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FCC TEST REPORT

REPORT NO.: RF980821H02

MODEL NO.: WUS620, SMCWUSBS-N3

RECEIVED: Aug. 21, 2009

TESTED: Sep. 01 to 07, 2009

ISSUED: Sep. 17, 2009

APPLICANT: Accton Wireless Broadband Corp.

ADDRESS: 3F, No. 1 Creation Rd. III, Science-based
Industrial Park Hsinchu 30077, Taiwan,
R.O.C.

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

TEST LOCATION: No. 81-1, Lu Liao Keng, 9th Ling,Wu Lung
Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien
307, Taiwan

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1. CERTIFICATION

PRODUCT: 150 Mbps N Wireless USB Adapter
BRAND NAME: AWB, SMC
MODEL NO.: WUS620, SMCWUSBS-N3
TEST SAMPLE: ENGINEERING SAMPLE
TESTED: Sep. 01 to 07, 2009
APPLICANT: Accton Wireless Broadband Corp.
STANDARDS: FCC Part 15, Subpart C (Section 15.247),
ANSI C63.4-2003

The above equipment (Model: SMCWUSBS-N3) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found 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:** Sep. 17, 2009
(Claire Kuan, Specialist)

TECHNICAL ACCEPTANCE :  , **DATE:** Sep. 17, 2009
Responsible for RF (Hank Chung, Deputy Manager)

APPROVED BY :  , **DATE:** Sep. 17, 2009
(May Chen, Deputy Manager)

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 15, Subpart C (Section 15.247)			
Standard Section	Test Type and Limit	Result	Remark
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -12.54dB at 0.177MHz
15.247(a)(2)	Spectrum Bandwidth of a Direct Sequence Spread Spectrum System Limit: min. 500kHz	PASS	Meet the requirement of limit.
15.247(b)	Maximum Peak Output Power Limit: max. 30dBm	PASS	Meet the requirement of limit.
15.247(d)	Radiated Emissions Limit: Table 15.209	PASS	Meet the requirement of limit. Minimum passing margin is -1.02dB at 4824.00MHz
15.247(e)	Power Spectral Density Limit: max. 8dBm	PASS	Meet the requirement of limit.
15.247(d)	Conducted Out-Band Emission Measurement Limit: 20dB less than the peak value of fundamental frequency	PASS	Meet the requirement of limit.



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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	2.44 dB
Radiated emissions (30MHz-1GHz)	3.83 dB
Radiated emissions (1GHz -18GHz)	2.44 dB
Radiated emissions (18GHz -40GHz)	2.67 dB



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3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	150 Mbps N Wireless USB Adapter
MODEL NO.	WUS620, SMCWUSBS-N3
FCC ID	V8YFIC17S620T00W
POWER SUPPLY	DC 5V 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 802.11g: 54 / 48 / 36 / 24 / 18 / 12 / 9 / 6Mbps Draft 802.11n (20MHz, 400ns GI): 72.2 / 65 / 57.8 / 43.3 / 28.9 / 21.7 / 14.4 / 7.2Mbps Draft 802.11n (40MHz, 400ns GI): 150 / 135 / 120 / 90 / 60 / 45 / 30 / 15Mbps
OPERATING FREQUENCY	2412 ~ 2462MHz
NUMBER OF CHANNEL	11 for 802.11b, 802.11g, draft 802.11n (20MHz) 7 for draft 802.11n (40MHz)
MAXIMUM OUTPUT POWER	802.11b: 113.763mW 802.11g: 301.995mW draft 802.11n (20MHz): 295.121mW draft 802.11n (40MHz): 313.329mW
ANTENNA TYPE	Please see note 2
DATA CABLE	NA
I/O PORT	NA

NOTE:

1. The EUT have two brand names and two model names which are identical to each other in all aspects except for the following:

Brand	Model No.	Difference
AWB	WUS620	For different marketing
SMC	SMCWUSBS-N3	

From the above models, model: **SMCWUSBS-N3** was elected as representative model for the test and its data was recorded in this report.



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2. There is one antenna provided to this EUT, please refer to the following table:

No.	Antenna Type	Gain (dBi)	Antenna Connector
1	Printed	2.65	NA

3. The EUT incorporates a SISO function with 802.11b, 802.11g, draft 802.11n. Physically, the EUT provides one completed transmitter and receivers.
4. The EUT is 1 * 1 spatial SISO without beam forming function. The antenna configuration is one transmitter antenna and one receiver antenna, as there is 1 Omni antenna. Spatial multiplexing modes for simultaneous transmission using 1 antenna, and for simultaneous receiver using 1 antenna.
5. The EUT complies with draft 802.11n standards and backwards compatible with 802.11b, 802.11g products.
6. The EUT, operates in the 2.4GHz frequency range, lets you connect IEEE 802.11g or IEEE 802.11b and draft 802.11n technique devices to the network.
7. 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.



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3.2 DESCRIPTION OF TEST MODES

Eleven channels are provided for 802.11b, 802.11g, draft 802.11n (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	2412MHz	7	2442MHz
2	2417MHz	8	2447MHz
3	2422MHz	9	2452MHz
4	2427MHz	10	2457MHz
5	2432MHz	11	2462MHz
6	2437MHz		

Seven channels are provided for draft 802.11n (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	2422MHz	5	2442MHz
2	2427MHz	6	2447MHz
3	2432MHz	7	2452MHz
4	2437MHz		

3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL:

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

Where **PLC**: Power Line Conducted Emission **RE < 1G**: Radiated Emission below 1GHz
RE ≥ 1G: Radiated Emission above 1GHz **APCM**: Antenna Port Conducted Measurement

POWER LINE CONDUCTED EMISSION TEST:

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

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11g	1 to 11	6	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).
- 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)
802.11g	1 to 11	6	OFDM	BPSK	6



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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)
802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
Draft 802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	7.2
Draft 802.11n (40MHz)	1 to 7	1, 4, 7	OFDM	BPSK	15

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)
802.11b	1 to 11	1, 11	DSSS	DBPSK	1
802.11g	1 to 11	1, 11	OFDM	BPSK	6
Draft 802.11n (20MHz)	1 to 11	1, 11	OFDM	BPSK	7.2
Draft 802.11n (40MHz)	1 to 7	1, 7	OFDM	BPSK	15

ANTENNA PORT CONDUCTED 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)
802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
Draft 802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	7.2
Draft 802.11n (40MHz)	1 to 7	1, 4, 7	OFDM	BPSK	15

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a 150 Mbps N Wireless USB Adapter. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, Subpart C. (15.247)

ANSI C63.4-2003

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

NOTE: The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

3.4 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.

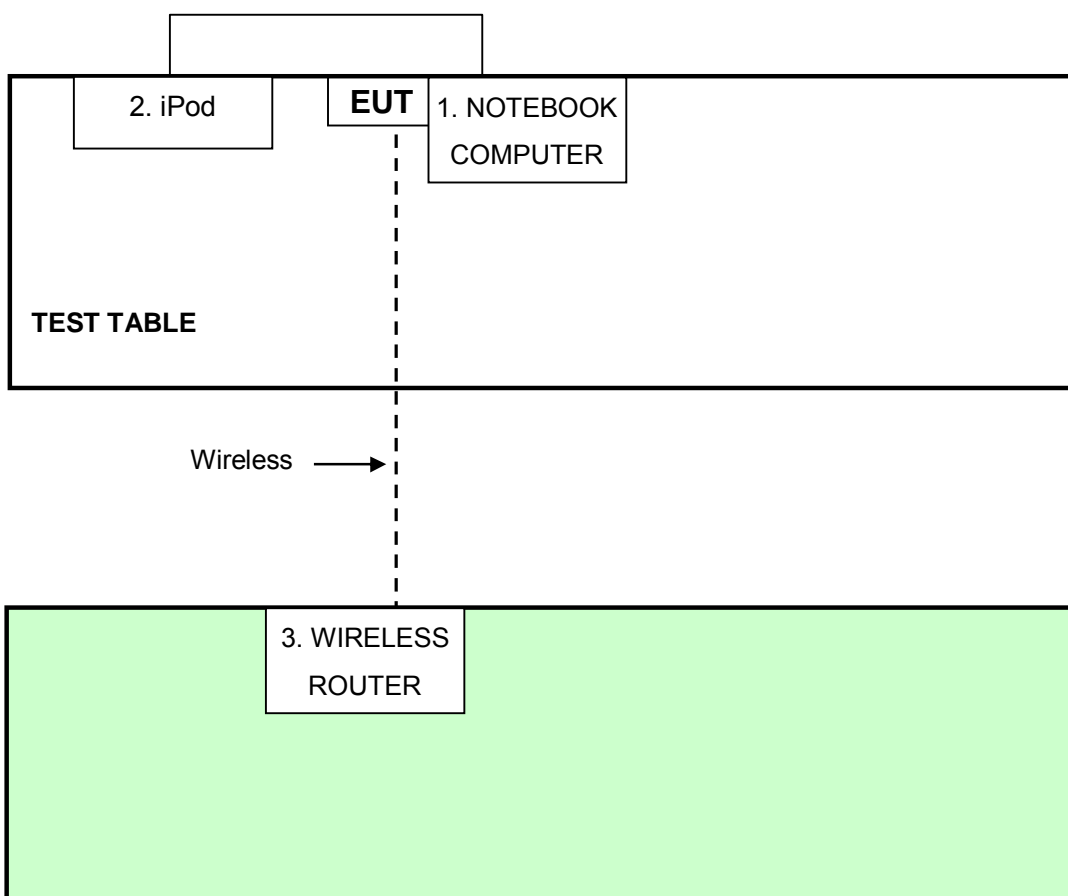
Conducted emission test					
NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK COMPUTER	DELL	PP21L	CN-0GD366-70166-5B3-09ZX	QDS-BRCM1016
2	iPod	Apple	A1199	6U6426MTVQS	FCC DoC
3	WIRELESS ROUTER	ABOCOM	WR224GR	060500749P	FCC
Other test					
NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK COMPUTER	DELL	PP18L	6976685584	FCC DoC

Other test	
NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	1 m shielded cable, terminated with USB connector, w/o core.
3	NA
Other test	
NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA

NOTE: All power cords of the above support units are non shielded (1.8m).

3.5 CONFIGURATION OF SYSTEM UNDER TEST

For conducted emission test:





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For other test:

1. NOTEBOOK COMPUTER	EUT
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TEST TABLE



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4. TEST TYPES AND RESULTS

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

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

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver	ESCS 30	100375	Mar. 23, 2009	Mar. 22, 2010
Line-Impedance Stabilization Network (for Peripheral)	ENV-216	100071	Nov. 26, 2008	Nov. 25, 2009
Line-Impedance Stabilization Network (for EUT)	ESH3-Z5	848773/004	Nov. 05, 2008	Nov. 04, 2009
RF Cable (JYEBAO)	5DFB	COBCAB-001	Aug. 14, 2009	Aug. 13, 2010
50 ohms Terminator	50	3	Nov. 05, 2008	Nov. 04, 2009
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. B.
3. The VCCI Con B Registration No. is C-2193.

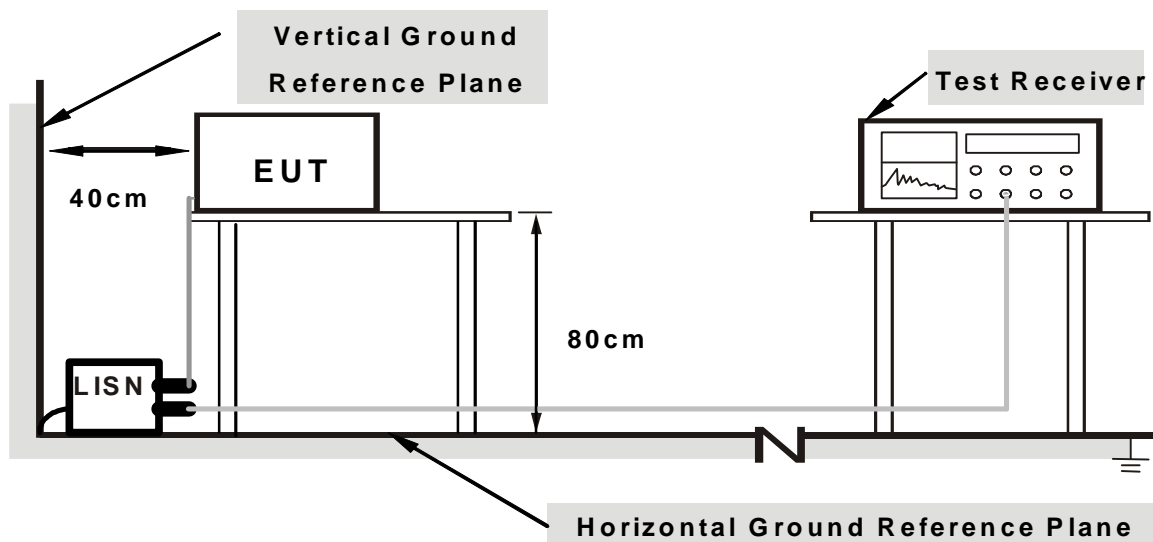
4.1.3 TEST PROCEDURES

- 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. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) were 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 placed on a testing table.
2. Support unit 1 (Notebook computer) run test program “RT3X7XQA.exe” to enable EUT under transmission condition continuously at specific channel frequency.

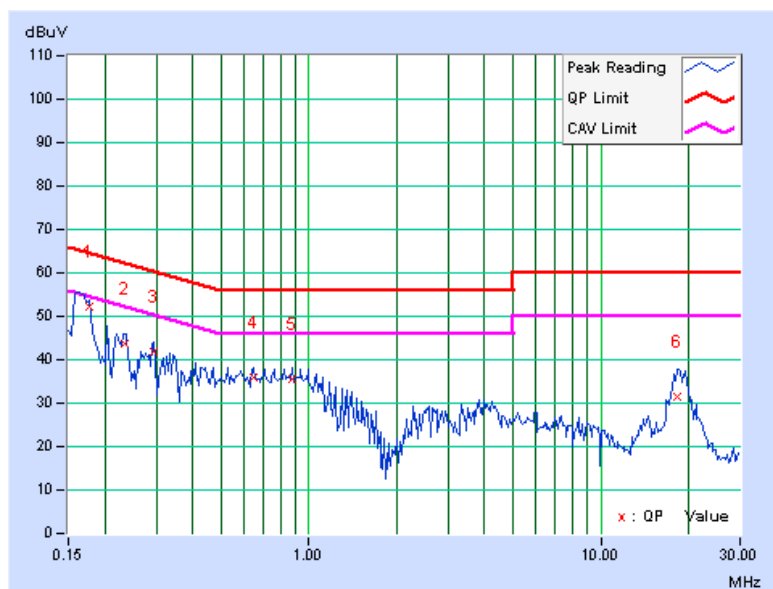
4.1.7 TEST RESULTS

802.11g OFDM MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	PHASE	Line (L)
MODULATION TYPE	BPSK	6dB BANDWIDTH	9 kHz
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	26deg. C, 63%RH, 965hPa	TESTED BY	Wen Yu

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.177	0.18	51.91	-	52.09	-	64.63	54.63	-12.54	-
2	0.233	0.18	43.40	-	43.58	-	62.35	52.35	-18.77	-
3	0.295	0.18	41.70	-	41.88	-	60.40	50.40	-18.51	-
4	0.646	0.29	35.57	-	35.86	-	56.00	46.00	-20.14	-
5	0.880	0.39	35.34	-	35.73	-	56.00	46.00	-20.27	-
6	18.234	1.44	29.98	-	31.42	-	60.00	50.00	-28.58	-

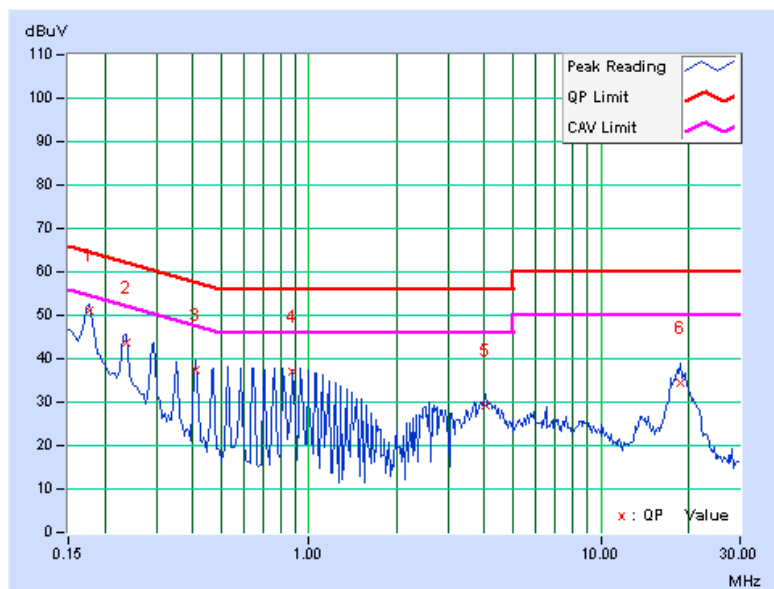
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	PHASE	Neutral (N)
MODULATION TYPE	BPSK	6dB BANDWIDTH	9 kHz
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	26deg. C, 63%RH, 965hPa	TESTED BY	Wen Yu

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.162	0.10	52.72	-	52.82	-	65.38	55.38	-12.55	-
2	0.235	0.11	44.10	-	44.21	-	62.28	52.28	-18.06	-
3	0.295	0.12	42.00	-	42.12	-	60.40	50.40	-18.28	-
4	0.646	0.22	35.86	-	36.08	-	56.00	46.00	-19.92	-
5	0.943	0.33	33.65	-	33.98	-	56.00	46.00	-22.02	-
6	18.302	1.20	32.63	-	33.83	-	60.00	50.00	-26.17	-

- 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 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.



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4.2.2 TEST INSTRUMENTS

For below 1GHz:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
ADVANTEST Spectrum Analyzer	U3751	160200410	July. 17, 2009	July. 16, 2010
ADVANTEST Spectrum Analyzer	U3772	160100280	July 25, 2009	July 24, 2010
HP Pre_Amplifier	8449B	3008A01922	Sep. 25, 2008	Sep. 24, 2009
ROHDE & SCHWARZ Test Receiver	ESVS 30	841977/002	Nov. 03, 2008	Nov. 02, 2009
SCHAFFNER(CHASE) Broadband Antenna	CBL6112B	2798	April 29, 2009	April 28, 2010
Schwarzbeck Horn_Antenna	BBHA9120-D1	D123	Sep. 30, 2008	Sep. 29, 2009
Schwarzbeck Horn_Antenna	BBHA 9170	BBHA9170153	Jan. 23, 2009	Jan. 22, 2010
RF Switches	MP59B	6100175593	Sep. 01, 2009	Aug. 31, 2010
RF Cable	8DFB	STBCAB-001	Sep. 01, 2009	Aug. 31, 2010
Software	ADT_Radiated_V7.6.15.9.2	NA	NA	NA
CT Antenna Tower & Turn Table	NA	NA	NA	NA
CORCOM AC Filter	MRI2030	024/019	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, HP preamplifier (model: 8449B) and Spectrum Analyzer (model: U3772) are used only for the measurement of emission frequency above 1GHz if tested.
3. The test was performed in Open Site No. B.
4. The VCCI Site Registration No. is R-847.
5. The FCC Site Registration No. is 92753.
6. The CANADA Site Registration No. is IC 7450G-2.



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For above 1GHz:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
ROHDE & SCHWARZ Spectrum Analyzer	FSP40	100036	Dec. 9, 2008	Dec. 8, 2009
Agilent PSA Spectrum Analyzer	E4446A	MY46180622	Apr. 24 , 2009	Apr. 23 , 2010
HP Pre_Amplifier	8449B	3008A01923	Nov. 10, 2008	Nov. 9, 2009
ROHDE & SCHWARZ Test Receiver	ESCS30	847124/029	Sep. 9, 2008	Sep. 8, 2009
SCHWARZBECK TRILOG Broadband Antenna	VULB 9168	138	April 29, 2009	April 28, 2010
Schwarzbeck Horn_Antenna	BBHA9120	D124	Dec. 09, 2008	Dec. 08, 2009
Schwarzbeck Horn_Antenna	BBHA 9170	BBHA9170153	Jan. 22, 2009	Jan. 21, 2010
R&S Loop Antenna	HFH2-Z2	100070	Jan. 14, 2008	Jan. 13, 2010
RF Switches	EMH-011	08009	Oct. 07, 2008	Oct. 06, 2009
RF CABLE (Chaintek)	Sucoflex 106	28077	Aug. 14, 2009	Aug. 13, 2010
RF Cable	8DFB	STCCAB-30M-1GHz	Oct. 07, 2008	Oct. 06, 2009
Software	ADT_Radiated_V7.6.15.9.2	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, HP preamplifier (model: 8449B) and Spectrum Analyzer (model: FSP40) are used only for the measurement of emission frequency above 1GHz if tested.
3. The test was performed in Open Site No. C.
4. The FCC Site Registration No. is 656396.
5. The VCCI Site Registration No. is R-1626.
6. The CANADA Site Registration No. is IC 7450G-3.

4.2.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter open area test site. 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 10 dB 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 10 dB margin would be re-tested one by one using the quasi-peak method or average method as specified and then reported in Data sheet peak mode and QP mode.

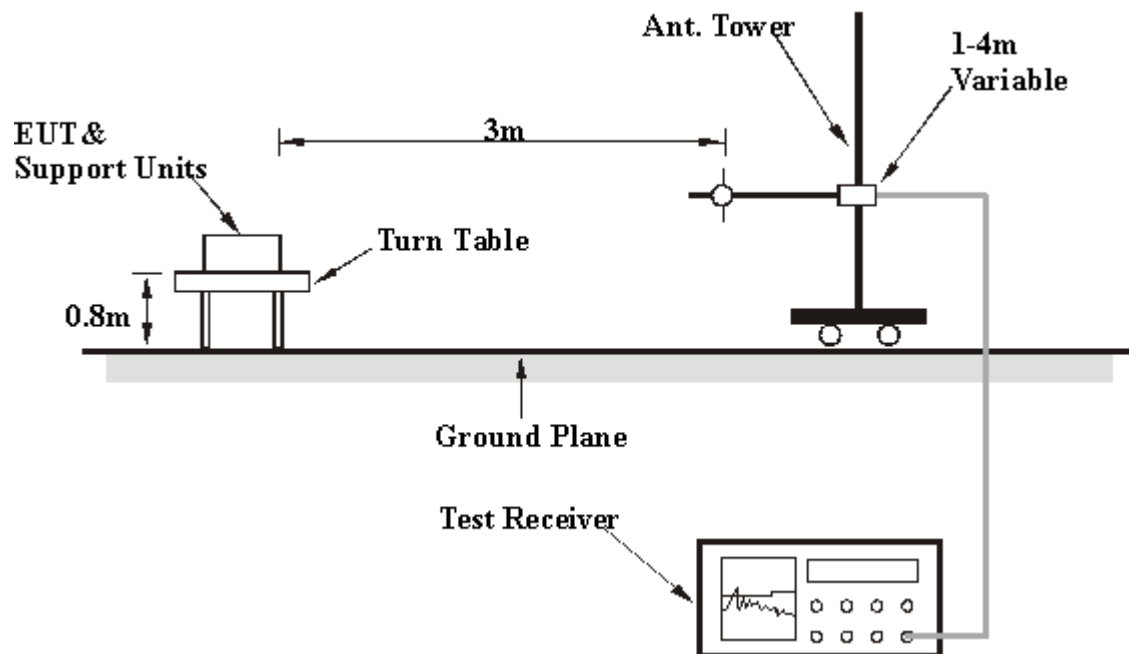
NOTE:

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.

4.2.4 DEVIATION FROM TEST STANDARD

No deviation

4.2.5 TEST SETUP



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

4.2.6 EUT OPERATING CONDITIONS

Same as the 4.1.6



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Below 1GHz Test Data

4.2.7 TEST RESULTS

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	30deg. C, 60%RH 965 hPa	TESTED BY	Max Tseng

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	109.27	31.21 QP	43.50	-12.29	2.60 H	279	18.70	12.51
2	240.25	33.79 QP	46.00	-12.21	2.80 H	22	19.48	14.31
3	400.00	36.03 QP	46.00	-9.97	1.98 H	87	16.60	19.43
4	500.00	34.48 QP	46.00	-11.52	1.81 H	193	12.24	22.24
5	800.00	34.58 QP	46.00	-11.42	1.25 H	207	8.44	26.14
6	900.00	34.43 QP	46.00	-11.57	1.20 H	245	7.01	27.42
7	960.00	35.78 QP	46.00	-10.22	1.00 H	46	7.74	28.04
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	74.25	28.45 QP	40.00	-11.55	1.00 V	248	20.56	7.89
2	109.40	29.33 QP	43.50	-14.17	1.00 V	21	16.81	12.52
3	240.25	33.02 QP	46.00	-12.98	2.08 V	19	18.71	14.31
4	500.00	33.63 QP	46.00	-12.37	1.54 V	335	11.39	22.24
5	700.00	32.80 QP	46.00	-13.20	1.00 V	345	8.21	24.59
6	800.00	34.49 QP	46.00	-11.51	1.77 V	228	8.35	26.14
7	900.00	37.17 QP	46.00	-8.83	2.07 V	283	9.75	27.42

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



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Above 1GHz Test Data

4.2.8 TEST RESULTS

802.11b DSSS MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	29deg. C, 45%RH 965 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	2390.00	62.85 PK	74.00	-11.15	1.68 H	214	32.57	30.28
2	2390.00	42.42 AV	54.00	-11.58	1.68 H	214	12.14	30.28
3	*2412.00	96.50 PK			1.66 H	183	66.14	30.36
4	*2412.00	93.60 AV			1.66 H	183	63.24	30.36
5	4824.00	51.17 PK	74.00	-22.83	1.66 H	4	14.38	36.79
6	4824.00	47.50 AV	54.00	-6.50	1.66 H	4	10.71	36.79
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	2390.00	65.60 PK	74.00	-8.40	1.23 V	252	35.32	30.28
2	2390.00	42.94 AV	54.00	-11.06	1.23 V	252	12.66	30.28
3	*2412.00	98.64 PK			1.24 V	292	68.28	30.36
4	*2412.00	96.58 AV			1.24 V	292	66.22	30.36
5	4824.00	54.88 PK	74.00	-19.12	1.43 V	300	18.09	36.79
6	4824.00	52.98 AV	54.00	-1.02	1.43 V	300	16.19	36.79

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	29deg. C, 45%RH 965 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	*2437.00	94.31 PK			1.71 H	66	63.85	30.46
2	*2437.00	91.08 AV			1.71 H	66	60.62	30.46
3	4874.00	51.69 PK	74.00	-22.31	1.08 H	27	14.77	36.92
4	4874.00	48.31 AV	54.00	-5.69	1.08 H	27	11.39	36.92
5	7311.00	50.96 PK	74.00	-23.04	1.57 H	28	7.82	43.14
6	7311.00	41.38 AV	54.00	-12.62	1.57 H	28	-1.76	43.14
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	*2437.00	96.11 PK			1.89 V	88	65.65	30.46
2	*2437.00	92.58 AV			1.89 V	88	62.12	30.46
3	4874.00	54.90 PK	74.00	-19.10	1.55 V	176	17.98	36.92
4	4874.00	52.96 AV	54.00	-1.04	1.55 V	176	16.04	36.92
5	7311.00	51.82 PK	74.00	-22.18	1.52 V	12	8.68	43.14
6	7311.00	41.28 AV	54.00	-12.72	1.52 V	12	-1.86	43.14

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



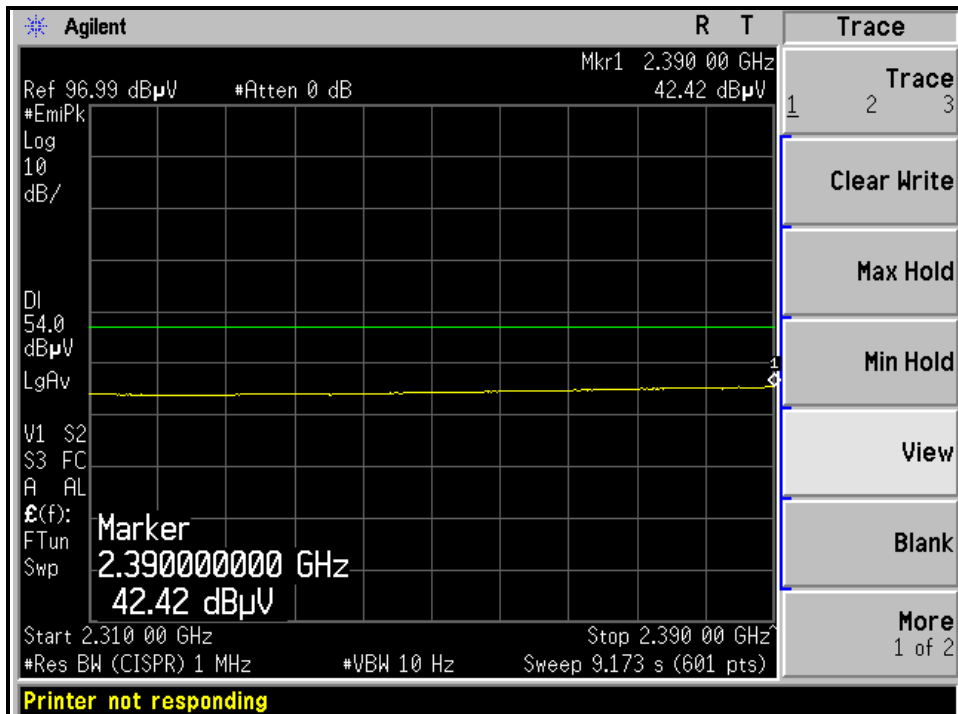
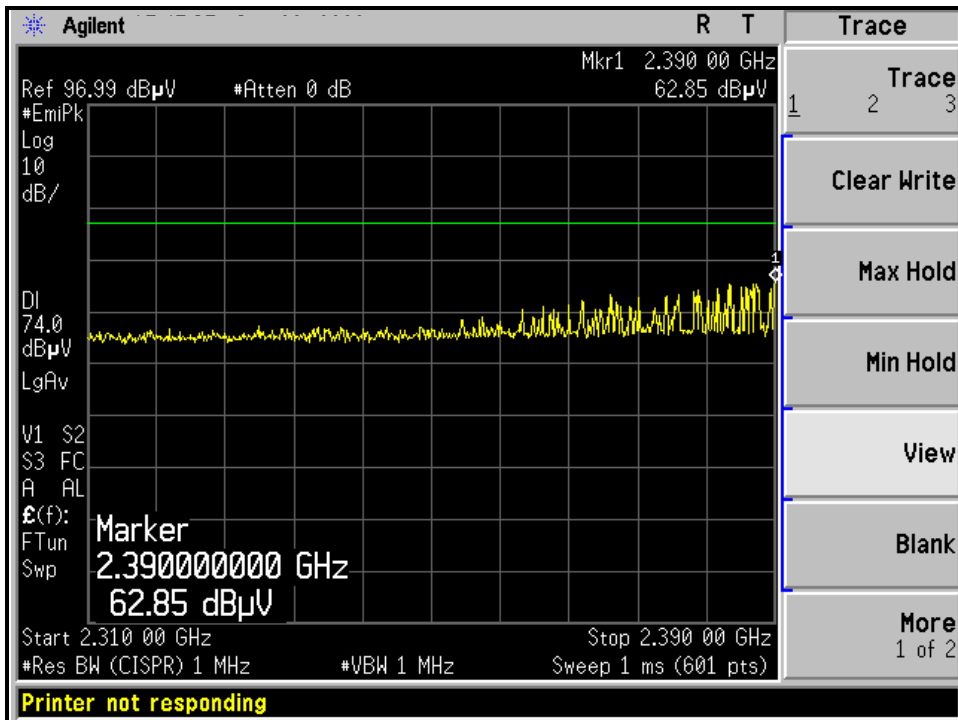
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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	29deg. C, 45%RH 965 hPa	TESTED BY	Eric Lee

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	*2462.00	93.20 PK			1.89 H	226	62.65	30.55
2	*2462.00	89.30 AV			1.89 H	226	58.75	30.55
3	2483.50	54.18 PK	74.00	-19.82	1.32 H	158	23.55	30.63
4	2483.50	41.64 AV	54.00	-12.36	1.32 H	158	11.01	30.63
5	4924.00	52.60 PK	74.00	-21.40	1.61 H	38	15.54	37.06
6	4924.00	47.69 AV	54.00	-6.31	1.61 H	38	10.63	37.06
7	7386.00	50.30 PK	74.00	-23.70	1.34 H	68	7.17	43.13
8	7386.00	43.10 AV	54.00	-10.90	1.34 H	68	-0.03	43.13
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	*2462.00	95.50 PK			1.91 V	79	64.95	30.55
2	*2462.00	92.32 AV			1.91 V	79	61.77	30.55
3	2483.50	54.53 PK	74.00	-19.47	1.91 V	88	23.90	30.63
4	2483.50	41.72 AV	54.00	-12.28	1.91 V	88	11.09	30.63
5	4924.00	55.07 PK	74.00	-18.93	1.10 V	234	18.01	37.06
6	4924.00	52.95 AV	54.00	-1.05	1.10 V	234	15.89	37.06
7	7386.00	52.45 PK	74.00	-21.55	1.60 V	88	9.32	43.13
8	7386.00	42.80 AV	54.00	-11.20	1.60 V	88	-0.33	43.13

- 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.
 5. “ * “: Fundamental frequency.

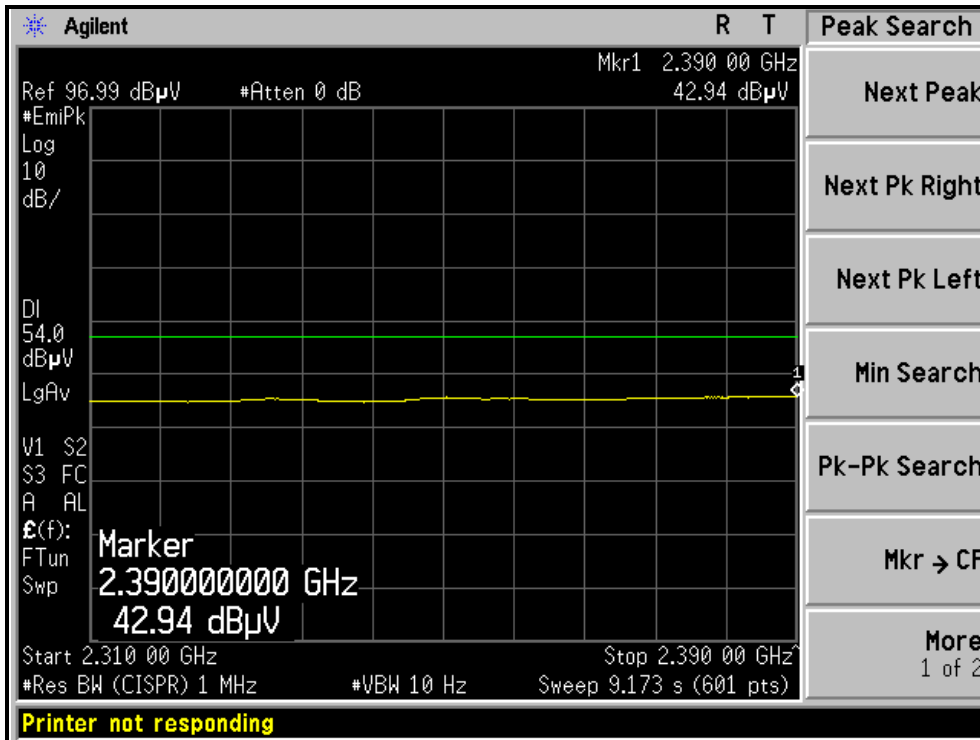
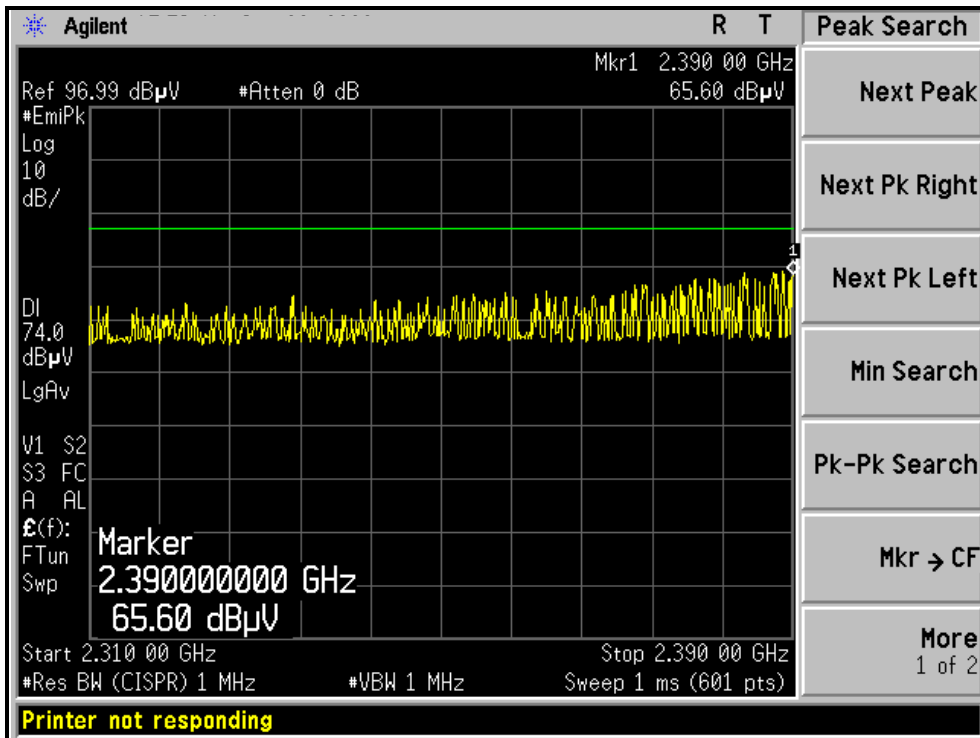
RESTRICTED BANDEDGE (802.11b MODE, CH1, HORIZONTAL)





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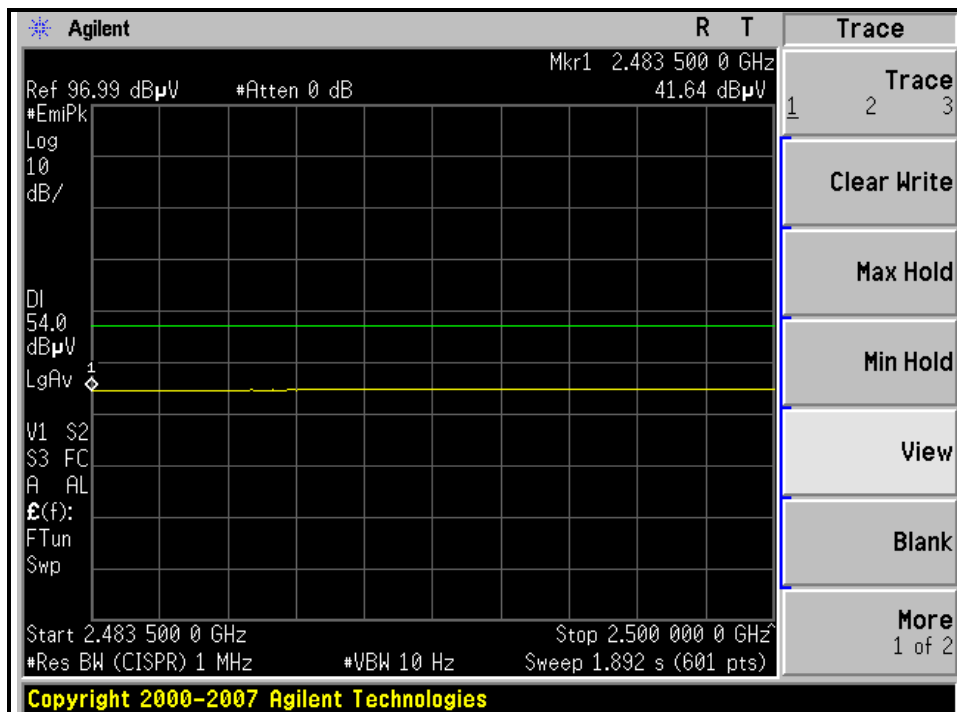
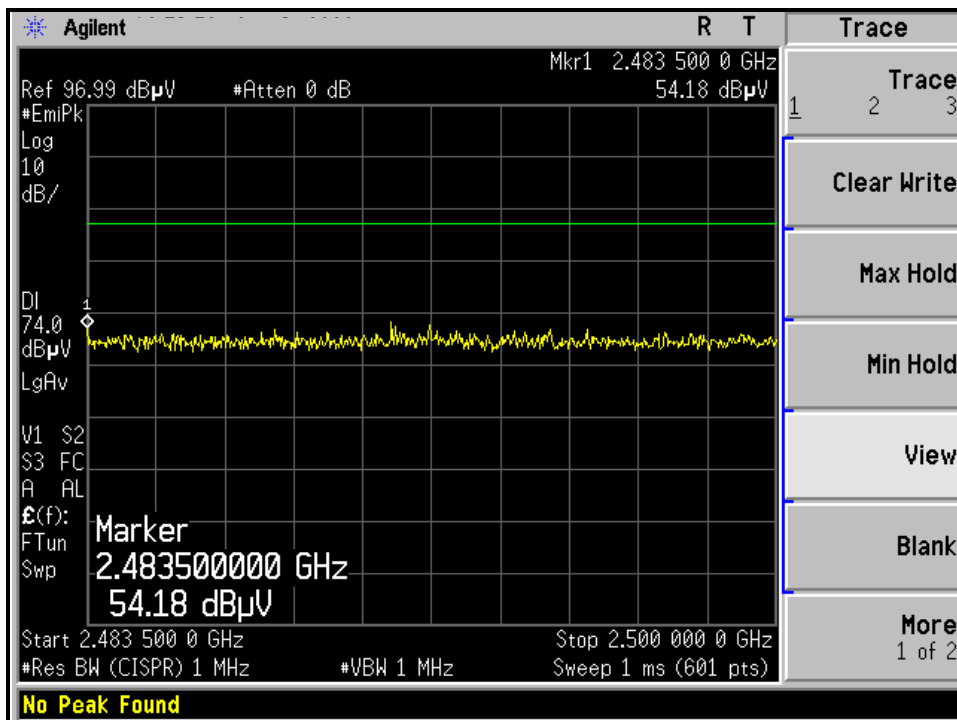
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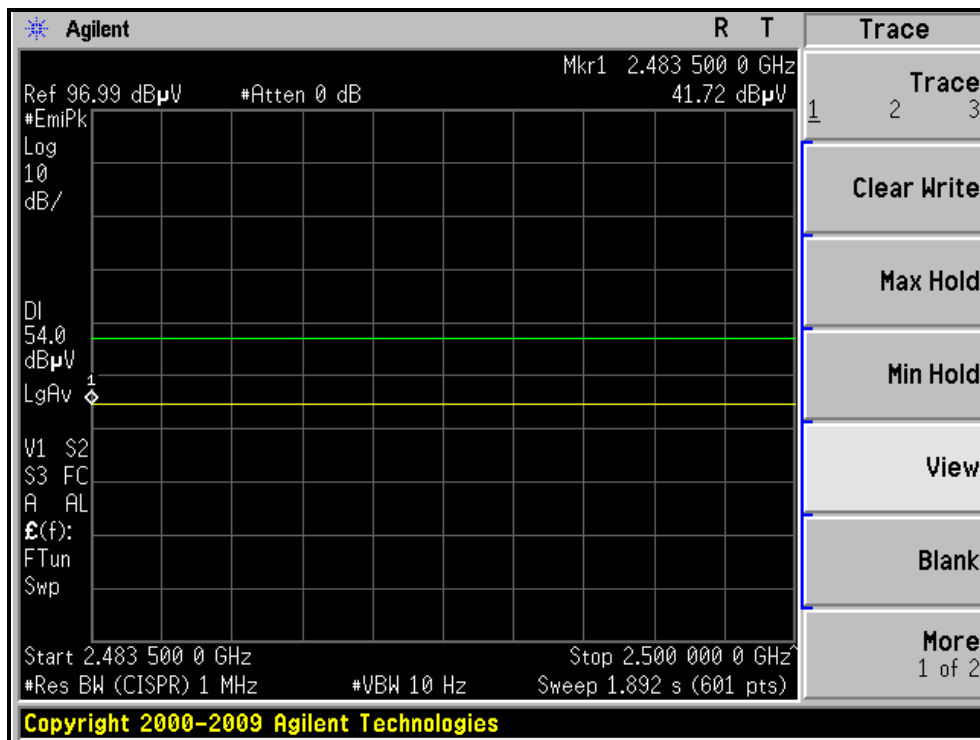
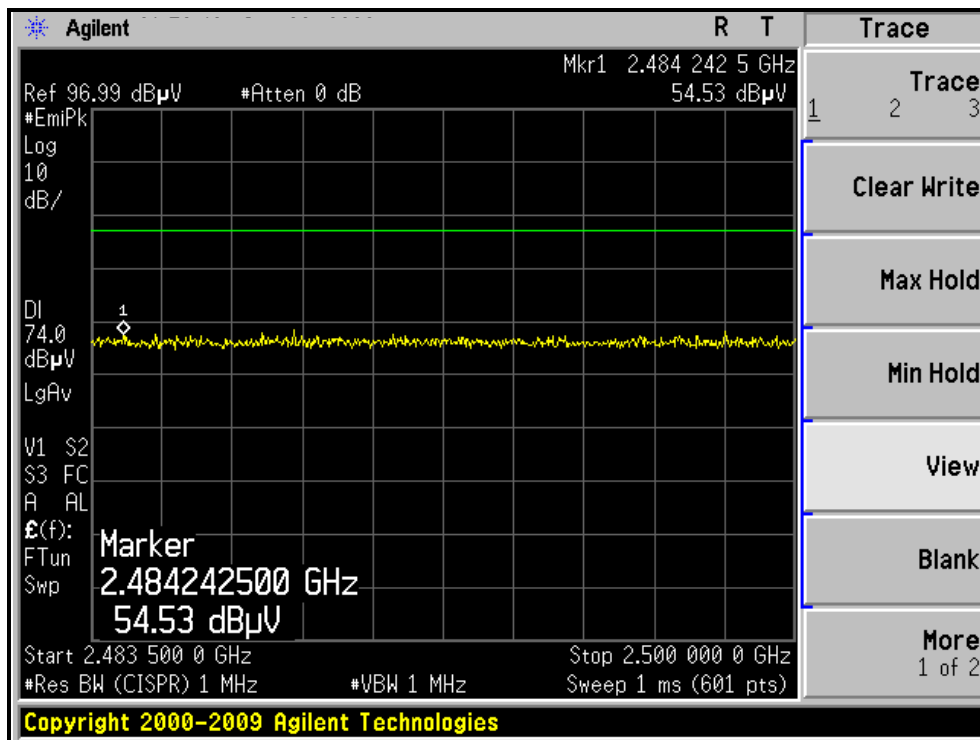
RESTRICTED BANDEDGE (802.11b MODE,CH11, HORIZONTAL)





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RESTRICTED BANDEDGE (802.11b MODE,CH11, VERTICAL)





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802.11g OFDM MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	29deg. C, 45%RH 965 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	2390.00	62.26 PK	74.00	-11.74	1.23 H	271	31.98	30.28
2	2390.00	47.11 AV	54.00	-6.89	1.23 H	271	16.83	30.28
3	*2412.00	101.75 PK			1.22 H	268	71.39	30.36
4	*2412.00	88.50 AV			1.22 H	268	58.14	30.36
5	4824.00	49.38 PK	74.00	-24.62	1.58 H	37	12.59	36.79
6	4824.00	36.24 AV	54.00	-17.76	1.58 H	37	-0.55	36.79
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	2390.00	68.93 PK	74.00	-5.07	1.07 V	212	38.65	30.28
2	2390.00	52.95 AV	54.00	-1.05	1.07 V	212	22.67	30.28
3	*2412.00	109.94 PK			1.03 V	200	79.58	30.36
4	*2412.00	95.07 AV			1.03 V	200	64.71	30.36
5	4824.00	53.93 PK	74.00	-20.07	1.31 V	233	17.14	36.79
6	4824.00	40.00 AV	54.00	-14.00	1.31 V	233	3.21	36.79

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	29deg. C, 45%RH 965 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	*2437.00	102.36 PK			1.33 H	187	71.90	30.46
2	*2437.00	93.22 AV			1.33 H	187	62.76	30.46
3	4874.00	49.64 PK	74.00	-24.36	1.07 H	28	12.72	36.92
4	4874.00	36.18 AV	54.00	-17.82	1.07 H	28	-0.74	36.92
5	7311.00	53.64 PK	74.00	-20.36	1.09 H	28	10.50	43.14
6	7311.00	40.31 AV	54.00	-13.69	1.09 H	28	-2.83	43.14

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	2390.00	59.66 PK	74.00	-14.34	1.00 V	298	29.38	30.28
2	2390.00	49.35 AV	54.00	-4.65	1.00 V	298	19.07	30.28
3	*2437.00	105.40 PK			1.14 V	96	74.94	30.46
4	*2437.00	94.33 AV			1.14 V	96	63.87	30.46
5	4874.00	60.20 PK	74.00	-13.80	1.61 V	28	23.28	36.92
6	4874.00	43.68 AV	54.00	-10.32	1.61 V	28	6.76	36.92
7	7311.00	57.49 PK	74.00	-16.51	1.47 V	107	14.35	43.14
8	7311.00	43.25 AV	54.00	-10.75	1.47 V	107	0.11	43.14

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	29deg. C, 45%RH 965 hPa	TESTED BY	Eric Lee

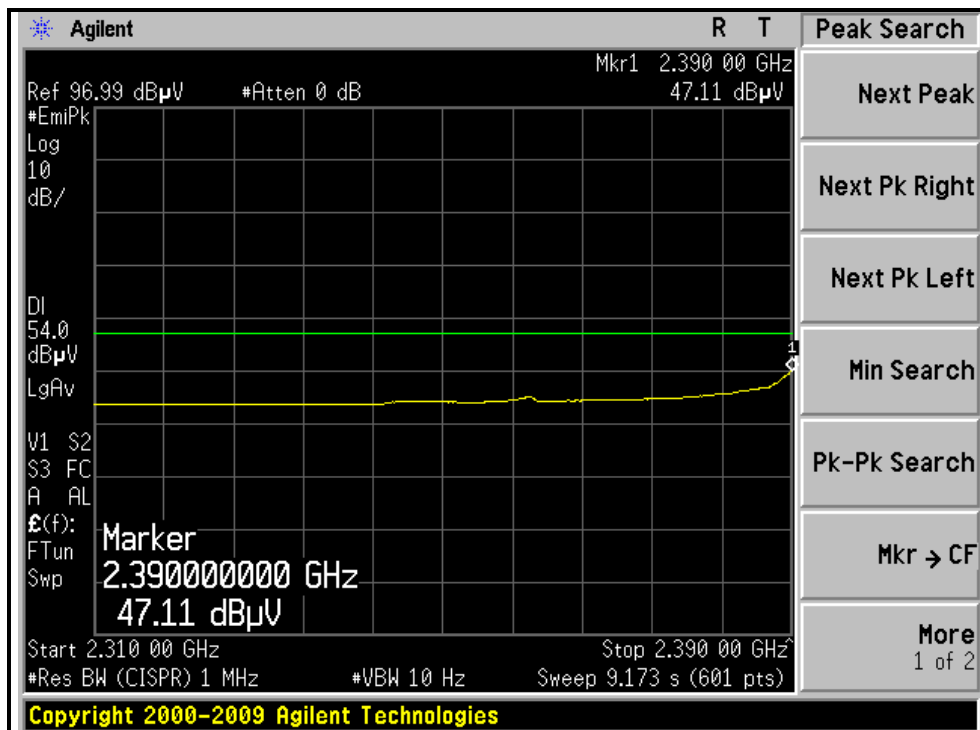
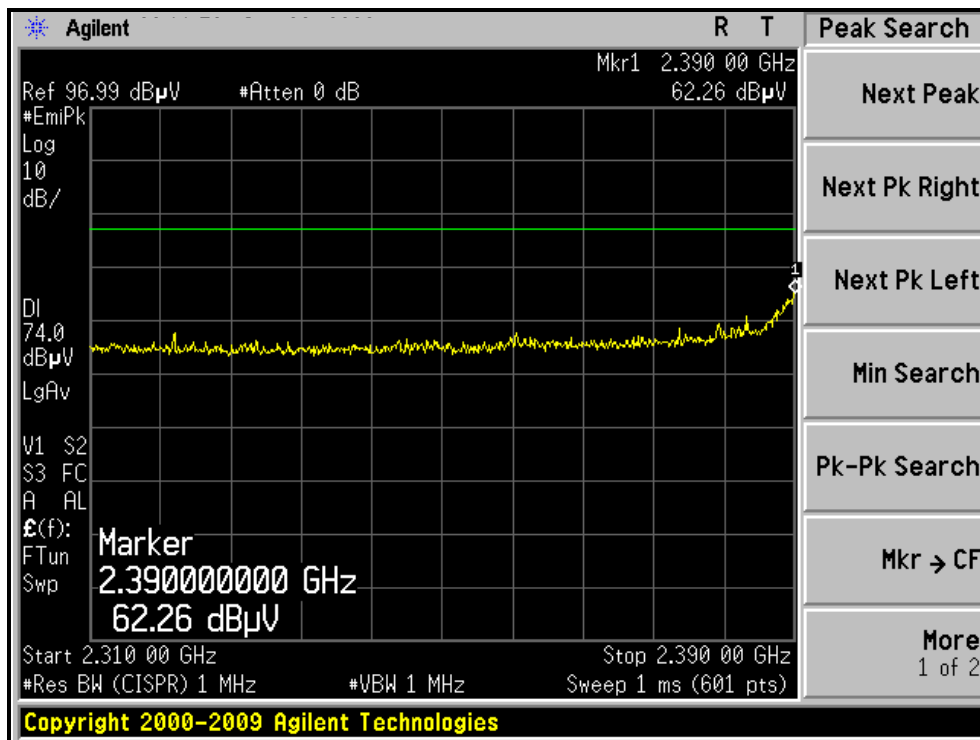
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	101.18 PK			1.35 H	190	70.63	30.55
2	*2462.00	92.41 AV			1.35 H	190	61.86	30.55
3	2483.50	61.94 PK	74.00	-12.06	1.35 H	190	31.31	30.63
4	2483.50	44.94 AV	54.00	-9.06	1.35 H	190	14.31	30.63
5	4924.00	55.54 PK	74.00	-18.46	1.30 H	273	18.48	37.06
6	4924.00	37.12 AV	54.00	-16.88	1.30 H	273	0.06	37.06
7	7386.00	56.34 PK	74.00	-17.66	1.21 H	256	13.21	43.13
8	7386.00	40.38 AV	54.00	-13.62	1.21 H	256	-2.75	43.13
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	*2462.00	108.99 PK			1.03 V	198	78.44	30.55
2	*2462.00	94.02 AV			1.03 V	198	63.47	30.55
3	2483.50	67.80 PK	74.00	-6.20	1.01 V	199	37.17	30.63
4	2483.50	51.39 AV	54.00	-2.61	1.01 V	199	20.76	30.63
5	4924.00	59.48 PK	74.00	-14.52	1.31 V	177	22.42	37.06
6	4924.00	43.45 AV	54.00	-10.55	1.31 V	177	6.39	37.06
7	7386.00	58.45 PK	74.00	-15.55	1.20 V	7	15.32	43.13
8	7386.00	43.70 AV	54.00	-10.30	1.20 V	7	0.57	43.13

- 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.
 5. “ * “: Fundamental frequency.



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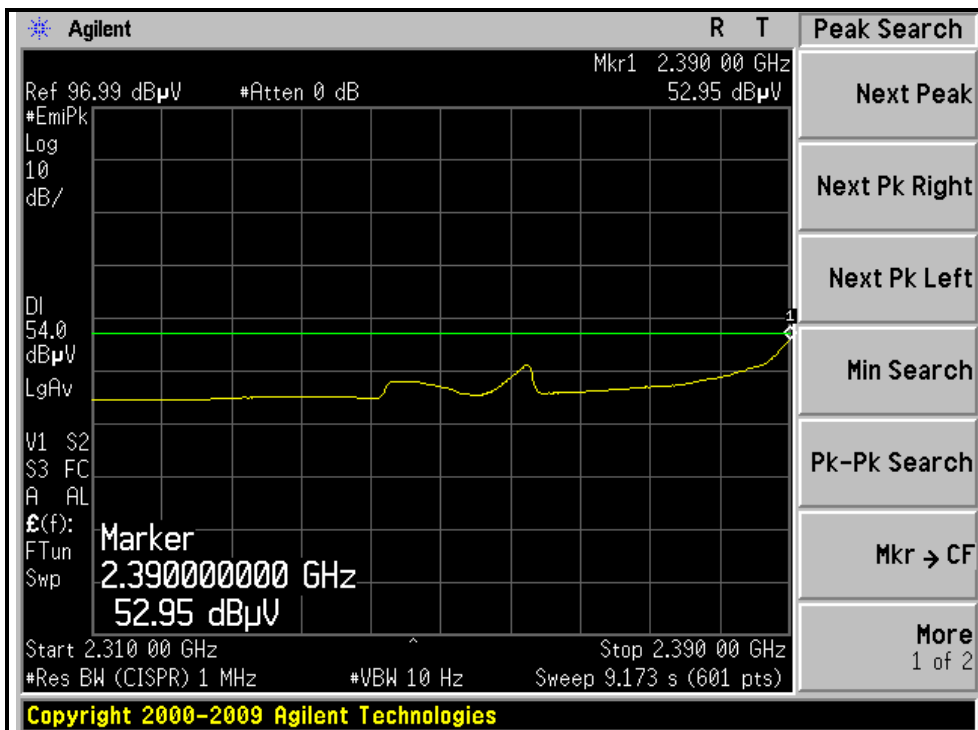
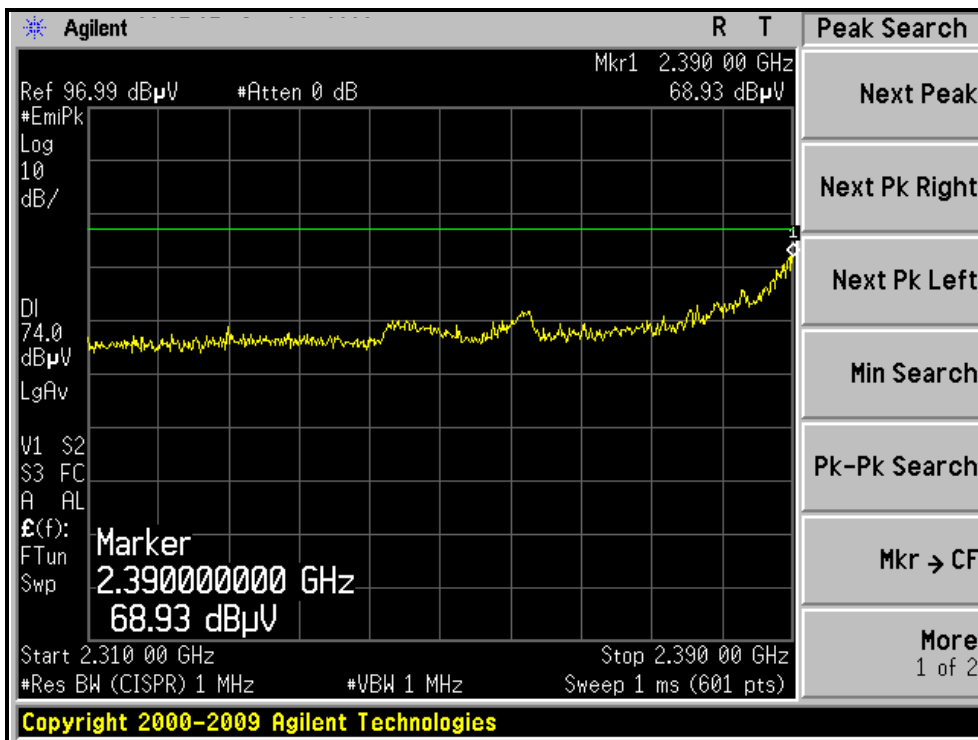
RESTRICTED BANDEDGE (802.11g MODE, CH1, HORIZONTAL)





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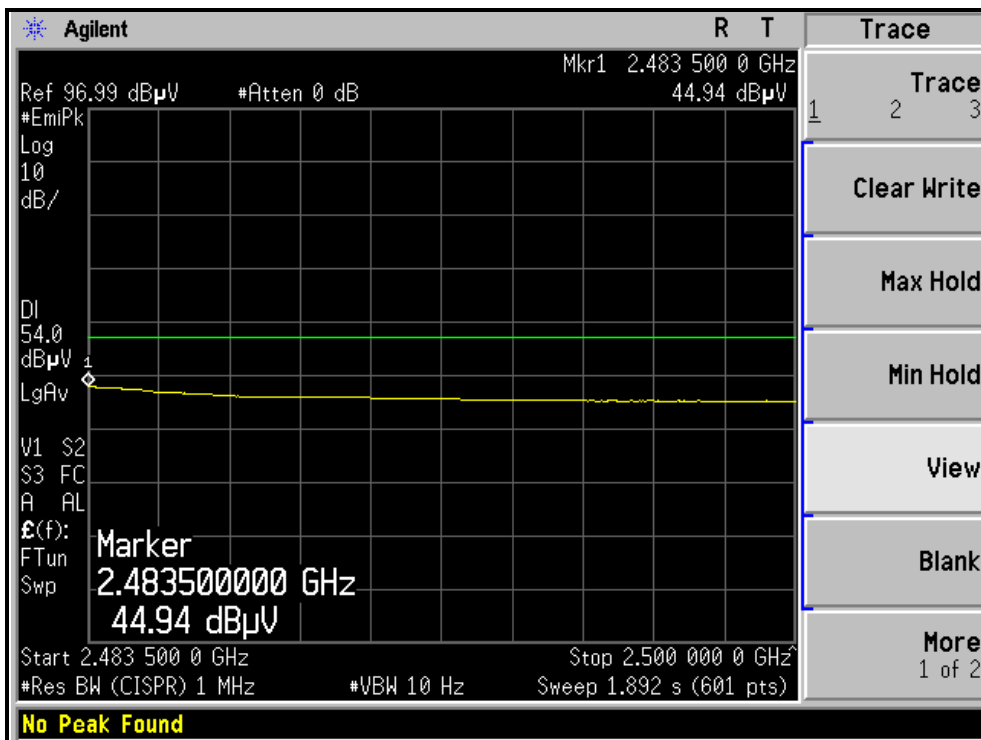
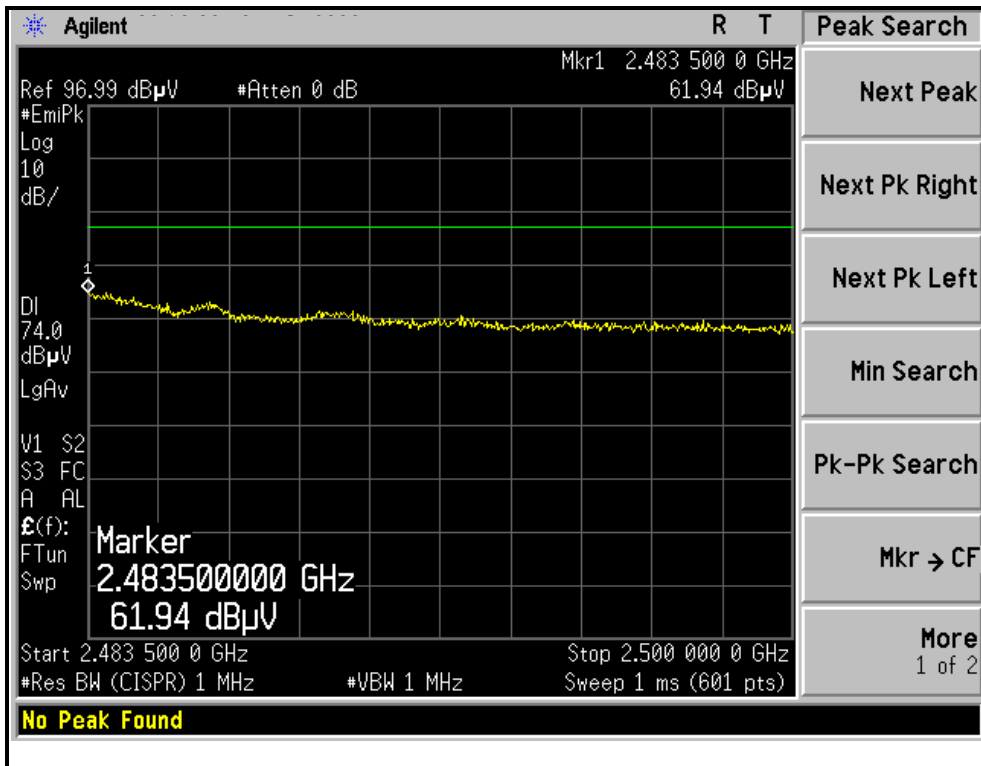
RESTRICTED BANDEDGE (802.11g MODE,CH1, VERTICAL)





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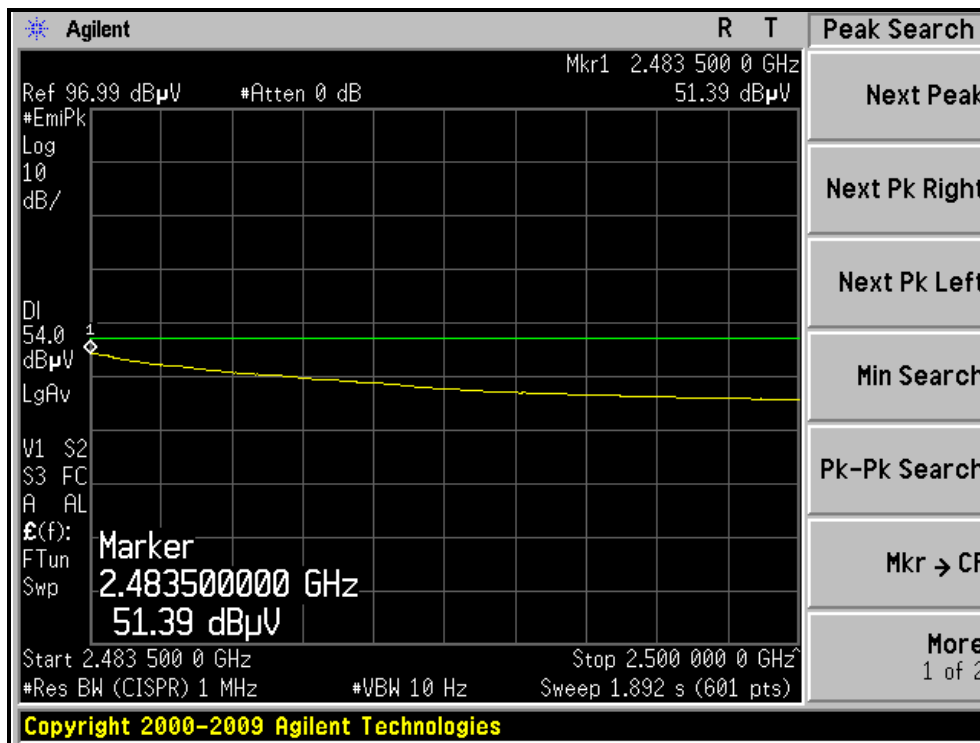
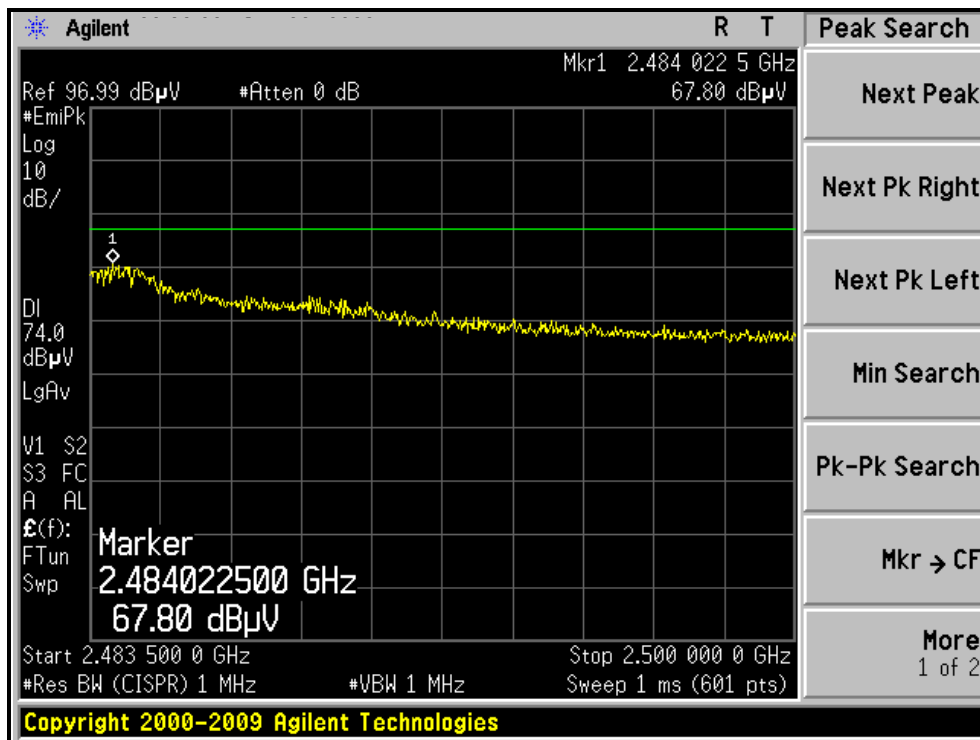
RESTRICTED BANDEDGE (802.11g MODE,CH11, HORIZONTAL)





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RESTRICTED BANDEDGE (802.11g MODE, CH11, VERTICAL)





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DRAFT 802.11n (20MHz) OFDM MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	29deg. C, 45%RH 965 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	2390.00	64.15 PK	74.00	-9.85	1.33 H	192	33.87	30.28
2	2390.00	47.64 AV	54.00	-6.36	1.33 H	192	17.36	30.28
3	*2412.00	102.34 PK			1.34 H	194	71.98	30.36
4	*2412.00	92.80 AV			1.34 H	194	62.44	30.36
5	4824.00	43.71 PK	74.00	-30.29	1.50 H	134	6.92	36.79
6	4824.00	32.39 AV	54.00	-21.61	1.50 H	134	-4.40	36.79

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	2390.00	71.97 PK	74.00	-2.03	1.00 V	289	41.69	30.28
2	2390.00	51.77 AV	54.00	-2.23	1.00 V	289	21.49	30.28
3	*2412.00	107.59 PK			1.09 V	281	77.23	30.36
4	*2412.00	98.12 AV			1.09 V	281	67.76	30.36
5	4824.00	49.20 PK	74.00	-24.80	1.32 V	290	12.41	36.79
6	4824.00	37.61 AV	54.00	-16.39	1.32 V	290	0.82	36.79

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	29deg. C, 45%RH 965 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	*2437.00	103.13 PK			1.31 H	190	72.67	30.46
2	*2437.00	93.10 AV			1.31 H	190	62.64	30.46
3	4874.00	55.35 PK	74.00	-18.65	1.30 H	107	18.43	36.92
4	4874.00	39.64 AV	54.00	-14.36	1.30 H	107	2.72	36.92
5	7311.00	51.48 PK	74.00	-22.52	1.28 H	196	8.34	43.14
6	7311.00	38.22 AV	54.00	-15.78	1.28 H	196	-4.92	43.14

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	2390.00	59.45 PK	74.00	-14.55	1.01 V	293	29.17	30.28
2	2390.00	50.80 AV	54.00	-3.20	1.01 V	293	20.52	30.28
3	*2437.00	104.43 PK			1.12 V	139	73.97	30.46
4	*2437.00	94.60 AV			1.12 V	139	64.14	30.46
5	2483.50	57.32 PK	74.00	-16.68	1.05 V	285	26.69	30.63
6	2483.50	46.69 AV	54.00	-7.31	1.05 V	285	16.06	30.63
7	4874.00	57.40 PK	74.00	-16.60	1.30 V	300	20.48	36.92
8	4874.00	42.39 AV	54.00	-11.61	1.30 V	300	5.47	36.92
9	7311.00	52.60 PK	74.00	-21.40	1.31 V	296	9.46	43.14
10	7311.00	40.13 AV	54.00	-13.87	1.31 V	296	-3.01	43.14

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	29deg. C, 45%RH 965 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	*2462.00	101.20 PK			1.33 H	193	70.65	30.55
2	*2462.00	91.75 AV			1.33 H	193	61.20	30.55
3	2483.50	64.18 PK	74.00	-9.82	1.35 H	190	33.55	30.63
4	2483.50	49.28 AV	54.00	-4.72	1.35 H	190	18.65	30.63
5	4924.00	46.70 PK	74.00	-27.30	1.07 H	36	9.64	37.06
6	4924.00	35.50 AV	54.00	-18.50	1.07 H	36	-1.56	37.06
7	7386.00	51.28 PK	74.00	-22.72	1.21 H	148	8.15	43.13
8	7386.00	38.44 AV	54.00	-15.56	1.21 H	148	-4.69	43.13

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

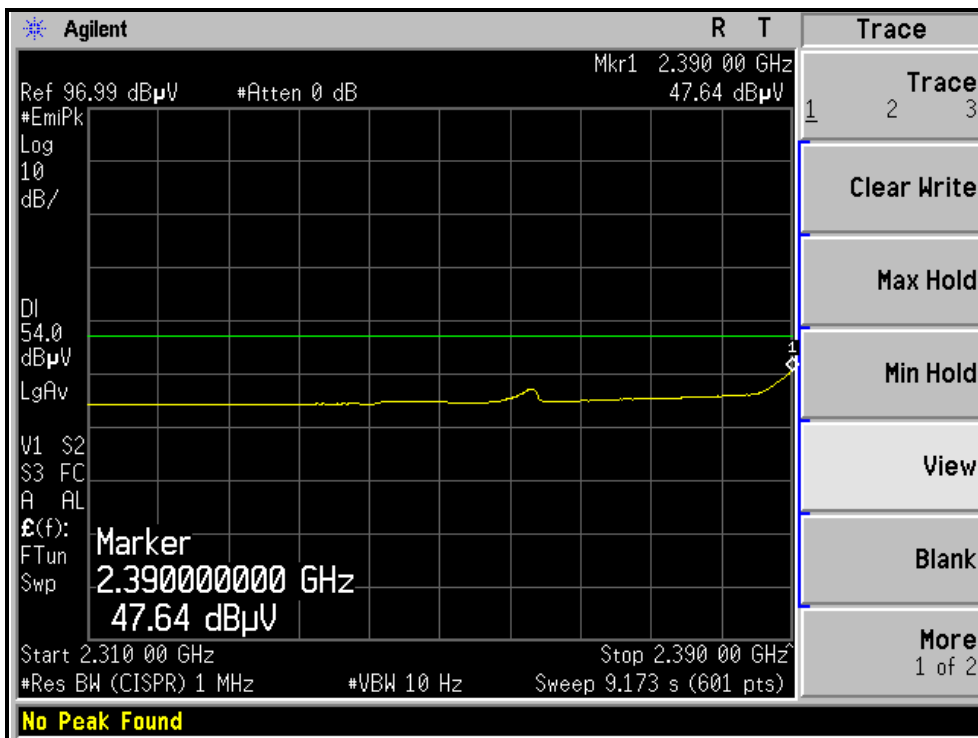
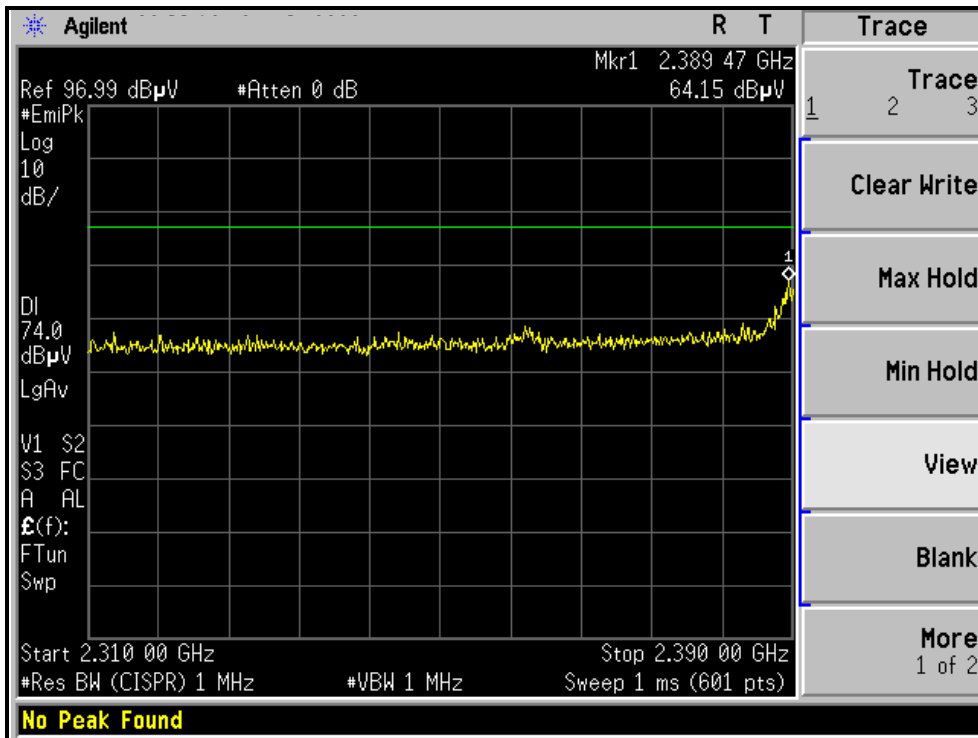
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	104.30 PK			1.05 V	246	73.75	30.55
2	*2462.00	94.84 AV			1.05 V	246	64.29	30.55
3	2483.50	61.79 PK	74.00	-12.21	1.01 V	245	31.16	30.63
4	2483.50	47.69 AV	54.00	-6.31	1.01 V	245	17.06	30.63
5	4924.00	58.74 PK	74.00	-15.26	1.20 V	296	21.68	37.06
6	4924.00	43.51 AV	54.00	-10.49	1.20 V	296	6.45	37.06
7	7386.00	53.54 PK	74.00	-20.46	1.30 V	298	10.41	43.13
8	7386.00	40.26 AV	54.00	-13.74	1.30 V	298	-2.87	43.13

- 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.
 5. “ * “: Fundamental frequency.

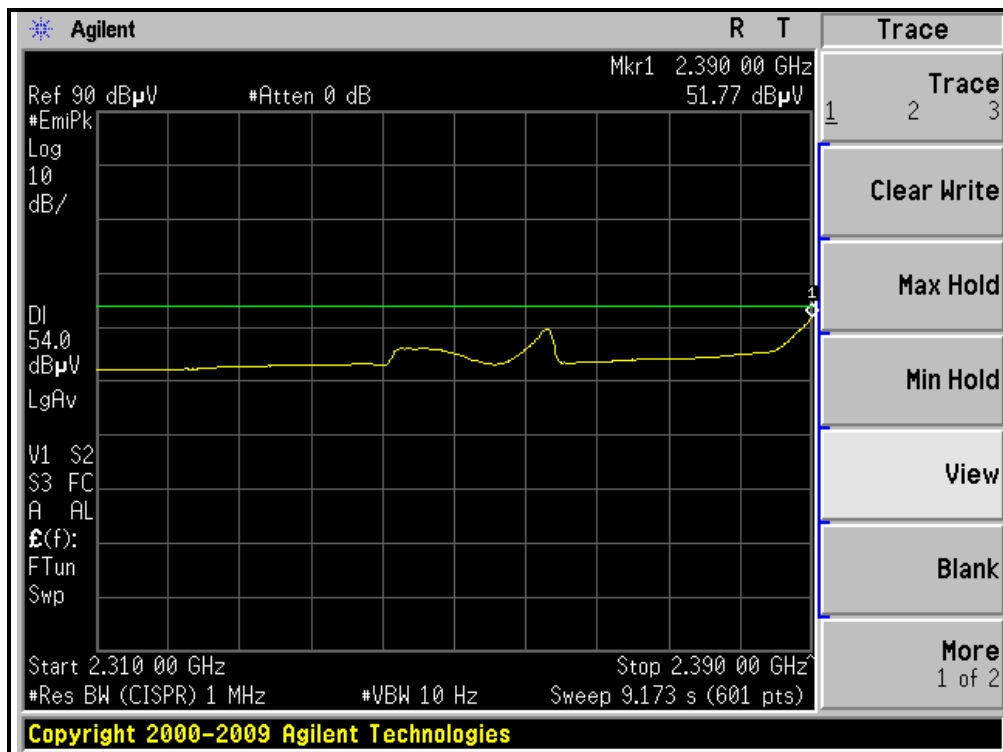
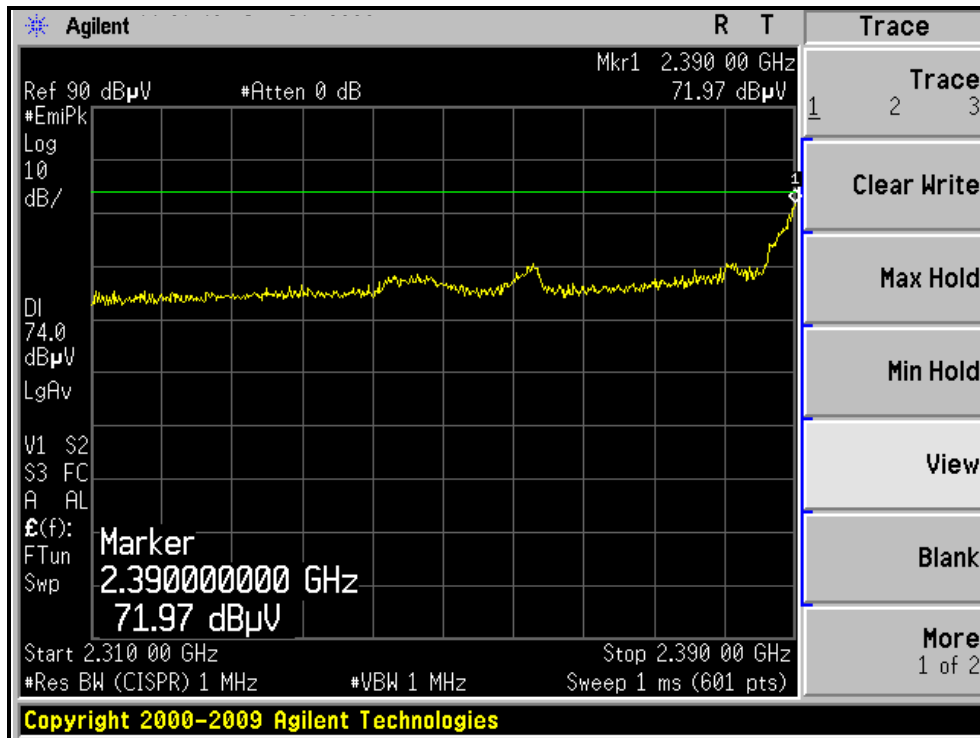


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RESTRICTED BANDEDGE (DRAFT 802.11n (20MHz) MODE, CH1, HORIZONTAL)



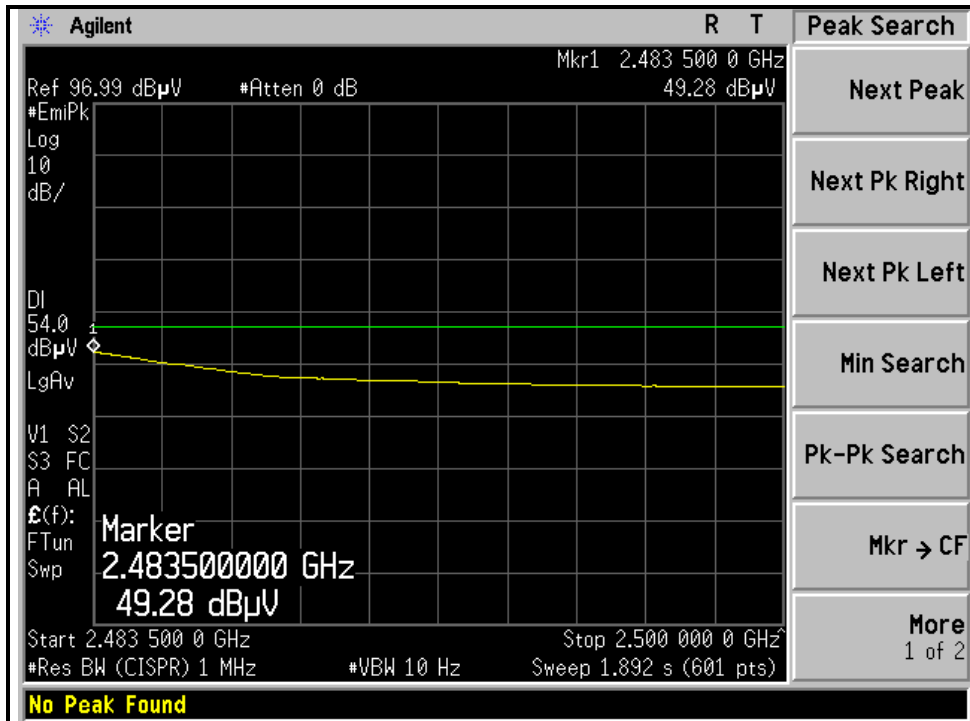
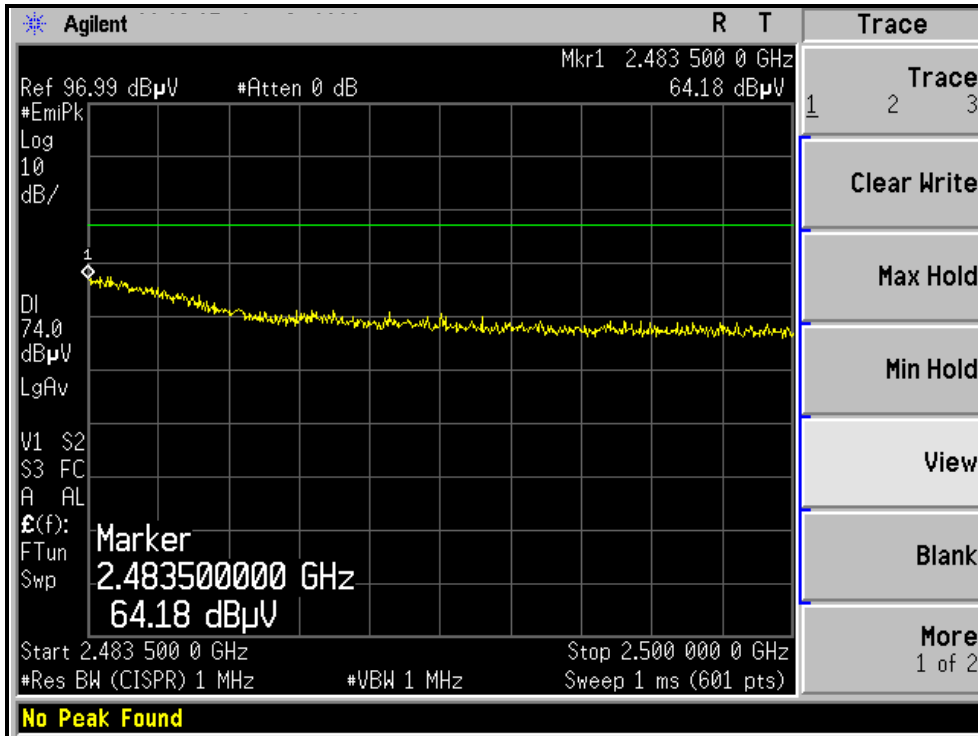
RESTRICTED BANDEDGE (DRAFT 802.11n (20MHz) MODE,CH1, VERTICAL)





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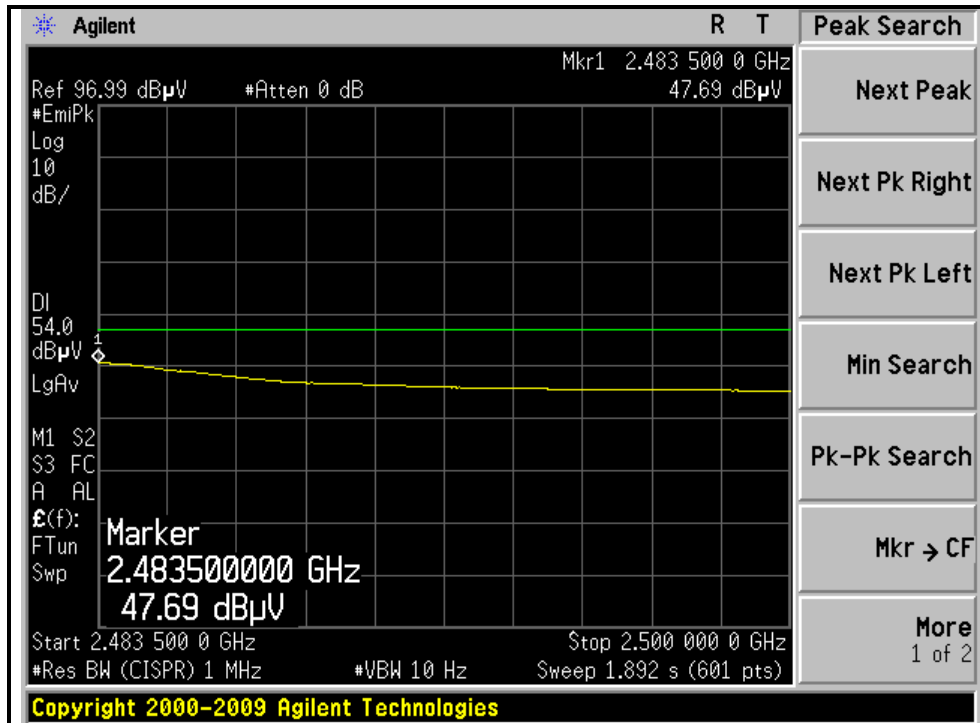
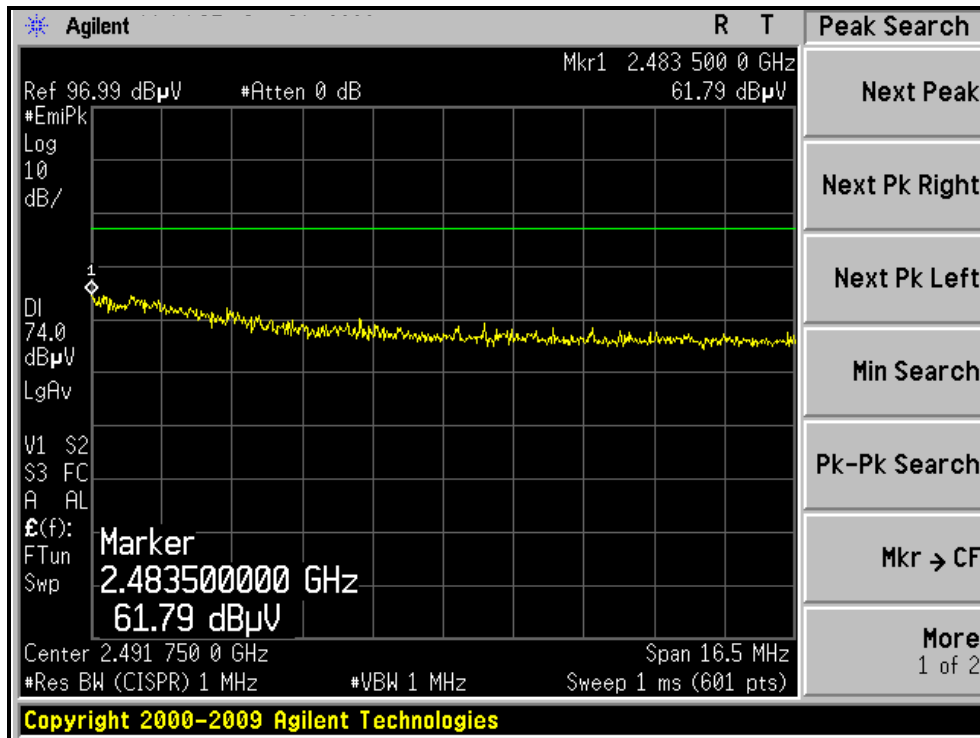
RESTRICTED BANDEDGE (DRAFT 802.11n (20MHz) MODE, CH11, HORIZONTAL)





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RESTRICTED BANDEDGE (DRAFT 802.11n (20MHz) MODE,CH11, VERTICAL)





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DRAFT 802.11n (40MHz) OFDM MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	29deg. C, 45%RH 965 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	2390.00	64.78 PK	74.00	-9.22	1.31 H	190	34.50	30.28
2	2390.00	51.24 AV	54.00	-2.76	1.31 H	190	20.96	30.28
3	*2422.00	98.08 PK			1.33 H	193	67.68	30.40
4	*2422.00	88.90 AV			1.33 H	193	58.50	30.40
5	4844.00	44.83 PK	74.00	-29.17	1.02 H	137	7.99	36.84
6	4844.00	32.10 AV	54.00	-21.90	1.02 H	137	-4.74	36.84
7	7266.00	50.93 PK	74.00	-23.07	1.04 H	129	7.79	43.14
8	7266.00	37.68 AV	54.00	-16.32	1.04 H	129	-5.46	43.14

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	2390.00	67.61 PK	74.00	-6.39	1.00 V	289	37.33	30.28
2	2390.00	52.93 AV	54.00	-1.07	1.00 V	289	22.65	30.28
3	*2422.00	101.84 PK			1.09 V	269	71.44	30.40
4	*2422.00	91.96 AV			1.09 V	269	61.56	30.40
5	4844.00	44.90 PK	74.00	-29.10	1.00 V	132	8.06	36.84
6	4844.00	32.90 AV	54.00	-21.10	1.00 V	132	-3.94	36.84
7	7266.00	51.60 PK	74.00	-22.40	1.00 V	141	8.46	43.14
8	7266.00	37.10 AV	54.00	-16.90	1.00 V	141	-6.04	43.14

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 4	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	29deg. C, 45%RH 965 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	*2437.00	100.80 PK			1.34 H	193	70.34	30.46
2	*2437.00	92.22 AV			1.34 H	193	61.76	30.46
3	4874.00	49.70 PK	74.00	-24.30	1.03 H	290	12.78	36.92
4	4874.00	36.40 AV	54.00	-17.60	1.03 H	290	-0.52	36.92
5	7311.00	51.40 PK	74.00	-22.60	1.31 H	224	8.26	43.14
6	7311.00	38.90 AV	54.00	-15.10	1.31 H	224	-4.24	43.14
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	2390.00	62.32 PK	74.00	-11.68	1.00 V	281	32.04	30.28
2	2390.00	50.10 AV	54.00	-3.90	1.00 V	281	19.82	30.28
3	*2437.00	102.11 PK			1.08 V	248	71.65	30.46
4	*2437.00	92.67 AV			1.08 V	248	62.21	30.46
5	2483.50	63.02 PK	74.00	-10.98	1.00 V	291	32.39	30.63
6	2483.50	50.92 AV	54.00	-3.08	1.00 V	291	20.29	30.63
7	4874.00	51.47 PK	74.00	-22.53	1.34 V	298	14.55	36.92
8	4874.00	40.31 AV	54.00	-13.69	1.34 V	298	3.39	36.92
9	7311.00	52.40 PK	74.00	-21.60	1.39 V	260	9.26	43.14
10	7311.00	39.60 AV	54.00	-14.40	1.39 V	260	-3.54	43.14

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 7	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	29deg. C, 45%RH 965 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	*2452.00	99.30 PK			1.31 H	190	68.79	30.51
2	*2452.00	90.60 AV			1.31 H	190	60.09	30.51
3	2483.50	61.67 PK	74.00	-12.33	1.33 H	189	31.04	30.63
4	2483.50	48.71 AV	54.00	-5.29	1.33 H	189	18.08	30.63
5	4904.00	46.30 PK	74.00	-27.70	1.21 H	133	9.30	37.00
6	4904.00	34.20 AV	54.00	-19.80	1.21 H	133	-2.80	37.00
7	7356.00	49.50 PK	74.00	-24.50	1.08 H	271	6.37	43.13
8	7356.00	37.90 AV	54.00	-16.10	1.08 H	271	-5.23	43.13

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

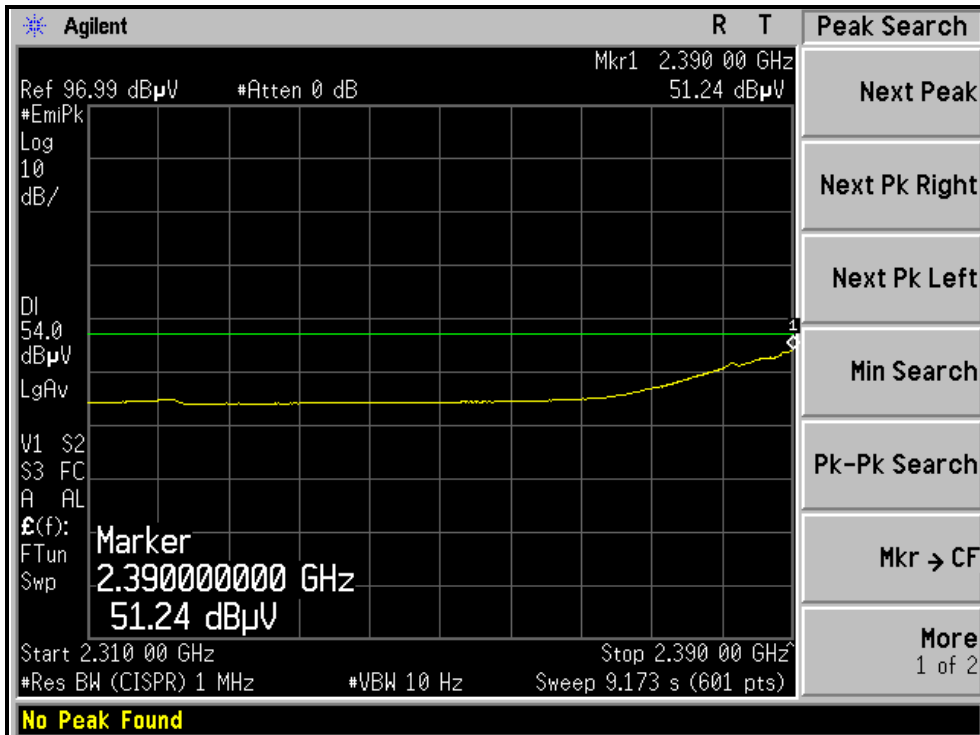
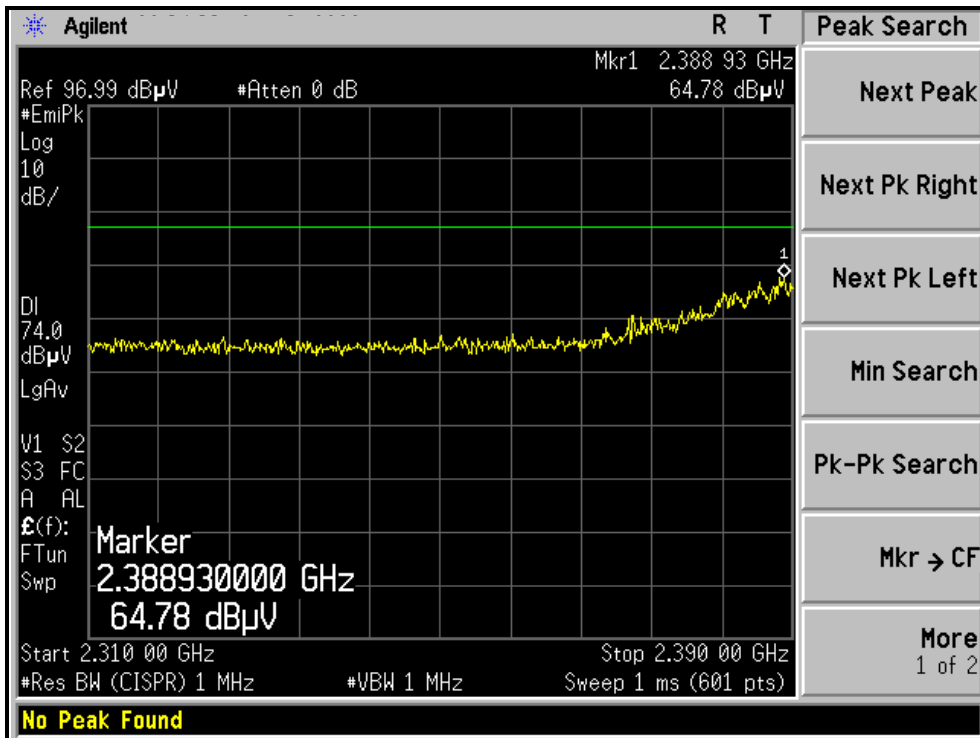
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1	*2452.00	101.84 PK			1.04 V	271	71.33	30.51
2	*2452.00	92.77 AV			1.04 V	271	62.26	30.51
3	2483.50	66.88 PK	74.00	-7.12	1.02 V	259	36.25	30.63
4	2483.50	52.06 AV	54.00	-1.94	1.02 V	259	21.43	30.63
5	4904.00	47.63 PK	74.00	-26.37	1.30 V	21	10.63	37.00
6	4904.00	36.38 AV	54.00	-17.62	1.30 V	21	-0.62	37.00
7	7356.00	49.65 PK	74.00	-24.35	1.07 V	291	6.52	43.13
8	7356.00	38.10 AV	54.00	-15.90	1.07 V	291	-5.03	43.13

- 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.
 5. “ * “: Fundamental frequency.



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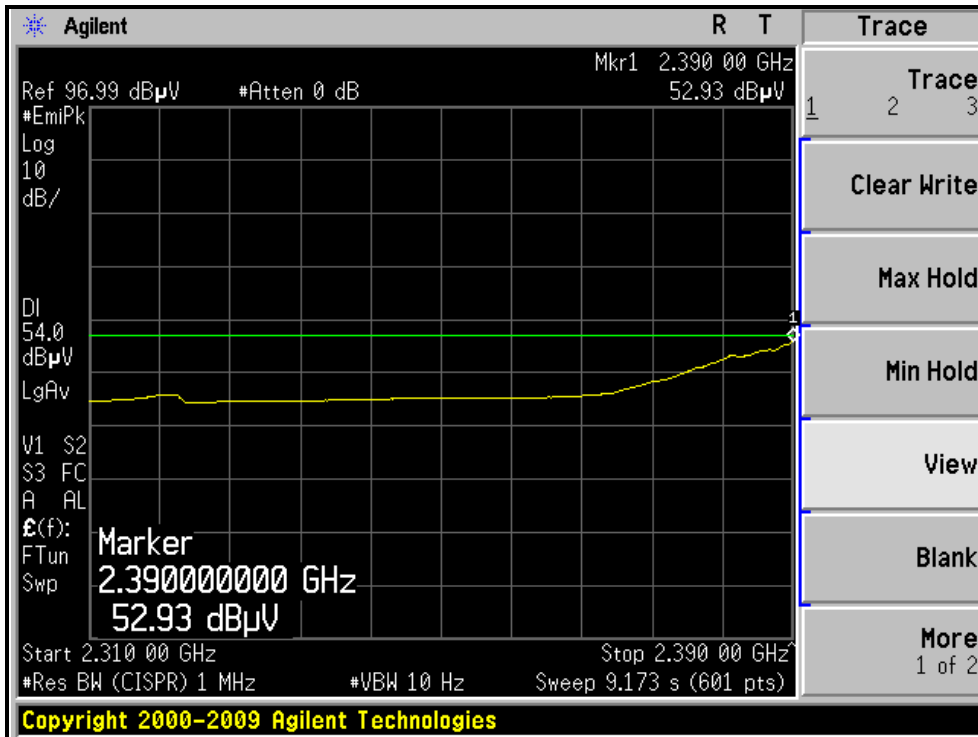
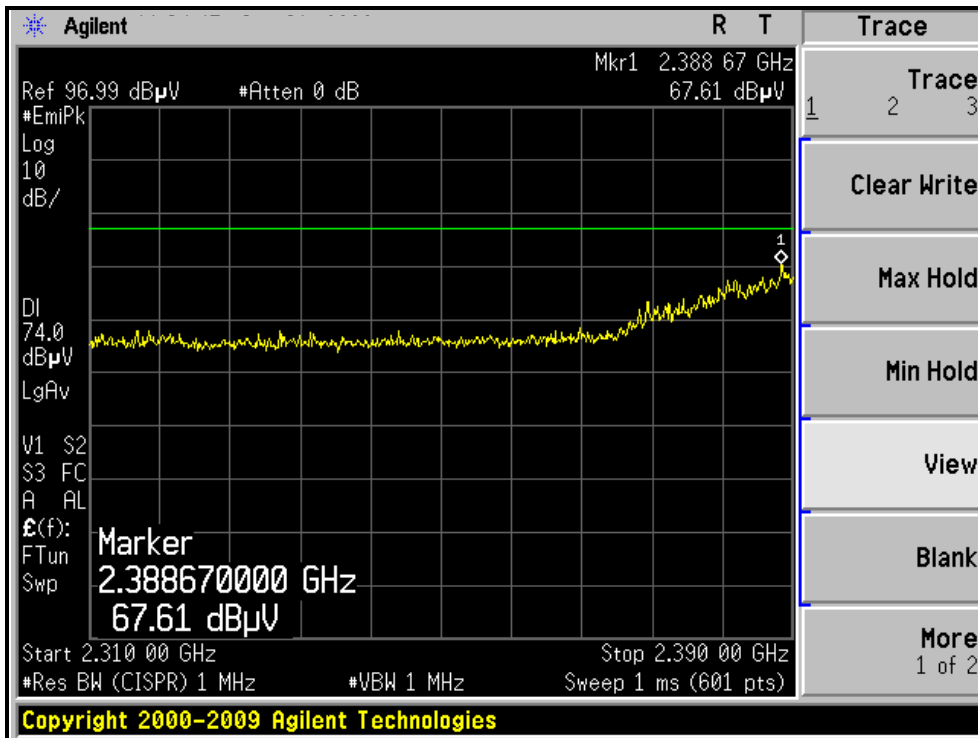
RESTRICTED BANDEDGE (DRAFT 802.11n (40MHz) MODE, CH1, HORIZONTAL)





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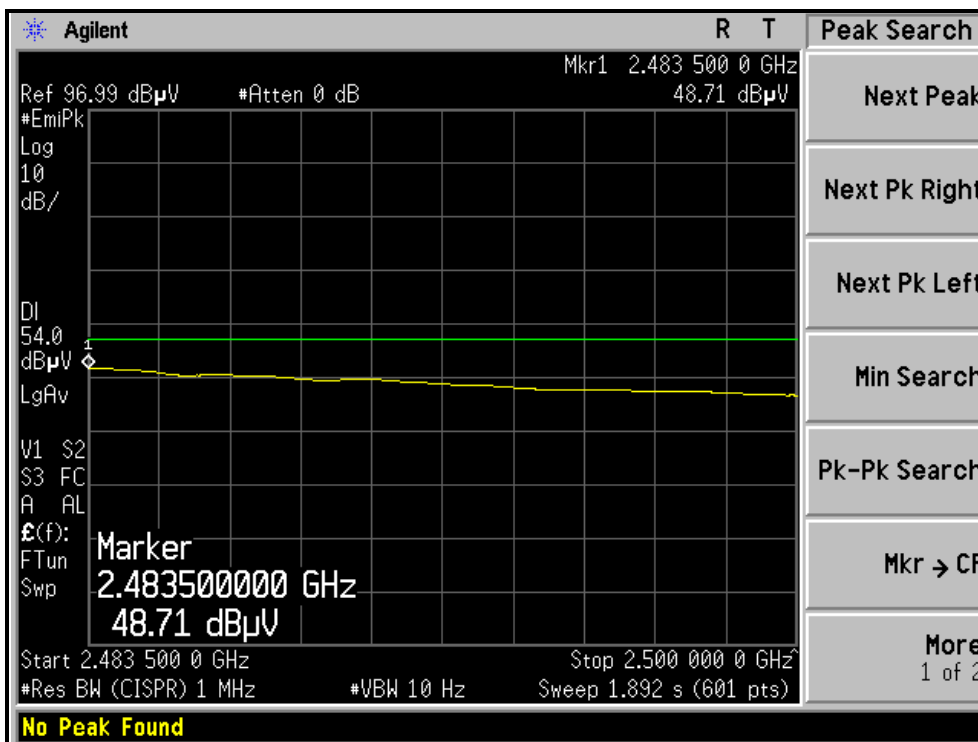
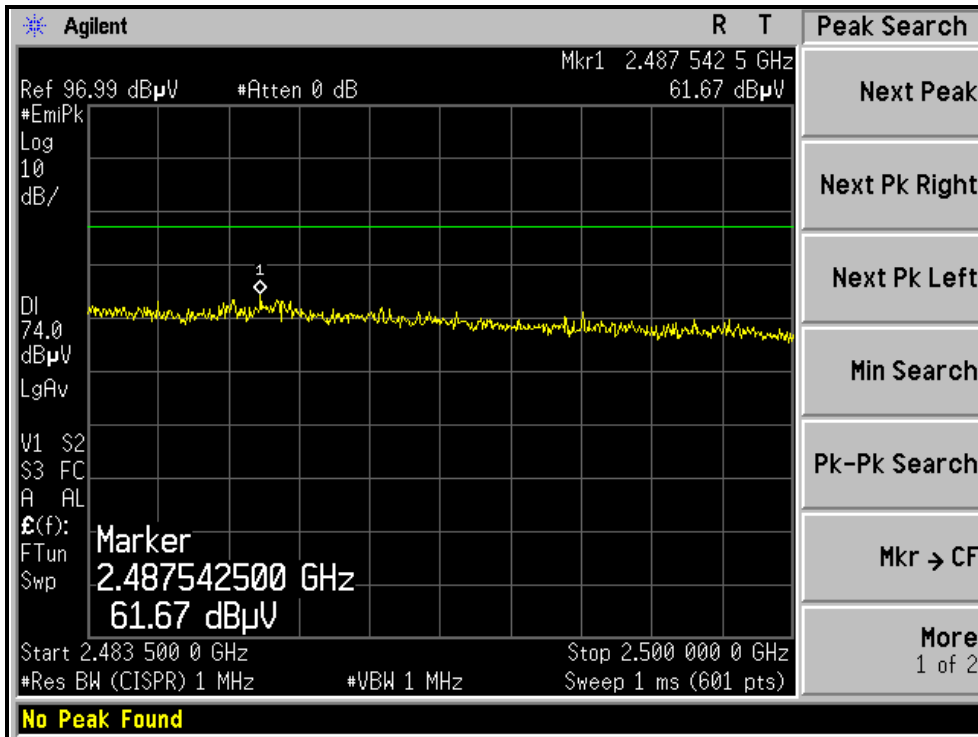
RESTRICTED BANDEDGE (DRAFT 802.11n (40MHz) MODE,CH1, VERTICAL)





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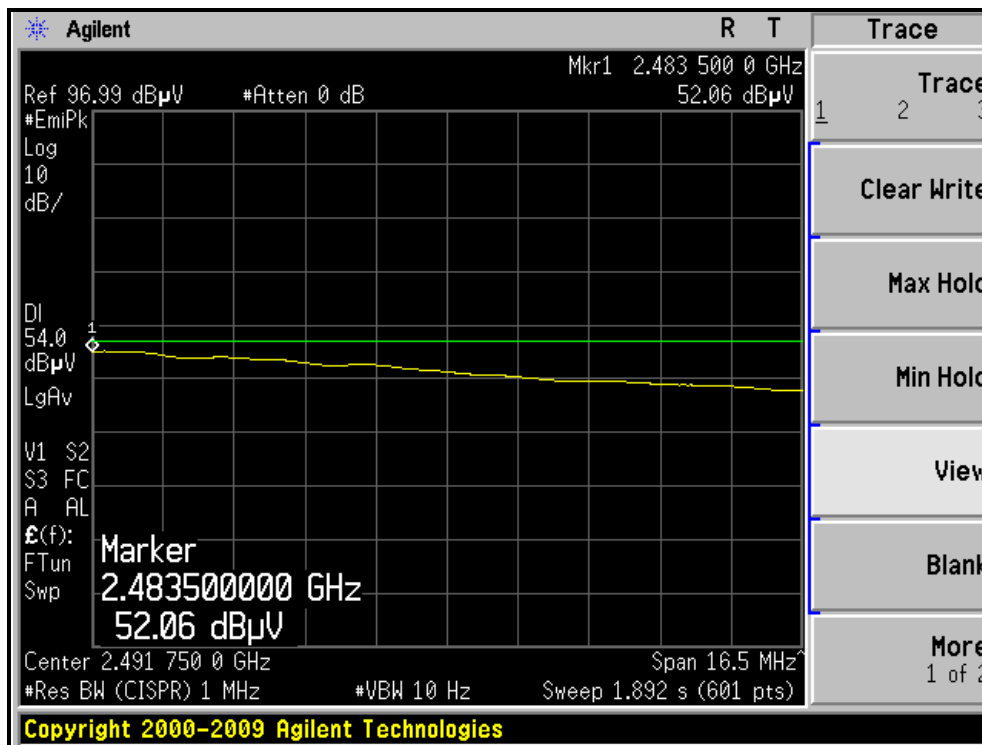
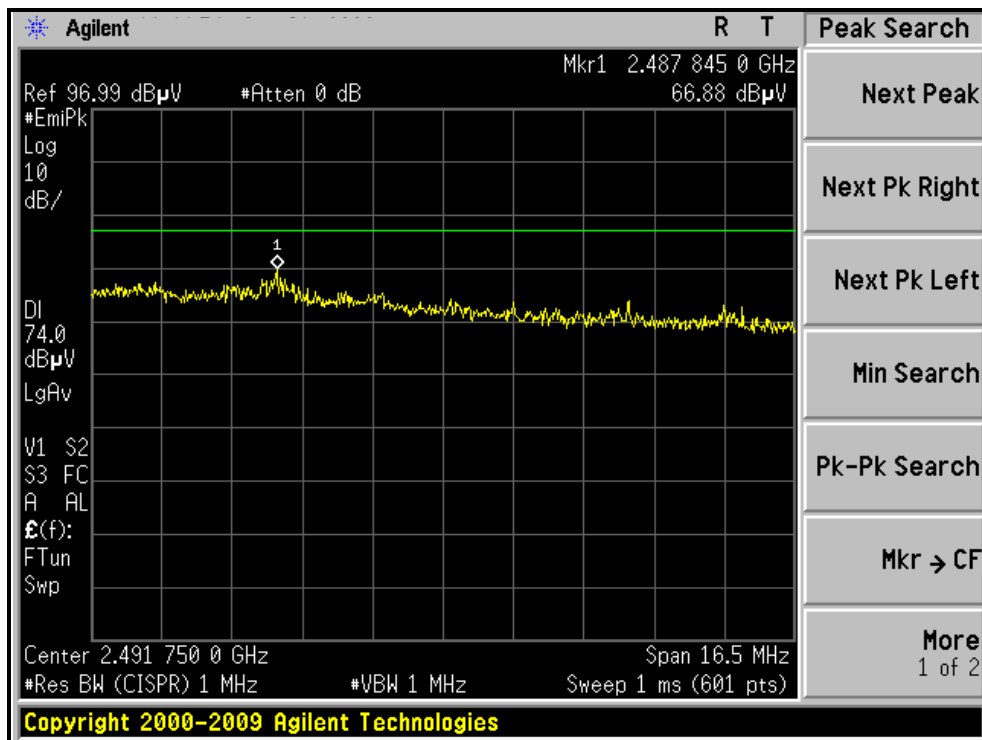
RESTRICTED BANDEDGE (DRAFT 802.11n (40MHz) MODE,CH7, HORIZONTAL)





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RESTRICTED BANDEDGE (DRAFT 802.11n (40MHz) MODE,CH7, VERTICAL)





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4.3 6dB BANDWIDTH MEASUREMENT

4.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
R&S SPECTRUM ANALYZER	FSP40	100037	Aug. 03, 2009	Aug. 02, 2010

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

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. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

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 lowest, middle and highest channel frequencies individually.



A D T

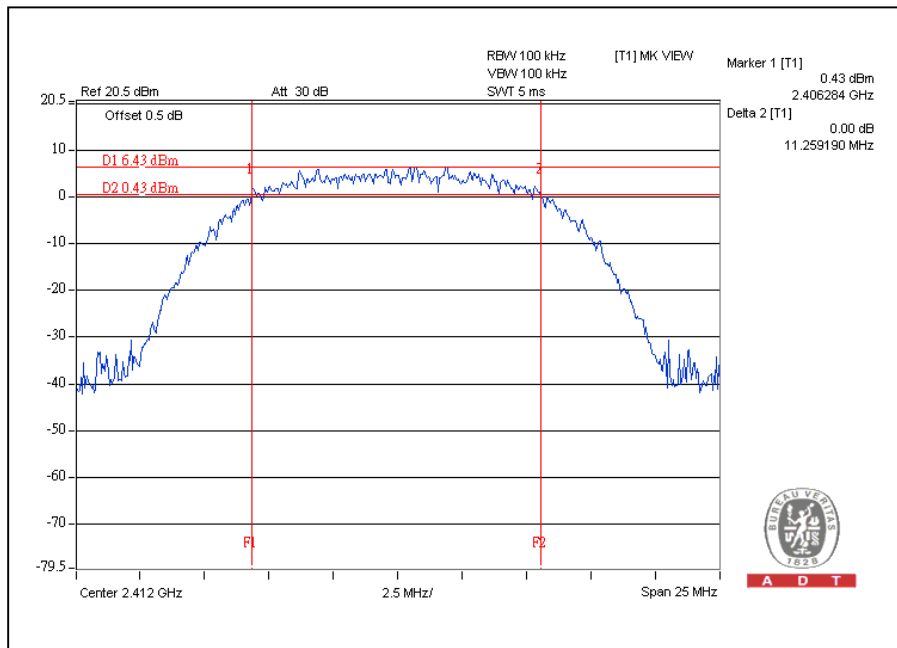
4.3.7 TEST RESULTS

802.11b DSSS MODULATION:

MODULATION TYPE	DBPSK	TRANSFER RATE	1Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 60%RH, 965hPa
TESTED BY	Phoenix Huang		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	11.26	0.5	PASS
6	2437	11.26	0.5	PASS
11	2462	11.26	0.5	PASS

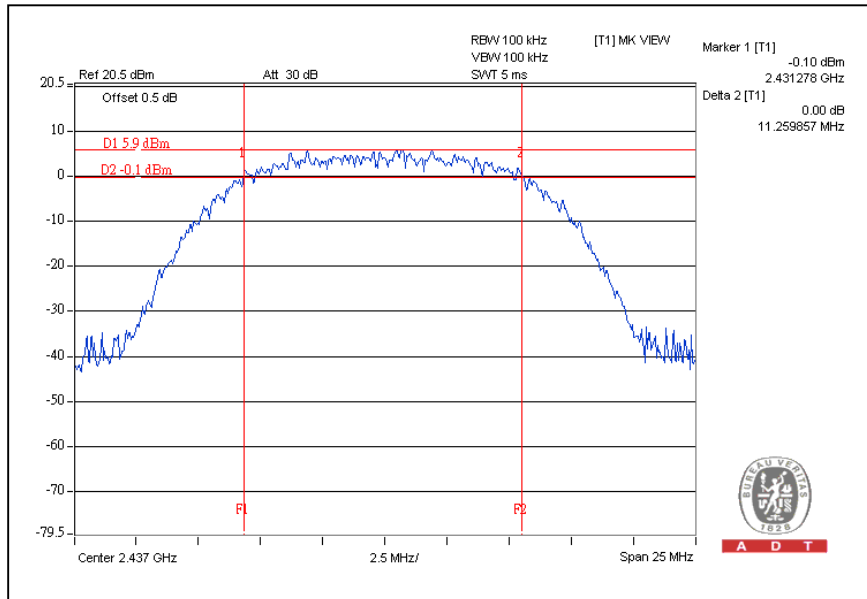
CH1



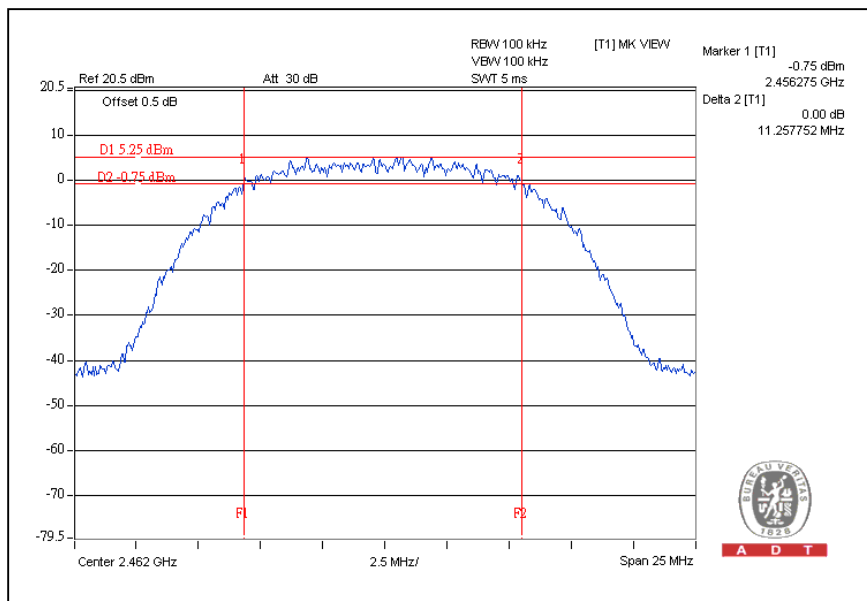


A D T

CH6



CH11





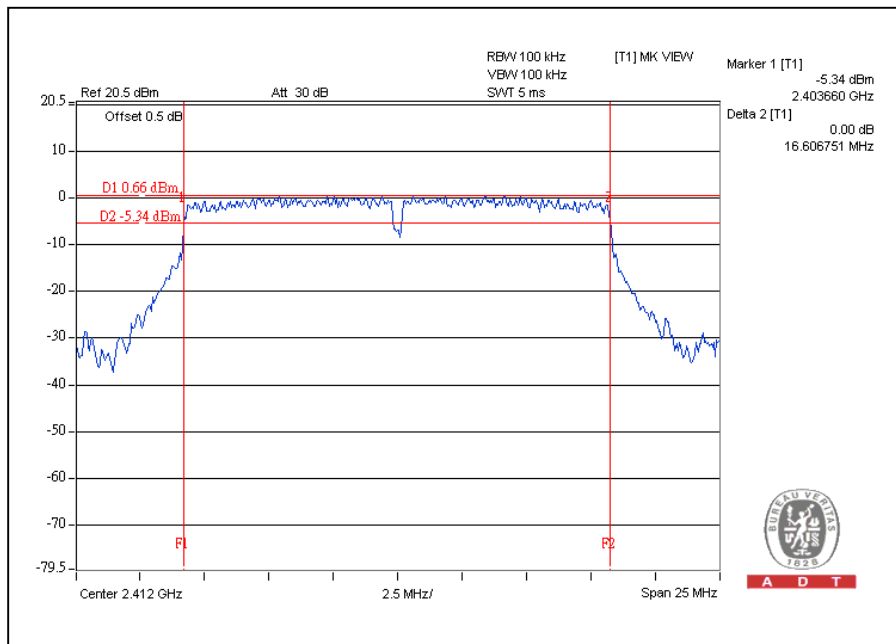
A D T

802.11g OFDM MODULATION:

MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 60%RH, 965hPa
TESTED BY	Phoenix Huang		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	16.61	0.5	PASS
6	2437	16.59	0.5	PASS
11	2462	16.56	0.5	PASS

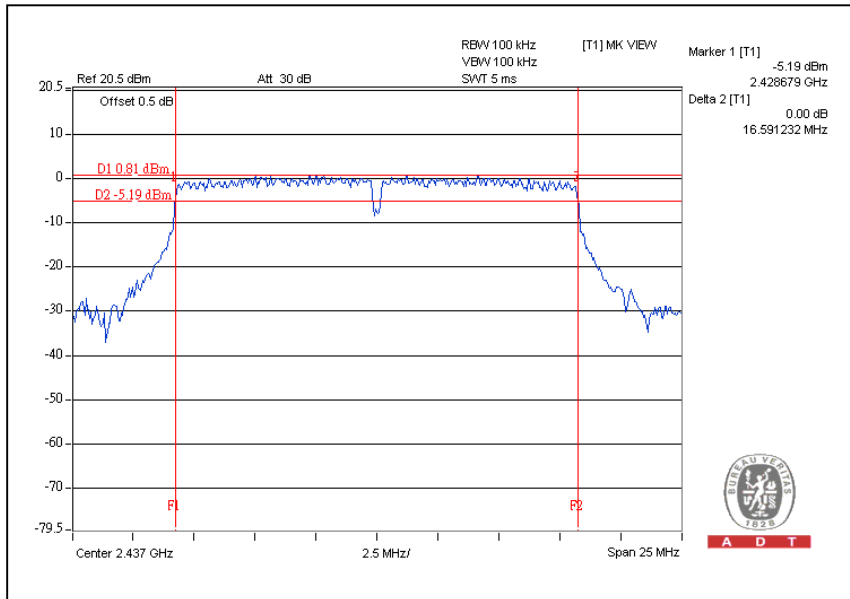
CH1



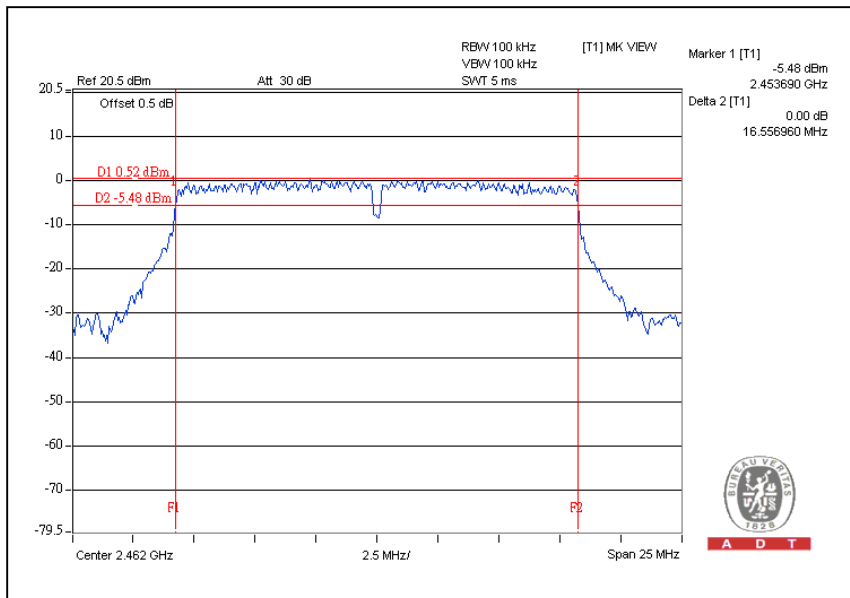


A D T

CH6



CH11





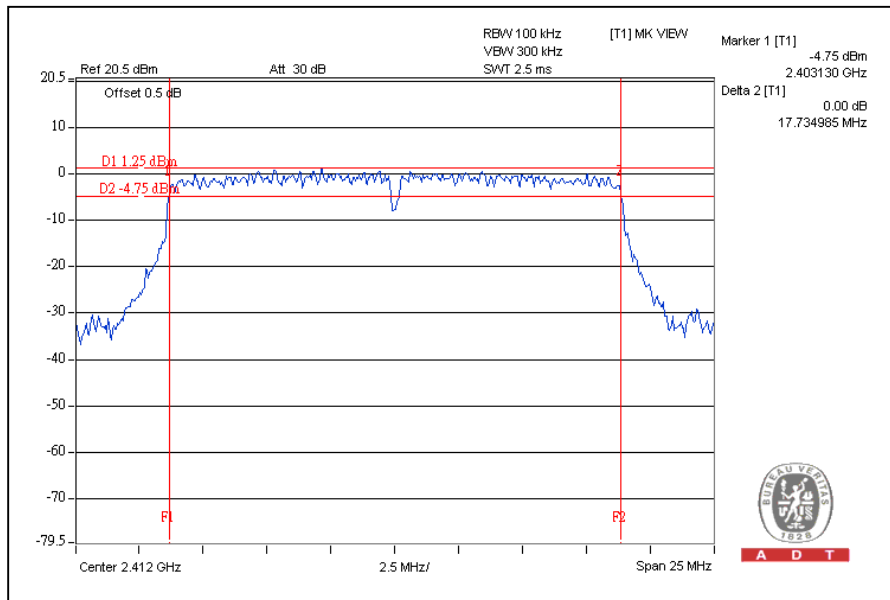
A D T

DRAFT 802.11n (20MHz) OFDM MODULATION:

MODULATION TYPE	BPSK	TRANSFER RATE	6.5Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 60%RH, 965hPa
TESTED BY	Phoenix Huang		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	17.73	0.5	PASS
6	2437	17.74	0.5	PASS
11	2462	17.76	0.5	PASS

CH1

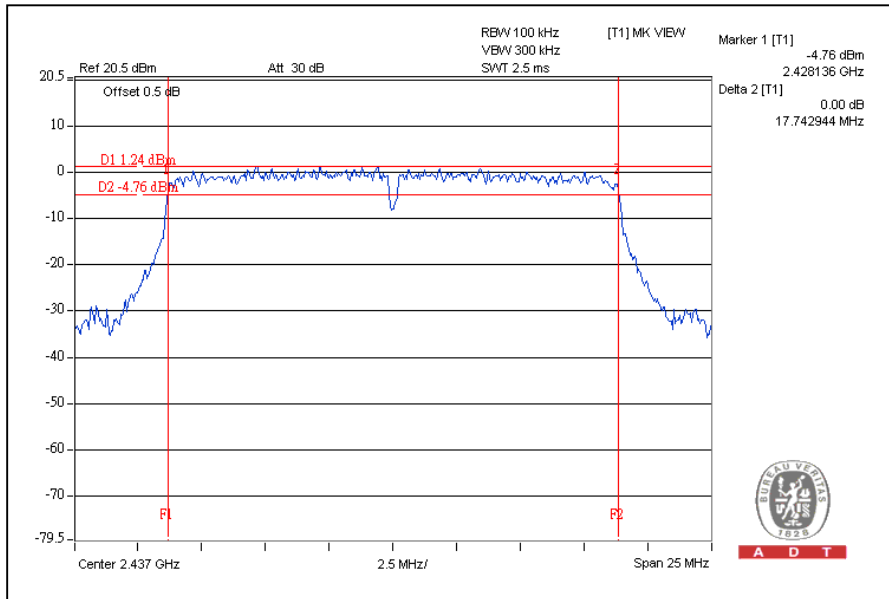


A D T

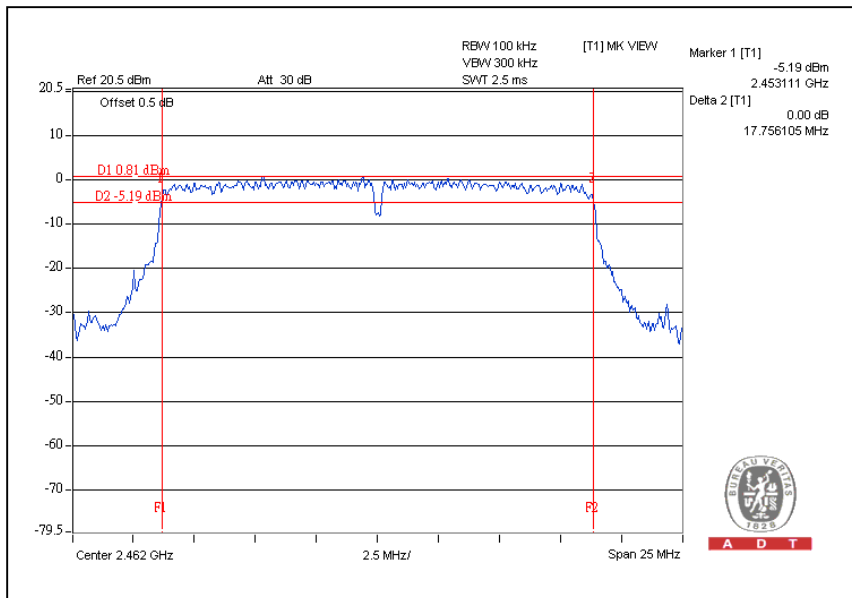


A D T

CH6



CH11





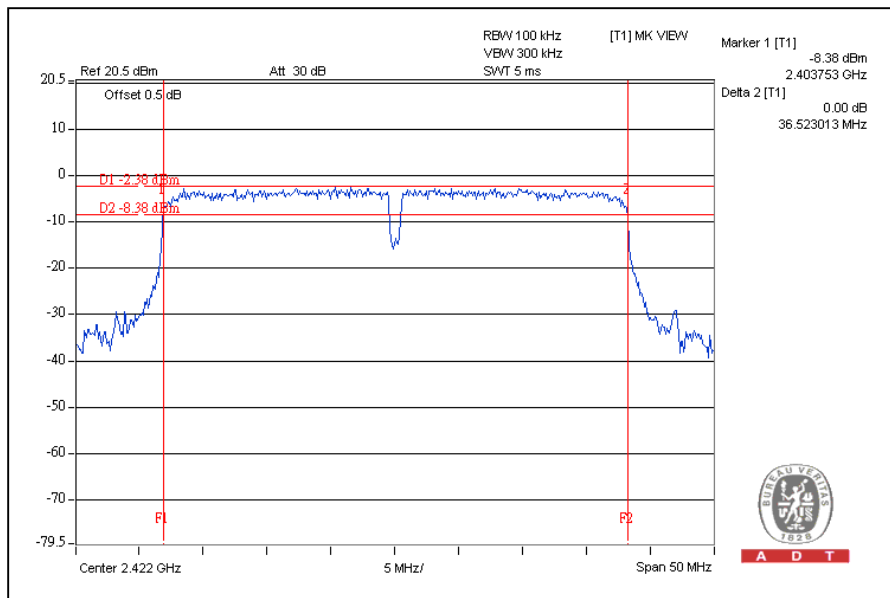
A D T

DRAFT 802.11n (40MHz) OFDM MODULATION:

MODULATION TYPE	BPSK	TRANSFER RATE	6.5Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 60%RH, 965hPa
TESTED BY	Phoenix Huang		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2422	36.52	0.5	PASS
4	2437	36.51	0.5	PASS
7	2452	36.52	0.5	PASS

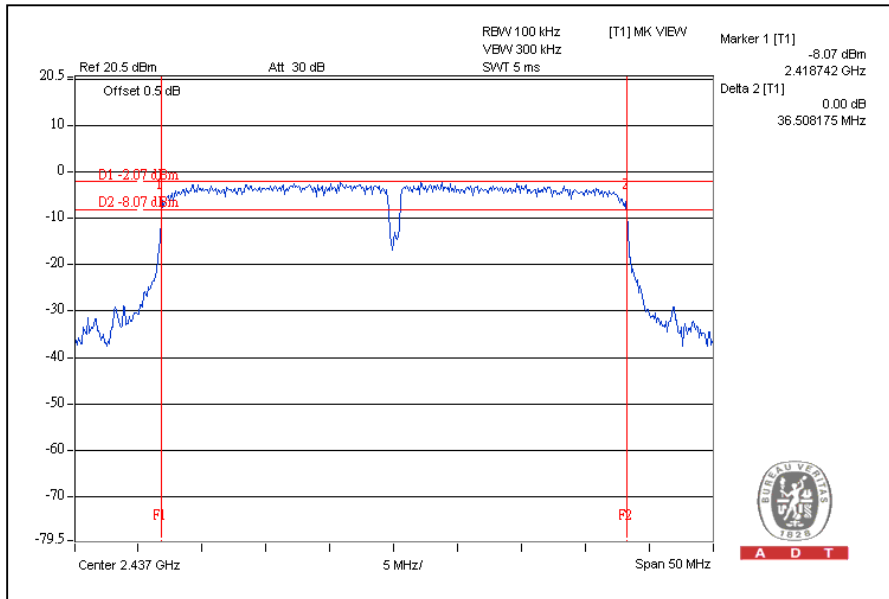
CH1



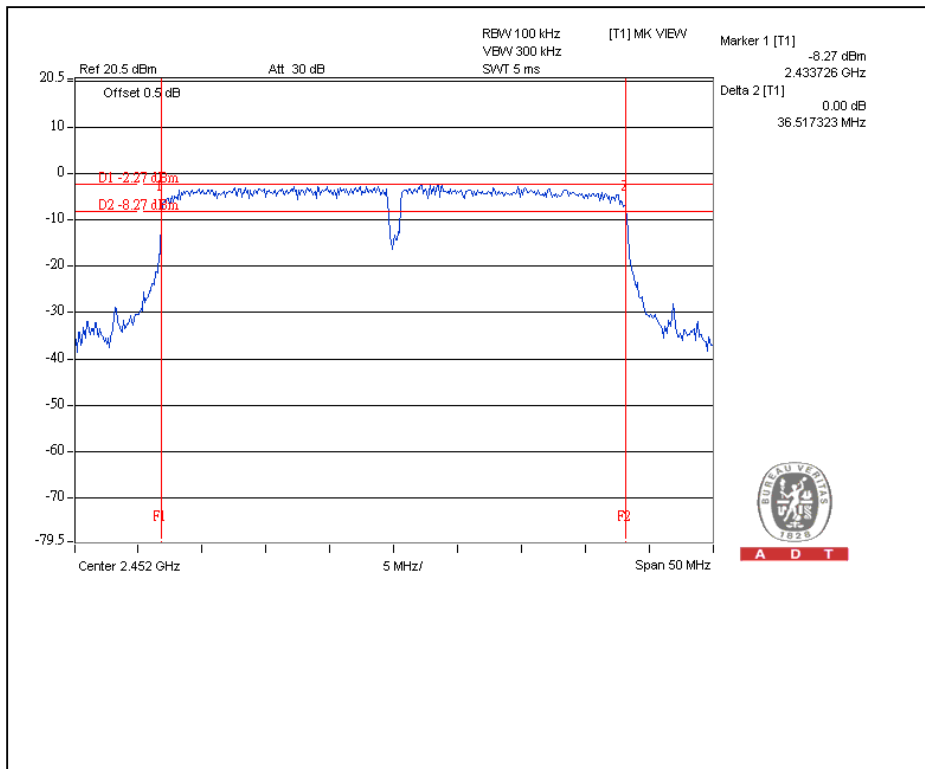


A D T

CH4



CH7



4.4 MAXIMUM PEAK OUTPUT POWER

4.4.1 LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

4.4.2 INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Anritsu Power Meter	ML2495A	0824006	April 25, 2009	April 24, 2010
Pulse Power Sensor	MA2411B	0738172	April 25, 2009	April 24, 2010

NOTE:

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

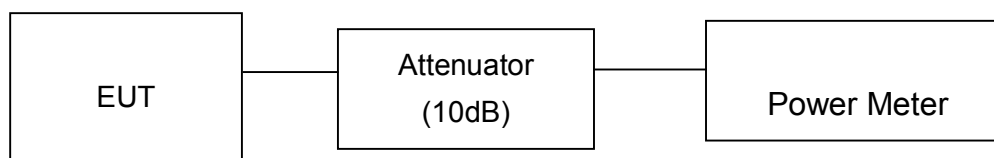
4.4.3 TEST PROCEDURES

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 power level.

4.4.4 DEVIATION FROM TEST STANDARD

No deviation

4.4.5 TEST SETUP



4.4.6 EUT OPERATING CONDITIONS

Same as Item 4.3.6



A D T

4.4.7 TEST RESULTS

802.11b DSSS MODULATION:

MODULATION TYPE	DBPSK	TRANSFER RATE	1Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 60%RH, 965hPa
TESTED BY	Phoenix Huang		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
1	2412	113.763	20.56	30	PASS
6	2437	104.713	20.20	30	PASS
11	2462	93.111	19.69	30	PASS

802.11g OFDM MODULATION:

MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 60%RH, 965hPa
TESTED BY	Phoenix Huang		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
1	2412	289.068	24.61	30	PASS
6	2437	301.995	24.80	30	PASS
11	2462	295.121	24.70	30	PASS



A D T

DRAFT 802.11n (20MHz) OFDM MODULATION:

MODULATION TYPE	BPSK	TRANSFER RATE	6.5Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 60%RH, 965hPa
TESTED BY	Phoenix Huang		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
1	2412	278.612	24.45	30	PASS
6	2437	295.121	24.70	30	PASS
11	2462	283.792	24.53	30	PASS

DRAFT 802.11n (40MHz) OFDM MODULATION:

MODULATION TYPE	BPSK	TRANSFER RATE	6.5Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 60%RH, 965hPa
TESTED BY	Phoenix Huang		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
1	2422	310.456	24.92	30	PASS
4	2437	313.329	24.96	30	PASS
7	2452	305.492	24.85	30	PASS



A D T

4.5 POWER SPECTRAL DENSITY MEASUREMENT

4.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

4.5.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
R&S SPECTRUM ANALYZER	FSP40	100037	Aug. 03, 2009	Aug. 02, 2010

NOTE:

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

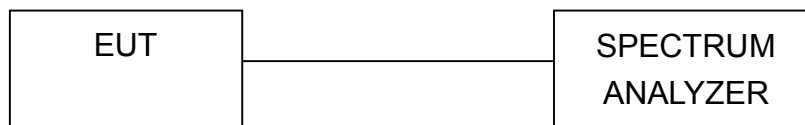
4.5.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3kHz RBW and 30kHz VBW, set sweep time = span/3kHz. The power spectral density was measured and recorded. The sweep time is allowed to be longer than span/3kHz for a full response of the mixer in the spectrum analyzer.

4.5.4 DEVIATION FROM TEST STANDARD

No deviation

4.5.5 TEST SETUP



4.5.6 EUT OPERATING CONDITION

Same as Item 4.3.6



A D T

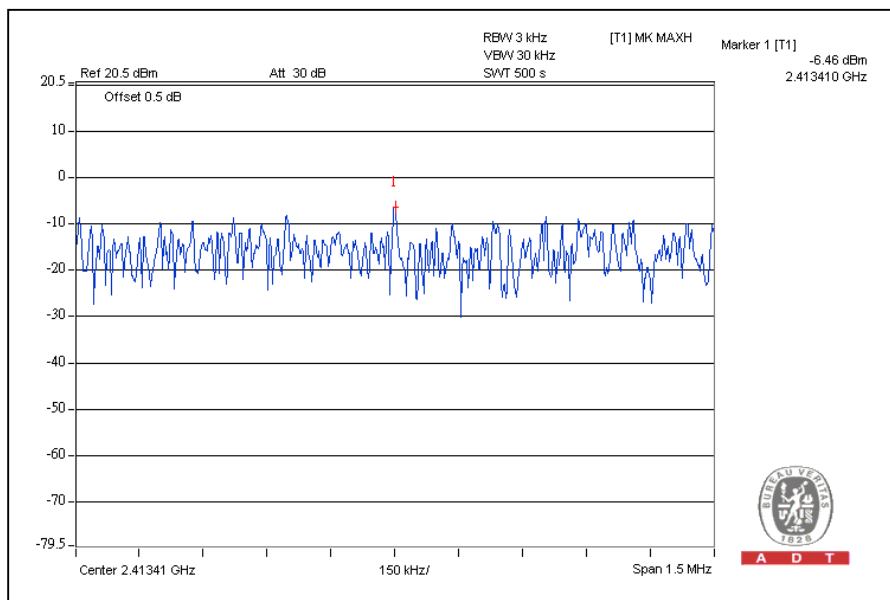
4.5.7 TEST RESULTS

802.11b DSSS MODULATION:

MODULATION TYPE	DBPSK	TRANSFER RATE	1Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 60%RH, 965hPa
TESTED BY	Phoenix Huang		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS / FAIL
1	2412	-6.46	8	PASS
6	2437	-6.96	8	PASS
11	2462	-7.55	8	PASS

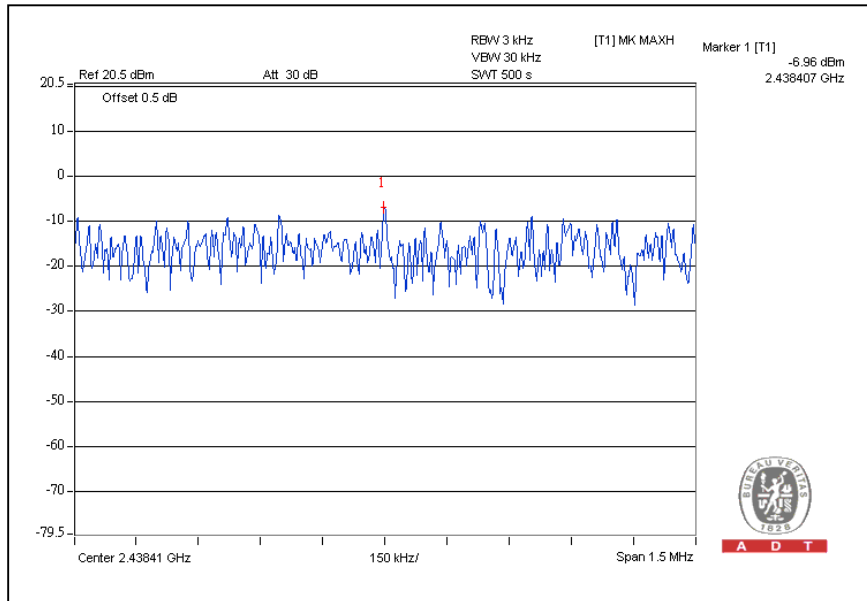
CH1



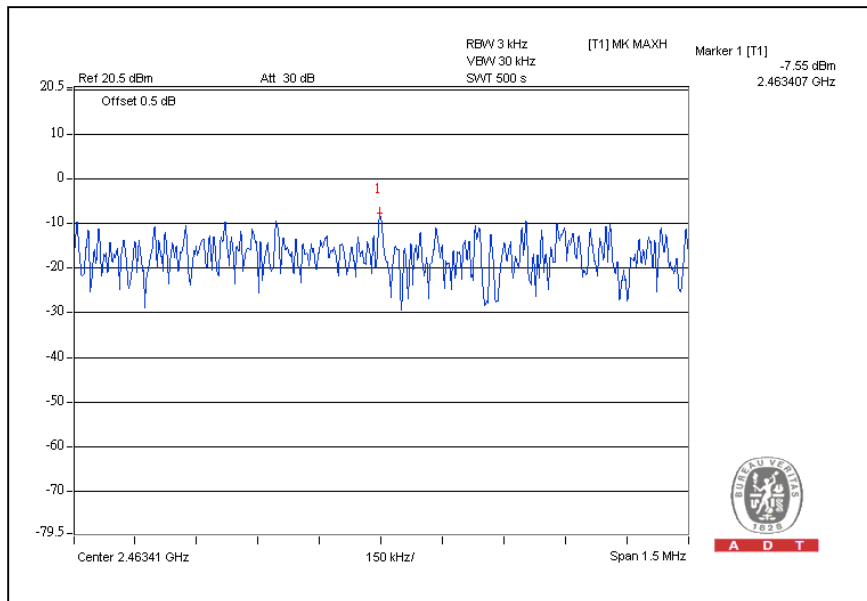


A D T

CH6



CH11





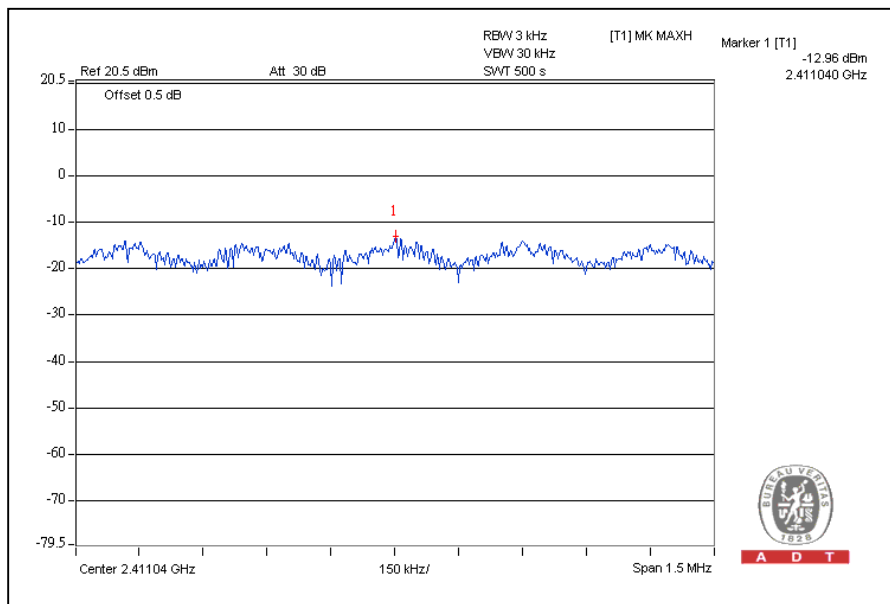
A D T

802.11g OFDM MODULATION:

MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 60%RH, 965hPa
TESTED BY	Phoenix Huang		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS / FAIL
1	2412	-12.96	8	PASS
6	2437	-12.75	8	PASS
11	2462	-13.23	8	PASS

CH1

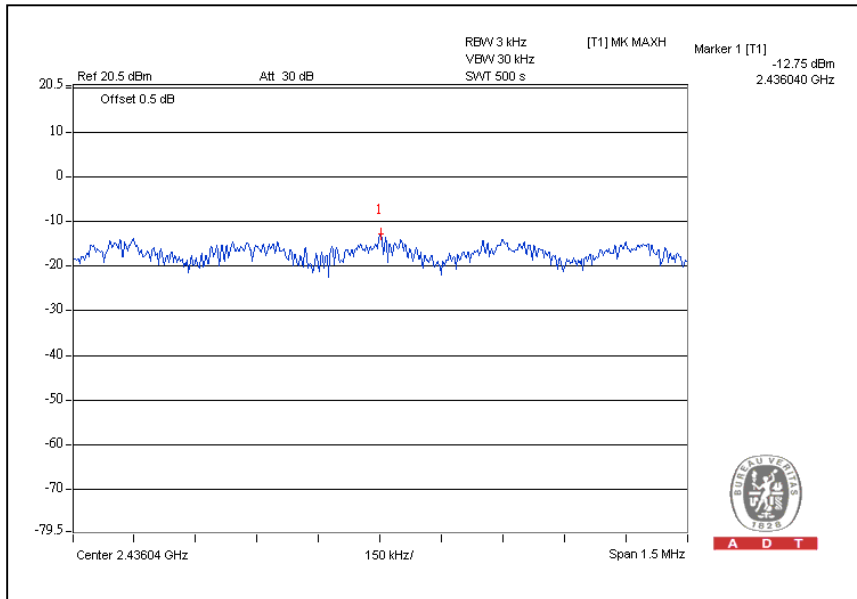


A D T

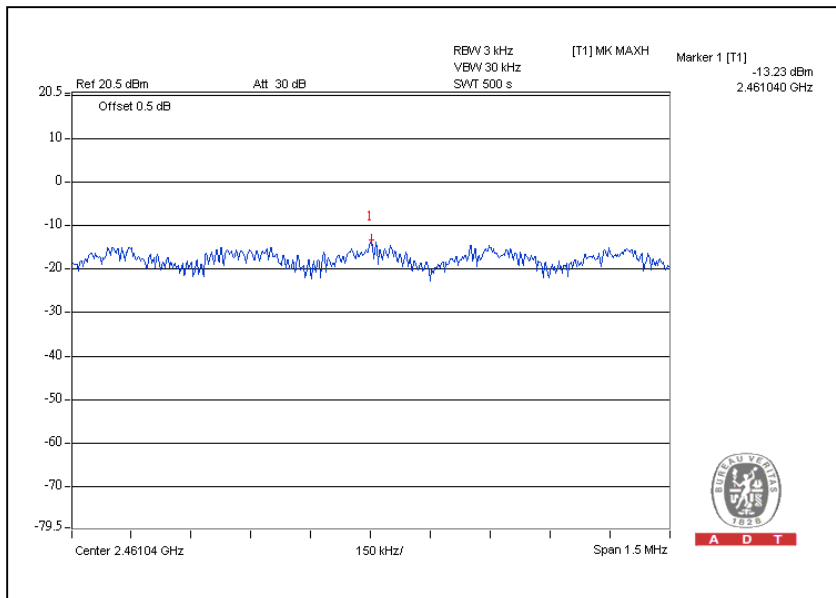


A D T

CH6



CH11





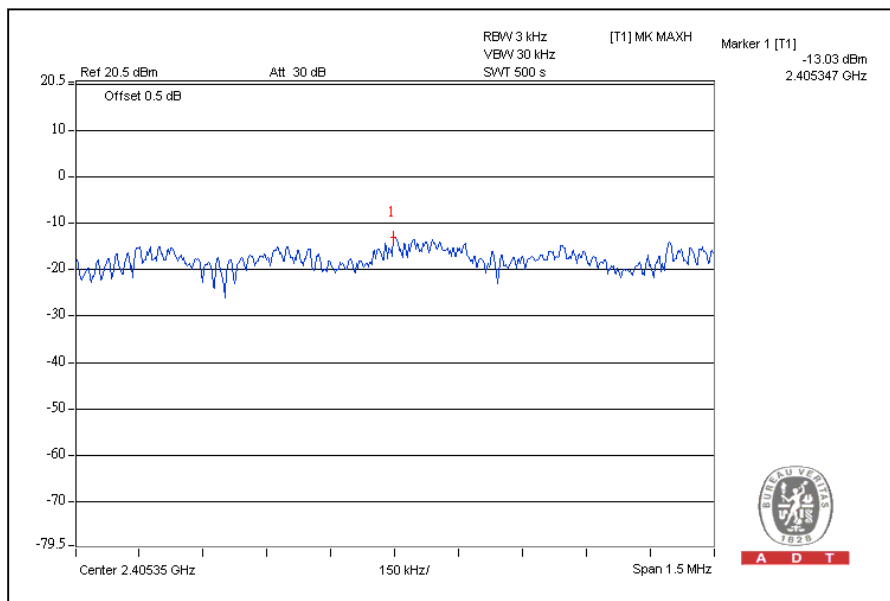
A D T

DRAFT 802.11n (20MHz) OFDM MODULATION:

MODULATION TYPE	BPSK	TRANSFER RATE	6.5Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25 deg.C, 62%RH, 965hPa
TESTED BY	Phoenix Huang		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS / FAIL
1	2412	-13.03	8	PASS
6	2437	-12.68	8	PASS
11	2462	-13.22	8	PASS

CH1

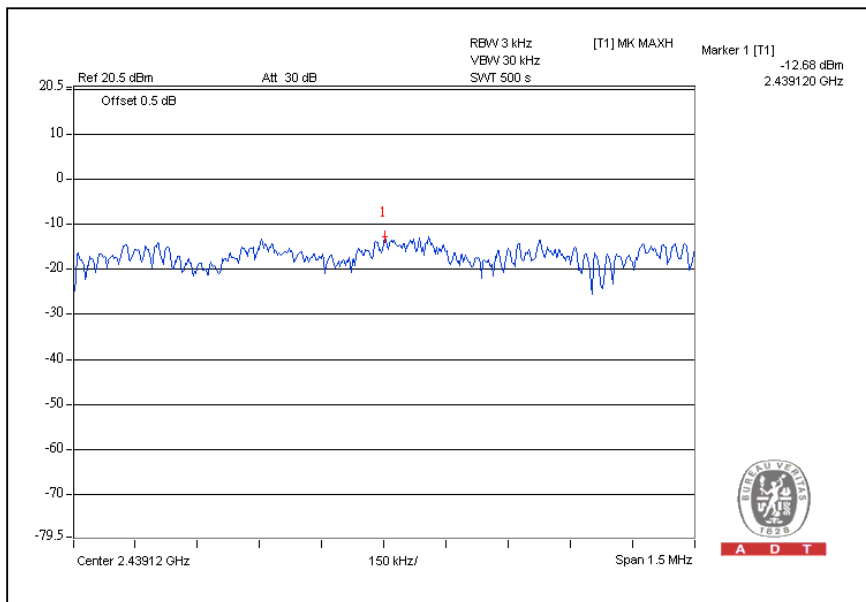


A D T



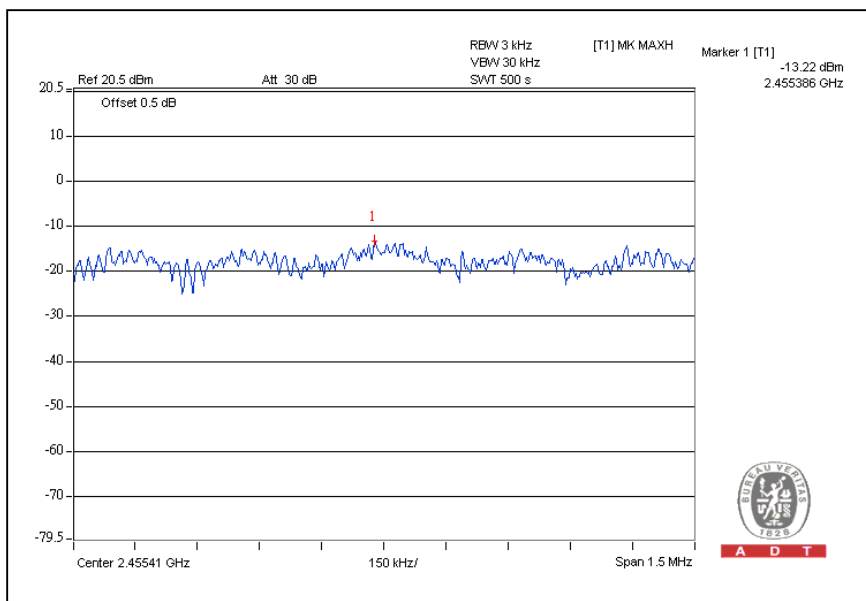
A D T

CH6



A D T

CH11



A D T



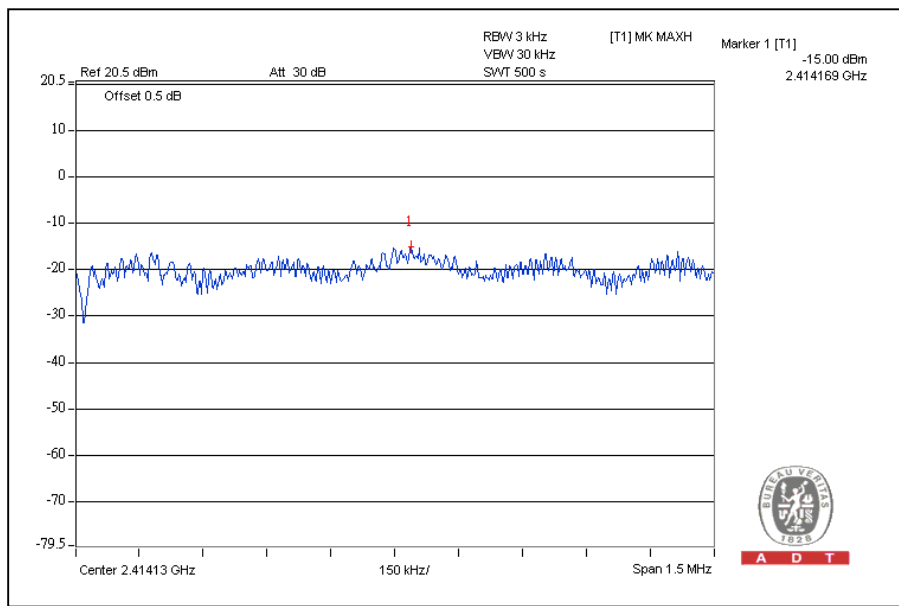
A D T

DRAFT 802.11n (40MHz) OFDM MODULATION:

MODULATION TYPE	BPSK	TRANSFER RATE	6.5Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 60%RH, 965hPa
TESTED BY	Phoenix Huang		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS / FAIL
1	2422	-15.00	8	PASS
4	2437	-13.09	8	PASS
7	2452	-15.49	8	PASS

CH1

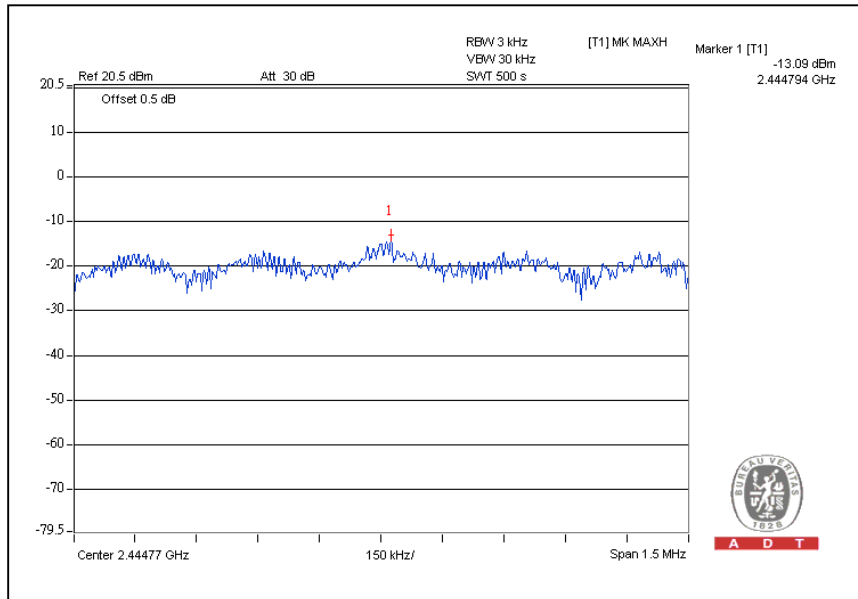


A D T

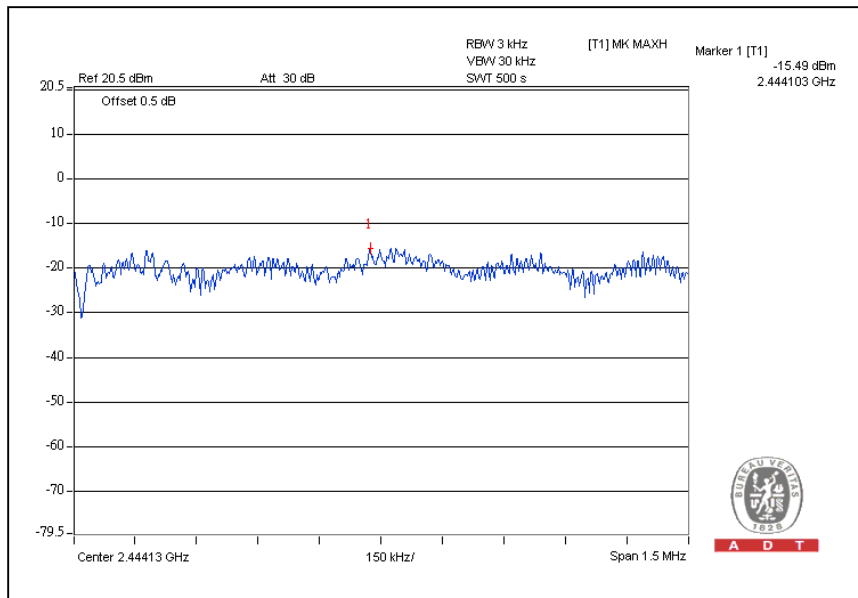


A D T

CH4



CH7



4.6 CONDUCTED OUT-BAND EMISSION MEASUREMENT

4.6.1 LIMITS OF CONDUCTED OUT-BAND EMISSION MEASUREMENT

Below -20dB of the highest emission level of operating band (in 100KHz Resolution Bandwidth).

4.6.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
R&S SPECTRUM ANALYZER	FSP40	100037	Aug. 03, 2009	Aug. 02, 2010

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 PROCEDURE

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

The spectrum plots (RBW = VBW = 100kHz) are attached on the following pages.

4.6.4 DEVIATION FROM TEST STANDARD

No deviation

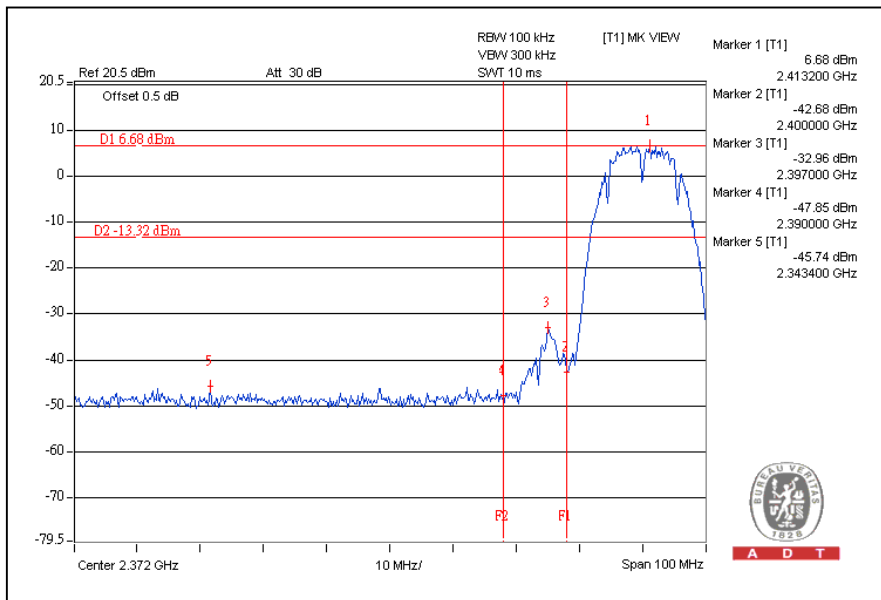
4.6.5 EUT OPERATING CONDITION

Same as Item 4.3.6

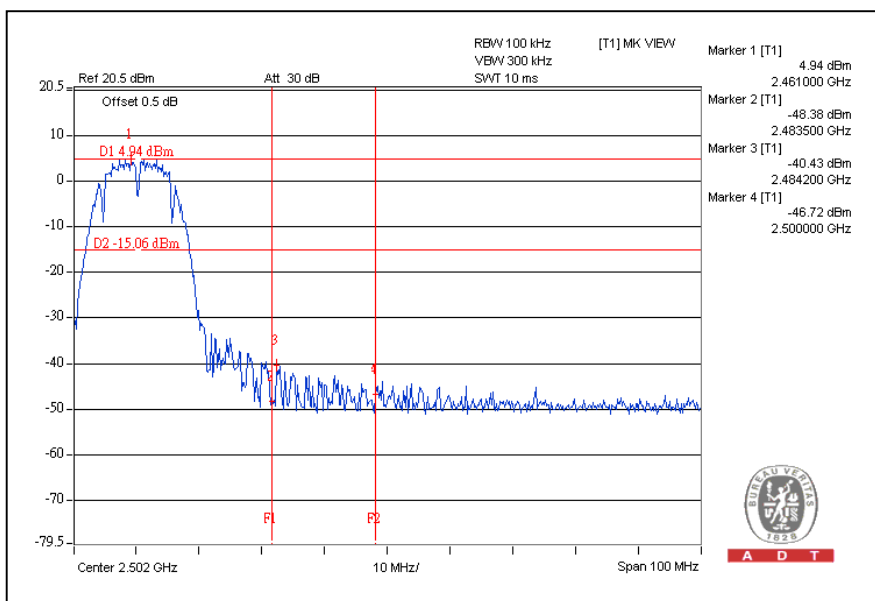
4.6.6 TEST RESULTS

The spectrum plots are attached on the following images. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D1. It shows compliance with the requirement in part 15.247(d).

802.11b DSSS MODULATION: CH1



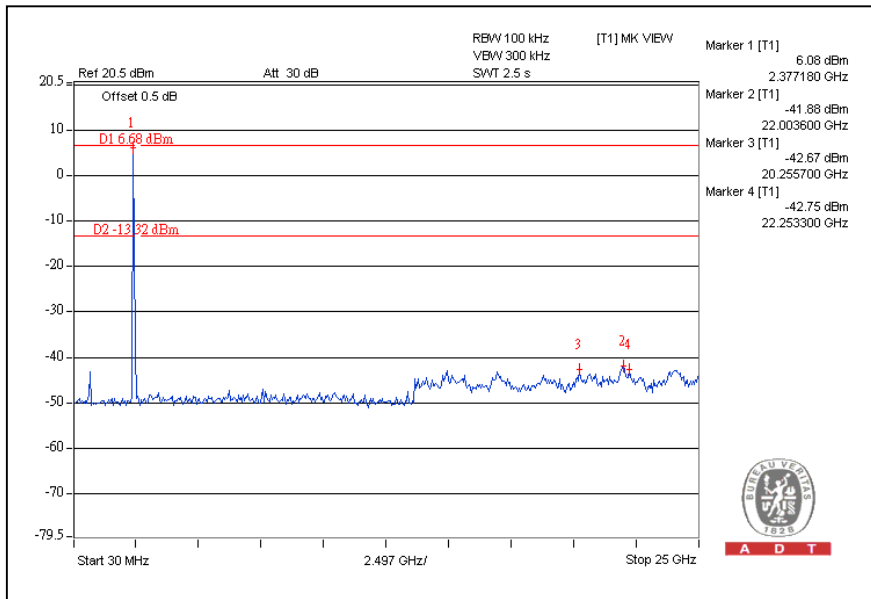
CH11



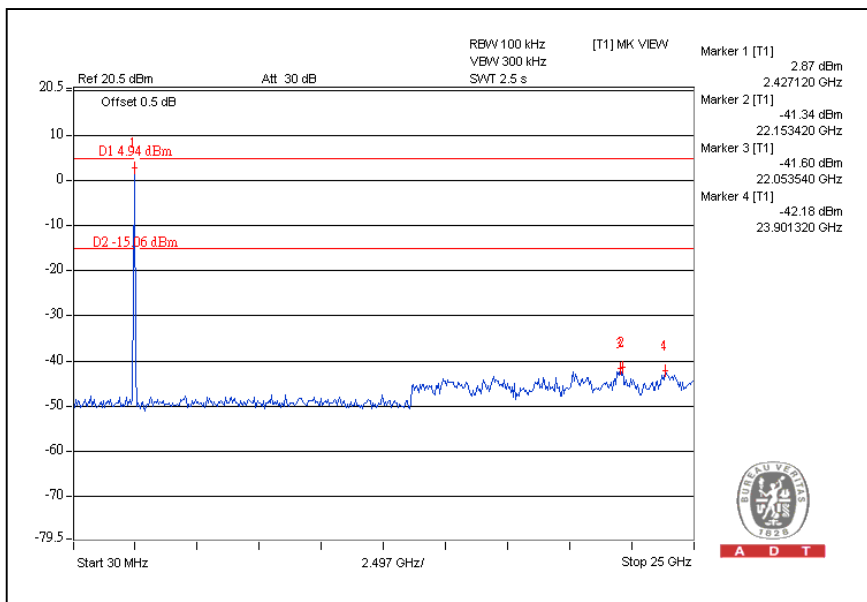


A D T

CH1



CH11

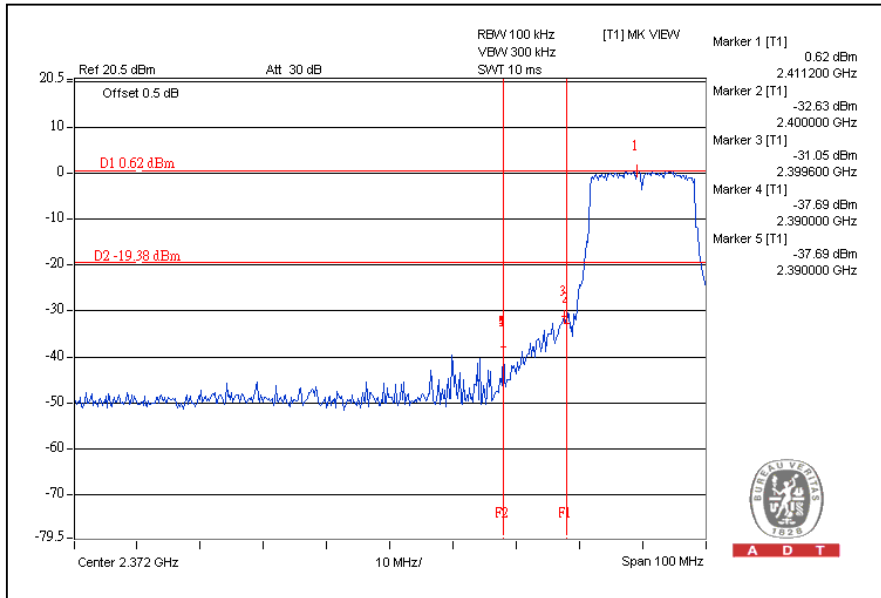




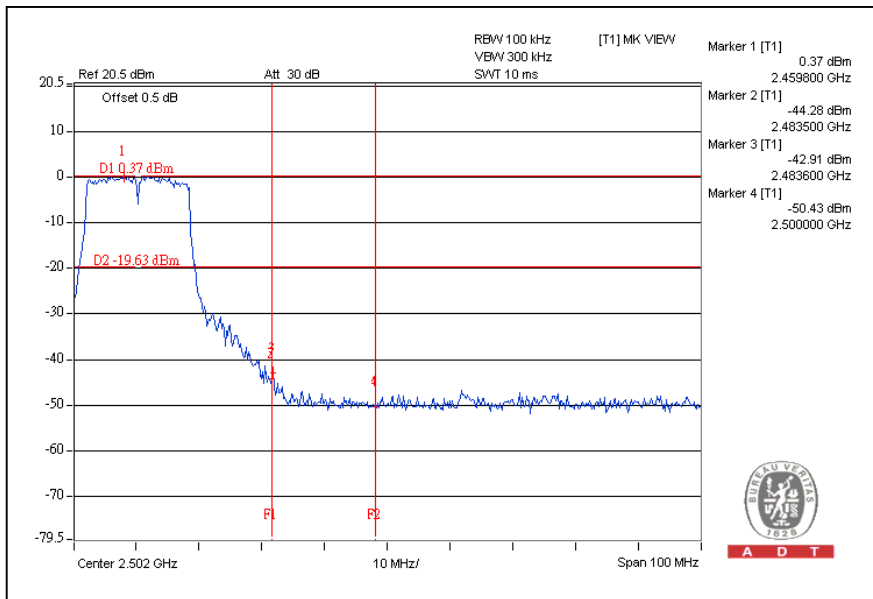
A D T

802.11g OFDM MODULATION:

CH 1



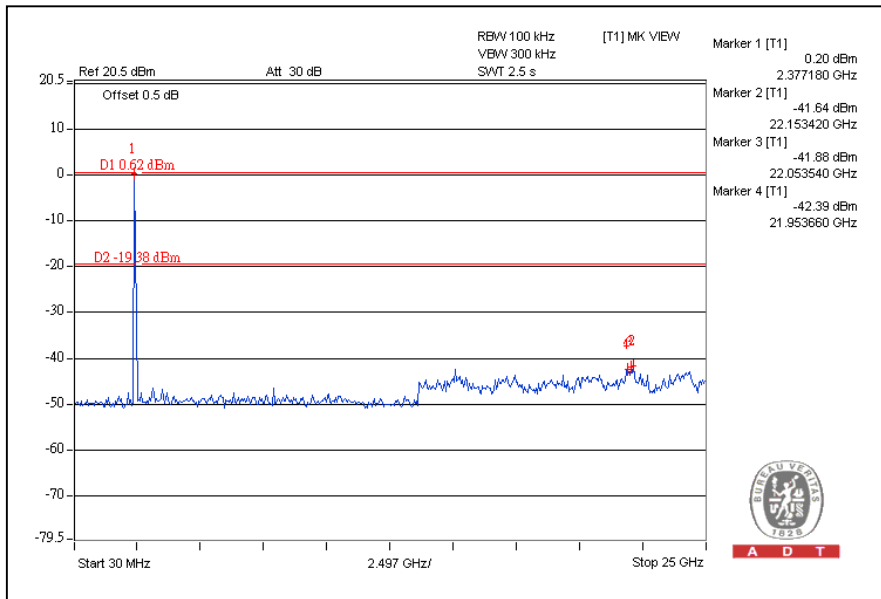
CH11



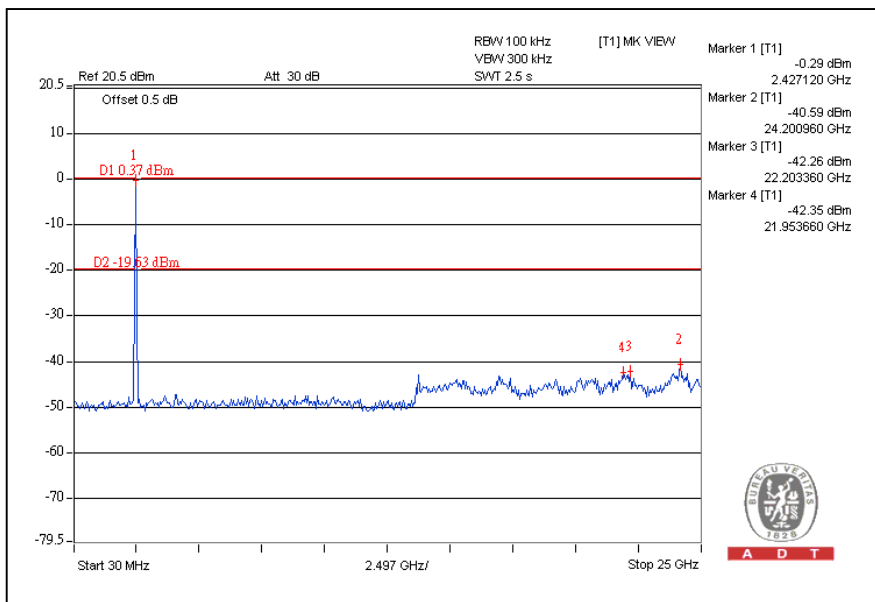


A D T

CH1



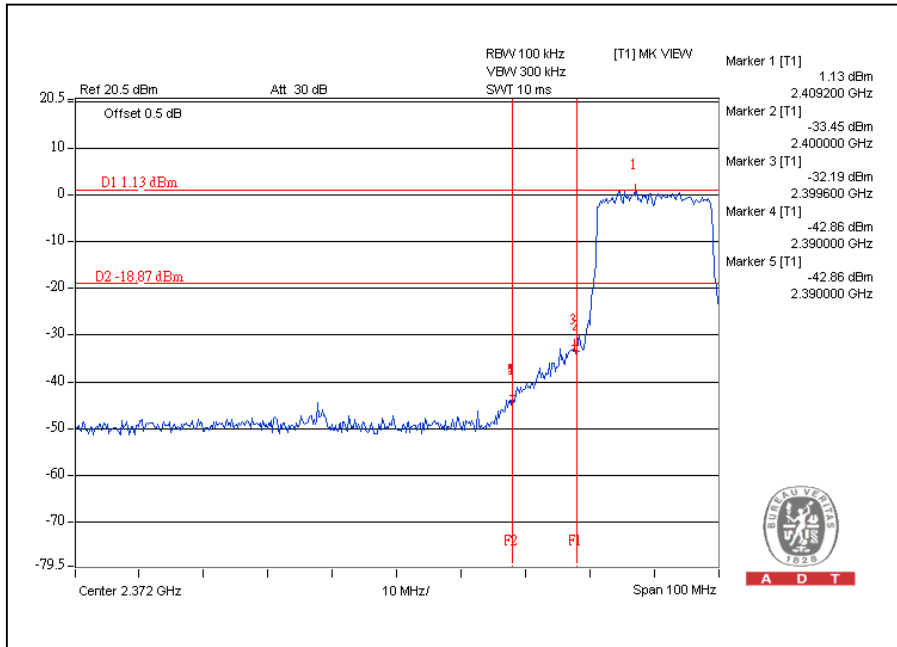
CH11



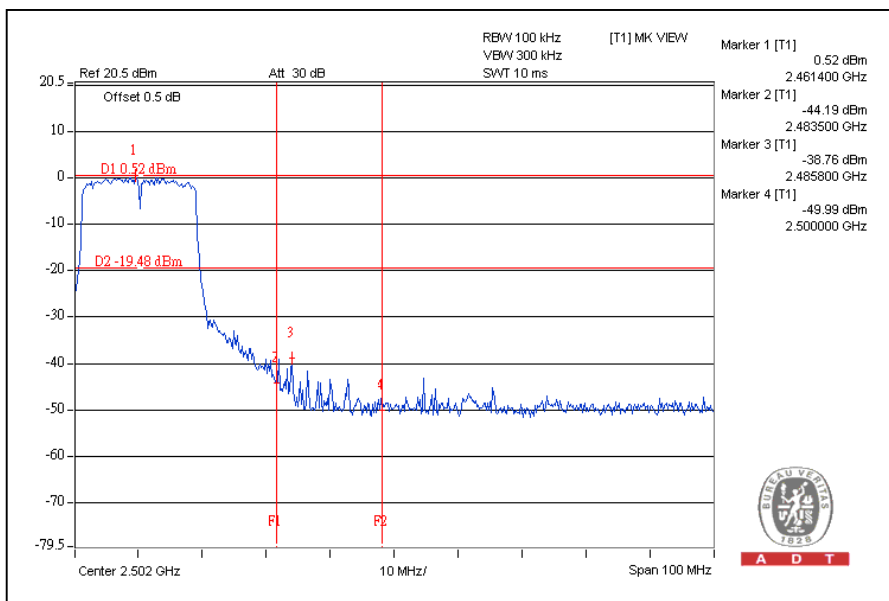


A D T

DRAFT 802.11n (20MHz) OFDM MODULATION: CH1



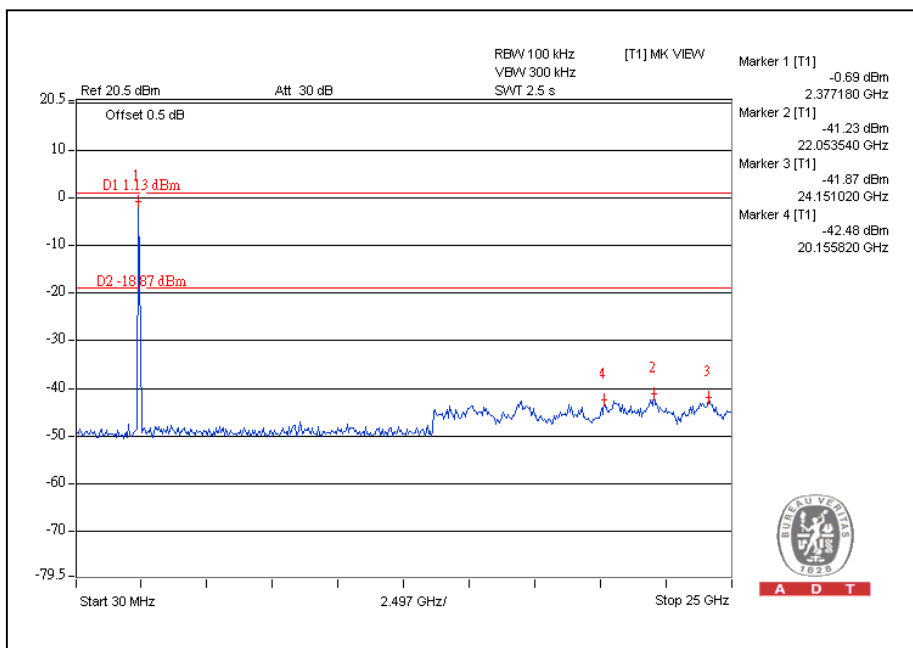
CH11



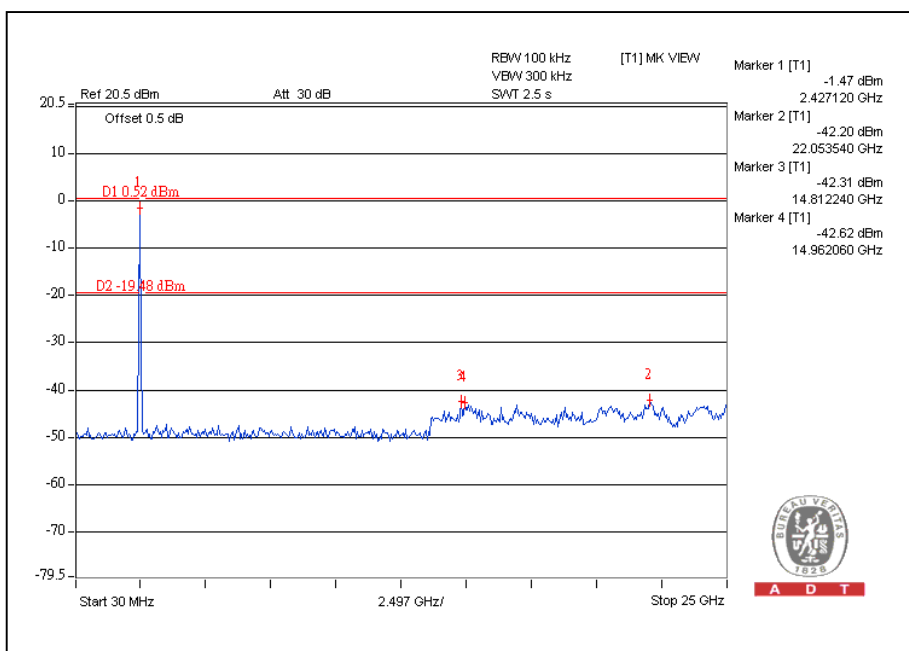


A D T

CH1



CH11

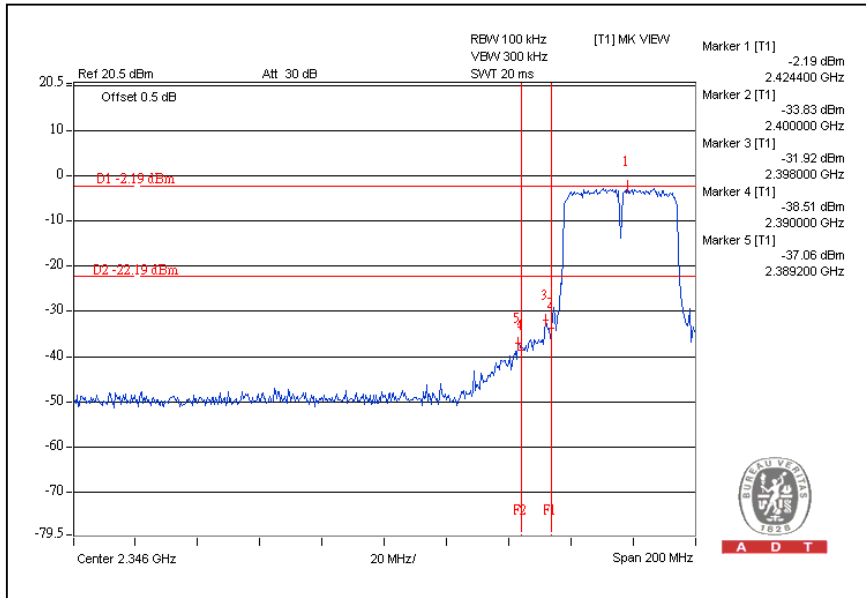




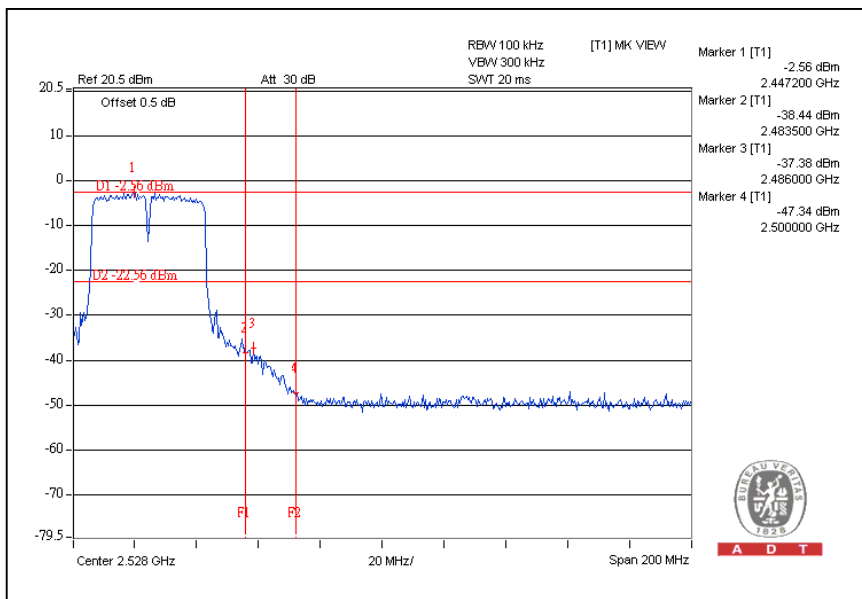
A D T

DRAFT 802.11n (40MHz) OFDM MODULATION:

CH1



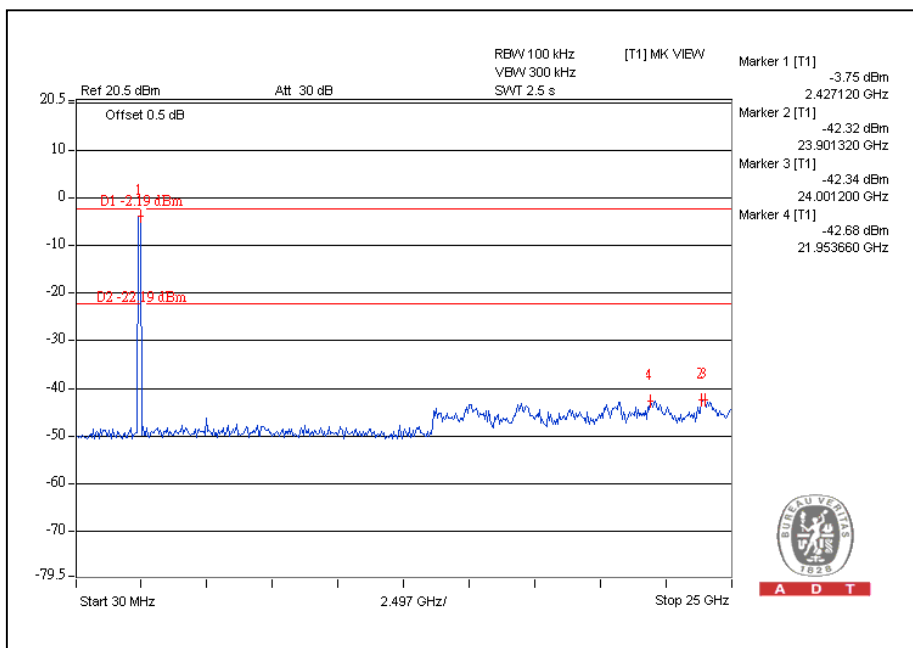
CH7



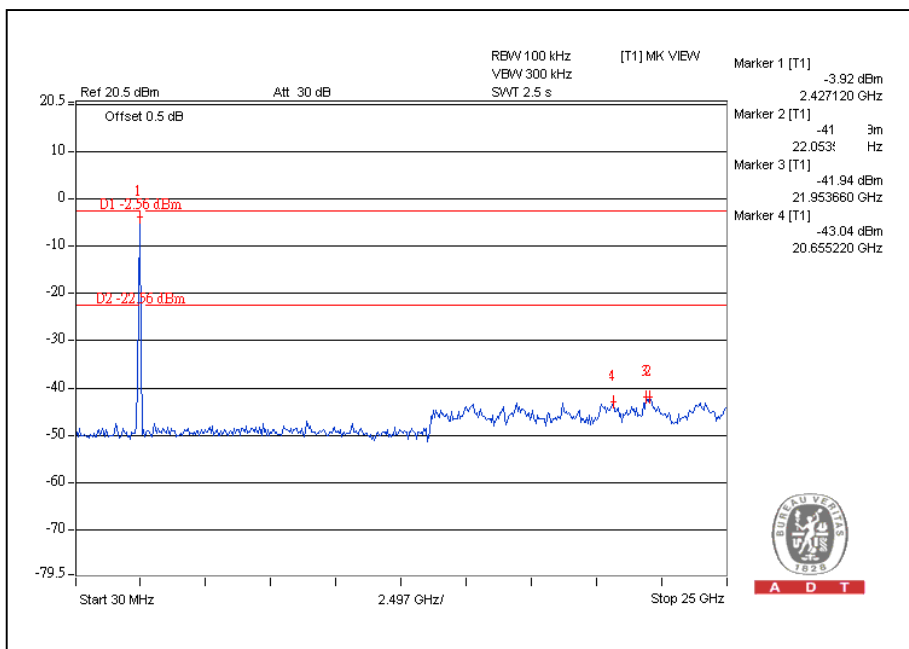


A D T

CH1



CH7



4.7 ANTENNA REQUIREMENT

4.7.1 STANDARD APPLICABLE

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

4.7.2 ANTENNA CONNECTED CONSTRUCTION

The antenna used in this product is Printed antenna. The maximum Gain of the antenna is 2.65dBi.



A D T

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 by the following approval agencies according to ISO/IEC 17025.

USA	FCC, NVLAP
Germany	TUV Rheinland
Japan	VCCI
Norway	NEMKO
Canada	INDUSTRY CANADA, CSA
R.O.C.	TAF, BSMI, NCC
Netherlands	Telefication
Singapore	GOST-ASIA(MOU)
Russia	CERTIS(MOU)

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

Web Site: www.adt.com.tw

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



A D T

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---