FCC TEST REPORT (15.407)

REPORT NO.:	RF990709E01-1
MODEL NO.:	ARS63
FCC ID:	PPD-ARS63
RECEIVED:	July 08, 2010
TESTED:	July 29 to Aug. 09, 2010
ISSUED:	Aug. 24, 2010
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
LAB ADDRESS:	No. 81-1, Lu Liao Keng, 9th Ling,Wu Lung Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan
TEST LOCATION (1):	No. 81-1, Lu Liao Keng, 9th Ling,Wu Lung Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan
TEST LOCATION (2):	No. 49, Ln. 206, Wende Rd., Shangshan Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan

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1. CERTIFICATION

PRODUCT:	Low Power 1x1 802.11 a/b/g/n (SDIO) + BT Combo Card
BRAND NAME:	Atheros
MODEL NO.:	ARS63
TEST SAMPLE:	R&D SAMPLE
TESTED:	July 29 to Aug. 09, 2010
APPLICANT:	Atheros Communications, Inc.
STANDARDS:	FCC Part 15, Subpart E (Section 15.407) ANSI C63.4-2003 Canada RSS-210 issue 7 Canada RSS-Gen issue 2

The above equipment (Model: ARS63) 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 : _____ , **DATE:** Aug. 24, 2010
(Midoli Peng, Specialist)

TECHNICAL ACCEPTANCE : _____ , **DATE:** Aug. 24, 2010
(Hank Chung, Deputy Manager)

APPROVED BY : _____ , **DATE:** Aug. 24, 2010
(May Chen, Deputy Manager)

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: 47 CFR Part 15, Subpart E, RSS-210,RSS-GEN					
Standard Section			Test Type	Result	REMARK
RSS-210	RSS-GEN	47 CFR Part 15			
-	7.2.2	15.407(b)(5)	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -6.39dB at 0.150MHz
A9.3	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 -0.8dB at 5350.0MHz
	6	-	Receiver Radiated Emissions RSS-GEN Limit: Table 1	PASS	Meet the requirement of limit. Minimum passing margin is -2.2dB at 166.5MHz & 33.5MHz
A9.2	-	15.407(a/1/2/3)	Peak 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 A9.5(2)	-	15.407(a/1/2/3)	Peak Power Spectral Density	PASS	Meet the requirement of limit
A9.5(5)	4.5	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 "RF990709E01-2")
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. (RF990709E01).

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	Low Power 1x1 802.11 a/b/g/n (SDIO) + BT Combo Card
MODEL NO.	ARS63
FCC ID	PPD-ARS63
IC ID	4104A-ARS63
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** 802.11a: 5.18 ~ 5.24GHz, 5.26 ~ 5.32GHz,5.50 ~ 5.70GHz
	For 15.247 802.11b & 802.11g: 2.412 ~ 2.462GHz 802.11a: 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: 85.1mW 802.11n (20MHz): 70.8mW 802.11n (40MHz): 81.3mW **For 15.247(2.4GHz)** 802.11b: 125.9mW 802.11g: 239.9mW 802.11n (20MHz): 234.4mW **For 15.247(5GHz)** 802.11a: 218.8mW 802.11n (20MHz): 239.9mW 802.11n (40MHz): 257.0mW
ANTENNA TYPE	See item 3.2
ANTENNA CONNECTOR	See item 3.2
DATA CABLE	NA
I/O PORTS	NA
ASSOCIATED DEVICES	NA

NOTE:

1. There are Bluetooth technology and WLAN technology used for the EUT. <the Bluetooth test data please refer "RF990709E01-2">

2. The EUT incorporates CDD function with 802.11a, 802.11b, 802.11g and SISO function with 802.11n.

3. The EUT is 1 * 1 spatial SISO without beam forming function. The antenna configuration is one transmitter antenna and one receiver antenna, as there are 2 PIFA antennas.

4. The EUT complies with 802.11n standards and backwards compatible with 802. 11a, 802.11b, 802.11g products.

5. 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.

6. 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
			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	300mm

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
			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	300mm

All of antenna can be application for WLAN and Bluetooth.

Antenna (model: 81.ED415.001) was chosen for 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 ³ 1G	APCM	
-	√	√	√	√	-

Where **PLC:** Power Line Conducted Emission **RE < 1G:** Radiated Emission below 1GHz

RE ³ 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, 120, 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, 116, 132, 140	OFDM	BPSK	6
802.11n (20MHz)	36 to 140	36, 40, 48, 52, 60, 64, 100, 116, 132, 140	OFDM	BPSK	6.5
802.11n (40MHz)	38 to 134	38,46, 54, 62, 102, 110, 134	OFDM	BPSK	13.5

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE≥1G	27deg. C, 72%RH, 1011 hPa	120Vac, 60Hz	Eric Lee
RE<1G	24deg. C, 68%RH, 1011 hPa	120Vac, 60Hz	Eric Lee
PLC	26deg. C, 75%RH, 1011 hPa	120Vac, 60Hz	Eric Lee
APCM	24deg. C, 68%RH, 1011 hPa	120Vac, 60Hz	Eric Lee

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:

47 CFR Part 15, Subpart E. (15.407)

ANSI C63.4 : 2003

Canada RSS-210 issue 7

Canada RSS-Gen issue 2

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.

3.5 DESCRIPTION OF SUPPORT UNITS

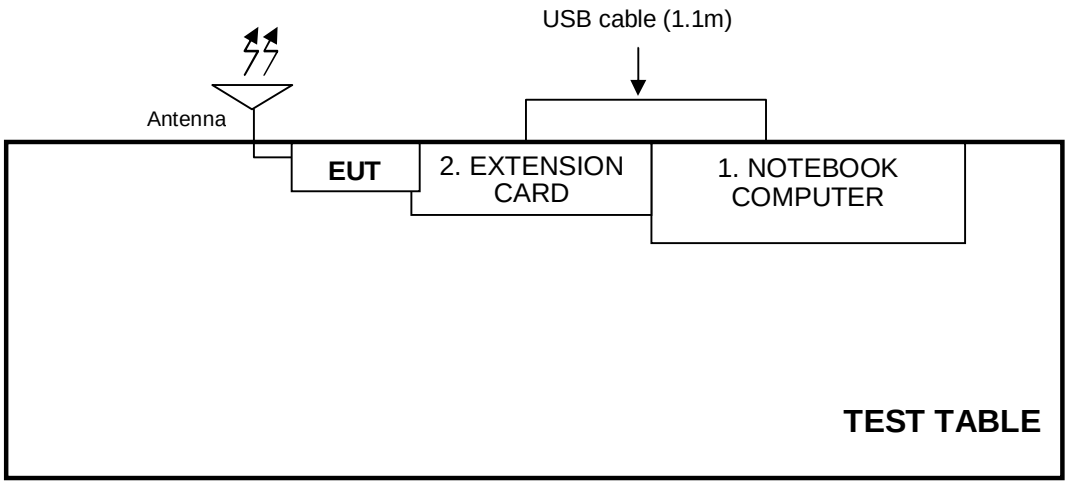
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

No.	Product	Brand	Model No.	Serial No.	FCC ID
1	NOTEBOOK COMPUTER	DELL	PP32LA	GSLB32S	FCC DoC
2	EXTENSION CARD	Atheros	NA	NA	NA

No.	Signal cable description
1	NA
2	NA

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

3.6 CONFIGURATION OF SYSTEM UNDER TEST



4.TEST TYPES AND RESULTS

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dBμV)	
	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, 2010	Mar. 08, 2011
Line-Impedance Stabilization Network (for EUT)	NSLK 8127	8127-522	Sep. 23, 2009	Sep. 22, 2010
Line-Impedance Stabilization Network (for Peripheral)	ESH3-Z5	848773/004	Oct. 26, 2009	Oct. 25, 2010
RF Cable (JYEBAO)	5DFB	COBCAB-001	Nov. 24, 2009	Nov. 23, 2010
50 ohms Terminator	50	3	Oct. 28, 2009	Oct. 27, 2010
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.

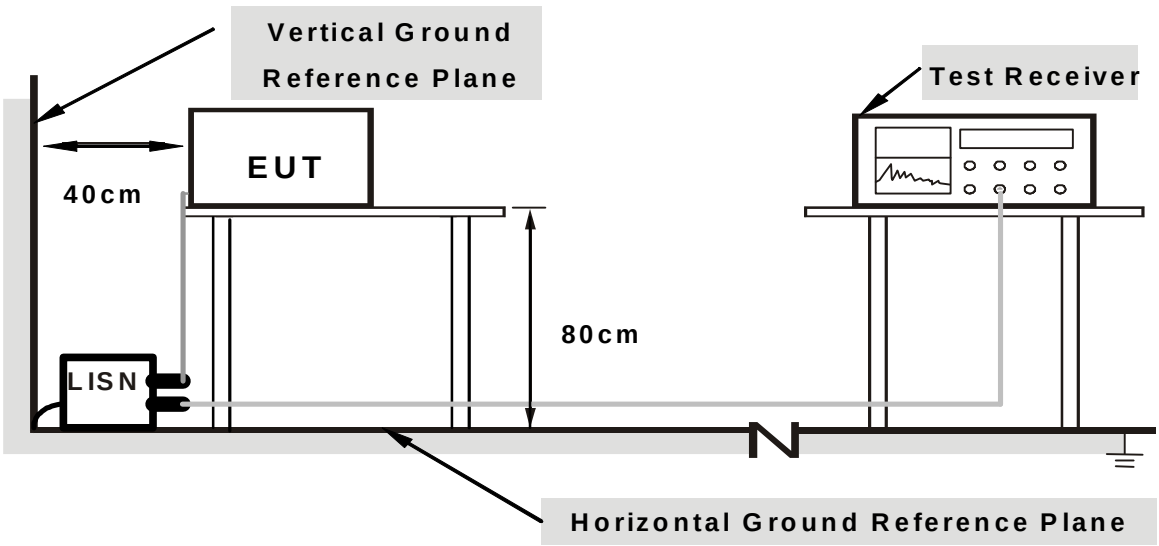
4.1.3 TEST PROCEDURES

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.

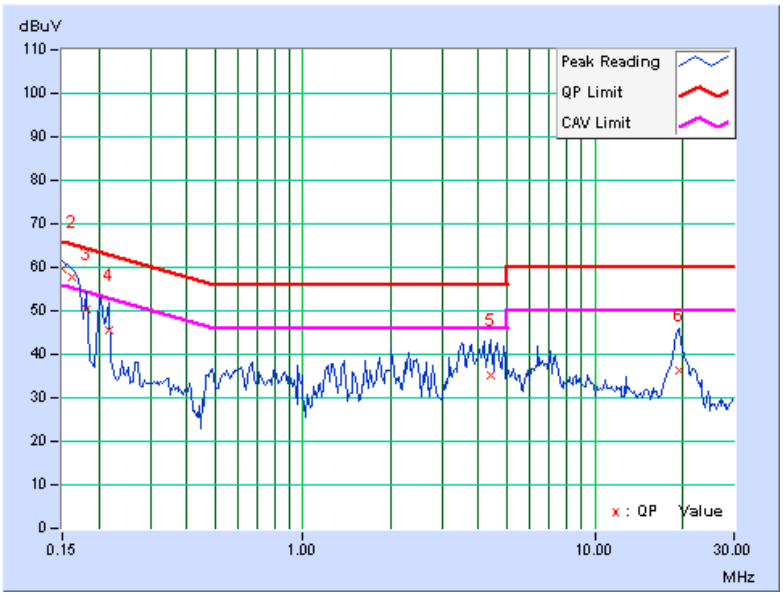
2. The communication partner run test program "ART_win_release_ar6003_v_0.2.6_061110" to enable EUT under transmission/receiving condition continuously at specific channel frequency.

4.1.7 TEST RESULTS

PHASE	Line (L)	6dB BANDWIDTH	9 kHz

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	**0.150**	**0.05**	**59.56**	**39.54**	**59.61**	**39.59**	**66.00**	**56.00**	**-6.39**	**-16.41**
2	0.162	0.05	57.58	37.93	57.63	37.98	65.38	55.38	-7.74	-17.39
3	0.181	0.05	50.15	-	50.20	-	64.43	54.43	-14.23	-
4	0.216	0.05	45.57	-	45.62	-	62.96	52.96	-17.33	-
5	4.383	0.20	35.17	-	35.37	-	56.00	46.00	-20.63	-
6	19.551	0.50	35.84	-	36.34	-	60.00	50.00	-23.66	-

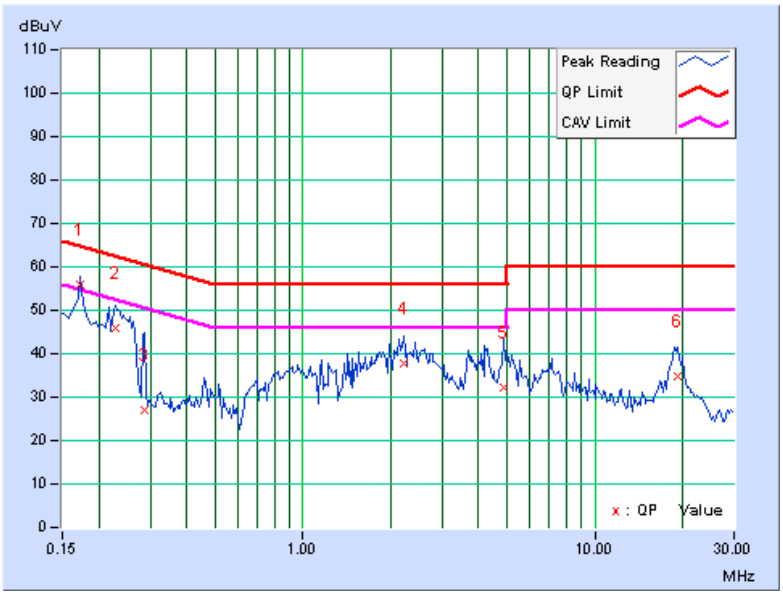
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



PHASE	Neutral (N)	6dB BANDWIDTH	9 kHz

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.173	0.06	55.83	40.32	55.89	40.38	64.79	54.79	-8.90	-14.41
2	0.228	0.06	46.02	-	46.08	-	62.52	52.52	-16.44	-
3	0.287	0.06	26.96	-	27.02	-	60.62	50.62	-33.59	-
4	2.230	0.15	37.73	-	37.88	-	56.00	46.00	-18.12	-
5	4.883	0.22	32.03	-	32.25	-	56.00	46.00	-23.75	-
6	19.145	0.51	34.48	-	34.99	-	60.00	50.00	-25.01	-

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

Emissions radiated outside of the specified bands, shall be according to the general radiated limits in 15.209 (RSS-210 table 2 & 3) 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. As shown in 15.35(b), 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 under any condition of modulation.
4. Section 15.205 restricted bands of operation shall compliance with the limits in Section 15.209.

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

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

4.2.3 TEST INSTRUMENTS

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	MY46520310	Aug. 18, 2009	Aug. 17, 2010
Agilent Signal Generator	N5181A	MY49060347	July 18, 2010	July 17, 2011
LIG NEX1 Test Receiver	ER-265	L09068005	Aug. 31, 2009	Aug. 30, 2010
Mini-Circuits Pre-Amplifier	ZFL-1000VH2B	AMP-ZFL-04	Nov. 18, 2009	Nov. 17, 2010
Agilent Pre-Amplifier	8449B	3008A02465	Mar. 01, 2010	Feb. 28, 2011
Miteq Pre-Amplifier	AFS33-18002650-30-8P-44	881786	NA	NA
SCHWARZBECK Trilog Broadband Antenna	VULB 9168	9168-361	Sep. 30, 2009	Sep. 29, 2010
AISI Horn_Antenna	AIH.8018	0000220091110	Nov. 16, 2009	Nov. 15, 2010
SCHWARZBECK Horn_Antenna	BBHA 9170	9170-424	Sep. 30, 2009	Sep. 29, 2010
RF CABLE	NA	RF104-205 RF104-207 RF104-208	Dec. 24, 2009	Dec. 23, 2010
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.

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 antenna is a broadband antenna, and its height 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.

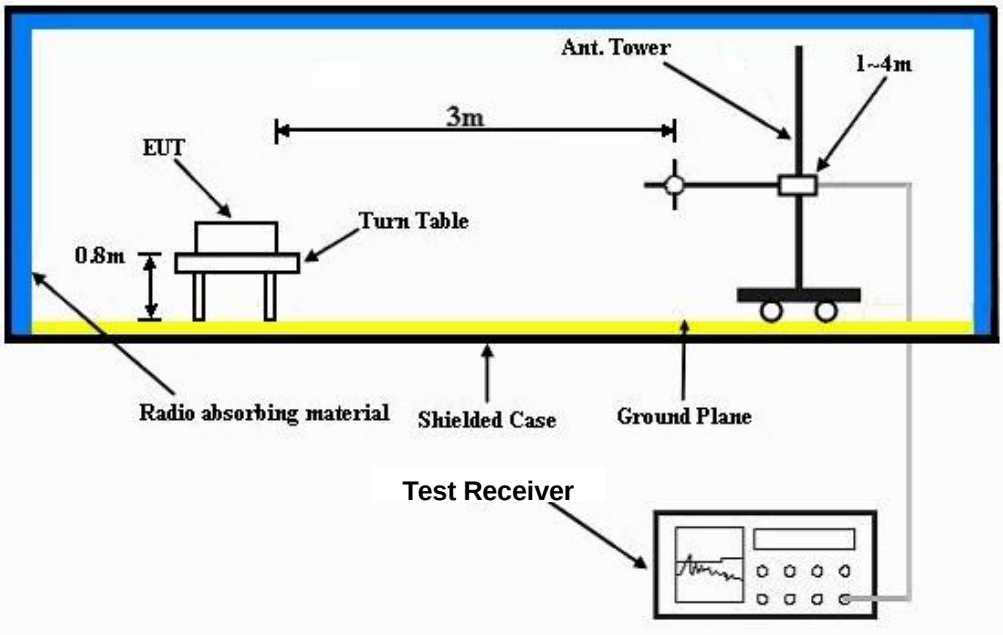
NOTE:

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	24deg. C, 70%RH 1011 hPa	**TESTED BY**	Eric Lee

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	99.70	33.9 QP	43.5	-9.6	1.75 H	360	23.95	9.95
2	115.00	34.0 QP	43.5	-9.5	1.50 H	358	21.93	12.07
3	133.20	34.0 QP	43.5	-9.5	2.25 H	0	20.30	13.70
4	150.00	35.0 QP	43.5	-8.5	1.50 H	360	20.70	14.30
5	166.50	41.3 QP	43.5	-2.2	1.75 H	220	27.30	14.00
6	200.00	37.2 QP	43.5	-6.3	1.25 H	0	25.99	11.21
7	248.20	40.0 QP	46.0	-6.0	1.25 H	281	27.11	12.89
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	33.50	37.8 QP	40.0	-2.2	1.00 V	291	24.32	13.46
2	99.80	26.8 QP	43.5	-16.7	1.00 V	28	16.85	9.95
3	149.86	33.6 QP	43.5	-9.9	1.25 V	360	19.30	14.30
4	166.05	34.4 QP	43.5	-9.1	2.25 V	312	20.38	14.02
5	248.82	33.3 QP	46.0	-12.7	1.00 V	217	20.39	12.91
6	365.25	31.0 QP	46.0	-15.0	1.75 V	360	14.12	16.88

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	24deg. C, 68%RH 1011 hPa	TESTED BY	Eric Lee

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	59.8 PK	74.0	-14.2	1.38 H	136	19.40	40.40
2	5150.00	47.4 AV	54.0	-6.6	1.38 H	136	7.00	40.40
3	*5180.00	108.2 PK			1.38 H	136	67.75	40.45
4	*5180.00	97.3 AV			1.38 H	136	56.85	40.45
5	#10360.00	62.1 PK	68.3	-26.2	1.33 H	222	15.29	46.81
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	5150.00	57.0 PK	74.0	-17.0	1.37 V	129	16.60	40.40
2	5150.00	45.4 AV	54.0	-8.6	1.37 V	129	5.00	40.40
3	*5180.00	101.4 PK			1.36 V	121	60.95	40.45
4	*5180.00	91.9 AV			1.37 V	129	51.45	40.45
5	#10360.00	65.1 PK	68.3	-23.2	1.59 V	341	18.29	46.81

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	24deg. C, 68%RH 1011 hPa	TESTED BY	Eric Lee

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	108.9 PK			1.40 H	122	68.41	40.49
2	*5200.00	98.1 AV			1.40 H	122	57.61	40.49
3	#10400.00	63.3 PK	68.3	-25.0	1.39 H	250	16.45	46.85
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	101.9 PK			1.37 V	122	61.41	40.49
2	*5200.00	92.1 AV			1.37 V	122	51.61	40.49
3	#10400.00	65.4 PK	68.3	-22.9	1.44 V	265	18.55	46.85

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	24deg. C, 68%RH 1011 hPa	**TESTED BY**	Eric Lee

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	109.3 PK			1.06 H	188	68.74	40.56
2	*5240.00	99.2 AV			1.06 H	188	58.64	40.56
3	#10480.00	63.3 PK	68.3	-25.0	1.39 H	250	16.39	46.91
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	102.5 PK			1.41 V	119	61.94	40.56
2	*5240.00	93.4 AV			1.41 V	119	52.84	40.56
3	#10480.00	65.1 PK	68.3	-23.2	1.32 V	300	18.19	46.91

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	24deg. C, 68%RH 1011 hPa	**TESTED BY**	Eric Lee

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	111.9 PK			1.39 H	180	71.30	40.60
2	*5260.00	101.8 AV			1.39 H	180	61.20	40.60
3	#10520.00	63.1 PK	68.3	-25.2	1.40 H	231	16.16	46.94
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	103.9 PK			1.38 V	120	63.30	40.60
2	*5260.00	97.4 AV			1.38 V	120	56.80	40.60
3	#10520.00	64.9 PK	68.3	-23.4	1.50 V	69	17.96	46.94

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	24deg. C, 68%RH 1011 hPa	**TESTED BY**	Eric Lee

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	111.8 PK			1.40 H	199	71.13	40.67
2	*5300.00	101.9 AV			1.40 H	199	61.23	40.67
3	10600.00	65.0 PK	74.0	-9.0	1.42 H	232	18.01	46.99
4	10600.00	51.0 AV	54.0	-3.0	1.42 H	232	4.01	46.99
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	105.9 PK			1.39 V	119	65.23	40.67
2	*5300.00	96.6 AV			1.39 V	119	55.93	40.67
3	10600.00	64.0 PK	74.0	-10.0	1.62 V	259	17.01	46.99
4	10600.00	50.0 AV	54.0	-4.0	1.62 V	259	3.01	46.99

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	24deg. C, 68%RH 1011 hPa	TESTED BY	Eric Lee

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	108.6 PK			1.16 H	111	67.89	40.71
2	*5320.00	98.5 AV			1.16 H	111	57.79	40.71
3	5350.00	67.2 PK	74.0	-6.8	1.16 H	111	26.43	40.77
4	5350.00	52.8 AV	54.0	-1.2	1.16 H	111	12.03	40.77
5	10640.00	64.9 PK	74.0	-9.1	1.43 H	156	17.88	47.02
6	10640.00	48.0 AV	54.0	-6.0	1.43 H	156	0.98	47.02
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	103.1 PK			1.22 V	312	62.39	40.71
2	*5320.00	94.0 AV			1.22 V	312	53.29	40.71
3	5350.00	61.2 PK	74.0	-12.8	1.21 V	311	20.43	40.77
4	5350.00	49.3 AV	54.0	-4.7	1.21 V	311	8.53	40.77
5	10640.00	66.1 PK	74.0	-7.9	1.43 V	269	19.08	47.02
6	10640.00	49.0 AV	54.0	-5.0	1.43 V	269	1.98	47.02

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 100	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 68%RH 1011 hPa	TESTED BY	Eric Lee

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	62.4 PK	74.0	-11.6	1.12 H	19	21.43	40.97
2	5460.00	47.4 AV	54.0	-6.6	1.12 H	19	6.43	40.97
3	#5470.00	71.8 PK	68.3	-16.5	1.11 H	20	30.81	40.99
4	*5500.00	112.6 PK			1.35 H	137	71.55	41.05
5	*5500.00	102.0 AV			1.35 H	137	60.96	41.05
6	11000.00	67.1 PK	74.0	-6.9	1.14 H	28	19.80	47.30
7	11000.00	51.9 AV	54.0	-2.1	1.14 H	28	4.60	47.30
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	57.2 PK	74.0	-16.8	1.26 V	333	16.23	40.97
2	5460.00	45.8 AV	54.0	-8.2	1.26 V	333	4.83	40.97
3	#5470.00	65.1 PK	68.3	-23.2	1.25 V	320	24.11	40.99
4	*5500.00	106.9 PK			1.38 V	311	65.85	41.05
5	*5500.00	96.9 AV			1.38 V	311	55.85	41.05
6	11000.00	69.6 PK	74.0	-4.4	1.39 V	224	22.30	47.30
7	11000.00	52.8 AV	54.0	-1.2	1.39 V	224	5.50	47.30

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	24deg. C, 68%RH 1011 hPa	TESTED BY	Eric Lee

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	111.1 PK			1.39 H	140	69.94	41.16
2	*5600.00	100.0 AV			1.39 H	140	58.84	41.16
3	11200.00	68.0 PK	74.0	-6.0	1.44 H	161	20.64	47.36
4	11200.00	52.2 AV	54.0	-1.8	1.44 H	161	4.84	47.36
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	106.1 PK			1.30 V	309	64.94	41.16
2	*5600.00	95.4 AV			1.30 V	309	54.24	41.16
3	11200.00	69.6 PK	74.0	-4.4	1.39 V	244	22.24	47.36
4	11200.00	52.3 AV	54.0	-1.7	1.39 V	244	4.94	47.36

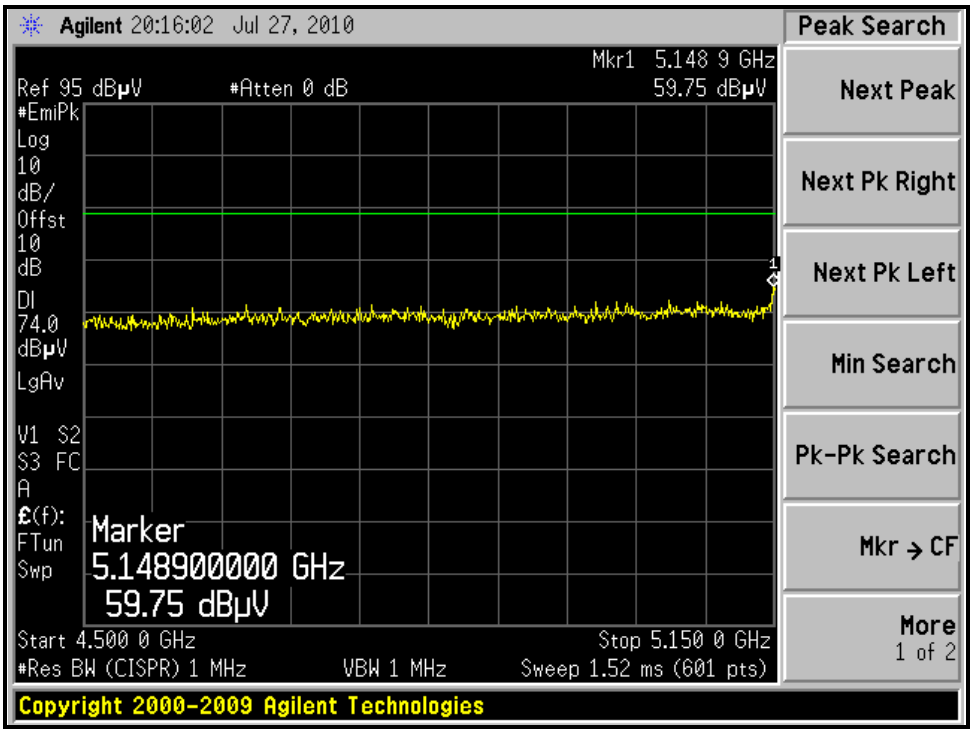
REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

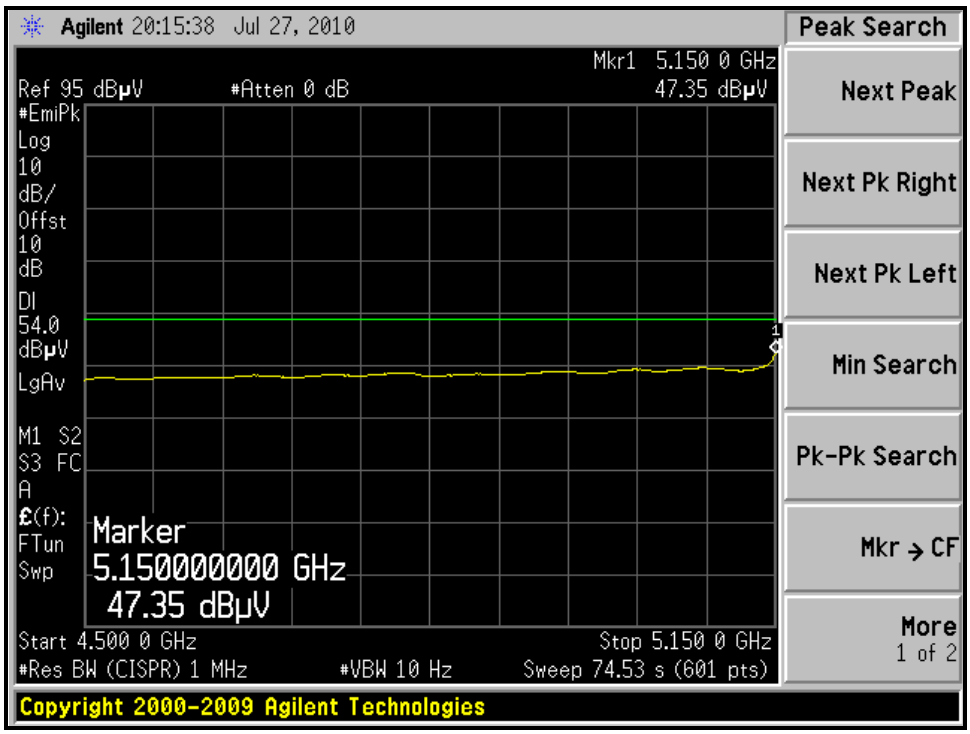
EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 140	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 68%RH 1011 hPa	TESTED BY	Eric Lee

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	*5700.00	112.1 PK			1.23 H	206	70.82	41.28
2	*5700.00	101.3 AV			1.23 H	206	60.02	41.28
3	#5725.00	73.2 PK	68.3	-15.1	1.14 H	29	31.89	41.31
4	11400.00	66.8 PK	74.0	-7.2	1.20 H	88	19.42	47.38
5	11400.00	50.2 AV	54.0	-3.8	1.20 H	88	2.82	47.38
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	107.4 PK			1.43 V	152	66.12	41.28
2	*5700.00	96.9 AV			1.43 V	152	55.62	41.28
3	#5725.00	66.9 PK	68.3	-21.4	1.30 V	311	25.59	41.31
4	11400.00	68.4 PK	74.0	-5.6	1.40 V	250	21.02	47.38
5	11400.00	52.5 AV	54.0	-1.5	1.40 V	250	5.12	47.38

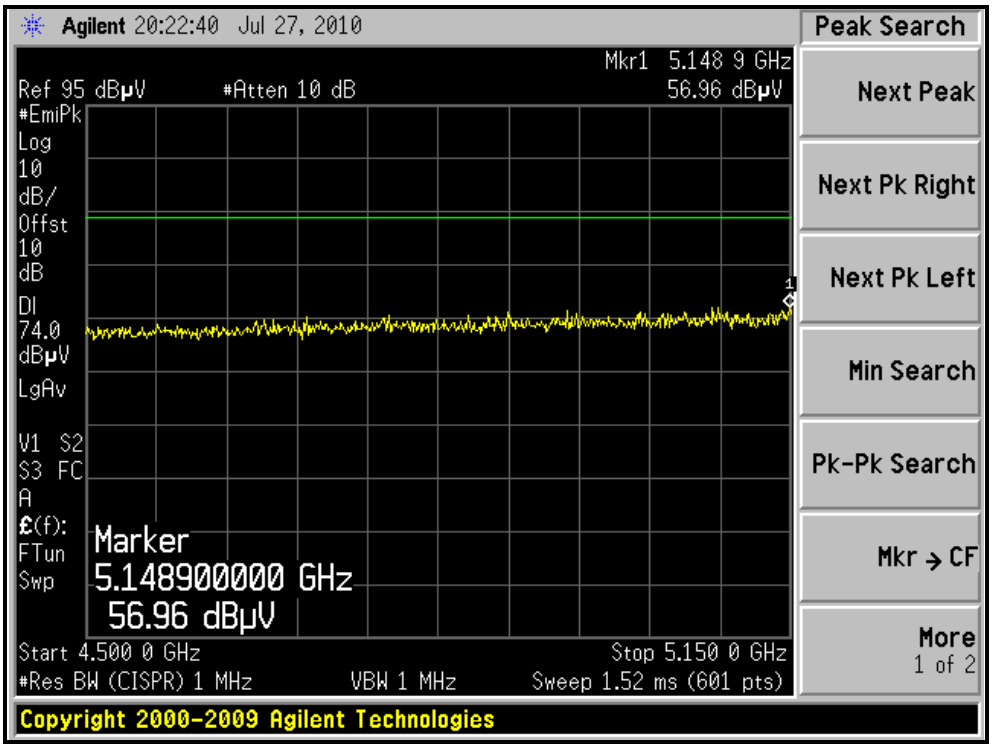
REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6.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

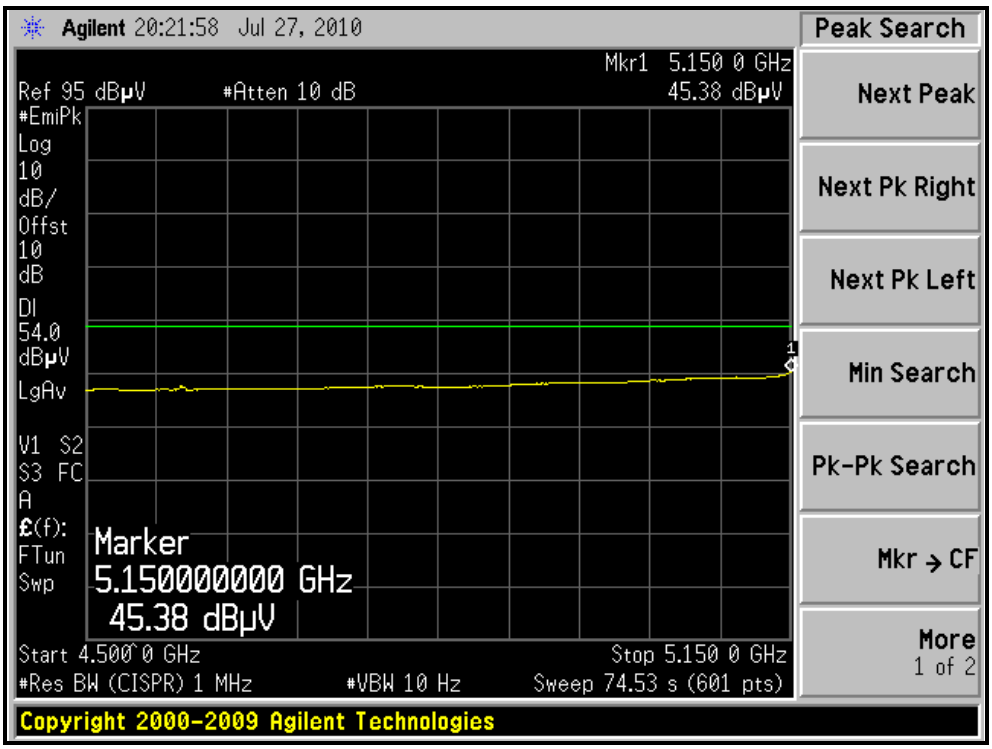
RESTRICTED BANDEDGE (802.11a MODE, CH36, HORIZONTAL)



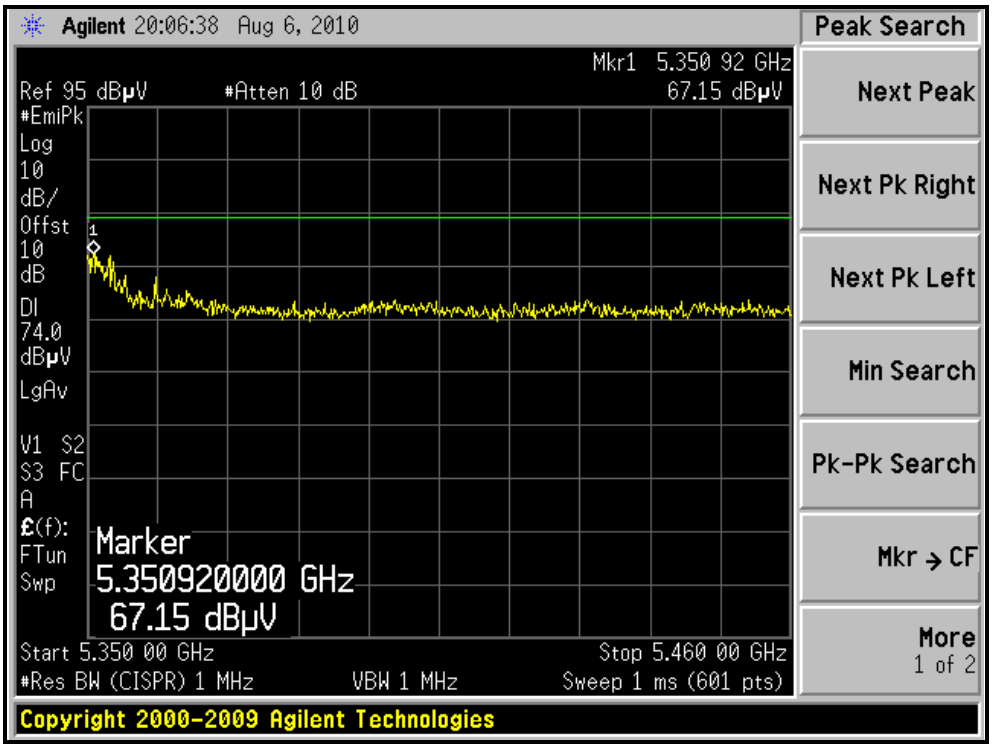


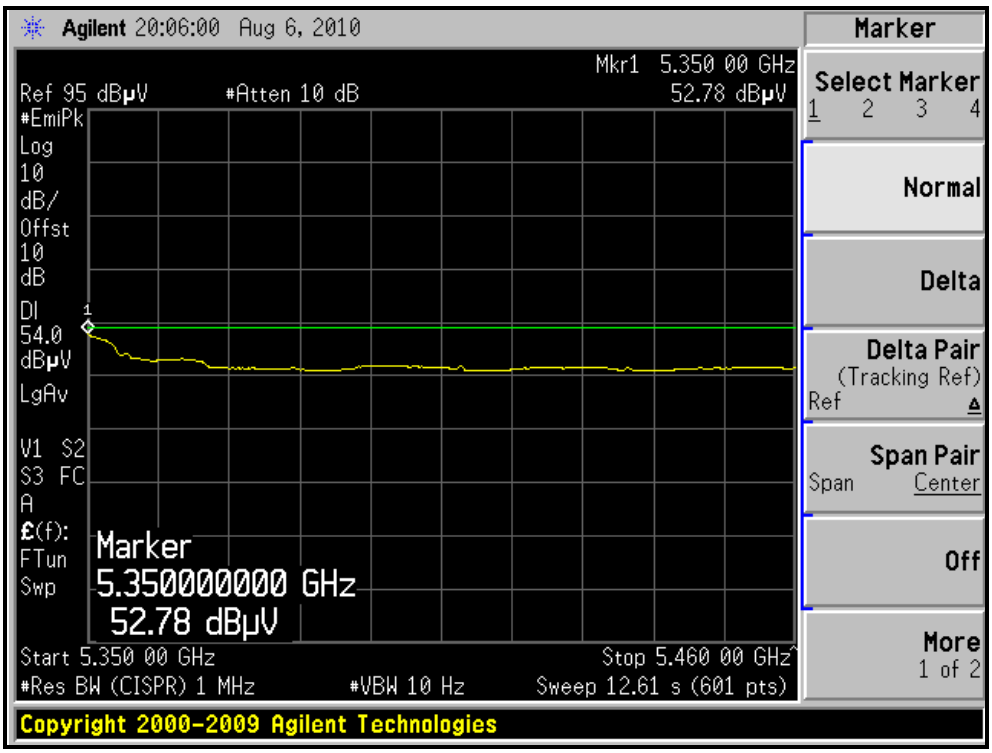
RESTRICTED BANDEDGE (802.11a MODE, CH36, VERTICAL)



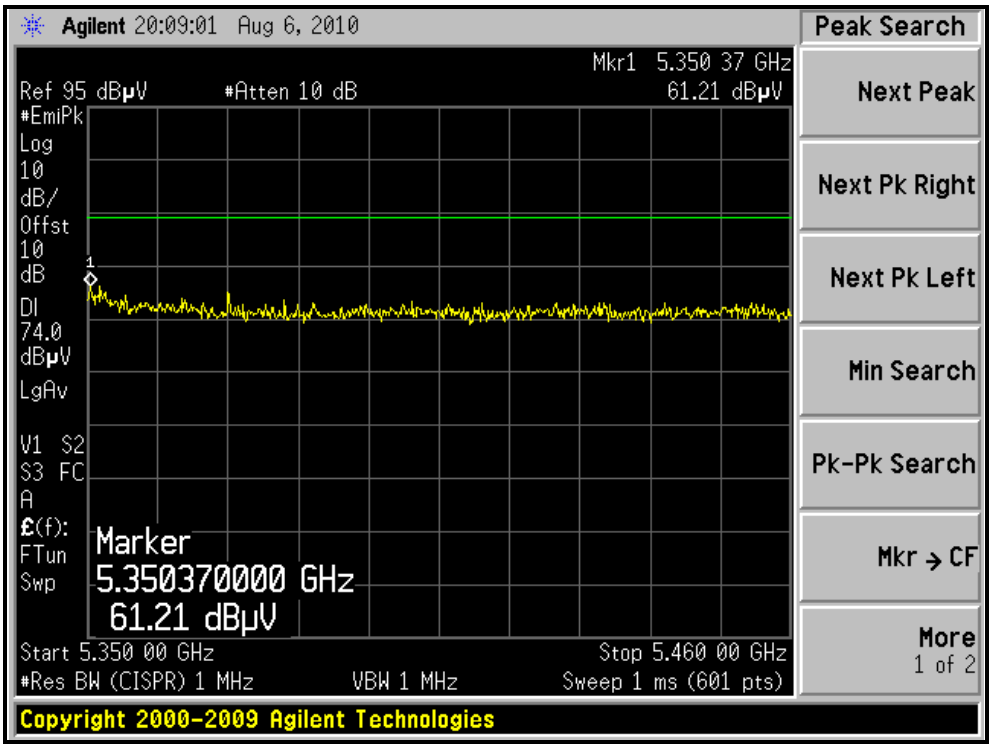


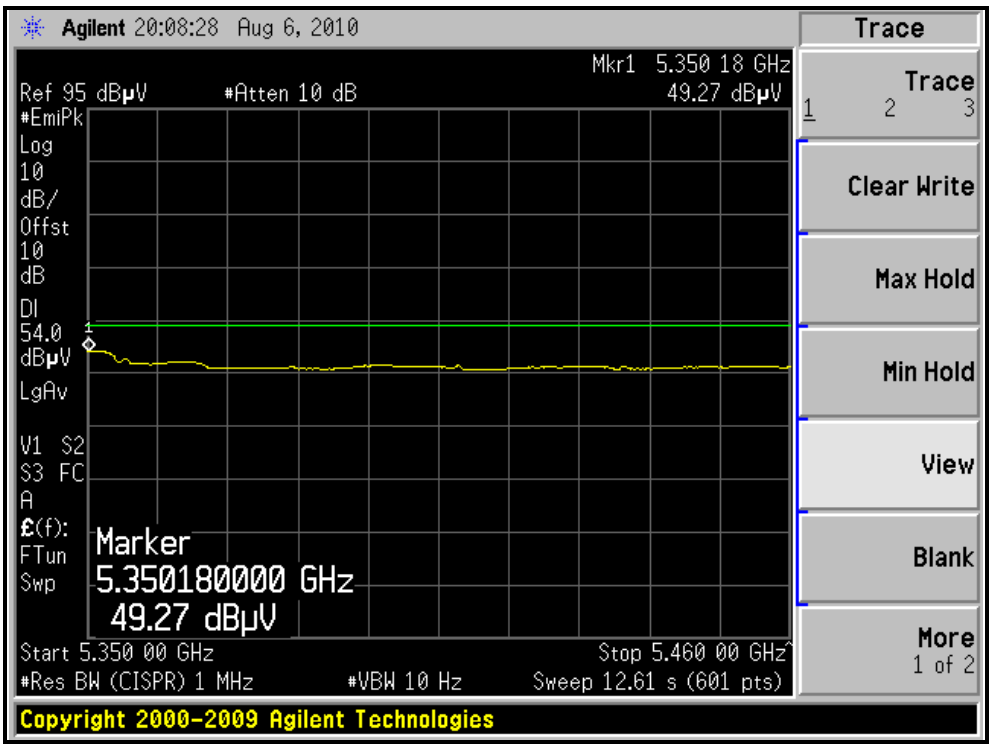
RESTRICTED BANDEDGE (802.11a MODE, CH64, HORIZONTAL)



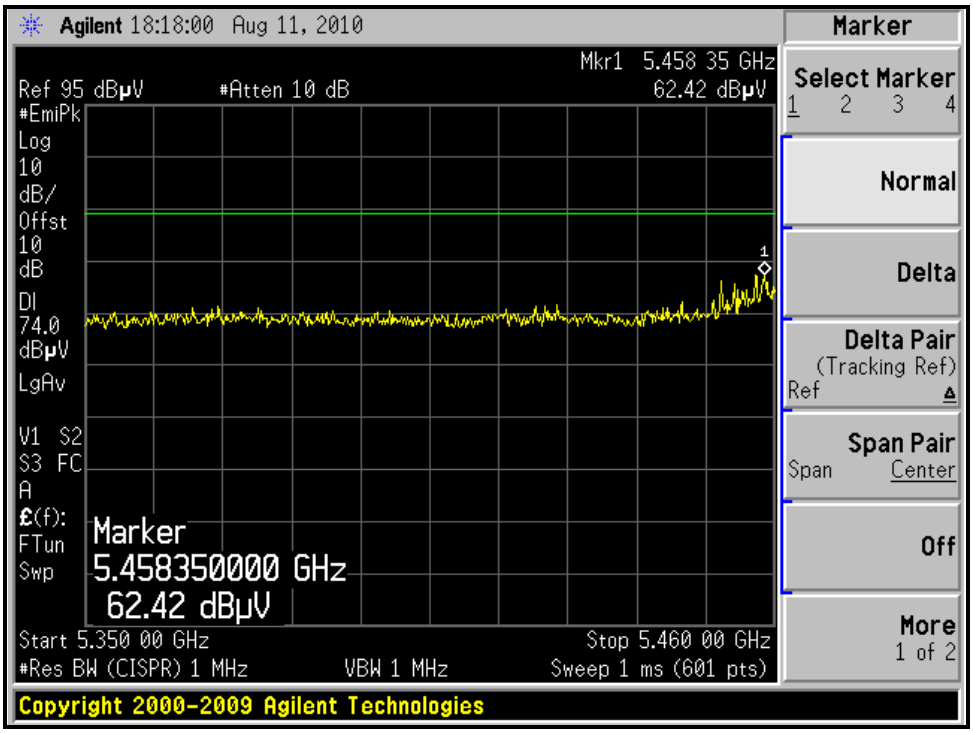


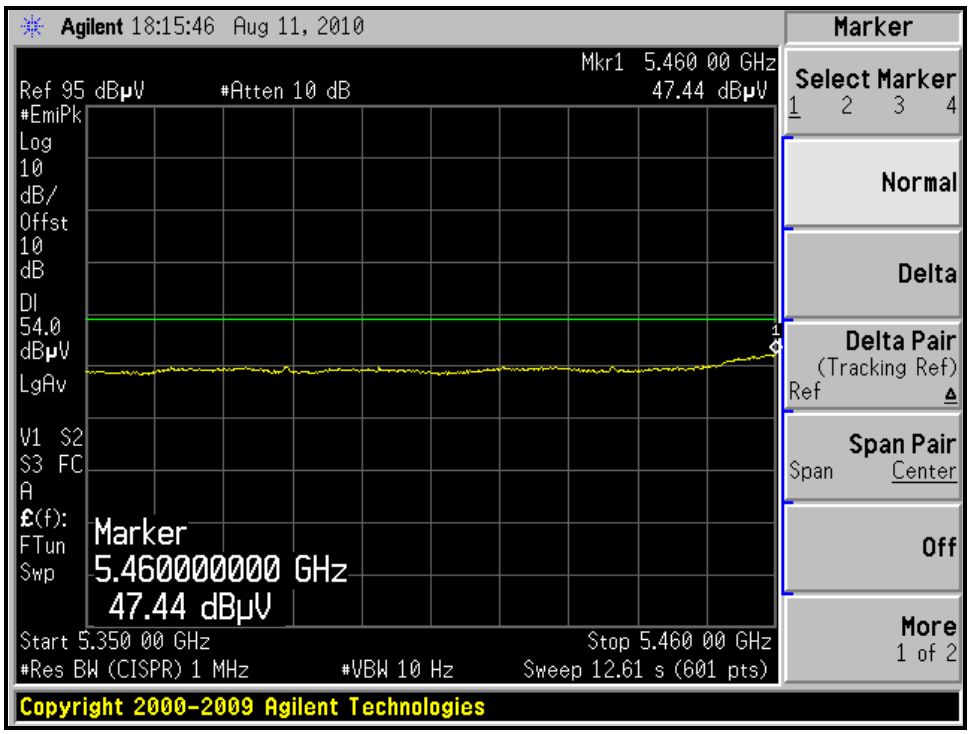
RESTRICTED BANDEDGE (802.11a MODE, CH64, VERTICAL)



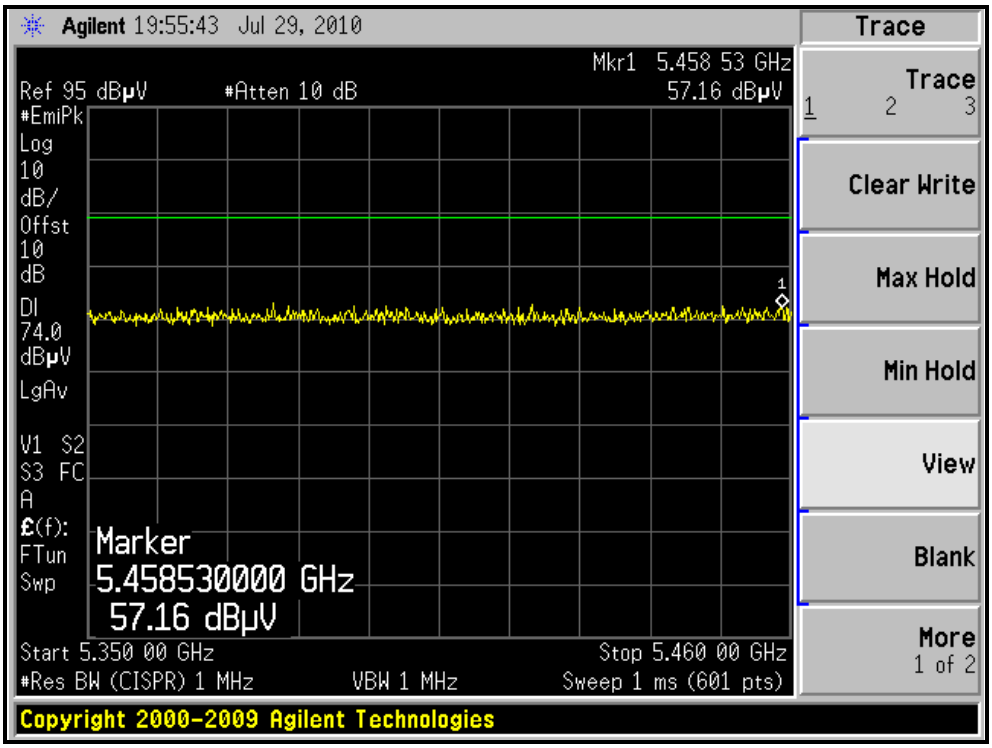


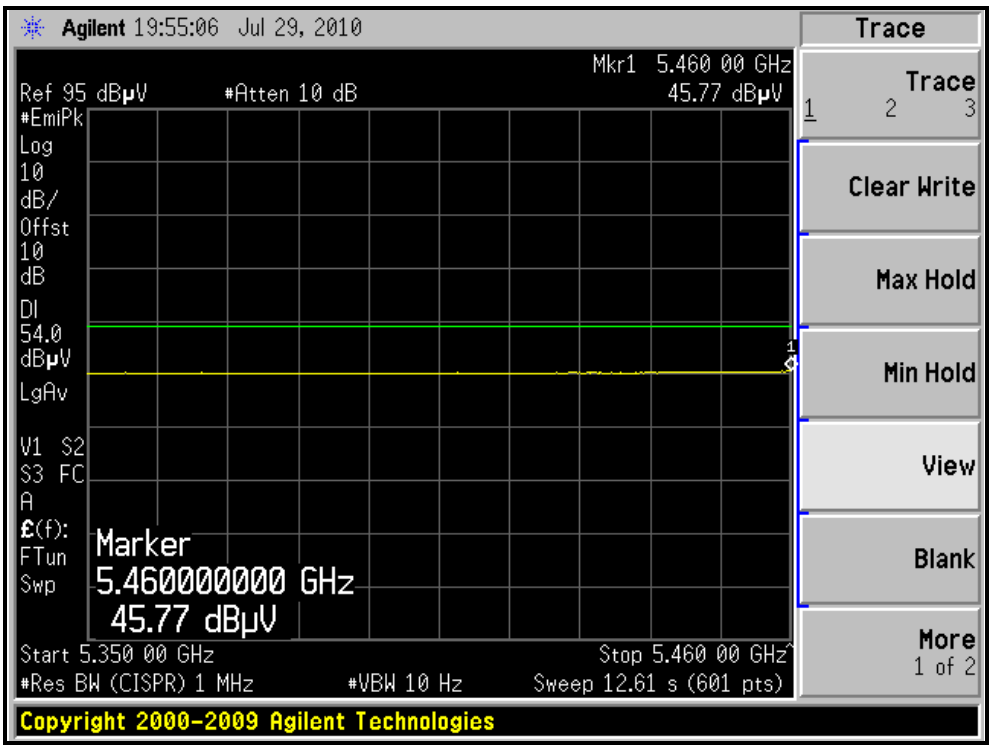
RESTRICTED BANDEDGE (802.11a MODE, CH100, HORIZONTAL)





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	24deg. C, 68%RH 1011 hPa	TESTED BY	Eric Lee

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	60.0 PK	74.0	-14.0	1.18 H	242	19.60	40.40
2	5150.00	46.9 AV	54.0	-7.1	1.18 H	242	6.50	40.40
3	*5180.00	107.4 PK			1.20 H	241	66.95	40.45
4	*5180.00	97.2 AV			1.20 H	241	56.75	40.45
5	#10360.00	62.1 PK	68.3	-26.2	1.14 H	148	15.29	46.81
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	5145.70	58.2 PK	74.0	-15.8	1.17 V	267	17.81	40.39
2	5145.70	46.2 AV	54.0	-7.8	1.17 V	267	5.81	40.39
3	*5180.00	102.6 PK			1.16 V	270	62.15	40.45
4	*5180.00	92.1 AV			1.16 V	270	51.65	40.45
5	#10360.00	64.1 PK	68.3	-24.2	1.20 V	68	17.29	46.81

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	24deg. C, 68%RH 1011 hPa	**TESTED BY**	Eric Lee

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	108.1 PK			1.19 H	240	67.61	40.49
2	*5200.00	97.4 AV			1.19 H	240	56.91	40.49
3	#10400.00	62.4 PK	68.3	-25.9	1.17 H	280	15.55	46.85
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	103.1 PK			1.17 V	288	62.61	40.49
2	*5200.00	92.8 AV			1.17 V	288	52.31	40.49
3	#10400.00	63.9 PK	68.3	-24.4	1.19 V	267	17.05	46.85

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	24deg. C, 68%RH 1011 hPa	**TESTED BY**	Eric Lee

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	107.9 PK			1.18 H	211	67.34	40.56
2	*5240.00	98.3 AV			1.18 H	211	57.74	40.56
3	#10480.00	63.4 PK	68.3	-24.9	1.18 H	260	16.49	46.91
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	102.9 PK			1.15 V	299	62.34	40.56
2	*5240.00	93.6 AV			1.15 V	299	53.04	40.56
3	#10480.00	64.3 PK	68.3	-24.0	1.20 V	340	17.39	46.91

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	24deg. C, 68%RH 1011 hPa	**TESTED BY**	Eric Lee

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	110.4 PK			1.17 H	240	69.80	40.60
2	*5260.00	101.2 AV			1.17 H	240	60.60	40.60
3	#10520.00	63.9 PK	68.3	-24.4	1.20 H	222	16.96	46.94
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	106.1 PK			1.14 V	303	65.50	40.60
2	*5260.00	95.9 AV			1.14 V	303	55.30	40.60
3	#10520.00	67.3 PK	68.3	-21.0	1.15 V	310	20.36	46.94

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	24deg. C, 68%RH 1011 hPa	TESTED BY	Eric Lee

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	110.5 PK			1.16 H	200	69.83	40.67
2	*5300.00	100.1 AV			1.16 H	200	59.43	40.67
3	10600.00	64.0 PK	74.0	-10.0	1.14 H	149	17.01	46.99
4	10600.00	47.1 AV	54.0	-6.9	1.14 H	149	0.11	46.99
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	105.8 PK			1.15 V	311	65.13	40.67
2	*5300.00	95.7 AV			1.15 V	311	55.03	40.67
3	10600.00	66.0 PK	74.0	-8.0	1.14 V	309	19.01	46.99
4	10600.00	49.9 AV	54.0	-4.1	1.14 V	309	2.91	46.99

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	24deg. C, 68%RH 1011 hPa	TESTED BY	Eric Lee

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	108.9 PK			1.30 H	311	68.19	40.71
2	*5320.00	99.0 AV			1.30 H	311	58.29	40.71
3	5350.00	68.7 PK	74.0	-5.3	1.28 H	213	27.93	40.77
4	5350.00	52.9 AV	54.0	-1.1	1.28 H	213	12.13	40.77
5	10640.00	62.0 PK	74.0	-12.0	1.60 H	222	14.98	47.02
6	10640.00	46.0 AV	54.0	-8.0	1.60 H	222	-1.02	47.02
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	104.0 PK			1.20 V	271	63.29	40.71
2	*5320.00	94.8 AV			1.20 V	271	54.09	40.71
3	5351.70	61.1 PK	74.0	-12.9	1.16 V	268	20.33	40.77
4	5351.70	48.8 AV	54.0	-5.2	1.16 V	268	8.03	40.77
5	10640.00	63.6 PK	74.0	-10.4	1.57 V	297	16.58	47.02
6	10640.00	48.5 AV	54.0	-5.5	1.57 V	297	1.48	47.02

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 100	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 68%RH 1011 hPa	TESTED BY	Eric Lee

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	62.2 PK	74.0	-11.8	1.36 H	332	21.23	40.97
2	5460.00	47.6 AV	54.0	-6.4	1.36 H	332	6.63	40.97
3	#5470.00	71.2 PK	68.3	-17.1	1.35 H	314	30.21	40.99
4	*5500.00	111.7 PK			1.28 H	296	70.65	41.05
5	*5500.00	101.4 AV			1.28 H	296	60.35	41.05
6	11000.00	66.4 PK	74.0	-7.6	1.69 H	52	19.10	47.30
7	11000.00	51.6 AV	54.0	-2.4	1.69 H	52	4.30	47.30
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	56.4 PK	74.0	-17.6	1.29 V	320	15.43	40.97
2	5460.00	45.0 AV	54.0	-9.0	1.29 V	320	4.03	40.97
3	#5470.00	64.2 PK	68.3	-24.1	1.29 V	320	23.21	40.99
4	*5500.00	106.9 PK			1.37 V	321	65.85	41.05
5	*5500.00	96.3 AV			1.37 V	321	55.25	41.05
6	11000.00	68.1 PK	74.0	-5.9	1.21 V	287	20.80	47.30
7	11000.00	52.6 AV	54.0	-1.4	1.21 V	287	5.30	47.30

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	24deg. C, 68%RH 1011 hPa	TESTED BY	Eric Lee

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	112.4 PK			1.33 H	309	71.24	41.16
2	*5600.00	101.9 AV			1.33 H	309	60.74	41.16
3	11200.00	67.9 PK	74.0	-6.1	1.56 H	214	20.54	47.36
4	11200.00	52.8 AV	54.0	-1.2	1.56 H	214	5.44	47.36
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	106.5 PK			1.38 V	311	65.34	41.16
2	*5600.00	97.2 AV			1.38 V	311	56.04	41.16
3	11200.00	68.0 PK	74.0	-6.0	1.20 V	297	20.64	47.36
4	11200.00	53.0 AV	54.0	-1.0	1.20 V	297	5.64	47.36

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

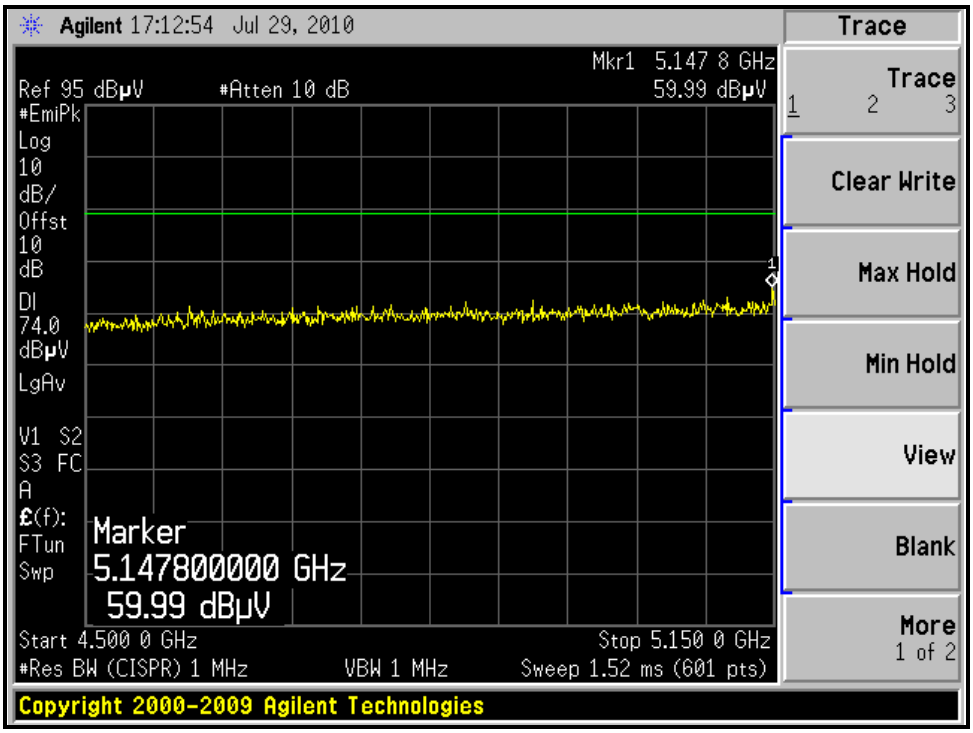
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

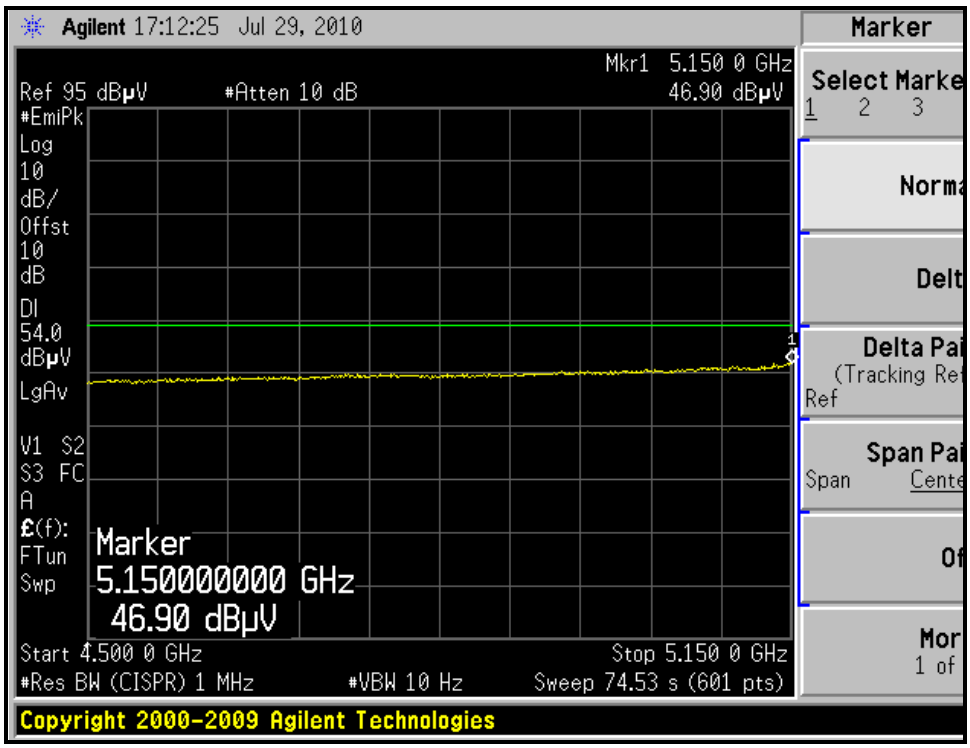
EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 140	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 68%RH 1011 hPa	TESTED BY	Eric Lee

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	*5700.00	111.5 PK			1.15 H	30	70.22	41.28
2	*5700.00	101.3 AV			1.15 H	30	60.02	41.28
3	#5725.00	72.9 PK	68.3	-15.4	1.15 H	30	31.59	41.31
4	11400.00	66.1 PK	74.0	-7.9	1.42 H	83	18.72	47.38
5	11400.00	51.8 AV	54.0	-2.2	1.42 H	83	4.42	47.38
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	106.4 PK			1.33 V	315	65.12	41.28
2	*5700.00	96.3 AV			1.33 V	315	55.02	41.28
3	#5725.00	65.1 PK	68.3	-23.2	1.33 V	315	23.79	41.31
4	11400.00	67.9 PK	74.0	-6.1	1.16 V	293	20.52	47.38
5	11400.00	52.9 AV	54.0	-1.1	1.16 V	293	5.52	47.38

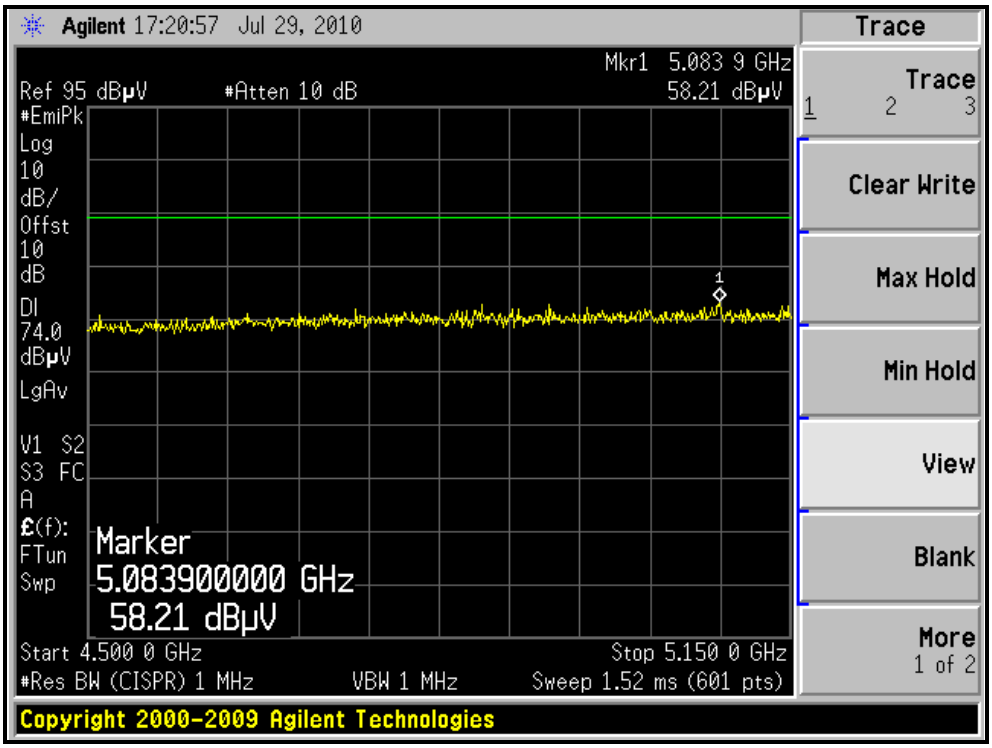
REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6.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

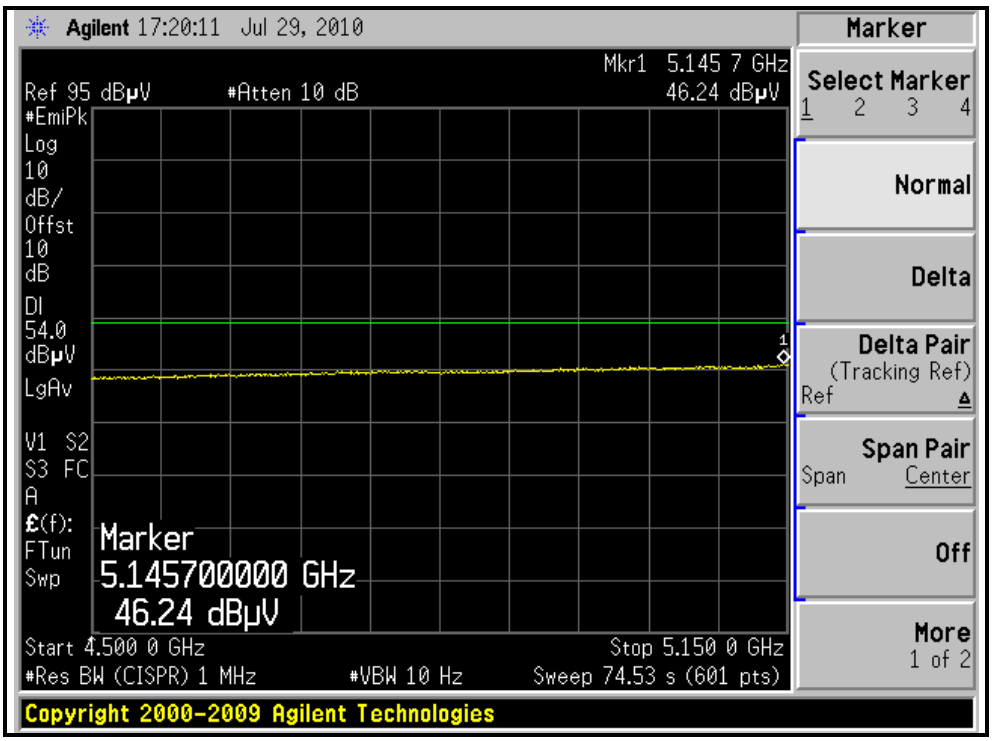
RESTRICTED BANDEDGE (802.11n (20MHz) MODE,CH36, HORIZONTAL)





RESTRICTED BANDEDGE (802.11n (20MHz) MODE,CH36, VERTICAL)





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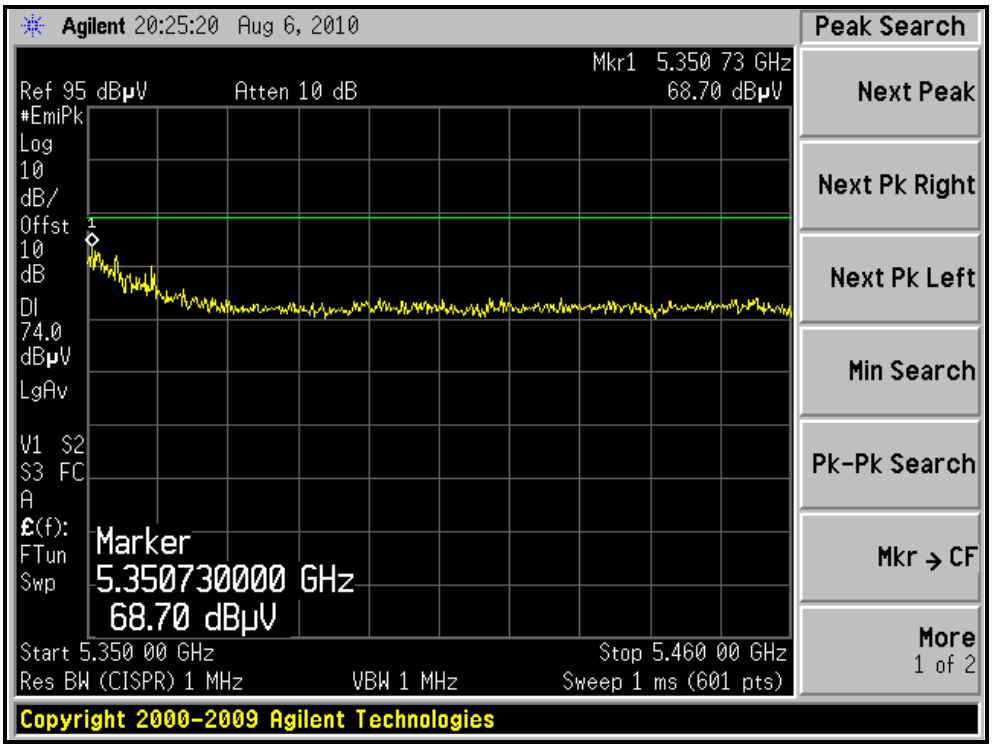

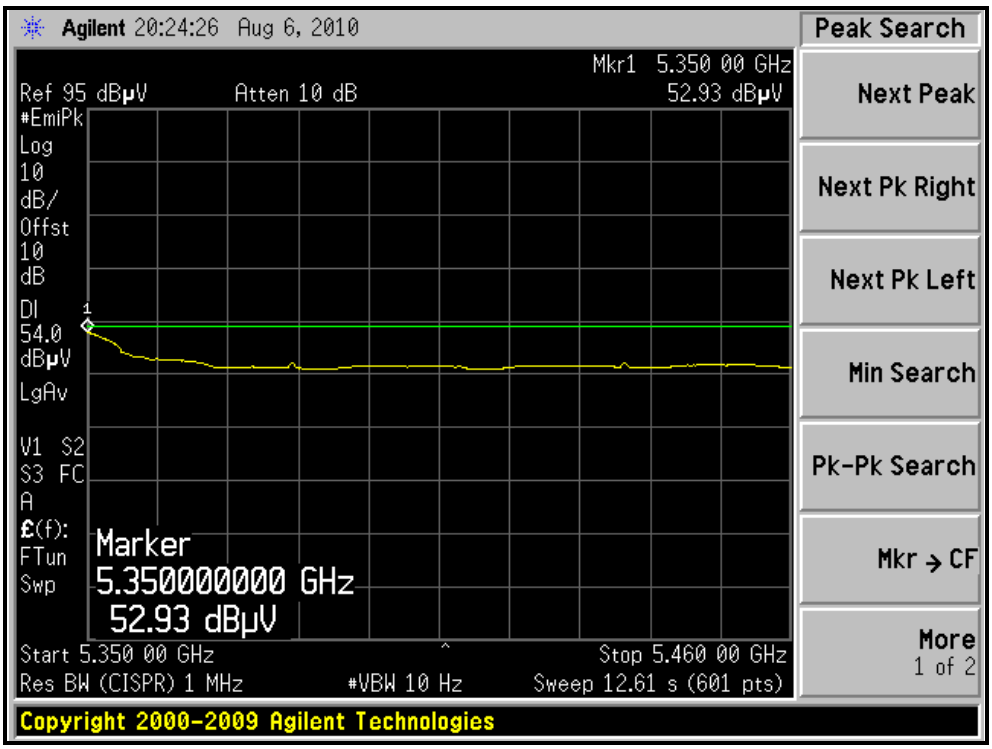

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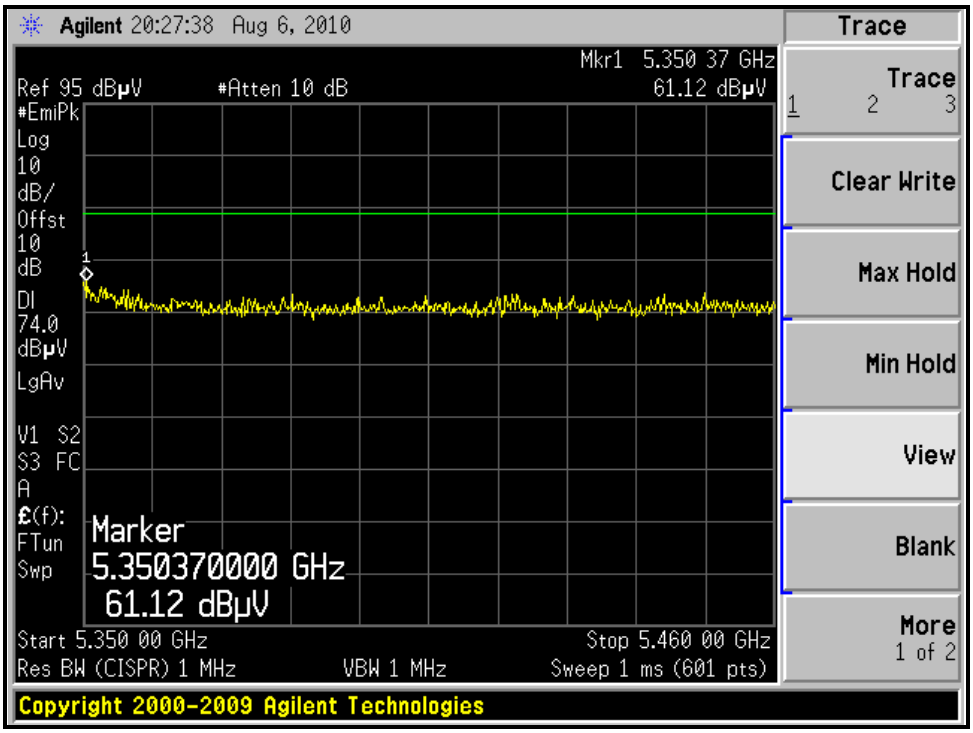

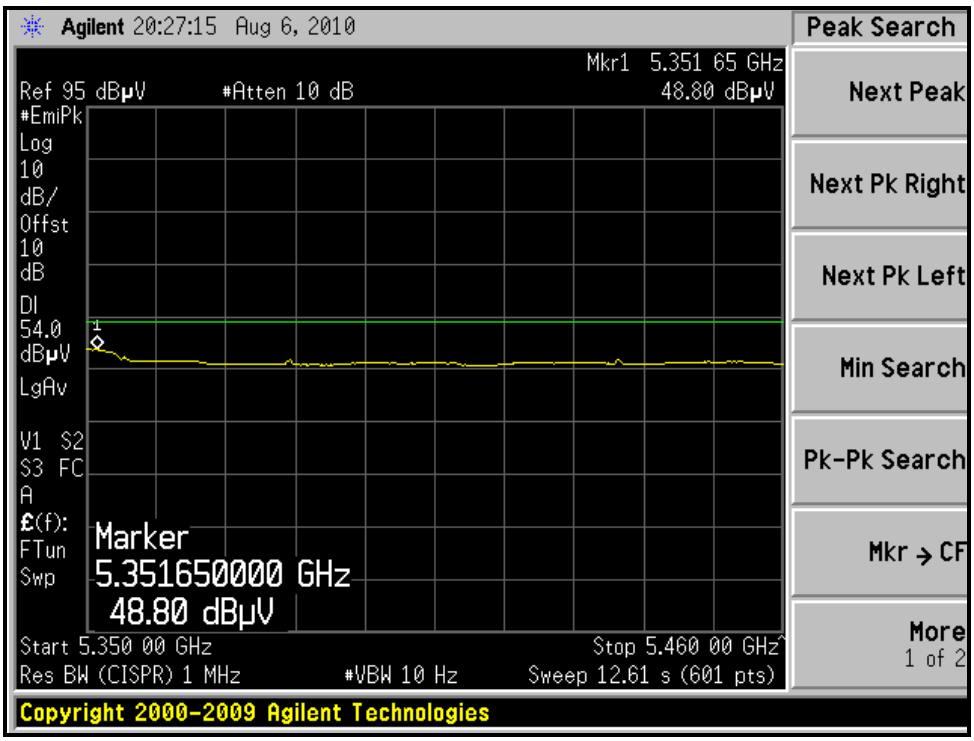

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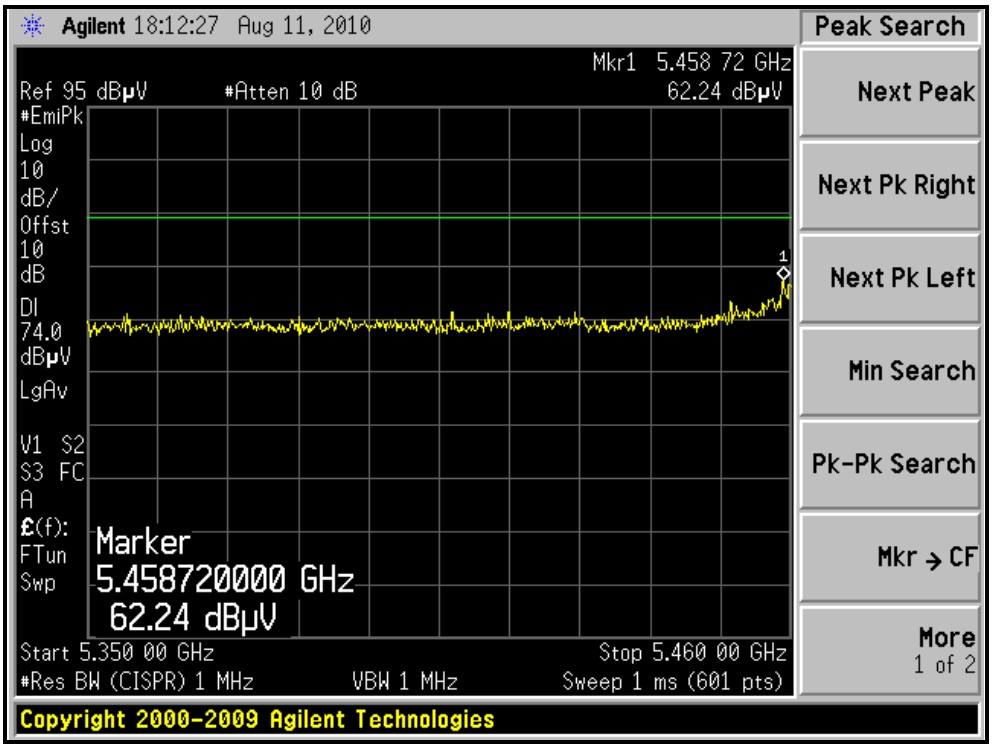

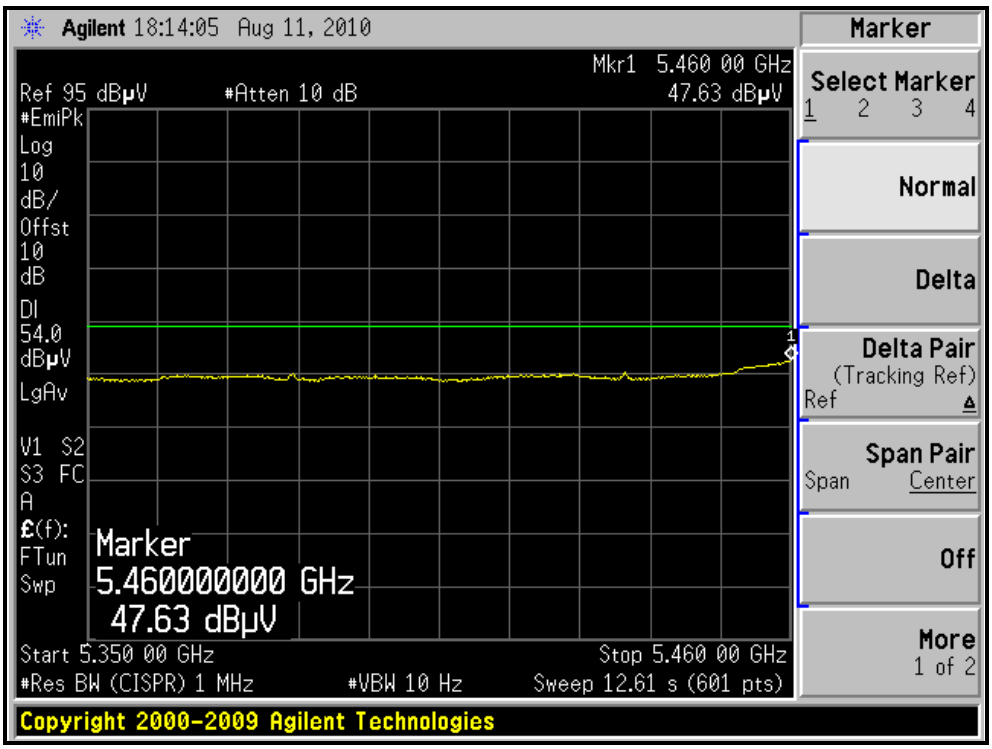

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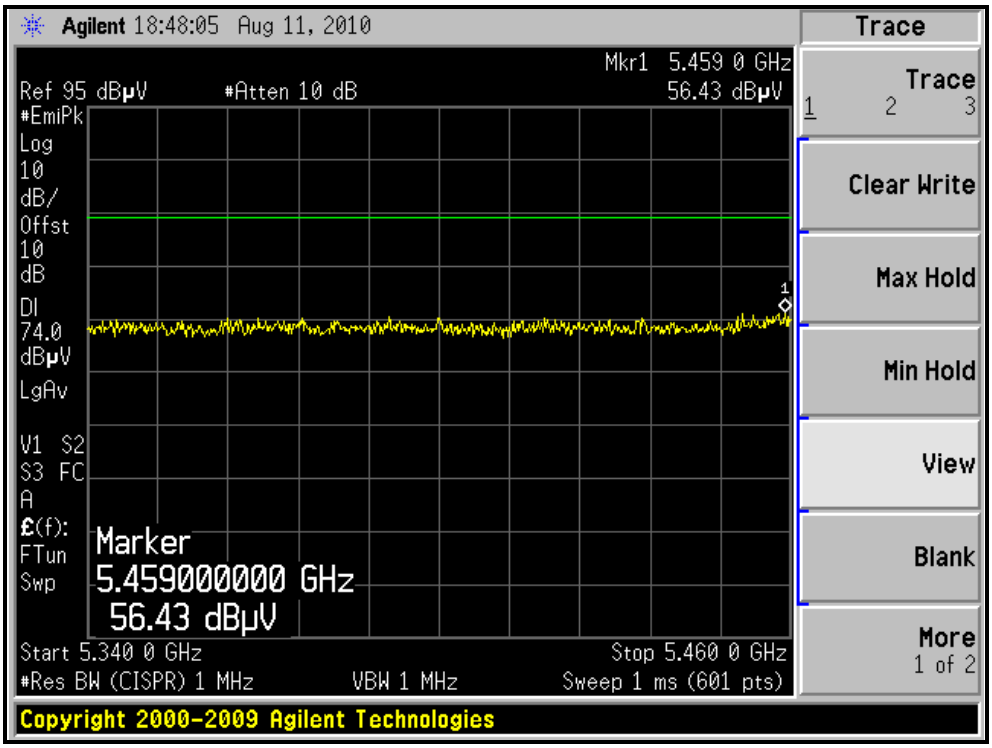
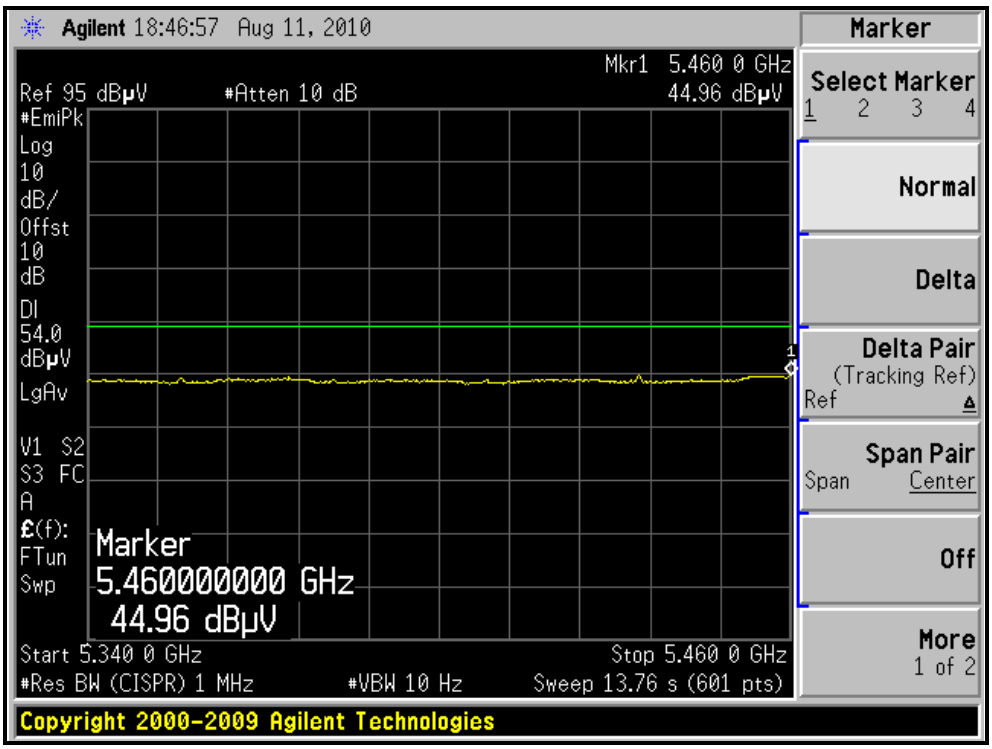




802.11n (40MHz) OFDM MODULATION

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	24deg. C, 68%RH 1011 hPa	TESTED BY	Eric Lee

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	63.7 PK	74.0	-10.3	1.29 H	243	23.30	40.40
2	5150.00	51.2 AV	54.0	-2.8	1.29 H	243	10.80	40.40
3	*5190.00	104.5 PK			1.30 H	244	64.03	40.47
4	*5190.00	93.7 AV			1.30 H	244	53.23	40.47
5	11380.00	62.9 PK	74.0	-11.1	1.20 H	298	15.53	47.37
6	11380.00	48.7 AV	54.0	-5.3	1.20 H	298	1.33	47.37
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	58.2 PK	74.0	-15.8	1.39 V	307	17.80	40.40
2	5150.00	47.8 AV	54.0	-6.2	1.39 V	307	7.40	40.40
3	*5190.00	97.4 PK			1.38 V	310	56.93	40.47
4	*5190.00	87.5 AV			1.38 V	310	47.03	40.47
5	11380.00	64.2 PK	74.0	-9.8	1.22 V	40	16.83	47.37
6	11380.00	50.0 AV	54.0	-4.0	1.22 V	40	2.63	47.37

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.

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	24deg. C, 68%RH 1011 hPa	TESTED BY	Eric Lee

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	107.6 PK			1.31 H	251	67.06	40.54
2	*5230.00	96.1 AV			1.31 H	251	55.56	40.54
3	#10460.00	62.4 PK	68.3	-25.9	1.16 H	305	15.50	46.90
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	99.4 PK			1.39 V	334	58.86	40.54
2	*5230.00	89.1 AV			1.39 V	334	48.56	40.54
3	#10460.00	64.5 PK	68.3	-23.8	1.18 V	58	17.60	46.90

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	24deg. C, 68%RH 1011 hPa	**TESTED BY**	Eric Lee

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	109.7 PK			1.29 H	266	69.08	40.62
2	*5270.00	98.7 AV			1.29 H	266	58.08	40.62
3	#10540.00	64.3 PK	68.3	-24.0	1.14 H	301	17.35	46.95
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	102.7 PK			1.40 V	341	62.08	40.62
2	*5270.00	92.6 AV			1.40 V	341	51.98	40.62
3	#10540.00	66.4 PK	68.3	-21.9	1.22 V	71	19.45	46.95

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 62	**FREQUENCY RANGE**	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 68%RH 1011 hPa	**TESTED BY**	Eric Lee

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	106.5 PK			1.35 H	245	65.81	40.69
2	*5310.00	95.7 AV			1.35 H	245	55.01	40.69
3	5350.00	66.3 PK	74.0	-7.7	1.07 H	226	25.53	40.77
4	**5350.00**	**53.2 AV**	**54.0**	**-0.8**	**1.07 H**	**226**	**12.43**	**40.77**
5	10620.00	63.4 PK	74.0	-10.6	1.41 H	288	16.40	47.00
6	10620.00	46.5 AV	54.0	-7.5	1.41 H	288	-0.50	47.00
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	100.2 PK			1.33 V	341	59.51	40.69
2	*5310.00	90.4 AV			1.33 V	341	49.71	40.69
3	5350.00	65.1 PK	74.0	-8.9	1.22 V	269	24.33	40.77
4	5350.00	48.1 AV	54.0	-5.9	1.22 V	269	7.33	40.77
5	10620.00	64.3 PK	74.0	-9.7	1.11 V	69	17.30	47.00
6	10620.00	47.0 AV	54.0	-7.0	1.11 V	69	0.00	47.00

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	24deg. C, 68%RH 1011 hPa	TESTED BY	Eric Lee

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	66.2 PK	74.0	-7.8	1.37 H	317	25.23	40.97
2	5460.00	53.0 AV	54.0	-1.0	1.37 H	317	12.03	40.97
3	#5470.00	80.7 PK	68.3	-7.6	1.40 H	320	39.71	40.99
4	*5510.00	109.6 PK			1.37 H	321	68.54	41.06
5	*5510.00	99.7 AV			1.37 H	321	58.64	41.06
6	11020.00	64.9 PK	74.0	-9.1	1.40 H	170	17.60	47.30
7	11020.00	46.9 AV	54.0	-7.1	1.40 H	170	-0.40	47.30
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	60.2 PK	74.0	-13.8	1.25 V	259	19.23	40.97
2	5460.00	47.7 AV	54.0	-6.3	1.25 V	259	6.73	40.97
3	#5470.00	74.1 PK	68.3	-14.2	1.30 V	261	33.11	40.99
4	*5510.00	104.6 PK			1.28 V	310	63.54	41.06
5	*5510.00	93.9 AV			1.28 V	310	52.84	41.06
6	11020.00	65.9 PK	74.0	-8.1	1.30 V	142	18.60	47.30
7	11020.00	48.6 AV	54.0	-5.4	1.30 V	142	1.30	47.30

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 118	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 68%RH 1011 hPa	TESTED BY	Eric Lee

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	109.3 PK			1.37 H	317	68.15	41.15
2	*5590.00	97.9 AV			1.37 H	317	56.75	41.15
3	11180.00	63.4 PK	74.0	-10.6	1.69 H	304	16.05	47.35
4	11180.00	46.2 AV	54.0	-7.8	1.69 H	304	-1.15	47.35
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	103.9 PK			1.30 V	314	62.75	41.15
2	*5590.00	93.3 AV			1.30 V	314	52.15	41.15
3	11180.00	67.3 PK	74.0	-6.7	1.42 V	326	19.95	47.35
4	11180.00	49.9 AV	54.0	-4.1	1.42 V	326	2.55	47.35

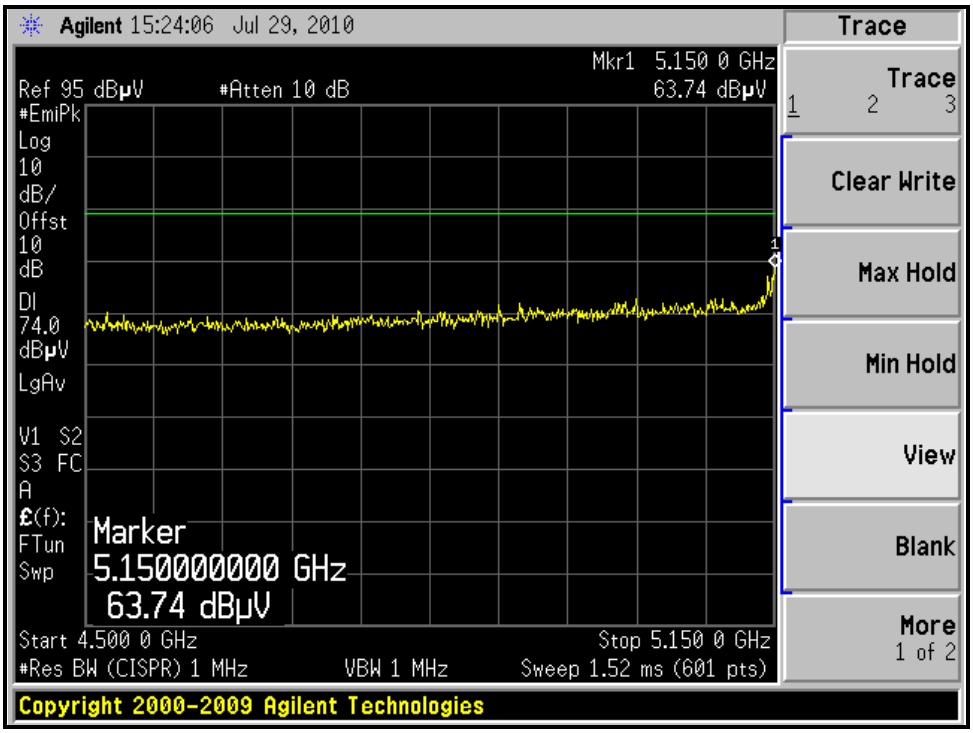
REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

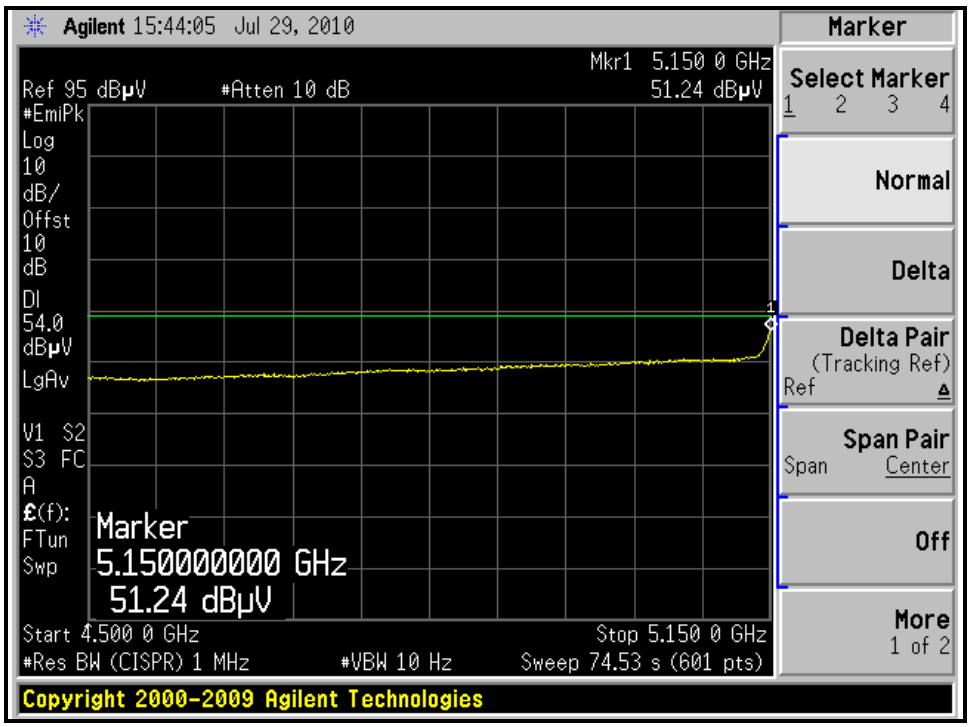
EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 134	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 68%RH 1011 hPa	TESTED BY	Eric Lee

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	*5670.00	110.4 PK			1.29 H	300	69.16	41.24
2	*5670.00	98.4 AV			1.29 H	300	57.16	41.24
3	#5725.00	70.0 PK	68.3	-18.3	1.33 H	318	28.69	41.31
4	11340.00	64.4 PK	74.0	-9.6	1.37 H	169	17.04	47.36
5	11340.00	46.7 AV	54.0	-7.3	1.37 H	169	-0.66	47.36
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	103.7 PK			1.29 V	340	62.46	41.24
2	*5670.00	93.7 AV			1.29 V	340	52.46	41.24
3	#5725.00	65.1 PK	68.3	-23.2	1.40 V	311	23.79	41.31
4	11340.00	66.1 PK	74.0	-7.9	1.30 V	142	18.74	47.36
5	11340.00	48.9 AV	54.0	-5.1	1.30 V	142	1.54	47.36

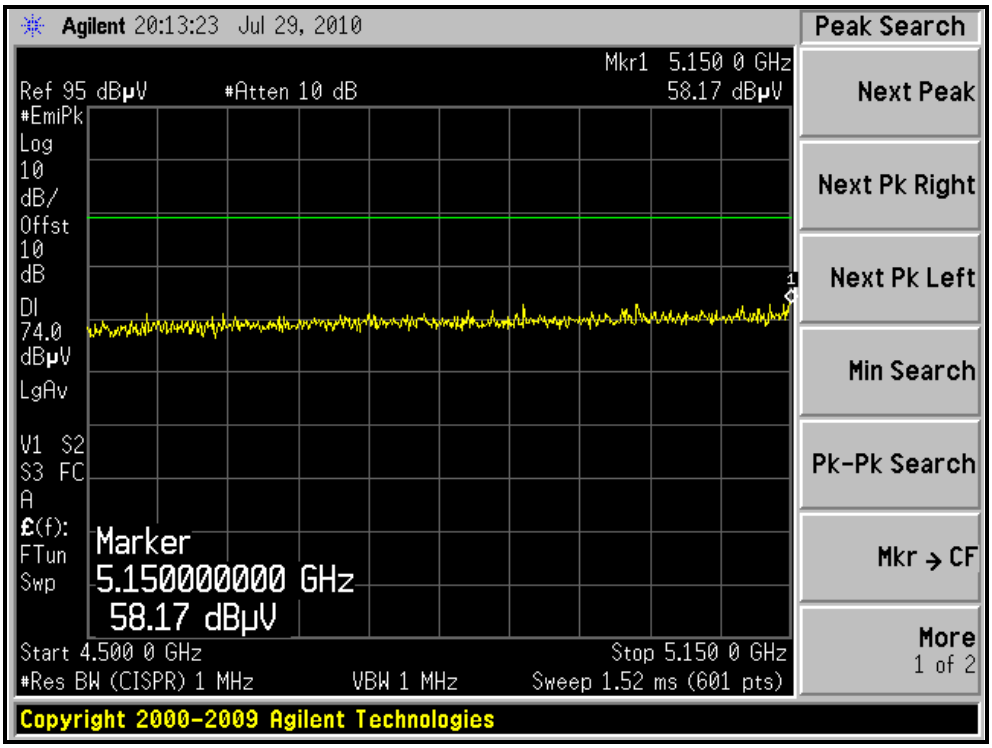
REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6.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

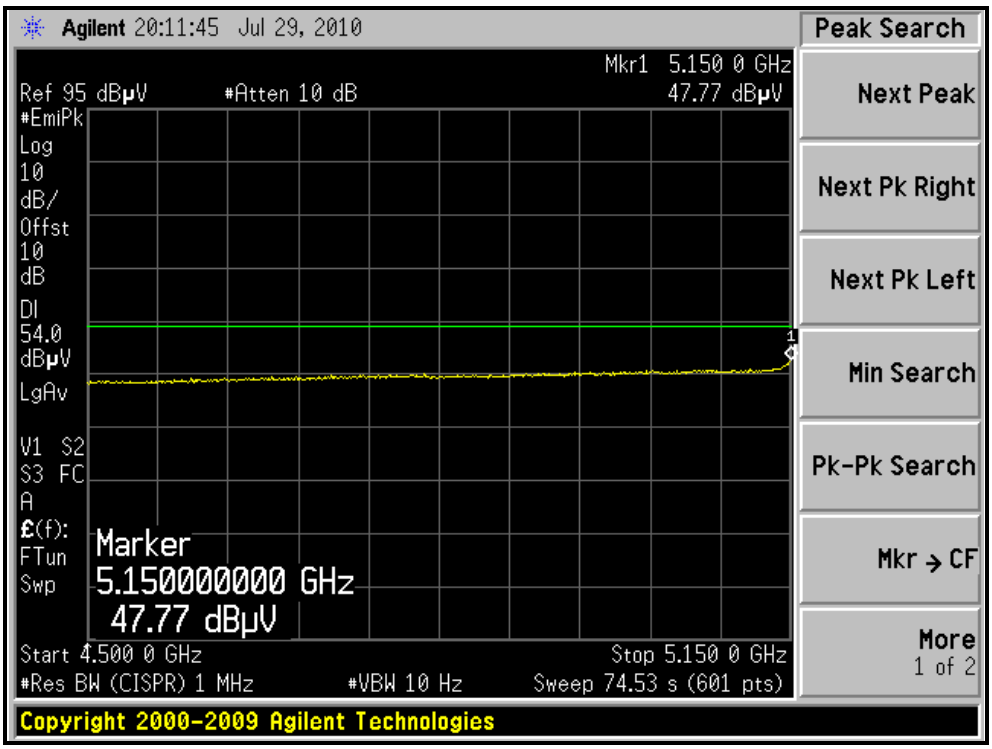
RESTRICTED BANDEDGE (802.11n (40MHz) MODE, CH38, HORIZONTAL)



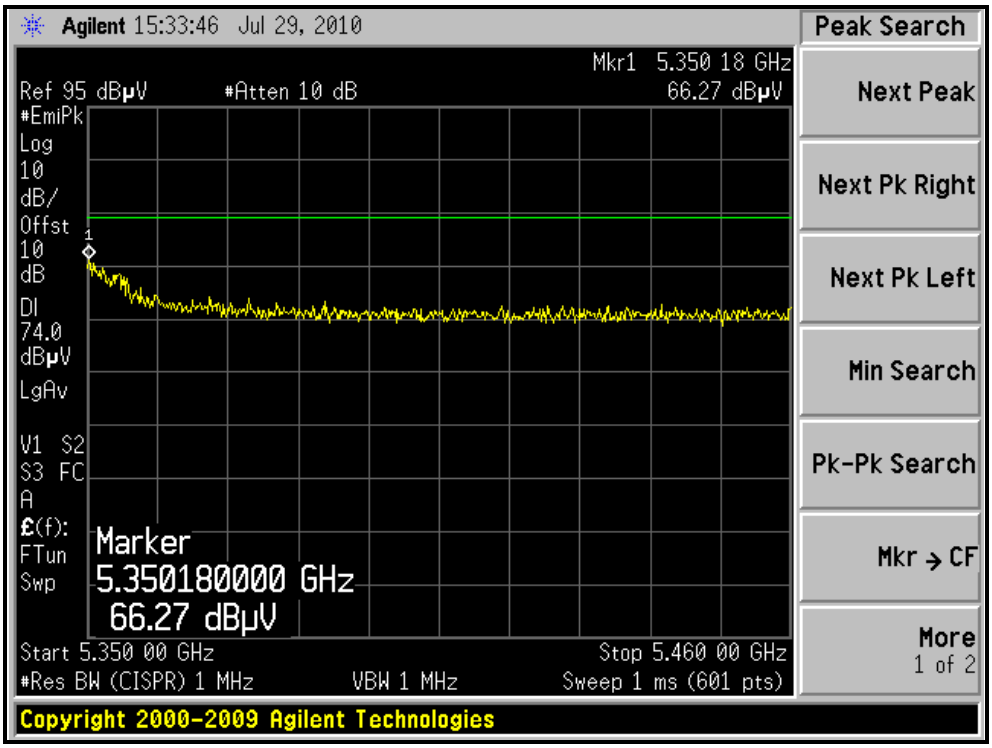


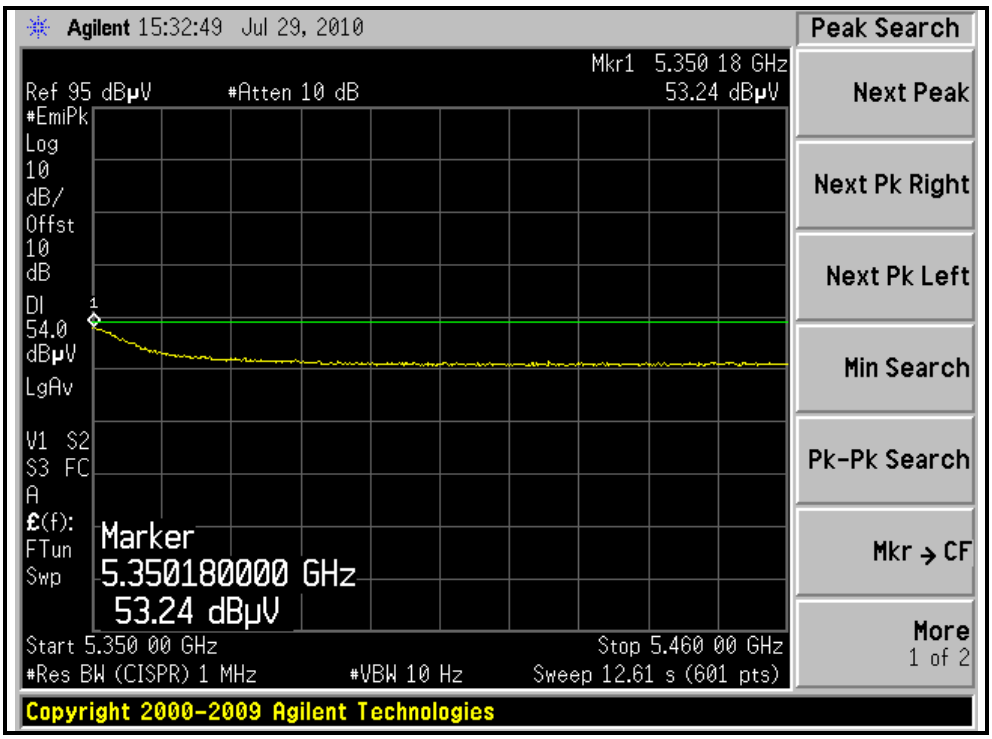
RESTRICTED BANDEDGE (802.11n (40MHz) MODE,CH38, VERTICAL)



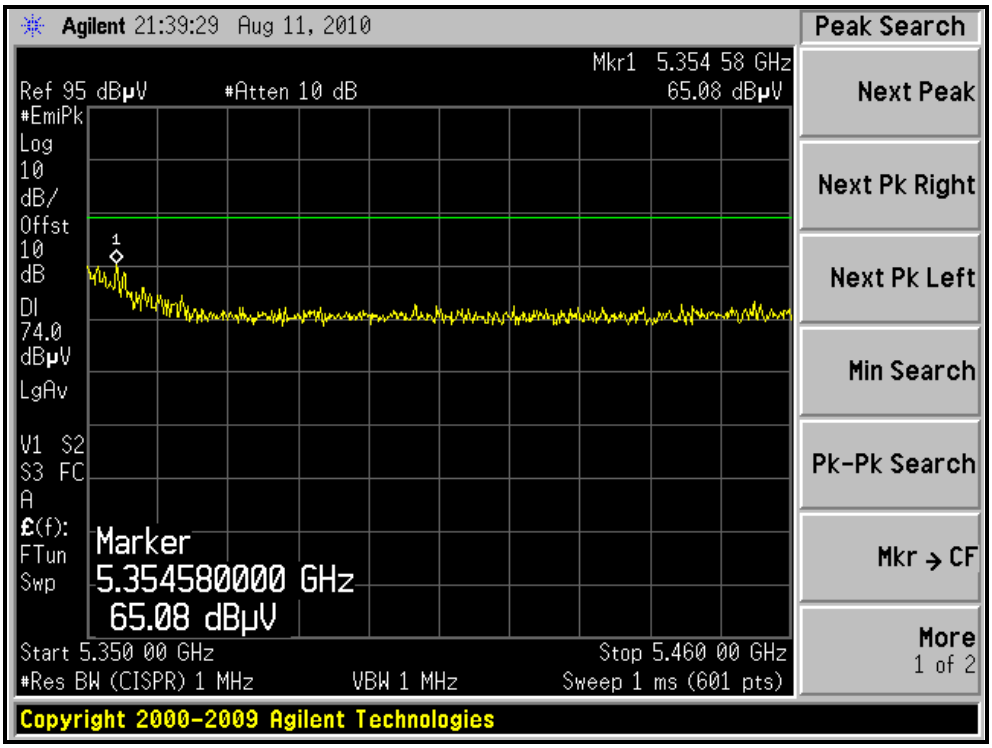


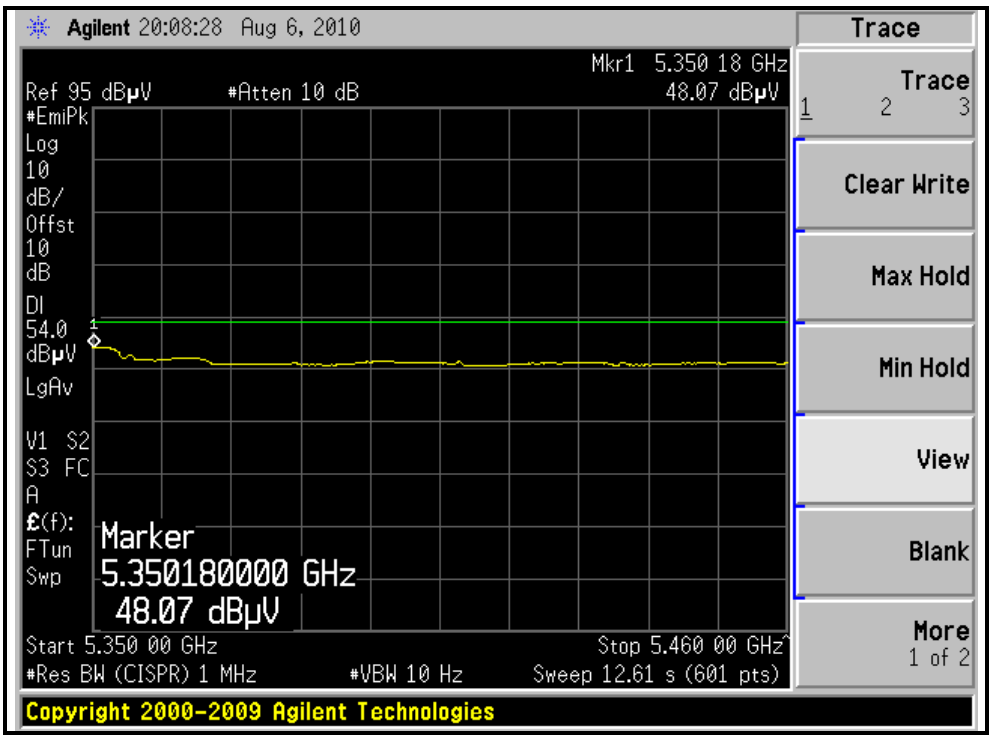
RESTRICTED BANDEDGE (802.11n (40MHz) MODE, CH62, HORIZONTAL)



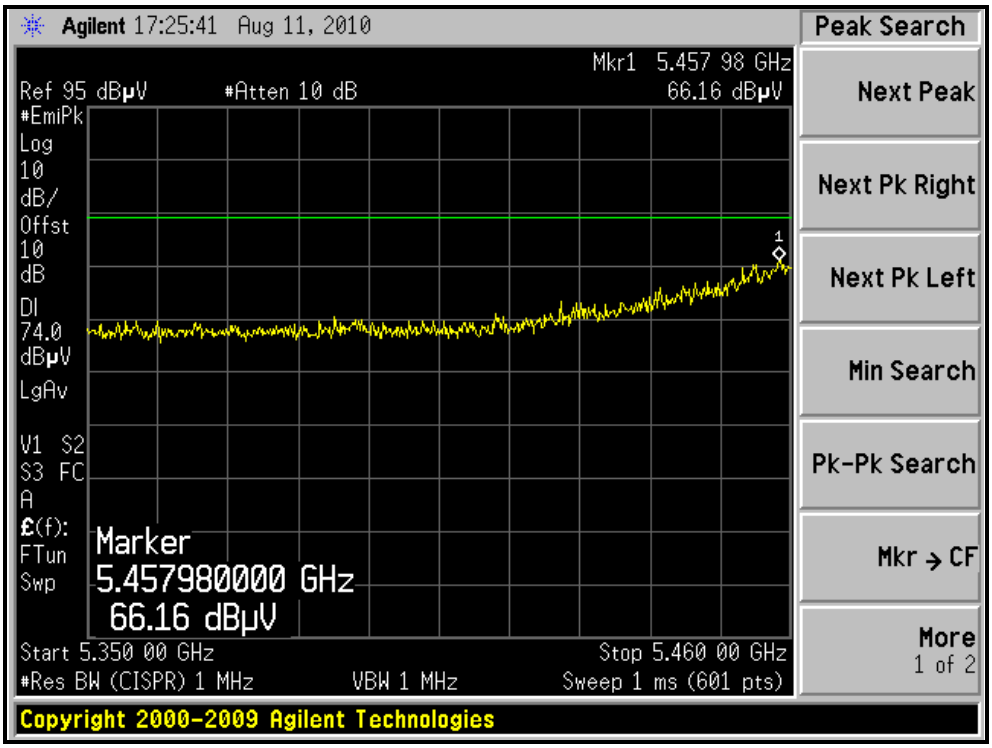


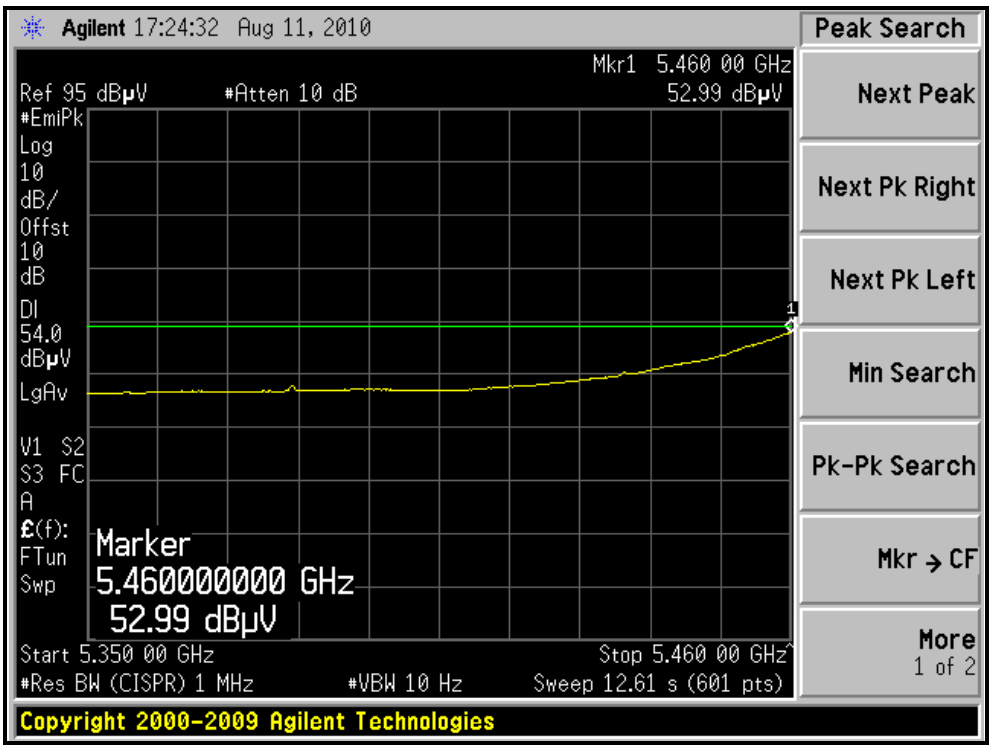
RESTRICTED BANDEDGE (802.11n (40MHz) MODE, CH62, VERTICAL)





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





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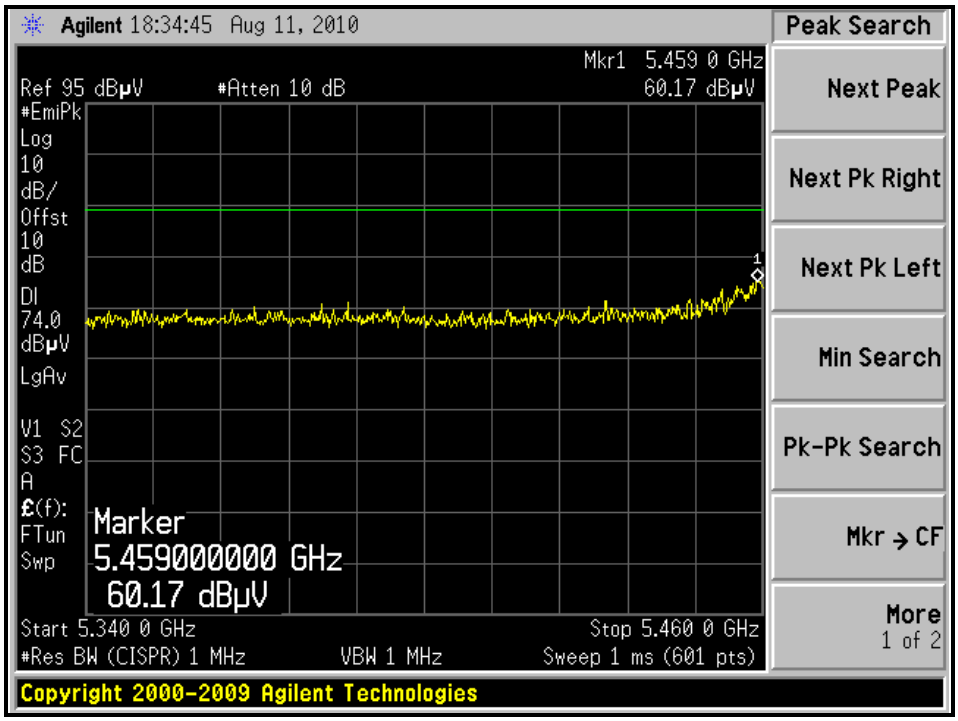
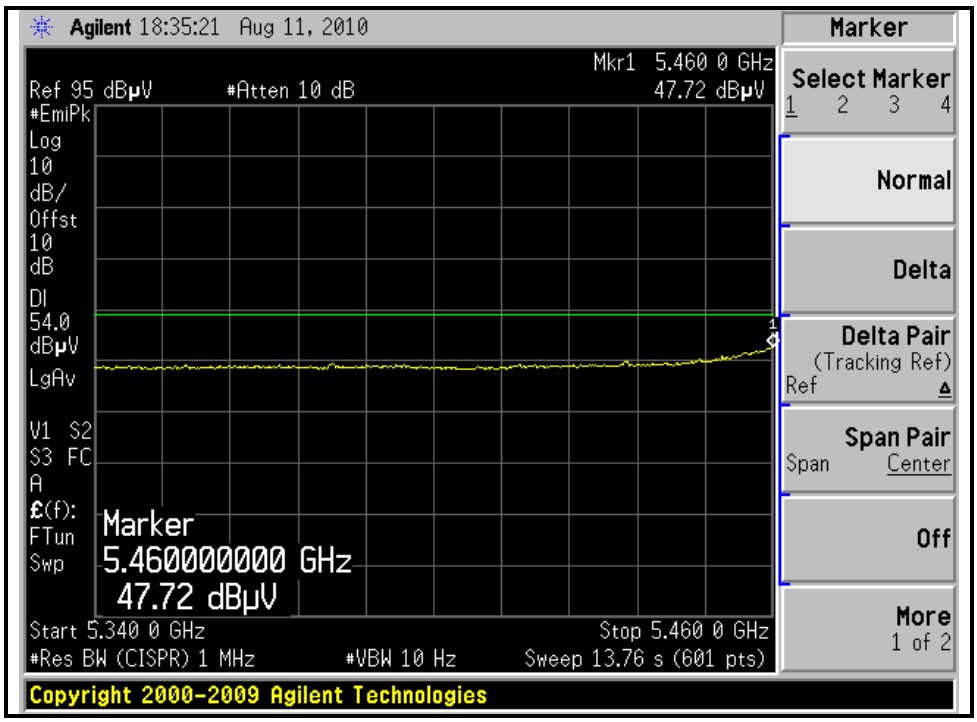




4.2.9 TEST RESULTS (FOR RECEIVER PART)

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	24deg. C, 70%RH 1011 hPa	**TESTED BY**	Eric Lee

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	99.70	33.9 QP	43.5	-9.6	1.75 H	360	23.95	9.95
2	115.00	34.0 QP	43.5	-9.5	1.50 H	358	21.93	12.07
3	133.20	34.0 QP	43.5	-9.5	2.25 H	0	20.30	13.70
4	150.00	35.0 QP	43.5	-8.5	1.50 H	360	20.70	14.30
5	**166.50**	**41.3 QP**	**43.5**	**-2.2**	**1.75 H**	**220**	**27.30**	**14.00**
6	200.00	37.2 QP	43.5	-6.3	1.25 H	0	25.99	11.21
7	248.20	40.0 QP	46.0	-6.0	1.25 H	281	27.11	12.89
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	**33.50**	**37.8 QP**	**40.0**	**-2.2**	**1.00 V**	**291**	**24.32**	**13.46**
2	99.80	26.8 QP	43.5	-16.7	1.00 V	28	16.85	9.95
3	149.86	33.6 QP	43.5	-9.9	1.25 V	360	19.30	14.30
4	166.05	34.4 QP	43.5	-9.1	2.25 V	312	20.38	14.02
5	248.82	33.3 QP	46.0	-12.7	1.00 V	217	20.39	12.91
6	365.25	31.0 QP	46.0	-15.0	1.75 V	360	14.12	16.88

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 ~ 17.55GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 70%RH 1011 hPa	TESTED BY	Eric Lee

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	3453.33	46.9 PK	74.0	-27.1	1.00 H	15	12.87	34.03
2	3453.33	40.2 AV	54.0	-13.8	1.00 H	15	6.17	34.03
3	6901.66	55.6 PK	74.0	-18.4	1.00 H	69	12.14	43.46
4	6901.66	45.1 AV	54.0	-8.9	1.00 H	69	1.64	43.46
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	3453.33	47.0 PK	74.0	-27.0	1.53 V	213	12.97	34.03
2	3453.33	40.8 AV	54.0	-13.2	1.53 V	213	6.77	34.03
3	6901.69	55.4 PK	74.0	-18.6	1.04 V	59	11.93	43.47
4	6901.69	44.8 AV	54.0	-9.2	1.04 V	59	1.33	43.47

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.

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	25deg. C, 70%RH 1011 hPa	**TESTED BY**	Eric Lee

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	3466.66	47.1 PK	74.0	-26.9	1.00 H	24	13.03	34.07
2	3466.66	40.4 AV	54.0	-13.6	1.00 H	24	6.33	34.07
3	6933.33	55.8 PK	74.0	-18.2	1.04 H	62	12.24	43.56
4	6933.33	45.4 AV	54.0	-8.6	1.04 H	62	1.84	43.56
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	3466.66	47.4 PK	74.0	-26.6	1.59 V	243	13.33	34.07
2	3466.66	41.1 AV	54.0	-12.9	1.59 V	243	7.03	34.07
3	6933.33	55.6 PK	74.0	-18.4	1.07 V	62	12.04	43.56
4	6933.33	44.9 AV	54.0	-9.1	1.07 V	62	1.34	43.56

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.

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	25deg. C, 70%RH 1011 hPa	**TESTED BY**	Eric Lee

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	3493.33	47.2 PK	74.0	-26.8	1.01 H	37	13.05	34.15
2	3493.33	40.6 AV	54.0	-13.4	1.01 H	37	6.45	34.15
3	6986.66	55.8 PK	74.0	-18.2	1.04 H	62	12.08	43.72
4	6986.66	45.4 AV	54.0	-8.6	1.04 H	62	1.68	43.72
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	3493.33	47.6 PK	74.0	-26.4	1.59 V	243	13.45	34.15
2	3493.33	41.1 AV	54.0	-12.9	1.59 V	243	6.95	34.15
3	6986.66	55.8 PK	74.0	-18.2	1.07 V	59	12.08	43.72
4	6986.66	44.8 AV	54.0	-9.2	1.07 V	59	1.08	43.72

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	25deg. C, 70%RH 1011 hPa	TESTED BY	Eric Lee

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	3506.66	47.4 PK	74.0	-26.6	1.04 H	43	13.20	34.20
2	3506.66	40.8 AV	54.0	-13.2	1.04 H	43	6.60	34.20
3	7013.33	56.2 PK	74.0	-17.8	1.03 H	57	12.43	43.77
4	7013.33	45.6 AV	54.0	-8.4	1.03 H	57	1.83	43.77
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	3506.66	47.9 PK	74.0	-26.1	1.54 V	249	13.70	34.20
2	3506.66	41.3 AV	54.0	-12.7	1.54 V	249	7.10	34.20
3	7013.33	55.9 PK	74.0	-18.1	1.07 V	62	12.13	43.77
4	7013.33	44.9 AV	54.0	-9.1	1.07 V	62	1.13	43.77

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 60	**FREQUENCY RANGE**	1 ~ 17.55GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 70%RH 1011 hPa	**TESTED BY**	Eric Lee

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	3533.33	47.3 PK	74.0	-26.7	1.05 H	62	13.00	34.30
2	3533.33	40.9 AV	54.0	-13.1	1.05 H	62	6.60	34.30
3	7066.66	56.3 PK	74.0	-17.7	1.04 H	69	12.48	43.82
4	7066.66	45.7 AV	54.0	-8.3	1.04 H	69	1.88	43.82
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	3533.33	48.1 PK	74.0	-25.9	1.51 V	243	13.80	34.30
2	3533.33	41.6 AV	54.0	-12.4	1.51 V	243	7.30	34.30
3	7066.66	56.2 PK	74.0	-17.8	1.04 V	59	12.38	43.82
4	7066.66	45.2 AV	54.0	-8.8	1.04 V	59	1.38	43.82

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 64	**FREQUENCY RANGE**	1 ~ 17.55GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 70%RH 1011 hPa	**TESTED BY**	Eric Lee

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	3546.66	47.6 PK	74.0	-26.4	1.04 H	57	13.25	34.35
2	3546.66	41.2 AV	54.0	-12.8	1.04 H	57	6.85	34.35
3	7093.33	56.9 PK	74.0	-17.1	1.02 H	62	13.06	43.84
4	7093.33	45.8 AV	54.0	-8.2	1.02 H	62	1.96	43.84
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	3546.66	48.2 PK	74.0	-25.8	1.54 V	249	13.85	34.35
2	3546.66	41.7 AV	54.0	-12.3	1.54 V	249	7.35	34.35
3	7093.33	56.3 PK	74.0	-17.7	1.07 V	62	12.46	43.84
4	7093.33	45.4 AV	54.0	-8.6	1.07 V	62	1.56	43.84

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 100	FREQUENCY RANGE	1 ~ 17.55GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 70%RH 1011 hPa	TESTED BY	Eric Lee

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	3666.66	47.9 PK	74.0	-26.1	1.03 H	62	13.09	34.81
2	3666.66	41.4 AV	54.0	-12.6	1.03 H	62	6.59	34.81
3	7333.33	57.2 PK	74.0	-16.8	1.04 H	59	13.07	44.13
4	7333.33	46.1 AV	54.0	-7.9	1.04 H	59	1.97	44.13
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	3666.66	48.4 PK	74.0	-25.6	1.56 V	243	13.59	34.81
2	3666.66	41.9 AV	54.0	-12.1	1.56 V	243	7.09	34.81
3	7333.33	57.3 PK	74.0	-16.7	1.09 V	59	13.17	44.13
4	7333.33	46.4 AV	54.0	-7.6	1.09 V	59	2.27	44.13

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	25deg. C, 70%RH 1011 hPa	**TESTED BY**	Eric Lee

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	3733.33	48.1 PK	74.0	-25.9	1.04 H	58	13.04	35.06
2	3733.33	41.7 AV	54.0	-12.3	1.04 H	58	6.64	35.06
3	7466.66	57.4 PK	74.0	-16.6	1.06 H	42	13.13	44.27
4	7466.66	46.3 AV	54.0	-7.7	1.06 H	42	2.03	44.27
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	3733.33	48.4 PK	74.0	-25.6	1.54 V	243	13.34	35.06
2	3733.33	41.9 AV	54.0	-12.1	1.54 V	243	6.84	35.06
3	7466.66	57.6 PK	74.0	-16.4	1.04 V	62	13.33	44.27
4	7466.66	46.6 AV	54.0	-7.4	1.04 V	62	2.33	44.27

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	25deg. C, 70%RH 1011 hPa	TESTED BY	Eric Lee

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	48.3 PK	74.0	-25.7	1.10 H	32	12.97	35.33
2	3800.00	41.8 AV	54.0	-12.2	1.10 H	32	6.47	35.33
3	7600.00	57.6 PK	74.0	-16.4	1.00 H	74	13.12	44.48
4	7600.00	46.4 AV	54.0	-7.6	1.00 H	74	1.92	44.48
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	48.6 PK	74.0	-25.4	1.54 V	209	13.27	35.33
2	3800.00	42.1 AV	54.0	-11.9	1.54 V	209	6.77	35.33
3	7600.00	57.7 PK	74.0	-16.3	1.23 V	64	13.22	44.48
4	7600.00	46.7 AV	54.0	-7.3	1.23 V	64	2.22	44.48

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 PEAK TRANSMIT POWER MEASUREMENT

4.3.1 LIMITS OF PEAK 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
PSA Sevies Spectrum Analyzer	E4446A	MY48250254	July 14, 2010	July 13, 2011

NOTE:

1. 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 300kHz.
4. Using the spectrum analyzer's channel power measurement function to measure the output power.

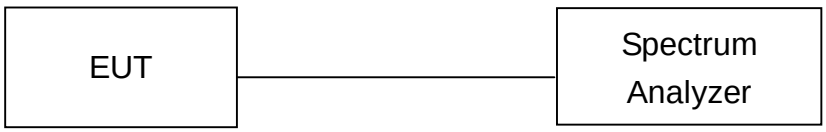
NOTE:
The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002.

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.

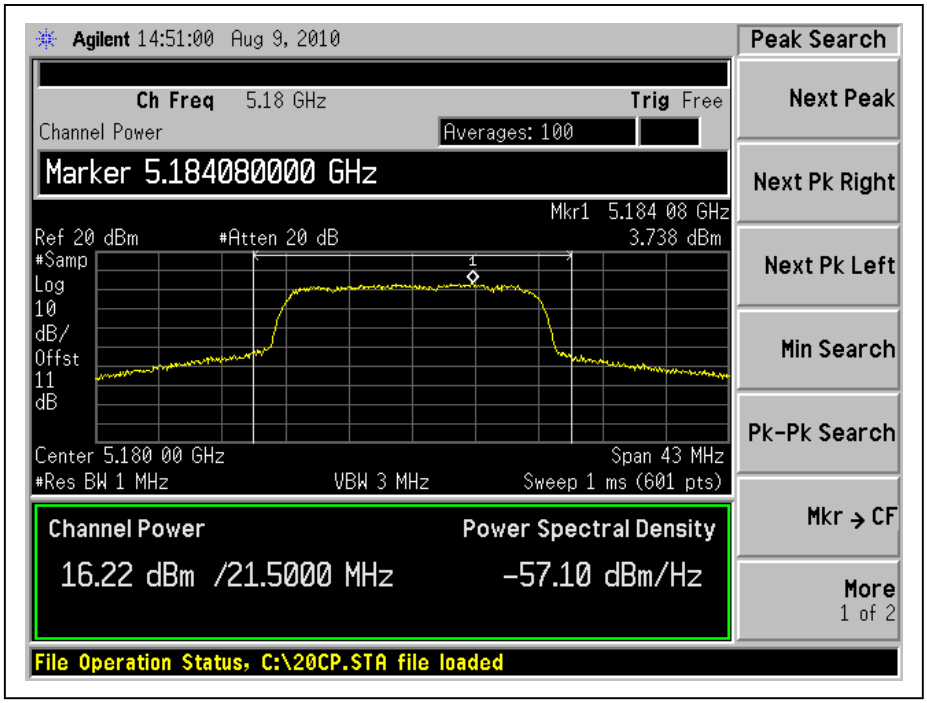
4.3.7 TEST RESULTS

802.11a OFDM MODULATION:

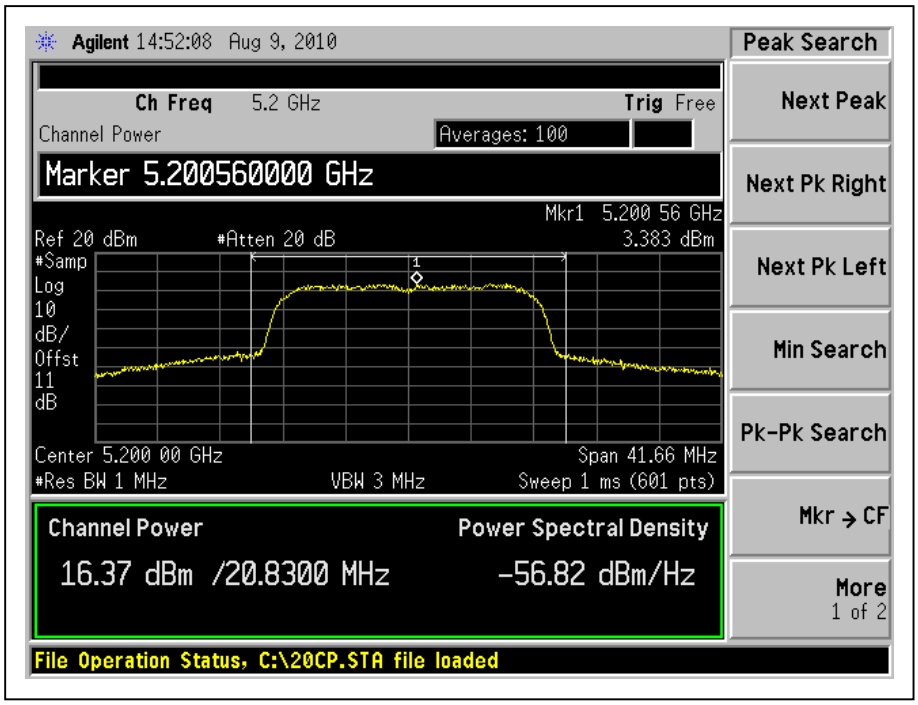
CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER (mW)	PEAK POWER LIMIT (dBm)	26dBc Occupied Bandwidth (MHz)	PASS/ FAIL
36	5180	16.2	41.7	17.0	21.50	PASS
40	5200	16.4	43.7	17.0	20.83	PASS
48	5240	16.7	46.8	17.0	21.58	PASS
52	5260	19.1	81.3	24.0	28.58	PASS
60	5300	19.3	85.1	24.0	23.83	PASS
64	5320	17.5	56.2	24.0	23.50	PASS
100	5500	19.0	79.4	24.0	27.33	PASS
120	5600	18.7	74.1	24.0	29.50	PASS
140	5700	19.0	79.4	24.0	29.92	PASS

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

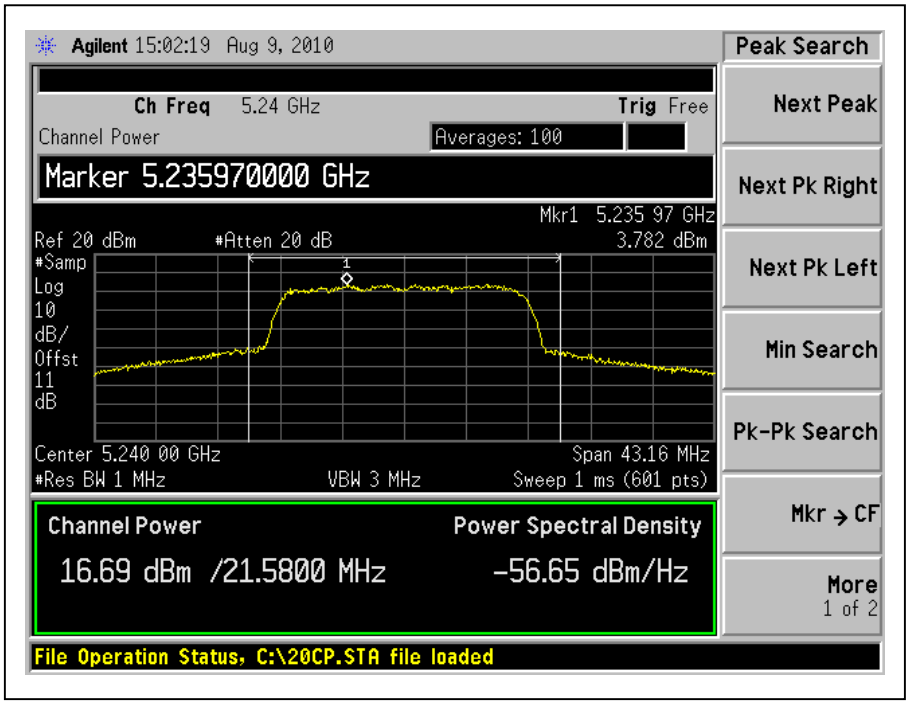
Peak Power Output:
CH36



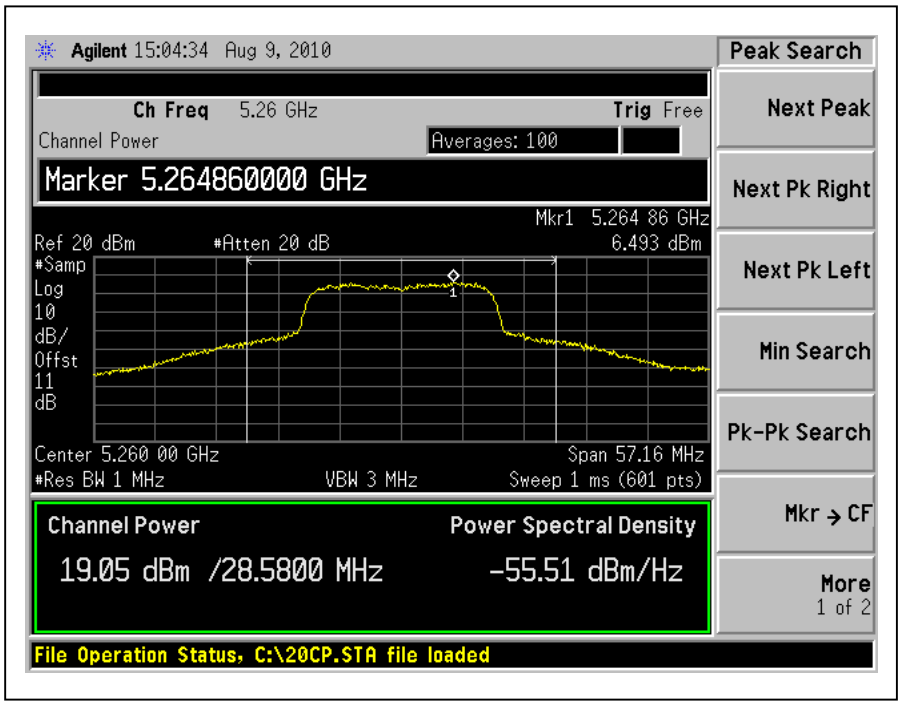
CH40



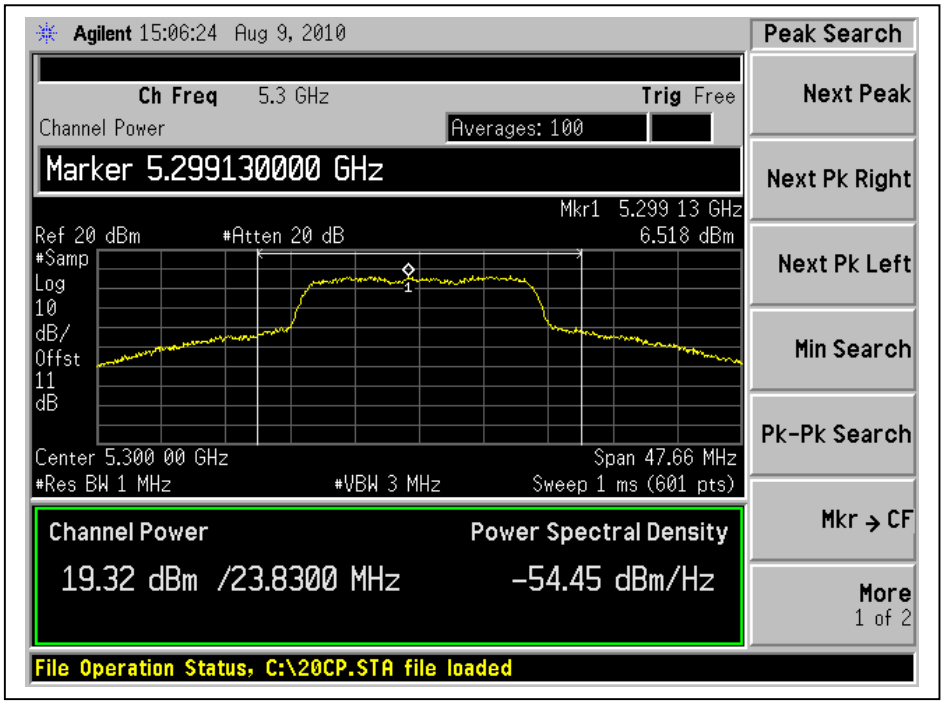
CH48


Agilent 15:02:19 Aug 9, 2010
Peak Search
Ch Freq 5.24 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.235970000 GHz
Mkr1 5.235 97 GHz
Ref 20 dBm
#Atten 20 dB
3.782 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.240 00 GHz
Span 43.16 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
16.69 dBm /21.5800 MHz
Power Spectral Density
-56.65 dBm/Hz
File Operation Status, C:\20CP.STA file loaded
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2

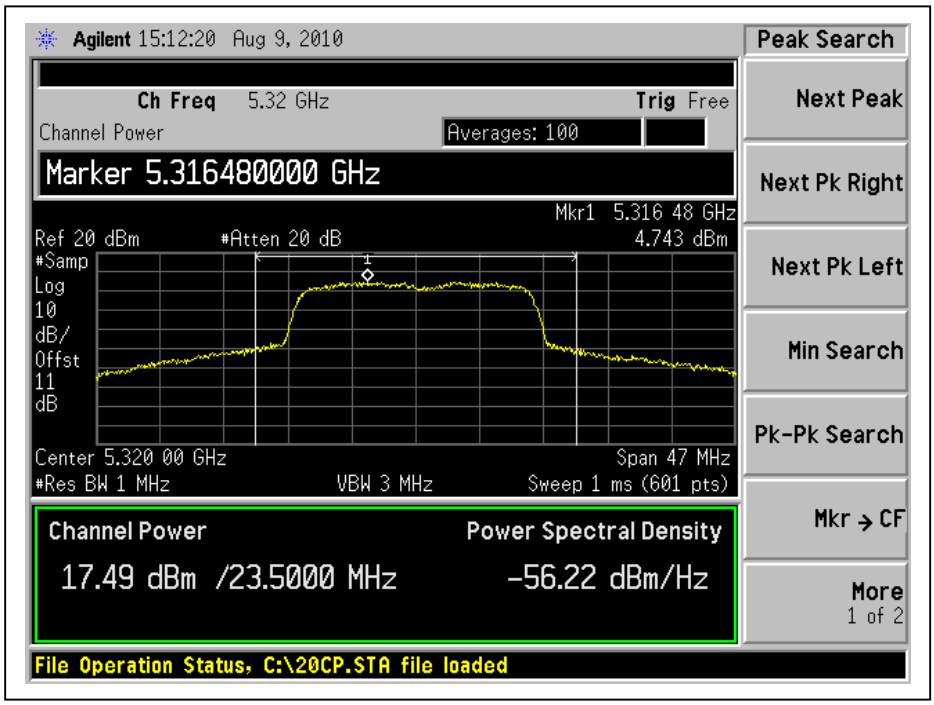
CH52


Agilent 15:04:34 Aug 9, 2010
Peak Search
Ch Freq 5.26 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.264860000 GHz
Mkr1 5.264 86 GHz
Ref 20 dBm
#Atten 20 dB
6.493 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.260 00 GHz
Span 57.16 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
19.05 dBm /28.5800 MHz
Power Spectral Density
-55.51 dBm/Hz
File Operation Status, C:\20CP.STA file loaded
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2

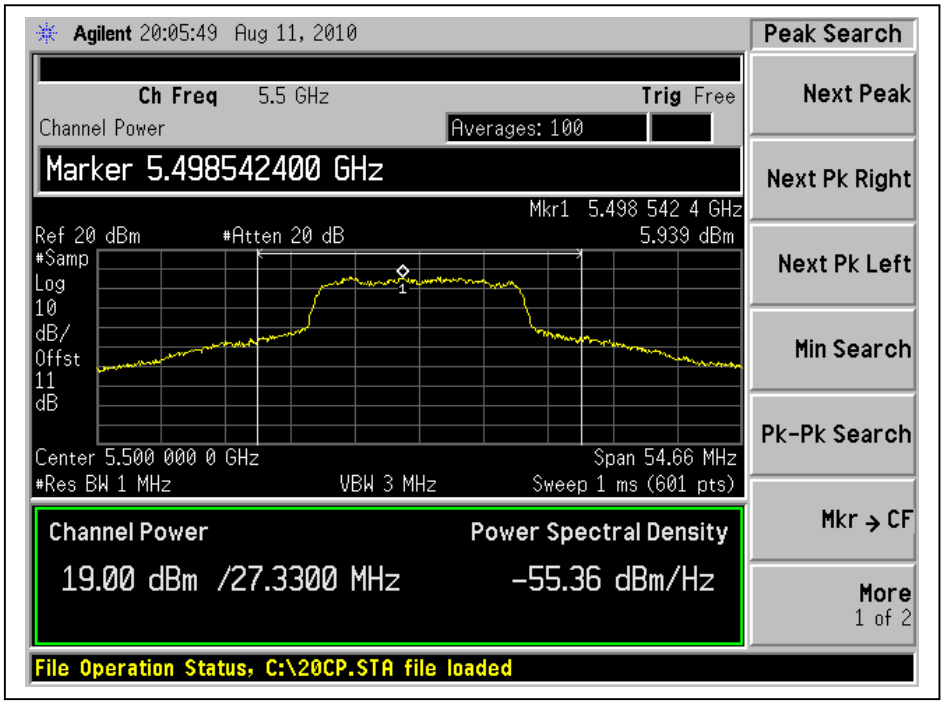
CH60


Agilent 15:06:24 Aug 9, 2010
Peak Search
Ch Freq 5.3 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.299130000 GHz
Mkr1 5.299 13 GHz
Ref 20 dBm
#Atten 20 dB
6.518 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.300 00 GHz
Span 47.66 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
19.32 dBm /23.8300 MHz
Power Spectral Density
-54.45 dBm/Hz
File Operation Status, C:\20CP.STA file loaded
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2

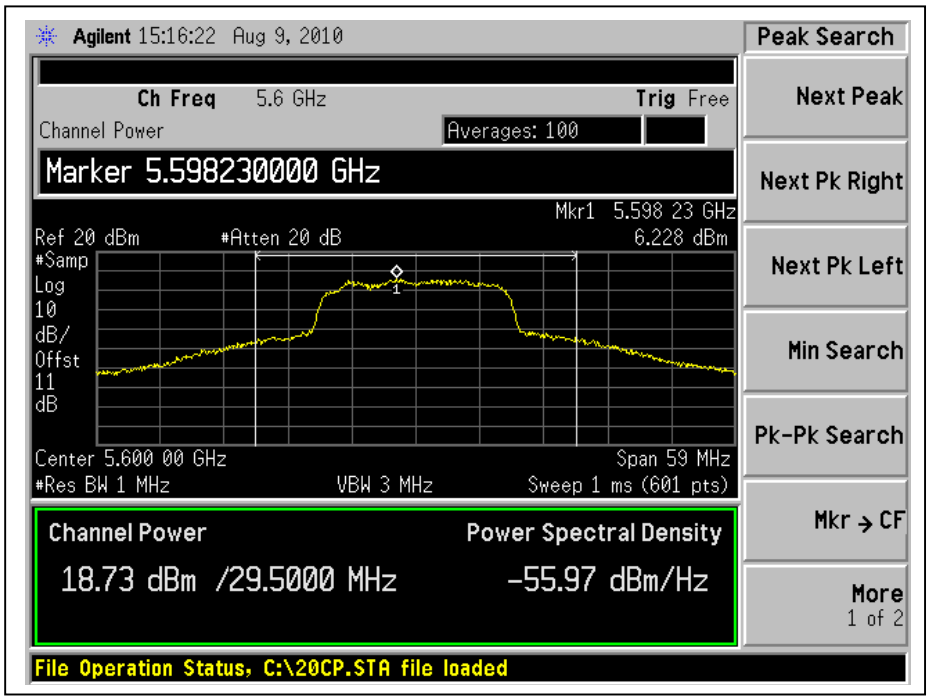
CH64


Agilent 15:12:20 Aug 9, 2010
Peak Search
Ch Freq 5.32 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.316480000 GHz
Mkr1 5.316 48 GHz
Ref 20 dBm
#Atten 20 dB
4.743 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.320 00 GHz
Span 47 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
17.49 dBm /23.5000 MHz
Power Spectral Density
-56.22 dBm/Hz
File Operation Status, C:\20CP.STA file loaded
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2

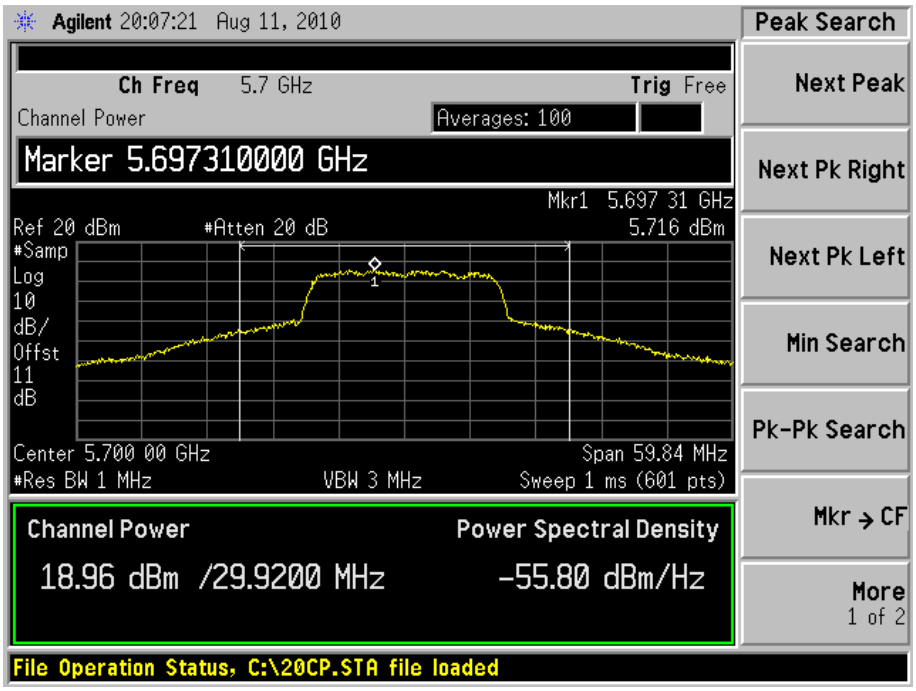
CH100


Agilent 20:05:49 Aug 11, 2010
Peak Search
Ch Freq 5.5 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.498542400 GHz
Mkr1 5.498 542 4 GHz
Ref 20 dBm
#Atten 20 dB
5.939 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.500 000 0 GHz
Span 54.66 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
19.00 dBm /27.3300 MHz
Power Spectral Density
-55.36 dBm/Hz
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
File Operation Status, C:\20CP.STA file loaded

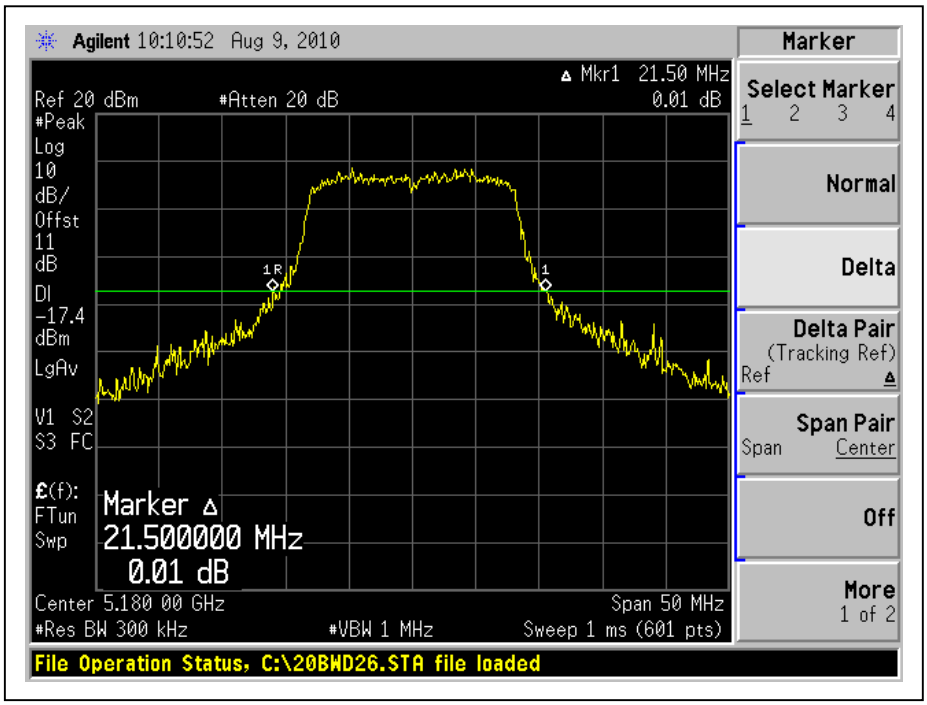
CH120


Agilent 15:16:22 Aug 9, 2010
Peak Search
Ch Freq 5.6 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.598230000 GHz
Mkr1 5.598 23 GHz
Ref 20 dBm
#Atten 20 dB
6.228 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.600 00 GHz
Span 59 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
18.73 dBm /29.5000 MHz
Power Spectral Density
-55.97 dBm/Hz
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
File Operation Status, C:\20CP.STA file loaded

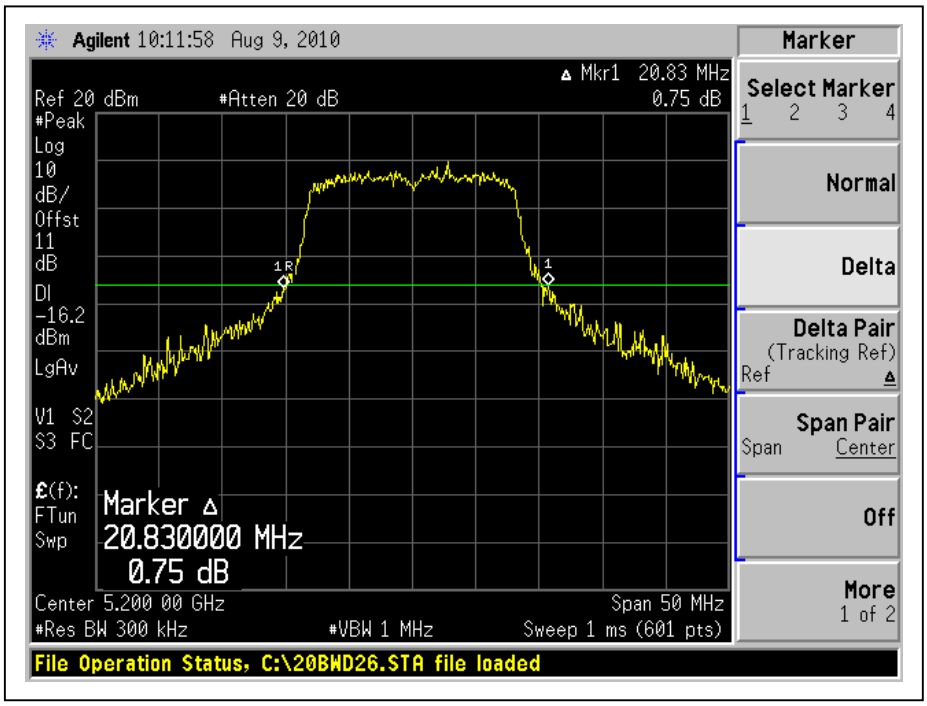
CH140


Agilent 20:07:21 Aug 11, 2010
Ch Freq 5.7 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.697310000 GHz
Mkr1 5.697 31 GHz
5.716 dBm
Ref 20 dBm
#Atten 20 dB
#Samp
Log
10
dB/
Offst
11
dB
Center 5.700 00 GHz
Span 59.84 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
18.96 dBm /29.9200 MHz
Power Spectral Density
-55.80 dBm/Hz
File Operation Status, C:\20CP.STA file loaded
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2

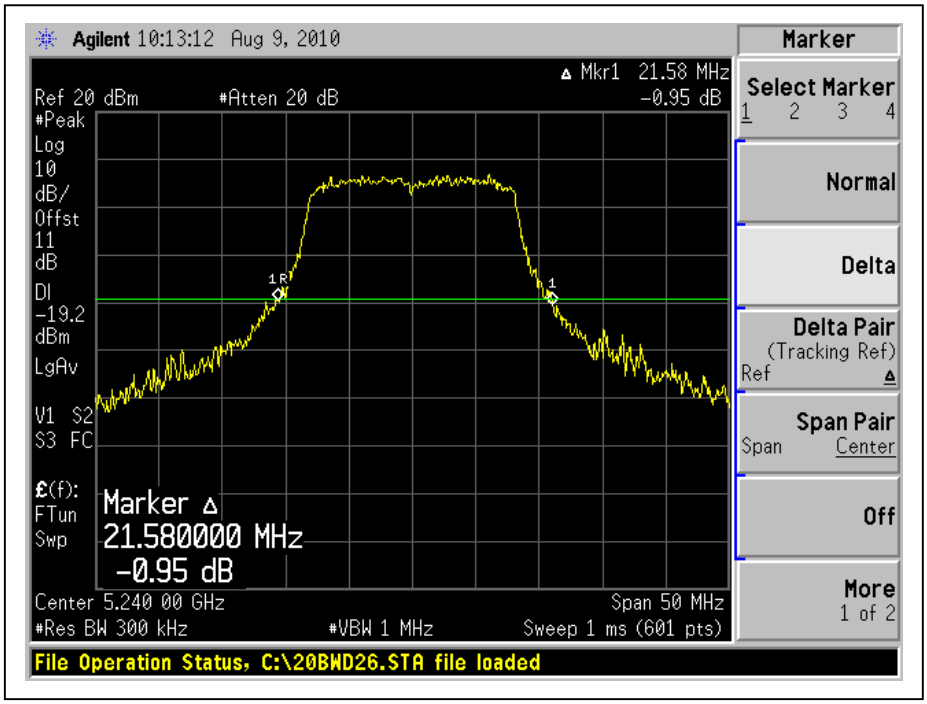
26dB Occupied Bandwidth:
CH36



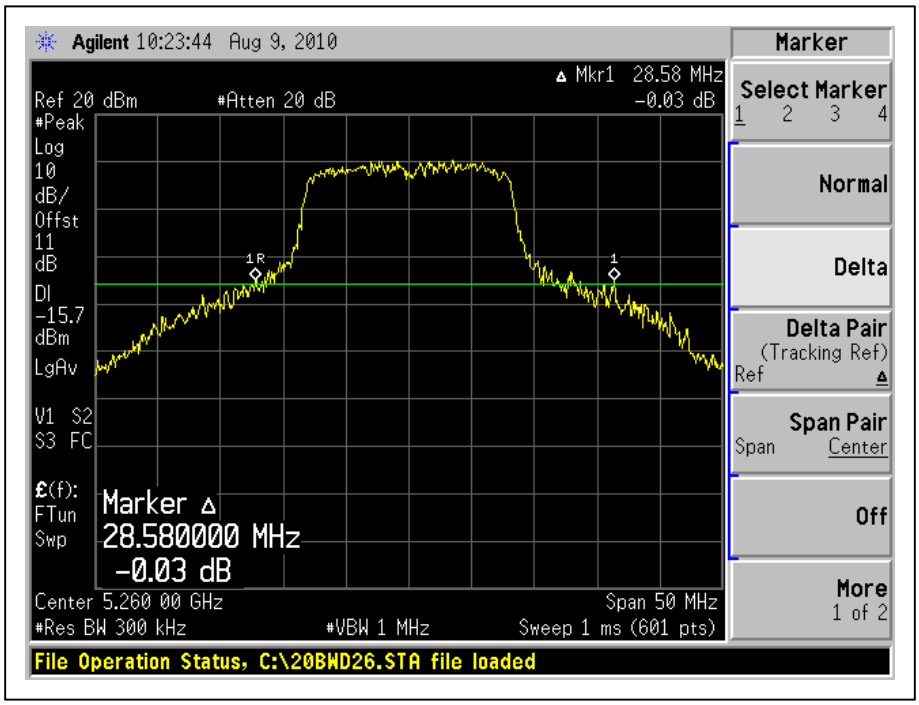
CH40



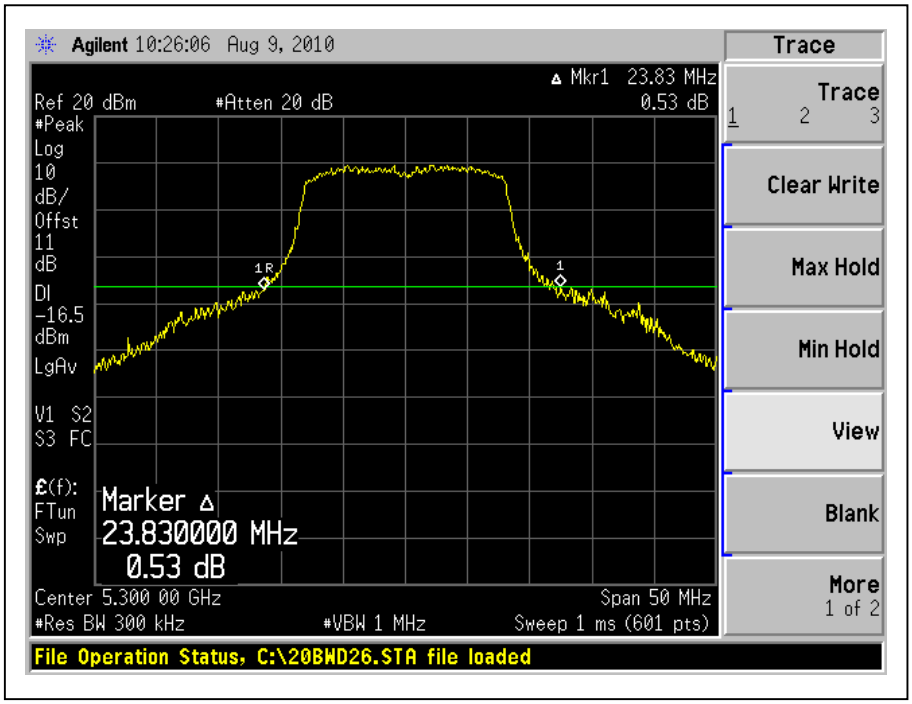
CH48


Agilent 10:13:12 Aug 9, 2010
Marker
Mkr1 21.58 MHz
-0.95 dB
Ref 20 dBm
#Atten 20 dB
#Peak
Log
10
dB/
Offst
11
dB
Dl
-19.2
dBm
LgAv
V1 S2
S3 FC
£(f):
FTun
Swp
Marker Δ
21.580000 MHz
-0.95 dB
Center 5.240 00 GHz
Span 50 MHz
#Res BW 300 kHz
#VBW 1 MHz
Sweep 1 ms (601 pts)
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
File Operation Status, C:\20BWD26.STA file loaded

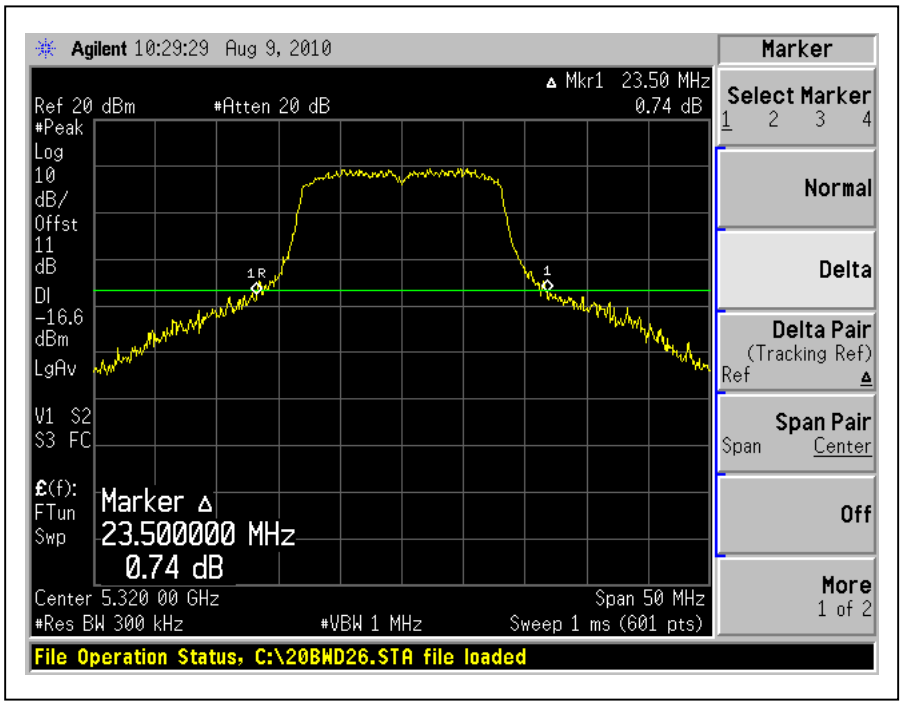
CH52


Agilent 10:23:44 Aug 9, 2010
Marker
Mkr1 28.58 MHz
-0.03 dB
Ref 20 dBm
#Atten 20 dB
#Peak
Log
10
dB/
Offst
11
dB
Dl
-15.7
dBm
LgAv
V1 S2
S3 FC
£(f):
FTun
Swp
Marker Δ
28.580000 MHz
-0.03 dB
Center 5.260 00 GHz
Span 50 MHz
#Res BW 300 kHz
#VBW 1 MHz
Sweep 1 ms (601 pts)
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
File Operation Status, C:\20BWD26.STA file loaded

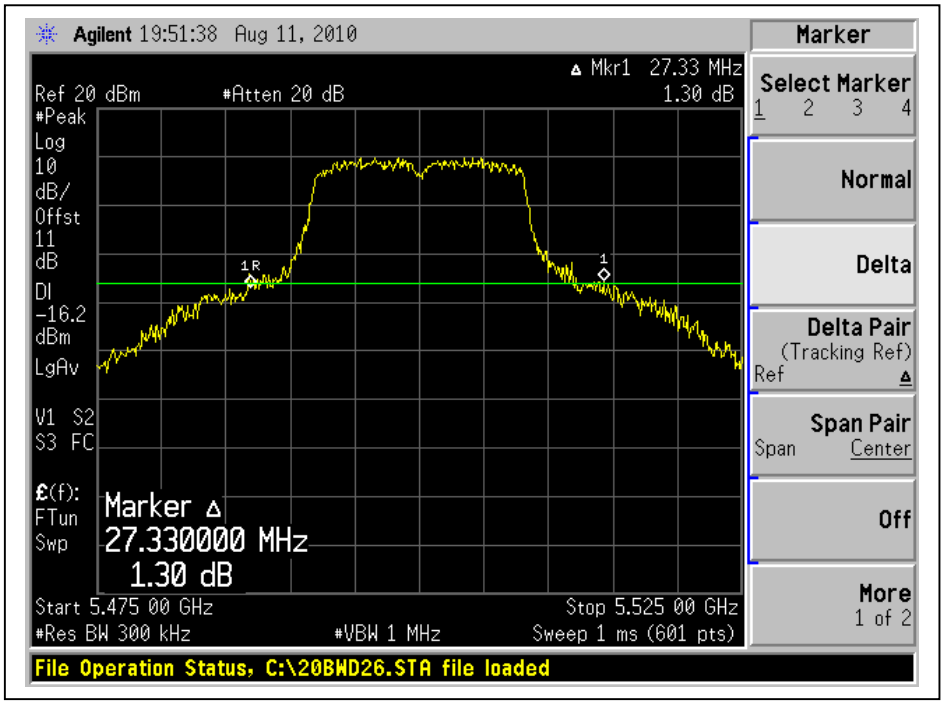
CH60


Agilent 10:26:06 Aug 9, 2010
Trace
Trace
1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
More
1 of 2
Mkr1 23.83 MHz
0.53 dB
Ref 20 dBm
#Atten 20 dB
#Peak
Log
10
dB/
Offst
11
dB
Dl
-16.5
dBm
LgAv
V1 S2
S3 FC
£(f):
FTun
Swp
Marker Δ
23.830000 MHz
0.53 dB
Center 5.300 00 GHz
Span 50 MHz
#Res BW 300 kHz
#VBW 1 MHz
Sweep 1 ms (601 pts)
File Operation Status, C:\20BWD26.STA file loaded

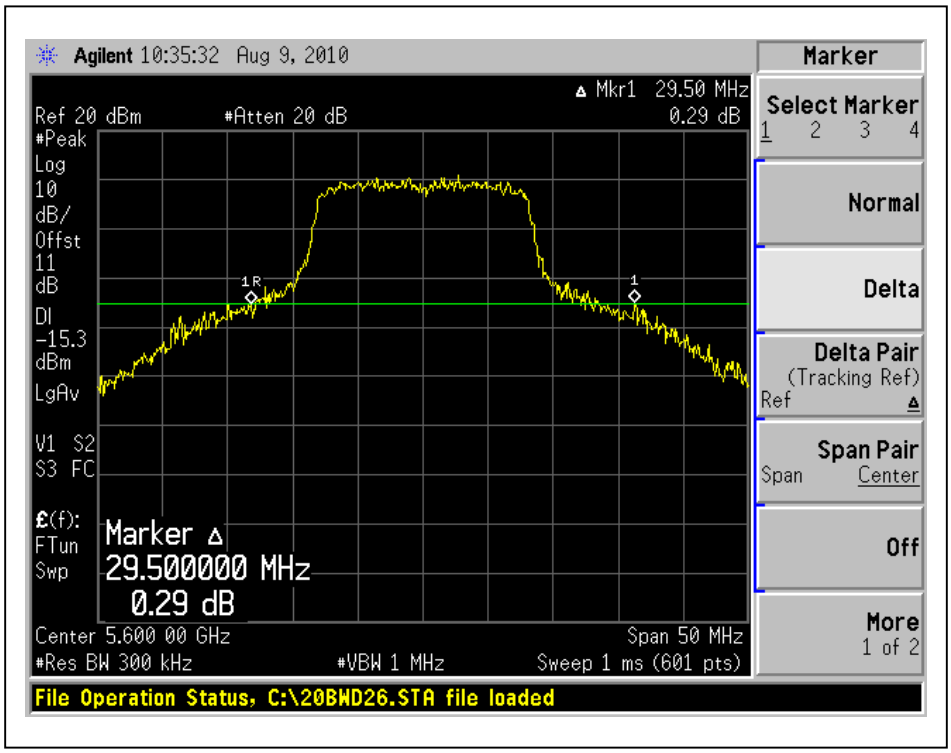
CH64


Agilent 10:29:29 Aug 9, 2010
Marker
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
Mkr1 23.50 MHz
0.74 dB
Ref 20 dBm
#Atten 20 dB
#Peak
Log
10
dB/
Offst
11
dB
Dl
-16.6
dBm
LgAv
V1 S2
S3 FC
£(f):
FTun
Swp
Marker Δ
23.500000 MHz
0.74 dB
Center 5.320 00 GHz
Span 50 MHz
#Res BW 300 kHz
#VBW 1 MHz
Sweep 1 ms (601 pts)
File Operation Status, C:\20BWD26.STA file loaded

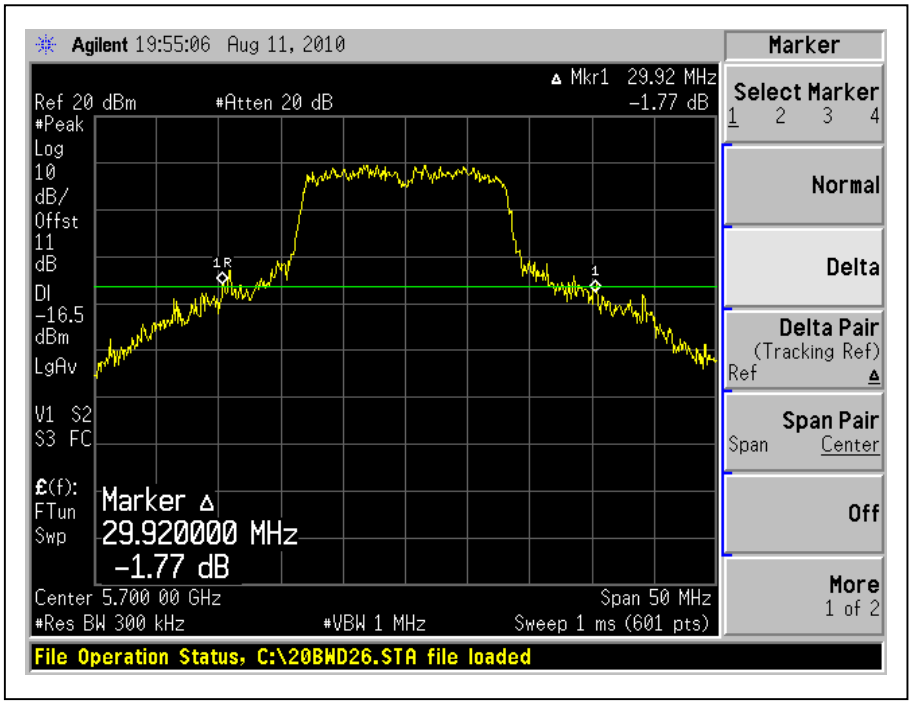
CH100


Agilent 19:51:38 Aug 11, 2010
Marker
Mkr1 27.33 MHz
1.30 dB
Ref 20 dBm
#Atten 20 dB
#Peak
Log
10
dB/
Offst
11
dB
Dl
-16.2
dBm
LgAv
V1 S2
S3 FC
£(f):
FTun
Swp
Marker Δ
27.330000 MHz
1.30 dB
Start 5.475 00 GHz
#Res BW 300 kHz
#VBW 1 MHz
Stop 5.525 00 GHz
Sweep 1 ms (601 pts)
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
File Operation Status, C:\20BWD26.STA file loaded

CH120


Agilent 10:35:32 Aug 9, 2010
Marker
Mkr1 29.50 MHz
0.29 dB
Ref 20 dBm
#Atten 20 dB
#Peak
Log
10
dB/
Offst
11
dB
Dl
-15.3
dBm
LgAv
V1 S2
S3 FC
£(f):
FTun
Swp
Marker Δ
29.500000 MHz
0.29 dB
Center 5.600 00 GHz
#Res BW 300 kHz
#VBW 1 MHz
Span 50 MHz
Sweep 1 ms (601 pts)
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
File Operation Status, C:\20BWD26.STA file loaded

CH140

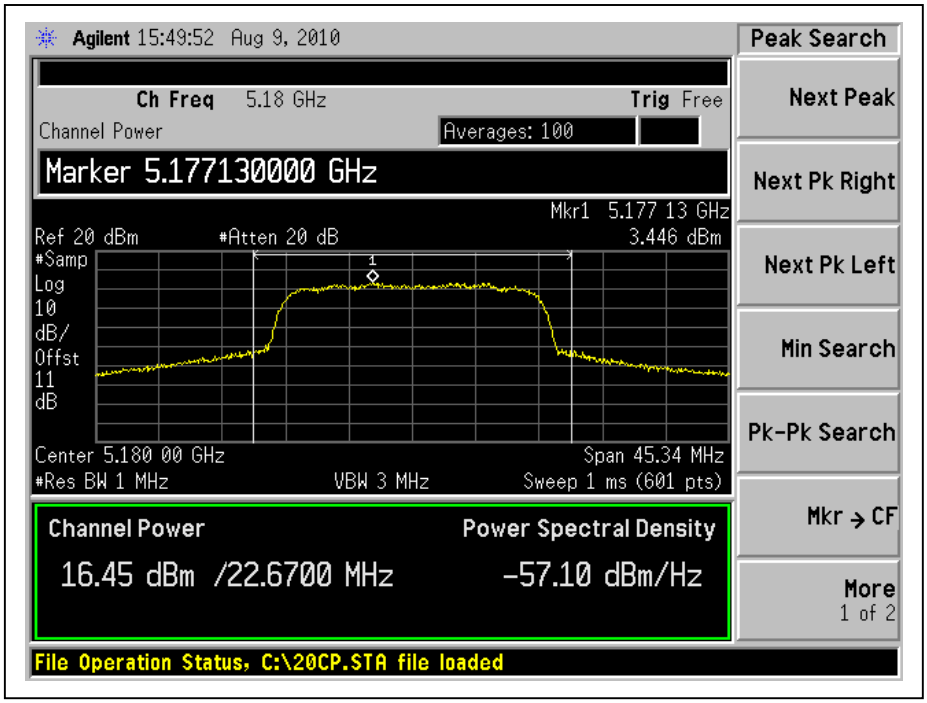

Agilent 19:55:06 Aug 11, 2010
Marker
Ref 20 dBm
#Atten 20 dB
Mkr1 29.92 MHz
-1.77 dB
#Peak
Log
10
dB/
Offst
11
dB
Dl
-16.5
dBm
LgAv
V1 S2
S3 FC
£(f):
FTun
Swp
Marker Δ
29.920000 MHz
-1.77 dB
Center 5.700 00 GHz
Span 50 MHz
#Res BW 300 kHz
#VBW 1 MHz
Sweep 1 ms (601 pts)
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
File Operation Status, C:\20BWD26.STA file loaded

802.11n (20MHz) OFDM MODULATION:

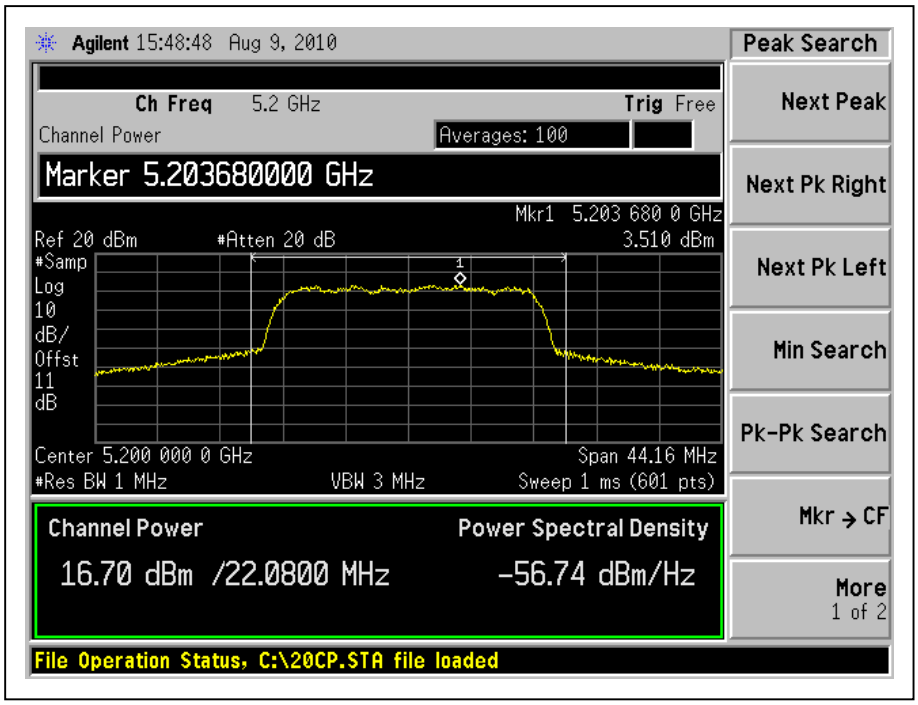
CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER (mW)	PEAK POWER LIMIT (dBm)	26dBc Occupied Bandwidth (MHz)	PASS/ FAIL
36	5180	16.5	44.7	17.0	22.67	PASS
40	5200	16.7	46.8	17.0	22.08	PASS
48	5240	16.6	45.7	17.0	22.42	PASS
52	5260	18.5	70.8	24.0	26.25	PASS
60	5300	18.4	69.2	24.0	24.33	PASS
64	5320	17.4	55.0	24.0	22.50	PASS
100	5500	18.3	67.6	24.0	29.58	PASS
120	5600	18.4	69.2	24.0	29.67	PASS
140	5700	18.5	70.8	24.0	30.33	PASS

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

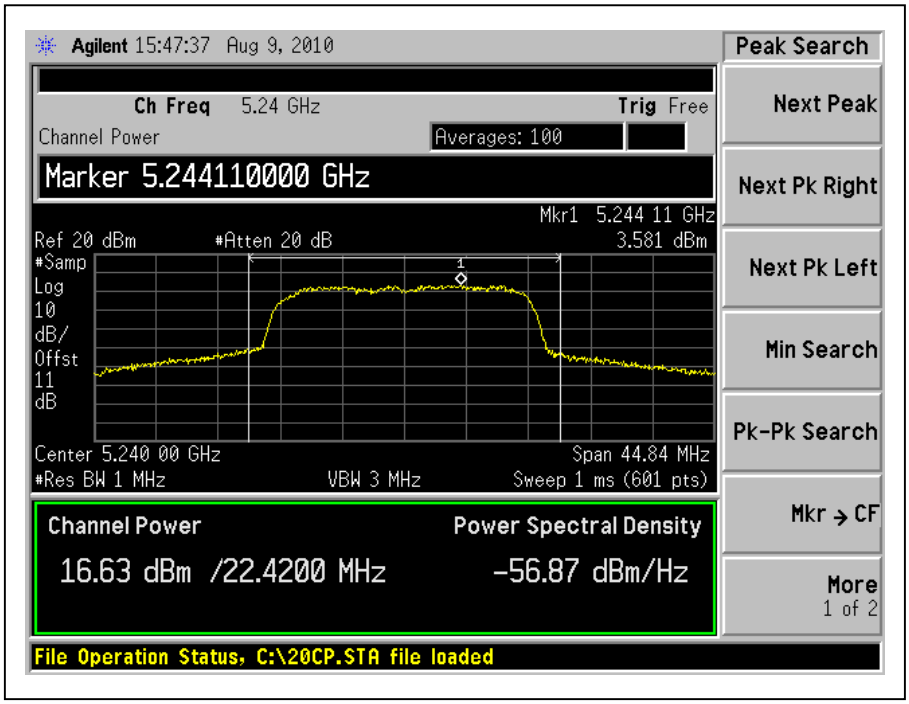
Peak Power Output:
CH36



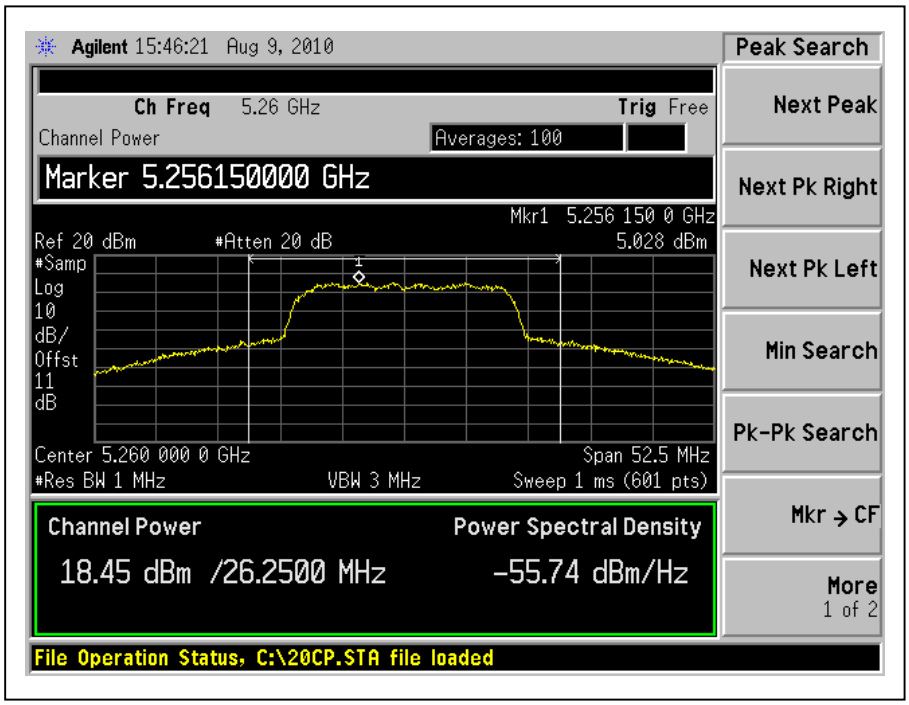
CH40



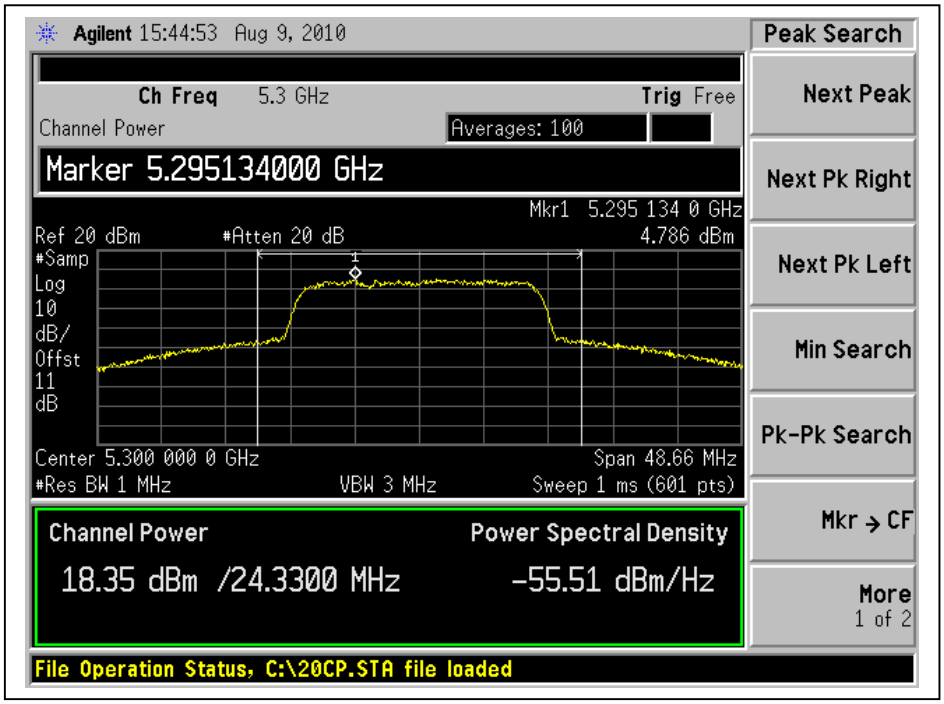
CH48


Agilent 15:47:37 Aug 9, 2010
Peak Search
Ch Freq 5.24 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.244110000 GHz
Mkr1 5.244 11 GHz
Ref 20 dBm
#Atten 20 dB
3.581 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.240 00 GHz
Span 44.84 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
16.63 dBm /22.4200 MHz
Power Spectral Density
-56.87 dBm/Hz
File Operation Status, C:\20CP.STA file loaded
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2

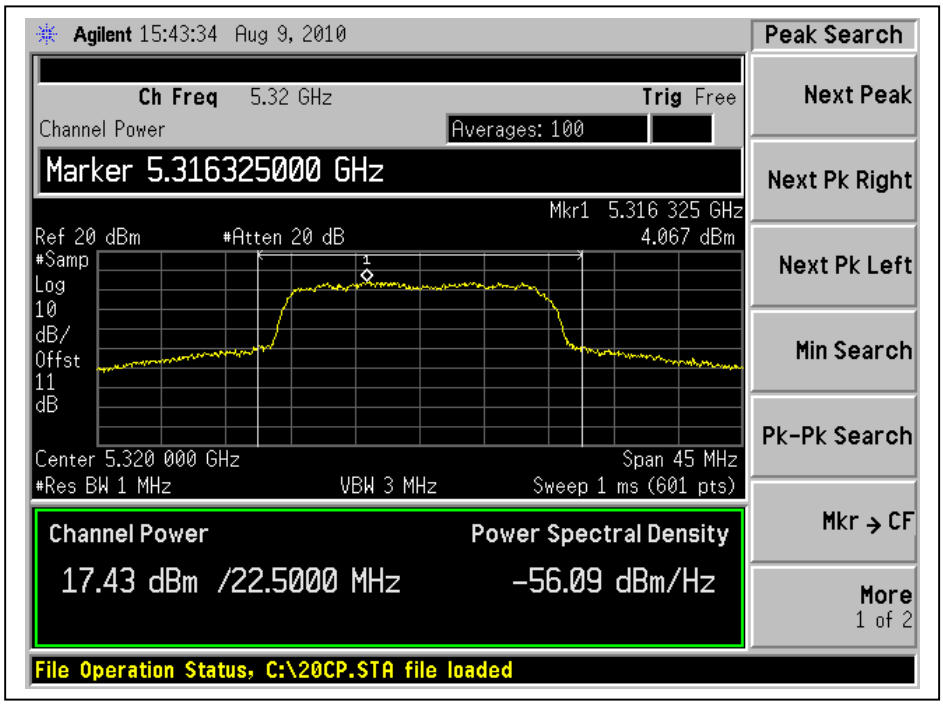
CH52


Agilent 15:46:21 Aug 9, 2010
Peak Search
Ch Freq 5.26 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.256150000 GHz
Mkr1 5.256 150 0 GHz
Ref 20 dBm
#Atten 20 dB
5.028 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.260 000 0 GHz
Span 52.5 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
18.45 dBm /26.2500 MHz
Power Spectral Density
-55.74 dBm/Hz
File Operation Status, C:\20CP.STA file loaded
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2

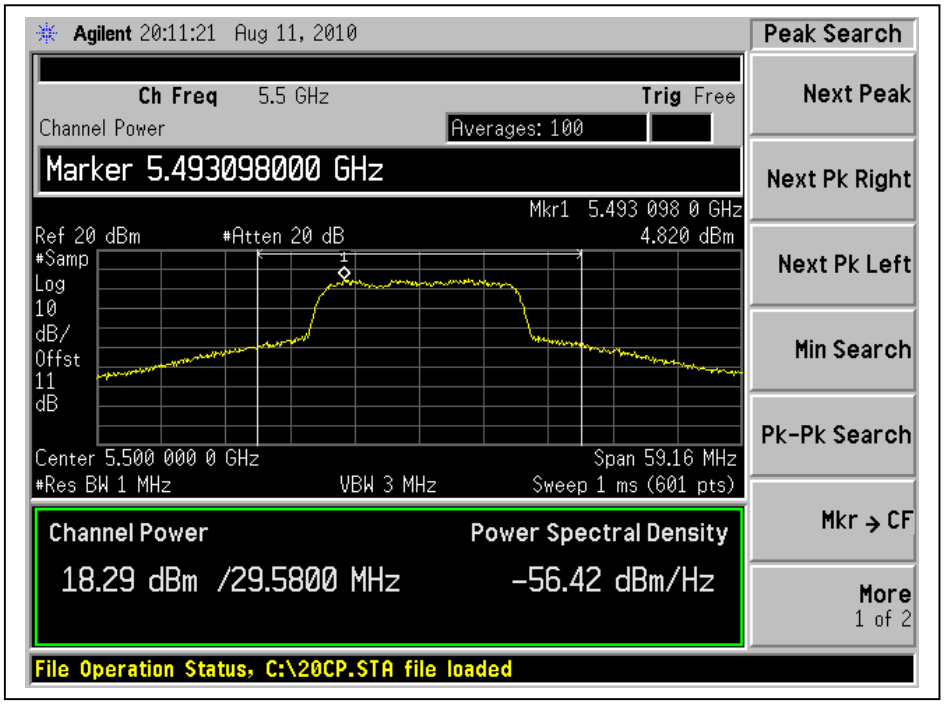
CH60


Agilent 15:44:53 Aug 9, 2010
Peak Search
Ch Freq 5.3 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.295134000 GHz
Mkr1 5.295 134 0 GHz
Ref 20 dBm
#Atten 20 dB
4.786 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.300 000 0 GHz
Span 48.66 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
18.35 dBm /24.3300 MHz
Power Spectral Density
-55.51 dBm/Hz
File Operation Status, C:\20CP.STA file loaded
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2

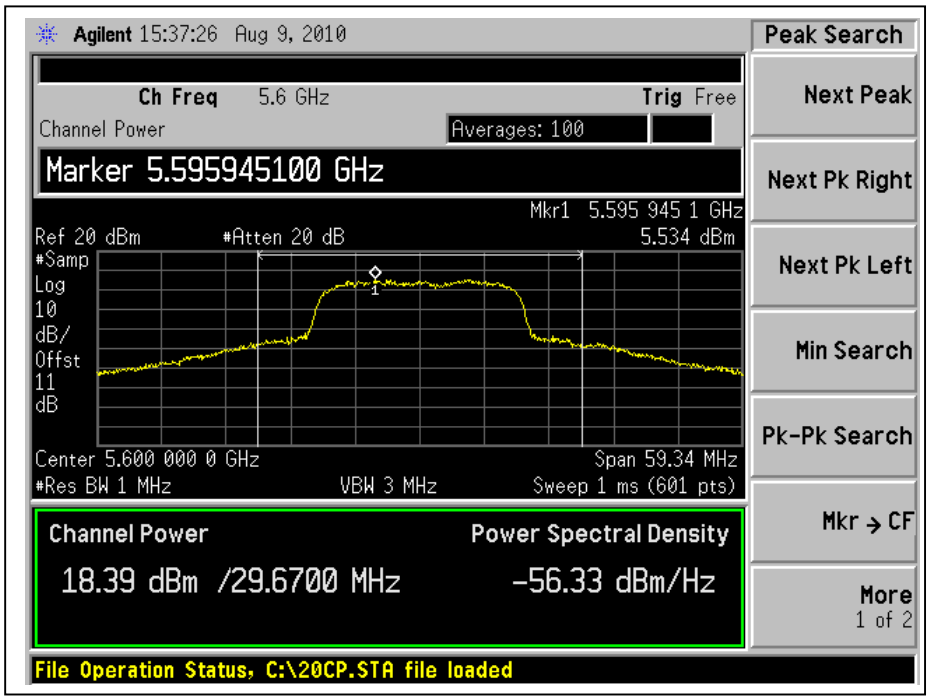
CH64


Agilent 15:43:34 Aug 9, 2010
Peak Search
Ch Freq 5.32 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.316325000 GHz
Mkr1 5.316 325 GHz
Ref 20 dBm
#Atten 20 dB
4.067 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.320 000 GHz
Span 45 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
17.43 dBm /22.5000 MHz
Power Spectral Density
-56.09 dBm/Hz
File Operation Status, C:\20CP.STA file loaded
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2

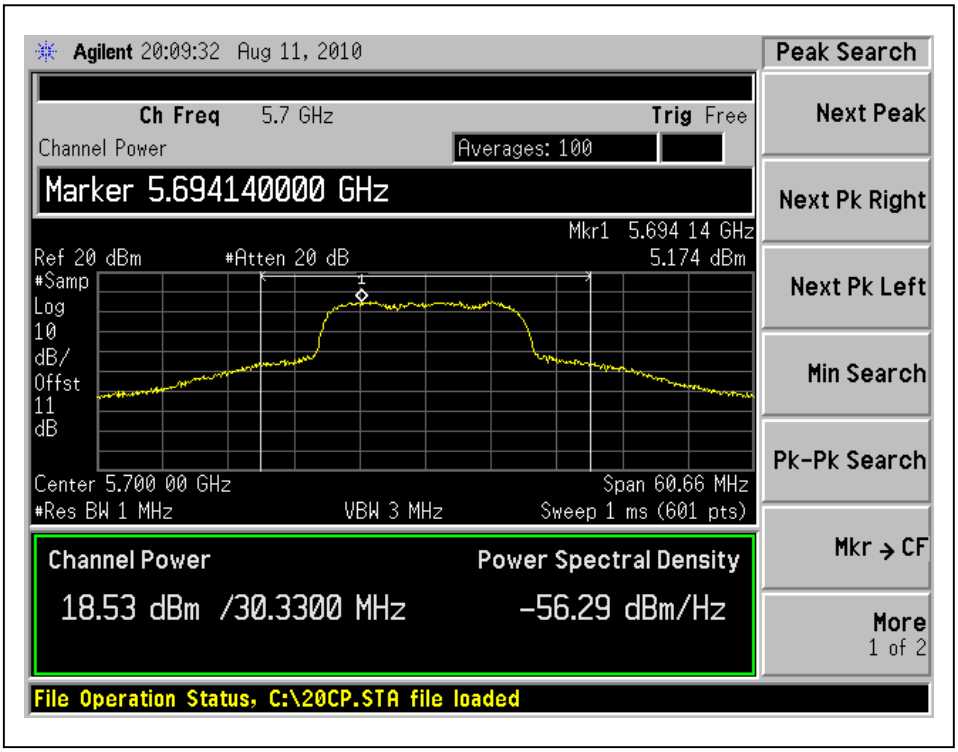
CH100


Agilent 20:11:21 Aug 11, 2010
Peak Search
Ch Freq 5.5 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.493098000 GHz
Mkr1 5.493 098 0 GHz
Ref 20 dBm
#Atten 20 dB
4.820 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.500 000 0 GHz
Span 59.16 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
18.29 dBm /29.5800 MHz
Power Spectral Density
-56.42 dBm/Hz
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
File Operation Status, C:\20CP.STA file loaded

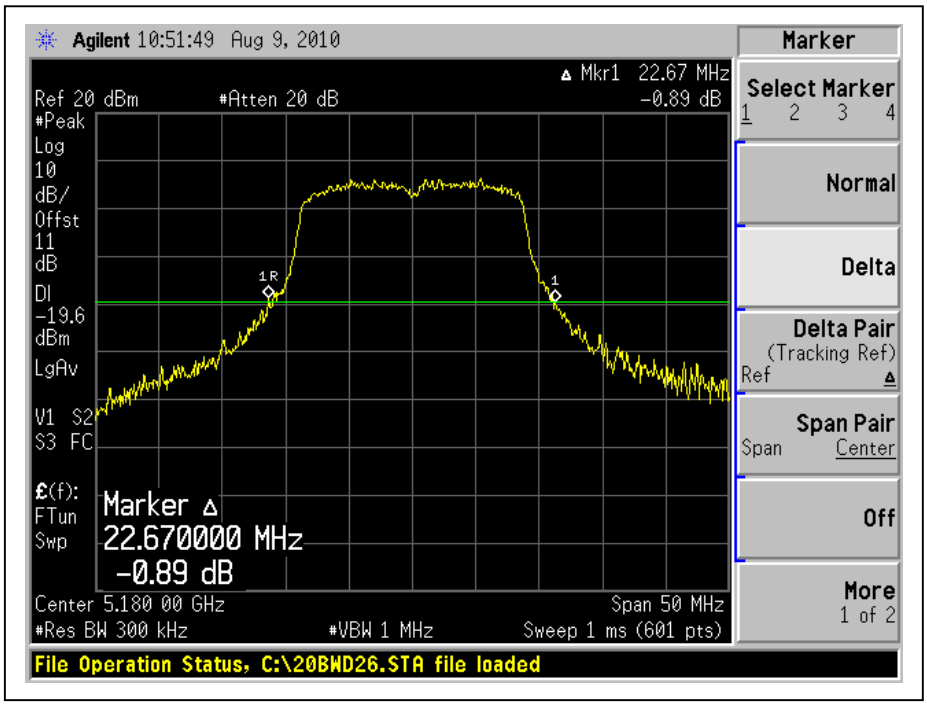
CH120


Agilent 15:37:26 Aug 9, 2010
Peak Search
Ch Freq 5.6 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.595945100 GHz
Mkr1 5.595 945 1 GHz
Ref 20 dBm
#Atten 20 dB
5.534 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.600 000 0 GHz
Span 59.34 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
18.39 dBm /29.6700 MHz
Power Spectral Density
-56.33 dBm/Hz
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
File Operation Status, C:\20CP.STA file loaded

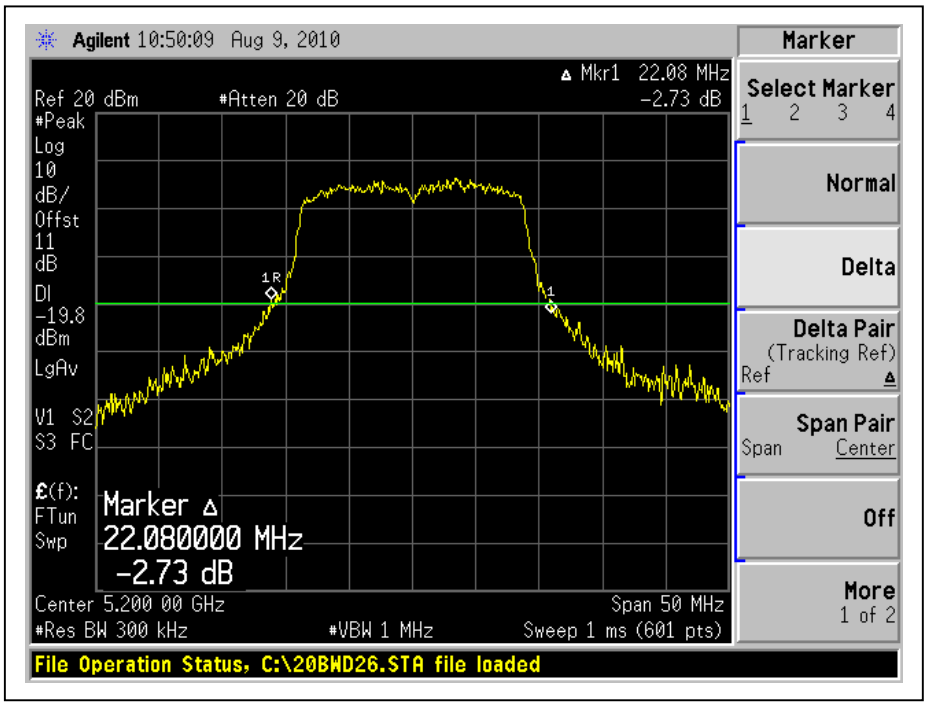
CH140


Agilent 20:09:32 Aug 11, 2010
Peak Search
Ch Freq 5.7 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.694140000 GHz
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Mkr1 5.694 14 GHz
5.174 dBm
Ref 20 dBm
#Atten 20 dB
#Samp
Log
10
dB/
Offst
11
dB
Center 5.700 00 GHz
Span 60.66 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
18.53 dBm /30.3300 MHz
Power Spectral Density
-56.29 dBm/Hz
File Operation Status, C:\20CP.STA file loaded

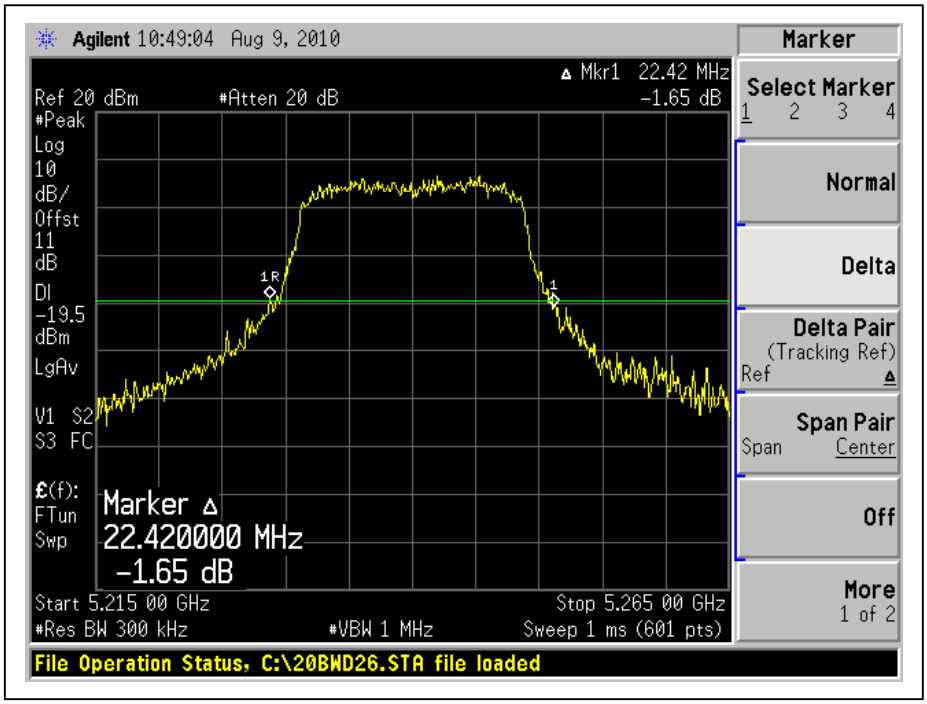
26dB Occupied Bandwidth:
CH36



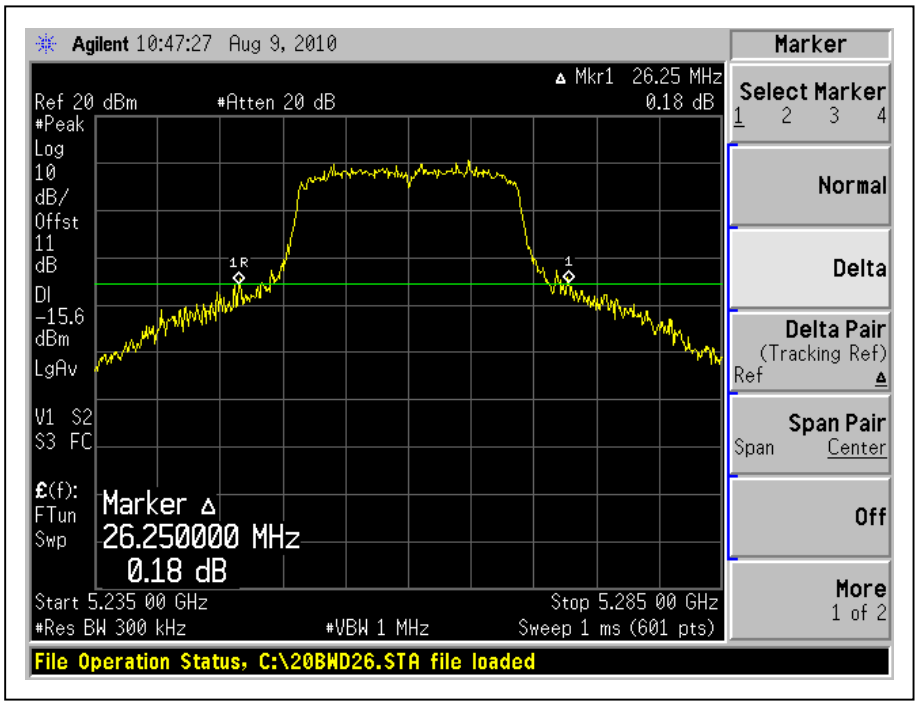
CH40



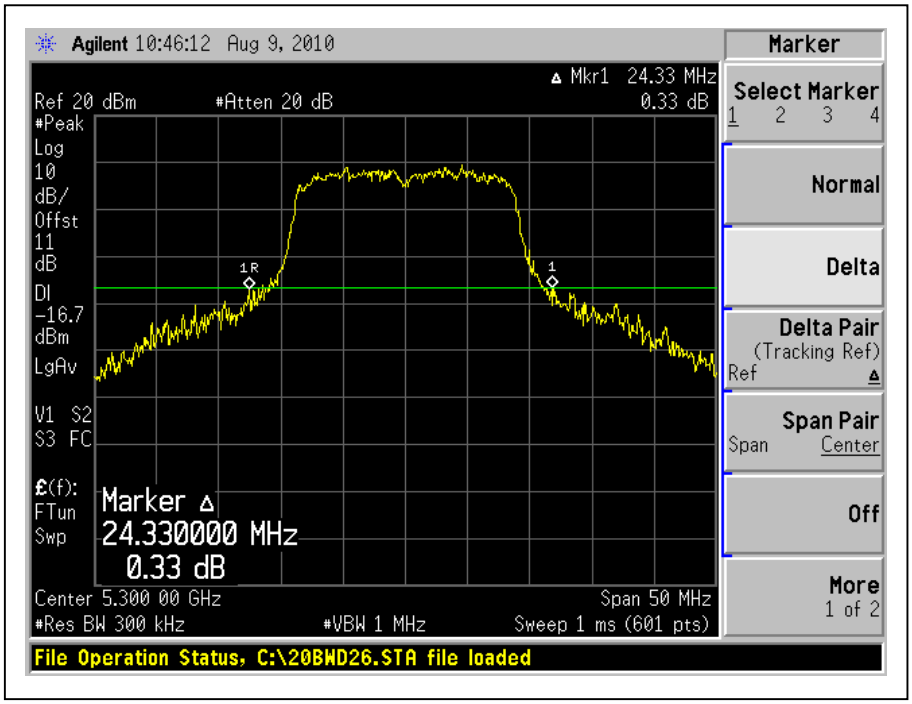
CH48


Agilent 10:49:04 Aug 9, 2010
Marker
Ref 20 dBm
#Atten 20 dB
Mkr1 22.42 MHz
-1.65 dB
#Peak
Log
10
dB/
Offst
11
dB
Dl
-19.5
dBm
LgAv
V1 S2
S3 FC
£(f):
FTun
Swp
Marker Δ
22.420000 MHz
-1.65 dB
Start 5.215 00 GHz
#Res BW 300 kHz
#VBW 1 MHz
Stop 5.265 00 GHz
Sweep 1 ms (601 pts)
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
File Operation Status, C:\20BWD26.STA file loaded

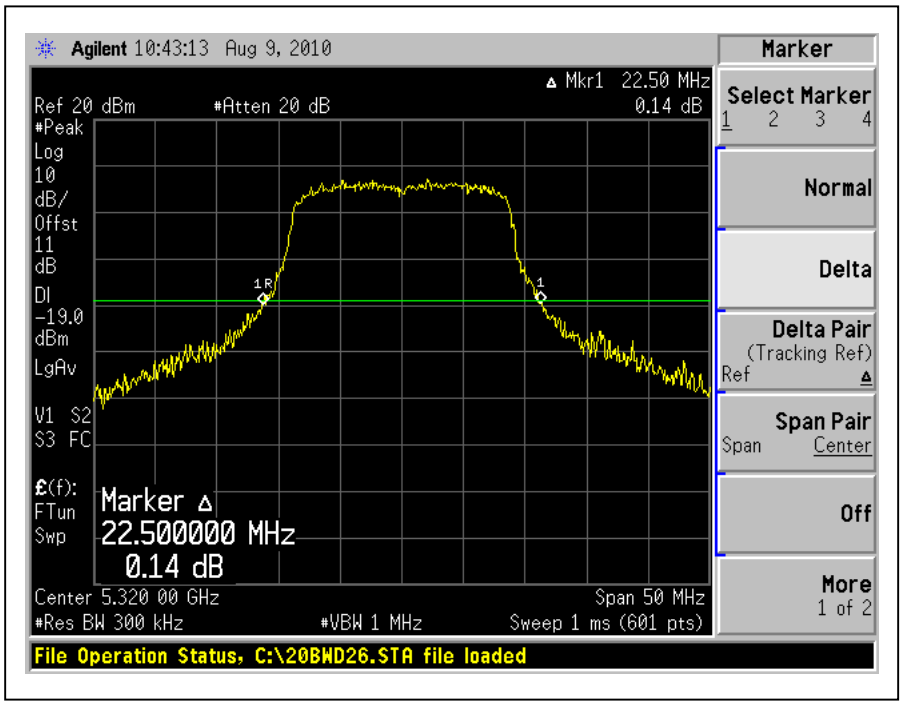
CH52


Agilent 10:47:27 Aug 9, 2010
Marker
Ref 20 dBm
#Atten 20 dB
Mkr1 26.25 MHz
0.18 dB
#Peak
Log
10
dB/
Offst
11
dB
Dl
-15.6
dBm
LgAv
V1 S2
S3 FC
£(f):
FTun
Swp
Marker Δ
26.250000 MHz
0.18 dB
Start 5.235 00 GHz
#Res BW 300 kHz
#VBW 1 MHz
Stop 5.285 00 GHz
Sweep 1 ms (601 pts)
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
File Operation Status, C:\20BWD26.STA file loaded

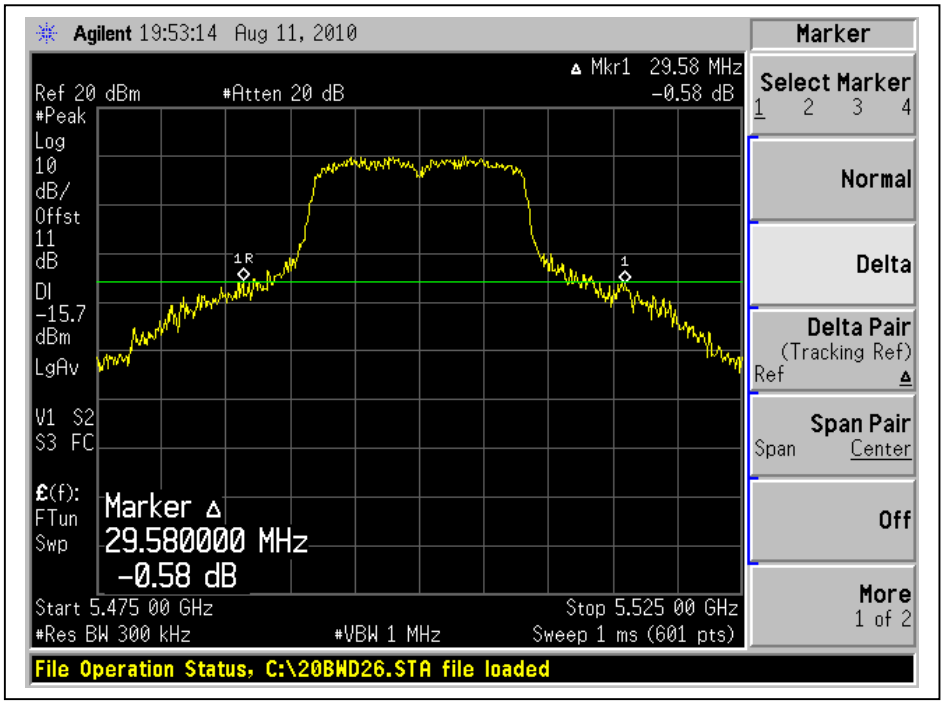
CH60


Agilent 10:46:12 Aug 9, 2010
Marker
Mkr1 24.33 MHz
0.33 dB
Ref 20 dBm
#Atten 20 dB
#Peak
Log
10
dB/
Offst
11
dB
Dl
-16.7
dBm
LgAv
V1 S2
S3 FC
£(f):
FTun
Swp
Marker Δ
24.330000 MHz
0.33 dB
Center 5.300 00 GHz
Span 50 MHz
#Res BW 300 kHz
#VBW 1 MHz
Sweep 1 ms (601 pts)
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
File Operation Status, C:\20BWD26.STA file loaded

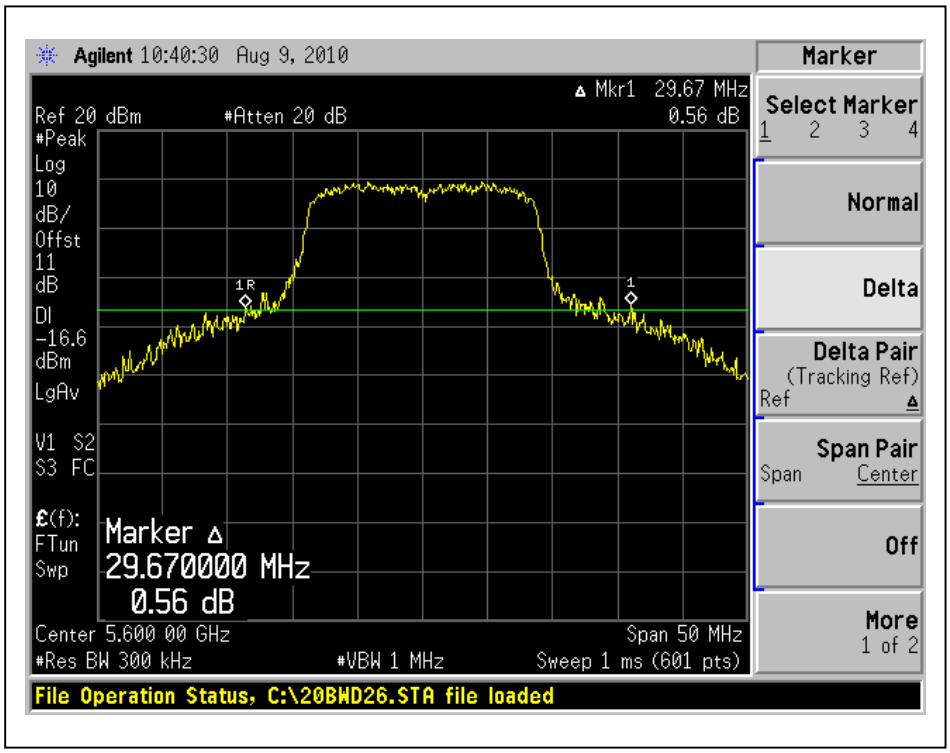
CH64


Agilent 10:43:13 Aug 9, 2010
Marker
Mkr1 22.50 MHz
0.14 dB
Ref 20 dBm
#Atten 20 dB
#Peak
Log
10
dB/
Offst
11
dB
Dl
-19.0
dBm
LgAv
V1 S2
S3 FC
£(f):
FTun
Swp
Marker Δ
22.500000 MHz
0.14 dB
Center 5.320 00 GHz
Span 50 MHz
#Res BW 300 kHz
#VBW 1 MHz
Sweep 1 ms (601 pts)
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
File Operation Status, C:\20BWD26.STA file loaded

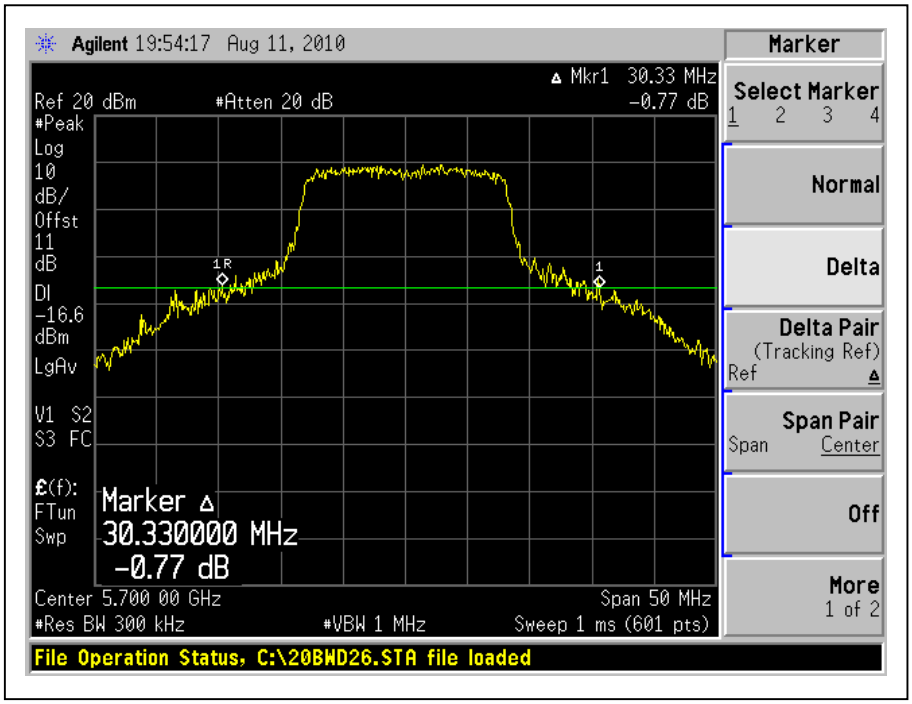
CH100


Agilent 19:53:14 Aug 11, 2010
Marker
Mkr1 29.58 MHz
-0.58 dB
Ref 20 dBm
#Atten 20 dB
#Peak
Log
10
dB/
Offst
11
dB
Dl
-15.7
dBm
LgAv
V1 S2
S3 FC
£(f):
FTun
Swp
Marker Δ
29.580000 MHz
-0.58 dB
Start 5.475 00 GHz
#Res BW 300 kHz
#VBW 1 MHz
Stop 5.525 00 GHz
Sweep 1 ms (601 pts)
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
File Operation Status, C:\20BWD26.STA file loaded

CH120


Agilent 10:40:30 Aug 9, 2010
Marker
Mkr1 29.67 MHz
0.56 dB
Ref 20 dBm
#Atten 20 dB
#Peak
Log
10
dB/
Offst
11
dB
Dl
-16.6
dBm
LgAv
V1 S2
S3 FC
£(f):
FTun
Swp
Marker Δ
29.670000 MHz
0.56 dB
Center 5.600 00 GHz
#Res BW 300 kHz
#VBW 1 MHz
Span 50 MHz
Sweep 1 ms (601 pts)
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
File Operation Status, C:\20BWD26.STA file loaded

CH140

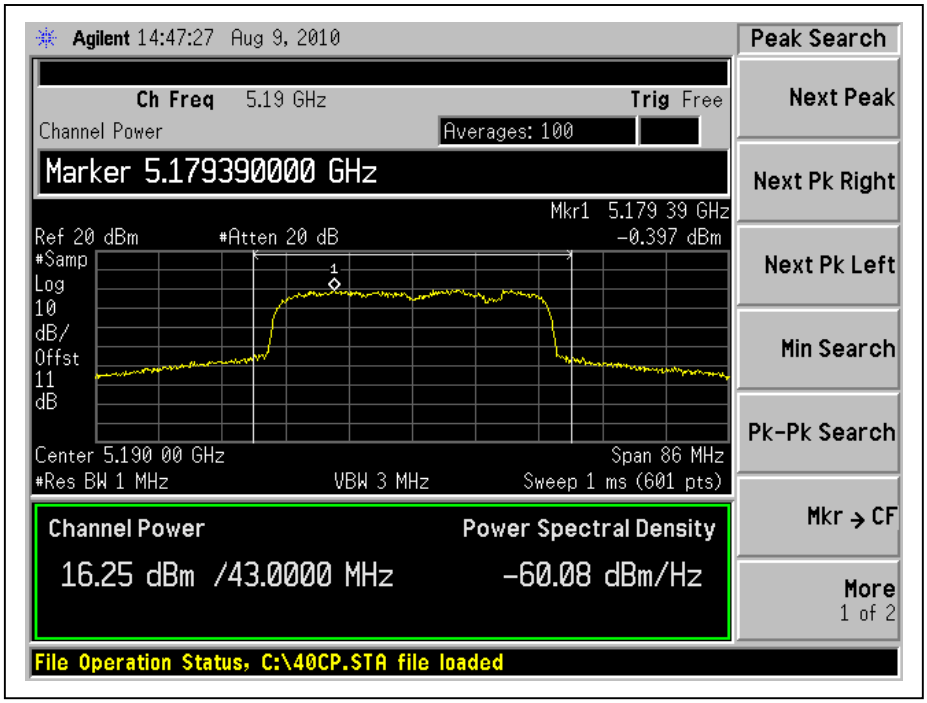

Agilent 19:54:17 Aug 11, 2010
Marker
Ref 20 dBm
#Atten 20 dB
Mkr1 30.33 MHz
-0.77 dB
#Peak
Log
10
dB/
Offst
11
dB
Dl
-16.6
dBm
LgAv
V1 S2
S3 FC
£(f):
FTun
Swp
Marker Δ
30.330000 MHz
-0.77 dB
Center 5.700 00 GHz
Span 50 MHz
#Res BW 300 kHz
#VBW 1 MHz
Sweep 1 ms (601 pts)
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
File Operation Status, C:\20BWD26.STA file loaded

802.11n (40MHz) OFDM MODULATION:

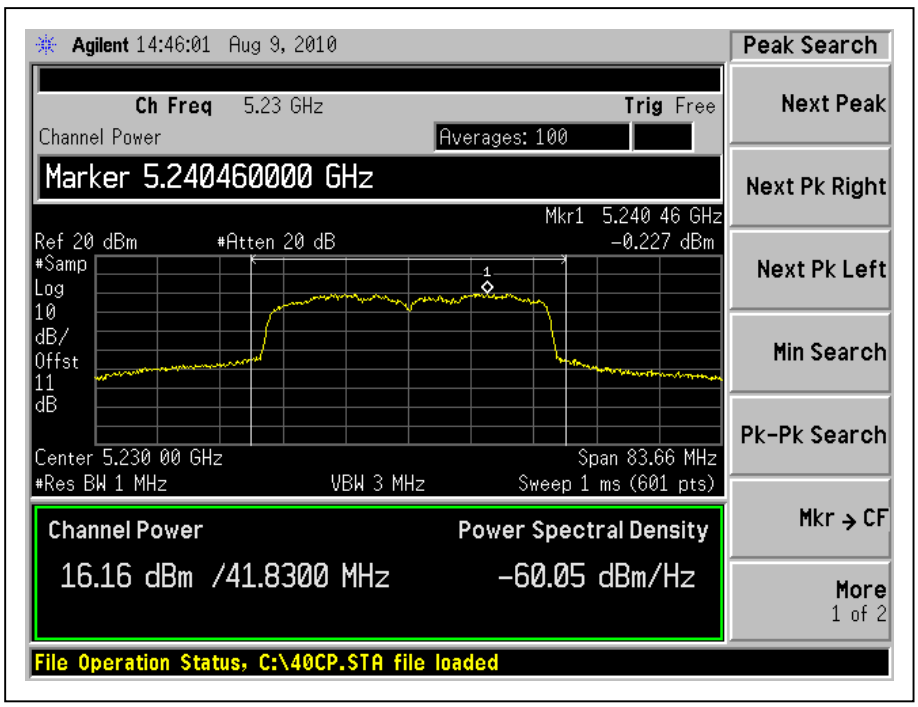
CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER (mW)	PEAK POWER LIMIT (dBm)	26dBc Occupied Bandwidth (MHz)	PASS/ FAIL
38	5190	16.3	42.7	17.0	43.00	PASS
46	5230	16.2	41.7	17.0	41.83	PASS
54	5270	18.8	75.9	24.0	41.67	PASS
62	5310	15.3	33.9	24.0	42.00	PASS
102	5510	18.5	70.8	24.0	59.17	PASS
118	5590	19.1	81.3	24.0	66.33	PASS
134	5670	19.0	79.4	24.0	66.00	PASS

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

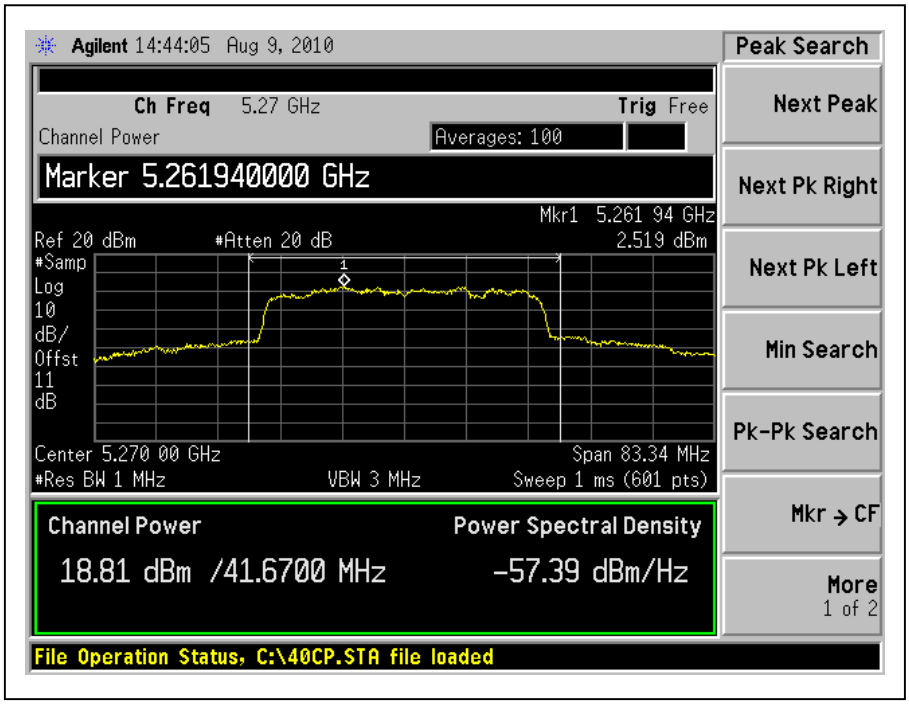
Peak Power Output:
CH38



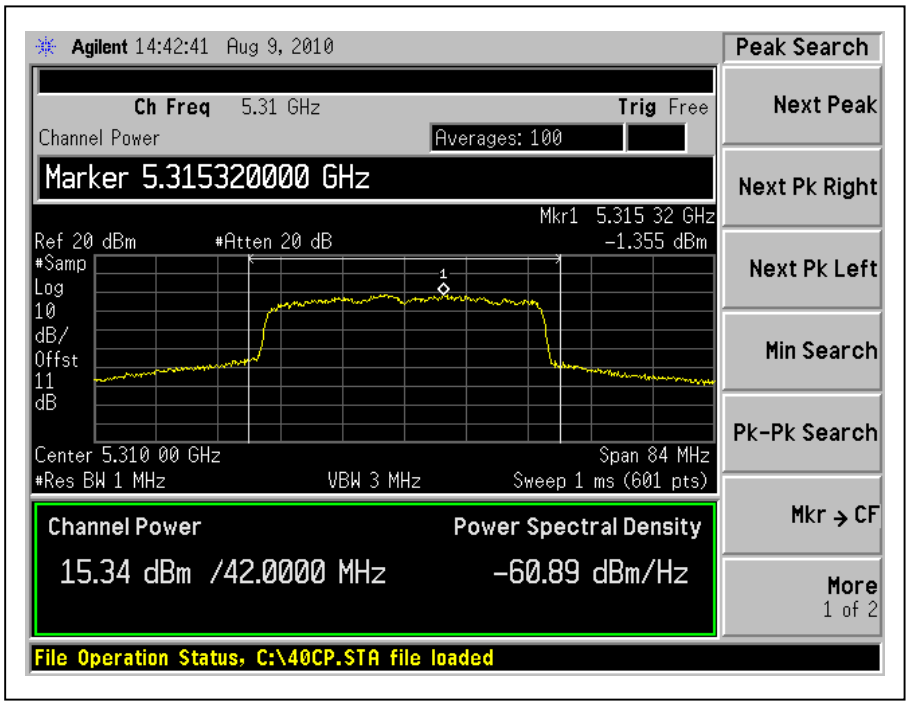
CH46



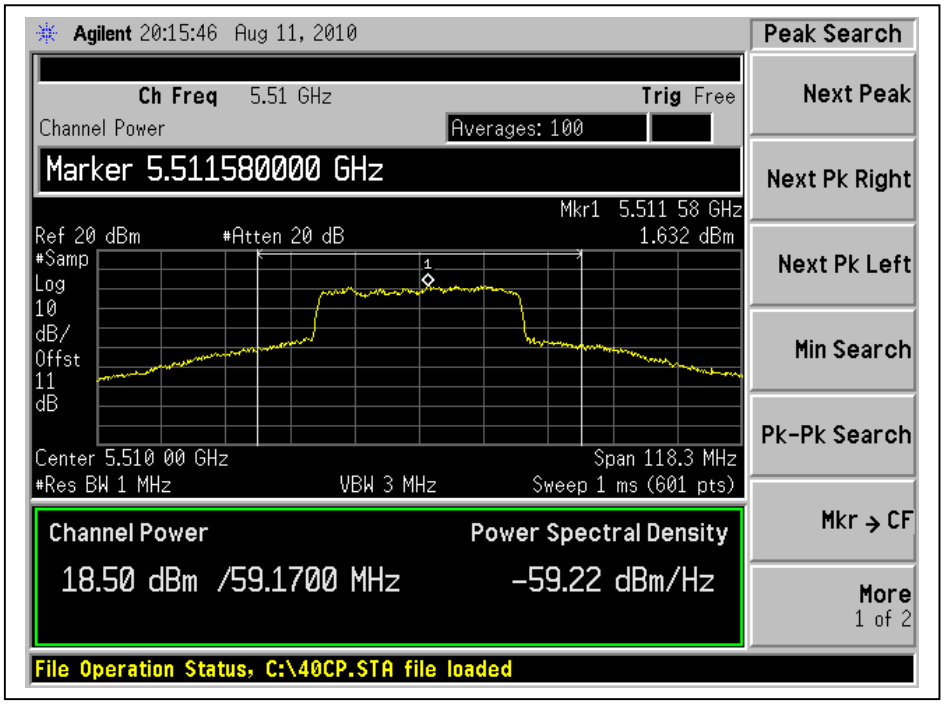
CH54


Agilent 14:44:05 Aug 9, 2010
Peak Search
Ch Freq 5.27 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.261940000 GHz
Mkr1 5.261 94 GHz
Ref 20 dBm
#Atten 20 dB
2.519 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.270 00 GHz
Span 83.34 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
18.81 dBm /41.6700 MHz
Power Spectral Density
-57.39 dBm/Hz
File Operation Status, C:\40CP.STA file loaded
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2

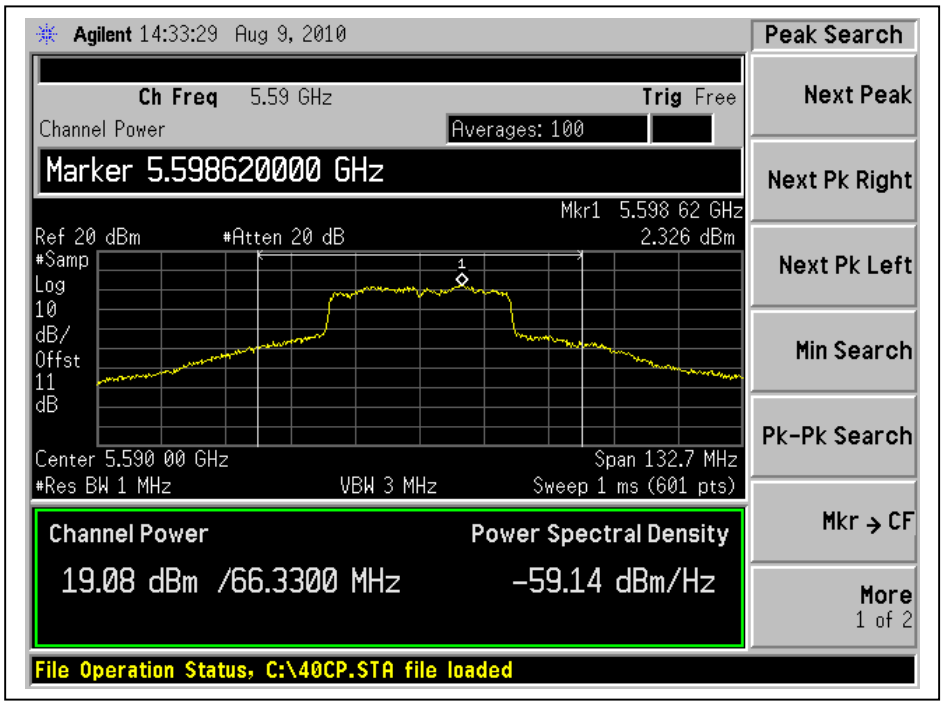
CH62


Agilent 14:42:41 Aug 9, 2010
Peak Search
Ch Freq 5.31 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.315320000 GHz
Mkr1 5.315 32 GHz
Ref 20 dBm
#Atten 20 dB
-1.355 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.310 00 GHz
Span 84 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
15.34 dBm /42.0000 MHz
Power Spectral Density
-60.89 dBm/Hz
File Operation Status, C:\40CP.STA file loaded
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2

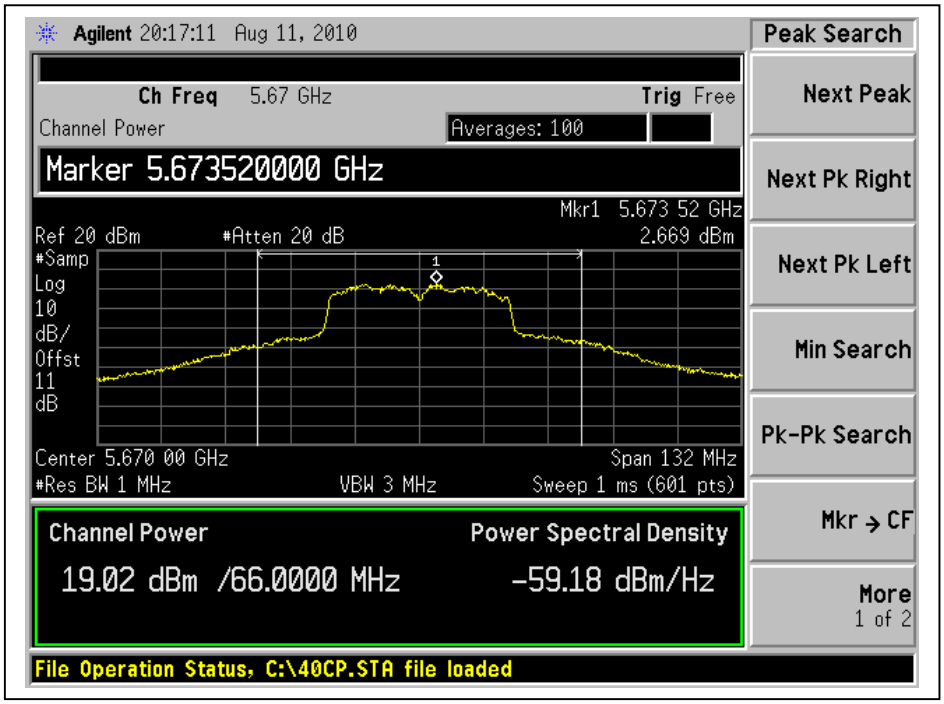
CH102


Agilent 20:15:46 Aug 11, 2010
Peak Search
Ch Freq 5.51 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.511580000 GHz
Mkr1 5.511 58 GHz
Ref 20 dBm
#Atten 20 dB
1.632 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.510 00 GHz
Span 118.3 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
18.50 dBm /59.1700 MHz
Power Spectral Density
-59.22 dBm/Hz
File Operation Status, C:\40CP.STA file loaded
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2

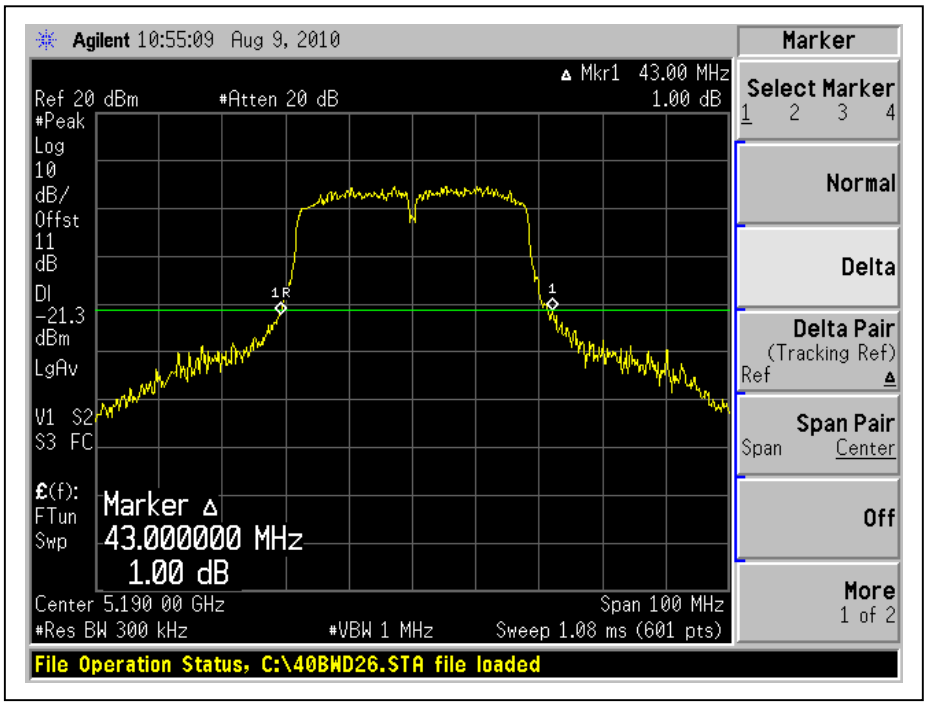
CH118


Agilent 14:33:29 Aug 9, 2010
Peak Search
Ch Freq 5.59 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.598620000 GHz
Mkr1 5.598 62 GHz
Ref 20 dBm
#Atten 20 dB
2.326 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.590 00 GHz
Span 132.7 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
19.08 dBm /66.3300 MHz
Power Spectral Density
-59.14 dBm/Hz
File Operation Status, C:\40CP.STA file loaded
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2

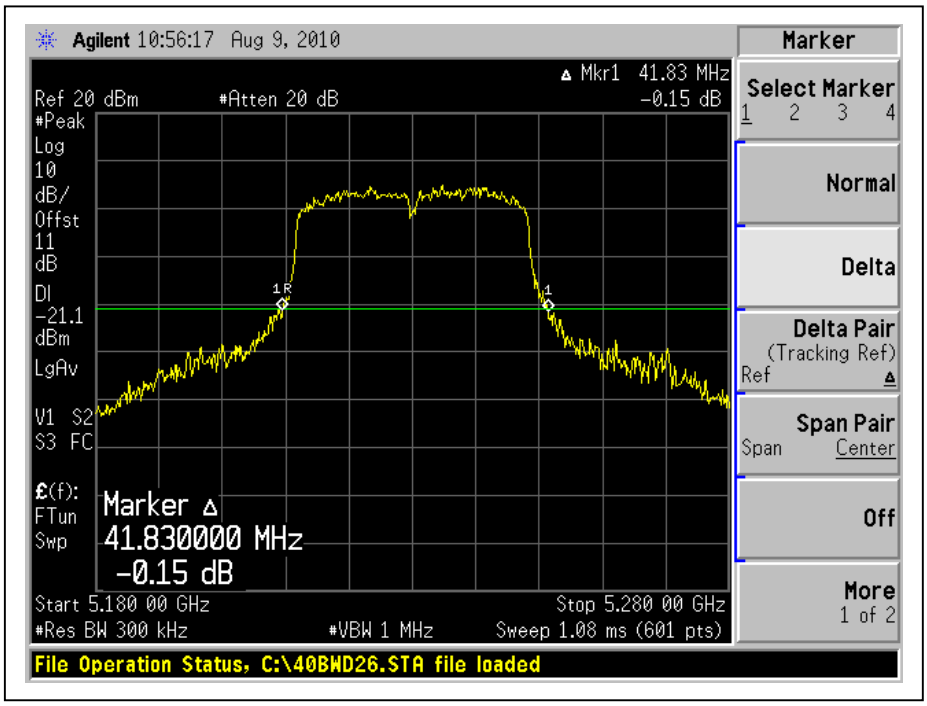
CH134


Agilent 20:17:11 Aug 11, 2010
Peak Search
Ch Freq 5.67 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.673520000 GHz
Mkr1 5.673 52 GHz
Ref 20 dBm
#Atten 20 dB
2.669 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.670 00 GHz
Span 132 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
19.02 dBm /66.0000 MHz
Power Spectral Density
-59.18 dBm/Hz
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
File Operation Status, C:\40CP.STA file loaded

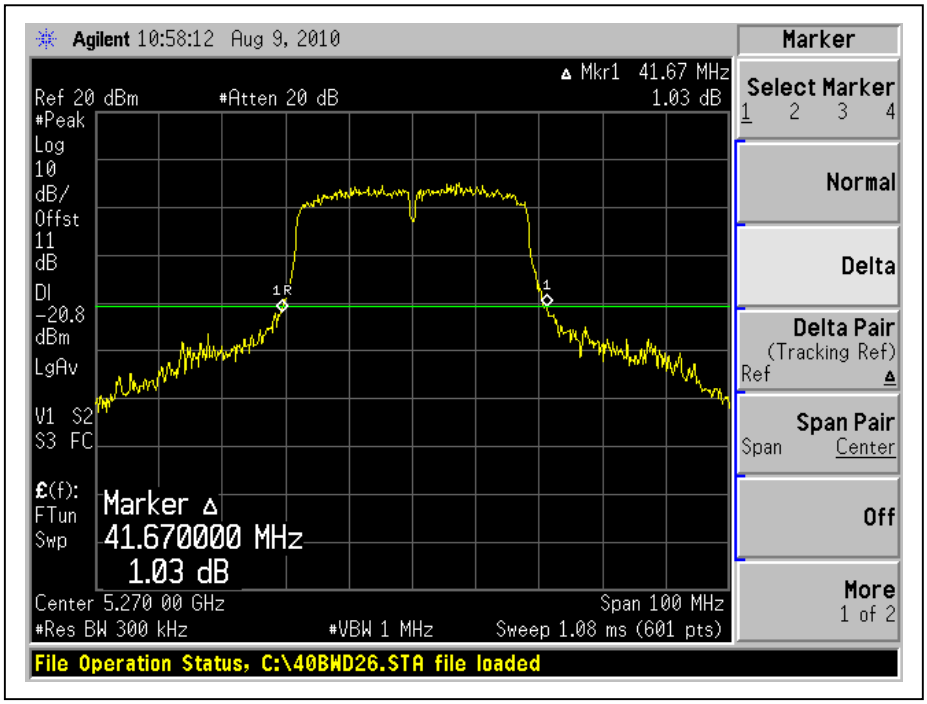
26dB Occupied Bandwidth:
CH38



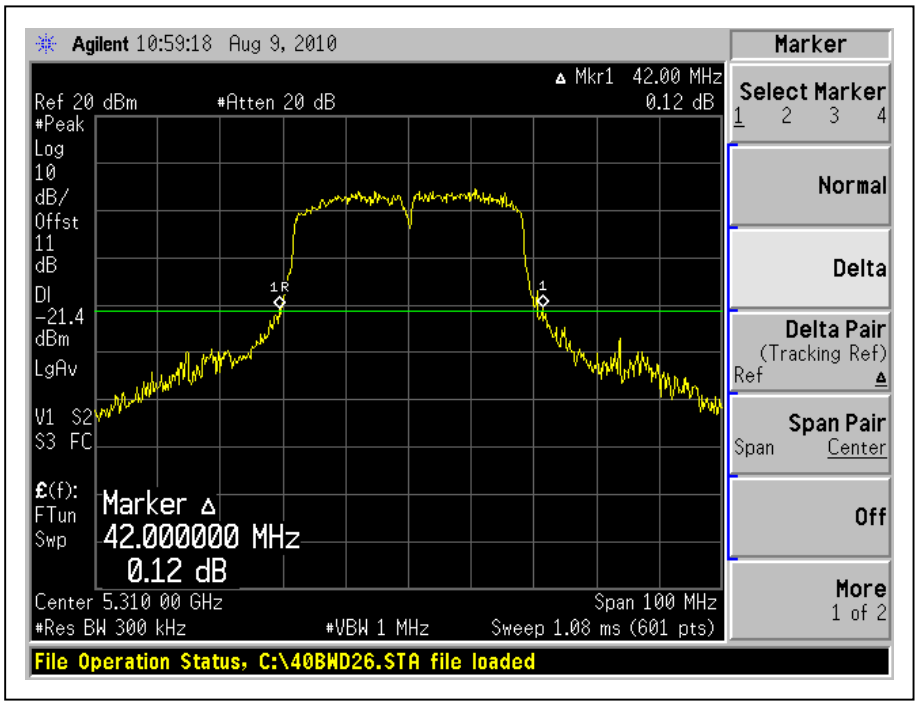
CH46



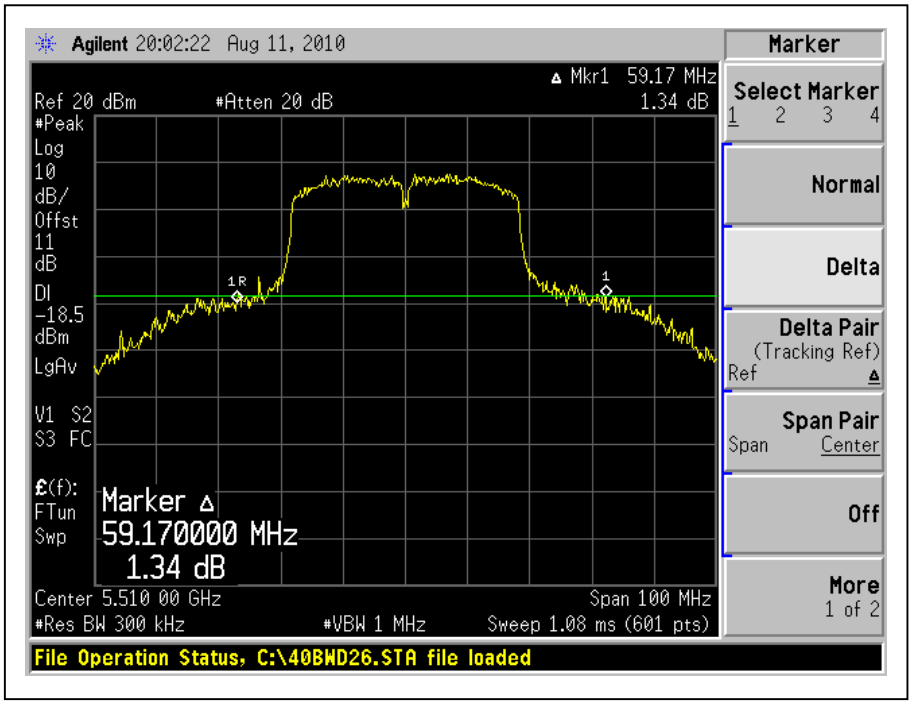
CH54


Agilent 10:58:12 Aug 9, 2010
Marker
Ref 20 dBm
#Atten 20 dB
Mkr1 41.67 MHz
1.03 dB
#Peak
Log
10
dB/
Offst
11
dB
Dl
-20.8
dBm
LgAv
V1 S2
S3 FC
£(f):
FTun
Swp
Marker Δ
41.670000 MHz
1.03 dB
Center 5.270 00 GHz
Span 100 MHz
#Res BW 300 kHz
#VBW 1 MHz
Sweep 1.08 ms (601 pts)
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
File Operation Status, C:\40BWD26.STA file loaded

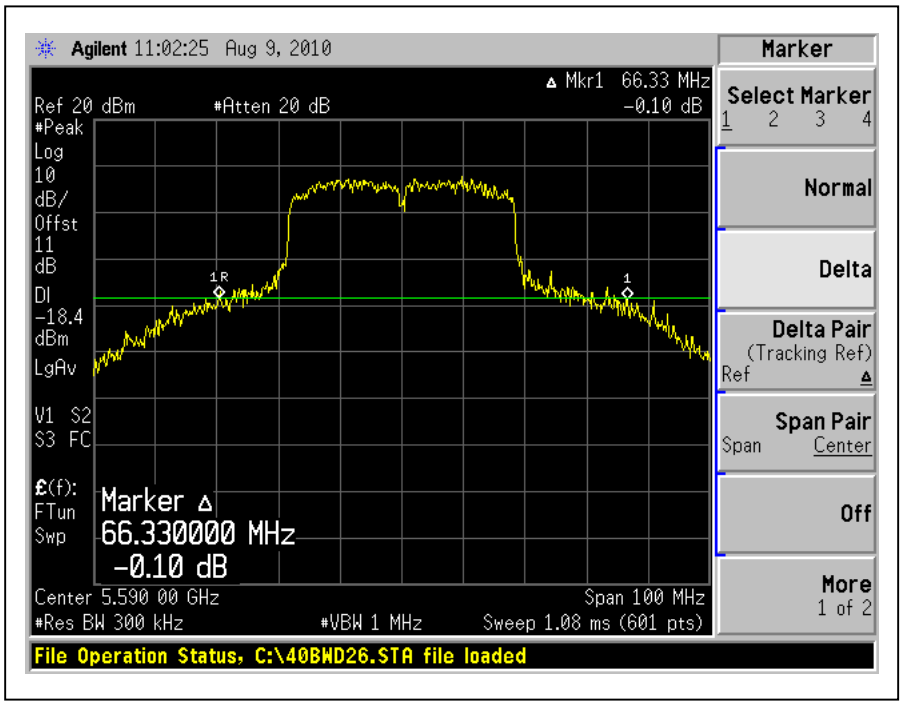
CH62


Agilent 10:59:18 Aug 9, 2010
Marker
Ref 20 dBm
#Atten 20 dB
Mkr1 42.00 MHz
0.12 dB
#Peak
Log
10
dB/
Offst
11
dB
Dl
-21.4
dBm
LgAv
V1 S2
S3 FC
£(f):
FTun
Swp
Marker Δ
42.000000 MHz
0.12 dB
Center 5.310 00 GHz
Span 100 MHz
#Res BW 300 kHz
#VBW 1 MHz
Sweep 1.08 ms (601 pts)
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
File Operation Status, C:\40BWD26.STA file loaded

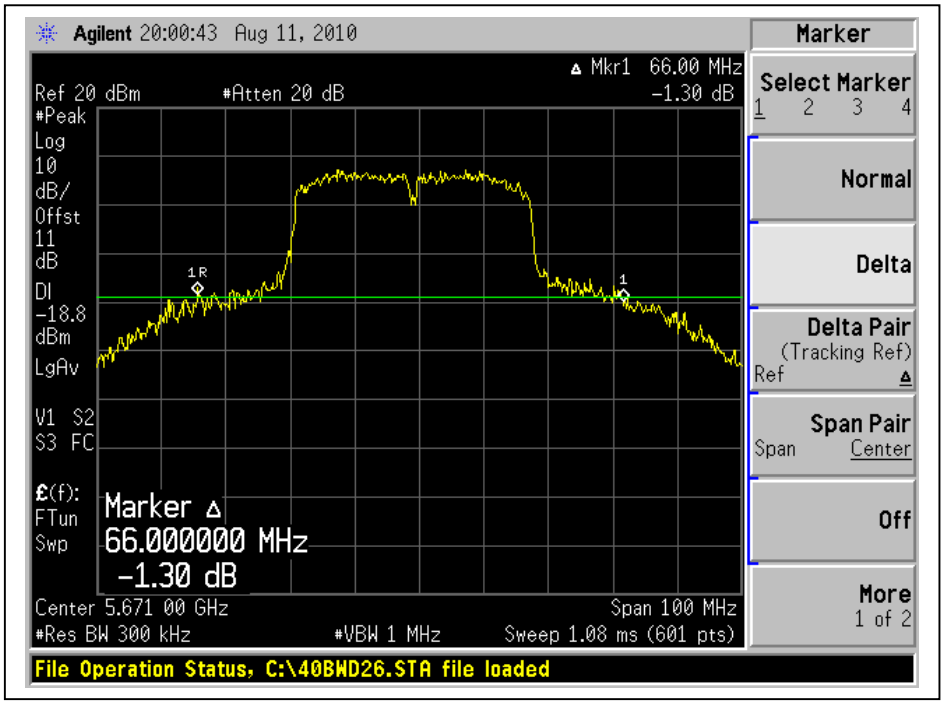
CH102


Agilent 20:02:22 Aug 11, 2010
Marker
Mkr1 59.17 MHz
Ref 20 dBm
#Atten 20 dB
1.34 dB
#Peak
Log
10
dB/
Offst
11
dB
Dl
-18.5
dBm
LgAv
V1 S2
S3 FC
£(f):
FTun
Swp
Marker Δ
59.170000 MHz
1.34 dB
Center 5.510 00 GHz
Span 100 MHz
#Res BW 300 kHz
#VBW 1 MHz
Sweep 1.08 ms (601 pts)
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
File Operation Status, C:\40BWD26.STA file loaded

CH118


Agilent 11:02:25 Aug 9, 2010
Marker
Mkr1 66.33 MHz
Ref 20 dBm
#Atten 20 dB
-0.10 dB
#Peak
Log
10
dB/
Offst
11
dB
Dl
-18.4
dBm
LgAv
V1 S2
S3 FC
£(f):
FTun
Swp
Marker Δ
66.330000 MHz
-0.10 dB
Center 5.590 00 GHz
Span 100 MHz
#Res BW 300 kHz
#VBW 1 MHz
Sweep 1.08 ms (601 pts)
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
File Operation Status, C:\40BWD26.STA file loaded

CH134


Agilent 20:00:43 Aug 11, 2010
Marker
Ref 20 dBm
#Atten 20 dB
Mkr1 66.00 MHz
-1.30 dB
#Peak
Log
10
dB/
Offst
11
dB
Dl
-18.8
dBm
LgAv
V1 S2
S3 FC
£(f):
FTun
Swp
Marker Δ
66.000000 MHz
-1.30 dB
Center 5.671 00 GHz
Span 100 MHz
#Res BW 300 kHz
#VBW 1 MHz
Sweep 1.08 ms (601 pts)
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
File Operation Status, C:\40BWD26.STA file loaded

4.4 AVERAGE OUTPUT POWER

4.4.1 FOR REFERENCE.

4.4.2 TEST INSTRUMENTS

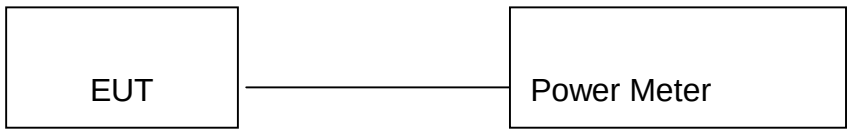
DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Peak Power Meter	ML2495A	0824006	May 04, 2010	May 03, 2011
Power Sensor	MA2411B	0738172	May 04, 2010	May 03, 2011

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	16.3
40	5200	16.6
48	5240	16.5
52	5260	18.7
60	5300	19.0
64	5320	17.1
100	5500	18.7
120	5600	18.7
140	5700	18.6

802.11n (20MHz) OFDM MODULATION:

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER OUTPUT (dBm)
36	5180	16.3
40	5200	16.4
48	5240	16.6
52	5260	18.6
60	5300	18.6
64	5320	17.1
100	5500	18.7
120	5600	18.7
140	5700	18.6

802.11n (40MHz) OFDM MODULATION:

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER OUTPUT (dBm)
38	5190	16.5
46	5230	16.3
54	5270	18.9
62	5310	15.4
102	5510	18.5
118	5590	18.9
134	5670	19.0

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
PSA Sevies 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.

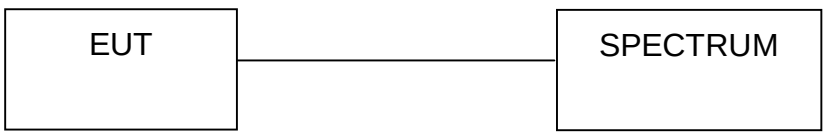
4.5.3 TEST PROCEDURE

1. The transmitter output was connected to the spectrum analyzer.
2. Set the spectrum bandwidth span to view the entire spectrum.
3. Using peak detector and Max-hold function for Trace 1 (RB=1MHz, VB=3MHz) and 2 (RB=1MHz, VB=300kHz).
4. The largest difference between Trace 1 and Trace 2 in any 1MHz band on any frequency was recorded.

4.5.4 DEVIATION FROM TEST STANDARD

No deviation

4.5.5 TEST SETUP



4.5.6 EUT OPERATING CONDITIONS

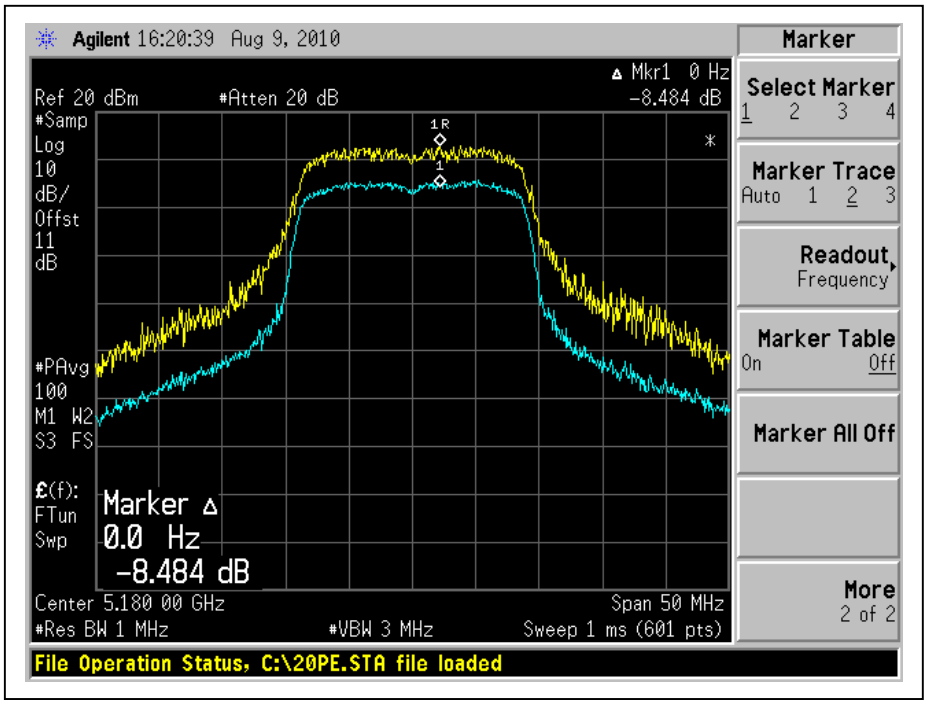
The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

4.5.7 TEST RESULTS

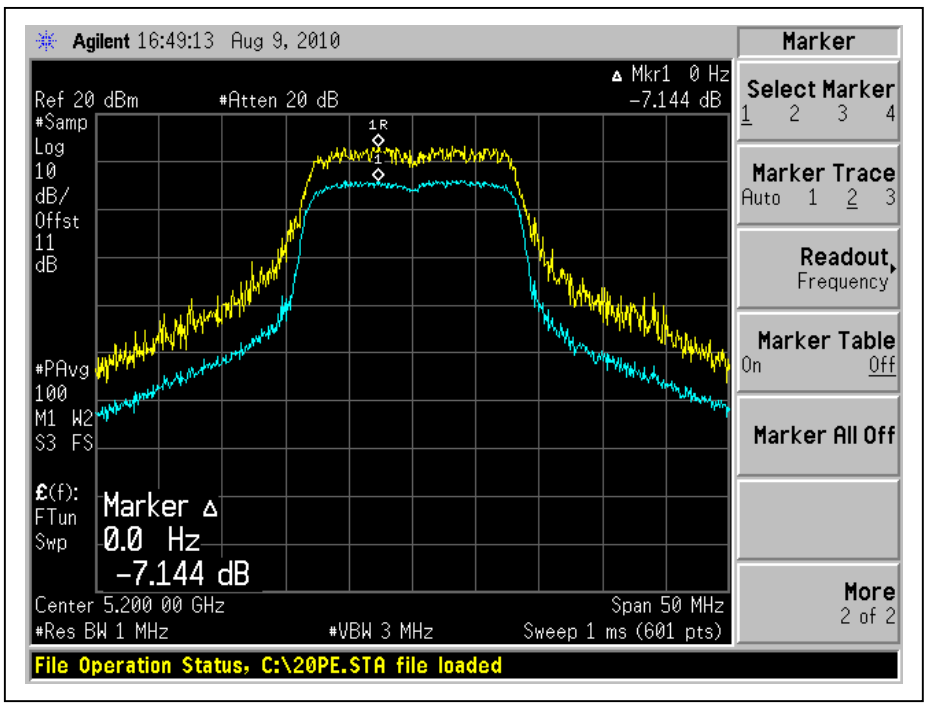
802.11a OFDM MODULATION

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
36	5180	8.5	13	PASS
40	5200	7.1	13	PASS
48	5240	7.5	13	PASS
52	5260	7.3	13	PASS
60	5300	8.3	13	PASS
64	5320	8.0	13	PASS
100	5500	8.5	13	PASS
132	5600	7.7	13	PASS
140	5700	8.1	13	PASS

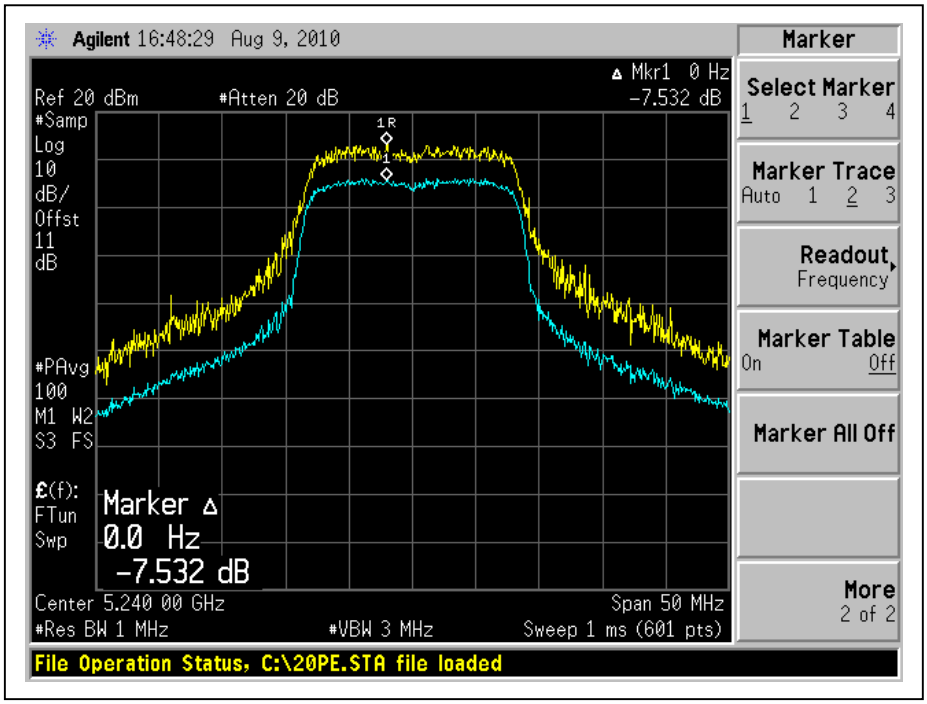
CH36


Agilent 16:20:39 Aug 9, 2010
Marker
Ref 20 dBm
#Atten 20 dB
Mkr1 0 Hz
-8.484 dB
#Samp
Log
10
dB/
Offst
11
dB
#PAvg
100
M1 W2
S3 FS
£(f):
FTun
Swp
Marker Δ
0.0 Hz
-8.484 dB
Center 5.180 00 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 50 MHz
Sweep 1 ms (601 pts)
Select Marker
1 2 3 4
Marker Trace
Auto 1 2 3
Readout
Frequency
Marker Table
On Off
Marker All Off
More
2 of 2
File Operation Status, C:\20PE.STA file loaded

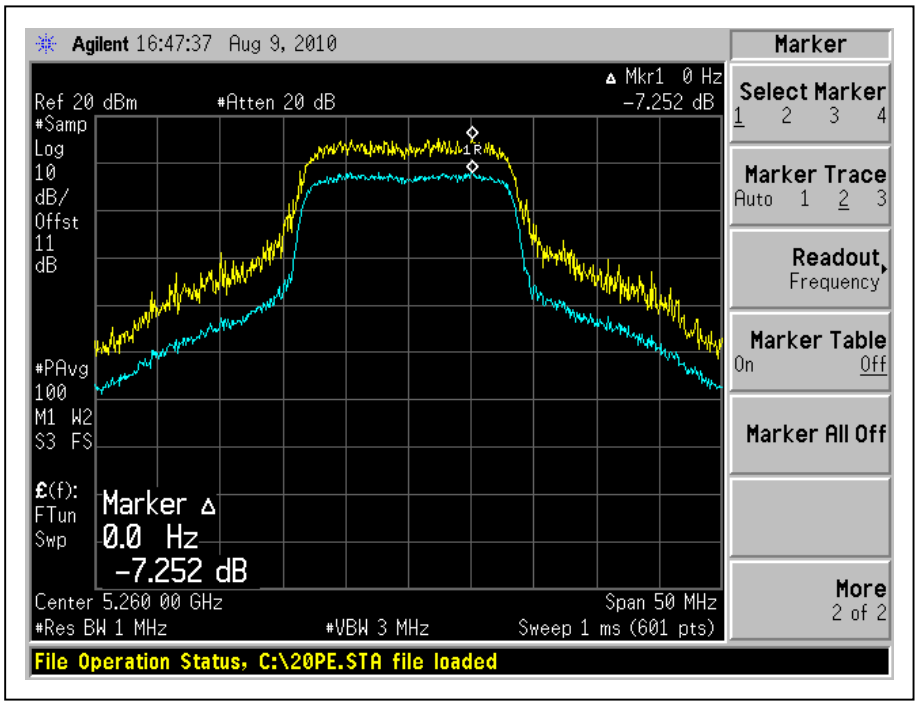
CH40


Agilent 16:49:13 Aug 9, 2010
Marker
Ref 20 dBm
#Atten 20 dB
Mkr1 0 Hz
-7.144 dB
#Samp
Log
10
dB/
Offst
11
dB
#PAvg
100
M1 W2
S3 FS
£(f):
FTun
Swp
Marker Δ
0.0 Hz
-7.144 dB
Center 5.200 00 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 50 MHz
Sweep 1 ms (601 pts)
Select Marker
1 2 3 4
Marker Trace
Auto 1 2 3
Readout
Frequency
Marker Table
On Off
Marker All Off
More
2 of 2
File Operation Status, C:\20PE.STA file loaded

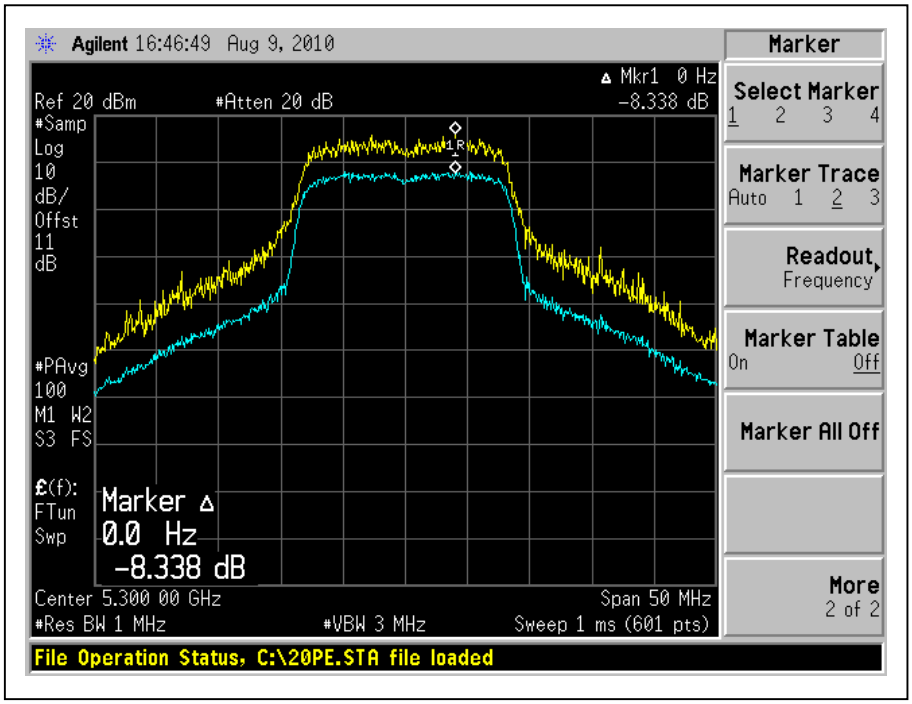
CH48


Agilent 16:48:29 Aug 9, 2010
Marker
Ref 20 dBm
#Atten 20 dB
Mkr1 0 Hz
-7.532 dB
#Samp
Log
10
dB/
Offst
11
dB
#PAvg
100
M1 W2
S3 FS
£(f):
FTun
Swp
Marker Δ
0.0 Hz
-7.532 dB
Center 5.240 00 GHz
Span 50 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Select Marker
1 2 3 4
Marker Trace
Auto 1 2 3
Readout
Frequency
Marker Table
On Off
Marker All Off
More
2 of 2
File Operation Status, C:\20PE.STA file loaded

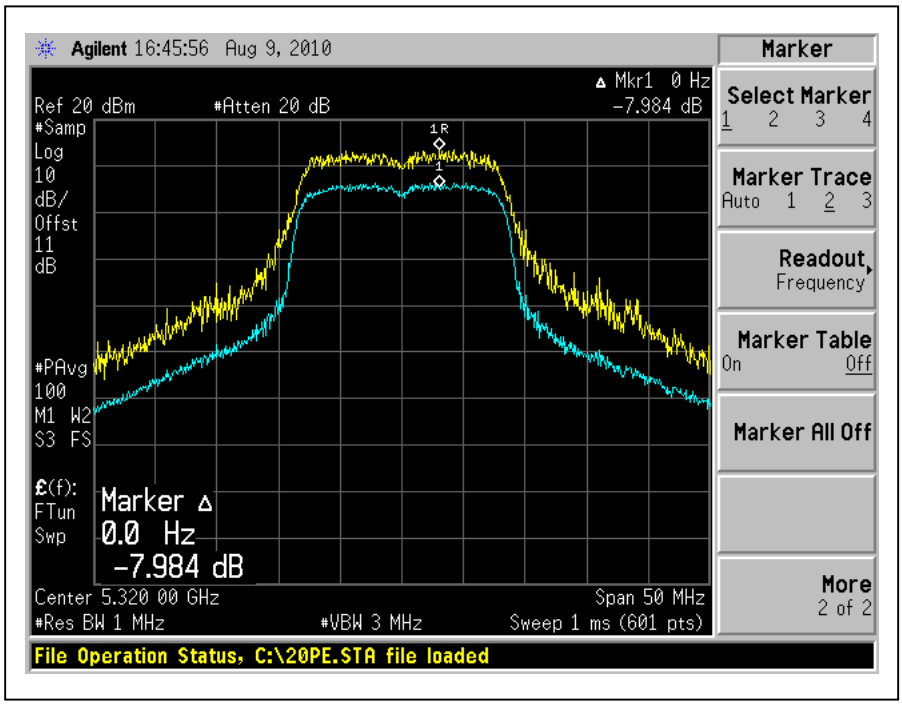
CH52


Agilent 16:47:37 Aug 9, 2010
Marker
Ref 20 dBm
#Atten 20 dB
Mkr1 0 Hz
-7.252 dB
#Samp
Log
10
dB/
Offst
11
dB
#PAvg
100
M1 W2
S3 FS
£(f):
FTun
Swp
Marker Δ
0.0 Hz
-7.252 dB
Center 5.260 00 GHz
Span 50 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Select Marker
1 2 3 4
Marker Trace
Auto 1 2 3
Readout
Frequency
Marker Table
On Off
Marker All Off
More
2 of 2
File Operation Status, C:\20PE.STA file loaded

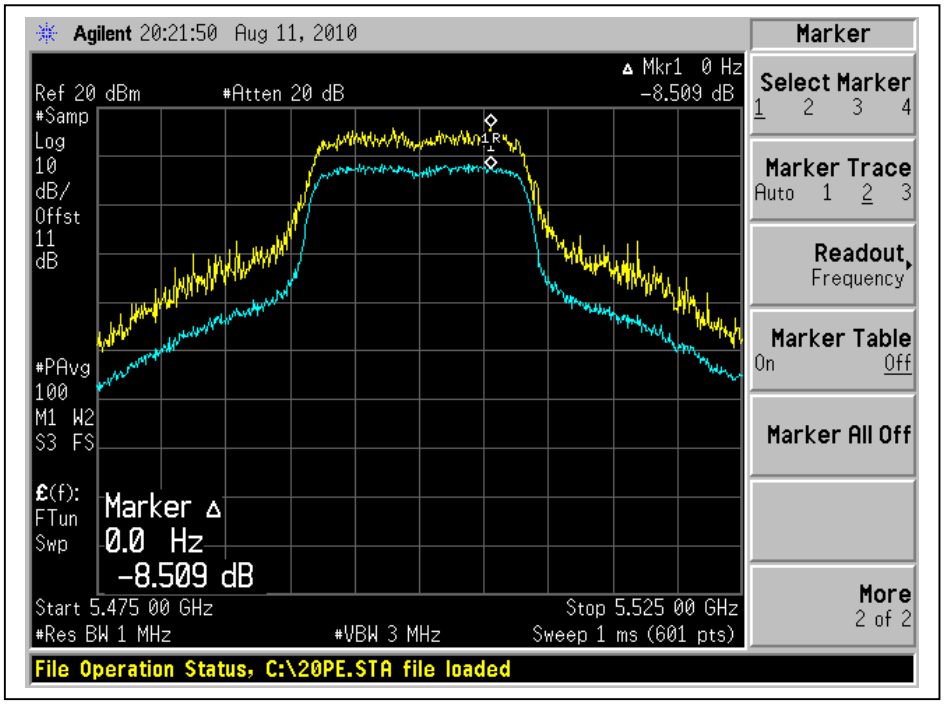
CH60


Agilent 16:46:49 Aug 9, 2010
Marker
Ref 20 dBm
#Atten 20 dB
Mkr1 0 Hz
-8.338 dB
#Samp
Log
10
dB/
Offst
11
dB
#PAvg
100
M1 W2
S3 FS
£(f):
FTun
Swp
Marker Δ
0.0 Hz
-8.338 dB
Center 5.300 00 GHz
Span 50 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Select Marker
1 2 3 4
Marker Trace
Auto 1 2 3
Readout
Frequency
Marker Table
On Off
Marker All Off
More
2 of 2
File Operation Status, C:\20PE.STA file loaded

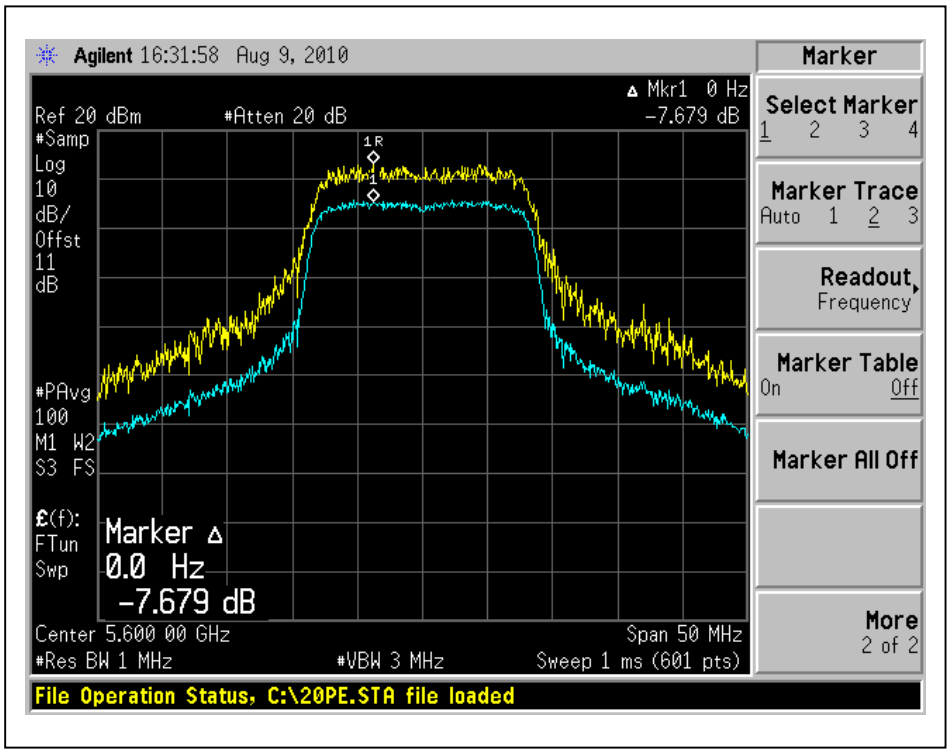
CH64


Agilent 16:45:56 Aug 9, 2010
Marker
Ref 20 dBm
#Atten 20 dB
Mkr1 0 Hz
-7.984 dB
#Samp
Log
10
dB/
Offst
11
dB
#PAvg
100
M1 W2
S3 FS
£(f):
FTun
Swp
Marker Δ
0.0 Hz
-7.984 dB
Center 5.320 00 GHz
Span 50 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Select Marker
1 2 3 4
Marker Trace
Auto 1 2 3
Readout
Frequency
Marker Table
On Off
Marker All Off
More
2 of 2
File Operation Status, C:\20PE.STA file loaded

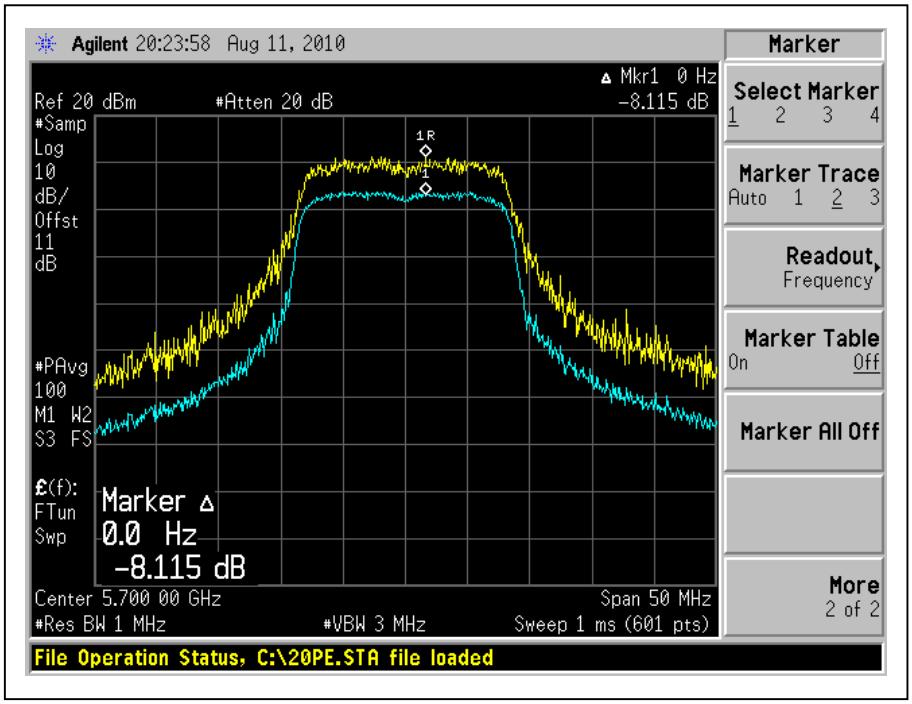
CH100


Agilent 20:21:50 Aug 11, 2010
Marker
Ref 20 dBm
#Atten 20 dB
Mkr1 0 Hz
-8.509 dB
#Samp
Log
10
dB/
Offst
11
dB
#PAvg
100
M1 W2
S3 FS
£(f):
FTun
Swp
Marker Δ
0.0 Hz
-8.509 dB
Start 5.475 00 GHz
#Res BW 1 MHz
#VBW 3 MHz
Stop 5.525 00 GHz
Sweep 1 ms (601 pts)
Select Marker
1 2 3 4
Marker Trace
Auto 1 2 3
Readout
Frequency
Marker Table
On Off
Marker All Off
More
2 of 2
File Operation Status, C:\20PE.STA file loaded

CH120


Agilent 16:31:58 Aug 9, 2010
Marker
Ref 20 dBm
#Atten 20 dB
Mkr1 0 Hz
-7.679 dB
#Samp
Log
10
dB/
Offst
11
dB
#PAvg
100
M1 W2
S3 FS
£(f):
FTun
Swp
Marker Δ
0.0 Hz
-7.679 dB
Center 5.600 00 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 50 MHz
Sweep 1 ms (601 pts)
Select Marker
1 2 3 4
Marker Trace
Auto 1 2 3
Readout
Frequency
Marker Table
On Off
Marker All Off
More
2 of 2
File Operation Status, C:\20PE.STA file loaded

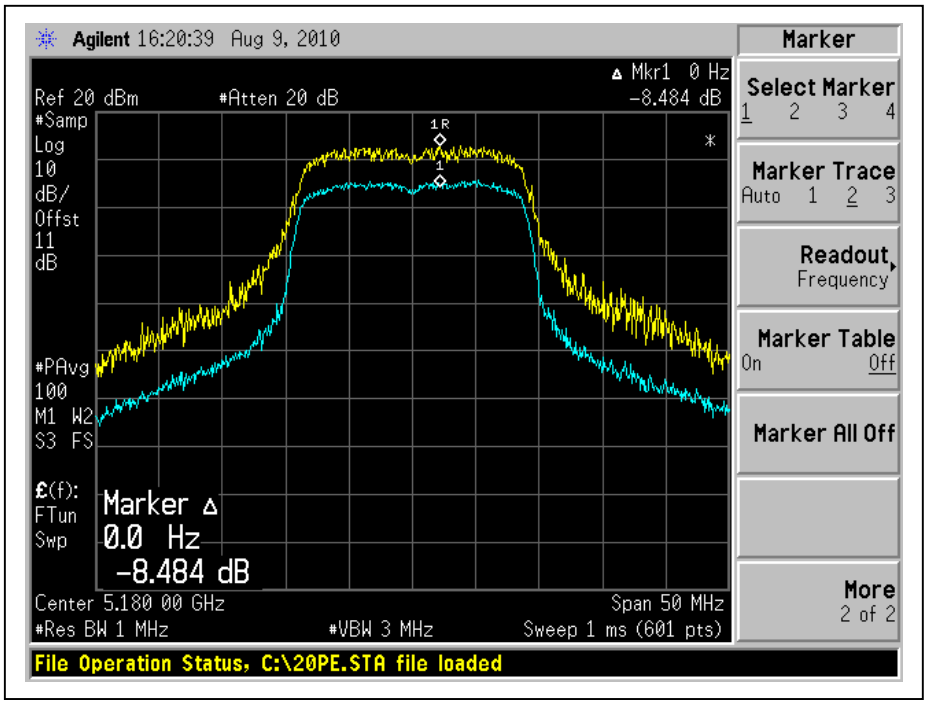
CH140


Agilent 20:23:58 Aug 11, 2010
Ref 20 dBm
#Atten 20 dB
Mkr1 0 Hz
-8.115 dB
#Samp
Log
10
dB/
Offst
11
dB
#PAvg
100
M1 W2
S3 FS
£(f):
FTun
Swp
Marker Δ
0.0 Hz
-8.115 dB
Center 5.700 00 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 50 MHz
Sweep 1 ms (601 pts)
File Operation Status, C:\20PE.STA file loaded
Marker
Select Marker
1 2 3 4
Marker Trace
Auto 1 2 3
Readout
Frequency
Marker Table
On Off
Marker All Off
More
2 of 2

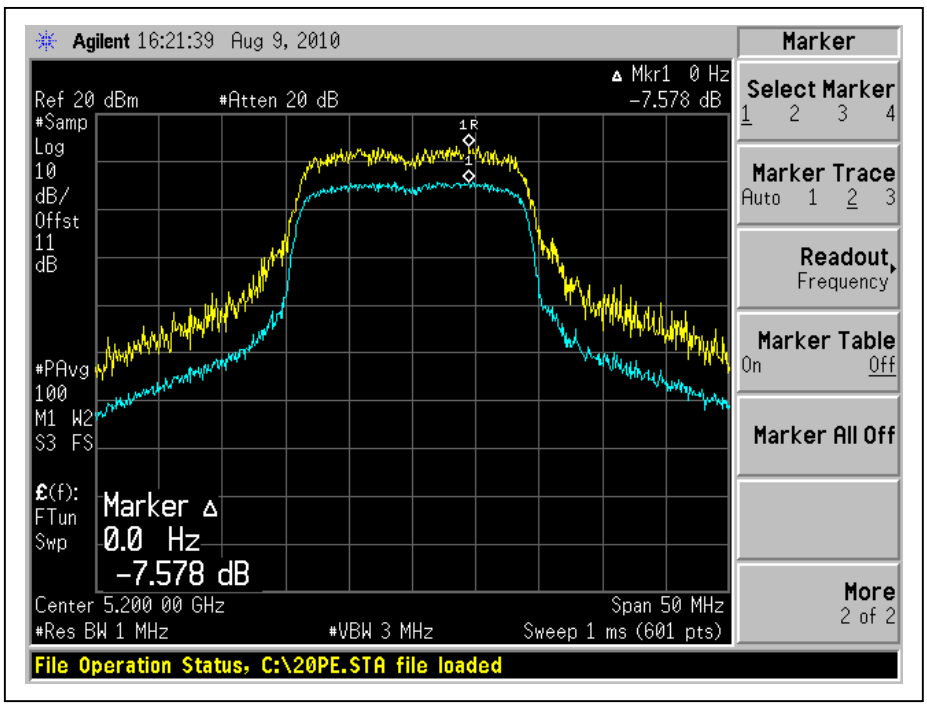
802.11n (20MHz) OFDM MODULATION:

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
36	5180	8.5	13	PASS
40	5200	7.6	13	PASS
48	5240	8.2	13	PASS
52	5260	8.2	13	PASS
60	5300	6.9	13	PASS
64	5320	7.6	13	PASS
100	5500	7.9	13	PASS
132	5600	9.0	13	PASS
140	5700	7.3	13	PASS

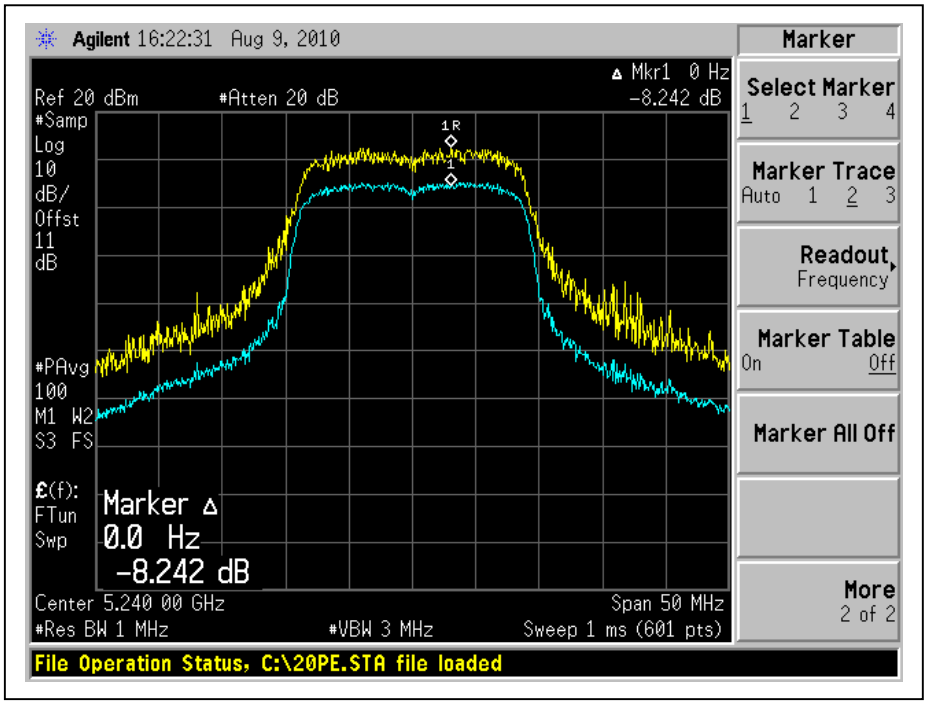
CH36


Agilent 16:20:39 Aug 9, 2010
Marker
Ref 20 dBm
#Atten 20 dB
Mkr1 0 Hz
-8.484 dB
#Samp
Log
10
dB/
Offst
11
dB
#PAvg
100
M1 W2
S3 FS
£(f):
FTun
Swp
Marker Δ
0.0 Hz
-8.484 dB
Center 5.180 00 GHz
Span 50 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
File Operation Status, C:\20PE.STA file loaded
Select Marker
1 2 3 4
Marker Trace
Auto 1 2 3
Readout
Frequency
Marker Table
On Off
Marker All Off
More
2 of 2

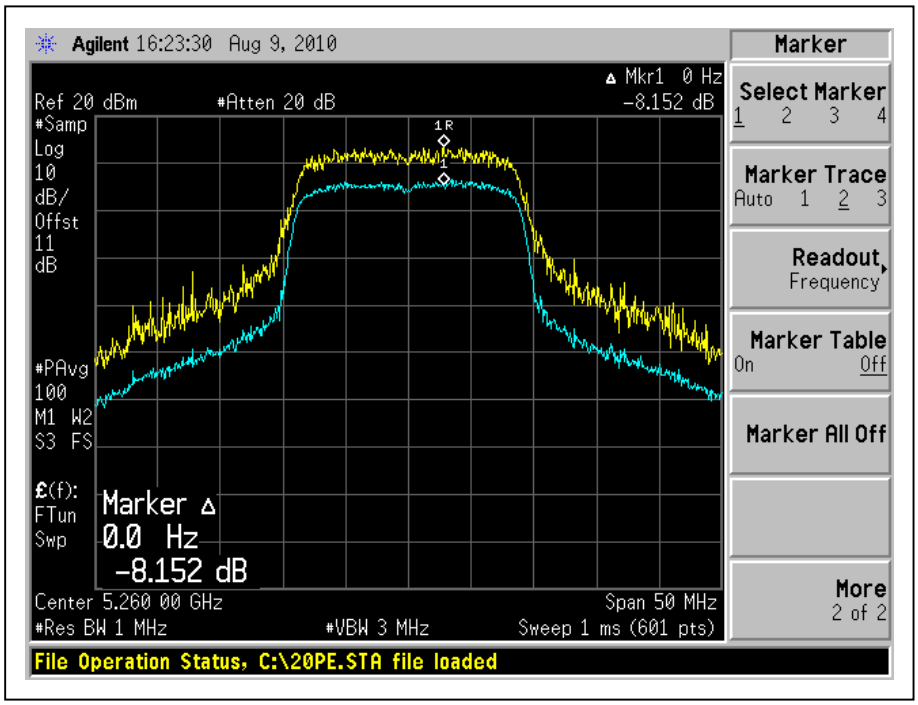
CH40


Agilent 16:21:39 Aug 9, 2010
Marker
Ref 20 dBm
#Atten 20 dB
Mkr1 0 Hz
-7.578 dB
#Samp
Log
10
dB/
Offst
11
dB
#PAvg
100
M1 W2
S3 FS
£(f):
FTun
Swp
Marker Δ
0.0 Hz
-7.578 dB
Center 5.200 00 GHz
Span 50 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
File Operation Status, C:\20PE.STA file loaded
Select Marker
1 2 3 4
Marker Trace
Auto 1 2 3
Readout
Frequency
Marker Table
On Off
Marker All Off
More
2 of 2

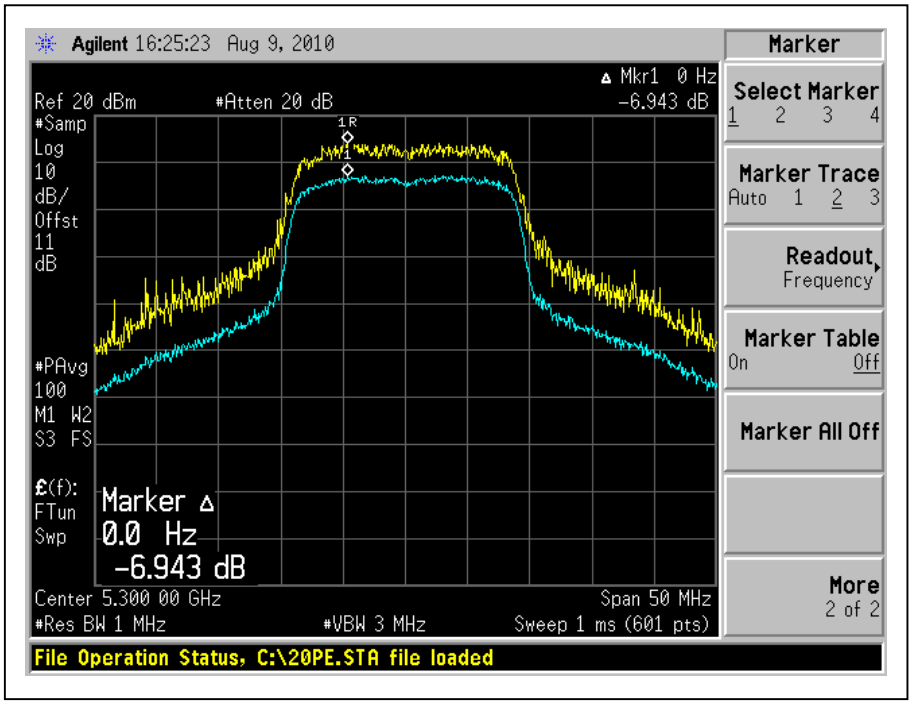
CH48


Agilent 16:22:31 Aug 9, 2010
Marker
Mkr1 0 Hz
-8.242 dB
Ref 20 dBm
#Atten 20 dB
Select Marker
1 2 3 4
#Samp
Log
10
dB/
Offst
11
dB
Marker Trace
Auto 1 2 3
Readout
Frequency
Marker Table
On Off
#PAvg
100
M1 W2
S3 FS
Marker All Off
£(f):
FTun
Swp
Marker Δ
0.0 Hz
-8.242 dB
More
2 of 2
Center 5.240 00 GHz
Span 50 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
File Operation Status, C:\20PE.STA file loaded

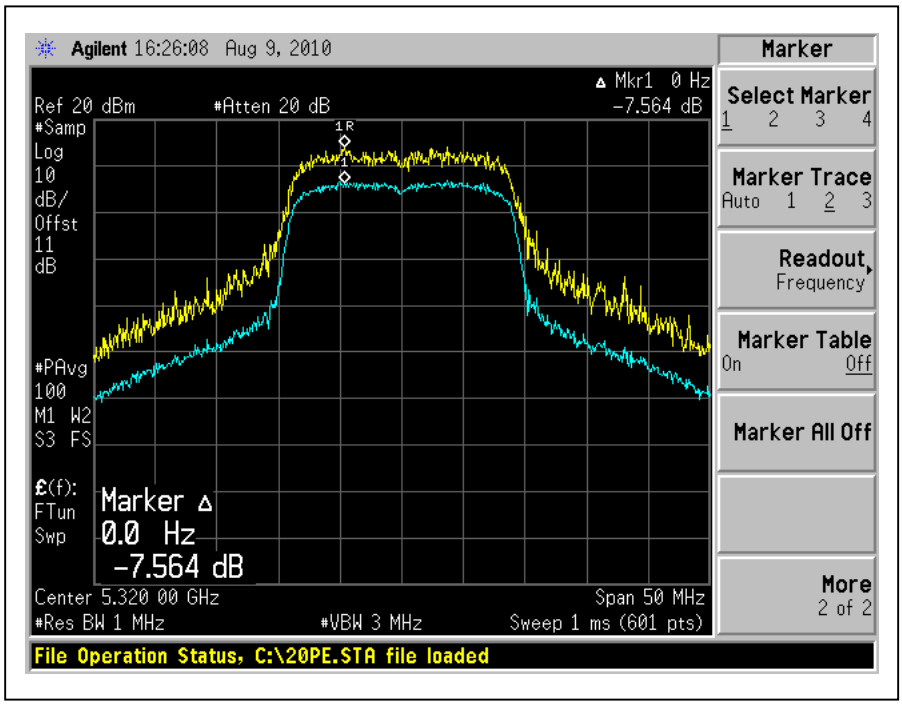
CH52


Agilent 16:23:30 Aug 9, 2010
Marker
Mkr1 0 Hz
-8.152 dB
Ref 20 dBm
#Atten 20 dB
Select Marker
1 2 3 4
#Samp
Log
10
dB/
Offst
11
dB
Marker Trace
Auto 1 2 3
Readout
Frequency
Marker Table
On Off
#PAvg
100
M1 W2
S3 FS
Marker All Off
£(f):
FTun
Swp
Marker Δ
0.0 Hz
-8.152 dB
More
2 of 2
Center 5.260 00 GHz
Span 50 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
File Operation Status, C:\20PE.STA file loaded

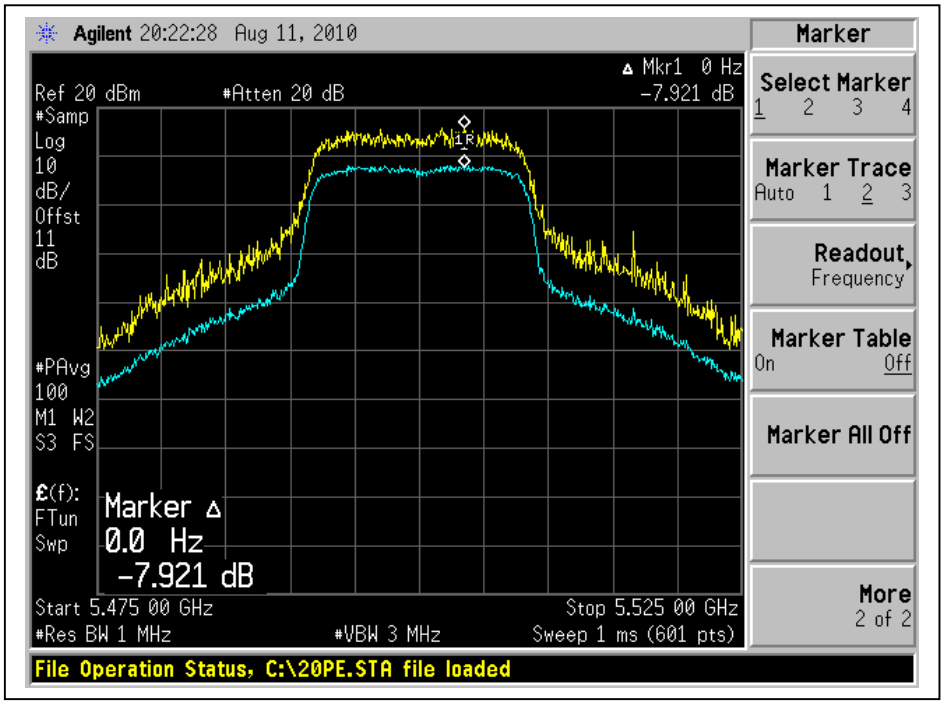
CH60


Agilent 16:25:23 Aug 9, 2010
Marker
Ref 20 dBm
#Atten 20 dB
Mkr1 0 Hz
-6.943 dB
#Samp
Log
10
dB/
Offst
11
dB
#PAvg
100
M1 W2
S3 FS
£(f):
FTun
Swp
Marker Δ
0.0 Hz
-6.943 dB
Center 5.300 00 GHz
Span 50 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Select Marker
1 2 3 4
Marker Trace
Auto 1 2 3
Readout
Frequency
Marker Table
On Off
Marker All Off
More
2 of 2
File Operation Status, C:\20PE.STA file loaded

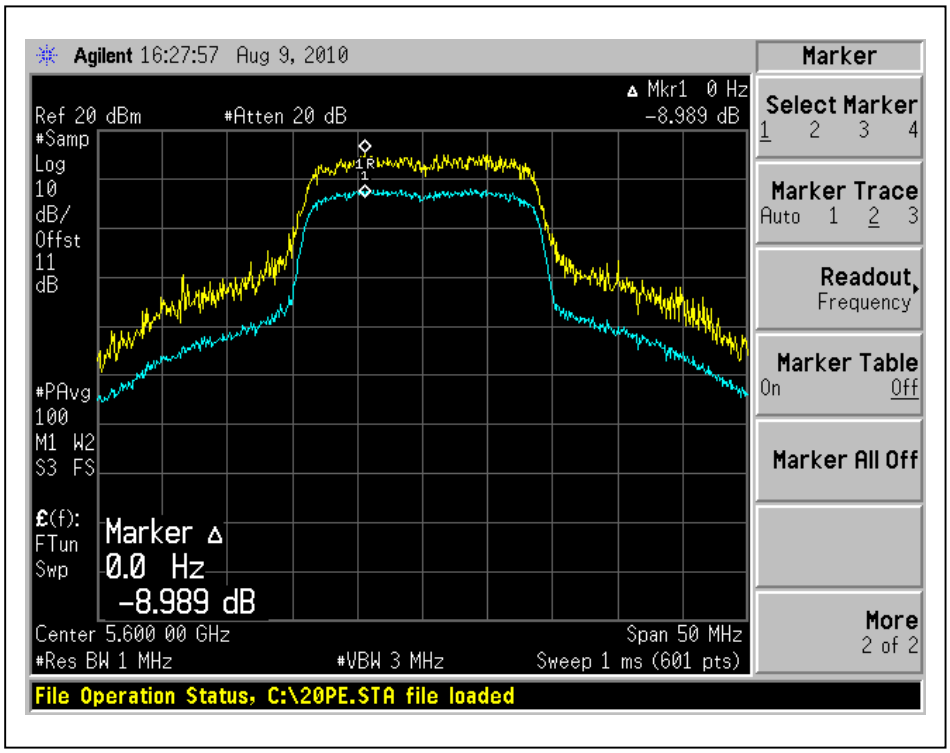
CH64


Agilent 16:26:08 Aug 9, 2010
Marker
Ref 20 dBm
#Atten 20 dB
Mkr1 0 Hz
-7.564 dB
#Samp
Log
10
dB/
Offst
11
dB
#PAvg
100
M1 W2
S3 FS
£(f):
FTun
Swp
Marker Δ
0.0 Hz
-7.564 dB
Center 5.320 00 GHz
Span 50 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Select Marker
1 2 3 4
Marker Trace
Auto 1 2 3
Readout
Frequency
Marker Table
On Off
Marker All Off
More
2 of 2
File Operation Status, C:\20PE.STA file loaded

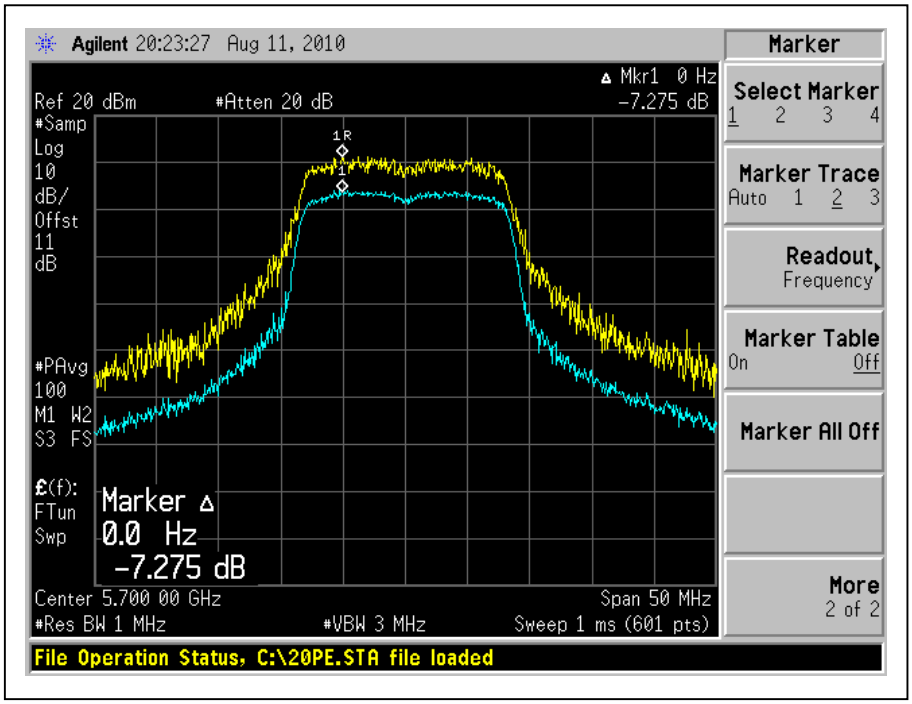
CH100


Agilent 20:22:28 Aug 11, 2010
Marker
Ref 20 dBm
#Atten 20 dB
Mkr1 0 Hz
-7.921 dB
#Samp
Log
10
dB/
Offst
11
dB
#PAvg
100
M1 W2
S3 FS
£(f):
FTun
Swp
Marker Δ
0.0 Hz
-7.921 dB
Start 5.475 00 GHz
#Res BW 1 MHz
#VBW 3 MHz
Stop 5.525 00 GHz
Sweep 1 ms (601 pts)
Select Marker
1 2 3 4
Marker Trace
Auto 1 2 3
Readout
Frequency
Marker Table
On Off
Marker All Off
More
2 of 2
File Operation Status, C:\20PE.STA file loaded

CH120


Agilent 16:27:57 Aug 9, 2010
Marker
Ref 20 dBm
#Atten 20 dB
Mkr1 0 Hz
-8.989 dB
#Samp
Log
10
dB/
Offst
11
dB
#PAvg
100
M1 W2
S3 FS
£(f):
FTun
Swp
Marker Δ
0.0 Hz
-8.989 dB
Center 5.600 00 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 50 MHz
Sweep 1 ms (601 pts)
Select Marker
1 2 3 4
Marker Trace
Auto 1 2 3
Readout
Frequency
Marker Table
On Off
Marker All Off
More
2 of 2
File Operation Status, C:\20PE.STA file loaded

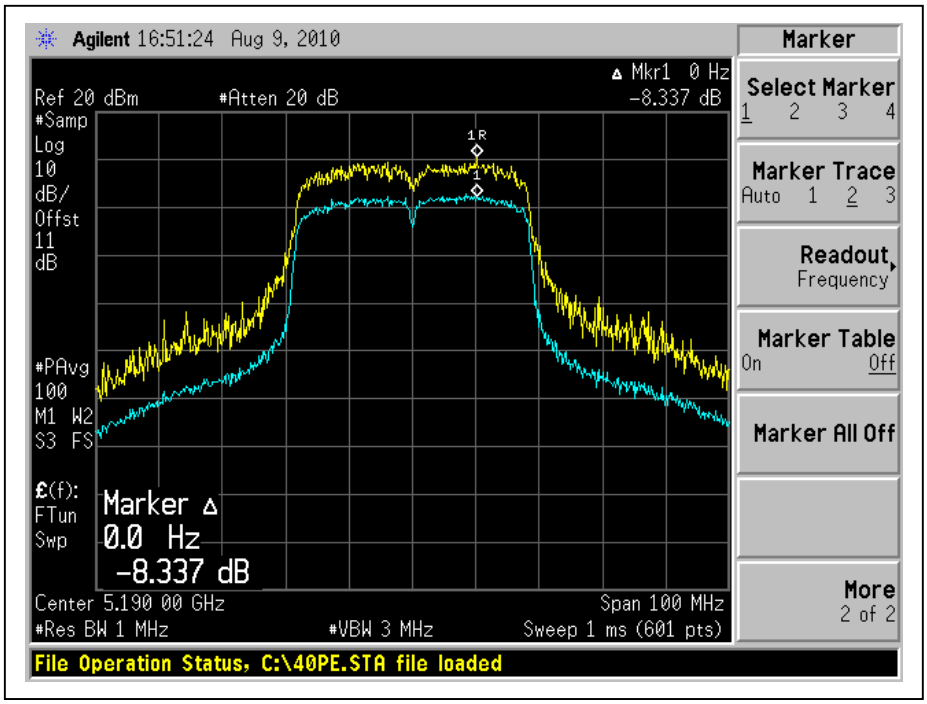
CH140


Agilent 20:23:27 Aug 11, 2010
Ref 20 dBm
#Atten 20 dB
Mkr1 0 Hz
-7.275 dB
#Samp
Log
10
dB/
Offst
11
dB
#PAvg
100
M1 W2
S3 FS
£(f):
FTun
Swp
Marker Δ
0.0 Hz
-7.275 dB
Center 5.700 00 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 50 MHz
Sweep 1 ms (601 pts)
Marker
Select Marker
1 2 3 4
Marker Trace
Auto 1 2 3
Readout
Frequency
Marker Table
On Off
Marker All Off
More
2 of 2
File Operation Status, C:\20PE.STA file loaded

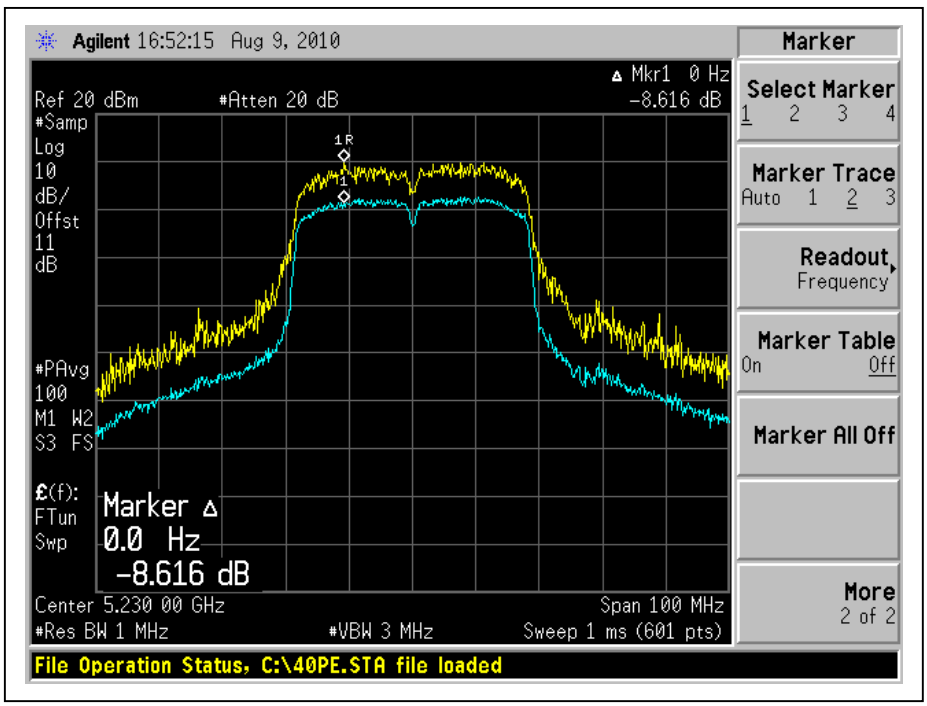
802.11n (40MHz) OFDM MODULATION:

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
38	5190	8.3	13	PASS
46	5230	8.6	13	PASS
54	5270	8.3	13	PASS
62	5310	6.9	13	PASS
102	5510	7.6	13	PASS
118	5590	8.1	13	PASS
134	5670	7.1	13	PASS

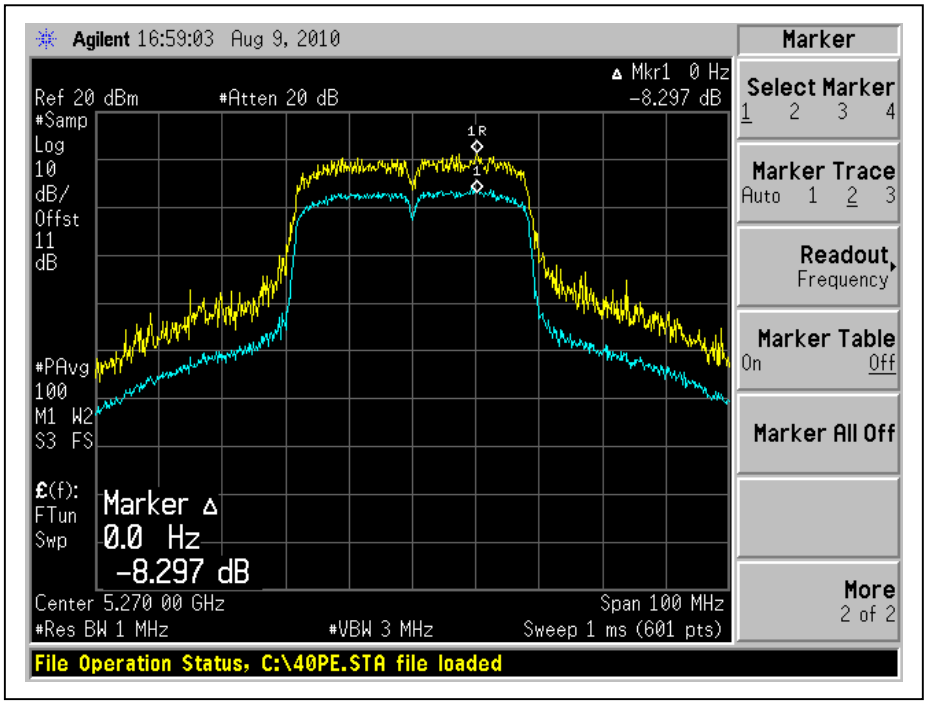
CH38


Agilent 16:51:24 Aug 9, 2010
Marker
Ref 20 dBm
#Atten 20 dB
Mkr1 0 Hz
-8.337 dB
#Samp
Log
10
dB/
Offst
11
dB
#PAvg
100
M1 W2
S3 FS
£(f):
FTun
Swp
Marker Δ
0.0 Hz
-8.337 dB
Center 5.190 00 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 100 MHz
Sweep 1 ms (601 pts)
Select Marker
1 2 3 4
Marker Trace
Auto 1 2 3
Readout
Frequency
Marker Table
On Off
Marker All Off
More
2 of 2
File Operation Status, C:\40PE.STA file loaded

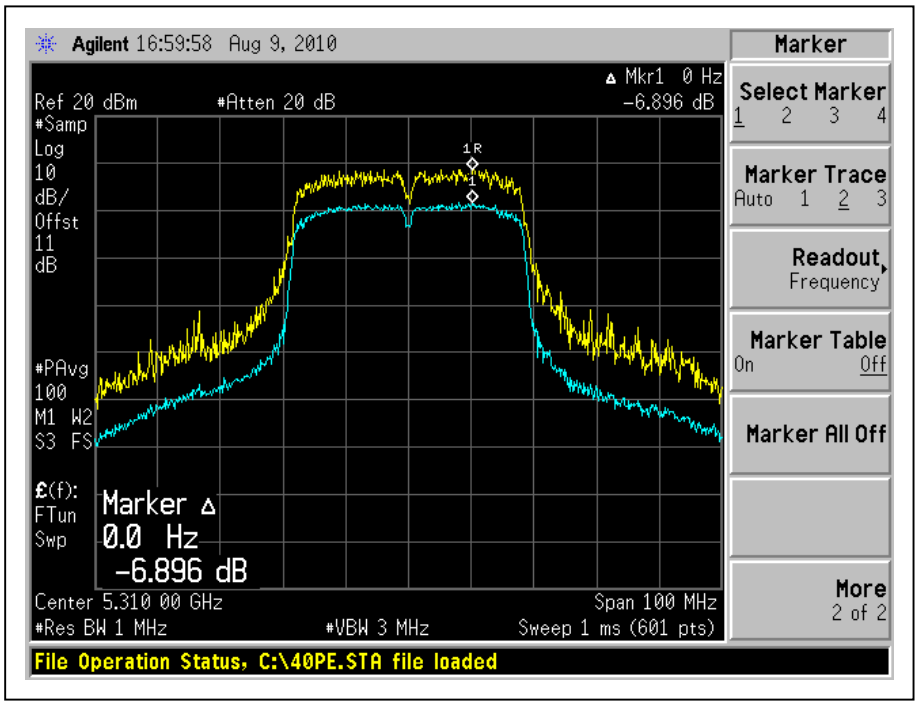
CH46


Agilent 16:52:15 Aug 9, 2010
Marker
Ref 20 dBm
#Atten 20 dB
Mkr1 0 Hz
-8.616 dB
#Samp
Log
10
dB/
Offst
11
dB
#PAvg
100
M1 W2
S3 FS
£(f):
FTun
Swp
Marker Δ
0.0 Hz
-8.616 dB
Center 5.230 00 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 100 MHz
Sweep 1 ms (601 pts)
Select Marker
1 2 3 4
Marker Trace
Auto 1 2 3
Readout
Frequency
Marker Table
On Off
Marker All Off
More
2 of 2
File Operation Status, C:\40PE.STA file loaded

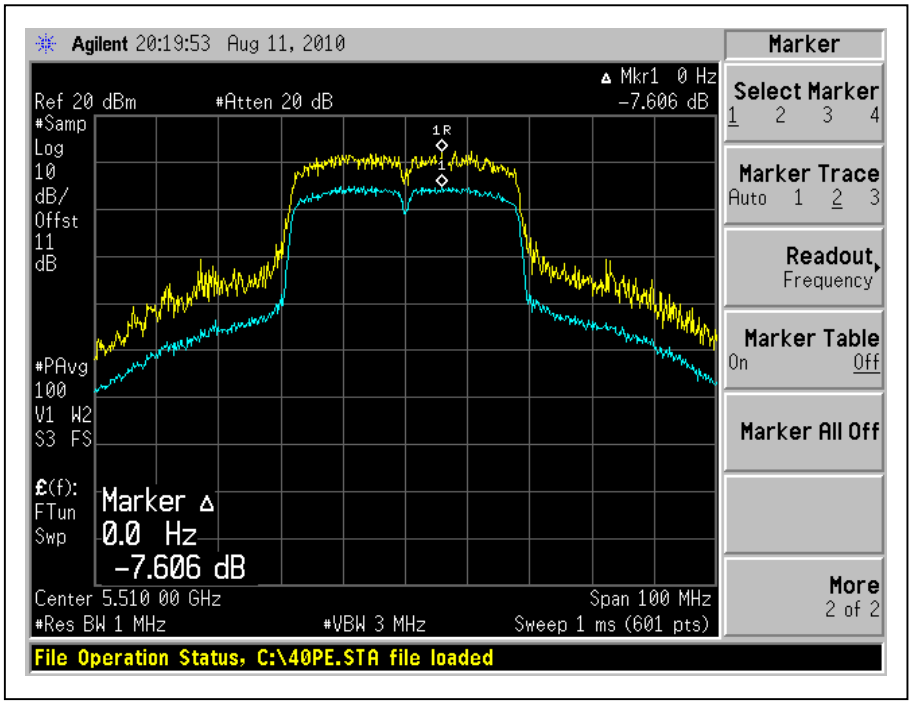
CH54


Agilent 16:59:03 Aug 9, 2010
Marker
Ref 20 dBm
#Atten 20 dB
Mkr1 0 Hz
-8.297 dB
#Samp
Log
10
dB/
Offst
11
dB
#PAvg
100
M1 W2
S3 FS
£(f):
FTun
Swp
Marker Δ
0.0 Hz
-8.297 dB
Center 5.270 00 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 100 MHz
Sweep 1 ms (601 pts)
Select Marker
1 2 3 4
Marker Trace
Auto 1 2 3
Readout
Frequency
Marker Table
On Off
Marker All Off
More
2 of 2
File Operation Status, C:\40PE.STA file loaded

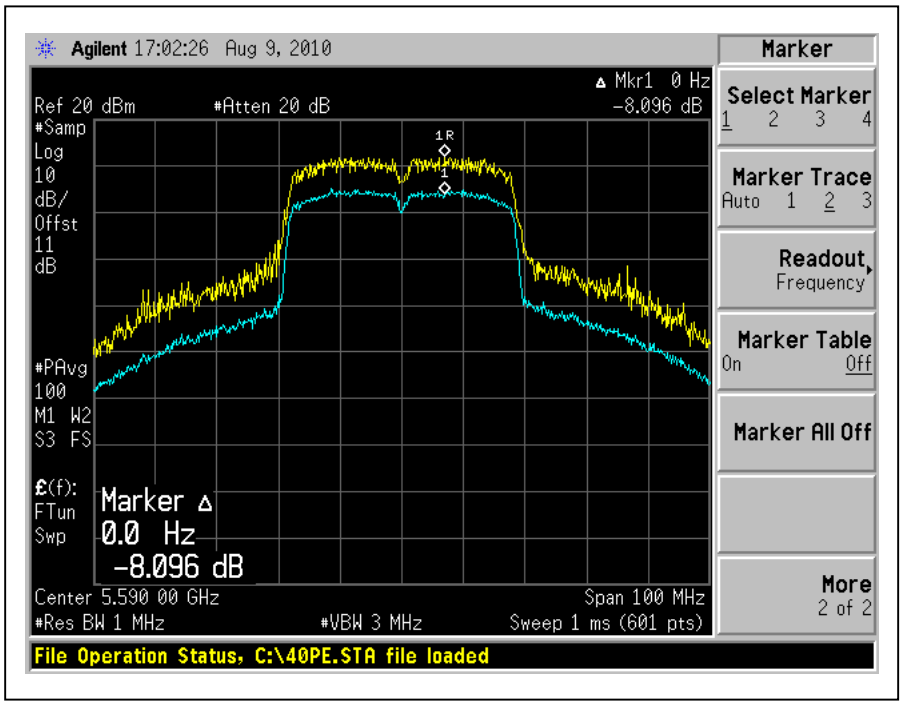
CH62


Agilent 16:59:58 Aug 9, 2010
Marker
Ref 20 dBm
#Atten 20 dB
Mkr1 0 Hz
-6.896 dB
#Samp
Log
10
dB/
Offst
11
dB
#PAvg
100
M1 W2
S3 FS
£(f):
FTun
Swp
Marker Δ
0.0 Hz
-6.896 dB
Center 5.310 00 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 100 MHz
Sweep 1 ms (601 pts)
Select Marker
1 2 3 4
Marker Trace
Auto 1 2 3
Readout
Frequency
Marker Table
On Off
Marker All Off
More
2 of 2
File Operation Status, C:\40PE.STA file loaded

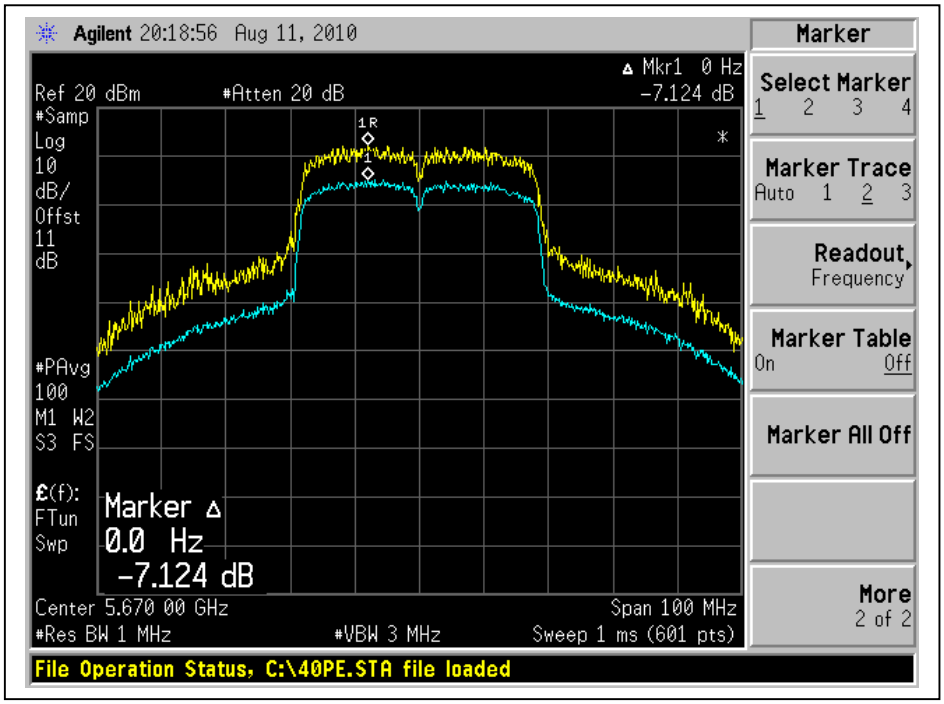
CH102


Agilent 20:19:53 Aug 11, 2010
Marker
Ref 20 dBm
#Atten 20 dB
Mkr1 0 Hz
-7.606 dB
#Samp
Log
10
dB/
Offst
11
dB
#PAvg
100
V1 W2
S3 FS
£(f):
FTun
Swp
Marker Δ
0.0 Hz
-7.606 dB
Center 5.510 00 GHz
Span 100 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Select Marker
1 2 3 4
Marker Trace
Auto 1 2 3
Readout
Frequency
Marker Table
On Off
Marker All Off
More
2 of 2
File Operation Status, C:\40PE.STA file loaded

CH118


Agilent 17:02:26 Aug 9, 2010
Marker
Ref 20 dBm
#Atten 20 dB
Mkr1 0 Hz
-8.096 dB
#Samp
Log
10
dB/
Offst
11
dB
#PAvg
100
M1 W2
S3 FS
£(f):
FTun
Swp
Marker Δ
0.0 Hz
-8.096 dB
Center 5.590 00 GHz
Span 100 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Select Marker
1 2 3 4
Marker Trace
Auto 1 2 3
Readout
Frequency
Marker Table
On Off
Marker All Off
More
2 of 2
File Operation Status, C:\40PE.STA file loaded

CH134


Agilent 20:18:56 Aug 11, 2010
Marker
Ref 20 dBm
#Atten 20 dB
Mkr1 0 Hz
-7.124 dB
#Samp
Log
10
dB/
Offst
11
dB
1R
1
#PAvg
100
M1 W2
S3 FS
£(f):
FTun
Swp
Marker Δ
0.0 Hz
-7.124 dB
Center 5.670 00 GHz
Span 100 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Select Marker
1 2 3 4
Marker Trace
Auto 1 2 3
Readout
Frequency
Marker Table
On Off
Marker All Off
More
2 of 2
File Operation Status, C:\40PE.STA file loaded

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
PSA Sevies Spectrum Analyzer	E4446A	MY48250254	July 14, 2010	July 13, 2011

NOTE:

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

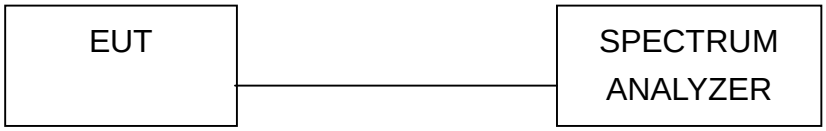
4.6.3 TEST PROCEDURES

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

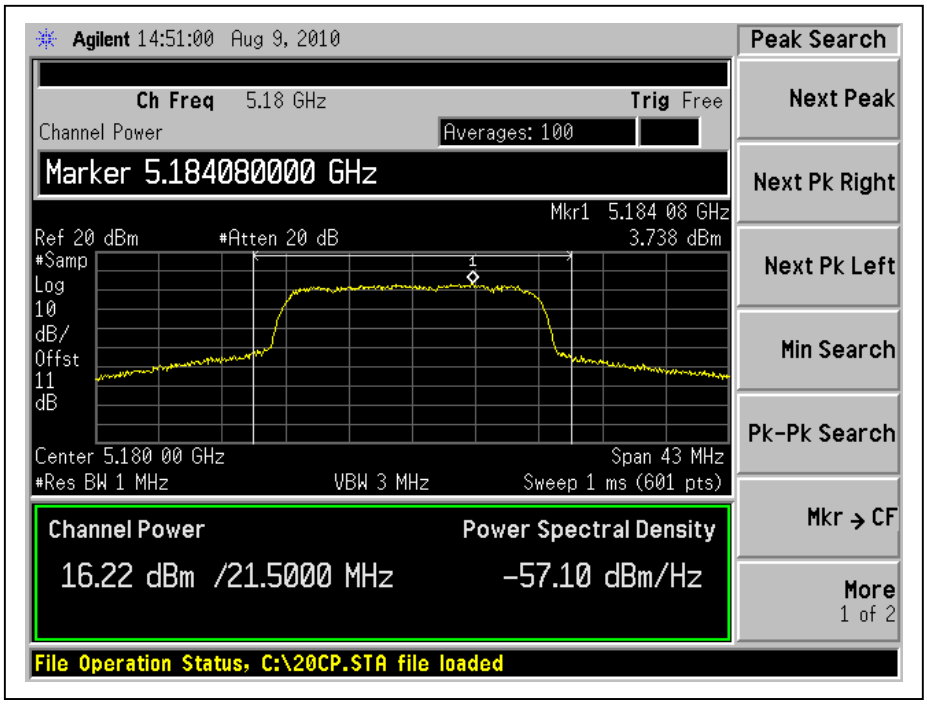
Same as 4.3.6

4.6.7 TEST RESULTS

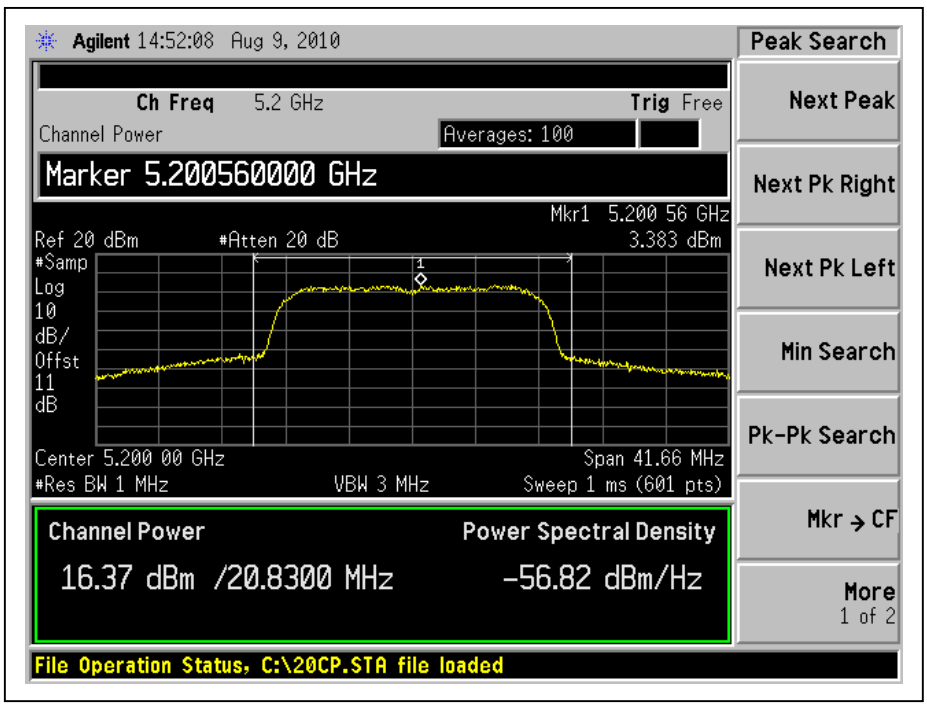
802.11a OFDM MODULATION

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
36	5180	3.7	4	PASS
40	5200	3.4	4	PASS
48	5240	3.8	4	PASS
52	5260	6.5	11	PASS
60	5300	6.5	11	PASS
64	5320	4.7	11	PASS
100	5500	5.9	11	PASS
120	5600	6.2	11	PASS
140	5700	5.7	11	PASS

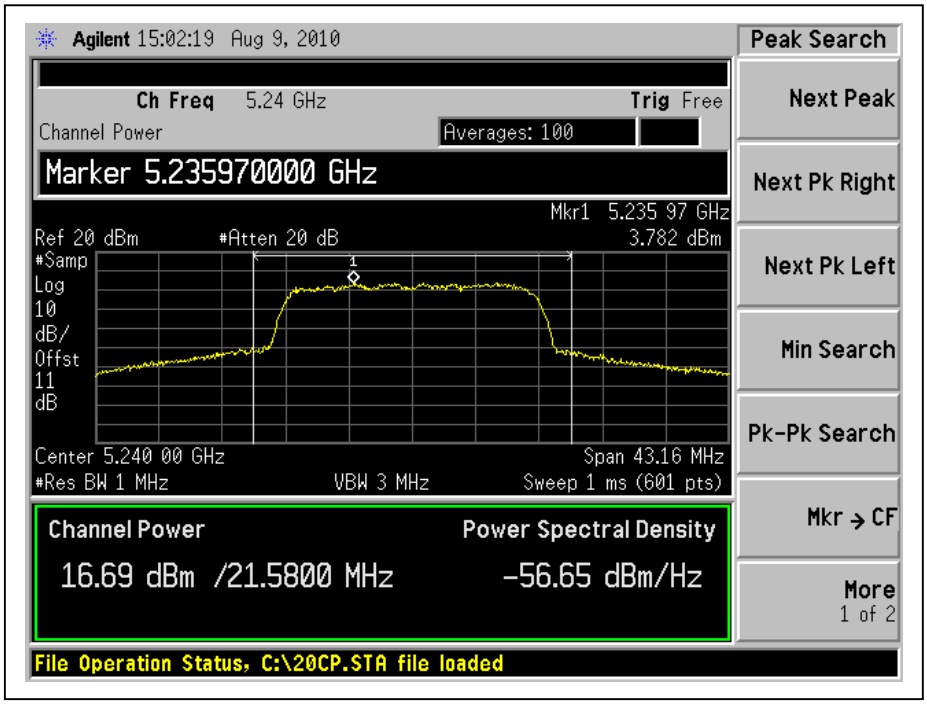
CH36


Agilent 14:51:00 Aug 9, 2010
Peak Search
Ch Freq 5.18 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.184080000 GHz
Mkr1 5.184 08 GHz
Ref 20 dBm
#Atten 20 dB
3.738 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.180 00 GHz
Span 43 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
16.22 dBm /21.5000 MHz
Power Spectral Density
-57.10 dBm/Hz
File Operation Status, C:\20CP.STA file loaded
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2

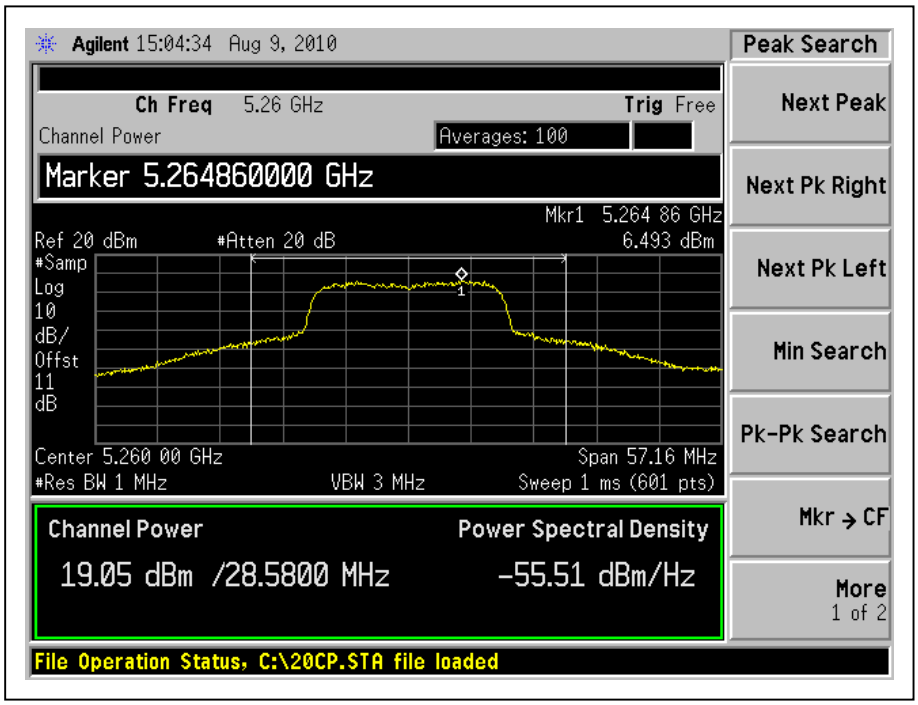
CH40


Agilent 14:52:08 Aug 9, 2010
Peak Search
Ch Freq 5.2 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.200560000 GHz
Mkr1 5.200 56 GHz
Ref 20 dBm
#Atten 20 dB
3.383 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.200 00 GHz
Span 41.66 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
16.37 dBm /20.8300 MHz
Power Spectral Density
-56.82 dBm/Hz
File Operation Status, C:\20CP.STA file loaded
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2

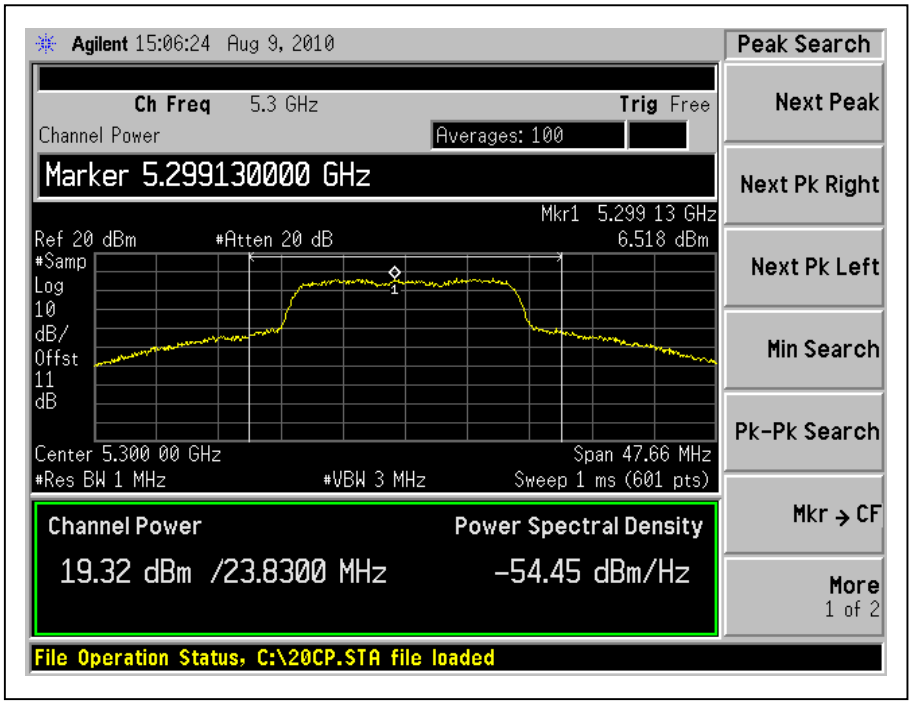
CH48


Agilent 15:02:19 Aug 9, 2010
Peak Search
Ch Freq 5.24 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.235970000 GHz
Mkr1 5.235 97 GHz
Ref 20 dBm
#Atten 20 dB
3.782 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.240 00 GHz
Span 43.16 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
16.69 dBm /21.5800 MHz
Power Spectral Density
-56.65 dBm/Hz
File Operation Status, C:\20CP.STA file loaded
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2

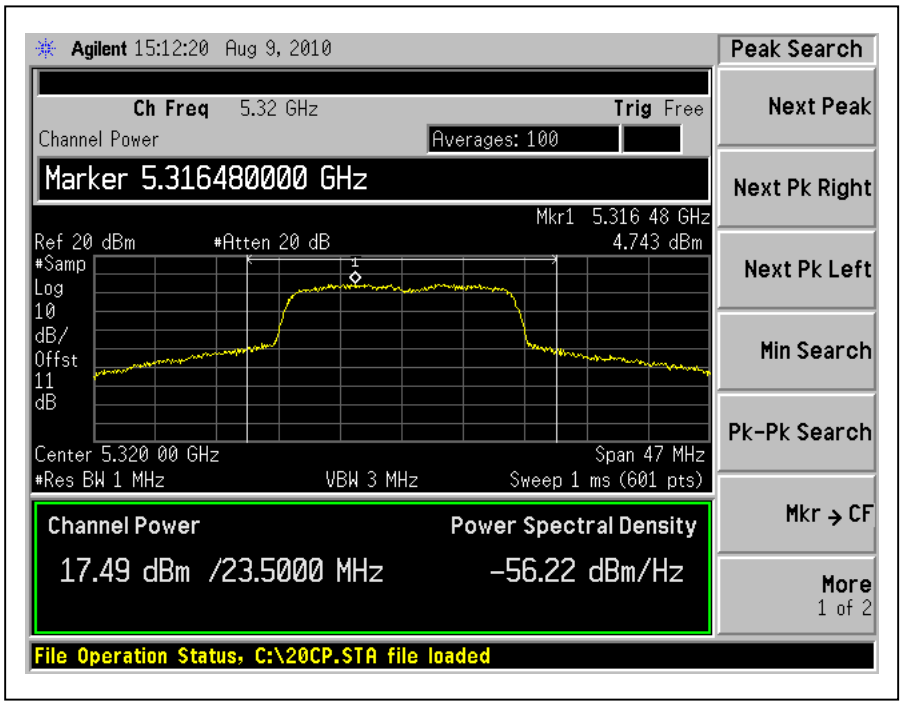
CH52


Agilent 15:04:34 Aug 9, 2010
Peak Search
Ch Freq 5.26 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.264860000 GHz
Mkr1 5.264 86 GHz
Ref 20 dBm
#Atten 20 dB
6.493 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.260 00 GHz
Span 57.16 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
19.05 dBm /28.5800 MHz
Power Spectral Density
-55.51 dBm/Hz
File Operation Status, C:\20CP.STA file loaded
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2

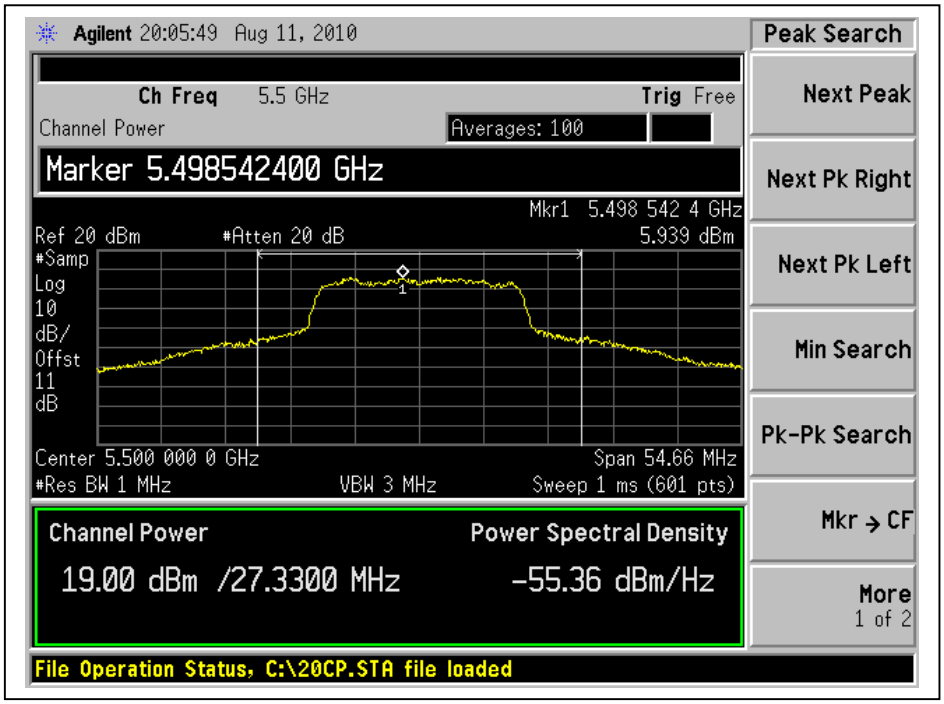
CH60


Agilent 15:06:24 Aug 9, 2010
Peak Search
Ch Freq 5.3 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.299130000 GHz
Mkr1 5.299 13 GHz
Ref 20 dBm
#Atten 20 dB
6.518 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.300 00 GHz
Span 47.66 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
19.32 dBm /23.8300 MHz
Power Spectral Density
-54.45 dBm/Hz
File Operation Status, C:\20CP.STA file loaded
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2

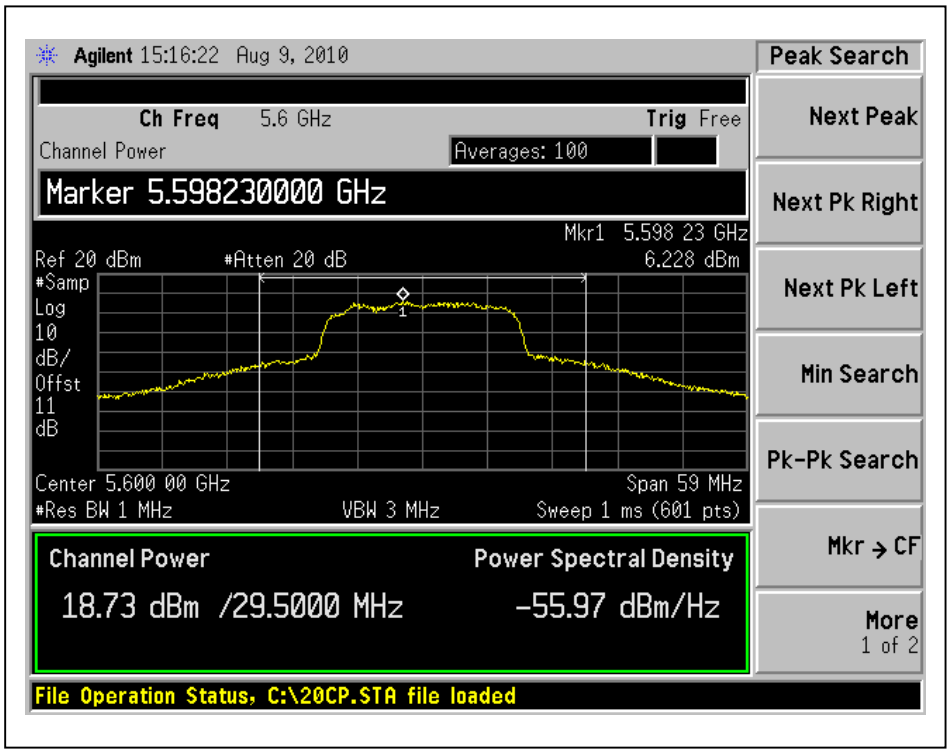
CH64


Agilent 15:12:20 Aug 9, 2010
Peak Search
Ch Freq 5.32 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.316480000 GHz
Mkr1 5.316 48 GHz
Ref 20 dBm
#Atten 20 dB
4.743 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.320 00 GHz
Span 47 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
17.49 dBm /23.5000 MHz
Power Spectral Density
-56.22 dBm/Hz
File Operation Status, C:\20CP.STA file loaded
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2

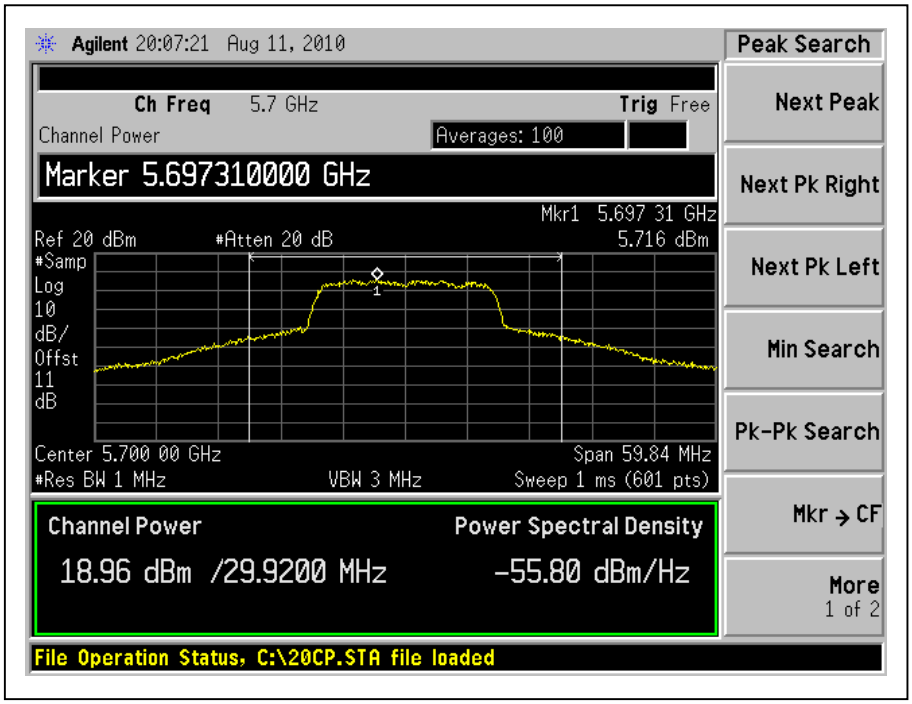
CH100


Agilent 20:05:49 Aug 11, 2010
Peak Search
Ch Freq 5.5 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.498542400 GHz
Mkr1 5.498 542 4 GHz
Ref 20 dBm
#Atten 20 dB
5.939 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.500 000 0 GHz
Span 54.66 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
19.00 dBm /27.3300 MHz
Power Spectral Density
-55.36 dBm/Hz
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
File Operation Status, C:\20CP.STA file loaded

CH120


Agilent 15:16:22 Aug 9, 2010
Peak Search
Ch Freq 5.6 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.598230000 GHz
Mkr1 5.598 23 GHz
Ref 20 dBm
#Atten 20 dB
6.228 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.600 00 GHz
Span 59 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
18.73 dBm /29.5000 MHz
Power Spectral Density
-55.97 dBm/Hz
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
File Operation Status, C:\20CP.STA file loaded

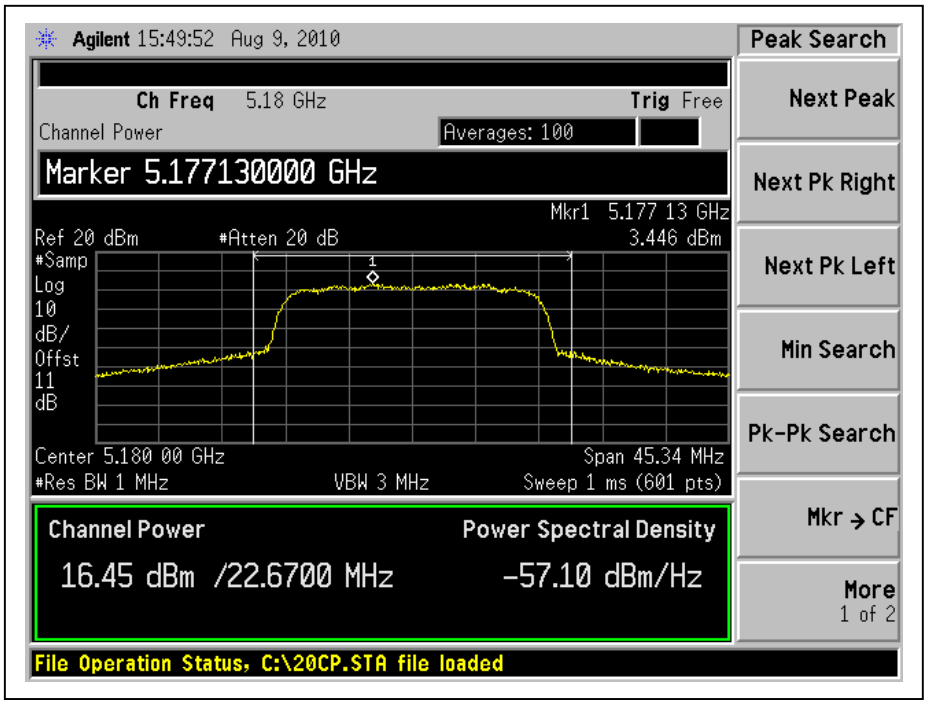
CH140


Agilent 20:07:21 Aug 11, 2010
Peak Search
Ch Freq 5.7 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.697310000 GHz
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Mkr1 5.697 31 GHz
5.716 dBm
Ref 20 dBm
#Atten 20 dB
#Samp
Log
10
dB/
Offst
11
dB
Center 5.700 00 GHz
Span 59.84 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
18.96 dBm /29.9200 MHz
Power Spectral Density
-55.80 dBm/Hz
File Operation Status, C:\20CP.STA file loaded

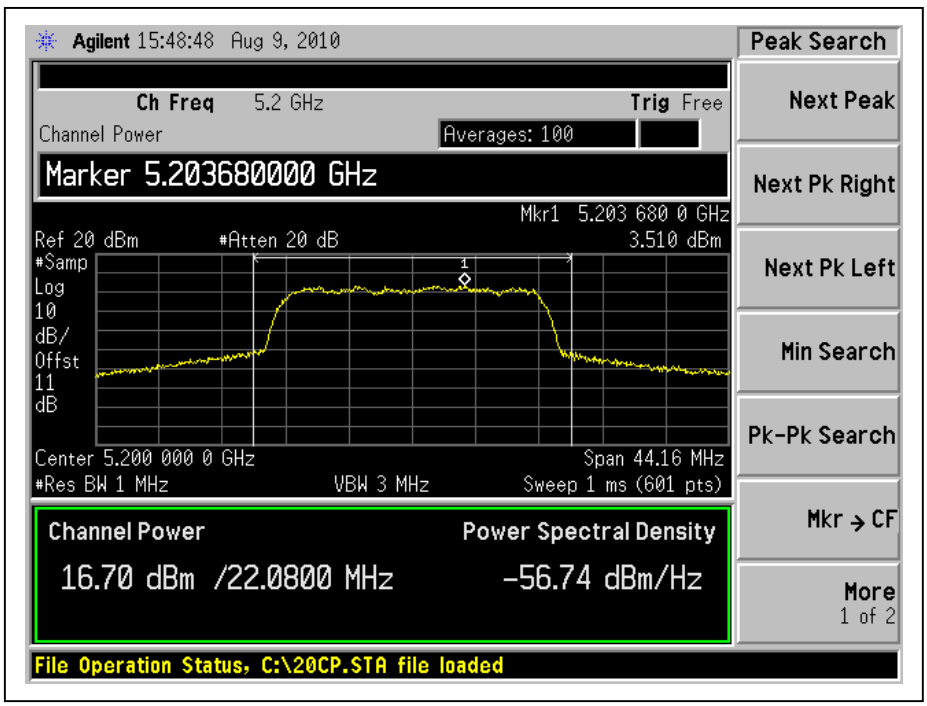
802.11n (20MHz) OFDM MODULATION:

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
36	5180	3.4	4	PASS
40	5200	3.5	4	PASS
48	5240	3.6	4	PASS
52	5260	5.0	11	PASS
60	5300	4.8	11	PASS
64	5320	4.1	11	PASS
100	5500	4.8	11	PASS
120	5600	5.5	11	PASS
140	5700	5.2	11	PASS

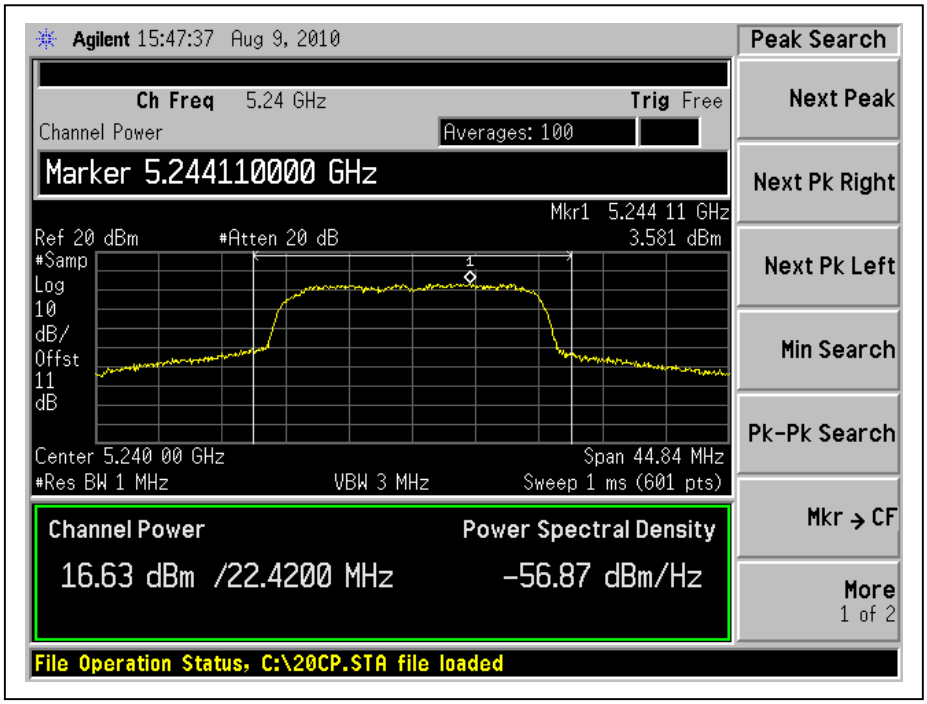
CH36


Agilent 15:49:52 Aug 9, 2010
Peak Search
Ch Freq 5.18 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.177130000 GHz
Mkr1 5.177 13 GHz
Ref 20 dBm
#Atten 20 dB
3.446 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.180 00 GHz
Span 45.34 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
16.45 dBm /22.6700 MHz
Power Spectral Density
-57.10 dBm/Hz
File Operation Status, C:\20CP.STA file loaded
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2

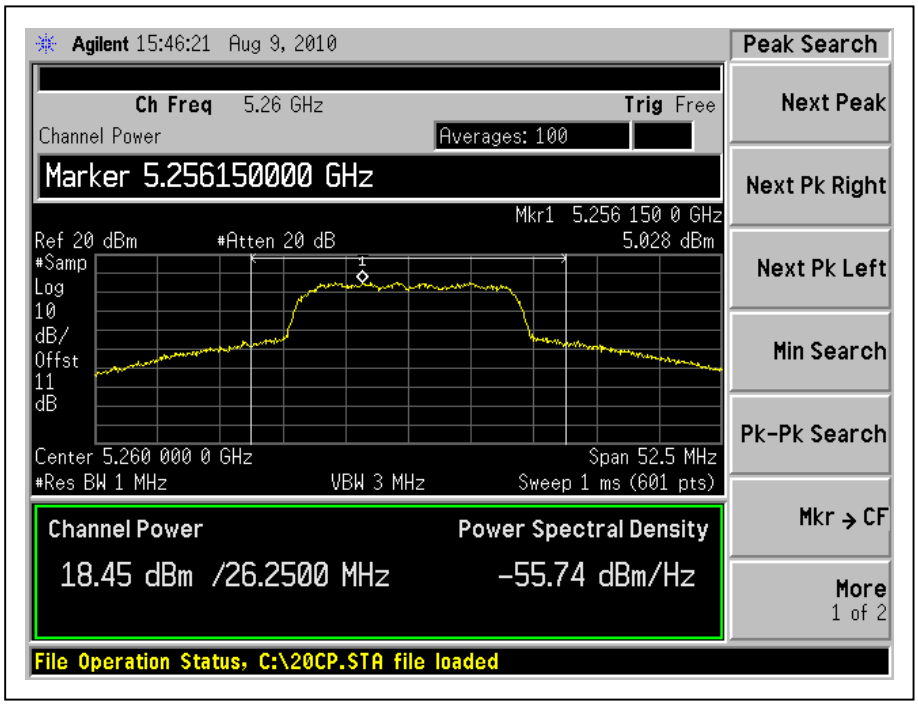
CH40


Agilent 15:48:48 Aug 9, 2010
Peak Search
Ch Freq 5.2 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.203680000 GHz
Mkr1 5.203 680 0 GHz
Ref 20 dBm
#Atten 20 dB
3.510 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.200 000 0 GHz
Span 44.16 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
16.70 dBm /22.0800 MHz
Power Spectral Density
-56.74 dBm/Hz
File Operation Status, C:\20CP.STA file loaded
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2

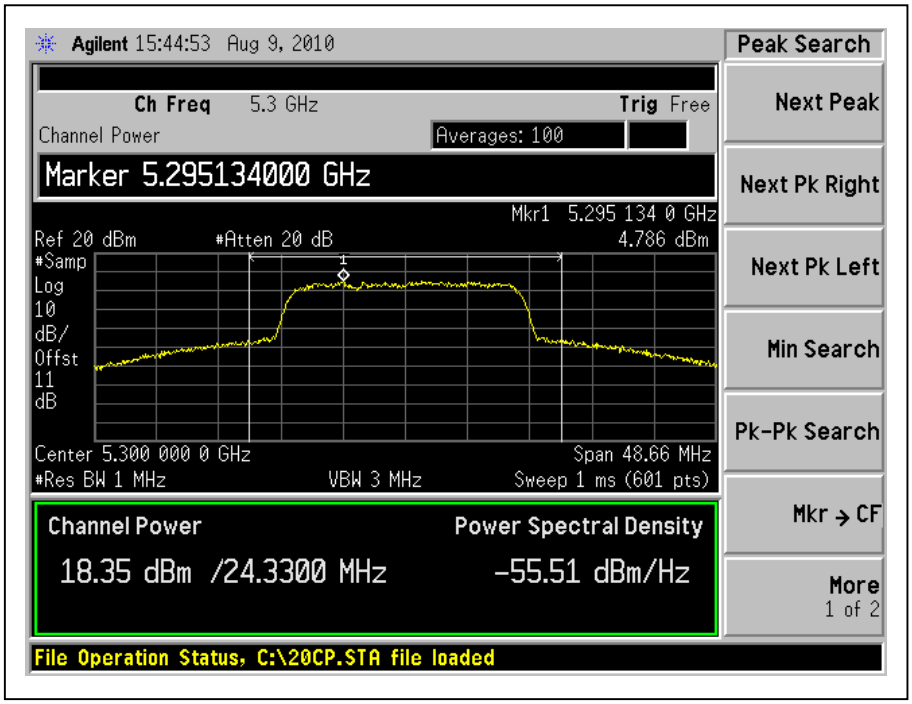
CH48


Agilent 15:47:37 Aug 9, 2010
Peak Search
Ch Freq 5.24 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.244110000 GHz
Mkr1 5.244 11 GHz
Ref 20 dBm
#Atten 20 dB
3.581 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.240 00 GHz
Span 44.84 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
16.63 dBm /22.4200 MHz
Power Spectral Density
-56.87 dBm/Hz
File Operation Status, C:\20CP.STA file loaded
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2

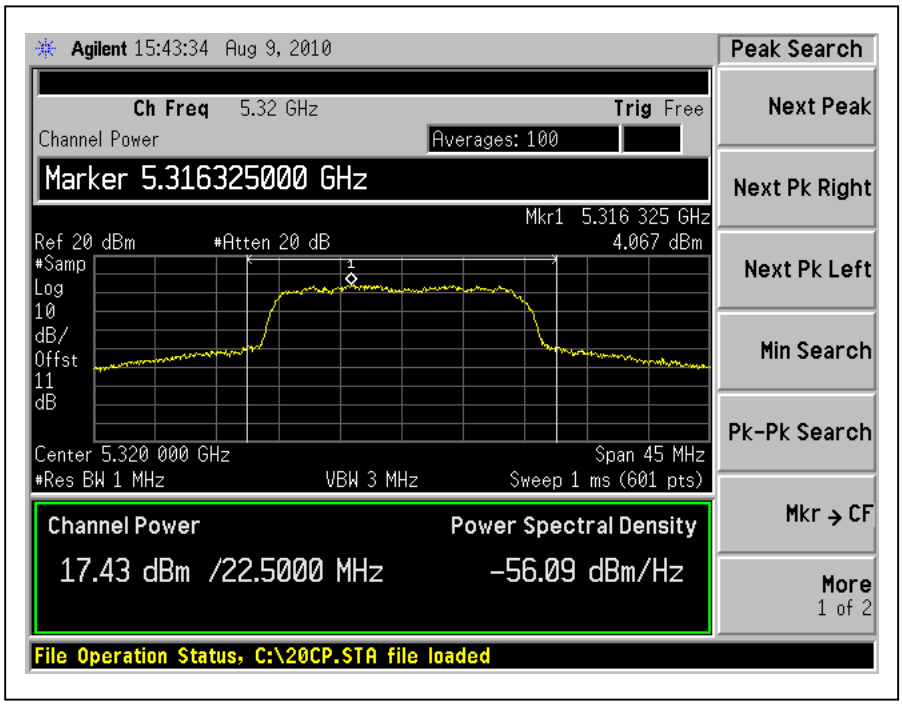
CH52


Agilent 15:46:21 Aug 9, 2010
Peak Search
Ch Freq 5.26 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.256150000 GHz
Mkr1 5.256 150 0 GHz
Ref 20 dBm
#Atten 20 dB
5.028 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.260 000 0 GHz
Span 52.5 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
18.45 dBm /26.2500 MHz
Power Spectral Density
-55.74 dBm/Hz
File Operation Status, C:\20CP.STA file loaded
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2

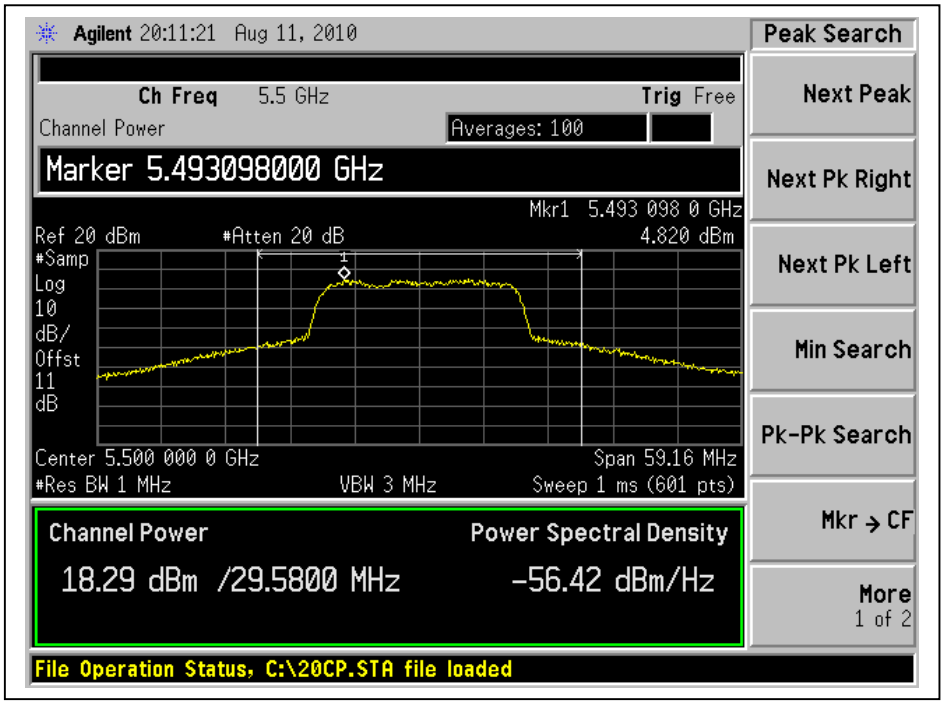
CH60


Agilent 15:44:53 Aug 9, 2010
Peak Search
Ch Freq 5.3 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.295134000 GHz
Mkr1 5.295 134 0 GHz
Ref 20 dBm
#Atten 20 dB
4.786 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.300 000 0 GHz
Span 48.66 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
18.35 dBm /24.3300 MHz
Power Spectral Density
-55.51 dBm/Hz
File Operation Status, C:\20CP.STA file loaded
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2

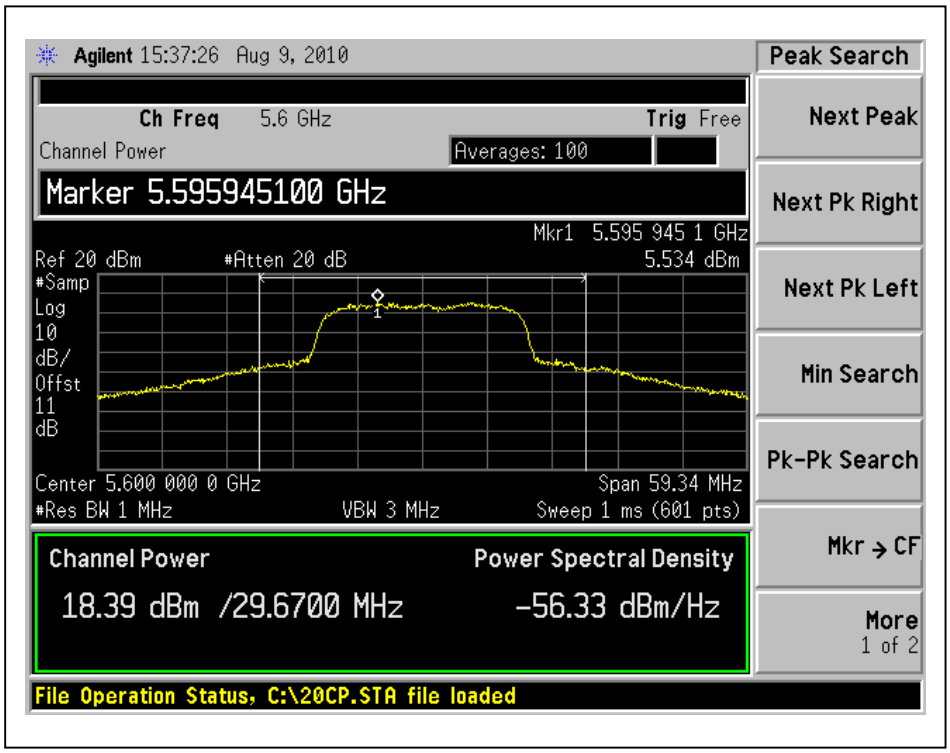
CH64


Agilent 15:43:34 Aug 9, 2010
Peak Search
Ch Freq 5.32 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.316325000 GHz
Mkr1 5.316 325 GHz
Ref 20 dBm
#Atten 20 dB
4.067 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.320 000 GHz
Span 45 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
17.43 dBm /22.5000 MHz
Power Spectral Density
-56.09 dBm/Hz
File Operation Status, C:\20CP.STA file loaded
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2

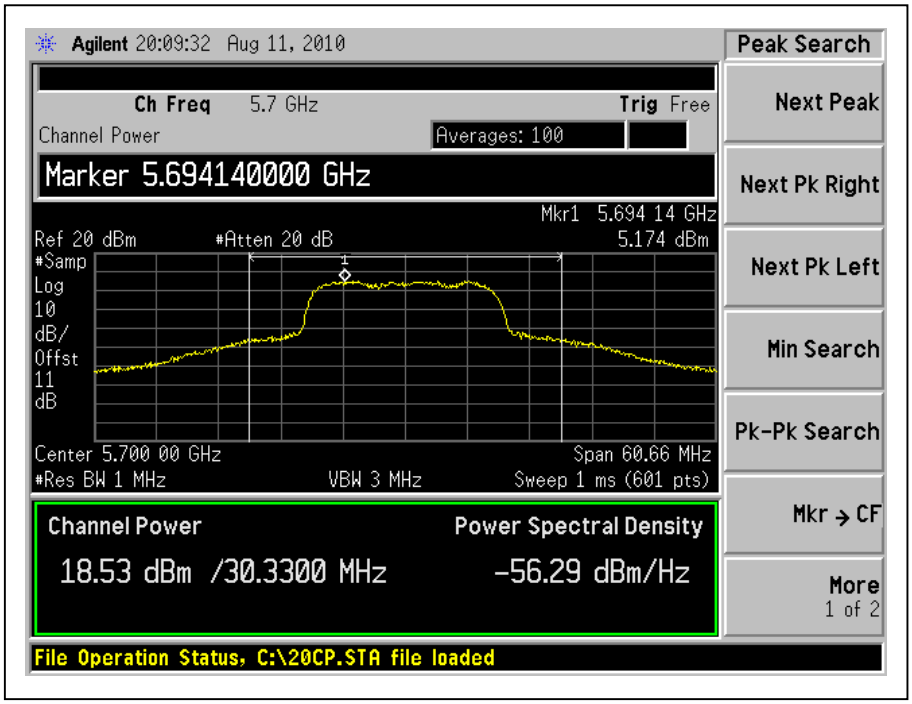
CH100


Agilent 20:11:21 Aug 11, 2010
Peak Search
Ch Freq 5.5 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.493098000 GHz
Mkr1 5.493 098 0 GHz
Ref 20 dBm
#Atten 20 dB
4.820 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.500 000 0 GHz
Span 59.16 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
18.29 dBm /29.5800 MHz
Power Spectral Density
-56.42 dBm/Hz
File Operation Status, C:\20CP.STA file loaded
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2

CH120


Agilent 15:37:26 Aug 9, 2010
Peak Search
Ch Freq 5.6 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.595945100 GHz
Mkr1 5.595 945 1 GHz
Ref 20 dBm
#Atten 20 dB
5.534 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.600 000 0 GHz
Span 59.34 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
18.39 dBm /29.6700 MHz
Power Spectral Density
-56.33 dBm/Hz
File Operation Status, C:\20CP.STA file loaded
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2

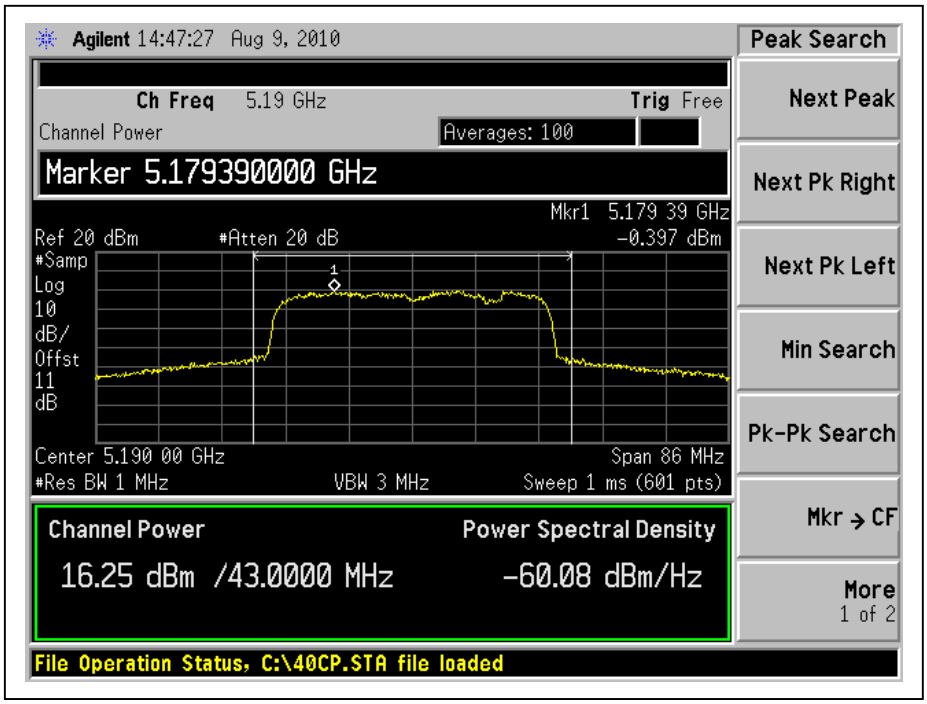
CH140


Agilent 20:09:32 Aug 11, 2010
Peak Search
Ch Freq 5.7 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.694140000 GHz
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Mkr1 5.694 14 GHz
5.174 dBm
Ref 20 dBm
#Atten 20 dB
#Samp
Log
10
dB/
Offst
11
dB
Center 5.700 00 GHz
Span 60.66 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
18.53 dBm /30.3300 MHz
Power Spectral Density
-56.29 dBm/Hz
File Operation Status, C:\20CP.STA file loaded

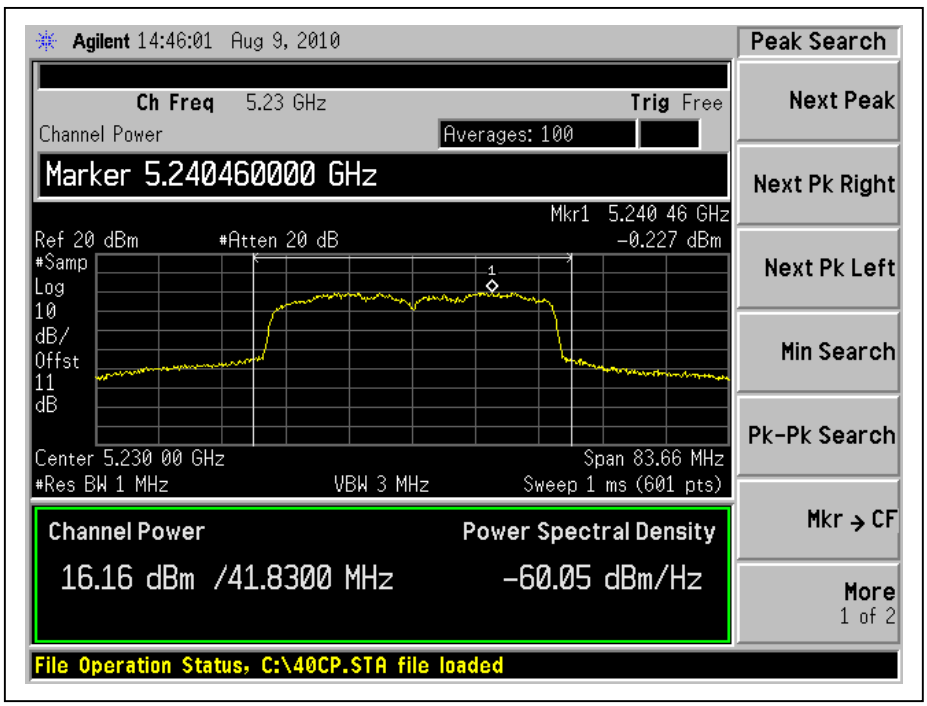
802.11n (40MHz) OFDM MODULATION:

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
38	5190	-0.4	4	PASS
46	5230	-0.2	4	PASS
54	5270	2.5	11	PASS
62	5310	-1.4	11	PASS
102	5510	1.6	11	PASS
118	5590	2.3	11	PASS
134	5670	2.7	11	PASS

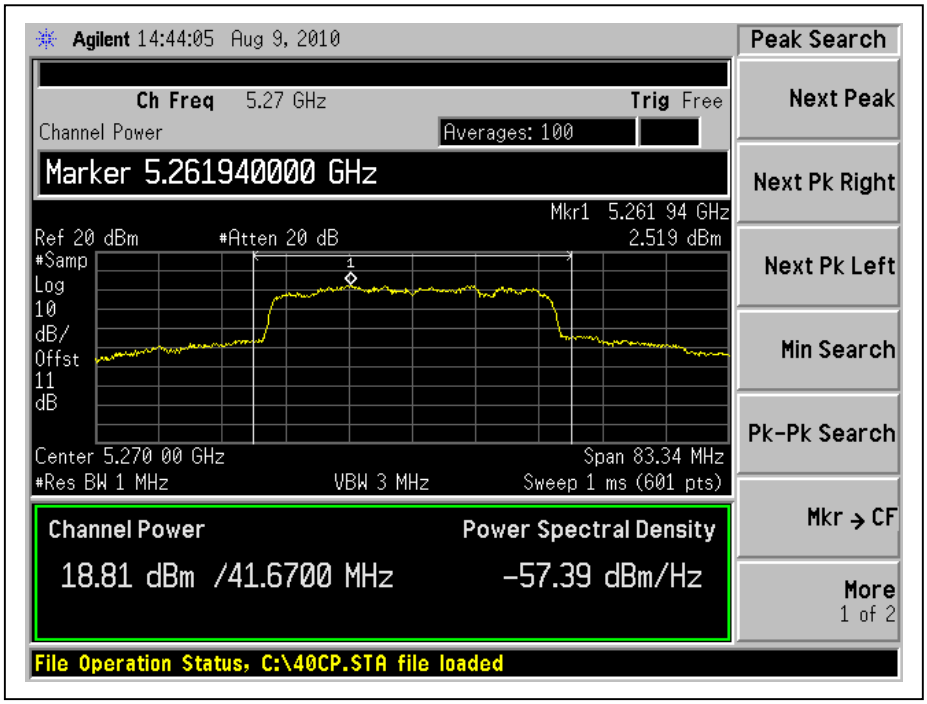
CH38


Agilent 14:47:27 Aug 9, 2010
Peak Search
Ch Freq 5.19 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.179390000 GHz
Mkr1 5.179 39 GHz
Ref 20 dBm
#Atten 20 dB
-0.397 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.190 00 GHz
Span 86 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
16.25 dBm /43.0000 MHz
Power Spectral Density
-60.08 dBm/Hz
File Operation Status, C:\40CP.STA file loaded
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2

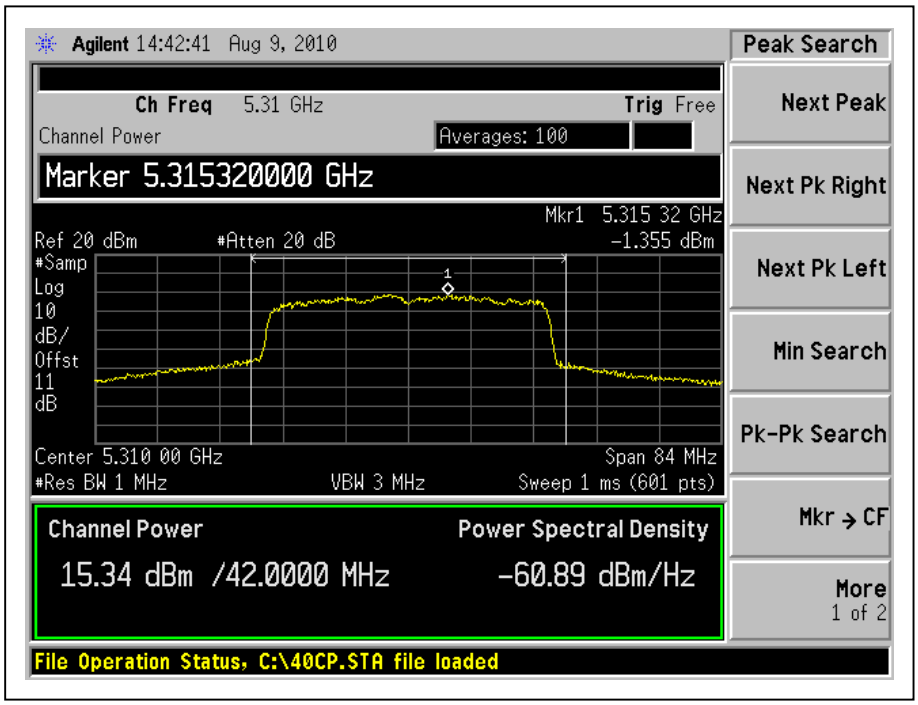
CH46


Agilent 14:46:01 Aug 9, 2010
Peak Search
Ch Freq 5.23 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.240460000 GHz
Mkr1 5.240 46 GHz
Ref 20 dBm
#Atten 20 dB
-0.227 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.230 00 GHz
Span 83.66 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
16.16 dBm /41.8300 MHz
Power Spectral Density
-60.05 dBm/Hz
File Operation Status, C:\40CP.STA file loaded
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2

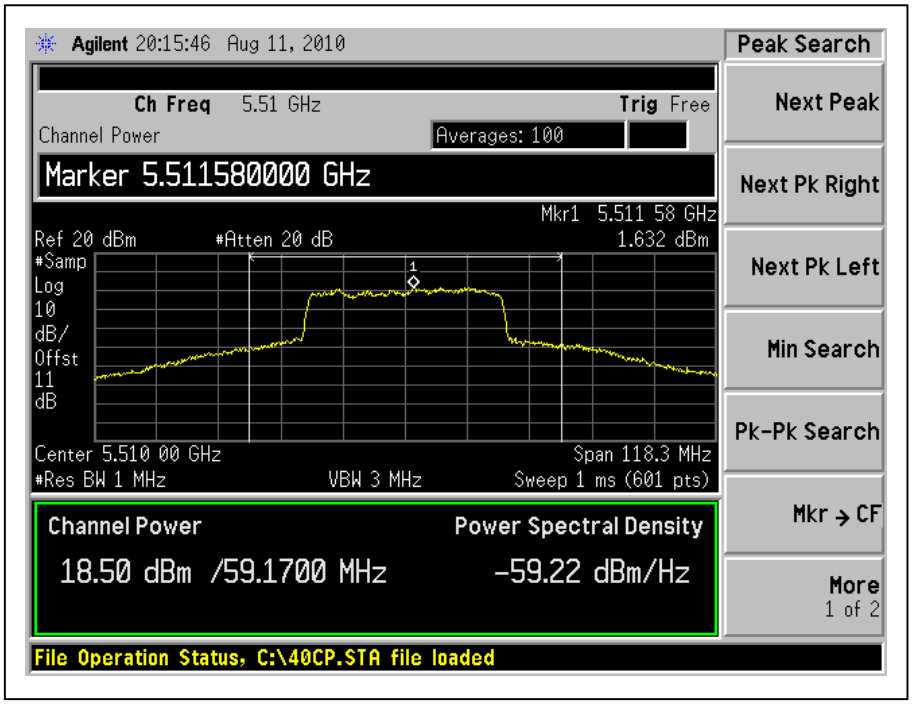
CH54


Agilent 14:44:05 Aug 9, 2010
Peak Search
Ch Freq 5.27 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.261940000 GHz
Mkr1 5.261 94 GHz
Ref 20 dBm
#Atten 20 dB
2.519 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.270 00 GHz
Span 83.34 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
18.81 dBm /41.6700 MHz
Power Spectral Density
-57.39 dBm/Hz
File Operation Status, C:\40CP.STA file loaded
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2

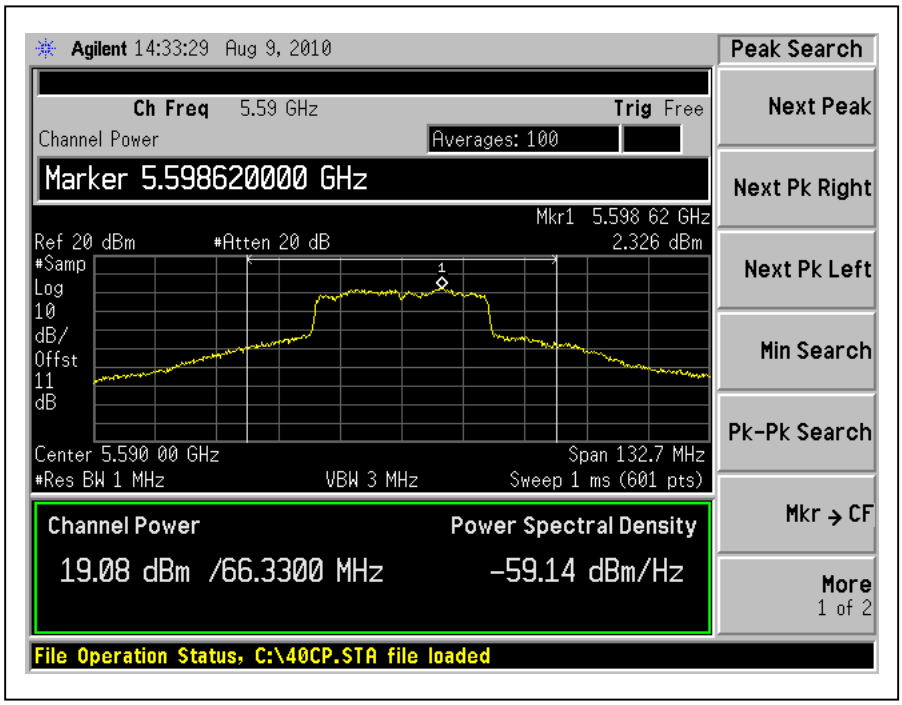
CH62


Agilent 14:42:41 Aug 9, 2010
Peak Search
Ch Freq 5.31 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.315320000 GHz
Mkr1 5.315 32 GHz
Ref 20 dBm
#Atten 20 dB
-1.355 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.310 00 GHz
Span 84 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
15.34 dBm /42.0000 MHz
Power Spectral Density
-60.89 dBm/Hz
File Operation Status, C:\40CP.STA file loaded
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2

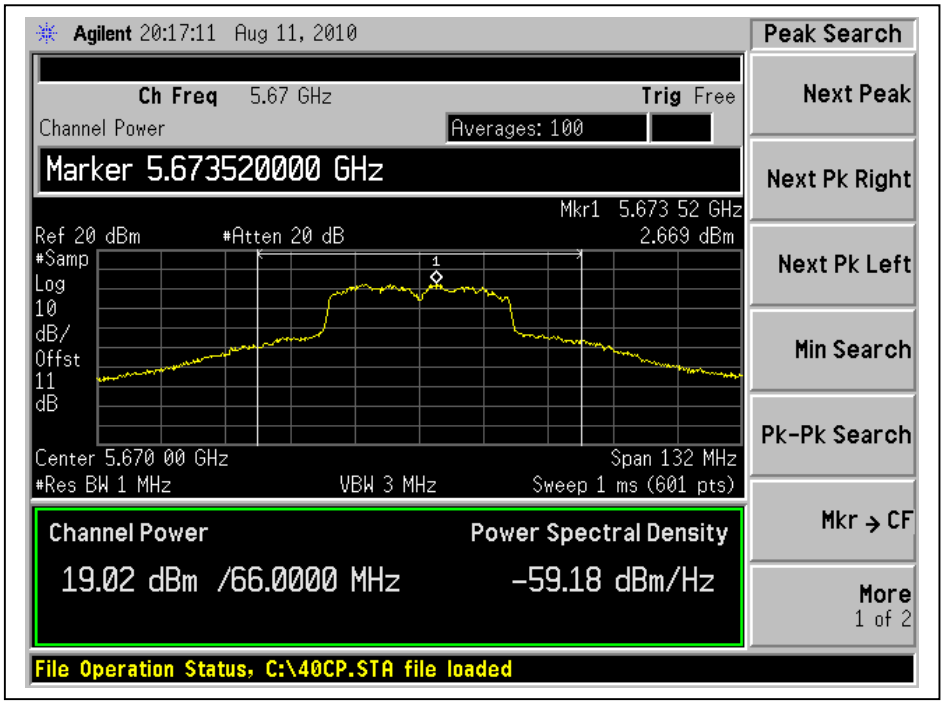
CH102


Agilent 20:15:46 Aug 11, 2010
Peak Search
Ch Freq 5.51 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.511580000 GHz
Mkr1 5.511 58 GHz
Ref 20 dBm
#Atten 20 dB
1.632 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.510 00 GHz
Span 118.3 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
18.50 dBm /59.1700 MHz
Power Spectral Density
-59.22 dBm/Hz
File Operation Status, C:\40CP.STA file loaded
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2

CH118


Agilent 14:33:29 Aug 9, 2010
Peak Search
Ch Freq 5.59 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.598620000 GHz
Mkr1 5.598 62 GHz
Ref 20 dBm
#Atten 20 dB
2.326 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.590 00 GHz
Span 132.7 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
19.08 dBm /66.3300 MHz
Power Spectral Density
-59.14 dBm/Hz
File Operation Status, C:\40CP.STA file loaded
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2

CH134


Agilent 20:17:11 Aug 11, 2010
Peak Search
Ch Freq 5.67 GHz
Trig Free
Channel Power
Averages: 100
Marker 5.673520000 GHz
Mkr1 5.673 52 GHz
Ref 20 dBm
#Atten 20 dB
2.669 dBm
#Samp
Log
10
dB/
Offst
11
dB
Center 5.670 00 GHz
Span 132 MHz
#Res BW 1 MHz
VBW 3 MHz
Sweep 1 ms (601 pts)
Channel Power
19.02 dBm /66.0000 MHz
Power Spectral Density
-59.18 dBm/Hz
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
File Operation Status, C:\40CP.STA file loaded

4.7 99% BANDWIDTH MEASUREMENT

4.7.1 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.

4.7.2 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 100kHz RBW and 100kHz VBW.

4.7.3 TEST SETUP

4.7.4 EUT OPERATING CONDITIONS

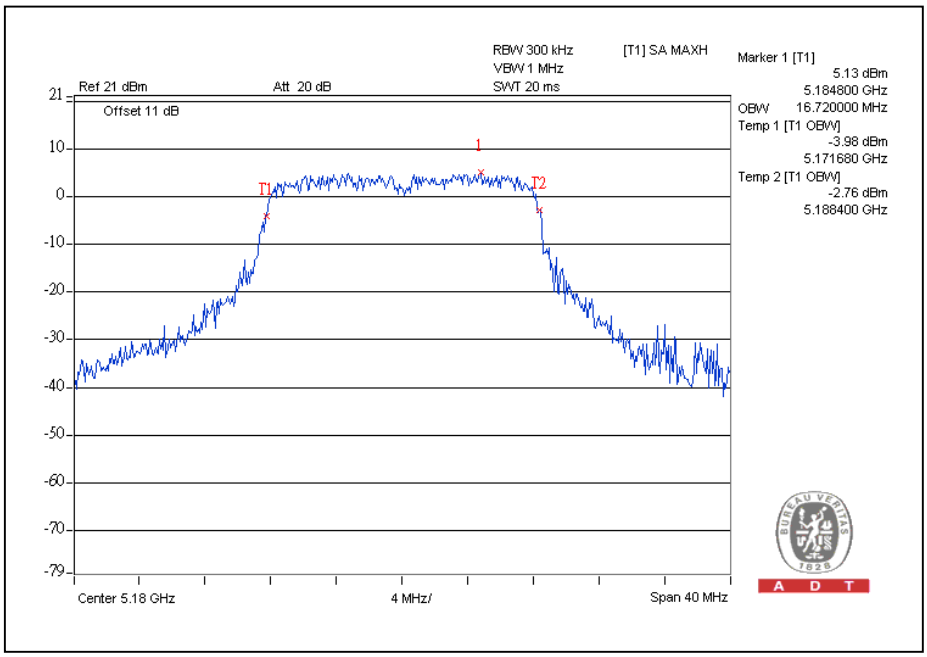
The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.7.5 TEST RESULTS

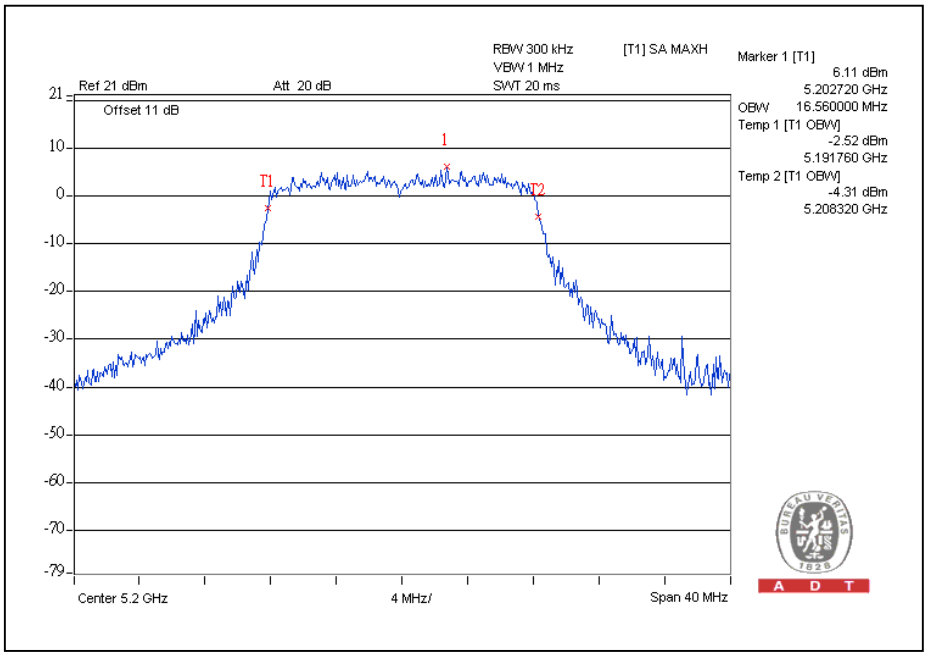
802.11a OFDM MODULATION

CHANNEL	CHANNEL FREQUENCY (MHz)	99% BANDWIDTH (MHz)
36	5180	16.72
40	5200	16.56
48	5240	16.64
52	5260	17.52
60	5300	17.20
64	5320	16.72
100	5500	17.12
120	5600	17.60
140	5700	17.52

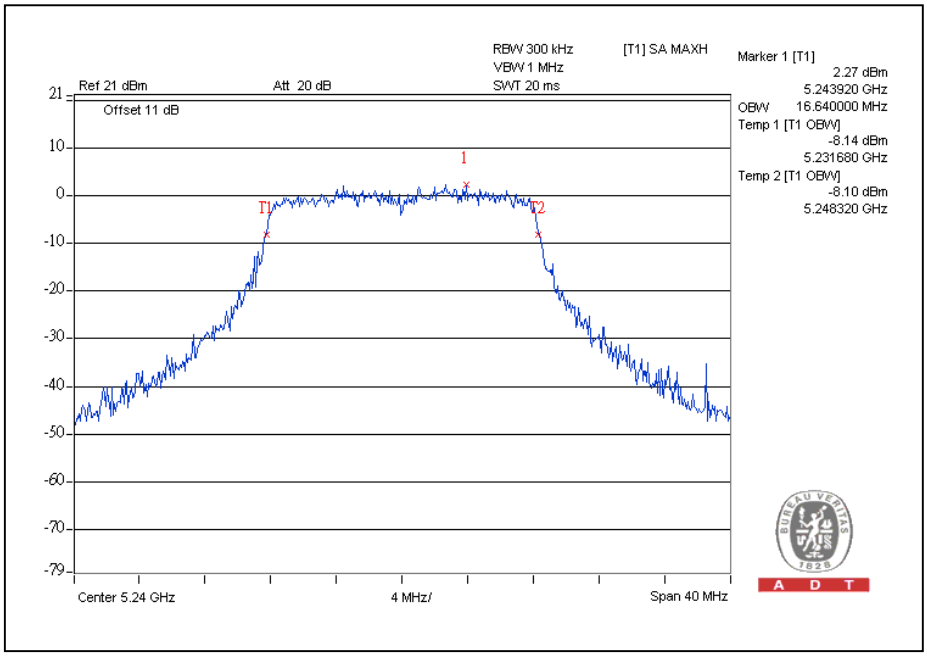
CH36


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] SA MAXH
Marker 1 [T1]
5.13 dBm
5.184800 GHz
OBW 16.720000 MHz
Temp 1 [T1 OBW]
-3.98 dBm
5.171680 GHz
Temp 2 [T1 OBW]
-2.76 dBm
5.188400 GHz
Ref 21 dBm
Att 20 dB
Offset 11 dB
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
T1
T2
1
Center 5.18 GHz
4 MHz/
Span 40 MHz

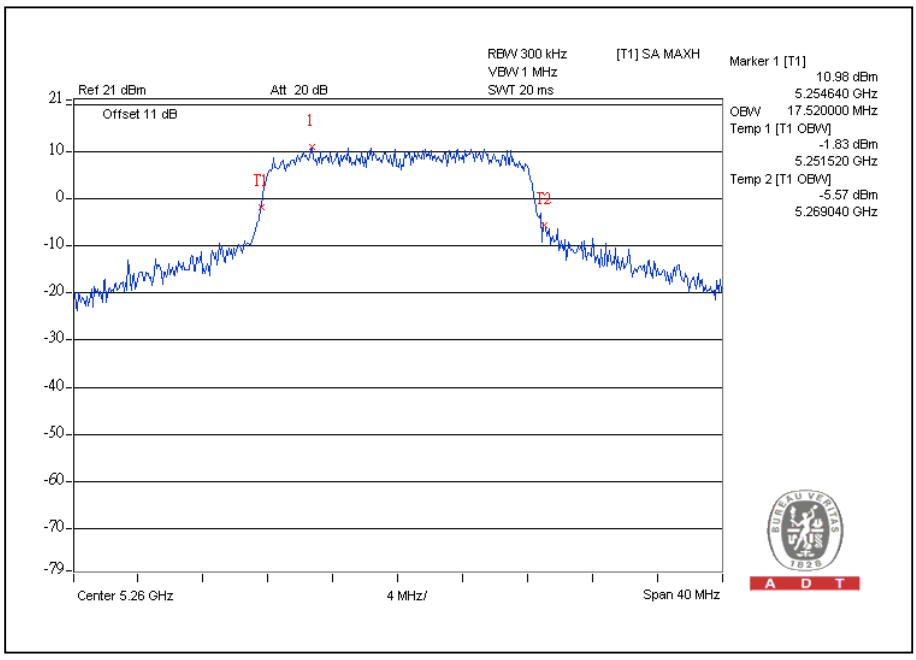
CH40


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] SA MAXH
Marker 1 [T1]
6.11 dBm
5.202720 GHz
OBW 16.560000 MHz
Temp 1 [T1 OBW]
-2.52 dBm
5.191760 GHz
Temp 2 [T1 OBW]
-4.31 dBm
5.208320 GHz
Ref 21 dBm
Att 20 dB
Offset 11 dB
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
T1
T2
1
Center 5.2 GHz
4 MHz/
Span 40 MHz

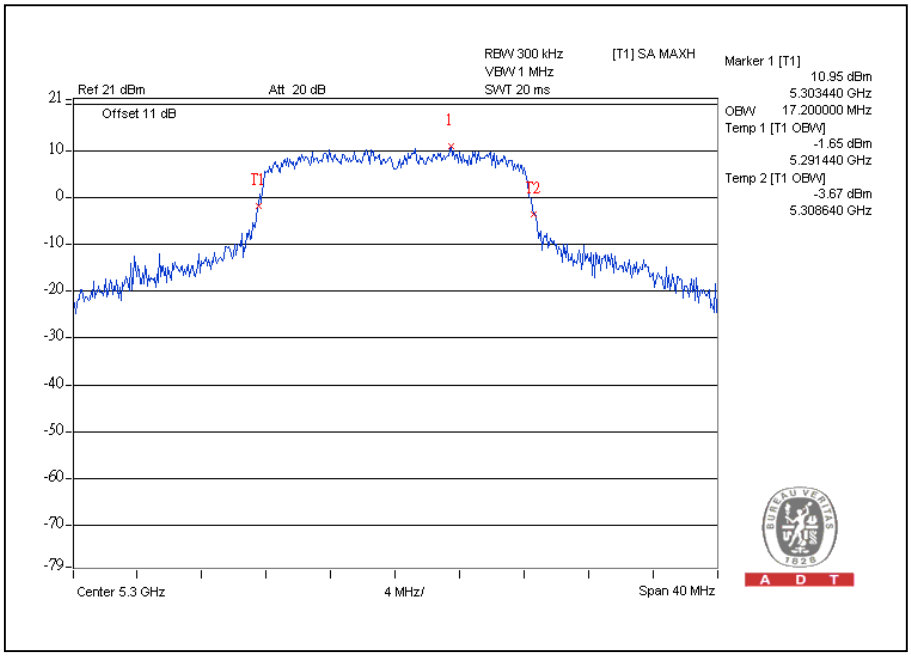
CH48


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] SA MAXH
Marker 1 [T1]
2.27 dBm
5.243920 GHz
OBW 16.640000 MHz
Temp 1 [T1 OBW]
-8.14 dBm
5.231680 GHz
Temp 2 [T1 OBW]
-8.10 dBm
5.248320 GHz
Ref 21 dBm
Att 20 dB
Offset 11 dB
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
T1
T2
1
Center 5.24 GHz
4 MHz/
Span 40 MHz

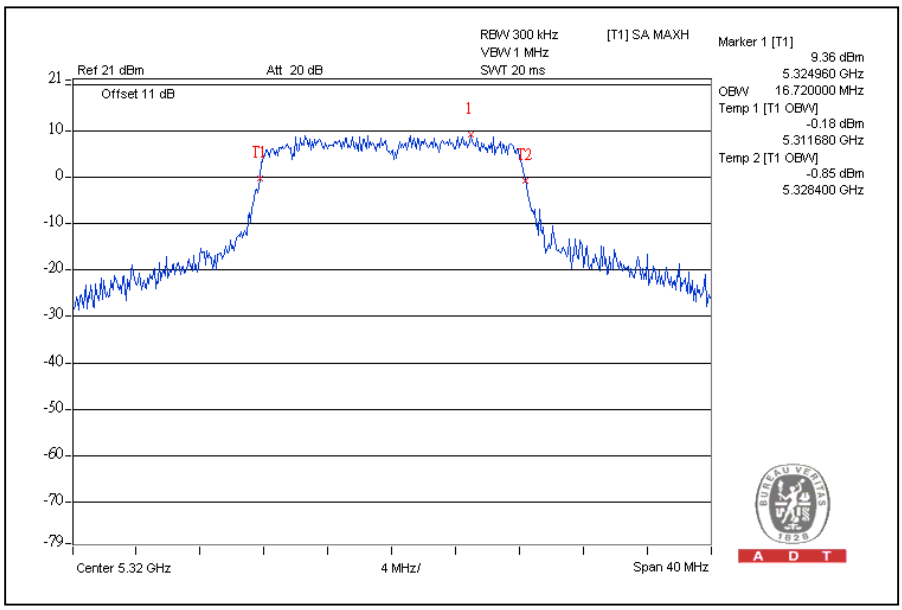
CH52


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] SA MAXH
Marker 1 [T1]
10.98 dBm
5.254640 GHz
OBW 17.520000 MHz
Temp 1 [T1 OBW]
-1.83 dBm
5.251520 GHz
Temp 2 [T1 OBW]
-5.57 dBm
5.269040 GHz
Ref 21 dBm
Att 20 dB
Offset 11 dB
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
T1
T2
1
Center 5.26 GHz
4 MHz/
Span 40 MHz

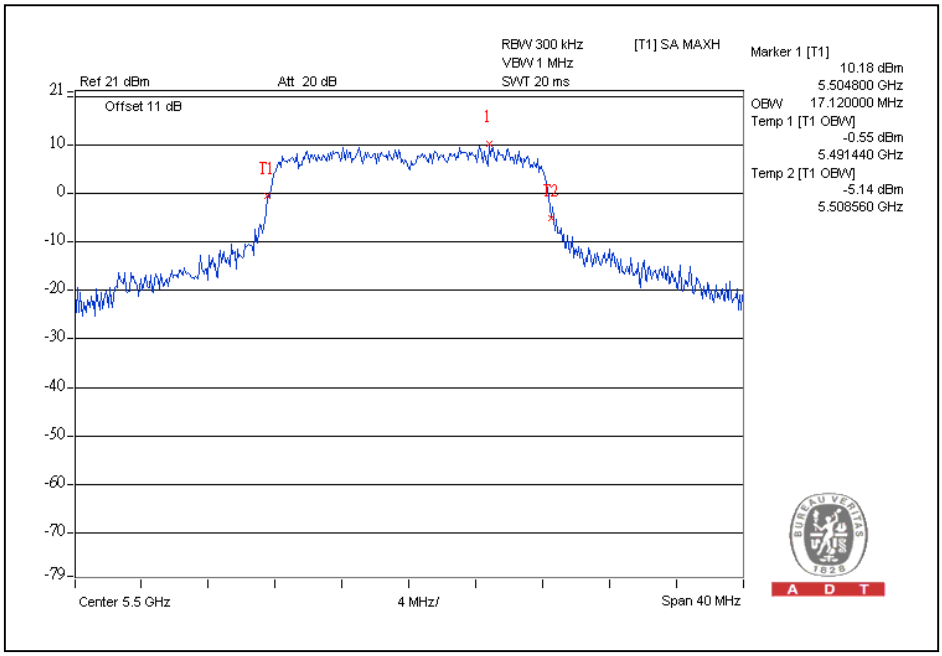
CH60


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] SA MAXH
Marker 1 [T1]
10.95 dBm
5.303440 GHz
OBW 17.200000 MHz
Temp 1 [T1 OBW]
-1.65 dBm
5.291440 GHz
Temp 2 [T1 OBW]
-3.67 dBm
5.308640 GHz
Ref 21 dBm
Att 20 dB
Offset 11 dB
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
Center 5.3 GHz
4 MHz/
Span 40 MHz

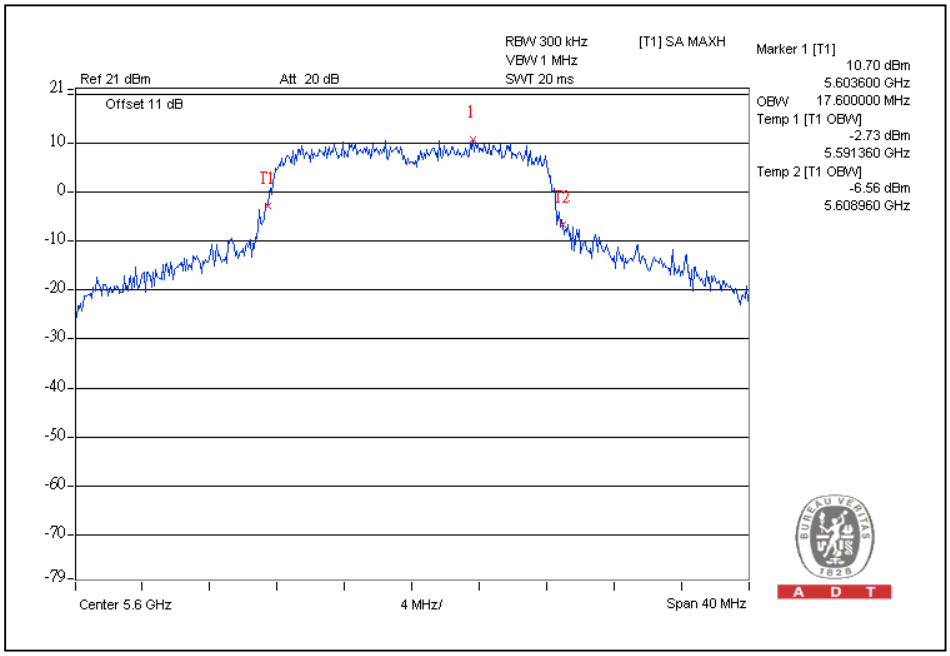
CH64


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] SA MAXH
Marker 1 [T1]
9.36 dBm
5.324960 GHz
OBW 16.720000 MHz
Temp 1 [T1 OBW]
-0.18 dBm
5.311680 GHz
Temp 2 [T1 OBW]
-0.85 dBm
5.328400 GHz
Ref 21 dBm
Att 20 dB
Offset 11 dB
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
Center 5.32 GHz
4 MHz/
Span 40 MHz

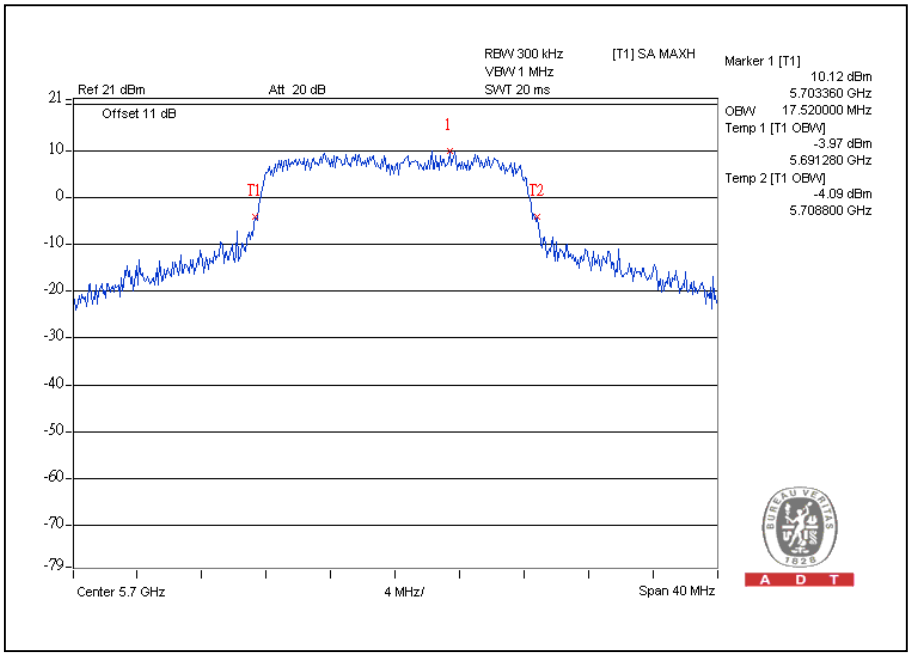
CH100


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] SA MAXH
Marker 1 [T1]
10.18 dBm
5.504800 GHz
OBW 17.120000 MHz
Temp 1 [T1 OBW]
-0.55 dBm
5.491440 GHz
Temp 2 [T1 OBW]
-5.14 dBm
5.508560 GHz
Ref 21 dBm
Att 20 dB
Offset 11 dB
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
Center 5.5 GHz
4 MHz/
Span 40 MHz

CH120


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] SA MAXH
Marker 1 [T1]
10.70 dBm
5.603600 GHz
OBW 17.600000 MHz
Temp 1 [T1 OBW]
-2.73 dBm
5.591360 GHz
Temp 2 [T1 OBW]
-6.56 dBm
5.608960 GHz
Ref 21 dBm
Att 20 dB
Offset 11 dB
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
Center 5.6 GHz
4 MHz/
Span 40 MHz

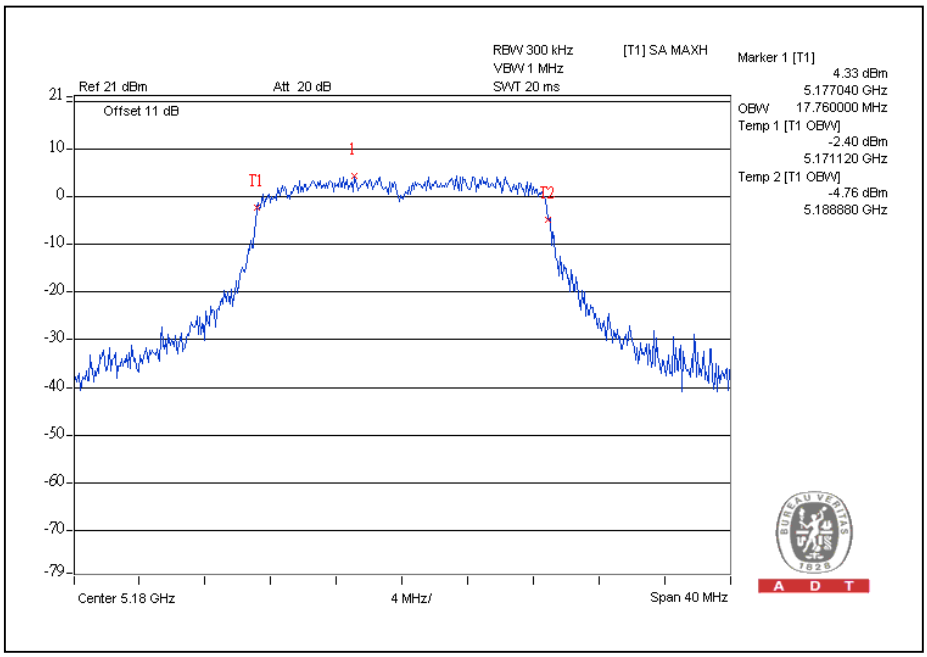
CH140


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] SA MAXH
Marker 1 [T1]
10.12 dBm
5.703360 GHz
OBW 17.520000 MHz
Temp 1 [T1 OBW]
-3.97 dBm
5.691280 GHz
Temp 2 [T1 OBW]
-4.09 dBm
5.708800 GHz
Ref 21 dBm
Att 20 dB
Offset 11 dB
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
T1
T2
1
Center 5.7 GHz
4 MHz/
Span 40 MHz

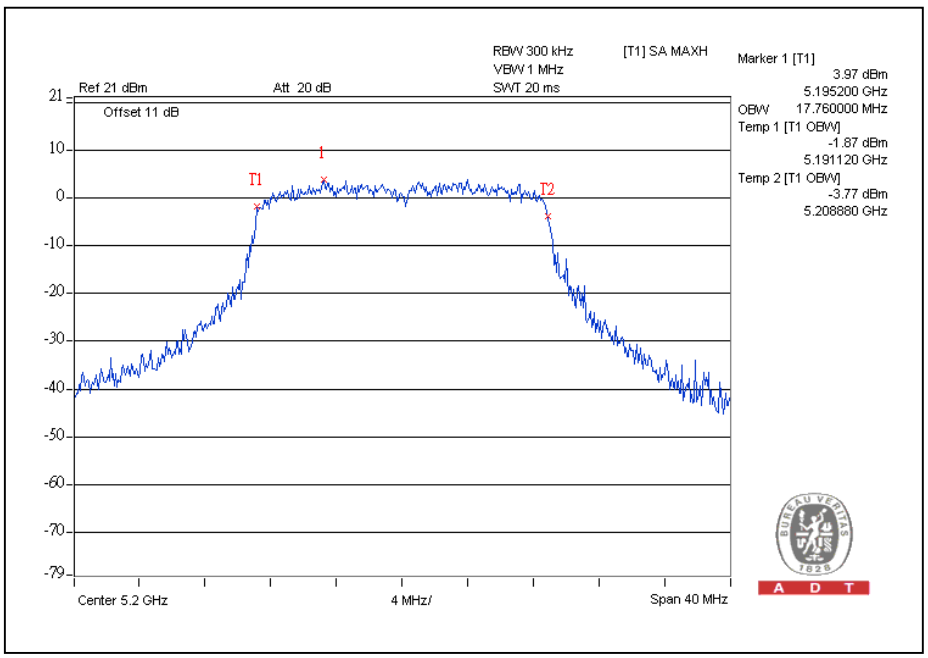
802.11n (20MHz) OFDM MODULATION:

CHANNEL	CHANNEL FREQUENCY (MHz)	99% BANDWIDTH (MHz)
36	5180	17.76
40	5200	17.76
48	5240	17.6
52	5260	18.0
60	5300	17.92
64	5320	17.84
100	5500	18.0
120	5600	18.64
140	5700	18.48

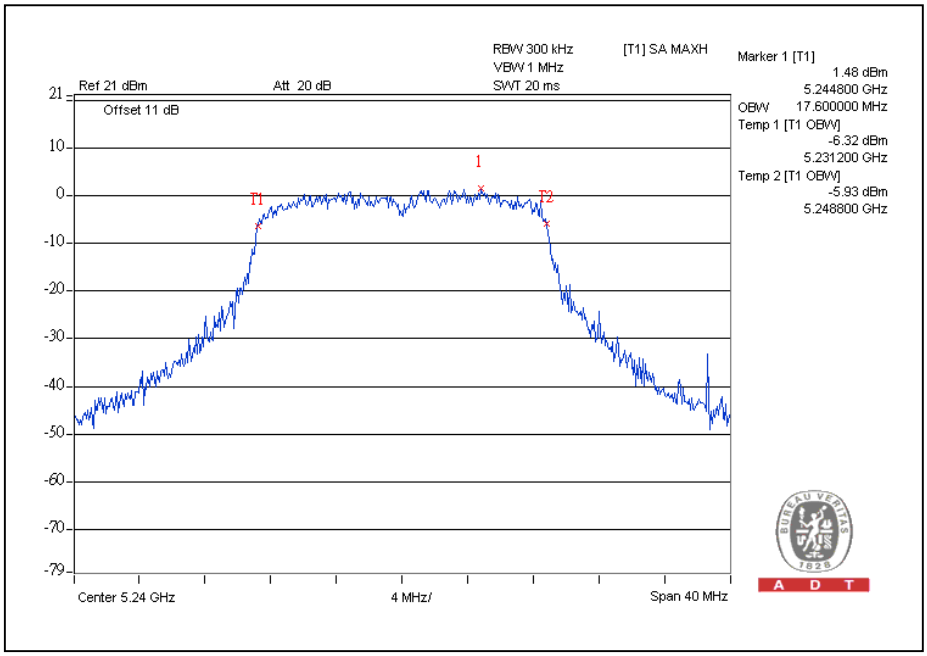
CH36


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] SA MAXH
Marker 1 [T1]
4.33 dBm
5.177040 GHz
OBW 17.760000 MHz
Temp 1 [T1 OBW]
-2.40 dBm
5.171120 GHz
Temp 2 [T1 OBW]
-4.76 dBm
5.188880 GHz
Ref 21 dBm
Att 20 dB
Offset 11 dB
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
T1
T2
1
Center 5.18 GHz
4 MHz/
Span 40 MHz

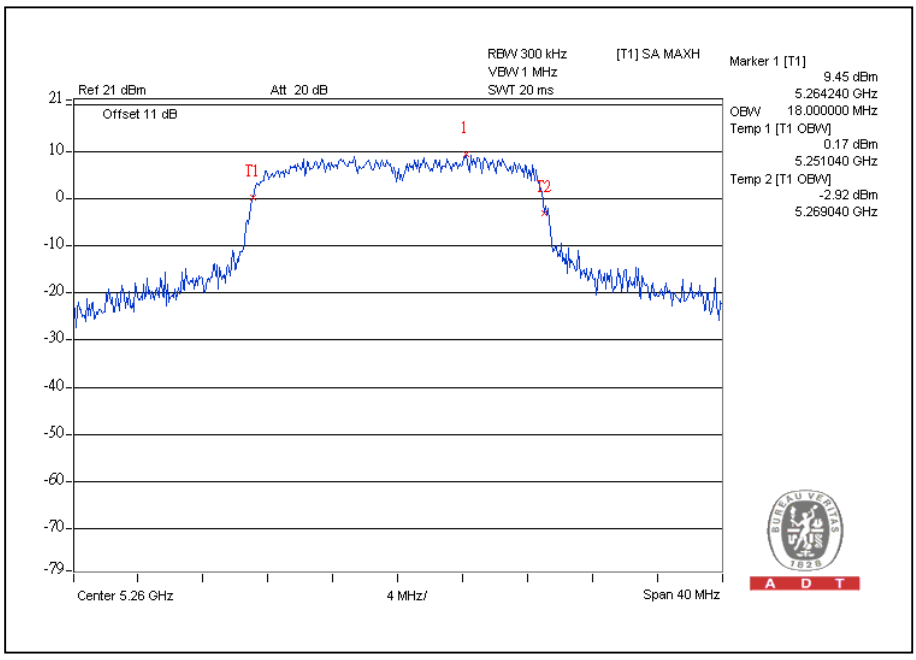
CH40


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] SA MAXH
Marker 1 [T1]
3.97 dBm
5.195200 GHz
OBW 17.760000 MHz
Temp 1 [T1 OBW]
-1.87 dBm
5.191120 GHz
Temp 2 [T1 OBW]
-3.77 dBm
5.208880 GHz
Ref 21 dBm
Att 20 dB
Offset 11 dB
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
T1
T2
1
Center 5.2 GHz
4 MHz/
Span 40 MHz

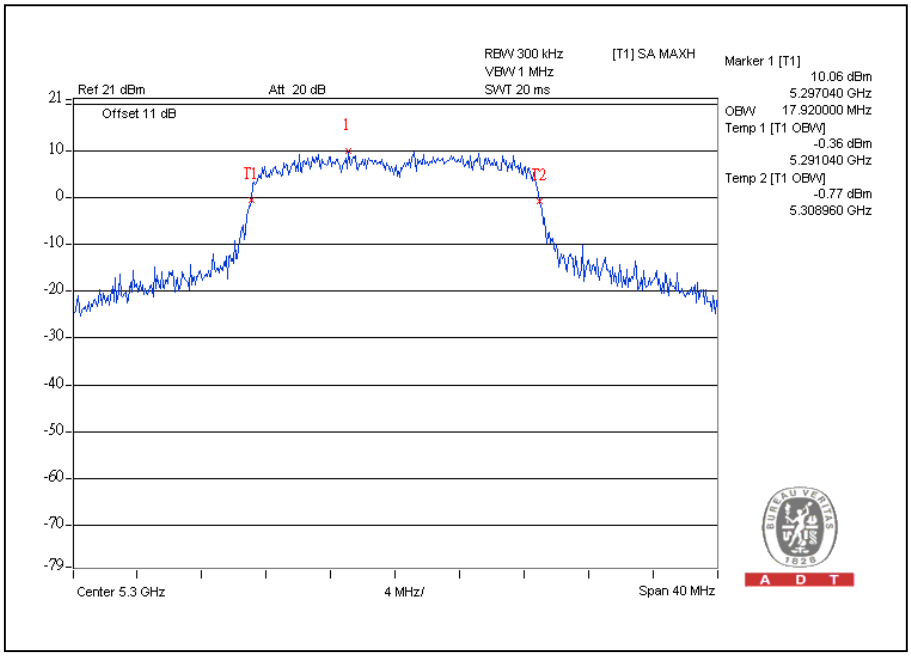
CH48


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] SA MAXH
Marker 1 [T1]
1.48 dBm
5.244800 GHz
OBW 17.600000 MHz
Temp 1 [T1 OBW]
-6.32 dBm
5.231200 GHz
Temp 2 [T1 OBW]
-5.93 dBm
5.248800 GHz
Ref 21 dBm
Att 20 dB
Offset 11 dB
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
T1
T2
1
Center 5.24 GHz
4 MHz/
Span 40 MHz

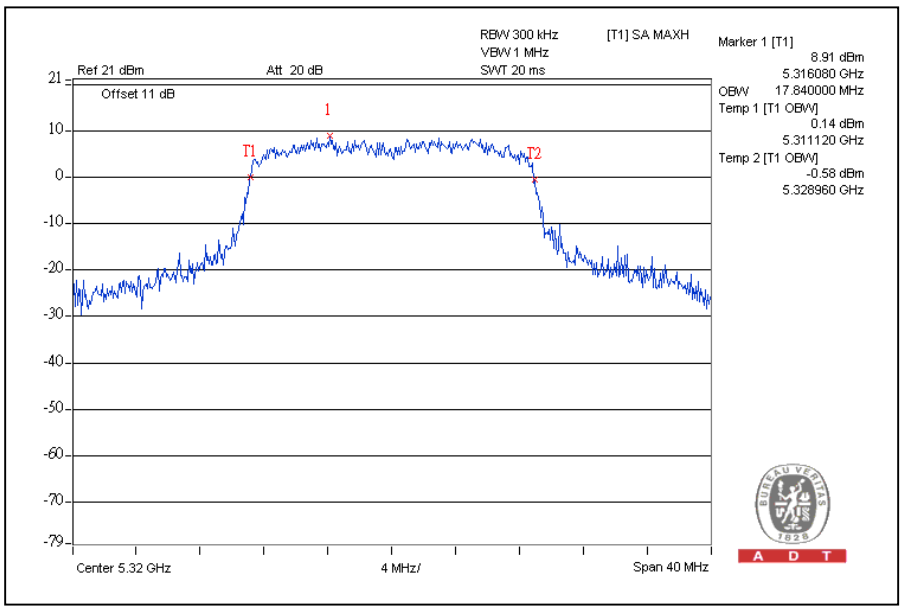
CH52


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] SA MAXH
Marker 1 [T1]
9.45 dBm
5.264240 GHz
OBW 18.000000 MHz
Temp 1 [T1 OBW]
0.17 dBm
5.251040 GHz
Temp 2 [T1 OBW]
-2.92 dBm
5.269040 GHz
Ref 21 dBm
Att 20 dB
Offset 11 dB
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
T1
T2
1
Center 5.26 GHz
4 MHz/
Span 40 MHz

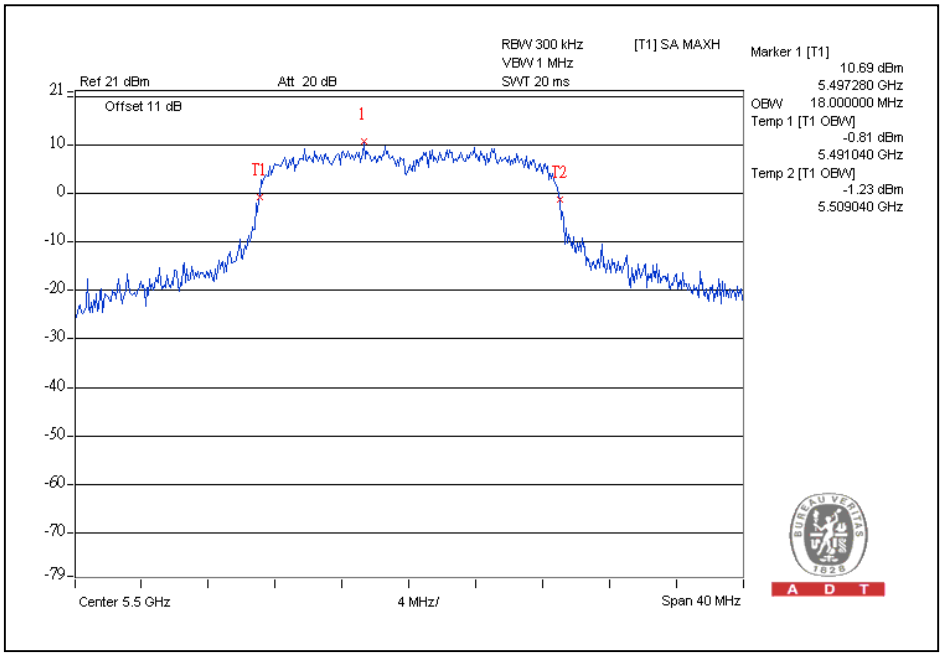
CH60


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] SA MAXH
Marker 1 [T1]
10.06 dBm
5.297040 GHz
OBW 17.920000 MHz
Temp 1 [T1 OBW]
-0.36 dBm
5.291040 GHz
Temp 2 [T1 OBW]
-0.77 dBm
5.308960 GHz
Ref 21 dBm
Att 20 dB
Offset 11 dB
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
Center 5.3 GHz
4 MHz/
Span 40 MHz

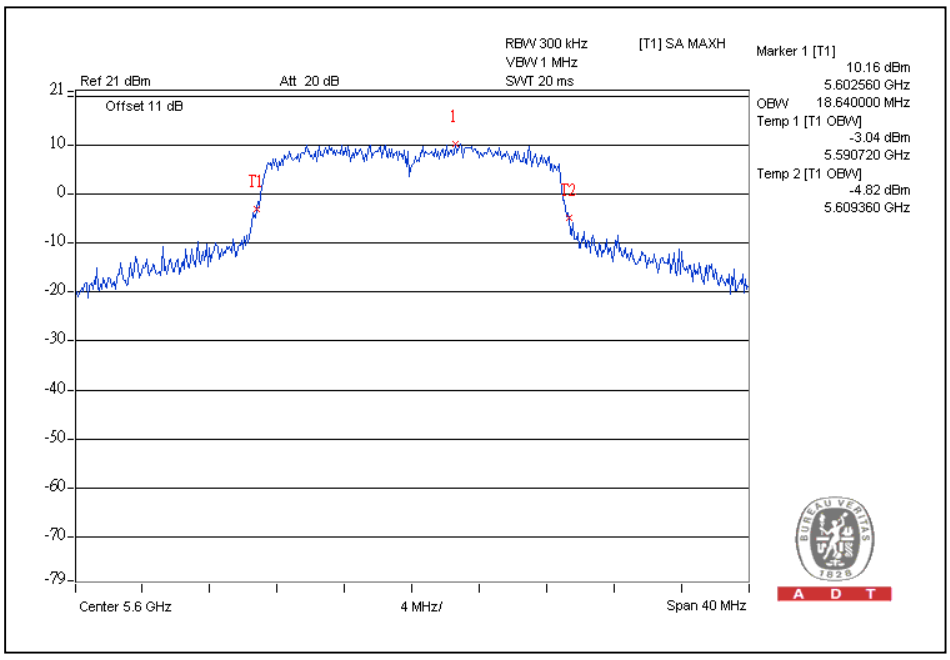
CH64


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] SA MAXH
Marker 1 [T1]
8.91 dBm
5.316080 GHz
OBW 17.840000 MHz
Temp 1 [T1 OBW]
0.14 dBm
5.311120 GHz
Temp 2 [T1 OBW]
-0.58 dBm
5.328960 GHz
Ref 21 dBm
Att 20 dB
Offset 11 dB
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
Center 5.32 GHz
4 MHz/
Span 40 MHz

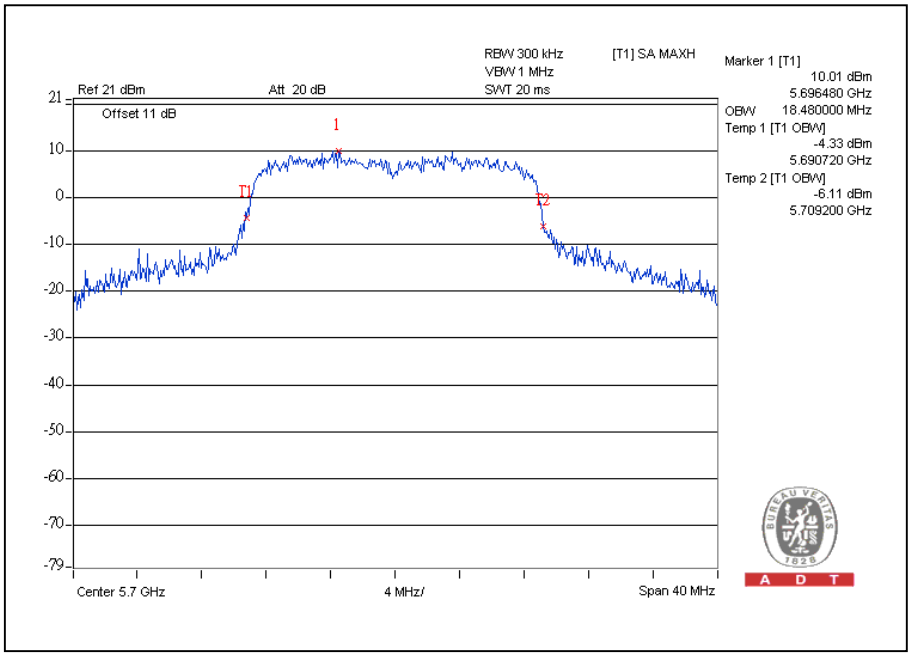
CH100


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] SA MAXH
Marker 1 [T1]
10.69 dBm
5.497280 GHz
OBW 18.000000 MHz
Temp 1 [T1 OBW]
-0.81 dBm
5.491040 GHz
Temp 2 [T1 OBW]
-1.23 dBm
5.509040 GHz
Ref 21 dBm
Att 20 dB
Offset 11 dB
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
1
T1
T2
Center 5.5 GHz
4 MHz/
Span 40 MHz

CH120


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] SA MAXH
Marker 1 [T1]
10.16 dBm
5.602560 GHz
OBW 18.640000 MHz
Temp 1 [T1 OBW]
-3.04 dBm
5.590720 GHz
Temp 2 [T1 OBW]
-4.82 dBm
5.609360 GHz
Ref 21 dBm
Att 20 dB
Offset 11 dB
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
1
T1
T2
Center 5.6 GHz
4 MHz/
Span 40 MHz

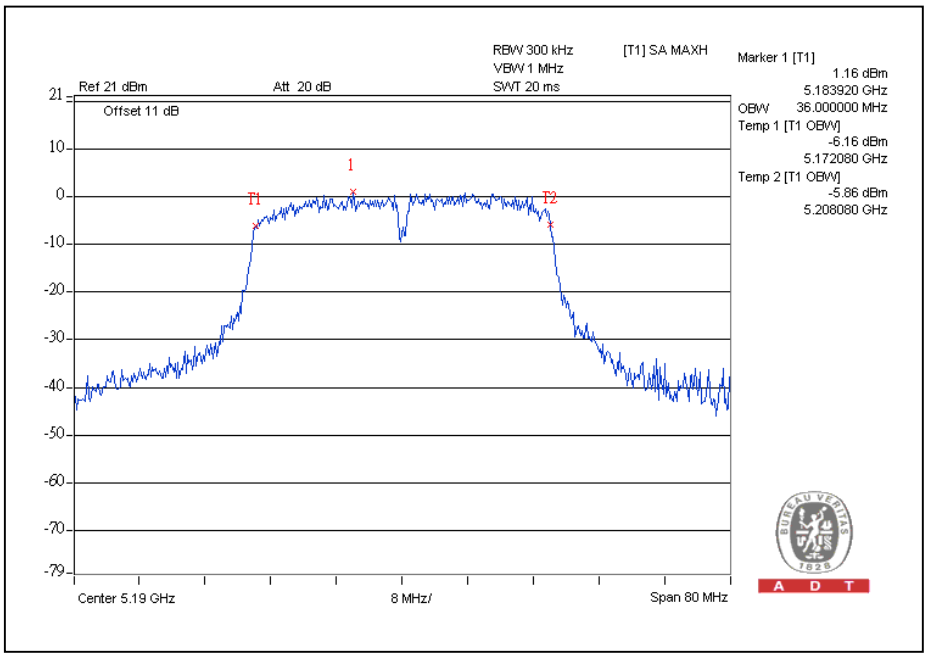
CH140


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] SA MAXH
Marker 1 [T1]
10.01 dBm
5.696480 GHz
OBW 18.480000 MHz
Temp 1 [T1 OBW]
-4.33 dBm
5.690720 GHz
Temp 2 [T1 OBW]
-6.11 dBm
5.709200 GHz
Ref 21 dBm
Att 20 dB
Offset 11 dB
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
Center 5.7 GHz
4 MHz/
Span 40 MHz

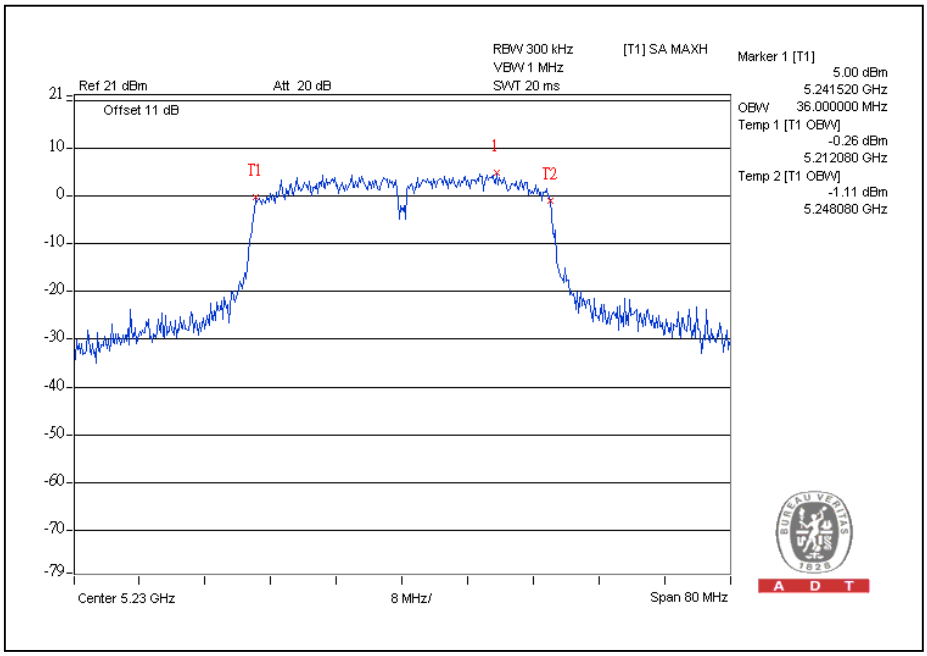
802.11n (40MHz) OFDM MODULATION:

CHANNEL	CHANNEL FREQUENCY (MHz)	99% BANDWIDTH (MHz)
38	5190	36.0
46	5230	36.0
54	5270	36.32
62	5310	35.84
102	5510	36.48
118	5590	36.64
134	5670	36.8

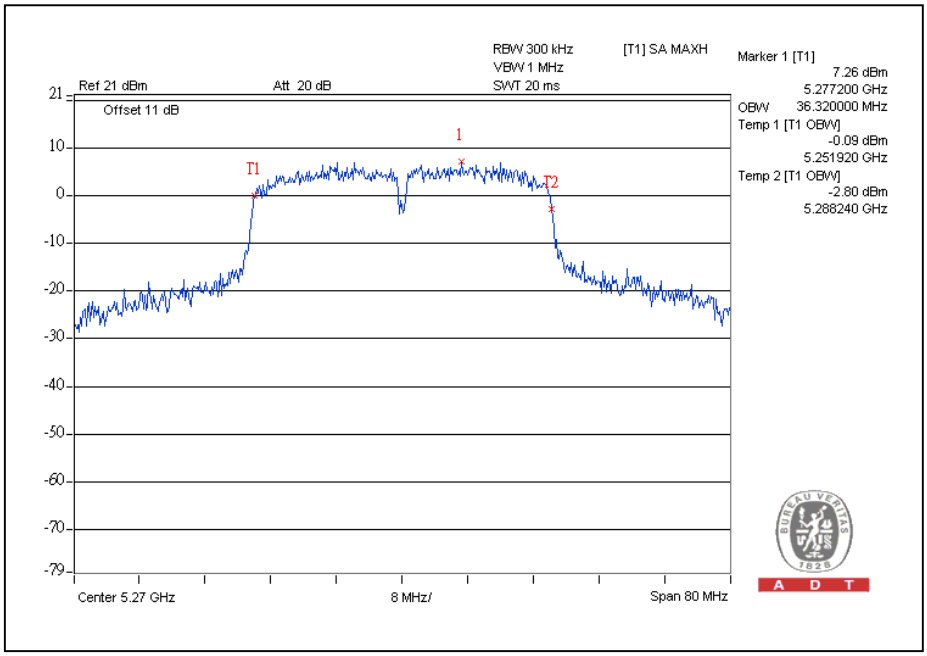
CH38


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] SA MAXH
Marker 1 [T1]
1.16 dBm
5.183920 GHz
OBW 36.000000 MHz
Temp 1 [T1 OBW]
-6.16 dBm
5.172080 GHz
Temp 2 [T1 OBW]
-5.86 dBm
5.208080 GHz
Ref 21 dBm
Att 20 dB
Offset 11 dB
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
T1
T2
1
Center 5.19 GHz
8 MHz/
Span 80 MHz

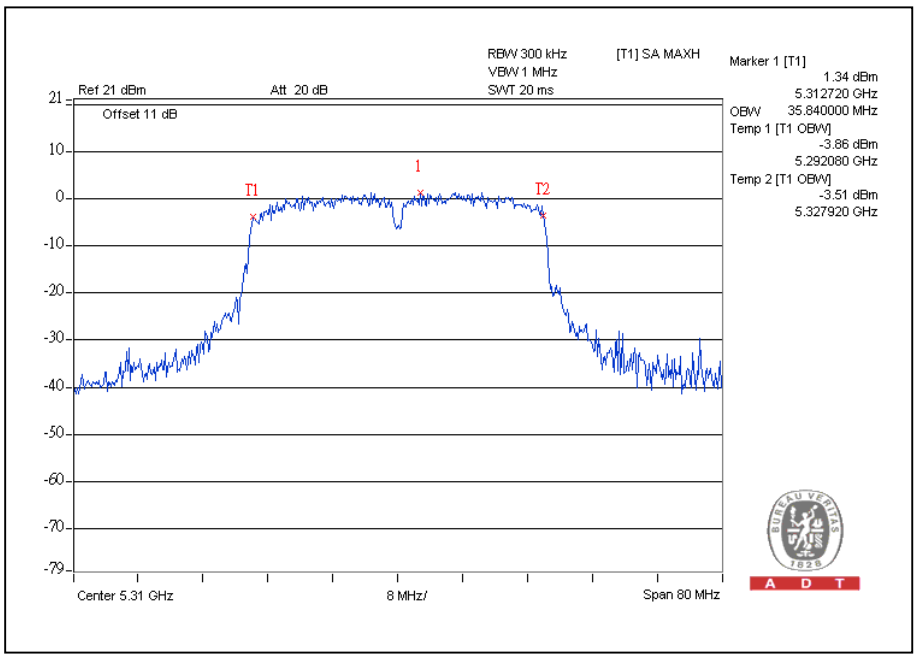
CH46


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] SA MAXH
Marker 1 [T1]
5.00 dBm
5.241520 GHz
OBW 36.000000 MHz
Temp 1 [T1 OBW]
-0.26 dBm
5.212080 GHz
Temp 2 [T1 OBW]
-1.11 dBm
5.248080 GHz
Ref 21 dBm
Att 20 dB
Offset 11 dB
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
T1
T2
1
Center 5.23 GHz
8 MHz/
Span 80 MHz

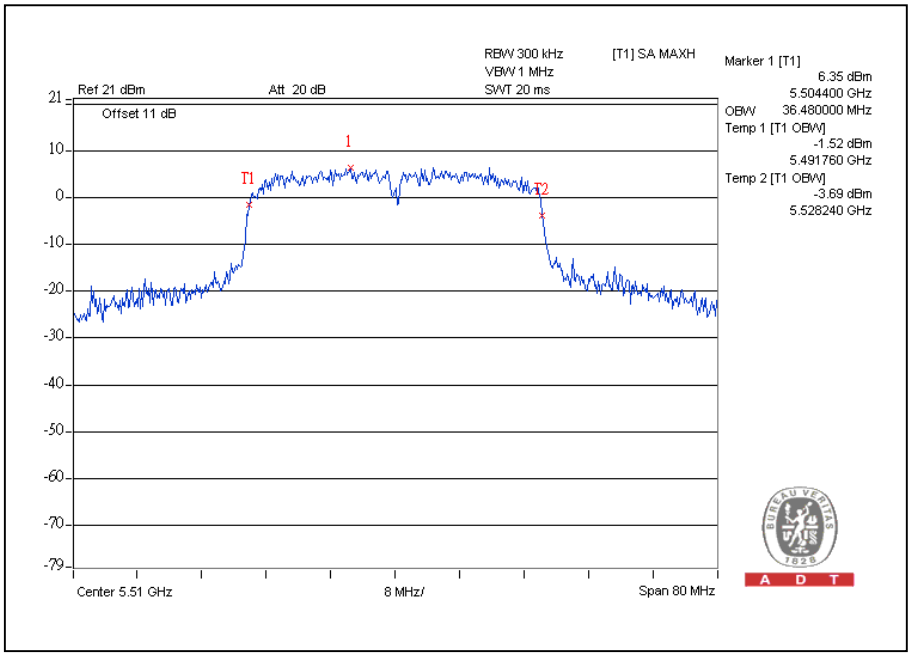
CH54


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] SA MAXH
Marker 1 [T1]
7.26 dBm
5.277200 GHz
OBW 36.320000 MHz
Temp 1 [T1 OBW]
-0.09 dBm
5.251920 GHz
Temp 2 [T1 OBW]
-2.80 dBm
5.288240 GHz
Ref 21 dBm
Att 20 dB
Offset 11 dB
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
T1
T2
1
Center 5.27 GHz
8 MHz/
Span 80 MHz

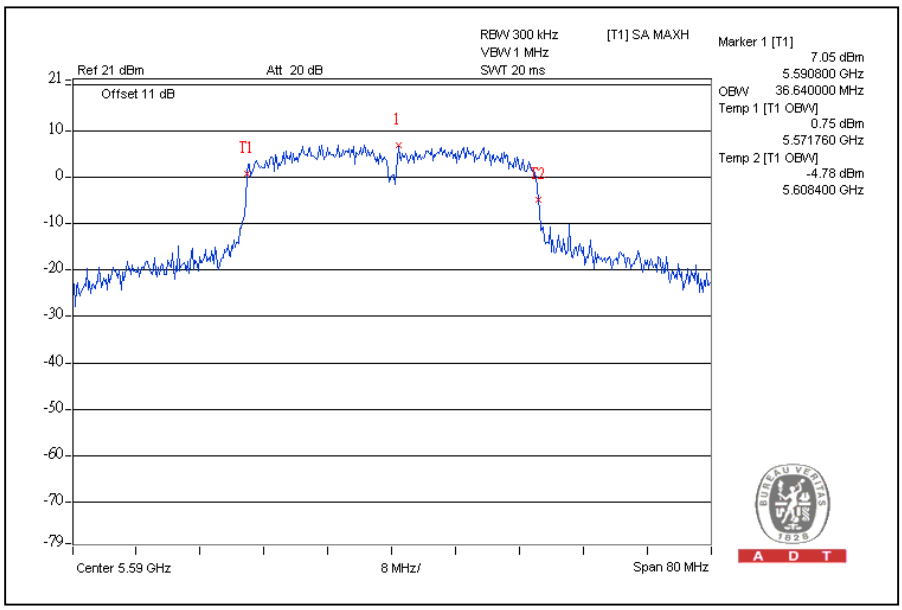
CH62


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] SA MAXH
Marker 1 [T1]
1.34 dBm
5.312720 GHz
OBW 35.840000 MHz
Temp 1 [T1 OBW]
-3.86 dBm
5.292080 GHz
Temp 2 [T1 OBW]
-3.51 dBm
5.327920 GHz
Ref 21 dBm
Att 20 dB
Offset 11 dB
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
T1
T2
1
Center 5.31 GHz
8 MHz/
Span 80 MHz

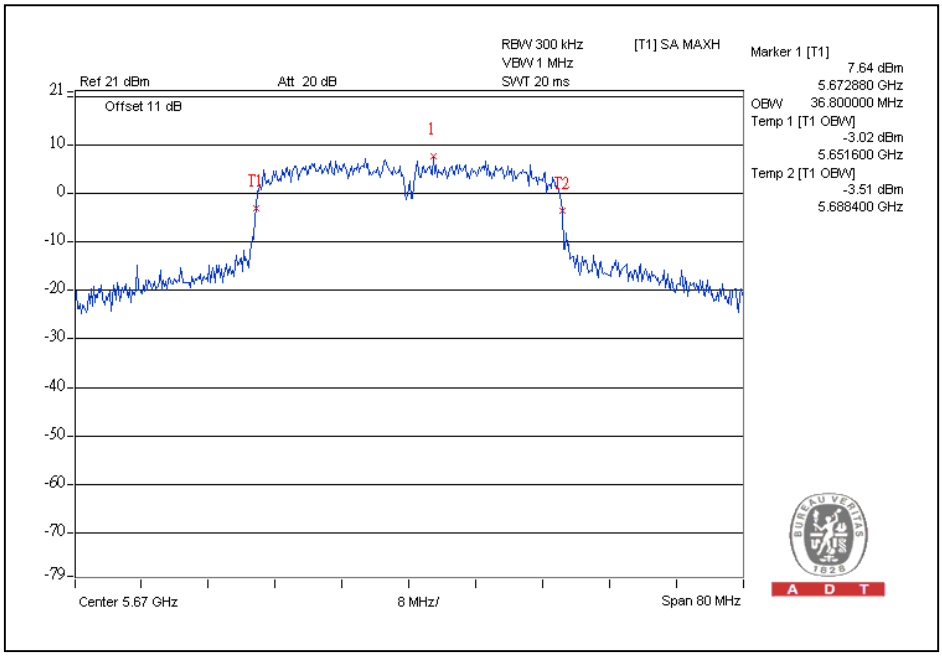
CH102


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] SA MAXH
Marker 1 [T1]
6.35 dBm
5.504400 GHz
OBW 36.480000 MHz
Temp 1 [T1 OBW]
-1.52 dBm
5.491760 GHz
Temp 2 [T1 OBW]
-3.69 dBm
5.528240 GHz
Ref 21 dBm
Att 20 dB
Offset 11 dB
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
T1
T2
1
Center 5.51 GHz
8 MHz/
Span 80 MHz

CH118


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] SA MAXH
Marker 1 [T1]
7.05 dBm
5.590800 GHz
OBW 36.640000 MHz
Temp 1 [T1 OBW]
0.75 dBm
5.571760 GHz
Temp 2 [T1 OBW]
-4.78 dBm
5.608400 GHz
Ref 21 dBm
Att 20 dB
Offset 11 dB
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
T1
T2
1
Center 5.59 GHz
8 MHz/
Span 80 MHz

CH134


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] SA MAXH
Marker 1 [T1]
7.64 dBm
5.672880 GHz
OBW 36.800000 MHz
Temp 1 [T1 OBW]
-3.02 dBm
5.651600 GHz
Temp 2 [T1 OBW]
-3.51 dBm
5.688400 GHz
Ref 21 dBm
Att 20 dB
Offset 11 dB
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
1
T1
T2
Center 5.67 GHz
8 MHz/
Span 80 MHz

4.8 FREQUENCY STABILITY

4.8.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

The frequency tolerance of the carrier signal shall be maintained within +/- 0.02% 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
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.

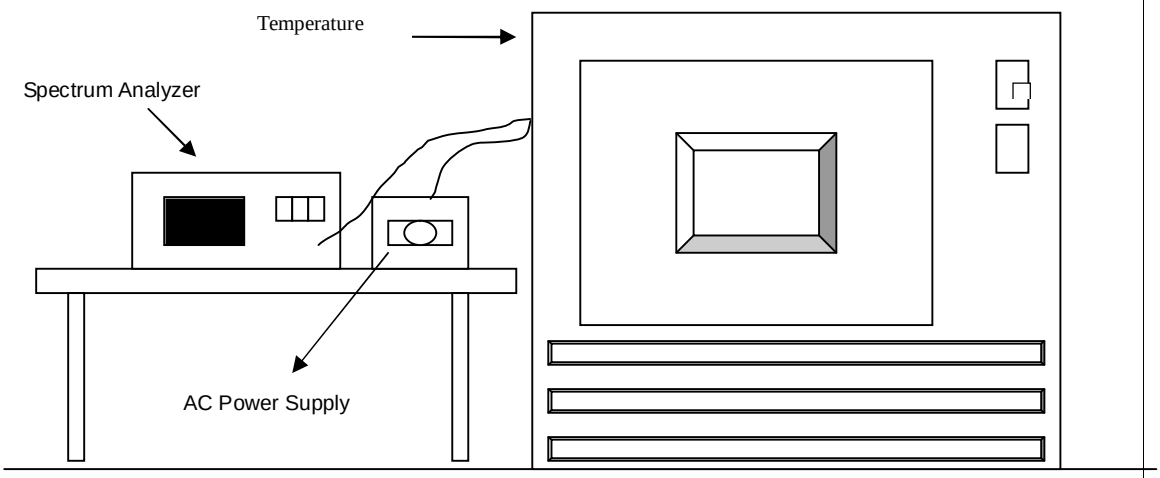
4.8.3 TEST PROCEDURE

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				Limit : ± 0.02%			
Temp. (℃)	Power supply (VAC)	2 minute		5 minute		10 minute	
		(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
50	126.5	5319.976	0.000451	5319.9761	0.000449	5319.9747	0.000476
	110	5319.9762	0.000447	5319.9762	0.000447	5319.9755	0.000461
	93.5	5319.976	0.000451	5319.9760	0.000451	5319.9749	0.000472
40	126.5	5319.9817	0.000344	5319.9817	0.000344	5319.9818	0.000342
	110	5319.9817	0.000344	5319.9819	0.000340	5319.9814	0.000350
	93.5	5319.982	0.000338	5319.9816	0.000346	5319.9817	0.000344
30	126.5	5319.9909	0.000171	5319.9909	0.000171	5319.9909	0.000171
	110	5319.9913	0.000164	5319.9913	0.000164	5319.9907	0.000175
	93.5	5319.9909	0.000171	5319.9909	0.000171	5319.9904	0.000180
20	126.5	5320.0208	0.000391	5320.0212	0.000398	5320.0211	0.000397
	110	5320.0207	0.000389	5320.0212	0.000398	5320.0217	0.000408
	93.5	5320.0205	0.000385	5320.0212	0.000398	5320.0215	0.000404
10	126.5	5320.0131	0.000246	5320.0114	0.000214	5320.0115	0.000216
	110	5320.0151	0.000284	5320.0134	0.000252	5320.0139	0.000261
	93.5	5320.0121	0.000227	5320.0114	0.000214	5320.0137	0.000258
0	126.5	5320.0021	0.000039	5320.0024	0.000045	5320.0025	0.000047
	110	5320.0051	0.000096	5320.0034	0.000064	5320.0031	0.000058
	93.5	5320.0021	0.000039	5320.0024	0.000045	5320.0029	0.000055
-10	126.5	5319.9952	0.000090	5319.9952	0.000090	5319.9939	0.000115
	110	5319.9954	0.000086	5319.9955	0.000085	5319.9937	0.000118
	93.5	5319.9952	0.000090	5319.9952	0.000090	5319.9934	0.000124
-20	126.5	5319.9963	0.000070	5319.9963	0.000070	5319.9951	0.000092
	110	5319.9963	0.000070	5319.9965	0.000066	5319.9949	0.000096
	93.5	5319.9962	0.000071	5319.9962	0.000071	5319.9947	0.000100
-30	126.5	5320.0091	0.000171	5320.0054	0.000102	5320.0045	0.000085
	110	5320.0121	0.000227	5320.0084	0.000158	5320.0069	0.000130
	93.5	5320.0081	0.000152	5320.0064	0.000120	5320.0055	0.000103

4.9 CONDUCTED OUT-BAND EMISSION MEASUREMENT

4.9.1 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.

4.9.2 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer via a low lose 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

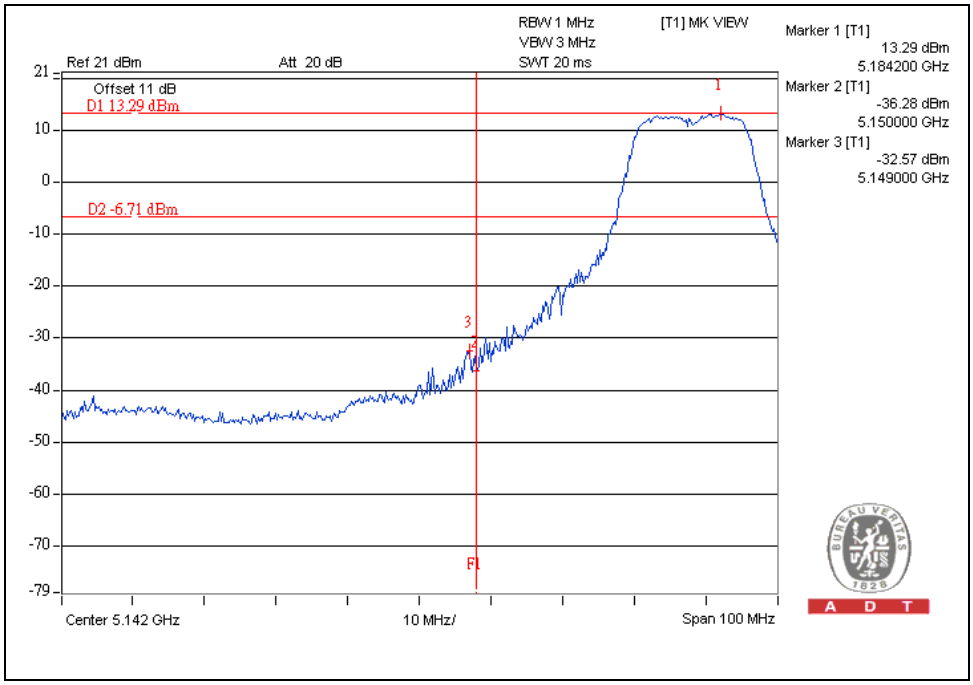
The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

4.9.4 TEST RESULTS

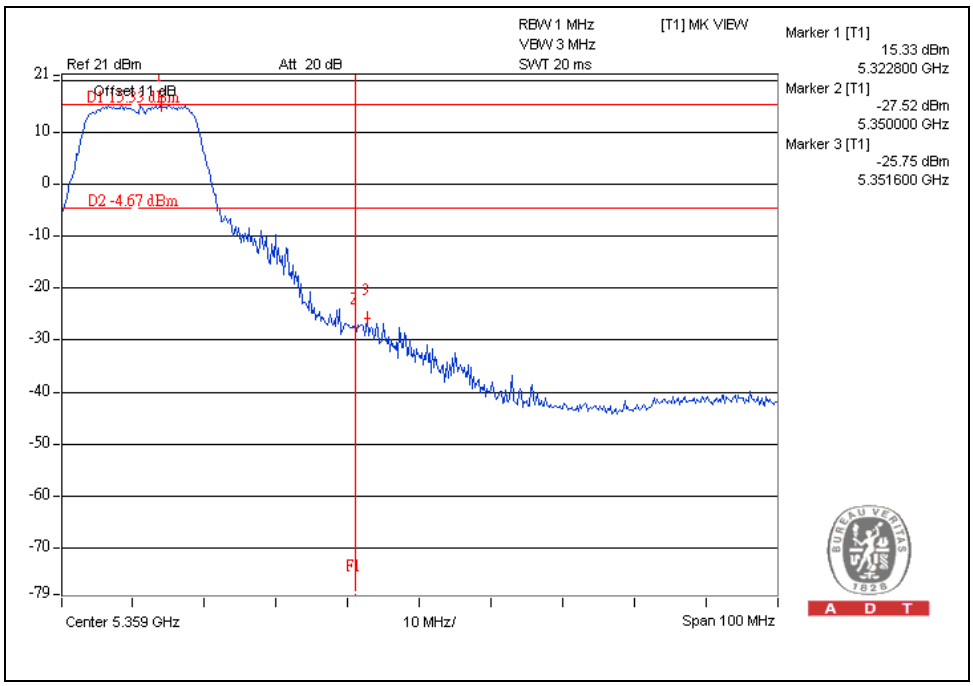
For 5.15 to 5.35GHz band:
The spectrum plots (Peak RBW=1MHz, VBW=3MHz) are attached on the following pages.

802.11a OFDM MODULATION

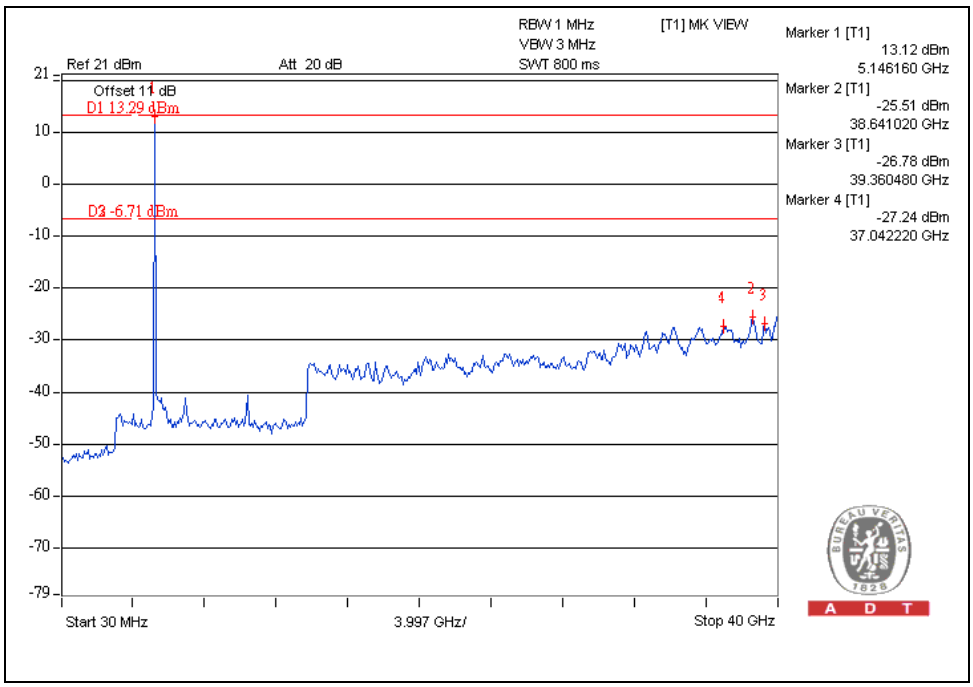
CH 36



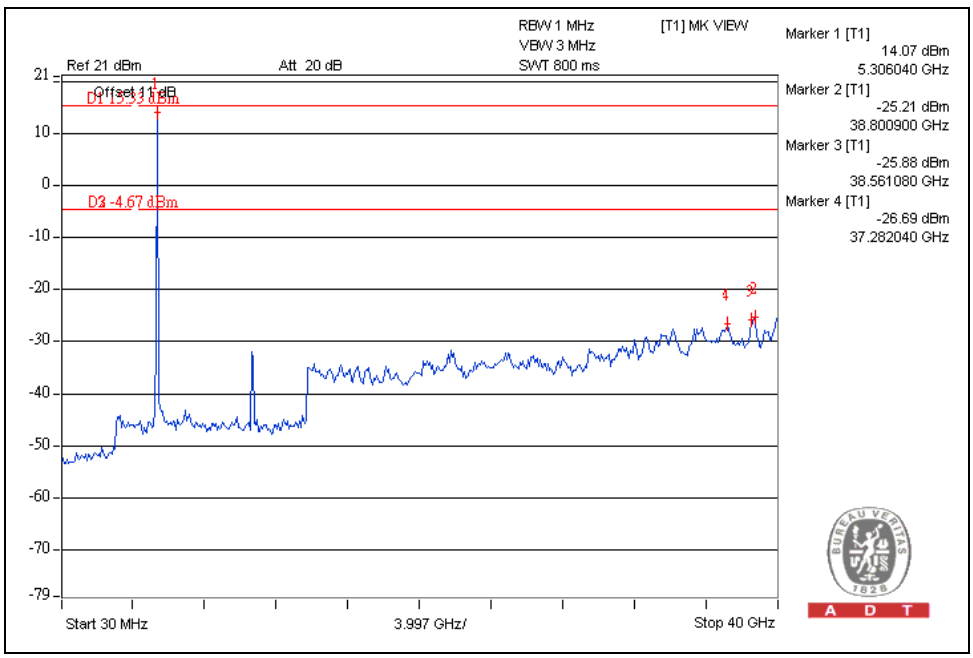
CH 64



CH 36

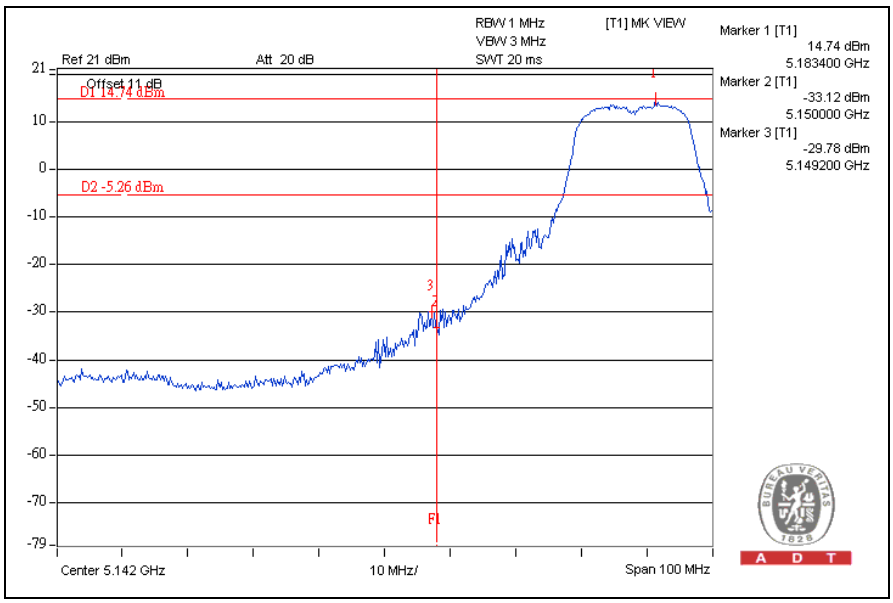

RBW 1 MHz
VBW 3 MHz
SWT 800 ms
[T1] MK VIEW
Ref 21 dBm
Att 20 dB
Offset 11 dB
D1 13.29 dBm
D2 -6.71 dBm
Marker 1 [T1]
13.12 dBm
5.146160 GHz
Marker 2 [T1]
-25.51 dBm
38.641020 GHz
Marker 3 [T1]
-26.78 dBm
39.360480 GHz
Marker 4 [T1]
-27.24 dBm
37.042220 GHz
Start 30 MHz
3.997 GHz/
Stop 40 GHz

CH 64

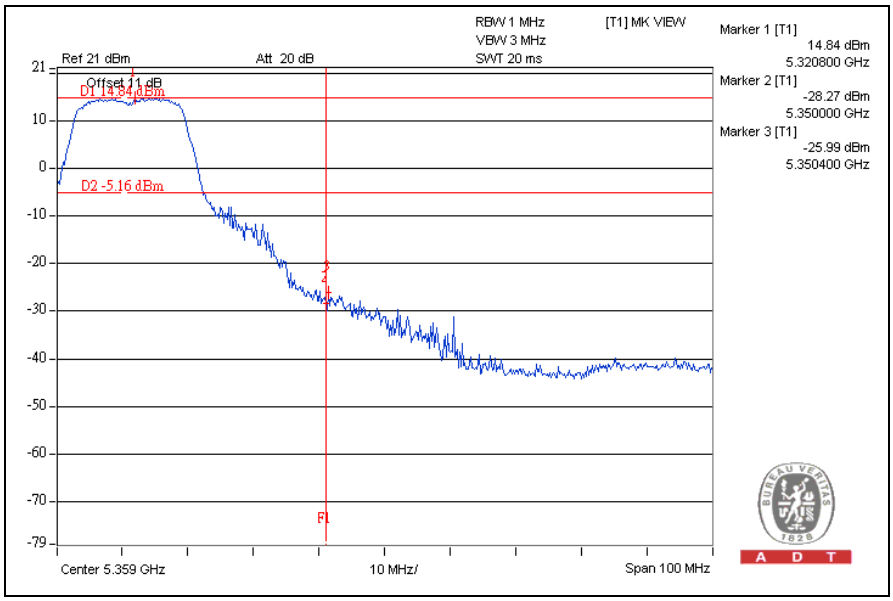

RBW 1 MHz
VBW 3 MHz
SWT 800 ms
[T1] MK VIEW
Ref 21 dBm
Att 20 dB
Offset 11 dB
D1 15.33 dBm
D2 -4.67 dBm
Marker 1 [T1]
14.07 dBm
5.306040 GHz
Marker 2 [T1]
-25.21 dBm
38.800900 GHz
Marker 3 [T1]
-25.88 dBm
38.561080 GHz
Marker 4 [T1]
-26.69 dBm
37.282040 GHz
Start 30 MHz
3.997 GHz/
Stop 40 GHz

802.11n (20MHz) OFDM MODULATION:

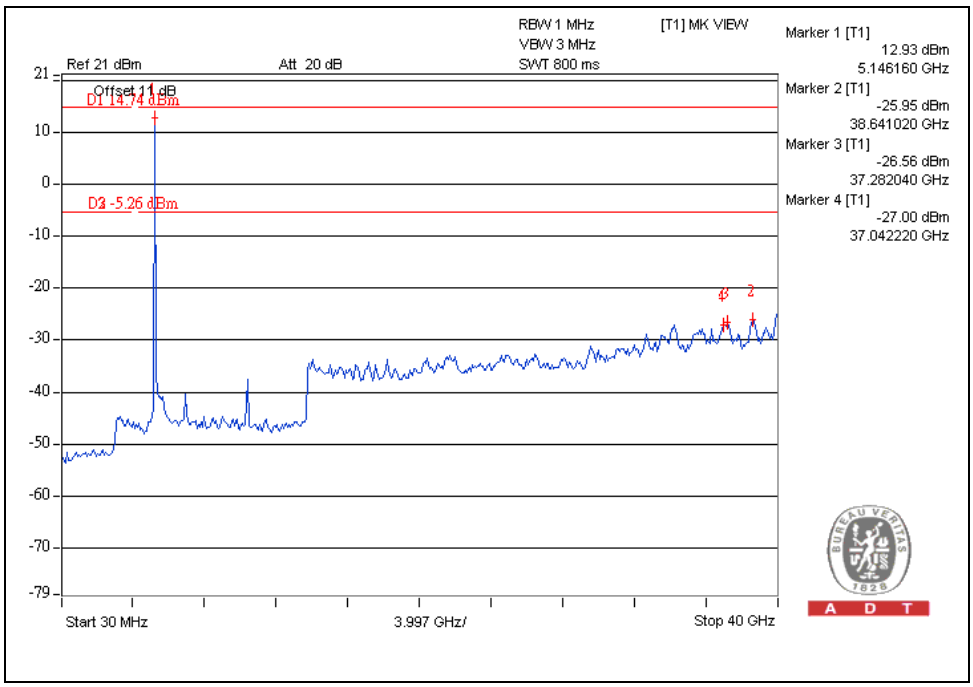
CH36



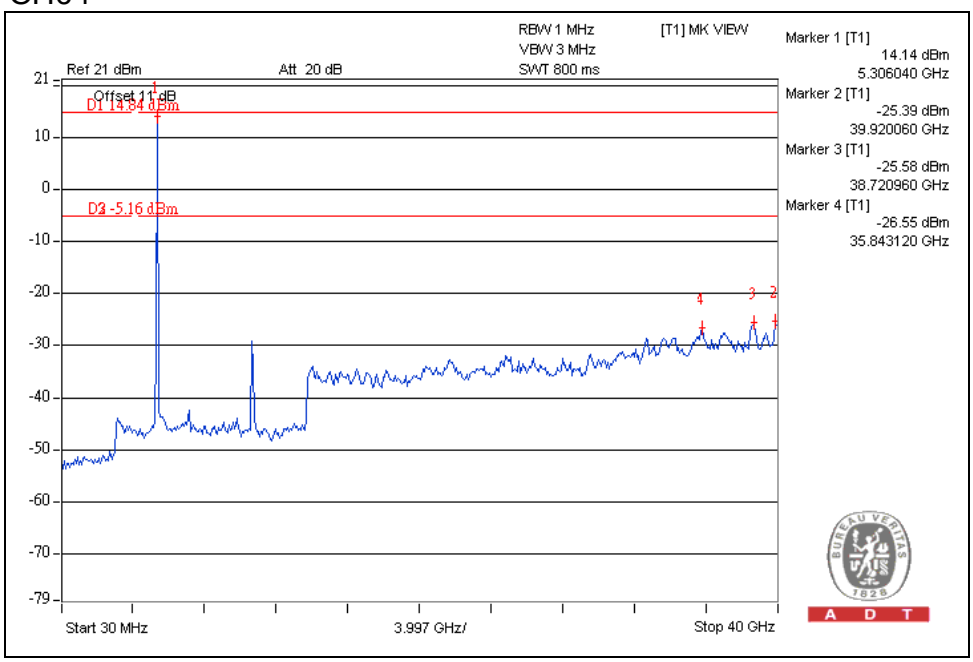
CH64



CH36

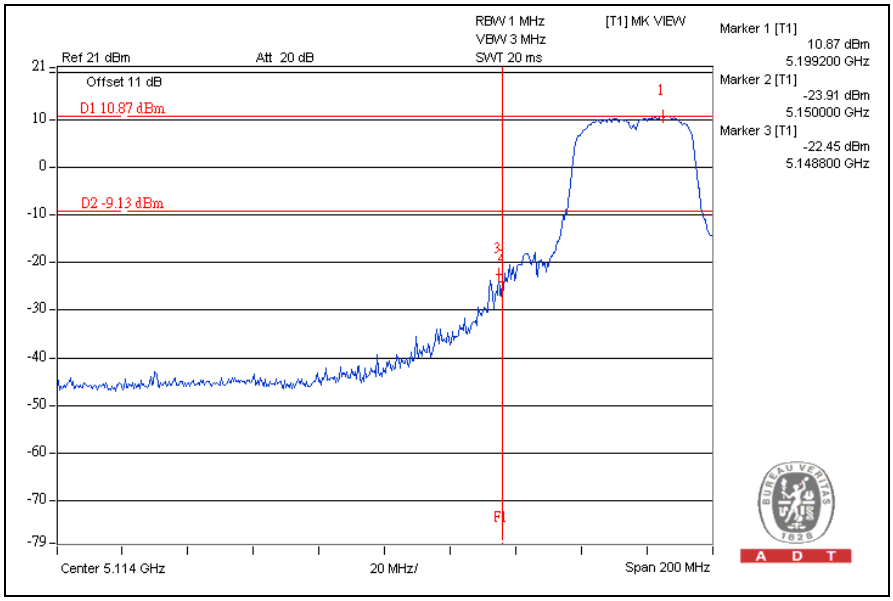

RBW 1 MHz
VBW 3 MHz
SWT 800 ms
[T1] MK VIEW
Ref 21 dBm
Att 20 dB
Offset 11 dB
D1 14.74 dBm
D2 -5.26 dBm
Marker 1 [T1]
12.93 dBm
5.146160 GHz
Marker 2 [T1]
-25.95 dBm
38.641020 GHz
Marker 3 [T1]
-26.56 dBm
37.282040 GHz
Marker 4 [T1]
-27.00 dBm
37.042220 GHz
Start 30 MHz
3.997 GHz/
Stop 40 GHz

CH64

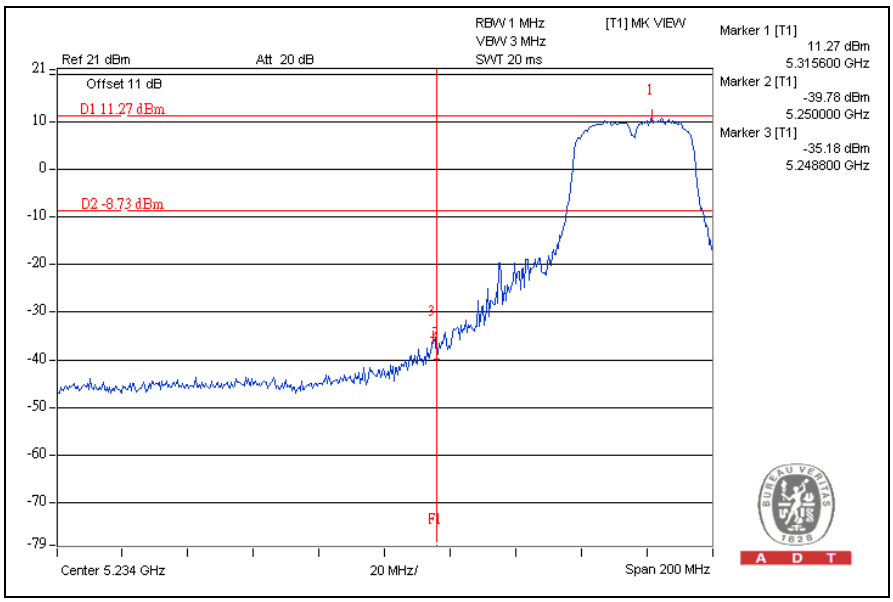

RBW 1 MHz
VBW 3 MHz
SWT 800 ms
[T1] MK VIEW
Ref 21 dBm
Att 20 dB
Offset 11 dB
D1 14.84 dBm
D2 -5.16 dBm
Marker 1 [T1]
14.14 dBm
5.306040 GHz
Marker 2 [T1]
-25.39 dBm
39.920060 GHz
Marker 3 [T1]
-25.58 dBm
38.720960 GHz
Marker 4 [T1]
-26.55 dBm
35.843120 GHz
Start 30 MHz
3.997 GHz/
Stop 40 GHz

802.11n (40MHz) OFDM MODULATION:

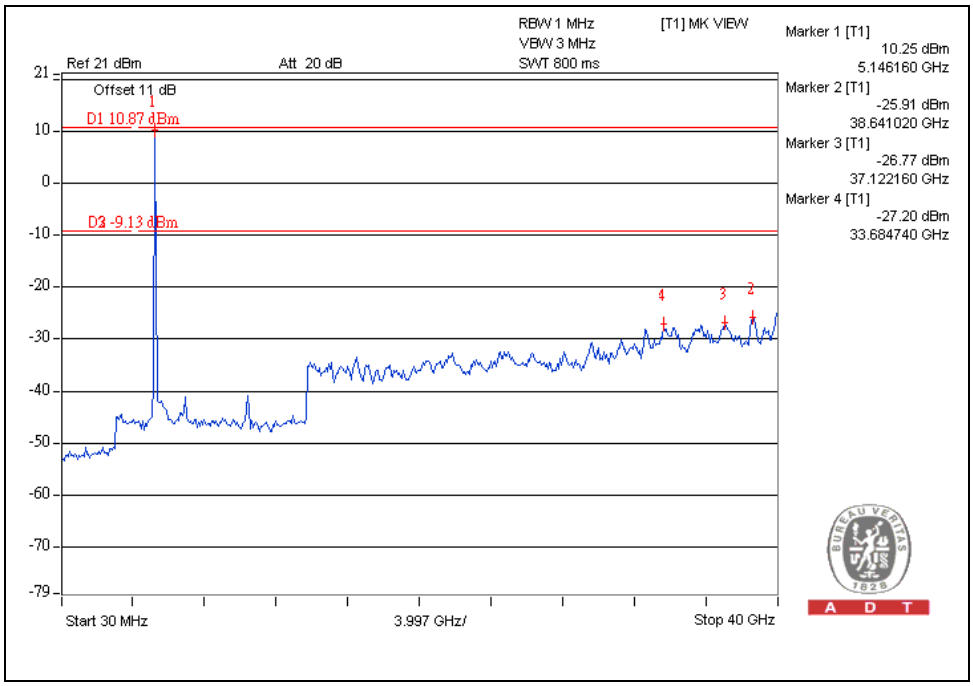
CH38



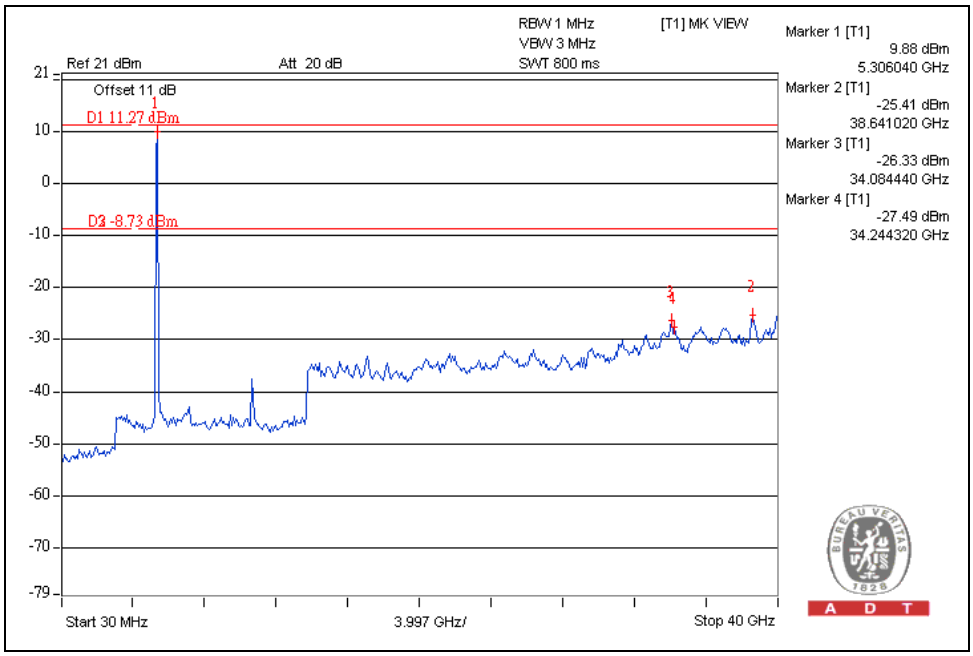
CH62



CH38


RBW 1 MHz
VBW 3 MHz
SWT 800 ms
[T1] MK VIEW
Ref 21 dBm
Att 20 dB
Offset 11 dB
D1 10.87 dBm
D2 -9.13 dBm
Marker 1 [T1]
10.25 dBm
5.146160 GHz
Marker 2 [T1]
-25.91 dBm
38.641020 GHz
Marker 3 [T1]
-26.77 dBm
37.122160 GHz
Marker 4 [T1]
-27.20 dBm
33.684740 GHz
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
Start 30 MHz
3.997 GHz/
Stop 40 GHz

CH62

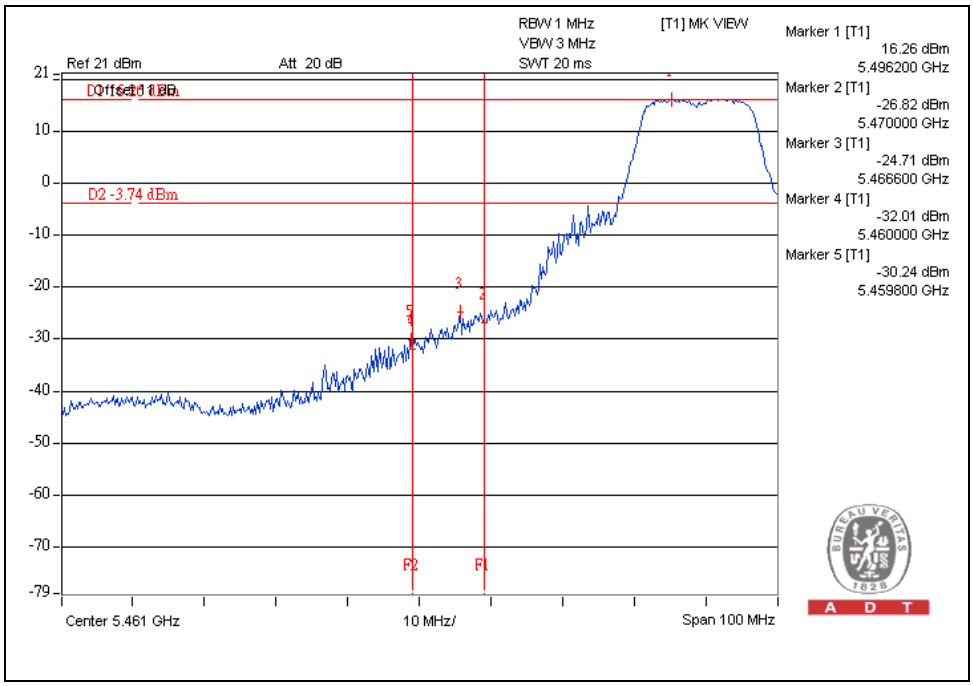

RBW 1 MHz
VBW 3 MHz
SWT 800 ms
[T1] MK VIEW
Ref 21 dBm
Att 20 dB
Offset 11 dB
D1 11.27 dBm
D2 -8.73 dBm
Marker 1 [T1]
9.88 dBm
5.306040 GHz
Marker 2 [T1]
-25.41 dBm
38.641020 GHz
Marker 3 [T1]
-26.33 dBm
34.084440 GHz
Marker 4 [T1]
-27.49 dBm
34.244320 GHz
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
Start 30 MHz
3.997 GHz/
Stop 40 GHz

For 5.47 to 5.725GHz band:

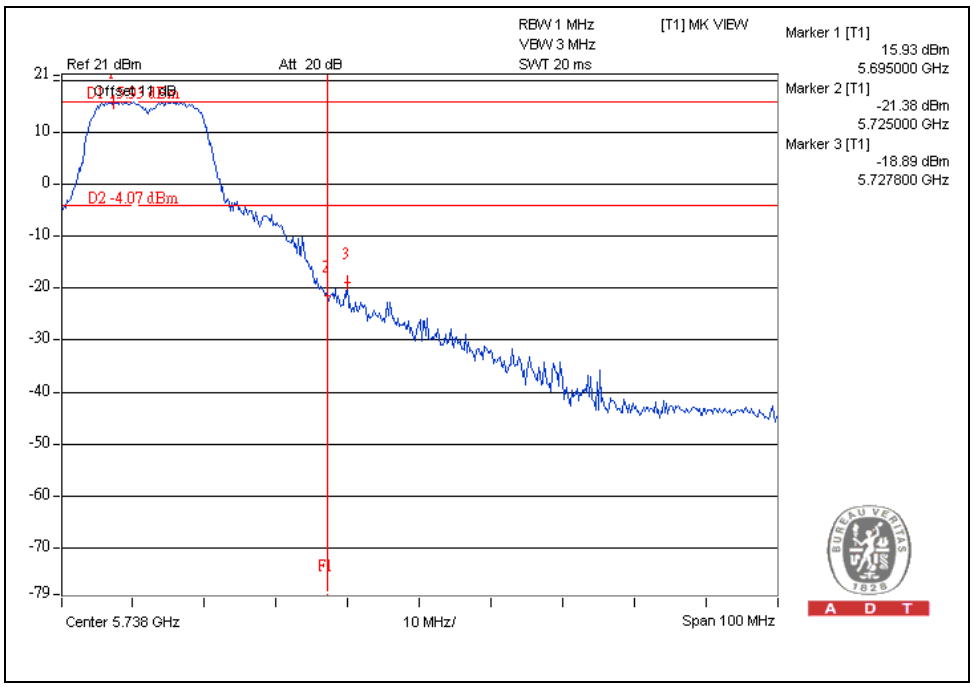
The spectrum plots (Peak RBW=1MHz, VBW=3MHz) are attached on the following pages.

802.11a OFDM MODULATION

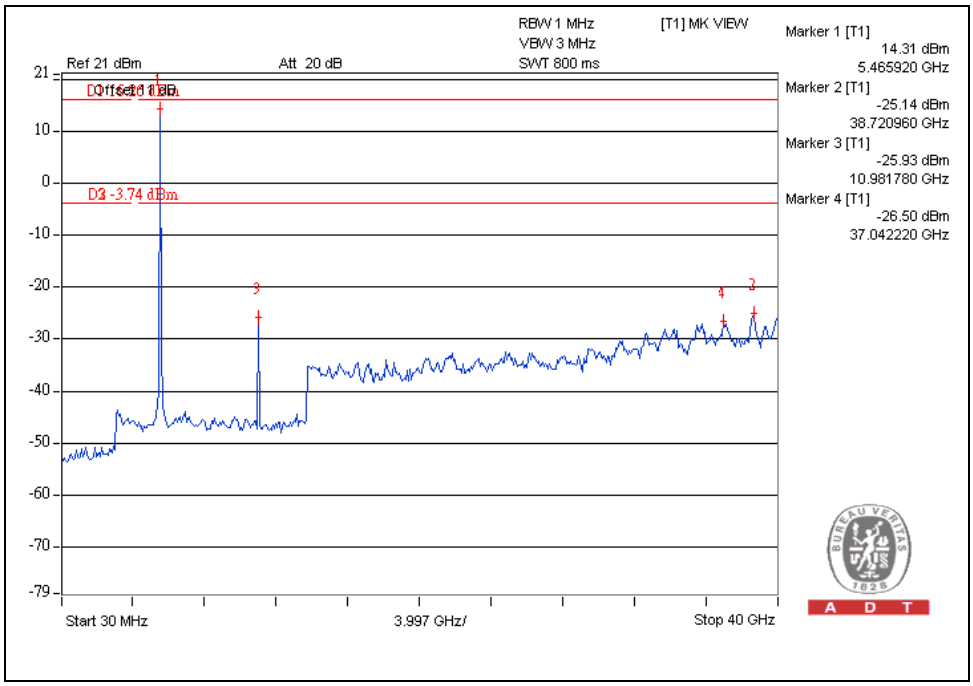
CH 100



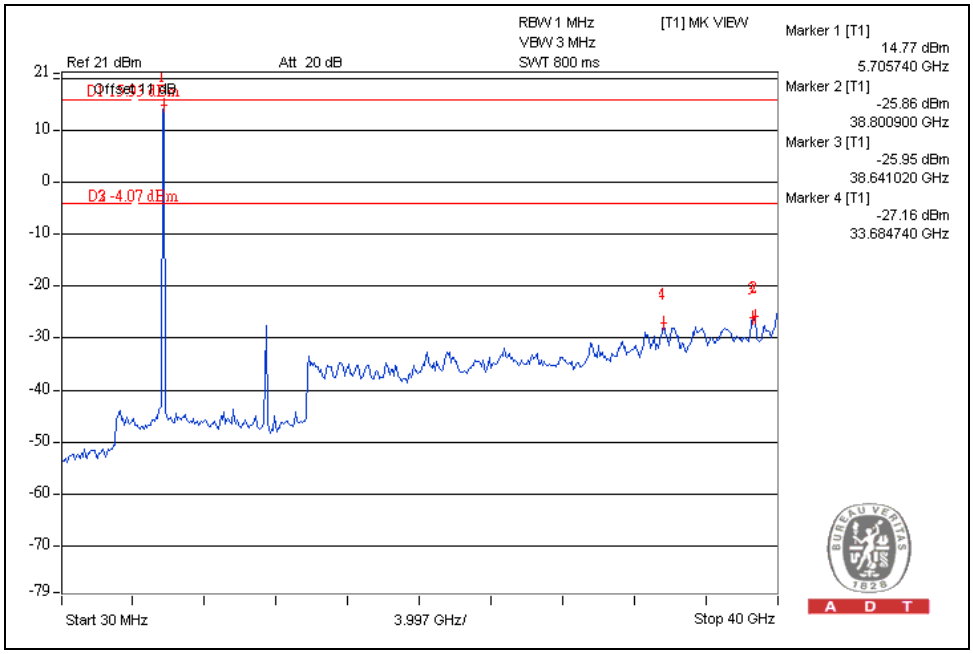
CH 140



CH 100

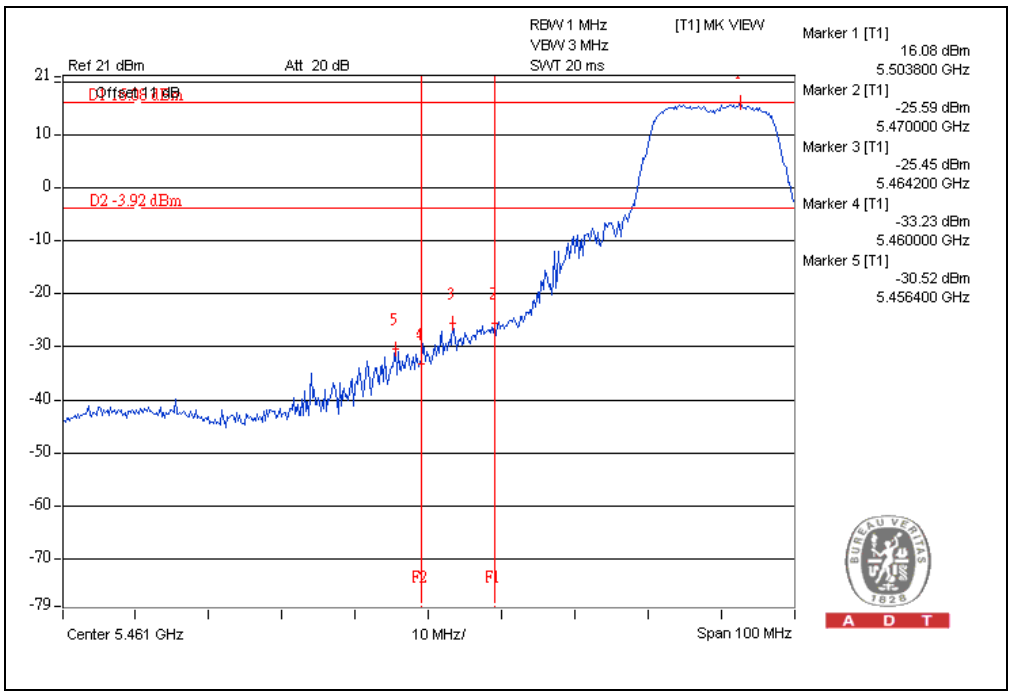

RBW 1 MHz
VBW 3 MHz
SWT 800 ms
[T1] MK VIEW
Ref 21 dBm
Att 20 dB
D2 -3.74 dBm
Marker 1 [T1]
14.31 dBm
5.465920 GHz
Marker 2 [T1]
-25.14 dBm
38.720960 GHz
Marker 3 [T1]
-25.93 dBm
10.981780 GHz
Marker 4 [T1]
-26.50 dBm
37.042220 GHz
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
Start 30 MHz
3.997 GHz/
Stop 40 GHz

CH 140

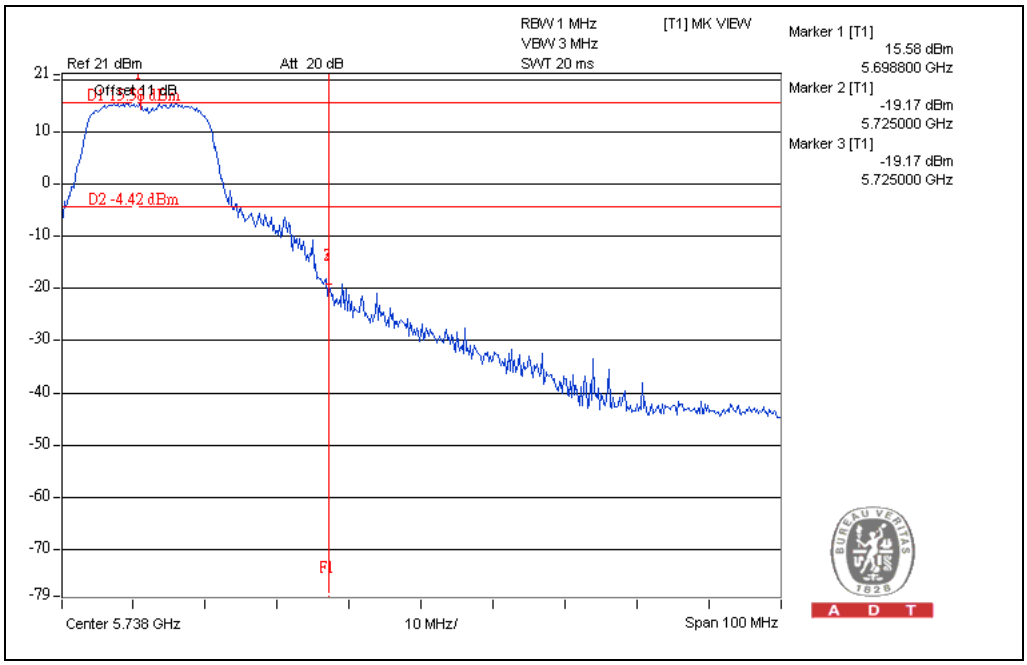

RBW 1 MHz
VBW 3 MHz
SWT 800 ms
[T1] MK VIEW
Ref 21 dBm
Att 20 dB
D2 -4.07 dBm
Marker 1 [T1]
14.77 dBm
5.705740 GHz
Marker 2 [T1]
-25.86 dBm
38.800900 GHz
Marker 3 [T1]
-25.95 dBm
38.641020 GHz
Marker 4 [T1]
-27.16 dBm
33.684740 GHz
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
Start 30 MHz
3.997 GHz/
Stop 40 GHz

802.11n (20MHz) OFDM MODULATION:

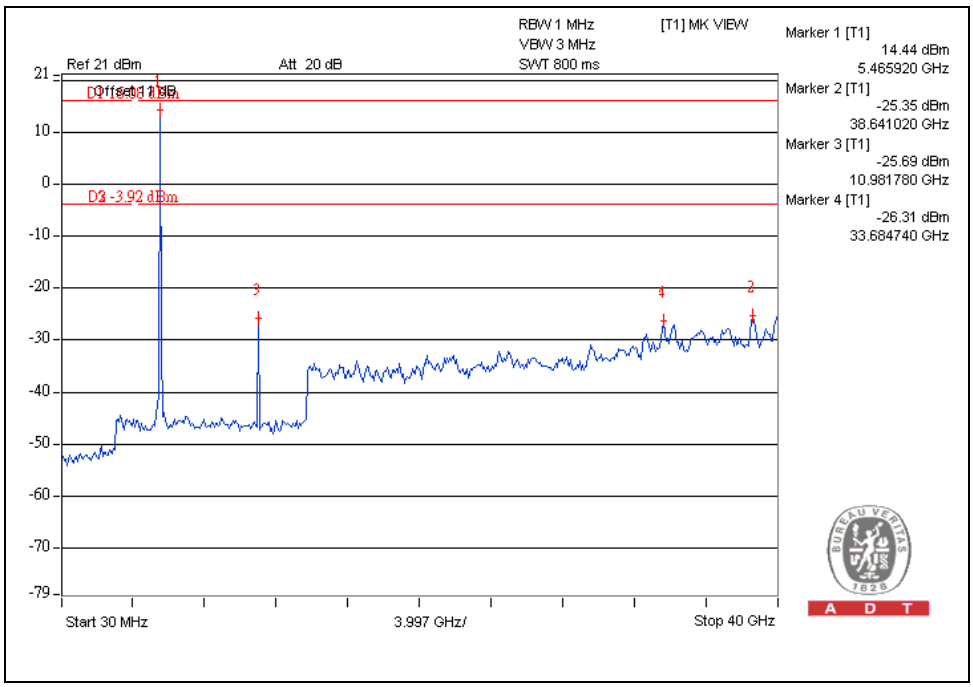
CH100



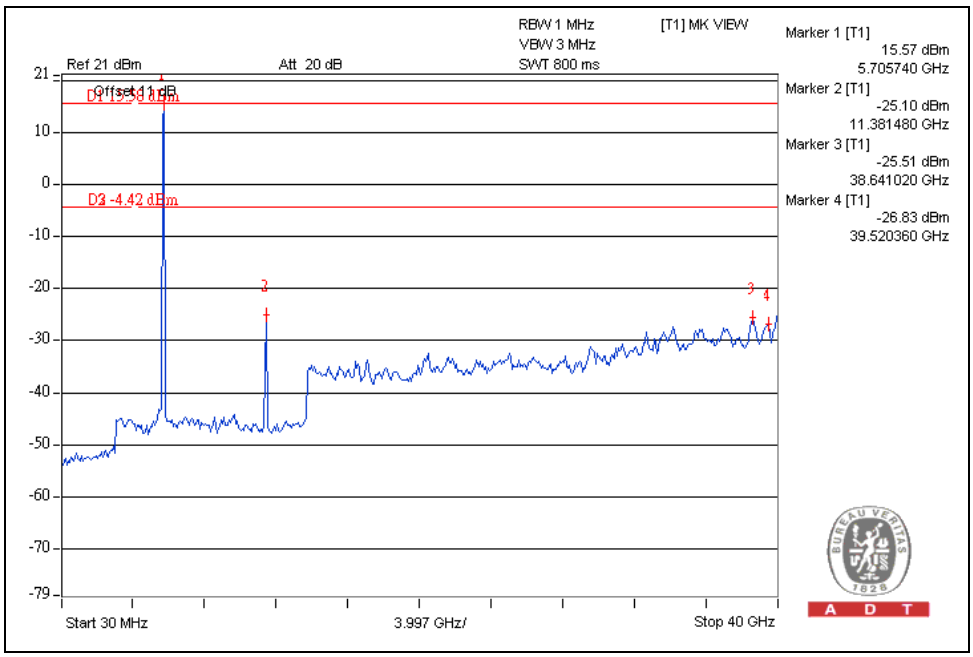
CH140



CH100

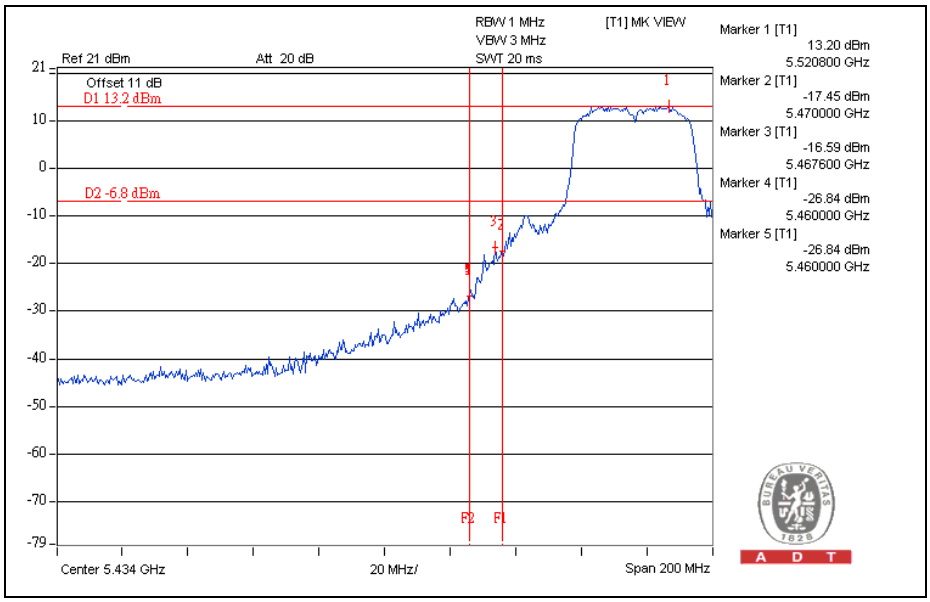

RBW 1 MHz
VBW 3 MHz
SWT 800 ms
[T1] MK VIEW
Ref 21 dBm
Att 20 dB
Offset 1 dB
D2 -3.92 dBm
Marker 1 [T1]
14.44 dBm
5.465920 GHz
Marker 2 [T1]
-25.35 dBm
38.641020 GHz
Marker 3 [T1]
-25.69 dBm
10.981780 GHz
Marker 4 [T1]
-26.31 dBm
33.684740 GHz
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
Start 30 MHz
3.997 GHz/
Stop 40 GHz

CH140

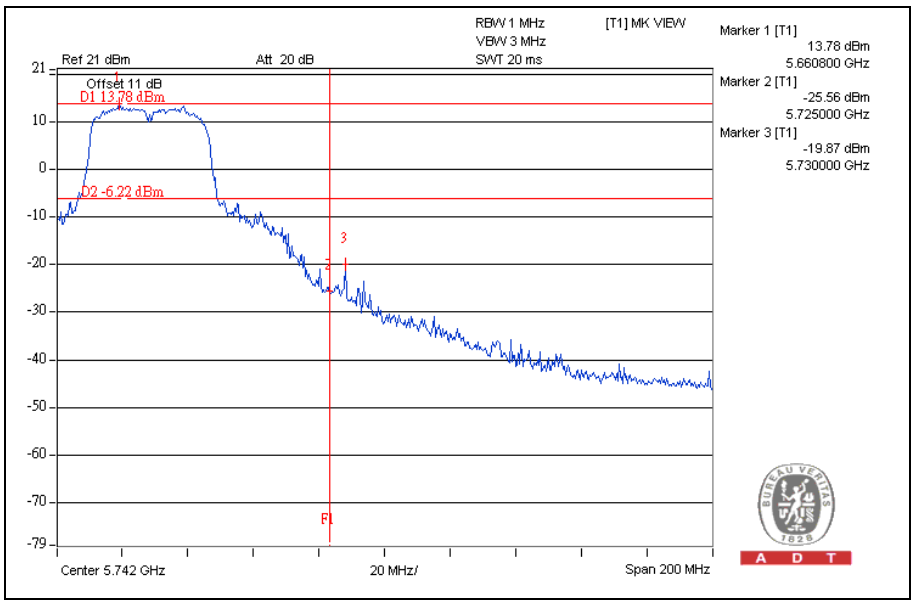

RBW 1 MHz
VBW 3 MHz
SWT 800 ms
[T1] MK VIEW
Ref 21 dBm
Att 20 dB
Offset 1 dB
D2 -4.42 dBm
Marker 1 [T1]
15.57 dBm
5.705740 GHz
Marker 2 [T1]
-25.10 dBm
11.381480 GHz
Marker 3 [T1]
-25.51 dBm
38.641020 GHz
Marker 4 [T1]
-26.83 dBm
39.520360 GHz
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
Start 30 MHz
3.997 GHz/
Stop 40 GHz

802.11n (40MHz) OFDM MODULATION:

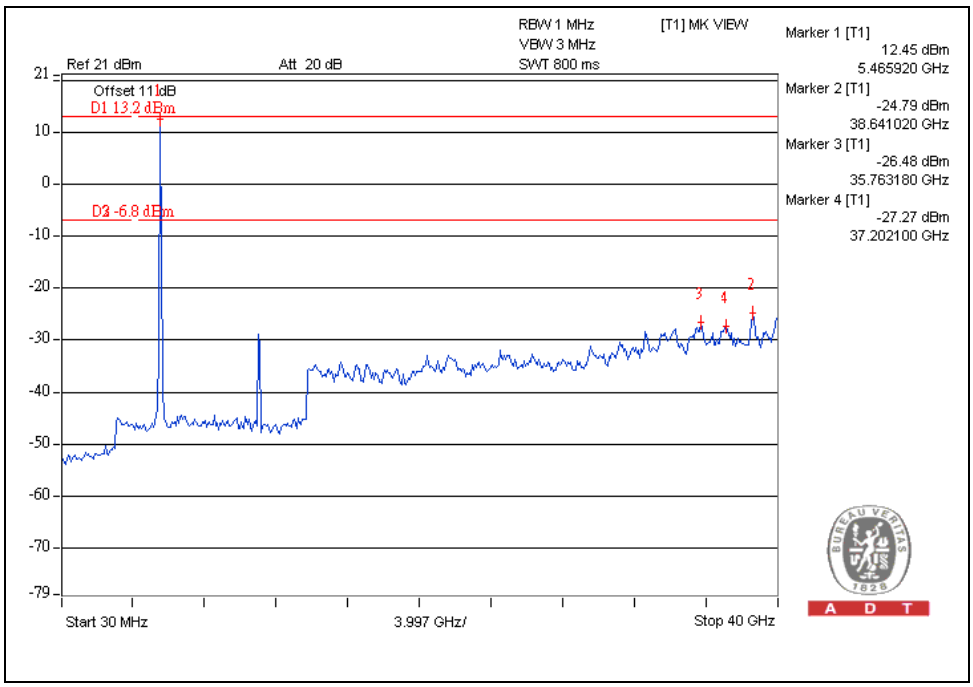
CH102



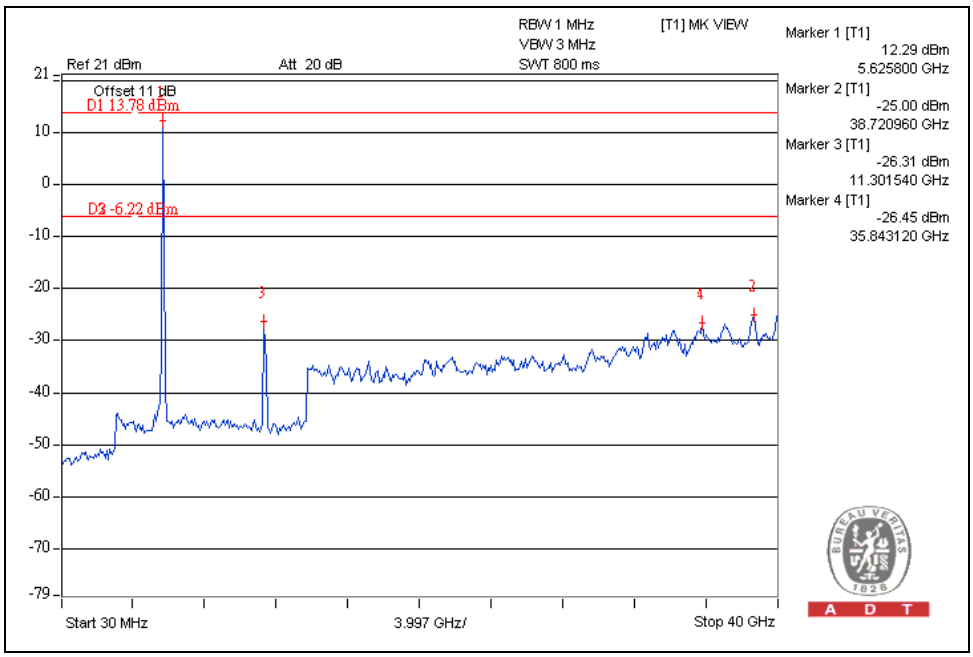
CH134



CH102


RBW 1 MHz
VBW 3 MHz
SWT 800 ms
[T1] MK VIEW
Ref 21 dBm
Att 20 dB
Offset 11 dB
D1 13.2 dBm
D2 -6.8 dBm
Marker 1 [T1]
12.45 dBm
5.465920 GHz
Marker 2 [T1]
-24.79 dBm
38.641020 GHz
Marker 3 [T1]
-26.48 dBm
35.763180 GHz
Marker 4 [T1]
-27.27 dBm
37.202100 GHz
Start 30 MHz
3.997 GHz/
Stop 40 GHz

CH134


RBW 1 MHz
VBW 3 MHz
SWT 800 ms
[T1] MK VIEW
Ref 21 dBm
Att 20 dB
Offset 11 dB
D1 13.78 dBm
D2 -6.22 dBm
Marker 1 [T1]
12.29 dBm
5.625800 GHz
Marker 2 [T1]
-25.00 dBm
38.720960 GHz
Marker 3 [T1]
-26.31 dBm
11.301540 GHz
Marker 4 [T1]
-26.45 dBm
35.843120 GHz
Start 30 MHz
3.997 GHz/
Stop 40 GHz

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.

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 ---