FCC RADIO TEST REPORT

according to

47 CFR FCC Part 15 Subpart C § 15.247

Equipment	:	**Web Pad**
Model No.	:	**DT390XX (X: Blank or A~Z)**
Brand Name	:	**DTR**
Filing Type	:	**Additional**
Applicant	:	**DT Research Inc.** 6F,NO.1 ,NingPo E. St., Taipei, 100 Taiwan, R.O.C.
FCC ID	:	**YE35100**
Manufacturer	:	**DT Research Inc.** 6F,NO.1 ,NingPo E. St., Taipei, 100 Taiwan, R.O.C.
Received Date	:	May 18, 2010
Final Test Date	:	May 30, 2010

Statement

Test result included is only for the 802.11a (5725 ~ 5850MHz) and 802.11b/g of the product.

The test result in this report refers exclusively to the presented test model / sample.

Without written approval of SPORTON International Inc., the test report shall not be reproduced except in full.

The measurements and test results shown in this test report were made in accordance with the procedures and found in compliance with the limit given in **ANSI C63.4-2003** and **47 CFR FCC Part 15 Subpart C**.

The test equipment used to perform the test is calibrated and traceable to NML/ROC.

SPORTON International Inc.

No. 52 Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.

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History of This Test Report

Original Issue Date: Jun. 07, 2010

Report No.: FR051151AB

□ No additional attachment.

■ Additional attachment were issued as following record:

Attachment No.	Issue Date	Description

CERTIFICATE OF COMPLIANCE

according to

47 CFR FCC Part 15 Subpart C § 15.247

Equipment	:	Web Pad
Model No.	:	DT390XX (X: Blank or A~Z)
Brand Name	:	DTR
Applicant	:	DT Research Inc. 6F,NO.1 ,NingPo E. St., Taipei, 100 Taiwan, R.O.C.

Sporton International as requested by the applicant to evaluate the EMC performance of the product sample received on May 18, 2010 would like to declare that the tested sample has been evaluated and found to be in compliance with the tested rule parts. The data recorded as well as the test configuration specified is true and accurate for showing the sample's EMC nature.

Wayne Hsu / Vice Manager

SPORTON International Inc.

No. 52 Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.

1 SUMMARY OF THE TEST RESULT

Applied Standard: 47 CFR FCC Part 15 Subpart C				
Part	**Rule Section**	**Description of Test**	**Result**	**Under Limit**
3.1	15.207	AC Power Line Conducted Emissions	Complies	7.53 dB
-	15.247(b)(3)	Maximum Conducted Output Power	-	-
-	15.247(e)	Power Spectral Density	-	-
-	15.247(a)(2)	6dB Spectrum Bandwidth	-	-
3.2	15.247(d)	Radiated Emissions	Complies	0.33 dB
3.3	15.247(d)	Band Edge Emissions	Complies	6.72 dB
3.4	15.203	Antenna Requirements	Complies	-

Note: Standard clause 15.247(b)(3), 15.247(e), 15.247(a)(2) was not performed due to the requirement of manufacturer.

Test Items	Uncertainty	Remark
AC Power Line Conducted Emissions	±2.3dB	Confidence levels of 95%
Maximum Peak Conducted Output Power	±0.8dB	Confidence levels of 95%
Power Spectral Density	±0.5dB	Confidence levels of 95%
6dB Spectrum Bandwidth	$\pm 8.5\times10^{-8}$	Confidence levels of 95%
Radiated Emissions (9kHz~30MHz)	±0.8dB	Confidence levels of 95%
Radiated Emissions (30MHz~1000MHz)	±1.9dB	Confidence levels of 95%
Radiated / Band Edge Emissions (1GHz~18GHz)	±1.9dB	Confidence levels of 95%
Radiated Emissions (18GHz~40GHz)	±1.9dB	Confidence levels of 95%
Temperature	±0.7℃	Confidence levels of 95%
Humidity	±3.2%	Confidence levels of 95%
DC / AC Power Source	±1.4%	Confidence levels of 95%

2 GENERAL INFORMATION

2.1 Product Details

Only the radio detail of IEEE 802.11a/b/g is shown in this report. For more detailed features description, please refer to the manufacturer's specifications or user's manual.

Items	Description
Modulation	DSSS for IEEE 802.11b ; OFDM for IEEE 802.11a/g
Data Modulation	DSSS (DBPSK / DQPSK / CCK) ; OFDM (BPSK / QPSK / 16QAM / 64QAM)
Data Rate (Mbps)	DSSS (1/ 2/ 5.5/11) ; OFDM (6/9/12/18/24/36/48/54)
Frequency Range	2400 ~ 2483.5MHz / 5725 ~ 5850MHz
Channel Number	11a: 5 ; 11b/g: 11

2.2 Table for Filed Antenna

Antenna & Bandwidth

Antenna Mode	Single Chain		Two Chain	
Bandwidth Mode	20 MHz	40 MHz	20 MHz	40 MHz
802.11b	V	X	X	X
802.11g	V	X	X	X
802.11n(2.4GHz)	V	X	V	X
802.11a (5725~5850MHzMHz)	V	X	X	X
802.11n (5725~5850MHzMHz)	V	V	V	V

Ant.	Antenna Type	Connector	Gain (dBi)		Remark
			2.4G	5G	
A	PIFA Antenna	Hirose/Foxconn	2.93	4.70	TX / RX
B	PIFA Antenna	Hirose/Foxconn	2.93	4.70	TX / RX

Antenna: IEEE 802.11 a/b/g only used one antenna for signal transmitting and receiving.

2.3 Table for Carrier Frequencies

Frequency Allocation for 802.11a

Frequency Band	Channel No.	Frequency
5725~5850 MHz	149	5745 MHz
	153	5765 MHz
	157	5785 MHz
	161	5805 MHz
	165	5825 MHz

Frequency Allocation for 802.11b/g

Frequency Band	Channel No.	Frequency	Channel No.	Frequency
2400~2483.5MHz	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	-	-

2.4 Table for Test Modes

Preliminary tests were performed in different data rate to find the worst radiated emission. The data rate shown in the table below is the worst-case rate with respect to the specific test item. Investigation has been done on the entire possible Configuration for searching the worst cases. The following table is a list of the test modes shown in this test report.

Test Items	Mode	Data Rate	Channel	Antenna
AC Power Line Conducted Emissions	Normal Mode	Auto	-	-
Radiated Emissions Below 1GHz	Normal Mode	Auto	-	-
Radiated Emissions Above 1GHz Band Edge Emissions	11a/BPSK	6 Mbps	149/157/165	A
	11b/CCK	11 Mbps	1/6/11	A
	11g/BPSK	6 Mbps	1/6/11	A

2.5 Table for Testing Locations

Test Site No.	Site Category	Location	FCC Reg. No.	IC File No.
CO01-HY	Conduction	Hwa Ya	643075	IC 4086C
03CH03-HY	SAC	Hwa Ya	643075	IC 4086B

Semi Anechoic Chamber (SAC).

2.6 Table for Supporting Units

Support Unit	Brand	Model	FCC ID	Remark
iPod nano x3	Apple	A1199	N/A	Conducted
Headset	HAMA	-	N/A	
Notebook (Remote Workstation)	DELL	D505	DoC	
AP (Remote Workstation)	EDIMAX	BR2604WG	DoC	

Note: The EUT was tested alone only for radiated emissions tested.

2.7 EUT Operation during Test

Conducted Emissions:

An executive program, “EMCTEST.EXE” under WIN XP, which generates a complete line of continuously repeating “H“ pattern was used as the test software.

The program was executed as follows :

a. Turn on the power of all equipment.
b. The NB reads the test program from the hard disk drive and runs it.
c. The NB sends "H" messages to the panel and the displays "H" patterns on the screen.
d. The NB sends messages to the modem.
e. The NB sends "H" messages to the internal hard disk, and the hard disk reads and writes the message.
f. Repeat the steps from c to f.

At the same time, the following programs were executed:

- Executed "Winthrax.exe" to read/write data from internal Hard Disk and iPod.
- Executed "Media player.exe" to play audio and video.
- Executed "Wireless" to link with the remote workstation to receive and transmit data by AP.

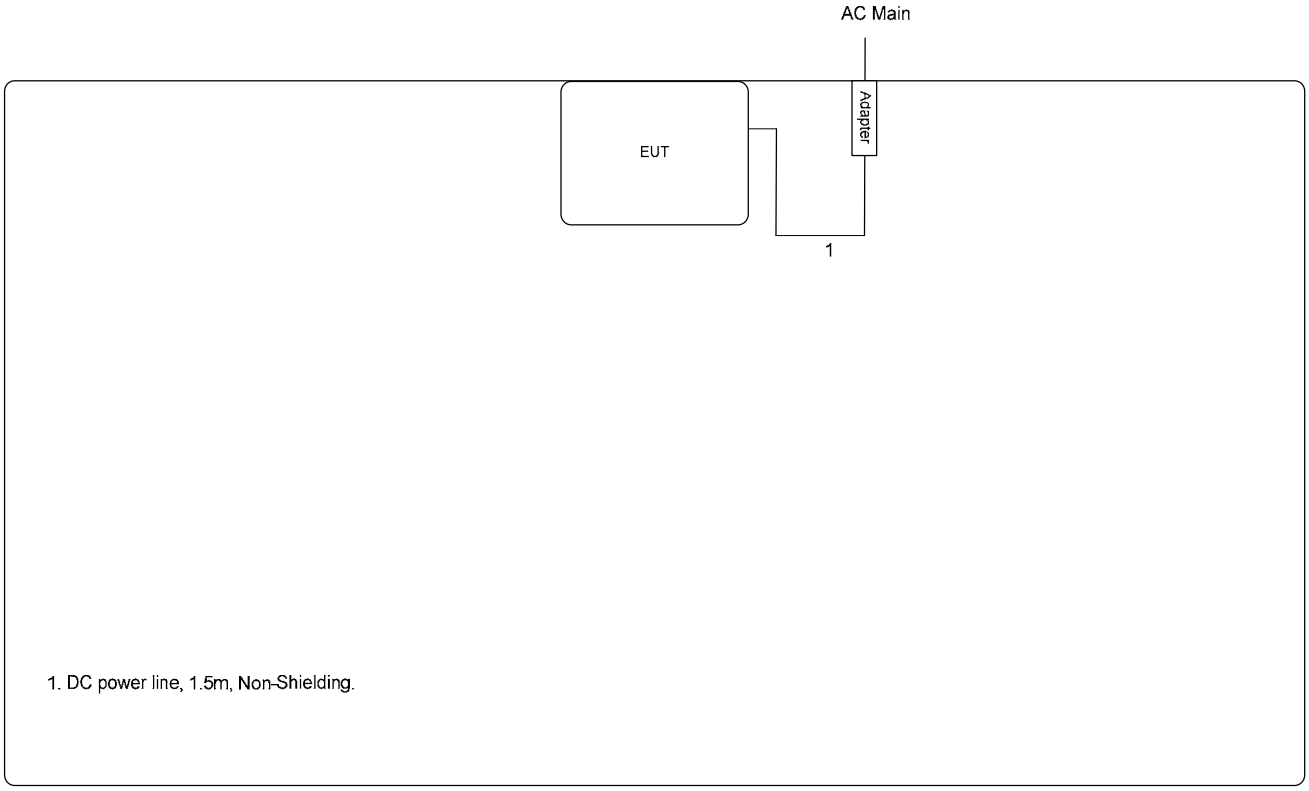
Radiated Emissions:

- Executed “CRTU” to keep transmitting signals at fixed frequency.

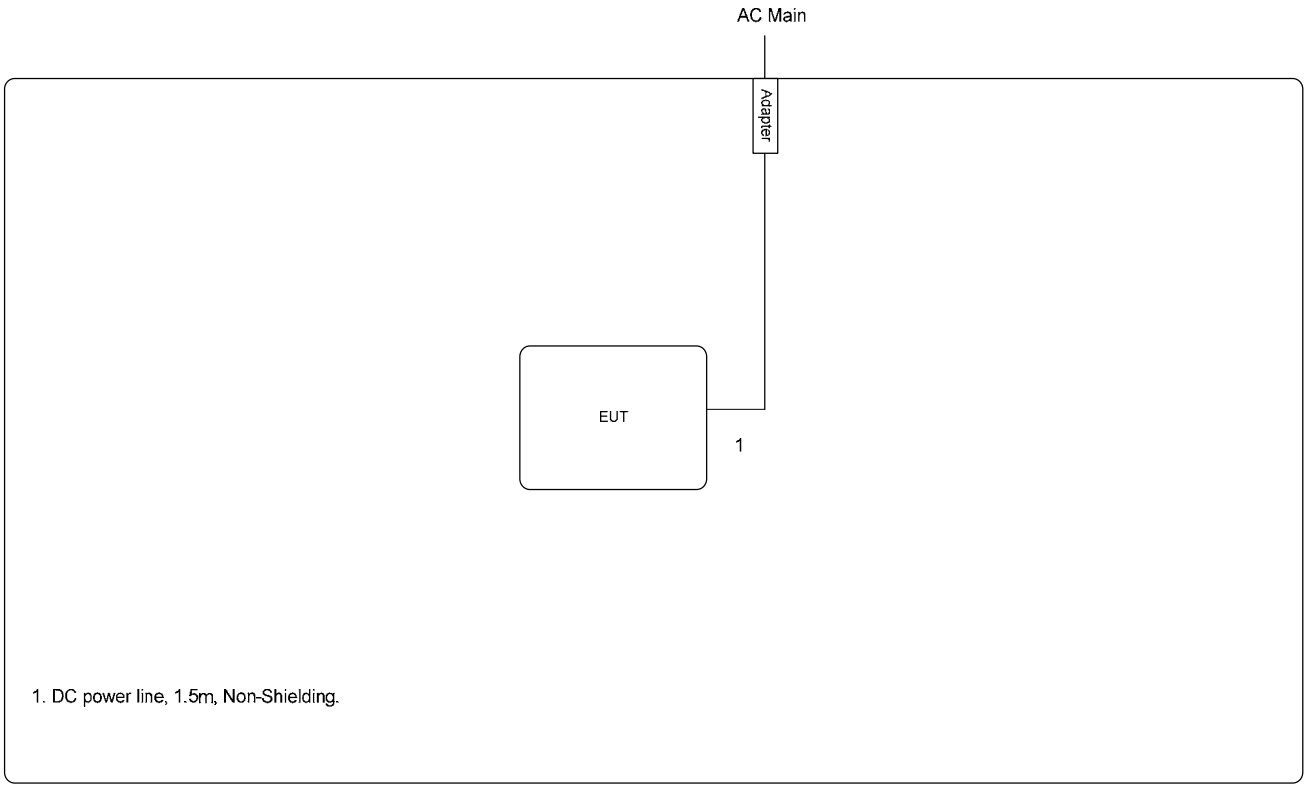
2.8 Test Configuration

2.8.1 Radiation Emissions Test Configuration

For radiated emissions 9kHz~1GHz



For radiated emissions above 1GHz



3 TEST RESULT

3.1 AC Power Line Conducted Emissions Measurement

3.1.1 Limit

For this product which is designed to be connected to the AC power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed below limits table.

Class B

Frequency (MHz)	QP Limit (dBuV)	AV Limit (dBuV)
0.15~0.5	66~56	56~46
0.5~5	56	46
5~30	60	50

3.1.2 Measuring Instruments and Setting

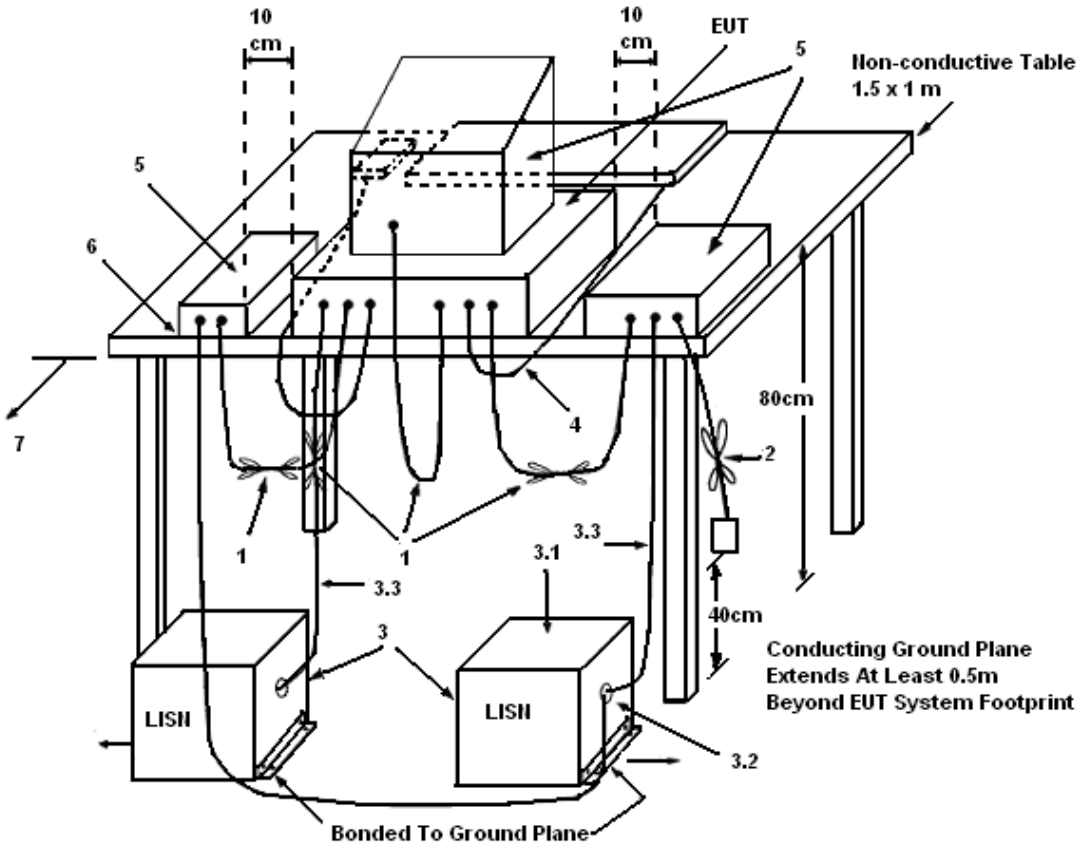
Please refer to section 4 of equipments list in this report. The following table is the setting of the receiver.

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 KHz

3.1.3 Test Procedures

1. The EUT warm up about 15 minutes then start test.
2. Configure the EUT according to ANSI C63.4. The EUT or host of EUT has to be placed 0.4 meter far from the conducting wall of the shielding room and at least 80 centimeters from any other grounded conducting surface.
3. Connect EUT or host of EUT to the power mains through a line impedance stabilization network (LISN).
4. All the support units are connected to the other LISNs. The LISN should provide 50uH/50ohms coupling impedance.
5. The frequency range from 150 KHz to 30 MHz was searched.
6. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
7. The measurement has to be done between each power line and ground at the power terminal.

3.1.4 Test Setup Layout



LEGEND:
(1) Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
(2) I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
(3) EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50 Ω. LISN can be placed on top of, or immediately beneath, reference ground plane.
(3.1) All other equipment powered from additional LISN(s).
(3.2) Multiple outlet strip can be used for multiple power cords of non-EUT equipment.
(3.3) LISN at least 80 cm from nearest part of EUT chassis.
(4) Cables of hand-operated devices, such as keyboards, mice, etc., shall be placed as for normal use.
(5) Non-EUT components of EUT system being tested.
(6) Rear of EUT, including peripherals, shall all be aligned and flush with rear of tabletop.
(7) Rear of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.

3.1.5 Test Deviation

There is no deviation with the original standard.

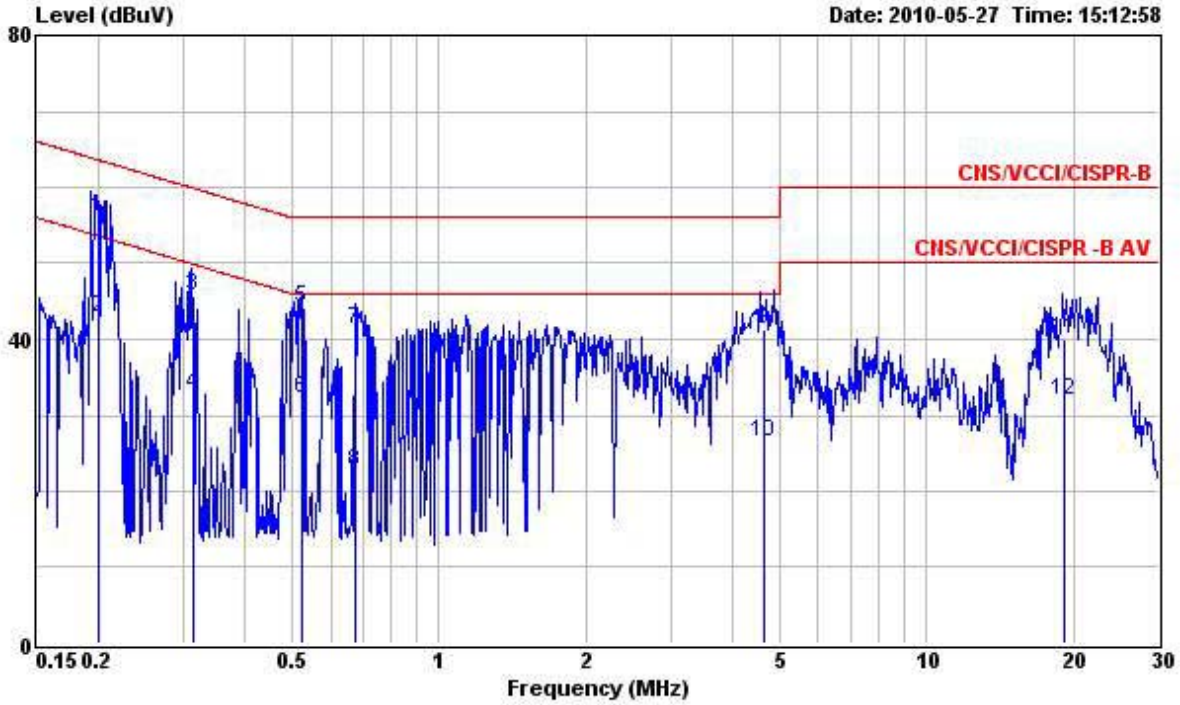
3.1.6 EUT Operation during Test

The EUT was placed on the test table and programmed in normal function.

3.1.7 Results of AC Power Line Conducted Emissions Measurement

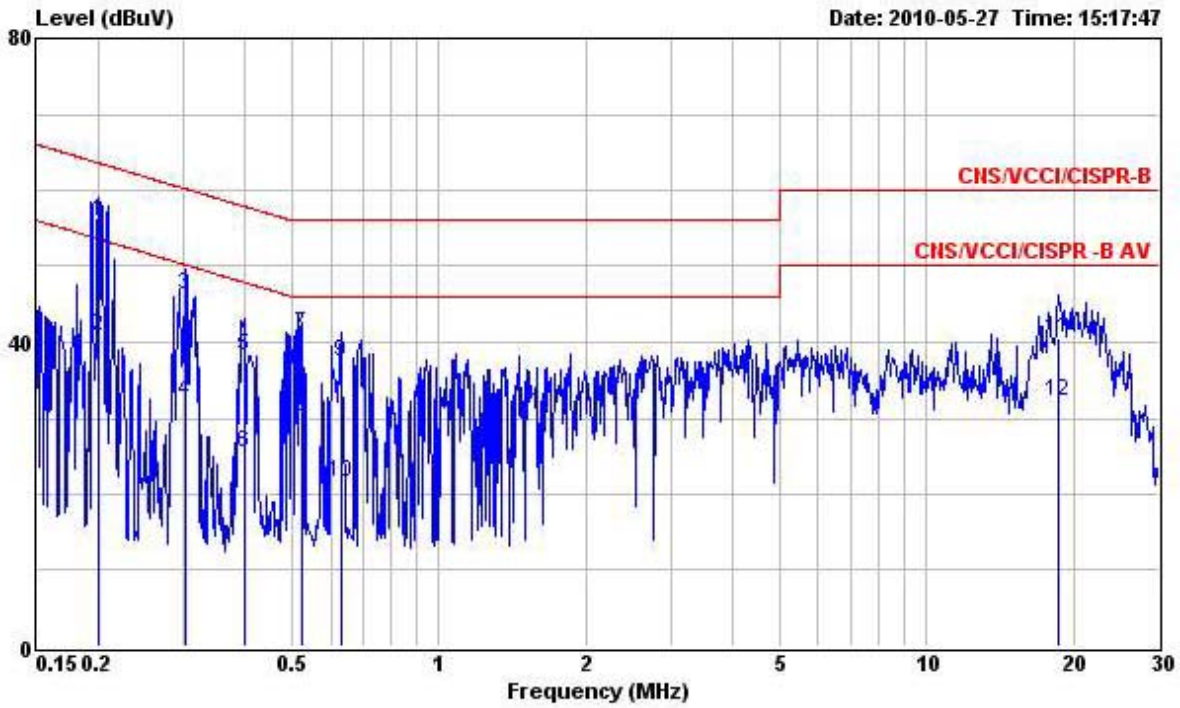
Final Test Date	May 27, 2010	**Test Site No.**	CO01-HY
Temperature	27.9℃	**Humidity**	56%
Test Engineer	Ace	**Configuration**	Normal Mode

Line



	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.200	56.08	-7.53	63.61	55.94	0.08	0.06	QP
2	0.200	42.89	-10.72	53.61	42.75	0.08	0.06	Average
3	0.315	45.75	-14.10	59.85	45.59	0.09	0.07	QP
4	0.315	32.83	-17.02	49.85	32.67	0.09	0.07	Average
5	0.524	44.24	-11.76	56.00	44.05	0.10	0.09	QP
6	0.524	32.25	-13.75	46.00	32.06	0.10	0.09	Average
7	0.672	41.38	-14.62	56.00	41.17	0.10	0.11	QP
8	0.672	22.65	-23.35	46.00	22.44	0.10	0.11	Average
9	4.635	41.20	-14.80	56.00	40.85	0.19	0.16	QP
10	4.635	26.41	-19.59	46.00	26.06	0.19	0.16	Average
11	19.240	39.98	-20.02	60.00	39.26	0.40	0.32	QP
12	19.240	31.89	-18.11	50.00	31.17	0.40	0.32	Average

Neutral



	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.200	55.84	-7.77	63.61	55.72	0.06	0.06	QP
2	0.200	40.86	-12.75	53.61	40.74	0.06	0.06	Average
3	0.302	46.28	-13.91	60.19	46.14	0.07	0.07	QP
4	0.302	32.16	-18.03	50.19	32.02	0.07	0.07	Average
5	0.398	38.29	-19.61	57.90	38.15	0.07	0.07	QP
6	0.398	25.38	-22.52	47.90	25.24	0.07	0.07	Average
7	0.523	40.95	-15.05	56.00	40.78	0.08	0.09	QP
8	0.523	30.04	-15.96	46.00	29.87	0.08	0.09	Average
9	0.630	37.28	-18.72	56.00	37.10	0.08	0.10	QP
10	0.630	21.47	-24.53	46.00	21.29	0.08	0.10	Average
11	18.720	40.58	-19.42	60.00	39.85	0.41	0.32	QP
12	18.720	32.15	-17.85	50.00	31.42	0.41	0.32	Average

Note:

Level = Read Level + LISN Factor + Cable Loss.

3.2 Radiated Emissions Measurement

3.2.1 Limit

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/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

3.2.2 Measuring Instruments and Setting

Please refer to section 4 of equipments list in this report. The following table is the setting of spectrum analyzer and receiver.

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (Emission in restricted band)	1MHz / 1MHz for Peak, 1 MHz / 10Hz for Average
RB / VB (Emission in non-restricted band)	1MHz / 1MHz for peak

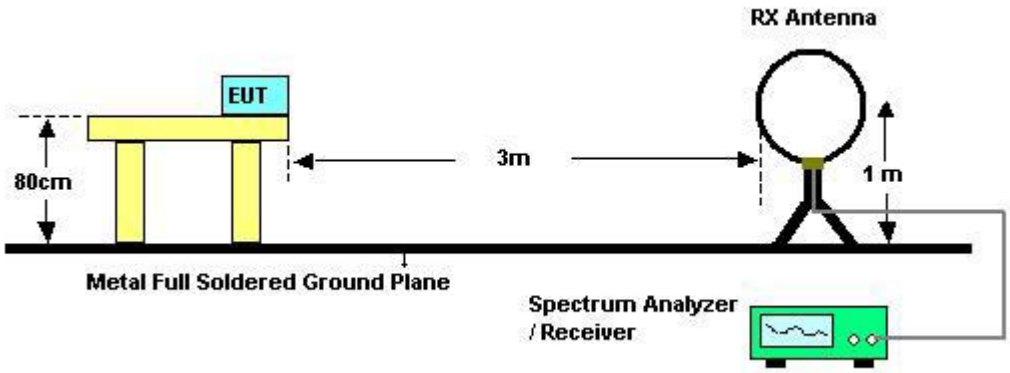
Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

3.2.3 Test Procedures

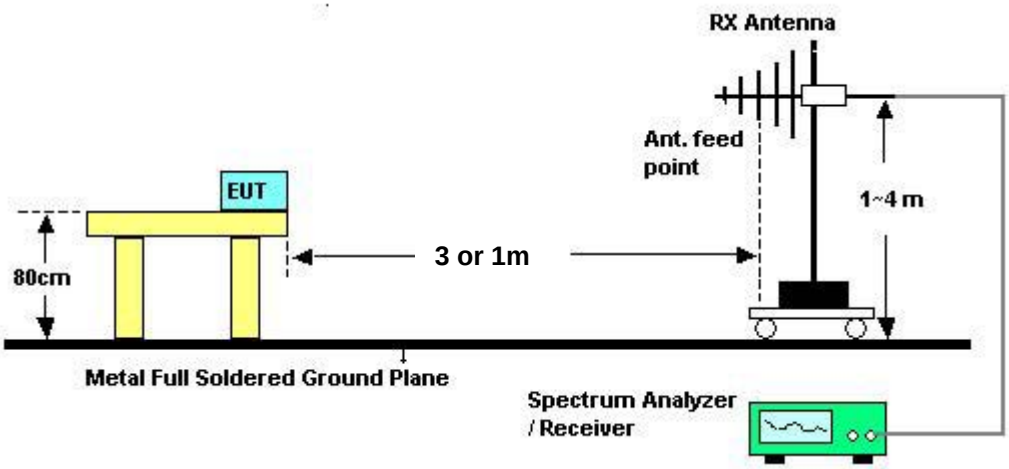
1. Configure the EUT according to ANSI C63.4. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. For emissions above 1GHz, use 1MHz VBW and RBW for peak reading. Then 1MHz RBW and 10Hz VBW for average reading in spectrum analyzer.
7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.
8. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High – Low scan is not required in this case.

3.2.4 Test Setup Layout

For radiated emissions below 30MHz



For radiated emissions above 30MHz



Above 10 GHz shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade form 3m to 1m.

Distance extrapolation factor = 20 log (specific distance [3m] / test distance [1m]) (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor [9.54 dB].

3.2.5 Test Deviation

There is no deviation with the original standard.

3.2.6 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

3.2.7 Results of Radiated Emissions (9kHz~30MHz)

Final Test Date	May 18, 2010	**Test Site No.**	03CH03-HY
Temperature	27.9℃	**Humidity**	56%
Test Engineer	Eddie		

Freq. (MHz)	Level (dBuV)	Over Limit (dB)	Limit Line (dBuV)	Remark
-	-	-	-	See Note

Note:

The amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

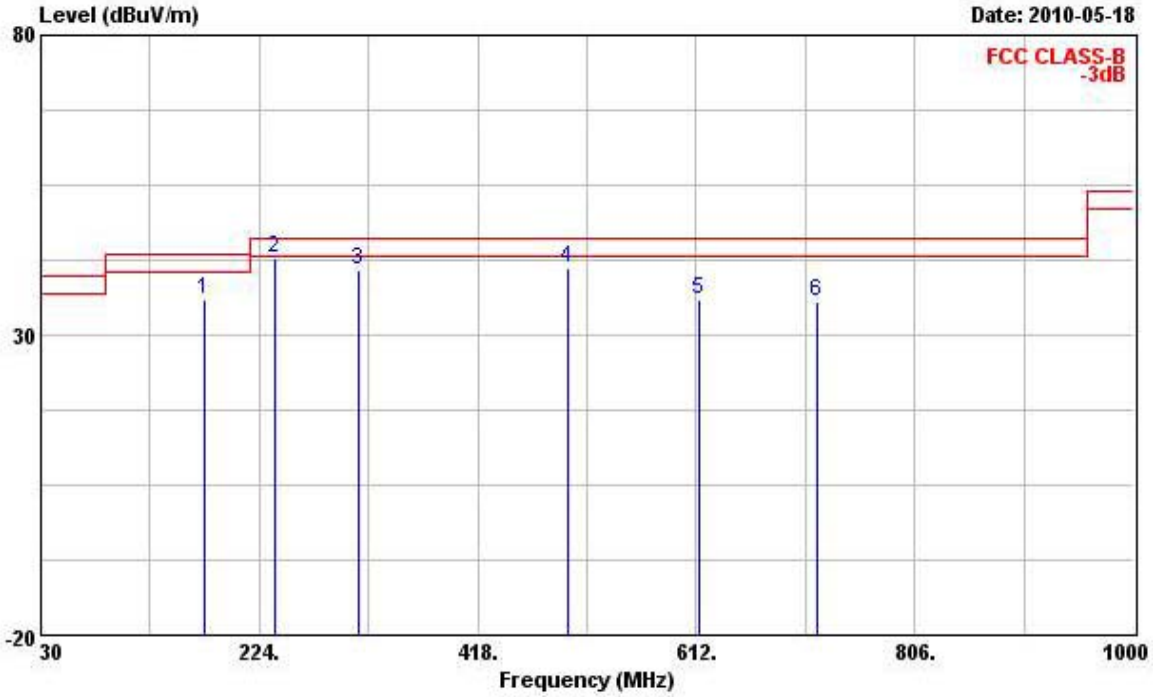
Distance extrapolation factor = 40 log (specific distance / test distance) (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor.

3.2.8 Results of Radiated Emissions (30MHz~1GHz)

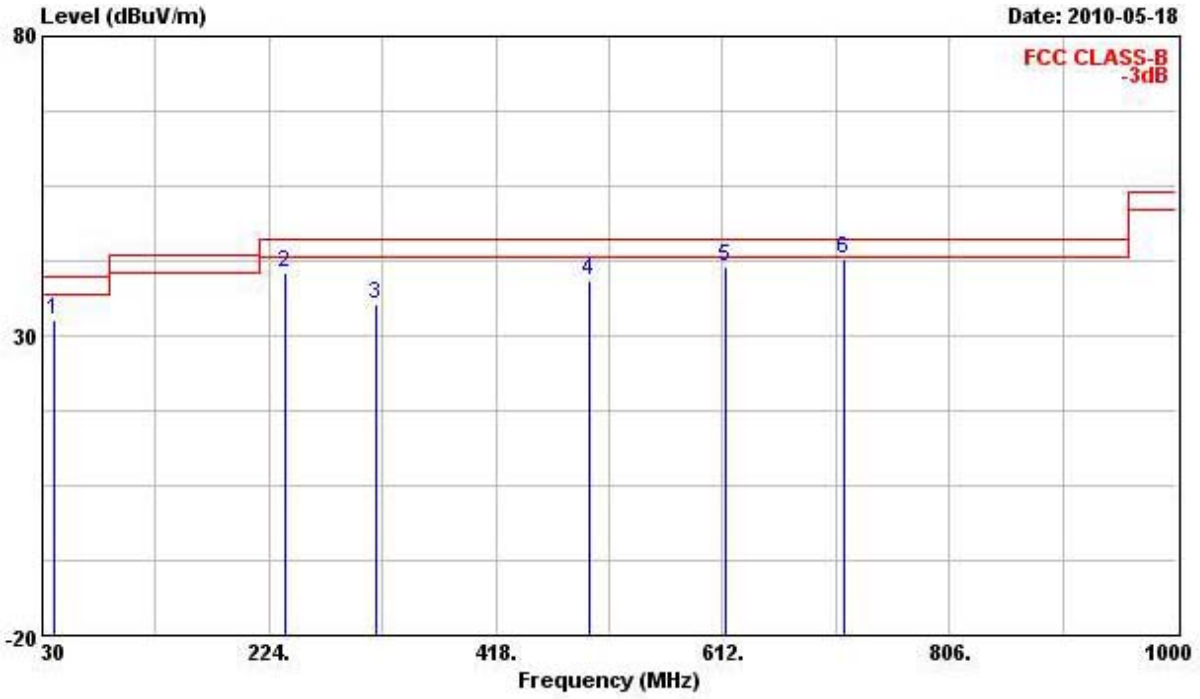
Final Test Date	May 18, 2010	**Test Site No.**	03CH03-HY
Temperature	27.9℃	**Humidity**	56%
Test Engineer	Eddie	**Configurations**	Normal Mode

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	175.500	36.05	-7.45	43.50	50.15	9.88	3.30	27.28	---	---	Peak
2 @	238.550	42.95	-3.05	46.00	53.24	12.62	3.96	26.87	---	---	Peak
3	312.270	40.90	-5.10	46.00	49.37	13.90	4.52	26.89	---	---	Peak
4	498.510	41.27	-4.73	46.00	46.04	17.26	6.15	28.18	---	---	Peak
5	614.910	35.91	-10.09	46.00	36.71	19.98	7.36	28.15	---	---	Peak
6	719.670	35.64	-10.36	46.00	37.00	19.13	7.47	27.95	---	---	Peak

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	39.700	32.60	-7.40	40.00	46.13	13.25	1.02	27.80	---	---	QP
2 @	238.550	40.44	-5.56	46.00	50.73	12.62	3.96	26.87	---	---	Peak
3 @	315.180	35.41	-10.59	46.00	43.87	13.94	4.51	26.91	---	---	Peak
4 @	498.510	39.24	-6.76	46.00	44.01	17.26	6.15	28.18	---	---	Peak
5 @	614.910	41.37	-4.63	46.00	42.17	19.98	7.36	28.15	---	---	Peak
6 @	715.790	42.78	-3.22	46.00	44.23	19.08	7.43	27.96	---	---	Peak

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

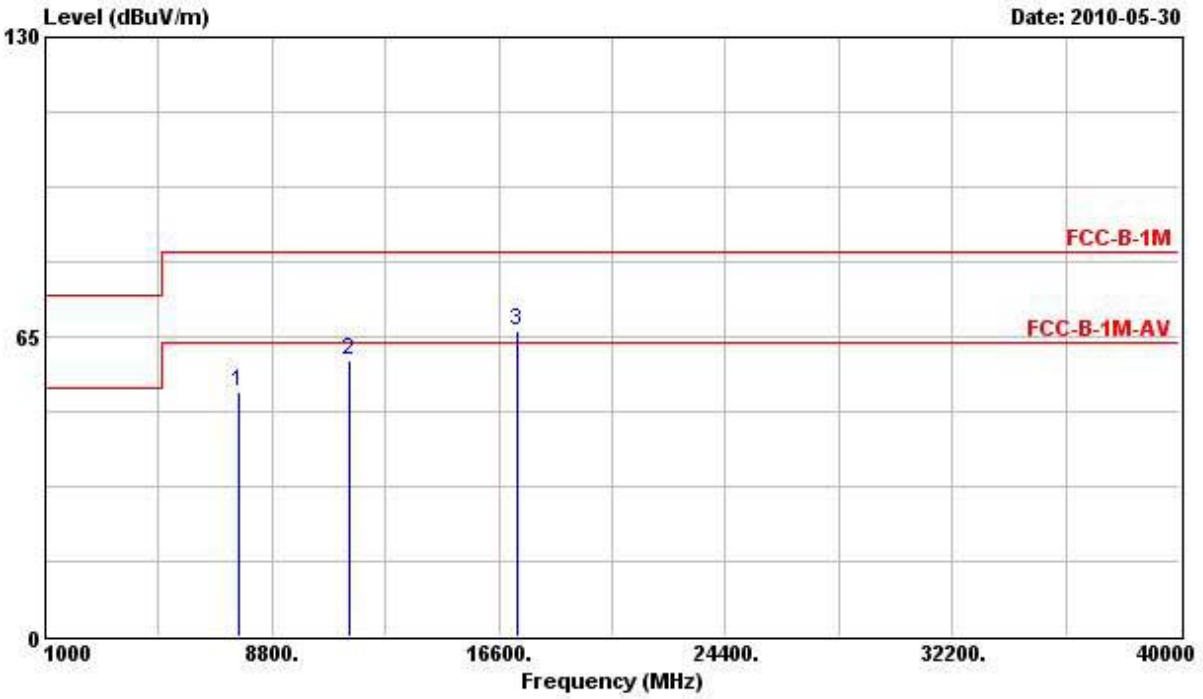
Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

3.2.9 Results for Radiated Emissions (1GHz~10th Harmonic)

Final Test Date	May 30, 2010	**Test Site No.**	03CH03-HY
Temperature	27.9℃	**Humidity**	56%
Test Engineer	Eddie	**Configuration**	802.11a Ch. 149

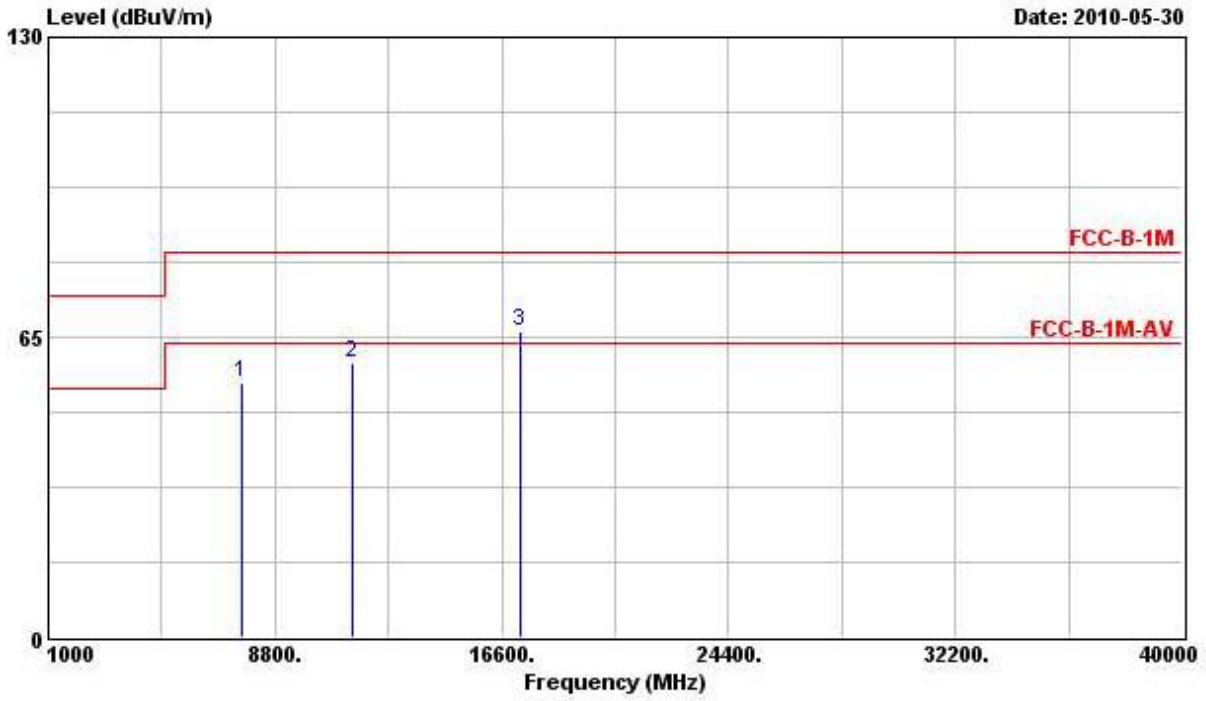
Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	7660.000	53.13	-10.41	63.54	42.98	37.20	5.02	32.06	---	---	PK
2 @	11492.000	59.75	-3.79	63.54	45.10	39.88	5.99	31.21	---	---	PK
3	17239.000	66.27			46.29	43.49	7.38	30.90	---	---	Peak

Note: The item 3 is on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

Vertical

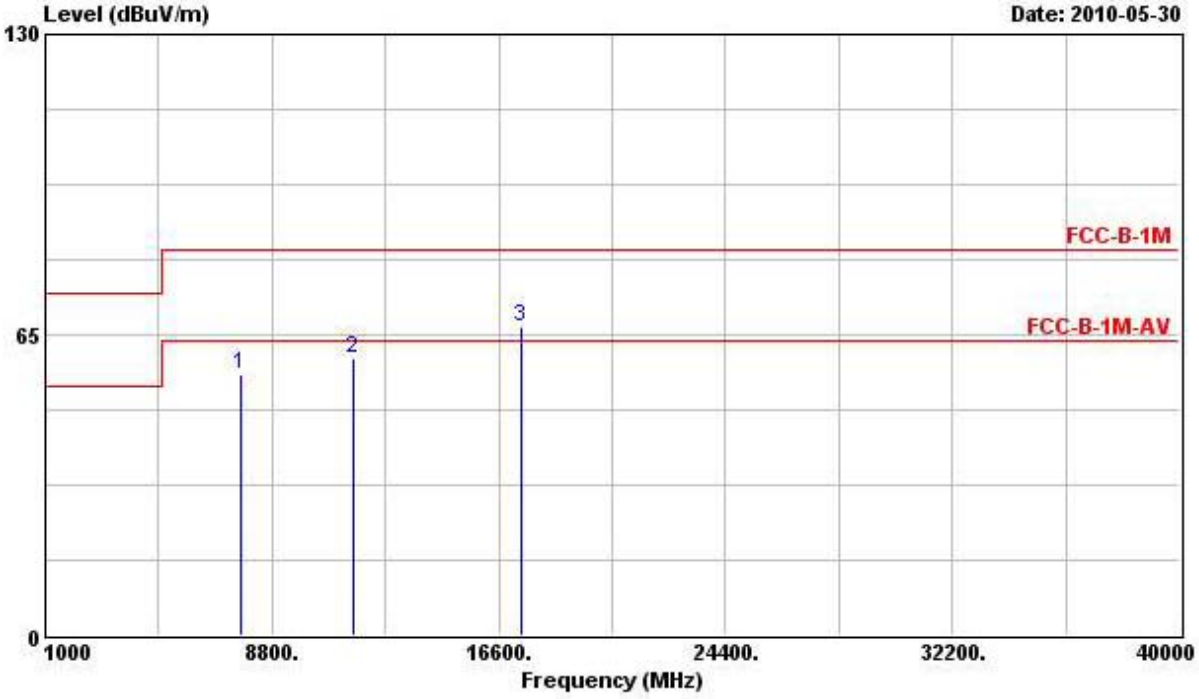


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	7660.000	55.03	-8.51	63.54	44.87	37.20	5.02	32.06	---	---	PK
2 @	11492.000	59.38	-4.16	63.54	44.73	39.88	5.99	31.21	---	---	PK
3	17239.000	66.27			46.29	43.49	7.38	30.90	---	---	Peak

Note: The item 3 is on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

Final Test Date	May 30, 2010	**Test Site No.**	03CH03-HY
Temperature	24.6℃	**Humidity**	61%
Test Engineer	Eddie	**Configuration**	802.11a Ch. 157

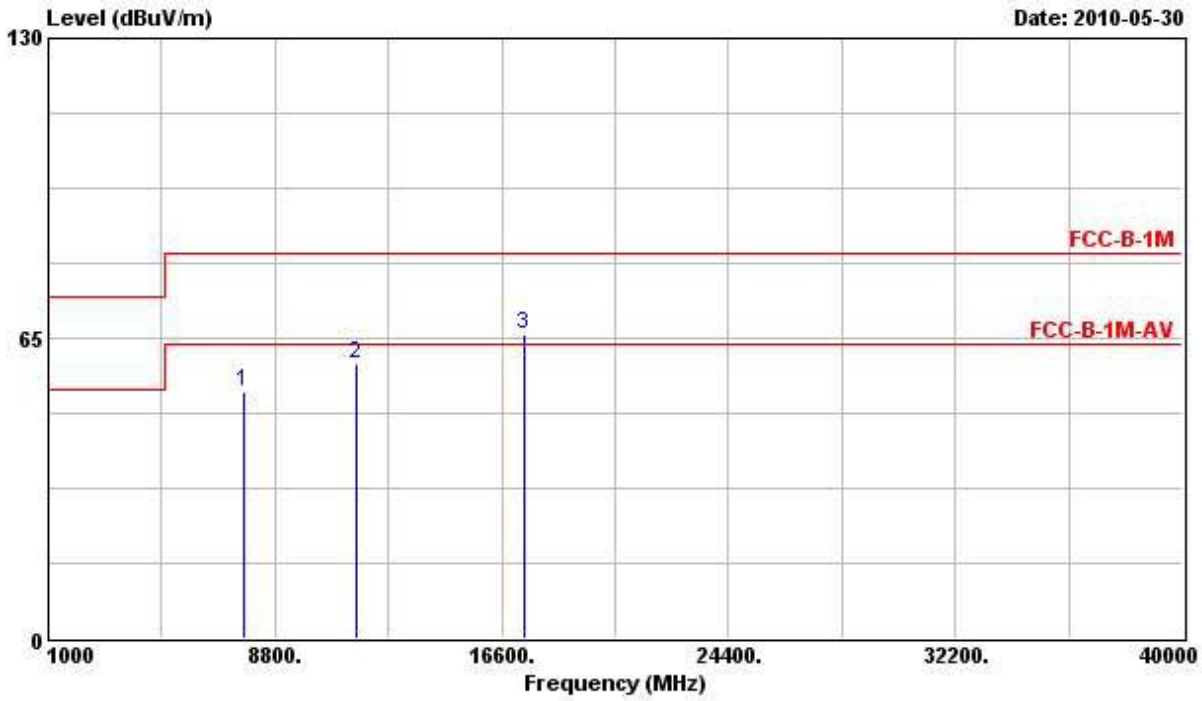
Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	7712.000	56.24	-7.30	63.54	46.02	37.26	5.05	32.09	---	---	PK
2 @	11572.000	59.66	-3.88	63.54	45.09	39.83	6.04	31.30	---	---	PK
3	17356.000	66.78			45.73	44.59	7.36	30.90	---	---	Peak

Note: The item 3 is on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

Vertical

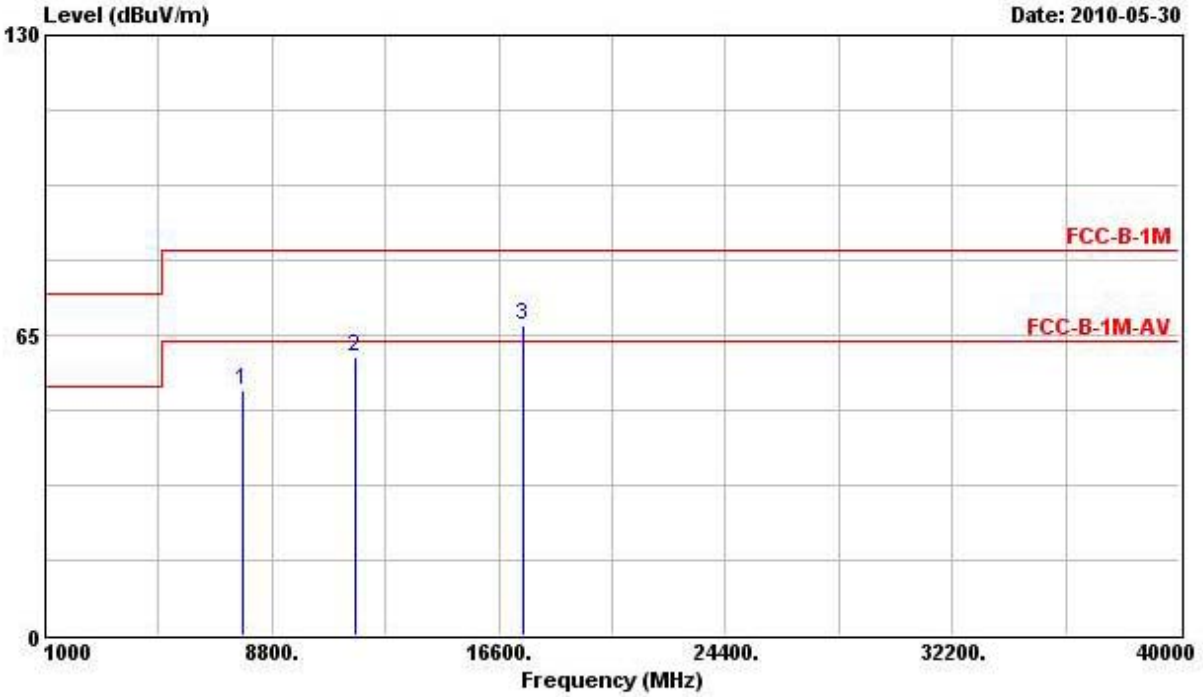


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	7712.000	53.54	-10.00	63.54	43.31	37.26	5.05	32.09	---	---	PK
2 @	11570.000	59.40	-4.14	63.54	44.83	39.83	6.04	31.30	---	---	PK
3	17352.000	65.98			44.92	44.59	7.37	30.90	---	---	Peak

Note: The item 3 is on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

Final Test Date	May 30, 2010	**Test Site No.**	03CH03-HY
Temperature	27.9℃	**Humidity**	56%
Test Engineer	Eddie	**Configuration**	802.11a Ch. 165

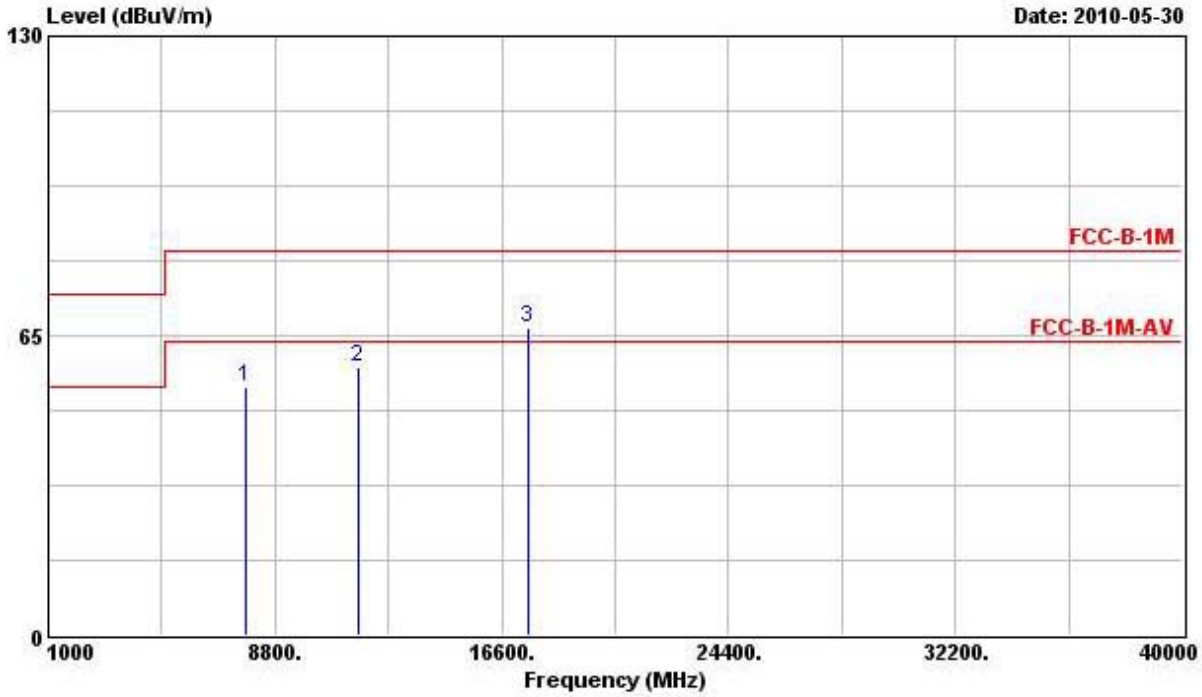
Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	7768.000	53.17			42.84	37.32	5.11	32.11	---	---	Peak
2 @	11650.000	60.45	-3.09	63.54	46.03	39.76	6.10	31.44	---	---	PK
3	17475.000	67.11			44.98	45.69	7.35	30.90	---	---	Peak

Note: The items 1 and 3 are on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

Vertical

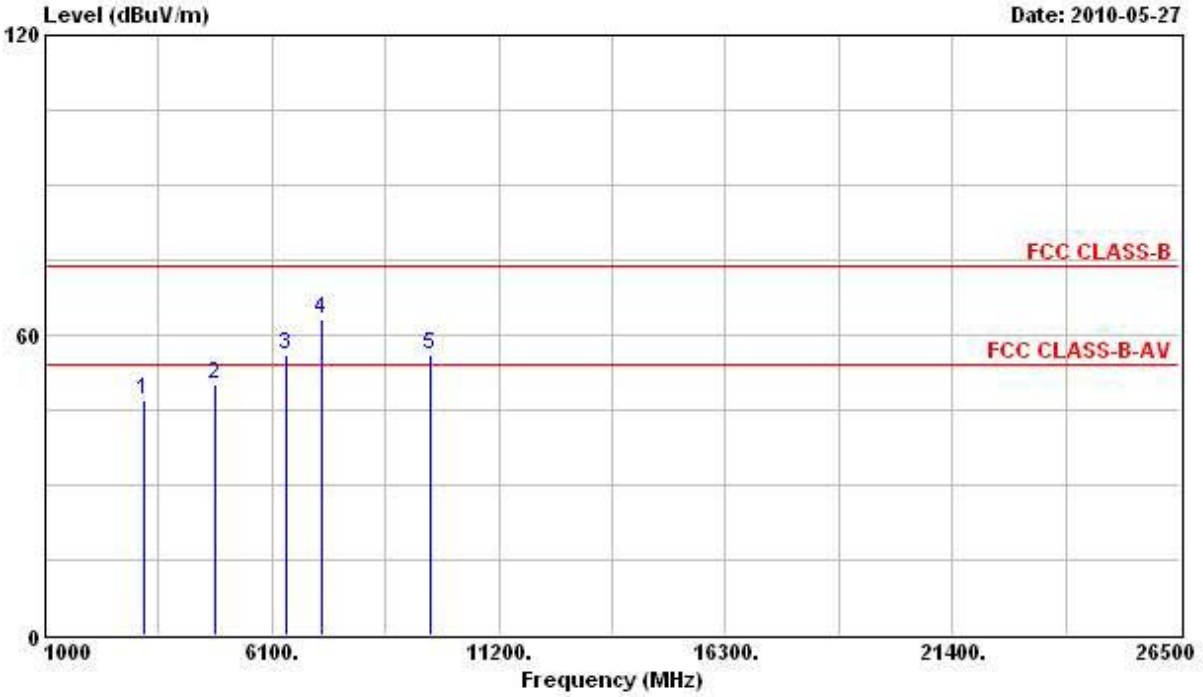


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	7768.000	53.78			43.46	37.32	5.11	32.11	---	---	Peak
2 @	11650.000	58.04	-5.50	63.54	43.62	39.76	6.10	31.44	---	---	PK
3	17479.000	66.91			44.77	45.69	7.35	30.90	---	---	Peak

Note: The items 1 and 3 are on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

Final Test Date	May 27, 2010	Test Site No.	03CH03-HY
Temperature	27.9℃	Humidity	56%
Test Engineer	Eddie	Configuration	802.11b Ch. 1

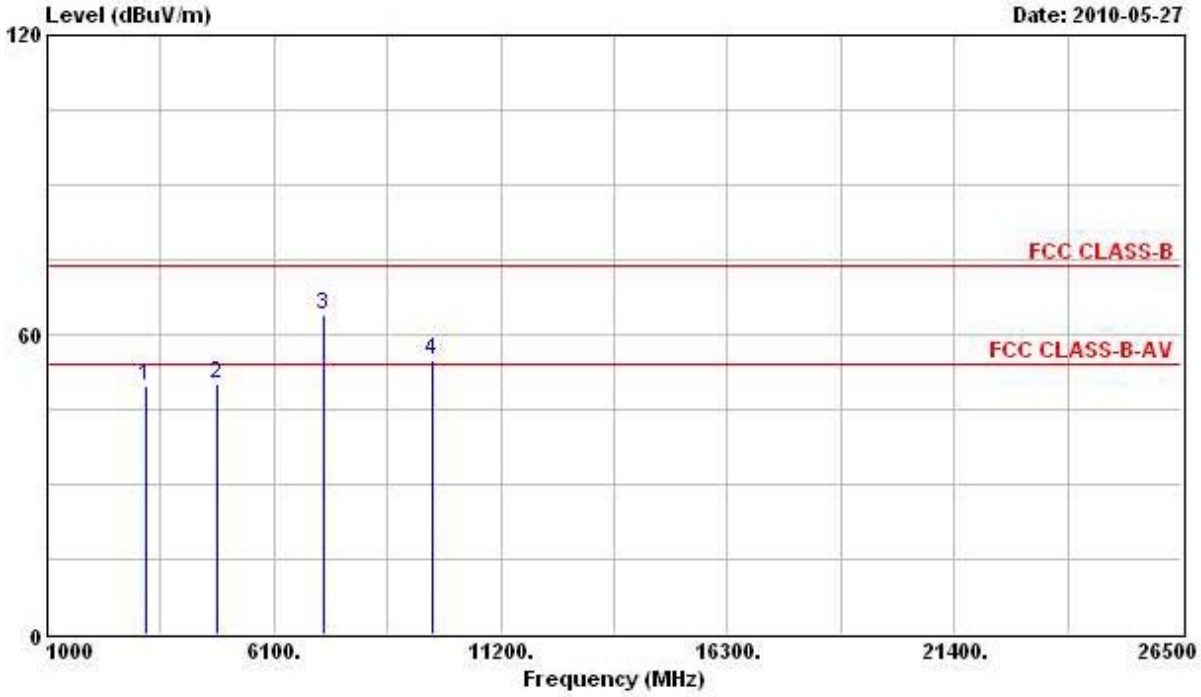
Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	3216.000	47.17			45.41	30.51	3.62	32.37	---	---	PEAK
2 @	4824.000	50.18	-3.82	54.00	44.83	33.06	4.58	32.28	---	---	PK
3	6432.000	55.89			48.17	34.19	5.45	31.91	---	---	PEAK
4	7236.000	62.99			54.44	35.53	5.63	32.61	---	---	PEAK
5	9648.000	55.94			43.47	38.41	6.34	32.28	---	---	PEAK

Note: The items 1 and 3~5 are on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

Vertical

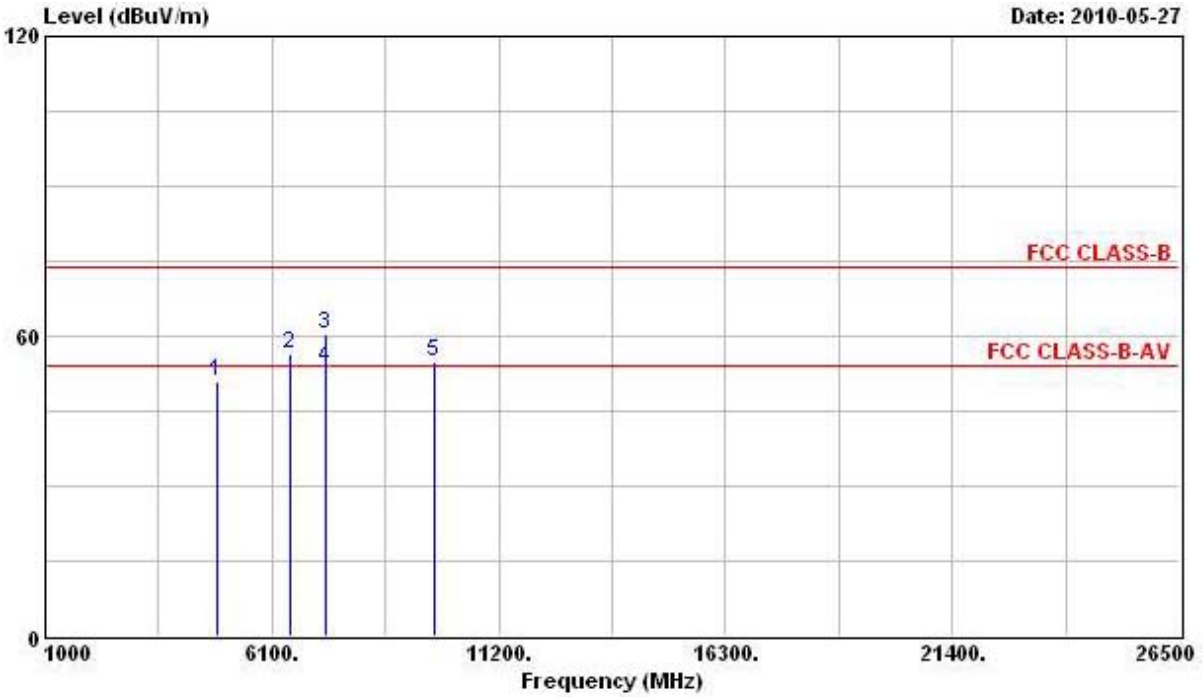


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	3216.000	49.69			47.93	30.51	3.62	32.37	---	---	PEAK
2 @	4824.000	49.97	-4.03	54.00	44.61	33.06	4.58	32.28	---	---	PK
3 @	7232.000	63.97			55.48	35.53	5.63	32.67	---	---	PEAK
4	9648.000	55.05			42.58	38.41	6.34	32.28	---	---	PEAK

Note: The items 1 and 3~4 are on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

Final Test Date	May 27, 2010	Test Site No.	03CH03-HY
Temperature	27.9℃	Humidity	56%
Test Engineer	Eddie	Configuration	802.11b Ch. 6

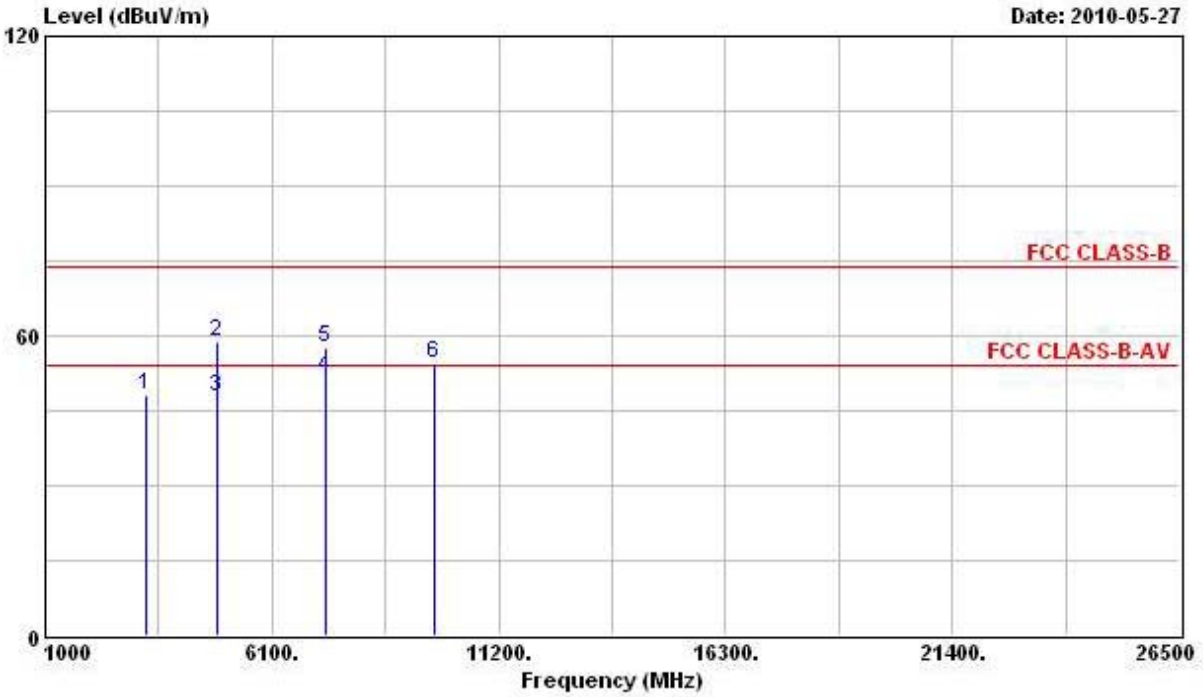
Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	4876.000	50.90	-3.10	54.00	45.46	33.16	4.61	32.33	---	---	PK
2	6500.000	56.29			48.46	34.20	5.49	31.86	---	---	PEAK
3	7308.000	60.38	-13.62	74.00	51.55	35.68	5.64	32.48	---	---	PEAK
4 @	7308.000	53.67	-0.33	54.00	44.83	35.68	5.64	32.48	---	---	Average
5	9752.000	54.88			42.24	38.62	6.36	32.33	---	---	PEAK

Note: The items 2 and 5 are on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

Vertical

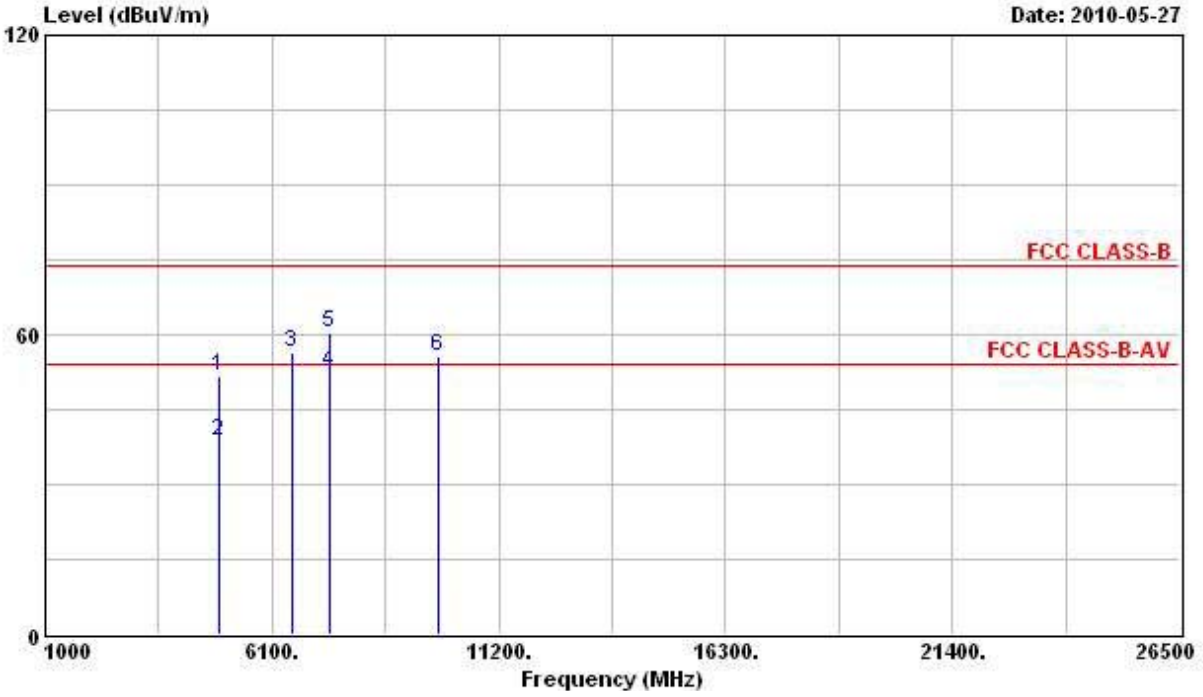


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	3248.000	48.23			46.35	30.58	3.65	32.36	---	---	PEAK
2	4876.000	58.81	-15.19	74.00	53.37	33.16	4.61	32.33	---	---	PEAK
3 @	4876.000	47.65	-6.35	54.00	42.21	33.16	4.61	32.33	---	---	Average
4 @	7308.000	51.76	-2.24	54.00	42.92	35.68	5.64	32.48	---	---	Average
5	7308.000	57.79	-16.21	74.00	48.95	35.68	5.64	32.48	---	---	PEAK
6	9748.000	54.51			41.86	38.62	6.36	32.33	---	---	PEAK

Note: The items 1 and 6 are on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

Final Test Date	May 27, 2010	Test Site No.	03CH03-HY
Temperature	27.9℃	Humidity	56%
Test Engineer	Eddie	Configuration	802.11b Ch. 11

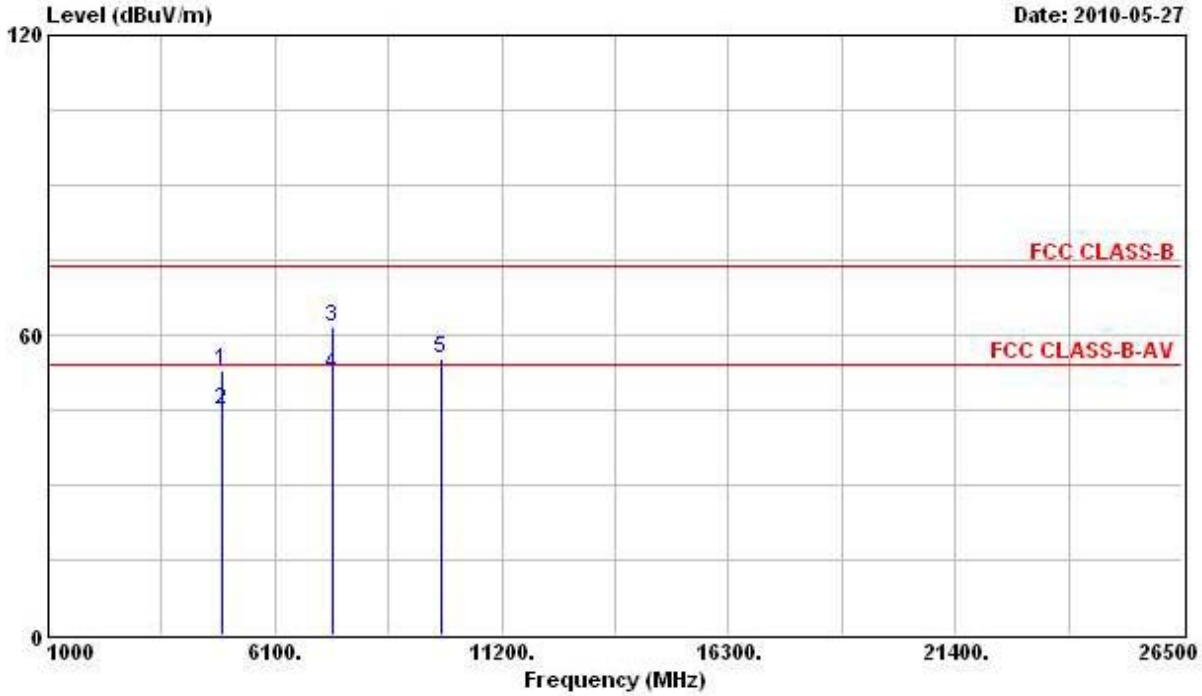
Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	4924.000	51.65	-22.35	74.00	46.09	33.26	4.68	32.38	---	---	Peak
2	4924.000	38.80	-15.20	54.00	33.24	33.26	4.68	32.38	---	---	Average
3	6560.000	56.28			48.49	34.28	5.51	32.00	---	---	Peak
4 @	7388.000	52.49	-1.51	54.00	43.21	35.87	5.65	32.24	---	---	Average
5	7388.000	60.30	-13.70	74.00	51.02	35.87	5.65	32.24	---	---	Peak
6	9848.000	55.83			43.04	38.79	6.38	32.38	---	---	Peak

Note: The items 3 and 6 are on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

Vertical

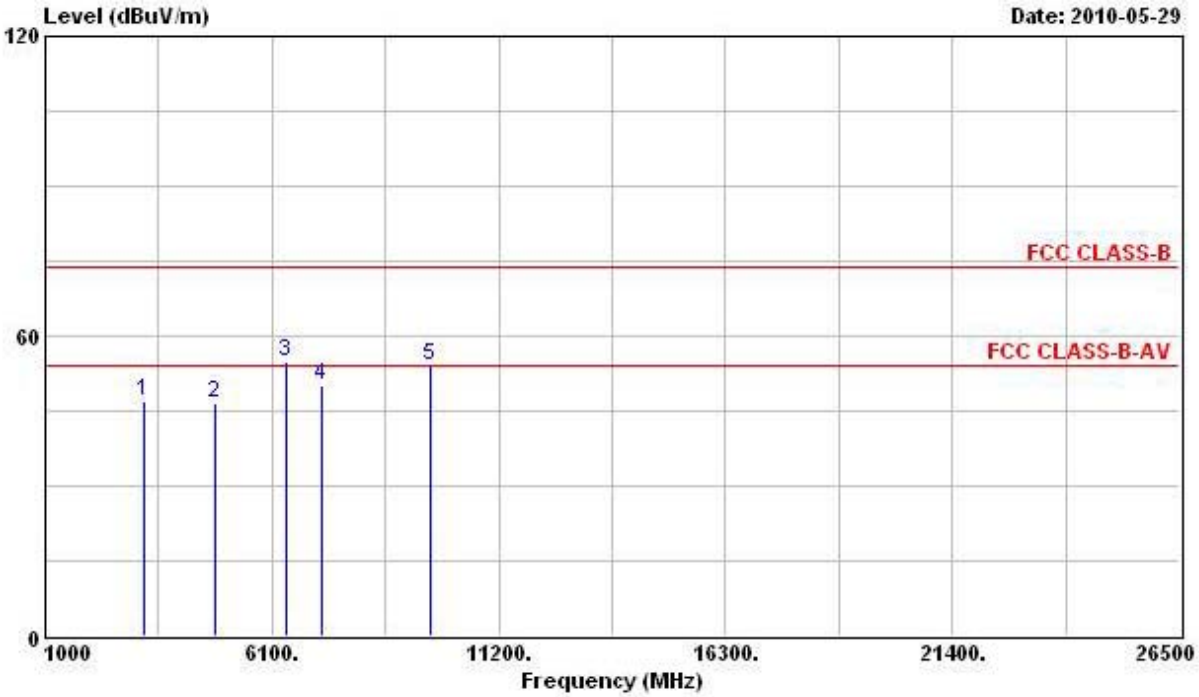


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	4924.000	53.05	-20.95	74.00	47.49	33.26	4.68	32.38	---	---	Peak
2 @	4924.000	45.07	-8.93	54.00	39.51	33.26	4.68	32.38	---	---	Average
3	7388.000	61.57	-12.43	74.00	52.29	35.87	5.65	32.24	---	---	Peak
4 @	7388.000	51.98	-2.02	54.00	42.70	35.87	5.65	32.24	---	---	Average
5	9848.000	55.11			42.33	38.79	6.38	32.38	---	---	Peak

Note: The item 5 is on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

Final Test Date	May 29, 2010	Test Site No.	03CH03-HY
Temperature	27.9℃	Humidity	56%
Test Engineer	Eddie	Configuration	802.11g Ch. 1

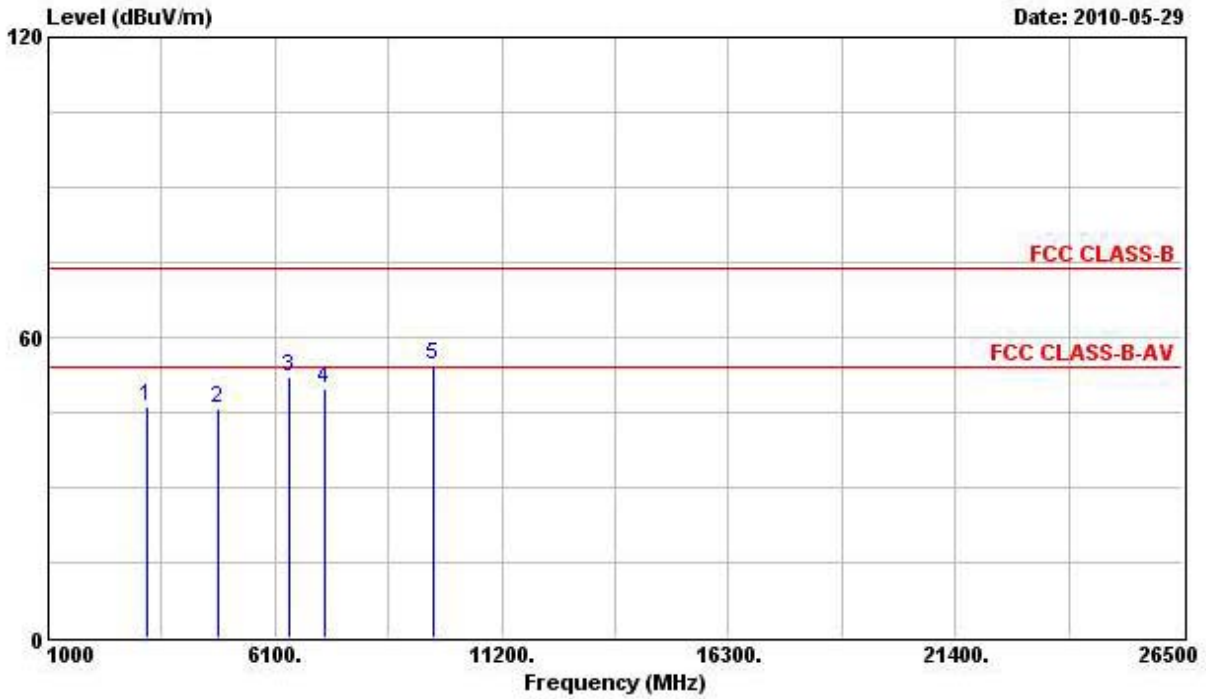
Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	3216.000	46.93			45.17	30.51	3.62	32.37	---	---	Peak
2 @	4824.000	46.64	-7.36	54.00	41.28	33.06	4.58	32.28	---	---	PK
3	6432.000	54.86			47.14	34.19	5.45	31.91	---	---	Peak
4	7236.000	50.19			41.64	35.53	5.63	32.61	---	---	Peak
5	9648.000	54.23			41.76	38.41	6.34	32.28	---	---	Peak

Note: The items 1 and 3~5 are on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

Vertical

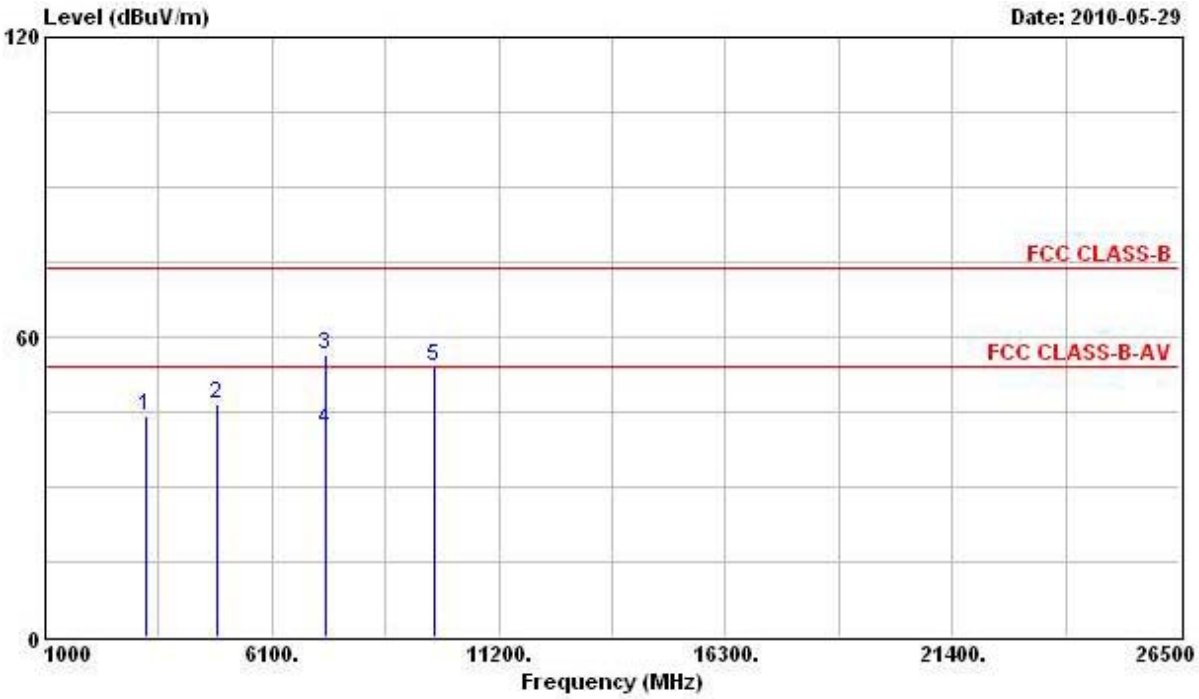


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	3216.000	46.16			44.40	30.51	3.62	32.37	---	---	Peak
2 @	4824.000	45.73	-8.27	54.00	40.38	33.06	4.58	32.28	---	---	PK
3	6432.000	51.93			44.20	34.19	5.45	31.91	---	---	Peak
4	7232.000	49.67			41.18	35.53	5.63	32.67	---	---	Peak
5	9648.000	54.52			42.04	38.41	6.34	32.28	---	---	Peak

Note: The items 1 and 3~5 are on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

Final Test Date	May 29, 2010	Test Site No.	03CH03-HY
Temperature	27.9℃	Humidity	56%
Test Engineer	Eddie	Configuration	802.11g Ch. 6

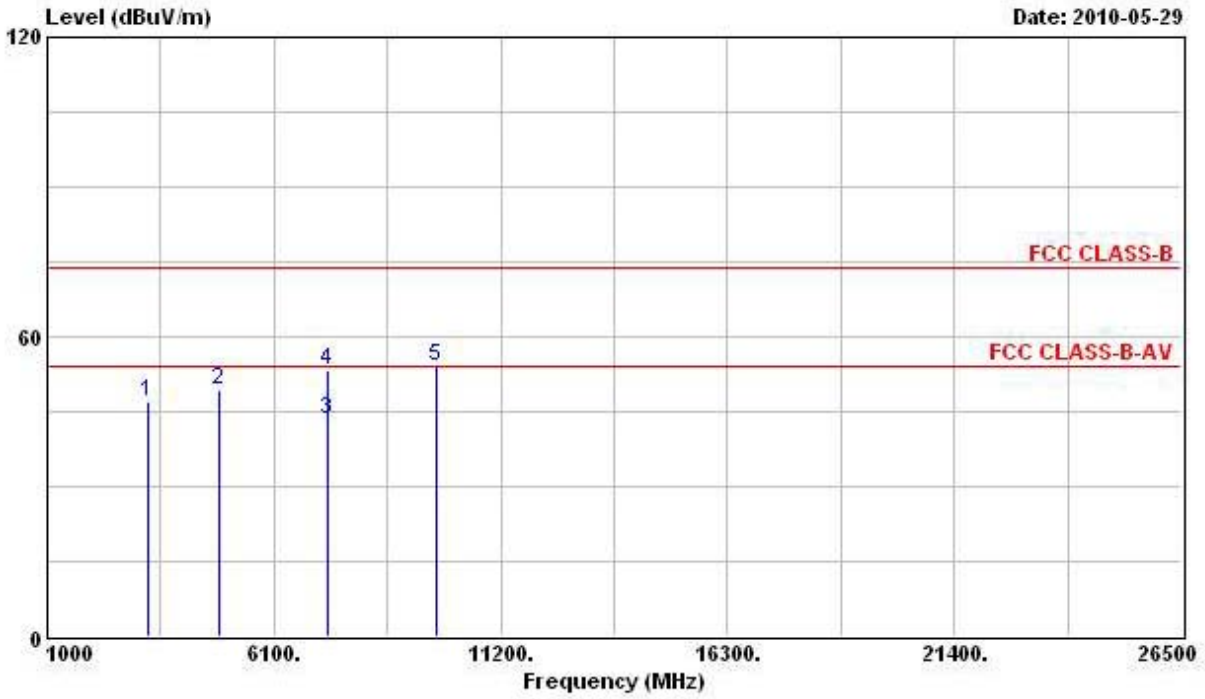
Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	3248.000	44.28			42.40	30.58	3.65	32.36	---	---	Peak
2	4876.000	46.72	-27.28	74.00	41.28	33.16	4.61	32.33	---	---	Peak
3	7311.000	56.53	-17.47	74.00	47.70	35.68	5.64	32.48	---	---	Peak
4	7311.000	41.30	-12.70	54.00	32.46	35.68	5.64	32.48	---	---	Average
5	9748.000	54.25			41.61	38.62	6.36	32.33	---	---	Peak

Note: The items 1 and 5 are on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

Vertical

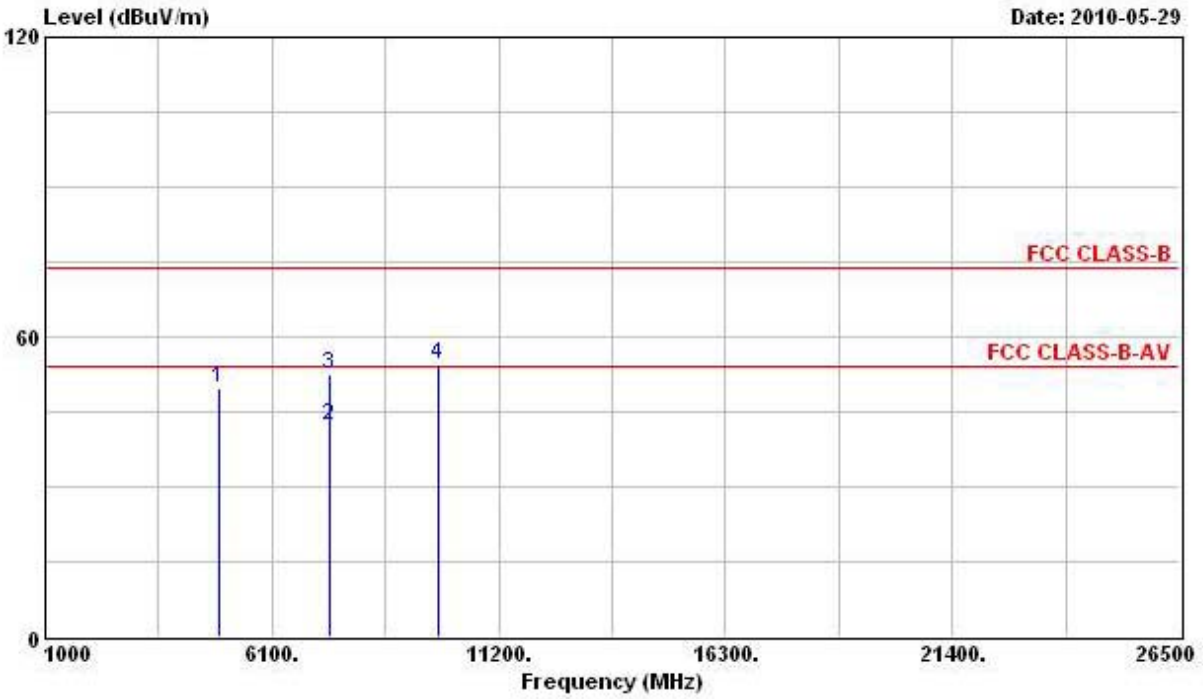


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	3248.000	46.91			45.04	30.58	3.65	32.36	---	---	Peak
2 @	4874.000	49.34	-4.66	54.00	43.90	33.16	4.61	32.33	---	---	PK
3	7308.000	43.44	-10.56	54.00	34.60	35.68	5.64	32.48	---	---	Average
4	7308.000	53.18	-20.82	74.00	44.35	35.68	5.64	32.48	---	---	Peak
5	9748.000	54.09			41.45	38.62	6.36	32.33	---	---	Peak

Note: The items 1 and 5 are on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

Final Test Date	May 29, 2010	Test Site No.	03CH03-HY
Temperature	27.9℃	Humidity	56%
Test Engineer	Eddie	Configuration	802.11g Ch. 11

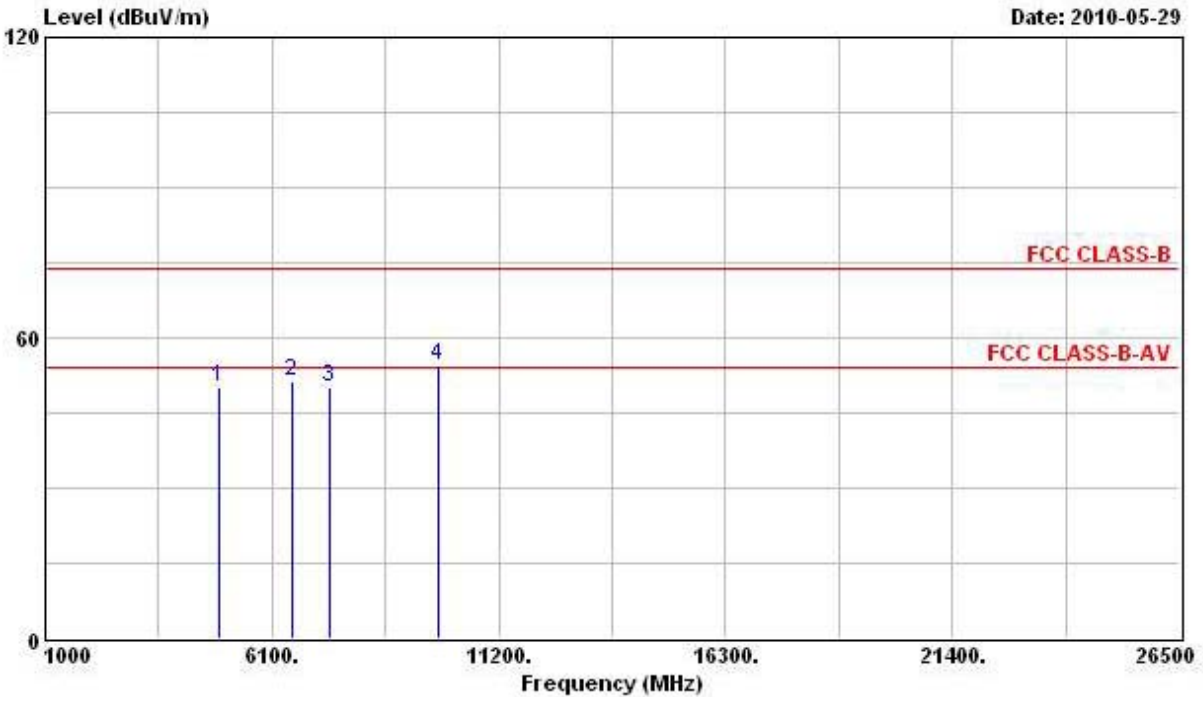
Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	4924.000	49.65	-4.35	54.00	44.09	33.26	4.68	32.38	---	---	PK
2	7386.000	42.43	-11.57	54.00	33.21	35.87	5.65	32.30	---	---	Average
3	7386.000	52.54	-21.46	74.00	43.32	35.87	5.65	32.30	---	---	Peak
4	9848.000	54.30			41.51	38.79	6.38	32.38	---	---	Peak

Note: The item 4 is on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	4924.000	49.94	-4.06	54.00	44.38	33.26	4.68	32.38	---	---	PK
2	6568.000	51.45			43.64	34.31	5.51	32.00	---	---	Peak
3 @	7386.000	50.27	-3.73	54.00	41.05	35.87	5.65	32.30	---	---	PK
4	9848.000	54.37			41.59	38.79	6.38	32.38	---	---	Peak

Note: The items 2 and 4 are on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

3.3 Band Edge and Fundamental Emissions Measurement

3.3.1 Limit

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/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

3.3.2 Measuring Instruments and Setting

Please refer to section 4 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	100 MHz
RB / VB (Emission in restricted band)	1MHz / 1MHz for Peak, 1 MHz / 10Hz for Average
RB / VB (Emission in non-restricted band)	1MHz / 1MHz for Peak

3.3.3 Test Procedures

1. The test procedure is the same as section 3.5.3; only the frequency range investigated is limited to 100MHz around band edges.
2. In case the emission is fail due to the used RB/VB is too wide, marker-delta method of FCC Public Notice DA00-705 will be followed.

3.3.4 Test Setup Layout

This test setup layout is the same as that shown in section 3.5.4.

3.3.5 Test Deviation

There is no deviation with the original standard.

3.3.6 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

3.3.7 Test Result of Band Edge and Fundamental Emissions

Final Test Date	May 28, 2010	**Test Site No.**	03CH03-HY
Temperature	27.9℃	**Humidity**	56%
Test Engineer	Eddie	**Configuration**	802.11a Ch. 149, 157, 165

Channel 149

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
2 @	5742.190	112.74			74.20	34.80	3.74	0.00	---	---	Peak
2 @	5740.430	101.83			63.29	34.80	3.74	0.00	---	---	Average

The item 2 is Fundamental Emissions.

Channel 157

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	5720.800	69.23	-14.31	83.54	30.73	34.80	3.70	0.00	---	---	Peak
2 @	5781.400	113.31			74.73	34.80	3.78	0.00	---	---	Peak
3	5867.800	69.30	-14.24	83.54	30.65	34.80	3.85	0.00	---	---	Peak
1	5723.800	55.90	-7.64	63.54	17.40	34.80	3.70	0.00	---	---	Average
2 @	5779.000	102.61			64.03	34.80	3.78	0.00	---	---	Average
3	5854.200	55.48	-8.06	63.54	16.83	34.80	3.85	0.00	---	---	Average

The item 2 is Fundamental Emission

Channel 165

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	5820.330	113.24			74.62	34.80	3.82	0.00	---	---	Peak
1 @	5822.220	102.50			63.88	34.80	3.82	0.00	---	---	Average

The item 2 is Fundamental Emissions.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Final Test Date	May 25, 2010	**Test Site No.**	03CH03-HY
Temperature	27.9℃	**Humidity**	56%
Test Engineer	Eddie	**Configuration**	802.11b Ch. 1, 6, 11

Channel 1

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2390.000	59.54	-14.46	74.00	28.82	28.13	2.58	0.00	---	---	Peak
2 @	2413.740	110.34			79.59	28.16	2.58	0.00	---	---	Peak
1 @	2390.000	47.20	-6.80	54.00	16.48	28.13	2.58	0.00	---	---	Average
2 @	2414.690	101.94			71.17	28.16	2.61	0.00	---	---	Average

The item 2 is Fundamental Emissions.

Channel 6

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	2438.820	107.40			76.58	28.22	2.61	0.00	---	---	Peak
1 @	2439.770	99.42			68.60	28.22	2.61	0.00	---	---	Average

The item 1 is Fundamental Emissions.

Channel 11

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	2459.340	110.02			79.15	28.24	2.63	0.00	---	---	Peak
2	2484.420	60.09	-13.91	74.00	29.19	28.27	2.63	0.00	---	---	Peak
1 @	2458.770	102.08			71.21	28.24	2.63	0.00	---	---	Average
2 @	2484.610	46.88	-7.12	54.00	15.98	28.27	2.63	0.00	---	---	Average

The item 1 is Fundamental Emissions.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Final Test Date	May 27, 2010	**Test Site No.**	03CH03-HY
Temperature	27.9℃	**Humidity**	56%
Test Engineer	Eddie	**Configuration**	802.11g Ch. 1, 6, 11

Channel 1

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	2390.000	64.29	-9.71	74.00	33.57	28.13	2.58	0.00	---	---	Peak
2 @	2417.540	105.13			74.36	28.16	2.61	0.00	---	---	Peak
1 @	2390.000	47.28	-6.72	54.00	16.56	28.13	2.58	0.00	---	---	Average
2 @	2419.060	94.72			63.95	28.16	2.61	0.00	---	---	Average

The item 2 is Fundamental Emissions.

Channel 6

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	2430.460	107.82			76.58	28.19	3.05	0.00	---	---	Peak
1 @	2432.170	97.07			65.83	28.19	3.05	0.00	---	---	Average

The item 1 is Fundamental Emissions.

Channel 11

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	2456.300	105.19			74.32	28.24	2.63	0.00	---	---	Peak
2 @	2485.180	64.43	-9.57	74.00	33.53	28.27	2.63	0.00	---	---	Peak
1 @	2454.970	93.97			63.10	28.24	2.63	0.00	---	---	Average
2	2483.500	43.56	-10.44	54.00	12.66	28.27	2.63	0.00	---	---	Average

The item 1 is Fundamental Emissions.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

3.4 Antenna Requirements

3.4.1 Limit

Except for special regulations, the Low-power Radio-frequency Devices must not be equipped with any jacket for installing an antenna with extension cable. 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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited.

3.4.2 Antenna Connector Construction

Please refer to section 2.2 in this test report; antenna connector complied with the requirements.

4 LIST OF MEASURING EQUIPMENTS

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMC Receiver	R&S	ESCS 30	100132	9kHz – 2.75GHz	Sep. 01, 2009	Conduction (CO01-HY)
LISN	MessTec	NNB-2/16Z	2001/004	9kHz – 30MHz	Jan. 19, 2010	Conduction (CO01-HY)
LISN (Support Unit)	MessTec	NNB-2/16Z	2001/009	9kHz – 30MHz	Mar. 01, 2010	Conduction (CO01-HY)
EMI Filter	LINDGREN	LRE-2060	1004	< 450Hz	N/A	Conduction (CO01-HY)
EMI Filter	LINDGREN	N6006	201052	0 – 60Hz	N/A	Conduction (CO01-HY)
RF Cable-CON	HUBER+SUHNER	RG213/U	07611832010001	9kHz – 30MHz	May 05, 2010	Conduction (CO01-HY)
Isolation Transformer	Erika Fiedler OHG	D-65396 Walluf	58	45MHz-2.15GHz	N/A	Conduction (CO01-HY)

Note: Calibration Interval of instruments listed above is one year.

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	30 MHz - 1 GHz 3m	Jun. 07, 2009	Radiation (03CH03-HY)
Amplifier	SCHAFFNER	COA9231A	18667	9 kHz - 2 GHz	Jan. 24, 2010	Radiation (03CH03-HY)
Amplifier	Agilent	8449B	3008A02120	1 GHz - 26.5 GHz	Jul. 21, 2009	Radiation (03CH01-HY)
Spectrum Analyzer	R&S	FSP40	100004	9 kHz - 40 GHz	Oct. 03, 2009	Radiation (03CH03-HY)
Bilog Antenna	SCHAFFNER	CBL 6112D	22237	30 MHz – 1 GHz	Sep. 26, 2009	Radiation (03CH03-HY)
Horn Antenna	EMCO	3115	6741	1GHz ~ 18GHz	May 19, 2009 May 20, 2010	Radiation (03CH03-HY)
Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170154	15 GHz - 40 GHz	Jan. 11, 2010	Radiation (03CH03-HY)
RF Cable-R03m	Jye Bao	RG142	CB021	30 MHz - 1 GHz	Jan. 05, 2010	Radiation (03CH03-HY)
RF Cable-HIGH	SUHNER	SUCOFLEX 106	03CH03-HY	1 GHz - 40 GHz	Jan. 05, 2010	Radiation (03CH03-HY)
Turn Table	HD	DS 420	420/650/00	0 – 360 degree	N/A	Radiation (03CH03-HY)
Antenna Mast	HD	MA 240	240/560/00	1 m - 4 m	N/A	Radiation (03CH03-HY)

Note: Calibration Interval of instruments listed above is one year.

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Loop Antenna	R&S	HFH2-Z2	860004/001	9 kHz - 30 MHz	Jul. 28, 2008*	Radiation (03CH03-HY)

Note: Calibration Interval of instruments listed above is two year.

5 TEST LOCATION

SHIJR	ADD	:	6Fl., No. 106, Sec. 1, Shintai 5th Rd., Shijr City, Taipei, Taiwan 221, R.O.C.
	TEL	:	886-2-2696-2468
	FAX	:	886-2-2696-2255
HWA YA	ADD	:	No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.
	TEL	:	886-3-327-3456
	FAX	:	886-3-318-0055
LINKOU	ADD	:	No. 30-2, Dingfu Tsuen, Linkou Shiang, Taipei, Taiwan 244, R.O.C
	TEL	:	886-2-2601-1640
	FAX	:	886-2-2601-1695
DUNGHU	ADD	:	No. 3, Lane 238, Kangle St., Neihu Chiu, Taipei, Taiwan 114, R.O.C.
	TEL	:	886-2-2631-4739
	FAX	:	886-2-2631-9740
JUNGHE	ADD	:	7Fl., No. 758, Jungjeng Rd., Junghe City, Taipei, Taiwan 235, R.O.C.
	TEL	:	886-2-8227-2020
	FAX	:	886-2-8227-2626
NEIHU	ADD	:	4Fl., No. 339, Hsin Hu 2nd Rd., Taipei 114, Taiwan, R.O.C.
	TEL	:	886-2-2794-8886
	FAX	:	886-2-2794-9777
JHUBEI	ADD	:	No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C.
	TEL	:	886-3-656-9065
	FAX	:	886-3-656-9085

6 TAF CERTIFICATE OF ACCREDITATION

Certificate No. : L1190-100107

財團法人全國認證基金會
Taiwan Accreditation Foundation

Certificate of Accreditation

This is to certify that

Sporton International Inc.
EMC & Wireless Communications Laboratory
No.52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.

is accredited in respect of laboratory

Accreditation Criteria	:	ISO/IEC 17025:2005
Accreditation Number	:	1190
Originally Accredited	:	December 15, 2003
Effective Period	:	January 10, 2010 to January 09, 2013
Accredited Scope	:	Testing Field, see described in the Appendix
Specific Accreditation Program	:	Accreditation Program for Designated Testing Laboratory for Commodities Inspection Accreditation Program for Telecommunication Equipment Testing Laboratory Accreditation Program for BSMI Mutual Recognition Arrangment with Foreign Authorities

Jay-San Chen
President, Taiwan Accreditation Foundation
Date : January 07, 2010

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