



Modular Approval  
Test Report  
And Application for Grant of Equipment Authorization

*TEST REPORT PERTAINING TO:*

| Equipment Under Test             | Model Number(s) |
|----------------------------------|-----------------|
| Intel® Centrino® Ultimate-N 6300 | 633ANHMW        |

**CONFIGURATION**

IEEE 802.11a / 802.11b / 802.11g / 802.11n with a set of  
Shanghai Universe Communication Electron Co.,Ltd. Antennas

*MEASUREMENTS PERFORMED IN ACCORDANCE WITH THE FOLLOWING STANDARD (S)*

**Regulatory Standard(s)**

47 CFR Part 15, Subpart C Section 15.247

Test Method:

ANSI C63.4: 2003 American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz



Certificate Number: 1111.01

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|-------|-------------|------------|---|-------------|
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## 1.0 REGULATORY COMPLIANCE GUIDELINES

Aegis Labs, Inc. operates as both a Nevada and California Corporation with no organizational or financial relationship with any company, institution, or private individual. Testing and engineering functions provided by Aegis Labs were furnished by RF technicians and engineers with accredited qualifications and training credentials to carry out their duties.

The object of this report was to publish verifiable test results of an EUT subjected to the tests outlined in the standard listed on the cover page of this report.

### 1.1 Guidelines For Testing To Emissions Standards

This standard for EMC emission requirements apply to electrical equipment for Information Technology Equipment (ITE). Compliance to these standards and in combination with the other standards listed in this test report can be used to demonstrate presumption of compliance with the protection requirements of the appropriate agency standard.

The purpose of this standard is to specify minimum requirements for emissions regarding electromagnetic compatibility (EMC) and protect the radio frequency spectrum 9 kHz. – 400 GHz. from unwanted interference generated from electrical/digital systems that intentionally or unintentionally generated RF energy. The emissions standards, normative documents and/or publications were used to conduct all tests performed on the equipment herein referred to as “Equipment Under Test”.



## 2.0 SUMMARY OF TEST RESULTS

### 802.11a Mode (5745-5825 MHz) Chain A

#### EMISSIONS STANDARD

| FCC Part 15 Section | Description                                                                                                                                                                                                                                                                                                                  | Results | Comments                                                                                                 |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|----------------------------------------------------------------------------------------------------------|
| 15.247(a)(2)        | The minimum 6dB bandwidth shall be at least 500 kHz.                                                                                                                                                                                                                                                                         | PASSED  | 5745 MHz = 16.33 MHz<br>5785 MHz = 16.25 MHz<br>5825 MHz = 16.42 MHz                                     |
| 15.247(b)(3)        | The maximum peak output power of the intentional radiator shall not exceed 1 watt. The maximum conducted output power is the highest total transmit power occurring in any mode                                                                                                                                              | PASSED  | 5745 MHz = 25.08 dBm = 322.38 mW<br>5785 MHz = 25.02 dBm = 317.95 mW<br>5825 MHz = 24.80 dBm = 302.25 mW |
| 15.247(b)(5)        | The intentional radiator shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the FCC guidelines per Section 1.1307(b)(1).                                                                                                                                | PASSED  | Refer to MPE Calculations                                                                                |
| 15.247(d)           | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. | PASSED  | See Data Sheets (Appendix A)                                                                             |
| 15.247(d)           | Radiated emissions, which fall in the restricted bands, as defined in Sec. 15.205(a), must also comply with the radiated emission limits specified in Sec. 15.209(a). All others must be < -20dBc.                                                                                                                           | PASSED  | See Data Sheets (Appendix A)                                                                             |
| 15.247(e)           | The power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.                                                                                                                                     | PASSED  | 5745 MHz = -9.17 dB<br>5785 MHz = -8.83 dB<br>5825 MHz = -9.50 dB                                        |
| 15.207              | AC Conducted Emissions                                                                                                                                                                                                                                                                                                       | PASSED  | See Data Sheets (Appendix A)                                                                             |
| 15.209              | Radiated Emissions (30-1000 MHz)                                                                                                                                                                                                                                                                                             | PASSED  |                                                                                                          |



## 2.0 Summary of Test Results (Continued)

**802.11a Mode (5745-5825 MHz) Chain B****EMISSIONS STANDARD**

| <b>FCC Part 15 Section</b> | <b>Description</b>                                                                                                                                                                                                                                                                                                           | <b>Results</b> | <b>Comments</b>                                                                                          |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------------------------------------------------------------------------------------|
| 15.247(a)(2)               | The minimum 6dB bandwidth shall be at least 500 kHz.                                                                                                                                                                                                                                                                         | PASSED         | 5745 MHz = 16.50 MHz<br>5785 MHz = 16.42 MHz<br>5825 MHz = 16.42 MHz                                     |
| 15.247(b)(3)               | The maximum peak output power of the intentional radiator shall not exceed 1 watt. The maximum conducted output power is the highest total transmit power occurring in any mode                                                                                                                                              | PASSED         | 5745 MHz = 22.08 dBm = 161.57 mW<br>5785 MHz = 22.00 dBm = 158.62 mW<br>5825 MHz = 22.14 dBm = 163.82 mW |
| 15.247(b)(5)               | The intentional radiator shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the FCC guidelines per Section 1.1307(b)(1).                                                                                                                                | PASSED         | Refer to MPE Calculations                                                                                |
| 15.247(d)                  | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. | PASSED         | See Data Sheets<br>(Appendix A)                                                                          |
| 15.247(d)                  | Radiated emissions, which fall in the restricted bands, as defined in Sec. 15.205(a), must also comply with the radiated emission limits specified in Sec. 15.209(a). All others must be < -20dBc.                                                                                                                           | PASSED         | See Data Sheets<br>(Appendix A)                                                                          |
| 15.247(e)                  | The peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.                                                                                                                                | PASSED         | 5745 MHz = -10.00 dB<br>5785 MHz = -9.50 dB<br>5825 MHz = -9.00 dB                                       |
| 15.207                     | AC Conducted Emissions                                                                                                                                                                                                                                                                                                       | PASSED         | See Data Sheets<br>(Appendix A)                                                                          |
| 15.209                     | Radiated Emissions (30-1000 MHz)                                                                                                                                                                                                                                                                                             | PASSED         |                                                                                                          |



## 2.0 Summary of Test Results (Continued)

**802.11a Mode (5745-5825 MHz) Chain C****EMISSIONS STANDARD**

| <b>FCC Part 15 Section</b> | <b>Description</b>                                                                                                                                                                                                                                                                                                           | <b>Results</b> | <b>Comments</b>                                                                                          |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------------------------------------------------------------------------------------|
| 15.247(a)(2)               | The minimum 6dB bandwidth shall be at least 500 kHz.                                                                                                                                                                                                                                                                         | PASSED         | 5745 MHz = 16.50 MHz<br>5785 MHz = 16.33 MHz<br>5825 MHz = 16.42 MHz                                     |
| 15.247(b)(3)               | The maximum peak output power of the intentional radiator shall not exceed 1 watt. The maximum conducted output power is the highest total transmit power occurring in any mode                                                                                                                                              | PASSED         | 5745 MHz = 22.58 dBm = 181.29 mW<br>5785 MHz = 22.25 dBm = 168.02 mW<br>5825 MHz = 22.09 dBm = 161.94 mW |
| 15.247(b)(5)               | The intentional radiator shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the FCC guidelines per Section 1.1307(b)(1).                                                                                                                                | PASSED         | Refer to MPE Calculations                                                                                |
| 15.247(d)                  | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. | PASSED         | See Data Sheets (Appendix A)                                                                             |
| 15.247(d)                  | Radiated emissions, which fall in the restricted bands, as defined in Sec. 15.205(a), must also comply with the radiated emission limits specified in Sec. 15.209(a). All others must be < -20dBc.                                                                                                                           | PASSED         | See Data Sheets (Appendix A)                                                                             |
| 15.247(e)                  | The peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.                                                                                                                                | PASSED         | 5745 MHz = -9.50 dB<br>5785 MHz = -9.00 dB<br>5825 MHz = -9.67 dB                                        |
| 15.207                     | AC Conducted Emissions                                                                                                                                                                                                                                                                                                       | PASSED         | See Data Sheets (Appendix A)                                                                             |
| 15.209                     | Radiated Emissions (30-1000 MHz)                                                                                                                                                                                                                                                                                             | PASSED         |                                                                                                          |



## 2.0 Summary of Test Results (Continued)

**802.11b Mode (2400-2483.5 MHz) Chain A****EMISSIONS STANDARD**

| <b>FCC Part 15 Section</b> | <b>Description</b>                                                                                                                                                                                                                                                                                                           | <b>Results</b> | <b>Comments</b>                                                                                       |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------------------------------------------------------------------------------------------|
| 15.247(a)(2)               | The minimum 6dB bandwidth shall be at least 500 kHz.                                                                                                                                                                                                                                                                         | PASSED         | 2412 MHz = 12.08 MHz<br>2437 MHz = 12.25 MHz<br>2462 MHz = 12.17 MHz                                  |
| 15.247(b)(3)               | The maximum peak output power of the intentional radiator shall not exceed 1 watt. The maximum conducted output power is the highest total transmit power occurring in any mode                                                                                                                                              | PASSED         | 2412 MHz = 18.98 dBm = 79.07 mW<br>2437 MHz = 18.81 dBm = 76.03 mW<br>2462 MHz = 19.01 dBm = 79.62 mW |
| 15.247(b)(5)               | The intentional radiator shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the FCC guidelines per Section 1.1307(b)(1).                                                                                                                                | PASSED         | Refer to MPE Calculations                                                                             |
| 15.247(d)                  | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. | PASSED         | See Data Sheets (Appendix A)                                                                          |
| 15.247(d)                  | Radiated emissions, which fall in the restricted bands, as defined in Sec. 15.205(a), must also comply with the radiated emission limits specified in Sec. 15.209(a). All others must be < -20dBc.                                                                                                                           | PASSED         | See Data Sheets (Appendix A)                                                                          |
| 15.247(e)                  | The peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.                                                                                                                                | PASSED         | 2412 MHz = -9.00 dB<br>2437 MHz = -9.00 dB<br>2462 MHz = -9.67 dB                                     |
| 15.207                     | AC Conducted Emissions                                                                                                                                                                                                                                                                                                       | PASSED         | See Data Sheets (Appendix A)                                                                          |
| 15.209                     | Radiated Emissions (30-1000 MHz)                                                                                                                                                                                                                                                                                             | PASSED         |                                                                                                       |



## 2.0 Summary of Test Results (Continued)

**802.11b Mode (2400-2483.5 MHz) Chain B****EMISSIONS STANDARD**

| <b>FCC Part 15 Section</b> | <b>Description</b>                                                                                                                                                                                                                                                                                                           | <b>Results</b> | <b>Comments</b>                                                                                       |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------------------------------------------------------------------------------------------|
| 15.247(a)(2)               | The minimum 6dB bandwidth shall be at least 500 kHz.                                                                                                                                                                                                                                                                         | PASSED         | 2412 MHz = 12.17 MHz<br>2437 MHz = 11.25 MHz<br>2462 MHz = 12.25 MHz                                  |
| 15.247(b)(3)               | The maximum peak output power of the intentional radiator shall not exceed 1 watt. The maximum conducted output power is the highest total transmit power occurring in any mode                                                                                                                                              | PASSED         | 2412 MHz = 19.22 dBm = 83.56 mW<br>2437 MHz = 19.16 dBm = 82.41 mW<br>2462 MHz = 19.10 dBm = 81.28 mW |
| 15.247(b)(5)               | The intentional radiator shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the FCC guidelines per Section 1.1307(b)(1).                                                                                                                                | PASSED         | Refer to MPE Calculations                                                                             |
| 15.247(d)                  | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. | PASSED         | See Data Sheets (Appendix A)                                                                          |
| 15.247(d)                  | Radiated emissions, which fall in the restricted bands, as defined in Sec. 15.205(a), must also comply with the radiated emission limits specified in Sec. 15.209(a). All others must be < -20dBc.                                                                                                                           | PASSED         | See Data Sheets (Appendix A)                                                                          |
| 15.247(e)                  | The peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.                                                                                                                                | PASSED         | 2412 MHz = -9.83 dB<br>2437 MHz = -9.33 dB<br>2462 MHz = -9.00 dB                                     |
| 15.207                     | AC Conducted Emissions                                                                                                                                                                                                                                                                                                       | PASSED         | See Data Sheets (Appendix A)                                                                          |
| 15.209                     | Radiated Emissions (30-1000 MHz)                                                                                                                                                                                                                                                                                             | PASSED         |                                                                                                       |



## 2.0 Summary of Test Results (Continued)

**802.11b Mode (2400-2483.5 MHz) Chain C****EMISSIONS STANDARD**

| <b>FCC Part 15 Section</b> | <b>Description</b>                                                                                                                                                                                                                                                                                                           | <b>Results</b> | <b>Comments</b>                                                                                       |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------------------------------------------------------------------------------------------|
| 15.247(a)(2)               | The minimum 6dB bandwidth shall be at least 500 kHz.                                                                                                                                                                                                                                                                         | PASSED         | 2412 MHz = 12.25 MHz<br>2437 MHz = 12.08 MHz<br>2462 MHz = 12.00 MHz                                  |
| 15.247(b)(3)               | The maximum peak output power of the intentional radiator shall not exceed 1 watt. The maximum conducted output power is the highest total transmit power occurring in any mode                                                                                                                                              | PASSED         | 2412 MHz = 19.08 dBm = 80.91 mW<br>2437 MHz = 18.91 dBm = 77.80 mW<br>2462 MHz = 18.94 dBm = 78.34 mW |
| 15.247(b)(5)               | The intentional radiator shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the FCC guidelines per Section 1.1307(b)(1).                                                                                                                                | PASSED         | Refer to MPE Calculations                                                                             |
| 15.247(d)                  | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. | PASSED         | See Data Sheets<br>(Appendix A)                                                                       |
| 15.247(d)                  | Radiated emissions, which fall in the restricted bands, as defined in Sec. 15.205(a), must also comply with the radiated emission limits specified in Sec. 15.209(a). All others must be < -20dBc.                                                                                                                           | PASSED         | See Data Sheets<br>(Appendix A)                                                                       |
| 15.247(e)                  | The peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.                                                                                                                                | PASSED         | 2412 MHz = -9.83 dB<br>2437 MHz = -9.50 dB<br>2462 MHz = -9.67 dB                                     |
| 15.207                     | AC Conducted Emissions                                                                                                                                                                                                                                                                                                       | PASSED         | See Data Sheets<br>(Appendix A)                                                                       |
| 15.209                     | Radiated Emissions (30-1000 MHz)                                                                                                                                                                                                                                                                                             | PASSED         |                                                                                                       |



## 2.0 Summary of Test Results (Continued)

**802.11g Mode (2400-2483.5 MHz) Chain A****EMISSIONS STANDARD**

| <b>FCC Part 15 Section</b> | <b>Description</b>                                                                                                                                                                                                                                                                                                           | <b>Results</b> | <b>Comments</b>                                                                                          |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------------------------------------------------------------------------------------|
| 15.247(a)(2)               | The minimum 6dB bandwidth shall be at least 500 kHz.                                                                                                                                                                                                                                                                         | PASSED         | 2412 MHz = 15.58 MHz<br>2437 MHz = 15.50 MHz<br>2462 MHz = 15.58 MHz                                     |
| 15.247(b)(3)               | The maximum peak output power of the intentional radiator shall not exceed 1 watt. The maximum conducted output power is the highest total transmit power occurring in any mode                                                                                                                                              | PASSED         | 2412 MHz = 23.36 dBm = 216.95 mW<br>2437 MHz = 23.76 dBm = 237.88 mW<br>2462 MHz = 22.54 dBm = 179.62 mW |
| 15.247(b)(5)               | The intentional radiator shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the FCC guidelines per Section 1.1307(b)(1).                                                                                                                                | PASSED         | Refer to MPE Calculations                                                                                |
| 15.247(d)                  | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. | PASSED         | See Data Sheets (Appendix A)                                                                             |
| 15.247(d)                  | Radiated emissions, which fall in the restricted bands, as defined in Sec. 15.205(a), must also comply with the radiated emission limits specified in Sec. 15.209(a). All others must be < -20dBc.                                                                                                                           | PASSED         | See Data Sheets (Appendix A)                                                                             |
| 15.247(e)                  | The peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.                                                                                                                                | PASSED         | 2412 MHz = -9.50 dB<br>2437 MHz = -8.83 dB<br>2462 MHz = -12.00 dB                                       |
| 15.207                     | AC Conducted Emissions                                                                                                                                                                                                                                                                                                       | PASSED         | See Data Sheets (Appendix A)                                                                             |
| 15.209                     | Radiated Emissions (30-1000 MHz)                                                                                                                                                                                                                                                                                             | PASSED         |                                                                                                          |



## 2.0 Summary of Test Results (Continued)

**802.11g Mode (2400-2483.5 MHz) Chain B****EMISSIONS STANDARD**

| <b>FCC Part 15 Section</b> | <b>Description</b>                                                                                                                                                                                                                                                                                                           | <b>Results</b> | <b>Comments</b>                                                                                          |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------------------------------------------------------------------------------------|
| 15.247(a)(2)               | The minimum 6dB bandwidth shall be at least 500 kHz.                                                                                                                                                                                                                                                                         | PASSED         | 2412 MHz = 15.67 MHz<br>2437 MHz = 15.83 MHz<br>2462 MHz = 15.17 MHz                                     |
| 15.247(b)(3)               | The maximum peak output power of the intentional radiator shall not exceed 1 watt. The maximum conducted output power is the highest total transmit power occurring in any mode                                                                                                                                              | PASSED         | 2412 MHz = 22.83 dBm = 192.03 mW<br>2437 MHz = 24.35 dBm = 272.50 mW<br>2462 MHz = 23.09 dBm = 203.88 mW |
| 15.247(b)(5)               | The intentional radiator shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the FCC guidelines per Section 1.1307(b)(1).                                                                                                                                | PASSED         | Refer to MPE Calculations                                                                                |
| 15.247(d)                  | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. | PASSED         | See Data Sheets<br>(Appendix A)                                                                          |
| 15.247(d)                  | Radiated emissions, which fall in the restricted bands, as defined in Sec. 15.205(a), must also comply with the radiated emission limits specified in Sec. 15.209(a). All others must be < -20dBc.                                                                                                                           | PASSED         | See Data Sheets<br>(Appendix A)                                                                          |
| 15.247(e)                  | The peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.                                                                                                                                | PASSED         | 2412 MHz = -10.67 dB<br>2437 MHz = -8.33 dB<br>2462 MHz = -9.67 dB                                       |
| 15.207                     | AC Conducted Emissions                                                                                                                                                                                                                                                                                                       | PASSED         | See Data Sheets<br>(Appendix A)                                                                          |
| 15.209                     | Radiated Emissions (30-1000 MHz)                                                                                                                                                                                                                                                                                             | PASSED         |                                                                                                          |



## 2.0 Summary of Test Results (Continued)

**802.11g Mode (2400-2483.5 MHz) Chain C****EMISSIONS STANDARD**

| <b>FCC Part 15 Section</b> | <b>Description</b>                                                                                                                                                                                                                                                                                                           | <b>Results</b> | <b>Comments</b>                                                                                          |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------------------------------------------------------------------------------------|
| 15.247(a)(2)               | The minimum 6dB bandwidth shall be at least 500 kHz.                                                                                                                                                                                                                                                                         | PASSED         | 2412 MHz = 15.50 MHz<br>2437 MHz = 15.67 MHz<br>2462 MHz = 15.50 MHz                                     |
| 15.247(b)(3)               | The maximum peak output power of the intentional radiator shall not exceed 1 watt. The maximum conducted output power is the highest total transmit power occurring in any mode                                                                                                                                              | PASSED         | 2412 MHz = 22.28 dBm = 169.19 mW<br>2437 MHz = 23.83 dBm = 241.75 mW<br>2462 MHz = 22.69 dBm = 185.94 mW |
| 15.247(b)(5)               | The intentional radiator shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the FCC guidelines per Section 1.1307(b)(1).                                                                                                                                | PASSED         | Refer to MPE Calculations                                                                                |
| 15.247(d)                  | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. | PASSED         | See Data Sheets<br>(Appendix A)                                                                          |
| 15.247(d)                  | Radiated emissions, which fall in the restricted bands, as defined in Sec. 15.205(a), must also comply with the radiated emission limits specified in Sec. 15.209(a). All others must be < -20dBc.                                                                                                                           | PASSED         | See Data Sheets<br>(Appendix A)                                                                          |
| 15.247(e)                  | The peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.                                                                                                                                | PASSED         | 2412 MHz = -10.17 dB<br>2437 MHz = -8.83 dB<br>2462 MHz = -9.50 dB                                       |
| 15.207                     | AC Conducted Emissions                                                                                                                                                                                                                                                                                                       | PASSED         | See Data Sheets<br>(Appendix A)                                                                          |
| 15.209                     | Radiated Emissions (30-1000 MHz)                                                                                                                                                                                                                                                                                             | PASSED         |                                                                                                          |



## 2.0 Summary of Test Results (Continued)

**802.11n Mode 20MHz Wide (2400-2483.5 MHz) Chain A**

| <b>EMISSIONS STANDARD</b>  |                                                                                                                                                                                                                                                                                                                              |                |                                                                                                          |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------------------------------------------------------------------------------------|
| <b>FCC Part 15 Section</b> | <b>Description</b>                                                                                                                                                                                                                                                                                                           | <b>Results</b> | <b>Comments</b>                                                                                          |
| 15.247(a)(2)               | The minimum 6dB bandwidth shall be at least 500 kHz.                                                                                                                                                                                                                                                                         | PASSED         | 2412 MHz = 16.25 MHz<br>2437 MHz = 16.50 MHz<br>2462 MHz = 16.25 MHz                                     |
| 15.247(b)(3)               | The maximum peak output power of the intentional radiator shall not exceed 1 watt. The maximum conducted output power is the highest total transmit power occurring in any mode                                                                                                                                              | PASSED         | 2412 MHz = 21.93 dBm = 156.09 mW<br>2437 MHz = 23.89 dBm = 245.11 mW<br>2462 MHz = 22.07 dBm = 161.20 mW |
| 15.247(b)(5)               | The intentional radiator shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the FCC guidelines per Section 1.1307(b)(1).                                                                                                                                | PASSED         | Refer to MPE Calculations                                                                                |
| 15.247(d)                  | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. | PASSED         | See Data Sheets<br>(Appendix A)                                                                          |
| 15.247(d)                  | Radiated emissions, which fall in the restricted bands, as defined in Sec. 15.205(a), must also comply with the radiated emission limits specified in Sec. 15.209(a). All others must be < -20dBc.                                                                                                                           | PASSED         | See Data Sheets<br>(Appendix A)                                                                          |
| 15.247(e)                  | The peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.                                                                                                                                | PASSED         | 2412 MHz = -10.00 dB<br>2437 MHz = -7.67 dB<br>2462 MHz = -10.50 dB                                      |
| 15.207                     | AC Conducted Emissions                                                                                                                                                                                                                                                                                                       | PASSED         | See Data Sheets<br>(Appendix A)                                                                          |
| 15.209                     | Radiated Emissions (30-1000 MHz)                                                                                                                                                                                                                                                                                             | PASSED         |                                                                                                          |



## 2.0 Summary of Test Results (Continued)

**802.11n Mode 20MHz Wide (2400-2483.5 MHz) Chain B**

| <b>EMISSIONS STANDARD</b>  |                                                                                                                                                                                                                                                                                                                              |                |                                                                                                          |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------------------------------------------------------------------------------------|
| <b>FCC Part 15 Section</b> | <b>Description</b>                                                                                                                                                                                                                                                                                                           | <b>Results</b> | <b>Comments</b>                                                                                          |
| 15.247(a)(2)               | The minimum 6dB bandwidth shall be at least 500 kHz.                                                                                                                                                                                                                                                                         | PASSED         | 2412 MHz = 16.25 MHz<br>2437 MHz = 16.17 MHz<br>2462 MHz = 15.83 MHz                                     |
| 15.247(b)(3)               | The maximum peak output power of the intentional radiator shall not exceed 1 watt. The maximum conducted output power is the highest total transmit power occurring in any mode                                                                                                                                              | PASSED         | 2412 MHz = 22.31 dBm = 170.36 mW<br>2437 MHz = 24.25 dBm = 266.30 mW<br>2462 MHz = 22.73 dBm = 187.66 mW |
| 15.247(b)(5)               | The intentional radiator shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the FCC guidelines per Section 1.1307(b)(1).                                                                                                                                | PASSED         | Refer to MPE Calculations                                                                                |
| 15.247(d)                  | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. | PASSED         | See Data Sheets<br>(Appendix A)                                                                          |
| 15.247(d)                  | Radiated emissions, which fall in the restricted bands, as defined in Sec. 15.205(a), must also comply with the radiated emission limits specified in Sec. 15.209(a). All others must be < -20dBc.                                                                                                                           | PASSED         | See Data Sheets<br>(Appendix A)                                                                          |
| 15.247(e)                  | The peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.                                                                                                                                | PASSED         | 2412 MHz = -9.67 dB<br>2437 MHz = -8.00 dB<br>2462 MHz = -10.00 dB                                       |
| 15.207                     | AC Conducted Emissions                                                                                                                                                                                                                                                                                                       | PASSED         | See Data Sheets<br>(Appendix A)                                                                          |
| 15.209                     | Radiated Emissions (30-1000 MHz)                                                                                                                                                                                                                                                                                             | PASSED         |                                                                                                          |



## 2.0 Summary of Test Results (Continued)

**802.11n Mode 20MHz Wide (2400-2483.5 MHz) Chain C**

| <b>EMISSIONS STANDARD</b>  |                                                                                                                                                                                                                                                                                                                              |                |                                                                                                          |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------------------------------------------------------------------------------------|
| <b>FCC Part 15 Section</b> | <b>Description</b>                                                                                                                                                                                                                                                                                                           | <b>Results</b> | <b>Comments</b>                                                                                          |
| 15.247(a)(2)               | The minimum 6dB bandwidth shall be at least 500 kHz.                                                                                                                                                                                                                                                                         | PASSED         | 2412 MHz = 16.25 MHz<br>2437 MHz = 15.75 MHz<br>2462 MHz = 15.17 MHz                                     |
| 15.247(b)(3)               | The maximum peak output power of the intentional radiator shall not exceed 1 watt. The maximum conducted output power is the highest total transmit power occurring in any mode                                                                                                                                              | PASSED         | 2412 MHz = 22.42 dBm = 174.73 mW<br>2437 MHz = 23.78 dBm = 238.98 mW<br>2462 MHz = 22.69 dBm = 185.94 mW |
| 15.247(b)(5)               | The intentional radiator shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the FCC guidelines per Section 1.1307(b)(1).                                                                                                                                | PASSED         | Refer to MPE Calculations                                                                                |
| 15.247(d)                  | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. | PASSED         | See Data Sheets<br>(Appendix A)                                                                          |
| 15.247(d)                  | Radiated emissions, which fall in the restricted bands, as defined in Sec. 15.205(a), must also comply with the radiated emission limits specified in Sec. 15.209(a). All others must be < -20dBc.                                                                                                                           | PASSED         | See Data Sheets<br>(Appendix A)                                                                          |
| 15.247(e)                  | The peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.                                                                                                                                | PASSED         | 2412 MHz = -9.67 dB<br>2437 MHz = -8.33 dB<br>2462 MHz = -9.67 dB                                        |
| 15.207                     | AC Conducted Emissions                                                                                                                                                                                                                                                                                                       | PASSED         | See Data Sheets<br>(Appendix A)                                                                          |
| 15.209                     | Radiated Emissions (30-1000 MHz)                                                                                                                                                                                                                                                                                             | PASSED         |                                                                                                          |



## 2.0 Summary of Test Results (Continued)

**802.11n Mode 40MHz Wide (2400-2483.5 MHz) Chain A**

| <b>EMISSIONS STANDARD</b>  |                                                                                                                                                                                                                                                                                                                              |                |                                                                                                          |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------------------------------------------------------------------------------------|
| <b>FCC Part 15 Section</b> | <b>Description</b>                                                                                                                                                                                                                                                                                                           | <b>Results</b> | <b>Comments</b>                                                                                          |
| 15.247(a)(2)               | The minimum 6dB bandwidth shall be at least 500 kHz.                                                                                                                                                                                                                                                                         | PASSED         | 2422 MHz = 35.00 MHz<br>2437 MHz = 33.83 MHz<br>2452 MHz = 35.00 MHz                                     |
| 15.247(b)(3)               | The maximum peak output power of the intentional radiator shall not exceed 1 watt. The maximum conducted output power is the highest total transmit power occurring in any mode                                                                                                                                              | PASSED         | 2422 MHz = 20.17 dBm = 104.08 mW<br>2437 MHz = 23.28 dBm = 212.99 mW<br>2452 MHz = 20.23 dBm = 105.53 mW |
| 15.247(b)(5)               | The intentional radiator shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the FCC guidelines per Section 1.1307(b)(1).                                                                                                                                | PASSED         | Refer to MPE Calculations                                                                                |
| 15.247(d)                  | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. | PASSED         | See Data Sheets<br>(Appendix A)                                                                          |
| 15.247(d)                  | Radiated emissions, which fall in the restricted bands, as defined in Sec. 15.205(a), must also comply with the radiated emission limits specified in Sec. 15.209(a). All others must be < -20dBc.                                                                                                                           | PASSED         | See Data Sheets<br>(Appendix A)                                                                          |
| 15.247(e)                  | The peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.                                                                                                                                | PASSED         | 2422 MHz = -17.00 dB<br>2437 MHz = -13.33 dB<br>2452 MHz = -16.50 dB                                     |
| 15.207                     | AC Conducted Emissions                                                                                                                                                                                                                                                                                                       | PASSED         | See Data Sheets<br>(Appendix A)                                                                          |
| 15.209                     | Radiated Emissions (30-1000 MHz)                                                                                                                                                                                                                                                                                             | PASSED         |                                                                                                          |



## 2.0 Summary of Test Results (Continued)

**802.11n Mode 40MHz Wide (2400-2483.5 MHz) Chain B**

| <b>EMISSIONS STANDARD</b>  |                                                                                                                                                                                                                                                                                                                              |                |                                                                                                          |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------------------------------------------------------------------------------------|
| <b>FCC Part 15 Section</b> | <b>Description</b>                                                                                                                                                                                                                                                                                                           | <b>Results</b> | <b>Comments</b>                                                                                          |
| 15.247(a)(2)               | The minimum 6dB bandwidth shall be at least 500 kHz.                                                                                                                                                                                                                                                                         | PASSED         | 2422 MHz = 34.17 MHz<br>2437 MHz = 35.00 MHz<br>2452 MHz = 34.00 MHz                                     |
| 15.247(b)(3)               | The maximum peak output power of the intentional radiator shall not exceed 1 watt. The maximum conducted output power is the highest total transmit power occurring in any mode                                                                                                                                              | PASSED         | 2422 MHz = 20.52 dBm = 112.81 mW<br>2437 MHz = 24.02 dBm = 252.56 mW<br>2452 MHz = 20.82 dBm = 120.88 mW |
| 15.247(b)(5)               | The intentional radiator shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the FCC guidelines per Section 1.1307(b)(1).                                                                                                                                | PASSED         | Refer to MPE Calculations                                                                                |
| 15.247(d)                  | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. | PASSED         | See Data Sheets<br>(Appendix A)                                                                          |
| 15.247(d)                  | Radiated emissions, which fall in the restricted bands, as defined in Sec. 15.205(a), must also comply with the radiated emission limits specified in Sec. 15.209(a). All others must be < -20dBc.                                                                                                                           | PASSED         | See Data Sheets<br>(Appendix A)                                                                          |
| 15.247(e)                  | The peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.                                                                                                                                | PASSED         | 2422 MHz = -16.33 dB<br>2437 MHz = -14.67 dB<br>2452 MHz = -16.83 dB                                     |
| 15.207                     | AC Conducted Emissions                                                                                                                                                                                                                                                                                                       | PASSED         | See Data Sheets<br>(Appendix A)                                                                          |
| 15.209                     | Radiated Emissions (30-1000 MHz)                                                                                                                                                                                                                                                                                             | PASSED         |                                                                                                          |



## 2.0 Summary of Test Results (Continued)

**802.11n Mode 40MHz Wide (2400-2483.5 MHz) Chain C**

| <b>EMISSIONS STANDARD</b>  |                                                                                                                                                                                                                                                                                                                              |                |                                                                                                          |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------------------------------------------------------------------------------------|
| <b>FCC Part 15 Section</b> | <b>Description</b>                                                                                                                                                                                                                                                                                                           | <b>Results</b> | <b>Comments</b>                                                                                          |
| 15.247(a)(2)               | The minimum 6dB bandwidth shall be at least 500 kHz.                                                                                                                                                                                                                                                                         | PASSED         | 2422 MHz = 35.00 MHz<br>2437 MHz = 35.00 MHz<br>2452 MHz = 35.00 MHz                                     |
| 15.247(b)(3)               | The maximum peak output power of the intentional radiator shall not exceed 1 watt. The maximum conducted output power is the highest total transmit power occurring in any mode                                                                                                                                              | PASSED         | 2422 MHz = 20.37 dBm = 108.98 mW<br>2437 MHz = 23.60 dBm = 229.28 mW<br>2452 MHz = 20.60 dBm = 114.91 mW |
| 15.247(b)(5)               | The intentional radiator shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the FCC guidelines per Section 1.1307(b)(1).                                                                                                                                | PASSED         | Refer to MPE Calculations                                                                                |
| 15.247(d)                  | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. | PASSED         | See Data Sheets<br>(Appendix A)                                                                          |
| 15.247(d)                  | Radiated emissions, which fall in the restricted bands, as defined in Sec. 15.205(a), must also comply with the radiated emission limits specified in Sec. 15.209(a). All others must be < -20dBc.                                                                                                                           | PASSED         | See Data Sheets<br>(Appendix A)                                                                          |
| 15.247(e)                  | The peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.                                                                                                                                | PASSED         | 2422 MHz = -17.33 dB<br>2437 MHz = -14.17 dB<br>2452 MHz = -17.00 dB                                     |
| 15.207                     | AC Conducted Emissions                                                                                                                                                                                                                                                                                                       | PASSED         | See Data Sheets<br>(Appendix A)                                                                          |
| 15.209                     | Radiated Emissions (30-1000 MHz)                                                                                                                                                                                                                                                                                             | PASSED         |                                                                                                          |



## 2.0 Summary of Test Results (Continued)

**802.11n Mode 20MHz Wide (5745-5825 MHz) Chain A****EMISSIONS STANDARD**

| <b>FCC Part 15 Section</b> | <b>Description</b>                                                                                                                                                                                                                                                                                                           | <b>Results</b> | <b>Comments</b>                                                                                          |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------------------------------------------------------------------------------------|
| 15.247(a)(2)               | The minimum 6dB bandwidth shall be at least 500 kHz.                                                                                                                                                                                                                                                                         | PASSED         | 5745 MHz = 17.50 MHz<br>5785 MHz = 17.58 MHz<br>5825 MHz = 17.33 MHz                                     |
| 15.247(b)(3)               | The maximum peak output power of the intentional radiator shall not exceed 1 watt. The maximum conducted output power is the highest total transmit power occurring in any mode                                                                                                                                              | PASSED         | 5745 MHz = 24.87 dBm = 307.16 mW<br>5785 MHz = 24.80 dBm = 302.25 mW<br>5825 MHz = 24.85 dBm = 305.75 mW |
| 15.247(b)(5)               | The intentional radiator shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the FCC guidelines per Section 1.1307(b)(1).                                                                                                                                | PASSED         | Refer to MPE Calculations                                                                                |
| 15.247(d)                  | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. | PASSED         | See Data Sheets<br>(Appendix A)                                                                          |
| 15.247(d)                  | Radiated emissions, which fall in the restricted bands, as defined in Sec. 15.205(a), must also comply with the radiated emission limits specified in Sec. 15.209(a). All others must be < -20dBc.                                                                                                                           | PASSED         | See Data Sheets<br>(Appendix A)                                                                          |
| 15.247(e)                  | The peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.                                                                                                                                | PASSED         | 5745 MHz = -10.00 dB<br>5785 MHz = -9.83 dB<br>5825 MHz = -10.33 dB                                      |
| 15.207                     | AC Conducted Emissions                                                                                                                                                                                                                                                                                                       | PASSED         | See Data Sheets<br>(Appendix A)                                                                          |
| 15.209                     | Radiated Emissions (30-1000 MHz)                                                                                                                                                                                                                                                                                             | PASSED         |                                                                                                          |



## 2.0 Summary of Test Results (Continued)

**802.11n Mode 20MHz Wide (5745-5825 MHz) Chain B****EMISSIONS STANDARD**

| <b>FCC Part 15 Section</b> | <b>Description</b>                                                                                                                                                                                                                                                                                                           | <b>Results</b> | <b>Comments</b>                                                                                          |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------------------------------------------------------------------------------------|
| 15.247(a)(2)               | The minimum 6dB bandwidth shall be at least 500 kHz.                                                                                                                                                                                                                                                                         | PASSED         | 5745 MHz = 17.58 MHz<br>5785 MHz = 17.33 MHz<br>5825 MHz = 17.58 MHz                                     |
| 15.247(b)(3)               | The maximum peak output power of the intentional radiator shall not exceed 1 watt. The maximum conducted output power is the highest total transmit power occurring in any mode                                                                                                                                              | PASSED         | 5745 MHz = 22.07 dBm = 161.20 mW<br>5785 MHz = 21.95 dBm = 156.81 mW<br>5825 MHz = 22.01 dBm = 158.99 mW |
| 15.247(b)(5)               | The intentional radiator shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the FCC guidelines per Section 1.1307(b)(1).                                                                                                                                | PASSED         | Refer to MPE Calculations                                                                                |
| 15.247(d)                  | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. | PASSED         | See Data Sheets<br>(Appendix A)                                                                          |
| 15.247(d)                  | Radiated emissions, which fall in the restricted bands, as defined in Sec. 15.205(a), must also comply with the radiated emission limits specified in Sec. 15.209(a). All others must be < -20dBc.                                                                                                                           | PASSED         | See Data Sheets<br>(Appendix A)                                                                          |
| 15.247(e)                  | The peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.                                                                                                                                | PASSED         | 5745 MHz = -10.33 dB<br>5785 MHz = -10.17 dB<br>5825 MHz = -10.00 dB                                     |
| 15.207                     | AC Conducted Emissions                                                                                                                                                                                                                                                                                                       | PASSED         | See Data Sheets<br>(Appendix A)                                                                          |
| 15.209                     | Radiated Emissions (30-1000 MHz)                                                                                                                                                                                                                                                                                             | PASSED         |                                                                                                          |



## 2.0 Summary of Test Results (Continued)

**802.11n Mode 20MHz Wide (5745-5825 MHz) Chain C****EMISSIONS STANDARD**

| <b>FCC Part 15 Section</b> | <b>Description</b>                                                                                                                                                                                                                                                                                                           | <b>Results</b> | <b>Comments</b>                                                                                          |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------------------------------------------------------------------------------------|
| 15.247(a)(2)               | The minimum 6dB bandwidth shall be at least 500 kHz.                                                                                                                                                                                                                                                                         | PASSED         | 5745 MHz = 17.33 MHz<br>5785 MHz = 17.58 MHz<br>5825 MHz = 17.33 MHz                                     |
| 15.247(b)(3)               | The maximum peak output power of the intentional radiator shall not exceed 1 watt. The maximum conducted output power is the highest total transmit power occurring in any mode                                                                                                                                              | PASSED         | 5745 MHz = 22.48 dBm = 177.16 mW<br>5785 MHz = 22.20 dBm = 166.10 mW<br>5825 MHz = 21.97 dBm = 157.53 mW |
| 15.247(b)(5)               | The intentional radiator shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the FCC guidelines per Section 1.1307(b)(1).                                                                                                                                | PASSED         | Refer to MPE Calculations                                                                                |
| 15.247(d)                  | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. | PASSED         | See Data Sheets (Appendix A)                                                                             |
| 15.247(d)                  | Radiated emissions, which fall in the restricted bands, as defined in Sec. 15.205(a), must also comply with the radiated emission limits specified in Sec. 15.209(a). All others must be < -20dBc.                                                                                                                           | PASSED         | See Data Sheets (Appendix A)                                                                             |
| 15.247(e)                  | The peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.                                                                                                                                | PASSED         | 5745 MHz = -10.17 dB<br>5785 MHz = -9.83 dB<br>5825 MHz = -10.50 dB                                      |
| 15.207                     | AC Conducted Emissions                                                                                                                                                                                                                                                                                                       | PASSED         | See Data Sheets (Appendix A)                                                                             |
| 15.209                     | Radiated Emissions (30-1000 MHz)                                                                                                                                                                                                                                                                                             | PASSED         |                                                                                                          |



## 2.0 Summary of Test Results (Continued)

**802.11n Mode 40MHz Wide (5745-5825 MHz) Chain A****EMISSIONS STANDARD**

| <b>FCC Part 15 Section</b> | <b>Description</b>                                                                                                                                                                                                                                                                                                           | <b>Results</b> | <b>Comments</b>                                                      |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------------------------------------------------|
| 15.247(a)(2)               | The minimum 6dB bandwidth shall be at least 500 kHz.                                                                                                                                                                                                                                                                         | PASSED         | 5755 MHz = 34.83 MHz<br>5795 MHz = 33.83 MHz                         |
| 15.247(b)(3)               | The maximum peak output power of the intentional radiator shall not exceed 1 watt. The maximum conducted output power is the highest total transmit power occurring in any mode                                                                                                                                              | PASSED         | 5755 MHz = 25.30 dBm = 338.67 mW<br>5795 MHz = 25.16 dBm = 327.92 mW |
| 15.247(b)(5)               | The intentional radiator shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the FCC guidelines per Section 1.1307(b)(1).                                                                                                                                | PASSED         | Refer to MPE Calculations                                            |
| 15.247(d)                  | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. | PASSED         | See Data Sheets (Appendix A)                                         |
| 15.247(d)                  | Radiated emissions, which fall in the restricted bands, as defined in Sec. 15.205(a), must also comply with the radiated emission limits specified in Sec. 15.209(a). All others must be < -20dBc.                                                                                                                           | PASSED         | See Data Sheets (Appendix A)                                         |
| 15.247(e)                  | The peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.                                                                                                                                | PASSED         | 5755 MHz = -13.67 dB<br>5795 MHz = -12.83 dB                         |
| 15.207                     | AC Conducted Emissions                                                                                                                                                                                                                                                                                                       | PASSED         | See Data Sheets (Appendix A)                                         |
| 15.209                     | Radiated Emissions (30-1000 MHz)                                                                                                                                                                                                                                                                                             | PASSED         |                                                                      |



## 2.0 Summary of Test Results (Continued)

**802.11n Mode 40MHz Wide (5745-5825 MHz) Chain B****EMISSIONS STANDARD**

| <b>FCC Part 15 Section</b> | <b>Description</b>                                                                                                                                                                                                                                                                                                           | <b>Results</b> | <b>Comments</b>                                                      |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------------------------------------------------|
| 15.247(a)(2)               | The minimum 6dB bandwidth shall be at least 500 kHz.                                                                                                                                                                                                                                                                         | PASSED         | 5755 MHz = 35.00 MHz<br>5795 MHz = 33.67 MHz                         |
| 15.247(b)(3)               | The maximum peak output power of the intentional radiator shall not exceed 1 watt. The maximum conducted output power is the highest total transmit power occurring in any mode                                                                                                                                              | PASSED         | 5755 MHz = 22.35 dBm = 171.70 mW<br>5795 MHz = 22.40 dBm = 173.69 mW |
| 15.247(b)(5)               | The intentional radiator shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the FCC guidelines per Section 1.1307(b)(1).                                                                                                                                | PASSED         | Refer to MPE Calculations                                            |
| 15.247(d)                  | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. | PASSED         | See Data Sheets<br>(Appendix A)                                      |
| 15.247(d)                  | Radiated emissions, which fall in the restricted bands, as defined in Sec. 15.205(a), must also comply with the radiated emission limits specified in Sec. 15.209(a). All others must be < -20dBc.                                                                                                                           | PASSED         | See Data Sheets<br>(Appendix A)                                      |
| 15.247(e)                  | The peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.                                                                                                                                | PASSED         | 5755 MHz = -13.83 dB<br>5795 MHz = -13.17 dB                         |
| 15.207                     | AC Conducted Emissions                                                                                                                                                                                                                                                                                                       | PASSED         | See Data Sheets<br>(Appendix A)                                      |
| 15.209                     | Radiated Emissions (30-1000 MHz)                                                                                                                                                                                                                                                                                             | PASSED         |                                                                      |



## 2.0 Summary of Test Results (Continued)

**802.11n Mode 40MHz Wide (5745-5825 MHz) Chain C****EMISSIONS STANDARD**

| <b>FCC Part 15 Section</b> | <b>Description</b>                                                                                                                                                                                                                                                                                                           | <b>Results</b> | <b>Comments</b>                                                      |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------------------------------------------------|
| 15.247(a)(2)               | The minimum 6dB bandwidth shall be at least 500 kHz.                                                                                                                                                                                                                                                                         | PASSED         | 5755 MHz = 33.67 MHz<br>5795 MHz = 35.00 MHz                         |
| 15.247(b)(3)               | The maximum peak output power of the intentional radiator shall not exceed 1 watt. The maximum conducted output power is the highest total transmit power occurring in any mode                                                                                                                                              | PASSED         | 5755 MHz = 22.61 dBm = 182.29 mW<br>5795 MHz = 22.48 dBm = 176.92 mW |
| 15.247(b)(5)               | The intentional radiator shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the FCC guidelines per Section 1.1307(b)(1).                                                                                                                                | PASSED         | Refer to MPE Calculations                                            |
| 15.247(d)                  | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. | PASSED         | See Data Sheets<br>(Appendix A)                                      |
| 15.247(d)                  | Radiated emissions, which fall in the restricted bands, as defined in Sec. 15.205(a), must also comply with the radiated emission limits specified in Sec. 15.209(a). All others must be < -20dBc.                                                                                                                           | PASSED         | See Data Sheets<br>(Appendix A)                                      |
| 15.247(e)                  | The peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.                                                                                                                                | PASSED         | 5755 MHz = -13.50 dB<br>5795 MHz = -12.83 dB                         |
| 15.207                     | AC Conducted Emissions                                                                                                                                                                                                                                                                                                       | PASSED         | See Data Sheets<br>(Appendix A)                                      |
| 15.209                     | Radiated Emissions (30-1000 MHz)                                                                                                                                                                                                                                                                                             | PASSED         |                                                                      |

**ANALYSIS AND CONCLUSIONS**

Based upon the measurement results we find that this equipment is within the limits of the global standards listed on the cover page of this test report. All results are based on a test of one sample. If any significant changes are made to the unit, the changes shall be evaluated and a retest may be required.

## Approval Signatories

**Report Completed By:**

**Johnny Candelas** 8/18/2009  
**Senior Test Engineer**  
**Aegis Labs, Inc.**

**Report Approved By:**

**Rick Candelas** 8/18/2009  
**Quality Assurance**  
**Aegis Labs, Inc.**



### 3.0 ADMINISTRATIVE DATA AND TEST DESCRIPTION

|                                      |                                                                                                                                                                                                                                                                  |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>DEVICE TESTED:</b>                | ITE Type: Intel® Centrino® Ultimate-N 6300<br>Model Number(s): 633ANHMMW<br>Serial Number: 0015005A17C0<br>FCC ID: E2K633ANH                                                                                                                                     |
| <b>DATE EUT RECEIVED:</b>            | June 18 <sup>th</sup> , 2009                                                                                                                                                                                                                                     |
| <b>TEST DATE(S):</b>                 | June 22 <sup>nd</sup> – July 30 <sup>th</sup> , 2009                                                                                                                                                                                                             |
| <b>ORIGIN OF TEST SAMPLE(S):</b>     | Production                                                                                                                                                                                                                                                       |
| <b>EQUIPMENT CLASS:</b>              | EUT tested as CLASS B device                                                                                                                                                                                                                                     |
| <b>RESPONSIBLE PARTY:</b>            | Intel Corporation<br>2111 NE 25 <sup>th</sup> Avenue<br>Hillsboro, Oregon 97124                                                                                                                                                                                  |
| <b>CLIENT CONTACT:</b>               | Mr. Steve Hackett                                                                                                                                                                                                                                                |
| <b>MANUFACTURER:</b>                 | Intel Corporation                                                                                                                                                                                                                                                |
| <b>TEST LOCATION:</b>                | Aegis Labs, Inc.<br>32231 Trabuco Creek Road<br>Trabuco Canyon, CA 92678<br>Open Area Test Site #1 & #2                                                                                                                                                          |
| <b>ACCREDITATION CERTIFICATE(s):</b> | A2LA Certificate Number: 1111.01, Valid through February 10, 2010                                                                                                                                                                                                |
| <b>PURPOSE OF TEST:</b>              | To demonstrate compliance with the standards as described in Sections 1.0 & 2.0 of this report.                                                                                                                                                                  |
| <b>UNCERTAINTY BUDGET:</b>           | Proficiency Testing and Uncertainty Calculations for all tests indicated in this report have been conducted in accordance with ISO 17025: 2005 requirements Section 5.4.6, and 5.9. Uncertainty Budgets and Proficiency Test results available upon request.     |
| <b>STATEMENT OF CALIBRATION:</b>     | All accredited equipment calibrations were performed by Liberty Labs, Inc. and World Cal. with typical calibration uncertainty estimates derived from ISO Guide to the determination of uncertainties with a Coverage Factor of k=2 for 95% level of confidence. |



## 4.0 DESCRIPTION OF EUT CONFIGURATION

### 4.1 EUT Description

| Equipment Under Test (EUT)               |                                                                                                                                                                                           |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Trade Name:                              | Intel® Centrino® Ultimate-N 6300                                                                                                                                                          |
| Model Number:                            | 633ANHMW                                                                                                                                                                                  |
| Frequency Range:                         | 802.11a = 5745 – 5825 MHz<br>802.11b/g = 2412 – 2462MHz<br>802.11n = 2412 – 2462MHz & 5745 – 5825 MHz                                                                                     |
| Type of Transmission:                    | Direct Sequence Spread Spectrum                                                                                                                                                           |
| Transfer Rate:                           | 1/5.5/11 Mbps for 802.11b mode<br>6/36/54 Mbps for 802.11g and 802.11a modes<br>Up to 450 Mbps for 802.11n mode                                                                           |
| Number of Channels:                      | 802.11a mode (5725-5850 MHz) = 5<br>802.11b mode (2400-2483.5 MHz) = 11<br>802.11g mode (2400-2483.5 MHz) = 11<br>802.11n mode (5725-5850 MHz) = 5<br>802.11n mode (2400-2483.5 MHz) = 11 |
| Modulation Type:                         | DBPSK, DQPSK, CCK, OFDM                                                                                                                                                                   |
| Antenna Type:                            | <u>Shanghai Universe Communication Electron Co., Ltd Antennas:</u><br>PIFA                                                                                                                |
| Antenna Gain (See Note 2):               | 4.97dBi @ 5 GHz /<br>3.24dBi @ 2.4 GHz                                                                                                                                                    |
| Transmit Output Power:                   | Please see Appendix A (Data Sheets) for actual output power.                                                                                                                              |
| Power Supply:                            | 3.3VDC from external source                                                                                                                                                               |
| Number of External Test Ports Exercised: | 3 Antenna Ports (Chain A, B, & C)                                                                                                                                                         |

The Intel® Centrino® Ultimate-N 6300 is an embedded IEEE 802.11a/b/g/n wireless network adapter that operates in the 2.4 GHz and 5.0 GHz spectrum. The adapter is capable of delivering up to 450 Mbps Tx/Rx.

**NOTE 1:** For a more detailed description, please refer to the manufacture's specifications or User's Manual.

**NOTE 2:** The EUT was tested with a set of Shanghai Universe Communication Electron Co., Ltd Antennas. (Refer to the antenna information exhibits).



## 4.2 EUT Configuration

The EUT was tested installed in the Mini PCI-E slot of an extender board which is then connected to the host computer. The EUT was then connected to a set of antennas via its Chain A, B, & C antenna ports. Data for a set of Shanghai Universe Communication Electron Co., Ltd Antennas can be found in Appendix A (Data Sheets)

The low, middle, and high channels were tested in 802.11a, b, g, & n modes. Also, the EUT was tested once transmitting from each chain individually (Chain A, B, then C) and then tested with all chains transmitting simultaneously (Chain ABC). The EUT was placed in continuous transmit mode by a program provided by the manufacturer (*CRTU Version 5.15.36.0*).

## 4.3 List of EUT, Sub-Assemblies and Host Equipment

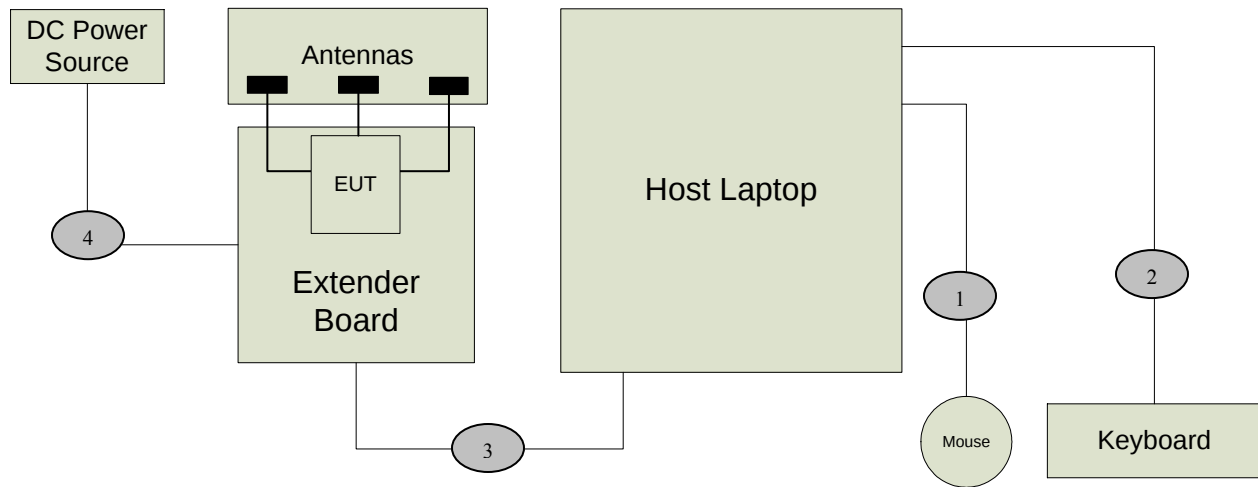
| Equipment Under Test |                                  |                      |               |
|----------------------|----------------------------------|----------------------|---------------|
| Manufacturer         | Equipment Name                   | Model or Part Number | Serial Number |
| Intel Corporation    | Intel® Centrino® Ultimate-N 6300 | 633ANHMW             | 0015005A17C0  |

| EUT Sub Assemblies                               |                 |                      |               |
|--------------------------------------------------|-----------------|----------------------|---------------|
| Manufacturer                                     | Equipment Name  | Model or Part Number | Serial Number |
| Shanghai Universe Communication Electron Co.,Ltd | Chain A Antenna | SUC ANT S11          | N/A           |
|                                                  | Chain B Antenna | SUC ANT S11          | N/A           |
|                                                  | Chain C Antenna | SUC ANT S11          | N/A           |

| HOST EQUIPMENT LIST |                 |                      |               |
|---------------------|-----------------|----------------------|---------------|
| Manufacturer        | Equipment Name  | Model or Part Number | Serial Number |
| Generic             | Host Laptop     | ENG001               | None          |
| Protek              | DC Power Source | 3006B                | AC2018        |
| Logitech            | Keyboard        | Y-BF37               | MCT25200581   |
| Logitech            | Mouse           | M-BJ58               | LNA22802012   |

NOTE: All the power cords of the above support equipment are standard and non-shielded.

#### 4.4 I/O Cabling Diagram and Description



**Signal Line Cable Description**

| Cable | Length | Construction                 | Source Connector               | Destination Connector         | Bundled Length | Ferrite Attached | Note |
|-------|--------|------------------------------|--------------------------------|-------------------------------|----------------|------------------|------|
| 1     | 1.5m   | Round, Braid & Foil Shielded | Host Computer: USB Port        | Keyboard: Hardwired           | N/A            | N/A              | N/A  |
| 2     | 1.5m   | Round, Braid & Foil Shielded | Host Computer: USB Port        | Mouse: Hardwired              | N/A            | N/A              | N/A  |
| 3     | 0.5m   | Flat, Braid & Foil Shielded  | Extender Board: Mini PCIe slot | Host Laptop: Mini PCIe slot   | N/A            | N/A              | N/A  |
| 4     | 0.5m   | Round Un-shielded            | Extender Board: Power Input    | DC Power Source: Power Output | N/A            | N/A              | N/A  |



## 4.5 EMC Test Hardware and Software Measurement Equipment

| TEST EQUIPMENT LIST - Emissions          |                              |                      |               |                      |                               |
|------------------------------------------|------------------------------|----------------------|---------------|----------------------|-------------------------------|
| Equipment Name                           | Manufacturer                 | Model Number         | Serial Number | Calibration Due Date | Maintenance Calibration Cycle |
| Spectrum Analyzer                        | Agilent                      | 8565EC               | 3946A00245    | 07/24/10             | 1 Year                        |
| PSA Spectrum Analyzer                    | Agilent                      | E4440A               | MY46186811    | 07/02/11             | 2 Years                       |
| Antenna – Horn                           | ETS                          | 3117                 | 00057423      | 12/23/09             | 1 Year                        |
| Preamp                                   | Miteq                        | JS42-01001800-25-10P | 815980        | 12/23/09             | 1 Year                        |
| 30 Foot Coax                             | Semflex                      | S130SFBS10360        | 0619          | 07/26/10             | 1 Year                        |
| 2.4 GHz Notch Filter                     | Micro-Tronics                | BRM50702-02          | 003           | NCR                  | NCR                           |
| 5.725-5.850 GHz Notch Filter             | Microwave Circuits           | N0257881             | 3173-01       | NCR                  | NCR                           |
| Antenna - 18-26.5 GHz Pre-amplified Horn | Aegis Labs, Inc.             | H042                 | SLK-35-3W     | 02/08/10             | 1 Year                        |
| Antenna - 26.5-40 GHz Pre-amplified Horn | Aegis Labs, Inc.             | H028                 | GM1260-10     | 02/08/10             | 1 Year                        |
| EMI Receiver - RF Section                | Hewlett Packard              | 8546A                | 3325A00137    | 04/26/10             | 1 Year                        |
| EMI Receiver - RF Filter Section         | Hewlett Packard              | 85460A               | 3330A00138    | 04/26/10             | 1 Year                        |
| 10 dB Attenuator                         | Pasternack                   | PE7014-10            | N/A           | 09/05/09             | 1 Year                        |
| LISN (EUT)                               | Fisher Custom Communications | FCC-LISN-50-25-2     | 9931          | 06/03/10             | 1 Year                        |
| LISN (Access)                            | EMCO                         | 3825/2               | 9108-1848     | 06/03/10             | 1 Year                        |
| Antenna - Biconical                      | EMCO                         | 3110                 | 9108-1421     | 06/05/10             | 1 Year                        |
| Antenna - Log Periodic                   | EMCO                         | 3148                 | 4947          | 06/12/10             | 1 Year                        |
| Power Meter                              | Anritsu                      | ML2487A              | 6K00001785    | 05/29/10             | 1 Year                        |
| Wide Bandwidth Sensor                    | Anritsu                      | MA2491A              | 31193         | 05/29/10             | 1 Year                        |
| 12dB Attenuator                          | Narda                        | 4779-12              | 203           | 06/09/10             | 1 Year                        |
| Temperature/Humidity Monitor             | Dickson                      | TH550                | 7255185       | 04/13/10             | 1 Year                        |

NCR – No Calibration Required.

## 5.0 CONDITIONS DURING EMISSIONS MEASUREMENTS

### 5.1 General

All measurements were made according to the procedures defined in or referred to by the standard listed on the cover page of this report. The measurements were made in the operating mode producing the largest emissions consistent with normal operation and connected to the minimum configuration of auxiliary devices.

### 5.2 Conducted Emissions Test Setup

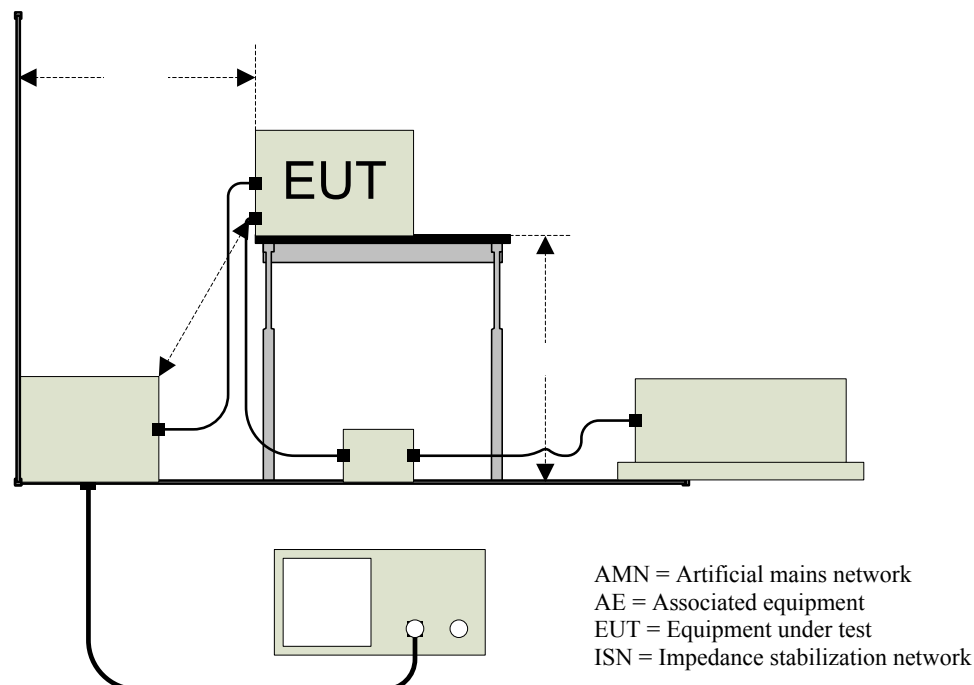
The following was the test configuration.

EUT signal cables that hung closer than 40 cm to the horizontal metal ground plane were folded back and forth forming a bundle 30 cm to 40 cm long. The power cord of the EUT was also bundled in the center and plugged into one of the artificial mains network (AMN). All peripheral equipment was powered from a second AMN via a multiple outlet strip placed at a distance on 10cm from each other. The AMN and ISN were positioned 80cm from the EUT. Signal cables that were not connected to an AE were terminated using the correct termination. If applicable, the current probe was placed at 0.1 m from the ISN.

Peak, quasi-peak and/or average detectors were used for testing performed between 150 kHz and 30 MHz. A swept frequency scan was performed for both Line 1 and Line 2. The six highest readings were compared against the limit and recorded in the data sheet along with a snapshot image of the sweep scan. The graphical scans in Appendix A only reflect peak readings while the tabulated data sheets reflect peak, average, and/or quasi-peak measurements.

#### Climatic Conditions:

The EUT was tested within its intended operating and climatic conditions.



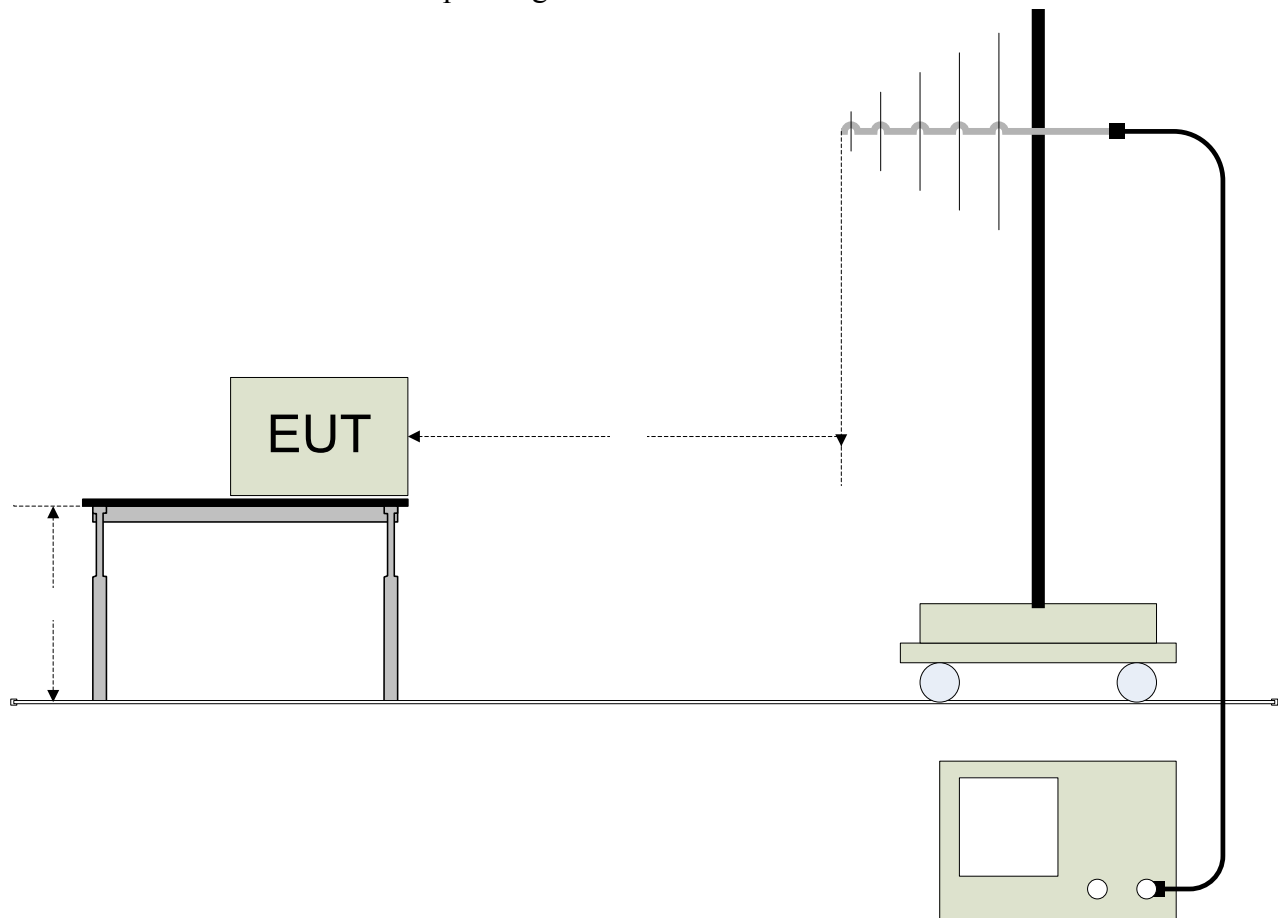
### 5.3 Radiated Emissions Test Setup

The Open Area Test Site (OATS) was used for radiated emission testing. The receiving (Rx) antenna(s) was placed 10m from the nearest side of the EUT facing the Rx antenna. The EUT (if floor-standing) was placed directly on the flush-mounted 360 degree rotating turntable. The EUT (if table-top) was placed directly on an 80cm high non-metallic table, and the table was placed on the rotating turntable. During the initial EMI scan, all the suspect frequencies, i.e.; harmonics, broadband signals were checked with the Rx broadband antennas in both vertical and horizontal polarities. The biconical Rx, log periodic Rx, and horn Rx antennas were used from 30MHz – 299.99MHz, 300MHz – 1000MHz, and 1GHz – 18GHz respectively.

Upon completion of all harmonic and broadband measurements, the balance of any remaining frequencies was checked between 30MHz – 18GHz. Any signals appearing within 20 dB of the classification limit was measured. Each signal was maximized by first rotating the turntable at least 360 degrees and recording the azimuth in the data sheet. Lastly, the Rx antenna was raised and/or lowered to maximize the signal elevation. If the measured signal was obtained using the peak detector and that signal appeared within 3 dB of the regulatory limit line, then the same signal was re-measured using the quasi-peak detector on the EMI receiver. Both meter readings if necessary were recorded on the data sheet.

#### Climatic Conditions:

The EUT was tested within its intended operating and climatic conditions.





## **APPENDIX A**

### ***TEST DATA***

**AC POWER PORT - CONDUCTED EMISSIONS TEST RESULTS**

|                       |                                                                                    |                        |              |
|-----------------------|------------------------------------------------------------------------------------|------------------------|--------------|
| <b>CLIENT:</b>        | Intel Corporation                                                                  | <b>DATE:</b>           | 07/24/09     |
| <b>EUT:</b>           | Intel® Centrino® Ultimate-N 6300                                                   | <b>PROJECT NUMBER:</b> | INTEL-090526 |
| <b>MODEL NUMBER:</b>  | 633ANHMW                                                                           | <b>TEST ENGINEER:</b>  | JC           |
| <b>SERIAL NUMBER:</b> | 0015005A17C0                                                                       | <b>SITE #:</b>         | 1            |
| <b>CONFIGURATION:</b> | Tested installed in an extender board connected to the host laptop's mini PCI slot | <b>TEMPERATURE:</b>    | 22 deg. C    |
|                       |                                                                                    | <b>HUMIDITY:</b>       | 49%          |
|                       |                                                                                    | <b>TIME:</b>           | 2:00 PM      |

|                     |                                                                                                                                                                                               |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description:</b> | Conducted Power RF Emissions (150 kHz – 30 MHz)                                                                                                                                               |
| <b>Results:</b>     | <b>PASSED</b> LINE 1 and LINE 2 Limits                                                                                                                                                        |
| <b>Note:</b>        | Conducted Emissions Measurements were performed on the EUT with the power supply set at the following voltage and frequency. <ul style="list-style-type: none"><li>• 120VAC / 60 Hz</li></ul> |

| Conducted Limits |                         |                      |
|------------------|-------------------------|----------------------|
| Frequency (MHz)  | Quasi-Peak Limit (dBuV) | Average Limit (dBuV) |
| 0.15-0.5         | 66 to 56*               | 56 to 46*            |
| 0.5-5            | 56                      | 46                   |
| 5-30             | 60                      | 50                   |

\*Decreases with the logarithm of the frequency.

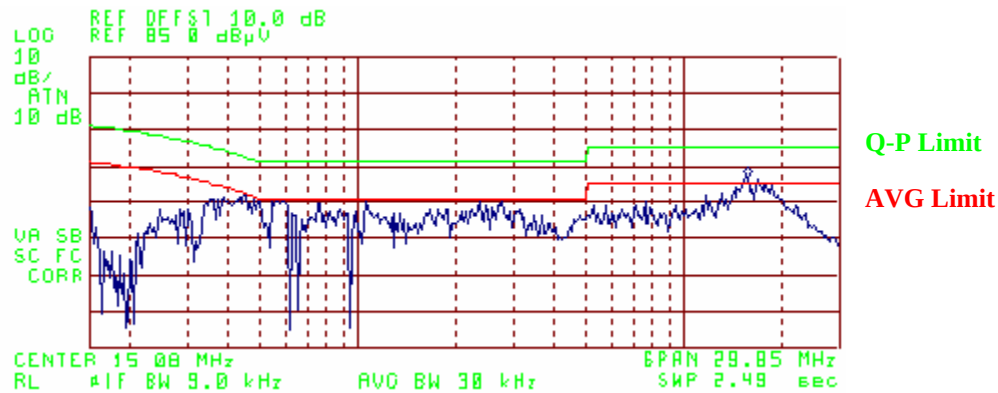


# AC Power Port – Conducted Emissions Test Results (Continued)

## Continuously Transmitting @ 120VAC/60Hz (INTEL-090526-22)

### FCC CLASS B CONDUCTED EMISSIONS – LINE 1

| Freq.<br>(MHz) | Meter<br>Reading (dBuV) | Detector<br>(PK/QP/AV) | Average<br>Limit (dBuV) | Average<br>Delta(dB) | Quasi-Peak<br>Limit (dBuV) | Quasi-Peak<br>Delta(dB) |
|----------------|-------------------------|------------------------|-------------------------|----------------------|----------------------------|-------------------------|
| 0.4500         | 47.42                   | PK                     | 47.43                   | -0.01                | 57.43                      | -10.01                  |
| 0.4500         | 28.39                   | AV                     | 47.43                   | -19.04               | 57.43                      | -29.04                  |
| 0.5900         | 45.85                   | PK                     | 46.00                   | -0.15                | 56.00                      | -10.15                  |
| 0.5900         | 25.01                   | AV                     | 46.00                   | -20.99               | 56.00                      | -30.99                  |
| 1.0700         | 45.11                   | PK                     | 46.00                   | -0.89                | 56.00                      | -10.89                  |
| 1.0700         | 23.59                   | AV                     | 46.00                   | -22.41               | 56.00                      | -32.41                  |
| 7.5800         | 45.18                   | PK                     | 50.00                   | -4.82                | 60.00                      | -14.82                  |
| 11.5900        | 46.92                   | PK                     | 50.00                   | -3.08                | 60.00                      | -13.08                  |
| 15.6800        | 52.02                   | PK                     | 50.00                   | 2.02                 | 60.00                      | -7.98                   |
| 15.6800        | 34.53                   | AV                     | 50.00                   | -15.47               | 60.00                      | -25.47                  |



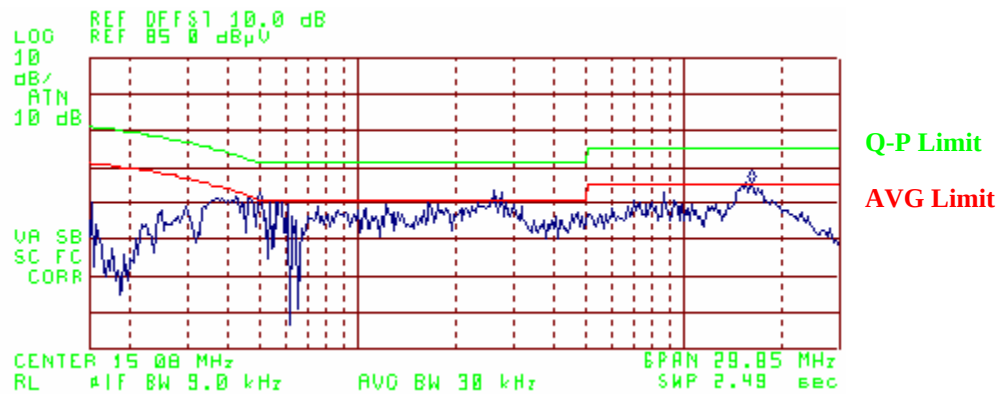


# AC Power Port – Conducted Emissions Test Results (Continued)

## Continuously Transmitting @ 120VAC/60Hz (INTEL-090526-22)

### FCC CLASS B CONDUCTED EMISSIONS - LINE 2

| Freq.<br>(MHz) | Meter<br>Reading (dBuV) | Detector<br>(PK/QP/AV) | Average<br>Limit (dBuV) | Average<br>Delta(dB) | Quasi-Peak<br>Limit (dBuV) | Quasi-Peak<br>Delta(dB) |
|----------------|-------------------------|------------------------|-------------------------|----------------------|----------------------------|-------------------------|
| 0.4300         | 46.69                   | PK                     | 48.00                   | -1.31                | 58.00                      | -11.31                  |
| 0.4300         | 25.39                   | AV                     | 48.00                   | -22.61               | 58.00                      | -32.61                  |
| 0.4700         | 46.90                   | PK                     | 46.85                   | 0.05                 | 56.85                      | -9.95                   |
| 0.4700         | 26.54                   | AV                     | 46.85                   | -20.31               | 56.85                      | -30.31                  |
| 0.5000         | 48.09                   | PK                     | 46.00                   | 2.09                 | 56.00                      | -7.91                   |
| 0.5000         | 24.08                   | AV                     | 46.00                   | -21.92               | 56.00                      | -31.92                  |
| 2.6300         | 48.19                   | PK                     | 46.00                   | 2.19                 | 56.00                      | -7.81                   |
| 2.6300         | 31.72                   | AV                     | 46.00                   | -14.28               | 56.00                      | -24.28                  |
| 8.6900         | 48.09                   | PK                     | 50.00                   | -1.91                | 60.00                      | -11.91                  |
| 8.6900         | 26.84                   | AV                     | 50.00                   | -23.16               | 60.00                      | -33.16                  |
| 16.1400        | 50.88                   | PK                     | 50.00                   | 0.88                 | 60.00                      | -9.12                   |
| 16.1400        | 33.76                   | AV                     | 50.00                   | -16.24               | 60.00                      | -26.24                  |



**RADIATED EMISSIONS TEST RESULTS**

|                       |                                                                                    |                        |              |
|-----------------------|------------------------------------------------------------------------------------|------------------------|--------------|
| <b>CLIENT:</b>        | Intel Corporation                                                                  | <b>DATE:</b>           | 07/24/09     |
| <b>EUT:</b>           | Intel® Centrino® Ultimate-N 6300                                                   | <b>PROJECT NUMBER:</b> | INTEL-090526 |
| <b>MODEL NUMBER:</b>  | 633ANHMW                                                                           | <b>TEST ENGINEER:</b>  | JC           |
| <b>SERIAL NUMBER:</b> | 0015005A17C0                                                                       | <b>SITE #:</b>         | 1            |
| <b>CONFIGURATION:</b> | Tested installed in an extender board connected to the host laptop's mini PCI slot | <b>TEMPERATURE:</b>    | 19 deg. C    |
|                       |                                                                                    | <b>HUMIDITY:</b>       | 57%          |
|                       |                                                                                    | <b>TIME:</b>           | 9:00 AM      |

|                     |                                                                                                                                                                                               |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description:</b> | Radiated RF Emissions (30 MHz – 1000 MHz)                                                                                                                                                     |
| <b>Results:</b>     | <b>PASSED</b> Horizontal and Vertical Antenna Polarizations Class B Limits                                                                                                                    |
| <b>Note:</b>        | Radiated Emissions Measurements were performed on the EUT with the power supply set at the following voltage and frequency. <ul style="list-style-type: none"><li>• 120VAC / 60 Hz.</li></ul> |

## Radiated Emissions Sample Calculations

$$\text{Corrected Meter Reading} = \text{Meter Reading} + F + C - D$$

Where, F = Antenna Factor

C = Cable Factor

G = Amplifier Gain

D = Distance Factor (if applicable)

Therefore, the equation for determining the Corrected Meter Reading Limit (CML) is:

$$\text{CML} = \text{Specification Limit} - F - C + D$$



## Radiated Emissions Test Results (Continued)

**Continuously Transmitting @ 120VAC/60Hz (INTEL-090526-21)****Horizontal Open Field Maximized Data**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Cable<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Antenna<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV/m) | Limits<br>(dBuV/m) | Diff (dB)<br>+=FAIL |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|---|-------------------------|-------------------------|---------------------------|----------------------------------|--------------------|---------------------|
| 48.02          | 8.58                       | 400                       | 45                   |                           |   | 2.65                    | 10.32                   | 10.46                     | 32.01                            | 40.00              | -7.99               |
| 120.00         | 14.23                      | 400                       | 90                   | 11.03                     | Q | 2.39                    | 11.20                   | 10.46                     | 35.08                            | 43.50              | -8.42               |
| 250.01         | 10.96                      | 350                       | 90                   |                           |   | 2.91                    | 17.40                   | 10.46                     | 41.73                            | 46.00              | -4.27               |
| 305.09         | 11.32                      | 300                       | 270                  |                           |   | 3.07                    | 14.49                   | 10.46                     | 39.33                            | 46.00              | -6.67               |
| 375.00         | 10.53                      | 250                       | 45                   |                           |   | 3.35                    | 15.10                   | 10.46                     | 39.44                            | 46.00              | -6.57               |
| 386.00         | 11.63                      | 225                       | 45                   |                           |   | 3.39                    | 15.54                   | 10.46                     | 41.02                            | 46.00              | -4.98               |

**Vertical Open Field Maximized Data**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Cable<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Antenna<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV/m) | Limits<br>(dBuV/m) | Diff (dB)<br>+=FAIL |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|---|-------------------------|-------------------------|---------------------------|----------------------------------|--------------------|---------------------|
| 48.01          | 11.12                      | 100                       | 45                   |                           |   | 2.65                    | 10.52                   | 10.46                     | 34.75                            | 40.00              | -5.25               |
| 119.98         | 18.40                      | 100                       | 90                   | 14.65                     | Q | 2.39                    | 10.80                   | 10.46                     | 38.30                            | 43.50              | -5.20               |
| 250.03         | 8.51                       | 100                       | 45                   |                           |   | 2.91                    | 18.30                   | 10.46                     | 40.18                            | 46.00              | -5.82               |
| 306.35         | 13.06                      | 100                       | 45                   |                           |   | 3.07                    | 14.78                   | 10.46                     | 41.37                            | 46.00              | -4.63               |
| 358.01         | 7.94                       | 100                       | 0                    |                           |   | 3.27                    | 15.44                   | 10.46                     | 37.11                            | 46.00              | -8.89               |
| 375.05         | 8.85                       | 100                       | 90                   |                           |   | 3.35                    | 15.30                   | 10.46                     | 37.96                            | 46.00              | -8.04               |
| 386.01         | 15.71                      | 100                       | 180                  | 13.62                     | Q | 3.39                    | 15.61                   | 10.46                     | 43.08                            | 46.00              | -2.92               |

**RADIATED EMISSIONS TEST RESULTS**

|                       |                                                                                                                            |                        |              |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------|------------------------|--------------|
| <b>CLIENT:</b>        | Intel Corporation                                                                                                          | <b>DATE:</b>           | 06/25/09     |
| <b>EUT:</b>           | Intel® Centrino® Ultimate-N 6300                                                                                           | <b>PROJECT NUMBER:</b> | INTEL-090526 |
| <b>MODEL NUMBER:</b>  | 633ANHMW                                                                                                                   | <b>TEST ENGINEER:</b>  | JC           |
| <b>SERIAL NUMBER:</b> | 0015005A17C0                                                                                                               | <b>SITE #:</b>         | 2            |
| <b>CONFIGURATION:</b> | Tested installed in an extender board connected to the host laptop's mini PCI slot in <b>802.11a (5745-5825 MHz) mode.</b> | <b>TEMPERATURE:</b>    | 27° C        |
|                       |                                                                                                                            | <b>HUMIDITY:</b>       | 44% RH       |
|                       |                                                                                                                            | <b>TIME:</b>           | 3:00 PM      |

|                     |                                                                                                                                                                                           |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description:</b> | Radiated RF Emissions (1 GHz – 18 GHz)                                                                                                                                                    |
| <b>Results:</b>     | <b>PASSED</b> Horizontal and Vertical Antenna Polarizations Class B Limits                                                                                                                |
| <b>Note:</b>        | Radiated Emissions Measurements were performed on the EUT with power supply set at the following voltage and frequency. <ul style="list-style-type: none"><li>• 120VAC / 60 Hz.</li></ul> |

| Unwanted Spurious Emissions Limits |                       |                                                                |                                                                      |
|------------------------------------|-----------------------|----------------------------------------------------------------|----------------------------------------------------------------------|
| Frequency (MHz)                    | Field Strength (uV/m) | Field Strength (dBuV/m)<br>(Emissions in the restricted bands) | Field Strength (dBm/MHz)<br>(Emissions outside the restricted bands) |
| Above 960                          | 500                   | 54.00 (Average)<br>74.00 (Peak)                                | < -20 dBc                                                            |

**Radiated Emissions Sample Calculations**

$$\text{Corrected Meter Reading} = \text{Meter Reading} + F + C - D$$

Where, F = Antenna Factor

C = Cable Factor

G = Amplifier Gain

D = Distance Factor (if applicable)

Therefore, the equation for determining the Corrected Meter Reading Limit (CML) is:

$$\text{CML} = \text{Specification Limit} - F - C + D$$



## Radiated Emissions Test Results (Continued)

**Fundamental Measurements in 802.11a mode (5745-5825 MHz)****Channels 149, 157, & 165****Continuous TX at Chain A Antenna port with Shanghai Universe Antennas****Aegis Labs, Inc. File #: INTEL-090526-09****RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV/m) | Limits<br>(dBuV/m) | Diff (dB)<br>+=FAIL | Comments       |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|---|-------------------------|------------------------|----------------------------------|--------------------|---------------------|----------------|
| 5745.00        | 63.83                      | 100                       | 90                   |                           |   | 3.98                    | 34.89                  | 102.71                           |                    |                     | <b>Ch. 149</b> |
| 5745.00        |                            |                           |                      | 53.67                     | A | 3.98                    | 34.89                  | 92.55                            |                    |                     |                |
| 5785.00        | 62.50                      | 100                       | 90                   |                           |   | 4.00                    | 34.94                  | 101.44                           |                    |                     | <b>Ch. 157</b> |
| 5785.00        |                            |                           |                      | 52.83                     | A | 4.00                    | 34.94                  | 91.77                            |                    |                     |                |
| 5825.00        | 59.33                      | 100                       | 45                   |                           |   | 4.01                    | 34.99                  | 98.33                            |                    |                     | <b>Ch. 165</b> |
| 5825.00        |                            |                           |                      | 50.50                     | A | 4.01                    | 34.99                  | 89.50                            |                    |                     |                |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV/m) | Limits<br>(dBuV/m) | Diff (dB)<br>+=FAIL | Comments       |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|---|-------------------------|------------------------|----------------------------------|--------------------|---------------------|----------------|
| 5745.00        | 63.50                      | 100                       | 315                  |                           |   | 3.98                    | 35.05                  | 102.53                           |                    |                     | <b>Ch. 149</b> |
| 5745.00        |                            |                           |                      | 53.83                     | A | 3.98                    | 35.05                  | 92.86                            |                    |                     |                |
| 5785.00        | 62.17                      | 100                       | 315                  |                           |   | 4.00                    | 35.09                  | 101.25                           |                    |                     | <b>Ch. 157</b> |
| 5785.00        |                            |                           |                      | 52.50                     | A | 4.00                    | 35.09                  | 91.58                            |                    |                     |                |
| 5825.00        | 60.00                      | 100                       | 315                  |                           |   | 4.01                    | 35.13                  | 99.14                            |                    |                     | <b>Ch. 165</b> |
| 5825.00        |                            |                           |                      | 50.83                     | A | 4.01                    | 35.13                  | 89.97                            |                    |                     |                |

NOTE: Fundamental signals measured to calculate the band edge field strengths using the "Marker Delta Method".



## Radiated Emissions Test Results (Continued)

*Band Edge Field Strength Measurements in 802.11a mode (5745-5825 MHz)*  
*Channels 149 & 165*  
*Continuous TX at Chain A Antenna port with Shanghai Universe Antennas*  
*Aegis Labs, Inc. File #: INTEL-090526-09*

**RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV/m) | Limits<br>(dBuV/m) | Diff (dB)<br>+=FAIL | Comments       |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|-------------------------|------------------------|----------------------------------|--------------------|---------------------|----------------|
| 5725.00        | 33.83                      | 100                       | 90                   |                           | 3.98                    | 34.87                  | 72.68                            | 82.71              | -10.03              | <b>Ch. 149</b> |
| 5850.00        | 31.50                      | 100                       | 45                   |                           | 4.02                    | 35.02                  | 70.54                            | 78.33              | -7.79               | <b>Ch. 165</b> |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV/m) | Limits<br>(dBuV/m) | Diff (dB)<br>+=FAIL | Comments       |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|-------------------------|------------------------|----------------------------------|--------------------|---------------------|----------------|
| 5725.00        | 34.17                      | 100                       | 315                  |                           | 3.98                    | 35.03                  | 73.17                            | 82.53              | -9.36               | <b>Ch. 149</b> |
| 5850.00        | 30.67                      | 100                       | 315                  |                           | 4.02                    | 35.15                  | 69.84                            | 79.14              | -9.30               | <b>Ch. 165</b> |

NOTE: The “Band Edge Field Strength” was calculated using the “Fundamental” and “Conducted Band Edge” measurements per the “Marker-Delta Method” with the following formula:

$$BE = F_m - \Delta m$$

Where

BE = Band Edge Field Strength

F<sub>m</sub> = Measured Fundamental (Peak or Average)

Δ<sub>m</sub> = Measured Conducted Band Edge Delta (Peak or Average)



## Radiated Emissions Test Results (Continued)

**Fundamental Measurements in 802.11a mode (5745-5825 MHz)****Channels 149, 157, & 165****Continuous TX at Chain B Antenna port with Shanghai Universe Antennas****Aegis Labs, Inc. File #: INTEL-090526-11****RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV/m) | Limits<br>(dBuV/m) | Diff (dB)<br>+=FAIL | Comments       |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|---|-------------------------|------------------------|----------------------------------|--------------------|---------------------|----------------|
| 5745.00        | 65.00                      | 100                       | 315                  |                           |   | 3.98                    | 34.89                  | 103.88                           |                    |                     | <b>Ch. 149</b> |
| 5745.00        |                            |                           |                      | 55.50                     | A | 3.98                    | 34.89                  | 94.38                            |                    |                     |                |
| 5785.00        | 64.33                      | 100                       | 315                  |                           |   | 4.00                    | 34.94                  | 103.27                           |                    |                     | <b>Ch. 157</b> |
| 5785.00        |                            |                           |                      | 54.83                     | A | 4.00                    | 34.94                  | 93.77                            |                    |                     |                |
| 5825.00        | 63.50                      | 100                       | 315                  |                           |   | 4.01                    | 34.99                  | 102.50                           |                    |                     | <b>Ch. 165</b> |
| 5825.00        |                            |                           |                      | 54.17                     | A | 4.01                    | 34.99                  | 93.17                            |                    |                     |                |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV/m) | Limits<br>(dBuV/m) | Diff (dB)<br>+=FAIL | Comments       |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|---|-------------------------|------------------------|----------------------------------|--------------------|---------------------|----------------|
| 5745.00        | 64.67                      | 100                       | 315                  |                           |   | 3.98                    | 35.05                  | 103.70                           |                    |                     | <b>Ch. 149</b> |
| 5745.00        |                            |                           |                      | 55.17                     | A | 3.98                    | 35.05                  | 94.20                            |                    |                     |                |
| 5785.00        | 63.83                      | 100                       | 315                  |                           |   | 4.00                    | 35.09                  | 102.91                           |                    |                     | <b>Ch. 157</b> |
| 5785.00        |                            |                           |                      | 54.67                     | A | 4.00                    | 35.09                  | 93.75                            |                    |                     |                |
| 5825.00        | 63.17                      | 100                       | 315                  |                           |   | 4.01                    | 35.13                  | 102.31                           |                    |                     | <b>Ch. 165</b> |
| 5825.00        |                            |                           |                      | 54.00                     | A | 4.01                    | 35.13                  | 93.14                            |                    |                     |                |

NOTE: Fundamental signals measured to calculate the band edge field strengths using the "Marker Delta Method".



## Radiated Emissions Test Results (Continued)

*Band Edge Field Strength Measurements in 802.11a mode (5745-5825 MHz)  
Channels 149 & 165  
Continuous TX at Chain B Antenna port with Shanghai Universe Antennas  
Aegis Labs, Inc. File #: INTEL-090526-11*

**RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV/m) | Limits<br>(dBuV/m) | Diff (dB)<br>+=FAIL | Comments       |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|-------------------------|------------------------|----------------------------------|--------------------|---------------------|----------------|
| 5725.00        | 36.67                      | 100                       | 315                  |                           | 3.98                    | 34.87                  | 75.52                            | 83.88              | -8.36               | <b>Ch. 149</b> |
| 5850.00        | 31.83                      | 100                       | 315                  |                           | 4.02                    | 35.02                  | 70.87                            | 82.50              | -11.63              | <b>Ch. 165</b> |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV/m) | Limits<br>(dBuV/m) | Diff (dB)<br>+=FAIL | Comments       |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|-------------------------|------------------------|----------------------------------|--------------------|---------------------|----------------|
| 5725.00        | 37.00                      | 100                       | 315                  |                           | 3.98                    | 35.03                  | 76.00                            | 83.70              | -7.70               | <b>Ch. 149</b> |
| 5850.00        | 31.50                      | 100                       | 315                  |                           | 4.02                    | 35.15                  | 70.67                            | 82.31              | -11.64              | <b>Ch. 165</b> |

NOTE: The “Band Edge Field Strength” was calculated using the “Fundamental” and “Conducted Band Edge” measurements per the “Marker-Delta Method” with the following formula:

$$BE = F_m - \Delta m$$

Where

BE = Band Edge Field Strength

F<sub>m</sub> = Measured Fundamental (Peak or Average)

Δ<sub>m</sub> = Measured Conducted Band Edge Delta (Peak or Average)



## Radiated Emissions Test Results (Continued)

**Fundamental Measurements in 802.11a mode (5745-5825 MHz)****Channels 149, 157, & 165****Continuous TX at Chain C Antenna port with Shanghai Universe Antennas****Aegis Labs, Inc. File #: INTEL-090526-13****RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV/m) | Limits<br>(dBuV/m) | Diff (dB)<br>+=FAIL | Comments       |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|---|-------------------------|------------------------|----------------------------------|--------------------|---------------------|----------------|
| 5745.00        | 63.83                      | 100                       | 90                   |                           |   | 3.98                    | 34.89                  | 102.71                           |                    |                     | <b>Ch. 149</b> |
| 5745.00        |                            |                           |                      | 53.83                     | A | 3.98                    | 34.89                  | 92.71                            |                    |                     |                |
| 5785.00        | 63.00                      | 100                       | 90                   |                           |   | 4.00                    | 34.94                  | 101.94                           |                    |                     | <b>Ch. 157</b> |
| 5785.00        |                            |                           |                      | 53.17                     | A | 4.00                    | 34.94                  | 92.11                            |                    |                     |                |
| 5825.00        | 60.17                      | 100                       | 45                   |                           |   | 4.01                    | 34.99                  | 99.17                            |                    |                     | <b>Ch. 165</b> |
| 5825.00        |                            |                           |                      | 51.00                     | A | 4.01                    | 34.99                  | 90.00                            |                    |                     |                |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV/m) | Limits<br>(dBuV/m) | Diff (dB)<br>+=FAIL | Comments       |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|---|-------------------------|------------------------|----------------------------------|--------------------|---------------------|----------------|
| 5745.00        | 64.17                      | 100                       | 315                  |                           |   | 3.98                    | 35.05                  | 103.20                           |                    |                     | <b>Ch. 149</b> |
| 5745.00        |                            |                           |                      | 54.50                     | A | 3.98                    | 35.05                  | 93.53                            |                    |                     |                |
| 5785.00        | 62.83                      | 100                       | 315                  |                           |   | 4.00                    | 35.09                  | 101.91                           |                    |                     | <b>Ch. 157</b> |
| 5785.00        |                            |                           |                      | 53.83                     | A | 4.00                    | 35.09                  | 92.91                            |                    |                     |                |
| 5825.00        | 61.33                      | 100                       | 315                  |                           |   | 4.01                    | 35.13                  | 100.47                           |                    |                     | <b>Ch. 165</b> |
| 5825.00        |                            |                           |                      | 51.67                     | A | 4.01                    | 35.13                  | 90.81                            |                    |                     |                |

NOTE: Fundamental signals measured to calculate the band edge field strengths using the "Marker Delta Method".



## Radiated Emissions Test Results (Continued)

*Band Edge Field Strength Measurements in 802.11a mode (5745-5825 MHz)  
Channels 149 & 165  
Continuous TX at Chain C Antenna port with Shanghai Universe Antennas  
Aegis Labs, Inc. File #: INTEL-090526-13*

**RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV/m) | Limits<br>(dBuV/m) | Diff (dB)<br>+=FAIL | Comments       |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|-------------------------|------------------------|----------------------------------|--------------------|---------------------|----------------|
| 5725.00        | 35.00                      | 100                       | 90                   |                           | 3.98                    | 34.87                  | 73.85                            | 82.71              | -8.86               | <b>Ch. 149</b> |
| 5850.00        | 32.17                      | 100                       | 45                   |                           | 4.02                    | 35.02                  | 71.21                            | 79.17              | -7.96               | <b>Ch. 165</b> |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV/m) | Limits<br>(dBuV/m) | Diff (dB)<br>+=FAIL | Comments       |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|-------------------------|------------------------|----------------------------------|--------------------|---------------------|----------------|
| 5725.00        | 36.33                      | 100                       | 315                  |                           | 3.98                    | 35.03                  | 75.33                            | 83.20              | -7.87               | <b>Ch. 149</b> |
| 5850.00        | 31.83                      | 100                       | 315                  |                           | 4.02                    | 35.15                  | 71.00                            | 80.47              | -9.47               | <b>Ch. 165</b> |

NOTE: The “Band Edge Field Strength” was calculated using the “Fundamental” and “Conducted Band Edge” measurements per the “Marker-Delta Method” with the following formula:

$$BE = F_m - \Delta m$$

Where

BE = Band Edge Field Strength

F<sub>m</sub> = Measured Fundamental (Peak or Average)

Δ<sub>m</sub> = Measured Conducted Band Edge Delta (Peak or Average)



## Radiated Emissions Test Results (Continued)

*Spurious Emissions Measurements in 802.11a mode (5745-5825 MHz)*  
*Channels 149, 157, & 165*  
*Continuous TX at Chain A, B, & C Antenna ports with Shanghai Universe Antennas*  
*Aegis Labs, Inc. File #: INTEL-090526-17*

| RADIATED EMISSIONS - Horizontal Antenna Polarization |                      |                     |                   |                        |   |                    |                   |                  |                          |               |                  |                       |
|------------------------------------------------------|----------------------|---------------------|-------------------|------------------------|---|--------------------|-------------------|------------------|--------------------------|---------------|------------------|-----------------------|
| Freq. (MHz)                                          | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Preamp Factor (dB) | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL | Channel/ Chain Tested |
| 7713.32                                              | 52.33                | 100                 | 270               |                        |   | 45.55              | 4.67              | 35.83            | 47.28                    | 74.00         | -26.72           | Ch. 157/              |
| 7713.32                                              |                      | 100                 | 270               | 44.84                  | A | 45.55              | 4.67              | 35.83            | 39.79                    | 54.00         | -14.21           | A                     |
| 11569.98                                             | 51.00                | 100                 | 0                 |                        |   | 45.34              | 5.93              | 38.36            | 49.94                    | 74.00         | -24.06           |                       |
| 11569.98                                             |                      | 100                 | 0                 | 38.13                  | A | 45.34              | 5.93              | 38.36            | 37.07                    | 54.00         | -16.93           |                       |
| 3856.66                                              | 51.83                | 100                 | 315               |                        |   | 47.58              | 3.22              | 33.23            | 40.70                    | 74.00         | -33.30           | Ch. 157/              |
| 7713.32                                              | 52.67                | 100                 | 315               |                        |   | 45.55              | 4.67              | 35.83            | 47.62                    | 74.00         | -26.38           | B                     |
| 7713.32                                              |                      | 100                 | 315               | 40.99                  | A | 45.55              | 4.67              | 35.83            | 35.94                    | 54.00         | -18.06           |                       |
| 3856.66                                              | 52.33                | 100                 | 270               |                        |   | 47.58              | 3.22              | 33.23            | 41.20                    | 74.00         | -32.80           | Ch.157/               |
| 7713.32                                              | 52.33                | 100                 | 315               |                        |   | 45.55              | 4.67              | 35.83            | 47.28                    | 74.00         | -26.72           | C                     |
| 7713.32                                              |                      | 100                 | 315               | 41.61                  | A | 45.55              | 4.67              | 35.83            | 36.56                    | 54.00         | -17.44           |                       |
| 3830.00                                              | 52.00                | 100                 | 315               |                        |   | 47.56              | 3.23              | 33.20            | 40.87                    | 74.00         | -33.13           | Ch. 149/              |
| 7660.00                                              | 52.00                | 100                 | 315               |                        |   | 45.57              | 4.65              | 35.80            | 46.87                    | 74.00         | -27.13           | A                     |
| 7660.00                                              |                      | 100                 | 315               | 40.90                  | A | 45.57              | 4.65              | 35.80            | 35.77                    | 54.00         | -18.23           |                       |
| 3883.33                                              | 51.83                | 100                 | 270               |                        |   | 47.60              | 3.22              | 33.26            | 40.71                    | 74.00         | -33.29           | Ch.165/               |
| 7666.66                                              | 52.67                | 100                 | 315               |                        |   | 45.57              | 4.65              | 35.80            | 47.55                    | 74.00         | -26.45           | A                     |
| 7666.66                                              |                      | 100                 | 315               | 40.81                  | A | 45.57              | 4.65              | 35.80            | 35.69                    | 54.00         | -18.31           |                       |

| RADIATED EMISSIONS - Vertical Antenna Polarization |                      |                     |                   |                        |   |                    |                   |                  |                          |               |                  |                       |
|----------------------------------------------------|----------------------|---------------------|-------------------|------------------------|---|--------------------|-------------------|------------------|--------------------------|---------------|------------------|-----------------------|
| Freq. (MHz)                                        | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Preamp Factor (dB) | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL | Channel/ Chain Tested |
| 3856.66                                            | 52.83                | 100                 | 0                 |                        |   | 47.58              | 3.22              | 33.17            | 41.64                    | 74.00         | -32.36           | Ch. 157/              |
| 7713.32                                            | 52.00                | 100                 | 315               |                        |   | 45.55              | 4.67              | 35.79            | 46.90                    | 74.00         | -27.10           | A                     |
| 7713.32                                            |                      | 100                 | 315               | 43.98                  | A | 45.55              | 4.67              | 35.79            | 38.88                    | 54.00         | -15.12           |                       |
| 11569.98                                           | 50.83                | 100                 | 0                 |                        |   | 45.34              | 5.93              | 38.36            | 49.77                    | 74.00         | -24.23           |                       |
| 11569.98                                           |                      | 100                 | 0                 | 40.13                  | A | 45.34              | 5.93              | 38.36            | 39.07                    | 54.00         | -14.93           |                       |
| 3856.66                                            | 53.83                | 100                 | 0                 |                        |   | 47.58              | 3.22              | 33.17            | 42.64                    | 74.00         | -31.36           | Ch. 157/              |
| 7713.32                                            | 53.50                | 100                 | 0                 |                        |   | 45.55              | 4.67              | 35.79            | 48.40                    | 74.00         | -25.60           | B                     |
| 7713.32                                            |                      | 100                 | 0                 | 44.17                  | A | 45.55              | 4.67              | 35.79            | 39.07                    | 54.00         | -14.93           |                       |
| 3856.66                                            | 52.33                | 100                 | 0                 |                        |   | 47.58              | 3.22              | 33.17            | 41.14                    | 74.00         | -32.86           | Ch.157/               |
| 7713.32                                            | 53.33                | 100                 | 315               |                        |   | 45.55              | 4.67              | 35.79            | 48.23                    | 74.00         | -25.77           | C                     |
| 7713.32                                            |                      | 100                 | 315               | 42.50                  | A | 45.55              | 4.67              | 35.79            | 37.40                    | 54.00         | -16.60           |                       |
| 3830.00                                            | 52.83                | 100                 | 0                 |                        |   | 47.56              | 3.23              | 33.13            | 41.63                    | 74.00         | -32.37           | Ch. 149/              |
| 7660.00                                            | 53.33                | 100                 | 0                 |                        |   | 45.57              | 4.65              | 35.76            | 48.17                    | 74.00         | -25.83           | A                     |
| 7660.00                                            |                      | 100                 | 0                 | 43.91                  | A | 45.57              | 4.65              | 35.76            | 38.75                    | 54.00         | -15.25           |                       |
| 3883.33                                            | 52.50                | 100                 | 0                 |                        |   | 47.60              | 3.22              | 33.21            | 41.33                    | 74.00         | -32.67           | Ch.165/               |
| 7666.66                                            | 54.17                | 100                 | 0                 |                        |   | 45.57              | 4.65              | 35.77            | 49.02                    | 74.00         | -24.98           | A                     |
| 7666.66                                            |                      | 100                 | 0                 | 45.79                  | A | 45.57              | 4.65              | 35.77            | 40.64                    | 54.00         | -13.36           |                       |

**RADIATED EMISSIONS TEST RESULTS**

|                       |                                                                                                                              |                        |              |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------|------------------------|--------------|
| <b>CLIENT:</b>        | Intel Corporation                                                                                                            | <b>DATE:</b>           | 06/25/09     |
| <b>EUT:</b>           | Intel® Centrino® Ultimate-N 6300                                                                                             | <b>PROJECT NUMBER:</b> | INTEL-090526 |
| <b>MODEL NUMBER:</b>  | 633ANHMW                                                                                                                     | <b>TEST ENGINEER:</b>  | JC           |
| <b>SERIAL NUMBER:</b> | 0015005A17C0                                                                                                                 | <b>SITE #:</b>         | 2            |
| <b>CONFIGURATION:</b> | Tested installed in an extender board connected to the host laptop's mini PCI slot in <b>802.11b (2400-2483.5 MHz) mode.</b> | <b>TEMPERATURE:</b>    | 27° C        |
|                       |                                                                                                                              | <b>HUMIDITY:</b>       | 44% RH       |
|                       |                                                                                                                              | <b>TIME:</b>           | 3:00 PM      |

|                     |                                                                                                                                                                                         |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description:</b> | Radiated RF Emissions (1 GHz – 18 GHz)                                                                                                                                                  |
| <b>Results:</b>     | <b>PASSED</b> Horizontal and Vertical Antenna Polarizations Class B Limits                                                                                                              |
| <b>Note:</b>        | Radiated Emissions Measurements were performed on the EUT with power supply set at the following voltage and frequency. <ul style="list-style-type: none"><li>120VAC / 60 Hz.</li></ul> |

| Unwanted Spurious Emissions Limits |                       |                                                                |                                                                      |
|------------------------------------|-----------------------|----------------------------------------------------------------|----------------------------------------------------------------------|
| Frequency (MHz)                    | Field Strength (uV/m) | Field Strength (dBuV/m)<br>(Emissions in the restricted bands) | Field Strength (dBm/MHz)<br>(Emissions outside the restricted bands) |
| Above 960                          | 500                   | 54.00 (Average)<br>74.00 (Peak)                                | < -20 dBc                                                            |

**Radiated Emissions Sample Calculations**

$$\text{Corrected Meter Reading} = \text{Meter Reading} + F + C - D$$

Where, F = Antenna Factor

C = Cable Factor

G = Amplifier Gain

D = Distance Factor (if applicable)

Therefore, the equation for determining the Corrected Meter Reading Limit (CML) is:

$$\text{CML} = \text{Specification Limit} - F - C + D$$



## Radiated Emissions Test Results (Continued)

*Fundamental Measurements in 802.11b mode (2400-2483.5 MHz)*  
*Channels 1, 6, & 11*  
*Continuous TX at Chain A Antenna port with Shanghai Universe Antennas*  
*Aegis Labs, Inc. File #: INTEL-090526-09*

| RADIATED EMISSIONS - Horizontal Antenna Polarization |                      |                     |                   |                        |   |                   |                  |                            |                 |                  |               |
|------------------------------------------------------|----------------------|---------------------|-------------------|------------------------|---|-------------------|------------------|----------------------------|-----------------|------------------|---------------|
| Freq. (MHz)                                          | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV/m) | Limits (dBuV/m) | Diff (dB) +=FAIL | Comments      |
| 2412.00                                              | 67.17                | 100                 | 135               |                        |   | 2.53              | 32.18            | 101.87                     |                 |                  | <b>Ch. 1</b>  |
| 2412.00                                              |                      |                     |                   | 64.17                  | A | 2.53              | 32.18            | 98.87                      |                 |                  |               |
| 2437.00                                              | 68.50                | 100                 | 135               |                        |   | 2.54              | 32.21            | 103.25                     |                 |                  | <b>Ch. 6</b>  |
| 2437.00                                              |                      |                     |                   | 65.83                  | A | 2.54              | 32.21            | 100.58                     |                 |                  |               |
| 2462.00                                              | 68.00                | 100                 | 135               |                        |   | 2.55              | 32.25            | 102.80                     |                 |                  | <b>Ch. 11</b> |
| 2462.00                                              |                      |                     |                   | 64.83                  | A | 2.55              | 32.25            | 99.63                      |                 |                  |               |

| RADIATED EMISSIONS - Vertical Antenna Polarization |                      |                     |                   |                        |   |                   |                  |                            |                 |                  |               |
|----------------------------------------------------|----------------------|---------------------|-------------------|------------------------|---|-------------------|------------------|----------------------------|-----------------|------------------|---------------|
| Freq. (MHz)                                        | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV/m) | Limits (dBuV/m) | Diff (dB) +=FAIL | Comments      |
| 2412.00                                            | 69.83                | 100                 | 0                 |                        |   | 2.53              | 31.89            | 104.25                     |                 |                  | <b>Ch. 1</b>  |
| 2412.00                                            |                      |                     |                   | 66.67                  | A | 2.53              | 31.89            | 101.09                     |                 |                  |               |
| 2437.00                                            | 69.33                | 100                 | 0                 |                        |   | 2.54              | 31.92            | 103.79                     |                 |                  | <b>Ch. 6</b>  |
| 2437.00                                            |                      |                     |                   | 66.33                  | A | 2.54              | 31.92            | 100.79                     |                 |                  |               |
| 2462.00                                            | 68.50                | 100                 | 0                 |                        |   | 2.55              | 31.95            | 103.01                     |                 |                  | <b>Ch. 11</b> |
| 2462.00                                            |                      |                     |                   | 65.67                  | A | 2.55              | 31.95            | 100.18                     |                 |                  |               |

NOTE: Fundamental signals measured to calculate the band edge field strengths using the "Marker Delta Method".



## Radiated Emissions Test Results (Continued)

**Band Edge Field Strength Measurements in 802.11b mode (2400-2483.5 MHz)****Channels 1 & 11****Continuous TX at Chain A Antenna port with Shanghai Universe Antennas****Aegis Labs, Inc. File #: INTEL-090526-09****RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq. (MHz) | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV/m) | Limits (dBuV/m) | Diff (dB) +=FAIL | Comments      |
|-------------|----------------------|---------------------|-------------------|------------------------|-------------------|------------------|----------------------------|-----------------|------------------|---------------|
| 2390.00     |                      |                     |                   |                        |                   |                  | 46.37                      | 74.00           | -27.63           | <b>Ch. 1</b>  |
| 2390.00     |                      |                     |                   |                        |                   |                  | 43.87                      | 74.00           | -30.13           |               |
| 2390.00     |                      |                     |                   | A                      |                   |                  | 40.04                      | 54.00           | -13.96           |               |
| 2390.00     |                      |                     |                   | A                      |                   |                  | 40.87                      | 54.00           | -13.13           |               |
| 2397.00     | 36.67                | 100                 | 135               |                        | 2.52              | 32.16            | 71.34                      | 81.87           | -10.53           |               |
| 2483.50     |                      |                     |                   |                        |                   |                  | 47.97                      | 74.00           | -26.03           | <b>Ch. 11</b> |
| 2483.50     |                      |                     |                   |                        |                   |                  | 46.80                      | 74.00           | -27.20           |               |
| 2483.50     |                      |                     |                   | A                      |                   |                  | 40.30                      | 54.00           | -13.70           |               |
| 2483.50     |                      |                     |                   | A                      |                   |                  | 43.63                      | 54.00           | -10.37           |               |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq. (MHz) | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV/m) | Limits (dBuV/m) | Diff (dB) +=FAIL | Comments      |
|-------------|----------------------|---------------------|-------------------|------------------------|-------------------|------------------|----------------------------|-----------------|------------------|---------------|
| 2390.00     |                      |                     |                   |                        |                   |                  | 48.75                      | 74.00           | -25.25           | <b>Ch. 1</b>  |
| 2390.00     |                      |                     |                   |                        |                   |                  | 46.25                      | 74.00           | -27.75           |               |
| 2390.00     |                      |                     |                   | A                      |                   |                  | 42.26                      | 54.00           | -11.74           |               |
| 2390.00     |                      |                     |                   | A                      |                   |                  | 43.09                      | 54.00           | -10.91           |               |
| 2397.00     | 38.50                | 100                 | 0                 |                        | 2.52              | 31.88            | 72.90                      | 84.25           | -11.35           |               |
| 2483.50     |                      |                     |                   |                        |                   |                  | 48.18                      | 74.00           | -25.82           | <b>Ch. 11</b> |
| 2483.50     |                      |                     |                   |                        |                   |                  | 47.01                      | 74.00           | -26.99           |               |
| 2483.50     |                      |                     |                   | A                      |                   |                  | 40.85                      | 54.00           | -13.15           |               |
| 2483.50     |                      |                     |                   | A                      |                   |                  | 44.18                      | 54.00           | -9.82            |               |

NOTE: The "Band Edge Field Strength" was calculated using the "Fundamental" and "Conducted Band Edge" measurements per the "Marker-Delta Method" with the following formula:

$$BE = F_m - \Delta m$$

Where

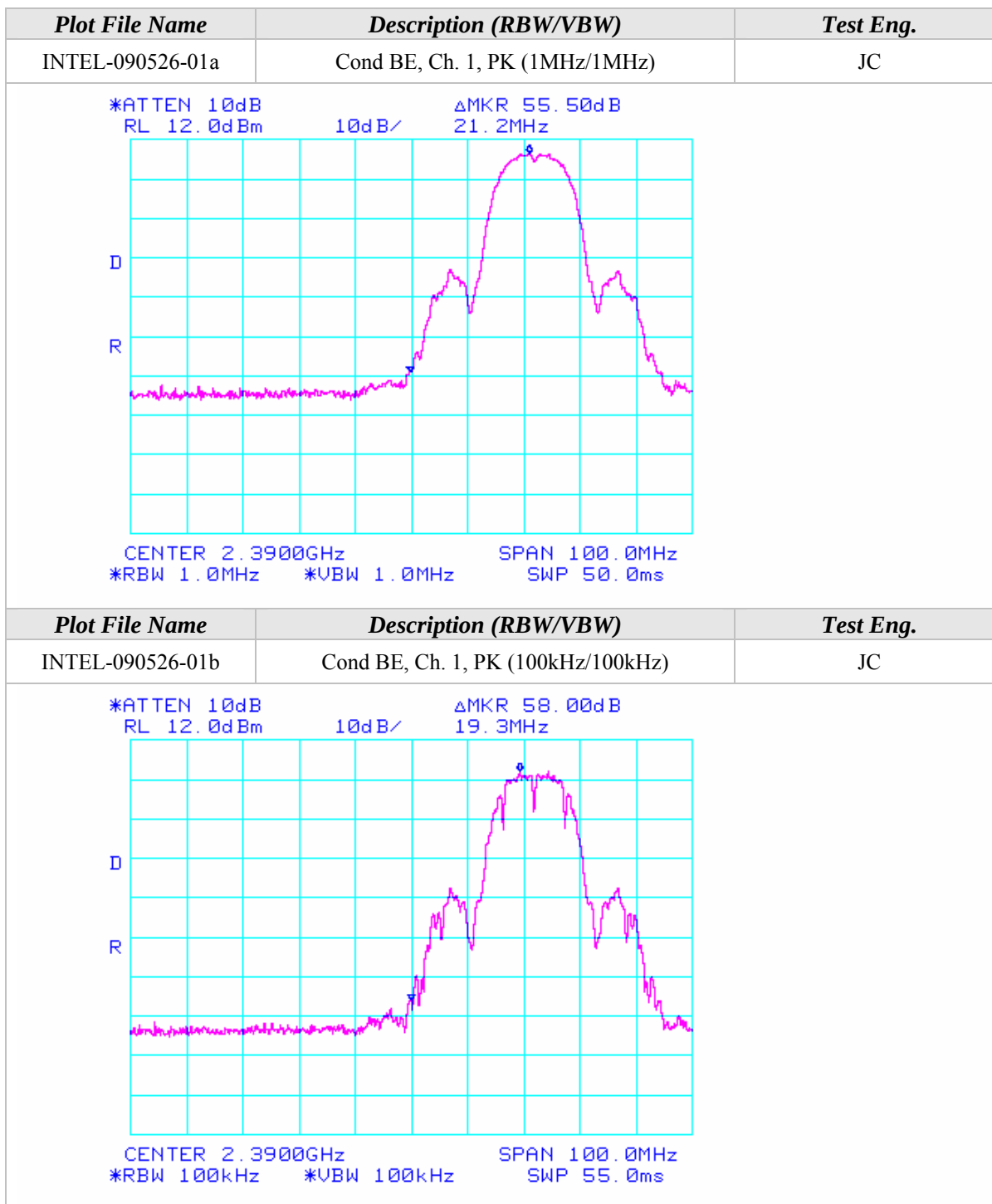
BE = Band Edge Field Strength

F<sub>m</sub> = Measured Fundamental (Peak or Average)

Δ<sub>m</sub> = Measured Conducted Band Edge Delta (Peak or Average)

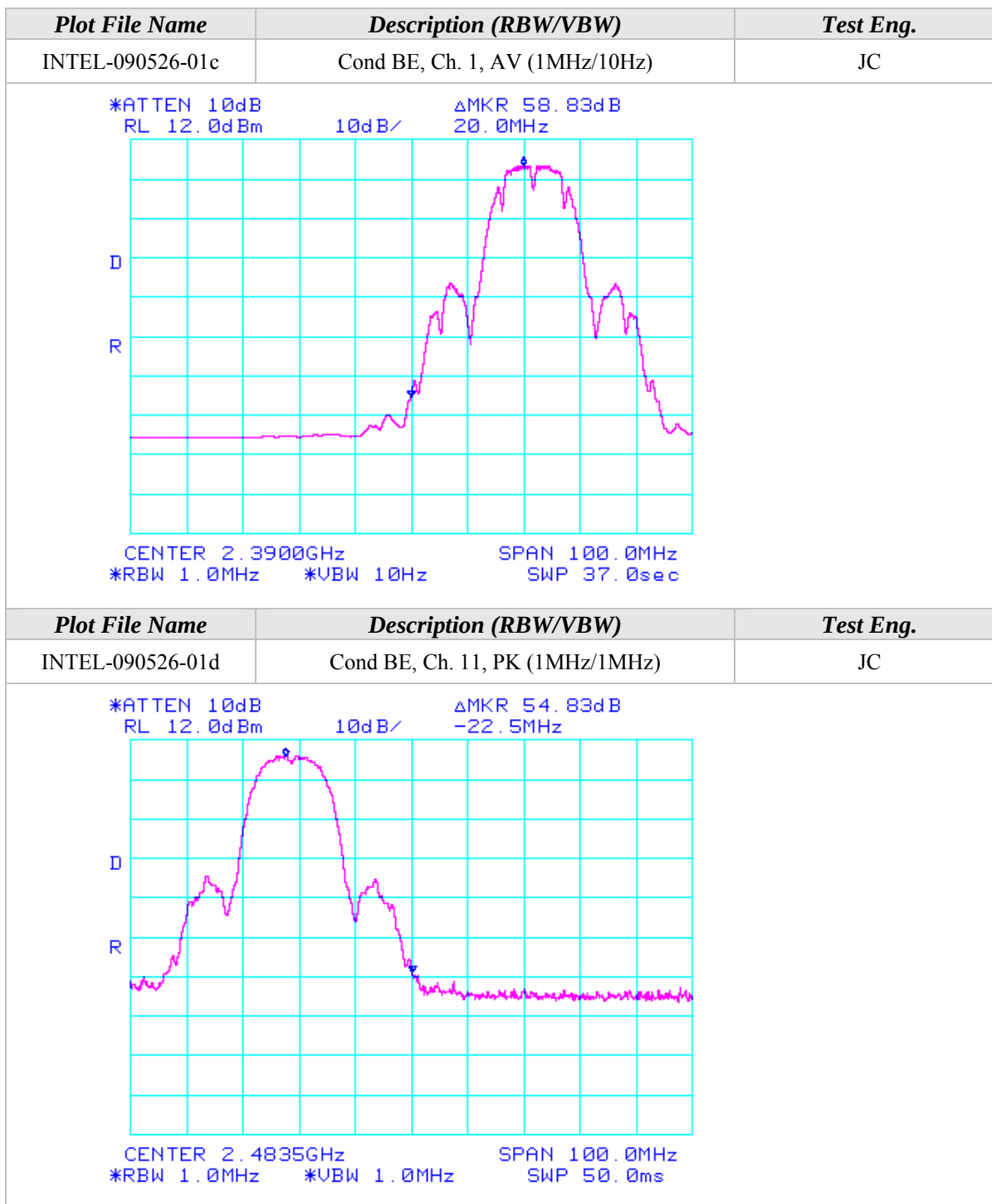


## Band-Edge Plots (Continued)



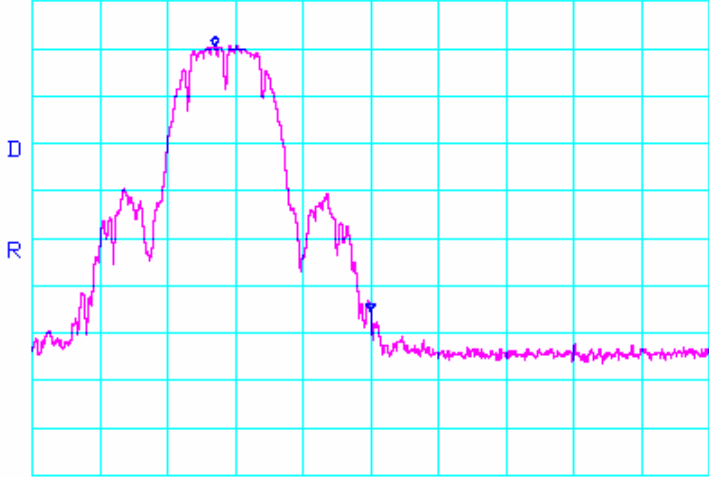
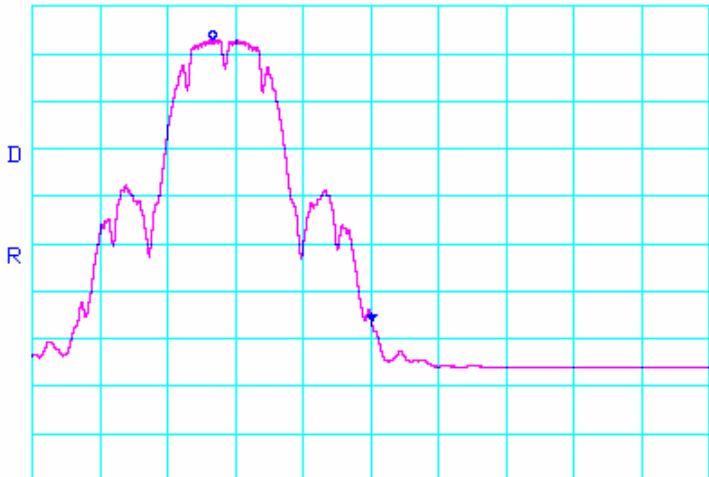


## Band-Edge Plots (Continued)





## Band-Edge Plots (Continued)

| Plot File Name                                                                                                                                                                                                                     | Description (RBW/VBW)               | Test Eng. |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-----------|
| INTEL-090526-01e                                                                                                                                                                                                                   | Cond BE, Ch. 11, PK (100kHz/100kHz) | JC        |
| <p>*ATTEN 10dB<br/>RL 12.0dBm 10dB/ ΔMKR 56.00dB<br/>-23.0MHz</p>  <p>CENTER 2.4835GHz SPAN 100.0MHz<br/>*RBW 100kHz *VBW 100kHz SWP 55.0ms</p>  |                                     |           |
| Plot File Name                                                                                                                                                                                                                     | Description (RBW/VBW)               | Test Eng. |
| INTEL-090526-01f                                                                                                                                                                                                                   | Cond BE, Ch. 11, AV (1MHz/10Hz)     | JC        |
| <p>*ATTEN 10dB<br/>RL 12.0dBm 10dB/ ΔMKR 59.33dB<br/>-23.5MHz</p>  <p>CENTER 2.4835GHz SPAN 100.0MHz<br/>*RBW 1.0MHz *VBW 10Hz SWP 37.0sec</p> |                                     |           |



## Radiated Emissions Test Results (Continued)

*Fundamental Measurements in 802.11b mode (2400-2483.5 MHz)*  
*Channels 1, 6, & 11*  
*Continuous TX at Chain B Antenna port with Shanghai Universe Antennas*  
*Aegis Labs, Inc. File #: INTEL-090526-11*

| RADIATED EMISSIONS - Horizontal Antenna Polarization |                      |                     |                   |                        |   |                   |                  |                          |               |                  |               |
|------------------------------------------------------|----------------------|---------------------|-------------------|------------------------|---|-------------------|------------------|--------------------------|---------------|------------------|---------------|
| Freq. (MHz)                                          | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL | Comments      |
| 2412.00                                              | 69.00                | 100                 | 315               |                        |   | 2.53              | 32.18            | 103.70                   |               |                  | <b>Ch. 1</b>  |
| 2412.00                                              |                      |                     |                   | 63.83                  | A | 2.53              | 32.18            | 98.53                    |               |                  |               |
| 2437.00                                              | 68.50                | 100                 | 315               |                        |   | 2.54              | 32.21            | 103.25                   |               |                  | <b>Ch. 6</b>  |
| 2437.00                                              |                      |                     |                   | 63.33                  | A | 2.54              | 32.21            | 98.08                    |               |                  |               |
| 2462.00                                              | 67.17                | 100                 | 315               |                        |   | 2.55              | 32.25            | 101.97                   |               |                  | <b>Ch. 11</b> |
| 2462.00                                              |                      |                     |                   | 62.17                  | A | 2.55              | 32.25            | 96.97                    |               |                  |               |

| RADIATED EMISSIONS - Vertical Antenna Polarization |                      |                     |                   |                        |   |                   |                  |                          |               |                  |               |
|----------------------------------------------------|----------------------|---------------------|-------------------|------------------------|---|-------------------|------------------|--------------------------|---------------|------------------|---------------|
| Freq. (MHz)                                        | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL | Comments      |
| 2412.00                                            | 66.50                | 100                 | 180               |                        |   | 2.53              | 31.89            | 100.92                   |               |                  | <b>Ch. 1</b>  |
| 2412.00                                            |                      |                     |                   | 63.17                  | A | 2.53              | 31.89            | 97.59                    |               |                  |               |
| 2437.00                                            | 65.67                | 100                 | 180               |                        |   | 2.54              | 31.92            | 100.13                   |               |                  | <b>Ch. 6</b>  |
| 2437.00                                            |                      |                     |                   | 62.50                  | A | 2.54              | 31.92            | 96.96                    |               |                  |               |
| 2462.00                                            | 65.00                | 100                 | 180               |                        |   | 2.55              | 31.95            | 99.51                    |               |                  | <b>Ch. 11</b> |
| 2462.00                                            |                      |                     |                   | 61.83                  | A | 2.55              | 31.95            | 96.34                    |               |                  |               |

NOTE: Fundamental signals measured to calculate the band edge field strengths using the "Marker Delta Method".



## Radiated Emissions Test Results (Continued)

**Band Edge Field Strength Measurements in 802.11b mode (2400-2483.5 MHz)****Channels 1 & 11****Continuous TX at Chain B Antenna port with Shanghai Universe Antennas****Aegis Labs, Inc. File #: INTEL-090526-11****RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq. (MHz) | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL | Comments      |
|-------------|----------------------|---------------------|-------------------|------------------------|-------------------|------------------|--------------------------|---------------|------------------|---------------|
| 2390.00     |                      |                     |                   |                        |                   |                  | 47.53                    | 74.00         | -26.47           | <b>Ch. 1</b>  |
| 2390.00     |                      |                     |                   |                        |                   |                  | 44.53                    | 74.00         | -29.47           |               |
| 2390.00     |                      |                     |                   | A                      |                   |                  | 36.37                    | 54.00         | -17.63           |               |
| 2390.00     |                      |                     |                   | A                      |                   |                  | 39.36                    | 54.00         | -14.64           |               |
| 2386.00     |                      |                     |                   |                        |                   |                  | 48.20                    | 74.00         | -25.80           |               |
| 2386.00     |                      |                     |                   |                        |                   |                  | 45.53                    | 74.00         | -28.47           |               |
| 2386.00     |                      |                     |                   | A                      |                   |                  | 37.37                    | 54.00         | -16.63           |               |
| 2386.00     |                      |                     |                   | A                      |                   |                  | 40.36                    | 54.00         | -13.64           |               |
| 2397.00     | 38.17                | 100                 | 315               |                        | 2.52              | 32.16            | 72.84                    | 83.70         | -10.86           | <b>Ch. 11</b> |
| 2483.50     |                      |                     |                   |                        |                   |                  | 46.47                    | 74.00         | -27.53           |               |
| 2483.50     |                      |                     |                   |                        |                   |                  | 43.47                    | 74.00         | -30.53           |               |
| 2483.50     |                      |                     |                   | A                      |                   |                  | 35.64                    | 54.00         | -18.36           |               |
| 2483.50     |                      |                     |                   | A                      |                   |                  | 38.47                    | 54.00         | -15.53           |               |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq. (MHz) | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL | Comments      |
|-------------|----------------------|---------------------|-------------------|------------------------|-------------------|------------------|--------------------------|---------------|------------------|---------------|
| 2390.00     |                      |                     |                   |                        |                   |                  | 44.75                    | 74.00         | -29.25           | <b>Ch. 1</b>  |
| 2390.00     |                      |                     |                   |                        |                   |                  | 41.75                    | 74.00         | -32.25           |               |
| 2390.00     |                      |                     |                   | A                      |                   |                  | 35.43                    | 54.00         | -18.57           |               |
| 2390.00     |                      |                     |                   | A                      |                   |                  | 38.42                    | 54.00         | -15.58           |               |
| 2386.00     |                      |                     |                   |                        |                   |                  | 45.42                    | 74.00         | -28.58           |               |
| 2386.00     |                      |                     |                   |                        |                   |                  | 42.75                    | 74.00         | -31.25           |               |
| 2386.00     |                      |                     |                   | A                      |                   |                  | 36.43                    | 54.00         | -17.57           |               |
| 2386.00     |                      |                     |                   | A                      |                   |                  | 39.42                    | 54.00         | -14.58           |               |
| 2397.00     | 36.33                | 100                 | 180               |                        | 2.52              | 31.88            | 70.73                    | 80.92         | -10.19           | <b>Ch. 11</b> |
| 2483.50     |                      |                     |                   |                        |                   |                  | 44.01                    | 74.00         | -29.99           |               |
| 2483.50     |                      |                     |                   |                        |                   |                  | 41.01                    | 74.00         | -32.99           |               |
| 2483.50     |                      |                     |                   | A                      |                   |                  | 35.01                    | 54.00         | -18.99           |               |
| 2483.50     |                      |                     |                   | A                      |                   |                  | 37.84                    | 54.00         | -16.16           |               |

NOTE: The "Band Edge Field Strength" was calculated using the "Fundamental" and "Conducted Band Edge" measurements per the "Marker-Delta Method" with the following formula:

$$BE = F_m - \Delta m$$

Where

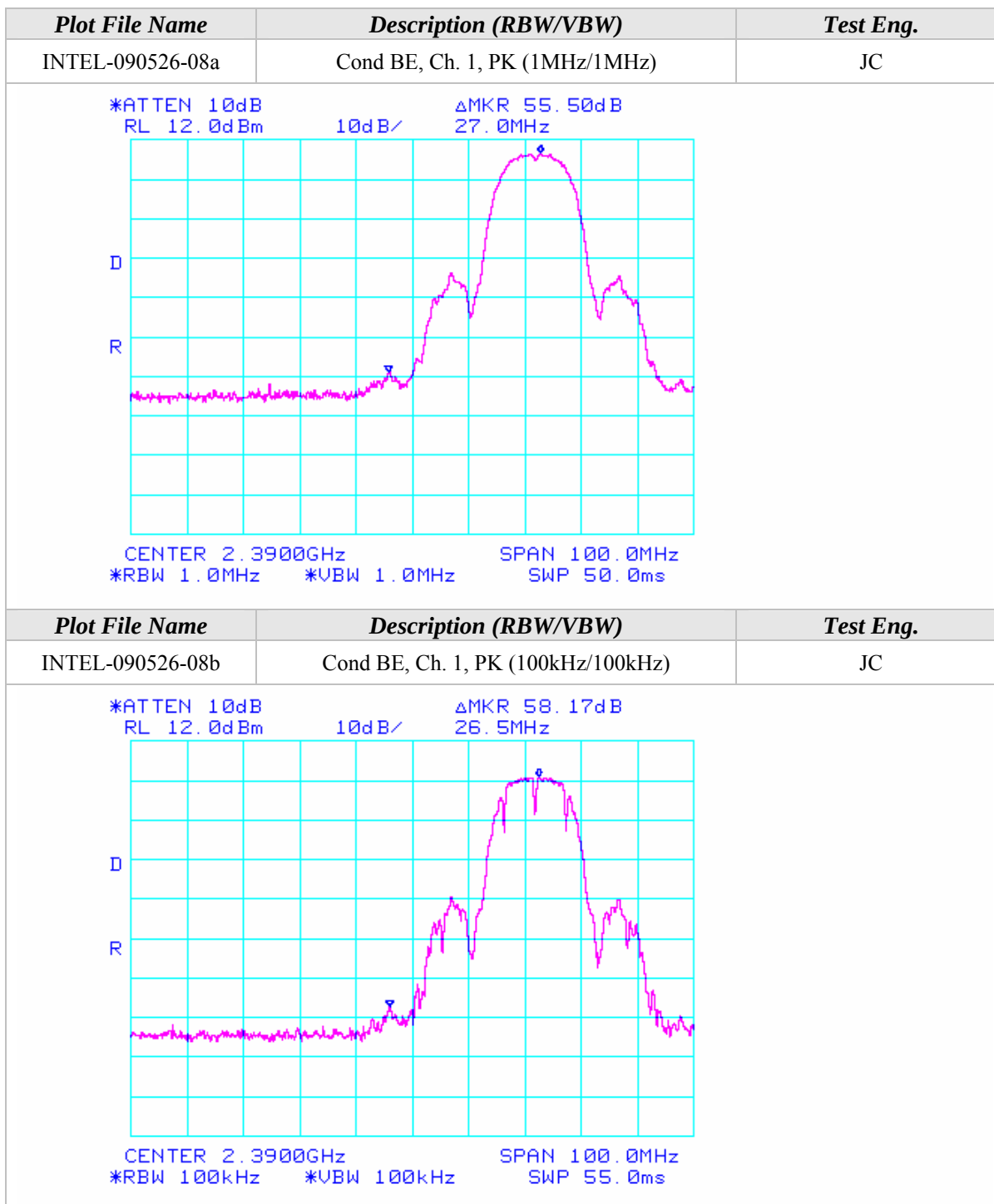
BE = Band Edge Field Strength

F<sub>m</sub> = Measured Fundamental (Peak or Average)

Δm = Measured Conducted Band Edge Delta (Peak or Average)

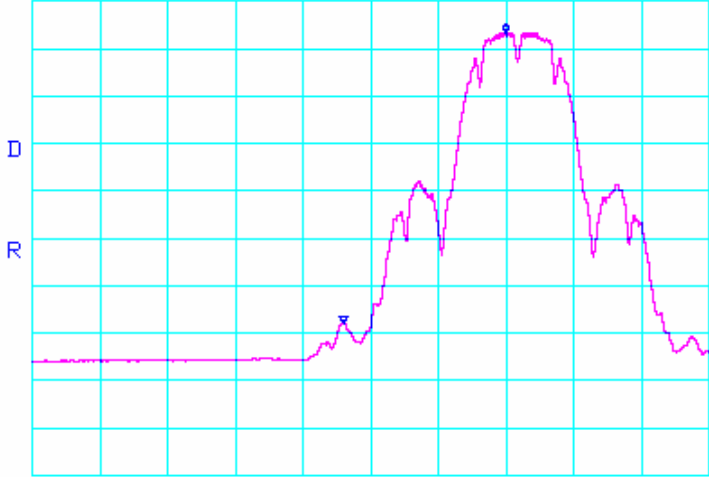
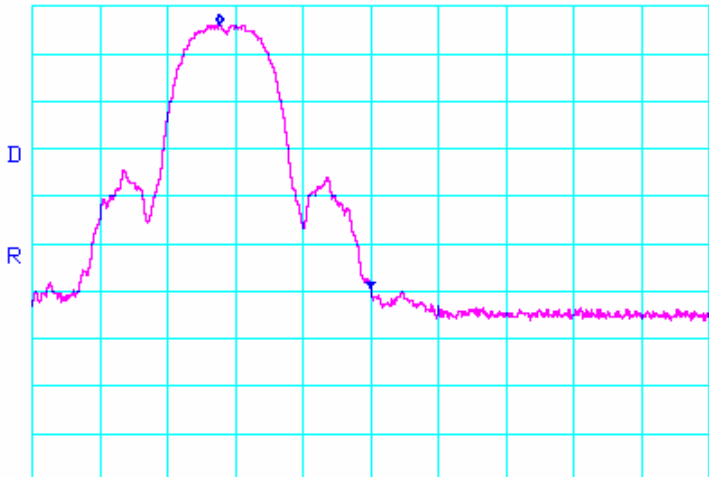


## Band-Edge Plots (Continued)



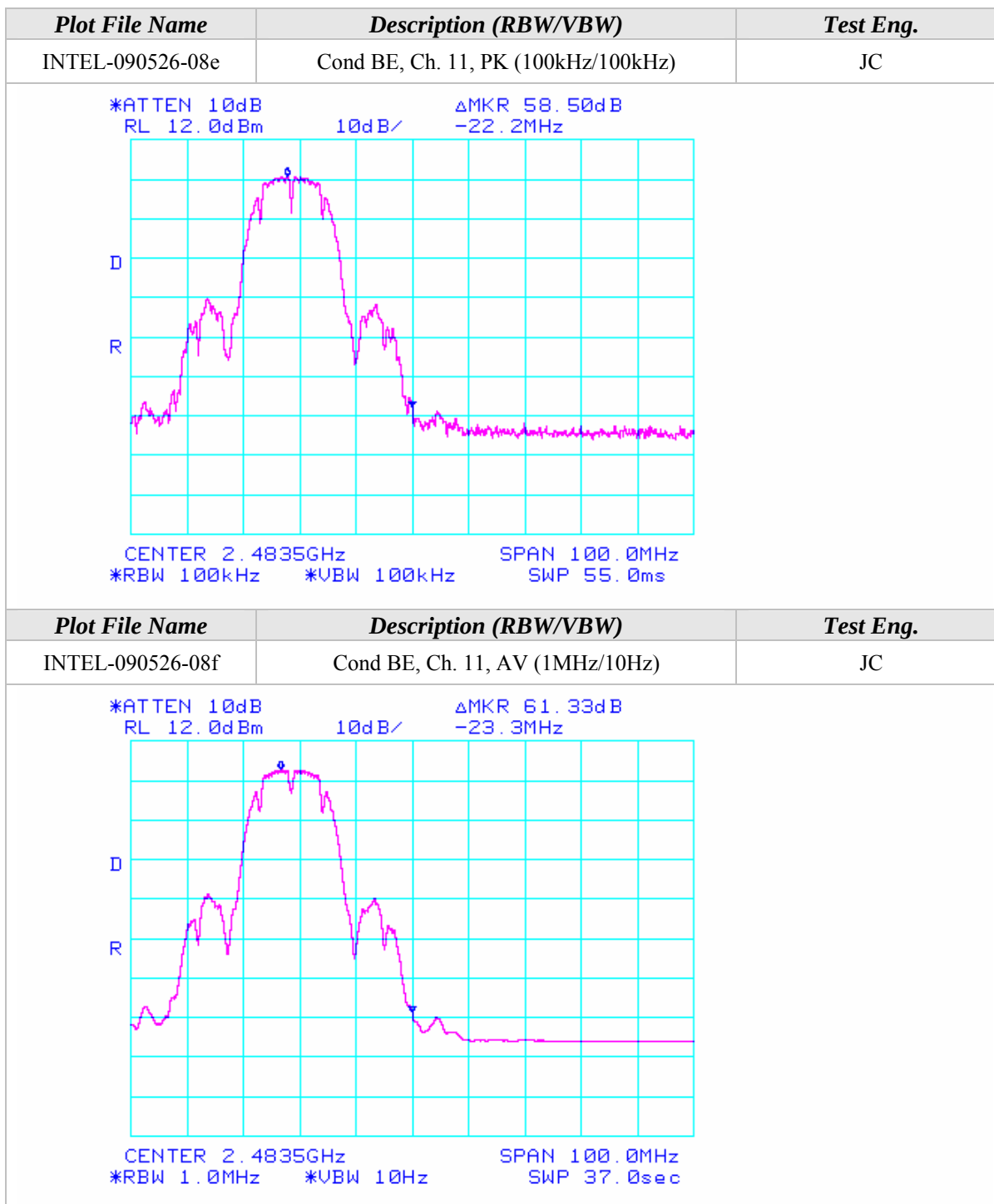


Band-Edge Plots (Continued)

| Plot File Name                                                                                                                                                                                                                                                                    | Description (RBW/VBW)           | Test Eng. |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------|
| INTEL-090526-08c                                                                                                                                                                                                                                                                  | Cond BE, Ch. 1, AV (1MHz/10Hz)  | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>ΔMKR 61.16dB<br/>24.0MHz</div></div><div>CENTER 2.3900GHzSPAN 100.0MHz<br/>*RBW 1.0MHz *VBW 10HzSWP 37.0sec</div></div>     |                                 |           |
| Plot File Name                                                                                                                                                                                                                                                                    | Description (RBW/VBW)           | Test Eng. |
| INTEL-090526-08d                                                                                                                                                                                                                                                                  | Cond BE, Ch. 11, PK (1MHz/1MHz) | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>ΔMKR 55.50dB<br/>-22.3MHz</div></div><div>CENTER 2.4835GHzSPAN 100.0MHz<br/>*RBW 1.0MHz *VBW 1.0MHzSWP 50.0ms</div></div> |                                 |           |



## Band-Edge Plots (Continued)





## Radiated Emissions Test Results (Continued)

*Fundamental Measurements in 802.11b mode (2400-2483.5 MHz)*  
*Channels 1, 6, & 11*  
*Continuous TX at Chain C Antenna port with Shanghai Universe Antennas*  
*Aegis Labs, Inc. File #: INTEL-090526-13*

| RADIATED EMISSIONS - Horizontal Antenna Polarization |                      |                     |                   |                        |   |                   |                  |                          |               |                  |               |
|------------------------------------------------------|----------------------|---------------------|-------------------|------------------------|---|-------------------|------------------|--------------------------|---------------|------------------|---------------|
| Freq. (MHz)                                          | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL | Comments      |
| 2412.00                                              | 68.83                | 100                 | 315               |                        |   | 2.53              | 32.18            | 103.53                   |               |                  | <b>Ch. 1</b>  |
| 2412.00                                              |                      |                     |                   | 63.67                  | A | 2.53              | 32.18            | 98.37                    |               |                  |               |
| 2437.00                                              | 68.33                | 100                 | 315               |                        |   | 2.54              | 32.21            | 103.08                   |               |                  | <b>Ch. 6</b>  |
| 2437.00                                              |                      |                     |                   | 63.17                  | A | 2.54              | 32.21            | 97.92                    |               |                  |               |
| 2462.00                                              | 67.50                | 100                 | 315               |                        |   | 2.55              | 32.25            | 102.30                   |               |                  | <b>Ch. 11</b> |
| 2462.00                                              |                      |                     |                   | 62.33                  | A | 2.55              | 32.25            | 97.13                    |               |                  |               |

| RADIATED EMISSIONS - Vertical Antenna Polarization |                      |                     |                   |                        |   |                   |                  |                          |               |                  |               |
|----------------------------------------------------|----------------------|---------------------|-------------------|------------------------|---|-------------------|------------------|--------------------------|---------------|------------------|---------------|
| Freq. (MHz)                                        | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL | Comments      |
| 2412.00                                            | 68.67                | 100                 | 0                 |                        |   | 2.53              | 31.89            | 103.09                   |               |                  | <b>Ch. 1</b>  |
| 2412.00                                            |                      |                     |                   | 65.50                  | A | 2.53              | 31.89            | 99.92                    |               |                  |               |
| 2437.00                                            | 69.17                | 100                 | 0                 |                        |   | 2.54              | 31.92            | 103.63                   |               |                  | <b>Ch. 6</b>  |
| 2437.00                                            |                      |                     |                   | 66.17                  | A | 2.54              | 31.92            | 100.63                   |               |                  |               |
| 2462.00                                            | 68.33                | 100                 | 0                 |                        |   | 2.55              | 31.95            | 102.84                   |               |                  | <b>Ch. 11</b> |
| 2462.00                                            |                      |                     |                   | 65.33                  | A | 2.55              | 31.95            | 99.84                    |               |                  |               |

NOTE: Fundamental signals measured to calculate the band edge field strengths using the "Marker Delta Method".



## Radiated Emissions Test Results (Continued)

**Band Edge Field Strength Measurements in 802.11b mode (2400-2483.5 MHz)****Channels 1 & 11****Continuous TX at Chain C Antenna port with Shanghai Universe Antennas****Aegis Labs, Inc. File #: INTEL-090526-13****RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq. (MHz) | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL | Comments      |
|-------------|----------------------|---------------------|-------------------|------------------------|-------------------|------------------|--------------------------|---------------|------------------|---------------|
| 2390.00     |                      |                     |                   |                        |                   |                  | 48.53                    | 74.00         | -25.47           | <b>Ch. 1</b>  |
| 2390.00     |                      |                     |                   |                        |                   |                  | 45.03                    | 74.00         | -28.97           |               |
| 2390.00     |                      |                     |                   | A                      |                   |                  | 39.20                    | 54.00         | -14.80           |               |
| 2390.00     |                      |                     |                   | A                      |                   |                  | 39.87                    | 54.00         | -14.13           |               |
| 2400.00     | 38.50                | 100                 | 315               |                        | 2.52              | 32.16            | 73.18                    | 83.53         | -10.35           | <b>Ch. 11</b> |
| 2483.50     |                      |                     |                   |                        |                   |                  | 47.46                    | 74.00         | -26.54           |               |
| 2483.50     |                      |                     |                   |                        |                   |                  | 44.64                    | 74.00         | -29.36           |               |
| 2483.50     |                      |                     |                   | A                      |                   |                  | 38.47                    | 54.00         | -15.53           |               |
| 2483.50     |                      |                     |                   | A                      |                   |                  | 39.47                    | 54.00         | -14.53           |               |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq. (MHz) | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL | Comments      |
|-------------|----------------------|---------------------|-------------------|------------------------|-------------------|------------------|--------------------------|---------------|------------------|---------------|
| 2390.00     |                      |                     |                   |                        |                   |                  | 48.09                    | 74.00         | -25.91           | <b>Ch. 1</b>  |
| 2390.00     |                      |                     |                   |                        |                   |                  | 44.59                    | 74.00         | -29.41           |               |
| 2390.00     |                      |                     |                   | A                      |                   |                  | 40.75                    | 54.00         | -13.25           |               |
| 2390.00     |                      |                     |                   | A                      |                   |                  | 41.42                    | 54.00         | -12.58           |               |
| 2400.00     | 37.67                | 100                 | 0                 |                        | 2.52              | 31.88            | 72.07                    | 83.09         | -11.02           | <b>Ch. 11</b> |
| 2483.50     |                      |                     |                   |                        |                   |                  | 48.00                    | 74.00         | -26.00           |               |
| 2483.50     |                      |                     |                   |                        |                   |                  | 45.18                    | 74.00         | -28.82           |               |
| 2483.50     |                      |                     |                   | A                      |                   |                  | 41.18                    | 54.00         | -12.82           |               |
| 2483.50     |                      |                     |                   | A                      |                   |                  | 42.18                    | 54.00         | -11.82           |               |

NOTE: The "Band Edge Field Strength" was calculated using the "Fundamental" and "Conducted Band Edge" measurements per the "Marker-Delta Method" with the following formula:

$$BE = F_m - \Delta m$$

Where

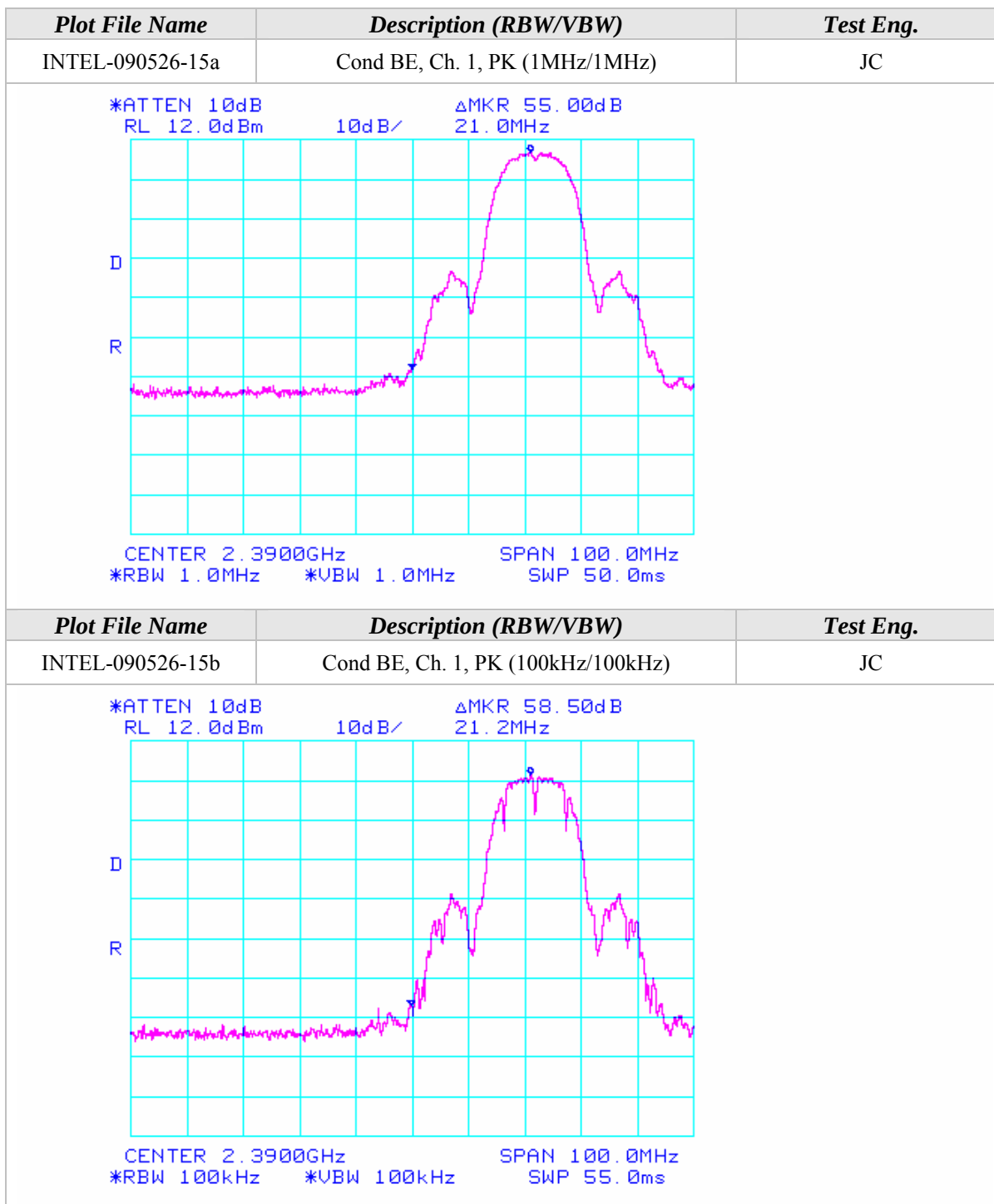
BE = Band Edge Field Strength

F<sub>m</sub> = Measured Fundamental (Peak or Average)

Δm = Measured Conducted Band Edge Delta (Peak or Average)

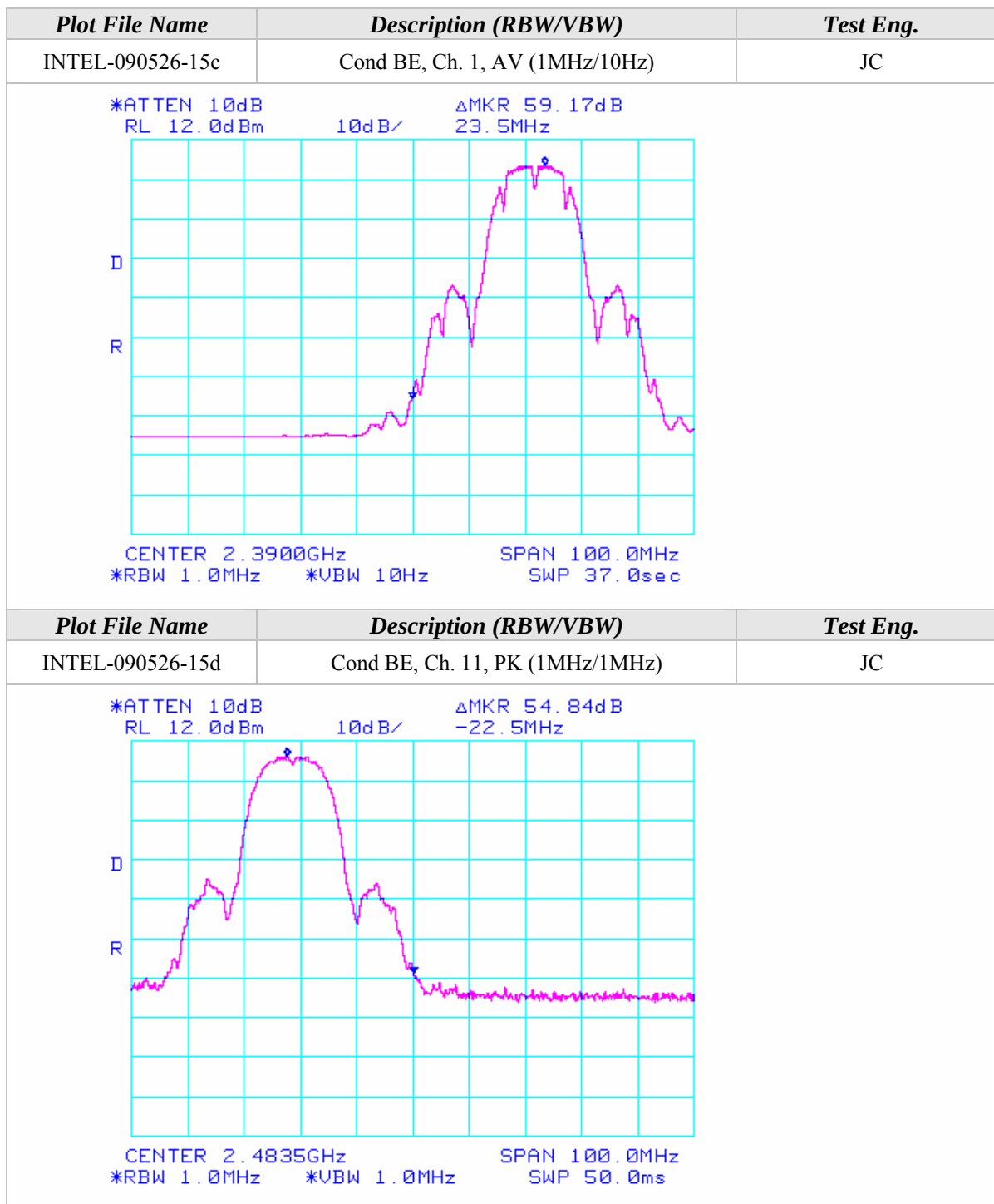


## Band-Edge Plots (Continued)



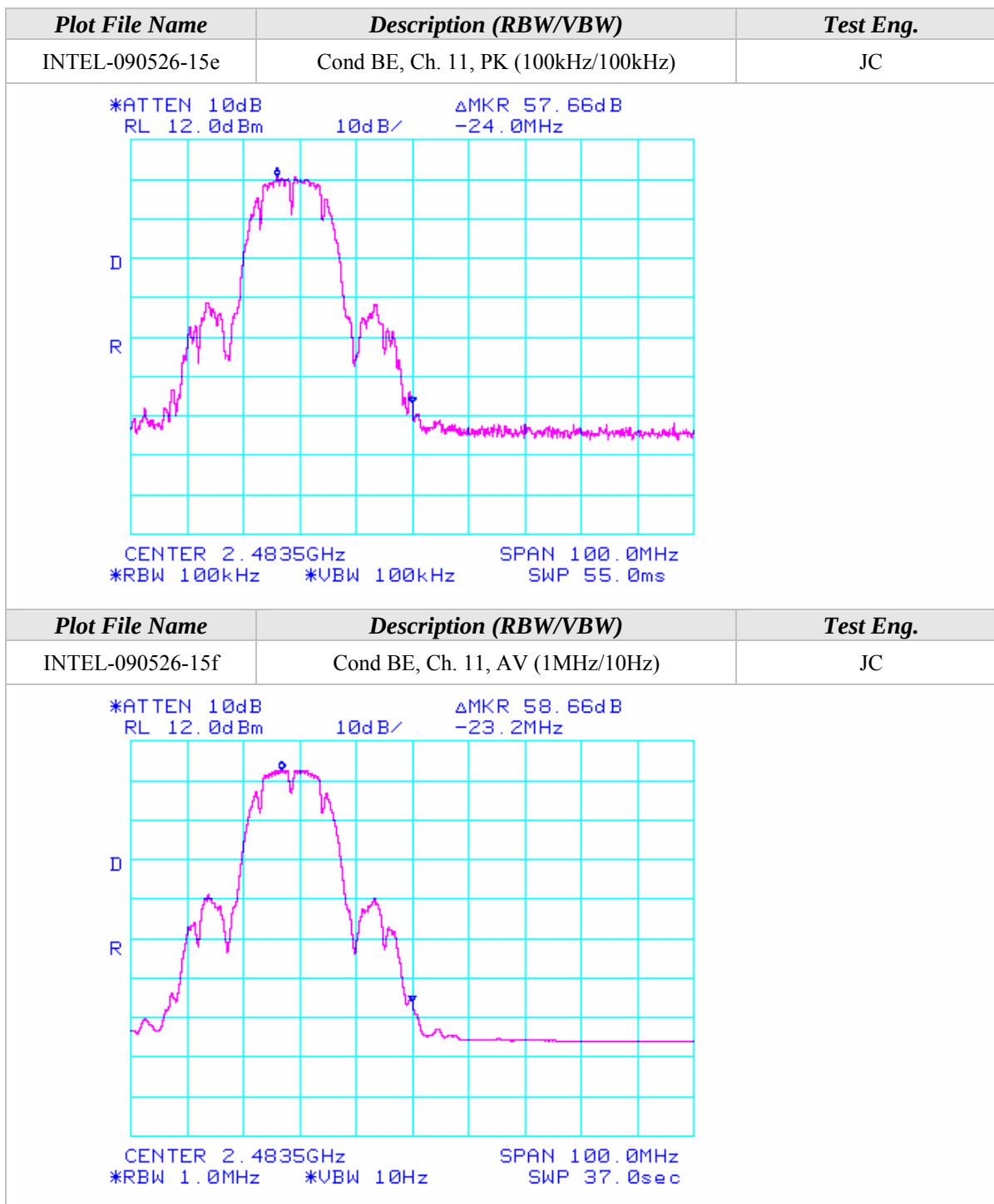


## Band-Edge Plots (Continued)





## Band-Edge Plots (Continued)





# Radiated Emissions Test Results (Continued)

## Spurious Emissions Measurements in 802.11b mode (2400-2483.5 MHz)

### Channels 1, 6, & 11

#### Continuous TX at Chain A, B, & C Antenna ports with Shanghai Universe Antennas

Aegis Labs, Inc. File #: INTEL-090526-17

## RADIATED EMISSIONS - Horizontal Antenna Polarization

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Preamp<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL | Channel/<br>Chain<br>Tested |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|---|--------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|-----------------------------|
| 4873.98        | 54.50                      | 100                       | 90                   |                           |   | 47.50                    | 3.64                    | 34.13                  | 44.76                          | 74.00            | -29.24              | Ch. 6/                      |
| 4873.98        |                            | 100                       | 90                   | 45.79                     | A | 47.50                    | 3.64                    | 34.13                  | 36.05                          | 54.00            | -17.95              | A                           |
| 4873.98        | 55.67                      | 100                       | 45                   |                           |   | 47.50                    | 3.64                    | 34.13                  | 45.93                          | 74.00            | -28.07              | Ch. 6/                      |
| 4873.98        |                            | 100                       | 45                   | 48.94                     | A | 47.50                    | 3.64                    | 34.13                  | 39.20                          | 54.00            | -14.80              | B                           |
| 4873.98        | 56.83                      | 100                       | 225                  |                           |   | 47.50                    | 3.64                    | 34.13                  | 47.09                          | 74.00            | -26.91              | Ch. 6/                      |
| 4873.98        |                            | 100                       | 225                  | 51.61                     | A | 47.50                    | 3.64                    | 34.13                  | 41.87                          | 54.00            | -12.13              | C                           |
| 3216.00        | 53.83                      | 100                       | 315                  |                           |   | 47.60                    | 2.91                    | 32.74                  | 41.89                          | 74.00            | -32.11              | Ch. 1/                      |
| 4824.00        | 56.83                      | 100                       | 315                  |                           |   | 47.51                    | 3.59                    | 34.14                  | 47.04                          | 74.00            | -26.96              | C                           |
| 4824.00        |                            | 100                       | 315                  | 50.71                     | A | 47.51                    | 3.59                    | 34.14                  | 40.92                          | 54.00            | -13.08              |                             |
| 4923.99        | 54.83                      | 100                       | 45                   |                           |   | 47.49                    | 3.67                    | 34.12                  | 45.13                          | 74.00            | -28.87              | Ch. 11/                     |
| 4923.99        |                            | 100                       | 45                   | 45.63                     | A | 47.49                    | 3.67                    | 34.12                  | 35.93                          | 54.00            | -18.07              | C                           |

## RADIATED EMISSIONS - Vertical Antenna Polarization

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Preamp<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL | Channel/<br>Chain<br>Tested |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|---|--------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|-----------------------------|
| 4873.98        | 56.67                      | 100                       | 315                  |                           |   | 47.50                    | 3.64                    | 34.30                  | 47.11                          | 74.00            | -26.89              | Ch. 6/                      |
| 4873.98        |                            |                           |                      | 46.40                     | A | 47.50                    | 3.64                    | 34.30                  | 36.84                          | 54.00            | -17.16              | A                           |
| 6498.64        | 52.50                      | 100                       | 270                  |                           |   | 46.93                    | 4.22                    | 35.50                  | 45.29                          | 74.00            | -28.71              |                             |
| 4873.98        | 58.50                      | 100                       | 45                   |                           |   | 47.50                    | 3.64                    | 34.30                  | 48.94                          | 74.00            | -25.06              | Ch. 6/                      |
| 4873.98        |                            | 100                       | 45                   | 53.44                     | A | 47.50                    | 3.64                    | 34.30                  | 43.88                          | 54.00            | -10.12              | B                           |
| 6498.64        | 52.50                      | 100                       | 90                   |                           |   | 46.93                    | 4.22                    | 35.50                  | 45.29                          | 74.00            | -28.71              |                             |
| 4873.98        | 57.17                      | 100                       | 270                  |                           |   | 47.50                    | 3.64                    | 34.30                  | 47.61                          | 74.00            | -26.39              | Ch. 6/                      |
| 4873.98        |                            | 100                       | 270                  | 51.69                     | A | 47.50                    | 3.64                    | 34.30                  | 42.13                          | 54.00            | -11.87              | C                           |
| 6498.64        | 52.00                      | 100                       | 0                    |                           |   | 46.93                    | 4.22                    | 35.50                  | 44.79                          | 74.00            | -29.21              |                             |
| 4824.00        | 57.00                      | 100                       | 270                  |                           |   | 47.51                    | 3.59                    | 34.30                  | 47.38                          | 74.00            | -26.62              | Ch. 1/                      |
| 4824.00        |                            | 100                       | 270                  | 52.42                     | A | 47.51                    | 3.59                    | 34.30                  | 42.80                          | 54.00            | -11.20              | B                           |
| 6432.00        | 52.33                      | 100                       | 0                    |                           |   | 46.99                    | 4.20                    | 35.47                  | 45.02                          | 74.00            | -28.98              |                             |
| 4923.92        | 55.00                      | 100                       | 270                  |                           |   | 47.49                    | 3.67                    | 34.30                  | 45.49                          | 74.00            | -28.51              | Ch. 11/                     |
| 4923.92        |                            | 100                       | 270                  | 48.09                     | A | 47.49                    | 3.67                    | 34.30                  | 38.58                          | 54.00            | -15.42              | B                           |
| 6565.16        | 51.50                      | 100                       | 90                   |                           |   | 46.83                    | 4.25                    | 35.51                  | 44.43                          | 74.00            | -29.57              |                             |

**RADIATED EMISSIONS TEST RESULTS**

|                       |                                                                                                                              |                        |              |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------|------------------------|--------------|
| <b>CLIENT:</b>        | Intel Corporation                                                                                                            | <b>DATE:</b>           | 06/25/09     |
| <b>EUT:</b>           | Intel® Centrino® Ultimate-N 6300                                                                                             | <b>PROJECT NUMBER:</b> | INTEL-090526 |
| <b>MODEL NUMBER:</b>  | 633ANHMW                                                                                                                     | <b>TEST ENGINEER:</b>  | JC           |
| <b>SERIAL NUMBER:</b> | 0015005A17C0                                                                                                                 | <b>SITE #:</b>         | 2            |
| <b>CONFIGURATION:</b> | Tested installed in an extender board connected to the host laptop's mini PCI slot in <b>802.11g (2400-2483.5 MHz) mode.</b> | <b>TEMPERATURE:</b>    | 27° C        |
|                       |                                                                                                                              | <b>HUMIDITY:</b>       | 44% RH       |
|                       |                                                                                                                              | <b>TIME:</b>           | 3:00 PM      |

|                     |                                                                                                                                                                                           |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description:</b> | Radiated RF Emissions (1 GHz – 18 GHz)                                                                                                                                                    |
| <b>Results:</b>     | <b>PASSED</b> Horizontal and Vertical Antenna Polarizations Class B Limits                                                                                                                |
| <b>Note:</b>        | Radiated Emissions Measurements were performed on the EUT with power supply set at the following voltage and frequency. <ul style="list-style-type: none"><li>• 120VAC / 60 Hz.</li></ul> |

| Unwanted Spurious Emissions Limits |                       |                                                                |                                                                      |
|------------------------------------|-----------------------|----------------------------------------------------------------|----------------------------------------------------------------------|
| Frequency (MHz)                    | Field Strength (uV/m) | Field Strength (dBuV/m)<br>(Emissions in the restricted bands) | Field Strength (dBm/MHz)<br>(Emissions outside the restricted bands) |
| Above 960                          | 500                   | 54.00 (Average)<br>74.00 (Peak)                                | < -20 dBc                                                            |

**Radiated Emissions Sample Calculations**

$$\text{Corrected Meter Reading} = \text{Meter Reading} + F + C - D$$

Where, F = Antenna Factor

C = Cable Factor

G = Amplifier Gain

D = Distance Factor (if applicable)

Therefore, the equation for determining the Corrected Meter Reading Limit (CML) is:

$$\text{CML} = \text{Specification Limit} - F - C + D$$



## Radiated Emissions Test Results (Continued)

*Fundamental Measurements in 802.11g mode (2400-2483.5 MHz)*  
*Channels 1, 6, & 11*  
*Continuous TX at Chain A Antenna port with Shanghai Universe Antennas*  
*Aegis Labs, Inc. File #: INTEL-090526-09*

| RADIATED EMISSIONS - Horizontal Antenna Polarization |                      |                     |                   |                        |   |                   |                  |                          |               |                  |               |
|------------------------------------------------------|----------------------|---------------------|-------------------|------------------------|---|-------------------|------------------|--------------------------|---------------|------------------|---------------|
| Freq. (MHz)                                          | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL | Comments      |
| 2412.00                                              | 71.00                | 100                 | 135               |                        |   | 2.53              | 32.18            | 105.70                   |               |                  | <b>Ch. 1</b>  |
| 2412.00                                              |                      |                     |                   | 61.33                  | A | 2.53              | 32.18            | 96.03                    |               |                  |               |
| 2437.00                                              | 72.67                | 100                 | 135               |                        |   | 2.54              | 32.21            | 107.42                   |               |                  | <b>Ch. 6</b>  |
| 2437.00                                              |                      |                     |                   | 62.17                  | A | 2.54              | 32.21            | 96.92                    |               |                  |               |
| 2462.00                                              | 69.00                | 100                 | 135               |                        |   | 2.55              | 32.25            | 103.80                   |               |                  | <b>Ch. 11</b> |
| 2462.00                                              |                      |                     |                   | 59.33                  | A | 2.55              | 32.25            | 94.13                    |               |                  |               |

| RADIATED EMISSIONS - Vertical Antenna Polarization |                      |                     |                   |                        |   |                   |                  |                          |               |                  |               |
|----------------------------------------------------|----------------------|---------------------|-------------------|------------------------|---|-------------------|------------------|--------------------------|---------------|------------------|---------------|
| Freq. (MHz)                                        | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL | Comments      |
| 2412.00                                            | 71.33                | 100                 | 0                 |                        |   | 2.53              | 31.89            | 105.75                   |               |                  | <b>Ch. 1</b>  |
| 2412.00                                            |                      |                     |                   | 62.50                  | A | 2.53              | 31.89            | 96.92                    |               |                  |               |
| 2437.00                                            | 72.50                | 100                 | 0                 |                        |   | 2.54              | 31.92            | 106.96                   |               |                  | <b>Ch. 6</b>  |
| 2437.00                                            |                      |                     |                   | 63.17                  | A | 2.54              | 31.92            | 97.63                    |               |                  |               |
| 2462.00                                            | 69.67                | 100                 | 0                 |                        |   | 2.55              | 31.95            | 104.18                   |               |                  | <b>Ch. 11</b> |
| 2462.00                                            |                      |                     |                   | 59.50                  | A | 2.55              | 31.95            | 94.01                    |               |                  |               |

NOTE: Fundamental signals measured to calculate the band edge field strengths using the "Marker Delta Method".



## Radiated Emissions Test Results (Continued)

**Band Edge Field Strength Measurements in 802.11g mode (2400-2483.5 MHz)****Channels 1 & 11****Continuous TX at Chain A Antenna port with Shanghai Universe Antennas****Aegis Labs, Inc. File #: INTEL-090526-09****RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq. (MHz) | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL | Comments      |
|-------------|----------------------|---------------------|-------------------|------------------------|-------------------|------------------|--------------------------|---------------|------------------|---------------|
| 2390.00     |                      |                     |                   |                        |                   |                  | 64.20                    | 74.00         | -9.80            | <b>Ch. 1</b>  |
| 2390.00     |                      |                     |                   |                        |                   |                  | 57.37                    | 74.00         | -16.63           |               |
| 2390.00     |                      |                     |                   | A                      |                   |                  | 46.03                    | 54.00         | -7.97            |               |
| 2390.00     |                      |                     |                   | A                      |                   |                  | 47.70                    | 54.00         | -6.30            |               |
| 2400.00     | 43.17                | 100                 | 135               |                        | 2.52              | 32.16            | 77.85                    | 85.70         | -7.85            |               |
| 2483.50     |                      |                     |                   |                        |                   |                  | 64.97                    | 74.00         | -9.03            | <b>Ch. 11</b> |
| 2483.50     |                      |                     |                   |                        |                   |                  | 60.63                    | 74.00         | -13.37           |               |
| 2483.50     |                      |                     |                   | A                      |                   |                  | 50.63                    | 54.00         | -3.37            |               |
| 2483.50     |                      |                     |                   | A                      |                   |                  | 50.96                    | 54.00         | -3.04            |               |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq. (MHz) | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL | Comments      |
|-------------|----------------------|---------------------|-------------------|------------------------|-------------------|------------------|--------------------------|---------------|------------------|---------------|
| 2390.00     |                      |                     |                   |                        |                   |                  | 64.25                    | 74.00         | -9.75            | <b>Ch. 1</b>  |
| 2390.00     |                      |                     |                   |                        |                   |                  | 57.42                    | 74.00         | -16.58           |               |
| 2390.00     |                      |                     |                   | A                      |                   |                  | 46.92                    | 54.00         | -7.08            |               |
| 2390.00     |                      |                     |                   | A                      |                   |                  | 48.59                    | 54.00         | -5.41            |               |
| 2400.00     | 42.83                | 100                 | 0                 |                        | 2.52              | 31.88            | 77.23                    | 85.75         | -8.52            |               |
| 2483.50     |                      |                     |                   |                        |                   |                  | 65.35                    | 74.00         | -8.65            | <b>Ch. 11</b> |
| 2483.50     |                      |                     |                   |                        |                   |                  | 61.01                    | 74.00         | -12.99           |               |
| 2483.50     |                      |                     |                   | A                      |                   |                  | 50.51                    | 54.00         | -3.49            |               |
| 2483.50     |                      |                     |                   | A                      |                   |                  | 50.84                    | 54.00         | -3.16            |               |

NOTE: The "Band Edge Field Strength" was calculated using the "Fundamental" and "Conducted Band Edge" measurements per the "Marker-Delta Method" with the following formula:

$$BE = F_m - \Delta m$$

Where

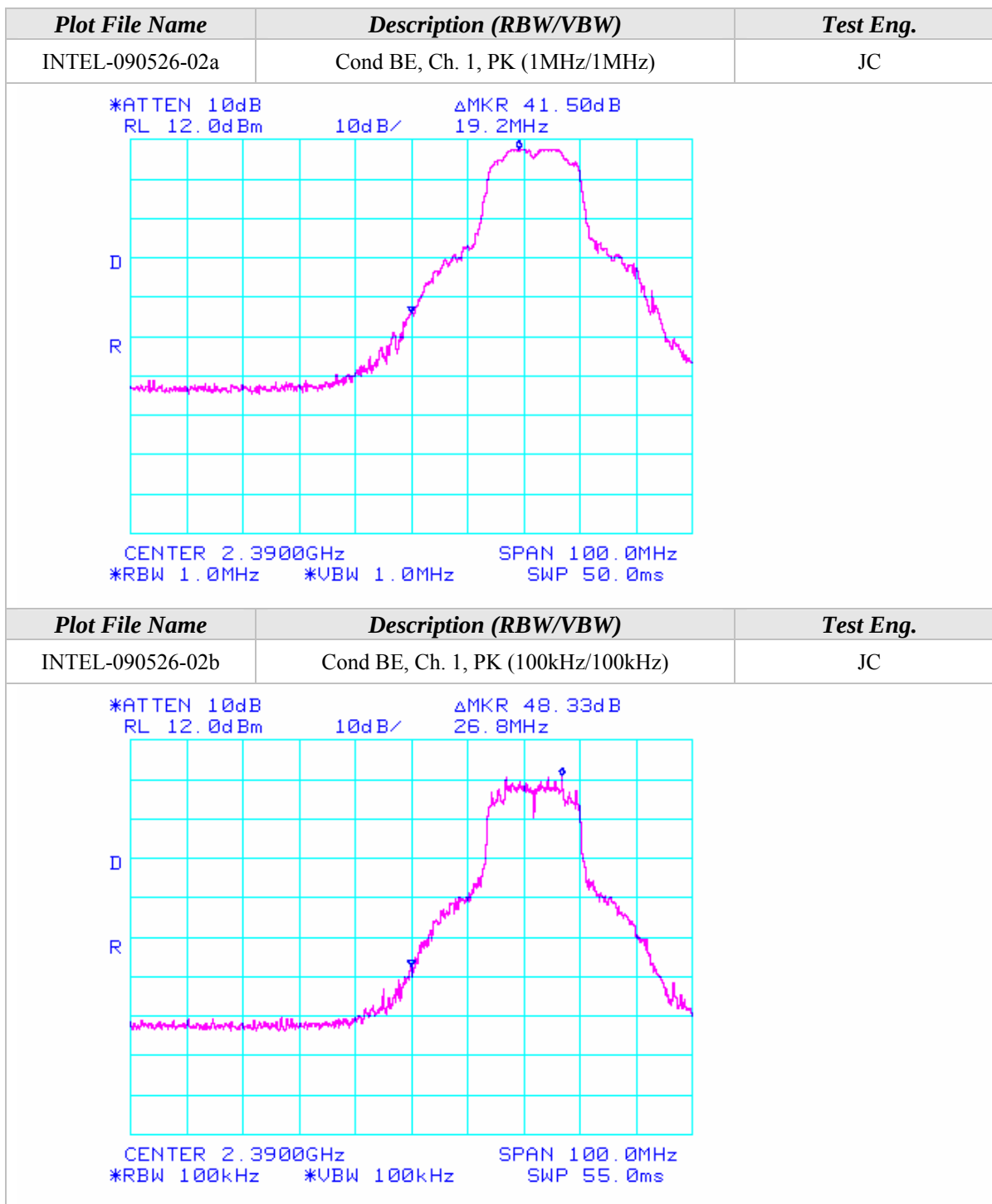
BE = Band Edge Field Strength

F<sub>m</sub> = Measured Fundamental (Peak or Average)

Δm = Measured Conducted Band Edge Delta (Peak or Average)

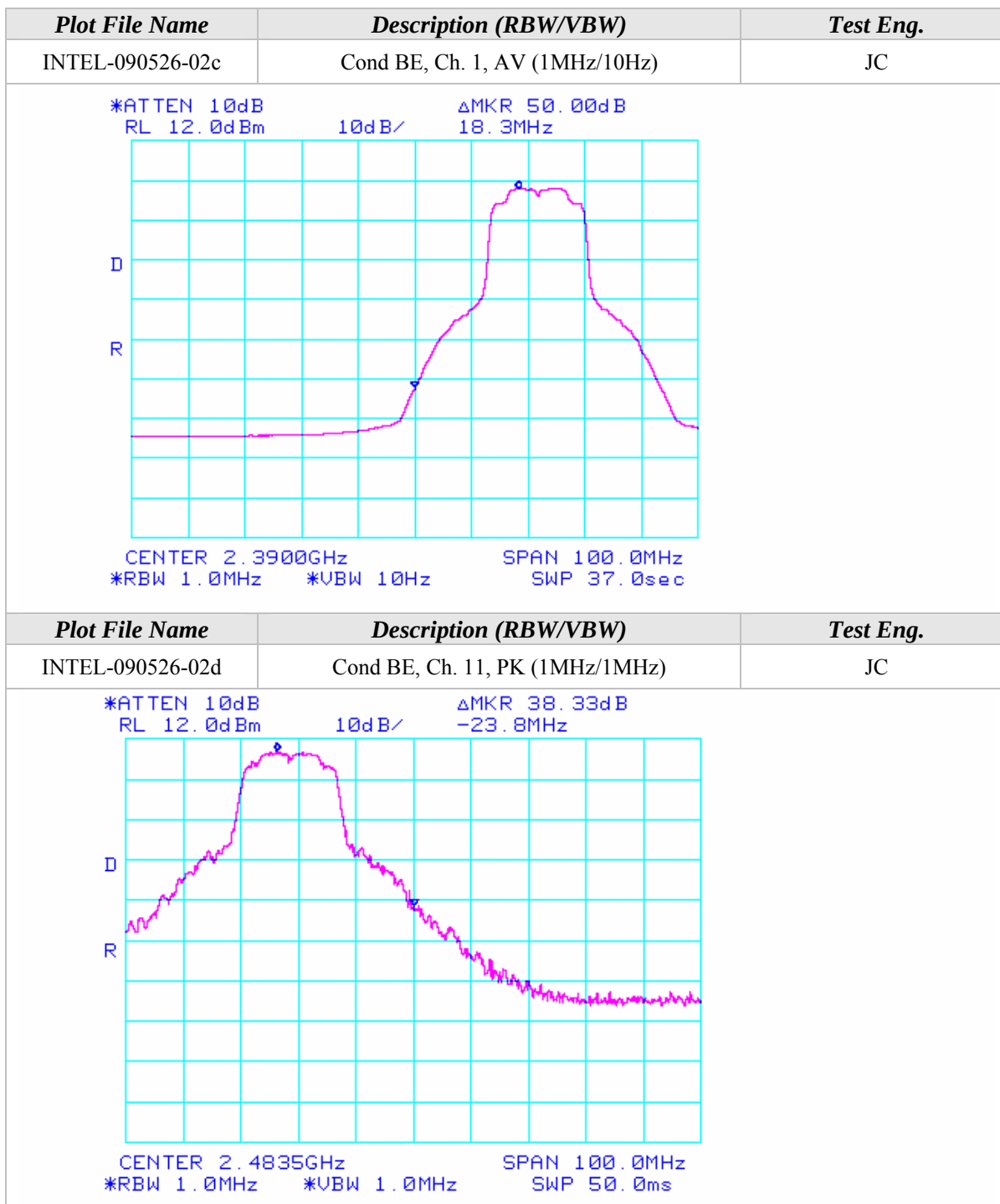


## Band-Edge Plots (Continued)



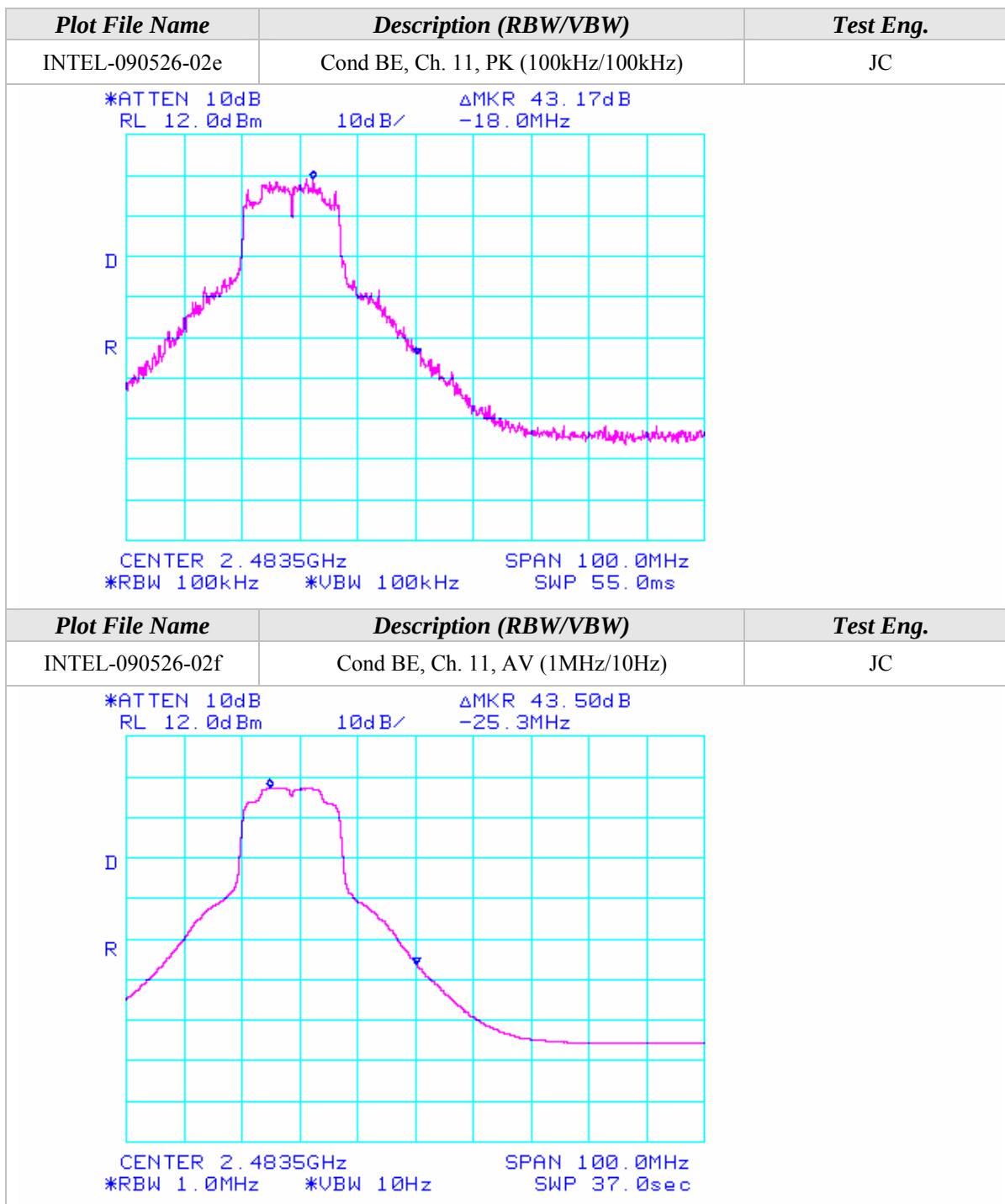


## Band-Edge Plots (Continued)





## Band-Edge Plots (Continued)





## Radiated Emissions Test Results (Continued)

*Fundamental Measurements in 802.11g mode (2400-2483.5 MHz)*  
*Channels 1, 6, & 11*  
*Continuous TX at Chain B Antenna port with Shanghai Universe Antennas*  
*Aegis Labs, Inc. File #: INTEL-090526-11*

| RADIATED EMISSIONS - Horizontal Antenna Polarization |                      |                     |                   |                        |   |                   |                  |                          |               |                  |               |
|------------------------------------------------------|----------------------|---------------------|-------------------|------------------------|---|-------------------|------------------|--------------------------|---------------|------------------|---------------|
| Freq. (MHz)                                          | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL | Comments      |
| 2412.00                                              | 71.17                | 100                 | 315               |                        |   | 2.53              | 32.18            | 105.87                   |               |                  | <b>Ch. 1</b>  |
| 2412.00                                              |                      |                     |                   | 61.33                  | A | 2.53              | 32.18            | 96.03                    |               |                  |               |
| 2437.00                                              | 73.50                | 100                 | 315               |                        |   | 2.54              | 32.21            | 108.25                   |               |                  | <b>Ch. 6</b>  |
| 2437.00                                              |                      |                     |                   | 64.17                  | A | 2.54              | 32.21            | 98.92                    |               |                  |               |
| 2462.00                                              | 69.33                | 100                 | 315               |                        |   | 2.55              | 32.25            | 104.13                   |               |                  | <b>Ch. 11</b> |
| 2462.00                                              |                      |                     |                   | 59.83                  | A | 2.55              | 32.25            | 94.63                    |               |                  |               |

| RADIATED EMISSIONS - Vertical Antenna Polarization |                      |                     |                   |                        |   |                   |                  |                          |               |                  |               |
|----------------------------------------------------|----------------------|---------------------|-------------------|------------------------|---|-------------------|------------------|--------------------------|---------------|------------------|---------------|
| Freq. (MHz)                                        | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL | Comments      |
| 2412.00                                            | 67.17                | 100                 | 180               |                        |   | 2.53              | 31.89            | 101.59                   |               |                  | <b>Ch. 1</b>  |
| 2412.00                                            |                      |                     |                   | 57.50                  | A | 2.53              | 31.89            | 91.92                    |               |                  |               |
| 2437.00                                            | 70.00                | 100                 | 180               |                        |   | 2.54              | 31.92            | 104.46                   |               |                  | <b>Ch. 6</b>  |
| 2437.00                                            |                      |                     |                   | 60.33                  | A | 2.54              | 31.92            | 94.79                    |               |                  |               |
| 2462.00                                            | 66.33                | 100                 | 180               |                        |   | 2.55              | 31.95            | 100.84                   |               |                  | <b>Ch. 11</b> |
| 2462.00                                            |                      |                     |                   | 56.83                  | A | 2.55              | 31.95            | 91.34                    |               |                  |               |

NOTE: Fundamental signals measured to calculate the band edge field strengths using the "Marker Delta Method".



## Radiated Emissions Test Results (Continued)

**Band Edge Field Strength Measurements in 802.11g mode (2400-2483.5 MHz)**  
**Channels 1 & 11****Continuous TX at Chain B Antenna port with Shanghai Universe Antennas**  
**Aegis Labs, Inc. File #: INTEL-090526-11****RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq. (MHz) | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL | Comments      |
|-------------|----------------------|---------------------|-------------------|------------------------|-------------------|------------------|--------------------------|---------------|------------------|---------------|
| 2390.00     |                      |                     |                   |                        |                   |                  | 67.37                    | 74.00         | -6.63            | <b>Ch. 1</b>  |
| 2390.00     |                      |                     |                   |                        |                   |                  | 60.03                    | 74.00         | -13.97           |               |
| 2390.00     |                      |                     |                   | A                      |                   |                  | 50.87                    | 54.00         | -3.13            |               |
| 2390.00     |                      |                     |                   | A                      |                   |                  | 50.19                    | 54.00         | -3.81            |               |
| 2400.00     | 46.67                | 100                 | 315               |                        | 2.52              | 32.16            | 81.35                    | 85.87         | -4.52            |               |
| 2483.50     |                      |                     |                   |                        |                   |                  | 63.46                    | 74.00         | -10.54           | <b>Ch. 11</b> |
| 2483.50     |                      |                     |                   |                        |                   |                  | 58.96                    | 74.00         | -15.04           |               |
| 2483.50     |                      |                     |                   | A                      |                   |                  | 48.46                    | 54.00         | -5.54            |               |
| 2483.50     |                      |                     |                   | A                      |                   |                  | 49.46                    | 54.00         | -4.54            |               |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq. (MHz) | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL | Comments      |
|-------------|----------------------|---------------------|-------------------|------------------------|-------------------|------------------|--------------------------|---------------|------------------|---------------|
| 2390.00     |                      |                     |                   |                        |                   |                  | 63.09                    | 74.00         | -10.91           | <b>Ch. 1</b>  |
| 2390.00     |                      |                     |                   |                        |                   |                  | 55.75                    | 74.00         | -18.25           |               |
| 2390.00     |                      |                     |                   | A                      |                   |                  | 46.76                    | 54.00         | -7.24            |               |
| 2390.00     |                      |                     |                   | A                      |                   |                  | 46.08                    | 54.00         | -7.92            |               |
| 2400.00     | 41.83                | 100                 | 180               |                        | 2.52              | 31.88            | 76.23                    | 81.59         | -5.36            |               |
| 2483.50     |                      |                     |                   |                        |                   |                  | 60.17                    | 74.00         | -13.83           | <b>Ch. 11</b> |
| 2483.50     |                      |                     |                   |                        |                   |                  | 55.67                    | 74.00         | -18.33           |               |
| 2483.50     |                      |                     |                   | A                      |                   |                  | 45.17                    | 54.00         | -8.83            |               |
| 2483.50     |                      |                     |                   | A                      |                   |                  | 46.17                    | 54.00         | -7.83            |               |

NOTE: The "Band Edge Field Strength" was calculated using the "Fundamental" and "Conducted Band Edge" measurements per the "Marker-Delta Method" with the following formula:

$$BE = F_m - \Delta m$$

Where

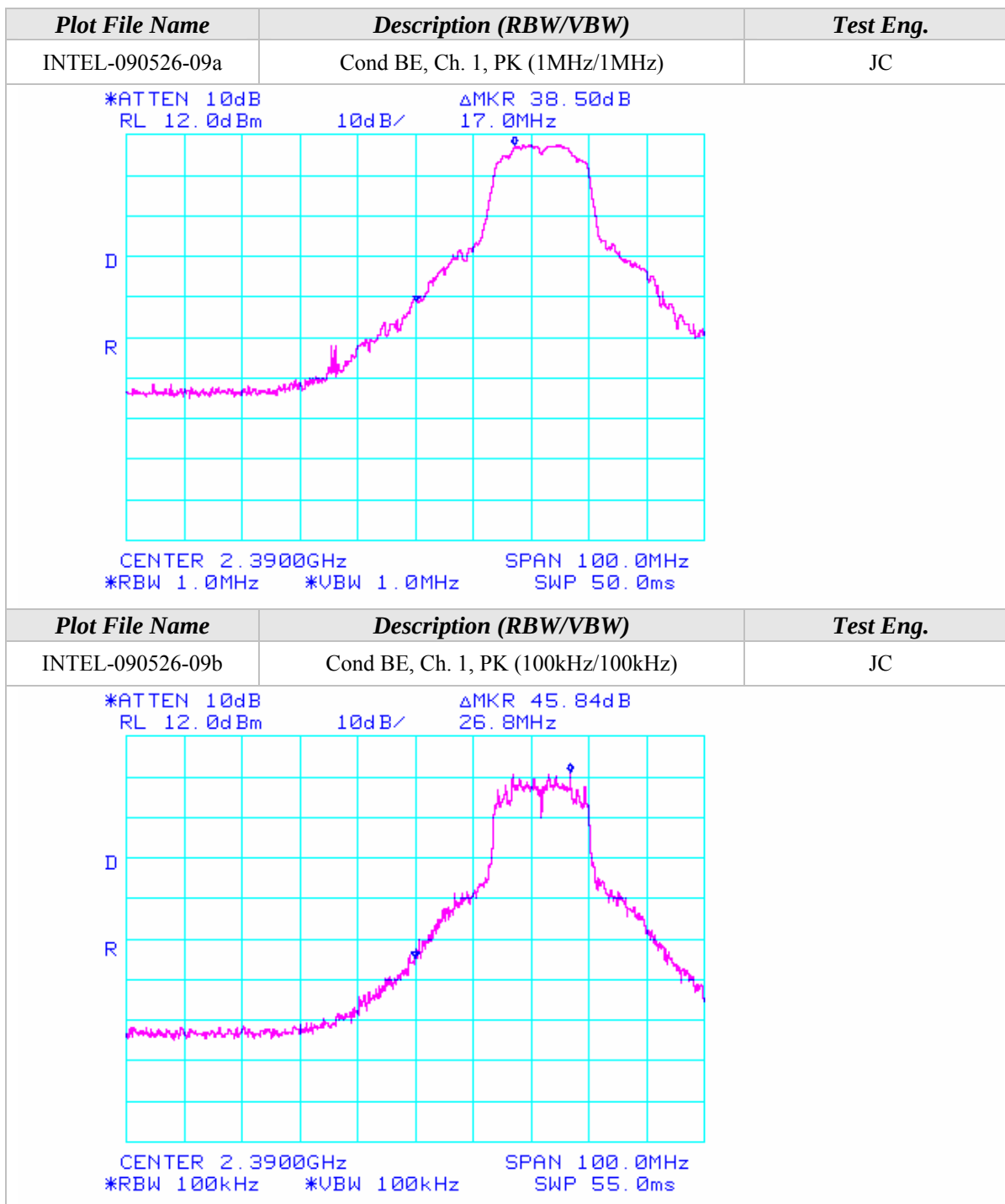
BE = Band Edge Field Strength

F<sub>m</sub> = Measured Fundamental (Peak or Average)

Δm = Measured Conducted Band Edge Delta (Peak or Average)

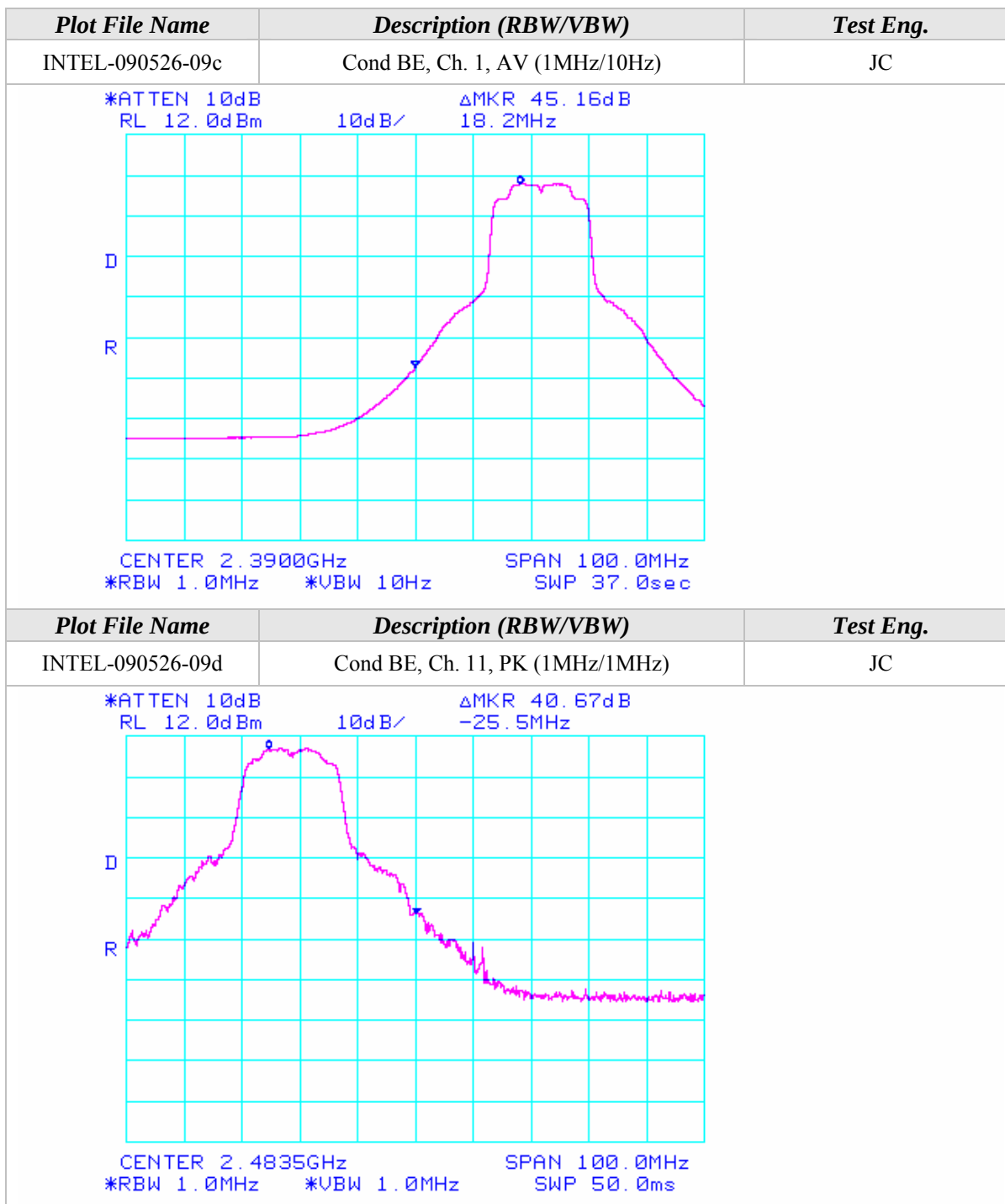


## Band-Edge Plots (Continued)



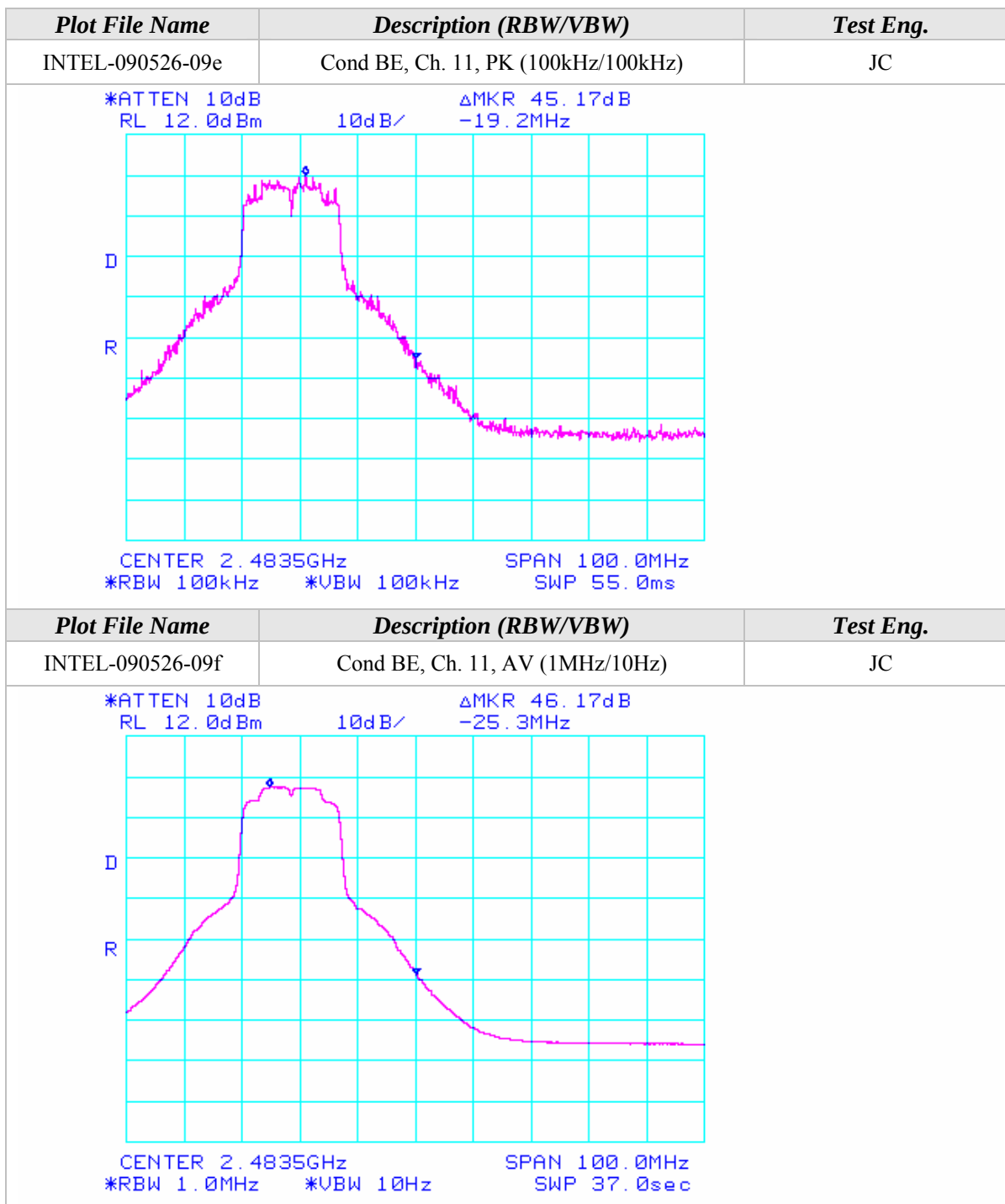


## Band-Edge Plots (Continued)





## Band-Edge Plots (Continued)





## Radiated Emissions Test Results (Continued)

*Fundamental Measurements in 802.11g mode (2400-2483.5 MHz)*  
*Channels 1, 6, & 11*  
*Continuous TX at Chain C Antenna port with Shanghai Universe Antennas*  
*Aegis Labs, Inc. File #: INTEL-090526-13*

| RADIATED EMISSIONS - Horizontal Antenna Polarization |                      |                     |                   |                        |   |                   |                  |                          |               |                  |               |
|------------------------------------------------------|----------------------|---------------------|-------------------|------------------------|---|-------------------|------------------|--------------------------|---------------|------------------|---------------|
| Freq. (MHz)                                          | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL | Comments      |
| 2412.00                                              | 68.83                | 100                 | 315               |                        |   | 2.53              | 32.18            | 103.53                   |               |                  | <b>Ch. 1</b>  |
| 2412.00                                              |                      |                     |                   | 58.83                  | A | 2.53              | 32.18            | 93.53                    |               |                  |               |
| 2437.00                                              | 72.00                | 100                 | 315               |                        |   | 2.54              | 32.21            | 106.75                   |               |                  | <b>Ch. 6</b>  |
| 2437.00                                              |                      |                     |                   | 61.67                  | A | 2.54              | 32.21            | 96.42                    |               |                  |               |
| 2462.00                                              | 69.17                | 100                 | 315               |                        |   | 2.55              | 32.25            | 103.97                   |               |                  | <b>Ch. 11</b> |
| 2462.00                                              |                      |                     |                   | 59.33                  | A | 2.55              | 32.25            | 94.13                    |               |                  |               |

| RADIATED EMISSIONS - Vertical Antenna Polarization |                      |                     |                   |                        |   |                   |                  |                          |               |                  |               |
|----------------------------------------------------|----------------------|---------------------|-------------------|------------------------|---|-------------------|------------------|--------------------------|---------------|------------------|---------------|
| Freq. (MHz)                                        | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL | Comments      |
| 2412.00                                            | 67.83                | 100                 | 0                 |                        |   | 2.53              | 31.89            | 102.25                   |               |                  | <b>Ch. 1</b>  |
| 2412.00                                            |                      |                     |                   | 58.17                  | A | 2.53              | 31.89            | 92.59                    |               |                  |               |
| 2437.00                                            | 70.50                | 100                 | 0                 |                        |   | 2.54              | 31.92            | 104.96                   |               |                  | <b>Ch. 6</b>  |
| 2437.00                                            |                      |                     |                   | 61.83                  | A | 2.54              | 31.92            | 96.29                    |               |                  |               |
| 2462.00                                            | 68.33                | 100                 | 0                 |                        |   | 2.55              | 31.95            | 102.84                   |               |                  | <b>Ch. 11</b> |
| 2462.00                                            |                      |                     |                   | 58.00                  | A | 2.55              | 31.95            | 92.51                    |               |                  |               |

NOTE: Fundamental signals measured to calculate the band edge field strengths using the "Marker Delta Method".



## Radiated Emissions Test Results (Continued)

**Band Edge Field Strength Measurements in 802.11g mode (2400-2483.5 MHz)****Channels 1 & 11****Continuous TX at Chain C Antenna port with Shanghai Universe Antennas****Aegis Labs, Inc. File #: INTEL-090526-13****RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq. (MHz) | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL | Comments      |
|-------------|----------------------|---------------------|-------------------|------------------------|-------------------|------------------|--------------------------|---------------|------------------|---------------|
| 2390.00     |                      |                     |                   |                        |                   |                  | 62.87                    | 74.00         | -11.13           | <b>Ch. 1</b>  |
| 2390.00     |                      |                     |                   |                        |                   |                  | 57.37                    | 74.00         | -16.63           |               |
| 2390.00     |                      |                     |                   | A                      |                   |                  | 45.70                    | 54.00         | -8.30            |               |
| 2390.00     |                      |                     |                   | A                      |                   |                  | 47.37                    | 54.00         | -6.63            |               |
| 2400.00     | 43.17                | 100                 | 315               |                        | 2.52              | 32.16            | 77.85                    | 83.53         | -5.68            |               |
| 2483.50     |                      |                     |                   |                        |                   |                  | 65.14                    | 74.00         | -8.86            | <b>Ch. 11</b> |
| 2483.50     |                      |                     |                   |                        |                   |                  | 60.47                    | 74.00         | -13.53           |               |
| 2483.50     |                      |                     |                   | A                      |                   |                  | 49.47                    | 54.00         | -4.53            |               |
| 2483.50     |                      |                     |                   | A                      |                   |                  | 50.63                    | 54.00         | -3.37            |               |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq. (MHz) | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL | Comments      |
|-------------|----------------------|---------------------|-------------------|------------------------|-------------------|------------------|--------------------------|---------------|------------------|---------------|
| 2390.00     |                      |                     |                   |                        |                   |                  | 61.59                    | 74.00         | -12.41           | <b>Ch. 1</b>  |
| 2390.00     |                      |                     |                   |                        |                   |                  | 56.09                    | 74.00         | -17.91           |               |
| 2390.00     |                      |                     |                   | A                      |                   |                  | 44.76                    | 54.00         | -9.24            |               |
| 2390.00     |                      |                     |                   | A                      |                   |                  | 46.43                    | 54.00         | -7.57            |               |
| 2400.00     | 42.50                | 100                 | 0                 |                        | 2.52              | 31.88            | 76.90                    | 82.25         | -5.35            |               |
| 2483.50     |                      |                     |                   |                        |                   |                  | 64.01                    | 74.00         | -9.99            | <b>Ch. 11</b> |
| 2483.50     |                      |                     |                   |                        |                   |                  | 59.34                    | 74.00         | -14.66           |               |
| 2483.50     |                      |                     |                   | A                      |                   |                  | 47.85                    | 54.00         | -6.15            |               |
| 2483.50     |                      |                     |                   | A                      |                   |                  | 49.01                    | 54.00         | -4.99            |               |

NOTE: The "Band Edge Field Strength" was calculated using the "Fundamental" and "Conducted Band Edge" measurements per the "Marker-Delta Method" with the following formula:

$$BE = F_m - \Delta m$$

Where

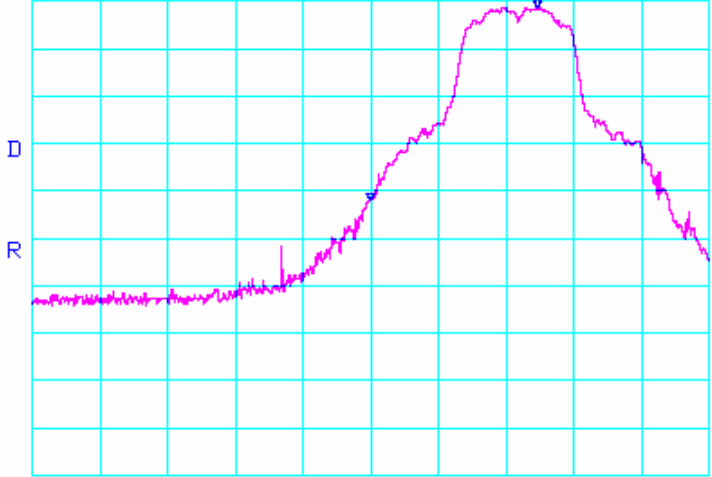
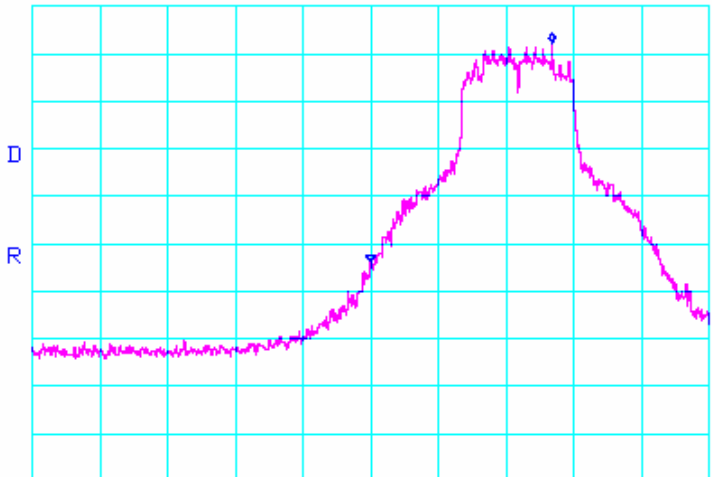
BE = Band Edge Field Strength

F<sub>m</sub> = Measured Fundamental (Peak or Average)

Δm = Measured Conducted Band Edge Delta (Peak or Average)

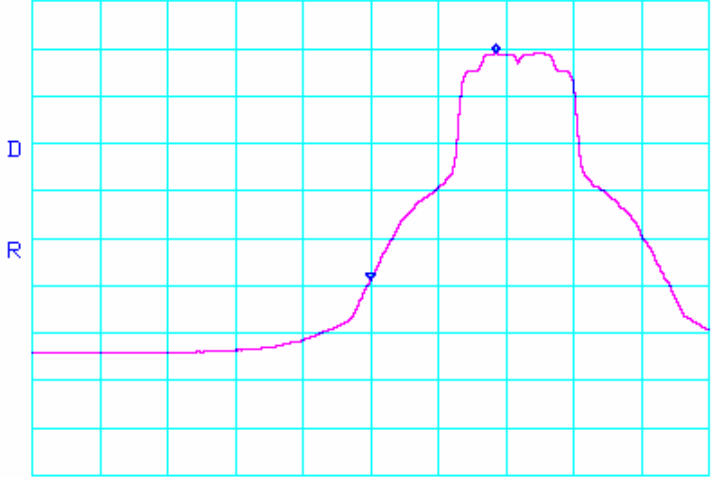
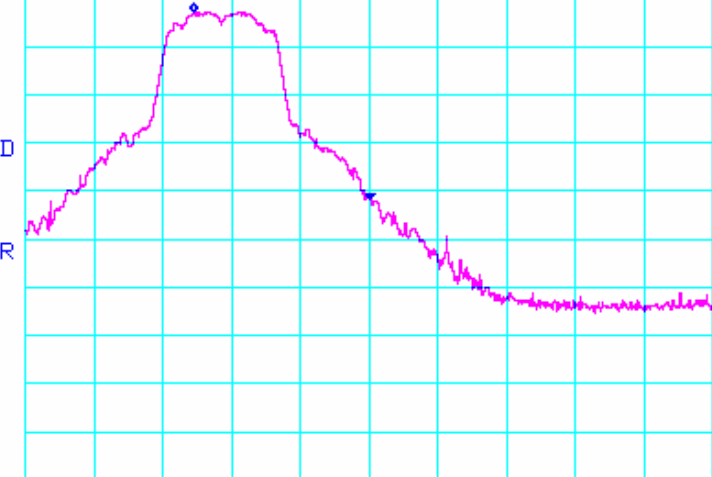


## Band-Edge Plots (Continued)

| Plot File Name                                                                                                                                                                                                                                              | Description (RBW/VBW)              | Test Eng. |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|-----------|
| INTEL-090526-16a                                                                                                                                                                                                                                            | Cond BE, Ch. 1, PK (1MHz/1MHz)     | JC        |
| <p>*ATTEN 10dB<br/>RL 12.0dBm      10dB/      ΔMKR 40.66dB<br/>24.7MHz</p>  <p>CENTER 2.3900GHz      SPAN 100.0MHz<br/>*RBW 1.0MHz      *VBW 1.0MHz      SWP 50.0ms</p>   |                                    |           |
| Plot File Name                                                                                                                                                                                                                                              | Description (RBW/VBW)              | Test Eng. |
| INTEL-090526-16b                                                                                                                                                                                                                                            | Cond BE, Ch. 1, PK (100kHz/100kHz) | JC        |
| <p>*ATTEN 10dB<br/>RL 12.0dBm      10dB/      ΔMKR 46.16dB<br/>26.8MHz</p>  <p>CENTER 2.3900GHz      SPAN 100.0MHz<br/>*RBW 100kHz      *VBW 100kHz      SWP 55.0ms</p> |                                    |           |

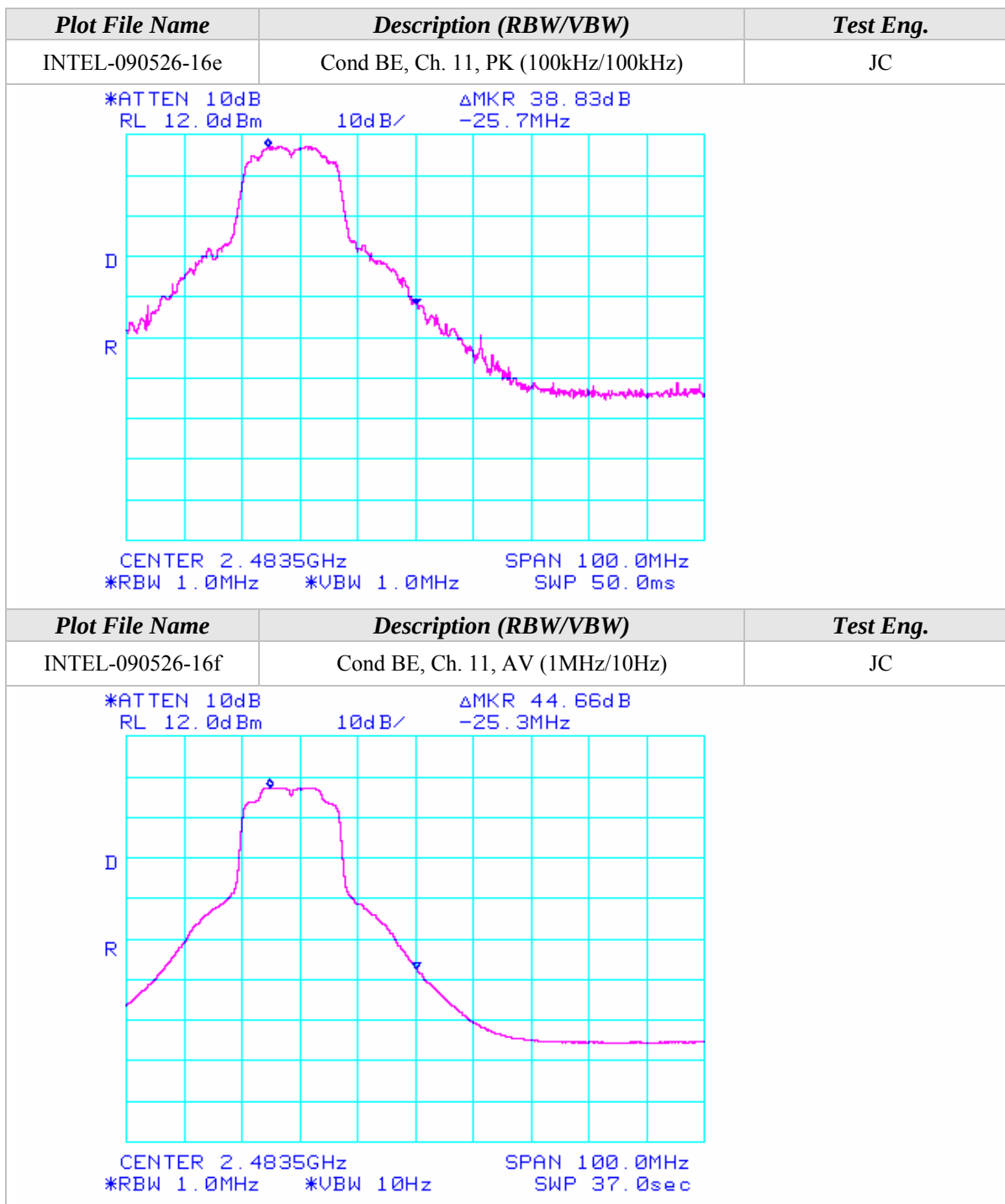


Band-Edge Plots (Continued)

| Plot File Name                                                                                                                                                                                                                                                                              | Description (RBW/VBW)           | Test Eng. |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------|
| INTEL-090526-16c                                                                                                                                                                                                                                                                            | Cond BE, Ch. 1, AV (1MHz/10Hz)  | JC        |
| <div><div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>ΔMKR 47.83dB<br/>18.5MHz</div></div><div>CENTER 2.3900GHzSPAN 100.0MHz<br/>*RBW 1.0MHz*VBW 10HzSWP 37.0sec</div></div></div>     |                                 |           |
| Plot File Name                                                                                                                                                                                                                                                                              | Description (RBW/VBW)           | Test Eng. |
| INTEL-090526-16d                                                                                                                                                                                                                                                                            | Cond BE, Ch. 11, PK (1MHz/1MHz) | JC        |
| <div><div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>ΔMKR 38.83dB<br/>-25.7MHz</div></div><div>CENTER 2.4835GHzSPAN 100.0MHz<br/>*RBW 1.0MHz*VBW 1.0MHzSWP 50.0ms</div></div></div> |                                 |           |



## Band-Edge Plots (Continued)





## Radiated Emissions Test Results (Continued)

**Spurious Emissions Measurements in 802.11g mode (2400-2483.5 MHz)****Channels 1, 6, & 11****Continuous TX at Chain A, B, & C Antenna ports with Shanghai Universe Antennas****Aegis Labs, Inc. File #: INTEL-090526-17****RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq. (MHz) | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Preamplifier Factor (dB) | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL | Channel/Chain Tested |
|-------------|----------------------|---------------------|-------------------|------------------------|---|--------------------------|-------------------|------------------|--------------------------|---------------|------------------|----------------------|
| 3249.33     | 51.83                | 315                 | 315               |                        |   | 47.61                    | 2.94              | 32.75            | 39.91                    | 74.00         | -34.09           | Ch. 6/               |
| 9748.00     | 51.17                | 100                 | 315               |                        |   | 45.52                    | 5.31              | 36.75            | 47.71                    | 74.00         | -26.29           | A                    |
| 3249.33     | 52.33                | 100                 | 0                 |                        |   | 47.61                    | 2.94              | 32.75            | 40.41                    | 74.00         | -33.59           | Ch. 6/B              |
| 3249.33     | 51.83                | 100                 | 315               |                        |   | 47.61                    | 2.94              | 32.75            | 39.91                    | 74.00         | -34.09           | Ch. 6/               |
| 9748.00     | 51.67                | 100                 | 315               |                        |   | 45.52                    | 5.31              | 36.75            | 48.21                    | 74.00         | -25.79           | C                    |
| 3216.00     | 52.00                | 100                 | 315               |                        |   | 47.60                    | 2.91              | 32.74            | 40.06                    | 74.00         | -33.94           | Ch. 1/C              |
| 3282.66     | 53.33                | 100                 | 315               |                        |   | 47.62                    | 2.97              | 32.76            | 41.43                    | 74.00         | -32.57           | Ch. 11/              |
| 4924.00     | 52.00                | 100                 | 315               |                        |   | 47.49                    | 3.67              | 34.30            | 42.49                    | 74.00         | -31.51           | C                    |
| 4924.00     |                      | 100                 | 315               | 40.13                  | A | 47.49                    | 3.67              | 34.30            | 30.62                    | 54.00         | -23.38           |                      |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq. (MHz) | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Preamplifier Factor (dB) | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL | Channel/Chain Tested |
|-------------|----------------------|---------------------|-------------------|------------------------|---|--------------------------|-------------------|------------------|--------------------------|---------------|------------------|----------------------|
| 3249.33     | 52.83                | 315                 | 0                 |                        |   | 47.61                    | 2.94              | 32.75            | 40.91                    | 74.00         | -33.09           | Ch. 6/               |
| 9748.00     | 52.33                | 100                 | 315               |                        |   | 45.52                    | 5.31              | 36.75            | 48.87                    | 74.00         | -25.13           | A                    |
| 3249.33     | 53.67                | 100                 | 0                 |                        |   | 47.61                    | 2.94              | 32.75            | 41.75                    | 74.00         | -32.25           | Ch. 6/B              |
| 3249.33     | 53.00                | 100                 | 315               |                        |   | 47.61                    | 2.94              | 32.75            | 41.08                    | 74.00         | -32.92           | Ch. 6/C              |
| 4873.98     | 53.33                | 100                 | 0                 |                        |   | 47.50                    | 3.64              | 34.13            | 43.59                    | 74.00         | -30.41           |                      |
| 4873.98     |                      | 100                 | 0                 | 41.17                  | A | 47.50                    | 3.64              | 34.13            | 31.43                    | 54.00         | -22.57           |                      |
| 9748.00     | 52.00                | 100                 | 0                 |                        |   | 45.52                    | 5.31              | 36.75            | 48.54                    | 74.00         | -25.46           |                      |
| 3216.00     | 52.50                | 100                 | 315               |                        |   | 47.60                    | 2.91              | 32.74            | 40.56                    | 74.00         | -33.44           | Ch. 1/C              |
| 3282.66     | 53.67                | 100                 | 315               |                        |   | 47.62                    | 2.97              | 32.76            | 41.77                    | 74.00         | -32.23           | Ch. 11/C             |

**RADIATED EMISSIONS TEST RESULTS**

|                       |                                                                                                                                         |                        |              |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------|------------------------|--------------|
| <b>CLIENT:</b>        | Intel Corporation                                                                                                                       | <b>DATE:</b>           | 06/25/09     |
| <b>EUT:</b>           | Intel® Centrino® Ultimate-N 6300                                                                                                        | <b>PROJECT NUMBER:</b> | INTEL-090526 |
| <b>MODEL NUMBER:</b>  | 633ANHMW                                                                                                                                | <b>TEST ENGINEER:</b>  | JC           |
| <b>SERIAL NUMBER:</b> | 0015005A17C0                                                                                                                            | <b>SITE #:</b>         | 2            |
| <b>CONFIGURATION:</b> | Tested installed in an extender board connected to the host laptop's mini PCI slot in <b>802.11n (2400-2483.5 MHz) mode 20MHz Wide.</b> | <b>TEMPERATURE:</b>    | 27° C        |
|                       |                                                                                                                                         | <b>HUMIDITY:</b>       | 44% RH       |
|                       |                                                                                                                                         | <b>TIME:</b>           | 3:00 PM      |

|                     |                                                                                                                                                                                           |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description:</b> | Radiated RF Emissions (1 GHz – 18 GHz)                                                                                                                                                    |
| <b>Results:</b>     | <b>PASSED</b> Horizontal and Vertical Antenna Polarizations Class B Limits                                                                                                                |
| <b>Note:</b>        | Radiated Emissions Measurements were performed on the EUT with power supply set at the following voltage and frequency. <ul style="list-style-type: none"><li>• 120VAC / 60 Hz.</li></ul> |

| Unwanted Spurious Emissions Limits |                       |                                                                |                                                                      |
|------------------------------------|-----------------------|----------------------------------------------------------------|----------------------------------------------------------------------|
| Frequency (MHz)                    | Field Strength (uV/m) | Field Strength (dBuV/m)<br>(Emissions in the restricted bands) | Field Strength (dBm/MHz)<br>(Emissions outside the restricted bands) |
| Above 960                          | 500                   | 54.00 (Average)<br>74.00 (Peak)                                | < -20 dBc                                                            |

**Radiated Emissions Sample Calculations**

$$\text{Corrected Meter Reading} = \text{Meter Reading} + F + C - D$$

Where, F = Antenna Factor

C = Cable Factor

G = Amplifier Gain

D = Distance Factor (if applicable)

Therefore, the equation for determining the Corrected Meter Reading Limit (CML) is:

$$\text{CML} = \text{Specification Limit} - F - C + D$$



## Radiated Emissions Test Results (Continued)

**Fundamental Measurements in 802.11n mode 20MHz Wide (2400-2483.5 MHz)****Channels 1, 6, & 11****Continuous TX at Chain A Antenna port with Shanghai Universe Antennas****Aegis Labs, Inc. File #: INTEL-090526-09****RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq. (MHz) | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) + =FAIL | Comments      |
|-------------|----------------------|---------------------|-------------------|------------------------|---|-------------------|------------------|--------------------------|---------------|-------------------|---------------|
| 2412.00     | 70.17                | 100                 | 315               |                        |   | 2.53              | 32.18            | 104.87                   |               |                   | <b>Ch. 1</b>  |
| 2412.00     |                      |                     |                   | 60.50                  | A | 2.53              | 32.18            | 95.20                    |               |                   |               |
| 2437.00     | 73.33                | 100                 | 315               |                        |   | 2.54              | 32.21            | 108.08                   |               |                   | <b>Ch. 6</b>  |
| 2437.00     |                      |                     |                   | 64.17                  | A | 2.54              | 32.21            | 98.92                    |               |                   |               |
| 2462.00     | 69.83                | 100                 | 315               |                        |   | 2.55              | 32.25            | 104.63                   |               |                   | <b>Ch. 11</b> |
| 2462.00     |                      |                     |                   | 60.50                  | A | 2.55              | 32.25            | 95.30                    |               |                   |               |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq. (MHz) | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) + =FAIL | Comments      |
|-------------|----------------------|---------------------|-------------------|------------------------|---|-------------------|------------------|--------------------------|---------------|-------------------|---------------|
| 2412.00     | 69.00                | 100                 | 0                 |                        |   | 2.53              | 31.89            | 103.42                   |               |                   | <b>Ch. 1</b>  |
| 2412.00     |                      |                     |                   | 59.67                  | A | 2.53              | 31.89            | 94.09                    |               |                   |               |
| 2437.00     | 72.50                | 100                 | 0                 |                        |   | 2.54              | 31.92            | 106.96                   |               |                   | <b>Ch. 6</b>  |
| 2437.00     |                      |                     |                   | 63.83                  | A | 2.54              | 31.92            | 98.29                    |               |                   |               |
| 2462.00     | 68.17                | 100                 | 45                |                        |   | 2.55              | 31.95            | 102.68                   |               |                   | <b>Ch. 11</b> |
| 2462.00     |                      |                     |                   | 58.67                  | A | 2.55              | 31.95            | 93.18                    |               |                   |               |

NOTE: Fundamental signals measured to calculate the band edge field strengths using the "Marker Delta Method".



## Radiated Emissions Test Results (Continued)

**Band Edge Field Strength Measurements in 802.11n mode 20MHz Wide (2400-2483.5 MHz)**  
**Channels 1 & 11****Continuous TX at Chain A Antenna port with Shanghai Universe Antennas**  
**Aegis Labs, Inc. File #: INTEL-090526-09****RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq. (MHz) | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL | Comments      |
|-------------|----------------------|---------------------|-------------------|------------------------|-------------------|------------------|--------------------------|---------------|------------------|---------------|
| 2390.00     |                      |                     |                   |                        |                   |                  | 68.54                    | 74.00         | -5.46            | <b>Ch. 1</b>  |
| 2390.00     |                      |                     |                   |                        |                   |                  | 57.87                    | 74.00         | -16.13           |               |
| 2390.00     |                      |                     |                   | A                      |                   |                  | 48.03                    | 54.00         | -5.97            |               |
| 2390.00     |                      |                     |                   | A                      |                   |                  | 48.20                    | 54.00         | -5.80            |               |
| 2400.00     | 45.33                | 100                 | 315               |                        | 2.52              | 32.16            | 80.01                    | 84.87         | -4.86            |               |
| 2483.50     |                      |                     |                   |                        |                   |                  | 64.79                    | 74.00         | -9.21            | <b>Ch. 11</b> |
| 2483.50     |                      |                     |                   |                        |                   |                  | 58.46                    | 74.00         | -15.54           |               |
| 2483.50     |                      |                     |                   | A                      |                   |                  | 48.80                    | 54.00         | -5.20            |               |
| 2483.50     |                      |                     |                   | A                      |                   |                  | 49.13                    | 54.00         | -4.87            |               |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq. (MHz) | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL | Comments      |
|-------------|----------------------|---------------------|-------------------|------------------------|-------------------|------------------|--------------------------|---------------|------------------|---------------|
| 2390.00     |                      |                     |                   |                        |                   |                  | 67.09                    | 74.00         | -6.91            | <b>Ch. 1</b>  |
| 2390.00     |                      |                     |                   |                        |                   |                  | 56.42                    | 74.00         | -17.58           |               |
| 2390.00     |                      |                     |                   | A                      |                   |                  | 46.92                    | 54.00         | -7.08            |               |
| 2390.00     |                      |                     |                   | A                      |                   |                  | 47.09                    | 54.00         | -6.91            |               |
| 2400.00     | 45.00                | 100                 | 0                 |                        | 2.52              | 31.88            | 79.40                    | 83.42         | -4.02            |               |
| 2483.50     |                      |                     |                   |                        |                   |                  | 62.84                    | 74.00         | -11.16           | <b>Ch. 11</b> |
| 2483.50     |                      |                     |                   |                        |                   |                  | 56.51                    | 74.00         | -17.49           |               |
| 2483.50     |                      |                     |                   | A                      |                   |                  | 46.68                    | 54.00         | -7.32            |               |
| 2483.50     |                      |                     |                   | A                      |                   |                  | 47.01                    | 54.00         | -6.99            |               |

NOTE: The "Band Edge Field Strength" was calculated using the "Fundamental" and "Conducted Band Edge" measurements per the "Marker-Delta Method" with the following formula:

$$BE = F_m - \Delta m$$

Where

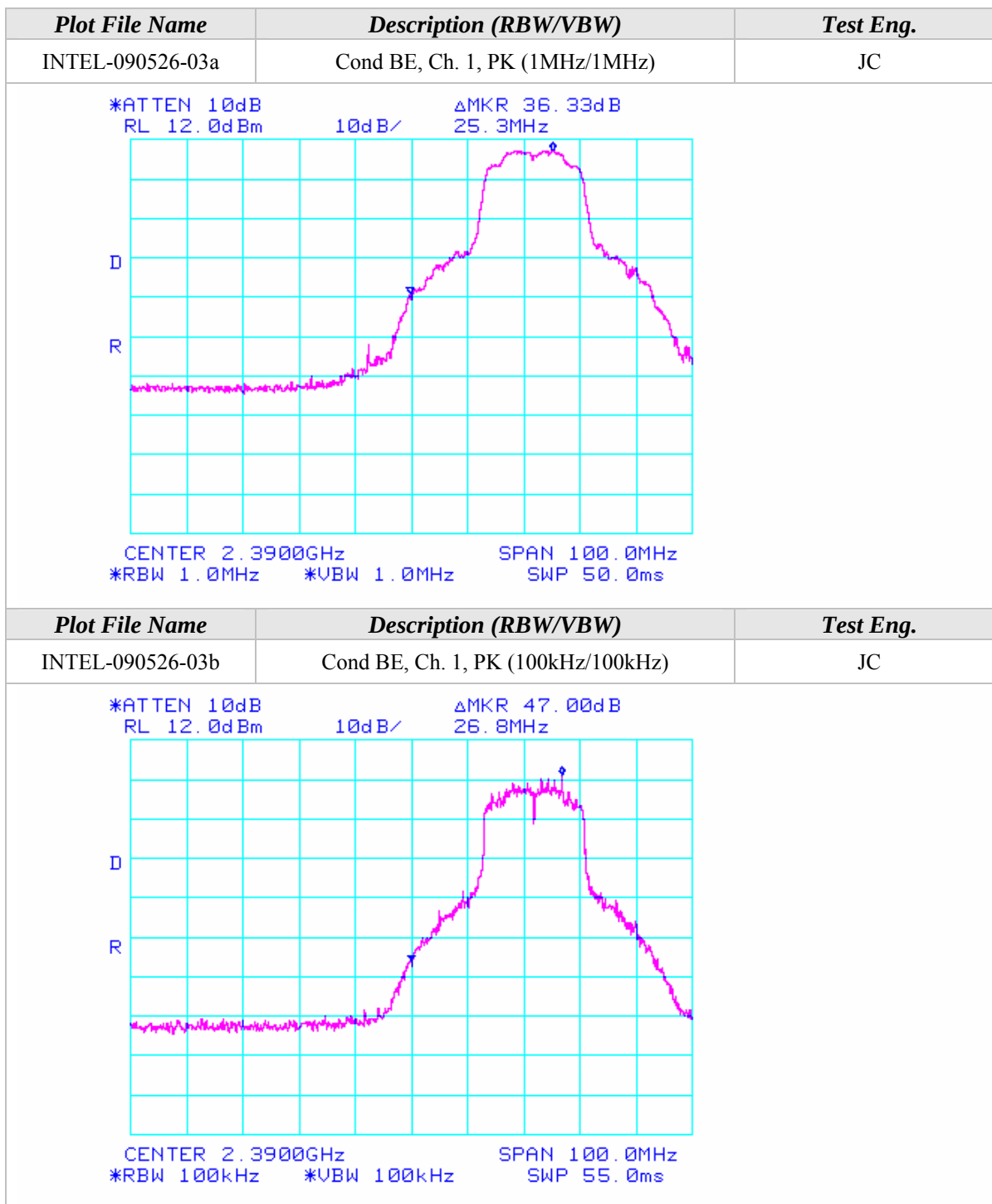
BE = Band Edge Field Strength

F<sub>m</sub> = Measured Fundamental (Peak or Average)

Δm = Measured Conducted Band Edge Delta (Peak or Average)

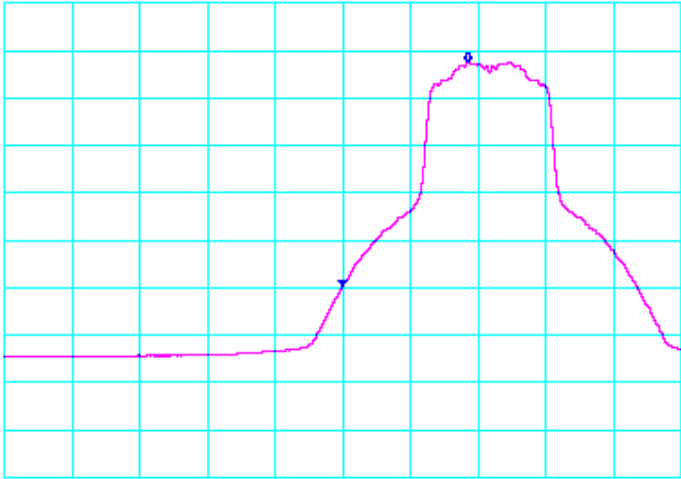
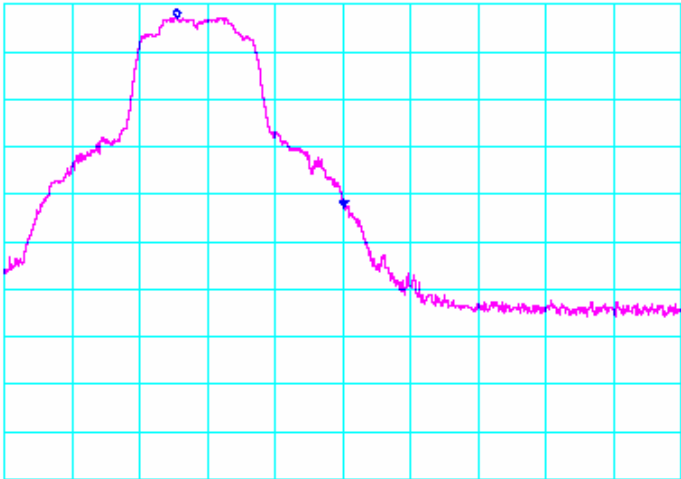


## Band-Edge Plots (Continued)



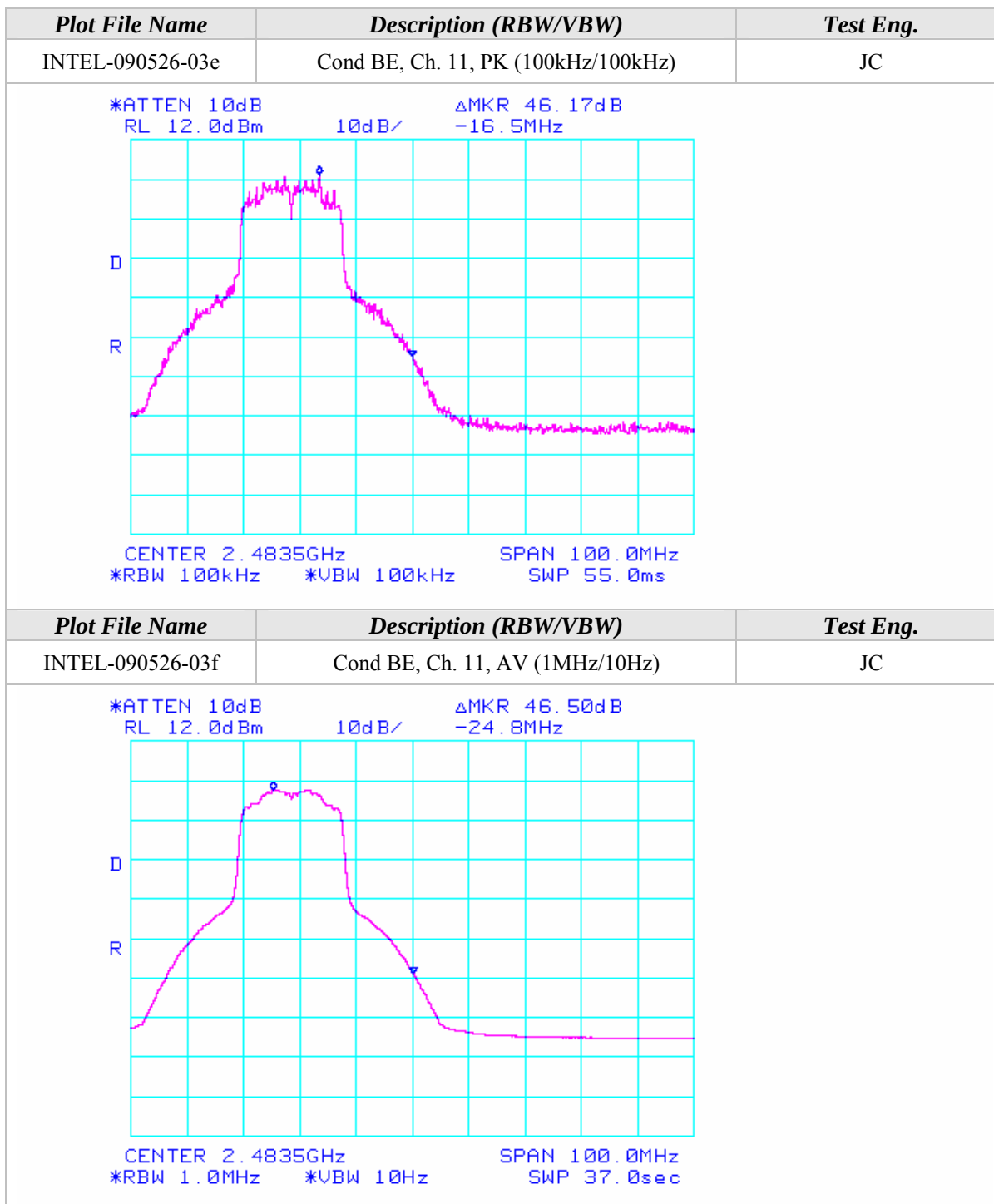


Band-Edge Plots (Continued)

| Plot File Name                                                                                                                                                                                                                                                                   | Description (RBW/VBW)           | Test Eng. |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------|
| INTEL-090526-03c                                                                                                                                                                                                                                                                 | Cond BE, Ch. 1, AV (1MHz/10Hz)  | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>ΔMKR 47.17dB<br/>18.5MHz</div></div><div>CENTER 2.3900GHzSPAN 100.0MHz<br/>*RBW 1.0MHz*VBW 10HzSWP 37.0sec</div></div>     |                                 |           |
| Plot File Name                                                                                                                                                                                                                                                                   | Description (RBW/VBW)           | Test Eng. |
| INTEL-090526-03d                                                                                                                                                                                                                                                                 | Cond BE, Ch. 11, PK (1MHz/1MHz) | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>ΔMKR 39.84dB<br/>-24.7MHz</div></div><div>CENTER 2.4835GHzSPAN 100.0MHz<br/>*RBW 1.0MHz*VBW 1.0MHzSWP 50.0ms</div></div> |                                 |           |



## Band-Edge Plots (Continued)





## Radiated Emissions Test Results (Continued)

**Fundamental Measurements in 802.11n mode 20MHz Wide (2400-2483.5 MHz)****Channels 1, 6, & 11****Continuous TX at Chain B Antenna port with Shanghai Universe Antennas****Aegis Labs, Inc. File #: INTEL-090526-11****RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq. (MHz) | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL | Comments      |
|-------------|----------------------|---------------------|-------------------|------------------------|---|-------------------|------------------|--------------------------|---------------|------------------|---------------|
| 2412.00     | 70.50                | 100                 | 315               |                        |   | 2.53              | 32.18            | 105.20                   |               |                  | <b>Ch. 1</b>  |
| 2412.00     |                      |                     |                   | 61.00                  | A | 2.53              | 32.18            | 95.70                    |               |                  |               |
| 2437.00     | 72.33                | 100                 | 315               |                        |   | 2.54              | 32.21            | 107.08                   |               |                  | <b>Ch. 6</b>  |
| 2437.00     |                      |                     |                   | 63.17                  | A | 2.54              | 32.21            | 97.92                    |               |                  |               |
| 2462.00     | 68.67                | 100                 | 315               |                        |   | 2.55              | 32.25            | 103.47                   |               |                  | <b>Ch. 11</b> |
| 2462.00     |                      |                     |                   | 59.33                  | A | 2.55              | 32.25            | 94.13                    |               |                  |               |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq. (MHz) | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL | Comments      |
|-------------|----------------------|---------------------|-------------------|------------------------|---|-------------------|------------------|--------------------------|---------------|------------------|---------------|
| 2412.00     | 67.00                | 100                 | 180               |                        |   | 2.53              | 31.89            | 101.42                   |               |                  | <b>Ch. 1</b>  |
| 2412.00     |                      |                     |                   | 57.50                  | A | 2.53              | 31.89            | 91.92                    |               |                  |               |
| 2437.00     | 69.67                | 100                 | 180               |                        |   | 2.54              | 31.92            | 104.13                   |               |                  | <b>Ch. 6</b>  |
| 2437.00     |                      |                     |                   | 59.67                  | A | 2.54              | 31.92            | 94.13                    |               |                  |               |
| 2462.00     | 65.50                | 100                 | 180               |                        |   | 2.55              | 31.95            | 100.01                   |               |                  | <b>Ch. 11</b> |
| 2462.00     |                      |                     |                   | 56.33                  | A | 2.55              | 31.95            | 90.84                    |               |                  |               |

NOTE: Fundamental signals measured to calculate the band edge field strengths using the "Marker Delta Method".



## Radiated Emissions Test Results (Continued)

**Band Edge Field Strength Measurements in 802.11n mode 20MHz Wide (2400-2483.5 MHz)  
Channels 1 & 11****Continuous TX at Chain B Antenna port with Shanghai Universe Antennas  
Aegis Labs, Inc. File #: INTEL-090526-11****RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL | Comments      |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|---------------|
| 2390.00        |                            |                           |                      |                           |                         |                        | 68.54                          | 74.00            | -5.46               | <b>Ch. 1</b>  |
| 2390.00        |                            |                           |                      |                           |                         |                        | 58.70                          | 74.00            | -15.30              |               |
| 2390.00        |                            |                           |                      | A                         |                         |                        | 48.37                          | 54.00            | -5.63               |               |
| 2390.00        |                            |                           |                      | A                         |                         |                        | 49.20                          | 54.00            | -4.80               |               |
| 2400.00        | 46.67                      | 100                       | 315                  |                           | 2.52                    | 32.16                  | 81.35                          | 85.20            | -3.85               |               |
| 2483.50        |                            |                           |                      |                           |                         |                        | 66.80                          | 74.00            | -7.20               | <b>Ch. 11</b> |
| 2483.50        |                            |                           |                      |                           |                         |                        | 58.63                          | 74.00            | -15.37              |               |
| 2483.50        |                            |                           |                      | A                         |                         |                        | 50.13                          | 54.00            | -3.87               |               |
| 2483.50        |                            |                           |                      | A                         |                         |                        | 49.29                          | 54.00            | -4.71               |               |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL | Comments      |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|---------------|
| 2390.00        |                            |                           |                      |                           |                         |                        | 64.76                          | 74.00            | -9.24               | <b>Ch. 1</b>  |
| 2390.00        |                            |                           |                      |                           |                         |                        | 54.92                          | 74.00            | -19.08              |               |
| 2390.00        |                            |                           |                      | A                         |                         |                        | 44.59                          | 54.00            | -9.41               |               |
| 2390.00        |                            |                           |                      | A                         |                         |                        | 45.42                          | 54.00            | -8.58               |               |
| 2400.00        | 42.83                      | 100                       | 180                  |                           | 2.52                    | 31.88                  | 77.23                          | 81.42            | -4.19               |               |
| 2483.50        |                            |                           |                      |                           |                         |                        | 63.34                          | 74.00            | -10.66              | <b>Ch. 11</b> |
| 2483.50        |                            |                           |                      |                           |                         |                        | 55.17                          | 74.00            | -18.83              |               |
| 2483.50        |                            |                           |                      | A                         |                         |                        | 46.84                          | 54.00            | -7.16               |               |
| 2483.50        |                            |                           |                      | A                         |                         |                        | 46.00                          | 54.00            | -8.00               |               |

NOTE: The “Band Edge Field Strength” was calculated using the “Fundamental” and “Conducted Band Edge” measurements per the “Marker-Delta Method” with the following formula:

$$BE = F_m - \Delta m$$

Where

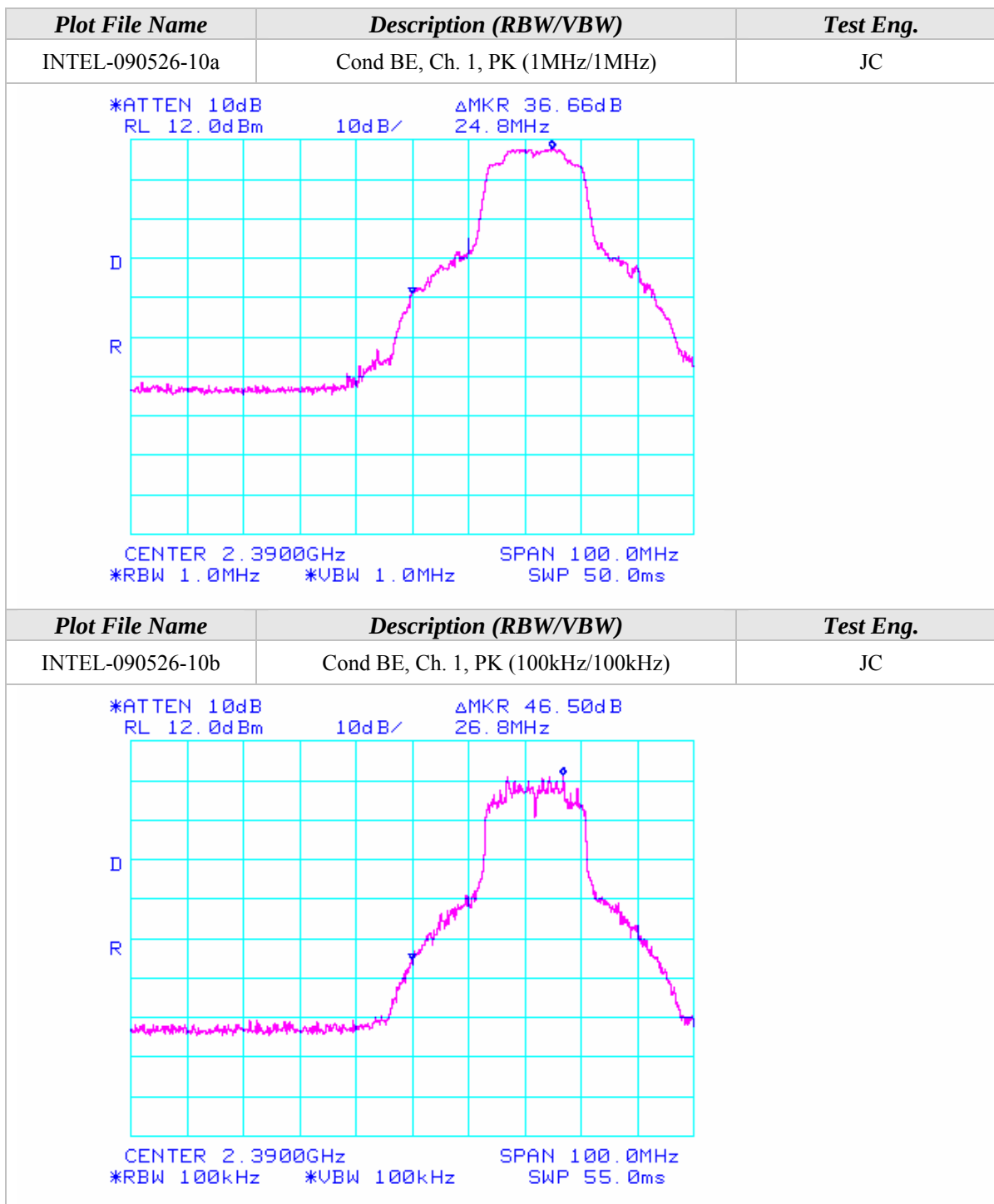
BE = Band Edge Field Strength

F<sub>m</sub> = Measured Fundamental (Peak or Average)

Δm = Measured Conducted Band Edge Delta (Peak or Average)

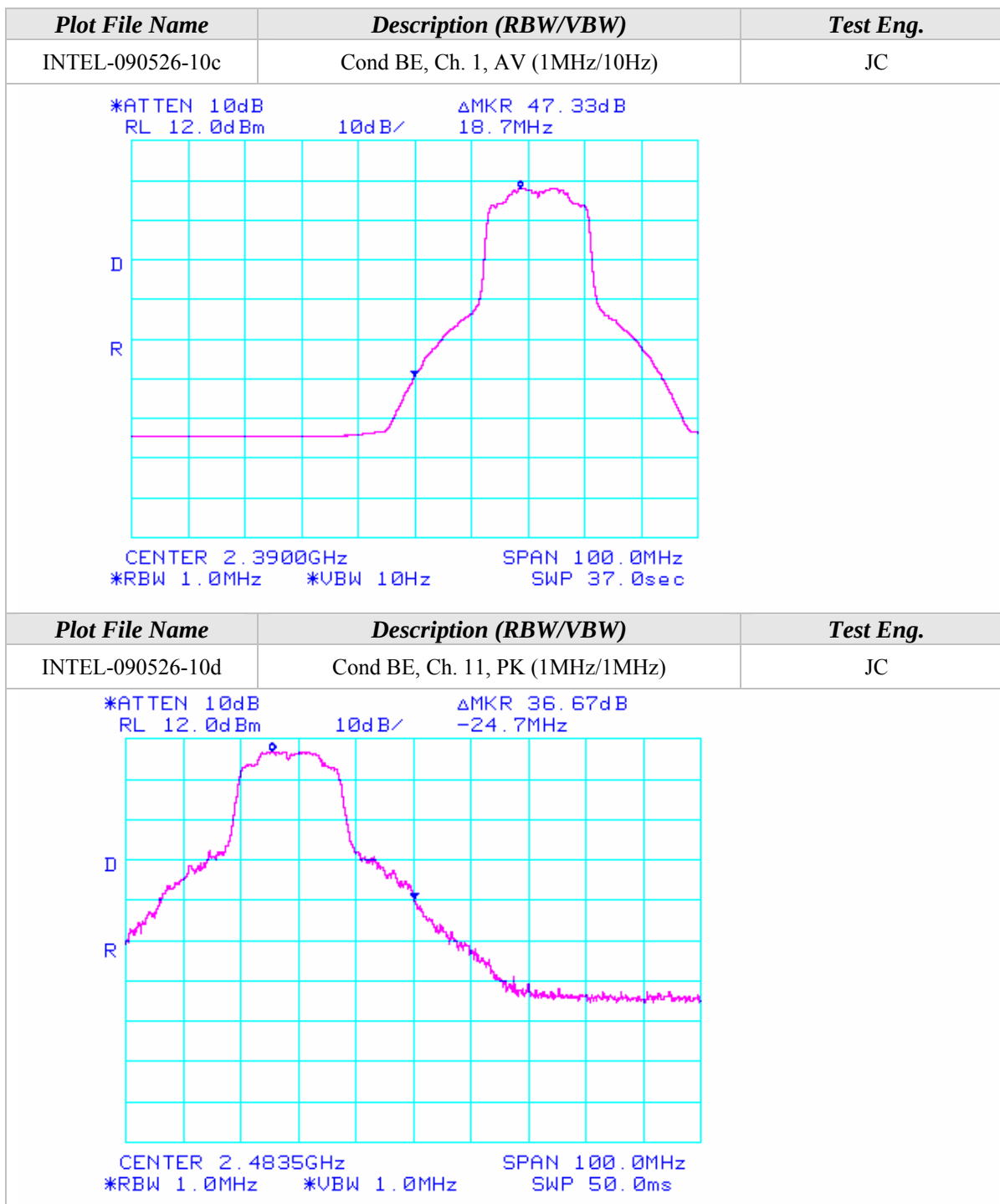


## Band-Edge Plots (Continued)



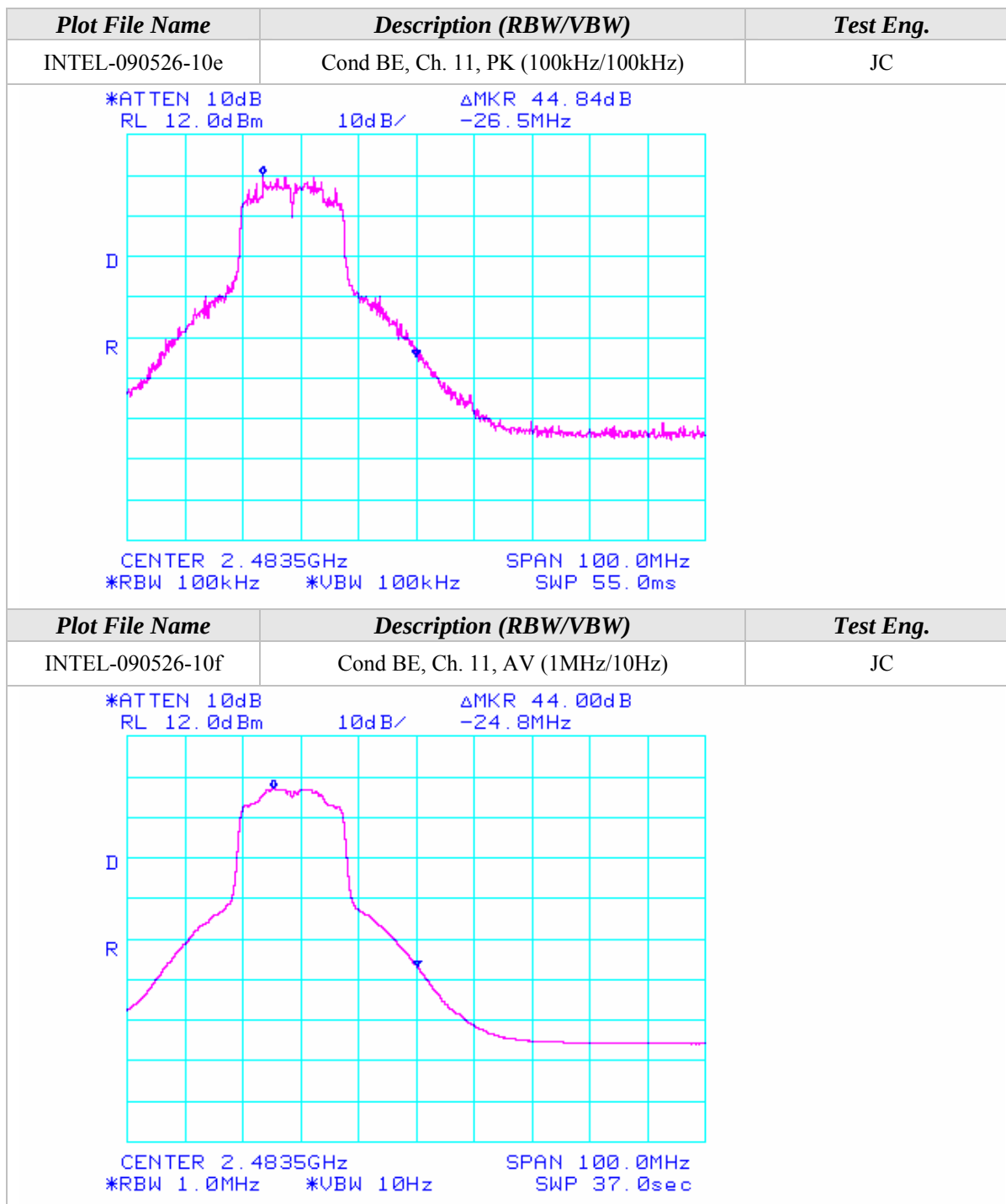


## Band-Edge Plots (Continued)





## Band-Edge Plots (Continued)





## Radiated Emissions Test Results (Continued)

**Fundamental Measurements in 802.11n mode 20MHz Wide (2400-2483.5 MHz)**  
**Channels 1, 6, & 11**  
**Continuous TX at Chain C Antenna port with Shanghai Universe Antennas**  
**Aegis Labs, Inc. File #: INTEL-090526-13**

**RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq. (MHz) | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL | Comments      |
|-------------|----------------------|---------------------|-------------------|------------------------|---|-------------------|------------------|--------------------------|---------------|------------------|---------------|
| 2412.00     | 71.67                | 100                 | 315               |                        |   | 2.53              | 32.18            | 106.37                   |               |                  | <b>Ch. 1</b>  |
| 2412.00     |                      |                     |                   | 61.67                  | A | 2.53              | 32.18            | 96.37                    |               |                  |               |
| 2437.00     | 73.17                | 100                 | 315               |                        |   | 2.54              | 32.21            | 107.92                   |               |                  | <b>Ch. 6</b>  |
| 2437.00     |                      |                     |                   | 64.50                  | A | 2.54              | 32.21            | 99.25                    |               |                  |               |
| 2462.00     | 72.50                | 100                 | 315               |                        |   | 2.55              | 32.25            | 107.30                   |               |                  | <b>Ch. 11</b> |
| 2462.00     |                      |                     |                   | 62.83                  | A | 2.55              | 32.25            | 97.63                    |               |                  |               |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq. (MHz) | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL | Comments      |
|-------------|----------------------|---------------------|-------------------|------------------------|---|-------------------|------------------|--------------------------|---------------|------------------|---------------|
| 2412.00     | 69.67                | 100                 | 0                 |                        |   | 2.53              | 31.89            | 104.09                   |               |                  | <b>Ch. 1</b>  |
| 2412.00     |                      |                     |                   | 60.83                  | A | 2.53              | 31.89            | 95.25                    |               |                  |               |
| 2437.00     | 70.50                | 100                 | 0                 |                        |   | 2.54              | 31.92            | 104.96                   |               |                  | <b>Ch. 6</b>  |
| 2437.00     |                      |                     |                   | 61.17                  | A | 2.54              | 31.92            | 95.63                    |               |                  |               |
| 2462.00     | 69.50                | 100                 | 0                 |                        |   | 2.55              | 31.95            | 104.01                   |               |                  | <b>Ch. 11</b> |
| 2462.00     |                      |                     |                   | 60.33                  | A | 2.55              | 31.95            | 94.84                    |               |                  |               |

NOTE: Fundamental signals measured to calculate the band edge field strengths using the "Marker Delta Method".



## Radiated Emissions Test Results (Continued)

**Band Edge Field Strength Measurements in 802.11n mode 20MHz Wide (2400-2483.5 MHz)  
Channels 1 & 11****Continuous TX at Chain C Antenna port with Shanghai Universe Antennas  
Aegis Labs, Inc. File #: INTEL-090526-13****RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL | Comments      |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|---------------|
| 2390.00        |                            |                           |                      |                           |                         |                        | 66.53                          | 74.00            | -7.47               | <b>Ch. 1</b>  |
| 2390.00        |                            |                           |                      |                           |                         |                        | 60.87                          | 74.00            | -13.13              |               |
| 2390.00        |                            |                           |                      | A                         |                         |                        | 48.54                          | 54.00            | -5.46               |               |
| 2390.00        |                            |                           |                      | A                         |                         |                        | 50.87                          | 54.00            | -3.13               |               |
| 2400.00        | 43.67                      | 100                       | 315                  |                           | 2.52                    | 32.16                  | 78.35                          | 86.37            | -8.02               | <b>Ch. 11</b> |
| 2483.50        |                            |                           |                      |                           |                         |                        | 67.80                          | 74.00            | -6.20               |               |
| 2483.50        |                            |                           |                      |                           |                         |                        | 58.97                          | 74.00            | -15.03              |               |
| 2483.50        |                            |                           |                      | A                         |                         |                        | 48.79                          | 54.00            | -5.21               |               |
| 2483.50        |                            |                           |                      | A                         |                         |                        | 49.30                          | 54.00            | -4.70               |               |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL | Comments      |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|---------------|
| 2390.00        |                            |                           |                      |                           |                         |                        | 64.25                          | 74.00            | -9.75               | <b>Ch. 1</b>  |
| 2390.00        |                            |                           |                      |                           |                         |                        | 58.59                          | 74.00            | -15.41              |               |
| 2390.00        |                            |                           |                      | A                         |                         |                        | 47.42                          | 54.00            | -6.58               |               |
| 2390.00        |                            |                           |                      | A                         |                         |                        | 49.75                          | 54.00            | -4.25               |               |
| 2400.00        | 41.33                      | 100                       | 0                    |                           | 2.52                    | 31.88                  | 75.73                          | 84.09            | -8.36               | <b>Ch. 11</b> |
| 2483.50        |                            |                           |                      |                           |                         |                        | 64.51                          | 74.00            | -9.49               |               |
| 2483.50        |                            |                           |                      |                           |                         |                        | 55.68                          | 74.00            | -18.32              |               |
| 2483.50        |                            |                           |                      | A                         |                         |                        | 46.00                          | 54.00            | -8.00               |               |
| 2483.50        |                            |                           |                      | A                         |                         |                        | 46.51                          | 54.00            | -7.49               |               |

NOTE: The "Band Edge Field Strength" was calculated using the "Fundamental" and "Conducted Band Edge" measurements per the "Marker-Delta Method" with the following formula:

$$BE = F_m - \Delta m$$

Where

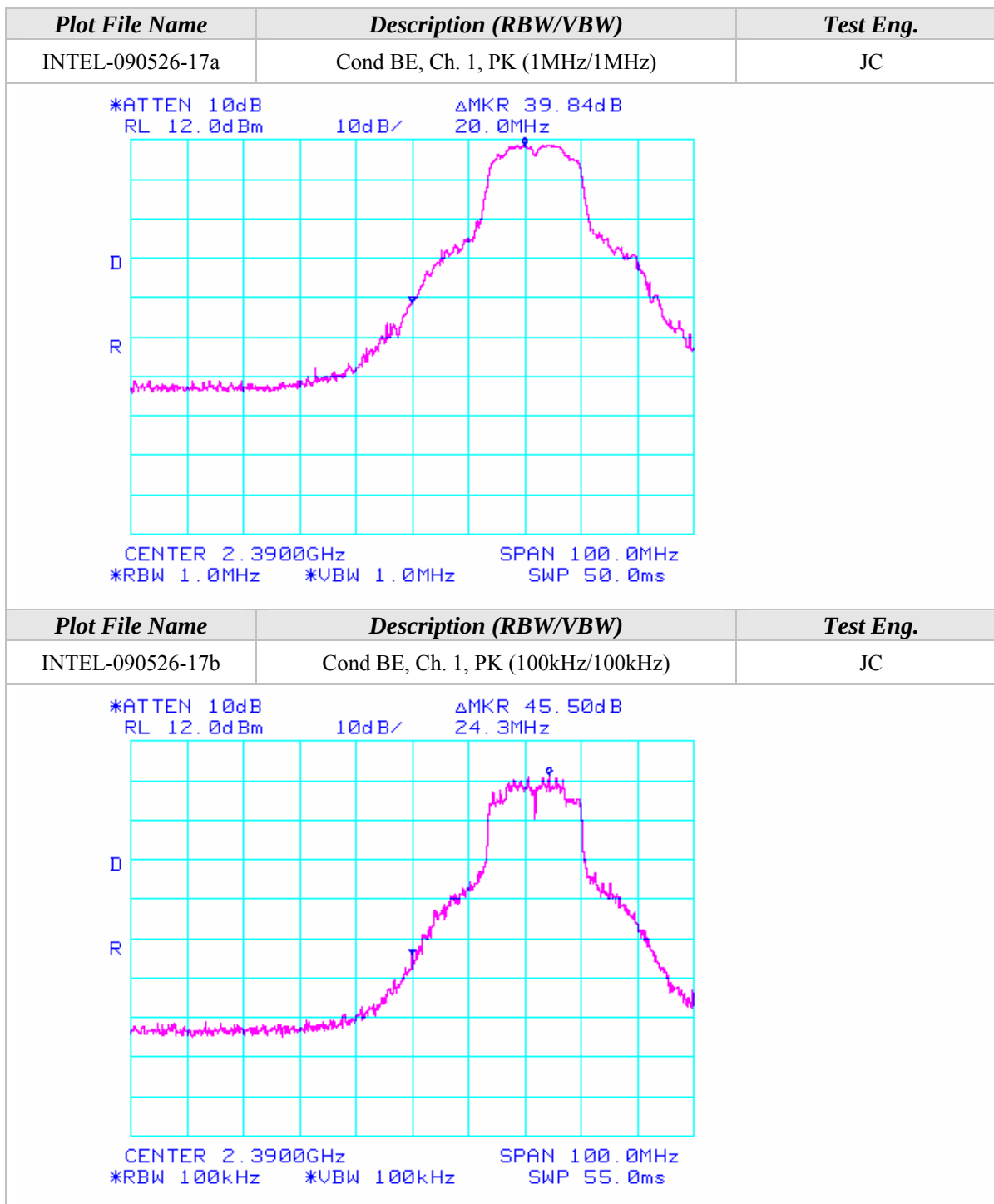
BE = Band Edge Field Strength

F<sub>m</sub> = Measured Fundamental (Peak or Average)

Δm = Measured Conducted Band Edge Delta (Peak or Average)



## Band-Edge Plots (Continued)



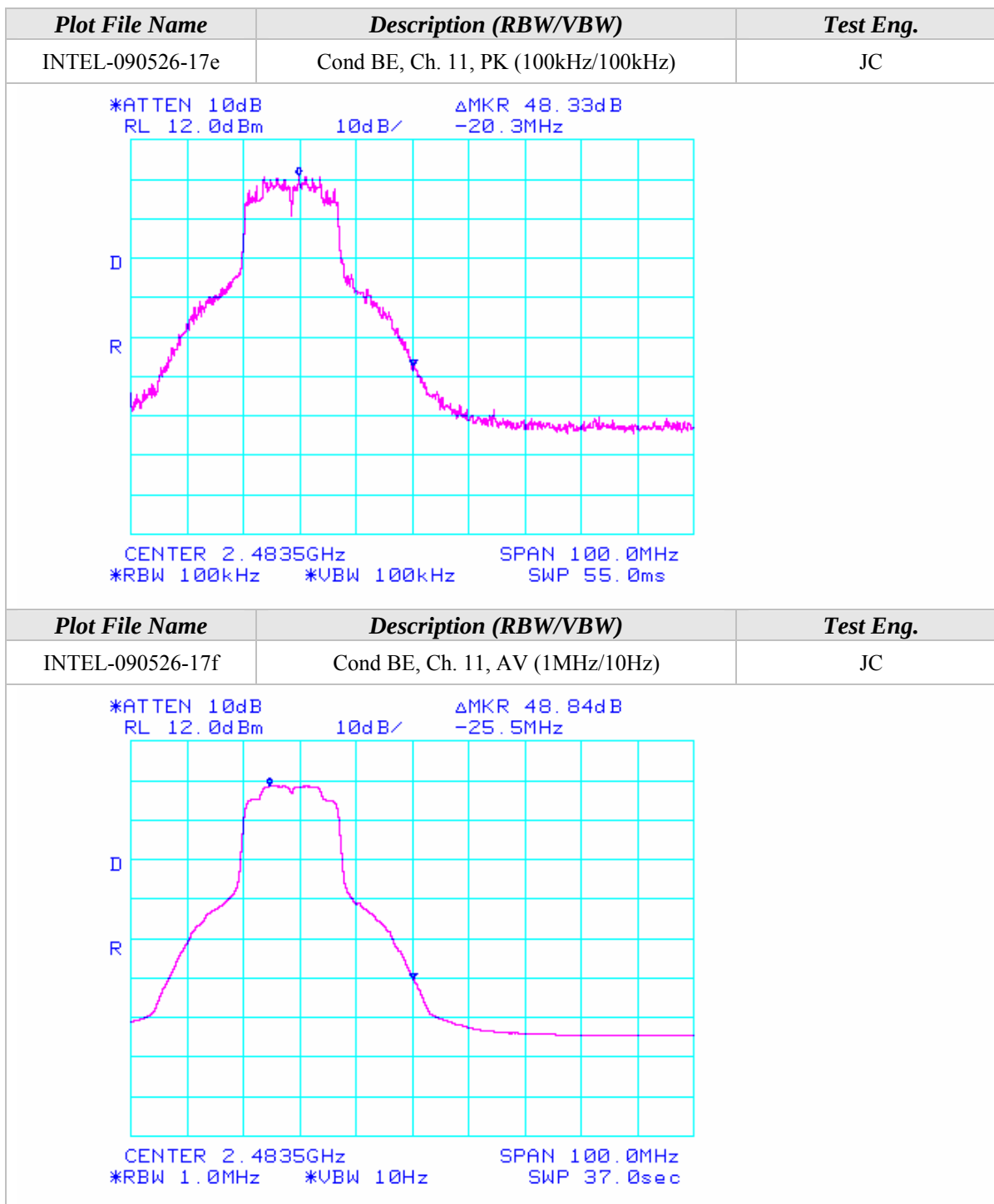


Band-Edge Plots (Continued)

| Plot File Name                                                                                                                                                                               | Description (RBW/VBW)           | Test Eng. |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------|
| INTEL-090526-17c                                                                                                                                                                             | Cond BE, Ch. 1, AV (1MHz/10Hz)  | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>ΔMKR 47.83dB<br/>18.3MHz</div></div><div>CENTER 2.3900GHzSPAN 100.0MHz<br/>*RBW 1.0MHz*VBW 10HzSWP 37.0sec</div></div>   |                                 |           |
| Plot File Name                                                                                                                                                                               | Description (RBW/VBW)           | Test Eng. |
| INTEL-090526-17d                                                                                                                                                                             | Cond BE, Ch. 11, PK (1MHz/1MHz) | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>ΔMKR 39.50dB<br/>-24.2MHz</div></div><div>CENTER 2.4835GHzSPAN 100.0MHz<br/>*RBW 1.0MHz*VBW 1.0MHzSWP 50.0ms</div></div> |                                 |           |



## Band-Edge Plots (Continued)





## Radiated Emissions Test Results (Continued)

*Spurious Emissions Measurements in 802.11n mode 20MHz Wide (2400-2483.5 MHz)*

*Channels 1, 6, & 11*

*Continuous TX at Chain A, B, & C Antenna ports with Shanghai Universe Antennas*

*Aegis Labs, Inc. File #: INTEL-090526-18*

### RADIATED EMISSIONS - Horizontal Antenna Polarization

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Preamp<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL | Channel/<br>Chain<br>Tested |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|---|--------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|-----------------------------|
| 3249.32        | 52.50                      | 100                       | 0                    |                           |   | 47.61                    | 2.94                    | 32.75                  | 40.58                          | 74.00            | -33.42              | Ch. 6/A                     |
| 3249.32        | 53.17                      | 100                       | 0                    |                           |   | 47.61                    | 2.94                    | 32.75                  | 41.25                          | 74.00            | -32.75              | Ch. 6/B                     |
| 3249.32        | 53.17                      | 100                       | 0                    |                           |   | 47.61                    | 2.94                    | 32.75                  | 41.25                          | 74.00            | -32.75              | Ch. 6/                      |
| 4873.98        | 54.67                      | 100                       | 45                   |                           |   | 47.50                    | 3.64                    | 34.13                  | 44.93                          | 74.00            | -29.07              | C                           |
| 4873.98        |                            | 100                       | 45                   | 41.86                     | A | 47.50                    | 3.64                    | 34.13                  | 32.12                          | 54.00            | -21.88              |                             |
| 3216.00        | 51.50                      | 100                       | 0                    |                           |   | 47.60                    | 2.91                    | 32.74                  | 39.56                          | 74.00            | -34.44              | Ch. 1/                      |
| 4873.98        | 51.83                      | 100                       | 0                    |                           |   | 47.50                    | 3.64                    | 34.13                  | 42.09                          | 74.00            | -31.91              | C                           |
| 4873.98        |                            | 100                       | 0                    | 40.23                     | A | 47.50                    | 3.64                    | 34.13                  | 30.49                          | 54.00            | -23.51              |                             |
| 3282.66        | 52.50                      | 100                       |                      |                           |   | 47.62                    | 2.97                    | 32.76                  | 40.60                          | 74.00            | -33.40              | Ch. 11/                     |
| 4923.99        | 51.17                      | 100                       | 315                  |                           |   | 47.49                    | 3.67                    | 34.12                  | 41.47                          | 74.00            | -32.53              | C                           |
| 4923.99        |                            | 100                       | 315                  | 39.82                     | A | 47.49                    | 3.67                    | 34.12                  | 30.12                          | 54.00            | -23.88              |                             |

### RADIATED EMISSIONS - Vertical Antenna Polarization

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Preamp<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL | Channel/<br>Chain<br>Tested |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|---|--------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|-----------------------------|
| 3249.32        | 53.67                      | 100                       | 0                    |                           |   | 47.61                    | 2.94                    | 32.55                  | 41.55                          | 74.00            | -32.45              | Ch. 6/                      |
| 4873.98        | 54.00                      | 100                       | 0                    |                           |   | 47.50                    | 3.64                    | 34.30                  | 44.44                          | 74.00            | -29.56              | A                           |
| 4873.98        |                            | 100                       | 0                    | 41.44                     | A | 47.50                    | 3.64                    | 34.30                  | 31.88                          | 54.00            | -22.12              |                             |
| 6498.64        | 51.17                      | 100                       | 90                   |                           |   | 46.93                    | 4.22                    | 35.50                  | 43.96                          | 74.00            | -30.04              |                             |
| 3249.32        | 53.83                      | 100                       | 0                    |                           |   | 47.61                    | 2.94                    | 32.55                  | 41.71                          | 74.00            | -32.29              | Ch. 6/                      |
| 6498.64        | 51.67                      | 100                       | 90                   |                           |   | 46.93                    | 4.22                    | 35.50                  | 44.46                          | 74.00            | -29.54              | B                           |
| 3249.32        | 53.83                      | 100                       | 0                    |                           |   | 47.61                    | 2.94                    | 32.55                  | 41.71                          | 74.00            | -32.29              | Ch. 6/                      |
| 4873.98        | 54.33                      | 100                       | 0                    |                           |   | 47.50                    | 3.64                    | 34.30                  | 44.77                          | 74.00            | -29.23              | C                           |
| 4873.98        |                            | 100                       | 0                    | 41.78                     | A | 47.50                    | 3.64                    | 34.30                  | 32.22                          | 54.00            | -21.78              |                             |
| 6498.64        | 50.83                      | 100                       | 90                   |                           |   | 46.93                    | 4.22                    | 35.50                  | 43.62                          | 74.00            | -30.38              |                             |
| 3216.00        | 52.67                      | 100                       | 0                    |                           |   | 47.60                    | 2.91                    | 32.54                  | 40.53                          | 74.00            | -33.47              | Ch. 1/C                     |
| 3282.66        | 54.00                      | 100                       | 45                   |                           |   | 47.62                    | 2.97                    | 32.56                  | 41.90                          | 74.00            | -32.10              | Ch. 11/                     |
| 4923.99        | 52.50                      | 100                       | 0                    |                           |   | 47.49                    | 3.67                    | 34.30                  | 42.99                          | 74.00            | -31.01              | C                           |
| 4923.99        |                            | 100                       | 0                    | 40.81                     | A | 47.49                    | 3.67                    | 34.30                  | 31.30                          | 54.00            | -22.70              |                             |



## Radiated Emissions Test Results (Continued)

**Spurious Emissions Measurements in 802.11n mode 20MHz Wide (2400-2483.5 MHz)****Channels 1, 6, & 11****Continuous TX at Triple Chain ABC Antenna ports with Shanghai Universe Antennas****Aegis Labs, Inc. File #: INTEL-090526-18****RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq. (MHz) | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Preamplifier Factor (dB) | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL | Channel/Chain Tested |
|-------------|----------------------|---------------------|-------------------|------------------------|---|--------------------------|-------------------|------------------|--------------------------|---------------|------------------|----------------------|
| 3216.00     | 52.67                | 100                 | 315               |                        |   | 47.60                    | 2.91              | 32.74            | 40.73                    | 74.00         | -33.27           | Ch. 1                |
| 6432.00     | 55.67                | 100                 | 45                |                        |   | 46.99                    | 4.20              | 35.63            | 48.52                    | 74.00         | -25.48           |                      |
| 3249.33     | 51.67                | 100                 | 315               |                        |   | 47.61                    | 2.94              | 32.75            | 39.75                    | 74.00         | -34.25           | Ch. 6                |
| 6498.66     | 55.67                | 100                 | 45                |                        |   | 46.93                    | 4.22              | 35.70            | 48.66                    | 74.00         | -25.34           |                      |
| 3282.66     | 53.50                | 100                 | 315               |                        |   | 47.62                    | 2.97              | 32.76            | 41.60                    | 74.00         | -32.40           | Ch. 11               |
| 4924.00     | 52.17                | 100                 | 315               |                        |   | 47.49                    | 3.67              | 34.12            | 42.47                    | 74.00         | -31.53           |                      |
| 4924.00     |                      | 100                 | 315               | 43.58                  | A | 47.49                    | 3.67              | 34.12            | 33.88                    | 54.00         | -20.12           |                      |
| 6565.33     | 56.00                | 100                 | 270               |                        |   | 46.83                    | 4.25              | 35.71            | 49.13                    | 74.00         | -24.87           |                      |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq. (MHz) | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Preamplifier Factor (dB) | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL | Channel/Chain Tested |
|-------------|----------------------|---------------------|-------------------|------------------------|---|--------------------------|-------------------|------------------|--------------------------|---------------|------------------|----------------------|
| 3216.00     | 52.17                | 100                 | 0                 |                        |   | 47.60                    | 2.91              | 32.54            | 40.03                    | 74.00         | -33.97           | Ch. 1                |
| 6432.00     | 57.83                | 100                 | 45                |                        |   | 46.99                    | 4.20              | 35.47            | 50.52                    | 74.00         | -23.48           |                      |
| 3249.32     | 53.00                | 100                 | 0                 |                        |   | 47.61                    | 2.94              | 32.55            | 40.88                    | 74.00         | -33.12           | Ch. 6                |
| 4873.98     | 52.17                | 100                 | 90                |                        |   | 47.50                    | 3.64              | 34.30            | 42.61                    | 74.00         | -31.39           |                      |
| 4873.98     |                      | 100                 | 90                | 40.62                  | A | 47.50                    | 3.64              | 34.30            | 31.06                    | 54.00         | -22.94           |                      |
| 6498.85     | 58.67                | 100                 | 90                |                        |   | 46.93                    | 4.22              | 35.50            | 51.46                    | 74.00         | -22.54           |                      |
| 9747.89     | 52.17                | 100                 | 0                 |                        |   | 45.52                    | 5.31              | 36.75            | 48.71                    | 74.00         | -25.29           |                      |
| 3282.66     | 53.00                | 100                 | 45                |                        |   | 47.62                    | 2.97              | 32.56            | 40.90                    | 74.00         | -33.10           | Ch. 11               |
| 4924.00     | 52.33                | 100                 | 90                |                        |   | 47.49                    | 3.67              | 34.30            | 42.82                    | 74.00         | -31.18           |                      |
| 4924.00     |                      | 100                 | 90                | 40.13                  | A | 47.49                    | 3.67              | 34.30            | 30.62                    | 54.00         | -23.38           |                      |
| 6565.33     | 59.83                | 100                 | 90                |                        |   | 46.83                    | 4.25              | 35.51            | 52.76                    | 74.00         | -21.24           |                      |

**RADIATED EMISSIONS TEST RESULTS**

|                       |                                                                                                                                         |                        |              |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------|------------------------|--------------|
| <b>CLIENT:</b>        | Intel Corporation                                                                                                                       | <b>DATE:</b>           | 06/25/09     |
| <b>EUT:</b>           | Intel® Centrino® Ultimate-N 6300                                                                                                        | <b>PROJECT NUMBER:</b> | INTEL-090526 |
| <b>MODEL NUMBER:</b>  | 633ANHMW                                                                                                                                | <b>TEST ENGINEER:</b>  | JC           |
| <b>SERIAL NUMBER:</b> | 0015005A17C0                                                                                                                            | <b>SITE #:</b>         | 2            |
| <b>CONFIGURATION:</b> | Tested installed in an extender board connected to the host laptop's mini PCI slot in <b>802.11n (2400-2483.5 MHz) mode 40MHz Wide.</b> | <b>TEMPERATURE:</b>    | 27° C        |
|                       |                                                                                                                                         | <b>HUMIDITY:</b>       | 44% RH       |
|                       |                                                                                                                                         | <b>TIME:</b>           | 3:00 PM      |

|                     |                                                                                                                                                                                           |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description:</b> | Radiated RF Emissions (1 GHz – 18 GHz)                                                                                                                                                    |
| <b>Results:</b>     | <b>PASSED</b> Horizontal and Vertical Antenna Polarizations Class B Limits                                                                                                                |
| <b>Note:</b>        | Radiated Emissions Measurements were performed on the EUT with power supply set at the following voltage and frequency. <ul style="list-style-type: none"><li>• 120VAC / 60 Hz.</li></ul> |

| Unwanted Spurious Emissions Limits |                       |                                                                |                                                                      |
|------------------------------------|-----------------------|----------------------------------------------------------------|----------------------------------------------------------------------|
| Frequency (MHz)                    | Field Strength (uV/m) | Field Strength (dBuV/m)<br>(Emissions in the restricted bands) | Field Strength (dBm/MHz)<br>(Emissions outside the restricted bands) |
| Above 960                          | 500                   | 54.00 (Average)<br>74.00 (Peak)                                | < -20 dBc                                                            |

**Radiated Emissions Sample Calculations**

$$\text{Corrected Meter Reading} = \text{Meter Reading} + F + C - D$$

Where, F = Antenna Factor

C = Cable Factor

G = Amplifier Gain

D = Distance Factor (if applicable)

Therefore, the equation for determining the Corrected Meter Reading Limit (CML) is:

$$\text{CML} = \text{Specification Limit} - F - C + D$$



## Radiated Emissions Test Results (Continued)

**Fundamental Measurements in 802.11n mode 40MHz Wide (2400-2483.5 MHz)****Channels 3, 4, 6, 8, & 9****Continuous TX at Chain A Antenna port with Shanghai Universe Antennas****Aegis Labs, Inc. File #: INTEL-090526-09****RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq. (MHz) | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) + =FAIL | Comments     |
|-------------|----------------------|---------------------|-------------------|------------------------|---|-------------------|------------------|--------------------------|---------------|-------------------|--------------|
| 2422.00     | 62.33                | 100                 | 315               |                        |   | 2.53              | 32.19            | 97.05                    |               |                   | <b>Ch. 3</b> |
| 2422.00     |                      |                     |                   | 51.67                  | A | 2.53              | 32.19            | 86.39                    |               |                   |              |
| 2427.00     | 64.00                | 100                 | 315               |                        |   | 2.53              | 32.20            | 98.73                    |               |                   | <b>Ch. 4</b> |
| 2427.00     |                      |                     |                   | 52.83                  | A | 2.53              | 32.20            | 87.56                    |               |                   |              |
| 2437.00     | 69.67                | 100                 | 315               |                        |   | 2.54              | 32.21            | 104.42                   |               |                   | <b>Ch. 6</b> |
| 2437.00     |                      |                     |                   | 60.67                  | A | 2.54              | 32.21            | 95.42                    |               |                   |              |
| 2447.00     | 64.50                | 100                 | 315               |                        |   | 2.54              | 32.23            | 99.27                    |               |                   | <b>Ch. 8</b> |
| 2447.00     |                      |                     |                   | 53.33                  | A | 2.54              | 32.23            | 88.10                    |               |                   |              |
| 2452.00     | 63.17                | 100                 | 315               |                        |   | 2.55              | 32.23            | 97.95                    |               |                   | <b>Ch. 9</b> |
| 2452.00     |                      |                     |                   | 52.67                  | A | 2.55              | 32.23            | 87.45                    |               |                   |              |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq. (MHz) | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) + =FAIL | Comments     |
|-------------|----------------------|---------------------|-------------------|------------------------|---|-------------------|------------------|--------------------------|---------------|-------------------|--------------|
| 2422.00     | 61.67                | 100                 | 0                 |                        |   | 2.53              | 31.91            | 96.11                    |               |                   | <b>Ch. 3</b> |
| 2422.00     |                      |                     |                   | 51.00                  | A | 2.53              | 31.91            | 85.44                    |               |                   |              |
| 2427.00     | 63.50                | 100                 | 0                 |                        |   | 2.53              | 31.91            | 97.95                    |               |                   | <b>Ch. 4</b> |
| 2427.00     |                      |                     |                   | 53.33                  | A | 2.53              | 31.91            | 87.78                    |               |                   |              |
| 2437.00     | 68.50                | 100                 | 0                 |                        |   | 2.54              | 31.92            | 102.96                   |               |                   | <b>Ch. 6</b> |
| 2437.00     |                      |                     |                   | 59.00                  | A | 2.54              | 31.92            | 93.46                    |               |                   |              |
| 2447.00     | 64.67                | 100                 | 0                 |                        |   | 2.54              | 31.94            | 99.15                    |               |                   | <b>Ch. 8</b> |
| 2447.00     |                      |                     |                   | 54.17                  | A | 2.54              | 31.94            | 88.65                    |               |                   |              |
| 2452.00     | 62.33                | 100                 | 45                |                        |   | 2.55              | 31.94            | 96.82                    |               |                   | <b>Ch. 9</b> |
| 2452.00     |                      |                     |                   | 52.67                  | A | 2.55              | 31.94            | 87.16                    |               |                   |              |

NOTE: Fundamental signals measured to calculate the band edge field strengths using the "Marker Delta Method".



## Radiated Emissions Test Results (Continued)

**Band Edge Field Strength Measurements in 802.11n mode 40MHz Wide (2400-2483.5 MHz)**  
**Channels 3, 4, 8, & 9**

**Continuous TX at Chain A Antenna port with Shanghai Universe Antennas**  
**Aegis Labs, Inc. File #: INTEL-090526-09**

| RADIATED EMISSIONS - Horizontal Antenna Polarization |                            |                           |                      |                           |                         |                        |                                |                  |                     |              |
|------------------------------------------------------|----------------------------|---------------------------|----------------------|---------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|--------------|
| Freq.<br>(MHz)                                       | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL | Comments     |
| 2390.00                                              |                            |                           |                      |                           |                         |                        | 66.05                          | 74.00            | -7.95               | <b>Ch. 3</b> |
| 2390.00                                              |                            |                           |                      |                           |                         |                        | 61.55                          | 74.00            | -12.45              |              |
| 2390.00                                              |                            |                           |                      | A                         |                         |                        | 48.89                          | 54.00            | -5.11               |              |
| 2390.00                                              |                            |                           |                      | A                         |                         |                        | 50.89                          | 54.00            | -3.11               |              |
| 2400.00                                              | 35.33                      | 100                       | 315                  |                           | 2.52                    | 32.16                  | 70.01                          | 77.05            | -7.04               | <b>Ch. 4</b> |
| 2390.00                                              |                            |                           |                      |                           |                         |                        | 64.23                          | 74.00            | -9.77               |              |
| 2390.00                                              |                            |                           |                      |                           |                         |                        | 60.73                          | 74.00            | -13.27              |              |
| 2390.00                                              |                            |                           |                      | A                         |                         |                        | 50.22                          | 54.00            | -3.78               |              |
| 2390.00                                              |                            |                           |                      | A                         |                         |                        | 49.56                          | 54.00            | -4.44               | <b>Ch. 8</b> |
| 2400.00                                              | 32.17                      | 100                       | 315                  |                           | 2.52                    | 32.16                  | 66.85                          | 78.73            | -11.88              |              |
| 2483.50                                              |                            |                           |                      |                           |                         |                        | 64.60                          | 74.00            | -9.40               |              |
| 2483.50                                              |                            |                           |                      |                           |                         |                        | 60.27                          | 74.00            | -13.73              |              |
| 2483.50                                              |                            |                           |                      | A                         |                         |                        | 48.44                          | 54.00            | -5.56               | <b>Ch. 9</b> |
| 2483.50                                              |                            |                           |                      | A                         |                         |                        | 49.10                          | 54.00            | -4.90               |              |
| 2483.50                                              |                            |                           |                      |                           |                         |                        | 64.45                          | 74.00            | -9.55               |              |
| 2483.50                                              |                            |                           |                      |                           |                         |                        | 59.95                          | 74.00            | -14.05              |              |
| 2483.50                                              |                            |                           |                      | A                         |                         |                        | 48.62                          | 54.00            | -5.38               |              |
| 2483.50                                              |                            |                           |                      | A                         |                         |                        | 49.45                          | 54.00            | -4.55               |              |



## Radiated Emissions Test Results (Continued)

| RADIATED EMISSIONS - Vertical Antenna Polarization |                            |                           |                      |                           |                         |                        |                                |                  |                     |              |
|----------------------------------------------------|----------------------------|---------------------------|----------------------|---------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|--------------|
| Freq.<br>(MHz)                                     | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL | Comments     |
| 2390.00                                            |                            |                           |                      |                           |                         |                        | 65.11                          | 74.00            | -8.89               | <b>Ch. 3</b> |
| 2390.00                                            |                            |                           |                      |                           |                         |                        | 60.61                          | 74.00            | -13.39              |              |
| 2390.00                                            |                            |                           |                      | A                         |                         |                        | 47.94                          | 54.00            | -6.06               |              |
| 2390.00                                            |                            |                           |                      | A                         |                         |                        | 49.94                          | 54.00            | -4.06               |              |
| 2400.00                                            | 33.67                      | 100                       | 0                    |                           | 2.52                    | 31.88                  | 68.07                          | 76.11            | -8.04               |              |
| 2390.00                                            |                            |                           |                      |                           |                         |                        | 63.45                          | 74.00            | -10.55              | <b>Ch. 4</b> |
| 2390.00                                            |                            |                           |                      |                           |                         |                        | 59.95                          | 74.00            | -14.05              |              |
| 2390.00                                            |                            |                           |                      | A                         |                         |                        | 50.44                          | 54.00            | -3.56               |              |
| 2390.00                                            |                            |                           |                      | A                         |                         |                        | 49.78                          | 54.00            | -4.22               |              |
| 2400.00                                            | 31.00                      | 100                       | 0                    |                           | 2.52                    | 31.88                  | 65.40                          | 73.46            | -8.06               |              |
| 2483.50                                            |                            |                           |                      |                           |                         |                        | 64.48                          | 74.00            | -9.52               | <b>Ch. 8</b> |
| 2483.50                                            |                            |                           |                      |                           |                         |                        | 60.15                          | 74.00            | -13.85              |              |
| 2483.50                                            |                            |                           |                      | A                         |                         |                        | 48.99                          | 54.00            | -5.01               |              |
| 2483.50                                            |                            |                           |                      | A                         |                         |                        | 49.65                          | 54.00            | -4.35               |              |
| 2483.50                                            |                            |                           |                      |                           |                         |                        | 63.32                          | 74.00            | -10.68              | <b>Ch. 9</b> |
| 2483.50                                            |                            |                           |                      |                           |                         |                        | 58.82                          | 74.00            | -15.18              |              |
| 2483.50                                            |                            |                           |                      | A                         |                         |                        | 48.33                          | 54.00            | -5.67               |              |
| 2483.50                                            |                            |                           |                      | A                         |                         |                        | 49.16                          | 54.00            | -4.84               |              |

NOTE: The “Band Edge Field Strength” was calculated using the “Fundamental” and “Conducted Band Edge” measurements per the “Marker-Delta Method” with the following formula:

$$BE = Fm - \Delta m$$

Where

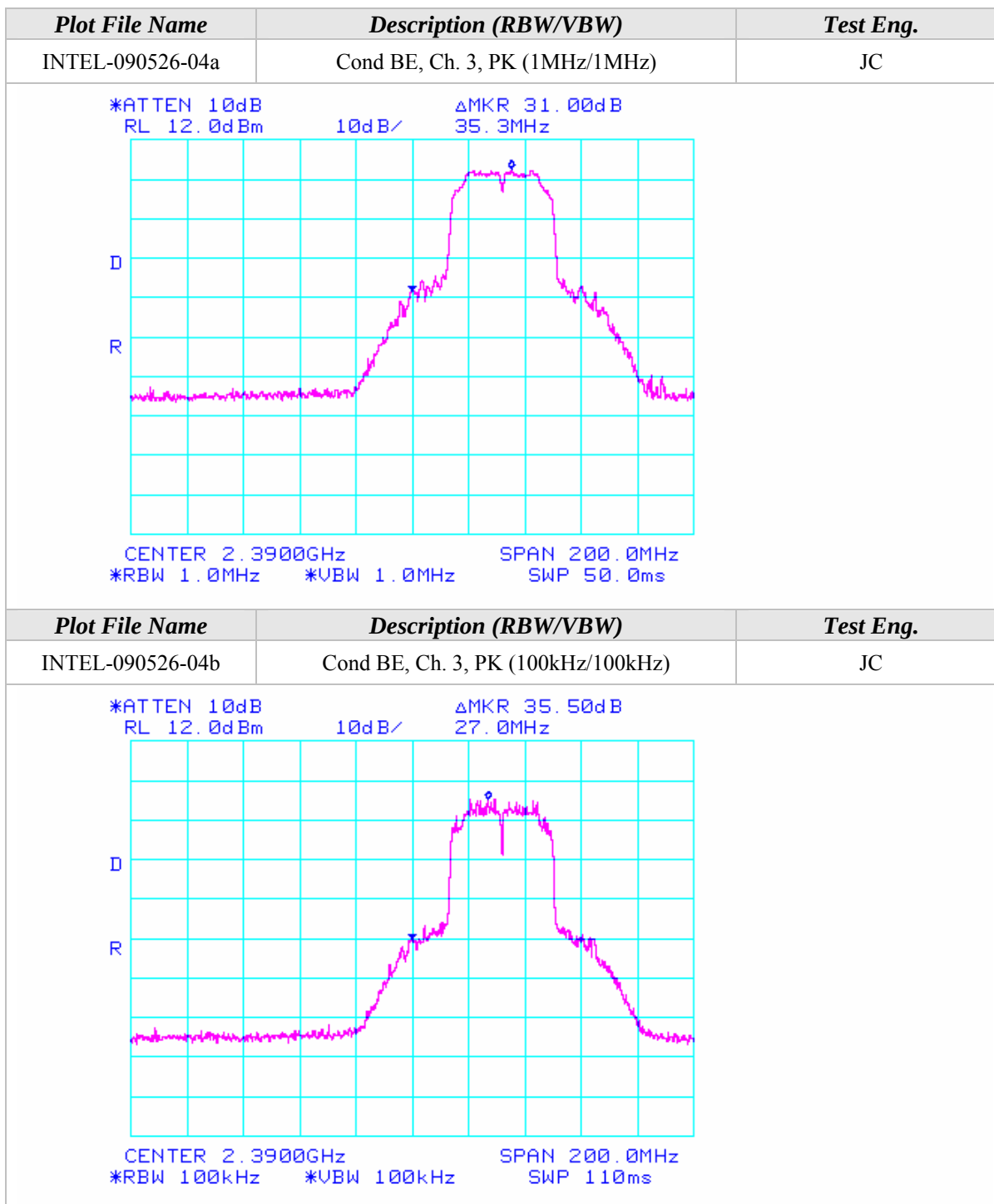
BE = Band Edge Field Strength

Fm = Measured Fundamental (Peak or Average)

$\Delta m$  = Measured Conducted Band Edge Delta (Peak or Average)

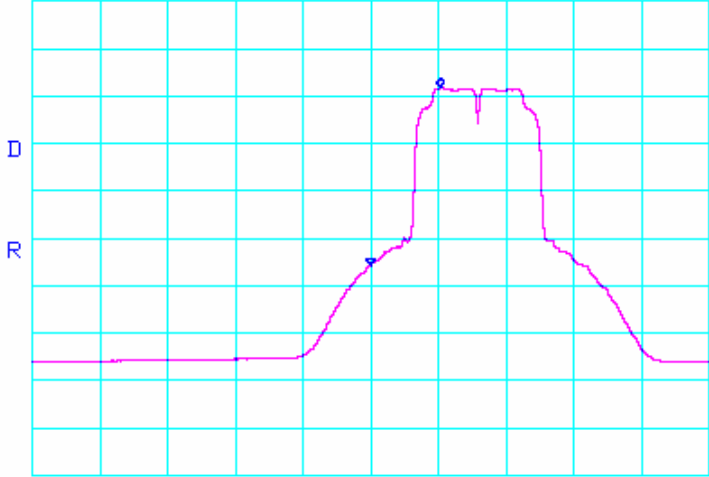
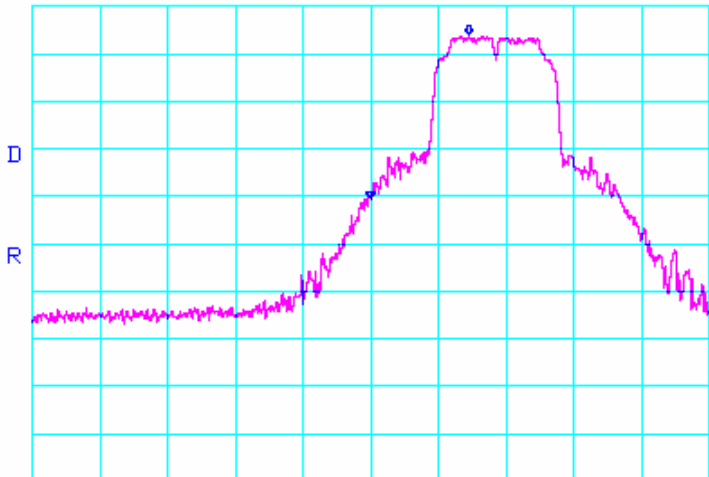


## Band-Edge Plots (Continued)



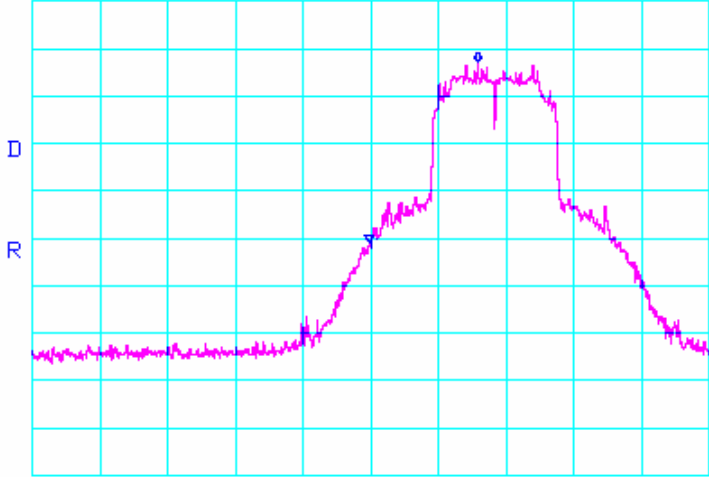
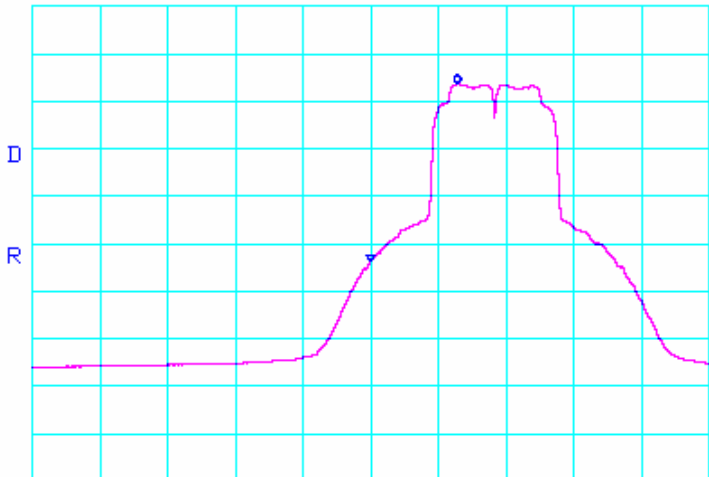


## Band-Edge Plots (Continued)

| Plot File Name                                                                                                                                                                                                                     | Description (RBW/VBW)          | Test Eng. |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-----------|
| INTEL-090526-04c                                                                                                                                                                                                                   | Cond BE, Ch. 3, AV (1MHz/10Hz) | JC        |
| <p>*ATTEN 10dB<br/>RL 12.0dBm 10dB/ ΔMKR 37.50dB<br/>20.7MHz</p>  <p>CENTER 2.3900GHz SPAN 200.0MHz<br/>*RBW 1.0MHz *VBW 10Hz SWP 74.0sec</p>    |                                |           |
| Plot File Name                                                                                                                                                                                                                     | Description (RBW/VBW)          | Test Eng. |
| INTEL-090526-04d                                                                                                                                                                                                                   | Cond BE, Ch. 4, PK (1MHz/1MHz) | JC        |
| <p>*ATTEN 10dB<br/>RL 12.0dBm 10dB/ ΔMKR 34.50dB<br/>29.0MHz</p>  <p>CENTER 2.3900GHz SPAN 200.0MHz<br/>*RBW 1.0MHz *VBW 1.0MHz SWP 50.0ms</p> |                                |           |

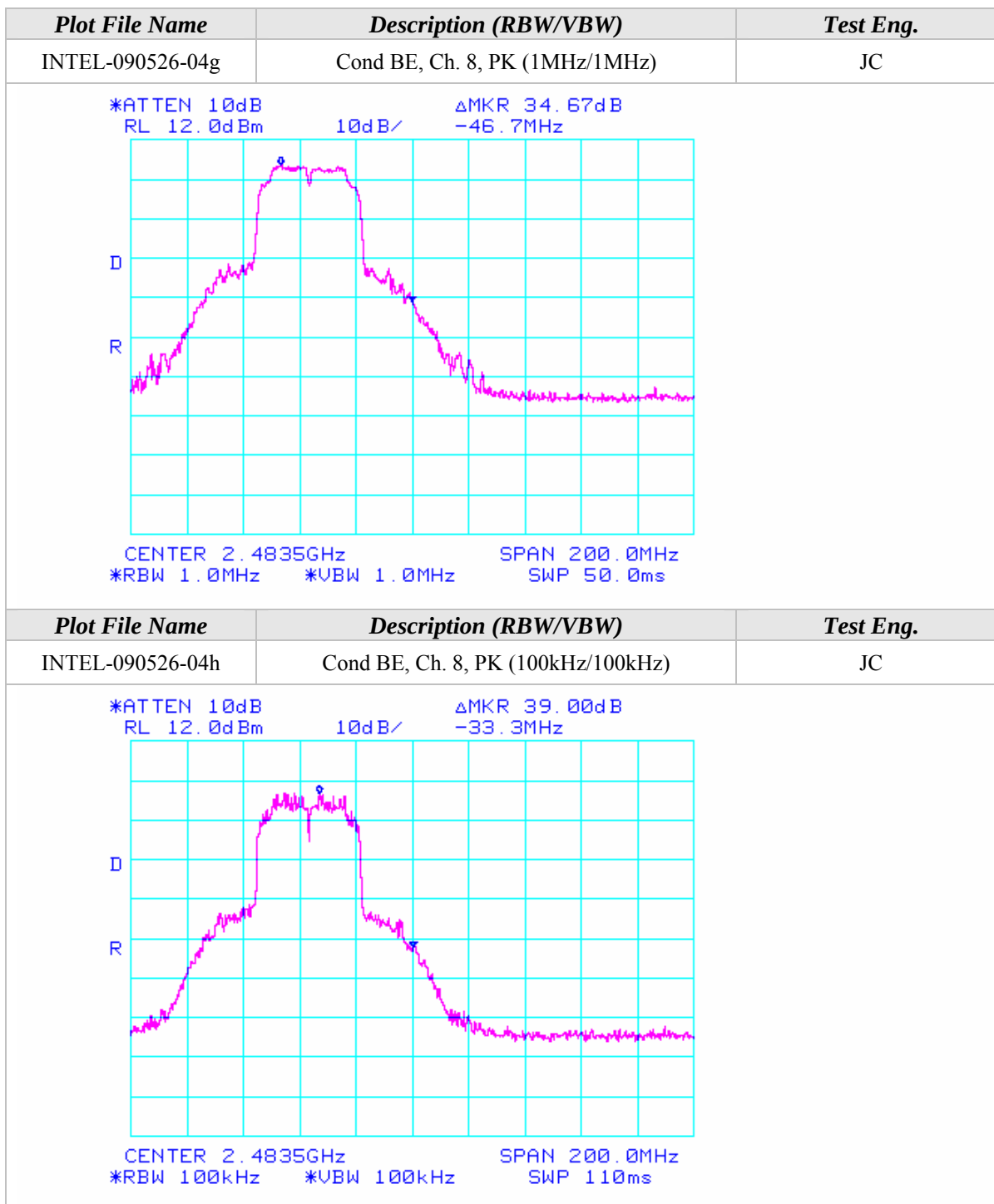


Band-Edge Plots (Continued)

| Plot File Name                                                                                                                                                                                                                                                                 | Description (RBW/VBW)              | Test Eng. |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|-----------|
| INTEL-090526-04e                                                                                                                                                                                                                                                               | Cond BE, Ch. 4, PK (100kHz/100kHz) | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>ΔMKR 38.00dB<br/>32.0MHz</div></div><div>CENTER 2.3900GHzSPAN 200.0MHz<br/>*RBW 100kHz*VBW 100kHzSWP 110ms</div></div>   |                                    |           |
| Plot File Name                                                                                                                                                                                                                                                                 | Description (RBW/VBW)              | Test Eng. |
| INTEL-090526-04f                                                                                                                                                                                                                                                               | Cond BE, Ch. 4, AV (1MHz/10Hz)     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>ΔMKR 37.34dB<br/>25.7MHz</div></div><div>CENTER 2.3900GHzSPAN 200.0MHz<br/>*RBW 1.0MHz*VBW 10HzSWP 74.0sec</div></div> |                                    |           |

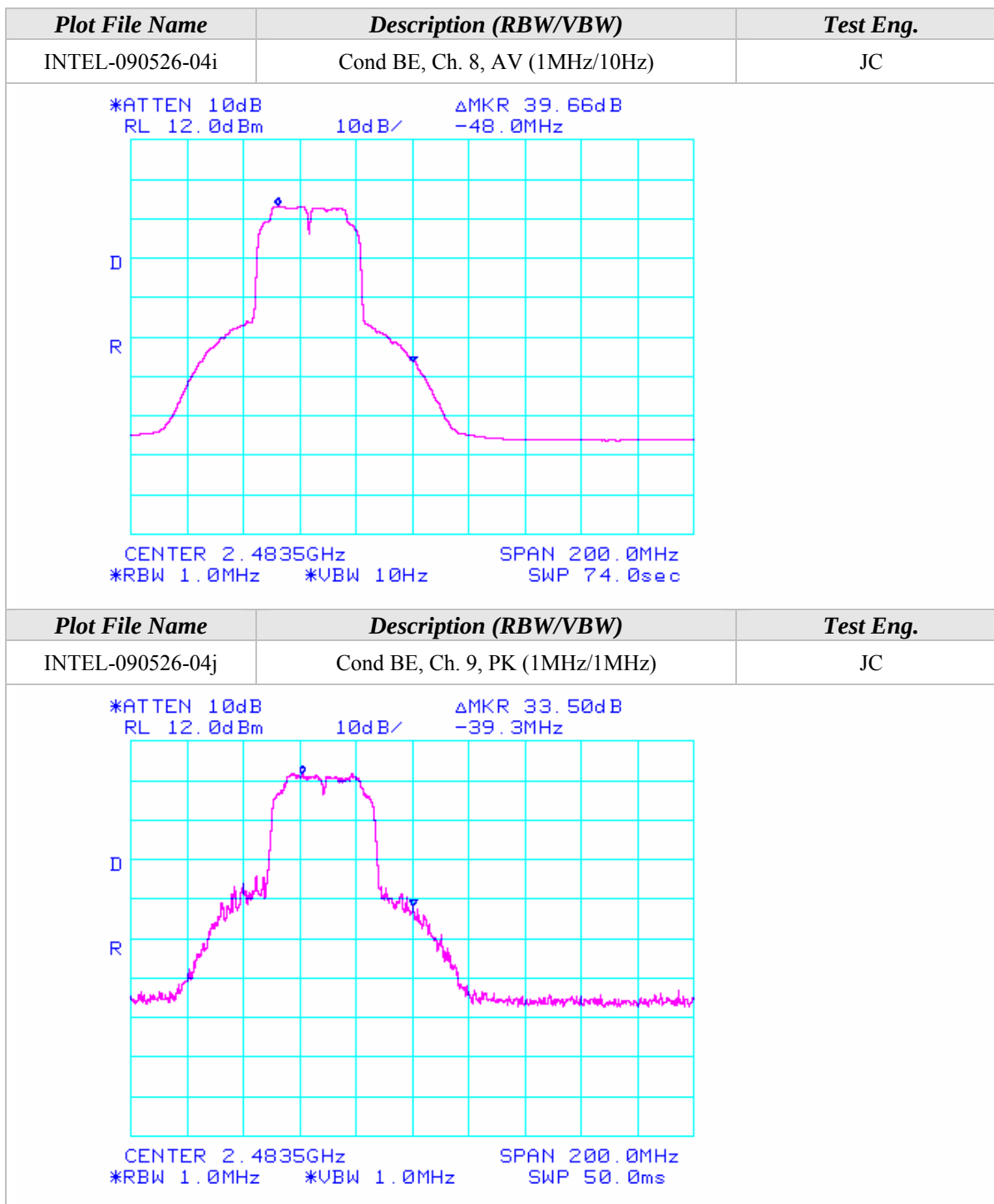


## Band-Edge Plots (Continued)



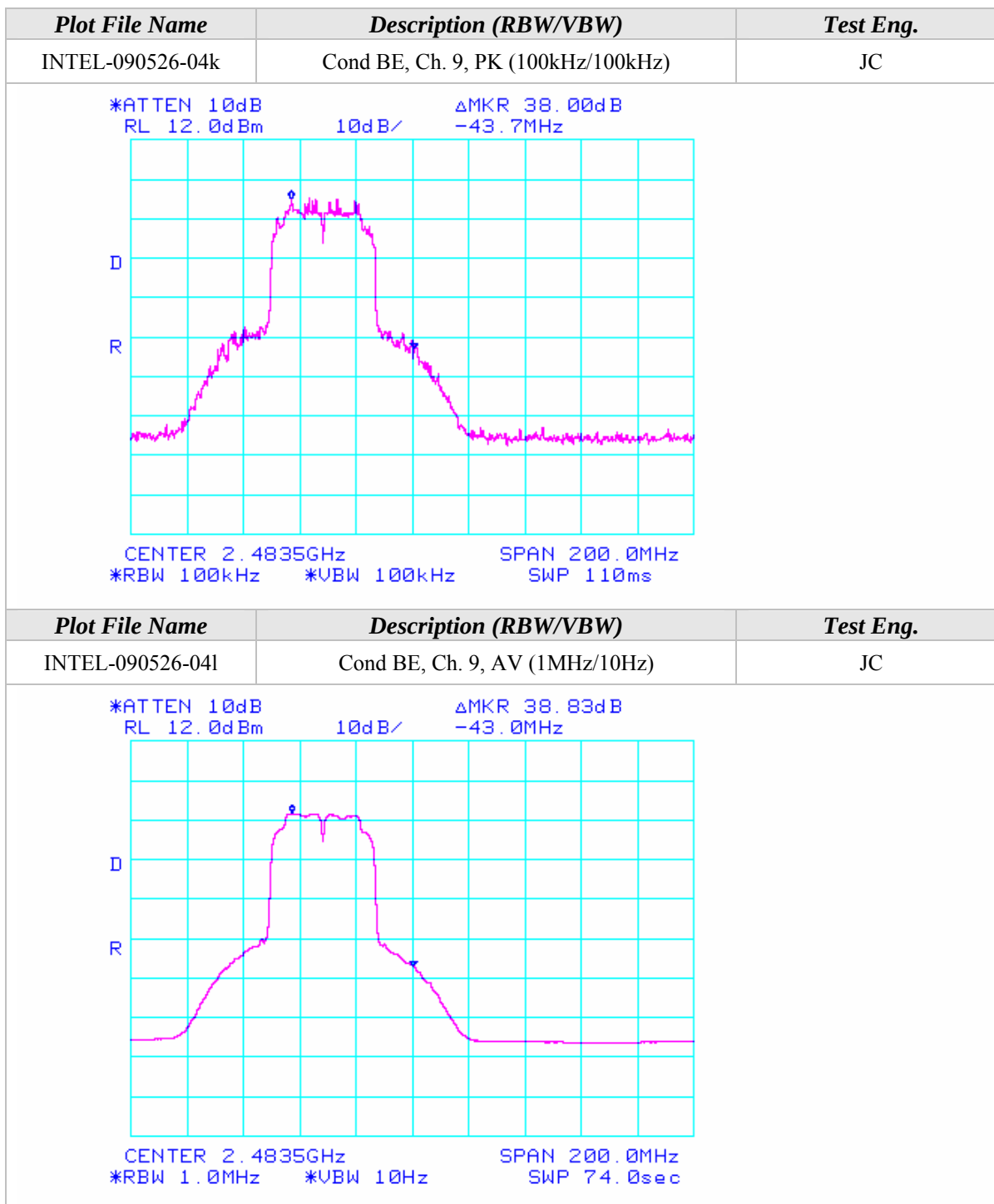


## Band-Edge Plots (Continued)





## Band-Edge Plots (Continued)





## Radiated Emissions Test Results (Continued)

**Fundamental Measurements in 802.11n mode 40MHz Wide (2400-2483.5 MHz)****Channels 3, 4, 6, 8, & 9****Continuous TX at Chain B Antenna port with Shanghai Universe Antennas****Aegis Labs, Inc. File #: INTEL-090526-11****RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq. (MHz) | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) + =FAIL | Comments     |
|-------------|----------------------|---------------------|-------------------|------------------------|---|-------------------|------------------|--------------------------|---------------|-------------------|--------------|
| 2422.00     | 61.83                | 100                 | 315               |                        |   | 2.53              | 32.19            | 96.55                    |               |                   | <b>Ch. 3</b> |
| 2422.00     |                      |                     |                   | 51.17                  | A | 2.53              | 32.19            | 85.89                    |               |                   |              |
| 2427.00     | 63.50                | 100                 | 315               |                        |   | 2.53              | 32.20            | 98.23                    |               |                   | <b>Ch. 4</b> |
| 2427.00     |                      |                     |                   | 52.67                  | A | 2.53              | 32.20            | 87.40                    |               |                   |              |
| 2437.00     | 69.83                | 100                 | 315               |                        |   | 2.54              | 32.21            | 104.58                   |               |                   | <b>Ch. 6</b> |
| 2437.00     |                      |                     |                   | 59.83                  | A | 2.54              | 32.21            | 94.58                    |               |                   |              |
| 2447.00     | 64.67                | 100                 | 315               |                        |   | 2.54              | 32.23            | 99.44                    |               |                   | <b>Ch. 8</b> |
| 2447.00     |                      |                     |                   | 53.67                  | A | 2.54              | 32.23            | 88.44                    |               |                   |              |
| 2452.00     | 63.00                | 100                 | 315               |                        |   | 2.55              | 32.23            | 97.78                    |               |                   | <b>Ch. 9</b> |
| 2452.00     |                      |                     |                   | 52.17                  | A | 2.55              | 32.23            | 86.95                    |               |                   |              |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq. (MHz) | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) + =FAIL | Comments     |
|-------------|----------------------|---------------------|-------------------|------------------------|---|-------------------|------------------|--------------------------|---------------|-------------------|--------------|
| 2422.00     | 62.00                | 100                 | 180               |                        |   | 2.53              | 31.91            | 96.44                    |               |                   | <b>Ch. 3</b> |
| 2422.00     |                      |                     |                   | 51.33                  | A | 2.53              | 31.91            | 85.77                    |               |                   |              |
| 2427.00     | 64.17                | 100                 | 180               |                        |   | 2.53              | 31.91            | 98.62                    |               |                   | <b>Ch. 4</b> |
| 2427.00     |                      |                     |                   | 53.83                  | A | 2.53              | 31.91            | 88.28                    |               |                   |              |
| 2437.00     | 67.83                | 100                 | 180               |                        |   | 2.54              | 31.92            | 102.29                   |               |                   | <b>Ch. 6</b> |
| 2437.00     |                      |                     |                   | 57.83                  | A | 2.54              | 31.92            | 92.29                    |               |                   |              |
| 2447.00     | 65.00                | 100                 | 180               |                        |   | 2.54              | 31.94            | 99.48                    |               |                   | <b>Ch. 8</b> |
| 2447.00     |                      |                     |                   | 54.50                  | A | 2.54              | 31.94            | 88.98                    |               |                   |              |
| 2452.00     | 62.50                | 100                 | 180               |                        |   | 2.55              | 31.94            | 96.99                    |               |                   | <b>Ch. 9</b> |
| 2452.00     |                      |                     |                   | 52.50                  | A | 2.55              | 31.94            | 86.99                    |               |                   |              |

NOTE: Fundamental signals measured to calculate the band edge field strengths using the "Marker Delta Method".



## Radiated Emissions Test Results (Continued)

**Band Edge Field Strength Measurements in 802.11n mode 40MHz Wide (2400-2483.5 MHz)**  
**Channels 3, 4, 8, & 9**

**Continuous TX at Chain B Antenna port with Shanghai Universe Antennas**  
**Aegis Labs, Inc. File #: INTEL-090526-11**

| RADIATED EMISSIONS - Horizontal Antenna Polarization |                            |                           |                      |                           |                         |                        |                                |                  |                     |              |
|------------------------------------------------------|----------------------------|---------------------------|----------------------|---------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|--------------|
| Freq.<br>(MHz)                                       | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL | Comments     |
| 2390.00                                              |                            |                           |                      |                           |                         |                        | 65.55                          | 74.00            | -8.45               | <b>Ch. 3</b> |
| 2390.00                                              |                            |                           |                      |                           |                         |                        | 61.38                          | 74.00            | -12.62              |              |
| 2390.00                                              |                            |                           |                      | A                         |                         |                        | 48.23                          | 54.00            | -5.77               |              |
| 2390.00                                              |                            |                           |                      | A                         |                         |                        | 50.72                          | 54.00            | -3.28               |              |
| 2400.00                                              | 33.83                      | 100                       | 315                  |                           | 2.52                    | 32.16                  | 68.51                          | 76.55            | -8.04               | <b>Ch. 4</b> |
| 2390.00                                              |                            |                           |                      |                           |                         |                        | 62.73                          | 74.00            | -11.27              |              |
| 2390.00                                              |                            |                           |                      |                           |                         |                        | 58.40                          | 74.00            | -15.60              |              |
| 2390.00                                              |                            |                           |                      | A                         |                         |                        | 48.06                          | 54.00            | -5.94               |              |
| 2390.00                                              |                            |                           |                      | A                         |                         |                        | 47.57                          | 54.00            | -6.43               | <b>Ch. 8</b> |
| 2400.00                                              | 31.50                      | 100                       | 315                  |                           | 2.52                    | 32.16                  | 66.18                          | 74.58            | -8.40               |              |
| 2483.50                                              |                            |                           |                      |                           |                         |                        | 62.94                          | 74.00            | -11.06              |              |
| 2483.50                                              |                            |                           |                      |                           |                         |                        | 60.61                          | 74.00            | -13.39              |              |
| 2483.50                                              |                            |                           |                      | A                         |                         |                        | 48.61                          | 54.00            | -5.39               | <b>Ch. 9</b> |
| 2483.50                                              |                            |                           |                      | A                         |                         |                        | 49.61                          | 54.00            | -4.39               |              |
| 2483.50                                              |                            |                           |                      |                           |                         |                        | 62.28                          | 74.00            | -11.72              |              |
| 2483.50                                              |                            |                           |                      |                           |                         |                        | 60.95                          | 74.00            | -13.05              |              |
| 2483.50                                              |                            |                           |                      | A                         |                         |                        | 47.95                          | 54.00            | -6.05               |              |
| 2483.50                                              |                            |                           |                      | A                         |                         |                        | 50.12                          | 54.00            | -3.88               |              |



## Radiated Emissions Test Results (Continued)

| RADIATED EMISSIONS - Vertical Antenna Polarization |                            |                           |                      |                           |                         |                        |                                |                  |                     |              |
|----------------------------------------------------|----------------------------|---------------------------|----------------------|---------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|--------------|
| Freq.<br>(MHz)                                     | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL | Comments     |
| 2390.00                                            |                            |                           |                      |                           |                         |                        | 65.44                          | 74.00            | -8.56               | <b>Ch. 3</b> |
| 2390.00                                            |                            |                           |                      |                           |                         |                        | 61.27                          | 74.00            | -12.73              |              |
| 2390.00                                            |                            |                           |                      | A                         |                         |                        | 48.11                          | 54.00            | -5.89               |              |
| 2390.00                                            |                            |                           |                      | A                         |                         |                        | 50.60                          | 54.00            | -3.40               |              |
| 2400.00                                            | 34.83                      | 100                       | 180                  |                           | 2.52                    | 31.88                  | 69.23                          | 76.44            | -7.21               |              |
| 2390.00                                            |                            |                           |                      |                           |                         |                        | 63.12                          | 74.00            | -10.88              | <b>Ch. 4</b> |
| 2390.00                                            |                            |                           |                      |                           |                         |                        | 58.79                          | 74.00            | -15.21              |              |
| 2390.00                                            |                            |                           |                      | A                         |                         |                        | 48.94                          | 54.00            | -5.06               |              |
| 2390.00                                            |                            |                           |                      | A                         |                         |                        | 48.45                          | 54.00            | -5.55               |              |
| 2400.00                                            | 31.67                      | 100                       | 180                  |                           | 2.52                    | 31.88                  | 66.07                          | 72.29            | -6.22               |              |
| 2483.50                                            |                            |                           |                      |                           |                         |                        | 62.98                          | 74.00            | -11.02              | <b>Ch. 8</b> |
| 2483.50                                            |                            |                           |                      |                           |                         |                        | 60.65                          | 74.00            | -13.35              |              |
| 2483.50                                            |                            |                           |                      | A                         |                         |                        | 49.15                          | 54.00            | -4.85               |              |
| 2483.50                                            |                            |                           |                      | A                         |                         |                        | 50.15                          | 54.00            | -3.85               |              |
| 2483.50                                            |                            |                           |                      |                           |                         |                        | 61.49                          | 74.00            | -12.51              | <b>Ch. 9</b> |
| 2483.50                                            |                            |                           |                      |                           |                         |                        | 60.16                          | 74.00            | -13.84              |              |
| 2483.50                                            |                            |                           |                      | A                         |                         |                        | 47.99                          | 54.00            | -6.01               |              |
| 2483.50                                            |                            |                           |                      | A                         |                         |                        | 50.16                          | 54.00            | -3.84               |              |

NOTE: The “Band Edge Field Strength” was calculated using the “Fundamental” and “Conducted Band Edge” measurements per the “Marker-Delta Method” with the following formula:

$$BE = Fm - \Delta m$$

Where

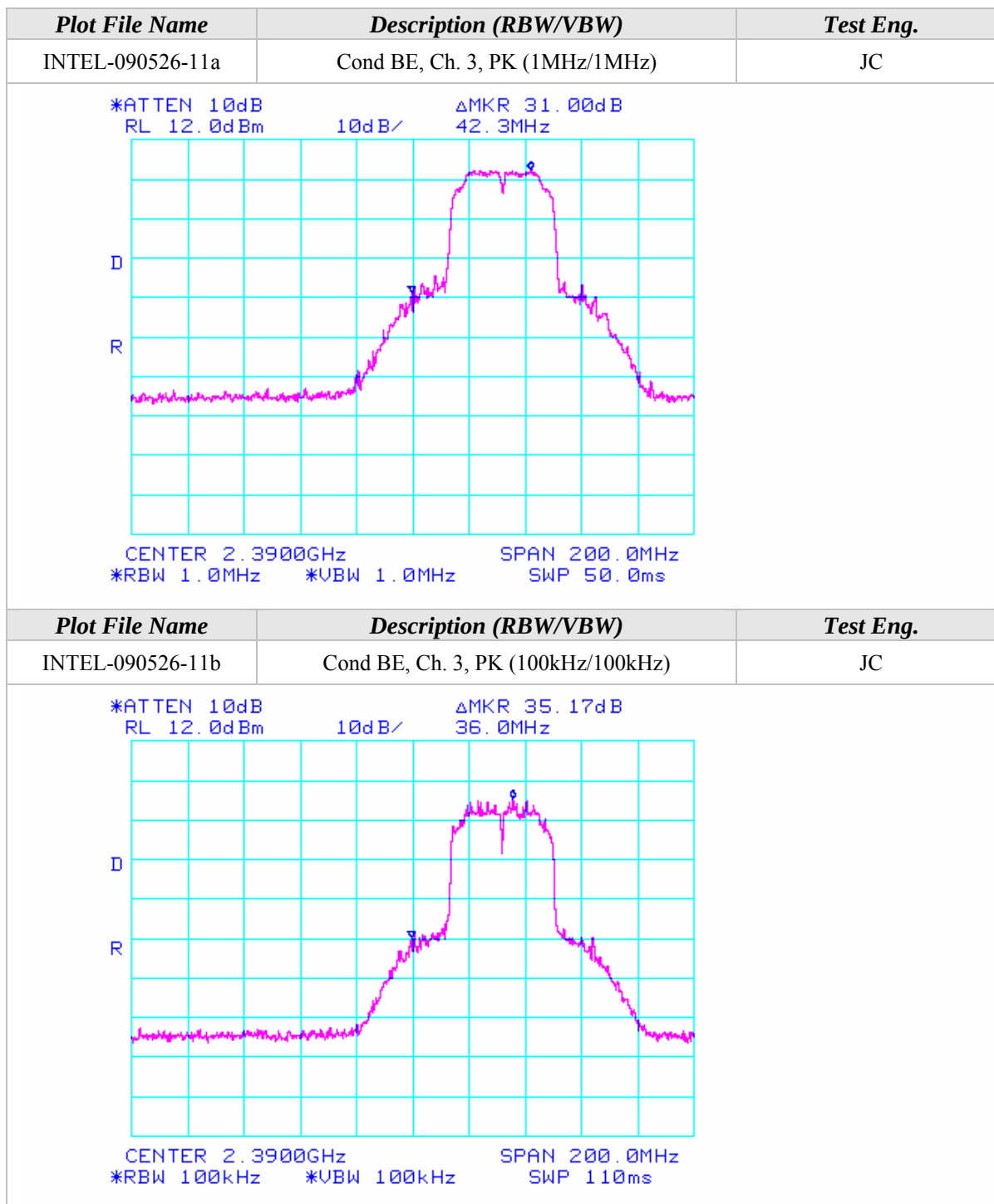
BE = Band Edge Field Strength

Fm = Measured Fundamental (Peak or Average)

$\Delta m$  = Measured Conducted Band Edge Delta (Peak or Average)



## Band-Edge Plots (Continued)



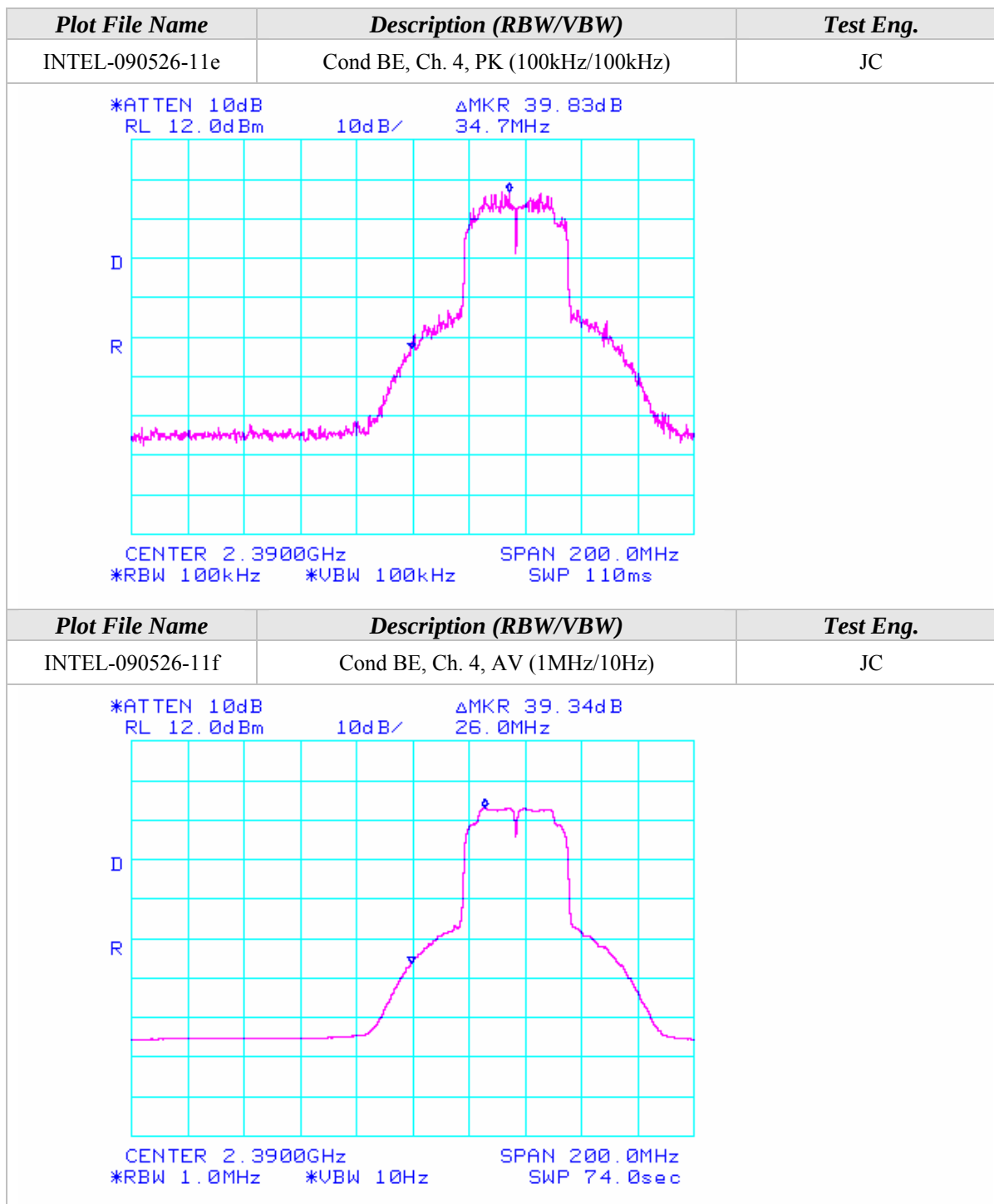


Band-Edge Plots (Continued)

| Plot File Name                                                                                                                                                                                         | Description (RBW/VBW)          | Test Eng. |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-----------|
| INTEL-090526-11c                                                                                                                                                                                       | Cond BE, Ch. 3, AV (1MHz/10Hz) | JC        |
| <div><div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>ΔMKR 37.66dB<br/>20.7MHz</div></div><div>CENTER 2.3900GHzSPAN 200.0MHz<br/>*RBW 1.0MHz*VBW 10HzSWP 74.0sec</div></div></div>  |                                |           |
| Plot File Name                                                                                                                                                                                         | Description (RBW/VBW)          | Test Eng. |
| INTEL-090526-11d                                                                                                                                                                                       | Cond BE, Ch. 4, PK (1MHz/1MHz) | JC        |
| <div><div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>ΔMKR 35.50dB<br/>47.0MHz</div></div><div>CENTER 2.3900GHzSPAN 200.0MHz<br/>*RBW 1.0MHz*VBW 1.0MHzSWP 50.0ms</div></div></div> |                                |           |

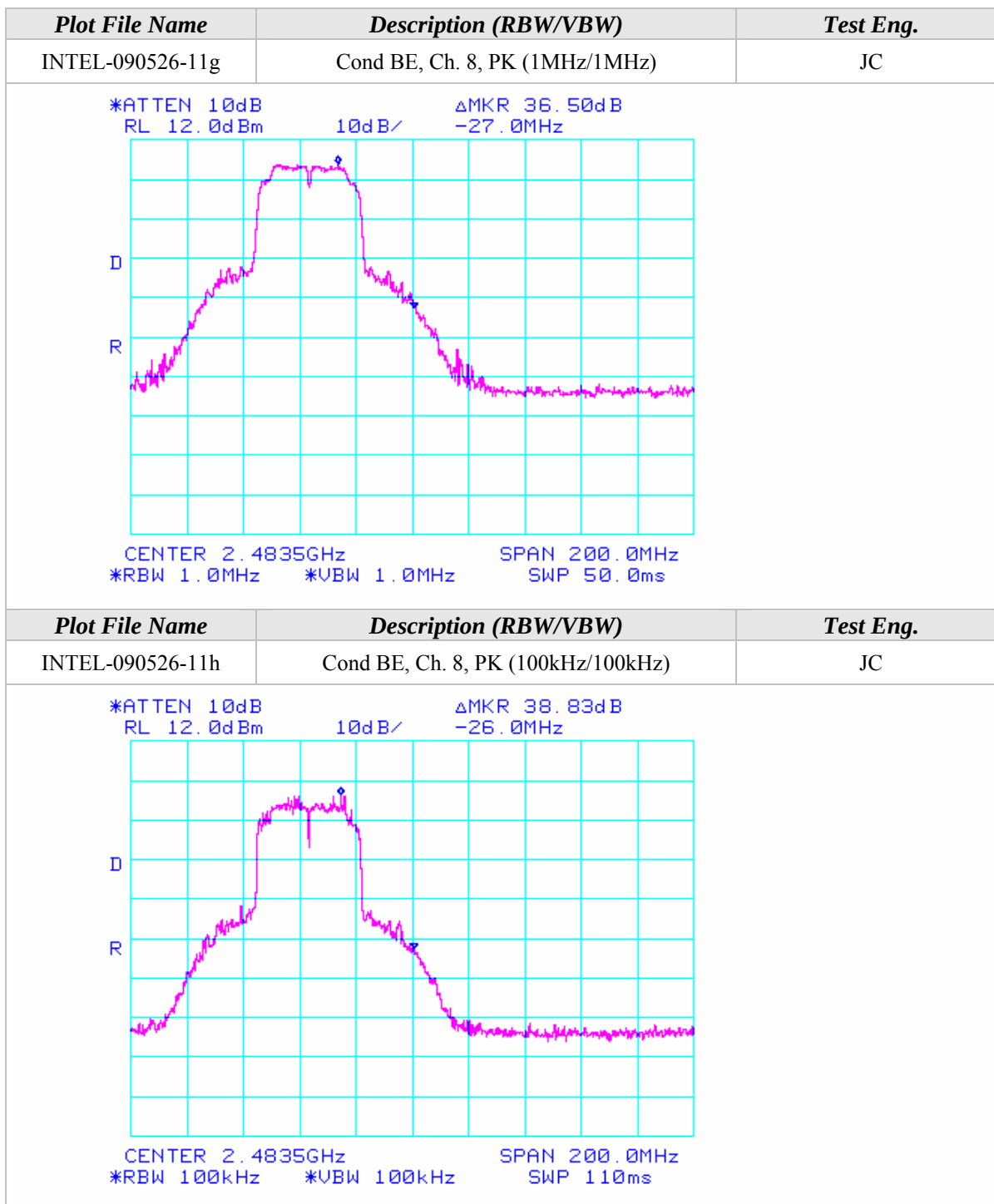


## Band-Edge Plots (Continued)



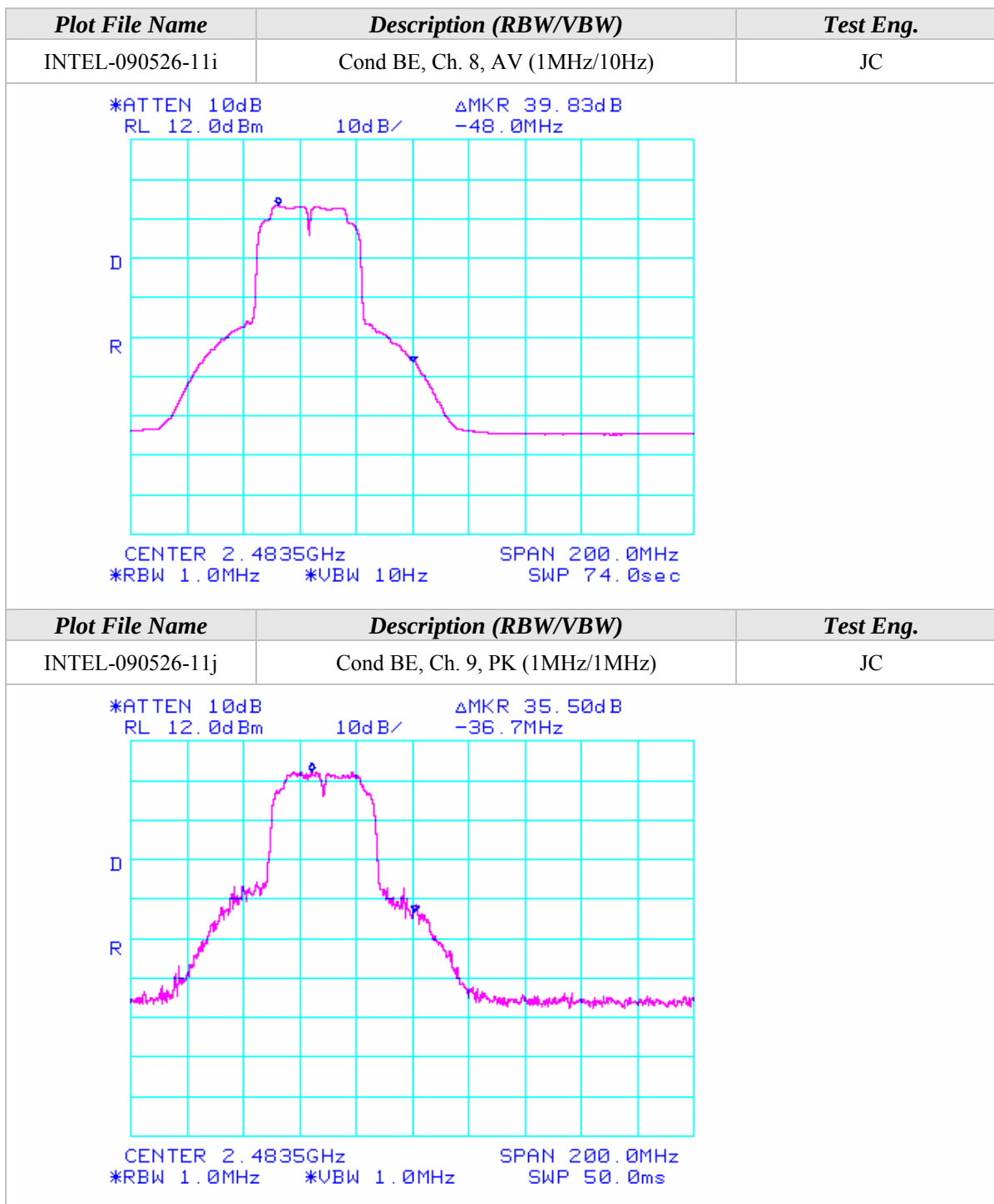


## Band-Edge Plots (Continued)



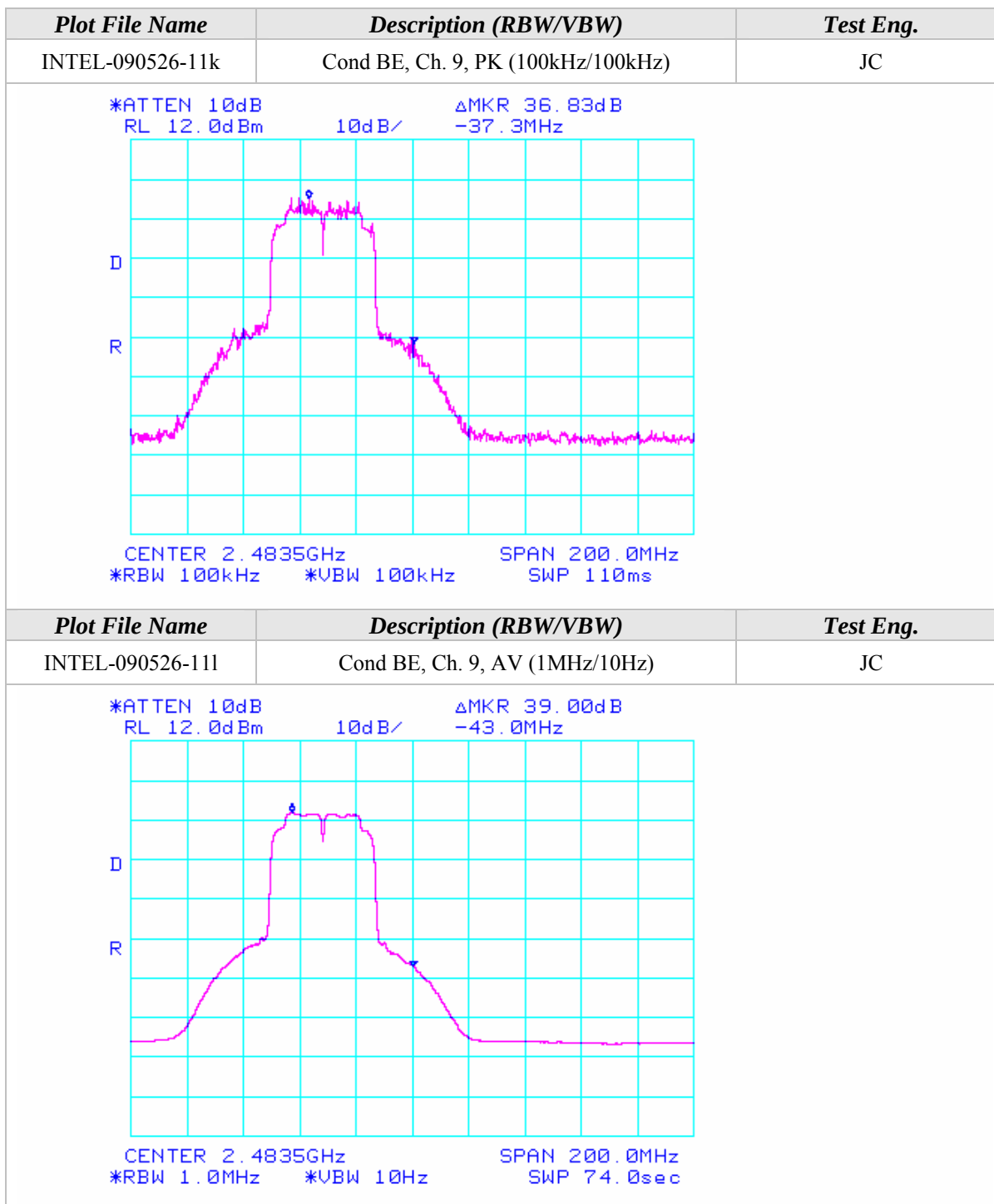


## Band-Edge Plots (Continued)





## Band-Edge Plots (Continued)





## Radiated Emissions Test Results (Continued)

**Fundamental Measurements in 802.11n mode 40MHz Wide (2400-2483.5 MHz)****Channels 3, 4, 6, 8, & 9****Continuous TX at Chain C Antenna port with Shanghai Universe Antennas****Aegis Labs, Inc. File #: INTEL-090526-13****RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq. (MHz) | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) + =FAIL | Comments     |
|-------------|----------------------|---------------------|-------------------|------------------------|---|-------------------|------------------|--------------------------|---------------|-------------------|--------------|
| 2422.00     | 63.17                | 100                 | 315               |                        |   | 2.53              | 32.19            | 97.89                    |               |                   | <b>Ch. 3</b> |
| 2422.00     |                      |                     |                   | 52.50                  | A | 2.53              | 32.19            | 87.22                    |               |                   |              |
| 2427.00     | 64.67                | 100                 | 315               |                        |   | 2.53              | 32.20            | 99.40                    |               |                   | <b>Ch. 4</b> |
| 2427.00     |                      |                     |                   | 53.33                  | A | 2.53              | 32.20            | 88.06                    |               |                   |              |
| 2437.00     | 69.33                | 100                 | 315               |                        |   | 2.54              | 32.21            | 104.08                   |               |                   | <b>Ch. 6</b> |
| 2437.00     |                      |                     |                   | 61.50                  | A | 2.54              | 32.21            | 96.25                    |               |                   |              |
| 2447.00     | 65.17                | 100                 | 315               |                        |   | 2.54              | 32.23            | 99.94                    |               |                   | <b>Ch. 8</b> |
| 2447.00     |                      |                     |                   | 54.17                  | A | 2.54              | 32.23            | 88.94                    |               |                   |              |
| 2452.00     | 63.50                | 100                 | 315               |                        |   | 2.55              | 32.23            | 98.28                    |               |                   | <b>Ch. 9</b> |
| 2452.00     |                      |                     |                   | 53.00                  | A | 2.55              | 32.23            | 87.78                    |               |                   |              |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq. (MHz) | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) + =FAIL | Comments     |
|-------------|----------------------|---------------------|-------------------|------------------------|---|-------------------|------------------|--------------------------|---------------|-------------------|--------------|
| 2422.00     | 62.50                | 100                 | 0                 |                        |   | 2.53              | 31.91            | 96.94                    |               |                   | <b>Ch. 3</b> |
| 2422.00     |                      |                     |                   | 52.33                  | A | 2.53              | 31.91            | 86.77                    |               |                   |              |
| 2427.00     | 64.17                | 100                 | 0                 |                        |   | 2.53              | 31.91            | 98.62                    |               |                   | <b>Ch. 4</b> |
| 2427.00     |                      |                     |                   | 54.00                  | A | 2.53              | 31.91            | 88.45                    |               |                   |              |
| 2437.00     | 68.00                | 100                 | 0                 |                        |   | 2.54              | 31.92            | 102.46                   |               |                   | <b>Ch. 6</b> |
| 2437.00     |                      |                     |                   | 58.83                  | A | 2.54              | 31.92            | 93.29                    |               |                   |              |
| 2447.00     | 64.83                | 100                 | 0                 |                        |   | 2.54              | 31.94            | 99.31                    |               |                   | <b>Ch. 8</b> |
| 2447.00     |                      |                     |                   | 54.50                  | A | 2.54              | 31.94            | 88.98                    |               |                   |              |
| 2452.00     | 62.17                | 100                 | 45                |                        |   | 2.55              | 31.94            | 96.66                    |               |                   | <b>Ch. 9</b> |
| 2452.00     |                      |                     |                   | 52.33                  | A | 2.55              | 31.94            | 86.82                    |               |                   |              |

NOTE: Fundamental signals measured to calculate the band edge field strengths using the "Marker Delta Method".



## Radiated Emissions Test Results (Continued)

**Band Edge Field Strength Measurements in 802.11n mode 40MHz Wide (2400-2483.5 MHz)**  
**Channels 3, 4, 8, & 9**

**Continuous TX at Chain C Antenna port with Shanghai Universe Antennas**  
**Aegis Labs, Inc. File #: INTEL-090526-13**

| RADIATED EMISSIONS - Horizontal Antenna Polarization |                            |                           |                      |                           |                         |                        |                                |                  |                     |              |
|------------------------------------------------------|----------------------------|---------------------------|----------------------|---------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|--------------|
| Freq.<br>(MHz)                                       | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL | Comments     |
| 2390.00                                              |                            |                           |                      |                           |                         |                        | 66.06                          | 74.00            | -7.94               | <b>Ch. 3</b> |
| 2390.00                                              |                            |                           |                      |                           |                         |                        | 60.22                          | 74.00            | -13.78              |              |
| 2390.00                                              |                            |                           |                      | A                         |                         |                        | 49.05                          | 54.00            | -4.95               |              |
| 2390.00                                              |                            |                           |                      | A                         |                         |                        | 49.55                          | 54.00            | -4.45               |              |
| 2400.00                                              | 35.83                      | 100                       | 315                  |                           | 2.52                    | 32.16                  | 70.51                          | 77.89            | -7.38               | <b>Ch. 4</b> |
| 2390.00                                              |                            |                           |                      |                           |                         |                        | 64.73                          | 74.00            | -9.27               |              |
| 2390.00                                              |                            |                           |                      |                           |                         |                        | 60.40                          | 74.00            | -13.60              |              |
| 2390.00                                              |                            |                           |                      | A                         |                         |                        | 49.56                          | 54.00            | -4.44               |              |
| 2390.00                                              |                            |                           |                      | A                         |                         |                        | 49.06                          | 54.00            | -4.94               | <b>Ch. 8</b> |
| 2400.00                                              | 33.00                      | 100                       | 315                  |                           | 2.52                    | 32.16                  | 67.68                          | 76.25            | -8.57               |              |
| 2483.50                                              |                            |                           |                      |                           |                         |                        | 63.77                          | 74.00            | -10.23              |              |
| 2483.50                                              |                            |                           |                      |                           |                         |                        | 60.28                          | 74.00            | -13.72              |              |
| 2483.50                                              |                            |                           |                      | A                         |                         |                        | 49.27                          | 54.00            | -4.73               | <b>Ch. 9</b> |
| 2483.50                                              |                            |                           |                      | A                         |                         |                        | 49.28                          | 54.00            | -4.72               |              |
| 2483.50                                              |                            |                           |                      |                           |                         |                        | 64.78                          | 74.00            | -9.22               |              |
| 2483.50                                              |                            |                           |                      |                           |                         |                        | 61.28                          | 74.00            | -12.72              |              |
| 2483.50                                              |                            |                           |                      | A                         |                         |                        | 48.95                          | 54.00            | -5.05               |              |
| 2483.50                                              |                            |                           |                      | A                         |                         |                        | 50.78                          | 54.00            | -3.22               |              |



## Radiated Emissions Test Results (Continued)

| RADIATED EMISSIONS - Vertical Antenna Polarization |                            |                           |                      |                           |                         |                        |                                |                  |                     |              |
|----------------------------------------------------|----------------------------|---------------------------|----------------------|---------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|--------------|
| Freq.<br>(MHz)                                     | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL | Comments     |
| 2390.00                                            |                            |                           |                      |                           |                         |                        | 65.11                          | 74.00            | -8.89               | <b>Ch. 3</b> |
| 2390.00                                            |                            |                           |                      |                           |                         |                        | 59.27                          | 74.00            | -14.73              |              |
| 2390.00                                            |                            |                           |                      | A                         |                         |                        | 48.60                          | 54.00            | -5.40               |              |
| 2390.00                                            |                            |                           |                      | A                         |                         |                        | 49.10                          | 54.00            | -4.90               |              |
| 2400.00                                            | 33.67                      | 100                       | 0                    |                           | 2.52                    | 31.88                  | 68.07                          | 76.94            | -8.87               |              |
| 2390.00                                            |                            |                           |                      |                           |                         |                        | 63.95                          | 74.00            | -10.05              | <b>Ch. 4</b> |
| 2390.00                                            |                            |                           |                      |                           |                         |                        | 59.62                          | 74.00            | -14.38              |              |
| 2390.00                                            |                            |                           |                      | A                         |                         |                        | 49.95                          | 54.00            | -4.05               |              |
| 2390.00                                            |                            |                           |                      | A                         |                         |                        | 49.45                          | 54.00            | -4.55               |              |
| 2400.00                                            | 31.00                      | 100                       | 0                    |                           | 2.52                    | 31.88                  | 65.40                          | 73.29            | -7.89               |              |
| 2483.50                                            |                            |                           |                      |                           |                         |                        | 63.14                          | 74.00            | -10.86              | <b>Ch. 8</b> |
| 2483.50                                            |                            |                           |                      |                           |                         |                        | 59.65                          | 74.00            | -14.35              |              |
| 2483.50                                            |                            |                           |                      | A                         |                         |                        | 49.31                          | 54.00            | -4.69               |              |
| 2483.50                                            |                            |                           |                      | A                         |                         |                        | 49.32                          | 54.00            | -4.68               |              |
| 2483.50                                            |                            |                           |                      |                           |                         |                        | 63.16                          | 74.00            | -10.84              | <b>Ch. 9</b> |
| 2483.50                                            |                            |                           |                      |                           |                         |                        | 59.66                          | 74.00            | -14.34              |              |
| 2483.50                                            |                            |                           |                      | A                         |                         |                        | 47.99                          | 54.00            | -6.01               |              |
| 2483.50                                            |                            |                           |                      | A                         |                         |                        | 49.82                          | 54.00            | -4.18               |              |

NOTE: The “Band Edge Field Strength” was calculated using the “Fundamental” and “Conducted Band Edge” measurements per the “Marker-Delta Method” with the following formula:

$$BE = Fm - \Delta m$$

Where

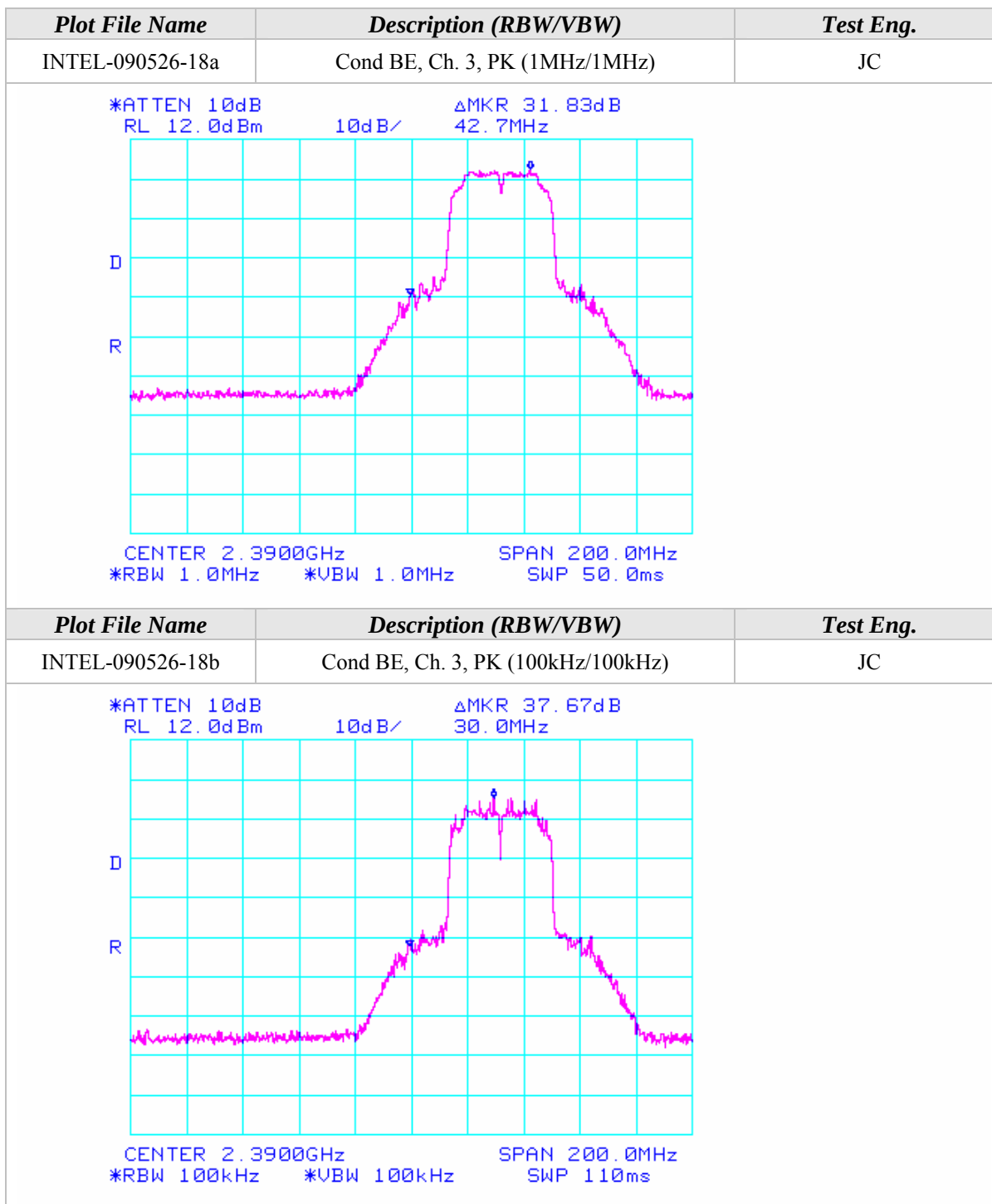
BE = Band Edge Field Strength

Fm = Measured Fundamental (Peak or Average)

$\Delta m$  = Measured Conducted Band Edge Delta (Peak or Average)

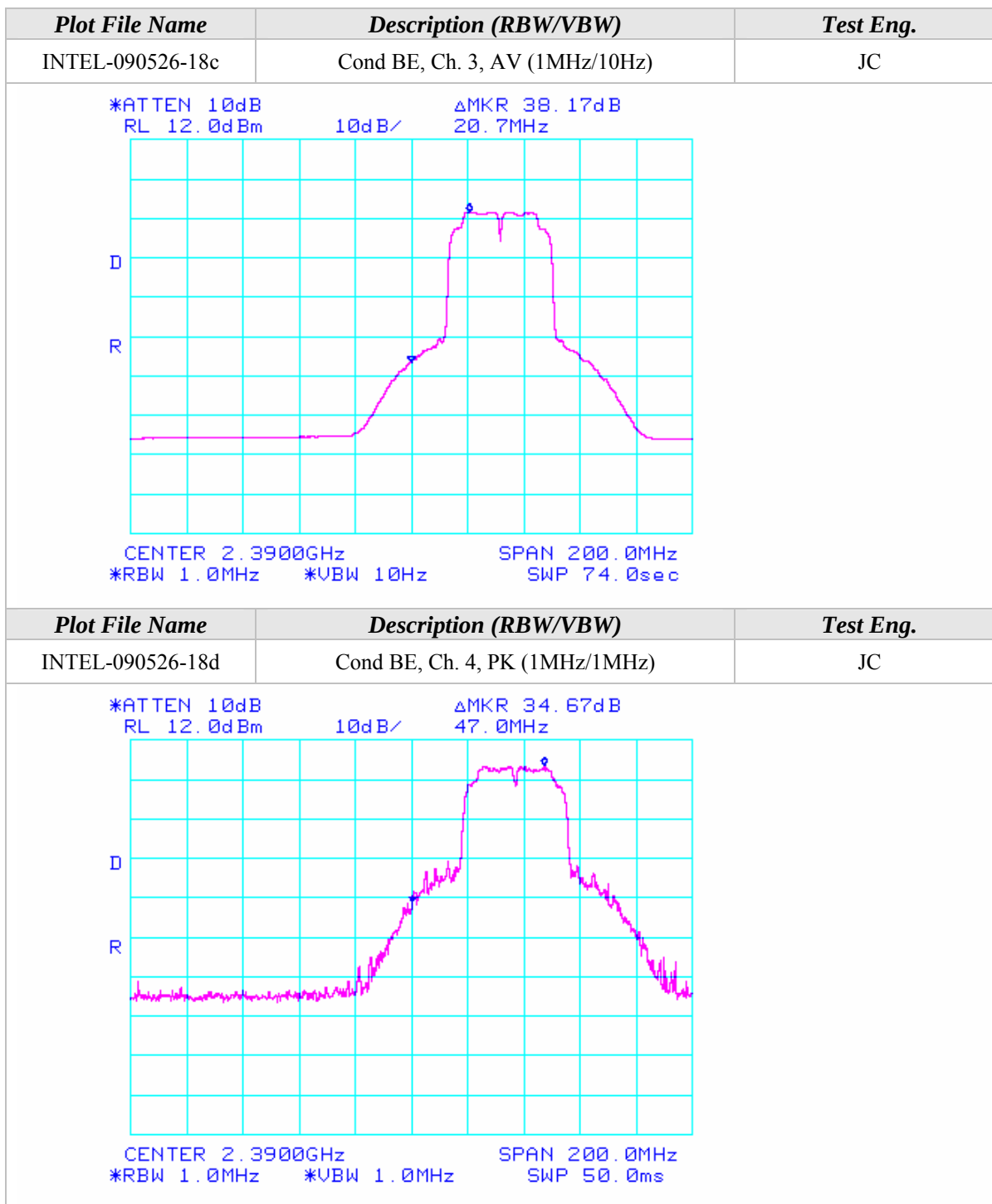


## Band-Edge Plots (Continued)



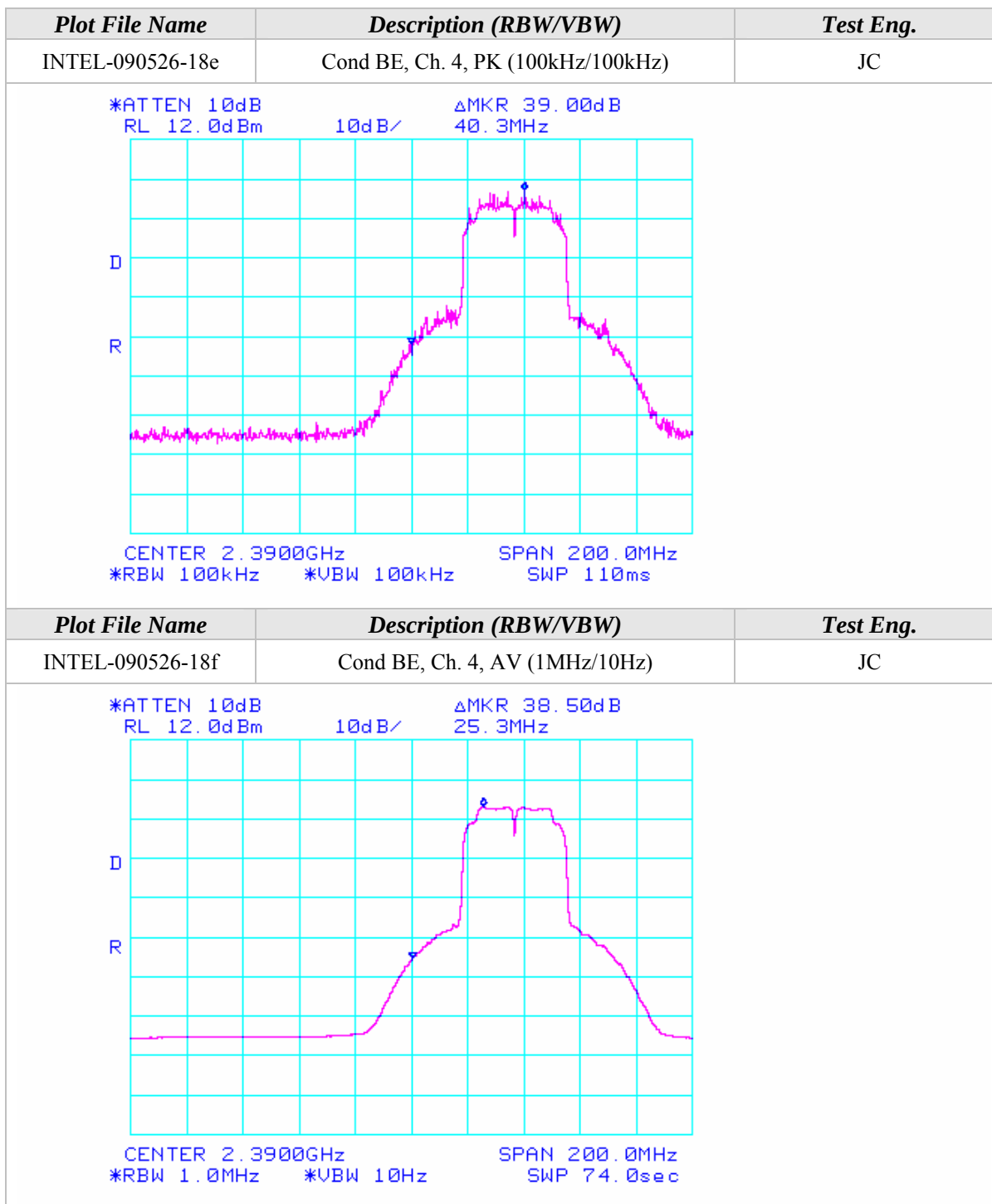


## Band-Edge Plots (Continued)



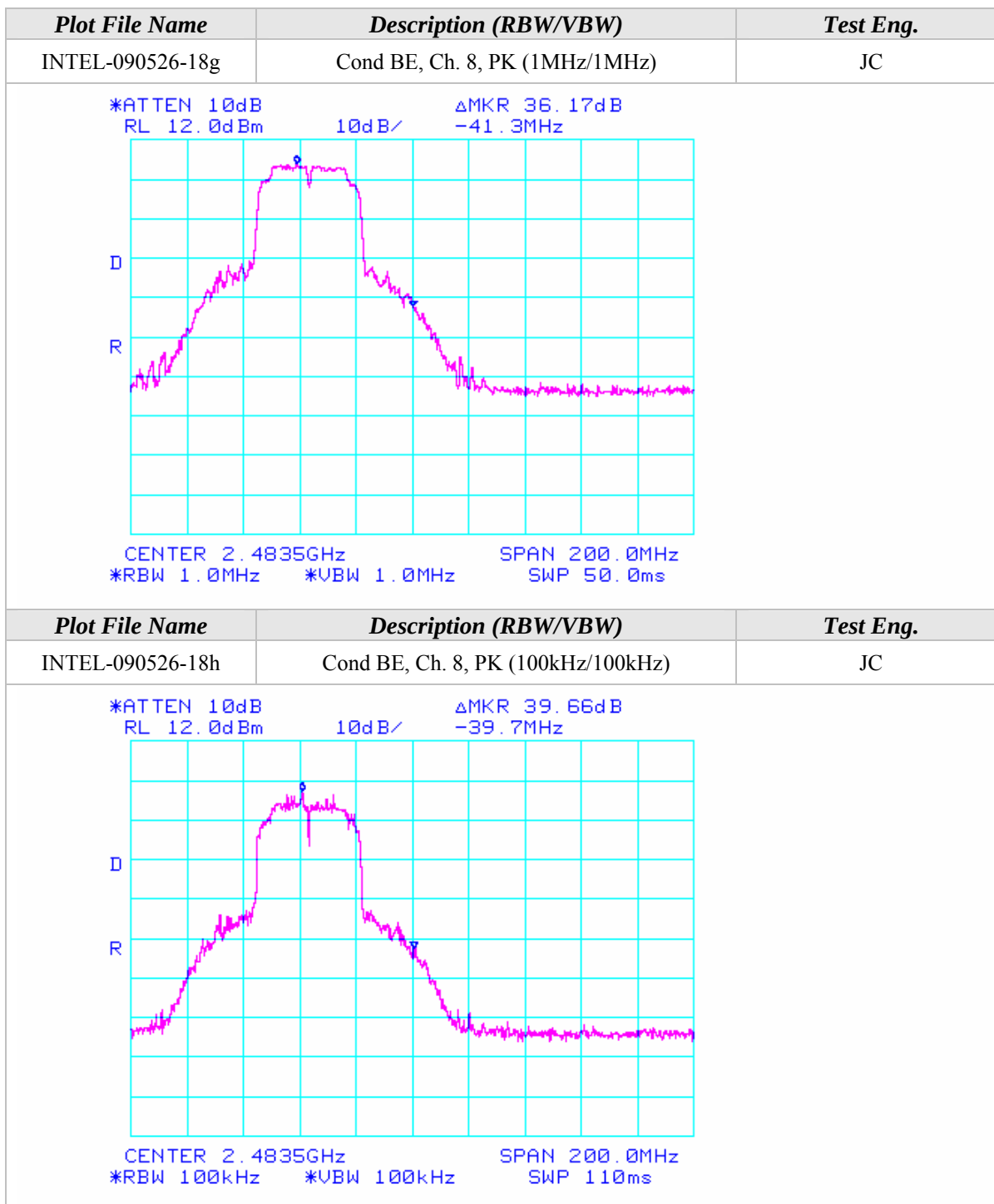


## Band-Edge Plots (Continued)





## Band-Edge Plots (Continued)



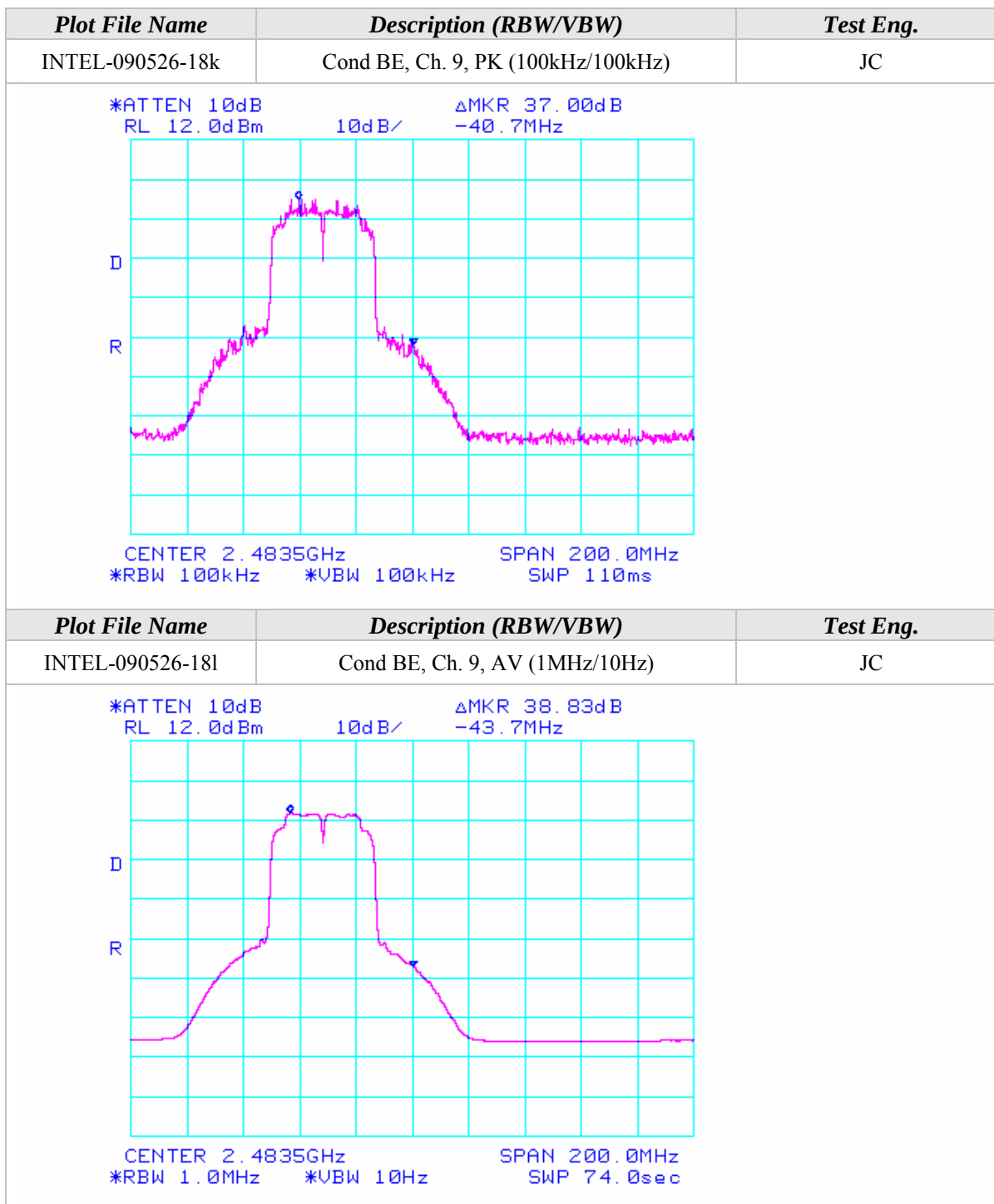


Band-Edge Plots (Continued)

| Plot File Name                                                                                                                                                                                                 | Description (RBW/VBW)          | Test Eng. |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-----------|
| INTEL-090526-18i                                                                                                                                                                                               | Cond BE, Ch. 8, AV (1MHz/10Hz) | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>ΔMKR 39.67dB<br/>-48.7MHz</div></div><div>CENTER 2.4835GHz      SPAN 200.0MHz<br/>*RBW 1.0MHz      *VBW 10Hz      SWP 74.0sec</div></div>  |                                |           |
| Plot File Name                                                                                                                                                                                                 | Description (RBW/VBW)          | Test Eng. |
| INTEL-090526-18j                                                                                                                                                                                               | Cond BE, Ch. 9, PK (1MHz/1MHz) | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>ΔMKR 33.50dB<br/>-43.0MHz</div></div><div>CENTER 2.4835GHz      SPAN 200.0MHz<br/>*RBW 1.0MHz      *VBW 1.0MHz      SWP 50.0ms</div></div> |                                |           |



## Band-Edge Plots (Continued)





## Radiated Emissions Test Results (Continued)

*Spurious Emissions Measurements in 802.11n mode 40MHz Wide (2400-2483.5 MHz)  
Channels 3, 6, & 9*

*Continuous TX at Chain A, B, & C Antenna ports with Shanghai Universe Antennas  
Aegis Labs, Inc. File #: INTEL-090526-18*

**RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Preamp<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL | Channel/<br>Chain<br>Tested |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|---|--------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|-----------------------------|
| 3249.32        | 52.67                      | 100                       | 315                  |                           |   | 47.61                    | 2.94                    | 32.75                  | 40.75                          | 74.00            | -33.25              | <b>Ch. 6/A</b>              |
| 3249.32        | 51.67                      | 100                       | 315                  |                           |   | 47.61                    | 2.94                    | 32.75                  | 39.75                          | 74.00            | -34.25              | <b>Ch. 6/B</b>              |
| 3249.32        | 53.00                      | 100                       | 315                  |                           |   | 47.61                    | 2.94                    | 32.75                  | 41.08                          | 74.00            | -32.92              | <b>Ch. 6/</b>               |
| 4873.98        | 51.67                      | 100                       | 315                  |                           |   | 47.50                    | 3.64                    | 34.13                  | 41.93                          | 74.00            | -32.07              | <b>C</b>                    |
| 4873.98        |                            | 100                       | 315                  | 40.02                     | A | 47.50                    | 3.64                    | 34.13                  | 30.28                          | 54.00            | -23.72              |                             |
| 3229.32        | 51.50                      | 100                       | 315                  |                           |   | 47.60                    | 2.92                    | 32.75                  | 39.57                          | 74.00            | -34.43              | <b>Ch. 3/</b>               |
| 4843.98        | 52.83                      | 100                       | 315                  |                           |   | 47.51                    | 3.61                    | 34.13                  | 43.06                          | 74.00            | -30.94              | <b>C</b>                    |
| 4843.98        |                            | 100                       | 315                  | 40.42                     | A | 47.51                    | 3.61                    | 34.13                  | 30.65                          | 54.00            | -23.35              |                             |
| 3269.32        | 52.17                      | 100                       | 315                  |                           |   | 47.62                    | 2.96                    | 32.75                  | 40.26                          | 74.00            | -33.74              | <b>Ch. 9/</b>               |
| 4903.98        | 51.50                      | 100                       | 0                    |                           |   | 47.49                    | 3.66                    | 34.12                  | 41.79                          | 74.00            | -32.21              | <b>C</b>                    |
| 4903.98        |                            | 100                       | 0                    | 39.50                     | A | 47.49                    | 3.66                    | 34.12                  | 29.79                          | 54.00            | -24.21              |                             |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Preamp<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL | Channel/<br>Chain<br>Tested |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|---|--------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|-----------------------------|
| 3249.32        | 54.17                      | 100                       | 0                    |                           |   | 47.61                    | 2.94                    | 32.55                  | 42.05                          | 74.00            | -31.95              | <b>Ch. 6/</b>               |
| 6498.64        | 51.33                      | 100                       | 90                   |                           |   | 46.93                    | 4.22                    | 35.50                  | 44.12                          | 74.00            | -29.88              | <b>A</b>                    |
| 3249.32        | 53.83                      | 100                       | 45                   |                           |   | 47.61                    | 2.94                    | 32.55                  | 41.71                          | 74.00            | -32.29              | <b>Ch. 6/</b>               |
| 4873.98        | 54.50                      | 100                       | 90                   |                           |   | 47.50                    | 3.64                    | 34.30                  | 44.94                          | 74.00            | -29.06              | <b>B</b>                    |
| 4873.98        |                            | 100                       | 90                   | 41.61                     | A | 47.50                    | 3.64                    | 34.30                  | 32.05                          | 54.00            | -21.95              |                             |
| 6498.64        | 51.50                      | 100                       | 90                   |                           |   | 46.93                    | 4.22                    | 35.50                  | 44.29                          | 74.00            | -29.71              |                             |
| 3249.32        | 53.83                      | 100                       | 0                    |                           |   | 47.61                    | 2.94                    | 32.55                  | 41.71                          | 74.00            | -32.29              | <b>Ch. 6/C</b>              |
| 3229.32        | 54.00                      | 100                       | 45                   |                           |   | 47.60                    | 2.92                    | 32.55                  | 41.87                          | 74.00            | -32.13              | <b>Ch. 3/</b>               |
| 6458.64        | 52.67                      | 100                       | 90                   |                           |   | 46.96                    | 4.21                    | 35.48                  | 45.40                          | 74.00            | -28.60              | <b>B</b>                    |
| 3269.32        | 54.00                      | 100                       | 45                   |                           |   | 47.62                    | 2.96                    | 32.55                  | 41.89                          | 54.00            | -12.11              | <b>Ch. 9/B</b>              |



## Radiated Emissions Test Results (Continued)

**Spurious Emissions Measurements in 802.11n mode 40MHz Wide (2400-2483.5 MHz)****Channels 3, 6, & 9****Continuous TX at Triple Chain ABC Antenna ports with Shanghai Universe Antennas****Aegis Labs, Inc. File #: INTEL-090526-18****RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |  | Preamp<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL | Channel/<br>Chain<br>Tested |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|--|--------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|-----------------------------|
| 3229.33        | 52.17                      | 100                       | 315                  |                           |  | 47.60                    | 2.92                    | 32.75                  | 40.24                          | 74.00            | -33.76              | <b>Ch. 3</b>                |
| 6458.66        | 55.83                      | 100                       | 45                   |                           |  | 46.96                    | 4.21                    | 35.66                  | 48.73                          | 74.00            | -25.27              |                             |
| 3249.32        | 50.83                      | 100                       | 315                  |                           |  | 47.61                    | 2.94                    | 32.75                  | 38.91                          | 74.00            | -35.09              | <b>Ch. 6</b>                |
| 6498.64        | 55.67                      | 100                       | 45                   |                           |  | 46.93                    | 4.22                    | 35.70                  | 48.66                          | 74.00            | -25.34              |                             |
| 3269.32        | 52.50                      | 100                       | 315                  |                           |  | 47.62                    | 2.96                    | 32.75                  | 40.59                          | 74.00            | -33.41              | <b>Ch. 9</b>                |
| 6538.64        | 55.50                      | 100                       | 45                   |                           |  | 46.87                    | 4.24                    | 35.71                  | 48.58                          | 74.00            | -25.42              |                             |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Preamp<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL | Channel/<br>Chain<br>Tested |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|---|--------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|-----------------------------|
| 3229.32        | 52.50                      | 100                       | 315                  |                           |   | 47.60                    | 2.92                    | 32.55                  | 40.37                          | 74.00            | -33.63              | <b>Ch. 1</b>                |
| 6458.64        | 59.50                      | 100                       |                      |                           |   | 46.96                    | 4.21                    | 35.48                  | 52.23                          | 74.00            | -21.77              |                             |
| 3249.32        | 52.17                      | 100                       | 0                    |                           |   | 47.61                    | 2.94                    | 32.55                  | 40.05                          | 74.00            | -33.95              | <b>Ch. 6</b>                |
| 4873.98        | 51.67                      | 100                       | 90                   |                           |   | 47.50                    | 3.64                    | 34.30                  | 42.11                          | 74.00            | -31.89              |                             |
| 4873.98        |                            | 100                       | 90                   | 40.32                     | A | 47.50                    | 3.64                    | 34.30                  | 30.76                          | 54.00            | -23.24              |                             |
| 6498.85        | 58.50                      | 100                       | 90                   |                           |   | 46.93                    | 4.22                    | 35.50                  | 51.29                          | 74.00            | -22.71              |                             |
| 3269.32        | 52.33                      | 100                       | 45                   |                           |   | 47.62                    | 2.96                    | 32.55                  | 40.22                          | 74.00            | -33.78              | <b>Ch. 11</b>               |
| 4904.00        | 51.83                      | 100                       | 90                   |                           |   | 47.49                    | 3.66                    | 34.30                  | 42.30                          | 74.00            | -31.70              |                             |
| 4904.00        |                            | 100                       | 90                   | 40.62                     | A | 47.49                    | 3.66                    | 34.30                  | 31.09                          | 54.00            | -22.91              |                             |
| 6538.66        | 59.67                      | 100                       | 90                   |                           |   | 46.87                    | 4.24                    | 35.51                  | 52.55                          | 74.00            | -21.45              |                             |

**RADIATED EMISSIONS TEST RESULTS**

|                       |                                                                                                                                       |                        |              |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------|------------------------|--------------|
| <b>CLIENT:</b>        | Intel Corporation                                                                                                                     | <b>DATE:</b>           | 06/25/09     |
| <b>EUT:</b>           | Intel® Centrino® Ultimate-N 6300                                                                                                      | <b>PROJECT NUMBER:</b> | INTEL-090526 |
| <b>MODEL NUMBER:</b>  | 633ANHMW                                                                                                                              | <b>TEST ENGINEER:</b>  | JC           |
| <b>SERIAL NUMBER:</b> | 0015005A17C0                                                                                                                          | <b>SITE #:</b>         | 2            |
| <b>CONFIGURATION:</b> | Tested installed in an extender board connected to the host laptop's mini PCI slot in <b>802.11n (5745-5825 MHz) mode 20MHz Wide.</b> | <b>TEMPERATURE:</b>    | 27° C        |
|                       |                                                                                                                                       | <b>HUMIDITY:</b>       | 44% RH       |
|                       |                                                                                                                                       | <b>TIME:</b>           | 3:00 PM      |

|                     |                                                                                                                                                                                           |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description:</b> | Radiated RF Emissions (1 GHz – 18 GHz)                                                                                                                                                    |
| <b>Results:</b>     | <b>PASSED</b> Horizontal and Vertical Antenna Polarizations Class B Limits                                                                                                                |
| <b>Note:</b>        | Radiated Emissions Measurements were performed on the EUT with power supply set at the following voltage and frequency. <ul style="list-style-type: none"><li>• 120VAC / 60 Hz.</li></ul> |

| Unwanted Spurious Emissions Limits |                       |                                                                |                                                                      |
|------------------------------------|-----------------------|----------------------------------------------------------------|----------------------------------------------------------------------|
| Frequency (MHz)                    | Field Strength (uV/m) | Field Strength (dBuV/m)<br>(Emissions in the restricted bands) | Field Strength (dBm/MHz)<br>(Emissions outside the restricted bands) |
| Above 960                          | 500                   | 54.00 (Average)<br>74.00 (Peak)                                | < -20 dBc                                                            |

**Radiated Emissions Sample Calculations**

$$\text{Corrected Meter Reading} = \text{Meter Reading} + F + C - D$$

Where, F = Antenna Factor

C = Cable Factor

G = Amplifier Gain

D = Distance Factor (if applicable)

Therefore, the equation for determining the Corrected Meter Reading Limit (CML) is:

$$\text{CML} = \text{Specification Limit} - F - C + D$$



## Radiated Emissions Test Results (Continued)

*Fundamental Measurements in 802.11n mode 20MHz Wide (5745-5825 MHz)  
Channels 149, 157, & 165*

*Continuous TX at Chain A Antenna port with Shanghai Universe Antennas  
Aegis Labs, Inc. File #: INTEL-090526-09*

**RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq. (MHz) | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL | Comments       |
|-------------|----------------------|---------------------|-------------------|------------------------|---|-------------------|------------------|--------------------------|---------------|------------------|----------------|
| 5745.00     | 63.50                | 100                 | 45                |                        |   | 3.98              | 34.89            | 102.38                   |               |                  | <b>Ch. 149</b> |
| 5745.00     |                      |                     |                   | 53.50                  | A | 3.98              | 34.89            | 92.38                    |               |                  |                |
| 5785.00     | 63.17                | 100                 | 45                |                        |   | 4.00              | 34.94            | 102.11                   |               |                  | <b>Ch. 157</b> |
| 5785.00     |                      |                     |                   | 53.33                  | A | 4.00              | 34.94            | 92.27                    |               |                  |                |
| 5825.00     | 63.83                | 100                 | 45                |                        |   | 4.01              | 34.99            | 102.83                   |               |                  | <b>Ch. 165</b> |
| 5825.00     |                      |                     |                   | 54.00                  | A | 4.01              | 34.99            | 93.00                    |               |                  |                |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq. (MHz) | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL | Comments       |
|-------------|----------------------|---------------------|-------------------|------------------------|---|-------------------|------------------|--------------------------|---------------|------------------|----------------|
| 5745.00     | 62.67                | 100                 | 315               |                        |   | 3.98              | 35.05            | 101.70                   |               |                  | <b>Ch. 149</b> |
| 5745.00     |                      |                     |                   | 51.67                  | A | 3.98              | 35.05            | 90.70                    |               |                  |                |
| 5785.00     | 62.00                | 100                 | 315               |                        |   | 4.00              | 35.09            | 101.08                   |               |                  | <b>Ch. 157</b> |
| 5785.00     |                      |                     |                   | 50.83                  | A | 4.00              | 35.09            | 89.91                    |               |                  |                |
| 5825.00     | 60.17                | 100                 | 315               |                        |   | 4.01              | 35.13            | 99.31                    |               |                  | <b>Ch. 165</b> |
| 5825.00     |                      |                     |                   | 50.33                  | A | 4.01              | 35.13            | 89.47                    |               |                  |                |

NOTE: Fundamental signals measured to calculate the band edge field strengths using the "Marker Delta Method".



## Radiated Emissions Test Results (Continued)

**Band Edge Field Strength Measurements in 802.11n mode 20MHz Wide (5745-5825 MHz)****Channels 149 & 165****Continuous TX at Chain A Antenna port with Shanghai Universe Antennas****Aegis Labs, Inc. File #: INTEL-090526-09****RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL | Comments       |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|----------------|
| 5725.00        | 34.67                      | 100                       | 45                   |                           | 3.98                    | 34.87                  | 73.52                          | 82.38            | -8.86               | <b>Ch. 149</b> |
| 5850.00        | 31.00                      | 100                       | 45                   |                           | 4.02                    | 35.02                  | 70.04                          | 82.83            | -12.79              | <b>Ch. 165</b> |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL | Comments       |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|----------------|
| 5725.00        | 33.50                      | 100                       | 315                  |                           | 3.98                    | 35.03                  | 72.50                          | 81.70            | -9.20               | <b>Ch. 149</b> |
| 5850.00        | 30.17                      | 100                       | 315                  |                           | 4.02                    | 35.15                  | 69.34                          | 79.31            | -9.97               | <b>Ch. 165</b> |

NOTE: The “Band Edge Field Strength” was calculated using the “Fundamental” and “Conducted Band Edge” measurements per the “Marker-Delta Method” with the following formula:

$$BE = F_m - \Delta m$$

Where

BE = Band Edge Field Strength

F<sub>m</sub> = Measured Fundamental (Peak or Average)

Δ<sub>m</sub> = Measured Conducted Band Edge Delta (Peak or Average)



## Radiated Emissions Test Results (Continued)

**Fundamental Measurements in 802.11n mode 20MHz Wide (5745-5825 MHz)**  
**Channels 149, 157, & 165**

**Continuous TX at Chain B Antenna port with Shanghai Universe Antennas**  
**Aegis Labs, Inc. File #: INTEL-090526-11**

**RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq. (MHz) | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL | Comments       |
|-------------|----------------------|---------------------|-------------------|------------------------|---|-------------------|------------------|--------------------------|---------------|------------------|----------------|
| 5745.00     | 64.50                | 100                 | 315               |                        |   | 3.98              | 34.89            | 103.38                   |               |                  | <b>Ch. 149</b> |
| 5745.00     |                      |                     |                   | 54.50                  | A | 3.98              | 34.89            | 93.38                    |               |                  |                |
| 5785.00     | 64.83                | 100                 | 315               |                        |   | 4.00              | 34.94            | 103.77                   |               |                  | <b>Ch. 157</b> |
| 5785.00     |                      |                     |                   | 55.67                  | A | 4.00              | 34.94            | 94.61                    |               |                  |                |
| 5825.00     | 63.67                | 100                 | 315               |                        |   | 4.01              | 34.99            | 102.67                   |               |                  | <b>Ch. 165</b> |
| 5825.00     |                      |                     |                   | 53.50                  | A | 4.01              | 34.99            | 92.50                    |               |                  |                |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq. (MHz) | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL | Comments       |
|-------------|----------------------|---------------------|-------------------|------------------------|---|-------------------|------------------|--------------------------|---------------|------------------|----------------|
| 5745.00     | 65.83                | 100                 | 315               |                        |   | 3.98              | 35.05            | 104.86                   |               |                  | <b>Ch. 149</b> |
| 5745.00     |                      |                     |                   | 56.00                  | A | 3.98              | 35.05            | 95.03                    |               |                  |                |
| 5785.00     | 64.33                | 100                 | 315               |                        |   | 4.00              | 35.09            | 103.41                   |               |                  | <b>Ch. 157</b> |
| 5785.00     |                      |                     |                   | 54.83                  | A | 4.00              | 35.09            | 93.91                    |               |                  |                |
| 5825.00     | 63.00                | 100                 | 315               |                        |   | 4.01              | 35.13            | 102.14                   |               |                  | <b>Ch. 165</b> |
| 5825.00     |                      |                     |                   | 53.33                  | A | 4.01              | 35.13            | 92.47                    |               |                  |                |

NOTE: Fundamental signals measured to calculate the band edge field strengths using the "Marker Delta Method".



## Radiated Emissions Test Results (Continued)

**Band Edge Field Strength Measurements in 802.11n mode 20MHz Wide (5745-5825 MHz)****Channels 149 & 165****Continuous TX at Chain B Antenna port with Shanghai Universe Antennas****Aegis Labs, Inc. File #: INTEL-090526-11****RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL | Comments       |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|----------------|
| 5725.00        | 37.83                      | 100                       | 315                  |                           | 3.98                    | 34.87                  | 76.68                          | 83.38            | -6.70               | <b>Ch. 149</b> |
| 5850.00        | 32.83                      | 100                       | 315                  |                           | 4.02                    | 35.02                  | 71.87                          | 82.67            | -10.80              | <b>Ch. 165</b> |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL | Comments       |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|----------------|
| 5725.00        | 38.50                      | 100                       | 315                  |                           | 3.98                    | 35.03                  | 77.50                          | 84.86            | -7.36               | <b>Ch. 149</b> |
| 5850.00        | 31.83                      | 100                       | 315                  |                           | 4.02                    | 35.15                  | 71.00                          | 82.14            | -11.14              | <b>Ch. 165</b> |

NOTE: The “Band Edge Field Strength” was calculated using the “Fundamental” and “Conducted Band Edge” measurements per the “Marker-Delta Method” with the following formula:

$$BE = F_m - \Delta m$$

Where

BE = Band Edge Field Strength

F<sub>m</sub> = Measured Fundamental (Peak or Average)

Δ<sub>m</sub> = Measured Conducted Band Edge Delta (Peak or Average)



## Radiated Emissions Test Results (Continued)

*Fundamental Measurements in 802.11n mode 20MHz Wide (5745-5825 MHz)  
Channels 149, 157, & 165*

*Continuous TX at Chain C Antenna port with Shanghai Universe Antennas  
Aegis Labs, Inc. File #: INTEL-090526-13*

| RADIATED EMISSIONS - Horizontal Antenna Polarization |                            |                           |                      |                           |   |                         |                        |                                |                  |                     |
|------------------------------------------------------|----------------------------|---------------------------|----------------------|---------------------------|---|-------------------------|------------------------|--------------------------------|------------------|---------------------|
| Freq.<br>(MHz)                                       | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
| 5745.00                                              | 63.67                      | 100                       | 45                   |                           |   | 3.98                    | 34.89                  | 102.55                         |                  |                     |
| 5745.00                                              |                            |                           |                      | 53.83                     | A | 3.98                    | 34.89                  | 92.71                          |                  |                     |
| 5785.00                                              | 62.83                      | 100                       | 45                   |                           |   | 4.00                    | 34.94                  | 101.77                         |                  |                     |
| 5785.00                                              |                            |                           |                      | 53.00                     | A | 4.00                    | 34.94                  | 91.94                          |                  |                     |
| 5825.00                                              | 62.17                      | 100                       | 45                   |                           |   | 4.01                    | 34.99                  | 101.17                         |                  |                     |
| 5825.00                                              |                            |                           |                      | 52.50                     | A | 4.01                    | 34.99                  | 91.50                          |                  |                     |

| RADIATED EMISSIONS - Vertical Antenna Polarization |                            |                           |                      |                           |   |                         |                        |                                |                  |                     |
|----------------------------------------------------|----------------------------|---------------------------|----------------------|---------------------------|---|-------------------------|------------------------|--------------------------------|------------------|---------------------|
| Freq.<br>(MHz)                                     | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
| 5745.00                                            | 63.67                      | 100                       | 315                  |                           |   | 3.98                    | 35.05                  | 102.70                         |                  |                     |
| 5745.00                                            |                            |                           |                      | 52.83                     | A | 3.98                    | 35.05                  | 91.86                          |                  |                     |
| 5785.00                                            | 62.50                      | 100                       | 315                  |                           |   | 4.00                    | 35.09                  | 101.58                         |                  |                     |
| 5785.00                                            |                            |                           |                      | 51.67                     | A | 4.00                    | 35.09                  | 90.75                          |                  |                     |
| 5825.00                                            | 60.83                      | 100                       | 315                  |                           |   | 4.01                    | 35.13                  | 99.97                          |                  |                     |
| 5825.00                                            |                            |                           |                      | 50.83                     | A | 4.01                    | 35.13                  | 89.97                          |                  |                     |

NOTE: Fundamental signals measured to calculate the band edge field strengths using the "Marker Delta Method".



## Radiated Emissions Test Results (Continued)

**Band Edge Field Strength Measurements in 802.11n mode 20MHz Wide (5745-5825 MHz)**  
**Channels 149 & 165**  
**Continuous TX at Chain C Antenna port with Shanghai Universe Antennas**  
**Aegis Labs, Inc. File #: INTEL-090526-13**

**RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL | Comments       |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|----------------|
| 5725.00        | 35.00                      | 100                       | 45                   |                           | 3.98                    | 34.87                  | 73.85                          | 82.55            | -8.70               | <b>Ch. 149</b> |
| 5850.00        | 31.83                      | 100                       | 45                   |                           | 4.02                    | 35.02                  | 70.87                          | 81.17            | -10.30              | <b>Ch. 165</b> |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL | Comments       |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|----------------|
| 5725.00        | 36.50                      | 100                       | 315                  |                           | 3.98                    | 35.03                  | 75.50                          | 82.70            | -7.20               | <b>Ch. 149</b> |
| 5850.00        | 31.67                      | 100                       | 315                  |                           | 4.02                    | 35.15                  | 70.84                          | 79.97            | -9.13               | <b>Ch. 165</b> |

NOTE: The “Band Edge Field Strength” was calculated using the “Fundamental” and “Conducted Band Edge” measurements per the “Marker-Delta Method” with the following formula:

$$BE = F_m - \Delta m$$

Where

BE = Band Edge Field Strength

F<sub>m</sub> = Measured Fundamental (Peak or Average)

Δ<sub>m</sub> = Measured Conducted Band Edge Delta (Peak or Average)



## Radiated Emissions Test Results (Continued)

*Spurious Emissions Measurements in 802.11n mode 20MHz Wide (5745-5825 MHz)*  
*Channels 149, 157, & 165*  
**Continuous TX at Chain A, B, & C Antenna ports with Shanghai Universe Antennas**  
*Aegis Labs, Inc. File #: INTEL-090526-18*

| RADIATED EMISSIONS - Horizontal Antenna Polarization |                      |                     |                   |                        |   |                    |                   |                  |                          |               |                   |                       |
|------------------------------------------------------|----------------------|---------------------|-------------------|------------------------|---|--------------------|-------------------|------------------|--------------------------|---------------|-------------------|-----------------------|
| Freq. (MHz)                                          | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Preamp Factor (dB) | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +/-FAIL | Channel/ Chain Tested |
| 3856.66                                              | 52.67                | 100                 | 0                 |                        |   | 47.58              | 3.22              | 33.23            | 41.54                    | 74.00         | -32.46            | <b>Ch. 157/</b>       |
| 3856.66                                              |                      | 100                 | 0                 | 40.71                  | A | 47.58              | 3.22              | 33.23            | 29.58                    | 54.00         | -24.42            | <b>A</b>              |
| 7713.32                                              | 53.17                | 100                 | 0                 |                        |   | 45.55              | 4.67              | 35.83            | 48.12                    | 74.00         | -25.88            |                       |
| 7713.32                                              |                      | 100                 | 0                 | 44.11                  | A | 45.55              | 4.67              | 35.83            | 39.06                    | 54.00         | -14.94            |                       |
| 3856.66                                              | 53.50                | 100                 | 0                 |                        |   | 47.58              | 3.22              | 33.23            | 42.37                    | 74.00         | -31.63            | <b>Ch. 157/</b>       |
| 3856.66                                              |                      | 100                 | 0                 | 42.80                  | A | 47.58              | 3.22              | 33.23            | 31.67                    | 54.00         | -22.33            | <b>B</b>              |
| 7713.32                                              | 53.00                | 100                 | 0                 |                        |   | 45.55              | 4.67              | 35.83            | 47.95                    | 74.00         | -26.05            |                       |
| 7713.32                                              |                      | 100                 | 0                 | 44.36                  | A | 45.55              | 4.67              | 35.83            | 39.31                    | 54.00         | -14.69            |                       |
| 3856.66                                              | 52.67                | 100                 | 0                 |                        |   | 47.58              | 3.22              | 33.23            | 41.54                    | 74.00         | -32.46            | <b>Ch.157/</b>        |
| 3856.66                                              |                      | 100                 | 0                 | 41.86                  | A | 47.58              | 3.22              | 33.23            | 30.73                    | 54.00         | -23.27            | <b>C</b>              |
| 7713.32                                              | 53.50                | 100                 | 0                 |                        |   | 45.55              | 4.67              | 35.83            | 48.45                    | 74.00         | -25.55            |                       |
| 7713.32                                              |                      | 100                 | 0                 | 43.09                  | A | 45.55              | 4.67              | 35.83            | 38.04                    | 54.00         | -15.96            |                       |
| 3830.00                                              | 53.00                | 100                 | 0                 |                        |   | 47.56              | 3.23              | 33.20            | 41.87                    | 74.00         | -32.13            | <b>Ch. 149/</b>       |
| 3830.00                                              |                      | 100                 | 0                 | 42.42                  | A | 47.56              | 3.23              | 33.20            | 31.29                    | 54.00         | -22.71            | <b>B</b>              |
| 7660.00                                              | 53.83                | 100                 | 0                 |                        |   | 45.57              | 4.65              | 35.80            | 48.70                    | 74.00         | -25.30            |                       |
| 7660.00                                              |                      | 100                 | 0                 | 45.99                  | A | 45.57              | 4.65              | 35.80            | 40.86                    | 54.00         | -13.14            |                       |
| 3883.33                                              | 53.67                | 100                 | 0                 |                        |   | 47.60              | 3.22              | 33.26            | 42.55                    | 74.00         | -31.45            | <b>Ch.165/</b>        |
| 3883.33                                              |                      | 100                 | 0                 | 43.02                  | A | 47.60              | 3.22              | 33.26            | 31.90                    | 54.00         | -22.10            | <b>B</b>              |
| 7766.66                                              | 52.00                | 100                 | 0                 |                        |   | 45.52              | 4.68              | 35.86            | 47.02                    | 74.00         | -26.98            |                       |
| 7766.66                                              |                      | 100                 | 0                 | 42.73                  | A | 45.52              | 4.68              | 35.86            | 37.75                    | 54.00         | -16.25            |                       |



## Radiated Emissions Test Results (Continued)

| RADIATED EMISSIONS - Vertical Antenna Polarization |                      |                     |                   |                        |   |                    |                   |                  |                          |               |                   |                       |
|----------------------------------------------------|----------------------|---------------------|-------------------|------------------------|---|--------------------|-------------------|------------------|--------------------------|---------------|-------------------|-----------------------|
| Freq. (MHz)                                        | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Preamp Factor (dB) | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +/-FAIL | Channel/ Chain Tested |
| 3856.66                                            | 54.00                | 100                 | 0                 |                        |   | 47.58              | 3.22              | 33.17            | 42.81                    | 74.00         | -31.19            | <b>Ch. 157/</b>       |
| 3856.66                                            |                      | 100                 | 0                 | 42.65                  | A | 47.58              | 3.22              | 33.17            | 31.46                    | 54.00         | -22.54            | <b>A</b>              |
| 7713.32                                            | 52.67                | 100                 | 315               |                        |   | 45.55              | 4.67              | 35.79            | 47.57                    | 74.00         | -26.43            |                       |
| 7713.32                                            |                      | 100                 | 315               | 42.87                  | A | 45.55              | 4.67              | 35.79            | 37.77                    | 54.00         | -16.23            |                       |
| 11569.98                                           | 52.50                | 100                 | 0                 |                        |   | 45.34              | 5.93              | 38.36            | 51.44                    | 74.00         | -22.56            |                       |
| 11569.98                                           |                      | 100                 | 0                 | 40.02                  | A | 45.34              | 5.93              | 38.36            | 38.96                    | 54.00         | -15.04            |                       |
| 3856.66                                            | 53.17                | 100                 | 0                 |                        |   | 47.58              | 3.22              | 33.17            | 41.98                    | 74.00         | -32.02            | <b>Ch. 157/</b>       |
| 3856.66                                            |                      | 100                 | 0                 | 44.30                  | A | 47.58              | 3.22              | 33.17            | 33.11                    | 54.00         | -20.89            | <b>B</b>              |
| 7713.32                                            | 53.33                | 100                 | 0                 |                        |   | 45.55              | 4.67              | 35.79            | 48.23                    | 74.00         | -25.77            |                       |
| 7713.32                                            |                      | 100                 | 0                 | 44.54                  | A | 45.55              | 4.67              | 35.79            | 39.44                    | 54.00         | -14.56            |                       |
| 3856.66                                            | 52.67                | 100                 | 0                 |                        |   | 47.58              | 3.22              | 33.17            | 41.48                    | 74.00         | -32.52            | <b>Ch.157/</b>        |
| 3856.66                                            |                      | 100                 | 0                 | 42.02                  | A | 47.58              | 3.22              | 33.17            | 30.83                    | 54.00         | -23.17            | <b>C</b>              |
| 7713.32                                            | 52.33                | 100                 | 0                 |                        |   | 45.55              | 4.67              | 35.79            | 47.23                    | 74.00         | -26.77            |                       |
| 7713.32                                            |                      | 100                 | 0                 | 43.44                  | A | 45.55              | 4.67              | 35.79            | 38.34                    | 54.00         | -15.66            |                       |
| 3830.00                                            | 54.17                | 100                 | 0                 |                        |   | 47.56              | 3.23              | 33.13            | 42.97                    | 74.00         | -31.03            | <b>Ch. 149/</b>       |
| 3830.00                                            |                      | 100                 | 0                 | 42.80                  | A | 47.56              | 3.23              | 33.13            | 31.60                    | 54.00         | -22.40            | <b>B</b>              |
| 7660.00                                            | 53.67                | 100                 | 0                 |                        |   | 45.57              | 4.65              | 35.76            | 48.51                    | 74.00         | -25.49            |                       |
| 7660.00                                            |                      | 100                 | 0                 | 45.07                  | A | 45.57              | 4.65              | 35.76            | 39.91                    | 54.00         | -14.09            |                       |
| 3883.33                                            | 53.67                | 100                 | 0                 |                        |   | 47.60              | 3.22              | 33.21            | 42.50                    | 74.00         | -31.50            | <b>Ch.165/</b>        |
| 3883.33                                            |                      | 100                 | 0                 | 44.78                  | A | 47.60              | 3.22              | 33.21            | 33.61                    | 54.00         | -20.39            | <b>B</b>              |
| 7766.66                                            | 52.67                | 100                 | 0                 |                        |   | 45.52              | 4.68              | 35.81            | 47.63                    | 74.00         | -26.37            |                       |
| 7766.66                                            |                      | 100                 | 0                 | 42.87                  | A | 45.52              | 4.68              | 35.81            | 37.83                    | 54.00         | -16.17            |                       |

**RADIATED EMISSIONS TEST RESULTS**

|                       |                                                                                                                                       |                        |              |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------|------------------------|--------------|
| <b>CLIENT:</b>        | Intel Corporation                                                                                                                     | <b>DATE:</b>           | 06/25/09     |
| <b>EUT:</b>           | Intel® Centrino® Ultimate-N 6300                                                                                                      | <b>PROJECT NUMBER:</b> | INTEL-090526 |
| <b>MODEL NUMBER:</b>  | 633ANHMW                                                                                                                              | <b>TEST ENGINEER:</b>  | JC           |
| <b>SERIAL NUMBER:</b> | 0015005A17C0                                                                                                                          | <b>SITE #:</b>         | 2            |
| <b>CONFIGURATION:</b> | Tested installed in an extender board connected to the host laptop's mini PCI slot in <b>802.11n (5745-5825 MHz) mode 40MHz Wide.</b> | <b>TEMPERATURE:</b>    | 27° C        |
|                       |                                                                                                                                       | <b>HUMIDITY:</b>       | 44% RH       |
|                       |                                                                                                                                       | <b>TIME:</b>           | 3:00 PM      |

|                     |                                                                                                                                                                                           |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description:</b> | Radiated RF Emissions (1 GHz – 18 GHz)                                                                                                                                                    |
| <b>Results:</b>     | <b>PASSED</b> Horizontal and Vertical Antenna Polarizations Class B Limits                                                                                                                |
| <b>Note:</b>        | Radiated Emissions Measurements were performed on the EUT with power supply set at the following voltage and frequency. <ul style="list-style-type: none"><li>• 120VAC / 60 Hz.</li></ul> |

| Unwanted Spurious Emissions Limits |                       |                                                                |                                                                      |
|------------------------------------|-----------------------|----------------------------------------------------------------|----------------------------------------------------------------------|
| Frequency (MHz)                    | Field Strength (uV/m) | Field Strength (dBuV/m)<br>(Emissions in the restricted bands) | Field Strength (dBm/MHz)<br>(Emissions outside the restricted bands) |
| Above 960                          | 500                   | 54.00 (Average)<br>74.00 (Peak)                                | < -20 dBc                                                            |

**Radiated Emissions Sample Calculations**

$$\text{Corrected Meter Reading} = \text{Meter Reading} + F + C - D$$

Where, F = Antenna Factor

C = Cable Factor

G = Amplifier Gain

D = Distance Factor (if applicable)

Therefore, the equation for determining the Corrected Meter Reading Limit (CML) is:

$$\text{CML} = \text{Specification Limit} - F - C + D$$



## Radiated Emissions Test Results (Continued)

**Fundamental Measurements in 802.11n mode 40MHz Wide (5745-5825 MHz)  
Channels 151 & 159****Continuous TX at Chain A Antenna port with Shanghai Universe Antennas  
Aegis Labs, Inc. File #: INTEL-090526-09****RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL | Comments       |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|---|-------------------------|------------------------|--------------------------------|------------------|---------------------|----------------|
| 5755.00        | 59.17                      | 100                       | 45                   |                           |   | 3.99                    | 34.91                  | 98.06                          |                  |                     | <b>Ch. 151</b> |
| 5755.00        |                            |                           |                      | 49.83                     | A | 3.99                    | 34.91                  | 88.72                          |                  |                     |                |
| 5795.00        | 59.83                      | 100                       | 0                    |                           |   | 4.00                    | 34.95                  | 98.79                          |                  |                     | <b>Ch. 159</b> |
| 5795.00        |                            |                           |                      | 50.67                     | A | 4.00                    | 34.95                  | 89.63                          |                  |                     |                |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL | Comments       |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|---|-------------------------|------------------------|--------------------------------|------------------|---------------------|----------------|
| 5755.00        | 56.67                      | 100                       | 315                  |                           |   | 3.99                    | 35.06                  | 95.71                          |                  |                     | <b>Ch. 151</b> |
| 5755.00        |                            |                           |                      | 47.33                     | A | 3.99                    | 35.06                  | 86.37                          |                  |                     |                |
| 5795.00        | 56.33                      | 100                       | 315                  |                           |   | 4.00                    | 35.10                  | 95.43                          |                  |                     | <b>Ch. 159</b> |
| 5795.00        |                            |                           |                      | 46.83                     | A | 4.00                    | 35.10                  | 85.93                          |                  |                     |                |

NOTE: Fundamental signals measured to calculate the band edge field strengths using the "Marker Delta Method".



## Radiated Emissions Test Results (Continued)

**Band Edge Field Strength Measurements in 802.11n mode 40MHz Wide (5745-5825 MHz)  
Channels 151 & 159****Continuous TX at Chain A Antenna port with Shanghai Universe Antennas  
Aegis Labs, Inc. File #: INTEL-090526-09****RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL | Comments       |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|----------------|
| 5725.00        | 31.67                      | 100                       | 45                   |                           | 3.98                    | 34.87                  | 70.52                          | 78.06            | -7.55               | <b>Ch. 151</b> |
| 5850.00        | 30.83                      | 100                       | 0                    |                           | 4.02                    | 35.02                  | 69.87                          | 78.79            | -8.91               | <b>Ch. 159</b> |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL | Comments       |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|----------------|
| 5725.00        | 31.00                      | 100                       | 315                  |                           | 3.98                    | 35.03                  | 70.00                          | 75.71            | -5.71               | <b>Ch. 151</b> |
| 5850.00        | 30.67                      | 100                       | 315                  |                           | 4.02                    | 35.15                  | 69.84                          | 75.43            | -5.58               | <b>Ch. 159</b> |

NOTE: The “Band Edge Field Strength” was calculated using the “Fundamental” and “Conducted Band Edge” measurements per the “Marker-Delta Method” with the following formula:

$$BE = F_m - \Delta m$$

Where

BE = Band Edge Field Strength

F<sub>m</sub> = Measured Fundamental (Peak or Average)

Δ<sub>m</sub> = Measured Conducted Band Edge Delta (Peak or Average)



## Radiated Emissions Test Results (Continued)

**Fundamental Measurements in 802.11n mode 40MHz Wide (5745-5825 MHz)  
Channels 151 & 159****Continuous TX at Chain B Antenna port with Shanghai Universe Antennas  
Aegis Labs, Inc. File #: INTEL-090526-11****RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL | Comments       |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|---|-------------------------|------------------------|--------------------------------|------------------|---------------------|----------------|
| 5755.00        | 61.67                      | 100                       | 315                  |                           |   | 3.99                    | 34.91                  | 100.56                         |                  |                     | <b>Ch. 151</b> |
| 5755.00        |                            |                           |                      | 51.17                     | A | 3.99                    | 34.91                  | 90.06                          |                  |                     |                |
| 5795.00        | 59.50                      | 100                       | 315                  |                           |   | 4.00                    | 34.95                  | 98.46                          |                  |                     | <b>Ch. 159</b> |
| 5795.00        |                            |                           |                      | 49.67                     | A | 4.00                    | 34.95                  | 88.63                          |                  |                     |                |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL | Comments       |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|---|-------------------------|------------------------|--------------------------------|------------------|---------------------|----------------|
| 5755.00        | 62.50                      | 100                       | 90                   |                           |   | 3.99                    | 35.06                  | 101.54                         |                  |                     | <b>Ch. 151</b> |
| 5755.00        |                            |                           |                      | 52.17                     | A | 3.99                    | 35.06                  | 91.21                          |                  |                     |                |
| 5795.00        | 59.17                      | 100                       | 90                   |                           |   | 4.00                    | 35.10                  | 98.27                          |                  |                     | <b>Ch. 159</b> |
| 5795.00        |                            |                           |                      | 49.50                     | A | 4.00                    | 35.10                  | 88.60                          |                  |                     |                |

NOTE: Fundamental signals measured to calculate the band edge field strengths using the "Marker Delta Method".



## Radiated Emissions Test Results (Continued)

**Band Edge Field Strength Measurements in 802.11n mode 40MHz Wide (5745-5825 MHz)****Channels 151 & 159****Continuous TX at Chain B Antenna port with Shanghai Universe Antennas****Aegis Labs, Inc. File #: INTEL-090526-11****RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL | Comments       |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|----------------|
| 5725.00        | 35.00                      | 100                       | 315                  |                           | 3.98                    | 34.87                  | 73.85                          | 80.56            | -6.72               | <b>Ch. 151</b> |
| 5850.00        | 31.67                      | 100                       | 315                  |                           | 4.02                    | 35.02                  | 70.71                          | 78.46            | -7.74               | <b>Ch. 159</b> |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL | Comments       |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|----------------|
| 5725.00        | 37.00                      | 100                       | 90                   |                           | 3.98                    | 35.03                  | 76.00                          | 81.54            | -5.54               | <b>Ch. 151</b> |
| 5850.00        | 35.83                      | 100                       | 90                   |                           | 4.02                    | 35.15                  | 75.00                          | 78.27            | -3.26               | <b>Ch. 159</b> |

NOTE: The “Band Edge Field Strength” was calculated using the “Fundamental” and “Conducted Band Edge” measurements per the “Marker-Delta Method” with the following formula:

$$BE = F_m - \Delta m$$

Where

BE = Band Edge Field Strength

F<sub>m</sub> = Measured Fundamental (Peak or Average)

Δ<sub>m</sub> = Measured Conducted Band Edge Delta (Peak or Average)



## Radiated Emissions Test Results (Continued)

**Fundamental Measurements in 802.11n mode 40MHz Wide (5745-5825 MHz)  
Channels 151 & 159****Continuous TX at Chain C Antenna port with Shanghai Universe Antennas  
Aegis Labs, Inc. File #: INTEL-090526-13****RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL | Comments       |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|---|-------------------------|------------------------|--------------------------------|------------------|---------------------|----------------|
| 5755.00        | 60.17                      | 100                       | 45                   |                           |   | 3.99                    | 34.91                  | 99.06                          |                  |                     | <b>Ch. 151</b> |
| 5755.00        |                            |                           |                      | 51.00                     | A | 3.99                    | 34.91                  | 89.89                          |                  |                     |                |
| 5795.00        | 59.50                      | 100                       | 0                    |                           |   | 4.00                    | 34.95                  | 98.46                          |                  |                     | <b>Ch. 159</b> |
| 5795.00        |                            |                           |                      | 50.17                     | A | 4.00                    | 34.95                  | 89.13                          |                  |                     |                |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL | Comments       |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|---|-------------------------|------------------------|--------------------------------|------------------|---------------------|----------------|
| 5755.00        | 62.17                      | 100                       | 315                  |                           |   | 3.99                    | 35.06                  | 101.21                         |                  |                     | <b>Ch. 151</b> |
| 5755.00        |                            |                           |                      | 51.83                     | A | 3.99                    | 35.06                  | 90.87                          |                  |                     |                |
| 5795.00        | 59.50                      | 100                       | 315                  |                           |   | 4.00                    | 35.10                  | 98.60                          |                  |                     | <b>Ch. 159</b> |
| 5795.00        |                            |                           |                      | 50.17                     | A | 4.00                    | 35.10                  | 89.27                          |                  |                     |                |

NOTE: Fundamental signals measured to calculate the band edge field strengths using the "Marker Delta Method".



## Radiated Emissions Test Results (Continued)

**Band Edge Field Strength Measurements in 802.11n mode 40MHz Wide (5745-5825 MHz)  
Channels 151 & 159****Continuous TX at Chain C Antenna port with Shanghai Universe Antennas  
Aegis Labs, Inc. File #: INTEL-090526-13****RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL | Comments       |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|----------------|
| 5725.00        | 34.17                      | 100                       | 45                   |                           | 3.98                    | 34.87                  | 73.02                          | 79.06            | -6.05               | <b>Ch. 151</b> |
| 5850.00        | 30.50                      | 100                       | 0                    |                           | 4.02                    | 35.02                  | 69.54                          | 78.46            | -8.91               | <b>Ch. 159</b> |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL | Comments       |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|----------------|
| 5725.00        | 33.33                      | 100                       | 315                  |                           | 3.98                    | 35.03                  | 72.33                          | 81.21            | -8.88               | <b>Ch. 151</b> |
| 5850.00        | 30.83                      | 100                       | 315                  |                           | 4.02                    | 35.15                  | 70.00                          | 78.60            | -8.59               | <b>Ch. 159</b> |

NOTE: The “Band Edge Field Strength” was calculated using the “Fundamental” and “Conducted Band Edge” measurements per the “Marker-Delta Method” with the following formula:

$$BE = F_m - \Delta m$$

Where

BE = Band Edge Field Strength

F<sub>m</sub> = Measured Fundamental (Peak or Average)

Δ<sub>m</sub> = Measured Conducted Band Edge Delta (Peak or Average)



## Radiated Emissions Test Results (Continued)

*Spurious Emissions Measurements in 802.11n mode 40MHz Wide (5745-5825 MHz)  
Channels 151 & 159*

*Continuous TX at Triple Chain ABC Antenna ports with Shanghai Universe Antennas  
Aegis Labs, Inc. File #: INTEL-090526-18*

**RADIATED EMISSIONS - Horizontal Antenna Polarization**

| Freq. (MHz) | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Preamp Factor (dB) | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +/-FAIL | Channel/ Chain Tested |
|-------------|----------------------|---------------------|-------------------|------------------------|---|--------------------|-------------------|------------------|--------------------------|---------------|-------------------|-----------------------|
| 3836.66     | 54.17                | 100                 | 315               |                        |   | 47.57              | 3.23              | 33.20            | 43.04                    | 74.00         | -30.96            | <b>Ch. 151</b>        |
| 3836.66     |                      | 100                 | 315               | 42.18                  | A | 47.57              | 3.23              | 33.20            | 31.05                    | 54.00         | -22.95            |                       |
| 7673.33     | 53.00                | 100                 | 0                 |                        |   | 45.57              | 4.66              | 35.80            | 47.89                    | 74.00         | -26.11            |                       |
| 7673.33     |                      | 100                 | 0                 | 44.17                  | A | 45.57              | 4.66              | 35.80            | 39.06                    | 54.00         | -14.94            |                       |
| 11510.00    | 52.83                | 100                 | 45                |                        |   | 45.32              | 5.91              | 38.31            | 51.73                    | 74.00         | -22.27            |                       |
| 11510.00    |                      | 100                 | 45                | 43.09                  | A | 45.32              | 5.91              | 38.31            | 41.99                    | 54.00         | -12.01            |                       |
| 3863.33     | 53.33                | 100                 | 315               |                        |   | 47.58              | 3.22              | 33.24            | 42.20                    | 74.00         | -31.80            | <b>Ch.159</b>         |
| 3863.33     |                      | 100                 | 315               | 41.17                  | A | 47.58              | 3.22              | 33.24            | 30.04                    | 54.00         | -23.96            |                       |
| 7726.66     | 51.83                | 100                 | 315               |                        |   | 45.54              | 4.67              | 35.84            | 46.79                    | 74.00         | -27.21            |                       |
| 7726.66     |                      | 100                 | 315               | 40.23                  | A | 45.54              | 4.67              | 35.84            | 35.19                    | 54.00         | -18.81            |                       |
| 11590.00    | 56.50                | 100                 | 45                |                        |   | 45.34              | 5.93              | 38.37            | 55.46                    | 74.00         | -18.54            |                       |
| 11590.00    |                      | 100                 | 45                | 46.40                  | A | 45.34              | 5.93              | 38.37            | 45.36                    | 54.00         | -8.64             |                       |

**RADIATED EMISSIONS - Vertical Antenna Polarization**

| Freq. (MHz) | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Preamp Factor (dB) | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +/-FAIL | Channel/ Chain Tested |
|-------------|----------------------|---------------------|-------------------|------------------------|---|--------------------|-------------------|------------------|--------------------------|---------------|-------------------|-----------------------|
| 3836.66     | 53.17                | 100                 | 0                 |                        |   | 47.57              | 3.23              | 33.14            | 41.97                    | 74.00         | -32.03            | <b>Ch. 151</b>        |
| 3836.66     |                      | 100                 | 0                 | 41.44                  | A | 47.57              | 3.23              | 33.14            | 30.24                    | 54.00         | -23.76            |                       |
| 7673.33     | 56.33                | 100                 | 0                 |                        |   | 45.57              | 4.66              | 35.77            | 51.19                    | 74.00         | -22.81            |                       |
| 7673.33     |                      | 100                 | 0                 | 51.94                  | A | 45.57              | 4.66              | 35.77            | 46.80                    | 54.00         | -7.20             |                       |
| 11510.00    | 52.67                | 100                 | 0                 |                        |   | 45.32              | 5.91              | 38.31            | 51.57                    | 74.00         | -22.43            |                       |
| 11510.00    |                      | 100                 | 0                 | 42.42                  | A | 45.32              | 5.91              | 38.31            | 41.32                    | 54.00         | -12.68            |                       |
| 3863.33     | 53.00                | 100                 | 0                 |                        |   | 47.58              | 3.22              | 33.18            | 41.82                    | 74.00         | -32.18            | <b>Ch.159</b>         |
| 3863.33     |                      | 100                 | 0                 | 41.69                  | A | 47.58              | 3.22              | 33.18            | 30.51                    | 54.00         | -23.49            |                       |
| 7726.66     | 55.50                | 100                 | 0                 |                        |   | 45.54              | 4.67              | 35.79            | 50.42                    | 74.00         | -23.58            |                       |
| 7726.66     |                      | 100                 | 0                 | 49.17                  | A | 45.54              | 4.67              | 35.79            | 44.09                    | 54.00         | -9.91             |                       |
| 11590.00    | 54.50                | 100                 | 0                 |                        |   | 45.34              | 5.93              | 38.37            | 53.46                    | 74.00         | -20.54            |                       |
| 11590.00    |                      | 100                 | 0                 | 45.84                  | A | 45.34              | 5.93              | 38.37            | 44.80                    | 54.00         | -9.20             |                       |

**PEAK TRANSMIT POWER**

|                       |                                                                                    |                        |              |
|-----------------------|------------------------------------------------------------------------------------|------------------------|--------------|
| <b>CLIENT:</b>        | Intel Corporation                                                                  | <b>DATE:</b>           | 06/22/09     |
| <b>EUT:</b>           | Intel® Centrino® Ultimate-N 6300                                                   | <b>PROJECT NUMBER:</b> | INTEL-090526 |
| <b>MODEL NUMBER:</b>  | 633ANHMW                                                                           | <b>TEST ENGINEER:</b>  | JC           |
| <b>SERIAL NUMBER:</b> | 0015005A17C0                                                                       | <b>SITE #:</b>         | 2            |
| <b>CONFIGURATION:</b> | Tested installed in an extender board connected to the host laptop's mini PCI slot | <b>TEMPERATURE:</b>    | 26 deg. C    |
|                       |                                                                                    | <b>HUMIDITY:</b>       | 39% RH       |
|                       |                                                                                    | <b>TIME:</b>           | 1:00 PM      |

|                     |                                                                                                                                                                                            |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description:</b> | The maximum peak output power of the intentional radiator shall not exceed 1 watt.                                                                                                         |
| <b>Results:</b>     | Passed (See Data Sheet)                                                                                                                                                                    |
| <b>Note:</b>        | Conducted Emissions Measurements were performed on the EUT with power supply set at the following voltage and frequency. <ul style="list-style-type: none"><li>• 120VAC / 60 Hz.</li></ul> |

| Peak Transmit Power Limits |                  |
|----------------------------|------------------|
| Frequency (MHz)            | Output Power (W) |
| 5745-5825                  | 1                |
| 2412-2462                  | 1                |



# Peak Transmit Power (Continued)

| Mode    | Channel | Frequency (MHz) | Chain | Data Rate (Mbps) | Average Power (dBm) | Average Power (mW) | Peak Power (dBm) | Peak Power (mW) |
|---------|---------|-----------------|-------|------------------|---------------------|--------------------|------------------|-----------------|
| 802.11a | 149     | 5745            | A     | 6                | 16.61               | 45.85              | 25.08            | 322.38          |
| 802.11a | 157     | 5785            | A     | 6                | 16.64               | 46.17              | 25.02            | 317.95          |
| 802.11a | 165     | 5825            | A     | 6                | 16.36               | 43.29              | 24.80            | 302.25          |
| 802.11a | 149     | 5745            | B     | 6                | 16.49               | 44.60              | 22.08            | 161.57          |
| 802.11a | 157     | 5785            | B     | 6                | 16.56               | 45.33              | 22.00            | 158.62          |
| 802.11a | 165     | 5825            | B     | 6                | 16.62               | 45.96              | 22.14            | 163.82          |
| 802.11a | 149     | 5745            | C     | 6                | 16.49               | 44.60              | 22.58            | 181.29          |
| 802.11a | 157     | 5785            | C     | 6                | 16.40               | 43.69              | 22.25            | 168.02          |
| 802.11a | 165     | 5825            | C     | 6                | 16.61               | 45.85              | 22.09            | 161.94          |
|         |         |                 |       |                  |                     |                    |                  |                 |
| 802.11b | 1       | 2412            | A     | 1                | 16.54               | 45.08              | 18.98            | 79.07           |
| 802.11b | 6       | 2437            | A     | 1                | 16.47               | 44.36              | 18.81            | 76.03           |
| 802.11b | 11      | 2462            | A     | 1                | 16.38               | 43.45              | 19.01            | 79.62           |
| 802.11b | 1       | 2412            | B     | 1                | 16.59               | 45.60              | 19.22            | 83.56           |
| 802.11b | 6       | 2437            | B     | 1                | 16.46               | 44.26              | 19.16            | 82.41           |
| 802.11b | 11      | 2462            | B     | 1                | 16.43               | 43.95              | 19.10            | 81.28           |
| 802.11b | 1       | 2412            | C     | 1                | 16.58               | 45.50              | 19.08            | 80.91           |
| 802.11b | 6       | 2437            | C     | 1                | 16.48               | 44.46              | 18.91            | 77.80           |
| 802.11b | 11      | 2462            | C     | 1                | 16.45               | 44.16              | 18.94            | 78.34           |
|         |         |                 |       |                  |                     |                    |                  |                 |
| 802.11g | 1       | 2412            | A     | 6                | 15.46               | 35.19              | 23.36            | 216.95          |
| 802.11g | 6       | 2437            | A     | 6                | 16.47               | 44.40              | 23.76            | 237.88          |
| 802.11g | 11      | 2462            | A     | 6                | 14.48               | 28.08              | 22.54            | 179.62          |
| 802.11g | 1       | 2412            | B     | 6                | 14.57               | 28.67              | 22.83            | 192.03          |
| 802.11g | 6       | 2437            | B     | 6                | 16.43               | 43.99              | 24.35            | 272.50          |
| 802.11g | 11      | 2462            | B     | 6                | 14.61               | 28.93              | 23.09            | 203.88          |
| 802.11g | 1       | 2412            | C     | 6                | 15.35               | 34.31              | 22.28            | 169.19          |
| 802.11g | 6       | 2437            | C     | 6                | 16.47               | 44.40              | 23.83            | 241.75          |
| 802.11g | 11      | 2462            | C     | 6                | 14.43               | 27.76              | 22.69            | 185.94          |
|         |         |                 |       |                  |                     |                    |                  |                 |
| 802.11n | 1       | 2412            | A     | HT0              | 14.51               | 28.27              | 21.93            | 156.09          |
| 802.11n | 6       | 2437            | A     | HT0              | 16.50               | 44.71              | 23.89            | 245.11          |
| 802.11n | 11      | 2462            | A     | HT0              | 14.45               | 27.88              | 22.07            | 161.20          |
| 802.11n | 1       | 2412            | B     | HT0              | 14.47               | 28.01              | 22.31            | 170.36          |
| 802.11n | 6       | 2437            | B     | HT0              | 16.47               | 44.40              | 24.25            | 266.30          |
| 802.11n | 11      | 2462            | B     | HT0              | 14.41               | 27.63              | 22.73            | 187.66          |
| 802.11n | 1       | 2412            | C     | HT0              | 15.50               | 35.51              | 22.42            | 174.73          |
| 802.11n | 6       | 2437            | C     | HT0              | 16.33               | 42.99              | 23.78            | 238.98          |
| 802.11n | 11      | 2462            | C     | HT0              | 15.46               | 35.19              | 22.69            | 185.94          |



# Peak Transmit Power (Continued)

| Mode            | Channel | Frequency (MHz) | Chain | Data Rate (Mbps) | Average Power (dBm) | Average Power (mW) | Peak Power (dBm) | Peak Power (mW) |
|-----------------|---------|-----------------|-------|------------------|---------------------|--------------------|------------------|-----------------|
| 802.11n (40MHz) | 3(F)    | 2422            | A     | HT0              | 11.98               | 15.79              | 20.17            | 104.08          |
| 802.11n (40MHz) | 4(F)    | 2427            | A     | HT0              | 13.65               | 23.19              | 21.22            | 132.55          |
| 802.11n (40MHz) | 6(F)    | 2437            | A     | HT0              | 16.40               | 43.69              | 23.28            | 212.99          |
| 802.11n (40MHz) | 8(F)    | 2447            | A     | HT0              | 13.44               | 22.10              | 21.02            | 126.58          |
| 802.11n (40MHz) | 9(F)    | 2452            | A     | HT0              | 12.06               | 16.08              | 20.23            | 105.53          |
| 802.11n (40MHz) | 3(F)    | 2422            | B     | HT0              | 12.04               | 16.01              | 20.52            | 112.81          |
| 802.11n (40MHz) | 4(F)    | 2427            | B     | HT0              | 13.51               | 22.46              | 21.33            | 135.95          |
| 802.11n (40MHz) | 6(F)    | 2437            | B     | HT0              | 16.33               | 42.99              | 24.02            | 252.56          |
| 802.11n (40MHz) | 8(F)    | 2447            | B     | HT0              | 13.46               | 22.20              | 21.17            | 131.03          |
| 802.11n (40MHz) | 9(F)    | 2452            | B     | HT0              | 12.19               | 16.57              | 20.82            | 120.88          |
| 802.11n (40MHz) | 3(F)    | 2422            | C     | HT0              | 11.99               | 15.83              | 20.37            | 108.98          |
| 802.11n (40MHz) | 4(F)    | 2427            | C     | HT0              | 13.33               | 21.55              | 21.13            | 129.83          |
| 802.11n (40MHz) | 6(F)    | 2437            | C     | HT0              | 16.40               | 43.69              | 23.60            | 229.28          |
| 802.11n (40MHz) | 8(F)    | 2447            | C     | HT0              | 13.67               | 23.30              | 21.60            | 144.67          |
| 802.11n (40MHz) | 9(F)    | 2452            | C     | HT0              | 12.09               | 16.19              | 20.60            | 114.91          |
|                 |         |                 |       |                  |                     |                    |                  |                 |
| 802.11n         | 149     | 5745            | A     | HT0              | 16.47               | 44.40              | 24.87            | 307.16          |
| 802.11n         | 157     | 5785            | A     | HT0              | 16.63               | 46.06              | 24.80            | 302.25          |
| 802.11n         | 165     | 5825            | A     | HT0              | 16.58               | 45.54              | 24.85            | 305.75          |
| 802.11n         | 149     | 5745            | B     | HT0              | 16.59               | 45.64              | 22.07            | 161.20          |
| 802.11n         | 157     | 5785            | B     | HT0              | 16.44               | 44.09              | 21.95            | 156.81          |
| 802.11n         | 165     | 5825            | B     | HT0              | 16.56               | 45.33              | 22.01            | 158.99          |
| 802.11n         | 149     | 5745            | C     | HT0              | 16.58               | 45.54              | 22.48            | 177.16          |
| 802.11n         | 157     | 5785            | C     | HT0              | 16.54               | 45.12              | 22.20            | 166.10          |
| 802.11n         | 165     | 5825            | C     | HT0              | 16.51               | 44.81              | 21.97            | 157.53          |
|                 |         |                 |       |                  |                     |                    |                  |                 |
| 802.11n (40MHz) | 151(F)  | 5755            | A     | HT0              | 16.48               | 44.44              | 25.30            | 338.67          |
| 802.11n (40MHz) | 159(F)  | 5795            | A     | HT0              | 16.62               | 45.90              | 25.16            | 327.92          |
| 802.11n (40MHz) | 151(F)  | 5755            | B     | HT0              | 16.47               | 44.34              | 22.35            | 171.70          |
| 802.11n (40MHz) | 159(F)  | 5795            | B     | HT0              | 16.51               | 44.75              | 22.40            | 173.69          |
| 802.11n (40MHz) | 151(F)  | 5755            | C     | HT0              | 16.50               | 44.65              | 22.61            | 182.29          |
| 802.11n (40MHz) | 159(F)  | 5795            | C     | HT0              | 16.64               | 46.11              | 22.48            | 176.92          |



## Peak Transmit Power (Continued)

**Triple Chain ABC Aggregate Power**

| Mode            | Channel | Frequency (MHz) | Chain | Data Rate (Mbps) | Avg. Output Power (dBm) | Avg. Output Power (mW) | Peak Output Power (dBm) | Peak Output Power (mW) |
|-----------------|---------|-----------------|-------|------------------|-------------------------|------------------------|-------------------------|------------------------|
| 802.11n (20MHz) | 1       | 2412            | ABC   | HT16             | 16.49                   | <b>44.58</b>           | 26.36                   | <b>432.06</b>          |
| 802.11n (20MHz) | 6       | 2437            | ABC   | HT16             | 16.58                   | <b>45.47</b>           | 26.36                   | <b>432.78</b>          |
| 802.11n (20MHz) | 11      | 2462            | ABC   | HT16             | 16.45                   | <b>44.15</b>           | 26.41                   | <b>437.46</b>          |
|                 |         |                 |       |                  |                         |                        |                         |                        |
| 802.11n (40MHz) | 3(F)    | 2422            | ABC   | HT16             | 16.49                   | <b>44.60</b>           | 26.36                   | <b>432.33</b>          |
| 802.11n (40MHz) | 6(F)    | 2437            | ABC   | HT16             | 16.51                   | <b>44.75</b>           | 26.24                   | <b>420.60</b>          |
| 802.11n (40MHz) | 9(F)    | 2452            | ABC   | HT16             | 16.51                   | <b>44.73</b>           | 26.31                   | <b>427.73</b>          |
|                 |         |                 |       |                  |                         |                        |                         |                        |
| 802.11n (20MHz) | 149     | 5745            | ABC   | HT16             | 16.53                   | <b>44.94</b>           | 26.44                   | <b>440.94</b>          |
| 802.11n (20MHz) | 157     | 5785            | ABC   | HT16             | 16.34                   | <b>43.00</b>           | 26.18                   | <b>414.62</b>          |
| 802.11n (20MHz) | 165     | 5825            | ABC   | HT16             | 16.41                   | <b>43.75</b>           | 26.19                   | <b>416.14</b>          |
|                 |         |                 |       |                  |                         |                        |                         |                        |
| 802.11n (40MHz) | 151(F)  | 5755            | ABC   | HT16             | 16.49                   | <b>44.53</b>           | 26.31                   | <b>427.13</b>          |
| 802.11n (40MHz) | 159(F)  | 5795            | ABC   | HT16             | 16.47                   | <b>44.32</b>           | 26.11                   | <b>408.13</b>          |

NOTE: The output power measurement is conducted.

(F) = Fat Channel

**6dB EMISSIONS BANDWIDTH**

|                       |                                                                                    |                        |              |
|-----------------------|------------------------------------------------------------------------------------|------------------------|--------------|
| <b>CLIENT:</b>        | Intel Corporation                                                                  | <b>DATE:</b>           | 07/23/09     |
| <b>EUT:</b>           | Intel WiFi Link 6300                                                               | <b>PROJECT NUMBER:</b> | INTEL-090526 |
| <b>MODEL NUMBER:</b>  | 633ANHMW                                                                           | <b>TEST ENGINEER:</b>  | JC           |
| <b>SERIAL NUMBER:</b> | 0015005A17C0                                                                       | <b>SITE #:</b>         | 2            |
| <b>CONFIGURATION:</b> | Tested installed in an extender board connected to the host laptop's mini PCI slot | <b>TEMPERATURE:</b>    | 24 deg. C    |
|                       |                                                                                    | <b>HUMIDITY:</b>       | 39% RH       |
|                       |                                                                                    | <b>TIME:</b>           | 2:30 PM      |

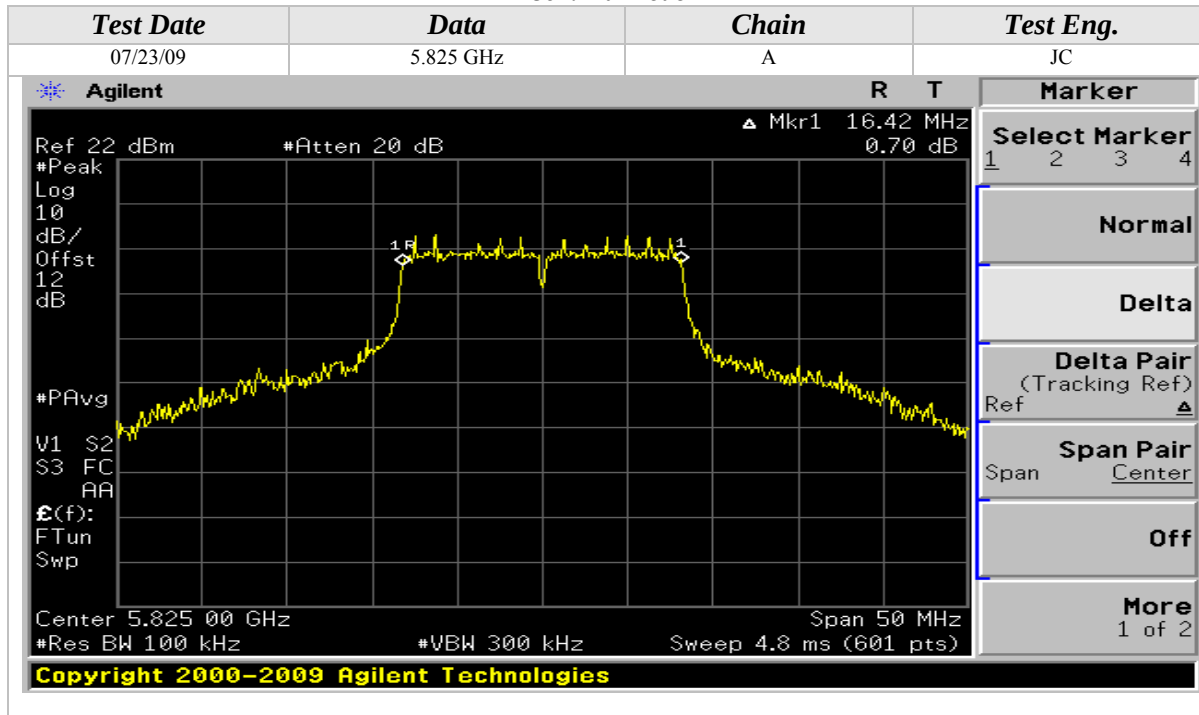
|                     |                                                                                                                                                                                            |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description:</b> | The minimum 6dB bandwidth shall be at least 500 kHz.                                                                                                                                       |
| <b>Results:</b>     | See Data Sheet                                                                                                                                                                             |
| <b>Note:</b>        | Conducted Emissions Measurements were performed on the EUT with power supply set at the following voltage and frequency. <ul style="list-style-type: none"><li>• 120VAC / 60 Hz.</li></ul> |



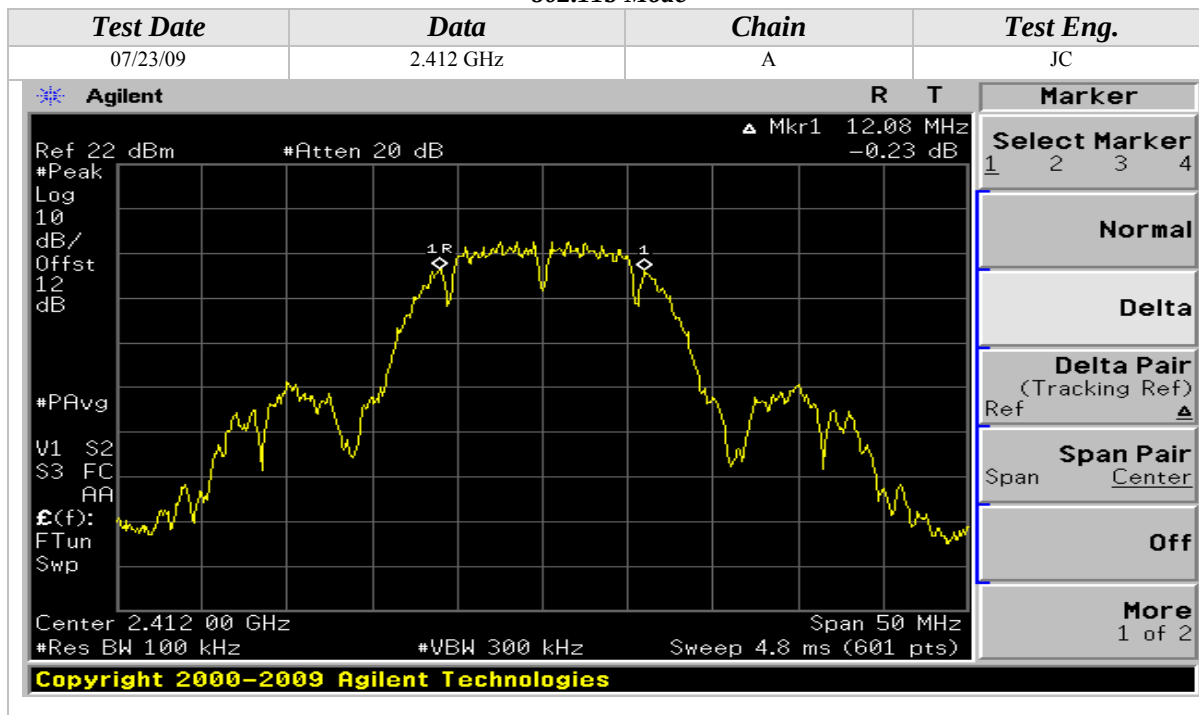


## 6dB Emissions Bandwidth (Continued)

## 802.11a Mode



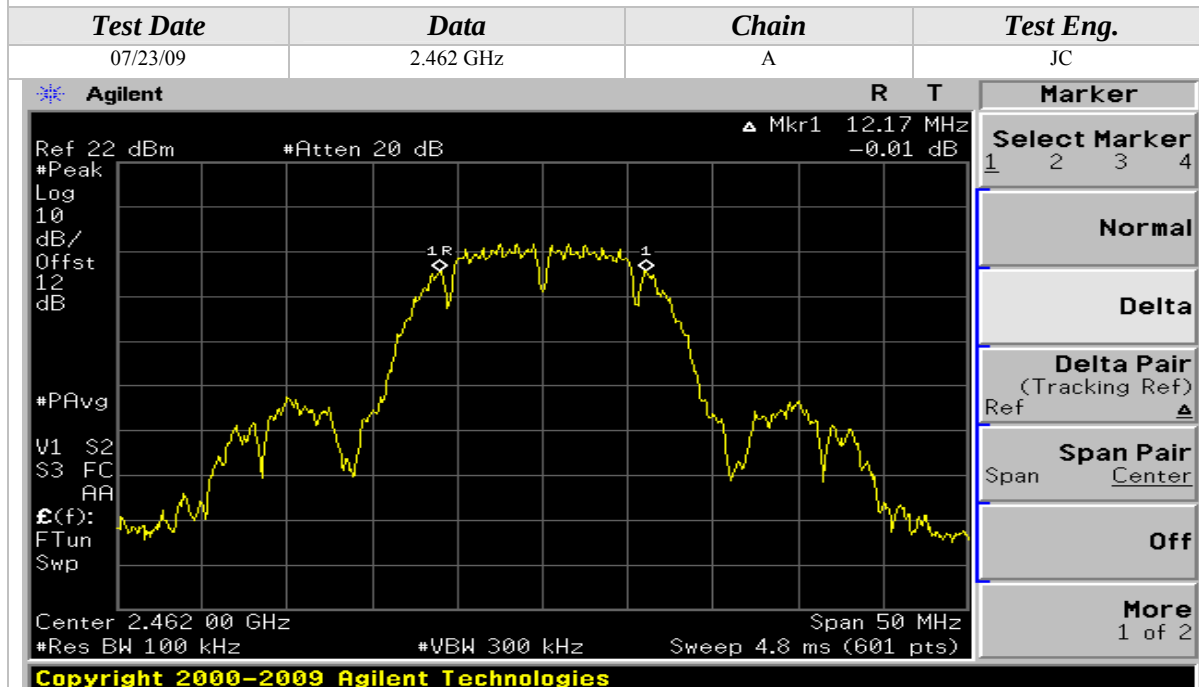
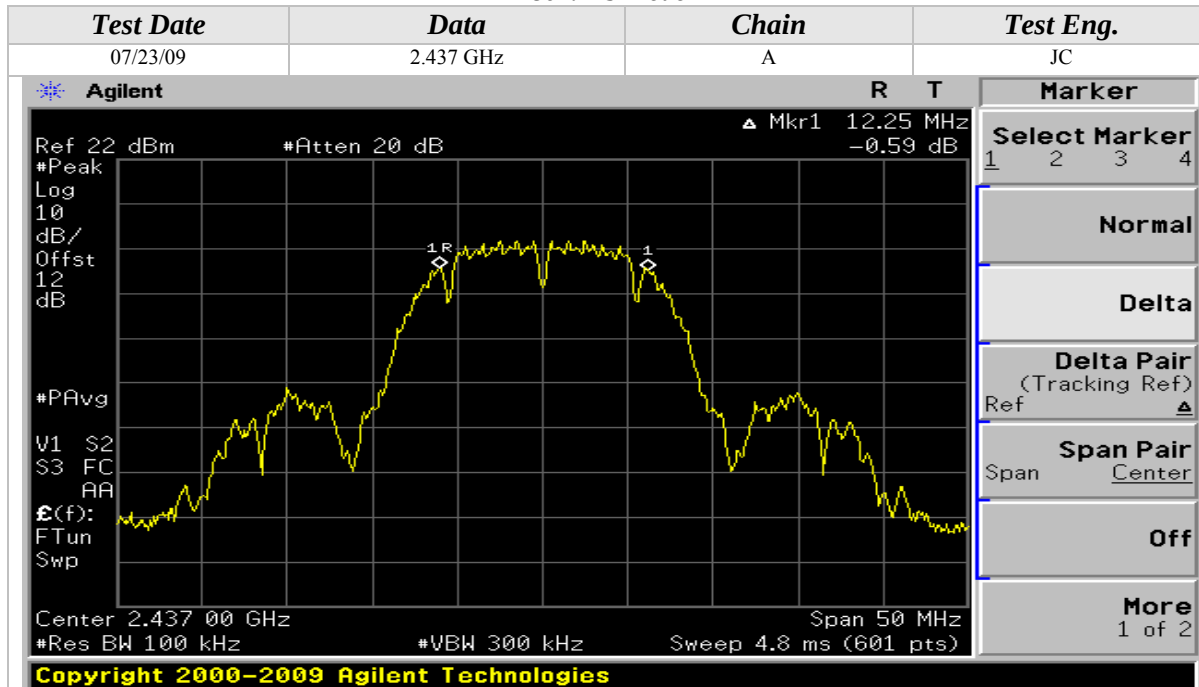
## 802.11b Mode





## 6dB Emissions Bandwidth (Continued)

## 802.11b Mode

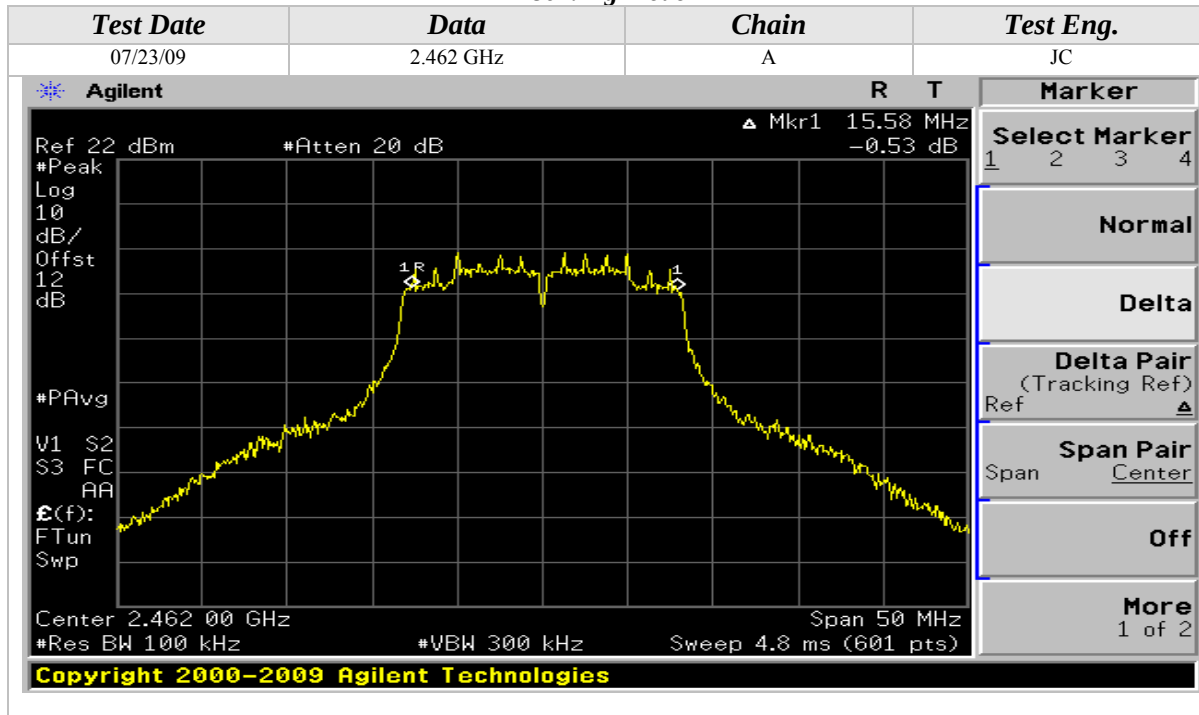




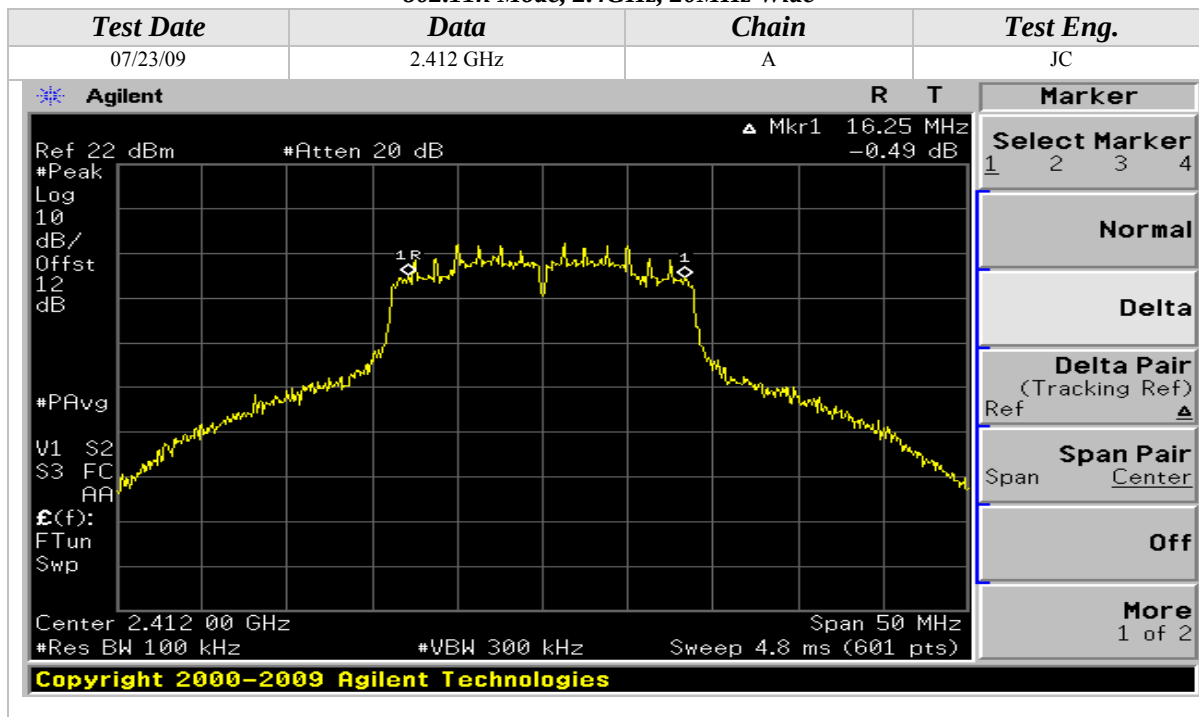


## 6dB Emissions Bandwidth (Continued)

## 802.11g Mode



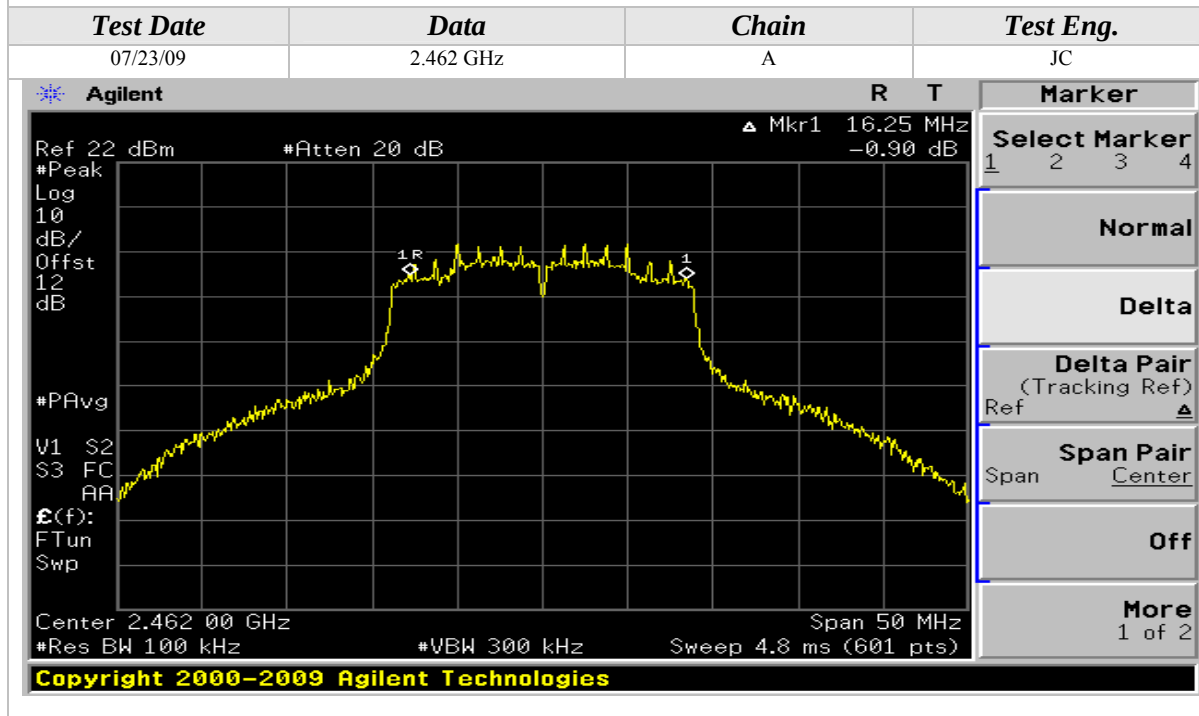
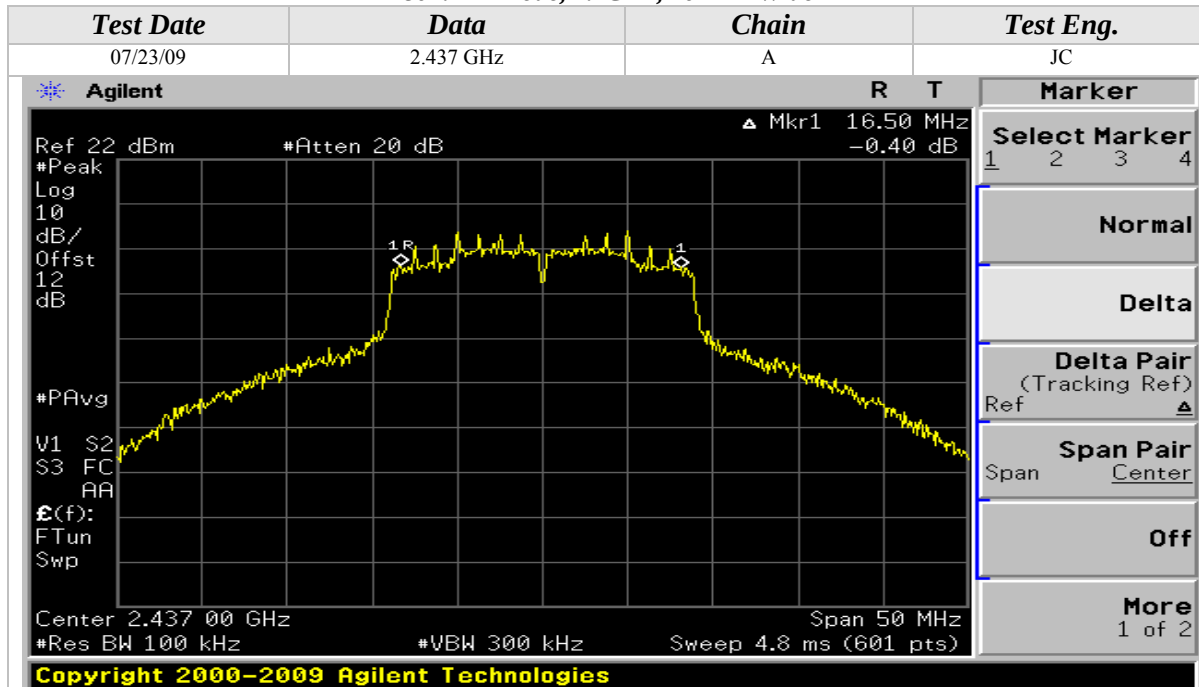
## 802.11n Mode, 2.4GHz, 20MHz Wide





## 6dB Emissions Bandwidth (Continued)

## 802.11n Mode, 2.4GHz, 20MHz Wide

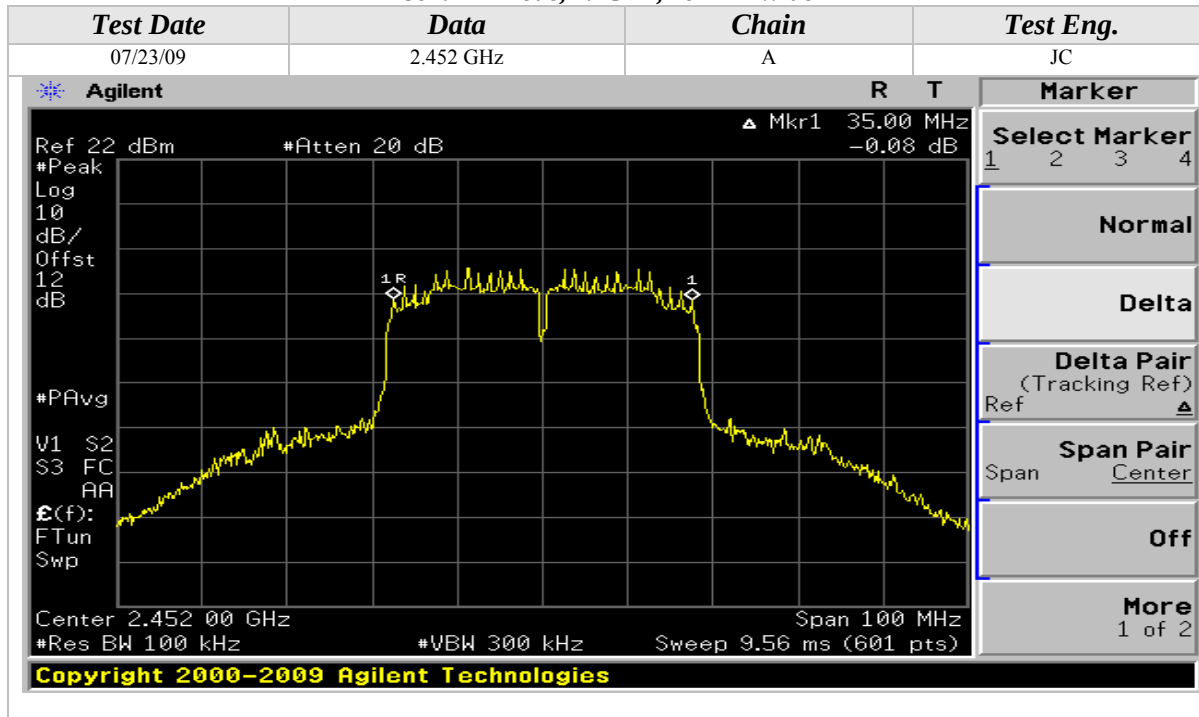




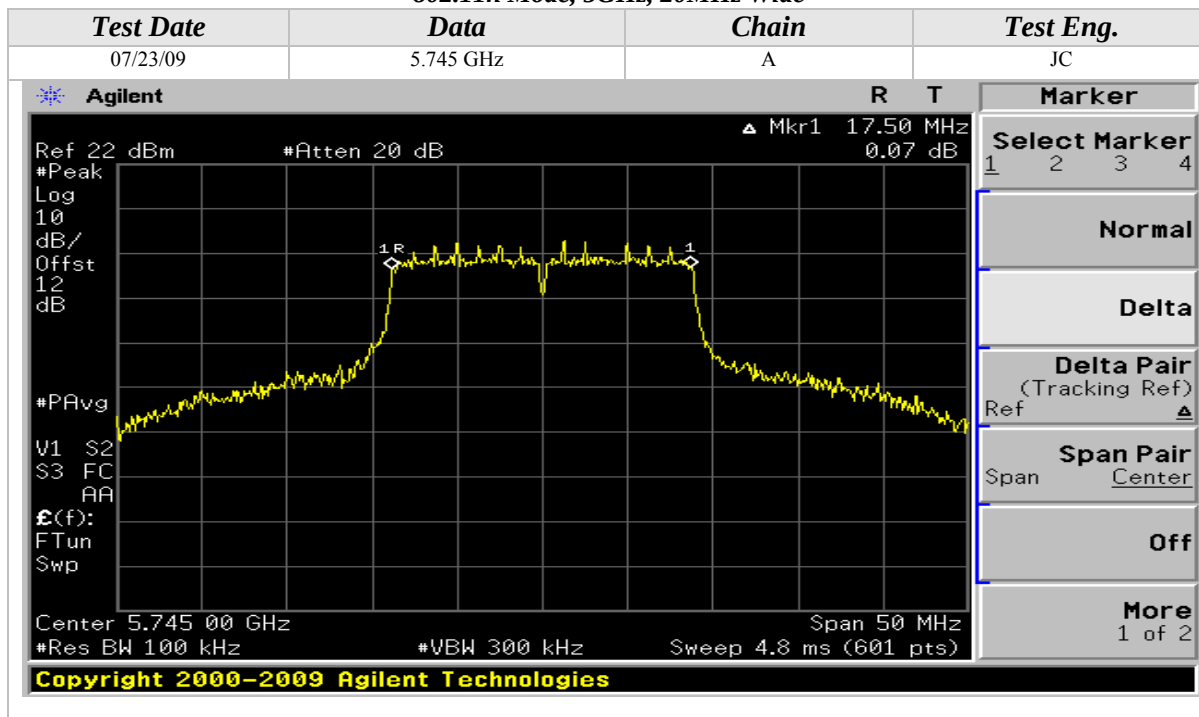


## 6dB Emissions Bandwidth (Continued)

## 802.11n Mode, 2.4GHz, 40MHz Wide



## 802.11n Mode, 5GHz, 20MHz Wide

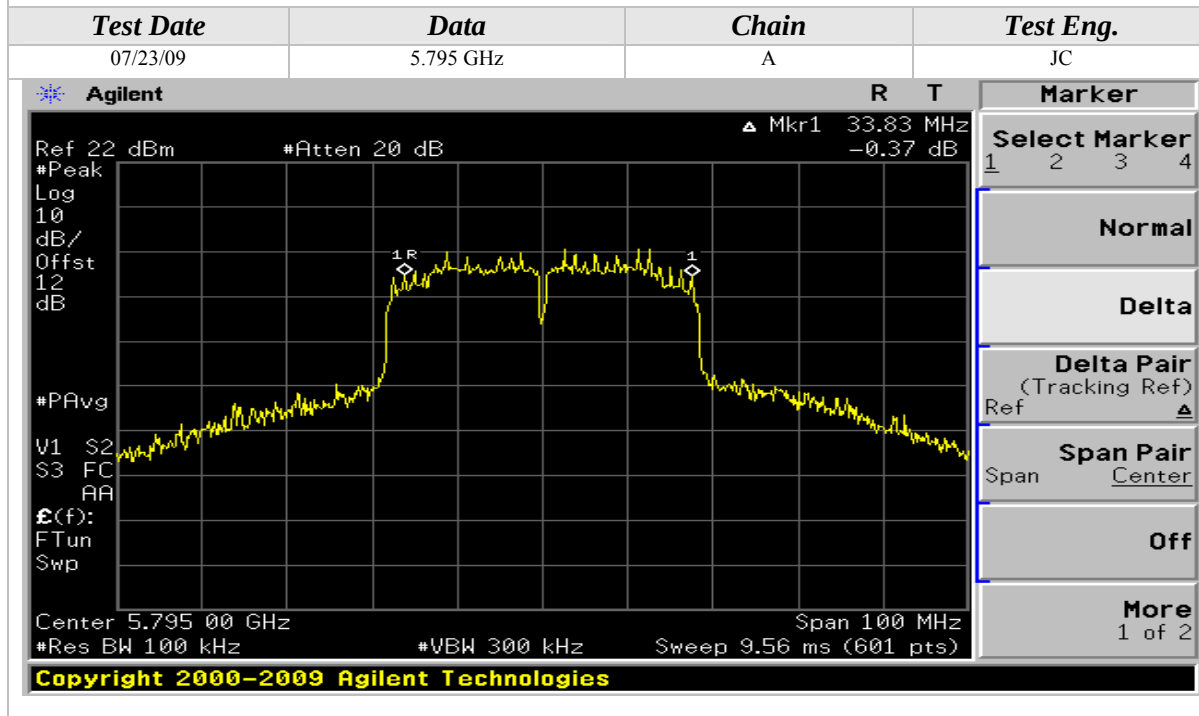
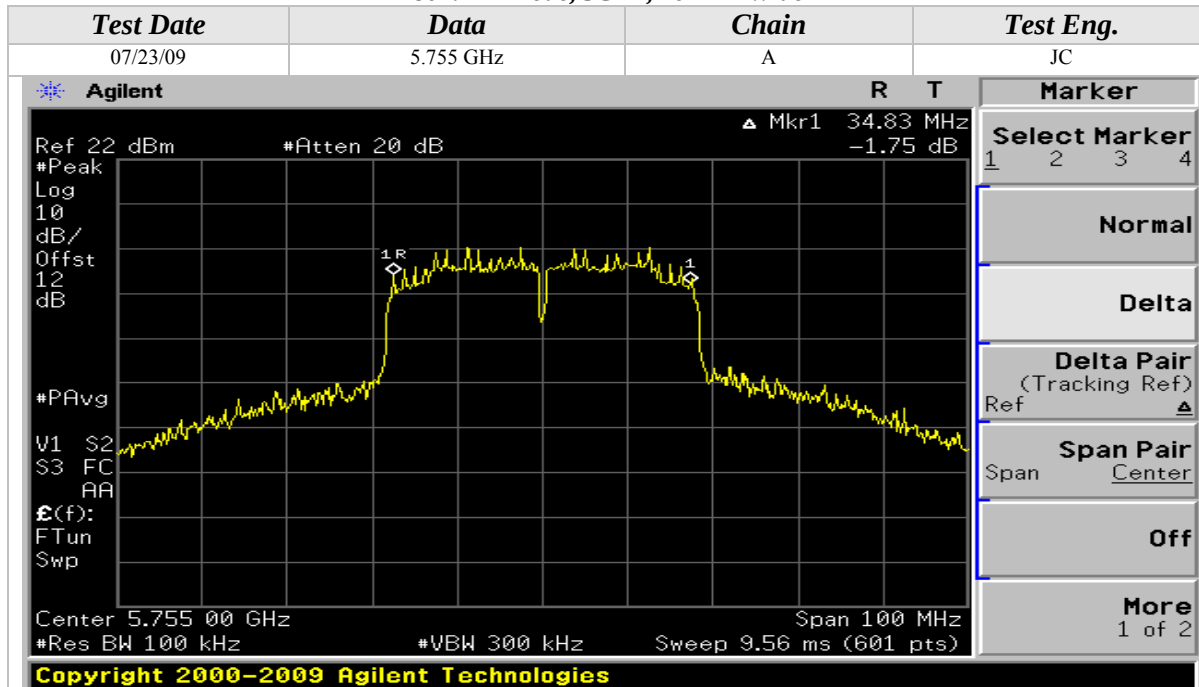






## 6dB Emissions Bandwidth (Continued)

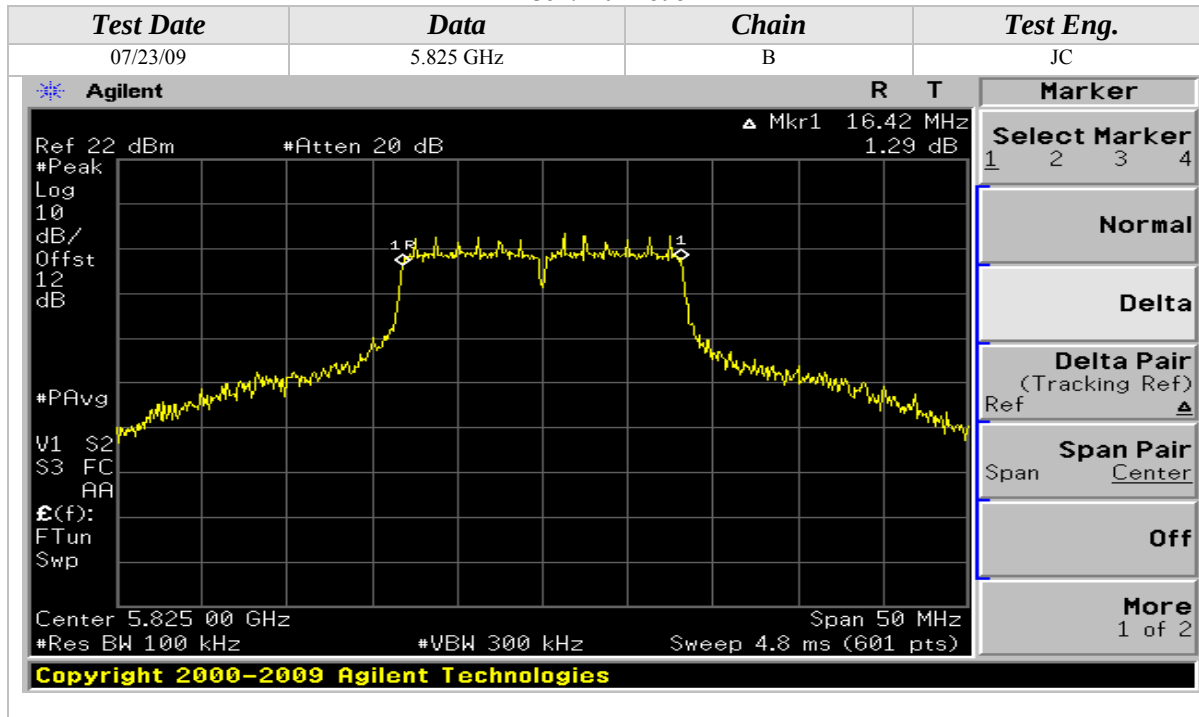
## 802.11n Mode, 5GHz, 40MHz Wide



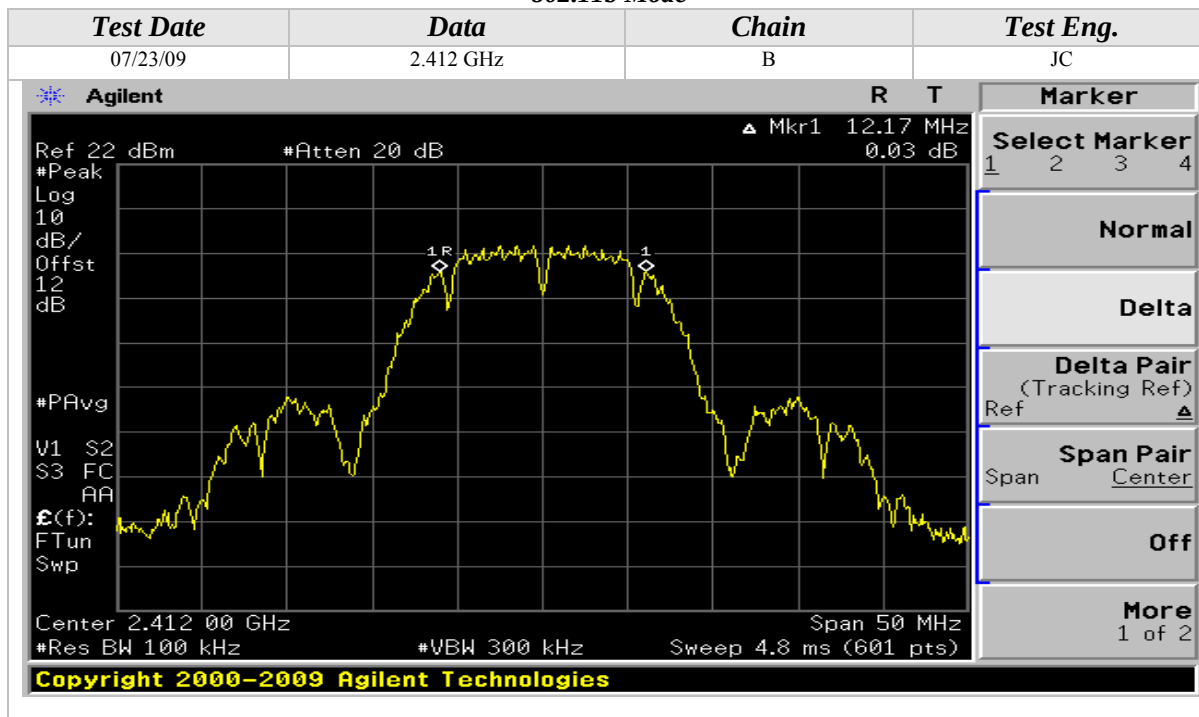


## 6dB Emissions Bandwidth (Continued)

### 802.11a Mode



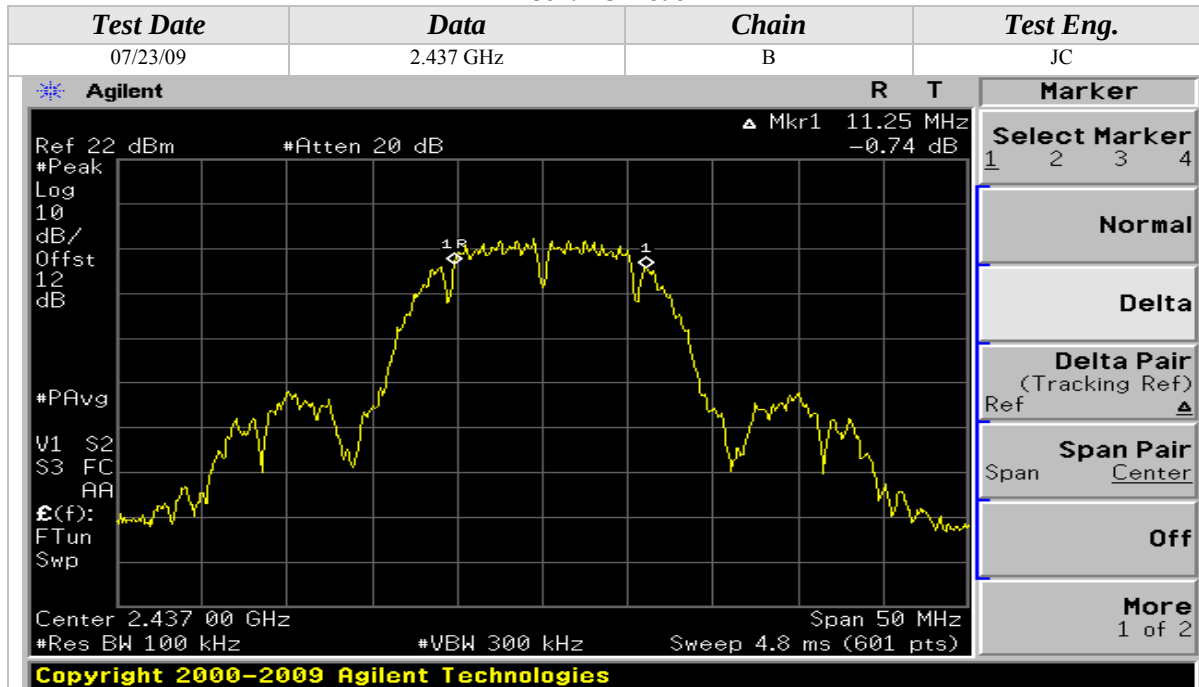
### 802.11b Mode





## 6dB Emissions Bandwidth (Continued)

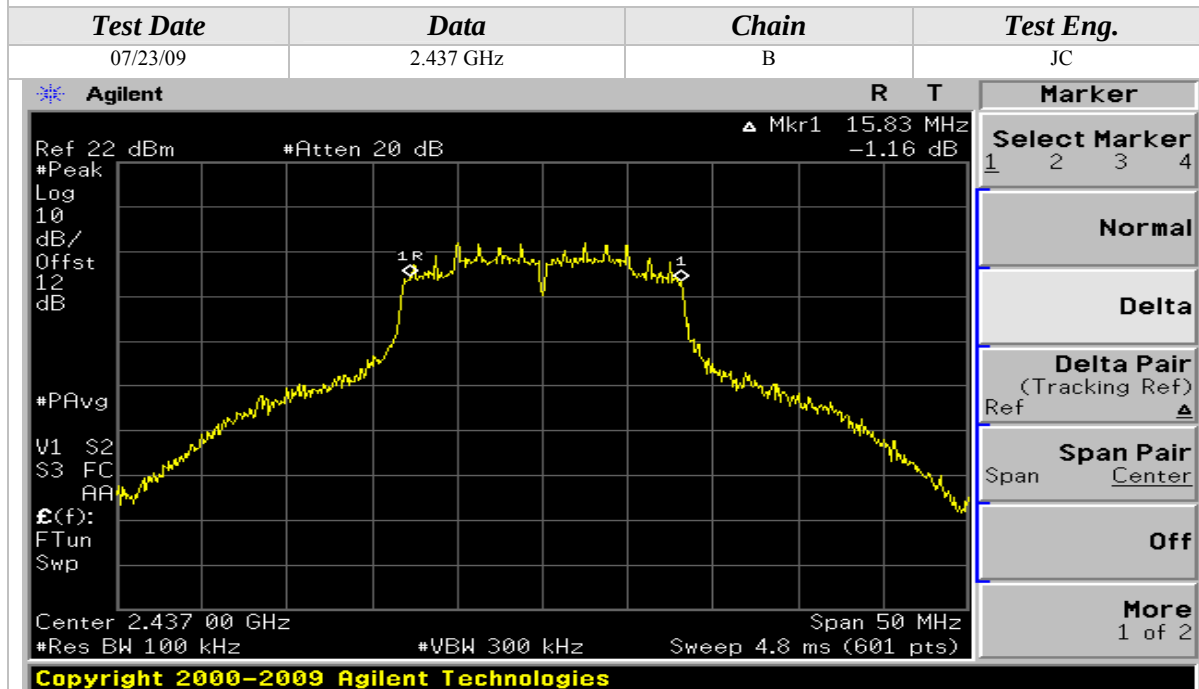
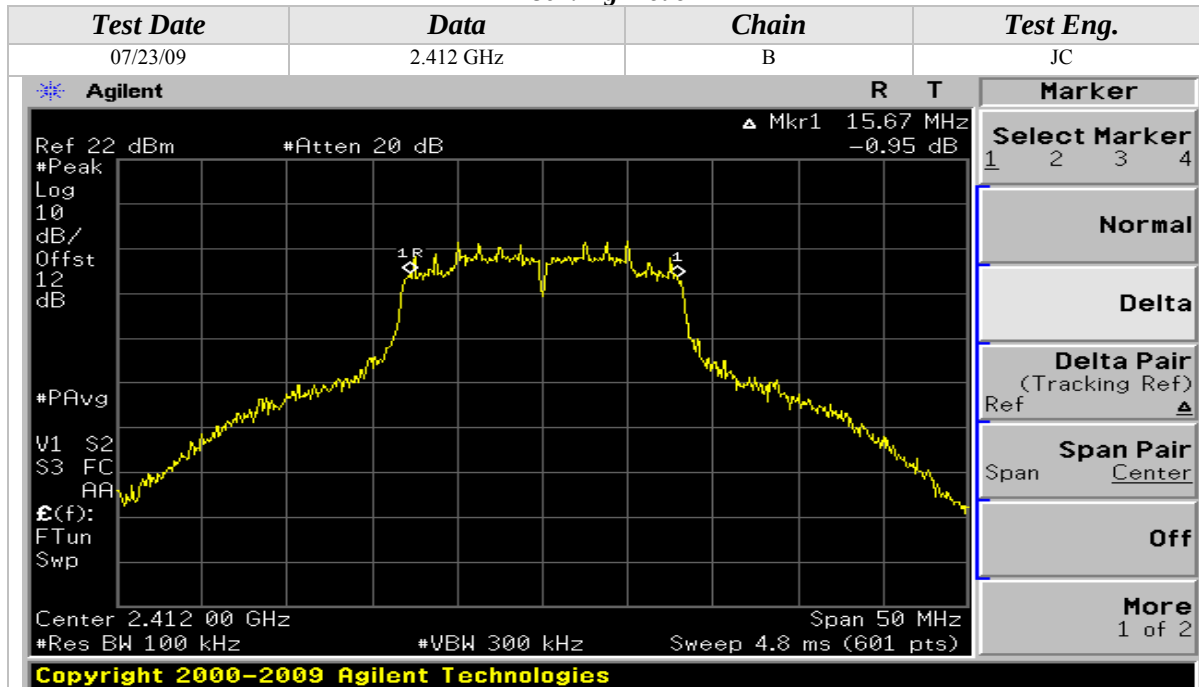
## 802.11b Mode





## 6dB Emissions Bandwidth (Continued)

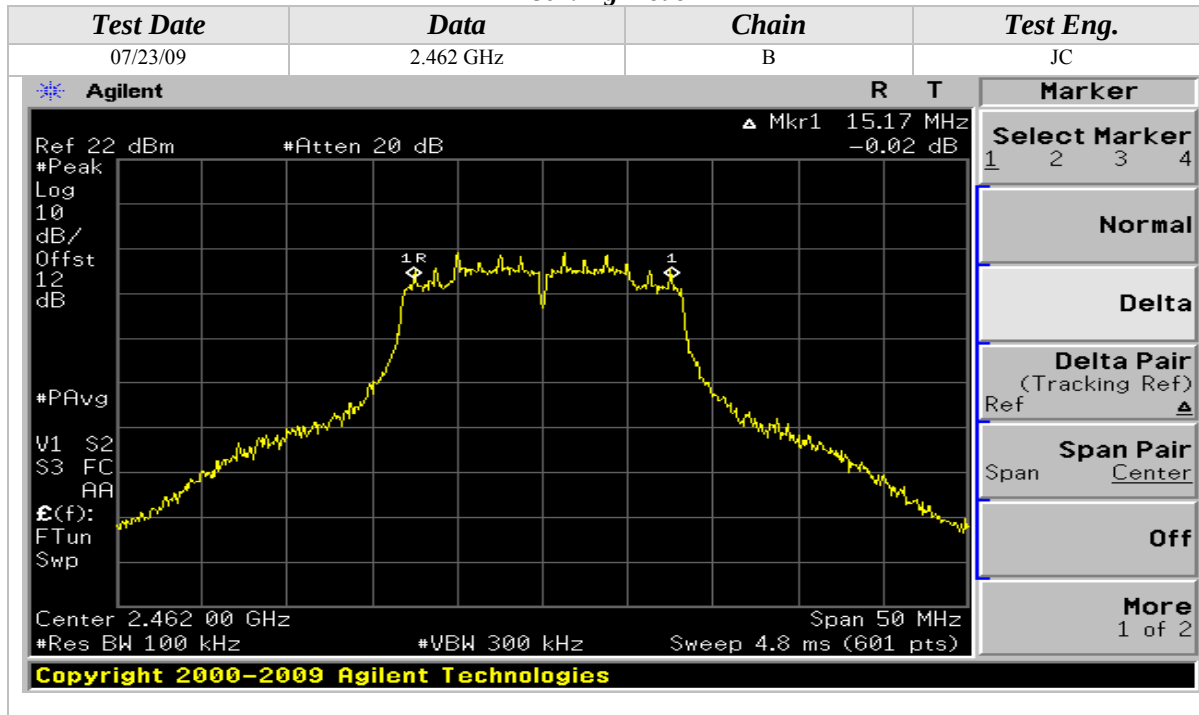
## 802.11g Mode



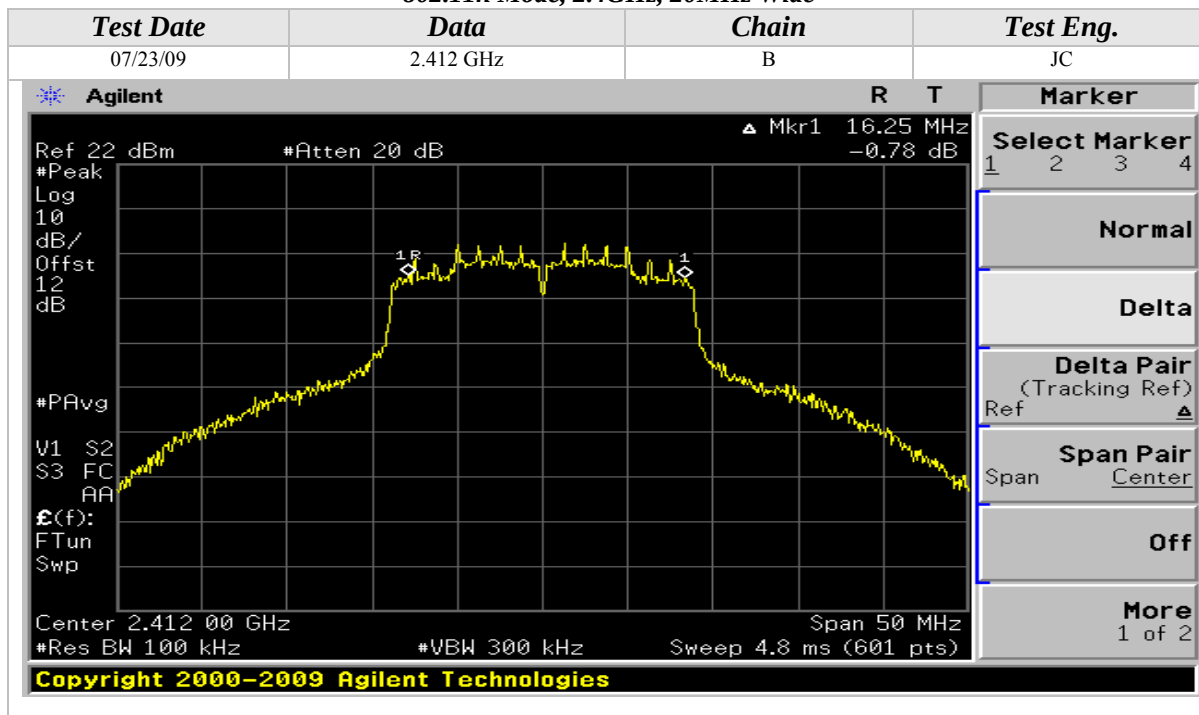


## 6dB Emissions Bandwidth (Continued)

## 802.11g Mode



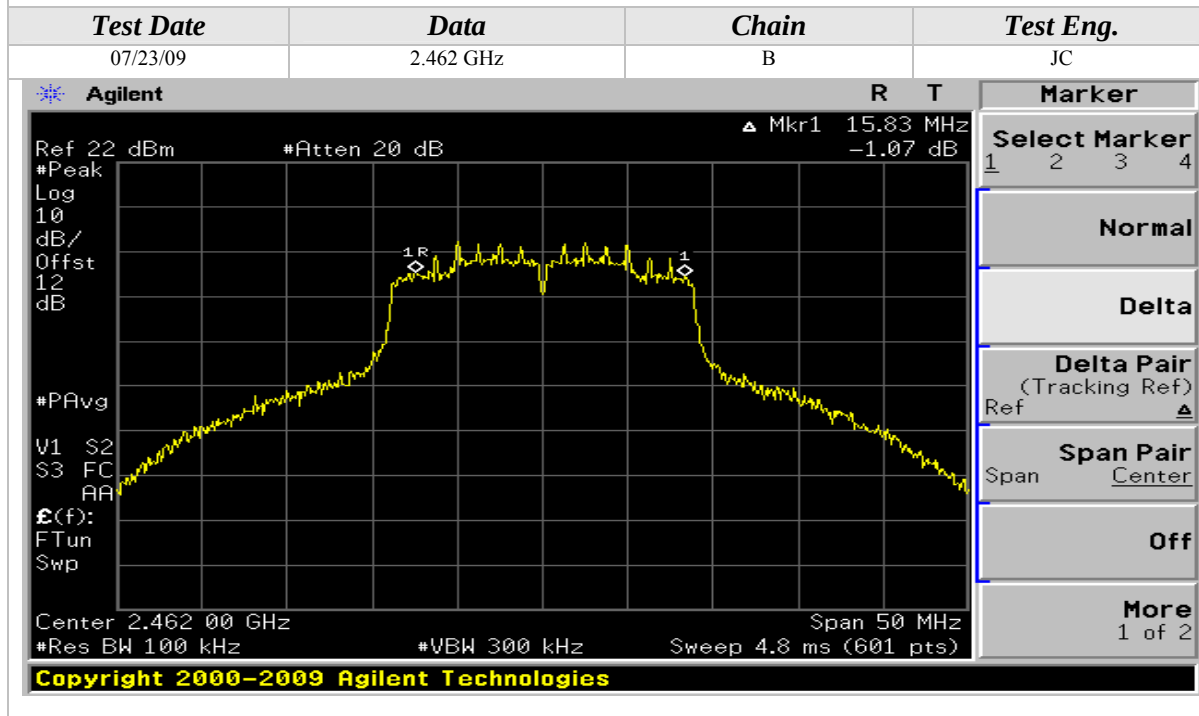
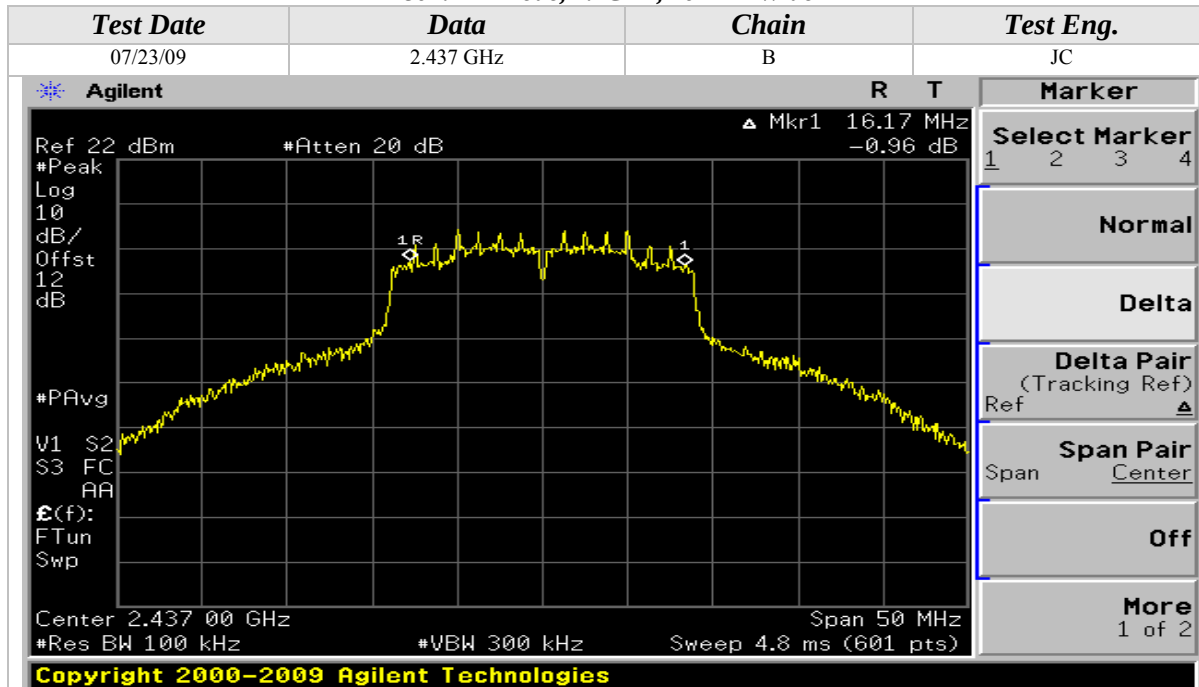
## 802.11n Mode, 2.4GHz, 20MHz Wide





## 6dB Emissions Bandwidth (Continued)

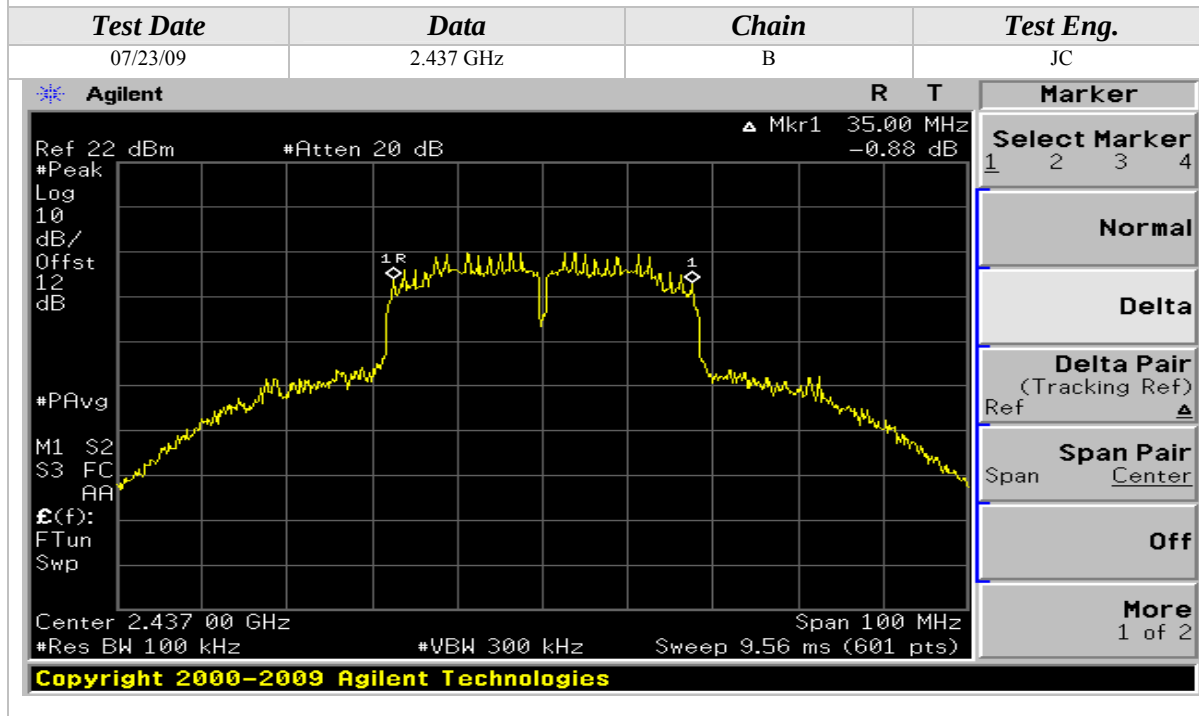
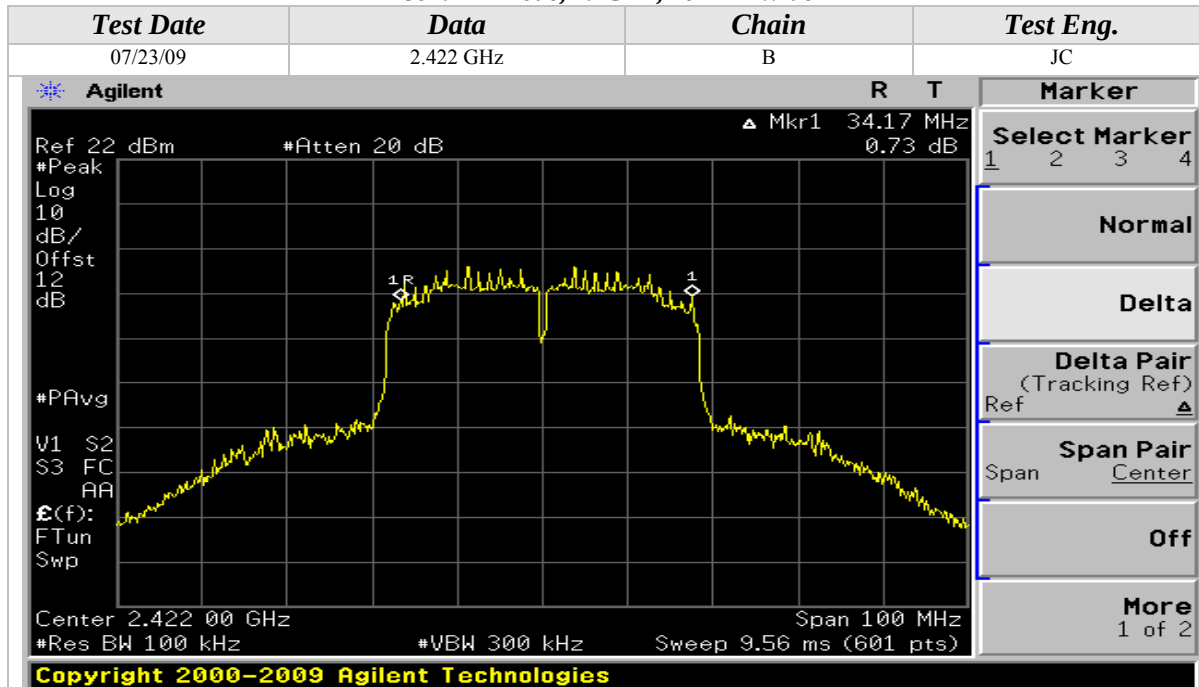
## 802.11n Mode, 2.4GHz, 20MHz Wide





## 6dB Emissions Bandwidth (Continued)

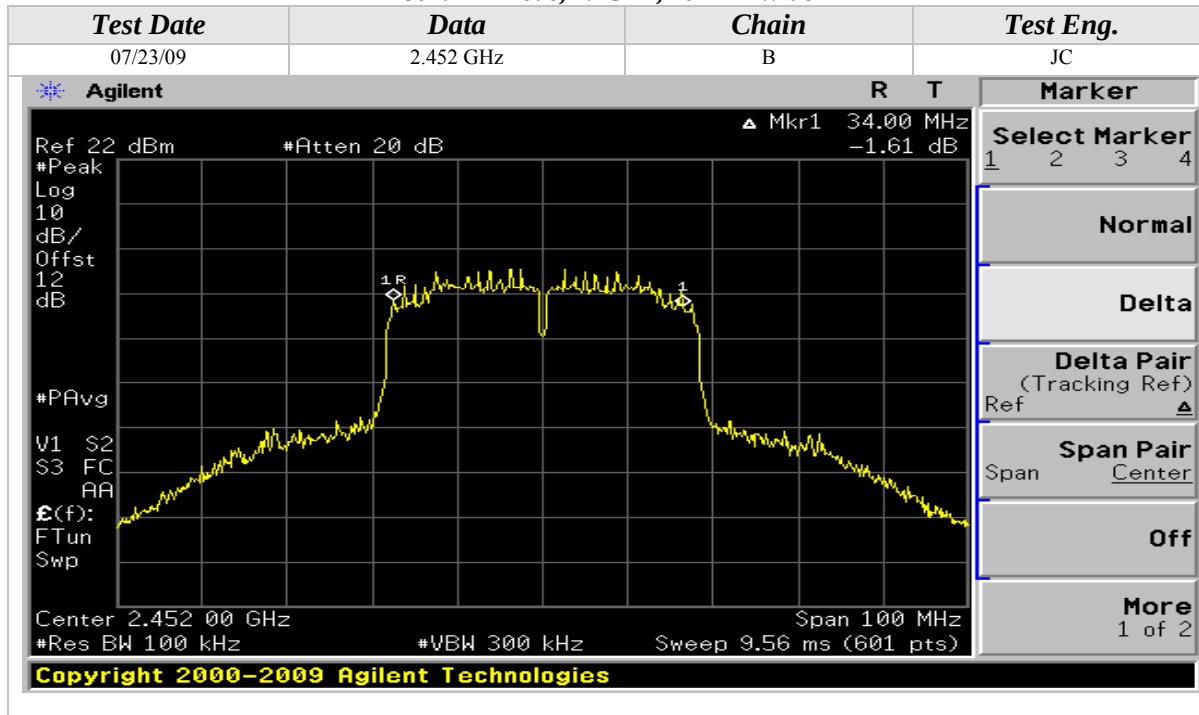
## 802.11n Mode, 2.4GHz, 40MHz Wide



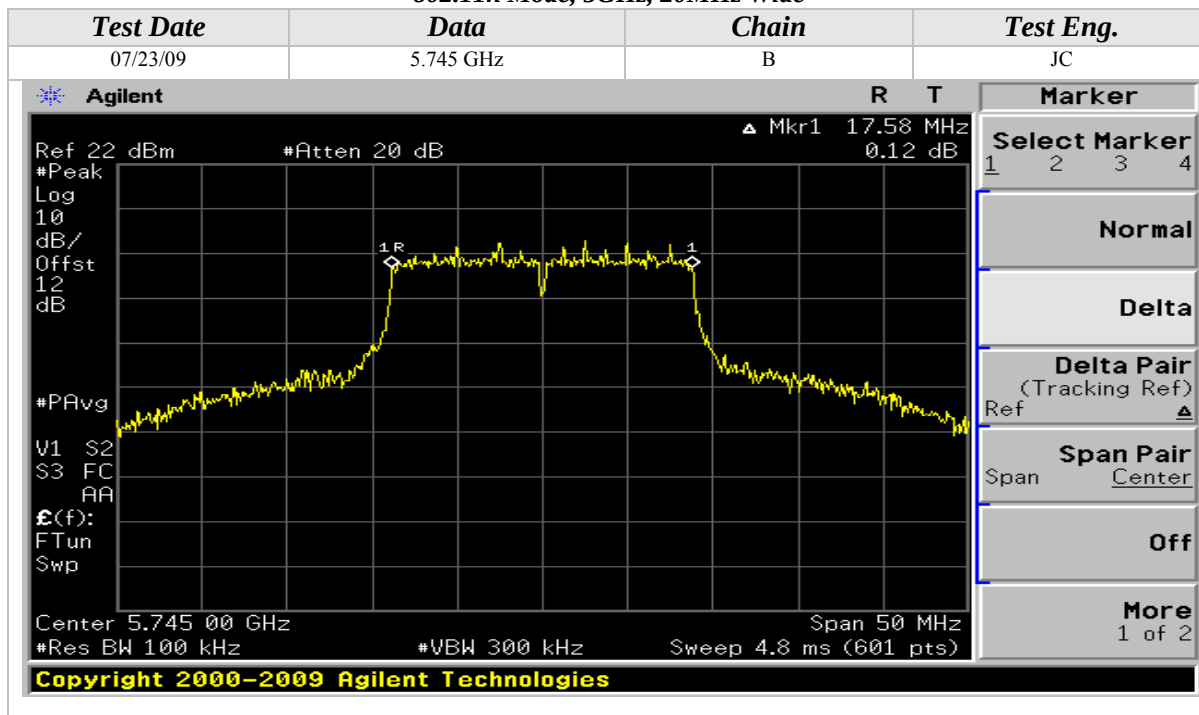


## 6dB Emissions Bandwidth (Continued)

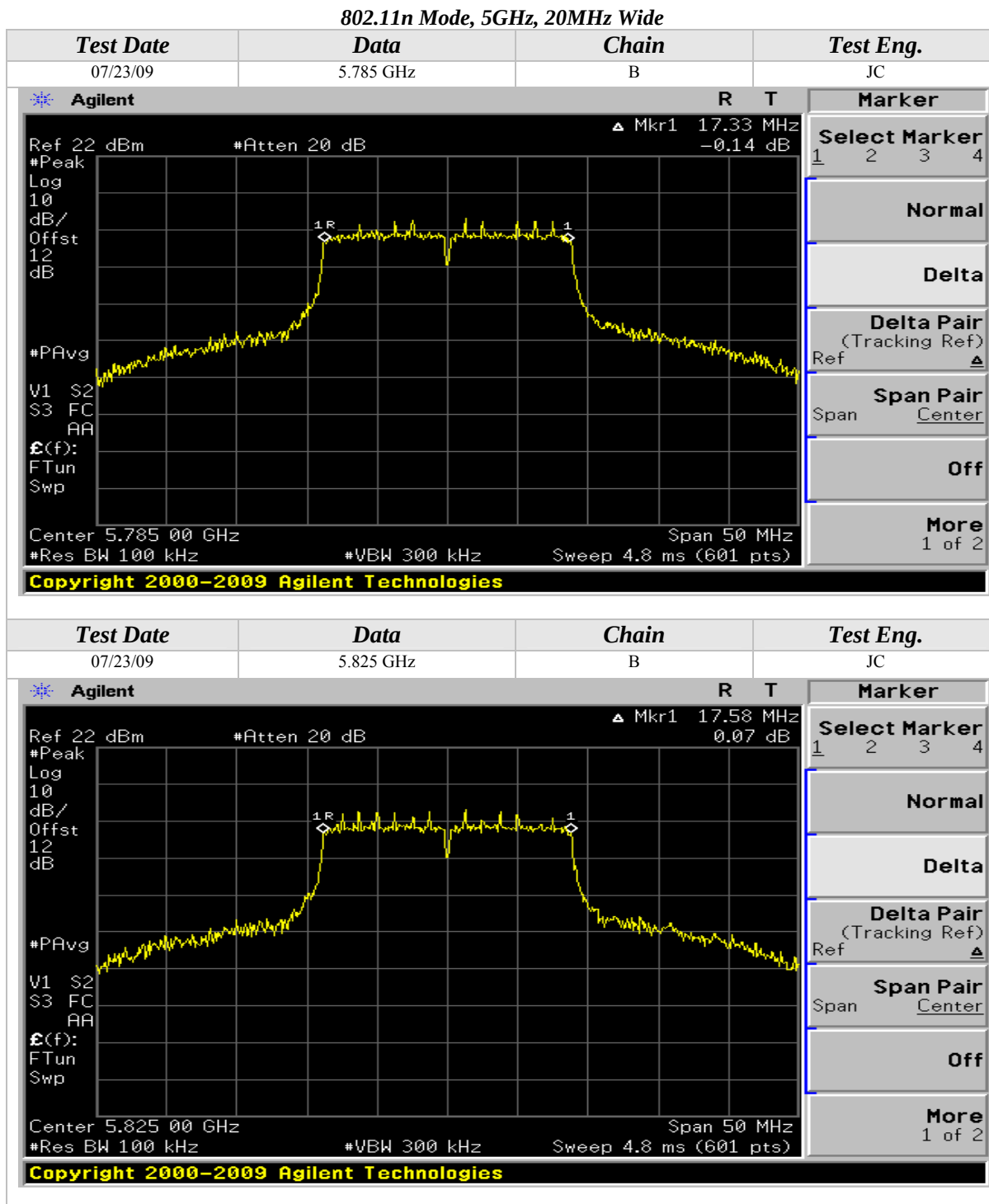
## 802.11n Mode, 2.4GHz, 40MHz Wide



## 802.11n Mode, 5GHz, 20MHz Wide



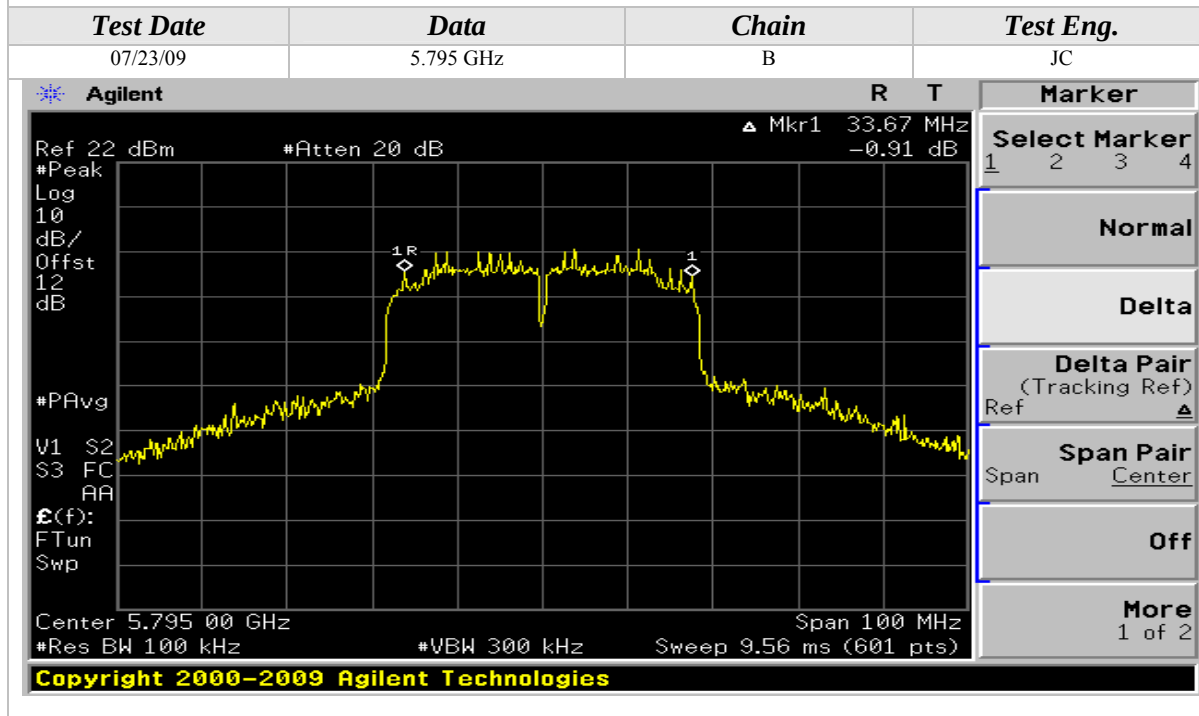
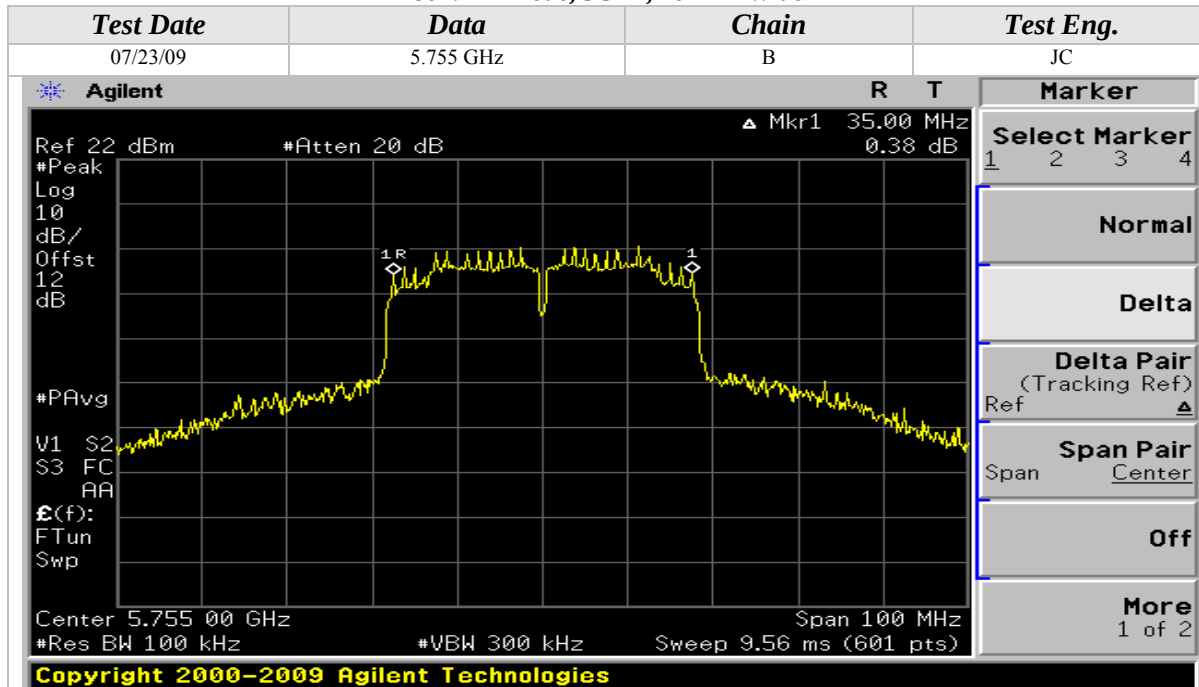
## 6dB Emissions Bandwidth (Continued)





## 6dB Emissions Bandwidth (Continued)

## 802.11n Mode, 5GHz, 40MHz Wide

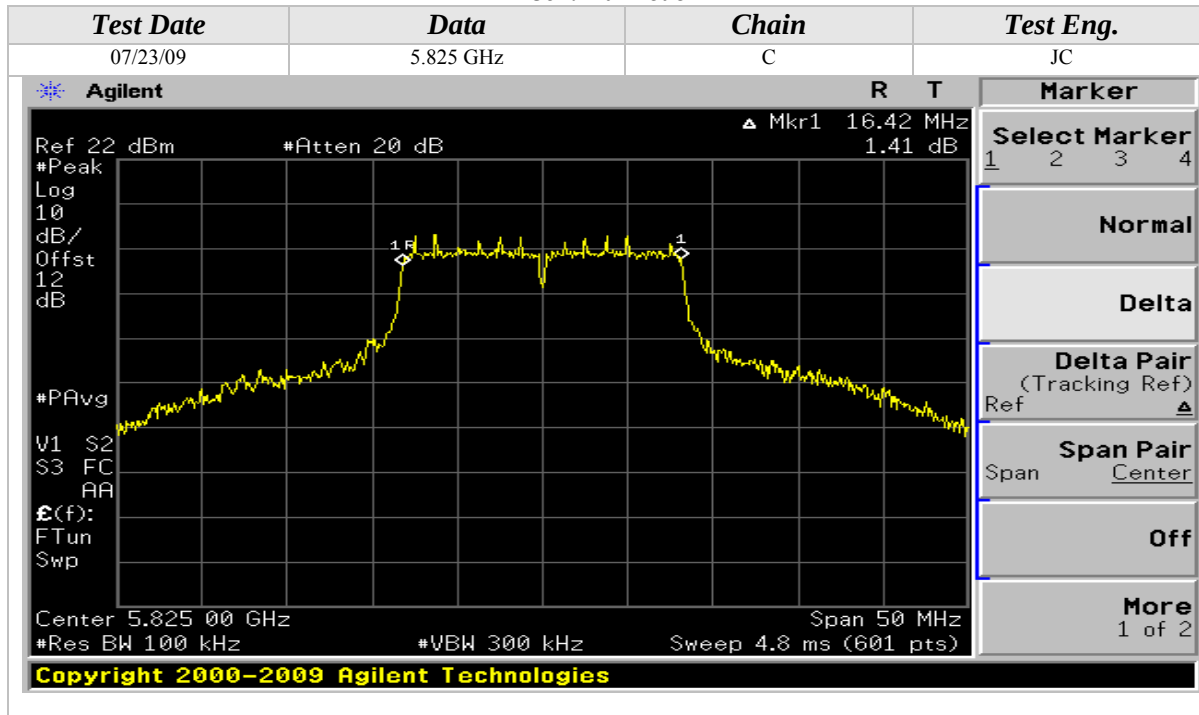






## 6dB Emissions Bandwidth (Continued)

## 802.11a Mode



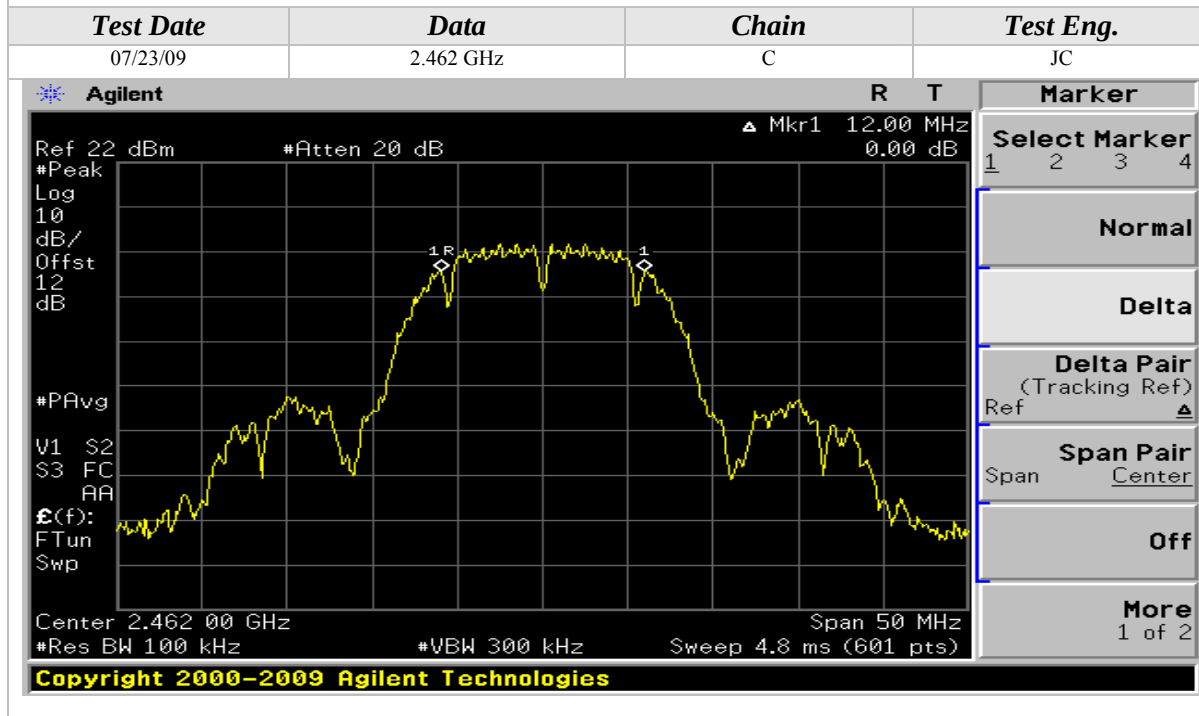
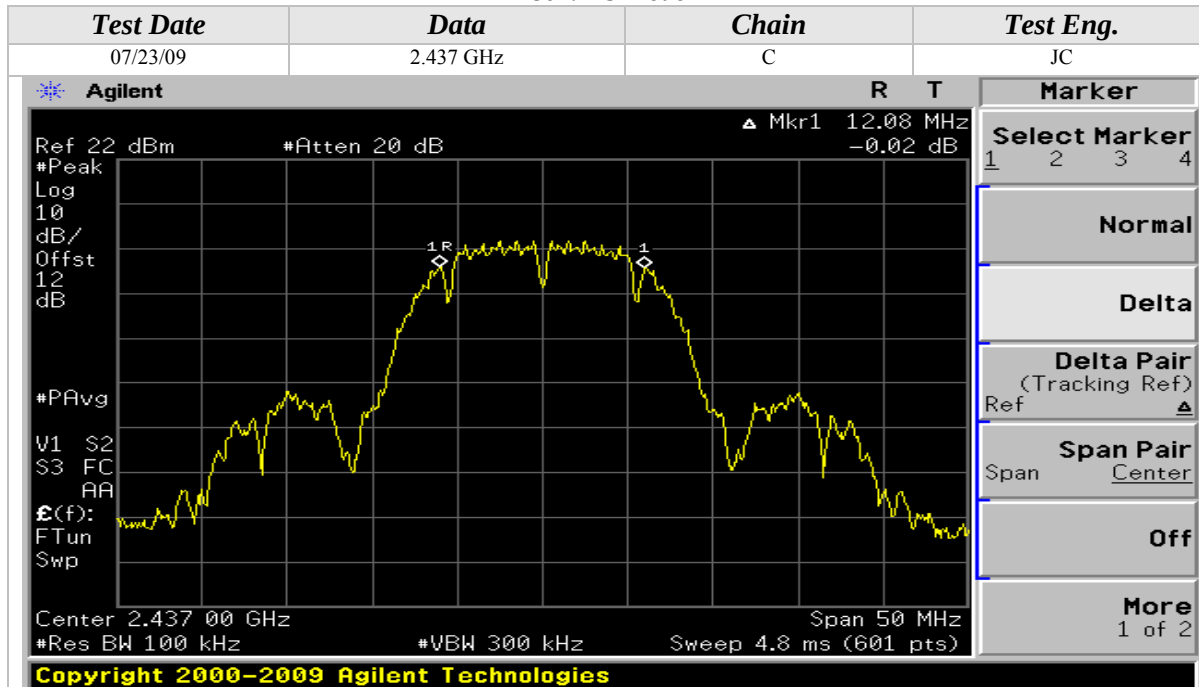
## 802.11b Mode





## 6dB Emissions Bandwidth (Continued)

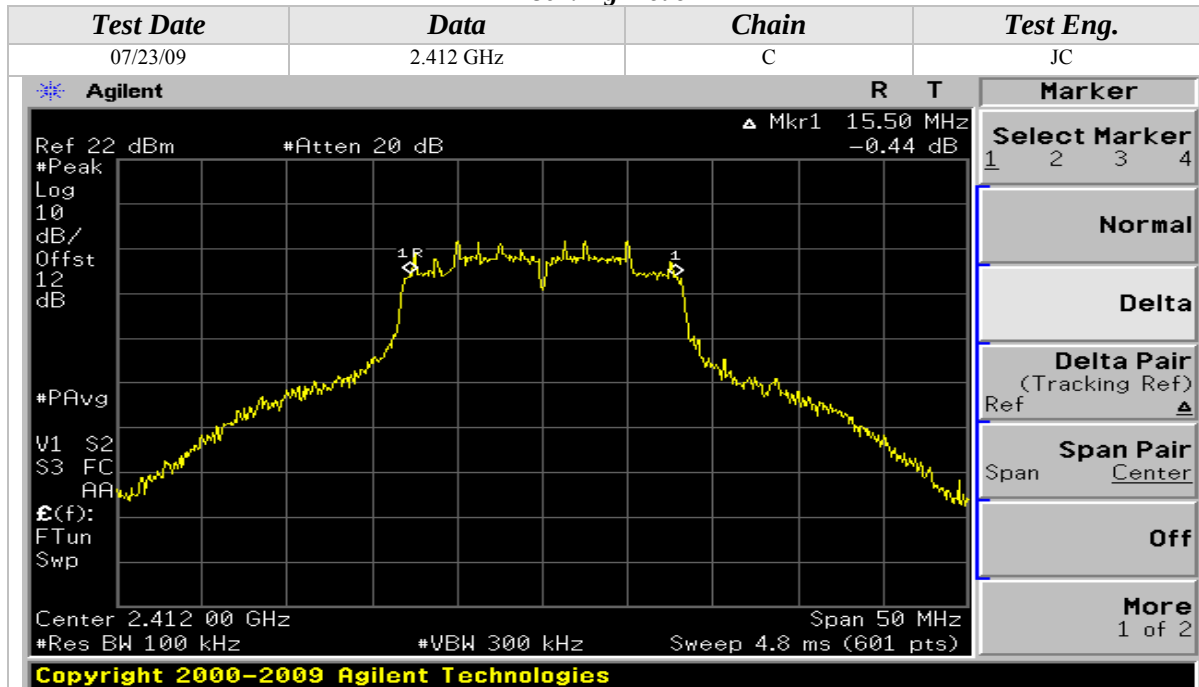
## 802.11b Mode





## 6dB Emissions Bandwidth (Continued)

## 802.11g Mode

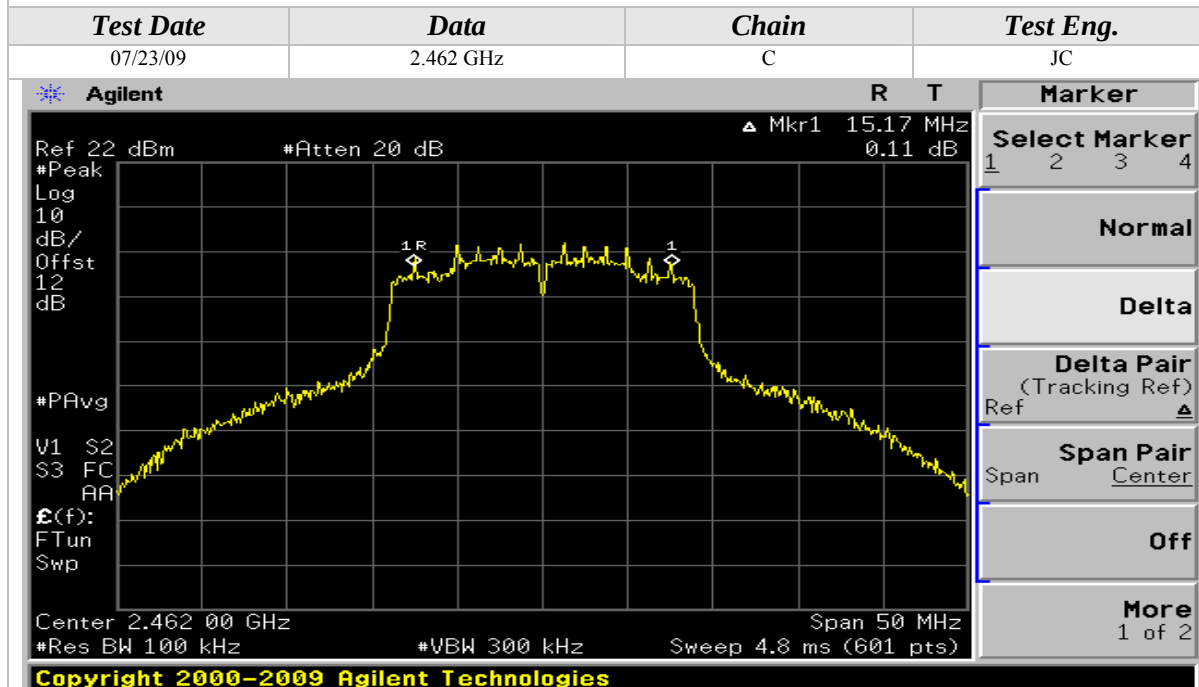
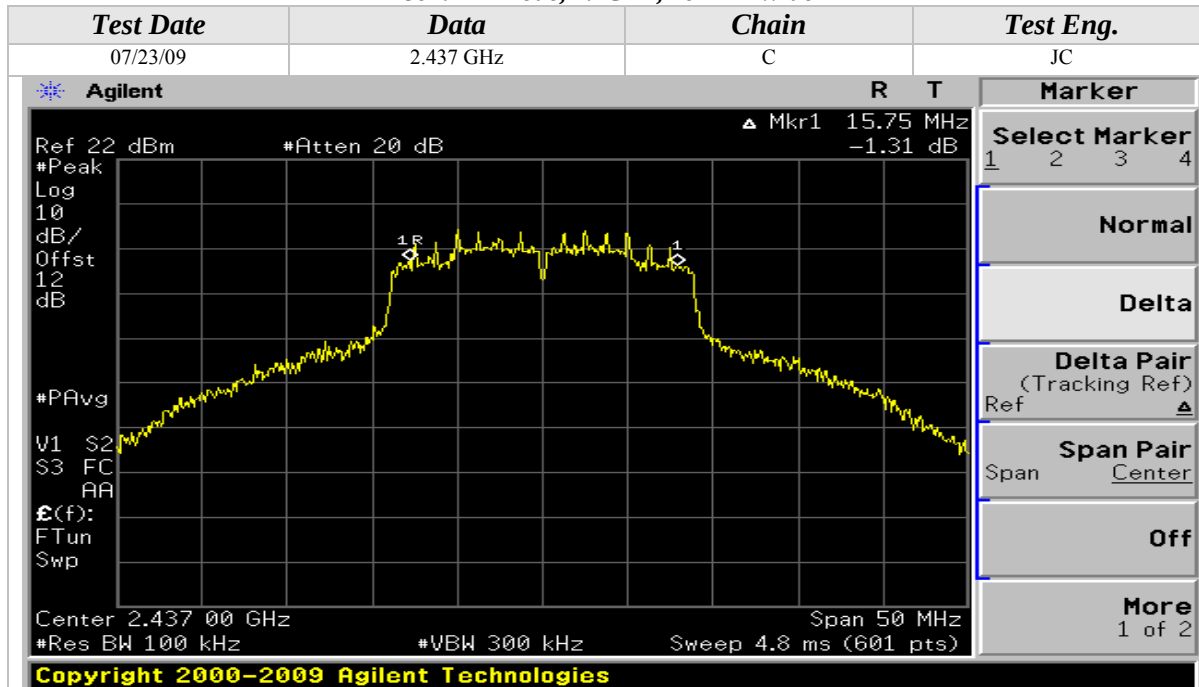






## 6dB Emissions Bandwidth (Continued)

## 802.11n Mode, 2.4GHz, 20MHz Wide

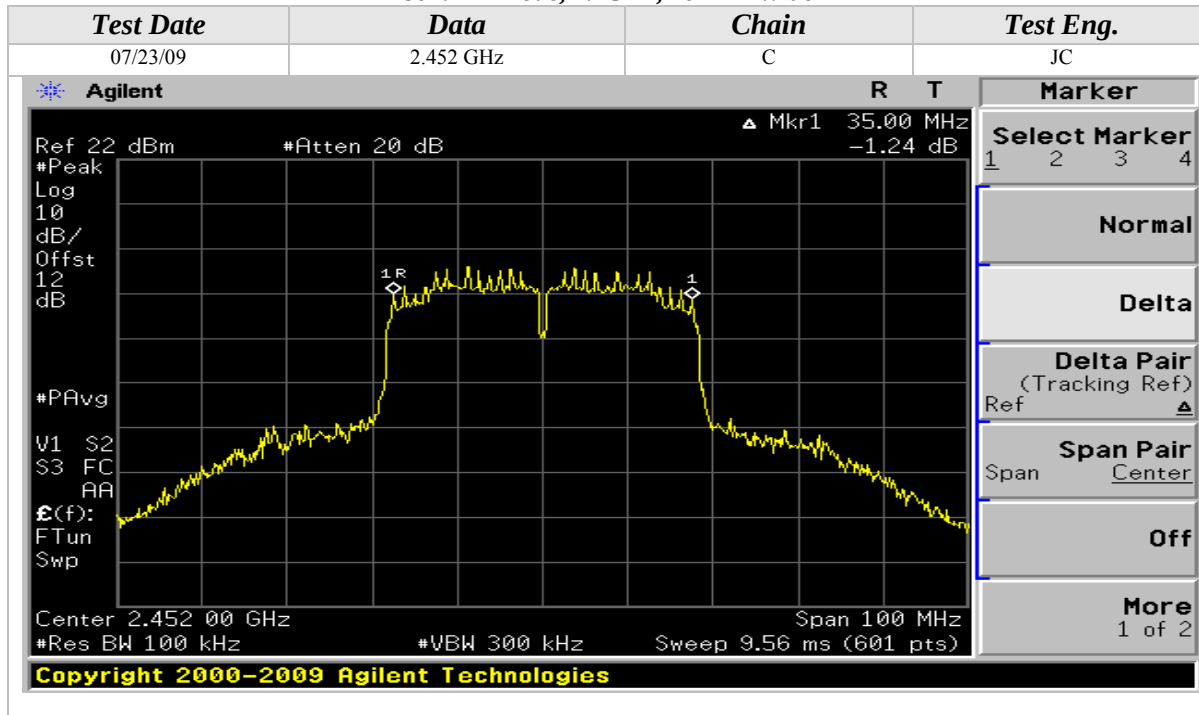




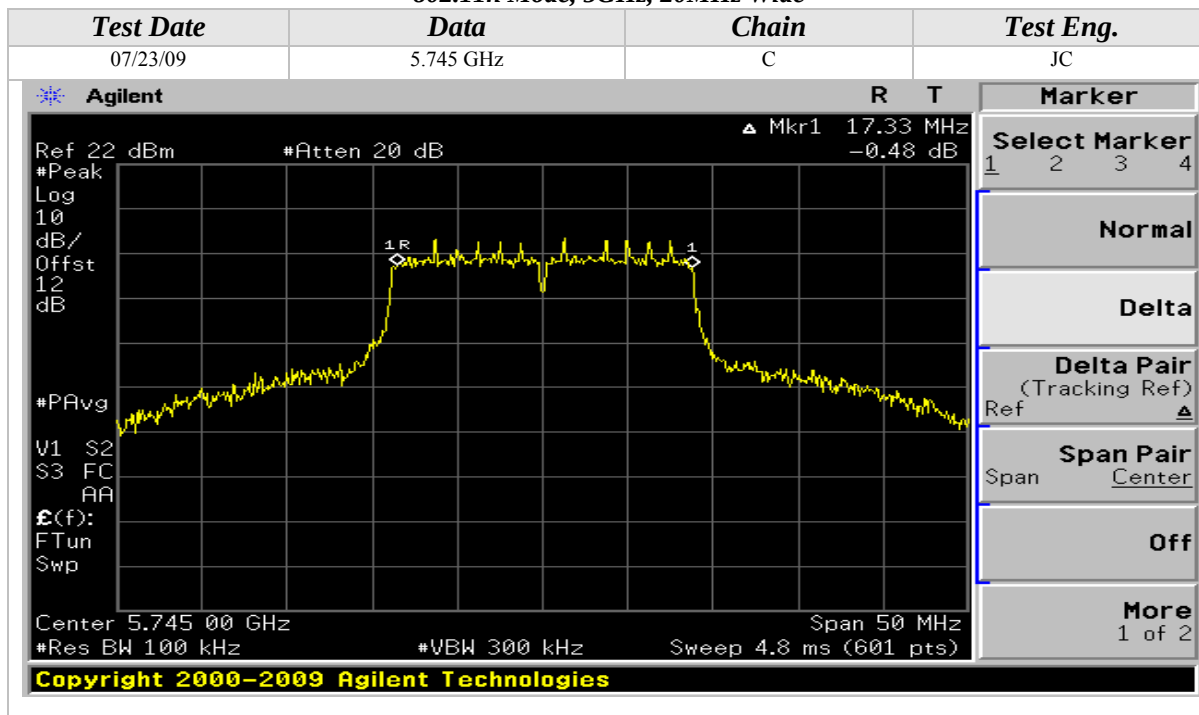


## 6dB Emissions Bandwidth (Continued)

## 802.11n Mode, 2.4GHz, 40MHz Wide



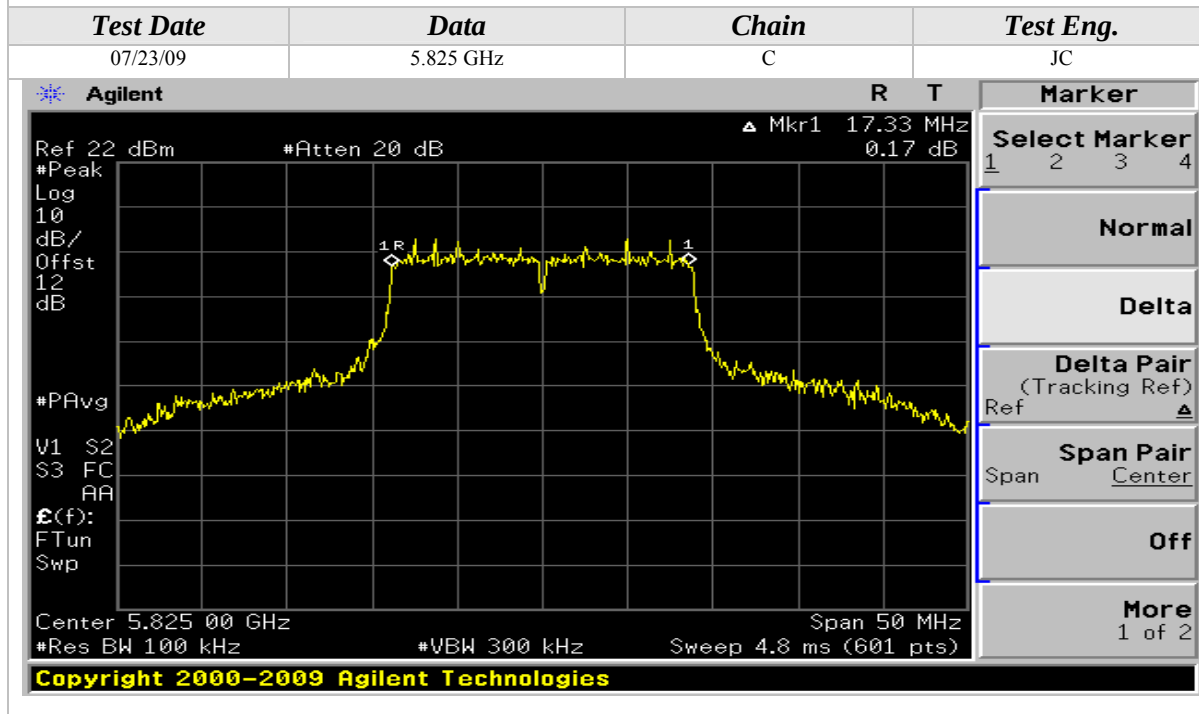
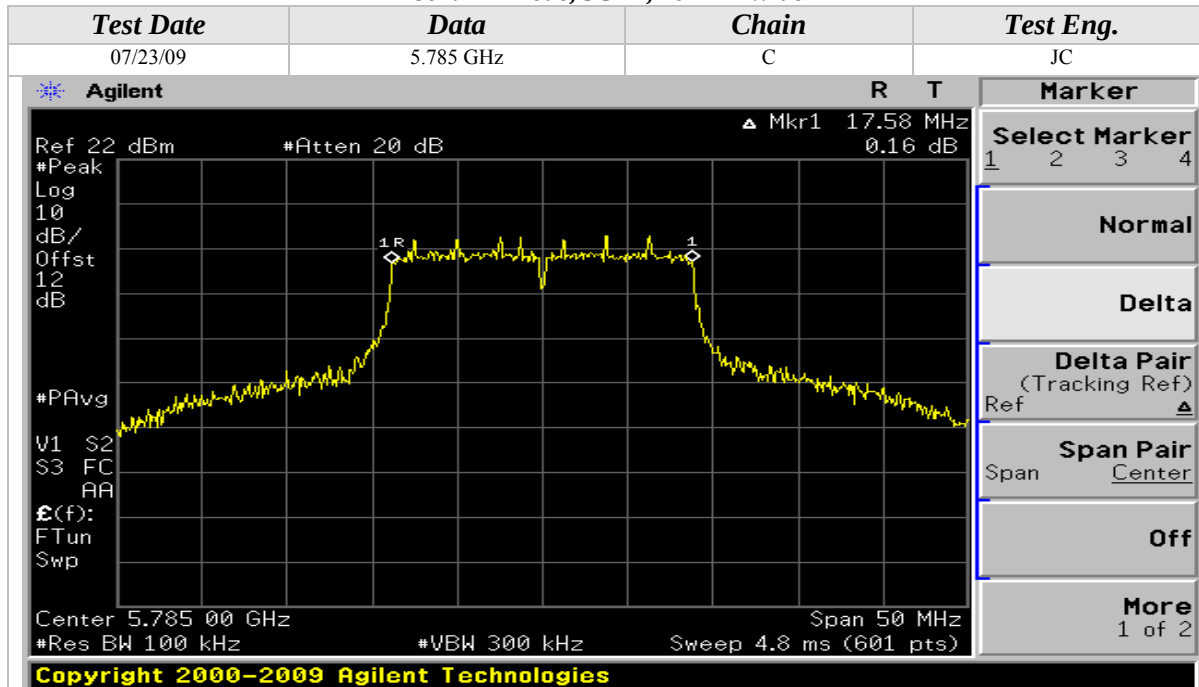
## 802.11n Mode, 5GHz, 20MHz Wide





## 6dB Emissions Bandwidth (Continued)

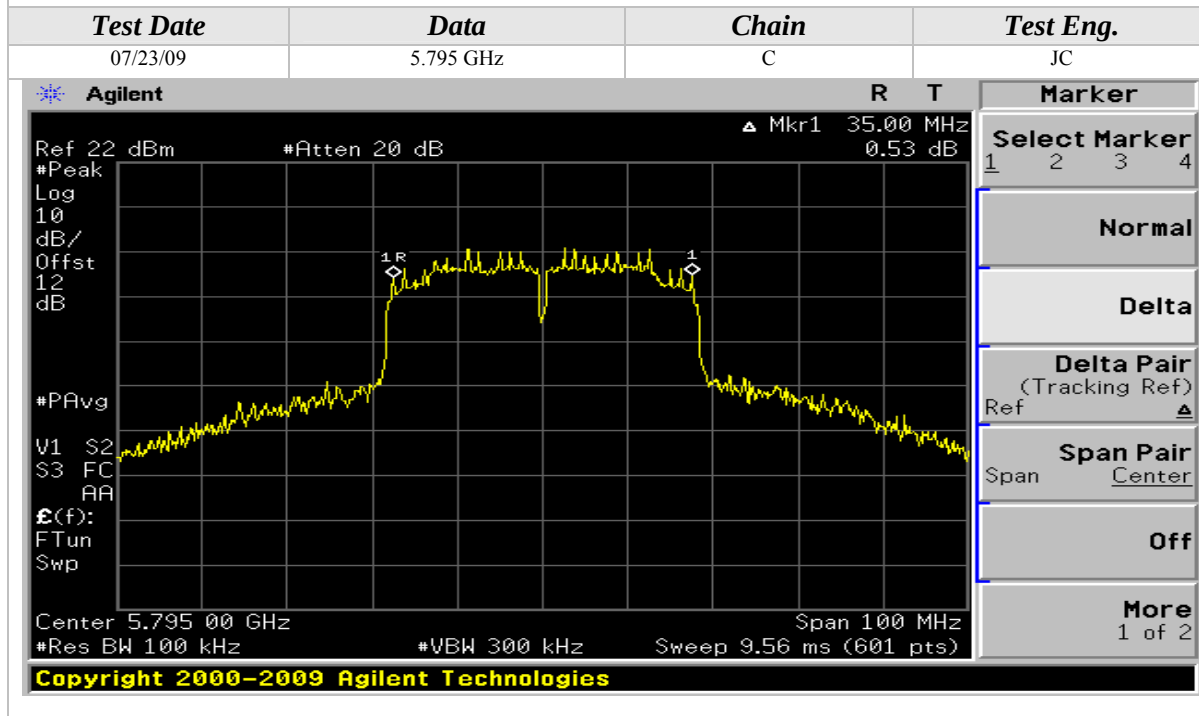
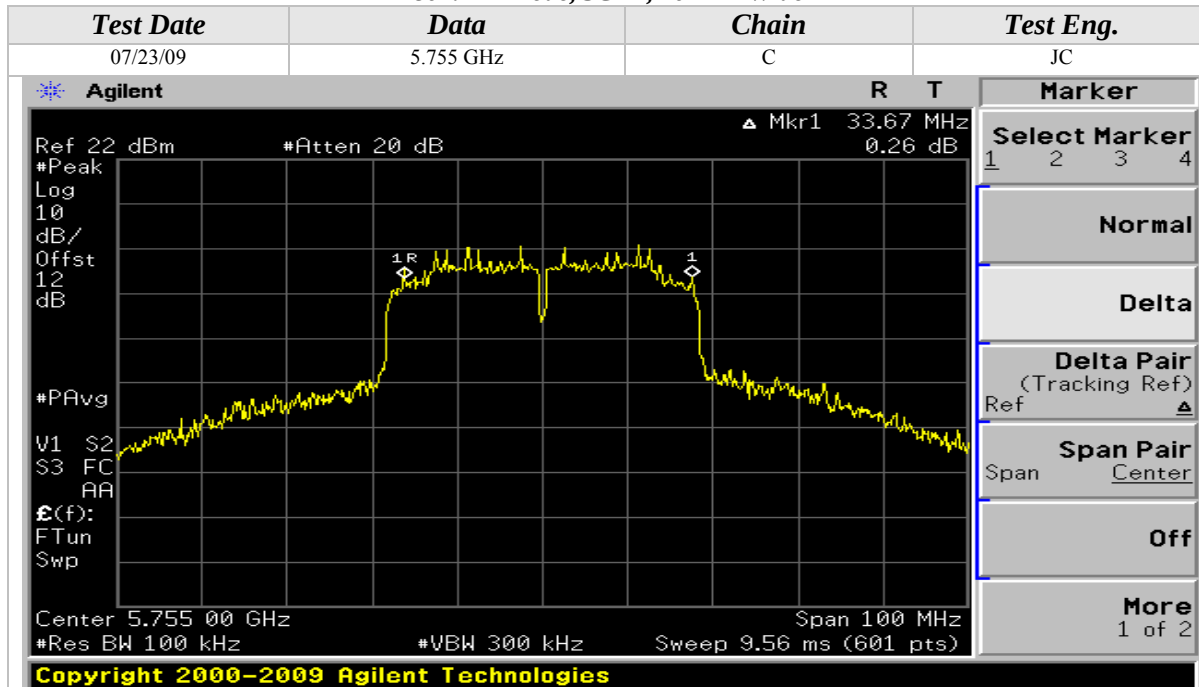
## 802.11n Mode, 5GHz, 20MHz Wide





## 6dB Emissions Bandwidth (Continued)

## 802.11n Mode, 5GHz, 40MHz Wide



**PEAK POWER SPECTRAL DENSITY**

|                       |                                                                                    |                        |              |
|-----------------------|------------------------------------------------------------------------------------|------------------------|--------------|
| <b>CLIENT:</b>        | Intel Corporation                                                                  | <b>DATE:</b>           | 07/15/09     |
| <b>EUT:</b>           | Intel WiFi Link 6300                                                               | <b>PROJECT NUMBER:</b> | INTEL-090526 |
| <b>MODEL NUMBER:</b>  | 633ANHMW                                                                           | <b>TEST ENGINEER:</b>  | JC           |
| <b>SERIAL NUMBER:</b> | 0015005A17C0                                                                       | <b>SITE #:</b>         | 2            |
| <b>CONFIGURATION:</b> | Tested installed in an extender board connected to the host laptop's mini PCI slot | <b>TEMPERATURE:</b>    | 22 deg. C    |
|                       |                                                                                    | <b>HUMIDITY:</b>       | 51% RH       |
|                       |                                                                                    | <b>TIME:</b>           | 10:30 AM     |

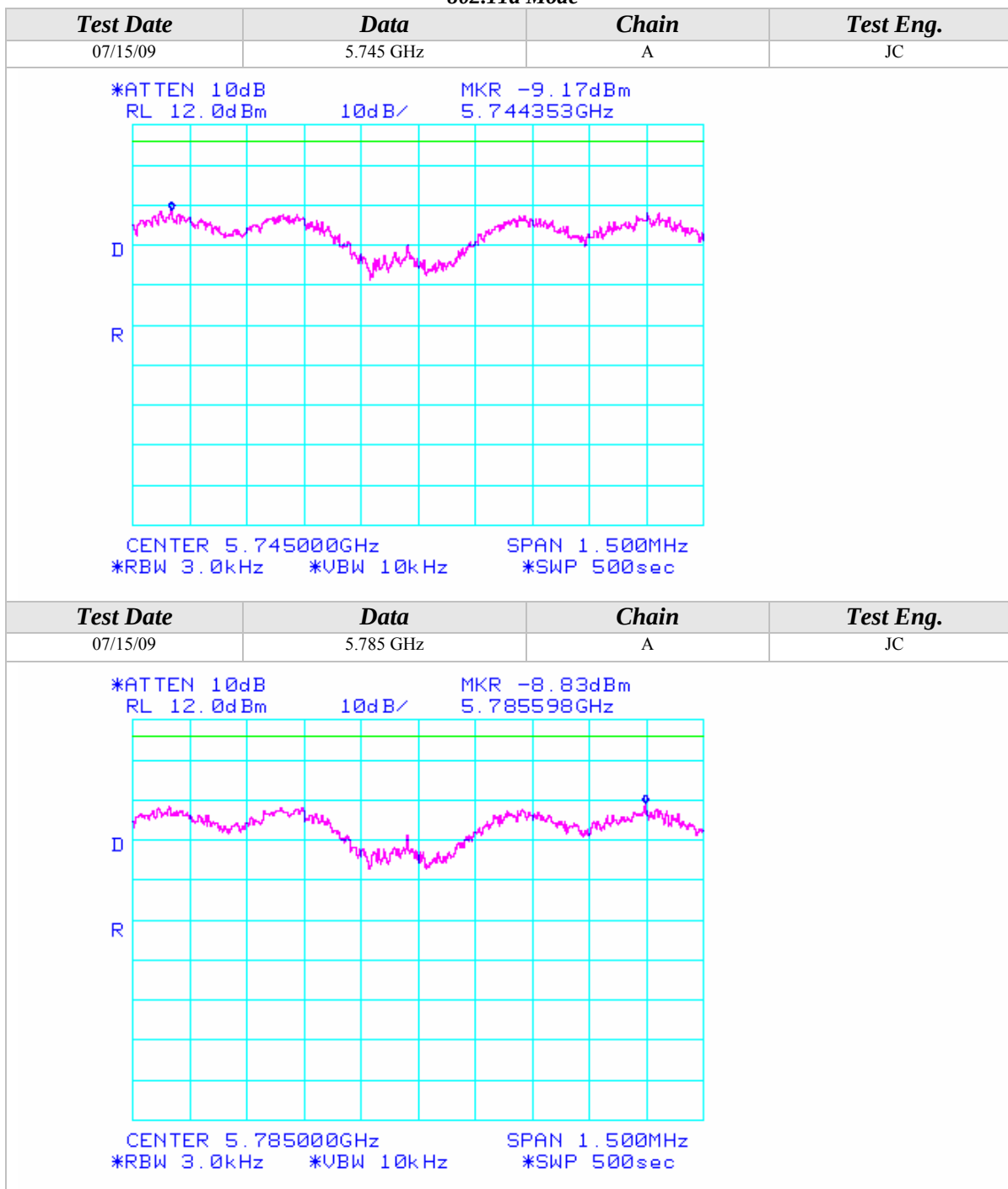
|                     |                                                                                                                                                                                               |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description:</b> | The peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. |
| <b>Results:</b>     | See Data Sheet                                                                                                                                                                                |
| <b>Note:</b>        | Conducted Emissions Measurements were performed on the EUT with power supply set at the following voltage and frequency. <ul style="list-style-type: none"><li>• 120VAC / 60 Hz.</li></ul>    |

| <b>Peak Power Spectral Density Limits</b> |                    |
|-------------------------------------------|--------------------|
| <b>Frequency (MHz)</b>                    | <b>Limit (dBm)</b> |
| 5725-5850                                 | 8                  |
| 2412-2462                                 | 8                  |



## Peak Power Spectral Density (Continued)

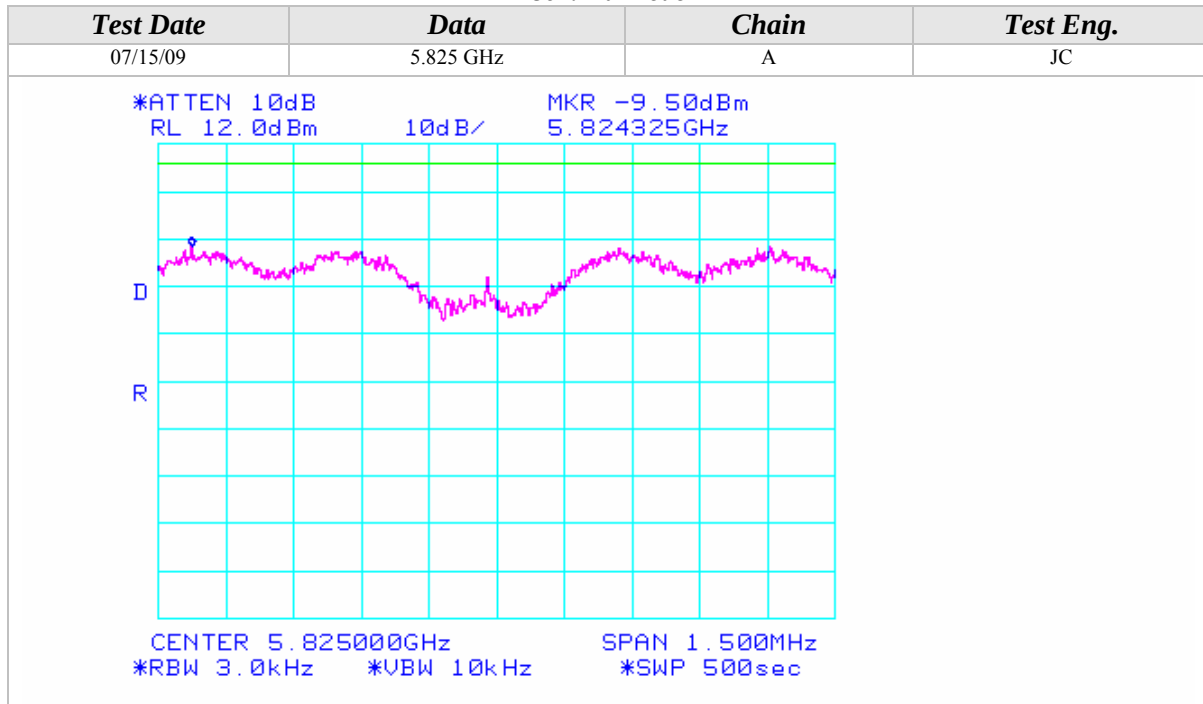
## 802.11a Mode



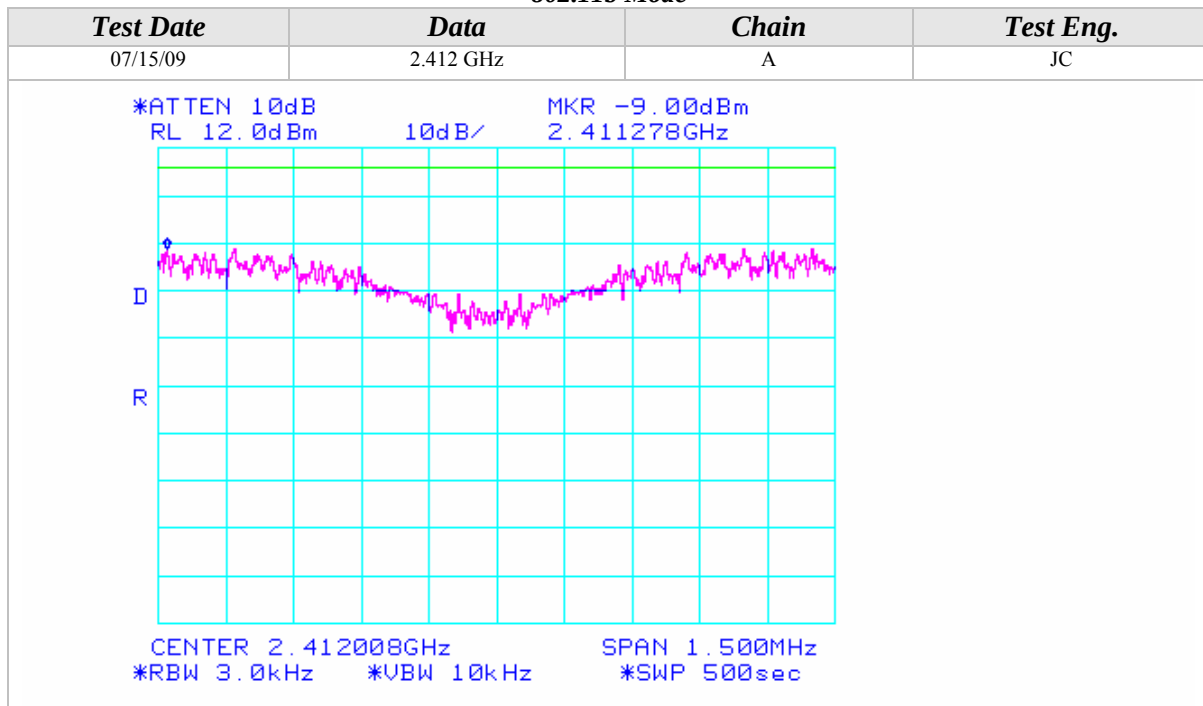


## Peak Power Spectral Density (Continued)

## 802.11a Mode

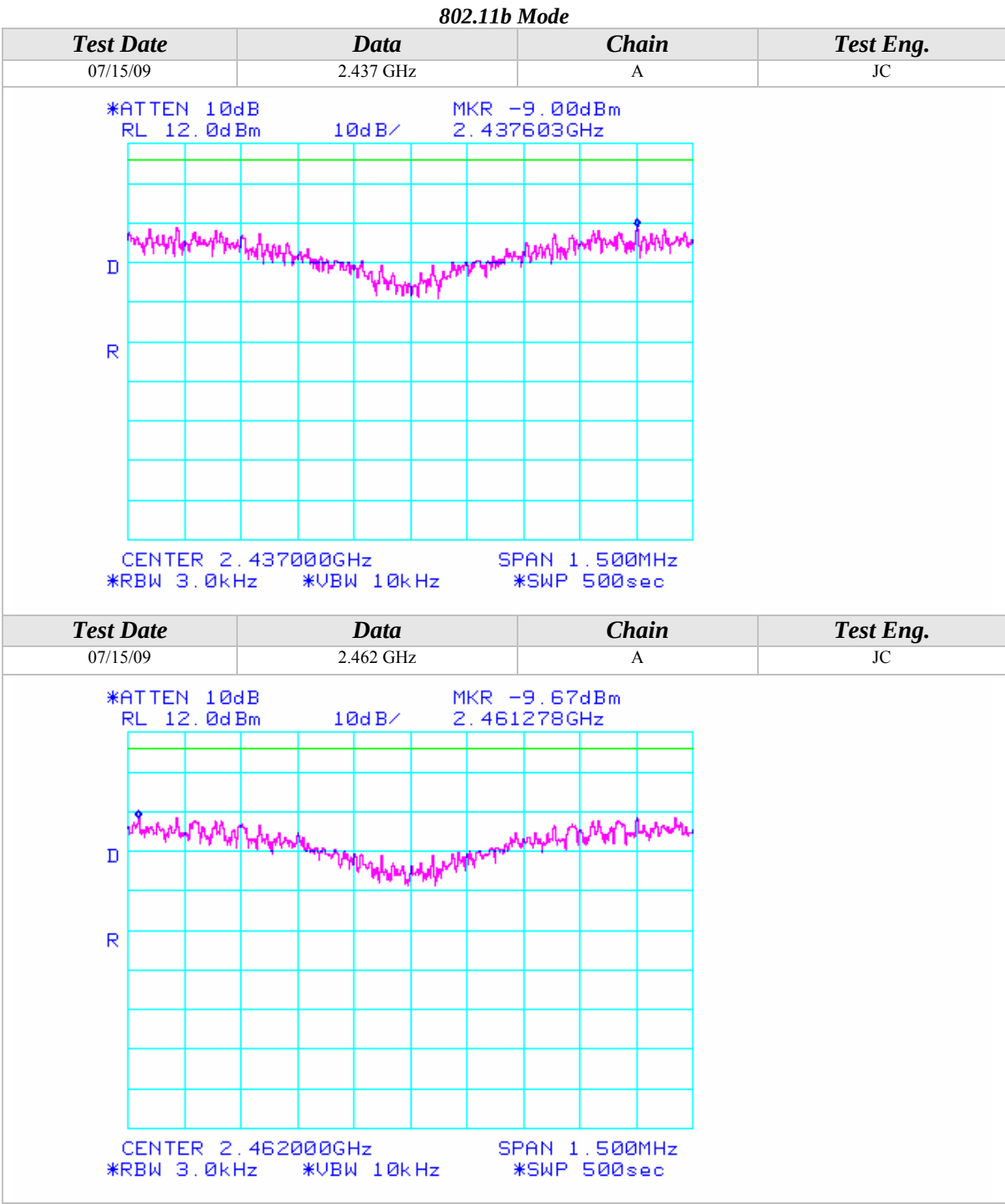


## 802.11b Mode





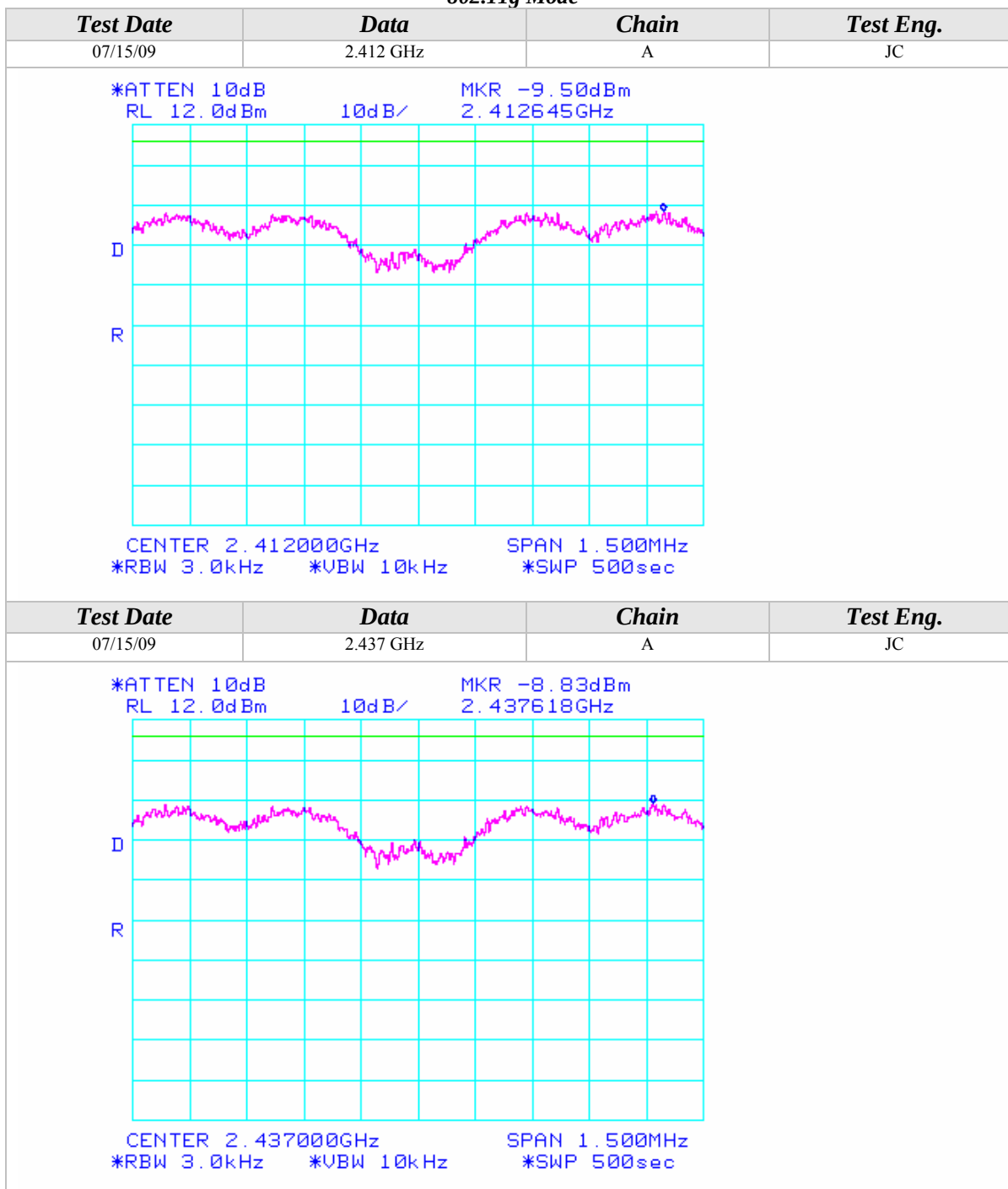
Peak Power Spectral Density (Continued)





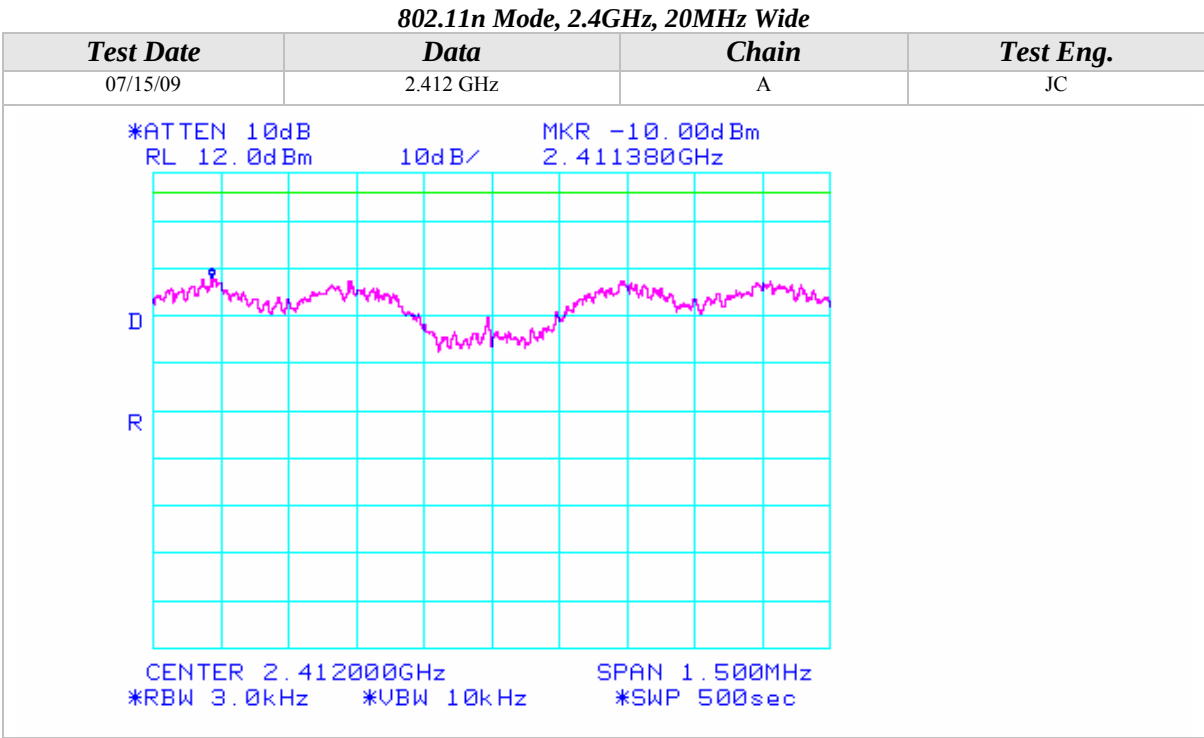
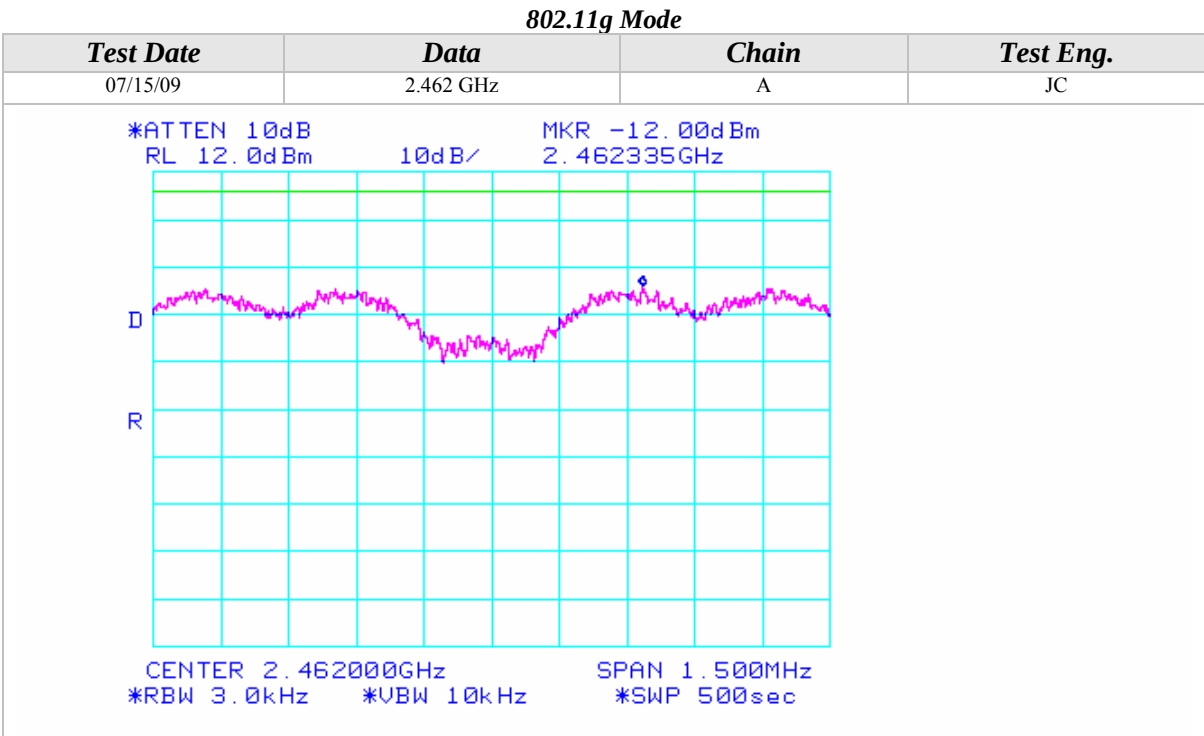
## Peak Power Spectral Density (Continued)

## 802.11g Mode



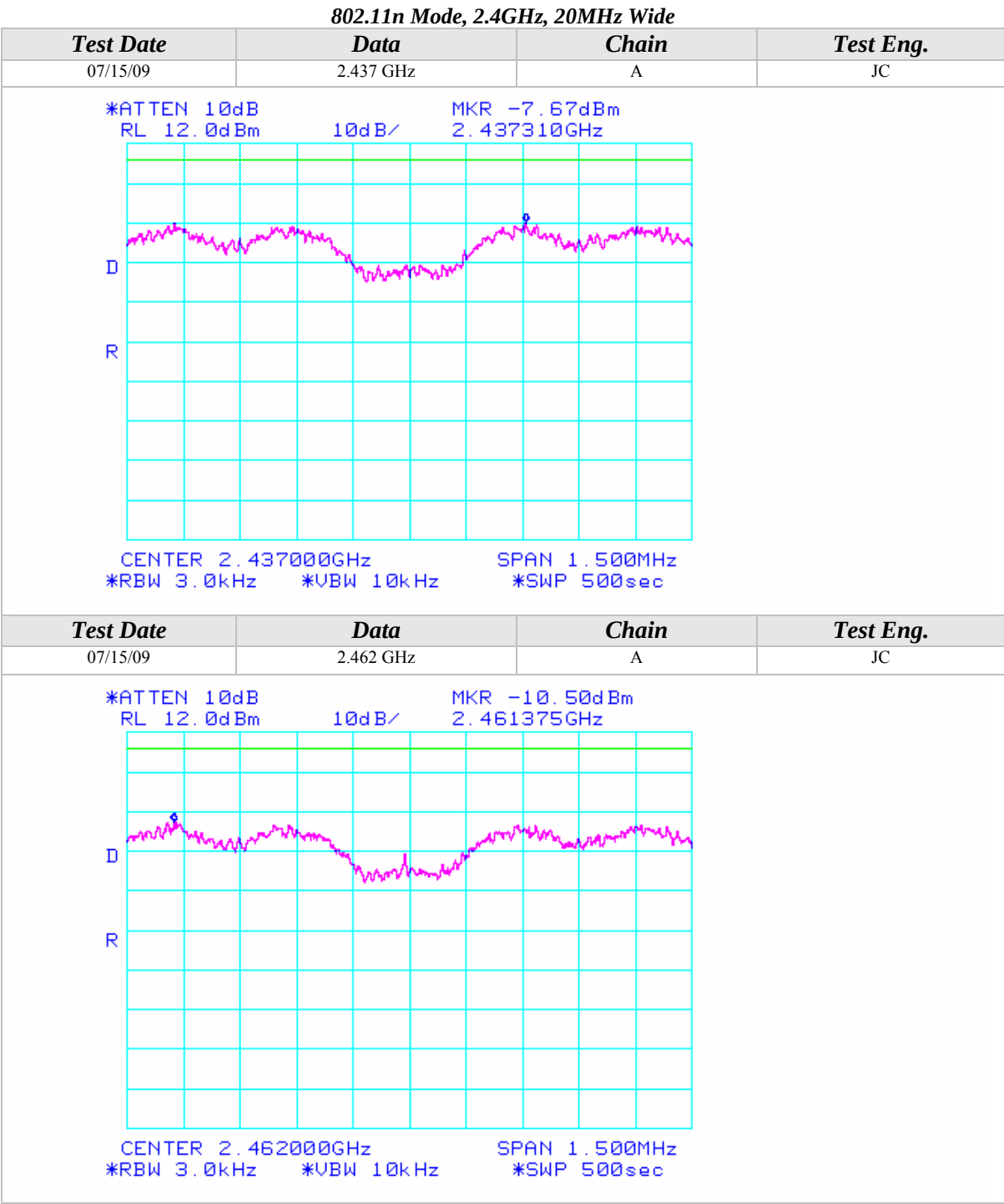


Peak Power Spectral Density (Continued)





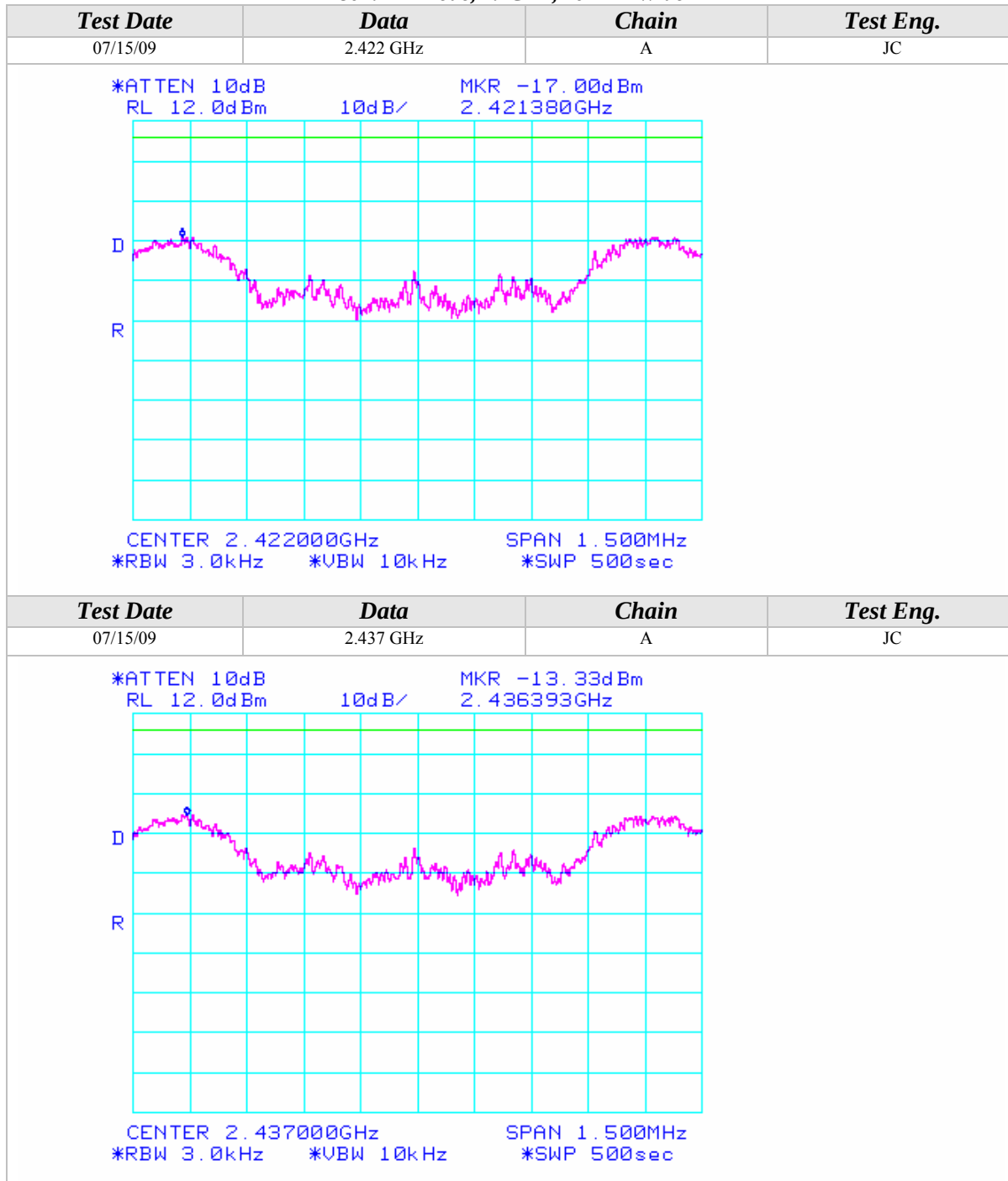
Peak Power Spectral Density (Continued)





## Peak Power Spectral Density (Continued)

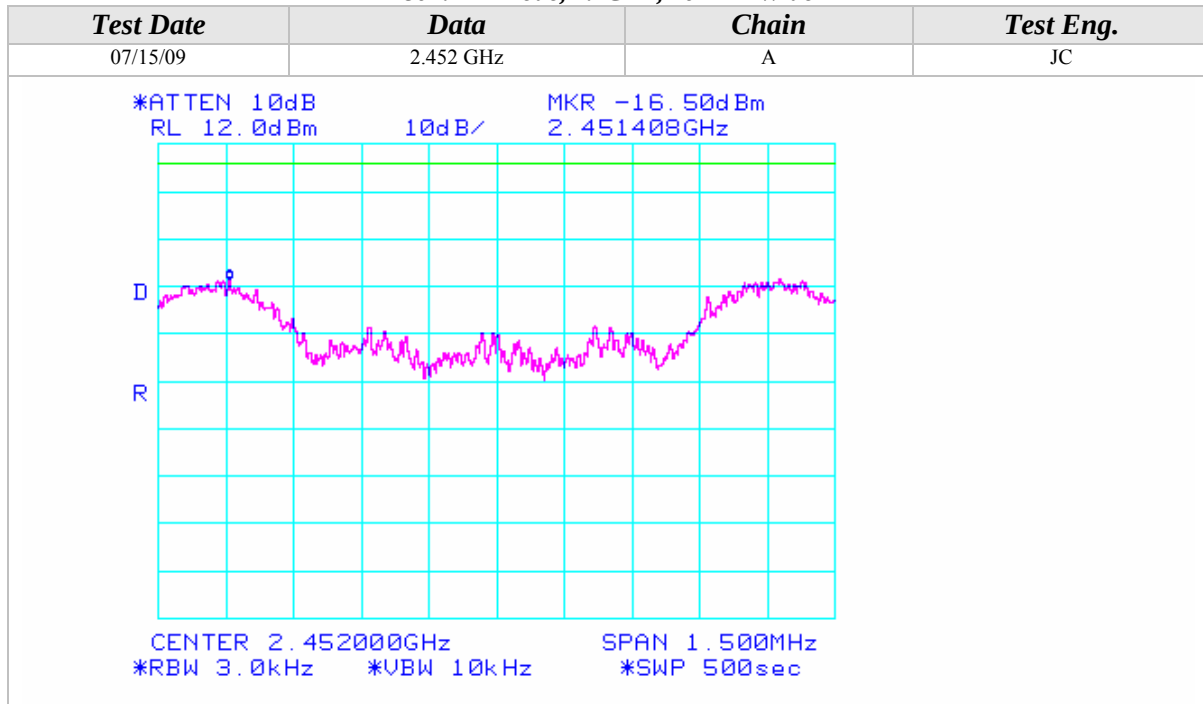
## 802.11n Mode, 2.4GHz, 40MHz Wide



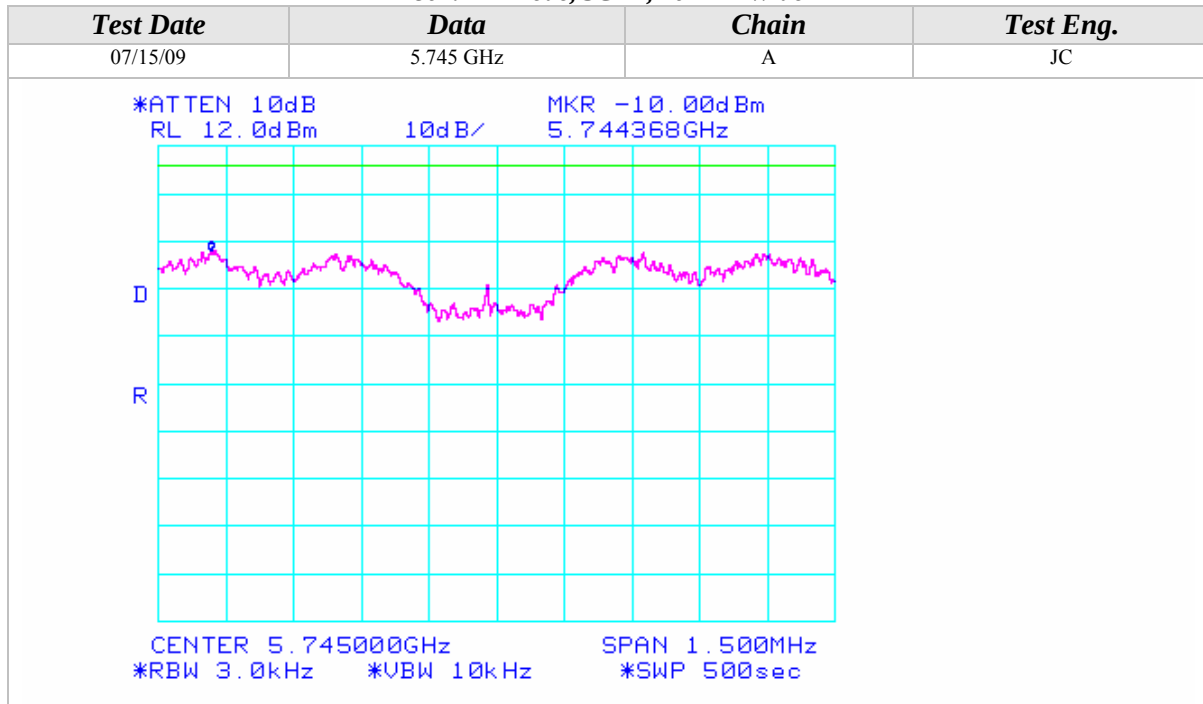


## Peak Power Spectral Density (Continued)

## 802.11n Mode, 2.4GHz, 40MHz Wide



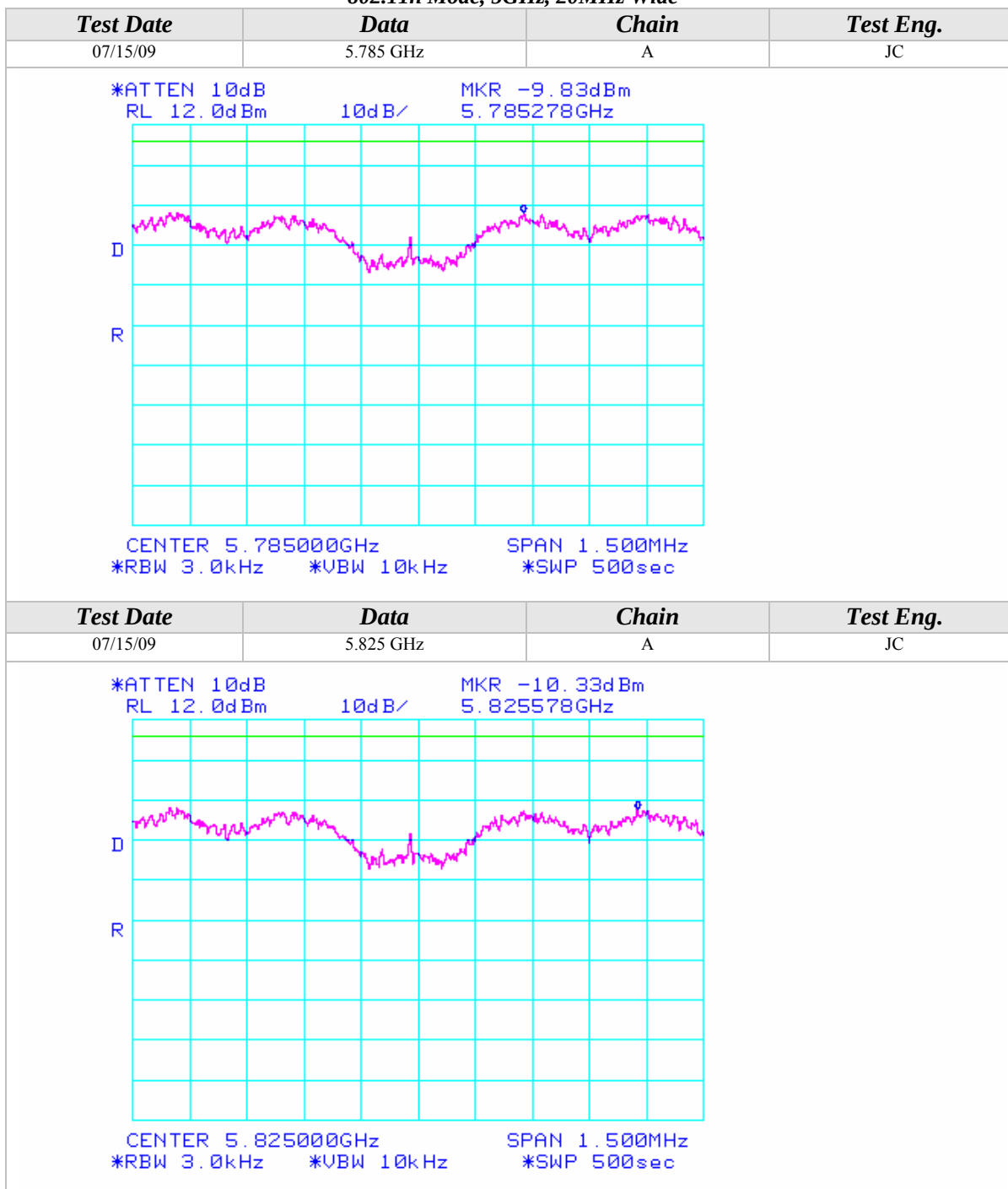
## 802.11n Mode, 5GHz, 20MHz Wide





## Peak Power Spectral Density (Continued)

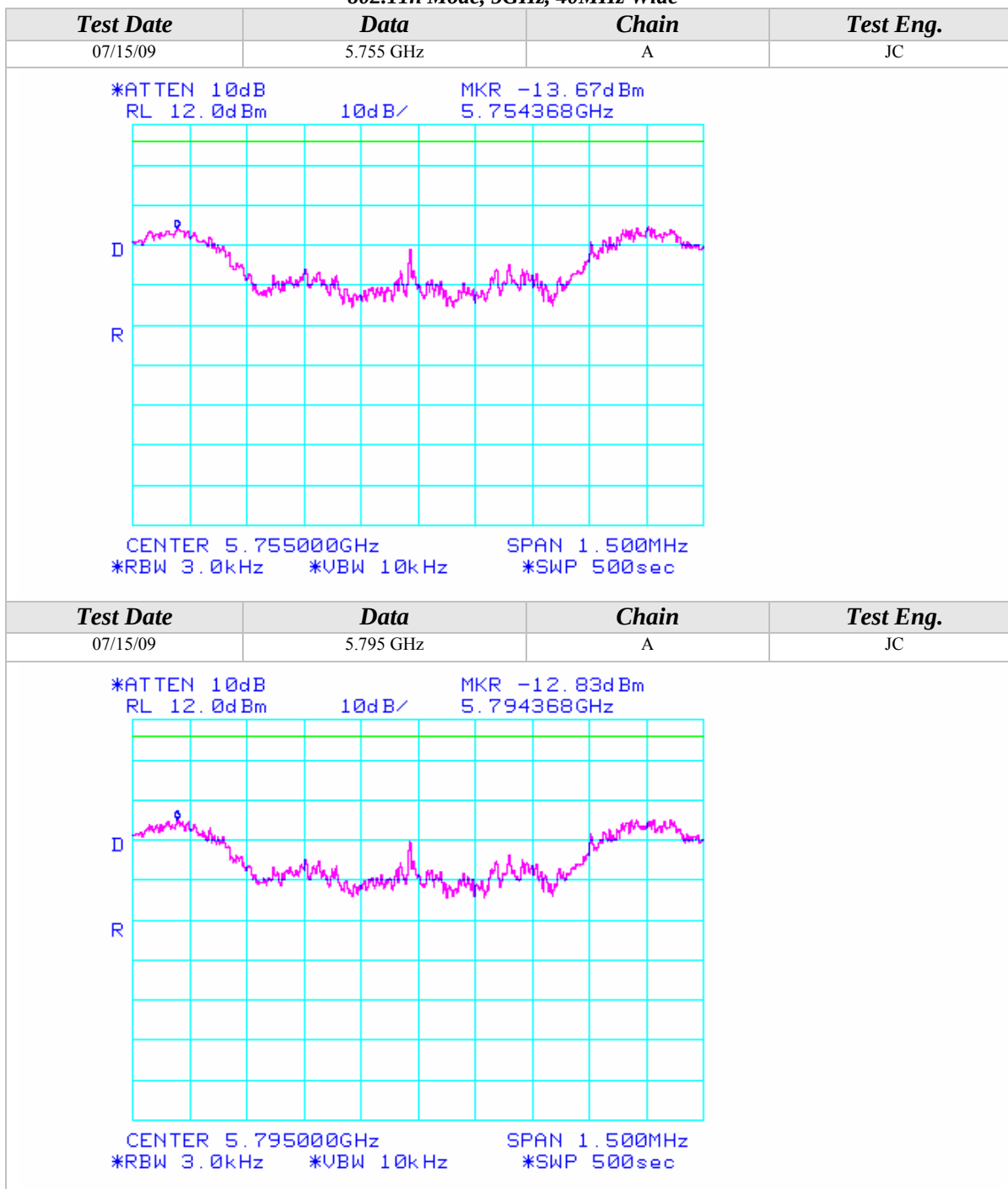
## 802.11n Mode, 5GHz, 20MHz Wide





## Peak Power Spectral Density (Continued)

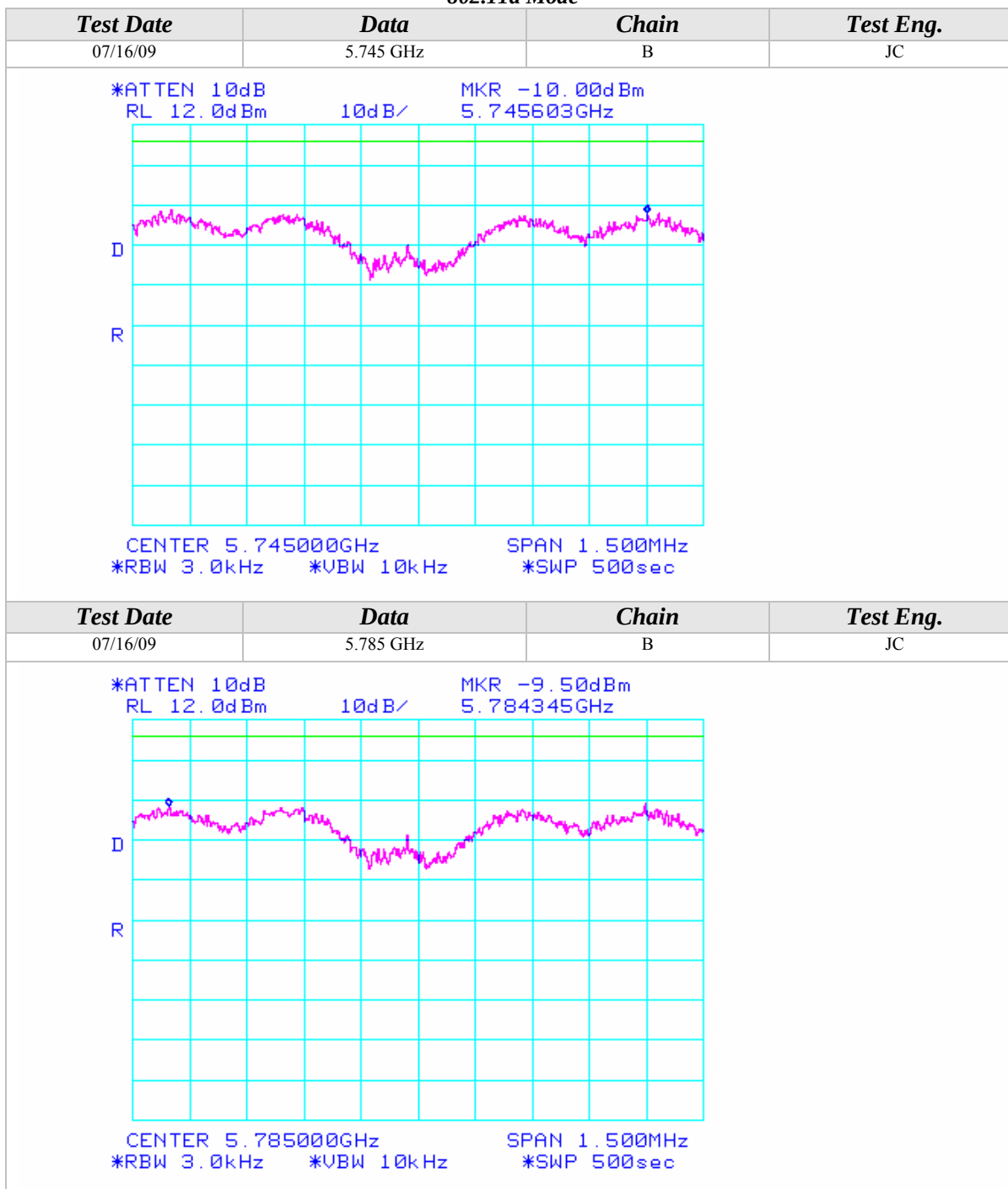
## 802.11n Mode, 5GHz, 40MHz Wide





## Peak Power Spectral Density (Continued)

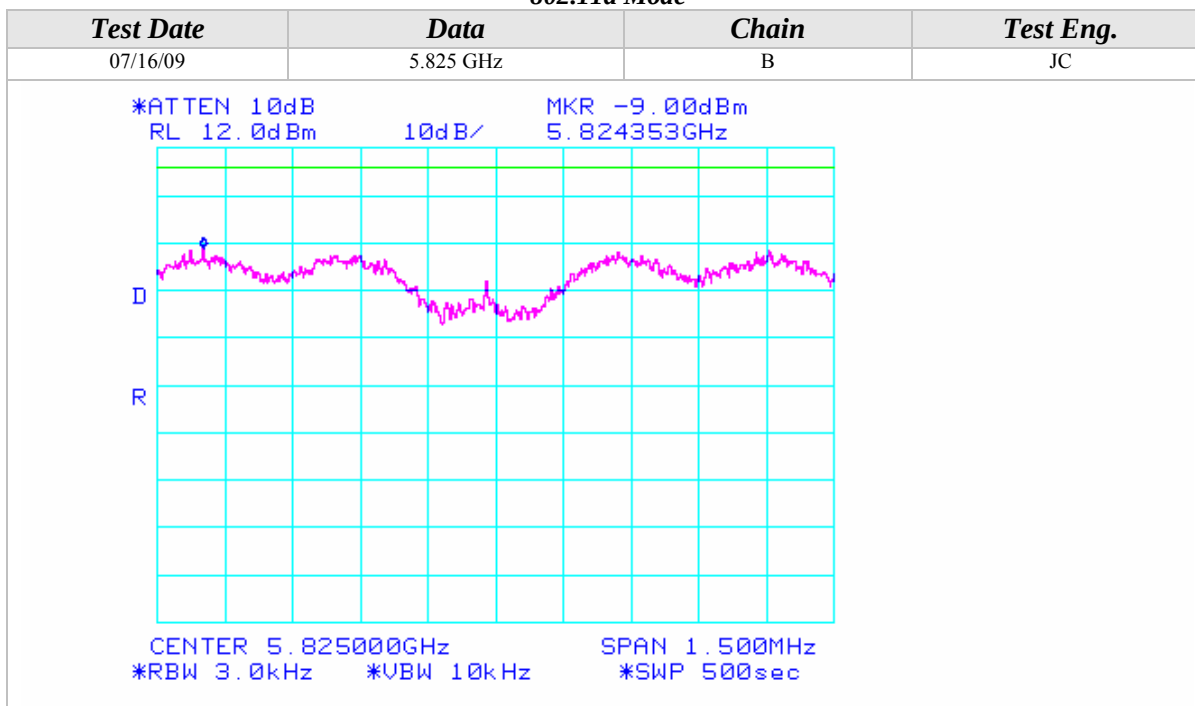
## 802.11a Mode



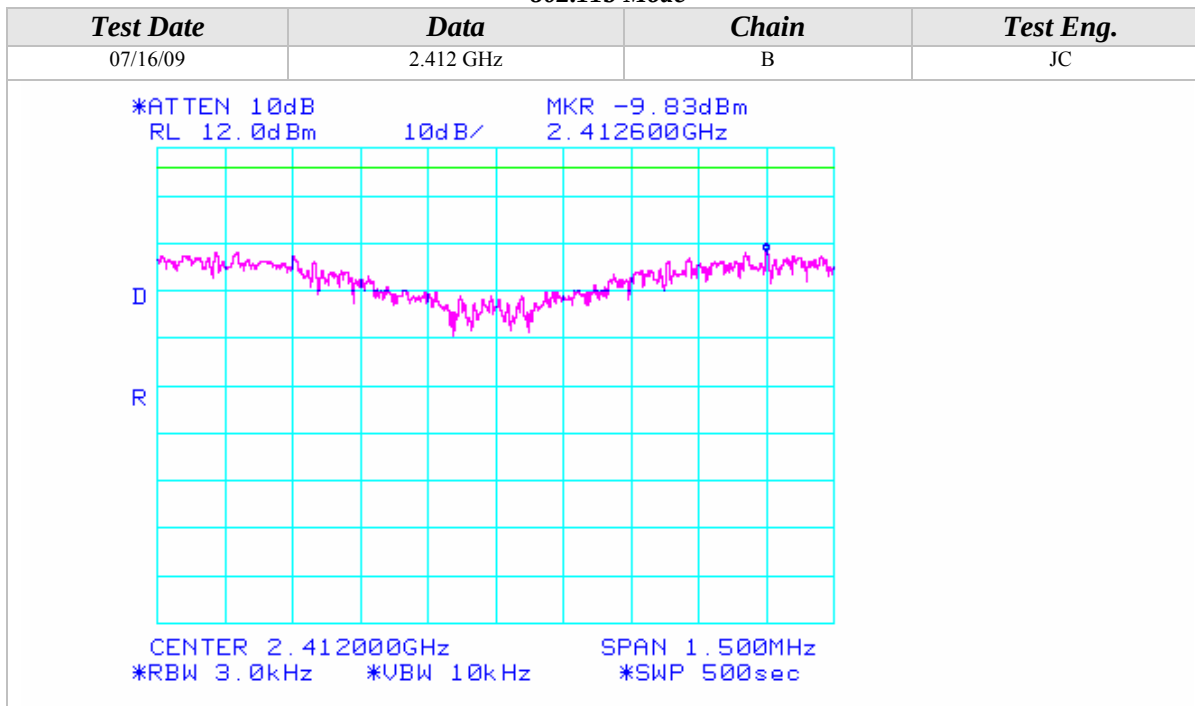


## Peak Power Spectral Density (Continued)

## 802.11a Mode



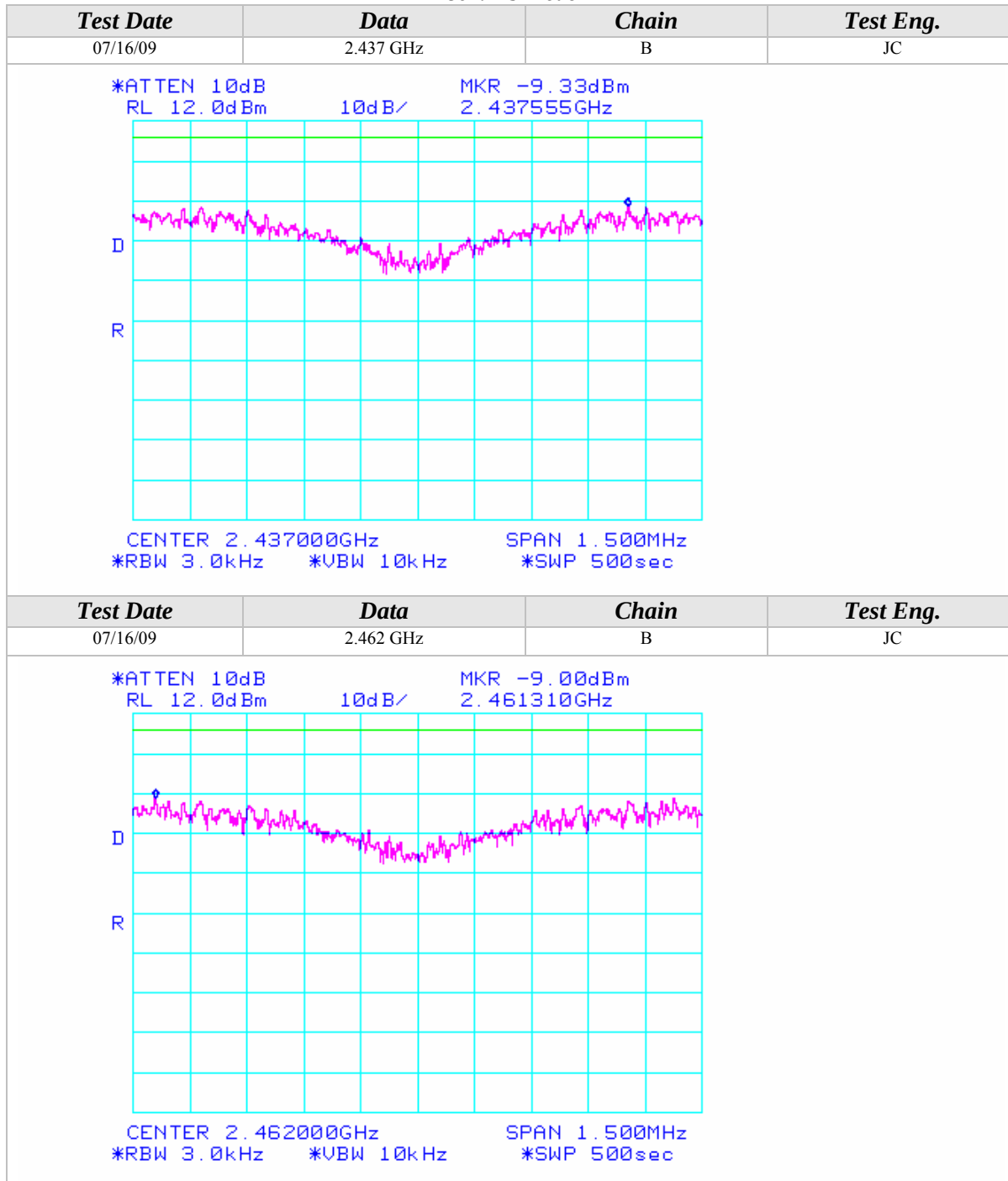
## 802.11b Mode





## Peak Power Spectral Density (Continued)

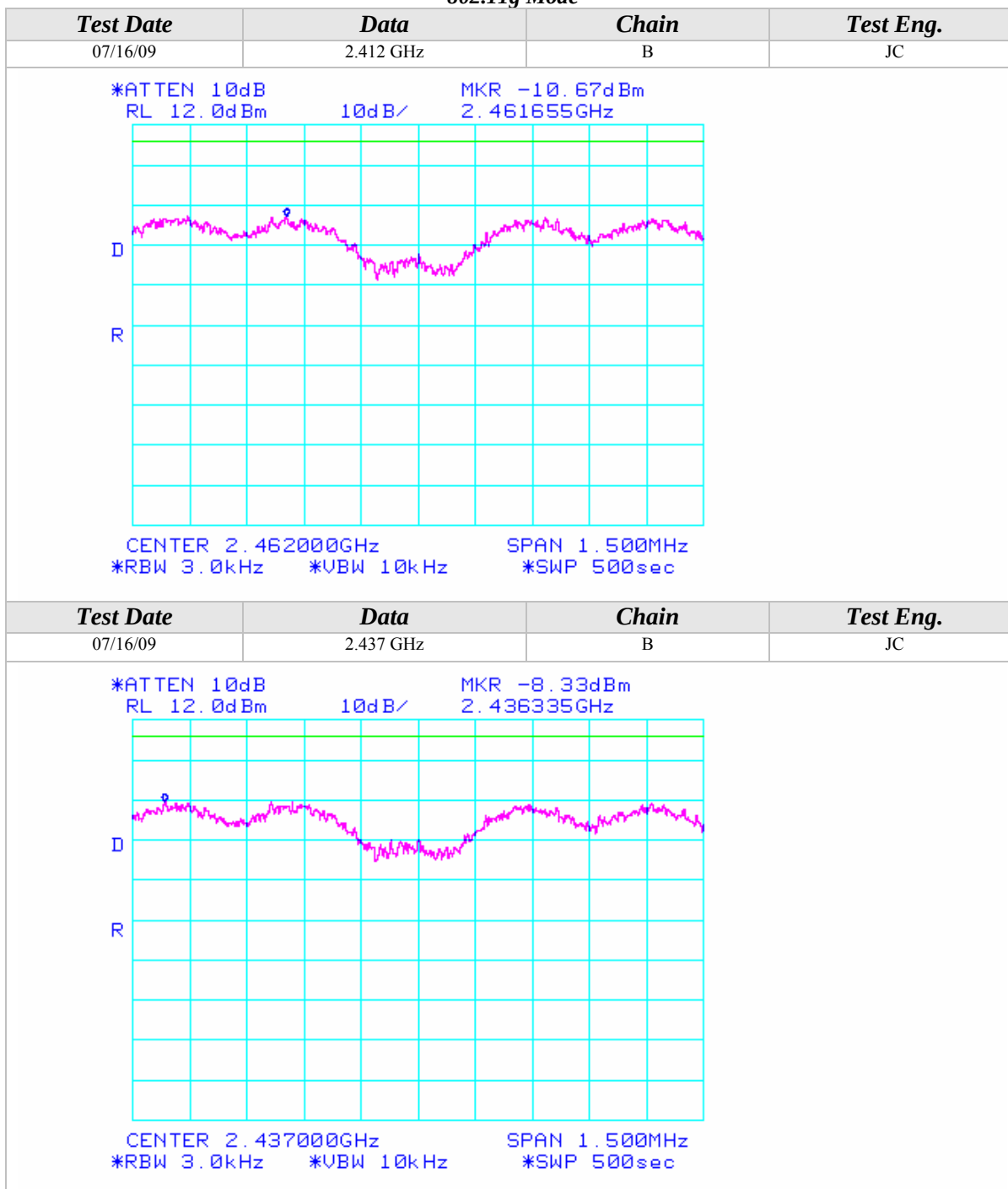
## 802.11b Mode





## Peak Power Spectral Density (Continued)

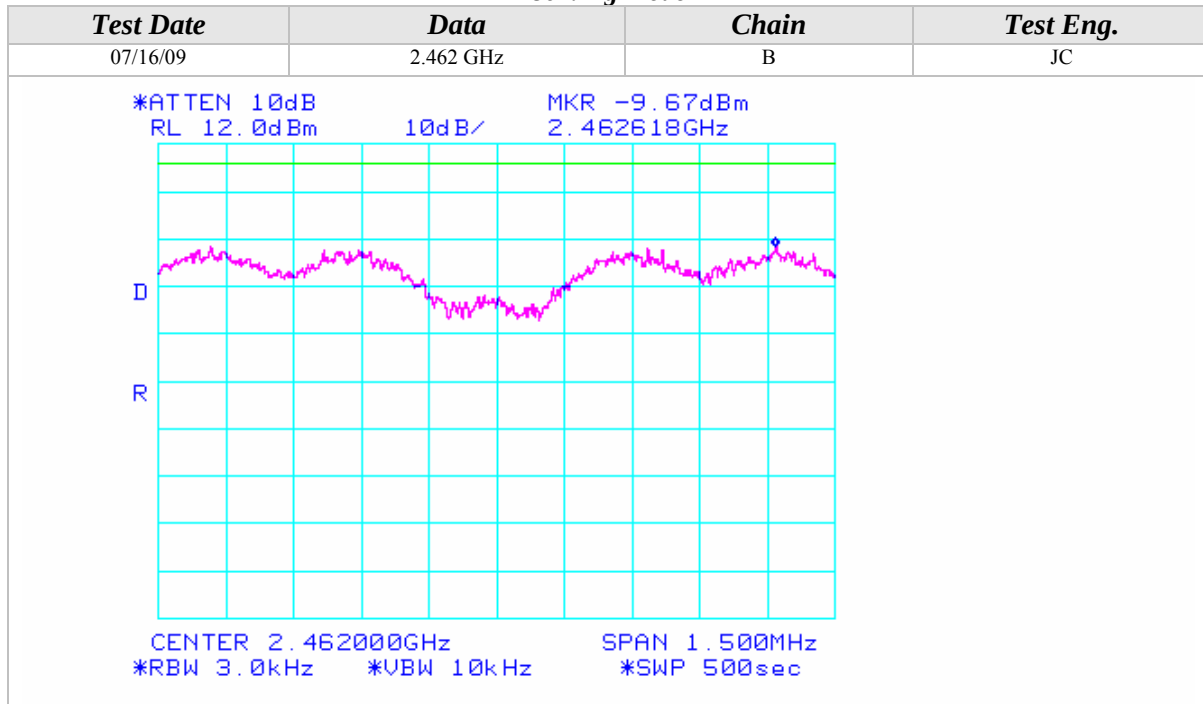
## 802.11g Mode



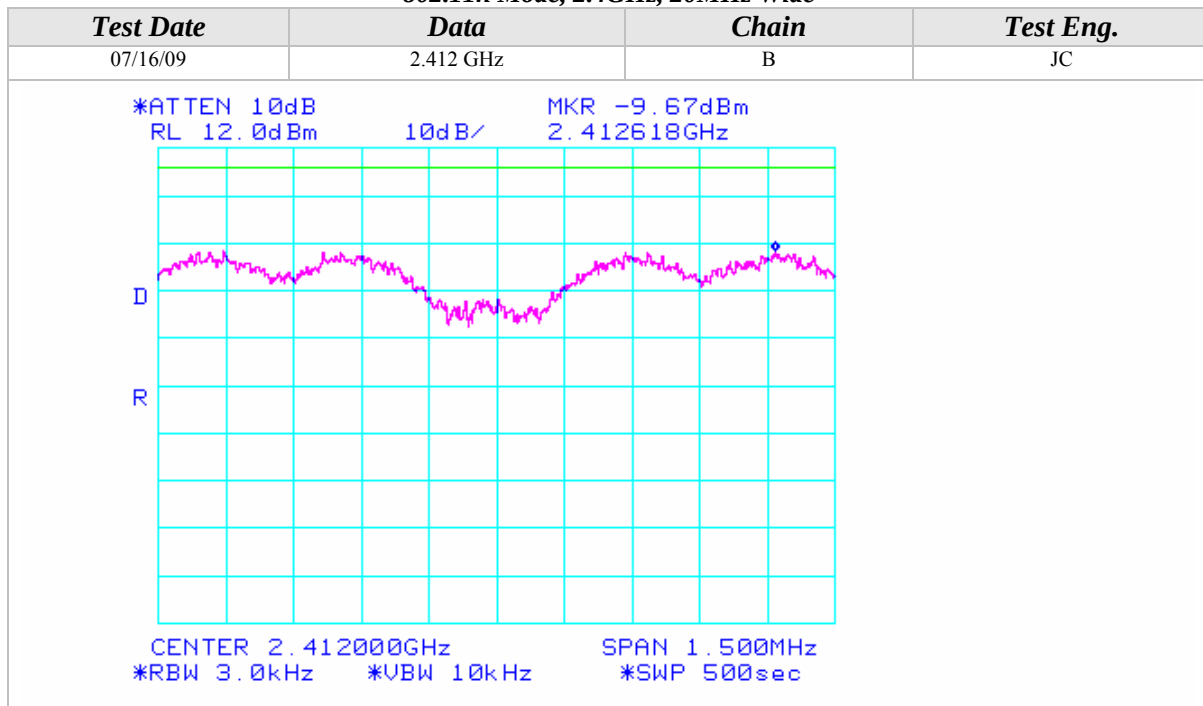


## Peak Power Spectral Density (Continued)

## 802.11g Mode



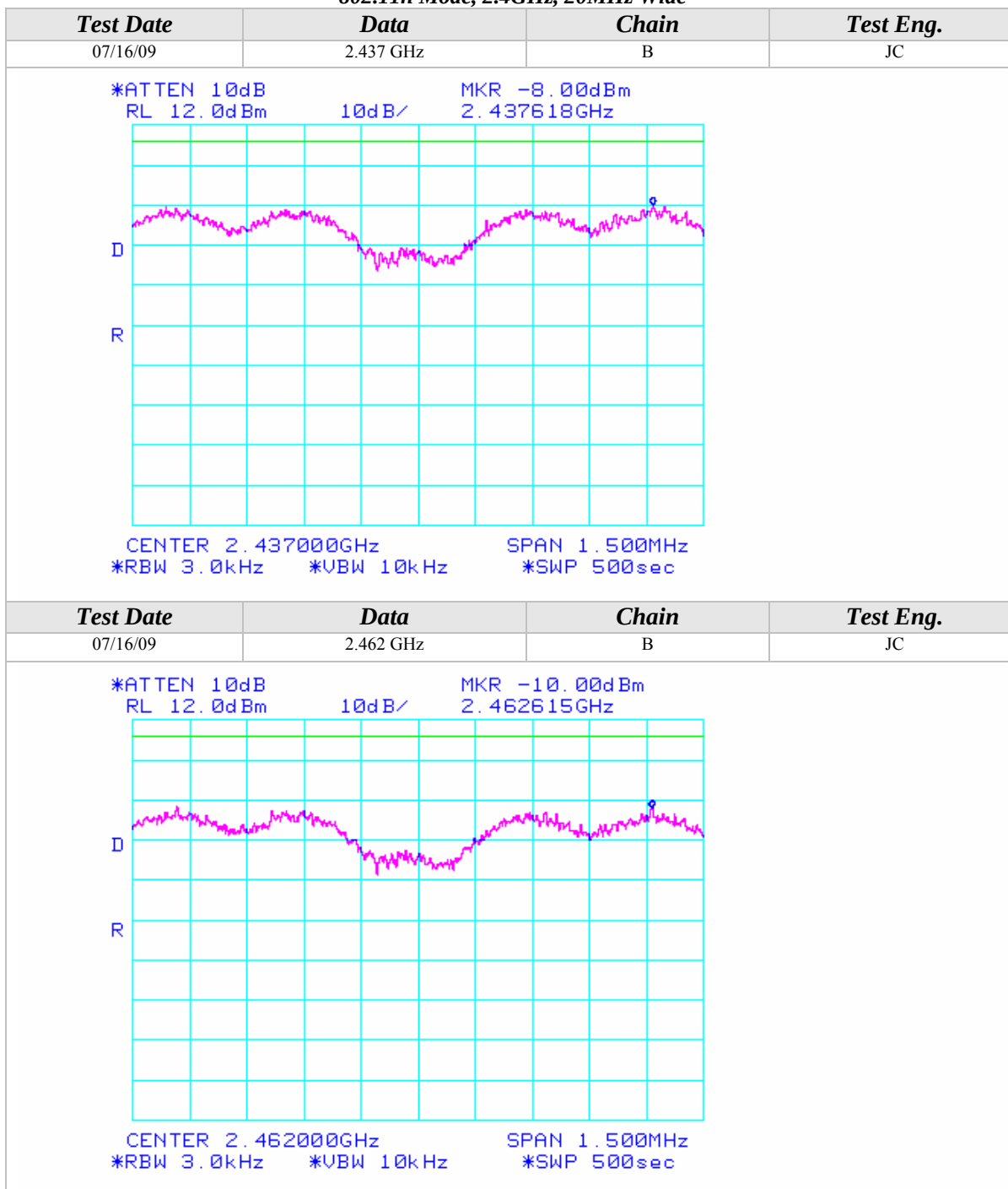
## 802.11n Mode, 2.4GHz, 20MHz Wide





## Peak Power Spectral Density (Continued)

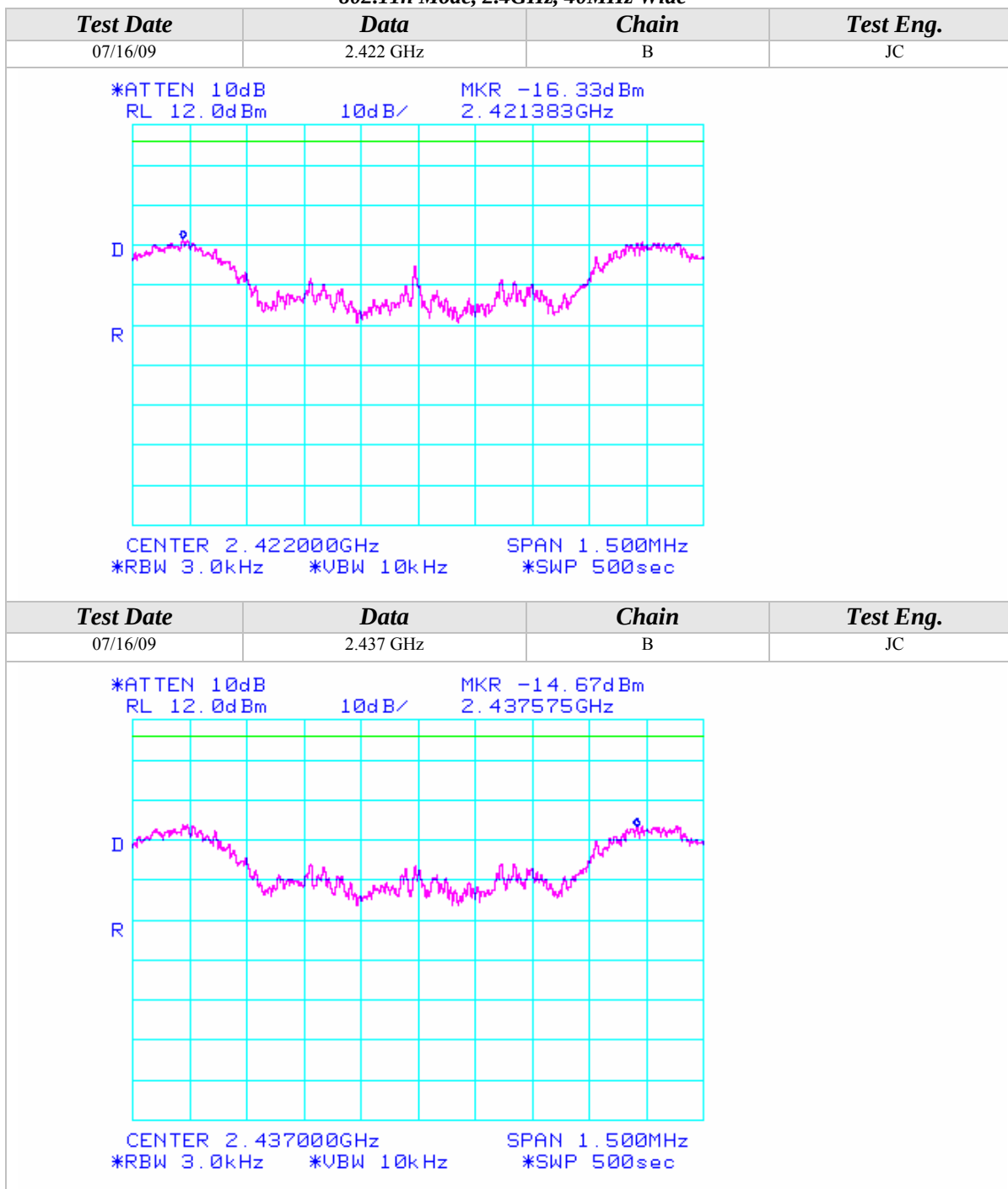
## 802.11n Mode, 2.4GHz, 20MHz Wide





## Peak Power Spectral Density (Continued)

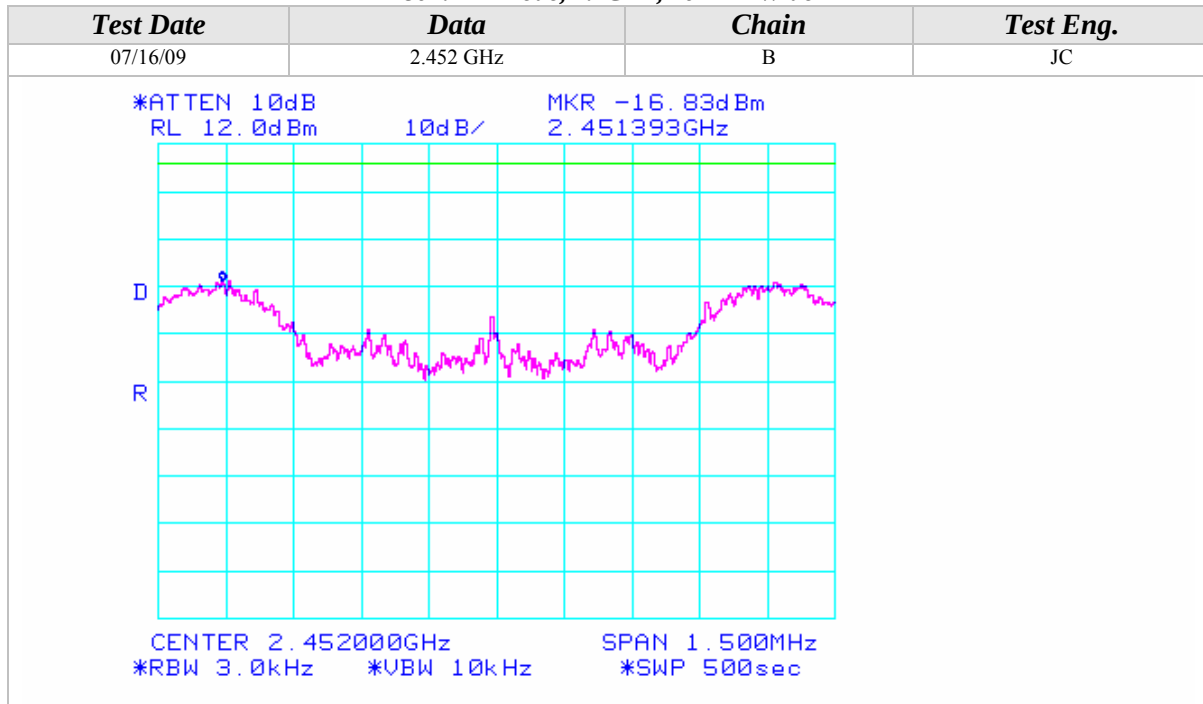
## 802.11n Mode, 2.4GHz, 40MHz Wide



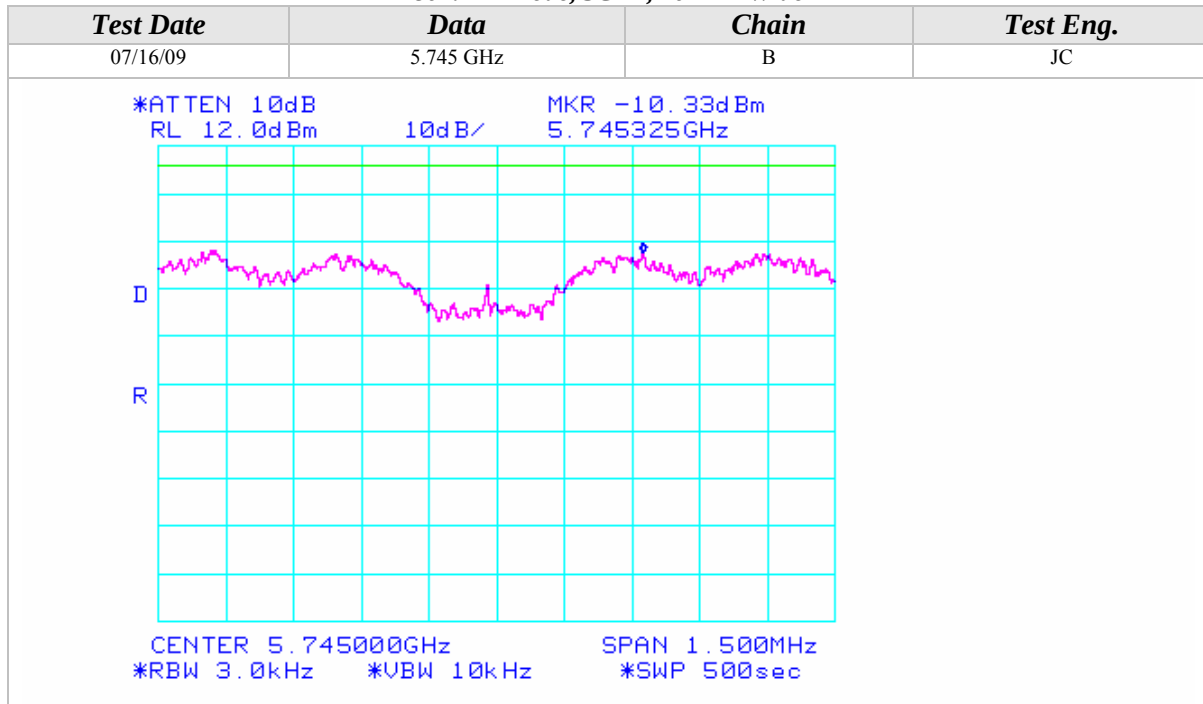


## Peak Power Spectral Density (Continued)

## 802.11n Mode, 2.4GHz, 40MHz Wide



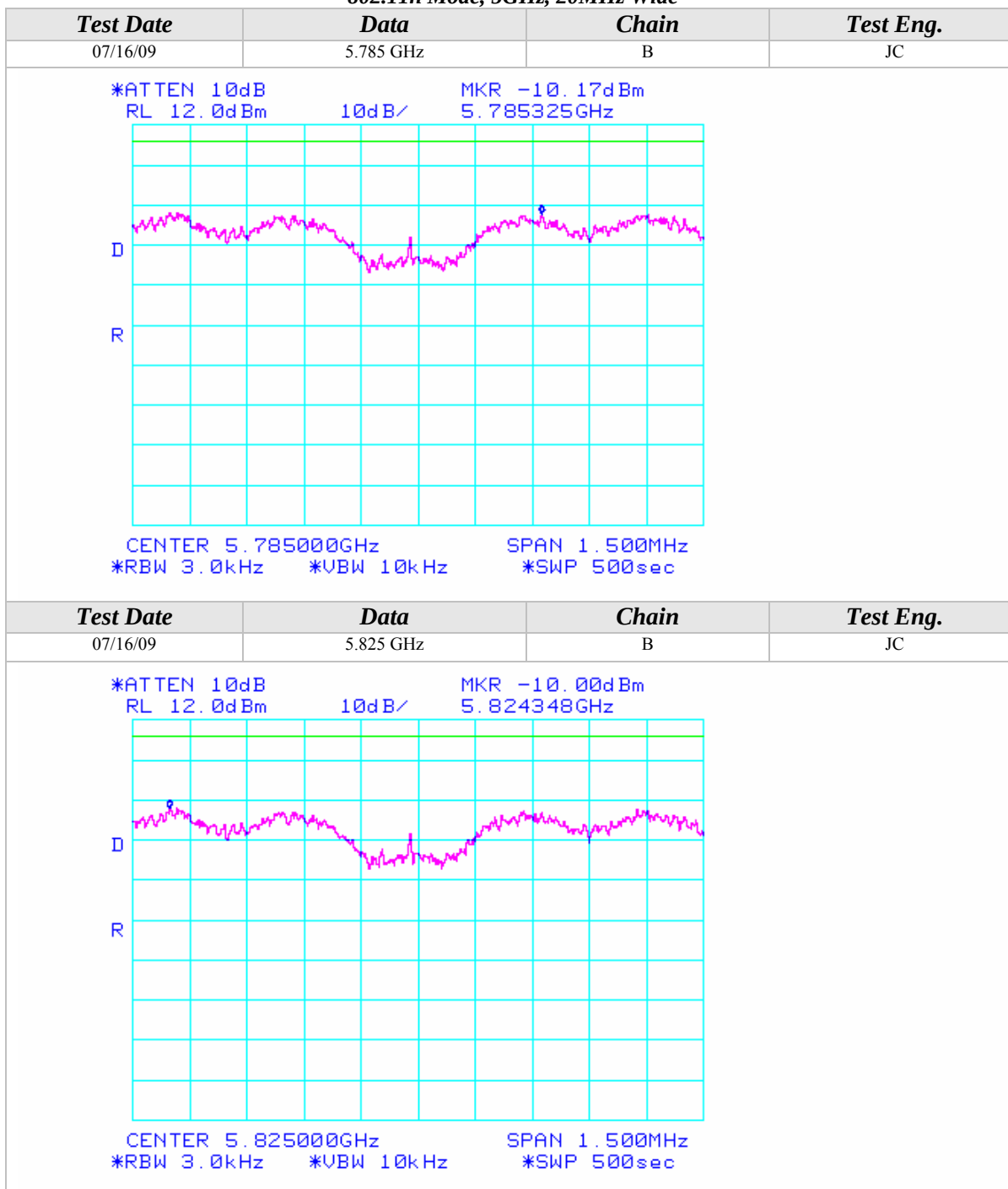
## 802.11n Mode, 5GHz, 20MHz Wide





## Peak Power Spectral Density (Continued)

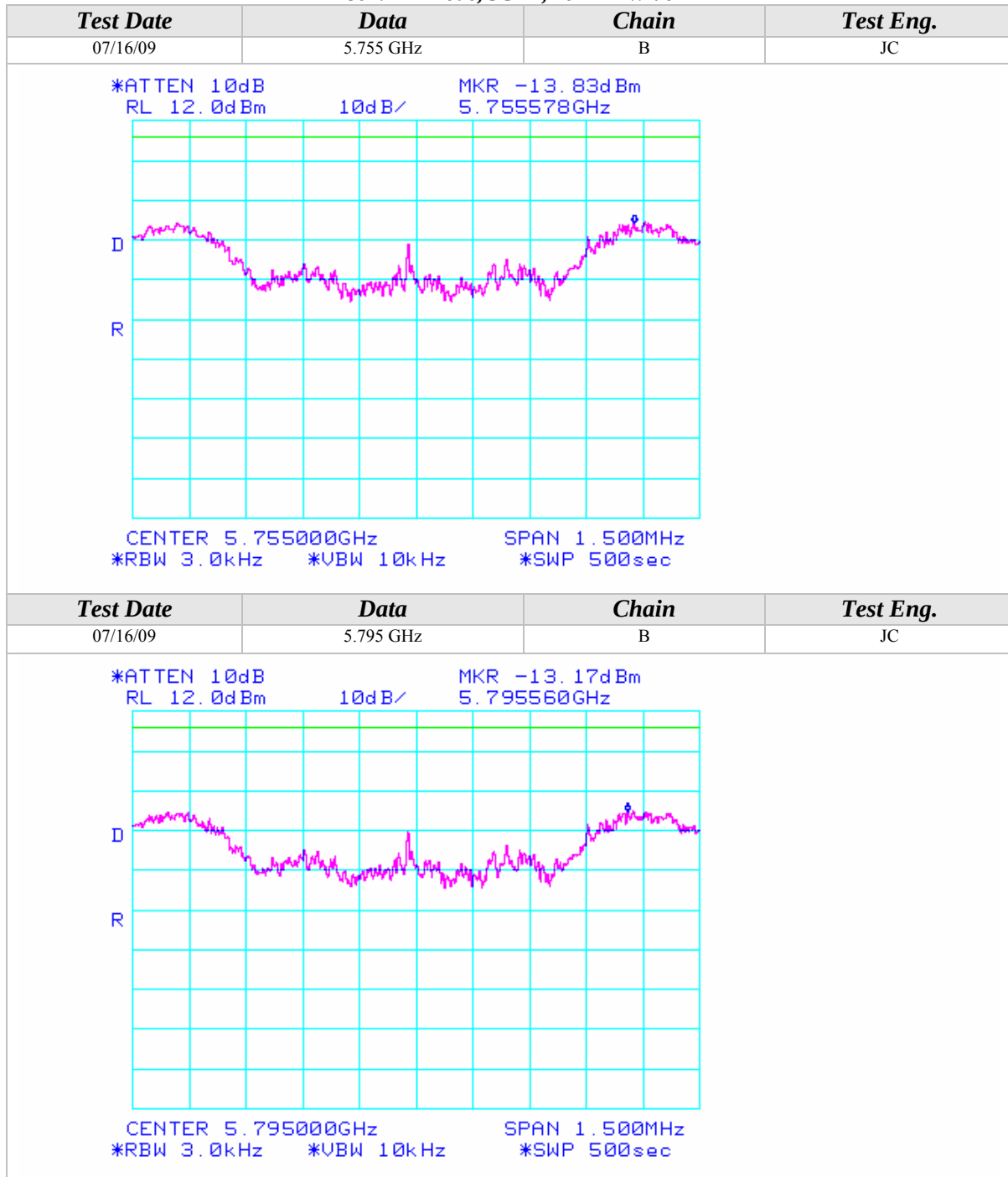
## 802.11n Mode, 5GHz, 20MHz Wide





## Peak Power Spectral Density (Continued)

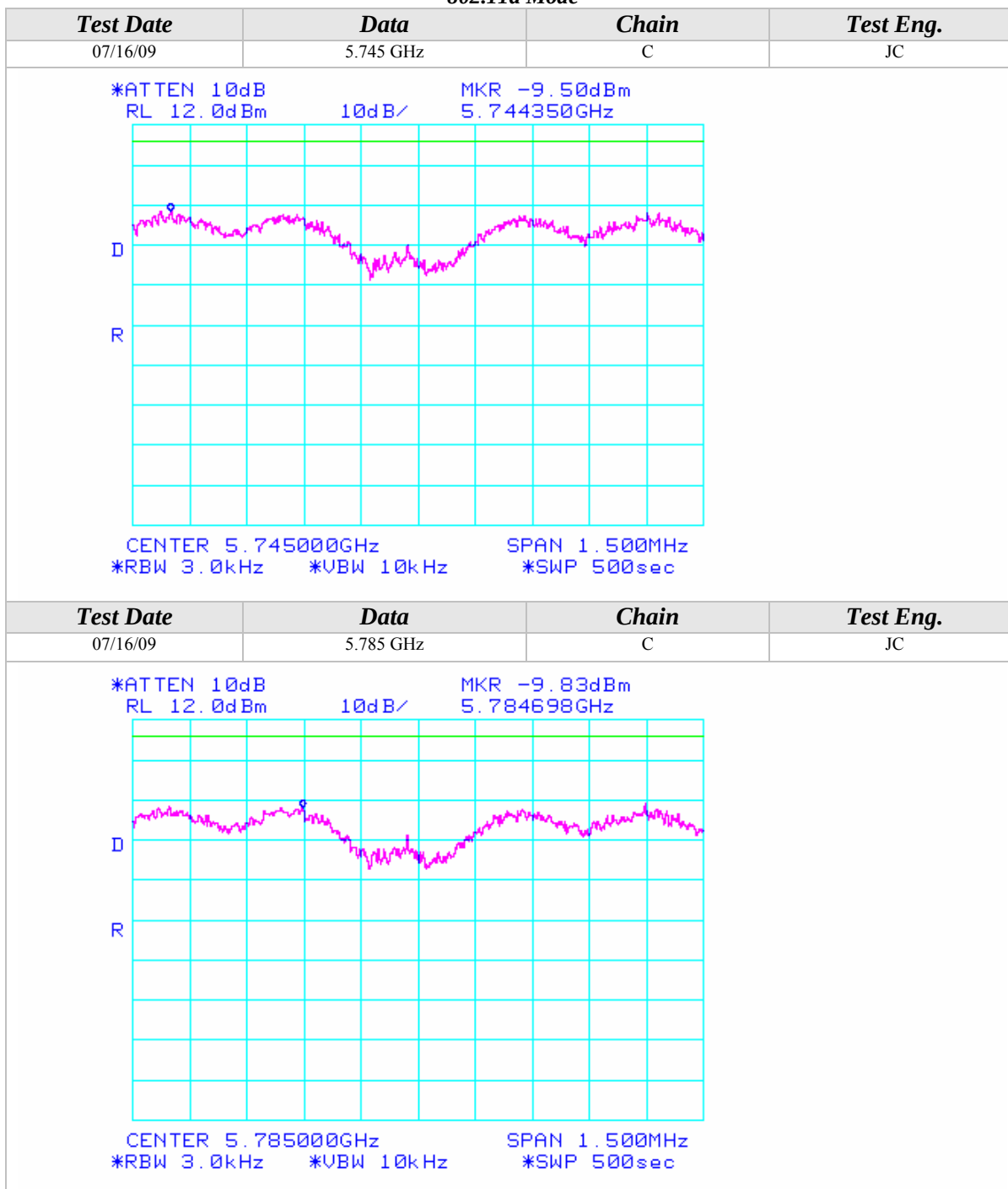
## 802.11n Mode, 5GHz, 40MHz Wide





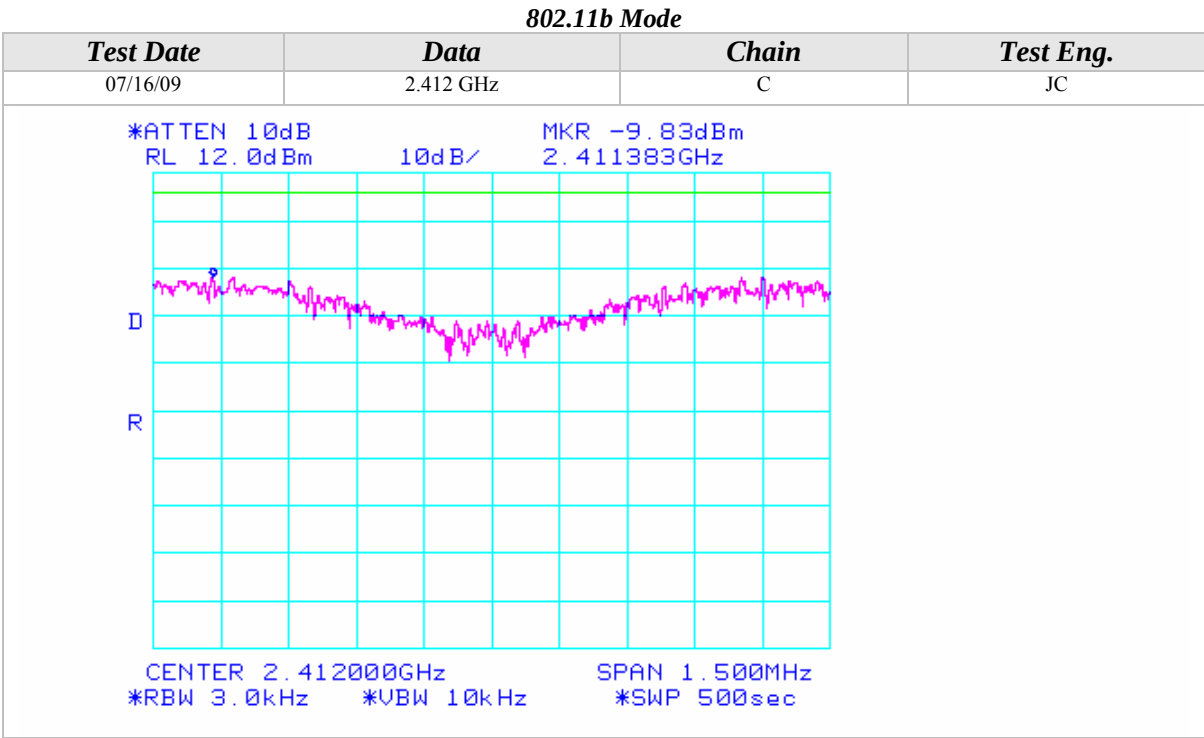
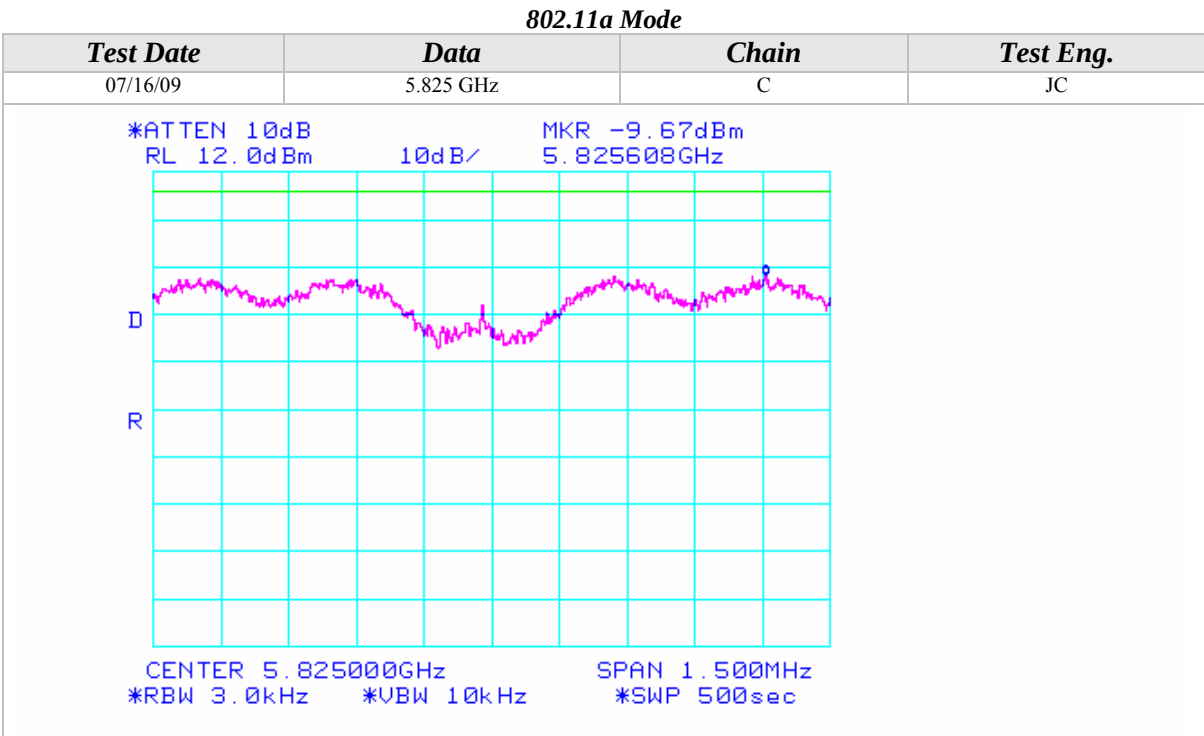
## Peak Power Spectral Density (Continued)

## 802.11a Mode





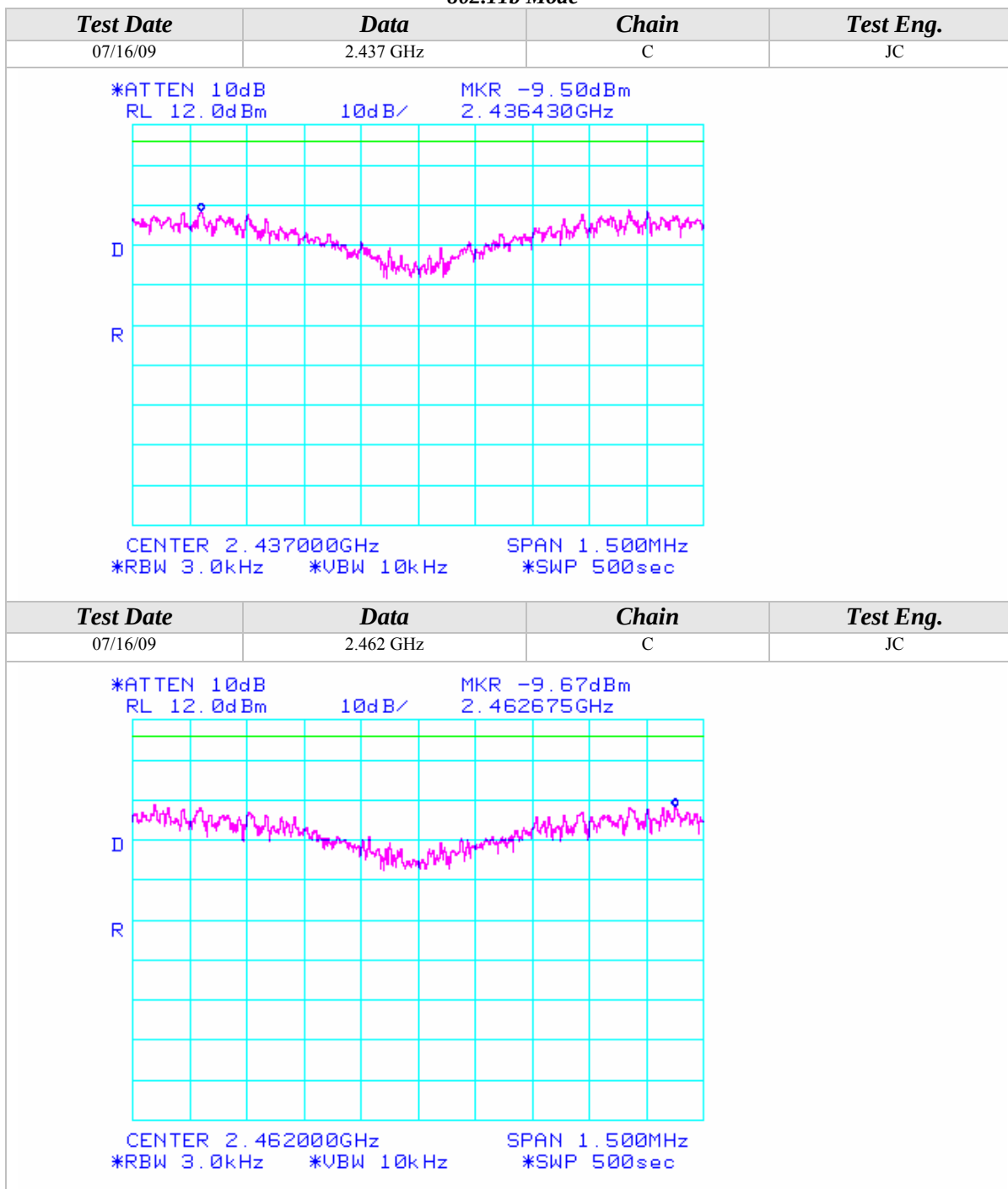
Peak Power Spectral Density (Continued)





## Peak Power Spectral Density (Continued)

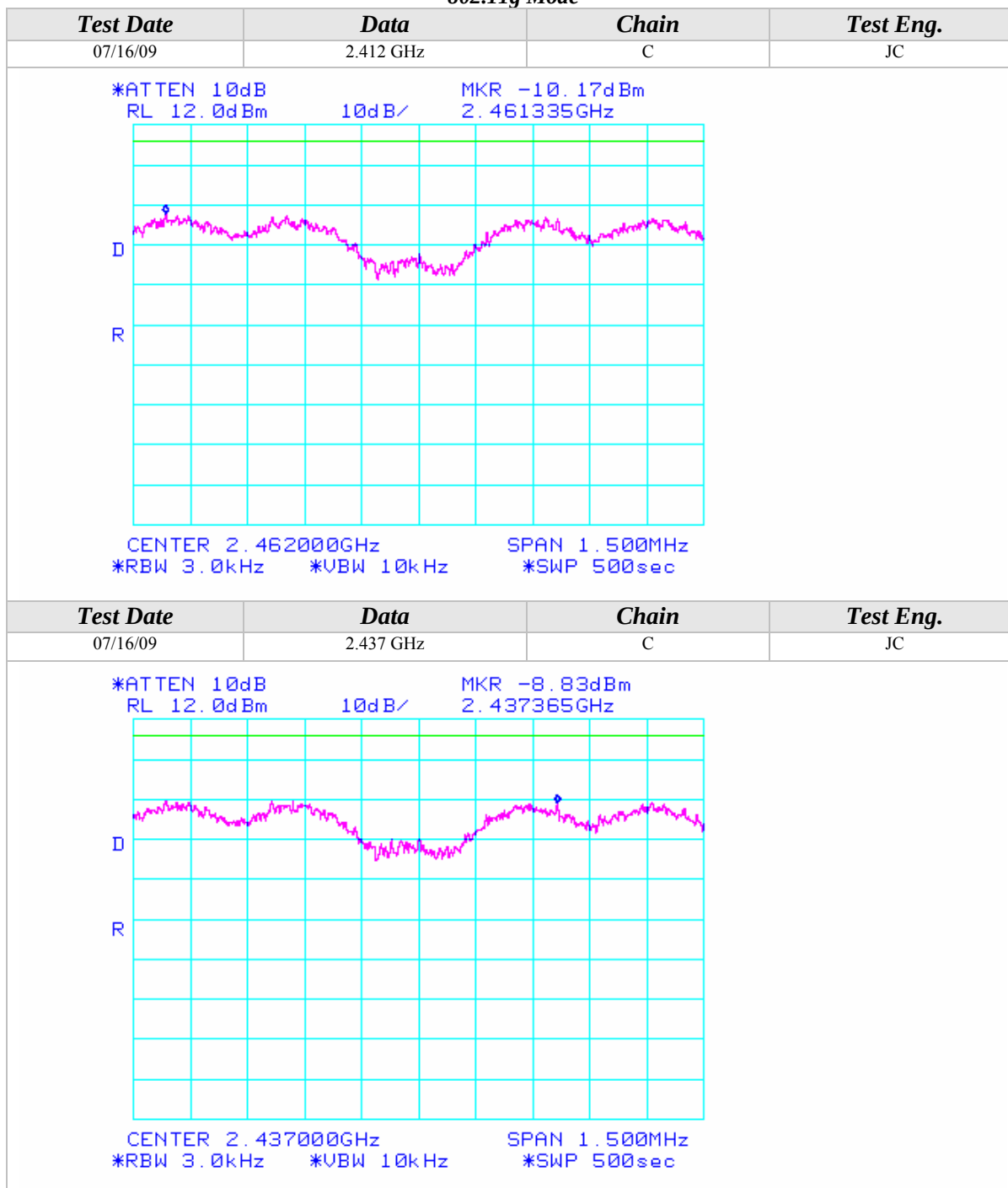
## 802.11b Mode





## Peak Power Spectral Density (Continued)

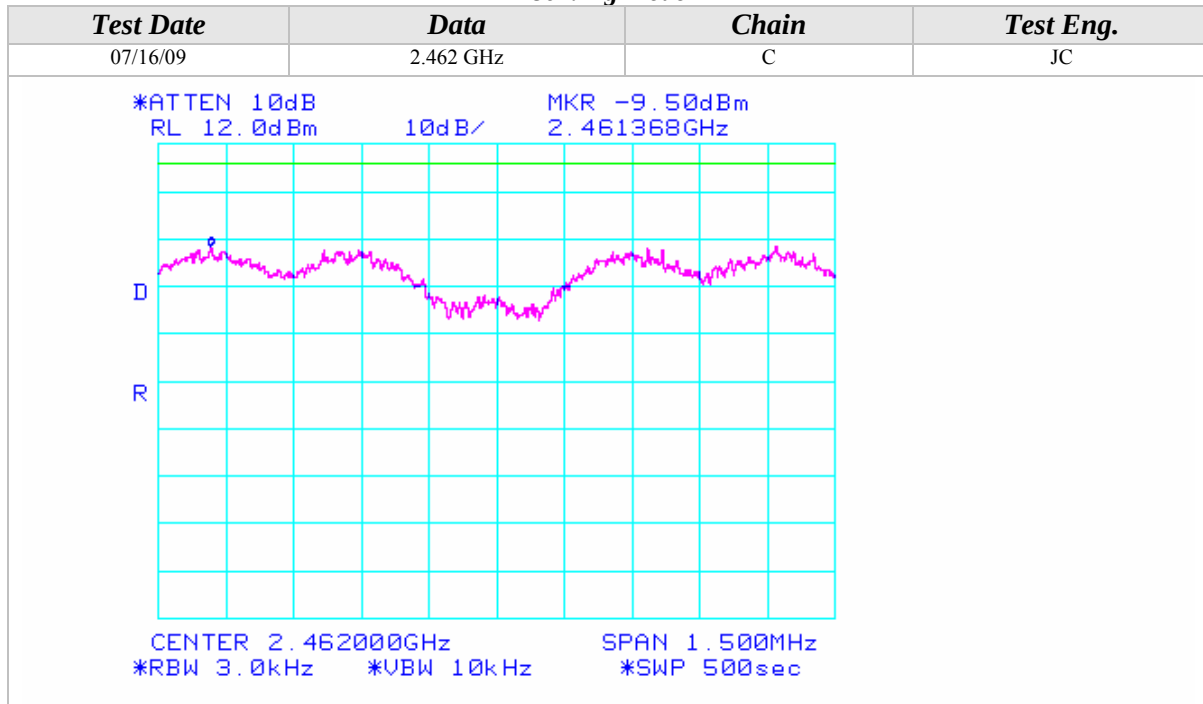
## 802.11g Mode



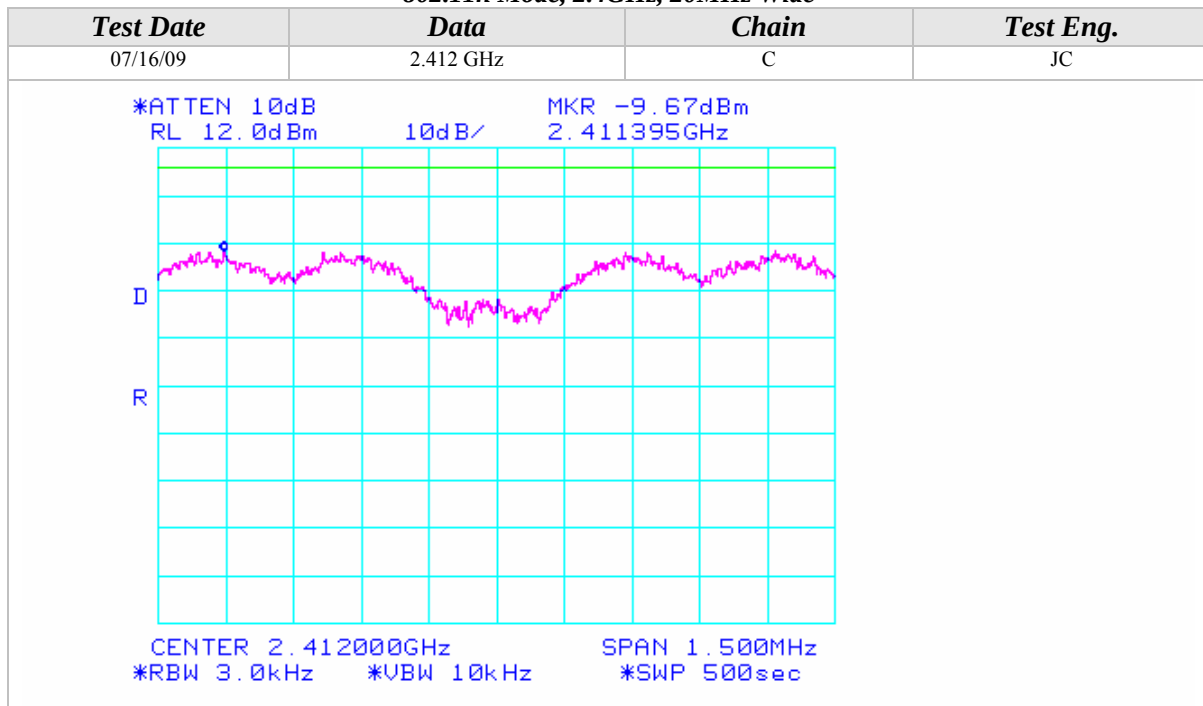


## Peak Power Spectral Density (Continued)

## 802.11g Mode



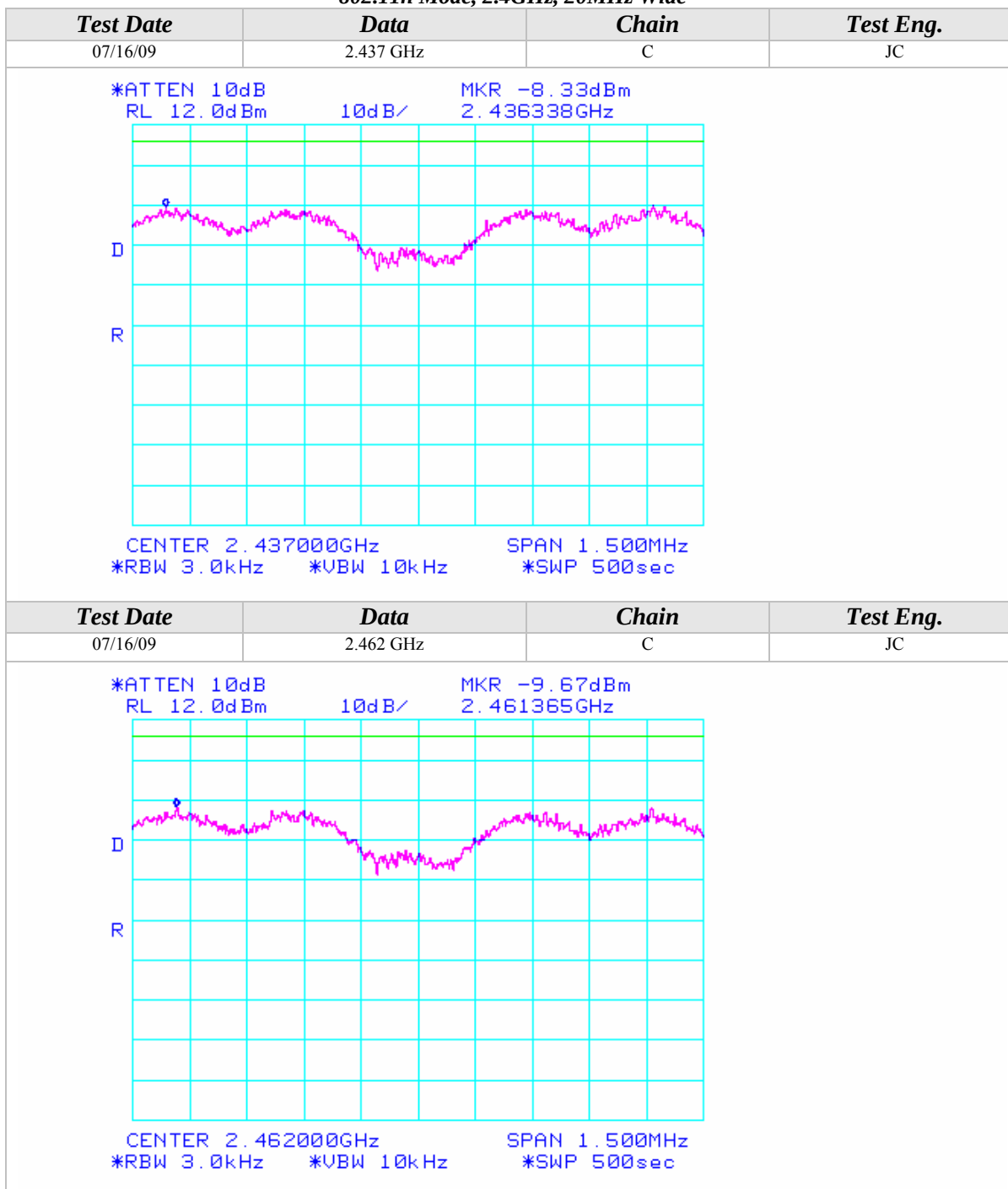
## 802.11n Mode, 2.4GHz, 20MHz Wide





## Peak Power Spectral Density (Continued)

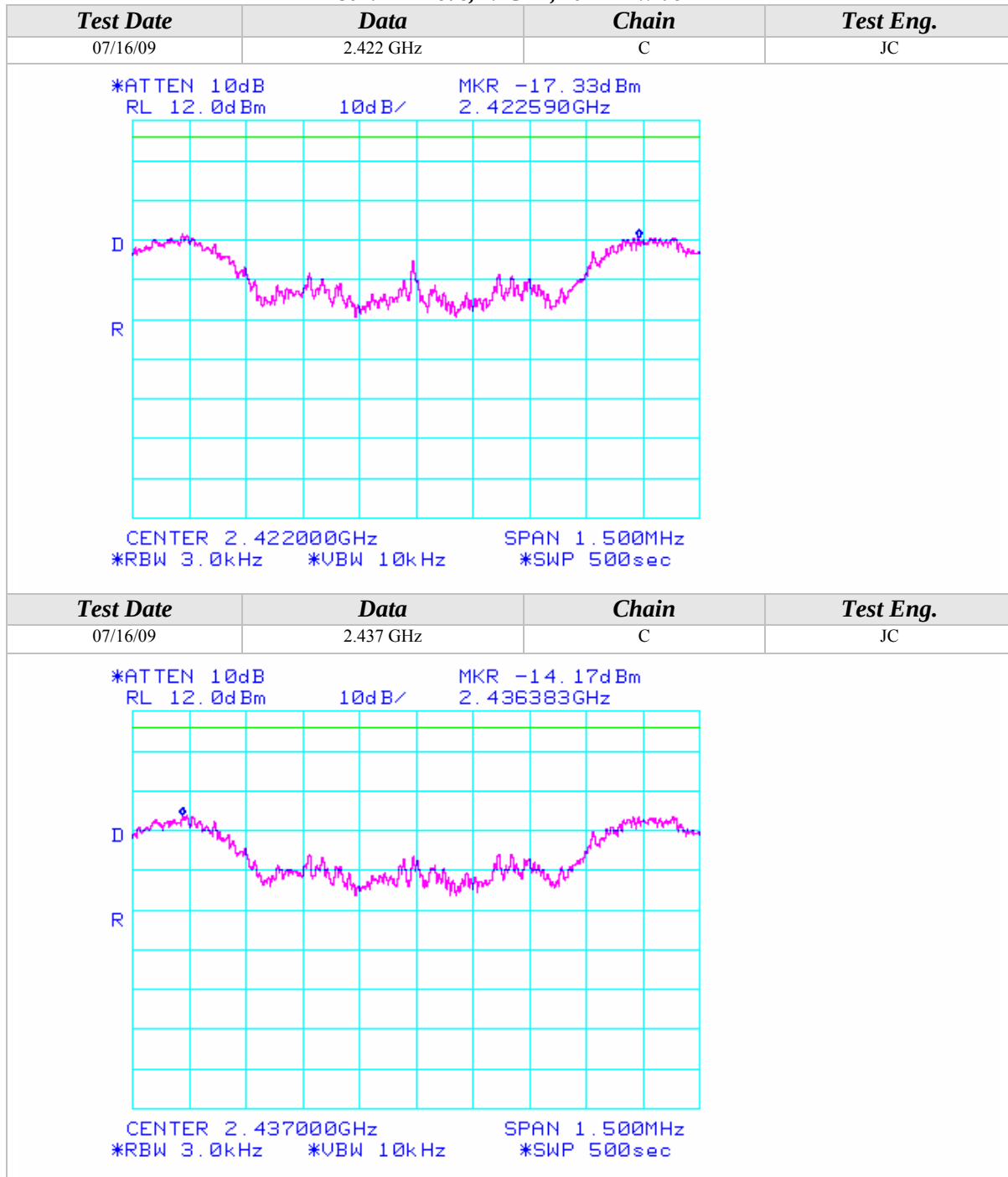
## 802.11n Mode, 2.4GHz, 20MHz Wide





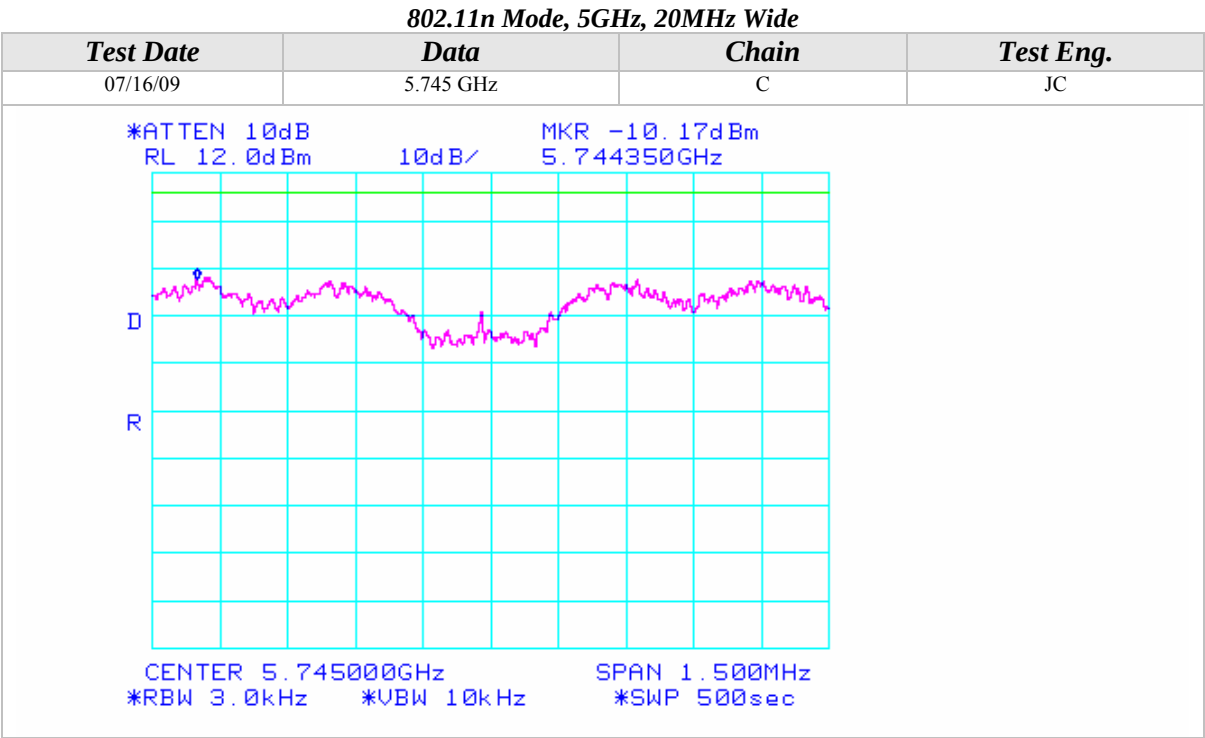
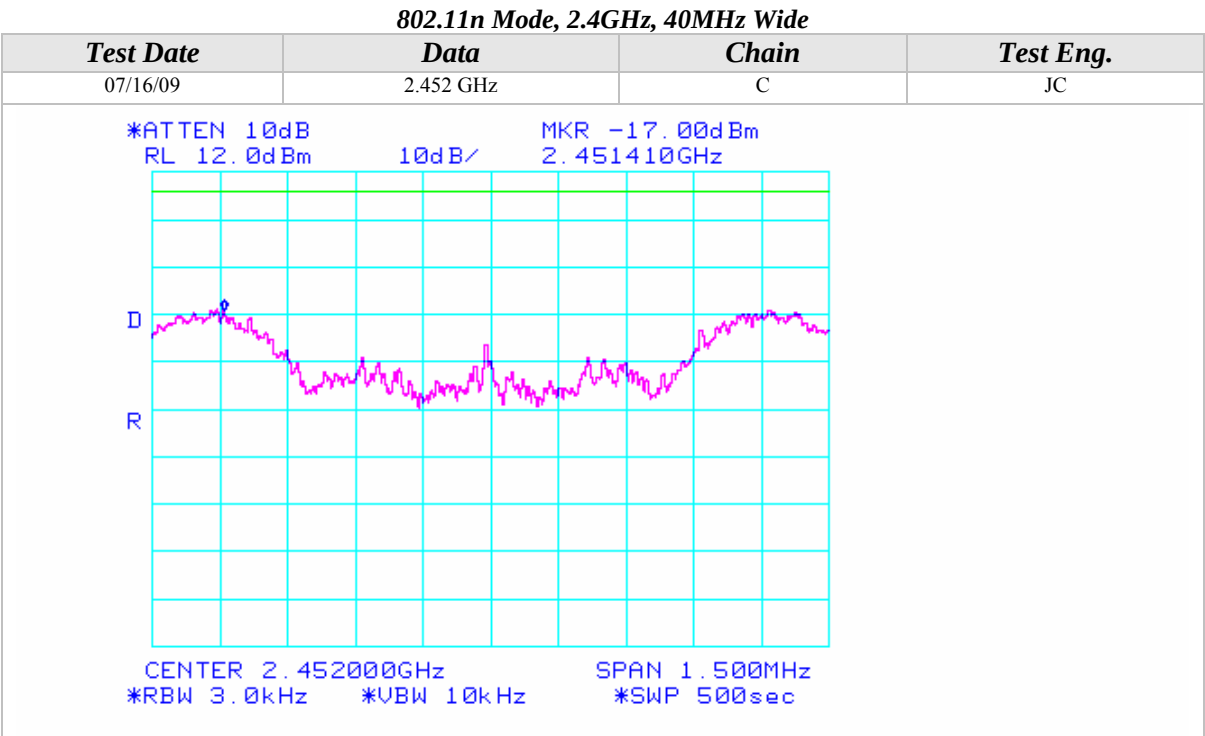
## Peak Power Spectral Density (Continued)

## 802.11n Mode, 2.4GHz, 40MHz Wide





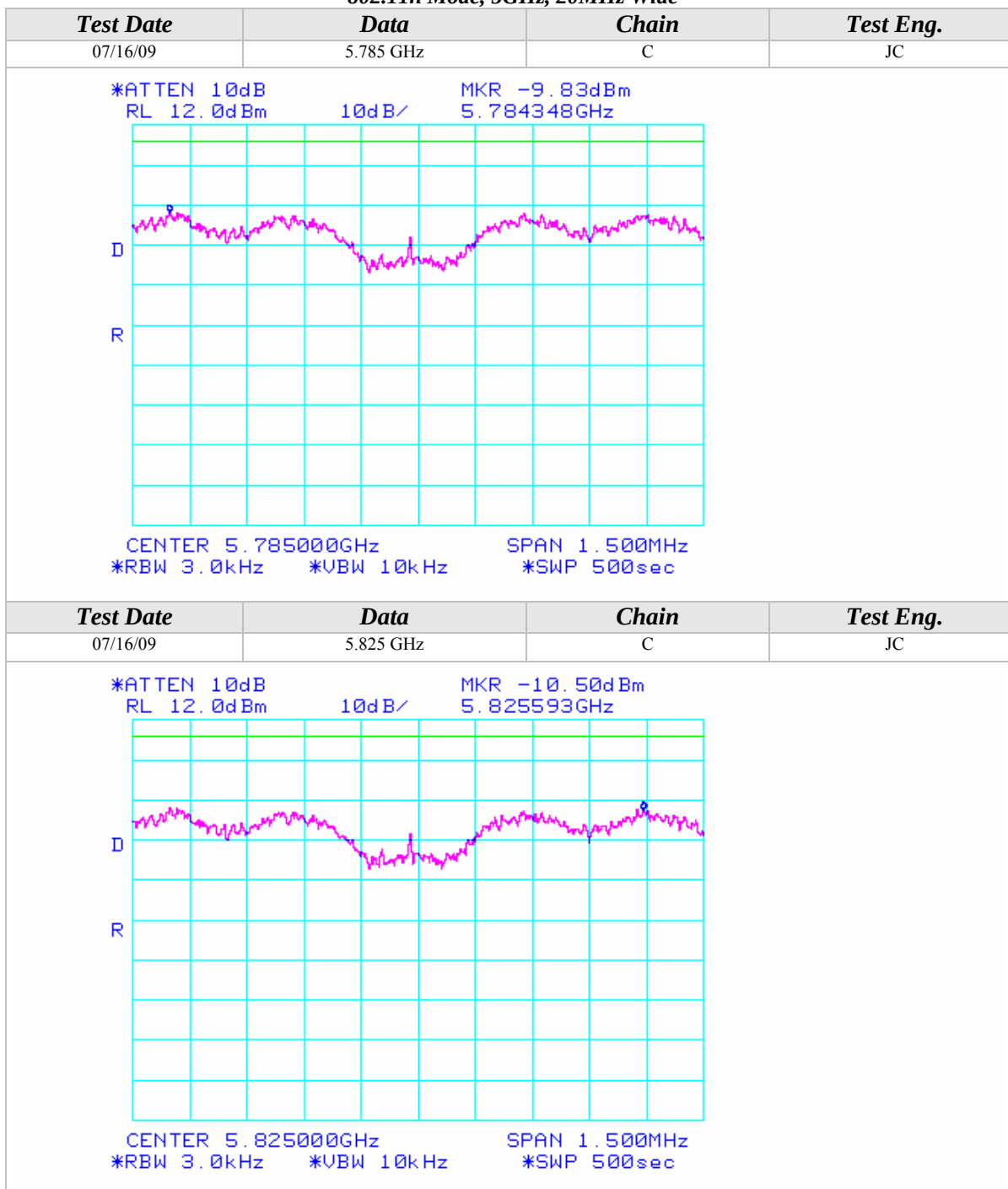
Peak Power Spectral Density (Continued)





## Peak Power Spectral Density (Continued)

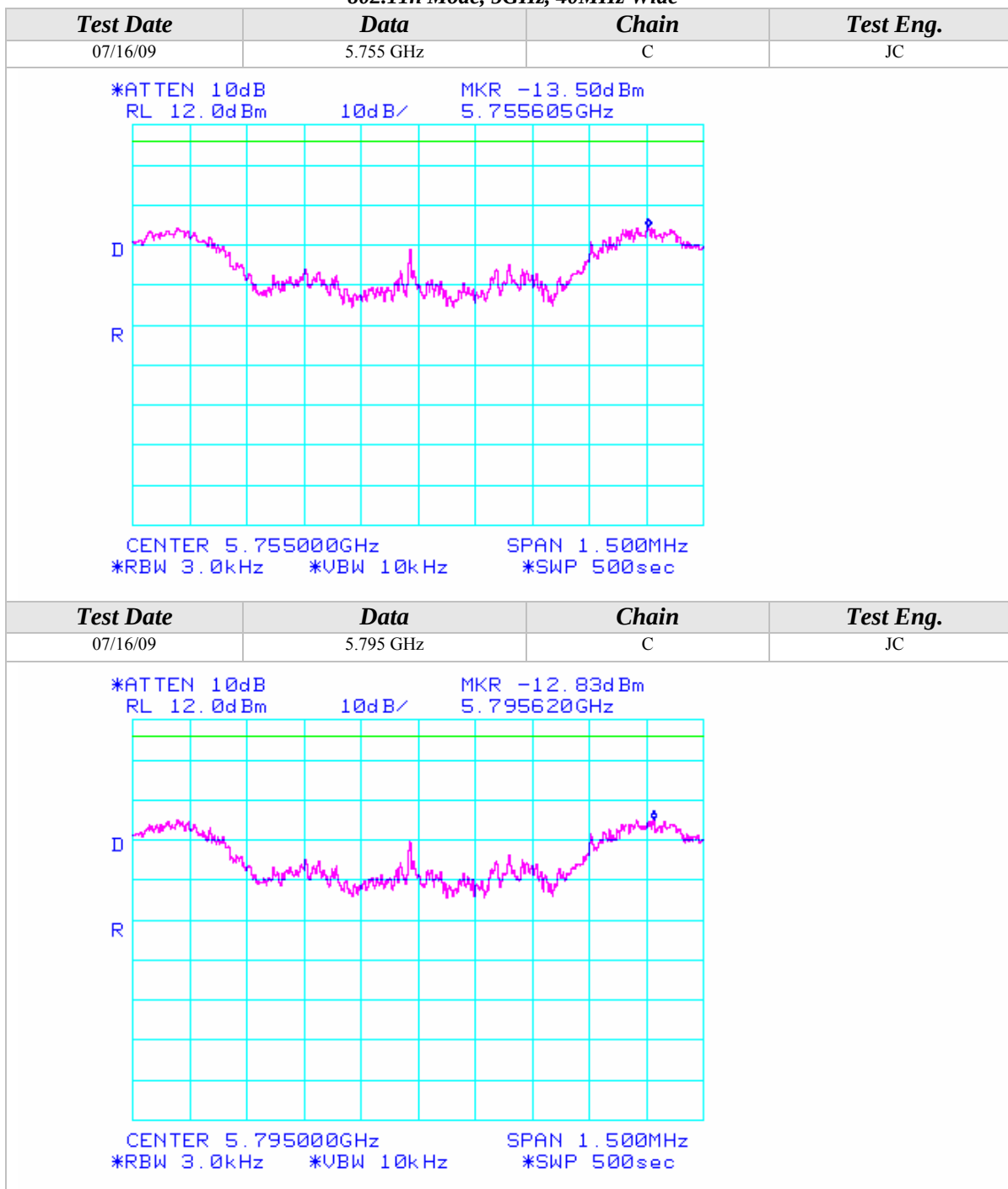
## 802.11n Mode, 5GHz, 20MHz Wide





## Peak Power Spectral Density (Continued)

## 802.11n Mode, 5GHz, 40MHz Wide



**CONDUCTED OUT OF BAND EMISSIONS**

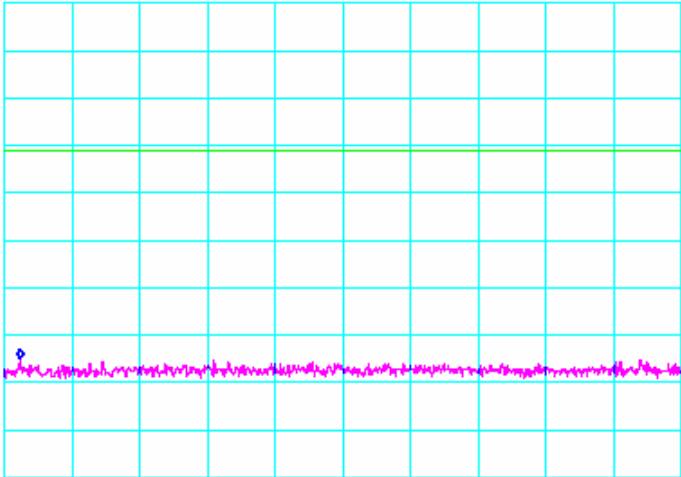
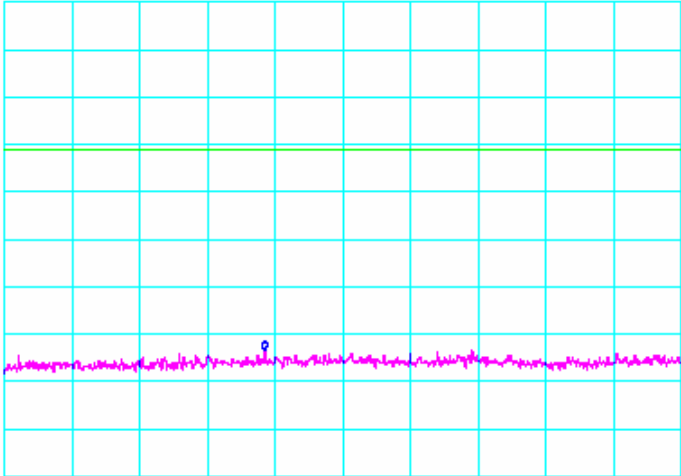
|                       |                                                                                    |                        |              |
|-----------------------|------------------------------------------------------------------------------------|------------------------|--------------|
| <b>CLIENT:</b>        | Intel Corporation                                                                  | <b>DATE:</b>           | 07/23/09     |
| <b>EUT:</b>           | Intel WiFi Link 6300                                                               | <b>PROJECT NUMBER:</b> | INTEL-090526 |
| <b>MODEL NUMBER:</b>  | 633ANHMW                                                                           | <b>TEST ENGINEER:</b>  | JC           |
| <b>SERIAL NUMBER:</b> | 0015005A17C0                                                                       | <b>SITE #:</b>         | 2            |
| <b>CONFIGURATION:</b> | Tested installed in an extender board connected to the host laptop's mini PCI slot | <b>TEMPERATURE:</b>    | 24 deg. C    |
|                       |                                                                                    | <b>HUMIDITY:</b>       | 37% RH       |
|                       |                                                                                    | <b>TIME:</b>           | 11:30 AM     |

|                     |                                                                                                                                                                                                                                                                                                                              |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description:</b> | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. |
| <b>Results:</b>     | See Data Sheet                                                                                                                                                                                                                                                                                                               |
| <b>Note:</b>        | Conducted Emissions Measurements were performed on the EUT with power supply set at the following voltage and frequency. <ul style="list-style-type: none"><li>• 120VAC / 60 Hz.</li></ul>                                                                                                                                   |



## Conducted Out Of Band Emissions (Continued)

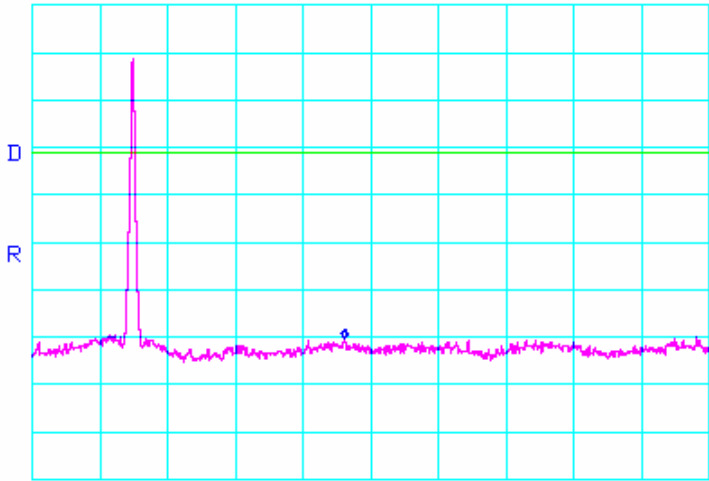
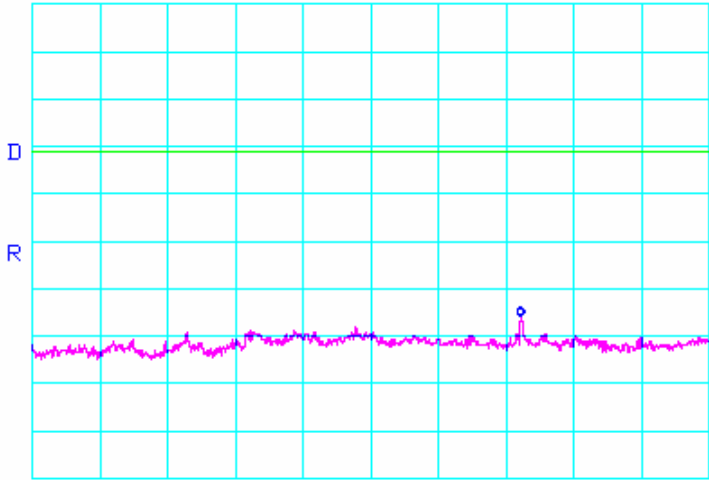
## 802.11a Mode

| Test Date                                                                                                                                                                                                                                                                                             | Data      | Chain | Test Eng. |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                                                              | 5.745 GHz | A     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -63.00dBm<br/>52.6MHz</div></div><div>START 30.0MHz<br/>*RBW 100kHz</div><div>STOP 1.0000GHz<br/>*VBW 300kHz<br/>SWP 540ms</div></div>      |           |       |           |
| Test Date                                                                                                                                                                                                                                                                                             | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                                              | 5.745 GHz | A     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -61.33dBm<br/>2.540GHz</div></div><div>START 1.000GHz<br/>*RBW 100kHz</div><div>STOP 5.000GHz<br/>*VBW 300kHz<br/>SWP 2.20sec</div></div> |           |       |           |



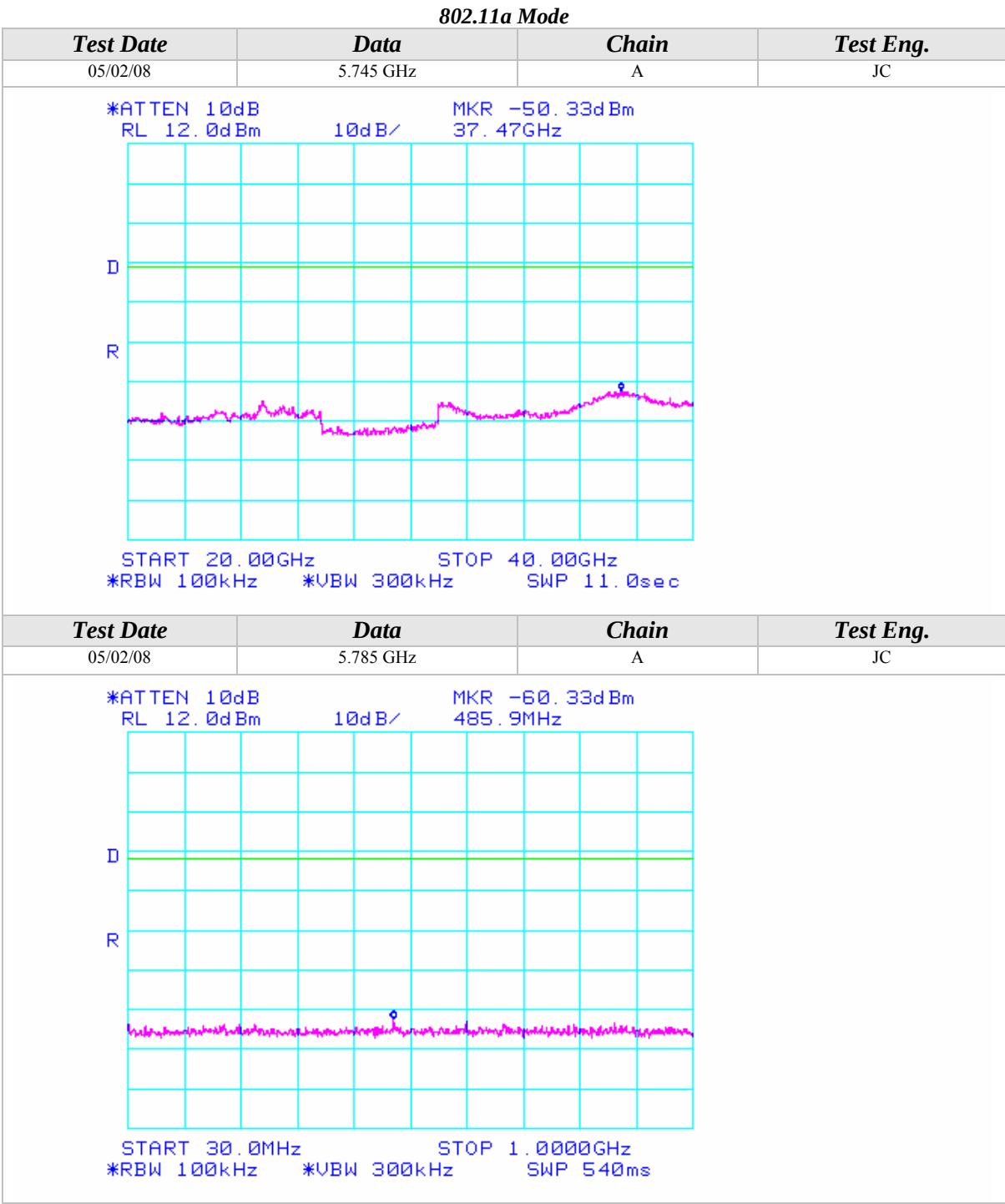
## Conducted Out Of Band Emissions (Continued)

## 802.11a Mode

| Test Date                                                                                                                                                                                                                                                                                            | Data      | Chain | Test Eng. |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                                                             | 5.745 GHz | A     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -58.33dBm<br/>7.308GHz</div></div><div>START 5.000GHz      STOP 10.000GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 2.80sec</div></div>    |           |       |           |
| Test Date                                                                                                                                                                                                                                                                                            | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                                             | 5.745 GHz | A     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -53.83dBm<br/>17.22GHz</div></div><div>START 10.000GHz      STOP 20.000GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 5.50sec</div></div> |           |       |           |



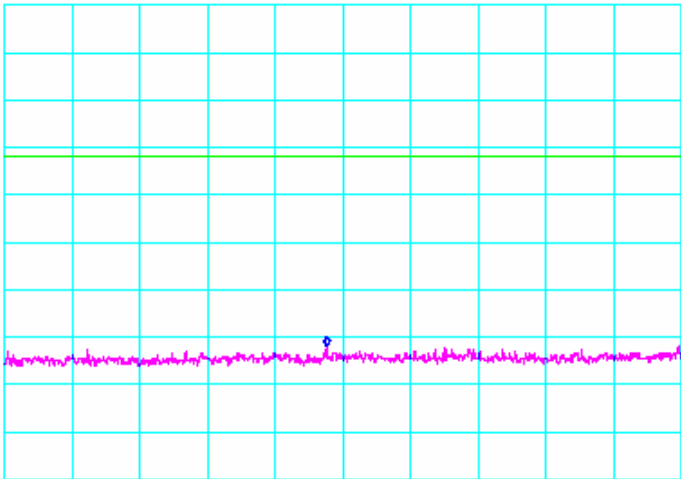
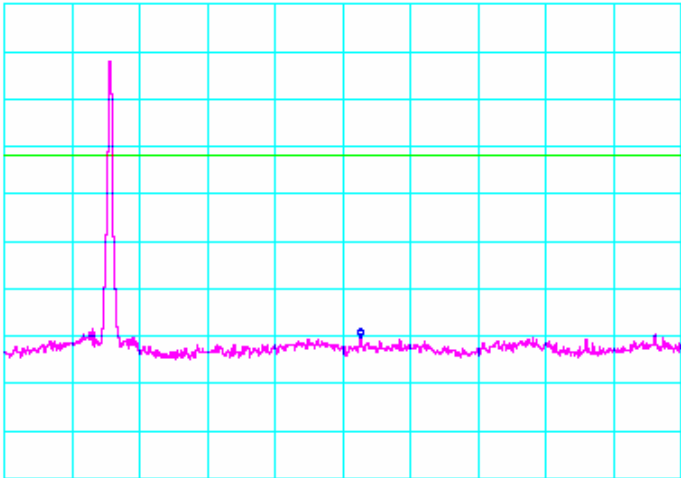
Conducted Out Of Band Emissions (Continued)





## Conducted Out Of Band Emissions (Continued)

## 802.11a Mode

| Test Date                                                                                                                                                                                                                                                                                              | Data      | Chain | Test Eng. |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                                                               | 5.785 GHz | A     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -59.83dBm<br/>2.907GHz</div></div><div>START 1.000GHz<br/>*RBW 100kHz</div><div>STOP 5.000GHz<br/>*VBW 300kHz<br/>SWP 2.20sec</div></div>    |           |       |           |
| Test Date                                                                                                                                                                                                                                                                                              | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                                               | 5.785 GHz | A     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -58.33dBm<br/>7.633GHz</div></div><div>START 5.000GHz<br/>*RBW 100kHz</div><div>STOP 10.000GHz<br/>*VBW 300kHz<br/>SWP 2.80sec</div></div> |           |       |           |



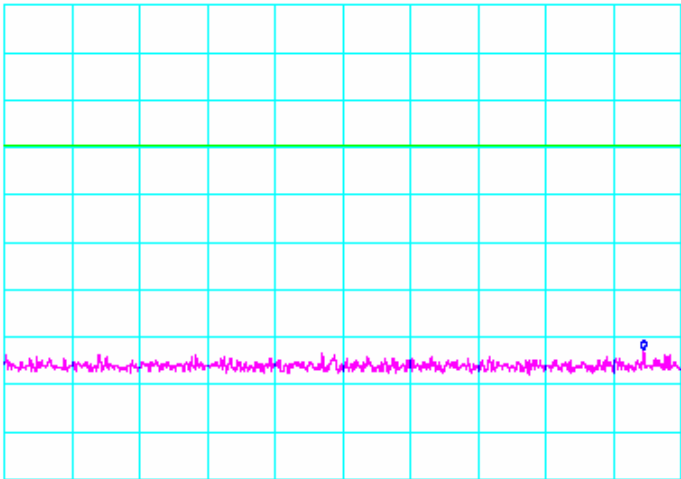
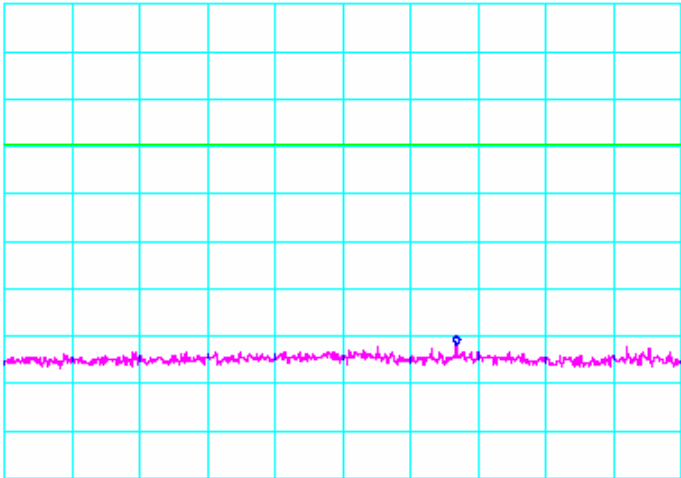
Conducted Out Of Band Emissions (Continued)

| 802.11a Mode                                                                                                                                                                                                              |           |       |           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| Test Date                                                                                                                                                                                                                 | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                  | 5.785 GHz | A     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -53.67dBm<br/>17.35GHz</div></div><div></div><div>START 10.00GHz      STOP 20.00GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 5.50sec</div></div> |           |       |           |
| Test Date                                                                                                                                                                                                                 | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                  | 5.785 GHz | A     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -49.50dBm<br/>37.67GHz</div></div><div></div><div>START 20.00GHz      STOP 40.00GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 11.0sec</div></div> |           |       |           |



## Conducted Out Of Band Emissions (Continued)

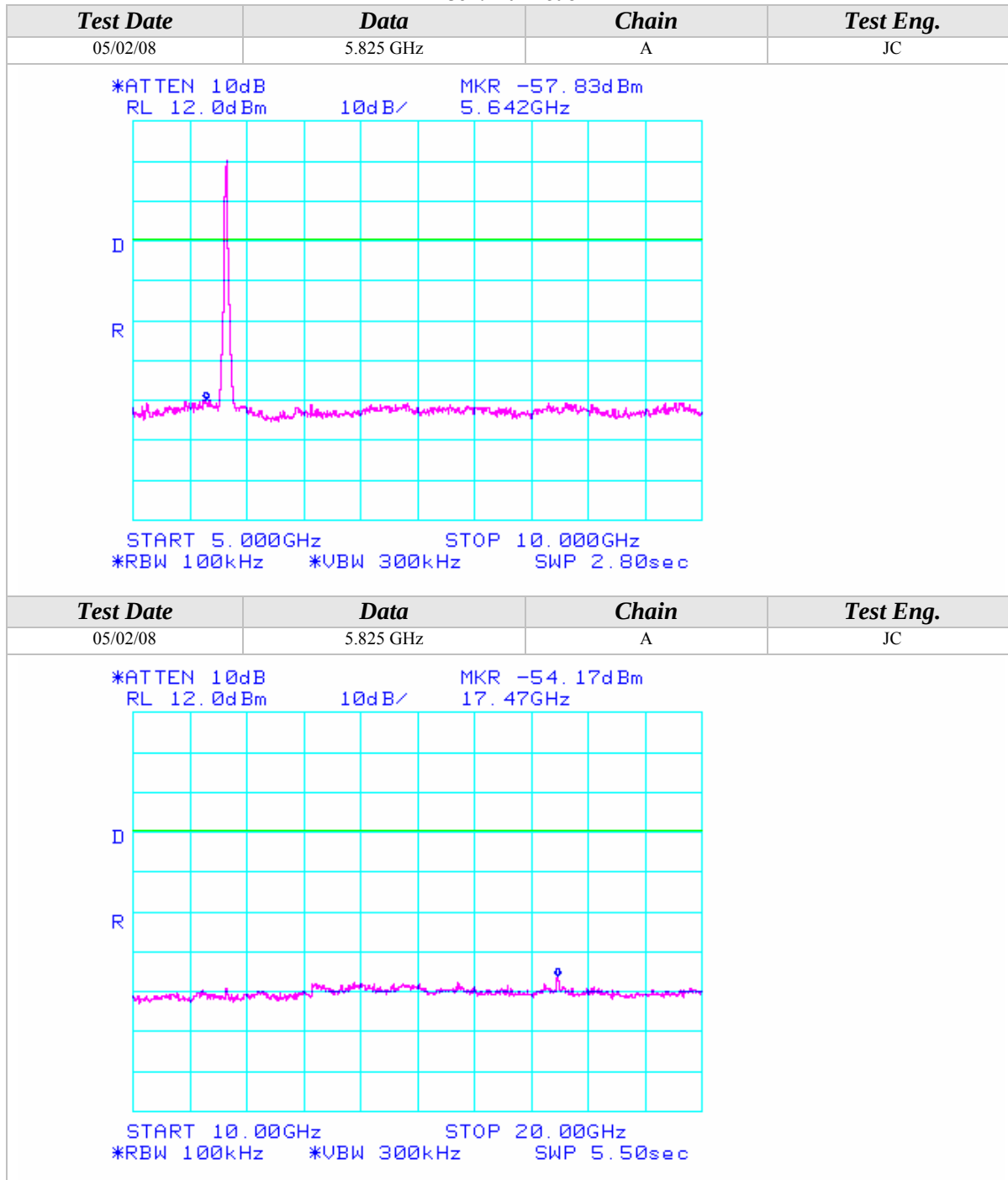
## 802.11a Mode

| Test Date                                                                                                                                                                                                                                                                                          | Data      | Chain | Test Eng. |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                                                           | 5.825 GHz | A     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -60.67dBm<br/>946.7MHz</div></div><div>START 30.0MHz      STOP 1.0000GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 540ms</div></div>     |           |       |           |
| Test Date                                                                                                                                                                                                                                                                                          | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                                           | 5.825 GHz | A     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -59.83dBm<br/>3.673GHz</div></div><div>START 1.000GHz      STOP 5.000GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 2.20sec</div></div> |           |       |           |



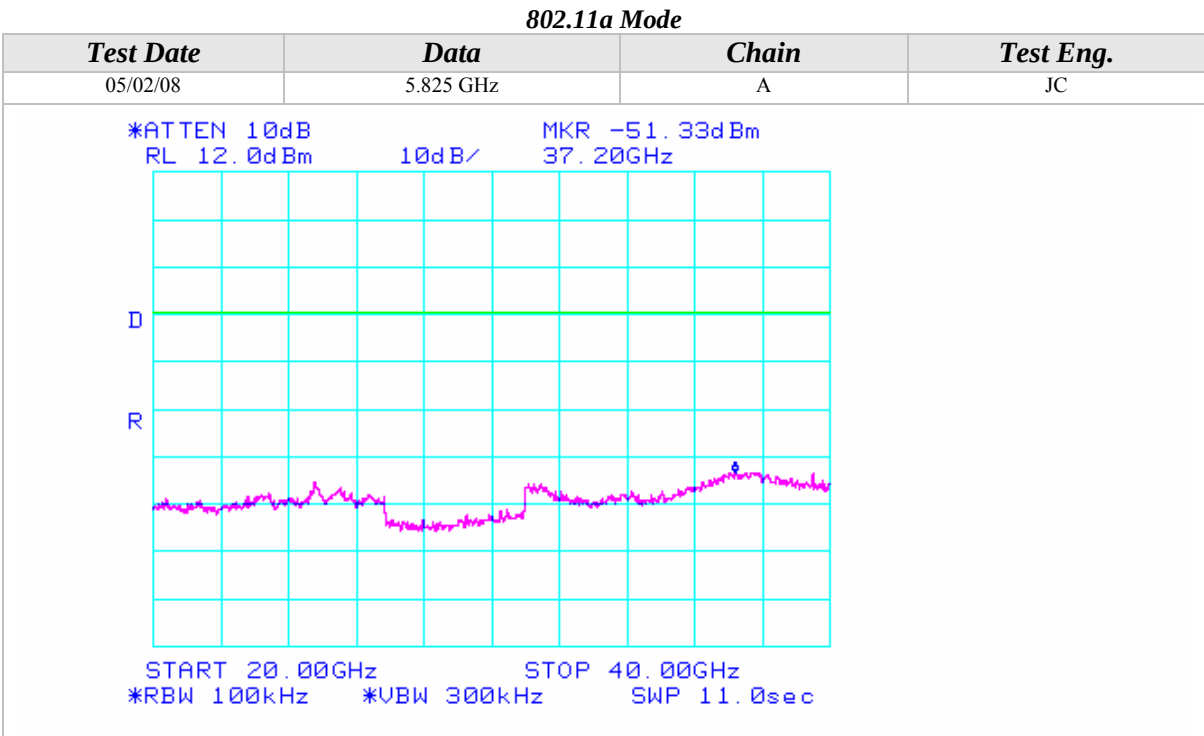
## Conducted Out Of Band Emissions (Continued)

## 802.11a Mode





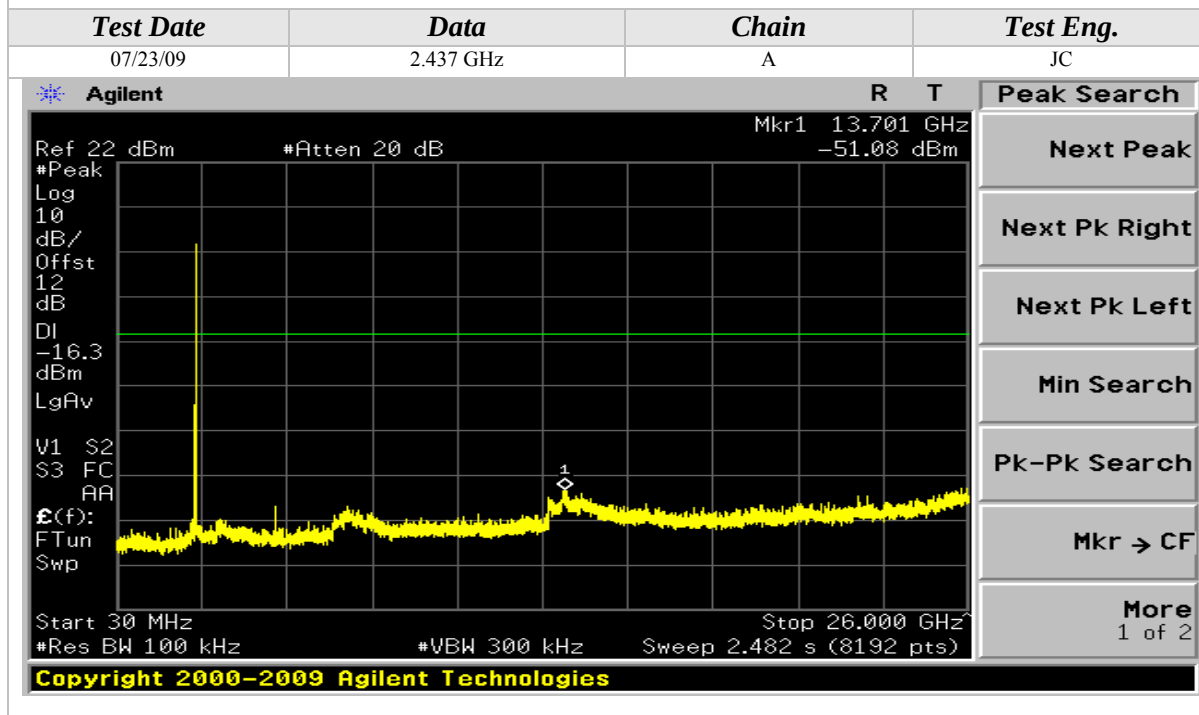
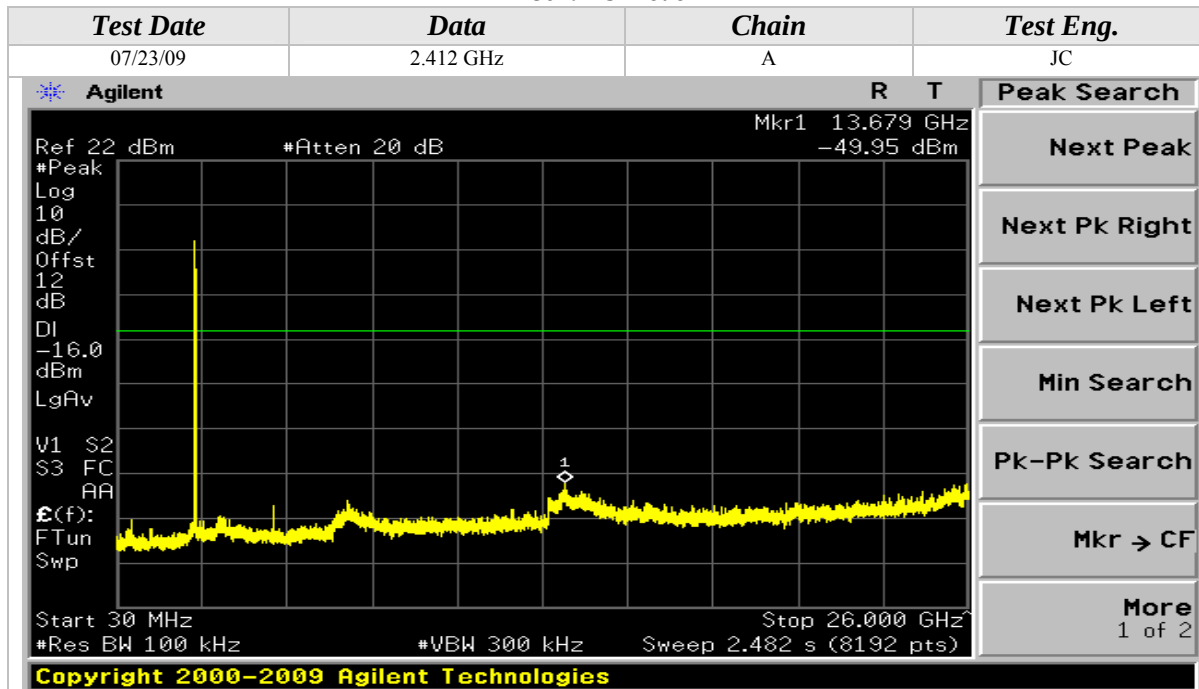
Conducted Out Of Band Emissions (Continued)





## Conducted Out Of Band Emissions (Continued)

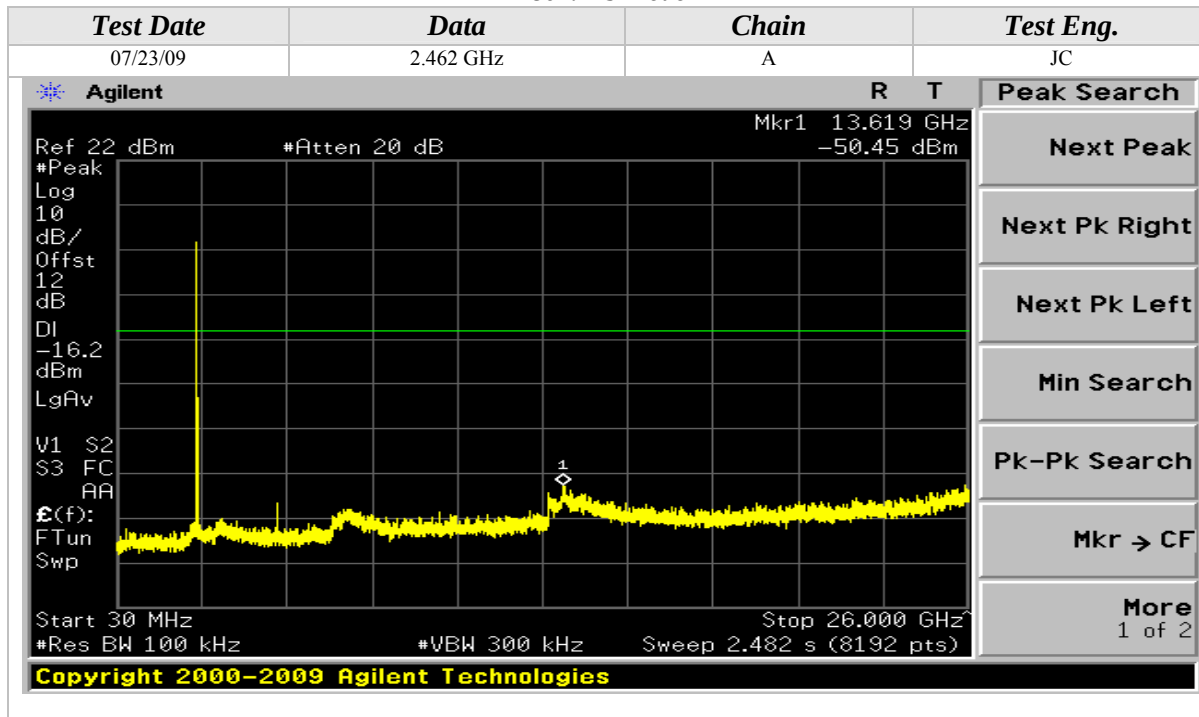
## 802.11b Mode



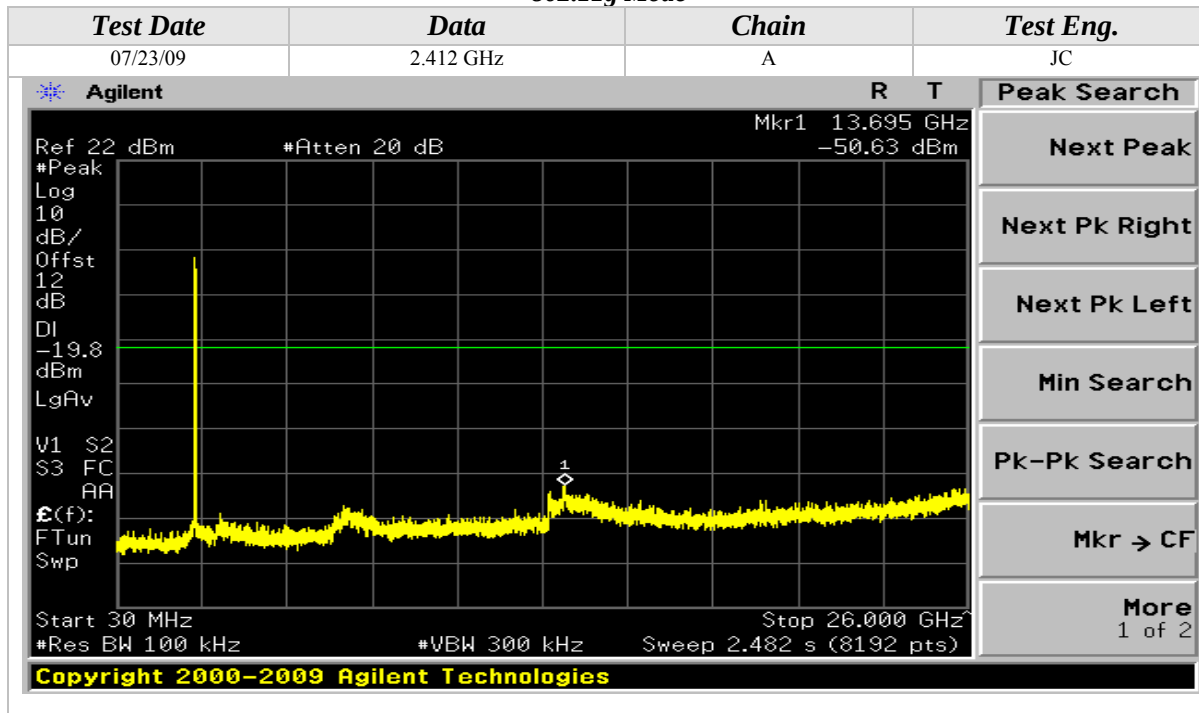


## Conducted Out Of Band Emissions (Continued)

## 802.11b Mode



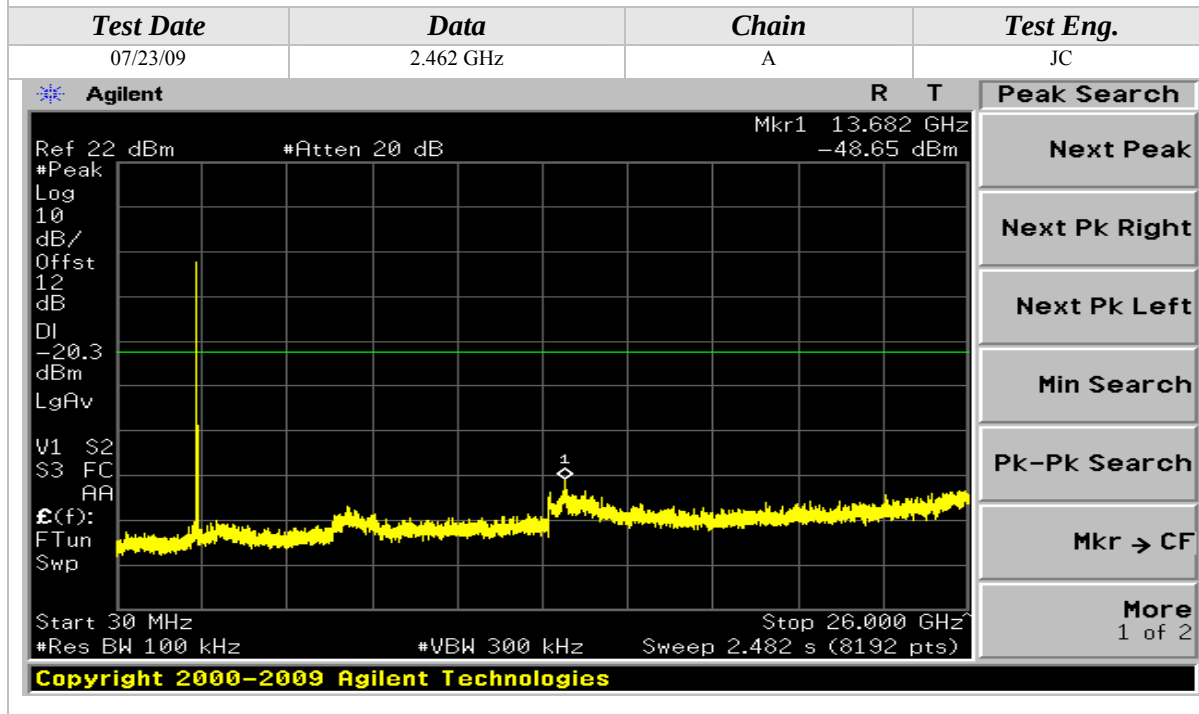
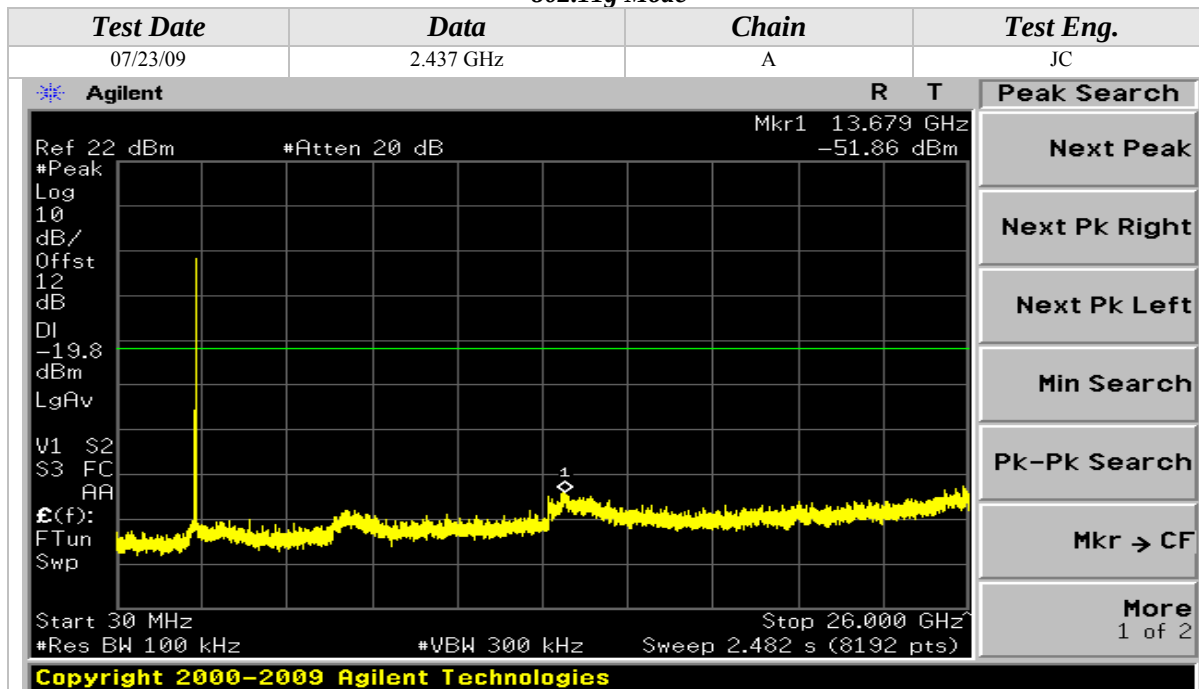
## 802.11g Mode





## Conducted Out Of Band Emissions (Continued)

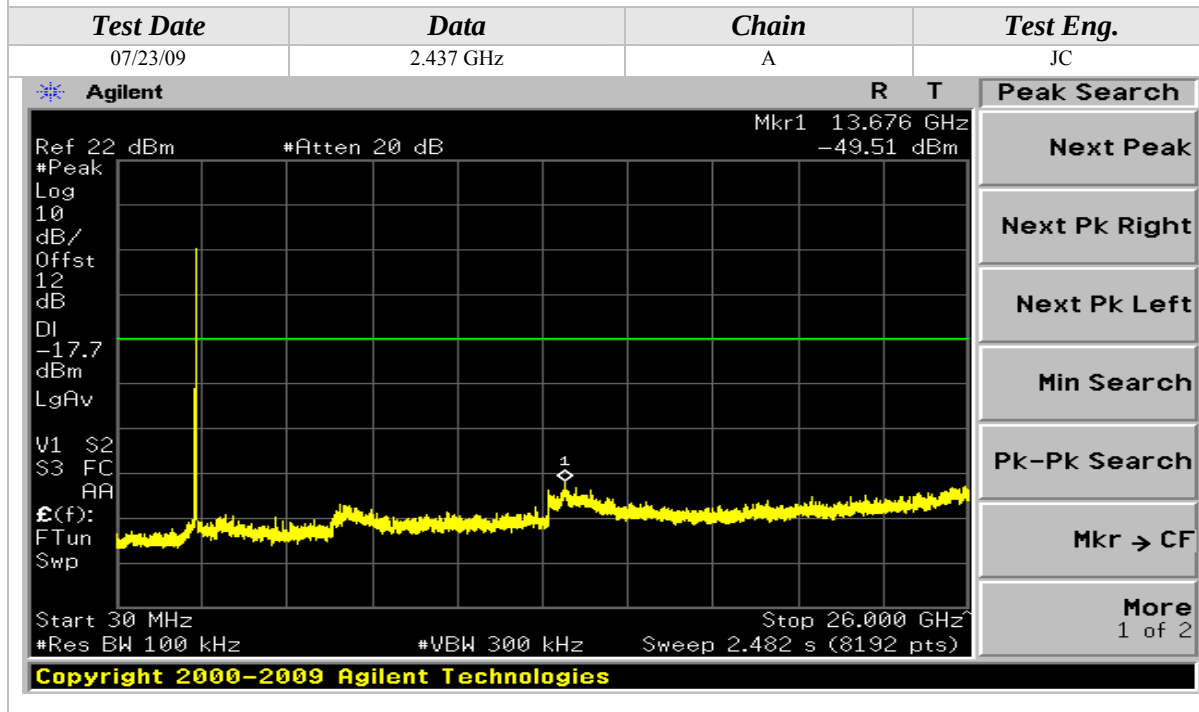
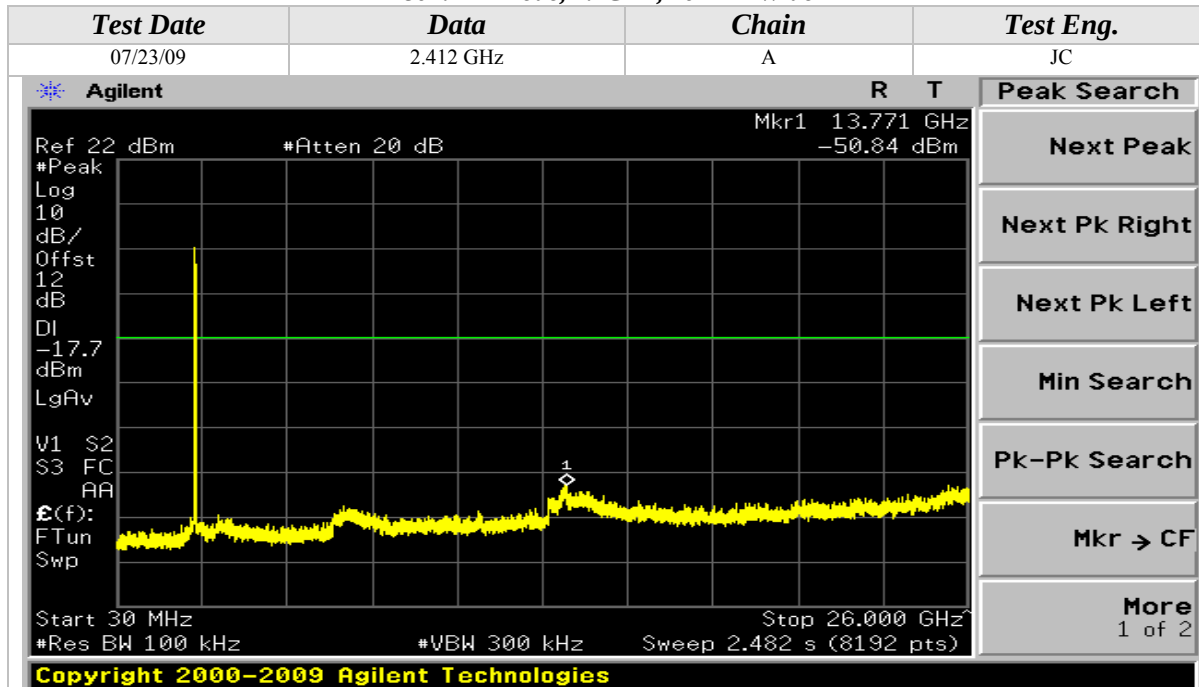
## 802.11g Mode





## Conducted Out Of Band Emissions (Continued)

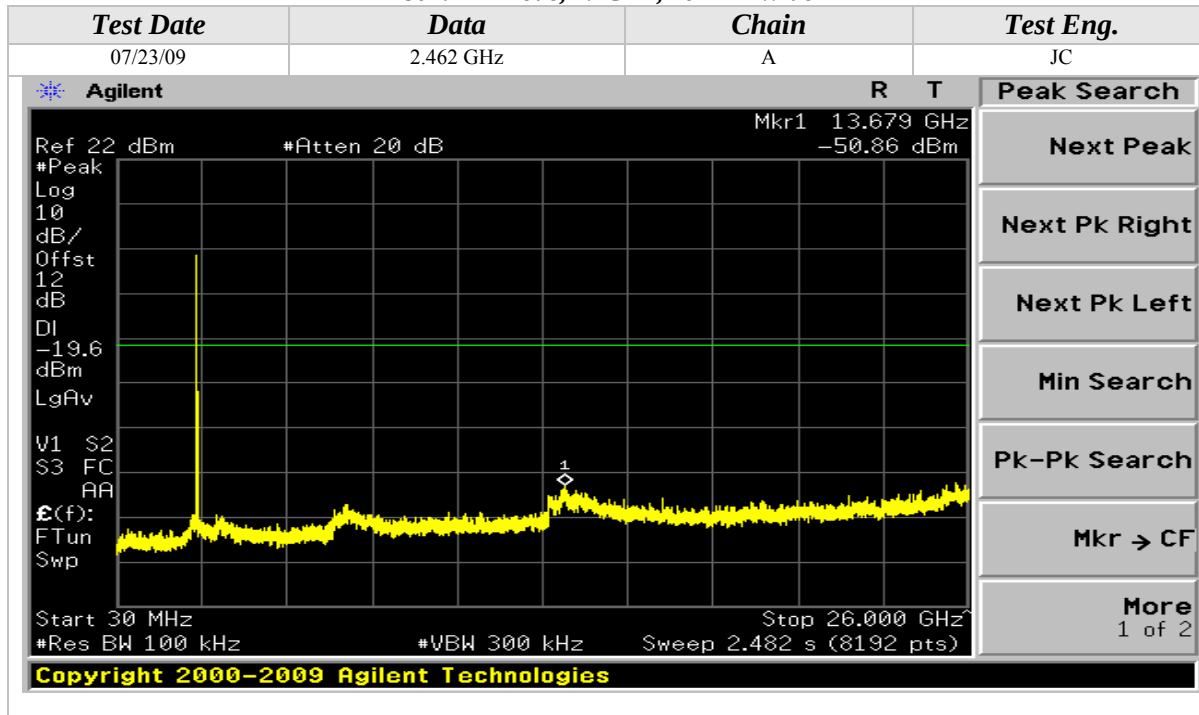
## 802.11n Mode, 2.4GHz, 20MHz Wide



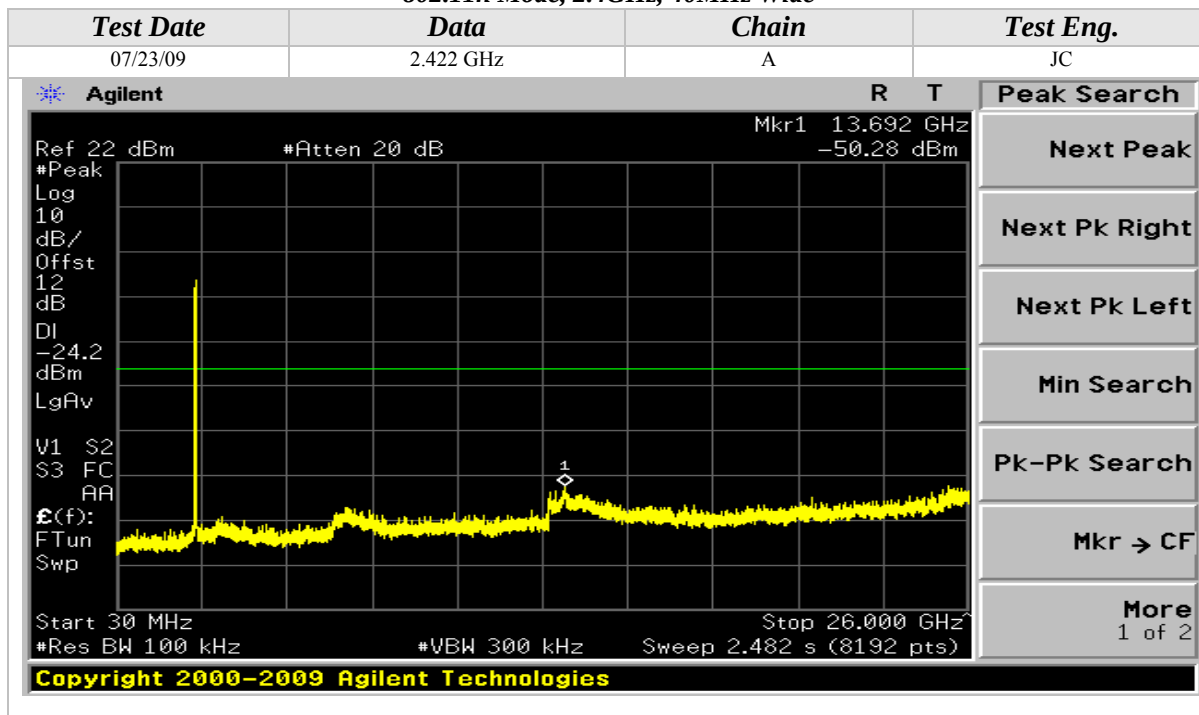


## Conducted Out Of Band Emissions (Continued)

## 802.11n Mode, 2.4GHz, 20MHz Wide



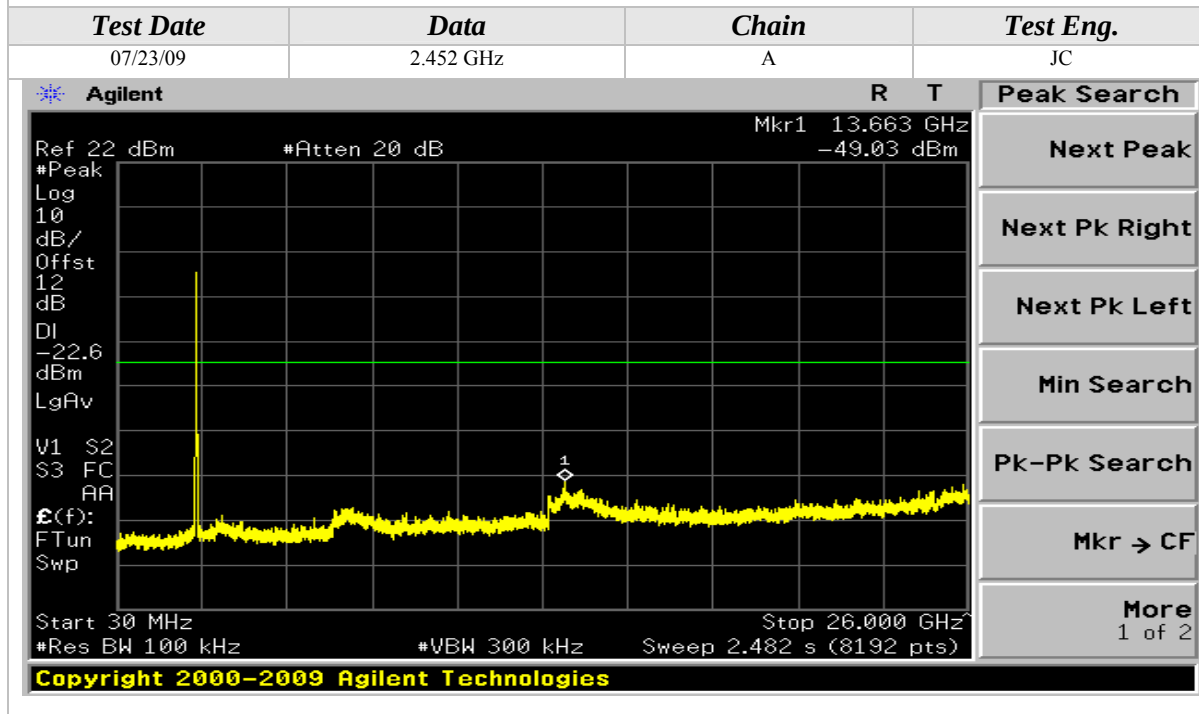
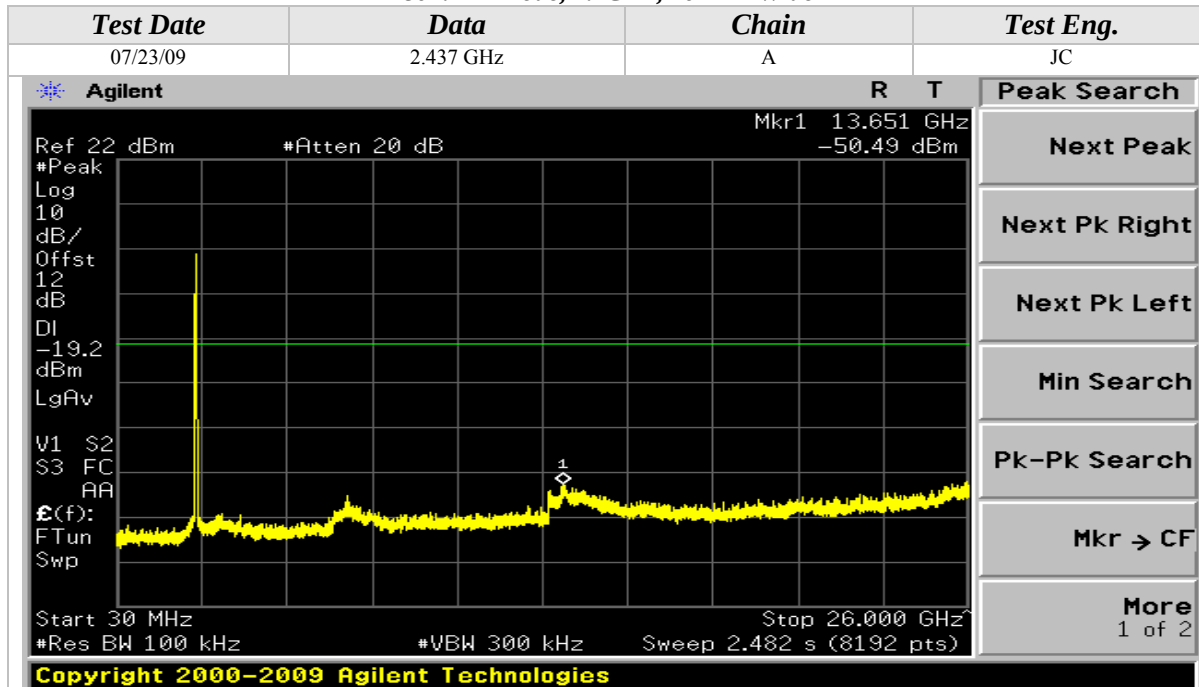
## 802.11n Mode, 2.4GHz, 40MHz Wide





## Conducted Out Of Band Emissions (Continued)

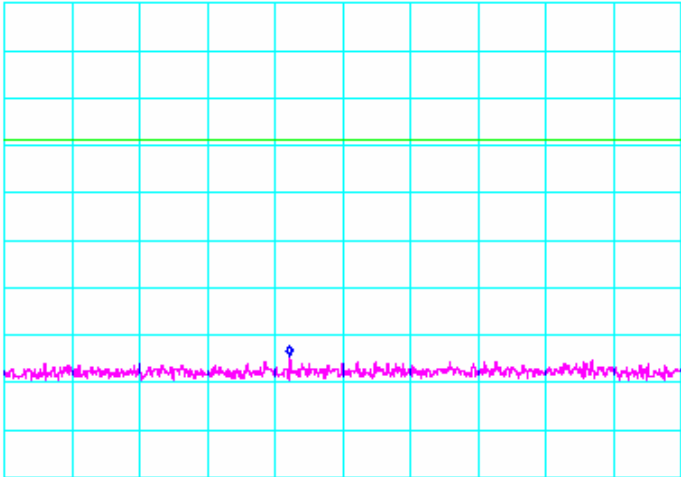
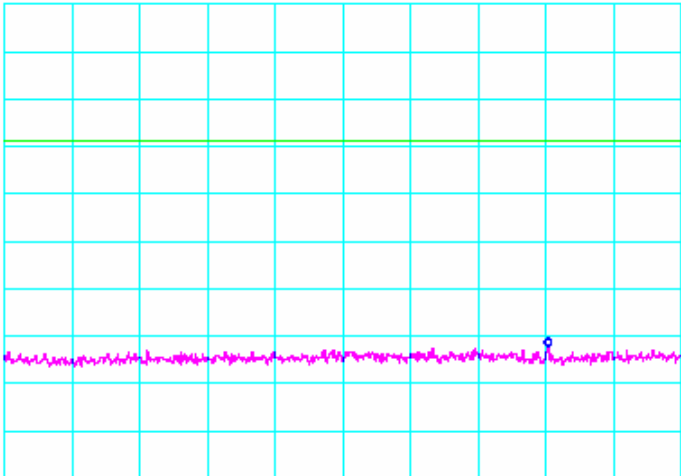
## 802.11n Mode, 2.4GHz, 40MHz Wide





## Conducted Out Of Band Emissions (Continued)

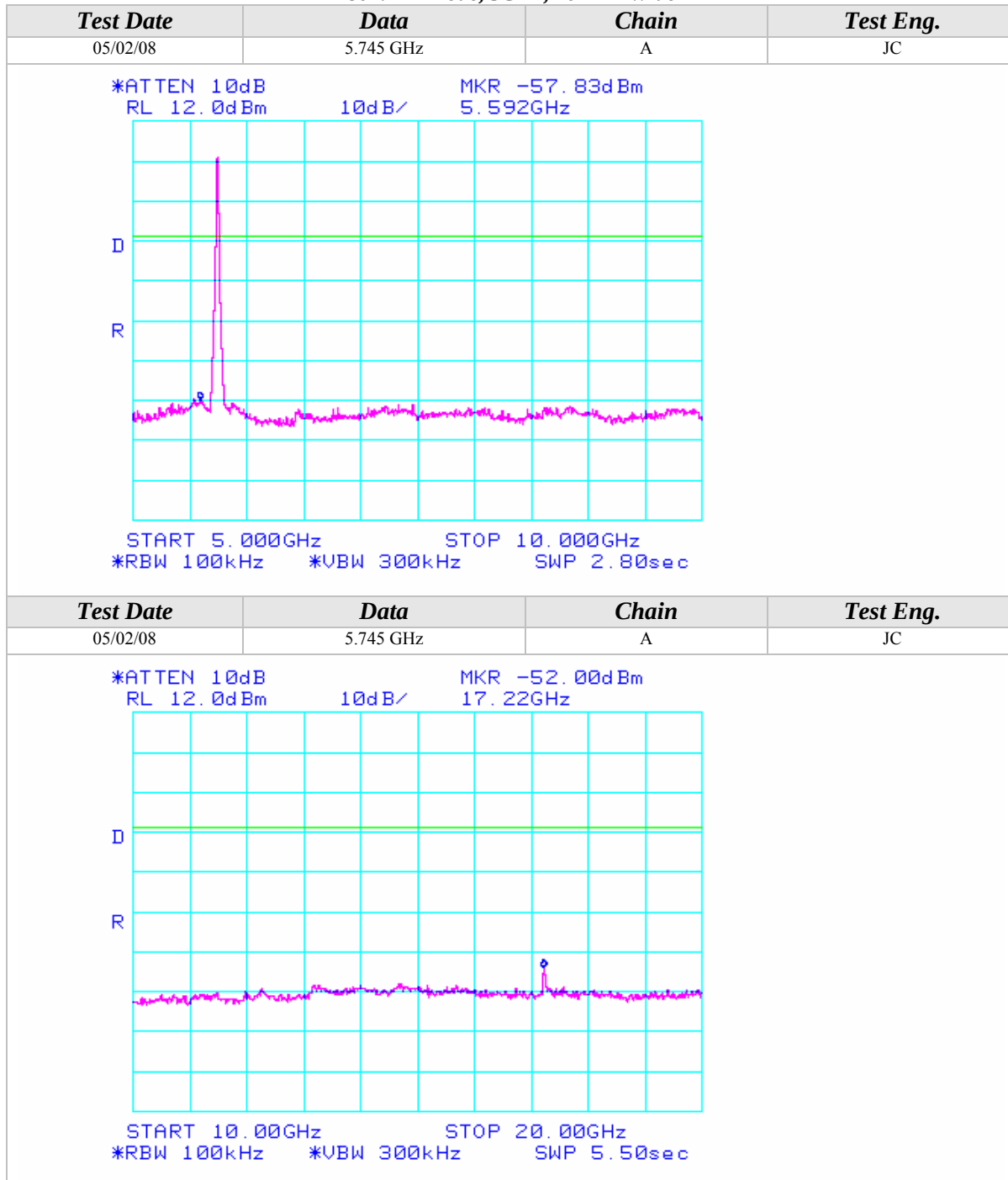
## 802.11n Mode, 5GHz, 20MHz Wide

| Test Date                                                                                                                                                                                                                                                                                          | Data      | Chain | Test Eng. |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                                                           | 5.745 GHz | A     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -62.33dBm<br/>439.0MHz</div></div><div>START 30.0MHz      STOP 1.0000GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 540ms</div></div>     |           |       |           |
| Test Date                                                                                                                                                                                                                                                                                          | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                                           | 5.745 GHz | A     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -60.33dBm<br/>4.213GHz</div></div><div>START 1.000GHz      STOP 5.000GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 2.20sec</div></div> |           |       |           |



## Conducted Out Of Band Emissions (Continued)

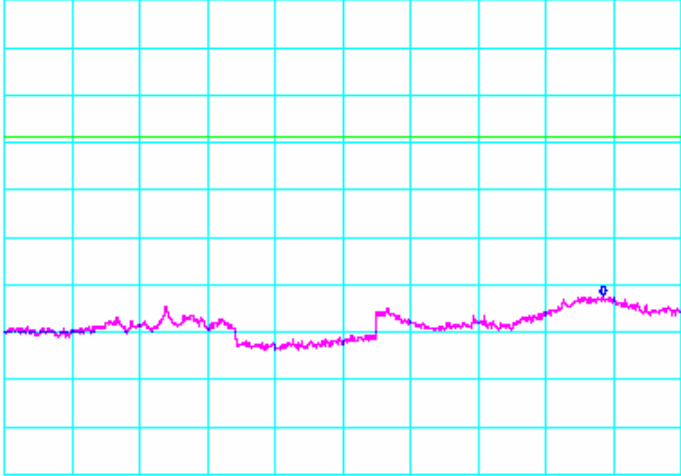
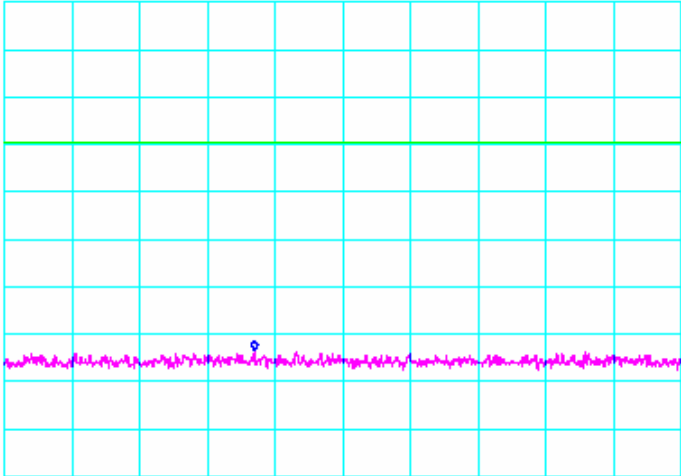
## 802.11n Mode, 5GHz, 20MHz Wide





## Conducted Out Of Band Emissions (Continued)

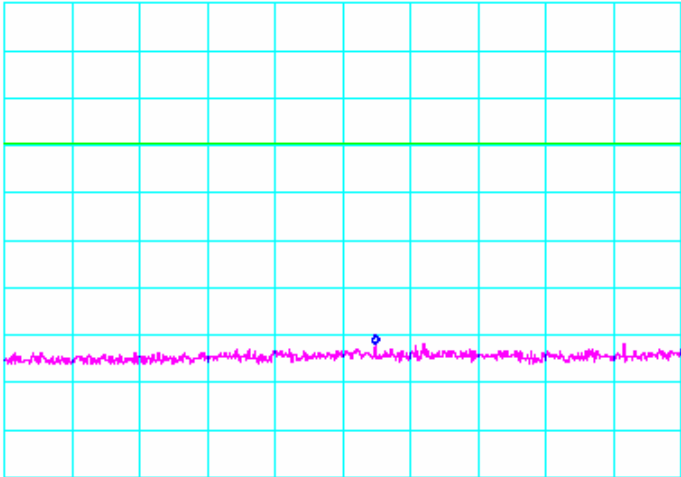
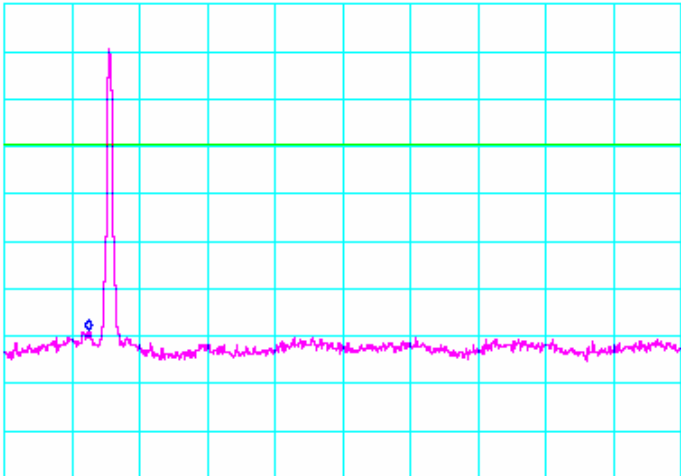
## 802.11n Mode, 5GHz, 20MHz Wide

| Test Date                                                                                                                                                                                                                                                                                        | Data      | Chain | Test Eng. |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                                                         | 5.745 GHz | A     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -50.33dBm<br/>37.70GHz</div></div><div>START 20.00GHz      STOP 40.00GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 11.0sec</div></div> |           |       |           |
| Test Date                                                                                                                                                                                                                                                                                        | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                                         | 5.785 GHz | A     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -61.33dBm<br/>388.9MHz</div></div><div>START 30.0MHz      STOP 1.0000GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 540ms</div></div> |           |       |           |



## Conducted Out Of Band Emissions (Continued)

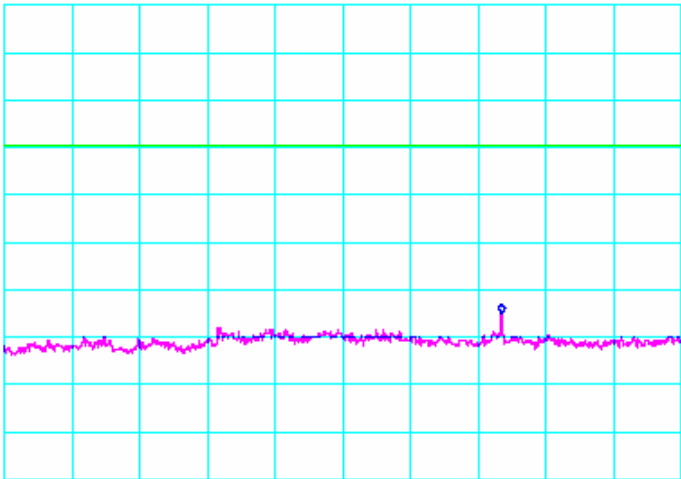
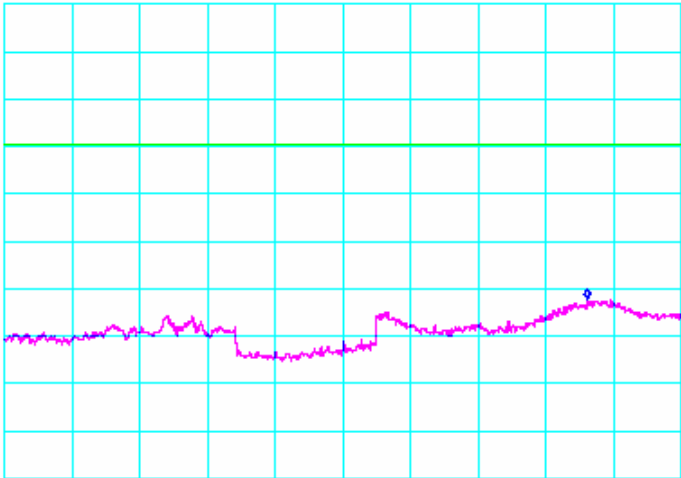
## 802.11n Mode, 5GHz, 20MHz Wide

| Test Date                                                                                                                                                                                                                                                                                           | Data      | Chain | Test Eng. |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                                                            | 5.785 GHz | A     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -50.00dBm<br/>3.193GHz</div></div><div>START 1.000GHz      STOP 5.000GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 2.20sec</div></div>    |           |       |           |
| Test Date                                                                                                                                                                                                                                                                                           | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                                            | 5.785 GHz | A     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -56.67dBm<br/>5.625GHz</div></div><div>START 5.000GHz      STOP 10.000GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 2.80sec</div></div> |           |       |           |



## Conducted Out Of Band Emissions (Continued)

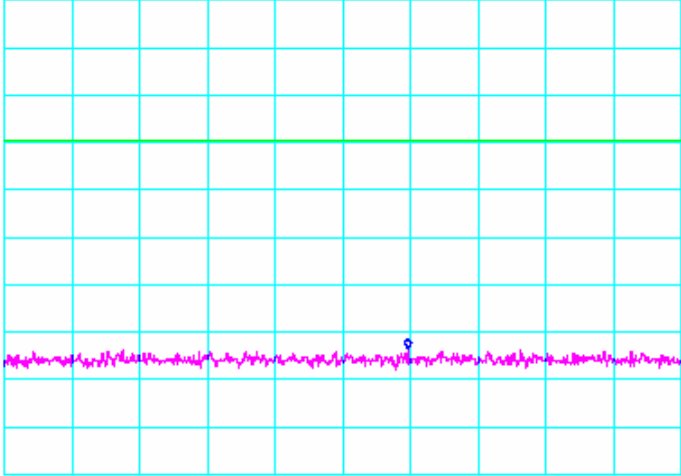
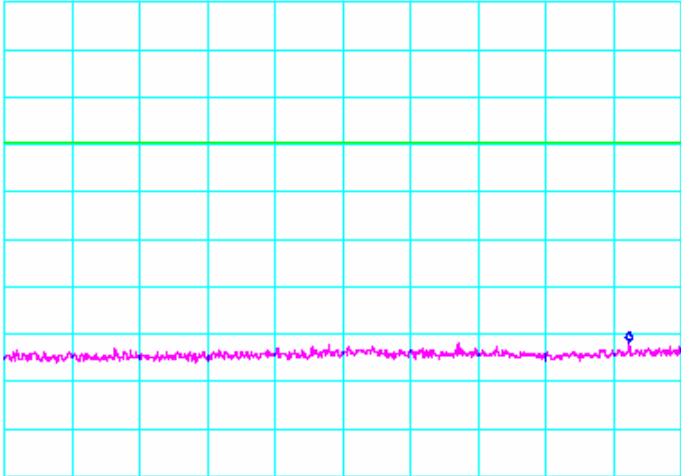
## 802.11n Mode, 5GHz, 20MHz Wide

| Test Date                                                                                                                                                                                                                                                                                             | Data      | Chain | Test Eng. |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                                                              | 5.785 GHz | A     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -53.00dBm<br/>17.35GHz</div></div><div>START 10.00GHz<br/>*RBW 100kHz</div><div>STOP 20.00GHz<br/>*VBW 300kHz<br/>SWP 5.50sec</div></div>   |           |       |           |
| Test Date                                                                                                                                                                                                                                                                                             | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                                              | 5.785 GHz | A     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -50.17dBm<br/>37.23GHz</div></div><div>START 20.00GHz<br/>*RBW 100kHz</div><div>STOP 40.00GHz<br/>*VBW 300kHz<br/>SWP 11.0sec</div></div> |           |       |           |



## Conducted Out Of Band Emissions (Continued)

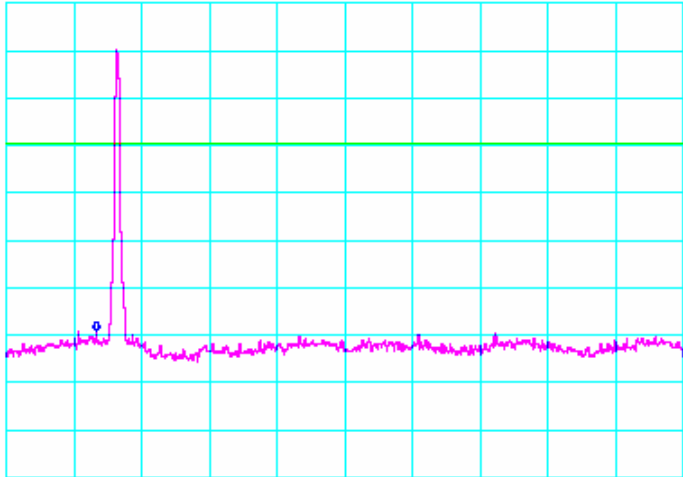
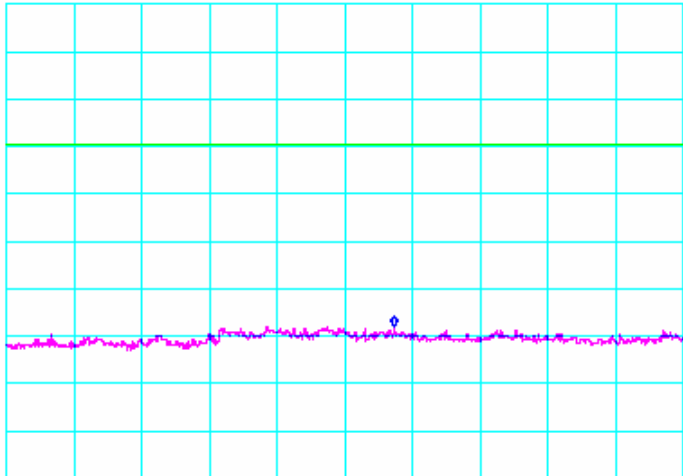
## 802.11n Mode, 5GHz, 20MHz Wide

| Test Date                                                                                                                                                                                                                                                                                          | Data      | Chain | Test Eng. |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                                                           | 5.825 GHz | A     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -61.33dBm<br/>608.8MHz</div></div><div>START 30.0MHz      STOP 1.0000GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 540ms</div></div>     |           |       |           |
| Test Date                                                                                                                                                                                                                                                                                          | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                                           | 5.825 GHz | A     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -59.67dBm<br/>4.693GHz</div></div><div>START 1.000GHz      STOP 5.000GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 2.20sec</div></div> |           |       |           |



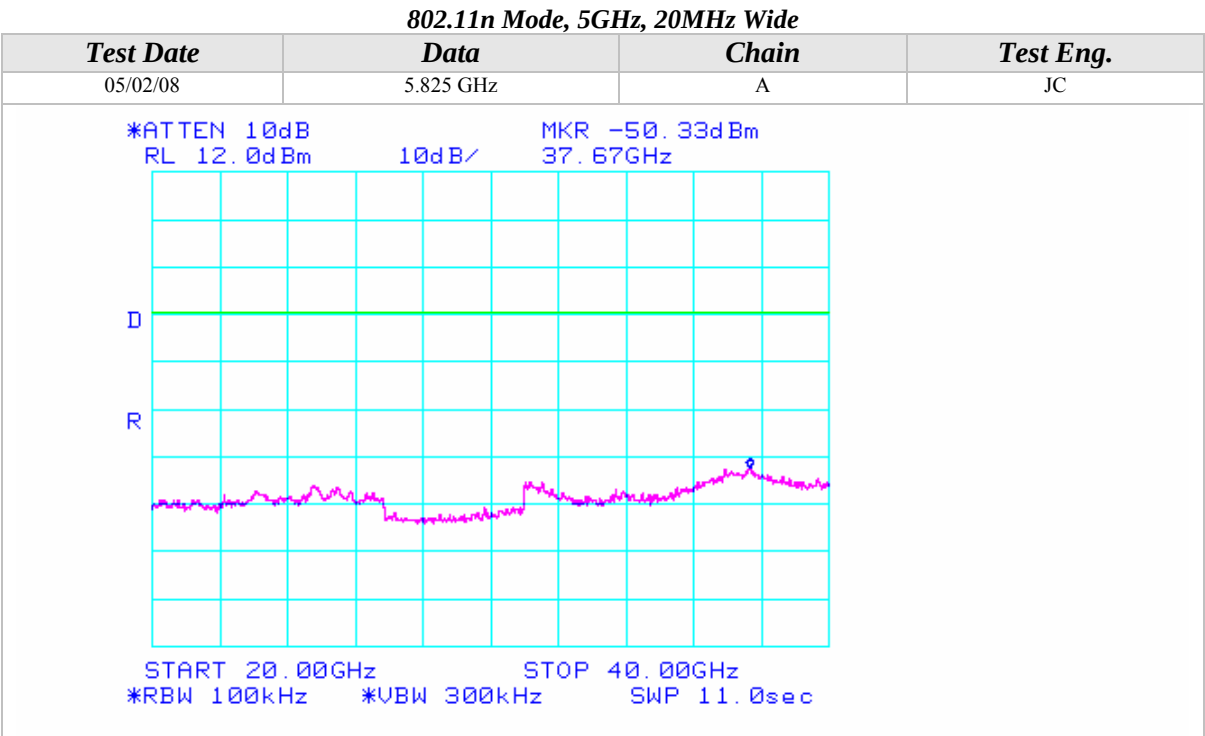
## Conducted Out Of Band Emissions (Continued)

## 802.11n Mode, 5GHz, 20MHz Wide

| Test Date                                                                                                                                                                                                                                                                                          | Data      | Chain | Test Eng. |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                                                           | 5.825 GHz | A     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -57.17dBm<br/>5.667GHz</div></div><div>START 5.000GHz      STOP 10.000GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 2.80sec</div></div>  |           |       |           |
| Test Date                                                                                                                                                                                                                                                                                          | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                                           | 5.825 GHz | A     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -55.83dBm<br/>15.73GHz</div></div><div>START 10.00GHz      STOP 20.00GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 5.50sec</div></div> |           |       |           |



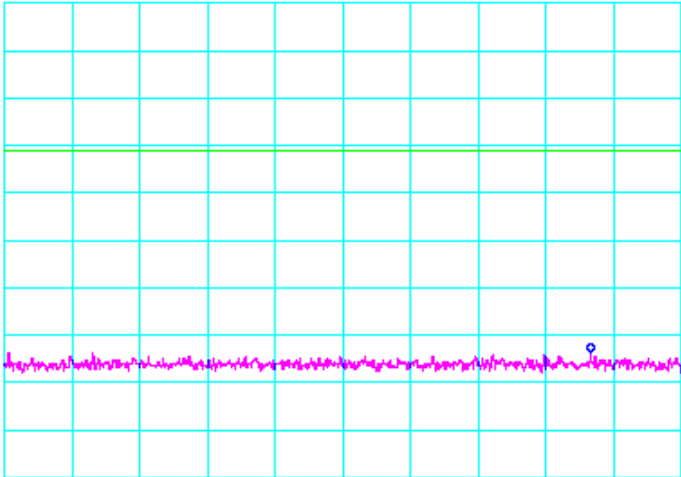
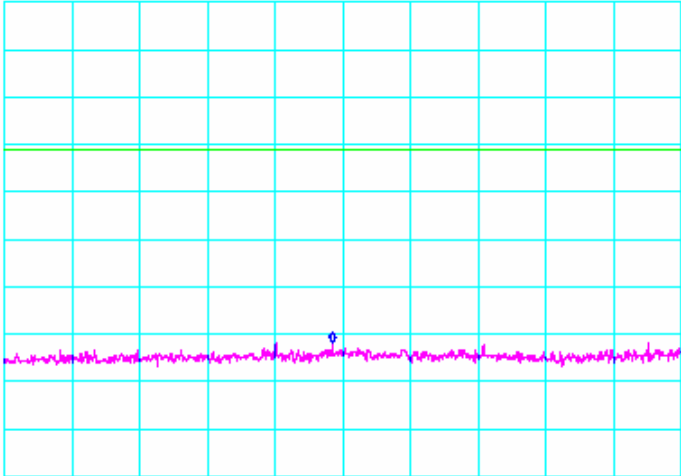
Conducted Out Of Band Emissions (Continued)





## Conducted Out Of Band Emissions (Continued)

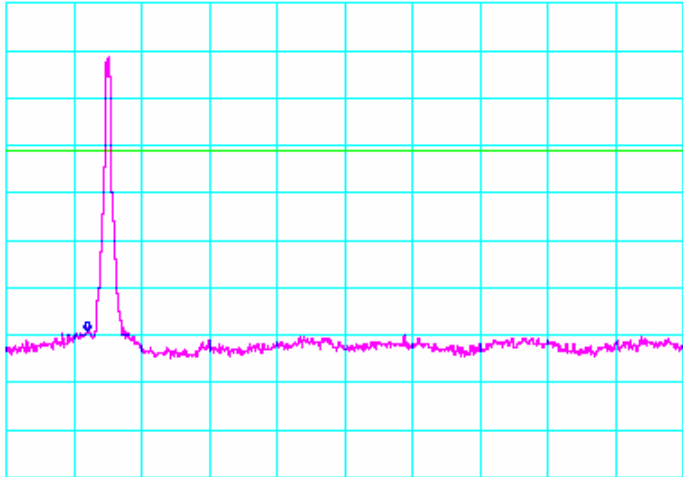
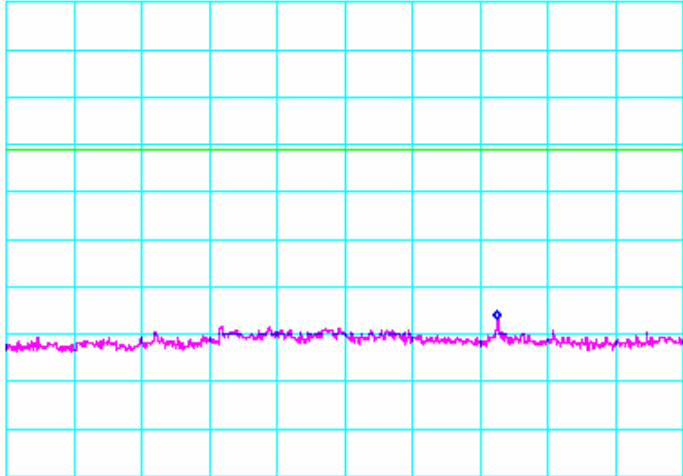
## 802.11n Mode, 5GHz, 40MHz Wide

| Test Date                                                                                                                                                                                                                                                                                          | Data      | Chain | Test Eng. |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                                                           | 5.755 GHz | A     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -61.67dBm<br/>870.7MHz</div></div><div>START 30.0MHz      STOP 1.0000GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 540ms</div></div>     |           |       |           |
| Test Date                                                                                                                                                                                                                                                                                          | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                                           | 5.755 GHz | A     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -59.67dBm<br/>2.940GHz</div></div><div>START 1.000GHz      STOP 5.000GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 2.20sec</div></div> |           |       |           |



## Conducted Out Of Band Emissions (Continued)

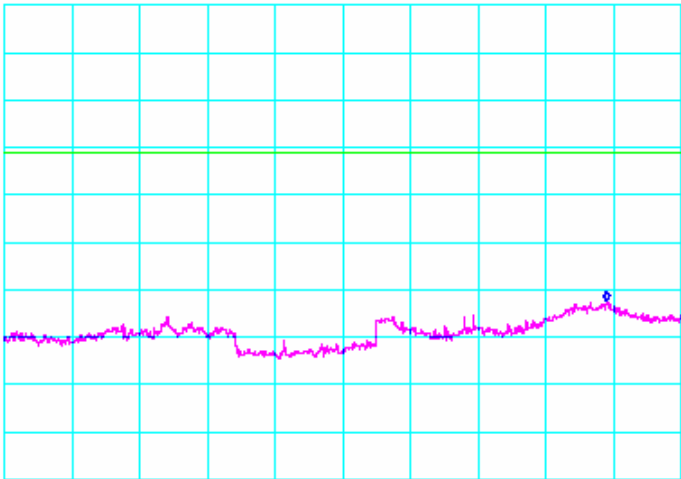
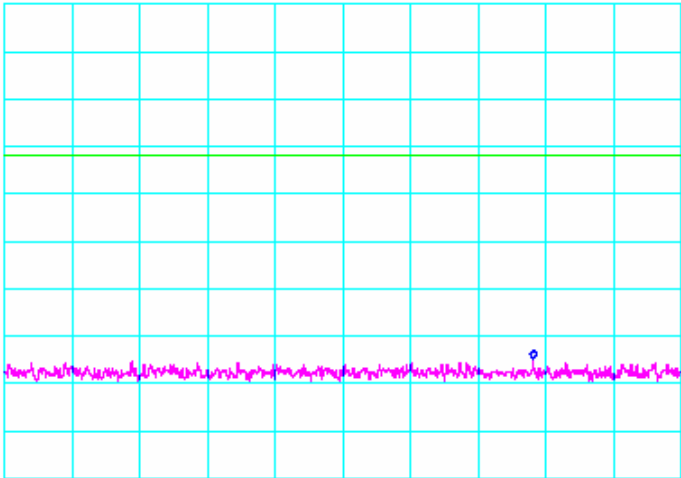
## 802.11n Mode, 5GHz, 40MHz Wide

| Test Date                                                                                                                                                                                                                                                                                 | Data      | Chain | Test Eng. |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                                                  | 5.755 GHz | A     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm<br/>10dB/</div><div>MKR -57.17dBm<br/>5.600GHz</div></div><div>START 5.000GHz<br/>*RBW 100kHz<br/>STOP 10.000GHz<br/>*VBW 300kHz<br/>SWP 2.80sec</div></div>  |           |       |           |
| Test Date                                                                                                                                                                                                                                                                                 | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                                  | 5.755 GHz | A     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm<br/>10dB/</div><div>MKR -55.00dBm<br/>17.25GHz</div></div><div>START 10.00GHz<br/>*RBW 100kHz<br/>STOP 20.00GHz<br/>*VBW 300kHz<br/>SWP 5.50sec</div></div> |           |       |           |



## Conducted Out Of Band Emissions (Continued)

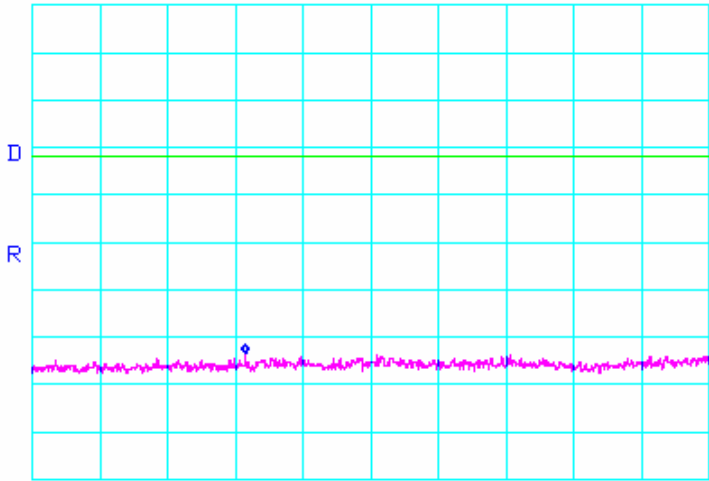
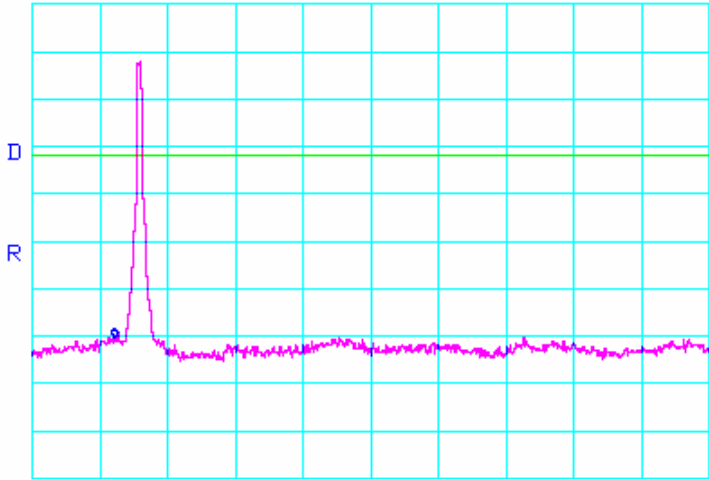
## 802.11n Mode, 5GHz, 40MHz Wide

| Test Date                                                                                                                                                                                                                                                                                        | Data      | Chain | Test Eng. |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                                                         | 5.755 GHz | A     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -50.33dBm<br/>37.80GHz</div></div><div>START 20.00GHz      STOP 40.00GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 11.0sec</div></div> |           |       |           |
| Test Date                                                                                                                                                                                                                                                                                        | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                                         | 5.795 GHz | A     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -62.83dBm<br/>788.2MHz</div></div><div>START 30.0MHz      STOP 1.0000GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 540ms</div></div> |           |       |           |



## Conducted Out Of Band Emissions (Continued)

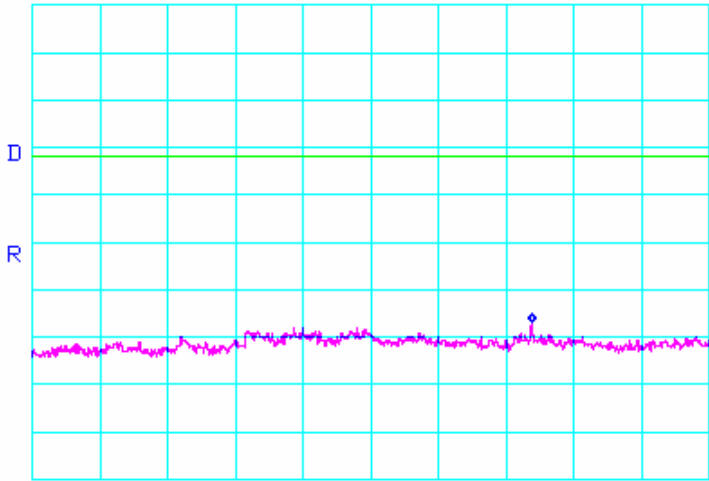
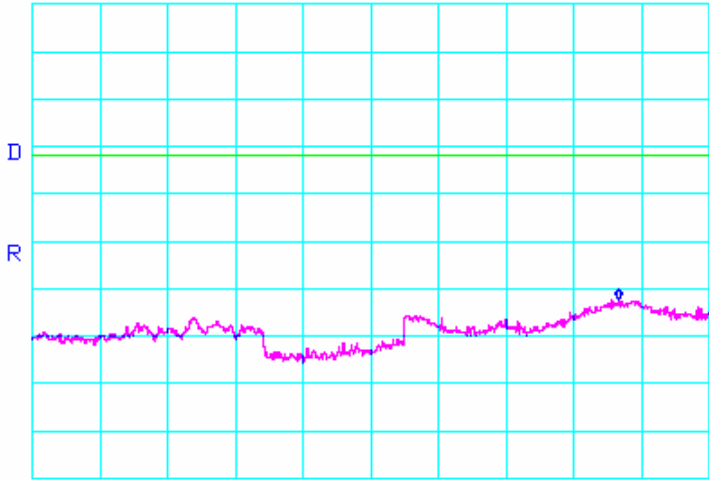
## 802.11n Mode, 5GHz, 40MHz Wide

| Test Date                                                                                                                                                                                                                                                      | Data      | Chain | Test Eng. |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                       | 5.795 GHz | A     | JC        |
| <p>*ATTEN 10dB      MKR -61.50dBm<br/>RL 12.0dBm      10dB/      2.260GHz</p>  <p>START 1.000GHz      STOP 5.000GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 2.20sec</p>    |           |       |           |
| Test Date                                                                                                                                                                                                                                                      | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                       | 5.795 GHz | A     | JC        |
| <p>*ATTEN 10dB      MKR -58.33dBm<br/>RL 12.0dBm      10dB/      5.608GHz</p>  <p>START 5.000GHz      STOP 10.000GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 2.80sec</p> |           |       |           |



## Conducted Out Of Band Emissions (Continued)

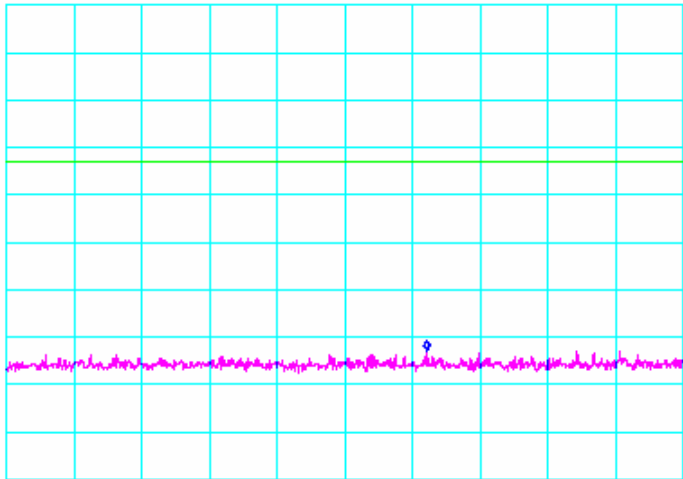
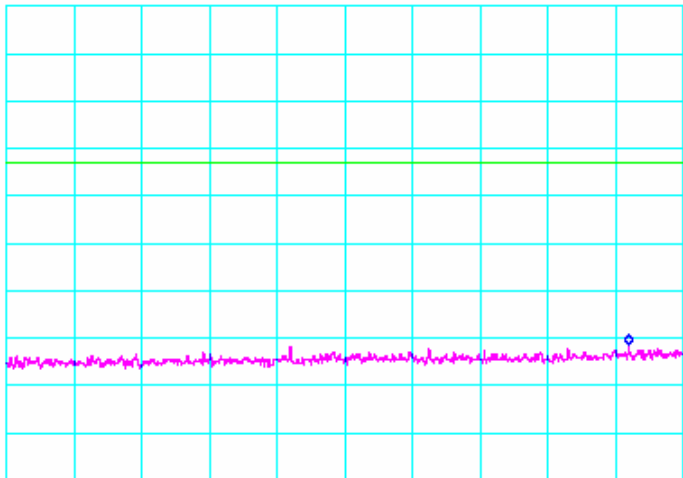
## 802.11n Mode, 5GHz, 40MHz Wide

| Test Date                                                                                                                                                                                                                                                     | Data      | Chain | Test Eng. |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                      | 5.795 GHz | A     | JC        |
| <p>*ATTEN 10dB      MKR -55.00dBm<br/>RL 12.0dBm      10dB/      17.38GHz</p>  <p>START 10.00GHz      STOP 20.00GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 5.50sec</p>   |           |       |           |
| Test Date                                                                                                                                                                                                                                                     | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                      | 5.795 GHz | A     | JC        |
| <p>*ATTEN 10dB      MKR -50.17dBm<br/>RL 12.0dBm      10dB/      37.33GHz</p>  <p>START 20.00GHz      STOP 40.00GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 11.0sec</p> |           |       |           |



## Conducted Out Of Band Emissions (Continued)

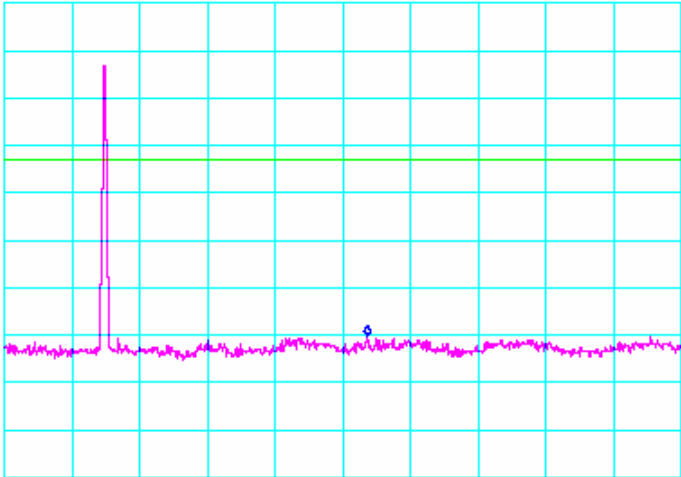
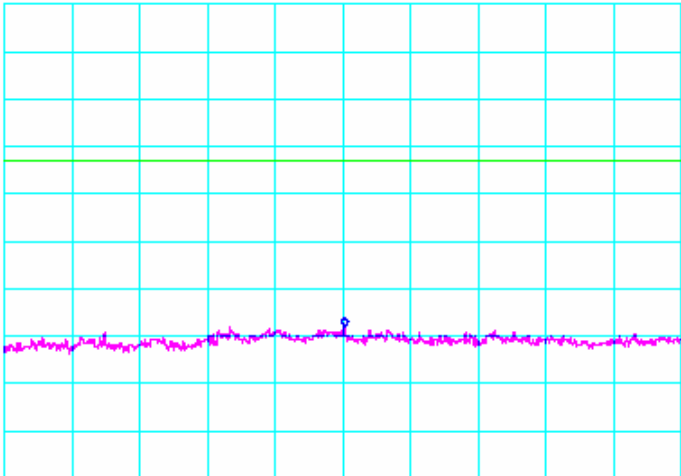
## 802.11a Mode

| Test Date                                                                                                                                                                                                                                                                                             | Data      | Chain | Test Eng. |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                                                              | 5.745 GHz | B     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -60.83dBm<br/>633.0MHz</div></div><div>START 30.0MHz<br/>*RBW 100kHz</div><div>STOP 1.0000GHz<br/>*VBW 300kHz<br/>SWP 540ms</div></div>     |           |       |           |
| Test Date                                                                                                                                                                                                                                                                                             | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                                              | 5.745 GHz | B     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -59.33dBm<br/>4.680GHz</div></div><div>START 1.000GHz<br/>*RBW 100kHz</div><div>STOP 5.000GHz<br/>*VBW 300kHz<br/>SWP 2.20sec</div></div> |           |       |           |



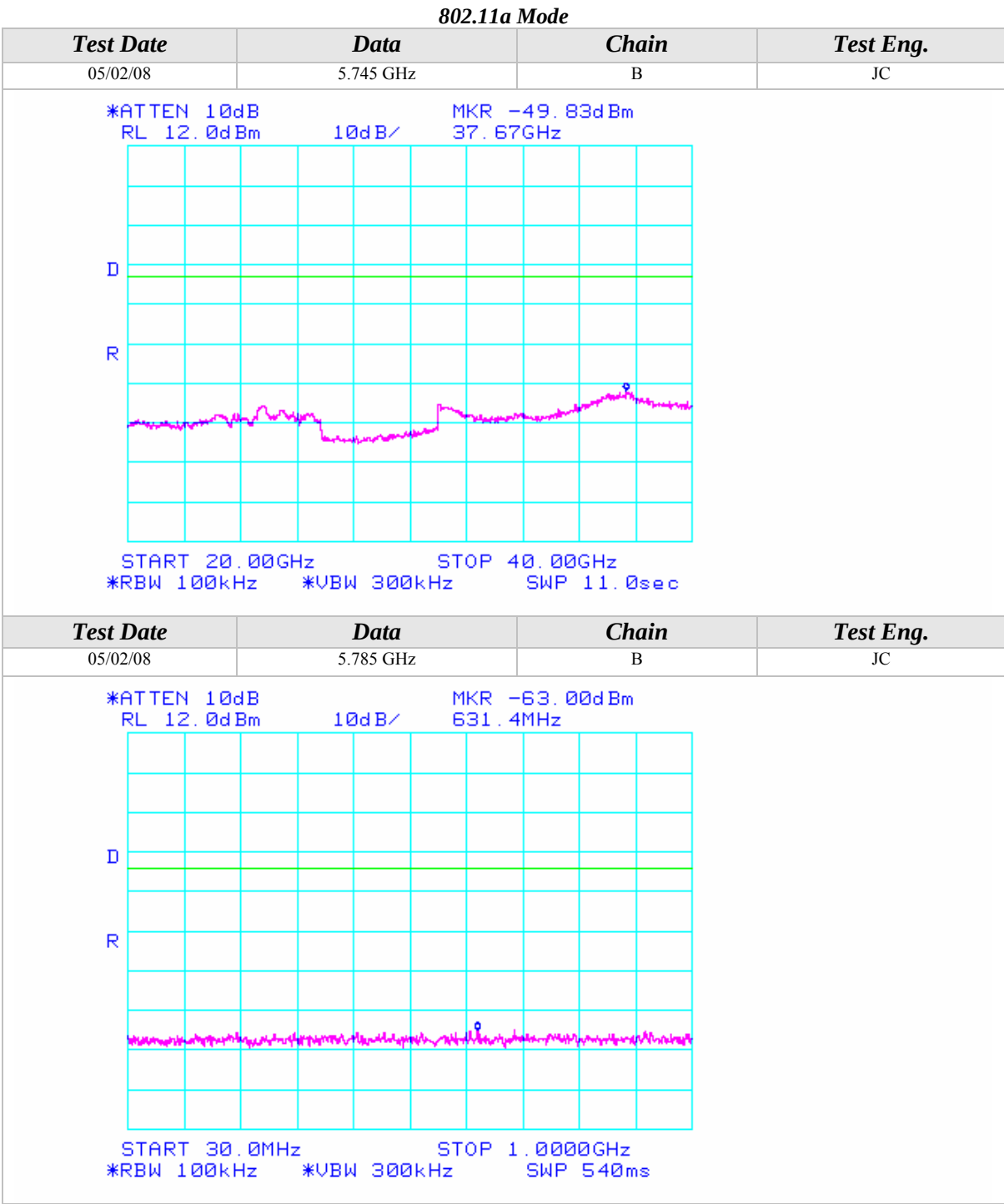
## Conducted Out Of Band Emissions (Continued)

## 802.11a Mode

| Test Date                                                                                                                                                                                                                                                                                          | Data      | Chain | Test Eng. |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                                                           | 5.745 GHz | B     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -58.17dBm<br/>7.683GHz</div></div><div>START 5.000GHz      STOP 10.000GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 2.80sec</div></div>  |           |       |           |
| Test Date                                                                                                                                                                                                                                                                                          | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                                           | 5.745 GHz | B     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -56.00dBm<br/>15.03GHz</div></div><div>START 10.00GHz      STOP 20.00GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 5.50sec</div></div> |           |       |           |



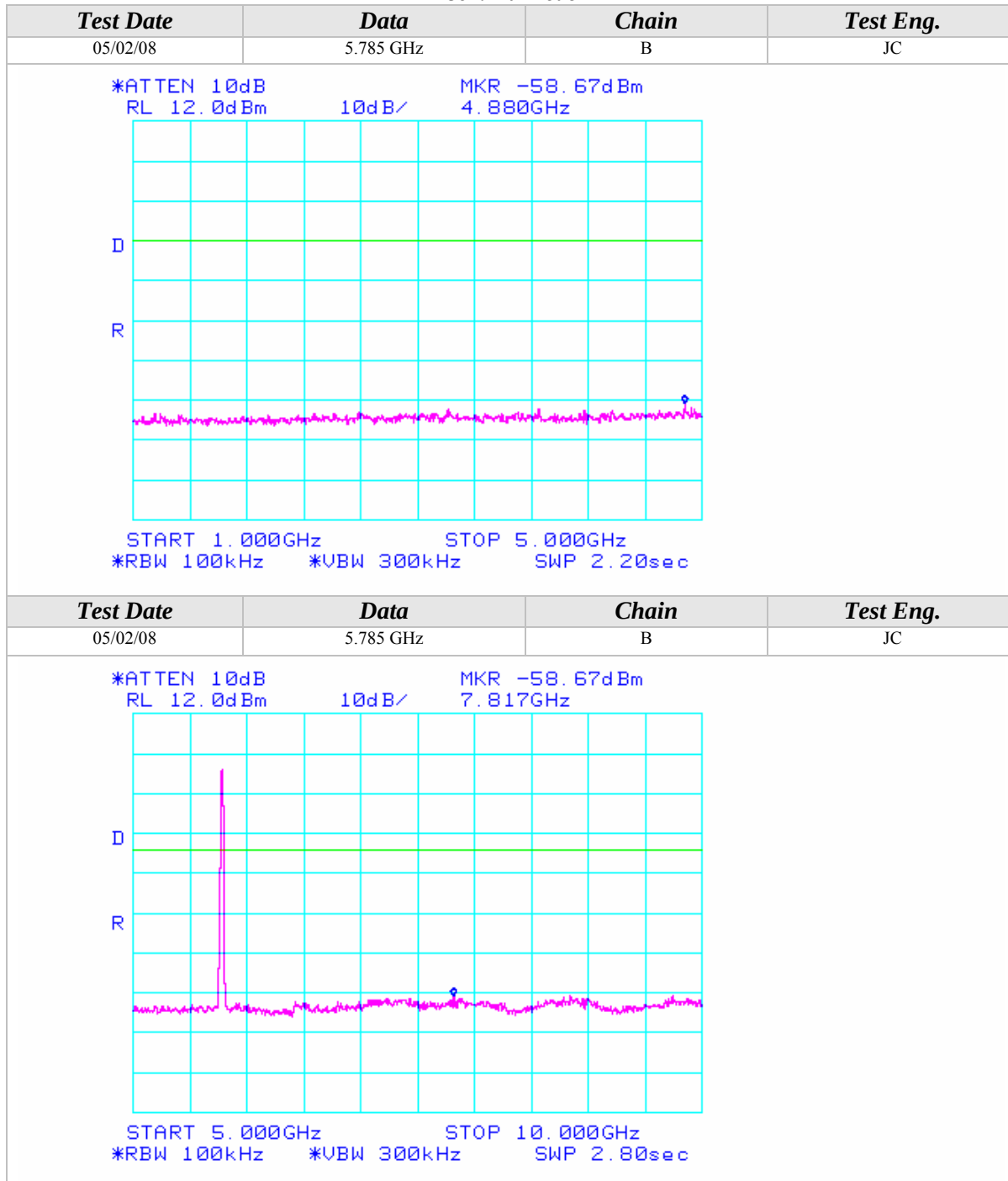
Conducted Out Of Band Emissions (Continued)





## Conducted Out Of Band Emissions (Continued)

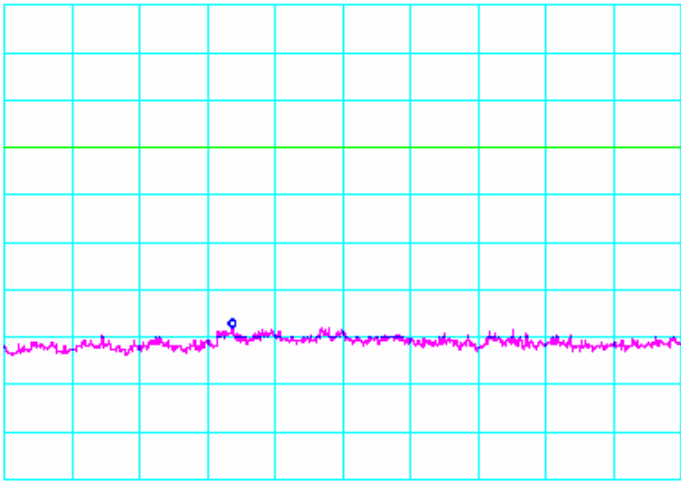
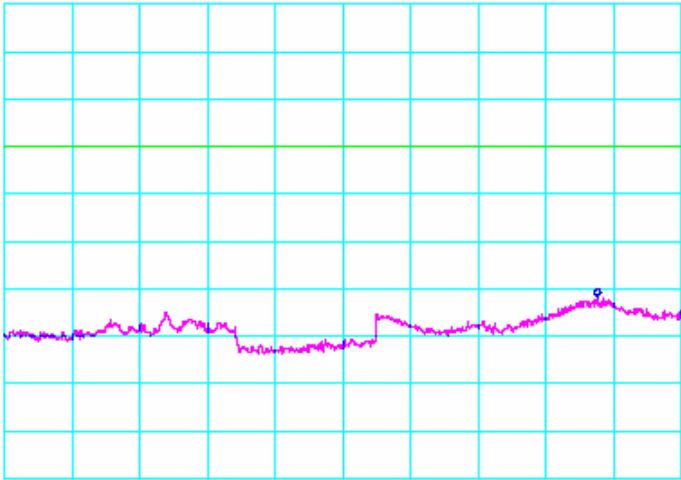
## 802.11a Mode





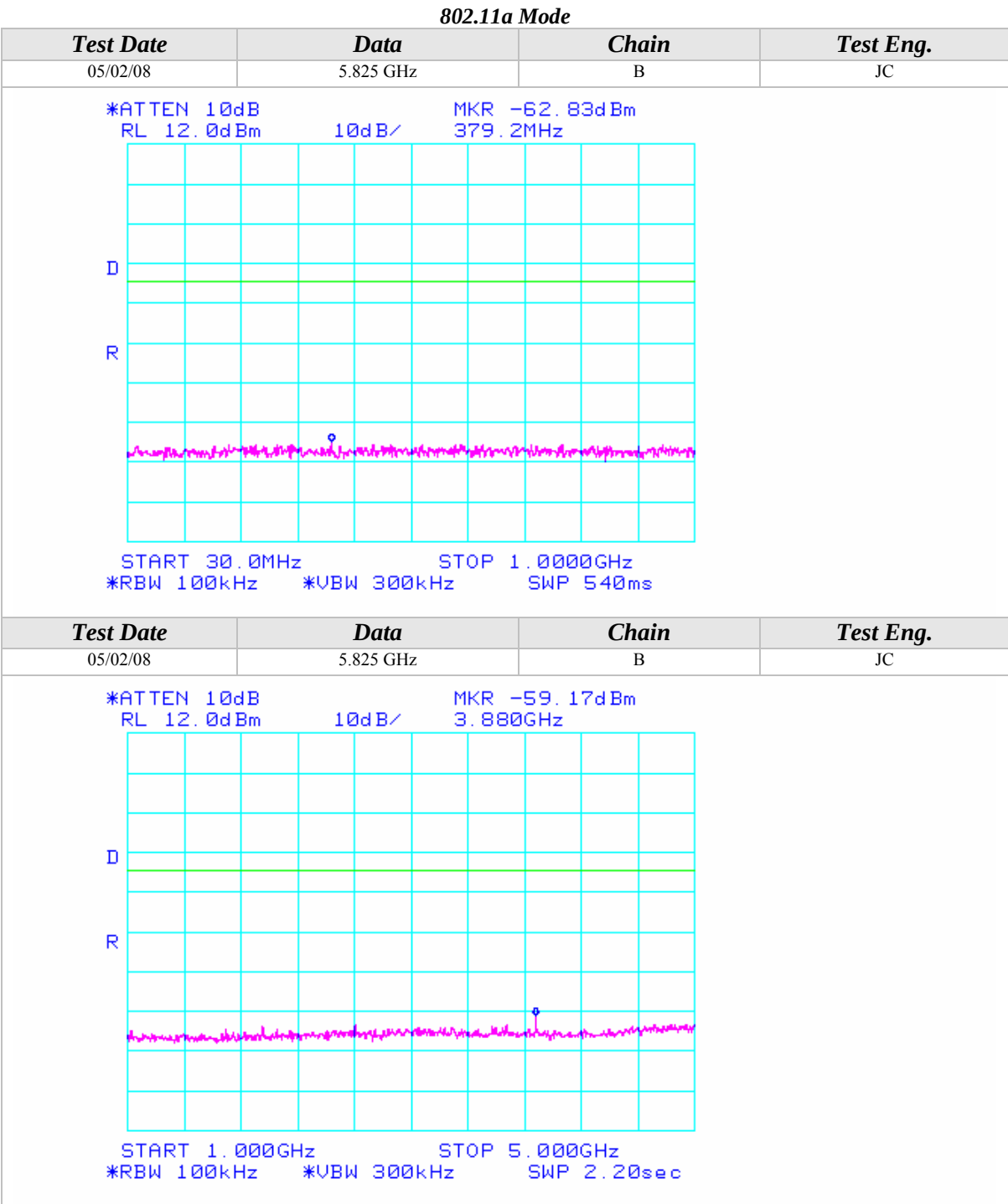
## Conducted Out Of Band Emissions (Continued)

## 802.11a Mode

| Test Date                                                                                                                                                                                                                                                                                             | Data      | Chain | Test Eng. |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                                                              | 5.785 GHz | B     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -56.17dBm<br/>13.37GHz</div></div><div>START 10.00GHz<br/>*RBW 100kHz</div><div>STOP 20.00GHz<br/>*VBW 300kHz<br/>SWP 5.50sec</div></div>   |           |       |           |
| Test Date                                                                                                                                                                                                                                                                                             | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                                              | 5.785 GHz | B     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -49.83dBm<br/>37.53GHz</div></div><div>START 20.00GHz<br/>*RBW 100kHz</div><div>STOP 40.00GHz<br/>*VBW 300kHz<br/>SWP 11.0sec</div></div> |           |       |           |



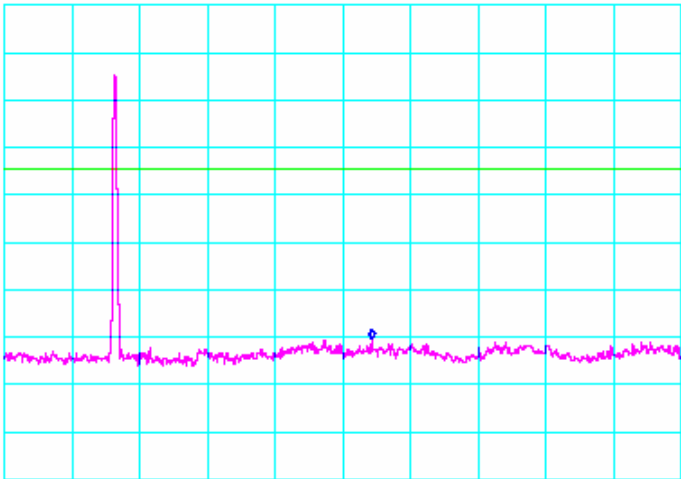
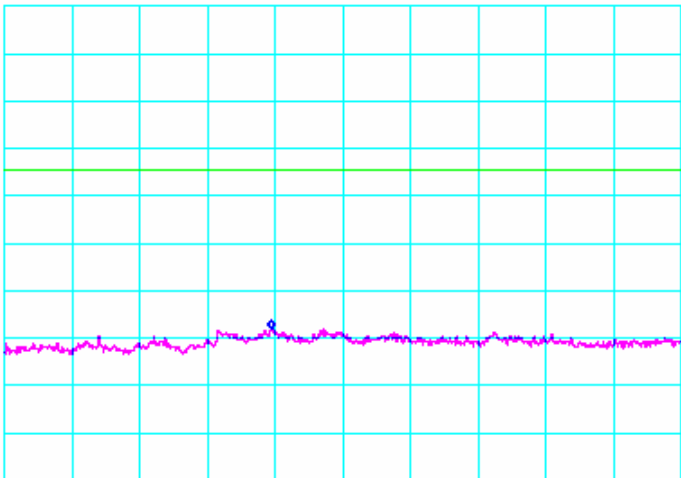
Conducted Out Of Band Emissions (Continued)





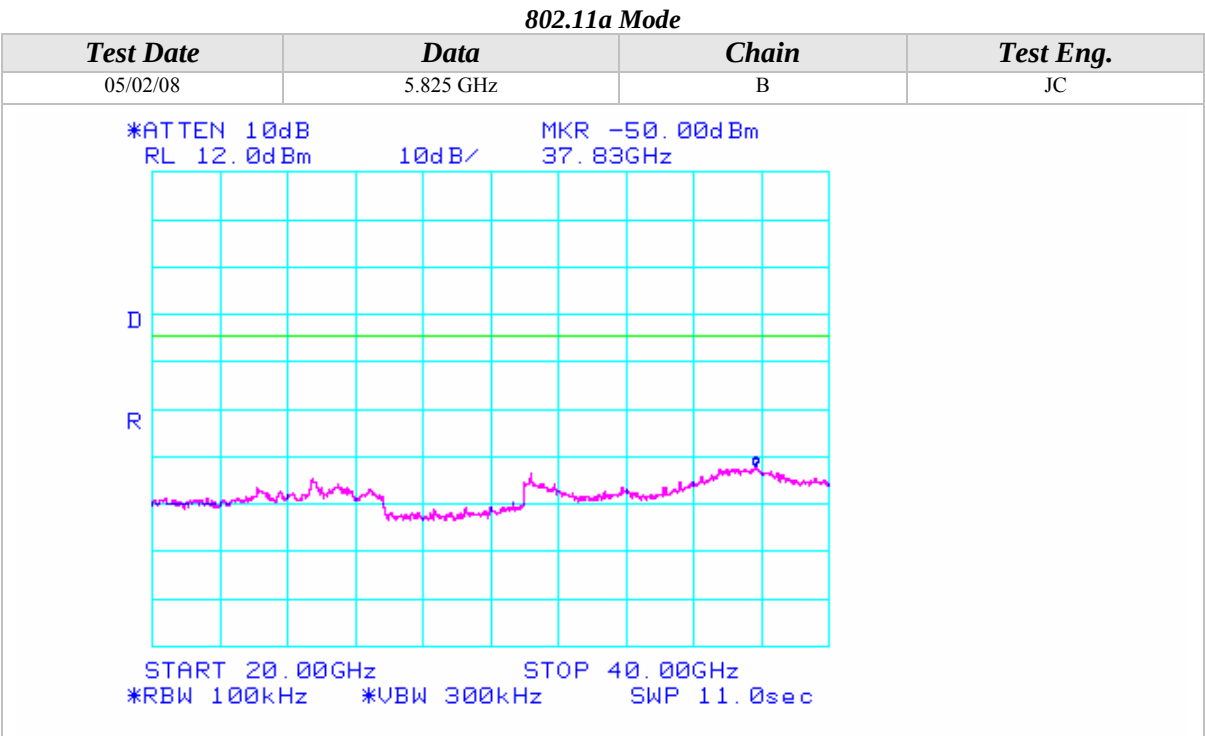
## Conducted Out Of Band Emissions (Continued)

## 802.11a Mode

| Test Date                                                                                                                                                                                                                                                                                               | Data      | Chain | Test Eng. |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                                                                | 5.825 GHz | B     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -58.33dBm<br/>7.717GHz</div></div><div>START 5.000GHz<br/>*RBW 100kHz</div><div>STOP 10.000GHz<br/>*VBW 300kHz<br/>SWP 2.80sec</div></div>    |           |       |           |
| Test Date                                                                                                                                                                                                                                                                                               | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                                                | 5.825 GHz | B     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -56.17dBm<br/>13.95GHz</div></div><div>START 10.000GHz<br/>*RBW 100kHz</div><div>STOP 20.000GHz<br/>*VBW 300kHz<br/>SWP 5.50sec</div></div> |           |       |           |



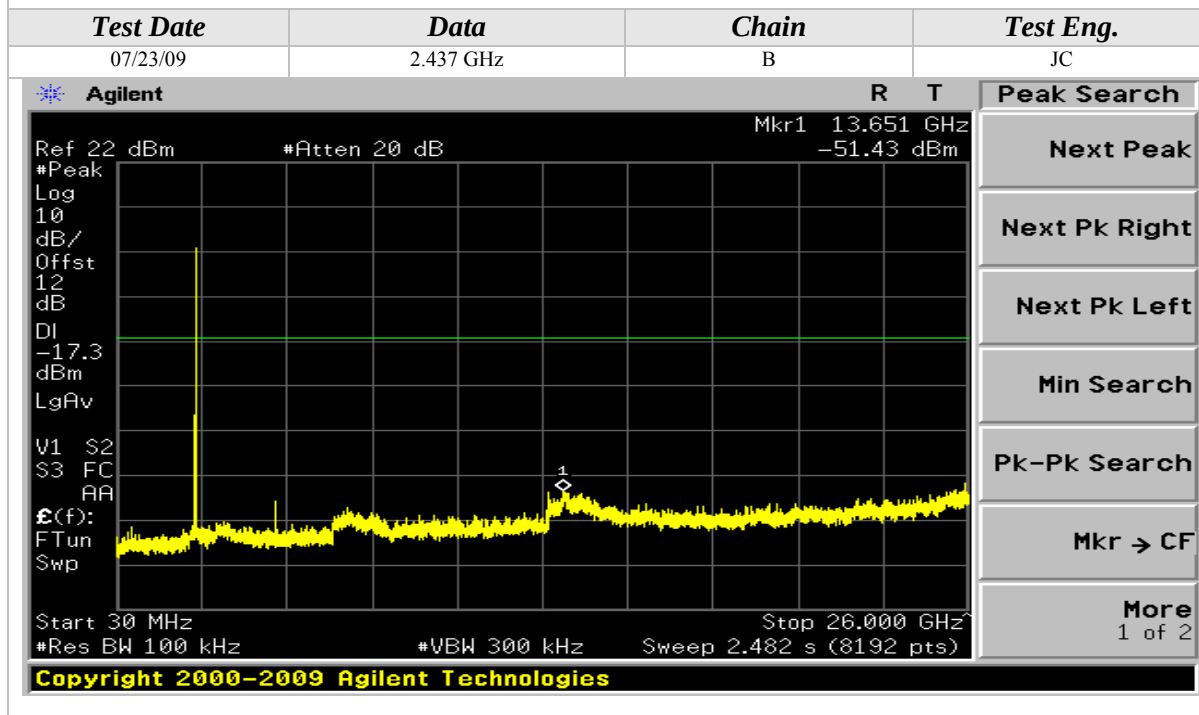
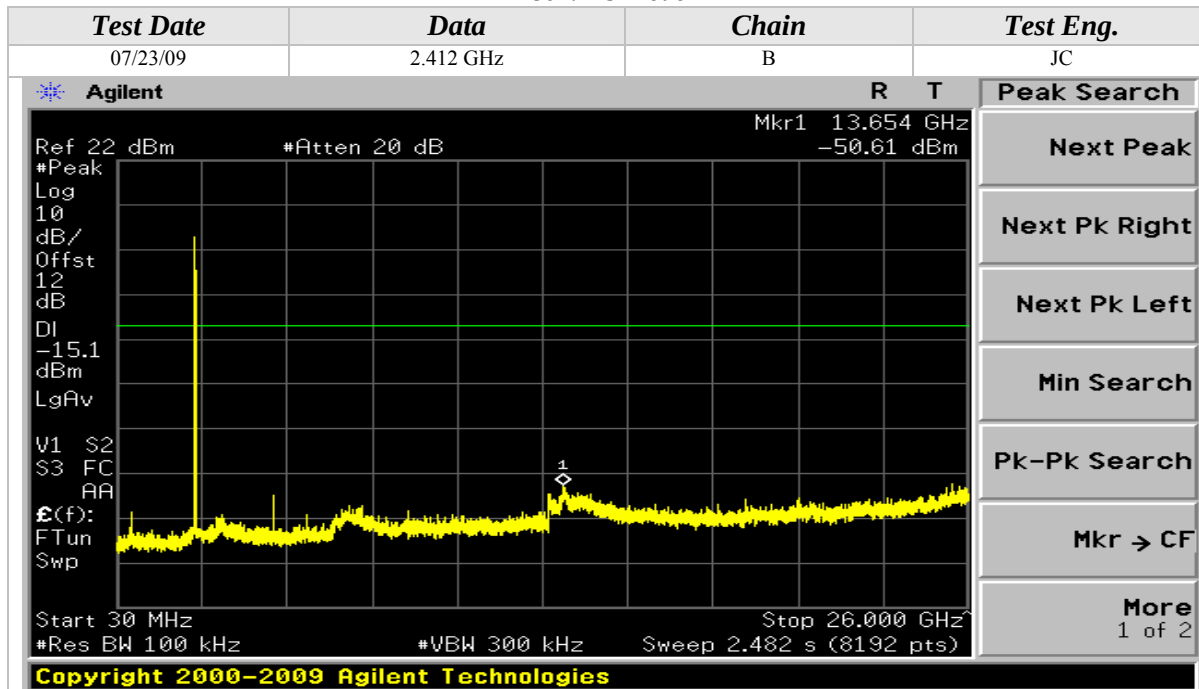
Conducted Out Of Band Emissions (Continued)





## Conducted Out Of Band Emissions (Continued)

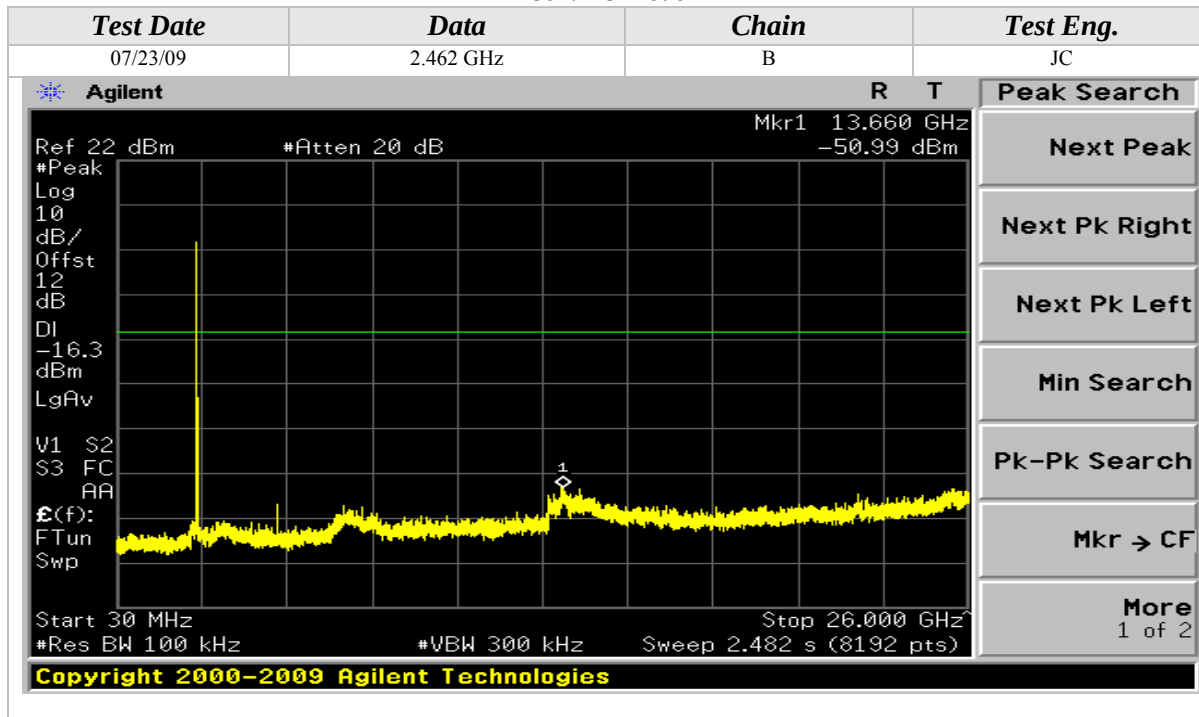
## 802.11b Mode



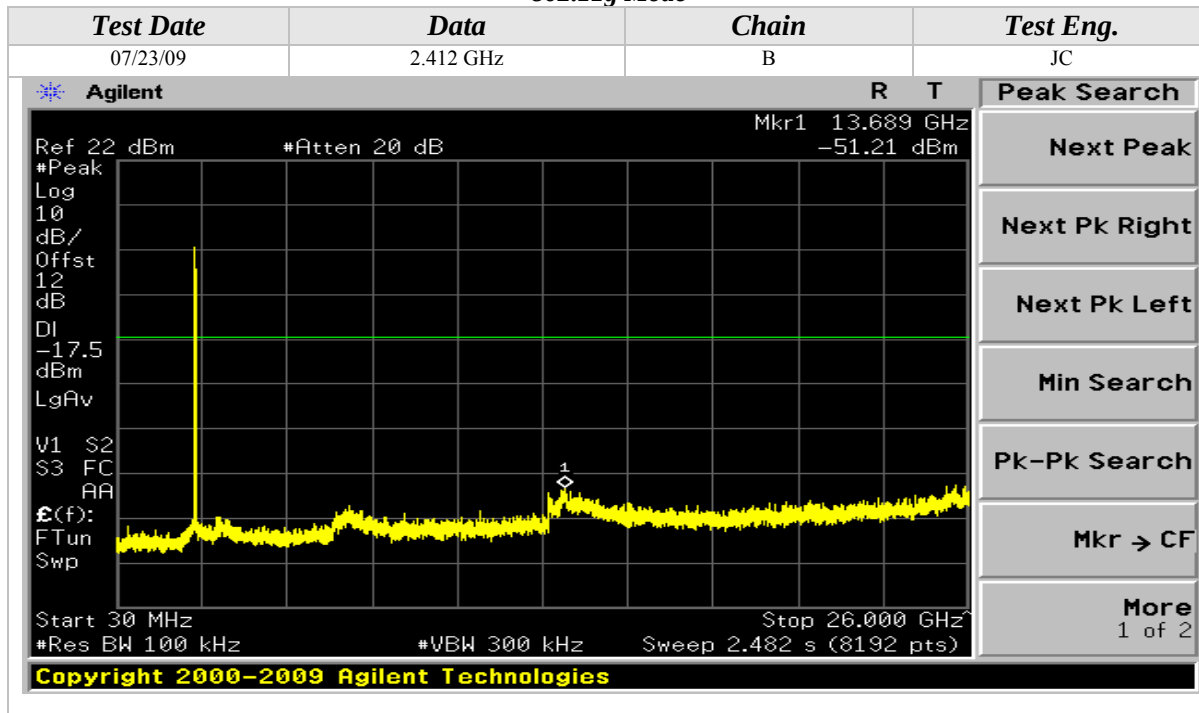


## Conducted Out Of Band Emissions (Continued)

## 802.11b Mode



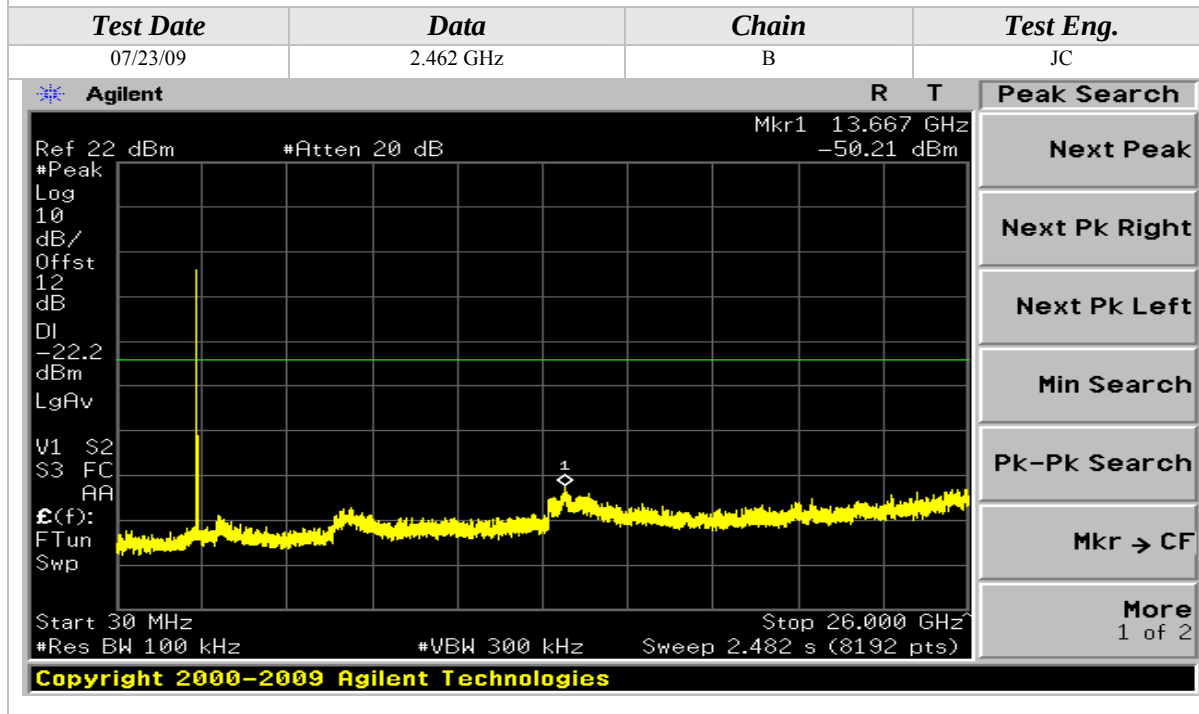
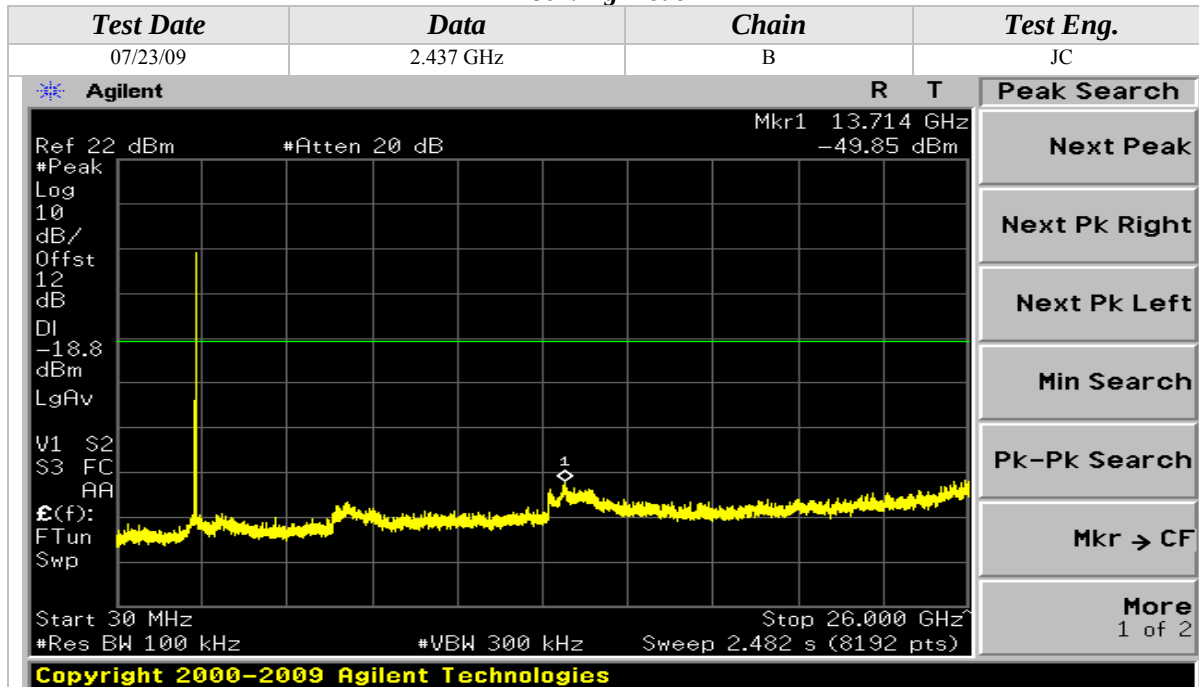
## 802.11g Mode





## Conducted Out Of Band Emissions (Continued)

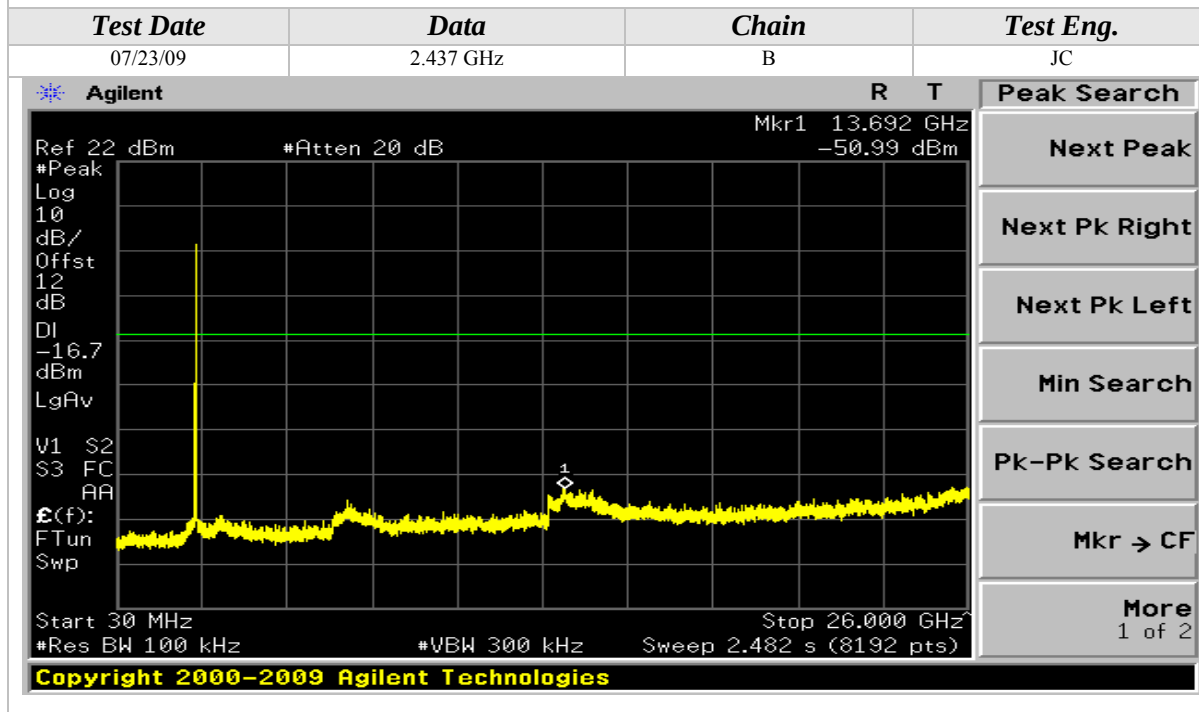
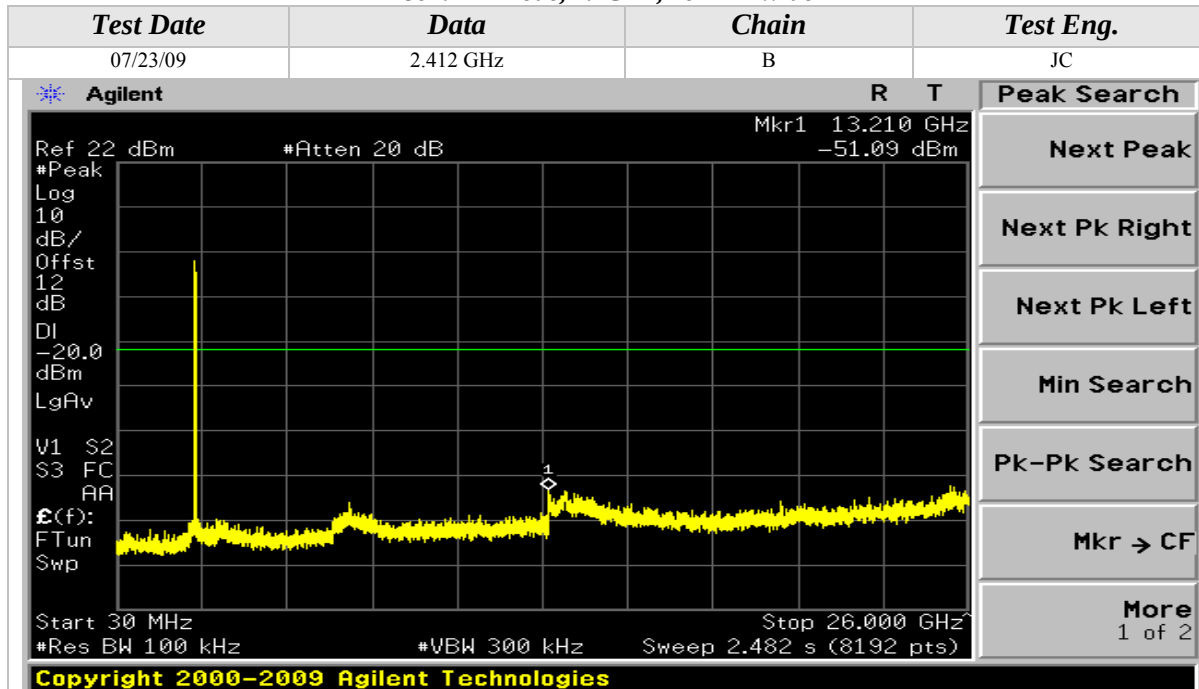
## 802.11g Mode





## Conducted Out Of Band Emissions (Continued)

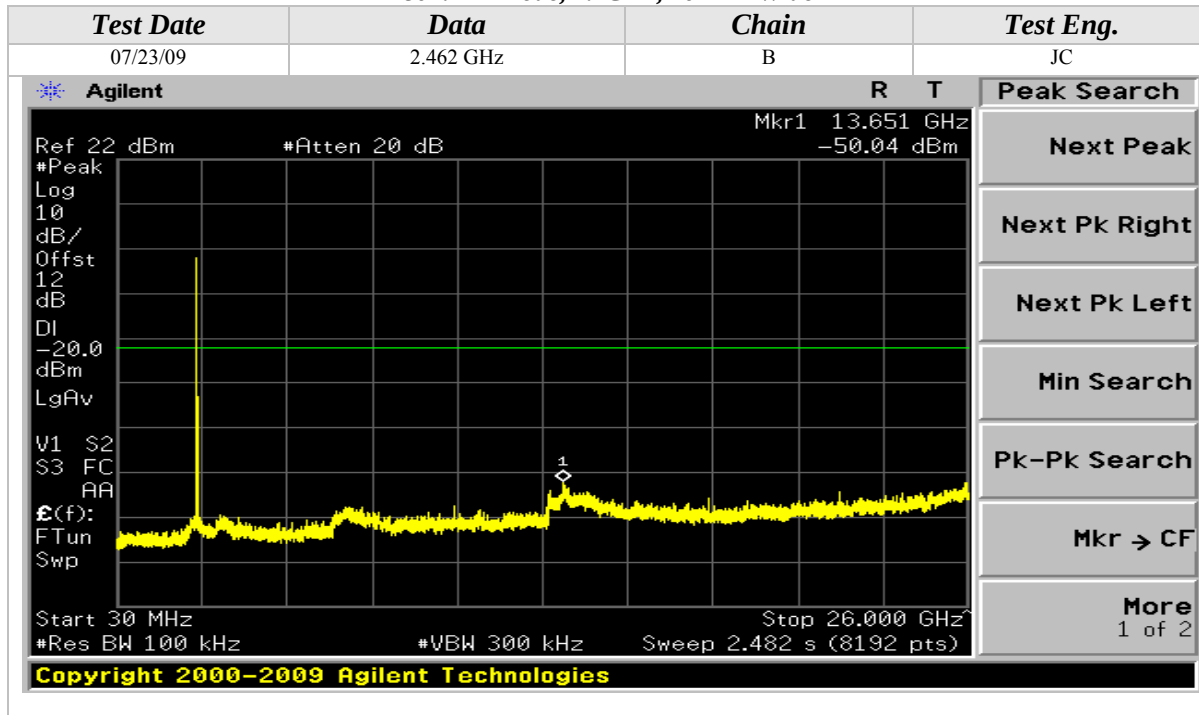
## 802.11n Mode, 2.4GHz, 20MHz Wide



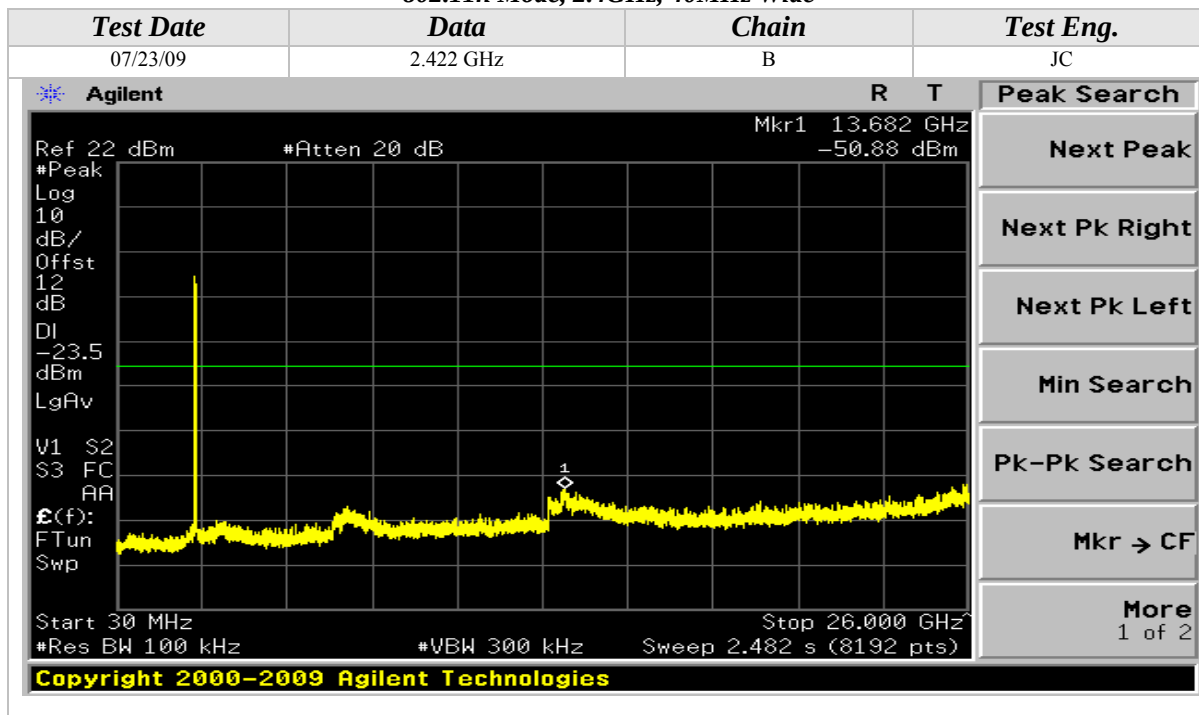


## Conducted Out Of Band Emissions (Continued)

## 802.11n Mode, 2.4GHz, 20MHz Wide



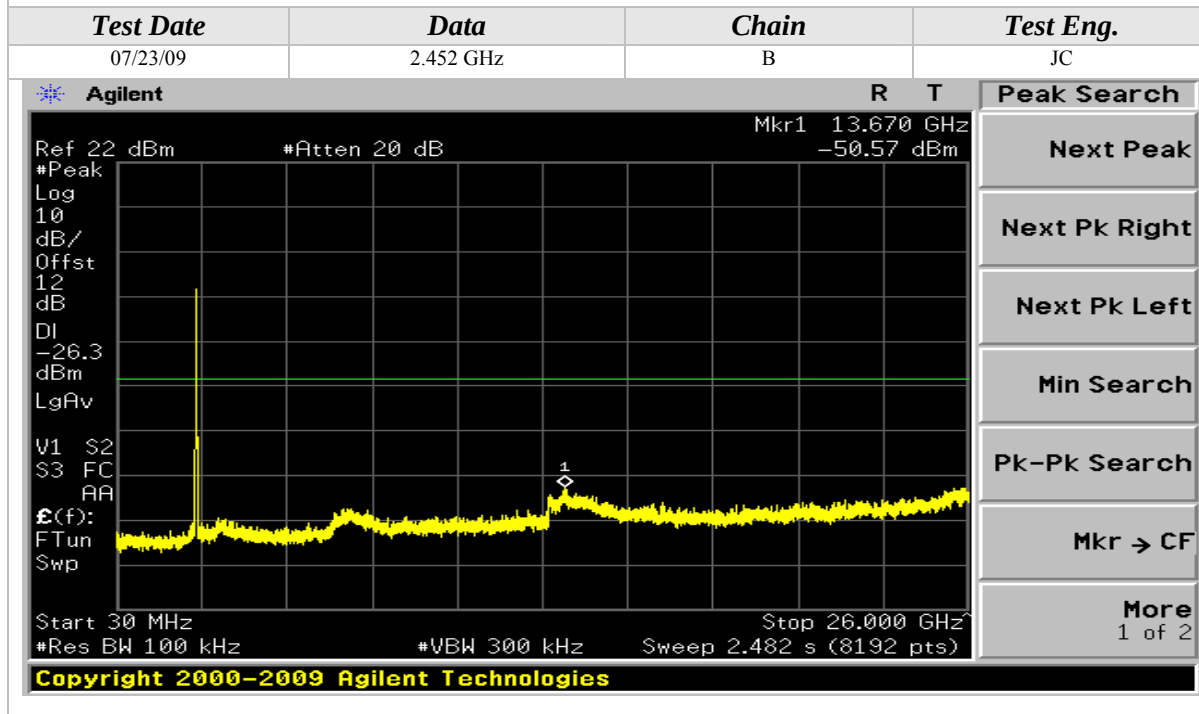
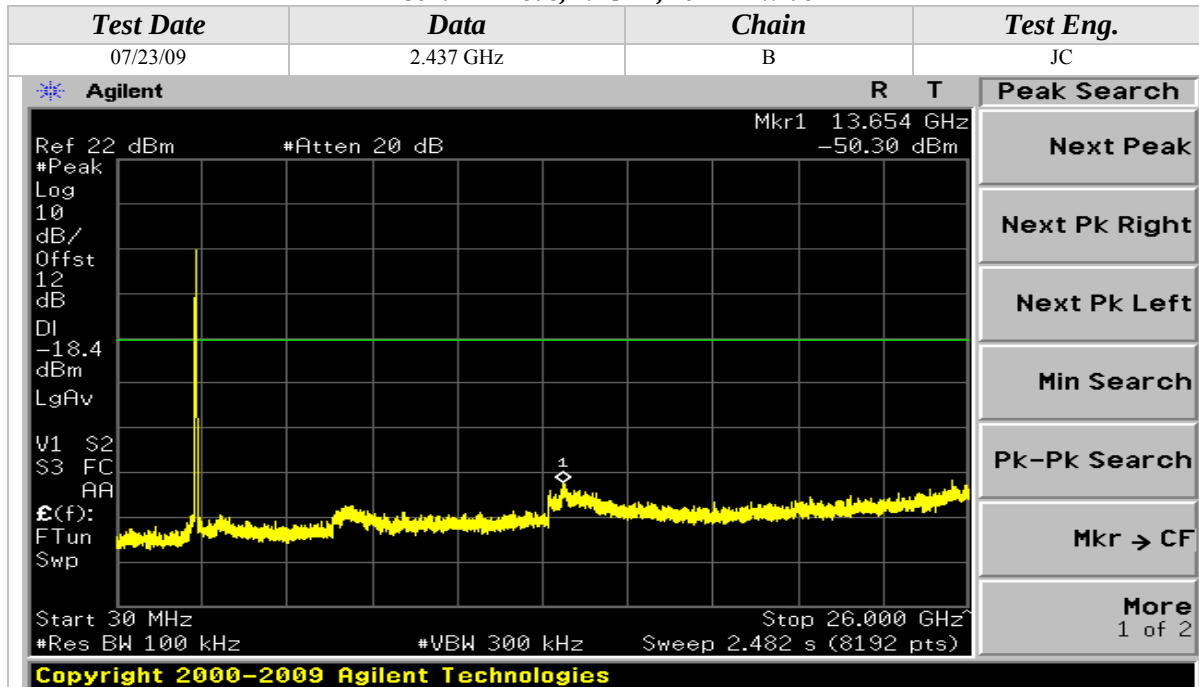
## 802.11n Mode, 2.4GHz, 40MHz Wide





## Conducted Out Of Band Emissions (Continued)

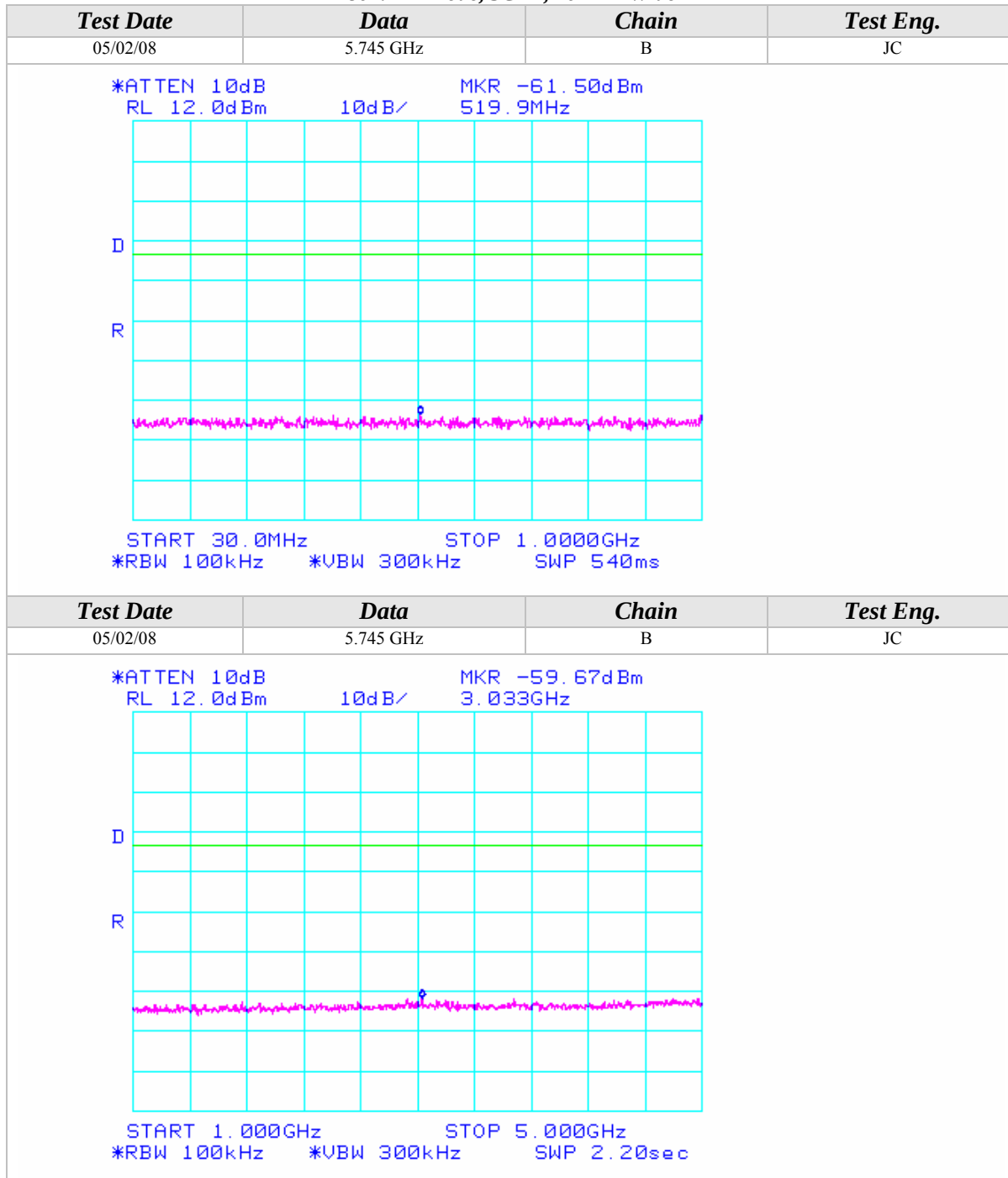
## 802.11n Mode, 2.4GHz, 40MHz Wide





## Conducted Out Of Band Emissions (Continued)

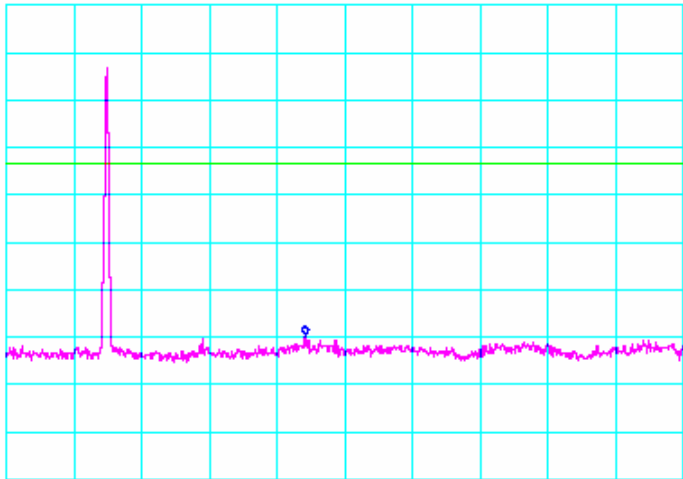
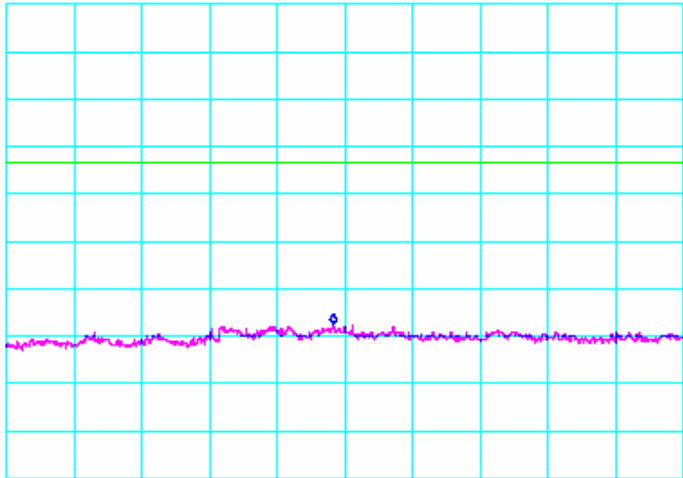
## 802.11n Mode, 5GHz, 20MHz Wide





## Conducted Out Of Band Emissions (Continued)

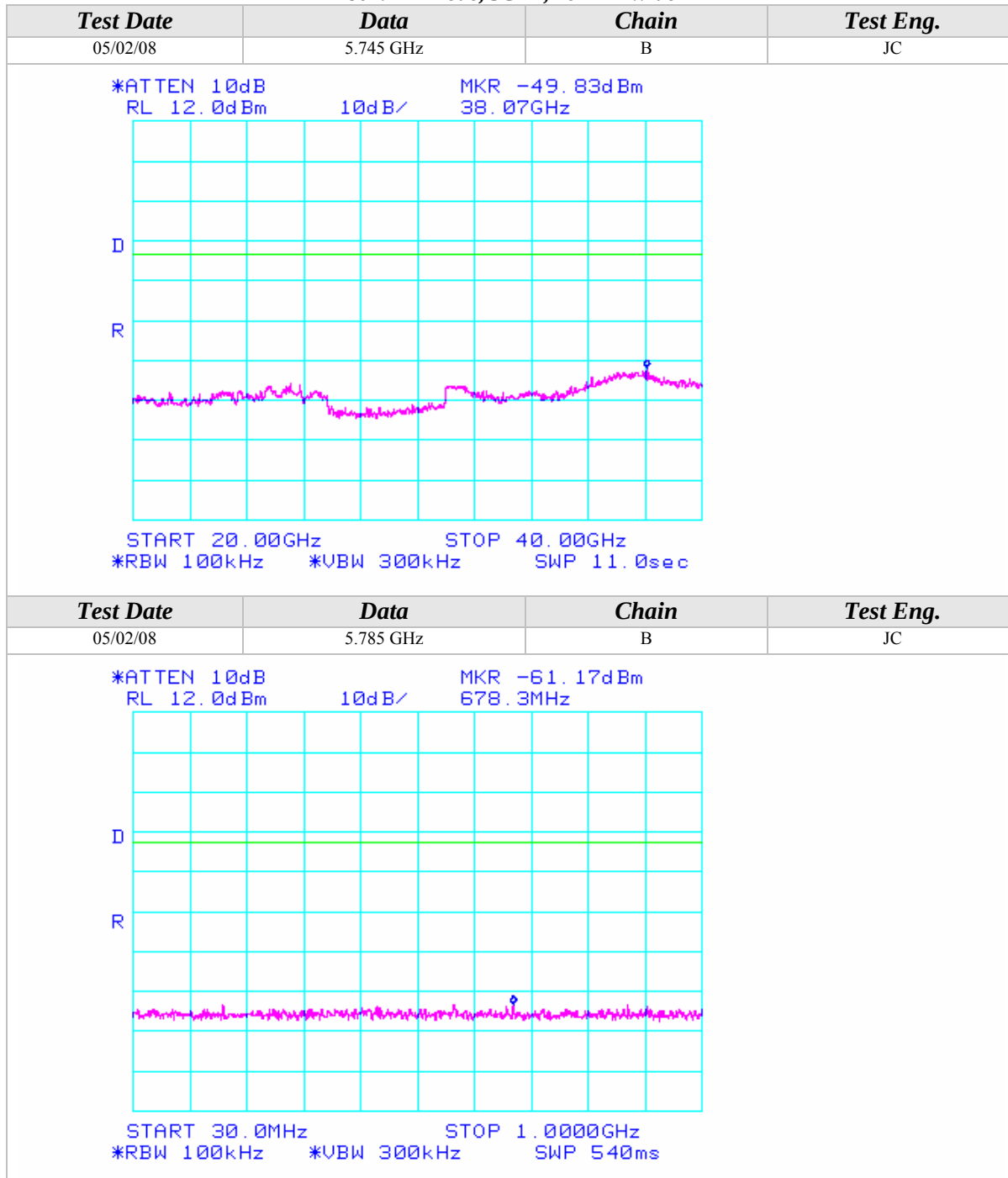
## 802.11n Mode, 5GHz, 20MHz Wide

| Test Date                                                                                                                                                                                                                                                                                          | Data      | Chain | Test Eng. |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                                                           | 5.745 GHz | B     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -57.50dBm<br/>7.208GHz</div></div><div>START 5.000GHz      STOP 10.000GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 2.80sec</div></div>  |           |       |           |
| Test Date                                                                                                                                                                                                                                                                                          | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                                           | 5.745 GHz | B     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -55.50dBm<br/>14.83GHz</div></div><div>START 10.00GHz      STOP 20.00GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 5.50sec</div></div> |           |       |           |



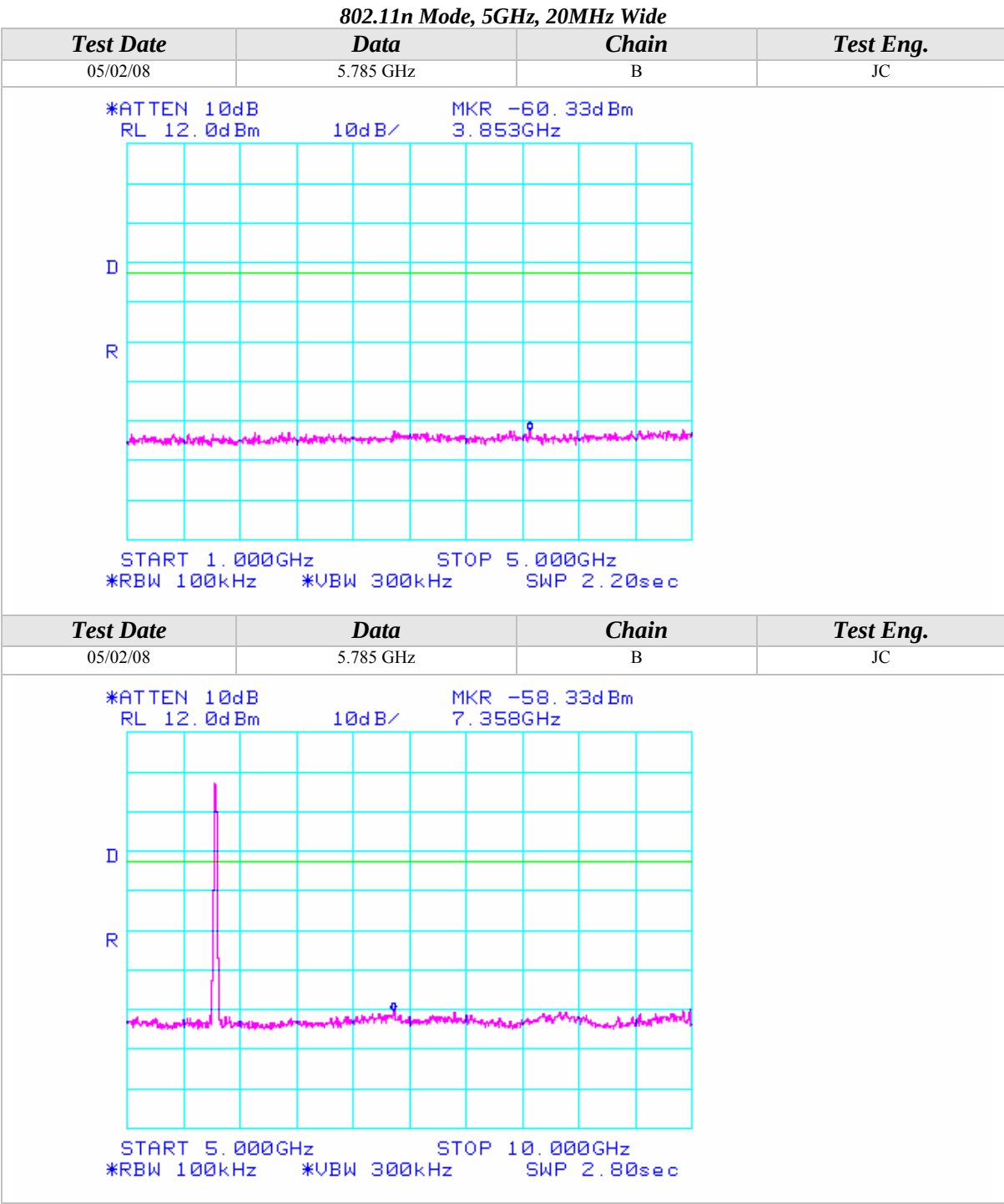
## Conducted Out Of Band Emissions (Continued)

## 802.11n Mode, 5GHz, 20MHz Wide





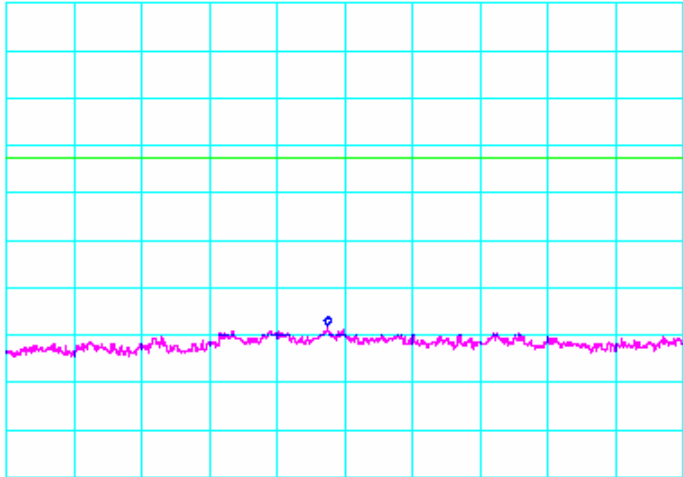
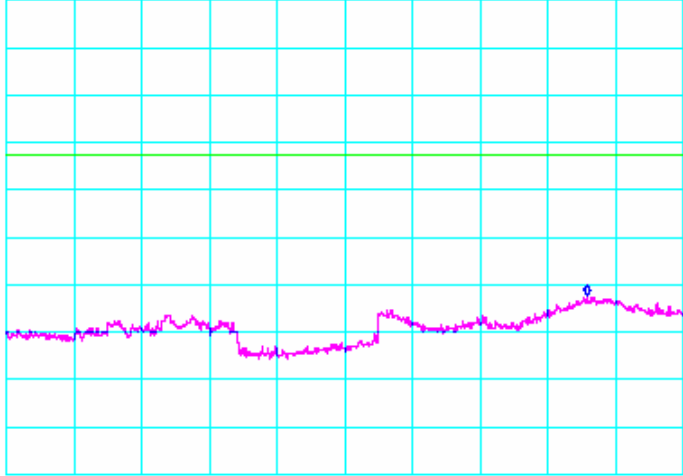
Conducted Out Of Band Emissions (Continued)





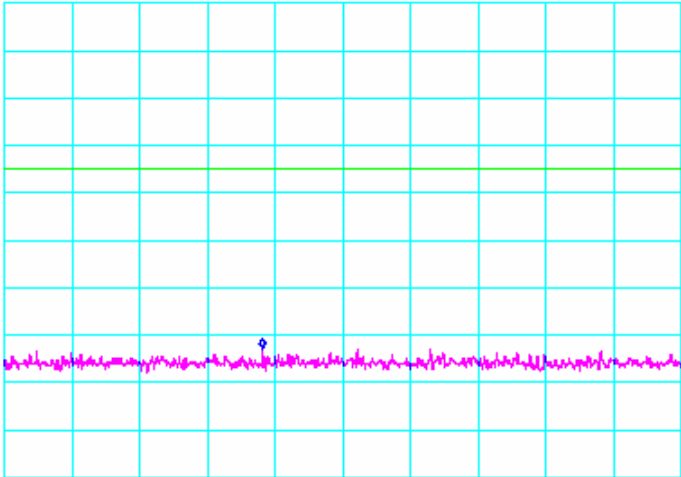
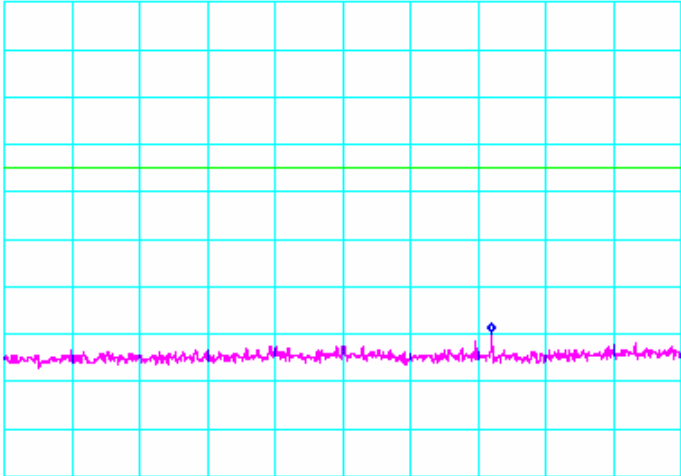
## Conducted Out Of Band Emissions (Continued)

## 802.11n Mode, 5GHz, 20MHz Wide

| Test Date                                                                                                                                                                                                                                                     | Data      | Chain | Test Eng. |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                      | 5.785 GHz | B     | JC        |
| <p>*ATTEN 10dB      MKR -56.00dBm<br/>RL 12.0dBm      10dB/      14.75GHz</p>  <p>START 10.00GHz      STOP 20.00GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 5.50sec</p>   |           |       |           |
| Test Date                                                                                                                                                                                                                                                     | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                      | 5.785 GHz | B     | JC        |
| <p>*ATTEN 10dB      MKR -50.17dBm<br/>RL 12.0dBm      10dB/      37.17GHz</p>  <p>START 20.00GHz      STOP 40.00GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 11.0sec</p> |           |       |           |



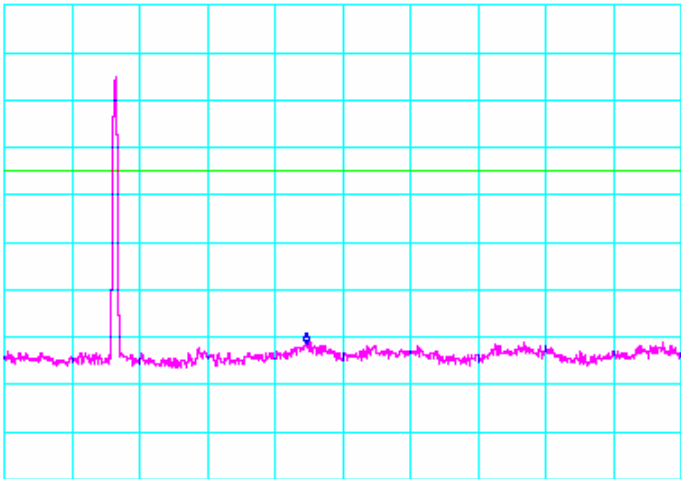
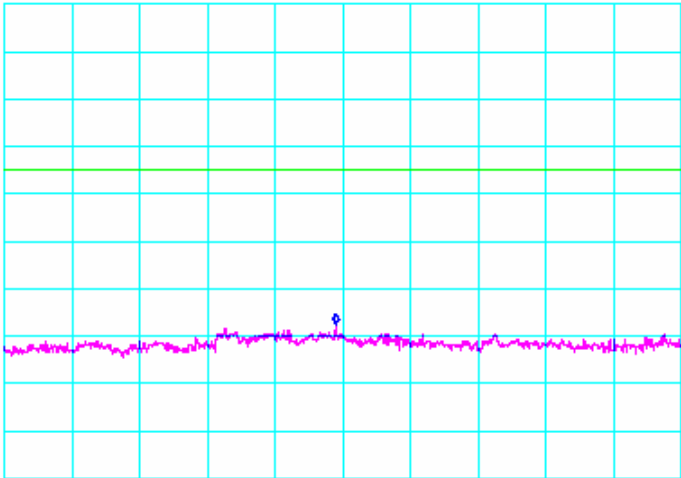
Conducted Out Of Band Emissions (Continued)

| 802.11n Mode, 5GHz, 20MHz Wide                                                                                                                                                                                                                                                                                |           |       |           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| Test Date                                                                                                                                                                                                                                                                                                     | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                                                      | 5.825 GHz | B     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -60.83dBm<br/>400.2MHz</div></div><div></div><div>START 30.0MHz      STOP 1.0000GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 540ms</div></div>     |           |       |           |
| Test Date                                                                                                                                                                                                                                                                                                     | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                                                      | 5.825 GHz | B     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -57.67dBm<br/>3.880GHz</div></div><div></div><div>START 1.000GHz      STOP 5.000GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 2.20sec</div></div> |           |       |           |



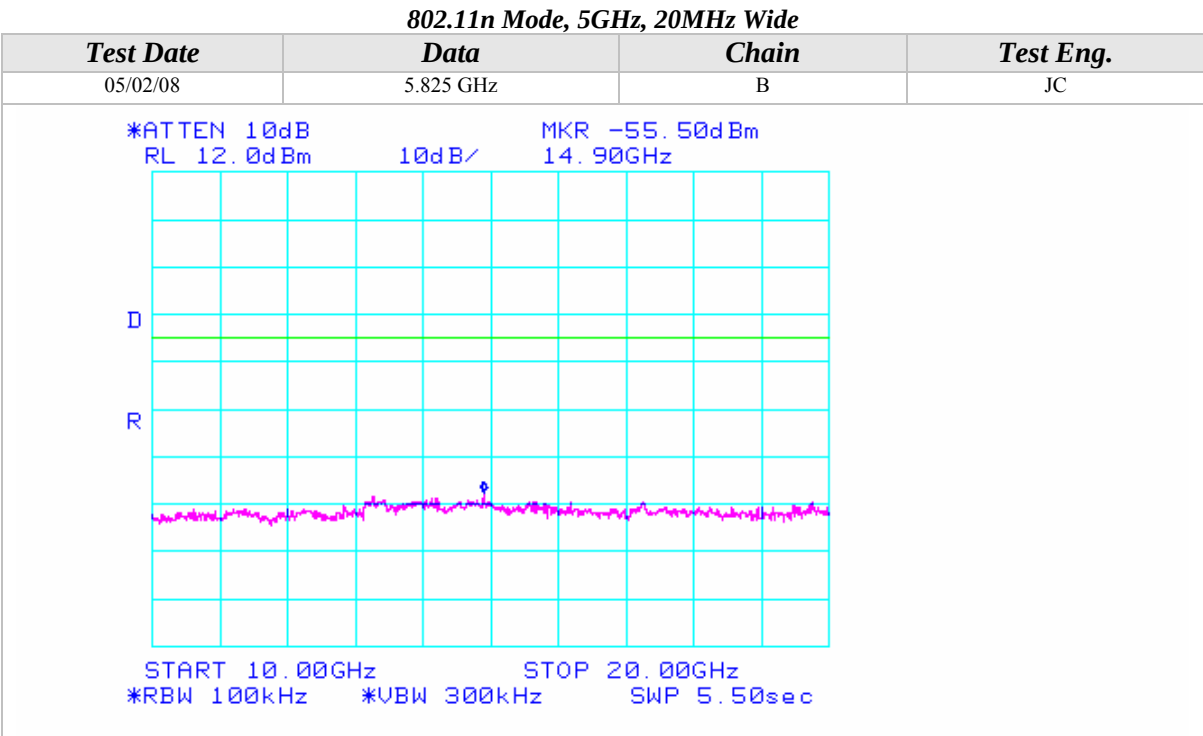
## Conducted Out Of Band Emissions (Continued)

## 802.11n Mode, 5GHz, 20MHz Wide

| Test Date                                                                                                                                                                                                                                                                                          | Data      | Chain | Test Eng. |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                                                           | 5.825 GHz | B     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -59.33dBm<br/>7.233GHz</div></div><div>START 5.000GHz      STOP 10.000GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 2.80sec</div></div>  |           |       |           |
| Test Date                                                                                                                                                                                                                                                                                          | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                                           | 5.825 GHz | B     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -55.50dBm<br/>14.90GHz</div></div><div>START 10.00GHz      STOP 20.00GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 5.50sec</div></div> |           |       |           |



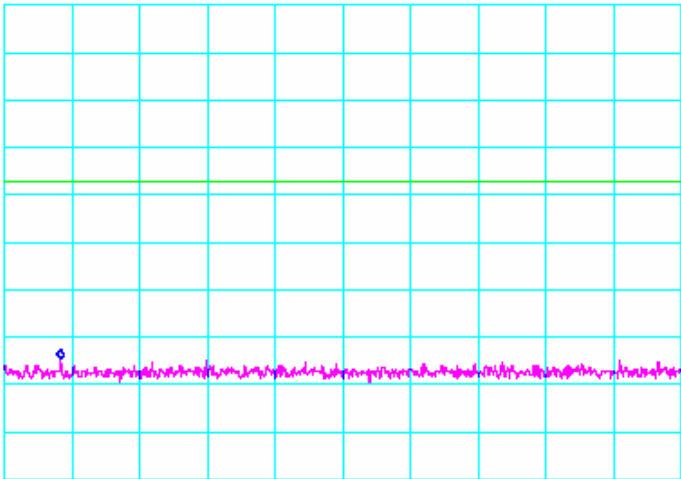
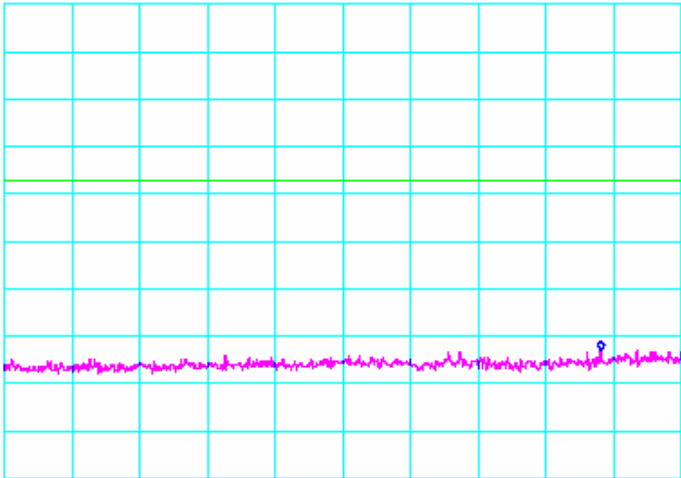
Conducted Out Of Band Emissions (Continued)





## Conducted Out Of Band Emissions (Continued)

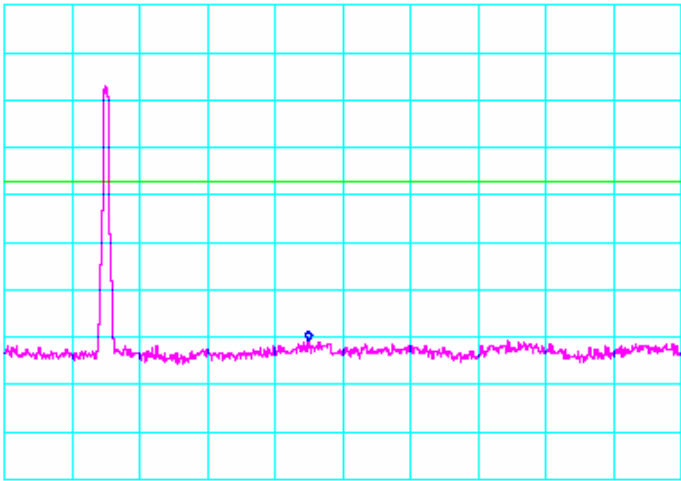
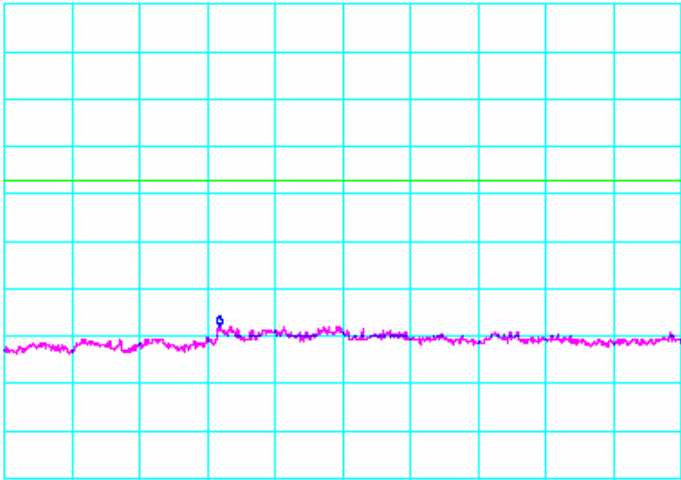
## 802.11n Mode, 5GHz, 40MHz Wide

| Test Date                                                                                                                                                                                                                                                                                          | Data      | Chain | Test Eng. |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                                                           | 5.755 GHz | B     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -62.67dBm<br/>110.8MHz</div></div><div>START 30.0MHz      STOP 1.0000GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 540ms</div></div>     |           |       |           |
| Test Date                                                                                                                                                                                                                                                                                          | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                                           | 5.755 GHz | B     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -61.00dBm<br/>4.527GHz</div></div><div>START 1.000GHz      STOP 5.000GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 2.20sec</div></div> |           |       |           |



## Conducted Out Of Band Emissions (Continued)

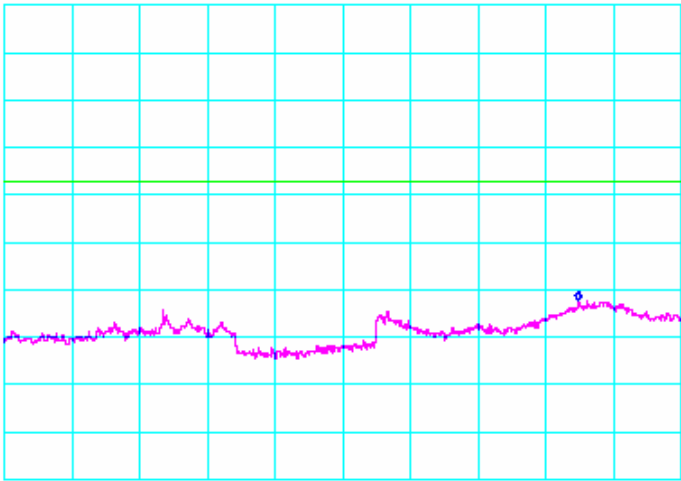
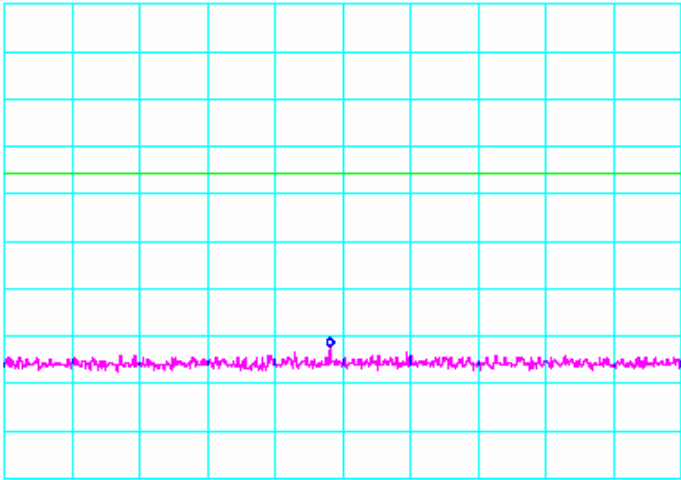
## 802.11n Mode, 5GHz, 40MHz Wide

| Test Date                                                                                                                                                                                                                                                                                 | Data      | Chain | Test Eng. |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                                                  | 5.755 GHz | B     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm<br/>10dB/</div><div>MKR -58.67dBm<br/>7.250GHz</div></div><div>START 5.000GHz<br/>*RBW 100kHz<br/>STOP 10.000GHz<br/>*VBW 300kHz<br/>SWP 2.80sec</div></div>  |           |       |           |
| Test Date                                                                                                                                                                                                                                                                                 | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                                  | 5.755 GHz | B     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm<br/>10dB/</div><div>MKR -55.83dBm<br/>13.18GHz</div></div><div>START 10.00GHz<br/>*RBW 100kHz<br/>STOP 20.00GHz<br/>*VBW 300kHz<br/>SWP 5.50sec</div></div> |           |       |           |



## Conducted Out Of Band Emissions (Continued)

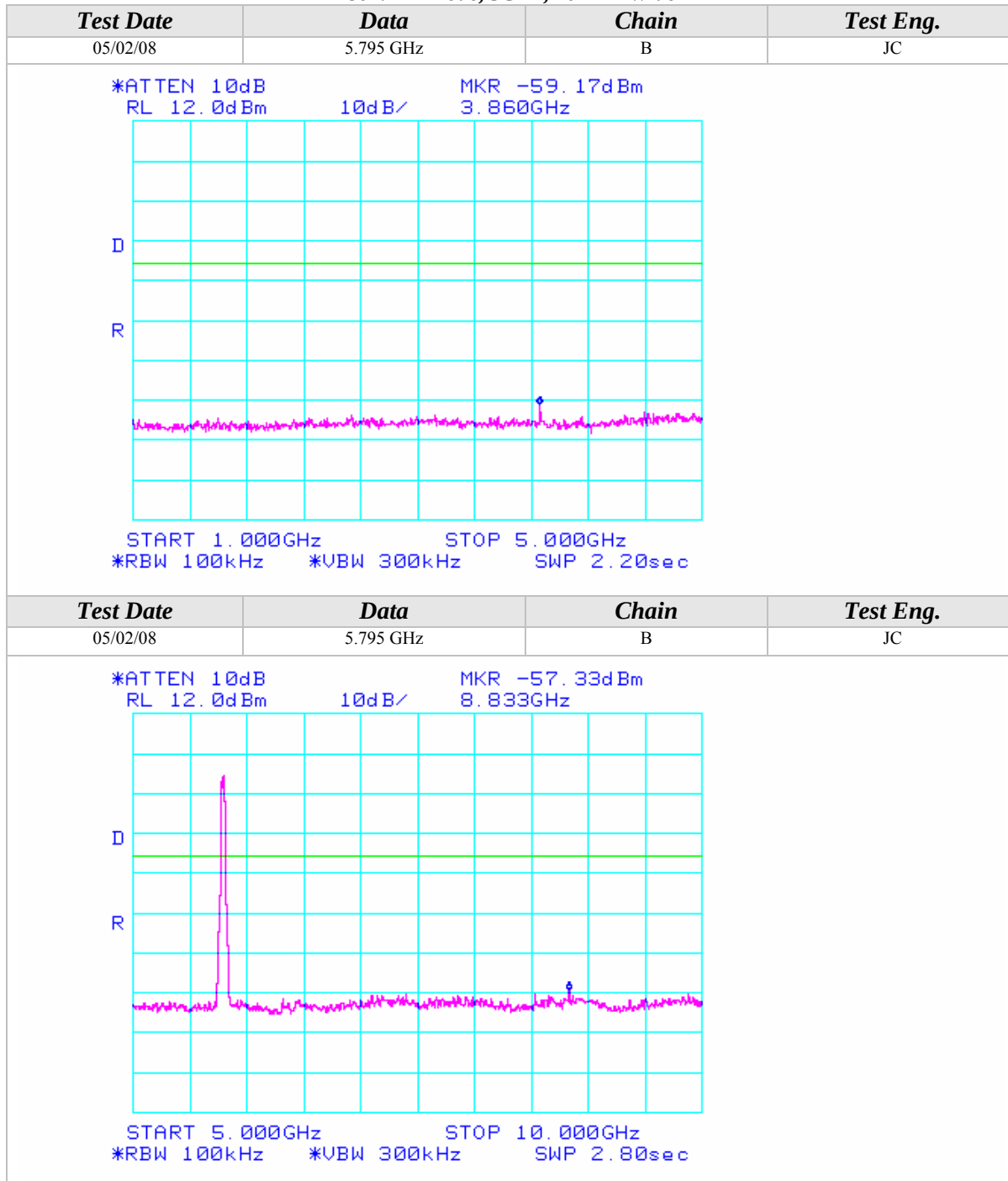
## 802.11n Mode, 5GHz, 40MHz Wide

| Test Date                                                                                                                                                                                                                                                   | Data      | Chain | Test Eng. |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                    | 5.755 GHz | B     | JC        |
| <p>*ATTEN 10dB      MKR -50.33dBm<br/>RL 12.0dBm      10dB/      36.97GHz</p>  <p>START 20.00GHz      STOP 40.00GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 11.0sec</p> |           |       |           |
| Test Date                                                                                                                                                                                                                                                   | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                    | 5.795 GHz | B     | JC        |
| <p>*ATTEN 10dB      MKR -60.33dBm<br/>RL 12.0dBm      10dB/      497.2MHz</p>  <p>START 30.0MHz      STOP 1.0000GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 540ms</p> |           |       |           |



## Conducted Out Of Band Emissions (Continued)

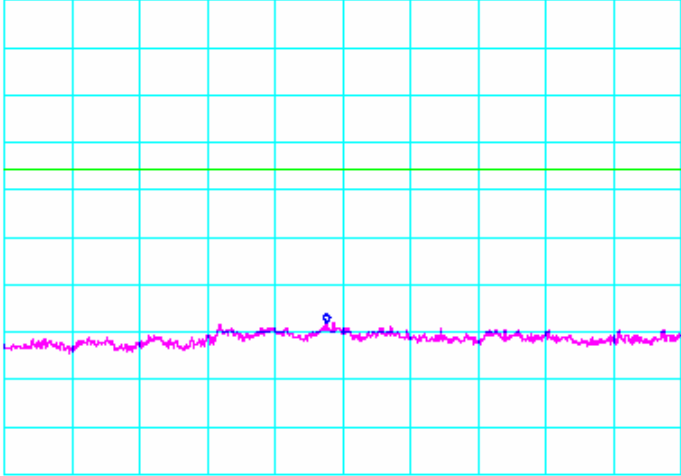
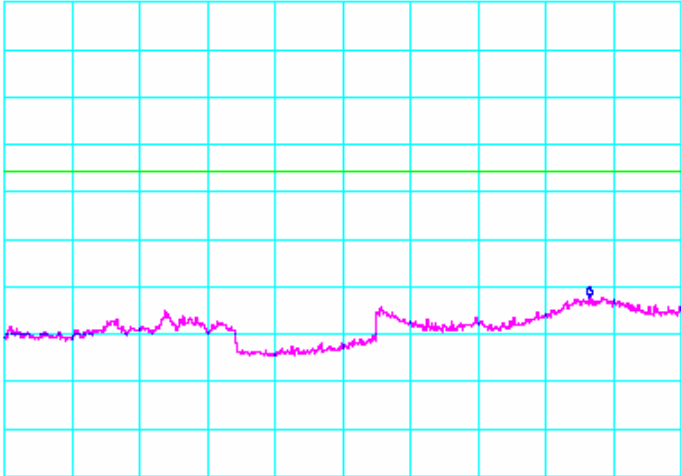
## 802.11n Mode, 5GHz, 40MHz Wide





## Conducted Out Of Band Emissions (Continued)

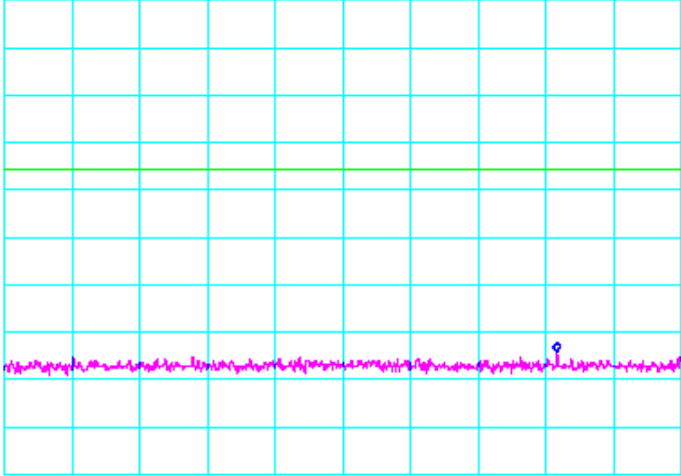
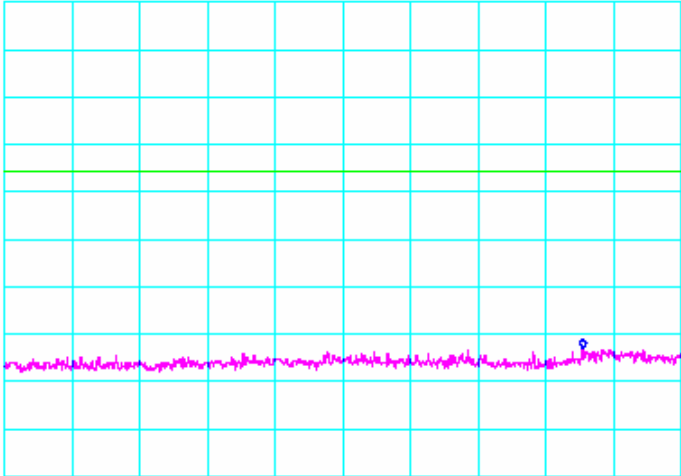
## 802.11n Mode, 5GHz, 40MHz Wide

| Test Date                                                                                                                                                                                                                                                                                             | Data      | Chain | Test Eng. |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                                                              | 5.795 GHz | B     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -56.00dBm<br/>14.77GHz</div></div><div>START 10.00GHz<br/>*RBW 100kHz</div><div>STOP 20.00GHz<br/>*VBW 300kHz<br/>SWP 5.50sec</div></div>   |           |       |           |
| Test Date                                                                                                                                                                                                                                                                                             | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                                              | 5.795 GHz | B     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -50.17dBm<br/>37.30GHz</div></div><div>START 20.00GHz<br/>*RBW 100kHz</div><div>STOP 40.00GHz<br/>*VBW 300kHz<br/>SWP 11.0sec</div></div> |           |       |           |



## Conducted Out Of Band Emissions (Continued)

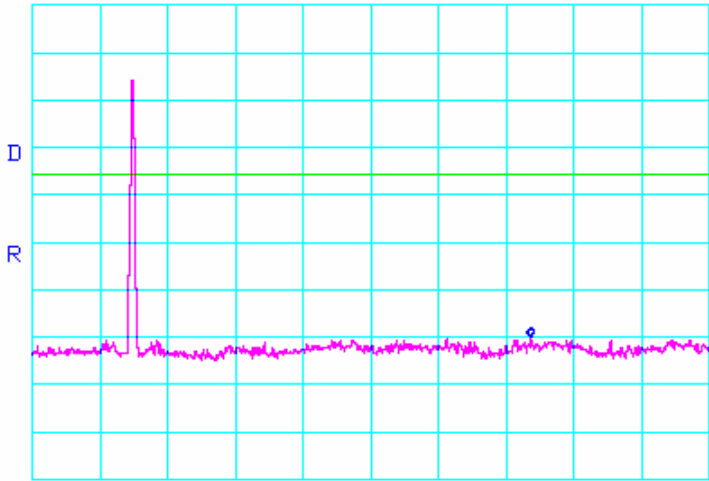
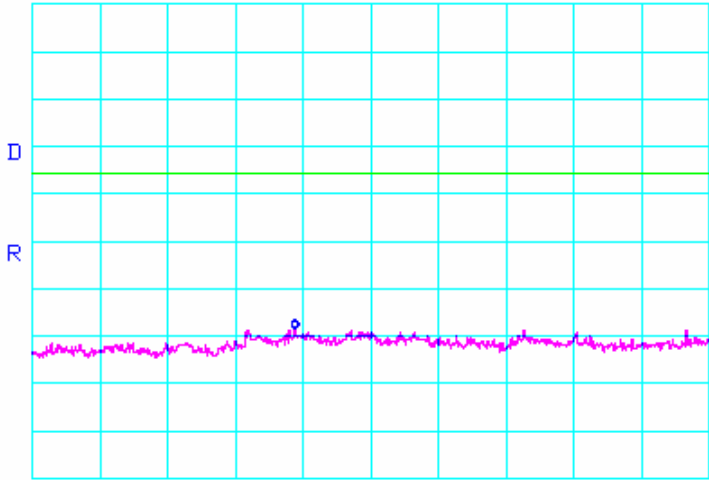
## 802.11a Mode

| Test Date                                                                                                                                                                                                                                                                                             | Data      | Chain | Test Eng. |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                                                              | 5.745 GHz | C     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -62.17dBm<br/>822.2MHz</div></div><div>START 30.0MHz<br/>*RBW 100kHz</div><div>STOP 1.0000GHz<br/>*VBW 300kHz<br/>SWP 540ms</div></div>     |           |       |           |
| Test Date                                                                                                                                                                                                                                                                                             | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                                              | 5.745 GHz | C     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -61.00dBm<br/>4.420GHz</div></div><div>START 1.000GHz<br/>*RBW 100kHz</div><div>STOP 5.000GHz<br/>*VBW 300kHz<br/>SWP 2.20sec</div></div> |           |       |           |



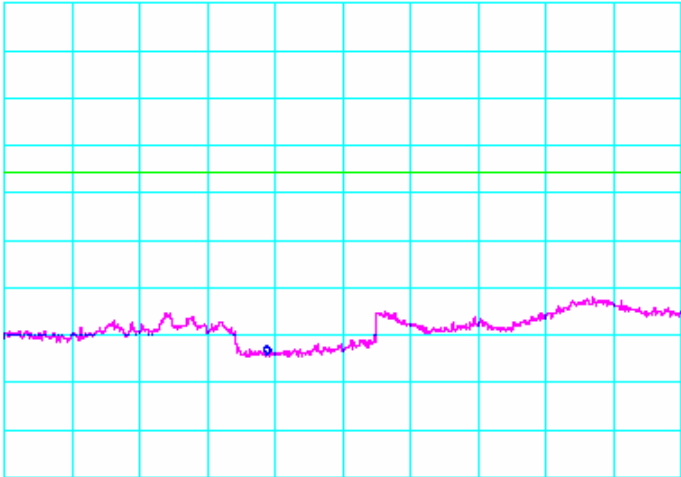
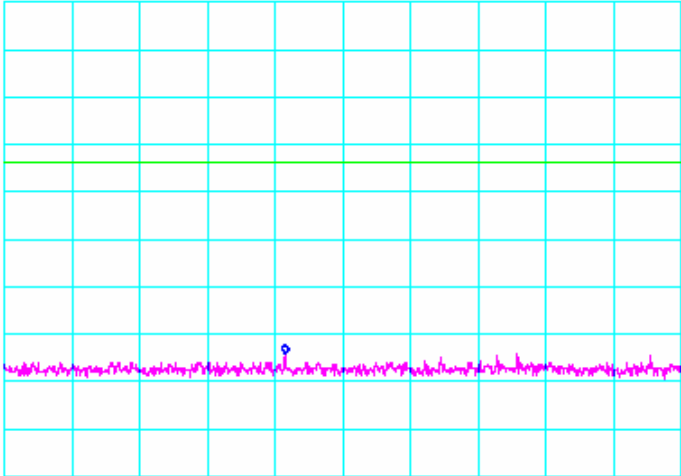
## Conducted Out Of Band Emissions (Continued)

## 802.11a Mode

| Test Date                                                                                                                                                                                                                                                                                          | Data      | Chain | Test Eng. |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                                                           | 5.745 GHz | C     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -58.00dBm<br/>8.683GHz</div></div><div>START 5.000GHz      STOP 10.000GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 2.80sec</div></div>  |           |       |           |
| Test Date                                                                                                                                                                                                                                                                                          | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                                           | 5.745 GHz | C     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -56.50dBm<br/>13.88GHz</div></div><div>START 10.00GHz      STOP 20.00GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 5.50sec</div></div> |           |       |           |



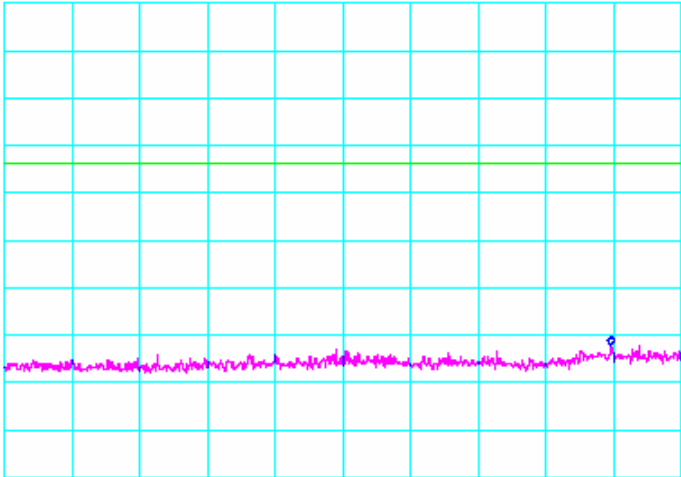
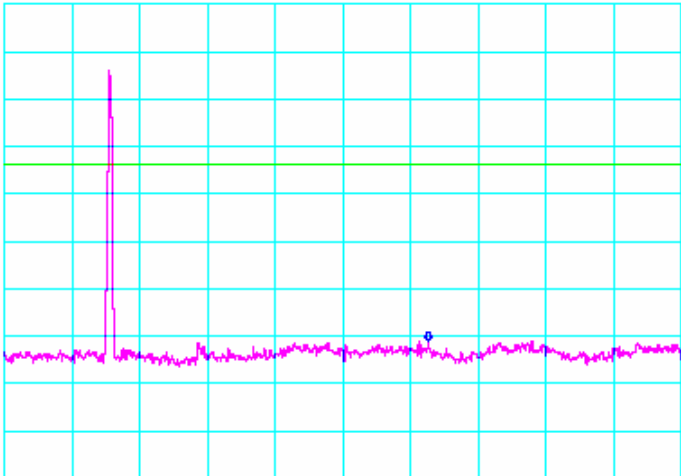
Conducted Out Of Band Emissions (Continued)

| 802.11a Mode                                                                                                                                                                                                                                                                                     |           |       |           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| Test Date                                                                                                                                                                                                                                                                                        | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                                         | 5.745 GHz | C     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -62.17dBm<br/>27.77GHz</div></div><div>START 20.00GHz      STOP 40.00GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 11.0sec</div></div> |           |       |           |
| Test Date                                                                                                                                                                                                                                                                                        | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                                         | 5.785 GHz | C     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -62.17dBm<br/>432.6MHz</div></div><div>START 30.0MHz      STOP 1.0000GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 540ms</div></div> |           |       |           |



## Conducted Out Of Band Emissions (Continued)

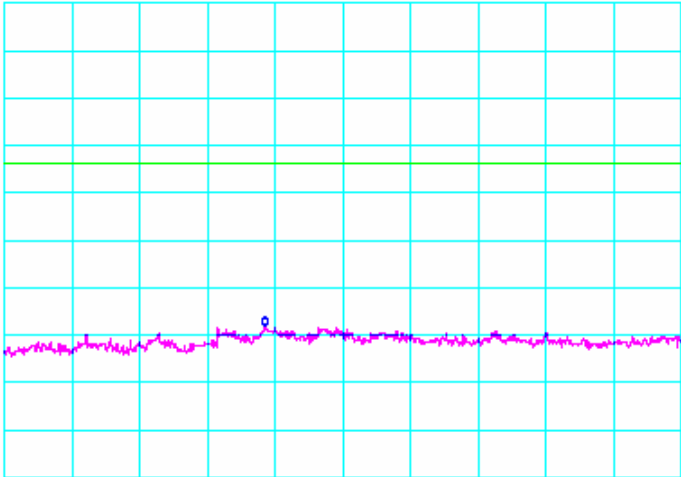
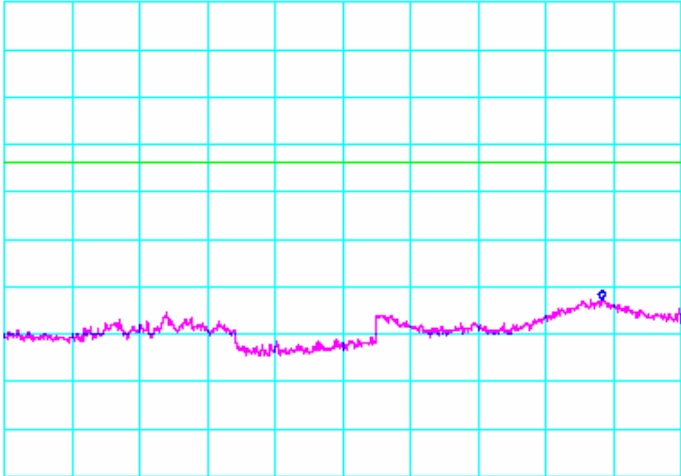
## 802.11a Mode

| Test Date                                                                                                                                                                                                                                                                                           | Data      | Chain | Test Eng. |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                                                            | 5.785 GHz | C     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -60.17dBm<br/>4.587GHz</div></div><div>START 1.000GHz      STOP 5.000GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 2.20sec</div></div>    |           |       |           |
| Test Date                                                                                                                                                                                                                                                                                           | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                                            | 5.785 GHz | C     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -59.17dBm<br/>8.133GHz</div></div><div>START 5.000GHz      STOP 10.000GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 2.80sec</div></div> |           |       |           |



## Conducted Out Of Band Emissions (Continued)

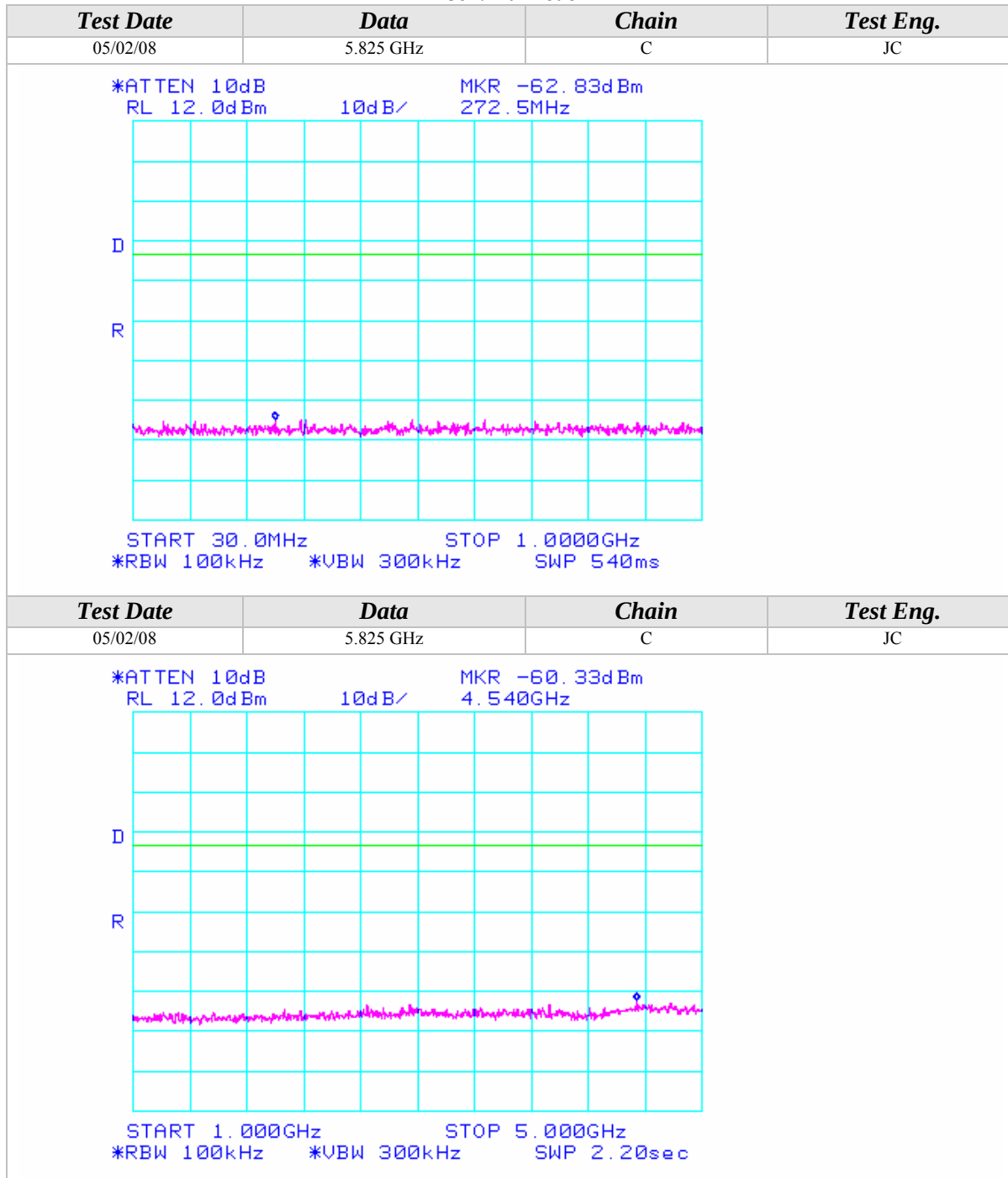
## 802.11a Mode

| Test Date                                                                                                                                                                                                                                                                                          | Data      | Chain | Test Eng. |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                                                           | 5.785 GHz | C     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -56.17dBm<br/>13.85GHz</div></div><div>START 10.00GHz      STOP 20.00GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 5.50sec</div></div>   |           |       |           |
| Test Date                                                                                                                                                                                                                                                                                          | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                                           | 5.785 GHz | C     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -50.67dBm<br/>37.67GHz</div></div><div>START 20.00GHz      STOP 40.00GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 11.0sec</div></div> |           |       |           |



## Conducted Out Of Band Emissions (Continued)

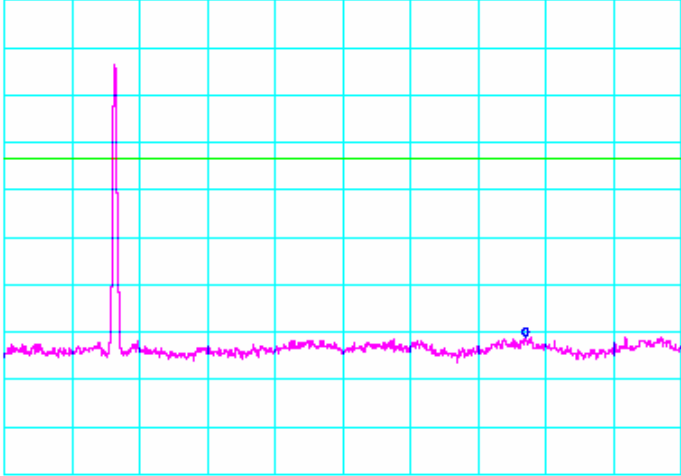
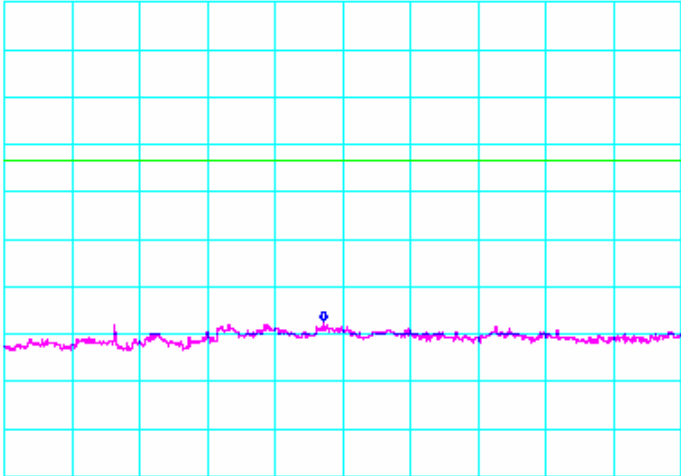
## 802.11a Mode





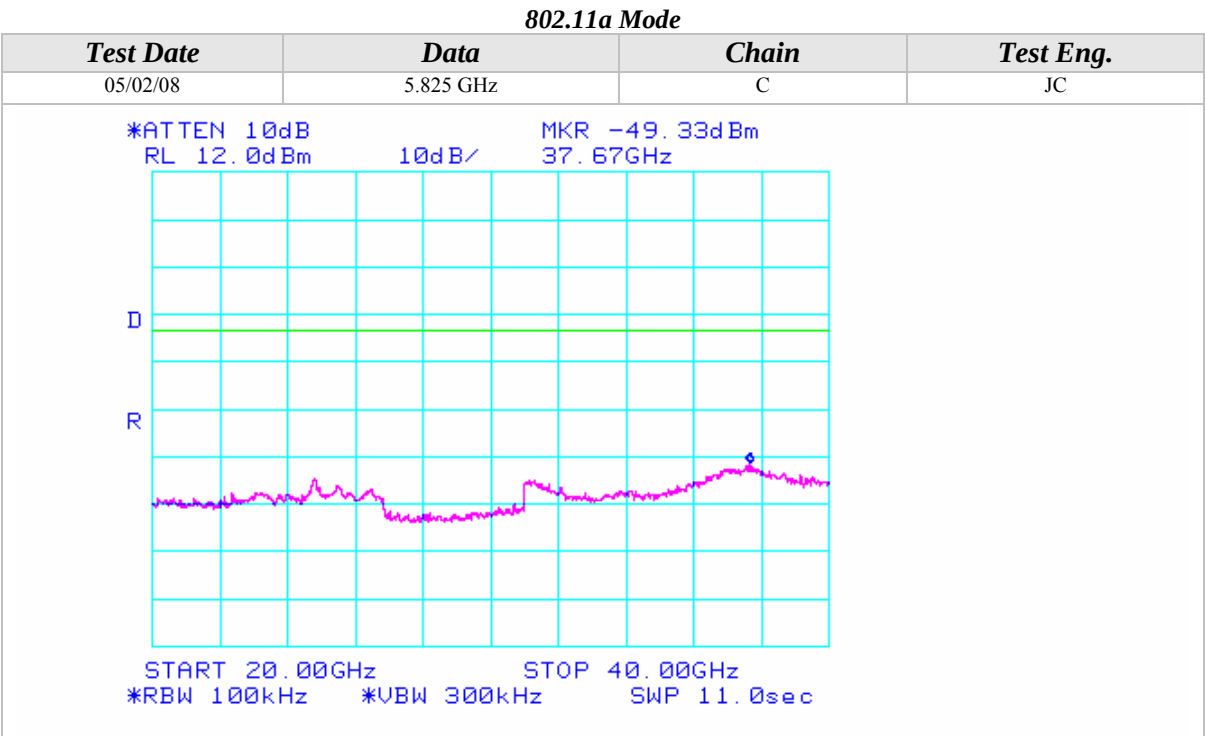
## Conducted Out Of Band Emissions (Continued)

## 802.11a Mode

| Test Date                                                                                                                                                                                                                                                                                          | Data      | Chain | Test Eng. |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                                                           | 5.825 GHz | C     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -59.00dBm<br/>8.850GHz</div></div><div>START 5.000GHz      STOP 10.000GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 2.80sec</div></div>  |           |       |           |
| Test Date                                                                                                                                                                                                                                                                                          | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                                           | 5.825 GHz | C     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -55.33dBm<br/>14.72GHz</div></div><div>START 10.00GHz      STOP 20.00GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 5.50sec</div></div> |           |       |           |



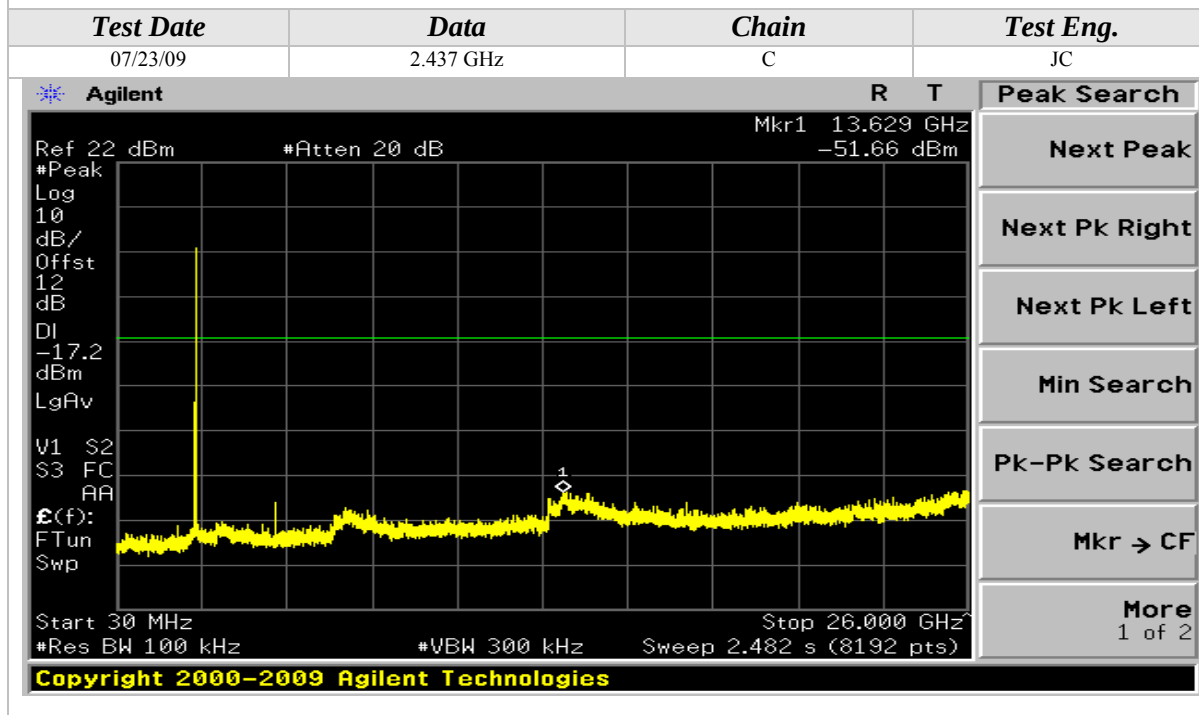
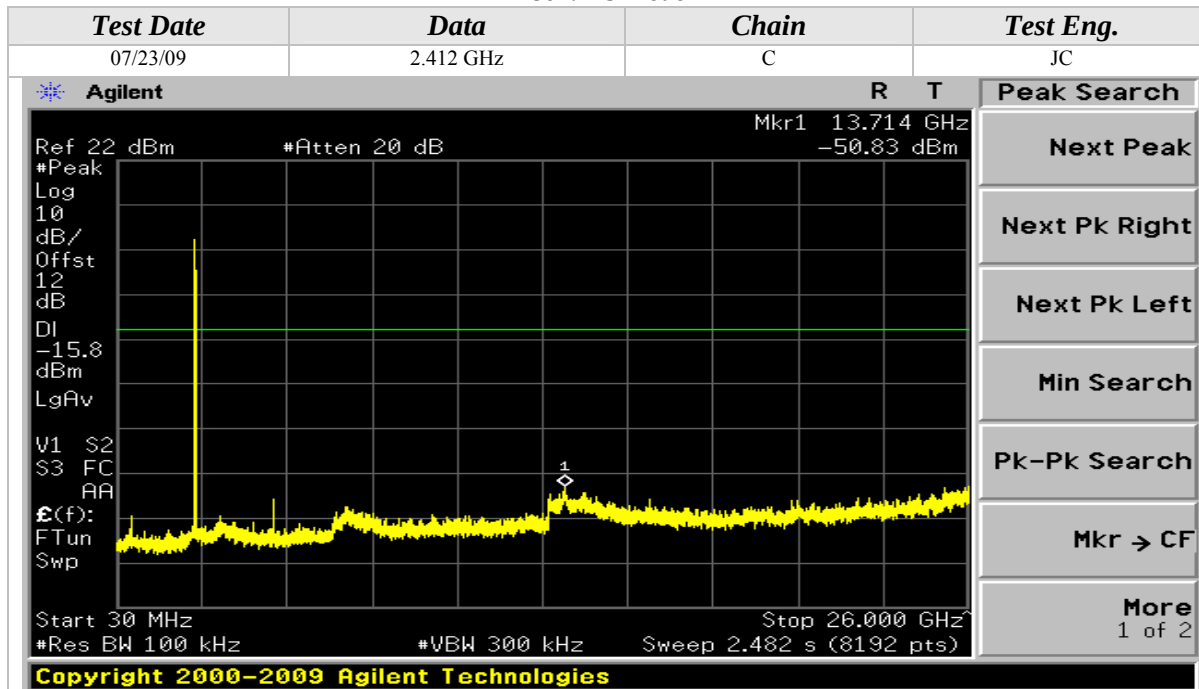
Conducted Out Of Band Emissions (Continued)





## Conducted Out Of Band Emissions (Continued)

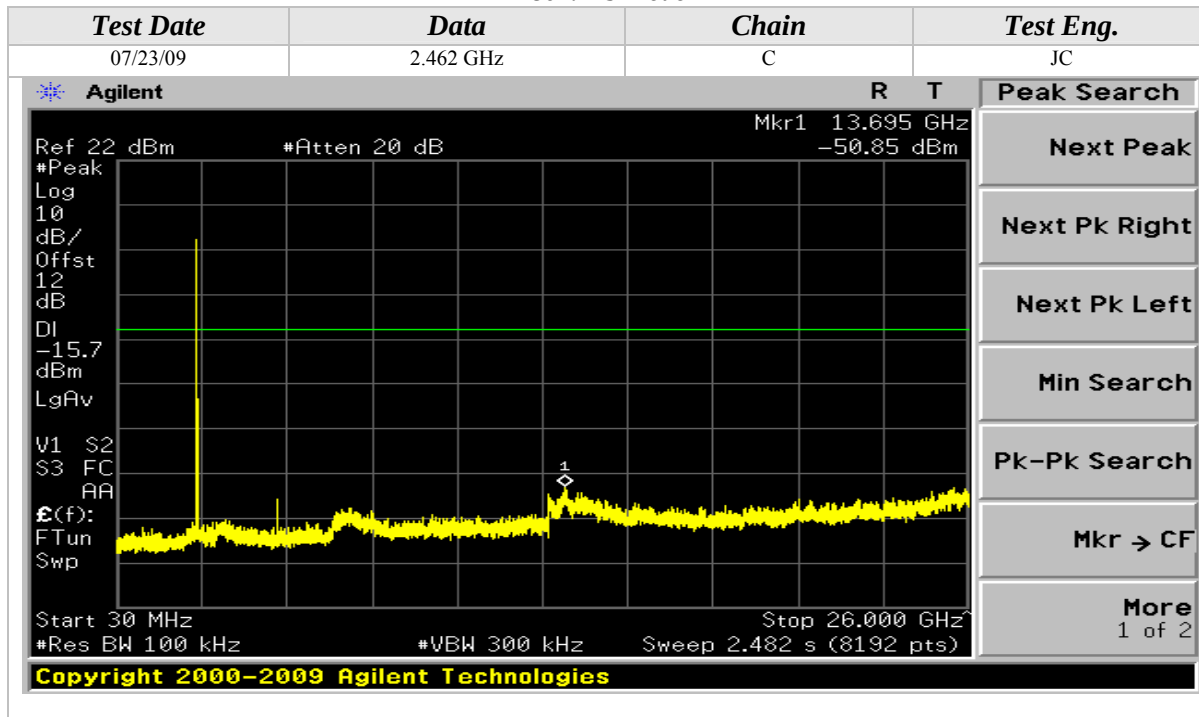
## 802.11b Mode



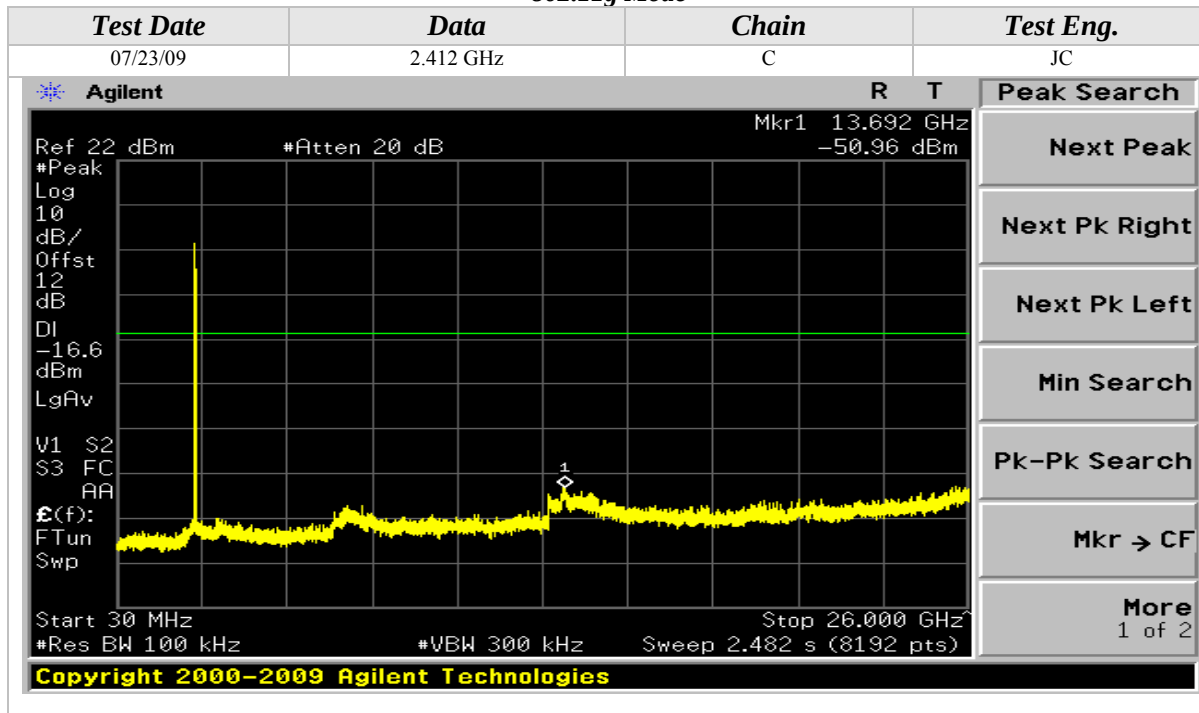


## Conducted Out Of Band Emissions (Continued)

## 802.11b Mode



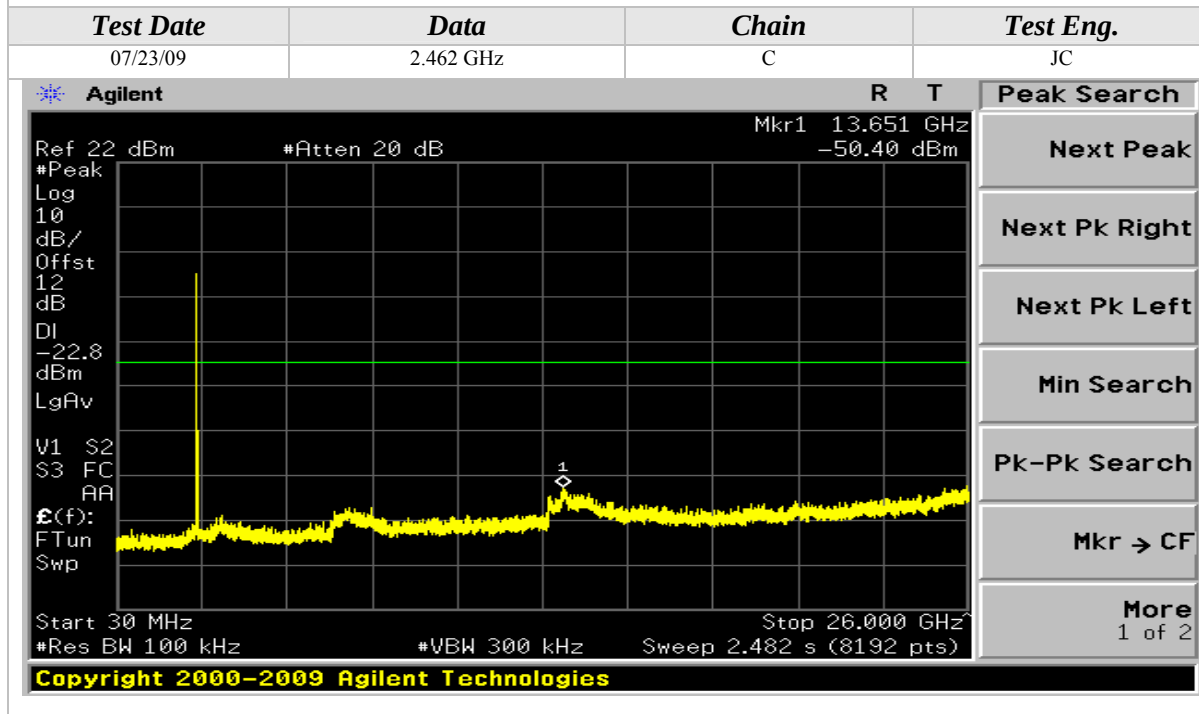
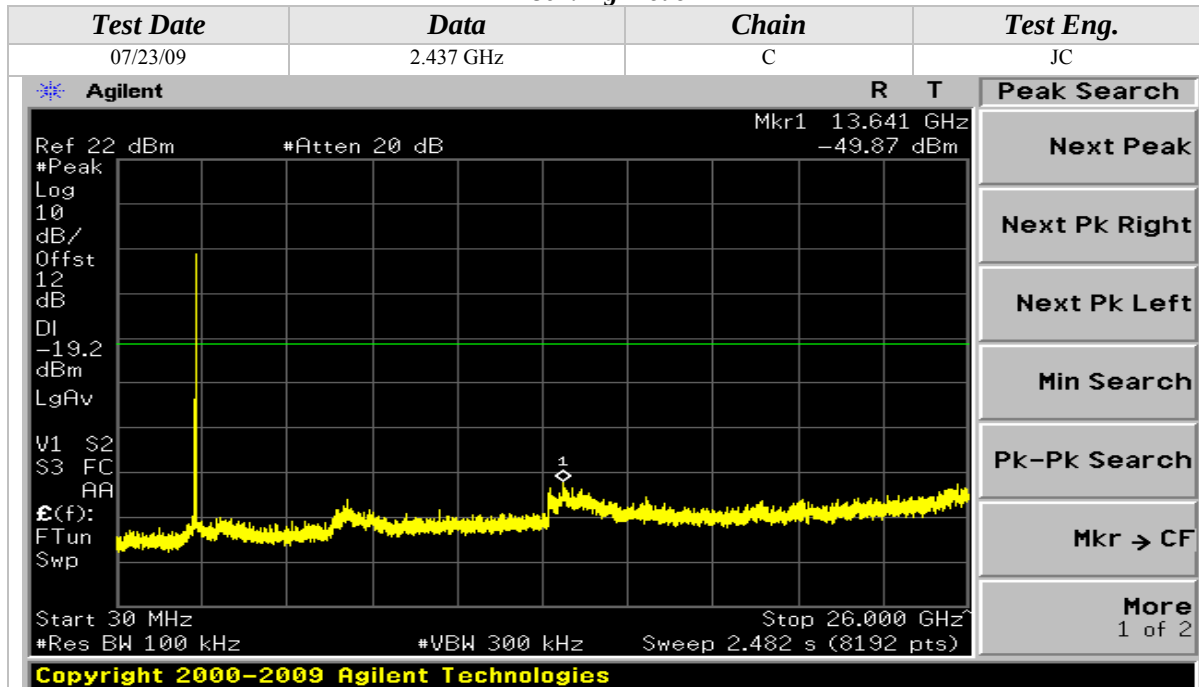
## 802.11g Mode





## Conducted Out Of Band Emissions (Continued)

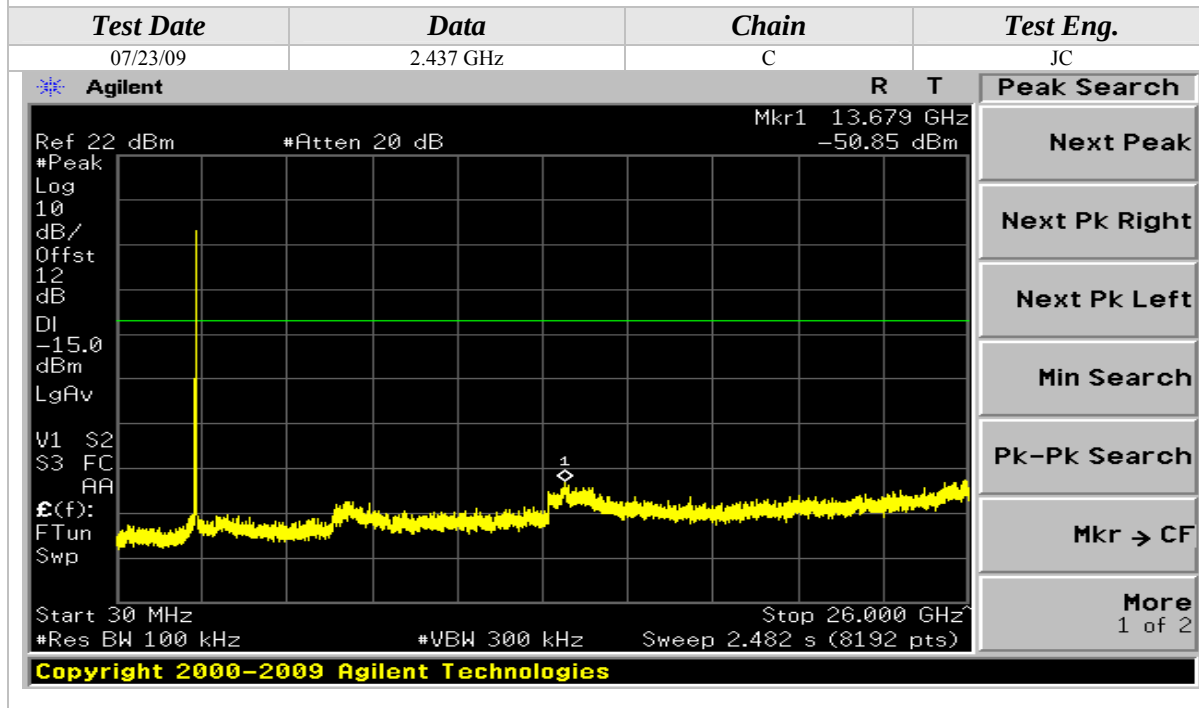
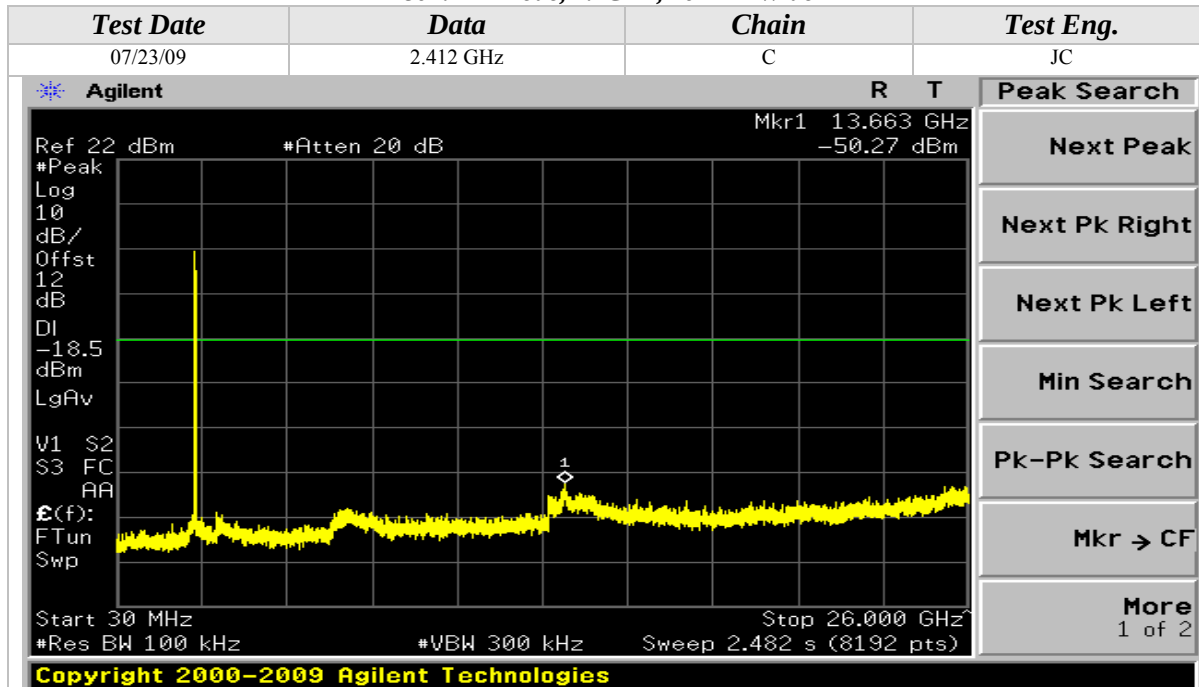
## 802.11g Mode





## Conducted Out Of Band Emissions (Continued)

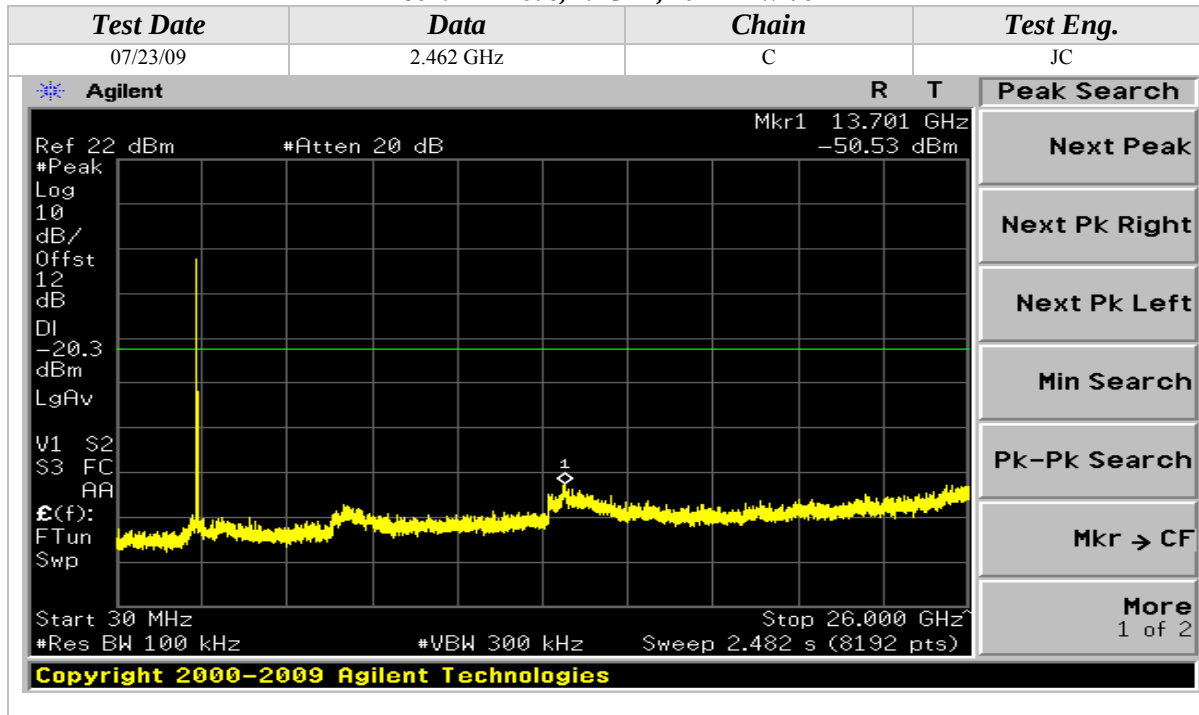
## 802.11n Mode, 2.4GHz, 20MHz Wide



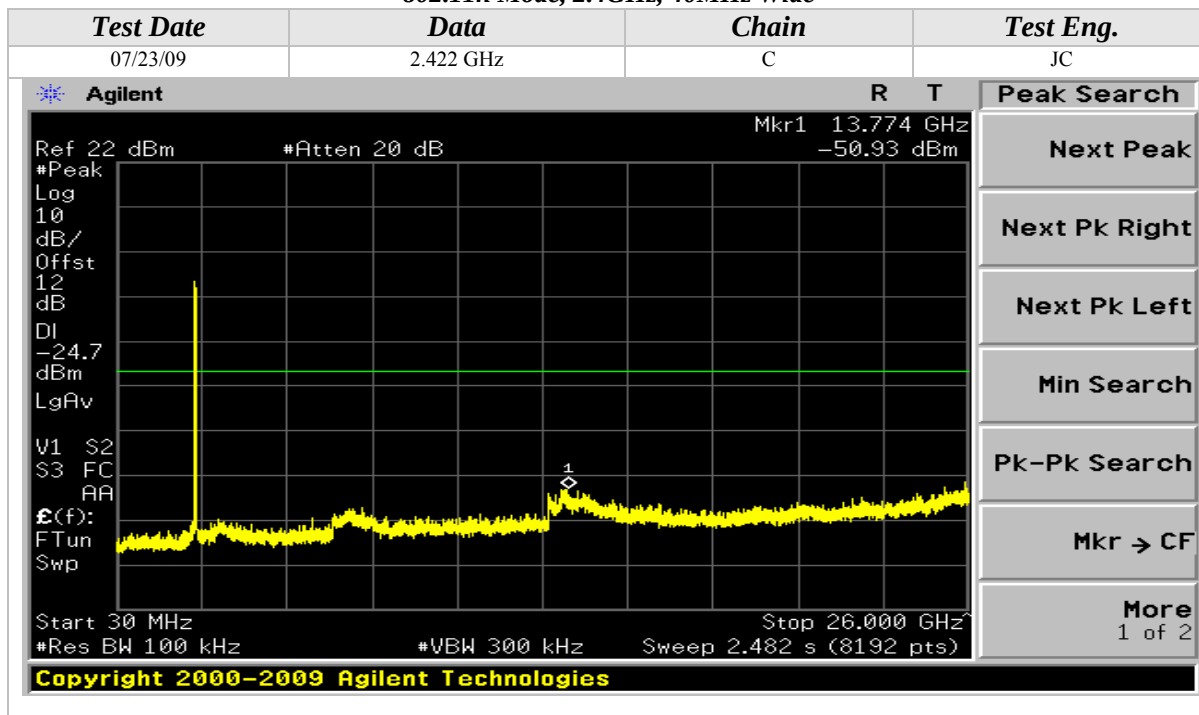


## Conducted Out Of Band Emissions (Continued)

## 802.11n Mode, 2.4GHz, 20MHz Wide



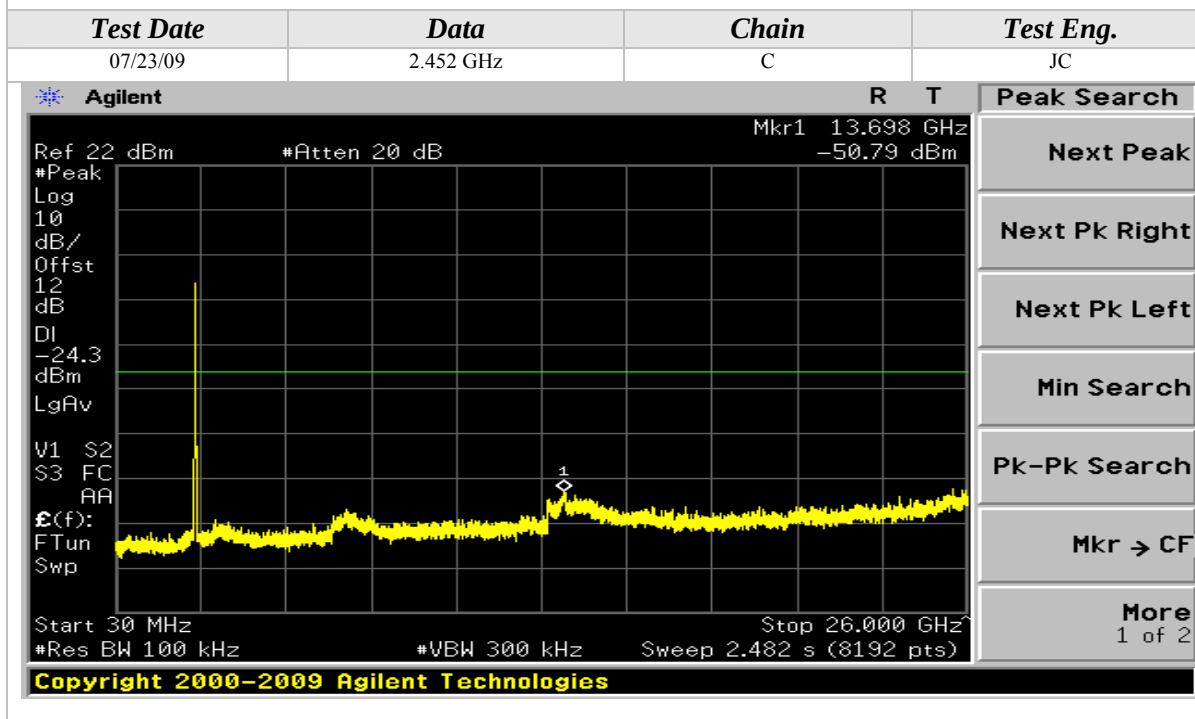
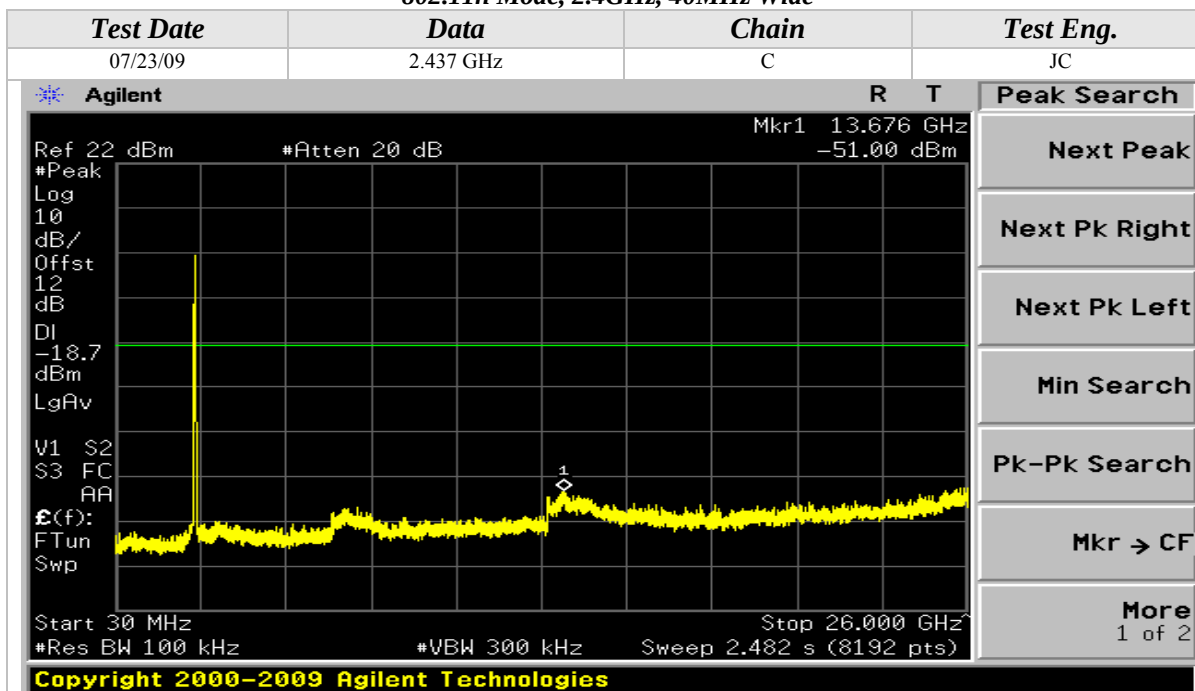
## 802.11n Mode, 2.4GHz, 40MHz Wide





## Conducted Out Of Band Emissions (Continued)

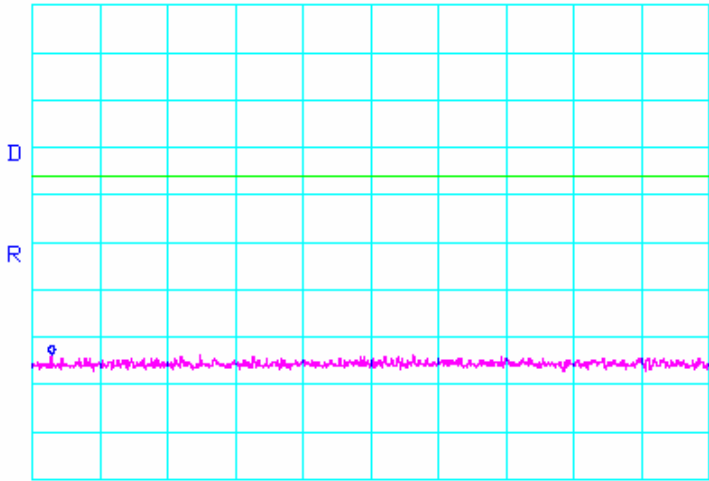
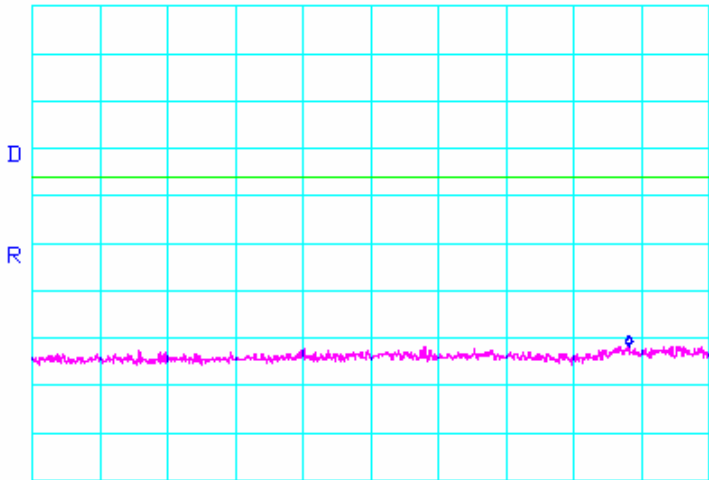
## 802.11n Mode, 2.4GHz, 40MHz Wide





## Conducted Out Of Band Emissions (Continued)

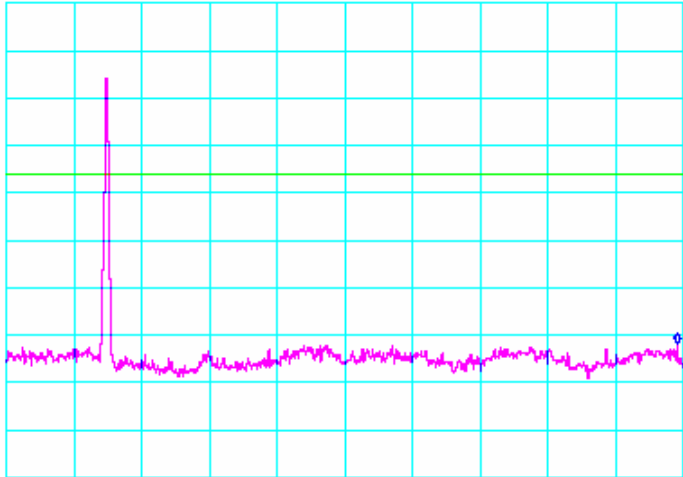
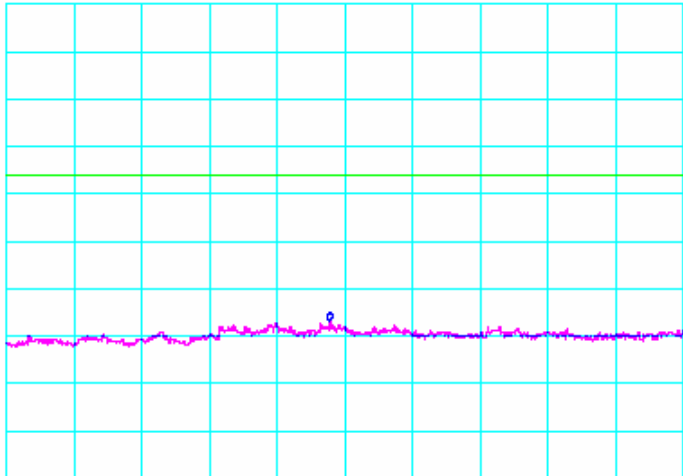
## 802.11n Mode, 5GHz, 20MHz Wide

| Test Date                                                                                                                                                                                                                           | Data      | Chain | Test Eng. |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                            | 5.745 GHz | C     | JC        |
| <p>*ATTEN 10dB<br/>RL 12.0dBm 10dB/ MKR -61.67dBm<br/>57.5MHz</p>  <p>START 30.0MHz STOP 1.0000GHz<br/>*RBW 100kHz *VBW 300kHz SWP 540ms</p>      |           |       |           |
| Test Date                                                                                                                                                                                                                           | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                            | 5.745 GHz | C     | JC        |
| <p>*ATTEN 10dB<br/>RL 12.0dBm 10dB/ MKR -59.67dBm<br/>4.527GHz</p>  <p>START 1.000GHz STOP 5.000GHz<br/>*RBW 100kHz *VBW 300kHz SWP 2.20sec</p> |           |       |           |



## Conducted Out Of Band Emissions (Continued)

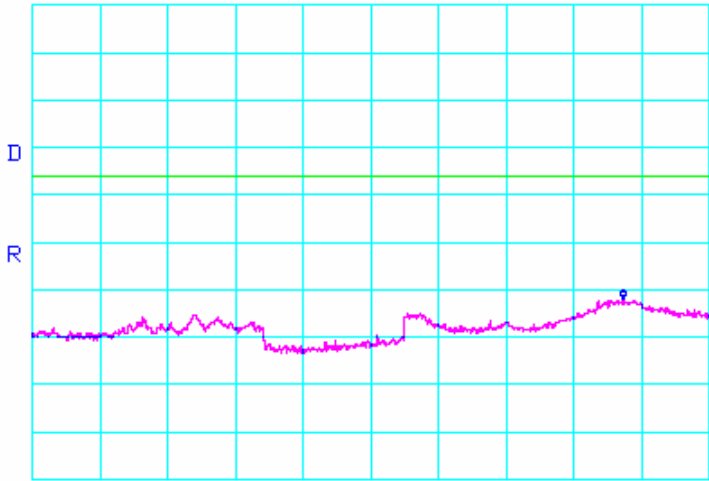
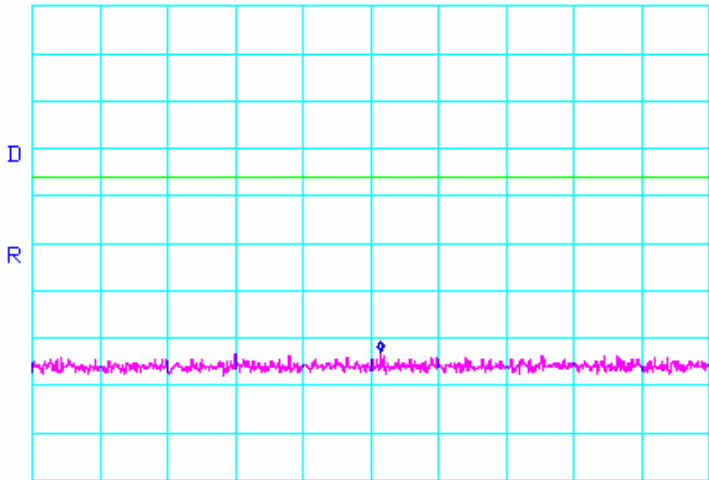
## 802.11n Mode, 5GHz, 20MHz Wide

| Test Date                                                                                                                                                                                                                                                                                          | Data      | Chain | Test Eng. |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                                                           | 5.745 GHz | C     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -59.67dBm<br/>9.958GHz</div></div><div>START 5.000GHz      STOP 10.000GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 2.80sec</div></div>  |           |       |           |
| Test Date                                                                                                                                                                                                                                                                                          | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                                           | 5.745 GHz | C     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -54.83dBm<br/>14.78GHz</div></div><div>START 10.00GHz      STOP 20.00GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 5.50sec</div></div> |           |       |           |



## Conducted Out Of Band Emissions (Continued)

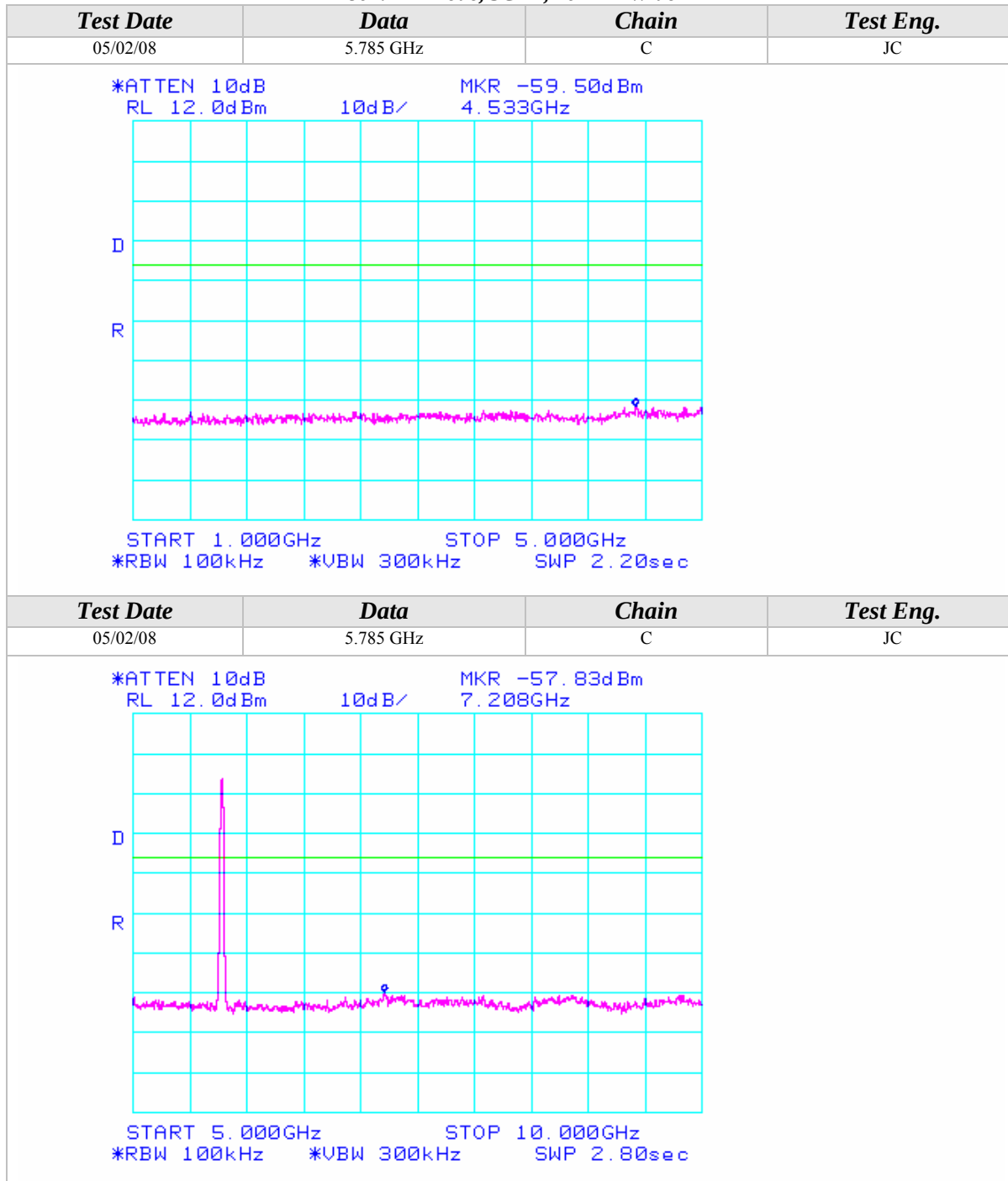
## 802.11n Mode, 5GHz, 20MHz Wide

| Test Date                                                                                                                                                                                                                         | Data      | Chain | Test Eng. |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                          | 5.745 GHz | C     | JC        |
| <p>*ATTEN 10dB<br/>RL 12.0dBm 10dB/ MKR -50.00dBm<br/>37.47GHz</p>  <p>START 20.00GHz STOP 40.00GHz<br/>*RBW 100kHz *VBW 300kHz SWP 11.0sec</p> |           |       |           |
| Test Date                                                                                                                                                                                                                         | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                          | 5.785 GHz | C     | JC        |
| <p>*ATTEN 10dB<br/>RL 12.0dBm 10dB/ MKR -60.83dBm<br/>529.6MHz</p>  <p>START 30.0MHz STOP 1.0000GHz<br/>*RBW 100kHz *VBW 300kHz SWP 540ms</p> |           |       |           |



## Conducted Out Of Band Emissions (Continued)

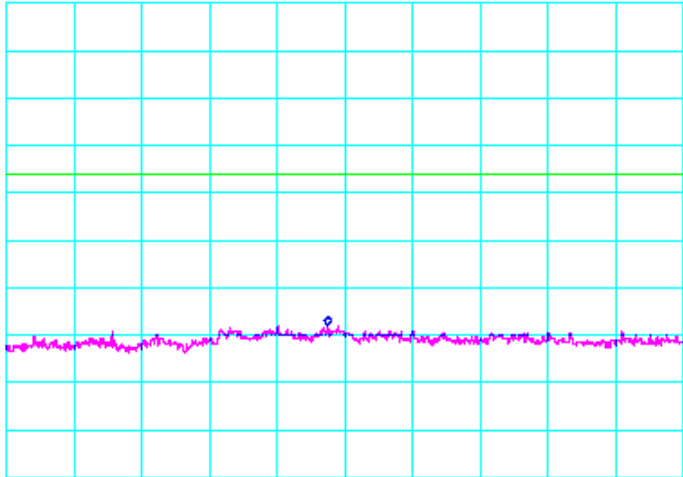
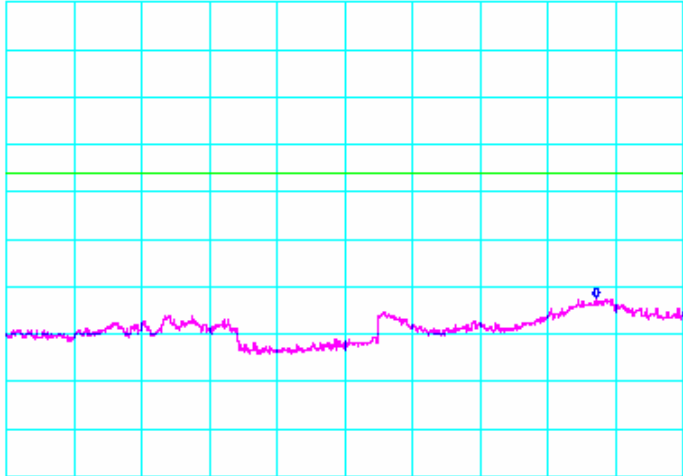
## 802.11n Mode, 5GHz, 20MHz Wide





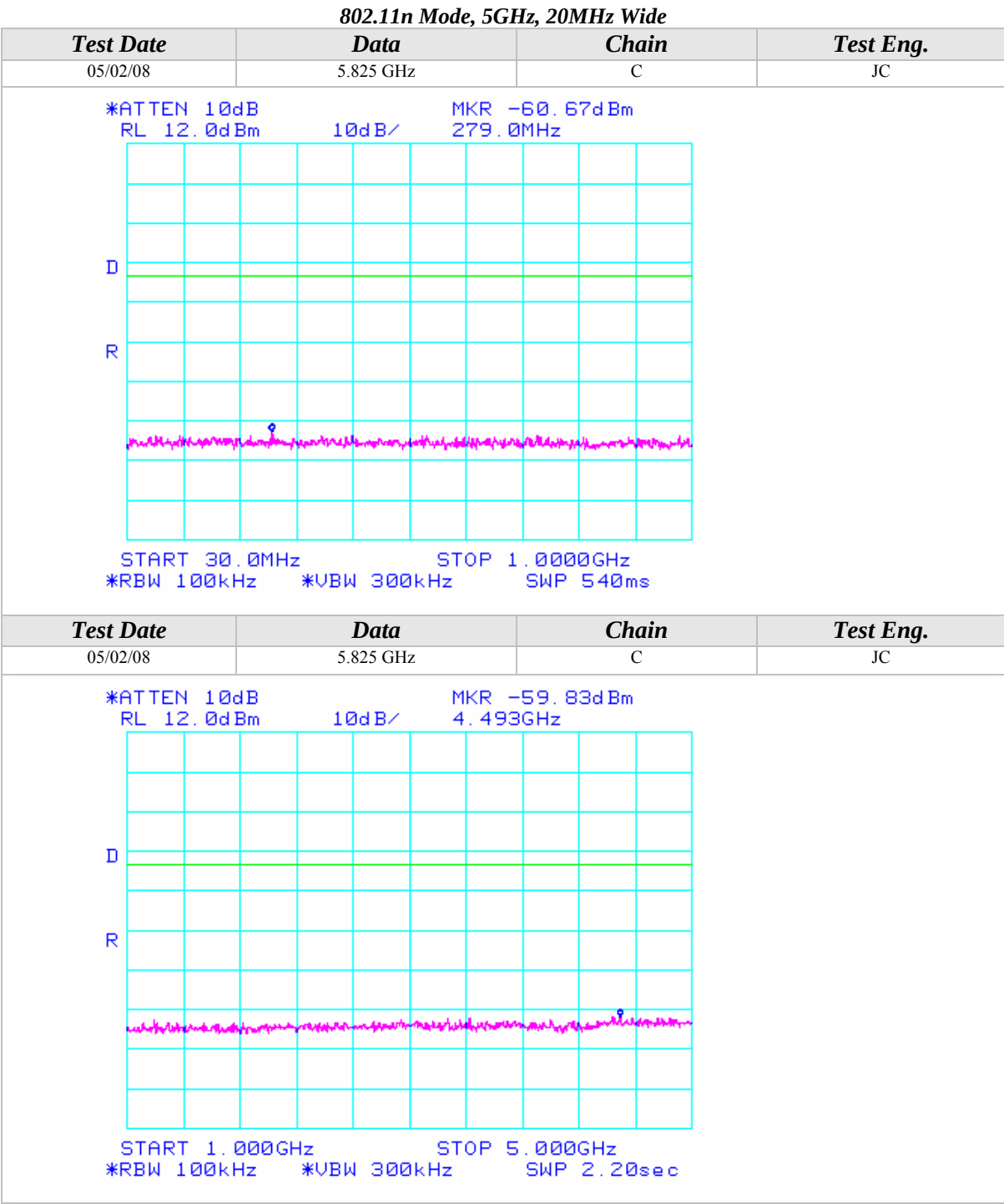
## Conducted Out Of Band Emissions (Continued)

## 802.11n Mode, 5GHz, 20MHz Wide

| Test Date                                                                                                                                                                                                                                                     | Data      | Chain | Test Eng. |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                      | 5.785 GHz | C     | JC        |
| <p>*ATTEN 10dB      MKR -56.00dBm<br/>RL 12.0dBm      10dB/      14.75GHz</p>  <p>START 10.00GHz      STOP 20.00GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 5.50sec</p>   |           |       |           |
| Test Date                                                                                                                                                                                                                                                     | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                      | 5.785 GHz | C     | JC        |
| <p>*ATTEN 10dB      MKR -50.33dBm<br/>RL 12.0dBm      10dB/      37.43GHz</p>  <p>START 20.00GHz      STOP 40.00GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 11.0sec</p> |           |       |           |



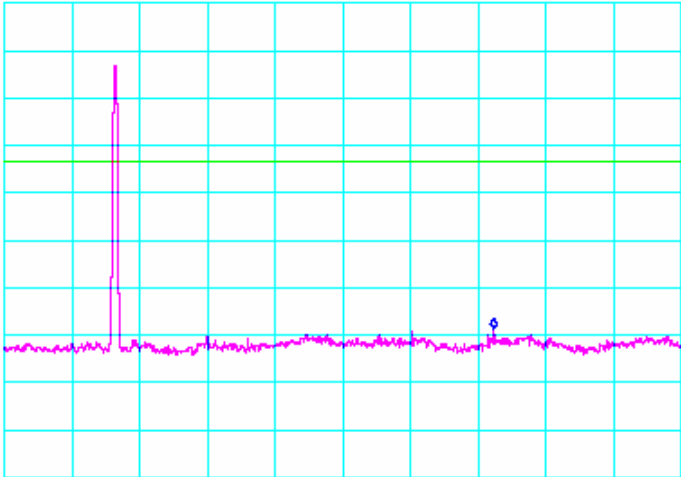
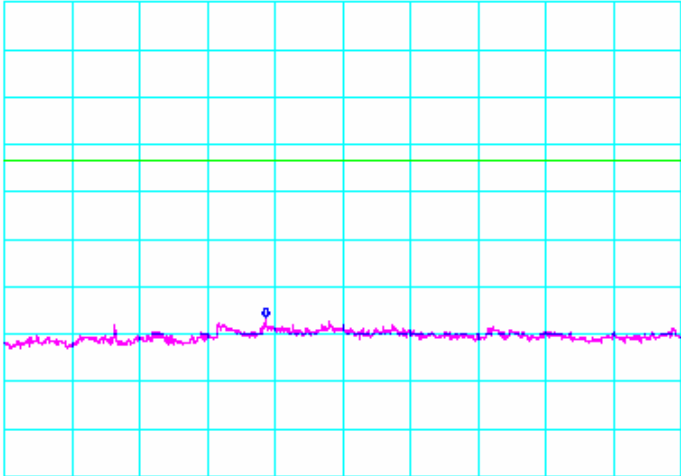
Conducted Out Of Band Emissions (Continued)





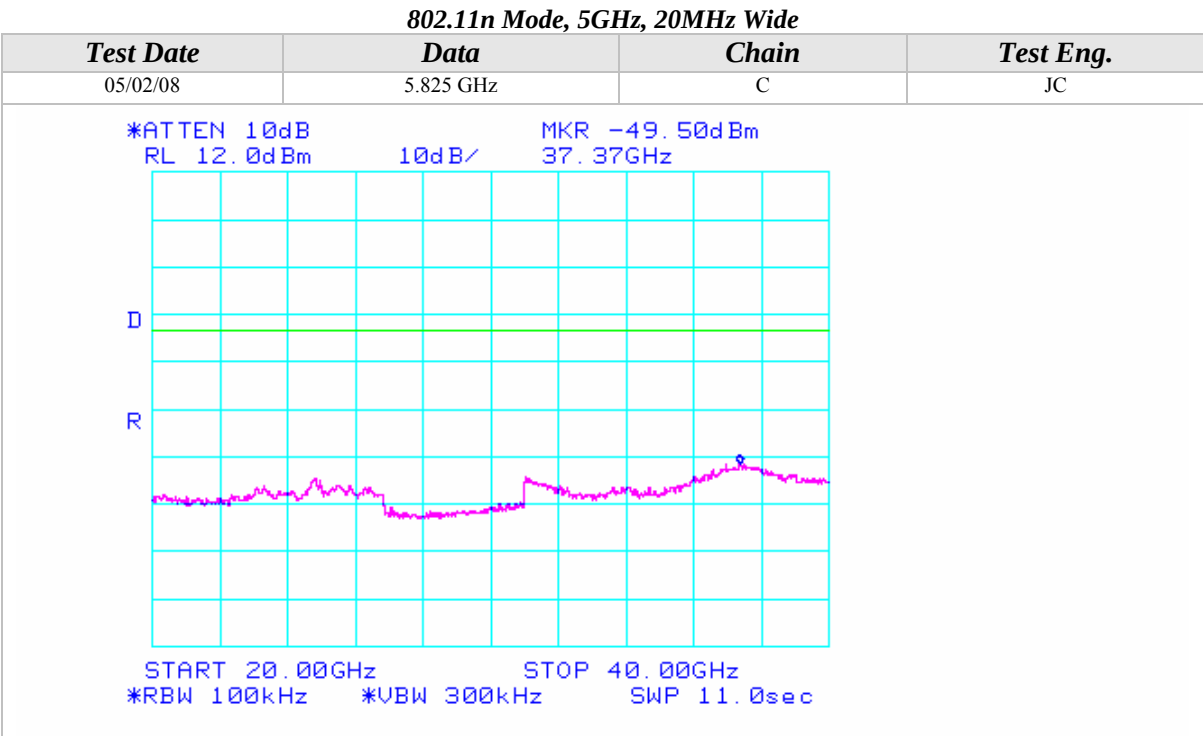
## Conducted Out Of Band Emissions (Continued)

## 802.11n Mode, 5GHz, 20MHz Wide

| Test Date                                                                                                                                                                                                                                                                                          | Data      | Chain | Test Eng. |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                                                           | 5.825 GHz | C     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -56.67dBm<br/>8.617GHz</div></div><div>START 5.000GHz      STOP 10.000GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 2.80sec</div></div>  |           |       |           |
| Test Date                                                                                                                                                                                                                                                                                          | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                                           | 5.825 GHz | C     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -54.50dBm<br/>13.87GHz</div></div><div>START 10.00GHz      STOP 20.00GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 5.50sec</div></div> |           |       |           |



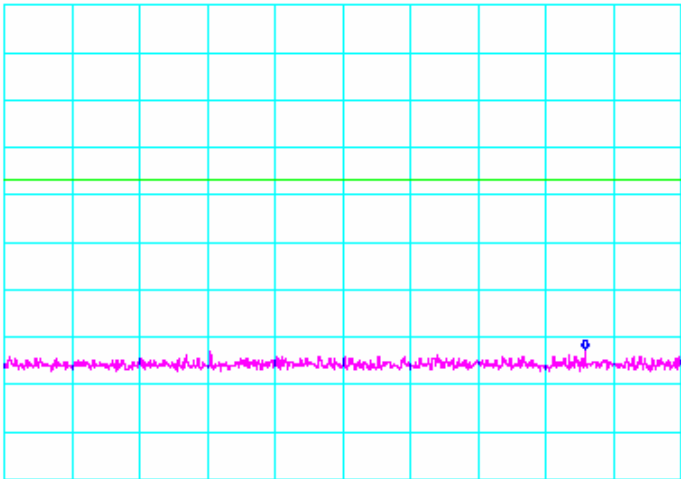
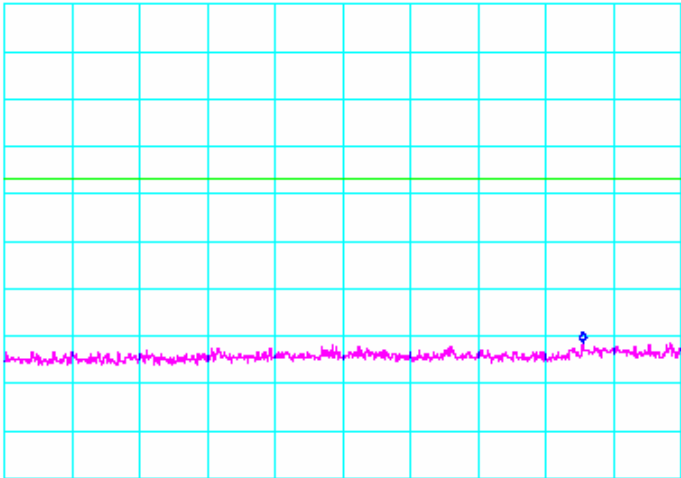
Conducted Out Of Band Emissions (Continued)





## Conducted Out Of Band Emissions (Continued)

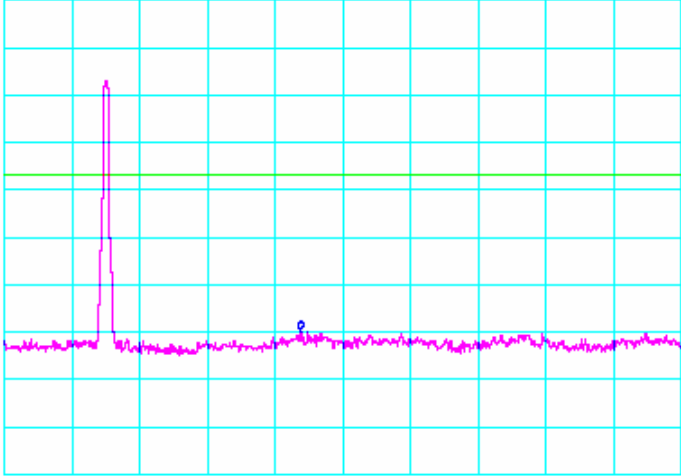
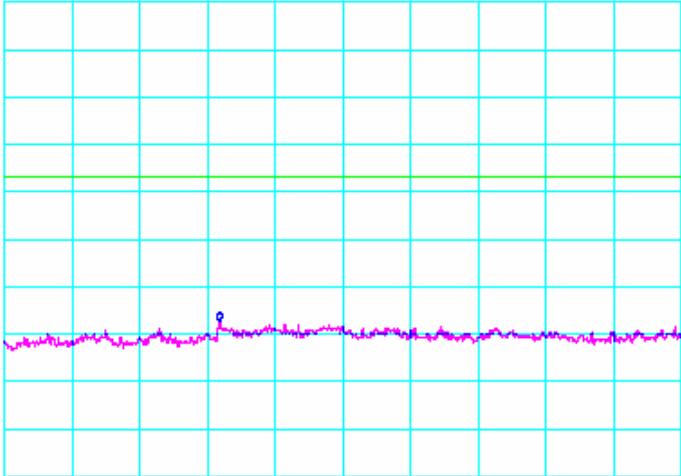
## 802.11n Mode, 5GHz, 40MHz Wide

| Test Date                                                                                                                                                                                                                                                                                          | Data      | Chain | Test Eng. |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                                                           | 5.755 GHz | C     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -60.67dBm<br/>862.6MHz</div></div><div>START 30.0MHz      STOP 1.0000GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 540ms</div></div>     |           |       |           |
| Test Date                                                                                                                                                                                                                                                                                          | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                                           | 5.755 GHz | C     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -59.33dBm<br/>4.420GHz</div></div><div>START 1.000GHz      STOP 5.000GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 2.20sec</div></div> |           |       |           |



## Conducted Out Of Band Emissions (Continued)

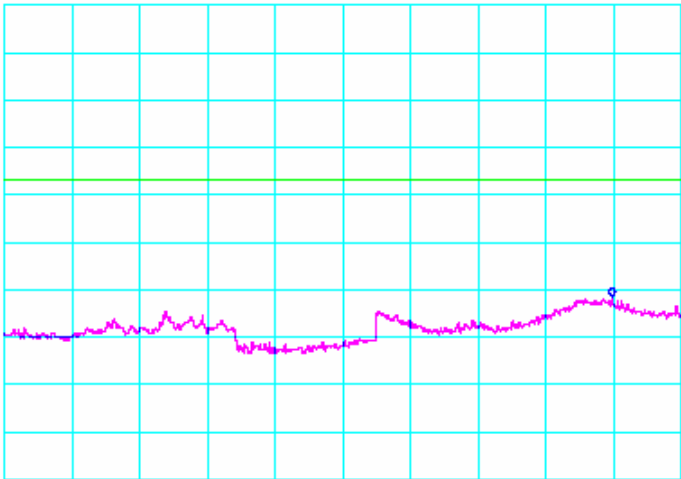
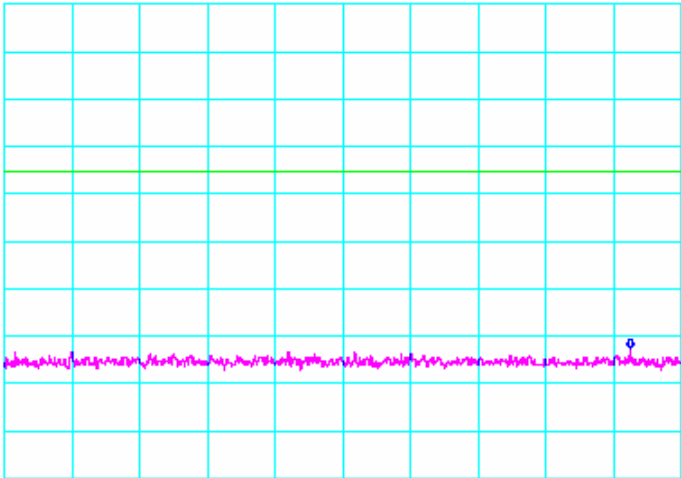
## 802.11n Mode, 5GHz, 40MHz Wide

| Test Date                                                                                                                                                                                                                                                                     | Data      | Chain | Test Eng. |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                                      | 5.755 GHz | C     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm<br/>10dB/</div><div>MKR -57.50dBm<br/>7.192GHz</div></div><div>START 5.000GHz STOP 10.000GHz<br/>*RBW 100kHz *VBW 300kHz SWP 2.80sec</div></div>  |           |       |           |
| Test Date                                                                                                                                                                                                                                                                     | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                      | 5.755 GHz | C     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm<br/>10dB/</div><div>MKR -55.33dBm<br/>13.18GHz</div></div><div>START 10.00GHz STOP 20.00GHz<br/>*RBW 100kHz *VBW 300kHz SWP 5.50sec</div></div> |           |       |           |



## Conducted Out Of Band Emissions (Continued)

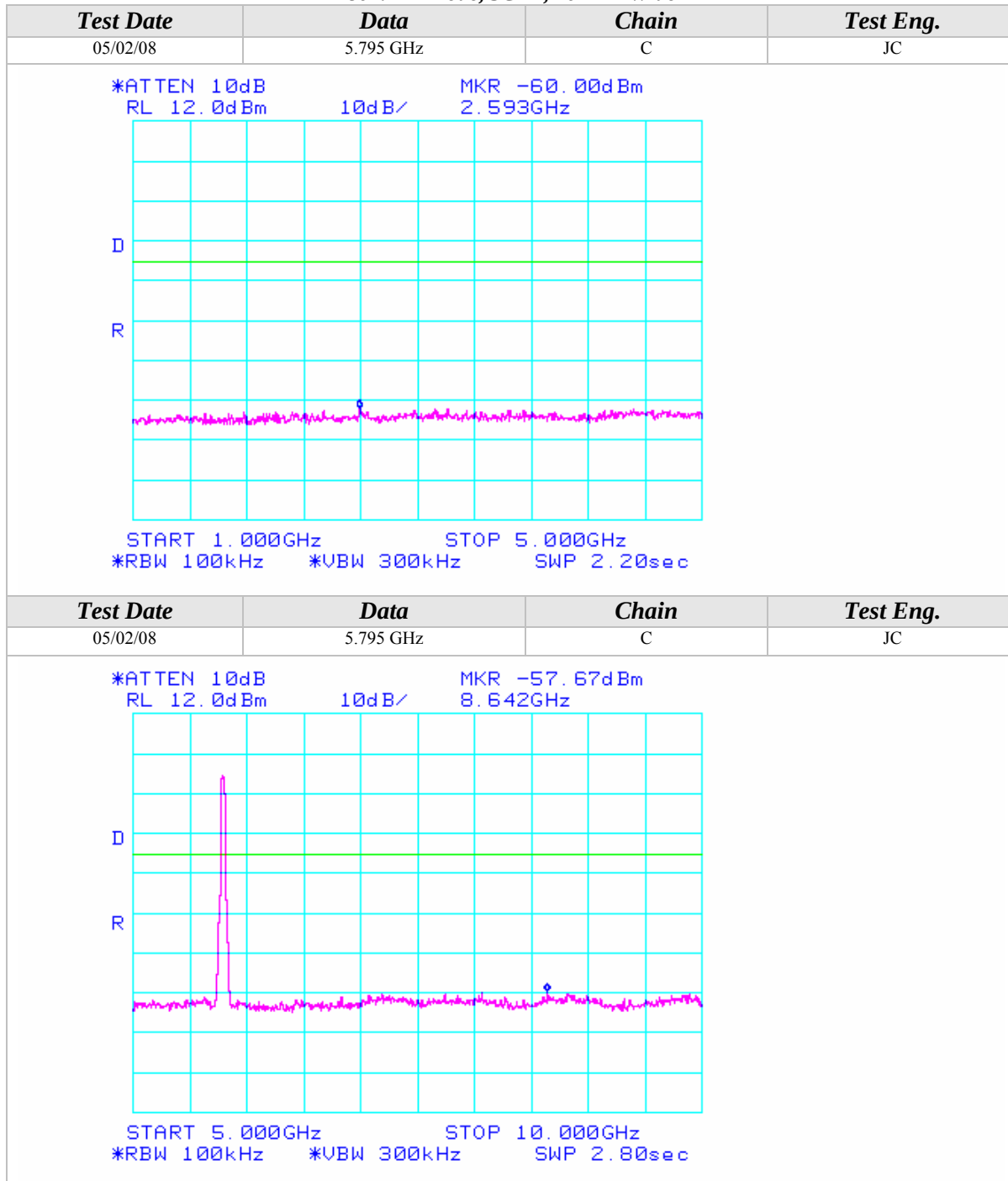
## 802.11n Mode, 5GHz, 40MHz Wide

| Test Date                                                                                                                                                                                                                                                                                        | Data      | Chain | Test Eng. |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                                                         | 5.755 GHz | C     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -49.50dBm<br/>37.97GHz</div></div><div>START 20.00GHz      STOP 40.00GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 11.0sec</div></div> |           |       |           |
| Test Date                                                                                                                                                                                                                                                                                        | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                                         | 5.795 GHz | C     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -60.67dBm<br/>927.3MHz</div></div><div>START 30.0MHz      STOP 1.0000GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 540ms</div></div> |           |       |           |



## Conducted Out Of Band Emissions (Continued)

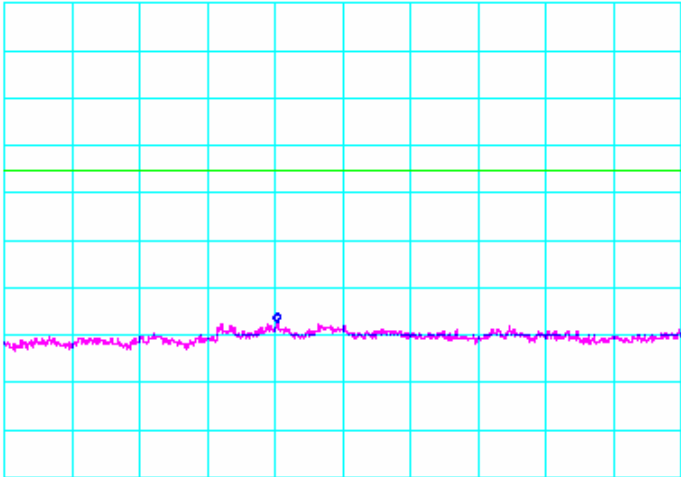
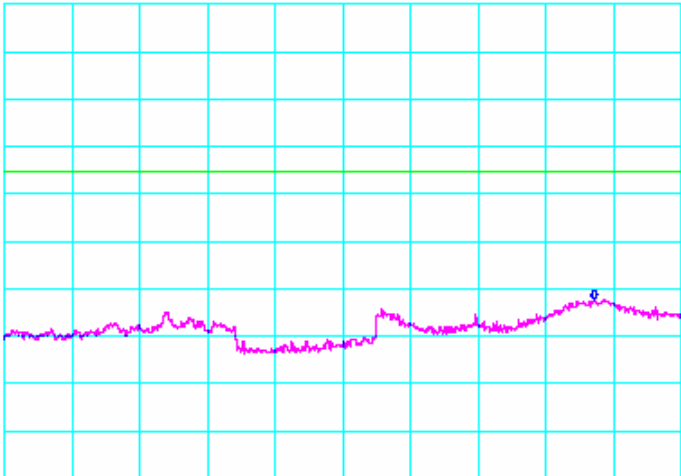
## 802.11n Mode, 5GHz, 40MHz Wide





## Conducted Out Of Band Emissions (Continued)

## 802.11n Mode, 5GHz, 40MHz Wide

| Test Date                                                                                                                                                                                                                                                                                             | Data      | Chain | Test Eng. |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|
| 05/02/08                                                                                                                                                                                                                                                                                              | 5.795 GHz | C     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -55.33dBm<br/>14.03GHz</div></div><div>START 10.00GHz<br/>*RBW 100kHz</div><div>STOP 20.00GHz<br/>*VBW 300kHz<br/>SWP 5.50sec</div></div>   |           |       |           |
| Test Date                                                                                                                                                                                                                                                                                             | Data      | Chain | Test Eng. |
| 05/02/08                                                                                                                                                                                                                                                                                              | 5.795 GHz | C     | JC        |
| <div><div><div>*ATTEN 10dB<br/>RL 12.0dBm</div><div>10dB/</div><div>MKR -50.33dBm<br/>37.43GHz</div></div><div>START 20.00GHz<br/>*RBW 100kHz</div><div>STOP 40.00GHz<br/>*VBW 300kHz<br/>SWP 11.0sec</div></div> |           |       |           |



## **APPENDIX B**

### ***MODIFICATIONS AND RECOMMENDATIONS***

|            |      |
|------------|------|
| <b>1.0</b> | NONE |
|            |      |