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# FCC TEST REPORT

**REPORT NO.:** RF990908E02

**MODEL NO.:** E60832

**FCC ID:** NOIE60832

**RECEIVED:** Sep. 08, 2010

**TESTED:** Sep. 13 to 14, 2010

**ISSUED:** Nov. 16, 2010

**APPLICANT:** NETRONIX , INC.

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302, Taiwan, R.O.C.

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

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## 1. CERTIFICATION

**PRODUCT:** 6"EBOOK READER DEVICE  
**BRAND NAME:** NETRONIX, GreenBook  
**MODEL NO.:** E60832  
**TEST SAMPLE:** R&D SAMPLE  
**TESTED DATE:** Sep. 13 to 14, 2010  
**APPLICANT:** NETRONIX , INC.  
**STANDARDS:** FCC Part 15, Subpart C (Section 15.247)  
ANSI C63.4-2003

The above equipment (Model: E60832) 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 :** Carol Liao , **DATE:** Nov. 16, 2010  
( Carol Liao, Specialist )

**TECHNICAL ACCEPTANCE :** Hank Chung , **DATE:** Nov. 16, 2010  
(Hank Chung, Deputy Manager )

**APPROVED BY :** May Chen , **DATE:** Nov. 16, 2010  
( May Chen, Deputy Manager )

## 2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

<b>APPLIED STANDARD: FCC Part 15, Subpart C (Section 15.247)</b>			
<b>Standard Section</b>	<b>Test Type and Limit</b>	<b>Result</b>	<b>Remark</b>
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -13.58dB at 0.374MHz
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 -5.5dB at 4924.00MHz
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.
15.203	Antenna Requirement	PASS	No antenna connector is used.

## 2.1 MEASUREMENT UNCERTAINTY

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

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

Measurement	Value
Conducted emissions	2.45 dB
Radiated emissions (30MHz-1GHz)	3.3 dB
Radiated emissions (1GHz -18GHz)	2.19 dB
Radiated emissions (18GHz -40GHz)	2.55 dB



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### 3. GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

<b>PRODUCT</b>	6"EBOOK READER DEVICE
<b>MODEL NO.</b>	E60832
<b>FCC ID</b>	NOIE60832
<b>POWER SUPPLY</b>	DC 5V from host equipment or power adapter DC 3.7~4.2V from battery
<b>MODULATION TYPE</b>	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
<b>MODULATION TECHNOLOGY</b>	DSSS, OFDM
<b>TRANSFER RATE</b>	802.11b:11/5.5/2/1Mbps 802.11g: 54/48/36/24/18/12/9/6Mbps
<b>OPRTAING FREQUENCY</b>	2412 ~ 2462MHz
<b>NUMBER OF CHANNEL</b>	11
<b>MAXIMUM OUTPUT POWER</b>	802.11b: 56.2mW 802.11g: 158.5mW
<b>ANTENNA TYPE</b>	Chip antenna (Gain : 2.5dBi)
<b>DATA CABLE</b>	USB cable (shielded, 1.3m)
<b>I/O PORTS</b>	USB port x 1(USB 2.0) headset port x 1 Memory slot port x 1(SD)
<b>ASSOCIATED DEVICES</b>	Adapter x 1 Rechargeable Battery x 1

**NOTE:**

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

Brand Name	Model No.	Description
Netronix	E60832	Only brand names are differences
GreenBook		

2. The EUT could be supplied with a power adapter or a rechargeable battery as the following table:

Item	Brand	Model No.	Spec.
Adapter	DVE	DSA-6G-05 FUS 050100	AC I/P: 100~240V, 50~60Hz, 0.2A DC O/P: 5V, 1A DC output cable : unshielded, 1.56m
Rechargeable battery	Psebattery	H503456	DC 3.7~4.2V, 1000mAh

3. The EUT was pre-tested under following test modes :

Pre-test	Description	Power Source
Mode A	X-Z plane	Adapter
<b>Mode B</b>	<b>X-Y plane</b>	<b>Adapter</b>
Mode C	Y-Z plane	Adapter
Mode D	X-Y plane	Battery

The worst radiated emission was found in **Mode B**. Therefore only the test data of the mode was recorded in this report.

4. The EUT, operates in the 2.4GHz frequency range, lets you connect IEEE 802.11g and IEEE 802.11b technique devices to the network.
5. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.





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### 3.2 DESCRIPTION OF TEST MODES

Eleven channels are provided to this EUT.

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		

### 3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	PLC	RE < 1G	RE ≥ 1G	APCM	
A	-	√	√	√	X-Y plane + Adapter mode
B	√	-	-	-	With Adapter mode

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)	EUT CONFIGURE MODE
802.11g	1 to 11	6	OFDM	BPSK	6	B

#### **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)	EUT CONFIGURE MODE
802.11g	1 to 11	6	OFDM	BPSK	6	A



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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)	EUT CONFIGURE MODE
802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1	A
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6	A

**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)	EUT CONFIGURE MODE
802.11b	1 to 11	1, 11	DSSS	DBPSK	1	A
802.11g	1 to 11	1, 11	OFDM	BPSK	6	A

**ANTENNA PORT CONDUCTED MEASUREMENT:**

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

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	EUT CONFIGURE MODE
802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1	A
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6	A



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**TEST CONDITION:**

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE <sup>3</sup> 1G	25deg. C, 72%RH, 1015 hPa	120Vac, 60Hz	Duke Tseng
RE<1G	25deg. C, 67%RH, 1015 hPa	120Vac, 60Hz	Duke Tseng
PLC	25deg. C, 60%RH, 1015 hPa	120Vac, 60Hz	Max Tseng
APCM	25deg. C, 60%RH, 1015 hPa	120Vac, 60Hz	Rex Huang

### 3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

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

**FCC Part 15, Subpart 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.



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### 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.

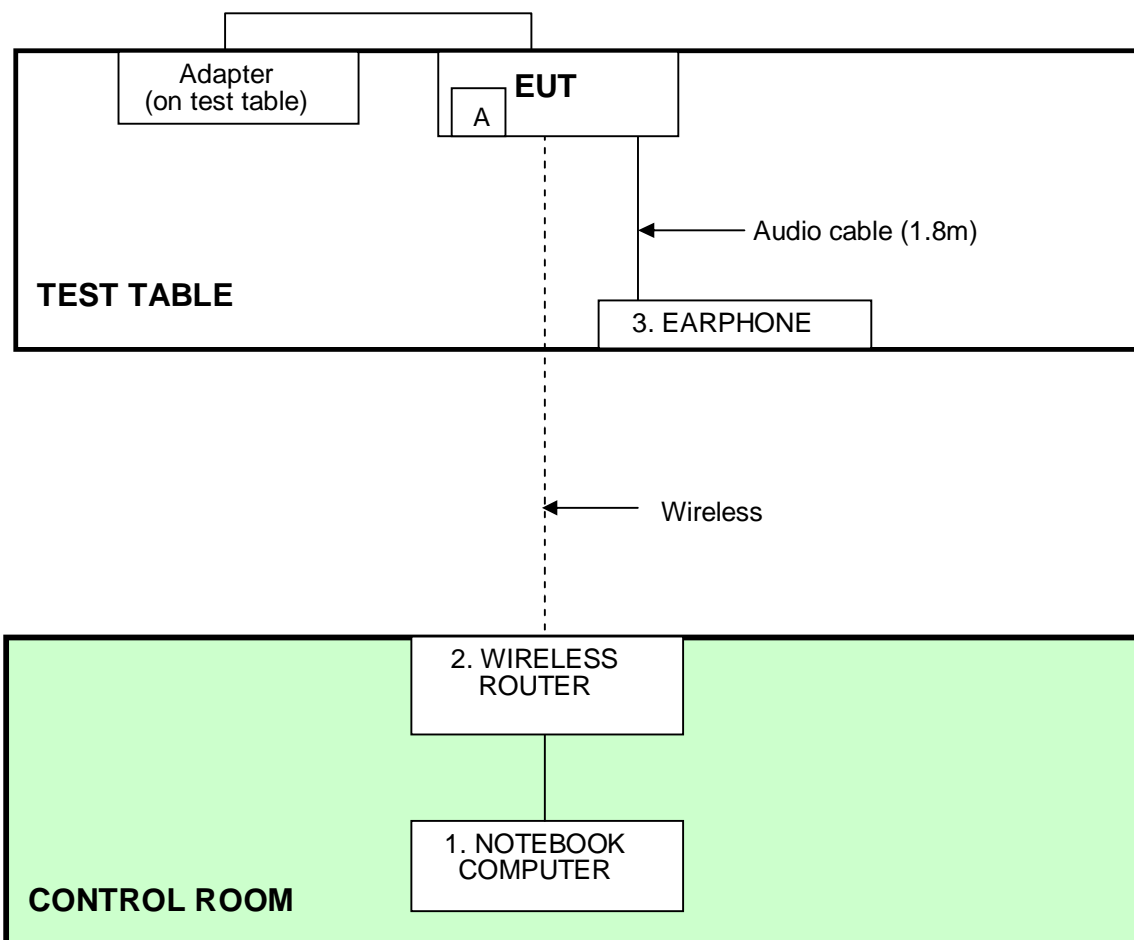
For Conducted test item					
NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK COMPUTER	DELL	PP32LA	FSLB32S	FCC DoC
2	WIRELESS ROUTER	linksys	WRT610N	NA	NA
3	EARPHONE	Hawk	HKC920	H002	FCC DoC
For other test items					
NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	EARPHONE	Hawk	HKC920	H001	FCC DoC

For Conducted test item	
NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	UTP Cable(Unshielded, 3m)
2	NA
3	Audio Cable(1.8m)
For other test items	
NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	Audio Cable(1.8m)

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

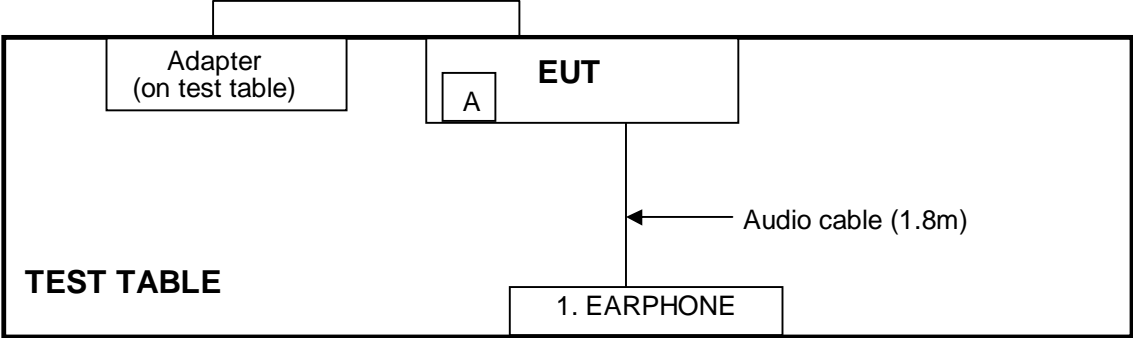
### 3.5 CONFIGURATION OF SYSTEM UNDER TEST

For Conducted test item:



**NOTE:** 1. Item A is the SD Card

**For other test items:**



**NOTE:** 1. Item A is the SD Card





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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 $\mu$ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

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

#### 4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver	ESCS 30	100375	Mar. 09, 2010	Mar. 08, 2011
Line-Impedance Stabilization Network (for EUT)	NSLK 8127	8127-522	Sep. 23, 2009	Sep. 22, 2010
Line-Impedance Stabilization Network (for Peripheral)	ESH3-Z5	848773/004	Oct. 26, 2009	Oct. 25, 2010
RF Cable (JYEBAO)	5DFB	COBCAB-001	Nov. 24, 2009	Nov. 23, 2010
50 ohms Terminator	50	3	Oct. 28, 2009	Oct. 27, 2010
Software	BV ADT_Cond_V7.3.7	NA	NA	NA

**Note:**

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

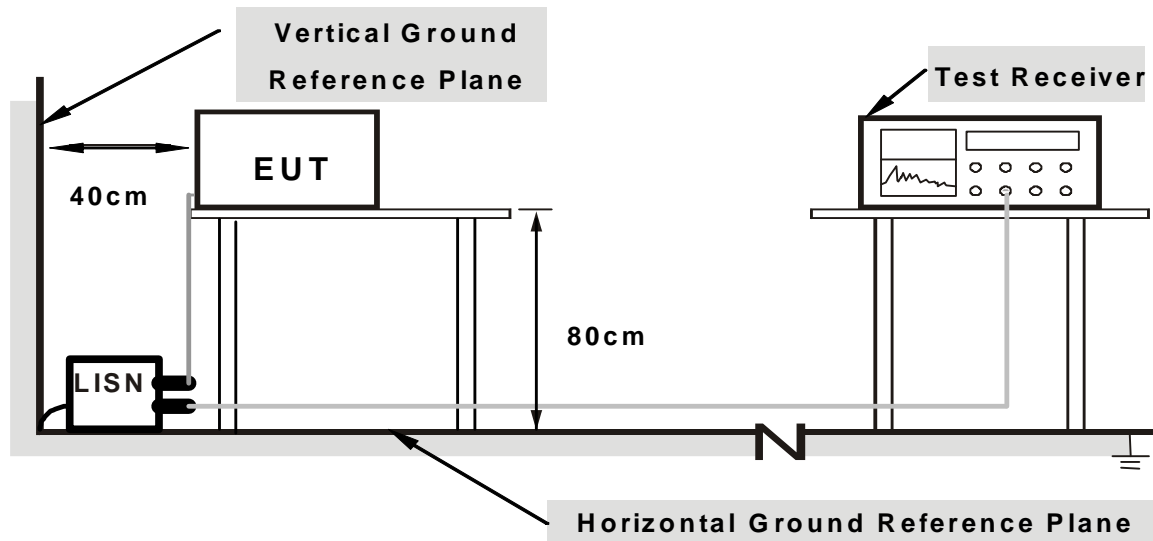
#### 4.1.3 TEST PROCEDURES

- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. 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. Turn on the power of all equipment.
2. Support unit 1 (NB) runs a test program “Ping.exe” to communicate with EUT via support unit 2 (Wireless Router) via wireless transmission condition continuously.
3. Support unit 1 (NB) sends audio messages to earphone (support unit 3) via EUT.

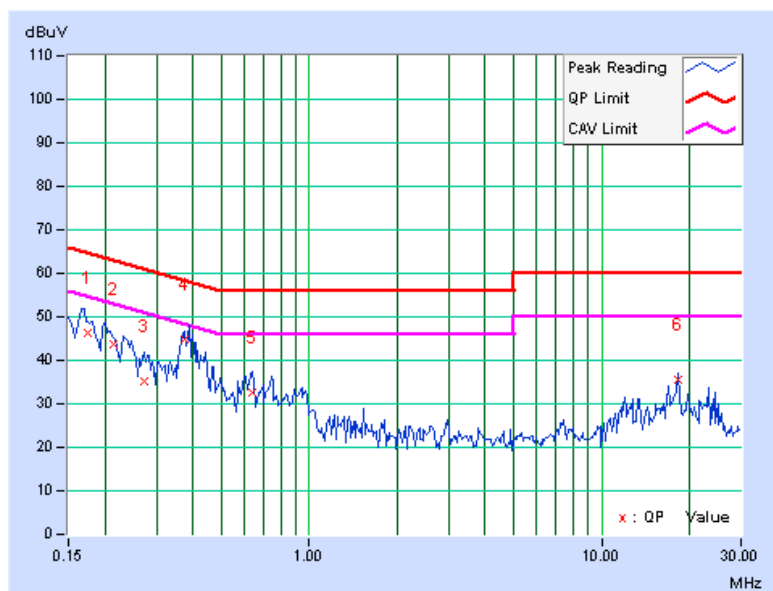
### 4.1.7 TEST RESULTS

#### 802.11g OFDM MODULATION:

PHASE	Line (L)	6dB BANDWIDTH	9 kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.175	9.73	36.60	-	46.33	-	64.74
2	0.214	9.74	34.12	-	43.86	-	63.04	53.04	-19.18	-
3	0.271	9.74	25.33	-	35.07	-	61.08	51.08	-26.01	-
4	<b>0.374</b>	<b>9.75</b>	<b>35.08</b>	-	<b>44.83</b>	-	<b>58.41</b>	<b>48.41</b>	<b>-13.58</b>	-
5	0.638	9.75	22.95	-	32.70	-	56.00	46.00	-23.30	-
6	18.246	10.03	25.56	-	35.59	-	60.00	50.00	-24.41	-

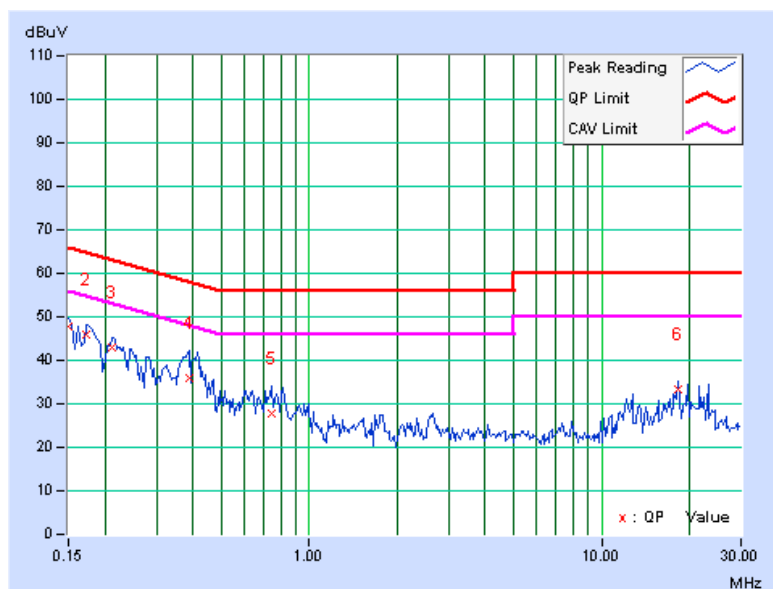
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
  2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
  3. The emission levels of other frequencies were very low against the limit.
  4. Margin value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



PHASE	Neutral (N)	6dB BANDWIDTH	9 kHz
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No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.150	9.71	38.05	-	47.76	-	66.00	56.00	-18.24	-
2	0.173	9.73	36.32	-	46.05	-	64.79	54.79	-18.75	-
3	0.213	9.74	33.31	-	43.05	-	63.11	53.11	-20.06	-
4	0.388	9.75	26.06	-	35.81	-	58.10	48.10	-22.29	-
5	0.740	9.76	17.87	-	27.63	-	56.00	46.00	-28.37	-
6	18.242	10.15	23.21	-	33.36	-	60.00	50.00	-26.64	-

- 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. Section 15.205 restricted bands of operation shall compliance with the limits in Section 15.209.



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#### 4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Agilent Spectrum Analyzer	E4446A	MY48250254	July 14, 2010	July 13, 2011
Agilent Pre-Selector	N9039A	MY46520311	July 14, 2010	July 13, 2011
Agilent Signal Generator	N5181A	MY49060517	July 14, 2010	July 13, 2011
Mini-Circuits Pre-Amplifier	ZFL-1000VH2B	AMP-ZFL-03	Nov. 18, 2009	Nov. 17, 2010
Agilent Pre-Amplifier	8449B	3008A02578	July 05, 2010	July 13, 2011
Miteq Pre-Amplifier	AFS33-1800265 0-30-8P-44	881786	NA	NA
SCHWARZBECK Trilog Broadband Antenna	VULB 9168	9168-360	Sep. 30, 2009	Sep. 29, 2010
AISI Horn_Antenna	AIH.8018	0000320091110	Nov. 16, 2009	Nov. 15, 2010
SCHWARZBECK Horn_Antenna	BBHA 9170	9170-424	Sep. 30, 2009	Sep. 29, 2010
RF CABLE	NA	RF104-201 RF104-203 RF104-204	Dec. 24, 2009	Dec. 23, 2010
RF Cable	NA	CHGCAB_001	NA	NA
Software	ADT_Radiated_ V8.7.05	NA	NA	NA
CT Antenna Tower & Turn Table	NA	NA	NA	NA

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

#### 4.2.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz.

**NOTE:**

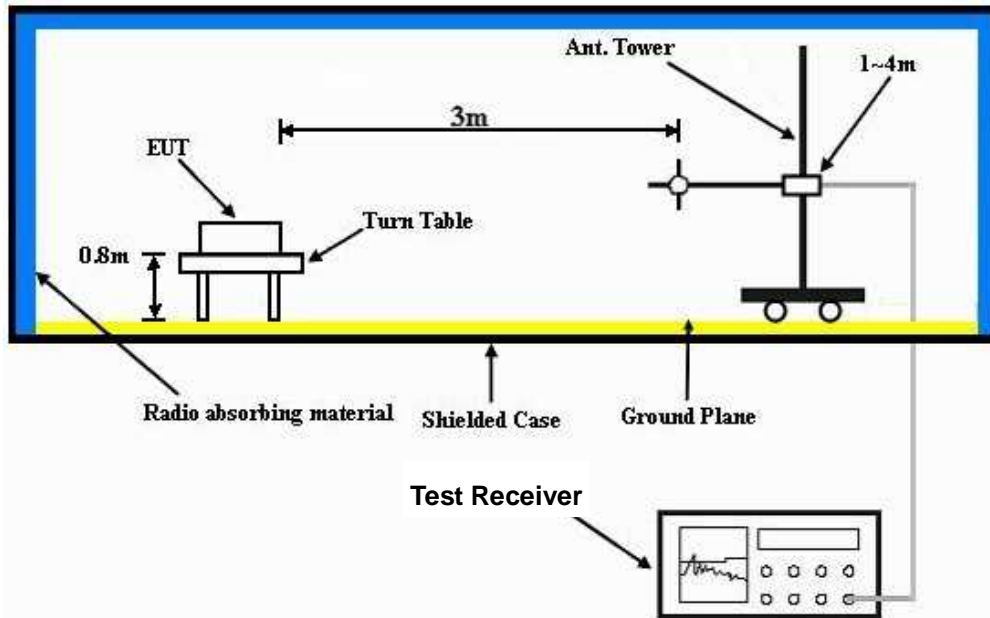
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
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 4.1.6



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### 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	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 67%RH 1013 hPa	TESTED BY	Duke 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	600.09	25.5 QP	46.0	-20.5	1.25 H	296	3.57	21.97
2	636.09	25.5 QP	46.0	-20.5	1.25 H	333	3.11	22.37
3	660.01	26.6 QP	46.0	-19.4	1.25 H	328	3.99	22.65
4	684.05	25.6 QP	46.0	-20.4	1.00 H	253	2.66	22.95
5	708.09	26.5 QP	46.0	-19.5	1.25 H	338	3.28	23.26
6	732.01	26.6 QP	46.0	-19.5	1.00 H	46	2.96	23.59
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	36.04	24.3 QP	40.0	-15.7	1.50 V	360	10.87	13.42
2	131.25	31.8 QP	43.5	-11.7	1.25 V	169	18.62	13.21
3	390.00	24.9 QP	46.0	-21.1	1.25 V	4	7.73	17.13
4	660.01	27.9 QP	46.0	-18.1	1.00 V	118	5.22	22.65
5	891.05	24.9 QP	46.0	-21.1	2.50 V	90	-1.17	26.09
6	948.01	25.1 QP	46.0	-20.9	1.00 V	78	-1.51	26.62

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



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### ABOVE 1GHz WORST-CASE DATA

### 802.11b DSSS MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 72%RH 1013 hPa	TESTED BY	Duke 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	2336.93	56.9 PK	74.0	-17.1	1.95 H	2	25.42	31.48
2	2336.93	44.5 AV	54.0	-9.5	1.95 H	2	13.02	31.48
3	*2412.00	102.1 PK			1.92 H	4	70.37	31.73
4	*2412.00	99.8 AV			1.92 H	4	68.07	31.73
5	4824.00	47.0 PK	74.0	-27.0	1.15 H	268	8.03	38.97
6	4824.00	37.2 AV	54.0	-16.8	1.15 H	268	-1.77	38.97

#### 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	56.6 PK	74.0	-17.4	1.28 V	345	24.94	31.66
2	2390.00	43.7 AV	54.0	-10.3	1.28 V	345	12.04	31.66
3	*2412.00	97.7 PK			1.28 V	345	65.97	31.73
4	*2412.00	95.2 AV			1.28 V	345	63.47	31.73
5	4824.00	50.0 PK	74.0	-24.0	1.11 V	260	11.03	38.97
6	4824.00	43.0 AV	54.0	-11.0	1.11 V	260	4.03	38.97

**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	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 72%RH 1013 hPa	TESTED BY	Duke 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	*2437.00	102.4 PK			1.87 H	2	70.59	31.81
2	*2437.00	100.2 AV			1.87 H	2	68.39	31.81
3	4874.00	50.0 PK	74.0	-24.0	1.17 H	282	10.86	39.14
4	4874.00	43.4 AV	54.0	-10.6	1.17 H	282	4.26	39.14
5	7311.00	54.0 PK	74.0	-20.0	1.09 H	217	7.37	46.63
6	7311.00	42.5 AV	54.0	-11.5	1.09 H	217	-4.13	46.63
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	96.1 PK			1.27 V	329	64.29	31.81
2	*2437.00	93.7 AV			1.27 V	329	61.89	31.81
3	4874.00	52.4 PK	74.0	-21.6	1.10 V	259	13.26	39.14
4	4874.00	47.4 AV	54.0	-6.6	1.10 V	259	8.26	39.14
5	7311.00	56.2 PK	74.0	-17.8	1.19 V	104	9.57	46.63
6	7311.00	47.3 AV	54.0	-6.7	1.19 V	104	0.67	46.63

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 72%RH 1013 hPa	TESTED BY	Duke Tseng

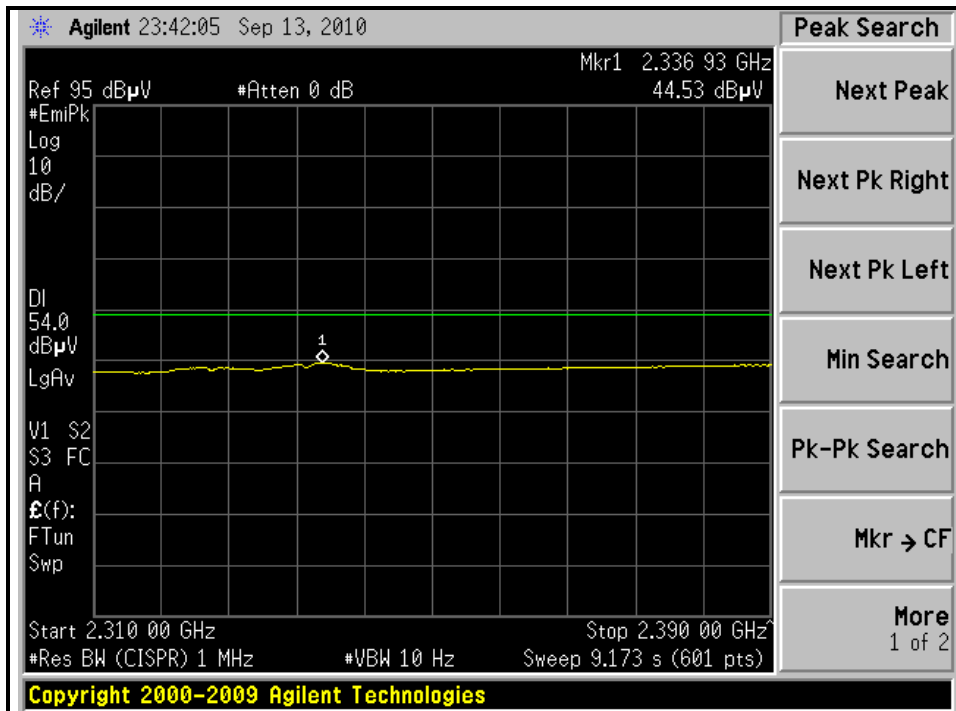
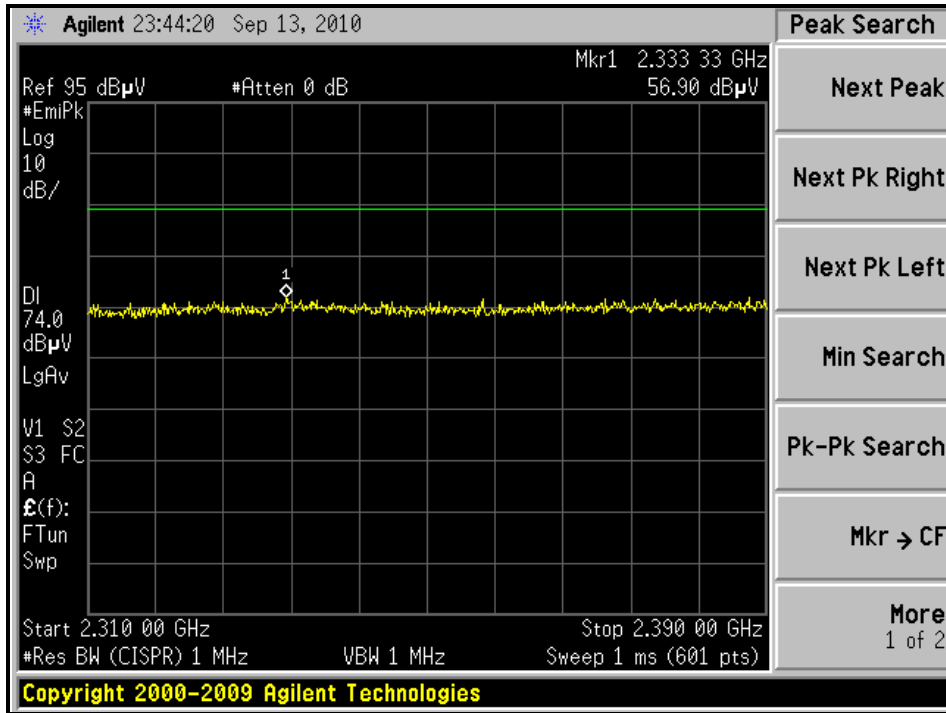
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NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	101.5 PK			1.85 H	357	69.61	31.89
2	*2462.00	99.2 AV			1.85 H	357	67.31	31.89
3	2483.53	59.0 PK	74.0	-15.0	1.75 H	196	27.03	31.97
4	2483.53	45.9 AV	54.0	-8.1	1.75 H	196	13.93	31.97
5	4924.00	50.5 PK	74.0	-23.5	1.14 H	282	11.19	39.31
6	4924.00	44.2 AV	54.0	-9.8	1.14 H	282	4.89	39.31
7	7386.00	54.8 PK	74.0	-19.2	1.10 H	218	8.20	46.60
8	7386.00	43.9 AV	54.0	-10.1	1.10 H	218	-2.70	46.60
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	95.8 PK			1.26 V	322	63.91	31.89
2	*2462.00	93.4 AV			1.26 V	322	61.51	31.89
3	2495.71	56.9 PK	74.0	-17.1	1.26 V	322	24.89	32.01
4	2495.71	43.7 AV	54.0	-10.3	1.26 V	322	11.69	32.01
5	4924.00	53.1 PK	74.0	-20.9	1.08 V	260	13.79	39.31
<b>6</b>	<b>4924.00</b>	<b>48.5 AV</b>	<b>54.0</b>	<b>-5.5</b>	<b>1.08 V</b>	<b>260</b>	<b>9.19</b>	<b>39.31</b>
7	7386.00	56.9 PK	74.0	-17.1	1.17 V	107	10.30	46.60
8	7386.00	47.7 AV	54.0	-6.3	1.17 V	107	1.10	46.60

- 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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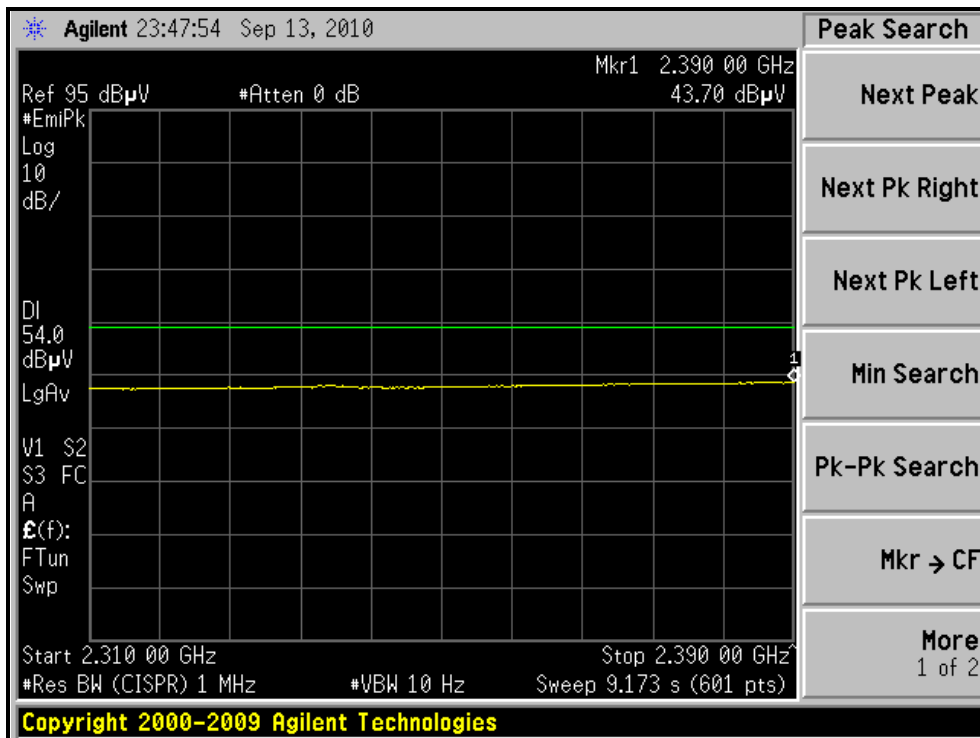
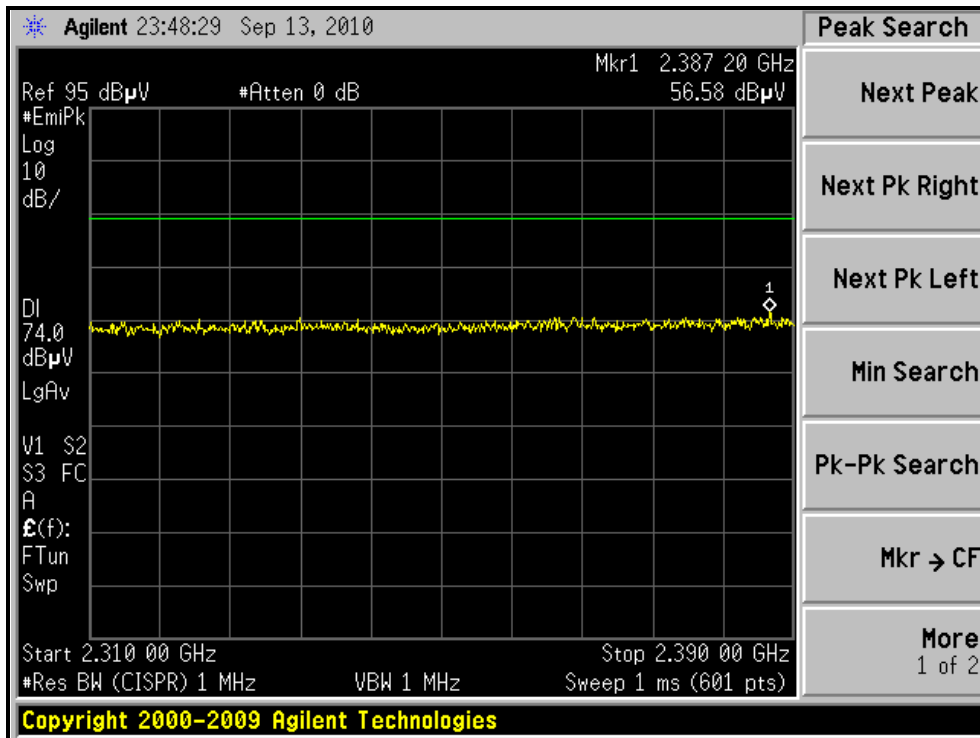
RESTRICTED BANDEDGE (802.11b MODE, CH1, HORIZONTAL )





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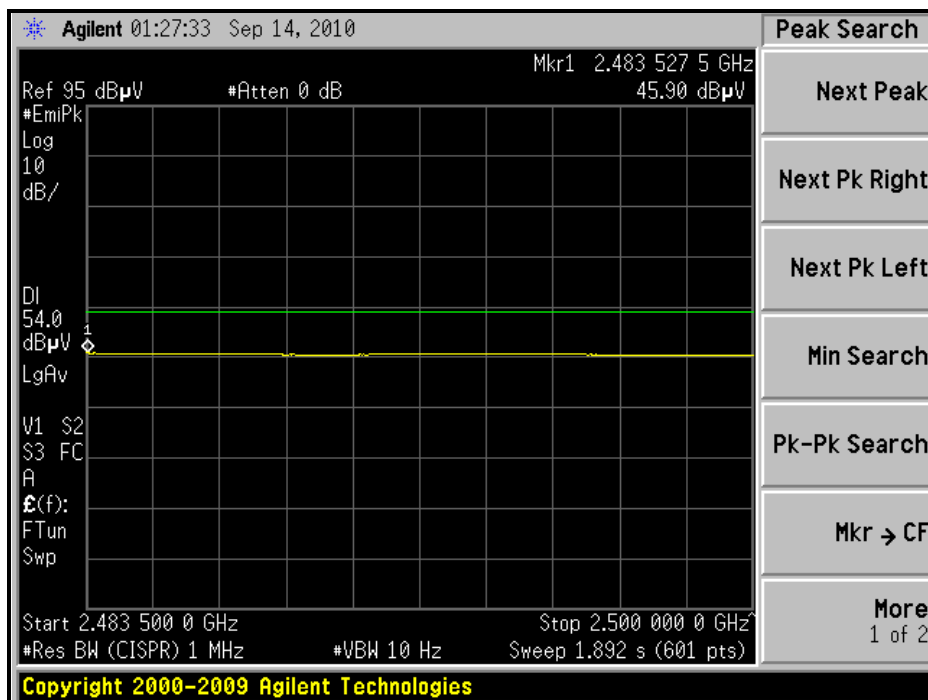
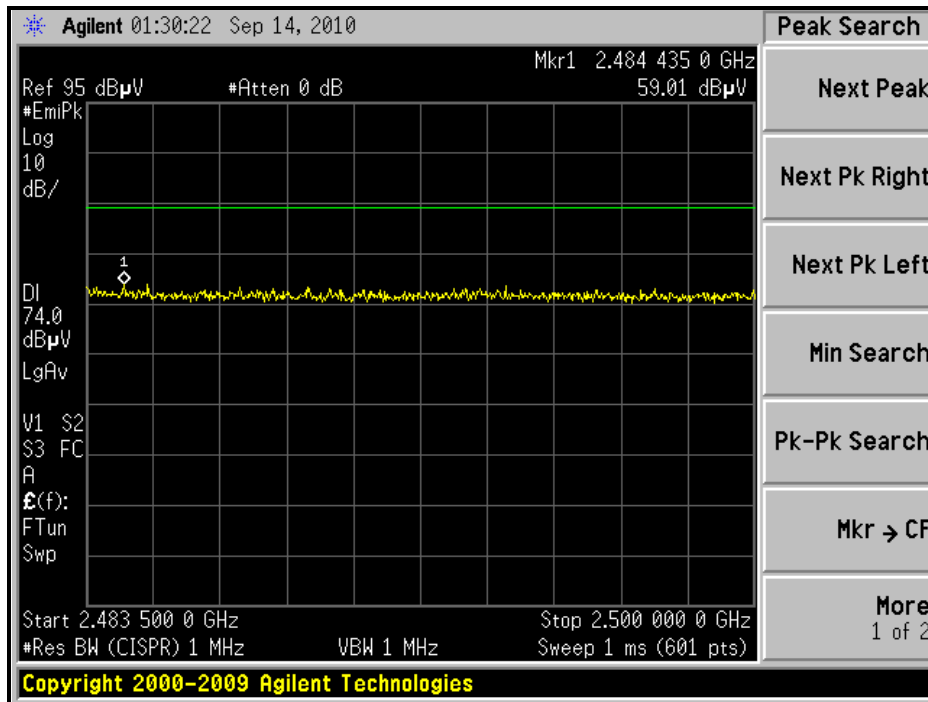
### RESTRICTED BANDEDGE (802.11b MODE, CH1, VERTICAL )





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### RESTRICTED BANDEDGE (802.11b MODE, CH11, HORIZONTAL )

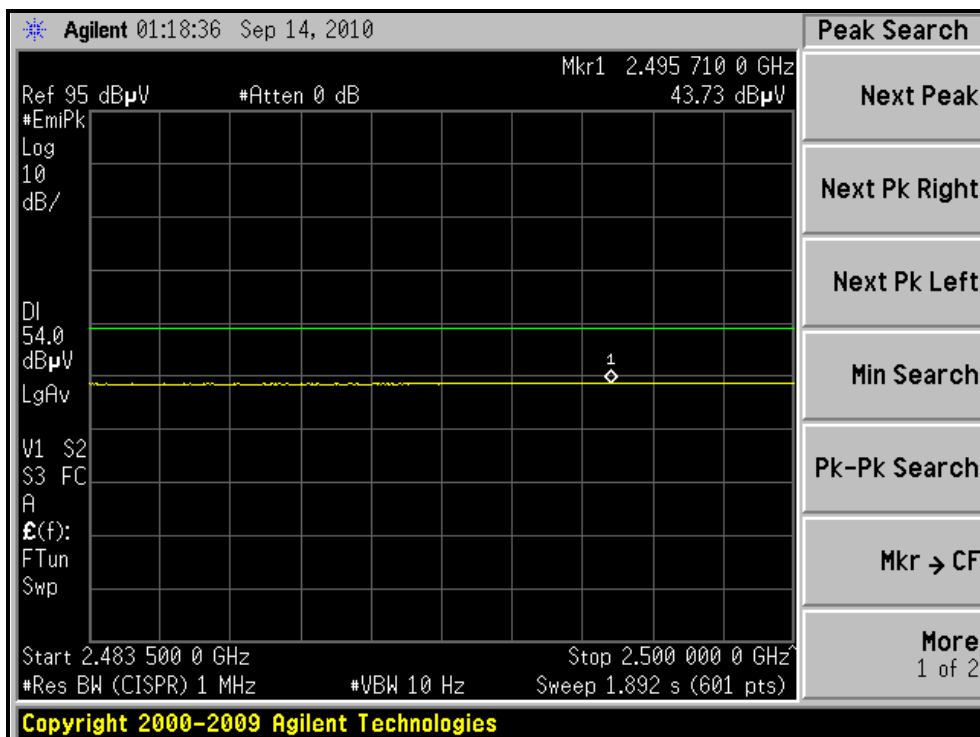
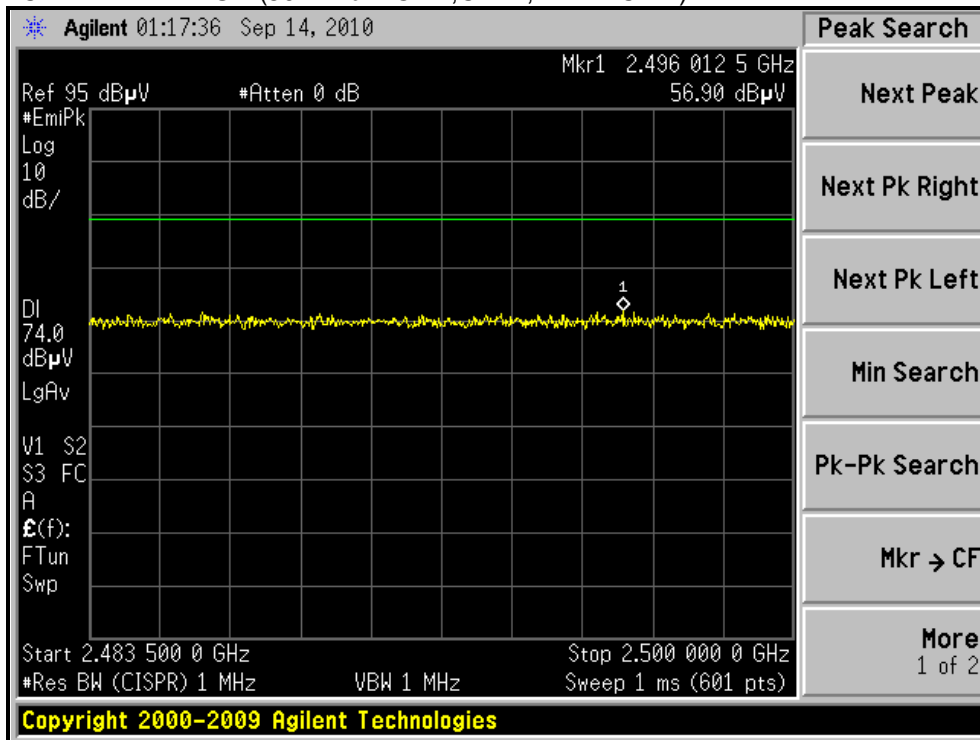






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### RESTRICTED BANDEDGE (802.11b MODE, CH11, VERTICAL )





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**802.11g OFDM MODULATION**

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 72%RH 1013 hPa	TESTED BY	Duke 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	2390.00	64.1 PK	74.0	-9.9	1.84 H	192	32.44	31.66
2	2390.00	48.2 AV	54.0	-5.8	1.84 H	192	16.54	31.66
3	*2412.00	101.4 PK			1.88 H	4	69.67	31.73
4	*2412.00	92.7 AV			1.88 H	4	60.97	31.73
5	4824.00	45.0 PK	74.0	-29.0	1.16 H	278	6.03	38.97
6	4824.00	33.5 AV	54.0	-20.5	1.16 H	278	-5.47	38.97

**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	56.5 PK	74.0	-17.5	1.28 V	338	24.84	31.66
2	2390.00	44.3 AV	54.0	-9.7	1.28 V	338	12.64	31.66
3	*2412.00	94.0 PK			1.31 V	342	62.27	31.73
4	*2412.00	84.5 AV			1.31 V	342	52.77	31.73
5	4824.00	46.0 PK	74.0	-28.0	1.10 V	262	7.03	38.97
6	4824.00	33.9 AV	54.0	-20.1	1.10 V	262	-5.07	38.97

- 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	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 72%RH 1013 hPa	TESTED BY	Duke 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	*2437.00	103.0 PK			1.88 H	2	71.19	31.81
2	*2437.00	93.9 AV			1.88 H	2	62.09	31.81
3	4874.00	46.5 PK	74.0	-27.5	1.18 H	282	7.36	39.14
4	4874.00	34.4 AV	54.0	-19.6	1.18 H	282	-4.74	39.14
5	7311.00	56.0 PK	74.0	-18.0	1.09 H	217	9.37	46.63
6	7311.00	42.2 AV	54.0	-11.8	1.09 H	217	-4.43	46.63
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	95.8 PK			1.29 V	327	63.99	31.81
2	*2437.00	86.8 AV			1.29 V	327	54.99	31.81
3	4874.00	47.9 PK	74.0	-26.1	1.09 V	260	8.76	39.14
4	4874.00	35.3 AV	54.0	-18.7	1.09 V	260	-3.84	39.14
5	7311.00	61.1 PK	74.0	-12.9	1.19 V	112	14.47	46.63
6	7311.00	45.3 AV	54.0	-8.7	1.19 V	112	-1.33	46.63

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 72%RH 1013 hPa	TESTED BY	Duke Tseng

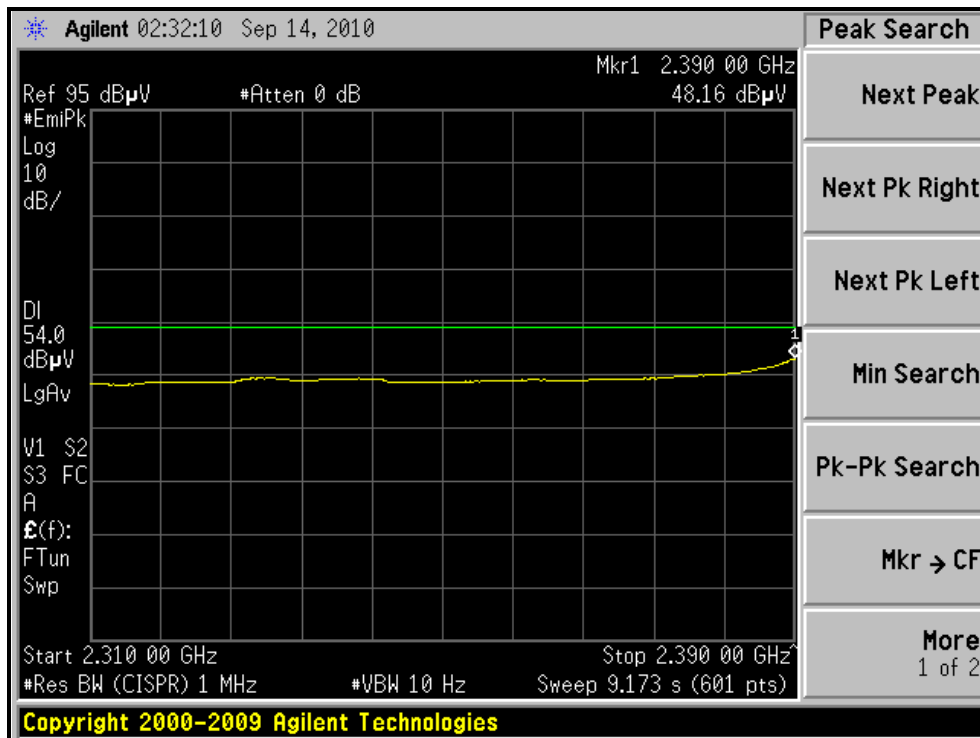
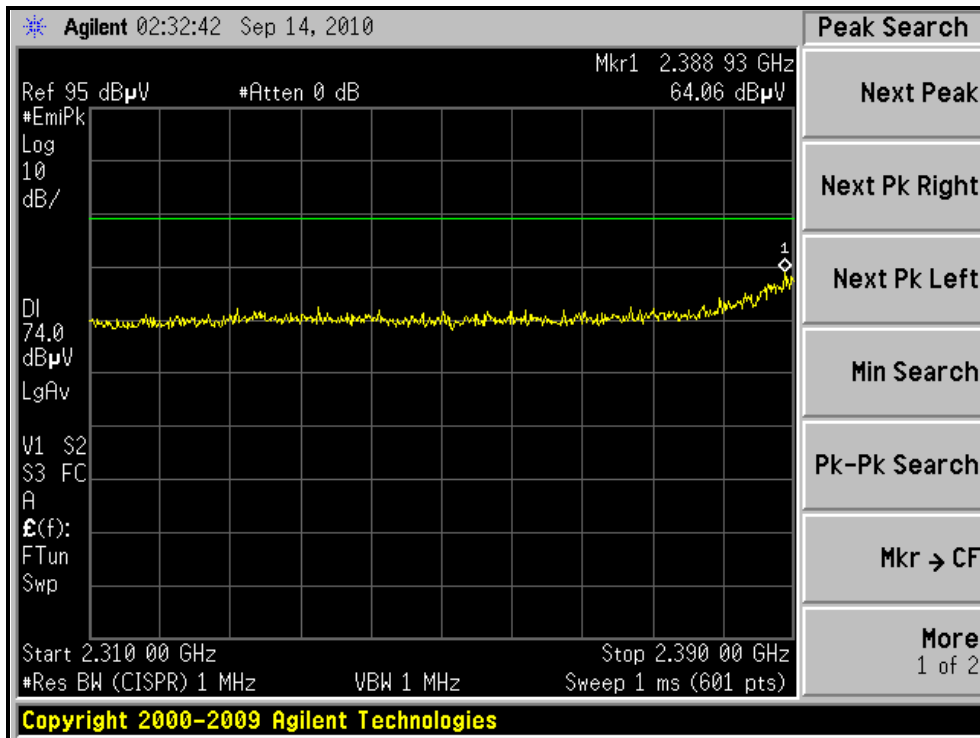
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	102.4 PK			1.83 H	5	70.51	31.89
2	*2462.00	93.5 AV			1.83 H	5	61.61	31.89
3	2483.50	62.7 PK	74.0	-11.3	1.74 H	189	30.73	31.97
4	2483.50	48.4 AV	54.0	-5.6	1.74 H	189	16.43	31.97
5	4924.00	46.0 PK	74.0	-28.0	1.15 H	281	6.69	39.31
6	4924.00	34.0 AV	54.0	-20.0	1.15 H	281	-5.31	39.31
7	7386.00	55.7 PK	74.0	-18.3	1.10 H	216	9.10	46.60
8	7386.00	41.8 AV	54.0	-12.2	1.10 H	216	-4.80	46.60
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	95.6 PK			1.27 V	324	63.71	31.89
2	*2462.00	86.7 AV			1.27 V	324	54.81	31.89
3	2483.72	57.1 PK	74.0	-16.9	1.26 V	324	25.13	31.97
4	2483.72	44.1 AV	54.0	-9.9	1.26 V	324	12.13	31.97
5	4924.00	47.0 PK	74.0	-27.0	1.09 V	259	7.69	39.31
6	4924.00	34.9 AV	54.0	-19.1	1.09 V	259	-4.41	39.31
7	7386.00	60.9 PK	74.0	-13.1	1.18 V	110	14.30	46.60
8	7386.00	45.0 AV	54.0	-9.0	1.18 V	110	-1.60	46.60

- 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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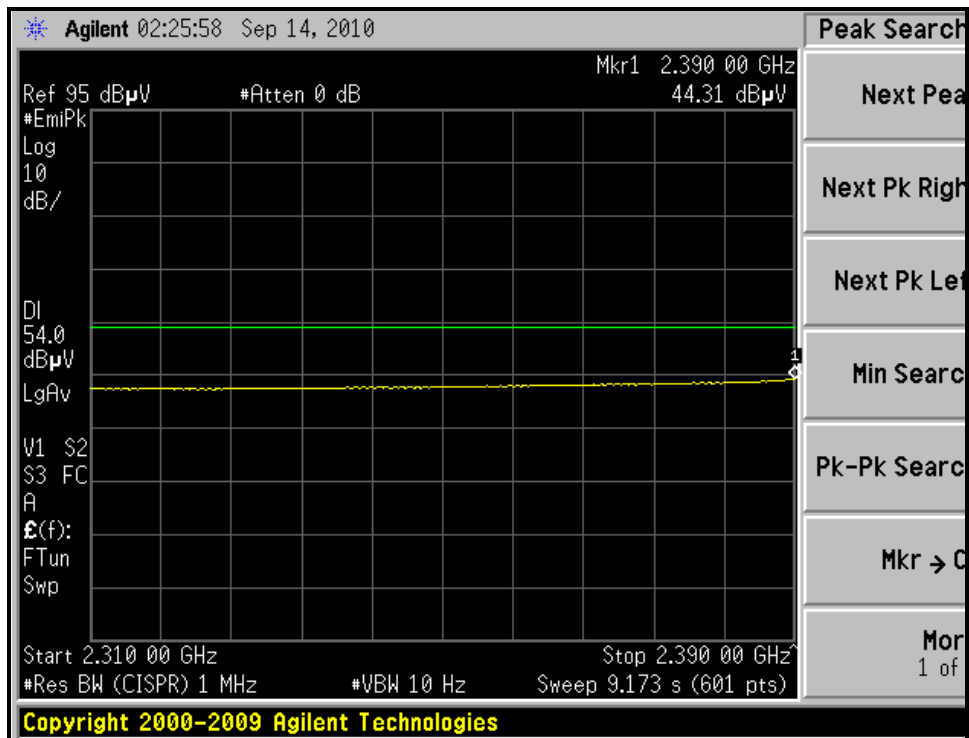
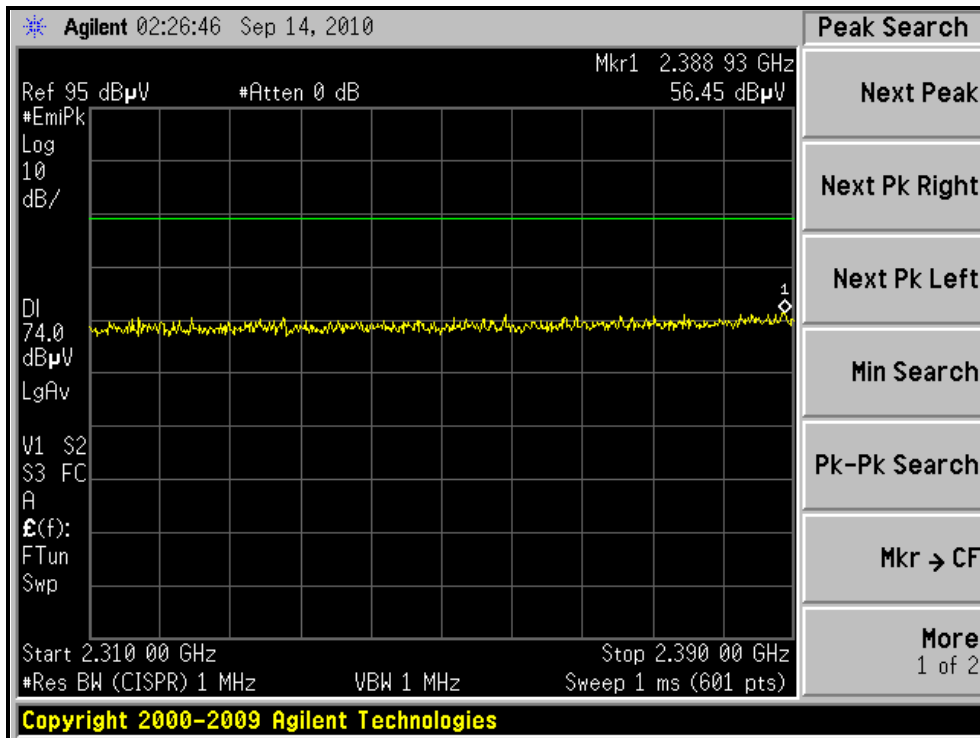
RESTRICTED BANDEDGE (802.11g MODE,CH1, HORIZONTAL )





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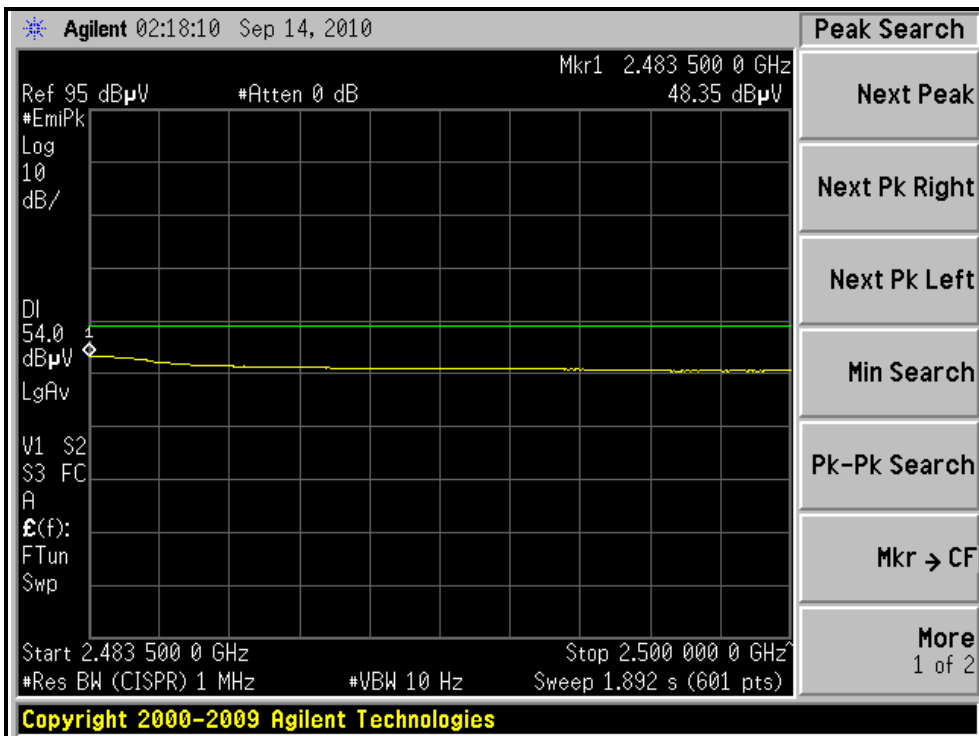
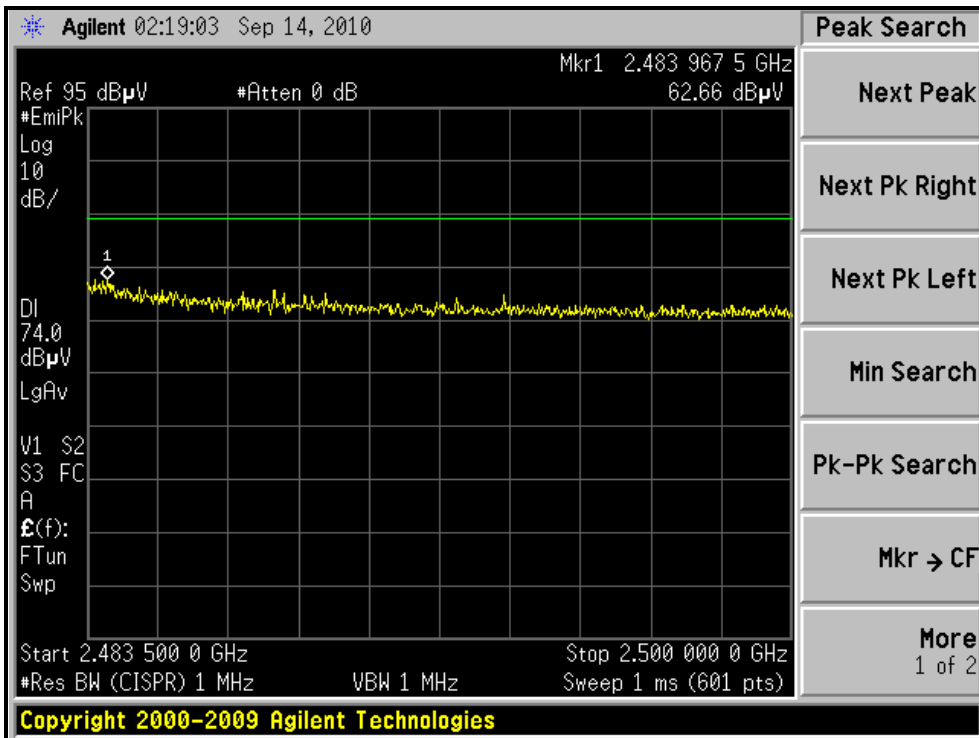
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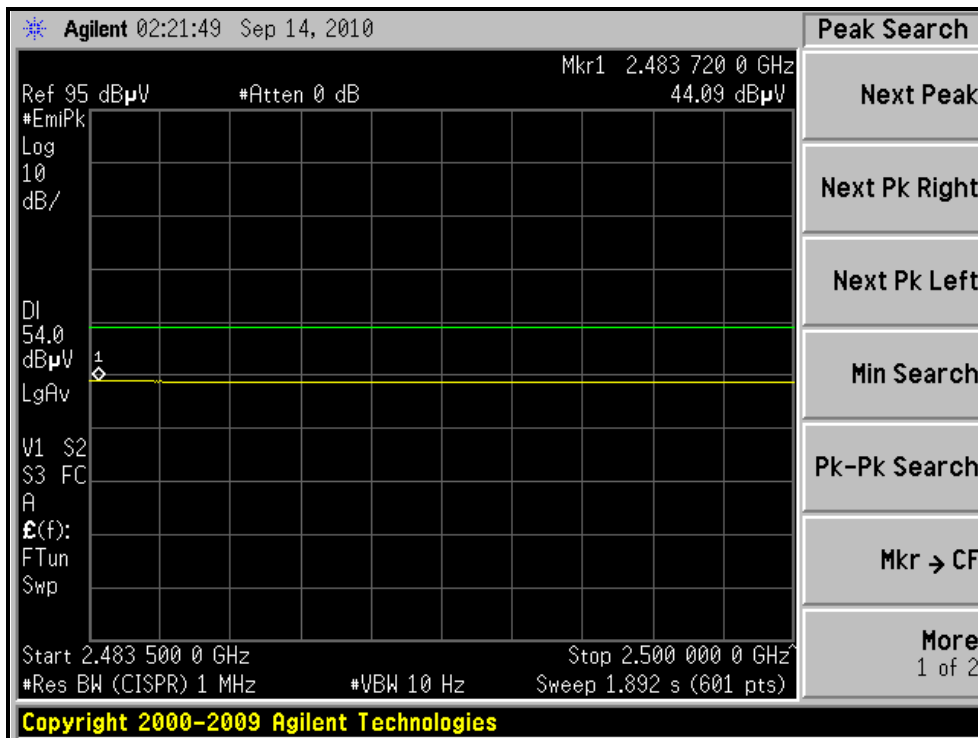
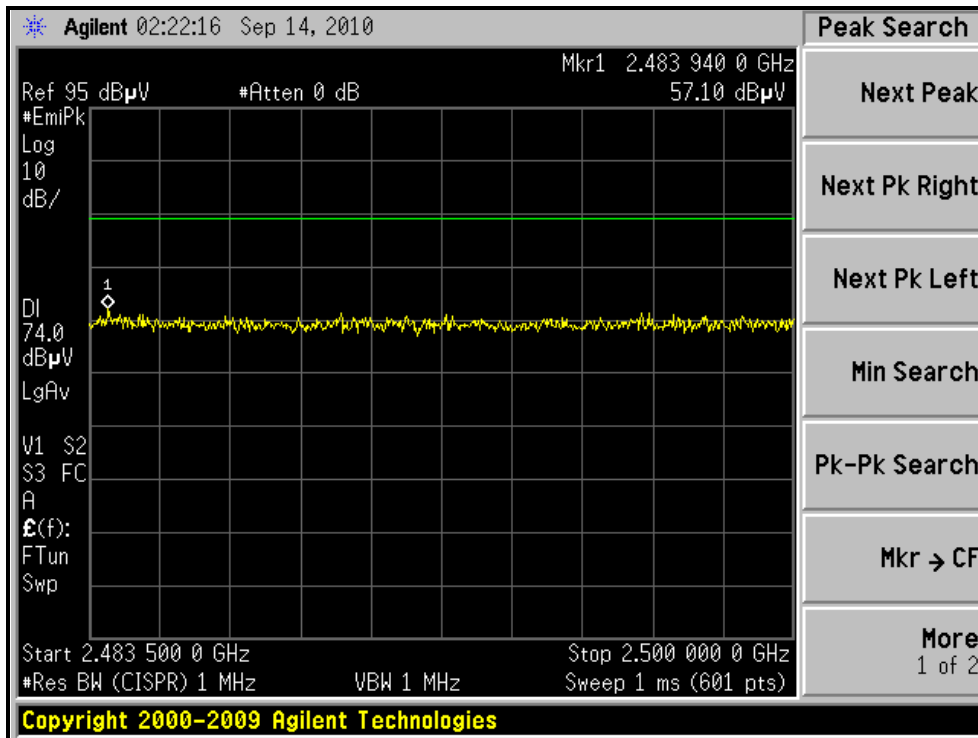
RESTRICTED BANDEDGE (802.11g MODE,CH11, HORIZONTAL )





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### RESTRICTED BANDEDGE (802.11g MODE, CH11, VERTICAL )







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### 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
Spectrum Analyzer	FSP 40	100036	Dec. 18, 2009	Dec. 17, 2010

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

### 4.3.3 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.



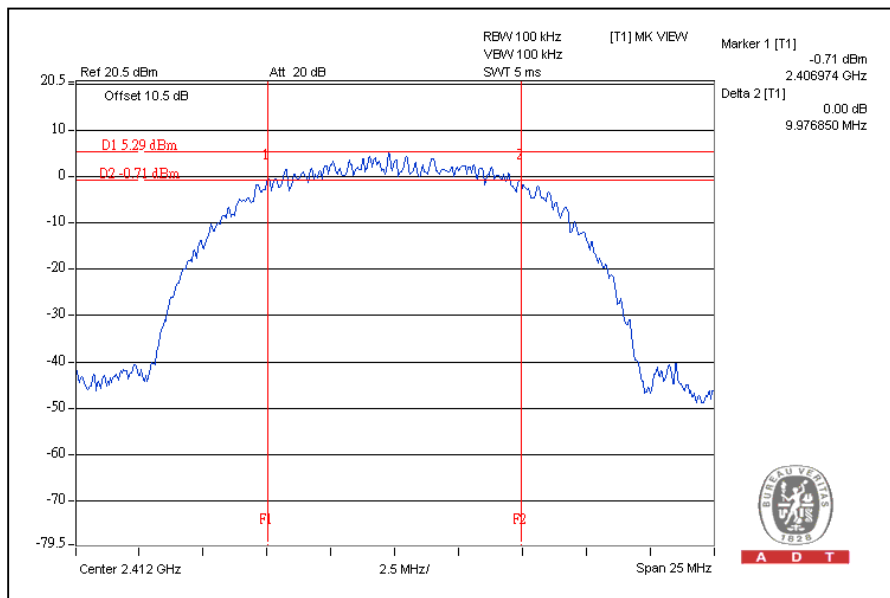
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### 4.3.7 TEST RESULTS

#### 802.11b

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	9.97	0.5	PASS
6	2437	9.53	0.5	PASS
11	2462	9.96	0.5	PASS

CH1



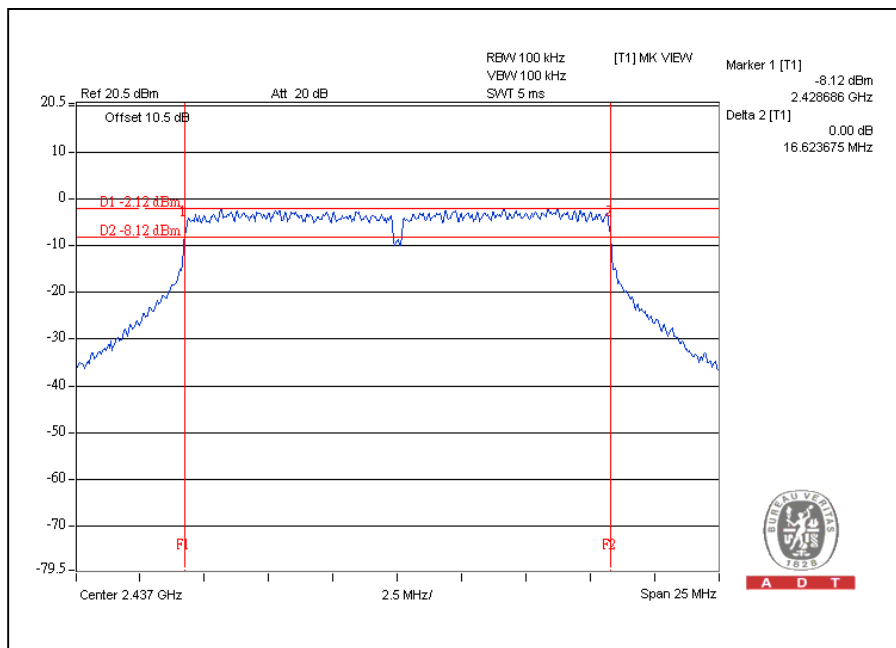


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### 802.11g

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

### CH6



#### 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	May 04, 2010	May 03, 2011
Pulse Power Sensor	MA2411B	0738172	May 04, 2010	May 03, 2011

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

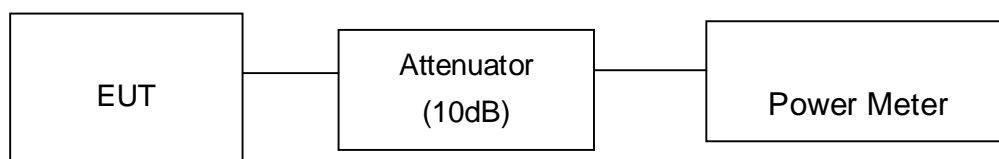
##### 4.4.3 TEST PROCEDURES

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



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#### 4.4.7 TEST RESULTS

##### 802.11b

CHAN	CHANNEL FREQUENCY (MHz)	POWER OUTPUT (mW)	POWER OUTPUT (dBm)	POWER LIMIT (dBm)	PASS/FAIL
1	2412	56.2	17.5	30	PASS
6	2437	50.1	17.0	30	PASS
11	2462	37.2	15.7	30	PASS

##### 802.11g

CHAN	CHANNEL FREQUENCY (MHz)	POWER OUTPUT (mW)	POWER OUTPUT (dBm)	POWER LIMIT (dBm)	PASS/FAIL
1	2412	147.9	21.7	30	PASS
6	2437	158.5	22.0	30	PASS
11	2462	134.9	21.3	30	PASS



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## 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
Spectrum Analyzer	FSP 40	100036	Dec. 18, 2009	Dec. 17, 2010

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



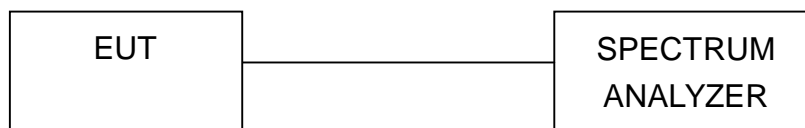
#### 4.5.3 TEST PROCEDURE

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



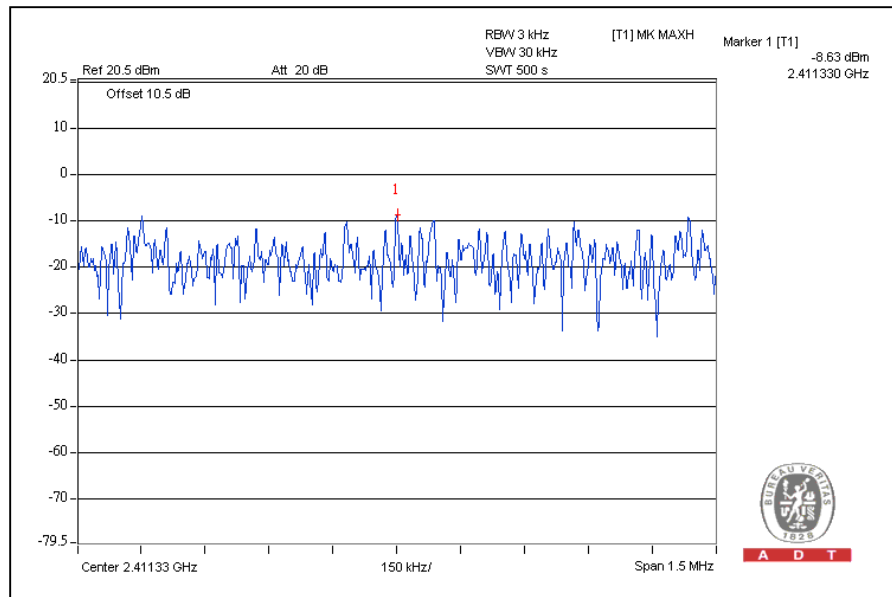
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## 4.5.7 TEST RESULTS

### 802.11b

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-8.6	8	PASS
6	2437	-8.9	8	PASS
11	2462	-9.7	8	PASS

### CH1



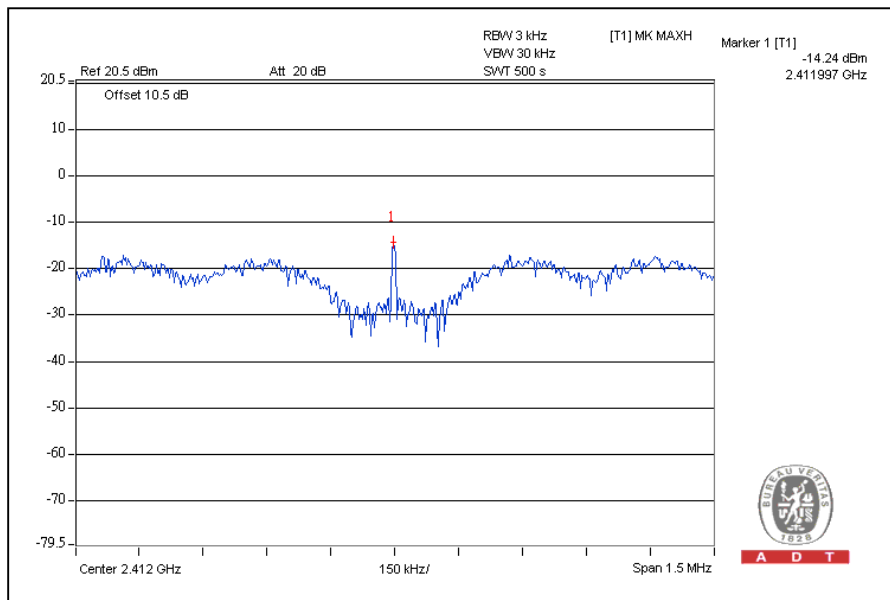


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### 802.11g

CHANNEL	CHANNEL FREQUENCY (MHz )	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-14.2	8	PASS
6	2437	-15.7	8	PASS
11	2462	-16.6	8	PASS

### CH1



## 4.6 CONDUCTED OUT-BAND EMISSION MEASUREMENT

### 4.6.1 LIMITS OF CONDUCTED OUT-BAND EMISSION MEASUREMENT

Below  $-20\text{dB}$  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
Spectrum Analyzer	FSP 40	100036	Dec. 18, 2009	Dec. 17, 2010

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

### 4.6.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer via a low loss 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 DEVIATION FROM TEST STANDARD

No deviation

#### 4.6.5 EUT OPERATING CONDITION

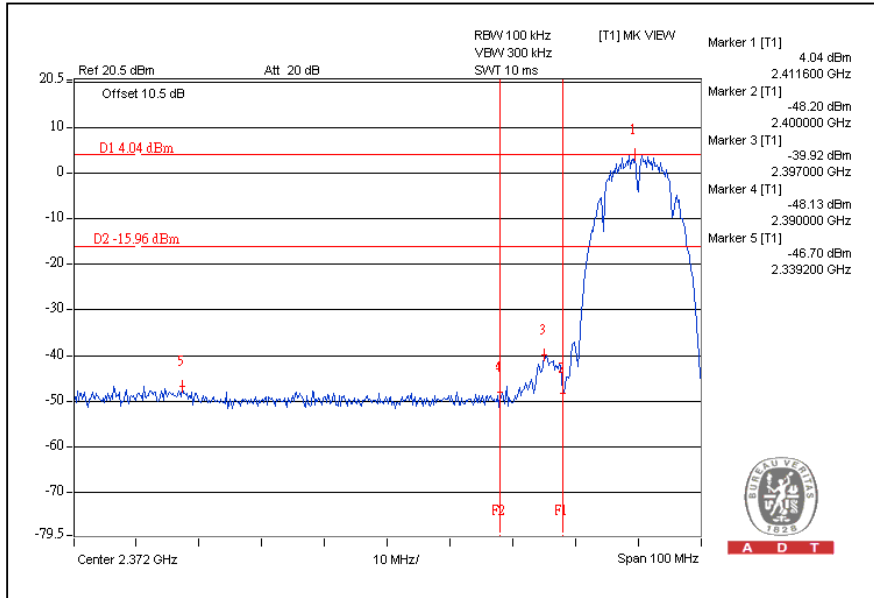
Same as Item 4.3.6

#### 4.6.6 TEST RESULTS

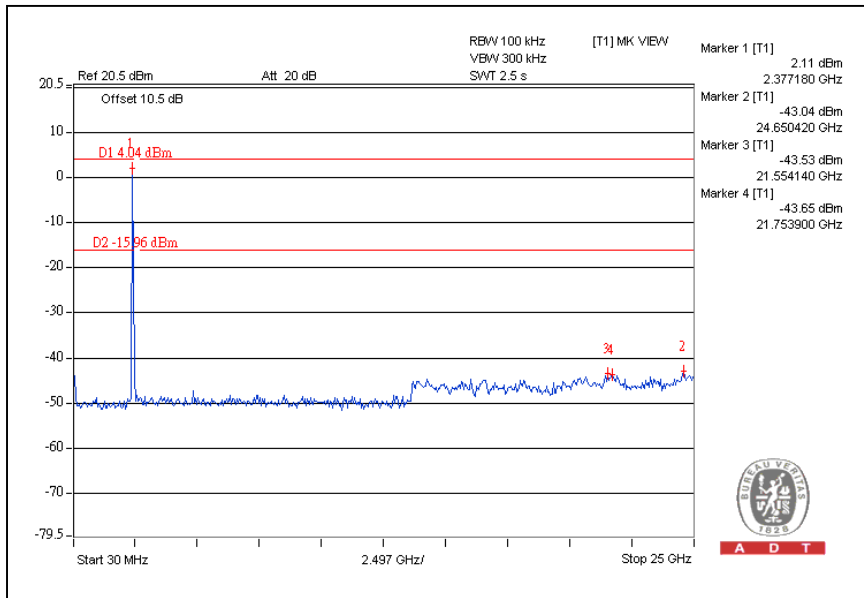
The spectrum plots are attached on the following images. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D1. It shows compliance with the requirement in part 15.247(d).

802.11b:

CH1



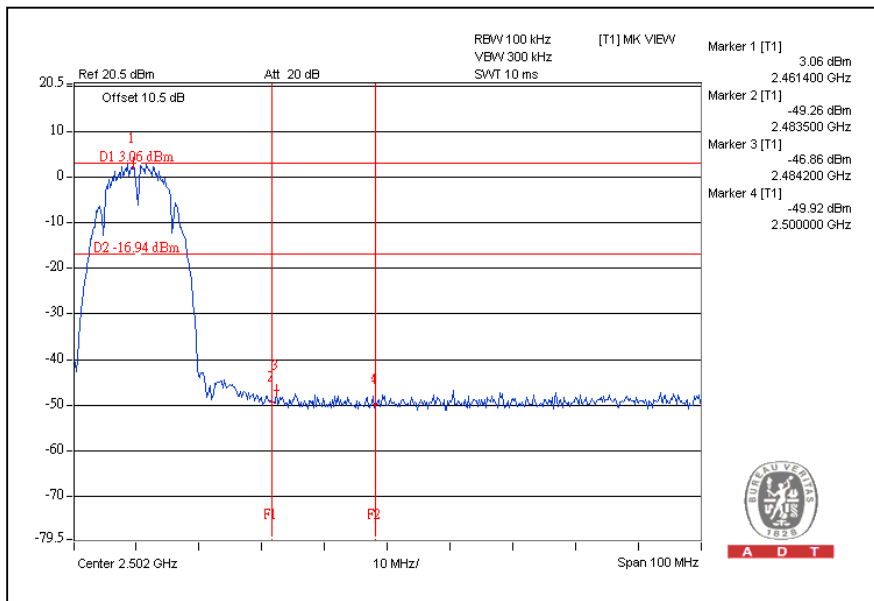
CH1



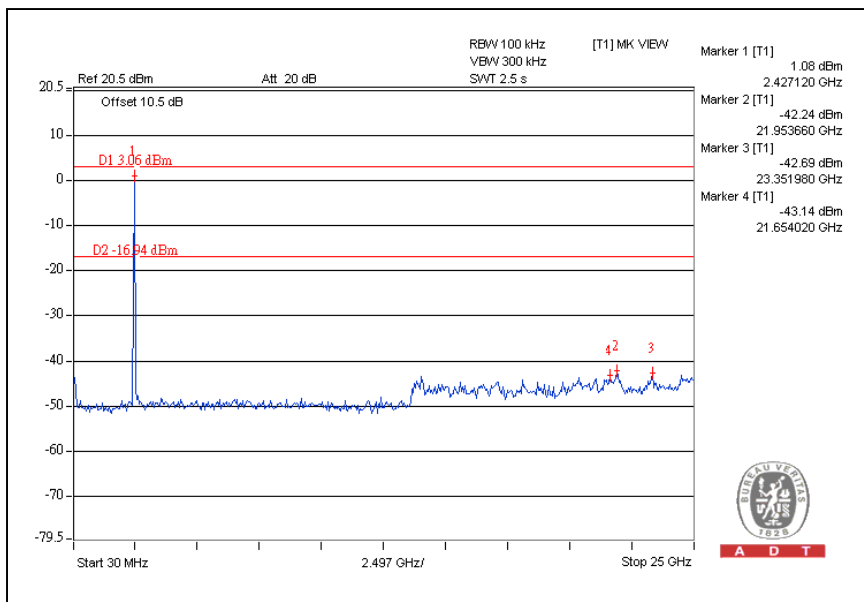


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### CH11

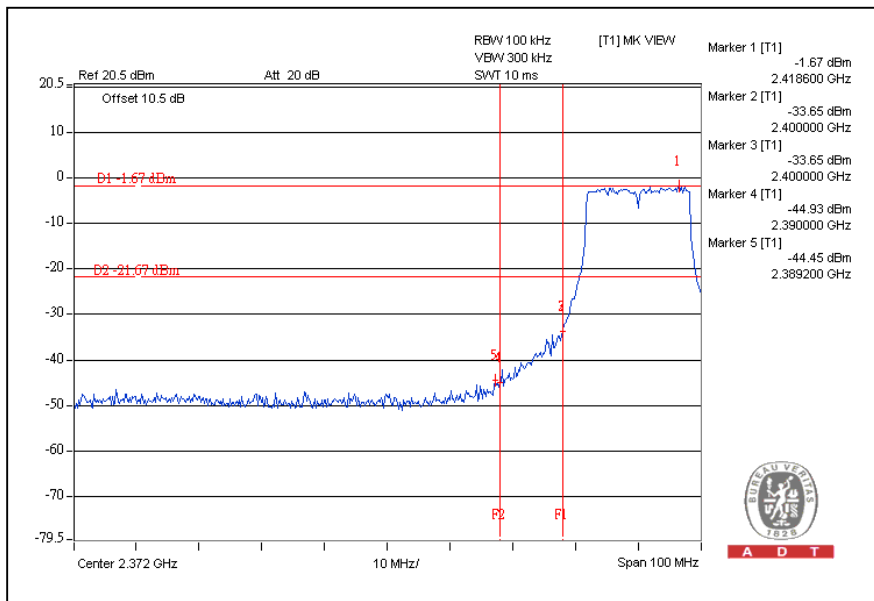


### CH11

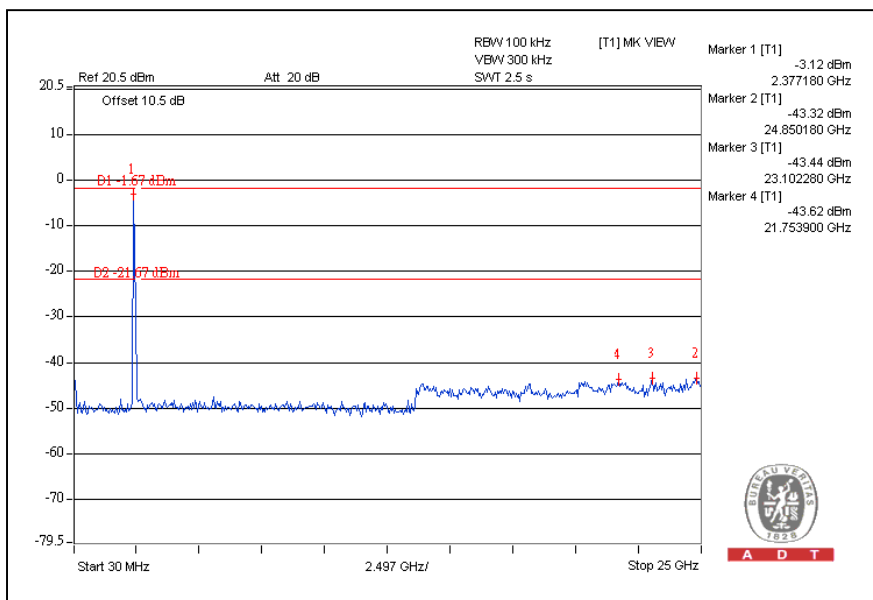


802.11g:

CH1



CH1

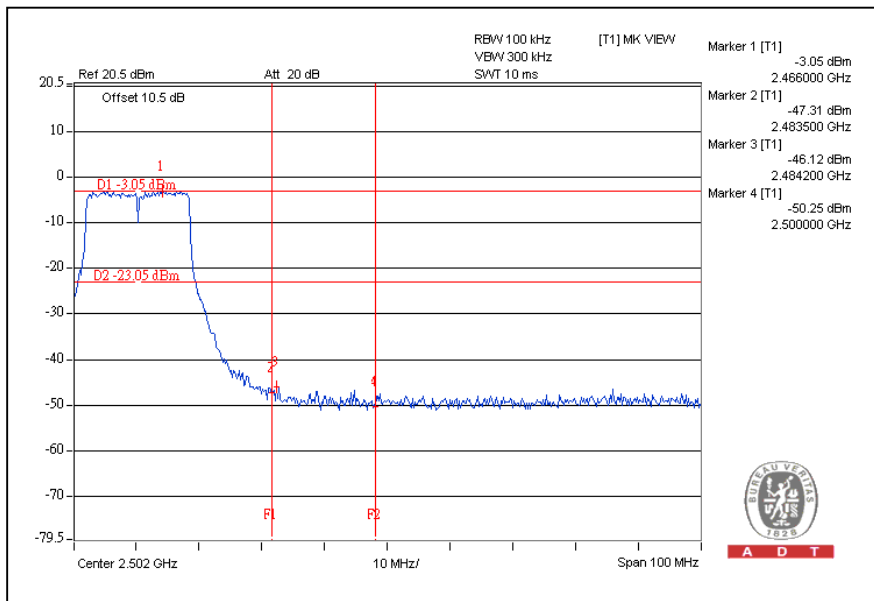




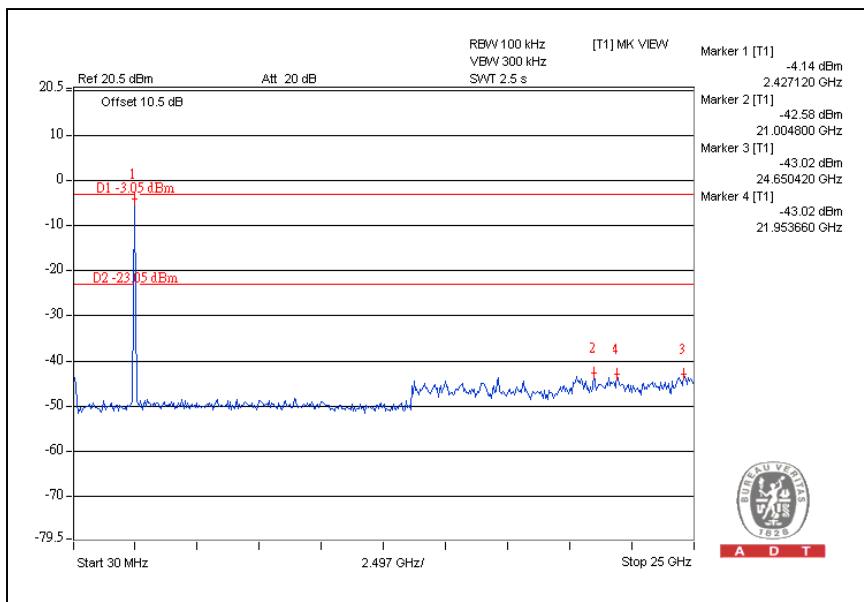


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### CH11



### CH11





## 5. INFORMATION ON THE TESTING LABORATORIES

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

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

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



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

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

**---END---**