FCC TEST REPORT

REPORT NO.: RF970721H01
MODEL NO.: AW-GM320
RECEIVED: July 21, 2008
TESTED: Aug. 05 to Sep. 25, 2008
ISSUED: Oct. 03, 2008

APPLICANT: AzureWave Technologies, Inc.

ADDRESS: 8 F., No. 94, Baozhong Rd., Xindian,Taipei, Taiwan 231

ISSUED BY: Advance Data Technology Corporation

LAB LOCATION: No. 81-1, Lu Liao Keng, 9 Ling, Wu Lung Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien, Taiwan, R.O.C.

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1 CERTIFICATION

PRODUCT :	IEEE 802.11 b/g Wireless LAN Module
BRAND NAME :	AzureWave
MODEL NO. :	AW-GM320
TESTED :	Aug. 05 to Sep. 25, 2008
APPLICANT :	AzureWave Technologies, Inc.
TEST SAMPLE :	ENGINEERING SAMPLE
STANDARDS :	47 CFR Part 15, Subpart C (Section 15.247) ANSI C63.4-2003

The above equipment (Model: AW-GM320) has been tested by **Advance Data Technology Corporation**, 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 : Sunny Wen , **DATE:** *Oct. 03, 2008*
(Sunny Wen, Specialist)

TECHNICAL ACCEPTANCE : Hank Chung , **DATE:** *Oct. 03, 2008*
Responsible for RF
(Hank Chung, Deputy Manager)

APPROVED BY : May Chen , **DATE:** *Oct. 03, 2008*
(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 C			
Standard Section	**Test Type and Limit**	**Result**	**REMARK**
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit Minimum passing margin is –12.39 dB at 0.189 MHz
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)	Transmitter Radiated Emissions Limit: Table 15.209	PASS	Meet the requirement of limit Minimum passing margin is -1.40 dB at 2483.50 MHz
15.247(e)	Power Spectral Density Limit: max. 8dBm	PASS	Meet the requirement of limit
15.247(d)	Band Edge Measurement Limit: 20 dB less than the peak value of fundamental frequency	PASS	Meet the requirement of limit

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:

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)	3.94 dB
Radiated emissions (1GHz -18GHz)	2.33 dB
Radiated emissions (18GHz -40GHz)	2.55 dB

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	IEEE 802.11 b/g Wireless LAN Module
MODEL NO.	AW-GM320
FCC ID	TLZ-GM320
POWER SUPPLY	DC 3.3V from host equipment
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
RADIO TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	802.11b: 11/5.5/2/1Mbps 802.11g: 54/48/36/24/18/12/9/6Mbps
FREQUENCY RANGE	2412MHz ~ 2462MHz
NUMBER OF CHANNEL	11
CHANNEL SPACING	5MHz
OUTPUT POWER	802.11b: 95.499mW 802.11g: 69.183mW
ANTENNA TYPE	Please see note 1
DATA CABLE	NA
I/O PORT	NA
ASSOCIATED DEVICES	NA

NOTE:

1. There are three antennas provided to this EUT, please refer to the following table:

Antenna	Brand	Model No.	Antenna Type	Gain (dBi)	Antenna Connector	Cable Loss (dB)
Antenna 1	NA	IWF-282XMPBX-99	Dipole	2	IPEX	0.7
Antenna 2	ACON	FMH10	PCB	Right (black) : 1.6 Left (white) : 2.26	IPEX	Black : 0.19 White : 0.13
Antenna 3	ACON	FMH00	PCB	Right (black) : 3.69 Left (white) : 3.97	IPEX	Black : 0.24 White : 0.43

   From the above antennas, model: **IWF-282XMPBX-99, FMH00** were selected as representative model for test and its data was recorded in this report.

2. The EUT complies with IEEE 802.11g standards, and backwards compatible with IEEE 802.11b products.

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

3.2 DESCRIPTION OF TEST MODES

Operated in 2400 ~ 2483.5MHz band:

For 802.11b/g normal mode: Eleven channels are provided to this EUT.

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

3.3 TEST MODE APPLICABLITY AND TESTED CHANNEL DETAIL:

EUT configure mode	Applicable to				Description
	PLC	RE<1G	RE≥1G	APCM	
-	√	√	√	√	NA

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)
802.11b	1 to 11	1	DSSS	DBPSK	1

☒ The EUT was tested under the following test modes and its data were recorded in this report:

Test Mode	Description
Mode 1	With antenna 1
Mode 2	With antenna 2
Mode 3	With antenna 3

From the above antennas, antenna 1 was selected for testing.

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)
802.11b	1 to 11	1	DSSS	DBPSK	1

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

Bandedge 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

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

3.4 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is an IEEE 802.11 b/g Wireless LAN Module. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

47 CFR Part 15, Subpart C. (15.247)
ANSI C63.4 : 2003

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

3.5 DESCRIPTION OF SUPPORT UNITS

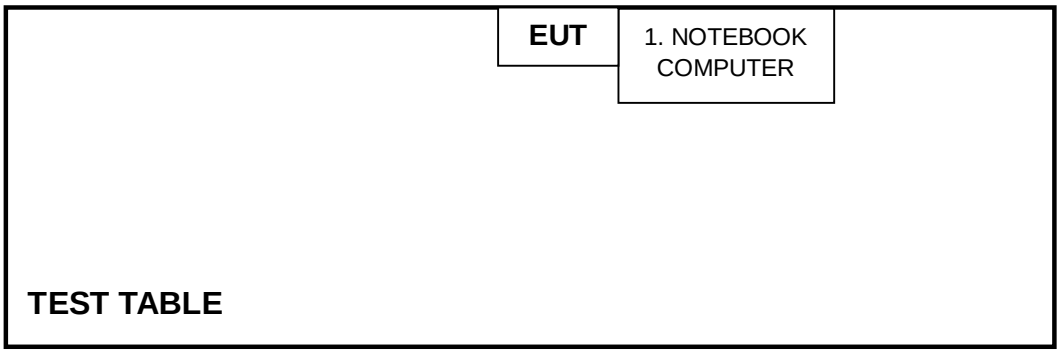
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK COMPUTER	Lenovo	7673	LV-C2468 07/08	DoC

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).

3.6 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 0.5-5 5-30	66 to 56 56 60	56 to 46 46 50

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. All emanations from a class 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
ROHDE & SCHWARZ Test Receiver	ESCS 30	100287	March 11, 2008	March 10, 2009
Line-Impedance Stabilization Network(for EUT)	KNW-407	8-1395-12	May 07, 2008	May 06, 2009
Line-Impedance Stabilization Network(for Peripheral)	ENV-216	100072	June 13, 2008	June 12, 2009
RF Cable (JYEBAO)	5DFB	COACAB-001	July 24, 2008	July 23, 2009
50 ohms Terminator	50	3	Nov. 16, 2007	Nov. 15, 2008
Software	ADT_Cond_V7.3.2	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 ADT Shielded Room No. A.
3. The VCCI Con A Registration No. is C-817.

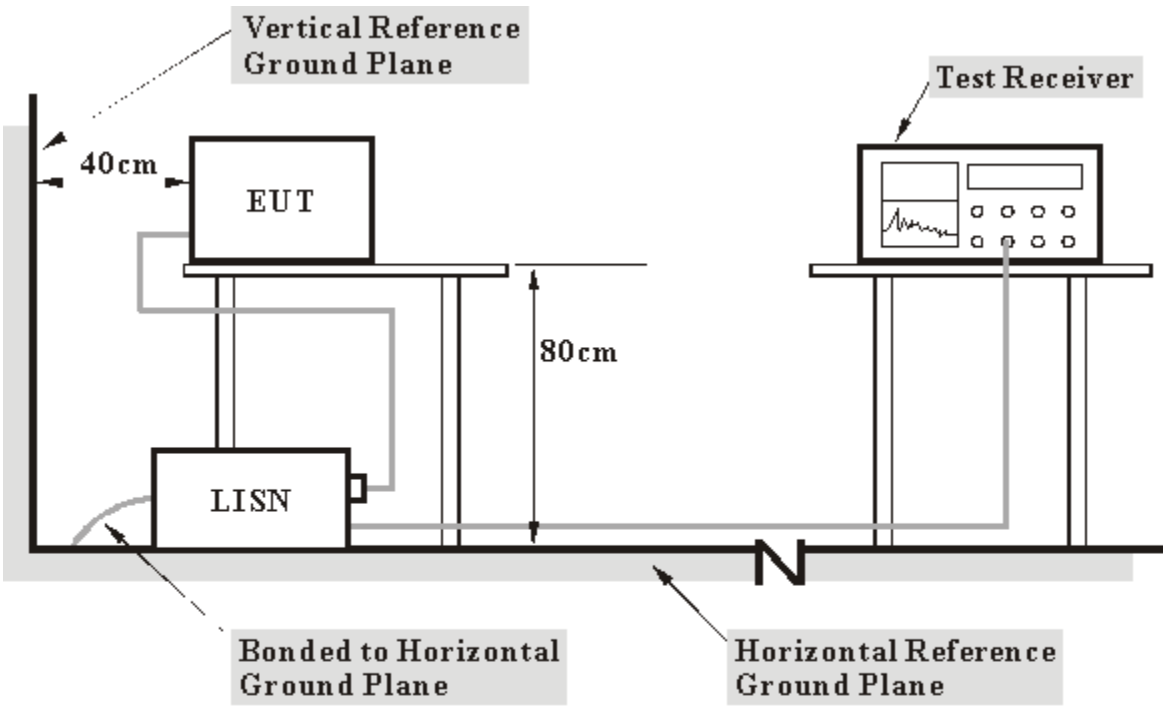
4.1.3 TEST PROCEDURES

a. The EUT/HOST was placed 0.4 meters from the conducting wall of the shielded room with EUT/HOST 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/HOST were checked for maximum conducted interference.

c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels over 10dB under the prescribed limits could not be reported

4.1.4 TEST SETUP



Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

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

4.1.5 EUT OPERATING CONDITIONS

a. Plug the EUT into test board and placed on the testing table.

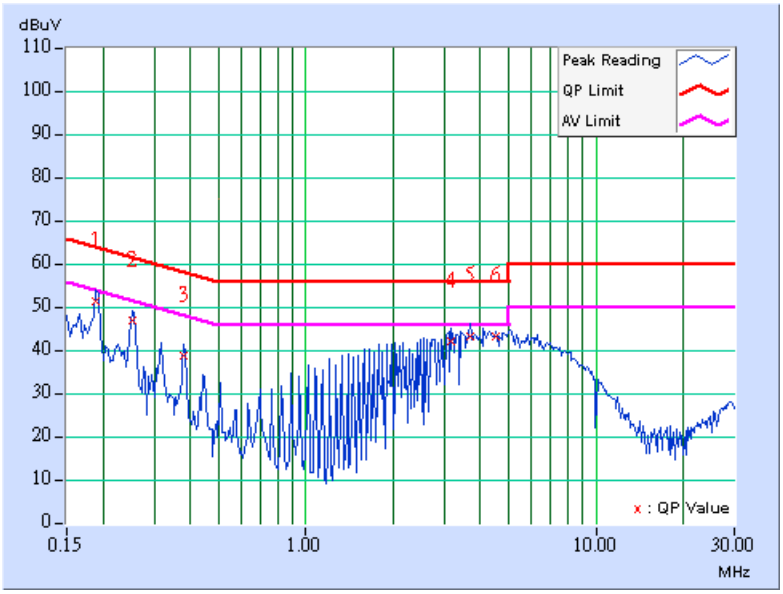
b. The support unit 1 (Notebook Computer) ran a test program “DutApiSD83xxp.exe” to enable EUT under transmission condition continuously at specific channel frequency.

4.1.6 TEST RESULTS

INPUT POWER	120Vac, 60 Hz	**6dB BANDWIDTH**	9 kHz
PHASE	Line (L)	**TRANSFER RATE**	1Mbps
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 959hPa	**TESTED BY**	Max Tseng

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	**0.189**	**0.52**	**51.16**	**-**	**51.68**	**-**	**64.08**	**54.08**	**-12.39**	**-**
2	0.254	0.47	46.49	-	46.96	-	61.62	51.62	-14.66	-
3	0.380	0.41	38.43	-	38.84	-	58.27	48.27	-19.43	-
4	3.172	0.48	41.81	-	42.29	-	56.00	46.00	-13.71	-
5	3.682	0.48	42.90	-	43.38	-	56.00	46.00	-12.62	-
6	4.508	0.49	42.86	-	43.35	-	56.00	46.00	-12.65	-

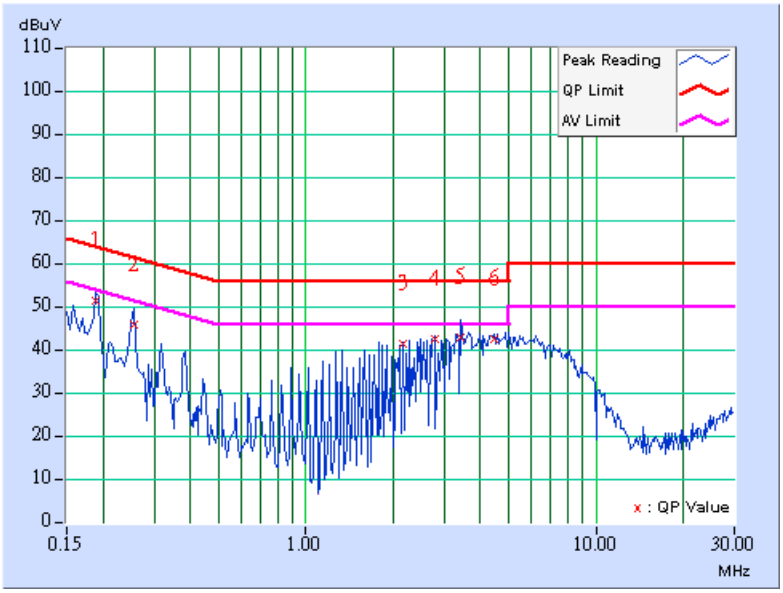
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



INPUT POWER	120Vac, 60 Hz	**6dB BANDWIDTH**	9 kHz
PHASE	Neutral (N)	**TRANSFER RATE**	1Mbps
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 959hPa	**TESTED BY**	Max Tseng

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.189	0.27	51.16	-	51.43	-	64.08	54.08	-12.64	-
2	0.255	0.23	45.79	-	46.02	-	61.58	51.58	-15.56	-
3	2.160	0.25	41.09	-	41.34	-	56.00	46.00	-14.66	-
4	2.793	0.25	42.15	-	42.40	-	56.00	46.00	-13.60	-
5	3.430	0.26	42.82	-	43.08	-	56.00	46.00	-12.92	-
6	4.445	0.27	42.34	-	42.61	-	56.00	46.00	-13.39	-

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.

4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
ADVANTEST Spectrum Analyzer	R3271A	85060311	July 16, 2008	July 15, 2009
HP Pre_Amplifier	8449B	3008A01922	Oct. 05, 2007	Oct. 04, 2008
ROHDE & SCHWARZ Test Receiver	ESCS30	100375	April 01, 2008	Mar. 31, 2009
SCHWARZBECK TRILOG Broadband Antenna	VULB 9168	138	April 30, 2008	April 29, 2009
Schwarzbeck Horn_Antenna	BBHA9120	D124	Dec. 17, 2007	Dec. 16, 2008
Schwarzbeck Horn_Antenna	BBHA 9170	BBHA9170153	Jan. 28, 2008	Jan. 27, 2009
RF Switches (ARNITSU)	CS-201	1565157	Aug. 14, 2008	Aug. 13, 2009
RF CABLE (Chaintek)	SF102	22054-2	Dec. 07, 2007	Dec. 06, 2008
RF Cable	8DFB	STCCAB-30M-1GHz	Oct. 10, 2007	Oct. 09, 2008
Software	ADT_Radiated_V7.6.15.8	NA	NA	NA
CHANCE MOST Antenna Tower	AT-100	0203	NA	NA
CHANCE MOST Turn Table	TT-100	0203	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: R3271A) are used only for the measurement of emission frequency above 1GHz if tested.
3. The test was performed in ADT 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 3789C-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.

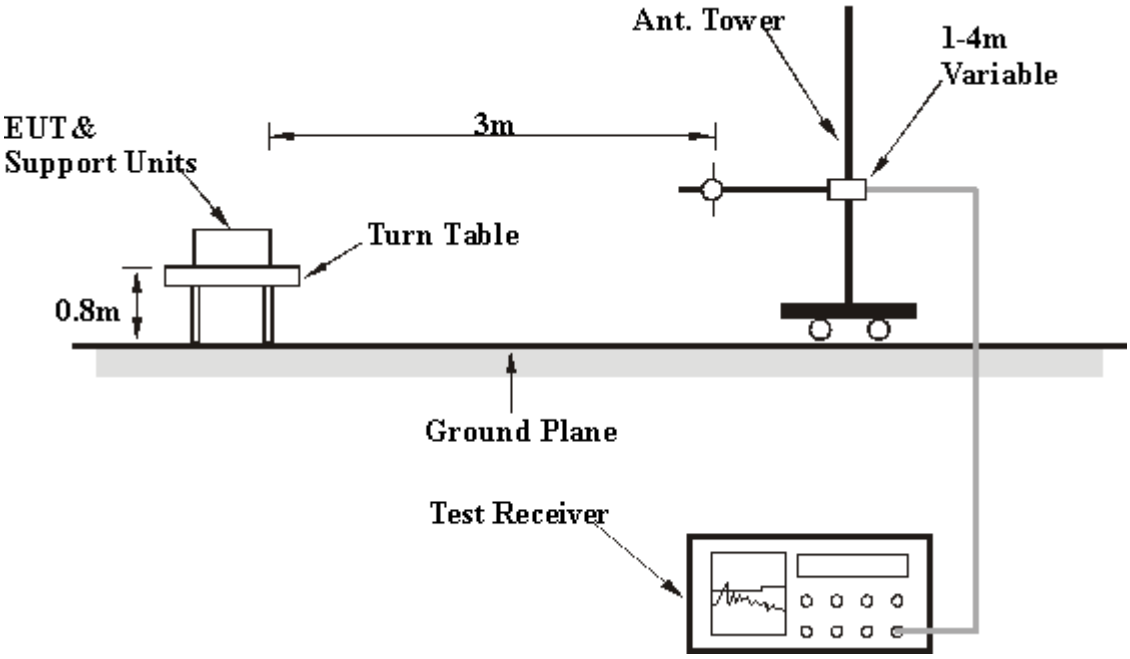
e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

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 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 Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth is 1MHz and video bandwidth of test receiver/spectrum analyzer is 3MHz for Peak detection 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 TEST SETUP



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

4.2.5 EUT OPERATING CONDITIONS

Same as 4.1.5

4.2.6 TEST RESULTS

BELOW 1GHz WORST-CASE DATA：802.11b DSSS MODULATION with Dipole antenna

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 78%RH 959hPa	TESTED BY	Wen Yu

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	166.45	34.74 QP	43.50	-8.76	2.61 H	17	23.54	11.20
2	216.25	28.63 QP	46.00	-17.37	4.00 H	19	17.30	11.33
3	266.98	38.01 QP	46.00	-7.99	3.07 H	0	23.60	14.41
4	286.05	33.15 QP	46.00	-12.85	3.16 H	326	18.72	14.43
5	325.00	29.42 QP	46.00	-16.58	2.82 H	185	14.30	15.12
6	375.01	30.79 QP	46.00	-15.21	3.47 H	216	14.23	16.56
7	671.99	29.82 QP	46.00	-16.18	1.24 H	330	6.58	23.24
8	863.98	35.66 QP	46.00	-10.34	1.45 H	328	8.72	26.94
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	168.45	26.72 QP	43.50	-16.78	1.00 V	233	15.69	11.03
2	216.30	30.55 QP	46.00	-15.45	1.00 V	129	19.21	11.34
3	266.98	29.58 QP	46.00	-16.42	1.00 V	43	15.17	14.41
4	286.05	34.18 QP	46.00	-11.82	1.84 V	197	19.75	14.43
5	324.91	31.79 QP	46.00	-14.21	1.00 V	303	16.67	15.12
6	375.00	30.71 QP	46.00	-15.29	1.76 V	19	14.15	16.56
7	671.99	29.67 QP	46.00	-16.33	1.00 V	236	6.43	23.24
8	863.98	33.21 QP	46.00	-12.79	1.58 V	34	6.27	26.94

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.

BELOW 1GHz WORST-CASE DATA：802.11b DSSS MODULATION with PCB antenna

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	27deg. C, 72%RH 959hPa	TESTED BY	Rex Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	240.02	32.96 QP	46.00	-13.04	1.45 H	352	18.93	14.03
2	279.20	29.68 QP	46.00	-16.32	1.07 H	333	14.12	15.56
3	400.02	26.08 QP	46.00	-19.92	1.00 H	146	5.95	20.13
4	479.99	22.50 QP	46.00	-23.50	1.00 H	221	1.43	21.07
5	640.02	25.48 QP	46.00	-20.52	1.31 H	265	1.20	24.28
6	863.98	39.96 QP	46.00	-6.04	1.00 H	254	10.81	29.15
7	959.98	33.88 QP	46.00	-12.12	1.59 H	26	3.33	30.55
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	240.00	22.66 QP	46.00	-23.34	1.00 V	242	8.63	14.03
2	400.02	24.74 QP	46.00	-21.26	1.00 V	317	4.61	20.13
3	479.99	22.06 QP	46.00	-23.94	1.22 V	337	0.99	21.07
4	640.02	25.46 QP	46.00	-20.54	1.44 V	138	1.18	24.28
5	863.98	32.46 QP	46.00	-13.54	1.00 V	98	3.31	29.15
6	959.98	32.01 QP	46.00	-13.99	1.24 V	99	1.46	30.55

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.

802.11b DSSS MODULATION with Dipole antenna

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	25deg. C, 60%RH 959hPa	TESTED BY	Frank Liu

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	2386.40	54.52 PK	74.00	-19.48	1.62 H	187	24.47	30.05
2	2386.40	44.18 AV	54.00	-9.82	1.62 H	187	14.13	30.05
3	*2412.00	102.00 PK			1.59 H	193	71.85	30.15
4	*2412.00	96.70 AV			1.59 H	193	66.55	30.15
5	4824.00	47.90 PK	74.00	-26.10	1.24 H	2	12.34	35.56
6	4824.00	38.90 AV	54.00	-15.10	1.24 H	2	3.34	35.56
7	#7236.00	54.20 PK	82.00	-27.80	1.24 H	96	12.80	41.40
8	#7236.00	42.70 AV	76.70	-34.00	1.24 H	96	1.30	41.40
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	2386.40	60.03 PK	74.00	-13.97	1.00 V	1	29.98	30.05
2	2386.40	49.86 AV	54.00	-4.14	1.00 V	1	19.81	30.05
3	*2412.00	111.30 PK			1.00 V	2	81.15	30.15
4	*2412.00	106.40 AV			1.00 V	2	76.25	30.15
5	4824.00	52.00 PK	74.00	-22.00	1.22 V	283	16.44	35.56
6	4824.00	47.50 AV	54.00	-6.50	1.22 V	283	11.94	35.56
7	#7236.00	57.90 PK	91.30	-33.40	1.08 V	89	16.50	41.40
8	#7236.00	50.30 AV	86.40	-36.10	1.08 V	89	8.90	41.40

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 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH 959hPa	TESTED BY	Frank Liu

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	102.40 PK			1.54 H	192	72.16	30.24
2	*2437.00	96.35 AV			1.54 H	192	66.11	30.24
3	4874.00	46.30 PK	74.00	-27.70	1.38 H	260	10.63	35.67
4	4874.00	37.60 AV	54.00	-16.40	1.38 H	260	1.93	35.67
5	7311.00	54.10 PK	74.00	-19.90	1.18 H	20	12.49	41.61
6	7311.00	41.70 AV	54.00	-12.30	1.18 H	20	0.09	41.61
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	112.00 PK			1.00 V	31	81.76	30.24
2	*2437.00	107.00 AV			1.00 V	31	76.76	30.24
3	4874.00	53.80 PK	74.00	-20.20	1.33 V	109	18.13	35.67
4	4874.00	49.60 AV	54.00	-4.40	1.33 V	109	13.93	35.67
5	7311.00	58.50 PK	74.00	-15.50	1.34 V	109	16.89	41.61
6	7311.00	51.80 AV	54.00	-2.20	1.34 V	109	10.19	41.61

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

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	25deg. C, 60%RH 959hPa	TESTED BY	Frank Liu

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	102.20 PK			1.58 H	192	71.86	30.34
2	*2462.00	96.70 AV			1.58 H	192	66.36	30.34
3	2483.50	55.61 PK	74.00	-18.39	1.54 H	360	25.18	30.43
4	2483.50	43.71 AV	54.00	-10.29	1.54 H	360	13.28	30.43
5	4924.00	48.00 PK	74.00	-26.00	1.22 H	264	12.21	35.79
6	4924.00	38.70 AV	54.00	-15.30	1.22 H	264	2.91	35.79
7	7386.00	52.10 PK	74.00	-21.90	1.52 H	61	10.29	41.81
8	7386.00	40.30 AV	54.00	-13.70	1.52 H	61	-1.51	41.81
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	*2462.00	111.90 PK			1.00 V	30	81.56	30.34
2	*2462.00	107.10 AV			1.00 V	30	76.76	30.34
3	2483.50	61.52 PK	74.00	-12.48	1.00 V	102	31.09	30.43
4	2483.50	51.90 AV	54.00	-2.10	1.00 V	102	21.47	30.43
5	4924.00	54.73 PK	74.00	-19.27	1.47 V	107	18.94	35.79
6	4924.00	51.92 AV	54.00	-2.08	1.47 V	107	16.13	35.79
7	7386.00	54.30 PK	74.00	-19.70	1.40 V	106	12.49	41.81
8	7386.00	44.80 AV	54.00	-9.20	1.40 V	106	2.99	41.81

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

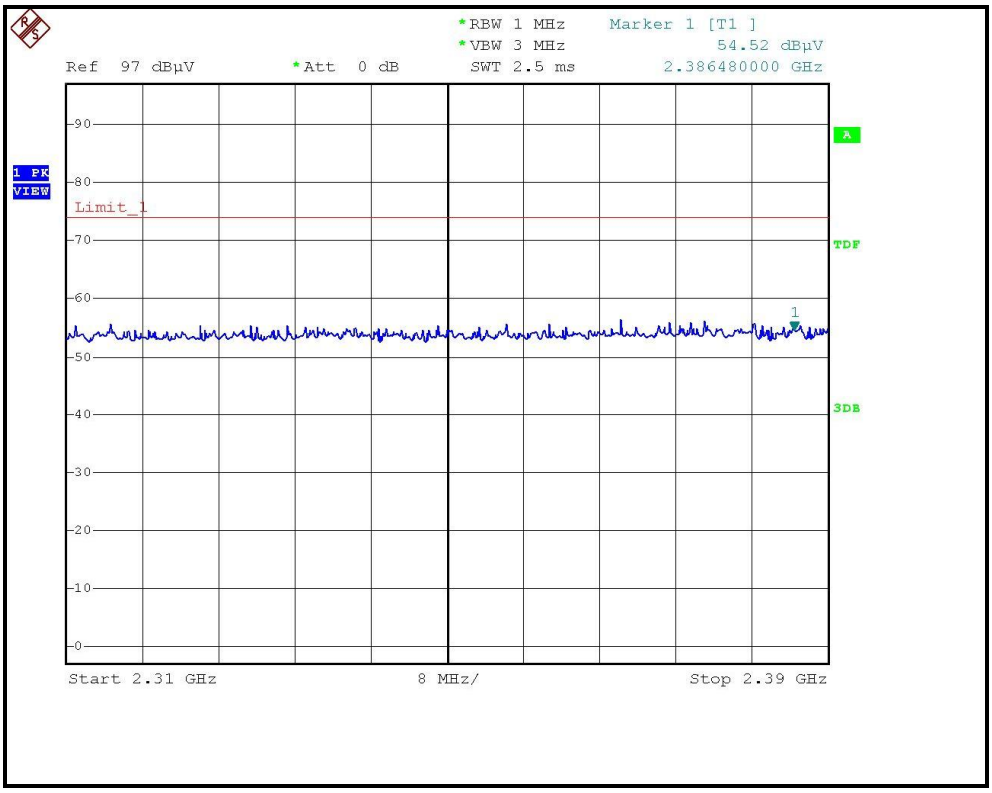
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

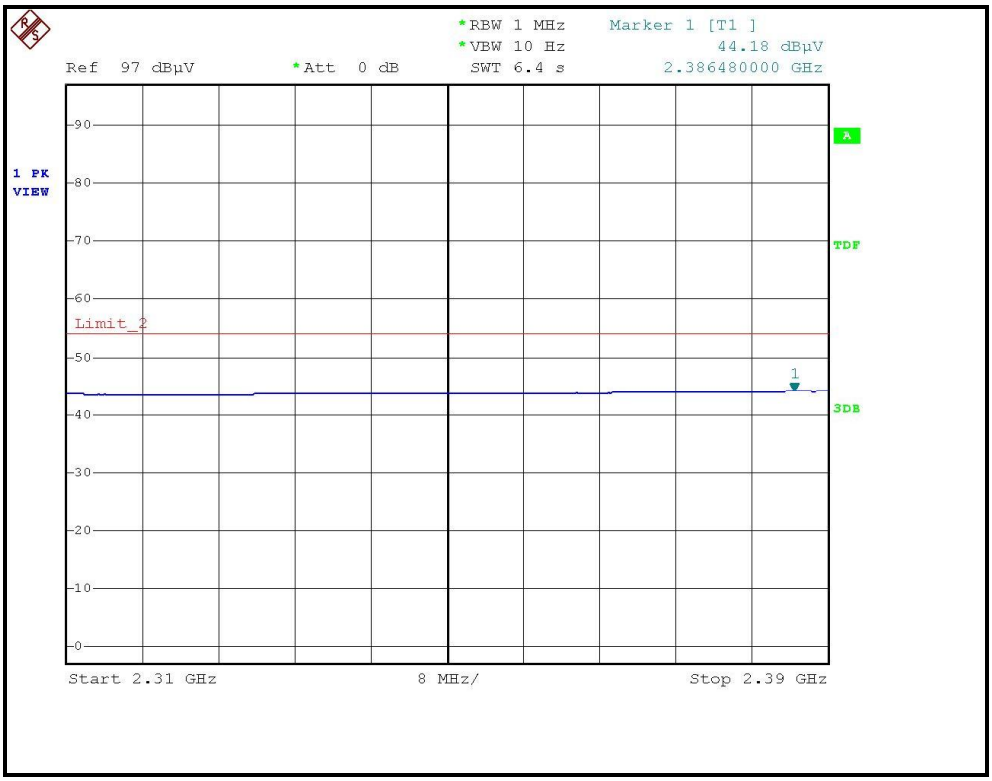
3. The other emission levels were very low against the limit.

4. Margin value = Emission level – Limit value.

5. " * ": Fundamental frequency.

RESTRICTED BANDEDGE (802.11b MODE, CH1, HORIZONTAL)





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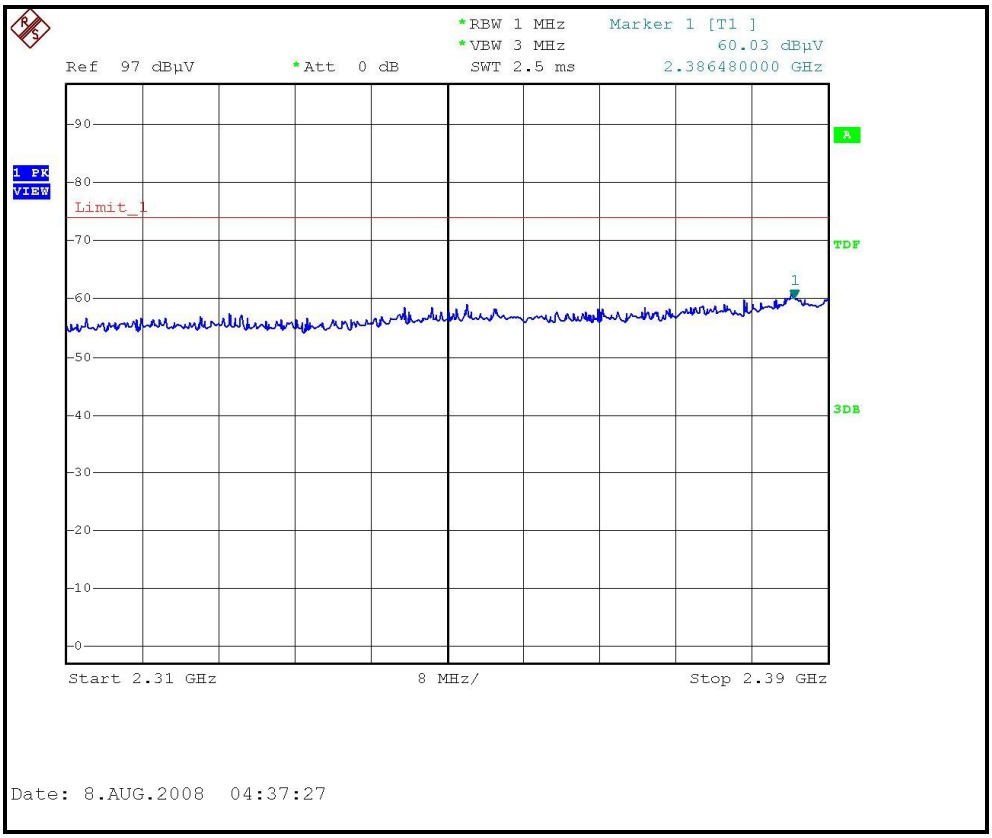

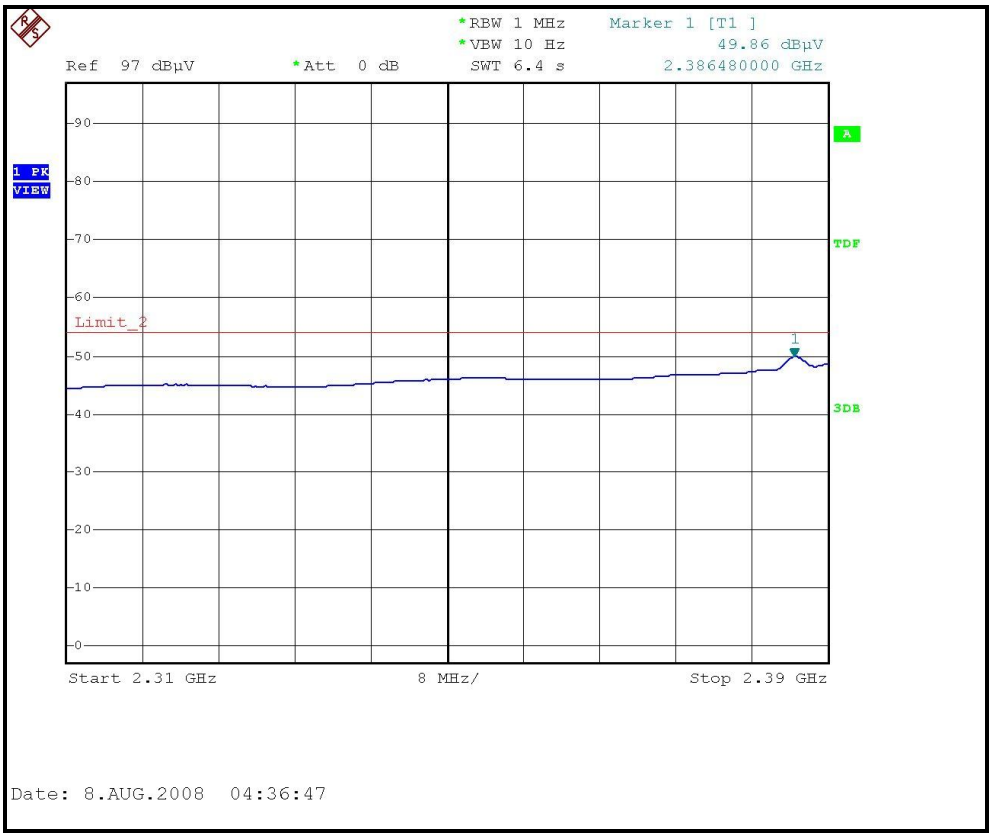

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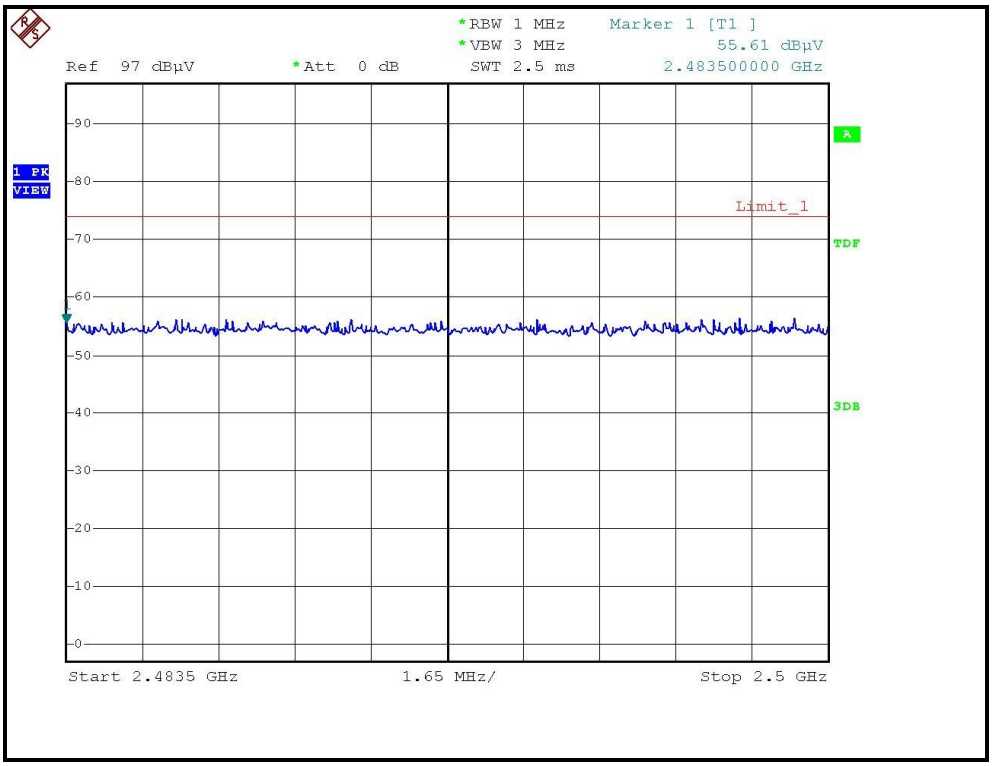

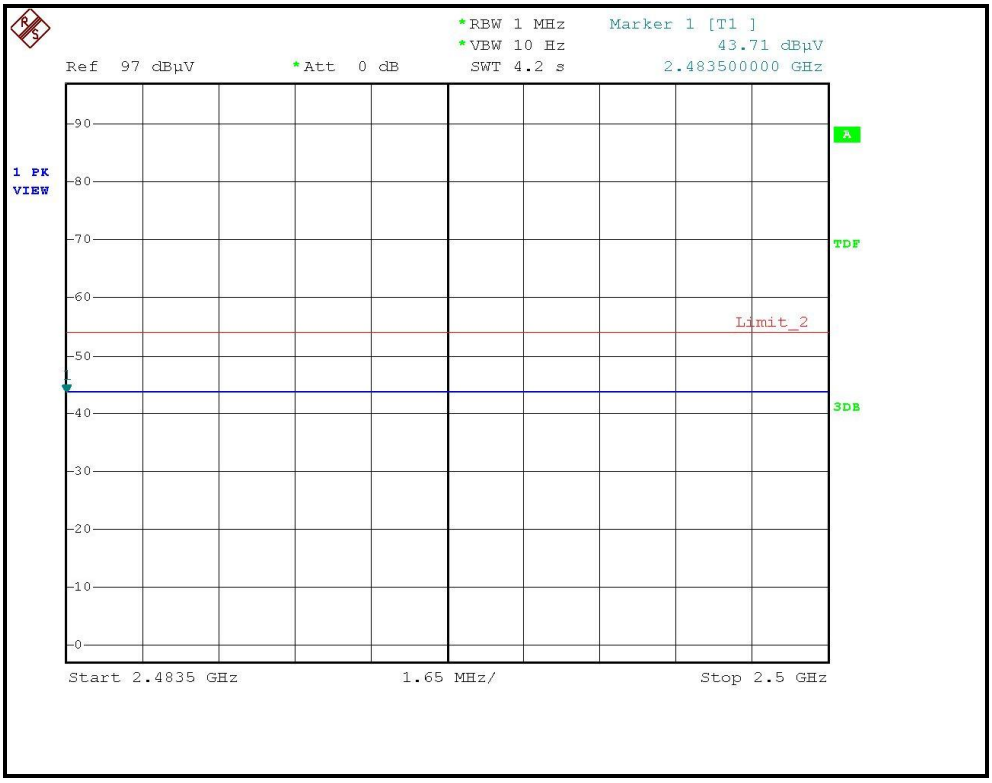

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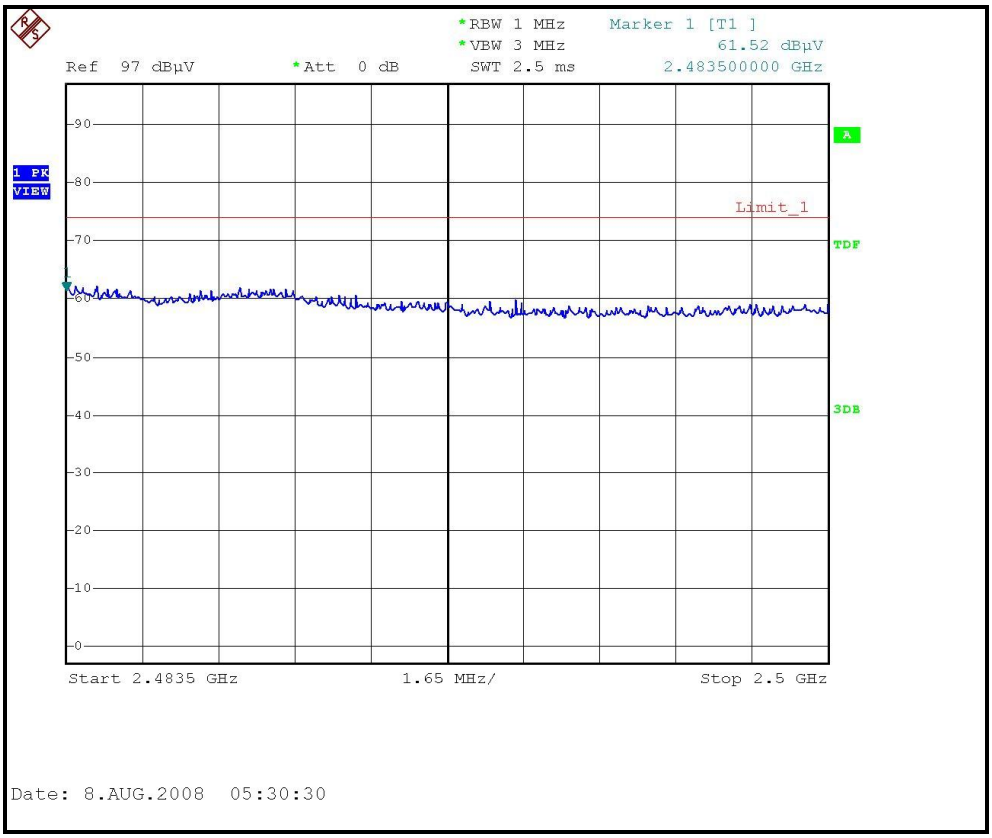
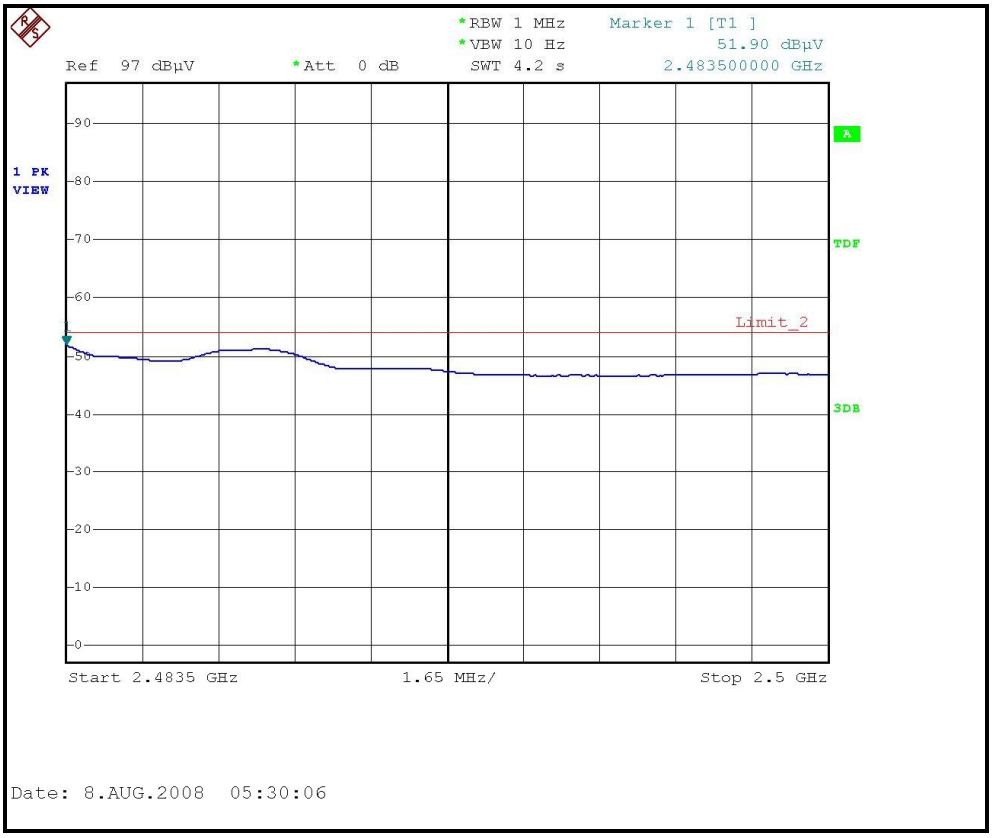




802.11b DSSS MODULATION with PCB antenna

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	25deg. C, 63%RH 959hPa	TESTED BY	Wen Yu

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	61.04 PK	74.00	-12.96	1.74 H	87	31.01	30.03
2	2390.00	52.57 AV	54.00	-1.43	1.74 H	87	22.54	30.03
3	*2412.00	108.52 PK			1.74 H	269	78.40	30.12
4	*2412.00	103.75 AV			1.74 H	269	73.63	30.12
5	4824.00	52.88 PK	74.00	-21.12	1.93 H	241	17.40	35.48
6	4824.00	48.83 AV	54.00	-5.17	1.93 H	241	13.35	35.48
7	#7236.00	56.91 PK	88.52	-31.61	1.80 H	242	15.84	41.07
8	#7236.00	43.17 AV	83.75	-40.58	1.80 H	242	2.10	41.07
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	59.40 PK	74.00	-14.60	1.05 V	103	29.37	30.03
2	2390.00	48.10 AV	54.00	-5.90	1.05 V	103	18.07	30.03
3	*2412.00	106.73 PK			1.02 V	106	76.61	30.12
4	*2412.00	102.15 AV			1.02 V	106	72.03	30.12
5	4824.00	51.49 PK	74.00	-22.51	1.75 V	95	16.01	35.48
6	4824.00	46.60 AV	54.00	-7.40	1.75 V	95	11.12	35.48
7	#7236.00	58.72 PK	86.73	-28.01	1.93 V	96	17.65	41.07
8	#7236.00	51.36 AV	82.15	-30.79	1.93 V	96	10.29	41.07

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 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 63%RH 959hPa	TESTED BY	Wen Yu

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	108.02 PK			1.75 H	86	77.81	30.21
2	*2437.00	103.56 AV			1.75 H	86	73.35	30.21
3	4874.00	50.69 PK	74.00	-23.31	1.93 H	245	15.07	35.62
4	4874.00	44.83 AV	54.00	-9.17	1.93 H	245	9.21	35.62
5	7311.00	53.35 PK	74.00	-20.65	1.69 H	254	12.08	41.27
6	7311.00	41.38 AV	54.00	-12.62	1.69 H	254	0.11	41.27
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	*2437.00	106.19 PK			1.00 V	105	75.98	30.21
2	*2437.00	101.37 AV			1.00 V	105	71.16	30.21
3	4874.00	50.03 PK	74.00	-23.97	1.68 V	93	14.41	35.62
4	4874.00	43.90 AV	54.00	-10.10	1.68 V	93	8.28	35.62
5	7311.00	56.13 PK	74.00	-17.87	1.94 V	91	14.86	41.27
6	7311.00	48.98 AV	54.00	-5.02	1.94 V	91	7.71	41.27

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.
5. " * ": Fundamental frequency.

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	25deg. C, 63%RH 959hPa	TESTED BY	Wen Yu

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	105.89 PK			1.76 H	261	75.58	30.31
2	*2462.00	101.85 AV			1.76 H	261	71.54	30.31
3	2487.00	57.81 PK	74.00	-16.19	1.76 H	261	27.40	30.41
4	2487.00	44.15 AV	54.00	-9.85	1.76 H	261	13.74	30.41
5	4924.00	49.86 PK	74.00	-24.14	1.93 H	251	14.11	35.75
6	4924.00	43.53 AV	54.00	-10.47	1.93 H	251	7.78	35.75
7	7386.00	52.75 PK	74.00	-21.25	1.70 H	253	11.31	41.44
8	7386.00	40.14 AV	54.00	-13.86	1.70 H	253	-1.30	41.44
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	105.77 PK			1.00 V	104	75.46	30.31
2	*2462.00	101.22 AV			1.00 V	104	70.91	30.31
3	2487.00	58.38 PK	74.00	-15.62	1.00 V	106	27.97	30.41
4	2487.00	45.37 AV	54.00	-8.63	1.00 V	106	14.96	30.41
5	4924.00	50.14 PK	74.00	-23.86	1.60 V	98	14.39	35.75
6	4924.00	42.63 AV	54.00	-11.37	1.60 V	98	6.88	35.75
7	7386.00	56.90 PK	74.00	-17.10	1.86 V	76	15.46	41.44
8	7386.00	47.86 AV	54.00	-6.14	1.86 V	76	6.42	41.44

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

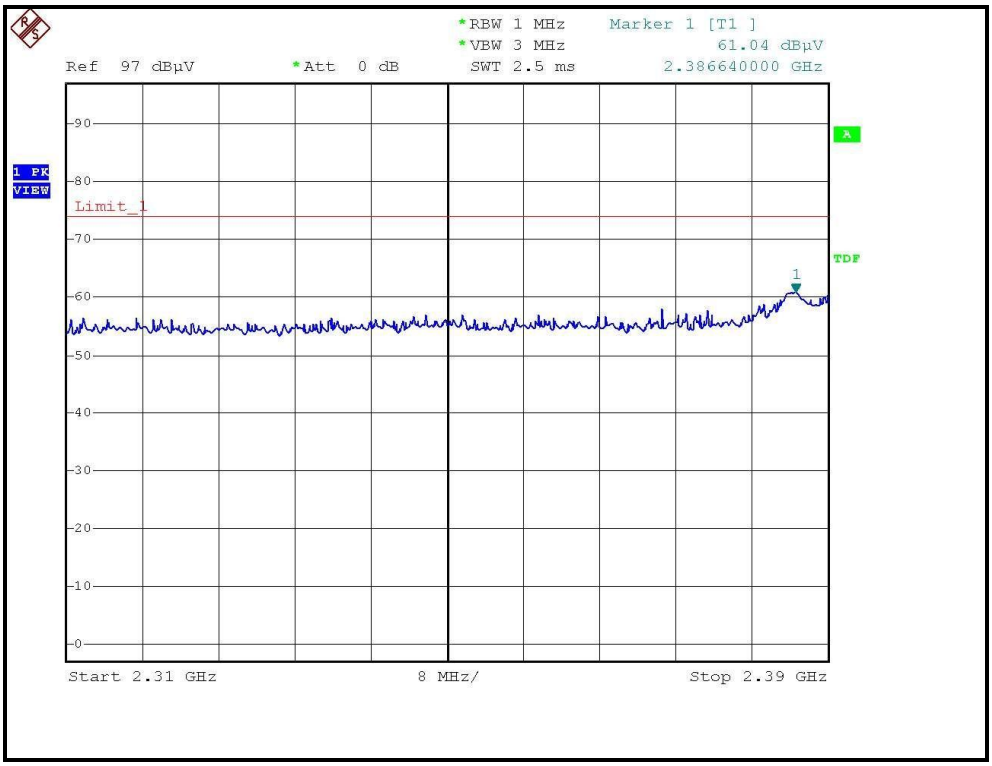
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

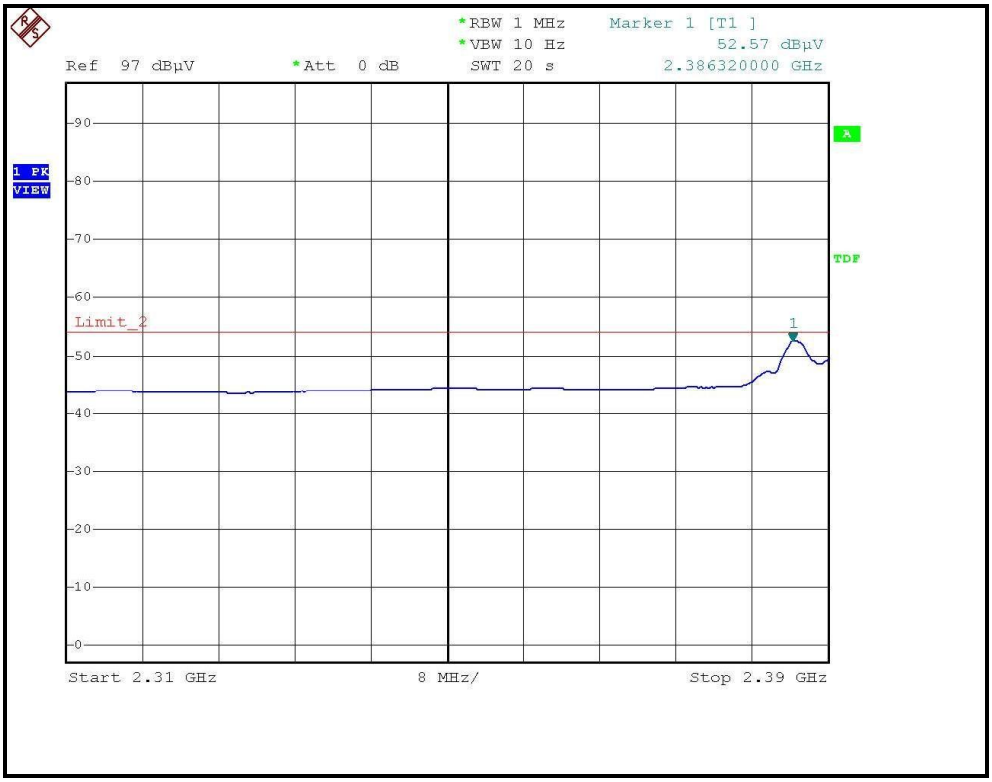
3. The other emission levels were very low against the limit.

4. Margin value = Emission level – Limit value.

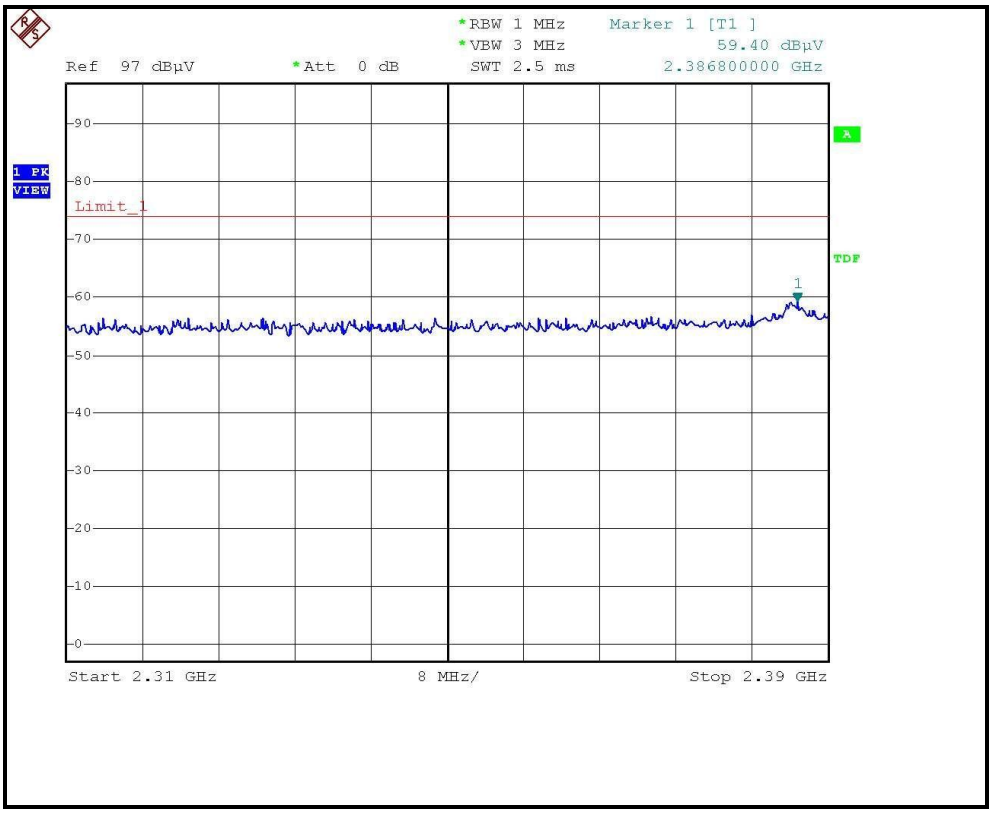
5. " * ": Fundamental frequency.

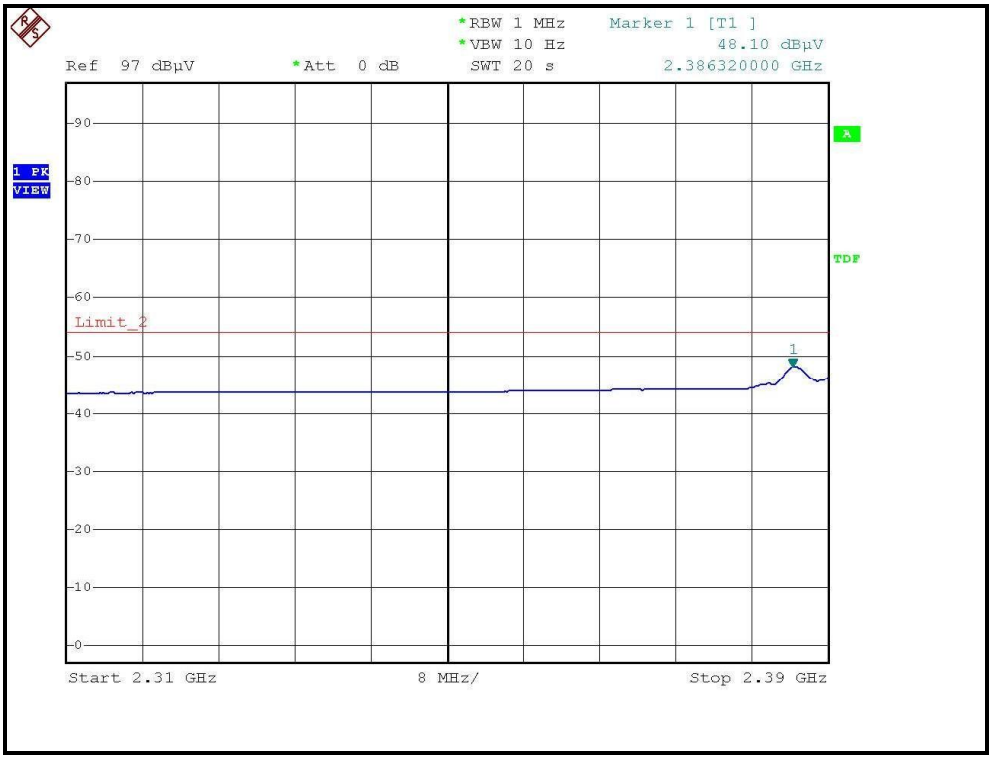
RESTRICTED BANDEDGE (802.11b MODE, CH1, HORIZONTAL)



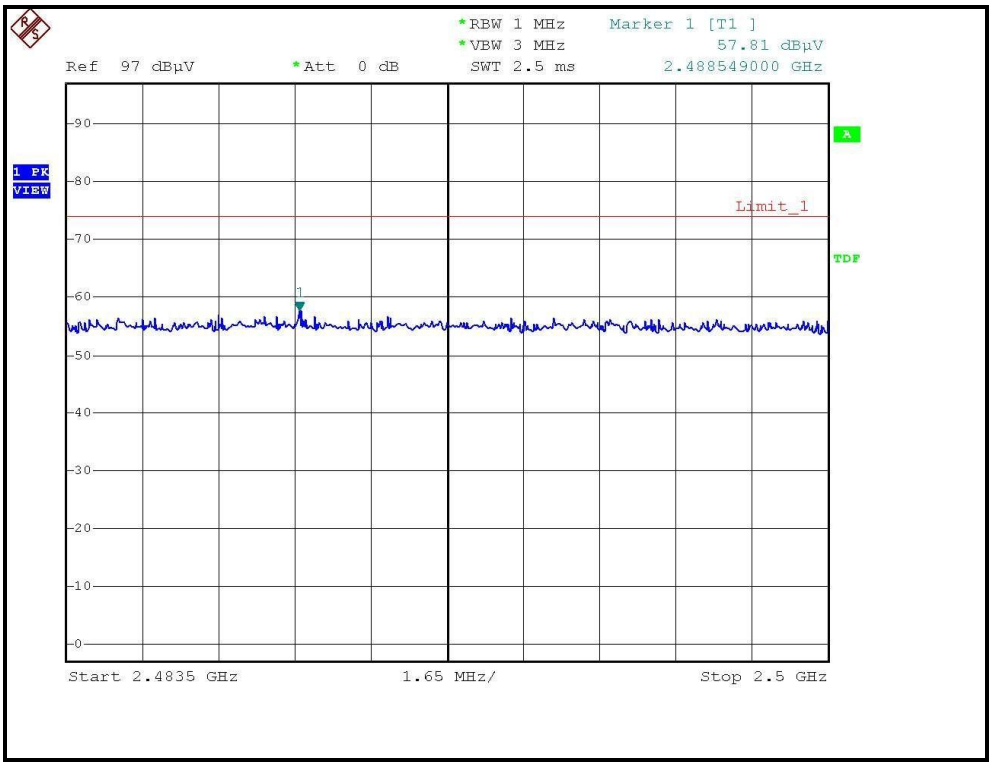


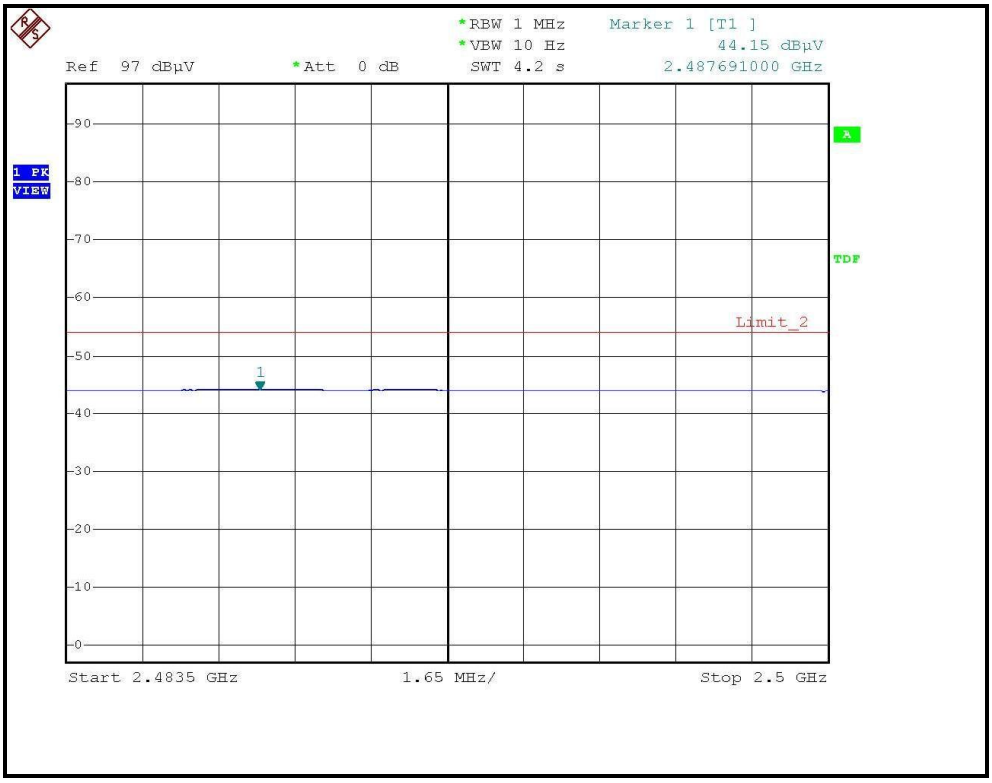
RESTRICTED BANDEDGE (802.11b MODE, CH1, VERTICAL)



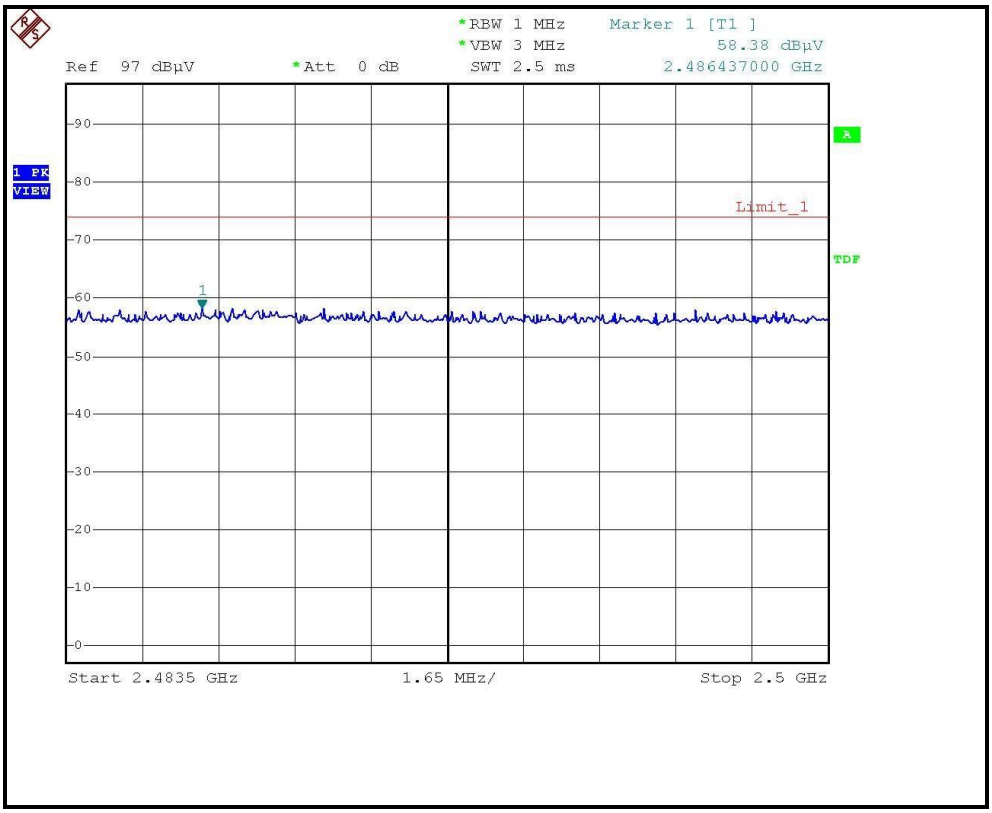


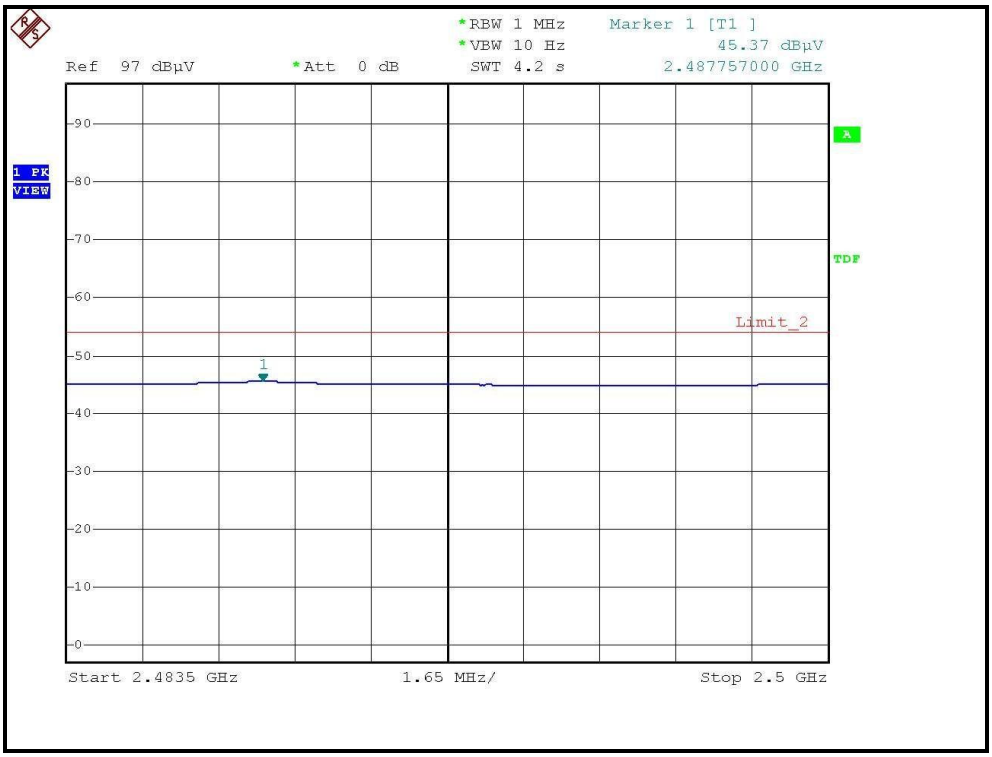
RESTRICTED BANDEDGE (802.11b MODE, CH11, HORIZONTAL)





RESTRICTED BANDEDGE (802.11b MODE, CH11, VERTICAL)





802.11g OFDM MODULATION with Dipole antenna

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	25deg. C, 60%RH 959hPa	TESTED BY	Frank Liu

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	61.92 PK	74.00	-12.08	1.62 H	191	31.86	30.06
2	2390.00	47.18 AV	54.00	-6.82	1.62 H	191	17.12	30.06
3	*2412.00	102.05 PK			1.57 H	195	71.90	30.15
4	*2412.00	91.40 AV			1.57 H	195	61.25	30.15
5	4824.00	44.70 PK	74.00	-29.30	1.37 H	252	9.14	35.56
6	4824.00	31.56 AV	54.00	-22.44	1.37 H	252	-4.00	35.56
7	#7236.00	56.30 PK	82.05	-25.75	1.35 H	79	14.90	41.40
8	#7236.00	39.20 AV	71.40	-32.20	1.35 H	79	-2.20	41.40
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	65.41 PK	74.00	-8.59	1.04 V	25	35.35	30.06
2	2390.00	50.29 AV	54.00	-3.71	1.04 V	25	20.23	30.06
3	*2412.00	108.20 PK			1.00 V	24	78.05	30.15
4	*2412.00	97.40 AV			1.00 V	24	67.25	30.15
5	4824.00	49.50 PK	74.00	-24.50	1.24 V	254	13.94	35.56
6	4824.00	33.20 AV	54.00	-20.80	1.24 V	254	-2.36	35.56
7	#7236.00	57.40 PK	88.20	-30.80	1.20 V	294	16.00	41.40
8	#7236.00	40.30 AV	77.40	-37.10	1.20 V	294	-1.10	41.40

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 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH 959hPa	TESTED BY	Frank Liu

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	102.70 PK			1.58 H	191	72.46	30.24
2	*2437.00	92.00 AV			1.58 H	191	61.76	30.24
3	4874.00	48.60 PK	74.00	-25.40	1.40 H	273	12.93	35.67
4	4874.00	32.60 AV	54.00	-21.40	1.40 H	273	-3.07	35.67
5	7311.00	60.10 PK	74.00	-13.90	1.33 H	68	18.49	41.61
6	7311.00	41.10 AV	54.00	-12.90	1.33 H	68	-0.51	41.61
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	110.80 PK			1.00 V	80	80.56	30.24
2	*2437.00	100.10 AV			1.00 V	80	69.86	30.24
3	4874.00	53.70 PK	74.00	-20.30	1.49 V	257	18.03	35.67
4	4874.00	34.80 AV	54.00	-19.20	1.49 V	257	-0.87	35.67
5	7311.00	61.60 PK	74.00	-12.40	1.28 V	298	19.99	41.61
6	7311.00	42.30 AV	54.00	-11.70	1.28 V	298	0.69	41.61

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

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	25deg. C, 60%RH 959hPa	TESTED BY	Frank Liu

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	102.70 PK			1.57 H	192	72.36	30.34
2	*2462.00	91.60 AV			1.57 H	192	61.26	30.34
3	2483.50	61.80 PK	74.00	-12.20	1.56 H	193	31.37	30.43
4	2483.50	46.57 AV	54.00	-7.43	1.56 H	193	16.14	30.43
5	4924.00	50.20 PK	74.00	-23.80	1.27 H	262	14.41	35.79
6	4924.00	34.30 AV	54.00	-19.70	1.27 H	262	-1.49	35.79
7	7386.00	53.40 PK	74.00	-20.60	1.34 H	83	11.59	41.81
8	7386.00	38.10 AV	54.00	-15.90	1.34 H	83	-3.71	41.81
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	*2462.00	109.50 PK			1.00 V	29	79.16	30.34
2	*2462.00	98.60 AV			1.00 V	29	68.26	30.34
3	2483.50	70.11 PK	74.00	-3.89	1.00 V	28	39.68	30.43
4	**2483.50**	**52.60 AV**	**54.00**	**-1.40**	**1.00 V**	**28**	**22.17**	**30.43**
5	4924.00	55.10 PK	74.00	-18.90	1.39 V	262	19.31	35.79
6	4924.00	36.10 AV	54.00	-17.90	1.39 V	262	0.31	35.79
7	7386.00	58.20 PK	74.00	-15.80	1.20 V	277	16.39	41.81
8	7386.00	40.20 AV	54.00	-13.80	1.20 V	277	-1.61	41.81

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

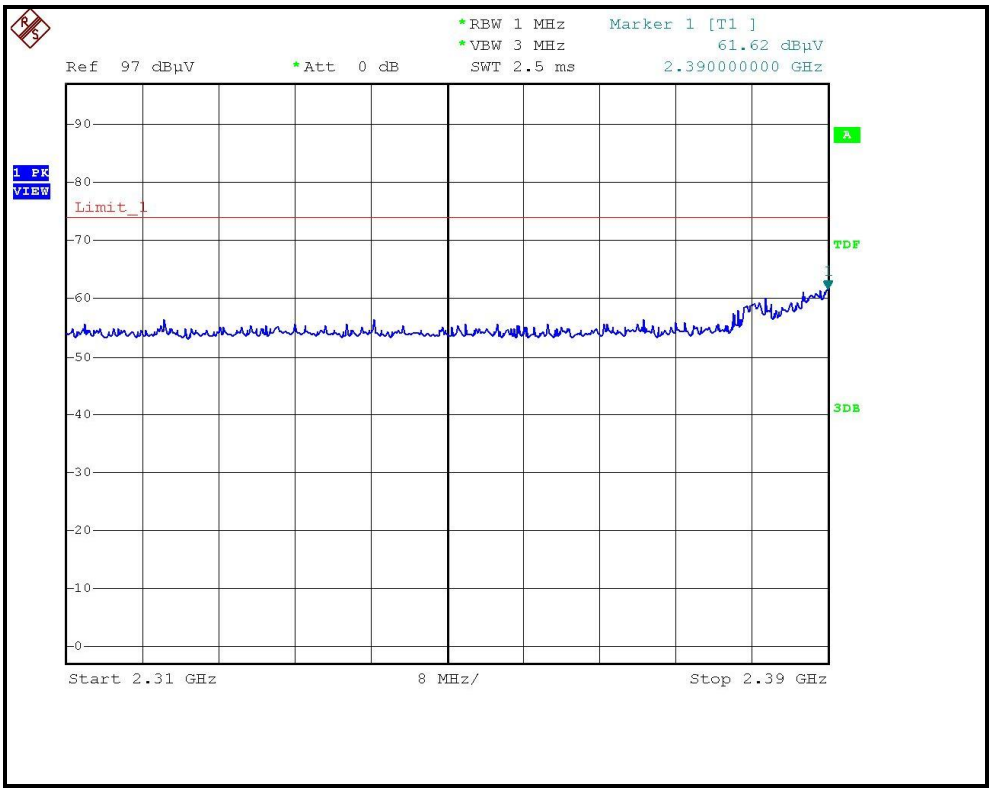
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

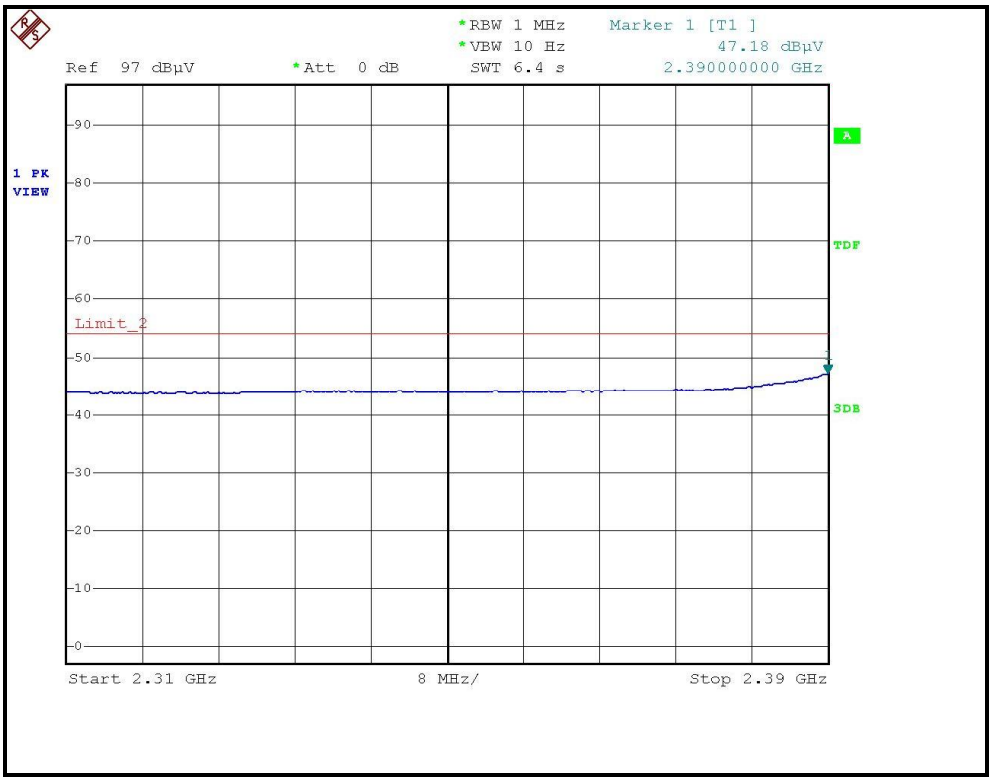
3. The other emission levels were very low against the limit.

4. Margin value = Emission level – Limit value.

5. " * ": Fundamental frequency.

RESTRICTED BANDEDGE (802.11g MODE, CH1, HORIZONTAL)





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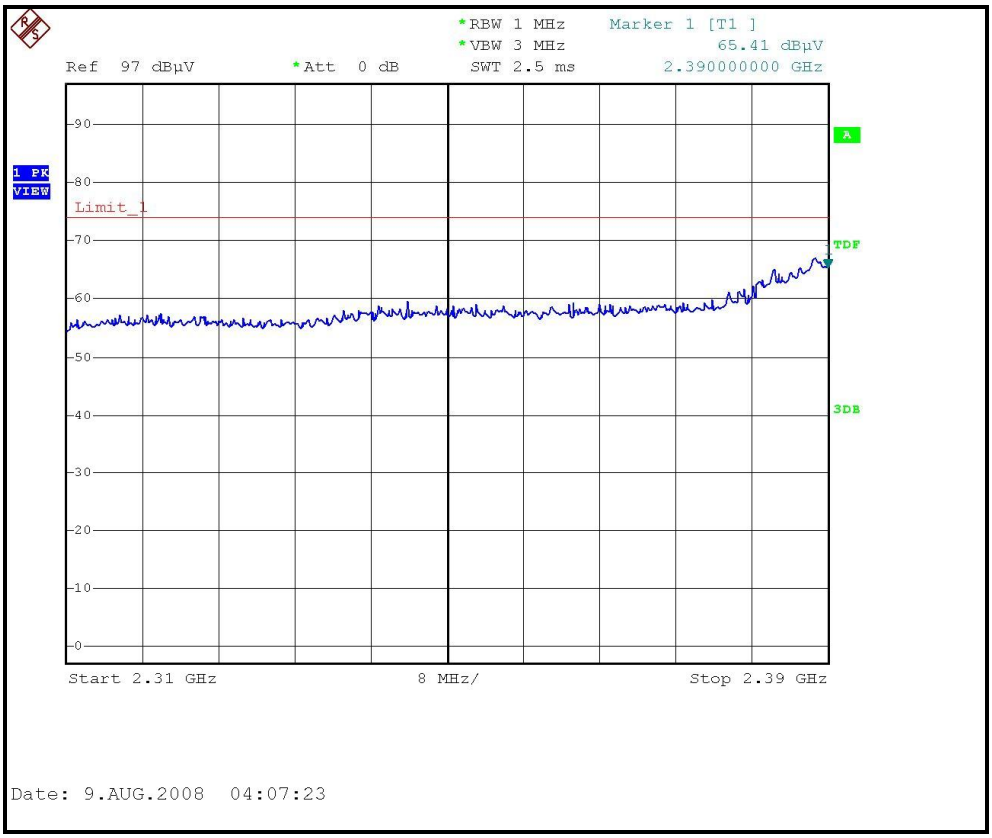
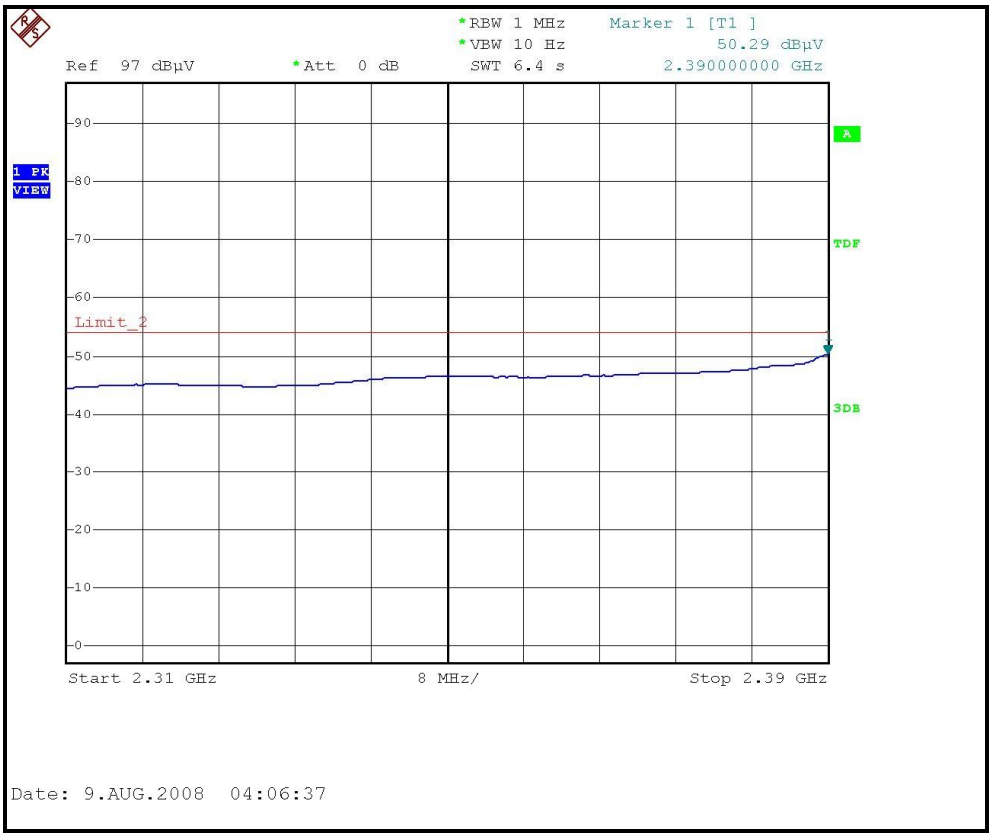
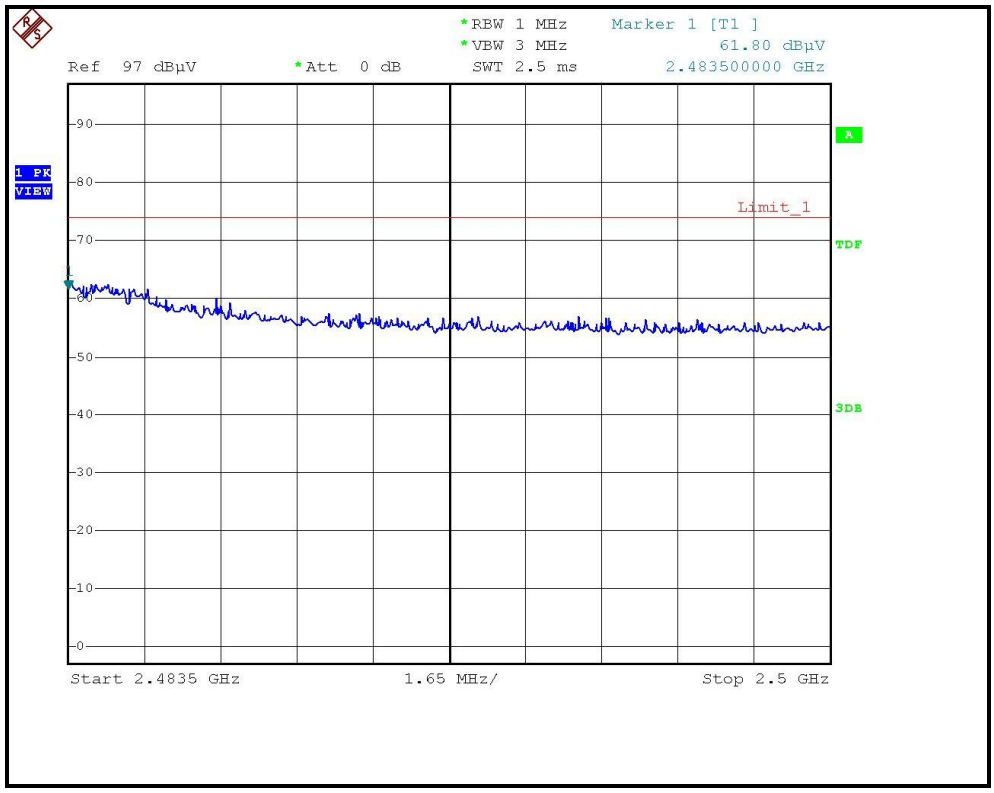
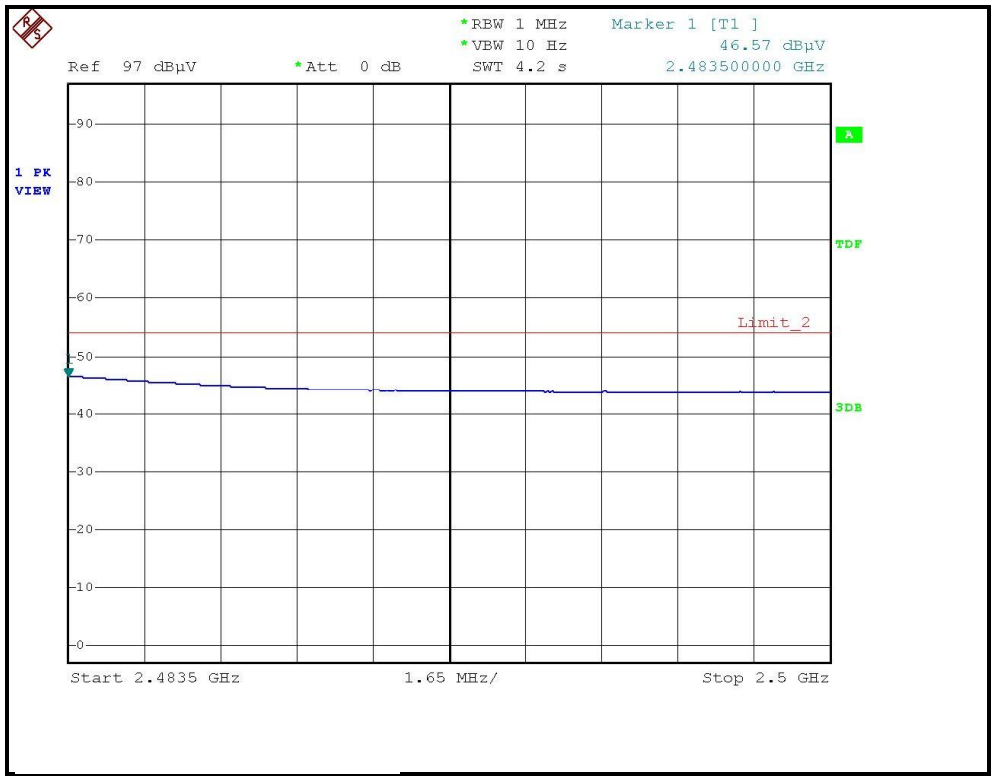


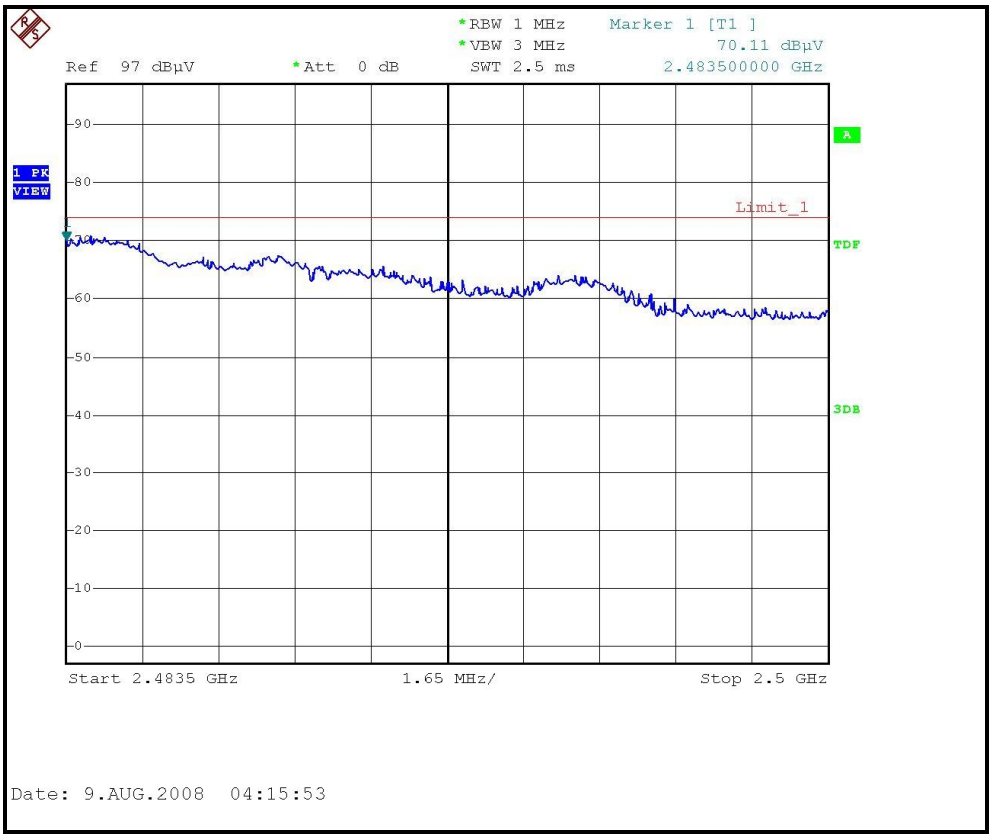


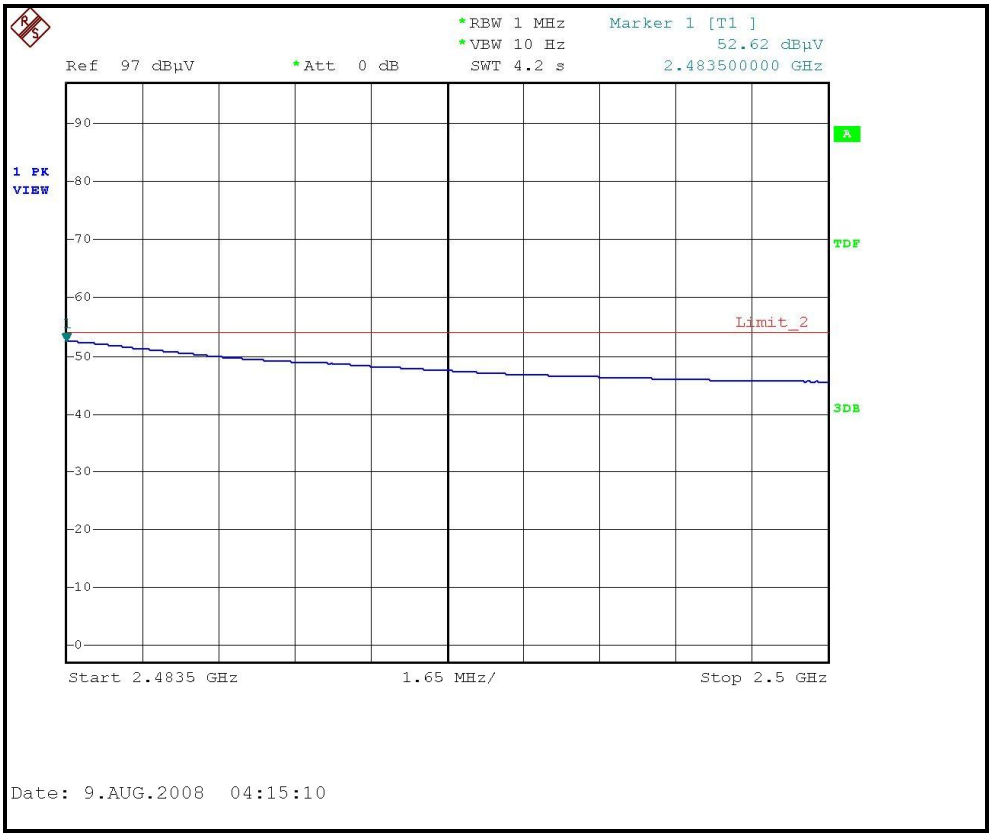
RESTRICTED BANDEDGE (802.11g MODE, CH11, HORIZONTAL)





RESTRICTED BANDEDGE (802.11g MODE, CH11, VERTICAL)





802.11g OFDM MODULATION with PCB antenna

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	25deg. C, 63%RH 959hPa	TESTED BY	Wen Yu

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	69.18 PK	74.00	-4.82	1.73 H	88	39.15	30.03
2	2390.00	51.14 AV	54.00	-2.86	1.73 H	88	21.11	30.03
3	*2412.00	105.70 PK			1.73 H	94	75.58	30.12
4	*2412.00	95.07 AV			1.73 H	94	64.95	30.12
5	4824.00	48.11 PK	74.00	-25.89	1.82 H	84	12.63	35.48
6	4824.00	34.41 AV	54.00	-19.59	1.82 H	84	-1.07	35.48
7	#7236.00	54.14 PK	85.70	-31.56	1.82 H	20	13.07	41.07
8	#7236.00	39.26 AV	75.07	-35.81	1.82 H	20	-1.81	41.07
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	68.95 PK	74.00	-5.05	1.06 V	106	38.92	30.03
2	2390.00	51.13 AV	54.00	-2.87	1.06 V	106	21.10	30.03
3	*2412.00	105.26 PK			1.03 V	106	75.14	30.12
4	*2412.00	94.75 AV			1.03 V	106	64.63	30.12
5	4824.00	47.89 PK	74.00	-26.11	1.77 V	96	12.41	35.48
6	4824.00	34.26 AV	54.00	-19.74	1.77 V	96	-1.22	35.48
7	#7236.00	53.86 PK	85.26	-31.40	1.94 V	95	12.79	41.07
8	#7236.00	38.45 AV	74.75	-36.30	1.94 V	95	-2.62	41.07

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 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 63%RH 959hPa	TESTED BY	Wen Yu

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	105.77 PK			1.73 H	98	75.56	30.21
2	*2437.00	95.71 AV			1.73 H	98	65.50	30.21
3	4874.00	48.26 PK	74.00	-25.74	1.83 H	86	12.64	35.62
4	4874.00	34.45 AV	54.00	-19.55	1.83 H	86	-1.17	35.62
5	7311.00	54.38 PK	74.00	-19.62	1.81 H	21	13.11	41.27
6	7311.00	39.36 AV	54.00	-14.64	1.81 H	21	-1.91	41.27
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	*2437.00	105.12 PK			1.03 V	105	74.91	30.21
2	*2437.00	94.68 AV			1.03 V	105	64.47	30.21
3	4874.00	48.12 PK	74.00	-25.88	1.74 V	97	12.50	35.62
4	4874.00	34.47 AV	54.00	-19.53	1.74 V	97	-1.15	35.62
5	7311.00	53.96 PK	74.00	-20.04	1.96 V	92	12.69	41.27
6	7311.00	38.52 AV	54.00	-15.48	1.96 V	92	-2.75	41.27

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.
5. " * ": Fundamental frequency.

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	25deg. C, 63%RH 959hPa	TESTED BY	Wen Yu

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	103.86 PK			1.74 H	265	73.55	30.31
2	*2462.00	93.14 AV			1.74 H	265	62.83	30.31
3	2483.50	63.38 PK	74.00	-10.62	1.67 H	87	32.98	30.40
4	2483.50	46.93 AV	54.00	-7.07	1.67 H	87	16.53	30.40
5	4924.00	48.38 PK	74.00	-25.62	1.83 H	80	12.63	35.75
6	4924.00	34.56 AV	54.00	-19.44	1.83 H	80	-1.19	35.75
7	7386.00	54.51 PK	74.00	-19.49	1.80 H	20	13.07	41.44
8	7386.00	39.42 AV	54.00	-14.58	1.80 H	20	-2.02	41.44
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	103.65 PK			1.03 V	104	73.34	30.31
2	*2462.00	92.98 AV			1.03 V	104	62.67	30.31
3	2483.50	63.33 PK	74.00	-10.67	1.00 V	105	32.93	30.40
4	2483.50	46.87 AV	54.00	-7.13	1.00 V	105	16.47	30.40
5	4924.00	48.06 PK	74.00	-25.94	1.75 V	98	12.31	35.75
6	4924.00	34.44 AV	54.00	-19.56	1.75 V	98	-1.31	35.75
7	7386.00	53.87 PK	74.00	-20.13	1.95 V	93	12.43	41.44
8	7386.00	38.45 AV	54.00	-15.55	1.95 V	93	-2.99	41.44

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

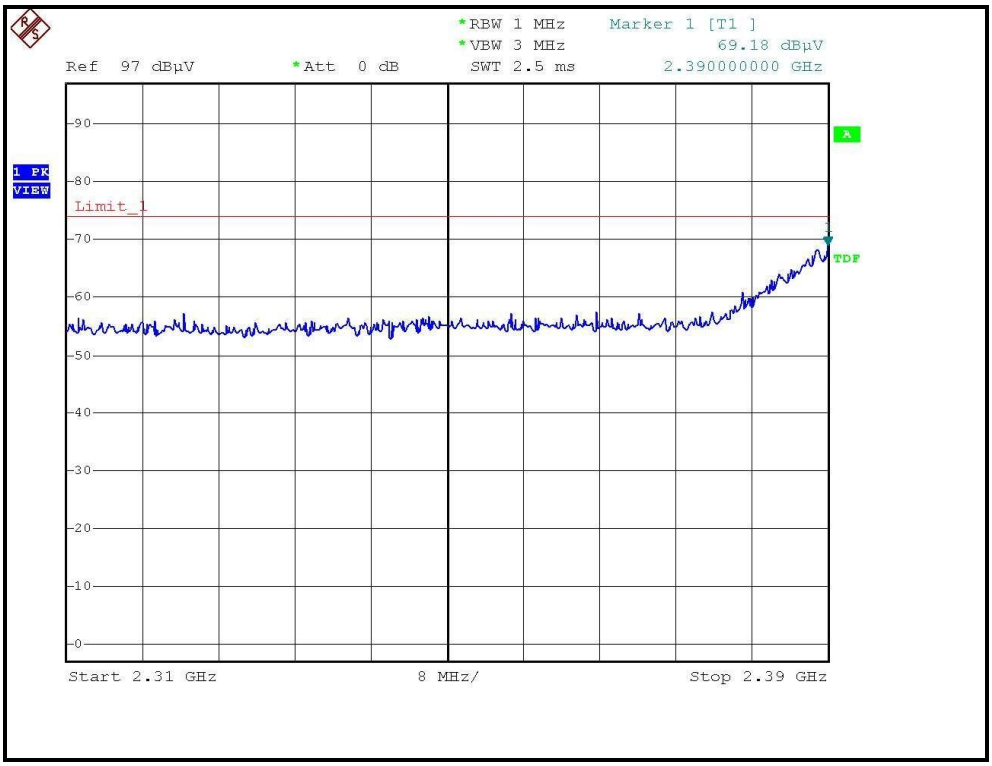
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

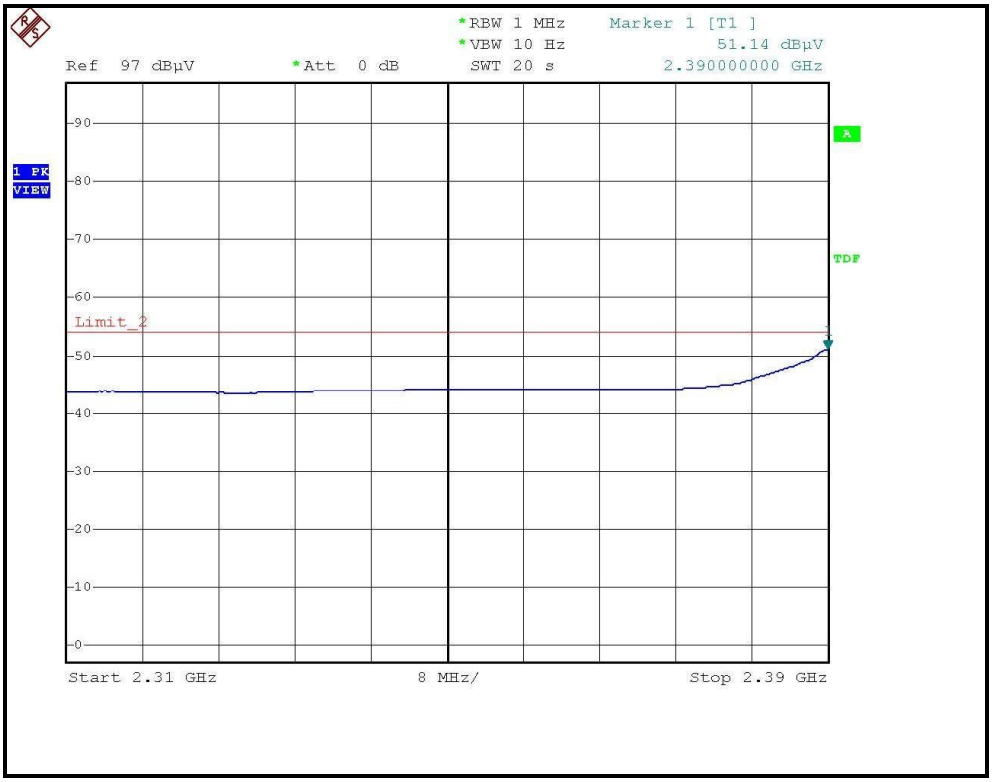
3. The other emission levels were very low against the limit.

4. Margin value = Emission level – Limit value.

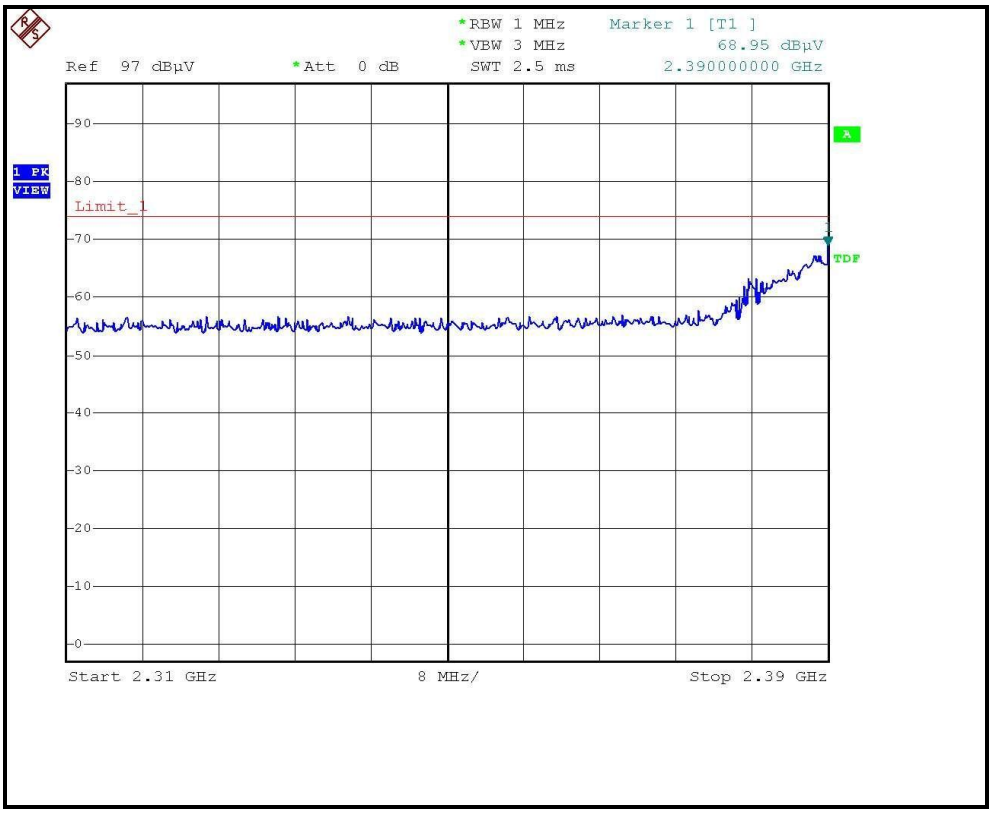
5. " * ": Fundamental frequency.

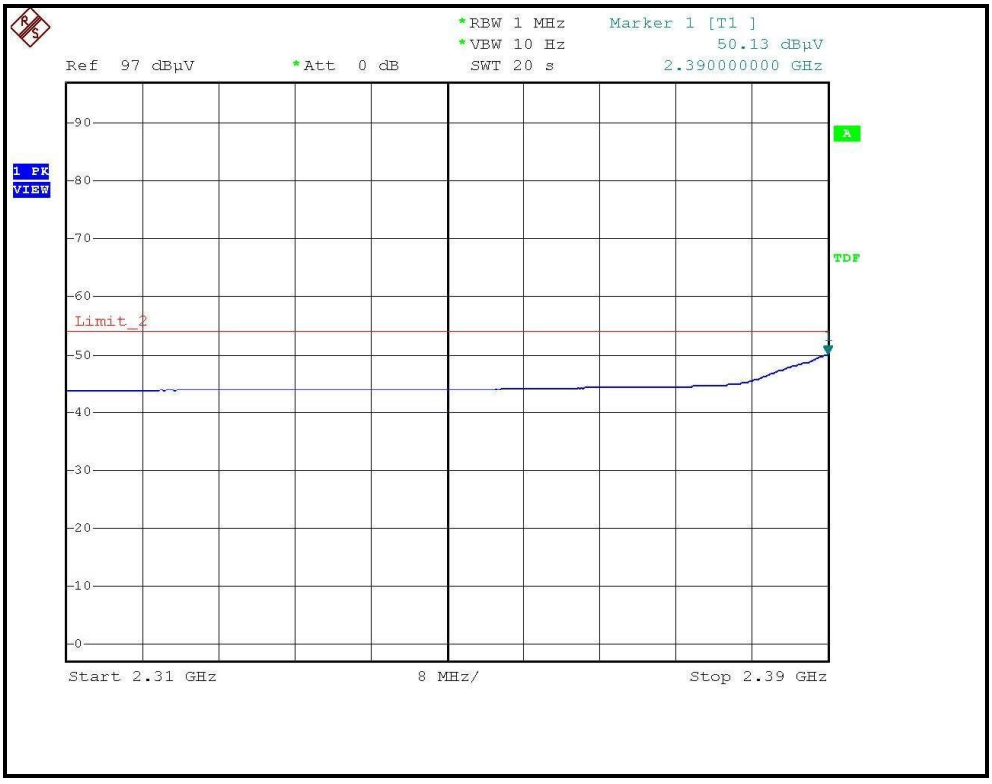
RESTRICTED BANDEDGE (802.11g MODE, CH1, HORIZONTAL)



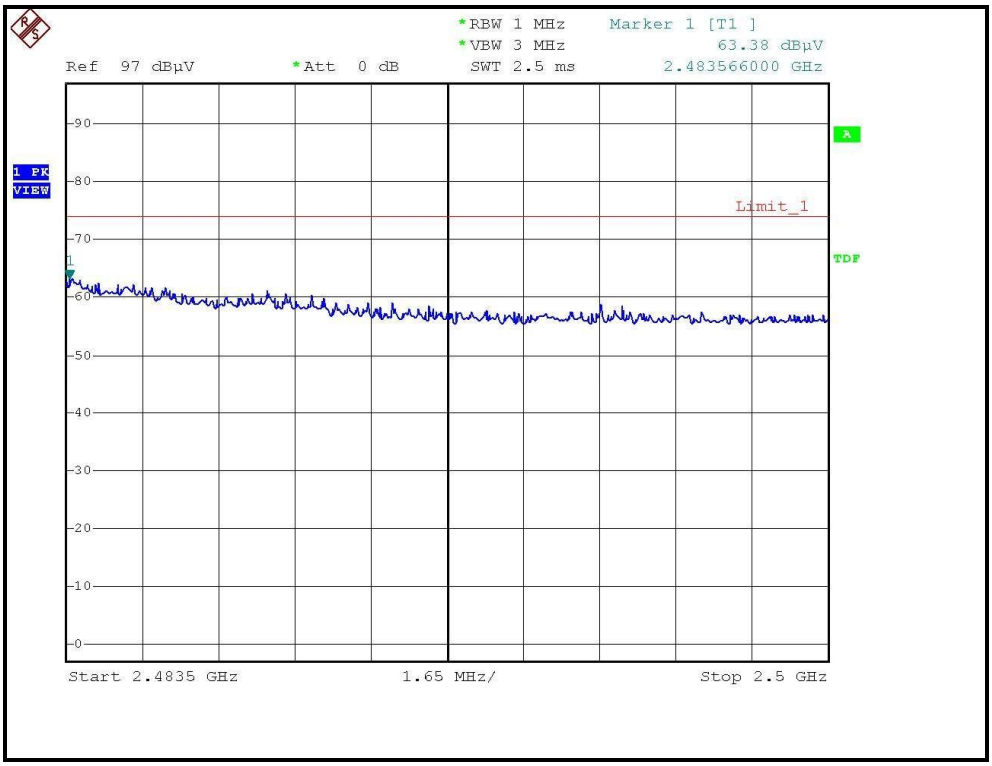


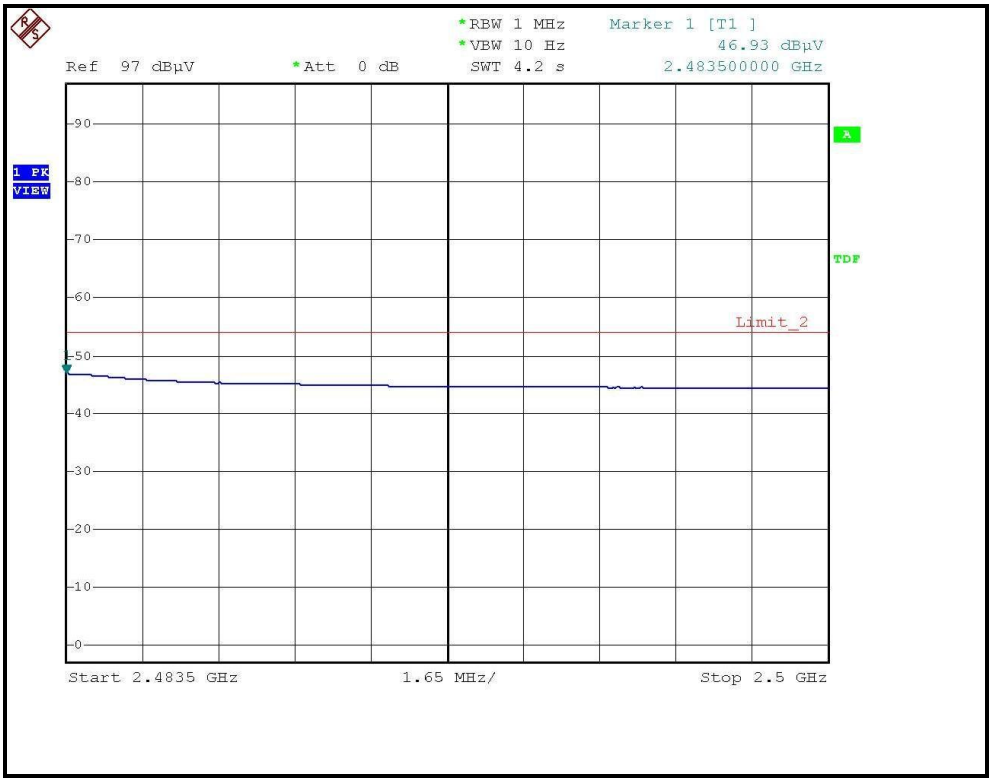
RESTRICTED BANDEDGE (802.11g MODE, CH1, VERTICAL)



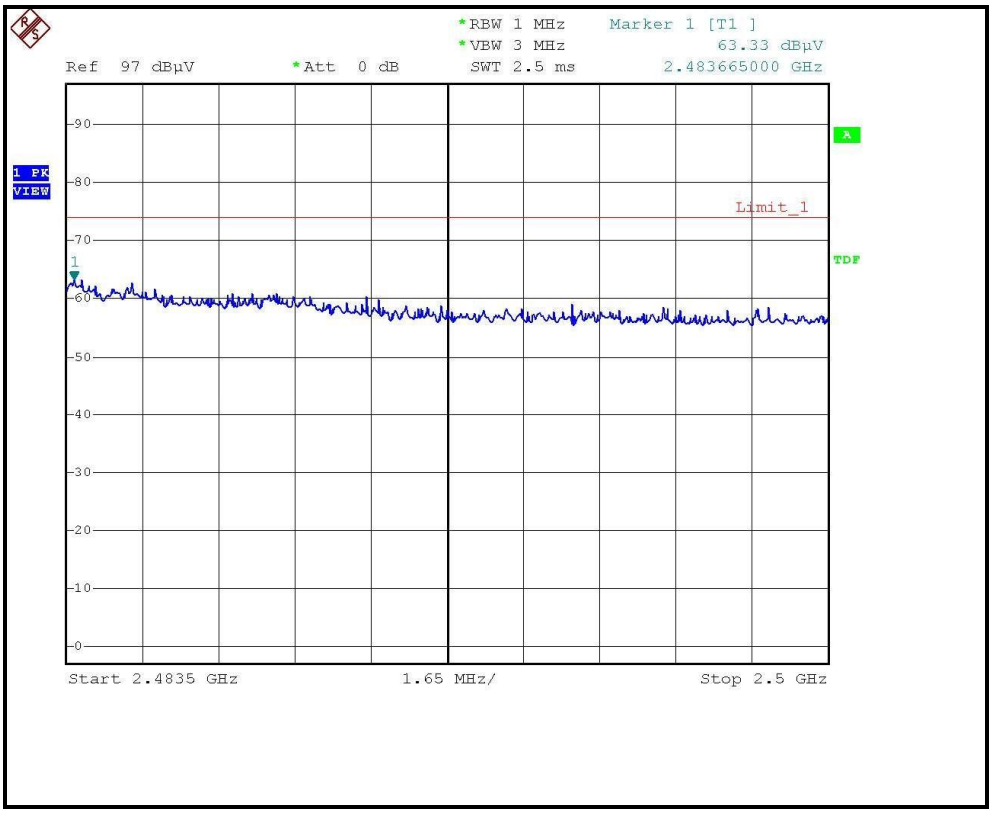


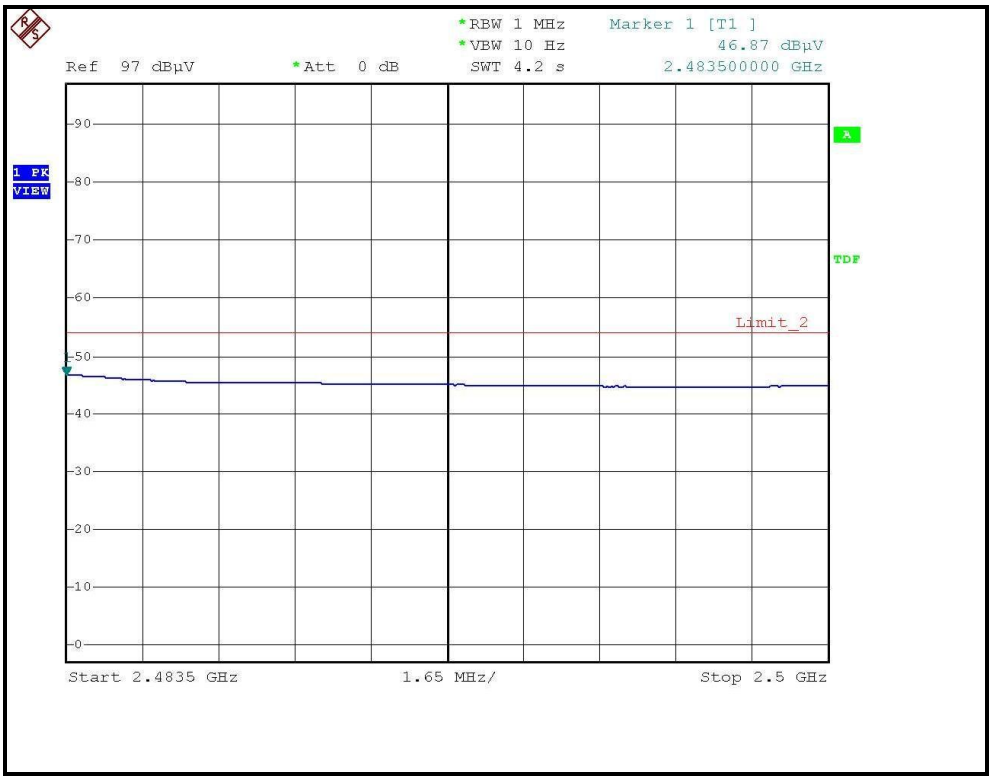
RESTRICTED BANDEDGE (802.11g MODE, CH11, HORIZONTAL)





RESTRICTED BANDEDGE (802.11g MODE, CH11, VERTICAL)





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 Until
R&S SPECTRUM ANALYZER	FSP40	100036	Dec. 17, 2008

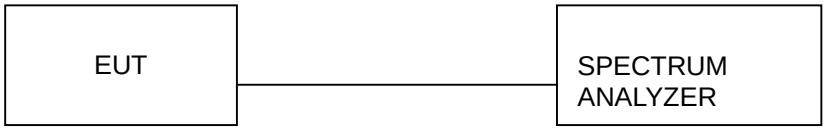
NOTE:

1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
2. 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 100 kHz RBW and 100 kHz VBW. The 6 dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6 dB.

4.3.4 TEST SETUP



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

4.3.5 EUT OPERATING CONDITIONS

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

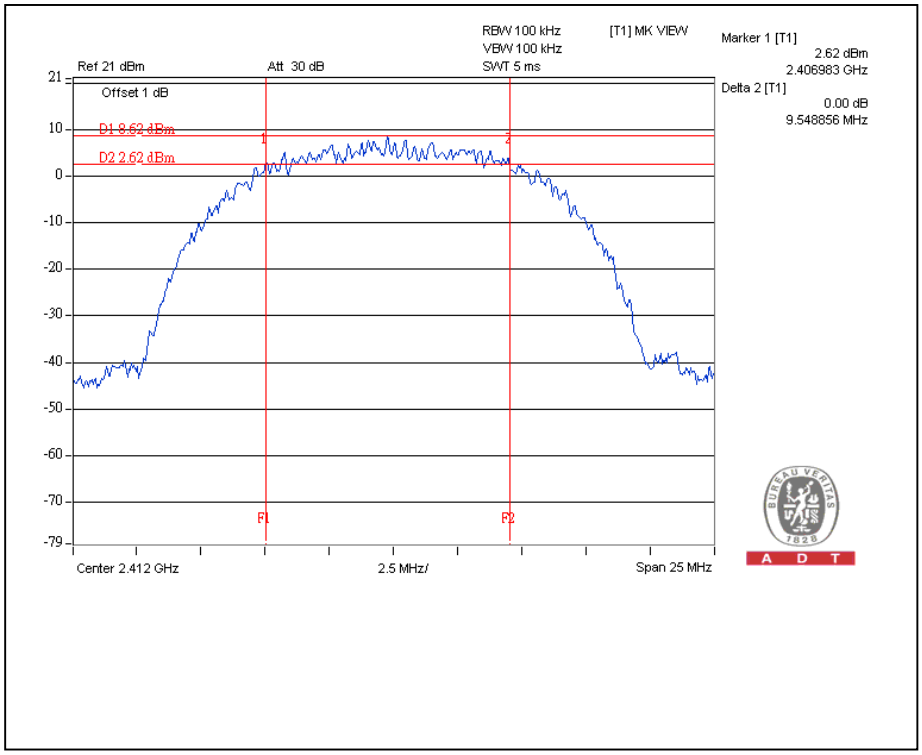
4.3.6 TEST RESULTS

802.11b DSSS modulation

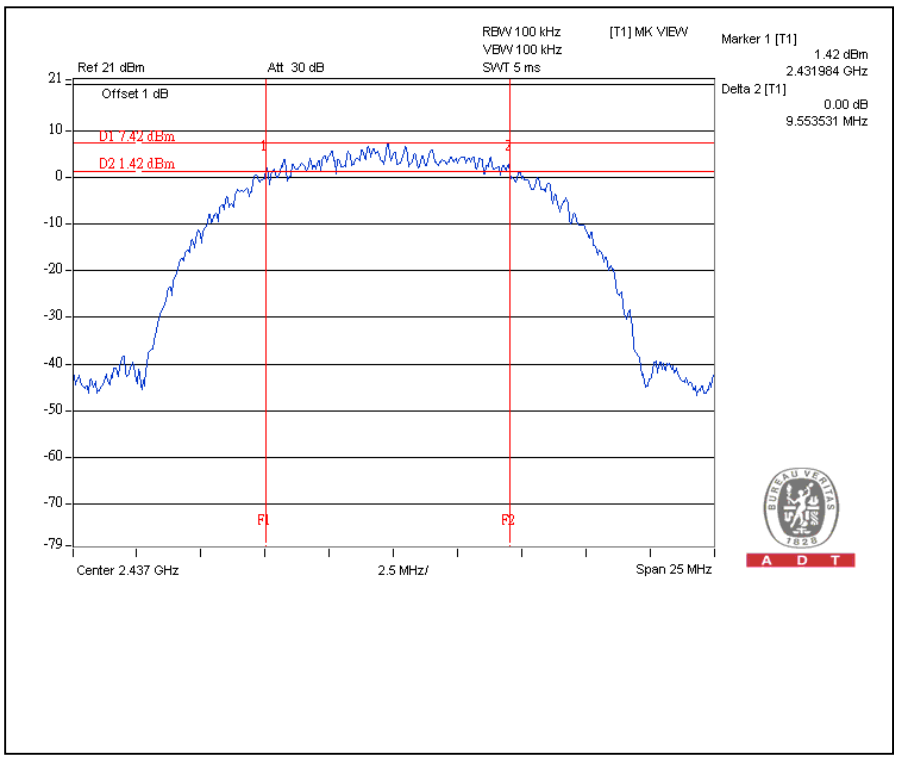
MODULATION TYPE	DBPSK	**TRANSFER RATE**	1Mbps
INPUT POWER	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	25deg. C, 60%RH, 959hPa
TESTED BY	Rex Huang		

CHANNEL	CHANNEL FREQUENCY (MHz)	6 dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	9.55	0.5	PASS
6	2437	9.55	0.5	PASS
11	2462	9.58	0.5	PASS

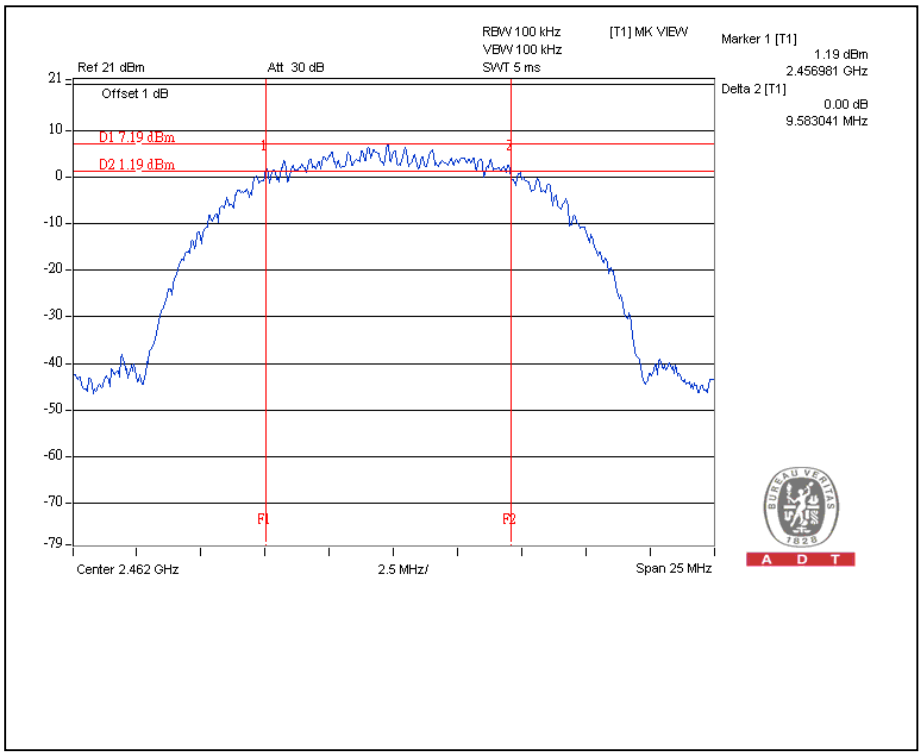
CH1


RBW 100 kHz
VBW 100 kHz
SWT 5 ms
[T1] MK VIEW
Marker 1 [T1]
2.62 dBm
2.406983 GHz
Delta 2 [T1]
0.00 dB
9.548856 MHz
Ref 21 dBm
Att 30 dB
Offset 1 dB
D1 8.62 dBm
D2 2.62 dBm
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
F1
F2
Center 2.412 GHz
2.5 MHz/
Span 25 MHz

CH6


RBW 100 kHz
VBW 100 kHz
SWT 5 ms
[T1] MK VIEW
Marker 1 [T1]
1.42 dBm
2.431984 GHz
Delta 2 [T1]
0.00 dB
9.553531 MHz
Ref 21 dBm
Att 30 dB
Offset 1 dB
D1 7.42 dBm
D2 1.42 dBm
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
F1
F2
Center 2.437 GHz
2.5 MHz/
Span 25 MHz

CH11

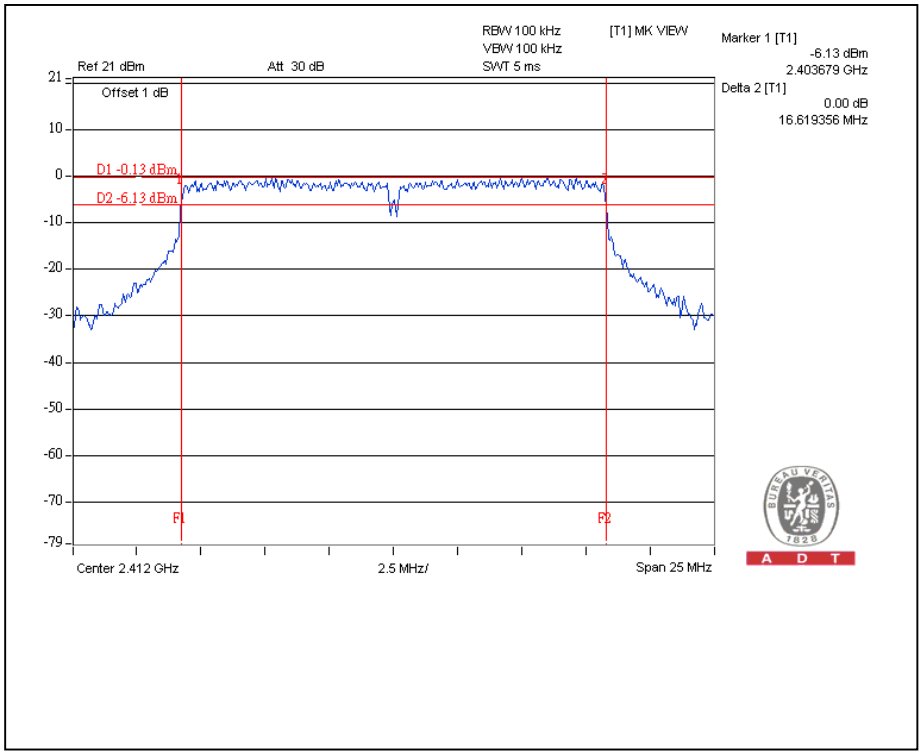

RBW 100 kHz
VBW 100 kHz
SWT 5 ms
[T1] MK VIEW
Marker 1 [T1]
1.19 dBm
2.456981 GHz
Delta 2 [T1]
0.00 dB
9.583041 MHz
Ref 21 dBm
Att 30 dB
Offset 1 dB
D1 7.19 dBm
D2 1.19 dBm
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
F1
F2
Center 2.462 GHz
2.5 MHz/
Span 25 MHz

802.11g OFDM modulation

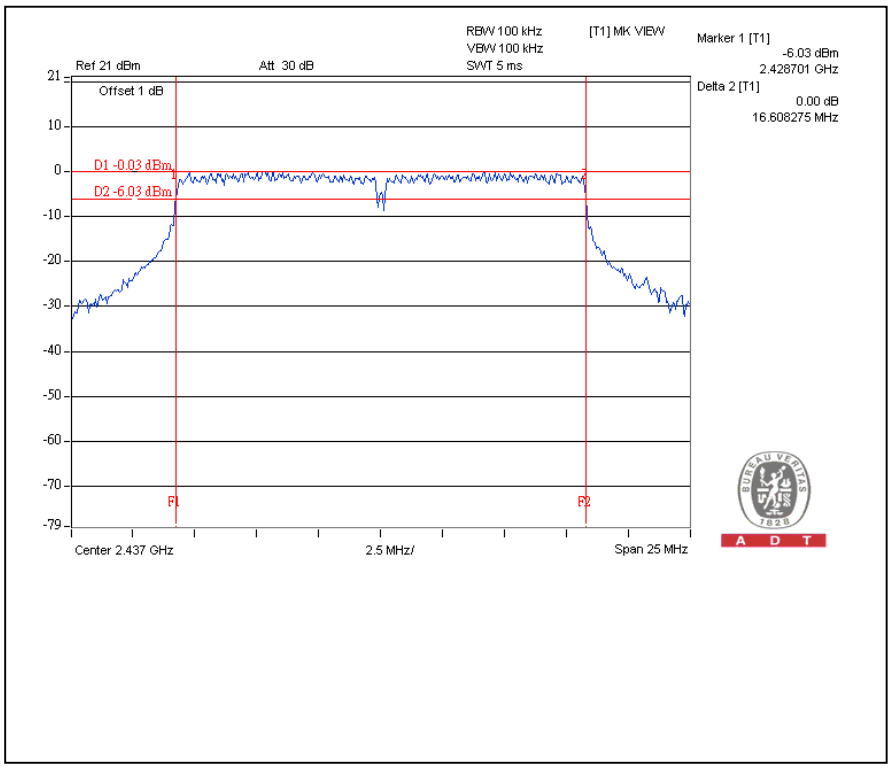
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	25deg. C, 60%RH, 959hPa
TESTED BY	Rex Huang		

CHANNEL	CHANNEL FREQUENCY (MHz)	6 dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	16.62	0.5	PASS
6	2437	16.61	0.5	PASS
11	2462	16.60	0.5	PASS

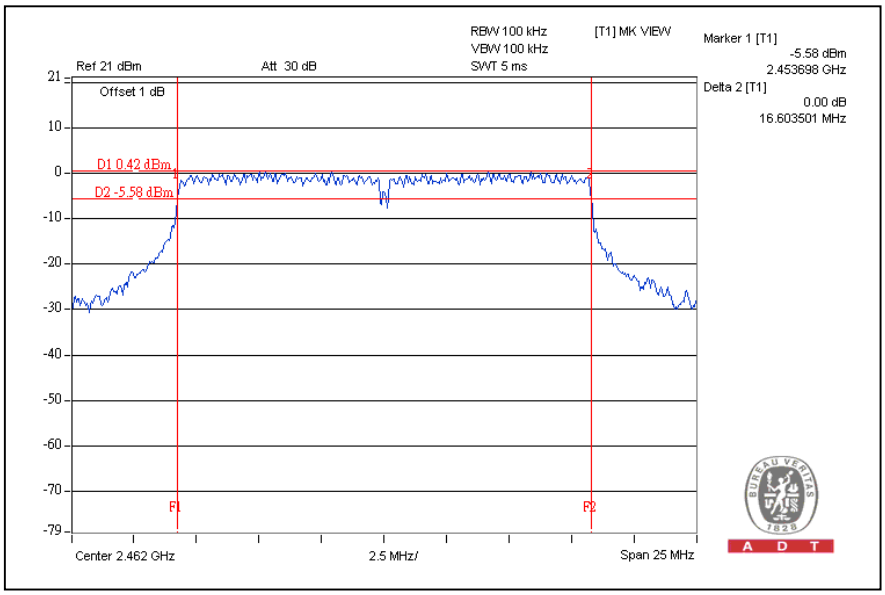
CH1


RBW 100 kHz
VBW 100 kHz
SWT 5 ms
[T1] MK VIEW
Marker 1 [T1]
-6.13 dBm
2.403679 GHz
Delta 2 [T1]
0.00 dB
16.619356 MHz
Ref 21 dBm
Att 30 dB
Offset 1 dB
D1 -0.13 dBm
D2 -6.13 dBm
F1
F2
Center 2.412 GHz
2.5 MHz/
Span 25 MHz

CH6


RBW 100 kHz
VBW 100 kHz
SWT 5 ms
[T1] MK VIEW
Marker 1 [T1]
-6.03 dBm
2.428701 GHz
Delta 2 [T1]
0.00 dB
16.608275 MHz
Ref 21 dBm
Att 30 dB
Offset 1 dB
D1 -0.03 dBm
D2 -6.03 dBm
F1
F2
Center 2.437 GHz
2.5 MHz/
Span 25 MHz

CH11


RBW 100 kHz
VBW 100 kHz
SWT 5 ms
[T1] MK VIEW
Marker 1 [T1]
-5.58 dBm
2.453698 GHz
Delta 2 [T1]
0.00 dB
16.603501 MHz
Ref 21 dBm
Att 30 dB
Offset 1 dB
D1 0.42 dBm
D2 -5.58 dBm
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
R1
R2
Center 2.462 GHz
2.5 MHz/
Span 25 MHz

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 TEST INSTRUMENTS

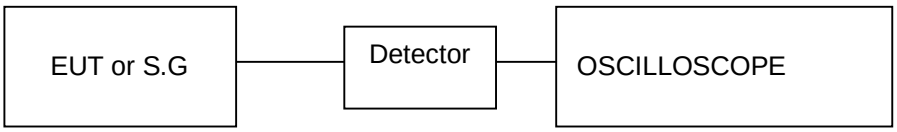
Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSP40	100036	Dec. 17, 2008
Agilent SIGNAL GENERATOR	E8257C	MY43320668	Dec. 07, 2008
TEKTRONIX OSCILLOSCOPE	TDS380	B016335	July. 20, 2009
NARDA DETECTOR	4503A	FSCM99899	NA

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. A detector was used on the output port of the EUT. An oscilloscope was used to read the peak response of the detector.
2. Replaced the EUT by the signal generator. The center frequency of the S.G was adjusted to the center frequency of the measured channel.
3. Adjusted the power to have the same peak reading on oscilloscope. Record the power level.

4.4.4 TEST SETUP



4.4.5 EUT OPERATING CONDITIONS

Same as Item 4.3.5

4.4.6 TEST RESULTS

802.11b DSSS modulation with Dipole antenna

MODULATION TYPE	DBPSK	**TRANSFER RATE**	1Mbps
INPUT POWER	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	25deg. C, 60%RH, 959hPa
TESTED BY	Rex Huang		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	95.499	19.80	30	PASS
6	2437	70.795	18.50	30	PASS
11	2462	63.096	18.00	30	PASS

802.11b DSSS modulation with PCB antenna

MODULATION TYPE	DBPSK	**TRANSFER RATE**	1Mbps
INPUT POWER	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	25deg. C, 60%RH, 959hPa
TESTED BY	Rex Huang		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	95.499	19.80	30	PASS
6	2437	70.795	18.50	30	PASS
11	2462	63.096	18.00	30	PASS

802.11g OFDM modulation with Dipole antenna

MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 959hPa
TESTED BY	Rex Huang		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	58.884	17.70	30	PASS
6	2437	66.069	18.20	30	PASS
11	2462	69.183	18.40	30	PASS

802.11g OFDM modulation with PCB antenna

MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 959hPa
TESTED BY	Rex Huang		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	58.884	17.70	30	PASS
6	2437	66.069	18.20	30	PASS
11	2462	69.183	18.40	30	PASS

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 Until
R&S SPECTRUM ANALYZER	FSP40	100036	Dec. 17, 2008

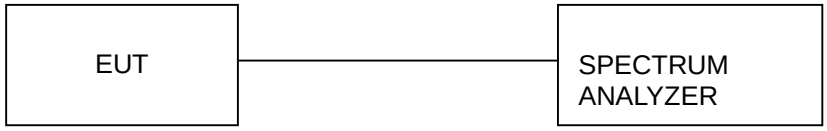
NOTE:

1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
2. 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 3 kHz RBW and 30 kHz 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 TEST SETUP



4.5.5 EUT OPERATING CONDITIONS

Same as 4.3.5

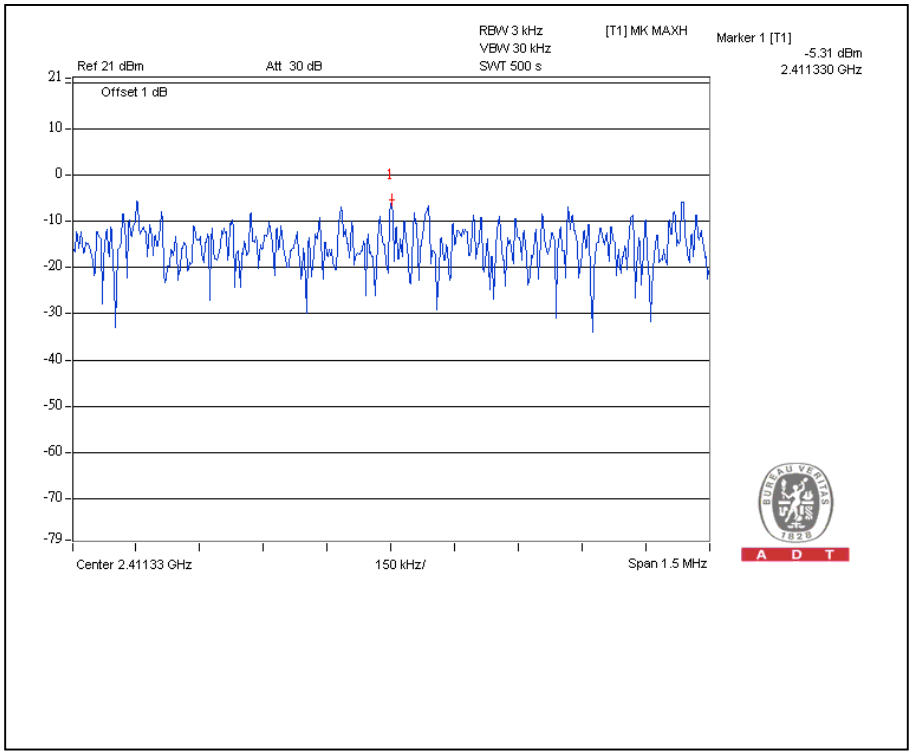
4.5.6 TEST RESULTS

802.11b DSSS modulation

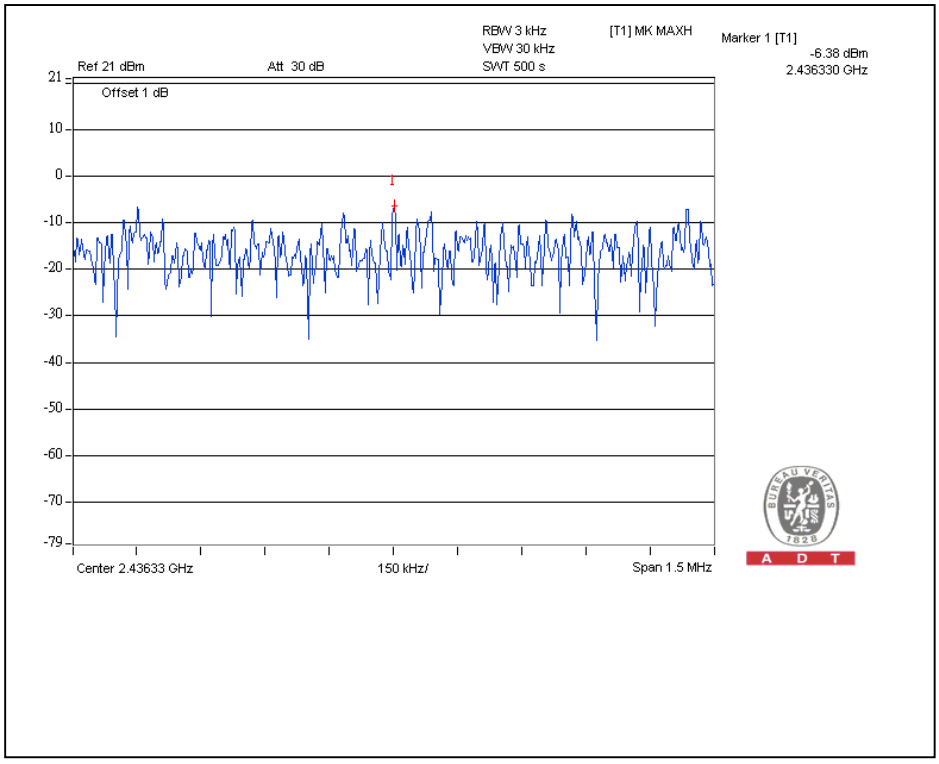
MODULATION TYPE	DBPSK	**TRANSFER RATE**	1Mbps
INPUT POWER	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	25deg. C, 60%RH, 959hPa
TESTED BY	Rex Huang		

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 KHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-5.31	8	PASS
6	2437	-6.38	8	PASS
11	2462	-6.57	8	PASS

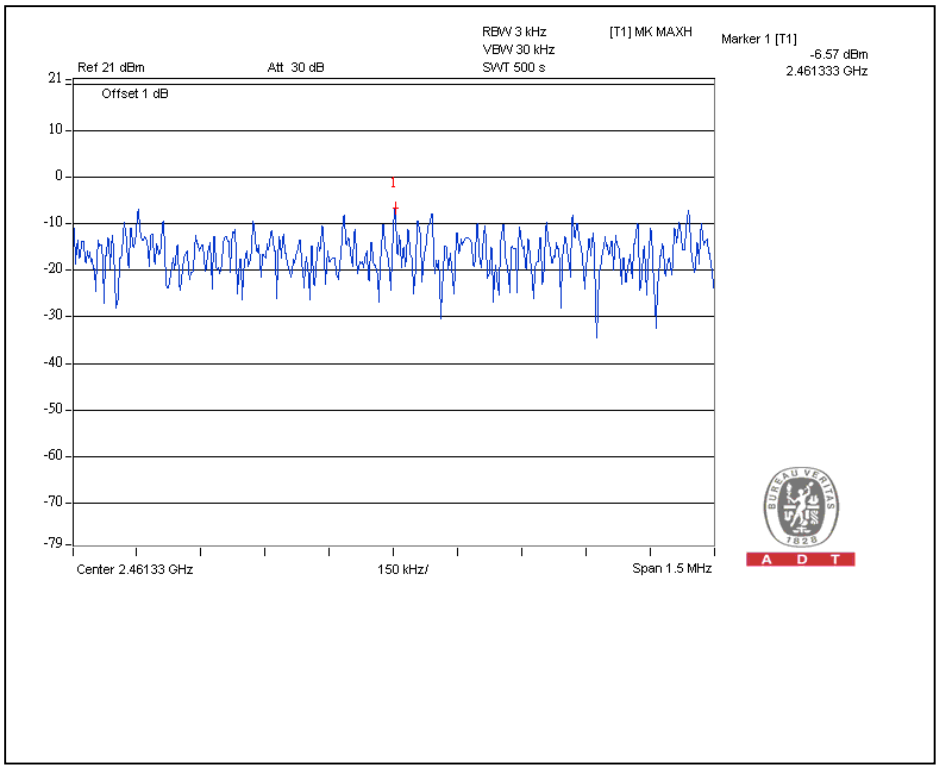
CH1


RBW 3 kHz
VBW 30 kHz
SWT 500 s
[T1] MK MAXH
Marker 1 [T1]
-5.31 dBm
2.411330 GHz
Ref 21 dBm
Att 30 dB
Offset 1 dB
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
Center 2.41133 GHz
150 kHz/
Span 1.5 MHz

CH6


RBW 3 kHz
VBW 30 kHz
SWT 500 s
[T1] MK MAXH
Marker 1 [T1]
-6.38 dBm
2.436330 GHz
Ref 21 dBm
Att 30 dB
Offset 1 dB
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
Center 2.43633 GHz
150 kHz/
Span 1.5 MHz

CH11

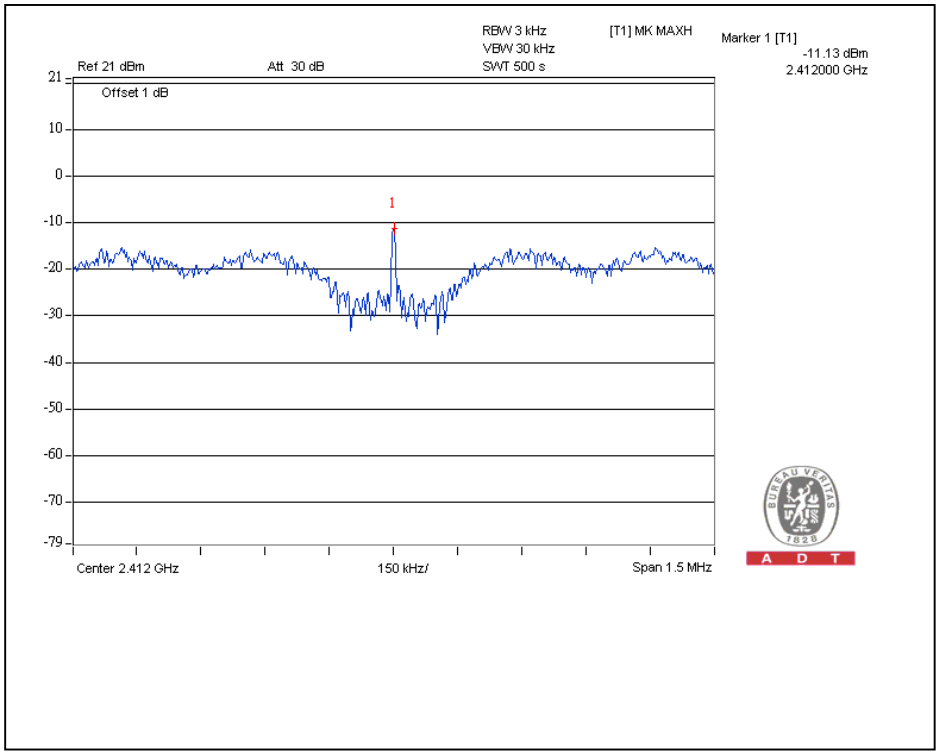

RBW 3 kHz
VBW 30 kHz
SWT 500 s
[T1] MK MAXH
Marker 1 [T1]
-6.57 dBm
2.461333 GHz
Ref 21 dBm
Att 30 dB
Offset 1 dB
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
Center 2.46133 GHz
150 kHz/
Span 1.5 MHz

802.11g OFDM modulation

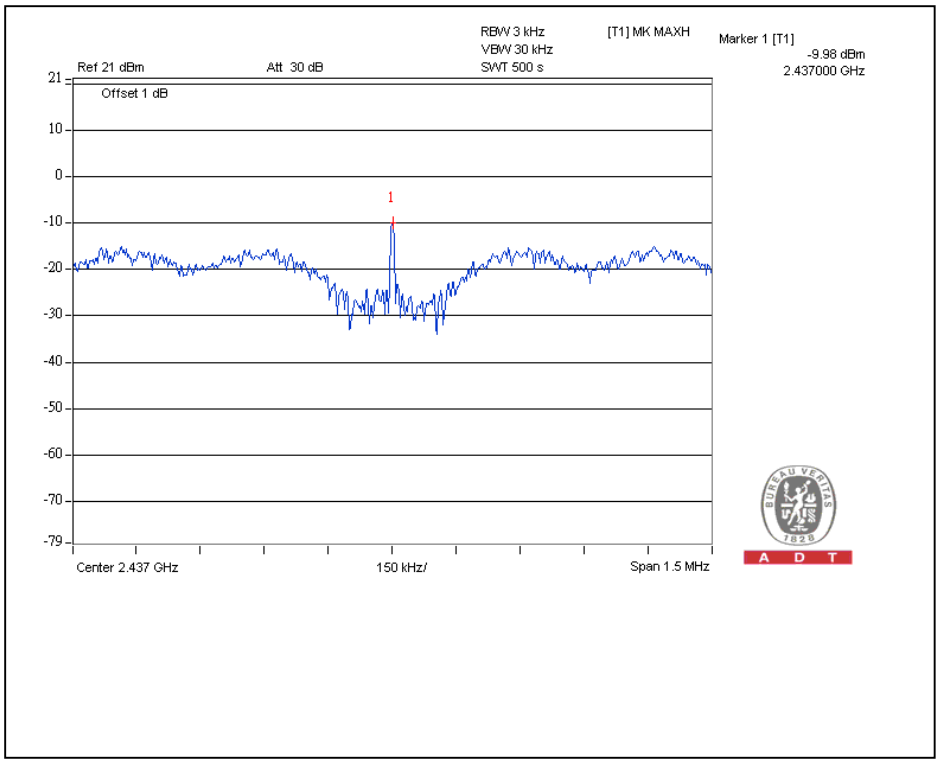
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	25deg. C, 60%RH, 959hPa
TESTED BY	Rex Huang		

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 KHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-11.13	8	PASS
6	2437	-9.98	8	PASS
11	2462	-9.33	8	PASS

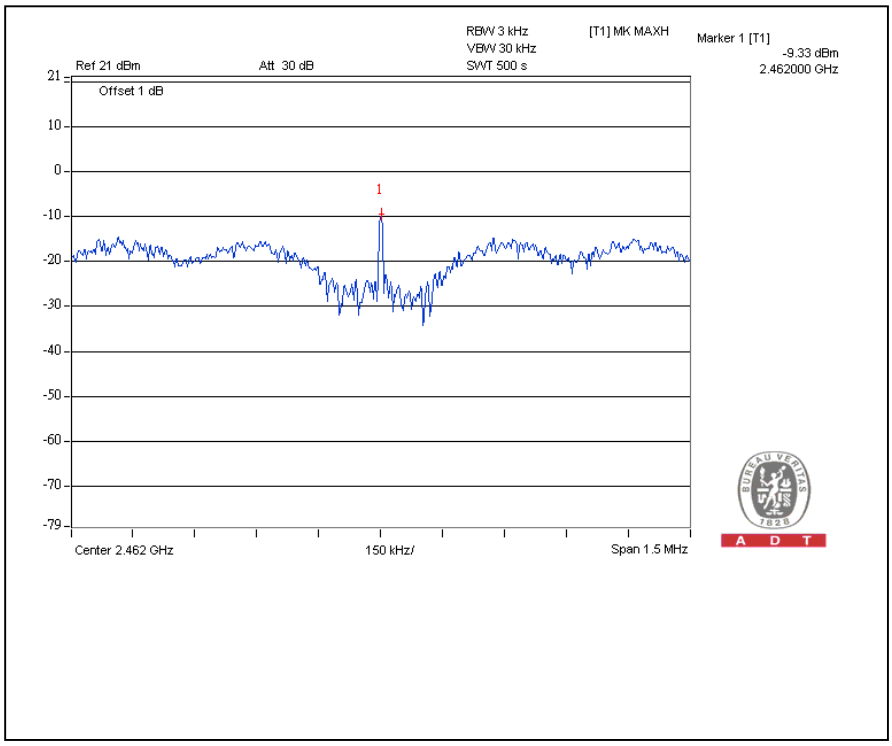
CH1


RBW 3 kHz
VBW 30 kHz
SWT 500 s
[T1] MK MAXH
Marker 1 [T1]
-11.13 dBm
2.412000 GHz
Ref 21 dBm
Att 30 dB
Offset 1 dB
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
1
Center 2.412 GHz
150 kHz/
Span 1.5 MHz

CH6


RBW 3 kHz
VBW 30 kHz
SWT 500 s
[T1] MK MAXH
Marker 1 [T1]
-9.98 dBm
2.437000 GHz
Ref 21 dBm
Att 30 dB
Offset 1 dB
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
1
Center 2.437 GHz
150 kHz/
Span 1.5 MHz

CH11


RBW 3 kHz
VBW 30 kHz
SWT 500 s
[T1] MK MAXH
Marker 1 [T1]
-9.33 dBm
2.462000 GHz
Ref 21 dBm
Att 30 dB
Offset 1 dB
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
1
Center 2.462 GHz
150 kHz/
Span 1.5 MHz

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 Until
R&S SPECTRUM ANALYZER	FSP40	100036	Dec. 17, 2008

NOTE:

1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
2. 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 lose cable. Set RBW of spectrum analyzer to 100kHz and VBW of spectrum analyzer to 300kHz with suitable frequency span including 100 MHz bandwidth from band edge. The band edges was measured and recorded.

The spectrum plots (RBW =100kHz ; VBW = 300kHz) are attached on the following pages.

4.6.4 EUT OPERATING CONDITION

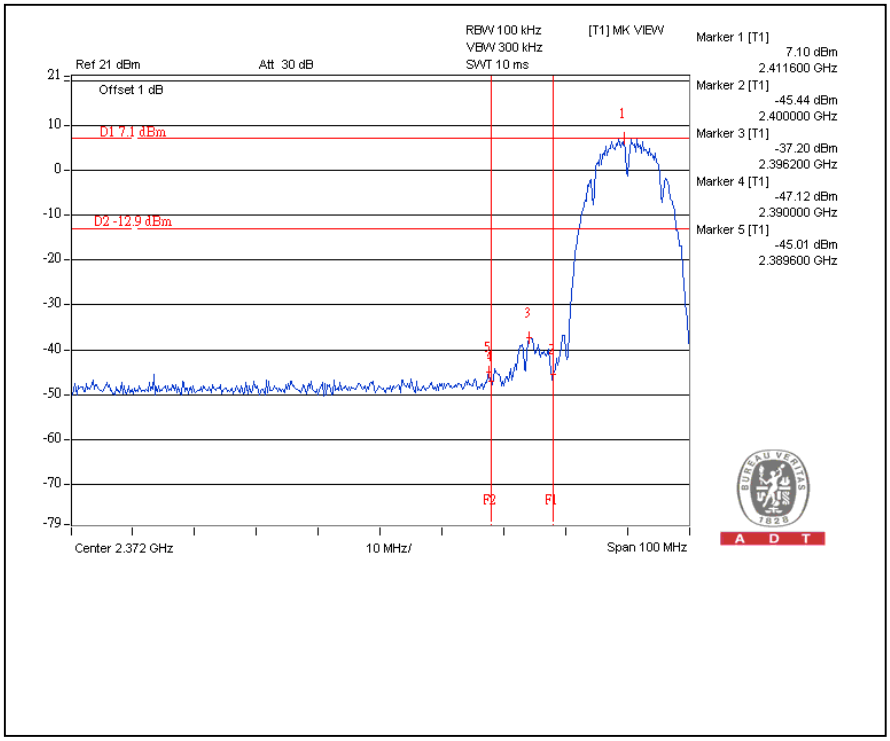
Same as Item 4.3.5

4.6.5 TEST RESULTS

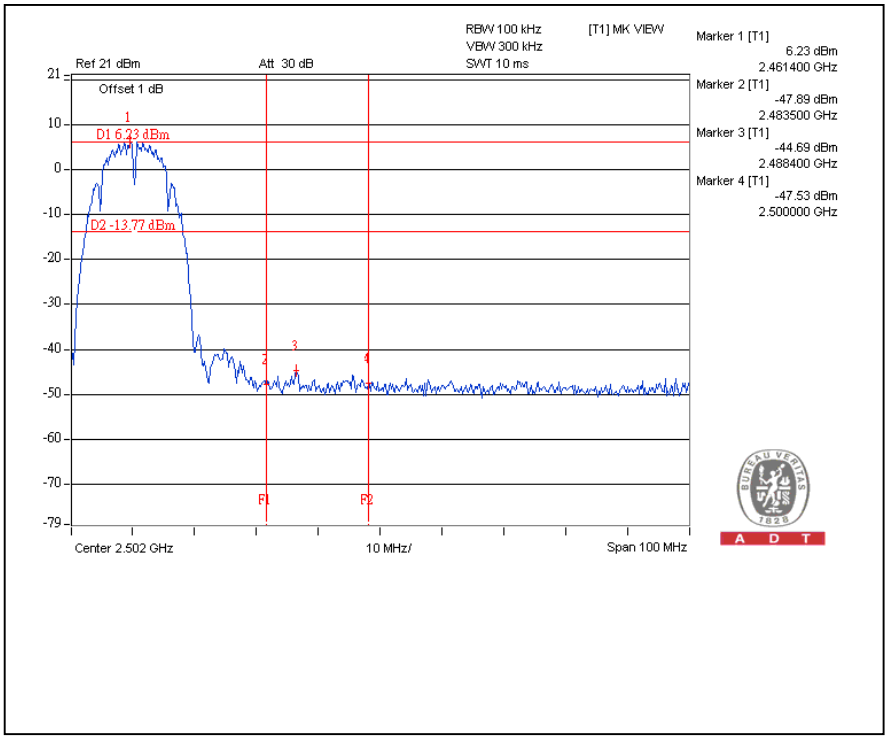
The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D1. It shows compliance with the requirement in part 15.247(d).

802.11b DSSS MODULATION:

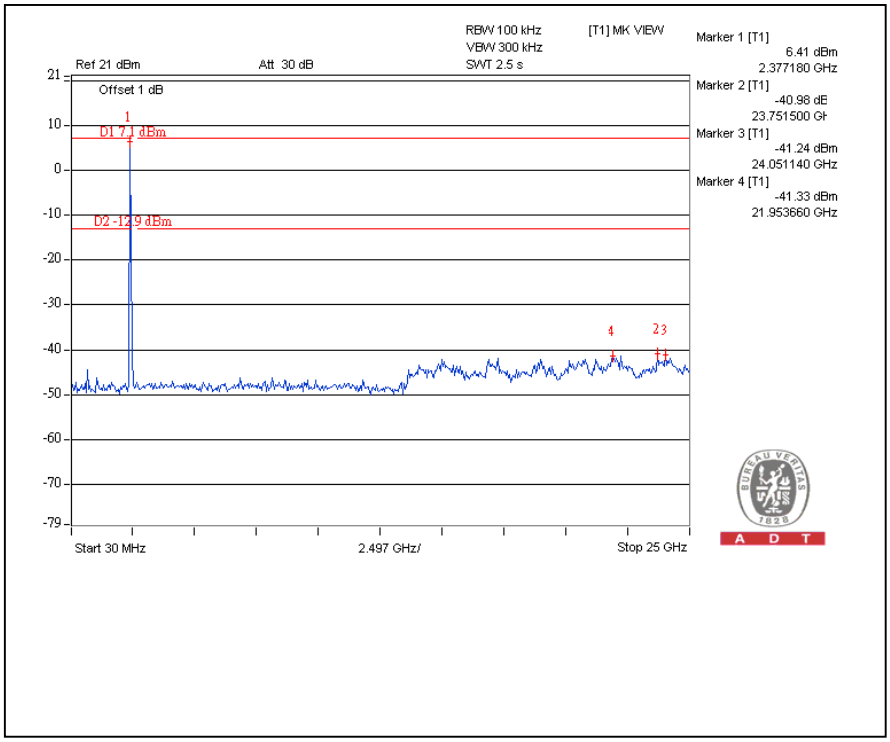
CH1



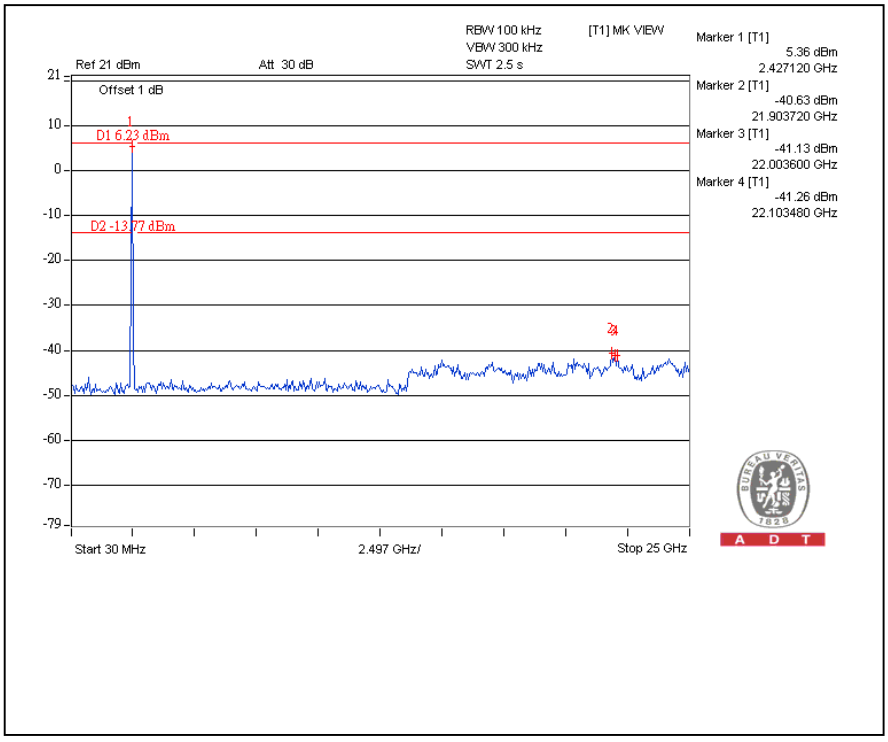
CH11



CH1

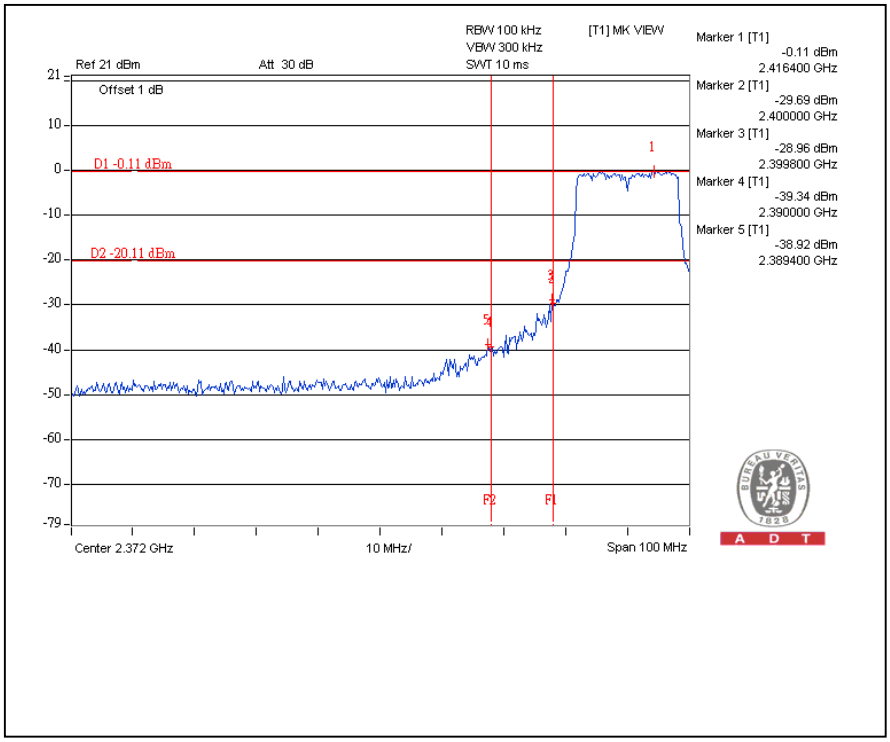

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 21 dBm
Att 30 dB
Offset 1 dB
D1 7.1 dBm
D2 -12.9 dBm
Marker 1 [T1]
6.41 dBm
2.377180 GHz
Marker 2 [T1]
-40.98 dE
23.751500 GH
Marker 3 [T1]
-41.24 dBm
24.051140 GHz
Marker 4 [T1]
-41.33 dBm
21.953660 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

CH11

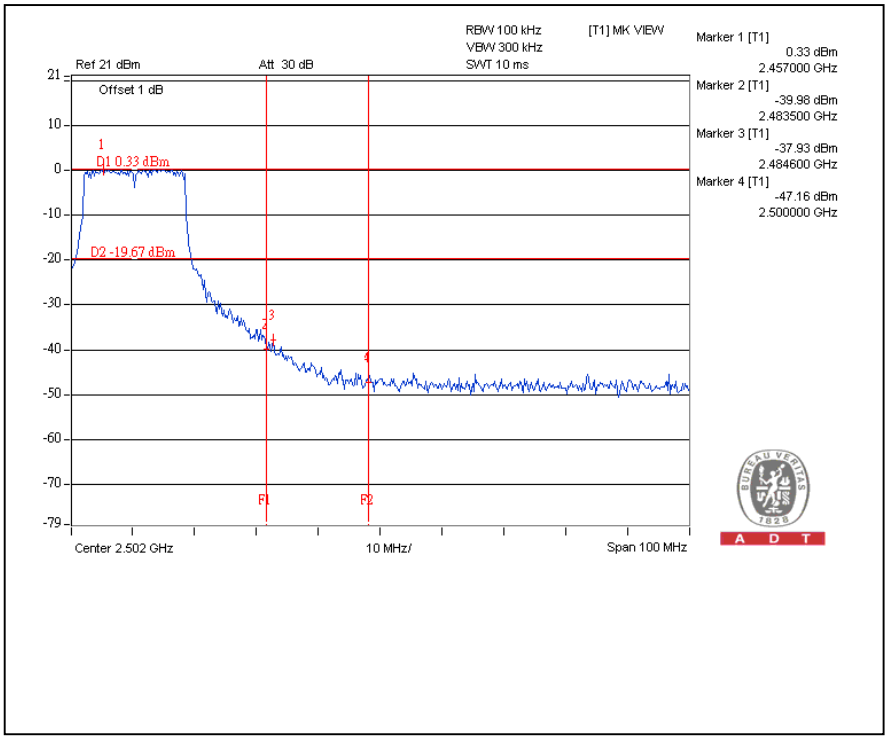

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 21 dBm
Att 30 dB
Offset 1 dB
D1 6.23 dBm
D2 -13.77 dBm
Marker 1 [T1]
5.36 dBm
2.427120 GHz
Marker 2 [T1]
-40.63 dBm
21.903720 GHz
Marker 3 [T1]
-41.13 dBm
22.003600 GHz
Marker 4 [T1]
-41.26 dBm
22.103480 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

802.11g OFDM MODULATION:

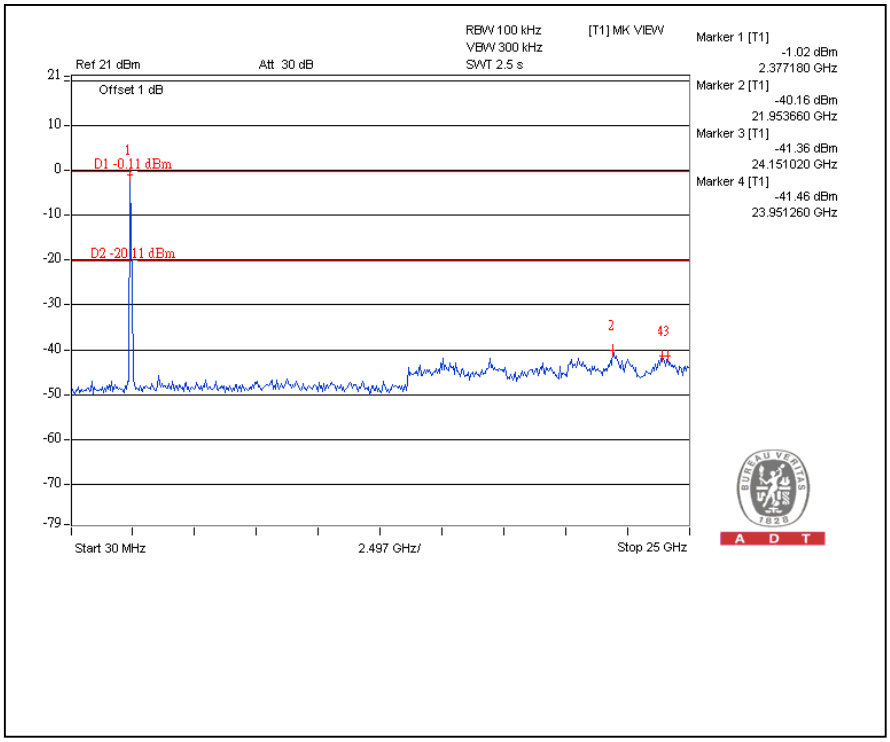
CH1



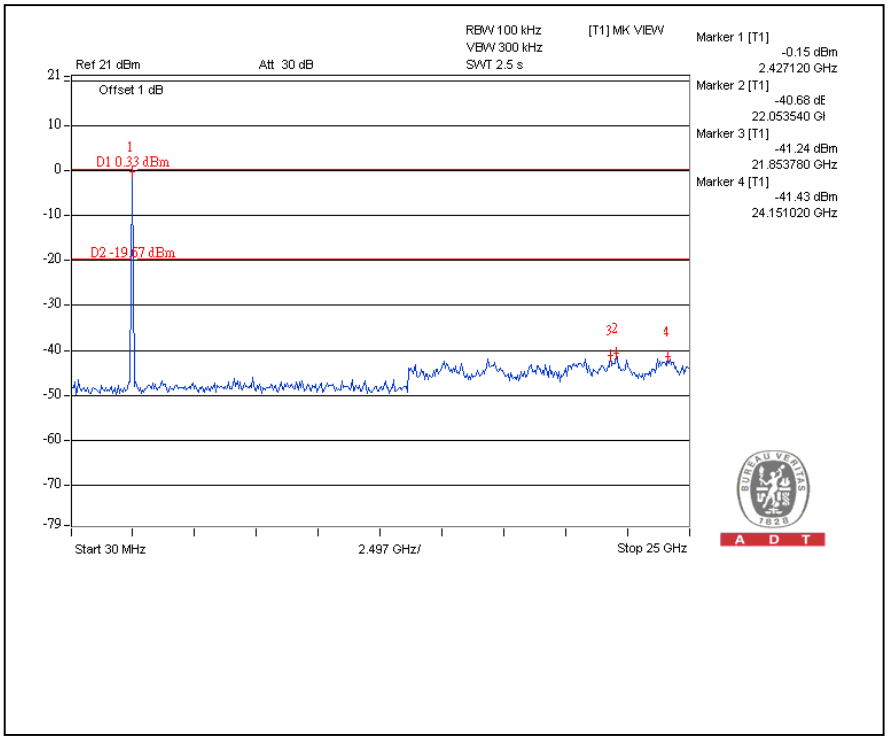
CH11



CH1


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 21 dBm
Att 30 dB
Offset 1 dB
D1 -0.11 dBm
D2 -20.11 dBm
Marker 1 [T1]
-1.02 dBm
2.377180 GHz
Marker 2 [T1]
-40.16 dBm
21.953660 GHz
Marker 3 [T1]
-41.36 dBm
24.151020 GHz
Marker 4 [T1]
-41.46 dBm
23.951260 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

CH11


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 21 dBm
Att 30 dB
Offset 1 dB
D1 0.33 dBm
D2 -19.67 dBm
Marker 1 [T1]
-0.15 dBm
2.427120 GHz
Marker 2 [T1]
-40.68 dE
22.053540 GI
Marker 3 [T1]
-41.24 dBm
21.853780 GHz
Marker 4 [T1]
-41.43 dBm
24.151020 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

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

There are three antennas provided to this EUT, please refer to the following table:

Brand	Model No.	Antenna Type	Gain (dBi)	Antenna Connector	Cable Loss (dB)
NA	IWF-282XMPBX-99	Dipole	2	IPEX	0.7
ACON	FMH10	PCB	Right (black) : 1.6 Left (white) : 2.26	IPEX	Black : 0.19 White : 0.13
ACON	FMH00	PCB	Right (black) : 3.69 Left (white) : 3.97	IPEX	Black : 0.24 White : 0.43

5 INFORMATION ON THE TESTING LABORATORIES

We, ADT Corp., 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, UL
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

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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.

--- EMD ---