



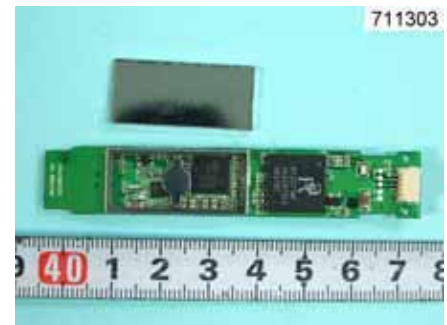
SPORTON International Inc.

No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, TaoYuan Hsien, Taiwan, R.O.C.
Ph: 886-3-327-3456 / FAX: 886-3-327-0973 / www.sporton.com.tw

FCC RADIO TEST REPORT

Applicant's company	LITE-ON Technology Corp
Applicant Address	4F, No.90, Chien 1Rd, Chung-Ho 235, Taipei Hsien, Taiwan, R.O.C.
FCC ID	PPQWN4300R
Manufacturer's company	DONG GUAN G-COM COMPUTER CO., LTD
Manufacturer Address	1 ST Row Yin Shan Rd., Yin Hwu Industrial Area, Qingxi Town, Dong Guan City, Guang Dong, China

Product Name	802.11b/g USB Adapter
Brand Name	LITE-ON
Model Name	WN4300R
Test Rule	47 CFR FCC Part 15 Subpart C § 15.247
Test Freq. Range	2400 ~ 2483.5MHz
Received Date	Jan. 15, 2007
Final Test Date	Jan. 26, 2007
Submission Type	Original Equipment



Statement

Test result included is only for the 802.11b/g part 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.

NVLAQ®

Lab Code: 200079-0



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History of This Test Report

Original Issue Date: Jan. 29, 2007

Report No.: FR711303

No additional attachment.

Additional attachment were issued as following record:

Attachment No.	Issue Date	Description

1. CERTIFICATE OF COMPLIANCE

Product Name : 802.11b/g USB Adapter
Brand Name : LITE-ON
Model Name : WN4300R
Applicant : LITE-ON Technology Corp
Test Rule Part(s) : 47 CFR FCC Part 15 Subpart C § 15.247

Sporton International as requested by the applicant to evaluate the EMC performance of the product sample received on Jan. 18, 2007 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.



Roger Sheng / Manager

SPORTON INTERNATIONAL INC.

Reviewed Date: Jan. 31, 2007

2. SUMMARY OF THE TEST RESULT

Applied Standard: 47 CFR FCC Part 15 Subpart C				
Part	Rule Section	Description of Test	Result	Under Limit
4.1	15.207	AC Power Line Conducted Emissions	Complies	3.04 dB
4.2	15.247(b)(3)	Maximum Peak Conducted Output Power	Complies	11.03 dB
4.3	15.247(e)	Power Spectral Density	Complies	16.09 dB
4.4	15.247(a)(2)	6dB Spectrum Bandwidth	Complies	-
4.5	15.247(d)	Radiated Emissions	Complies	3.60 dB
4.6	15.247(d)	Band Edge Emissions	Complies	3.21 dB
4.7	15.203	Antenna Requirements	Complies	-

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	±8.5×10 ⁻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°C	Confidence levels of 95%
Humidity	±3.2%	Confidence levels of 95%
DC / AC Power Source	±1.4%	Confidence levels of 95%

3. GENERAL INFORMATION

3.1. Product Details





EUT is a USB Adapter with IEEE 802.11b/g radio functions. Only the radio detail of WLAN is shown in the table below. 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 802.11g
Data Modulation	DSSS (BPSK / QPSK / 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
Channel Number	11
Channel Band Width (99%)	11b: 15.08 MHz ; 11g: 16.44 MHz
Conducted Output Power	11b: 18.97 dBm ; 11g: 16.96 dBm

3.2. Accessories





N/A

3.3. Antenna composition

Ant.				
Antenna Type	PIFA (INTERNAL)	Dipole (W/O cable)-XCC	Dipole (With 1m cable)-XCD	Dipole (With 1m cable)
Manufacturer	Wistron	Wistron	Wistron	Joymax
Connector	UFL	Reversed-SMA	Reversed-SMA	Reversed-SMA
Ant Gain	3.00 dBi	2.00 dBi	2.00 dBi	1.95 dBi
Configuration				

The EUT could be configured with two different antennas. The combinations of antennas are listed above.

3.4. Internal cable for Dipole Antenna

Extended cable				
	26cm-1.37Ø	26cm-1.13Ø	9.5cm-1.37Ø	9.5cm-1.13Ø

The internal cables are used to connect the EUT to the antenna port on bracket. Different cables were used.

3.5. Table for Carrier Frequencies

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		

3.6. 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 all the possible configurations 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
AC Power Line Conducted Emissions	Normal Mode	11 Mbps	6
Maximum Peak Conducted Output Power Power Spectral Density 6dB Spectrum Bandwidth	11b/CCK	11 Mbps	1/6/11
	11g/BPSK	6 Mbps	1/6/11
Radiated Emissions 9kHz~1GHz	11g/BPSK	6 Mbps	6
Radiated Emissions 1GHz~10 th Harmonic	11b/CCK	11 Mbps	1/6/11
	11g/BPSK	6 Mbps	1/6/11
Band Edge Emissions	11b/CCK	11 Mbps	1/11
	11g/BPSK	6 Mbps	1/11

For AC Power Line Conducted Emissions test, the following modes were tested:

Mode 1: Normal Mode (PC-Arches)

Mode 2: Normal Mode (PC-ID07)

For Radiated Emissions test, the following modes were pre-tested:

Mode 1: PIFA (INTERNAL- Wistron)+PIFA Antenna Mode

Mode 2: Dipole (W/O cable- Wistron)+PIFA Antenna Mode

Mode 3: Dipole (With 1m cable- Wistron)+PIFA Antenna Mode

Mode 4: Dipole (With 1m cable- Joymax)+PIFA Antenna Mode

Radiated Emissions below 1GHz: Because "mode 1" and "mode 3" generated the worst test result, it was reported as final data.

Radiated Emissions above 1GHz and Band Edge Emissions: Because "mode 1" and "mode 2" generated the worst test result, it was reported as final data.

3.7. Table for Testing Locations

Test Site No.	Site Category	Location	FCC Reg. No.	IC File No.	VCCI Reg. No
OS05-LK	OATS	Lin Kou	93596	IC 46405-4087	-
CO04-HY	Conduction	Hwa Ya	101377	IC 46405-4088	-
TH01-HY	OVEN Room	Hwa Ya	-	-	-

Open Area Test Site (OATS); Semi Anechoic Chamber (SAC); Fully Anechoic Chamber (FAC).

Please refer section 6 for Test Site Address.

3.8. Table for Supporting Units

Support Unit	Brand	Model	FCC ID
PC	Arches	Provide by Customer	
PC	ID07		
Monitor	ViewSonic	VCDTS2153-3P	DoC
Mouse (PS/2)	LOGITECH	M-S34	DZL211029
iPod	Apple	A1051	R33057
MIC + Headset	J-S	CD-87MV	DoC
MIC + Headset	ERGOTECH	ET-E241	DoC
Keyboard (PS/2)	IBM	SK-8811	DoC
Walk man	Panasonic	RQ-L8LT	DoC
Keyboard	HP	SK-8811	DoC
Mouse	LOGITECH	KB-0133	DoC

3.9. Table for Parameters of Test Software Setting

During testing, Channel & Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

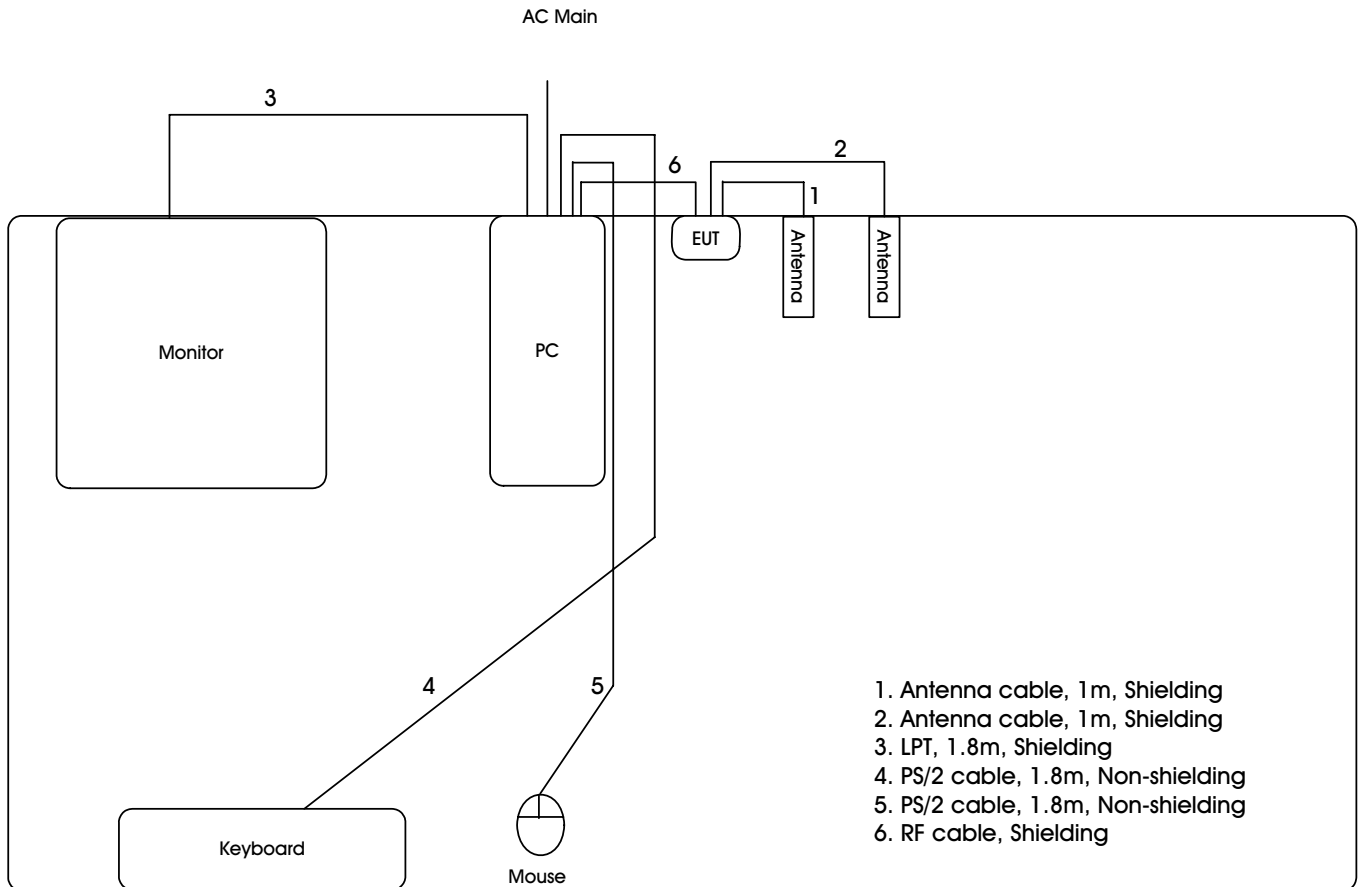
Power Parameters of IEEE 802.11b/g

Test Software Version	RT2571W		
Frequency	2412 MHz	2437 MHz	2462 MHz
IEEE 802.11b	F	F	E
IEEE 802.11g	F	F	E

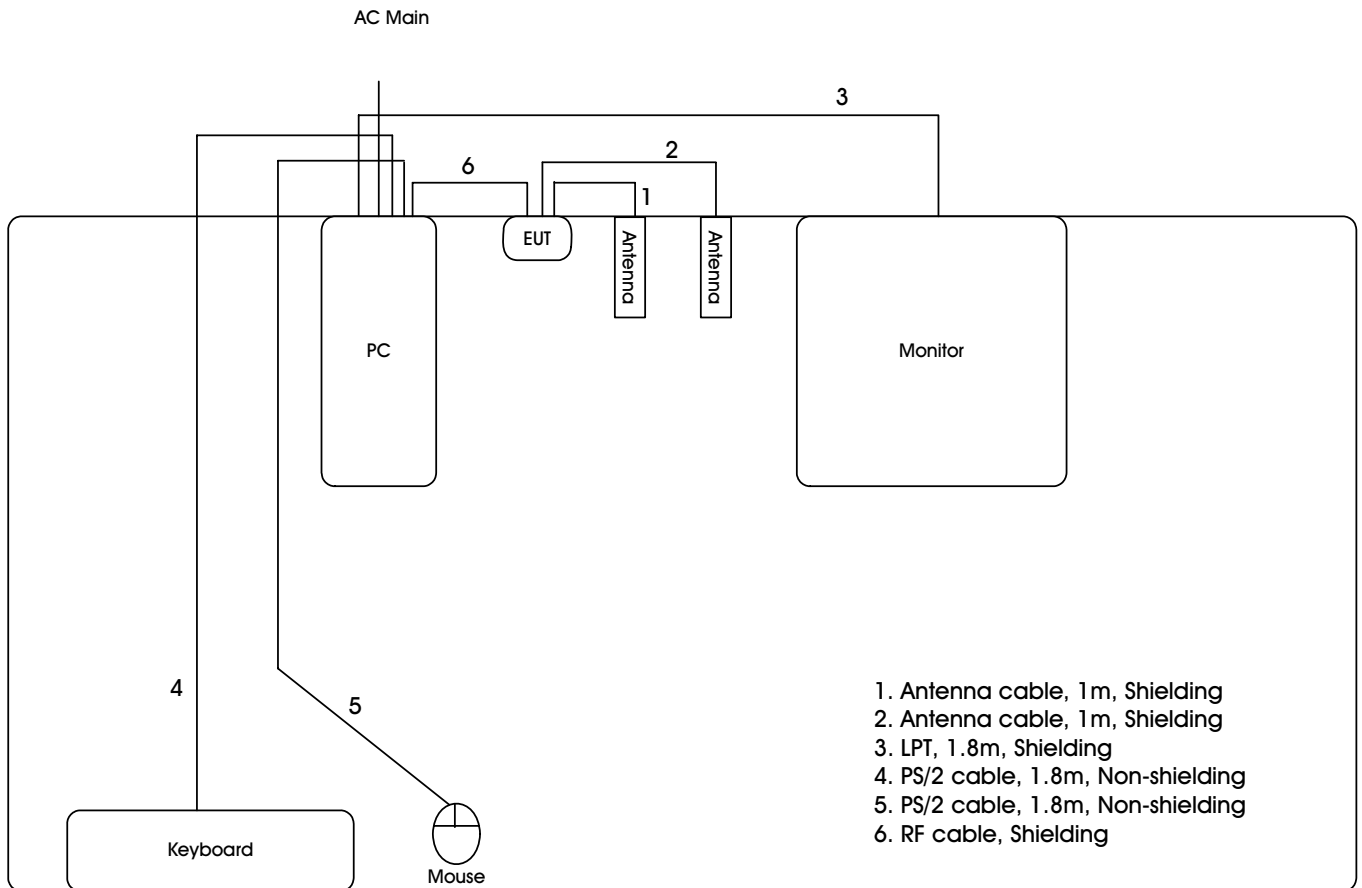
3.10. Test Configurations

3.10.1. Radiation Emissions Test Configuration

Below 1GHz



Above 1GHz



4. TEST RESULT

4.1. AC Power Line Conducted Emissions Measurement

4.1.1. 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.

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

4.1.2. Measuring Instruments and Setting

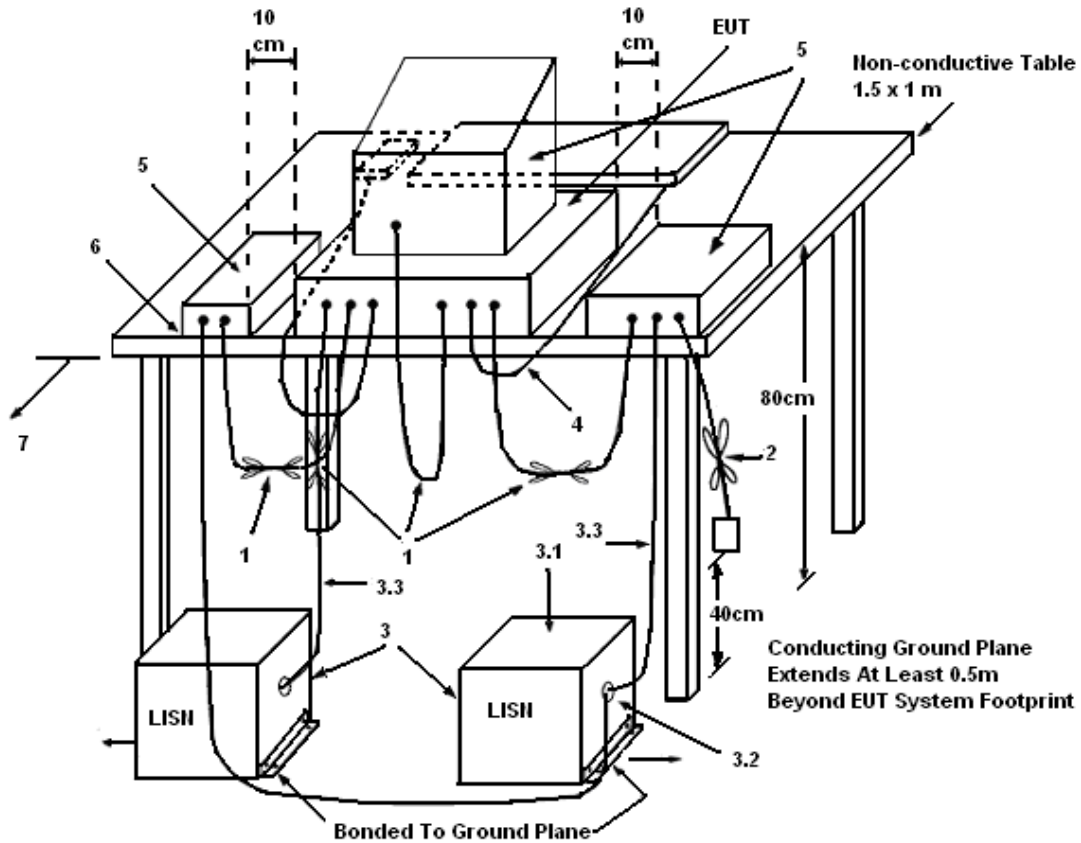
Please refer to section 5 of equipments list in this report. The following table is the setting of the receiver.

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

4.1.3. Test Procedures

1. 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.
2. Connect EUT or host of EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connected to the other LISNs. The LISN should provide 50uH/50ohms coupling impedance.
4. The frequency range from 150 KHz to 30 MHz was searched.
5. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. The measurement has to be done between each power line and ground at the power terminal.

4.1.4. 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 50Ω . 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.

4.1.5. Test Deviation

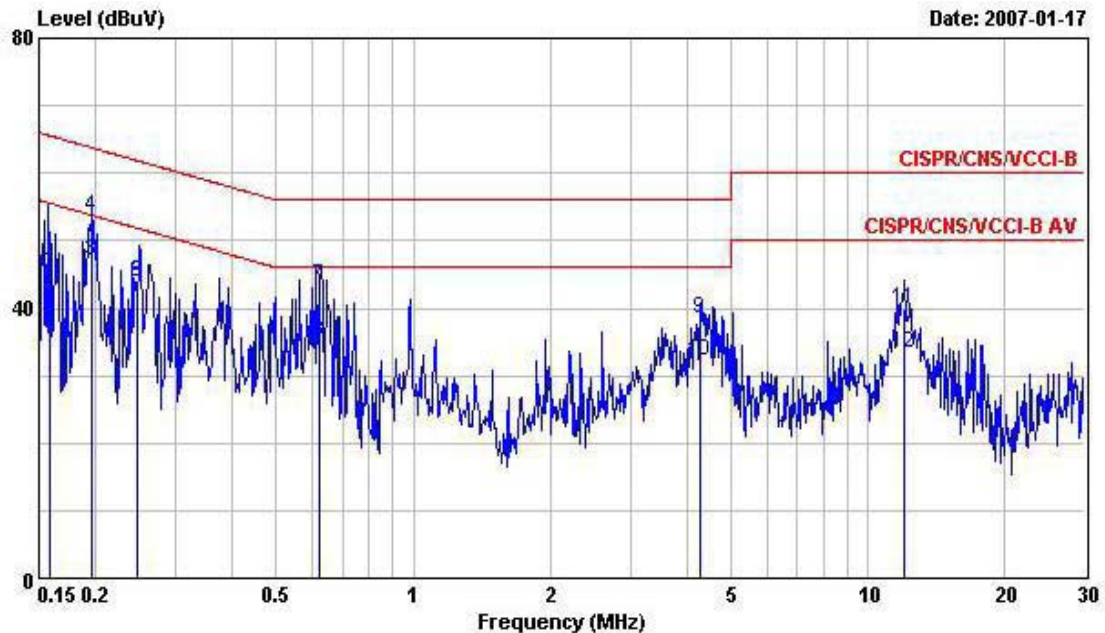
There is no deviation with the original standard.

4.1.6. EUT Operation during Test

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

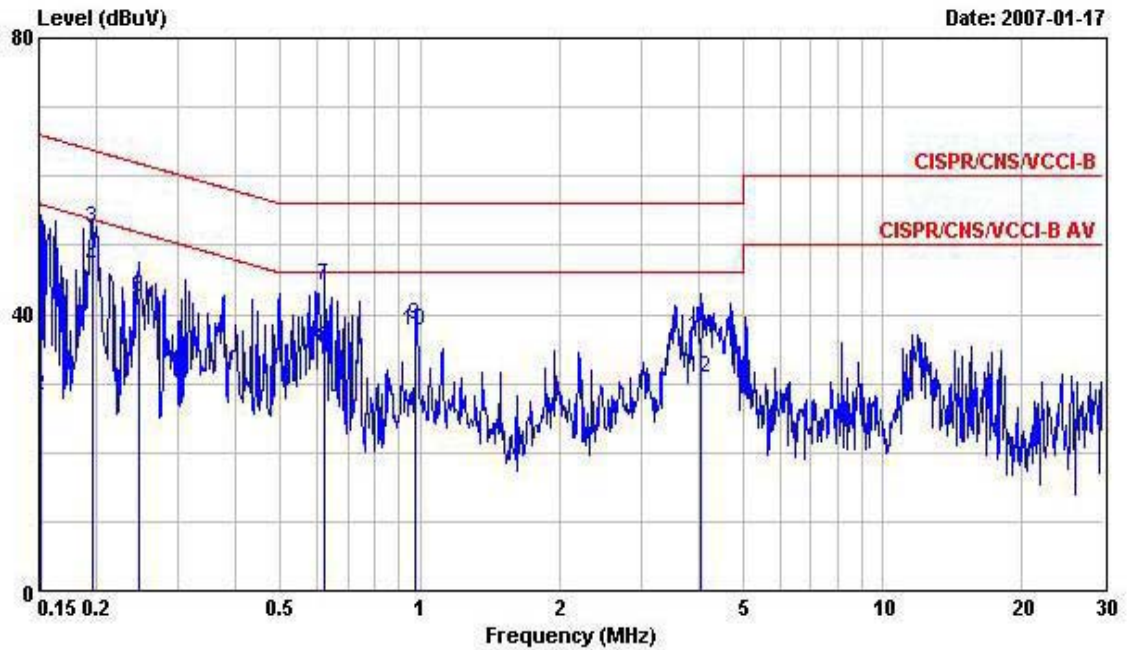
4.1.7. Results of AC Power Line Conducted Emissions Measurement

Temperature	28°C	Humidity	44%
Test Engineer	Ted Chiu	Phase	Line
Configuration	Mode 1		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.1590550	35.17	-20.34	55.51	34.71	0.10	0.36	Average
2	0.1590550	45.06	-20.45	65.51	44.60	0.10	0.36	QP
3	0.1965370	46.94	-6.82	53.76	46.63	0.10	0.21	Average
4	0.1965370	53.50	-10.26	63.76	53.19	0.10	0.21	QP
5	0.2469140	43.76	-18.10	61.86	43.46	0.10	0.20	QP
6	0.2469140	42.83	-9.03	51.86	42.53	0.10	0.20	Average
7	0.6203110	43.20	-12.80	56.00	43.00	0.10	0.10	QP
8	0.6203110	35.16	-10.84	46.00	34.96	0.10	0.10	Average
9	4.290	38.42	-17.58	56.00	38.01	0.11	0.30	QP
10	4.290	32.19	-13.81	46.00	31.78	0.11	0.30	Average
11	12.060	39.78	-20.22	60.00	38.95	0.38	0.45	QP
12	12.060	33.40	-16.60	50.00	32.57	0.38	0.45	Average

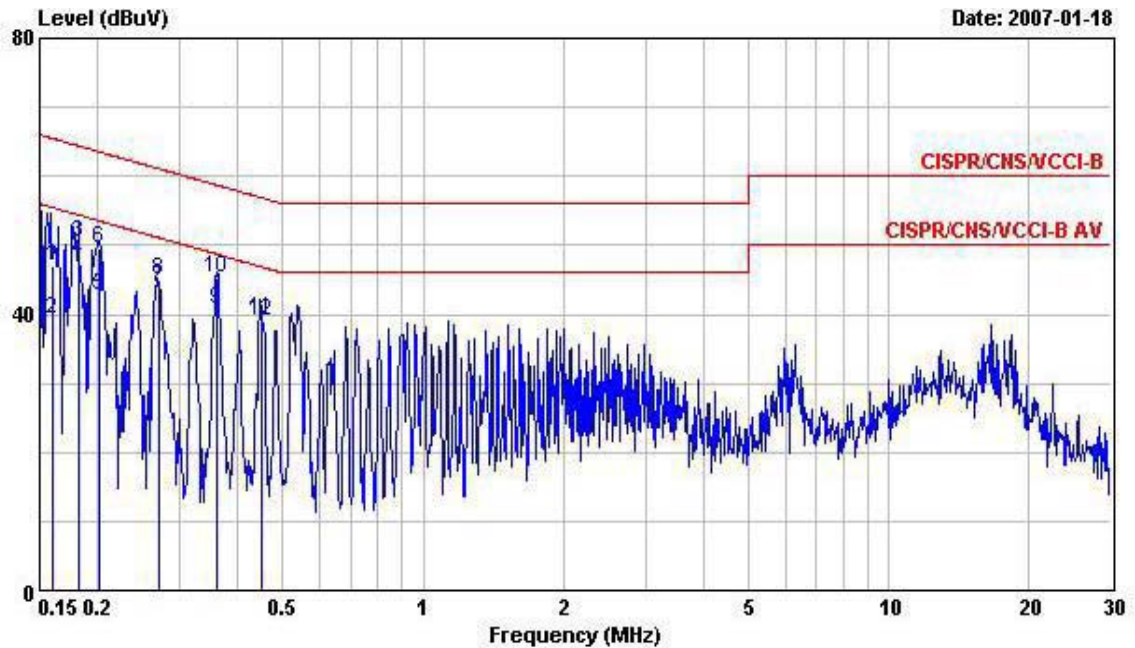
Temperature	28°C	Humidity	44%
Test Engineer	Ted Chiu	Phase	Neutral
Configuration	Mode 1		



Note:

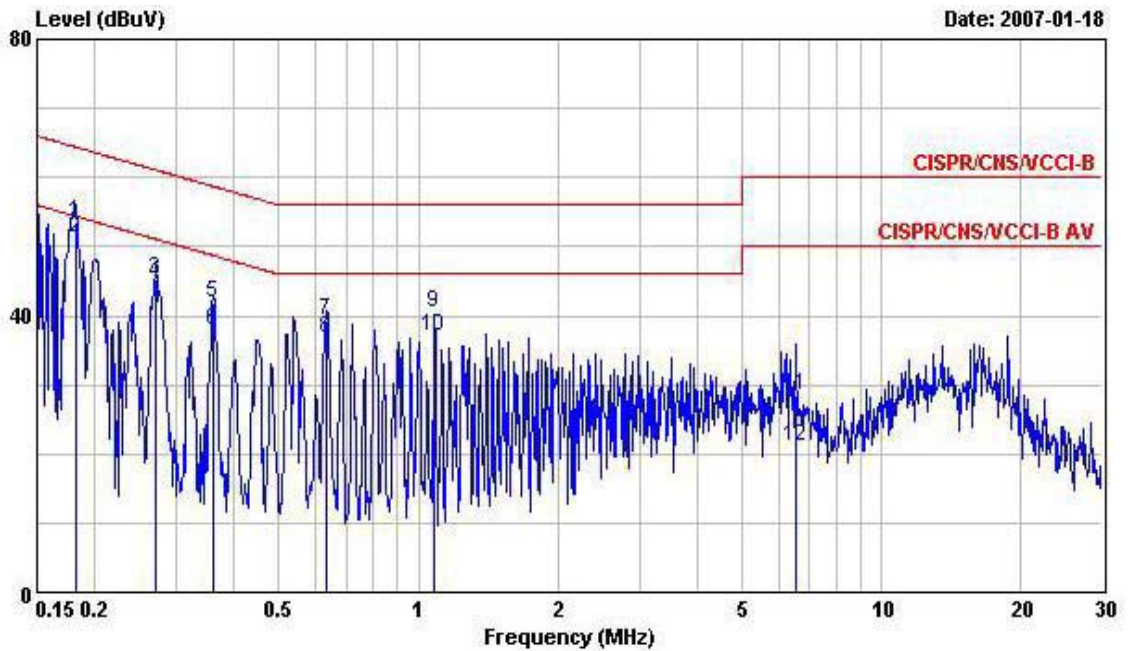
Level = Read Level + LISN Factor + Cable Loss.

Temperature	28°C	Humidity	44%
Test Engineer	Ted Chiu	Phase	Line
Configuration	Mode 2		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.1596420	46.96	-18.52	65.48	46.50	0.10	0.36	QP
2	0.1596420	39.19	-16.29	55.48	38.73	0.10	0.36	Average
3	0.1813120	50.45	-13.98	64.43	50.08	0.10	0.27	QP
4	0.1813120	47.79	-6.64	54.43	47.42	0.10	0.27	Average
5	0.2009660	42.69	-10.88	53.57	42.39	0.10	0.20	Average
6	0.2009660	49.60	-13.97	63.57	49.30	0.10	0.20	QP
7	0.2712110	43.88	-7.20	51.08	43.63	0.10	0.15	Average
8	0.2712110	44.84	-16.24	61.08	44.59	0.10	0.15	QP
9	0.3601820	40.73	-7.99	48.72	40.53	0.10	0.10	Average
10	0.3601820	45.20	-13.52	58.72	45.00	0.10	0.10	QP
11	0.4496900	39.19	-17.69	56.88	38.89	0.10	0.20	QP
12	0.4496900	39.13	-7.75	46.88	38.83	0.10	0.20	Average

Temperature	28°C	Humidity	44%
Test Engineer	Ted Chiu	Phase	Neutral
Configuration	Mode 2		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.1815220	53.45	-10.97	64.42	53.08	0.10	0.27	QP
2	@0.1815220	51.38	-3.04	54.42	51.01	0.10	0.27	Average
3	0.2715230	45.14	-15.93	61.07	44.89	0.10	0.15	QP
4	0.2715230	44.57	-6.50	51.07	44.32	0.10	0.15	Average
5	0.3614620	41.76	-16.93	58.69	41.56	0.10	0.10	QP
6	0.3614620	37.94	-10.75	48.69	37.74	0.10	0.10	Average
7	0.6338280	39.25	-16.75	56.00	39.05	0.10	0.10	QP
8	0.6338280	36.71	-9.29	46.00	36.51	0.10	0.10	Average
9	1.082	40.53	-15.47	56.00	40.23	0.10	0.20	QP
10	1.082	37.00	-9.00	46.00	36.70	0.10	0.20	Average
11	6.520	28.40	-31.60	60.00	27.81	0.25	0.34	QP
12	6.520	21.10	-28.90	50.00	20.51	0.25	0.34	Average

Note:

Level = Read Level + LISN Factor + Cable Loss.

4.2. Maximum Peak Output Power Measurement

4.2.1. Limit

For systems using digital modulation in the 2400-2483.5MHz, the limit for peak output power is 30dBm. The limited has to be reduced by the amount in dB that the gain of the antenna exceed 6dBi. In case of point-to-point operation, the limit has to be reduced by 1dB for every 3dB that the directional gain of the antenna exceeds 6dBi.

4.2.2. Measuring Instruments and Setting

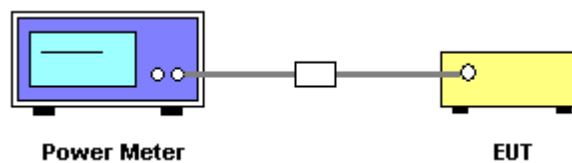
Please refer to section 5 of equipments list in this report. The following table is the setting of the power meter.

Power Meter Parameter	Setting
Filter No.	Auto
Measurement time	0.135 s ~ 26 s
Used Peak Sensor	NRV-Z32 (model 04)

4.2.3. Test Procedures

1. The transmitter output (antenna port) was connected to the power meter.
2. Turn on the EUT and power meter and then record the peak power value.
3. Repeat above procedures on all channels needed to be tested.

4.2.4. Test Setup Layout



4.2.5. Test Deviation

There is no deviation with the original standard.

4.2.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.



4.2.7. Test Result of Maximum Peak Output Power

Temperature	26°C	Humidity	55%
Test Engineer	Sam Lee	Configurations	802.11b/g

Configuration IEEE 802.11b

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
1	2412 MHz	18.89	30.00	Complies
6	2437 MHz	18.97	30.00	Complies
11	2462 MHz	18.42	30.00	Complies

Configuration IEEE 802.11g

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
1	2412 MHz	16.96	30.00	Complies
6	2437 MHz	16.89	30.00	Complies
11	2462 MHz	16.26	30.00	Complies

4.3. Power Spectral Density Measurement

4.3.1. Limit

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

4.3.2. Measuring Instruments and Setting

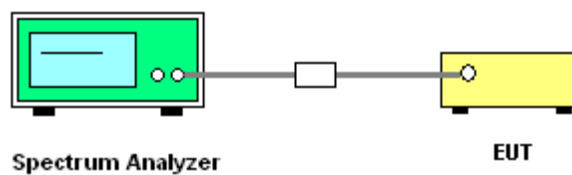
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	1.5MHz
RB	3 kHz
VB	30 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	500s

4.3.3. Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyser.
2. Set RBW of spectrum analyzer to 3kHz and VBW to 30kHz. Set Detector to Peak, Trace to Max Hold.
3. Mark the frequency with maximum peak power as the center of the display of the spectrum.
4. Set the span to 1.5MHz and the sweep time to 500s and record the maximum peak value.

4.3.4. Test Setup Layout



4.3.5. Test Deviation

There is no deviation with the original standard.

4.3.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.3.7. Test Result of Power Spectral Density

Temperature	26°C	Humidity	55%
Test Engineer	Sam Lee	Configurations	802.11b/g

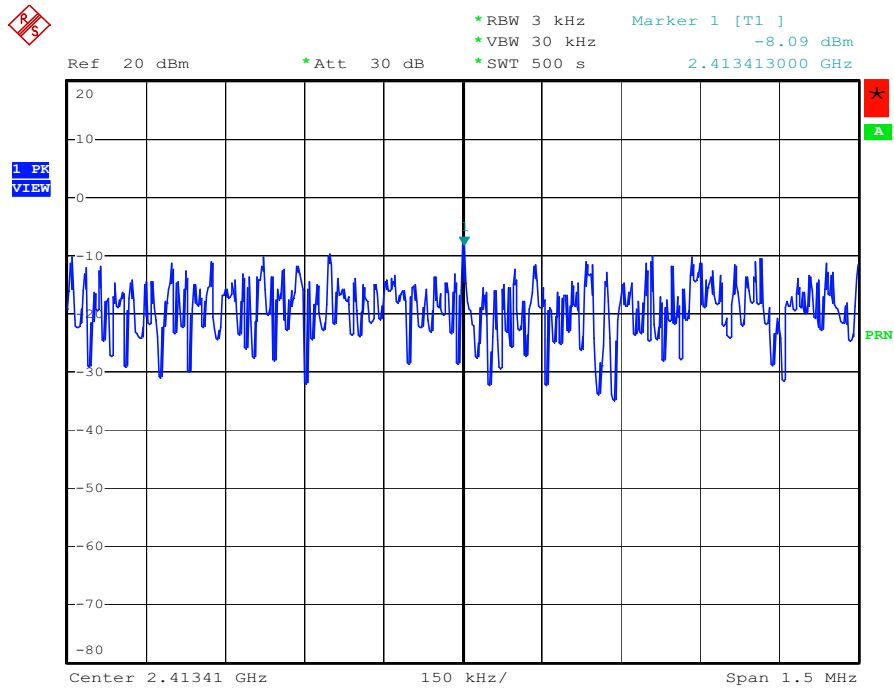
Configuration IEEE 802.11b

Channel	Frequency	Power Density (dBm)	Max. Limit (dBm)	Result
1	2412 MHz	-8.09	8.00	Complies
6	2437 MHz	-8.09	8.00	Complies
11	2462 MHz	-8.65	8.00	Complies

Configuration IEEE 802.11g

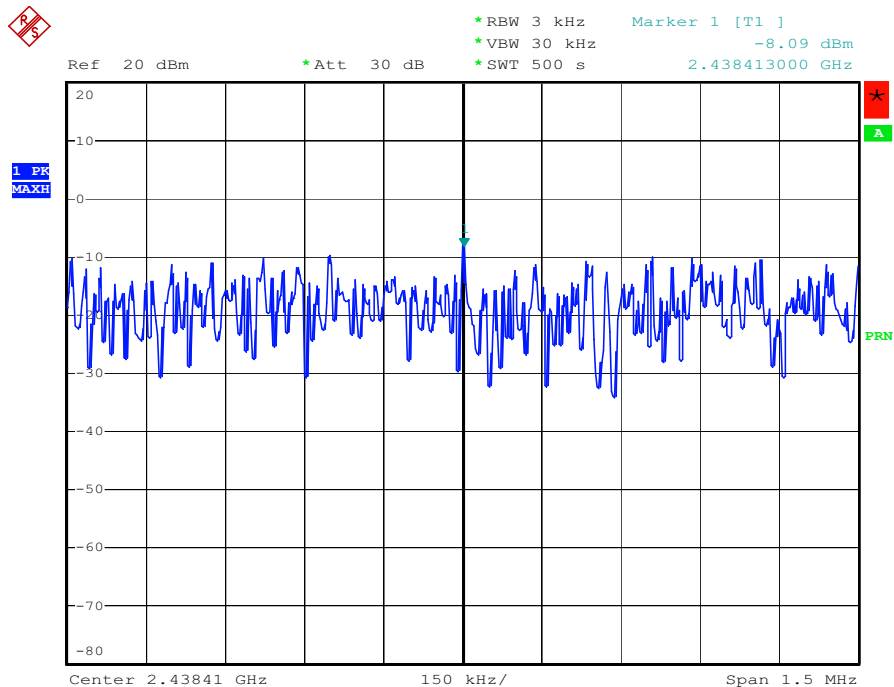
Channel	Frequency	Power Density (dBm)	Max. Limit (dBm)	Result
1	2412 MHz	-16.68	8.00	Complies
6	2437 MHz	-16.40	8.00	Complies
11	2462 MHz	-16.89	8.00	Complies

Power Density Plot on Configuration IEEE 802.11b / 2412 MHz



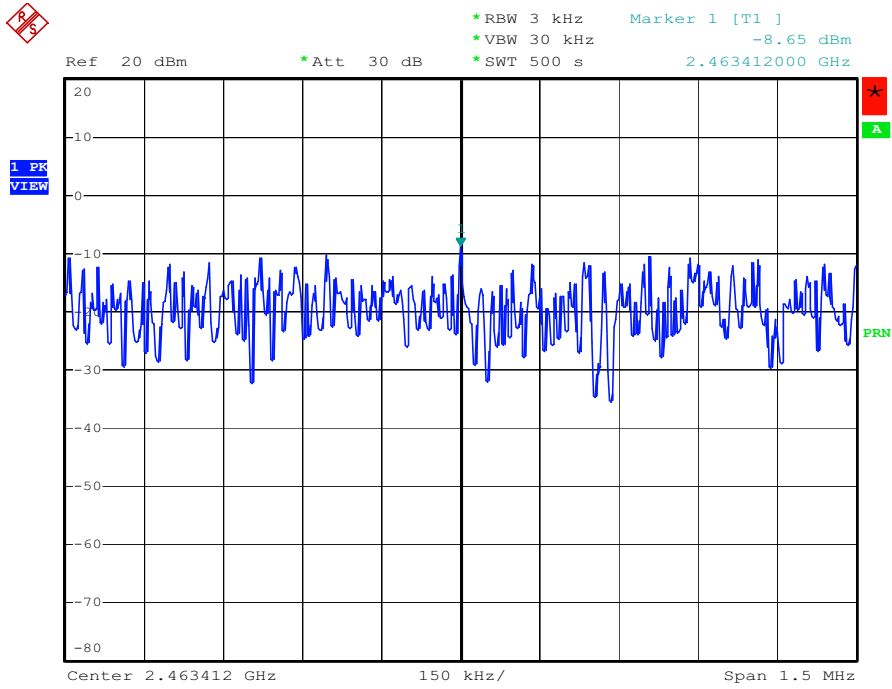
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Power Density Plot on Configuration IEEE 802.11b / 2437 MHz



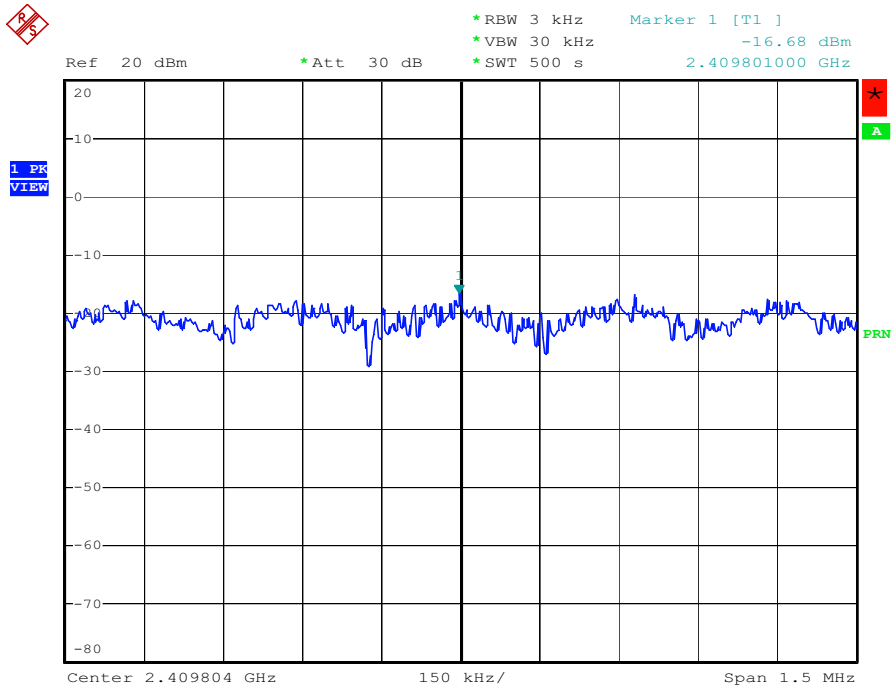
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Power Density Plot on Configuration IEEE 802.11b / 2462 MHz



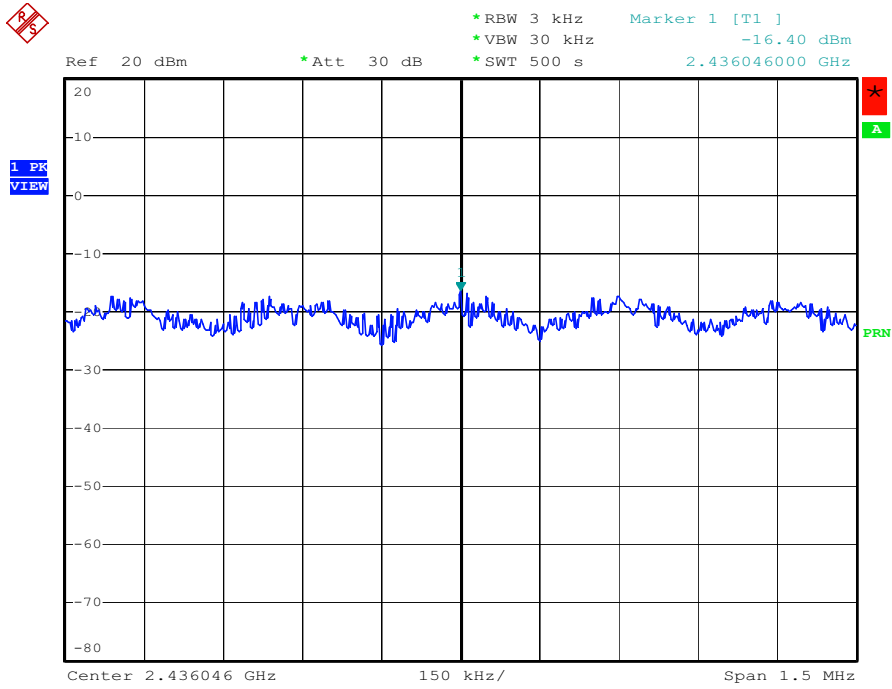
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Power Density Plot on Configuration IEEE 802.11g / 2412 MHz



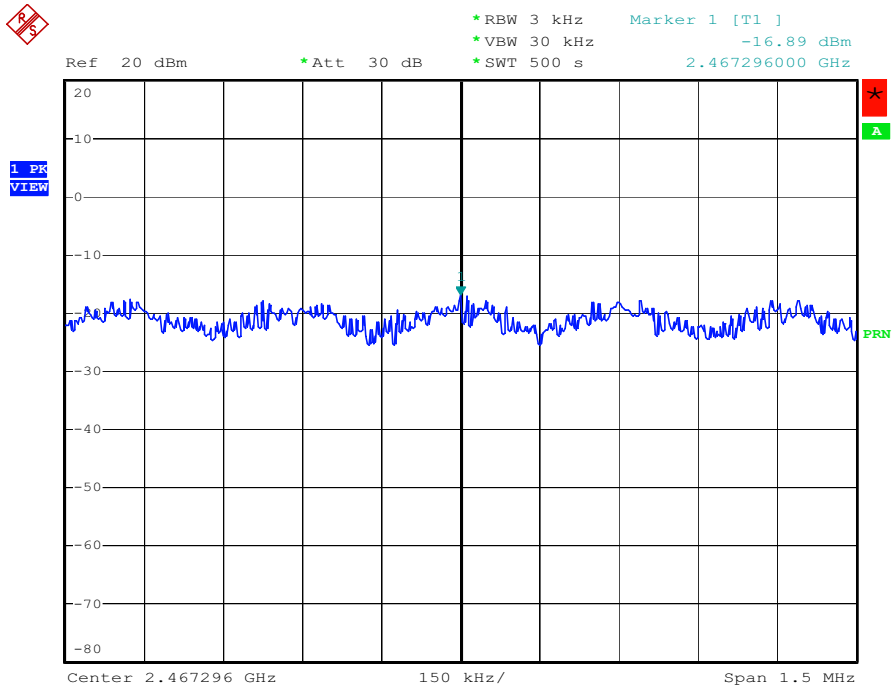
Date: 15.JAN.2007 08:41:17

Power Density Plot on Configuration IEEE 802.11g / 2437 MHz



Date: 15.JAN.2007 08:42:18

Power Density Plot on Configuration IEEE 802.11g / 2462 MHz



Date: 15.JAN.2007 08:47:05

4.4. 6dB Spectrum Bandwidth Measurement

4.4.1. Limit

For digital modulation systems, the minimum 6dB bandwidth shall be at least 500 kHz.

4.4.2. Measuring Instruments and Setting

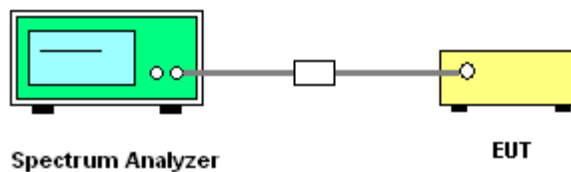
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameters	Setting
Attenuation	Auto
Span Frequency	> 6dB Bandwidth
RB	100 kHz
VB	100 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

4.4.3. Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyser in peak hold mode.
2. The resolution bandwidth of 100 kHz and the video bandwidth of 100 kHz were used.
3. Measured the spectrum width with power higher than 6dB below carrier.

4.4.4. Test Setup Layout



4.4.5. Test Deviation

There is no deviation with the original standard.

4.4.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.4.7. Test Result of 6dB Spectrum Bandwidth

Temperature	26°C	Humidity	55%
Test Engineer	Sam Lee	Configurations	802.11b/g

Configuration IEEE 802.11b

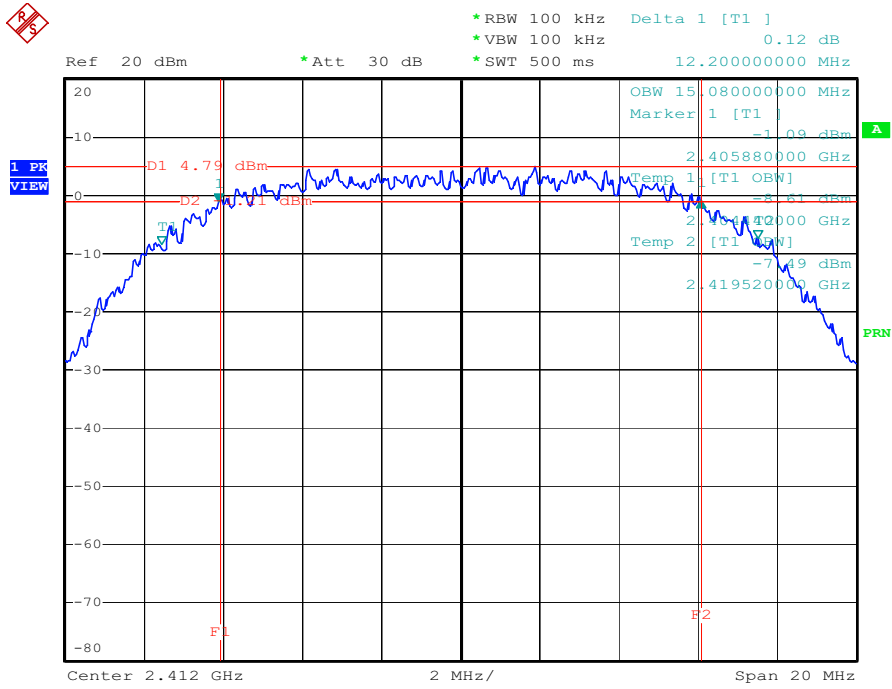
Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	12.20	15.08	500	Complies
6	2437 MHz	12.20	15.08	500	Complies
11	2462 MHz	12.20	15.04	500	Complies

Configuration IEEE 802.11g

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	16.56	16.44	500	Complies
6	2437 MHz	16.52	16.44	500	Complies
11	2462 MHz	16.56	16.40	500	Complies

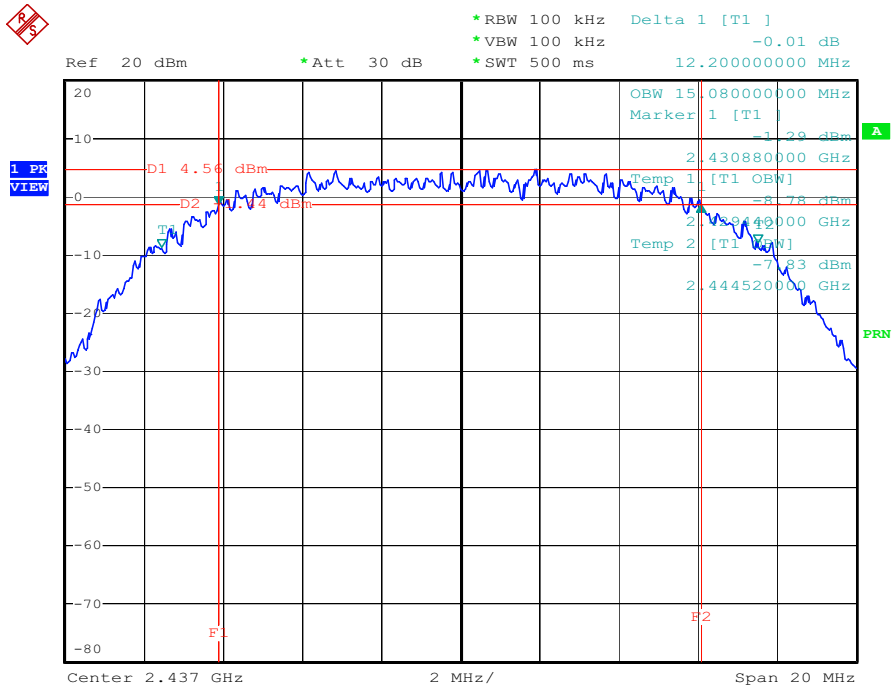


6 dB Bandwidth Plot on Configuration IEEE 802.11b / 2412 MHz



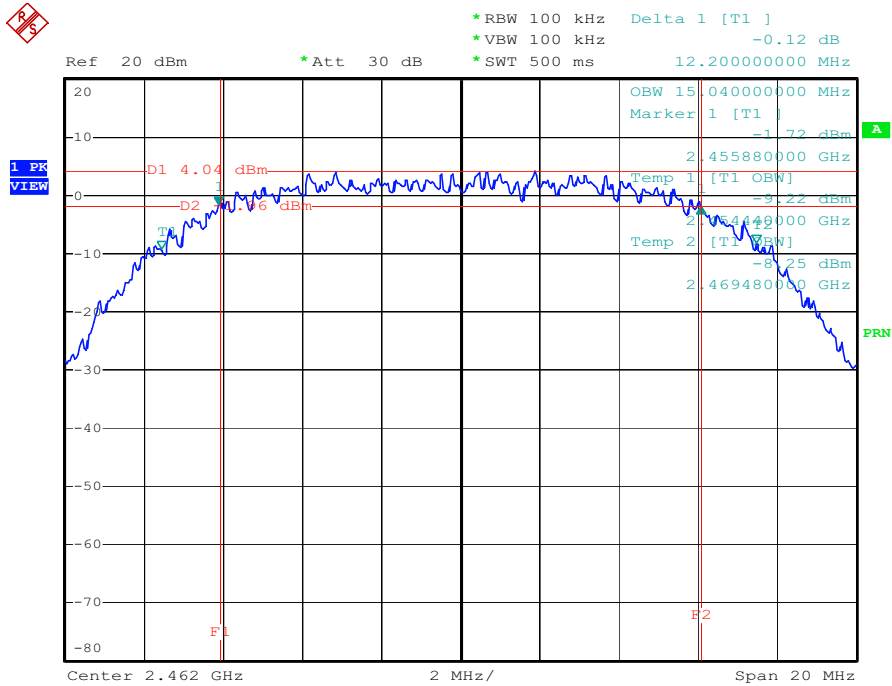
Date: 15.JAN.2007 08:28:15

6 dB Bandwidth Plot on Configuration IEEE 802.11b / 2437 MHz



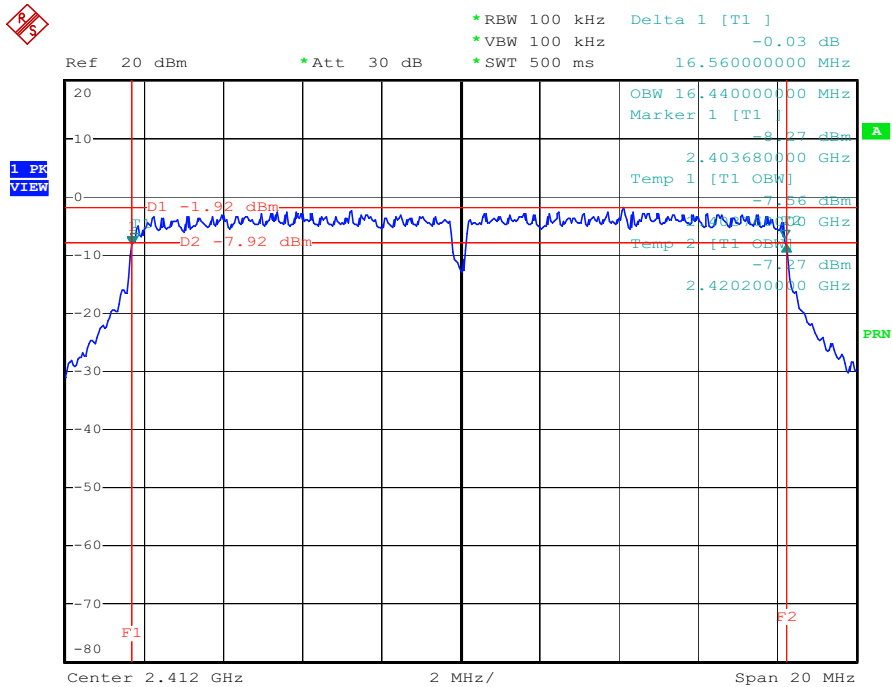
Date: 15.JAN.2007 08:32:10

6 dB Bandwidth Plot on Configuration IEEE 802.11b / 2462 MHz



Date: 15.JAN.2007 08:33:06

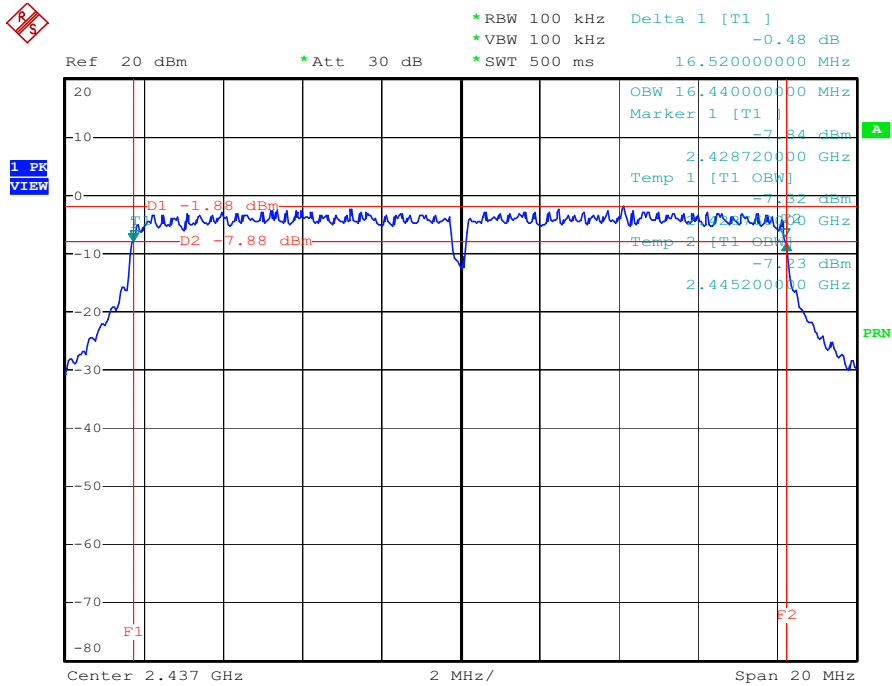
6 dB Bandwidth Plot on Configuration IEEE 802.11g / 2412 MHz



Date: 15.JAN.2007 08:39:05

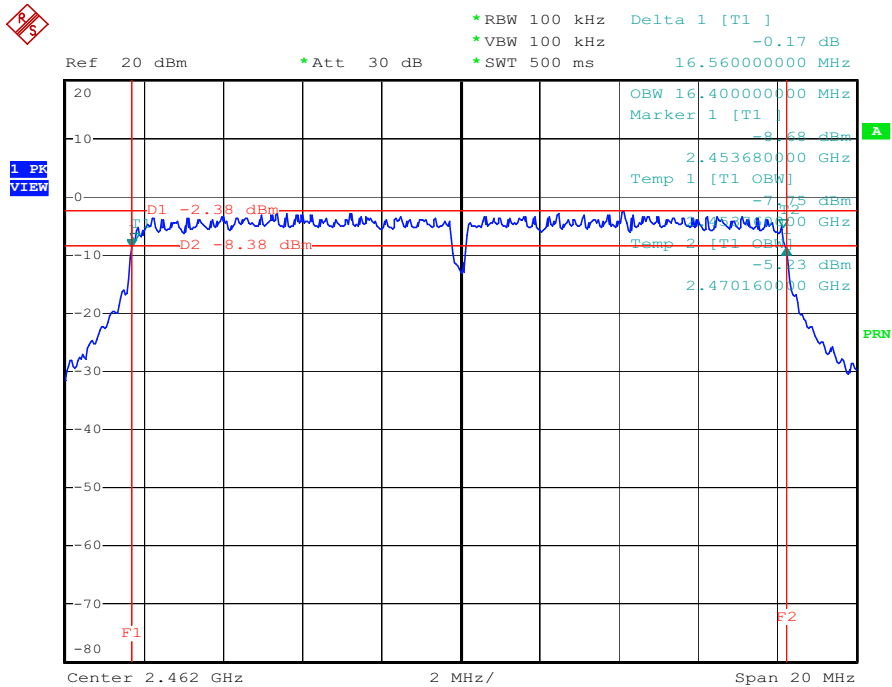


6 dB Bandwidth Plot on Configuration IEEE 802.11g / 2437 MHz



Date: 15.JAN.2007 08:43:32

6 dB Bandwidth Plot on Configuration IEEE 802.11g / 2462 MHz



Date: 15.JAN.2007 08:44:29

4.5. Radiated Emissions Measurement

4.5.1. 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 (micovolts/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

4.5.2. Measuring Instruments and Setting

Please refer to section 5 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)	100KHz / 100KHz for peak

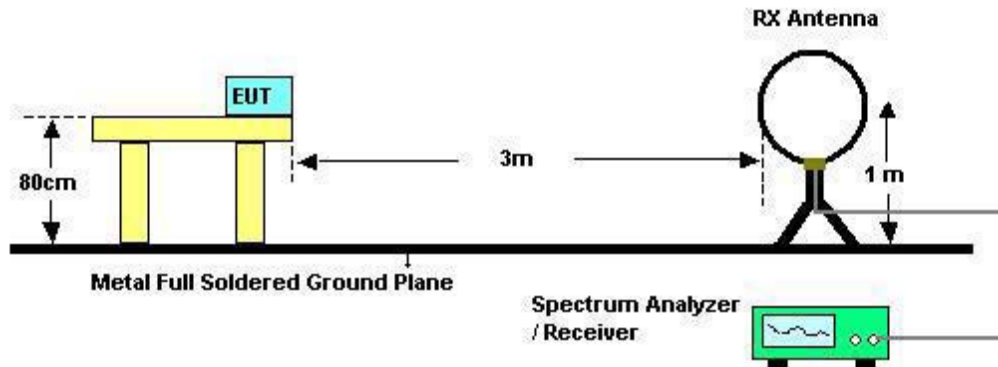
Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

4.5.3. Test Procedures

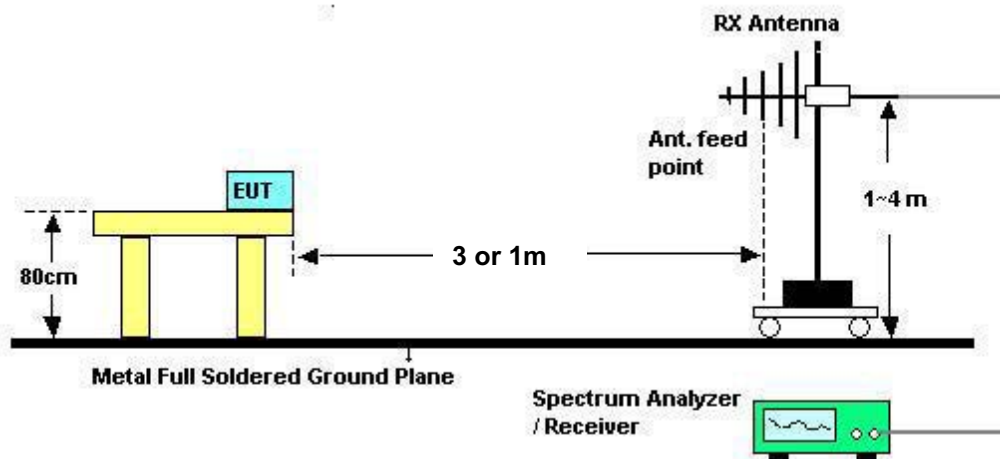
1. Configure the EUT according to ANSI C63.4. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting 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.

4.5.4. 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 from 3m to 1m.

Distance extrapolation factor = $20 \log (\text{specific distance [3m]} / \text{test distance [1m]})$ (dB);

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

4.5.5. Test Deviation

There is no deviation with the original standard.

4.5.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.5.7. Results of Radiated Emissions (9kHz~30MHz)

Temperature	22°C	Humidity	56%
Test Engineer	Vic Hsiao		

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.

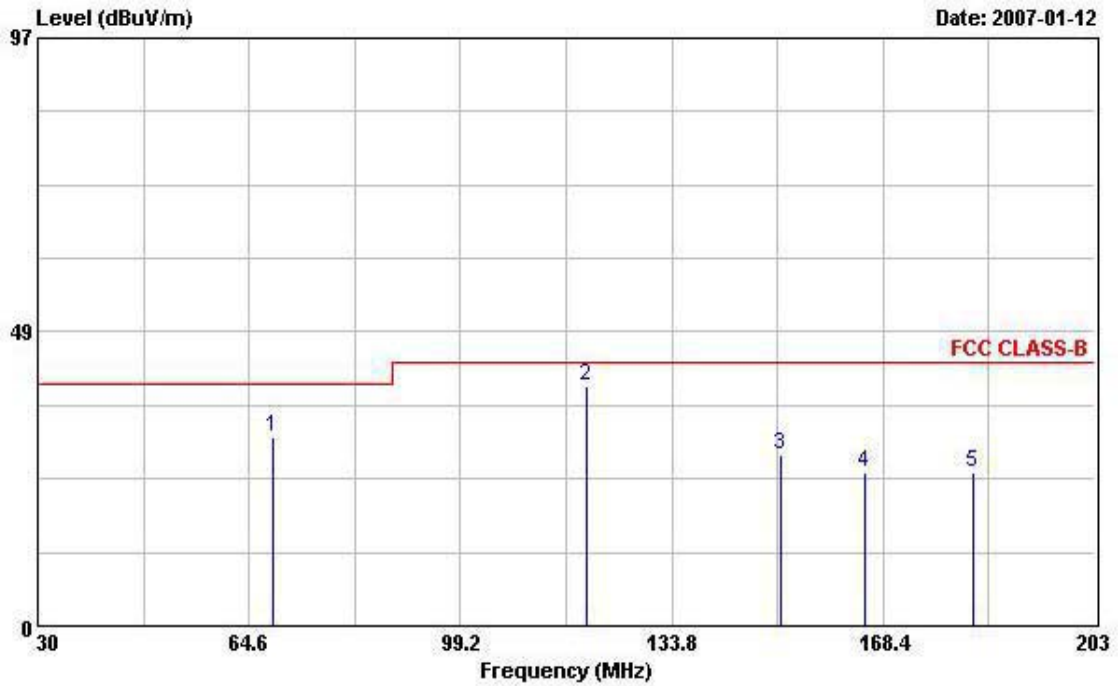
Distance extrapolation factor = $40 \log(\text{specific distance} / \text{test distance})$ (dB);

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

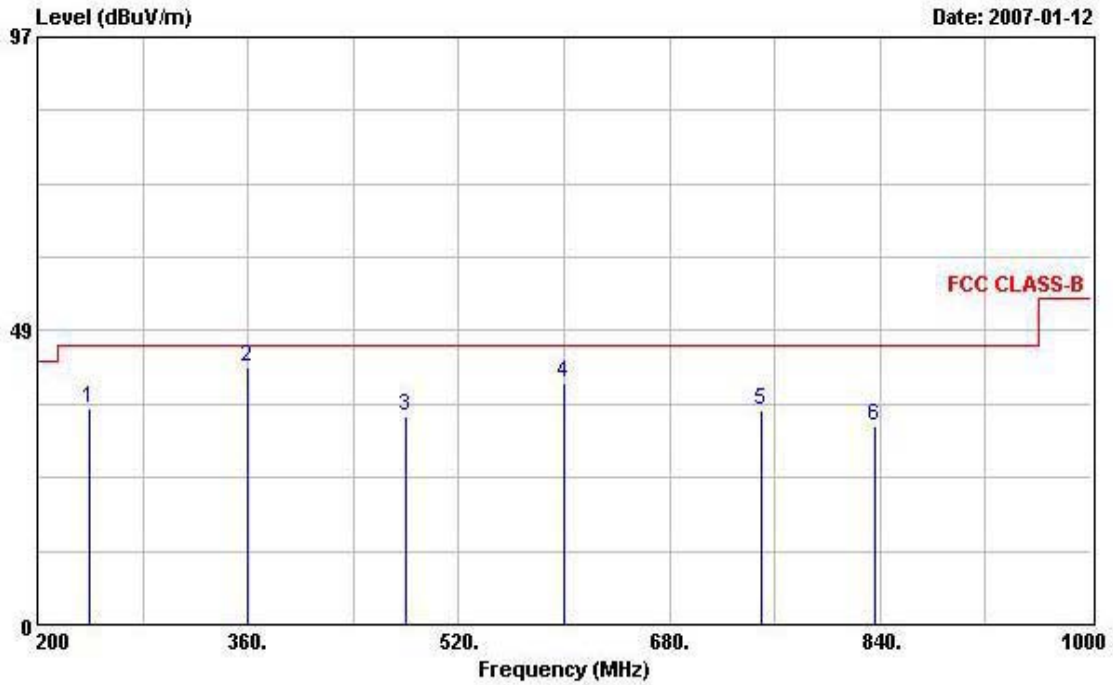
4.5.8. Results of Radiated Emissions (30MHz~1GHz)

Temperature	22°C	Humidity	56%
Test Engineer	Vic Hsiao	Configurations	Mode 1 / 802.11g CH 6

Horizontal

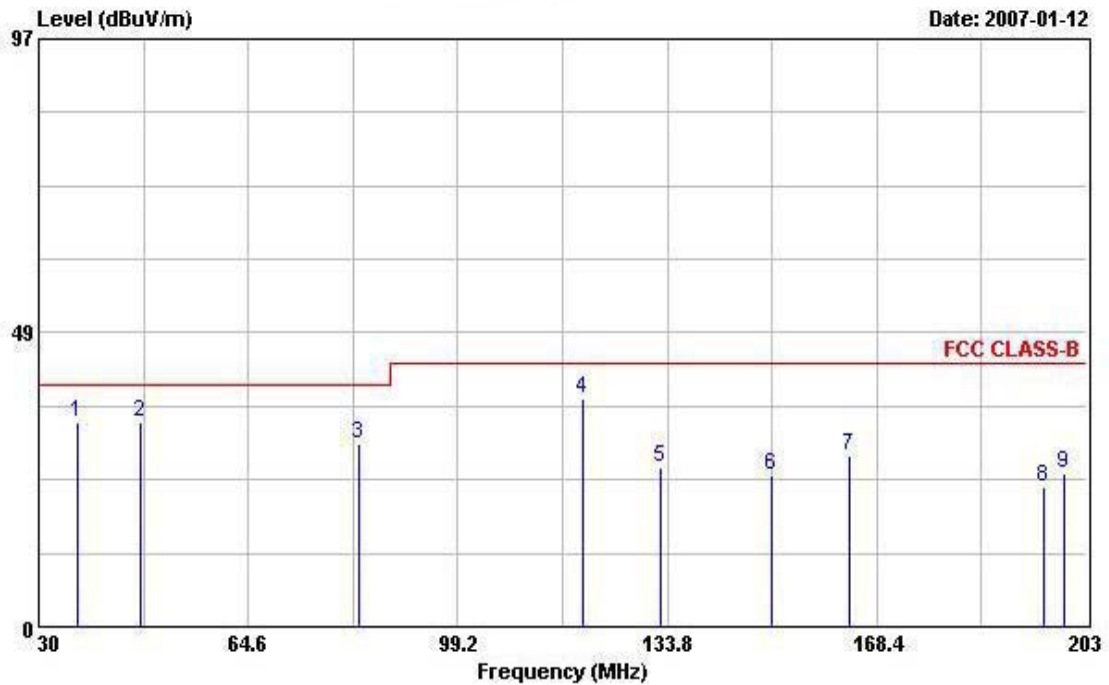


	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	68.580	31.24	-8.76	40.00	51.80	5.67	1.08	27.31	Peak	---	---
2 @	120.000	39.66	-3.84	43.50	53.26	12.35	1.20	27.15	QP	---	---
3	151.620	28.27	-15.23	43.50	43.55	10.34	1.40	27.02	Peak	---	---
4	165.460	25.25	-18.25	43.50	41.40	9.41	1.40	26.96	Peak	---	---
5	183.110	25.15	-18.35	43.50	41.82	8.79	1.43	26.89	Peak	---	---

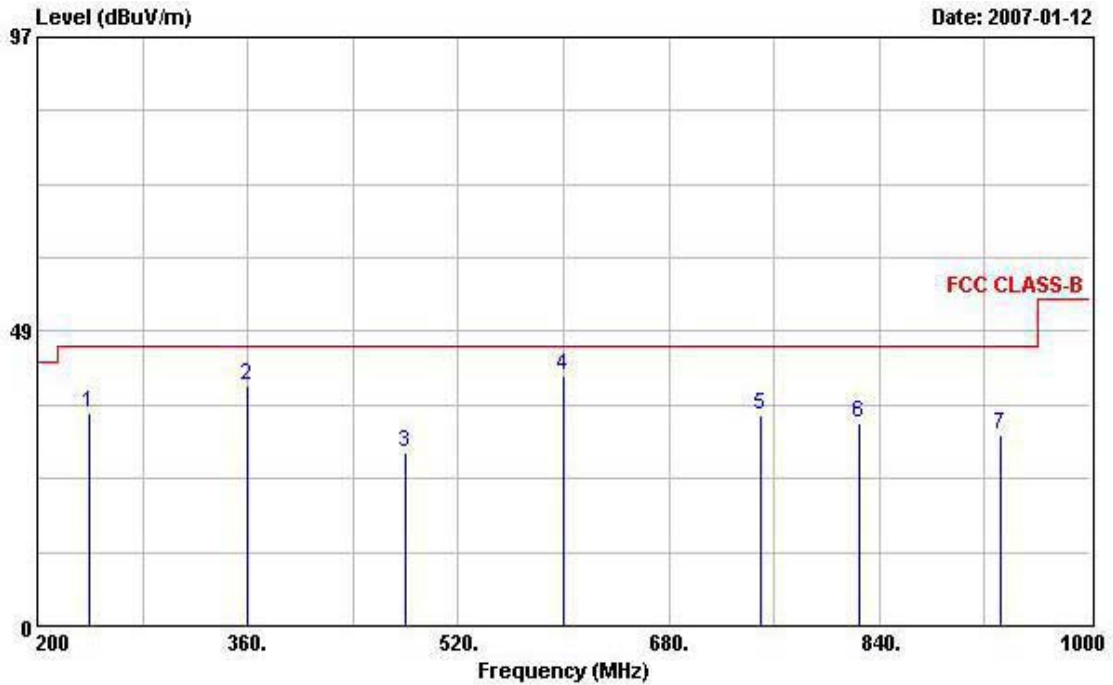


	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	240.000	35.69	-10.31	46.00	49.01	11.77	1.70	26.79	Peak	---	---
2 @	360.000	42.35	-3.65	46.00	42.35	0.00	0.00	0.00	QP	220	196
3	480.000	34.24	-11.76	46.00	42.00	17.43	2.52	27.71	Peak	---	---
4 @	600.000	40.01	-5.99	46.00	46.21	18.98	3.00	28.18	Peak	---	---
5	750.000	35.40	-10.60	46.00	40.20	19.94	3.40	28.14	Peak	---	---
6	836.000	32.85	-13.15	46.00	36.80	20.46	3.54	27.95	Peak	---	---

Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	36.570	33.59	-6.41	40.00	46.31	13.99	0.65	27.36	Peak	---	---
2 @	46.950	33.80	-6.20	40.00	51.05	9.30	0.80	27.35	Peak	---	---
3	82.770	30.11	-9.89	40.00	48.99	7.29	1.10	27.27	Peak	---	---
4 @	119.790	37.50	-6.00	43.50	51.10	12.35	1.20	27.15	Peak	---	---
5	132.590	26.13	-17.37	43.50	40.39	11.60	1.23	27.09	Peak	---	---
6	151.100	24.91	-18.59	43.50	40.19	10.34	1.40	27.02	Peak	---	---
7	163.730	28.13	-15.37	43.50	44.19	9.51	1.40	26.97	Peak	---	---
8	196.080	23.09	-20.41	43.50	39.23	9.20	1.50	26.84	Peak	---	---
9	199.190	25.20	-18.30	43.50	41.22	9.30	1.50	26.82	Peak	---	---



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	239.880	35.09	-10.91	46.00	48.41	11.77	1.70	26.79	Peak	---	---
2	360.000	39.43	-6.57	46.00	49.20	14.60	2.22	26.59	Peak	---	---
3	480.000	28.64	-17.36	46.00	36.40	17.43	2.52	27.71	Peak	---	---
4	600.000	41.21	-4.79	46.00	47.41	18.98	3.00	28.18	Peak	---	---
5	750.000	34.80	-11.20	46.00	39.60	19.94	3.40	28.14	Peak	---	---
6	825.000	33.35	-12.65	46.00	37.40	20.41	3.53	27.99	Peak	---	---
7	932.000	31.51	-14.49	46.00	34.61	20.68	3.82	27.60	Peak	---	---

Note:

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

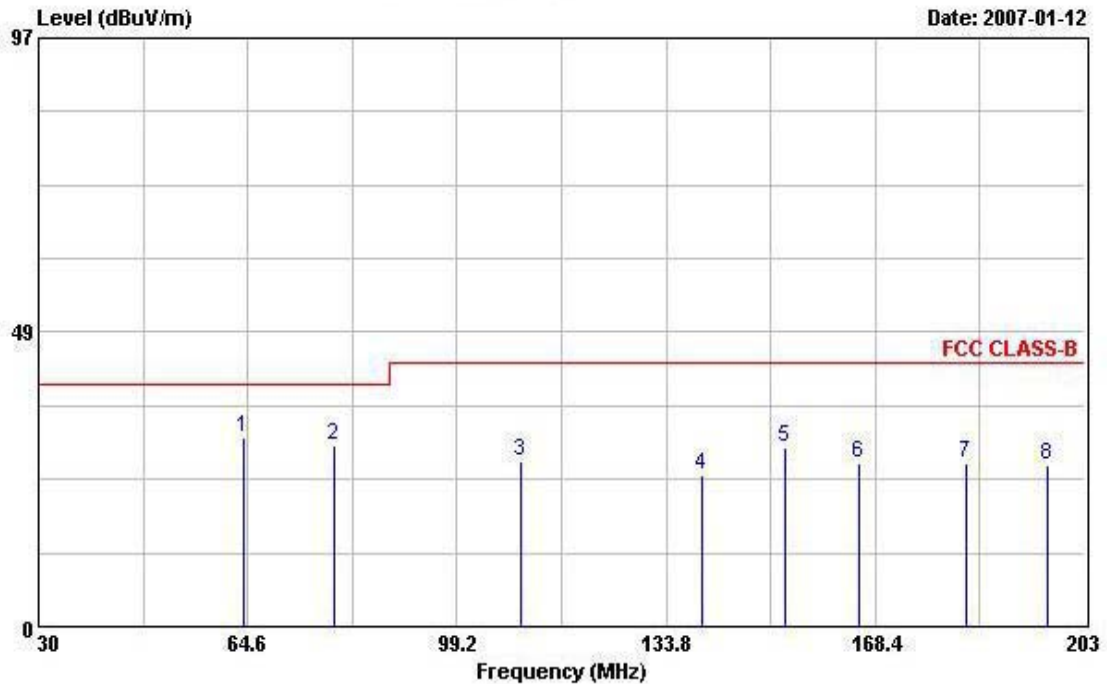
Emission level (dBuV/m) = 20 log Emission level (uV/m).

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

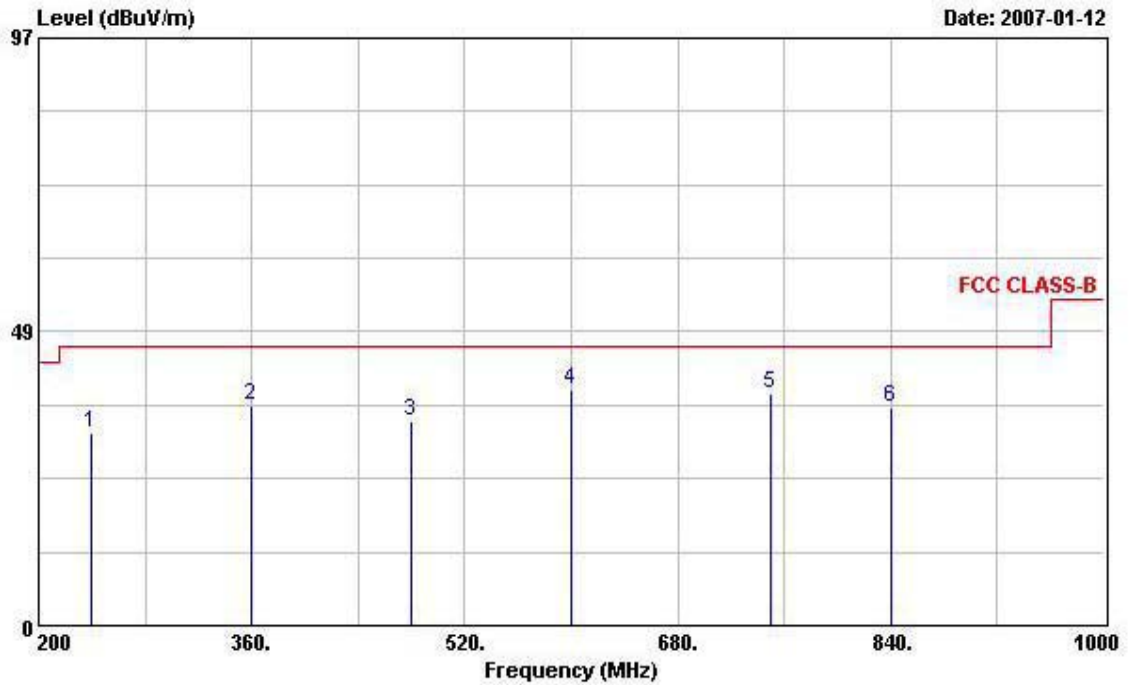


Temperature	22°C	Humidity	56%
Test Engineer	Vic Hsiao	Configurations	Mode 3 / 802.11g CH 6

Horizontal

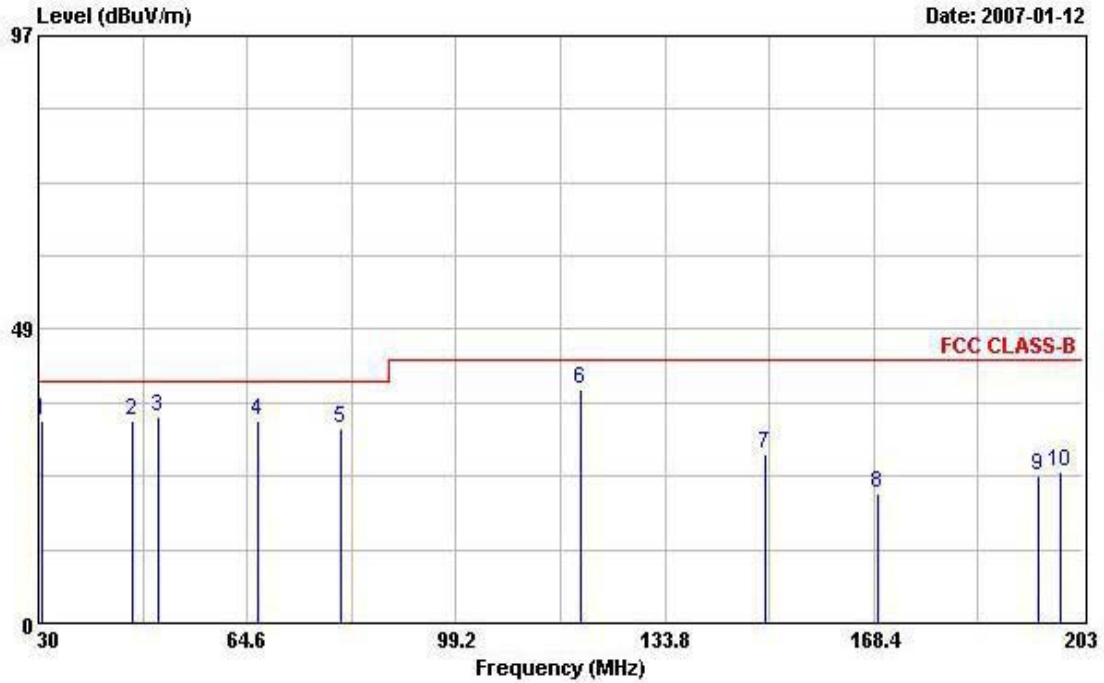


	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	64.080	31.12	-8.88	40.00	51.59	5.87	0.98	27.32	Peak	---	---
2	78.960	29.92	-10.08	40.00	49.49	6.61	1.10	27.28	Peak	---	---
3	109.750	27.25	-16.25	43.50	41.65	11.59	1.20	27.19	Peak	---	---
4	139.680	25.00	-18.50	43.50	39.57	11.20	1.30	27.07	Peak	---	---
5	153.350	29.55	-13.95	43.50	44.96	10.20	1.40	27.01	Peak	---	---
6	165.630	26.85	-16.65	43.50	43.00	9.41	1.40	26.96	Peak	---	---
7	183.450	26.96	-16.54	43.50	43.63	8.79	1.43	26.89	Peak	---	---
8	196.950	26.52	-16.98	43.50	42.61	9.24	1.50	26.83	Peak	---	---

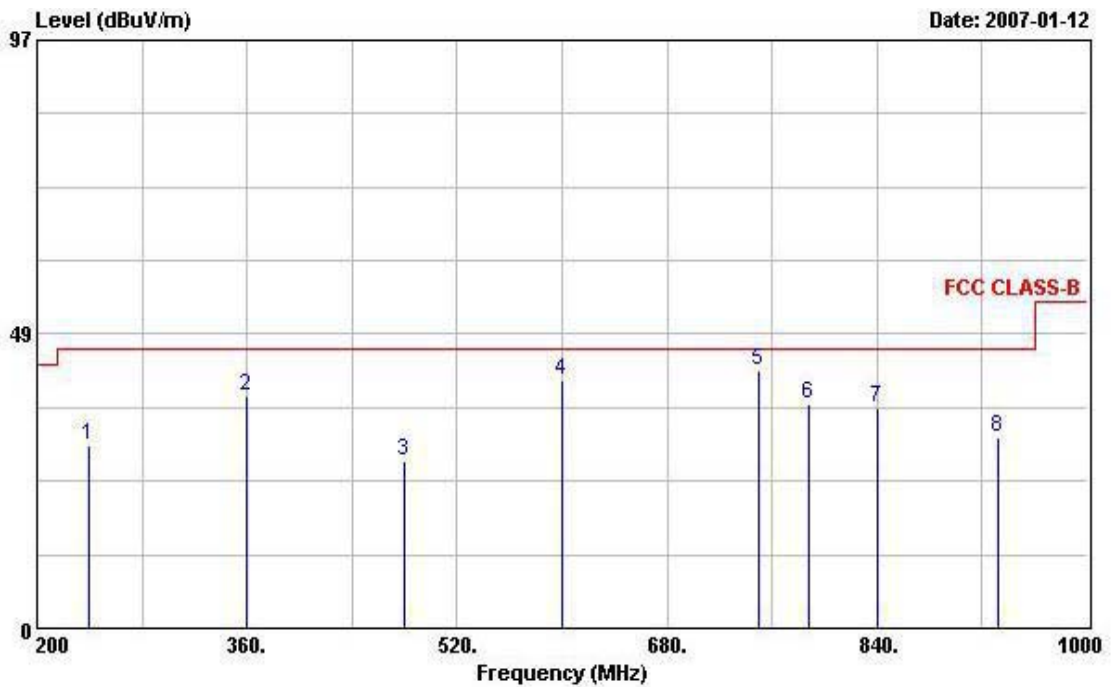


	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Rnt Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	240.000	31.89	-14.11	46.00	45.21	11.77	1.70	26.79	Peak	---	---
2	360.000	36.23	-9.77	46.00	46.00	14.60	2.22	26.59	Peak	---	---
3	480.000	33.64	-12.36	46.00	41.40	17.43	2.52	27.71	Peak	---	---
4	600.000	39.00	-7.00	46.00	45.20	18.98	3.00	28.18	Peak	---	---
5	750.000	38.20	-7.80	46.00	43.00	19.94	3.40	28.14	Peak	---	---
6	840.000	36.08	-9.92	46.00	39.99	20.48	3.54	27.93	Peak	---	---

Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	30.520	33.29	-6.71	40.00	42.80	17.51	0.35	27.37	Peak	---	---
2 @	45.570	33.56	-6.44	40.00	50.39	9.72	0.80	27.35	Peak	---	---
3 @	49.720	34.16	-5.84	40.00	52.66	8.05	0.80	27.35	Peak	---	---
4 @	66.330	33.48	-6.52	40.00	53.98	5.79	1.02	27.31	Peak	---	---
5 @	80.170	32.09	-7.91	40.00	51.44	6.83	1.10	27.28	Peak	---	---
6 @	119.790	38.60	-4.90	43.50	52.20	12.35	1.20	27.15	Peak	---	---
7 @	150.580	27.95	-15.55	43.50	43.16	10.41	1.40	27.02	Peak	---	---
8 @	169.090	21.49	-22.01	43.50	37.77	9.27	1.40	26.95	Peak	---	---
9 @	195.560	24.27	-19.23	43.50	40.41	9.20	1.50	26.84	Peak	---	---
10 @	199.370	25.01	-18.49	43.50	41.00	9.33	1.50	26.82	Peak	---	---



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	240.000	30.29	-15.71	46.00	43.61	11.77	1.70	26.79	Peak	---	---
2	360.000	38.25	-7.75	46.00	48.02	14.60	2.22	26.59	Peak	---	---
3	480.000	27.44	-18.56	46.00	35.20	17.43	2.52	27.71	Peak	---	---
4	600.000	40.81	-5.19	46.00	47.01	18.98	3.00	28.18	Peak	---	---
5	750.000	42.40	-3.60	46.00	42.40	0.00	0.00	0.00	QP	200	172
6	787.600	36.99	-9.01	46.00	41.41	20.21	3.47	28.10	Peak	---	---
7	840.000	36.28	-9.72	46.00	40.19	20.48	3.54	27.93	Peak	---	---
8	932.000	31.51	-14.49	46.00	34.61	20.68	3.82	27.60	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).

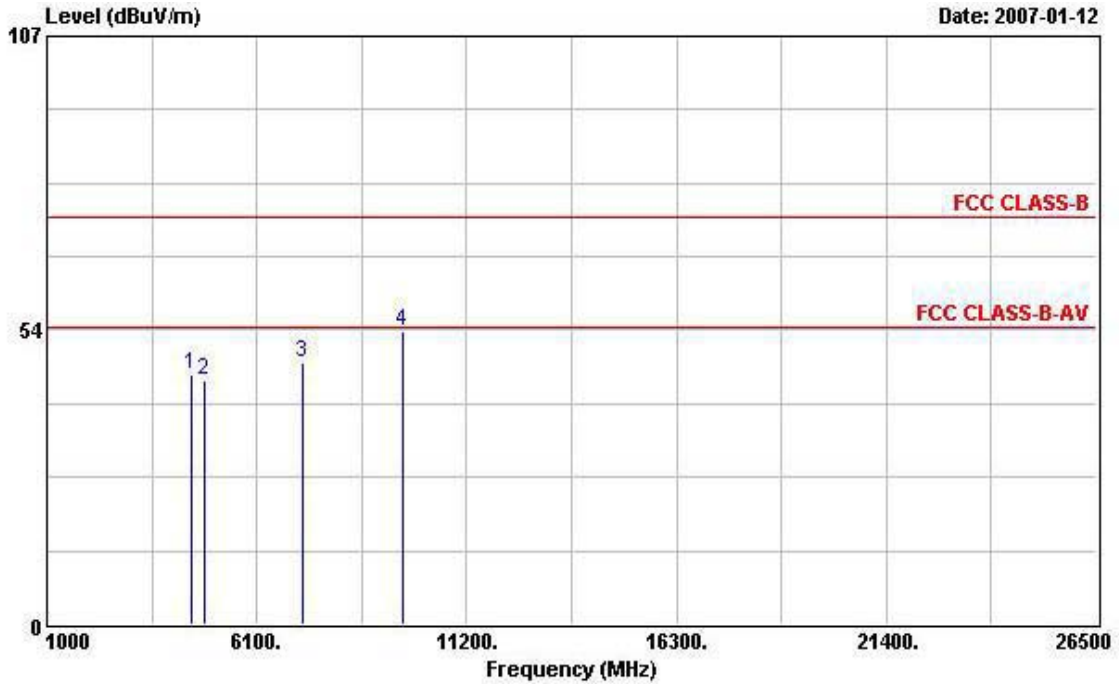
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.



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

Temperature	22°C	Humidity	56%
Test Engineer	Vic Hsiao	Configurations	Mode 1 / 802.11b CH 1

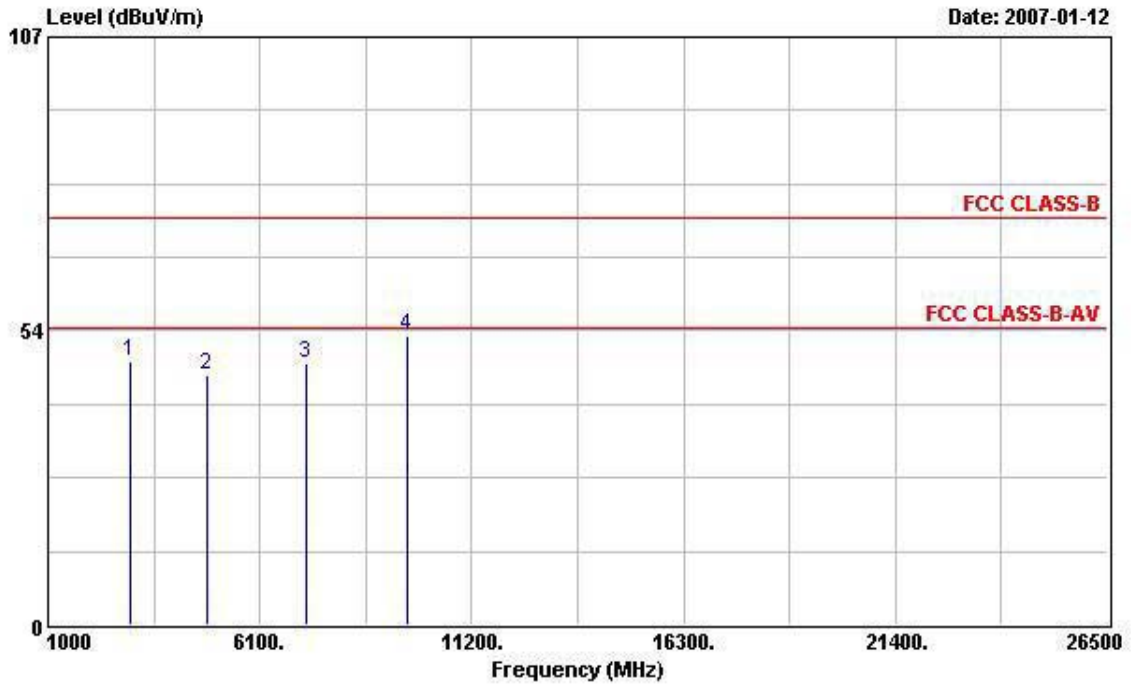
Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna	Cable	Preamp	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB		cm	deg
1	4500.000	45.42	-28.58	74.00	42.90	32.50	2.50	32.48 Peak	---	---
2	4824.000	44.48	-29.52	74.00	41.06	33.09	2.65	32.32 Peak	---	---
3	7236.000	47.68	-26.32	74.00	40.95	35.98	3.32	32.57 Peak	---	---
4	9648.000	53.23	-20.77	74.00	42.91	38.58	4.54	32.80 Peak	---	---



Vertical

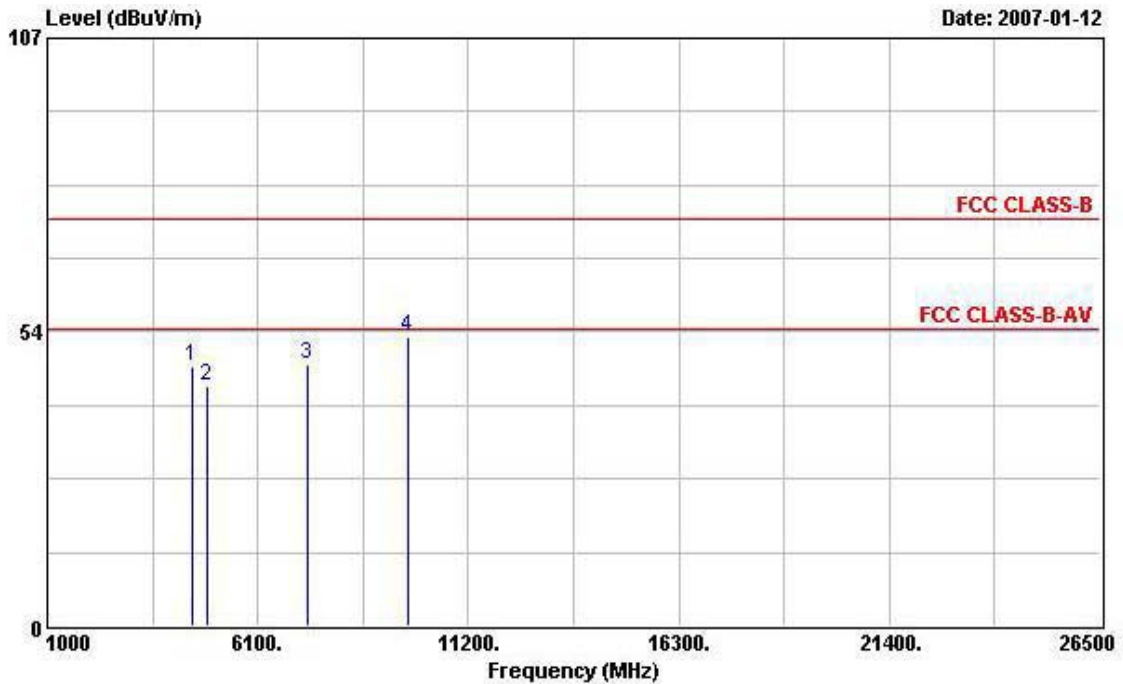


	Freq	Level	Over Limit	Limit Line	ReadAntenna	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB		cm	deg
1	3000.000	48.04	-25.96	74.00	48.79	30.00	1.97	32.72 Peak	---	---
2	4824.000	45.46	-28.54	74.00	42.04	33.09	2.65	32.32 Peak	---	---
3	7236.000	47.76	-26.24	74.00	41.03	35.98	3.32	32.57 Peak	---	---
4	9648.000	52.52	-21.48	74.00	42.20	38.58	4.54	32.80 Peak	---	---



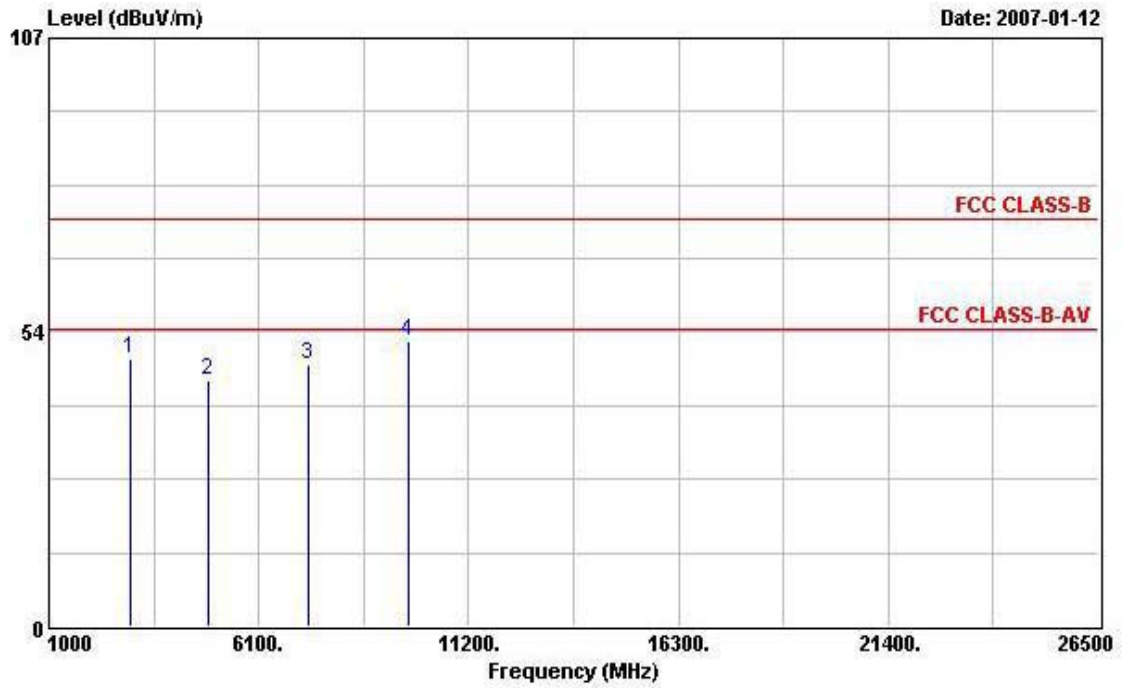
Temperature	22°C	Humidity	56%
Test Engineer	Vic Hsiao	Configurations	Mode 1 / 802.11b CH 6

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	4500.000	47.28	-26.72	74.00	44.76	32.50	2.50	32.48	Peak	---	---
2	4874.000	43.67	-30.33	74.00	40.10	33.18	2.69	32.30	Peak	---	---
3	7311.000	47.70	-26.30	74.00	40.77	36.14	3.38	32.59	Peak	---	---
4	9748.000	52.74	-21.26	74.00	42.17	38.77	4.59	32.79	Peak	---	---

Vertical

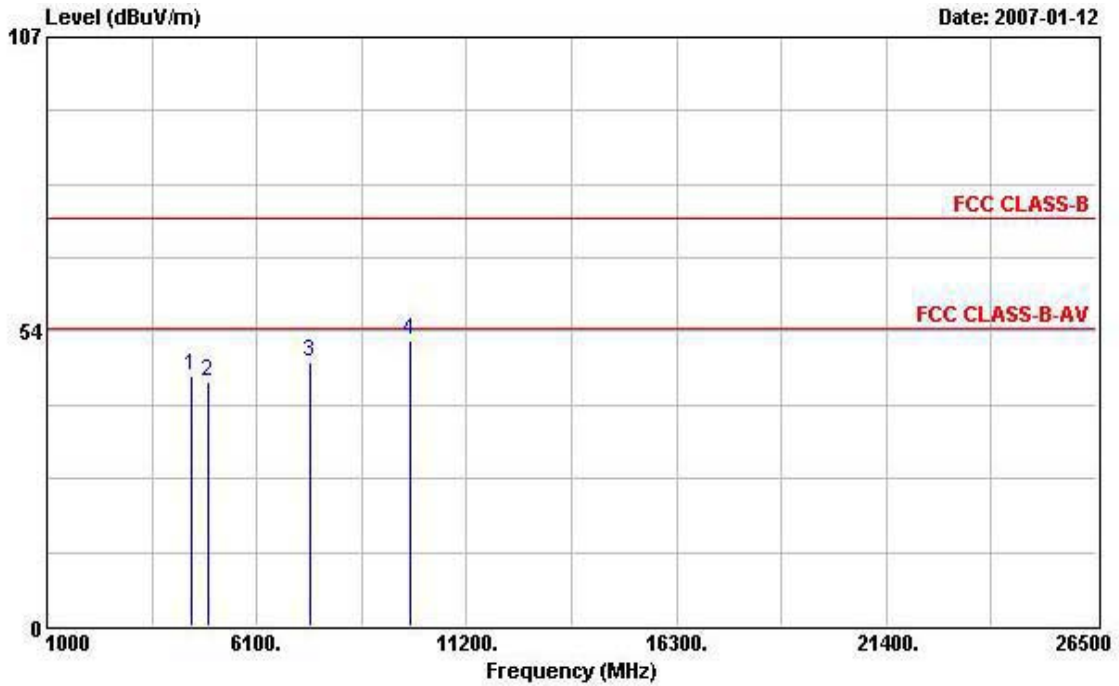


	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	3000.000	48.59	-25.41	74.00	49.34	30.00	1.97	32.72	Peak	---	---
2	4874.000	44.58	-29.42	74.00	41.01	33.18	2.69	32.30	Peak	---	---
3	7311.000	47.55	-26.45	74.00	40.62	36.14	3.38	32.59	Peak	---	---
4	9748.000	51.97	-22.03	74.00	41.40	38.77	4.59	32.79	Peak	---	---



Temperature	22°C	Humidity	56%
Test Engineer	Vic Hsiao	Configurations	Mode 1 / 802.11b CH 11

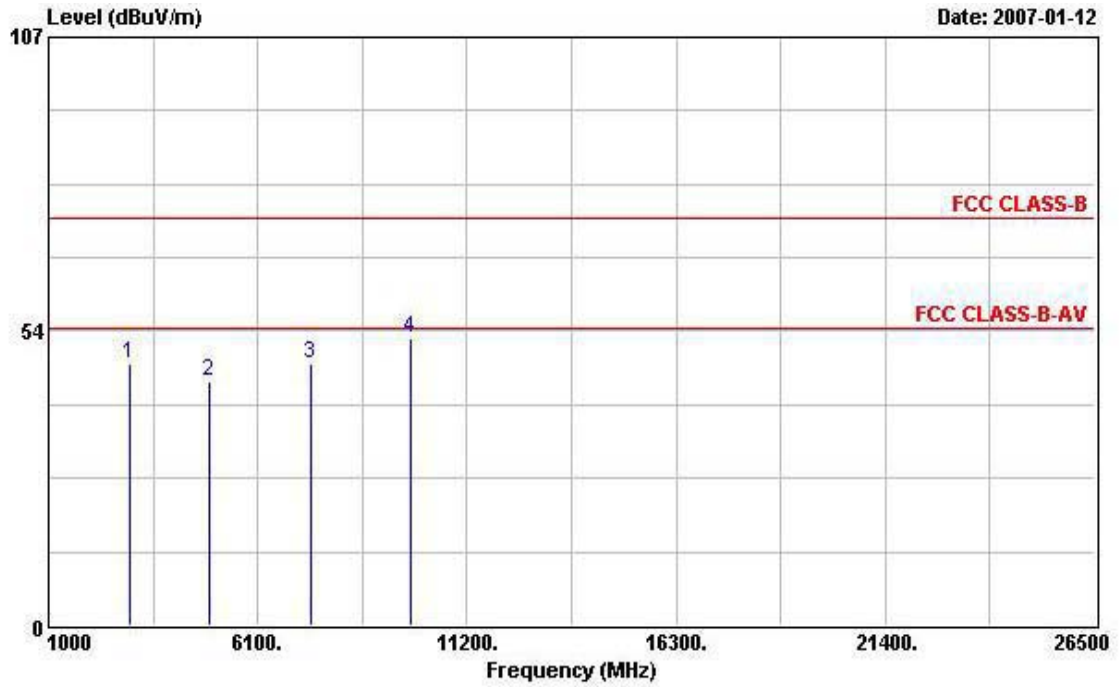
Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	4500.000	45.43	-28.57	74.00	42.91	32.50	2.50	32.48	Peak	---	---
2	4924.000	44.37	-29.63	74.00	40.66	33.28	2.71	32.28	Peak	---	---
3	7386.000	47.98	-26.02	74.00	40.82	36.35	3.44	32.63	Peak	---	---
4	9848.000	51.86	-22.14	74.00	41.11	38.92	4.62	32.79	Peak	---	---



Vertical

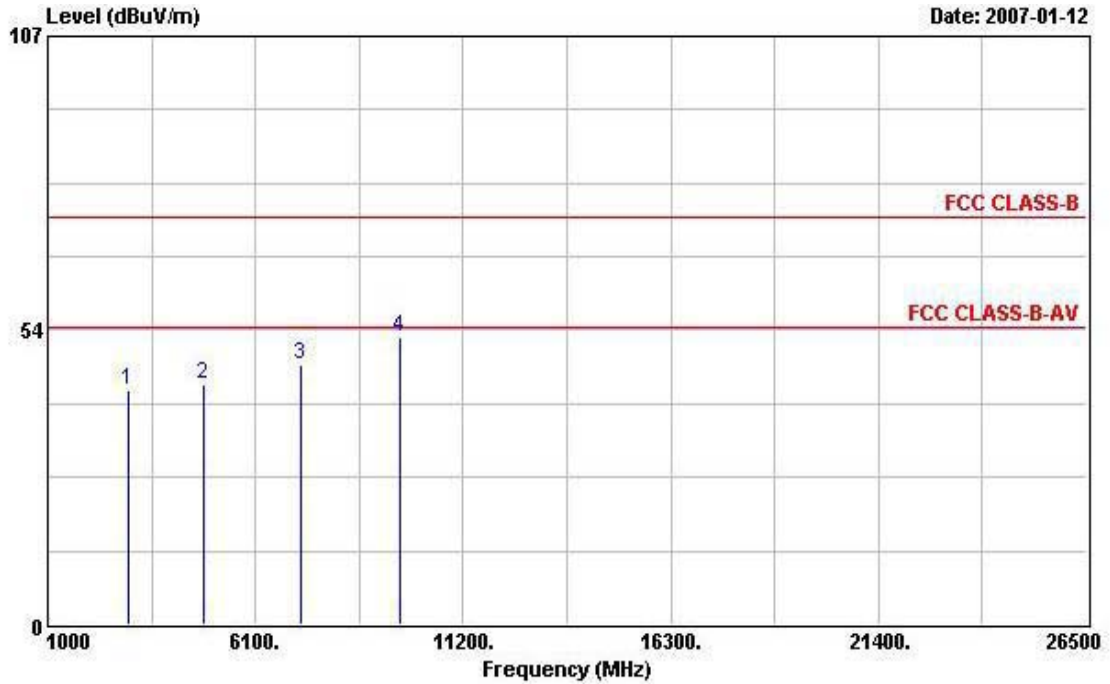


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	3000.000	47.68	-26.32	74.00	48.43	30.00	1.97	32.72	Peak	---	---
2	4924.000	44.25	-29.75	74.00	40.54	33.28	2.71	32.28	Peak	---	---
3	7386.000	47.58	-26.42	74.00	40.42	36.35	3.44	32.63	Peak	---	---
4	9848.000	52.35	-21.65	74.00	41.60	38.92	4.62	32.79	Peak	---	---



Temperature	22°C	Humidity	56%
Test Engineer	Vic Hsiao	Configurations	Mode 1 / 802.11g CH 1

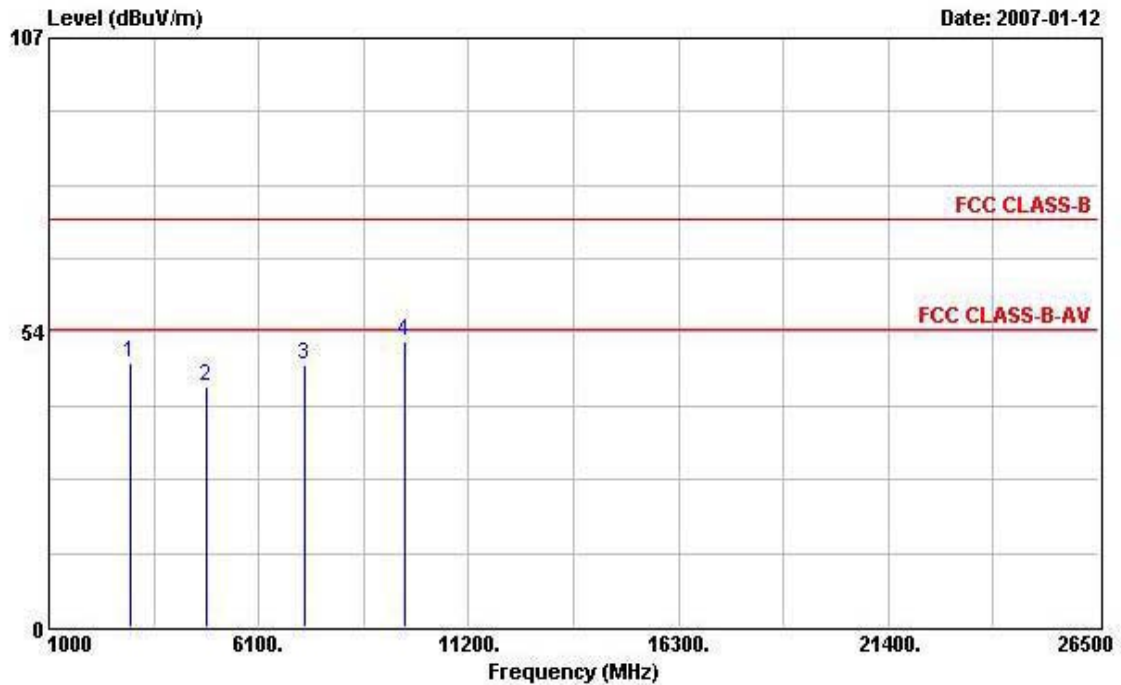
Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	3000.000	42.59	-31.41	74.00	43.34	30.00	1.97	32.72	Peak	---	---
2	4824.000	43.74	-30.26	74.00	40.32	33.09	2.65	32.32	Peak	---	---
3	7236.000	47.08	-26.92	74.00	40.35	35.98	3.32	32.57	Peak	---	---
4	9648.000	52.38	-21.62	74.00	42.06	38.58	4.54	32.80	Peak	---	---



Vertical

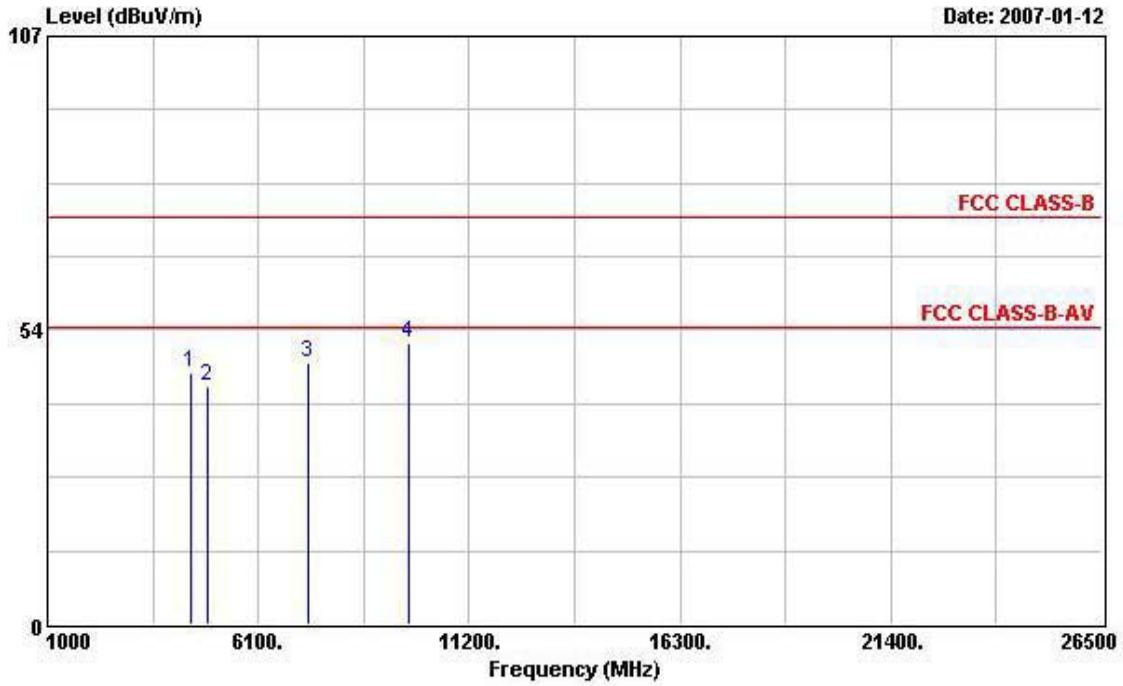


	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	3000.000	48.07	-25.93	74.00	48.82	30.00	1.97	32.72	Peak	---	---
2	4824.000	43.67	-30.33	74.00	40.25	33.09	2.65	32.32	Peak	---	---
3	7236.000	47.50	-26.50	74.00	40.77	35.98	3.32	32.57	Peak	---	---
4	9648.000	52.06	-21.94	74.00	41.74	38.58	4.54	32.80	Peak	---	---



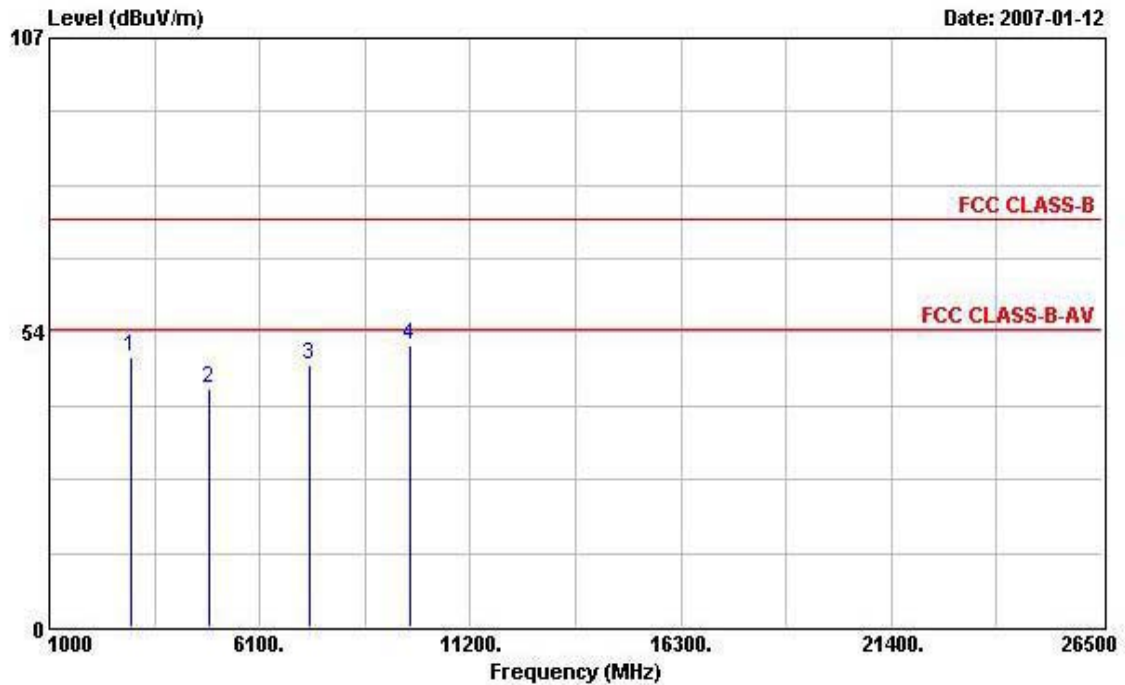
Temperature	22°C	Humidity	56%
Test Engineer	Vic Hsiao	Configurations	Mode 1 / 802.11g CH 6

Horizontal



	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp		Ant	Table
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Remark	Pos	Pos
			dB	dBuV/m	dBuV	dB	dB		cm	deg
1	4454.000	45.82	-28.18	74.00	43.32	32.51	2.48	32.49 Peak	---	---
2	4874.000	43.42	-30.58	74.00	39.85	33.18	2.69	32.30 Peak	---	---
3	7311.000	47.49	-26.51	74.00	40.56	36.14	3.38	32.59 Peak	---	---
4	9748.000	51.18	-22.82	74.00	40.61	38.77	4.59	32.79 Peak	---	---

Vertical

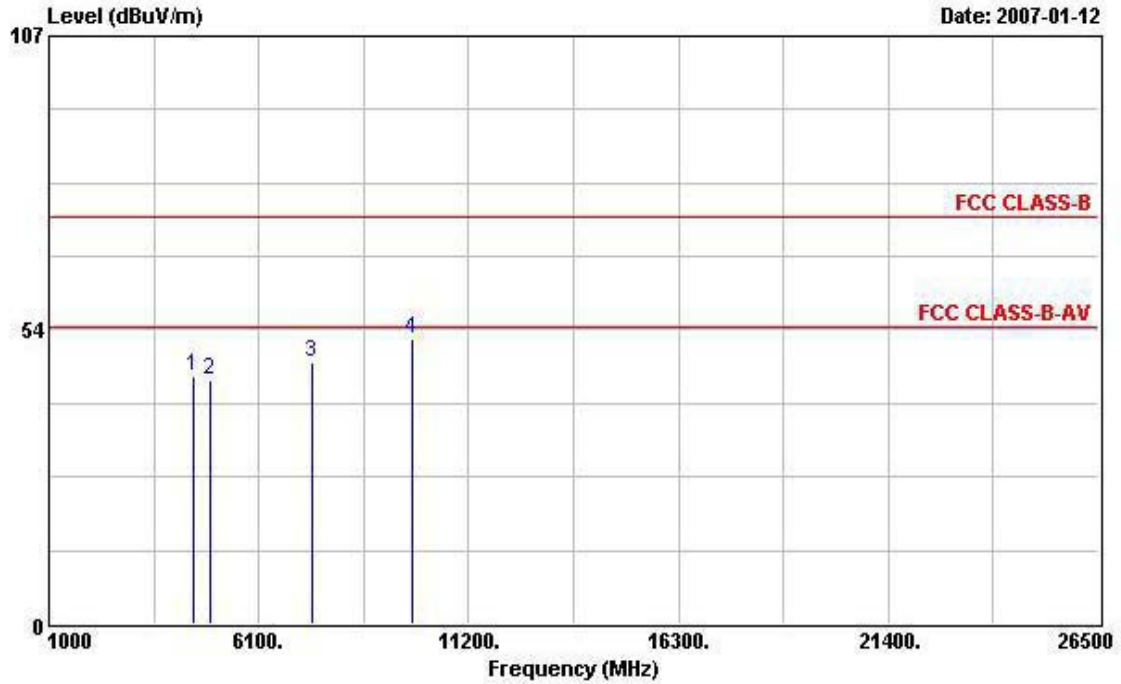


	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	3000.000	48.96	-25.04	74.00	49.71	30.00	1.97	32.72	Peak	---	---
2	4874.000	43.34	-30.66	74.00	39.77	33.18	2.69	32.30	Peak	---	---
3	7311.000	47.55	-26.45	74.00	40.62	36.14	3.38	32.59	Peak	---	---
4	9748.000	51.23	-22.77	74.00	40.66	38.77	4.59	32.79	Peak	---	---



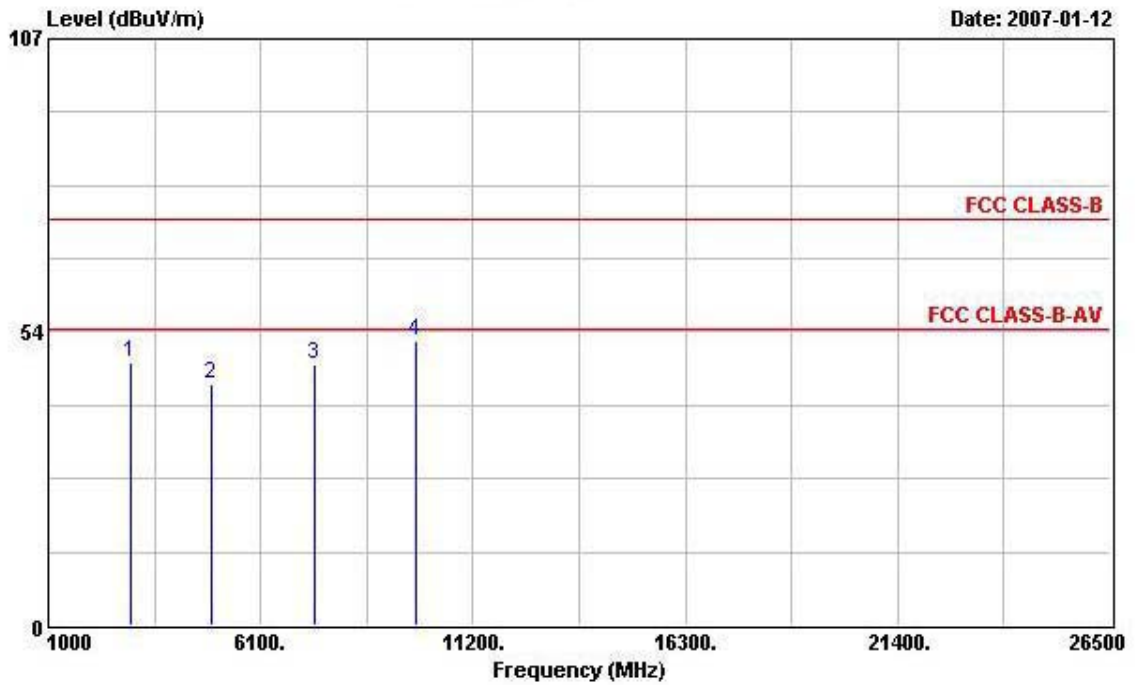
Temperature	22°C	Humidity	56%
Test Engineer	Vic Hsiao	Configurations	Mode 1 / 802.11g CH 11

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	4500.000	45.25	-28.75	74.00	42.73	32.50	2.50	32.48	Peak	---	---
2	4924.000	44.22	-29.78	74.00	40.51	33.28	2.71	32.28	Peak	---	---
3	7386.000	47.65	-26.35	74.00	40.49	36.35	3.44	32.63	Peak	---	---
4	9848.000	52.03	-21.97	74.00	41.28	38.92	4.62	32.79	Peak	---	---

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	3000.000	48.10	-25.90	74.00	48.85	30.00	1.97	32.72	Peak	---	---
2	4924.000	43.85	-30.15	74.00	40.14	33.28	2.71	32.28	Peak	---	---
3	7386.000	47.60	-26.40	74.00	40.44	36.35	3.44	32.63	Peak	---	---
4	9848.000	51.96	-22.04	74.00	41.21	38.92	4.62	32.79	Peak	---	---

Note:

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

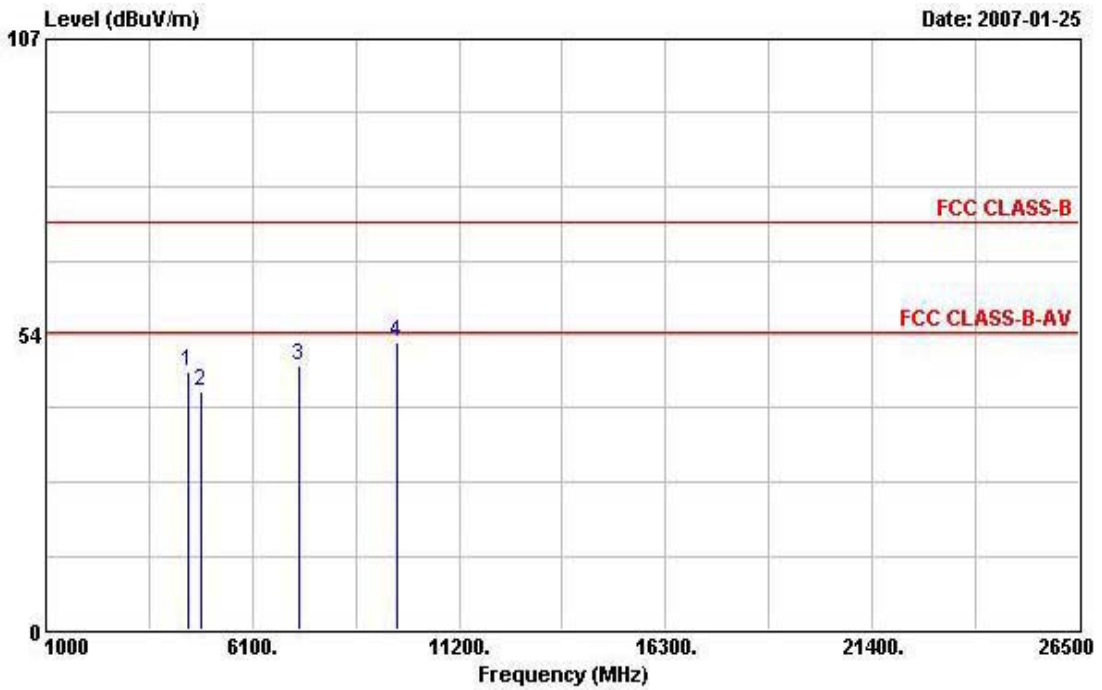
Emission level (dBuV/m) = 20 log Emission level (uV/m).

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



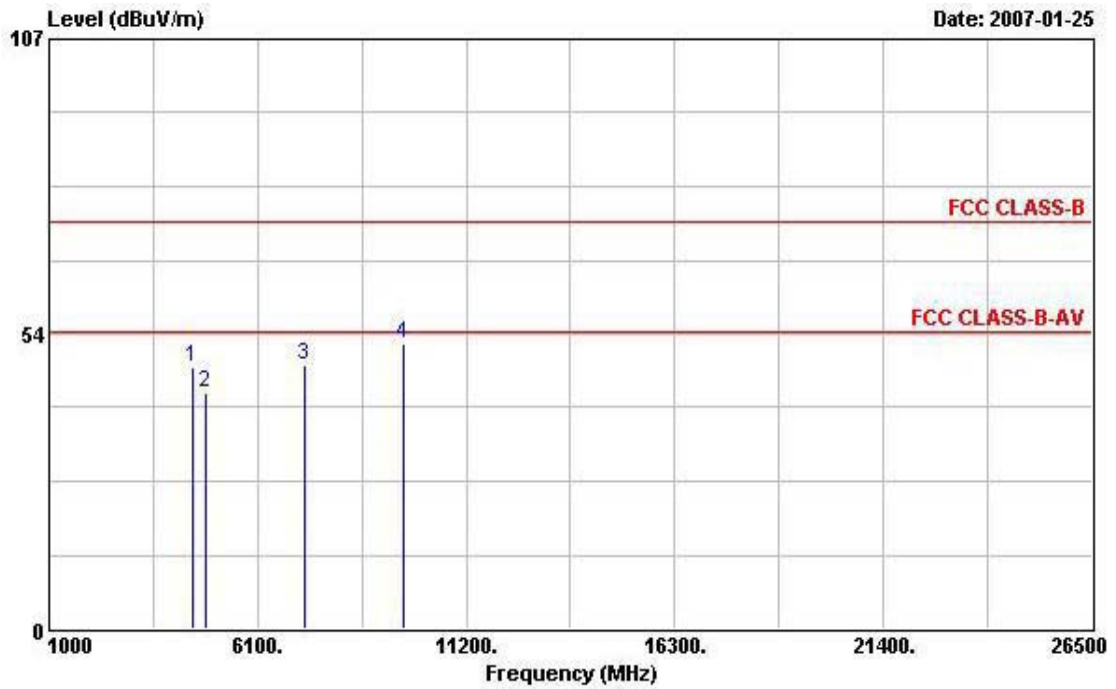
Temperature	22°C	Humidity	56%
Test Engineer	Vic Hsiao	Configurations	Mode 2 / 802.11b CH 1

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	4500.000	46.89	-27.11	74.00	44.37	32.50	2.50	32.48	Peak	---	---
2	4824.000	43.33	-30.67	74.00	39.91	33.09	2.65	32.32	Peak	---	---
3	7236.000	47.84	-26.16	74.00	41.11	35.98	3.32	32.57	Peak	---	---
4	9648.000	52.12	-21.88	74.00	41.80	38.58	4.54	32.80	Peak	---	---

Vertical

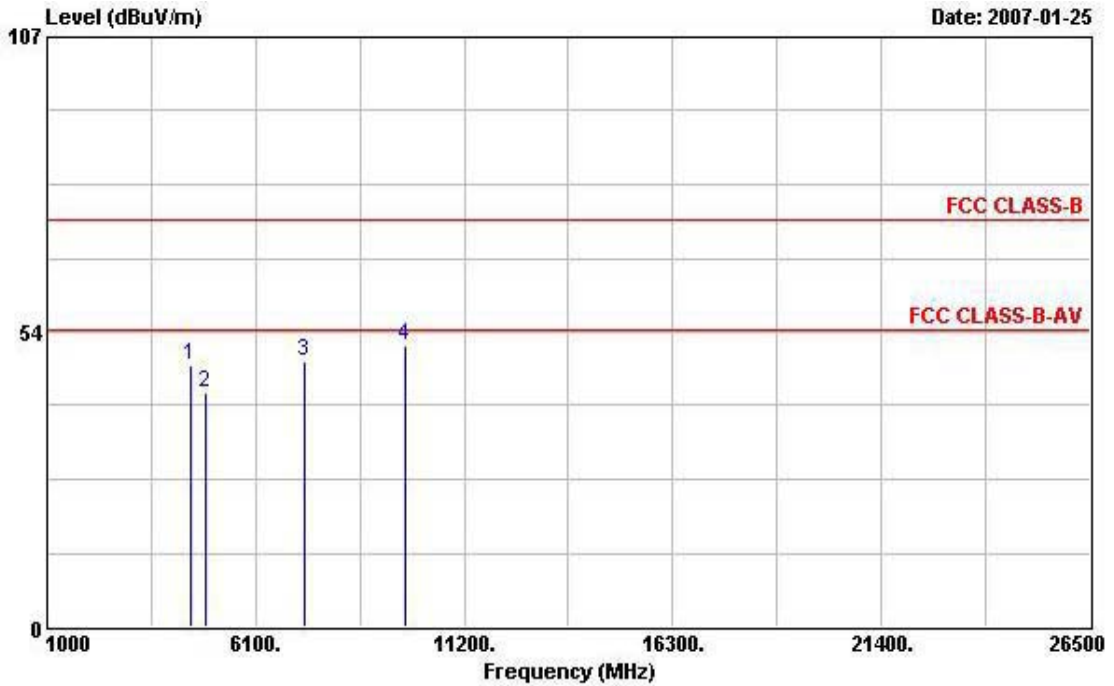


	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	4500.000	47.39	-26.61	74.00	44.87	32.50	2.50	32.48	Peak	---	---
2	4824.000	42.95	-31.05	74.00	39.53	33.09	2.65	32.32	Peak	---	---
3	7236.000	47.62	-26.38	74.00	40.89	35.98	3.32	32.57	Peak	---	---
4	9648.000	51.79	-22.21	74.00	41.47	38.58	4.54	32.80	Peak	---	---



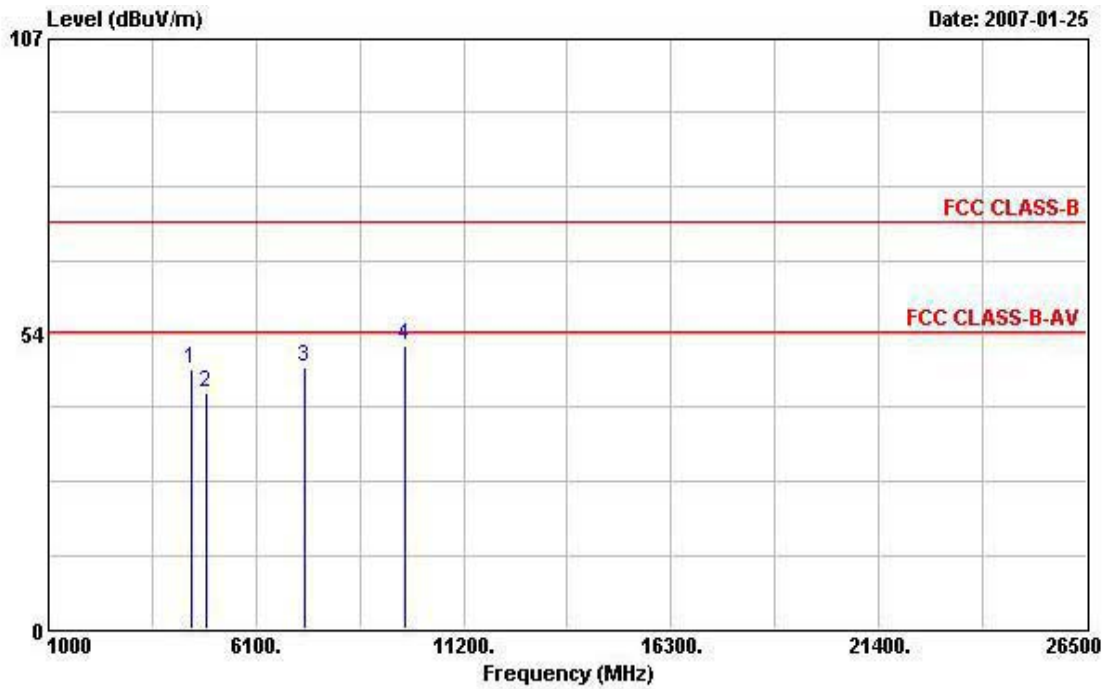
Temperature	22°C	Humidity	56%
Test Engineer	Vic Hsiao	Configurations	Mode 2 / 802.11b CH 6

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	4500.000	47.55	-26.45	74.00	45.03	32.50	2.50	32.48	Peak	---	---
2	4874.000	42.62	-31.38	74.00	39.05	33.18	2.69	32.30	Peak	---	---
3	7311.000	48.01	-25.99	74.00	41.08	36.14	3.38	32.59	Peak	---	---
4	9748.000	50.95	-23.05	74.00	40.38	38.77	4.59	32.79	Peak	---	---

Vertical

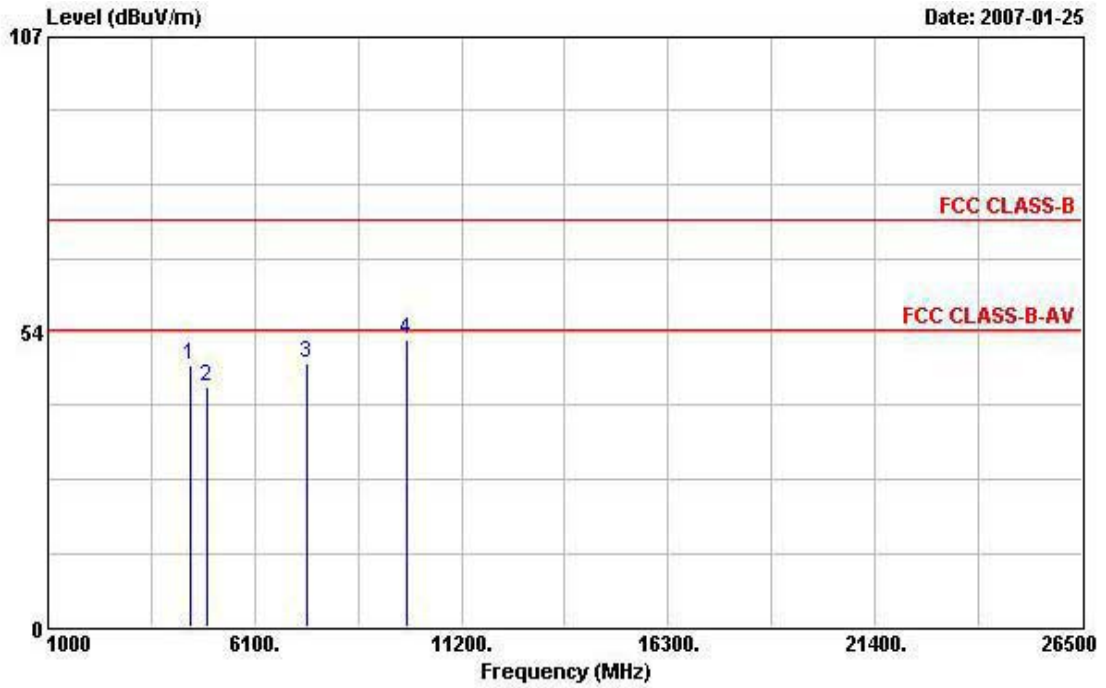


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	4500.000	46.91	-27.09	74.00	44.39	32.50	2.50	32.48	Peak	---	---
2	4874.000	42.64	-31.36	74.00	39.07	33.18	2.69	32.30	Peak	---	---
3	7311.000	47.61	-26.39	74.00	40.68	36.14	3.38	32.59	Peak	---	---
4	9748.000	51.24	-22.76	74.00	40.67	38.77	4.59	32.79	Peak	---	---



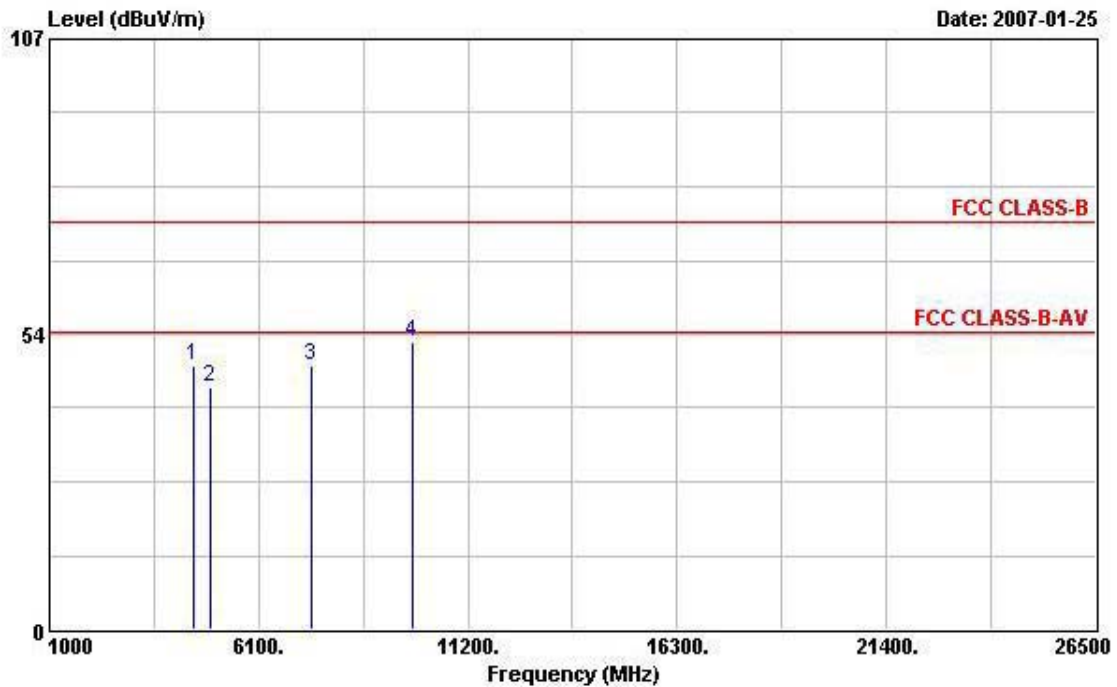
Temperature	22°C	Humidity	56%
Test Engineer	Vic Hsiao	Configurations	Mode 2 / 802.11b CH 11

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	4502.000	47.26	-26.74	74.00	44.74	32.50	2.50	32.48	Peak	---	---
2	4924.000	43.58	-30.42	74.00	39.87	33.28	2.71	32.28	Peak	---	---
3	7386.000	47.87	-26.13	74.00	40.71	36.35	3.44	32.63	Peak	---	---
4	9848.000	51.99	-22.01	74.00	41.24	38.92	4.62	32.79	Peak	---	---

Vertical

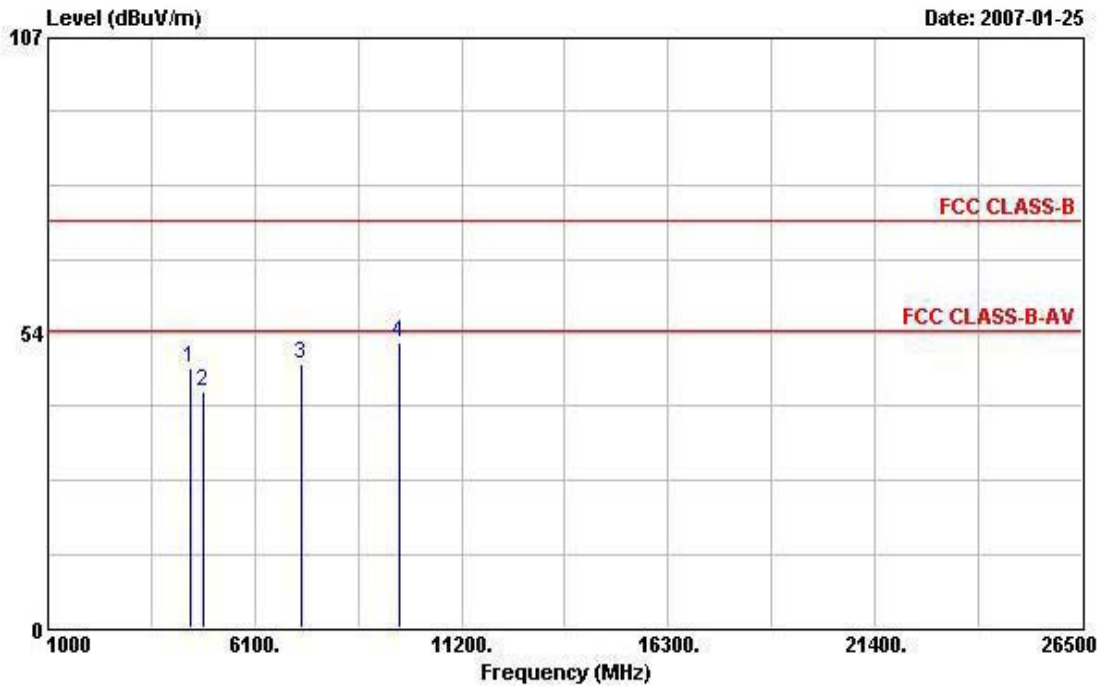


	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	4500.000	47.64	-26.36	74.00	45.12	32.50	2.50	32.48	Peak	---	---
2	4924.000	43.71	-30.29	74.00	40.00	33.28	2.71	32.28	Peak	---	---
3	7386.000	47.78	-26.22	74.00	40.62	36.35	3.44	32.63	Peak	---	---
4	9848.000	51.90	-22.10	74.00	41.15	38.92	4.62	32.79	Peak	---	---



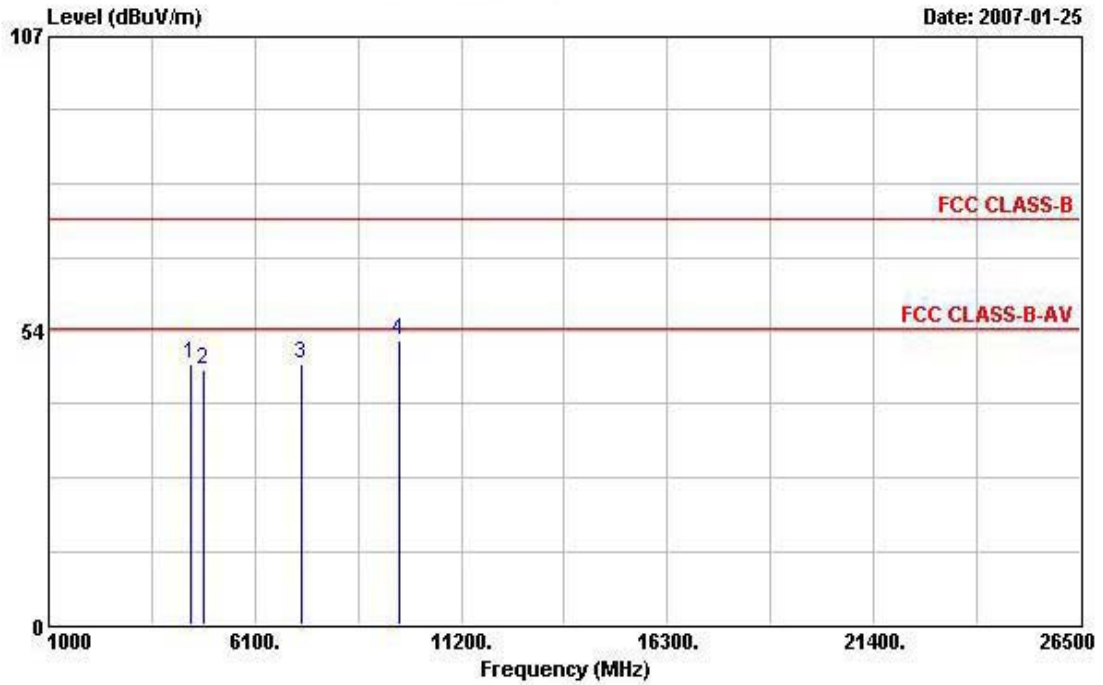
Temperature	22°C	Humidity	56%
Test Engineer	Vic Hsiao	Configurations	Mode 2 / 802.11g CH 1

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	4500.000	47.23	-26.77	74.00	44.71	32.50	2.50	32.48	Peak	---	---
2	4824.000	42.91	-31.09	74.00	39.49	33.09	2.65	32.32	Peak	---	---
3	7236.000	47.83	-26.17	74.00	41.10	35.98	3.32	32.57	Peak	---	---
4	9648.000	51.58	-22.42	74.00	41.26	38.58	4.54	32.80	Peak	---	---

Vertical

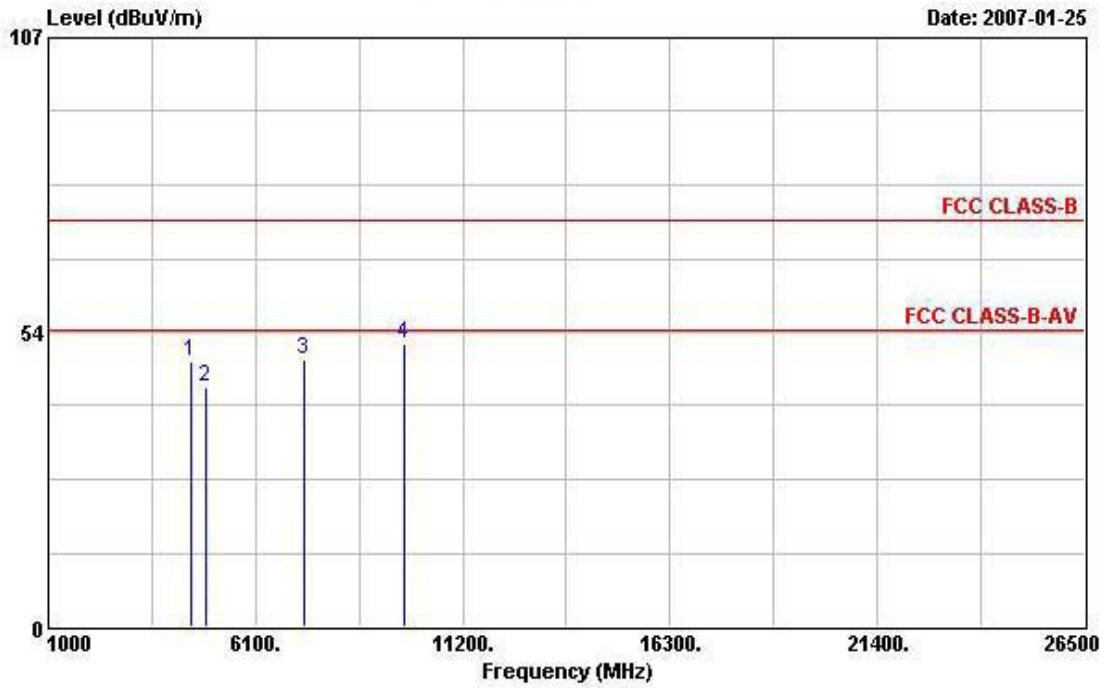


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamplifier	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	4500.000	47.47	-26.53	74.00	44.95	32.50	2.50	32.48	Peak	---	---
2	4824.000	46.39	-27.61	74.00	42.97	33.09	2.65	32.32	Peak	---	---
3	7236.000	47.29	-26.71	74.00	40.56	35.98	3.32	32.57	Peak	---	---
4	9648.000	51.65	-22.35	74.00	41.33	38.58	4.54	32.80	Peak	---	---



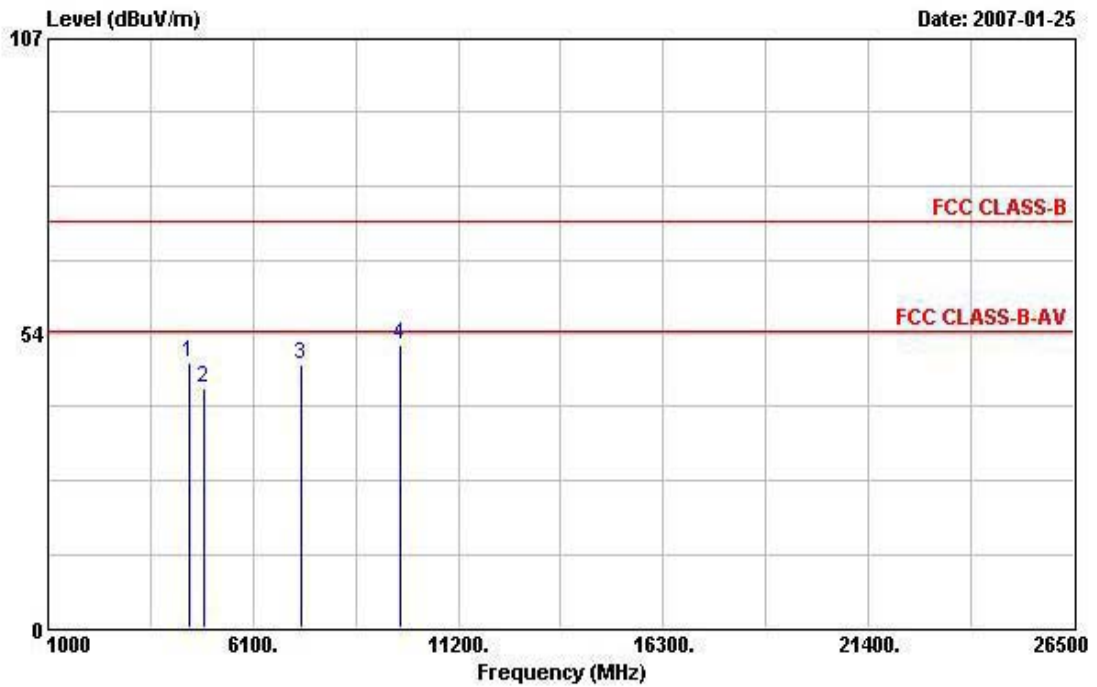
Temperature	22°C	Humidity	56%
Test Engineer	Vic Hsiao	Configurations	Mode 2 / 802.11g CH 6

Horizontal



	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Remark	Ant	Table
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor		Pos	Pos
			dB	dBuV/m	dBuV	dB	dB		cm	deg
1	4500.000	48.14	-25.86	74.00	45.62	32.50	2.50	32.48 Peak	---	---
2	4874.000	43.40	-30.60	74.00	39.83	33.18	2.69	32.30 Peak	---	---
3	7311.000	48.35	-25.65	74.00	41.42	36.14	3.38	32.59 Peak	---	---
4	9748.000	51.38	-22.62	74.00	40.81	38.77	4.59	32.79 Peak	---	---

Vertical

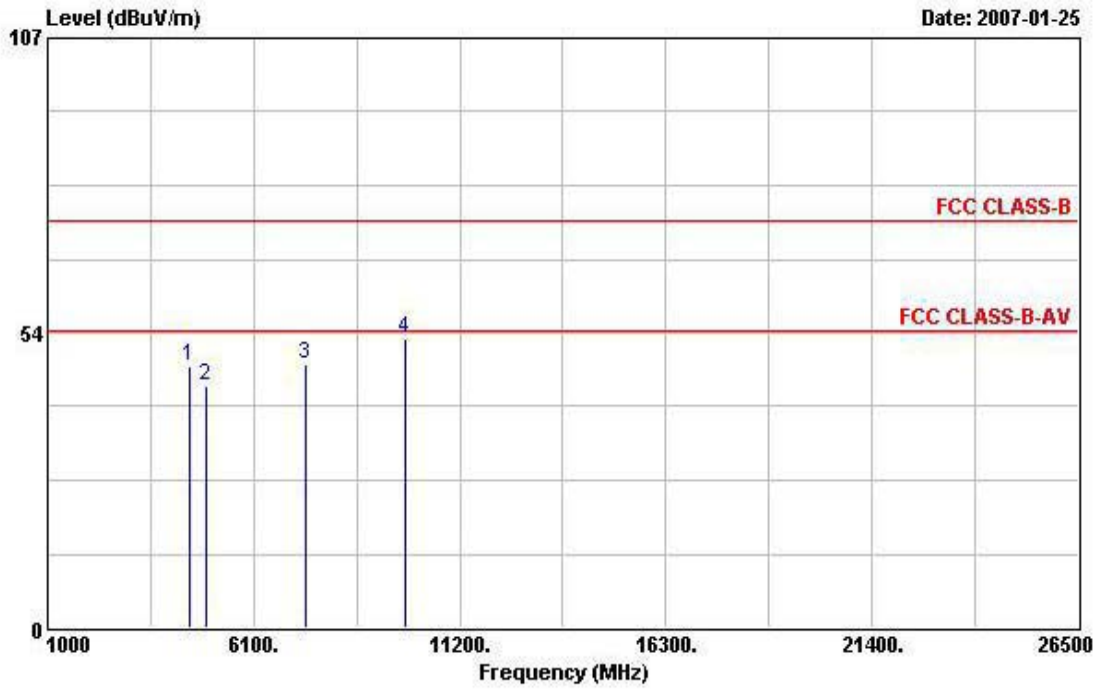


	Freq	Level	Over Limit	Limit Line	Read Antenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBUV/m	dB	dBUV/m	dBuV	dB/m	dB	dB		cm	deg
1	4500.000	47.99	-26.01	74.00	45.47	32.50	2.50	32.48	Peak	---	---
2	4874.000	43.41	-30.59	74.00	39.84	33.18	2.69	32.30	Peak	---	---
3	7311.000	47.72	-26.28	74.00	40.79	36.14	3.38	32.59	Peak	---	---
4	9748.000	51.40	-22.60	74.00	40.83	38.77	4.59	32.79	Peak	---	---



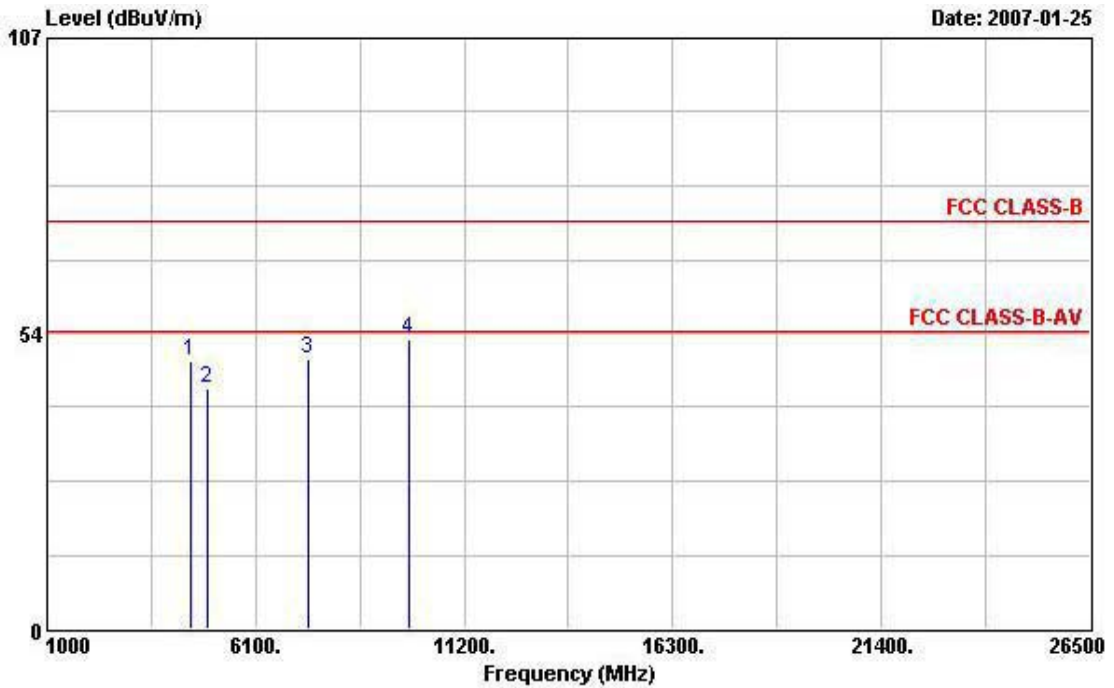
Temperature	22°C	Humidity	56%
Test Engineer	Vic Hsiao	Configurations	Mode 2 / 802.11g CH 11

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	4500.000	47.53	-26.47	74.00	45.01	32.50	2.50	32.48	Peak	---	---
2	4924.000	43.71	-30.29	74.00	40.00	33.28	2.71	32.28	Peak	---	---
3	7386.000	47.95	-26.05	74.00	40.79	36.35	3.44	32.63	Peak	---	---
4	9848.000	52.43	-21.57	74.00	41.68	38.92	4.62	32.79	Peak	---	---

Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	4500.000	48.42	-25.58	74.00	45.90	32.50	2.50	32.48	Peak	---	---
2	4924.000	43.67	-30.33	74.00	39.96	33.28	2.71	32.28	Peak	---	---
3	7386.000	48.88	-25.12	74.00	41.72	36.35	3.44	32.63	Peak	---	---
4	9848.000	52.40	-21.60	74.00	41.65	38.92	4.62	32.79	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.