

FCC TEST REPORT (15.407)

REPORT NO.: RF110309E06-1

MODEL NO.: ARS263

FCC ID: PPD-ARS263

RECEIVED: Mar. 09, 2011

TESTED: Mar. 22 to Apr. 07, 2011

ISSUED: Apr. 15, 2011

APPLICANT: Atheros Communications, Inc.

ADDRESS: 1700 Technology Drive, San Jose, CA
95110

ISSUED BY: Bureau Veritas Consumer Products Services (H.K.)
Ltd., Taoyuan Branch Hsin Chu Laboratory

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF110309E06-1	Original release	Apr. 15, 2011



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1. CERTIFICATION

PRODUCT: 1x1 802.11a/b/g/n +BT SDIO-WLAN/USB-BT Card
BRAND NAME: Atheros
MODEL NO.: ARS263
TEST SAMPLE: R&D SAMPLE
APPLICANT: Atheros Communications, Inc.
TESTED: Mar. 22 to Apr. 07, 2011
STANDARDS: FCC Part 15, Subpart E (Section 15.407)
ANSI C63.4-2003
ANSI C63.10-2009
Canada RSS-210 Issue 8 (2010-12)
Canada RSS-Gen Issue 3 (2010-12)

The above equipment (Model: ARS263) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and was in compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : Midoli Peng , **DATE:** Apr. 15, 2011
(Midoli Peng, Specialist)

APPROVED BY : May Chen , **DATE:** Apr. 15, 2011
(May Chen, Deputy Manager)

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 15, Subpart E, RSS-210,RSS-GEN					
Standard Section			Test Type	Result	REMARK
RSS-210	RSS-GEN	FCC Part 15			
-	7.2.4	15.407(b)(5)	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -34.51dB at 3.309MHz
A9.2	4.7	15.407(b/1/2/3)(b)(5)	Electric Field Strength Spurious Emissions, 30MHz ~ 40000MHz	PASS	Meet the requirement of limit. Minimum passing margin is -0.5dB at 5350MHz
	6.1	-	Receiver Radiated Emissions RSS-Gen Limit: Table 2	PASS	Meet the requirement of limit. Minimum passing margin is -1.6dB at 299.57MHz
A9.2	-	15.407(a/1/2/3)	Output Transmit Power	PASS	Meet the requirement of limit
A9.2		15.407(a)(6)	Peak Power Excursion	PASS	Meet the requirement of limit
A9.2 A9.4(2)	-	15.407(a/1/2/3)	Peak Power Spectral Density	PASS	Meet the requirement of limit
A9.5(5)	4.7	15.407(g)	Frequency Stability	PASS	Meet the requirement of limit
-	7.1.4	15.203	Antenna Requirement	PASS	Antenna connector is IPEX not a standard connector.

NOTE:

1. There are Bluetooth technology and WLAN technology used for the EUT. (The Bluetooth test data please refer "RF110309E06-2")
2. For WLAN: The EUT was operating in 2400 ~ 2483.5MHz, 5.15~5.35GHz, 5.47~5.725GHz and 5.725~5.85GHz frequencies band. This report was recorded the RF parameters including 5.15~5.35GHz and 5.47~5.725GHz. For the 2400 ~ 2483.5MHz and 5.725~5.85GHz RF parameters was recorded in another test report. (RF110309E06).

2.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

Measurement	Value
Conducted emissions	2.45 dB
Radiated emissions (30MHz-1GHz)	3.76 dB
Radiated emissions (1GHz -18GHz)	2.19 dB
Radiated emissions (18GHz -40GHz)	2.55 dB

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	1x1 802.11a/b/g/n +BT SDIO-WLAN/USB-BT Card
MODEL NO.	ARS263
FCC ID	PPD-ARS263
IC ID	4104A-ARS263
POWER SUPPLY	DC 3.3V from host equipment
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
MODULATION TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	802.11b: 11 / 5.5 / 2 / 1Mbps 802.11a/g: 54/48/36/24/18/12/9/6Mbps 802.11n (20MHz, 800ns GI): 65 / 58.5 / 52 / 39 / 26 / 19.5 / 13 / 6.5Mbps 802.11n (20MHz, 400ns GI): 72.2 / 65 / 57.8 / 43.3 / 28.9 / 21.7 / 14.4 / 7.2Mbps 802.11n (40MHz, 800ns GI) <For 5GHz only> : 135 / 121.5 / 108 / 81 / 54 / 40.5 / 27 / 13.5Mbps 802.11n (40MHz, 400ns GI) <For 5GHz only> : 150 / 135 / 120 / 90 / 60 / 45 / 30 / 15Mbps
OPERATING FREQUENCY	For 15.407 5.18 ~ 5.24GHz, 5.26 ~ 5.32GHz, 5.50 ~ 5.70GHz
	For 15.247 2.4GHz : 2.412 ~ 2.462GHz 5GHz: 5.745 ~ 5.825GHz
NUMBER OF CHANNEL	For 15.407 19 for 802.11a, 802.11n (20MHz) 9 for 802.11n (40MHz)
	For 15.247(2.4GHz) 11 for 802.11b, 802.11g, 802.11n (20MHz) For 15.247(5GHz) 5 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz)

MAXIMUM OUTPUT POWER	For 15.407 802.11a: 64.6mW 802.11n (20MHz): 45.7mW 802.11n (40MHz): 26.9mW For 15.247(2.4GHz) 802.11b: 83.2mW 802.11g: 177.8mW 802.11n (20MHz): 162.2mW For 15.247(5GHz) 802.11a: 173.8mW 802.11n (20MHz): 173.8mW 802.11n (40MHz): 169.8mW
ANTENNA TYPE	See item 3.2
ANTENNA CONNECTOR	See item 3.2
DATA CABLE	NA
I/O PORTS	NA
ASSOCIATED DEVICES	NA

NOTE:

- There are Bluetooth technology and WLAN technology used for the EUT. <the Bluetooth test data please refer "RF110309E06-2">
- There are two versions of EUT, The only difference is version 132C has SFLASH installed. And there is no SFLASH in version 132A. The worst-case scenario has been investigated with the same power level and found no difference. The test data reflects the worst-case scenarios.
- Conducted emission and Radiated emission of the simultaneous operation (WiFi & Bluetooth) have been evaluated and no non-compliance found.
- The EUT is 1 * 1 spatial SISO without beam forming function.
- The EUT complies with 802.11n standards and backwards compatible with 802. 11a, 802.11b, 802.11g products.
- The EUT was pre-tested under the following modes:

Test Mode	Data rate
Mode A	400ns GI
Mode B	800ns GI

From the above modes, the worst case was found in **Mode B**. Therefore only the test data of the mode was recorded in this report.

- For radiated : The EUT's antenna was pre-tested under the following modes:

Test Mode	Description
Mode A	X-Y axis
Mode B	Y-Z axis
Mode C	X-Z axis

From the above modes, the worst case was found in **Mode A**. Therefore only the test data of the mode was recorded in this report.



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8. The above EUT information was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3.2 DESCRIPTION OF ANTENNA

There are two sets of antennas provided to this EUT, please refer to the following table:

Set 1:

No.	Brand	Model	Antenna Type	Connector	Antenna Gain (dBi)< included cable loss>			
					For 2.4GHz	For 5GHz (5.15~5.35)	For 5GHz (5.47~5.725)	For 5GHz (5.725~5.85)
1&2	WNC	81-EBJ15.005	PIFA	IPEX	3.62	3.08	4.76	4.76

Cable Loss:

No.	Brand	Model	Cable Loss(dB)				Cable Length(mm)
			For 2.4GHz	For 5GHz (5.15~5.35)	For 5GHz (5.47~5.725)	For 5GHz (5.725~5.85)	
1&2	WNC	81-EBJ15.005	1.15	1.70	1.74	1.79	300

Set 2:

No.	Brand	Model	Antenna Type	Connector	Antenna Gain (dBi)< included cable loss>			
					For 2.4GHz	For 5GHz (5.15~5.35)	For 5GHz (5.47~5.725)	For 5GHz (5.725~5.85)
1&2	WNC	81.ED415.001	PIFA	IPEX	1.48	5.56	5.34	3.14

Cable Loss:

No.	Brand	Model	Cable Loss(dB)				Cable Length(mm)
			For 2.4GHz	For 5GHz (5.15~5.35)	For 5GHz (5.47~5.725)	For 5GHz (5.725~5.85)	
1&2	WNC	81.ED415.001	0.96	1.29	1.36	1.38	300

Note:

1. Above antenna gains of antenna are Total (H+V).
2. All of antenna can be application for WLAN and Bluetooth.
3. Antenna (model: 81-EBJ15.005) was chosen for Bluetooth, 2.4GHz & 5GHz (Band 4) final test.
4. Antenna (model: 81.ED415.001) was chosen for 5GHz (Band 1~3) final test.

3.3 DESCRIPTION OF TEST MODES

Operated in 5150MHz ~ 5350MHz bands:

Eight channels are provided for 802.11a and 802.11n (20MHz):

CHANNEL	FREQUENCY
36	5180 MHz
40	5200 MHz
44	5220 MHz
48	5240 MHz
52	5260 MHz
56	5280 MHz
60	5300 MHz
64	5320 MHz

Four channels are provided for 802.11n (40MHz):

CHANNEL	FREQUENCY
38	5190 MHz
46	5230 MHz
54	5270 MHz
62	5310 MHz

Operated in 5470MHz ~ 5725MHz bands:

Eleven channels are provided for 802.11a and 802.11n (20MHz):

CHANNEL	FREQUENCY
100	5500 MHz
104	5520 MHz
108	5540 MHz
112	5560 MHz
116	5580 MHz
120	5600 MHz
124	5620 MHz
128	5640 MHz
132	5660 MHz
136	5680 MHz
140	5700 MHz

Five channels are provided for 802.11n (40MHz):

CHANNEL	FREQUENCY
102	5510 MHz
110	5550 MHz
118	5590 MHz
126	5630 MHz
134	5670 MHz

3.3.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	PLC	RE < 1G	RE ≥ 1G	APCM	
-	√	√	√	√	-

Where **PLC**: Power Line Conducted Emission

RE < 1G: Radiated Emission below 1GHz

RE ≥ 1G: Radiated Emission above 1GHz

APCM: Antenna Port Conducted Measurement

POWER LINE CONDUCTED EMISSION TEST:

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a	36 to 140	60	OFDM	BPSK	6

RADIATED EMISSION TEST (BELOW 1 GHz):

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ The receiving mode had show equal or better than Tx mode during the pre-scan and hence the Tx mode data is re-used for Receiving-mode worst-case data.
- ☒ Following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a	36 to 140	60	OFDM	BPSK	6

RADIATED EMISSION TEST (ABOVE 1 GHz):

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a	36 to 140	36, 40, 48, 52, 60, 64, 100, 120, 140	OFDM	BPSK	6
802.11n (20MHz)	36 to 140	36, 40, 48, 52, 60, 64, 100, 120, 140	OFDM	BPSK	6.5
802.11n (40MHz)	38 to 134	38, 46, 54, 62, 102, 118, 134	OFDM	BPSK	13.5
Receiver	36 to 140	36, 40, 48, 52, 60, 64, 100, 120, 140			

CONDUCTED OUT-BAND EMISSION MEASUREMENT:

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a	36 to 140	36, 64, 100, 140	OFDM	BPSK	6
802.11n (20MHz)	36 to 140	36, 64, 100, 140	OFDM	BPSK	6.5
802.11n (40MHz)	38 to 134	38, 62, 102, 134	OFDM	BPSK	13.5

ANTENNA PORT CONDUCTED MEASUREMENT:

- ☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a	36 to 140	36, 40, 48, 52, 60, 64, 100, 120, 140	OFDM	BPSK	6
802.11n (20MHz)	36 to 140	36, 40, 48, 52, 60, 64, 100, 120, 140	OFDM	BPSK	6.5
802.11n (40MHz)	38 to 134	38, 46, 54, 62, 102, 118, 134	OFDM	BPSK	13.5

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE ³ 1G	19deg. C, 66%RH, 1022 hPa	120Vac, 60Hz	Rex Huang
RE<1G	22deg. C, 62%RH, 1022 hPa	120Vac, 60Hz	Rex Huang
PLC	23deg. C, 69%RH, 1022 hPa	120Vac, 60Hz	Andy Ho
APCM	20deg. C, 60%RH, 1022 hPa	120Vac, 60Hz	Rex Huang

3.4 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, Subpart E (Section 15.407)

ANSI C63.4-2003

ANSI C63.10-2009

Canada RSS-210 Issue 8 (2010-12)

Canada RSS-Gen Issue 3 (2010-12)

All test items have been performed and recorded as per the above standards.

NOTE: The EUT has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.



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3.5 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

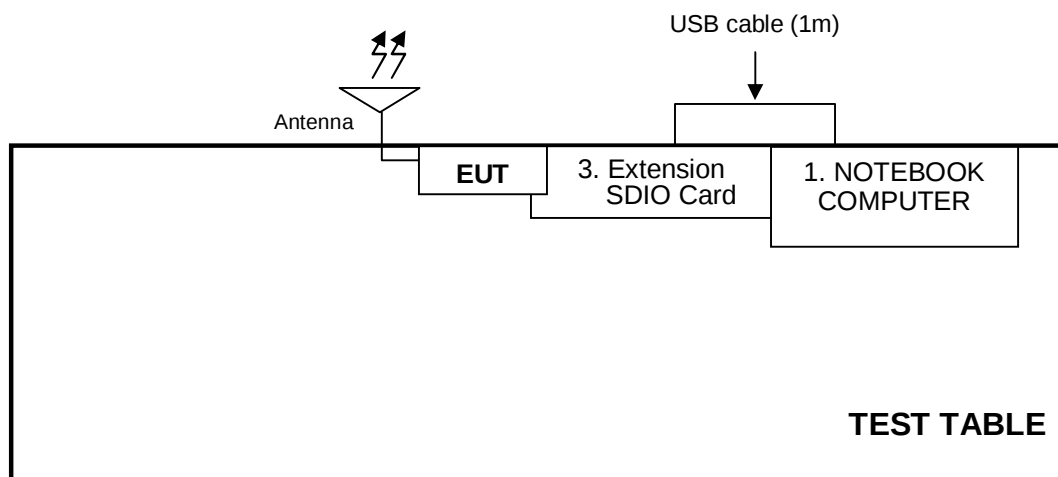
No.	Product	Brand	Model No.	Serial No.	FCC ID
1	Notebook Computer	Lenovo	T61	L3Z9538	FCC DoC
2	ExpressCard Adapter	Atheros	NA	NA	NA
3	Extension SDIO Card	Atheros	NA	NA	NA

No.	Signal cable description
1	NA
2	NA
3	NA

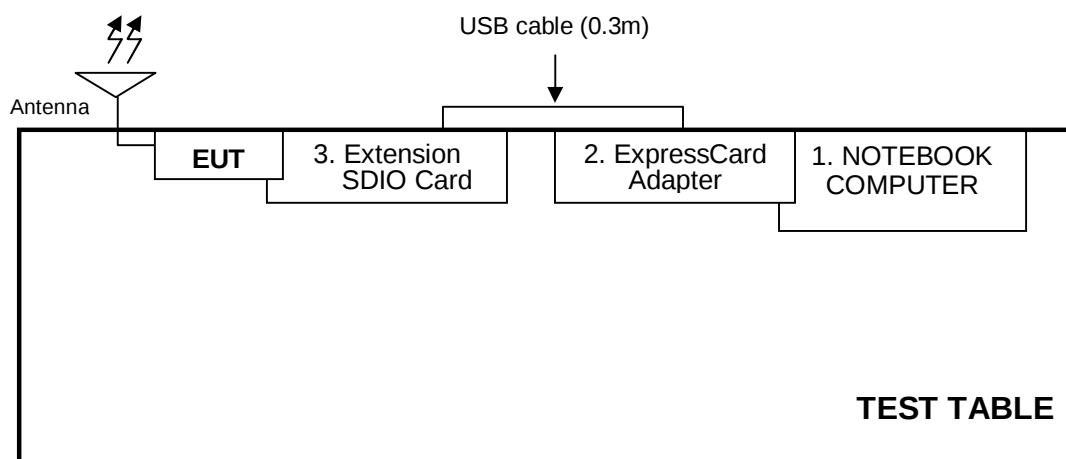
Note: The power cords of the above support units were unshielded (1.8m).

3.6 CONFIGURATION OF SYSTEM UNDER TEST

For conducted test:



For other test items:



4. TEST TYPES AND RESULTS

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB μ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

- NOTE:**
1. The lower limit shall apply at the transition frequencies.
 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.
 3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver	ESCS 30	100375	Mar. 09, 2011	Mar. 08, 2012
Line-Impedance Stabilization Network (for EUT)	NSLK 8127	8127-522	Sep. 08, 2010	Sep. 07, 2011
Line-Impedance Stabilization Network (for Peripheral)	ESH3-Z5	848773/004	Nov. 03, 2010	Nov. 02, 2011
RF Cable (JYEBAO)	5DFB	COCCAB-002	Aug. 30, 2010	Aug. 29, 2011
50 ohms Terminator	50	3	Nov. 03, 2010	Nov. 02, 2011
Software	BV ADT_Cond_V7.3.7	NA	NA	NA

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in Shielded Room No. C.
- 3 The VCCI Con C Registration No. is C-3611.

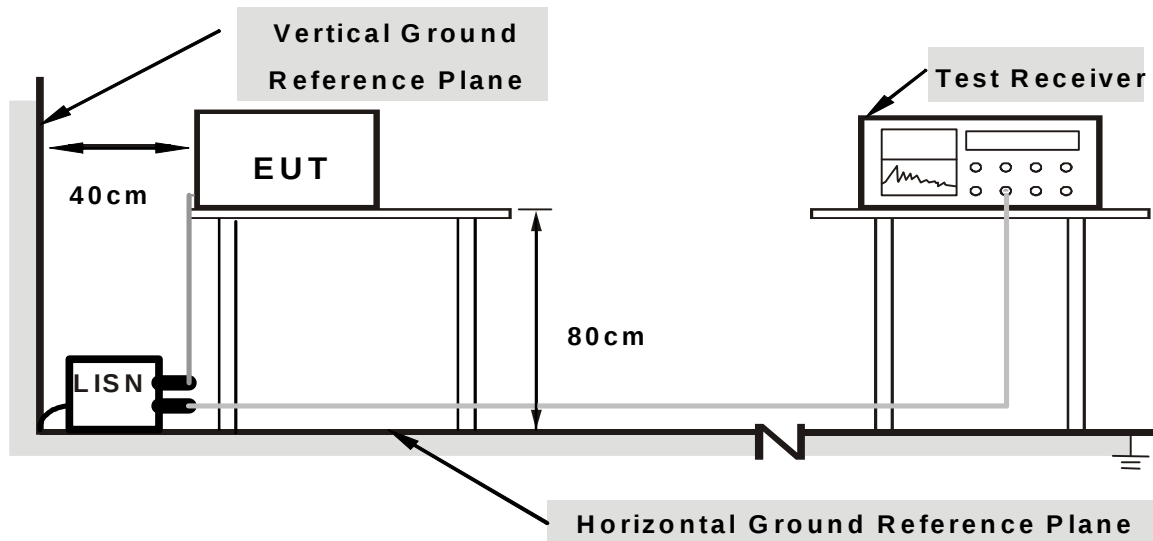
4.1.3 TEST PROCEDURES

- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN.
- b. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- c. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- d. The frequency range from 150kHz to 30MHz was searched. Emission level under (Limit – 20dB) was not recorded.

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP



Note: 1.Support units were connected to second LISN.

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

4.1.6 EUT OPERATING CONDITIONS

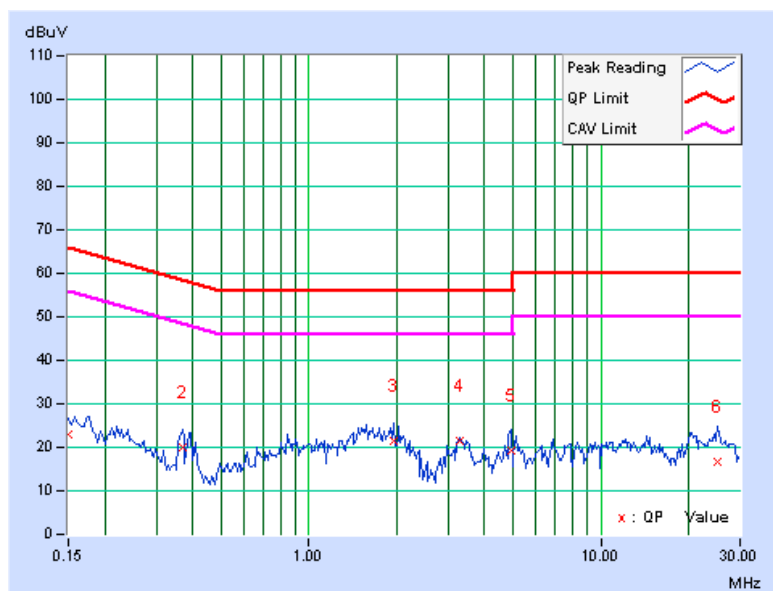
1. Connect the EUT with the support unit 1 (Notebook Computer) which is placed on a testing table.
2. The communication partner run test program “ART R0.2B25” to enable EUT under transmission/receiving condition continuously at specific channel frequency.

4.1.7 TEST RESULTS

PHASE	Line (L)	6dB BANDWIDTH	9 kHz
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No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor (dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.150	0.10	22.75	-	22.85	-	66.00	56.00	-43.15	-
2	0.369	0.13	19.98	-	20.11	-	58.53	48.53	-38.42	-
3	1.957	0.16	21.27	-	21.43	-	56.00	46.00	-34.57	-
4	3.309	0.19	21.30	-	21.49	-	56.00	46.00	-34.51	-
5	4.934	0.24	18.89	-	19.13	-	56.00	46.00	-36.87	-
6	25.129	0.82	15.80	-	16.62	-	60.00	50.00	-43.38	-

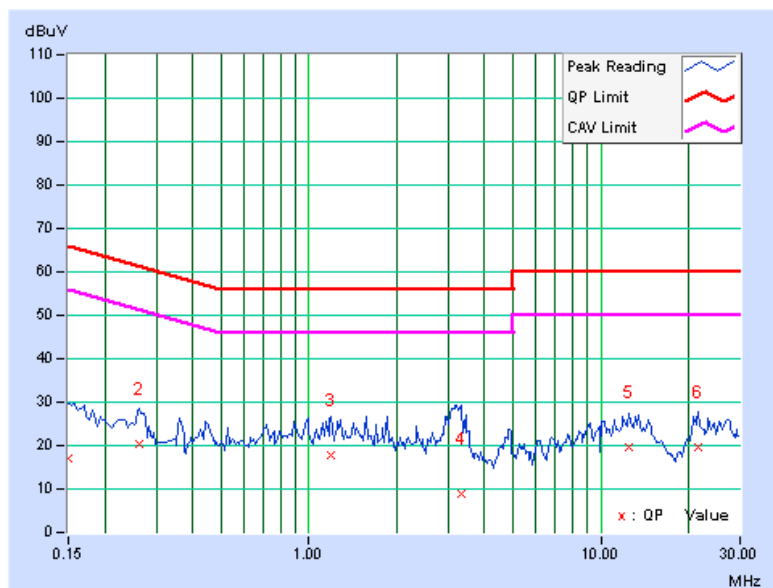
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.



PHASE	Neutral (N)	6dB BANDWIDTH	9 kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.150	0.12	16.78	-	16.90	-	66.00	56.00	-49.10	-
2	0.263	0.14	20.34	-	20.48	-	61.33	51.33	-40.84	-
3	1.195	0.17	17.79	-	17.96	-	56.00	46.00	-38.04	-
4	3.324	0.25	8.80	-	9.05	-	56.00	46.00	-46.95	-
5	12.527	0.98	18.63	-	19.61	-	60.00	50.00	-40.39	-
6	21.590	1.54	18.11	-	19.65	-	60.00	50.00	-40.35	-

- REMARKS:** 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



4.2 RADIATED EMISSION MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

For transmitter part:

Emissions radiated outside of the specified bands, shall be according to the general radiated limits in 15.209 (RSS-Gen table 5, 6) as following:

Frequencies (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB.
4. Section 15.205 restricted bands of operation shall compliance with the limits in Section 15.209.

For receiver part:

Emissions radiated outside of the specified bands, shall be according to the general radiated limits in RSS-Gen table 2 as following:

Frequencies (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

NOTE:

- The lower limit shall apply at the transition frequencies.
- Emission level (dBuV/m) = 20 log Emission level (uV/m).
- For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB.

4.2.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

Frequencies (MHz)	EIRP Limit (dBm)	Equivalent Field Strength at 3m (dBμV/m) *note 3
5150~5250	-27	68.3
5250~5350	-27	68.3
5470~5725	-27	68.3
5725~5825	-27 *note 1	68.3
	-17 *note 2	78.3

NOTE:

1. For frequencies 10MHz or greater above or below the band edge.
2. All emissions within the frequency range from the band edge to 10MHz above or below the band edge.
3. The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength

$$E = \frac{1000000\sqrt{30P}}{3} \mu\text{V/m, where P is the eirp (Watts)}$$

4.2.3 TEST INSTRUMENTS

Below 1GHz:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Agilent Spectrum Analyzer	E4446A	MY48250253	Aug. 23, 2010	Aug. 22, 2011
Agilent Pre-Selector	N9039A	MY46520310	Aug. 23, 2010	Aug. 22, 2011
Agilent Signal Generator	N5181A	MY49060347	July 30, 2010	July 29, 2011
LIG NEX1 Test Receiver	ER-265	L09068005	Oct. 25, 2010	Oct. 24, 2011
Mini-Circuits Pre-Amplifier	ZFL-1000VH2B	AMP-ZFL-04	Nov. 16, 2010	Nov. 15, 2011
Agilent Pre-Amplifier	8449B	3008A02465	Feb. 28, 2011	Feb. 27, 2012
Miteq Pre-Amplifier	AFS33-1800265 0-30-8P-44	881786	NA	NA
SCHWARZBECK Trilog Broadband Antenna	VULB 9168	9168-361	Apr. 28, 2010	Apr. 27, 2011
AISI Horn_Antenna	AIH.8018	0000220091110	Nov. 22, 2010	Nov. 21, 2011
SCHWARZBECK Horn_Antenna	BBHA 9170	9170-424	Oct. 08, 2010	Oct. 07, 2011
RF CABLE	NA	RF104-205 RF104-207 RF104-202	Dec. 28, 2010	Dec. 27, 2011
RF Cable	NA	CHHCAB_001	NA	NA
Software	ADT_Radiated_V8.7.05	NA	NA	NA
CT Antenna Tower & Turn Table	NA	NA	NA	NA

- Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The horn antenna, preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
3. The test was performed in 966 Chamber No. H.
4. The FCC Site Registration No. is 797305.
5. The CANADA Site Registration No. is IC 7450H-3.



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Above 1GHz:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Agilent Spectrum Analyzer	E4446A	MY48250254	July 14, 2010	July 13, 2011
Agilent Pre-Selector	N9039A	MY46520311	July 14, 2010	July 13, 2011
Agilent Signal Generator	N5181A	MY49060517	July 14, 2010	July 13, 2011
Mini-Circuits Pre-Amplifier	ZFL-1000VH2B	AMP-ZFL-03	Nov. 16, 2010	Nov. 15, 2011
Agilent Pre-Amplifier	8449B	3008A02578	July 05, 2010	July 04, 2011
Miteq Pre-Amplifier	AFS33-1800265 0-30-8P-44	881786	NA	NA
SCHWARZBECK Trilog Broadband Antenna	VULB 9168	9168-360	Apr. 29, 2010	Apr. 28, 2011
AISI Horn_Antenna	AIH.8018	0000320091110	Nov. 12, 2010	Nov. 11, 2011
SCHWARZBECK Horn_Antenna	BBHA 9170	9170-424	Oct. 08, 2010	Oct. 07, 2011
RF CABLE	NA	RF104-201 RF104-203 RF104-204	Dec. 27, 2010	Dec. 26, 2011
RF Cable	NA	CHGCAB_001	NA	NA
Software	ADT_Radiated_ V8.7.05	NA	NA	NA
CT Antenna Tower & Turn Table	NA	NA	NA	NA

- Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The horn antenna, preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
3. The test was performed in 966 Chamber No. G.
4. The FCC Site Registration No. is 966073.
5. The VCCI Site Registration No. is G-137.
6. The CANADA Site Registration No. is IC 7450H-2.

4.2.4 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meters chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

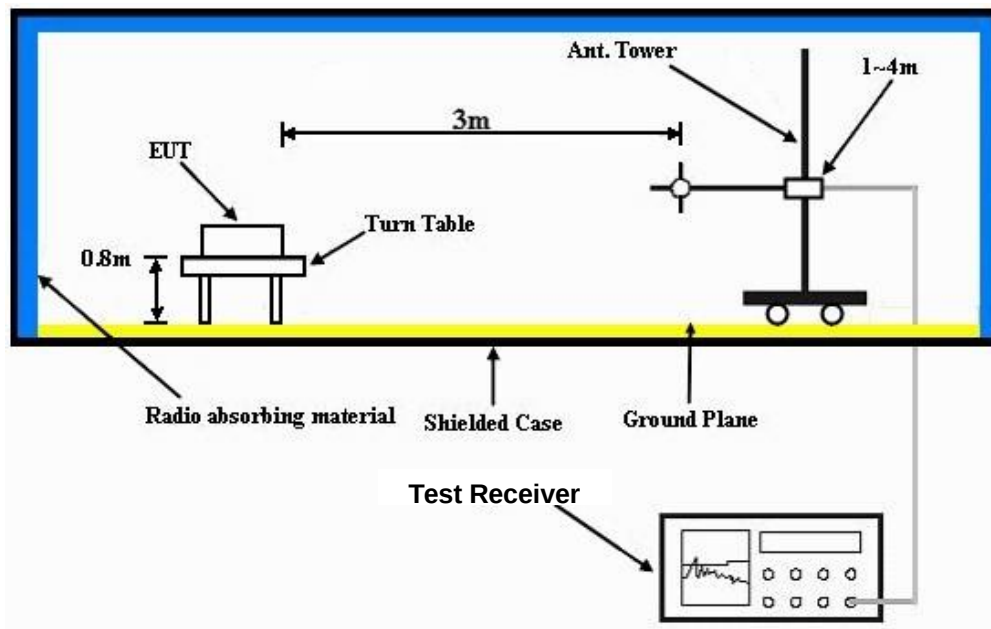
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz for Average detection (AV) at frequency above 1GHz.

4.2.5 DEVIATION FROM TEST STANDARD

No deviation

4.2.6 TEST SETUP



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

4.2.7 EUT OPERATING CONDITION

Same as 4.1.6

4.2.8 TEST RESULTS (FOR TRANSMITTER PART)

BELOW 1GHz WORST-CASE DATA : 802.11a OFDM MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 60	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	19deg. C, 66%RH 1022 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	87.23	38.2 QP	40.0	-1.9	2.00 H	310	28.56	9.59
2	187.34	37.1 QP	43.5	-6.4	1.75 H	100	24.99	12.12
3	236.52	40.0 QP	46.0	-6.0	1.25 H	276	27.57	12.44
4	261.66	38.6 QP	46.0	-7.4	1.25 H	256	25.22	13.37
5	299.57	44.4 QP	46.0	-1.6	1.00 H	191	29.52	14.91
6	398.04	43.1 QP	46.0	-2.9	1.00 H	226	25.27	17.80
7	497.38	39.4 QP	46.0	-6.6	2.00 H	245	19.49	19.91
8	796.94	40.8 QP	46.0	-5.2	1.25 H	232	15.99	24.81
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	87.40	29.1 QP	40.0	-10.9	1.00 V	345	19.52	9.58
2	187.08	28.5 QP	43.5	-15.1	2.00 V	175	16.31	12.14
3	237.10	31.4 QP	46.0	-14.6	1.50 V	206	18.90	12.46
4	261.85	31.3 QP	46.0	-14.7	1.75 V	207	17.92	13.38
5	299.26	35.8 QP	46.0	-10.2	1.00 V	273	20.94	14.90
6	399.18	37.5 QP	46.0	-8.5	2.00 V	273	19.70	17.84
7	497.46	34.4 QP	46.0	-11.6	2.00 V	282	14.47	19.91
8	799.58	32.8 QP	46.0	-13.2	1.25 V	252	7.93	24.86

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.

ABOVE 1GHz WORST-CASE DATA

802.11a OFDM MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 36	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH 1022 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	60.1 PK	74.0	-13.9	1.34 H	238	20.16	39.94
2	5150.00	48.7 AV	54.0	-5.3	1.34 H	238	8.76	39.94
3	*5180.00	108.5 PK			1.34 H	238	68.48	40.02
4	*5180.00	98.8 AV			1.34 H	238	58.78	40.02
5	#10360.00	54.8 PK	68.3	-13.5	1.03 H	27	8.27	46.53
6	15540.00	63.1 PK	74.0	-10.9	1.00 H	21	11.73	51.37
7	15540.00	51.2 AV	54.0	-2.8	1.00 H	21	-0.17	51.37
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	58.0 PK	74.0	-16.0	1.00 V	80	18.06	39.94
2	5150.00	45.9 AV	54.0	-8.1	1.00 V	80	5.96	39.94
3	*5180.00	102.7 PK			1.00 V	80	62.68	40.02
4	*5180.00	93.1 AV			1.00 V	80	53.08	40.02
5	#10360.00	55.1 PK	68.3	-13.2	1.00 V	26	8.57	46.53
6	15540.00	63.2 PK	74.0	-10.8	1.00 V	15	11.83	51.37
7	15540.00	51.1 AV	54.0	-2.9	1.00 V	15	-0.27	51.37

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “: Fundamental frequency.
 6. “#”:The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 40	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH 1022 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	107.8 PK			1.42 H	301	67.73	40.07
2	*5200.00	98.4 AV			1.42 H	301	58.33	40.07
3	#10400.00	54.9 PK	68.3	-13.4	1.04 H	36	8.33	46.57
4	15600.00	63.0 PK	74.0	-11.0	1.00 H	46	11.53	51.47
5	15600.00	51.1 AV	54.0	-2.9	1.00 H	46	-0.37	51.47
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	103.3 PK			1.00 V	79	63.23	40.07
2	*5200.00	93.5 AV			1.00 V	79	53.43	40.07
3	#10400.00	54.9 PK	68.3	-13.4	1.00 V	27	8.33	46.57
4	15600.00	63.2 PK	74.0	-10.8	1.01 V	24	11.73	51.47
5	15600.00	51.1 AV	54.0	-2.9	1.01 V	24	-0.37	51.47

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * ”: Fundamental frequency.
 6. “ # ”: The radiated frequency is out the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 48	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH 1022 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	107.5 PK			1.41 H	297	67.33	40.17
2	*5240.00	98.1 AV			1.41 H	297	57.93	40.17
3	#10480.00	54.7 PK	68.3	-13.6	1.03 H	76	8.03	46.67
4	15720.00	63.2 PK	74.0	-10.8	1.00 H	37	11.69	51.51
5	15720.00	51.3 AV	54.0	-2.7	1.00 H	37	-0.21	51.51
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	103.1 PK			1.13 V	74	62.93	40.17
2	*5240.00	93.2 AV			1.13 V	74	53.03	40.17
3	#10480.00	55.3 PK	68.3	-13.0	1.00 V	23	8.63	46.67
4	15720.00	63.6 PK	74.0	-10.4	1.03 V	14	12.09	51.51
5	15720.00	51.5 AV	54.0	-2.5	1.03 V	14	-0.01	51.51

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “: Fundamental frequency.
 6. “#”:The radiated frequency is out the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 52	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH 1022 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5260.00	109.6 PK			1.46 H	304	69.37	40.23
2	*5260.00	100.0 AV			1.46 H	304	59.77	40.23
3	#10520.00	55.1 PK	68.3	-13.2	1.05 H	59	8.38	46.72
4	15780.00	63.3 PK	74.0	-10.7	1.00 H	43	11.72	51.58
5	15780.00	51.2 AV	54.0	-2.8	1.00 H	43	-0.38	51.58
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5260.00	104.5 PK			1.11 V	73	64.27	40.23
2	*5260.00	94.9 AV			1.11 V	73	54.67	40.23
3	#10520.00	56.0 PK	68.3	-12.3	1.00 V	16	9.28	46.72
4	15780.00	64.0 PK	74.0	-10.0	1.00 V	11	12.42	51.58
5	15780.00	52.0 AV	54.0	-2.0	1.00 V	11	0.42	51.58

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ * ”: Fundamental frequency.
6. “#”:The radiated frequency is out the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 60	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH 1022 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	110.6 PK			1.42 H	302	70.27	40.33
2	*5300.00	101.2 AV			1.42 H	302	60.87	40.33
3	10600.00	55.4 PK	74.0	-18.6	1.07 H	62	8.58	46.82
4	10600.00	44.1 AV	54.0	-9.9	1.07 H	62	-2.72	46.82
5	15900.00	63.4 PK	74.0	-10.6	1.00 H	51	11.74	51.66
6	15900.00	51.4 AV	54.0	-2.6	1.00 H	51	-0.26	51.66
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	105.4 PK			1.06 V	68	65.07	40.33
2	*5300.00	95.8 AV			1.06 V	68	55.47	40.33
3	10600.00	55.6 PK	74.0	-18.4	1.00 V	10	8.78	46.82
4	10600.00	44.2 AV	54.0	-9.8	1.00 V	10	-2.62	46.82
5	15900.00	64.4 PK	74.0	-9.6	1.00 V	24	12.74	51.66
6	15900.00	52.5 AV	54.0	-1.5	1.00 V	24	0.84	51.66

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ * ”: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH 1022 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	109.6 PK			1.37 H	234	69.21	40.39
2	*5320.00	99.7 AV			1.37 H	234	59.31	40.39
3	5350.00	65.9 PK	74.0	-8.1	1.34 H	233	25.43	40.47
4	5350.00	51.9 AV	54.0	-2.1	1.34 H	233	11.43	40.47
5	10640.00	55.4 PK	74.0	-18.6	1.51 H	294	8.53	46.87
6	10640.00	45.3 AV	54.0	-8.7	1.51 H	294	-1.57	46.87
7	15960.00	60.3 PK	74.0	-13.7	1.21 H	137	8.57	51.73
8	15960.00	49.9 AV	54.0	-4.1	1.21 H	137	-1.83	51.73
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	104.9 PK			1.00 V	74	64.51	40.39
2	*5320.00	95.0 AV			1.00 V	74	54.61	40.39
3	5350.00	63.3 PK	74.0	-10.7	1.00 V	74	22.83	40.47
4	5350.00	48.6 AV	54.0	-5.4	1.00 V	74	8.13	40.47
5	10640.00	56.1 PK	74.0	-17.9	1.00 V	22	9.23	46.87
6	10640.00	44.7 AV	54.0	-9.3	1.00 V	22	-2.17	46.87
7	15960.00	64.3 PK	74.0	-9.7	1.00 V	30	12.57	51.73
8	15960.00	52.4 AV	54.0	-1.6	1.00 V	30	0.67	51.73

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ * “: Fundamental frequency.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH 1022 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	59.3 PK	74.0	-14.7	1.29 H	247	18.54	40.76
2	5460.00	47.6 AV	54.0	-6.4	1.29 H	247	6.84	40.76
3	#5470.00	67.1 PK	68.3	-1.2	1.29 H	247	26.32	40.78
4	*5500.00	107.2 PK			1.27 H	246	66.34	40.86
5	*5500.00	97.4 AV			1.27 H	246	56.54	40.86
6	11000.00	56.1 PK	74.0	-17.9	1.00 H	79	8.82	47.28
7	11000.00	44.3 AV	54.0	-9.7	1.00 H	79	-2.98	47.28
8	#16500.00	65.8 PK	68.3	-2.5	1.00 H	43	12.77	53.03
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	60.8 PK	74.0	-13.2	1.07 V	110	20.04	40.76
2	5460.00	46.0 AV	54.0	-8.0	1.07 V	110	5.24	40.76
3	#5470.00	62.6 PK	68.3	-5.7	1.07 V	110	21.82	40.78
4	*5500.00	102.5 PK			1.07 V	110	61.64	40.86
5	*5500.00	92.9 AV			1.07 V	110	52.04	40.86
6	11000.00	55.8 PK	74.0	-18.2	1.00 V	15	8.52	47.28
7	11000.00	44.7 AV	54.0	-9.3	1.00 V	15	-2.58	47.28
8	#16500.00	63.8 PK	68.3	-4.5	1.03 V	31	10.77	53.03

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “: Fundamental frequency.
 6. “#”:The radiated frequency is out the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 120	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH 1022 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5600.00	109.2 PK			1.29 H	231	68.05	41.15
2	*5600.00	99.4 AV			1.29 H	231	58.25	41.15
3	11200.00	56.3 PK	74.0	-17.7	1.00 H	84	8.88	47.42
4	11200.00	44.5 AV	54.0	-9.5	1.00 H	84	-2.92	47.42
5	#16800.00	65.3 PK	68.3	-3.0	1.00 H	37	11.67	53.63
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5600.00	104.4 PK			1.08 V	106	63.25	41.15
2	*5600.00	94.3 AV			1.08 V	106	53.15	41.15
3	11200.00	56.3 PK	74.0	-17.7	1.04 V	6	8.88	47.42
4	11200.00	45.4 AV	54.0	-8.6	1.04 V	6	-2.02	47.42
5	#16800.00	63.5 PK	68.3	-4.8	1.00 V	28	9.87	53.63

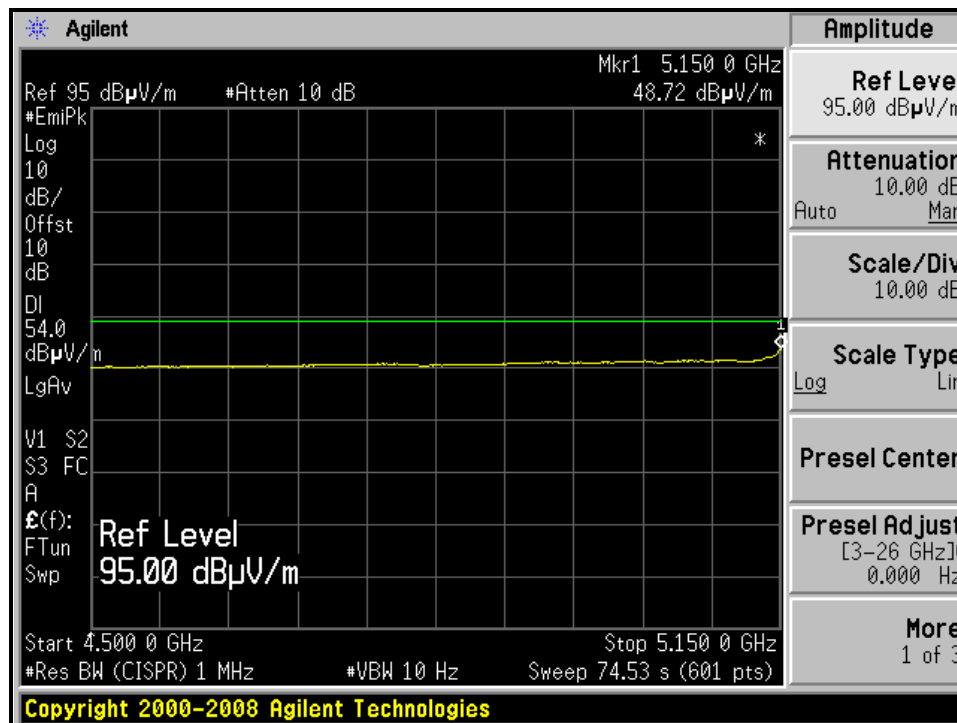
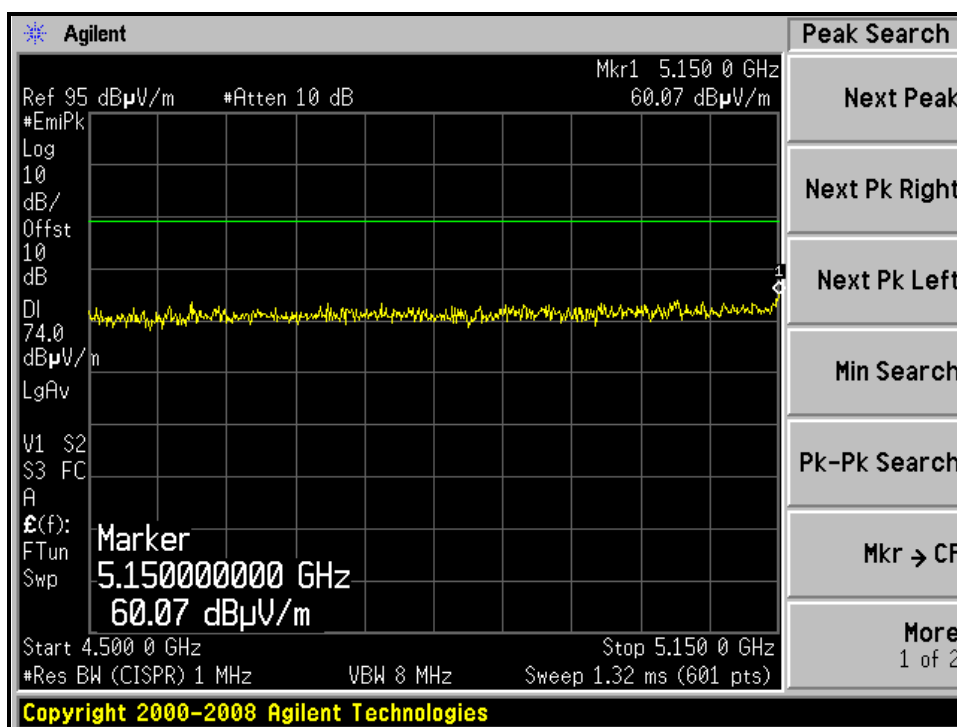
REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ * ”: Fundamental frequency.
6. “#”:The radiated frequency is out the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 140	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH 1022 hPa	TESTED BY	Rex Huang

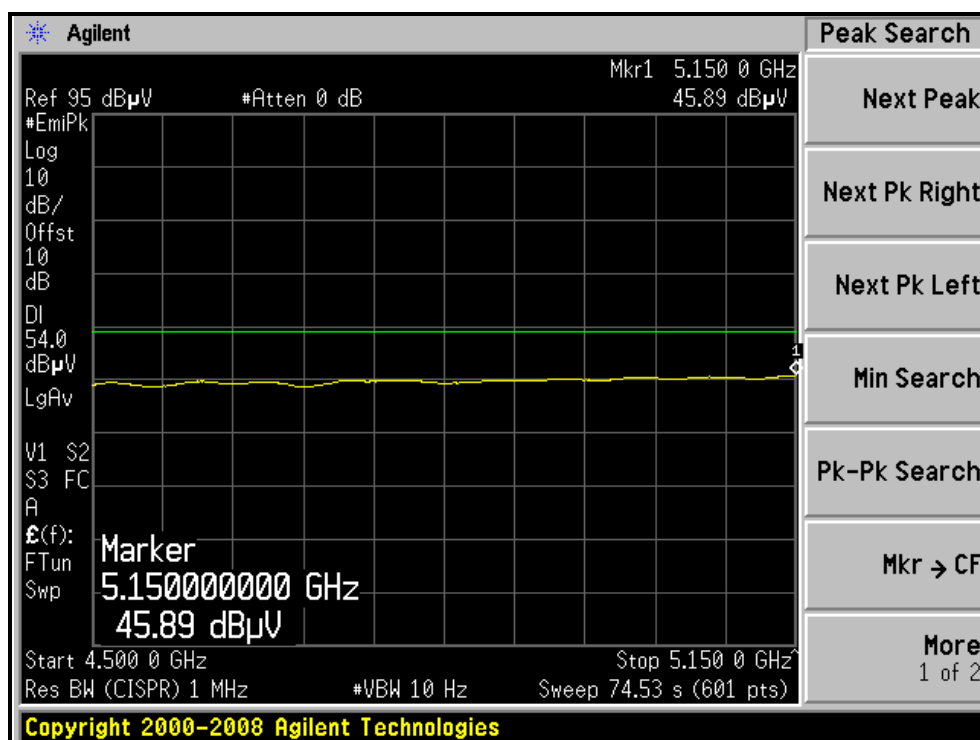
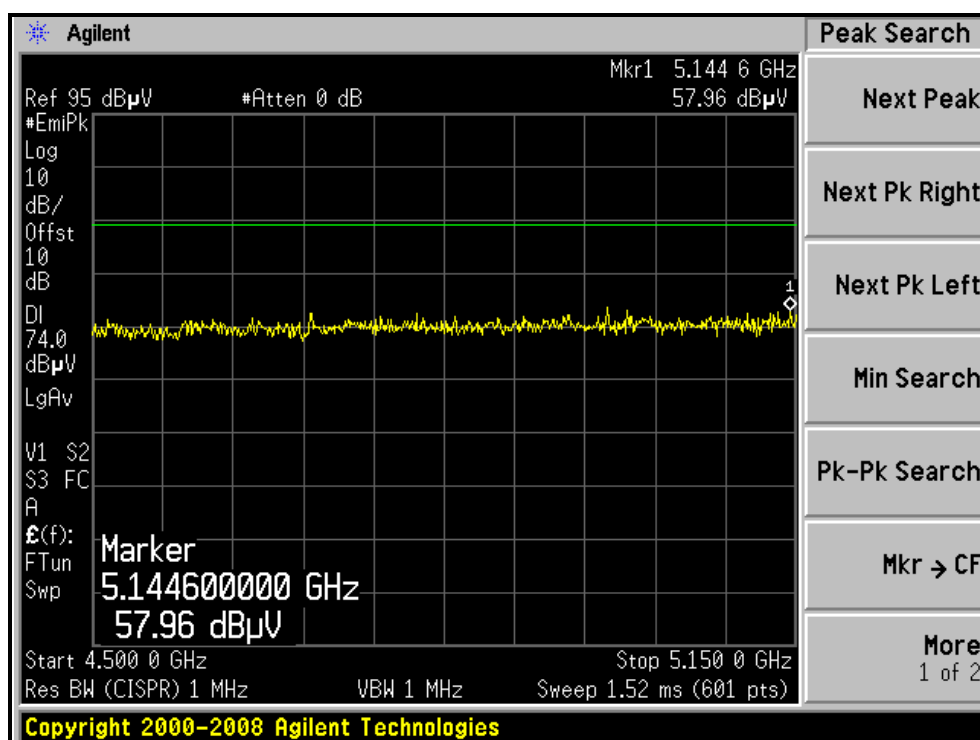
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NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	106.5 PK			1.30 H	242	65.08	41.42
2	*5700.00	96.3 AV			1.30 H	242	54.88	41.42
3	#5725.00	67.7 PK	68.3	-0.6	1.24 H	230	26.21	41.49
4	11400.00	56.8 PK	74.0	-17.2	1.00 H	79	9.18	47.62
5	11400.00	44.7 AV	54.0	-9.3	1.00 H	79	-2.92	47.62
6	#17100.00	64.6 PK	68.3	-3.7	1.00 H	29	10.40	54.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	101.7 PK			1.14 V	120	60.28	41.42
2	*5700.00	91.3 AV			1.14 V	120	49.88	41.42
3	#5725.00	63.1 PK	68.3	-5.2	1.14 V	120	21.61	41.49
4	11400.00	56.4 PK	74.0	-17.6	1.05 V	5	8.78	47.62
5	11400.00	45.2 AV	54.0	-8.8	1.05 V	5	-2.42	47.62
6	#17100.00	63.9 PK	68.3	-4.4	1.05 V	16	9.70	54.20

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ * “: Fundamental frequency.
6. “#”:The radiated frequency is out the restricted band.

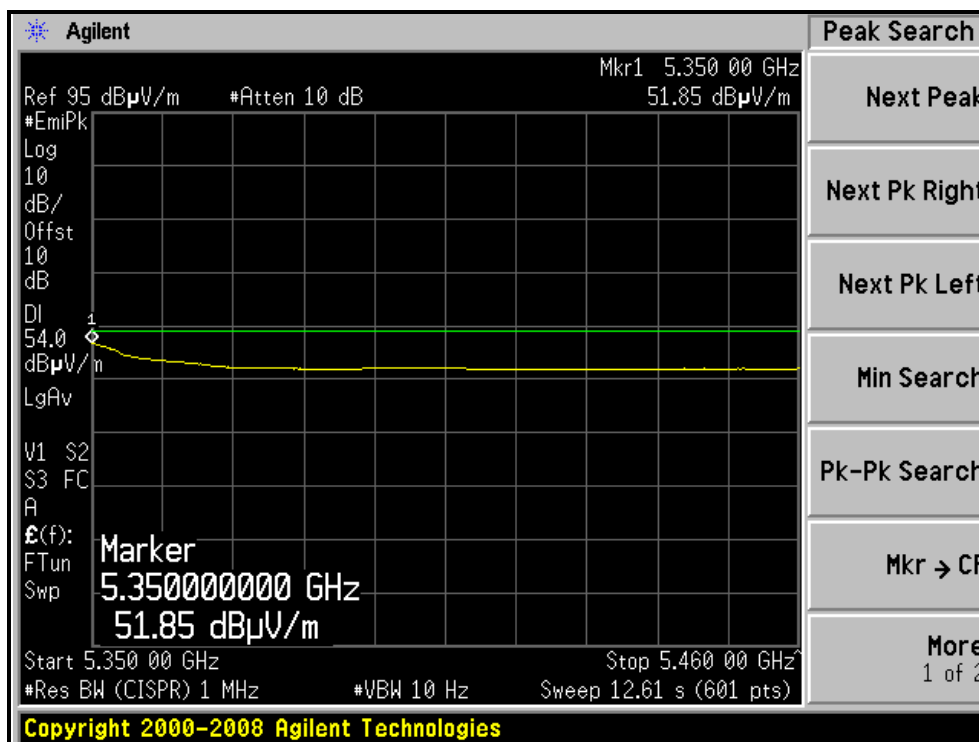
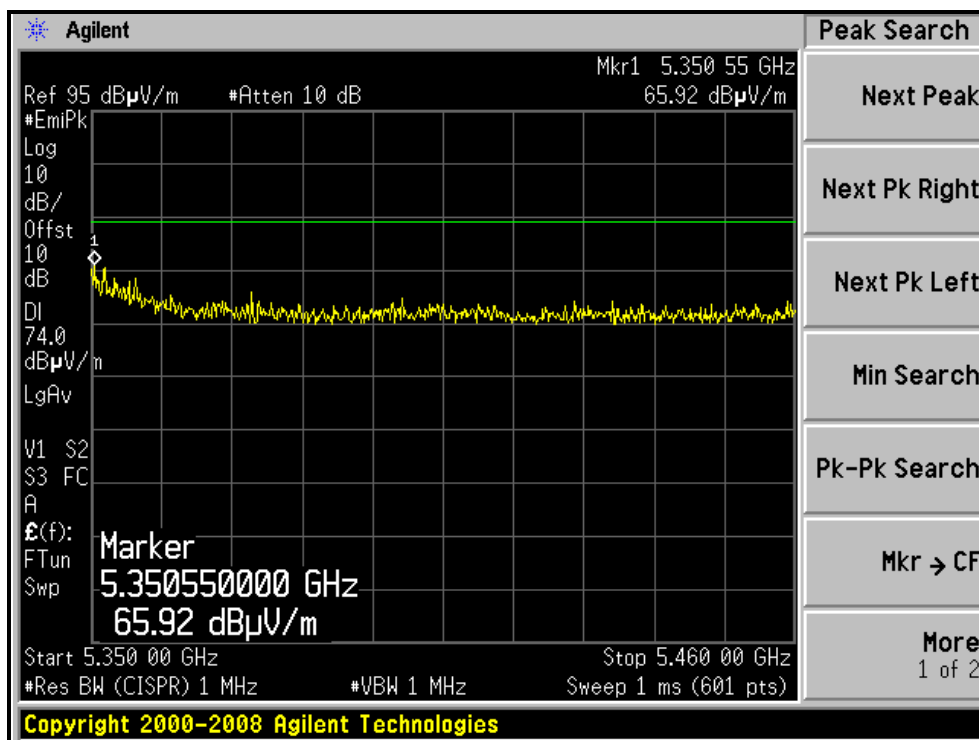
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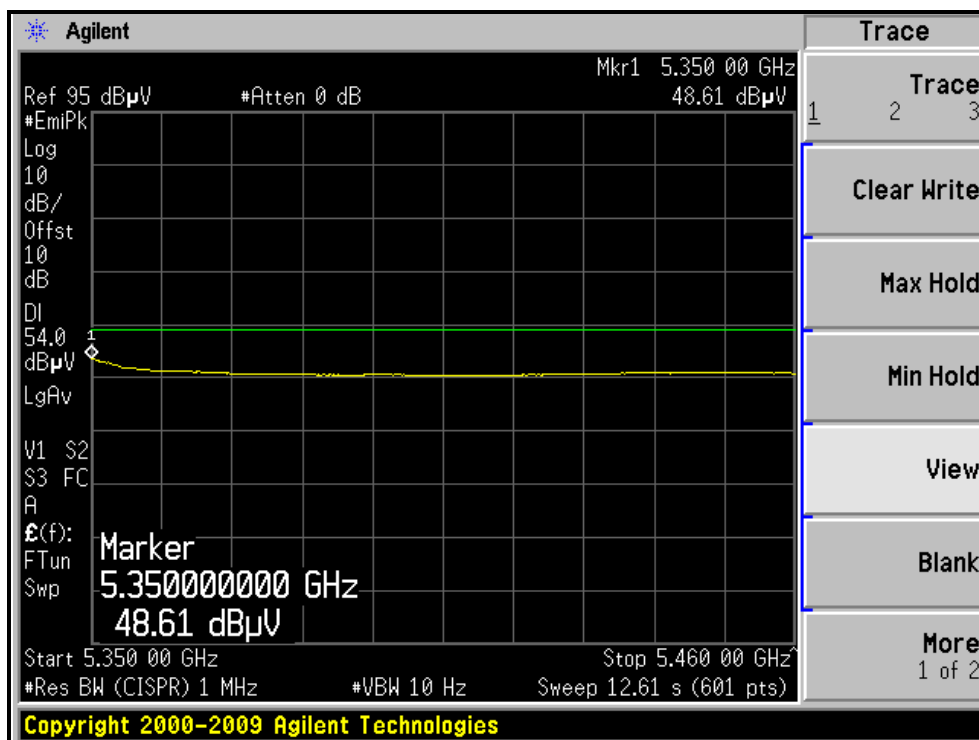
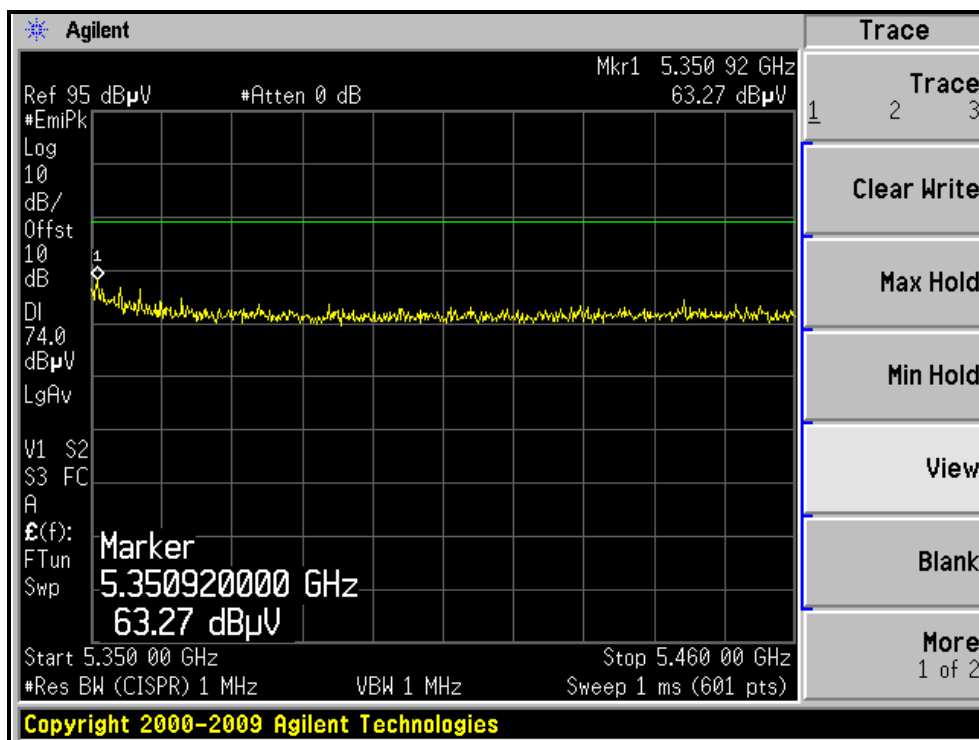
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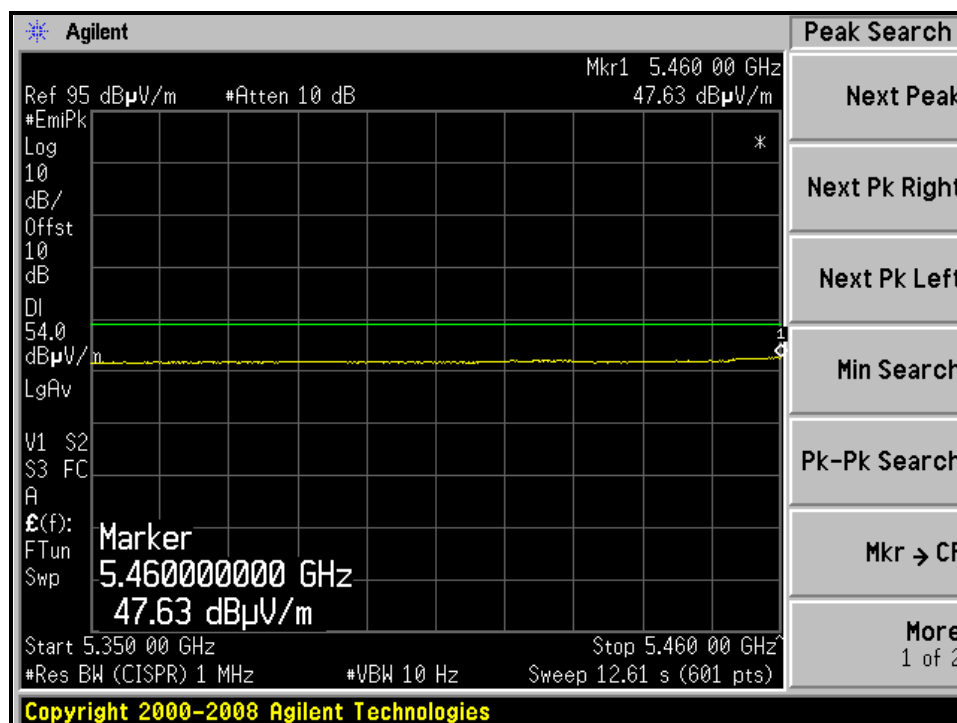
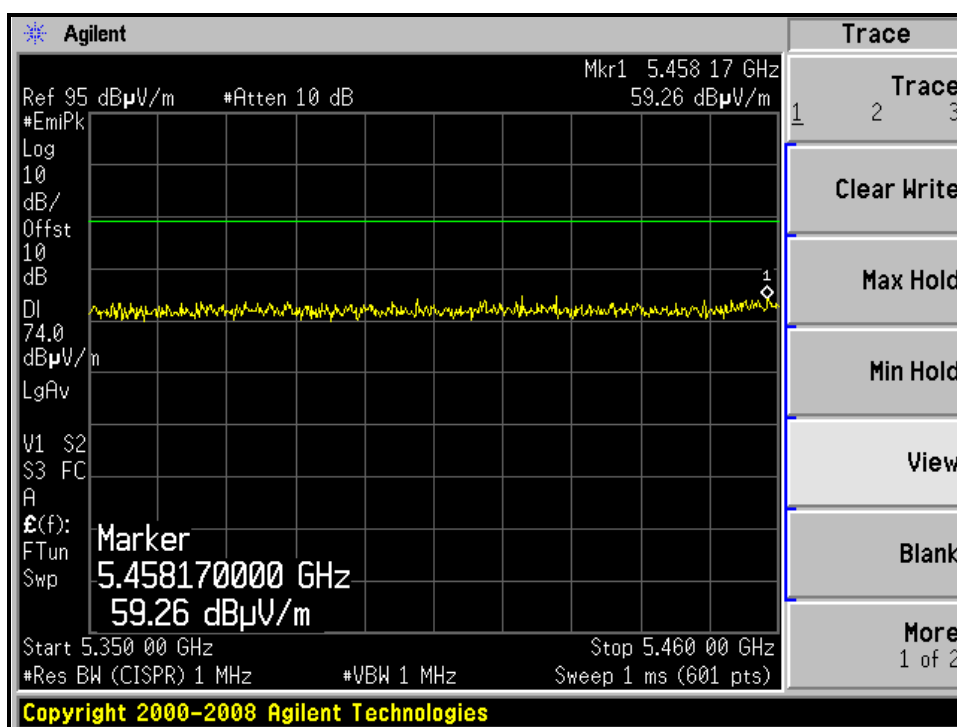
RESTRICTED BANDEDGE (802.11a MODE, CH64, HORIZONTAL)



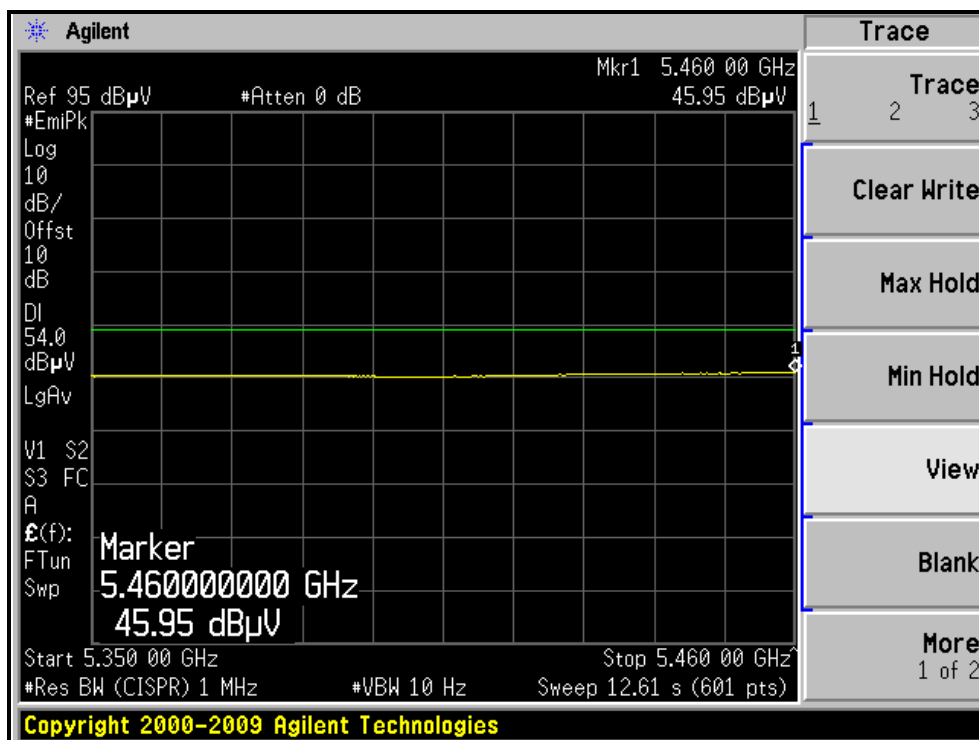
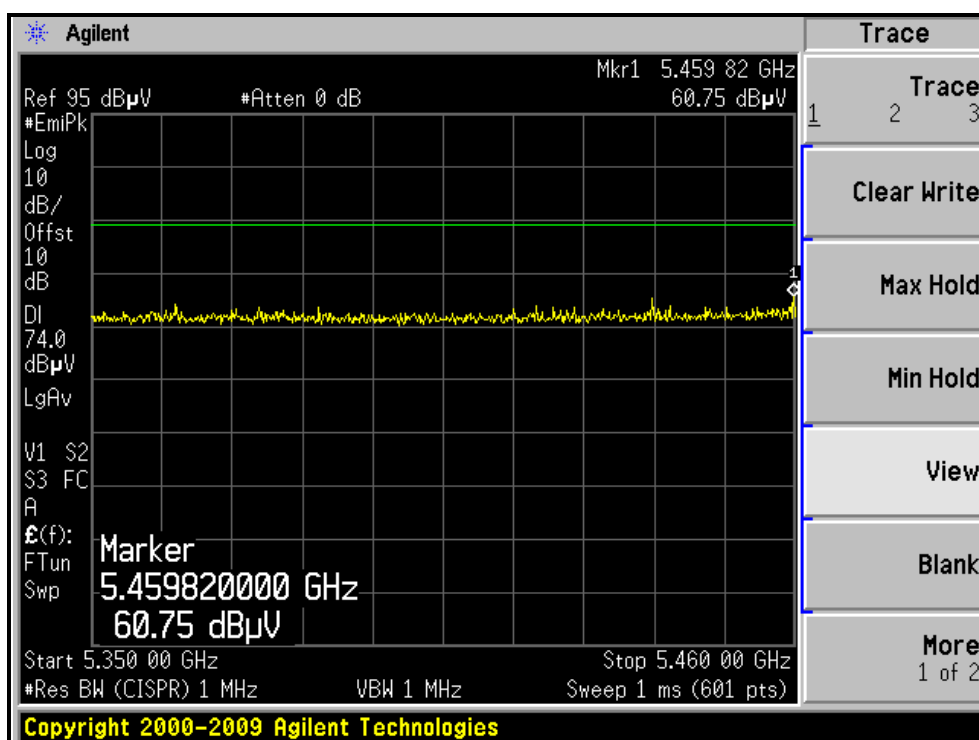
RESTRICTED BANDEDGE (802.11a MODE, CH64, VERTICAL)



RESTRICTED BANDEDGE (802.11a MODE, CH100, HORIZONTAL)



RESTRICTED BANDEDGE (802.11a MODE, CH100, VERTICAL)



802.11n (20MHz) OFDM MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 36	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH 1022 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	61.0 PK	74.0	-13.0	1.42 H	303	21.06	39.94
2	5150.00	47.8 AV	54.0	-6.2	1.42 H	303	7.86	39.94
3	*5180.00	108.6 PK			1.42 H	303	68.58	40.02
4	*5180.00	98.5 AV			1.42 H	303	58.48	40.02
5	#10360.00	55.8 PK	68.3	-12.5	1.00 H	34	9.27	46.53
6	15540.00	63.1 PK	74.0	-10.9	1.00 H	96	11.73	51.37
7	15540.00	51.4 AV	54.0	-2.6	1.00 H	96	0.03	51.37
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	57.6 PK	74.0	-16.4	1.00 V	81	17.66	39.94
2	5150.00	45.9 AV	54.0	-8.1	1.00 V	81	5.96	39.94
3	*5180.00	103.1 PK			1.00 V	81	63.08	40.02
4	*5180.00	92.9 AV			1.00 V	81	52.88	40.02
5	#10360.00	55.4 PK	68.3	-12.9	1.06 V	27	8.87	46.53
6	15540.00	63.4 PK	74.0	-10.6	1.02 V	39	12.03	51.37
7	15540.00	51.3 AV	54.0	-2.7	1.02 V	39	-0.07	51.37

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “: Fundamental frequency.
 6. “#”:The radiated frequency is out the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 40	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH 1022 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	107.1 PK			1.39 H	308	67.03	40.07
2	*5200.00	97.4 AV			1.39 H	308	57.33	40.07
3	#10400.00	56.3 PK	68.3	-12.0	1.00 H	23	9.73	46.57
4	15600.00	63.2 PK	74.0	-10.8	1.00 H	90	11.73	51.47
5	15600.00	51.5 AV	54.0	-2.5	1.00 H	90	0.03	51.47
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	102.9 PK			1.03 V	93	62.83	40.07
2	*5200.00	93.3 AV			1.03 V	93	53.23	40.07
3	#10400.00	55.9 PK	68.3	-12.4	1.06 V	40	9.33	46.57
4	15600.00	63.8 PK	74.0	-10.2	1.00 V	29	12.33	51.47
5	15600.00	51.4 AV	54.0	-2.6	1.00 V	29	-0.07	51.47

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “*”: Fundamental frequency.
6. “#”: The radiated frequency is out the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 48	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH 1022 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	106.8 PK			1.41 H	303	66.63	40.17
2	*5240.00	97.2 AV			1.41 H	303	57.03	40.17
3	#10480.00	56.9 PK	68.3	-11.4	1.00 H	18	10.23	46.67
4	15720.00	63.6 PK	74.0	-10.4	1.00 H	94	12.09	51.51
5	15720.00	52.0 AV	54.0	-2.0	1.00 H	94	0.49	51.51
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	101.9 PK			1.04 V	85	61.73	40.17
2	*5240.00	92.3 AV			1.04 V	85	52.13	40.17
3	#10480.00	55.4 PK	68.3	-12.9	1.06 V	41	8.73	46.67
4	15720.00	64.5 PK	74.0	-9.5	1.01 V	28	12.99	51.51
5	15720.00	51.9 AV	54.0	-2.1	1.01 V	28	0.39	51.51

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ * ”: Fundamental frequency.
6. “ # ”: The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 52	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH 1022 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5260.00	108.8 PK			1.46 H	303	68.57	40.23
2	*5260.00	98.9 AV			1.46 H	303	58.67	40.23
3	#10520.00	57.7 PK	68.3	-10.6	1.00 H	22	10.98	46.72
4	15780.00	64.1 PK	74.0	-9.9	1.00 H	90	12.52	51.58
5	15780.00	52.3 AV	54.0	-1.7	1.00 H	90	0.72	51.58
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5260.00	103.8 PK			1.02 V	95	63.57	40.23
2	*5260.00	93.8 AV			1.02 V	95	53.57	40.23
3	#10520.00	55.9 PK	68.3	-12.4	1.05 V	36	9.18	46.72
4	15780.00	64.7 PK	74.0	-9.3	1.00 V	21	13.12	51.58
5	15780.00	52.2 AV	54.0	-1.8	1.00 V	21	0.62	51.58

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ * ”: Fundamental frequency.
6. “ # ”: The radiated frequency is out the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 60	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH 1022 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	109.3 PK			1.44 H	302	68.97	40.33
2	*5300.00	99.4 AV			1.44 H	302	59.07	40.33
3	10600.00	57.8 PK	74.0	-16.2	1.01 H	23	10.98	46.82
4	10600.00	45.2 AV	54.0	-8.8	1.01 H	23	-1.62	46.82
5	15900.00	64.1 PK	74.0	-9.9	1.00 H	95	12.44	51.66
6	15900.00	52.5 AV	54.0	-1.5	1.00 H	95	0.84	51.66
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	104.1 PK			1.01 V	82	63.77	40.33
2	*5300.00	94.3 AV			1.01 V	82	53.97	40.33
3	10600.00	55.9 PK	74.0	-18.1	1.08 V	41	9.08	46.82
4	10600.00	43.4 AV	54.0	-10.6	1.08 V	41	-3.42	46.82
5	15900.00	64.6 PK	74.0	-9.4	1.02 V	22	12.94	51.66
6	15900.00	52.3 AV	54.0	-1.7	1.02 V	22	0.64	51.66

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ * ”: Fundamental frequency.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH 1022 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	110.7 PK			1.40 H	304	70.31	40.39
2	*5320.00	100.0 AV			1.40 H	304	59.61	40.39
3	5350.00	64.2 PK	74.0	-9.8	1.40 H	304	23.73	40.47
4	5350.00	50.6 AV	54.0	-3.4	1.40 H	304	10.13	40.47
5	10640.00	56.9 PK	74.0	-17.1	1.00 H	22	10.03	46.87
6	10640.00	44.7 AV	54.0	-9.3	1.00 H	22	-2.17	46.87
7	15960.00	65.0 PK	74.0	-9.0	1.00 H	106	13.27	51.73
8	15960.00	53.2 AV	54.0	-0.8	1.00 H	106	1.47	51.73
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	103.7 PK			1.00 V	74	63.31	40.39
2	*5320.00	93.4 AV			1.00 V	74	53.01	40.39
3	5350.00	61.1 PK	74.0	-12.9	1.00 V	74	20.63	40.47
4	5350.00	47.1 AV	54.0	-6.9	1.00 V	74	6.63	40.47
5	10640.00	56.1 PK	74.0	-17.9	1.12 V	29	9.23	46.87
6	10640.00	44.5 AV	54.0	-9.5	1.12 V	29	-2.37	46.87
7	15960.00	64.8 PK	74.0	-9.2	1.00 V	24	13.07	51.73
8	15960.00	52.8 AV	54.0	-1.2	1.00 V	24	1.07	51.73

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “: Fundamental frequency.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH 1022 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	59.2 PK	74.0	-14.8	1.39 H	298	18.44	40.76
2	5460.00	47.1 AV	54.0	-6.9	1.39 H	298	6.34	40.76
3	#5470.00	67.5 PK	68.3	-0.8	1.39 H	298	26.72	40.78
4	*5500.00	108.8 PK			1.47 H	295	67.94	40.86
5	*5500.00	98.4 AV			1.47 H	295	57.54	40.86
6	11000.00	56.7 PK	74.0	-17.3	1.00 H	15	9.42	47.28
7	11000.00	44.7 AV	54.0	-9.3	1.00 H	15	-2.58	47.28
8	#16500.00	65.4 PK	68.3	-2.9	1.00 H	118	12.37	53.03
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	58.4 PK	74.0	-15.6	1.07 V	110	17.64	40.76
2	5460.00	46.0 AV	54.0	-8.0	1.07 V	110	5.24	40.76
3	#5470.00	63.8 PK	68.3	-4.5	1.07 V	110	23.02	40.78
4	*5500.00	103.1 PK			1.07 V	110	62.24	40.86
5	*5500.00	92.5 AV			1.07 V	110	51.64	40.86
6	11000.00	56.7 PK	74.0	-17.3	1.10 V	32	9.42	47.28
7	11000.00	45.2 AV	54.0	-8.8	1.10 V	32	-2.08	47.28
8	#16500.00	65.1 PK	68.3	-3.2	1.00 V	20	12.07	53.03

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ * “: Fundamental frequency.
6. “#”:The radiated frequency is out the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 120	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH 1022 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5600.00	111.2 PK			1.44 H	297	70.05	41.15
2	*5600.00	101.0 AV			1.44 H	297	59.85	41.15
3	11200.00	56.5 PK	74.0	-17.5	1.03 H	25	9.08	47.42
4	11200.00	44.5 AV	54.0	-9.5	1.03 H	25	-2.92	47.42
5	#16800.00	65.7 PK	68.3	-2.6	1.00 H	131	12.07	53.63
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5600.00	106.2 PK			1.05 V	114	65.05	41.15
2	*5600.00	95.8 AV			1.05 V	114	54.65	41.15
3	11200.00	56.6 PK	74.0	-17.4	1.08 V	34	9.18	47.42
4	11200.00	45.0 AV	54.0	-9.0	1.08 V	34	-2.42	47.42
5	#16800.00	65.5 PK	68.3	-2.8	1.00 V	13	11.87	53.63

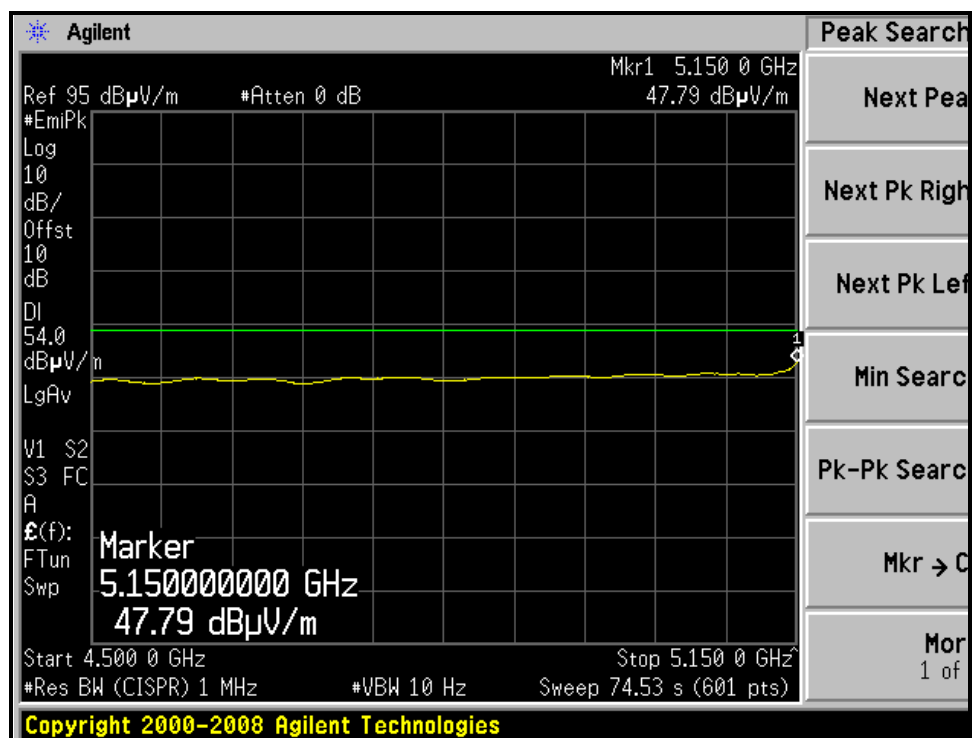
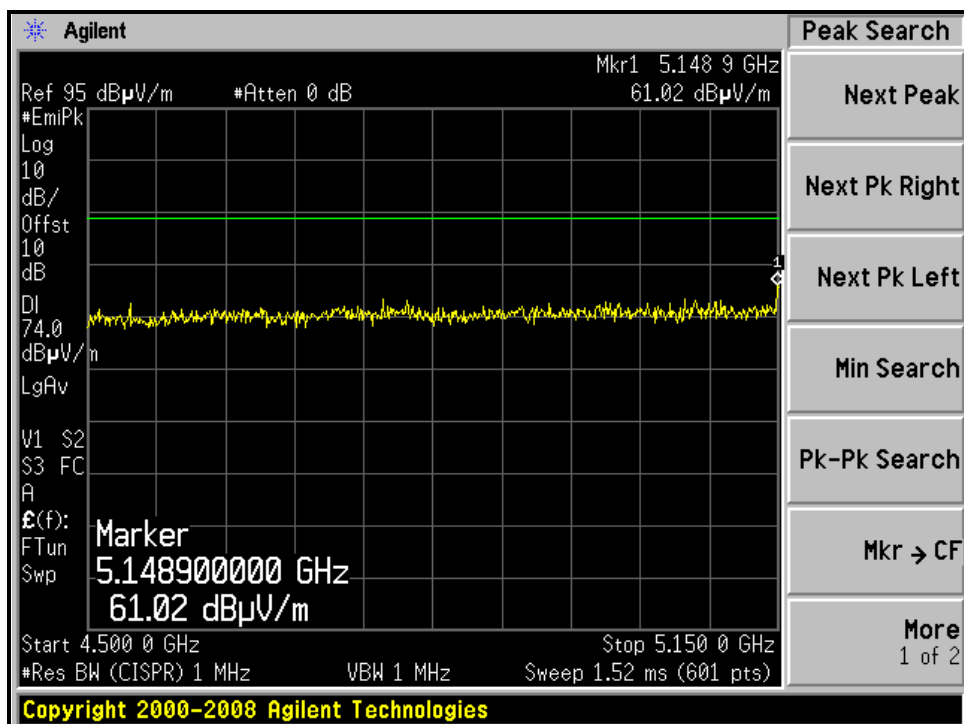
REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ * ”: Fundamental frequency.
6. “#”:The radiated frequency is out the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 140	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH 1022 hPa	TESTED BY	Rex Huang

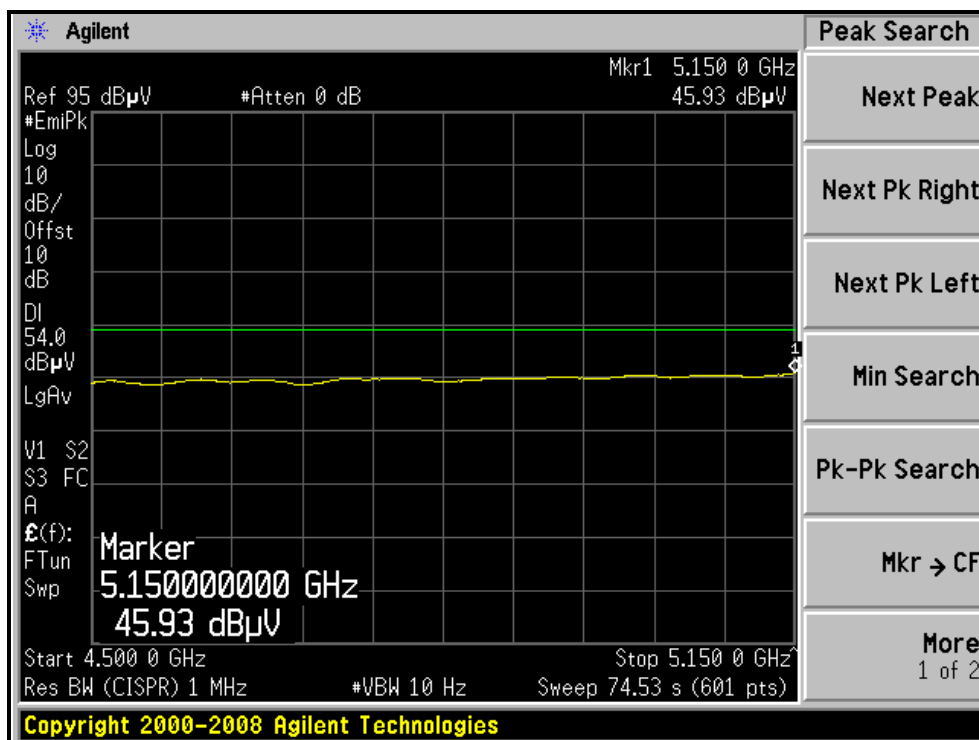
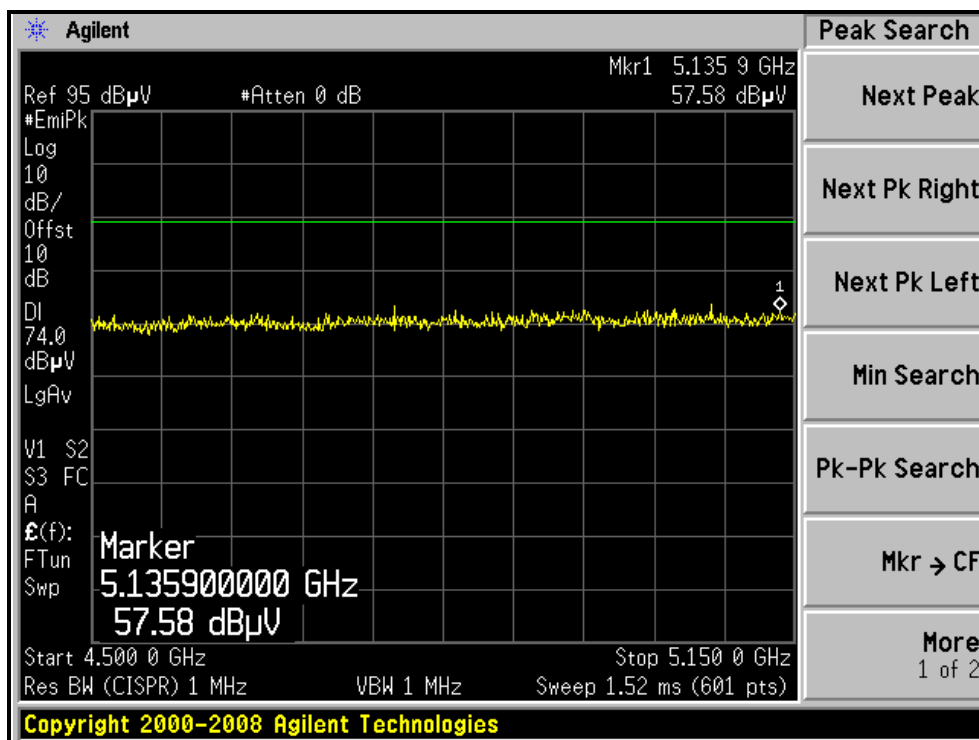
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NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	107.5 PK			1.44 H	299	66.08	41.42
2	*5700.00	97.4 AV			1.44 H	299	55.98	41.42
3	#5725.00	67.6 PK	68.3	-0.7	1.44 H	299	26.11	41.49
4	11400.00	56.9 PK	74.0	-17.1	1.04 H	18	9.28	47.62
5	11400.00	44.9 AV	54.0	-9.1	1.04 H	18	-2.72	47.62
6	#17100.00	66.6 PK	68.3	-1.7	1.01 H	132	12.40	54.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	102.1 PK			1.03 V	112	60.68	41.42
2	*5700.00	91.5 AV			1.03 V	112	50.08	41.42
3	#5725.00	64.4 PK	68.3	-3.9	1.03 V	112	22.91	41.49
4	11400.00	57.5 PK	74.0	-16.5	1.10 V	40	9.88	47.62
5	11400.00	45.6 AV	54.0	-8.4	1.10 V	40	-2.02	47.62
6	#17100.00	65.8 PK	68.3	-2.5	1.00 V	9	11.60	54.20

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ * “: Fundamental frequency.
6. “#”:The radiated frequency is out the restricted band.

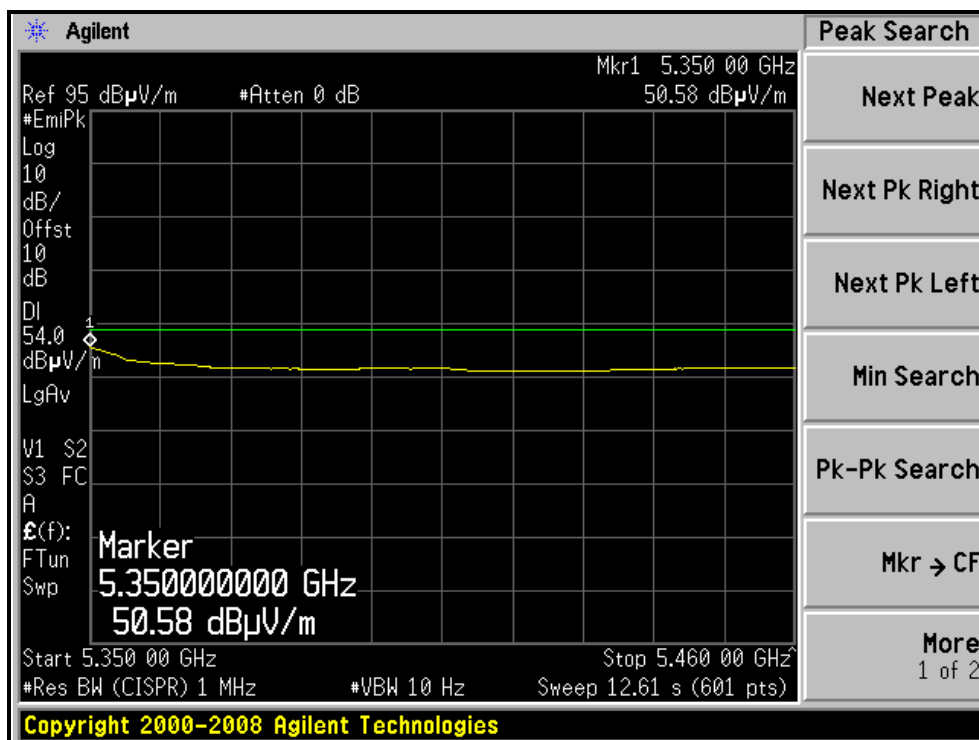
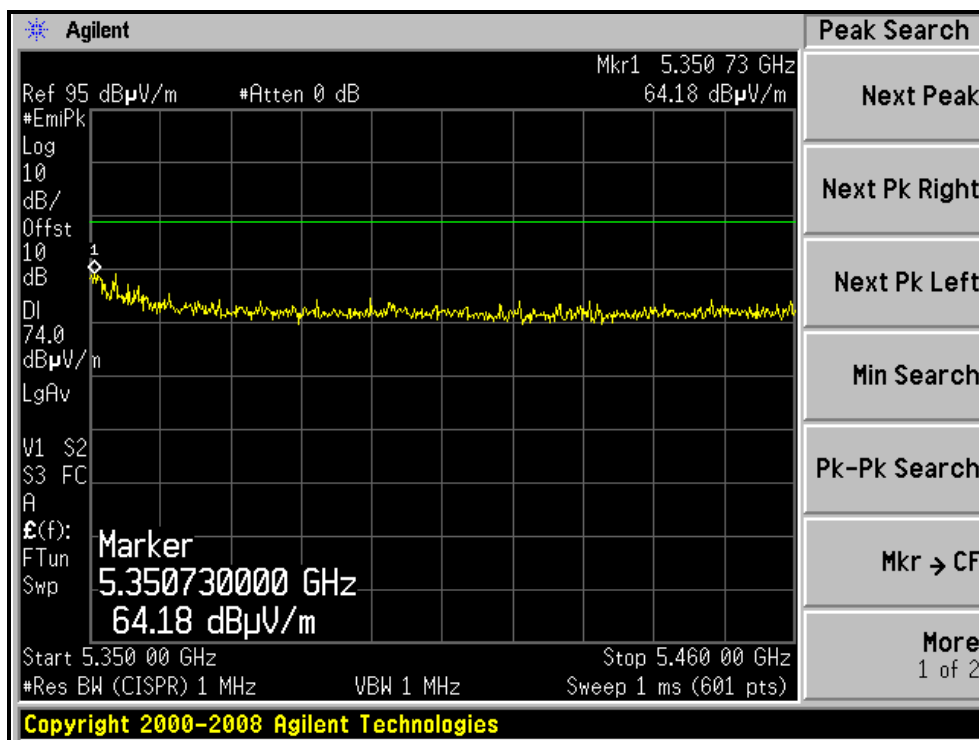
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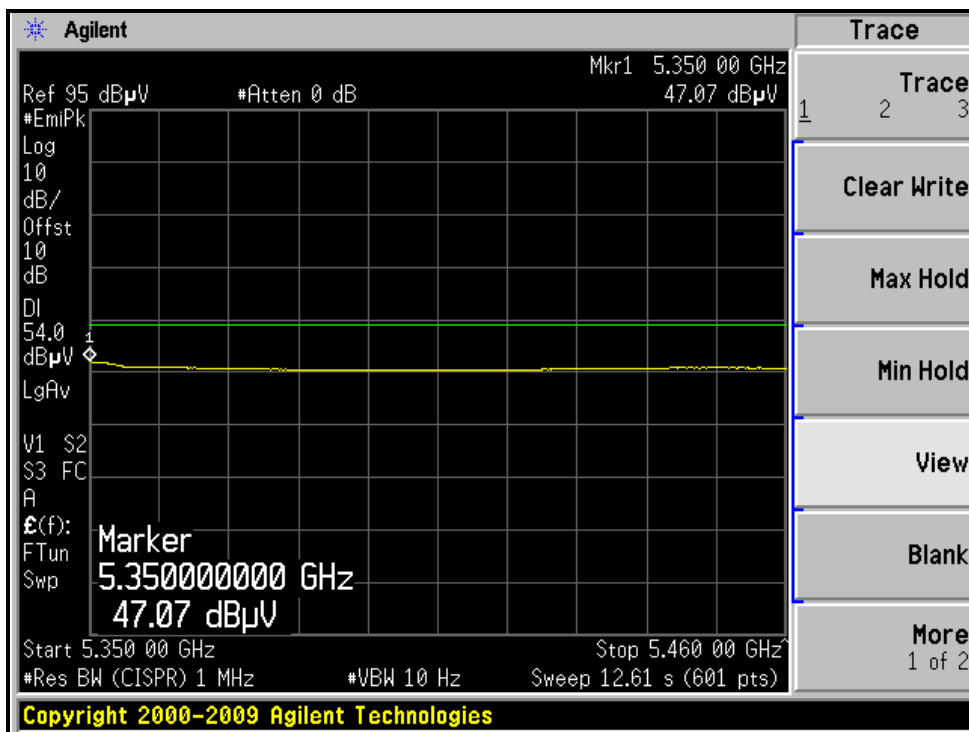
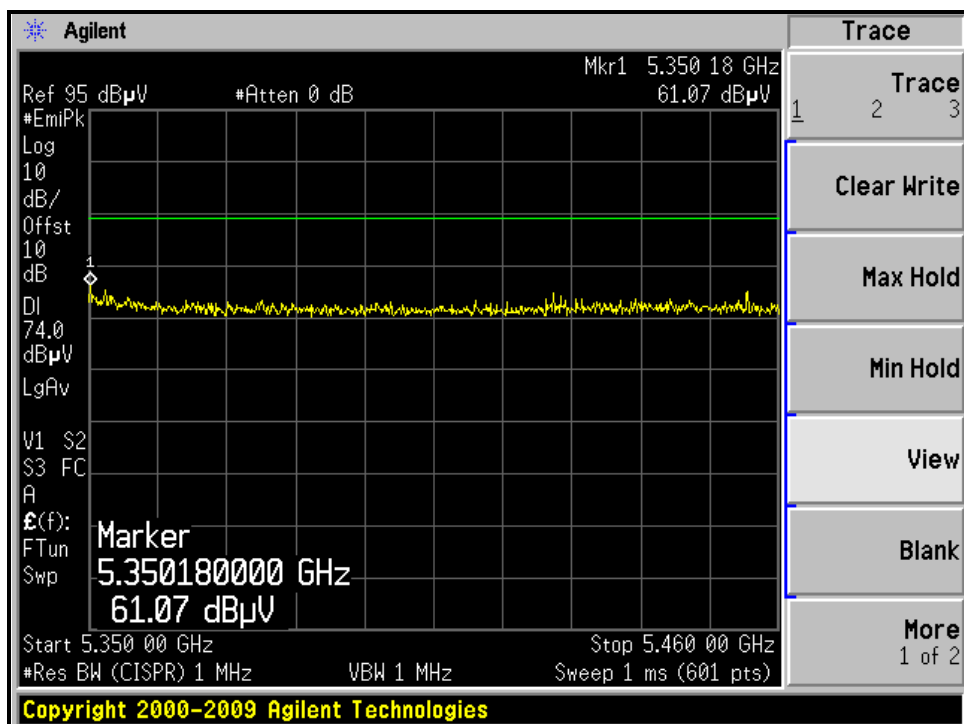
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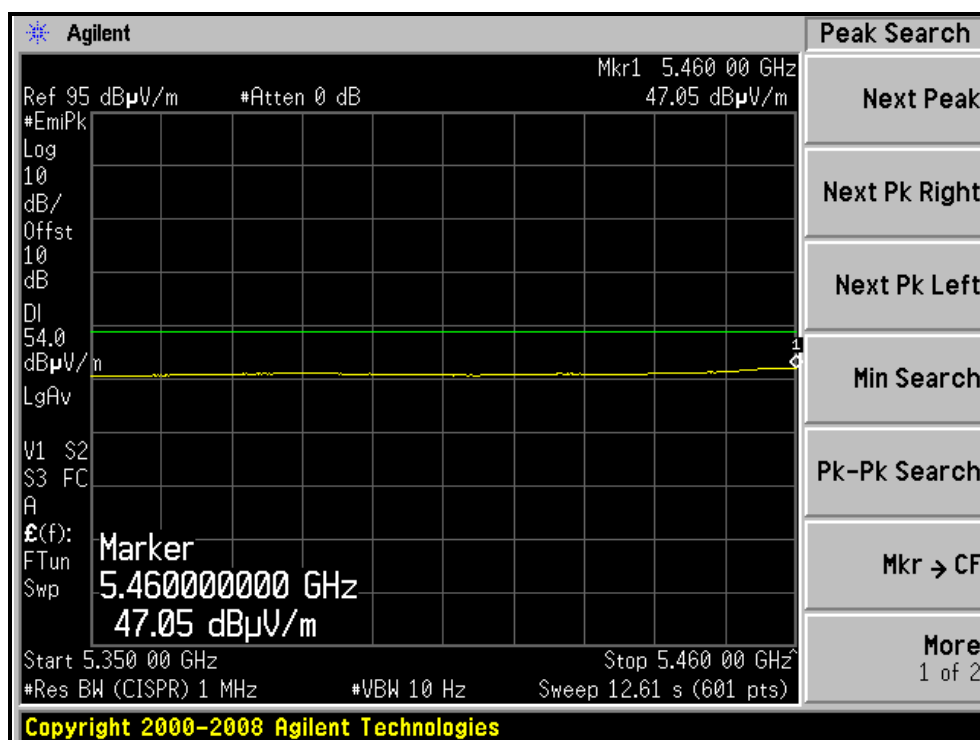
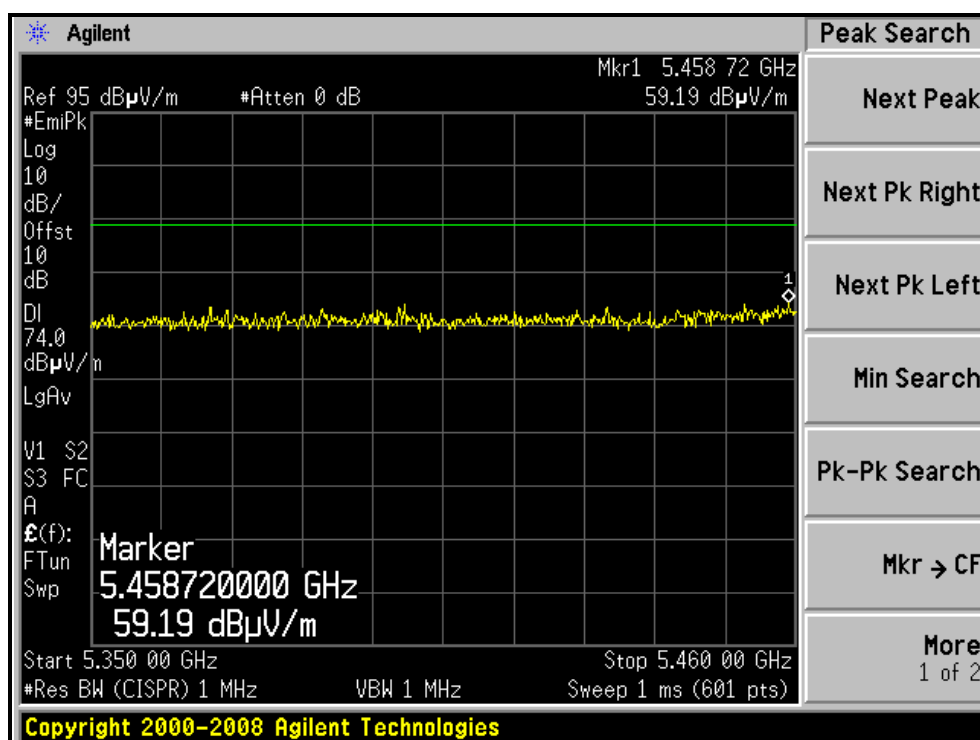
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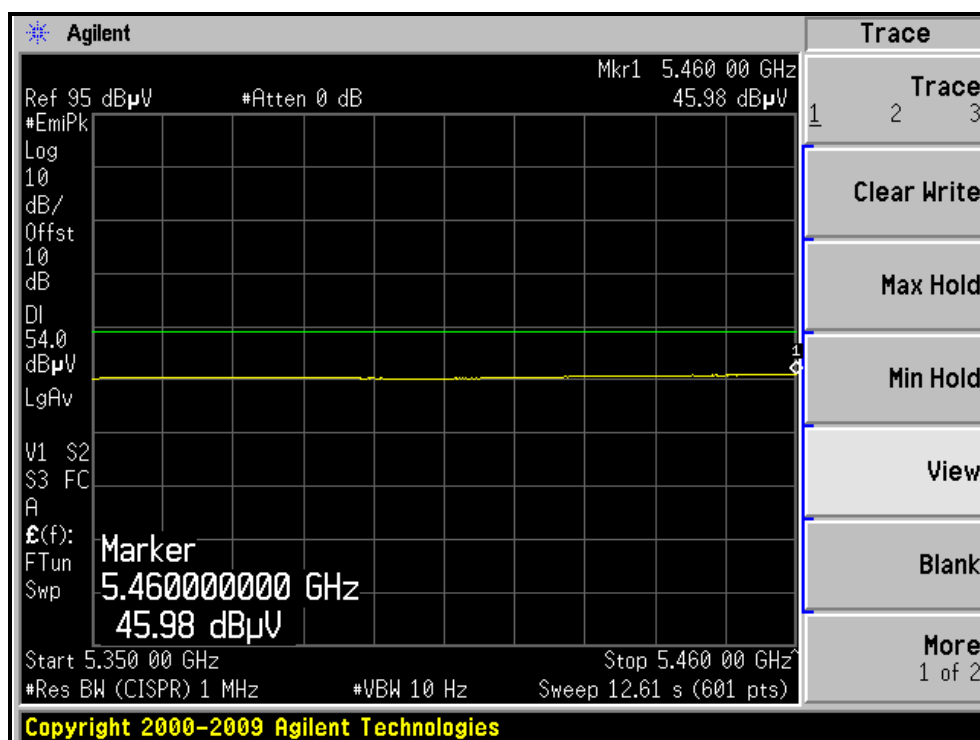
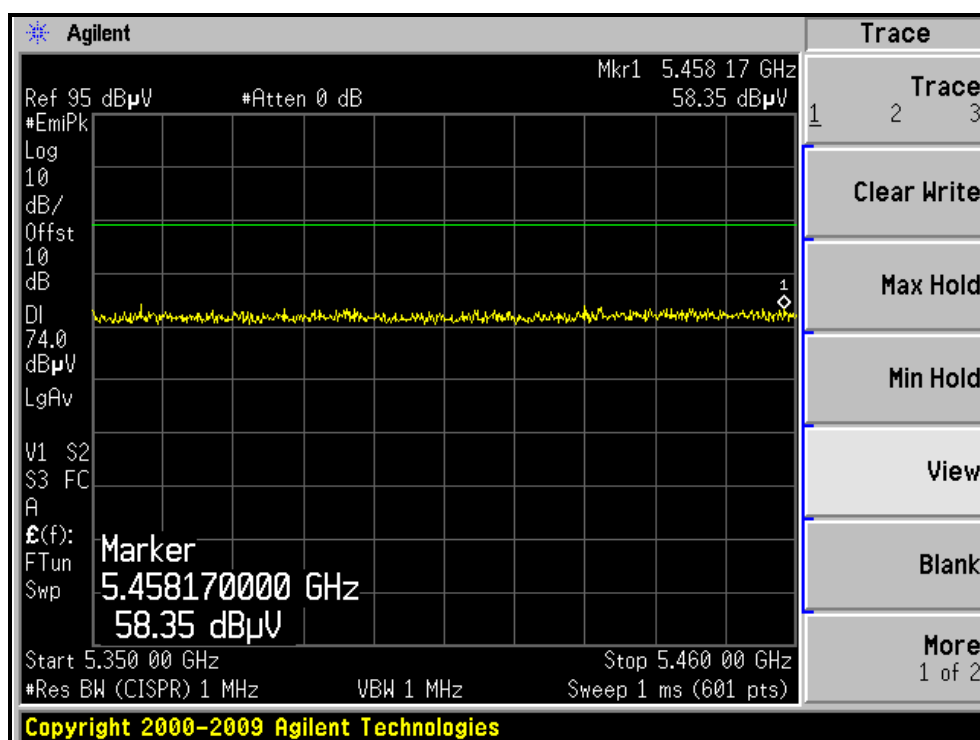
RESTRICTED BANDEDGE (802.11n (20MHz) MODE,CH 64, VERTICAL)



RESTRICTED BANDEDGE (802.11n (20MHz) MODE,CH 100, HORIZONTAL)



RESTRICTED BANDEDGE (802.11n (20MHz) MODE,CH 100, VERTICAL)



802.11n (40MHz) OFDM MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 38	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH 1022 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	72.0 PK	74.0	-2.0	1.42 H	306	32.06	39.94
2	5150.00	53.4 AV	54.0	-0.6	1.42 H	306	13.46	39.94
3	*5190.00	107.1 PK			1.42 H	306	67.06	40.04
4	*5190.00	95.6 AV			1.42 H	306	55.56	40.04
5	#10380.00	55.5 PK	68.3	-12.8	1.00 H	34	8.95	46.55
6	15570.00	62.9 PK	74.0	-11.1	1.00 H	96	11.48	51.42
7	15570.00	51.2 AV	54.0	-2.8	1.00 H	96	-0.22	51.42
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	62.6 PK	74.0	-11.4	1.13 V	85	22.66	39.94
2	5150.00	48.8 AV	54.0	-5.2	1.13 V	85	8.86	39.94
3	*5190.00	100.5 PK			1.13 V	85	60.46	40.04
4	*5190.00	89.8 AV			1.13 V	85	49.76	40.04
5	#10380.00	55.6 PK	68.3	-12.7	1.04 V	35	9.05	46.55
6	15570.00	63.4 PK	74.0	-10.6	1.01 V	49	11.98	51.42
7	15570.00	51.2 AV	54.0	-2.8	1.01 V	49	-0.22	51.42

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ * “: Fundamental frequency.
6. “#”:The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 46	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH 1022 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	108.0 PK			1.42 H	304	67.85	40.15
2	*5230.00	96.4 AV			1.42 H	304	56.25	40.15
3	#10460.00	56.1 PK	68.3	-12.2	1.00 H	40	9.45	46.65
4	15690.00	62.9 PK	74.0	-11.1	1.00 H	98	11.41	51.49
5	15690.00	51.3 AV	54.0	-2.7	1.00 H	98	-0.19	51.49
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	102.4 PK			1.08 V	99	62.25	40.15
2	*5230.00	91.0 AV			1.08 V	99	50.85	40.15
3	#10460.00	55.1 PK	68.3	-13.2	1.10 V	28	8.45	46.65
4	15690.00	63.4 PK	74.0	-10.6	1.00 V	59	11.91	51.49
5	15690.00	51.4 AV	54.0	-2.6	1.00 V	59	-0.09	51.49

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ * ”: Fundamental frequency.
6. “ # ”: The radiated frequency is out the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 54	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH 1022 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5270.00	107.4 PK			1.42 H	305	67.15	40.25
2	*5270.00	95.8 AV			1.42 H	305	55.55	40.25
3	#10540.00	56.9 PK	68.3	-11.4	1.00 H	51	10.15	46.75
4	15810.00	63.1 PK	74.0	-10.9	1.00 H	90	11.49	51.61
5	15810.00	51.5 AV	54.0	-2.5	1.00 H	90	-0.11	51.61
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5270.00	102.2 PK			1.03 V	110	61.95	40.25
2	*5270.00	90.6 AV			1.03 V	110	50.35	40.25
3	#10540.00	55.4 PK	68.3	-12.9	1.16 V	37	8.65	46.75
4	15810.00	62.9 PK	74.0	-11.1	1.00 V	63	11.29	51.61
5	15810.00	51.2 AV	54.0	-2.8	1.00 V	63	-0.41	51.61

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ * ”: Fundamental frequency.
6. “#”:The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 62	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH 1022 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	105.4 PK			1.43 H	303	65.04	40.36
2	*5310.00	94.6 AV			1.43 H	303	54.24	40.36
3	5350.00	68.3 PK	74.0	-5.7	1.43 H	303	27.83	40.47
4	5350.00	53.5 AV	54.0	-0.5	1.43 H	303	13.03	40.47
5	10620.00	57.7 PK	74.0	-16.3	1.02 H	22	10.86	46.84
6	10620.00	45.3 AV	54.0	-8.7	1.02 H	22	-1.54	46.84
7	15930.00	64.1 PK	74.0	-9.9	1.00 H	90	12.41	51.69
8	15930.00	52.3 AV	54.0	-1.7	1.00 H	90	0.61	51.69
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	99.3 PK			1.00 V	74	58.94	40.36
2	*5310.00	88.0 AV			1.00 V	74	47.64	40.36
3	5350.00	64.9 PK	74.0	-9.1	1.00 V	74	24.43	40.47
4	5350.00	49.0 AV	54.0	-5.0	1.00 V	74	8.53	40.47
5	10620.00	55.9 PK	74.0	-18.1	1.05 V	36	9.06	46.84
6	10620.00	44.4 AV	54.0	-9.6	1.05 V	36	-2.44	46.84
7	15930.00	64.7 PK	74.0	-9.3	1.00 V	21	13.01	51.69
8	15930.00	52.2 AV	54.0	-1.8	1.00 V	21	0.51	51.69

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ * “: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 102	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH 1022 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	59.3 PK	74.0	-14.7	1.40 H	298	18.54	40.76
2	5460.00	46.8 AV	54.0	-7.2	1.40 H	298	6.04	40.76
3	#5470.00	67.5 PK	68.3	-0.8	1.40 H	298	26.72	40.78
4	*5510.00	103.6 PK			1.46 H	294	62.71	40.89
5	*5510.00	92.2 AV			1.46 H	294	51.31	40.89
6	11020.00	57.3 PK	74.0	-16.7	1.06 H	27	10.01	47.29
7	11020.00	45.2 AV	54.0	-8.8	1.06 H	27	-2.09	47.29
8	#16530.00	65.0 PK	68.3	-3.3	1.00 H	77	11.92	53.08
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	58.8 PK	74.0	-15.2	1.09 V	112	18.04	40.76
2	5460.00	45.9 AV	54.0	-8.1	1.09 V	112	5.14	40.76
3	#5470.00	63.6 PK	68.3	-4.7	1.09 V	112	22.82	40.78
4	*5510.00	98.5 PK			1.09 V	112	57.61	40.89
5	*5510.00	87.3 AV			1.09 V	112	46.41	40.89
6	11020.00	56.6 PK	74.0	-17.4	1.08 V	31	9.31	47.29
7	11020.00	44.8 AV	54.0	-9.2	1.08 V	31	-2.49	47.29
8	#16530.00	65.4 PK	68.3	-2.9	1.02 V	15	12.32	53.08

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ * “: Fundamental frequency.
6. “#”:The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 118	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH 1022 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5590.00	108.3 PK			1.44 H	296	67.18	41.12
2	*5590.00	97.5 AV			1.44 H	296	56.38	41.12
3	11180.00	57.1 PK	74.0	-16.9	1.00 H	35	9.69	47.41
4	11180.00	45.3 AV	54.0	-8.7	1.00 H	35	-2.11	47.41
5	#16770.00	65.6 PK	68.3	-2.7	1.00 H	79	12.04	53.56
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5590.00	103.3 PK			1.03 V	108	62.18	41.12
2	*5590.00	92.7 AV			1.03 V	108	51.58	41.12
3	11180.00	57.1 PK	74.0	-16.9	1.08 V	28	9.69	47.41
4	11180.00	45.4 AV	54.0	-8.6	1.08 V	28	-2.01	47.41
5	#16770.00	65.5 PK	68.3	-2.8	1.02 V	21	11.94	53.56

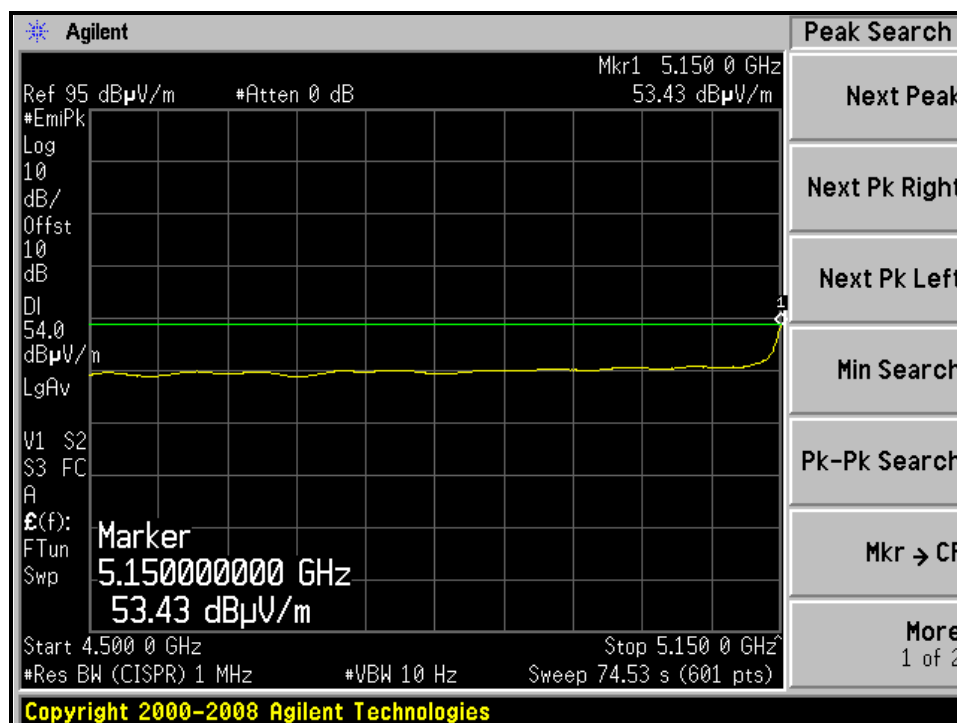
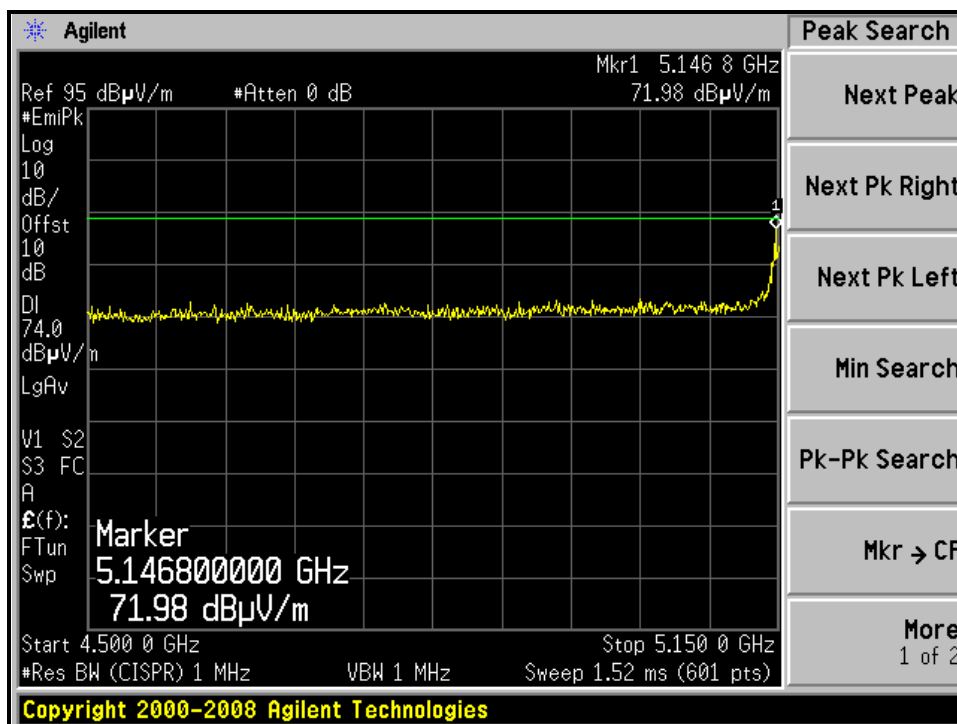
REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “*”: Fundamental frequency.
6. “#”: The radiated frequency is out the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 134	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH 1022 hPa	TESTED BY	Rex Huang

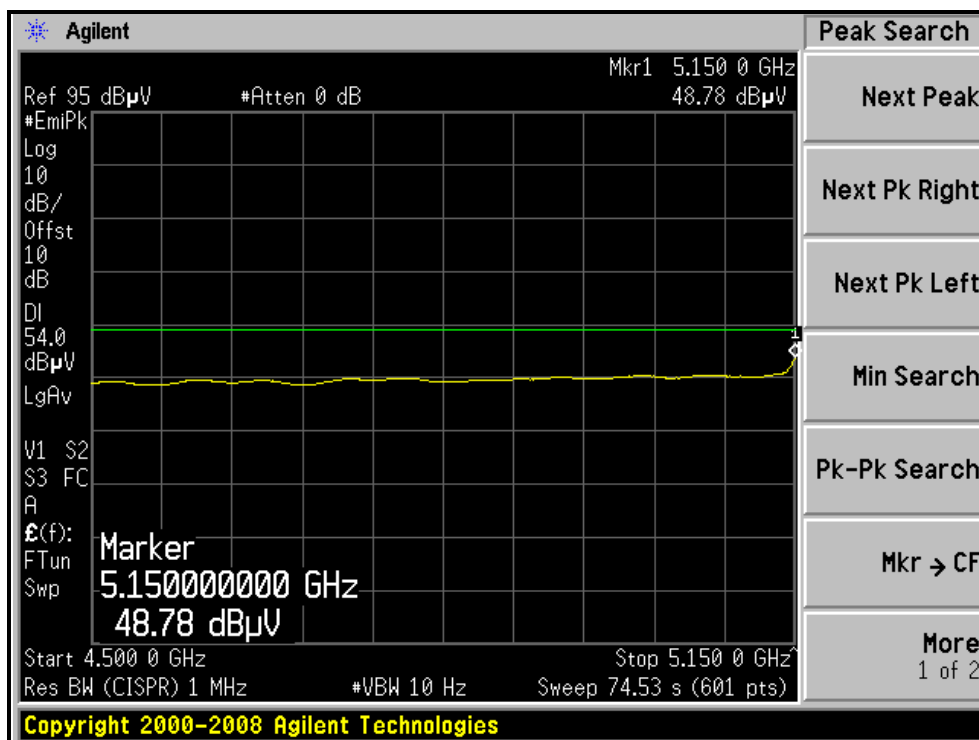
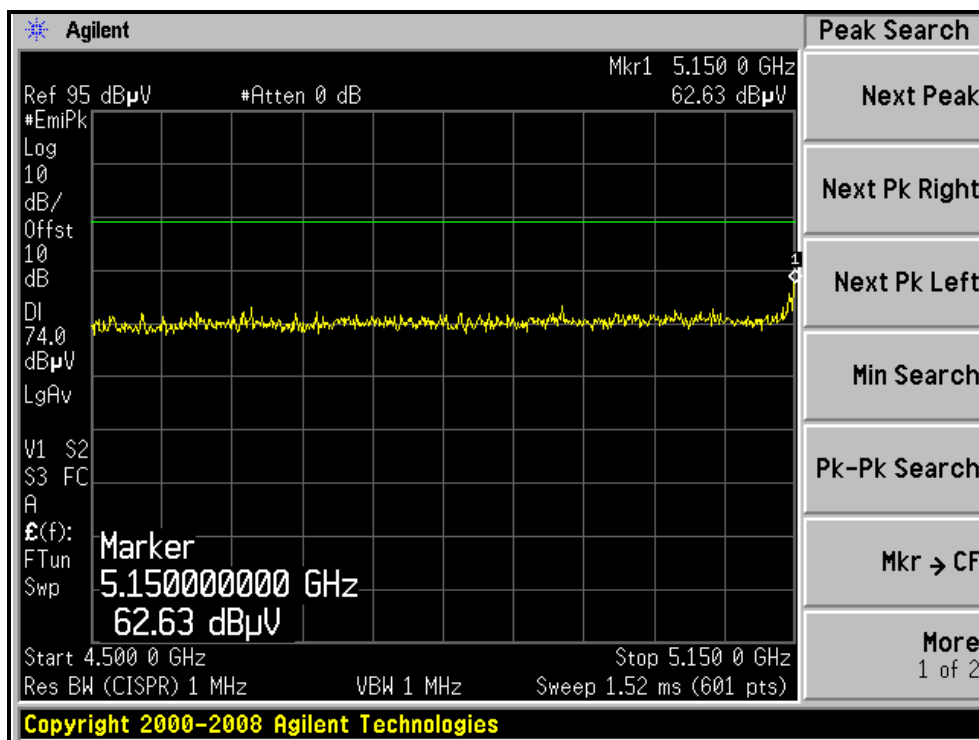
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NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	107.1 PK			1.46 H	299	65.76	41.34
2	*5670.00	96.7 AV			1.46 H	299	55.36	41.34
3	#5725.00	67.4 PK	68.3	-0.9	1.42 H	297	25.91	41.49
4	11340.00	57.1 PK	74.0	-16.9	1.04 H	23	9.53	47.57
5	11340.00	45.2 AV	54.0	-8.8	1.04 H	23	-2.37	47.57
6	#17010.00	65.4 PK	68.3	-2.9	1.00 H	90	11.31	54.09
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	102.3 PK			1.05 V	113	60.96	41.34
2	*5670.00	91.2 AV			1.05 V	113	49.86	41.34
3	#5725.00	62.2 PK	68.3	-6.1	1.05 V	113	20.71	41.49
4	11340.00	57.2 PK	74.0	-16.8	1.13 V	26	9.63	47.57
5	11340.00	45.4 AV	54.0	-8.6	1.13 V	26	-2.17	47.57
6	#17010.00	65.8 PK	68.3	-2.5	1.04 V	14	11.71	54.09

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ * “: Fundamental frequency.
6. “#”:The radiated frequency is out the restricted band.

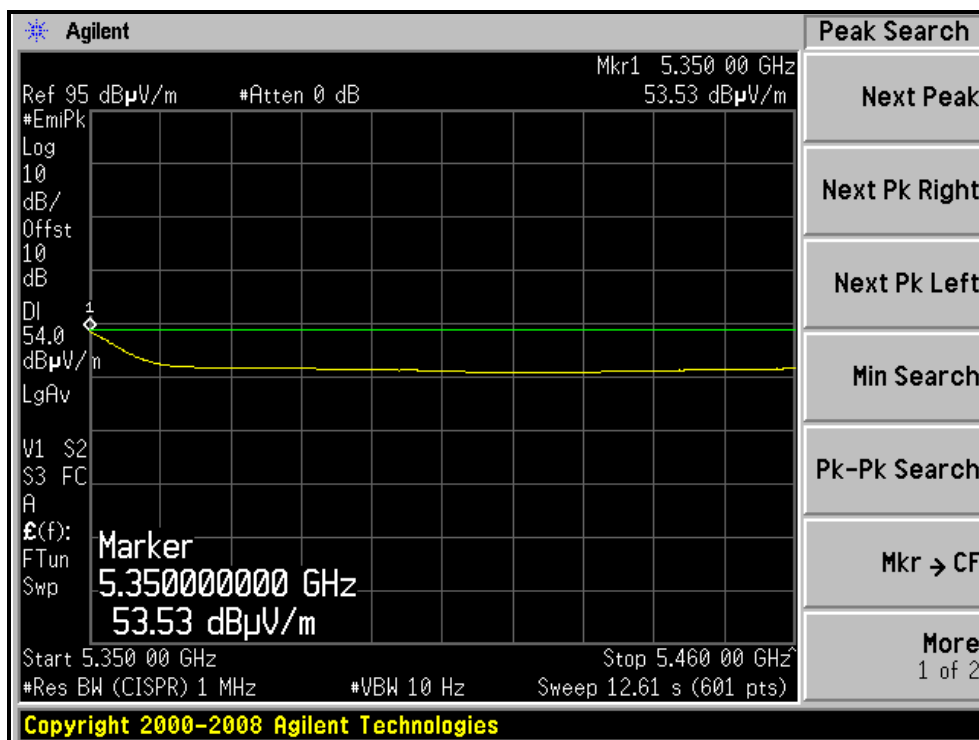
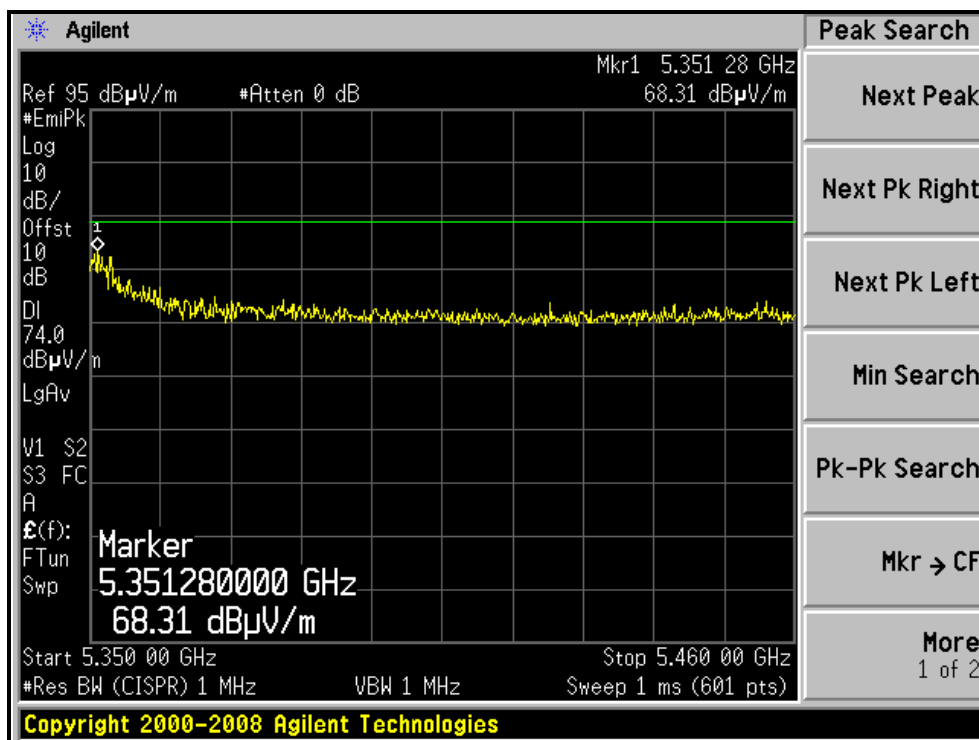
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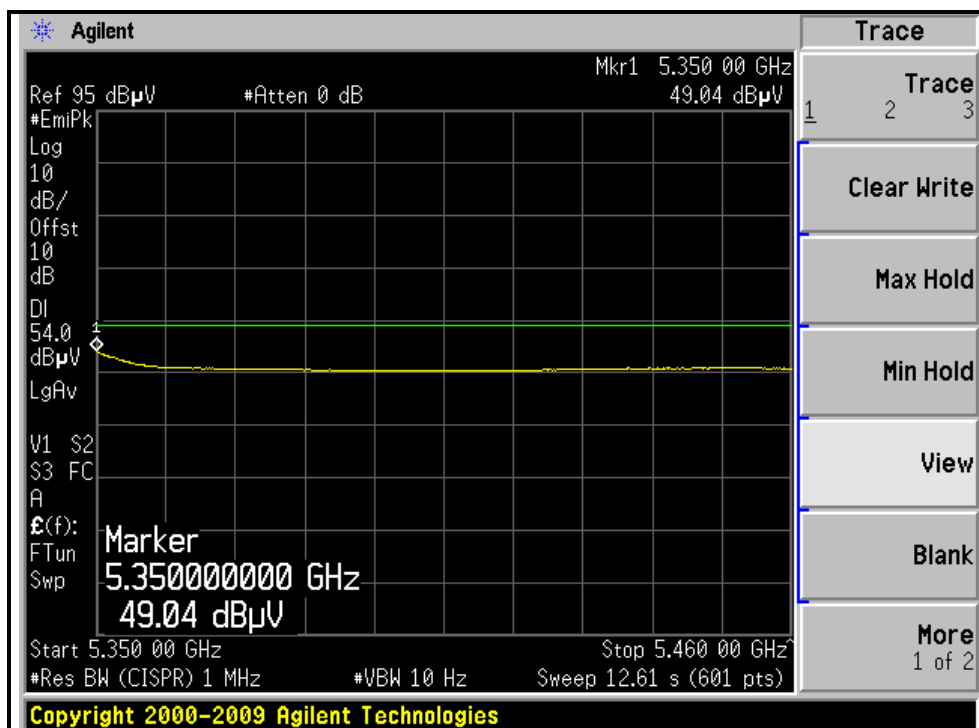
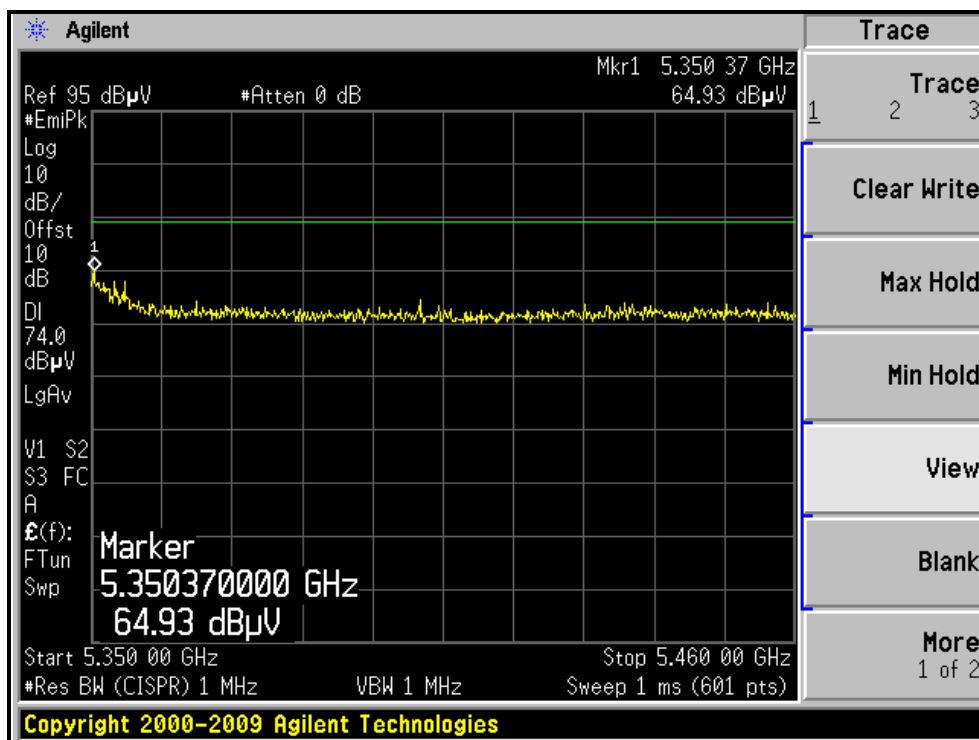
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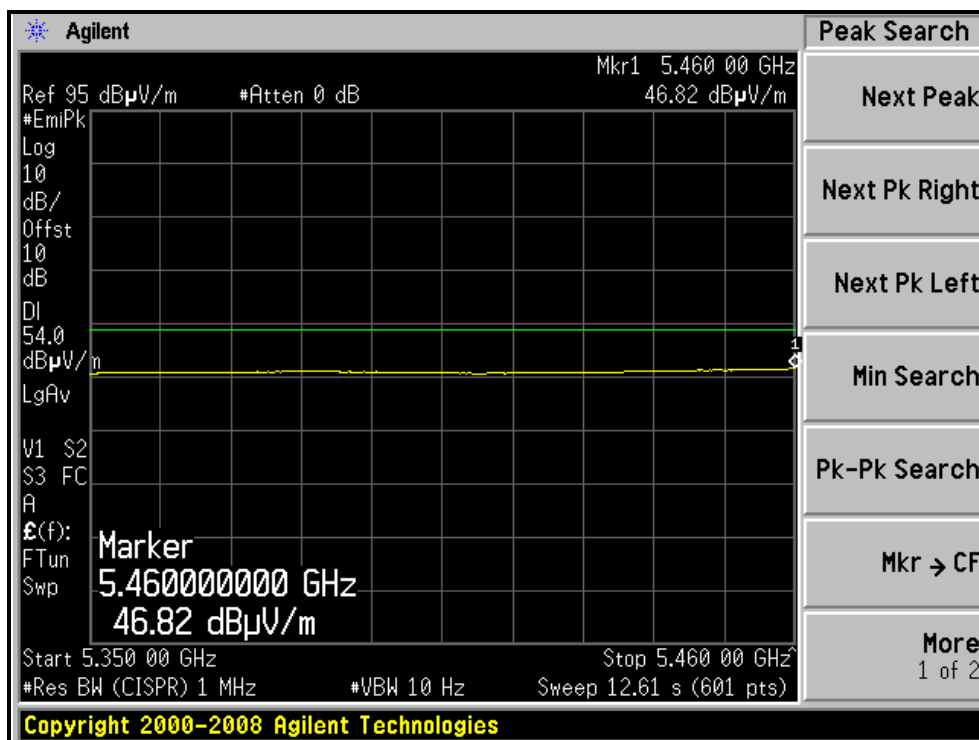
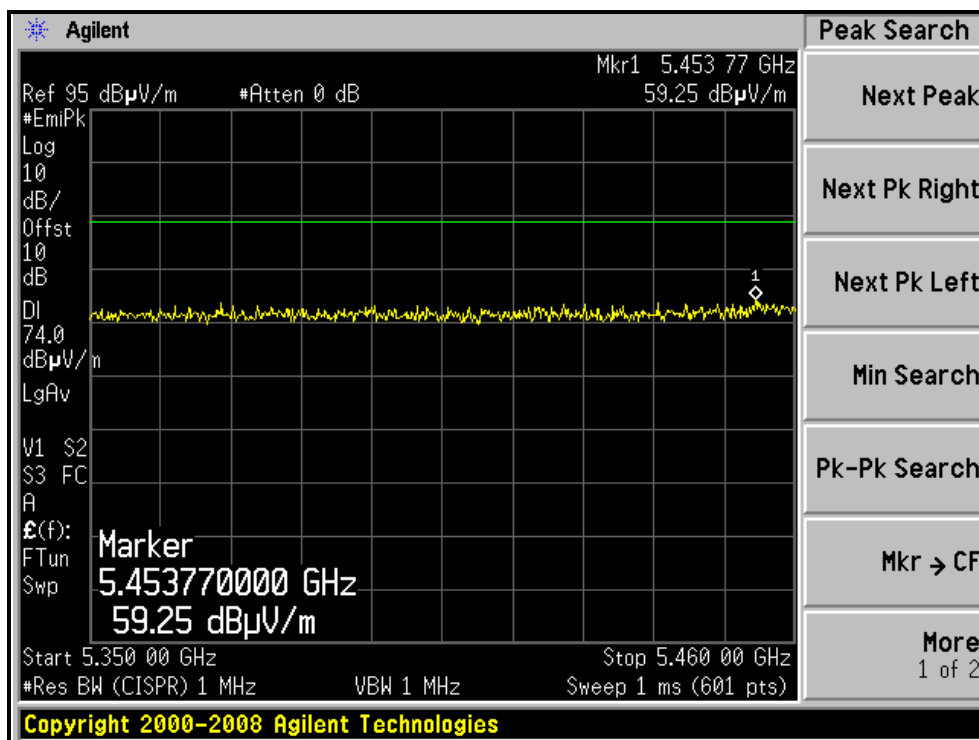
RESTRICTED BANDEDGE (802.11n (40MHz) MODE, CH62, HORIZONTAL)



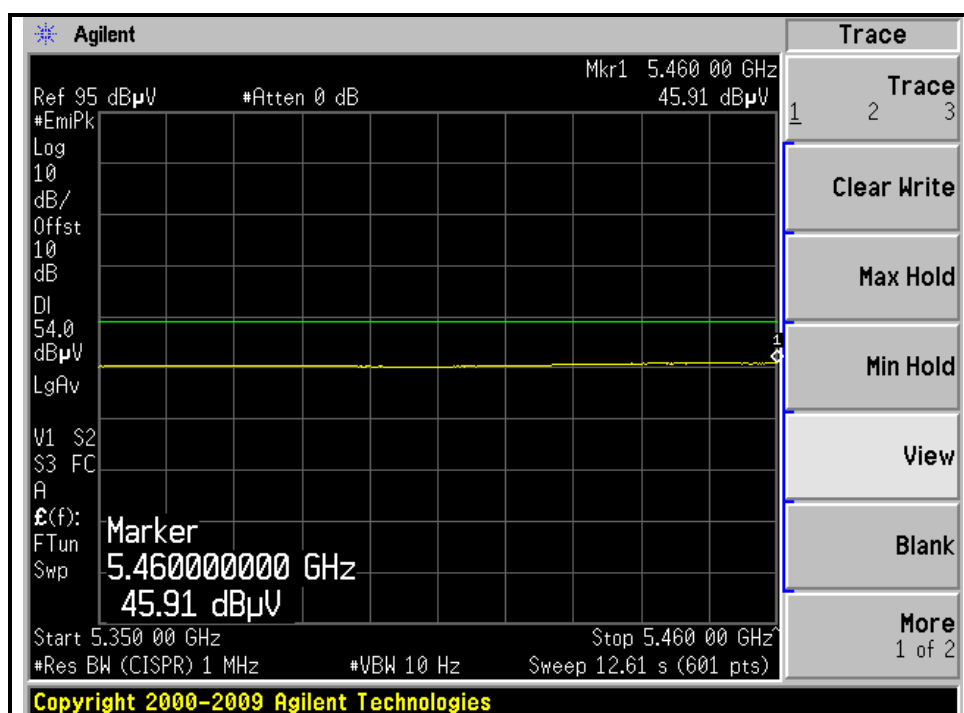
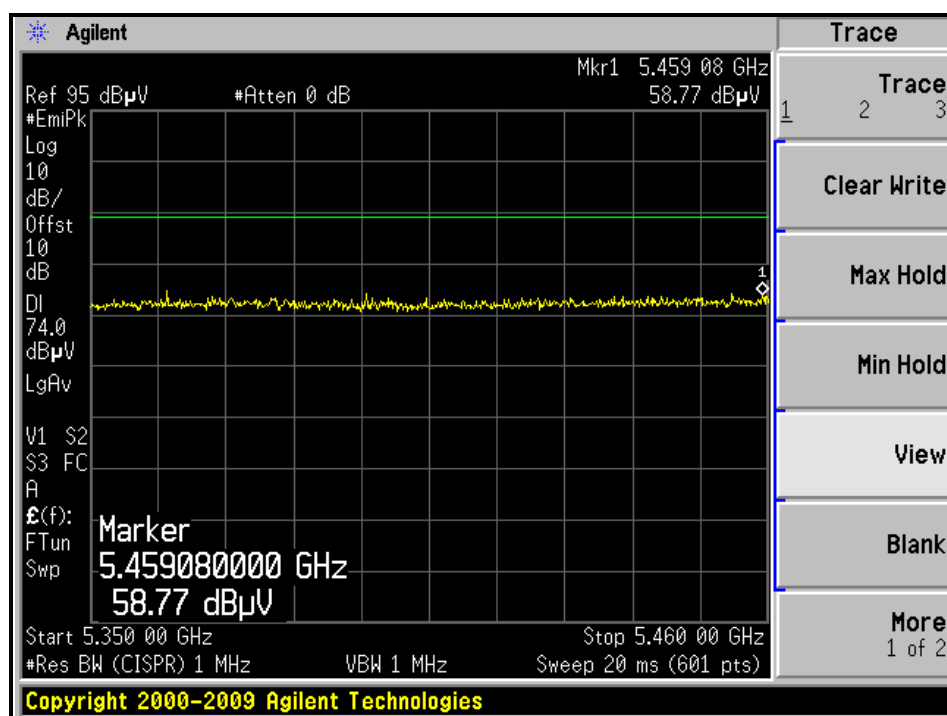
RESTRICTED BANDEDGE (802.11n (40MHz) MODE, CH62, VERTICAL)



RESTRICTED BANDEDGE (802.11n (40MHz) MODE, CH102, HORIZONTAL)



RESTRICTED BANDEDGE (802.11n (40MHz) MODE, CH102, VERTICAL)



4.2.9 TEST RESULTS (FOR RECEIVER PART)

BELOW 1GHz WORST-CASE DATA :

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 60	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	19deg. C, 66%RH 1022 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	87.23	38.2 QP	40.0	-1.9	2.00 H	310	28.56	9.59
2	187.34	37.1 QP	43.5	-6.4	1.75 H	100	24.99	12.12
3	236.52	40.0 QP	46.0	-6.0	1.25 H	276	27.57	12.44
4	261.66	38.6 QP	46.0	-7.4	1.25 H	256	25.22	13.37
5	299.57	44.4 QP	46.0	-1.6	1.00 H	191	29.52	14.91
6	398.04	43.1 QP	46.0	-2.9	1.00 H	226	25.27	17.80
7	497.38	39.4 QP	46.0	-6.6	2.00 H	245	19.49	19.91
8	796.94	40.8 QP	46.0	-5.2	1.25 H	232	15.99	24.81
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	87.40	29.1 QP	40.0	-10.9	1.00 V	345	19.52	9.58
2	187.08	28.5 QP	43.5	-15.1	2.00 V	175	16.31	12.14
3	237.10	31.4 QP	46.0	-14.6	1.50 V	206	18.90	12.46
4	261.85	31.3 QP	46.0	-14.7	1.75 V	207	17.92	13.38
5	299.26	35.8 QP	46.0	-10.2	1.00 V	273	20.94	14.90
6	399.18	37.5 QP	46.0	-8.5	2.00 V	273	19.70	17.84
7	497.46	34.4 QP	46.0	-11.6	2.00 V	282	14.47	19.91
8	799.58	32.8 QP	46.0	-13.2	1.25 V	252	7.93	24.86

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

ABOVE 1GHz WORST-CASE DATA

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 36	FREQUENCY RANGE	1 ~ 17.55GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH 1022 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	3453.30	43.5 PK	74.0	-30.5	1.00 H	275	9.19	34.31
2	3453.30	32.2 AV	54.0	-21.8	1.00 H	275	-2.11	34.31
3	6906.60	52.1 PK	74.0	-21.9	1.00 H	132	5.81	46.29
4	6906.60	39.5 AV	54.0	-14.5	1.00 H	132	-6.79	46.29
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	3453.30	42.3 PK	74.0	-31.7	1.00 V	182	7.99	34.31
2	3453.30	31.8 AV	54.0	-22.2	1.00 V	182	-2.51	34.31
3	6906.60	52.0 PK	74.0	-22.0	1.00 V	263	5.71	46.29
4	6906.60	39.3 AV	54.0	-14.7	1.00 V	263	-6.99	46.29

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 40	FREQUENCY RANGE	1 ~ 17.55GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH 1022 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	3466.70	43.3 PK	74.0	-30.7	1.00 H	264	8.95	34.35
2	3466.70	32.1 AV	54.0	-21.9	1.00 H	264	-2.25	34.35
3	6933.40	51.8 PK	74.0	-22.2	1.00 H	125	5.35	46.45
4	6933.40	39.5 AV	54.0	-14.5	1.00 H	125	-6.95	46.45
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	3466.70	42.0 PK	74.0	-32.0	1.00 V	178	7.65	34.35
2	3466.70	31.8 AV	54.0	-22.2	1.00 V	178	-2.55	34.35
3	6933.40	52.4 PK	74.0	-21.6	1.00 V	276	5.95	46.45
4	6933.40	39.5 AV	54.0	-14.5	1.00 V	276	-6.95	46.45

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 48	FREQUENCY RANGE	1 ~ 17.55GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH 1022 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	3493.30	43.6 PK	74.0	-30.4	1.00 H	278	9.17	34.43
2	3493.30	32.7 AV	54.0	-21.3	1.00 H	278	-1.73	34.43
3	6986.60	51.8 PK	74.0	-22.2	1.00 H	129	5.03	46.77
4	6986.60	39.5 AV	54.0	-14.5	1.00 H	129	-7.27	46.77
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	3493.30	41.6 PK	74.0	-32.4	1.00 V	179	7.17	34.43
2	3493.30	31.5 AV	54.0	-22.5	1.00 V	179	-2.93	34.43
3	6986.60	52.2 PK	74.0	-21.8	1.00 V	270	5.43	46.77
4	6986.60	39.6 AV	54.0	-14.4	1.00 V	270	-7.17	46.77

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 52	FREQUENCY RANGE	1 ~ 17.55GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH 1022 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	3506.70	43.8 PK	74.0	-30.2	1.00 H	279	9.33	34.47
2	3506.70	33.2 AV	54.0	-20.8	1.00 H	279	-1.27	34.47
3	7013.40	51.5 PK	74.0	-22.5	1.00 H	124	4.66	46.84
4	7013.40	39.3 AV	54.0	-14.7	1.00 H	124	-7.54	46.84
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	3506.70	41.2 PK	74.0	-32.8	1.00 V	172	6.73	34.47
2	3506.70	31.3 AV	54.0	-22.7	1.00 V	172	-3.17	34.47
3	7013.40	52.4 PK	74.0	-21.6	1.00 V	258	5.56	46.84
4	7013.40	39.7 AV	54.0	-14.3	1.00 V	258	-7.14	46.84

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 60	FREQUENCY RANGE	1 ~ 17.55GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH 1022 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	3533.30	43.9 PK	74.0	-30.1	1.00 H	288	9.35	34.55
2	3533.30	33.5 AV	54.0	-20.5	1.00 H	288	-1.05	34.55
3	7066.60	52.4 PK	74.0	-21.6	1.00 H	135	5.60	46.80
4	7066.60	40.0 AV	54.0	-14.0	1.00 H	135	-6.80	46.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	3533.30	40.9 PK	74.0	-33.1	1.00 V	167	6.35	34.55
2	3533.30	31.2 AV	54.0	-22.8	1.00 V	167	-3.35	34.55
3	7066.60	53.3 PK	74.0	-20.7	1.00 V	266	6.50	46.80
4	7066.60	40.4 AV	54.0	-13.6	1.00 V	266	-6.40	46.80

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	FREQUENCY RANGE	1 ~ 17.55GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH 1022 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	3546.70	43.6 PK	74.0	-30.4	1.00 H	286	9.01	34.59
2	3546.70	33.3 AV	54.0	-20.7	1.00 H	286	-1.29	34.59
3	7093.40	52.6 PK	74.0	-21.4	1.00 H	137	5.82	46.78
4	7093.40	40.4 AV	54.0	-13.6	1.00 H	137	-6.38	46.78
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	3546.70	41.2 PK	74.0	-32.8	1.00 V	156	6.61	34.59
2	3546.70	31.3 AV	54.0	-22.7	1.00 V	156	-3.29	34.59
3	7093.40	53.0 PK	74.0	-21.0	1.00 V	275	6.22	46.78
4	7093.40	40.3 AV	54.0	-13.7	1.00 V	275	-6.48	46.78

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	FREQUENCY RANGE	1 ~ 17.55GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH 1022 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	3666.70	44.0 PK	74.0	-30.0	1.00 H	279	9.05	34.95
2	3666.70	33.8 AV	54.0	-20.2	1.00 H	279	-1.15	34.95
3	7333.40	52.9 PK	74.0	-21.1	1.00 H	132	6.28	46.62
4	7333.40	40.9 AV	54.0	-13.1	1.00 H	132	-5.72	46.62
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	3666.70	41.6 PK	74.0	-32.4	1.00 V	166	6.65	34.95
2	3666.70	31.7 AV	54.0	-22.3	1.00 V	166	-3.25	34.95
3	7333.40	52.8 PK	74.0	-21.2	1.00 V	264	6.18	46.62
4	7333.40	40.3 AV	54.0	-13.7	1.00 V	264	-6.32	46.62

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 120	FREQUENCY RANGE	1 ~ 17.55GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH 1022 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	3733.30	44.4 PK	74.0	-29.6	1.00 H	275	9.24	35.16
2	3733.30	33.9 AV	54.0	-20.1	1.00 H	275	-1.26	35.16
3	7466.60	53.2 PK	74.0	-20.8	1.00 H	130	6.66	46.54
4	7466.60	40.9 AV	54.0	-13.1	1.00 H	130	-5.64	46.54
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	3733.30	41.7 PK	74.0	-32.3	1.00 V	165	6.54	35.16
2	3733.30	31.6 AV	54.0	-22.4	1.00 V	165	-3.56	35.16
3	7466.60	53.5 PK	74.0	-20.5	1.00 V	256	6.96	46.54
4	7466.60	40.9 AV	54.0	-13.1	1.00 V	256	-5.64	46.54

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 140	FREQUENCY RANGE	1 ~ 17.55GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH 1022 hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	3800.00	44.9 PK	74.0	-29.1	1.00 H	284	9.53	35.37
2	3800.00	34.5 AV	54.0	-19.5	1.00 H	284	-0.87	35.37
3	7600.00	53.1 PK	74.0	-20.9	1.00 H	121	6.69	46.41
4	7600.00	40.7 AV	54.0	-13.3	1.00 H	121	-5.71	46.41
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	3800.00	41.9 PK	74.0	-32.1	1.00 V	165	6.53	35.37
2	3800.00	31.6 AV	54.0	-22.4	1.00 V	165	-3.77	35.37
3	7600.00	53.8 PK	74.0	-20.2	1.00 V	251	7.39	46.41
4	7600.00	41.0 AV	54.0	-13.0	1.00 V	251	-5.41	46.41

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

4.3 OUTPUT TRANSMIT POWER MEASUREMENT

4.3.1 LIMITS OF OUTPUT TRANSMIT POWER MEASUREMENT

Frequency Band	Limit
5.15 – 5.25GHz	The lesser of 50mW (17dBm) or 4dBm + 10logB
5.25 – 5.35GHz	The lesser of 250mW (24dBm) or 11dBm + 10logB
5.47 – 5.725GHz	The lesser of 250mW (24dBm) or 11dBm + 10logB
5.725 – 5.825GHz	The lesser of 1W (30dBm) or 17dBm + 10logB

NOTE: Where B is the 26dB emission bandwidth in MHz.

4.3.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer	E4446A	MY48250254	July 14, 2010	July 13, 2011

NOTE: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.3.3 TEST PROCEDURE

1. The transmitter output was connected to the spectrum analyzer.
2. Set span to encompass the entire emission bandwidth of the signal.
3. Set RBW to 1MHz, VBW to 3MHz.
4. Using the spectrum analyzer's channel power measurement function to measure the output power.

NOTE:

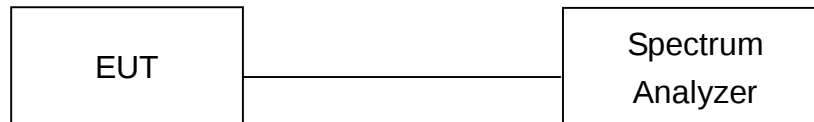
The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002.

The transmitter output operates continuously therefore Method # 1 is used.

4.3.4 DEVIATION FROM TEST STANDARD

No deviation

4.3.5 TEST SETUP



4.3.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

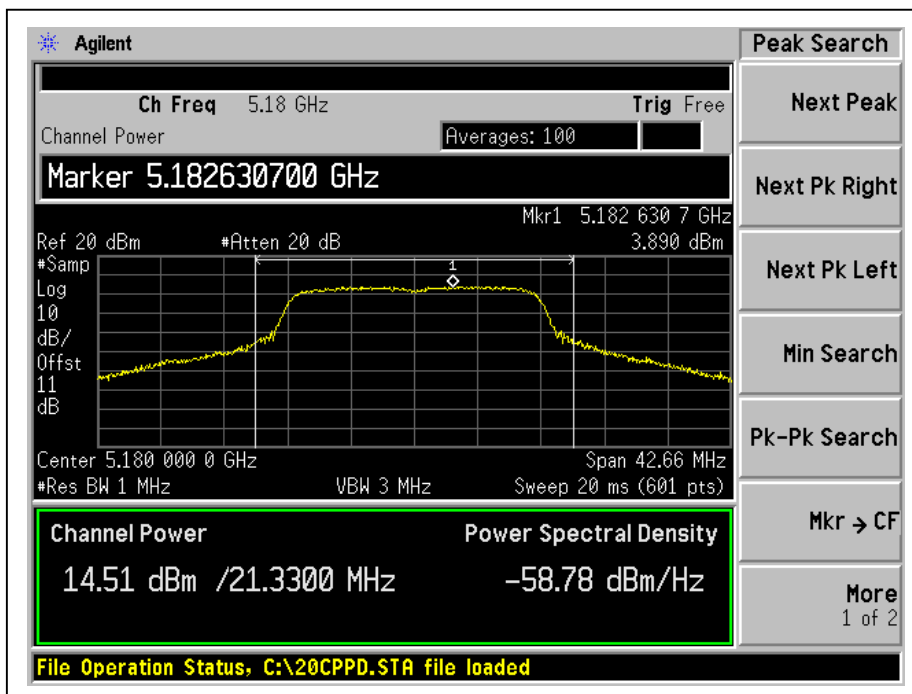
4.3.7 TEST RESULTS

802.11a OFDM MODULATION:

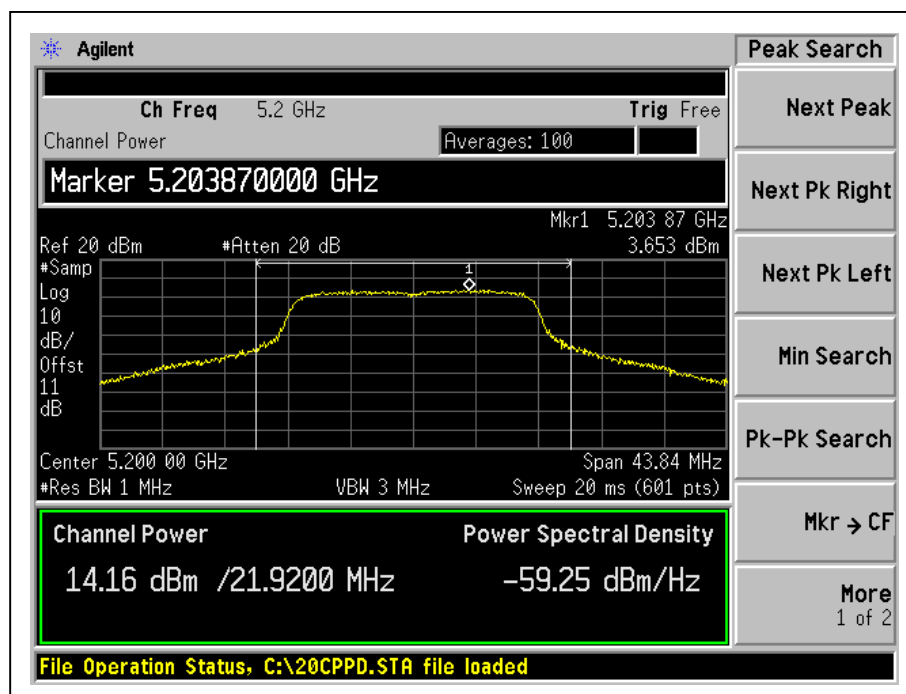
CHANNEL	CHANNEL FREQUENCY (MHz)	OUTPUT POWER (mW)	OUTPUT POWER (dBm)	OUTPUT POWER LIMIT (dBm)	26dBc Occupied Bandwidth (MHz)	PASS/ FAIL
36	5180	28.2	14.5	17	21.33	PASS
40	5200	26.3	14.2	17	21.92	PASS
48	5240	25.1	14.0	17	22.00	PASS
52	5260	60.3	17.8	24	31.25	PASS
60	5300	64.6	18.1	24	33.92	PASS
64	5320	55.0	17.4	24	32.17	PASS
100	5500	29.5	14.7	24	25.67	PASS
120	5600	53.7	17.3	24	34.25	PASS
140	5700	19.5	12.9	24	22.17	PASS

NOTE: The 26dBc Occupied Bandwidth plot, please refer to the following pages.

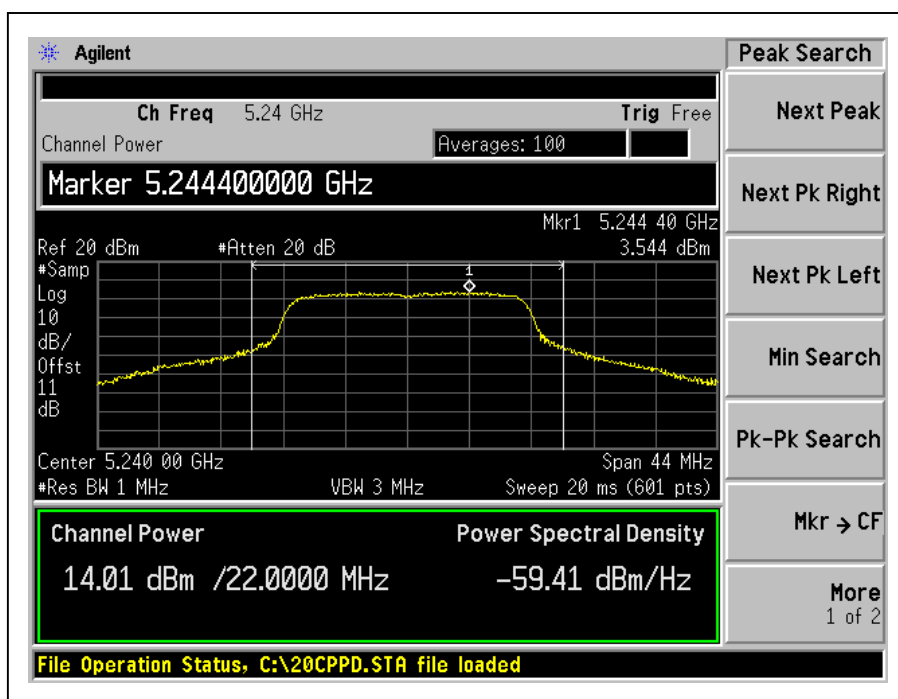
Peak Power Output: CH36



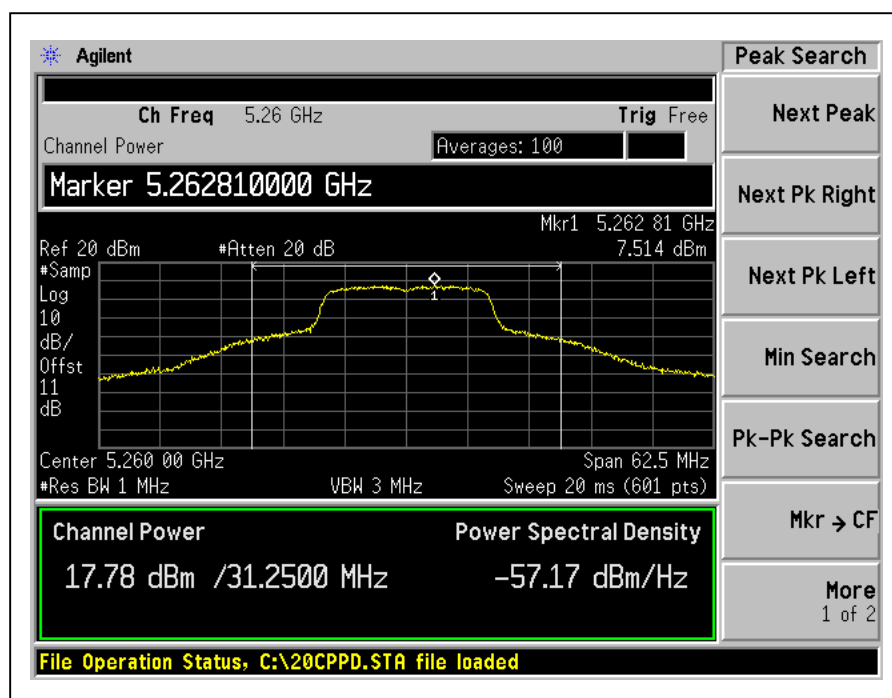
CH40



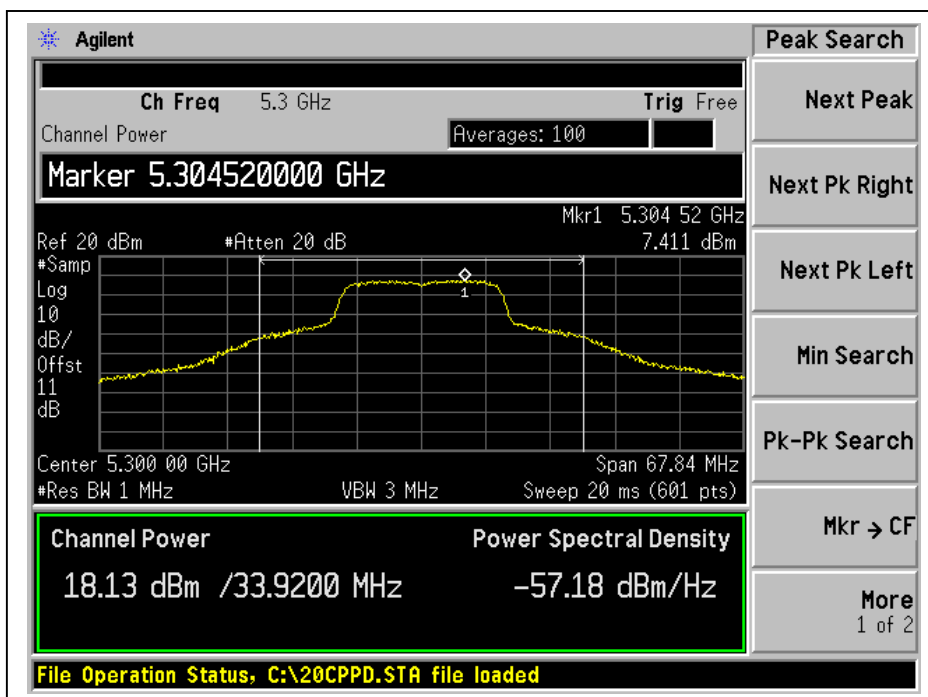
CH48



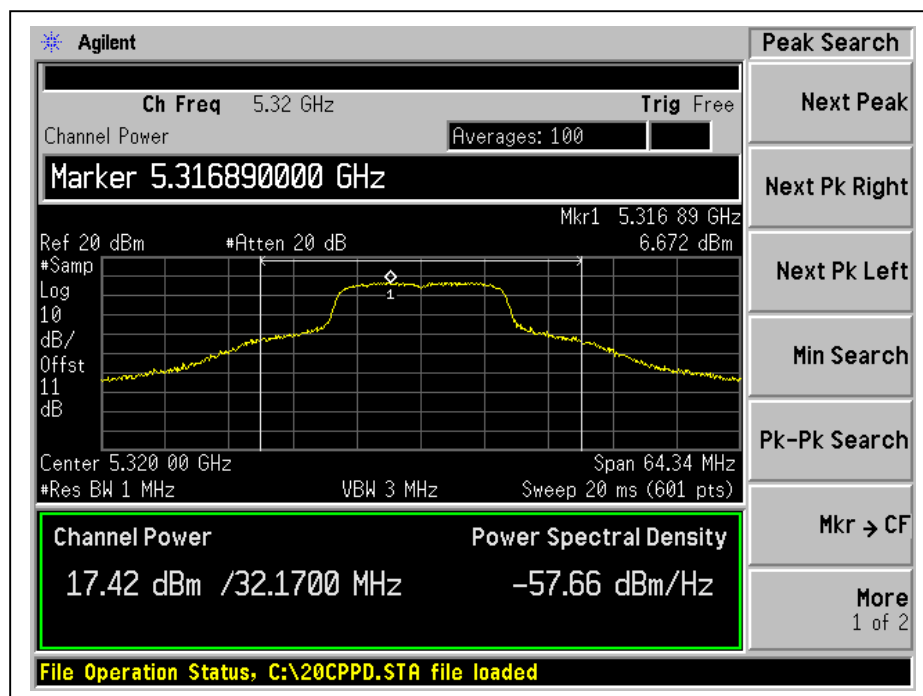
CH52



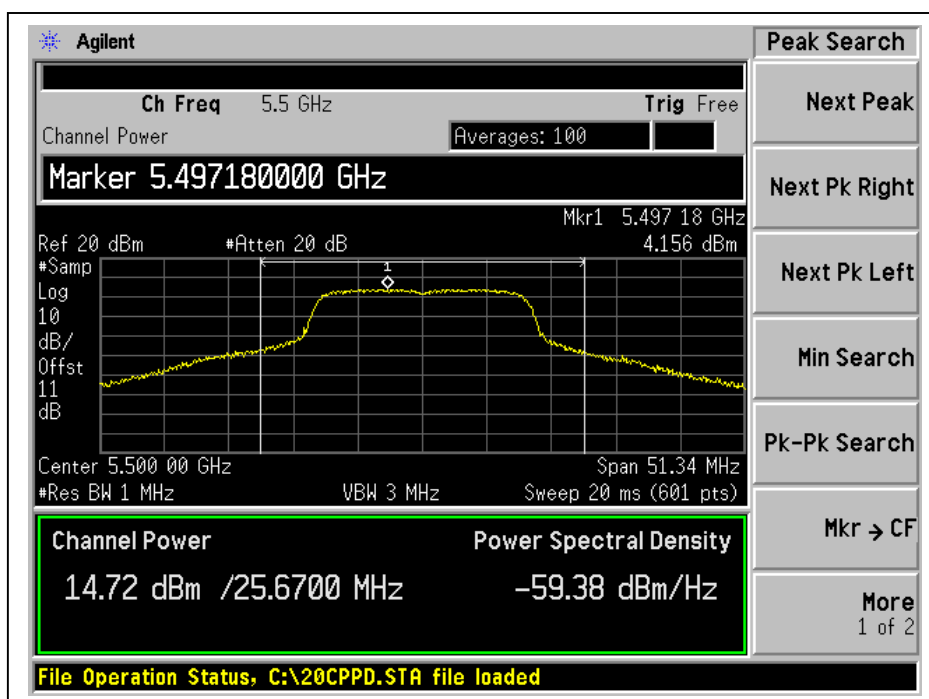
CH60



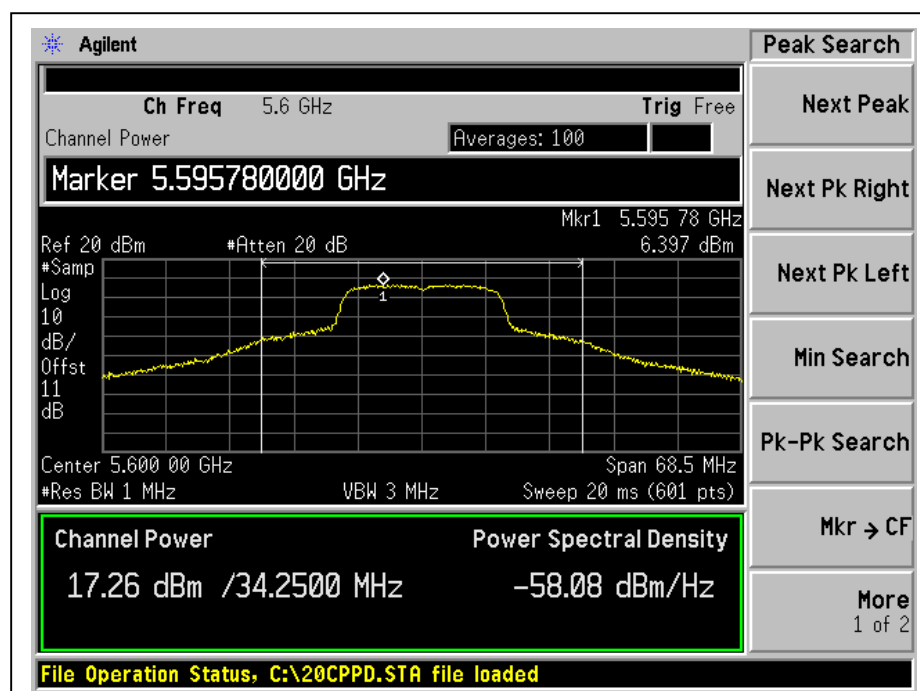
CH64



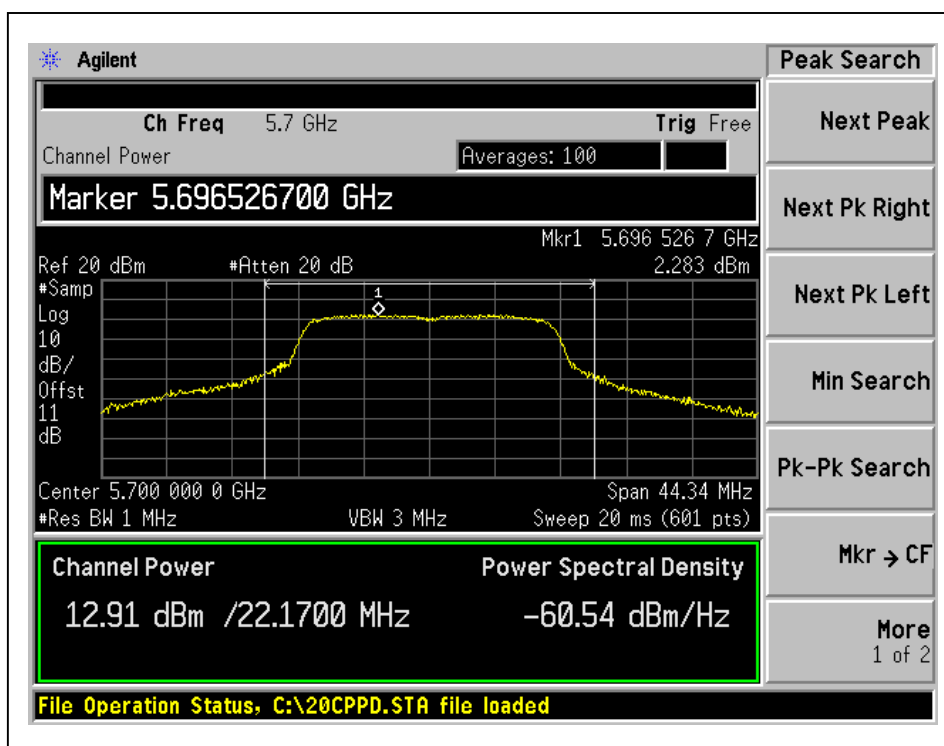
CH100



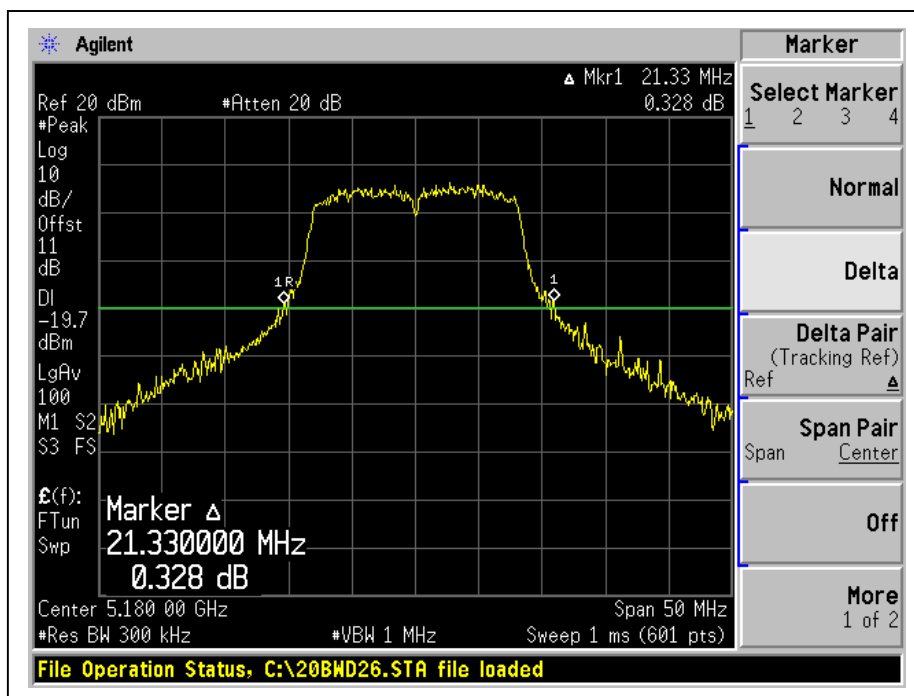
CH120



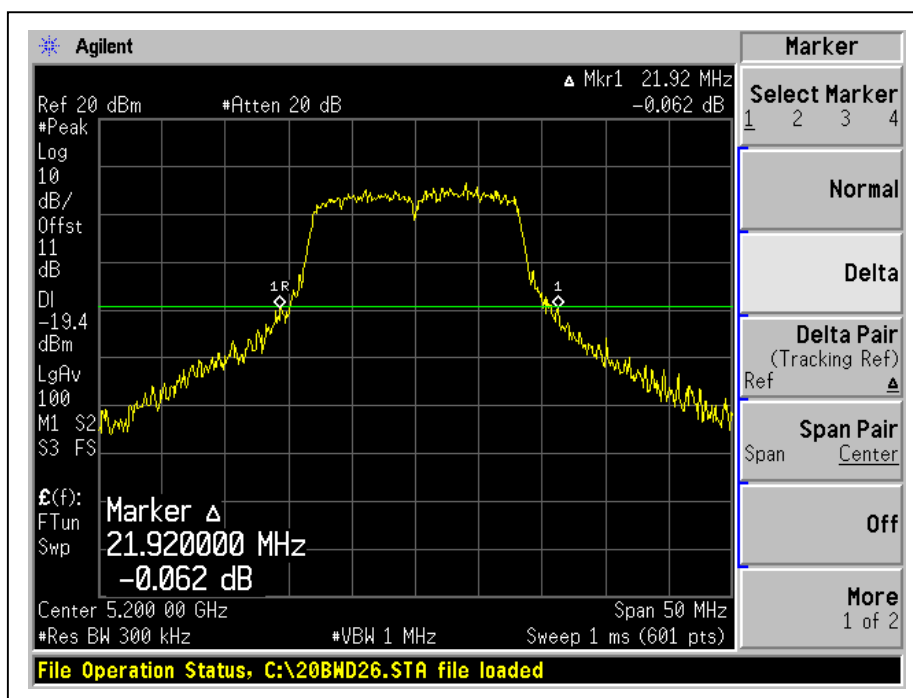
CH140



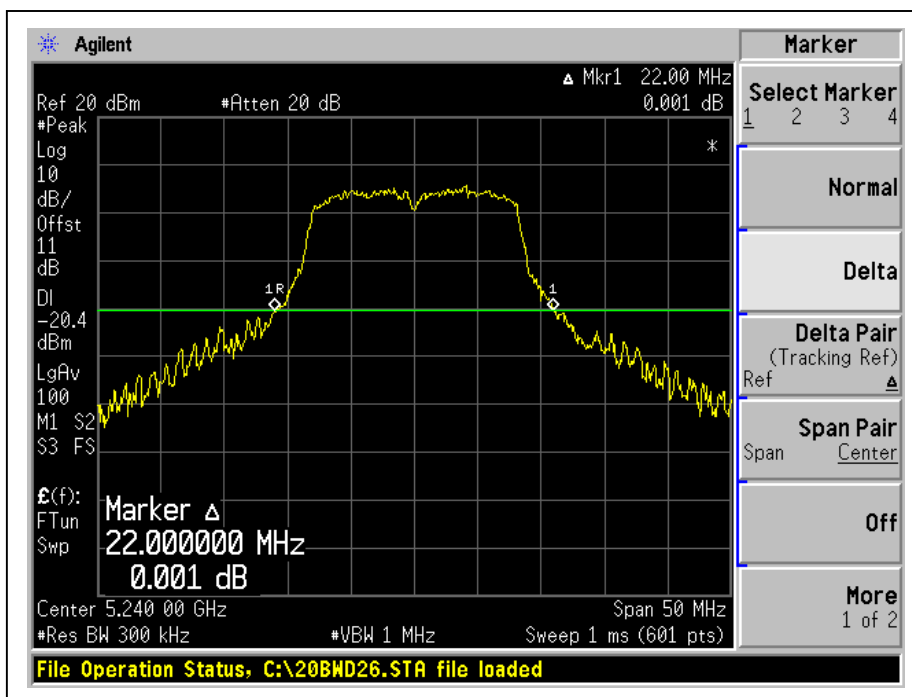
26dB Occupied Bandwidth: CH36



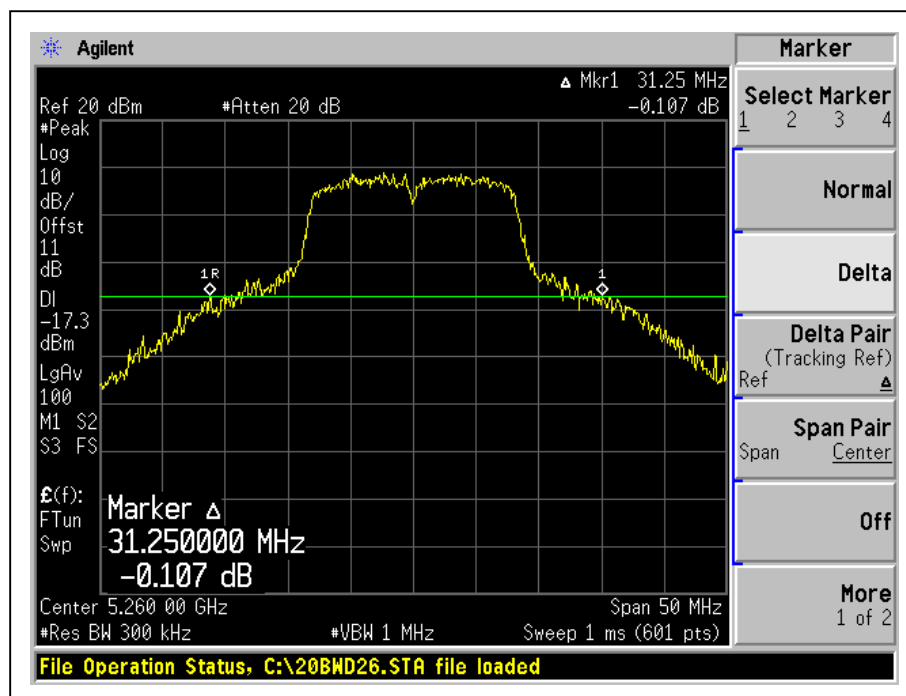
CH40



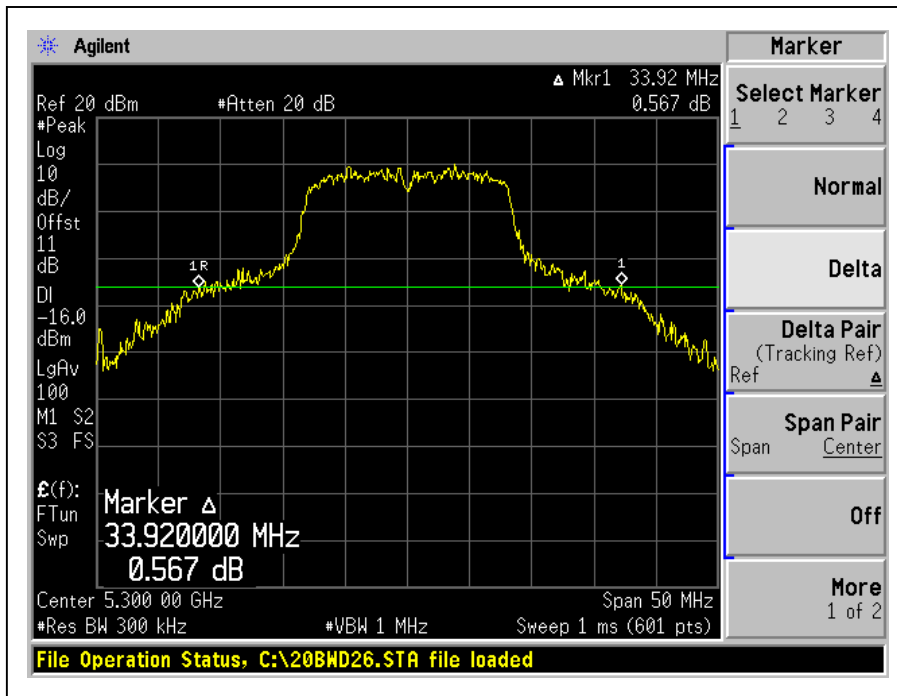
CH48



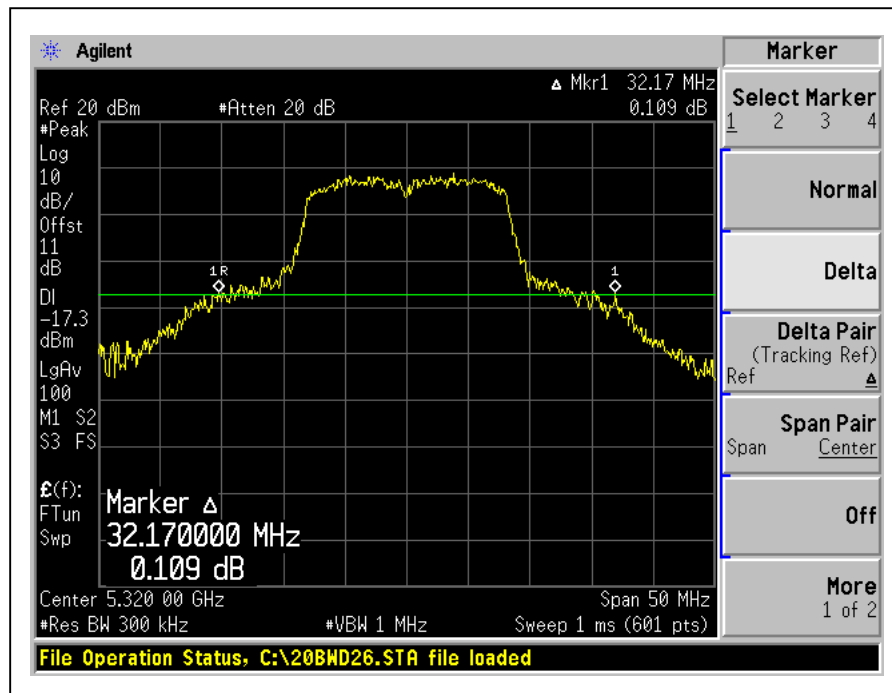
CH52



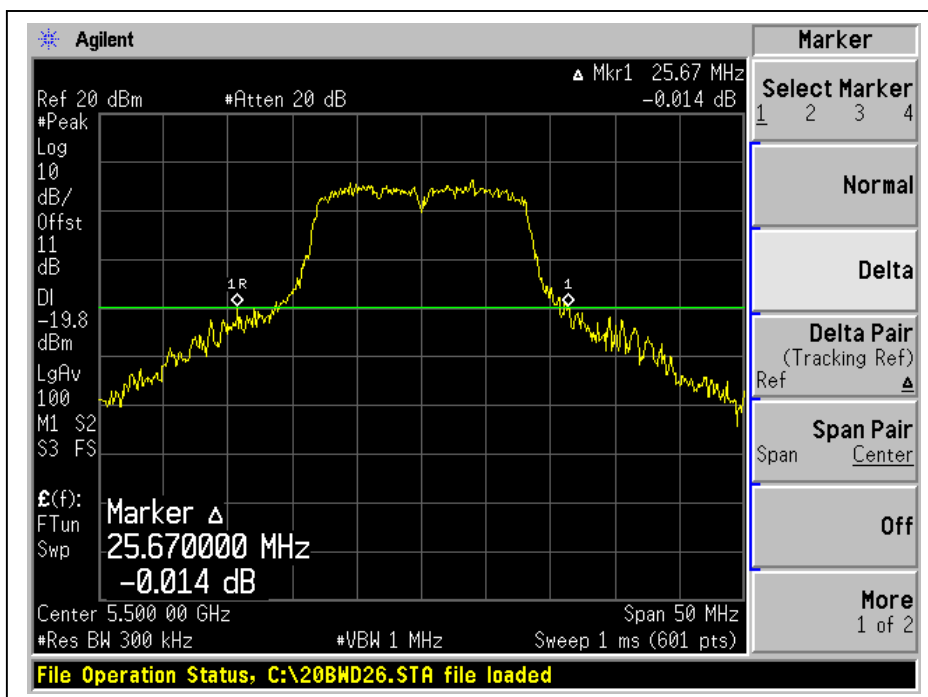
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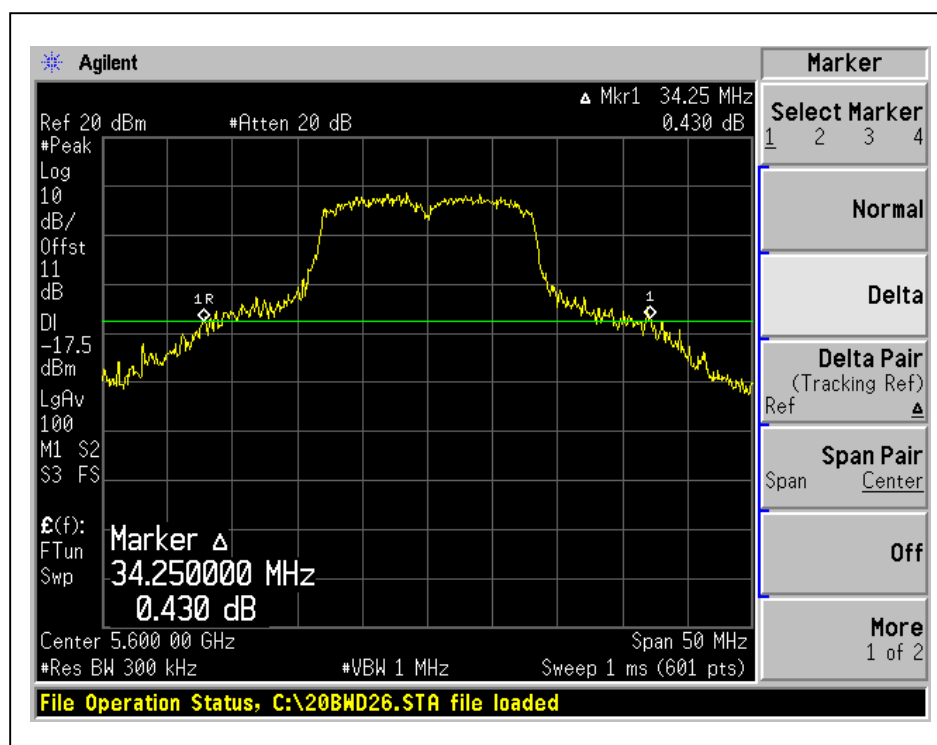
CH64



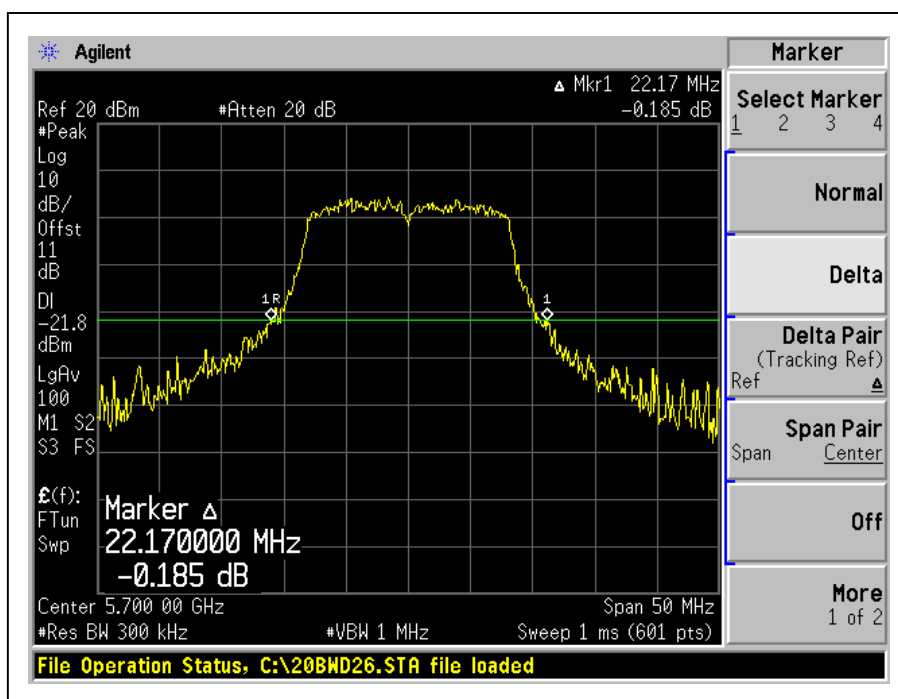
CH100



CH120



CH140

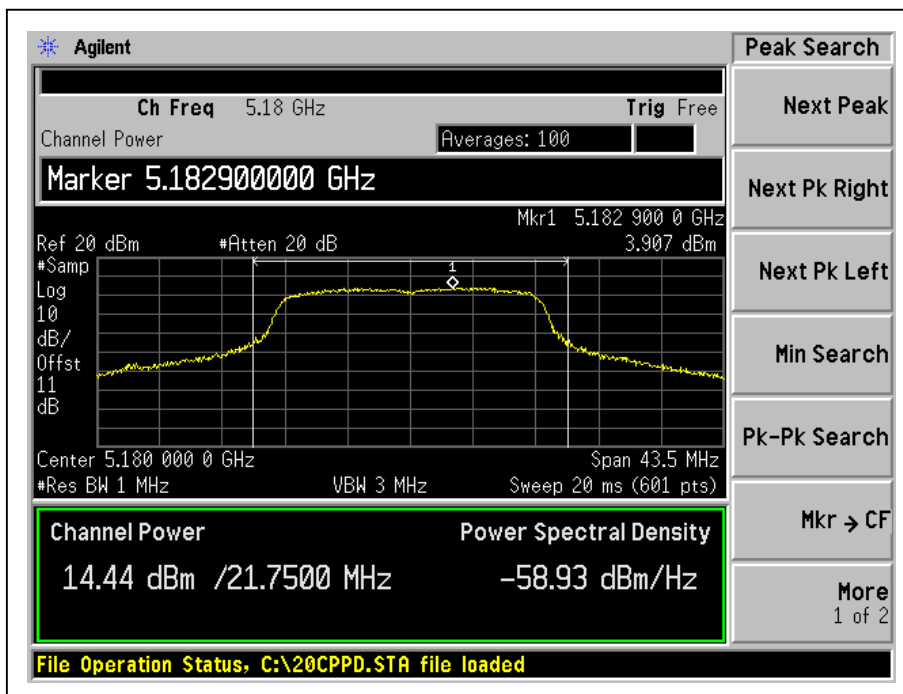


802.11n (20MHz) OFDM MODULATION:

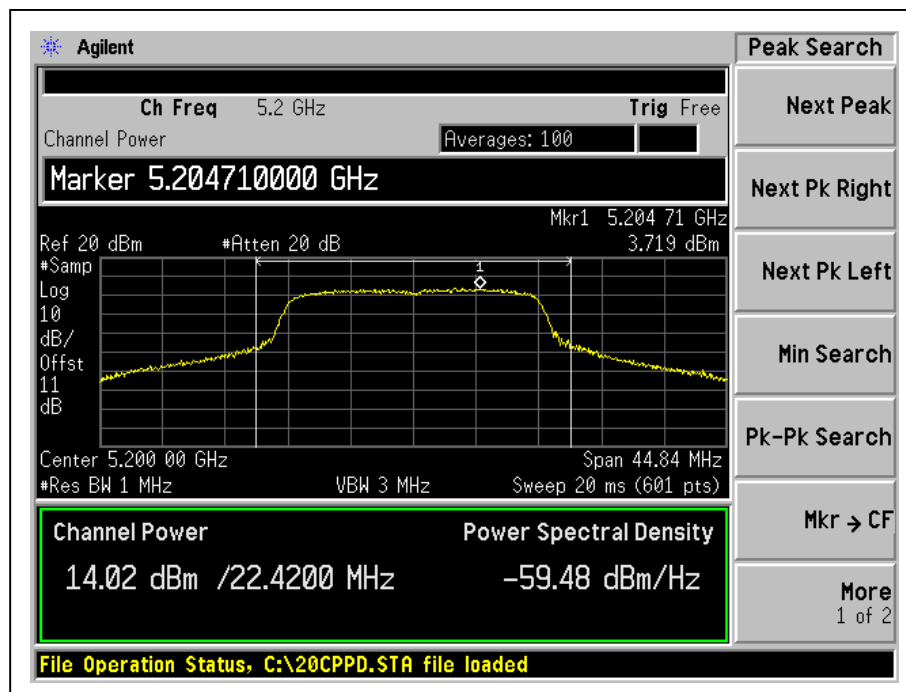
CHANNEL	CHANNEL FREQUENCY (MHz)	OUTPUT POWER (mW)	OUTPUT POWER (dBm)	OUTPUT POWER LIMIT (dBm)	26dBc Occupied Bandwidth (MHz)	PASS/ FAIL
36	5180	27.5	14.4	17	21.75	PASS
40	5200	25.1	14.0	17	22.42	PASS
48	5240	24.5	13.9	17	22.50	PASS
52	5260	44.7	16.5	24	29.50	PASS
60	5300	45.7	16.6	24	31.42	PASS
64	5320	43.7	16.4	24	29.67	PASS
100	5500	33.1	15.2	24	28.58	PASS
120	5600	44.7	16.5	24	29.17	PASS
140	5700	18.6	12.7	24	22.08	PASS

NOTE: The 26dBc Occupied Bandwidth plot, please refer to the following pages.

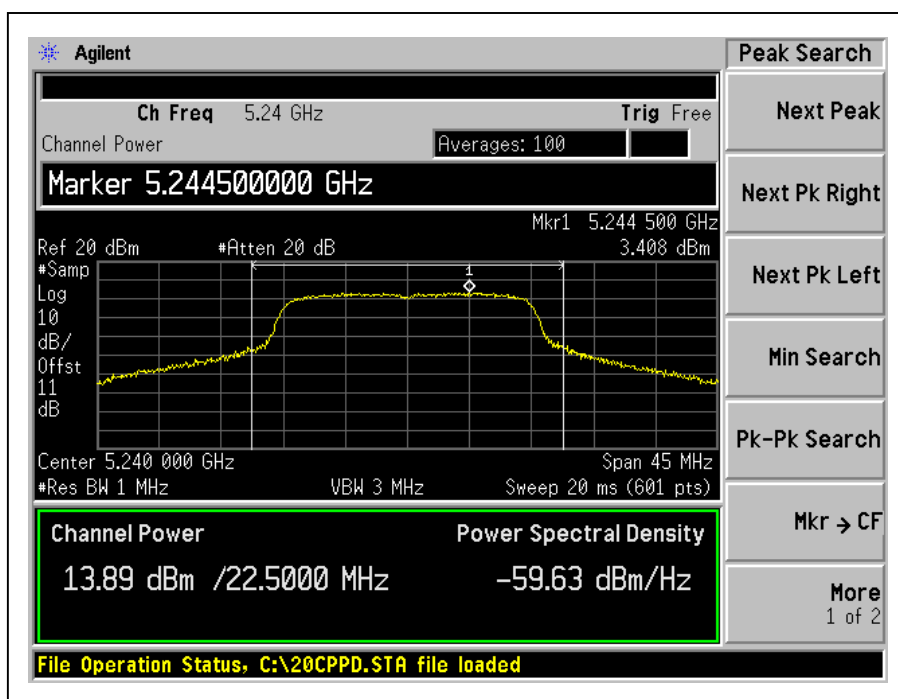
Peak Power Output: CH36



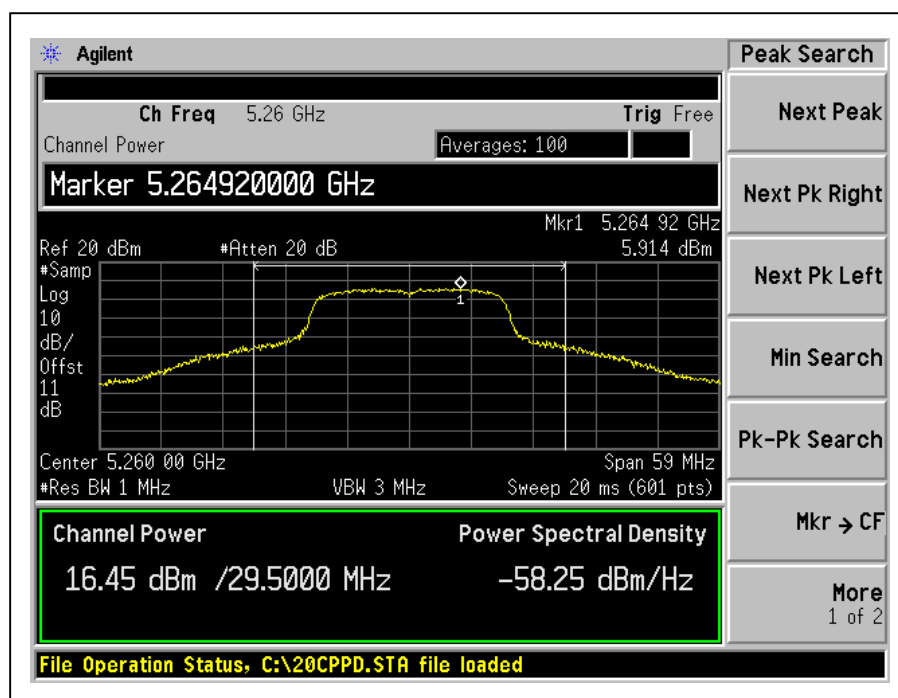
CH40



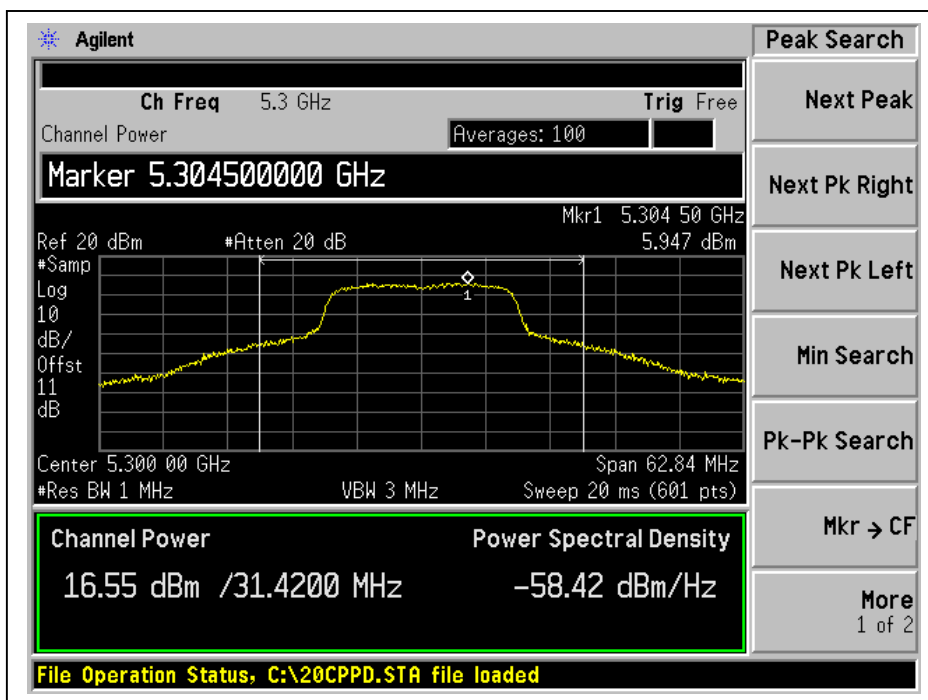
CH48



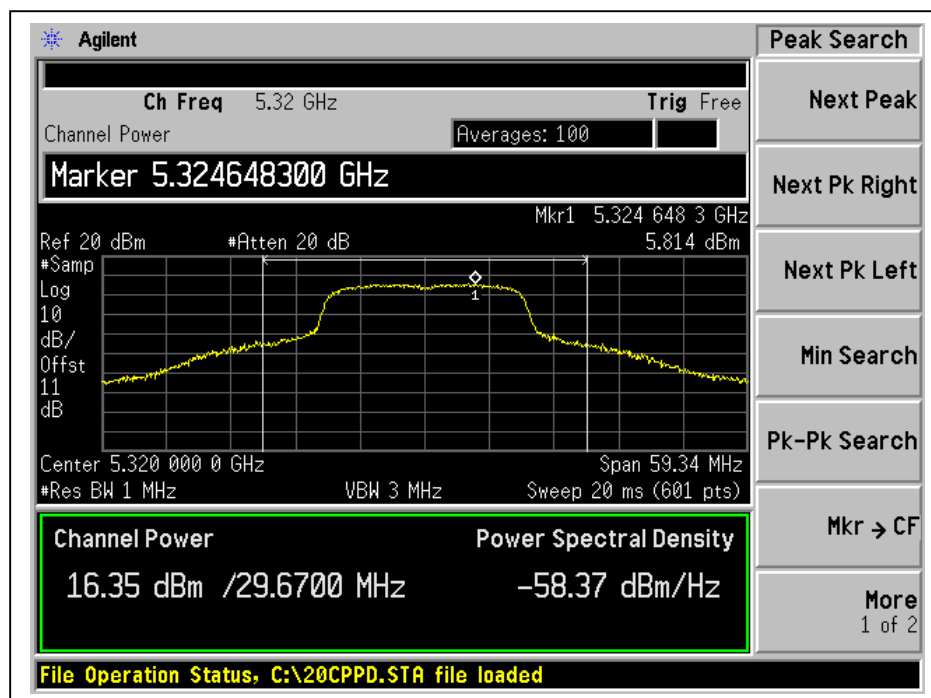
CH52



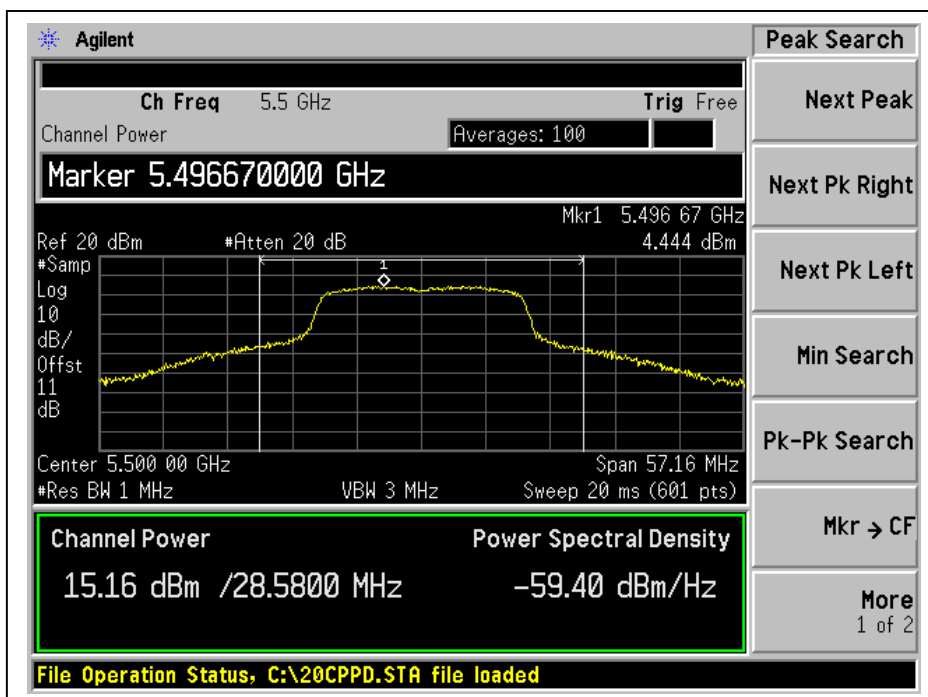
CH60



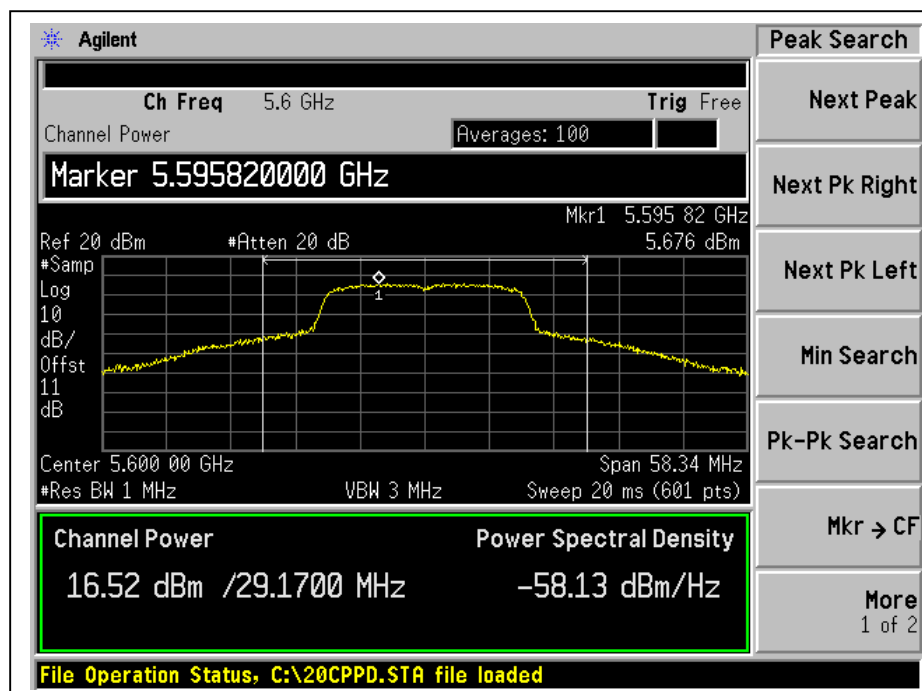
CH64



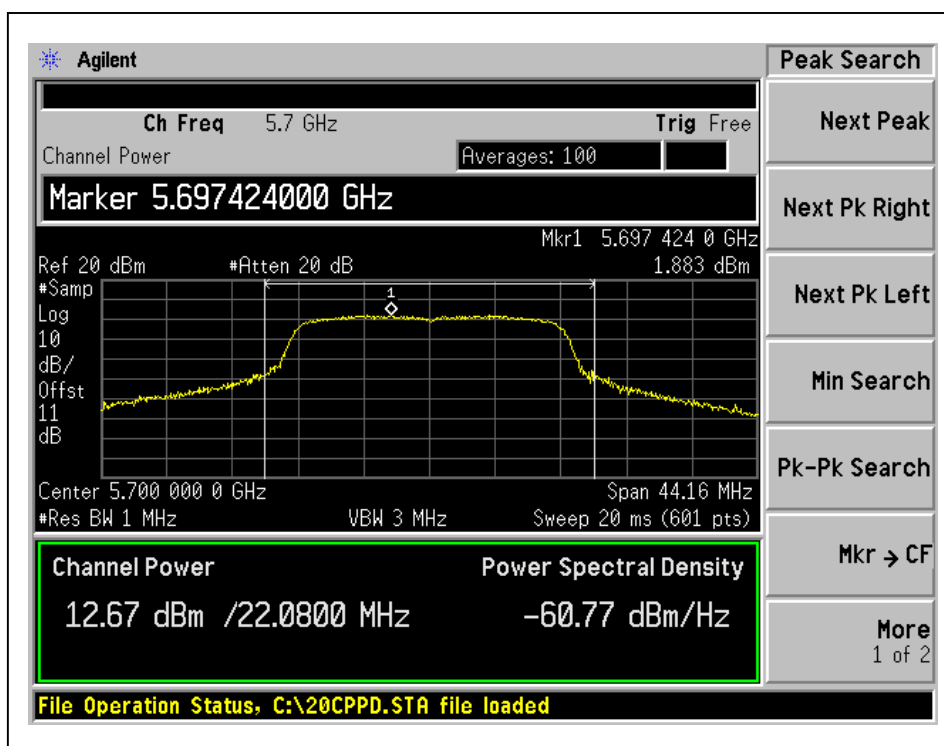
CH100



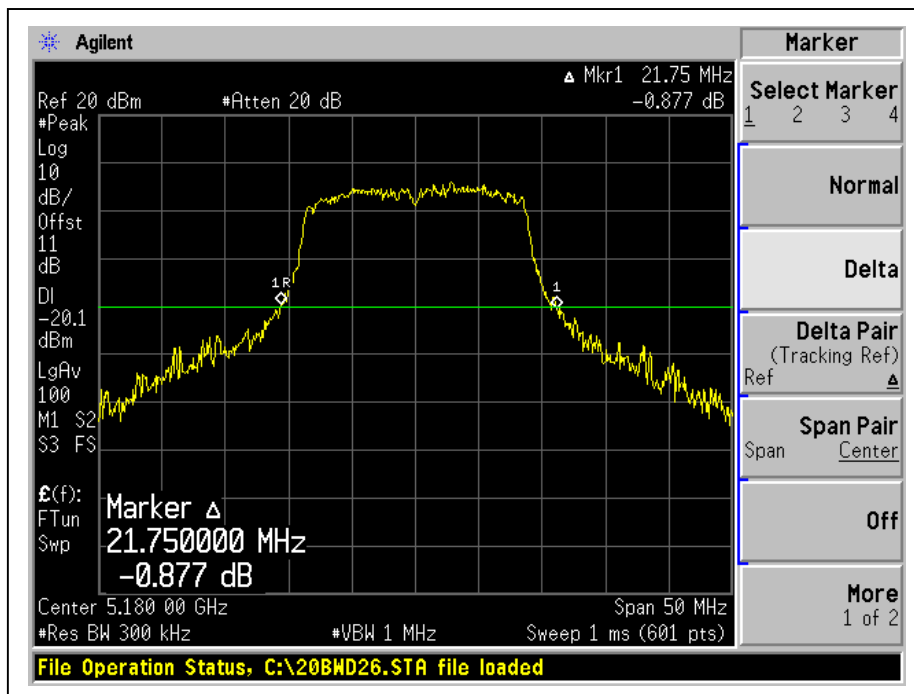
CH120



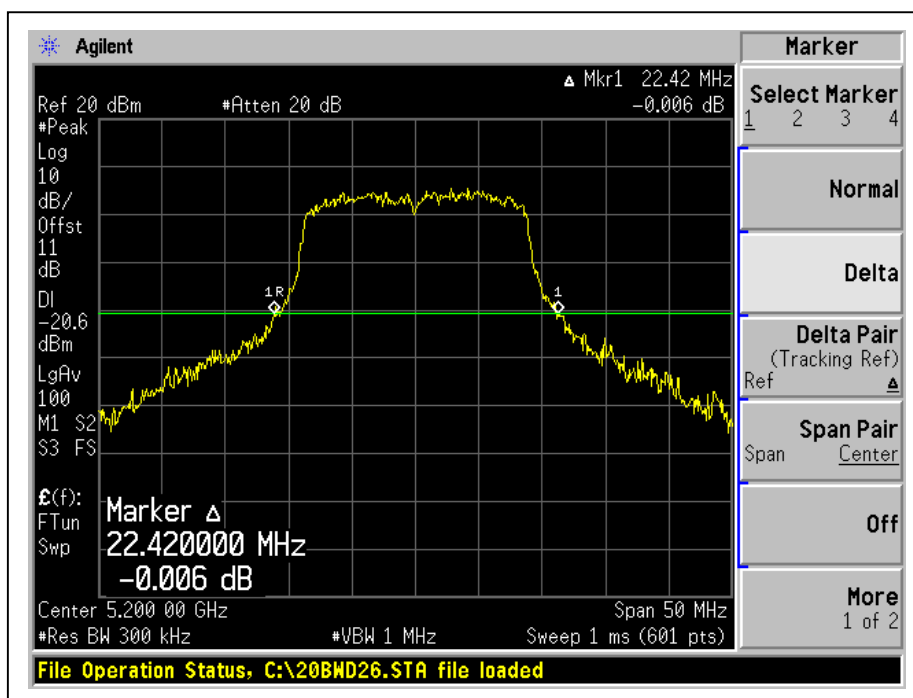
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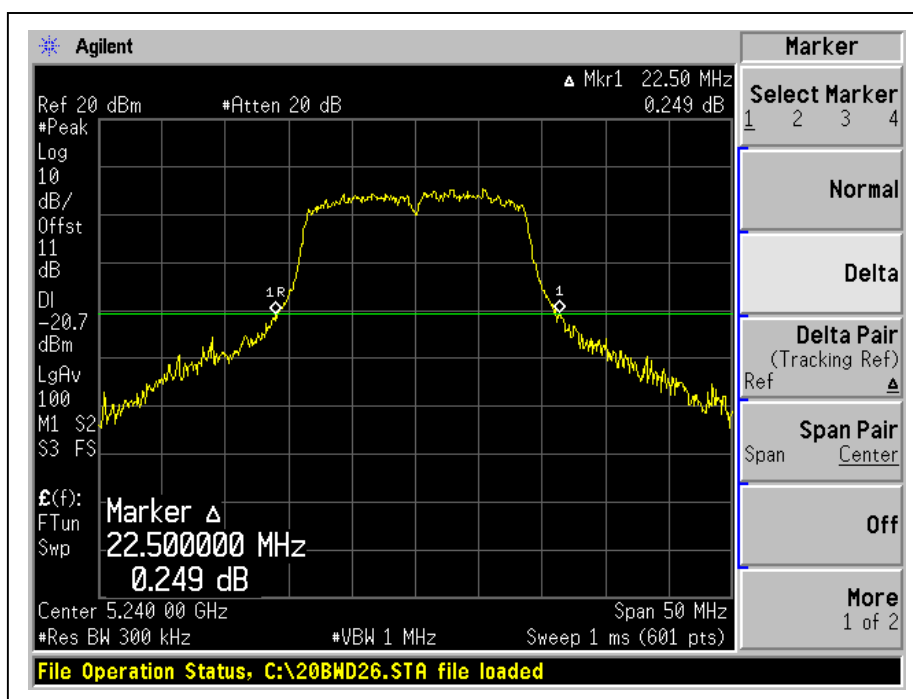
26dB Occupied Bandwidth: CH36



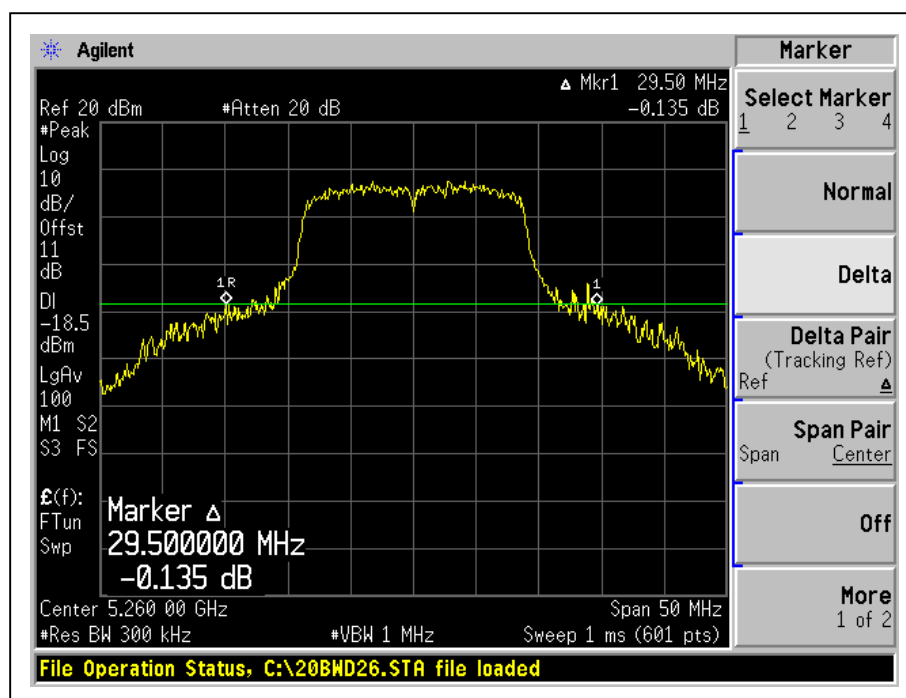
CH40



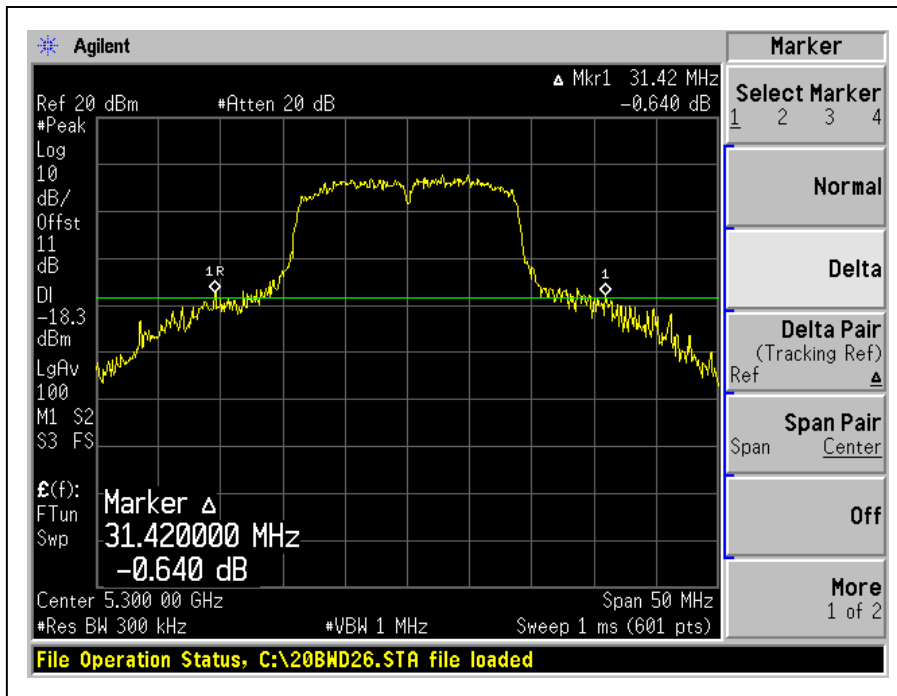
CH48



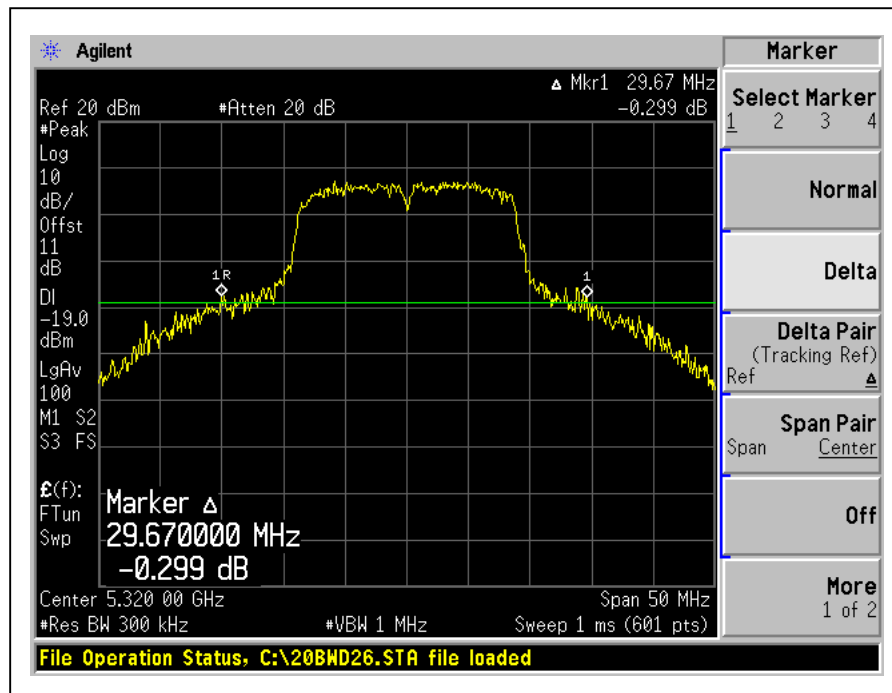
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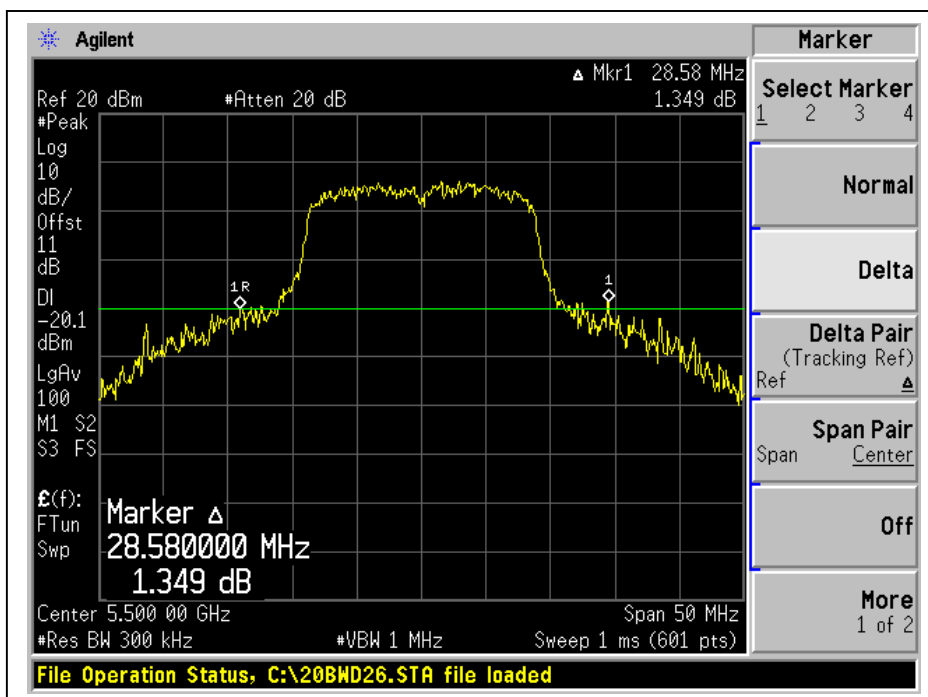
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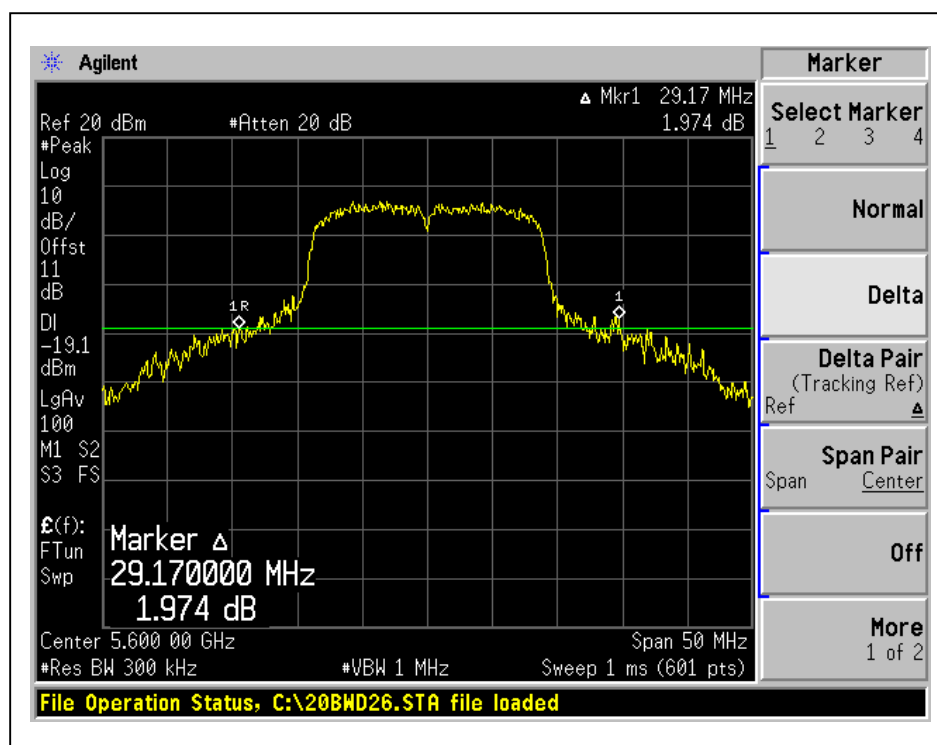
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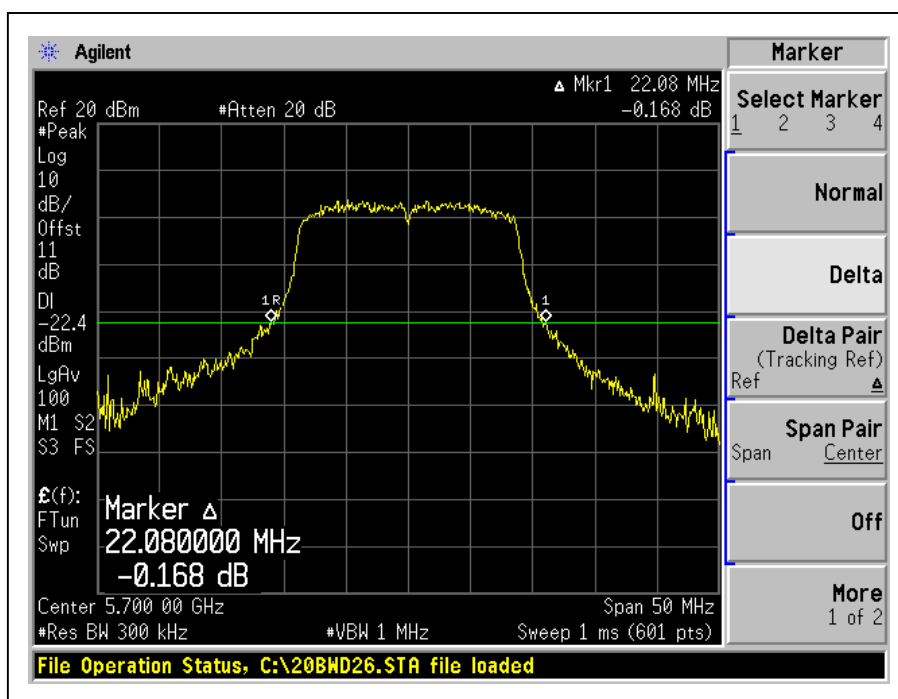
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CH120



CH140

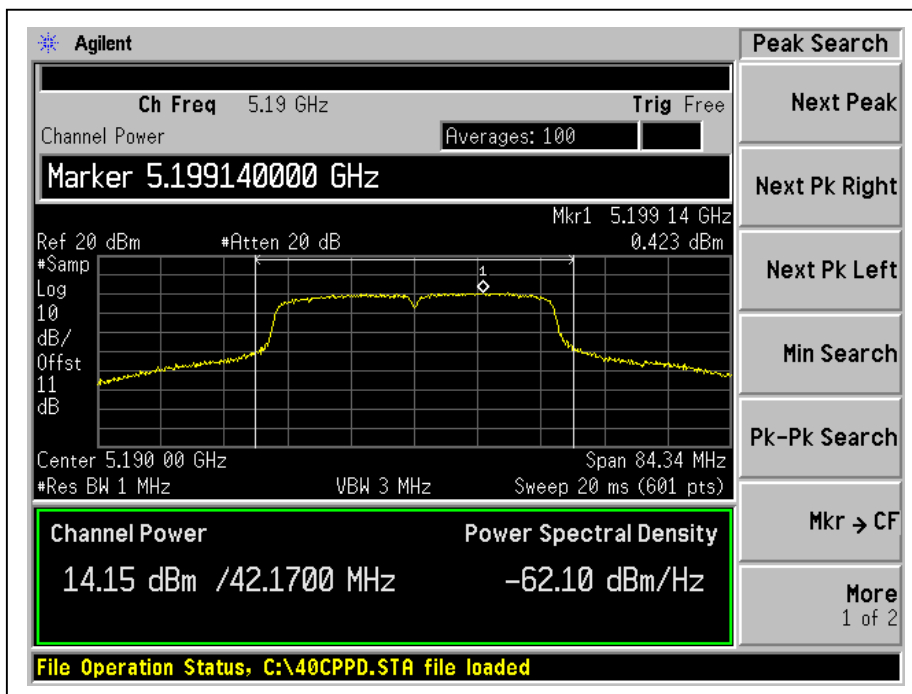


802.11n (40MHz) OFDM MODULATION:

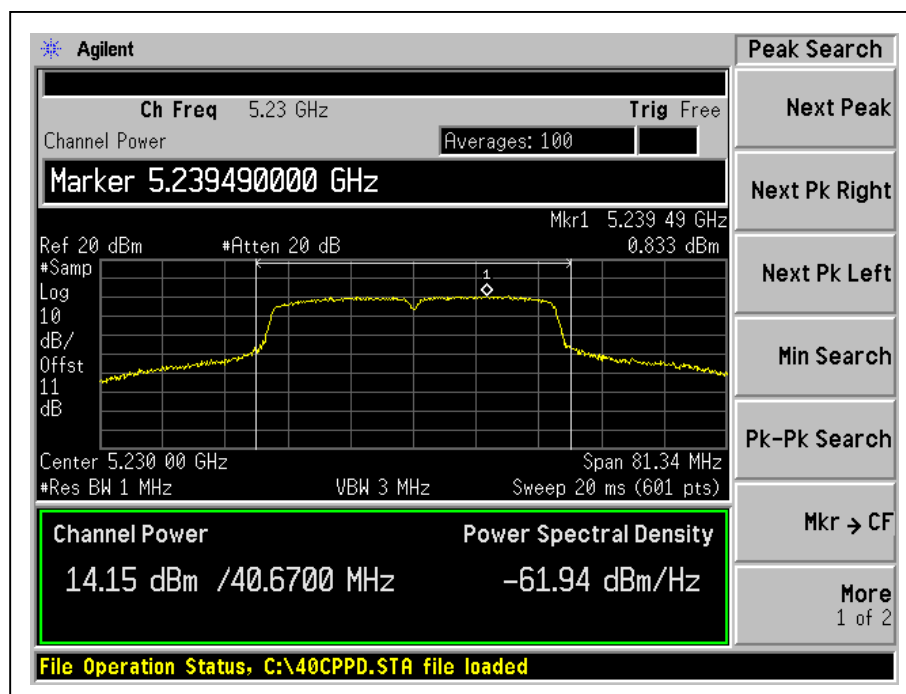
CHANNEL	CHANNEL FREQUENCY (MHz)	OUTPUT POWER (mW)	OUTPUT POWER (dBm)	OUTPUT POWER LIMIT (dBm)	26dBc Occupied Bandwidth (MHz)	PASS/ FAIL
38	5190	26.3	14.2	17	42.17	PASS
46	5230	26.3	14.2	17	40.67	PASS
54	5270	26.9	14.3	24	43.33	PASS
62	5310	26.9	14.3	24	41.67	PASS
102	5510	15.1	11.8	24	41.83	PASS
118	5590	26.3	14.2	24	44.5	PASS
134	5670	26.3	14.2	24	42.5	PASS

NOTE: The 26dBc Occupied Bandwidth plot, please refer to the following pages.

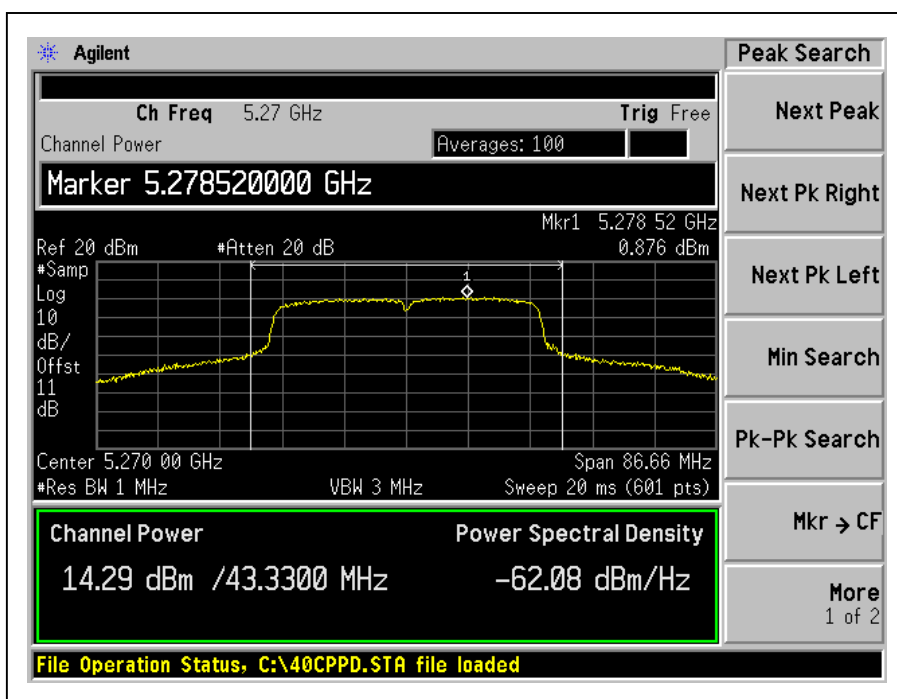
Peak Power Output: CH38



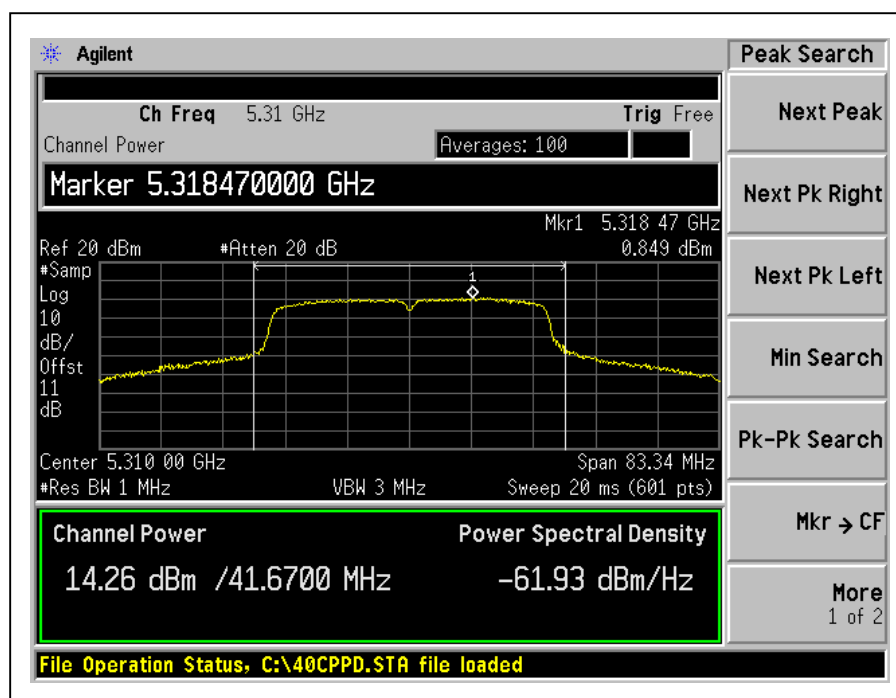
CH46



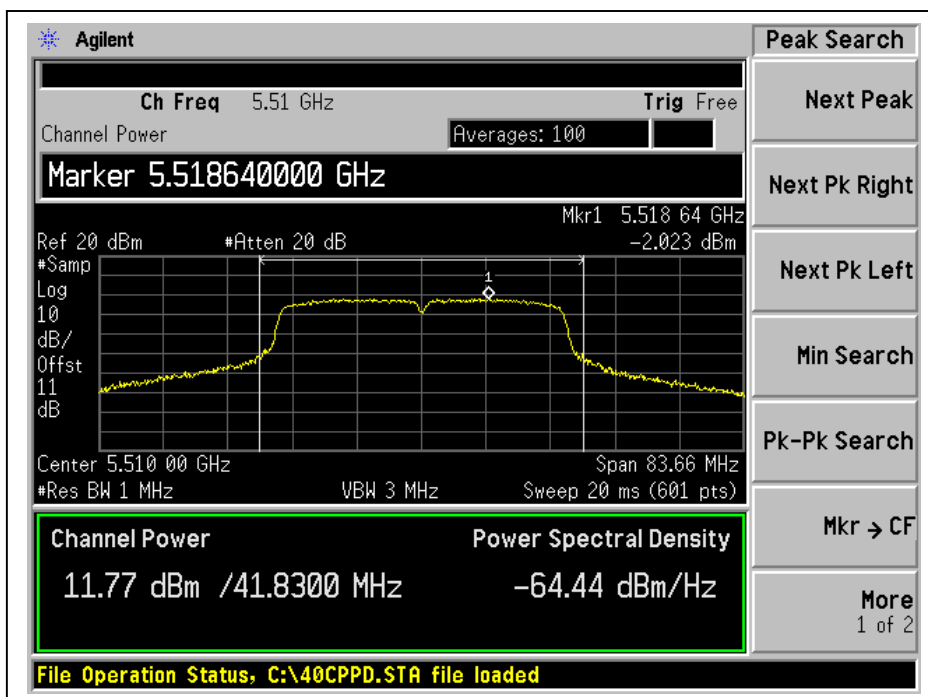
CH54



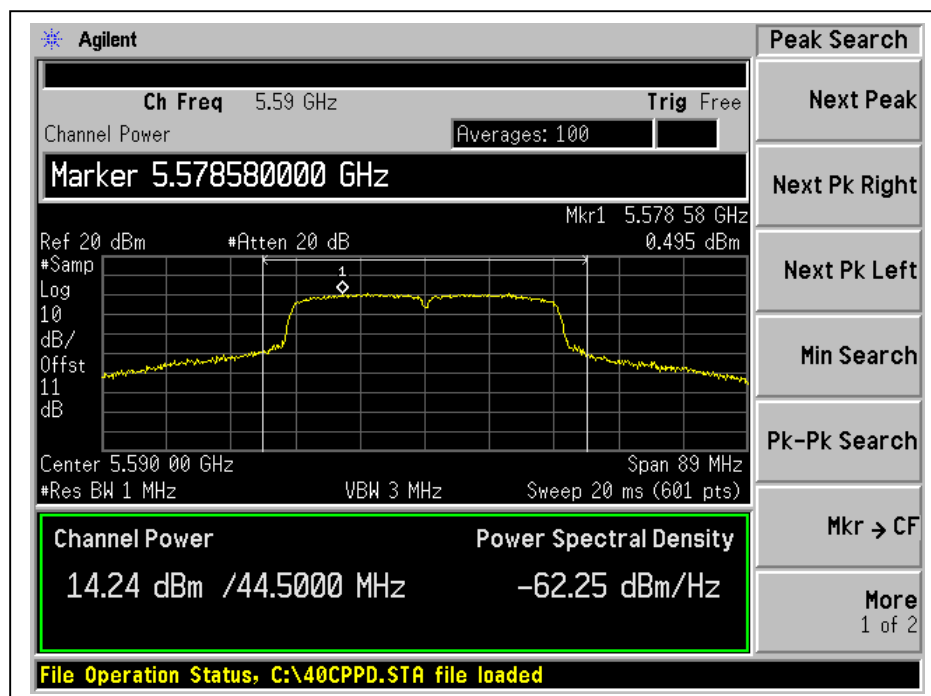
CH62



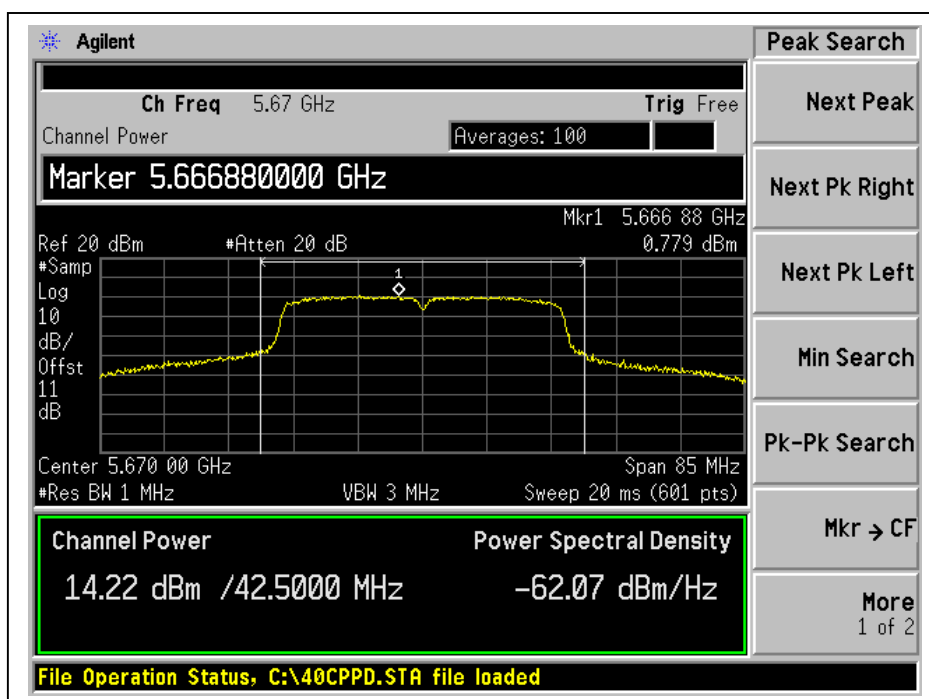
CH102



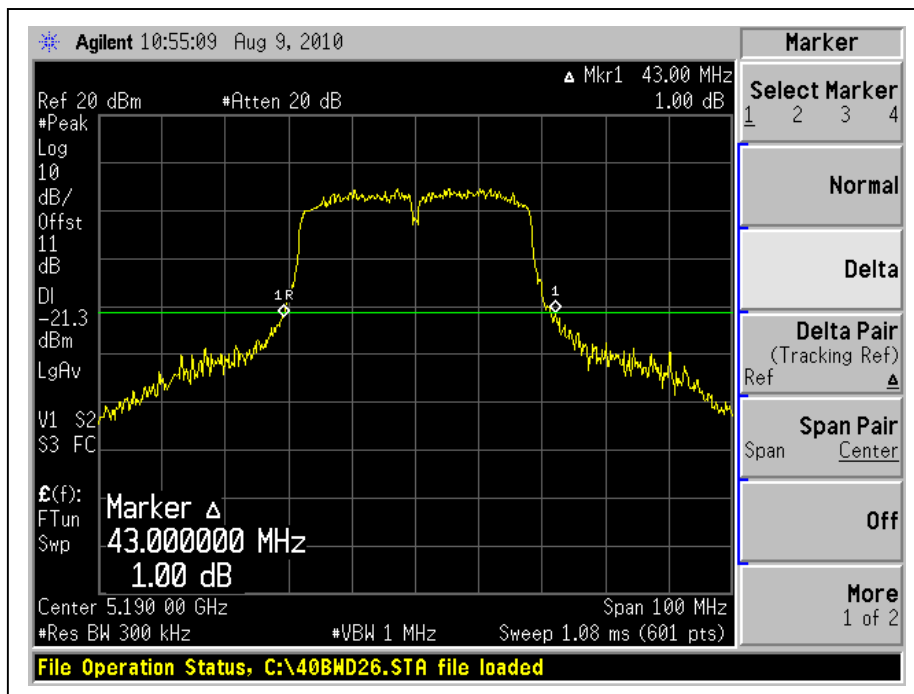
CH118



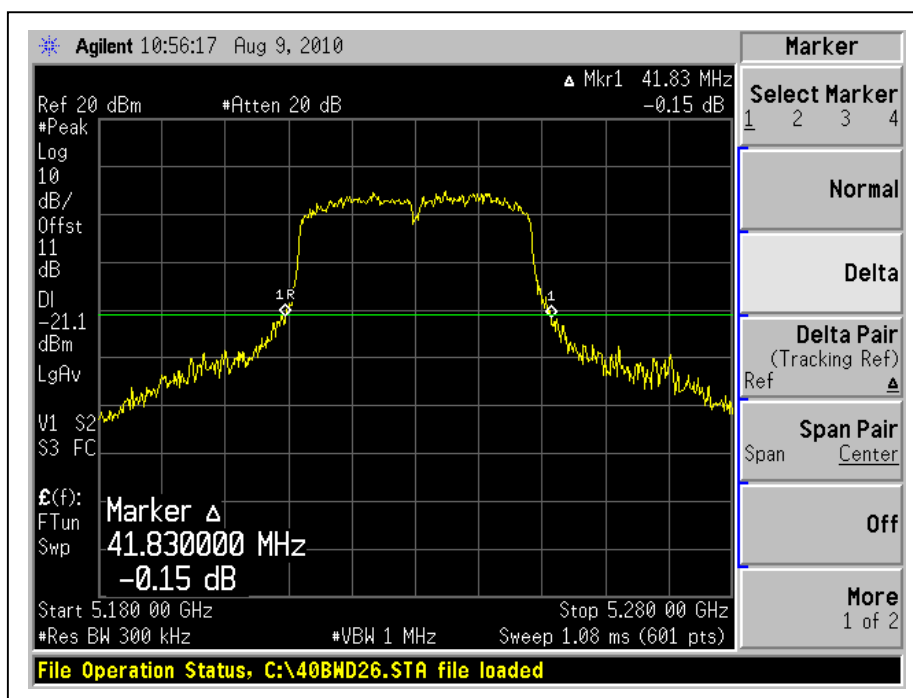
CH134



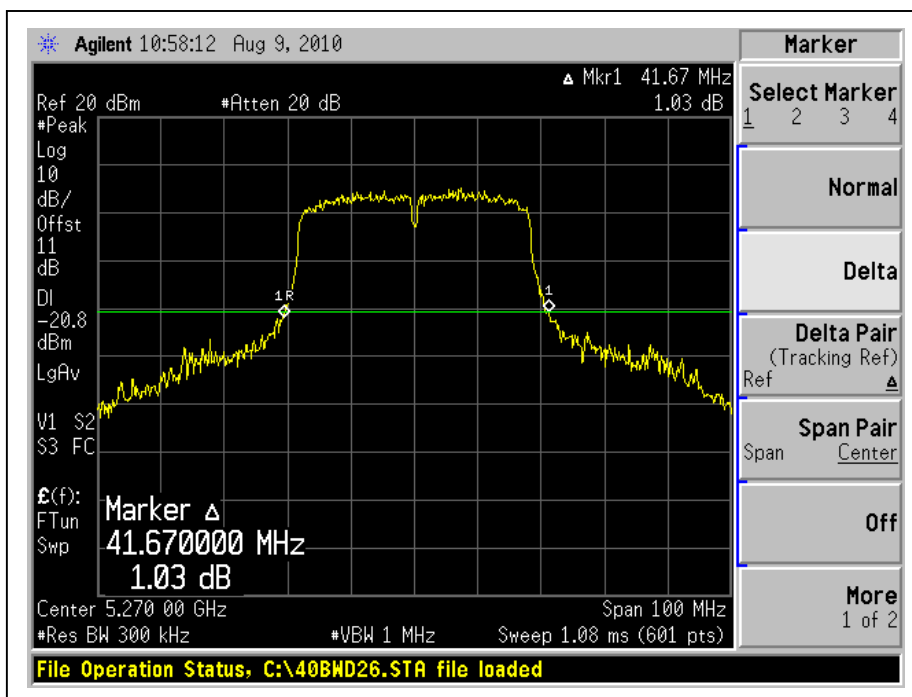
26dB Occupied Bandwidth: CH38



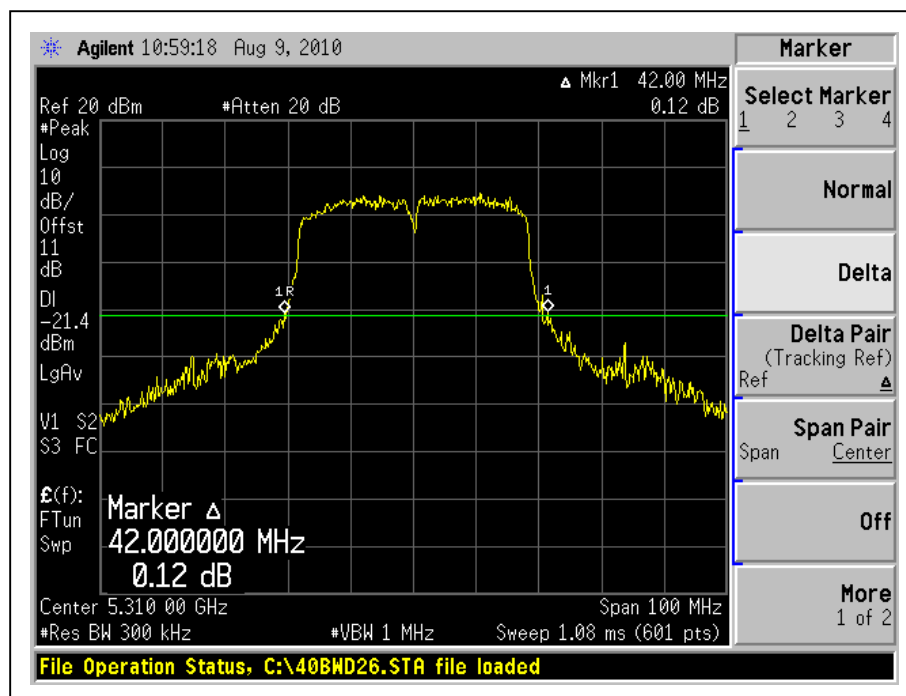
CH46



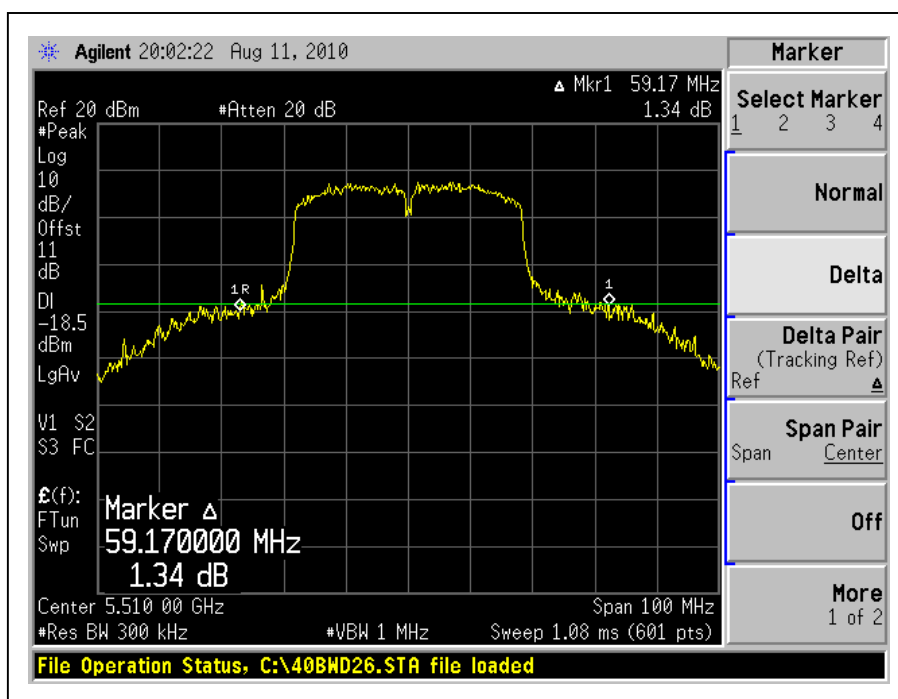
CH54



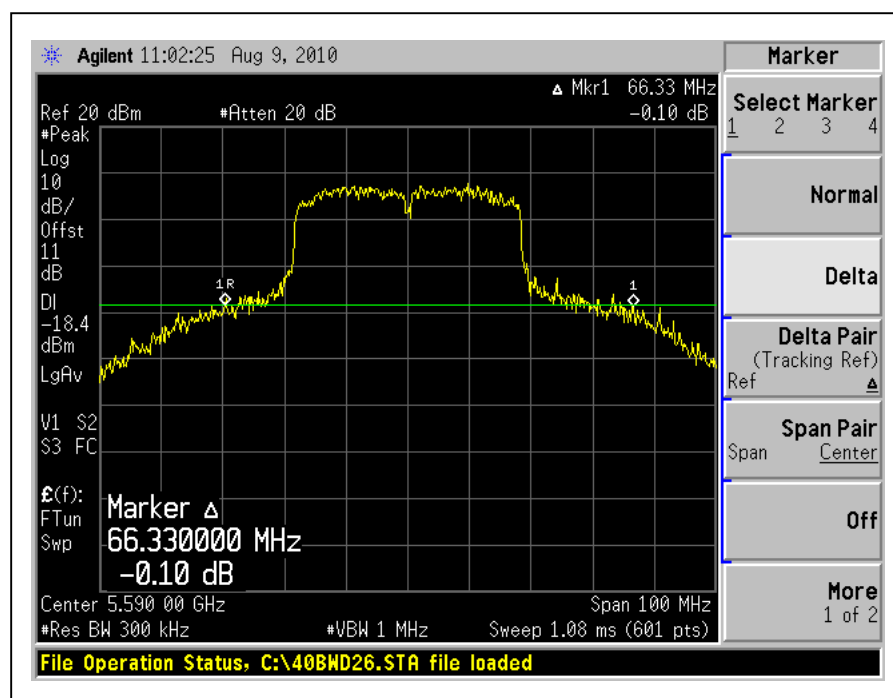
CH62



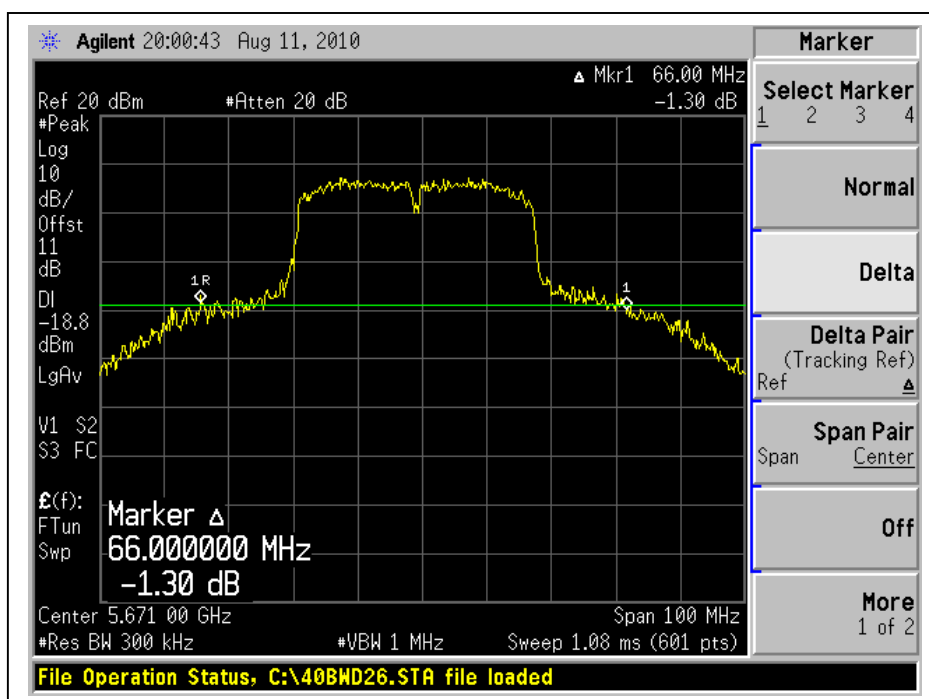
CH102



CH118



CH134



4.4 AVERAGE OUTPUT POWER

4.4.1 FOR REFERENCE.

4.4.2 TEST INSTRUMENTS

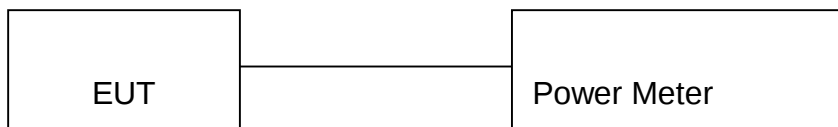
DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Peak Power Meter	ML2495A	0824006	May 04, 2010	May 03, 2011
Power Sensor	MA2411B	0738172	May 04, 2010	May 03, 2011

NOTE: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.4.3 TEST PROCEDURES

1. The transmitter output was connected to the power meter through an attenuator, the bandwidth of the fundamental frequency was measured with the power meter.
2. Record the average power level.

4.4.4 TEST SETUP



4.4.5 EUT OPERATING CONDITIONS

Same as Item 4.3.5

4.4.6 TEST RESULTS

802.11a OFDM MODULATION:

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER OUTPUT (dBm)
36	5180	14.0
40	5200	14.0
48	5240	13.6
52	5260	17.5
60	5300	17.1
64	5320	17.1
100	5500	15.1
120	5600	17.2
140	5700	12.9

802.11n (20MHz) OFDM MODULATION:

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER OUTPUT (dBm)
36	5180	14.0
40	5200	14.0
48	5240	13.8
52	5260	16.4
60	5300	16.2
64	5320	16.2
100	5500	14.9
120	5600	16.5
140	5700	12.5

802.11n (40MHz) OFDM MODULATION:

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER OUTPUT (dBm)
38	5190	14.0
46	5230	14.0
54	5270	14.1
62	5310	14.0
102	5510	12.2
118	5590	14.0
134	5670	14.0

4.5 PEAK POWER EXCURSION MEASUREMENT

4.5.1 LIMITS OF PEAK POWER EXCURSION MEASUREMENT

Frequency Band	Limit
5.15 – 5.25 GHz	13dB
5.25 – 5.35 GHz	13dB
5.47 – 5.725GHz	13dB
5.725 – 5.825 GHz	13dB

4.5.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer	E4446A	MY48250254	July 14, 2010	July 13, 2011

NOTE: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

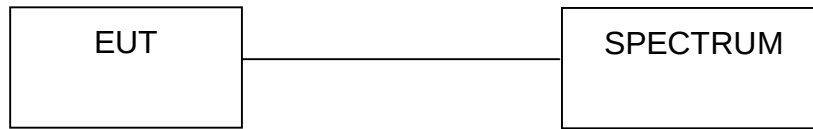
4.5.3 TEST PROCEDURE

1. Connect the cable from the spectrum analyzer to the EUT antenna port using an appropriate RF attenuator.
2. Verify the antenna port selected is the active one if the system has more than one antenna.
3. Verify the unlicensed wireless device is set to operate at 100 % duty cycle at the maximum allowed power for operation.
4. Testing shall be done on the center frequency of each U-NII band.
5. Set the spectrum analyzer span to view the entire emission bandwidth. The largest difference between the following two traces must be 13 dB for all frequencies across the emission bandwidth.
 - a. First trace: set RBW = 1 MHz, VBW = 3 MHz with peak detector and max hold settings.
 - b. Second trace: set RBW = 1 MHz, VBW = 3 MHz with sample detector and trace average across 100 traces in power averaging mode.

4.5.4 DEVIATION FROM TEST STANDARD

No deviation

4.5.5 TEST SETUP



4.5.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.



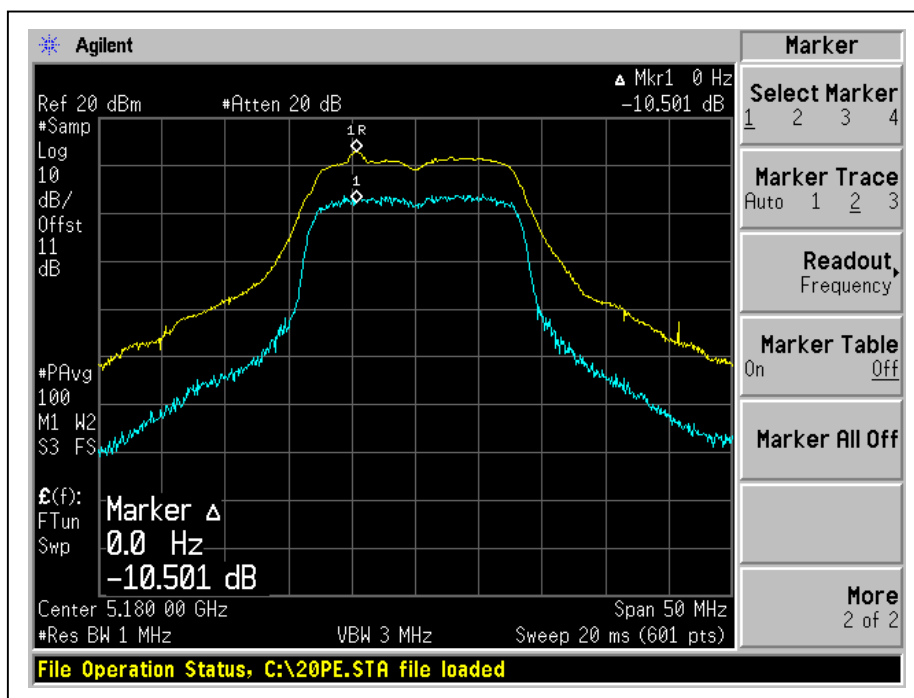
A D T

4.5.7 TEST RESULTS

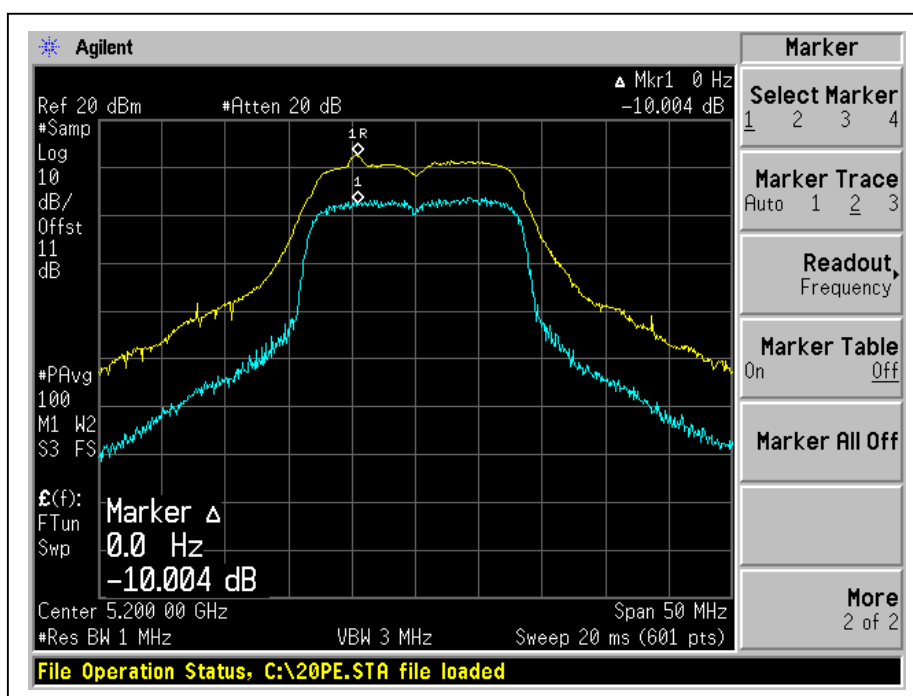
802.11a OFDM MODULATION

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
36	5180	10.5	13	PASS
40	5200	10	13	PASS
48	5240	10.4	13	PASS
52	5260	9.4	13	PASS
60	5300	10	13	PASS
64	5320	10.1	13	PASS
100	5500	10.2	13	PASS
132	5600	9.4	13	PASS
140	5700	11	13	PASS

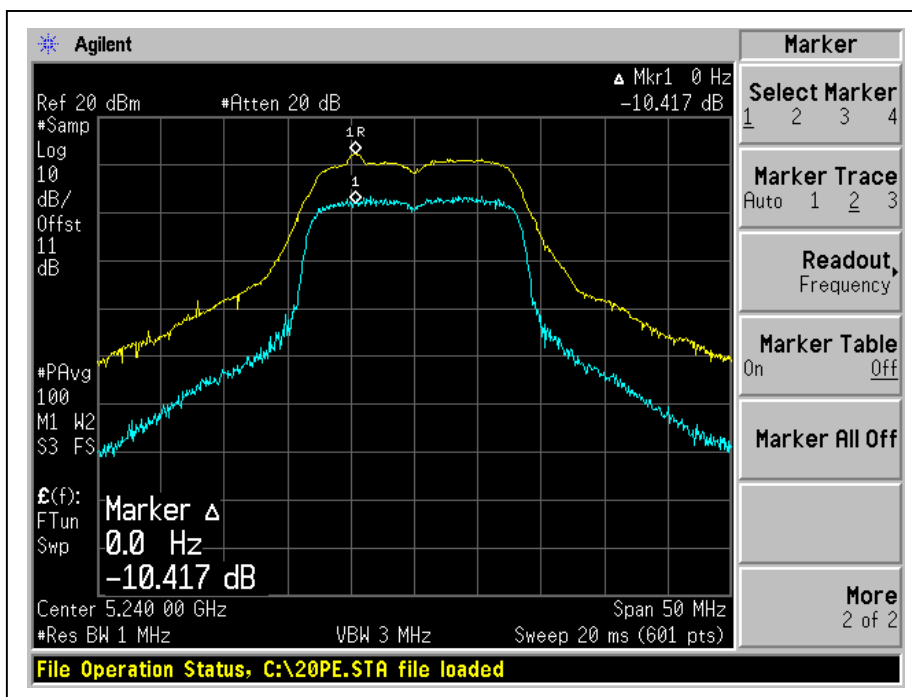
CH36



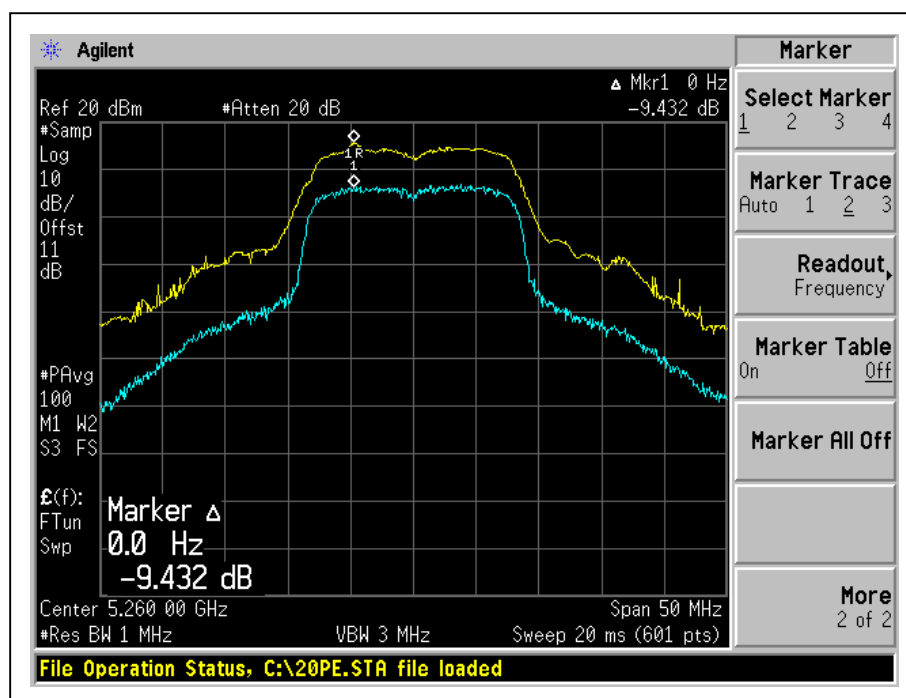
CH40



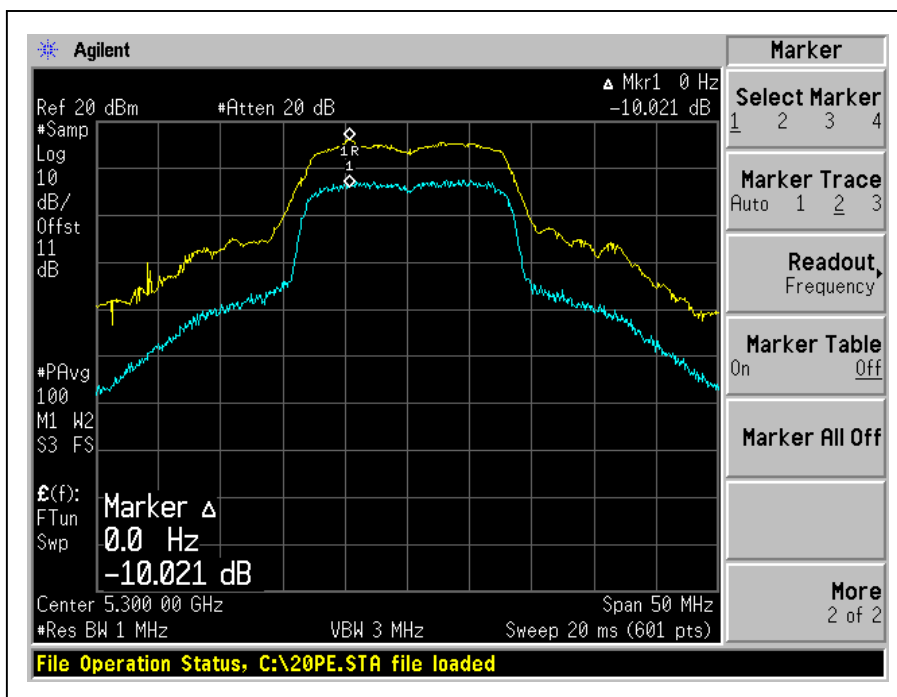
CH48



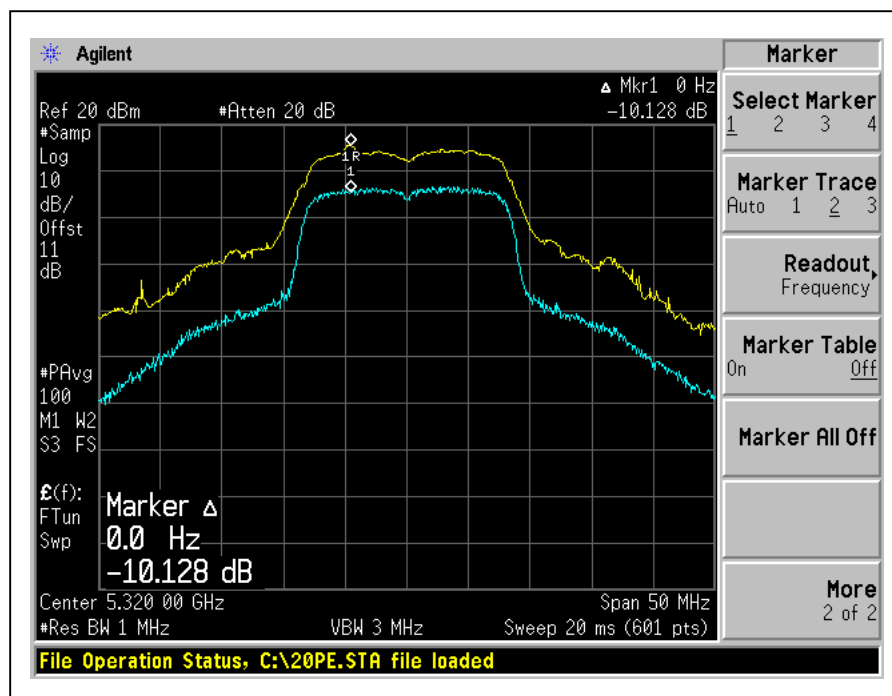
CH52



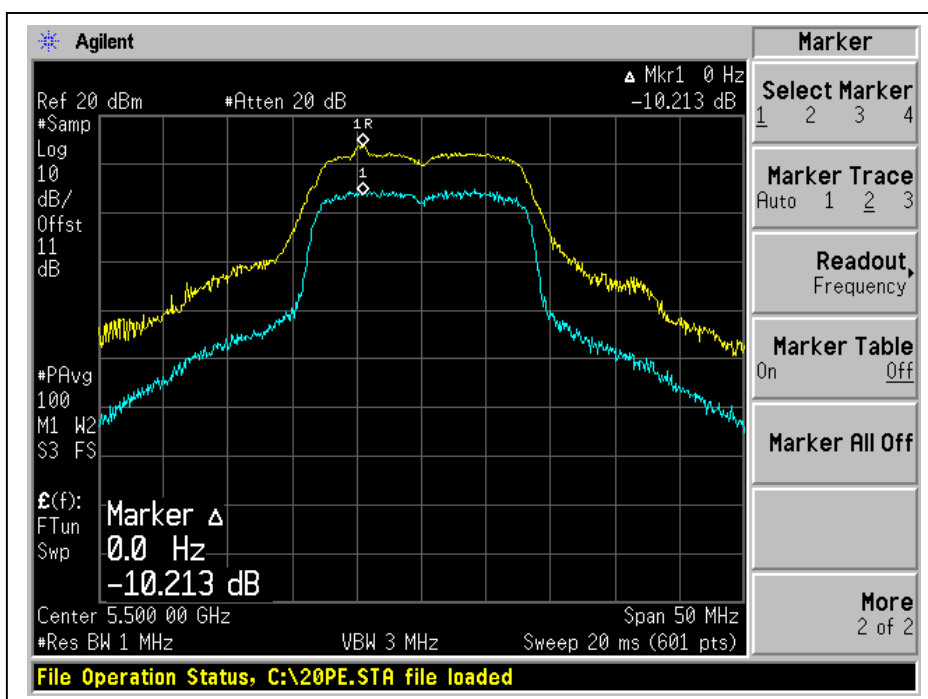
CH60



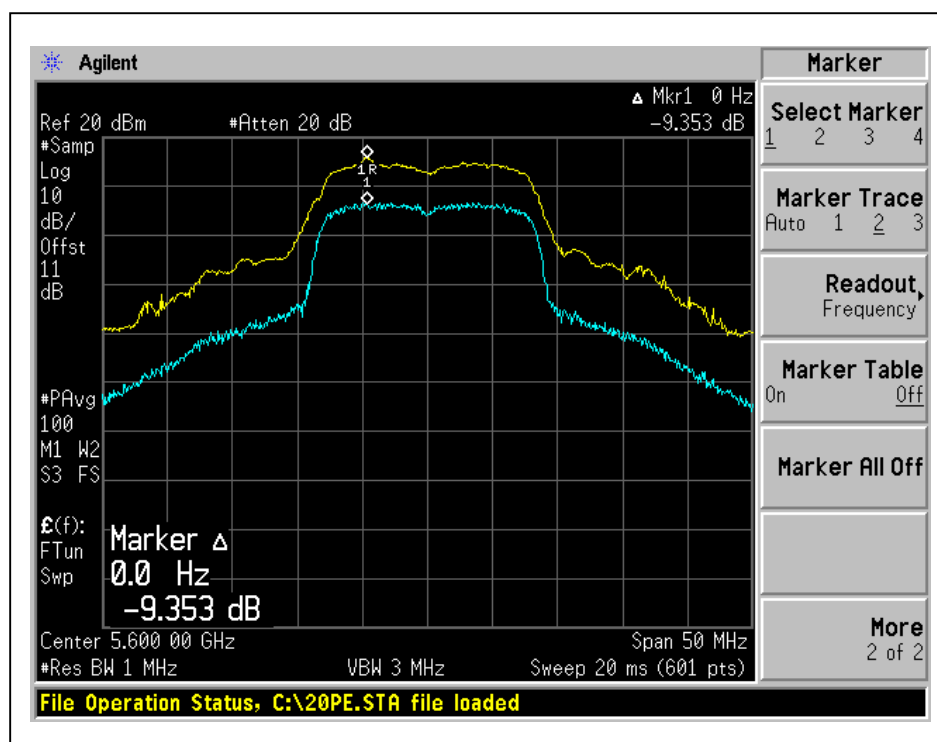
CH64



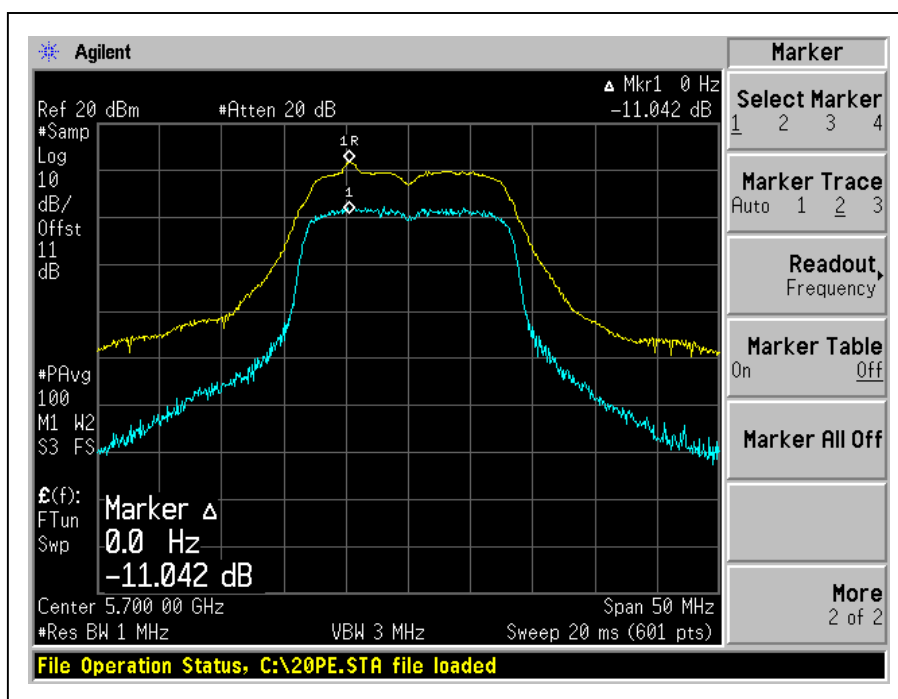
CH100



CH120



CH140



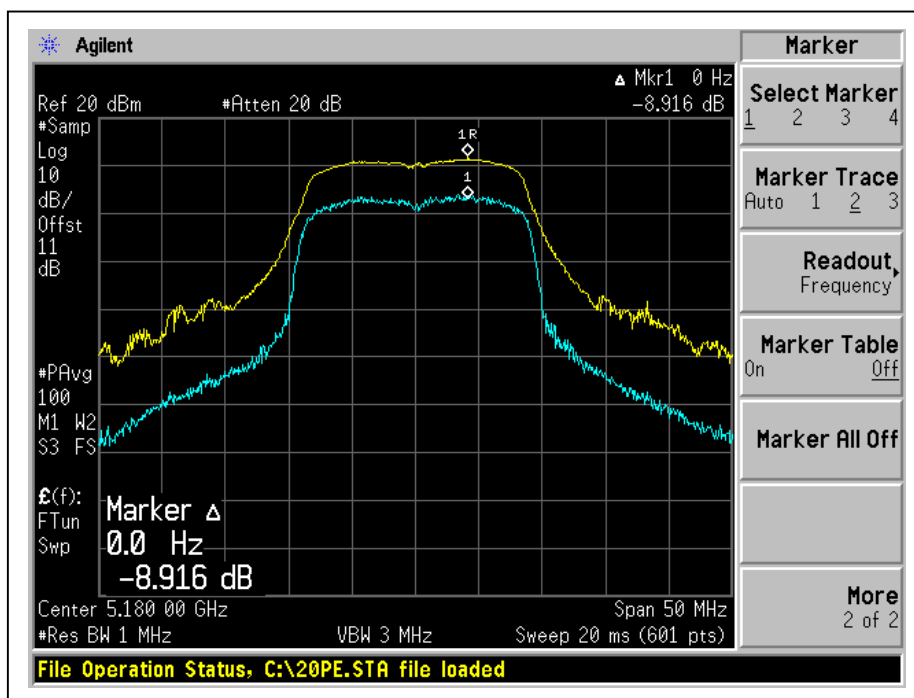


A D T

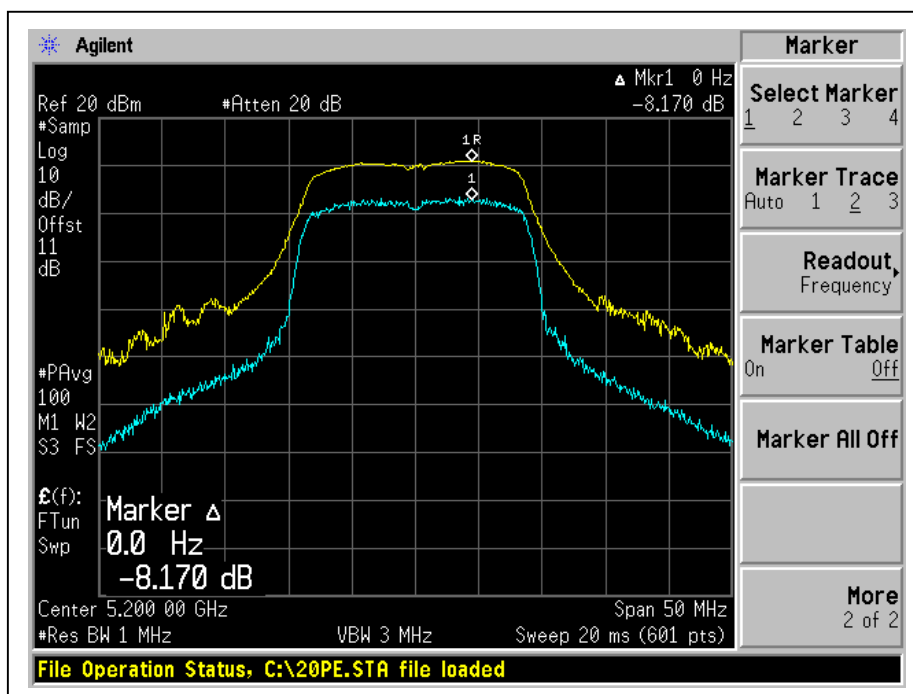
802.11n (20MHz) OFDM MODULATION:

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
36	5180	8.9	13	PASS
40	5200	8.2	13	PASS
48	5240	8.9	13	PASS
52	5260	8.7	13	PASS
60	5300	9.6	13	PASS
64	5320	8	13	PASS
100	5500	8.2	13	PASS
132	5600	9	13	PASS
140	5700	9	13	PASS

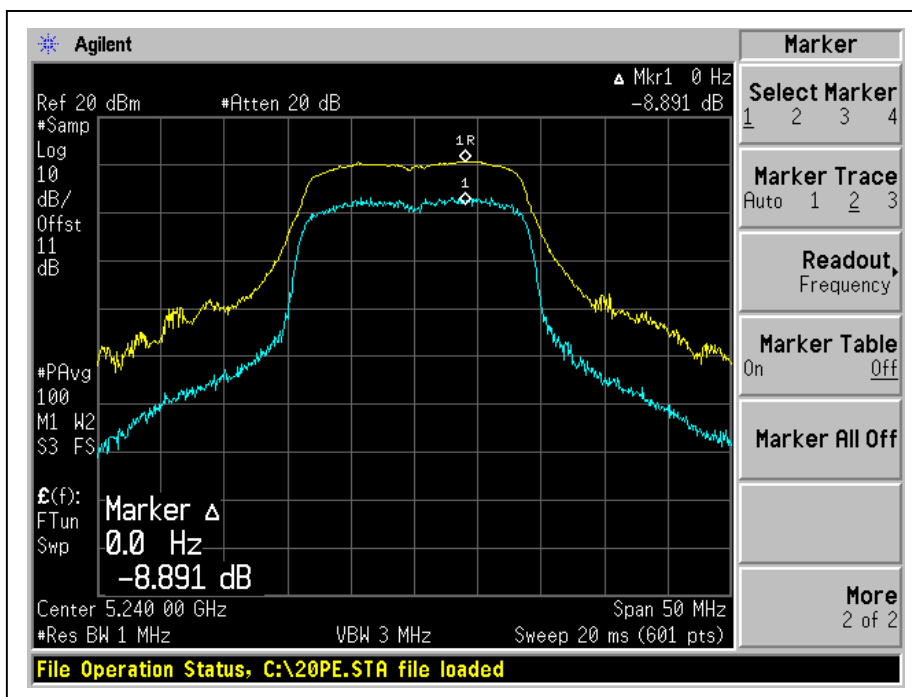
CH36



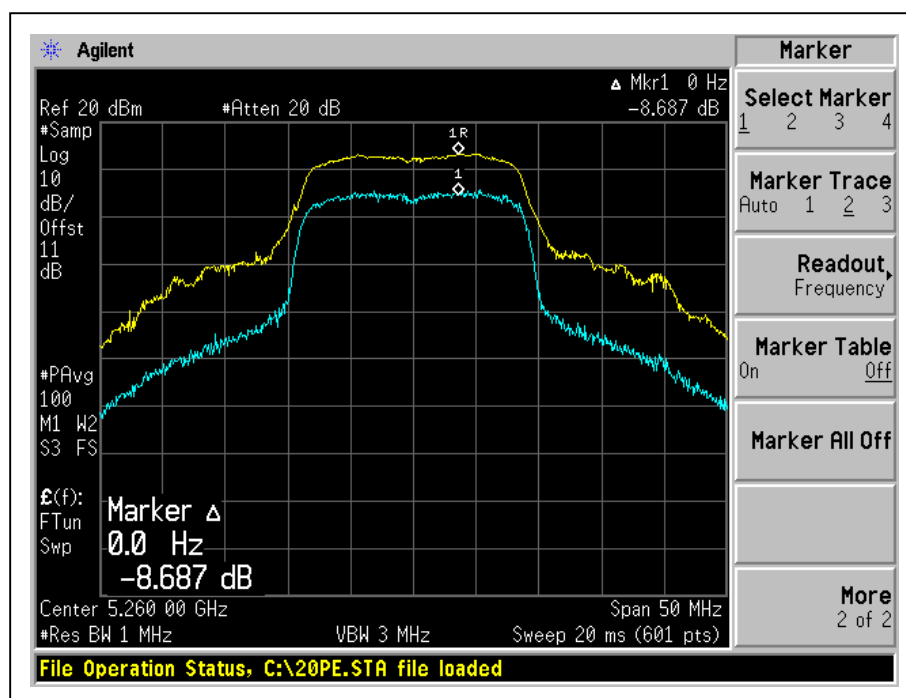
CH40



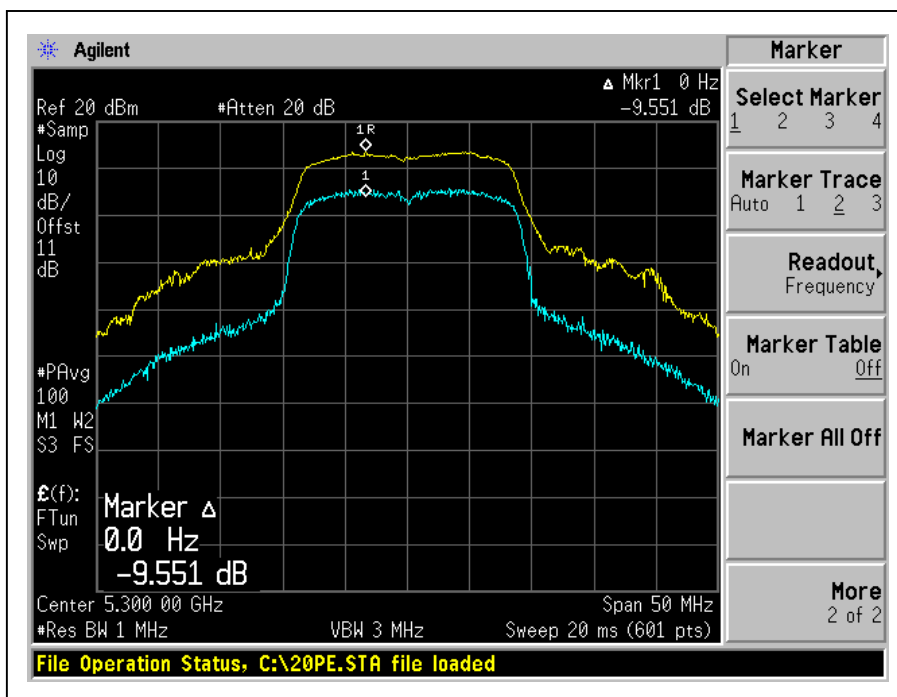
CH48



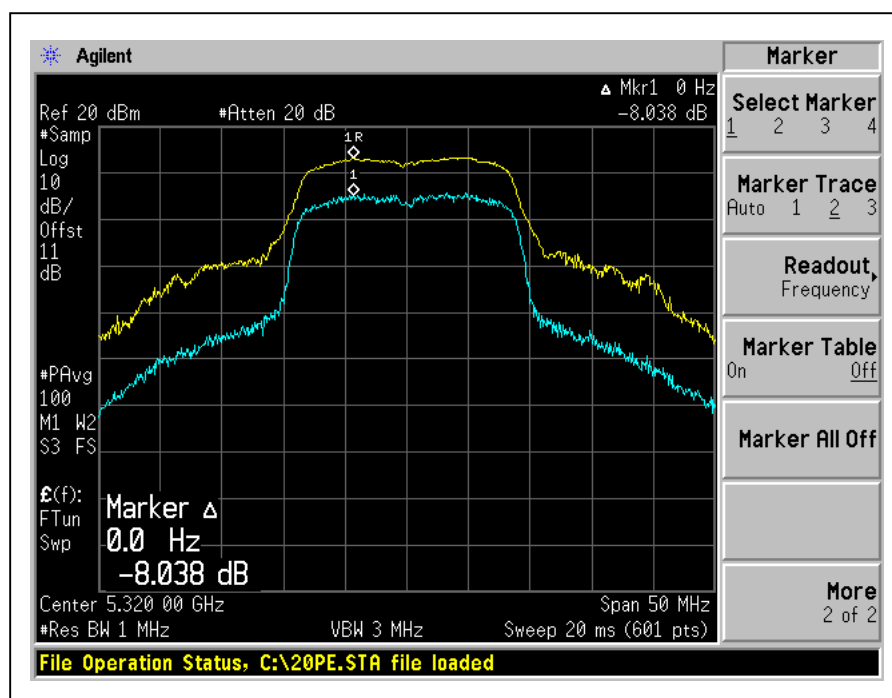
CH52



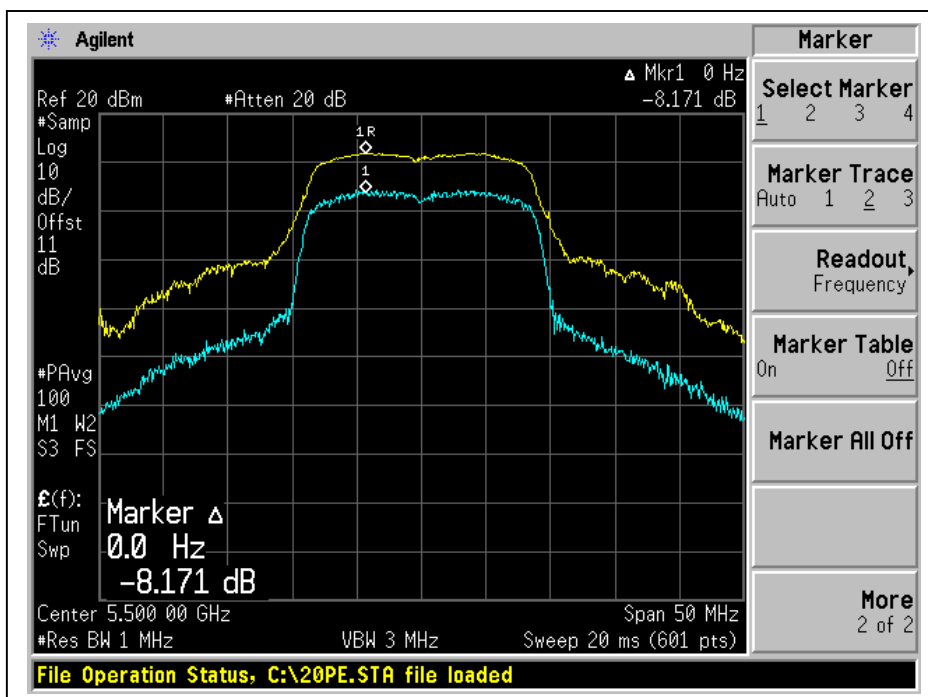
CH60



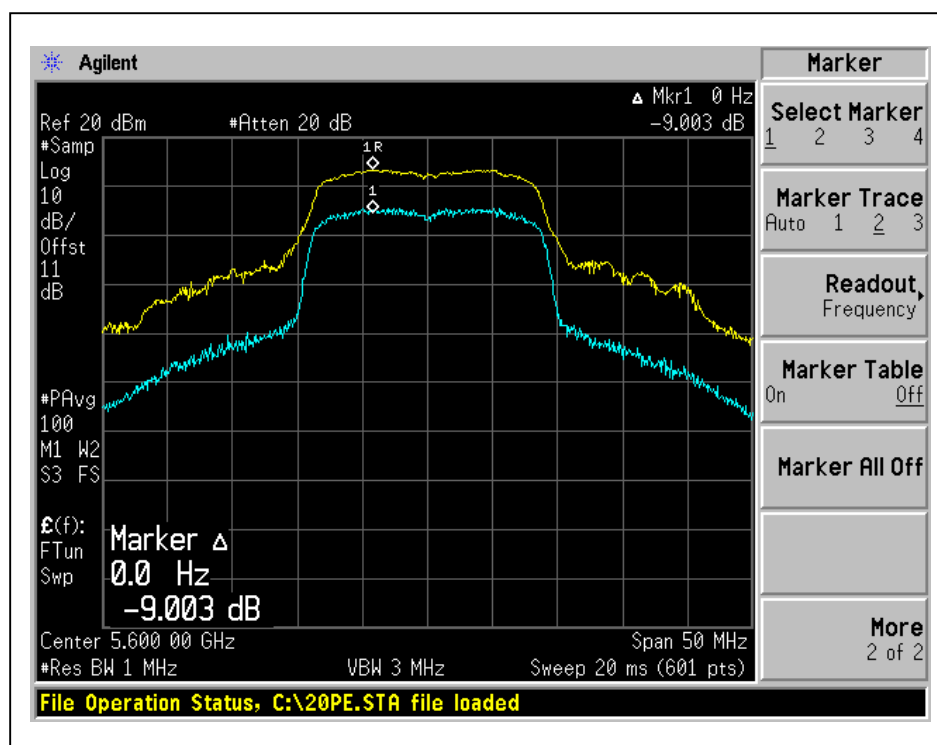
CH64



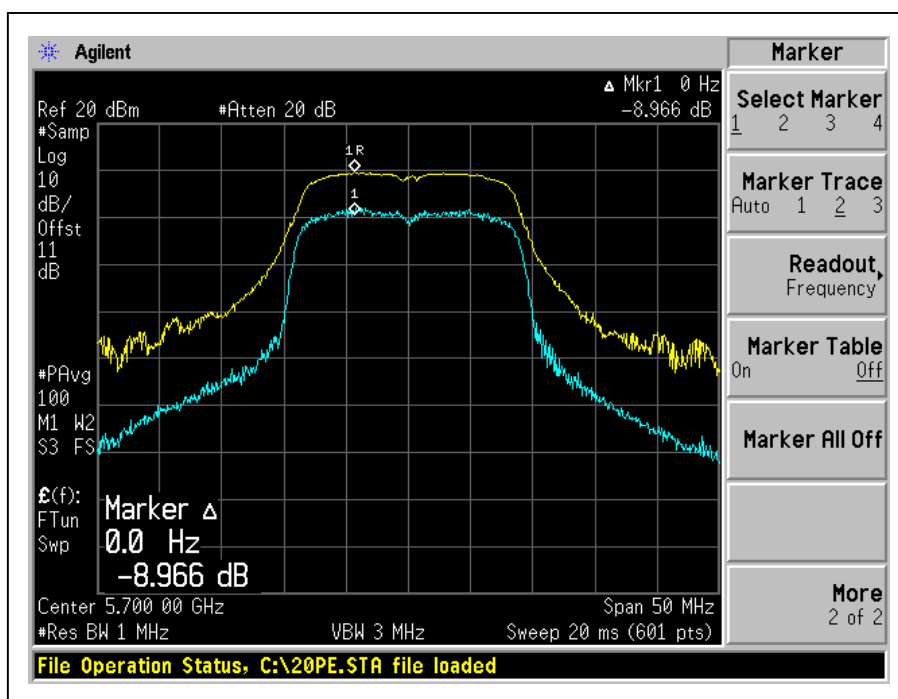
CH100



CH120



CH140



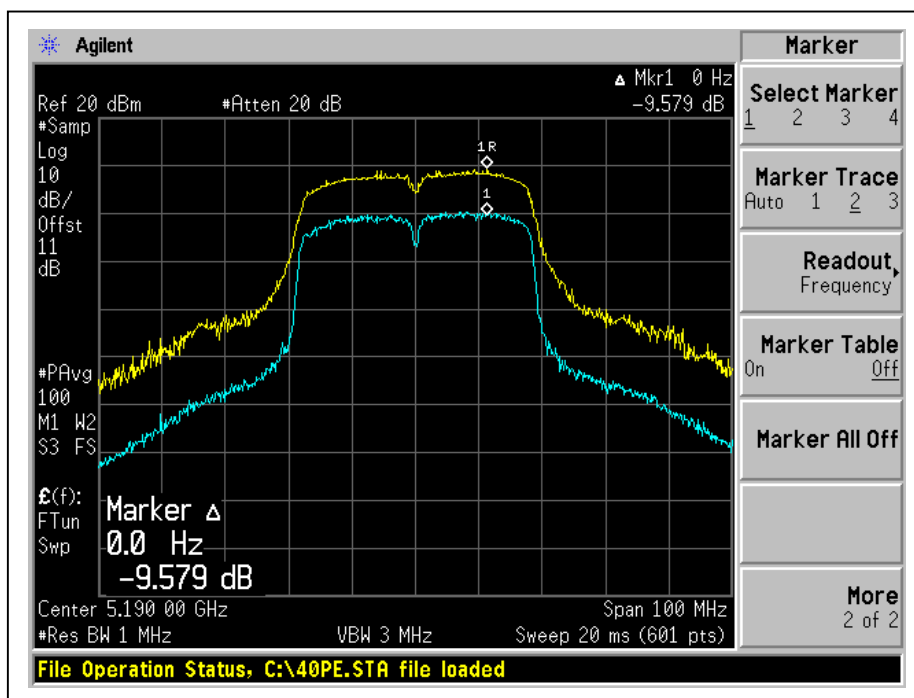


A D T

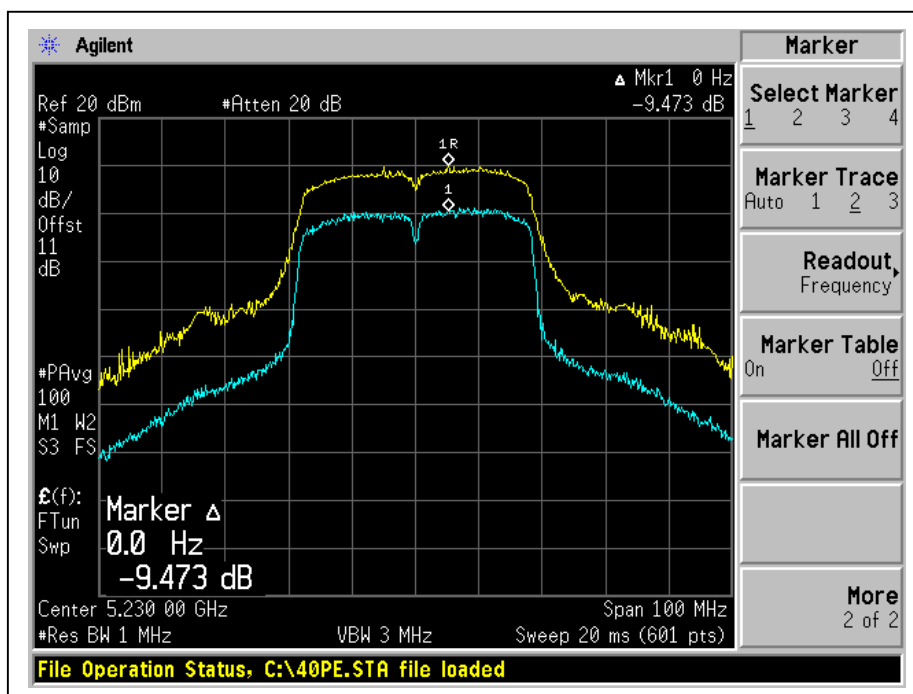
802.11n (40MHz) OFDM MODULATION:

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
38	5190	9.6	13	PASS
46	5230	9.5	13	PASS
54	5270	8.3	13	PASS
62	5310	8.8	13	PASS
102	5510	8.9	13	PASS
118	5590	9.6	13	PASS
134	5670	9.3	13	PASS

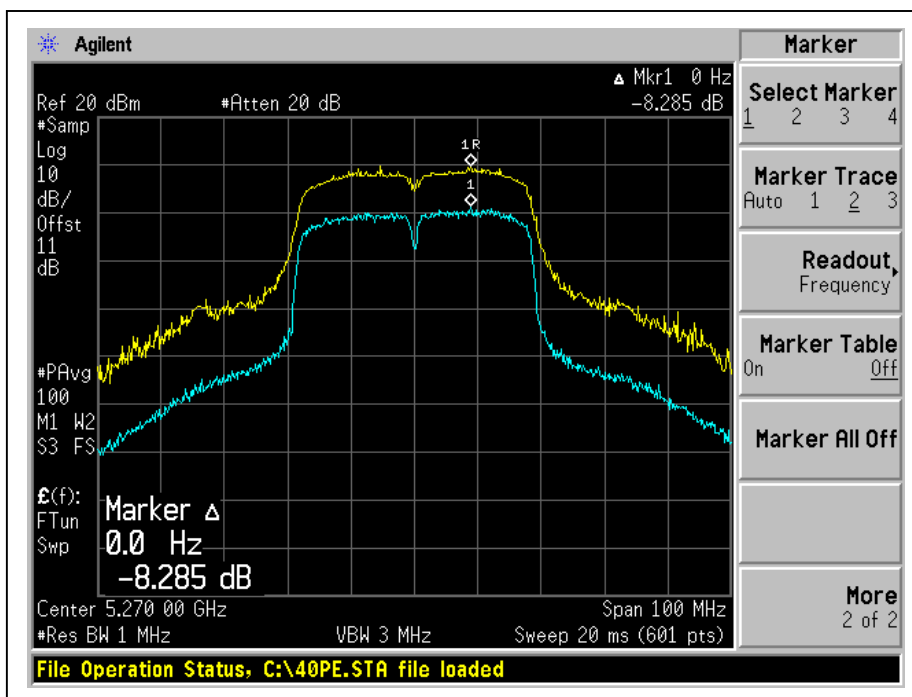
CH38



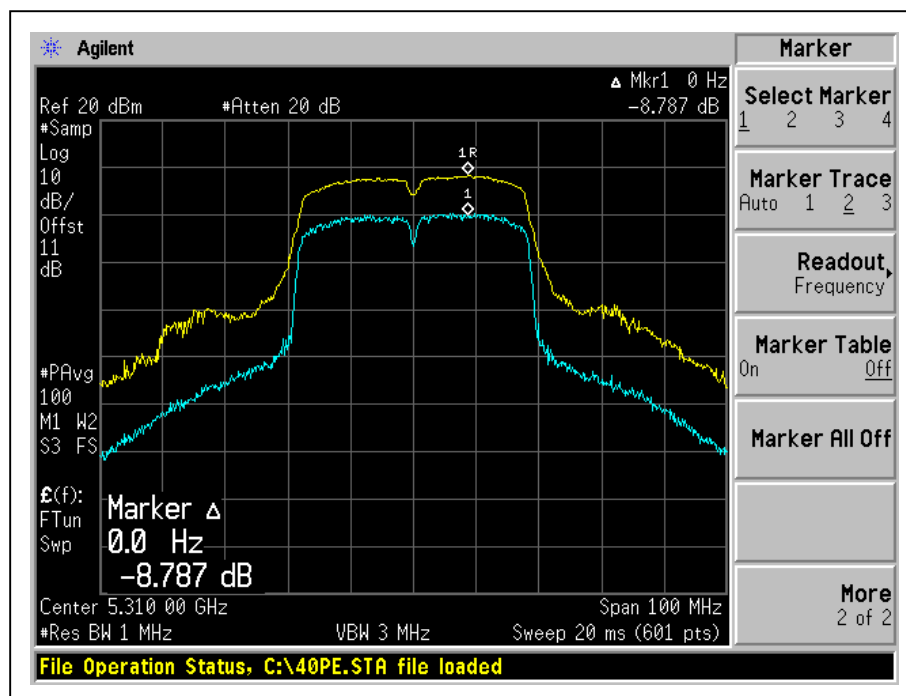
CH46



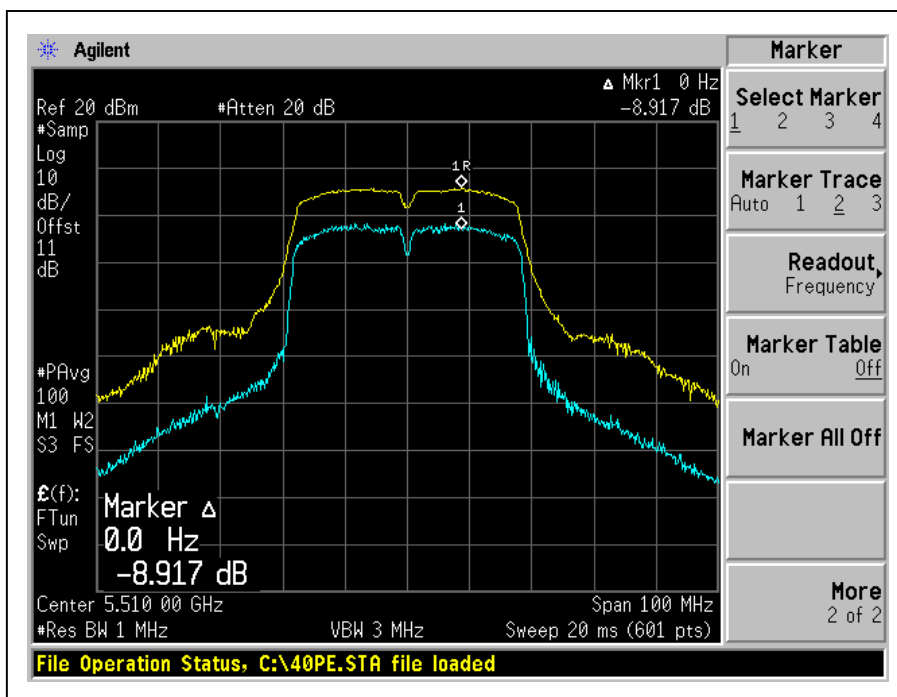
CH54



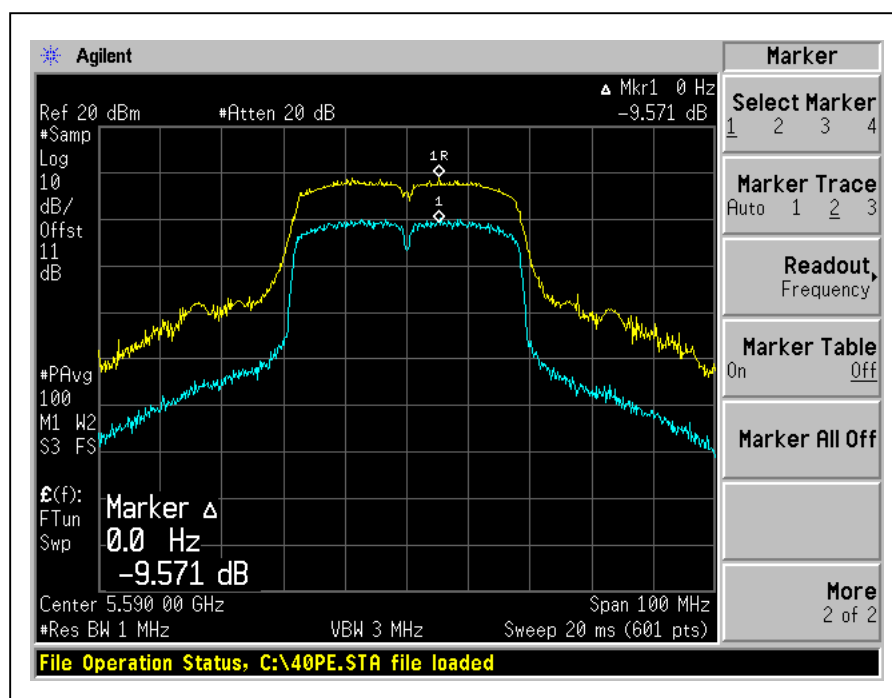
CH62



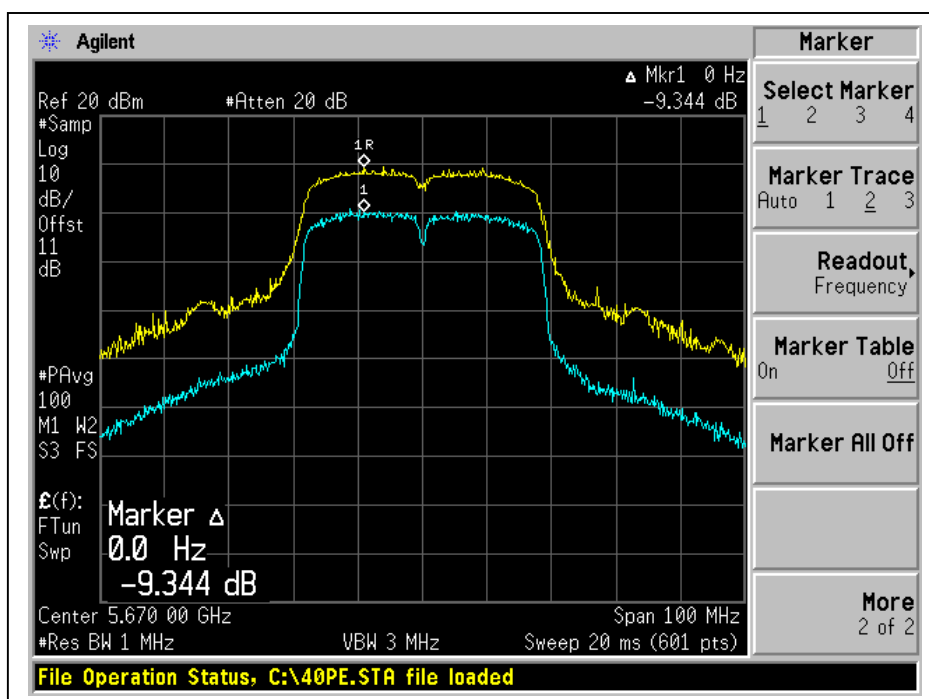
CH102



CH118



CH134



4.6 PEAK POWER SPECTRAL DENSITY MEASUREMENT

4.6.1 LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT

Frequency Band	Limit
5.15 ~ 5.25GHz	4dBm
5.25 ~ 5.35GHz	11dBm
5.47 ~ 5.725GHz	11dBm
5.725 ~ 5.825GHz	17dBm

4.6.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer	E4446A	MY48250254	July 14, 2010	July 13, 2011

NOTE: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

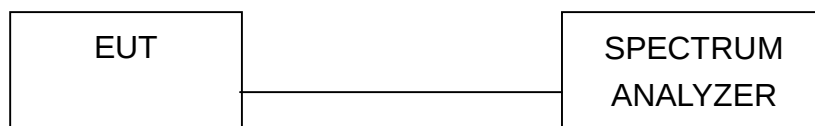
4.6.3 TEST PROCEDURES

1. The transmitter output was connected to the spectrum analyzer.
2. Set RBW=1MHz, VBW=3MHz. The PPSD is the highest level found across the emission in any 1MHz band.

4.6.4 DEVIATION FROM TEST STANDARD

No deviation

4.6.5 TEST SETUP



4.6.6 EUT OPERATING CONDITIONS

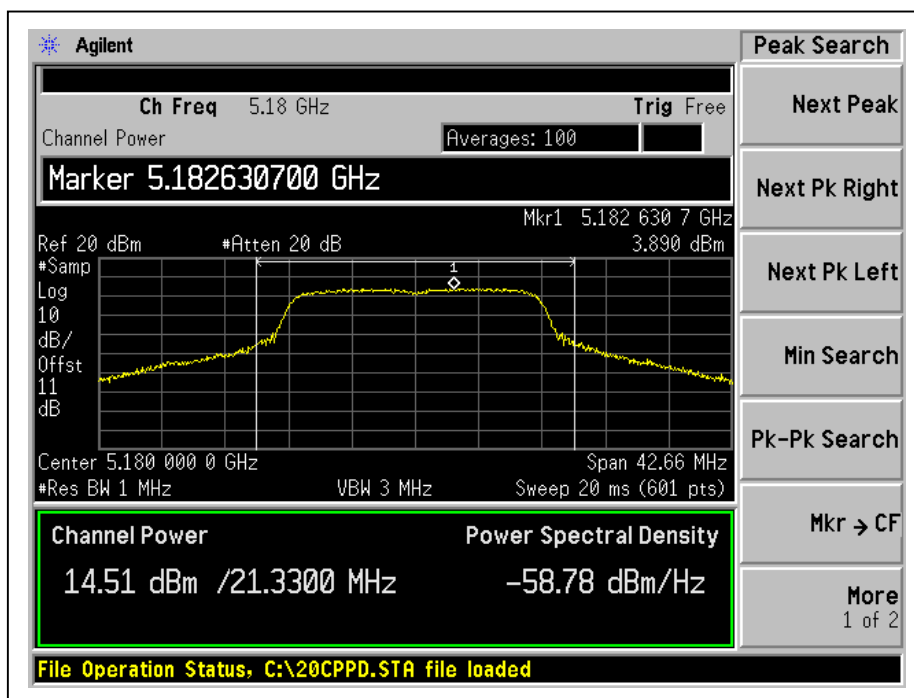
Same as 4.3.6

4.6.7 TEST RESULTS

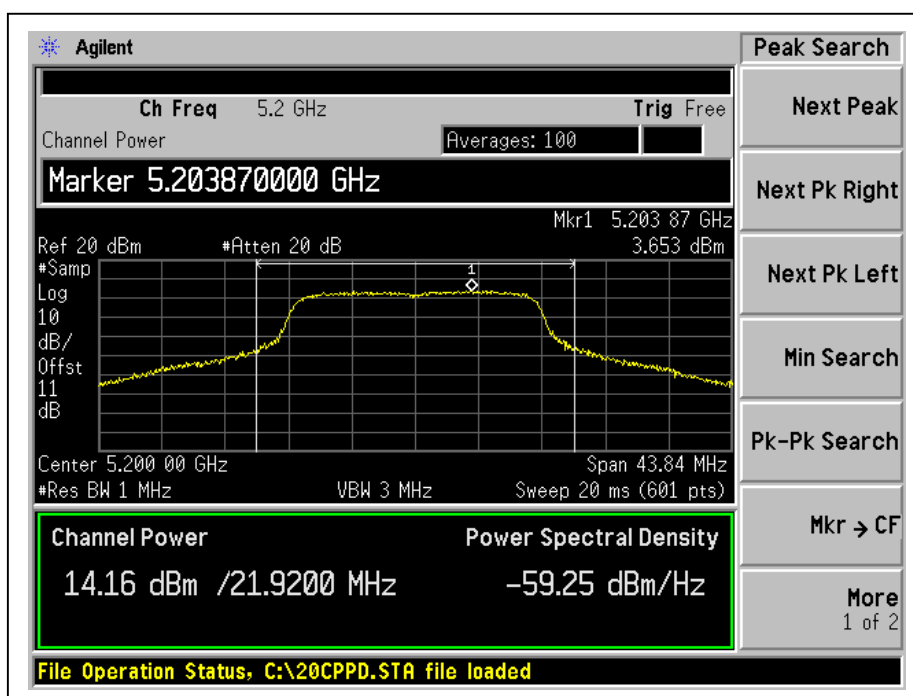
802.11a OFDM MODULATION

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
36	5180	3.9	4	PASS
40	5200	3.7	4	PASS
48	5240	3.5	4	PASS
52	5260	7.5	11	PASS
60	5300	7.4	11	PASS
64	5320	6.7	11	PASS
100	5500	4.2	11	PASS
120	5600	6.4	11	PASS
140	5700	2.3	11	PASS

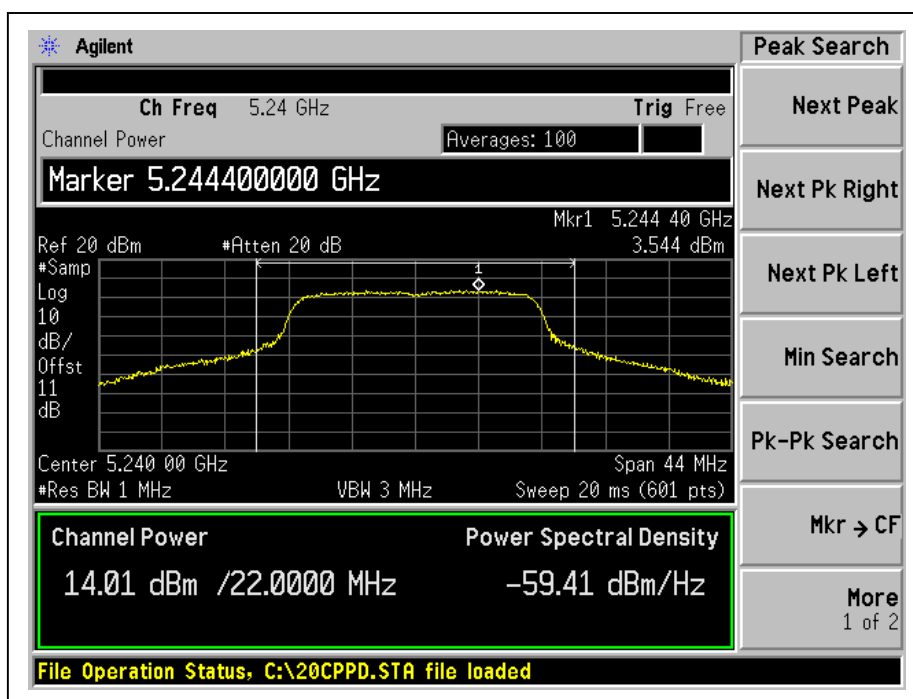
CH36



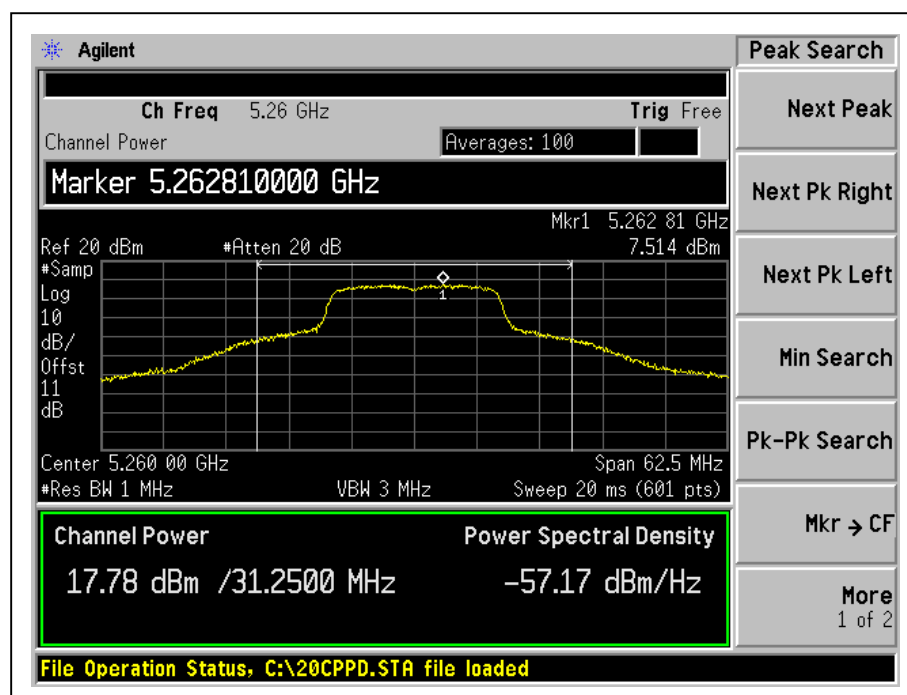
CH40



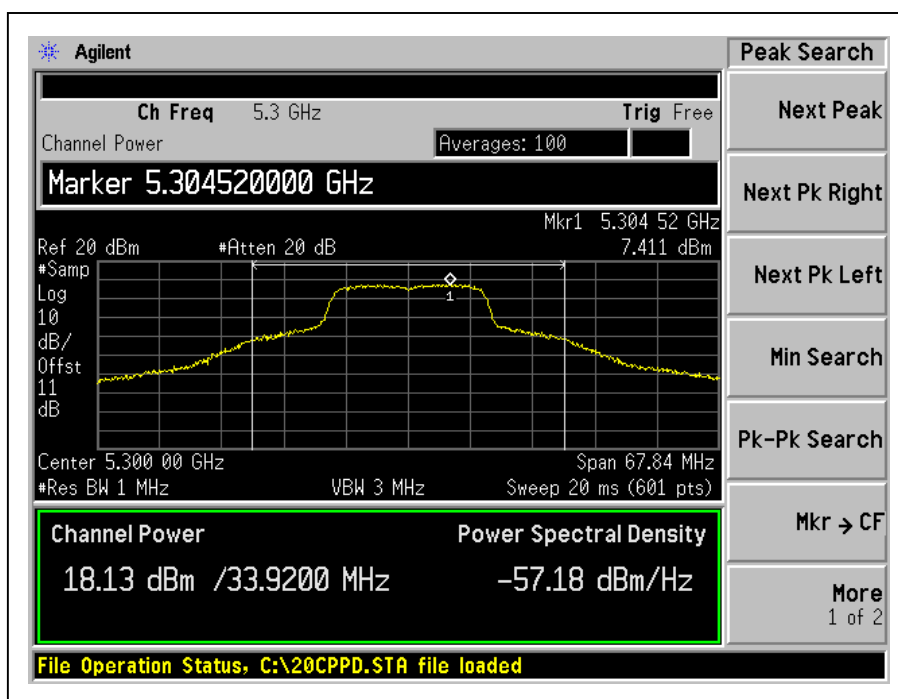
CH48



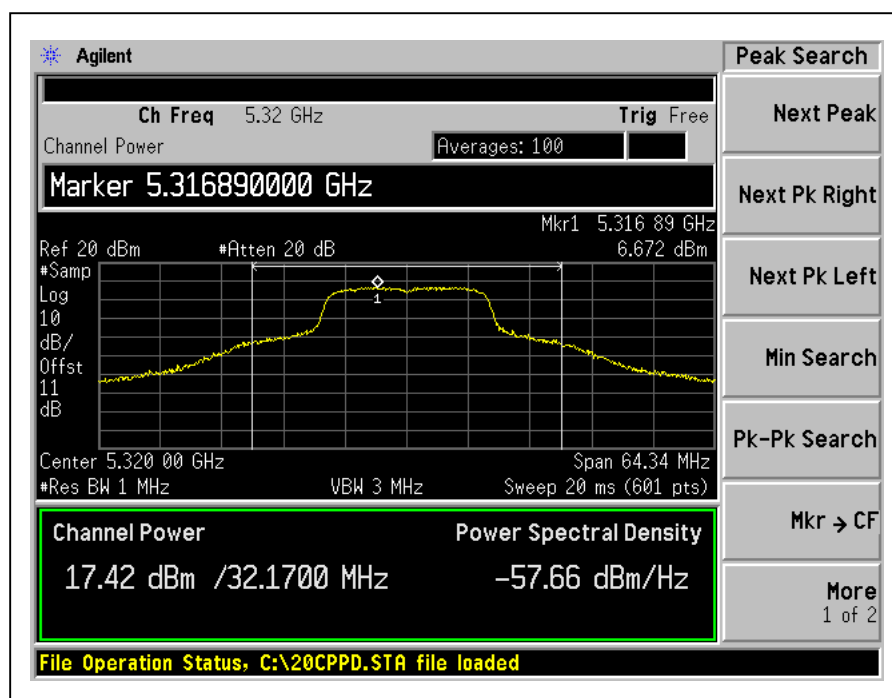
CH52



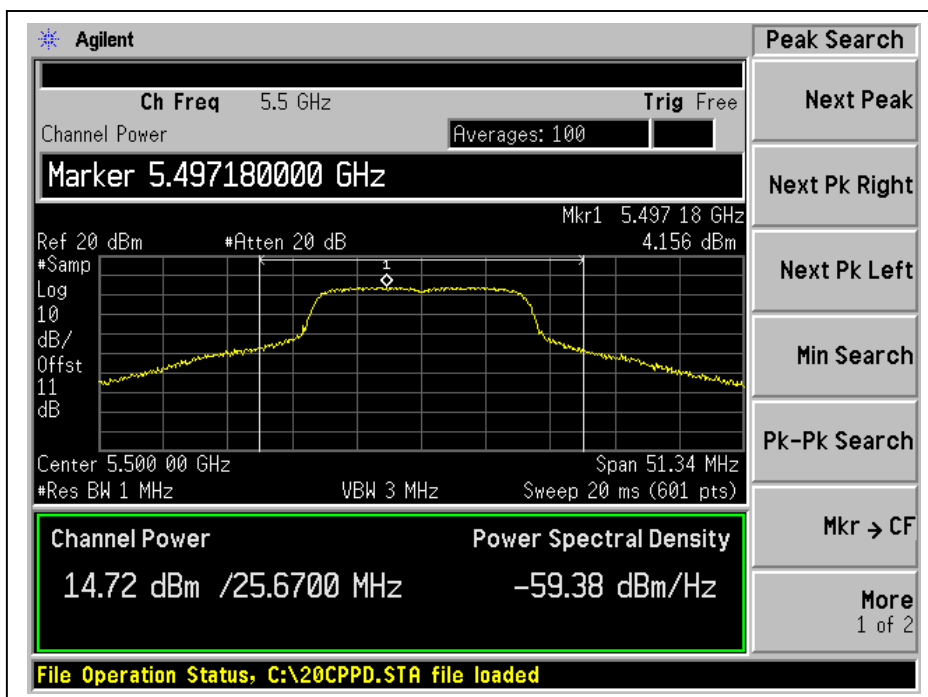
CH60



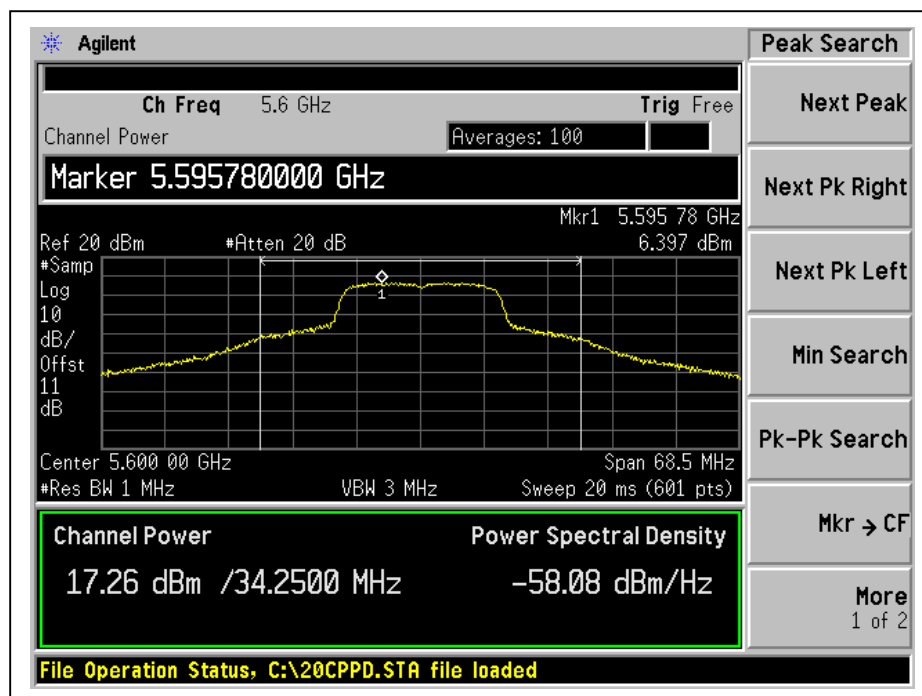
CH64



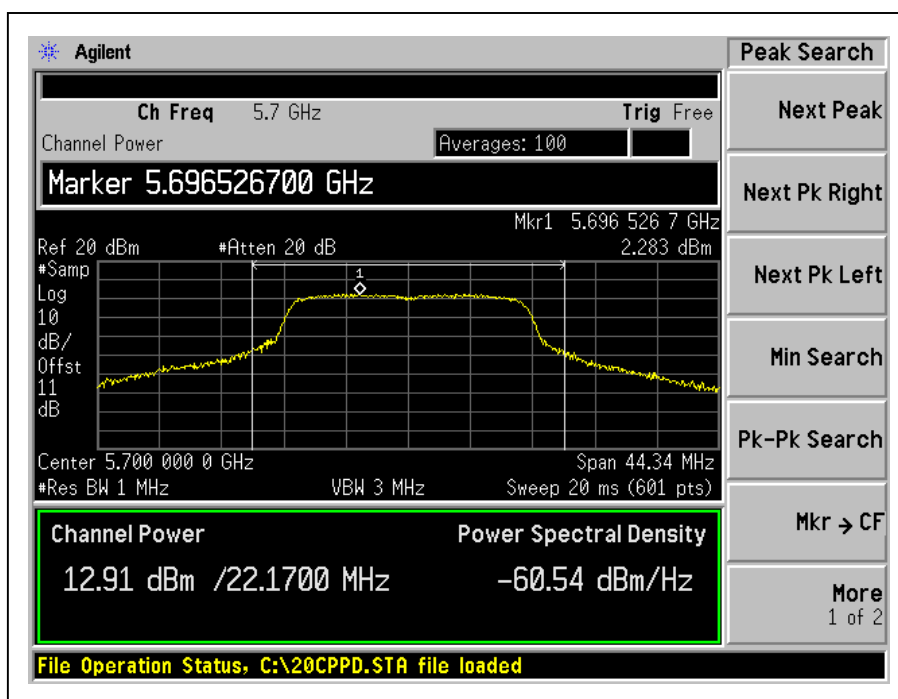
CH100



CH120



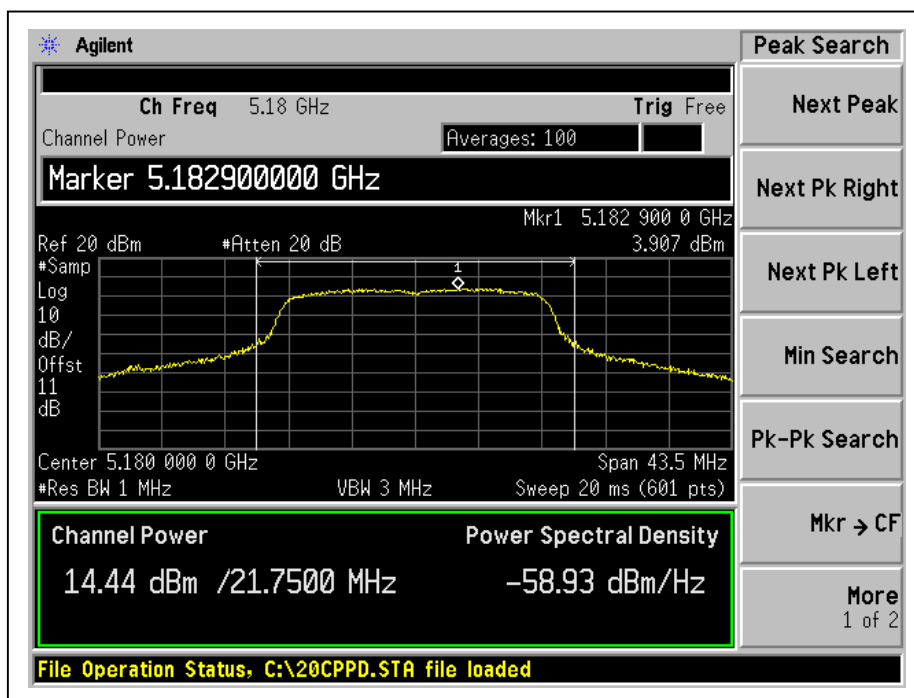
CH140



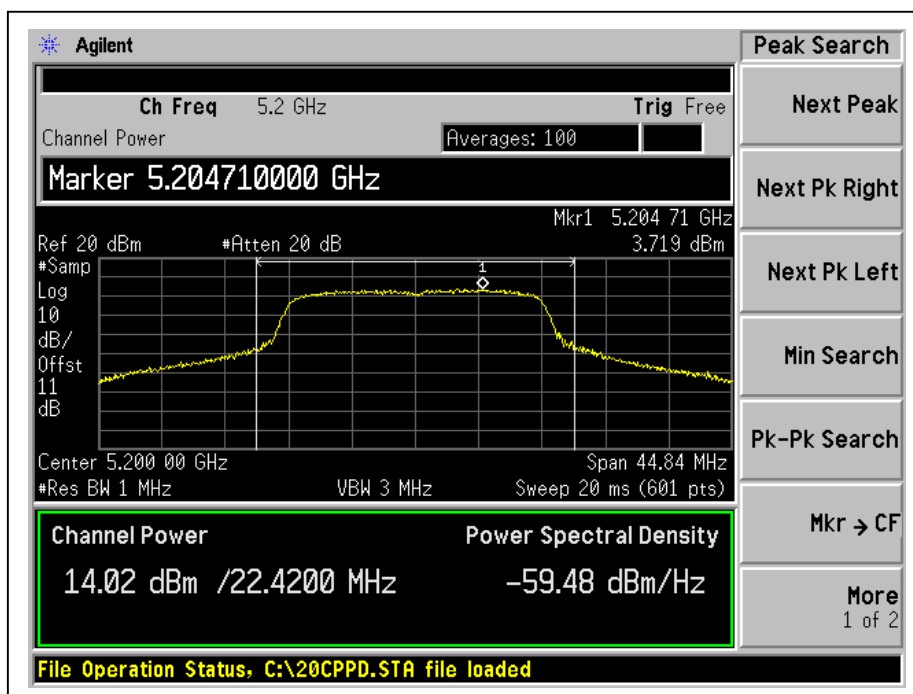
802.11n (20MHz) OFDM MODULATION:

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
36	5180	3.9	4	PASS
40	5200	3.7	4	PASS
48	5240	3.4	4	PASS
52	5260	5.9	11	PASS
60	5300	5.9	11	PASS
64	5320	5.8	11	PASS
100	5500	4.4	11	PASS
120	5600	5.7	11	PASS
140	5700	1.9	11	PASS

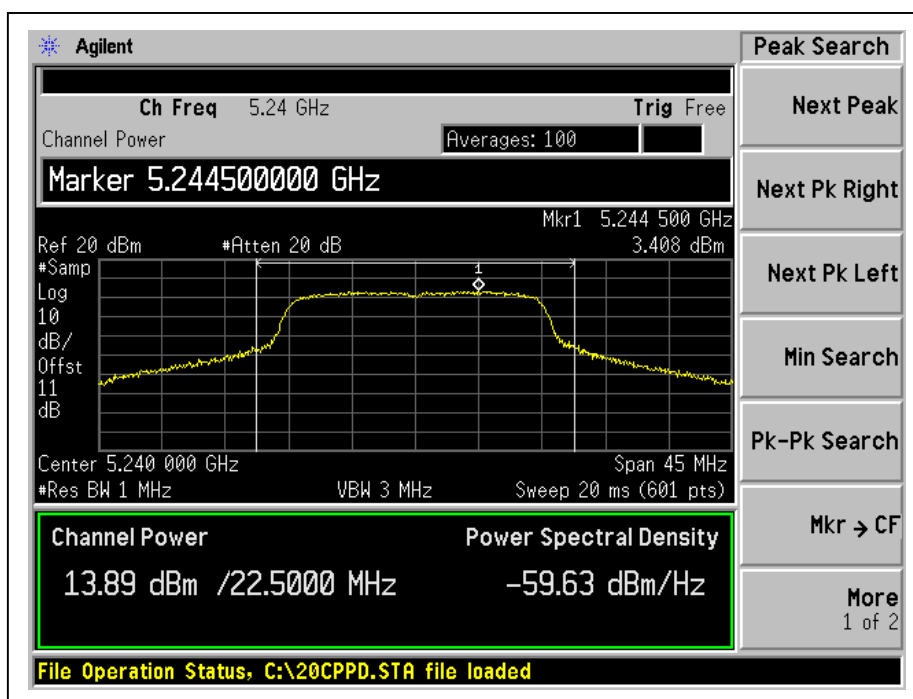
CH36



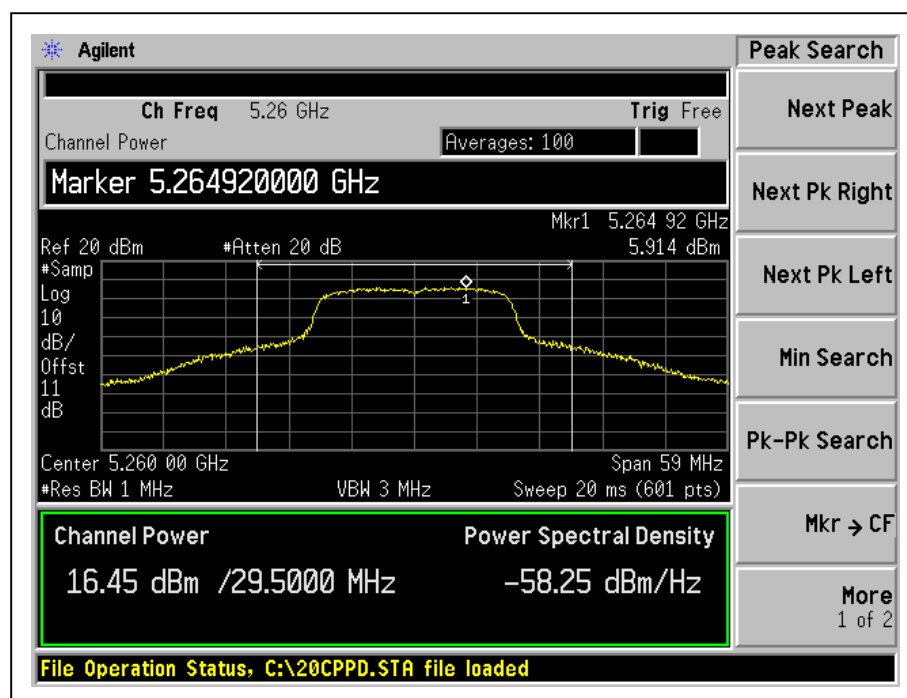
CH40



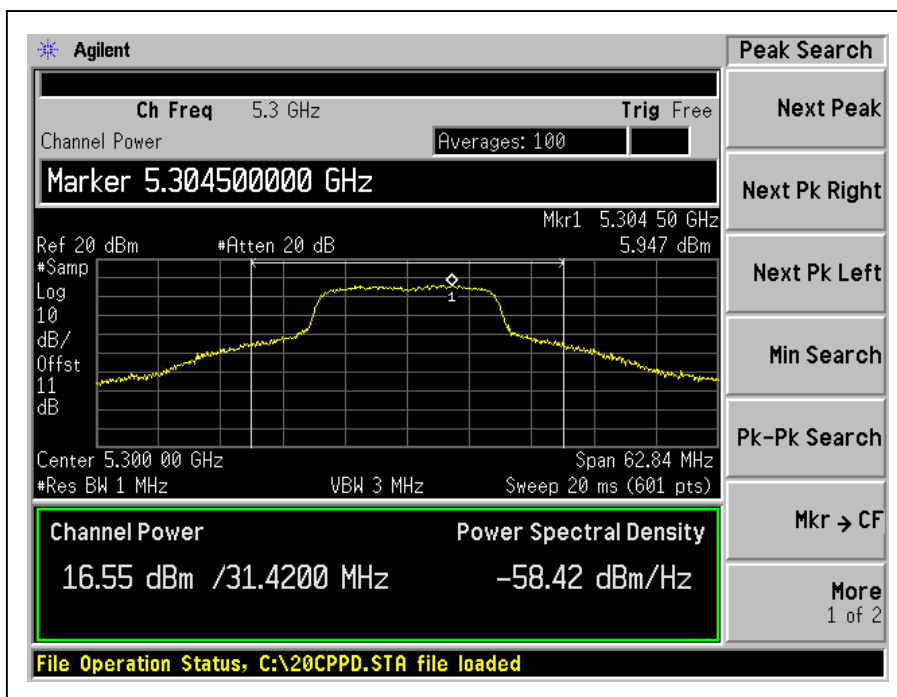
CH48



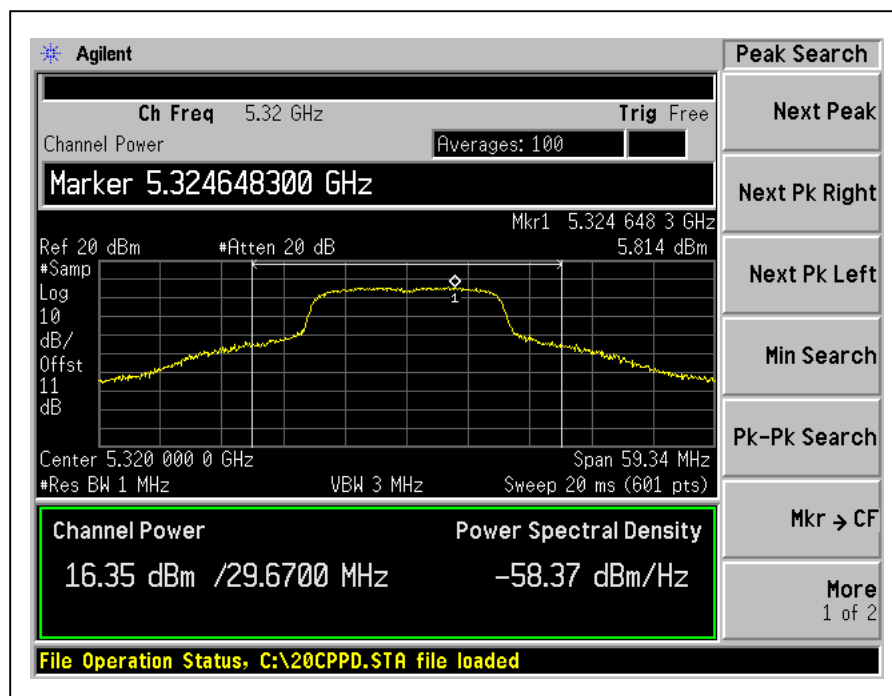
CH52



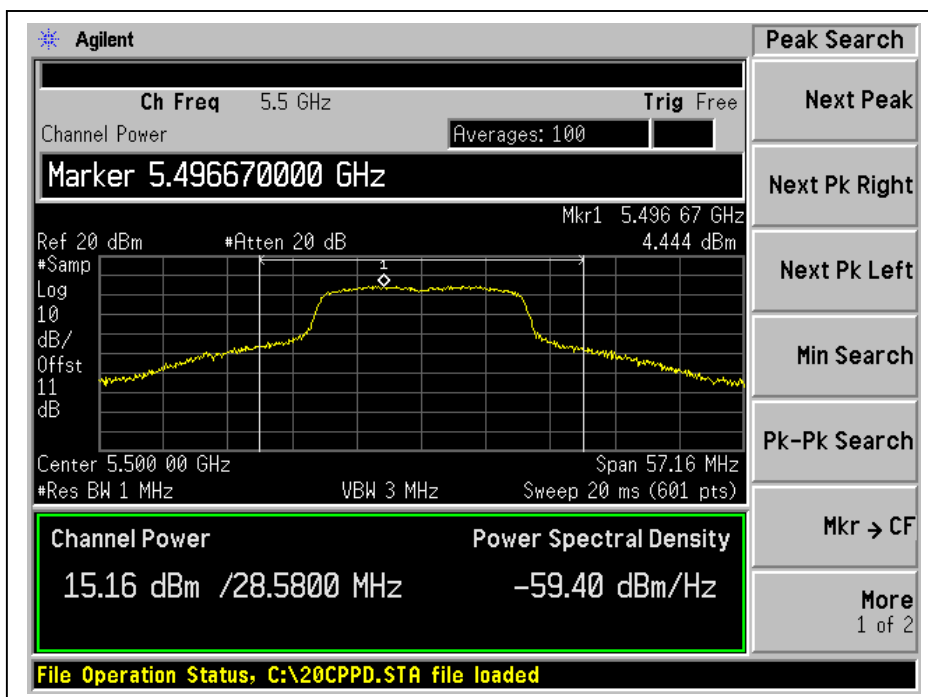
CH60



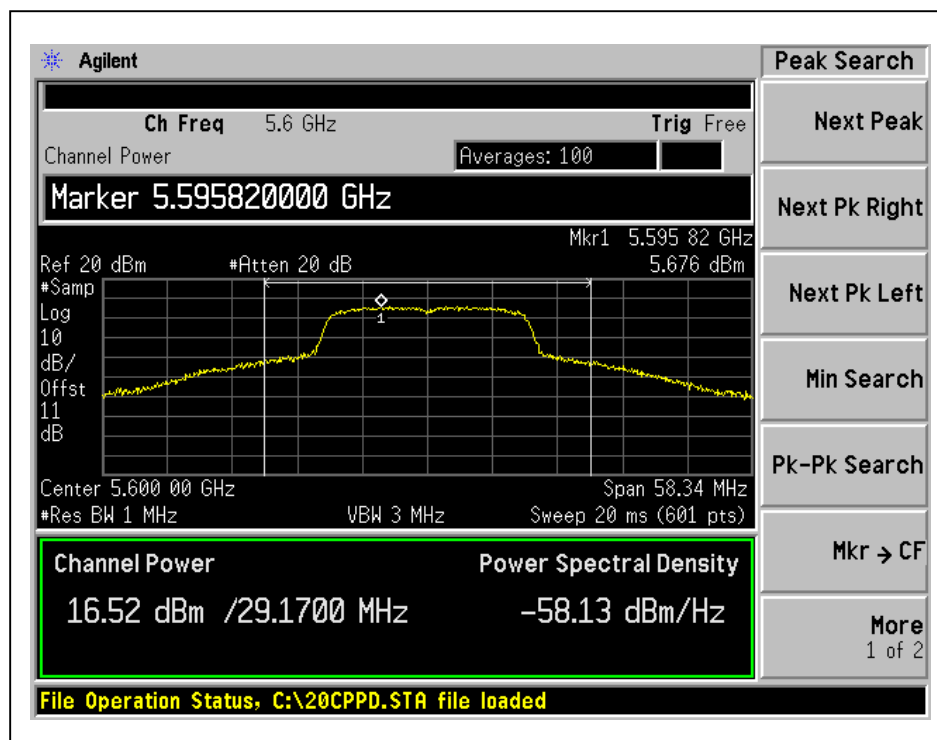
CH64



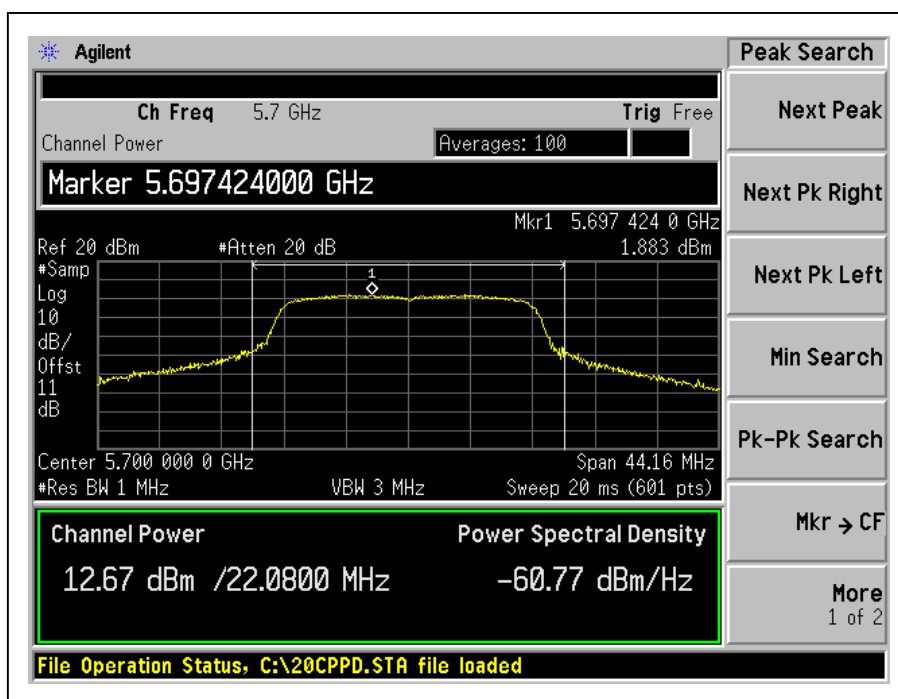
CH100



CH120



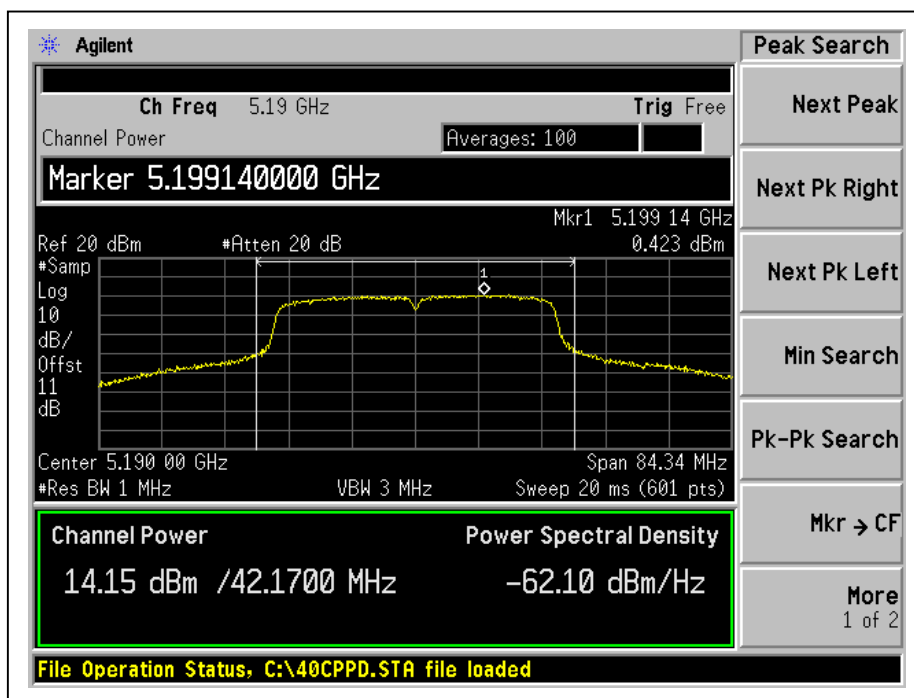
CH140



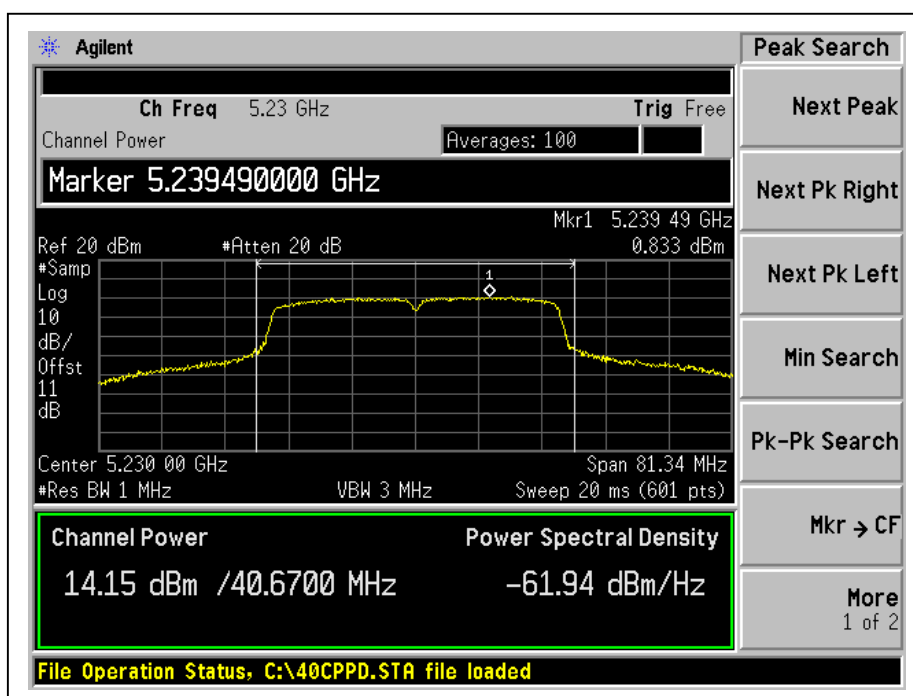
802.11n (40MHz) OFDM MODULATION:

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
38	5190	0.4	4	PASS
46	5230	0.8	4	PASS
54	5270	0.9	11	PASS
62	5310	0.8	11	PASS
102	5510	-2.0	11	PASS
118	5590	0.5	11	PASS
134	5670	0.8	11	PASS

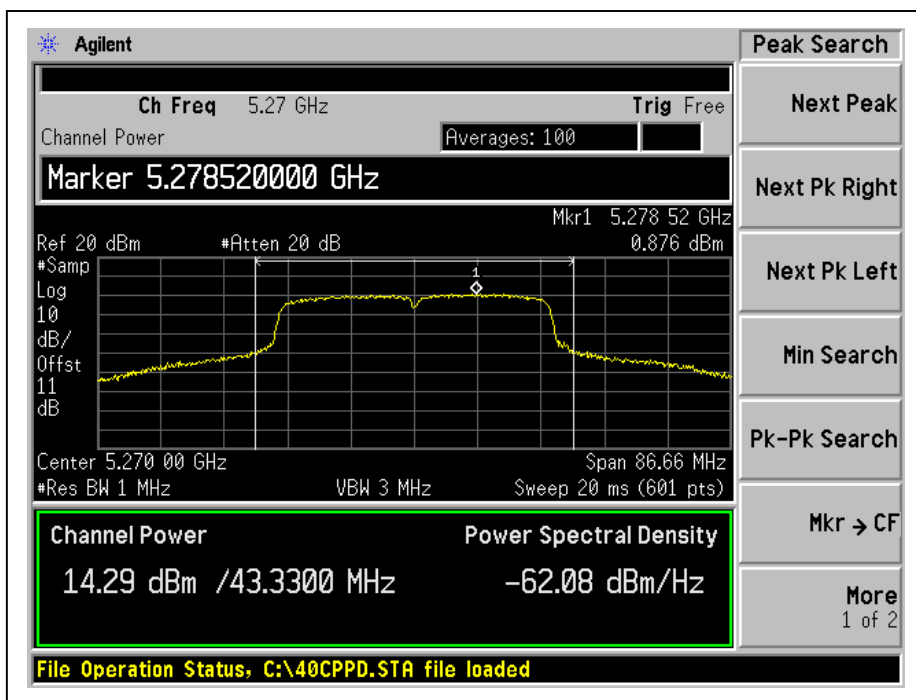
CH38



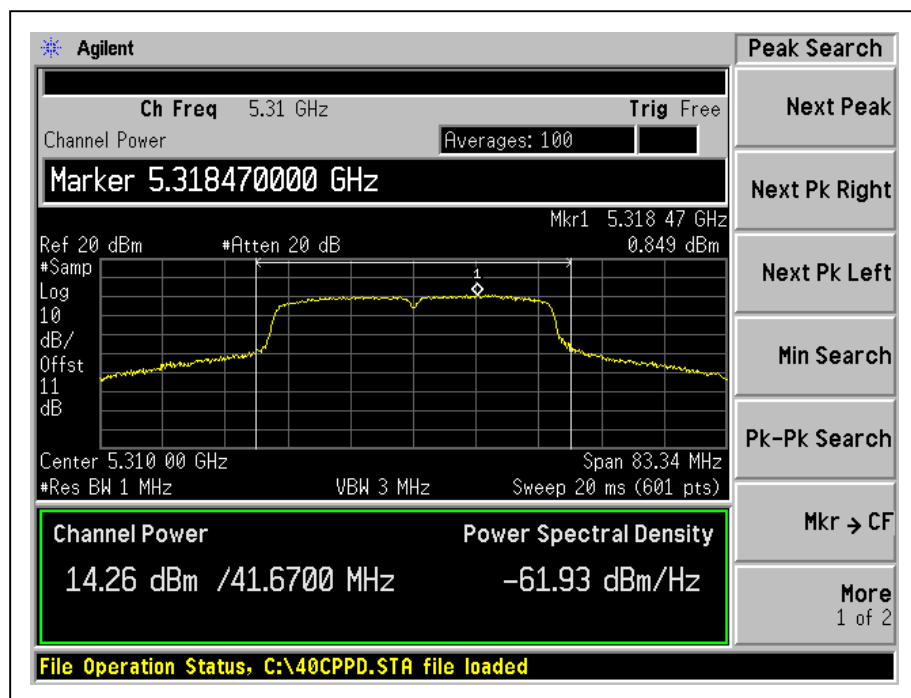
CH46



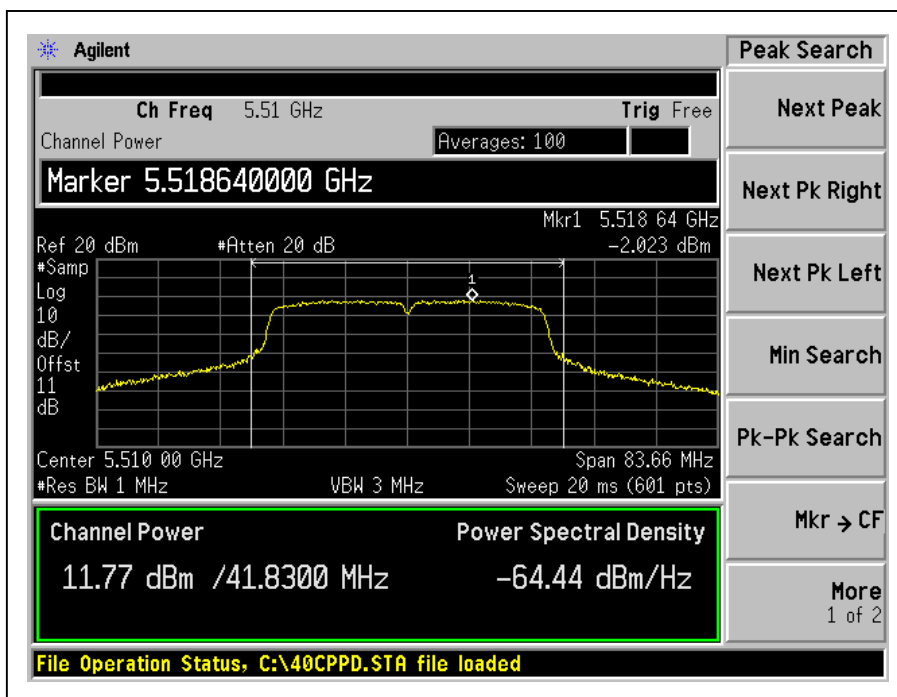
CH54



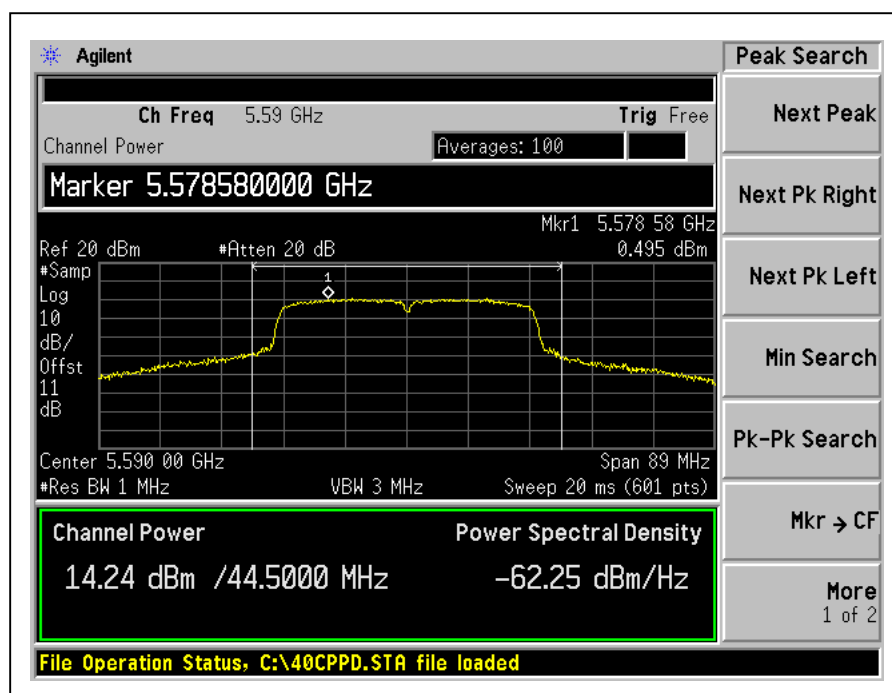
CH62



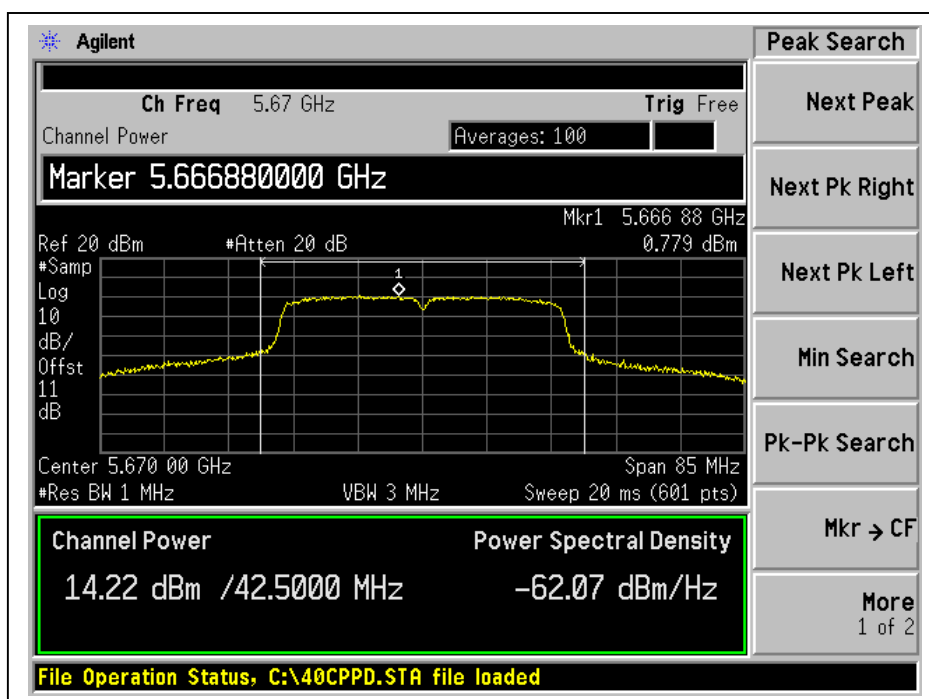
CH102



CH118



CH134





A D T

4.7 99% BANDWIDTH MEASUREMENT

4.7.1 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
R&S SPECTRUM ANALYZER	FSP40	100036	Dec. 08, 2010	Dec. 07, 2011

NOTE: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.7.2 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 300kHz RBW and 1MHz VBW.

4.7.3 TEST SETUP



4.7.4 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.7.5 TEST RESULTS

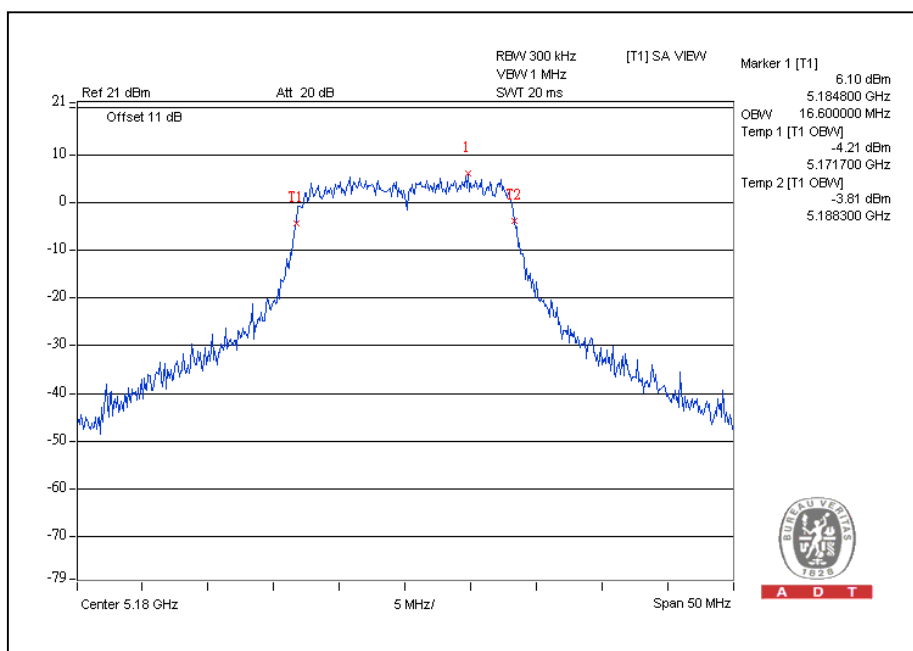
802.11a OFDM MODULATION

CHANNEL	CHANNEL FREQUENCY (MHz)	99% BANDWIDTH (MHz)
36	5180	16.6
40	5200	16.6
48	5240	16.5
52	5260	16.9
60	5300	17.4
64	5320	16.9
100	5500	16.6
120	5600	17.4
140	5700	16.5

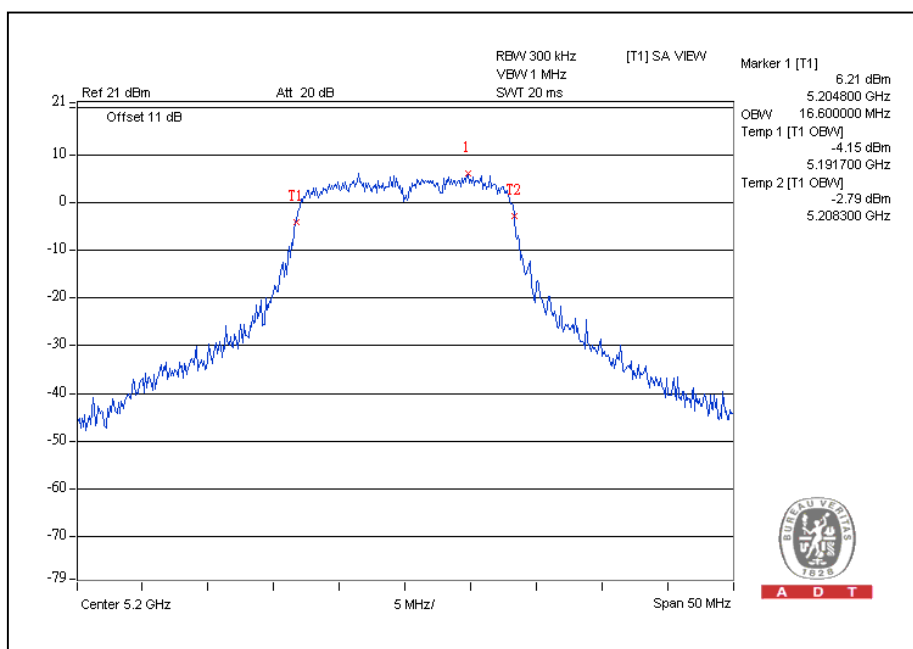


A D T

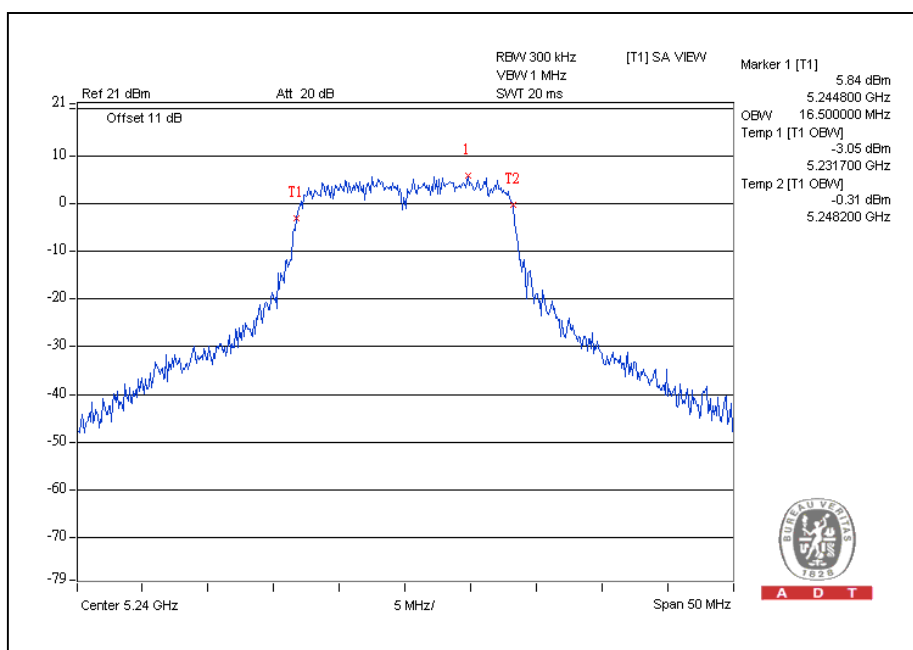
CH36



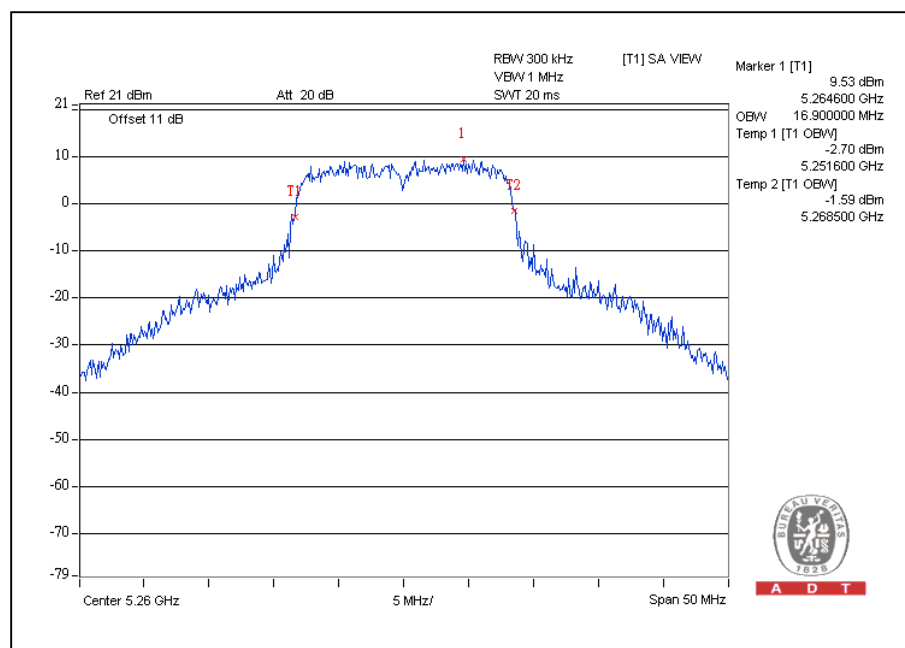
CH40



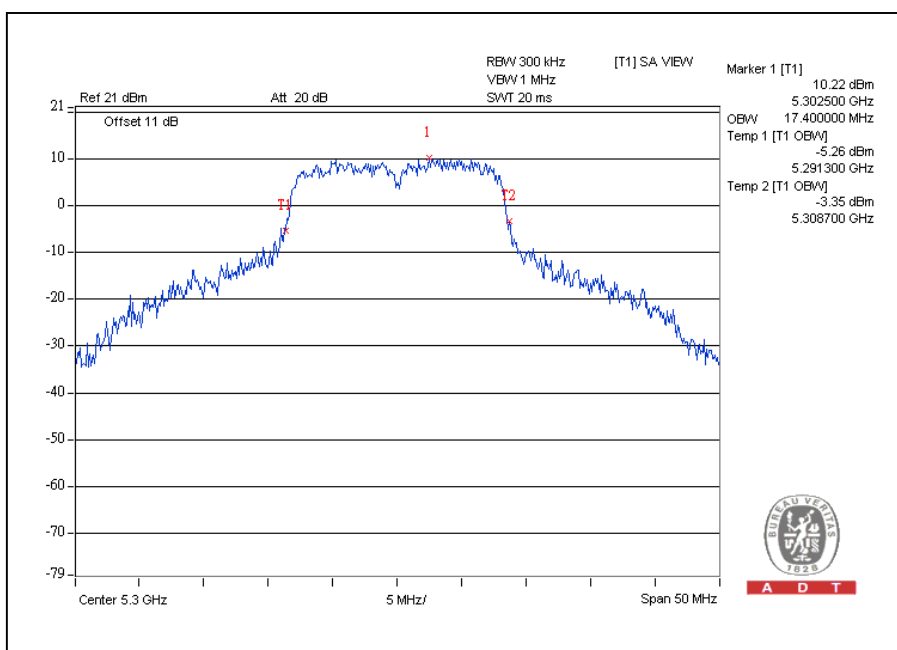
CH48



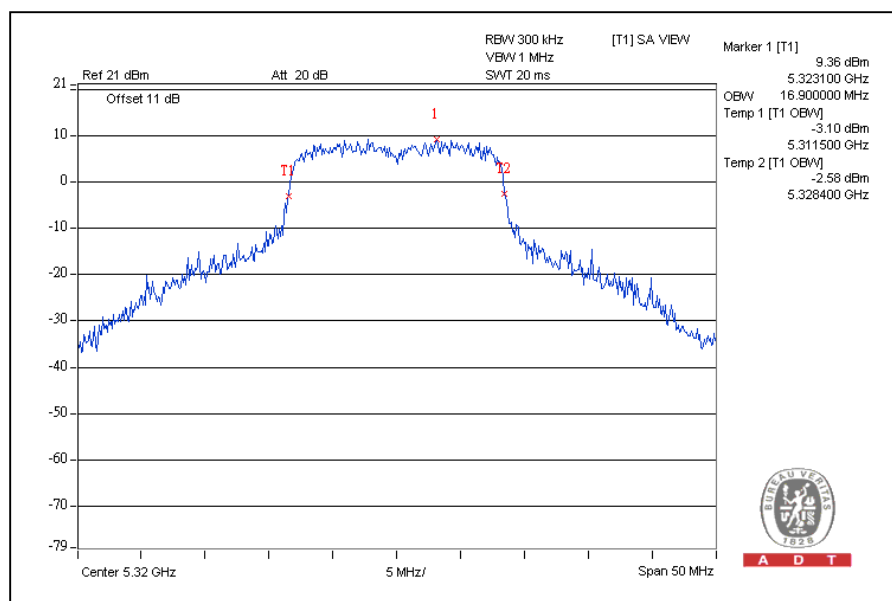
CH52



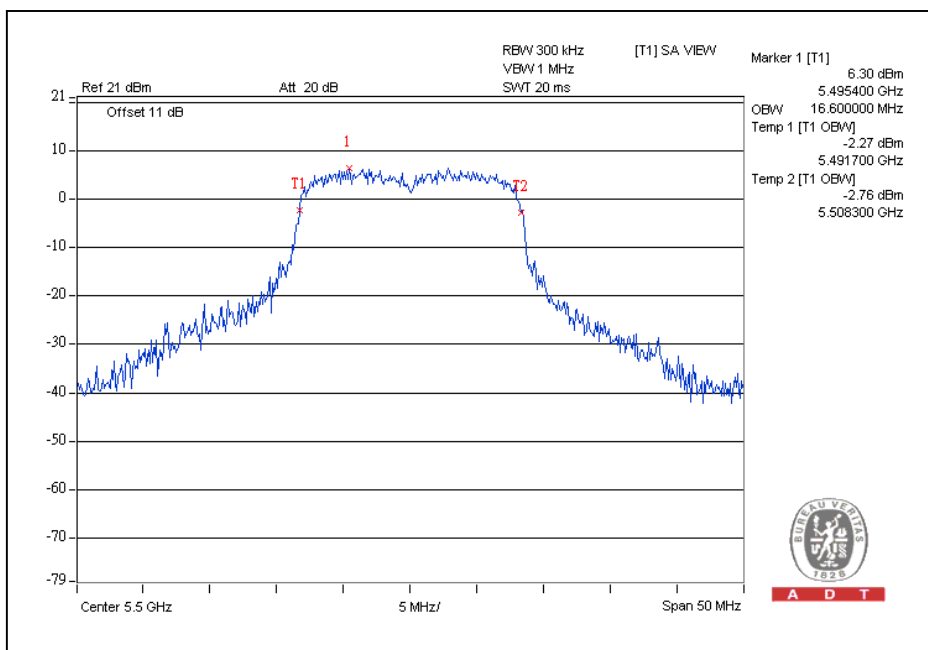
CH60



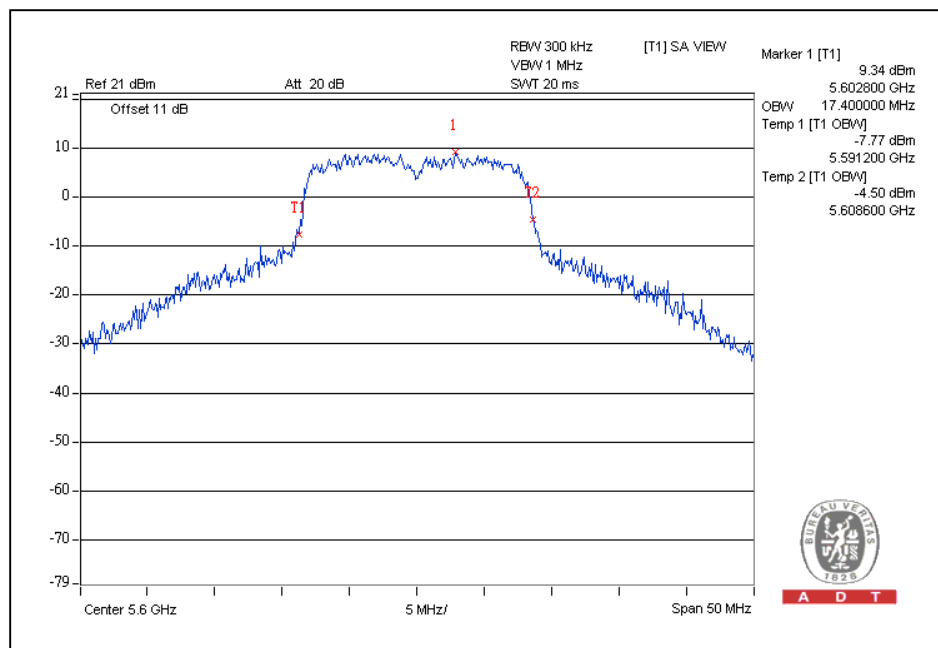
CH64



CH100



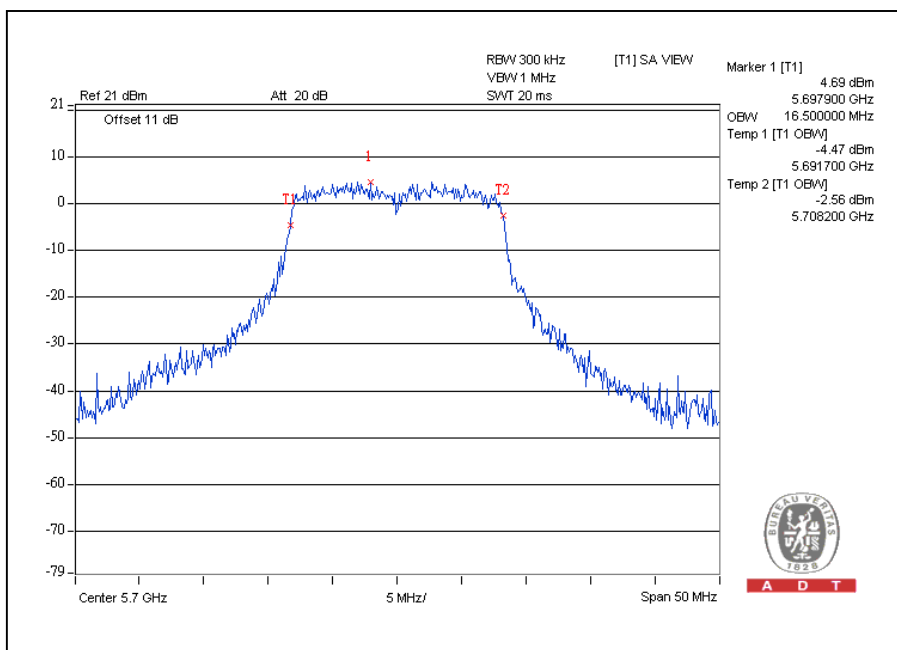
CH120





A D T

CH140



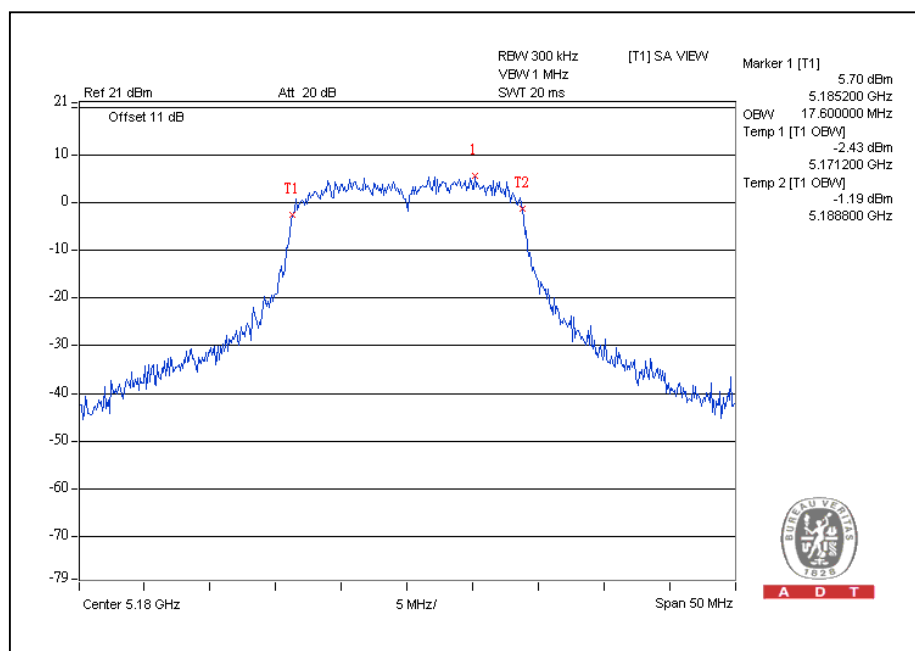
802.11n (20MHz) OFDM MODULATION:

CHANNEL	CHANNEL FREQUENCY (MHz)	99% BANDWIDTH (MHz)
36	5180	17.6
40	5200	17.8
48	5240	17.7
52	5260	17.9
60	5300	17.8
64	5320	17.8
100	5500	17.7
120	5600	17.9
140	5700	17.6

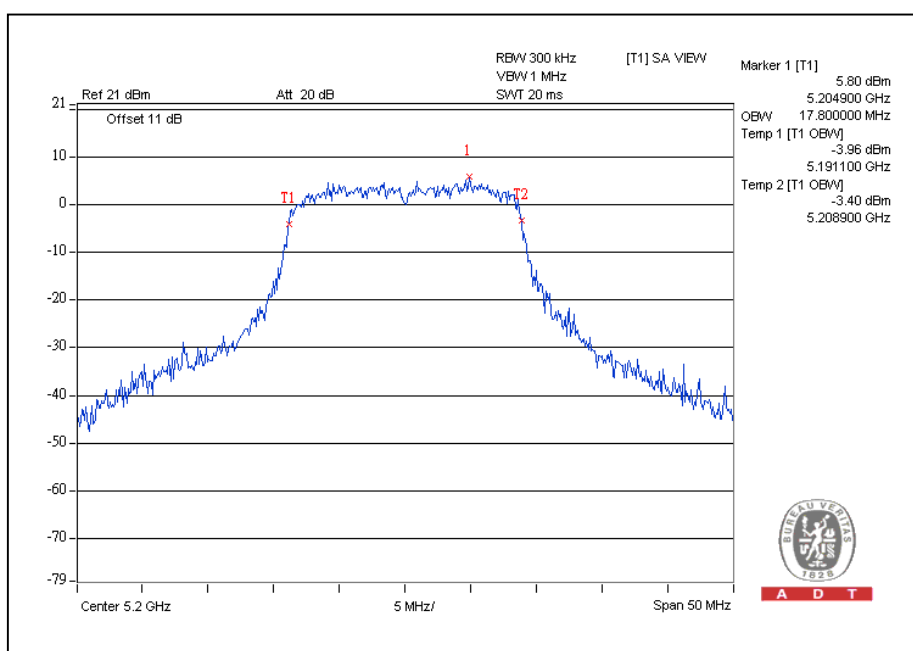


A D T

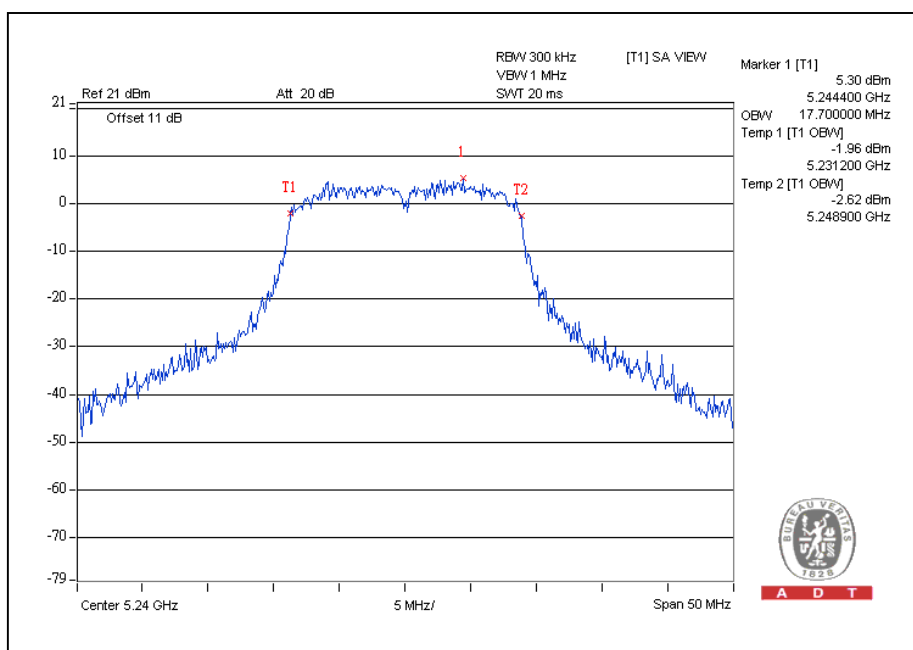
CH36



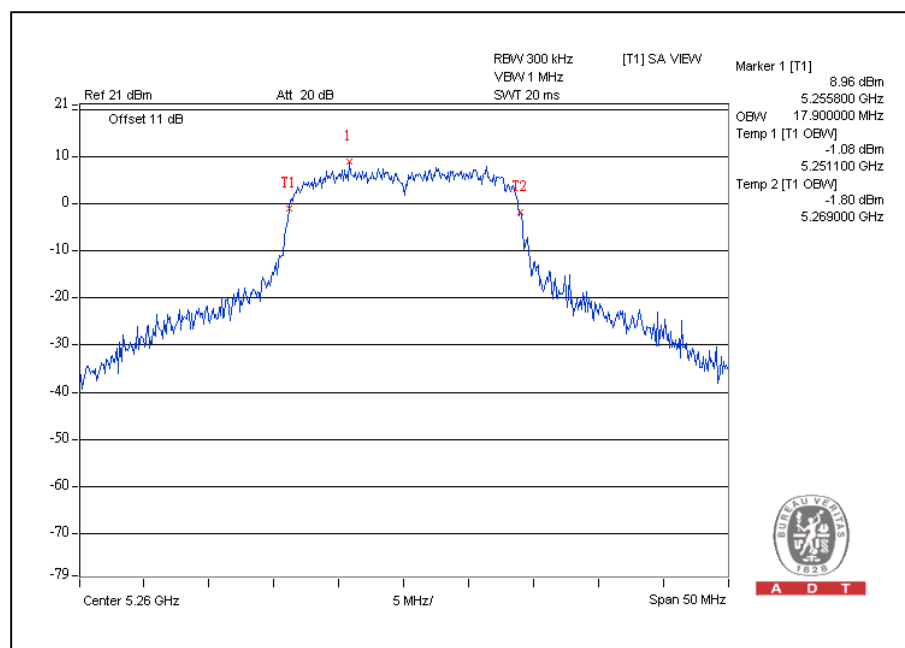
CH40



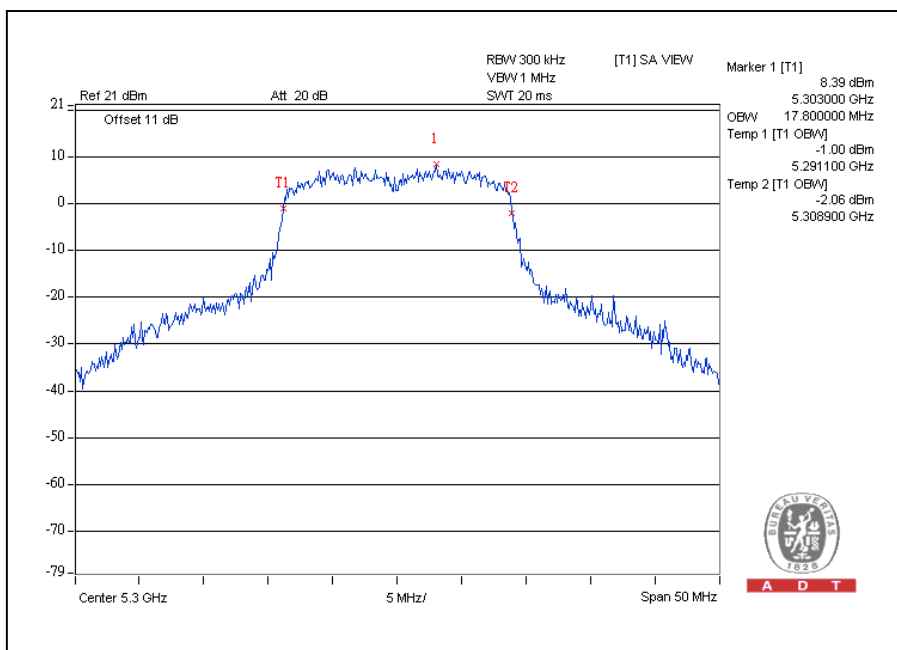
CH48



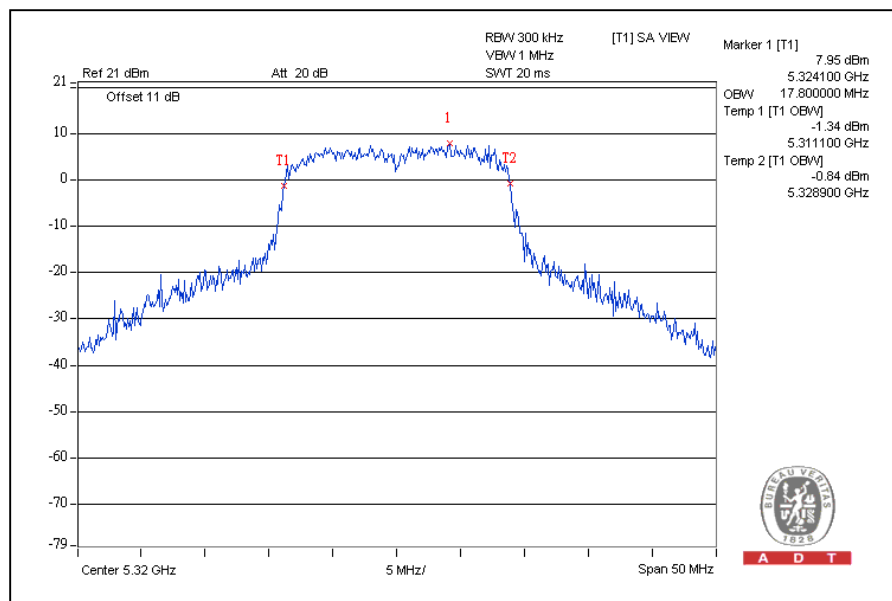
CH52



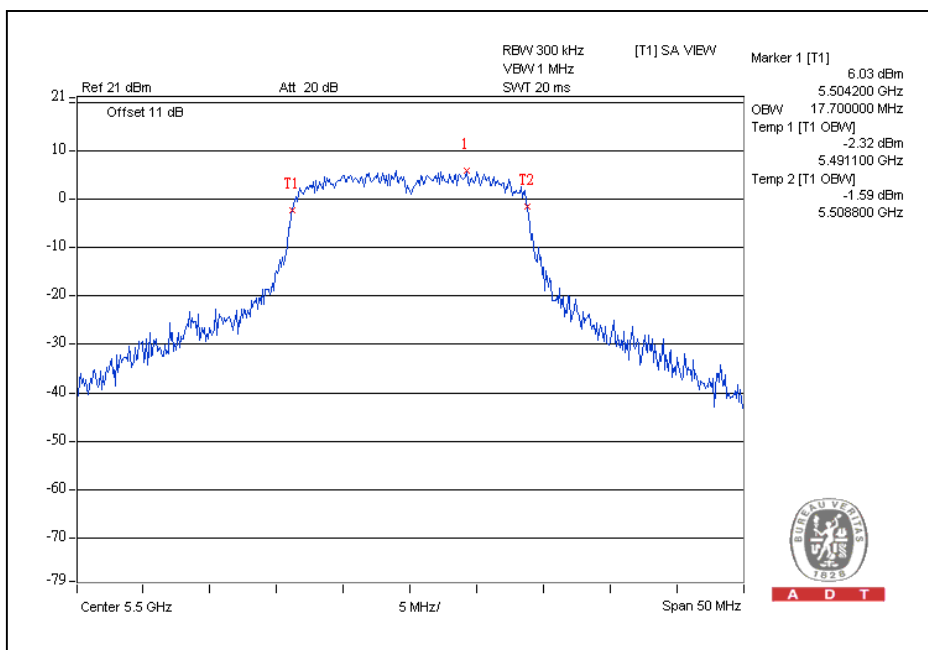
CH60



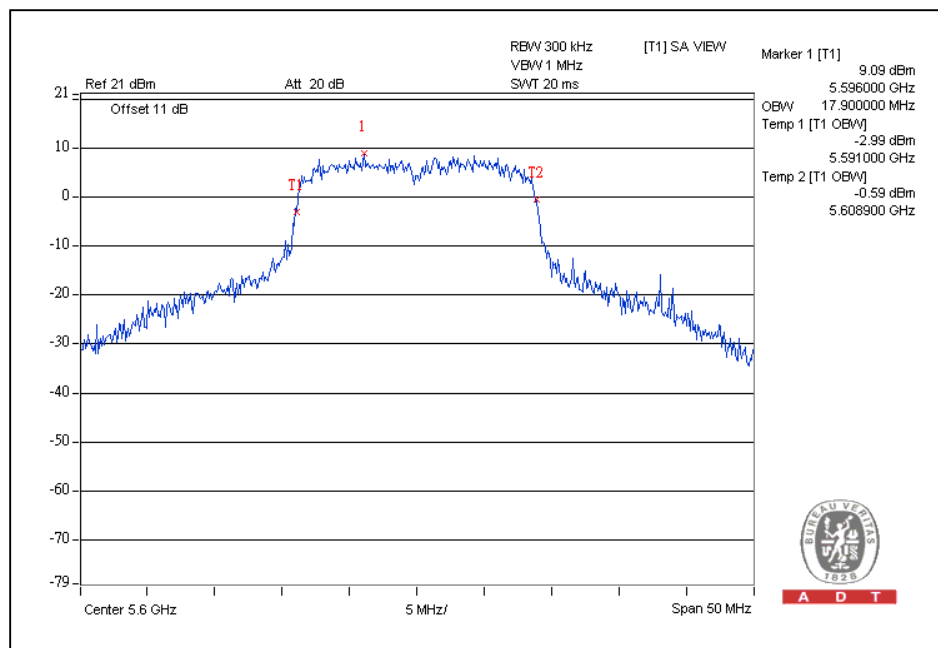
CH64



CH100



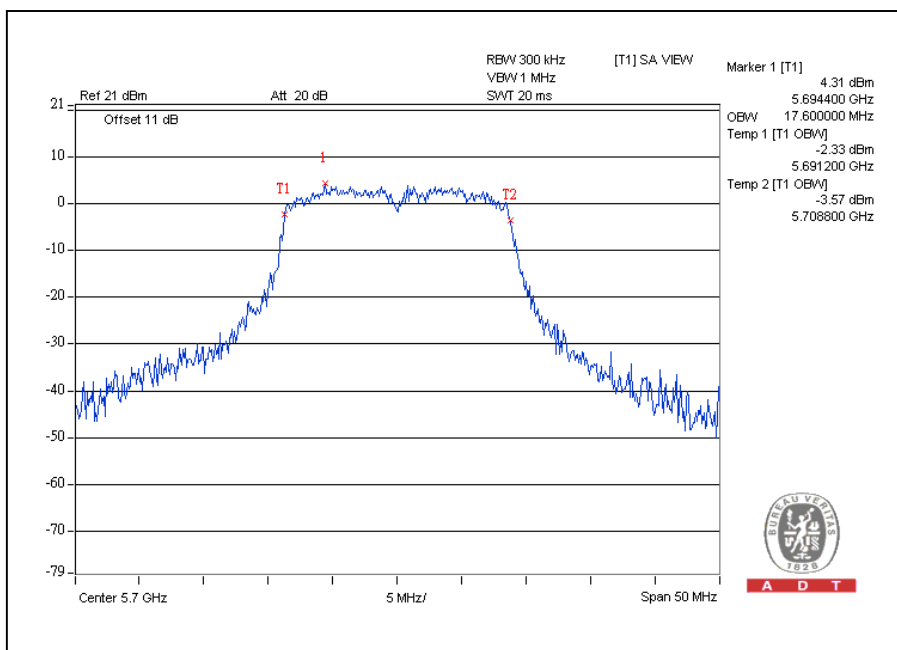
CH120





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CH140



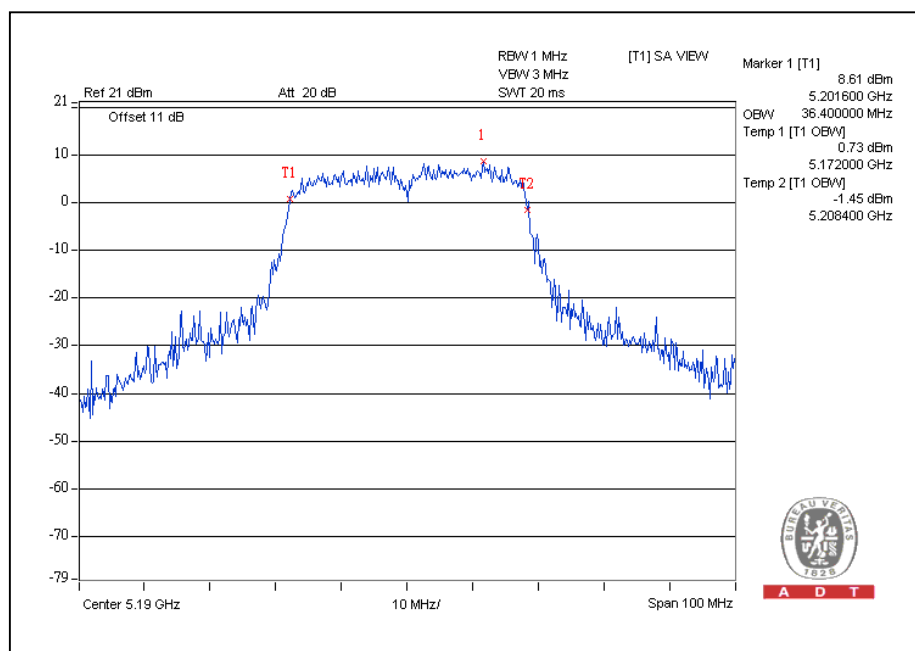
802.11n (40MHz) OFDM MODULATION:

CHANNEL	CHANNEL FREQUENCY (MHz)	99% BANDWIDTH (MHz)
38	5190	36.4
46	5230	36.4
54	5270	36.2
62	5310	36.4
102	5510	36.2
118	5590	36.2
134	5670	36.4

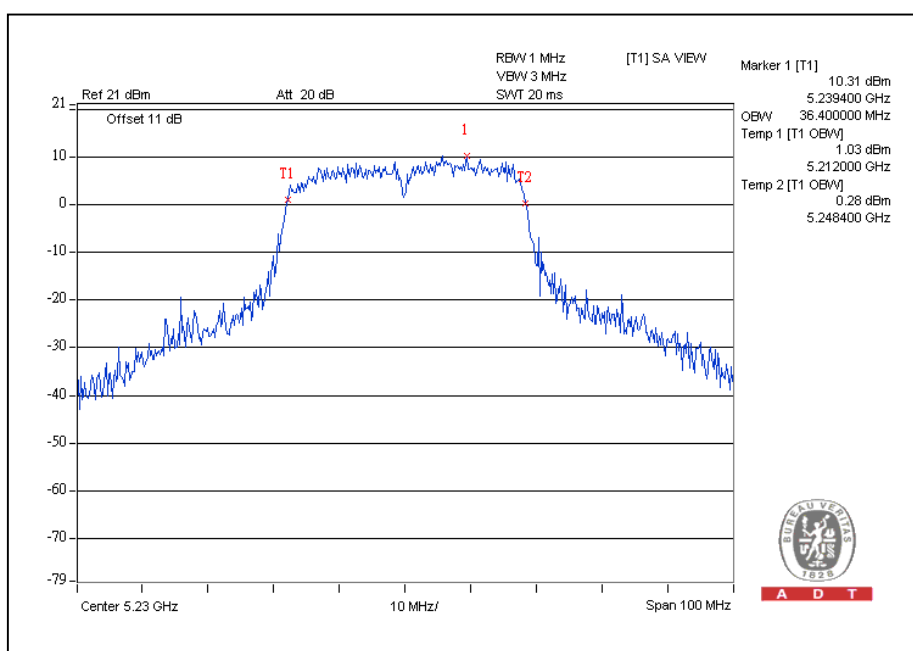


A D T

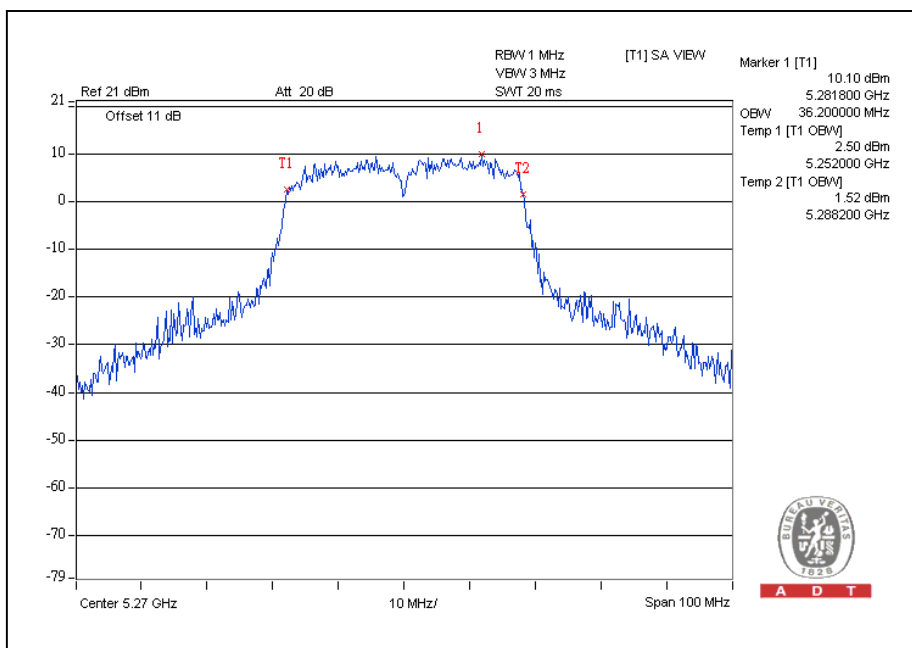
CH38



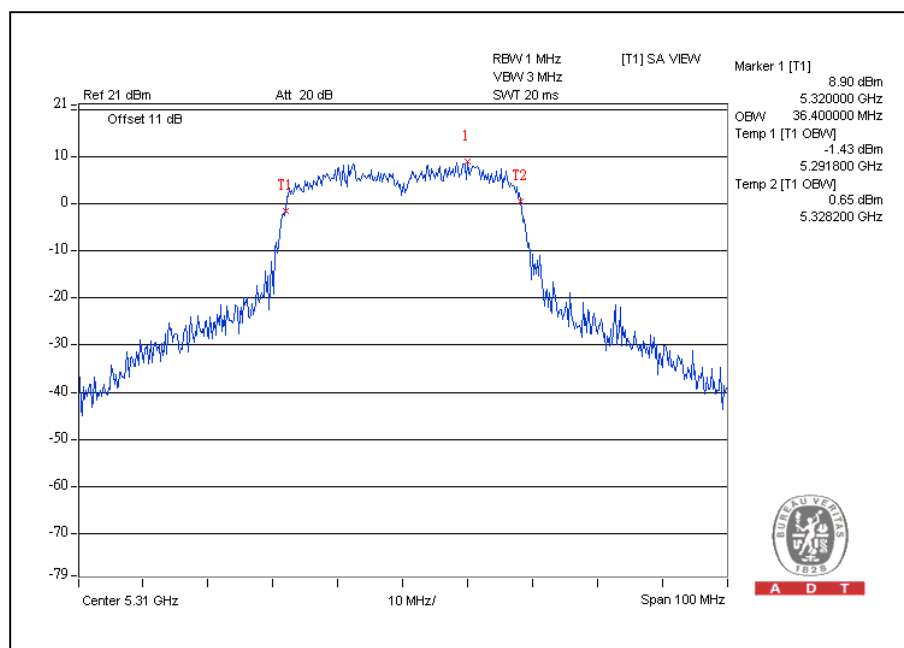
CH46



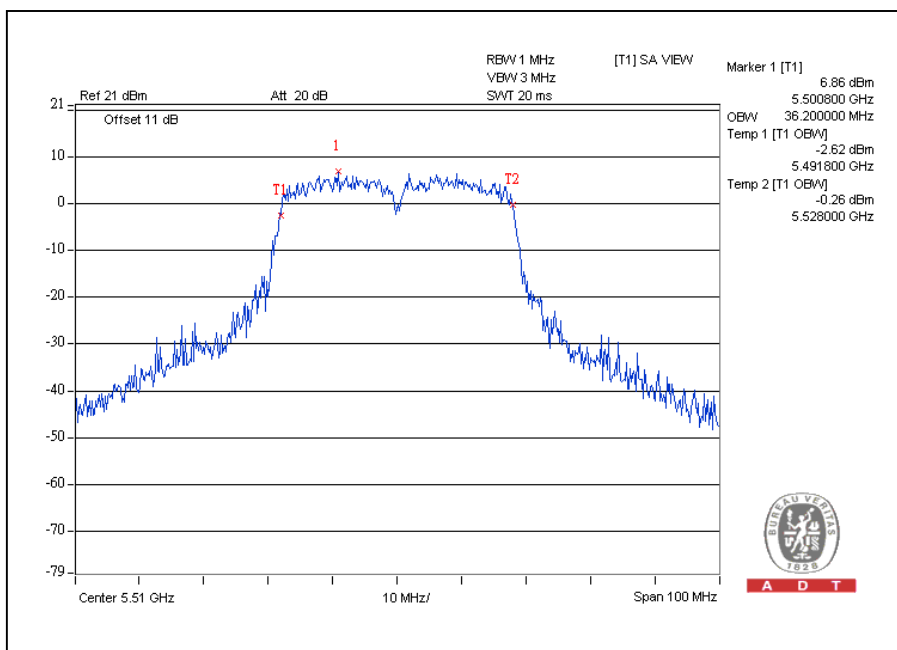
CH54



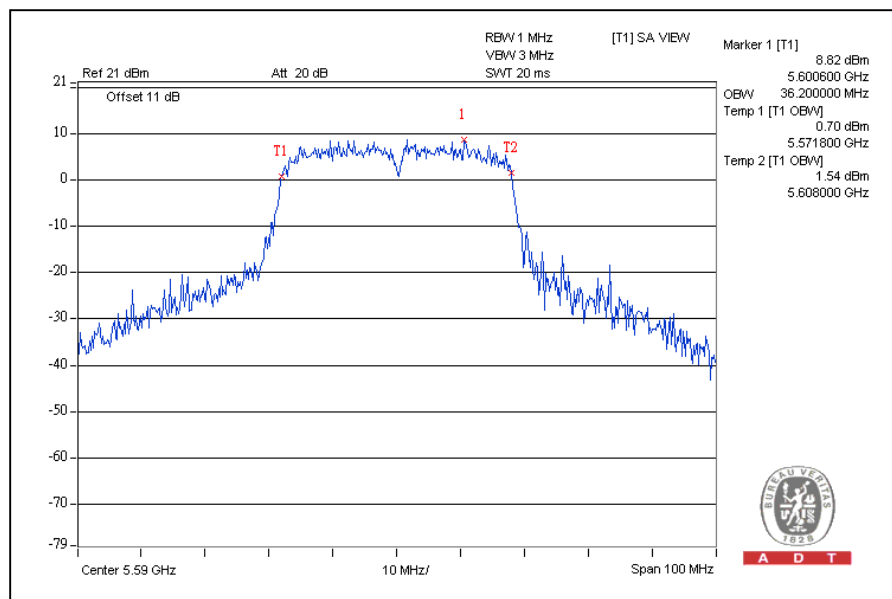
CH62



CH102



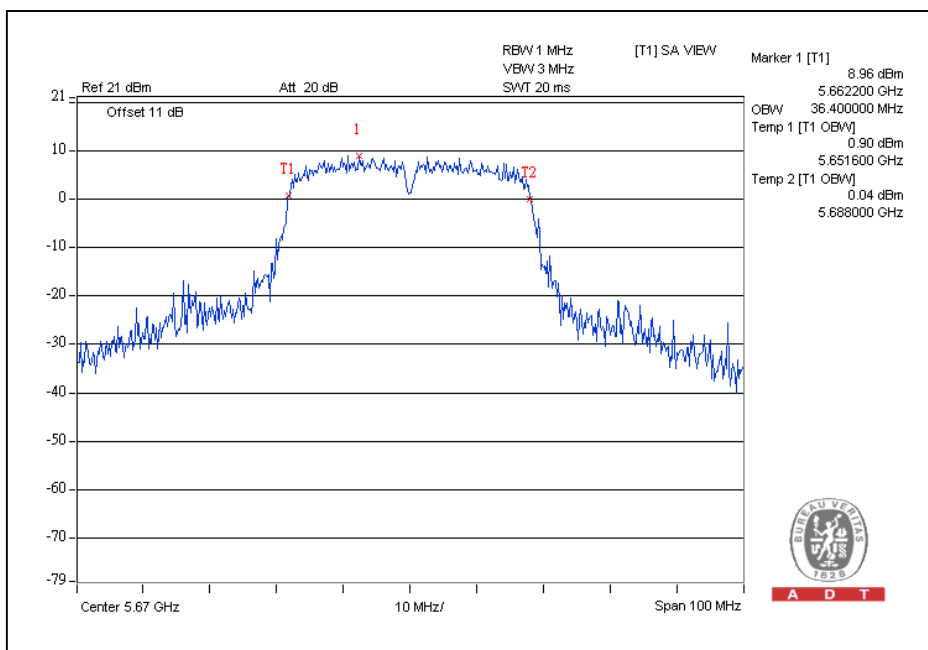
CH118





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CH134



4.8 FREQUENCY STABILITY

4.8.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

The frequency tolerance of the carrier signal shall be maintained within the band of the operating frequency over a temperature variation of –30 degrees to 50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C.

4.8.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
R&S SPECTRUM ANALYZER	FSP40	100036	Dec. 08, 2010	Dec. 07, 2011

NOTE: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

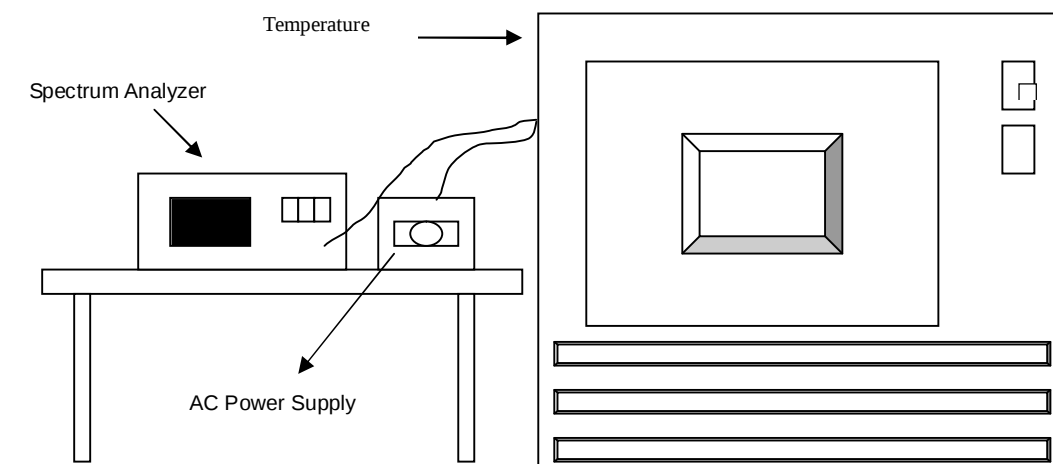
4.8.3 TEST PROCEDURE

1. The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
2. Turn the EUT on and couple its output to a spectrum analyzer.
3. Turn the EUT off and set the chamber to the highest temperature specified.
4. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
5. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
6. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

4.8.4 DEVIATION FROM TEST STANDARD

No deviation

4.8.5 TEST SETUP



4.8.6 EUT OPERATING CONDITION

The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

4.8.7 TEST RESULTS

Operating frequency: 5320MHz									
Temp. (°C)	Power supply (VAC)	0 minute		2 minute		5 minute		10 minute	
		(MHz)	(%)	(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
50	138	5320.0124	2.3308	5320.0126	2.3684	5320.0074	1.3910	5320.0043	0.8083
	120	5320.0133	2.5000	5320.0122	2.2932	5320.0061	1.1466	5320.0024	0.4511
	102	5320.0133	2.5000	5320.0123	2.3120	5320.0076	1.4286	5320.0041	0.7707
40	138	5319.9974	-0.4887	5320.0005	0.0940	5319.9959	-0.7707	5319.9933	-1.2594
	120	5319.9975	-0.4699	5320.0005	0.0940	5319.9966	-0.6391	5319.992	-1.5038
	102	5319.9972	-0.5263	5319.9999	-0.0188	5319.9969	-0.5827	5319.9918	-1.5414
30	138	5320.0127	2.3872	5320.0154	2.8947	5320.0139	2.6128	5320.016	3.0075
	120	5320.0131	2.4624	5320.016	3.0075	5320.0129	2.4248	5320.0167	3.1391
	102	5320.0125	2.3496	5320.0153	2.8759	5320.0136	2.5564	5320.0161	3.0263
20	138	5319.9955	-0.8459	5319.9919	-1.5226	5319.9933	-1.2594	5319.9889	-2.0865
	120	5319.9964	-0.6767	5319.9923	-1.4474	5319.9935	-1.2218	5319.9893	-2.0113
	102	5319.9972	-0.5263	5319.9925	-1.4098	5319.9943	-1.0714	5319.9892	-2.0301
10	138	5320.0016	0.3008	5320.0057	1.0714	5320.0099	1.8609	5320.0136	2.5564
	120	5320.0021	0.3947	5320.0066	1.2406	5320.0098	1.8421	5320.014	2.6316
	102	5320.0023	0.4323	5320.0057	1.0714	5320.0117	2.1992	5320.0152	2.8571
0	138	5319.9909	-1.7105	5319.9877	-2.3120	5319.9882	-2.2180	5319.9913	-1.6353
	120	5319.9908	-1.7293	5319.988	-2.2556	5319.9889	-2.0865	5319.9919	-1.5226
	102	5319.9908	-1.7293	5319.989	-2.0677	5319.99	-1.8797	5319.9927	-1.3722
-10	138	5320.0135	2.5376	5320.0145	2.7256	5320.0115	2.1617	5320.0111	2.0865
	120	5320.0138	2.5940	5320.0146	2.7444	5320.0107	2.0113	5320.0107	2.0113
	102	5320.0136	2.5564	5320.013	2.4436	5320.0111	2.0865	5320.0101	1.8985
-20	138	5319.9835	-3.1015	5319.9873	-2.3872	5319.9901	-1.8609	5319.9859	-2.6504
	120	5319.9845	-2.9135	5319.9873	-2.3872	5319.9889	-2.0865	5319.9845	-2.9135
	102	5319.9849	-2.8383	5319.9883	-2.1992	5319.9886	-2.1429	5319.985	-2.8195
-30	138	5320.0105	1.9737	5320.0129	2.4248	5320.0087	1.6353	5320.007	1.3158
	120	5320.0111	2.0865	5320.0145	2.7256	5320.008	1.5038	5320.0079	1.4850
	102	5320.0112	2.1053	5320.0129	2.4248	5320.0095	1.7857	5320.0077	1.4474



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4.9 CONDUCTED OUT-BAND EMISSION MEASUREMENT

4.9.1 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
R&S SPECTRUM ANALYZER	FSP40	100036	Dec. 08, 2010	Dec. 07, 2011

NOTE: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.9.2 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer via a low loss cable. Set RBW of spectrum analyzer to 1MHz with suitable frequency span including 100 MHz or 200 MHz bandwidth from band edge. The band edges was measured and recorded.

4.9.3 EUT OPERATING CONDITION

The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

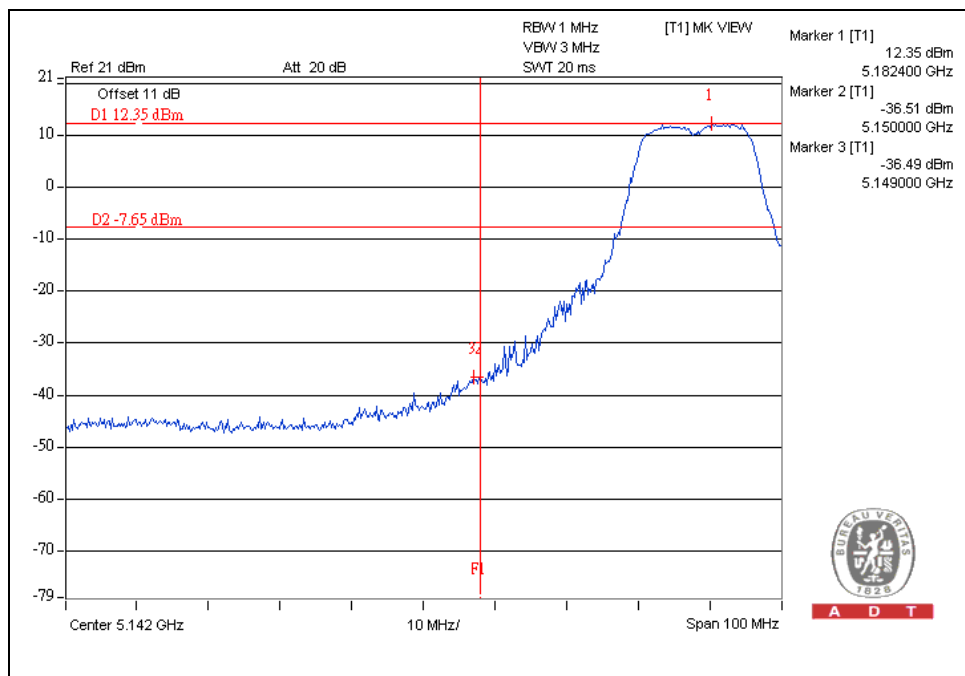
4.9.4 TEST RESULTS

For 5.15 to 5.35GHz band:

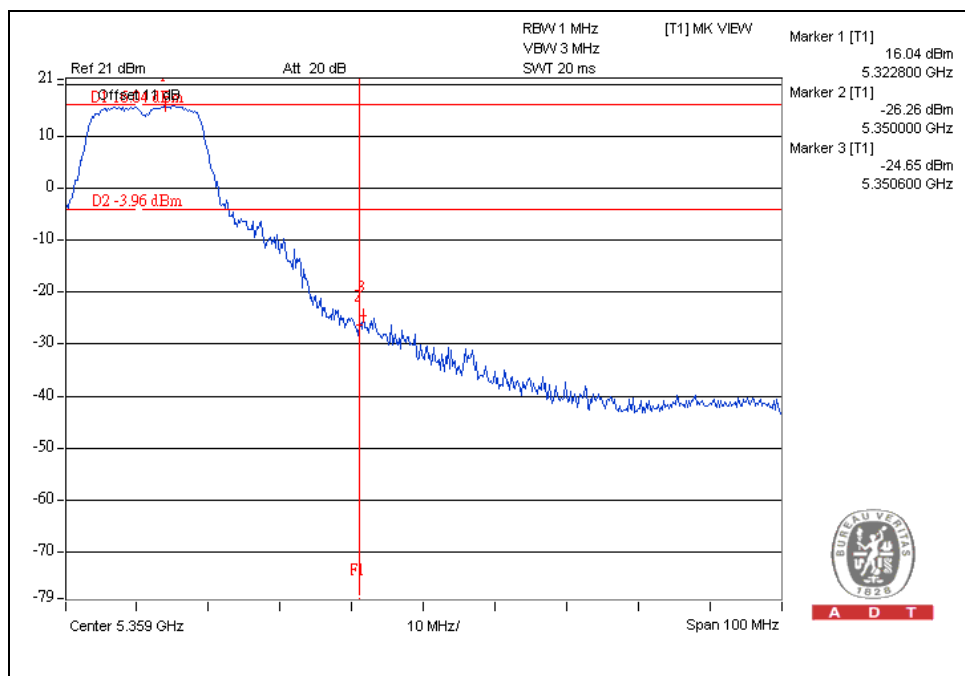
The spectrum plots (Peak RBW=1MHz, VBW=3MHz) are attached on the following pages.

802.11a OFDM MODULATION

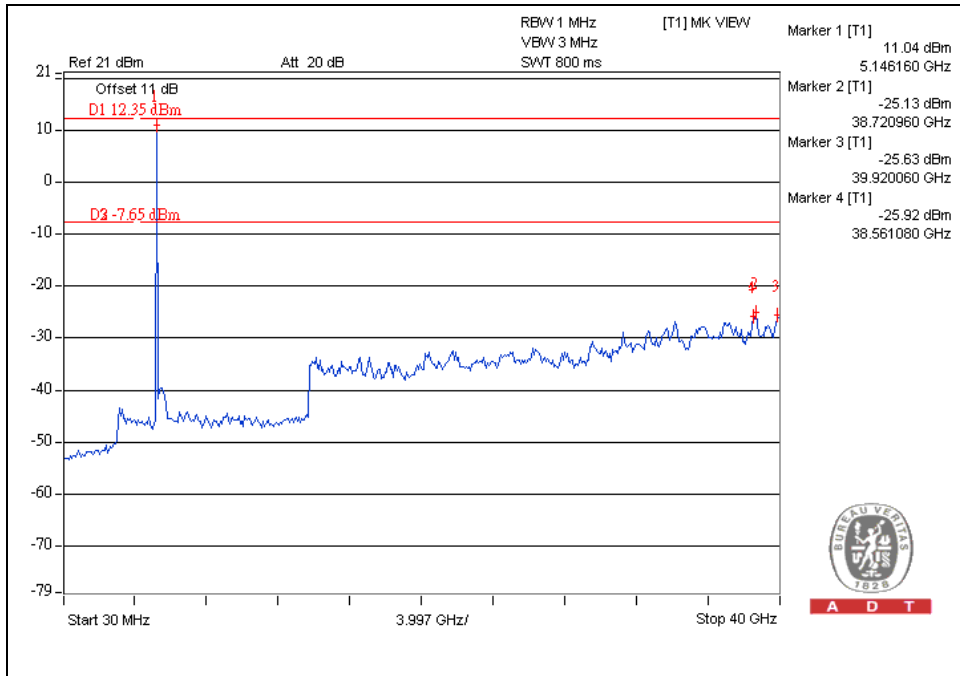
CH 36



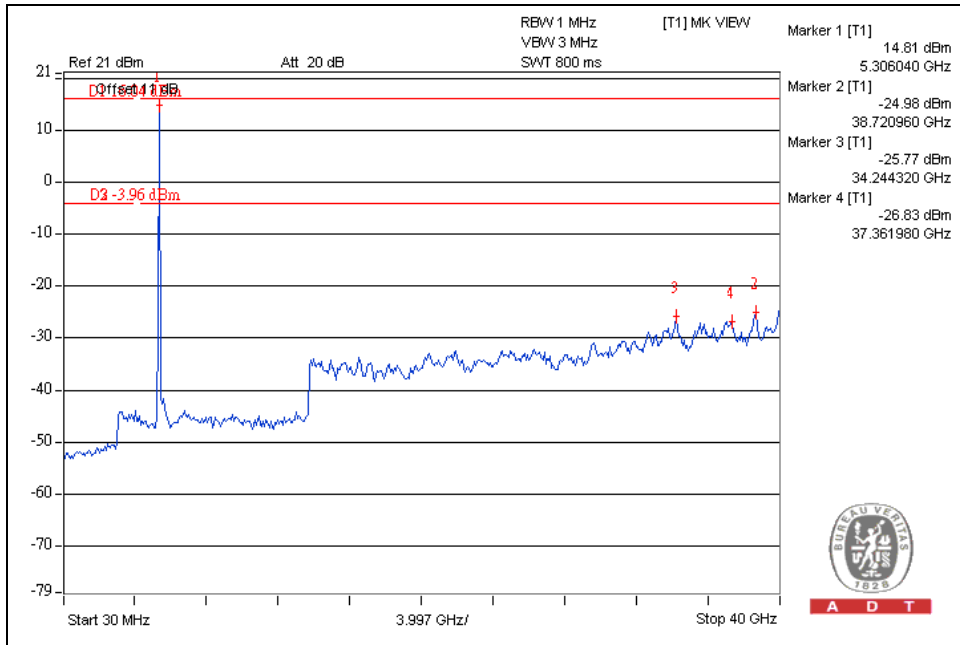
CH 64



CH 36

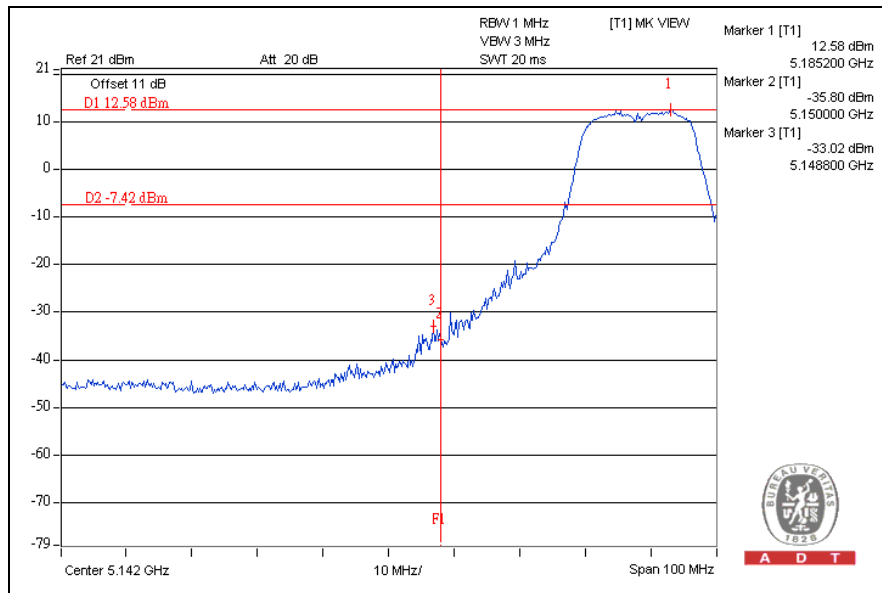


CH 64

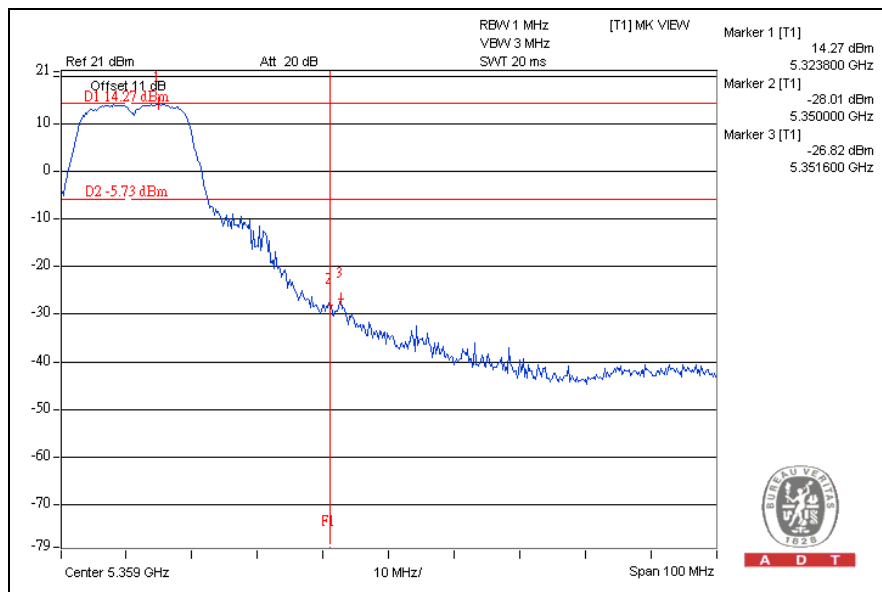


802.11n (20MHz) OFDM MODULATION:

CH36



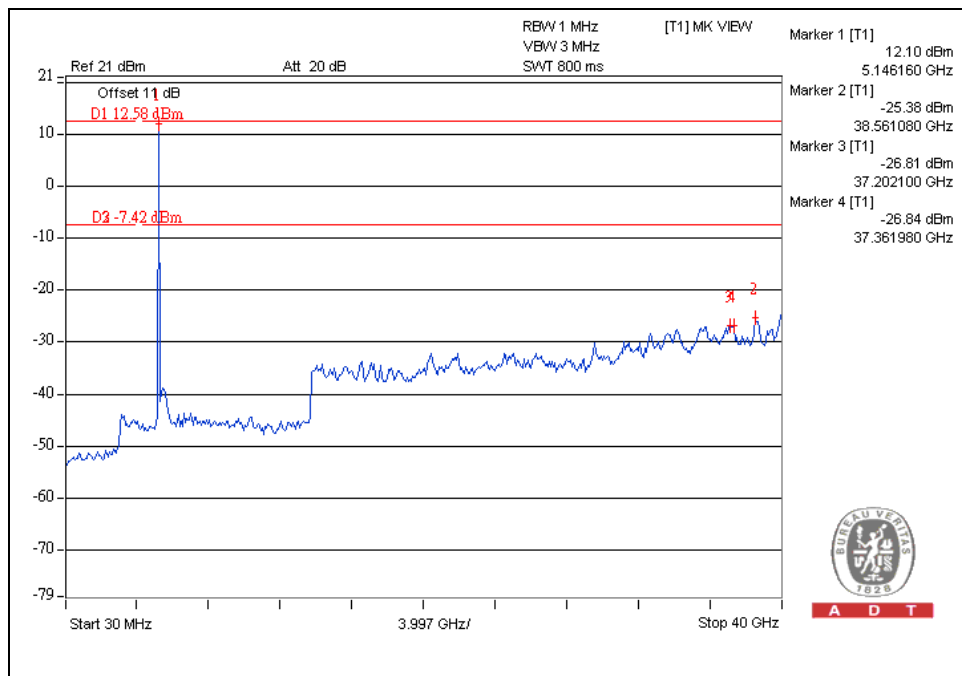
CH64





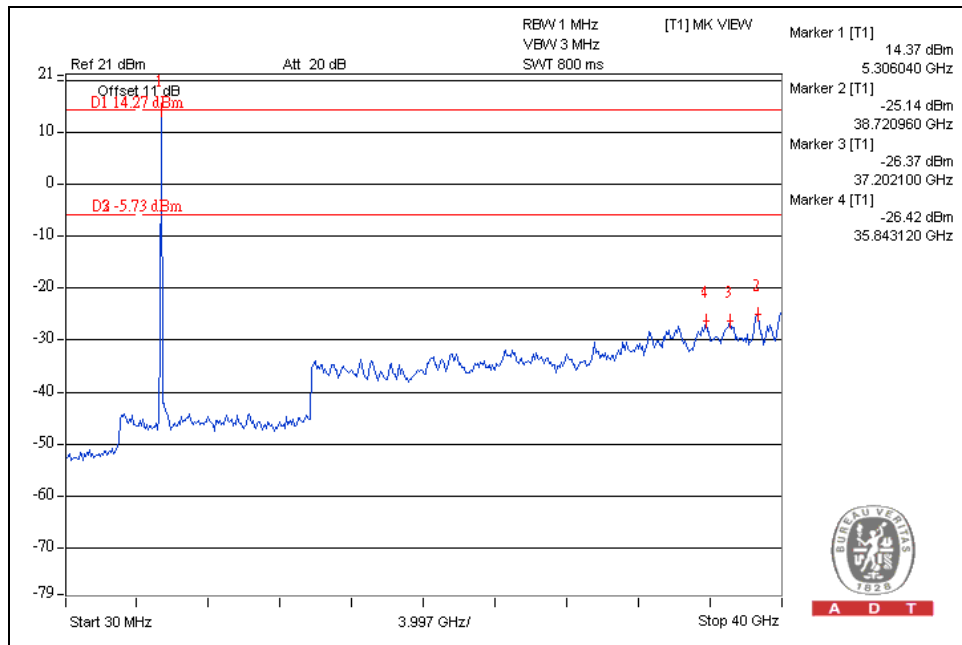
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CH36



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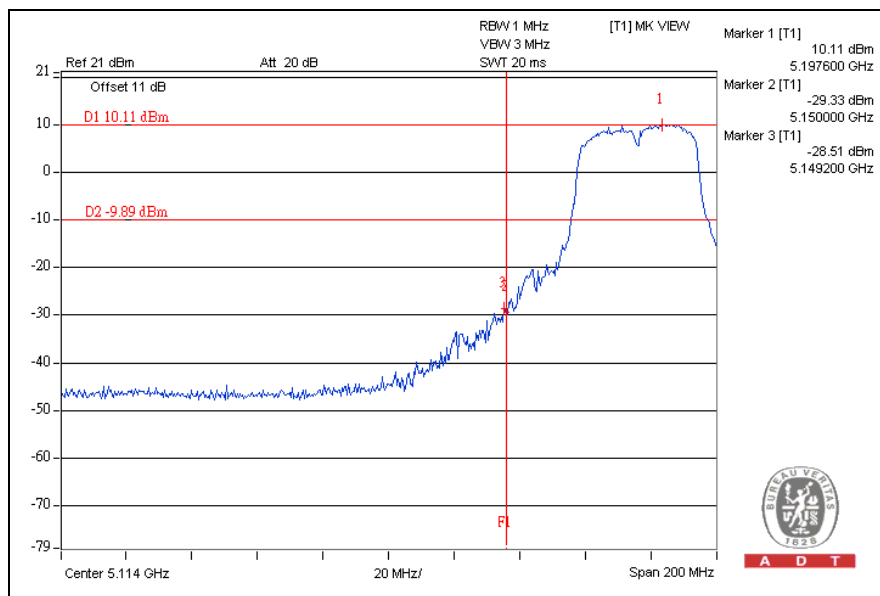
CH64



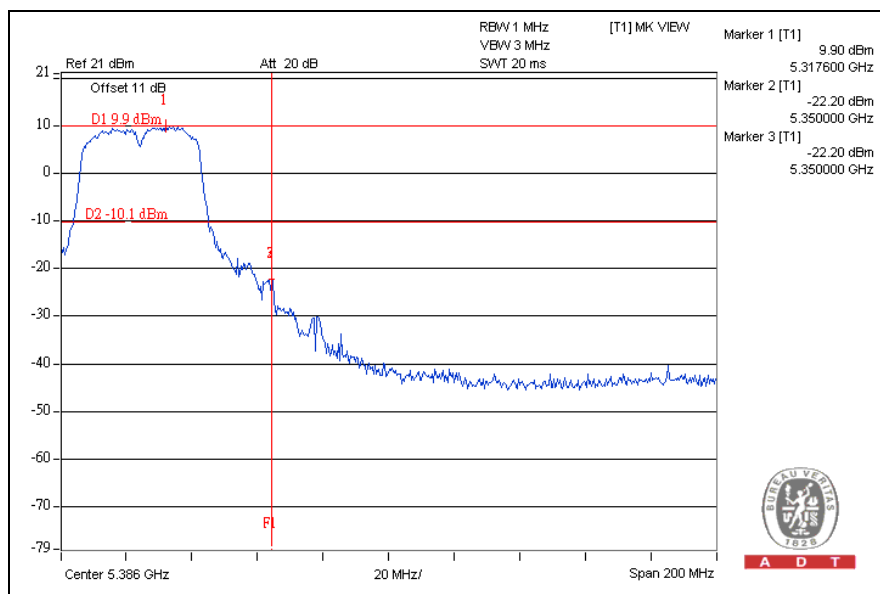
A D T

802.11n (40MHz) OFDM MODULATION:

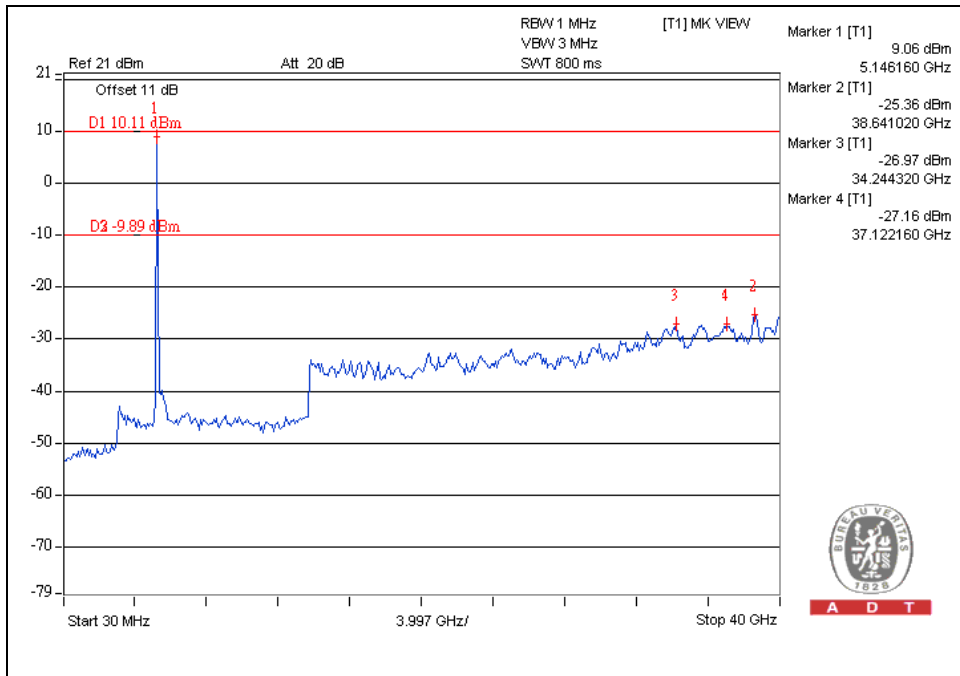
CH38



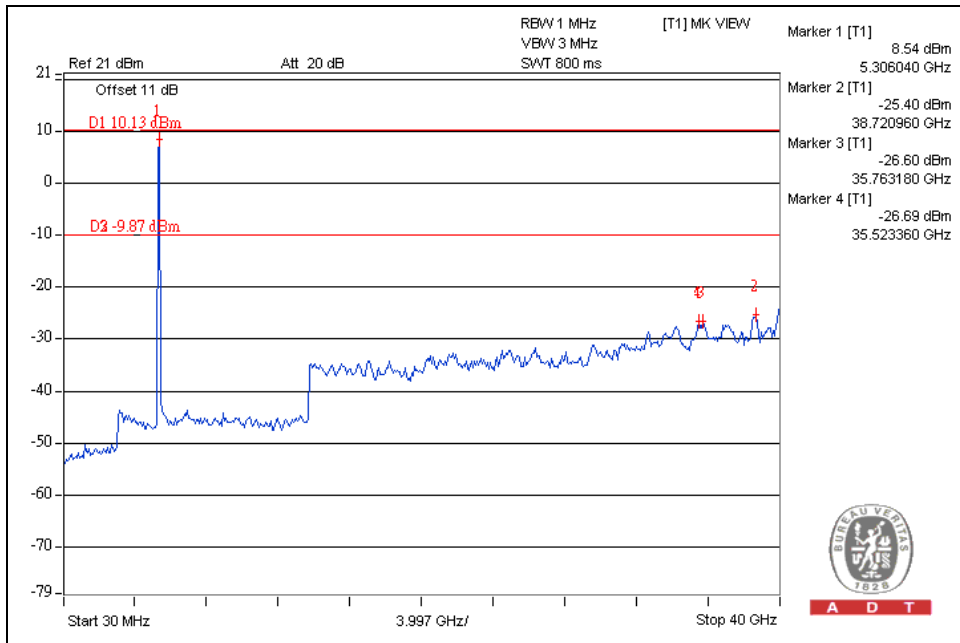
CH62



CH38



CH62

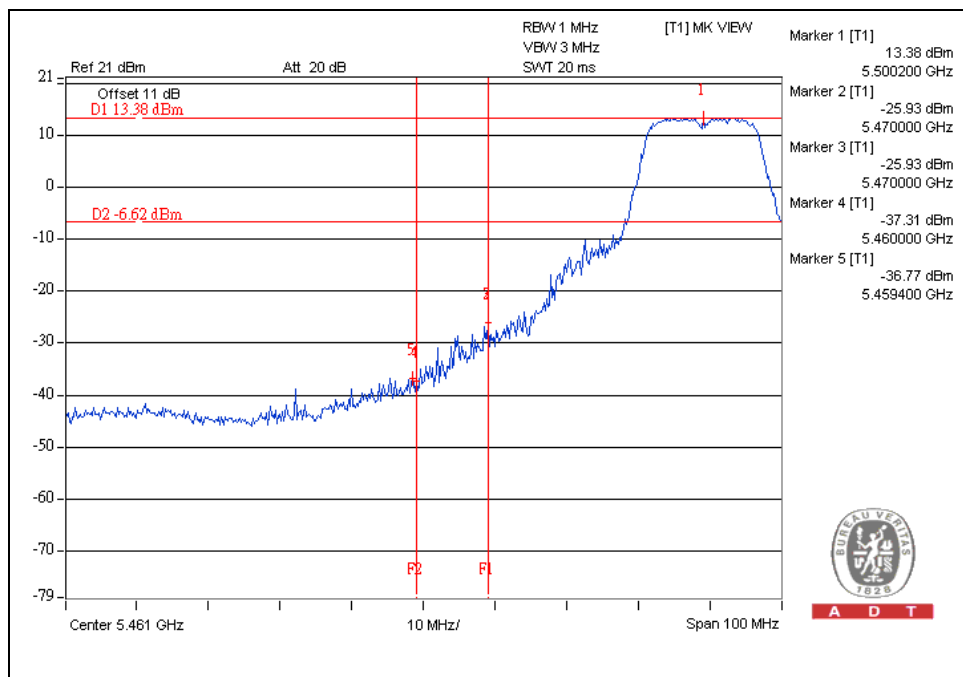


For 5.47 to 5.725GHz band:

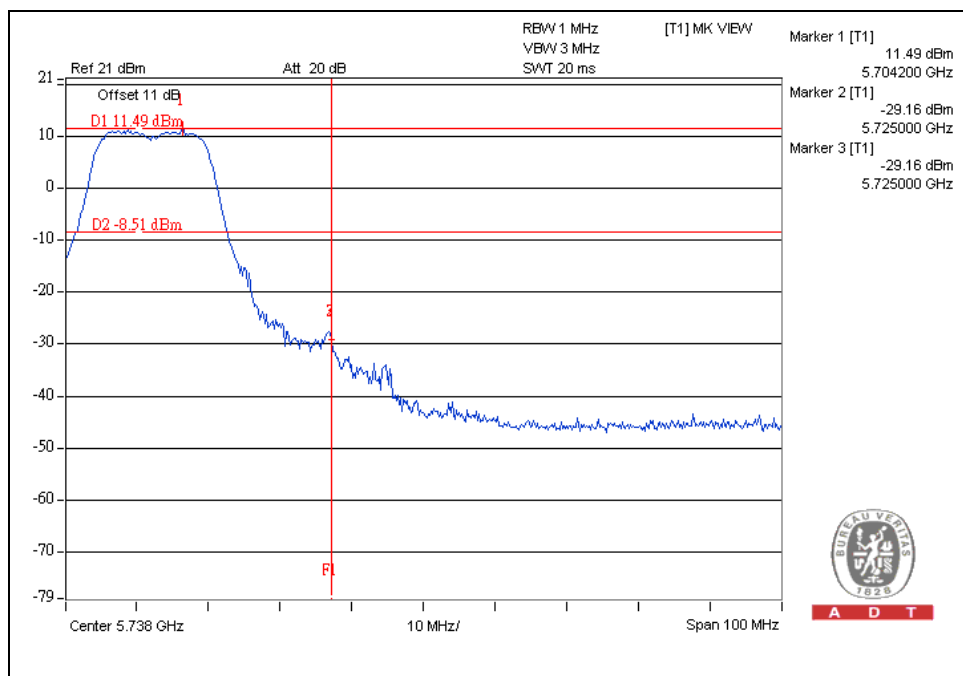
The spectrum plots (Peak RBW=1MHz, VBW=3MHz) are attached on the following pages.

802.11a OFDM MODULATION

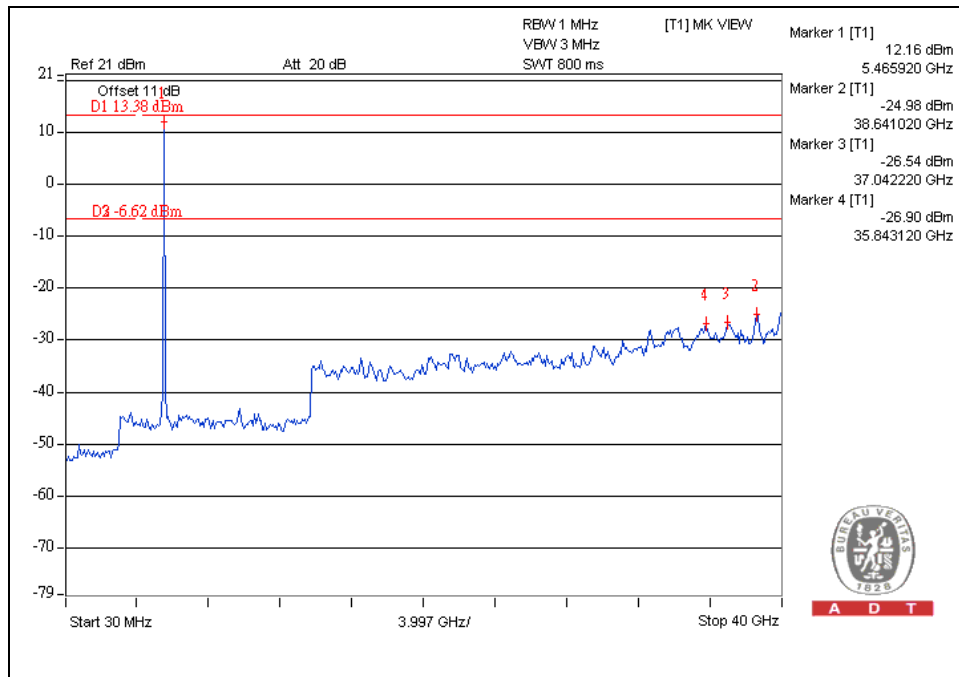
CH 100



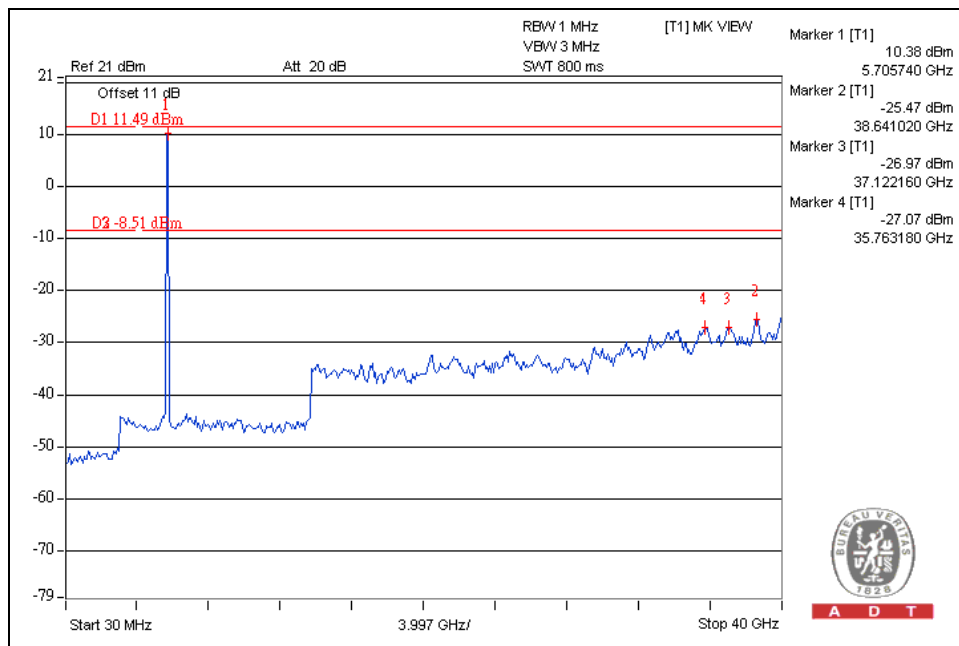
CH 140



CH 100

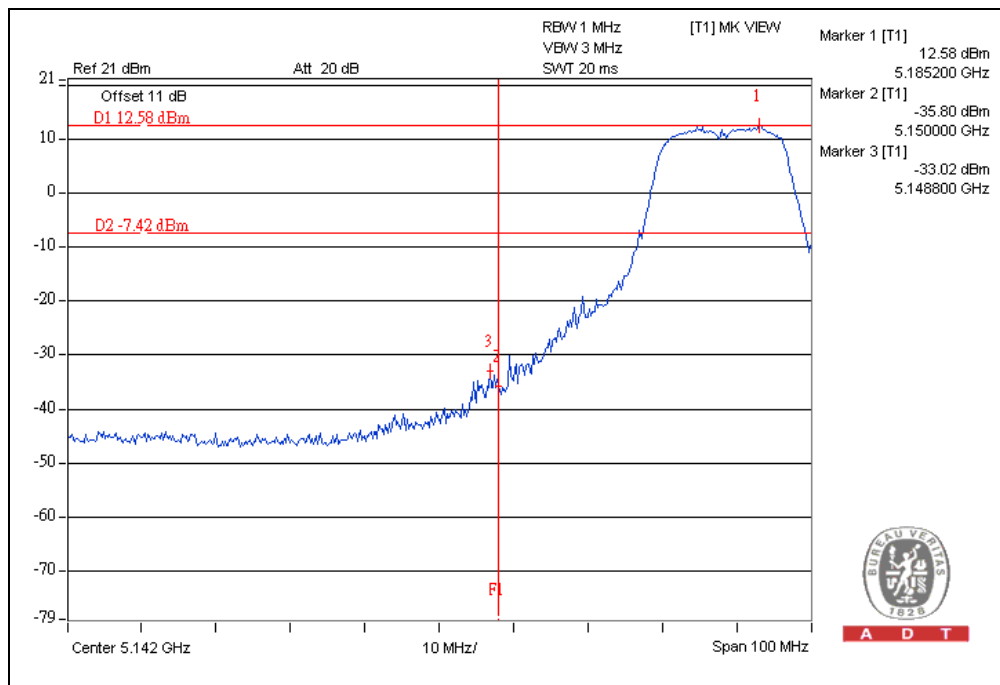


CH 140

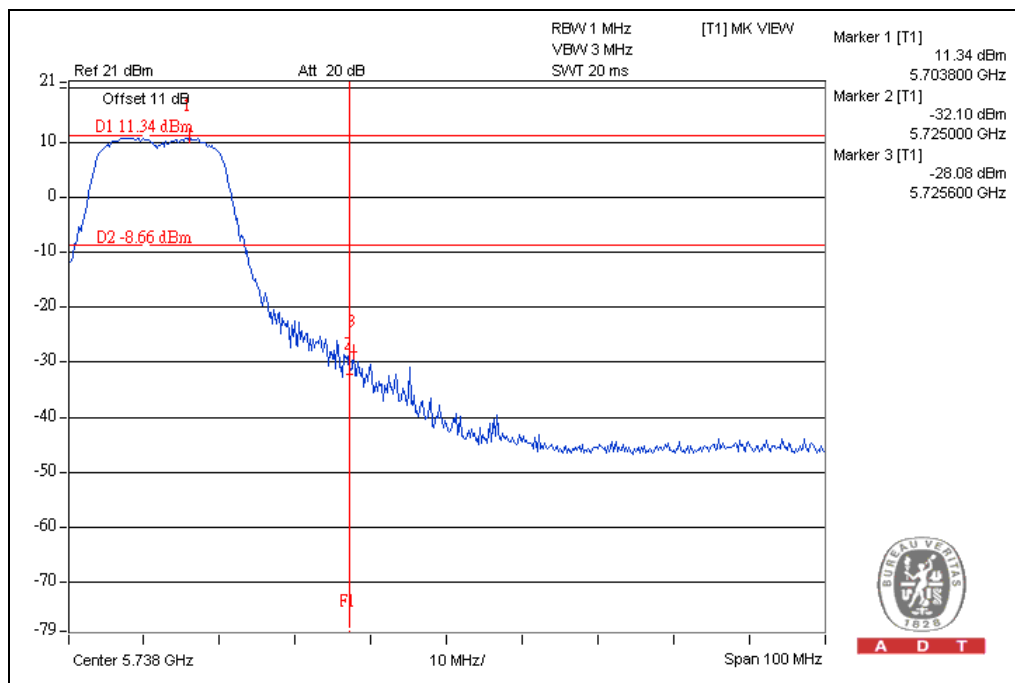


802.11n (20MHz) OFDM MODULATION:

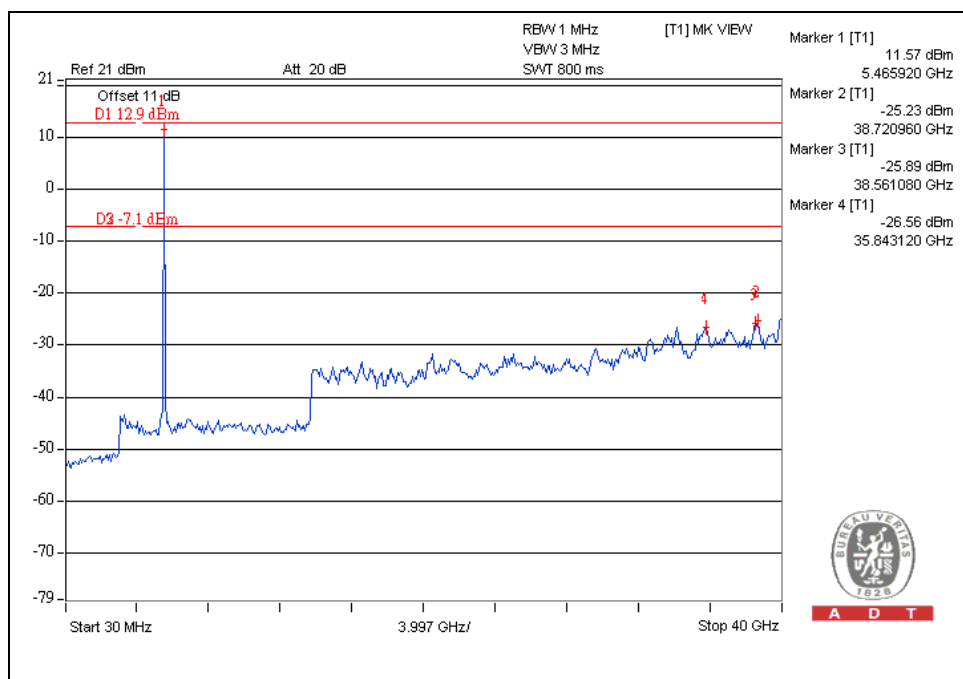
CH100



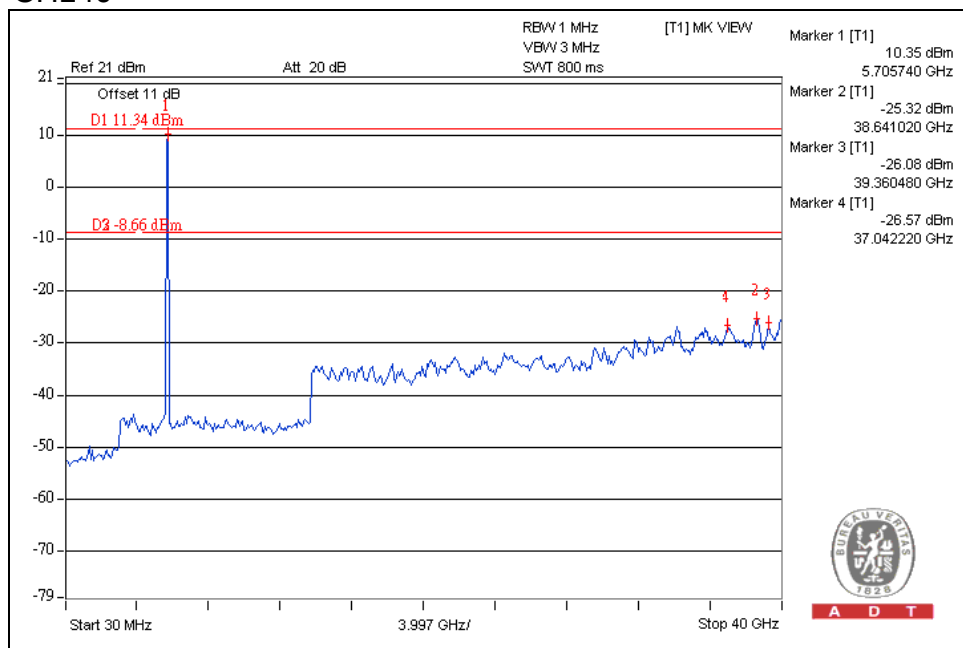
CH140



CH100

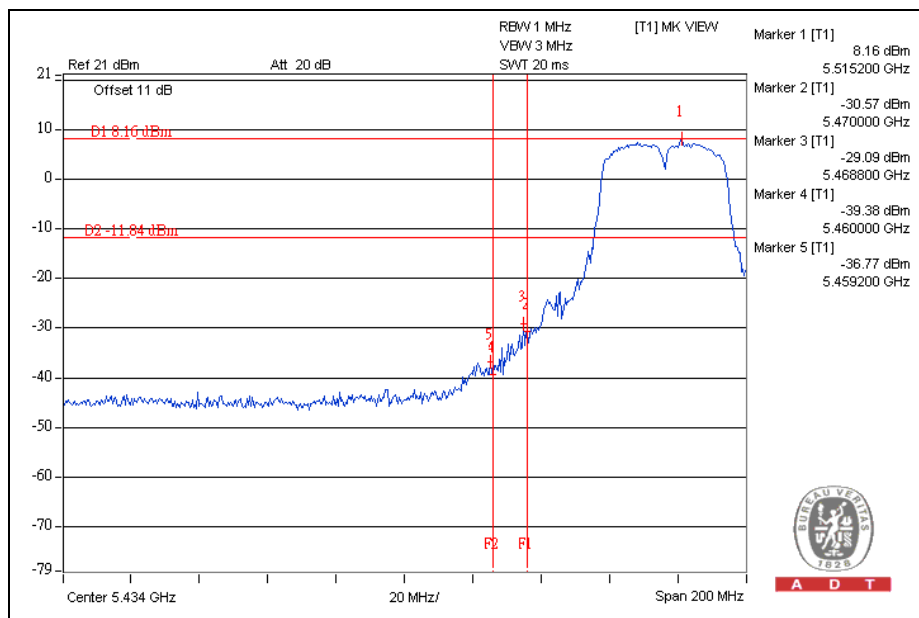


CH140

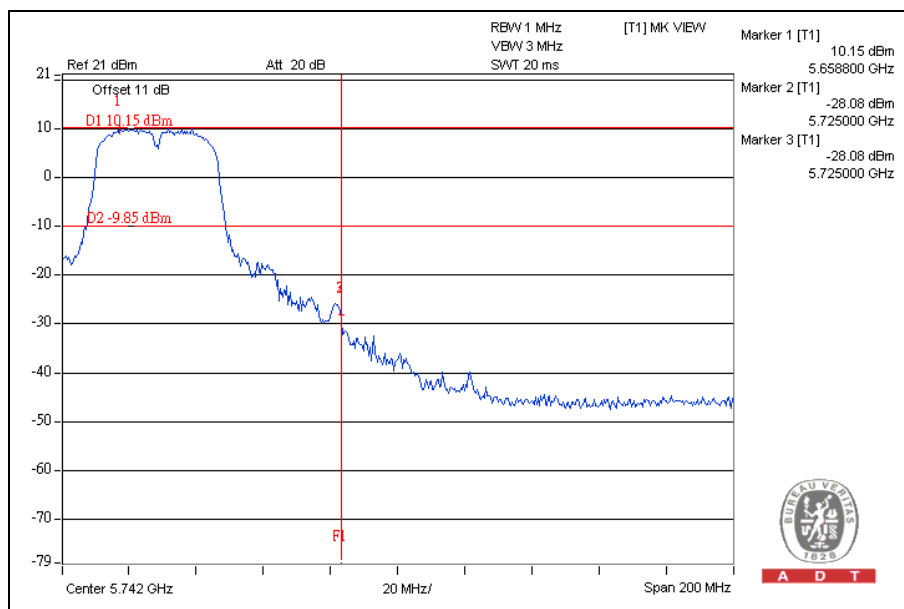


802.11n (40MHz) OFDM MODULATION:

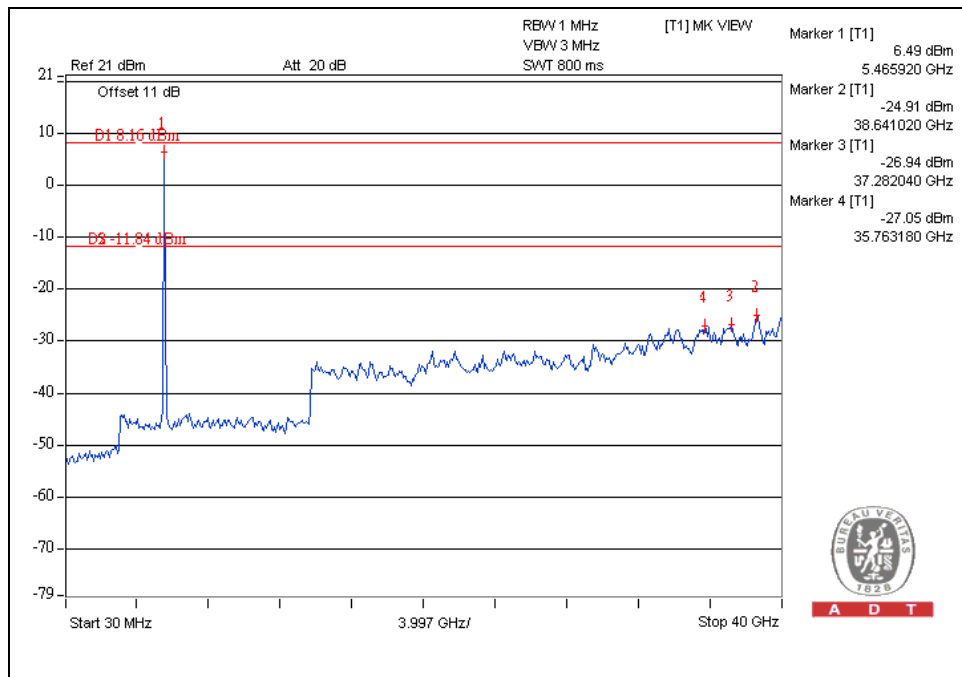
CH102



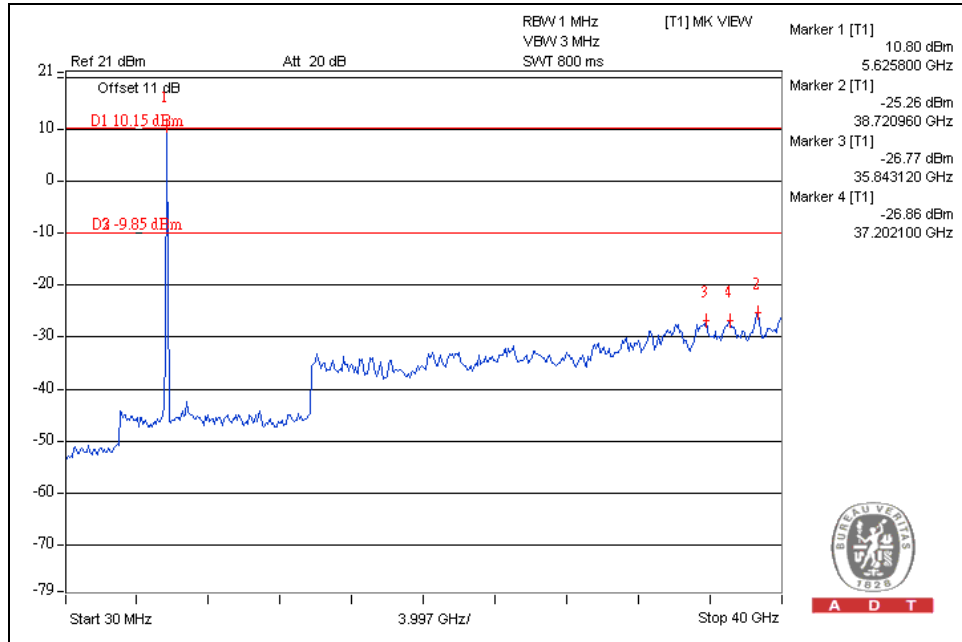
CH134



CH102



CH134



5. INFORMATION ON THE TESTING LABORATORIES

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

Copies of accreditation certificates of our laboratories obtained from approval agencies can be downloaded from our web site: www.adt.com.tw/index.5.phtml.

If you have any comments, please feel free to contact us at the following:

Linko EMC/RF Lab:

Tel: 886-2-26052180

Fax: 886-2-26052943

Hsin Chu EMC/RF Lab:

Tel: 886-3-5935343

Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety/Telecom Lab:

Tel: 886-3-3183232

Fax: 886-3-3185050

Email: service@adt.com.tw

Web Site: www.adt.com.tw

The address and road map of all our labs can be found in our web site also.



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6.APPENDIX A - MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.

--- END ---