



**FCC 47 CFR PART 15 SUBPART E**

**CERTIFICATION TEST REPORT**

**FOR**

**WIRELESS INPUT DEVICE**

**MODEL NUMBER: 1698**

**FCC ID: C3K1698**

**REPORT NUMBER: R10778321-E2A**

**ISSUE DATE: 2015-07-02**

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NVLAP Lab code: 200246-0

Revision History

| Rev. | Issue Date | Revisions                                    | Revised By |
|------|------------|----------------------------------------------|------------|
| --   | 2015-06-04 | Initial Issue                                | Jeff Moser |
| 1    | 2015-07-02 | Revised unit designations on Radiated plots. | Jeff Moser |

## TABLE OF CONTENTS

|                                                  |           |
|--------------------------------------------------|-----------|
| <b>1. ATTESTATION OF TEST RESULTS .....</b>      | <b>6</b>  |
| <b>2. TEST METHODOLOGY .....</b>                 | <b>7</b>  |
| <b>3. FACILITIES AND ACCREDITATION .....</b>     | <b>7</b>  |
| <b>4. CALIBRATION AND UNCERTAINTY .....</b>      | <b>7</b>  |
| 4.1. MEASURING INSTRUMENT CALIBRATION .....      | 7         |
| 4.2. SAMPLE CALCULATION .....                    | 7         |
| 4.3. MEASUREMENT UNCERTAINTY .....               | 8         |
| <b>5. EQUIPMENT UNDER TEST .....</b>             | <b>9</b>  |
| 5.1. DESCRIPTION OF EUT .....                    | 9         |
| 5.2. MAXIMUM OUTPUT POWER.....                   | 9         |
| 5.3. DESCRIPTION OF AVAILABLE ANTENNAS .....     | 9         |
| 5.4. SOFTWARE AND FIRMWARE.....                  | 9         |
| 5.5. WORST-CASE CONFIGURATION AND MODE.....      | 10        |
| 5.6. DESCRIPTION OF TEST SETUP.....              | 11        |
| <b>6. TEST AND MEASUREMENT EQUIPMENT .....</b>   | <b>14</b> |
| <b>7. MEASUREMENT METHODS .....</b>              | <b>16</b> |
| <b>8. ANTENNA PORT TEST RESULTS .....</b>        | <b>17</b> |
| 8.1. ON TIME AND DUTY CYCLE.....                 | 17        |
| 8.2. 802.11a MODE IN THE 5.2 GHz BAND.....       | 19        |
| 8.2.1. 26 dB BANDWIDTH.....                      | 19        |
| 8.2.2. 99% BANDWIDTH.....                        | 22        |
| 8.2.3. AVERAGE POWER.....                        | 25        |
| 8.2.4. OUTPUT POWER AND PSD.....                 | 26        |
| 8.3. 802.11n HT20 MODE IN THE 5.2 GHz BAND ..... | 30        |
| 8.3.1. 26 dB BANDWIDTH.....                      | 30        |
| 8.3.2. 99% BANDWIDTH.....                        | 33        |
| 8.3.3. AVERAGE POWER.....                        | 36        |
| 8.3.4. OUTPUT POWER AND PSD .....                | 37        |
| 8.4. 802.11a MODE IN THE 5.3 GHz BAND.....       | 41        |
| 8.4.1. 26 dB BANDWIDTH.....                      | 41        |
| 8.4.2. 99% BANDWIDTH.....                        | 44        |
| 8.4.3. AVERAGE POWER.....                        | 47        |
| 8.4.4. OUTPUT POWER AND PSD.....                 | 48        |
| 8.4.5. TPC POWER.....                            | 52        |
| 8.5. 802.11n HT20 MODE IN THE 5.3 GHz BAND ..... | 53        |
| 8.5.1. 26 dB BANDWIDTH.....                      | 53        |
| 8.5.2. 99% BANDWIDTH.....                        | 56        |

|           |                                                                            |            |
|-----------|----------------------------------------------------------------------------|------------|
| 8.5.3.    | AVERAGE POWER .....                                                        | 59         |
| 8.5.4.    | OUTPUT POWER AND PSD .....                                                 | 60         |
| 8.5.5.    | TPC POWER .....                                                            | 64         |
| 8.6.      | 802.11a MODE IN THE 5.6 GHz BAND .....                                     | 65         |
| 8.6.1.    | 26 dB BANDWIDTH .....                                                      | 65         |
| 8.6.2.    | 99% BANDWIDTH .....                                                        | 68         |
| 8.6.3.    | AVERAGE POWER .....                                                        | 71         |
| 8.6.4.    | OUTPUT POWER AND PSD .....                                                 | 72         |
| 8.6.5.    | TPC POWER .....                                                            | 76         |
| 8.7.      | 802.11n HT20 MODE IN THE 5.6 GHz BAND .....                                | 77         |
| 8.7.1.    | 26 dB BANDWIDTH .....                                                      | 77         |
| 8.7.2.    | 99% BANDWIDTH .....                                                        | 80         |
| 8.7.3.    | AVERAGE POWER .....                                                        | 83         |
| 8.7.4.    | OUTPUT POWER AND PSD .....                                                 | 84         |
| 8.7.5.    | TPC POWER .....                                                            | 88         |
| 8.8.      | 802.11a MODE IN THE 5.8 GHz BAND .....                                     | 89         |
| 8.8.1.    | 26 dB BANDWIDTH .....                                                      | 89         |
| 8.8.2.    | 6 dB BANDWIDTH .....                                                       | 92         |
| 8.8.3.    | 99% BANDWIDTH .....                                                        | 95         |
| 8.8.4.    | AVERAGE POWER .....                                                        | 98         |
| 8.8.5.    | OUTPUT POWER .....                                                         | 99         |
| 8.8.6.    | Maximum Power Spectral Density (PSD) .....                                 | 101        |
| 8.9.      | 802.11n HT20 MODE IN THE 5.8 GHz BAND .....                                | 105        |
| 8.9.1.    | 26 dB BANDWIDTH .....                                                      | 105        |
| 8.9.2.    | 6 dB BANDWIDTH .....                                                       | 108        |
| 8.9.3.    | 99% BANDWIDTH .....                                                        | 111        |
| 8.9.4.    | AVERAGE POWER .....                                                        | 114        |
| 8.9.5.    | OUTPUT POWER .....                                                         | 115        |
| 8.9.6.    | Maximum Power Spectral Density (PSD) .....                                 | 117        |
| <b>9.</b> | <b>RADIATED TEST RESULTS .....</b>                                         | <b>121</b> |
| 9.1.      | LIMITS AND PROCEDURE .....                                                 | 121        |
| 9.2.      | TRANSMITTER ABOVE 1 GHz .....                                              | 122        |
| 9.3.      | TX ABOVE 1 GHz 802.11a MODE IN THE 5.2 GHz BAND .....                      | 122        |
| 9.4.      | TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.2 GHz BAND .....                 | 128        |
| 9.5.      | TX ABOVE 1 GHz 802.11a MODE IN THE 5.3 GHz BAND .....                      | 133        |
| 9.6.      | TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.3 GHz BAND .....                 | 138        |
| 9.7.      | TX ABOVE 1 GHz 802.11a MODE IN THE 5.6 GHz BAND .....                      | 143        |
| 9.8.      | TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.6 GHz BAND .....                 | 151        |
| 9.9.      | TX ABOVE 1 GHz 802.11a MODE IN THE 5.8 GHz BAND .....                      | 158        |
| 9.10.     | TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.8 GHz BAND .....                 | 165        |
| 9.11.     | WORST-CASE BELOW 1 GHz .....                                               | 172        |
| 9.11.1.   | SPURIOUS EMISSIONS 30 TO 1000 MHz (5GHz WORST-CASE<br>CONFIGURATION) ..... | 172        |
| 9.12.     | WORST-CASE ABOVE 18 GHz .....                                              | 173        |

|                                                                              |            |
|------------------------------------------------------------------------------|------------|
| 9.12.1. SPURIOUS EMISSIONS 18 TO 26 GHz (5GHz WORST-CASE CONFIGURATION)..... | 173        |
| 9.12.2. SPURIOUS EMISSIONS 26 TO 40 GHz (5GHz WORST-CASE CONFIGURATION)..... | 175        |
| <b>10. SETUP PHOTOS .....</b>                                                | <b>177</b> |

## 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME:** MICROSOFT CORPORATION  
ONE MICROSOFT WAY  
REDMOND, WA 98052, U.S.A.

**EUT DESCRIPTION:** WIRELESS INPUT DEVICE

**MODEL:** 1698

**SERIAL NUMBER:** Conducted 1, Radiated 1

**DATE TESTED:** 2015-05-15 to 2015-05-22

| APPLICABLE STANDARDS     |              |
|--------------------------|--------------|
| STANDARD                 | TEST RESULTS |
| CFR 47 Part 15 Subpart E | PASS         |

UL LLC tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL LLC based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

**Note:** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL LLC and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL LLC will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Approved & Released  
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## 2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, FCC 06-96, FCC KDB 789033, ANSI C63.10-2009.

Note – Radiated testing above 1GHz was performed on a 1.5m table height, per ANSI C63.10: 2013. All other testing was performed per ANSI C63.10: 2009.

## 3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 12 Laboratory Dr., Research Triangle Park, NC 27709, USA.

|                                     |           |
|-------------------------------------|-----------|
| 12 Laboratory Dr., RTP, NC 27709    |           |
| <input type="checkbox"/>            | Chamber A |
| <input checked="" type="checkbox"/> | Chamber C |

UL LLC (RTP) is accredited by NVLAP, Laboratory Code 200246-0. The full scope of accreditation can be viewed at <http://ts.nist.gov/standards/scopes/2002460.htm>.

## 4. CALIBRATION AND UNCERTAINTY

### 4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

### 4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) +  
Cable Loss (dB) – Preamp Gain (dB)

36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

### 4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

| Test                             | Uncertainty      |
|----------------------------------|------------------|
| Total RF power, conducted        | +/- 0.45 dB      |
| RF power density, conducted      | +/- 1.5 dB       |
| Spurious emissions, conducted    | +/- 1.46 dB      |
| Radiated Emissions (30-1000 MHz) | +/- 6.04 dB (3m) |
| Radiated Emissions (1-6 GHz)     | +/- 5.96 dB      |
| Radiated Emissions (6-18 GHz)    | +/- 6.10 dB      |
| Radiated Emissions (18-26 GHz)   | +/- 6.81 dB      |

Uncertainty figures are valid to a confidence level of 95%.

## 5. EQUIPMENT UNDER TEST

### 5.1. DESCRIPTION OF EUT

The EUT is an 802.11a/g/n transceiver, model 1698.

### 5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

| Frequency Range (MHz) | Mode         | Output Power (dBm) | Output Power (mW) |
|-----------------------|--------------|--------------------|-------------------|
| 5180 - 5240           | 802.11a      | 8.50               | 7.08              |
| 5180 - 5240           | 802.11n HT20 | 8.48               | 7.05              |
| 5260 - 5320           | 802.11a      | 8.22               | 6.64              |
| 5260 - 5320           | 802.11n HT20 | 8.50               | 7.08              |
| 5500 - 5700           | 802.11a      | 8.39               | 6.90              |
| 5500 - 5700           | 802.11n HT20 | 8.50               | 7.08              |
| 5725-5850             | 802.11a      | 8.38               | 6.89              |
| 5725-5850             | 802.11n HT20 | 8.26               | 6.70              |

### 5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an integral antenna, with a maximum antenna gain as follows:

| Frequency Band (GHz) | 5.2 | 5.3 | 5.6 | 5.8 |
|----------------------|-----|-----|-----|-----|
| Antenna Gain (dBi)   | 1.8 | 1.7 | 2.9 | 3.0 |

### 5.4. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was R74.

The test utility software used during testing was Atheros ART2 ver 2.3.

## **5.5. WORST-CASE CONFIGURATION AND MODE**

Radiated emission and power line conducted emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.

The fundamental of the EUT was investigated in three orthogonal orientations X,Y,Z, it was determined that Y orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in Y orientation.

Worst-case data rates as provided by the client and checked by UL were:

- 802.11a mode: 6 Mbps
- 802.11n HT20mode: MCS0

Radiated emissions for EUT with antenna was performed and passed; therefore, antenna port spurious was not performed.

## 5.6. DESCRIPTION OF TEST SETUP

### SUPPORT EQUIPMENT

| Support Equipment List |                    |                      |               |          |
|------------------------|--------------------|----------------------|---------------|----------|
| Description            | Manufacturer       | Model                | Serial Number | FCC ID   |
| Laptop                 | Lenovo             | T440                 |               | TP00050A |
| AC/DC adapter          | Lenovo             | DCWP MMC 170W<br>20V | -             | -        |
| External DC Source     | Circuit Specialist | CS13005X5            | -             | -        |

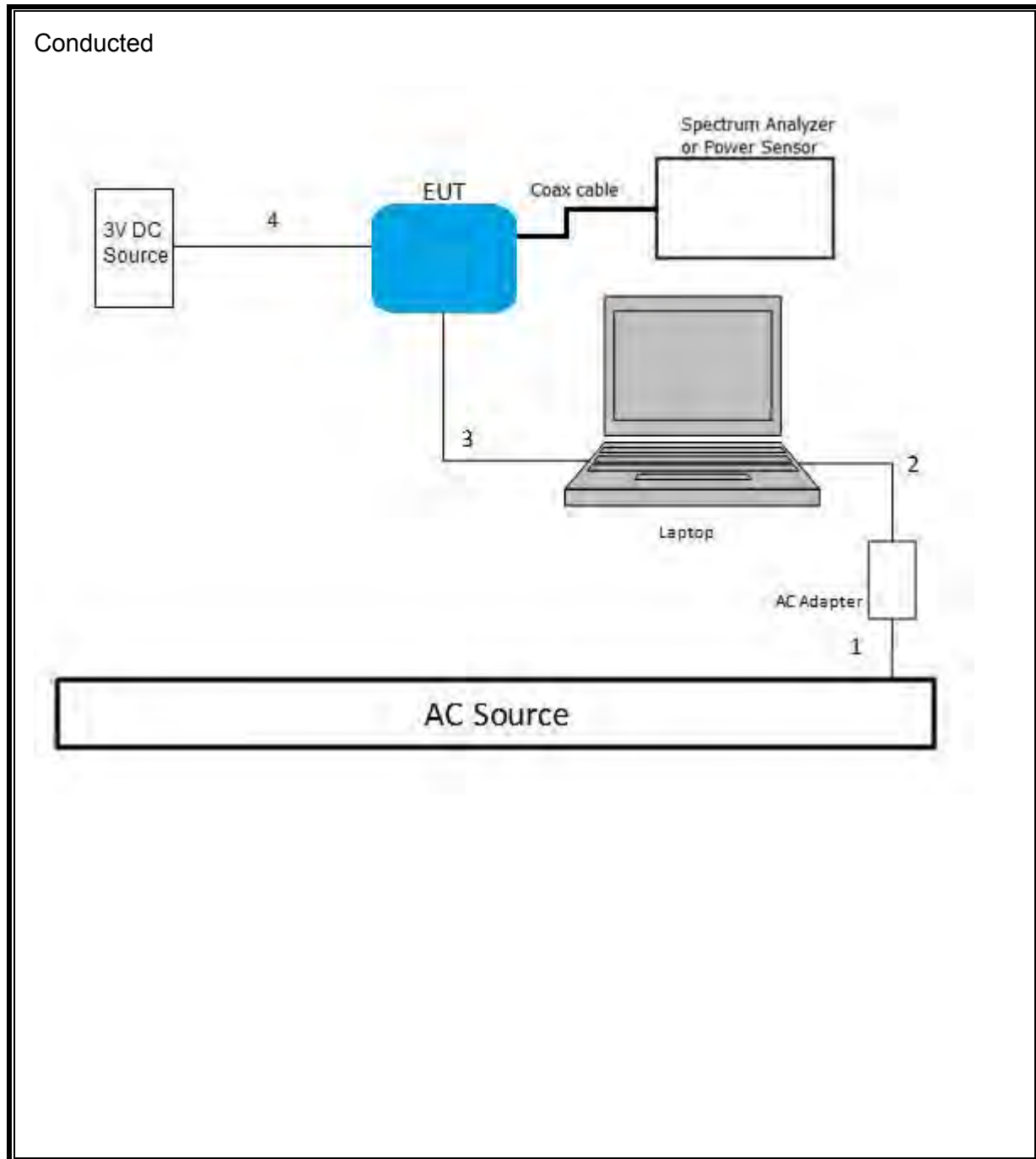
### I/O CABLES

| I/O Cable List |      |                      |                |            |                  |                                              |
|----------------|------|----------------------|----------------|------------|------------------|----------------------------------------------|
| Cable No       | Port | # of identical ports | Connector Type | Cable Type | Cable Length (m) | Remarks                                      |
| 1              | AC   | 1                    | AC - 3 Prong   | Unshielded | <3               | None.                                        |
| 2              | DC   | 1                    | DC - Barrel    | Shielded   | <3               | None.                                        |
| 3              | USB  | 1                    | USB            | Shielded   | <3               | None.                                        |
| 4              | DC   | 1                    | NA             | Unshielded | <3               | External DC source during conducted testing. |

### TEST SETUP

The EUT is configured as table top equipment during the tests. During Conducted Emissions testing, the EUT was connected to a laptop to change modes and channels. The EUT was powered by an external power source. During Radiated testing, the EUT was tested as a stand alone device. The EUT was set for the proper channel/mode, then the laptop was removed from the test site. Test software exercised the radio card.

**SETUP DIAGRAM FOR TESTS**



Radiated

EUT



AC Source

## 6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

### Radiated Disturbance Emissions (E-field) – Chamber C

| Equip. ID                 | Description                                       | Manufacturer         | Model Number | Last Cal.  | Next Cal.  |
|---------------------------|---------------------------------------------------|----------------------|--------------|------------|------------|
|                           | <b>30-1000 MHz Range</b>                          |                      |              |            |            |
| AT0066                    | Hybrid Broadband Antenna                          | Sunol Sciences Corp. | JB1          | 2014-07-10 | 2015-07-31 |
|                           | <b>1-18 GHz</b>                                   |                      |              |            |            |
| AT0062                    | Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz | ETS Lindgren         | 3117         | 2014-07-22 | 2015-07-31 |
|                           | <b>18-40 GHz (calibrated as set)</b>              |                      |              |            |            |
| AT0063                    | Horn Antenna, 18-26.5GHz                          | ARA                  | MWH-1826/B   | 2014-07-23 | 2015-07-31 |
| AT0061                    | Horn Antenna, 25.5-40GHz                          | ARA                  | MWH-2640/B   | 2014-07-23 | 2015-07-31 |
|                           | <b>Gain-Loss Chains</b>                           |                      |              |            |            |
| SAC_G (Hybrid) 30-1000MHz | Gain-Loss string for Hybrid antenna at 3m         | Various              | Various      | 2015-01-26 | 2016-01-31 |
| SAC_G (BOM) 1-18GHz       | Gain-Loss string for Hybrid antenna at 3m         | Various              | Various      | 2015-01-26 | 2016-01-31 |
| SAC_G (BOM) 18-40GHz      | Gain-Loss string for Hybrid antenna at 3m         | Various              | Various      | 2015-01-26 | 2016-01-31 |
|                           | <b>Receiver &amp; Software</b>                    |                      |              |            |            |
| SA0018                    | Spectrum Analyzer                                 | Agilent              | N9030A       | 2014-06-24 | 2015-06-30 |
| SOFTEMI                   | EMI Software                                      | UL                   | Version 9.5  | NA         | NA         |
|                           | <b>Additional Equipment used</b>                  |                      |              |            |            |
| HI0034                    | Temp/Humid/Pressure Meter                         | Cole-Parmer          | 99760-00     | 2015-03-23 | 2016-03-31 |
| HPF009                    | 1GHz High-pass Filter                             | Micro-Tronics        | HPM17672     | 2015-01-28 | 2016-01-31 |

Wireless Conducted Measurement Equipment

| Equipment ID | Description                | Manufacturer         | Model Number                    | Last Cal.  | Next Cal.  |
|--------------|----------------------------|----------------------|---------------------------------|------------|------------|
|              | <b>Common Equipment</b>    |                      |                                 |            |            |
| SA0020       | Spectrum Analyzer          | Agilent Technologies | E4446                           | 2014-06-12 | 2015-06-30 |
| PSENSOR001   | RF Power Meter Sensor Head | Rohde & Schwartz     | NRP-Z81 (w/ NRP-Z3 USB adapter) | 2014-09-03 | 2015-09-30 |
| MM0143       | Digital Multimeter         | Fluke                | 175                             | 2014-09-04 | 2016-09-30 |
| HI0034       | Temp/Humid/Pressure Meter  | Cole-Parmer          | 99760-00                        | 2015-03-23 | 2016-03-31 |

## 7. MEASUREMENT METHODS

26 dB Emission BW: KDB 789033 D02 v01r, Section C.

99% Occupied BW: KDB 789033 D02 v01, Section D.

Conducted Output Power: KDB 789033 D02 v01, Section E.3.a (Method PM).

Power Spectral Density: KDB 789033 D02 v01, Section F.

Unwanted emissions in restricted bands: KDB 789033 D02 v01, Sections G.3, G.4, G.5, and G.6.

Unwanted emissions in non-restricted bands: KDB 789033 D02 v01, Sections G.3, G.4, and G.5.

## 8. ANTENNA PORT TEST RESULTS

### 8.1. ON TIME AND DUTY CYCLE

#### LIMITS

None; for reporting purposes only.

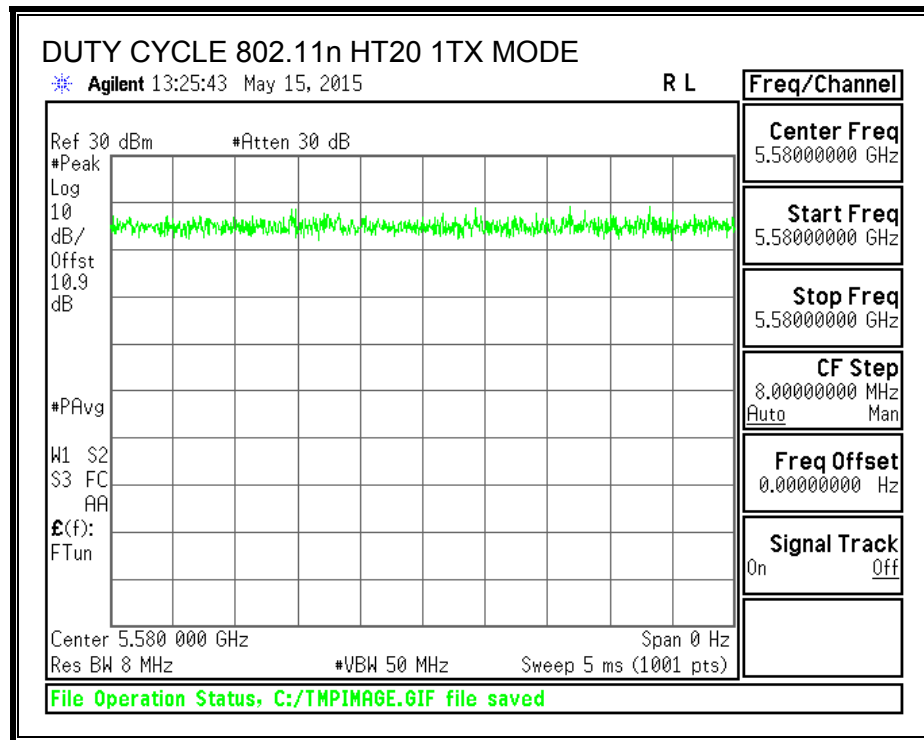
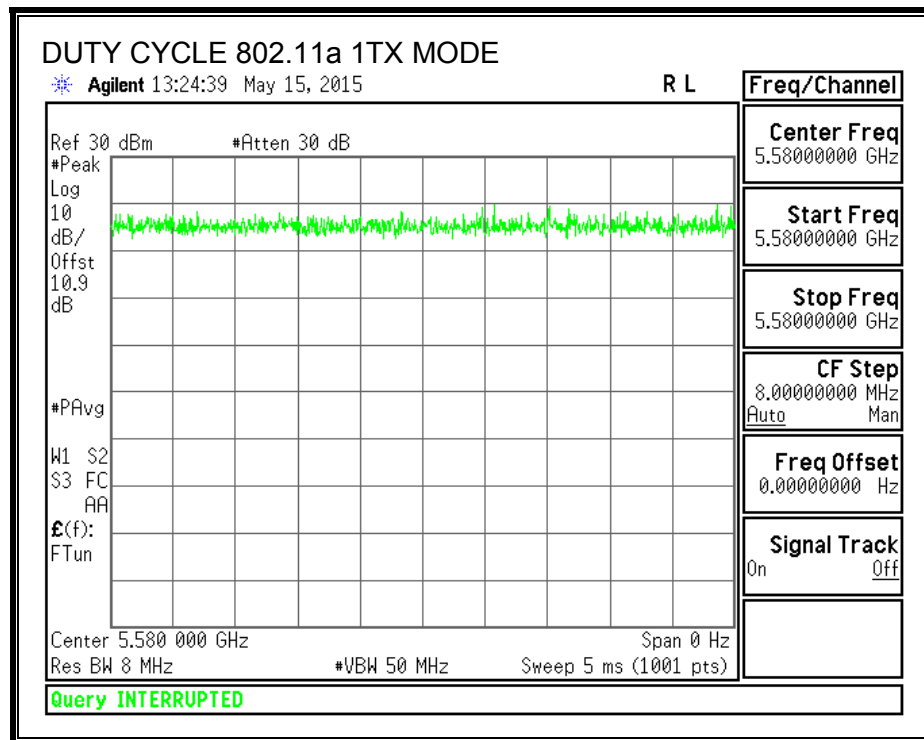
#### PROCEDURE

KDB 789033 Zero-Span Spectrum Analyzer Method.

#### ON TIME AND DUTY CYCLE RESULTS

| Mode             | ON Time<br>B<br>(msec) | Period<br>(msec) | Duty Cycle<br>x<br>(linear) | Duty<br>Cycle<br>(%) | Duty Cycle<br>Correction Factor<br>(dB) | 1/B<br>Minimum VBW<br>(kHz) |
|------------------|------------------------|------------------|-----------------------------|----------------------|-----------------------------------------|-----------------------------|
| 802.11a 1TX      | 1.000                  | 1.000            | 1.000                       | 100.00%              | 0.00                                    | 0.010                       |
| 802.11n HT20 1TX | 1.000                  | 1.000            | 1.000                       | 100.00%              | 0.00                                    | 0.010                       |

**DUTY CYCLE PLOTS**



## 8.2. 802.11a MODE IN THE 5.2 GHz BAND

### 8.2.1. 26 dB BANDWIDTH

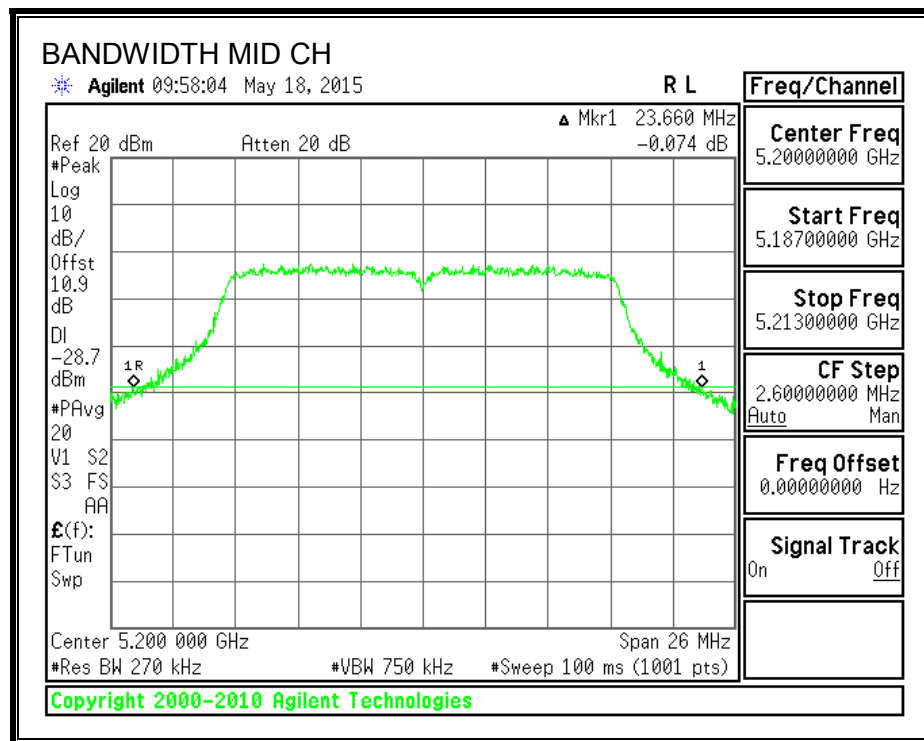
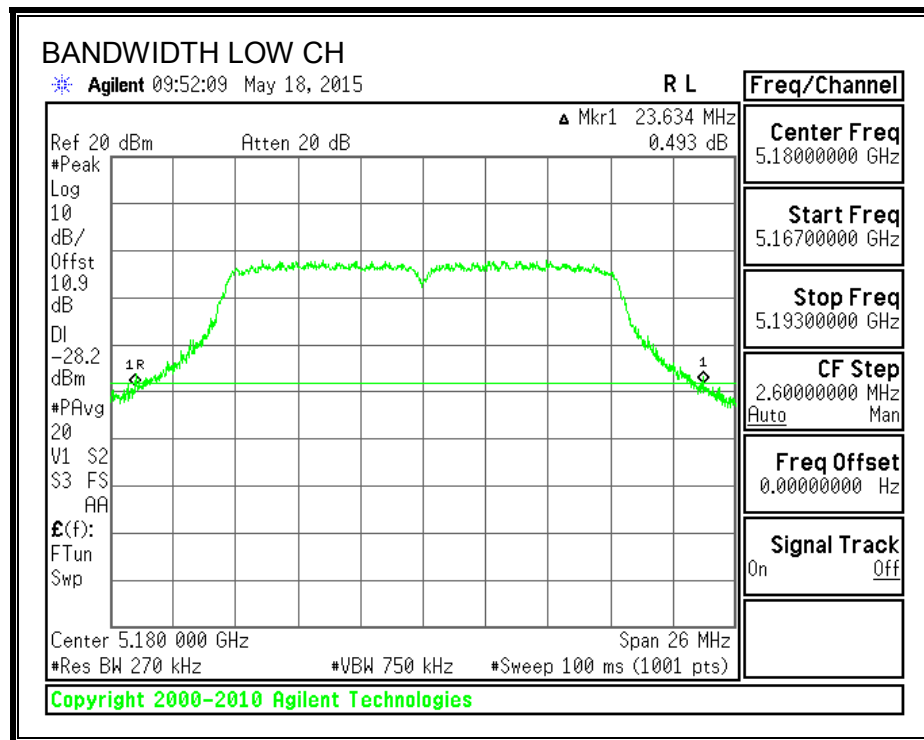
#### LIMITS

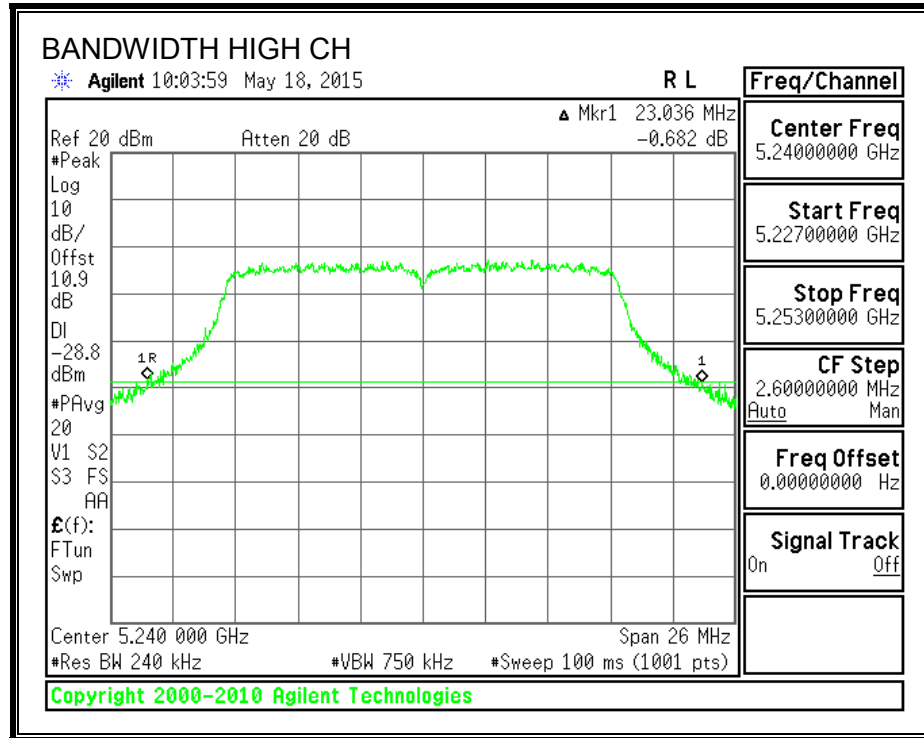
None; for reporting purposes only.

#### RESULTS

| Channel | Frequency<br>(MHz) | 26 dB Bandwidth<br>(MHz) |
|---------|--------------------|--------------------------|
| Low     | 5180               | 23.63                    |
| Mid     | 5200               | 23.66                    |
| High    | 5240               | 23.04                    |

**26 dB BANDWIDTH**





### 8.2.2. 99% BANDWIDTH

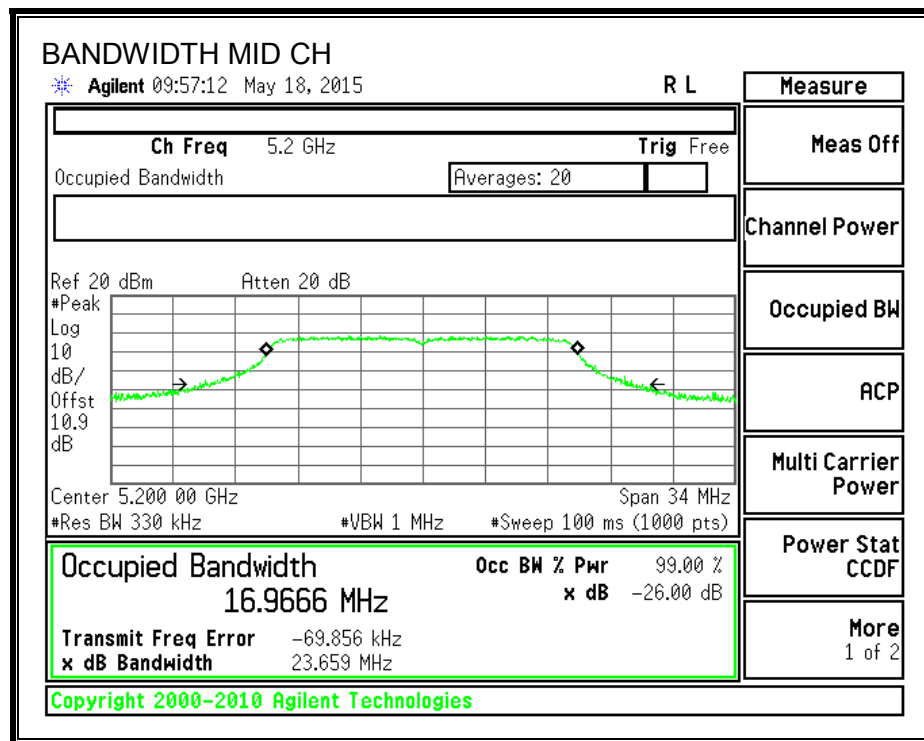
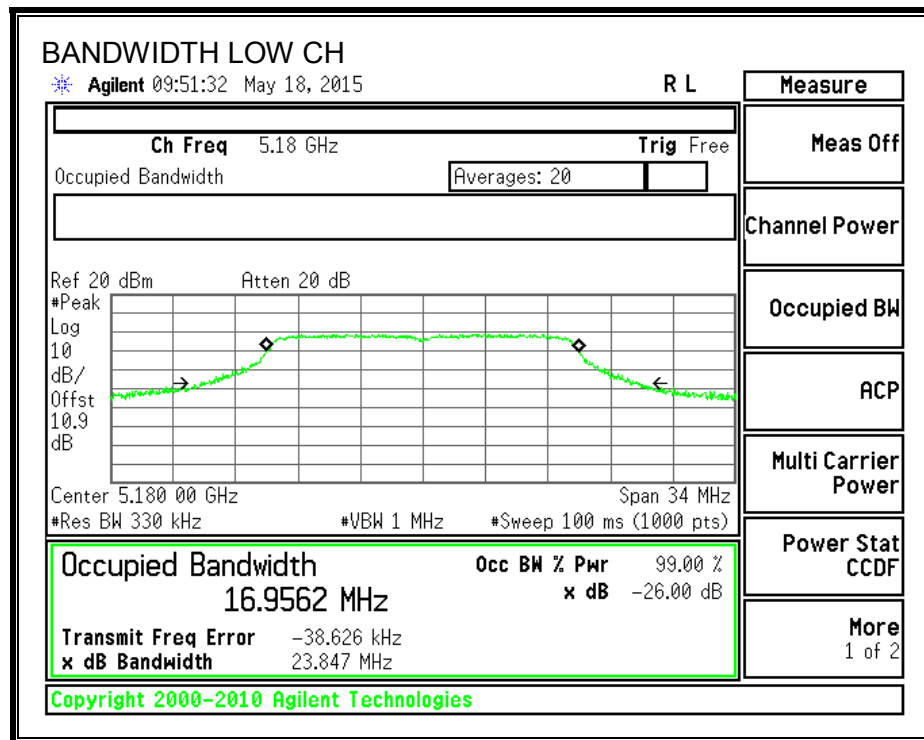
#### LIMITS

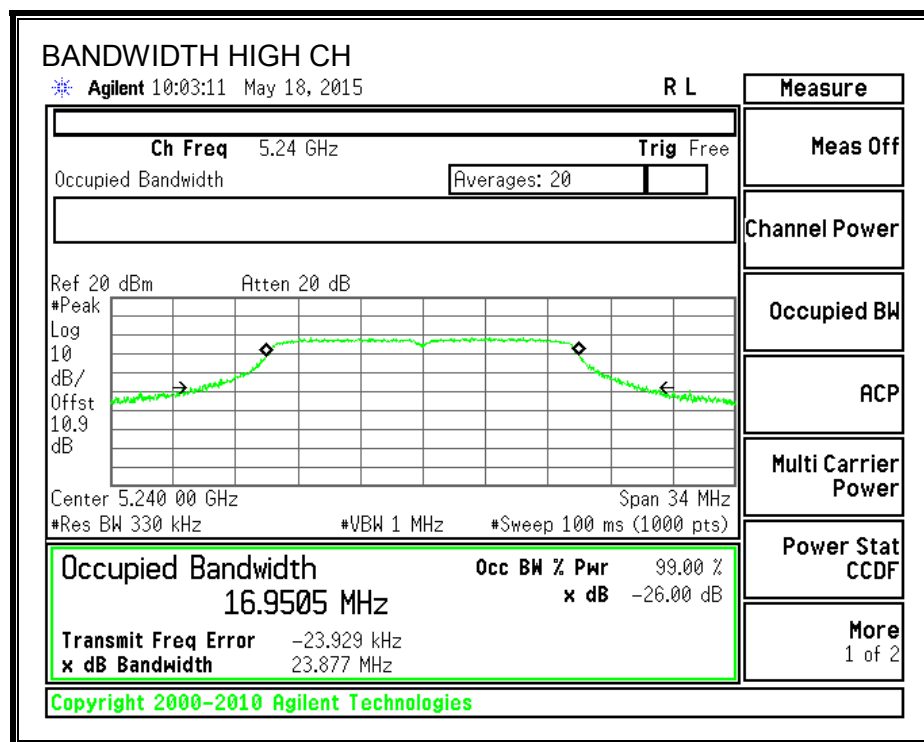
None; for reporting purposes only.

#### RESULTS

| Channel | Frequency<br>(MHz) | 99% Bandwidth<br>(MHz) |
|---------|--------------------|------------------------|
| Low     | 5180               | 16.9562                |
| Mid     | 5200               | 16.9666                |
| High    | 5240               | 16.9505                |

**99% BANDWIDTH**





### 8.2.3. AVERAGE POWER

#### LIMITS

None; for reporting purposes only.

#### RESULTS

| Channel | Frequency<br>(MHz) | Power<br>(dBm) |
|---------|--------------------|----------------|
| Low     | 5180               | 8.03           |
| Mid     | 5200               | 8.50           |
| High    | 5240               | 8.50           |

## 8.2.4. OUTPUT POWER AND PSD

### LIMITS

FCC §15.407 (a) (1)

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

## RESULTS

### Antenna Gain and Limits

| Channel | Frequency<br>(MHz) | Directional<br>Gain<br>for Power<br>(dBi) | Directional<br>Gain<br>for PSD<br>(dBi) | Power<br>Limit<br>(dBm) | PSD<br>Limit<br>(dBm) |
|---------|--------------------|-------------------------------------------|-----------------------------------------|-------------------------|-----------------------|
| Low     | 5180               | 1.80                                      | 1.80                                    | 24.00                   | 11.00                 |
| Mid     | 5200               | 1.80                                      | 1.80                                    | 24.00                   | 11.00                 |
| High    | 5240               | 1.80                                      | 1.80                                    | 24.00                   | 11.00                 |

|                    |      |                                                |
|--------------------|------|------------------------------------------------|
| Duty Cycle CF (dB) | 0.00 | Included in Calculations of Corr'd Power & PSD |
|--------------------|------|------------------------------------------------|

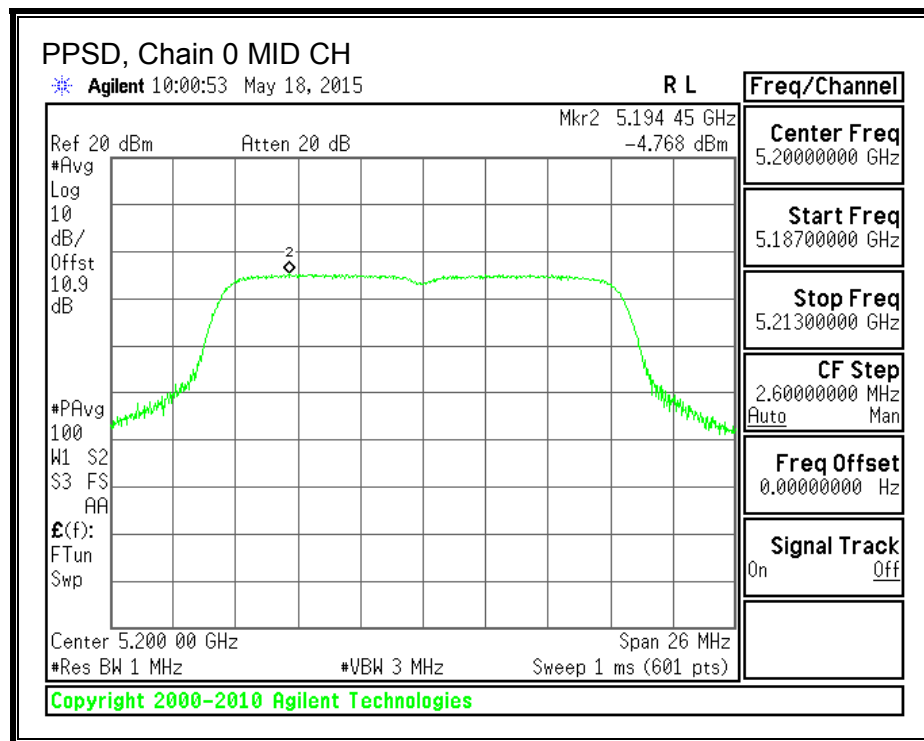
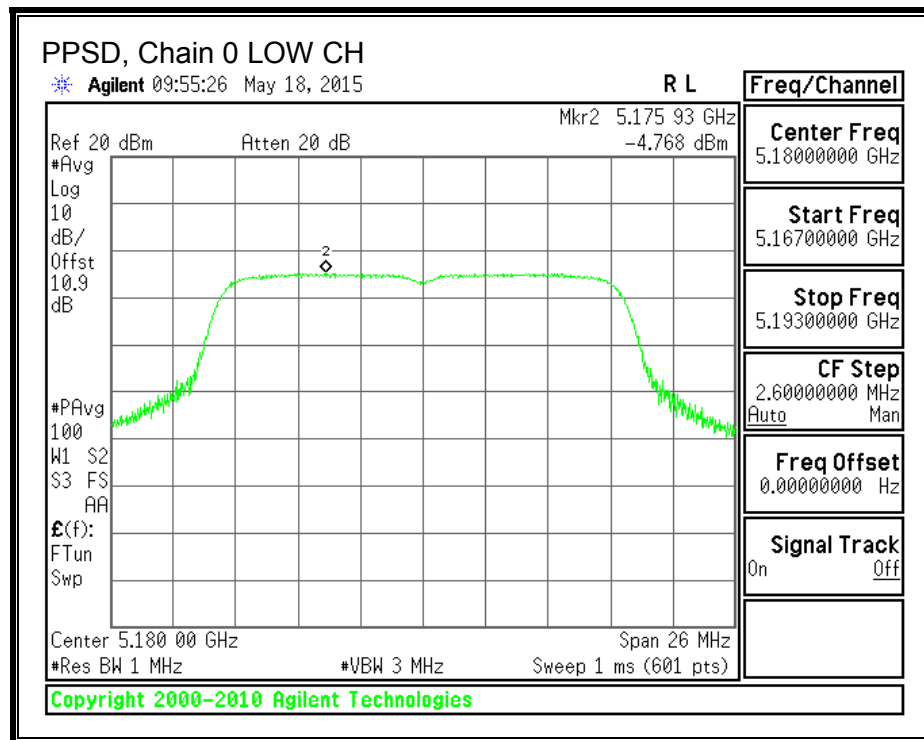
### Output Power Results

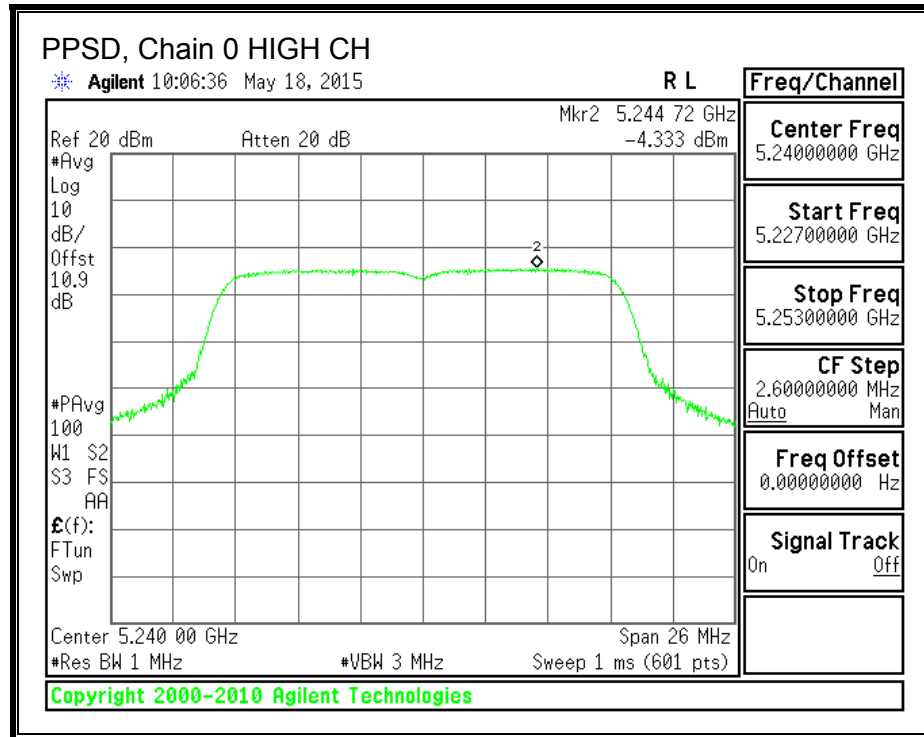
| Channel | Frequency<br>(MHz) | Chain 0<br>Meas<br>Power<br>(dBm) | Total<br>Corr'd<br>Power<br>(dBm) | Power<br>Limit<br>(dBm) | Power<br>Margin<br>(dB) |
|---------|--------------------|-----------------------------------|-----------------------------------|-------------------------|-------------------------|
| Low     | 5180               | 8.03                              | 8.03                              | 24.00                   | -15.97                  |
| Mid     | 5200               | 8.50                              | 8.50                              | 24.00                   | -15.50                  |
| High    | 5240               | 8.50                              | 8.50                              | 24.00                   | -15.50                  |

### PSD Results

| Channel | Frequency<br>(MHz) | Chain 0<br>Meas<br>PSD<br>(dBm) | Total<br>Corr'd<br>PSD<br>(dBm) | PSD<br>Limit<br>(dBm) | PSD<br>Margin<br>(dB) |
|---------|--------------------|---------------------------------|---------------------------------|-----------------------|-----------------------|
| Low     | 5180               | -4.77                           | -4.77                           | 11.00                 | -15.77                |
| Mid     | 5200               | -4.77                           | -4.77                           | 11.00                 | -15.77                |
| High    | 5240               | -4.33                           | -4.33                           | 11.00                 | -15.33                |

**PPSD, Chain 0**





### 8.3. 802.11n HT20 MODE IN THE 5.2 GHz BAND

#### 8.3.1. 26 dB BANDWIDTH

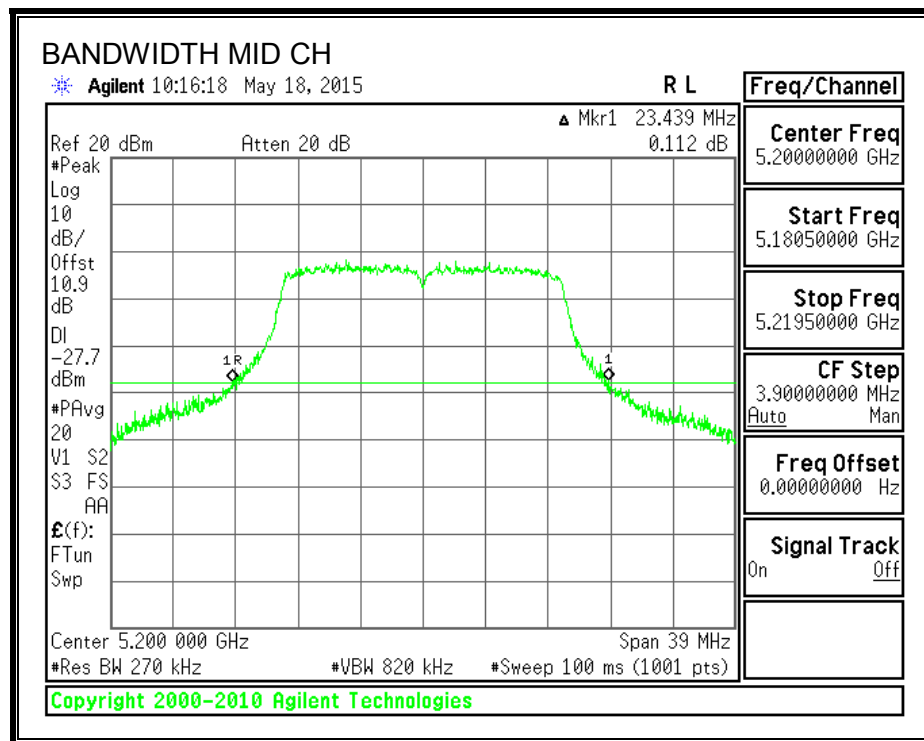
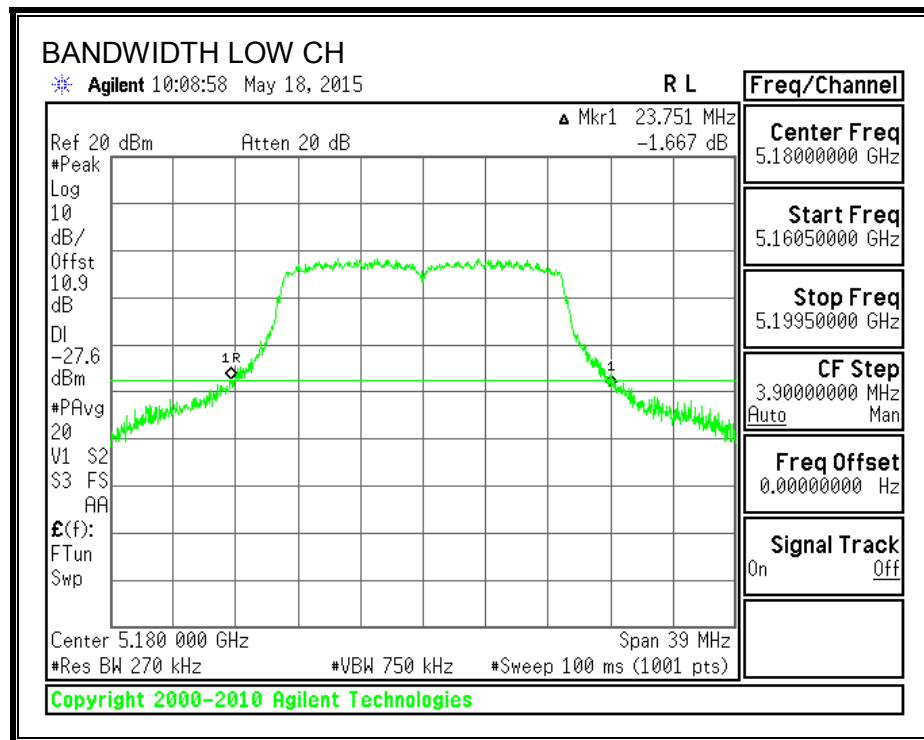
##### LIMITS

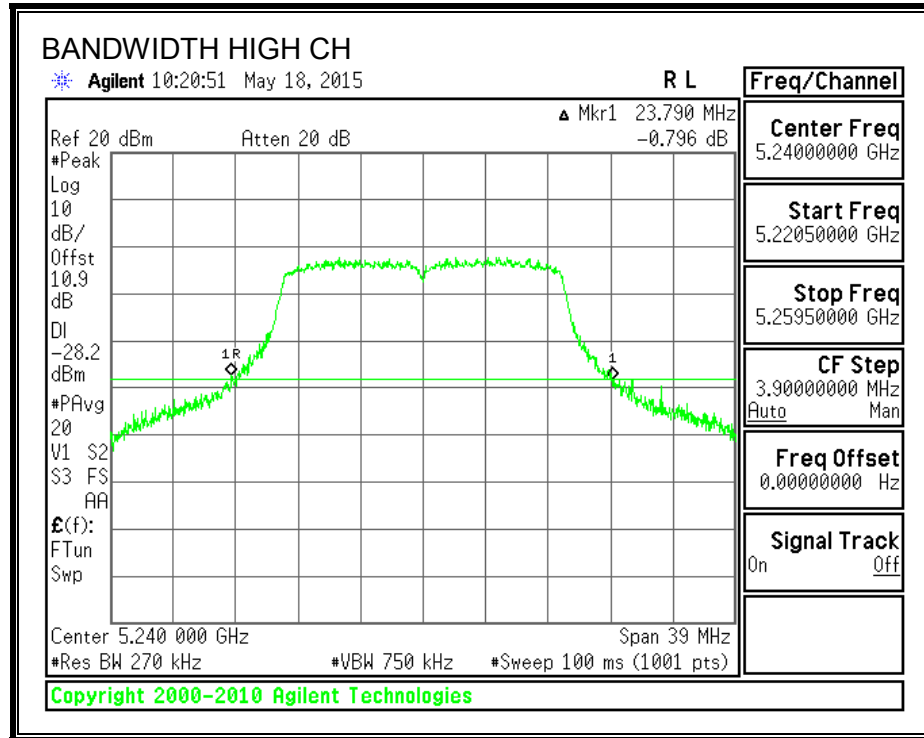
None; for reporting purposes only.

##### RESULTS

| Channel | Frequency<br>(MHz) | 26 dB Bandwidth<br>(MHz) |
|---------|--------------------|--------------------------|
| Low     | 5180               | 23.75                    |
| Mid     | 5200               | 23.44                    |
| High    | 5240               | 23.79                    |

**26 dB BANDWIDTH**





### 8.3.2. 99% BANDWIDTH

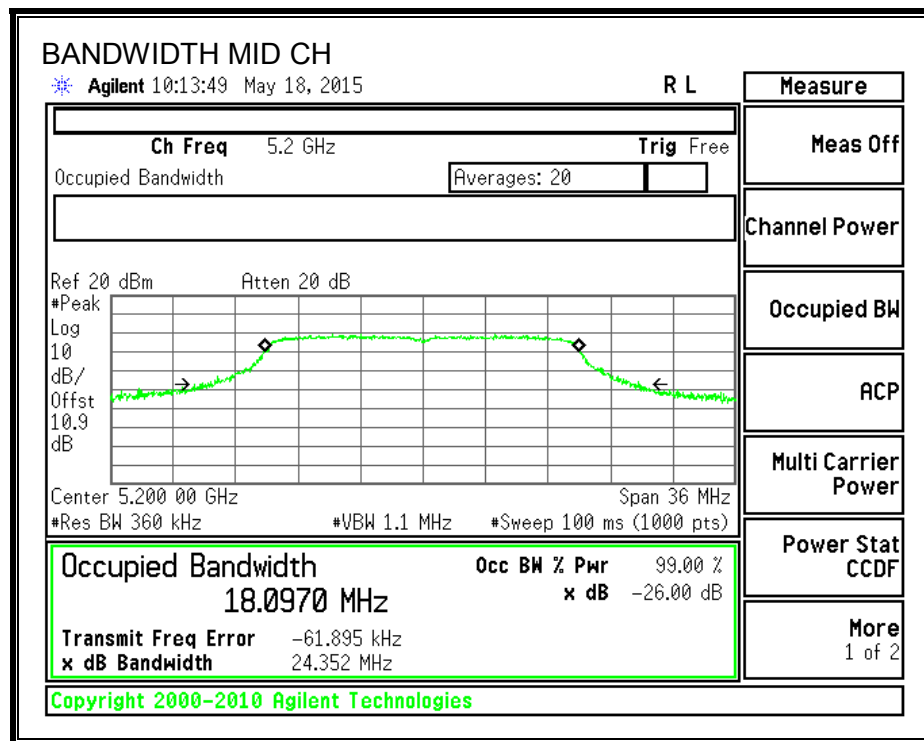
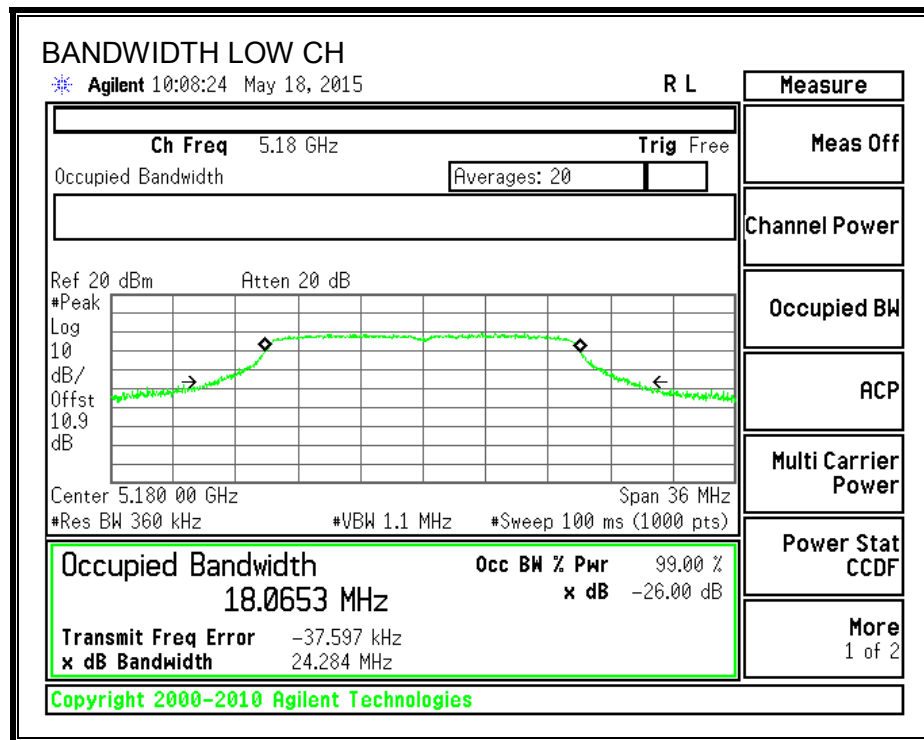
#### LIMITS

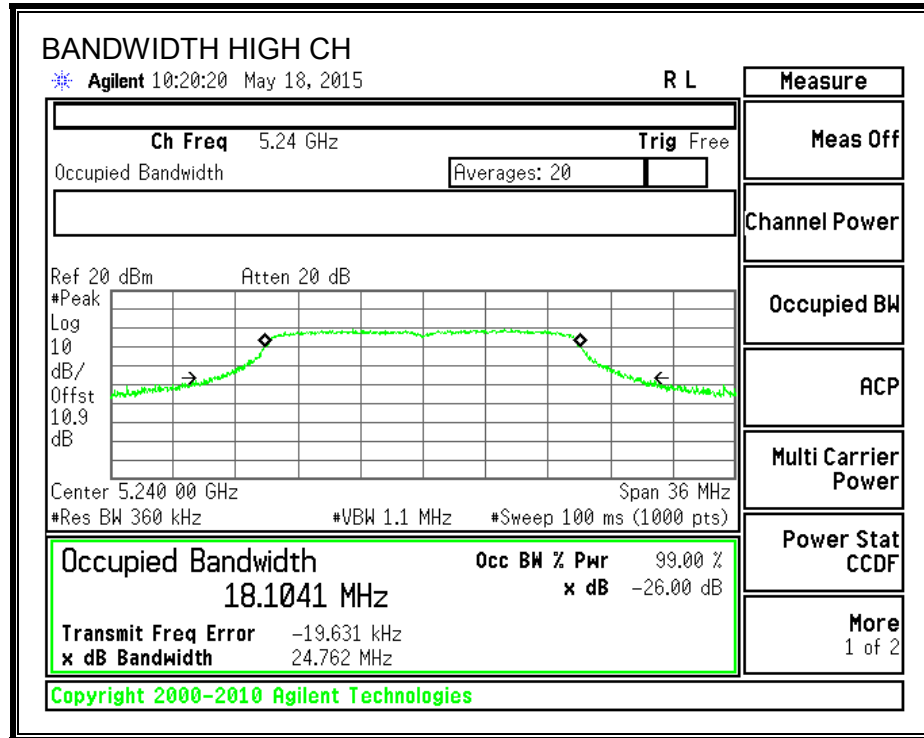
None; for reporting purposes only.

#### RESULTS

| Channel | Frequency<br>(MHz) | 99% Bandwidth<br>(MHz) |
|---------|--------------------|------------------------|
| Low     | 5180               | 18.0653                |
| Mid     | 5200               | 18.0970                |
| High    | 5240               | 18.1041                |

**99% BANDWIDTH**





### 8.3.3. AVERAGE POWER

#### LIMITS

None; for reporting purposes only.

#### RESULTS

| Channel | Frequency<br>(MHz) | Power<br>(dBm) |
|---------|--------------------|----------------|
| Low     | 5180               | 8.04           |
| Mid     | 5200               | 8.48           |
| High    | 5240               | 8.42           |

### **8.3.4. OUTPUT POWER AND PSD**

#### **LIMITS**

FCC §15.407 (a) (1)

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple colocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

#### **DIRECTIONAL ANTENNA GAIN**

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

## RESULTS

### Antenna Gain and Limits

| Channel | Frequency<br>(MHz) | Directional<br>Gain<br>for Power<br>(dBi) | Directional<br>Gain<br>for PSD<br>(dBi) | Power<br>Limit<br>(dBm) | PSD<br>Limit<br>(dBm) |
|---------|--------------------|-------------------------------------------|-----------------------------------------|-------------------------|-----------------------|
| Low     | 5180               | 1.80                                      | 1.80                                    | 24.00                   | 11.00                 |
| Mid     | 5200               | 1.80                                      | 1.80                                    | 24.00                   | 11.00                 |
| High    | 5240               | 1.80                                      | 1.80                                    | 24.00                   | 11.00                 |

|                    |      |                                                |
|--------------------|------|------------------------------------------------|
| Duty Cycle CF (dB) | 0.00 | Included in Calculations of Corr'd Power & PSD |
|--------------------|------|------------------------------------------------|

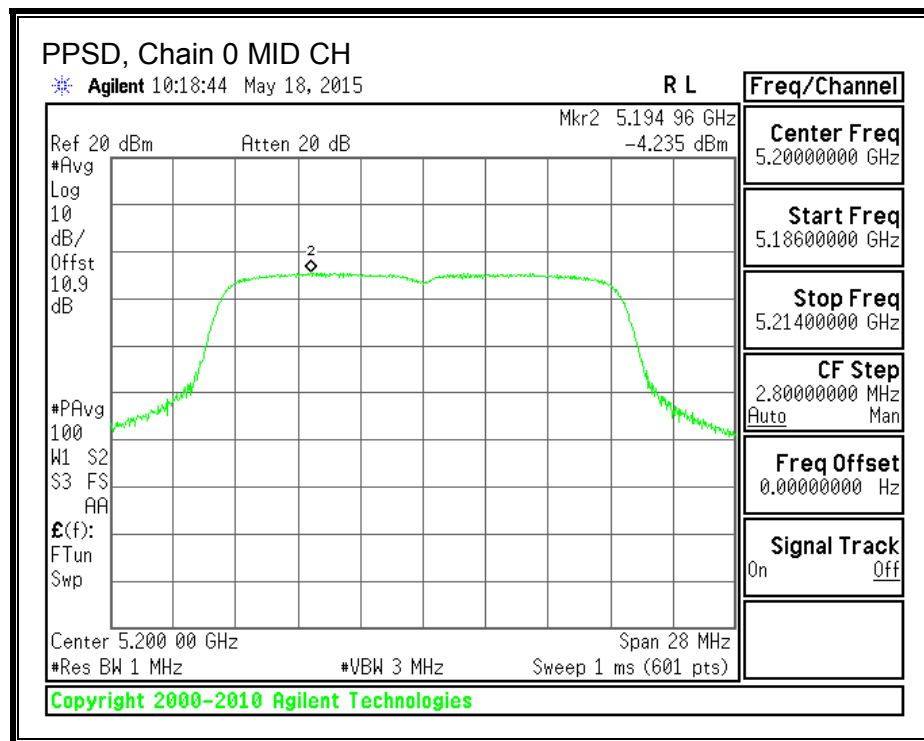
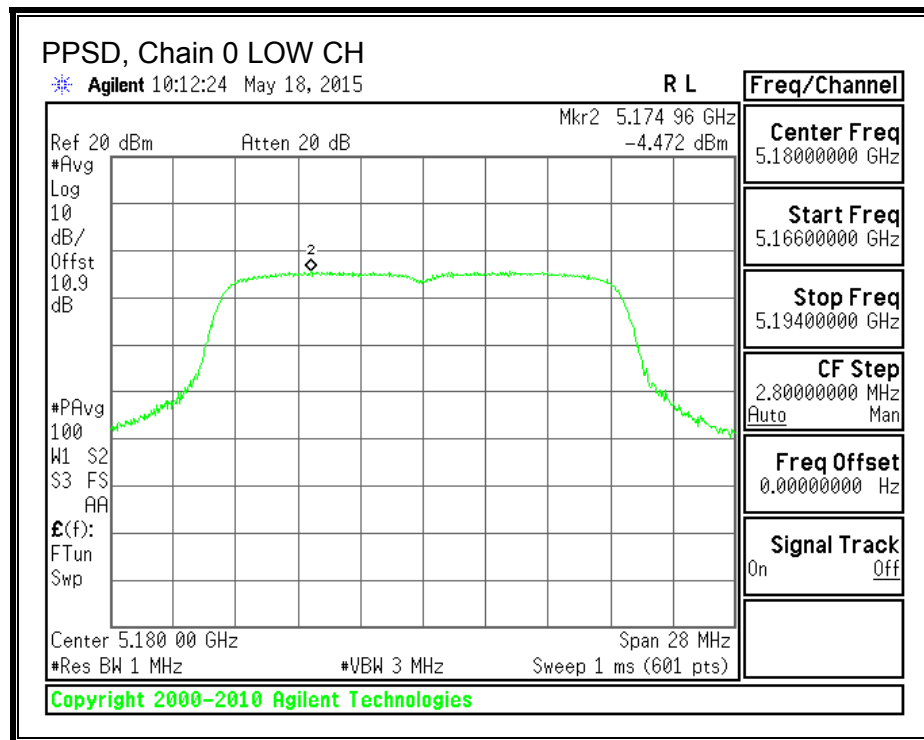
### Output Power Results

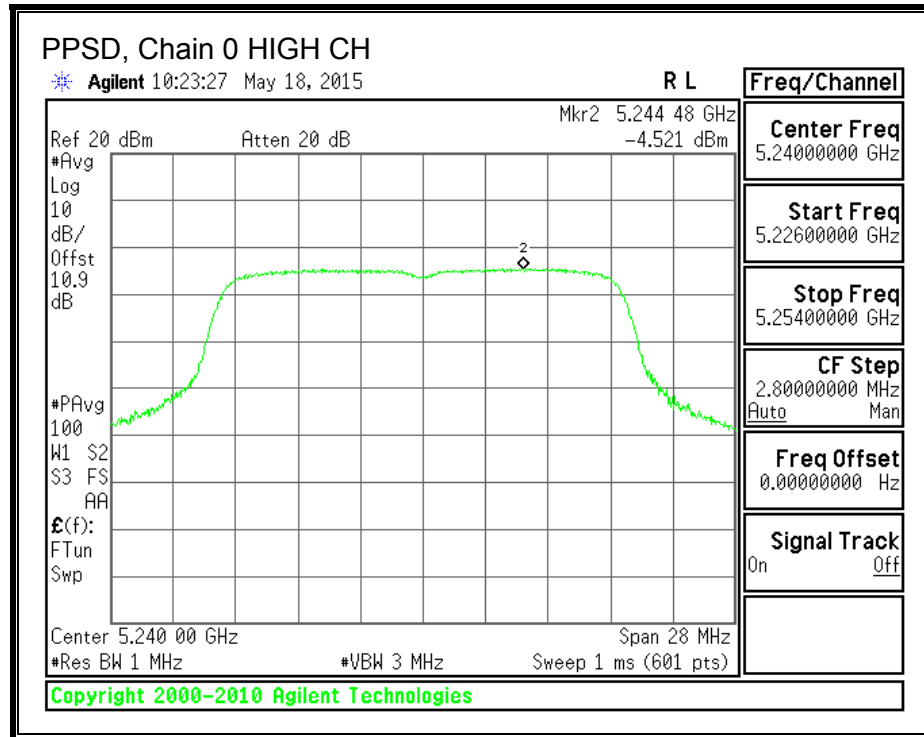
| Channel | Frequency<br>(MHz) | Chain 0<br>Meas<br>Power<br>(dBm) | Total<br>Corr'd<br>Power<br>(dBm) | Power<br>Limit<br>(dBm) | Power<br>Margin<br>(dB) |
|---------|--------------------|-----------------------------------|-----------------------------------|-------------------------|-------------------------|
| Low     | 5180               | 8.04                              | 8.04                              | 24.00                   | -15.96                  |
| Mid     | 5200               | 8.48                              | 8.48                              | 24.00                   | -15.52                  |
| High    | 5240               | 8.42                              | 8.42                              | 24.00                   | -15.58                  |

### PSD Results

| Channel | Frequency<br>(MHz) | Chain 0<br>Meas<br>PSD<br>(dBm) | Total<br>Corr'd<br>PSD<br>(dBm) | PSD<br>Limit<br>(dBm) | PSD<br>Margin<br>(dB) |
|---------|--------------------|---------------------------------|---------------------------------|-----------------------|-----------------------|
| Low     | 5180               | -4.47                           | -4.47                           | 11.00                 | -15.47                |
| Mid     | 5200               | -4.24                           | -4.24                           | 11.00                 | -15.24                |
| High    | 5240               | -4.52                           | -4.52                           | 11.00                 | -15.52                |

**PPSD, Chain 0**





## 8.4. 802.11a MODE IN THE 5.3 GHz BAND

### 8.4.1. 26 dB BANDWIDTH

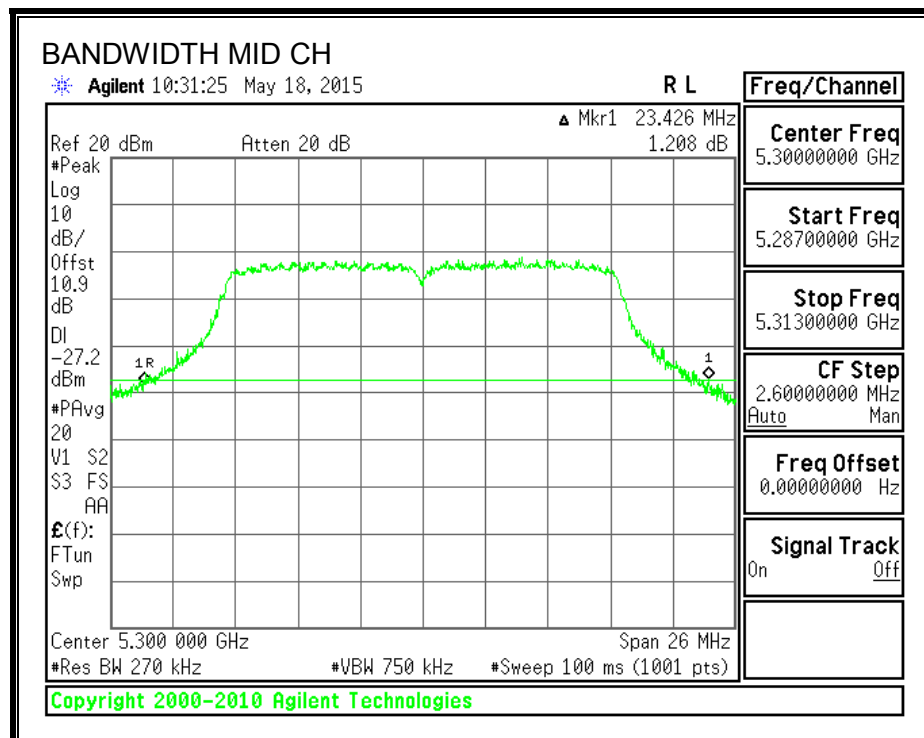
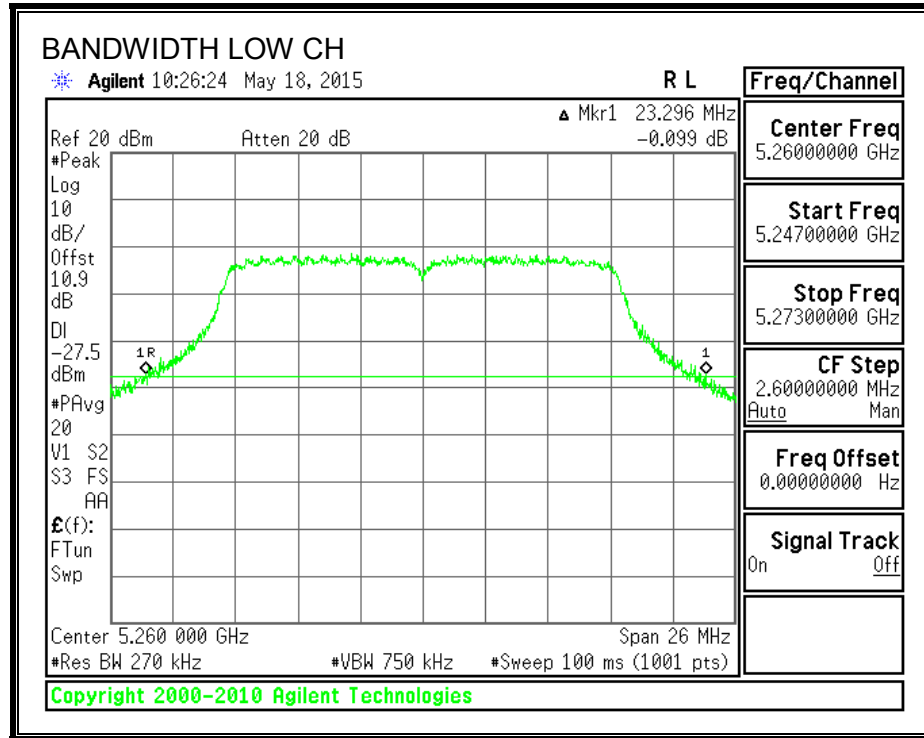
#### LIMITS

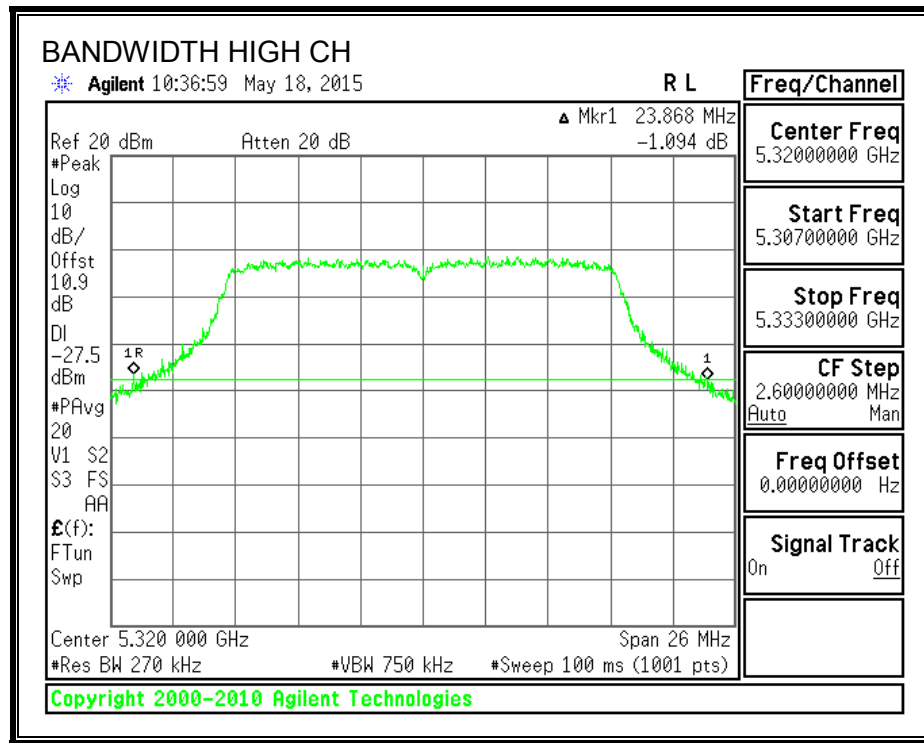
None; for reporting purposes only.

#### RESULTS

| Channel | Frequency<br>(MHz) | 26 dB Bandwidth<br>(MHz) |
|---------|--------------------|--------------------------|
| Low     | 5260               | 23.30                    |
| Mid     | 5300               | 23.43                    |
| High    | 5320               | 23.87                    |

**26 dB BANDWIDTH**





#### 8.4.2. 99% BANDWIDTH

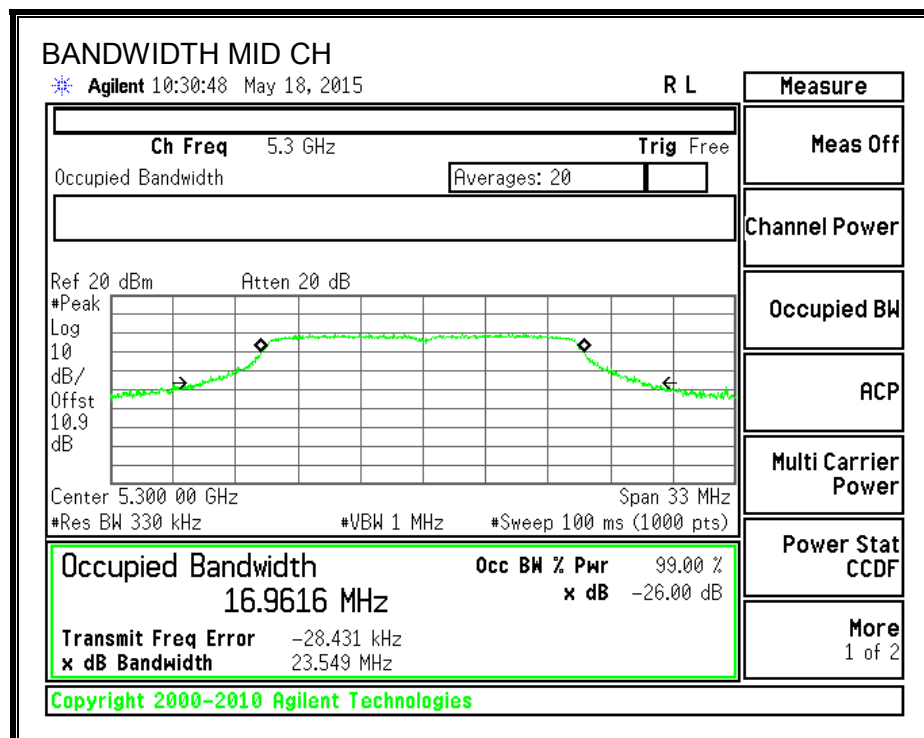
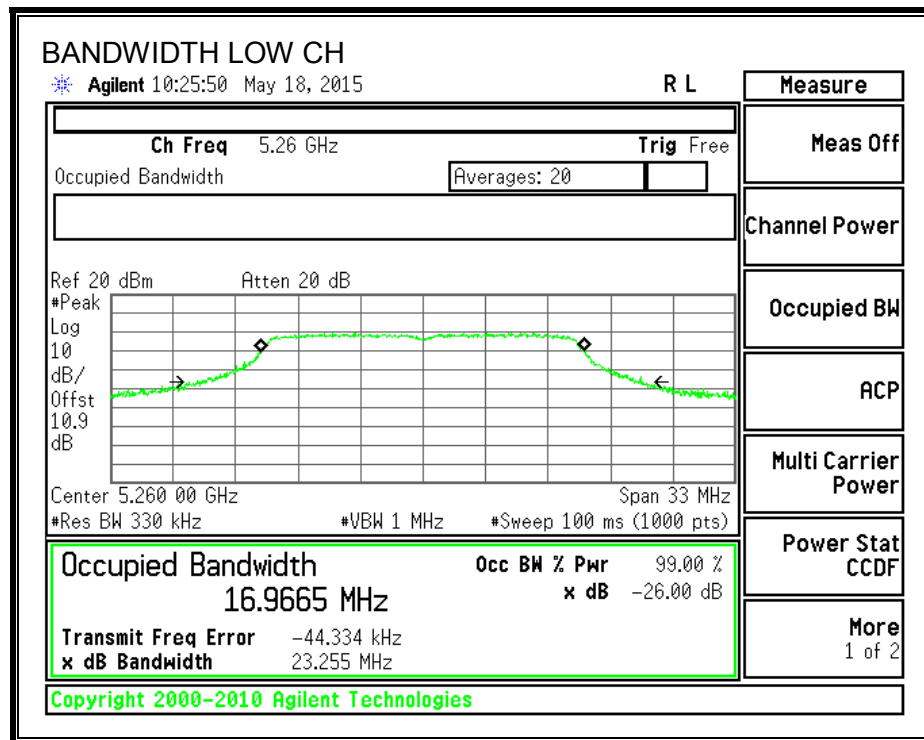
##### LIMITS

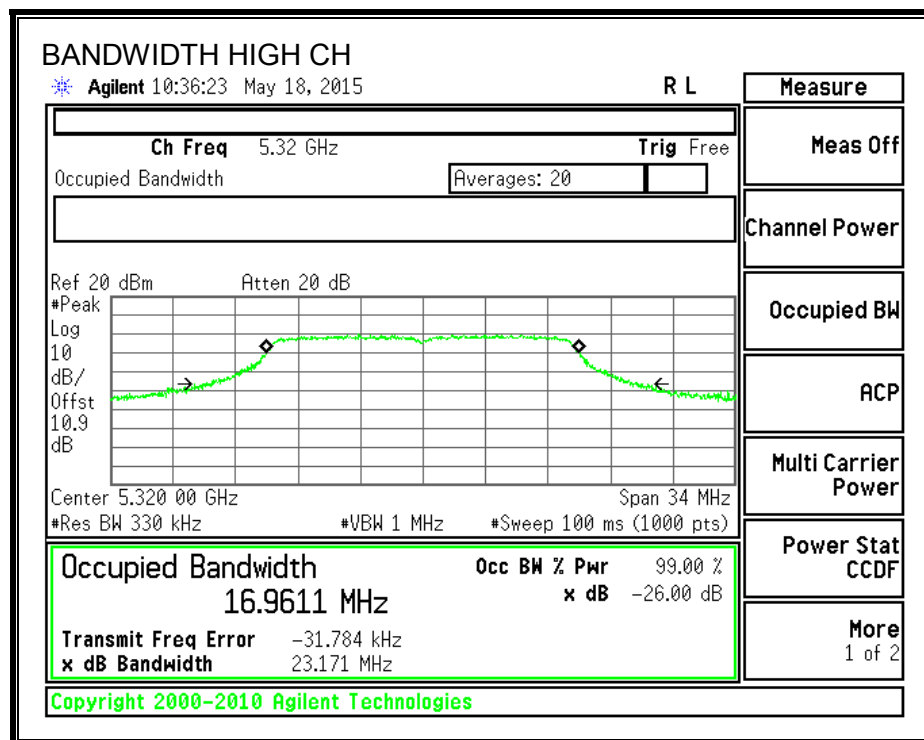
None; for reporting purposes only.

##### RESULTS

| Channel | Frequency<br>(MHz) | 99% Bandwidth<br>(MHz) |
|---------|--------------------|------------------------|
| Low     | 5260               | 16.9665                |
| Mid     | 5300               | 16.9616                |
| High    | 5320               | 16.9611                |

**99% BANDWIDTH**





### 8.4.3. AVERAGE POWER

#### LIMITS

None; for reporting purposes only.

#### RESULTS

| Channel | Frequency<br>(MHz) | Power<br>(dBm) |
|---------|--------------------|----------------|
| Low     | 5260               | 8.22           |
| Mid     | 5300               | 8.10           |
| High    | 5320               | 8.07           |

#### **8.4.4. OUTPUT POWER AND PSD**

##### **LIMITS**

FCC §15.407 (a) (2)

For the band 5.25–5.35 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or  $11 \text{ dBm} + 10 \log B$ , where B is the 26-dB emission bandwidth in MHz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1-MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

##### **DIRECTIONAL ANTENNA GAIN**

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

## RESULTS

### Bandwidth, Antenna Gain, and Limits

| Channel | Frequency<br>(MHz) | Min<br>26 dB<br>BW<br>(MHz) | Directional<br>Gain<br>(dBi) | Power<br>Limit<br>(dBm) | PSD<br>Limit<br>(dBm) |
|---------|--------------------|-----------------------------|------------------------------|-------------------------|-----------------------|
| Low     | 5260               | 23.30                       | 1.70                         | 24.00                   | 11.00                 |
| Mid     | 5300               | 23.43                       | 1.70                         | 24.00                   | 11.00                 |
| High    | 5320               | 23.87                       | 1.70                         | 24.00                   | 11.00                 |

|                    |      |                                                |
|--------------------|------|------------------------------------------------|
| Duty Cycle CF (dB) | 0.00 | Included in Calculations of Corr'd Power & PSD |
|--------------------|------|------------------------------------------------|

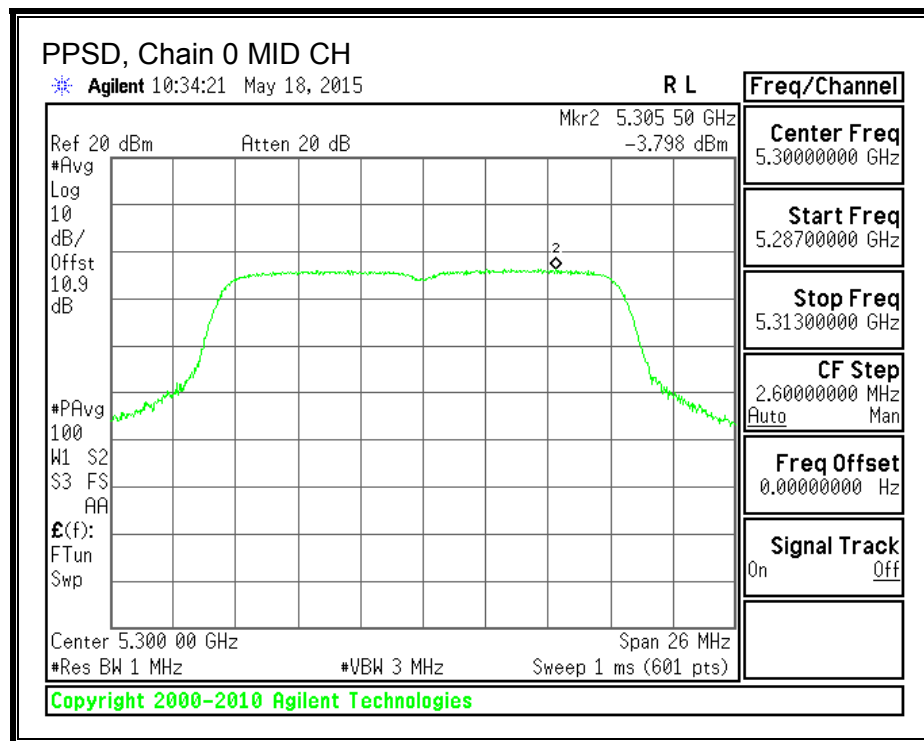
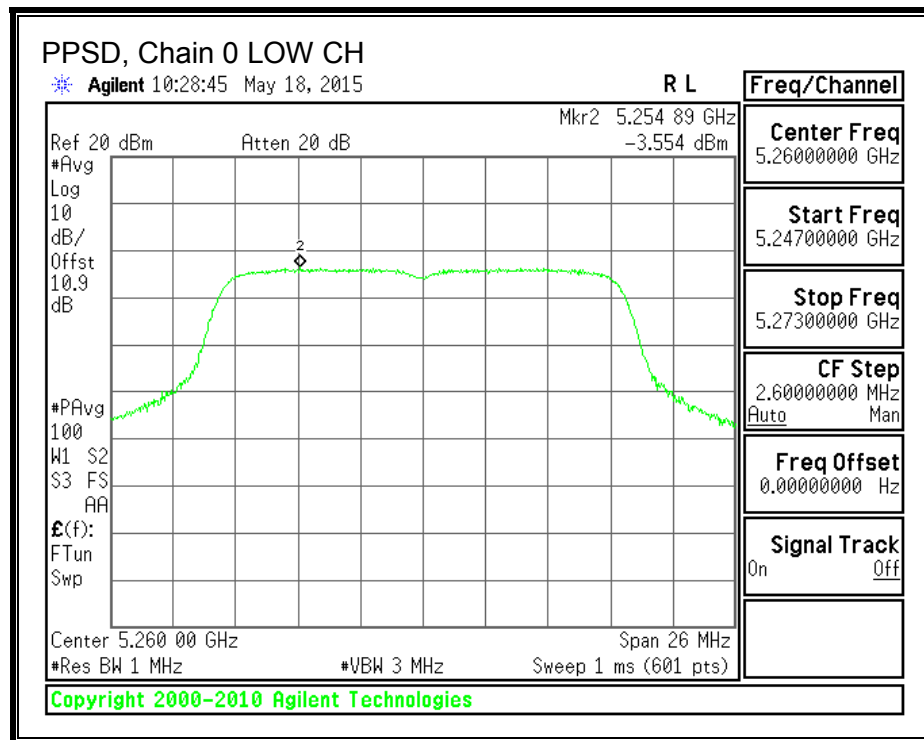
### Output Power Results

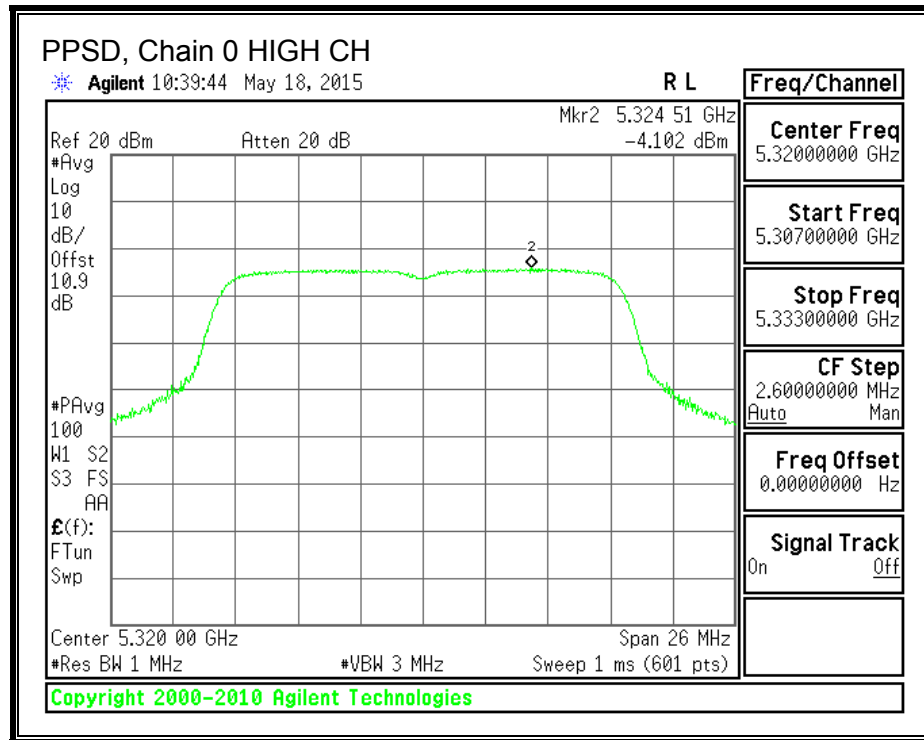
| Channel | Frequency<br>(MHz) | Chain 0<br>Meas<br>Power<br>(dBm) | Total<br>Corr'd<br>Power<br>(dBm) | Power<br>Limit<br>(dBm) | Power<br>Margin<br>(dB) |
|---------|--------------------|-----------------------------------|-----------------------------------|-------------------------|-------------------------|
| Low     | 5260               | 8.22                              | 8.22                              | 24.00                   | -15.78                  |
| Mid     | 5300               | 8.10                              | 8.10                              | 24.00                   | -15.90                  |
| High    | 5320               | 8.07                              | 8.07                              | 24.00                   | -15.93                  |

### PSD Results

| Channel | Frequency<br>(MHz) | Chain 0<br>Meas<br>PSD<br>(dBm) | Total<br>Corr'd<br>PSD<br>(dBm) | PSD<br>Limit<br>(dBm) | PSD<br>Margin<br>(dB) |
|---------|--------------------|---------------------------------|---------------------------------|-----------------------|-----------------------|
| Low     | 5260               | -3.55                           | -3.55                           | 11.00                 | -14.55                |
| Mid     | 5300               | -3.80                           | -3.80                           | 11.00                 | -14.80                |
| High    | 5320               | -4.10                           | -4.10                           | 11.00                 | -15.10                |

**PPSD, Chain 0**





## 8.4.5. TPC POWER

### LIMITS

FCC §15.407 (h) (1)

Transmit power control (TPC). U-NII devices operating in the 5.25–5.35 GHz band and the 5.47–5.725 GHz band shall employ a TPC mechanism. The U-NII device is required to have the capability to operate at least 6 dB below the mean EIRP value of 30 dBm. A TPC mechanism is not required for systems with an e.i.r.p. of less than 500 mW.

### DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

### RESULTS

#### TPC Limits

| Channel | Frequency<br>(MHz) | Limit<br>EIRP<br>(dBm) | Directional<br>Gain<br>(dBi) | Limit<br>Cond<br>(dBm) |
|---------|--------------------|------------------------|------------------------------|------------------------|
| Low     | 5260               | 24                     | 1.70                         | 22.30                  |
| Mid     | 5300               | 24                     | 1.70                         | 22.30                  |
| High    | 5320               | 24                     | 1.70                         | 22.30                  |

|                    |      |                                          |
|--------------------|------|------------------------------------------|
| Duty Cycle CF (dB) | 0.00 | Included in Calculations of Corr'd Power |
|--------------------|------|------------------------------------------|

#### TPC Output Power Results

| Channel | Frequency<br>(MHz) | Meas<br>Power<br>(dBm) | Corr'd<br>Power<br>(dBm) | Cond<br>Limit<br>(dBm) | Margin<br>(dB) |
|---------|--------------------|------------------------|--------------------------|------------------------|----------------|
| Low     | 5260               | 8.22                   | 8.22                     | 22.30                  | -14.08         |
| Mid     | 5300               | 8.10                   | 8.10                     | 22.30                  | -14.20         |
| High    | 5320               | 8.07                   | 8.07                     | 22.30                  | -14.23         |

## 8.5. 802.11n HT20 MODE IN THE 5.3 GHz BAND

### 8.5.1. 26 dB BANDWIDTH

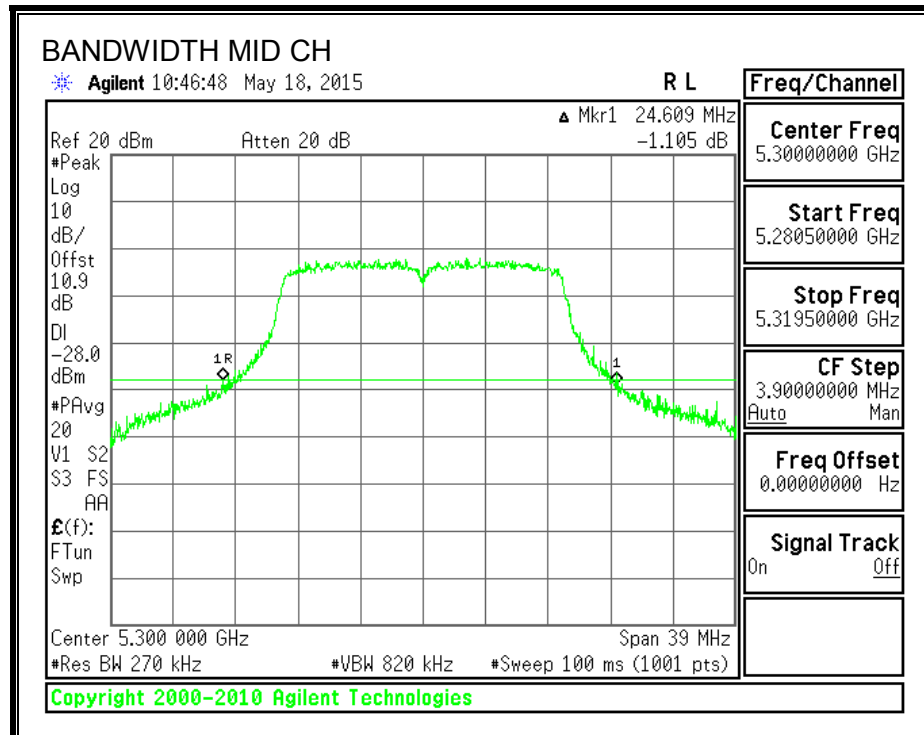
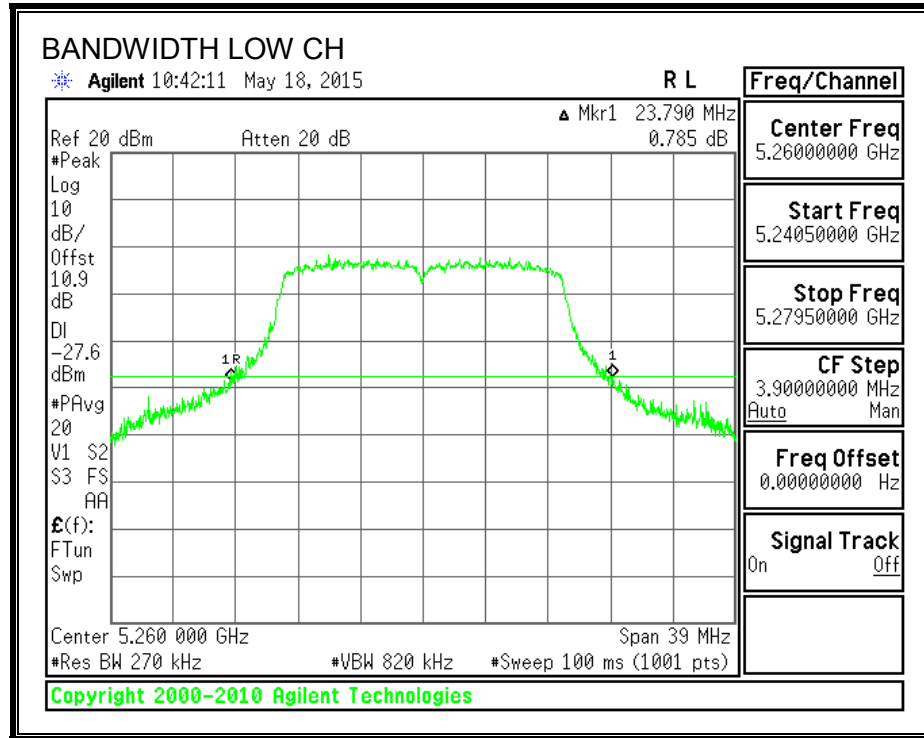
#### LIMITS

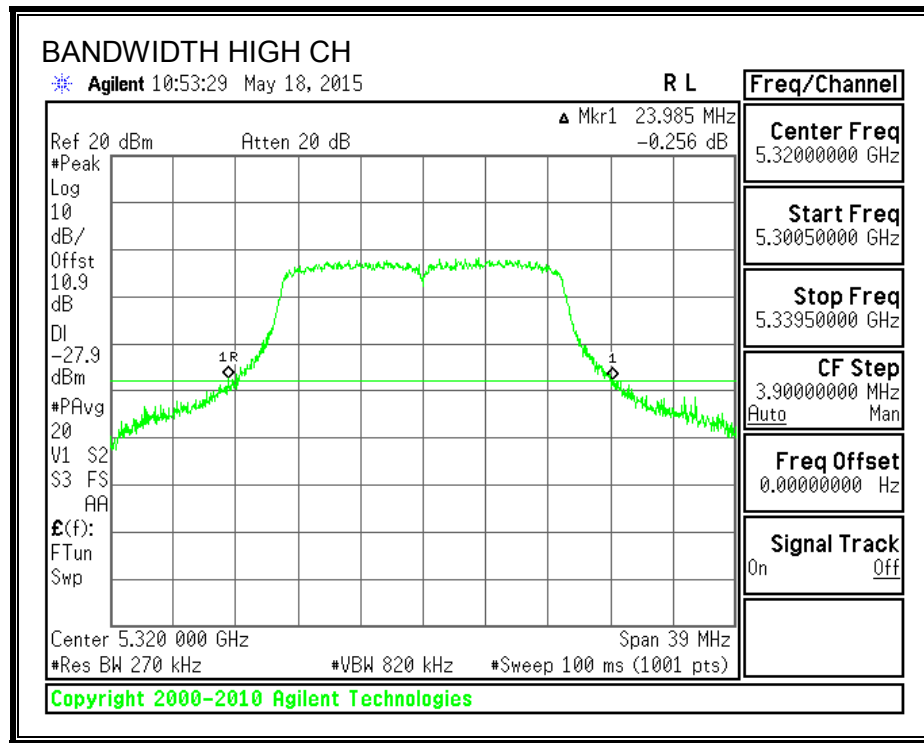
None; for reporting purposes only.

#### RESULTS

| Channel | Frequency<br>(MHz) | 26 dB Bandwidth<br>(MHz) |
|---------|--------------------|--------------------------|
| Low     | 5260               | 23.79                    |
| Mid     | 5300               | 24.61                    |
| High    | 5320               | 23.99                    |

**26 dB BANDWIDTH**





### 8.5.2. 99% BANDWIDTH

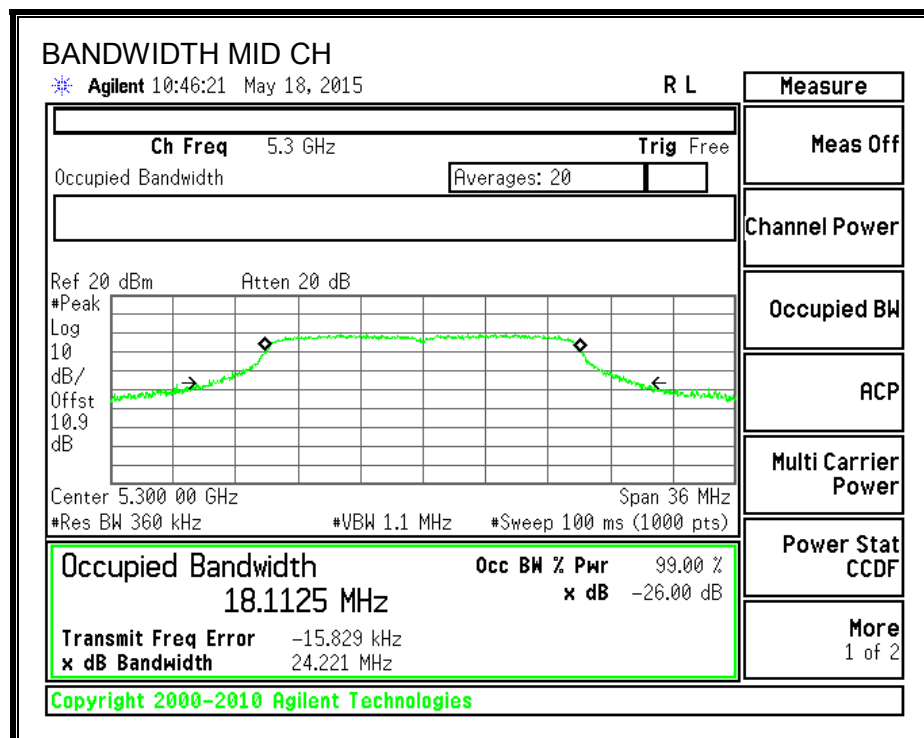
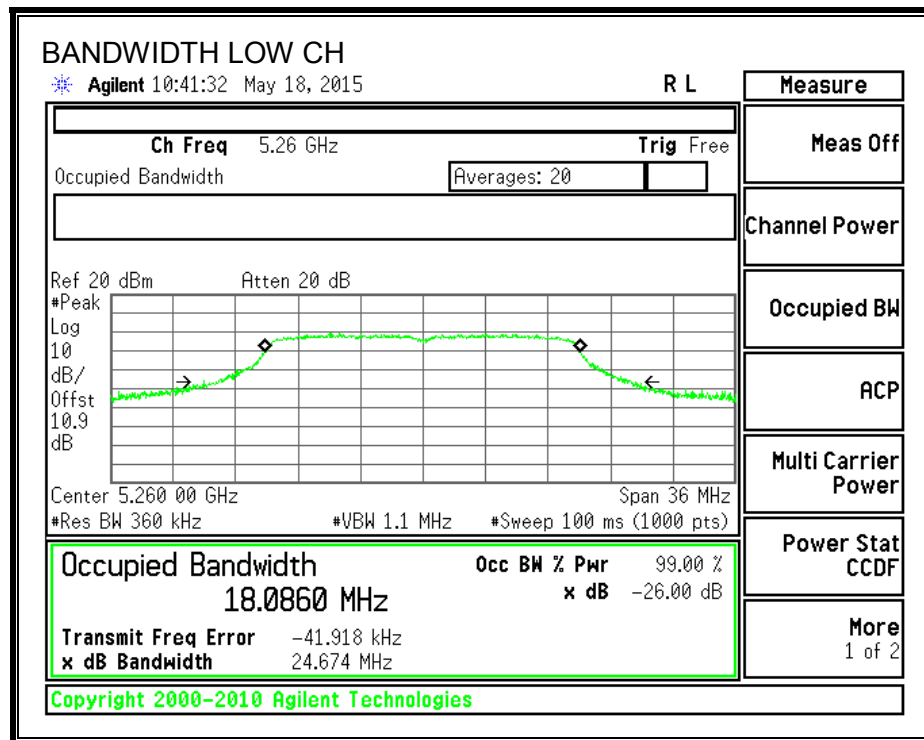
#### LIMITS

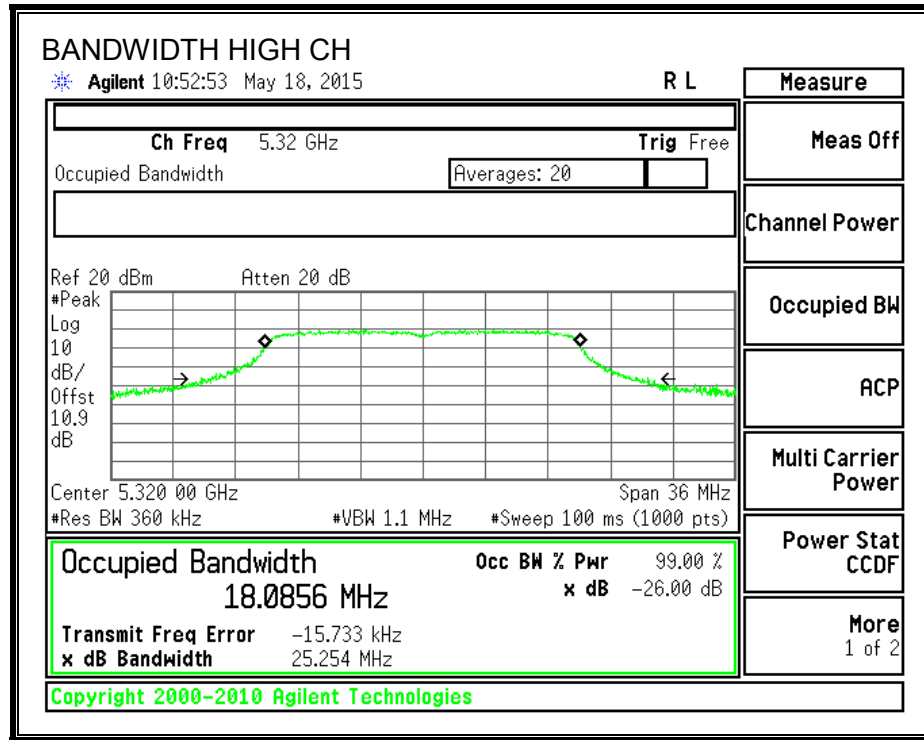
None; for reporting purposes only.

#### RESULTS

| Channel | Frequency<br>(MHz) | 99% Bandwidth<br>(MHz) |
|---------|--------------------|------------------------|
| Low     | 5260               | 18.0860                |
| Mid     | 5300               | 18.1125                |
| High    | 5320               | 18.0856                |

**99% BANDWIDTH**





### 8.5.3. AVERAGE POWER

#### LIMITS

None; for reporting purposes only.

#### RESULTS

| Channel | Frequency<br>(MHz) | Power<br>(dBm) |
|---------|--------------------|----------------|
| Low     | 5260               | 8.09           |
| Mid     | 5300               | 8.41           |
| High    | 5320               | 8.50           |

#### **8.5.4. OUTPUT POWER AND PSD**

##### **LIMITS**

FCC §15.407 (a) (2)

For the band 5.25–5.35 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or  $11 \text{ dBm} + 10 \log B$ , where B is the 26-dB emission bandwidth in MHz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1-MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

##### **DIRECTIONAL ANTENNA GAIN**

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

## RESULTS

### Bandwidth, Antenna Gain, and Limits

| Channel | Frequency<br>(MHz) | Min<br>26 dB<br>BW<br>(MHz) | Directional<br>Gain<br>(dBi) | Power<br>Limit<br>(dBm) | PSD<br>Limit<br>(dBm) |
|---------|--------------------|-----------------------------|------------------------------|-------------------------|-----------------------|
| Low     | 5260               | 23.79                       | 1.70                         | 24.00                   | 11.00                 |
| Mid     | 5300               | 24.61                       | 1.70                         | 24.00                   | 11.00                 |
| High    | 5320               | 23.99                       | 1.70                         | 24.00                   | 11.00                 |

|                    |      |                                                |
|--------------------|------|------------------------------------------------|
| Duty Cycle CF (dB) | 0.00 | Included in Calculations of Corr'd Power & PSD |
|--------------------|------|------------------------------------------------|

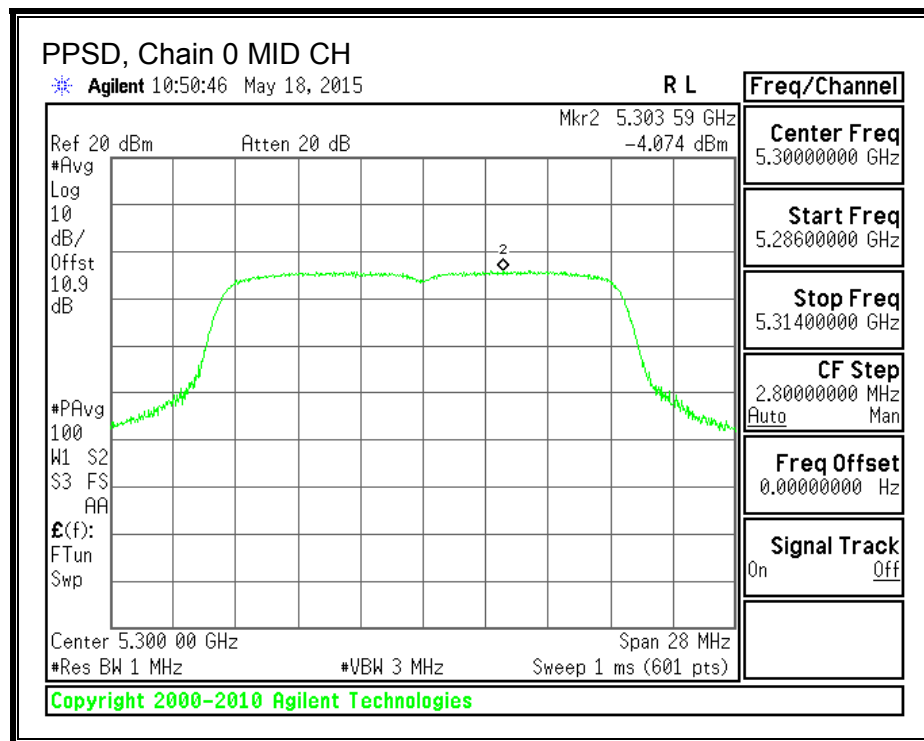
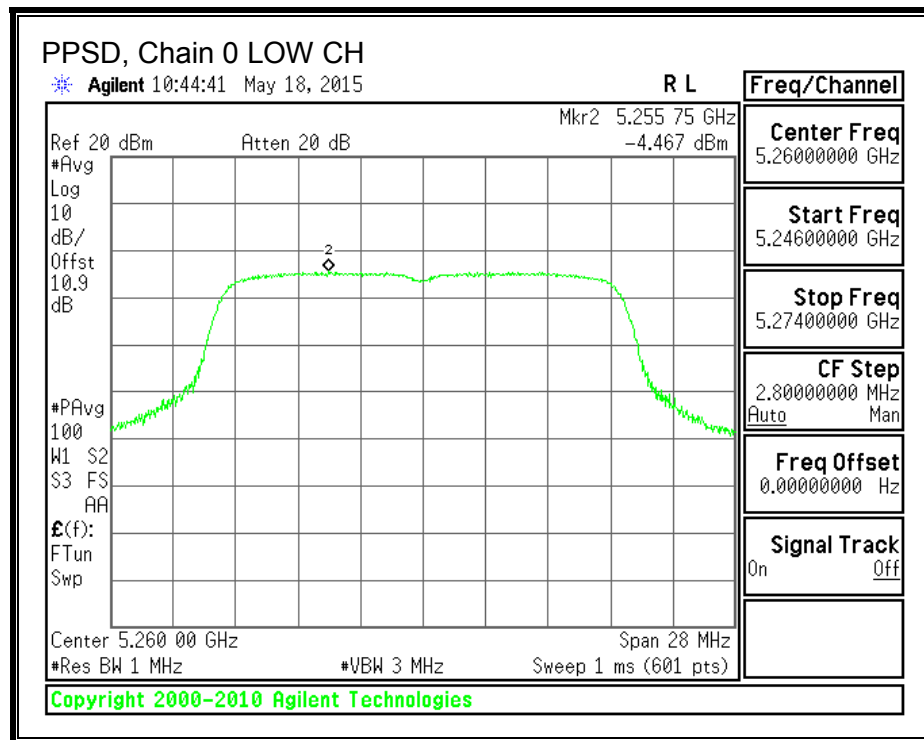
### Output Power Results

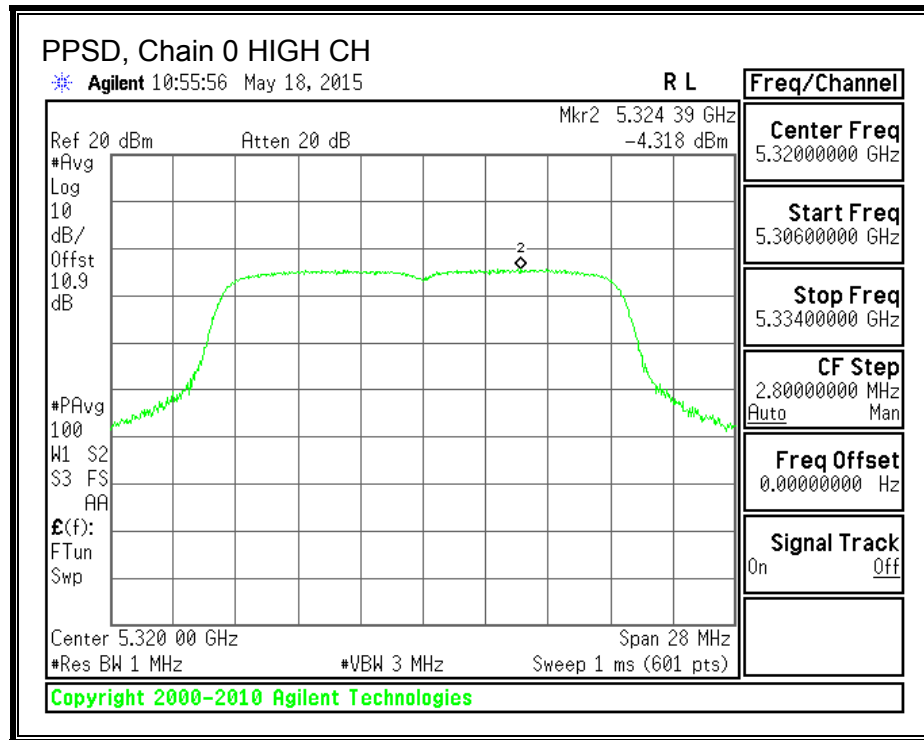
| Channel | Frequency<br>(MHz) | Chain 0<br>Meas<br>Power<br>(dBm) | Total<br>Corr'd<br>Power<br>(dBm) | Power<br>Limit<br>(dBm) | Power<br>Margin<br>(dB) |
|---------|--------------------|-----------------------------------|-----------------------------------|-------------------------|-------------------------|
| Low     | 5260               | 8.09                              | 8.09                              | 24.00                   | -15.91                  |
| Mid     | 5300               | 8.41                              | 8.41                              | 24.00                   | -15.59                  |
| High    | 5320               | 8.50                              | 8.50                              | 24.00                   | -15.50                  |

### PSD Results

| Channel | Frequency<br>(MHz) | Chain 0<br>Meas<br>PSD<br>(dBm) | Total<br>Corr'd<br>PSD<br>(dBm) | PSD<br>Limit<br>(dBm) | PSD<br>Margin<br>(dB) |
|---------|--------------------|---------------------------------|---------------------------------|-----------------------|-----------------------|
| Low     | 5260               | -4.47                           | -4.47                           | 11.00                 | -15.47                |
| Mid     | 5300               | -4.07                           | -4.07                           | 11.00                 | -15.07                |
| High    | 5320               | -4.32                           | -4.32                           | 11.00                 | -15.32                |

**PPSD, Chain 0**





## 8.5.5. TPC POWER

### LIMITS

FCC §15.407 (h) (1)

Transmit power control (TPC). U-NII devices operating in the 5.25–5.35 GHz band and the 5.47–5.725 GHz band shall employ a TPC mechanism. The U-NII device is required to have the capability to operate at least 6 dB below the mean EIRP value of 30 dBm. A TPC mechanism is not required for systems with an e.i.r.p. of less than 500 mW.

### DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

### RESULTS

#### TPC Limits

| Channel | Frequency<br>(MHz) | Limit<br>EIRP<br>(dBm) | Directional<br>Gain<br>(dBi) | Limit<br>Cond<br>(dBm) |
|---------|--------------------|------------------------|------------------------------|------------------------|
| Low     | 5260               | 24                     | 1.70                         | 22.30                  |
| Mid     | 5300               | 24                     | 1.70                         | 22.30                  |
| High    | 5320               | 24                     | 1.70                         | 22.30                  |

|                    |      |                                          |
|--------------------|------|------------------------------------------|
| Duty Cycle CF (dB) | 0.00 | Included in Calculations of Corr'd Power |
|--------------------|------|------------------------------------------|

#### TPC Output Power Results

| Channel | Frequency<br>(MHz) | Meas<br>Power<br>(dBm) | Corr'd<br>Power<br>(dBm) | Cond<br>Limit<br>(dBm) | Margin<br>(dB) |
|---------|--------------------|------------------------|--------------------------|------------------------|----------------|
| Low     | 5260               | 8.09                   | 8.09                     | 22.30                  | -14.21         |
| Mid     | 5300               | 8.41                   | 8.41                     | 22.30                  | -13.89         |
| High    | 5320               | 8.50                   | 8.50                     | 22.30                  | -13.80         |

## 8.6. 802.11a MODE IN THE 5.6 GHz BAND

### 8.6.1. 26 dB BANDWIDTH

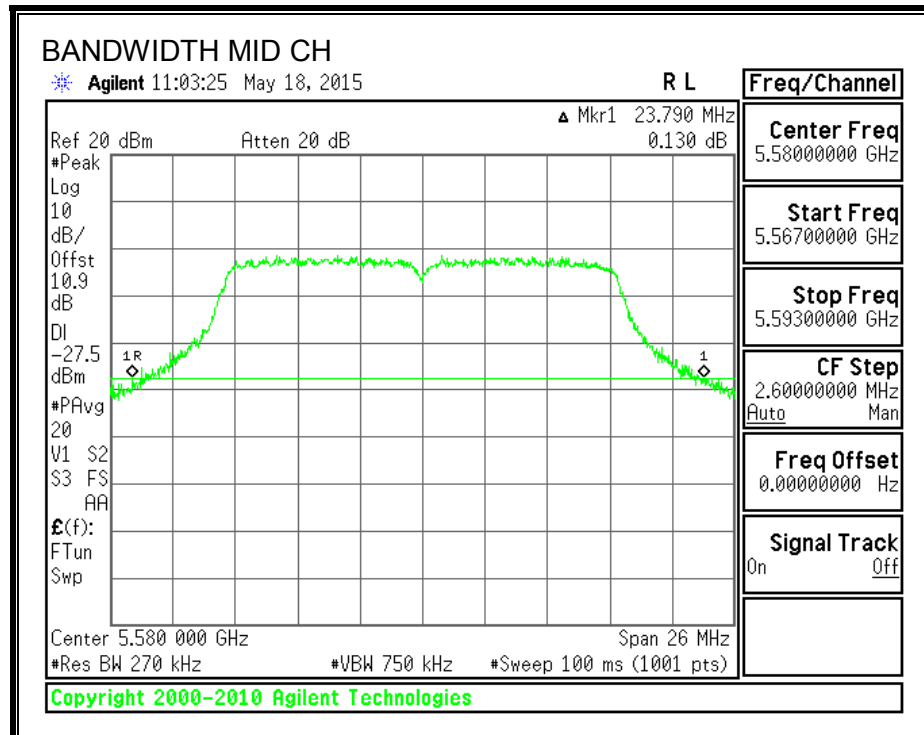
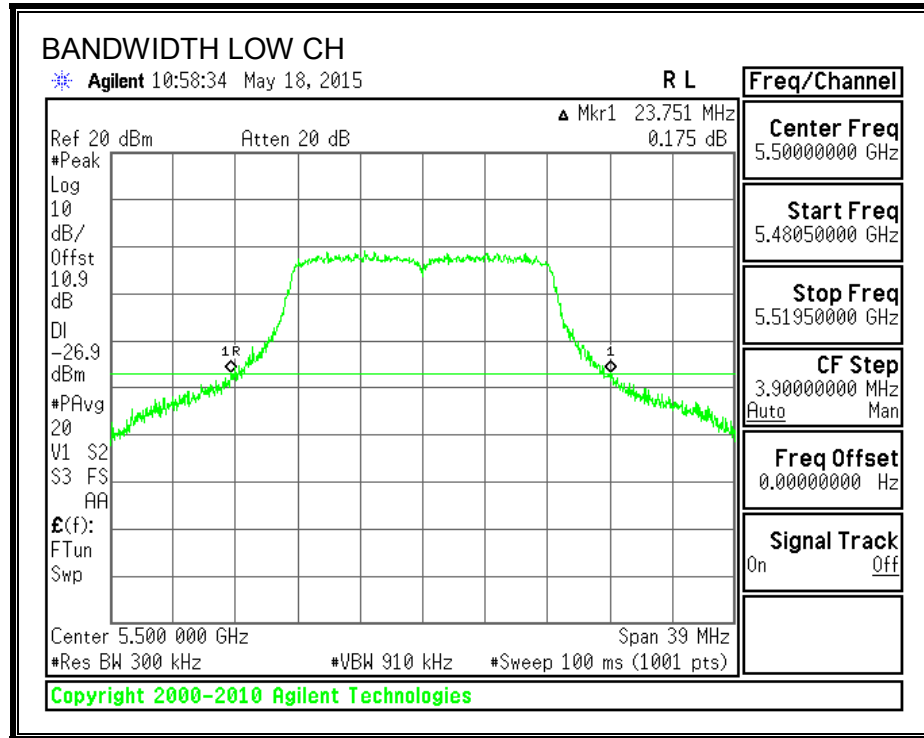
#### LIMITS

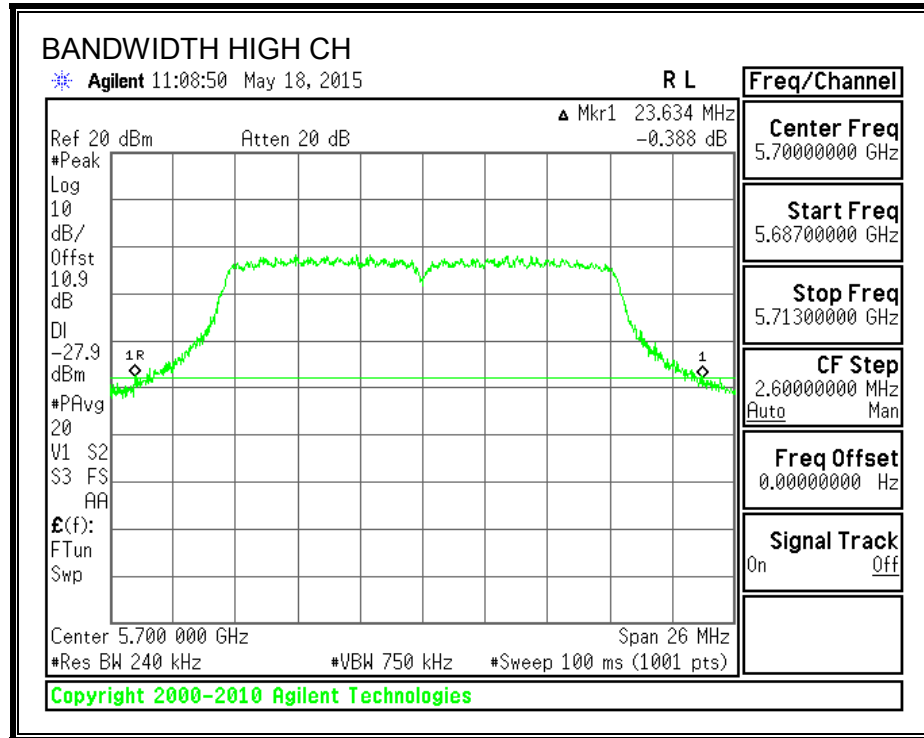
None; for reporting purposes only.

#### RESULTS

| Channel | Frequency<br>(MHz) | 26 dB Bandwidth<br>(MHz) |
|---------|--------------------|--------------------------|
| Low     | 5500               | 23.75                    |
| Mid     | 5580               | 23.79                    |
| High    | 5700               | 23.63                    |

**26 dB BANDWIDTH**





## 8.6.2. 99% BANDWIDTH

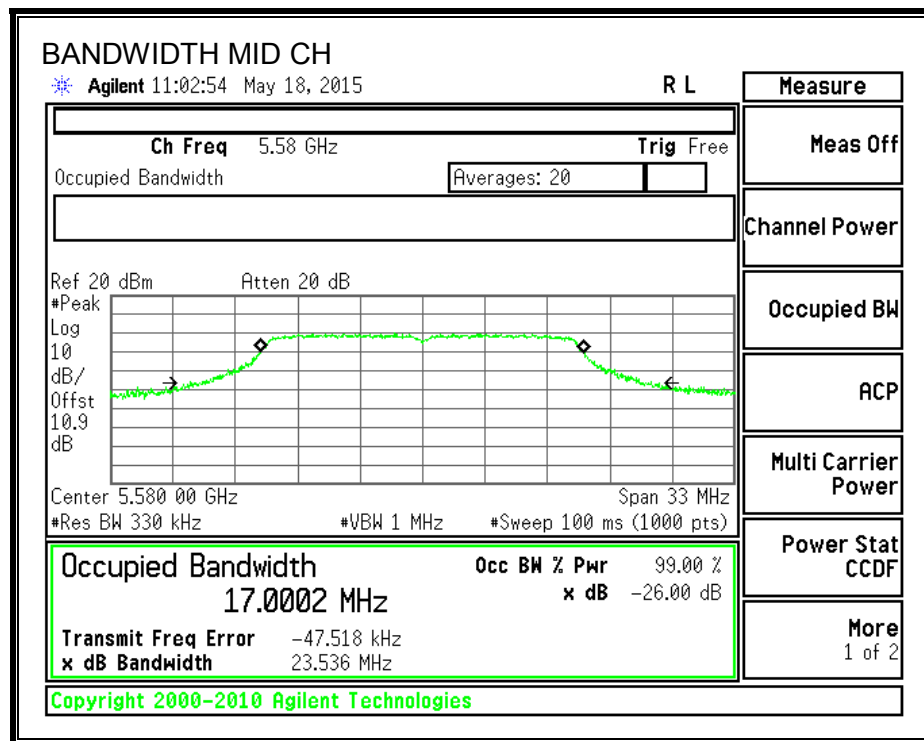
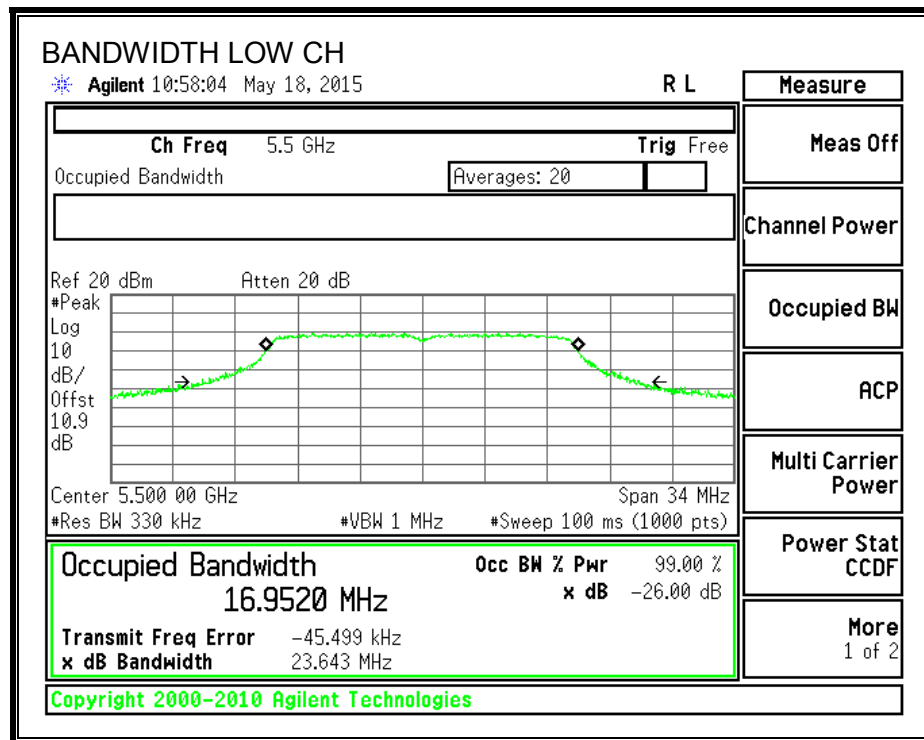
### LIMITS

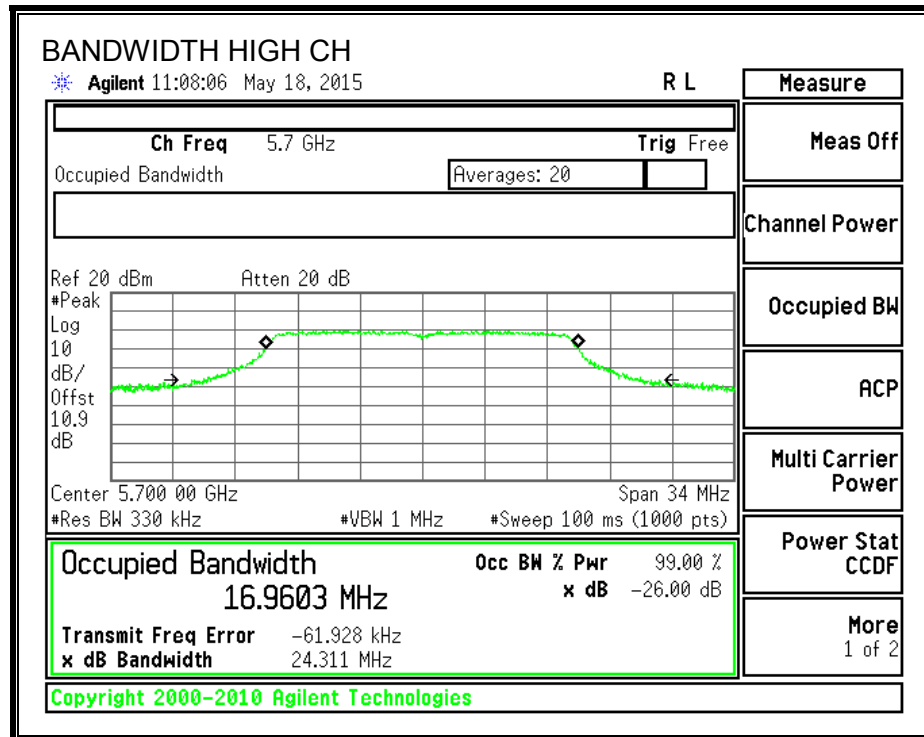
None; for reporting purposes only.

### RESULTS

| Channel | Frequency<br>(MHz) | 99% Bandwidth<br>(MHz) |
|---------|--------------------|------------------------|
| Low     | 5500               | 16.9520                |
| Mid     | 5580               | 17.0002                |
| High    | 5700               | 16.9603                |

**99% BANDWIDTH**





### 8.6.3. AVERAGE POWER

#### LIMITS

None; for reporting purposes only.

#### RESULTS

| Channel | Frequency<br>(MHz) | Power<br>(dBm) |
|---------|--------------------|----------------|
| Low     | 5500               | 8.39           |
| Mid     | 5580               | 8.04           |
| High    | 5700               | 8.21           |

#### **8.6.4. OUTPUT POWER AND PSD**

##### **LIMITS**

FCC §15.407 (a) (2)

For the band 5.47–5.725 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or  $11 \text{ dBm} + 10 \log B$ , where B is the 26-dB emission bandwidth in MHz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1-MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

##### **DIRECTIONAL ANTENNA GAIN**

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

## RESULTS

### Bandwidth, Antenna Gain, and Limits

| Channel | Frequency<br>(MHz) | Min<br>26 dB<br>BW<br>(MHz) | Directional<br>Gain<br>(dBi) | Power<br>Limit<br>(dBm) | PSD<br>Limit<br>(dBm) |
|---------|--------------------|-----------------------------|------------------------------|-------------------------|-----------------------|
| Low     | 5500               | 23.75                       | 2.90                         | 24.00                   | 11.00                 |
| Mid     | 5580               | 23.79                       | 2.90                         | 24.00                   | 11.00                 |
| High    | 5700               | 23.63                       | 2.90                         | 24.00                   | 11.00                 |

|                    |      |                                                |
|--------------------|------|------------------------------------------------|
| Duty Cycle CF (dB) | 0.00 | Included in Calculations of Corr'd Power & PSD |
|--------------------|------|------------------------------------------------|

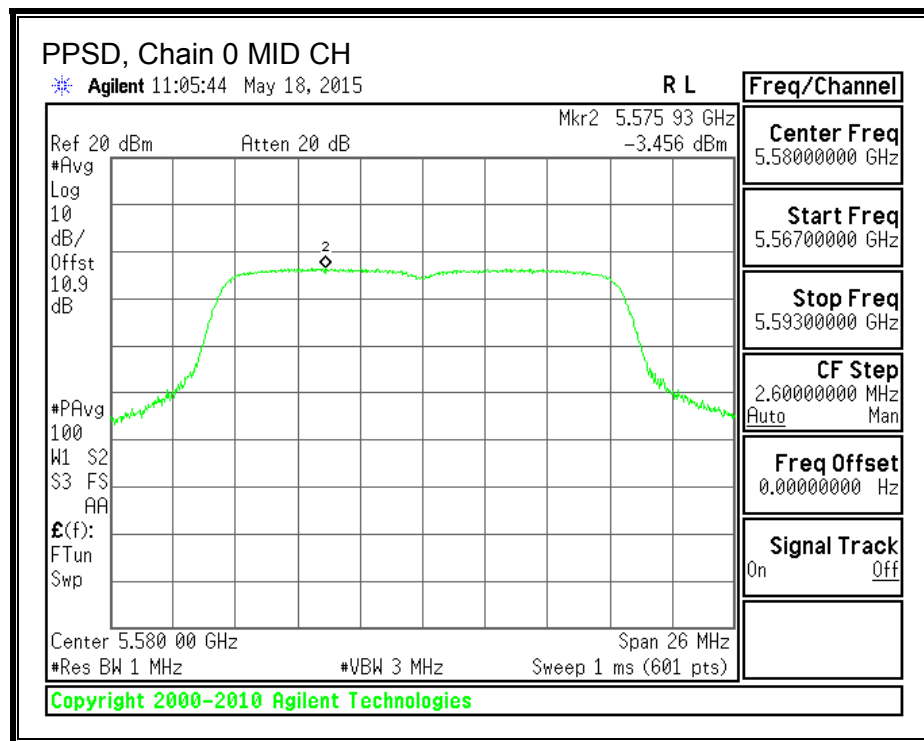
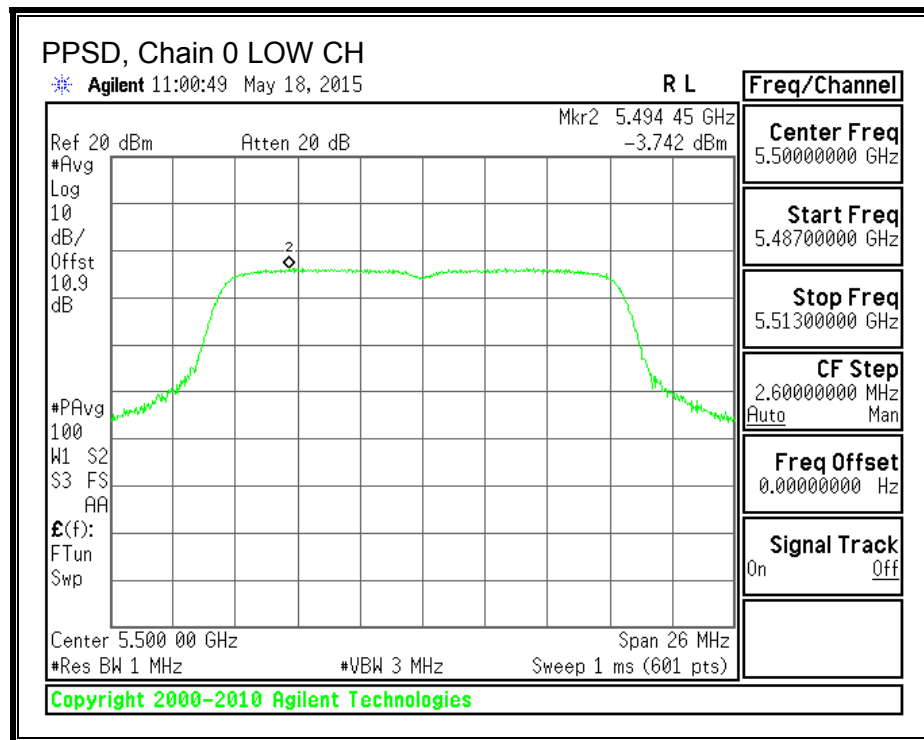
### Output Power Results

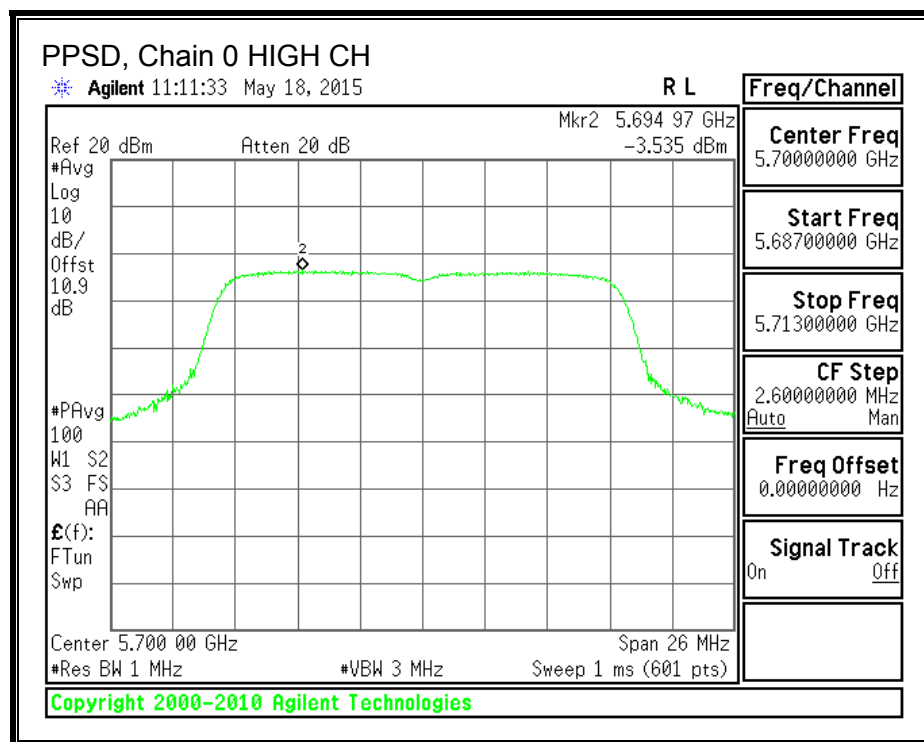
| Channel | Frequency<br>(MHz) | Chain 0<br>Meas<br>Power<br>(dBm) | Total<br>Corr'd<br>Power<br>(dBm) | Power<br>Limit<br>(dBm) | Power<br>Margin<br>(dB) |
|---------|--------------------|-----------------------------------|-----------------------------------|-------------------------|-------------------------|
| Low     | 5500               | 8.39                              | 8.39                              | 24.00                   | -15.61                  |
| Mid     | 5580               | 8.04                              | 8.04                              | 24.00                   | -15.96                  |
| High    | 5700               | 8.21                              | 8.21                              | 24.00                   | -15.79                  |

### PSD Results

| Channel | Frequency<br>(MHz) | Chain 0<br>Meas<br>PSD<br>(dBm) | Total<br>Corr'd<br>PSD<br>(dBm) | PSD<br>Limit<br>(dBm) | PSD<br>Margin<br>(dB) |
|---------|--------------------|---------------------------------|---------------------------------|-----------------------|-----------------------|
| Low     | 5500               | -3.74                           | -3.74                           | 11.00                 | -14.74                |
| Mid     | 5580               | -3.46                           | -3.46                           | 11.00                 | -14.46                |
| High    | 5700               | -3.54                           | -3.54                           | 11.00                 | -14.54                |

**PPSD, Chain 0**





## 8.6.5. TPC POWER

### LIMITS

FCC §15.407 (h) (1)

Transmit power control (TPC). U-NII devices operating in the 5.25–5.35 GHz band and the 5.47–5.725 GHz band shall employ a TPC mechanism. The U-NII device is required to have the capability to operate at least 6 dB below the mean EIRP value of 30 dBm. A TPC mechanism is not required for systems with an e.i.r.p. of less than 500 mW.

### DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

### RESULTS

#### TPC Limits

| Channel | Frequency<br>(MHz) | Limit<br>EIRP<br>(dBm) | Directional<br>Gain<br>(dBi) | Limit<br>Cond<br>(dBm) |
|---------|--------------------|------------------------|------------------------------|------------------------|
| Low     | 5500               | 24                     | 2.90                         | 21.10                  |
| Mid     | 5580               | 24                     | 2.90                         | 21.10                  |
| High    | 5700               | 24                     | 2.90                         | 21.10                  |

|                    |      |                                          |
|--------------------|------|------------------------------------------|
| Duty Cycle CF (dB) | 0.00 | Included in Calculations of Corr'd Power |
|--------------------|------|------------------------------------------|

#### TPC Output Power Results

| Channel | Frequency<br>(MHz) | Meas<br>Power<br>(dBm) | Corr'd<br>Power<br>(dBm) | Cond<br>Limit<br>(dBm) | Margin<br>(dB) |
|---------|--------------------|------------------------|--------------------------|------------------------|----------------|
| Low     | 5500               | 8.39                   | 8.39                     | 21.10                  | -12.71         |
| Mid     | 5580               | 8.04                   | 8.04                     | 21.10                  | -13.06         |
| High    | 5700               | 8.21                   | 8.21                     | 21.10                  | -12.89         |

## 8.7. 802.11n HT20 MODE IN THE 5.6 GHz BAND

### 8.7.1. 26 dB BANDWIDTH

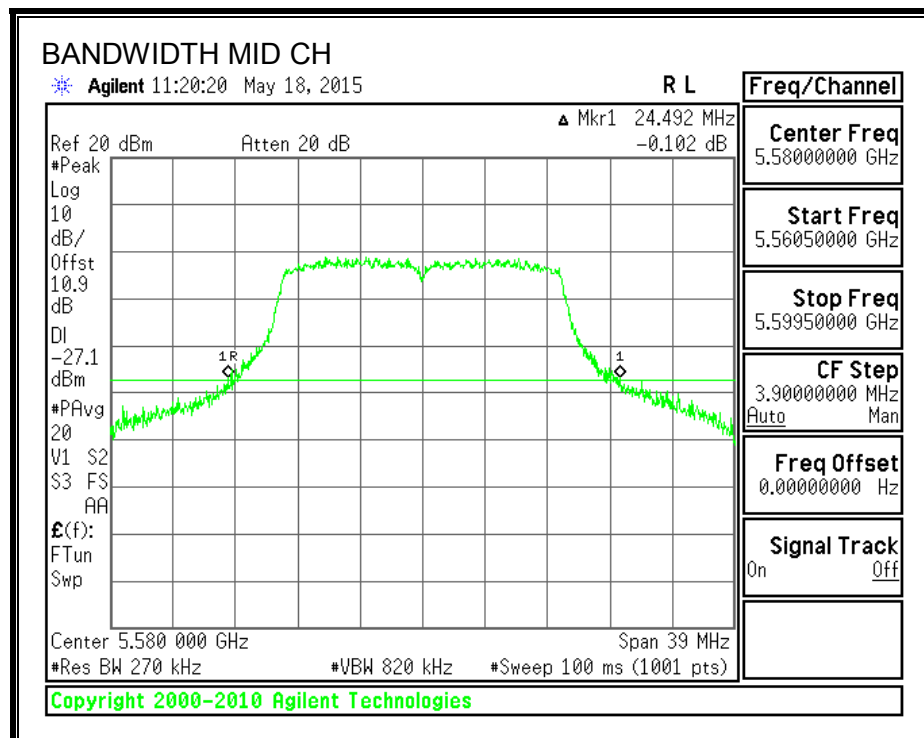
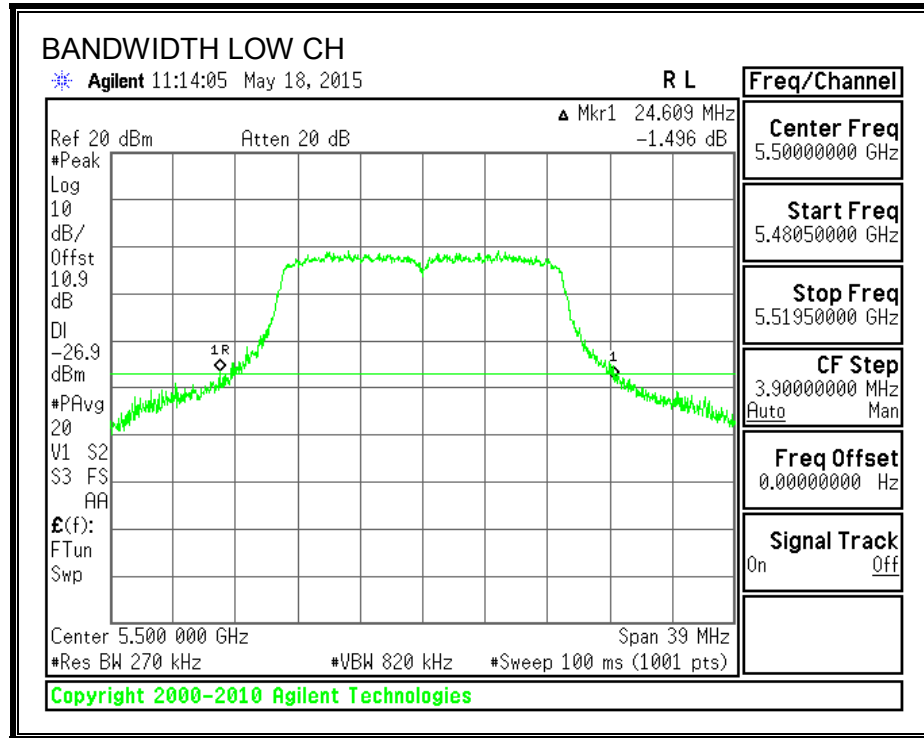
#### LIMITS

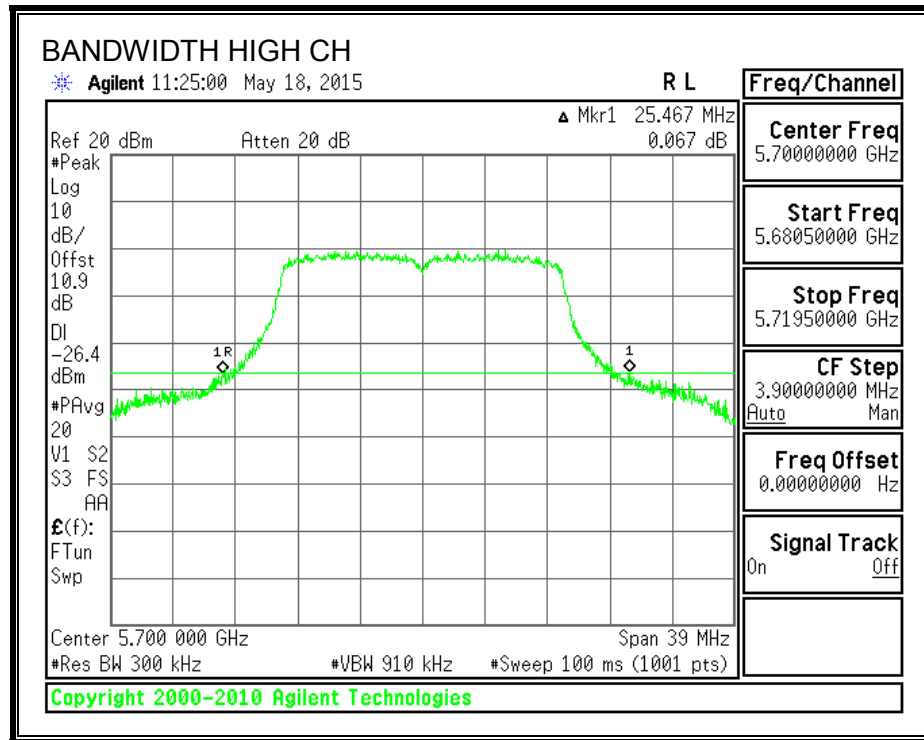
None; for reporting purposes only.

#### RESULTS

| Channel | Frequency<br>(MHz) | 26 dB Bandwidth<br>(MHz) |
|---------|--------------------|--------------------------|
| Low     | 5500               | 24.61                    |
| Mid     | 5580               | 24.49                    |
| High    | 5700               | 25.47                    |

**26 dB BANDWIDTH**





### 8.7.2. 99% BANDWIDTH

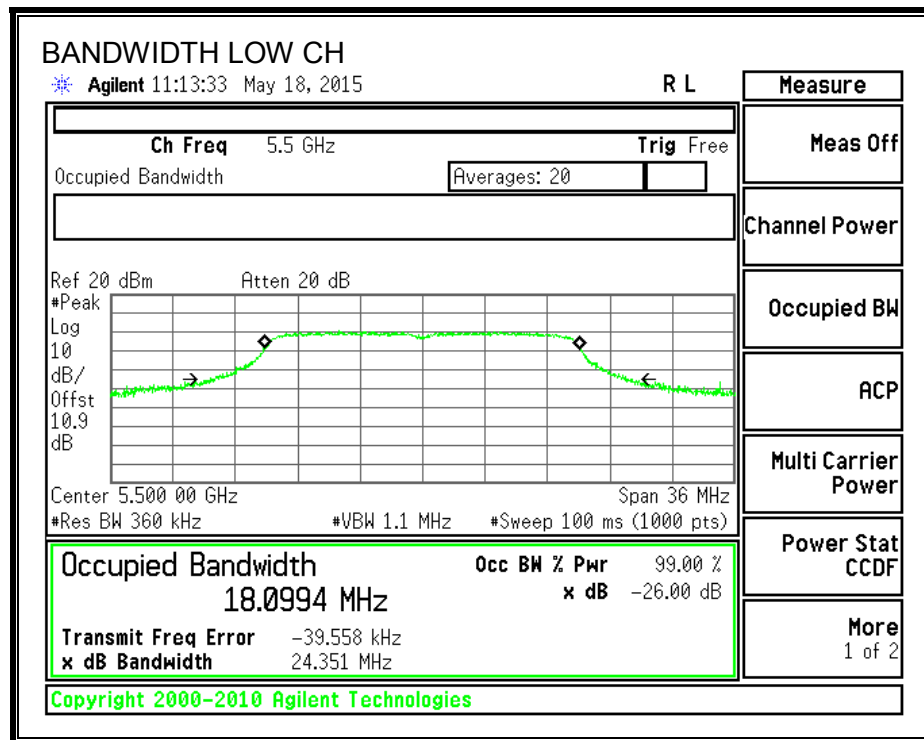
#### LIMITS

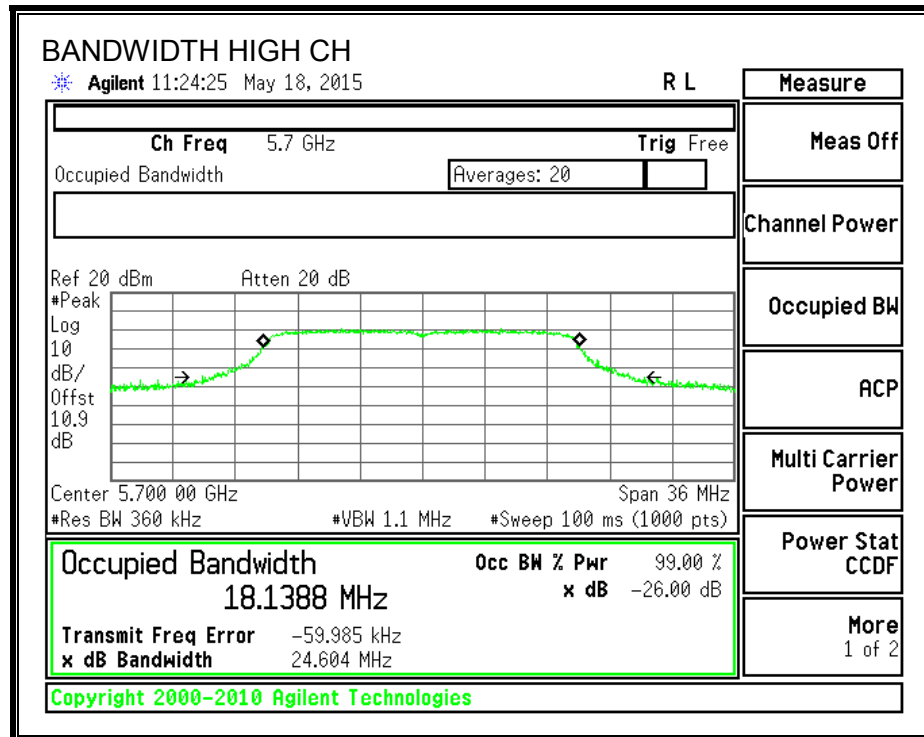
None; for reporting purposes only.

#### RESULTS

| Channel | Frequency<br>(MHz) | 99% Bandwidth<br>(MHz) |
|---------|--------------------|------------------------|
| Low     | 5500               | 18.0994                |
| Mid     | 5580               | 18.1250                |
| High    | 5700               | 18.1388                |

**99% BANDWIDTH**





### 8.7.3. AVERAGE POWER

#### LIMITS

None; for reporting purposes only.

#### RESULTS

| Channel | Frequency<br>(MHz) | Power<br>(dBm) |
|---------|--------------------|----------------|
| Low     | 5500               | 8.31           |
| Mid     | 5580               | 8.50           |
| High    | 5700               | 8.12           |

#### **8.7.4. OUTPUT POWER AND PSD**

##### **LIMITS**

FCC §15.407 (a) (2)

For the band 5.47–5.725 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or  $11 \text{ dBm} + 10 \log B$ , where B is the 26-dB emission bandwidth in MHz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1-MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

##### **DIRECTIONAL ANTENNA GAIN**

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

## **RESULTS**

### **Bandwidth, Antenna Gain, and Limits**

| Channel | Frequency<br>(MHz) | Min<br>26 dB<br>BW<br>(MHz) | Directional<br>Gain<br>(dBi) | Power<br>Limit<br>(dBm) | PSD<br>Limit<br>(dBm) |
|---------|--------------------|-----------------------------|------------------------------|-------------------------|-----------------------|
| Low     | 5500               | 24.61                       | 2.90                         | 24.00                   | 11.00                 |
| Mid     | 5580               | 24.49                       | 2.90                         | 24.00                   | 11.00                 |
| High    | 5700               | 25.47                       | 2.90                         | 24.00                   | 11.00                 |

|                    |      |                                                |
|--------------------|------|------------------------------------------------|
| Duty Cycle CF (dB) | 0.00 | Included in Calculations of Corr'd Power & PSD |
|--------------------|------|------------------------------------------------|

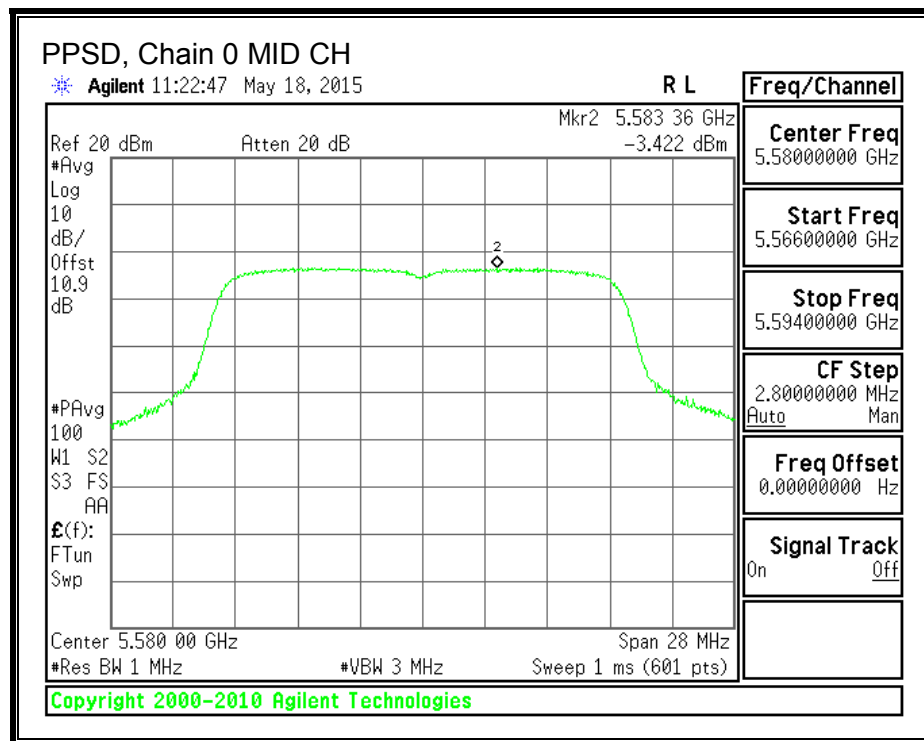
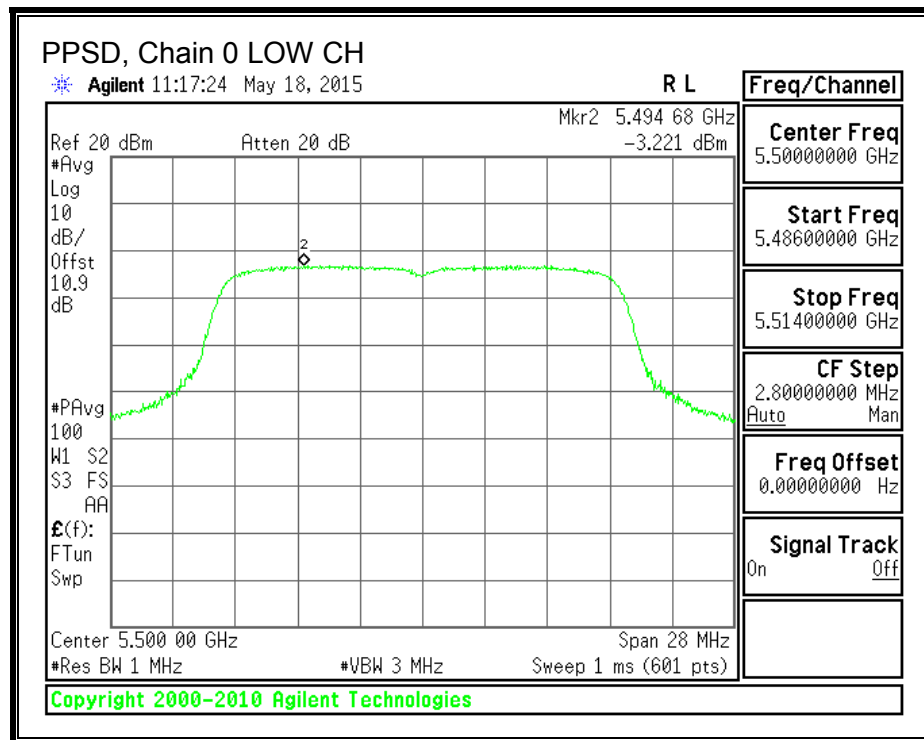
### **Output Power Results**

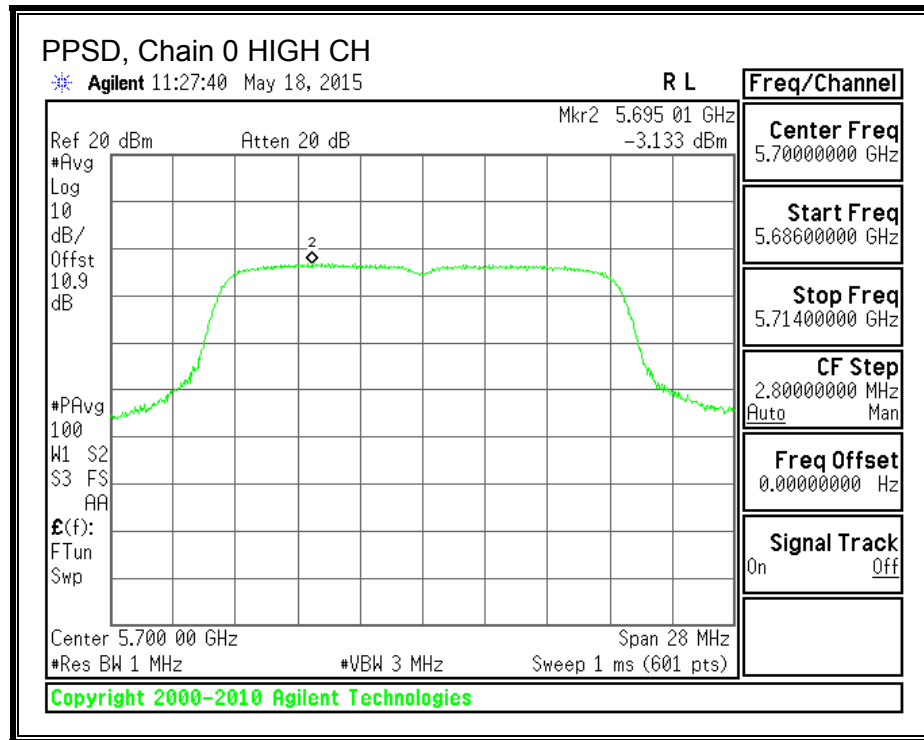
| Channel | Frequency<br>(MHz) | Chain 0<br>Meas<br>Power<br>(dBm) | Total<br>Corr'd<br>Power<br>(dBm) | Power<br>Limit<br>(dBm) | Power<br>Margin<br>(dB) |
|---------|--------------------|-----------------------------------|-----------------------------------|-------------------------|-------------------------|
| Low     | 5500               | 8.31                              | 8.31                              | 24.00                   | -15.69                  |
| Mid     | 5580               | 8.50                              | 8.50                              | 24.00                   | -15.50                  |
| High    | 5700               | 8.12                              | 8.12                              | 24.00                   | -15.88                  |

### **PSD Results**

| Channel | Frequency<br>(MHz) | Chain 0<br>Meas<br>PSD<br>(dBm) | Total<br>Corr'd<br>PSD<br>(dBm) | PSD<br>Limit<br>(dBm) | PSD<br>Margin<br>(dB) |
|---------|--------------------|---------------------------------|---------------------------------|-----------------------|-----------------------|
| Low     | 5500               | -3.22                           | -3.22                           | 11.00                 | -14.22                |
| Mid     | 5580               | -3.42                           | -3.42                           | 11.00                 | -14.42                |
| High    | 5700               | -3.13                           | -3.13                           | 11.00                 | -14.13                |

**PPSD, Chain 0**





## 8.7.5. TPC POWER

### LIMITS

FCC §15.407 (h) (1)

Transmit power control (TPC). U-NII devices operating in the 5.25–5.35 GHz band and the 5.47–5.725 GHz band shall employ a TPC mechanism. The U-NII device is required to have the capability to operate at least 6 dB below the mean EIRP value of 30 dBm. A TPC mechanism is not required for systems with an e.i.r.p. of less than 500 mW.

### DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

### RESULTS

#### TPC Limits

| Channel | Frequency<br>(MHz) | Limit<br>EIRP<br>(dBm) | Directional<br>Gain<br>(dBi) | Limit<br>Cond<br>(dBm) |
|---------|--------------------|------------------------|------------------------------|------------------------|
| Low     | 5500               | 24                     | 2.90                         | 21.10                  |
| Mid     | 5580               | 24                     | 2.90                         | 21.10                  |
| High    | 5700               | 24                     | 2.90                         | 21.10                  |

|                    |      |                                          |
|--------------------|------|------------------------------------------|
| Duty Cycle CF (dB) | 0.00 | Included in Calculations of Corr'd Power |
|--------------------|------|------------------------------------------|

#### TPC Output Power Results

| Channel | Frequency<br>(MHz) | Meas<br>Power<br>(dBm) | Corr'd<br>Power<br>(dBm) | Cond<br>Limit<br>(dBm) | Margin<br>(dB) |
|---------|--------------------|------------------------|--------------------------|------------------------|----------------|
| Low     | 5500               | 8.31                   | 8.31                     | 21.10                  | -12.79         |
| Mid     | 5580               | 8.50                   | 8.50                     | 21.10                  | -12.60         |
| High    | 5700               | 8.12                   | 8.12                     | 21.10                  | -12.98         |

## 8.8. 802.11a MODE IN THE 5.8 GHz BAND

### 8.8.1. 26 dB BANDWIDTH

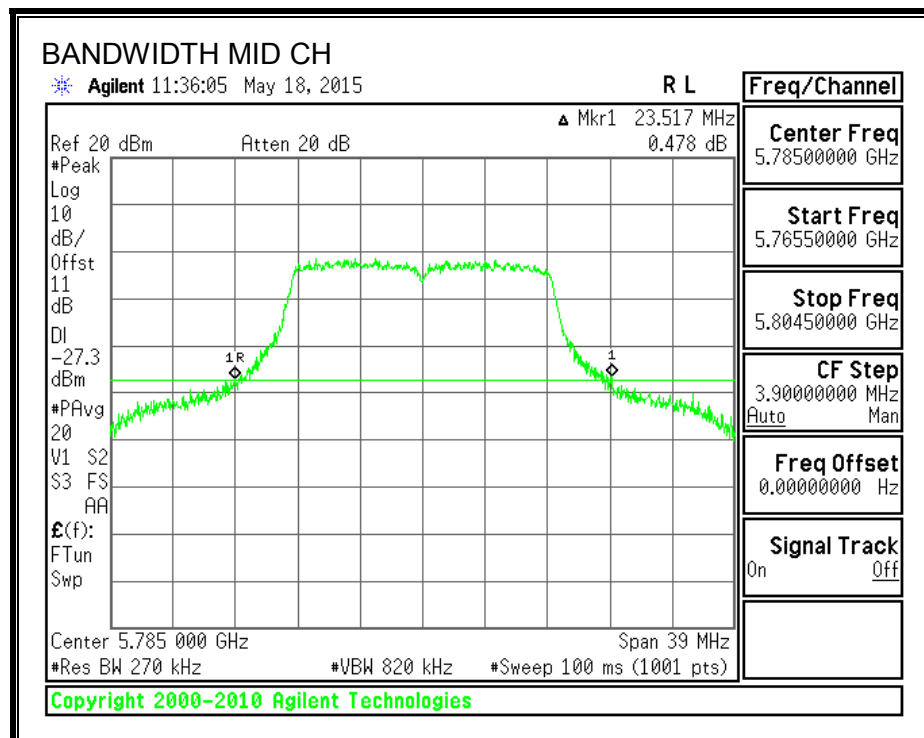
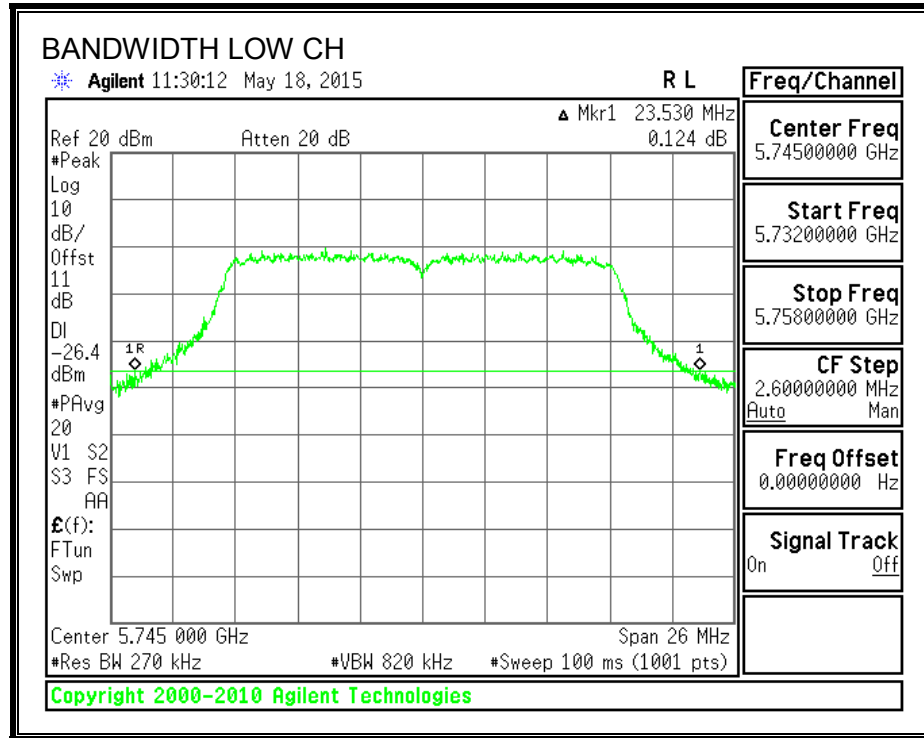
#### LIMITS

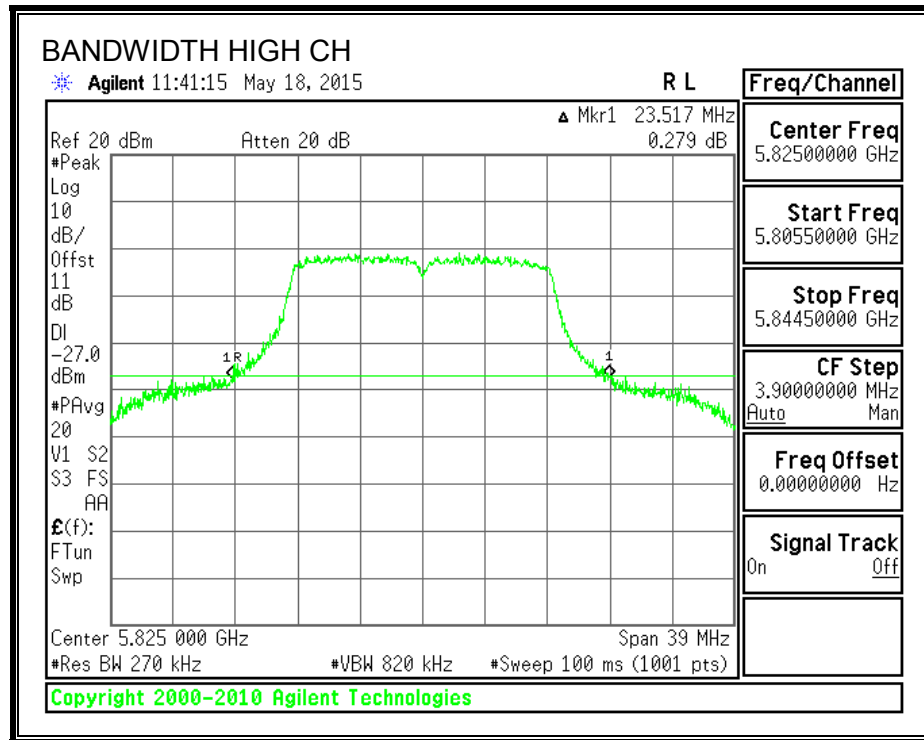
None; for reporting purposes only.

#### RESULTS

| Channel | Frequency<br>(MHz) | 26 dB Bandwidth<br>(MHz) |
|---------|--------------------|--------------------------|
| Low     | 5745               | 23.53                    |
| Mid     | 5785               | 23.52                    |
| High    | 5825               | 23.52                    |

**26 dB BANDWIDTH**





### 8.8.2. 6 dB BANDWIDTH

#### LIMITS

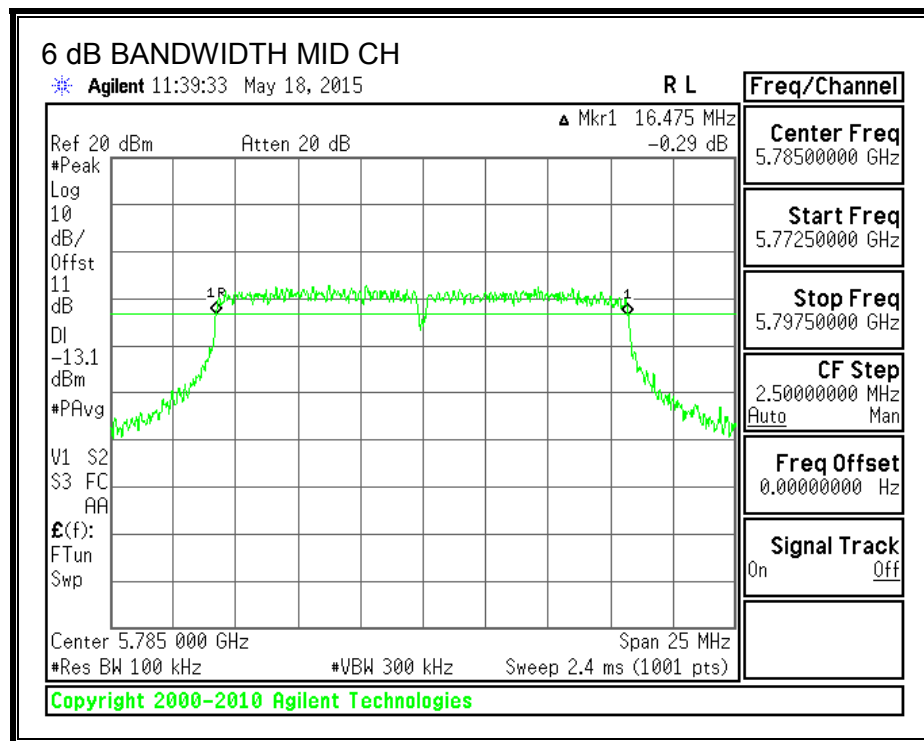
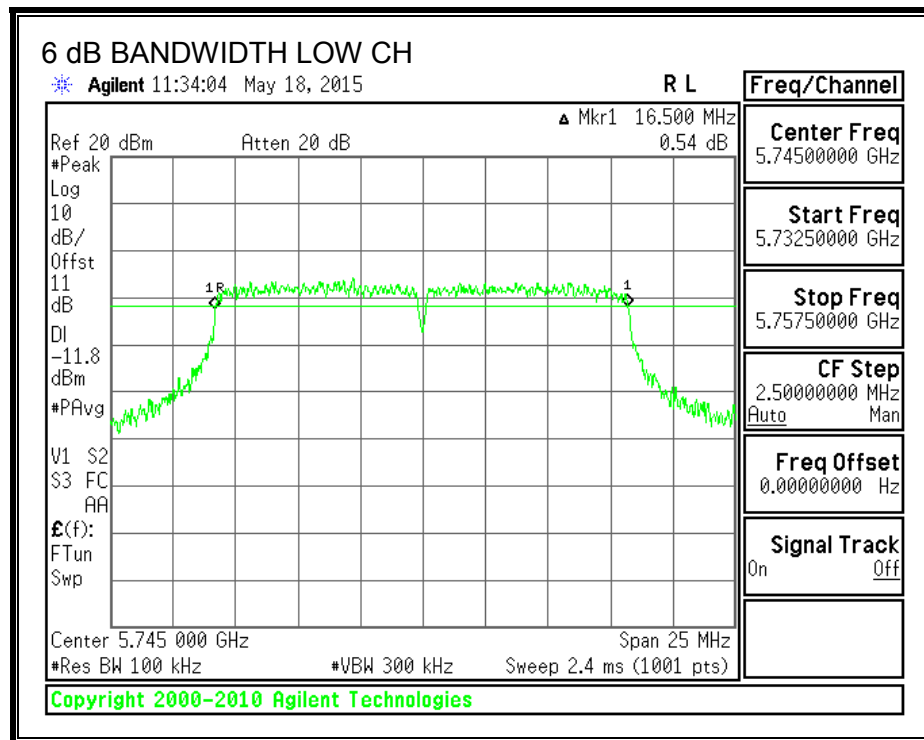
FCC §15.407 (e)

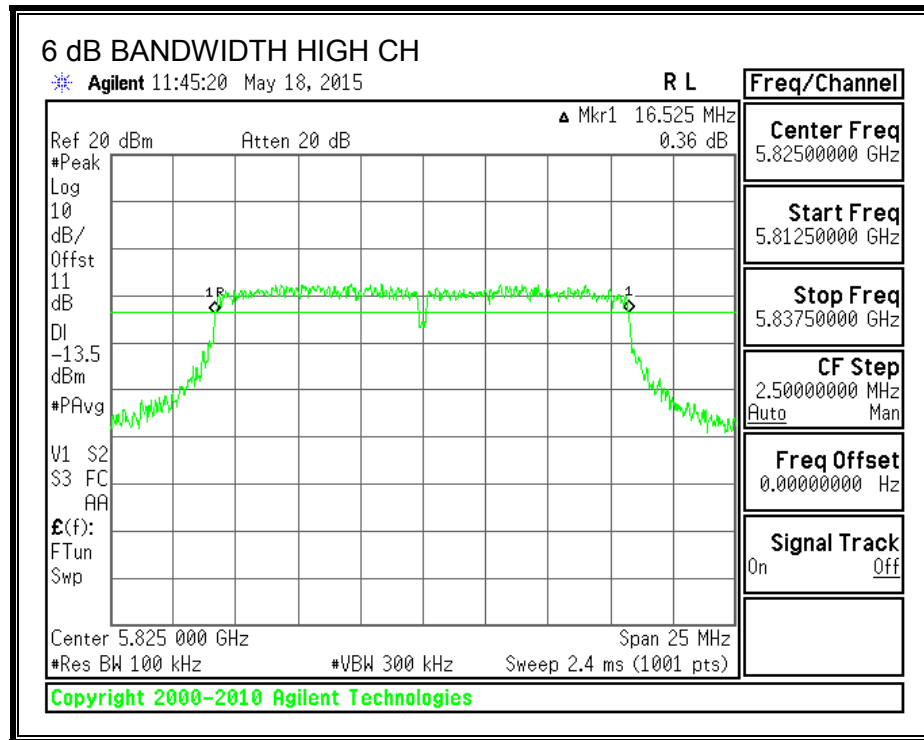
The minimum 6 dB bandwidth shall be at least 500 kHz.

#### RESULTS

| Channel | Frequency<br>(MHz) | 6 dB Bandwidth<br>(MHz) | Minimum Limit<br>(MHz) |
|---------|--------------------|-------------------------|------------------------|
| Low     | 5745               | 16.5000                 | 0.5                    |
| Mid     | 5785               | 16.4750                 | 0.5                    |
| High    | 5825               | 16.5250                 | 0.5                    |

**6 dB BANDWIDTH**





### 8.8.3. 99% BANDWIDTH

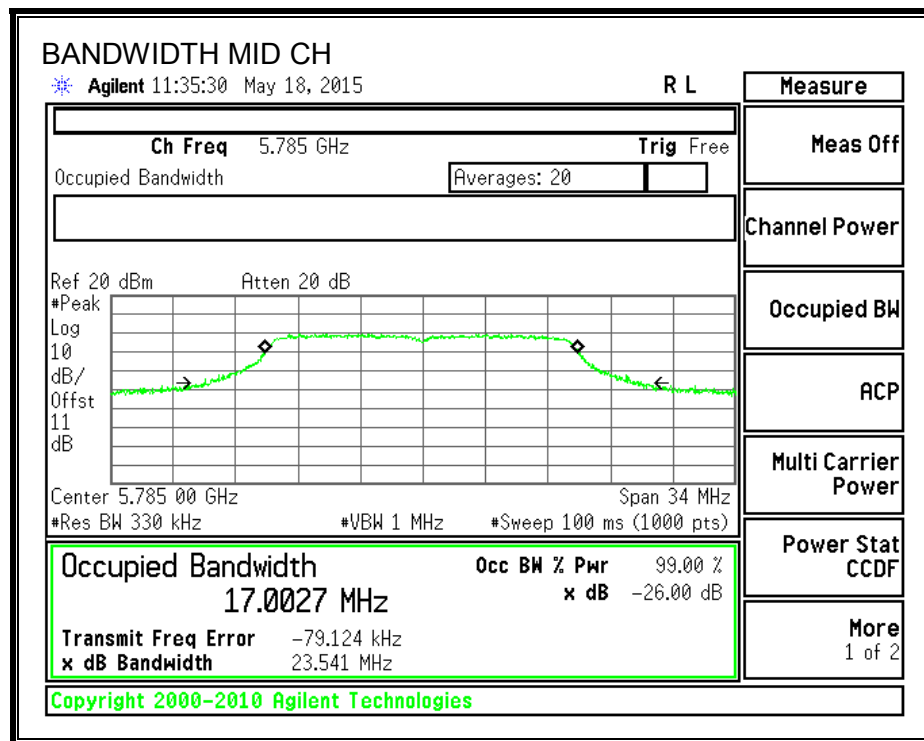
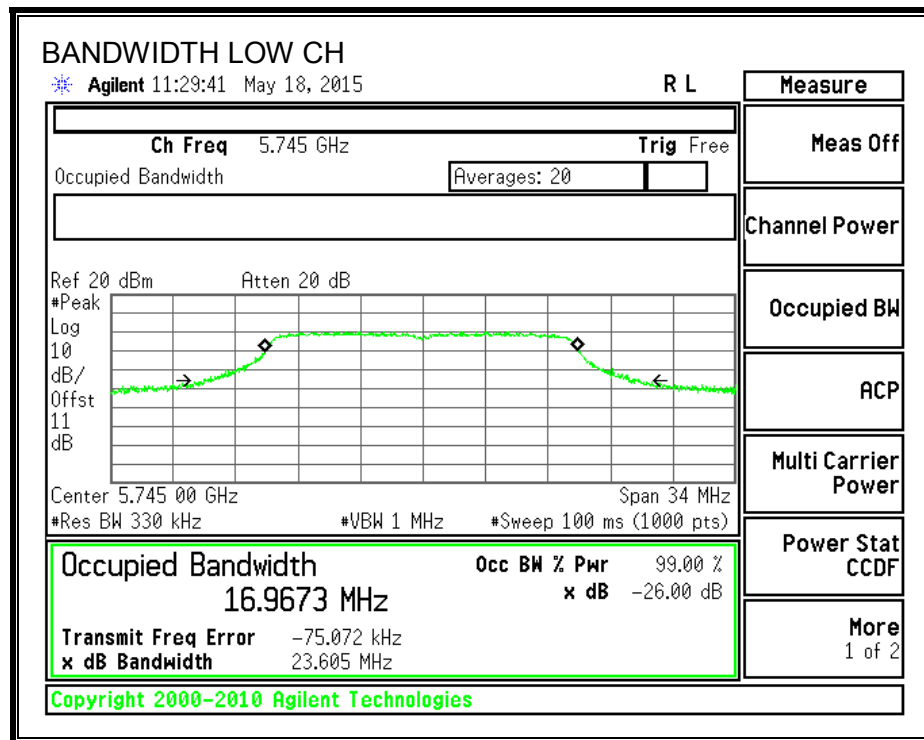
#### LIMITS

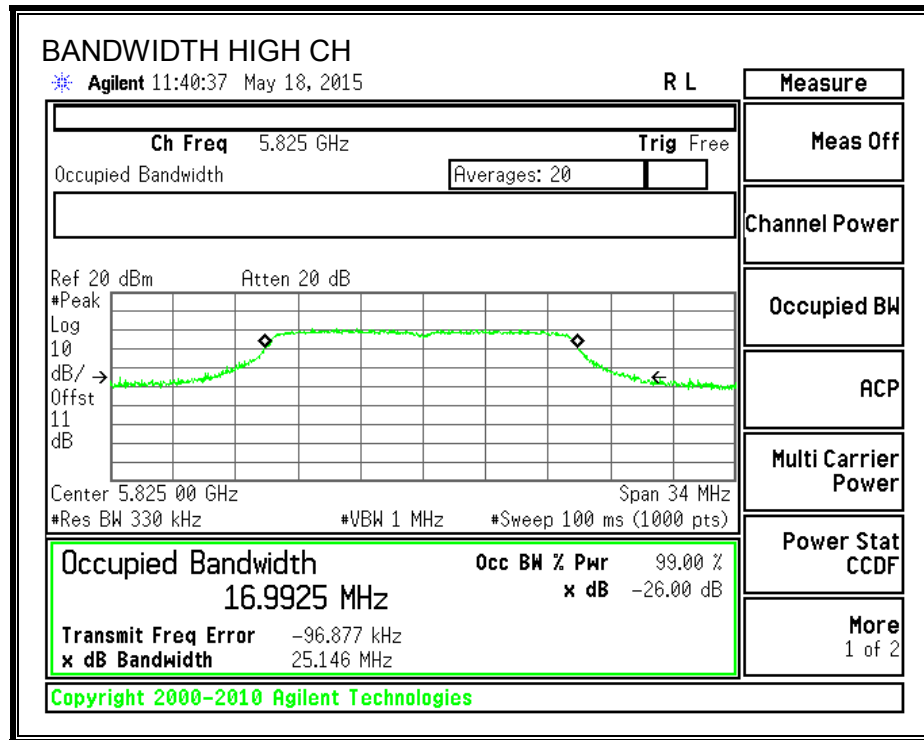
None; for reporting purposes only.

#### RESULTS

| Channel | Frequency<br>(MHz) | 99% Bandwidth<br>(MHz) |
|---------|--------------------|------------------------|
| Low     | 5745               | 16.9673                |
| Mid     | 5785               | 17.0027                |
| High    | 5825               | 16.9925                |

**99% BANDWIDTH**





#### 8.8.4. AVERAGE POWER

##### LIMITS

None; for reporting purposes only.

##### RESULTS

| Channel | Frequency<br>(MHz) | Power<br>(dBm) |
|---------|--------------------|----------------|
| Low     | 5745               | 8.37           |
| Mid     | 5785               | 8.38           |
| High    | 5825               | 8.16           |

### **8.8.5. OUTPUT POWER**

#### **LIMITS**

FCC §15.407 (a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

#### **DIRECTIONAL ANTENNA GAIN**

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

## **RESULTS**

### **Antenna Gain and Limit**

| Channel | Frequency<br>(MHz) | Directional<br>Gain<br>for Power<br>(dBi) | Power<br>Limit<br>(dBm) |
|---------|--------------------|-------------------------------------------|-------------------------|
| Low     | 5745               | 3.00                                      | 30.00                   |
| Mid     | 5785               | 3.00                                      | 30.00                   |
| High    | 5825               | 3.00                                      | 30.00                   |

|                    |      |                                          |
|--------------------|------|------------------------------------------|
| Duty Cycle CF (dB) | 0.00 | Included in Calculations of Corr'd Power |
|--------------------|------|------------------------------------------|

### **Output Power Results**

| Channel | Frequency<br>(MHz) | Chain 0<br>Meas<br>Power<br>(dBm) | Total<br>Corr'd<br>Power<br>(dBm) | Power<br>Limit<br>(dBm) | Power<br>Margin<br>(dB) |
|---------|--------------------|-----------------------------------|-----------------------------------|-------------------------|-------------------------|
| Low     | 5745               | 8.37                              | 8.37                              | 30.00                   | -21.63                  |
| Mid     | 5785               | 8.38                              | 8.38                              | 30.00                   | -21.62                  |
| High    | 5825               | 8.16                              | 8.16                              | 30.00                   | -21.84                  |

### **8.8.6. Maximum Power Spectral Density (PSD)**

#### **LIMITS**

FCC §15.407 (a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

#### **DIRECTIONAL ANTENNA GAIN**

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

## **RESULTS**

### **Antenna Gain and Limits**

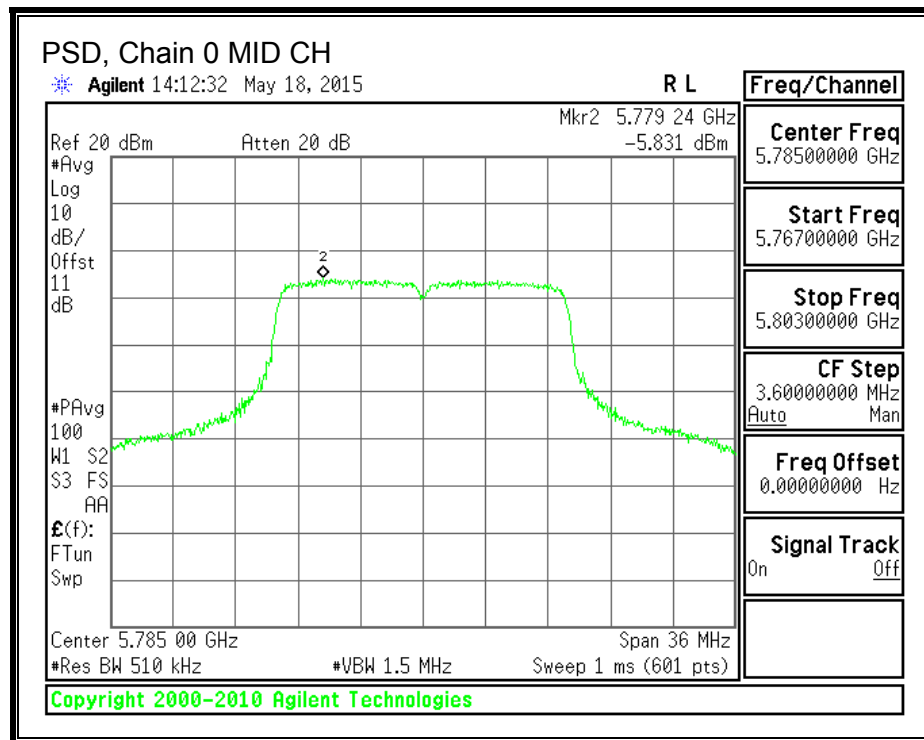
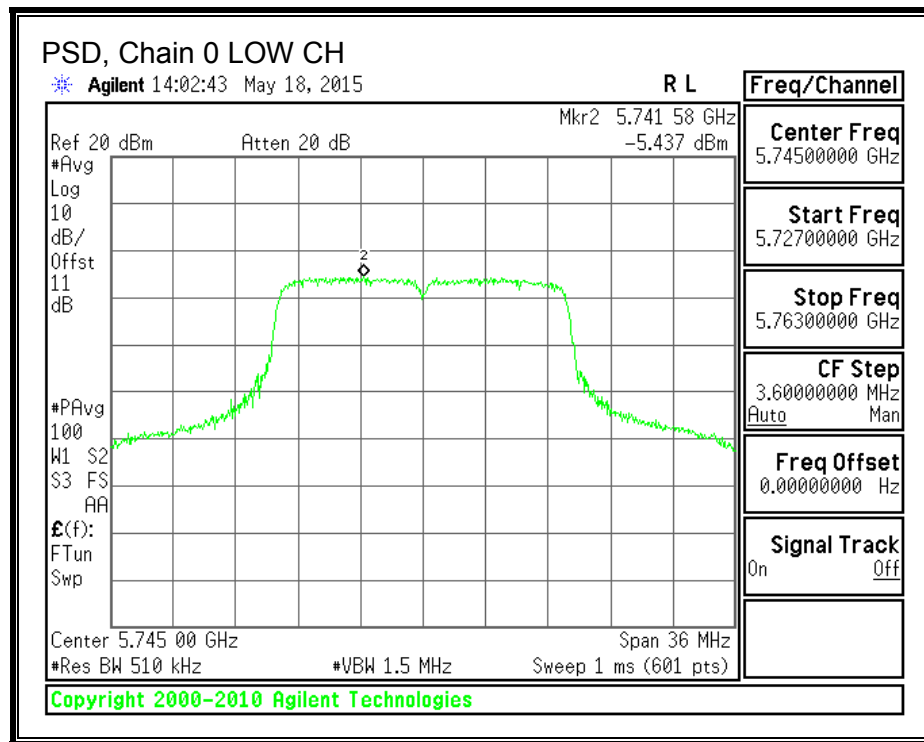
| Channel | Frequency<br>(MHz) | Directional<br>Gain<br>(dBi) | PSD<br>Limit<br>(dBm) |
|---------|--------------------|------------------------------|-----------------------|
| Low     | 5745               | 3.00                         | 30.00                 |
| Mid     | 5785               | 3.00                         | 30.00                 |
| High    | 5825               | 3.00                         | 30.00                 |

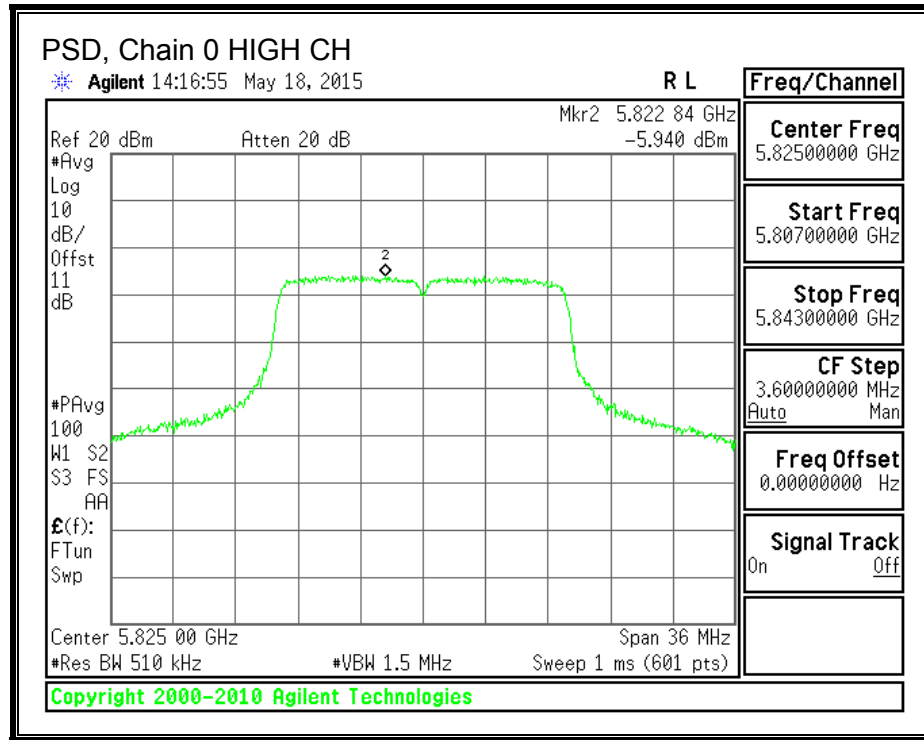
|                    |      |                                        |
|--------------------|------|----------------------------------------|
| Duty Cycle CF (dB) | 0.00 | Included in Calculations of Corr'd PSD |
|--------------------|------|----------------------------------------|

### **PSD Results**

| Channel | Frequency<br>(MHz) | Chain 0<br>Meas<br>PSD<br>(dBm) | Total<br>Corr'd<br>PSD<br>(dBm) | PSD<br>Limit<br>(dBm) | PSD<br>Margin<br>(dB) |
|---------|--------------------|---------------------------------|---------------------------------|-----------------------|-----------------------|
| Low     | 5745               | -5.44                           | -5.44                           | 30.00                 | -35.44                |
| Mid     | 5785               | -5.83                           | -5.83                           | 30.00                 | -35.83                |
| High    | 5825               | -5.94                           | -5.94                           | 30.00                 | -35.94                |

**PSD, Chain 0**





## 8.9. 802.11n HT20 MODE IN THE 5.8 GHz BAND

### 8.9.1. 26 dB BANDWIDTH

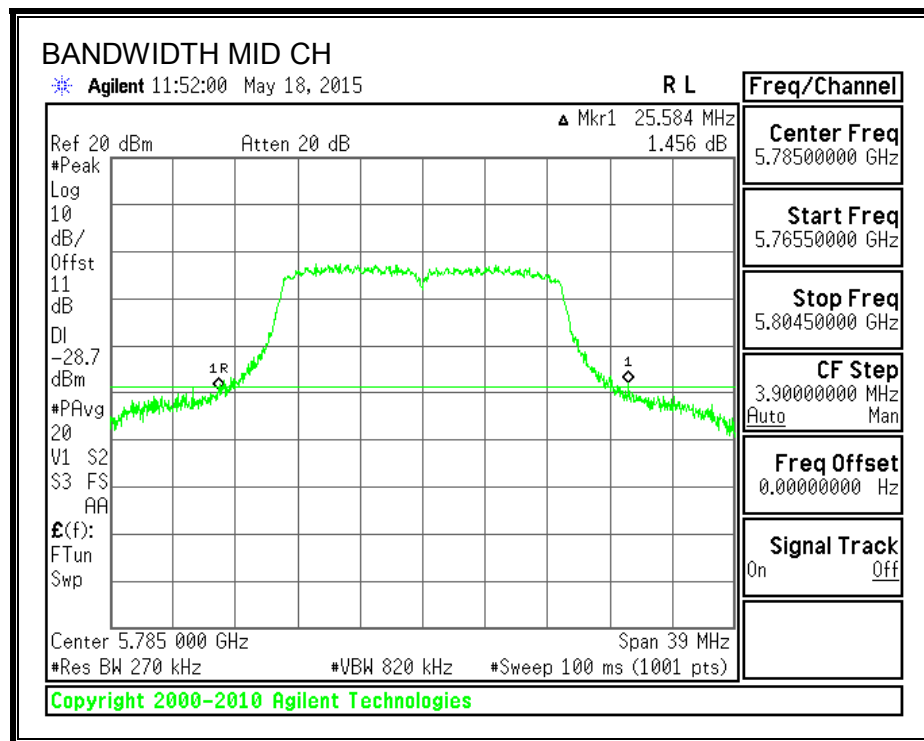
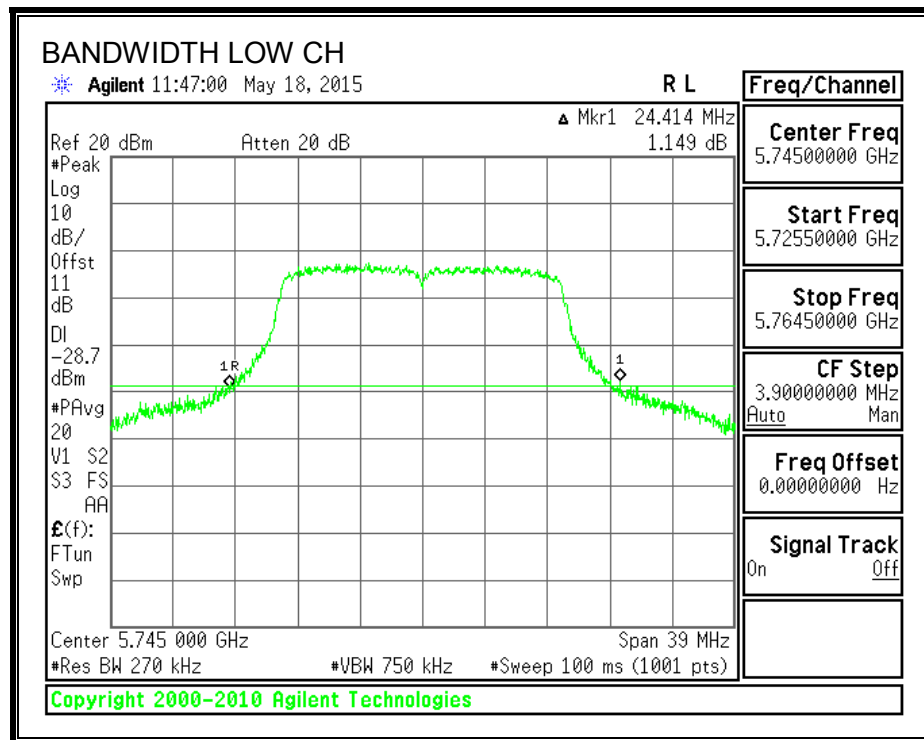
#### LIMITS

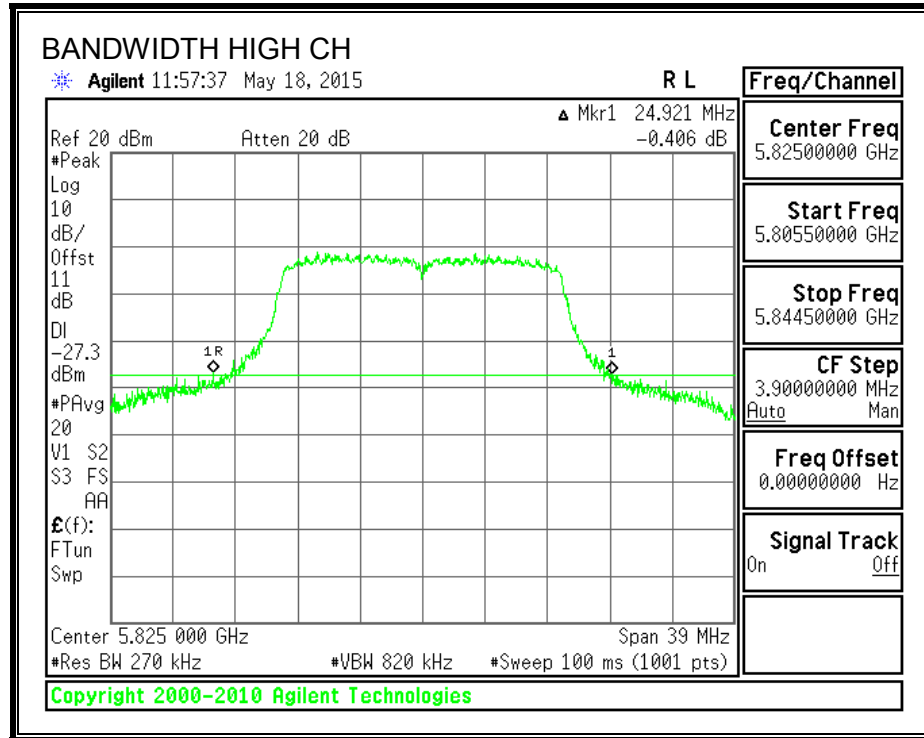
None; for reporting purposes only.

#### RESULTS

| Channel | Frequency<br>(MHz) | 26 dB Bandwidth<br>(MHz) |
|---------|--------------------|--------------------------|
| Low     | 5745               | 24.41                    |
| Mid     | 5785               | 25.58                    |
| High    | 5825               | 24.92                    |

**26 dB BANDWIDTH**





### 8.9.2. 6 dB BANDWIDTH

#### LIMITS

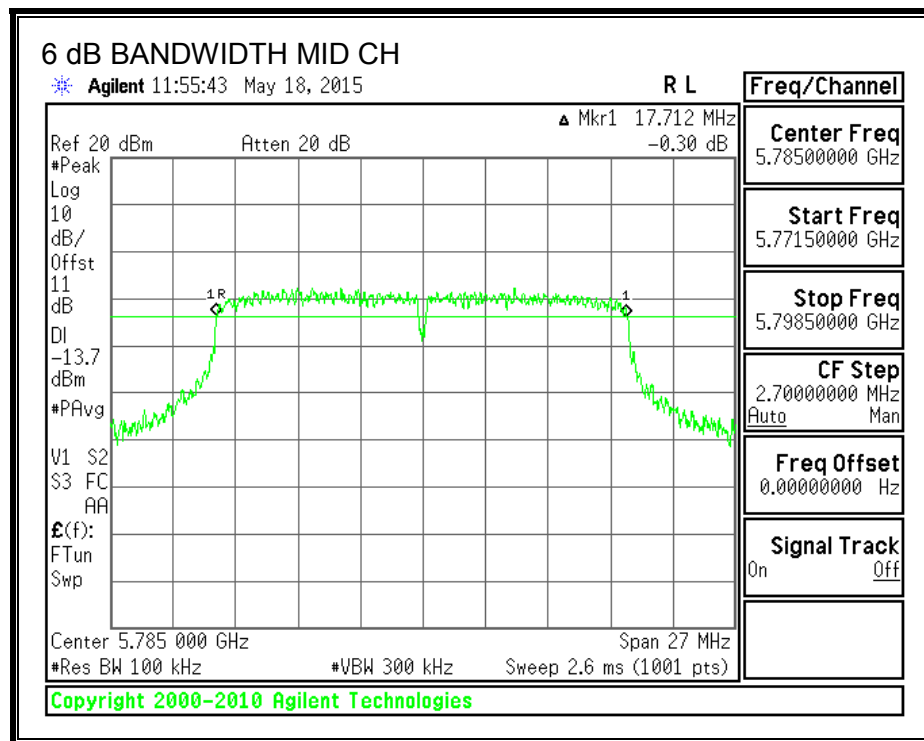
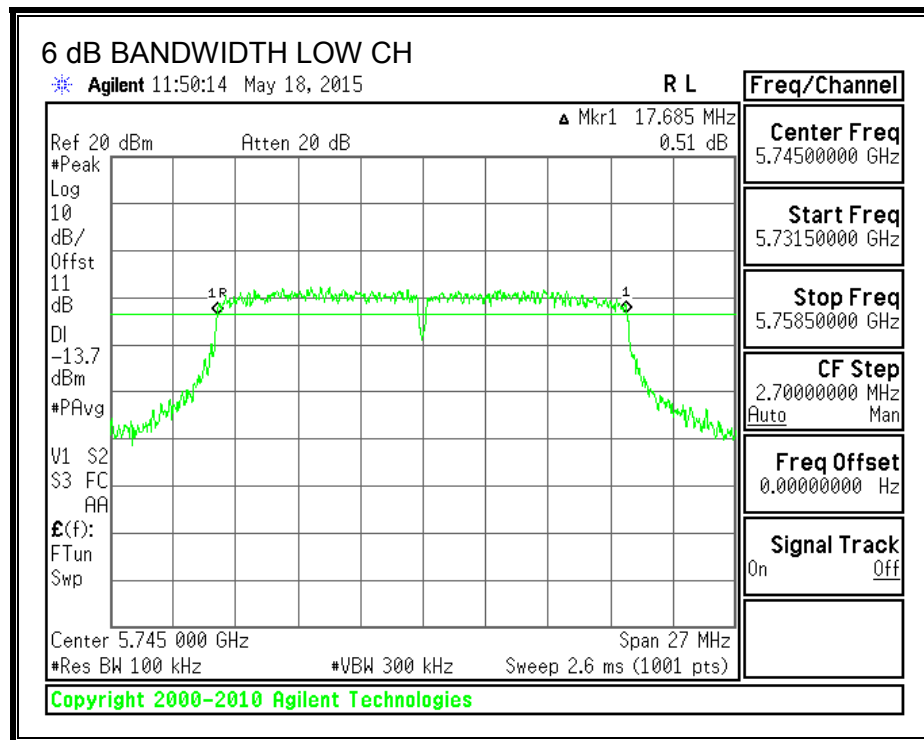
FCC §15.407 (e)

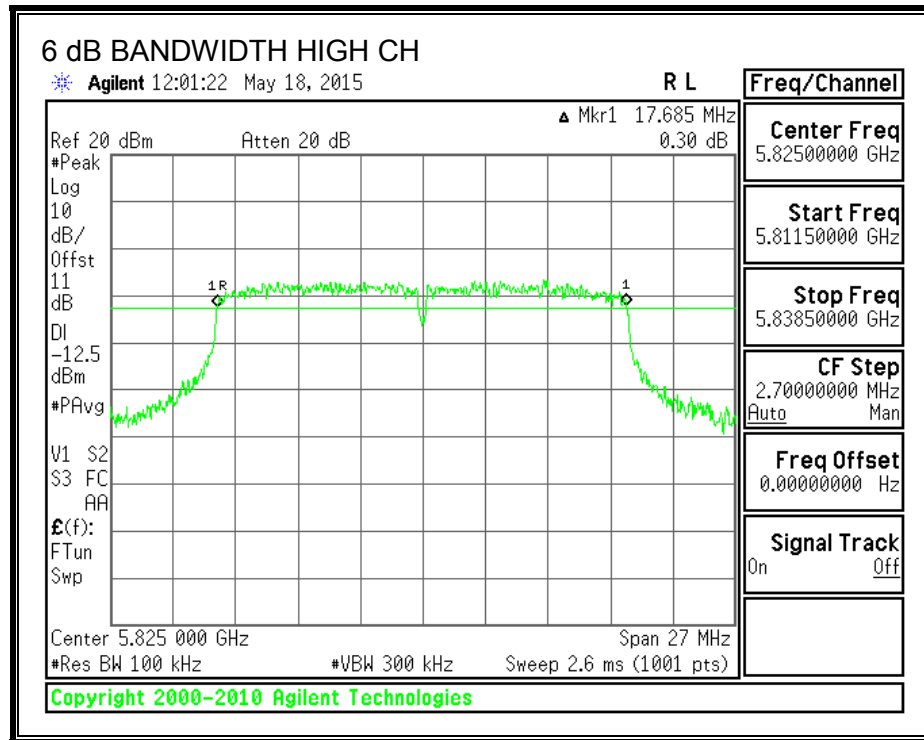
The minimum 6 dB bandwidth shall be at least 500 kHz.

#### RESULTS

| Channel | Frequency<br>(MHz) | 6 dB Bandwidth<br>(MHz) | Minimum Limit<br>(MHz) |
|---------|--------------------|-------------------------|------------------------|
| Low     | 5745               | 17.6850                 | 0.5                    |
| Mid     | 5785               | 17.7120                 | 0.5                    |
| High    | 5825               | 17.6850                 | 0.5                    |

**6 dB BANDWIDTH**





### 8.9.3. 99% BANDWIDTH

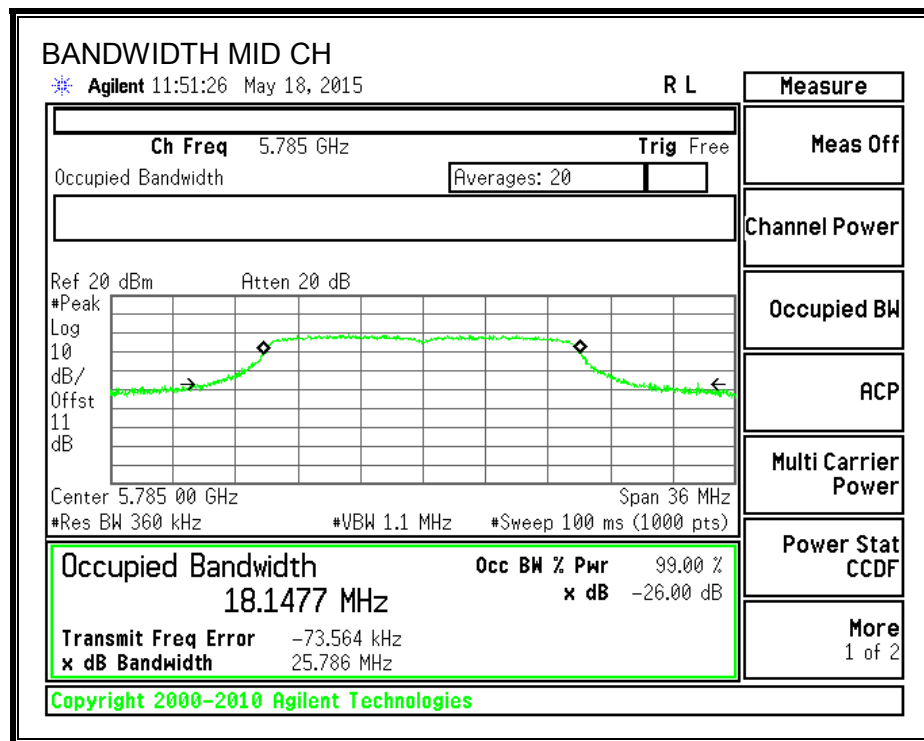
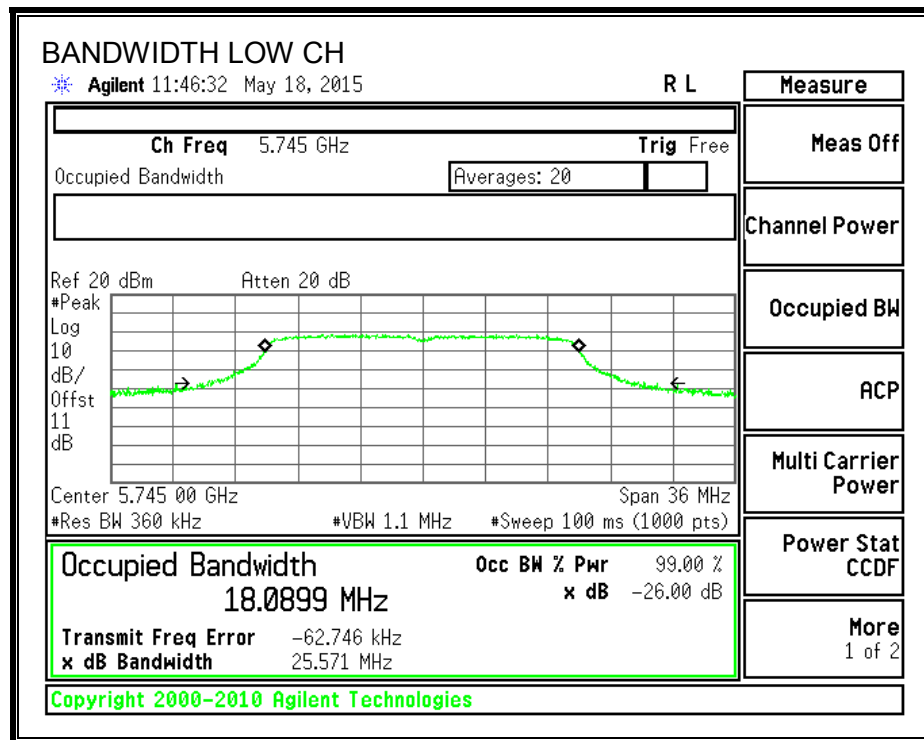
#### LIMITS

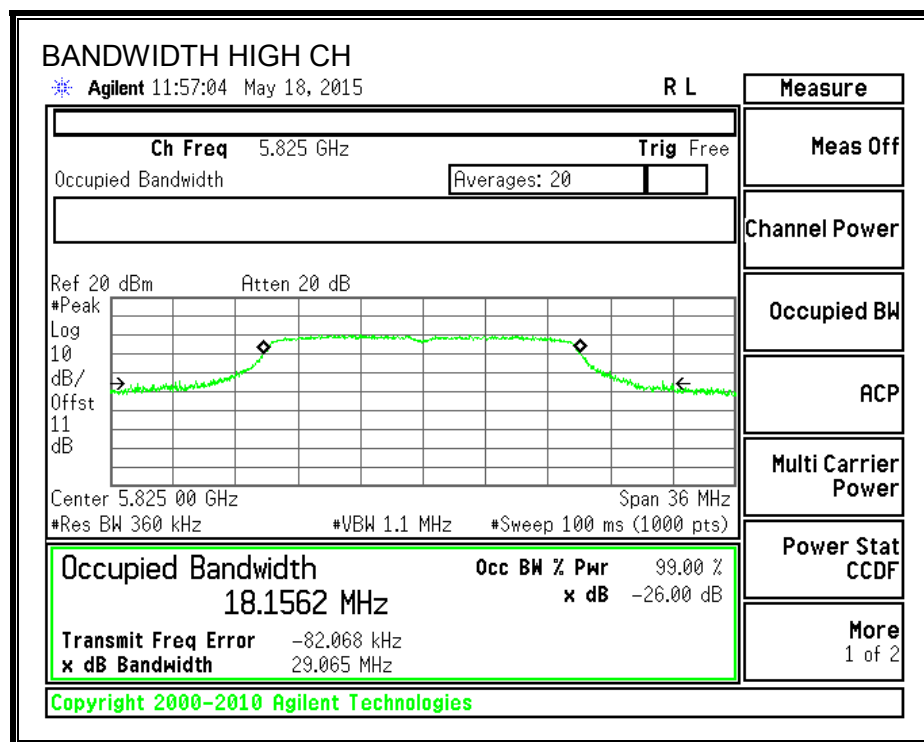
None; for reporting purposes only.

#### RESULTS

| Channel | Frequency<br>(MHz) | 99% Bandwidth<br>(MHz) |
|---------|--------------------|------------------------|
| Low     | 5745               | 18.0899                |
| Mid     | 5785               | 18.1477                |
| High    | 5825               | 18.1562                |

**99% BANDWIDTH**





#### 8.9.4. AVERAGE POWER

##### LIMITS

None; for reporting purposes only.

##### RESULTS

| Channel | Frequency<br>(MHz) | Power<br>(dBm) |
|---------|--------------------|----------------|
| Low     | 5745               | 8.23           |
| Mid     | 5785               | 8.26           |
| High    | 5825               | 8.05           |

### **8.9.5. OUTPUT POWER**

#### **LIMITS**

FCC §15.407 (a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

#### **DIRECTIONAL ANTENNA GAIN**

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

## **RESULTS**

### **Antenna Gain and Limit**

| Channel | Frequency<br>(MHz) | Directional<br>Gain<br>for Power<br>(dBi) | Power<br>Limit<br>(dBm) |
|---------|--------------------|-------------------------------------------|-------------------------|
| Low     | 5745               | 3.00                                      | 30.00                   |
| Mid     | 5785               | 3.00                                      | 30.00                   |
| High    | 5825               | 3.00                                      | 30.00                   |

|                    |      |                                          |
|--------------------|------|------------------------------------------|
| Duty Cycle CF (dB) | 0.00 | Included in Calculations of Corr'd Power |
|--------------------|------|------------------------------------------|

### **Output Power Results**

| Channel | Frequency<br>(MHz) | Chain 0<br>Meas<br>Power<br>(dBm) | Total<br>Corr'd<br>Power<br>(dBm) | Power<br>Limit<br>(dBm) | Power<br>Margin<br>(dB) |
|---------|--------------------|-----------------------------------|-----------------------------------|-------------------------|-------------------------|
| Low     | 5745               | 8.23                              | 8.23                              | 30.00                   | -21.77                  |
| Mid     | 5785               | 8.26                              | 8.26                              | 30.00                   | -21.74                  |
| High    | 5825               | 8.05                              | 8.05                              | 30.00                   | -21.95                  |

### **8.9.6. Maximum Power Spectral Density (PSD)**

#### **LIMITS**

FCC §15.407 (a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

#### **DIRECTIONAL ANTENNA GAIN**

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

## **RESULTS**

### **Antenna Gain and Limits**

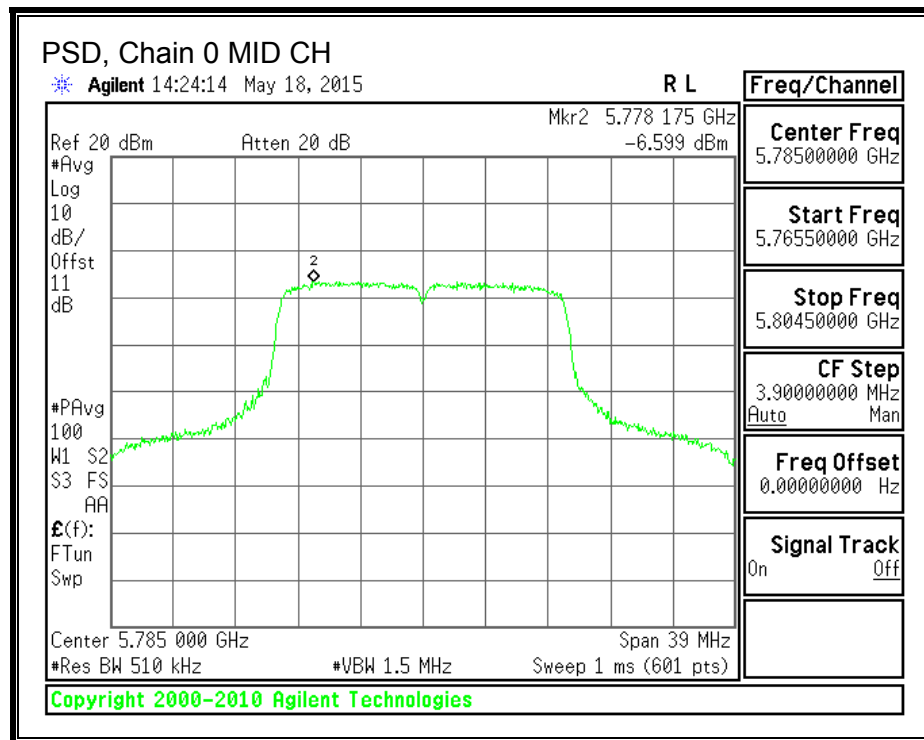
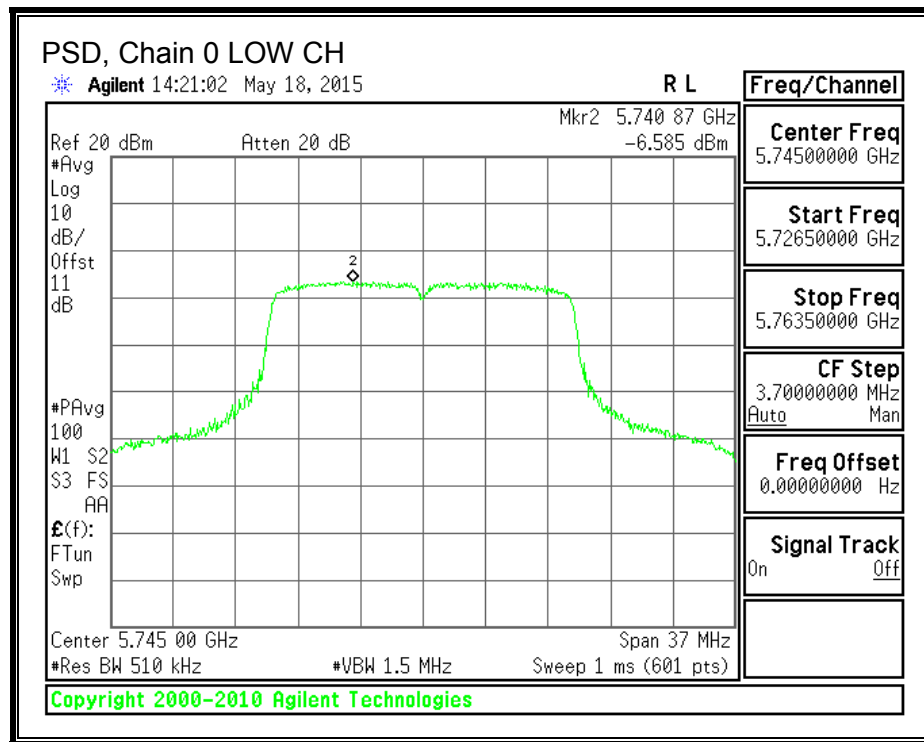
| Channel | Frequency<br>(MHz) | Directional<br>Gain<br>(dBi) | PSD<br>Limit<br>(dBm) |
|---------|--------------------|------------------------------|-----------------------|
| Low     | 5745               | 3.00                         | 30.00                 |
| Mid     | 5785               | 3.00                         | 30.00                 |
| High    | 5825               | 3.00                         | 30.00                 |

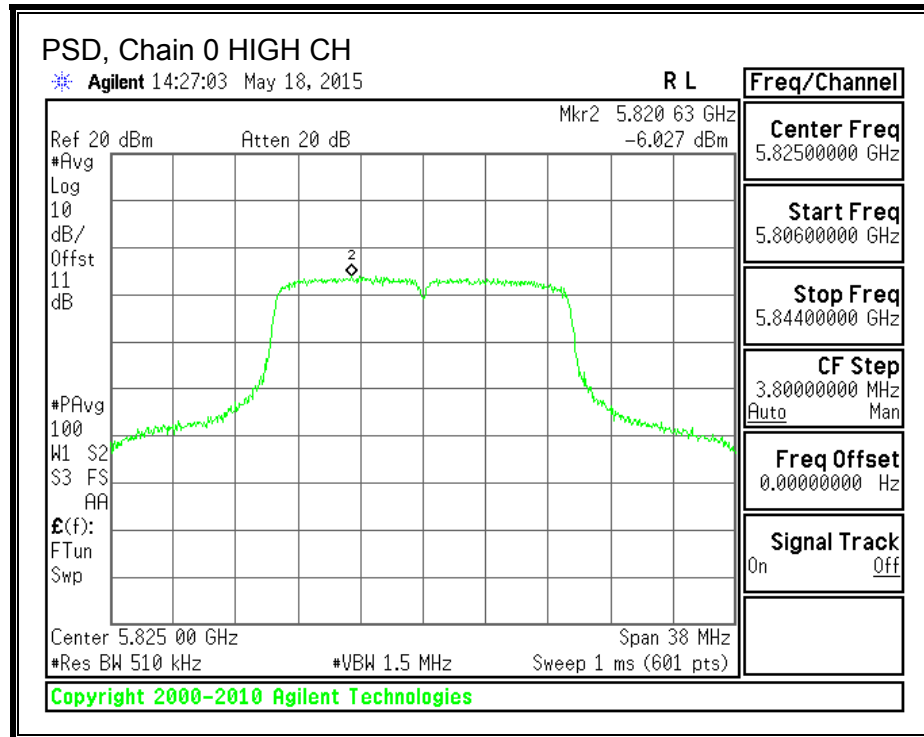
|                    |      |                                        |
|--------------------|------|----------------------------------------|
| Duty Cycle CF (dB) | 0.00 | Included in Calculations of Corr'd PSD |
|--------------------|------|----------------------------------------|

### **PSD Results**

| Channel | Frequency<br>(MHz) | Chain 0<br>Meas<br>PSD<br>(dBm) | Total<br>Corr'd<br>PSD<br>(dBm) | PSD<br>Limit<br>(dBm) | PSD<br>Margin<br>(dB) |
|---------|--------------------|---------------------------------|---------------------------------|-----------------------|-----------------------|
| Low     | 5745               | -6.59                           | -6.59                           | 30.00                 | -36.59                |
| Mid     | 5785               | -6.60                           | -6.60                           | 30.00                 | -36.60                |
| High    | 5825               | -6.03                           | -6.03                           | 30.00                 | -36.03                |

**PSD, Chain 0**





## 9. RADIATED TEST RESULTS

### 9.1. LIMITS AND PROCEDURE

#### LIMITS

FCC §15.205 and §15.209

| Frequency Range (MHz) | Field Strength Limit (uV/m) at 3 m | Field Strength Limit (dBuV/m) at 3 m |
|-----------------------|------------------------------------|--------------------------------------|
| 30 - 88               | 100                                | 40                                   |
| 88 - 216              | 150                                | 43.5                                 |
| 216 - 960             | 200                                | 46                                   |
| Above 960             | 500                                | 54                                   |

#### TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for below 1GHz measurements and 1.5 m above the ground plane for above 1GHz measurements. The antenna to EUT distance is 3 meters.

For measurements below 1 GHz the resolution bandwidth is set to 120 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 1 MHz for peak measurements and as applicable for average measurements.

The spectrum from 30 MHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.

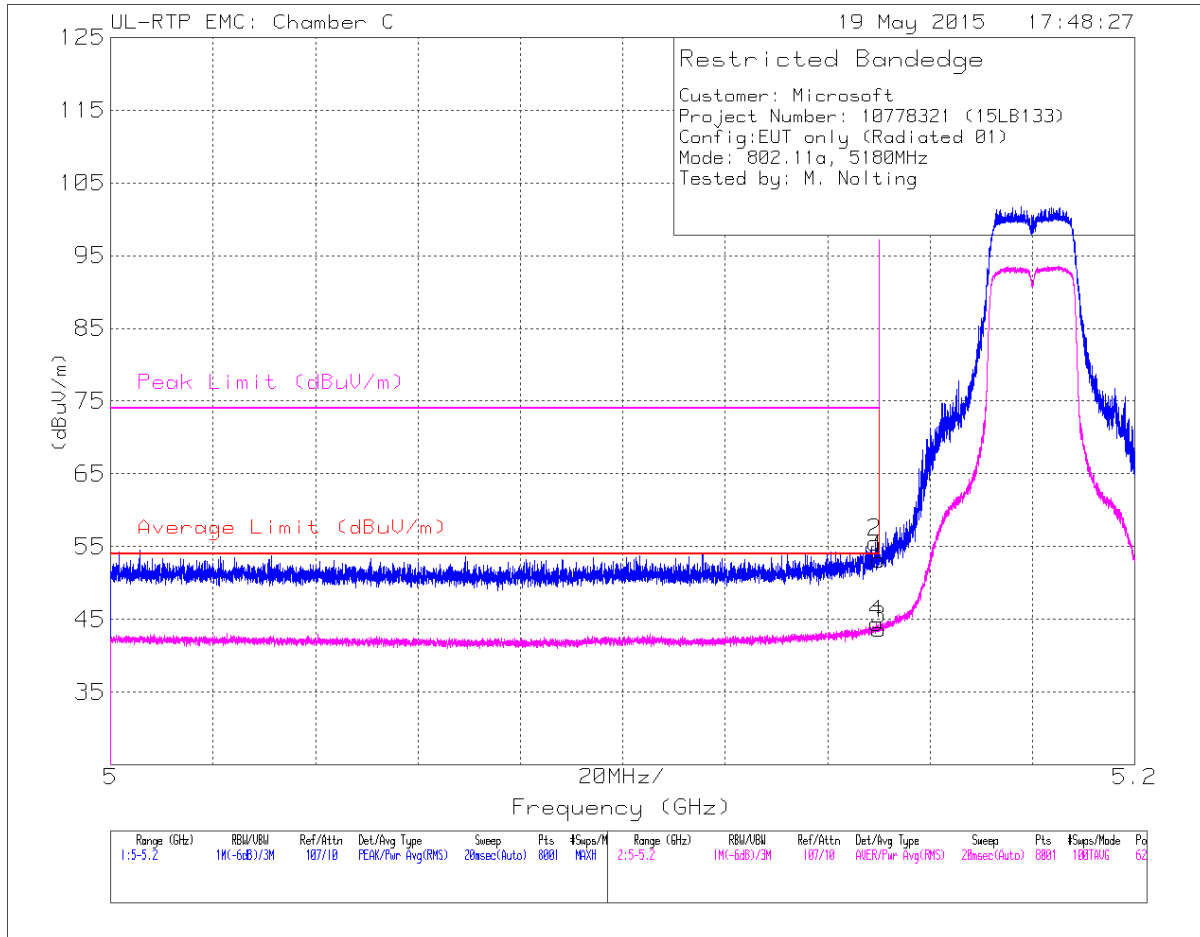
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

## 9.2. TRANSMITTER ABOVE 1 GHz

## 9.3. TX ABOVE 1 GHz 802.11a MODE IN THE 5.2 GHz BAND

### RESTRICTED BANDEGE (LOW CHANNEL)

#### HORIZONTAL



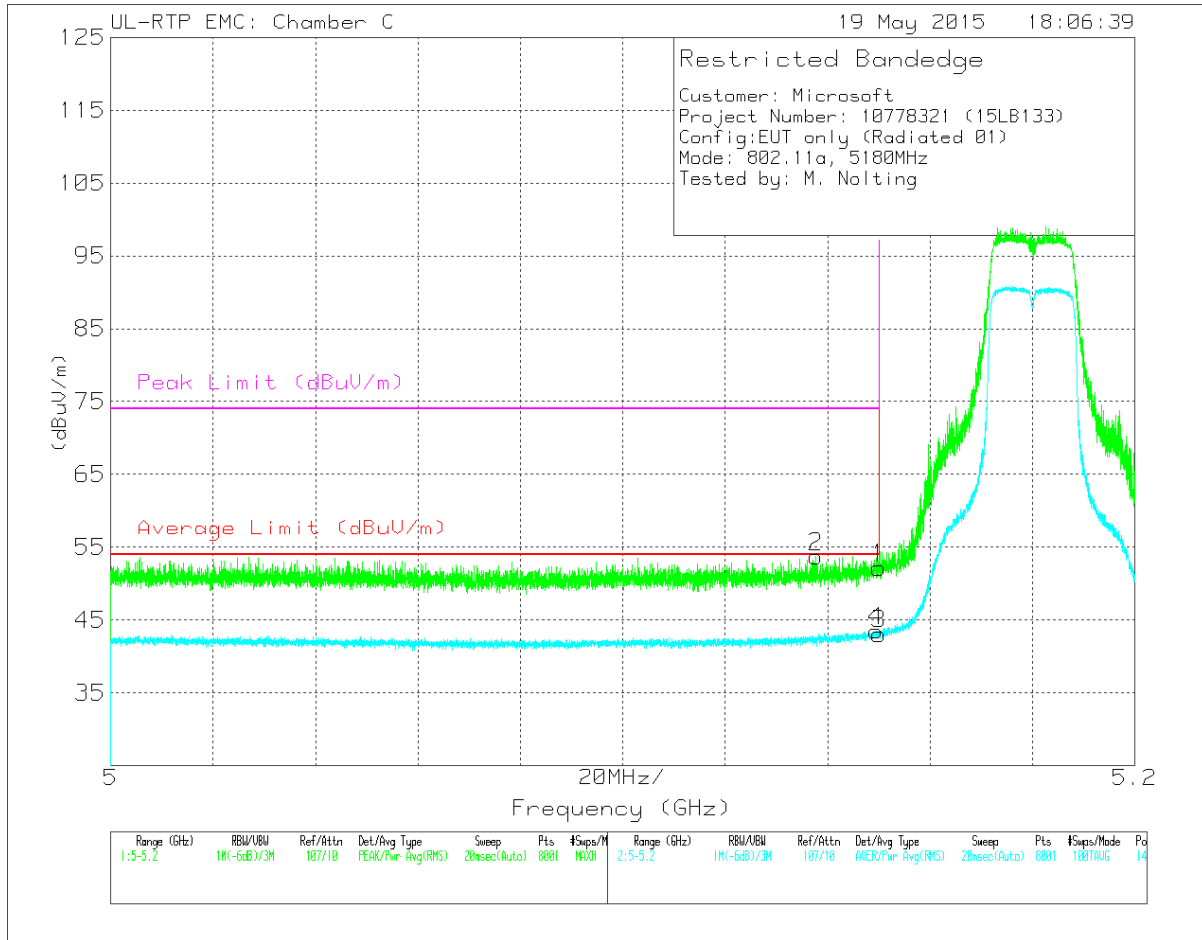
| Marker | Frequency (GHz) | Meter Reading (dBUV) | Det | AT0062 (dB/m) | Amp/Cbl/F ltr/Pad | Corrected Reading (dBUV/m) | Average Limit (dBUV/m) | Margin (dB) | Peak Limit (dBUV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|-------------------|----------------------------|------------------------|-------------|---------------------|----------------|----------------|-------------|----------|
| 1      | * 5.15          | 42.24                | Pk  | 34.2          | -23.2             | 53.24                      | -                      | -           | 74                  | -20.76         | 62             | 288         | H        |
| 2      | * 5.149         | 44.67                | Pk  | 34.2          | -23.3             | 55.57                      | -                      | -           | 74                  | -18.43         | 62             | 288         | H        |
| 3      | * 5.15          | 32.64                | RMS | 34.2          | -23.2             | 43.64                      | 54                     | -10.36      | -                   | -              | 62             | 288         | H        |
| 4      | * 5.15          | 33.56                | RMS | 34.2          | -23.3             | 44.46                      | 54                     | -9.54       | -                   | -              | 62             | 288         | H        |

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

# VERTICAL



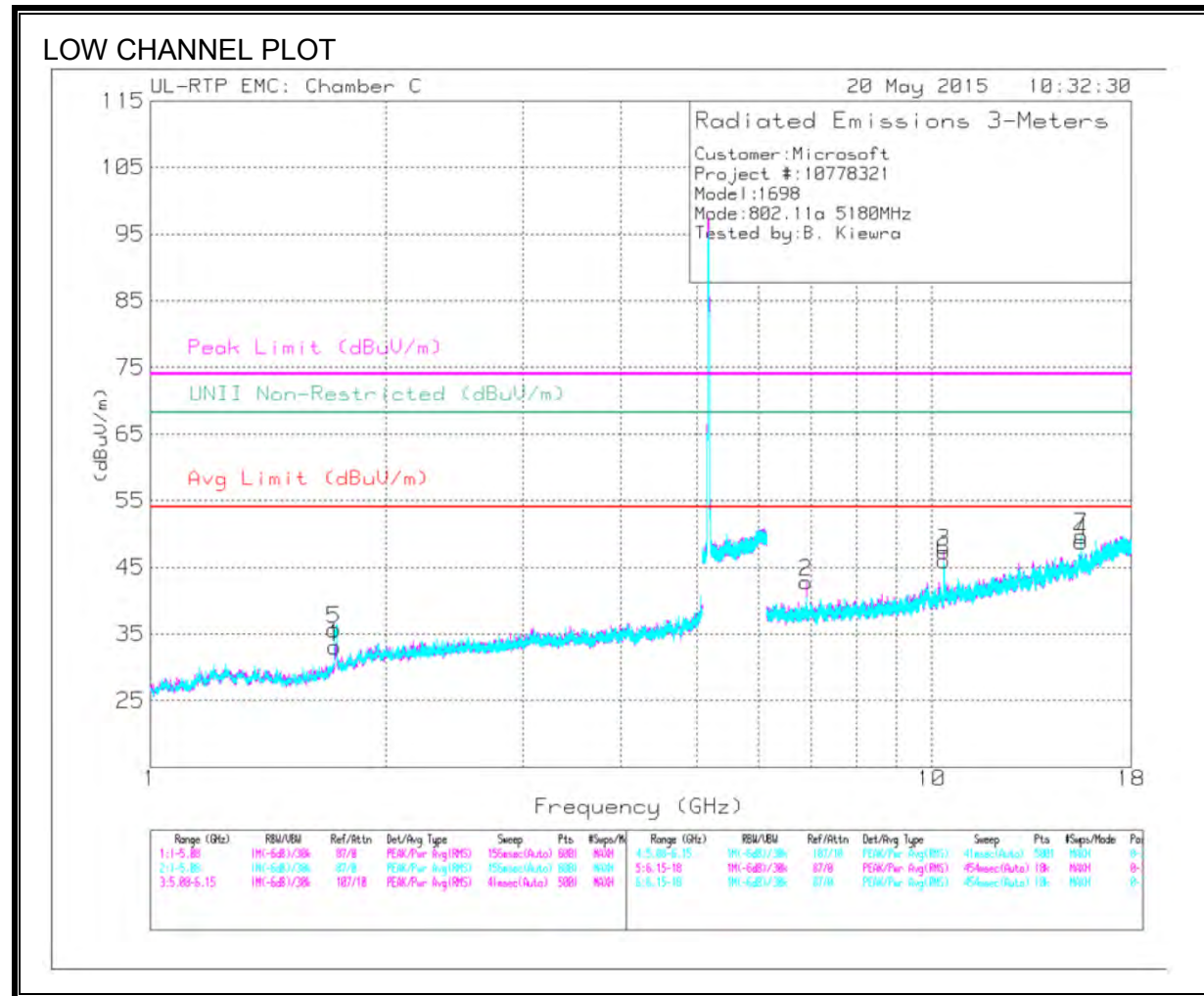
| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AT0062 (dB/m) | Amp/Cbl/F ltr/Pad | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|-------------------|----------------------------|------------------------|-------------|---------------------|----------------|----------------|-------------|----------|
| 2      | * 5.138         | 42.8                 | Pk  | 34.2          | -23.3             | 53.7                       | -                      | -           | 74                  | -20.3          | 140            | 232         | V        |
| 1      | * 5.15          | 41.16                | Pk  | 34.2          | -23.2             | 52.16                      | -                      | -           | 74                  | -21.84         | 140            | 232         | V        |
| 3      | * 5.15          | 32.08                | RMS | 34.2          | -23.2             | 43.08                      | 54                     | -10.92      | -                   | -              | 140            | 232         | V        |
| 4      | * 5.15          | 32.64                | RMS | 34.2          | -23.3             | 43.54                      | 54                     | -10.46      | -                   | -              | 140            | 232         | V        |

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

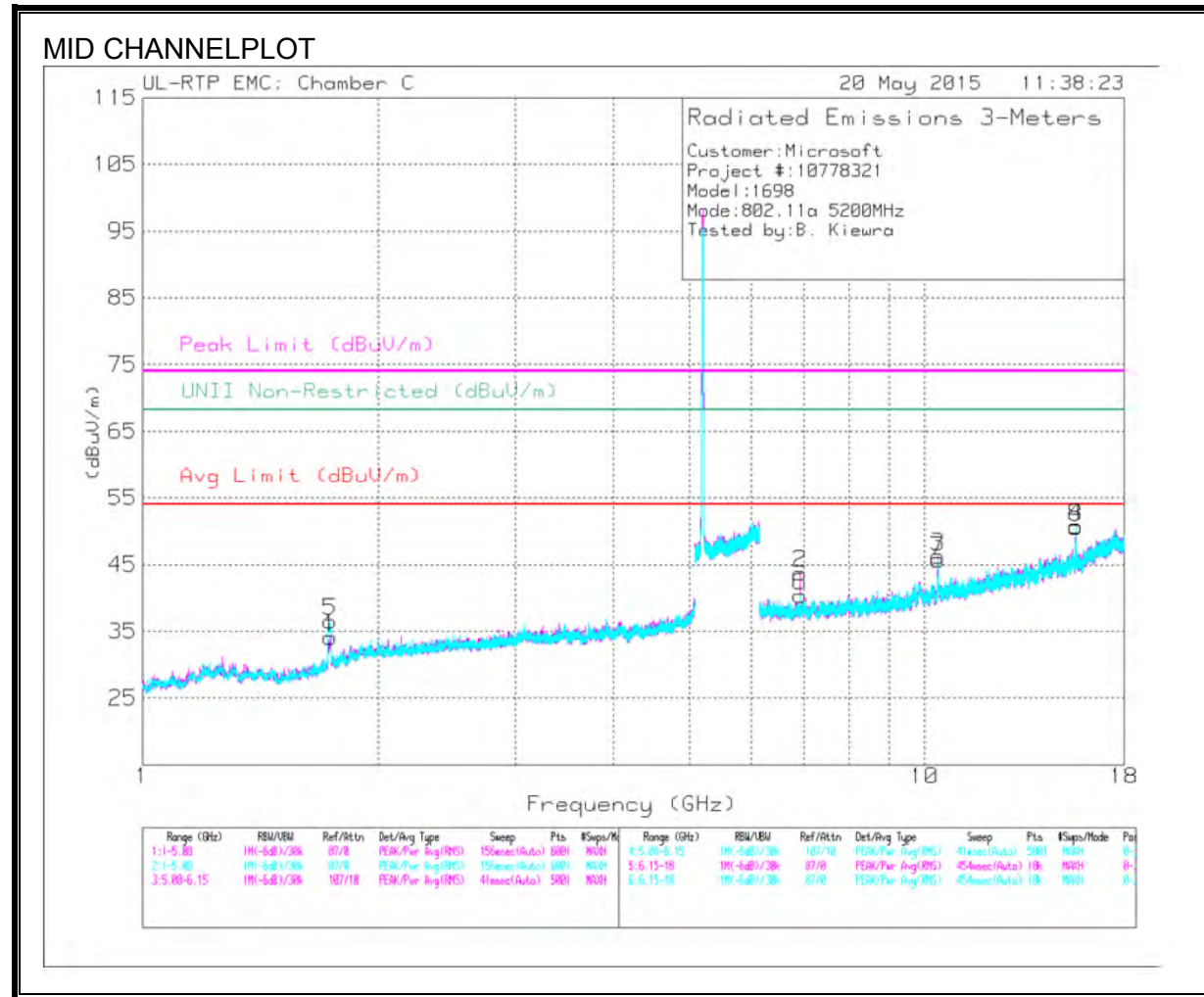
**HARMONICS AND SPURIOUS EMISSIONS**



**DATA**

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AT0062 (dB/m) | Amp/Cbl/ Ftr/Pad | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | UNII Non-Restricted (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|------------------|----------------------------|--------------------|-------------|---------------------|----------------|------------------------------|----------------|----------------|-------------|----------|
| 1      | * 1.719         | 50.99                | PK3 | 29.4          | -37.9            | 42.49                      | -                  | -           | 74                  | -31.51         | 68.2                         | -25.71         | 220            | 179         | H        |
|        | * 1.72          | 39.65                | ADR | 29.4          | -37.9            | 31.15                      | 54                 | -22.85      | -                   | -              | -                            | -              | 220            | 179         | H        |
| 2      | 6.907           | 43.98                | PK3 | 35.6          | -28.3            | 51.28                      | -                  | -           | 74                  | -22.72         | 68.2                         | -16.92         | 45             | 249         | H        |
| 3      | 10.36           | 33.2                 | ADR | 37.3          | -25.6            | 44.9                       | 54                 | -9.1        | -                   | -              | -                            | -              | 168            | 254         | H        |
|        | 10.362          | 46.84                | PK3 | 37.3          | -25.5            | 58.64                      | -                  | -           | 74                  | -15.36         | 68.2                         | -9.56          | 168            | 254         | H        |
| 4      | * 15.544        | 42.6                 | PK3 | 40.4          | -24.2            | 58.8                       | -                  | -           | 74                  | -15.2          | 68.2                         | -9.4           | 192            | 307         | H        |
|        | * 15.538        | 29.11                | ADR | 40.4          | -24.2            | 45.31                      | 54                 | -8.69       | -                   | -              | -                            | -              | 192            | 307         | H        |
| 5      | * 1.719         | 53.04                | PK3 | 29.4          | -37.9            | 44.54                      | -                  | -           | 74                  | -29.46         | 68.2                         | -23.66         | 54             | 248         | V        |
|        | * 1.722         | 42.24                | ADR | 29.4          | -37.9            | 33.74                      | 54                 | -20.26      | -                   | -              | -                            | -              | 54             | 248         | V        |
| 6      | 10.359          | 43.3                 | PK3 | 37.3          | -25.7            | 54.9                       | -                  | -           | 74                  | -19.1          | 68.2                         | -13.3          | 64             | 127         | V        |
|        | 10.359          | 31.08                | ADR | 37.3          | -25.7            | 42.68                      | 54                 | -11.32      | -                   | -              | -                            | -              | 64             | 127         | V        |
| 7      | * 15.54         | 45.83                | PK3 | 40.4          | -24.2            | 62.03                      | -                  | -           | 74                  | -11.97         | 68.2                         | -6.17          | 191            | 154         | V        |
|        | * 15.54         | 31.54                | ADR | 40.4          | -24.2            | 47.74                      | 54                 | -6.26       | -                   | -              | -                            | -              | 191            | 154         | V        |

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band  
PK3 - U-NII: Maximum Peak  
ADR - U-NII AD primary method, RMS average



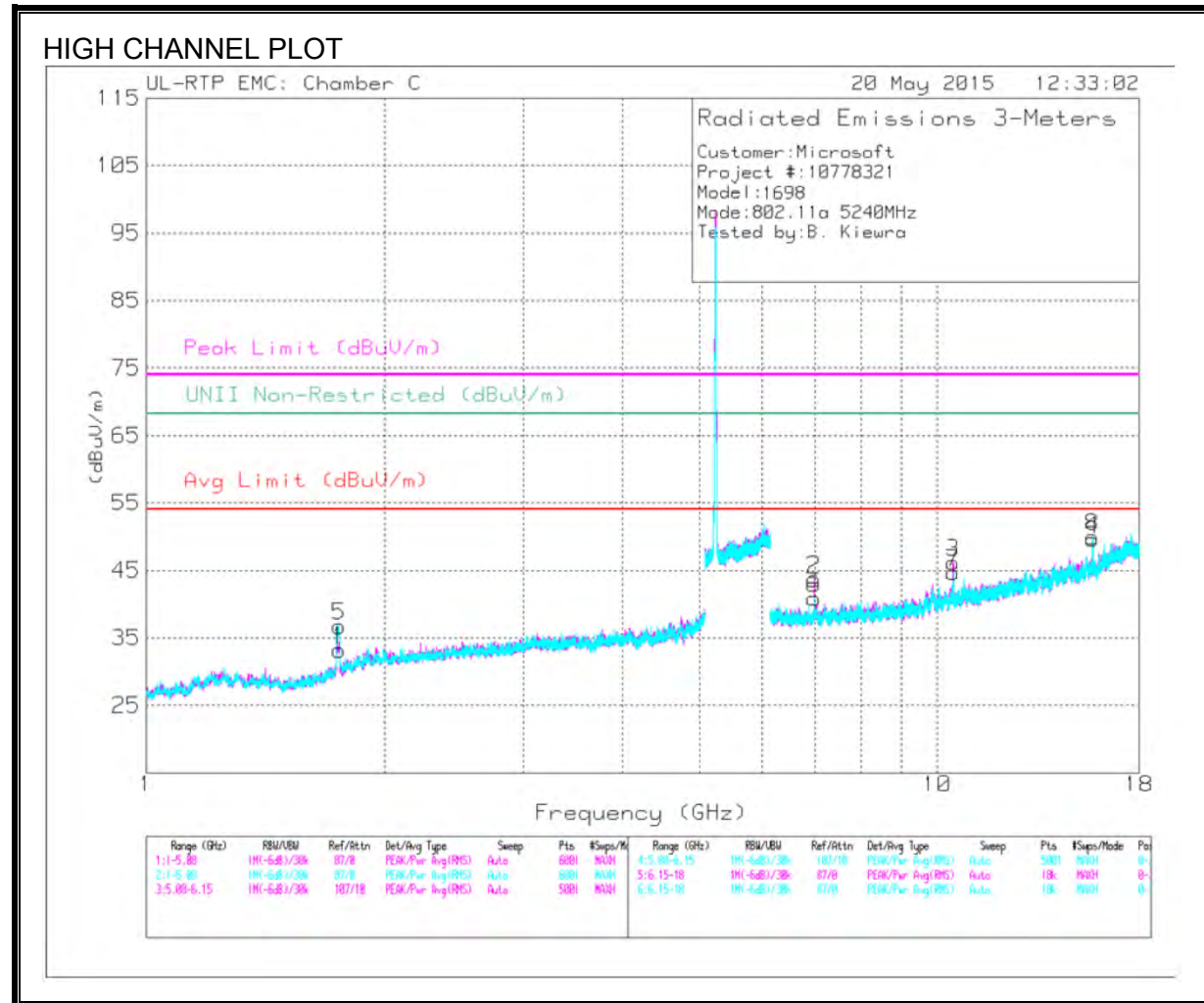
## DATA

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AT0062 (dB/m) | Amp/Cbl /Filtr/Pad | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | UNII Non-Restricted (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|--------------------|----------------------------|--------------------|-------------|---------------------|----------------|------------------------------|----------------|----------------|-------------|----------|
| 1      | 1.737           | 51.28                | PK3 | 29.6          | -37.9              | 42.98                      | -                  | -           | 74                  | -31.02         | 68.2                         | -25.22         | 153            | 156         | H        |
| 2      | 6.933           | 45.45                | PK3 | 35.6          | -28.8              | 52.25                      | -                  | -           | 74                  | -21.75         | 68.2                         | -15.95         | 46             | 230         | H        |
| 3      | 10.399          | 44.41                | PK3 | 37.4          | -24.4              | 57.41                      | -                  | -           | 74                  | -16.59         | 68.2                         | -10.79         | 168            | 216         | H        |
|        | 10.399          | 31.59                | ADR | 37.4          | -24.4              | 44.59                      | 54                 | -9.41       | -                   | -              | -                            | -              | 168            | 216         | H        |
| 4      | * 15.595        | 43.4                 | PK3 | 40.4          | -23.6              | 60.2                       | -                  | -           | 74                  | -13.8          | 68.2                         | -8             | 192            | 253         | H        |
|        | * 15.602        | 30.63                | ADR | 40.4          | -23.6              | 47.43                      | 54                 | -6.57       | -                   | -              | -                            | -              | 192            | 253         | H        |
| 5      | 1.737           | 55.23                | PK3 | 29.6          | -37.9              | 46.93                      | -                  | -           | 74                  | -27.07         | 68.2                         | -21.27         | 47             | 235         | V        |
| 6      | 6.933           | 41.29                | PK3 | 35.6          | -28.8              | 48.09                      | -                  | -           | 74                  | -25.91         | 68.2                         | -20.11         | 19             | 108         | V        |
| 7      | 10.397          | 42.56                | PK3 | 37.4          | -24.4              | 55.56                      | -                  | -           | 74                  | -18.44         | 68.2                         | -12.64         | 77             | 102         | V        |
|        | 10.4            | 30.15                | ADR | 37.4          | -24.4              | 43.15                      | 54                 | -10.85      | -                   | -              | -                            | -              | 77             | 102         | V        |
| 8      | * 15.599        | 43.88                | PK3 | 40.4          | -23.6              | 60.68                      | -                  | -           | 74                  | -13.32         | 68.2                         | -7.52          | 209            | 162         | V        |
|        | * 15.6          | 30.5                 | ADR | 40.4          | -23.6              | 47.3                       | 54                 | -6.7        | -                   | -              | -                            | -              | 209            | 162         | V        |

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK3 - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average



### DATA

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AT0062 (dB/m) | Amp/Cbl /Filtr/Pad | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | UNII Non-Restricted (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|--------------------|----------------------------|--------------------|-------------|---------------------|----------------|------------------------------|----------------|----------------|-------------|----------|
| 1      | 1.751           | 52.46                | PK3 | 29.8          | -37.8              | 44.46                      | -                  | -           | 74                  | -29.54         | 68.2                         | -23.74         | 156            | 124         | H        |
| 2      | 6.987           | 43.5                 | PK3 | 35.7          | -27.8              | 51.4                       | -                  | -           | 74                  | -22.6          | 68.2                         | -16.8          | 38             | 304         | H        |
| 3      | 10.48           | 29.77                | ADR | 37.5          | -25.2              | 42.07                      | 54                 | -11.93      | -                   | -              | -                            | -              | 206            | 236         | H        |
|        | 10.482          | 42.07                | PK3 | 37.5          | -25.2              | 54.37                      | -                  | -           | 74                  | -19.63         | 68.2                         | -13.83         | 206            | 236         | H        |
| 4      | * 15.711        | 45.29                | PK3 | 40.4          | -24                | 61.69                      | -                  | -           | 74                  | -12.31         | 68.2                         | -6.51          | 191            | 264         | H        |
|        | * 15.723        | 31.35                | ADR | 40.4          | -24                | 47.75                      | 54                 | -6.25       | -                   | -              | -                            | -              | 191            | 264         | H        |
| 5      | 1.746           | 54.32                | PK3 | 29.7          | -37.9              | 46.12                      | -                  | -           | 74                  | -27.88         | 68.2                         | -22.08         | 53             | 260         | V        |
| 6      | 6.987           | 41.55                | PK3 | 35.7          | -27.8              | 49.45                      | -                  | -           | 74                  | -24.55         | 68.2                         | -18.75         | 71             | 252         | V        |
| 7      | 10.481          | 42.87                | PK3 | 37.5          | -25.2              | 55.17                      | -                  | -           | 74                  | -18.83         | 68.2                         | -13.03         | 77             | 119         | V        |
|        | 10.481          | 30.59                | ADR | 37.5          | -25.2              | 42.89                      | 54                 | -11.11      | -                   | -              | -                            | -              | 77             | 119         | V        |
| 8      | * 15.715        | 42.21                | PK3 | 40.4          | -24                | 58.61                      | -                  | -           | 74                  | -15.39         | 68.2                         | -9.59          | 178            | 351         | V        |
|        | * 15.721        | 29.65                | ADR | 40.4          | -24                | 46.05                      | 54                 | -7.95       | -                   | -              | -                            | -              | 178            | 351         | V        |

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

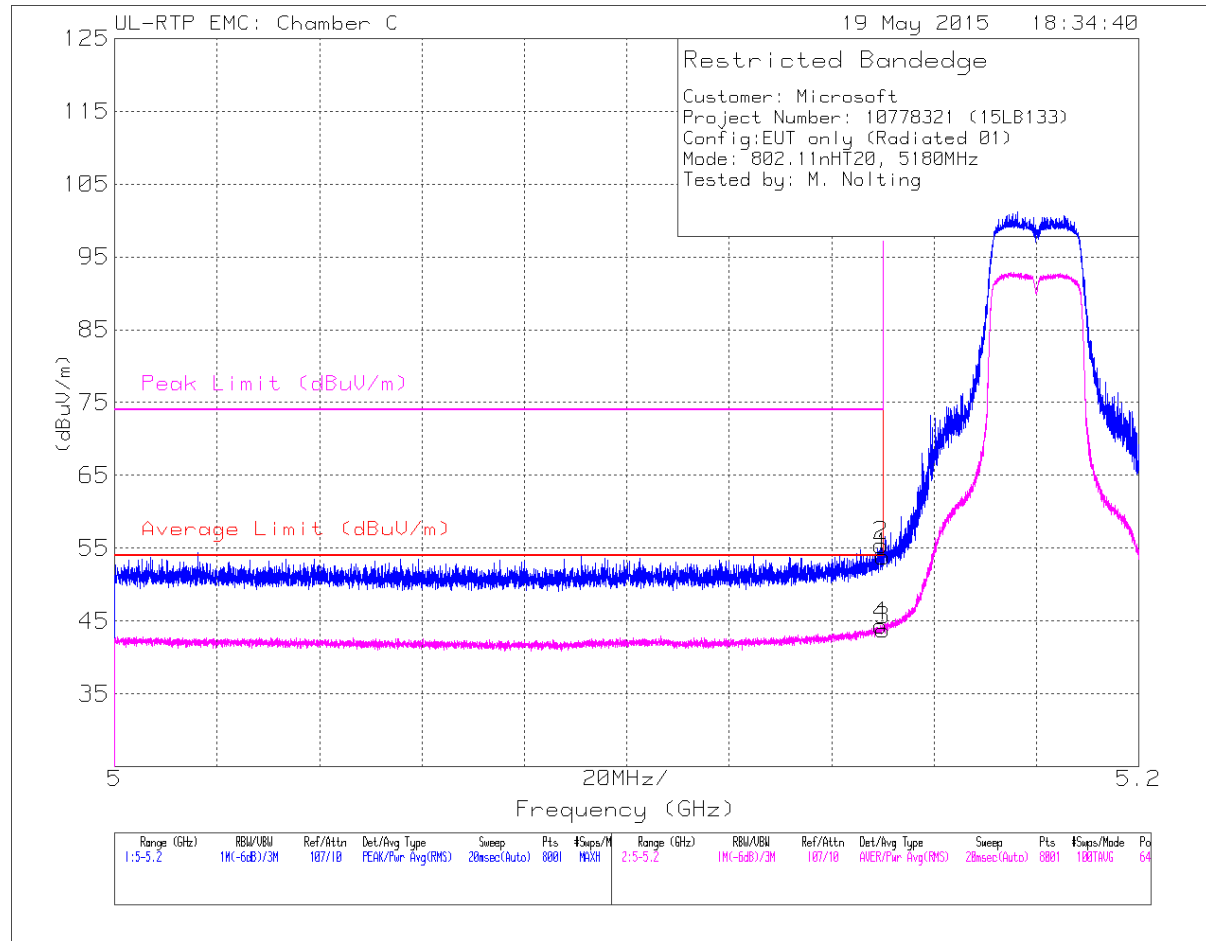
PK3 - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

## 9.4. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.2 GHz BAND

### RESTRICTED BANDEDGE (LOW CHANNEL)

#### HORIZONTAL



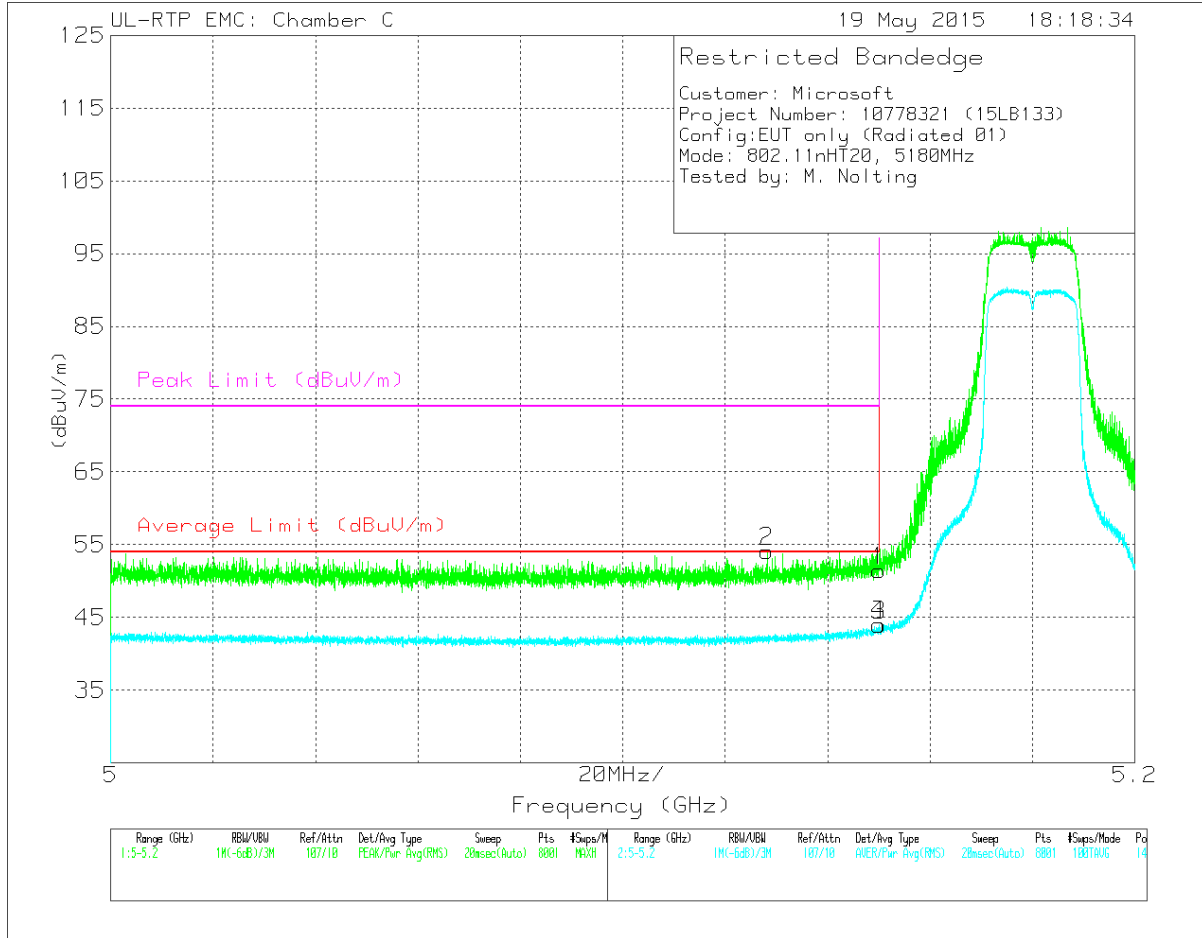
| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AT0062 (dB/m) | Amp/Cbl/F ltr/Pad | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|-------------------|----------------------------|------------------------|-------------|---------------------|----------------|----------------|-------------|----------|
| 1      | * 5.15          | 42.83                | Pk  | 34.2          | -23.2             | 53.83                      | -                      | -           | 74                  | -20.17         | 64             | 270         | H        |
| 2      | * 5.15          | 44.51                | Pk  | 34.2          | -23.3             | 55.41                      | -                      | -           | 74                  | -18.59         | 64             | 270         | H        |
| 3      | * 5.15          | 32.79                | RMS | 34.2          | -23.2             | 43.79                      | 54                     | -10.21      | -                   | -              | 64             | 270         | H        |
| 4      | * 5.15          | 33.45                | RMS | 34.2          | -23.3             | 44.35                      | 54                     | -9.65       | -                   | -              | 64             | 270         | H        |

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

# VERTICAL



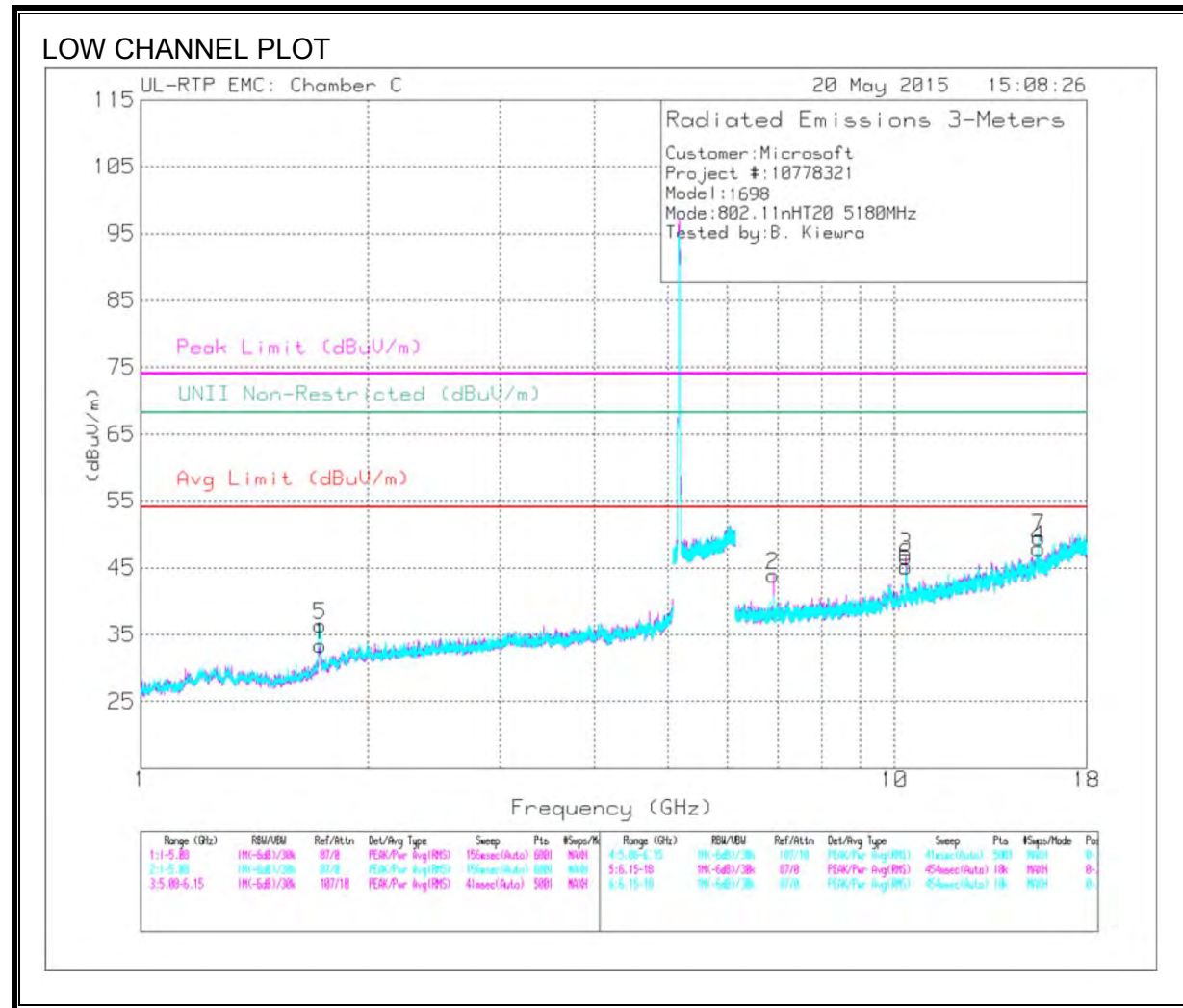
| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AT0062 (dB/m) | Amp/Cbl/F ltr/Pad | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|-------------------|----------------------------|------------------------|-------------|---------------------|----------------|----------------|-------------|----------|
| 1      | * 5.15          | 40.47                | Pk  | 34.2          | -23.2             | 51.47                      | -                      | -           | 74                  | -22.53         | 140            | 231         | V        |
| 2      | * 5.128         | 43.18                | Pk  | 34.2          | -23.3             | 54.08                      | -                      | -           | 74                  | -19.92         | 140            | 231         | V        |
| 3      | * 5.15          | 32.95                | RMS | 34.2          | -23.2             | 43.95                      | 54                     | -10.05      | -                   | -              | 140            | 231         | V        |
| 4      | * 5.15          | 33.02                | RMS | 34.2          | -23.2             | 44.02                      | 54                     | -9.98       | -                   | -              | 140            | 231         | V        |

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

# HARMONICS AND SPURIOUS EMISSIONS



## DATA

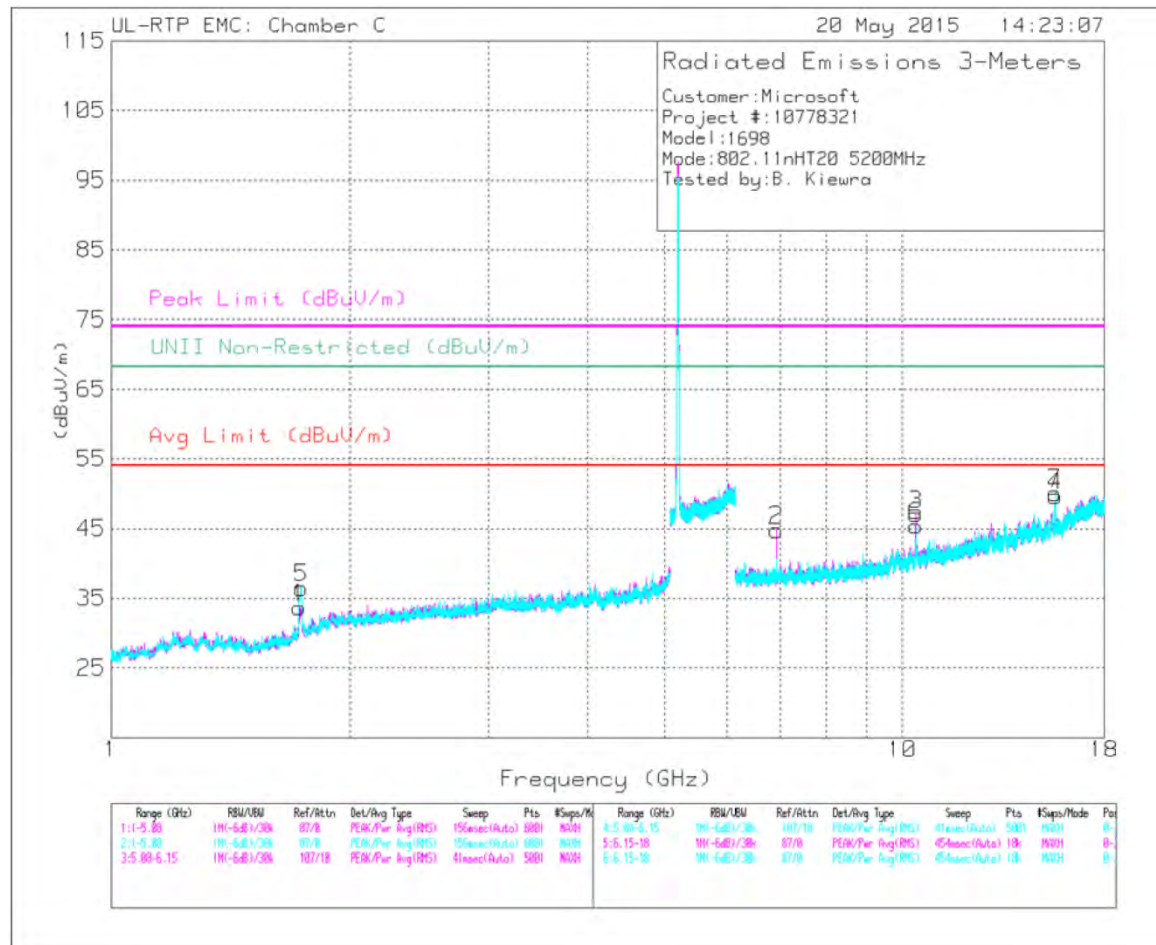
| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AT0062 (dB/m) | Amp/Cbl/Filtr/Pad | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | UNII Non-Restricted (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|-------------------|----------------------------|--------------------|-------------|---------------------|----------------|------------------------------|----------------|----------------|-------------|----------|
| 1      | 1.725           | 51.91                | PK3 | 29.5          | -37.9             | 43.51                      | -                  | -           | 74                  | -30.49         | 68.2                         | -24.69         | 159            | 131         | H        |
| 2      | 6.906           | 44.29                | PK3 | 35.6          | -28.3             | 51.59                      | -                  | -           | 74                  | -22.41         | 68.2                         | -16.61         | 43             | 198         | H        |
| 3      | 10.36           | 46.46                | PK3 | 37.3          | -25.6             | 58.16                      | -                  | -           | 74                  | -15.84         | 68.2                         | -10.04         | 167            | 225         | H        |
|        | 10.36           | 33.13                | ADR | 37.3          | -25.6             | 44.83                      | 54                 | -9.17       | -                   | -              | -                            | -              | 167            | 225         | H        |
| 4      | * 15.537        | 41.46                | PK3 | 40.4          | -24.2             | 57.66                      | -                  | -           | 74                  | -16.34         | 68.2                         | -10.54         | 242            | 101         | H        |
|        | * 15.538        | 28.15                | ADR | 40.4          | -24.2             | 44.35                      | 54                 | -9.65       | -                   | -              | -                            | -              | 242            | 101         | H        |
| 5      | 1.732           | 54.28                | PK3 | 29.6          | -37.9             | 45.98                      | -                  | -           | 74                  | -28.02         | 68.2                         | -22.22         | 39             | 186         | V        |
| 6      | 10.359          | 44.1                 | PK3 | 37.3          | -25.6             | 55.8                       | -                  | -           | 74                  | -18.2          | 68.2                         | -12.4          | 65             | 112         | V        |
|        | 10.359          | 31.11                | ADR | 37.3          | -25.6             | 42.81                      | 54                 | -11.19      | -                   | -              | -                            | -              | 65             | 112         | V        |
| 7      | * 15.546        | 43.73                | PK3 | 40.4          | -24.2             | 59.93                      | -                  | -           | 74                  | -14.07         | 68.2                         | -8.27          | 186            | 148         | V        |
|        | * 15.54         | 30.02                | ADR | 40.4          | -24.2             | 46.22                      | 54                 | -7.78       | -                   | -              | -                            | -              | 186            | 148         | V        |

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK3 - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

# MID CHANNEL PLOT



## DATA

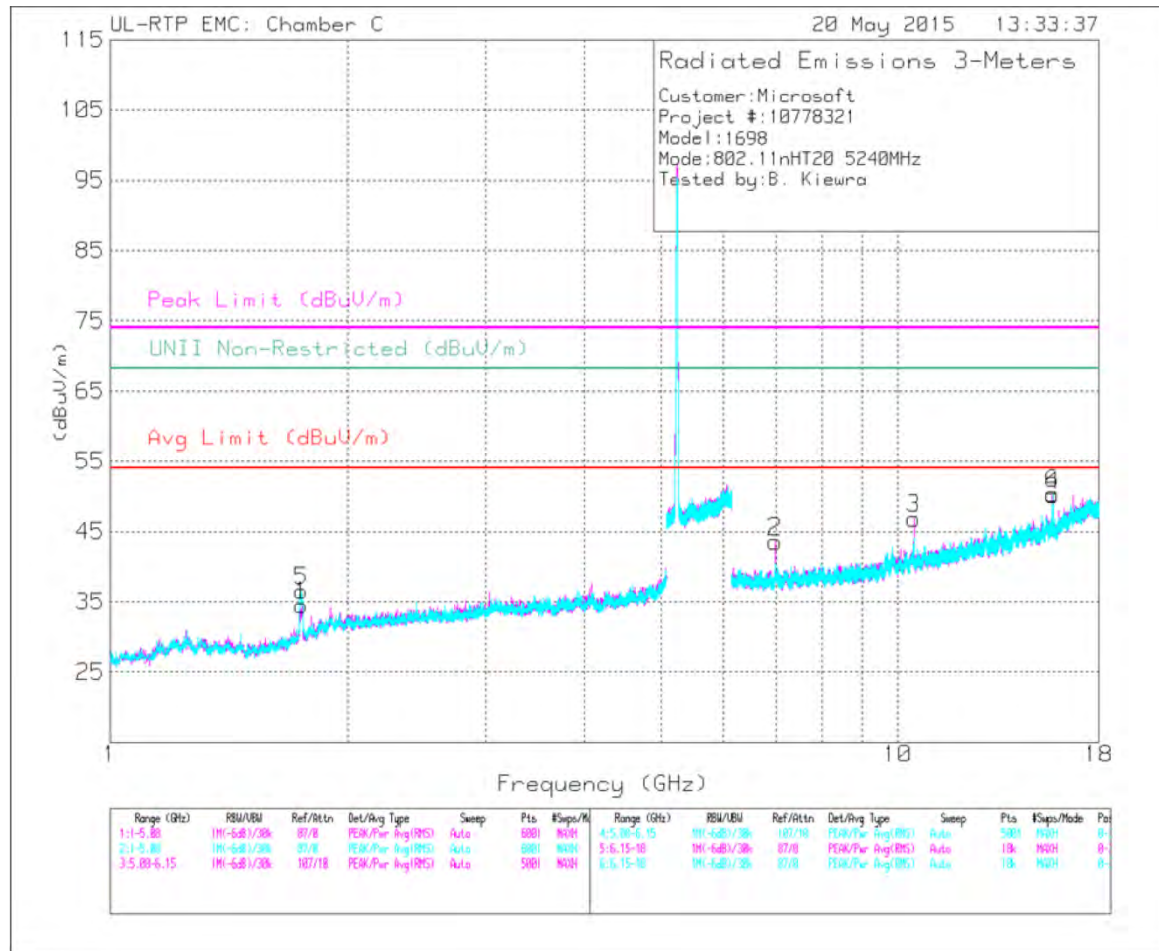
| Marker | Frequency (GHz) | Meter Reading (dBUV) | Det | AT0062 (dB/m) | Amp/Cbl/Fltr/Pad | Corrected Reading (dBUV/m) | Avg Limit (dBUV/m) | Margin (dB) | Peak Limit (dBUV/m) | PK Margin (dB) | UNII Non-Restricted (dBUV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|------------------|----------------------------|--------------------|-------------|---------------------|----------------|------------------------------|----------------|----------------|-------------|----------|
| 1      | 1.735           | 53.4                 | PK3 | 29.6          | -37.9            | 45.1                       | -                  | -           | 74                  | -28.9          | 68.2                         | -23.1          | 158            | 154         | H        |
| 2      | 6.933           | 45.01                | PK3 | 35.6          | -28.8            | 51.81                      | -                  | -           | 74                  | -22.19         | 68.2                         | -16.39         | 38             | 291         | H        |
| 3      | 10.394          | 43.38                | PK3 | 37.4          | -24.5            | 56.28                      | -                  | -           | 74                  | -17.72         | 68.2                         | -11.92         | 144            | 148         | H        |
|        | 10.399          | 30.53                | ADR | 37.4          | -24.4            | 43.53                      | 54                 | -10.47      | -                   | -              | -                            | -              | 144            | 148         | H        |
| 4      | * 15.592        | 44.55                | PK3 | 40.4          | -23.7            | 61.25                      | -                  | -           | 74                  | -12.75         | 68.2                         | -6.95          | 191            | 269         | H        |
|        | * 15.6          | 30.77                | ADR | 40.4          | -23.6            | 47.57                      | 54                 | -6.43       | -                   | -              | -                            | -              | 191            | 269         | H        |
| 5      | 1.735           | 54.74                | PK3 | 29.6          | -37.9            | 46.44                      | -                  | -           | 74                  | -27.56         | 68.2                         | -21.76         | 57             | 231         | V        |
| 6      | 10.397          | 40.11                | PK3 | 37.4          | -24.4            | 53.11                      | -                  | -           | 74                  | -20.89         | 68.2                         | -15.09         | 163            | 142         | V        |
|        | 10.4            | 28.2                 | ADR | 37.4          | -24.4            | 41.2                       | 54                 | -12.8       | -                   | -              | -                            | -              | 163            | 142         | V        |
| 7      | * 15.594        | 45.15                | PK3 | 40.4          | -23.7            | 61.85                      | -                  | -           | 74                  | -12.15         | 68.2                         | -6.35          | 191            | 163         | V        |
|        | * 15.603        | 31.1                 | ADR | 40.4          | -23.6            | 47.9                       | 54                 | -6.1        | -                   | -              | -                            | -              | 191            | 163         | V        |

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK3 - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

# HIGH CHANNEL PLOT



## DATA

| Marker | Frequency (GHz) | Meter Reading (dBUV) | Det | AT0062 (dB/m) | Amp/Cbl /Fltr/Pad | Corrected Reading (dBUV/m) | Avg Limit (dBUV/m) | Margin (dB) | Peak Limit (dBUV/m) | PK Margin (dB) | UNII Non-Restricted (dBUV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|-------------------|----------------------------|--------------------|-------------|---------------------|----------------|------------------------------|----------------|----------------|-------------|----------|
| 1      | 1.751           | 50.96                | PK3 | 29.8          | -37.8             | 42.96                      | -                  | -           | 74                  | -31.04         | 68.2                         | -25.24         | 344            | 134         | H        |
| 2      | 6.987           | 43.04                | PK3 | 35.7          | -27.8             | 50.94                      | -                  | -           | 74                  | -23.06         | 68.2                         | -17.26         | 28             | 312         | H        |
| 3      | 10.479          | 41.3                 | PK3 | 37.5          | -25.1             | 53.7                       | -                  | -           | 74                  | -20.3          | 68.2                         | -14.5          | 118            | 104         | H        |
|        | 10.48           | 29.16                | ADR | 37.5          | -25.2             | 41.46                      | 54                 | -12.54      | -                   | -              | -                            | -              | 118            | 104         | H        |
| 4      | * 15.727        | 44.03                | PK3 | 40.4          | -24               | 60.43                      | -                  | -           | 74                  | -13.57         | 68.2                         | -7.77          | 201            | 227         | H        |
|        | * 15.721        | 30.82                | ADR | 40.4          | -24               | 47.22                      | 54                 | -6.78       | -                   | -              | -                            | -              | 201            | 227         | H        |
| 5      | 1.753           | 54.38                | PK3 | 29.8          | -37.8             | 46.38                      | -                  | -           | 74                  | -27.62         | 68.2                         | -21.82         | 199            | 192         | V        |
| 6      | * 15.721        | 44.09                | PK3 | 40.4          | -24               | 60.49                      | -                  | -           | 74                  | -13.51         | 68.2                         | -7.71          | 178            | 154         | V        |
|        | * 15.722        | 30.64                | ADR | 40.4          | -24               | 47.04                      | 54                 | -6.96       | -                   | -              | -                            | -              | 178            | 154         | V        |

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

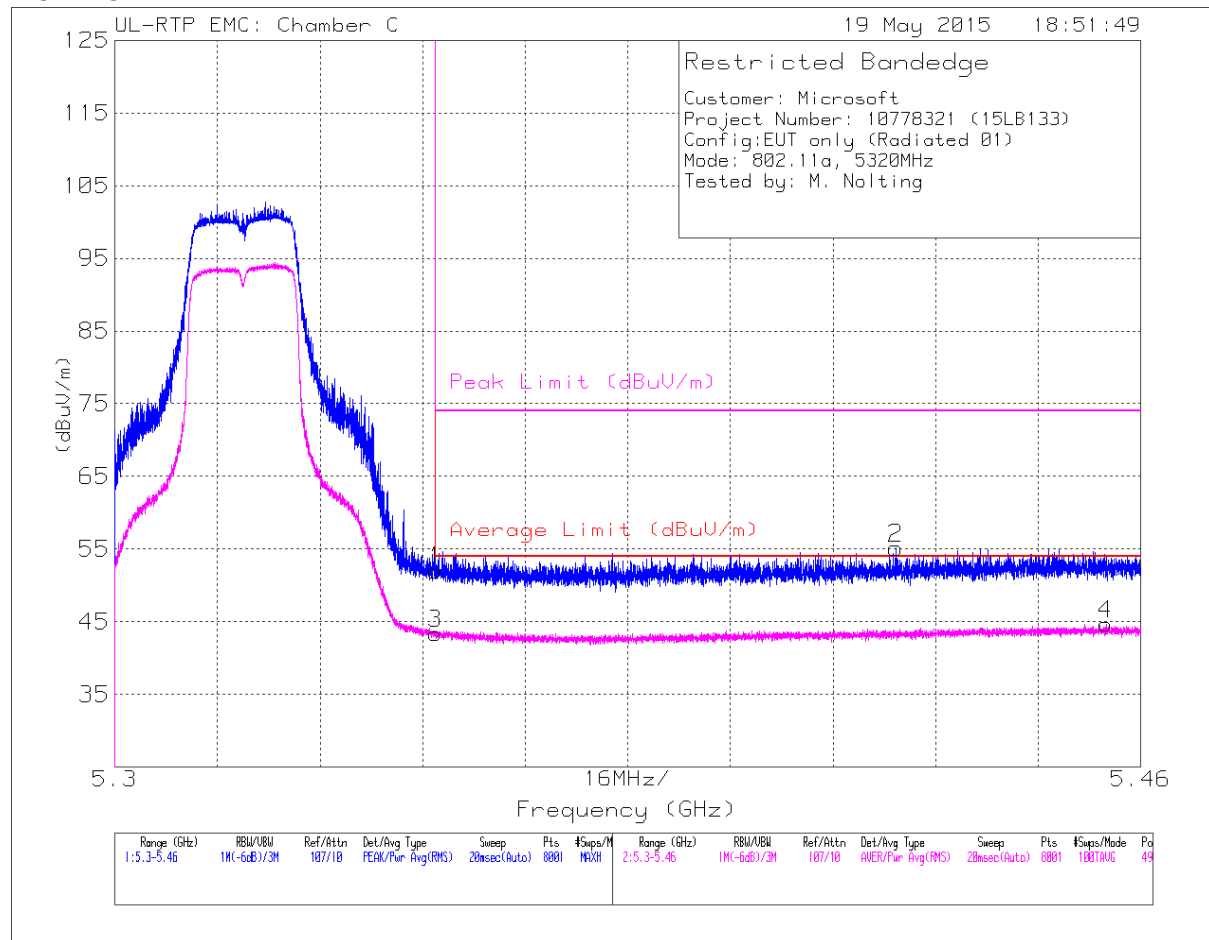
PK3 - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

## 9.5. TX ABOVE 1 GHz 802.11a MODE IN THE 5.3 GHz BAND

### AUTHORIZED BANDEDGE (HIGH CHANNEL)

#### HORIZONTAL



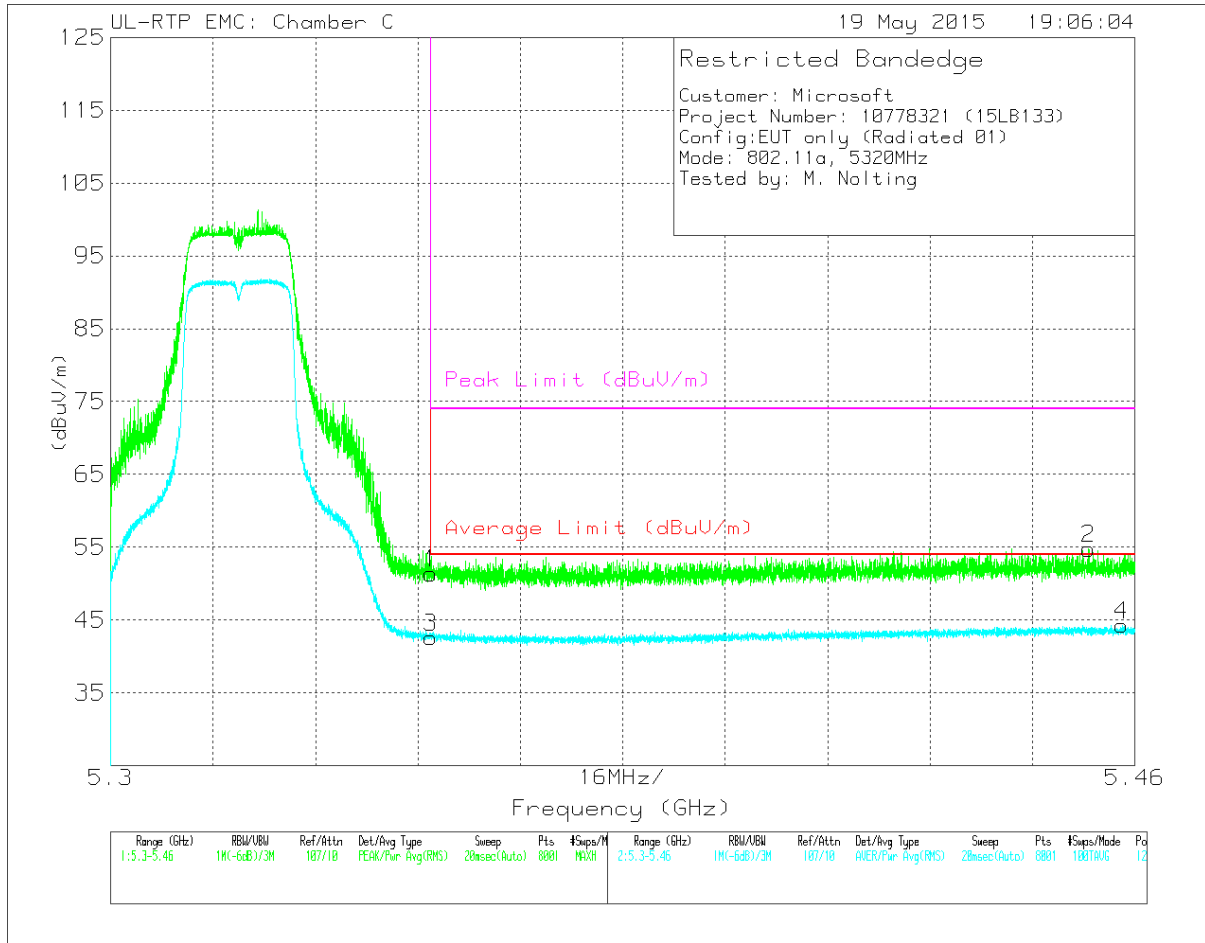
| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AT0062 (dB/m) | Amp/Cbl/F ltr/Pad | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|-------------------|----------------------------|------------------------|-------------|---------------------|----------------|----------------|-------------|----------|
| 1      | * 5.35          | 40.36                | Pk  | 34.5          | -22.8             | 52.06                      | -                      | -           | 74                  | -21.94         | 49             | 214         | H        |
| 2      | * 5.422         | 43.05                | Pk  | 34.5          | -22.4             | 55.15                      | -                      | -           | 74                  | -18.85         | 49             | 214         | H        |
| 3      | * 5.35          | 31.71                | RMS | 34.5          | -22.8             | 43.41                      | 54                     | -10.59      | -                   | -              | 49             | 214         | H        |
| 4      | * 5.455         | 32.3                 | RMS | 34.5          | -22.1             | 44.7                       | 54                     | -9.3        | -                   | -              | 49             | 214         | H        |

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

# VERTICAL



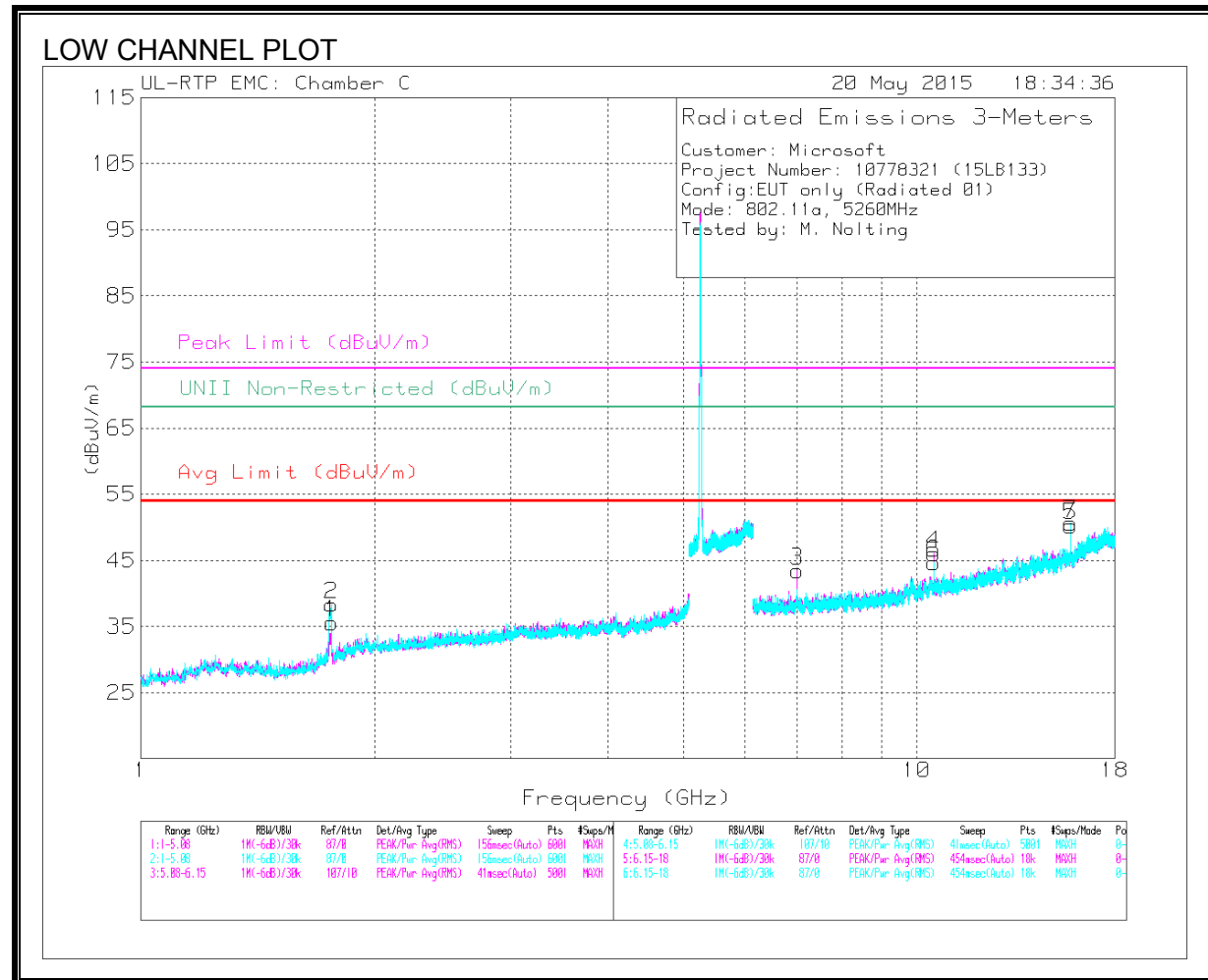
| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AT0062 (dB/m) | Amp/Cbl/F ltr/Pad | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|-------------------|----------------------------|------------------------|-------------|---------------------|----------------|----------------|-------------|----------|
| 1      | * 5.35          | 39.7                 | Pk  | 34.5          | -22.8             | 51.4                       | -                      | -           | 74                  | -22.6          | 127            | 220         | V        |
| 2      | * 5.453         | 42.39                | Pk  | 34.5          | -22.1             | 54.79                      | -                      | -           | 74                  | -19.21         | 127            | 220         | V        |
| 3      | * 5.35          | 30.93                | RMS | 34.5          | -22.8             | 42.63                      | 54                     | -11.37      | -                   | -              | 127            | 220         | V        |
| 4      | * 5.458         | 31.9                 | RMS | 34.5          | -22.1             | 44.3                       | 54                     | -9.7        | -                   | -              | 127            | 220         | V        |

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

## HARMONICS AND SPURIOUS EMISSIONS



## DATA

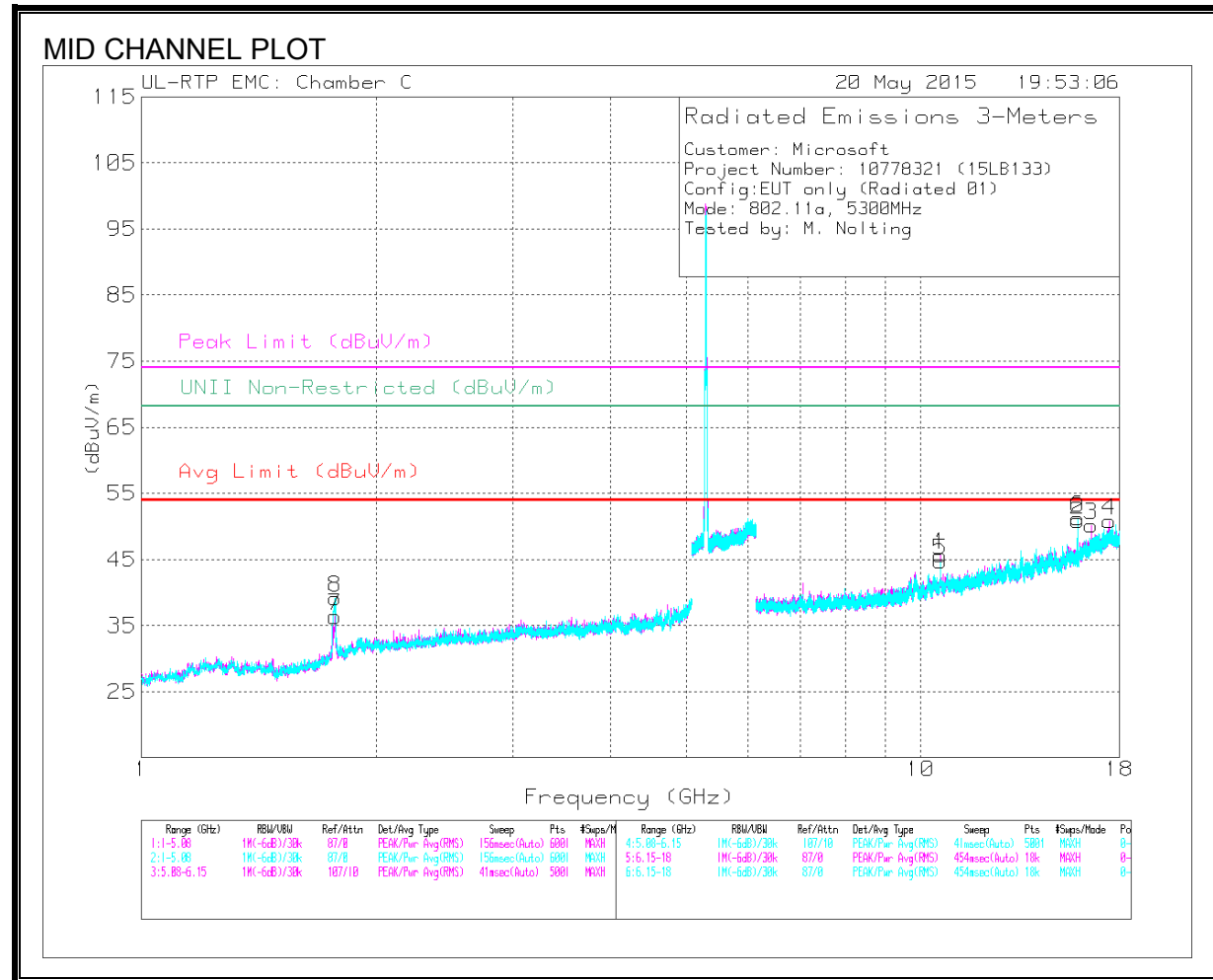
| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AT0062 (dB/m) | Amp/Cbl/F ltr/Pad | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | UNII Non-Restricted (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|-------------------|----------------------------|--------------------|-------------|---------------------|----------------|------------------------------|----------------|----------------|-------------|----------|
| 5      | * 15.778        | 46.47                | PK3 | 40.5          | -23.5             | 63.47                      | -                  | -           | 74                  | -10.53         | -                            | -              | 193            | 275         | H        |
|        | * 15.78         | 32.93                | ADR | 40.5          | -23.5             | 49.93                      | 54                 | -4.07       | -                   | -              | -                            | -              | 193            | 275         | H        |
| 7      | * 15.785        | 46.44                | PK3 | 40.5          | -23.5             | 63.44                      | -                  | -           | 74                  | -10.56         | -                            | -              | 211            | 174         | V        |
|        | * 15.778        | 32.05                | ADR | 40.5          | -23.5             | 49.05                      | 54                 | -4.95       | -                   | -              | -                            | -              | 211            | 174         | V        |
| 2      | 1.749           | 55.21                | PK3 | 29.7          | -37.9             | 47.01                      | -                  | -           | -                   | -              | 68.2                         | -21.19         | 55             | 262         | V        |
| 1      | 1.756           | 52.54                | PK3 | 29.8          | -37.8             | 44.54                      | -                  | -           | -                   | -              | 68.2                         | -23.66         | 305            | 110         | H        |
| 3      | 7.014           | 42.57                | PK3 | 35.7          | -27.3             | 50.97                      | -                  | -           | -                   | -              | 68.2                         | -17.23         | 40             | 252         | H        |
| 4      | 10.523          | 44.99                | PK3 | 37.5          | -25.8             | 56.69                      | -                  | -           | -                   | -              | 68.2                         | -11.51         | 168            | 187         | H        |
| 6      | 10.519          | 44.04                | PK3 | 37.5          | -25.7             | 55.84                      | -                  | -           | -                   | -              | 68.2                         | -12.36         | 78             | 111         | V        |

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

PK3 - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average



## DATA

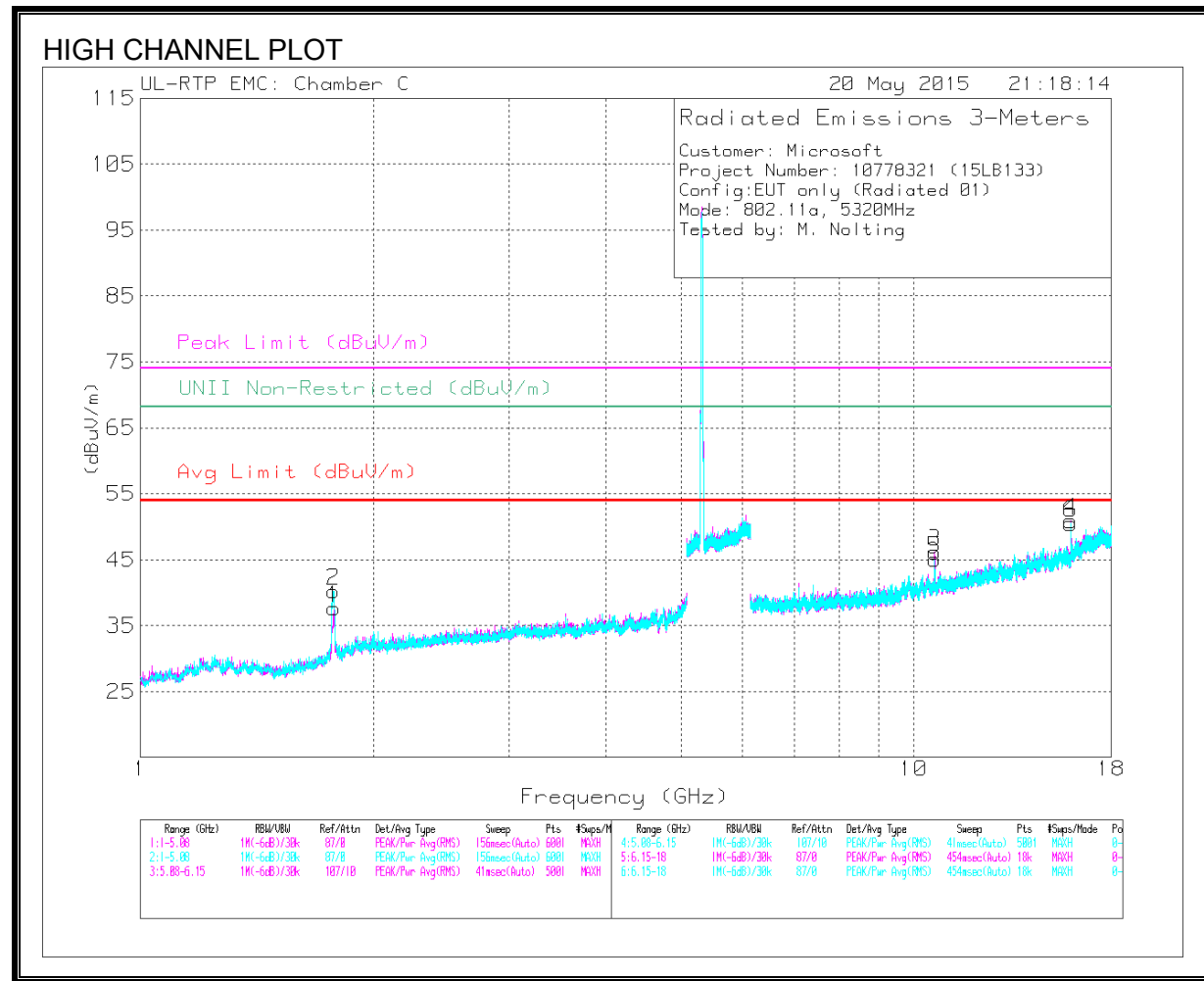
| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AT0062 (dB/m) | Amp/Cbl/F ltr/Pad | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | UNII Non-Restricted (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|-------------------|----------------------------|--------------------|-------------|---------------------|----------------|------------------------------|----------------|----------------|-------------|----------|
| 2      | * 15.9          | 46.05                | PK3 | 40.6          | -23.9             | 62.75                      | -                  | -           | 74                  | -11.25         | -                            | -              | 192            | 281         | H        |
|        | * 15.901        | 32.73                | ADR | 40.6          | -23.9             | 49.43                      | 54                 | -4.57       | -                   | -              | -                            | -              | 192            | 281         | H        |
| 6      | * 15.893        | 45.86                | PK3 | 40.6          | -23.8             | 62.66                      | -                  | -           | 74                  | -11.34         | -                            | -              | 208            | 136         | V        |
|        | * 15.9          | 31.94                | ADR | 40.6          | -23.9             | 48.64                      | 54                 | -5.36       | -                   | -              | -                            | -              | 208            | 136         | V        |
| 1      | * 10.6          | 44.04                | PK3 | 37.6          | -25.5             | 56.14                      | -                  | -           | 74                  | -17.86         | -                            | -              | 168            | 181         | H        |
|        | * 10.6          | 32.38                | ADR | 37.6          | -25.5             | 44.48                      | 54                 | -9.52       | -                   | -              | -                            | -              | 168            | 181         | H        |
| 5      | * 10.6          | 42.36                | PK3 | 37.6          | -25.5             | 54.46                      | -                  | -           | 74                  | -19.54         | -                            | -              | 74             | 105         | V        |
|        | * 10.601        | 30.56                | ADR | 37.6          | -25.5             | 42.66                      | 54                 | -11.34      | -                   | -              | -                            | -              | 74             | 105         | V        |
| 7      | 1.761           | 53.21                | PK3 | 29.9          | -37.8             | 45.31                      | -                  | -           | -                   | -              | 68.2                         | -22.89         | 304            | 111         | H        |
| 8      | 1.772           | 56.79                | PK3 | 30            | -37.8             | 48.99                      | -                  | -           | -                   | -              | 68.2                         | -19.21         | 200            | 248         | V        |
| 3      | 16.568          | 36.66                | PK3 | 41.6          | -21.5             | 56.76                      | -                  | -           | -                   | -              | 68.2                         | -11.44         | 0              | 134         | H        |
| 4      | 17.466          | 35.48                | PK3 | 41.6          | -19.9             | 57.18                      | -                  | -           | -                   | -              | 68.2                         | -11.02         | 2              | 353         | H        |

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

PK3 - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average



## DATA

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AT062 (dB/m) | Amp/Cbl/F ltr/Pad | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | UNII Non-Restricted (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|--------------|-------------------|----------------------------|--------------------|-------------|---------------------|----------------|------------------------------|----------------|----------------|-------------|----------|
| 3      | * 10.645        | 45.03                | PK3 | 37.7         | -25.6             | 57.13                      | -                  | -           | 74                  | -16.87         | -                            | -              | 167            | 186         | H        |
|        | * 10.64         | 32.8                 | ADR | 37.7         | -25.5             | 45                         | 54                 | -9          | -                   | -              | -                            | -              | 167            | 186         | H        |
| 4      | * 15.952        | 45.97                | PK3 | 40.7         | -23.9             | 62.77                      | -                  | -           | 74                  | -11.23         | -                            | -              | 192            | 284         | H        |
|        | * 15.958        | 31.81                | ADR | 40.7         | -23.8             | 48.71                      | 54                 | -5.29       | -                   | -              | -                            | -              | 192            | 284         | H        |
| 5      | * 10.636        | 42.01                | PK3 | 37.7         | -25.5             | 54.21                      | -                  | -           | 74                  | -19.79         | -                            | -              | 75             | 103         | V        |
|        | * 10.641        | 30.45                | ADR | 37.7         | -25.5             | 42.65                      | 54                 | -11.35      | -                   | -              | -                            | -              | 75             | 103         | V        |
| 6      | * 15.96         | 44.54                | PK3 | 40.7         | -23.7             | 61.54                      | -                  | -           | 74                  | -12.46         | -                            | -              | 208            | 141         | V        |
|        | * 15.959        | 30.96                | ADR | 40.7         | -23.8             | 47.86                      | 54                 | -6.14       | -                   | -              | -                            | -              | 208            | 141         | V        |
| 2      | 1.777           | 58.04                | PK3 | 30           | -37.8             | 50.24                      | -                  | -           | -                   | -              | 68.2                         | -17.96         | 207            | 248         | V        |
| 1      | 1.779           | 54.04                | PK3 | 30           | -37.7             | 46.34                      | -                  | -           | -                   | -              | 68.2                         | -21.86         | 302            | 101         | H        |

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

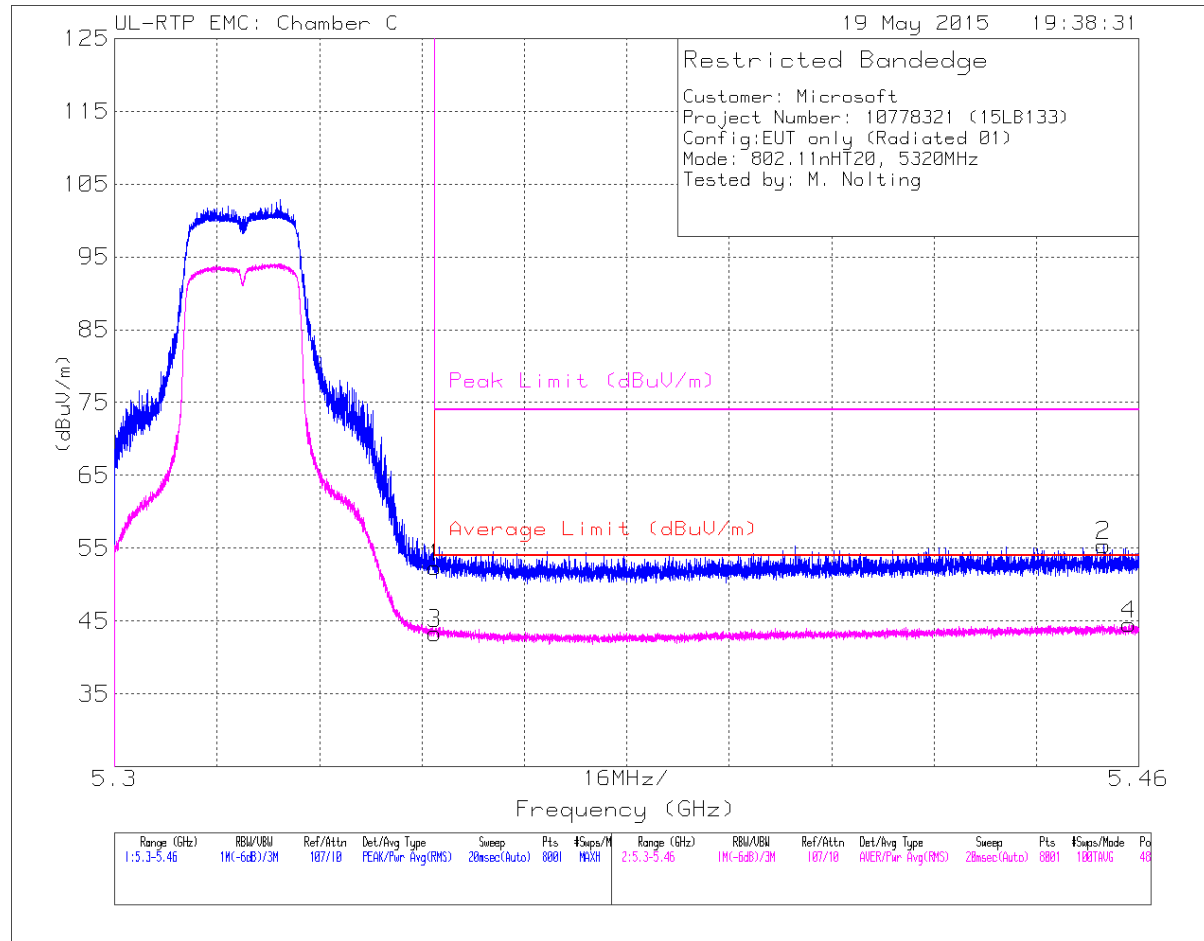
PK3 - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

## 9.6. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.3 GHz BAND

### AUTHORIZED BANDEGE (HIGH CHANNEL)

#### HORIZONTAL



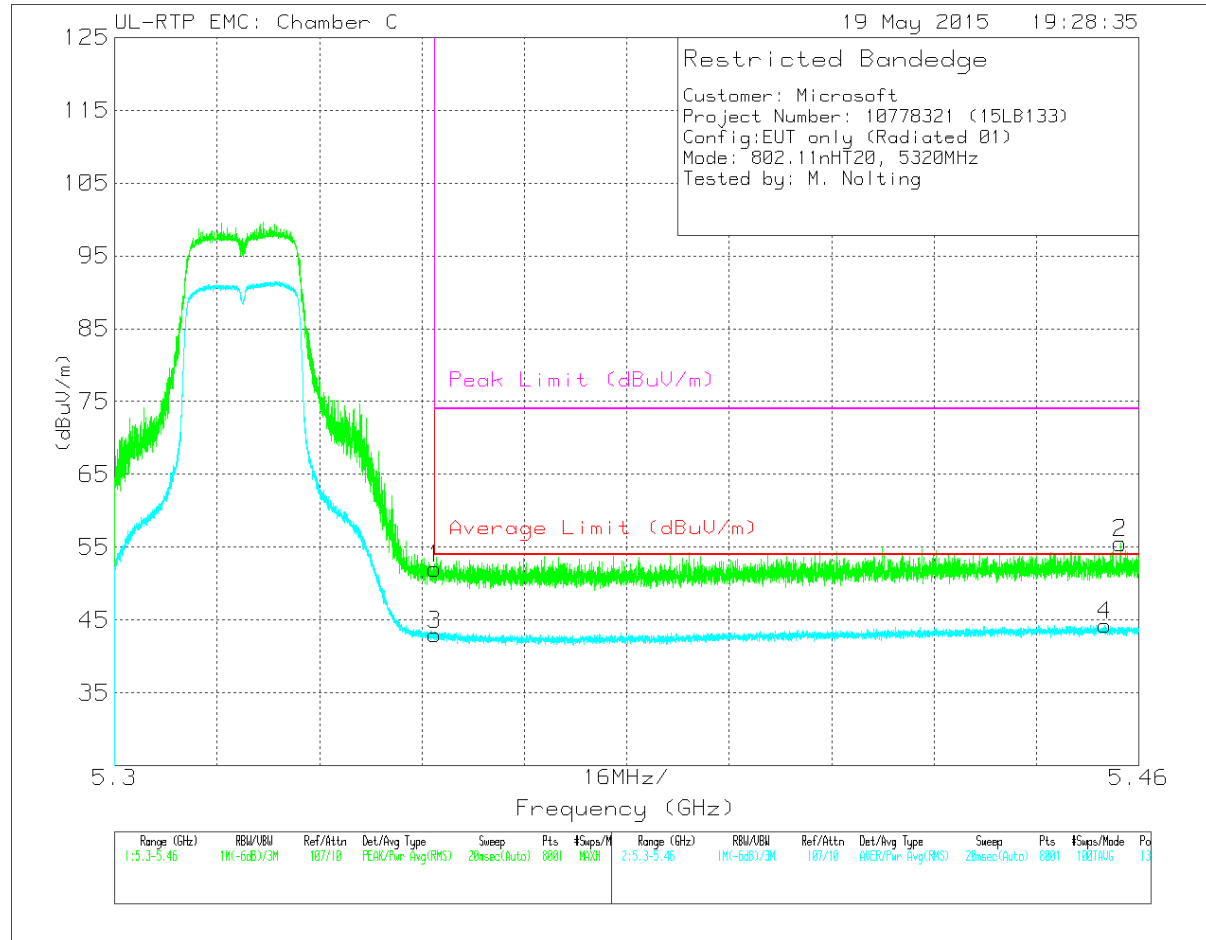
| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AT0062 (dB/m) | Amp/Cbl/Ftr/Pad | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|-----------------|----------------------------|------------------------|-------------|---------------------|----------------|----------------|-------------|----------|
| 1      | * 5.35          | 40.68                | Pk  | 34.5          | -22.8           | 52.38                      | -                      | -           | 74                  | -21.62         | 48             | 216         | H        |
| 2      | * 5.454         | 42.98                | Pk  | 34.5          | -22.1           | 55.38                      | -                      | -           | 74                  | -18.62         | 48             | 216         | H        |
| 3      | * 5.35          | 31.61                | RMS | 34.5          | -22.8           | 43.31                      | 54                     | -10.69      | -                   | -              | 48             | 216         | H        |
| 4      | * 5.458         | 32.18                | RMS | 34.5          | -22.1           | 44.58                      | 54                     | -9.42       | -                   | -              | 48             | 216         | H        |

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

# VERTICAL



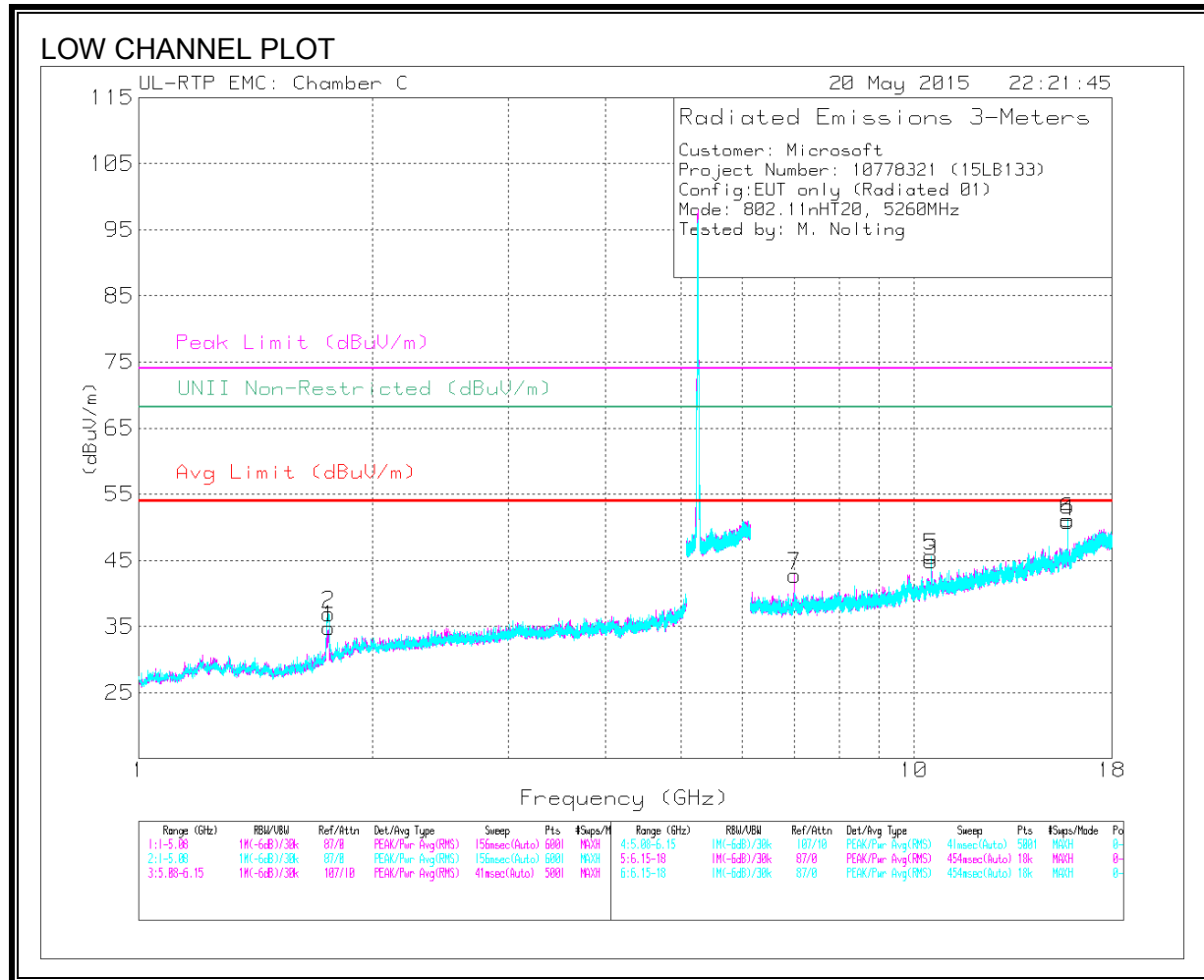
| Marker | Frequency (GHz) | Meter Reading (dBUV) | Det | AT0062 (dB/m) | Amp/Cbl/Ftr/Pad | Corrected Reading (dBUV/m) | Average Limit (dBUV/m) | Margin (dB) | Peak Limit (dBUV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|-----------------|----------------------------|------------------------|-------------|---------------------|----------------|----------------|-------------|----------|
| 1      | * 5.35          | 40.36                | Pk  | 34.5          | -22.8           | 52.06                      | -                      | -           | 74                  | -21.94         | 134            | 171         | V        |
| 2      | * 5.457         | 43.16                | Pk  | 34.5          | -22.1           | 55.56                      | -                      | -           | 74                  | -18.44         | 134            | 171         | V        |
| 3      | * 5.35          | 31.3                 | RMS | 34.5          | -22.8           | 43                         | 54                     | -11         | -                   | -              | 134            | 171         | V        |
| 4      | * 5.455         | 31.91                | RMS | 34.5          | -22.1           | 44.31                      | 54                     | -9.69       | -                   | -              | 134            | 171         | V        |

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

# HARMONICS AND SPURIOUS EMISSIONS (1-18GHz)



## DATA

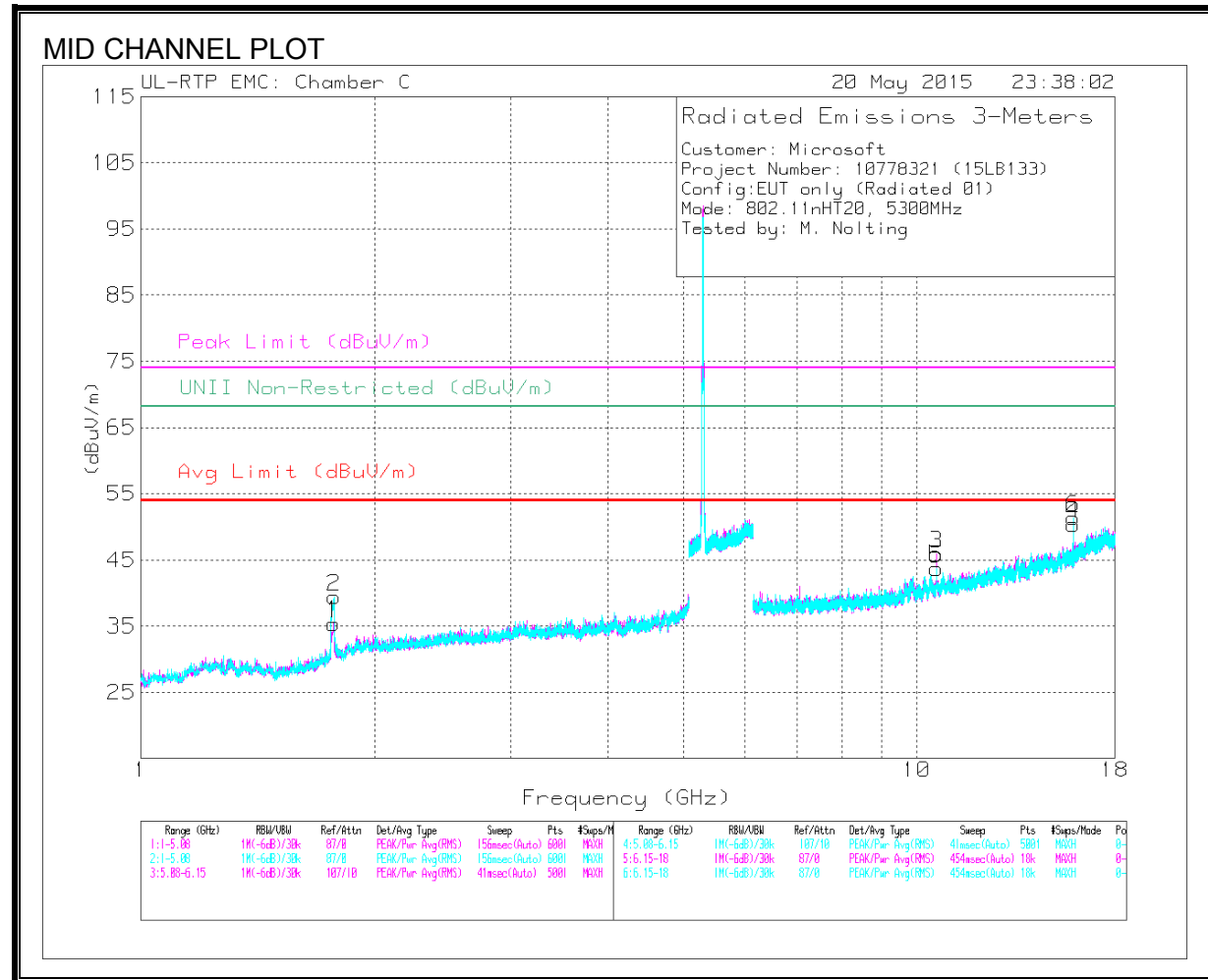
| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AT0062 (dB/m) | Amp/Cbl/F ltr/Pad | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | UNII Non-Restricted (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|-------------------|----------------------------|--------------------|-------------|---------------------|----------------|------------------------------|----------------|----------------|-------------|----------|
| 4      | * 15.779        | 46.22                | PK3 | 40.5          | -23.5             | 63.22                      | -                  | -           | 74                  | -10.78         | -                            | -              | 193            | 278         | H        |
|        | * 15.78         | 32.93                | ADR | 40.5          | -23.5             | 49.93                      | 54                 | -4.07       | -                   | -              | -                            | -              | 193            | 278         | H        |
| 6      | * 15.777        | 46.63                | PK3 | 40.5          | -23.5             | 63.63                      | -                  | -           | 74                  | -10.37         | -                            | -              | 182            | 140         | V        |
|        | * 15.778        | 32.12                | ADR | 40.5          | -23.5             | 49.12                      | 54                 | -4.88       | -                   | -              | -                            | -              | 182            | 140         | V        |
| 2      | 1.759           | 55.3                 | PK3 | 29.8          | -37.8             | 47.3                       | -                  | -           | -                   | -              | 68.2                         | -20.9          | 201            | 255         | V        |
| 1      | 1.755           | 52.68                | PK3 | 29.8          | -37.8             | 44.68                      | -                  | -           | -                   | -              | 68.2                         | -23.52         | 303            | 109         | H        |
| 7      | 7.013           | 42.71                | PK3 | 35.7          | -27.3             | 51.11                      | -                  | -           | -                   | -              | 68.2                         | -17.09         | 38             | 252         | H        |
| 5      | 10.52           | 43.9                 | PK3 | 37.5          | -25.7             | 55.7                       | -                  | -           | -                   | -              | 68.2                         | -12.5          | 79             | 110         | V        |
| 3      | 10.52           | 45.07                | PK3 | 37.5          | -25.7             | 56.87                      | -                  | -           | -                   | -              | 68.2                         | -11.33         | 167            | 184         | H        |

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

PK3 - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average



## DATA

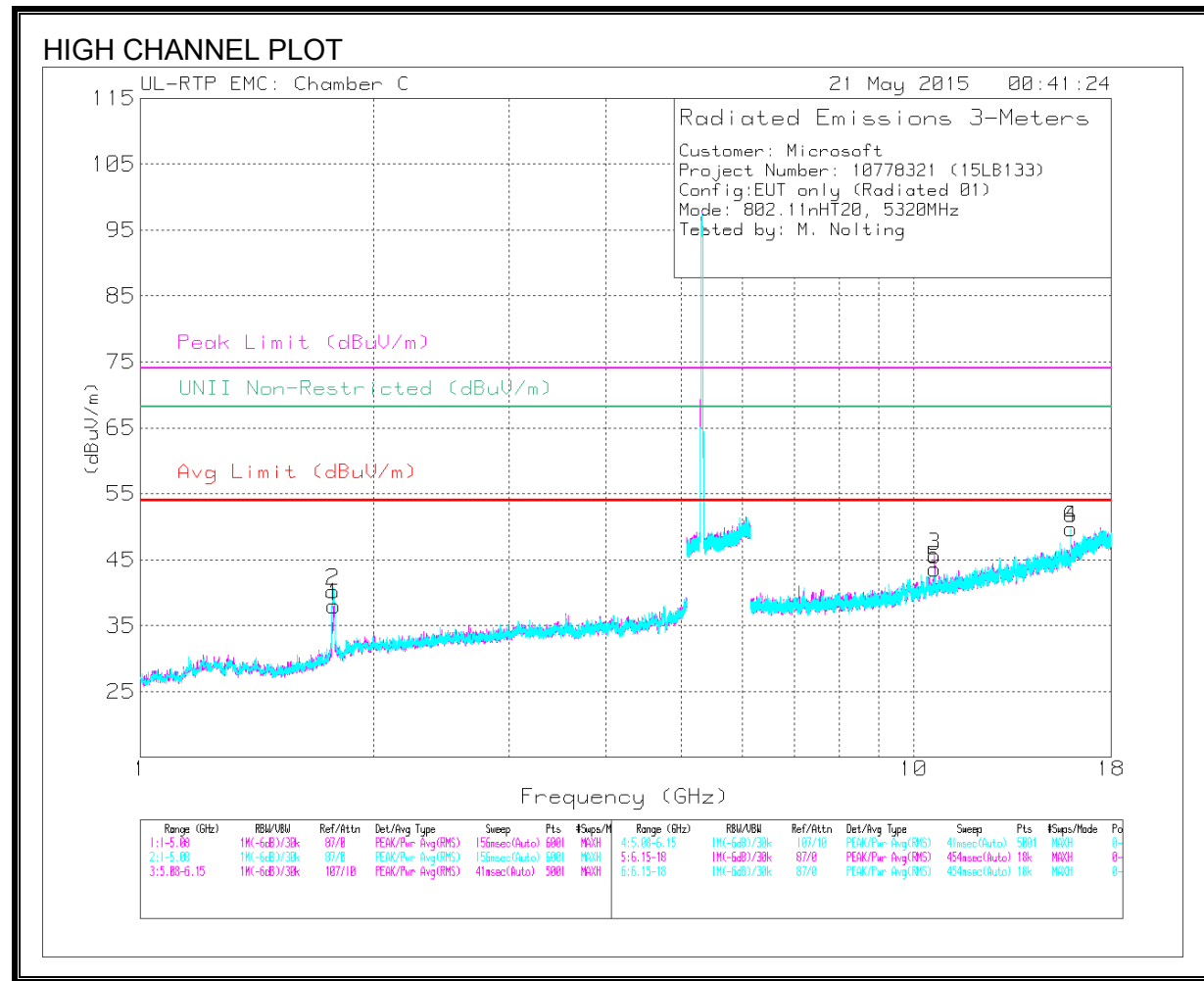
| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AT0062 (dB/m) | Amp/Cbl/F ltr/Pad | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | UNII Non-Restricted (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|-------------------|----------------------------|--------------------|-------------|---------------------|----------------|------------------------------|----------------|----------------|-------------|----------|
| 3      | * 10.6          | 42.9                 | PK3 | 37.6          | -25.5             | 55                         | -                  | -           | 74                  | -19            | -                            | -              | 169            | 207         | H        |
|        | * 10.6          | 31.9                 | ADR | 37.6          | -25.5             | 44                         | 54                 | -10         | -                   | -              | -                            | -              | 169            | 207         | H        |
| 4      | * 15.902        | 46.58                | PK3 | 40.6          | -23.9             | 63.28                      | -                  | -           | 74                  | -10.72         | -                            | -              | 192            | 281         | H        |
|        | * 15.902        | 32.46                | ADR | 40.6          | -23.9             | 49.16                      | 54                 | -4.84       | -                   | -              | -                            | -              | 192            | 281         | H        |
| 5      | * 10.605        | 42.43                | PK3 | 37.6          | -25.4             | 54.63                      | -                  | -           | 74                  | -19.37         | -                            | -              | 69             | 101         | V        |
|        | * 10.6          | 30.26                | ADR | 37.6          | -25.5             | 42.36                      | 54                 | -11.64      | -                   | -              | -                            | -              | 69             | 101         | V        |
| 6      | * 15.891        | 45.3                 | PK3 | 40.6          | -23.8             | 62.1                       | -                  | -           | 74                  | -11.9          | -                            | -              | 207            | 134         | V        |
|        | * 15.9          | 31.33                | ADR | 40.6          | -23.9             | 48.03                      | 54                 | -5.97       | -                   | -              | -                            | -              | 207            | 134         | V        |
| 1      | 1.775           | 54.17                | PK3 | 30            | -37.8             | 46.37                      | -                  | -           | -                   | -              | 68.2                         | -21.83         | 302            | 101         | H        |
| 2      | 1.772           | 56.58                | PK3 | 30            | -37.8             | 48.78                      | -                  | -           | -                   | -              | 68.2                         | -19.42         | 204            | 248         | V        |

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

PK3 - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average



### DATA

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AT0062 (dB/m) | Amp/Cbl/F ltr/Pad | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | UNII Non-Restricted (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|-------------------|----------------------------|--------------------|-------------|---------------------|----------------|------------------------------|----------------|----------------|-------------|----------|
| 3      | * 10.636        | 44.7                 | PK3 | 37.7          | -25.5             | 56.9                       | -                  | -           | 74                  | -17.1          | -                            | -              | 167            | 187         | H        |
|        | * 10.639        | 32.03                | ADR | 37.7          | -25.5             | 44.23                      | 54                 | -9.77       | -                   | -              | -                            | -              | 167            | 187         | H        |
| 4      | * 15.956        | 45.62                | PK3 | 40.7          | -23.8             | 62.52                      | -                  | -           | 74                  | -11.48         | -                            | -              | 191            | 277         | H        |
|        | * 15.957        | 31.33                | ADR | 40.7          | -23.8             | 48.23                      | 54                 | -5.77       | -                   | -              | -                            | -              | 191            | 277         | H        |
| 5      | * 10.644        | 42.05                | PK3 | 37.7          | -25.6             | 54.15                      | -                  | -           | 74                  | -19.85         | -                            | -              | 75             | 108         | V        |
|        | * 10.64         | 29.99                | ADR | 37.7          | -25.5             | 42.19                      | 54                 | -11.81      | -                   | -              | -                            | -              | 75             | 108         | V        |
| 6      | * 15.951        | 43.66                | PK3 | 40.7          | -23.9             | 60.46                      | -                  | -           | 74                  | -13.54         | -                            | -              | 207            | 129         | V        |
|        | * 15.958        | 30.52                | ADR | 40.7          | -23.8             | 47.42                      | 54                 | -6.58       | -                   | -              | -                            | -              | 207            | 129         | V        |
| 2      | 1.776           | 57.51                | PK3 | 30            | -37.8             | 49.71                      | -                  | -           | -                   | -              | 68.2                         | -18.49         | 203            | 248         | V        |
| 1      | 1.778           | 54.5                 | PK3 | 30            | -37.8             | 46.7                       | -                  | -           | -                   | -              | 68.2                         | -21.5          | 302            | 102         | H        |

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

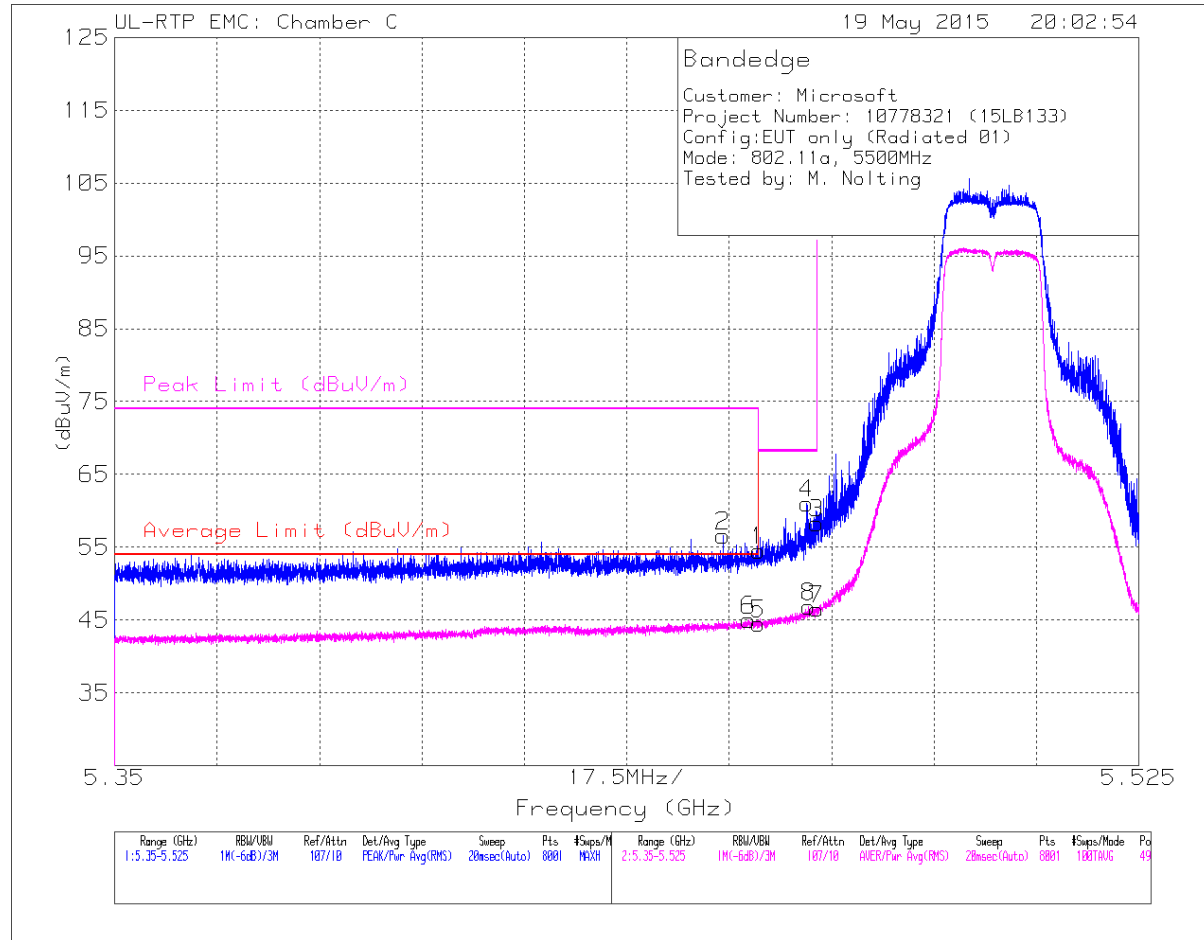
PK3 - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

## 9.7. TX ABOVE 1 GHz 802.11a MODE IN THE 5.6 GHz BAND

### RESTRICTED BANDEGE (LOW CHANNEL)

#### HORIZONTAL



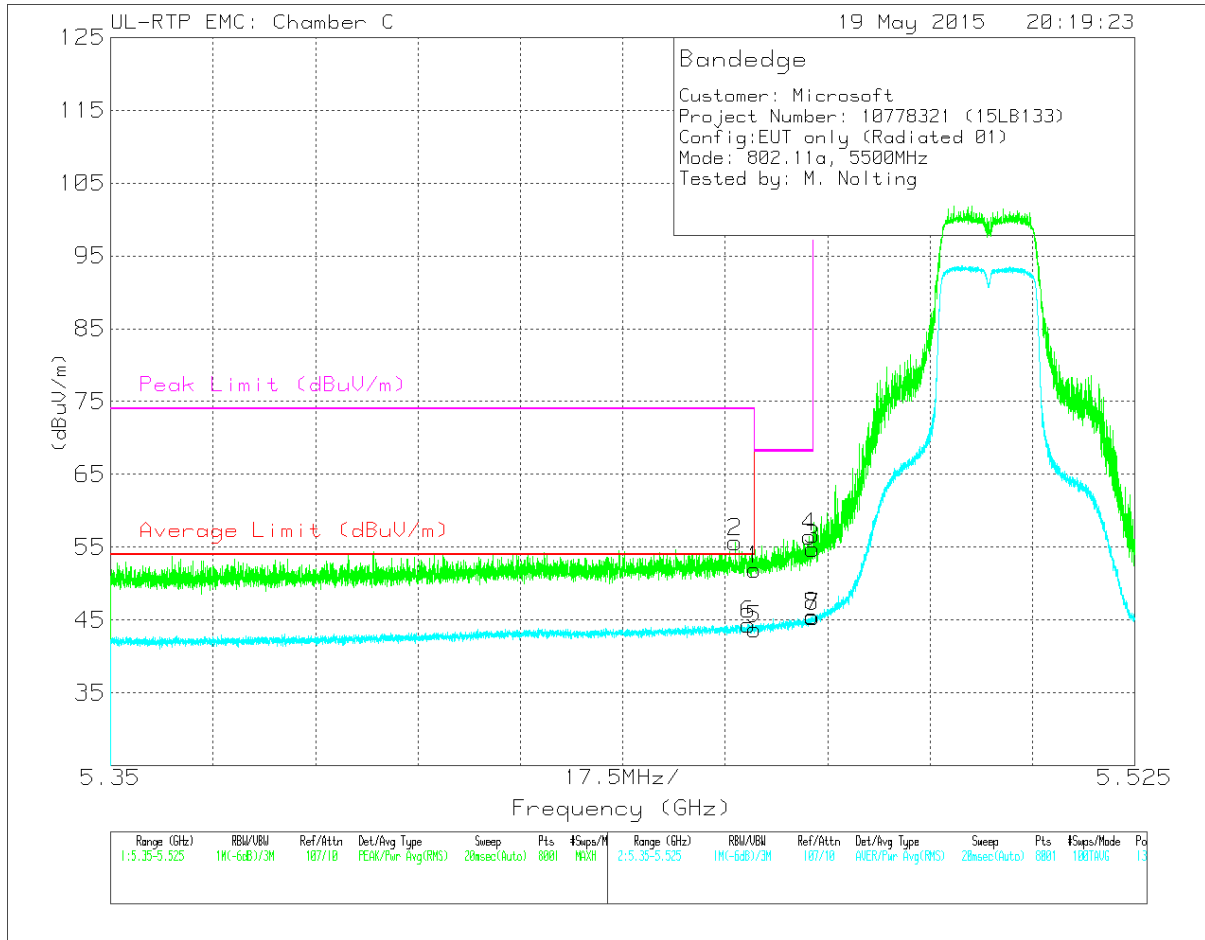
| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AT0062 (dB/m) | Amp/Cbl/Fil tr/Pad | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|--------------------|----------------------------|------------------------|-------------|---------------------|----------------|----------------|-------------|----------|
| 2      | * 5.454         | 44.16                | Pk  | 34.5          | -22.1              | 56.56                      | -                      | -           | 74                  | -17.44         | 49             | 220         | H        |
| 6      | * 5.458         | 32.59                | RMS | 34.5          | -22.1              | 44.99                      | 54                     | -9.01       | -                   | -              | 49             | 220         | H        |
| 1      | * 5.46          | 42.12                | Pk  | 34.5          | -22.1              | 54.52                      | -                      | -           | 74                  | -19.48         | 49             | 220         | H        |
| 5      | * 5.46          | 32.09                | RMS | 34.5          | -22.1              | 44.49                      | 54                     | -9.51       | -                   | -              | 49             | 220         | H        |
| 4      | 5.468           | 48.61                | Pk  | 34.5          | -22.1              | 61.01                      | -                      | -           | 68.2                | -7.19          | 49             | 220         | H        |
| 8      | 5.469           | 34.41                | RMS | 34.5          | -22.1              | 46.81                      | -                      | -           | -                   | -              | 49             | 220         | H        |
| 3      | 5.47            | 45.9                 | Pk  | 34.5          | -22.1              | 58.3                       | -                      | -           | 68.2                | -9.9           | 49             | 220         | H        |
| 7      | 5.47            | 34.1                 | RMS | 34.5          | -22.1              | 46.5                       | -                      | -           | -                   | -              | 49             | 220         | H        |

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL



| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AT0062 (dB/m) | Amp/Cbl/Ftr/Pad | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|-----------------|----------------------------|------------------------|-------------|---------------------|----------------|----------------|-------------|----------|
| 2      | * 5.457         | 43.29                | Pk  | 34.5          | -22.1           | 55.69                      | -                      | -           | 74                  | -18.31         | 138            | 172         | V        |
| 6      | * 5.459         | 32                   | RMS | 34.5          | -22.1           | 44.4                       | 54                     | -9.6        | -                   | -              | 138            | 172         | V        |
| 1      | * 5.46          | 39.51                | Pk  | 34.5          | -22.1           | 51.91                      | -                      | -           | 74                  | -22.09         | 138            | 172         | V        |
| 5      | * 5.46          | 31.36                | RMS | 34.5          | -22.1           | 43.76                      | 54                     | -10.24      | -                   | -              | 138            | 172         | V        |
| 4      | 5.469           | 44.03                | Pk  | 34.5          | -22.1           | 56.43                      | -                      | -           | 68.2                | -11.77         | 138            | 172         | V        |
| 3      | 5.47            | 42.34                | Pk  | 34.5          | -22.1           | 54.74                      | -                      | -           | 68.2                | -13.46         | 138            | 172         | V        |
| 7      | 5.47            | 33.04                | RMS | 34.5          | -22.1           | 45.44                      | -                      | -           | -                   | -              | 138            | 172         | V        |
| 8      | 5.47            | 33.13                | RMS | 34.5          | -22.1           | 45.53                      | -                      | -           | -                   | -              | 138            | 172         | V        |

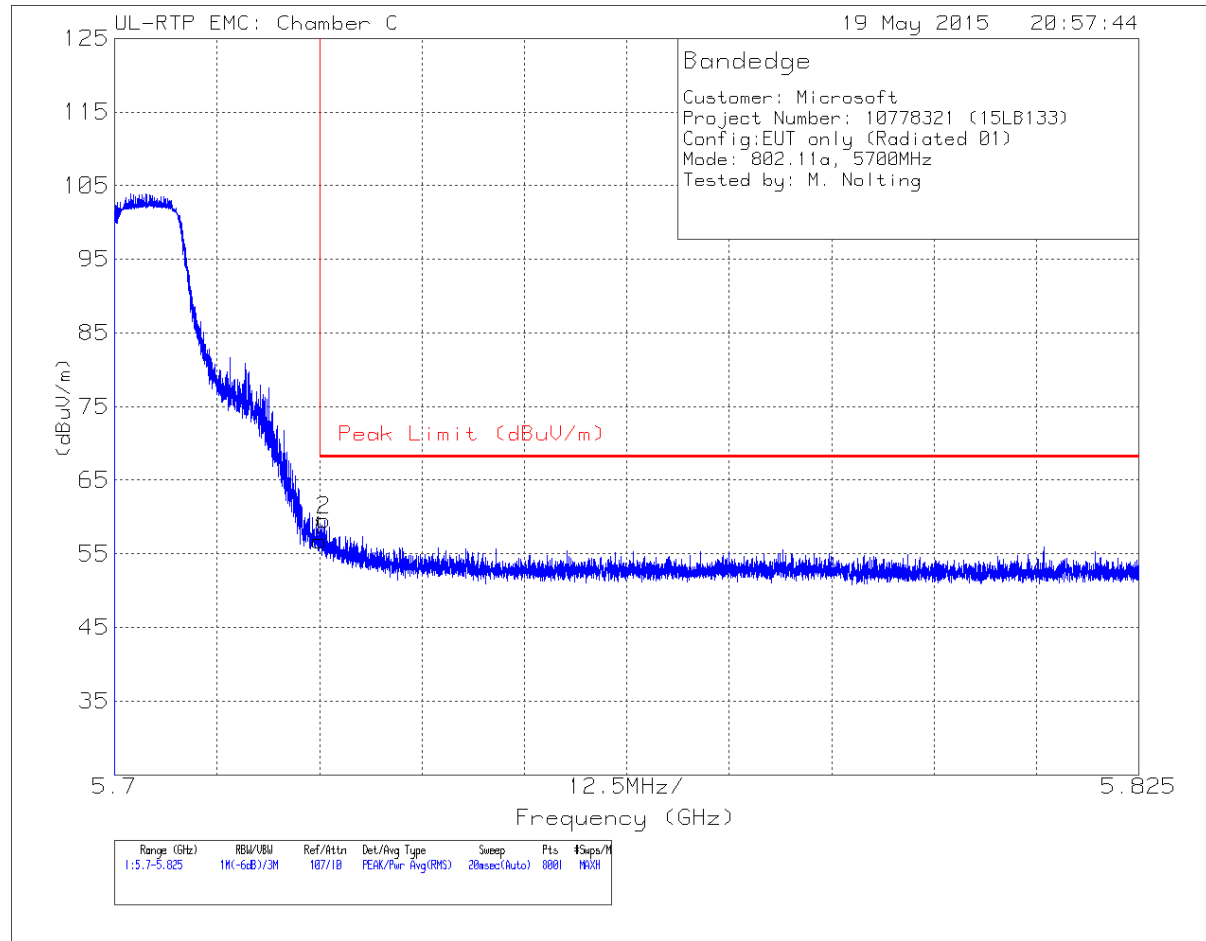
\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

**AUTHORIZED BANDEDGE (HIGH CHANNEL)**

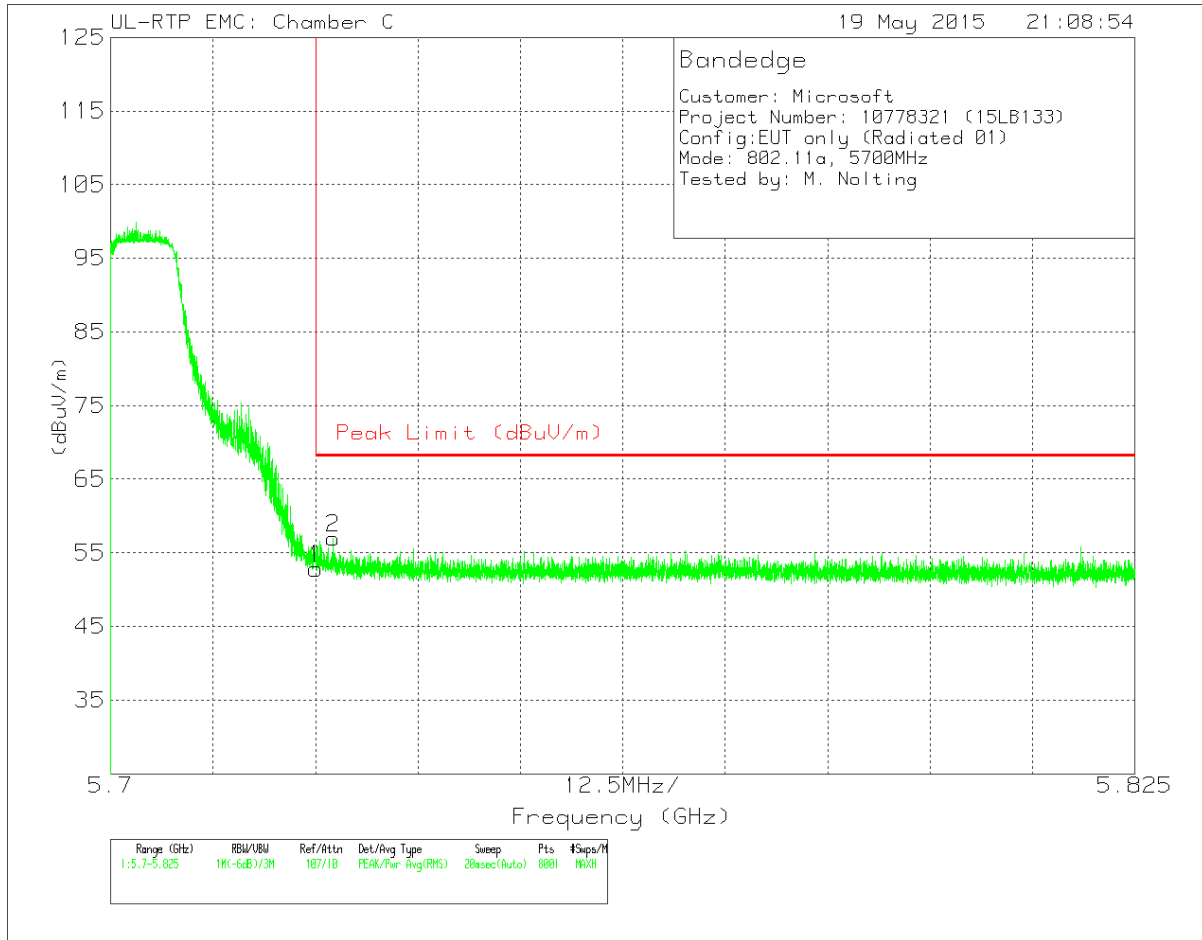
**HORIZONTAL**



| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AT0062 (dB/m) | Amp/Cbl/FI tr/Pad | Corrected Reading (dBuV/m) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|-------------------|----------------------------|---------------------|----------------|----------------|-------------|----------|
| 1      | 5.725           | 43.98                | Pk  | 34.6          | -21.8             | 56.78                      | 68.2                | -11.42         | 45             | 222         | H        |
| 2      | 5.726           | 46.79                | Pk  | 34.6          | -21.8             | 59.59                      | 68.2                | -8.61          | 45             | 222         | H        |

Pk - Peak detector

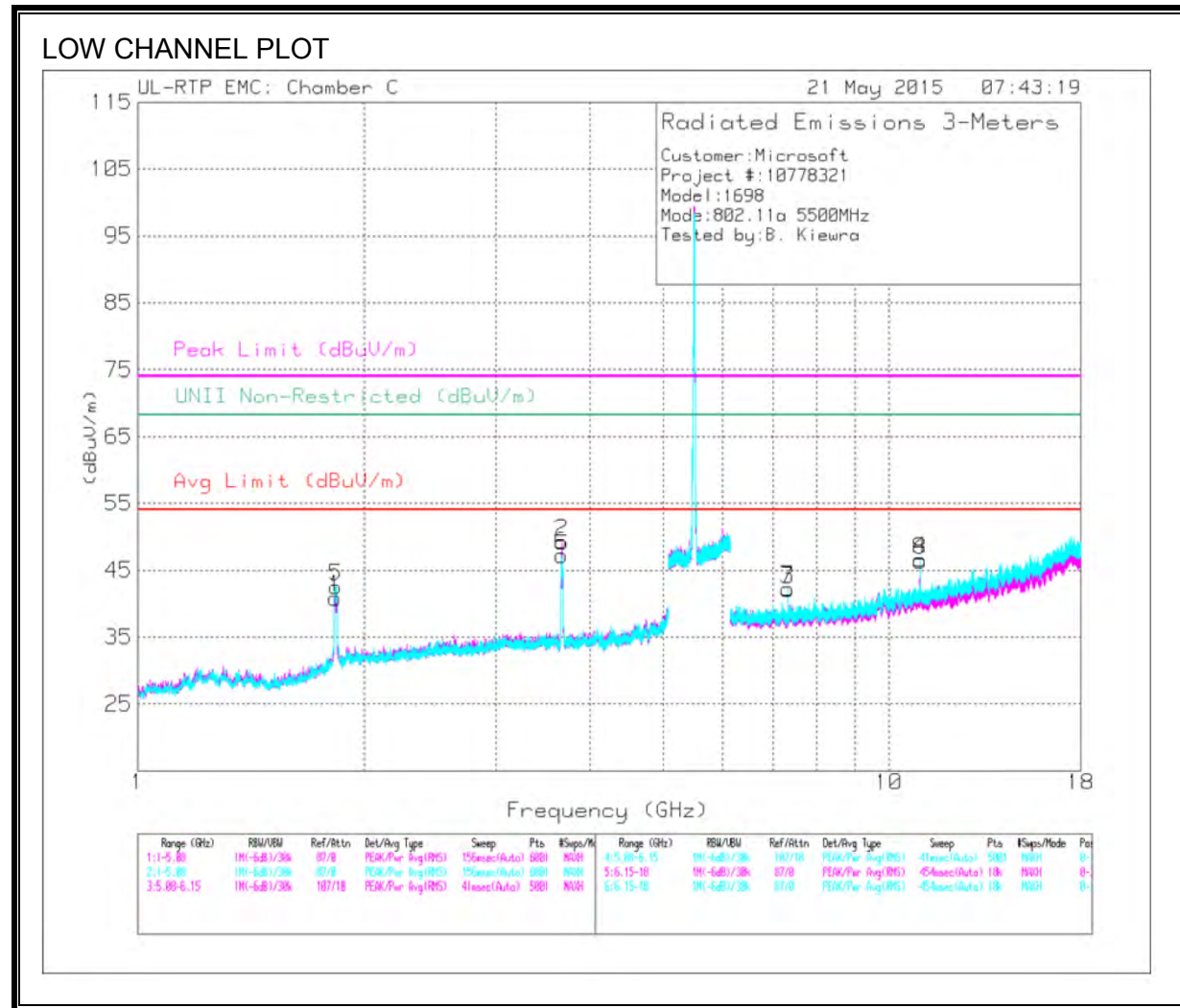
VERTICAL



| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AT0062 (dB/m) | Amp/Cbl/FI tr/Pad | Corrected Reading (dBuV/m) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|-------------------|----------------------------|---------------------|----------------|----------------|-------------|----------|
| 1      | 5.725           | 40.03                | Pk  | 34.6          | -21.8             | 52.83                      | 68.2                | -15.37         | 138            | 171         | V        |
| 2      | 5.727           | 44.19                | Pk  | 34.6          | -21.8             | 56.99                      | 68.2                | -11.21         | 138            | 171         | V        |

Pk - Peak detector

**HARMONICS AND SPURIOUS EMISSIONS**



**DATA**

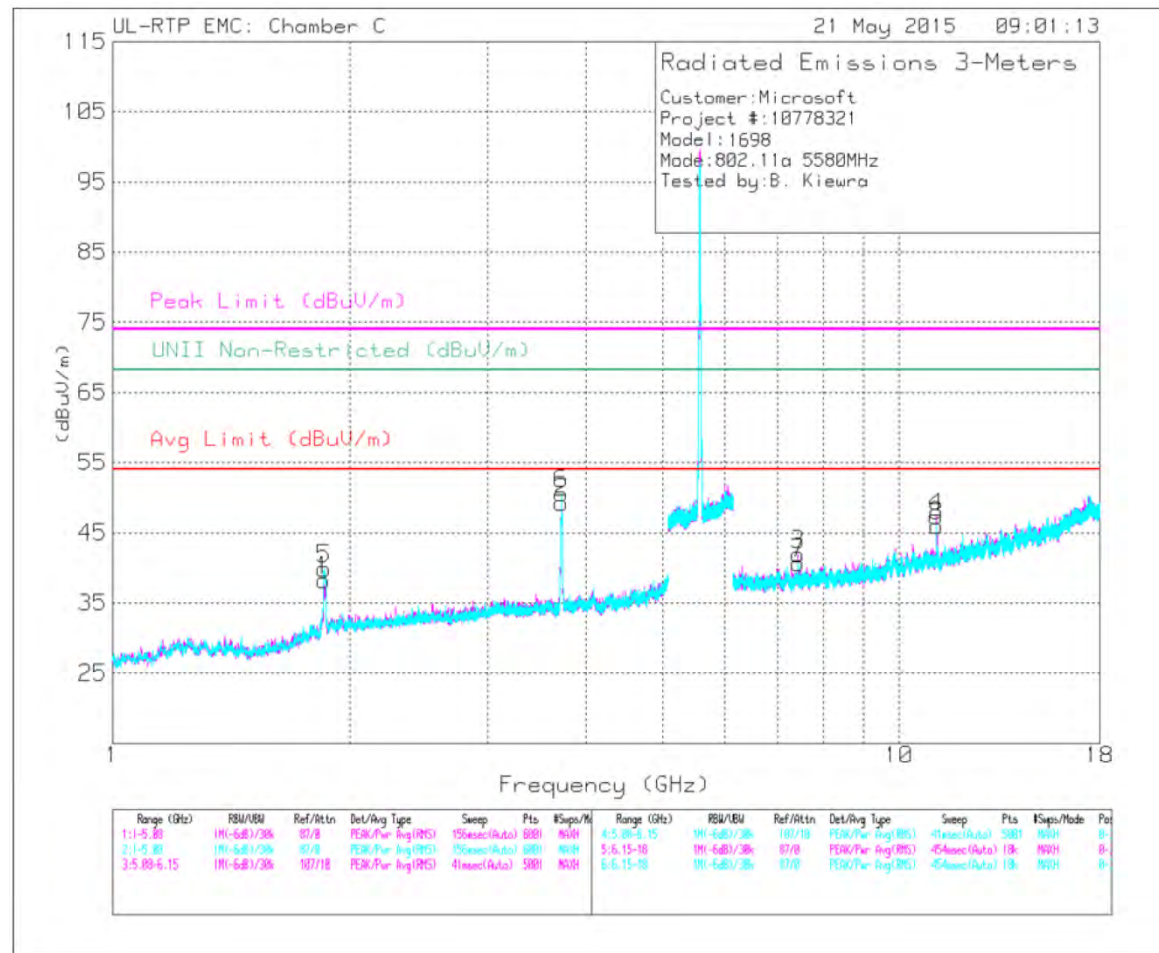
| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AT0062 (dB/m) | Amp/Cbl /Filtr/Pad | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | UNII Non-Restricted (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|--------------------|----------------------------|--------------------|-------------|---------------------|----------------|------------------------------|----------------|----------------|-------------|----------|
| 1      | 1.84            | 57.07                | PK3 | 30.8          | -37.6              | 50.27                      | -                  | -           | 74                  | -23.73         | 68.2                         | -17.93         | 167            | 174         | H        |
| 2      | * 3.666         | 59.83                | PK3 | 33.2          | -34.9              | 58.13                      | -                  | -           | 74                  | -15.87         | 68.2                         | -10.07         | 223            | 164         | H        |
|        | * 3.667         | 47.7                 | ADR | 33.2          | -34.9              | 46                         | 54                 | -8          | -                   | -              | -                            | -              | 223            | 164         | H        |
| 3      | * 7.333         | 42.74                | PK3 | 35.7          | -28.4              | 50.04                      | -                  | -           | 74                  | -23.96         | 68.2                         | -18.16         | 53             | 277         | H        |
|        | * 7.333         | 34.1                 | ADR | 35.7          | -28.4              | 41.4                       | 54                 | -12.6       | -                   | -              | -                            | -              | 53             | 277         | H        |
| 4      | * 11.003        | 41.36                | PK3 | 37.7          | -24.7              | 54.36                      | -                  | -           | 74                  | -19.64         | 68.2                         | -13.84         | 204            | 205         | H        |
|        | * 10.999        | 29.82                | ADR | 37.7          | -24.7              | 42.82                      | 54                 | -11.18      | -                   | -              | -                            | -              | 204            | 205         | H        |
| 5      | 1.827           | 58.45                | PK3 | 30.6          | -37.6              | 51.45                      | -                  | -           | 74                  | -22.55         | 68.2                         | -16.75         | 21             | 249         | V        |
| 6      | * 3.672         | 58.2                 | PK3 | 33.2          | -34.8              | 56.6                       | -                  | -           | 74                  | -17.4          | 68.2                         | -11.6          | 136            | 231         | V        |
|        | * 3.667         | 46.48                | ADR | 33.2          | -34.9              | 44.78                      | 54                 | -9.22       | -                   | -              | -                            | -              | 136            | 231         | V        |
| 7      | * 7.333         | 42.74                | PK3 | 35.7          | -28.4              | 50.04                      | -                  | -           | 74                  | -23.96         | 68.2                         | -18.16         | 32             | 194         | V        |
|        | * 7.333         | 34.21                | ADR | 35.7          | -28.4              | 41.51                      | 54                 | -12.49      | -                   | -              | -                            | -              | 32             | 194         | V        |
| 8      | * 10.999        | 42.17                | PK3 | 37.7          | -24.6              | 55.27                      | -                  | -           | 74                  | -18.73         | 68.2                         | -12.93         | 76             | 121         | V        |
|        | * 11            | 29.83                | ADR | 37.7          | -24.7              | 42.83                      | 54                 | -11.17      | -                   | -              | -                            | -              | 76             | 121         | V        |

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK3 - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

# MID CHANNEL PLOT



## DATA

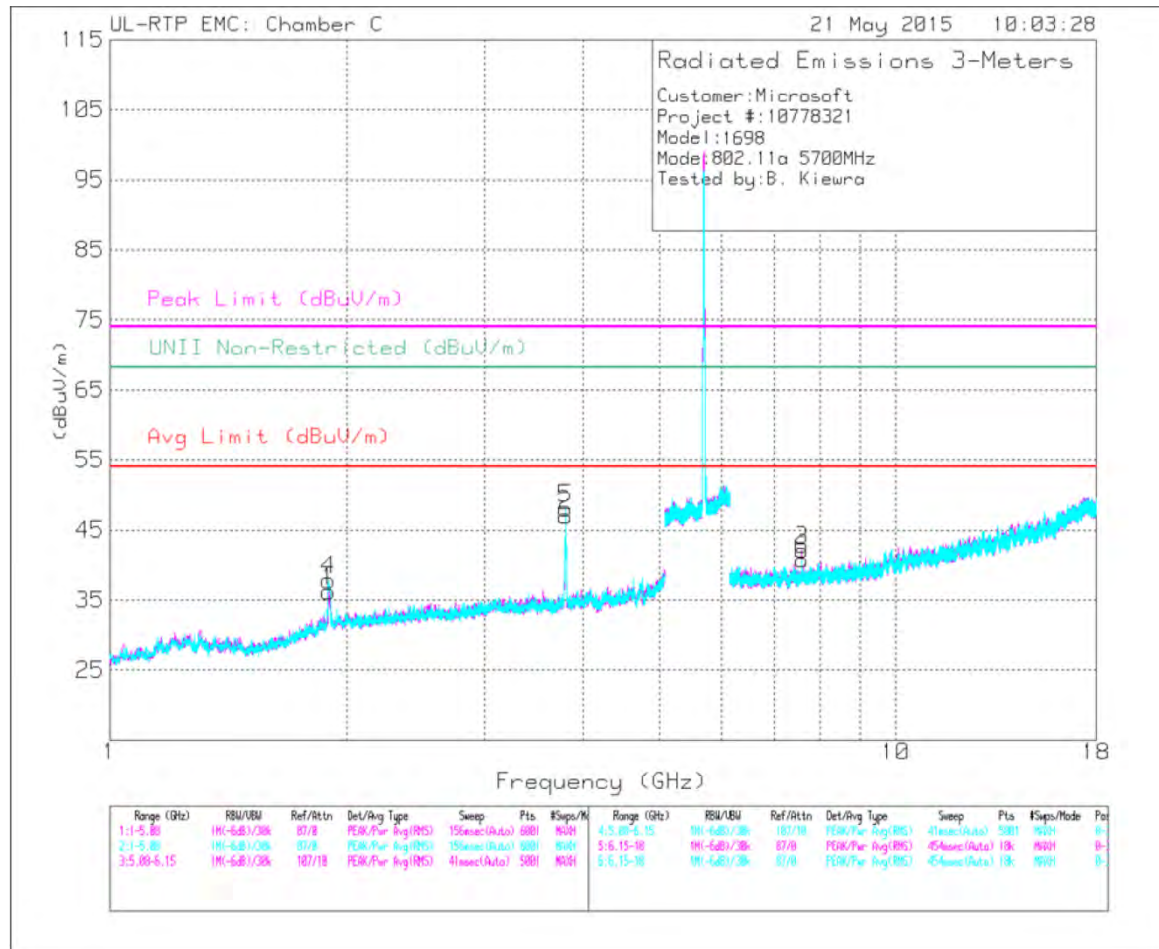
| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AT0062 (dB/m) | Amp/Cbl/Ftr/Pad | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | UNII Non-Restricted (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|-----------------|----------------------------|--------------------|-------------|---------------------|----------------|------------------------------|----------------|----------------|-------------|----------|
| 1      | 1.857           | 54.88                | PK3 | 31            | -37.6           | 48.28                      | -                  | -           | 74                  | -25.72         | 68.2                         | -19.92         | 103            | 335         | H        |
| 2      | * 3.72          | 61.22                | PK3 | 33.3          | -34.3           | 60.22                      | -                  | -           | 74                  | -13.78         | 68.2                         | -7.98          | 221            | 187         | H        |
|        | * 3.72          | 49.45                | ADR | 33.3          | -34.3           | 48.45                      | 54                 | -5.55       | -                   | -              | -                            | -              | 221            | 187         | H        |
| 3      | * 7.44          | 41.72                | PK3 | 35.7          | -27.7           | 49.72                      | -                  | -           | 74                  | -24.28         | 68.2                         | -18.48         | 64             | 204         | H        |
|        | * 7.44          | 32.85                | ADR | 35.7          | -27.7           | 40.85                      | 54                 | -13.15      | -                   | -              | -                            | -              | 64             | 204         | H        |
| 4      | * 11.159        | 44.81                | PK3 | 37.8          | -25.1           | 57.51                      | -                  | -           | 74                  | -16.49         | 68.2                         | -10.69         | 172            | 172         | H        |
|        | * 11.16         | 31.65                | ADR | 37.8          | -25.1           | 44.35                      | 54                 | -9.65       | -                   | -              | -                            | -              | 172            | 172         | H        |
| 5      | 1.858           | 57.86                | PK3 | 31            | -37.6           | 51.26                      | -                  | -           | 74                  | -22.74         | 68.2                         | -16.94         | 18             | 285         | V        |
| 6      | * 3.72          | 61.21                | PK3 | 33.3          | -34.3           | 60.21                      | -                  | -           | 74                  | -13.79         | 68.2                         | -7.99          | 141            | 233         | V        |
|        | * 3.72          | 48.53                | ADR | 33.3          | -34.3           | 47.53                      | 54                 | -6.47       | -                   | -              | -                            | -              | 141            | 233         | V        |
| 7      | * 7.44          | 41.43                | PK3 | 35.7          | -27.7           | 49.43                      | -                  | -           | 74                  | -24.57         | 68.2                         | -18.77         | 29             | 170         | V        |
|        | * 7.44          | 31.72                | ADR | 35.7          | -27.7           | 39.72                      | 54                 | -14.28      | -                   | -              | -                            | -              | 29             | 170         | V        |
| 8      | * 11.158        | 43.12                | PK3 | 37.8          | -25.1           | 55.82                      | -                  | -           | 74                  | -18.18         | 68.2                         | -12.38         | 72             | 102         | V        |
|        | * 11.16         | 30.96                | ADR | 37.8          | -25.1           | 43.66                      | 54                 | -10.34      | -                   | -              | -                            | -              | 72             | 102         | V        |

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK3 - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

# HIGH CHANNEL PLOT



## DATA

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AT0062 (dB/m) | Amp/Cbl /Filtr/Pad | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | UNII Non-Restricted (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|--------------------|----------------------------|--------------------|-------------|---------------------|----------------|------------------------------|----------------|----------------|-------------|----------|
| 1      | 1.896           | 51.29                | PK3 | 31.5          | -37.6              | 45.19                      | -                  | -           | 74                  | -28.81         | 68.2                         | -23.01         | 170            | 197         | H        |
| 2      | * 3.8           | 57.63                | PK3 | 33.4          | -33.9              | 57.13                      | -                  | -           | 74                  | -16.87         | 68.2                         | -11.07         | 226            | 156         | H        |
|        | * 3.8           | 47.29                | ADR | 33.4          | -33.9              | 46.79                      | 54                 | -7.21       | -                   | -              | -                            | -              | 226            | 156         | H        |
| 3      | * 7.6           | 42.01                | PK3 | 35.8          | -27                | 50.81                      | -                  | -           | 74                  | -23.19         | 68.2                         | -17.39         | 54             | 184         | H        |
|        | * 7.6           | 32.91                | ADR | 35.8          | -27                | 41.71                      | 54                 | -12.29      | -                   | -              | -                            | -              | 54             | 184         | H        |
| 4      | 1.896           | 53.19                | PK3 | 31.5          | -37.6              | 47.09                      | -                  | -           | 74                  | -26.91         | 68.2                         | -21.11         | 16             | 243         | V        |
| 5      | * 3.8           | 57.47                | PK3 | 33.4          | -33.9              | 56.97                      | -                  | -           | 74                  | -17.03         | 68.2                         | -11.23         | 154            | 251         | V        |
|        | * 3.8           | 46.68                | ADR | 33.4          | -33.9              | 46.18                      | 54                 | -7.82       | -                   | -              | -                            | -              | 154            | 251         | V        |
| 6      | * 7.6           | 40.3                 | PK3 | 35.8          | -27                | 49.1                       | -                  | -           | 74                  | -24.9          | 68.2                         | -19.1          | 255            | 253         | V        |
|        | * 7.6           | 30.12                | ADR | 35.8          | -27                | 38.92                      | 54                 | -15.08      | -                   | -              | -                            | -              | 255            | 253         | V        |

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

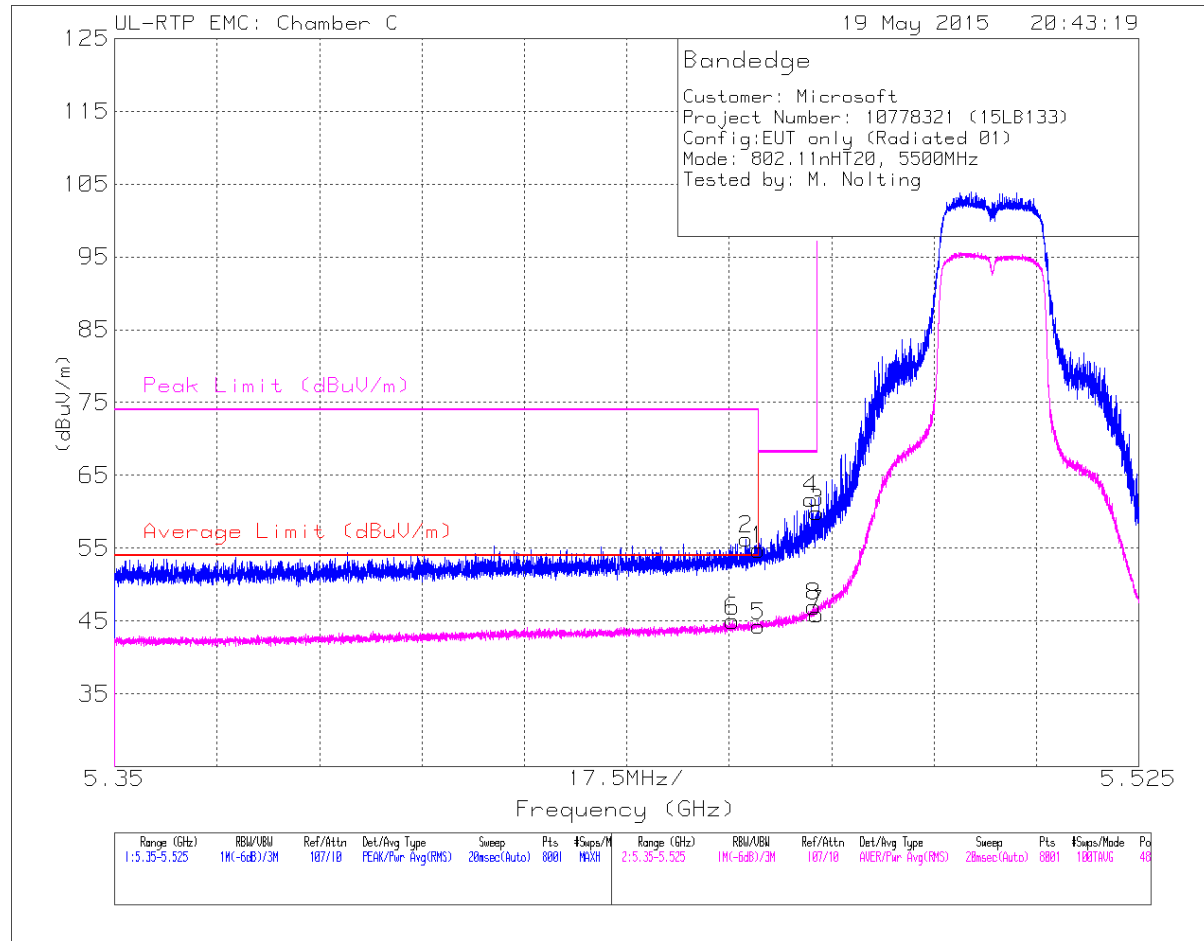
PK3 - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

## 9.8. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.6 GHz BAND

### RESTRICTED BANDEDGE (LOW CHANNEL)

#### HORIZONTAL



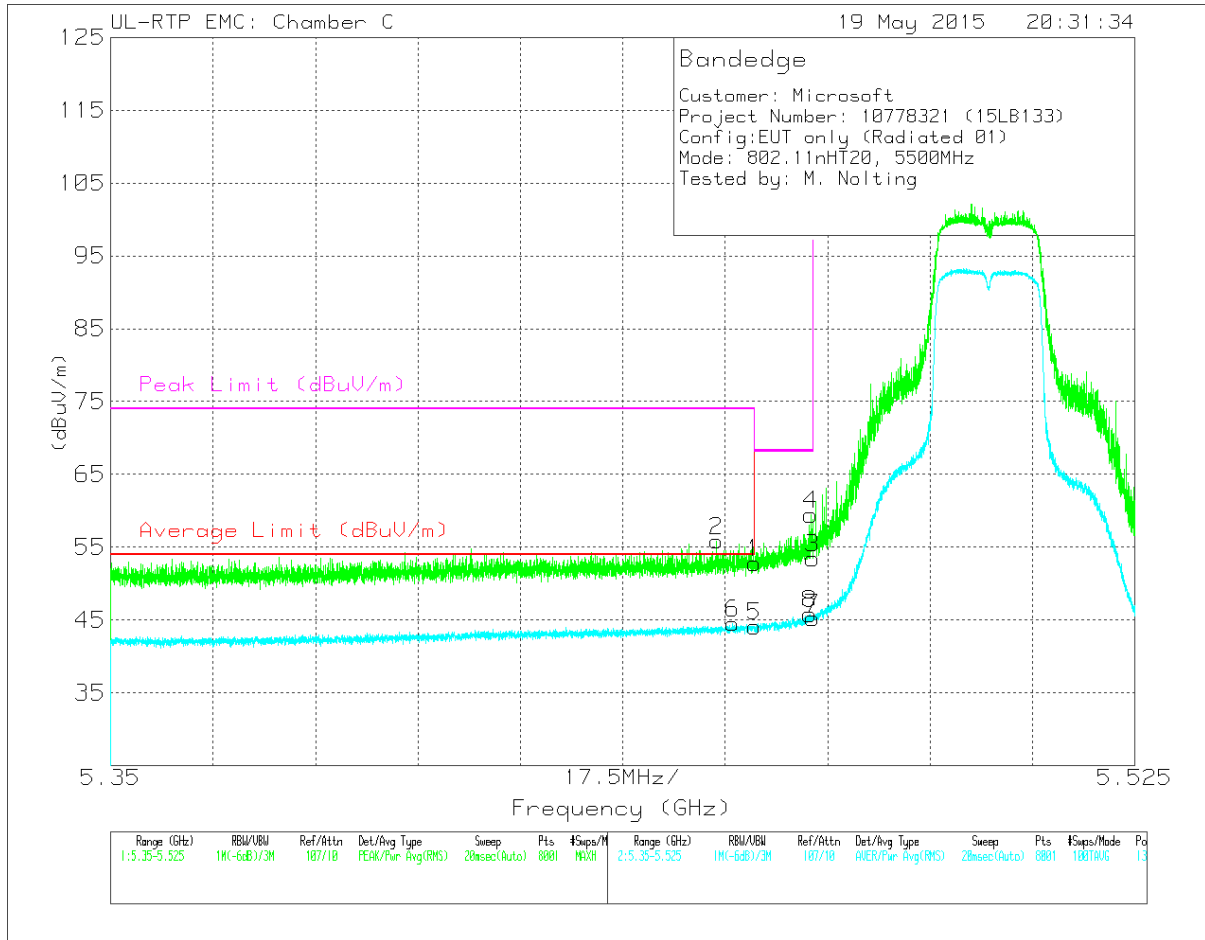
| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AT0062 (dB/m) | Amp/Cbl/F ltr/Pad | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|-------------------|----------------------------|------------------------|-------------|---------------------|----------------|----------------|-------------|----------|
| 6      | * 5.456         | 32.6                 | RMS | 34.5          | -22.1             | 45                         | 54                     | -9          | -                   | -              | 48             | 221         | H        |
| 2      | * 5.458         | 43.86                | Pk  | 34.5          | -22.1             | 56.26                      | -                      | -           | 74                  | -17.74         | 48             | 221         | H        |
| 1      | * 5.46          | 42.39                | Pk  | 34.5          | -22.1             | 54.79                      | -                      | -           | 74                  | -19.21         | 48             | 221         | H        |
| 5      | * 5.46          | 31.91                | RMS | 34.5          | -22.1             | 44.31                      | 54                     | -9.69       | -                   | -              | 48             | 221         | H        |
| 4      | 5.469           | 49.3                 | Pk  | 34.5          | -22.1             | 61.7                       | -                      | -           | 68.2                | -6.5           | 48             | 221         | H        |
| 8      | 5.469           | 34.59                | RMS | 34.5          | -22.1             | 46.99                      | -                      | -           | -                   | -              | 48             | 221         | H        |
| 3      | 5.47            | 47.49                | Pk  | 34.5          | -22.1             | 59.89                      | -                      | -           | 68.2                | -8.31          | 48             | 221         | H        |
| 7      | 5.47            | 33.5                 | RMS | 34.5          | -22.1             | 45.9                       | -                      | -           | -                   | -              | 48             | 221         | H        |

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

# VERTICAL



| Marker | Frequency (GHz) | Meter Reading (dBUV) | Det | AT0062 (dB/m) | Amp/Cbl/Ftr/Pad | Corrected Reading (dBUV/m) | Average Limit (dBUV/m) | Margin (dB) | Peak Limit (dBUV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|-----------------|----------------------------|------------------------|-------------|---------------------|----------------|----------------|-------------|----------|
| 2      | * 5.454         | 43.48                | Pk  | 34.5          | -22.1           | 55.88                      | -                      | -           | 74                  | -18.12         | 138            | 172         | V        |
| 6      | * 5.456         | 32.15                | RMS | 34.5          | -22.1           | 44.55                      | 54                     | -9.45       | -                   | -              | 138            | 172         | V        |
| 1      | * 5.46          | 40.46                | Pk  | 34.5          | -22.1           | 52.86                      | -                      | -           | 74                  | -21.14         | 138            | 172         | V        |
| 5      | * 5.46          | 31.74                | RMS | 34.5          | -22.1           | 44.14                      | 54                     | -9.86       | -                   | -              | 138            | 172         | V        |
| 8      | 5.469           | 33.44                | RMS | 34.5          | -22.1           | 45.84                      | -                      | -           | -                   | -              | 138            | 172         | V        |
| 3      | 5.47            | 41.1                 | Pk  | 34.5          | -22.1           | 53.5                       | -                      | -           | 68.2                | -14.7          | 138            | 172         | V        |
| 4      | 5.47            | 47.08                | Pk  | 34.5          | -22.1           | 59.48                      | -                      | -           | 68.2                | -8.72          | 138            | 172         | V        |
| 7      | 5.47            | 32.85                | RMS | 34.5          | -22.1           | 45.25                      | -                      | -           | -                   | -              | 138            | 172         | V        |

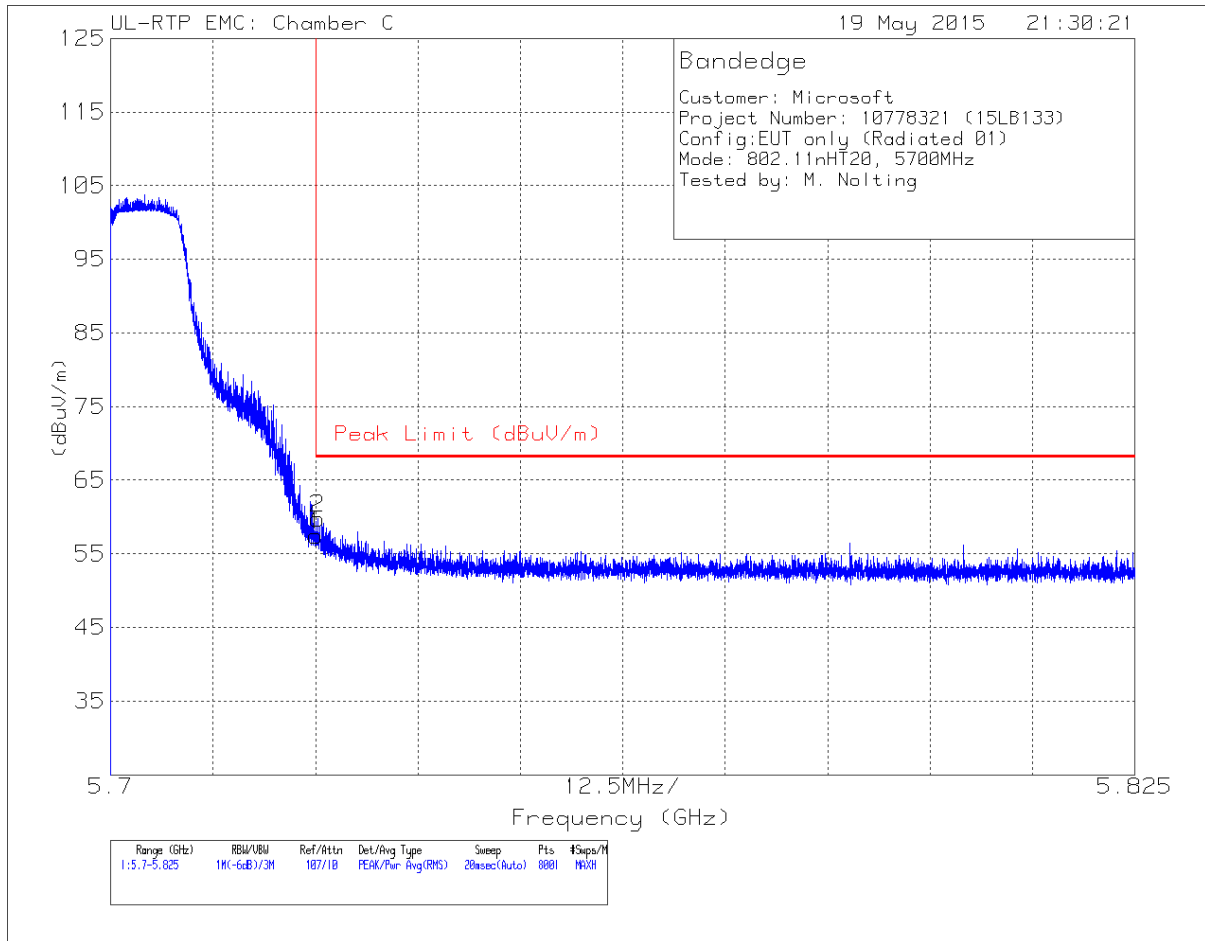
\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

**AUTHORIZED BANDEDGE (HIGH CHANNEL)**

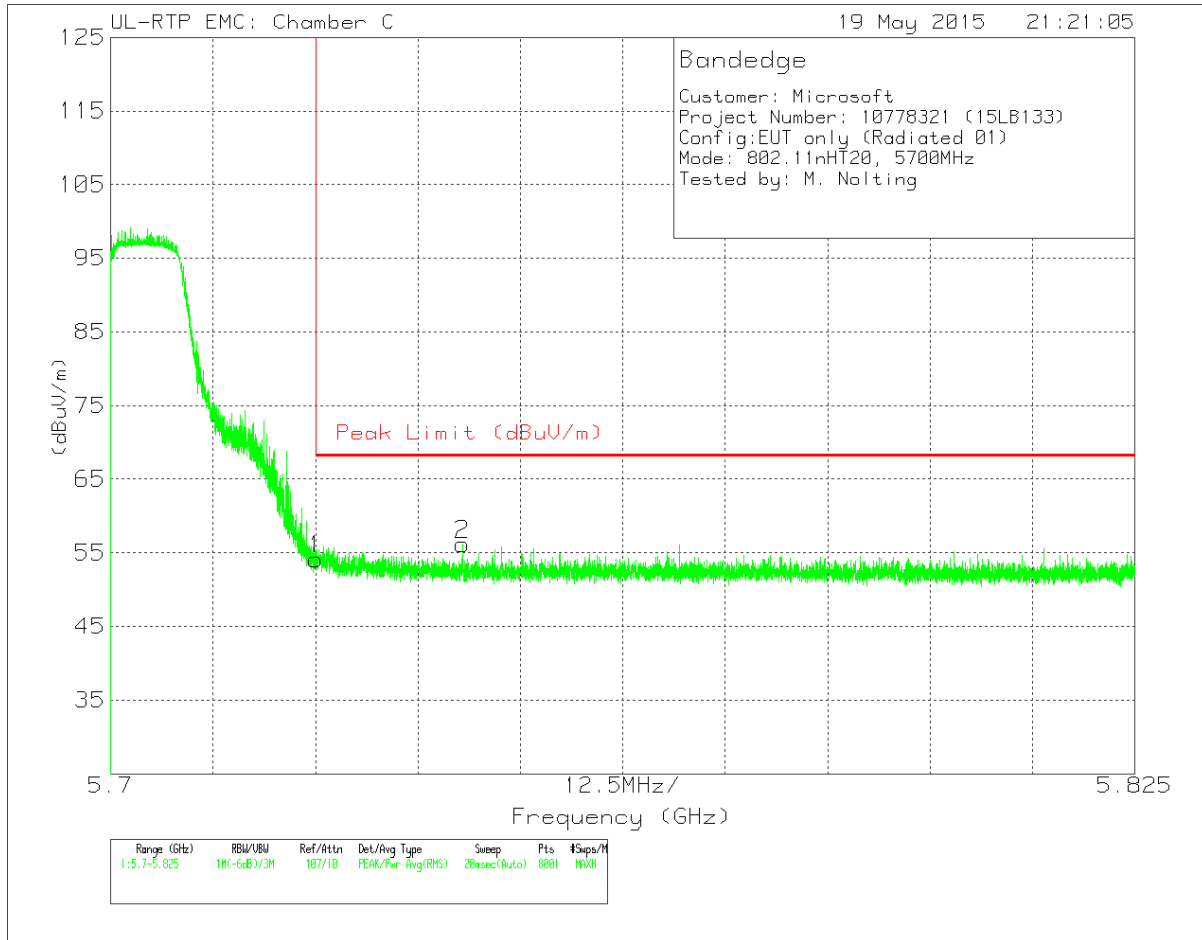
**HORIZONTAL**



| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AT0062 (dB/m) | Amp/Cbl/Fit r/Pad | Corrected Reading (dBuV/m) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|-------------------|----------------------------|---------------------|----------------|----------------|-------------|----------|
| 1      | 5.725           | 44.67                | Pk  | 34.6          | -21.8             | 57.47                      | 68.2                | -10.73         | 49             | 224         | H        |
| 2      | 5.725           | 46.97                | Pk  | 34.6          | -21.8             | 59.77                      | 68.2                | -8.43          | 49             | 224         | H        |

Pk - Peak detector

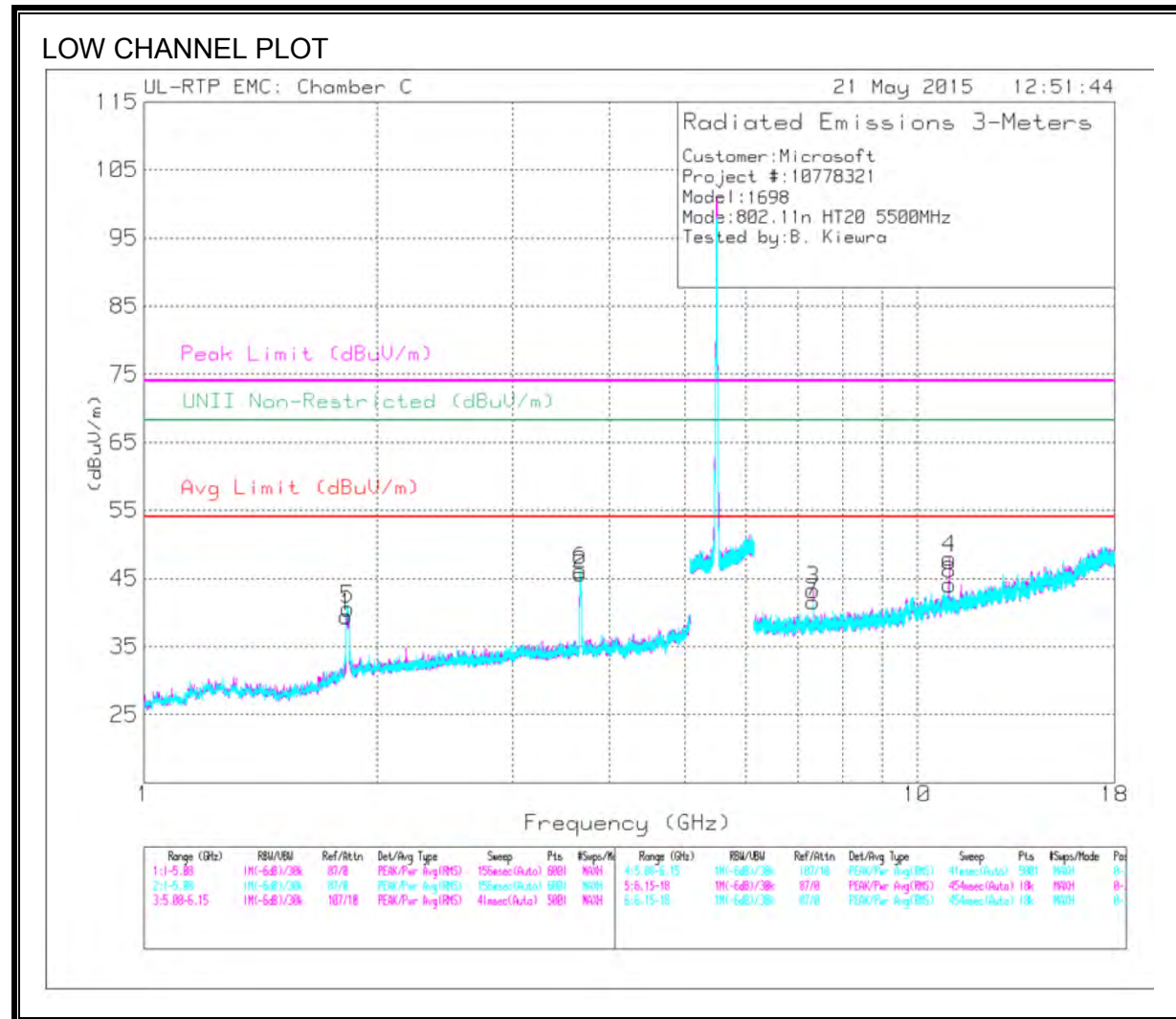
VERTICAL



| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AT0062 (dB/m) | Amp/Cbl/Fit r/Pad | Corrected Reading (dBuV/m) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|-------------------|----------------------------|---------------------|----------------|----------------|-------------|----------|
| 1      | 5.725           | 41.35                | Pk  | 34.6          | -21.8             | 54.15                      | 68.2                | -14.05         | 140            | 170         | V        |
| 2      | 5.743           | 43.25                | Pk  | 34.6          | -21.7             | 56.15                      | 68.2                | -12.05         | 140            | 170         | V        |

Pk - Peak detector

# **HARMONICS AND SPURIOUS EMISSIONS**



## **DATA**

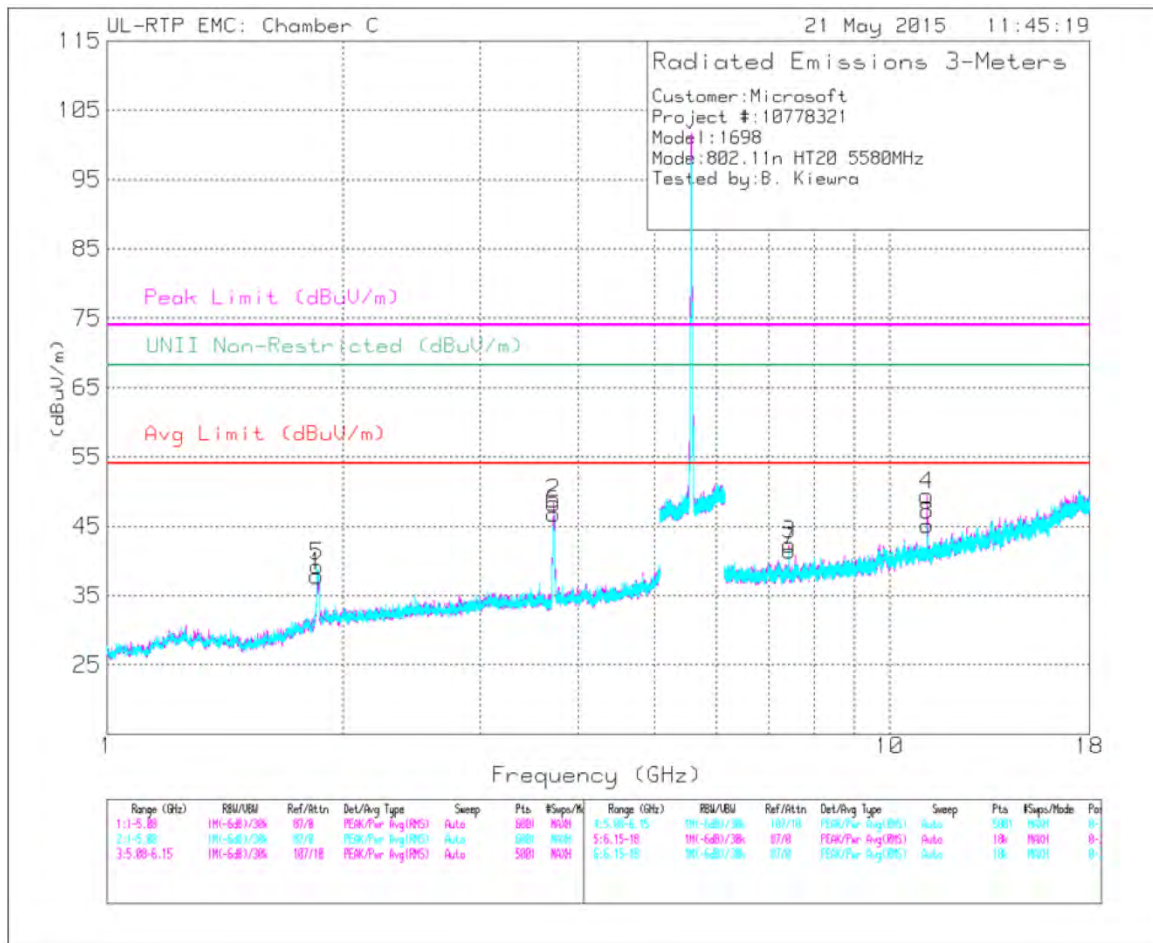
| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AT0062 (dB/m) | Amp/Cbl/ Filt/Pad | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | UNII Non-Restricted (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|-------------------|----------------------------|--------------------|-------------|---------------------|----------------|------------------------------|----------------|----------------|-------------|----------|
| 1      | 1.83            | 53.19                | PK3 | 30.7          | -37.6             | 46.29                      | -                  | -           | 74                  | -27.71         | 68.2                         | -21.91         | 0              | 149         | H        |
| 2      | * 3.67          | 58.47                | PK3 | 33.2          | -34.8             | 56.87                      | -                  | -           | 74                  | -17.13         | 68.2                         | -11.33         | 208            | 186         | H        |
|        | * 3.67          | 46.08                | ADR | 33.2          | -34.9             | 44.38                      | 54                 | -9.62       | -                   | -              | -                            | -              | 208            | 186         | H        |
| 3      | * 7.33          | 43.49                | PK3 | 35.7          | -28.4             | 50.79                      | -                  | -           | 74                  | -23.21         | 68.2                         | -17.41         | 40             | 227         | H        |
|        | * 7.33          | 34.79                | ADR | 35.7          | -28.4             | 42.09                      | 54                 | -11.91      | -                   | -              | -                            | -              | 40             | 227         | H        |
| 4      | * 11.00         | 44.78                | PK3 | 37.7          | -24.7             | 57.78                      | -                  | -           | 74                  | -16.22         | 68.2                         | -10.42         | 173            | 159         | H        |
|        | * 11.00         | 32.76                | ADR | 37.7          | -24.7             | 45.76                      | 54                 | -8.24       | -                   | -              | -                            | -              | 173            | 159         | H        |
| 5      | 1.83            | 57.24                | PK3 | 30.6          | -37.7             | 50.14                      | -                  | -           | 74                  | -23.86         | 68.2                         | -18.06         | 21             | 248         | V        |
| 6      | * 3.67          | 56.68                | PK3 | 33.2          | -34.9             | 54.98                      | -                  | -           | 74                  | -19.02         | 68.2                         | -13.22         | 149            | 226         | V        |
|        | * 3.67          | 44.61                | ADR | 33.2          | -34.9             | 42.91                      | 54                 | -11.09      | -                   | -              | -                            | -              | 149            | 226         | V        |
| 7      | * 7.33          | 42.4                 | PK3 | 35.7          | -28.4             | 49.70                      | -                  | -           | 74                  | -24.30         | 68.2                         | -18.50         | 34             | 102         | V        |
|        | * 7.33          | 33.47                | ADR | 35.7          | -28.4             | 40.77                      | 54                 | -13.23      | -                   | -              | -                            | -              | 34             | 102         | V        |
| 8      | * 11.00         | 40.24                | PK3 | 37.7          | -24.7             | 53.24                      | -                  | -           | 74                  | -20.76         | 68.2                         | -14.96         | 71             | 127         | V        |
|        | * 11.00         | 28.32                | ADR | 37.7          | -24.7             | 41.32                      | 54                 | -12.68      | -                   | -              | -                            | -              | 71             | 127         | V        |

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK3 - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

# MID CHANNEL PLOT



## DATA

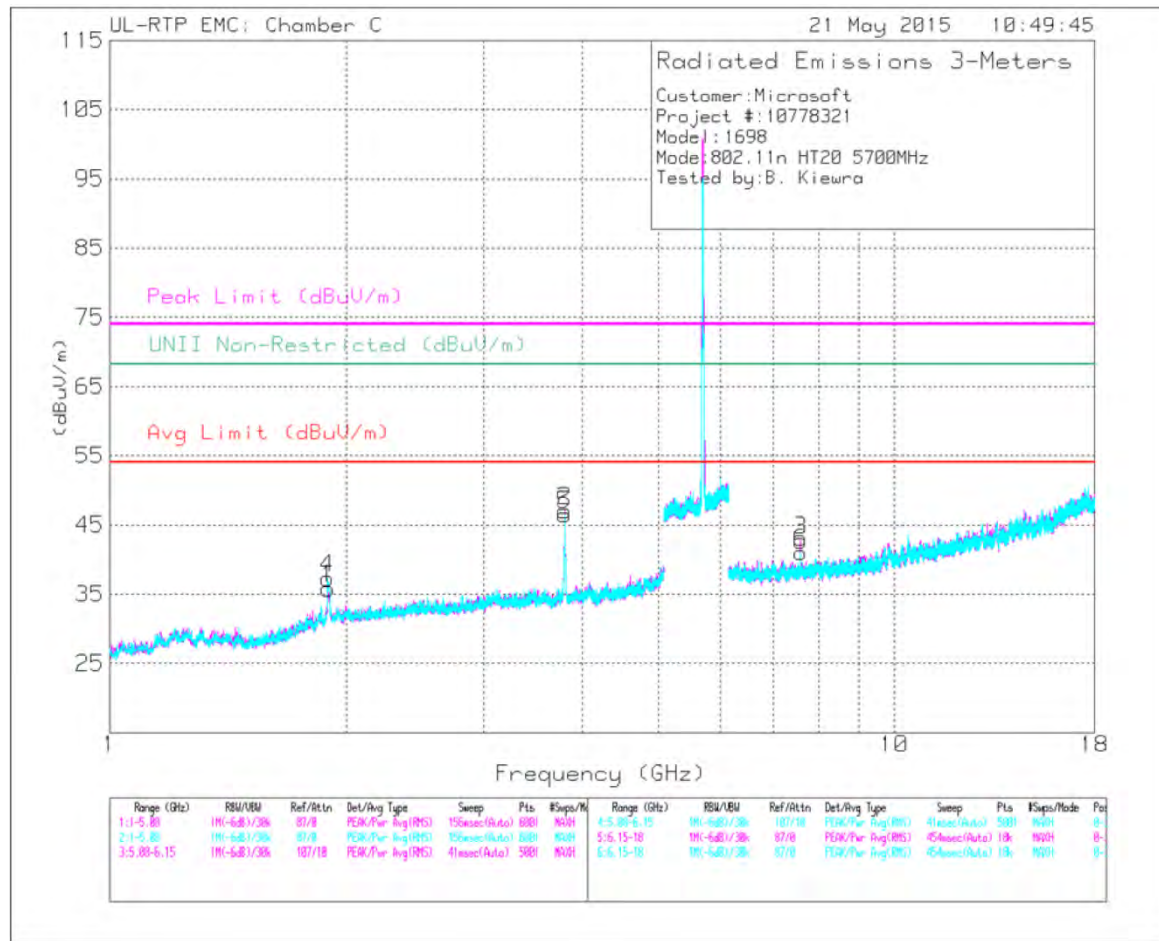
| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AT0062 (dB/m) | Amp/Cbl/Ftr/Pad | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | UNII Non-Restricted (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|-----------------|----------------------------|--------------------|-------------|---------------------|----------------|------------------------------|----------------|----------------|-------------|----------|
| 2      | * 3.72          | 60.71                | PK3 | 33.3          | -34.3           | 59.71                      | -                  | -           | 74                  | -14.29         | 68.2                         | -8.49          | 220            | 157         | H        |
|        | * 3.72          | 48.21                | ADR | 33.3          | -34.3           | 47.21                      | 54                 | -6.79       | -                   | -              | -                            | -              | 220            | 157         | H        |
| 6      | * 3.72          | 58.68                | PK3 | 33.3          | -34.3           | 57.68                      | -                  | -           | 74                  | -16.32         | 68.2                         | -10.52         | 149            | 270         | V        |
|        | * 3.72          | 46.68                | ADR | 33.3          | -34.3           | 45.68                      | 54                 | -8.32       | -                   | -              | -                            | -              | 149            | 270         | V        |
| 3      | * 7.44          | 42.62                | PK3 | 35.7          | -27.7           | 50.62                      | -                  | -           | 74                  | -23.38         | 68.2                         | -17.58         | 59             | 191         | H        |
|        | * 7.44          | 34.08                | ADR | 35.7          | -27.7           | 42.08                      | 54                 | -11.92      | -                   | -              | -                            | -              | 59             | 191         | H        |
| 4      | * 11.156        | 44.91                | PK3 | 37.8          | -25.1           | 57.61                      | -                  | -           | 74                  | -16.39         | 68.2                         | -10.59         | 178            | 105         | H        |
|        | * 11.16         | 33.68                | ADR | 37.8          | -25.1           | 46.38                      | 54                 | -7.62       | -                   | -              | -                            | -              | 178            | 105         | H        |
| 7      | * 7.44          | 41.79                | PK3 | 35.7          | -27.7           | 49.79                      | -                  | -           | 74                  | -24.21         | 68.2                         | -18.41         | 65             | 310         | V        |
|        | * 7.44          | 31.55                | ADR | 35.7          | -27.7           | 39.55                      | 54                 | -14.45      | -                   | -              | -                            | -              | 65             | 310         | V        |
| 8      | * 11.16         | 41.87                | PK3 | 37.8          | -25.1           | 54.57                      | -                  | -           | 74                  | -19.43         | 68.2                         | -13.63         | 65             | 147         | V        |
|        | * 11.161        | 29.33                | ADR | 37.8          | -25.1           | 42.03                      | 54                 | -11.97      | -                   | -              | -                            | -              | 65             | 147         | V        |
| 1      | 1.855           | 53.78                | PK3 | 31            | -37.6           | 47.18                      | -                  | -           | 74                  | -26.82         | 68.2                         | -21.02         | 354            | 158         | H        |
| 5      | 1.857           | 55.56                | PK3 | 31            | -37.6           | 48.96                      | -                  | -           | 74                  | -25.04         | 68.2                         | -19.24         | 214            | 195         | V        |

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK3 - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

# HIGH CHANNEL PLOT



## DATA

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AT0062 (dB/m) | Amp/Cbl/F ltr/Pad | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | UNII Non-Restricted (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|-------------------|----------------------------|--------------------|-------------|---------------------|----------------|------------------------------|----------------|----------------|-------------|----------|
| 1      | 1.894           | 52.04                | PK3 | 31.5          | -37.6             | 45.94                      | -                  | -           | 74                  | -28.06         | 68.2                         | -22.26         | 225            | 137         | H        |
| 2      | * 3.8           | 58.85                | PK3 | 33.4          | -33.9             | 58.35                      | -                  | -           | 74                  | -15.65         | 68.2                         | -9.85          | 222            | 178         | H        |
|        | * 3.8           | 48.21                | ADR | 33.4          | -33.9             | 47.71                      | 54                 | -6.29       | -                   | -              | -                            | -              | 222            | 178         | H        |
| 3      | * 7.6           | 41.75                | PK3 | 35.8          | -27               | 50.55                      | -                  | -           | 74                  | -23.45         | 68.2                         | -17.65         | 53             | 211         | H        |
|        | * 7.6           | 33.03                | ADR | 35.8          | -27               | 41.83                      | 54                 | -12.17      | -                   | -              | -                            | -              | 53             | 211         | H        |
| 4      | 1.895           | 52.2                 | PK3 | 31.5          | -37.6             | 46.1                       | -                  | -           | 74                  | -27.9          | 68.2                         | -22.1          | 22             | 277         | V        |
| 5      | * 3.8           | 56.54                | PK3 | 33.4          | -33.9             | 56.04                      | -                  | -           | 74                  | -17.96         | 68.2                         | -12.16         | 152            | 253         | V        |
|        | * 3.8           | 46.13                | ADR | 33.4          | -33.9             | 45.63                      | 54                 | -8.37       | -                   | -              | -                            | -              | 152            | 253         | V        |
| 6      | * 7.6           | 40.61                | PK3 | 35.8          | -27               | 49.41                      | -                  | -           | 74                  | -24.59         | 68.2                         | -18.79         | 14             | 140         | V        |
|        | * 7.6           | 30.03                | ADR | 35.8          | -27               | 38.83                      | 54                 | -15.17      | -                   | -              | -                            | -              | 14             | 140         | V        |

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

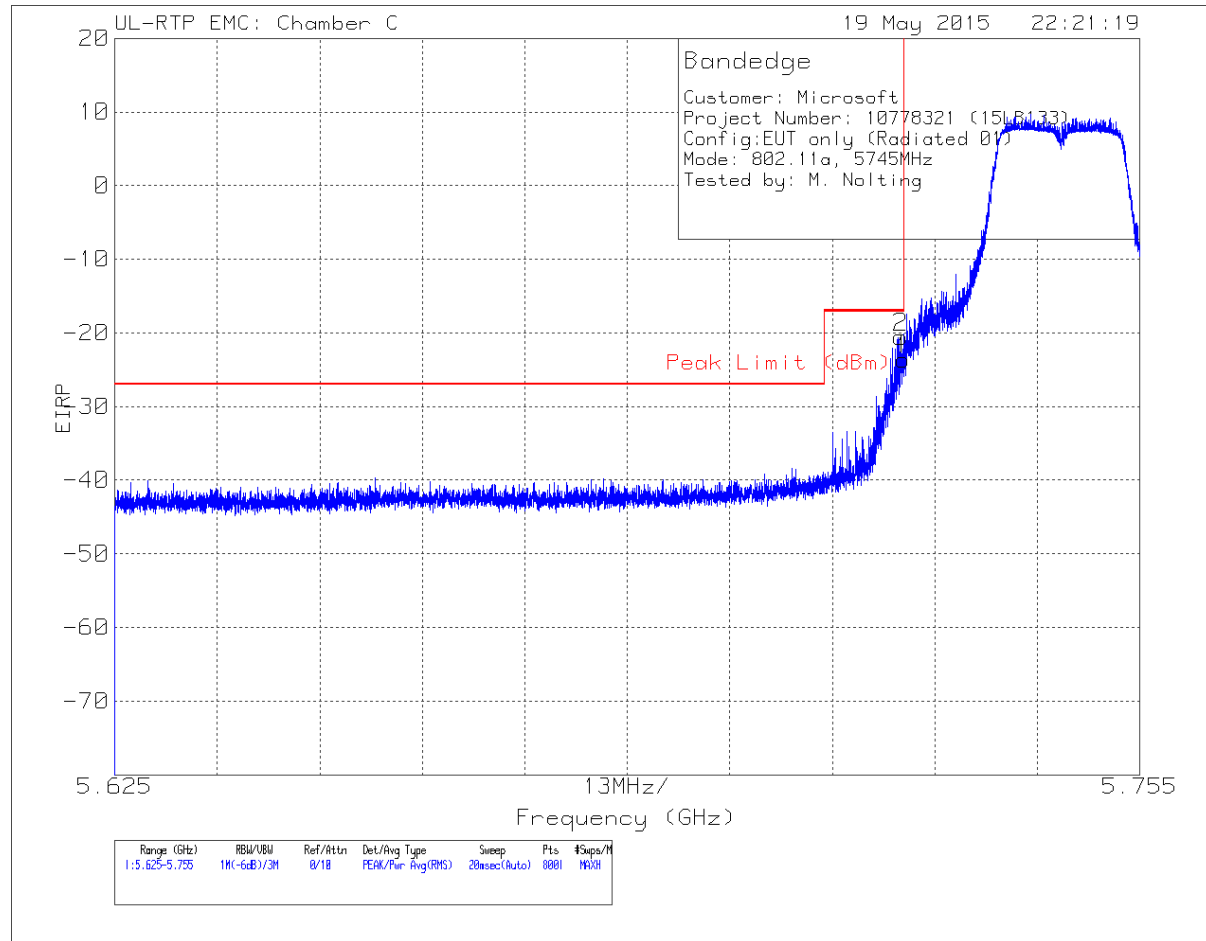
PK3 - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

## 9.9. TX ABOVE 1 GHz 802.11a MODE IN THE 5.8 GHz BAND

### RESTRICTED BANDEDGE (LOW CHANNEL)

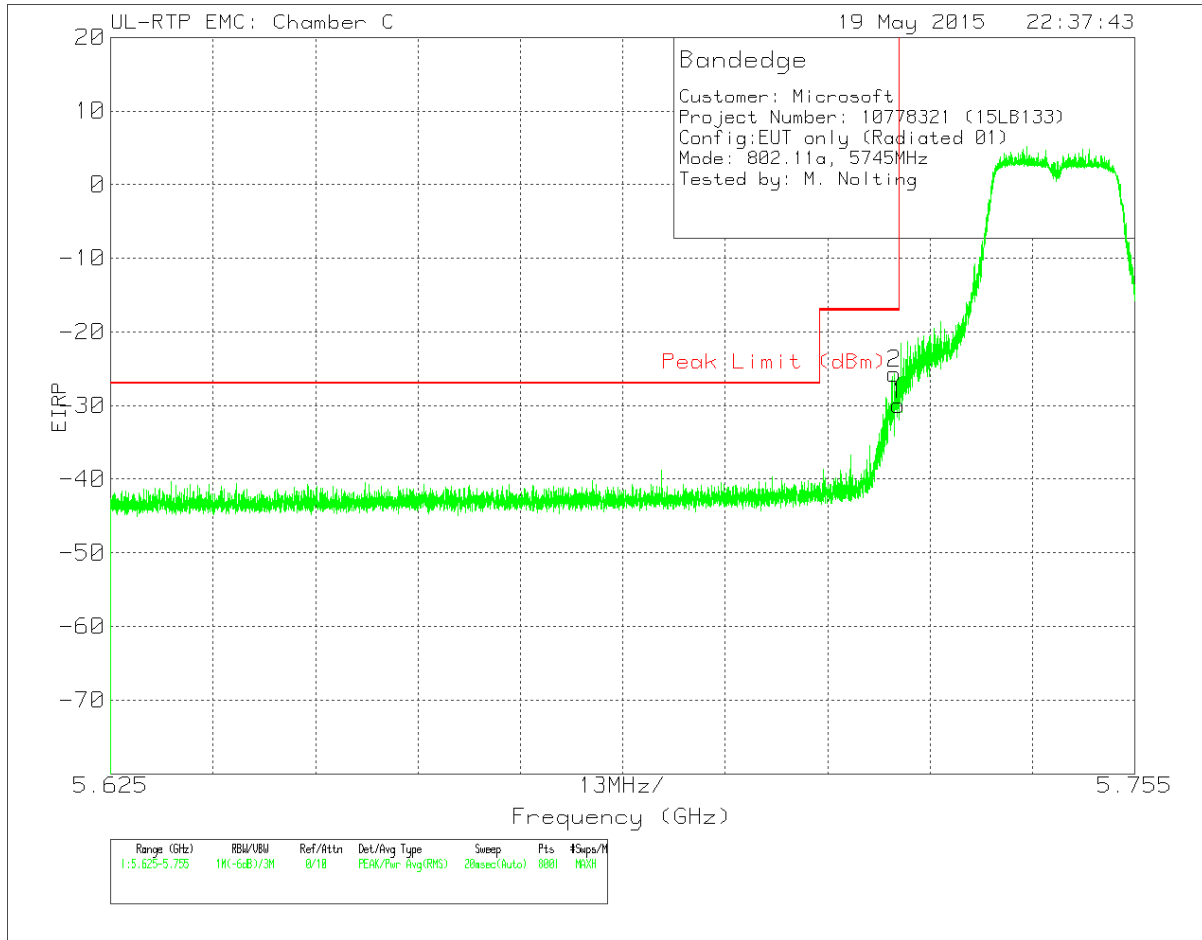
#### HORIZONTAL



| Marker | Frequency (GHz) | Meter Reading (dBm) | Det | AT0062 (dB/m) | Amp/Cbl/F ltr/Pad | Conversion Factor (dB) | Corrected Reading EIRP | Peak Limit (dBm) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|---------------------|-----|---------------|-------------------|------------------------|------------------------|------------------|----------------|----------------|-------------|----------|
| 1      | 5.725           | -48.22              | Pk  | 34.6          | -21.8             | 11.8                   | -23.62                 | -17              | -6.62          | 47             | 232         | H        |
| 2      | 5.725           | -45.15              | PK  | 34.6          | -21.8             | 11.8                   | -20.55                 | -17              | -3.55          | 47             | 232         | H        |

Pk - Peak detector

# VERTICAL

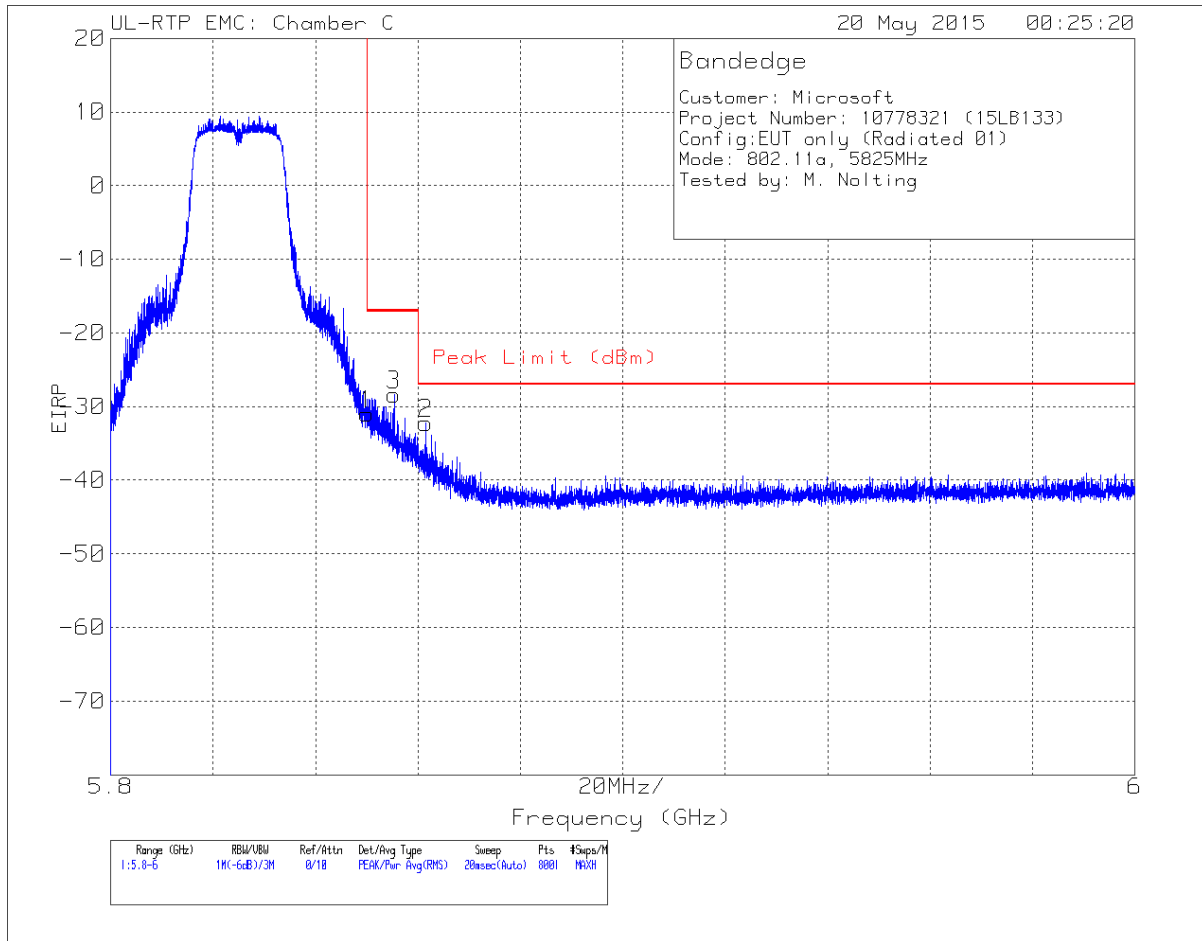


| Marker | Frequency (GHz) | Meter Reading (dBm) | Det | AT0062 (dB/m) | Amp/Cbl/F ltr/Pad | Conversion Factor (dB) | Corrected Reading EIRP | Peak Limit (dBm) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|---------------------|-----|---------------|-------------------|------------------------|------------------------|------------------|----------------|----------------|-------------|----------|
| 2      | 5.724           | -50.25              | Pk  | 34.6          | -21.8             | 11.8                   | -25.65                 | -17              | -8.65          | 140            | 176         | V        |
| 1      | 5.725           | -54.52              | Pk  | 34.6          | -21.8             | 11.8                   | -29.92                 | -17              | -12.92         | 140            | 176         | V        |

Pk - Peak detector

**AUTHORIZED BANDEDGE (HIGH CHANNEL)**

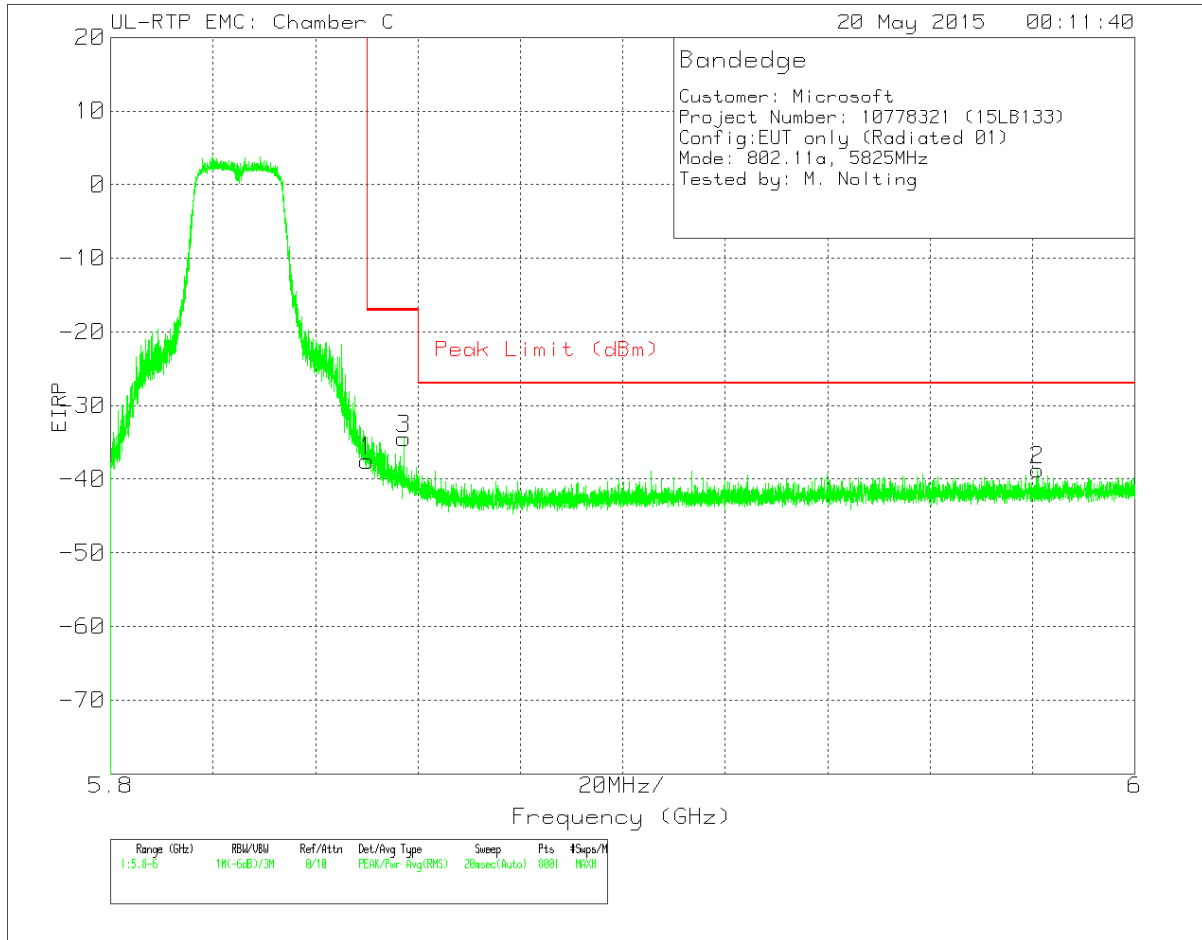
**HORIZONTAL**



| Marker | Frequency (GHz) | Meter Reading (dBm) | Det | AT0062 (dB/m) | Amp/Cbl/F ltr/Pad | Conversion Factor (dB) | Corrected Reading EIRP | Peak Limit (dBm) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|---------------------|-----|---------------|-------------------|------------------------|------------------------|------------------|----------------|----------------|-------------|----------|
| 1      | 5.85            | -56.5               | Pk  | 34.9          | -21.2             | 11.8                   | -31                    | -17              | -14            | 42             | 202         | H        |
| 3      | 5.855           | -53.92              | Pk  | 34.9          | -21.2             | 11.8                   | -28.42                 | -17              | -11.42         | 42             | 202         | H        |
| 2      | 5.861           | -57.75              | Pk  | 34.9          | -21.2             | 11.8                   | -32.25                 | -27              | -5.25          | 42             | 202         | H        |

Pk - Peak detector

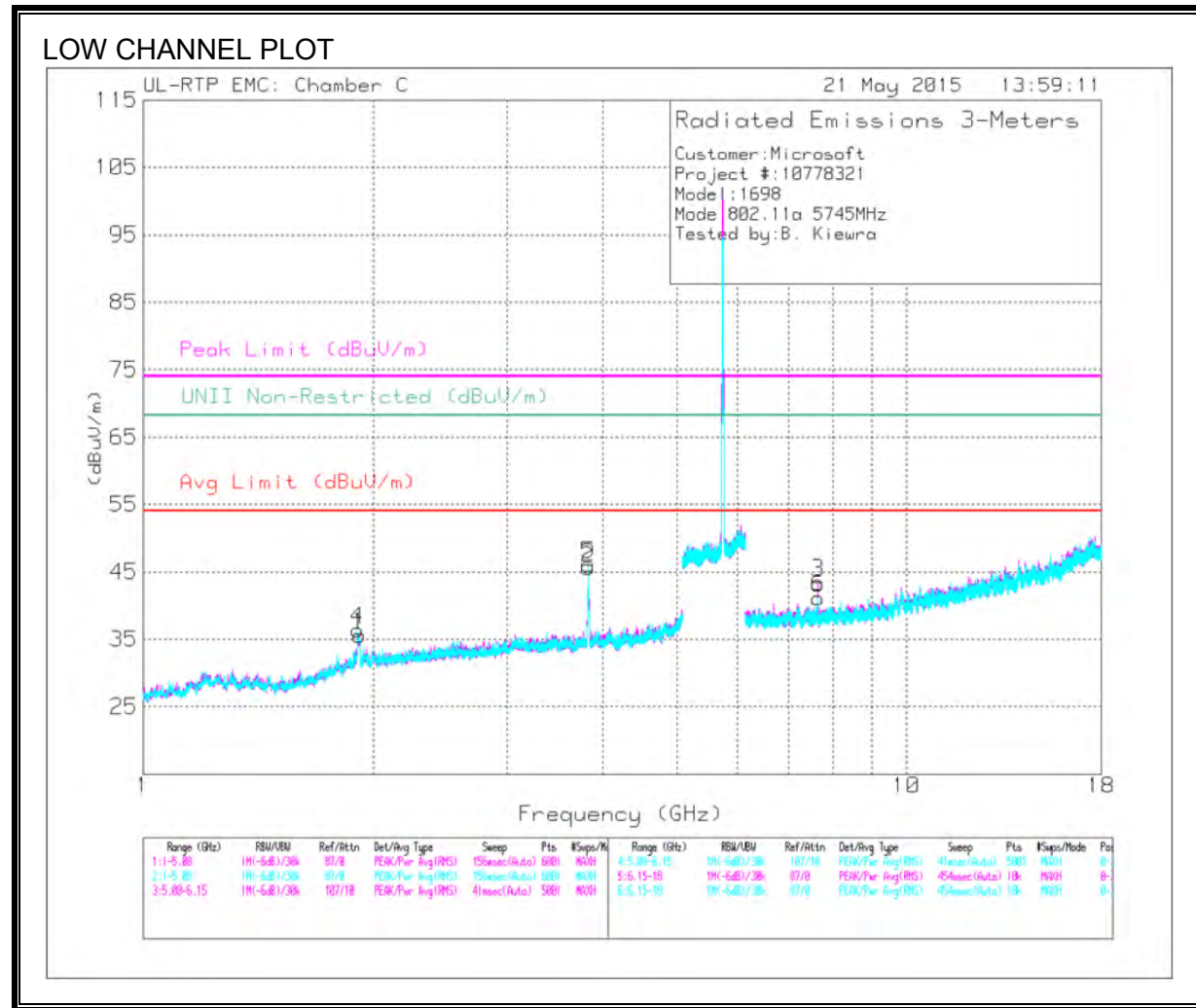
VERTICAL



| Marker | Frequency (GHz) | Meter Reading (dBm) | Det | AT0062 (dB/m) | Amp/Cbl/F ltr/Pad | Conversion Factor (dB) | Corrected Reading EIRP | Peak Limit (dBm) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|---------------------|-----|---------------|-------------------|------------------------|------------------------|------------------|----------------|----------------|-------------|----------|
| 1      | 5.85            | -63.03              | Pk  | 34.9          | -21.2             | 11.8                   | -37.53                 | -17              | -20.53         | 140            | 186         | V        |
| 3      | 5.857           | -59.97              | Pk  | 34.9          | -21.2             | 11.8                   | -34.47                 | -17              | -17.47         | 140            | 186         | V        |
| 2      | 5.981           | -64.74              | Pk  | 35.2          | -21               | 11.8                   | -38.74                 | -27              | -11.74         | 140            | 186         | V        |

Pk - Peak detector

# HARMONICS AND SPURIOUS EMISSIONS (1-18GHz)



## DATA

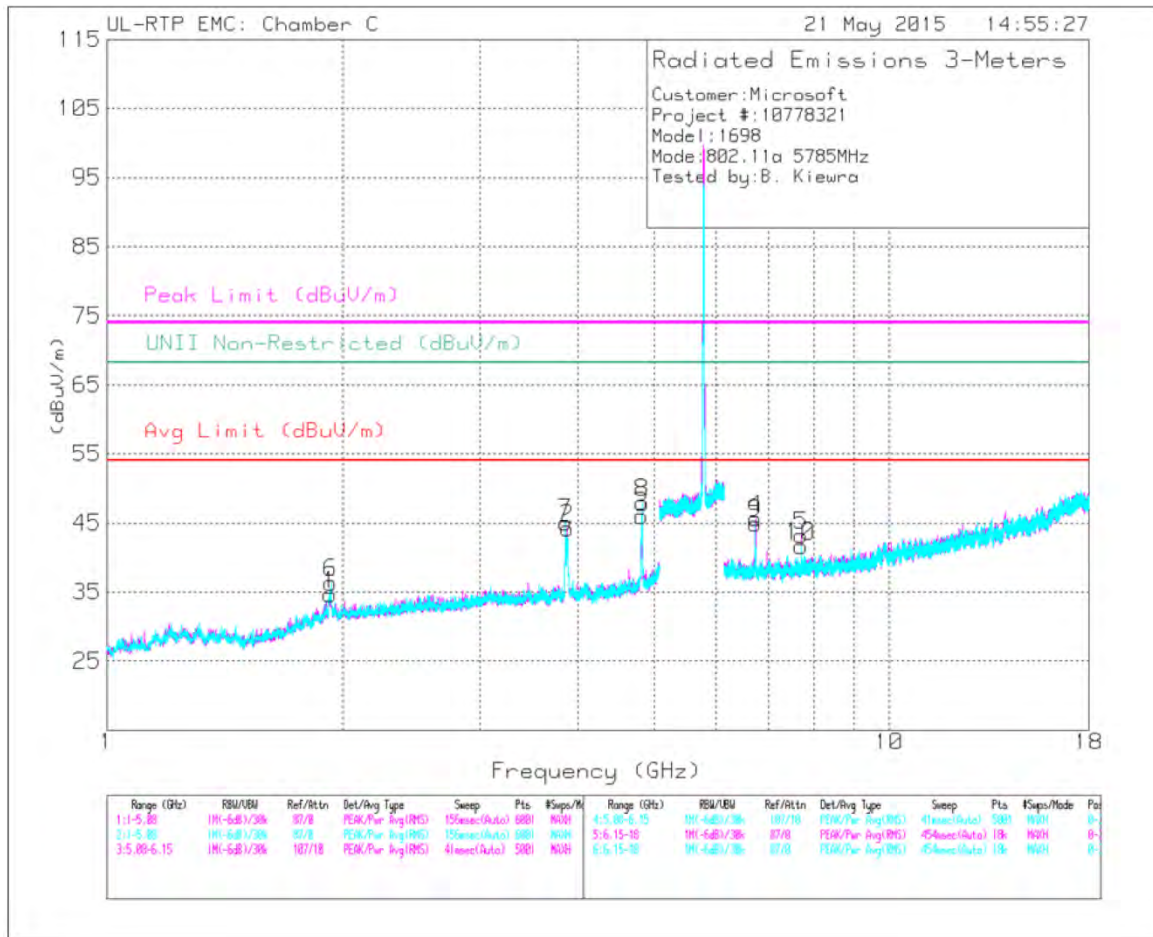
| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AT0062 (dB/m) | Amp/Cbl/Filtr/Pad | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | UNII Non-Restricted (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|-------------------|----------------------------|--------------------|-------------|---------------------|----------------|------------------------------|----------------|----------------|-------------|----------|
| 1      | 1.913           | 50.38                | PK3 | 31.5          | -37.5             | 44.38                      | -                  | -           | 74                  | -29.62         | 68.2                         | -17.82         | 342            | 282         | H        |
| 2      | * 3.83          | 56.43                | PK3 | 33.5          | -34.4             | 55.53                      | -                  | -           | 74                  | -18.47         | -                            | -              | 223            | 149         | H        |
|        | * 3.83          | 46.75                | ADR | 33.5          | -34.4             | 45.85                      | 54                 | -8.15       | -                   | -              | -                            | -              | 223            | 149         | H        |
| 3      | * 7.66          | 42.67                | PK3 | 35.8          | -27.7             | 50.77                      | -                  | -           | 74                  | -23.23         | -                            | -              | 57             | 185         | H        |
|        | * 7.66          | 34.91                | ADR | 35.8          | -27.7             | 43.01                      | 54                 | -10.99      | -                   | -              | -                            | -              | 57             | 185         | H        |
| 4      | 1.913           | 52.14                | PK3 | 31.5          | -37.5             | 46.14                      | -                  | -           | 74                  | -27.86         | 68.2                         | -22.06         | 26             | 179         | V        |
| 5      | * 3.83          | 55.77                | PK3 | 33.5          | -34.4             | 54.87                      | -                  | -           | 74                  | -19.13         | -                            | -              | 151            | 289         | V        |
|        | * 3.83          | 46.33                | ADR | 33.5          | -34.4             | 45.43                      | 54                 | -8.57       | -                   | -              | -                            | -              | 151            | 289         | V        |
| 6      | * 7.659         | 41.78                | PK3 | 35.8          | -27.7             | 49.88                      | -                  | -           | 74                  | -24.12         | -                            | -              | 188            | 192         | V        |
|        | * 7.66          | 32.23                | ADR | 35.8          | -27.7             | 40.33                      | 54                 | -13.67      | -                   | -              | -                            | -              | 188            | 192         | V        |

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK3 - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

# MID CHANNEL PLOT



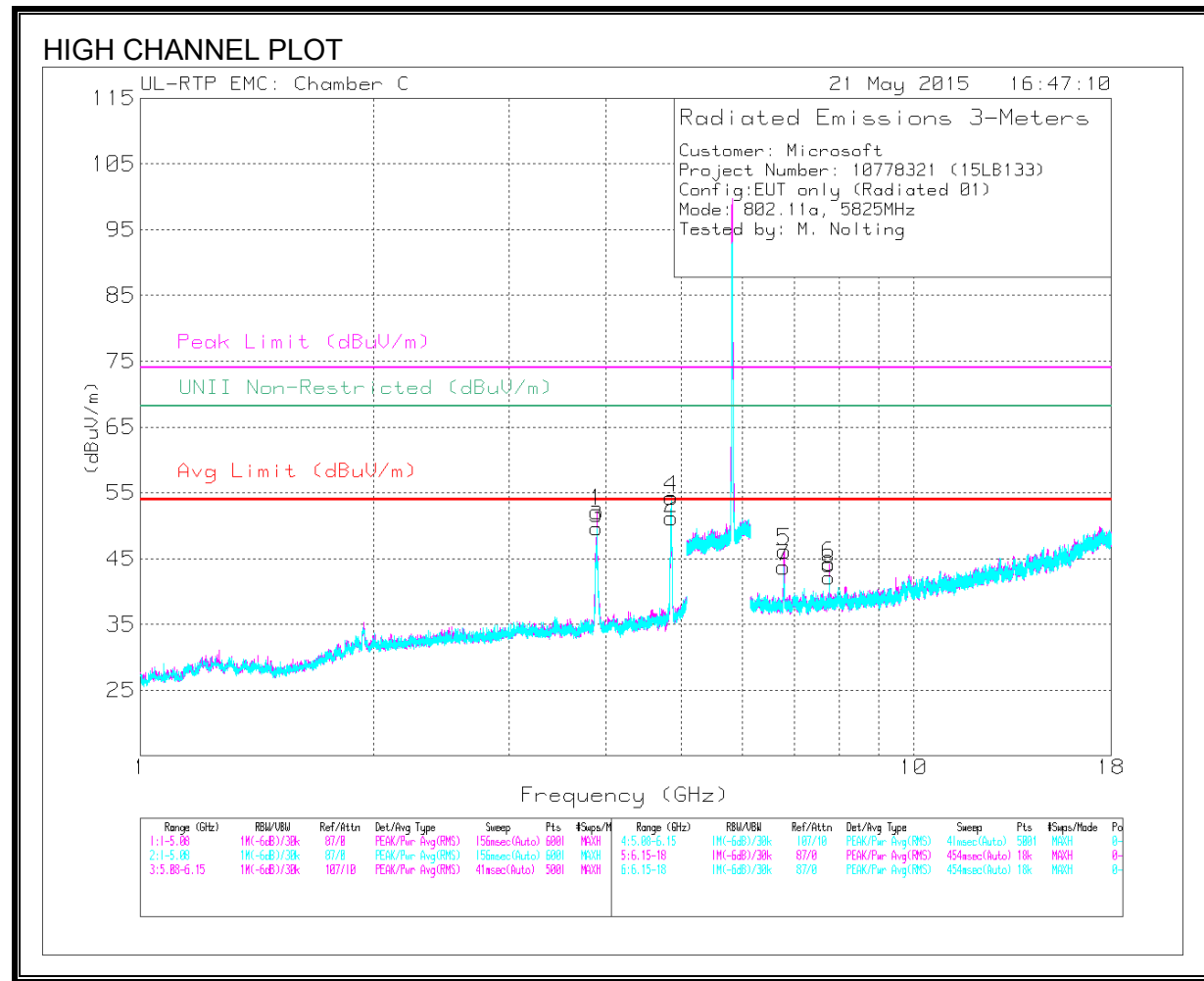
## DATA

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AT0062 (dB/m) | Amp/Cbl/ Filt/Pad | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | UNII Non-Restricted (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|-------------------|----------------------------|--------------------|-------------|---------------------|----------------|------------------------------|----------------|----------------|-------------|----------|
| 1      | 1.93            | 49.92                | PK3 | 31.5          | -37.5             | 43.92                      | -                  | -           | -                   | -              | 68.2                         | -24.28         | 349            | 288         | H        |
| 2      | * 3.877         | 60.89                | PK3 | 33.6          | -34.5             | 59.99                      | -                  | -           | 74                  | -14.01         | -                            | -              | 0              | 235         | H        |
|        | * 3.875         | 38.84                | ADR | 33.6          | -34.6             | 37.84                      | 54                 | -16.16      | -                   | -              | -                            | -              | 0              | 235         | H        |
| 3      | * 4.827         | 58.43                | PK3 | 34.1          | -32.2             | 60.33                      | -                  | -           | 74                  | -13.67         | -                            | -              | 76             | 207         | H        |
|        | * 4.825         | 37.63                | ADR | 34.1          | -32.2             | 39.53                      | 54                 | -14.47      | -                   | -              | -                            | -              | 76             | 207         | H        |
| 4      | 6.736           | 54                   | PK3 | 35.7          | -28.6             | 61.1                       | -                  | -           | -                   | -              | 68.2                         | -7.1           | 47             | 277         | H        |
| 5      | * 7.713         | 42.69                | PK3 | 35.8          | -28               | 50.49                      | -                  | -           | 74                  | -23.51         | -                            | -              | 43             | 206         | H        |
|        | * 7.713         | 35.16                | ADR | 35.8          | -28               | 42.96                      | 54                 | -11.04      | -                   | -              | -                            | -              | 43             | 206         | H        |
| 6      | 1.934           | 49.92                | PK3 | 31.5          | -37.5             | 43.92                      | -                  | -           | -                   | -              | 68.2                         | -24.28         | 38             | 129         | V        |
| 7      | * 3.856         | 56.51                | PK3 | 33.5          | -34.7             | 55.31                      | -                  | -           | 74                  | -18.69         | -                            | -              | 151            | 220         | V        |
|        | * 3.857         | 45.85                | ADR | 33.5          | -34.7             | 44.65                      | 54                 | -9.35       | -                   | -              | -                            | -              | 151            | 220         | V        |
| 8      | * 4.828         | 60.11                | PK3 | 34.1          | -32.2             | 62.01                      | -                  | -           | 74                  | -11.99         | -                            | -              | 105            | 140         | V        |
|        | * 4.827         | 38.1                 | ADR | 34.1          | -32.2             | 40                         | 54                 | -14         | -                   | -              | -                            | -              | 105            | 140         | V        |
| 9      | 6.734           | 50.7                 | PK3 | 35.7          | -28.6             | 57.8                       | -                  | -           | -                   | -              | 68.2                         | -10.4          | 77             | 241         | V        |
| 10     | * 7.713         | 42.26                | PK3 | 35.8          | -28               | 50.06                      | -                  | -           | 74                  | -23.94         | -                            | -              | 208            | 234         | V        |
|        | * 7.713         | 33.39                | ADR | 35.8          | -28               | 41.19                      | 54                 | -12.81      | -                   | -              | -                            | -              | 208            | 234         | V        |

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK3 - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average



### DATA

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AT0062 (dB/m) | Amp/Cbl/F ltr/Pad | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | UNII Non-Restricted (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|-------------------|----------------------------|--------------------|-------------|---------------------|----------------|------------------------------|----------------|----------------|-------------|----------|
| 1      | * 3.891         | 64.51                | PK3 | 33.6          | -34.3             | 63.81                      | -                  | -           | 74                  | -10.19         | -                            | -              | 218            | 196         | H        |
|        | * 3.883         | 47.25                | ADR | 33.6          | -34.5             | 46.35                      | 54                 | -7.65       | -                   | -              | -                            | -              | 218            | 196         | H        |
| 2      | * 4.853         | 67.97                | PK3 | 34.1          | -32               | 70.07                      | -                  | -           | 74                  | -3.93          | -                            | -              | 68             | 219         | H        |
|        | * 4.857         | 43.74                | ADR | 34.1          | -32               | 45.84                      | 54                 | -8.16       | -                   | -              | -                            | -              | 68             | 219         | H        |
| 3      | * 3.887         | 63.56                | PK3 | 33.6          | -34.4             | 62.76                      | -                  | -           | 74                  | -11.24         | -                            | -              | 165            | 236         | V        |
|        | * 3.883         | 46.02                | ADR | 33.6          | -34.5             | 45.12                      | 54                 | -8.88       | -                   | -              | -                            | -              | 165            | 236         | V        |
| 4      | * 4.853         | 67.95                | PK3 | 34.1          | -32               | 70.05                      | -                  | -           | 74                  | -3.95          | -                            | -              | 113            | 101         | V        |
|        | * 4.855         | 44.01                | ADR | 34.1          | -32               | 46.11                      | 54                 | -7.89       | -                   | -              | -                            | -              | 113            | 101         | V        |
| 7      | 6.784           | 52.54                | PK3 | 35.6          | -28.9             | 59.24                      | -                  | -           | -                   | -              | 68.2                         | -8.96          | 214            | 261         | V        |
| 5      | 6.785           | 54.53                | PK3 | 35.6          | -28.8             | 61.33                      | -                  | -           | -                   | -              | 68.2                         | -6.87          | 56             | 203         | H        |
| 6      | 7.766           | 42.59                | PK3 | 35.8          | -27               | 51.39                      | -                  | -           | -                   | -              | 68.2                         | -16.81         | 44             | 199         | H        |
| 8      | 7.766           | 42.01                | PK3 | 35.8          | -27               | 50.81                      | -                  | -           | -                   | -              | 68.2                         | -17.39         | 212            | 329         | V        |

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

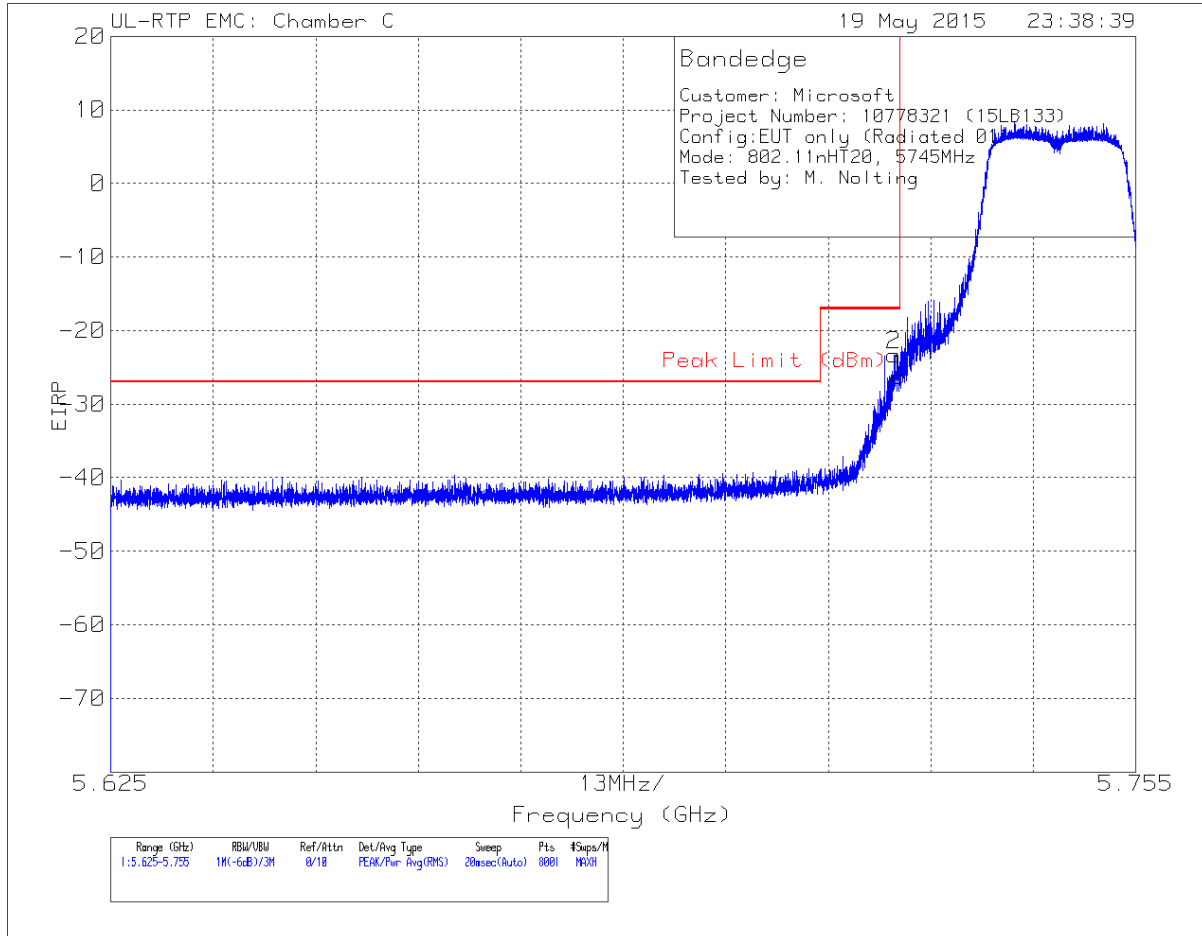
PK3 - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

## 9.10. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.8 GHz BAND

### RESTRICTED BANDEDGE (LOW CHANNEL)

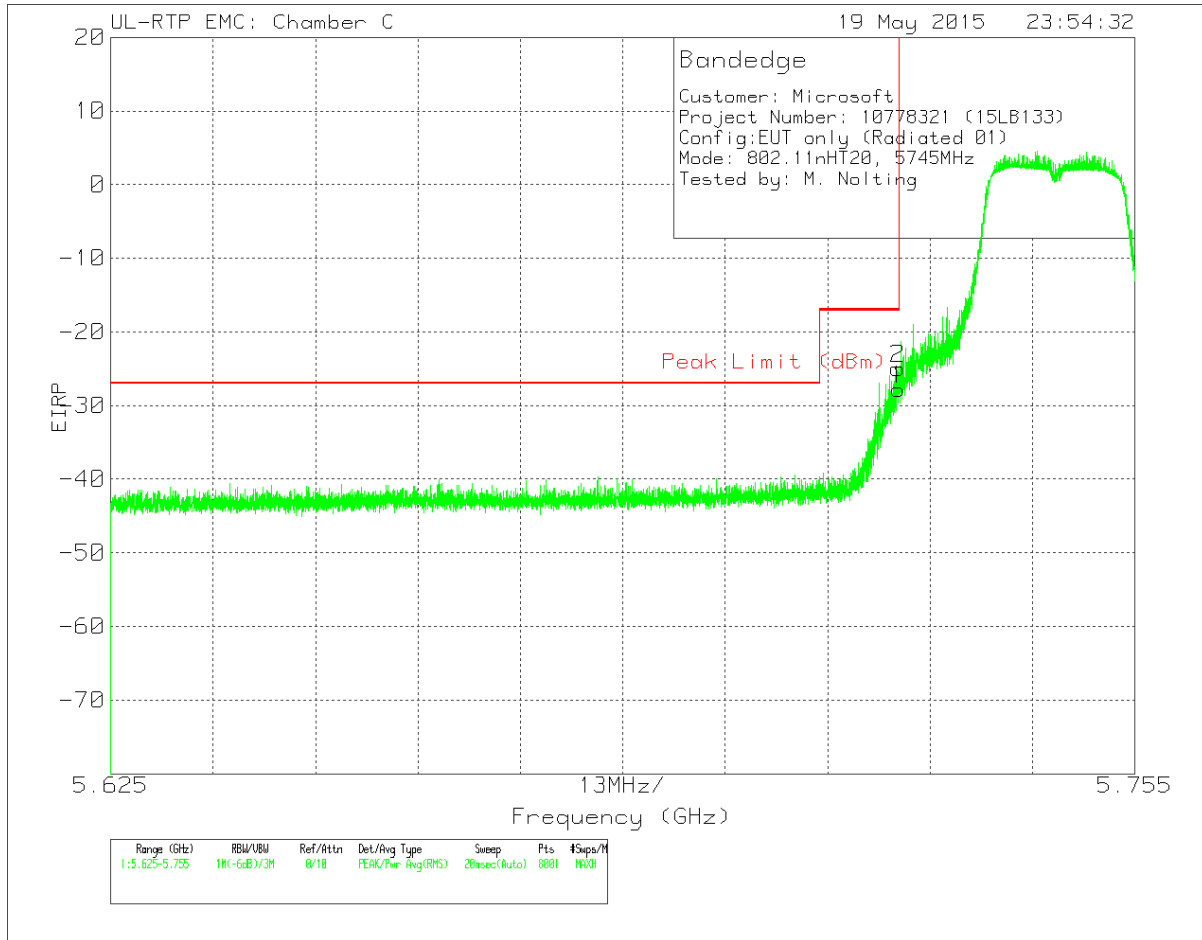
#### HORIZONTAL



| Marker | Frequency (GHz) | Meter Reading (dBm) | Det | AT0062 (dB/m) | Amp/Cbl/F ltr/Pad | Conversion Factor (dB) | Corrected Reading EIRP | Peak Limit (dBm) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|---------------------|-----|---------------|-------------------|------------------------|------------------------|------------------|----------------|----------------|-------------|----------|
| 2      | 5.724           | -47.92              | Pk  | 34.6          | -21.8             | 11.8                   | -23.32                 | -17              | -6.32          | 45             | 232         | H        |
| 1      | 5.725           | -50.85              | Pk  | 34.6          | -21.8             | 11.8                   | -26.25                 | -17              | -9.25          | 45             | 232         | H        |

Pk - Peak detector

VERTICAL

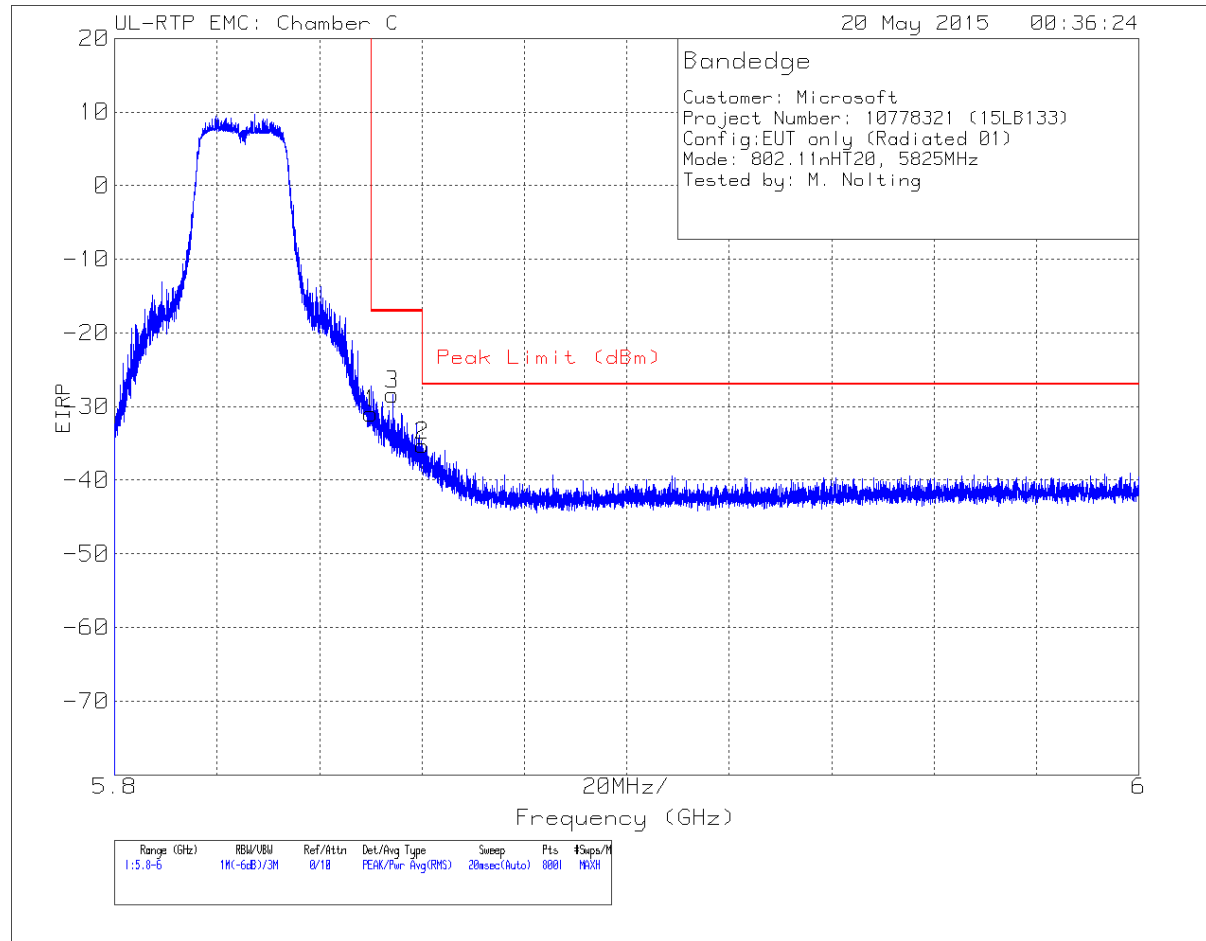


| Marker | Frequency (GHz) | Meter Reading (dBm) | Det | AT0062 (dB/m) | Amp/Cbl/F ltr/Pad | Conversion Factor (dB) | Corrected Reading EIRP | Peak Limit (dBm) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|---------------------|-----|---------------|-------------------|------------------------|------------------------|------------------|----------------|----------------|-------------|----------|
| 1      | 5.725           | -52.39              | Pk  | 34.6          | -21.8             | 11.8                   | -27.79                 | -17              | -10.79         | 138            | 177         | V        |
| 2      | 5.725           | -49.56              | Pk  | 34.6          | -21.8             | 11.8                   | -24.96                 | -17              | -7.96          | 138            | 177         | V        |

Pk - Peak detector

**AUTHORIZED BANDEDGE (HIGH CHANNEL)**

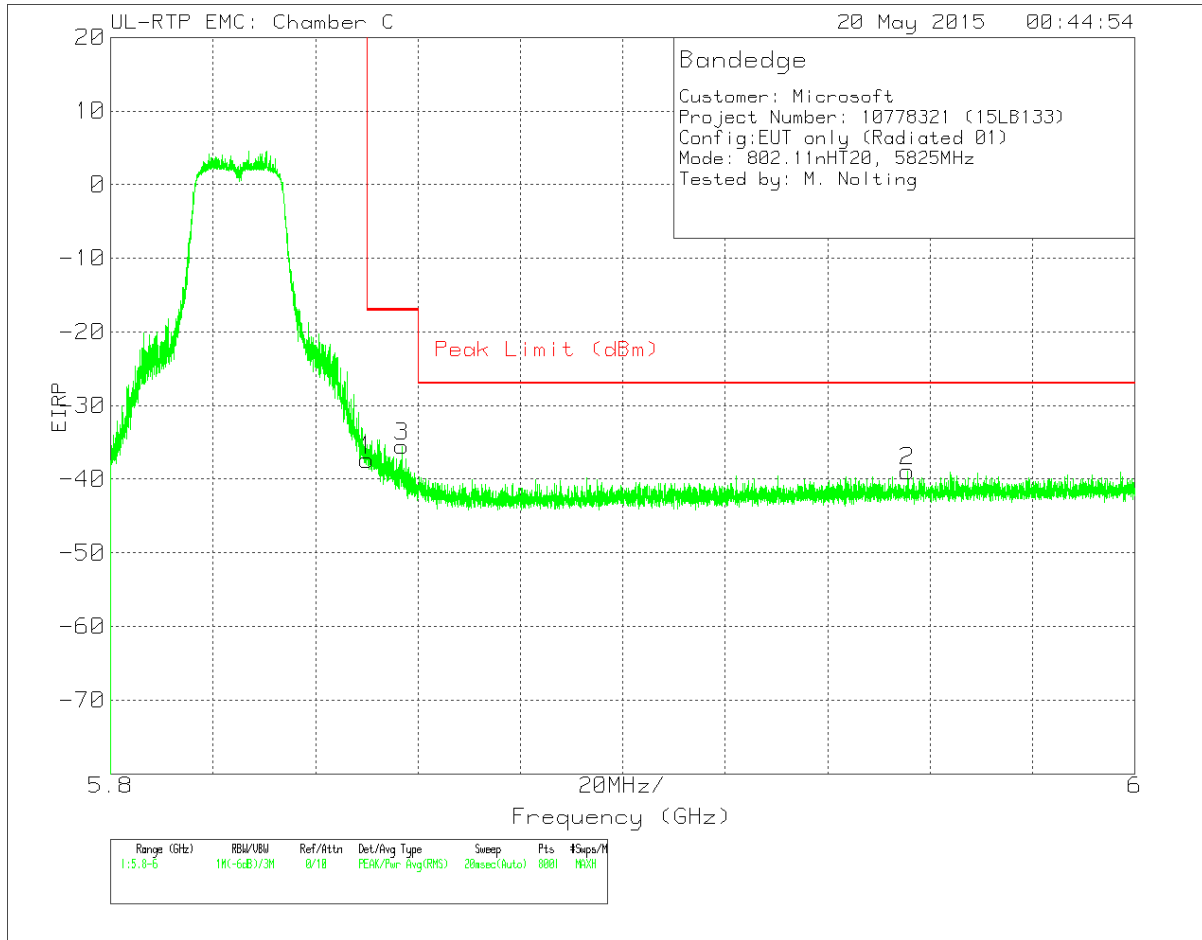
**HORIZONTAL**



| Marker | Frequency (GHz) | Meter Reading (dBm) | Det | AT0062 (dB/m) | Amp/Cbl/F ltr/Pad | Conversion Factor (dB) | Corrected Reading EIRP | Peak Limit (dBm) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|---------------------|-----|---------------|-------------------|------------------------|------------------------|------------------|----------------|----------------|-------------|----------|
| 1      | 5.85            | -56.42              | Pk  | 34.9          | -21.2             | 11.8                   | -30.92                 | -17              | -13.92         | 43             | 199         | H        |
| 3      | 5.854           | -53.89              | Pk  | 34.9          | -21.2             | 11.8                   | -28.39                 | -17              | -11.39         | 43             | 199         | H        |
| 2      | 5.86            | -60.78              | Pk  | 34.9          | -21.2             | 11.8                   | -35.28                 | -27              | -8.28          | 43             | 199         | H        |

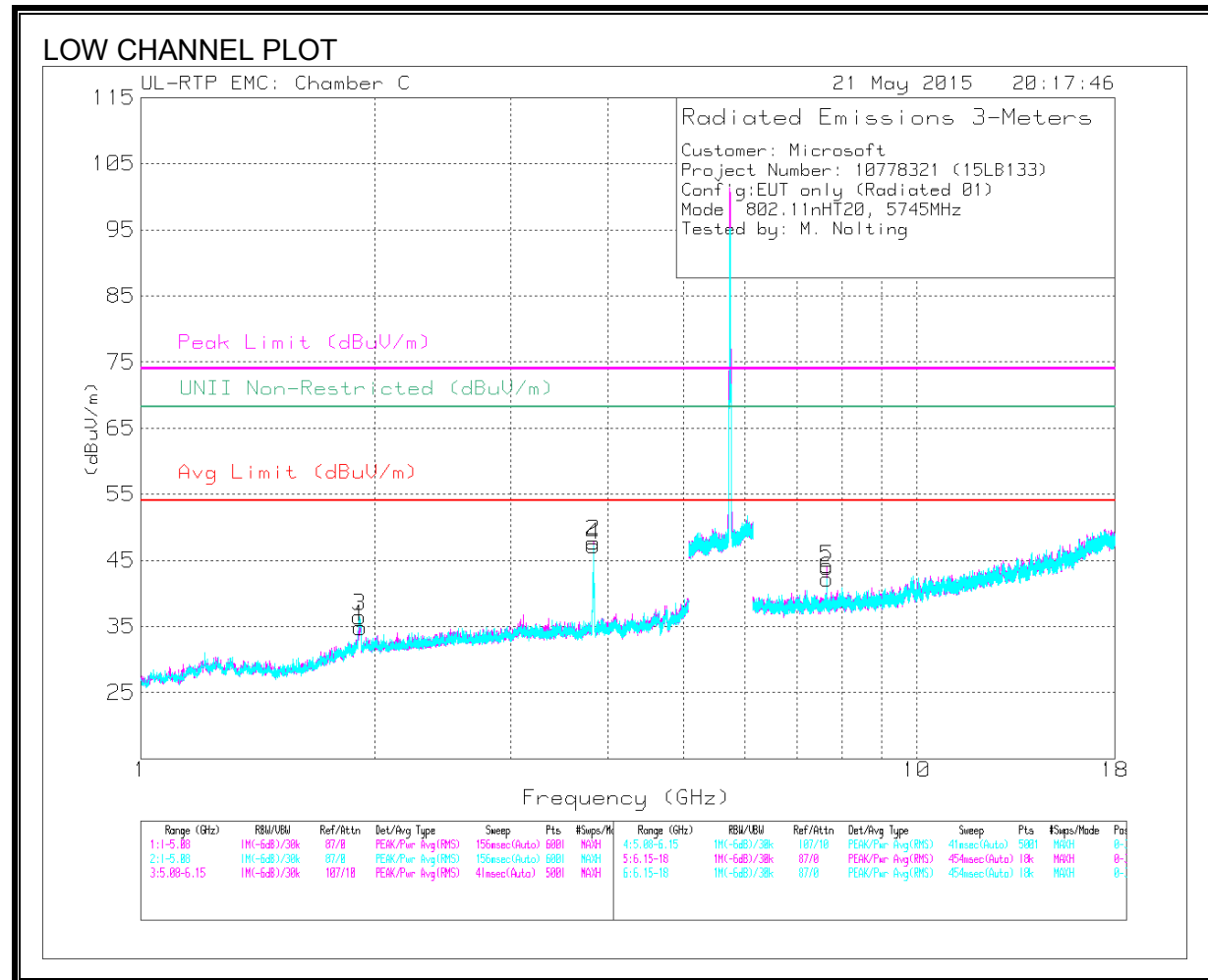
Pk - Peak detector

VERTICAL



Pk - Peak detector

## HARMONICS AND SPURIOUS EMISSIONS



## DATA

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AT0062 (dB/m) | Amp/Cbl/F ltr/Pad | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | UNII Non-Restricted (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|-------------------|----------------------------|--------------------|-------------|---------------------|----------------|------------------------------|----------------|----------------|-------------|----------|
| 2      | * 3.83          | 56.75                | PK3 | 33.5          | -34.4             | 55.85                      | -                  | -           | 74                  | -18.15         | -                            | -              | 216            | 189         | H        |
|        | * 3.83          | 48.14                | ADR | 33.5          | -34.4             | 47.24                      | 54                 | -6.76       | -                   | -              | -                            | -              | 216            | 189         | H        |
| 4      | * 3.83          | 54.6                 | PK3 | 33.5          | -34.4             | 53.7                       | -                  | -           | 74                  | -20.3          | -                            | -              | 142            | 248         | V        |
|        | * 3.83          | 46.5                 | ADR | 33.5          | -34.4             | 45.6                       | 54                 | -8.4        | -                   | -              | -                            | -              | 142            | 248         | V        |
| 5      | * 7.66          | 42.89                | PK3 | 35.8          | -27.7             | 50.99                      | -                  | -           | 74                  | -23.01         | -                            | -              | 51             | 192         | H        |
|        | * 7.66          | 35.16                | ADR | 35.8          | -27.7             | 43.26                      | 54                 | -10.74      | -                   | -              | -                            | -              | 51             | 192         | H        |
| 6      | * 7.66          | 41.45                | PK3 | 35.8          | -27.7             | 49.55                      | -                  | -           | 74                  | -24.45         | -                            | -              | 184            | 168         | V        |
|        | * 7.66          | 32.78                | ADR | 35.8          | -27.7             | 40.88                      | 54                 | -13.12      | -                   | -              | -                            | -              | 184            | 168         | V        |
| 3      | 1.923           | 52.26                | PK3 | 31.5          | -37.5             | 46.26                      | -                  | -           | -                   | -              | 68.2                         | -21.94         | 29             | 160         | V        |
| 1      | 1.914           | 51.73                | PK3 | 31.5          | -37.5             | 45.73                      | -                  | -           | -                   | -              | 68.2                         | -22.47         | 225            | 130         | H        |

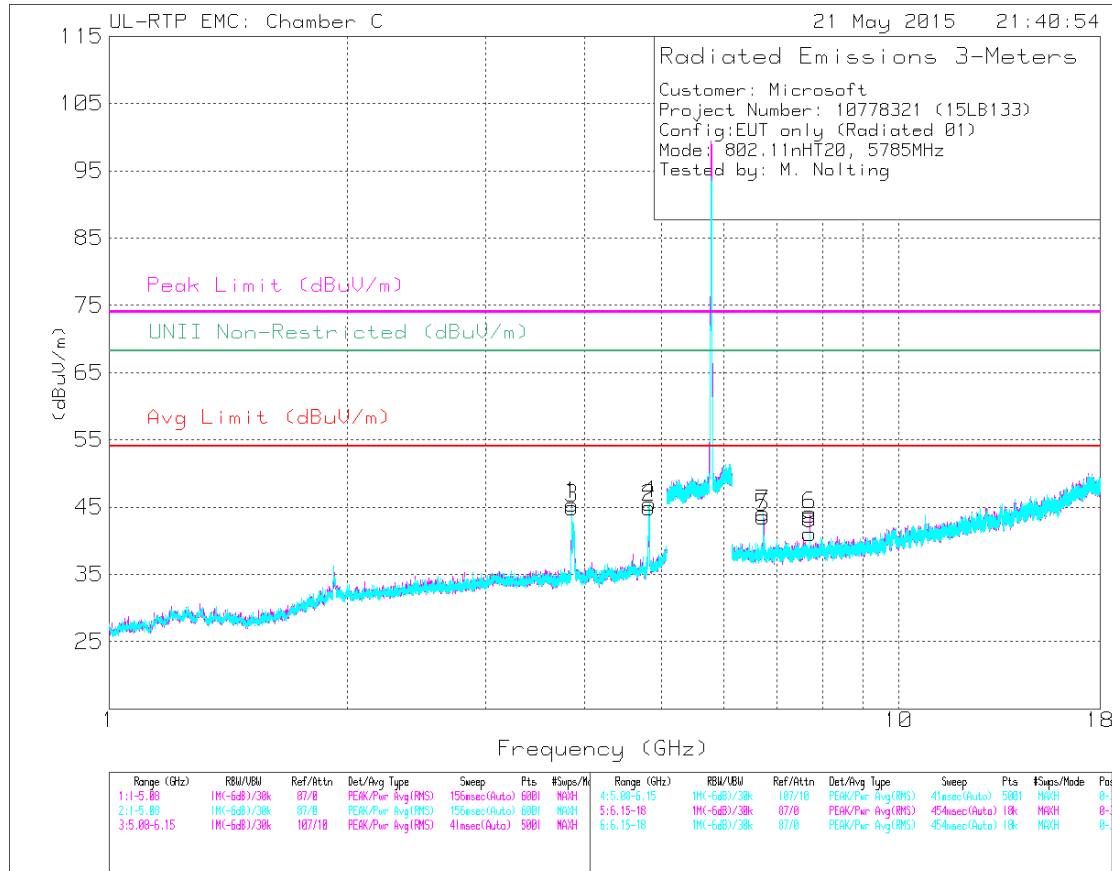
\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

PK3 - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

# MID CHANNEL PLOT



## DATA

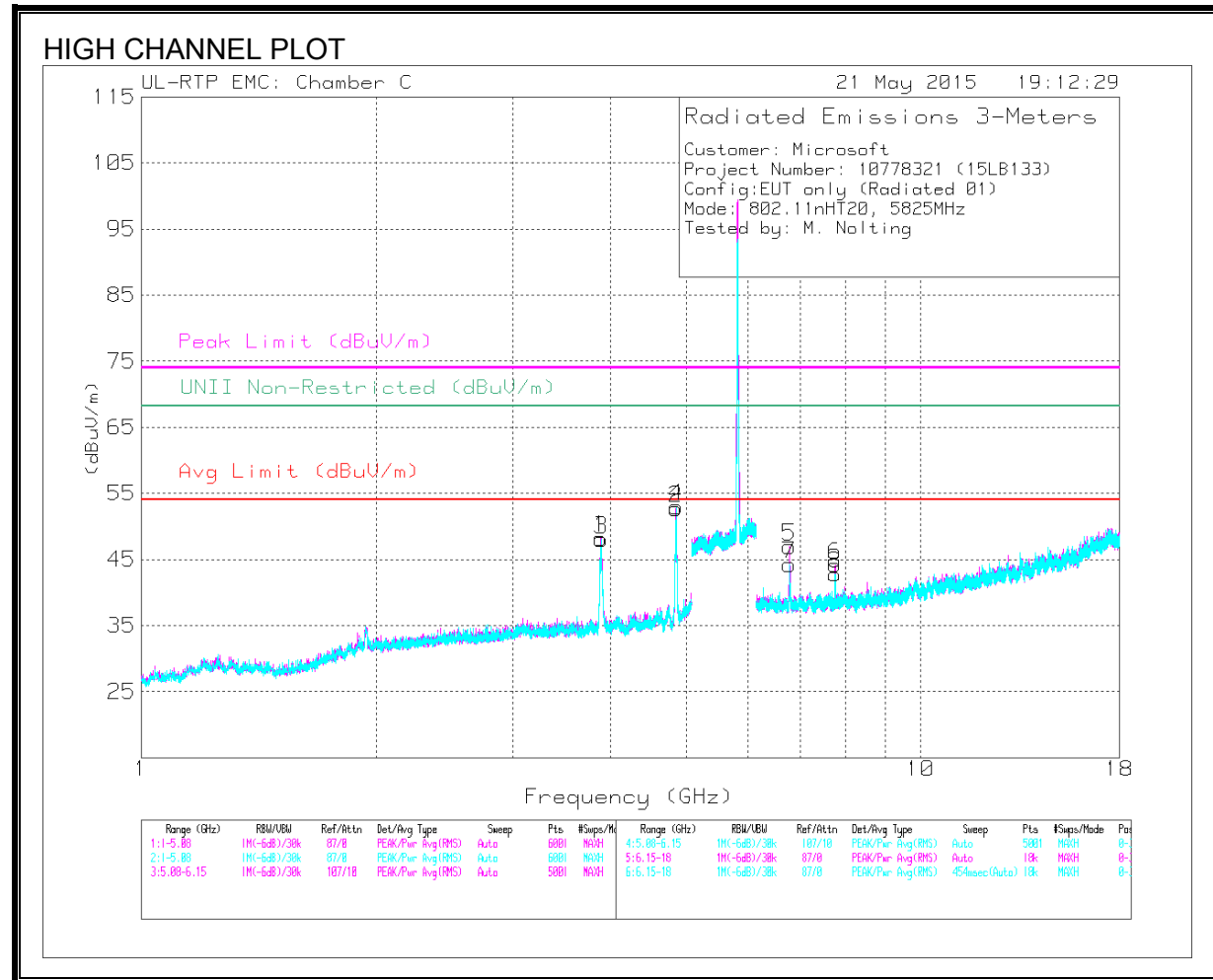
| Marker | Frequency (GHz) | Meter Reading (dBUV) | Det | AT0062 (dB/m) | Amp/Cbl/F ltr/Pad | Corrected Reading (dBUV/m) | Avg Limit (dBUV/m) | Margin (dB) | Peak Limit (dBUV/m) | PK Margin (dB) | UNII Non-Restricted (dBUV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|-------------------|----------------------------|--------------------|-------------|---------------------|----------------|------------------------------|----------------|----------------|-------------|----------|
| 1      | * 3.863         | 57.03                | PK3 | 33.5          | -34.7             | 55.83                      | -                  | -           | 74                  | -18.17         | -                            | -              | 215            | 184         | H        |
|        | * 3.857         | 46.97                | ADR | 33.5          | -34.7             | 45.77                      | 54                 | -8.23       | -                   | -              | -                            | -              | 215            | 184         | H        |
| 2      | * 4.83          | 59.59                | PK3 | 34.1          | -32.1             | 61.59                      | -                  | -           | 74                  | -12.41         | -                            | -              | 72             | 222         | H        |
|        | * 4.827         | 35.72                | ADR | 34.1          | -32.2             | 37.62                      | 54                 | -16.38      | -                   | -              | -                            | -              | 72             | 222         | H        |
| 3      | * 3.866         | 56.6                 | PK3 | 33.5          | -34.7             | 55.4                       | -                  | -           | 74                  | -18.6          | -                            | -              | 161            | 223         | V        |
|        | * 3.857         | 46.21                | ADR | 33.5          | -34.7             | 45.01                      | 54                 | -8.99       | -                   | -              | -                            | -              | 161            | 223         | V        |
| 4      | * 4.833         | 56.69                | PK3 | 34.1          | -32               | 58.79                      | -                  | -           | 74                  | -15.21         | -                            | -              | 111            | 121         | V        |
|        | * 4.825         | 34.77                | ADR | 34.1          | -32.3             | 36.57                      | 54                 | -17.43      | -                   | -              | -                            | -              | 111            | 121         | V        |
| 6      | * 7.713         | 42.95                | PK3 | 35.8          | -28               | 50.75                      | -                  | -           | 74                  | -23.25         | -                            | -              | 48             | 189         | H        |
|        | * 7.713         | 35.74                | ADR | 35.8          | -28               | 43.54                      | 54                 | -10.46      | -                   | -              | -                            | -              | 48             | 189         | H        |
| 8      | * 7.713         | 42.3                 | PK3 | 35.8          | -28               | 50.1                       | -                  | -           | 74                  | -23.9          | -                            | -              | 212            | 321         | V        |
|        | * 7.713         | 33.72                | ADR | 35.8          | -28               | 41.52                      | 54                 | -12.48      | -                   | -              | -                            | -              | 212            | 321         | V        |
| 5      | 6.742           | 53.7                 | PK3 | 35.7          | -28.7             | 60.7                       | -                  | -           | -                   | -              | 68.2                         | -7.5           | 57             | 193         | H        |
| 7      | 6.744           | 51.18                | PK3 | 35.7          | -28.7             | 58.18                      | -                  | -           | -                   | -              | 68.2                         | -10.02         | 223            | 271         | V        |

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

PK3 - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average



### DATA

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AT0062 (dB/m) | Amp/Cbl/Ftr/Pad | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | UNII Non-Restricted (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|-----------------|----------------------------|--------------------|-------------|---------------------|----------------|------------------------------|----------------|----------------|-------------|----------|
| 1      | * 3.889         | 65.05                | PK3 | 33.6          | -34.4           | 64.25                      | -                  | -           | 74                  | -9.75          | -                            | -              | 217            | 196         | H        |
|        | * 3.883         | 47.26                | ADR | 33.6          | -34.5           | 46.36                      | 54                 | -7.64       | -                   | -              | -                            | -              | 217            | 196         | H        |
| 2      | * 4.85          | 65.57                | PK3 | 34.1          | -31.9           | 67.77                      | -                  | -           | 74                  | -6.23          | -                            | -              | 65             | 219         | H        |
|        | * 4.856         | 42.75                | ADR | 34.1          | -32             | 44.85                      | 54                 | -9.15       | -                   | -              | -                            | -              | 65             | 219         | H        |
| 3      | * 3.892         | 64.9                 | PK3 | 33.6          | -34.3           | 64.2                       | -                  | -           | 74                  | -9.8           | -                            | -              | 165            | 236         | V        |
|        | * 3.883         | 45.82                | ADR | 33.6          | -34.5           | 44.92                      | 54                 | -9.08       | -                   | -              | -                            | -              | 165            | 236         | V        |
| 4      | * 4.851         | 66.59                | PK3 | 34.1          | -31.9           | 68.79                      | -                  | -           | 74                  | -5.21          | -                            | -              | 116            | 101         | V        |
|        | * 4.853         | 42.61                | ADR | 34.1          | -31.9           | 44.81                      | 54                 | -9.19       | -                   | -              | -                            | -              | 116            | 101         | V        |
| 7      | 6.785           | 50.07                | PK3 | 35.6          | -28.8           | 56.87                      | -                  | -           | -                   | -              | 68.2                         | -11.33         | 215            | 261         | V        |
| 5      | 6.794           | 55.14                | PK3 | 35.6          | -28.7           | 62.04                      | -                  | -           | -                   | -              | 68.2                         | -6.16          | 55             | 203         | H        |
| 6      | 7.767           | 42.41                | PK3 | 35.8          | -27             | 51.21                      | -                  | -           | -                   | -              | 68.2                         | -16.99         | 45             | 194         | H        |
| 8      | 7.767           | 41.35                | PK3 | 35.8          | -26.9           | 50.25                      | -                  | -           | -                   | -              | 68.2                         | -17.95         | 212            | 329         | V        |

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

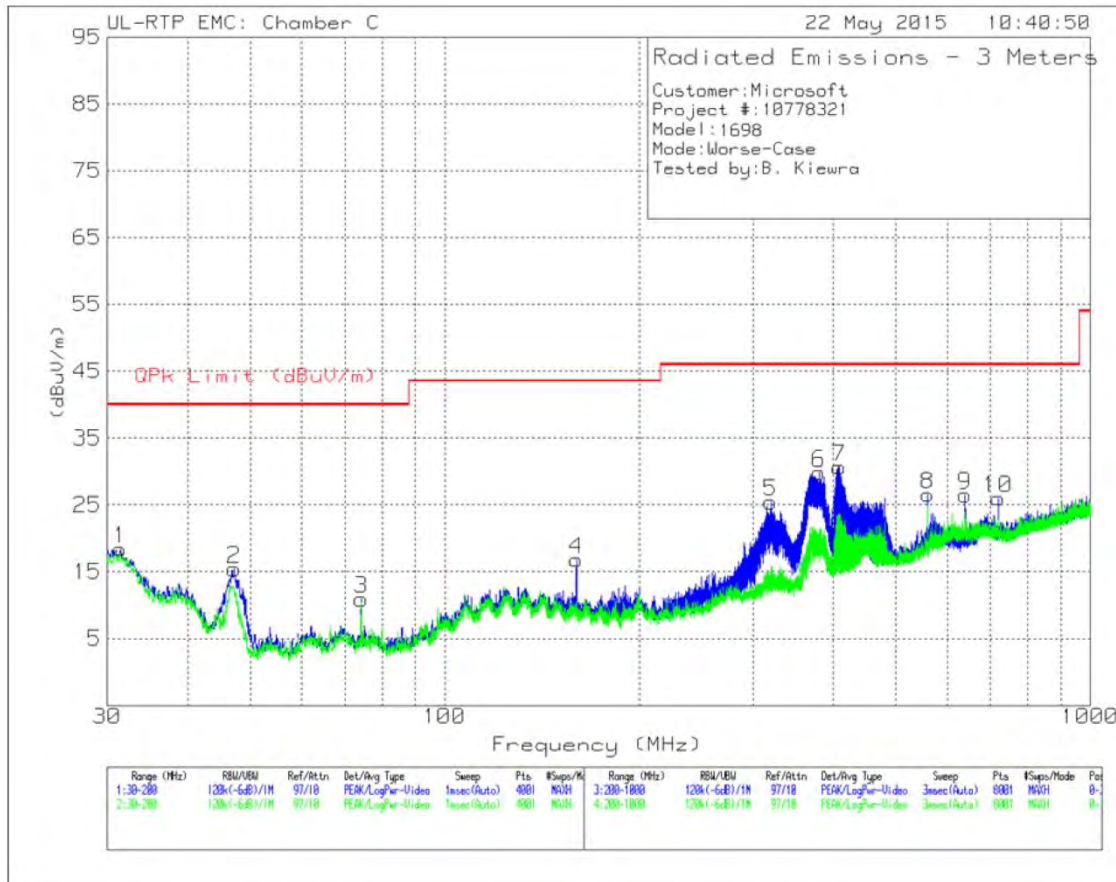
PK3 - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

## 9.11. WORST-CASE BELOW 1 GHz

### 9.11.1. SPURIOUS EMISSIONS 30 TO 1000 MHz (5GHz WORST-CASE CONFIGURATION)

HORIZONTAL & VERTICAL PLOT:



## DATA

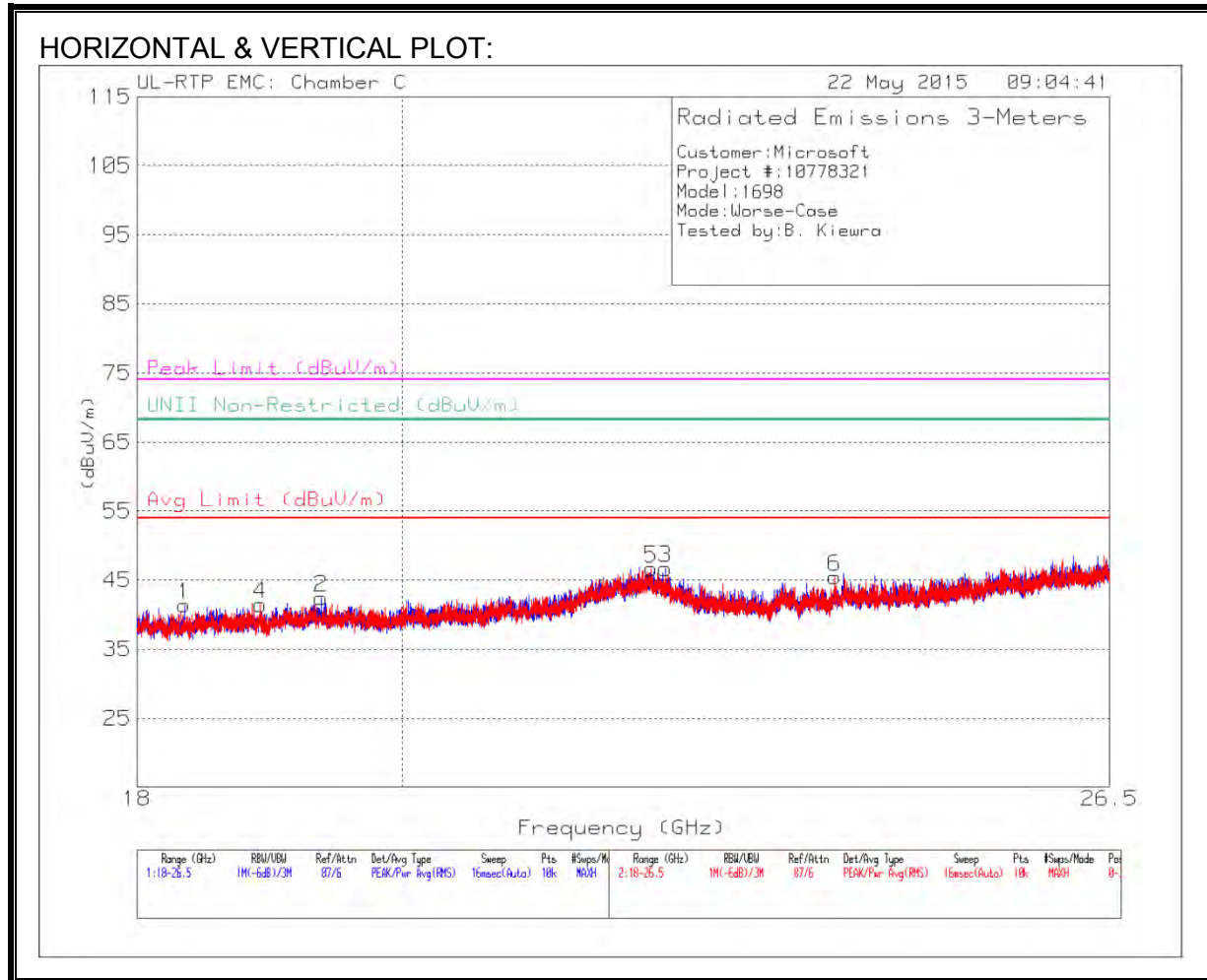
| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | AT0066 (dB/m) | Amp/Cbl (dB) | Corrected Reading (dBuV/m) | QPk Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|---------------|--------------|----------------------------|--------------------|-------------|----------------|-------------|----------|
| 3      | * 74.2425       | 33.93                | Pk  | 8.1           | -31.1        | 10.93                      | 40                 | -29.07      | 0-360          | 100         | H        |
| 7      | * 408.7         | 44.07                | Pk  | 16            | -29.4        | 30.67                      | 46.02              | -15.35      | 0-360          | 101         | H        |
| 1      | 31.445          | 29.32                | Pk  | 20.7          | -31.6        | 18.42                      | 40                 | -21.58      | 0-360          | 200         | H        |
| 2      | 47.2125         | 37.62                | Pk  | 9.2           | -31.4        | 15.42                      | 40                 | -24.58      | 0-360          | 300         | H        |
| 4      | 160.0075        | 35.12                | Pk  | 12.1          | -30.4        | 16.82                      | 43.52              | -26.7       | 0-360          | 300         | H        |
| 5      | 320             | 41.16                | Pk  | 14            | -29.7        | 25.46                      | 46.02              | -20.56      | 0-360          | 101         | H        |
| 6      | 380             | 44.19                | Pk  | 15.1          | -29.5        | 29.79                      | 46.02              | -16.23      | 0-360          | 101         | H        |
| 8      | 560             | 36.86                | Pk  | 18.5          | -28.8        | 26.56                      | 46.02              | -19.46      | 0-360          | 200         | H        |
| 9      | 640             | 35.49                | Pk  | 19.7          | -28.7        | 26.49                      | 46.02              | -19.53      | 0-360          | 101         | H        |
| 10     | 720             | 34.23                | Pk  | 20.5          | -28.7        | 26.03                      | 46.02              | -19.99      | 0-360          | 101         | H        |

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

## 9.12. WORST-CASE ABOVE 18 GHz

### 9.12.1. SPURIOUS EMISSIONS 18 TO 26 GHz (5GHz WORST-CASE CONFIGURATION)



# DATA

## Trace Markers

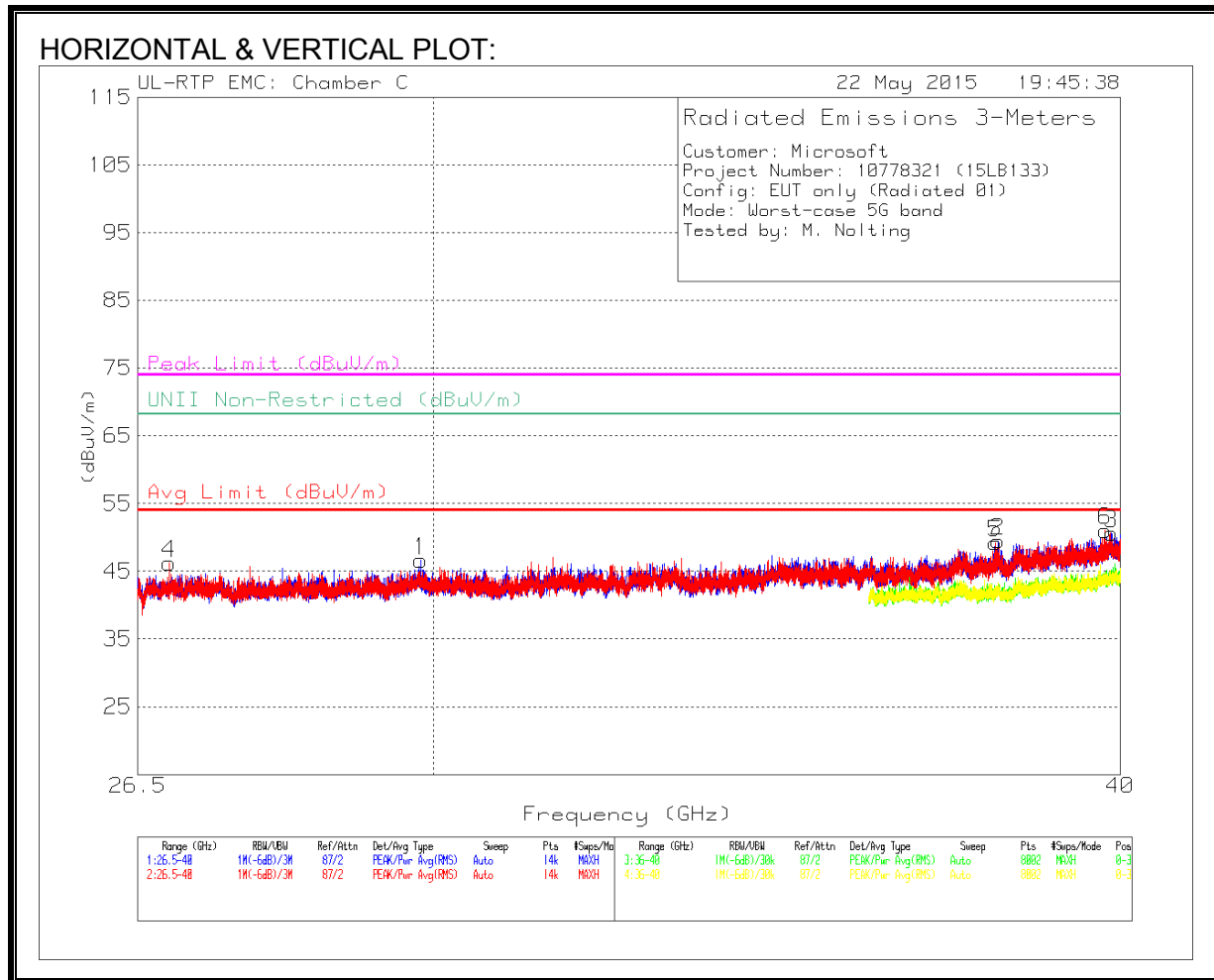
| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | Horn AT0063 (dB/m) | Amp/Cbl (dB) | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | UNII Non-Restricted (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|--------------------|--------------|----------------------------|--------------------|-------------|---------------------|----------------|------------------------------|----------------|----------------|-------------|----------|
| 1      | * 18.34         | 44.04                | PK3 | 32.2               | -33.2        | 43.04                      | -                  | -           | 74                  | -30.96         | 68.2                         | -25.16         | 91             | 190         | H        |
|        | * 18.345        | 32.81                | ADR | 32.2               | -33.2        | 31.81                      | 54                 | -22.19      | -                   | -              | -                            | -              | 91             | 190         | H        |
| 2      | * 19.372        | 44.26                | PK3 | 32.6               | -32.9        | 43.96                      | -                  | -           | 74                  | -30.04         | 68.2                         | -24.24         | 63             | 188         | H        |
|        | * 19.367        | 32.87                | ADR | 32.6               | -32.9        | 32.57                      | 54                 | -21.43      | -                   | -              | -                            | -              | 63             | 188         | H        |
| 3      | * 22.208        | 44.25                | PK3 | 36.2               | -32          | 48.45                      | -                  | -           | 74                  | -25.55         | 68.2                         | -19.75         | 174            | 166         | H        |
|        | * 22.207        | 32.52                | ADR | 36.2               | -32          | 36.72                      | 54                 | -17.28      | -                   | -              | -                            | -              | 174            | 166         | H        |
| 4      | * 18.905        | 44.31                | PK3 | 32.5               | -33          | 43.81                      | -                  | -           | 74                  | -30.19         | 68.2                         | -24.39         | 350            | 181         | V        |
|        | * 18.904        | 32.72                | ADR | 32.5               | -33          | 32.22                      | 54                 | -21.78      | -                   | -              | -                            | -              | 350            | 181         | V        |
| 5      | * 22.087        | 45.83                | PK3 | 36.8               | -32.1        | 50.53                      | -                  | -           | 74                  | -23.47         | 68.2                         | -17.67         | 205            | 160         | V        |
|        | * 22.086        | 32.75                | ADR | 36.8               | -32.1        | 37.45                      | 54                 | -16.55      | -                   | -              | -                            | -              | 205            | 160         | V        |
| 6      | * 23.756        | 44.92                | PK3 | 33.5               | -30.5        | 47.92                      | -                  | -           | 74                  | -26.08         | 68.2                         | -20.28         | 265            | 180         | V        |
|        | * 23.757        | 32.76                | ADR | 33.5               | -30.5        | 35.76                      | 54                 | -18.24      | -                   | -              | -                            | -              | 265            | 180         | V        |

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK3 - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

## 9.12.2. SPURIOUS EMISSIONS 26 TO 40 GHz (5GHz WORST-CASE CONFIGURATION)



**DATA**

Trace Markers

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | Horn AT0061 (dB/m) | Amp/Cbl (dB) | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | UNII Non-Restricted (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|--------------------|--------------|----------------------------|--------------------|-------------|---------------------|----------------|------------------------------|----------------|----------------|-------------|----------|
| 3      | * 39.854        | 45.68                | PK3 | 38.3               | -31.4        | 52.58                      | -                  | -           | 74                  | -21.42         | -                            | -              | 326            | 176         | H        |
|        | * 39.855        | 34.09                | ADR | 38.3               | -31.4        | 40.99                      | 54                 | -13.01      | -                   | -              | -                            | -              | 326            | 176         | H        |
| 6      | * 39.748        | 46.14                | PK3 | 38.4               | -31.7        | 52.84                      | -                  | -           | 74                  | -21.16         | -                            | -              | 115            | 164         | V        |
|        | * 39.747        | 34.28                | ADR | 38.4               | -31.7        | 40.98                      | 54                 | -13.02      | -                   | -              | -                            | -              | 115            | 164         | V        |
| 4      | 26.855          | 47.41                | Pk  | 35.7               | -36.9        | 46.21                      | -                  | -           | -                   | -              | 68.2                         | -21.99         | 0-360          | 150         | V        |
| 1      | 29.837          | 45.91                | Pk  | 36.2               | -35.5        | 46.61                      | -                  | -           | -                   | -              | 68.2                         | -21.59         | 0-360          | 150         | H        |
| 5      | 37.964          | 46.32                | Pk  | 37.8               | -34.9        | 49.22                      | -                  | -           | -                   | -              | 68.2                         | -18.98         | 0-360          | 175         | V        |
| 2      | 38.005          | 46.6                 | Pk  | 37.7               | -34.8        | 49.5                       | -                  | -           | -                   | -              | 68.2                         | -18.7          | 0-360          | 175         | H        |

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

PK3 - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average