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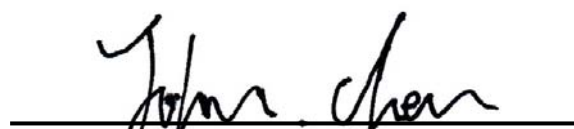
Part 15 C Measurement Report



Report No.	: 0802FR13
Applicant	: Innovation Wireless Inc.
Trade Mark	: CADEN
Product Model	: MS6030
Product Type	: Wi-Fi IP Phone
FCC ID	: V25-MS6030
Dates of Test	: Feb. 27, 2008 ~Mar. 05 ~ 07, 2008
Test Specification	: Part 15 Subpart C (15.247)
Location of Test Lab.	: Chang-an Lab.

1. The test operations have to be performed with cautious behavior, the test results are as attached.
2. The test results are under chamber environment of A Test Lab Techno Corp. A Test Lab Techno Corp. does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples.
3. The measurement report has to be written approval of A Test Lab Techno Corp. It may only be reproduced or published in full.


Country Huang 20080311
Measurement Center Manager


John Cheng 20080311
Testing Engineer



CERTIFICATION

We here by verify that:

The test data, data evaluation, test procedures and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4:2001. All test were conducted by *A Test Lab Techno Corp. No.140-1, Chang-an St., Bade City, Tao-Yuan County 334, Taiwan (R.O.C.)* Also, we attest to the accuracy of each.

We further submit that the energy emitted by the sample EUT tested as described in the report is in compliance with Class B radiated and conducted emission limit of FCC Rules Part 15 Subpart C (15.247).

EUT : Wi-Fi IP Phone

Applicant : Innovation Wireless Inc.

4F-1, No.81 Shuei-li Rd., Hsinchu 30059, Taiwan, R.O.C.

Model No : MS6030

FCC ID : V25-MS6030

Approved by : 
Country Huang Prepared by : 
John Cheng

A Test Lab Techno Corp.

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Contents

1. GENERAL	5
1.1 Description of Equipment under Test (EUT)	5
1.2 Introduction	6
1.3 Summary of Tests	6
1.4 Description of Support Equipment	7
1.5 Configuration of System under Test	8
1.6 Test Procedure	9
1.7 General Test Condition	9
1.8 Test Modes	9
2. Conducted Emissions Requirements	10
2.1 General & Setup:	10
2.2 Test Equipment List:	10
2.3 Test Configuration:	11
2.4 Test condition:	12
2.5 Conducted Emissions Limits:	12
2.6 Measurement Data of Conducted Emissions:	13
3. Radiated Emissions Requirements	15
3.1 Final radiation measurements were made on a three-meter:	15
3.2 Test Equipment List:	17
3.3 Test Configuration:	18
3.4 Test condition:	20
3.5 Radiated Emissions Limits:	20
3.6 Measurement Data of Radiated Emissions:	21
4. Maximum Conducted Output Power Requirements	27
4.1 Test Condition & Setup:	27
4.2 Test Instruments Configuration:	27
4.3 Test Equipment List:	28
4.4 Test Result:	28
4.5 Test Graphs	29
5. Minimum 6dB RF Bandwidth Requirements	33
5.1 Test Condition & Setup:	33
5.2 Test Instruments Configuration:	33
5.3 Test Equipment List:	33
5.4 Test Result:	34
5.5 Test Graphs	35
6. Maximum Power Density Requirements	39
6.1 Test Condition & Setup:	39
6.2 Test Instruments Configuration:	39
6.3 Test Equipment List:	40
6.4 Test Result:	40
6.5 Test Graphs	41



Contents

7. Out of Band Conducted Emissions Requirements	45
7.1 Test Condition & Setup:	45
7.2 Test Instruments Configuration:	45
7.3 Test Equipment List:	46
7.4 Test Result:	46
7.5 Test Graphs	47
8. Band Edges Requirements	49
8.1 Test Condition & Setup:	49
8.2 Test Instruments Configuration:	49
8.3 Test Equipment List:	50
8.4 Test Result:	51
9. Antenna Requirements	53
9.1 Standard Applicable:	53
9.2 Antenna Connector Construction	53
Appendix A - EUT Test SETUP	54



1. GENERAL

1.1 Description of Equipment under Test (EUT)

Applicant :

Innovation Wireless Inc.
4F-1, No.81 Shuei-li Rd., Hsinchu 30059, Taiwan, R.O.C.

Manufacturer : Innovation Wireless Inc.
Manufacturer Address : 4F-1, No.81 Shuei-li Rd., Hsinchu 30059, Taiwan, R.O.C.
Product Type : Wi-Fi IP Phone
Trade Name : CADEN
Model Name : MS6030
FCC ID : V25-MS6030
Input Rating : 100 - 240VAC / 0.15A (AC Adapter)
Frequency of Channel : See Table 1
Type of Modulation : Direct Sequence Spread Spectrum
Type of Antenna : Internal Type

During testing the EUT was operated at Tx or Rx mode for each emission measured. This was done in order to ensure that maximum emission levels were attained.

802.11b/g Mode	
CH	Frequency
1	2412
2	2417
3	2422
4	2427
5	2432
6	2437
7	2442
8	2447
9	2452
10	2457
11	2462

Table 1. WLAN Frequency of Each Channel (Working Frequency)



1.2 Introduction

The following measurement report is submitted on behalf of **Innovation Wireless Inc.** In support of a Class B Digital Device certification in accordance with Part2 Subpart J and Part 15 Subpart A And B&C of the Commission's and Regulations.

1.3 Summary of Tests

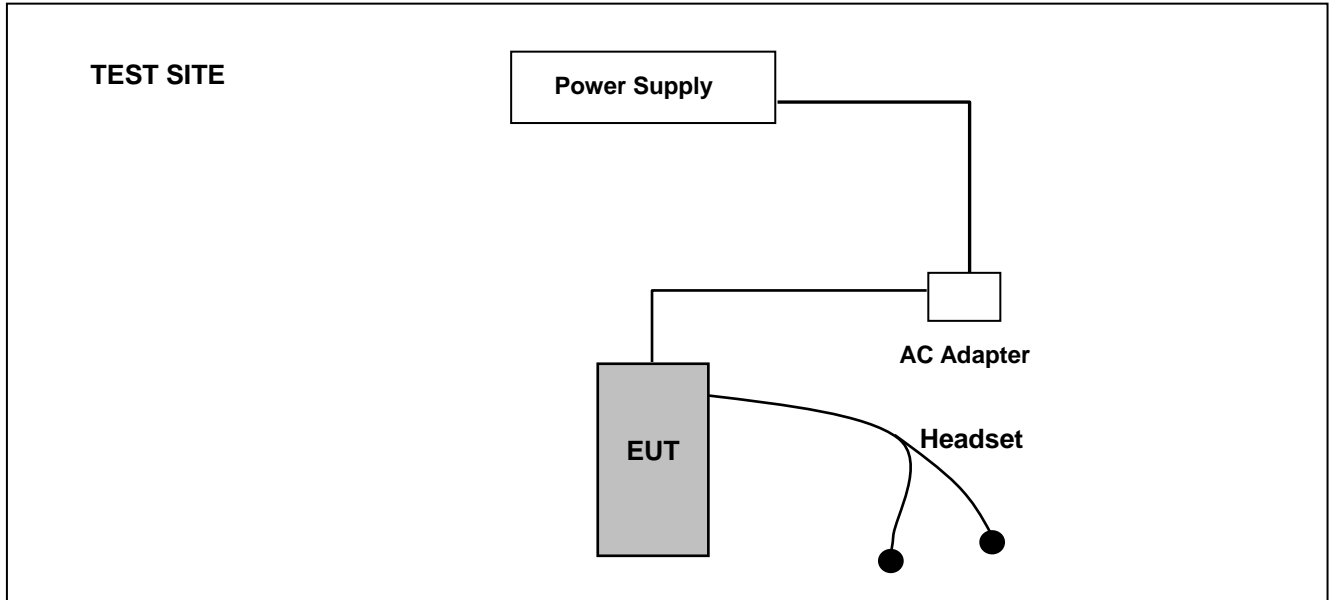
47 CFR Part 15 Subpart C			
Reference	Test	Results	Note
15.107	AC Power Conducted Emission	PASS	
15.247(c)	Transmitter Radiated Emissions	PASS	
15.247(b)	Max. Output Power	PASS	
15.247(a)(2)	6dB RF Bandwidth	PASS	
15.247(d)	Max. Power Density	PASS	
15.247(c)	Out of Band Conducted Spurious Emission	PASS	
15.247(c)	Band Edge Measurement	PASS	
15.203	Antenna Requirement	PASS	



1.4 Description of Support Equipment

Computer	: DELL
Model No.	: PP49L
Serial No.	: UF230 A03
FCC ID	: E2KWM3945ABC
Keyboard	: DELL
Model No.	: SK-8115
Serial No.	: MY-0DJ325-71619-7113-1366
FCC ID	: FCC DOC
Monitor	: DELL
Model No.	: E177FPc
Serial No.	: CN-0FJ179-64180-6BT-4LYS
FCC ID	: FCC DOC
Mouse	: DELL
Model No.	: M056U0A
Serial No.	: F1F026E1
FCC ID	: FCC DOC
Printer	: EPSON
Model No.	: C60
Serial No.	: DR3K041323
FCC ID	: FCC DOC

1.5 Configuration of System under Test



During EMI testing (LINK) the EUT (Wi-Fi IP Phone)'s Power port was connected to AC Adapter. EUT (Wi-Fi IP Phone)'s ear port connected to headset.



1.6 Test Procedure

All measurements contained in this report were performed according to the techniques described in Measurement procedure ANSI C63.4-2003 "Measurement of un-Intentional Radiators."

1.7 General Test Condition

The conditions under which the EUT operates were varied to determine their effect on the equipment's emission characteristics. The final configuration of the test system and the mode of operation used during these tests were chosen as that which produced the highest emission levels. However, only those conditions which the EUT was considered likely to encounter in normal use were investigated. The system's radiated and conducted emissions were investigated while the computer alternately transferred data to the EUT as well as to the monitor and printer. Using a test program which sent a continuous data and transferred data to and from the EUT was proven to worst case emissions. The system's physical layout and cabling was randomly arranged to ensure that maximum emission levels were attained.

1.8 Test Modes

Preliminary tests were performed in different data rate to find the worst case. The data rate shown in the table below is the worst-case rate (Blue color). 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.

802.11b		
Channel	Data Rate (Mbps)	Power (dBm)
1	1	21.63
	5.5	21.58
	11	21.54
6	1	21.94
	5.5	21.89
	11	21.82
11	1	21.76
	5.5	21.54
	11	21.48

802.11g		
Channel	Data Rate (Mbps)	Power (dBm)
1	6	20.13
	24	19.96
	54	19.85
6	6	19.94
	24	19.83
	54	19.81
11	6	19.56
	24	19.45
	54	19.39



2. Conducted Emissions Requirements

2.1 General & Setup:

The EUT was setup to ANSI C63.4, 2003; tested to DTS test procedure of Oct 2002 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The power line conducted emission measurements were performed in a shielded enclosure. The EUT was assembled on a wooden table which is 80 centimeters high, was placed 40 centimeters from the back wall and at least 1 meter from the sidewall.

Power was fed to the EUT from the public utility power grid through a line filter and EMCO Model 3162/2 SH Line Impedance Stabilization Networks (LISN). The LISN housing, measuring instrumentation case, ground plane, etc., were electrically bonded together at the same RF potential. The Spectrum analyzer was connected to the AC line through an isolation transformer. The 50-ohm output of the LISN was connected to the spectrum analyzer directly. Conducted emission levels were in the CISPR quasi-peak detection mode. The analyzer's 6 dB bandwidth was set to 9 KHz. No post-detector video filter was used.

The spectrum was scanned from 150 KHz to 30 MHz. The physical arrangement of the test system and associated cabling was varied (within the scope of arrangements likely to be encountered in actual use) to determine the effect on the unit's emanations in amplitude and frequency. All spurious emission frequencies were observed. The highest emission amplitudes relative to the appropriate limit were measured and have been recorded in paragraph 2.6.

2.2 Test Equipment List:

Describe	Manufacturer	Model	Serial Number	Calibration	
				Cal. Date	Due Date
Spectrum Analyzer	Advantest	R3132	160300103	Mar. 23, 2007	Mar. 23, 2008
Test Receiver	R&S	ESCI	100367	May. 23, 2007	May. 23, 2008
LISN	EMCO	3816/2 SH	00060110	Jun. 06, 2007	Jun. 06, 2008
LISN	EMCO	3816/2 SH	00060111	Jun. 13, 2007	Jun. 13, 2008
Transient Limiter	ELECTRO-METRICS	EM-7600	777	Jun. 26, 2007	Jun. 26, 2008

2.3 Test Configuration:

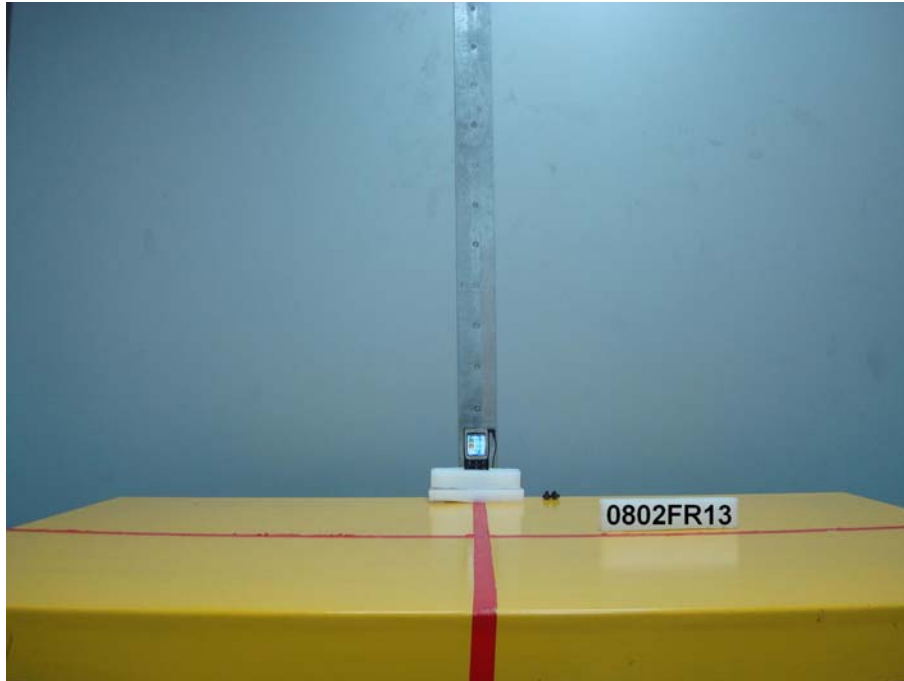


Figure 1. Front View of the Test Configuration



Figure 2. Rear View of the Test Configuration



2.4 Test condition:

EUT tested in accordance with the specifications given by the Manufacturer, and exercised in the most unfavorable manner.

2.5 Conducted Emissions Limits:

Frequency range (MHz)	Limits (dBuV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5.0	56	46
5.0 to 30	60	50



2.6 Measurement Data of Conducted Emissions:

2.6.1 Conducted Emissions (Subpart C)

The following table show a summary of the highest emissions of power line conducted emissions to the HOT and NATURAL conductor of the EUT power.

Applicant : Innovation Wireless Inc.
Model No : MS6030
EUT : Wi-Fi IP Phone
Test Mode : AC Adapter _ 802.11b CH Low & Middle & High
Test Date : 02/27/2008

Please refer to next pager of detail testing data.

Notes:

1. L1: One end & Ground L2: The other end & Ground
2. Height of table on which the EUT was placed: 0.8 m.
3. The Quasi-Peak Value have already met the Average Value Limit showed on above limits.
4. The above test results are obtained under the normal condition.



Conducted Emission Measurement

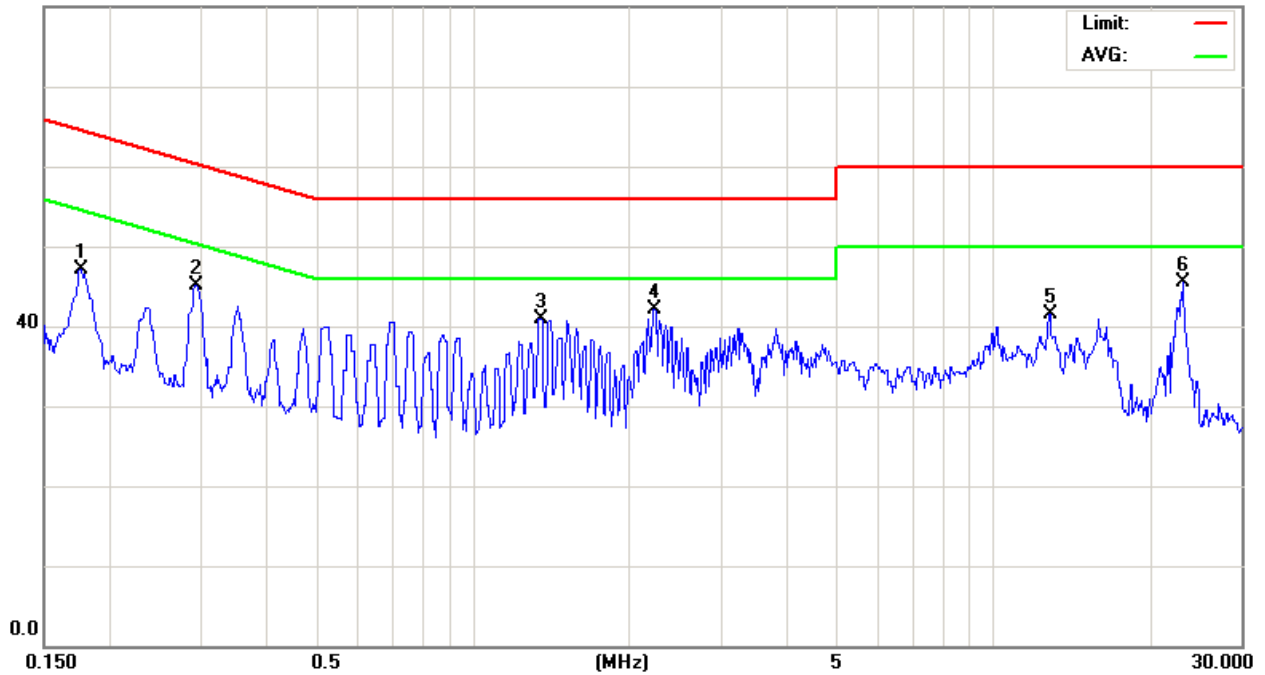
File :MS6030(11b)

Data :#1

Date: 2008/2/27

Time:

80.0 dBuV



Site site#1

Phase: **L1**

Temperature: 26 °C

Limit: CISPR22 Class B Conduction(QP)

Power: AC 110V/60Hz

Humidity: 55 %

EUT:

M/N: MS6030

Mode: WIFI(11b)

Note: CH01

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1759	37.38	9.74	47.12	64.67	-17.55	peak	
2		0.2928	35.36	9.76	45.12	60.44	-15.32	peak	
3		1.3460	31.12	9.82	40.94	56.00	-15.06	peak	
4	*	2.2280	32.16	9.88	42.04	56.00	-13.96	peak	
5		12.8000	31.26	10.18	41.44	60.00	-18.56	peak	
6		23.1000	35.11	10.38	45.49	60.00	-14.51	peak	

*:Maximum data x:Over limit !:over margin

●Reference Only



Conducted Emission Measurement

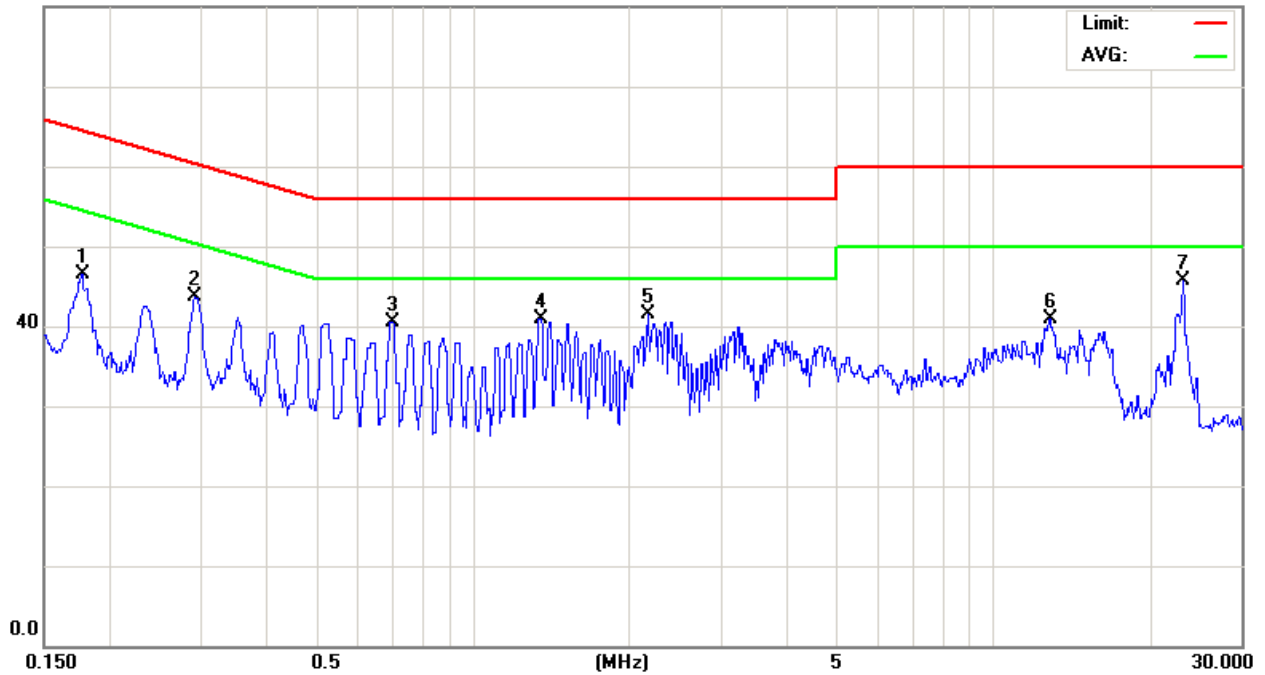
File:MS6030(11b)

Data :#2

Date: 2008/2/27

Time:

80.0 dBuV



Site site#1

Phase: **L2**

Temperature: 26 °C

Limit: CISPR22 Class B Conduction(QP)

Power: AC 110V/60Hz

Humidity: 55 %

EUT:

M/N: MS6030

Mode: WIFI(11b)

Note: CH01

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1773	36.80	9.74	46.54	64.61	-18.07	peak	
2		0.2921	33.96	9.76	43.72	60.46	-16.74	peak	
3		0.6980	30.67	9.79	40.46	56.00	-15.54	peak	
4		1.3460	31.17	9.82	40.99	56.00	-15.01	peak	
5		2.1650	31.66	9.88	41.54	56.00	-14.46	peak	
6		12.8000	30.77	10.18	40.95	60.00	-19.05	peak	
7	*	23.1000	35.34	10.38	45.72	60.00	-14.28	peak	

*:Maximum data x:Over limit !:over margin

●Reference Only



Conducted Emission Measurement

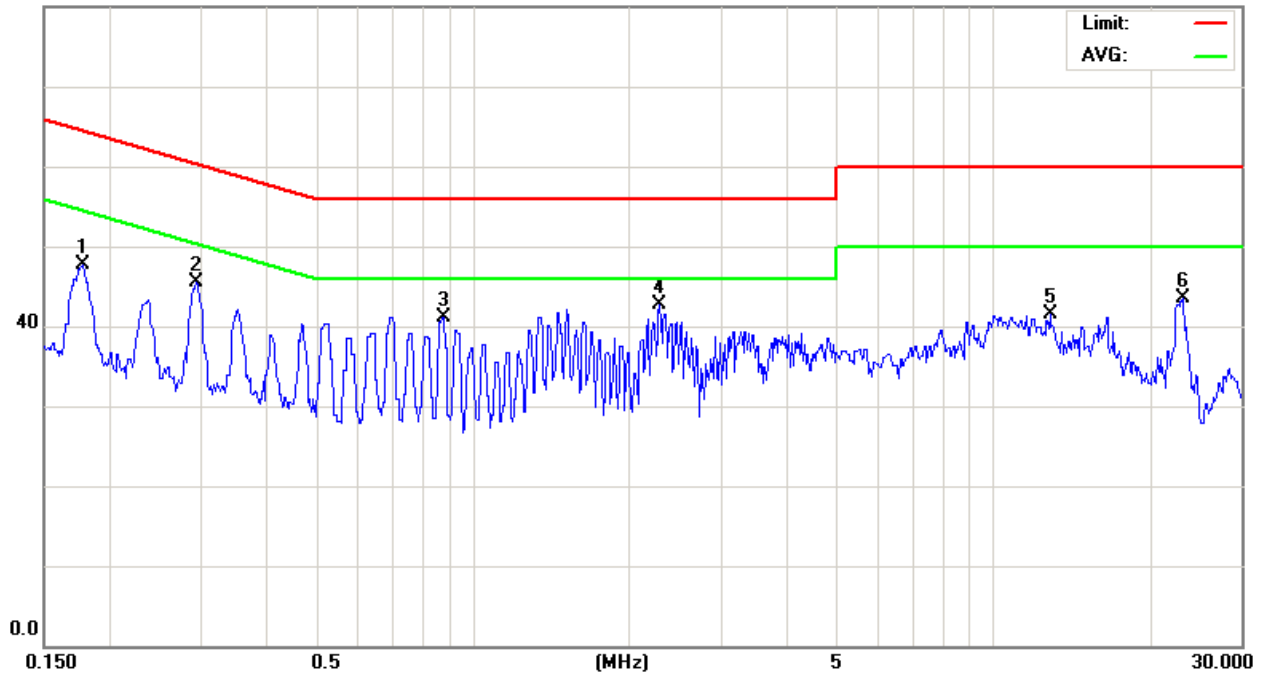
File:MS6030(11b)

Data :#3

Date: 2008/2/27

Time:

80.0 dBuV



Site site#1

Phase: **L1**

Temperature: 26 °C

Limit: CISPR22 Class B Conduction(QP)

Power: AC 110V/60Hz

Humidity: 55 %

EUT:

M/N: MS6030

Mode: WIFI(11b)

Note: CH06

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1780	37.94	9.74	47.68	64.57	-16.89	peak	
2		0.2935	35.80	9.76	45.56	60.42	-14.86	peak	
3		0.8780	31.34	9.80	41.14	56.00	-14.86	peak	
4	*	2.2820	32.80	9.87	42.67	56.00	-13.33	peak	
5		12.8500	31.25	10.18	41.43	60.00	-18.57	peak	
6		23.1000	33.21	10.38	43.59	60.00	-16.41	peak	

*:Maximum data x:Over limit !:over margin

●Reference Only



Conducted Emission Measurement

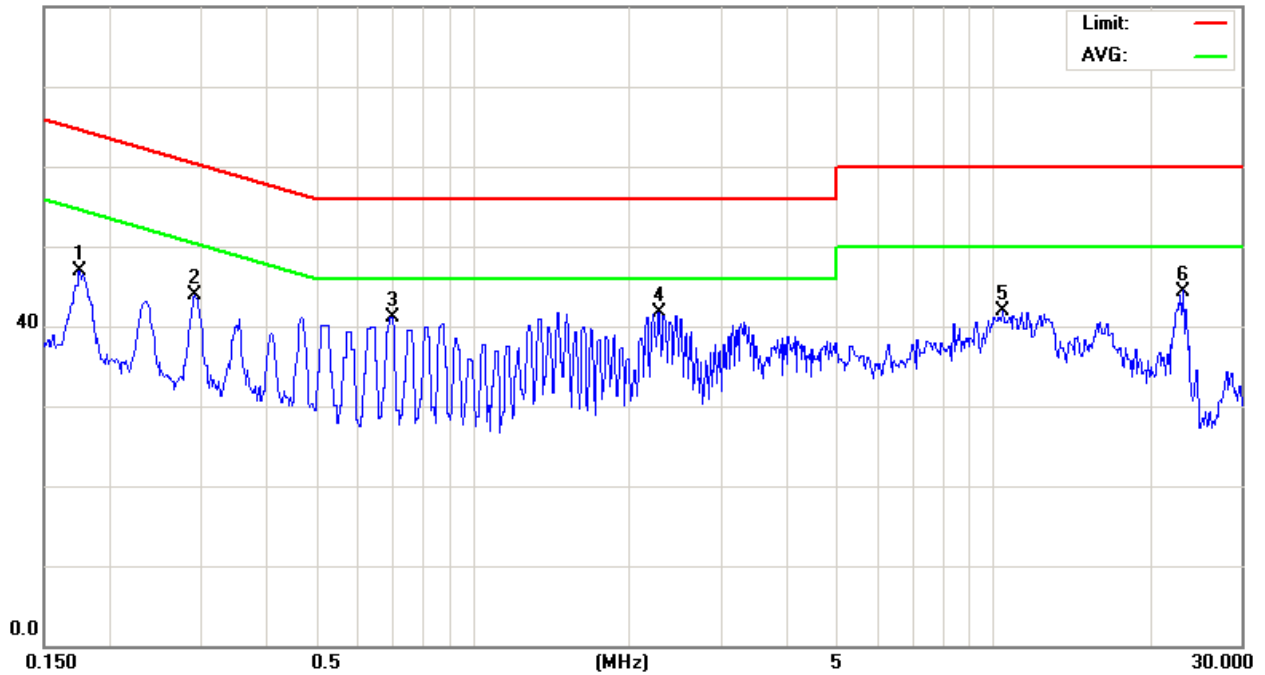
File:MS6030(11b)

Data :#4

Date: 2008/2/27

Time:

80.0 dBuV



Site site#1

Phase: **L2**

Temperature: 26 °C

Limit: CISPR22 Class B Conduction(QP)

Power: AC 110V/60Hz

Humidity: 55 %

EUT:

M/N: MS6030

Mode: WIFI(11b)

Note: CH06

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1751	37.20	9.74	46.94	64.71	-17.77	peak	
2		0.2920	34.05	9.76	43.81	60.46	-16.65	peak	
3		0.6980	31.40	9.79	41.19	56.00	-14.81	peak	
4	*	2.2819	31.90	9.87	41.77	56.00	-14.23	peak	
5		10.4500	31.80	10.05	41.85	60.00	-18.15	peak	
6		23.1000	34.02	10.38	44.40	60.00	-15.60	peak	

*:Maximum data x:Over limit !:over margin

●Reference Only



Conducted Emission Measurement

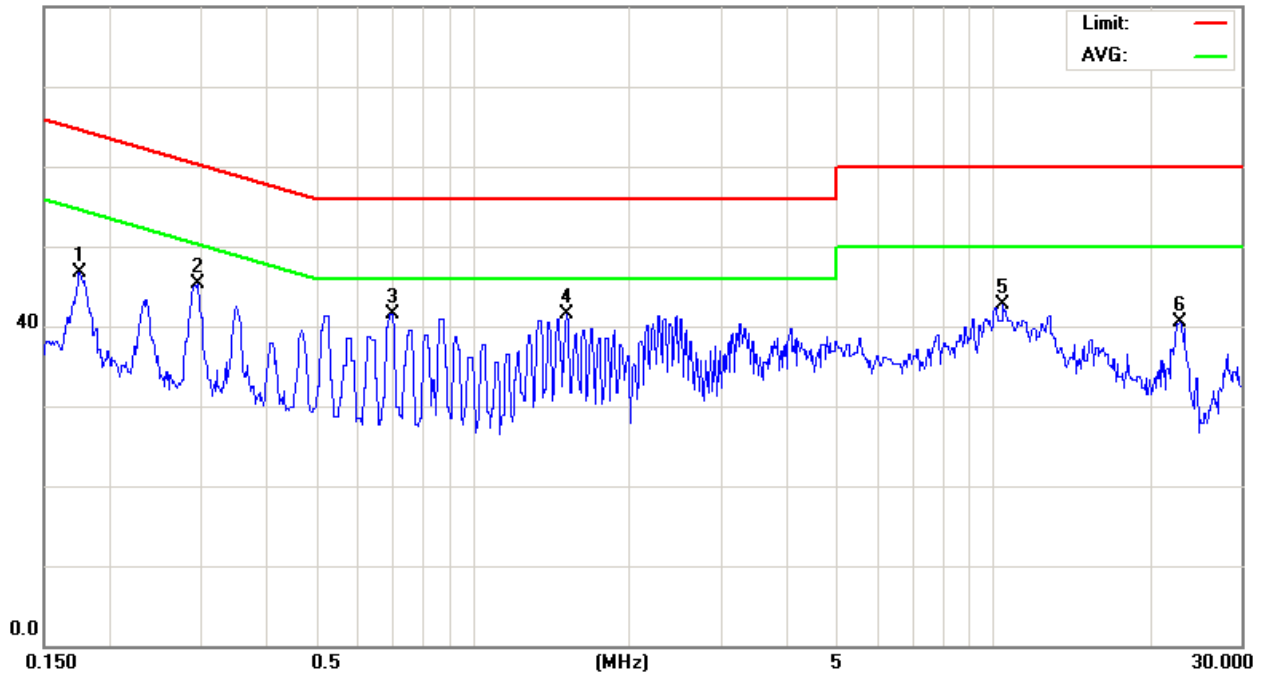
File:MS6030(11b)

Data :#5

Date: 2008/2/27

Time:

80.0 dBuV



Site site#1

Phase: **L1**

Temperature: 26 °C

Limit: CISPR22 Class B Conduction(QP)

Power: AC 110V/60Hz

Humidity: 55 %

EUT:

M/N: MS6030

Mode: WIFI(11b)

Note: CH11

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1751	36.96	9.74	46.70	64.71	-18.01	peak	
2		0.2970	35.50	9.76	45.26	60.32	-15.06	peak	
3		0.6980	31.67	9.79	41.46	56.00	-14.54	peak	
4	*	1.5170	31.72	9.81	41.53	56.00	-14.47	peak	
5		10.4500	32.59	10.05	42.64	60.00	-17.36	peak	
6		22.8000	30.23	10.34	40.57	60.00	-19.43	peak	

*:Maximum data x:Over limit !:over margin

●Reference Only



Conducted Emission Measurement

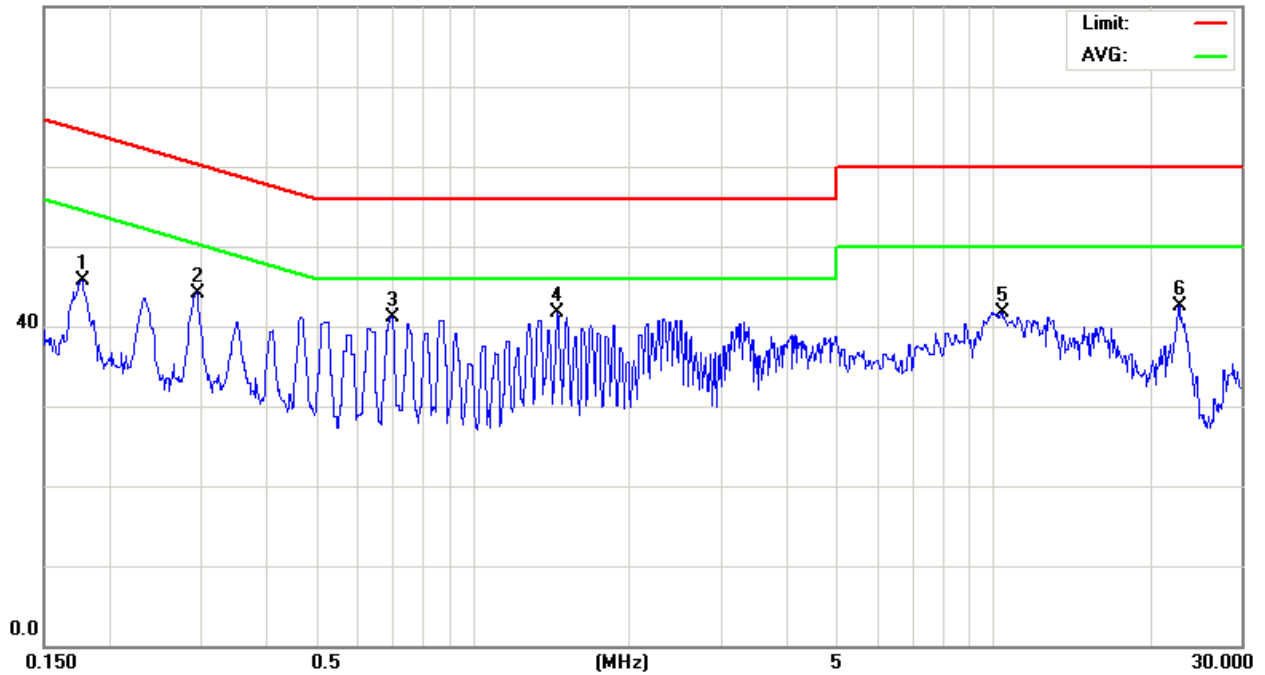
File:MS6030(11b)

Data :#6

Date: 2008/2/27

Time:

80.0 dBuV



Site site#1

Phase: **L2**

Temperature: 26 °C

Limit: CISPR22 Class B Conduction(QP)

Power: AC 110V/60Hz

Humidity: 55 %

EUT:

M/N: MS6030

Mode: WIFI(11b)

Note: CH11

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1773	35.88	9.74	45.62	64.61	-18.99	peak	
2		0.2941	34.30	9.76	44.06	60.41	-16.35	peak	
3		0.6980	31.25	9.79	41.04	56.00	-14.96	peak	
4	*	1.4539	31.86	9.81	41.67	56.00	-14.33	peak	
5		10.3500	31.73	10.06	41.79	60.00	-18.21	peak	
6		22.7000	32.20	10.33	42.53	60.00	-17.47	peak	

*:Maximum data x:Over limit !:over margin

●Reference Only



2.6.2 Conducted Emissions (Subpart C)

The following table show a summary of the highest emissions of power line conducted emissions to the HOT and NATURAL conductor of the EUT power.

Applicant : Innovation Wireless Inc.
Model No : MS6030
EUT : Wi-Fi IP Phone
Test Mode : AC Adapter _ 802.11g CH Low & Middle & High
Test Date : 02/27/2008

Please refer to next pager of detail testing data.

Notes:

1. L1: One end & Ground L2: The other end & Ground
2. Height of table on which the EUT was placed: 0.8 m.
3. The Quasi-Peak Value have already met the Average Value Limit showed on above limits.
4. The above test results are obtained under the normal condition.



Conducted Emission Measurement

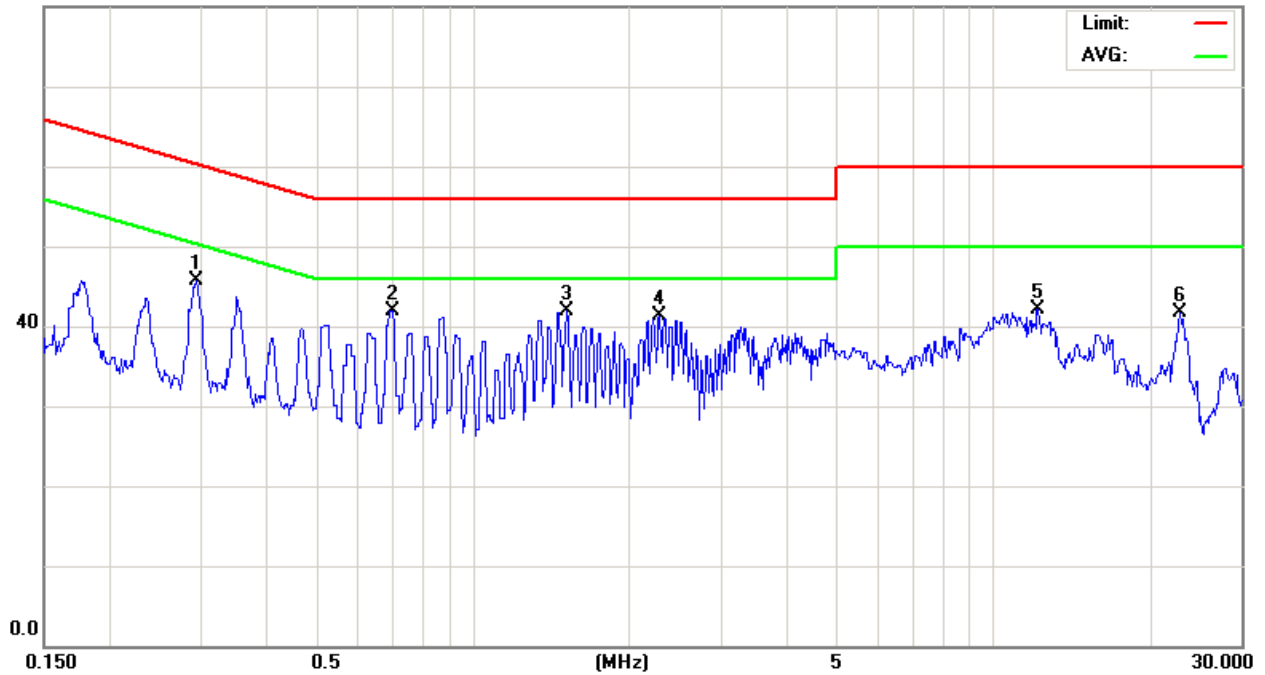
File :MS6030(11g)

Data :#1

Date: 2008/2/27

Time:

80.0 dBuV



Site site#1

Phase: **L1**

Temperature: 26 °C

Limit: CISPR22 Class B Conduction(QP)

Power: AC 110V/60Hz

Humidity: 55 %

EUT:

M/N: MS6030

Mode: WIFI(11g)

Note: CH01

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.2935	35.92	9.76	45.68	60.42	-14.74	peak	
2	*	0.6980	32.10	9.79	41.89	56.00	-14.11	peak	
3		1.5170	32.01	9.81	41.82	56.00	-14.18	peak	
4		2.2820	31.50	9.87	41.37	56.00	-14.63	peak	
5		12.1500	32.02	10.14	42.16	60.00	-17.84	peak	
6		22.8000	31.43	10.34	41.77	60.00	-18.23	peak	

*:Maximum data x:Over limit !:over margin

●Reference Only



Conducted Emission Measurement

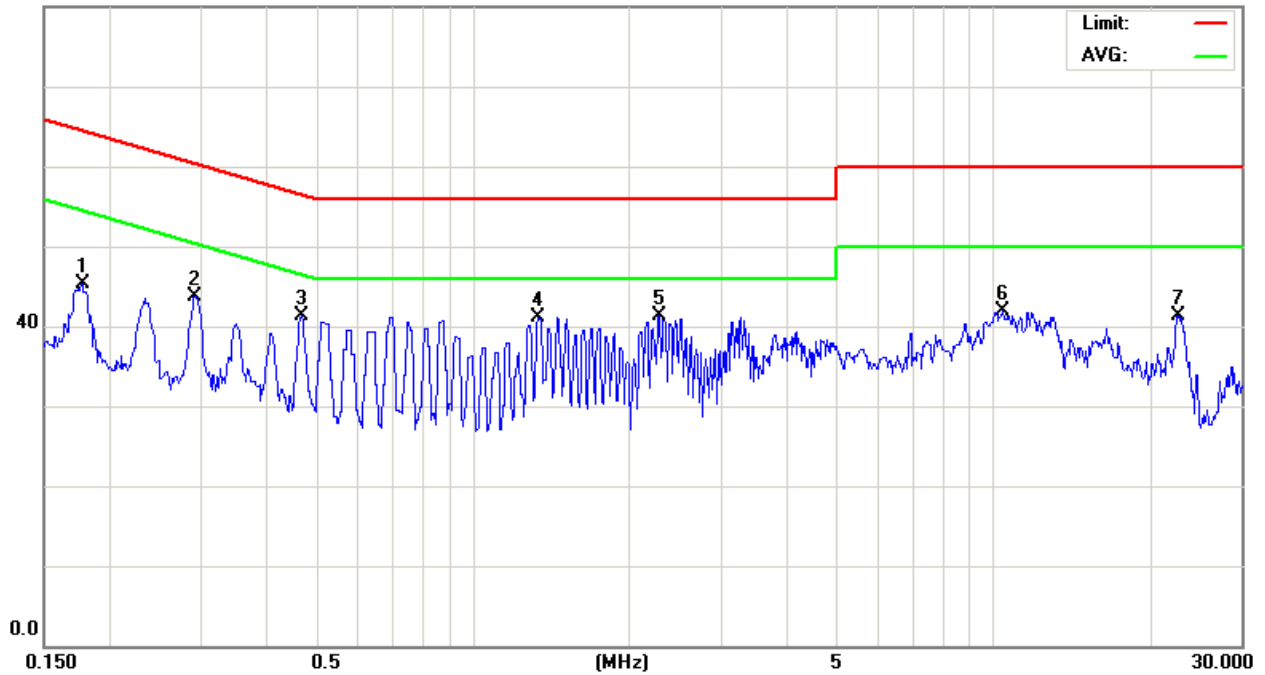
File:MS6030(11g)

Data :#2

Date: 2008/2/27

Time:

80.0 dBuV



Site site#1

Phase: **L2**

Temperature: 26 °C

Limit: CISPR22 Class B Conduction(QP)

Power: AC 110V/60Hz

Humidity: 55 %

EUT:

M/N: MS6030

Mode: WIFI(11g)

Note: CH01

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1773	35.65	9.74	45.39	64.61	-19.22	peak	
2		0.2914	34.03	9.76	43.79	60.48	-16.69	peak	
3		0.4671	31.43	9.78	41.21	56.57	-15.36	peak	
4		1.3370	31.37	9.82	41.19	56.00	-14.81	peak	
5	*	2.2730	31.51	9.87	41.38	56.00	-14.62	peak	
6		10.4000	31.85	10.05	41.90	60.00	-18.10	peak	
7		22.5500	30.99	10.31	41.30	60.00	-18.70	peak	

*:Maximum data x:Over limit !:over margin

●Reference Only



Conducted Emission Measurement

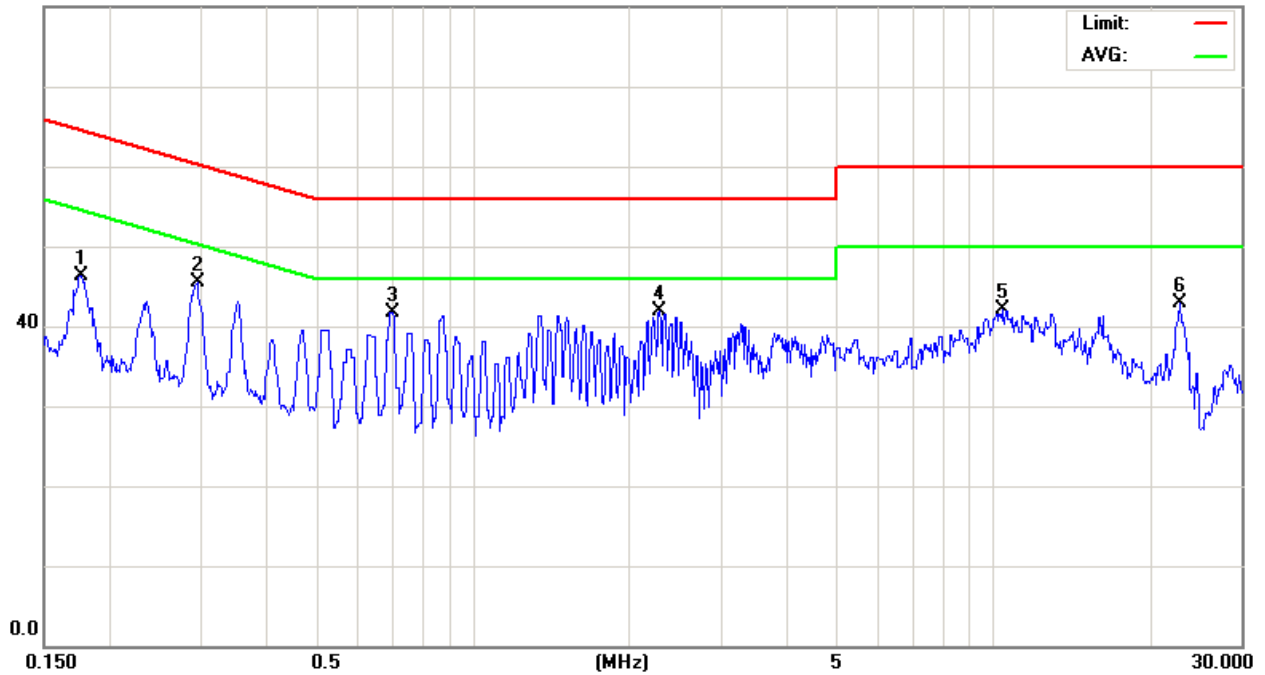
File:MS6030(11g)

Data :#3

Date: 2008/2/27

Time:

80.0 dBuV



Site site#1

Phase: **L1**

Temperature: 26 °C

Limit: CISPR22 Class B Conduction(QP)

Power: AC 110V/60Hz

Humidity: 55 %

EUT:

M/N: MS6030

Mode: WIFI(11g)

Note: CH06

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1759	36.49	9.74	46.23	64.67	-18.44	peak	
2		0.2949	35.75	9.76	45.51	60.38	-14.87	peak	
3		0.6980	32.00	9.79	41.79	56.00	-14.21	peak	
4	*	2.2820	31.95	9.87	41.82	56.00	-14.18	peak	
5		10.4500	32.08	10.05	42.13	60.00	-17.87	peak	
6		22.8000	32.49	10.34	42.83	60.00	-17.17	peak	

*:Maximum data x:Over limit !:over margin

●Reference Only



Conducted Emission Measurement

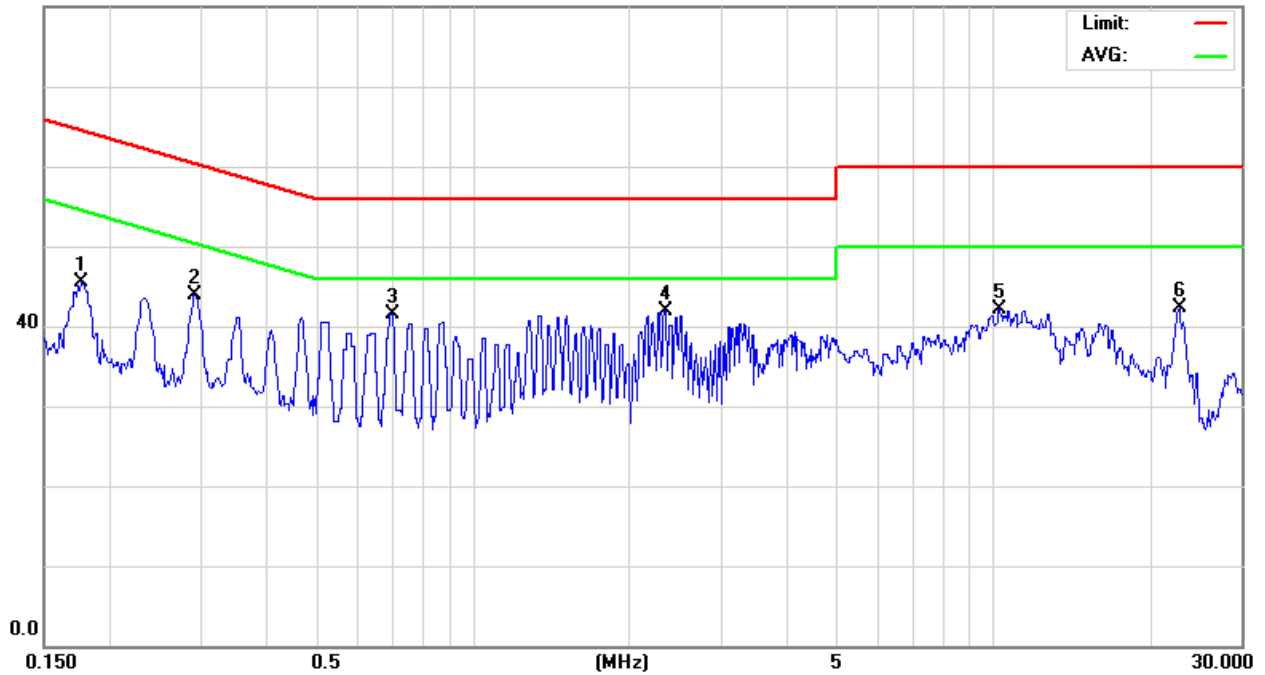
File:MS6030(11g)

Data :#4

Date: 2008/2/27

Time:

80.0 dBuV



Site site#1

Phase: **L2**

Temperature: 26 °C

Limit: CISPR22 Class B Conduction(QP)

Power: AC 110V/60Hz

Humidity: 55 %

EUT:

M/N: MS6030

Mode: WIFI(11g)

Note: CH06

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1766	35.74	9.74	45.48	64.64	-19.16	peak	
2		0.2912	34.22	9.76	43.98	60.49	-16.51	peak	
3		0.6980	31.74	9.79	41.53	56.00	-14.47	peak	
4	*	2.3359	32.10	9.85	41.95	56.00	-14.05	peak	
5		10.2500	32.11	10.06	42.17	60.00	-17.83	peak	
6		22.7500	31.98	10.34	42.32	60.00	-17.68	peak	

*:Maximum data x:Over limit !:over margin

●Reference Only



Conducted Emission Measurement

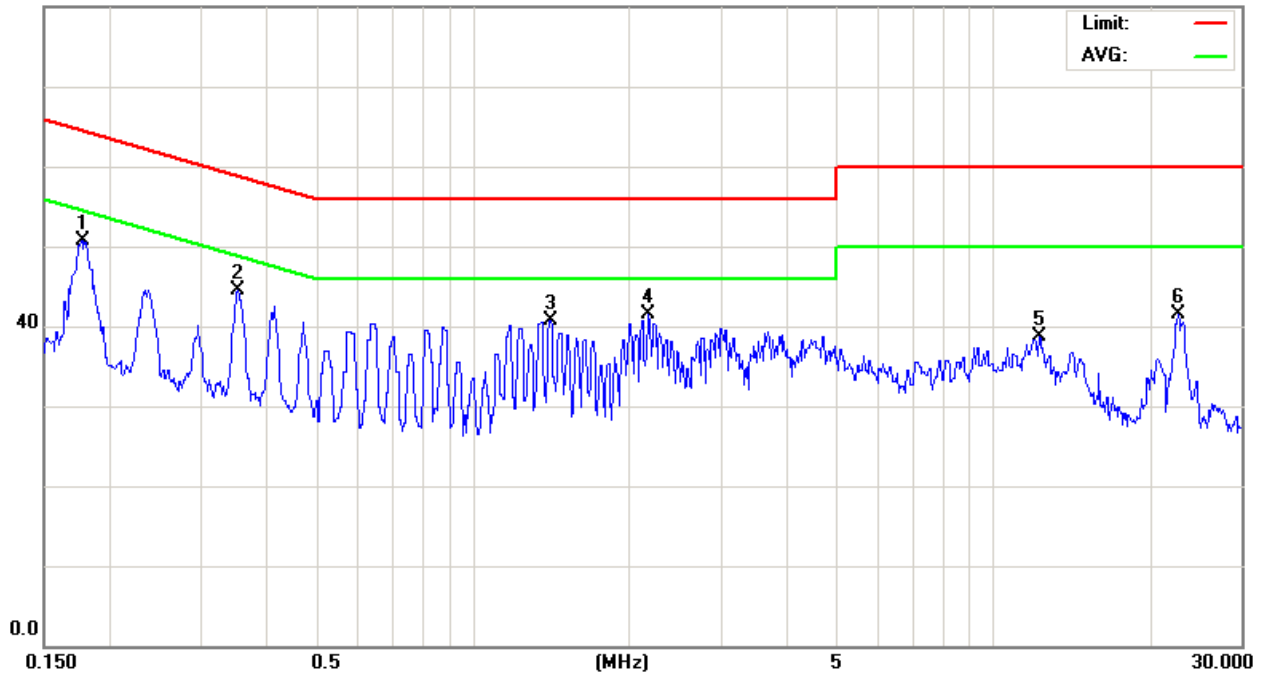
File:MS6030(11g)

Data :#5

Date: 2008/2/27

Time:

80.0 dBuV



Site site#1

Phase: **L1**

Temperature: 26 °C

Limit: CISPR22 Class B Conduction(QP)

Power: AC 110V/60Hz

Humidity: 55 %

EUT:

M/N: MS6030

Mode: WIFI(11g)

Note: CH11

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	*	0.1773	40.91	9.74	50.65	64.61	-13.96	peak	
2		0.3537	34.64	9.78	44.42	58.87	-14.45	peak	
3		1.4089	30.95	9.81	40.76	56.00	-15.24	peak	
4		2.1740	31.70	9.88	41.58	56.00	-14.42	peak	
5		12.2500	28.56	10.15	38.71	60.00	-21.29	peak	
6		22.6000	31.22	10.32	41.54	60.00	-18.46	peak	

*:Maximum data x:Over limit !:over margin

●Reference Only



Conducted Emission Measurement

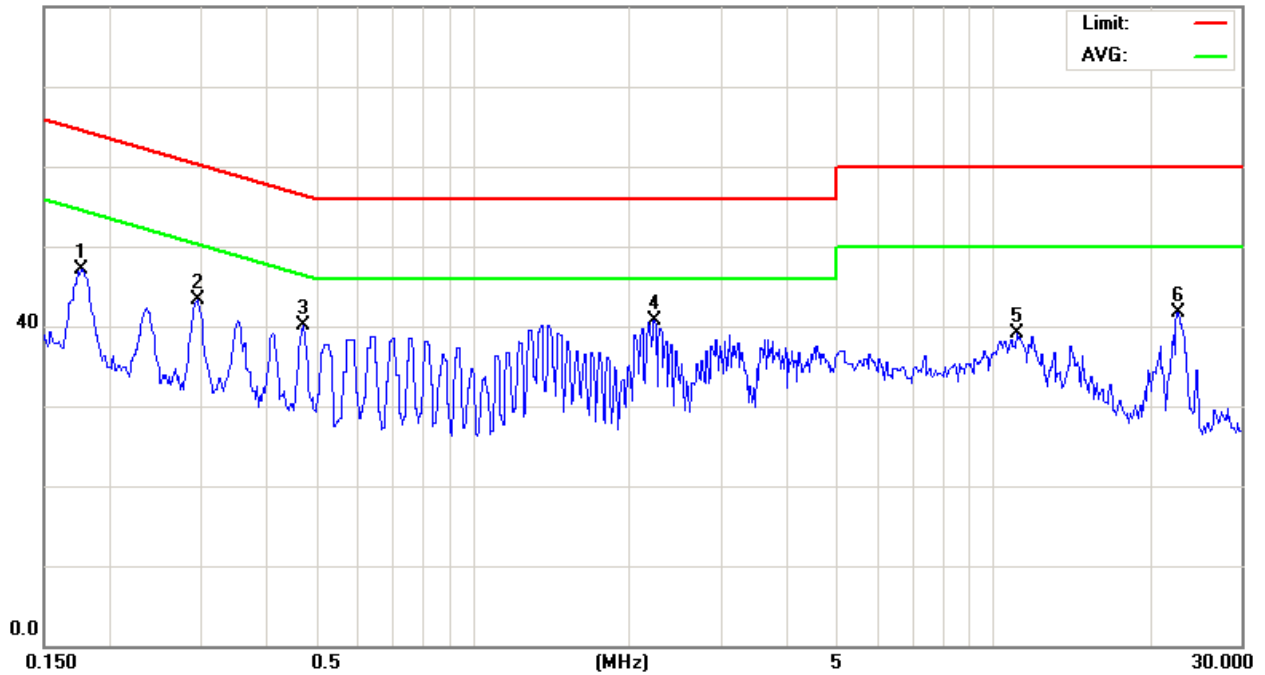
File:MS6030(11g)

Data :#6

Date: 2008/2/27

Time:

80.0 dBuV



Site site#1

Phase: **L2**

Temperature: 26 °C

Limit: CISPR22 Class B Conduction(QP)

Power: AC 110V/60Hz

Humidity: 55 %

EUT:

M/N: MS6030

Mode: WIFI(11g)

Note: CH11

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1766	37.36	9.74	47.10	64.64	-17.54	peak	
2		0.2948	33.59	9.76	43.35	60.39	-17.04	peak	
3		0.4712	30.36	9.78	40.14	56.49	-16.35	peak	
4	*	2.2279	30.85	9.88	40.73	56.00	-15.27	peak	
5		11.1000	29.04	10.11	39.15	60.00	-20.85	peak	
6		22.5500	31.34	10.31	41.65	60.00	-18.35	peak	

*:Maximum data x:Over limit !:over margin

●Reference Only



3. Radiated Emissions Requirements

3.1 Final radiation measurements were made on a three-meter:

The EUT was setup to ANSI C63.4, 2003; tested to DTS test procedure of Oct 2002 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

Final radiation measurements were made on a three-meter, Semi Anechoic Chamber. The EUT system was placed on a nonconductive turntable which is 0.8 meters height, top surface 1.0 x 1.5 meter. The spectrum was examined from 250 MHz to 2.5 GHz in order to cover the whole spectrum below 10th harmonic which could generate from the EUT. During the test, EUT was set to transmit continuously & Measurements spectrum range from 30 MHz to 26.5 GHz is investigated.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak. For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, and then the video bandwidth is set to 1 MHz for peak measurements and 10 Hz for average measurements.

A nonconductive material surrounded the EUT to supporting the EUT for standing on three orthogonal planes. At each condition, the EUT was rotated 360 degrees, and the antenna was raised and lowered from one to four meters to find the maximum emission levels. Measurements were taken using both horizontal and vertical antenna polarization.

SCHWARZBECK MESS-ELEKTRONIK Biconilog Antenna (model VULB9163) at 3 Meter and the SCHWARZBECK Double Ridged Guide Antenna (model BBHA9120D&9170) was used in frequencies 1 – 26.5 GHz at a distance of 1 meter. All test results were extrapolated to equivalent signal at 3 meters utilizing an inverse linear distance extrapolation Factor (20dB/decade).



For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission 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.

Appropriate preamplifiers were used for improving sensitivity and precautions were taken to avoid overloading or desensitizing the spectrum analyzer. No post – detector video filters were used in the test.

The spectrum analyzer's 6 dB bandwidth was set to 1 MHz, and the analyzer was operated in the peak detection mode, for frequencies both below and up 1 GHz. The average levels were obtained by subtracting the duty cycle correction factor from the peak readings.

The following procedures were used to convert the emission levels measured in decibels referenced to 1 microvolt (dBuV) into field intensity in micro volts per meter (uV/m).

The actual field intensity in decibels referenced to 1 microvolt in to field intensity in micro volts per meter (dBuV/m).

The actual field intensity in referenced to 1 microvolt per meter (dBuV/m) is determined by algebraically adding the measured reading in dBuV, the antenna factor (dB), and cable loss (dB) and Subtracting the gain of preamplifier (dB) is auto calculate in spectrum analyzer.

$$(1) \text{ Amplitude (dBuV/m) = FI (dBuV) + AF (dBuV) + CL (dBuV) - Gain (dB)}$$

FI= Reading of the field intensity.

AF= Antenna factor.

CL= Cable loss.

P.S Amplitude is auto calculate in spectrum analyzer.

$$(2) \text{ Actual Amplitude (dBuV/m) = Amplitude (dBuV) - Dis(dB)}$$

The FCC specified emission limits were calculated according the EUT operating frequency and by following linear interpolation equations:

(a) For fundamental frequency :

Transmitter Output < +30dBm

(b) For spurious frequency :

Spurious emission limits = fundamental emission limit /10



3.2 Test Equipment List:

Describe	Manufacturer	Model	Serial Number	Calibration	
				Cal. Date	Due Date
Spectrum Analyzer	Agilent	E4408B	MY45107753	May. 28, 2007	May. 28, 2008
Pre Amplifier	Agilent	8449B	3008A02237	May. 28, 2007	May. 28, 2008
Pre Amplifier	Agilent	8447D	2944A10961	Jun. 09, 2007	Jun. 09, 2008
Test Receiver	R&S	ESCI	100367	May. 23, 2007	May. 23, 2008
Biconilog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	9163-270	Jun. 26, 2007	Jun. 26, 2008
Horn Antenna	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	9120D-550	Jun. 26, 2007	Jun. 26, 2008
Horn Antenna	SCHWARZBECK MESS-ELEKTRONIK	BBHA9170	9170-320	Jun. 09, 2007	Jun. 09, 2008
Horn Antenna	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120E	0899	Jun. 26, 2007	Jun. 26, 2008

3.3 Test Configuration:



Figure 3. Front View of the Test Configuration



Figure 4. Rear View of the Test Configuration



Figure 5. Front View of the Test Configuration



Figure 6. Rear View of the Test Configuration



3.4 Test condition:

EUT tested in accordance with the specifications given by the manufacturer, and exercised in the most unfavorable manner.

3.5 Radiated Emissions Limits:

Frequency range (MHz)	Peak(dBuV)
30 to 88	40
88 to 216	43.5
216 to 960	46
Above 960	54



3.6 Measurement Data of Radiated Emissions:

3.6.1 Open Field Radiated Emissions (Subpart C)

The highest peak values of radiated emissions from the EUT at various antenna heights, antenna polarization, EUT orientation, etc. are recorded on the following.

Applicant : Innovation Wireless Inc.
Model No : MS6030
EUT : Wi-Fi IP Phone
Test Mode : AC Adapter _ 802.11b CH1 2412.000 (Local Frequency: 2412.000 MHz)
Test Date : 03/05~06/2008

Please refer to next pager of detail testing data.

Notes:

1. Margin= Amplitude - Limits
2. Distance of Measurement: 3 Meter (30-1000MHz) & (1-10GHz), 1 Meter (10-26.5GHz)
3. Height of table for EUT placed: 0.8 Meter.
4. ANT= Antenna height.
5. Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor
(Auto calculate in spectrum analyzer)
6. The EUT was worst case on X axis after pretest on X & Y & Z axis setting.
7. The testing data only show below 18GHz's data because measure data above 18GHz was only ambient noise.
8. All frequencies from 30MHz to 26.5GHz have been tested



Radiated Emission Measurement

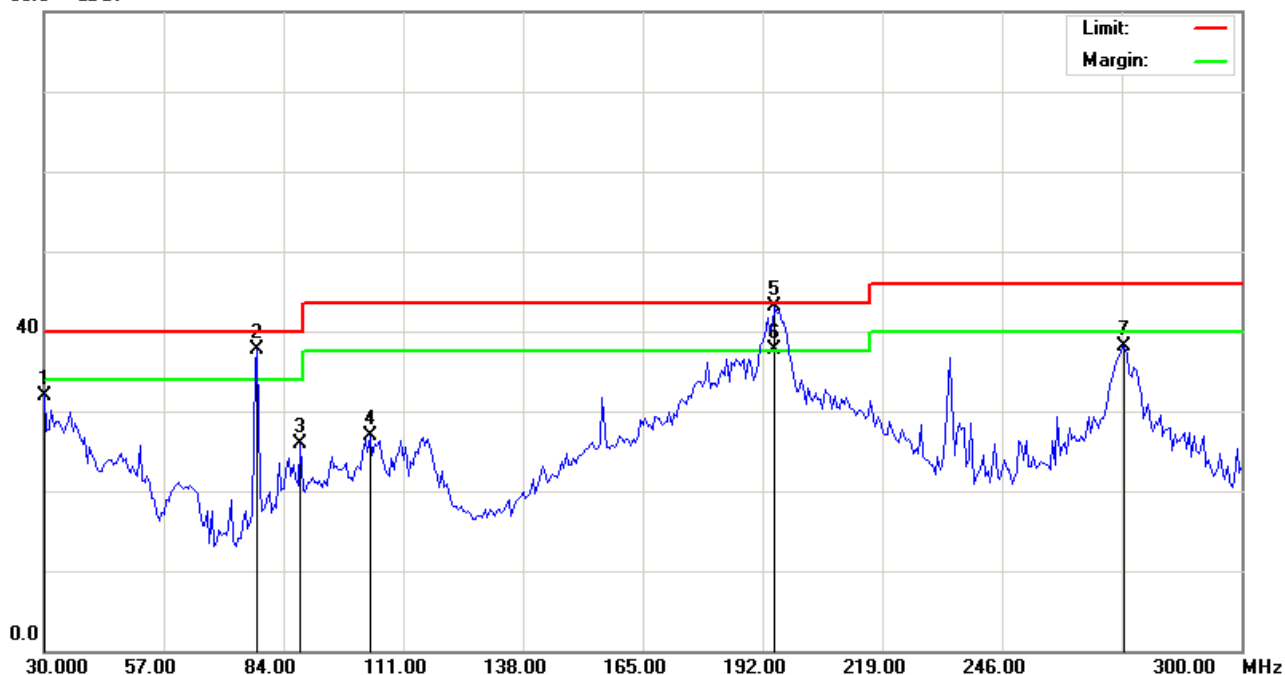
File :MS6030(WIFI,11b)

Data :#1

Date: 2008-3-5

Time:

80.0 dBuV



Site Polarization: **Vertical** Temperature: 22 °C
Limit: FCC Class B 3M Radiation Power: Humidity: 60 %
EUT: Distance: 3m
M/N: MS6030
Mode: WIFI(11b)
Note: CH01,換耳機,接充電器,手機(2)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		30.0000	45.49	-13.49	32.00	40.00	-8.00	peak		
2	!	78.0600	54.58	-16.79	37.79	40.00	-2.21	peak		
3		87.7800	39.84	-13.87	25.97	40.00	-14.03	peak		
4		103.4400	38.80	-11.98	26.82	43.50	-16.68	peak		
5	*	194.7000	56.25	-13.12	43.13	43.50	-0.37	peak		
6	!	194.7000	50.74	-13.12	37.62	43.50	-5.88	QP		
7		273.5400	48.94	-10.83	38.11	46.00	-7.89	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

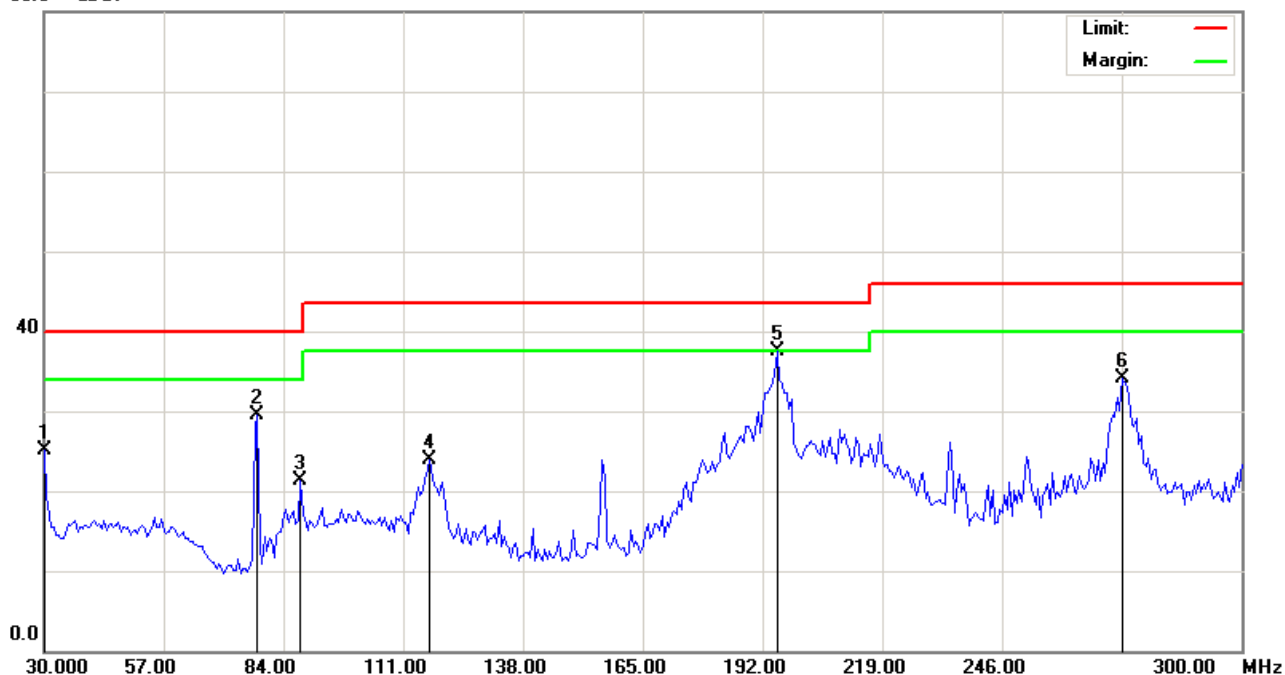
File :MS6030(WIFI,11b)

Data :#3

Date: 2008-3-5

Time:

80.0 dBuV



Site: Polarization: **Horizontal** Temperature: 22 °C
Limit: FCC Class B 3M Radiation Power: Humidity: 60 %
EUT: Distance: 3m
M/N: MS6030
Mode: WIFI(11b)
Note: CH01,換耳機,接充電器,手機(2)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		30.0000	38.58	-13.49	25.09	40.00	-14.91	peak		
2		78.0600	46.38	-16.79	29.59	40.00	-10.41	peak		
3		87.7800	35.18	-13.87	21.31	40.00	-18.69	peak		
4		116.9400	37.63	-13.68	23.95	43.50	-19.55	peak		
5	*	195.2400	50.57	-13.09	37.48	43.50	-6.02	peak		
6		273.0000	44.87	-10.85	34.02	46.00	-11.98	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

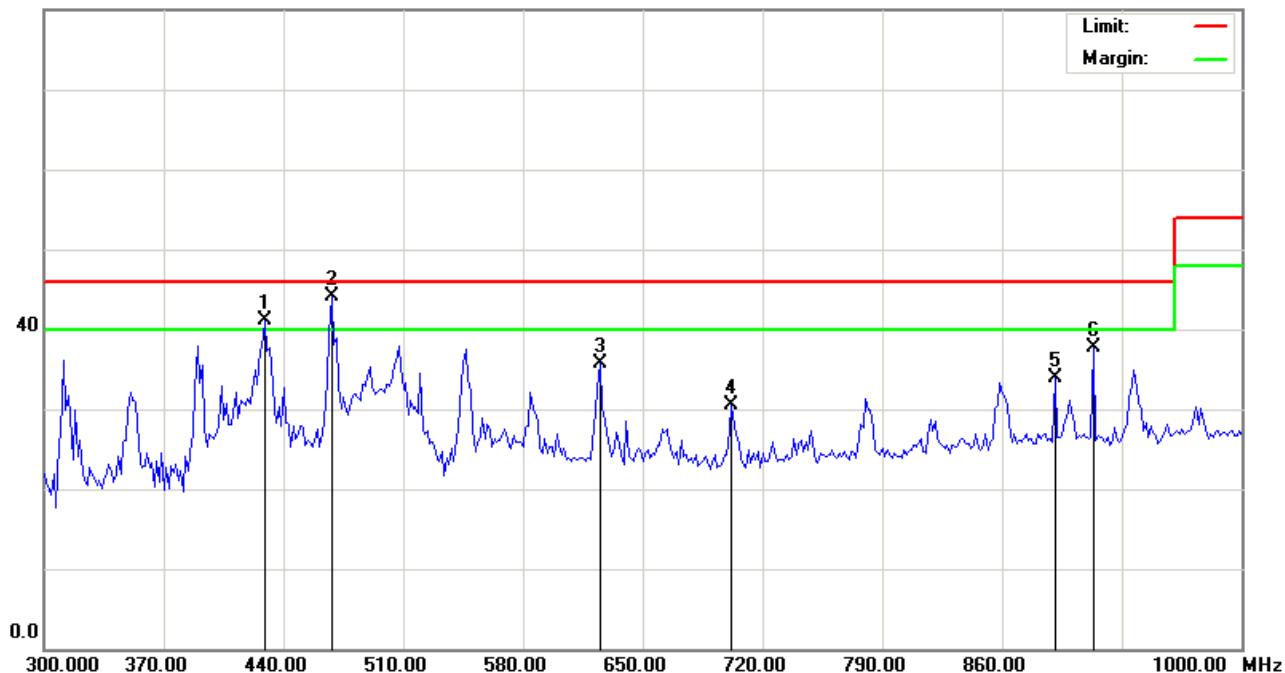
File :MS6030(WIFI,11b)

Data :#2

Date: 2008-3-5

Time:

80.0 dBuV



Site Polarization: **Vertical** Temperature: 22 °C
Limit: FCC Class B 3M Radiation Power: Humidity: 60 %
EUT: Distance: 3m
M/N: MS6030
Mode: WIFI(11b)
Note: CH01,換耳機,接充電器,手機(2)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1	!	428.8000	49.21	-8.05	41.16	46.00	-4.84	peak		
2	*	468.0000	51.89	-7.77	44.12	46.00	-1.88	peak		
3		624.8000	40.31	-4.64	35.67	46.00	-10.33	peak		
4		701.8000	34.48	-3.92	30.56	46.00	-15.44	peak		
5		890.8000	34.74	-0.78	33.96	46.00	-12.04	peak		
6		913.2000	37.80	-0.19	37.61	46.00	-8.39	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

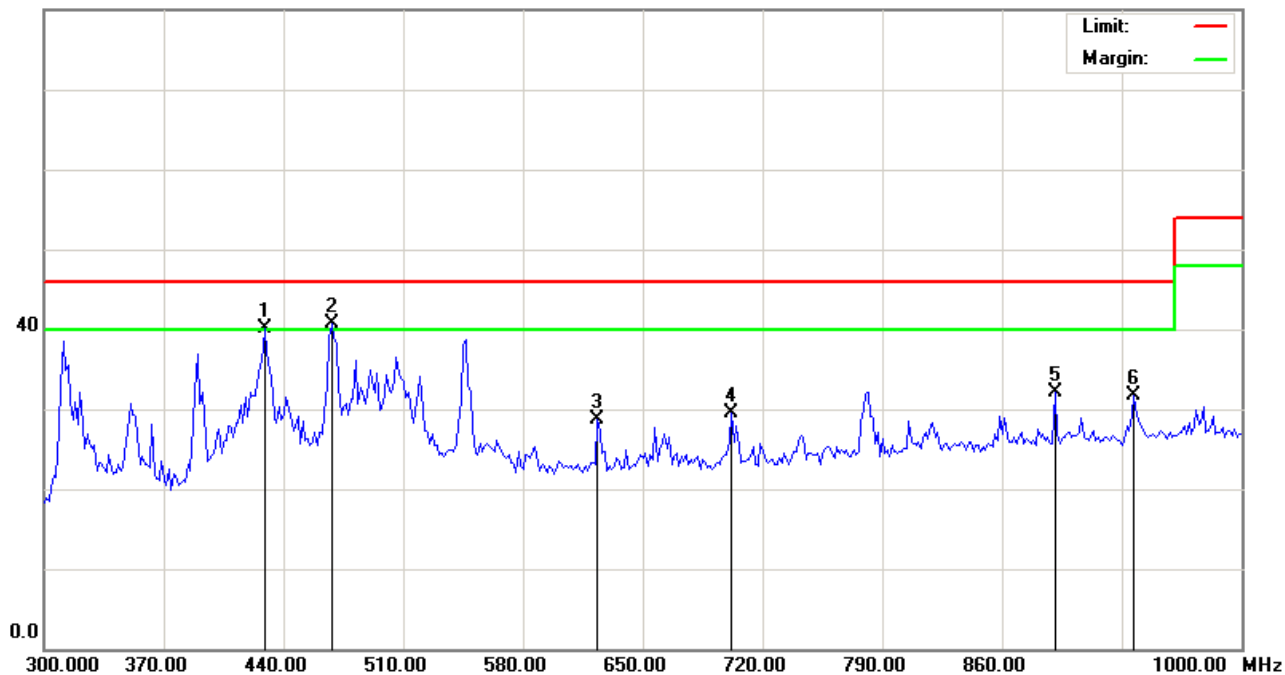
File :MS6030(WIFI,11b)

Data :#4

Date: 2008-3-5

Time:

80.0 dBuV



Site: Polarization: **Horizontal** Temperature: 22 °C
 Limit: FCC Class B 3M Radiation Power: Humidity: 60 %
 EUT: Distance: 3m
 M/N: MS6030
 Mode: WIFI(11b)
 Note: CH01,換耳機,接充電器,手機(2)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1	!	428.8000	48.09	-8.05	40.04	46.00	-5.96	peak		
2	*	468.0000	48.49	-7.77	40.72	46.00	-5.28	peak		
3		623.4000	33.34	-4.56	28.78	46.00	-17.22	peak		
4		701.8000	33.51	-3.92	29.59	46.00	-16.41	peak		
5		890.8000	32.87	-0.78	32.09	46.00	-13.91	peak		
6		937.0000	31.56	0.12	31.68	46.00	-14.32	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

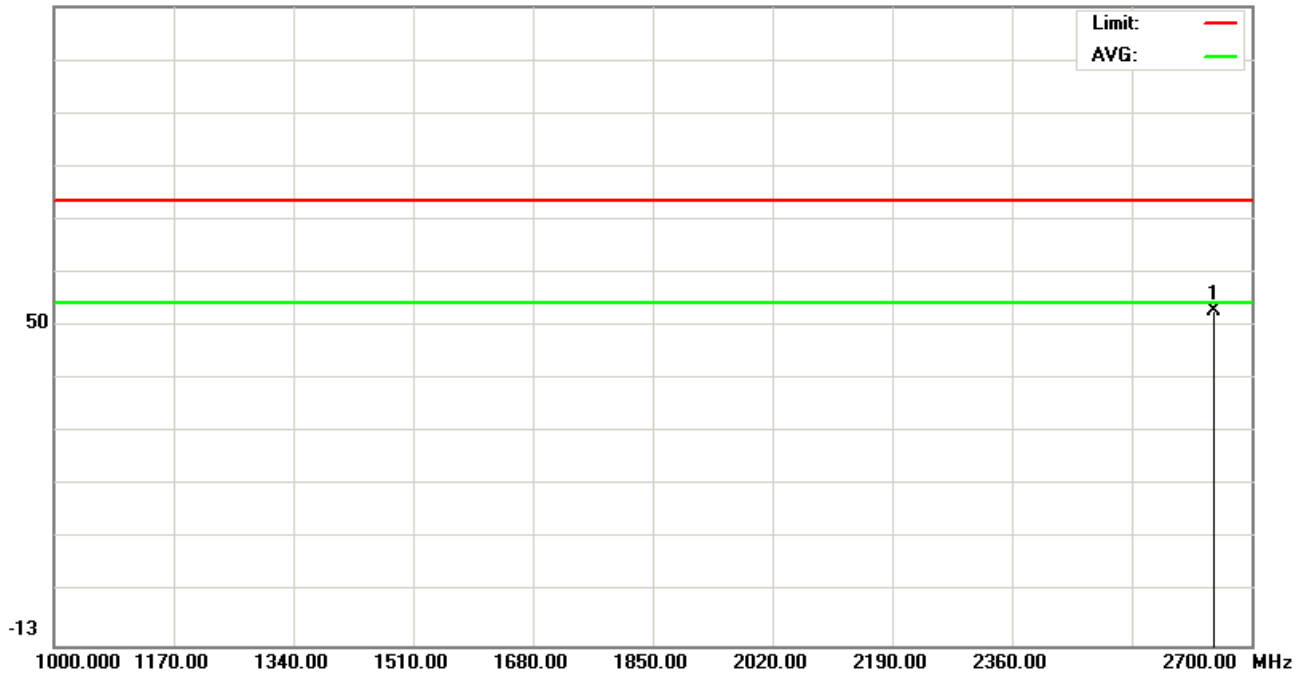
File :MS6030(CH2412)

Data :#1

Date: 2008/03/06

Time:

112.0 dBuV



Site

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 3m

M/N: MS6030

Mode: WIFI(11b)

Note: CH01(2412MHz)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree
1	*	2645.600	51.35	0.97	52.32	74.00	-21.68	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

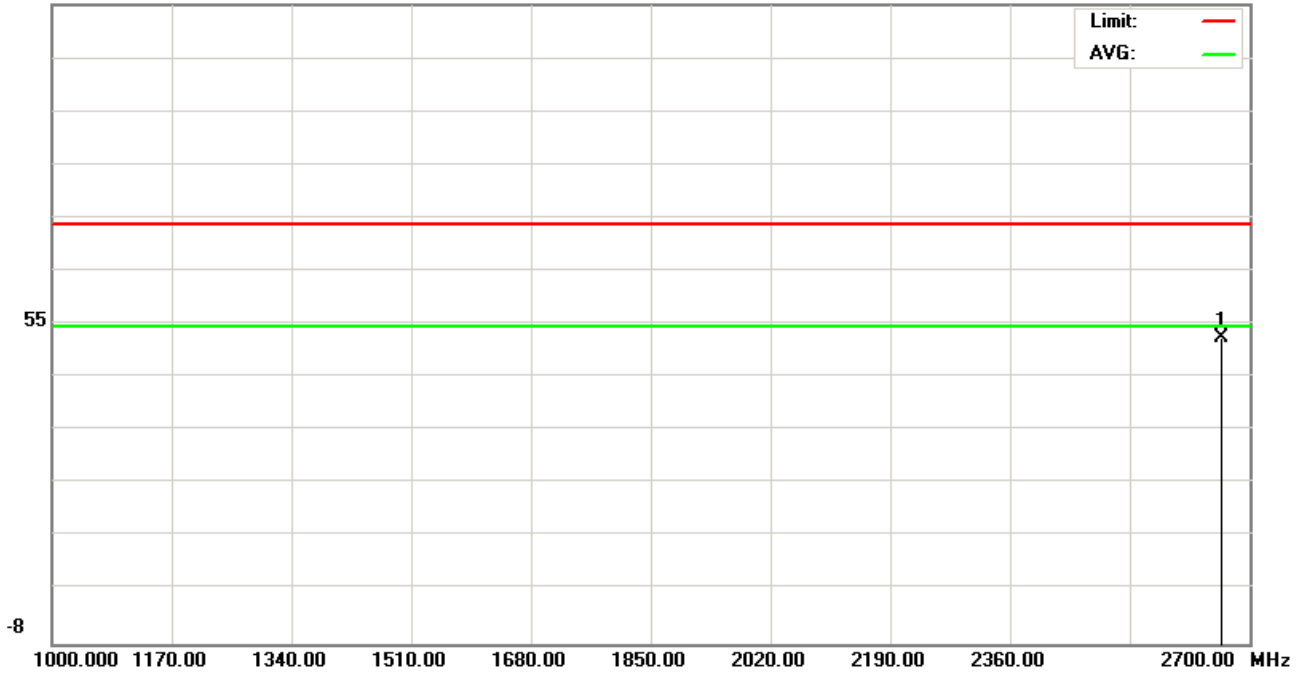
File :MS6030(CH2412)

Data :#3

Date: 2008/03/06

Time:

117.0 dBuV



Site

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 3m

M/N: MS6030

Mode: WIFI(11b)

Note: CH01(2412MHz)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree
1	*	2659.200	50.99	0.92	51.91	74.00	-22.09	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

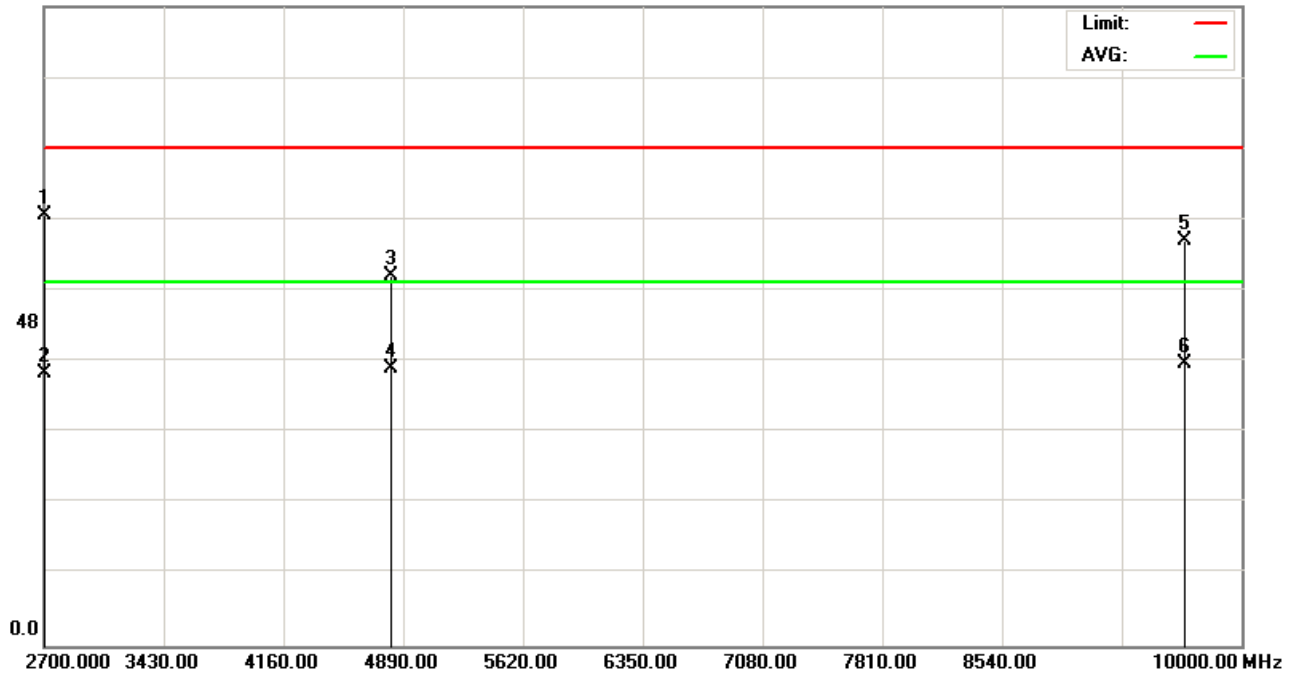
File :MS6030(CH2412)

Data :#5

Date: 2008/03/06

Time:

95.0 dBuV



Site

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 3m

M/N: MS6030

Mode: WIFI(11b)

Note: CH01(2412MHz)

2.7G-10G PK Scan Att:0 ; REF:95 ; Range:95(EUT Power Lever:255)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2700.000	41.42	22.58	64.00	74.00	-10.00	peak		
2		2700.000	17.98	22.58	40.56	54.00	-13.44	AVG		
3		4817.000	47.53	7.42	54.95	74.00	-19.05	peak		
4		4817.000	33.72	7.42	41.14	54.00	-12.86	AVG		
5		9653.250	43.15	16.95	60.10	74.00	-13.90	peak		
6		9653.250	24.91	16.95	41.86	54.00	-12.14	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

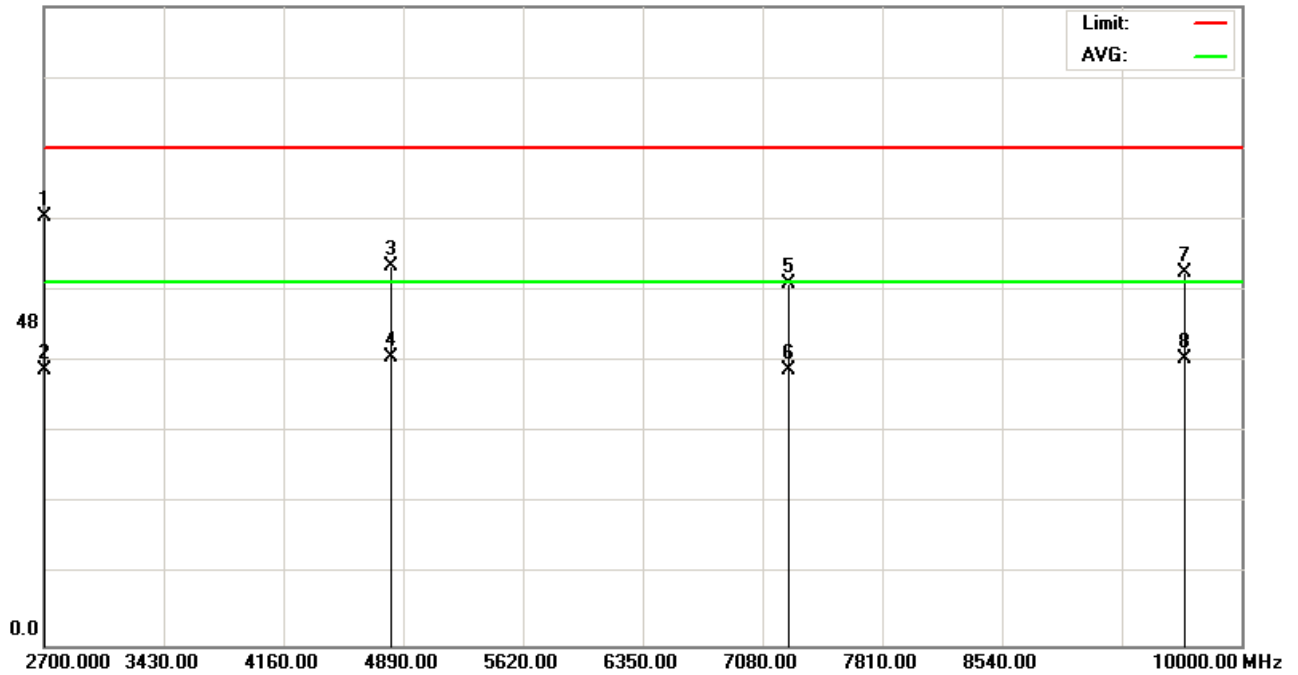
File :MS6030(CH2412)

Data :#7

Date: 2008/03/06

Time:

95.0 dBuV



Site Polarization: **Horizontal** Temperature: 22 °C
 Limit: FCC part 15 (PK) Power: Humidity: 60 %
 EUT: phone Distance: 3m
 M/N: MS6030
 Mode: WIFI(11b)
 Note: CH01(2412MHz)

2.7G-10G PK Scan Att:0 ; REF:95 ; Range:95(EUT Power Lever:255)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2700.000	41.08	22.58	63.66	74.00	-10.34	peak		
2		2700.000	18.36	22.58	40.94	54.00	-13.06	AVG		
3		4817.000	48.93	7.42	56.35	74.00	-17.65	peak		
4		4817.000	35.40	7.42	42.82	54.00	-11.18	AVG		
5		7244.250	40.02	13.76	53.78	74.00	-20.22	peak		
6		7244.250	27.16	13.76	40.92	54.00	-13.08	AVG		
7		9653.250	38.42	16.95	55.37	74.00	-18.63	peak		
8		9653.250	25.61	16.95	42.56	54.00	-11.44	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

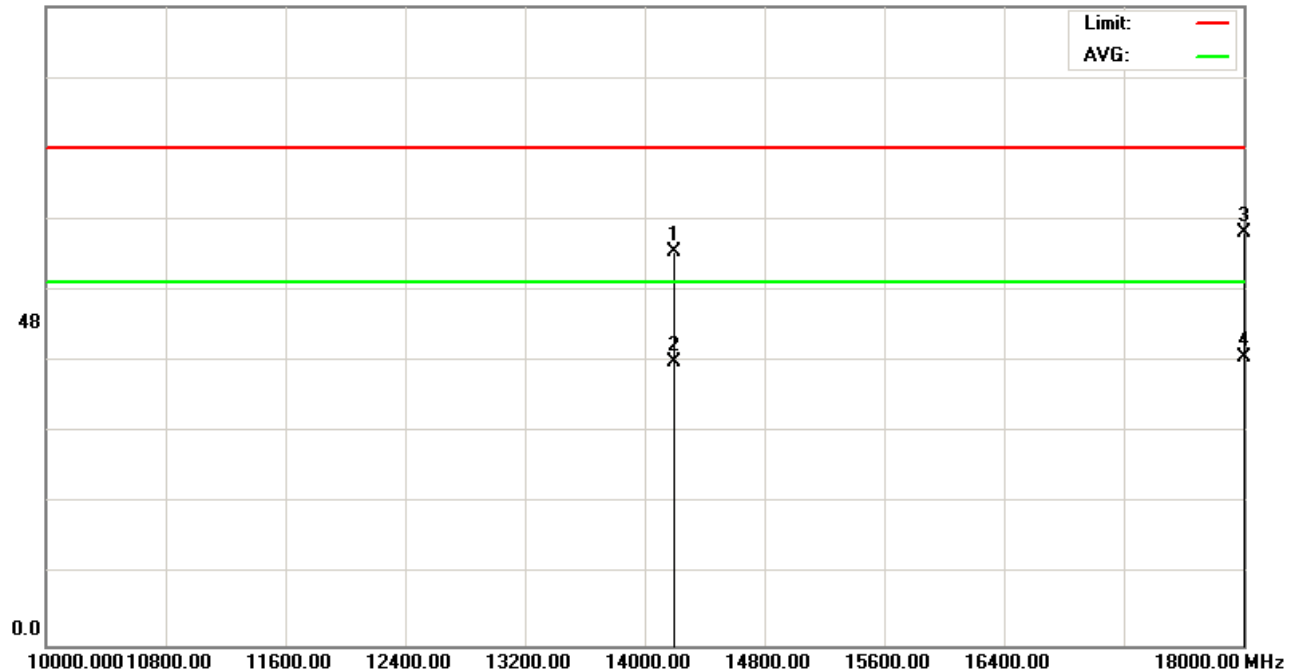
File :MS6030(CH2412)

Data :#9

Date: 2008/03/06

Time:

95.0 dBuV



Site

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 1m

M/N: MS6030

Mode: WIFI(11b)

Note: CH01(2412MHz)

10G - 18G PK Scan Att:0 ; REF:95 ; Range:95(EUT Power Lever:255)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	cm	degree	Comment
1		14200.00	30.25	28.40	58.65	74.00	-15.35	peak		
2		14200.00	13.65	28.40	42.05	54.00	-11.95	AVG		
3		18000.00	26.31	35.11	61.42	74.00	-12.58	peak		
4	*	18000.00	7.67	35.11	42.78	54.00	-11.22	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

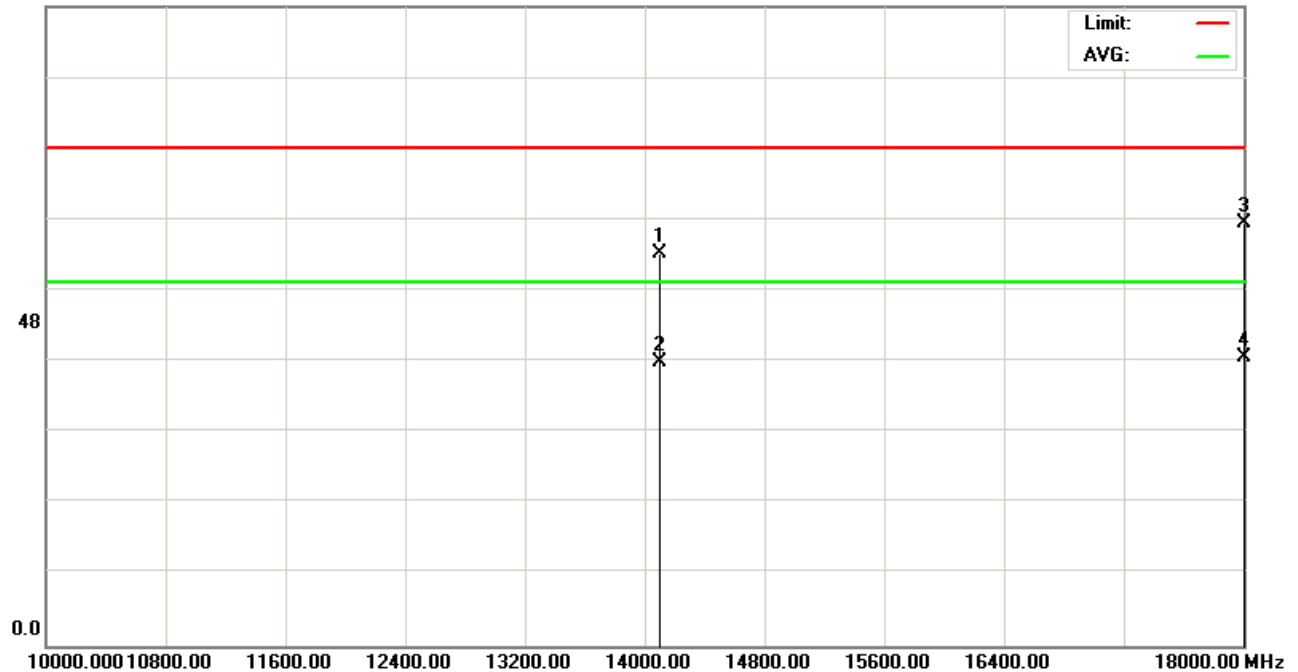
File :MS6030(CH2412)

Data :#11

Date: 2008/03/06

Time:

95.0 dBuV



Site

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 1m

M/N: MS6030

Mode: WIFI(11b)

Note: CH01(2412MHz)

10G - 18G PK Scan Att:0 ; REF:95 ; Range:95(EUT Power Lever:255)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree
1		14100.00	29.75	28.44	58.19	74.00	-15.81	peak		
2		14100.00	13.67	28.44	42.11	54.00	-11.89	AVG		
3		18000.00	27.66	35.11	62.77	74.00	-11.23	peak		
4	*	18000.00	7.79	35.11	42.90	54.00	-11.10	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

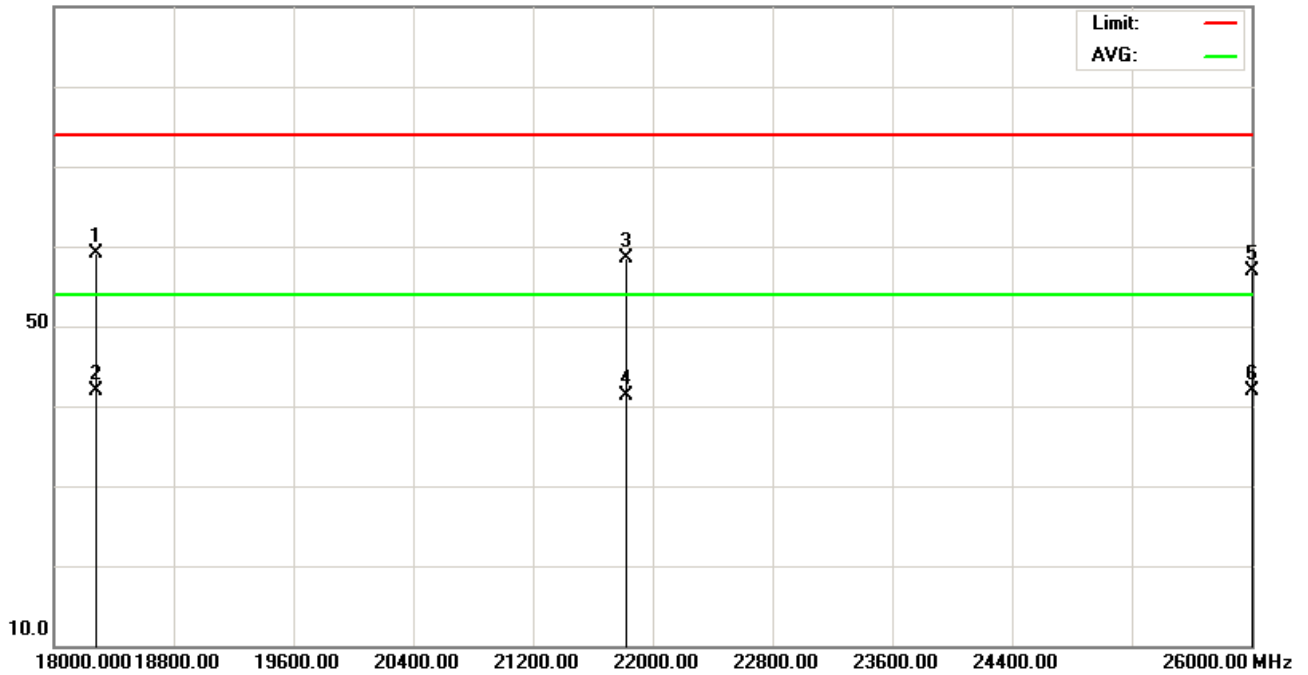
File :MS6030(CH2412)

Data :#13

Date: 2008/03/06

Time:

90.0 dBuV



Site

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 3m

M/N: MS6030

Mode: WIFI(11b)

Note: CH01(2412MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		18280.00	24.91	34.18	59.09	74.00	-14.91	peak		
2		18280.00	7.68	34.18	41.86	54.00	-12.14	AVG		
3		21820.00	27.60	30.97	58.57	74.00	-15.43	peak		
4		21820.00	10.35	30.97	41.32	54.00	-12.68	AVG		
5		26000.00	28.70	28.12	56.82	74.00	-17.18	peak		
6	*	26000.00	13.87	28.12	41.99	54.00	-12.01	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

File :MS6030(CH2412)

Data :#14

Date: 2008/03/06

Time:

90.0 dBuV



Site

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 3m

M/N: MS6030

Mode: WIFI(11b)

Note: CH01(2412MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		18020.00	24.88	33.99	58.87	74.00	-15.13	peak		
2	*	18020.00	8.37	33.99	42.36	54.00	-11.64	AVG		
3		22140.00	27.32	30.76	58.08	74.00	-15.92	peak		
4		22140.00	11.14	30.76	41.90	54.00	-12.10	AVG		
5		25920.00	29.82	28.17	57.99	74.00	-16.01	peak		
6		25920.00	13.05	28.17	41.22	54.00	-12.78	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



3.6.2 Open Field Radiated Emissions (Subpart C)

The highest peak values of radiated emissions from the EUT at various antenna heights, antenna polarization, EUT orientation, etc. are recorded on the following

Applicant : Innovation Wireless Inc.
Model No : MS6030
EUT : Wi-Fi IP Phone
Test Mode : AC Adapter _ 802.11b CH6 2437.000 (Local Frequency: 2437.000 MHz)
Test Date : 03/05~06/2008

Please refer to next pager of detail testing data.

Notes:

1. Margin= Amplitude - Limits
2. Distance of Measurement: 3 Meter (30-1000MHz) & (1-10GHz), 1 Meter (10-26.5GHz)
3. Height of table for EUT placed: 0.8 Meter.
4. ANT= Antenna height.
5. Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor
(Auto calculate in spectrum analyzer)
6. The EUT was worst case on X axis after pretest on X & Y & Z axis setting.
7. The testing data only show below 18GHz's data because measure data above 18GHz was only ambient noise.
8. All frequencies from 30MHz to 26.5GHz have been tested



Radiated Emission Measurement

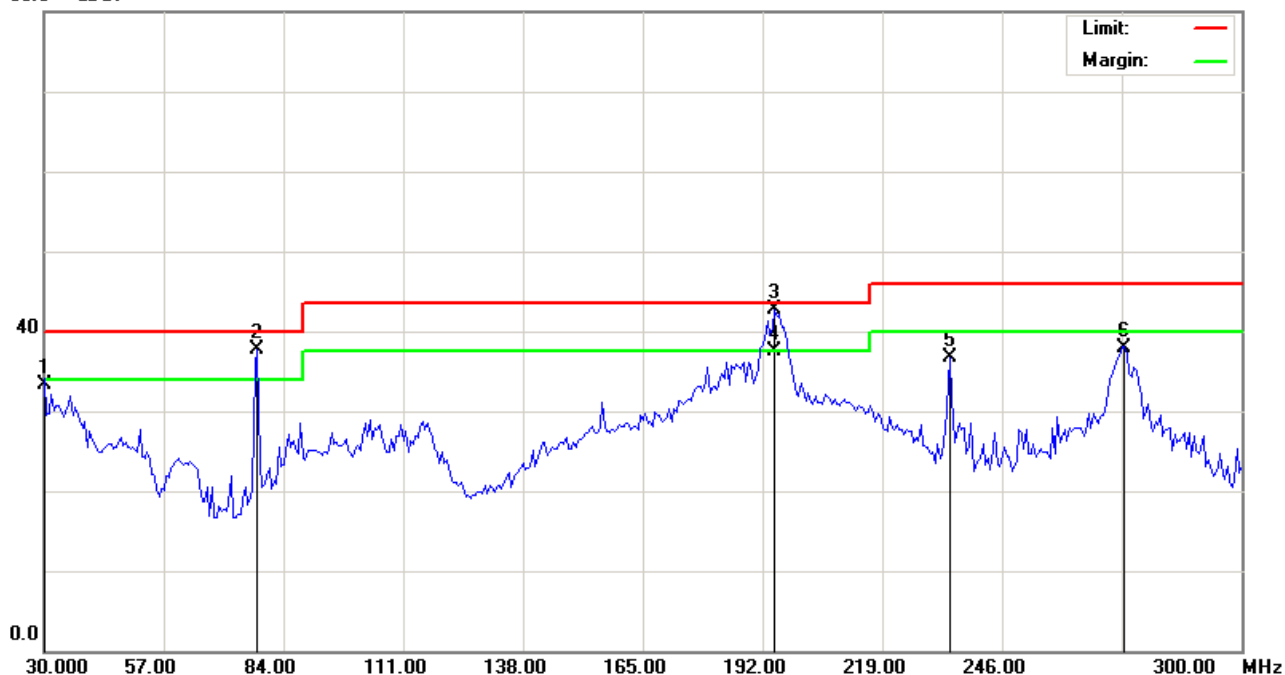
File :MS6030(WIFI,11b)

Data :#5

Date: 2008-3-5

Time:

80.0 dBuV



Site Polarization: **Vertical** Temperature: 22 °C
 Limit: FCC Class B 3M Radiation Power: Humidity: 60 %
 EUT: Distance: 3m
 M/N: MS6030
 Mode: WIFI(11b)
 Note: CH06,換耳機,接充電器,手機(2)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		30.0000	46.74	-13.49	33.25	40.00	-6.75	peak		
2	!	78.0600	54.43	-16.79	37.64	40.00	-2.36	peak		
3	*	194.7000	55.78	-13.12	42.66	43.50	-0.84	peak		
4	!	194.7000	50.63	-13.12	37.51	43.50	-5.99	QP		
5		234.1200	48.48	-11.75	36.73	46.00	-9.27	peak		
6		273.5400	48.83	-10.83	38.00	46.00	-8.00	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

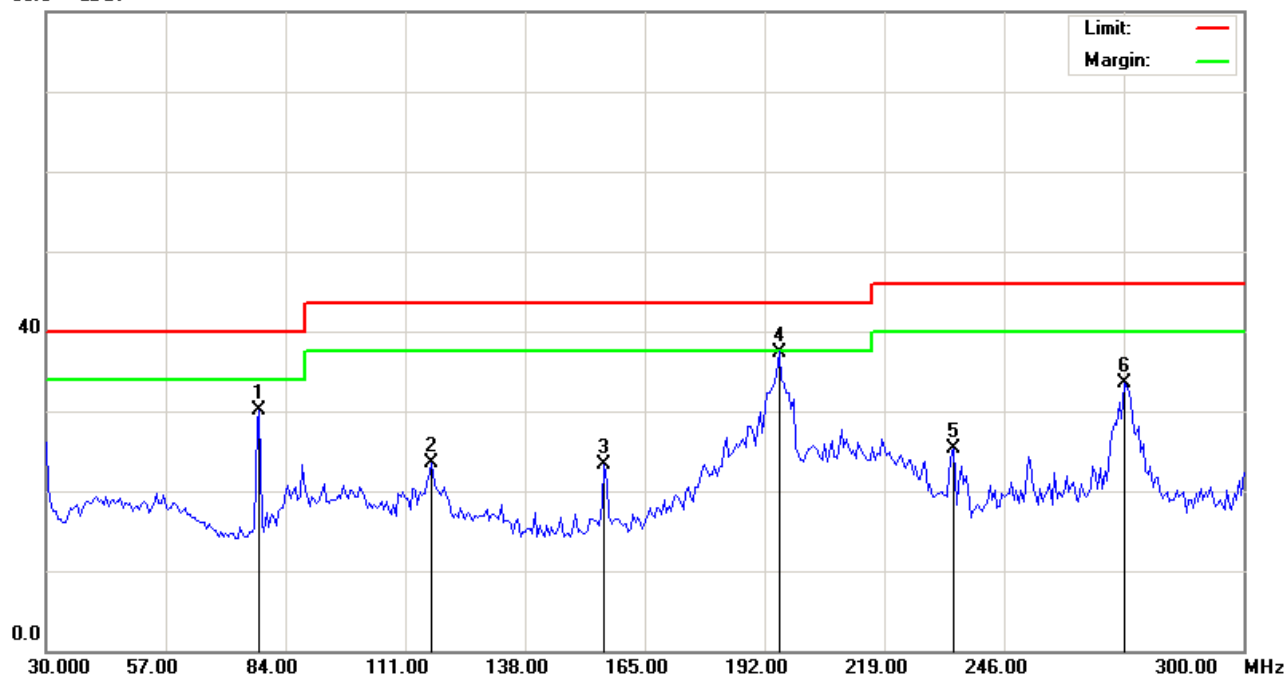
File :MS6030(WIFI,11b)

Data :#7

Date: 2008-3-5

Time:

80.0 dBuV



Site Polarization: **Horizontal** Temperature: 22 °C
Limit: FCC Class B 3M Radiation Power: Humidity: 60 %
EUT: Distance: 3m
M/N: MS6030
Mode: WIFI(11b)
Note: CH06,換耳機,接充電器,手機(2)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		78.0600	46.88	-16.79	30.09	40.00	-9.91	peak		
2		116.9400	37.13	-13.68	23.45	43.50	-20.05	peak		
3		155.8200	39.24	-15.84	23.40	43.50	-20.10	peak		
4	*	195.2400	50.31	-13.09	37.22	43.50	-6.28	peak		
5		234.6600	37.06	-11.74	25.32	46.00	-20.68	peak		
6		273.0000	44.33	-10.85	33.48	46.00	-12.52	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

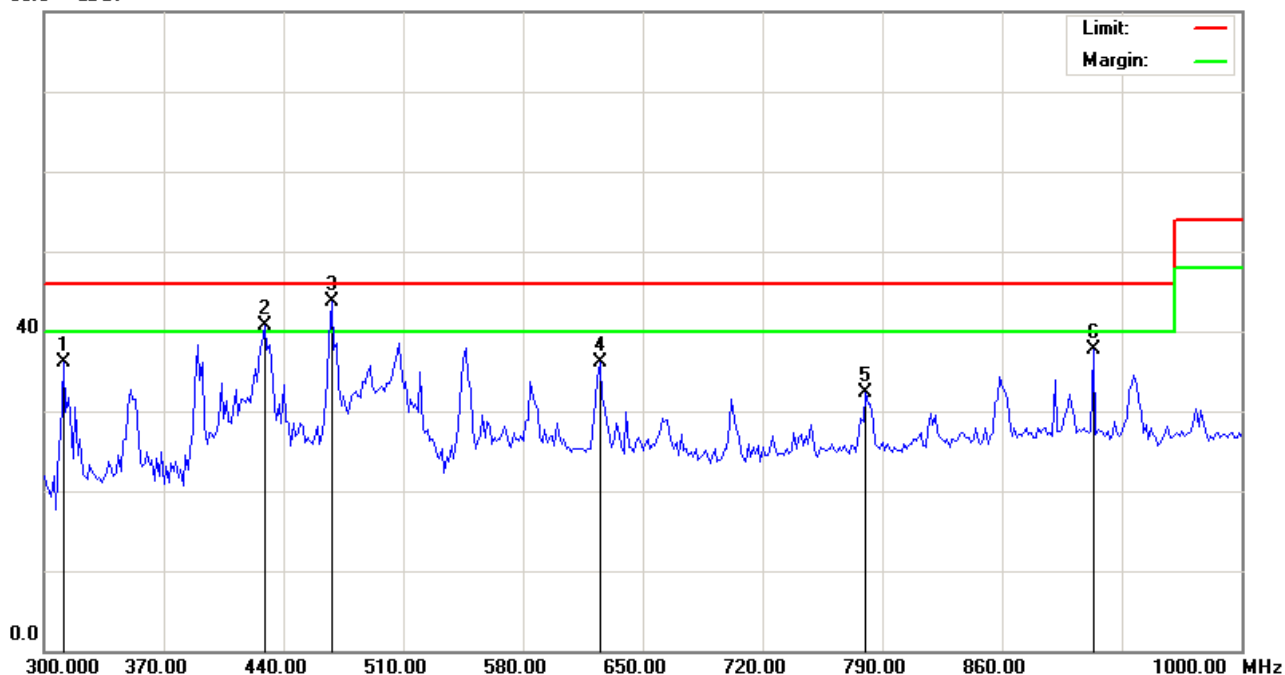
File :MS6030(WIFI,11b)

Data :#6

Date: 2008-3-5

Time:

80.0 dBuV



Site: Polarization: **Vertical** Temperature: 22 °C
 Limit: FCC Class B 3M Radiation Power: Humidity: 60 %
 EUT: Distance: 3m
 M/N: MS6030
 Mode: WIFI(11b)
 Note: CH06,換耳機,接充電器,手機(2)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		311.2000	45.96	-9.82	36.14	46.00	-9.86	peak		
2	!	428.8000	48.71	-8.05	40.66	46.00	-5.34	peak		
3	*	468.0000	51.39	-7.77	43.62	46.00	-2.38	peak		
4		624.8000	40.81	-4.64	36.17	46.00	-9.83	peak		
5		780.2000	34.69	-2.36	32.33	46.00	-13.67	peak		
6		913.2000	37.93	-0.19	37.74	46.00	-8.26	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

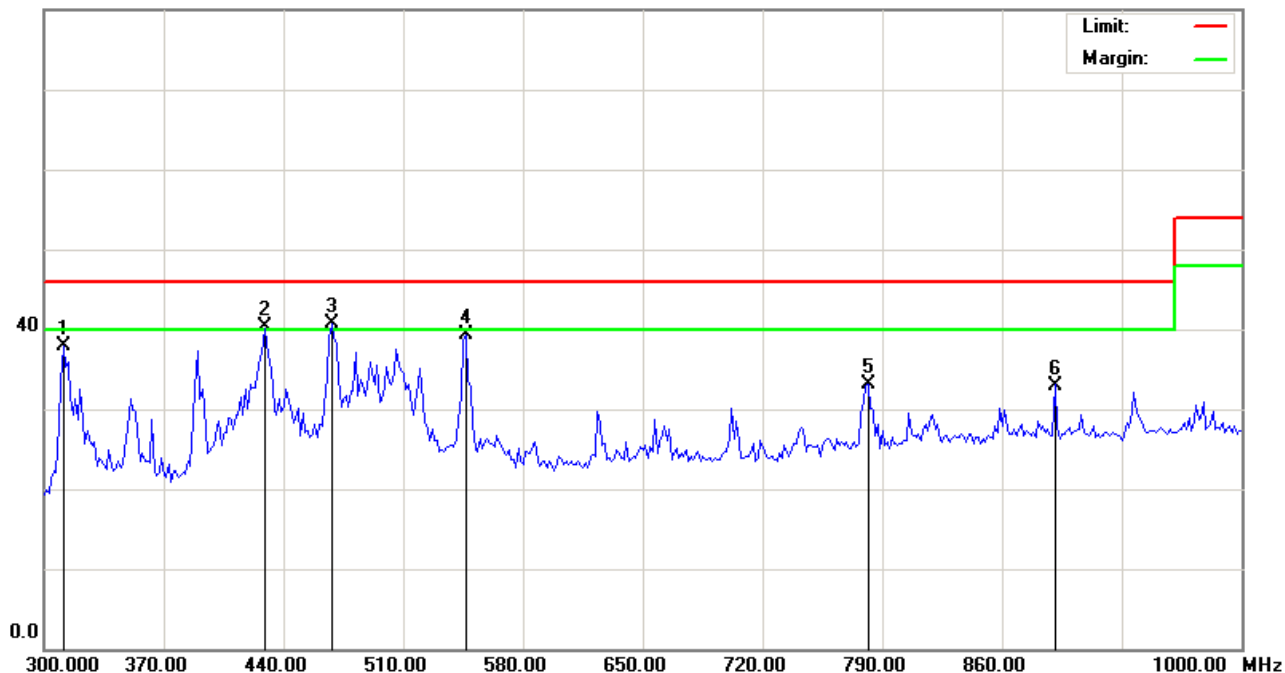
File :MS6030(WIFI,11b)

Data :#8

Date: 2008-3-5

Time:

80.0 dBuV



Site Polarization: **Horizontal** Temperature: 22 °C
Limit: FCC Class B 3M Radiation Power: Humidity: 60 %
EUT: Distance: 3m
M/N: MS6030
Mode: WIFI(11b)
Note: CH06,換耳機,接充電器,手機(2)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	cm	degree	Comment
1		311.2000	47.79	-9.82	37.97	46.00	-8.03	peak		
2	!	428.8000	48.32	-8.05	40.27	46.00	-5.73	peak		
3	*	468.0000	48.49	-7.77	40.72	46.00	-5.28	peak		
4		546.4000	45.33	-6.04	39.29	46.00	-6.71	peak		
5		781.6000	35.40	-2.38	33.02	46.00	-12.98	peak		
6		890.8000	33.63	-0.78	32.85	46.00	-13.15	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

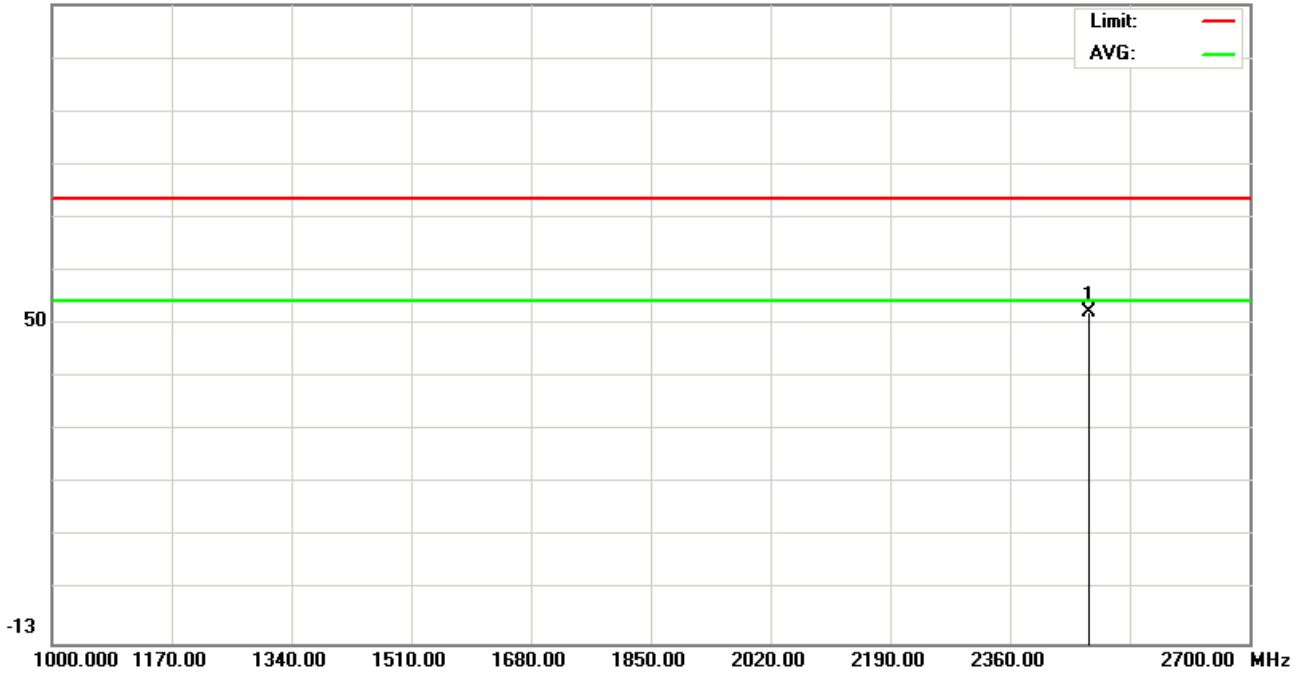
File :MS6030(CH2437)

Data :#1

Date: 2008/03/06

Time:

112.0 dBuV



Site

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 3m

M/N: MS6030

Mode: WIFI(11b)

Note: CH06(2437MHz)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree
1	*	2472.200	51.65	0.20	51.85	74.00	-22.15	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

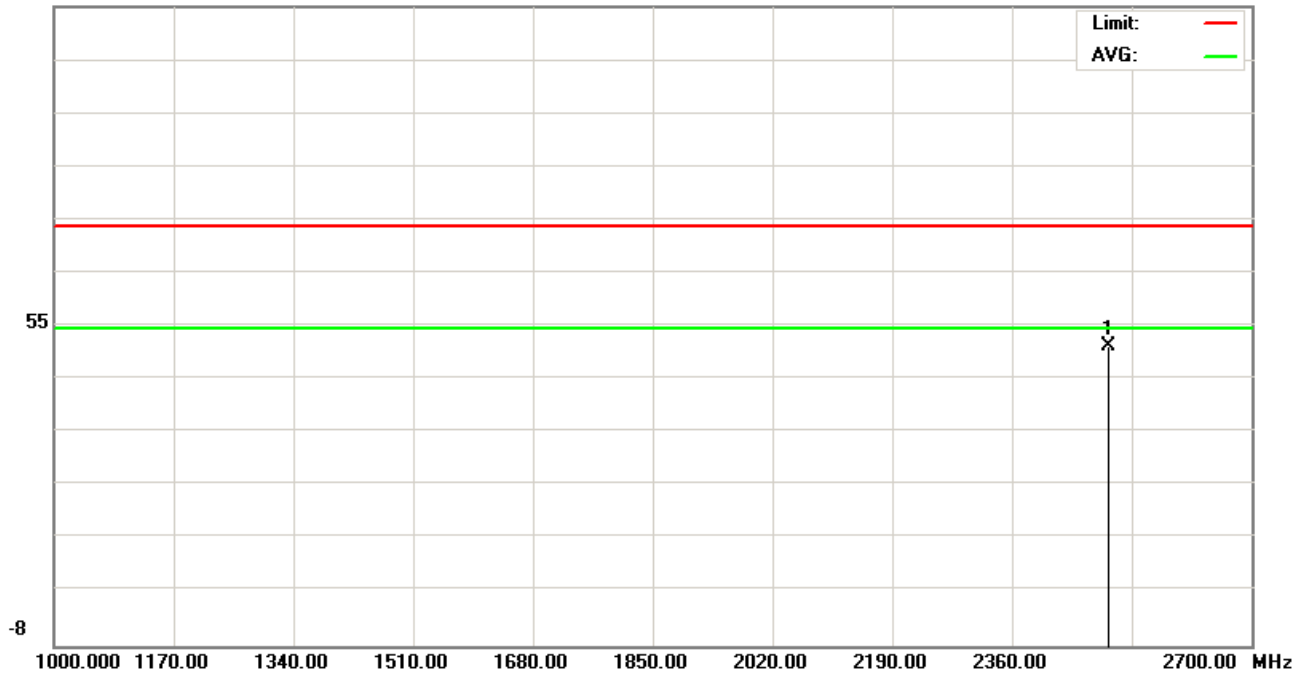
File :MS6030(CH2437)

Data :#3

Date: 2008/03/06

Time:

117.0 dBuV



Site

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 3m

M/N: MS6030

Mode: WIFI(11b)

Note: CH06(2437MHz)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree
1	*	2496.000	50.45	0.25	50.70	74.00	-23.30	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

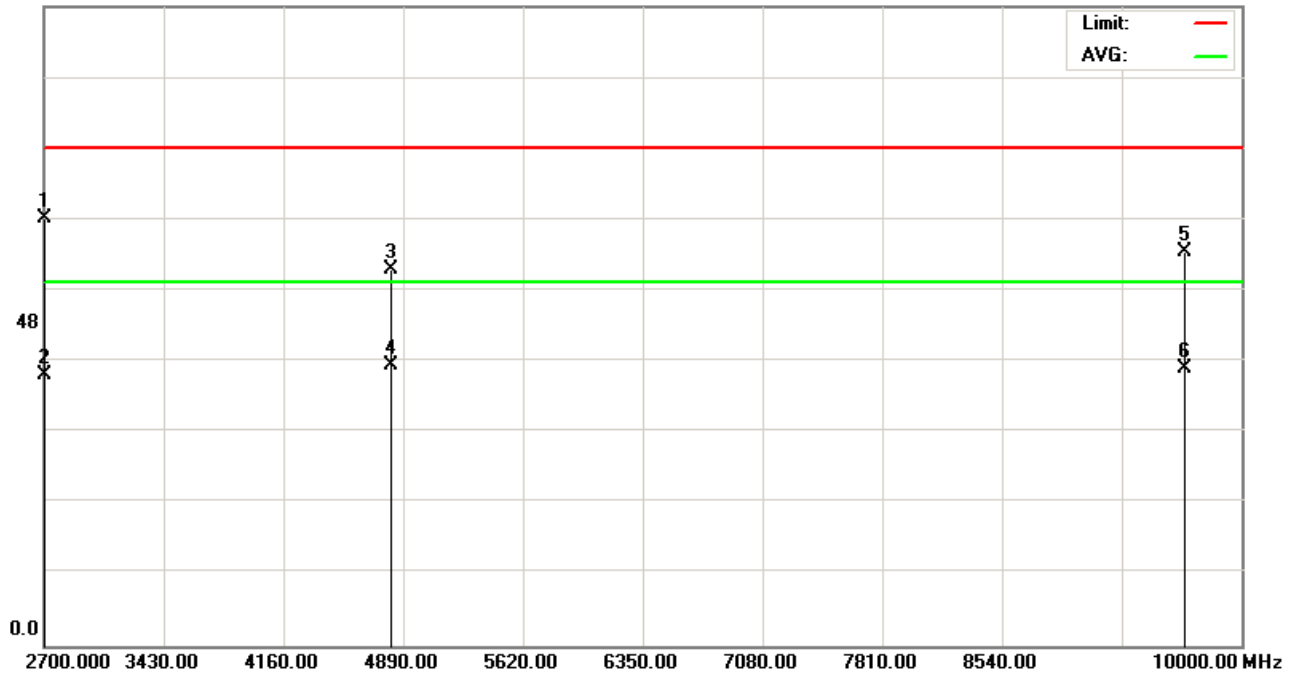
File :MS6030(CH2437)

Data :#5

Date: 2008/03/06

Time:

95.0 dBuV



Site

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 3m

M/N: MS6030

Mode: WIFI(11b)

Note: CH06(2437MHz)

2.7G-10G PK Scan Att:0 ; REF:95 ; Range:95(EUT Power Lever:255)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2700.000	40.99	22.58	63.57	74.00	-10.43	peak		
2		2700.000	17.71	22.58	40.29	54.00	-13.71	AVG		
3		4817.000	48.41	7.42	55.83	74.00	-18.17	peak		
4		4817.000	34.38	7.42	41.80	54.00	-12.20	AVG		
5		9653.250	41.65	16.95	58.60	74.00	-15.40	peak		
6		9653.250	24.34	16.95	41.29	54.00	-12.71	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

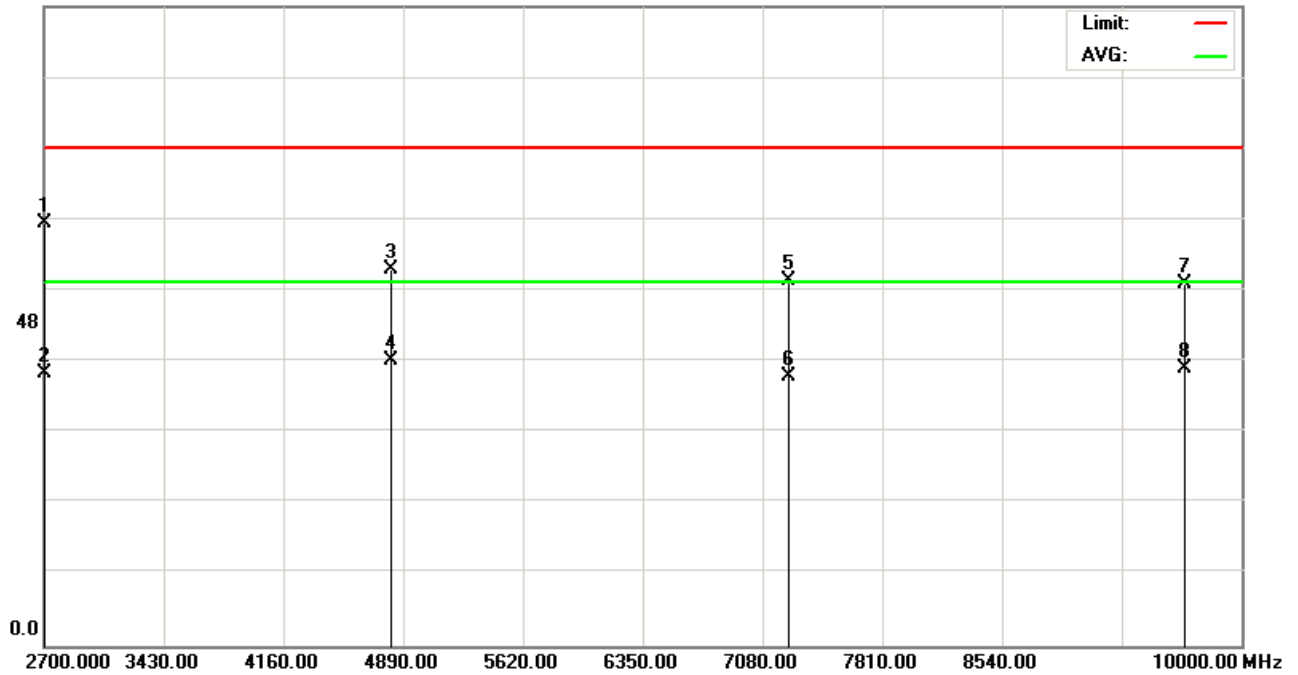
File :MS6030(CH2437)

Data :#7

Date: 2008/03/06

Time:

95.0 dBuV



Site

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 3m

M/N: MS6030

Mode: WIFI(11b)

Note: CH06(2437MHz)

2.7G-10G PK Scan Att:0 ; REF:95 ; Range:95(EUT Power Lever:255)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2700.000	40.35	22.58	62.93	74.00	-11.07	peak		
2		2700.000	17.93	22.58	40.51	54.00	-13.49	AVG		
3		4817.000	48.43	7.42	55.85	74.00	-18.15	peak		
4		4817.000	35.07	7.42	42.49	54.00	-11.51	AVG		
5		7244.250	40.52	13.76	54.28	74.00	-19.72	peak		
6		7244.250	26.25	13.76	40.01	54.00	-13.99	AVG		
7		9653.250	36.92	16.95	53.87	74.00	-20.13	peak		
8		9653.250	24.36	16.95	41.31	54.00	-12.69	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

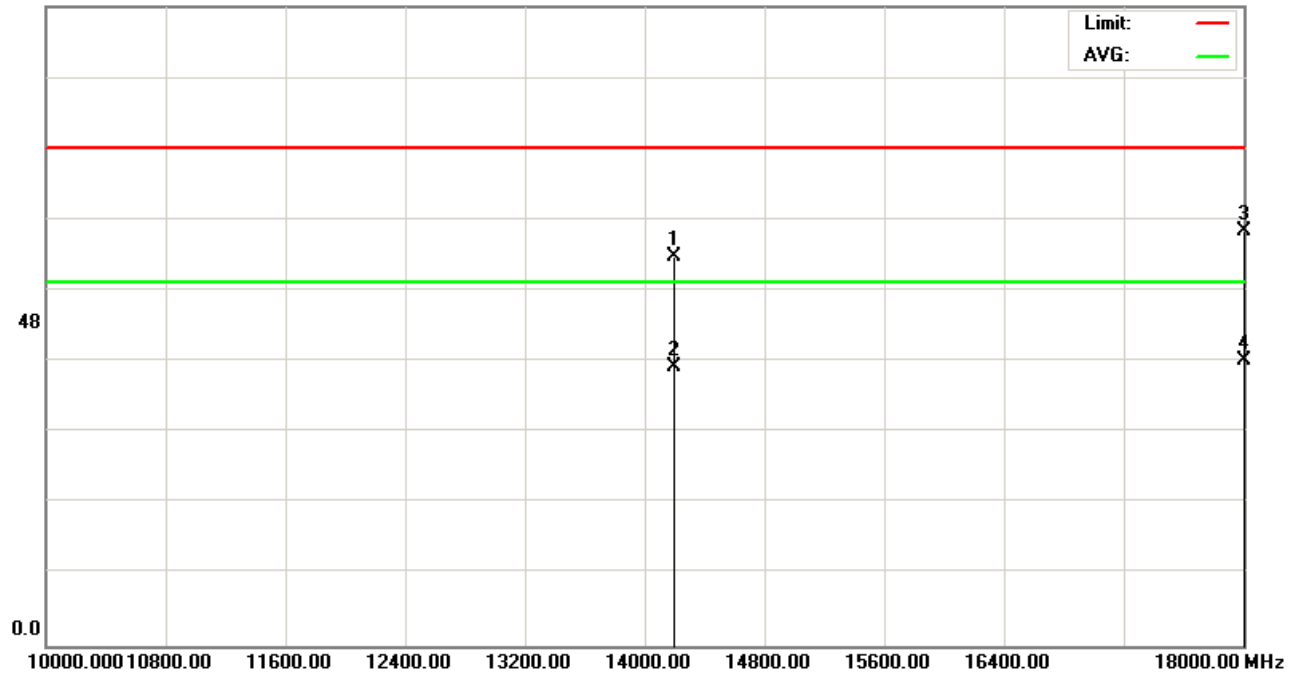
File :MS6030(CH2437)

Data :#9

Date: 2008/03/06

Time:

95.0 dBuV



Site

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 1m

M/N: MS6030

Mode: WIFI(11b)

Note: CH06(2437MHz)

10G - 18G PK Scan Att:0 ; REF:95 ; Range:95(EUT Power Lever:255)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		14200.00	29.43	28.40	57.83	74.00	-16.17	peak		
2		14200.00	13.06	28.40	41.46	54.00	-12.54	AVG		
3		18000.00	26.55	35.11	61.66	74.00	-12.34	peak		
4	*	18000.00	7.35	35.11	42.46	54.00	-11.54	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

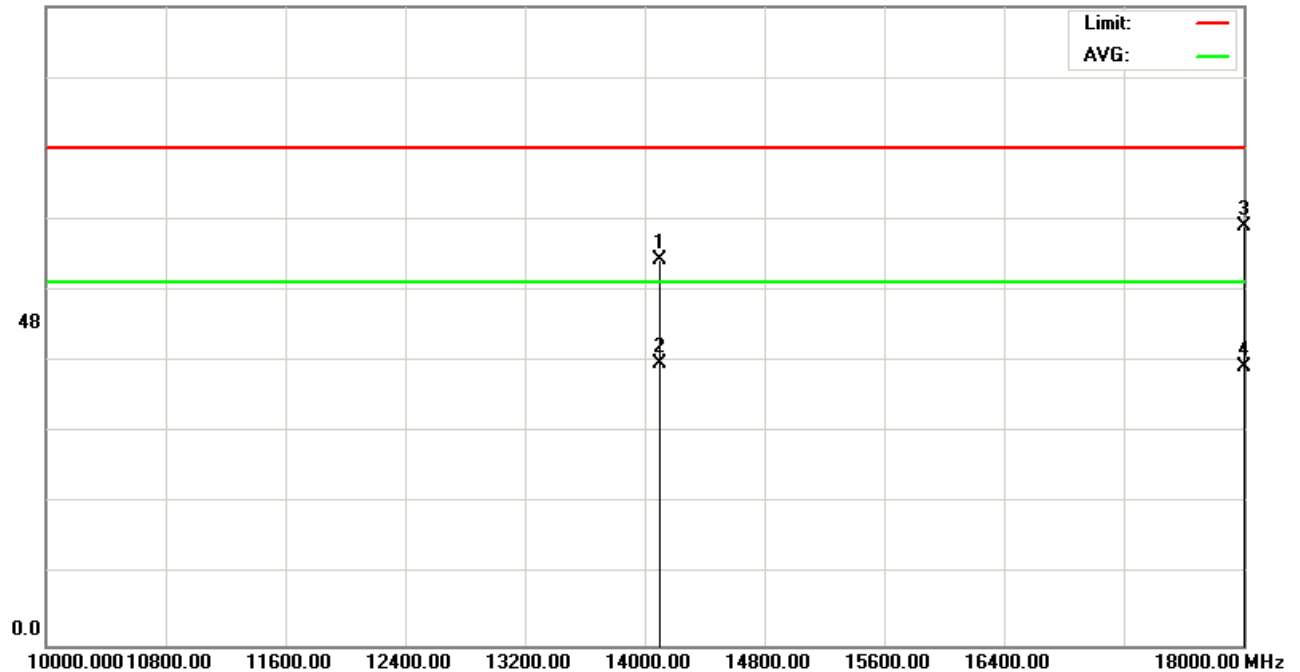
File :MS6030(CH2437)

Data :#11

Date: 2008/03/06

Time:

95.0 dBuV



Site

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 1m

M/N: MS6030

Mode: WIFI(11b)

Note: CH06(2437MHz)

10G - 18G PK Scan Att:0 ; REF:95 ; Range:95(EUT Power Lever:255)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree
1		14100.00	28.88	28.44	57.32	74.00	-16.68	peak		
2		14100.00	13.51	28.44	41.95	54.00	-12.05	AVG		
3	*	18000.00	27.16	35.11	62.27	74.00	-11.73	peak		
4		18000.00	6.30	35.11	41.41	54.00	-12.59	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

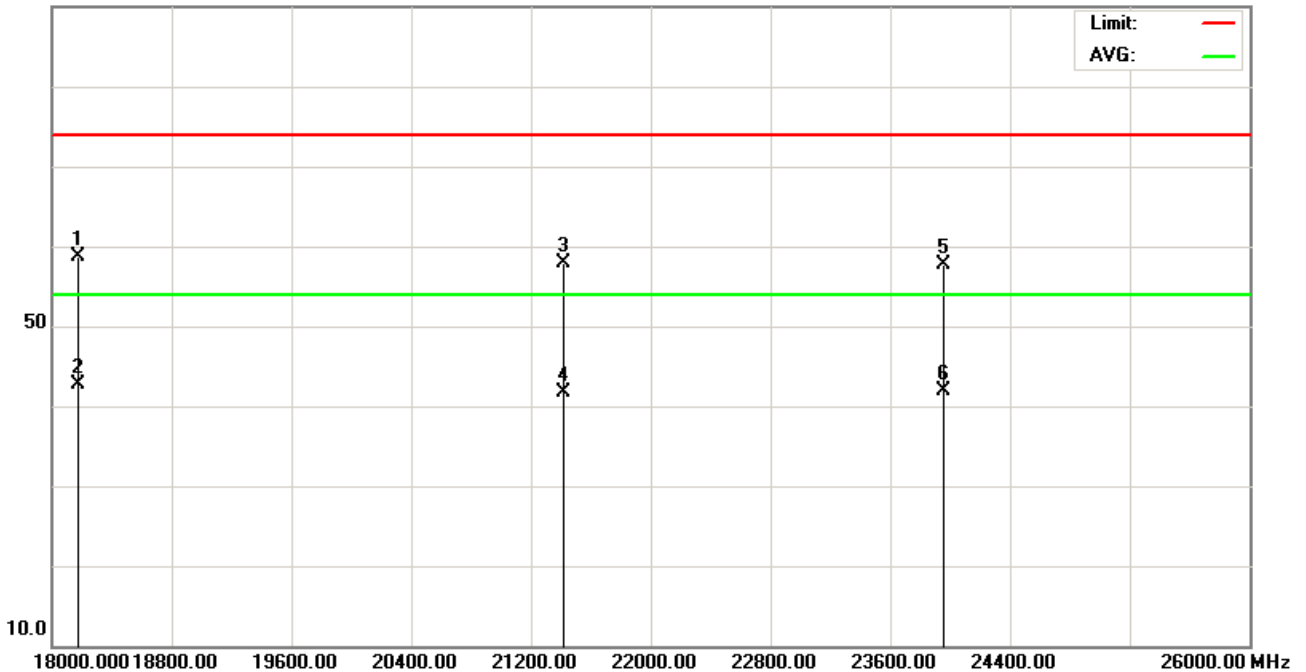
File :MS6030(CH2437)

Data :#13

Date: 2008/03/06

Time:

90.0 dBuV



Site

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 3m

M/N: MS6030

Mode: WIFI(11b)

Note: CH06(2437MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		18180.00	24.33	34.34	58.67	74.00	-15.33	peak		
2	*	18180.00	8.30	34.34	42.64	54.00	-11.36	AVG		
3		21420.00	26.72	31.25	57.97	74.00	-16.03	peak		
4		21420.00	10.38	31.25	41.63	54.00	-12.37	AVG		
5		23960.00	28.26	29.51	57.77	74.00	-16.23	peak		
6		23960.00	12.34	29.51	41.85	54.00	-12.15	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

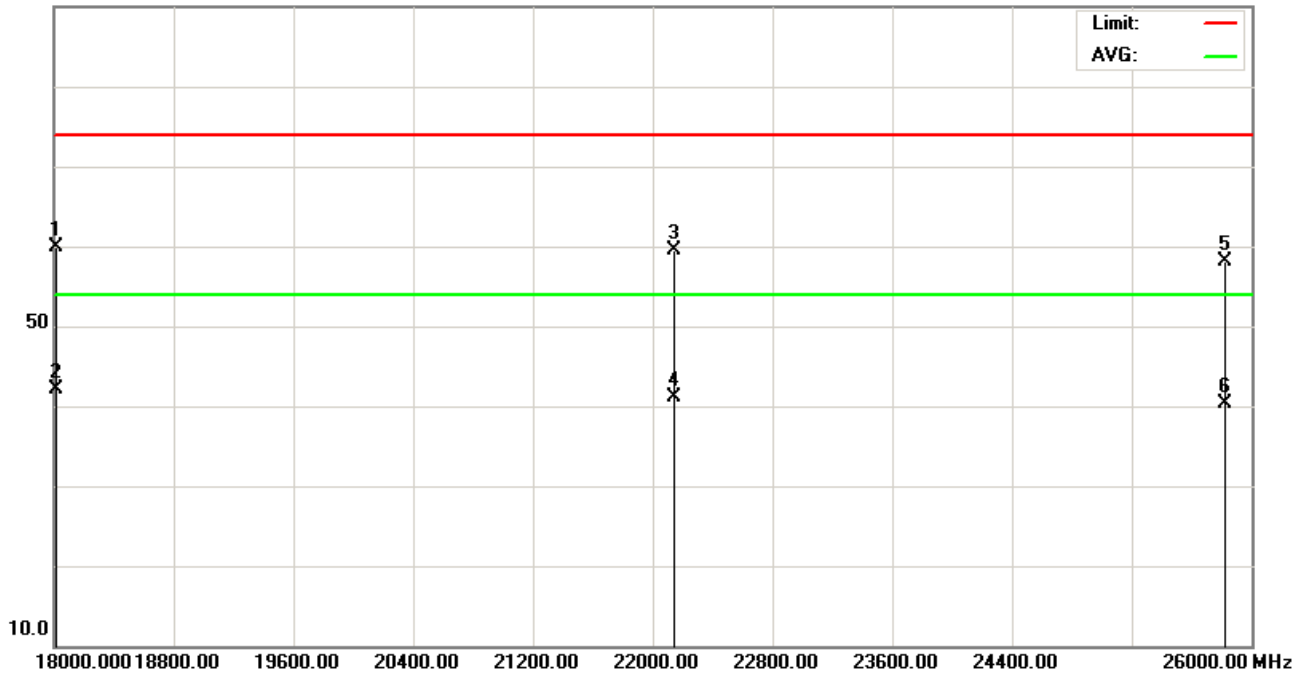
File :MS6030(CH2437)

Data :#14

Date: 2008/03/06

Time:

90.0 dBuV



Site

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 3m

M/N: MS6030

Mode: WIFI(11b)

Note: CH06(2437MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		18020.00	25.88	33.99	59.87	74.00	-14.13	peak		
2	*	18020.00	8.14	33.99	42.13	54.00	-11.87	AVG		
3		22140.00	28.82	30.76	59.58	74.00	-14.42	peak		
4		22140.00	10.35	30.76	41.11	54.00	-12.89	AVG		
5		25820.00	29.83	28.25	58.08	74.00	-15.92	peak		
6		25820.00	12.06	28.25	40.31	54.00	-13.69	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



3.6.3 Open Field Radiated Emissions (Subpart C)

The highest peak values of radiated emissions from the EUT at various antenna heights, antenna polarization, EUT orientation, etc. are recorded on the following.

Applicant : Innovation Wireless Inc.
Model No : MS6030
EUT : Wi-Fi IP Phone
Test Mode : AC Adapter _ 802.11b CH11 2462.000 (Local Frequency: 2462.000 MHz)
Test Date : 03/05~06/2008

Please refer to next pager of detail testing data.

Notes:

1. Margin= Amplitude - Limits
2. Distance of Measurement: 3 Meter (30-1000MHz) & (1-10GHz), 1 Meter (10-26.5GHz)
3. Height of table for EUT placed: 0.8 Meter.
4. ANT= Antenna height.
5. Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor
(Auto calculate in spectrum analyzer)
6. The EUT was worst case on X axis after pretest on X & Y & Z axis setting.
7. The testing data only show below 18GHz's data because measure data above 18GHz was only ambient noise.
8. All frequencies from 30MHz to 26.5GHz have been tested



Radiated Emission Measurement

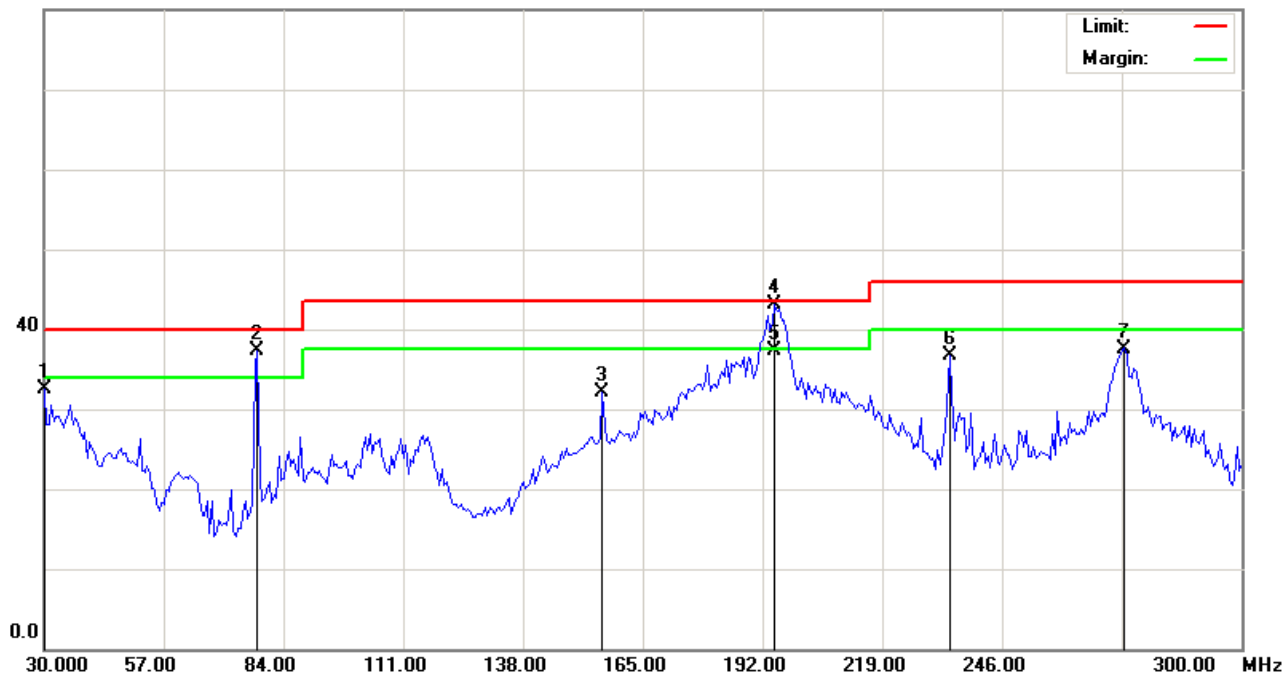
File :MS6030(WIFI,11b)

Data :#9

Date: 2008-3-5

Time:

80.0 dBuV



Site Polarization: **Vertical** Temperature: 22 °C
Limit: FCC Class B 3M Radiation Power: Humidity: 60 %
EUT: Distance: 3m
M/N: MS6030
Mode: WIFI(11b)
Note: CH11,換耳機,接充電器,手機(2)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		30.0000	45.99	-13.49	32.50	40.00	-7.50	peak		
2	!	78.0600	54.01	-16.79	37.22	40.00	-2.78	peak		
3		155.8200	47.96	-15.84	32.12	43.50	-11.38	peak		
4	*	194.7000	56.14	-13.12	43.02	43.50	-0.48	peak		
5		194.7000	50.41	-13.12	37.29	43.50	-6.21	QP		
6		234.1200	48.48	-11.75	36.73	46.00	-9.27	peak		
7		273.5400	48.31	-10.83	37.48	46.00	-8.52	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

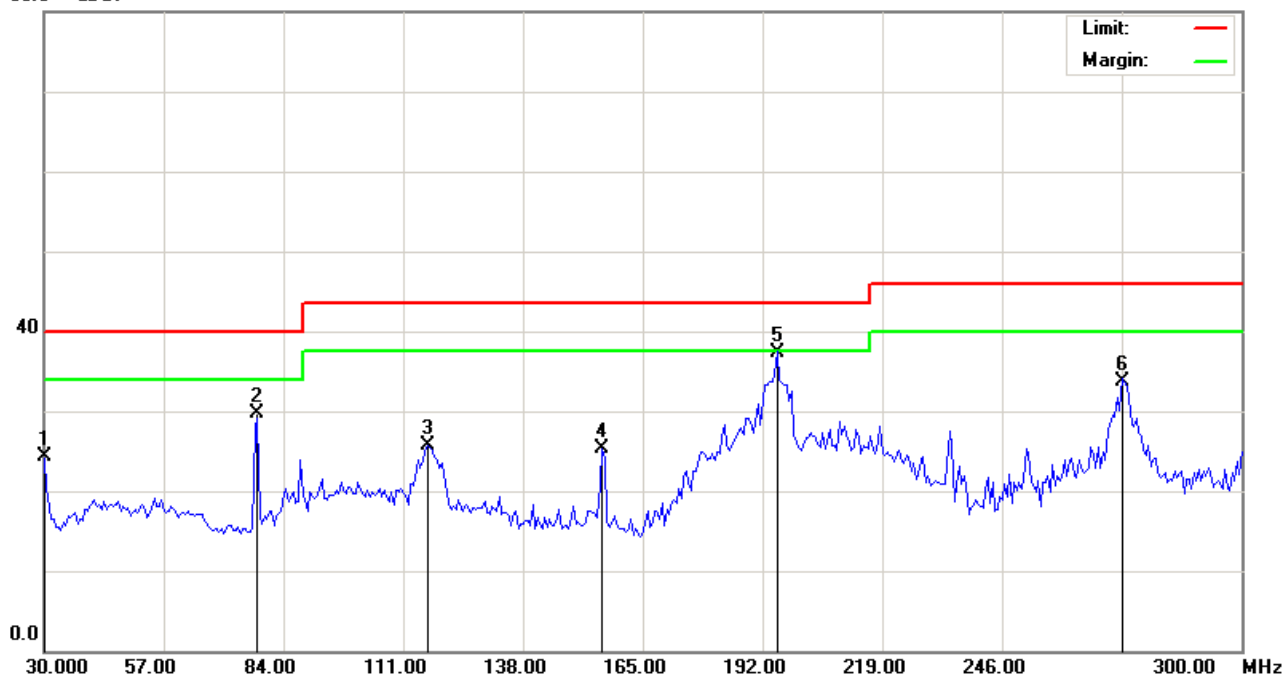
File :MS6030(WIFI,11b)

Data :#11

Date: 2008-3-5

Time:

80.0 dBuV



Site: Polarization: **Horizontal** Temperature: 22 °C
Limit: FCC Class B 3M Radiation Power: Humidity: 60 %
EUT: Distance: 3m
M/N: MS6030
Mode: WIFI(11b)
Note: CH11,換耳機,接充電器,手機(2)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	cm	degree	Comment
1		30.0000	37.83	-13.49	24.34	40.00	-15.66			peak
2		78.0600	46.56	-16.79	29.77	40.00	-10.23			peak
3		116.4000	39.37	-13.58	25.79	43.50	-17.71			peak
4		155.8200	41.24	-15.84	25.40	43.50	-18.10			peak
5	*	195.2400	50.31	-13.09	37.22	43.50	-6.28			peak
6		273.0000	44.62	-10.85	33.77	46.00	-12.23			peak

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

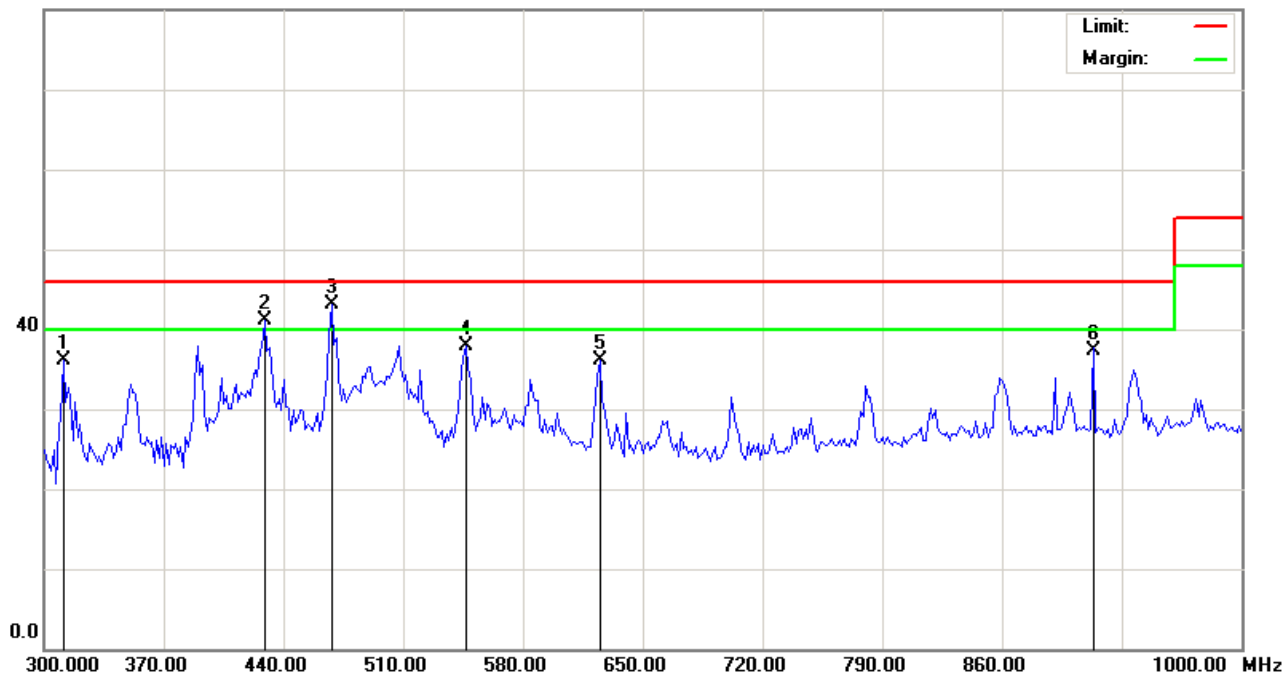
File :MS6030(WIFI,11b)

Data :#10

Date: 2008-3-5

Time:

80.0 dBuV



Site Polarization: **Vertical** Temperature: 22 °C
Limit: FCC Class B 3M Radiation Power: Humidity: 60 %
EUT: Distance: 3m
M/N: MS6030
Mode: WIFI(11b)
Note: CH11,換耳機,接充電器,手機(2)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		311.2000	45.96	-9.82	36.14	46.00	-9.86	peak		
2	!	428.8000	49.14	-8.05	41.09	46.00	-4.91	peak		
3	*	468.0000	50.89	-7.77	43.12	46.00	-2.88	peak		
4		546.4000	44.04	-6.04	38.00	46.00	-8.00	peak		
5		624.8000	40.81	-4.64	36.17	46.00	-9.83	peak		
6		913.2000	37.59	-0.19	37.40	46.00	-8.60	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

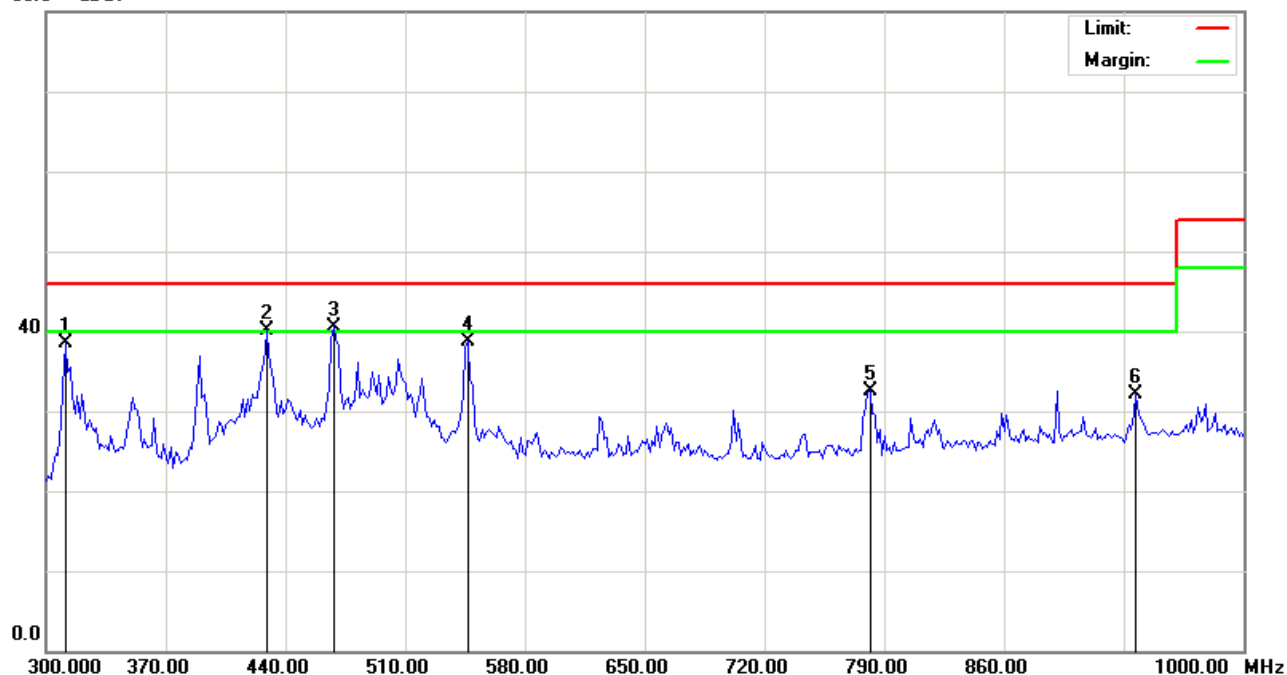
File :MS6030(WIFI,11b)

Data :#12

Date: 2008-3-5

Time:

80.0 dBuV



Site: Polarization: **Horizontal** Temperature: 22 °C
Limit: FCC Class B 3M Radiation Power: Humidity: 60 %
EUT: Distance: 3m
M/N: MS6030
Mode: WIFI(11b)
Note: CH11,換耳機,接充電器,手機(2)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		311.2000	48.26	-9.82	38.44	46.00	-7.56	peak		
2	!	428.8000	48.13	-8.05	40.08	46.00	-5.92	peak		
3	*	468.0000	48.37	-7.77	40.60	46.00	-5.40	peak		
4		546.4000	44.83	-6.04	38.79	46.00	-7.21	peak		
5		781.6000	34.90	-2.38	32.52	46.00	-13.48	peak		
6		937.0000	32.06	0.12	32.18	46.00	-13.82	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

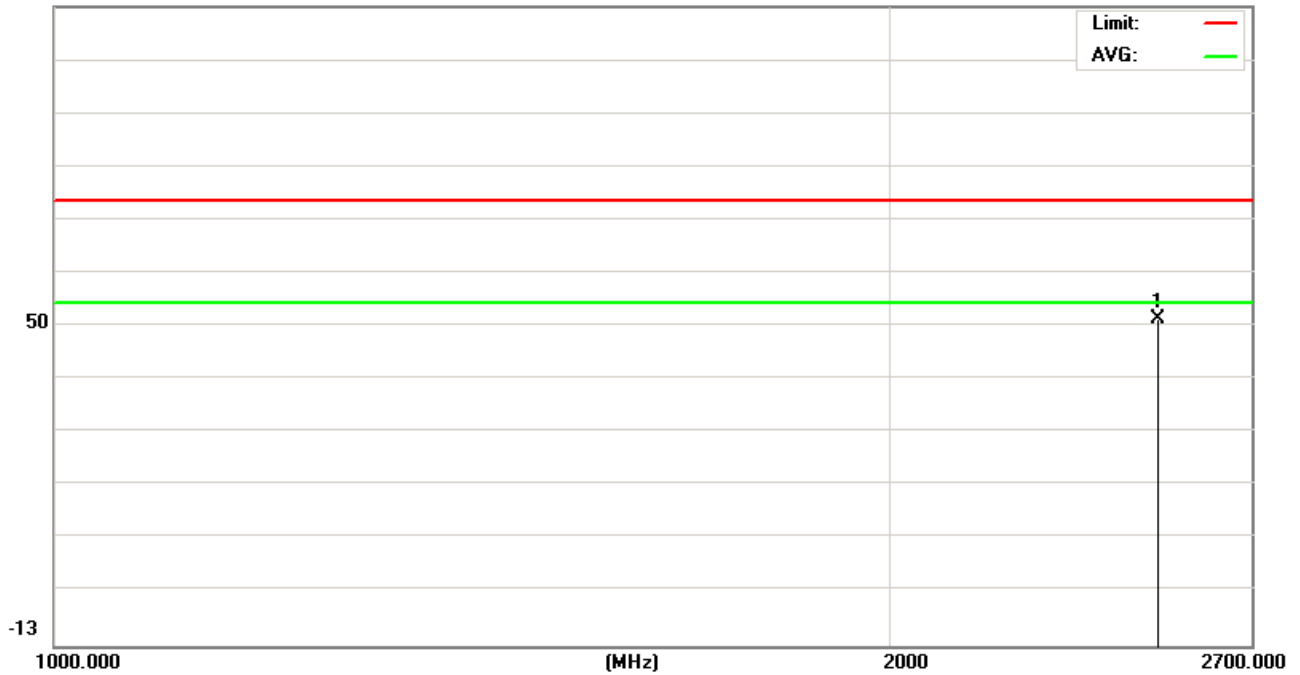
File :MS6030(CH2462)

Data :#1

Date: 2008/03/06

Time:

112.0 dBuV



Site

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 3m

M/N: MS6030

Mode: WIFI(11b)1

Note: CH11(2462MHz)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree
1	*	2496.000	50.68	0.25	50.93	74.00	-23.07	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

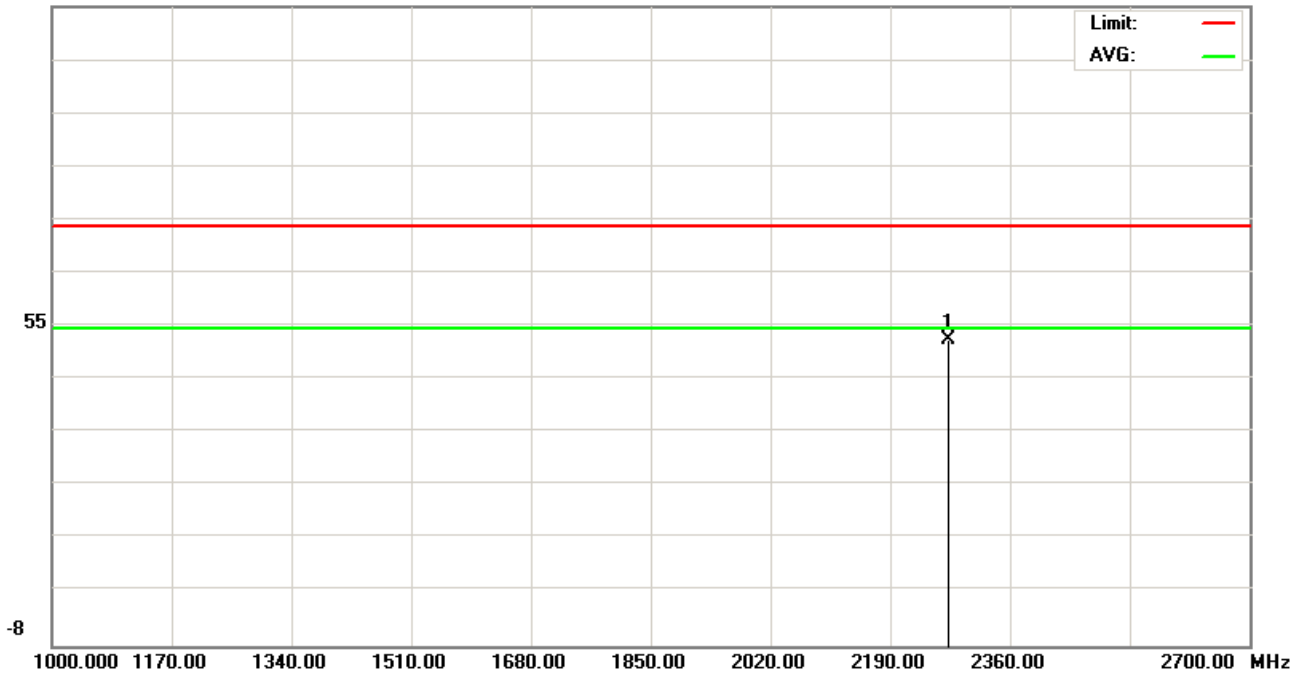
File :MS6030(CH2462)

Data :#3

Date: 2008/03/06

Time:

117.0 dBuV



Site

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 3m

M/N: MS6030

Mode: WIFI(11b)

Note: CH11(2462MHz)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree
1	*	2271.600	51.52	0.43	51.95	74.00	-22.05	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

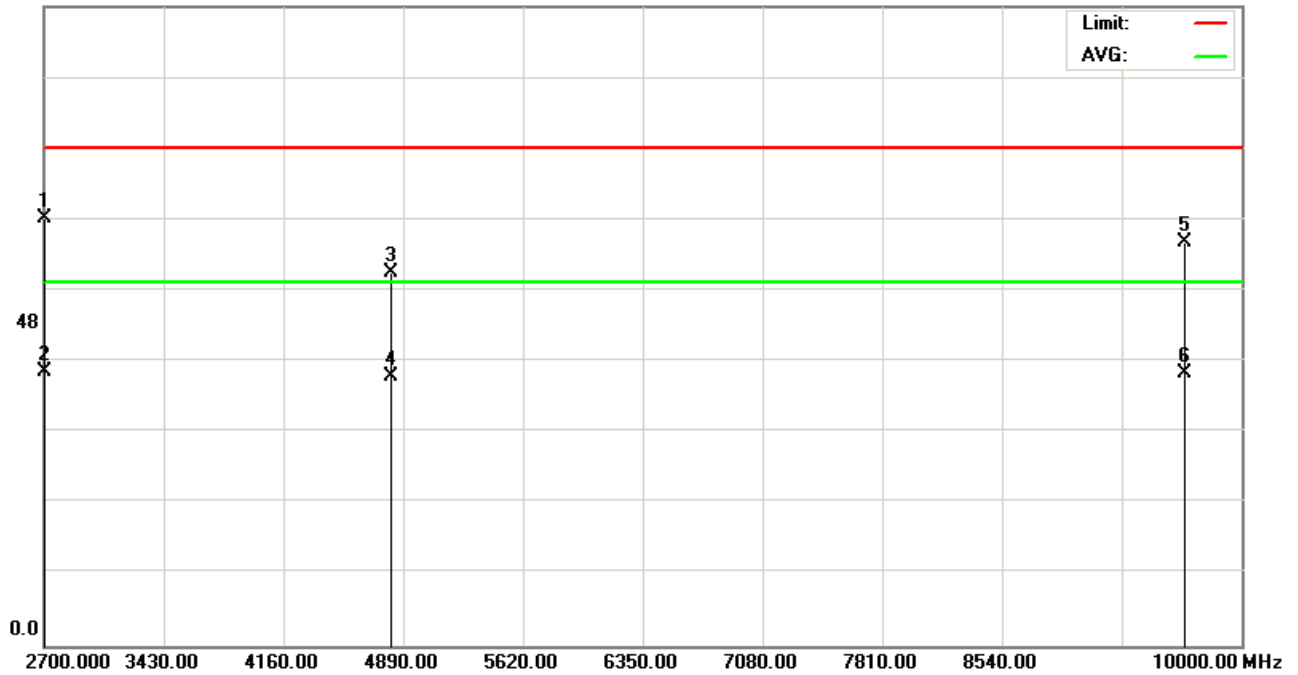
File :MS6030(CH2462)

Data :#5

Date: 2008/03/06

Time:

95.0 dBuV



Site

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 3m

M/N: MS6030

Mode: WIFI(11b)

Note: CH11(2462MHz)

2.7G-10G PK Scan Att:0 ; REF:95 ; Range:95(EUT Power Lever:255)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2700.000	40.92	22.58	63.50	74.00	-10.50	peak		
2		2700.000	18.24	22.58	40.82	54.00	-13.18	AVG		
3		4817.000	48.07	7.42	55.49	74.00	-18.51	peak		
4		4817.000	32.60	7.42	40.02	54.00	-13.98	AVG		
5		9653.250	42.99	16.95	59.94	74.00	-14.06	peak		
6		9653.250	23.52	16.95	40.47	54.00	-13.53	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

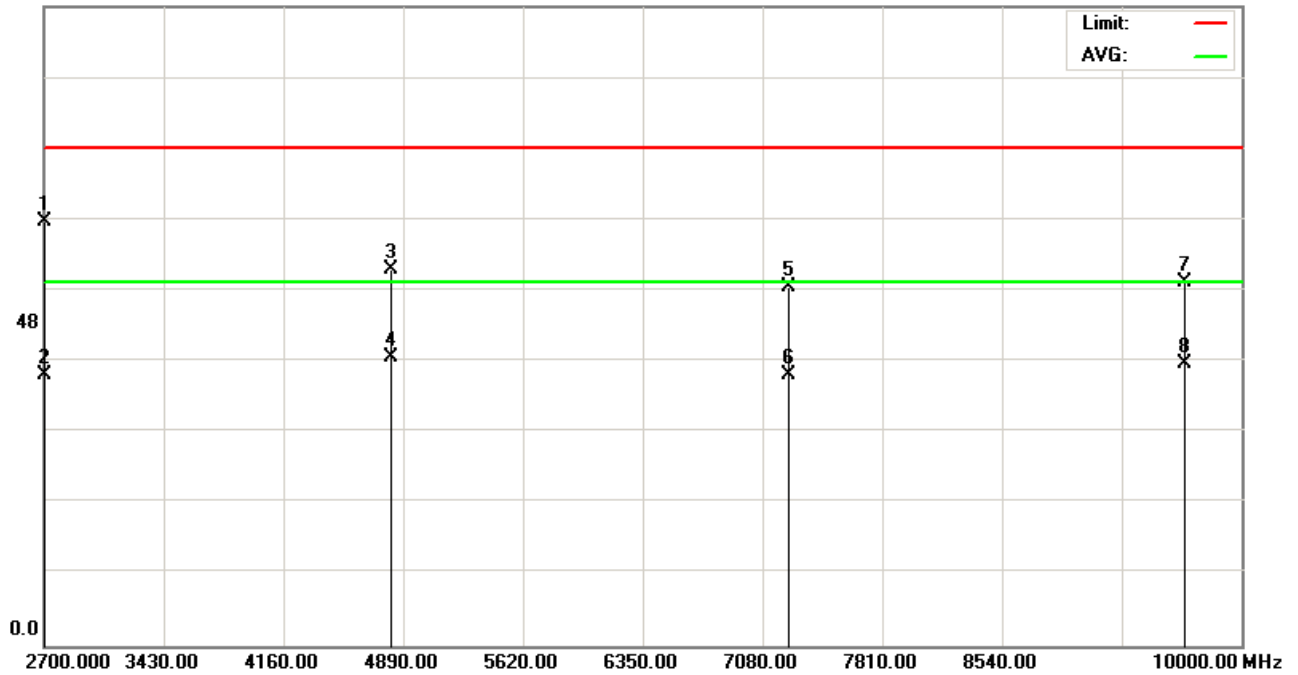
File :MS6030(CH2462)

Data :#7

Date: 2008/03/06

Time:

95.0 dBuV



Site

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 3m

M/N: MS6030

Mode: WIFI(11b)

Note: CH11(2462MHz)

2.7G-10G PK Scan Att:0 ; REF:95 ; Range:95(EUT Power Lever:255)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	cm	degree	Comment
1	*	2700.000	40.58	22.58	63.16	74.00	-10.84	peak		
2		2700.000	17.73	22.58	40.31	54.00	-13.69	AVG		
3		4817.000	48.43	7.42	55.85	74.00	-18.15	peak		
4		4817.000	35.51	7.42	42.93	54.00	-11.07	AVG		
5		7244.250	39.55	13.76	53.31	74.00	-20.69	peak		
6		7244.250	26.52	13.76	40.28	54.00	-13.72	AVG		
7		9653.250	37.09	16.95	54.04	74.00	-19.96	peak		
8		9653.250	24.98	16.95	41.93	54.00	-12.07	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

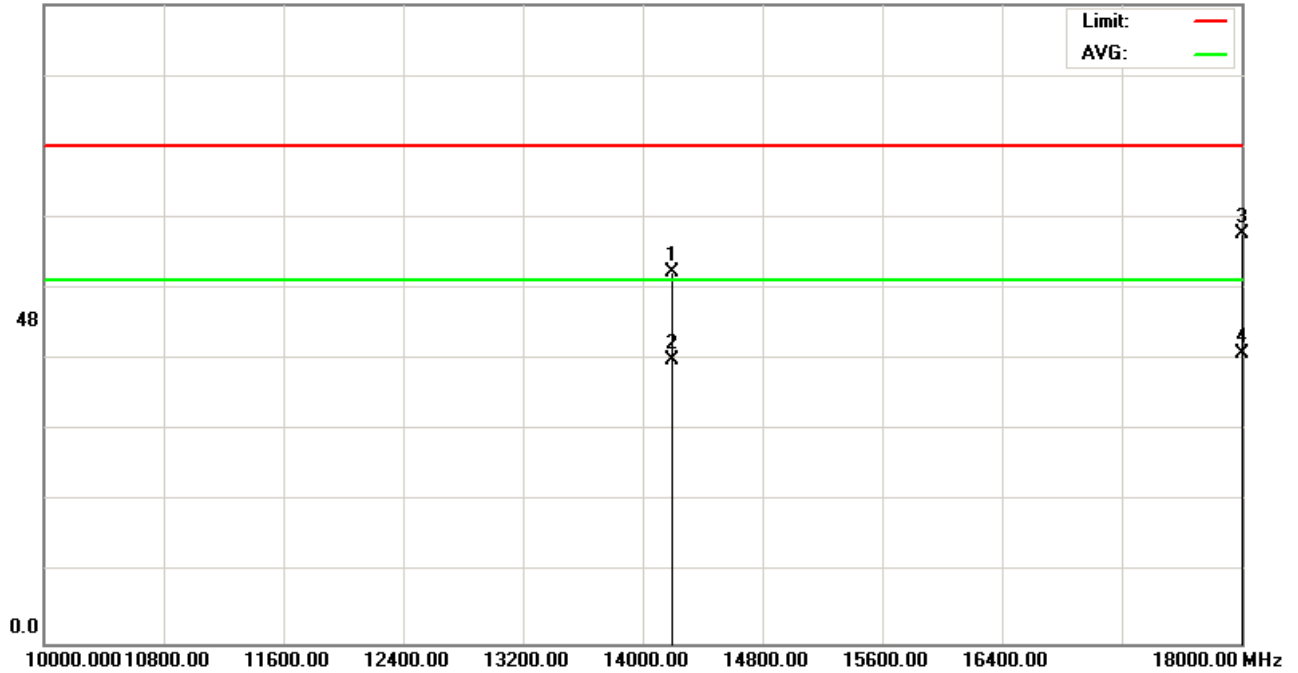
File :MS6030(CH2462)

Data :#9

Date: 2008/03/06

Time:

95.0 dBuV



Site

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 1m

M/N: MS6030

Mode: WIFI(11b)

Note: CH11(2462MHz)

10G - 18G PK Scan Att:0 ; REF:95 ; Range:95(EUT Power Lever:255)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		14200.00	26.75	28.40	55.15	74.00	-18.85	peak		
2		14200.00	13.85	28.40	42.25	54.00	-11.75	AVG		
3		18000.00	25.92	35.11	61.03	74.00	-12.97	peak		
4	*	18000.00	8.05	35.11	43.16	54.00	-10.84	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

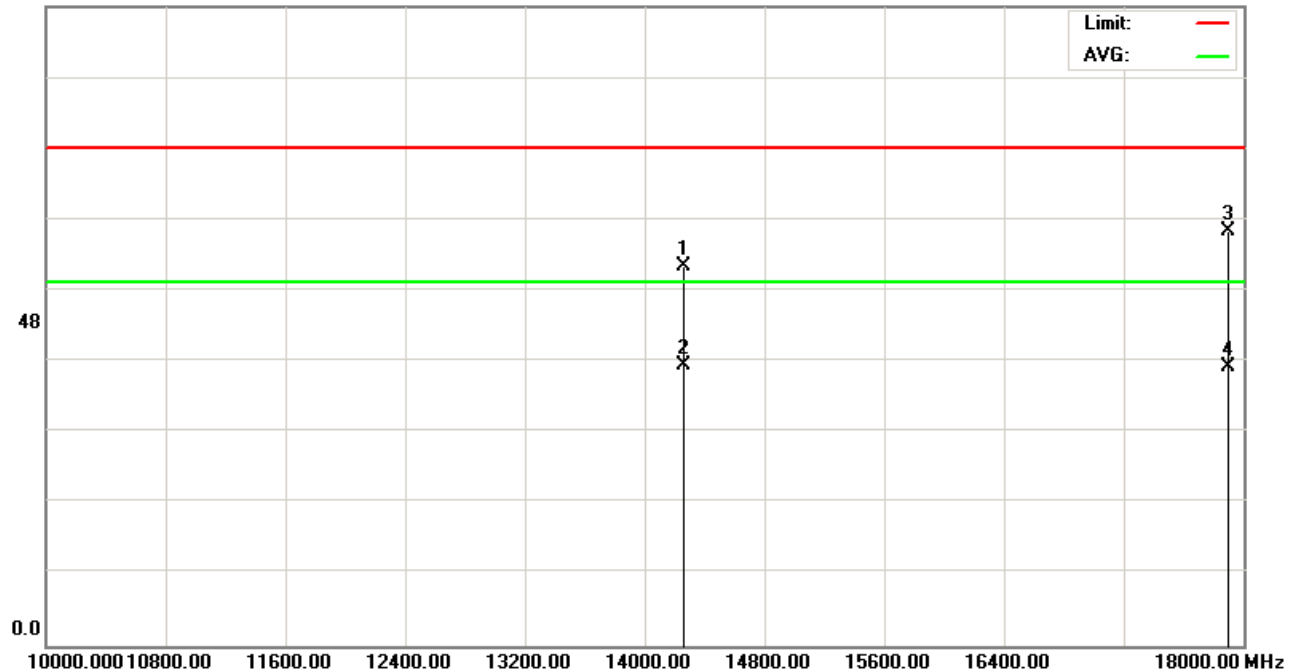
File :MS6030(CH2462)

Data :#11

Date: 2008/03/06

Time:

95.0 dBuV



Site

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 1m

M/N: MS6030

Mode: WIFI(11b)

Note: CH11(2462MHz)

10G - 18G PK Scan Att:0 ; REF:95 ; Range:95(EUT Power Lever:255)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		14260.00	28.31	28.20	56.51	74.00	-17.49	peak		
2		14260.00	13.52	28.20	41.72	54.00	-12.28	AVG		
3	*	17900.00	27.25	34.50	61.75	74.00	-12.25	peak		
4		17900.00	7.03	34.50	41.53	54.00	-12.47	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

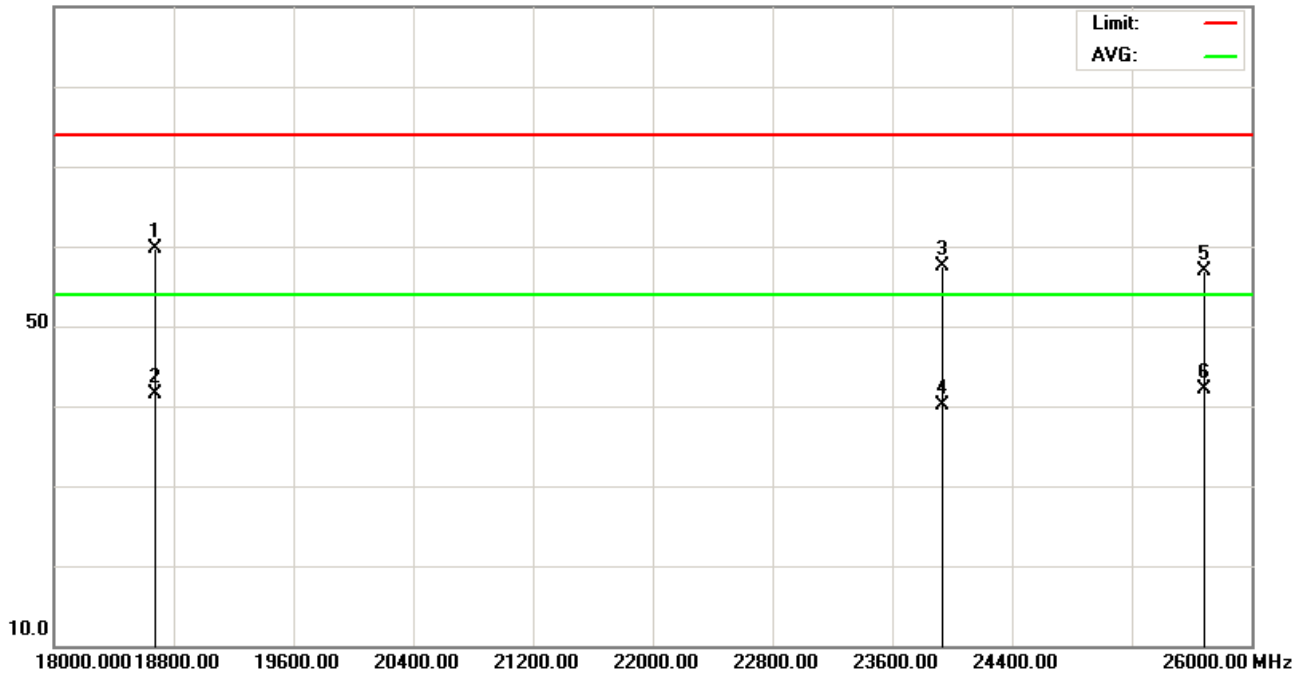
File :MS6030(CH2462)

Data :#13

Date: 2008/03/06

Time:

90.0 dBuV



Site

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 3m

M/N: MS6030

Mode: WIFI(11b)

Note: CH11(2462MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		18680.00	26.57	33.11	59.68	74.00	-14.32	peak		
2		18680.00	8.35	33.11	41.46	54.00	-12.54	AVG		
3		23940.00	27.92	29.53	57.45	74.00	-16.55	peak		
4		23940.00	10.57	29.53	40.10	54.00	-13.90	AVG		
5		25680.00	28.67	28.33	57.00	74.00	-17.00	peak		
6	*	25680.00	13.73	28.33	42.06	54.00	-11.94	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

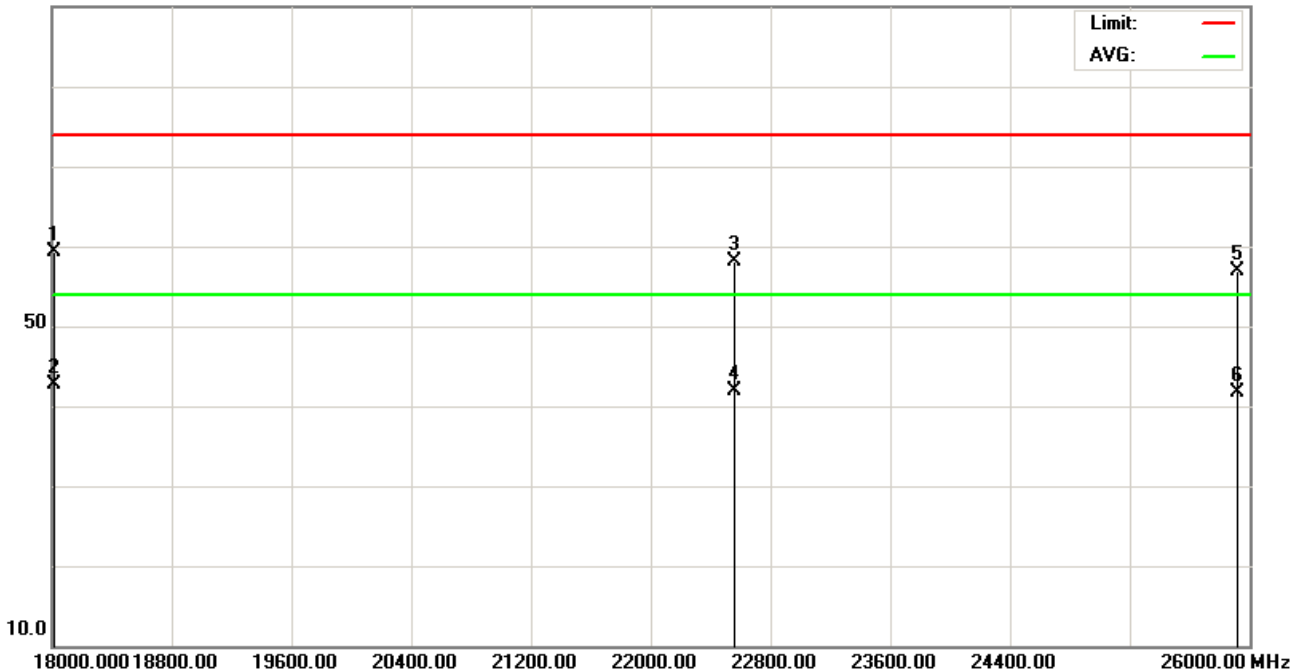
File :MS6030(CH2462)

Data :#14

Date: 2008/03/06

Time:

90.0 dBuV



Site

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 3m

M/N: MS6030

Mode: WIFI(11b)

Note: CH11(2462MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		18020.00	25.38	33.99	59.37	74.00	-14.63	peak		
2	*	18020.00	8.63	33.99	42.62	54.00	-11.38	AVG		
3		22560.00	27.59	30.46	58.05	74.00	-15.95	peak		
4		22560.00	11.48	30.46	41.94	54.00	-12.06	AVG		
5		25920.00	28.82	28.17	56.99	74.00	-17.01	peak		
6		25920.00	13.51	28.17	41.68	54.00	-12.32	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



3.6.4 Open Field Radiated Emissions (Subpart C)

The highest peak values of radiated emissions from the EUT at various antenna heights, antenna polarization, EUT orientation, etc. are recorded on the following.

Applicant : Innovation Wireless Inc.
Model No : MS6030
EUT : Wi-Fi IP Phone
Test Mode : AC Adapter _ 802.11g CH1 2412.000 (Local Frequency: 2412.000 MHz)
Test Date : 03/05~06/2008

Please refer to next pager of detail testing data.

Notes:

1. Margin= Amplitude - Limits
2. Distance of Measurement: 3 Meter (30-1000MHz) & (1-10GHz), 1 Meter (10-26.5GHz)
3. Height of table for EUT placed: 0.8 Meter.
4. ANT= Antenna height.
5. Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor
(Auto calculate in spectrum analyzer)
6. The EUT was worst case on X axis after pretest on X & Y & Z axis setting.
7. The testing data only show below 18GHz's data because measure data above 18GHz was only ambient noise.
8. All frequencies from 30MHz to 26.5GHz have been tested



Radiated Emission Measurement

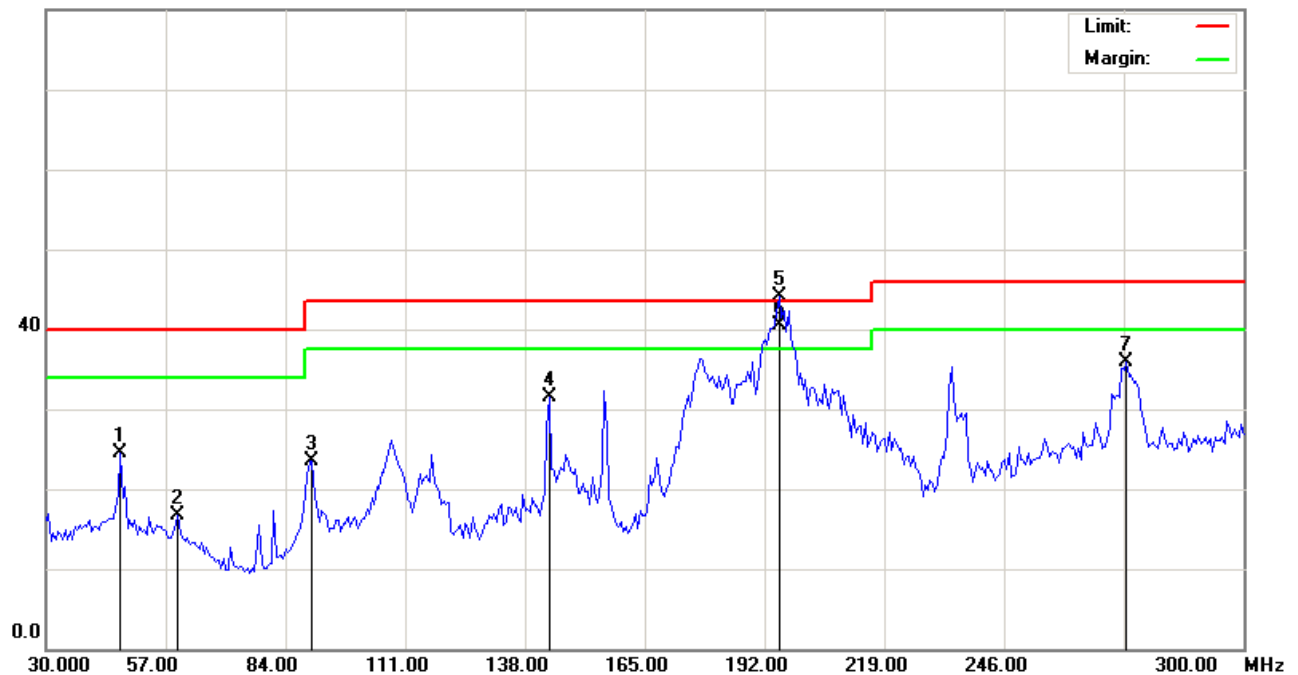
File :MS6030(PC MODE,WIFI,11g)

Data :#1

Date: 2008/03/05

Time:

80.0 dBuV



Site

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC Class B 3M Radiation

Power:

Humidity: 60 %

EUT:

Distance: 3m

M/N: MS6030

Mode: PC MODE(WIFI,11G)

Note: CH01,接耳機,接NB-01(DELL),(2)號手機,後下的孔

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		46.7400	36.46	-11.94	24.52	40.00	-15.48	peak		
2		59.7000	29.16	-12.52	16.64	40.00	-23.36	peak		
3		89.9400	36.76	-13.20	23.56	43.50	-19.94	peak		
4		143.4000	47.82	-16.24	31.58	43.50	-11.92	peak		
5	*	195.2400	57.26	-13.09	44.17	43.50	0.67	peak		
6	!	195.2400	53.60	-13.09	40.51	43.50	-2.99	QP		
7		273.5400	46.66	-10.83	35.83	46.00	-10.17	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

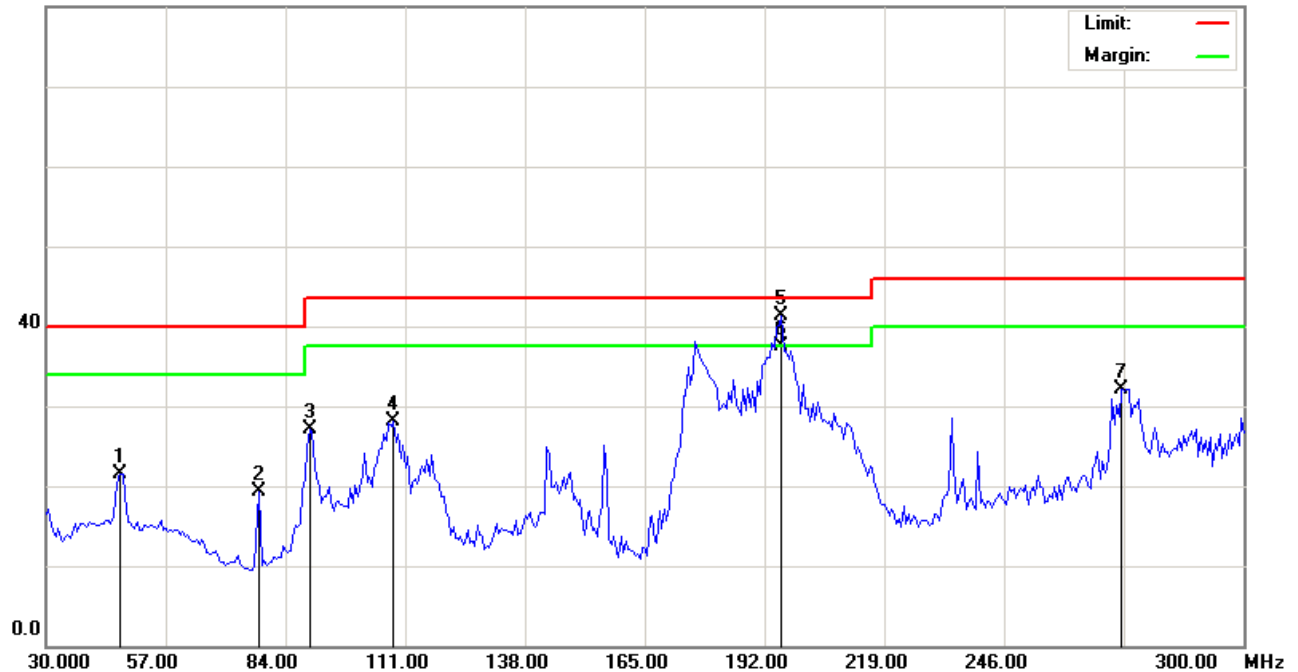
File :MS6030(PC MODE,WIFI,11g)

Data :#3

Date: 2008/03/05

Time:

80.0 dBuV



Site

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC Class B 3M Radiation

Power:

Humidity: 60 %

EUT:

Distance: 3m

M/N: MS6030

Mode: PC MODE(WIFI,11G)

Note: CH01,接耳機,接NB-01(DELL),(2)號手機,後下的孔

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		46.7400	33.48	-11.94	21.54	40.00	-18.46	peak		
2		78.0600	36.12	-16.79	19.33	40.00	-20.67	peak		
3		89.4000	40.46	-13.36	27.10	43.50	-16.40	peak		
4		108.3000	40.57	-12.37	28.20	43.50	-15.30	peak		
5	*	195.7800	54.32	-13.10	41.22	43.50	-2.28	peak		
6		195.7800	50.54	-13.10	37.44	43.50	-6.06	QP		
7		272.4600	42.97	-10.86	32.11	46.00	-13.89	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

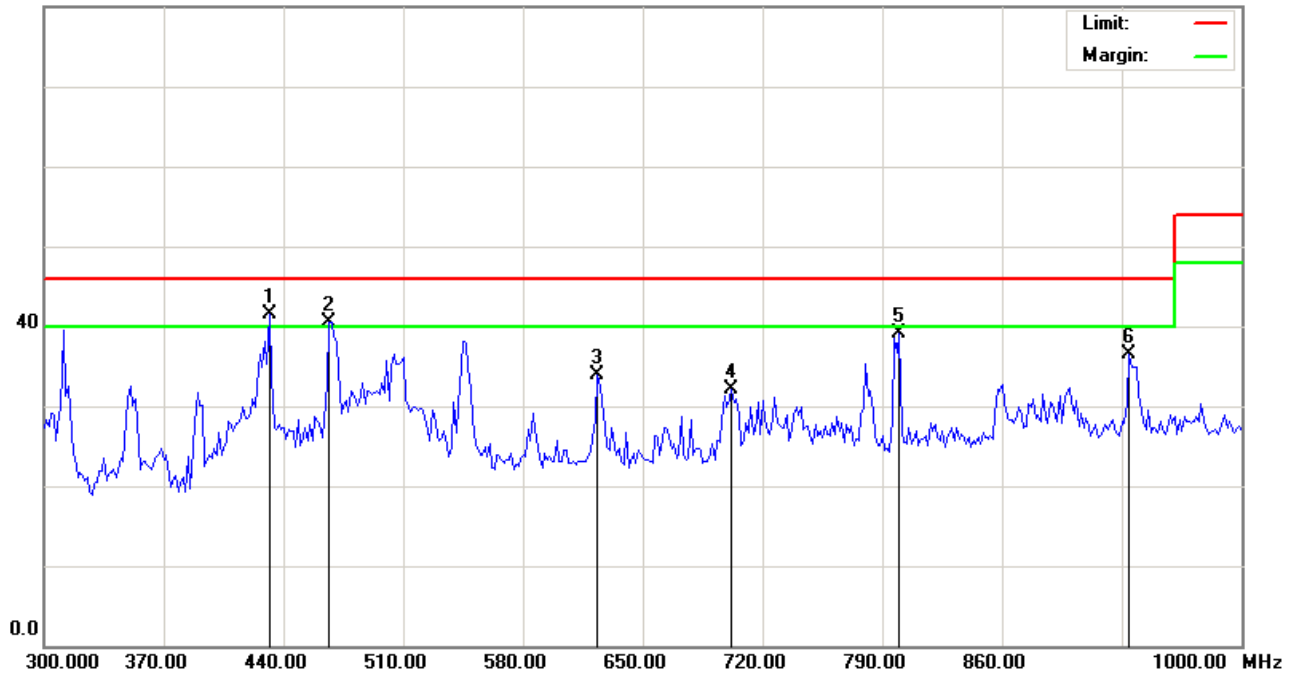
File :MS6030(PC MODE,WIFI,11g)

Data :#2

Date: 2008/03/05

Time:

80.0 dBuV



Site

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC Class B 3M Radiation

Power:

Humidity: 60 %

EUT:

Distance: 3m

M/N: MS6030

Mode: PC MODE(WIFI,11G)

Note: CH01,接耳機,接NB-01(DELL),(2)號手機，後下的孔

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	431.6000	49.45	-8.03	41.42	46.00	-4.58	peak		
2	!	466.6000	48.41	-7.81	40.60	46.00	-5.40	peak		
3		623.4000	38.42	-4.56	33.86	46.00	-12.14	peak		
4		701.8000	36.02	-3.92	32.10	46.00	-13.90	peak		
5		799.8000	41.51	-2.32	39.19	46.00	-6.81	peak		
6		934.2000	36.61	-0.06	36.55	46.00	-9.45	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

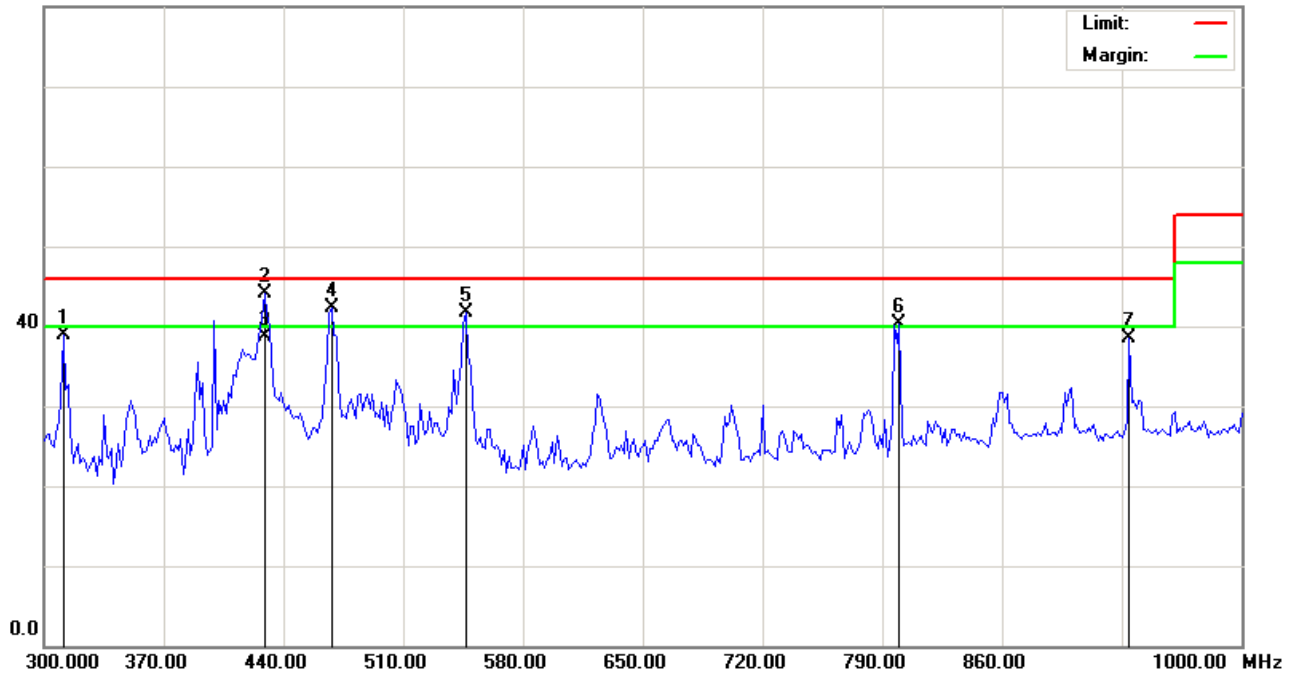
File :MS6030(PC MODE,WIFI,11g)

Data :#4

Date: 2008/03/05

Time:

80.0 dBuV



Site

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC Class B 3M Radiation

Power:

Humidity: 60 %

EUT:

Distance: 3m

M/N: MS6030

Mode: PC MODE(WIFI,11G)

Note: CH01,接耳機,接NB-01(DELL),(2)號手機,後下的孔

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		311.2000	48.68	-9.82	38.86	46.00	-7.14	peak		
2	*	428.8000	52.11	-8.05	44.06	46.00	-1.94	peak		
3		428.8000	46.68	-8.05	38.63	46.00	-7.37	QP		
4	!	468.0000	50.06	-7.77	42.29	46.00	-3.71	peak		
5	!	546.4000	47.67	-6.04	41.63	46.00	-4.37	peak		
6	!	799.8000	42.63	-2.32	40.31	46.00	-5.69	peak		
7		934.2000	38.51	-0.06	38.45	46.00	-7.55	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

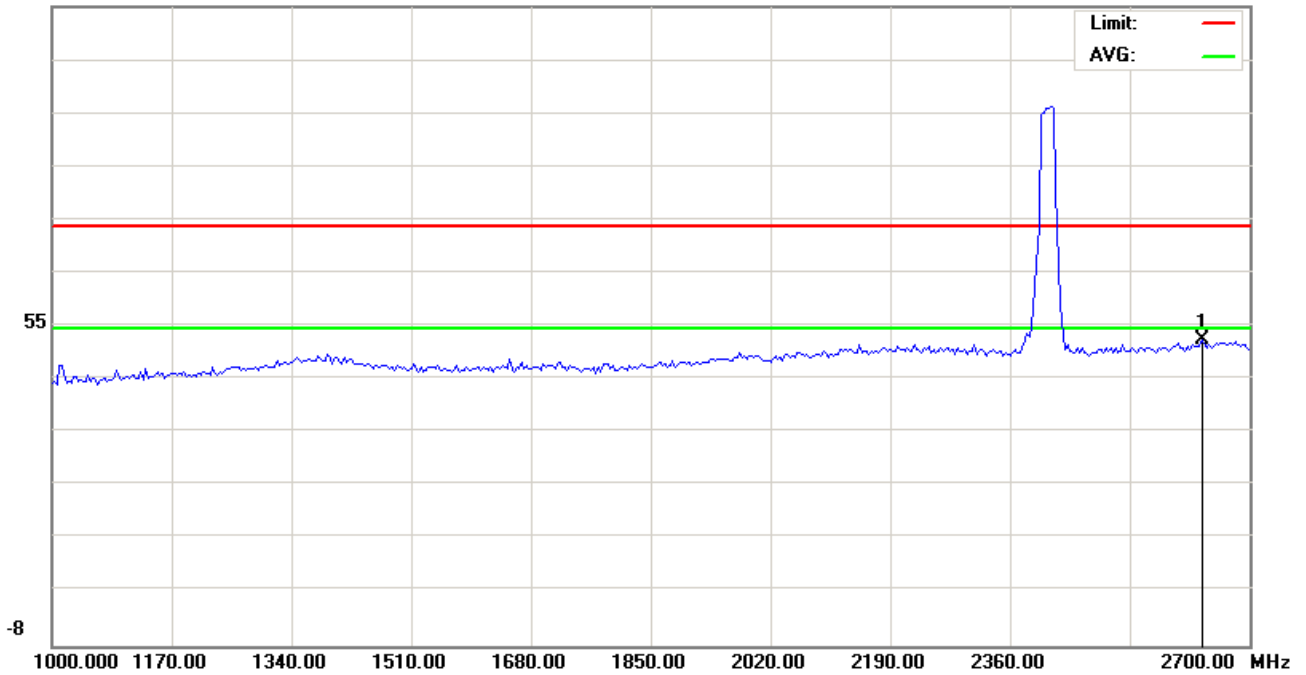
File :MS6030(CH2412)

Data :#1

Date: 2008/03/06

Time:

117.0 dBuV



Site

Polarization: Vertical

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 3m

M/N: MS6030

Mode: WIFI(11g)

Note: CH01(2412MHz)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree
1	*	2632.000	51.03	0.93	51.96	74.00	-22.04	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

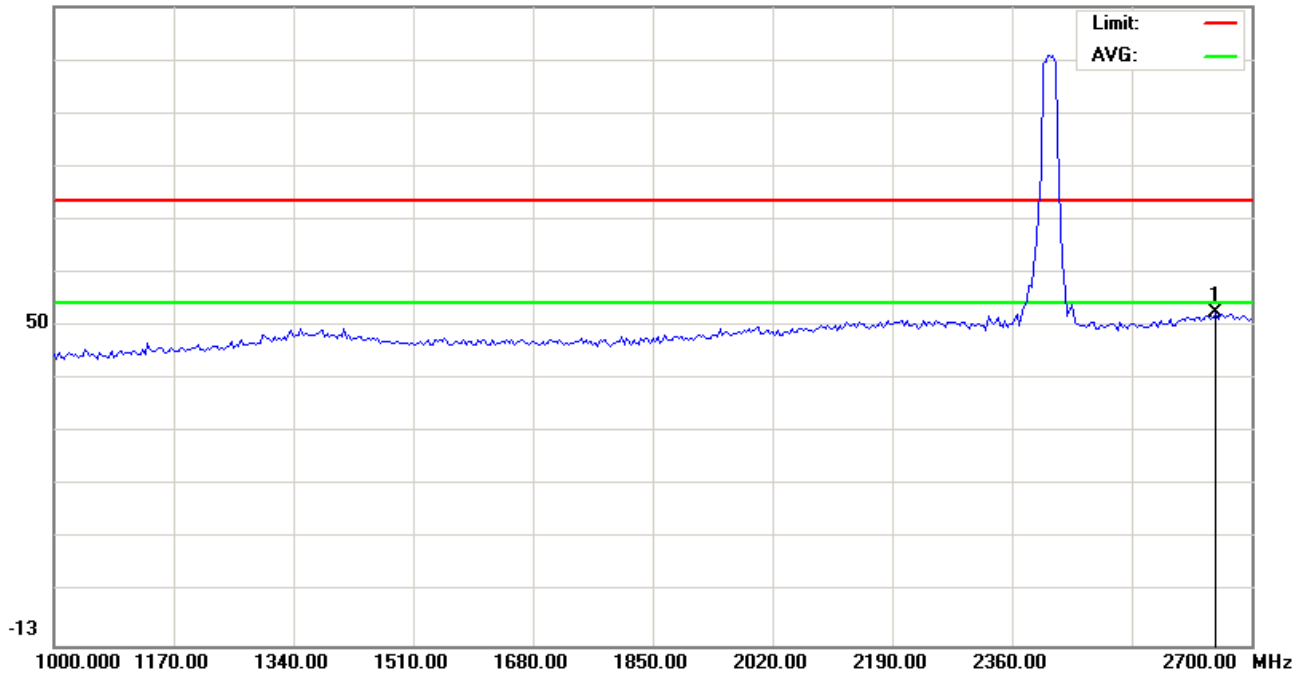
File :MS6030(CH2412)

Data :#3

Date: 2008/03/06

Time:

112.0 dBuV



Site

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 3m

M/N: MS6030

Mode: WIFI(11g)

Note: CH01(2412MHz)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree
1	*	2649.000	51.27	0.97	52.24	74.00	-21.76	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

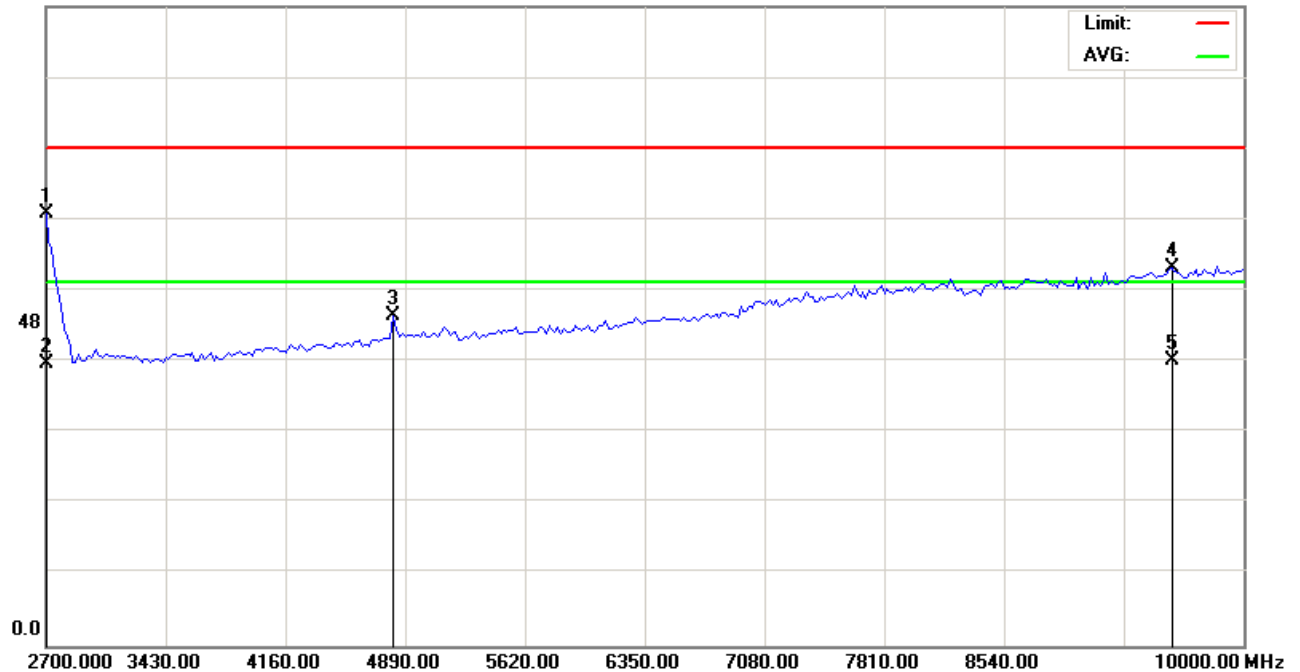
File :MS6030(CH2412)

Data :#5

Date: 2008/03/06

Time:

95.0 dBuV



Site

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 3m

M/N: MS6030

Mode: WIFI(11g)

Note: CH01(2412MHz)

2.7G-10G PK Scan Att:0 ; REF:95 ; Range:95(EUT Power Lever:255)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2700.000	41.62	22.58	64.20	74.00	-9.80	peak		
2		2700.000	19.38	22.58	41.96	54.00	-12.04	AVG		
3		4817.000	41.55	7.42	48.97	74.00	-25.03	peak		
4		9562.000	38.94	17.21	56.15	74.00	-17.85	peak		
5		9562.000	25.16	17.21	42.37	54.00	-11.63	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

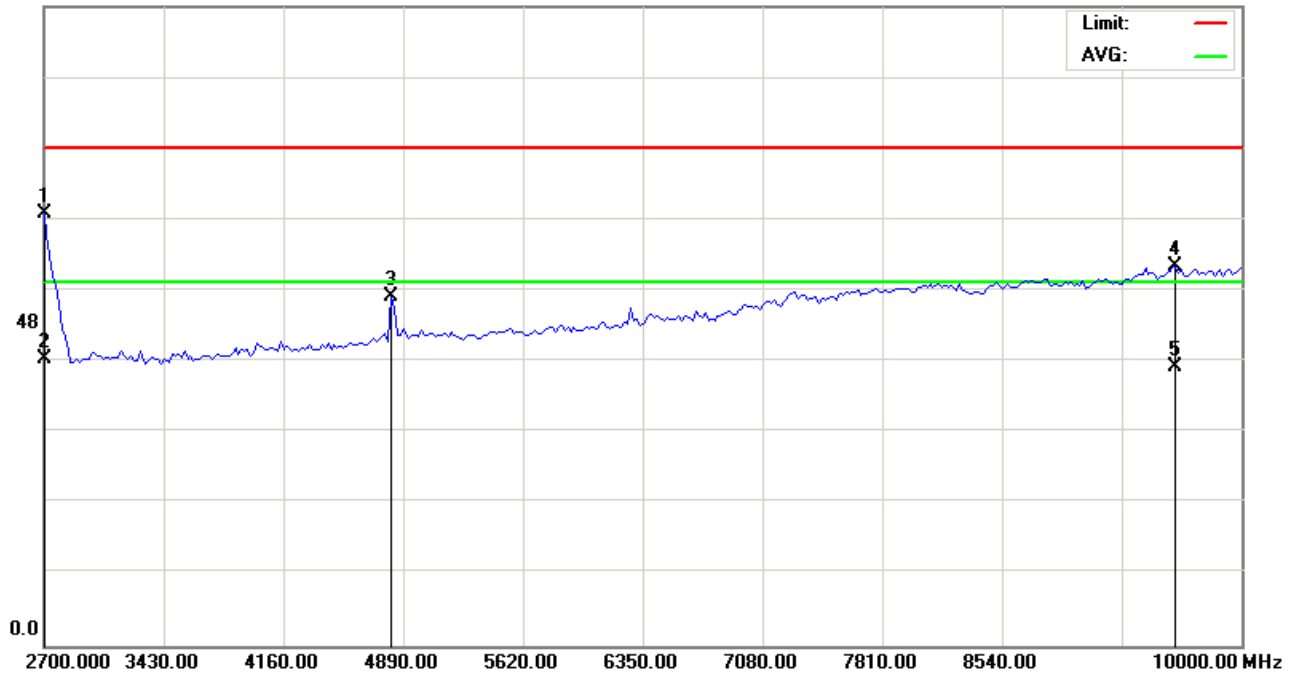
File :MS6030(CH2412)

Data :#7

Date: 2008/03/06

Time:

95.0 dBuV



Site

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 3m

M/N: MS6030

Mode: WIFI(11g)

Note: CH01(2412MHz)

2.7G-10G PK Scan Att:0 ; REF:95 ; Range:95(EUT Power Lever:255)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2700.000	41.61	22.58	64.19	74.00	-9.81	peak		
2		2700.000	20.09	22.58	42.67	54.00	-11.33	AVG		
3		4817.000	44.59	7.42	52.01	74.00	-21.99	peak		
4		9598.500	38.93	17.41	56.34	74.00	-17.66	peak		
5		9598.500	24.06	17.41	41.47	54.00	-12.53	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

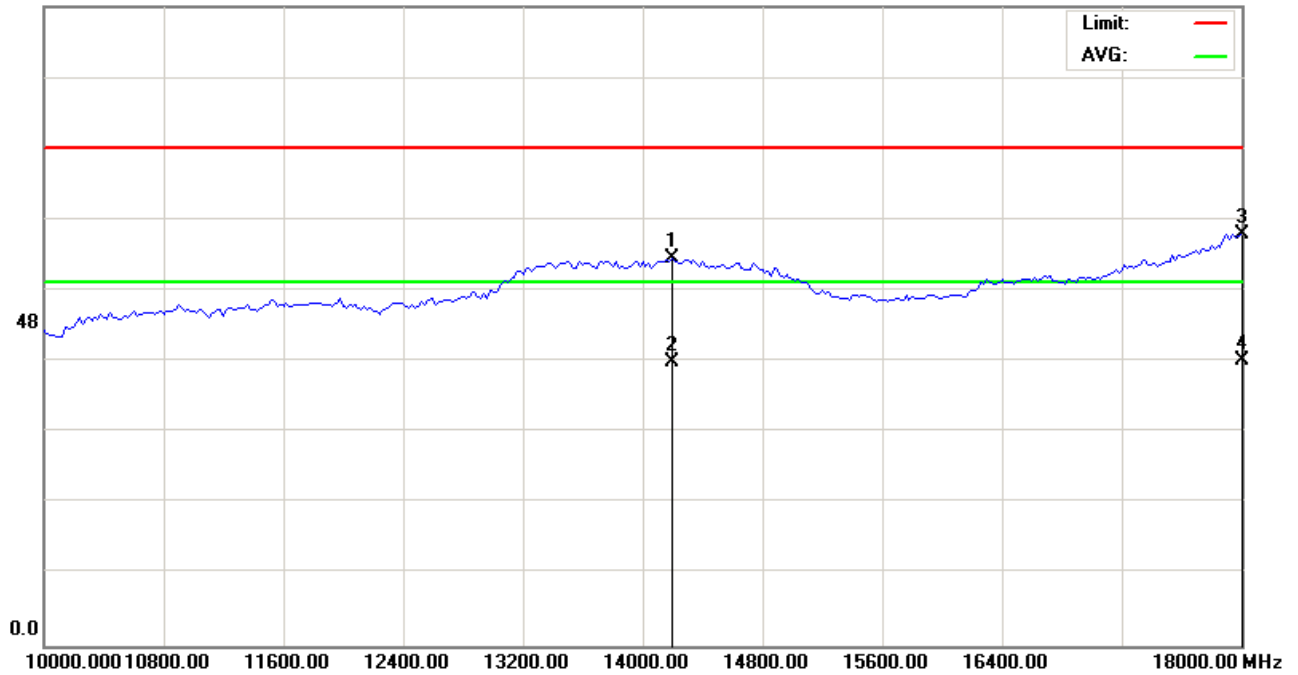
File :MS6030(CH2412)

Data :#9

Date: 2008/03/06

Time:

95.0 dBuV



Site

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 1m

M/N: MS6030

Mode: WIFI(11g)

Note: CH01(2412MHz)

10G - 18G PK Scan Att:0 ; REF:95 ; Range:95(EUT Power Lever:255)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		14200.00	29.25	28.40	57.65	74.00	-16.35	peak		
2		14200.00	13.69	28.40	42.09	54.00	-11.91	AVG		
3		18000.00	26.05	35.11	61.16	74.00	-12.84	peak		
4	*	18000.00	7.36	35.11	42.47	54.00	-11.53	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

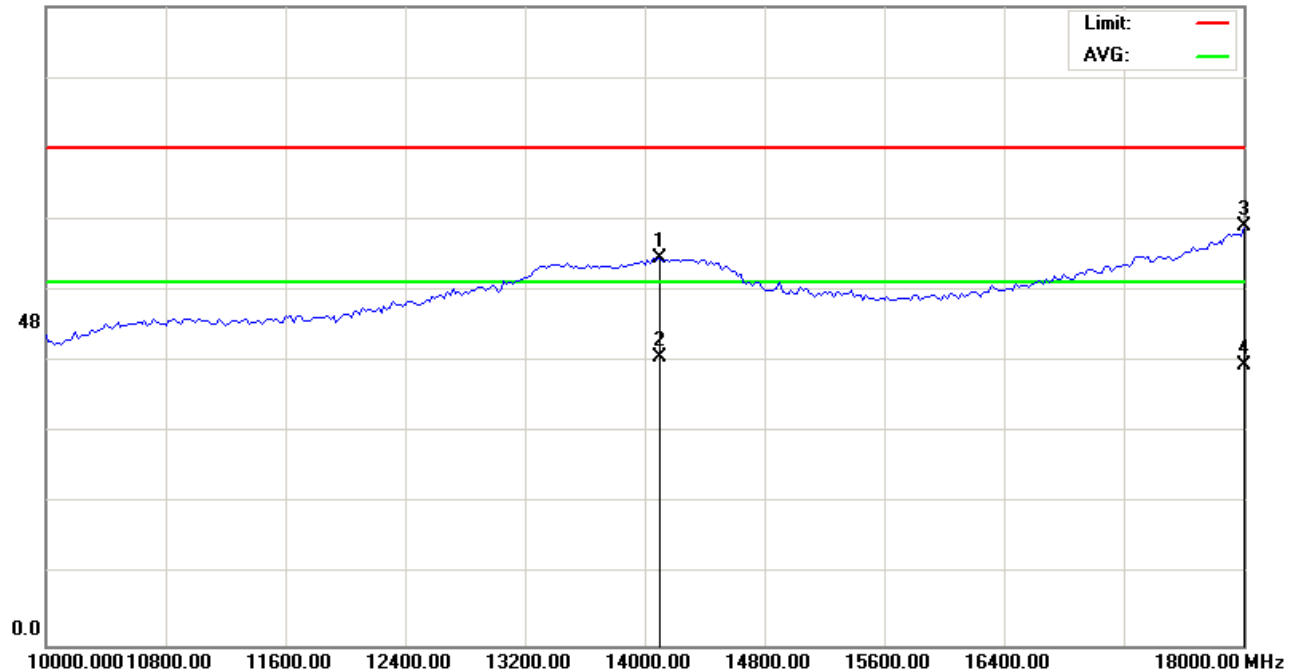
File :MS6030(CH2412)

Data :#11

Date: 2008/03/06

Time:

95.0 dBuV



Site

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 1m

M/N: MS6030

Mode: WIFI(11g)

Note: CH01(2412MHz)

10G - 18G PK Scan Att:0 ; REF:95 ; Range:95(EUT Power Lever:255)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		14100.00	29.25	28.44	57.69	74.00	-16.31	peak		
2	*	14100.00	14.32	28.44	42.76	54.00	-11.24	AVG		
3		18000.00	27.16	35.11	62.27	74.00	-11.73	peak		
4		18000.00	6.69	35.11	41.80	54.00	-12.20	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

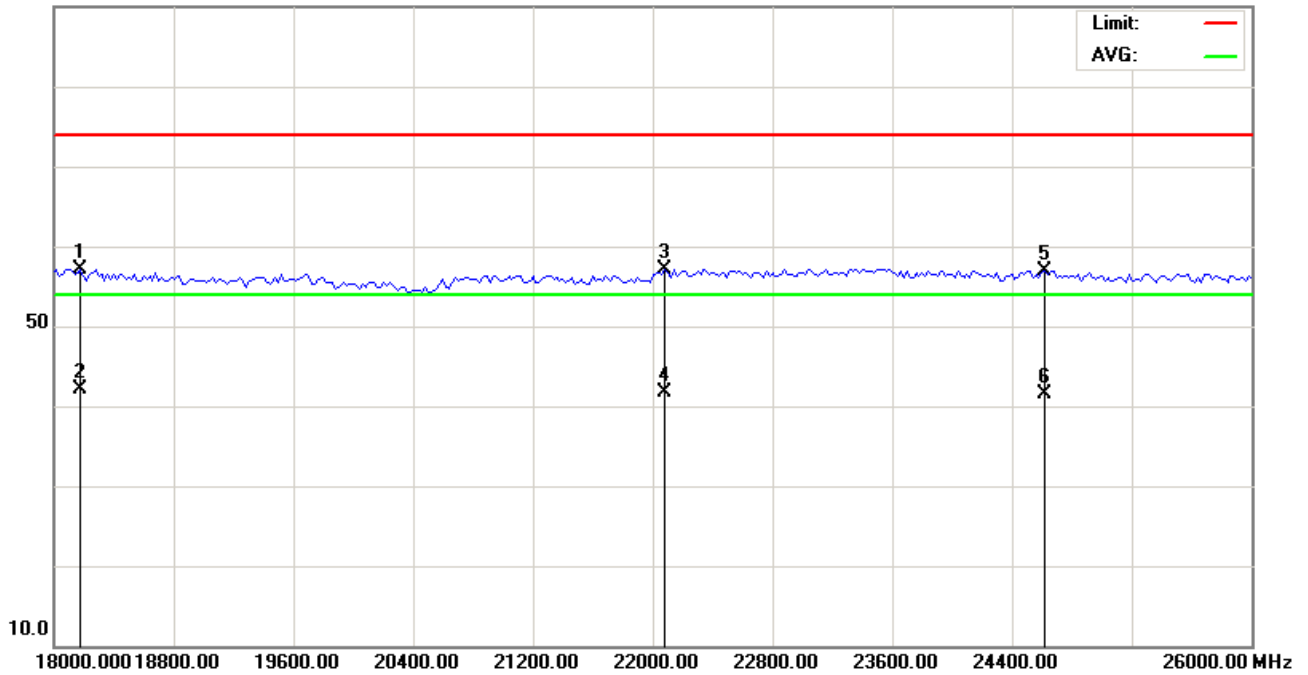
File :MS6030(CH2412)

Data :#13

Date: 2008/03/06

Time:

90.0 dBuV



Site

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 3m

M/N: MS6030

Mode: WIFI(11g)

Note: CH01(2412MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		18180.00	22.83	34.34	57.17	74.00	-16.83	peak		
2	*	18180.00	7.69	34.34	42.03	54.00	-11.97	AVG		
3		22080.00	26.29	30.80	57.09	74.00	-16.91	peak		
4		22080.00	10.94	30.80	41.74	54.00	-12.26	AVG		
5		24620.00	27.92	29.06	56.98	74.00	-17.02	peak		
6		24620.00	12.35	29.06	41.41	54.00	-12.59	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

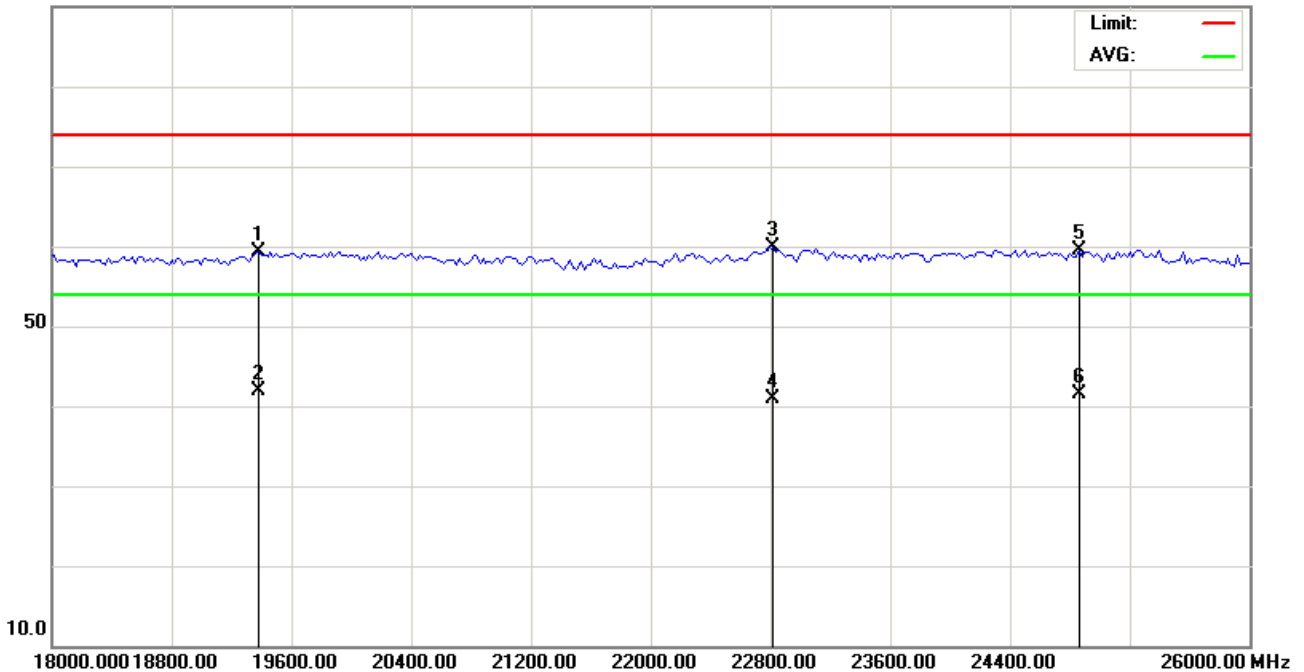
File :MS6030(CH2412)

Data :#14

Date: 2008/03/06

Time:

90.0 dBuV



Site
Limit: FCC part 15 (PK)
EUT: phone
M/N: MS6030
Mode: WIFI(11g)
Note: CH01(2412MHz)

Polarization: **Horizontal**
Power:
Distance: 3m

Temperature: 22 °C
Humidity: 60 %

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		19380.00	26.71	32.63	59.34	74.00	-14.66	peak		
2	*	19380.00	9.34	32.63	41.97	54.00	-12.03	AVG		
3		22820.00	29.61	30.29	59.90	74.00	-14.10	peak		
4		22820.00	10.67	30.29	40.96	54.00	-13.04	AVG		
5		24860.00	30.58	28.90	59.48	74.00	-14.52	peak		
6		24860.00	12.69	28.90	41.59	54.00	-12.41	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



3.6.5 Open Field Radiated Emissions (Subpart C)

The highest peak values of radiated emissions from the EUT at various antenna heights, antenna polarization, EUT orientation, etc. are recorded on the following

Applicant : Innovation Wireless Inc.
Model No : MS6030
EUT : Wi-Fi IP Phone
Test Mode : AC Adapter _ 802.11g CH6 2437.000 (Local Frequency: 2437.000 MHz)
Test Date : 03/05~06/2008

Please refer to next pager of detail testing data.

Notes:

1. Margin= Amplitude - Limits
2. Distance of Measurement: 3 Meter (30-1000MHz) & (1-10GHz), 1 Meter (10-26.5GHz)
3. Height of table for EUT placed: 0.8 Meter.
4. ANT= Antenna height.
5. Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor
(Auto calculate in spectrum analyzer)
6. The EUT was worst case on X axis after pretest on X & Y & Z axis setting.
7. The testing data only show below 18GHz's data because measure data above 18GHz was only ambient noise.
8. All frequencies from 30MHz to 26.5GHz have been tested



Radiated Emission Measurement

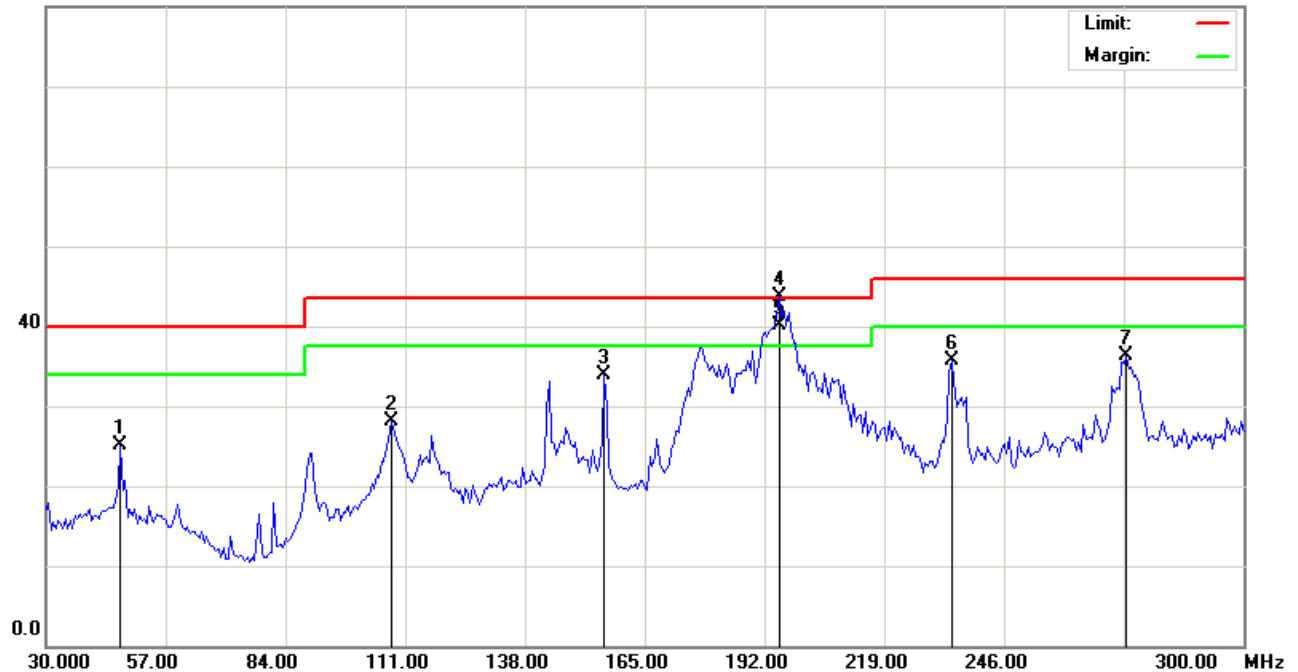
File :MS6030(PC MODE,WIFI,11g)

Data :#5

Date: 2008/03/05

Time:

80.0 dBuV



Site

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC Class B 3M Radiation

Power:

Humidity: 60 %

EUT:

Distance: 3m

M/N: MS6030

Mode: PC MODE(WIFI,11G)

Note: CH06,接耳機,接NB-01(DELL),(2)號手機,後下的孔

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		46.7400	36.96	-11.94	25.02	40.00	-14.98	peak		
2		107.7600	40.34	-12.32	28.02	43.50	-15.48	peak		
3		155.8200	49.68	-15.84	33.84	43.50	-9.66	peak		
4	*	195.2400	56.73	-13.09	43.64	43.50	0.14	peak		
5	!	195.2400	53.24	-13.09	40.15	43.50	-3.35	peak		
6		234.1200	47.46	-11.75	35.71	46.00	-10.29	peak		
7		273.5400	47.17	-10.83	36.34	46.00	-9.66	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

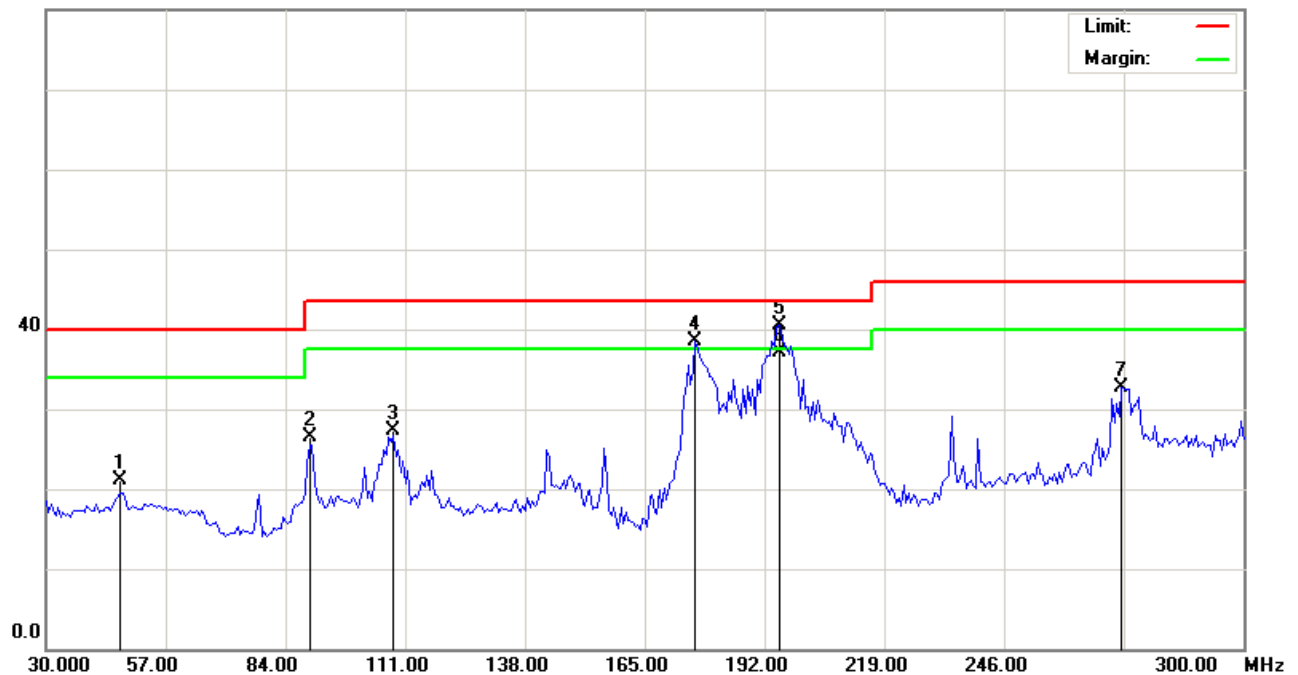
File :MS6030(PC MODE,WIFI,11g)

Data :#7

Date: 2008/03/05

Time:

80.0 dBuV



Site

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC Class B 3M Radiation

Power:

Humidity: 60 %

EUT:

Distance: 3m

M/N: MS6030

Mode: PC MODE(WIFI,11G)

Note: CH06,接耳機,接NB-01(DELL),(2)號手機，後下的孔

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		46.7400	33.05	-11.94	21.11	40.00	-18.89	peak		
2		89.4000	39.82	-13.36	26.46	43.50	-17.04	peak		
3		108.3000	39.67	-12.37	27.30	43.50	-16.20	peak		
4	!	176.3400	53.14	-14.55	38.59	43.50	-4.91	peak		
5	*	195.2400	53.61	-13.09	40.52	43.50	-2.98	peak		
6		195.2400	50.25	-13.09	37.16	43.50	-6.34	QP		
7		272.4600	43.47	-10.86	32.61	46.00	-13.39	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

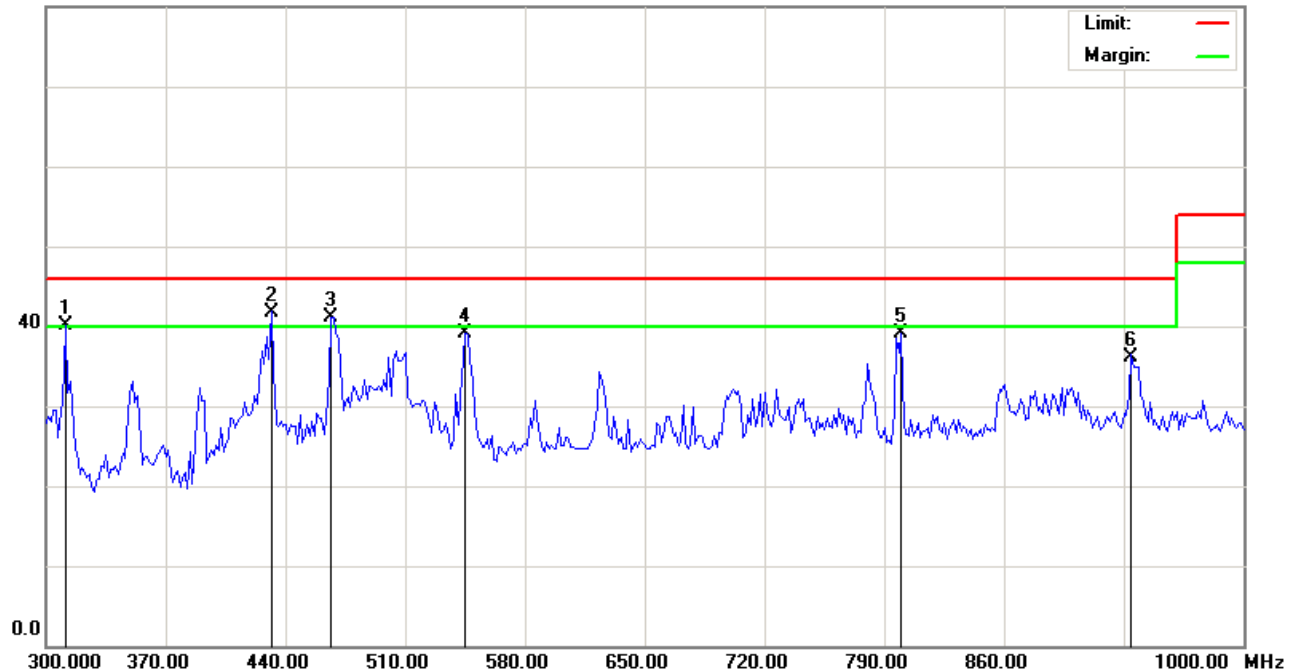
File :MS6030(PC MODE,WIFI,11g)

Data :#6

Date: 2008/03/05

Time:

80.0 dBuV



Site

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC Class B 3M Radiation

Power:

Humidity: 60 %

EUT:

Distance: 3m

M/N: MS6030

Mode: PC MODE(WIFI,11G)

Note: CH06,接耳機,接NB-01(DELL),(2)號手機,後下的孔

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1	!	311.2000	49.88	-9.82	40.06	46.00	-5.94	peak		
2	*	431.6000	49.82	-8.03	41.79	46.00	-4.21	peak		
3	!	466.6000	48.91	-7.81	41.10	46.00	-4.90	peak		
4		545.0000	45.12	-6.06	39.06	46.00	-6.94	peak		
5		799.8000	41.36	-2.32	39.04	46.00	-6.96	peak		
6		934.2000	36.17	-0.06	36.11	46.00	-9.89	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

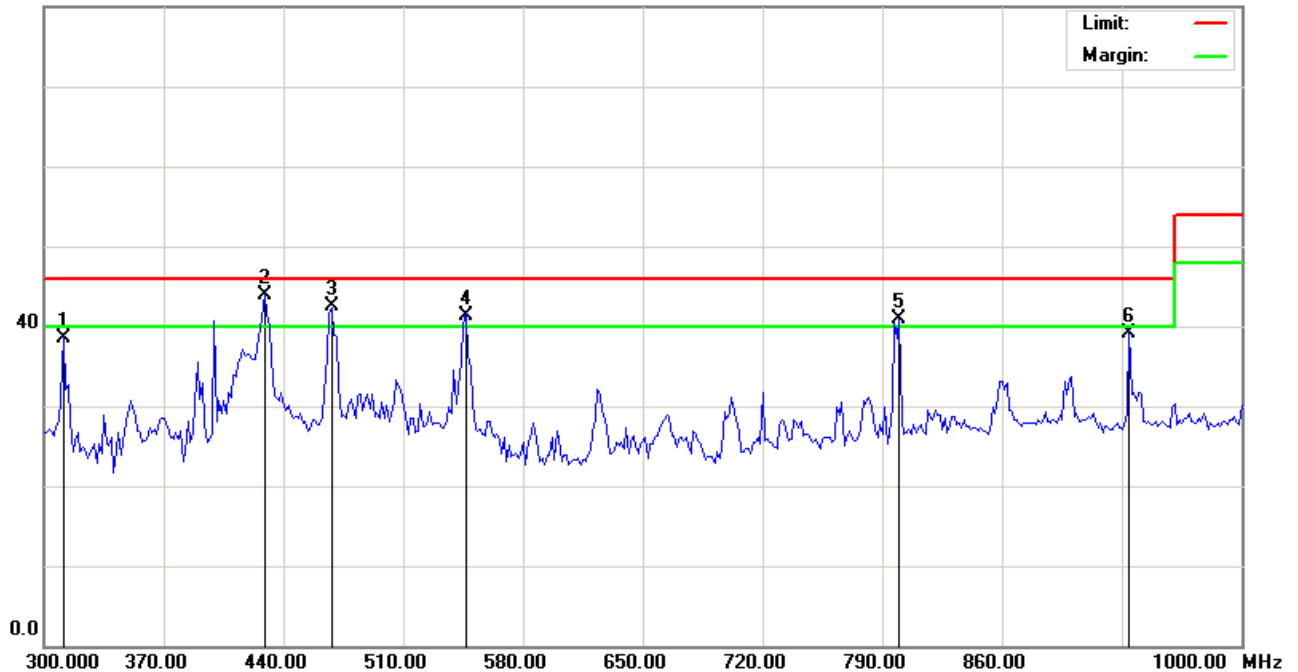
File :MS6030(PC MODE,WIFI,11g)

Data :#8

Date: 2008/03/05

Time:

80.0 dBuV



Site

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC Class B 3M Radiation

Power:

Humidity: 60 %

EUT:

Distance: 3m

M/N: MS6030

Mode: PC MODE(WIFI,11G)

Note: CH06,接耳機,接NB-01(DELL),(2)號手機,後下的孔

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		311.2000	48.37	-9.82	38.55	46.00	-7.45	peak		
2	*	428.8000	52.03	-8.05	43.98	46.00	-2.02	peak		
3	!	468.0000	50.22	-7.77	42.45	46.00	-3.55	peak		
4	!	546.4000	47.31	-6.04	41.27	46.00	-4.73	peak		
5	!	799.8000	43.13	-2.32	40.81	46.00	-5.19	peak		
6		934.2000	39.08	-0.06	39.02	46.00	-6.98	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

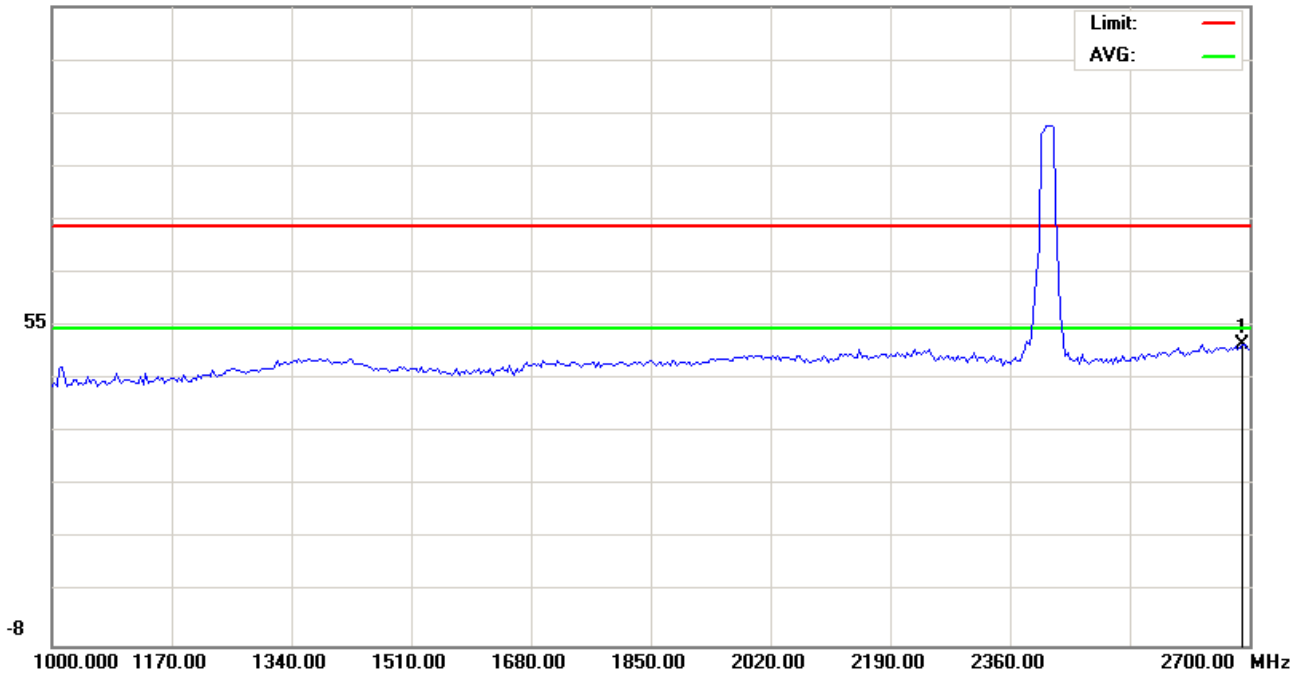
File :MS6030(CH2437)

Data :#1

Date: 2008/03/06

Time:

117.0 dBuV



Site

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 3m

M/N: MS6030

Mode: WIFI(11g)

Note: CH06(2437MHz)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree
1	*	2689.800	49.90	1.03	50.93	74.00	-23.07	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

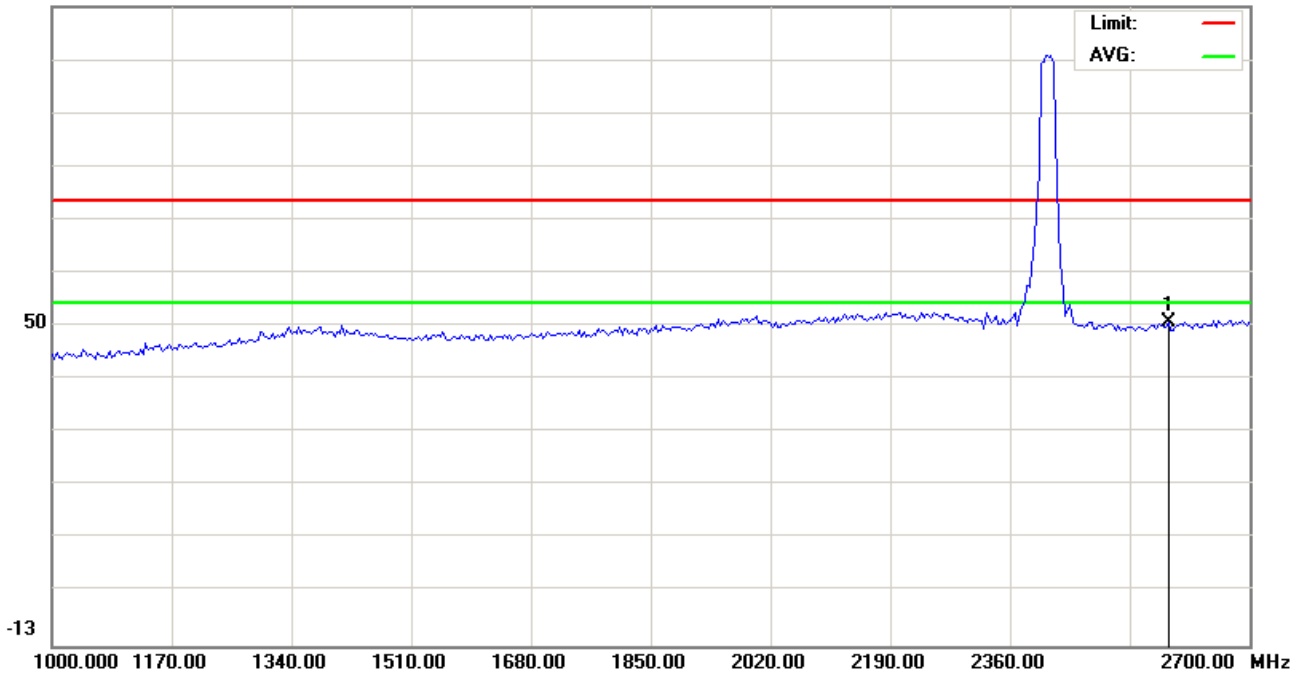
File :MS6030(CH2437)

Data :#3

Date: 2008/03/06

Time:

112.0 dBuV



Site

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 3m

M/N: MS6030

Mode: WIFI(11g)

Note: CH06(2437MHz)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree
1	*	2584.400	49.83	0.55	50.38	74.00	-23.62	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

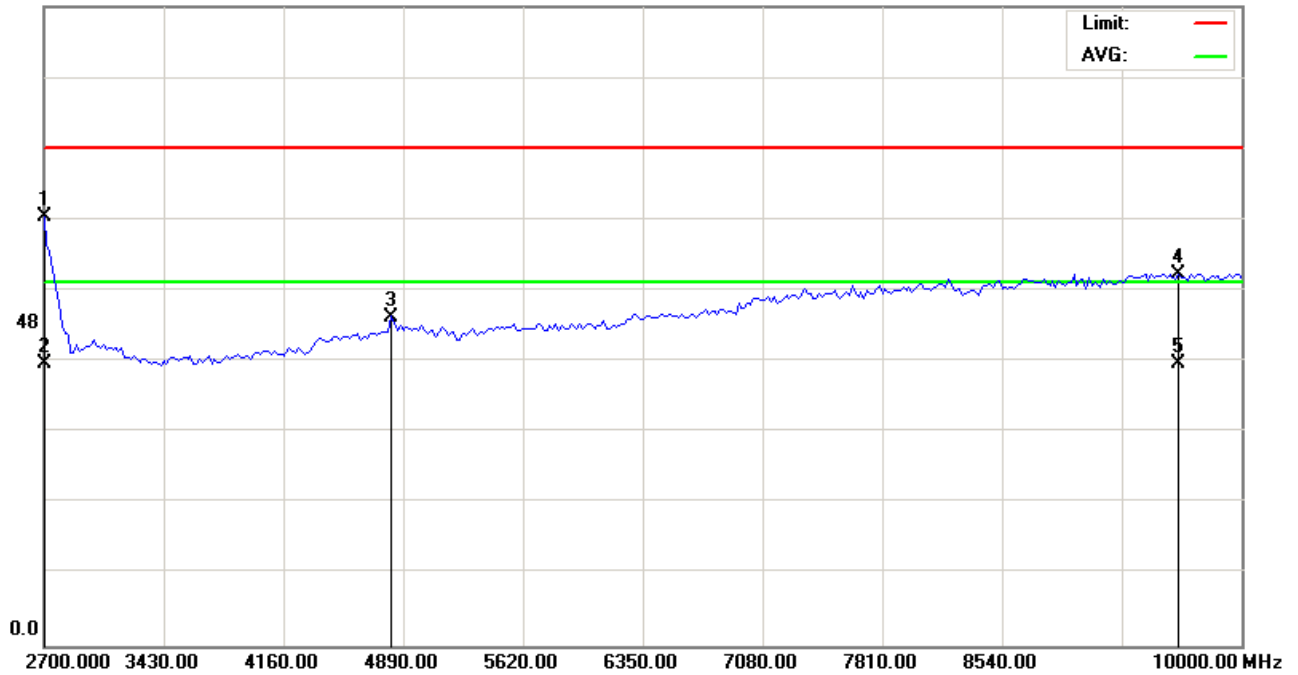
File :MS6030(CH2437)

Data :#5

Date: 2008/03/06

Time:

95.0 dBuV



Site

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 3m

M/N: MS6030

Mode: WIFI(11g)

Note: CH06(2437MHz)

2.7G-10G PK Scan Att:0 ; REF:95 ; Range:95(EUT Power Lever:255)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2700.000	41.12	22.58	63.70	74.00	-10.30	peak		
2		2700.000	19.23	22.58	41.81	54.00	-12.19	AVG		
3		4817.000	41.37	7.42	48.79	74.00	-25.21	peak		
4		9616.750	38.04	17.25	55.29	74.00	-18.71	peak		
5		9616.750	24.67	17.25	41.92	54.00	-12.08	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

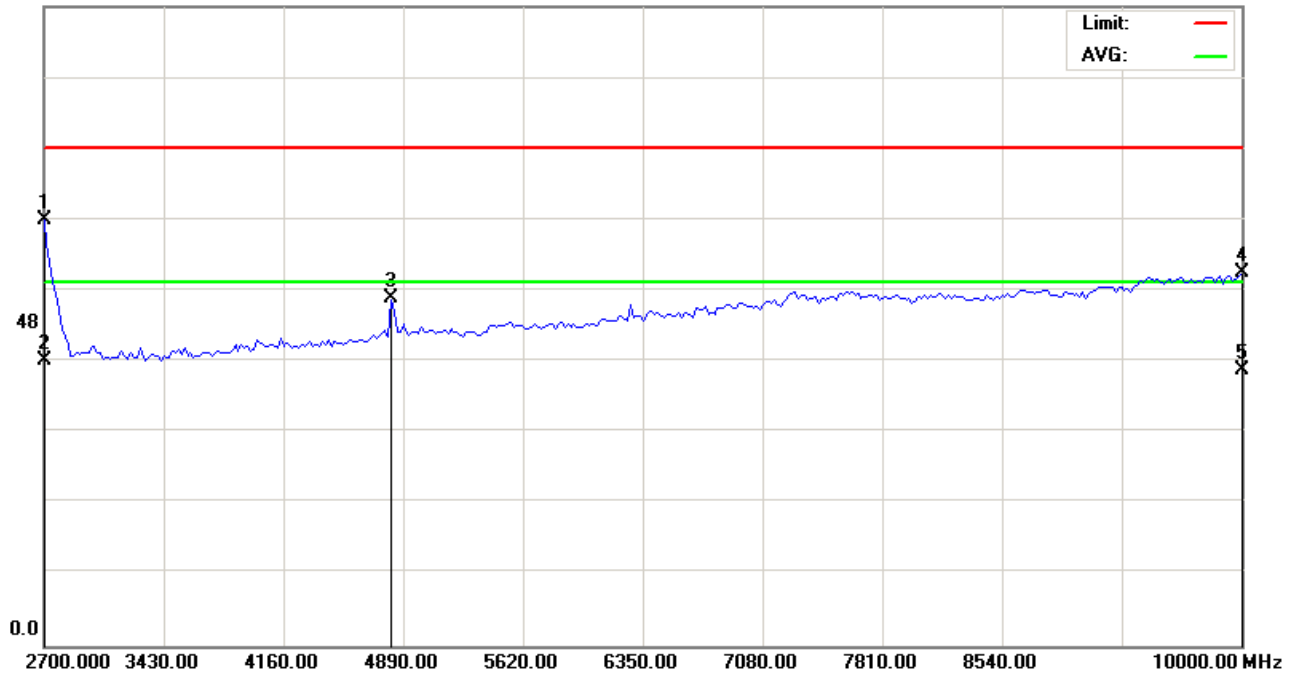
File :MS6030(CH2437)

Data :#7

Date: 2008/03/06

Time:

95.0 dBuV



Site

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 3m

M/N: MS6030

Mode: WIFI(11g)

Note: CH06(2437MHz)

2.7G-10G PK Scan Att:0 ; REF:95 ; Range:95(EUT Power Lever:255)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2700.000	40.83	22.58	63.41	74.00	-10.59	peak		
2		2700.000	19.72	22.58	42.30	54.00	-11.70	AVG		
3		4817.000	44.34	7.42	51.76	74.00	-22.24	peak		
4		10000.00	37.57	17.94	55.51	74.00	-18.49	peak		
5		10000.00	23.03	17.94	40.97	54.00	-13.03	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

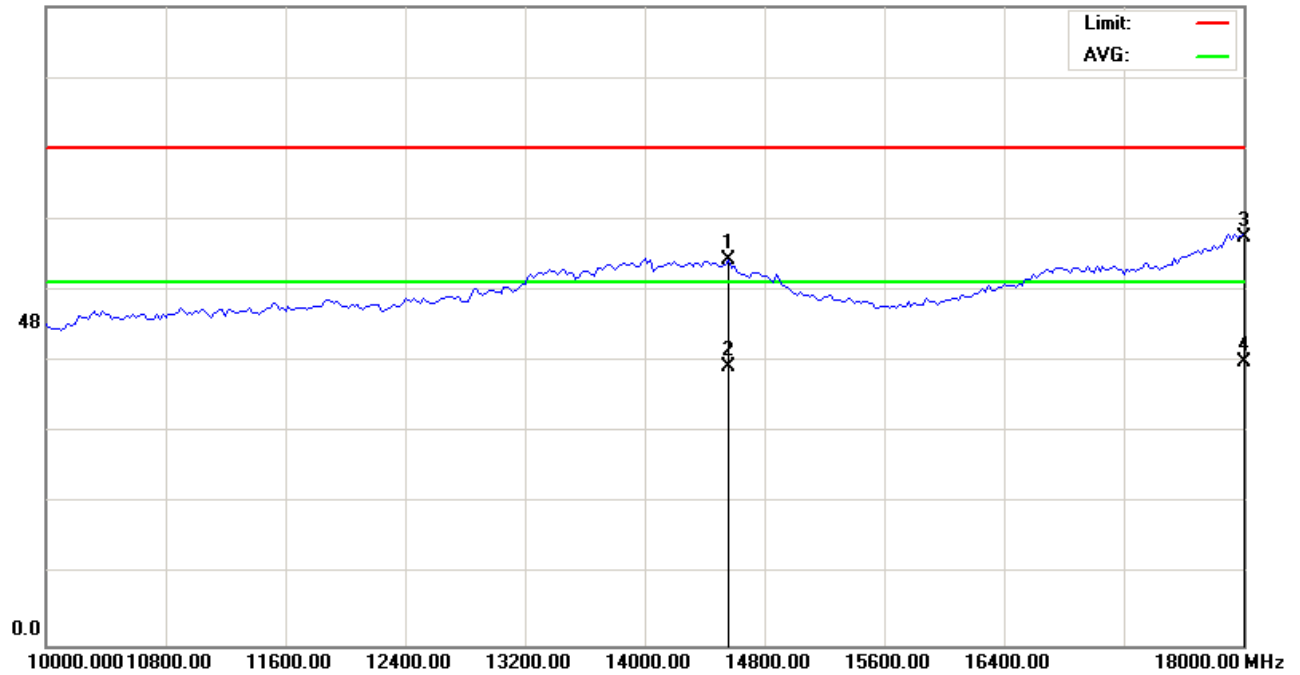
File :MS6030(CH2437)

Data :#9

Date: 2008/03/06

Time:

95.0 dBuV



Site

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 1m

M/N: MS6030

Mode: WIFI(11g)

Note: CH06(2437MHz)

10G - 18G PK Scan Att:0 ; REF:95 ; Range:95(EUT Power Lever:255)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		14560.00	29.92	27.33	57.25	74.00	-16.75	peak		
2		14560.00	14.09	27.33	41.42	54.00	-12.58	AVG		
3		18000.00	25.47	35.11	60.58	74.00	-13.42	peak		
4	*	18000.00	7.09	35.11	42.20	54.00	-11.80	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

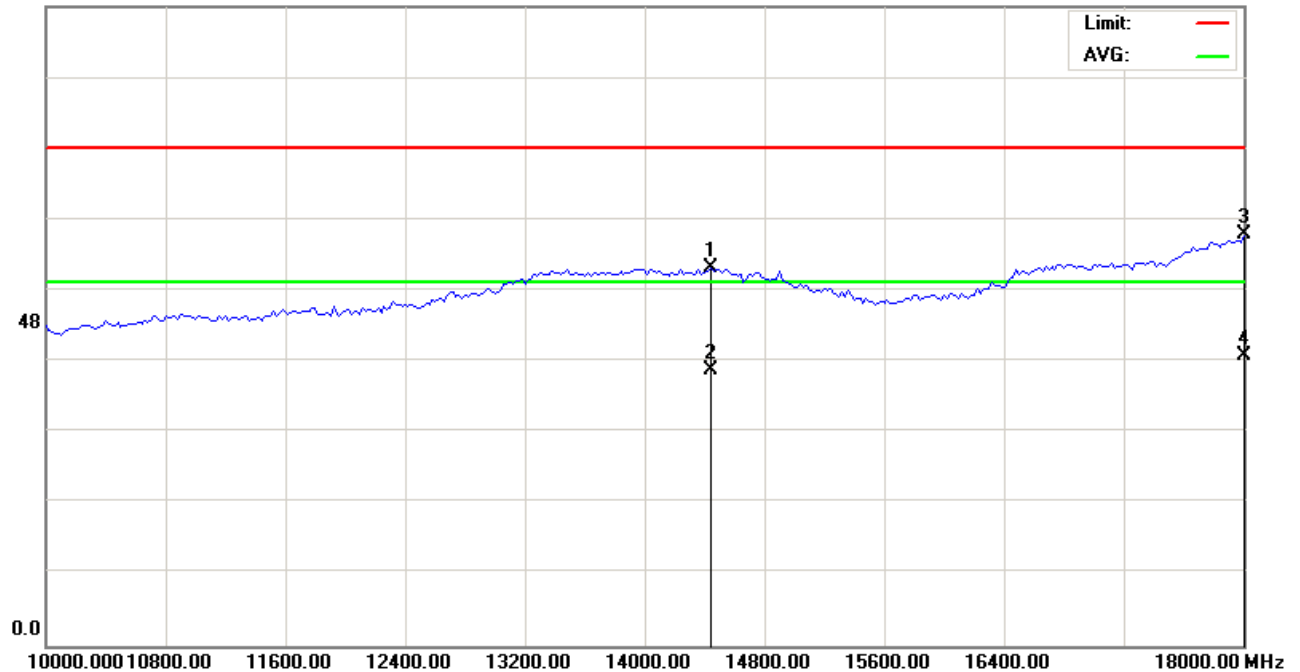
File :MS6030(CH2437)

Data :#11

Date: 2008/03/06

Time:

95.0 dBuV



Site

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 1m

M/N: MS6030

Mode: WIFI(11g)

Note: CH06(2437MHz)

10G - 18G PK Scan Att:0 ; REF:95 ; Range:95(EUT Power Lever:255)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		14440.00	28.52	27.54	56.06	74.00	-17.94	peak		
2		14440.00	13.35	27.54	40.89	54.00	-13.11	AVG		
3		18000.00	26.16	35.11	61.27	74.00	-12.73	peak		
4	*	18000.00	8.07	35.11	43.18	54.00	-10.82	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

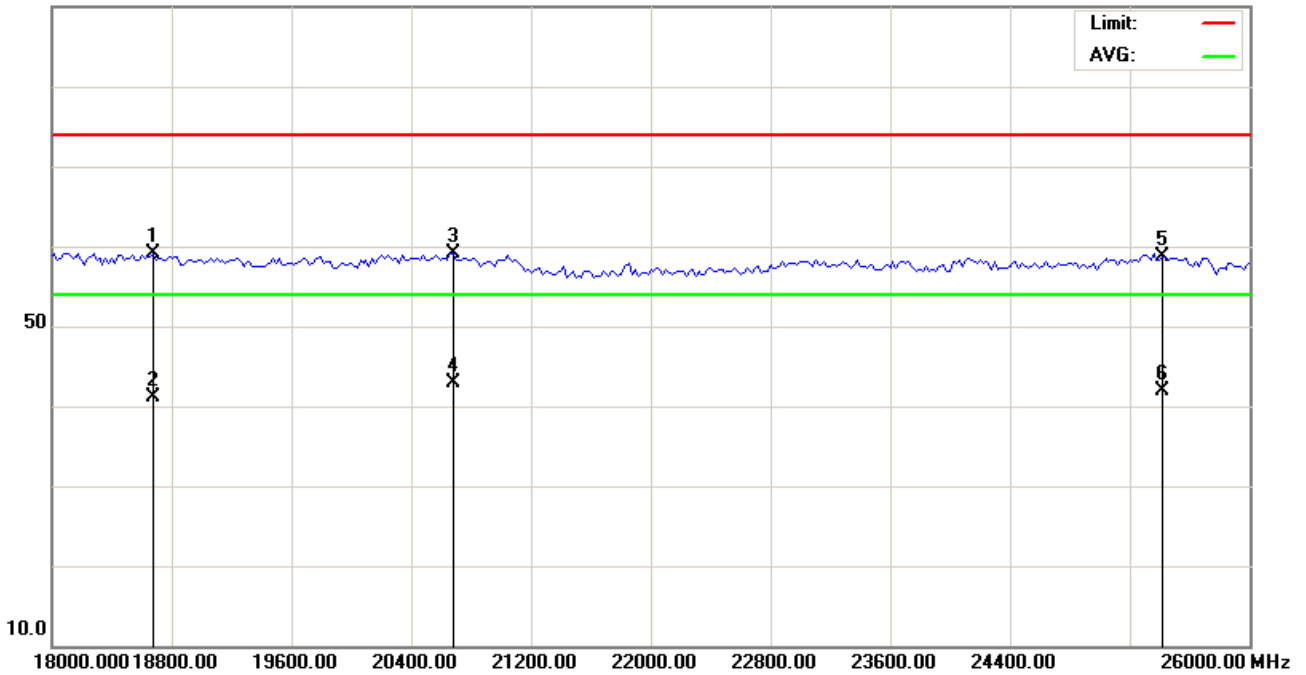
File :MS6030(CH2437)

Data :#13

Date: 2008/03/06

Time:

90.0 dBuV



Site

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 3m

M/N: MS6030

Mode: WIFI(11g)

Note: CH06(2437MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		18680.00	26.07	33.11	59.18	74.00	-14.82	peak		
2		18680.00	8.03	33.11	41.14	54.00	-12.86	AVG		
3		20680.00	27.28	31.75	59.03	74.00	-14.97	peak		
4	*	20680.00	11.09	31.75	42.84	54.00	-11.16	AVG		
5		25420.00	30.26	28.51	58.77	74.00	-15.23	peak		
6		25420.00	13.41	28.51	41.92	54.00	-12.08	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

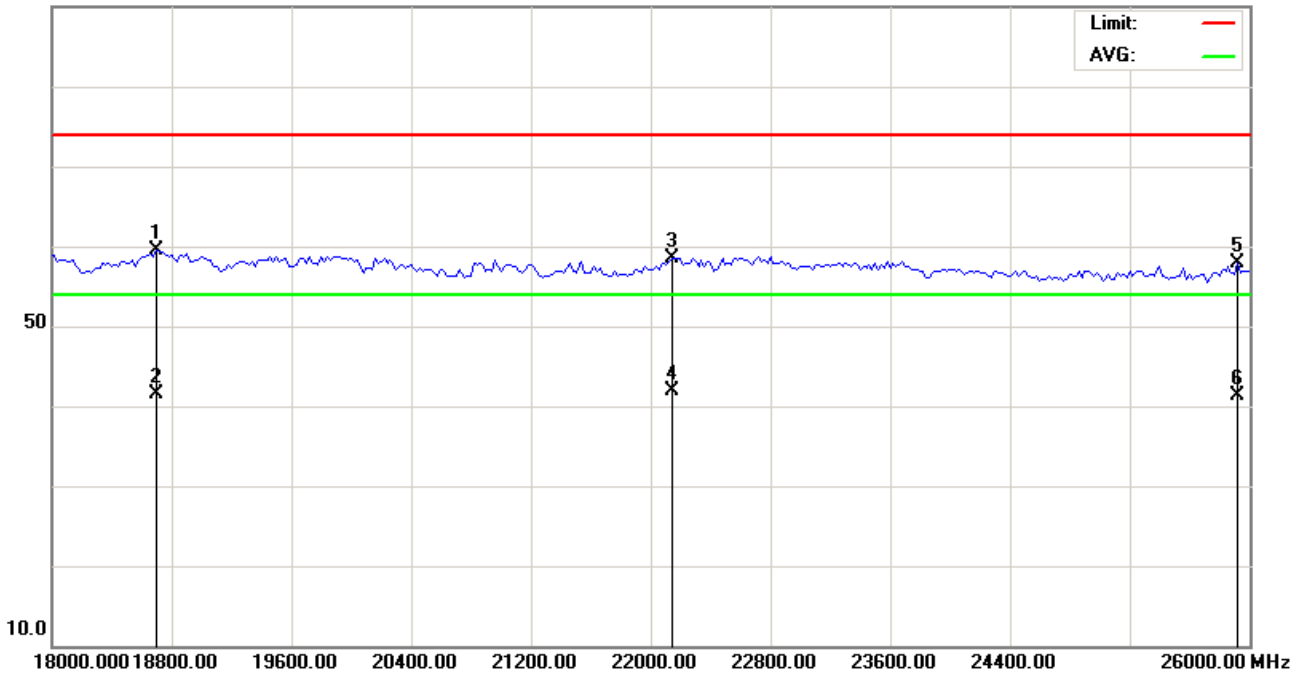
File :MS6030(CH2437)

Data :#14

Date: 2008/03/06

Time:

90.0 dBuV



Site

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 3m

M/N: MS6030

Mode: WIFI(11g)

Note: CH06(2437MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		18700.00	26.47	33.10	59.57	74.00	-14.43	peak		
2		18700.00	8.36	33.10	41.46	54.00	-12.54	AVG		
3		22140.00	27.82	30.76	58.58	74.00	-15.42	peak		
4	*	22140.00	11.09	30.76	41.85	54.00	-12.15	AVG		
5		25920.00	29.82	28.17	57.99	74.00	-16.01	peak		
6		25920.00	13.08	28.17	41.25	54.00	-12.75	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



3.6.6 Open Field Radiated Emissions (Subpart C)

The highest peak values of radiated emissions from the EUT at various antenna heights, antenna polarization, EUT orientation, etc. are recorded on the following.

Applicant : Innovation Wireless Inc.
Model No : MS6030
EUT : Wi-Fi IP Phone
Test Mode : AC Adapter _ 802.11g CH11 2462.000 (Local Frequency: 2462.000 MHz)
Test Date : 03/05~06/2008

Please refer to next pager of detail testing data.

Notes:

1. Margin= Amplitude - Limits
2. Distance of Measurement: 3 Meter (30-1000MHz) & (1-10GHz), 1 Meter (10-26.5GHz)
3. Height of table for EUT placed: 0.8 Meter.
4. ANT= Antenna height.
5. Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor
(Auto calculate in spectrum analyzer)
6. The EUT was worst case on X axis after pretest on X & Y & Z axis setting.
7. The testing data only show below 18GHz's data because measure data above 18GHz was only ambient noise.
8. All frequencies from 30MHz to 26.5GHz have been tested



Radiated Emission Measurement

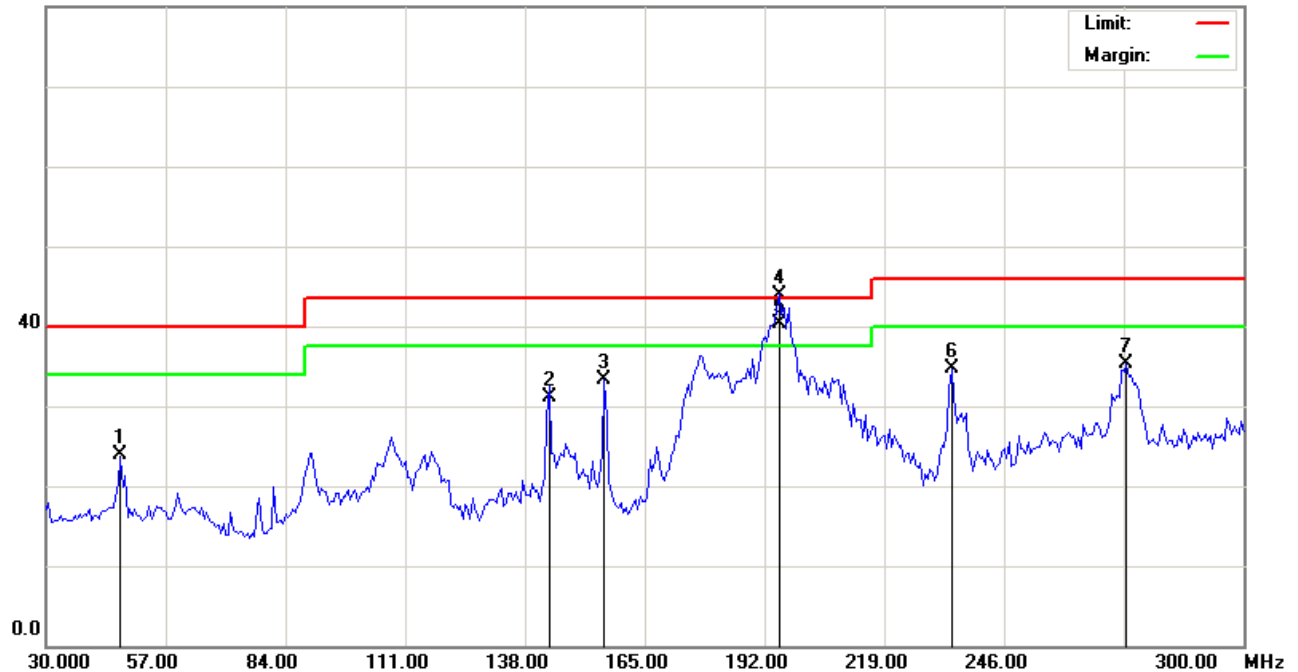
File :MS6030(PC MODE,WIFI,11g)

Data :#9

Date: 2008/03/05

Time:

80.0 dBuV



Site

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC Class B 3M Radiation

Power:

Humidity: 60 %

EUT:

Distance: 3m

M/N: MS6030

Mode: PC MODE(WIFI,11G)

Note: CH11,接耳機,接NB-01(DELL),(2)號手機,後下的孔

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		46.7400	35.87	-11.94	23.93	40.00	-16.07	peak		
2		143.4000	47.25	-16.24	31.01	43.50	-12.49	peak		
3		155.8200	49.18	-15.84	33.34	43.50	-10.16	peak		
4	*	195.2400	57.04	-13.09	43.95	43.50	0.45	peak		
5	!	195.2400	53.43	-13.09	40.34	43.50	-3.16	QP		
6		234.1200	46.46	-11.75	34.71	46.00	-11.29	peak		
7		273.5400	46.11	-10.83	35.28	46.00	-10.72	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

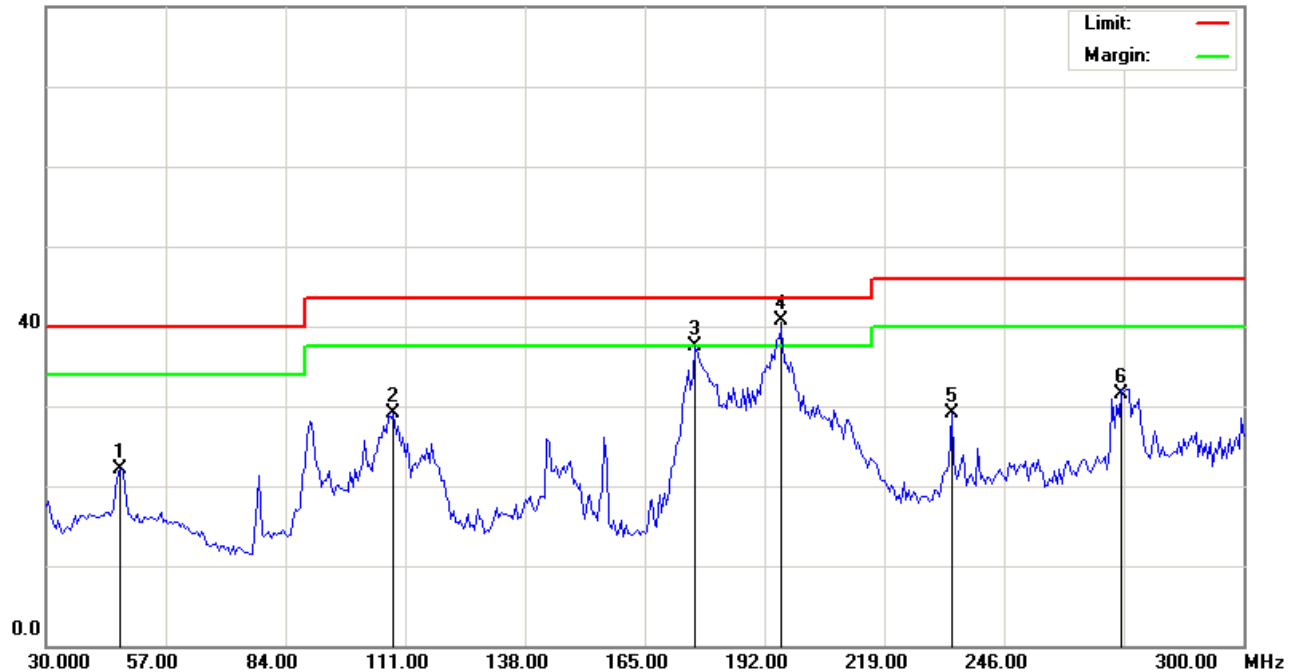
File :MS6030(PC MODE,WIFI,11g)

Data :#11

Date: 2008/03/05

Time:

80.0 dBuV



Site

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC Class B 3M Radiation

Power:

Humidity: 60 %

EUT:

Distance: 3m

M/N: MS6030

Mode: PC MODE(WIFI,11G)

Note: CH11,接耳機,接NB-01(DELL),(2)號手機,後下的孔

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		46.7400	33.98	-11.94	22.04	40.00	-17.96	peak		
2		108.3000	41.57	-12.37	29.20	43.50	-14.30	peak		
3	!	176.3400	52.14	-14.55	37.59	43.50	-5.91	peak		
4	*	195.7800	53.82	-13.10	40.72	43.50	-2.78	peak		
5		234.1200	40.82	-11.75	29.07	46.00	-16.93	peak		
6		272.4600	42.36	-10.86	31.50	46.00	-14.50	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

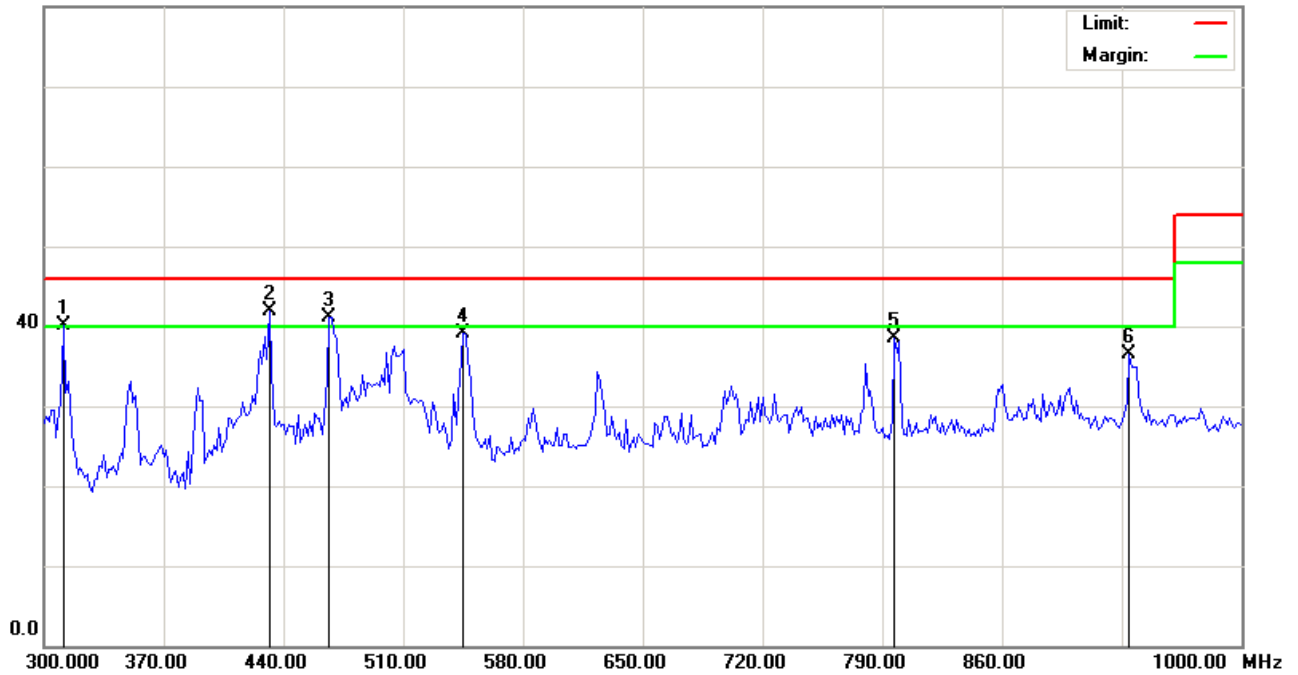
File :MS6030(PC MODE,WIFI,11g)

Data :#10

Date: 2008/03/05

Time:

80.0 dBuV



Site

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC Class B 3M Radiation

Power:

Humidity: 60 %

EUT:

Distance: 3m

M/N: MS6030

Mode: PC MODE(WIFI,11G)

Note: CH11,接耳機,接NB-01(DELL),(2)號手機,後下的孔

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1	!	311.2000	49.88	-9.82	40.06	46.00	-5.94	peak		
2	*	431.6000	49.91	-8.03	41.88	46.00	-4.12	peak		
3	!	466.6000	48.91	-7.81	41.10	46.00	-4.90	peak		
4		545.0000	45.12	-6.06	39.06	46.00	-6.94	peak		
5		797.0000	40.79	-2.34	38.45	46.00	-7.55	peak		
6		934.2000	36.53	-0.06	36.47	46.00	-9.53	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

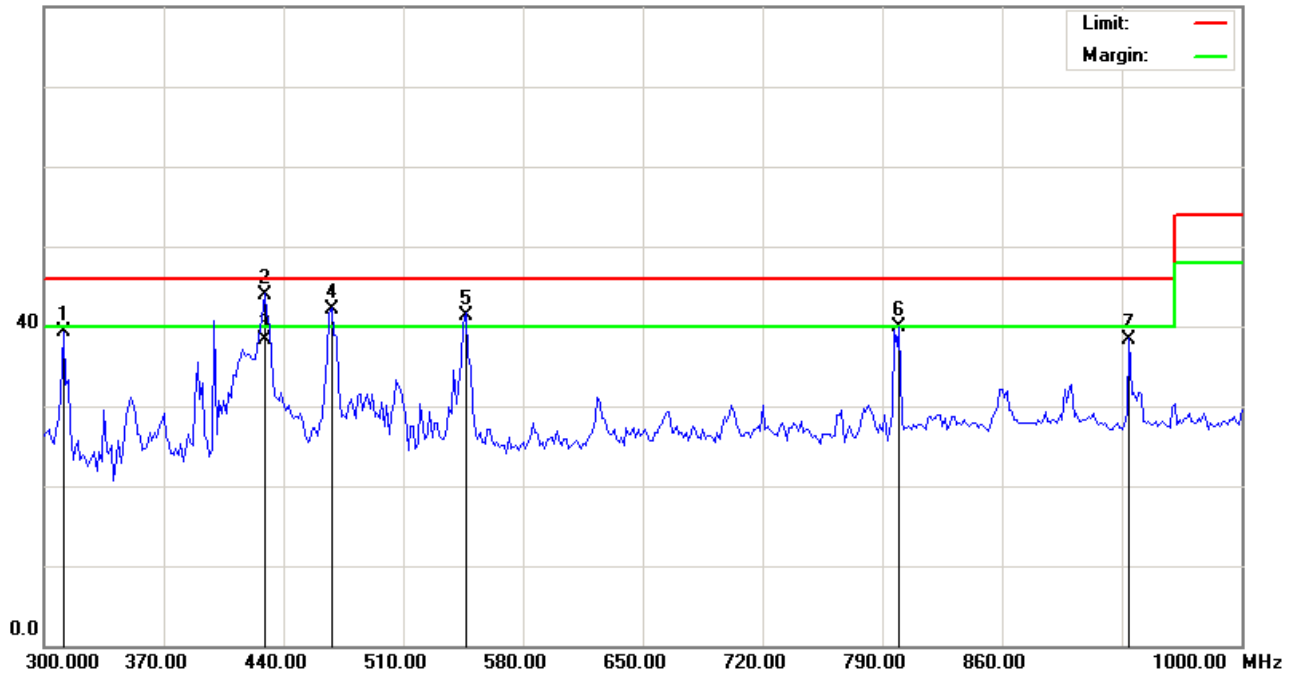
File :MS6030(PC MODE,WIFI,11g)

Data :#12

Date: 2008/03/05

Time:

80.0 dBuV



Site

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC Class B 3M Radiation

Power:

Humidity: 60 %

EUT:

Distance: 3m

M/N: MS6030

Mode: PC MODE(WIFI,11G)

Note: CH11,接耳機,接NB-01(DELL),(2)號手機,後下的孔

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		311.2000	49.18	-9.82	39.36	46.00	-6.64	peak		
2	*	428.8000	52.03	-8.05	43.98	46.00	-2.02	peak		
3		428.8000	46.32	-8.05	38.27	46.00	-7.73	QP		
4	!	468.0000	49.92	-7.77	42.15	46.00	-3.85	peak		
5	!	546.4000	47.31	-6.04	41.27	46.00	-4.73	peak		
6		799.8000	42.13	-2.32	39.81	46.00	-6.19	peak		
7		934.2000	38.27	-0.06	38.21	46.00	-7.79	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

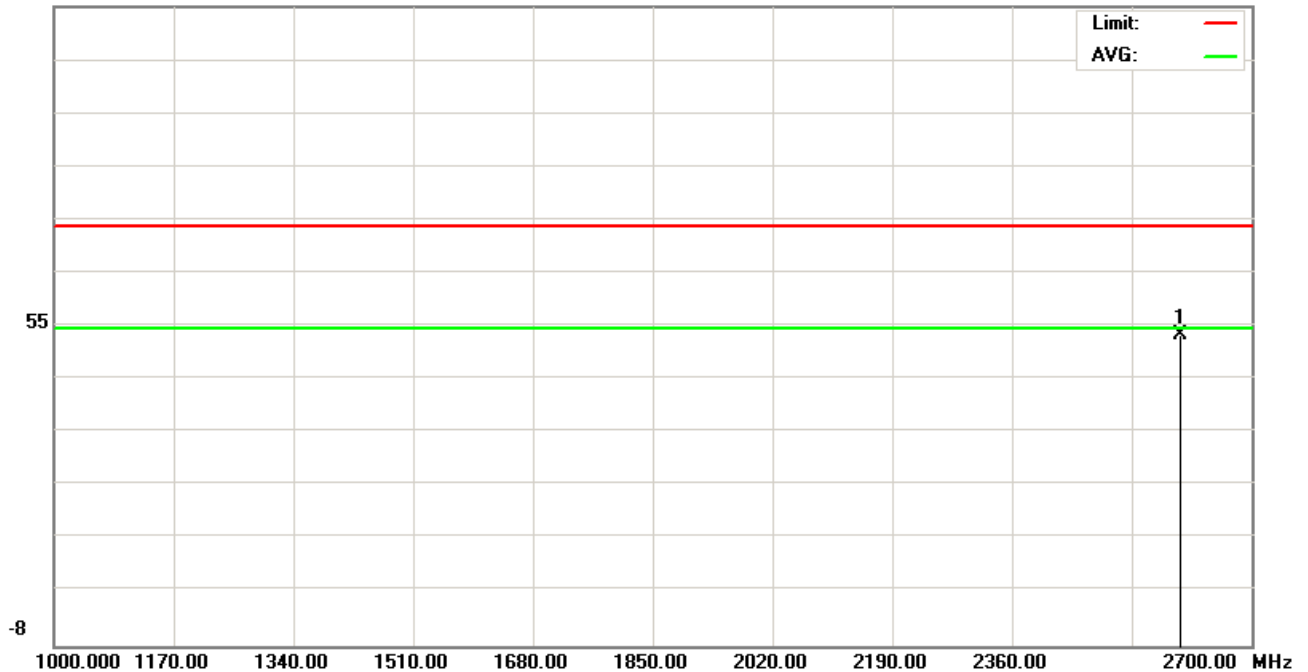
File :MS6030(CH2462)

Data :#1

Date: 2008/03/06

Time:

117.0 dBuV



Site

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 3m

M/N: MS6030

Mode: WIFI(11g)

Note: CH11(2462MHz)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree
1	*	2598.000	52.22	0.55	52.77	74.00	-21.23	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

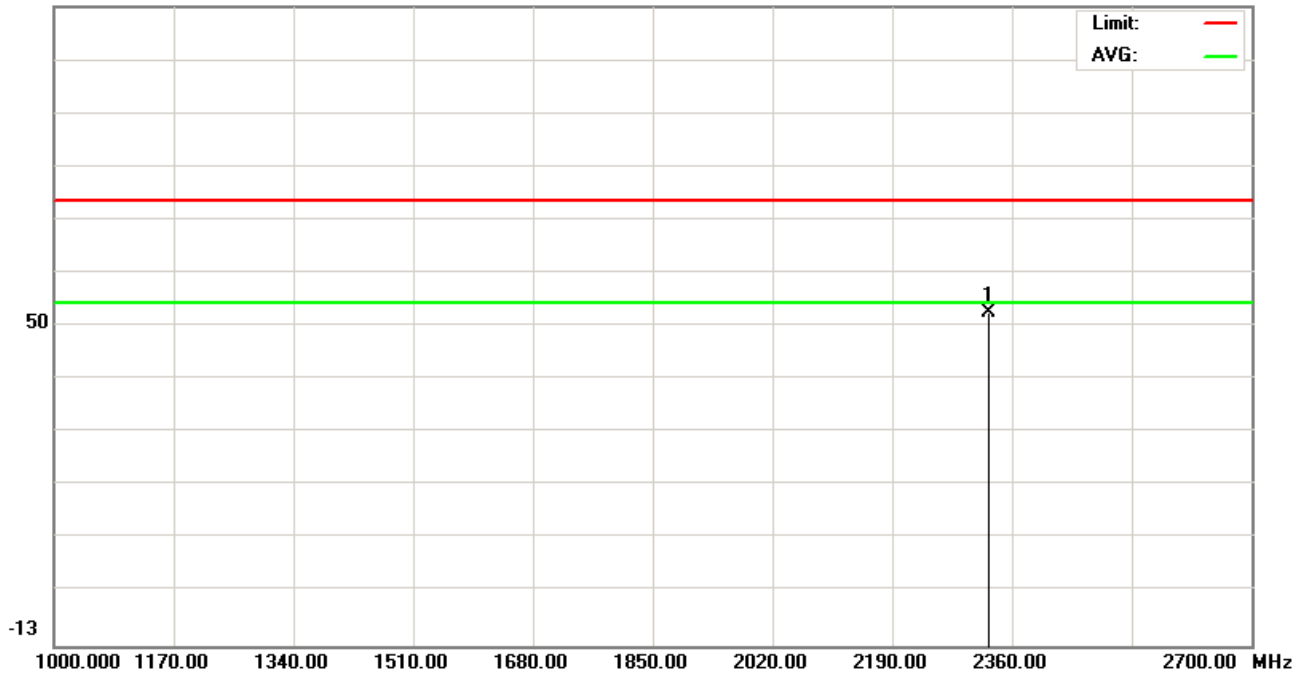
File :MS6030(CH2462)

Data :#3

Date: 2008/03/06

Time:

112.0 dBuV



Site

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 3m

M/N: MS6030

Mode: WIFI(11g)

Note: CH11(2462MHz)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	cm	degree
1	*	2326.000	51.79	0.28	52.07	74.00	-21.93	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

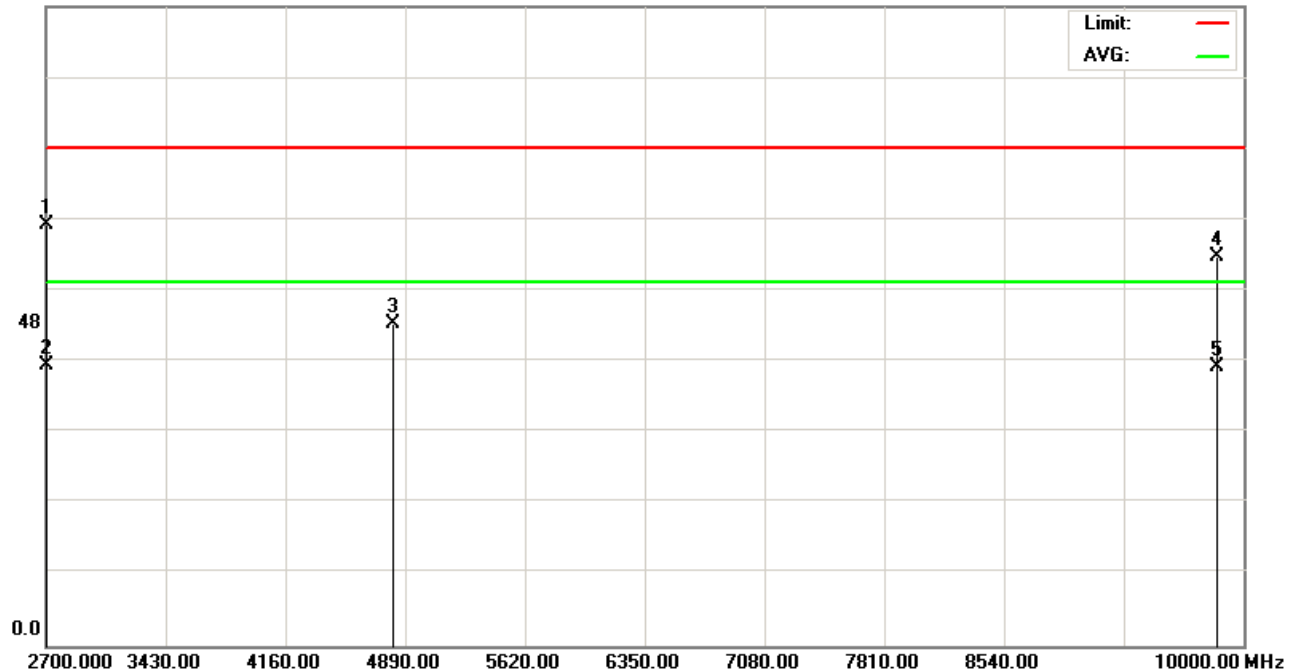
File :MS6030(CH2462)

Data :#5

Date: 2008/03/06

Time:

95.0 dBuV



Site

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 3m

M/N: MS6030

Mode: WIFI(11g)

Note: CH11(2462MHz)

2.7G-10G PK Scan Att:0 ; REF:95 ; Range:95(EUT Power Lever:255)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2700.000	40.12	22.58	62.70	74.00	-11.30	peak		
2		2700.000	19.04	22.58	41.62	54.00	-12.38	AVG		
3		4817.000	40.55	7.42	47.97	74.00	-26.03	peak		
4		9835.750	40.01	17.83	57.84	74.00	-16.16	peak		
5		9835.750	23.51	17.83	41.34	54.00	-12.66	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

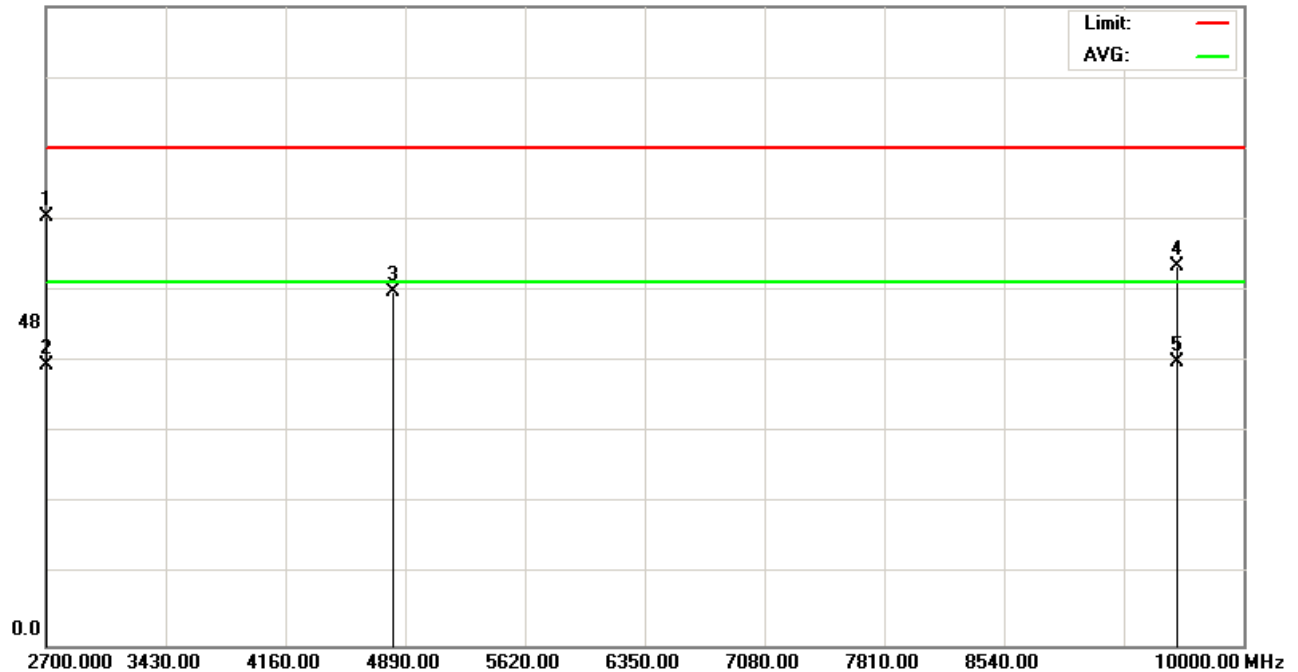
File :MS6030(CH2462)

Data :#7

Date: 2008/03/06

Time:

95.0 dBuV



Site

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 3m

M/N: MS6030

Mode: WIFI(11g)

Note: CH11(2462MHz)

2.7G-10G PK Scan Att:0 ; REF:95 ; Range:95(EUT Power Lever:255)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	cm	degree	Comment
1	*	2700.000	41.11	22.58	63.69	74.00	-10.31	peak		
2		2700.000	19.13	22.58	41.71	54.00	-12.29	AVG		
3		4817.000	45.09	7.42	52.51	74.00	-21.49	peak		
4		9598.500	38.93	17.41	56.34	74.00	-17.66	peak		
5		9598.500	24.74	17.41	42.15	54.00	-11.85	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

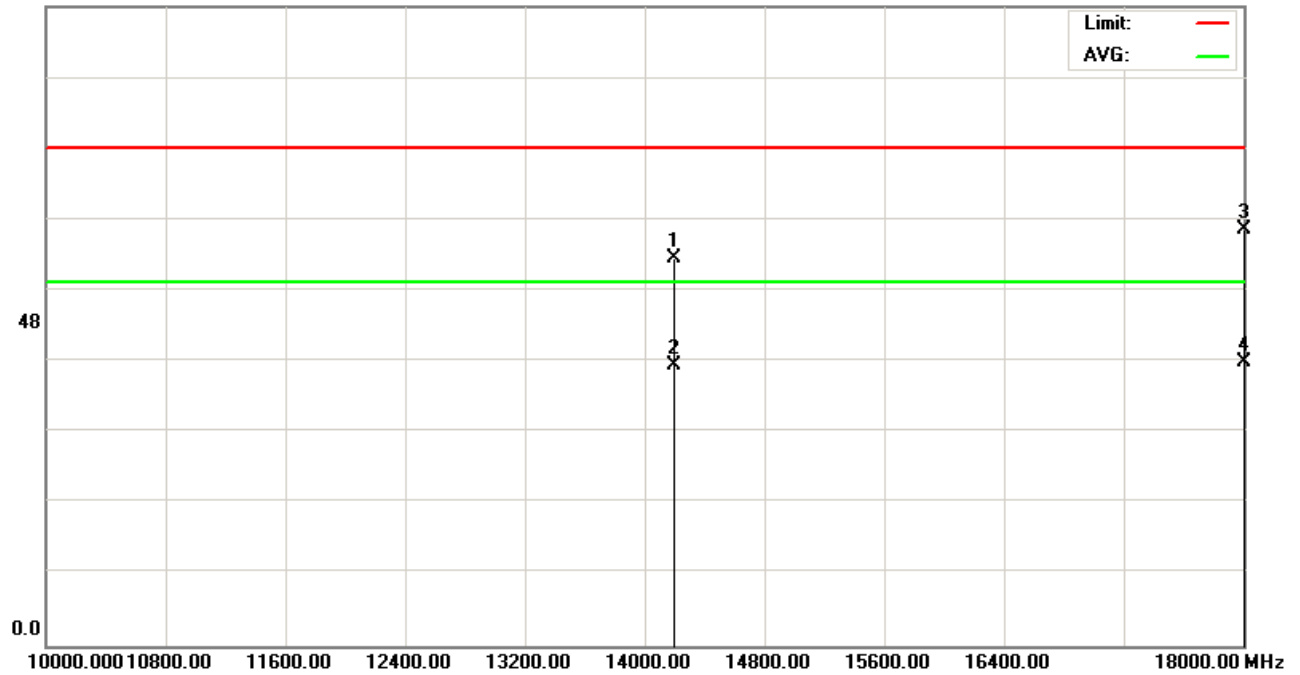
File :MS6030(CH2462)

Data :#9

Date: 2008/03/06

Time:

95.0 dBuV



Site

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 1m

M/N: MS6030

Mode: WIFI(11g)

Note: CH11(2462MHz)

10G - 18G PK Scan Att:0 ; REF:95 ; Range:95(EUT Power Lever:255)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		14200.00	29.13	28.40	57.53	74.00	-16.47	peak		
2		14200.00	13.24	28.40	41.64	54.00	-12.36	AVG		
3		18000.00	26.82	35.11	61.93	74.00	-12.07	peak		
4	*	18000.00	7.03	35.11	42.14	54.00	-11.86	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

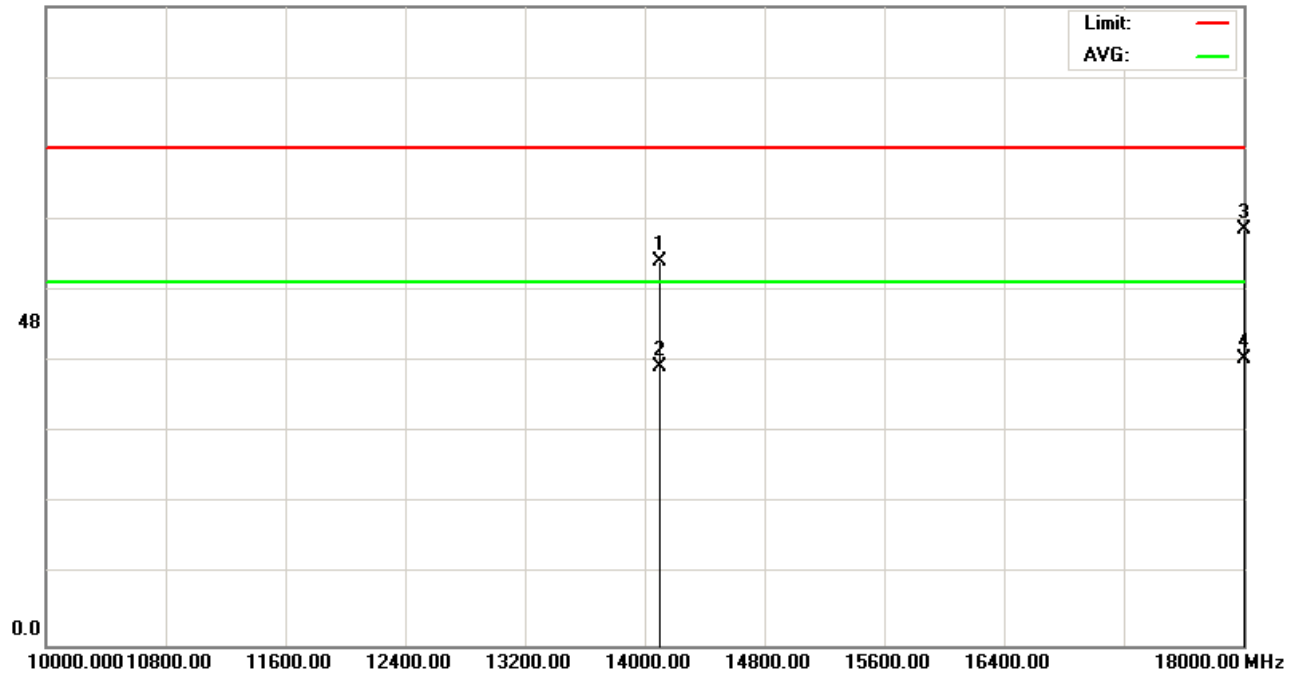
File :MS6030(CH2462)

Data :#11

Date: 2008/03/06

Time:

95.0 dBuV



Site

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 1m

M/N: MS6030

Mode: WIFI(11g)

Note: CH11(2462MHz)

10G - 18G PK Scan Att:0 ; REF:95 ; Range:95(EUT Power Lever:255)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		14100.00	28.75	28.44	57.19	74.00	-16.81	peak		
2		14100.00	13.06	28.44	41.50	54.00	-12.50	AVG		
3		18000.00	26.66	35.11	61.77	74.00	-12.23	peak		
4	*	18000.00	7.62	35.11	42.73	54.00	-11.27	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

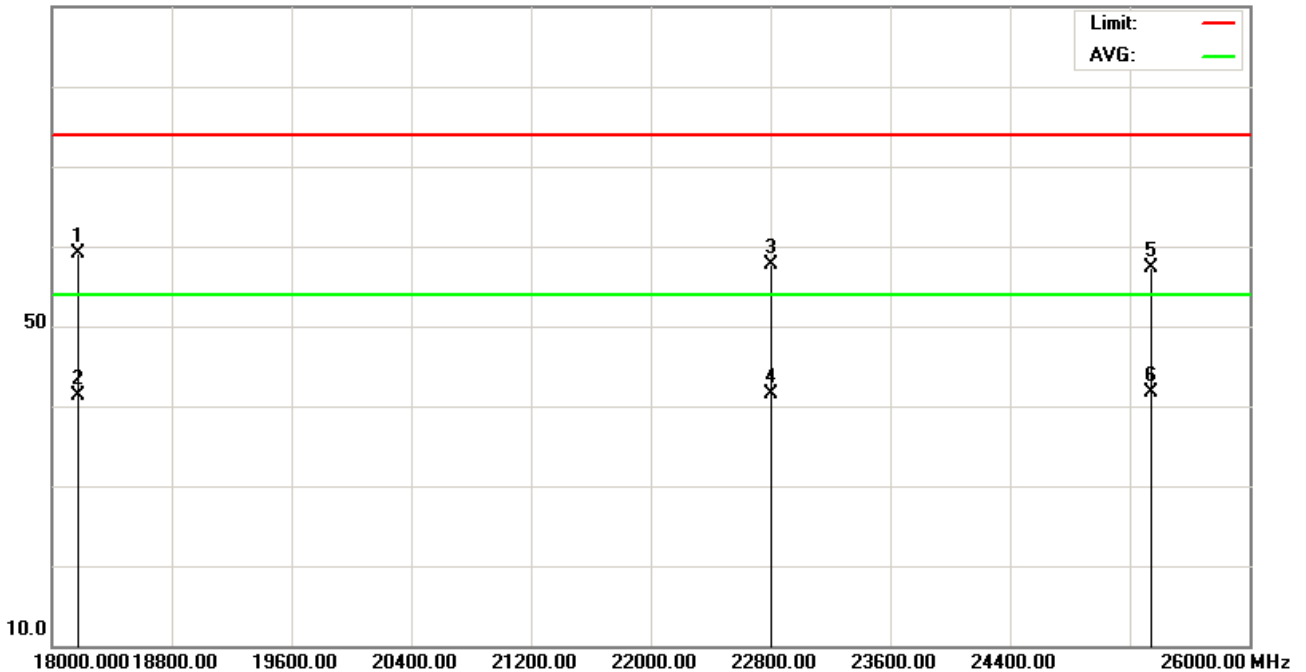
File :MS6030(CH2462)

Data :#13

Date: 2008/03/06

Time:

90.0 dBuV



Site

Polarization: **Vertical**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 3m

M/N: MS6030

Mode: WIFI(11g)

Note: CH11(2462MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		18180.00	24.83	34.34	59.17	74.00	-14.83	peak		
2		18180.00	6.92	34.34	41.26	54.00	-12.74	AVG		
3		22800.00	27.38	30.30	57.68	74.00	-16.32	peak		
4		22800.00	11.23	30.30	41.53	54.00	-12.47	AVG		
5		25340.00	28.78	28.57	57.35	74.00	-16.65	peak		
6	*	25340.00	13.09	28.57	41.66	54.00	-12.34	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

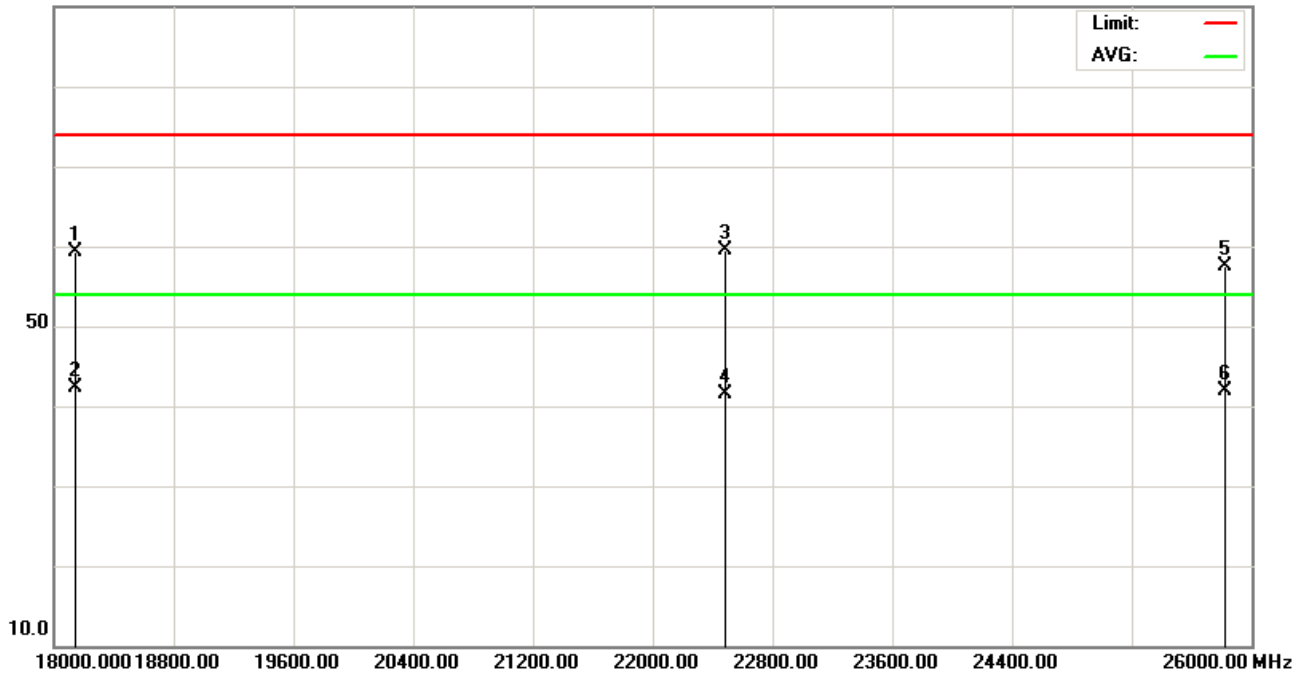
File :MS6030(CH2462)

Data :#14

Date: 2008/03/06

Time:

90.0 dBuV



Site

Polarization: **Horizontal**

Temperature: 22 °C

Limit: FCC part 15 (PK)

Power:

Humidity: 60 %

EUT: phone

Distance: 3m

M/N: MS6030

Mode: WIFI(11g)

Note: CH11(2462MHz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		18140.00	24.92	34.31	59.23	74.00	-14.77	peak		
2	*	18140.00	8.09	34.31	42.40	54.00	-11.60	AVG		
3		22480.00	28.95	30.52	59.47	74.00	-14.53	peak		
4		22480.00	11.06	30.52	41.58	54.00	-12.42	AVG		
5		25820.00	29.33	28.25	57.58	74.00	-16.42	peak		
6		25820.00	13.65	28.25	41.90	54.00	-12.10	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



4. Maximum Conducted Output Power Requirements

4.1 Test Condition & Setup:

The EUT was setup to ANSI C63.4, 2003; tested to DTS test procedure of Oct 2002 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

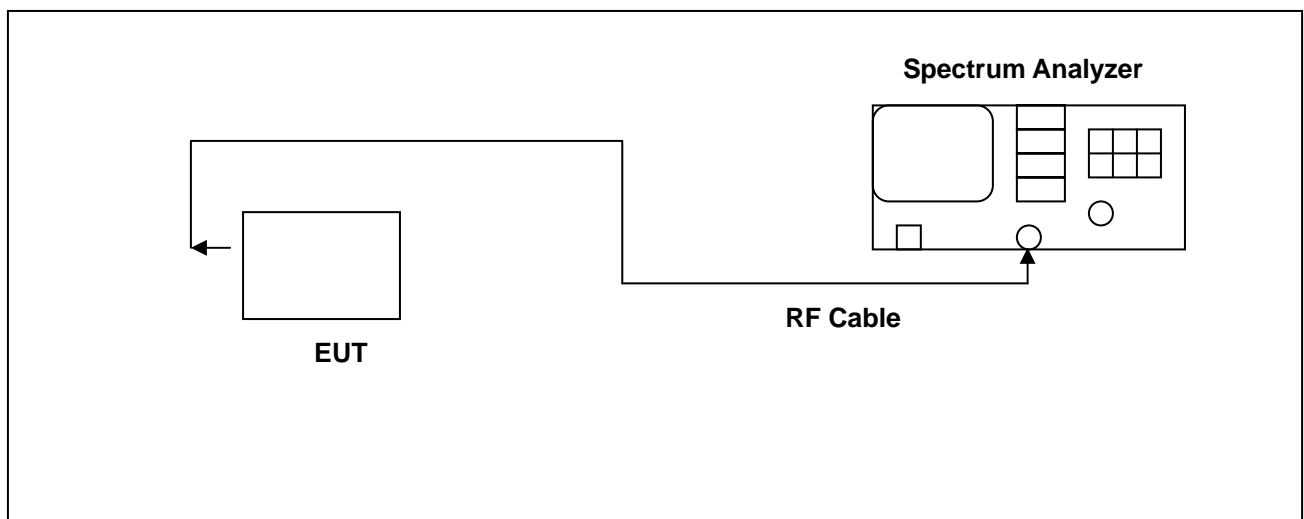
The tests below are run with the EUT's transmitter set at high power in TX mode. The EUT is needed to force selection of output power level and channel number. While testing, EUT was set to transmit continuously. Remove the Subjective device's antenna and connect the RF output port to spectrum analyzer. The maximum peak output power shall not exceed 1 watt.

Use a direct connection between the antenna port of transmitter and the spectrum Analyzer, for prevent the spectrum analyzer input attenuation 40-50 dB. Set the RBW Bandwidth of the emission or use a channel power meter mode.

For antennas with gains of 6 dBi or less, maximum allowed transmitter output is 1 watt (+30 dBm). For antennas with gains greater than 6 dBi, transmitter output level must be decreased by an amount equal to $(\text{GAIN} - 6)/3$ dBm.

The antenna port of the EUT was connected to the input of a power meter. Power was read directly and cable loss correction was added to the reading to obtain power at the EUT antenna terminals.

4.2 Test Instruments Configuration:





4.3 Test Equipment List:

Describe	Manufacturer	Model	Serial Number	Calibration	
				Cal. Date	Due Date
Spectrum Analyzer	Agilent	E4445A	MY45300744	Nov. 29, 2007	Nov.29, 2008

4.4 Test Result:

802.11b

Frequency (MHz)	Output (dBm)	Required Limit
2412	21.63	<30dBm
2437	21.94	<30dBm
2462	21.76	<30dBm

802.11g

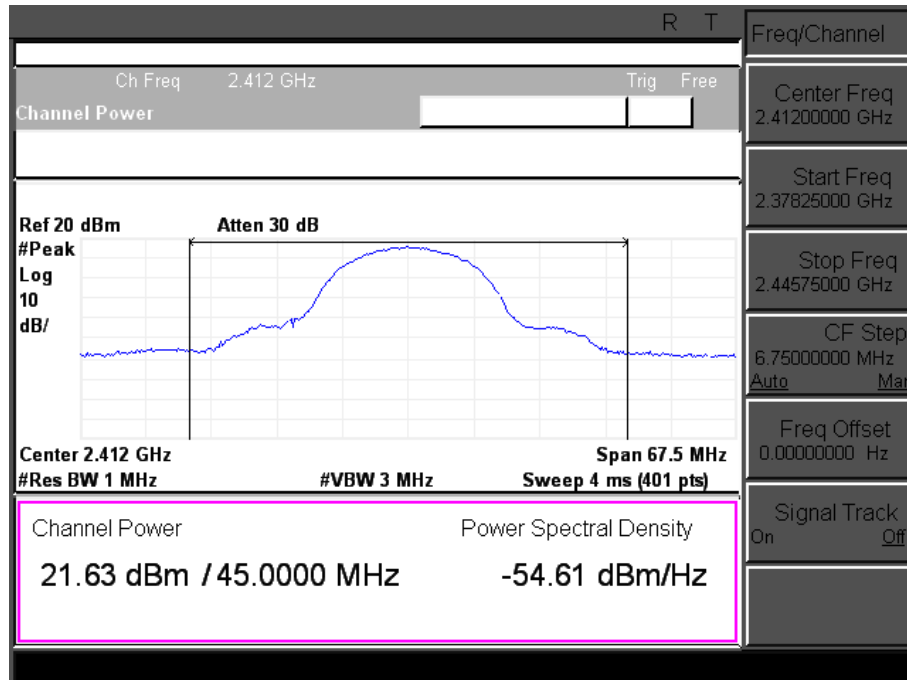
Frequency (MHz)	Output (dBm)	Required Limit
2412	20.13	<30dBm
2437	19.94	<30dBm
2462	19.56	<30dBm

Note: Test Graphs See next page.

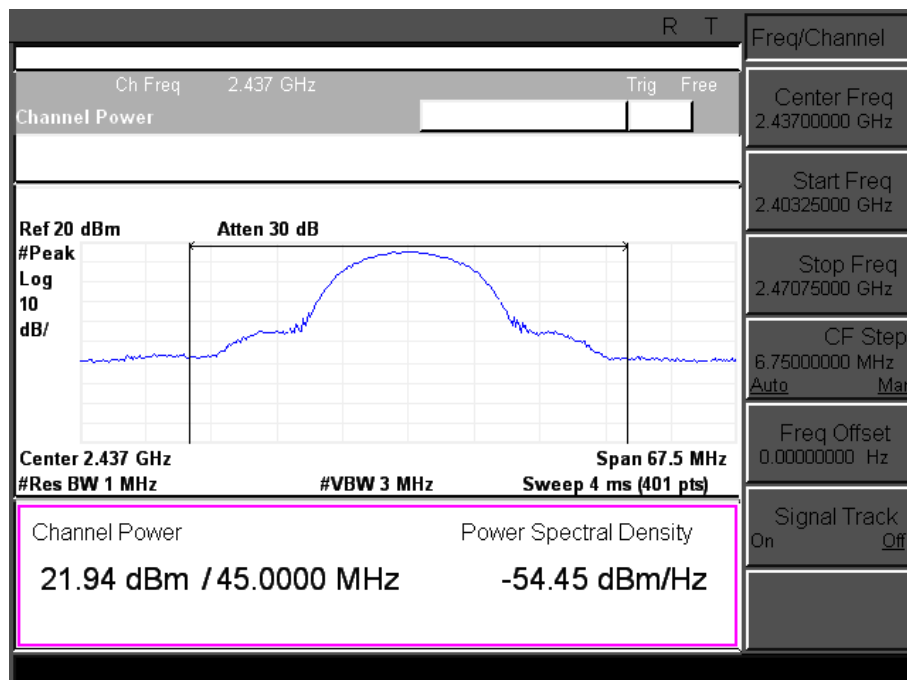


4.5 Test Graphs

802.11b CH1 (2412MHz)

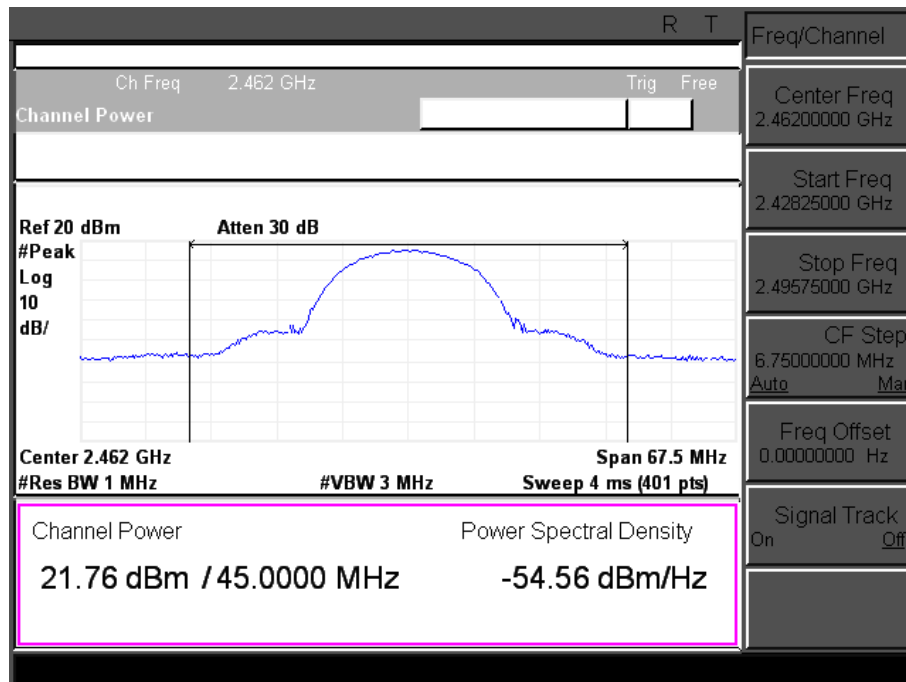


802.11b CH6 (2437MHz)



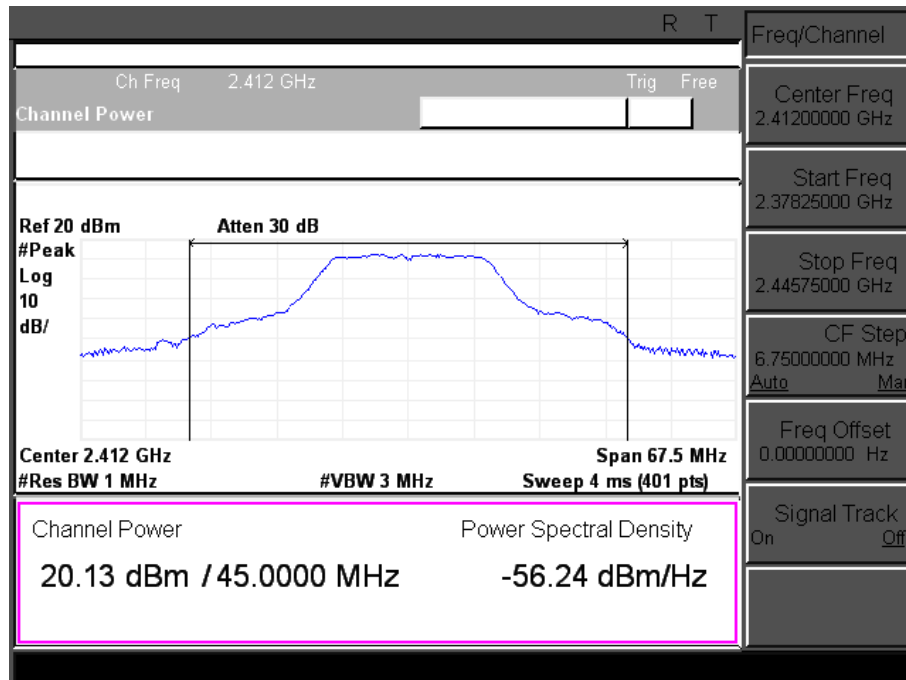


802.11b CH11 (2462MHz)

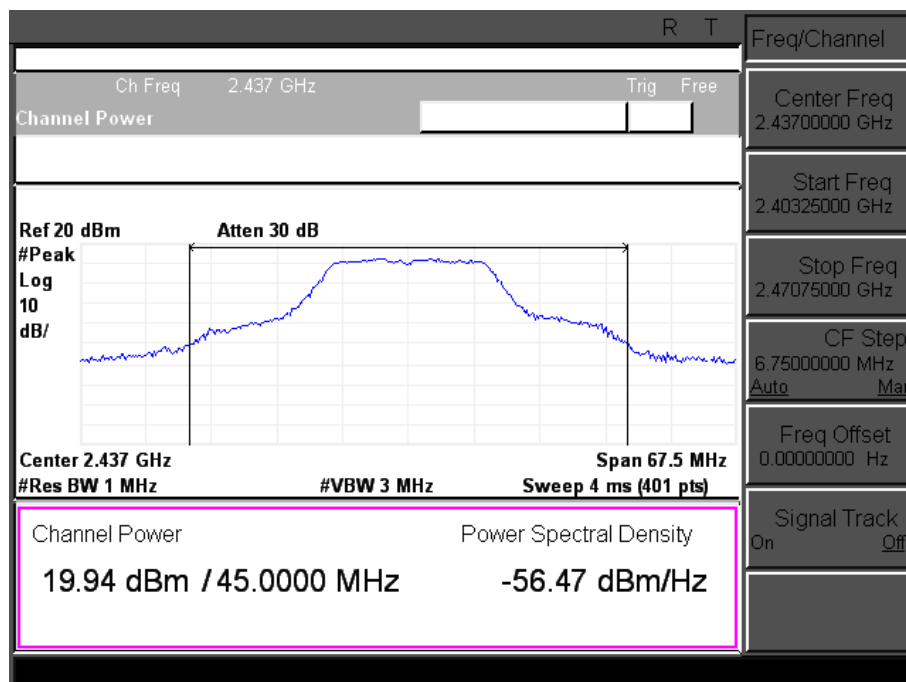




802.11g CH1 (2412MHz)

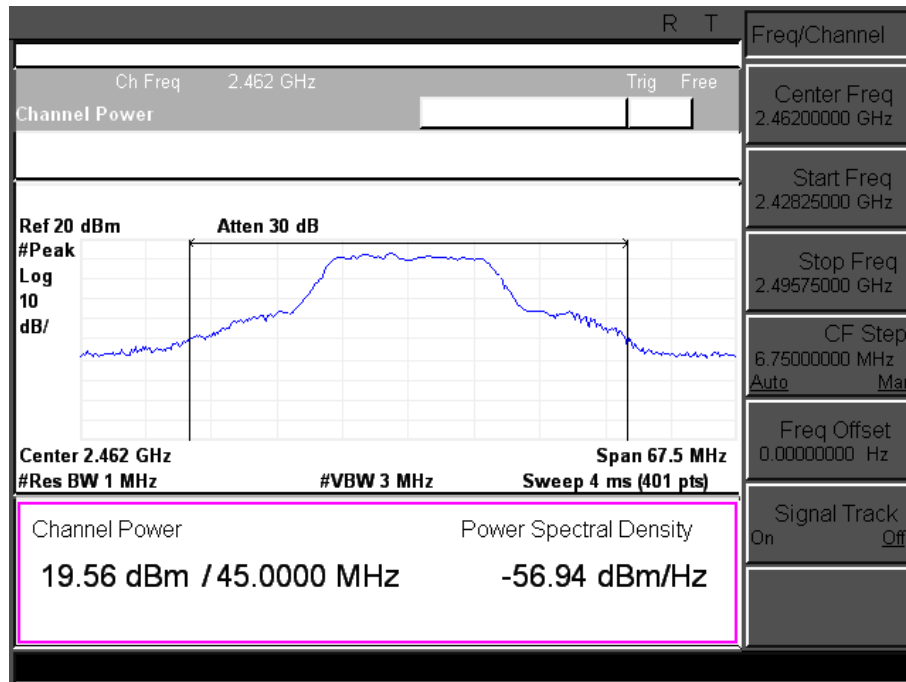


802.11g CH6 (2437MHz)





802.11g CH11 (2462MHz)





5. Minimum 6dB RF Bandwidth Requirements

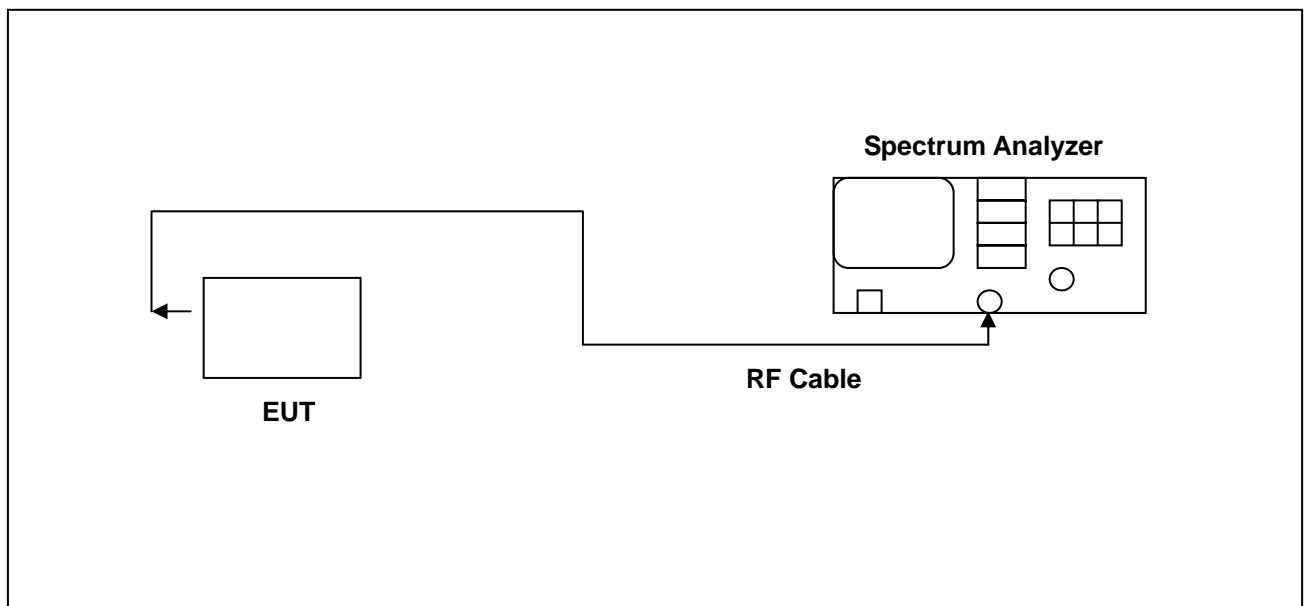
5.1 Test Condition & Setup:

The EUT was setup to ANSI C63.4, 2003; tested to DTS test procedure of Oct 2002 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The antenna port of the EUT was connected to the input of a spectrum analyzer. Analyzer RES BW was set to 100 kHz. For each RF output channel investigated, the spectrum analyzer center frequency was set to the channel carrier. A PEAK output reading was taken, a DISPLAY line was drawn 6 dB lower than PEAK level. The 6 dB bandwidth was determined from where the channel output spectrum intersected the display line.

The test was performed at 3 channels (Channel 1, 6, 11)

5.2 Test Instruments Configuration:



5.3 Test Equipment List:

Describe	Manufacturer	Model	Serial Number	Calibration	
				Cal. Date	Due Date
Spectrum Analyzer	Agilent	E4445A	MY45300744	Nov. 29, 2007	Nov. 29, 2008



5.4 Test Result:

802.11b

Frequency (MHz)	Min. 6dB Bandwidth (MHz)	Required Limit
2412	10.015	> 500 KHz
2437	10.150	> 500 KHz
2462	9.365	> 500 KHz

802.11g

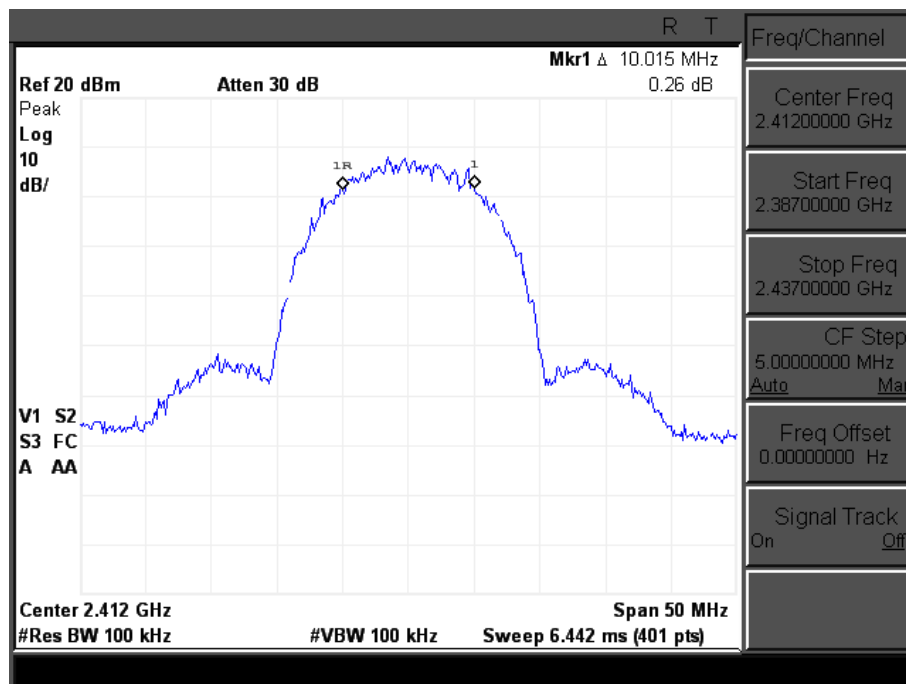
Frequency (MHz)	Min. 6dB Bandwidth (MHz)	Required Limit
2412	16.612	> 500 KHz
2437	16.612	> 500 KHz
2462	16.612	> 500 KHz

Note: Test Graphs See next page.

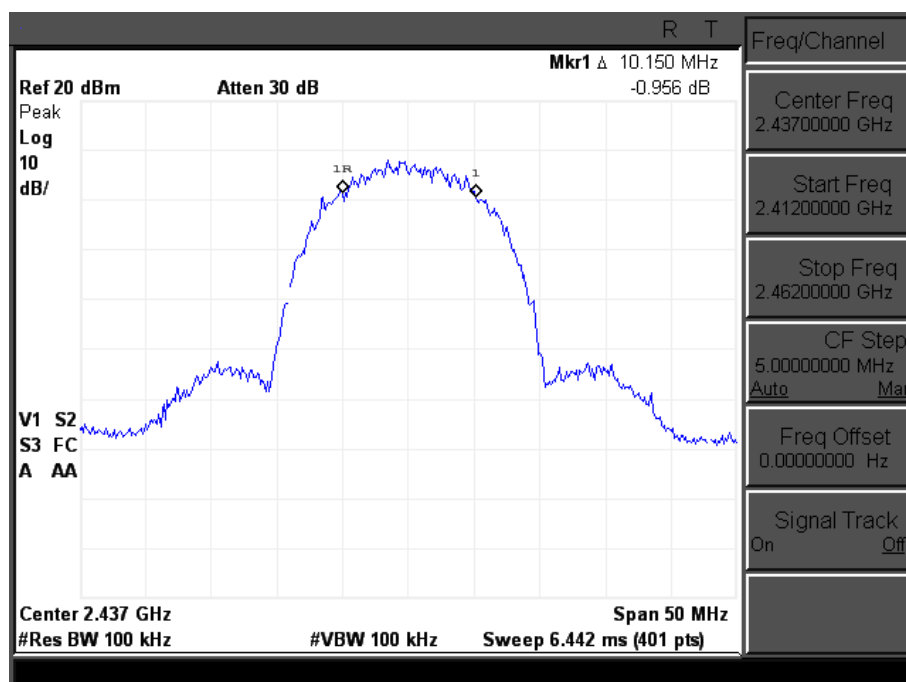


5.5 Test Graphs

802.11b (2412MHz)

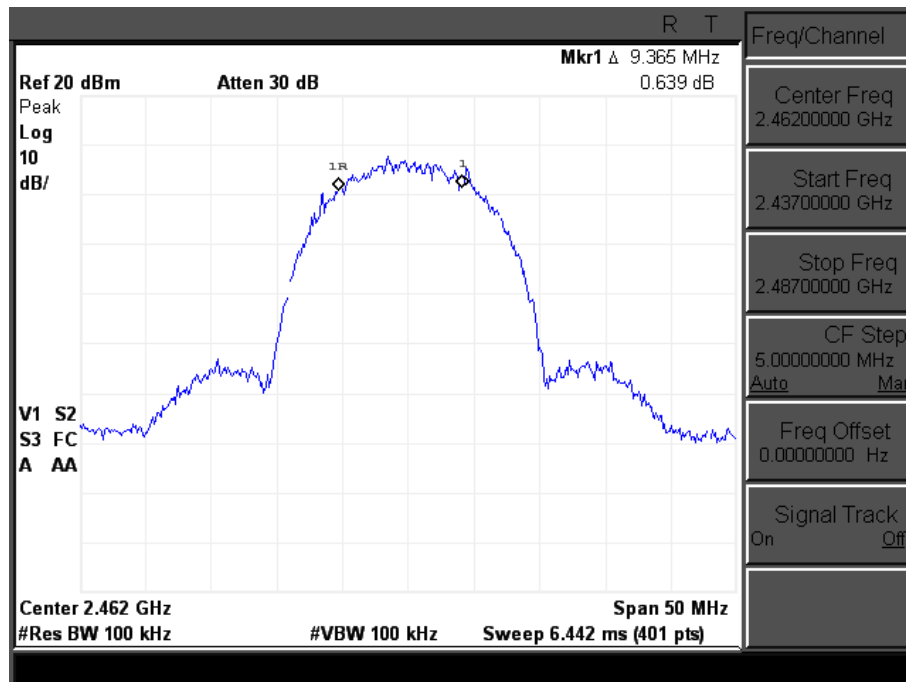


802.11b (2437MHz)



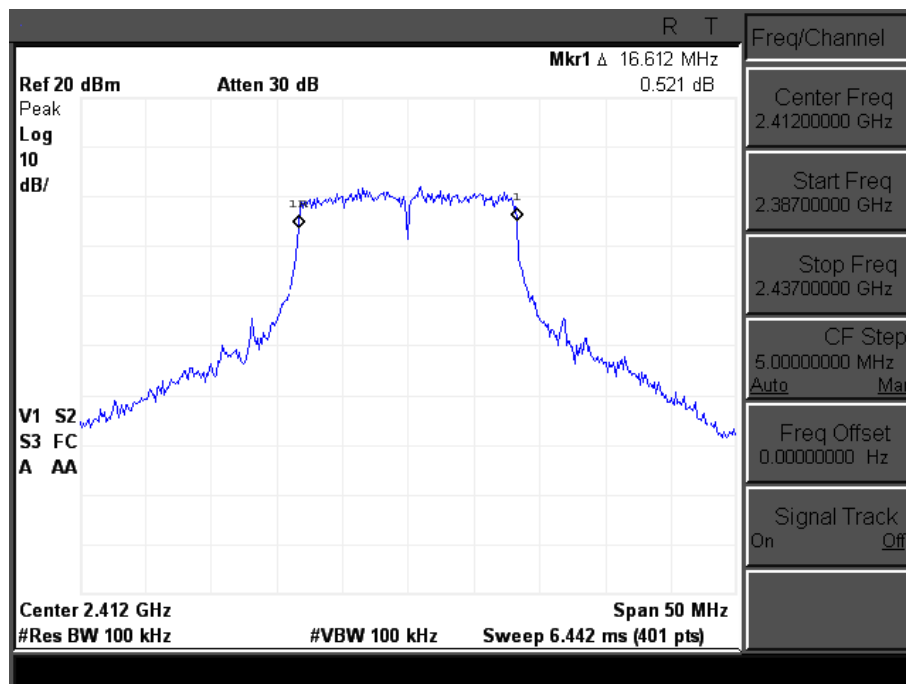


802.11b (2462MHz)

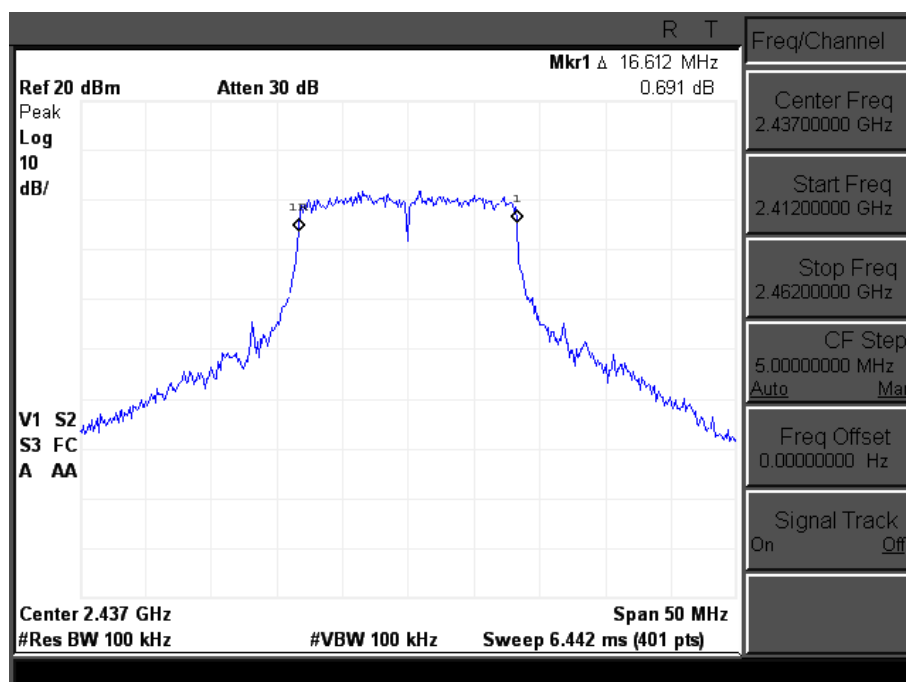




802.11g (2412MHz)

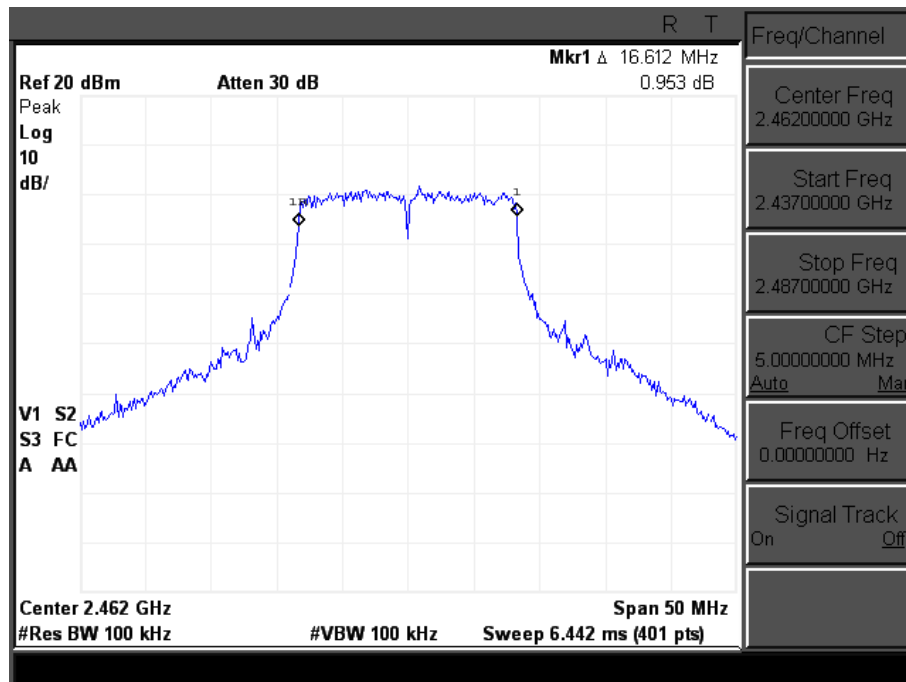


802.11g (2437MHz)





802.11g (2462MHz)



6. Maximum Power Density Requirements

6.1 Test Condition & Setup:

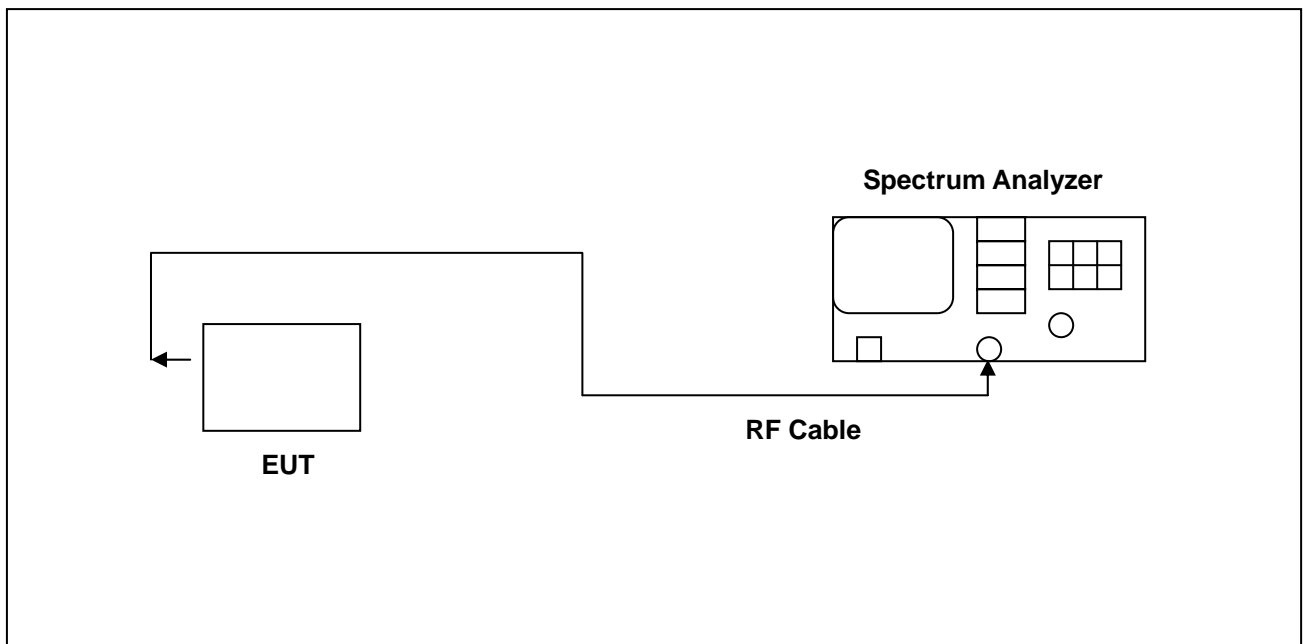
The EUT was setup to ANSI C63.4, 2003; tested to DTS test procedure of Oct 2002 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The spectrum analyzer RES BW was set to 3 kHz. The START and STOP frequencies were set to the band edges of the maximum output pass band. If there is no clear maximum amplitude in any given portion of the band, it may be necessary to make measurements at a number of bands defined by several START and STOP frequency pairs. The specification calls for a 1 second interval at each 3 kHz bandwidth; total SWEEP TIME is calculated as follows:

$$\text{SWEEP TIME (SEC)} = (\text{Fstop, kHz} - \text{Fstart, kHz}) / 3 \text{ kHz}$$

Antenna output of the EUT was coupled directly to spectrum analyzer; if an external attenuator and/or cable was used, these losses are compensated for with the analyzer OFFSET function.

6.2 Test Instruments Configuration:





6.3 Test Equipment List:

Describe	Manufacturer	Model	Serial Number	Calibration	
				Cal. Date	Due Date
Spectrum Analyzer	Agilent	E4445A	MY45300744	Nov. 29, 2007	Nov. 29, 2008

6.4 Test Result:

802.11b

Frequency (MHz)	Power Density (dBm)	Required Limit
2412	-6.715	<8dBm
2437	-6.637	<8dBm
2462	-6.871	<8dBm

802.11g

Frequency (MHz)	Power Density (dBm)	Required Limit
2412	-13.46	<8dBm
2437	-13.40	<8dBm
2462	-13.86	<8dBm

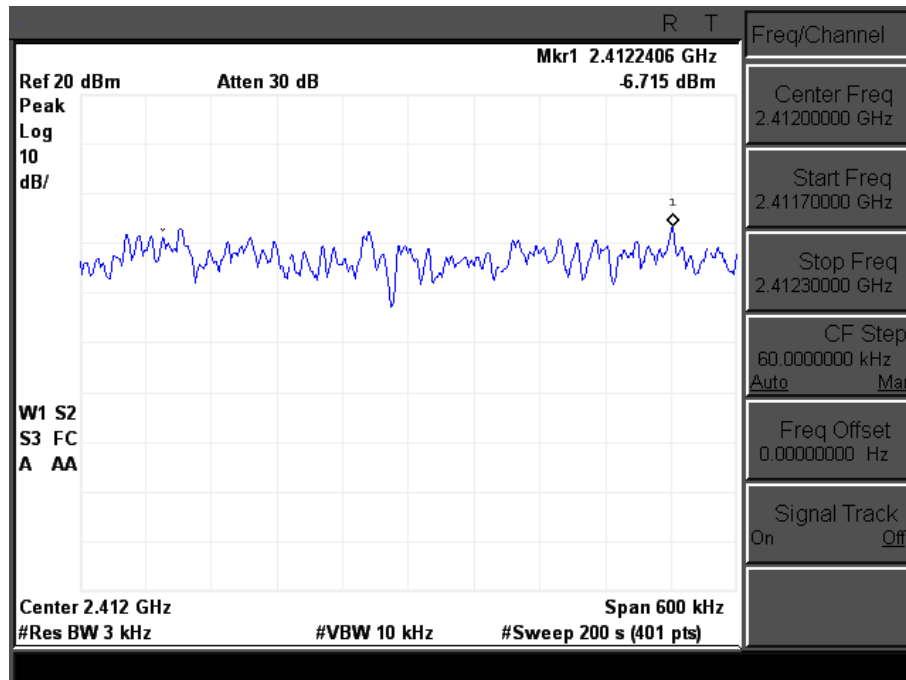
Note:

1. Frequency Span= 600 kHz
2. Sweep Time = Frequency Span/3 kHz=200secs
3. Test Graphs See next page.

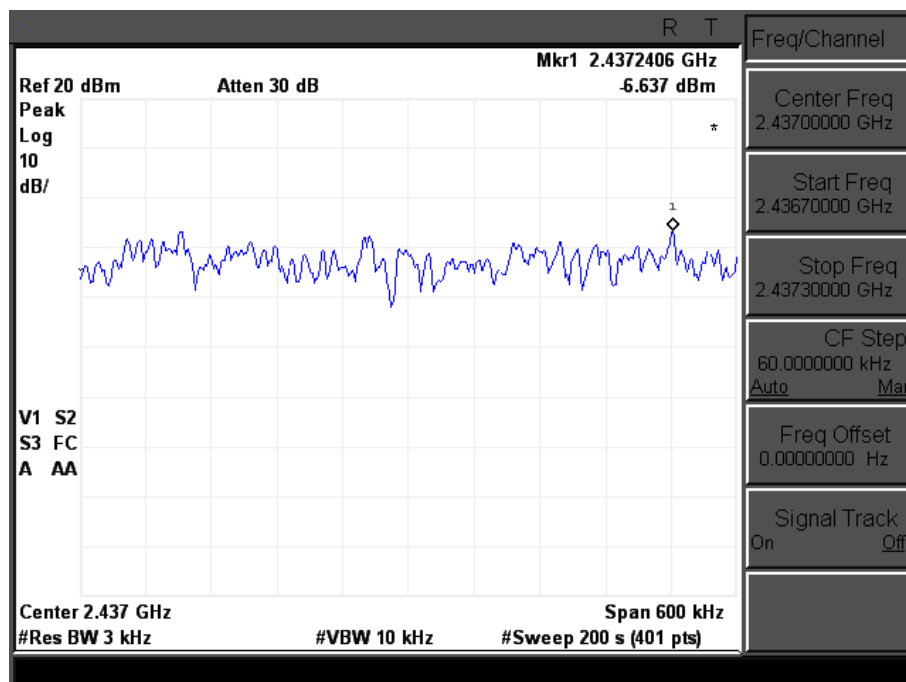


6.5 Test Graphs

802.11b (2412MHz)

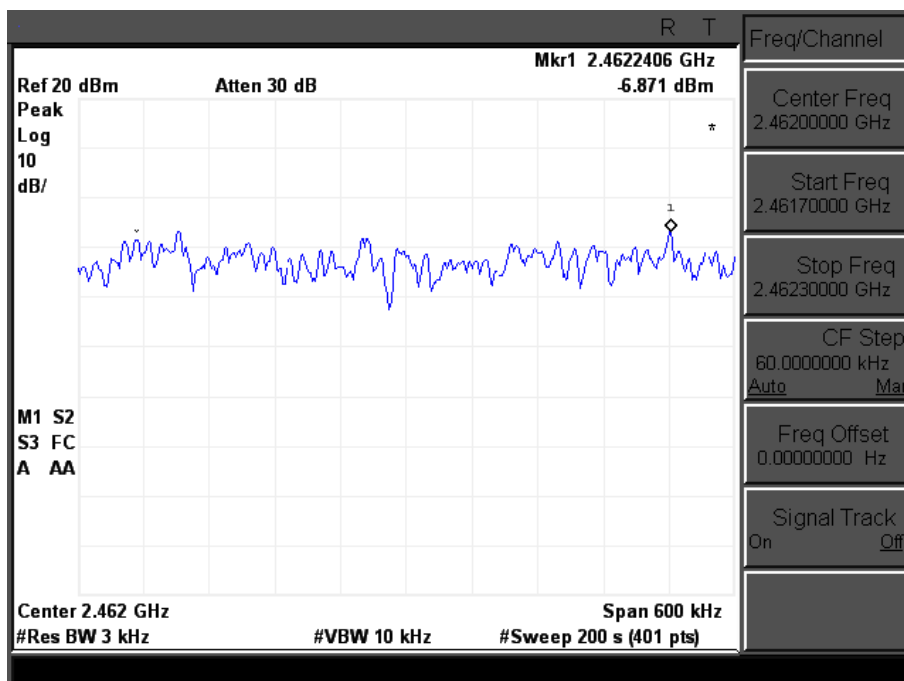


802.11b (2437MHz)



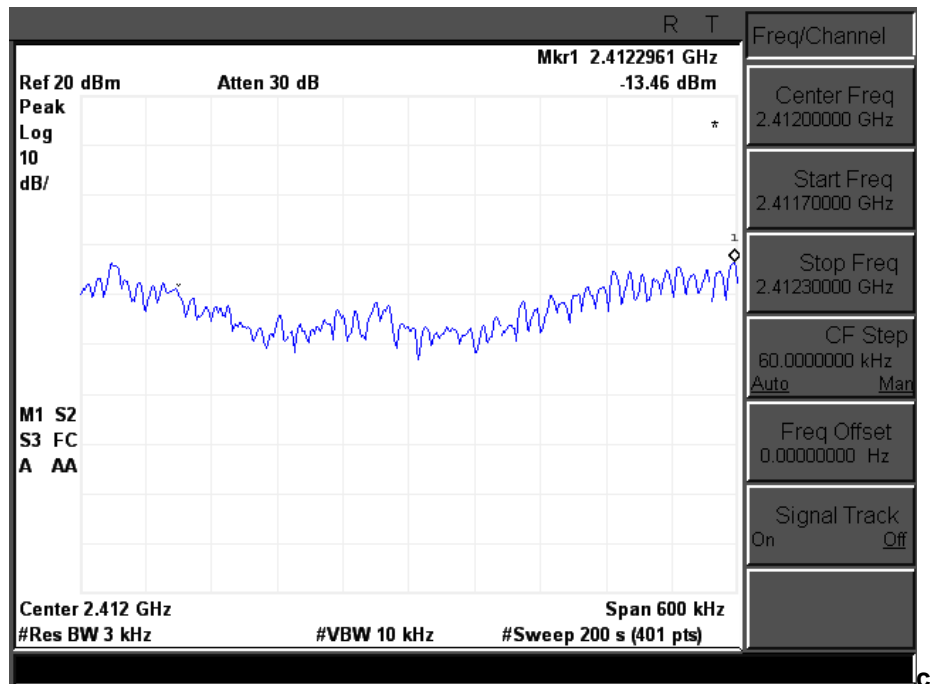


802.11b (2462MHz)

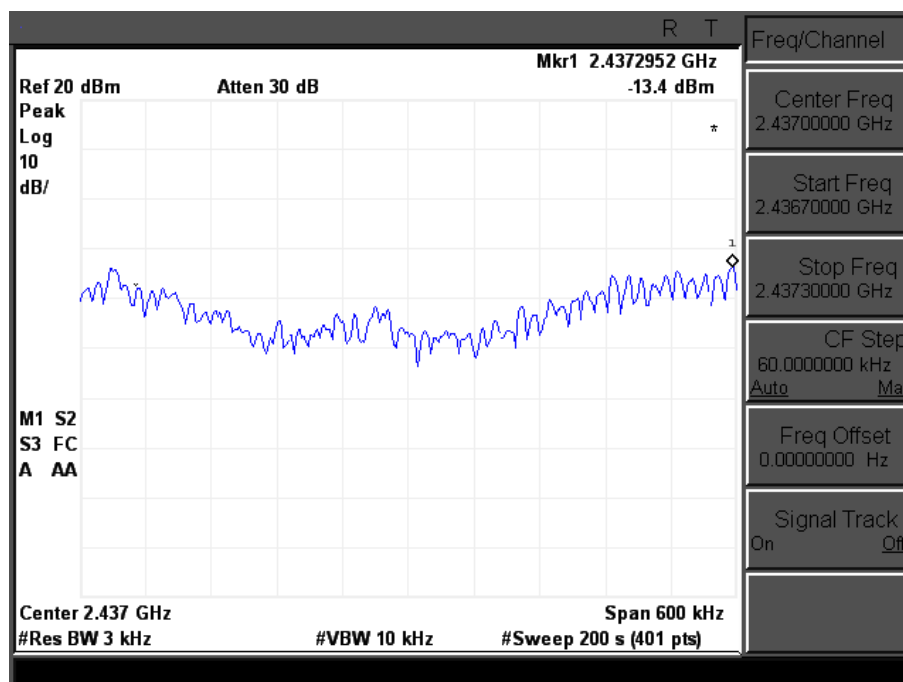




802.11g (2412MHz)

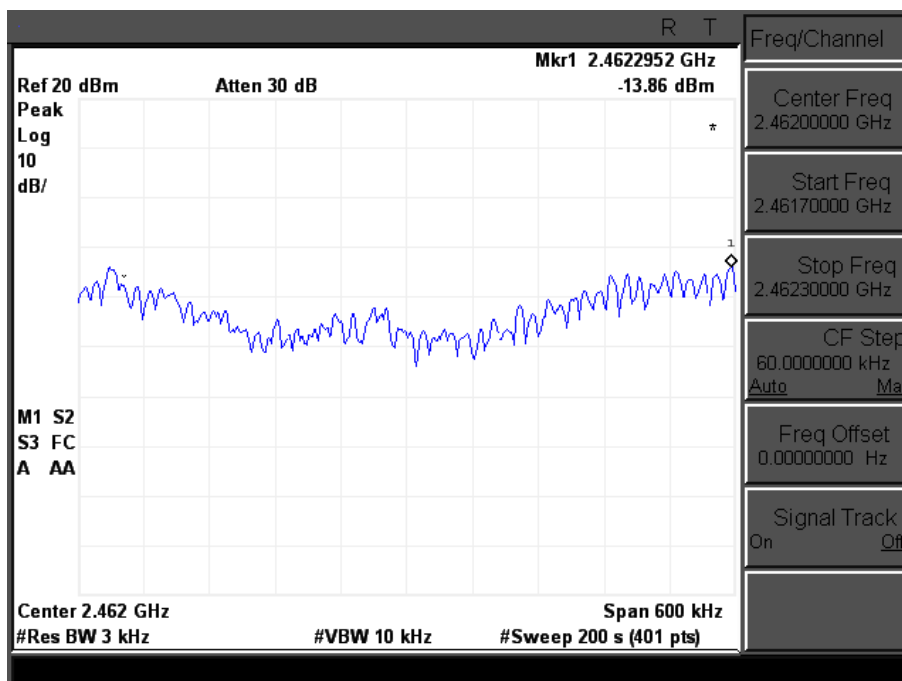


802.11g (2437MHz)





802.11g (2462MHz)



7. Out of Band Conducted Emissions Requirements

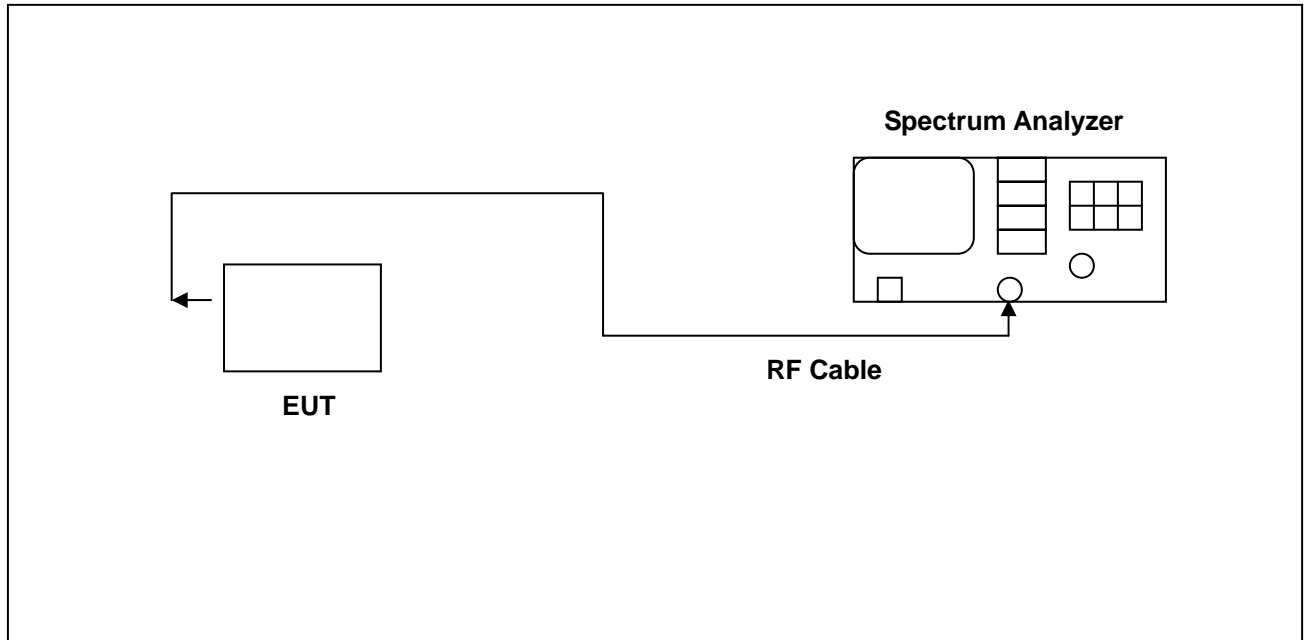
7.1 Test Condition & Setup:

The EUT was setup to ANSI C63.4, 2003; tested to DTS test procedure of Oct 2002 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

In any 100 kHz bandwidth outside the EUT pass band, the RF power produced by the modulation products of the spreading sequence, the information sequence, and the carrier frequency shall be at least 20 dB below that of the maximum in-band 100 kHz emission, antenna output of the EUT was coupled directly to spectrum analyzer; if an external attenuator and/or cable was used, these losses are compensated for with the analyzer OFFSET function.

All other types of emissions from the EUT shall meet the general limits for radiated frequencies outside the pass band. The test was performed at 3 channels (Channel 1, 6, 11)

7.2 Test Instruments Configuration:





7.3 Test Equipment List:

Describe	Manufacturer	Model	Serial Number	Calibration	
				Cal. Date	Due Date
Spectrum Analyzer	Agilent	E4445A	MY45300744	Nov.29, 2007	Nov.29, 2008

7.4 Test Result:

Refer to attached data sheets. Data shows out of band emissions are suppressed well below the -20 dBc minimum required by the Rules.

Note: Test Graphs See next page.



7.5 Test Graphs

7.5.1 802.11b Test Graphs

Please refer to next pager of detail testing data.



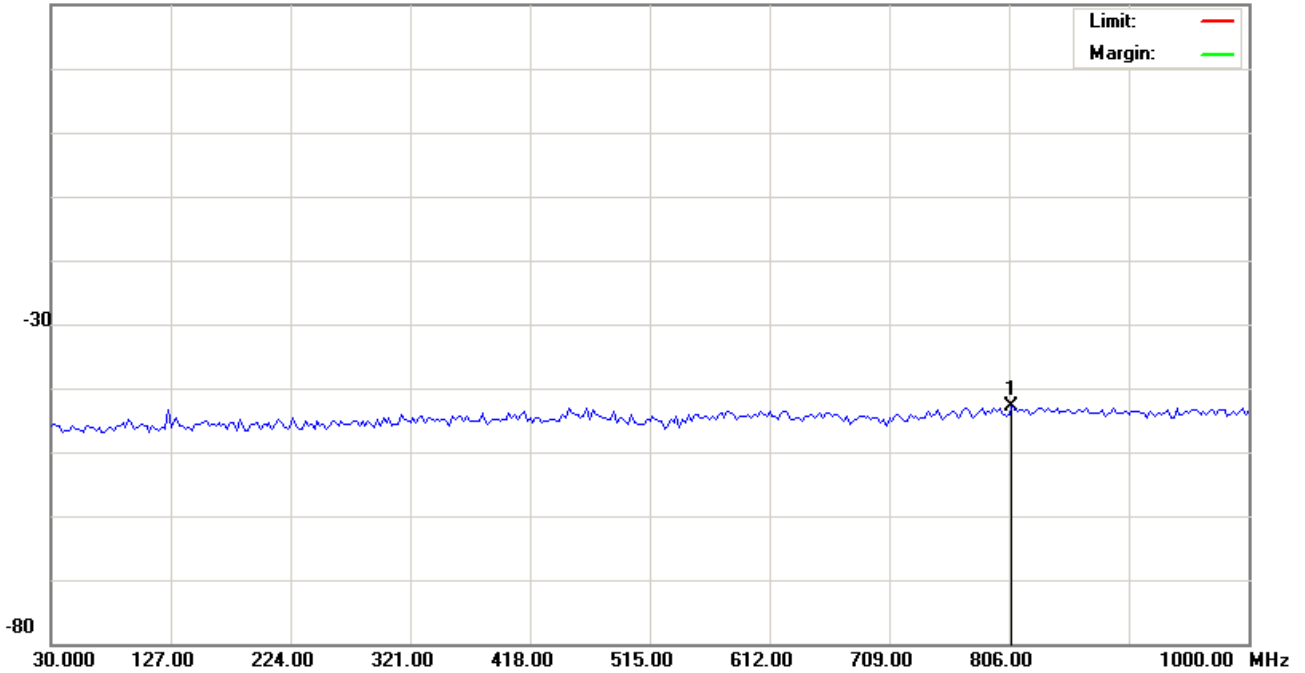
File :MS6030(20dB)(11b)

Data :#1

Date: 2008/03/05

Time:

20.0 dBm



Site
Limit:
EUT:
M/N: MS6030
Mode: 11b
Note: ch2412

Polarization:
Power: AC 110V/60Hz
Distance:
Temperature: 26 °C
Humidity: 55 %

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	808.4249	-43.84	1.00	-42.84					peak

*:Maximum data x:Over limit !:over margin

●Reference Only



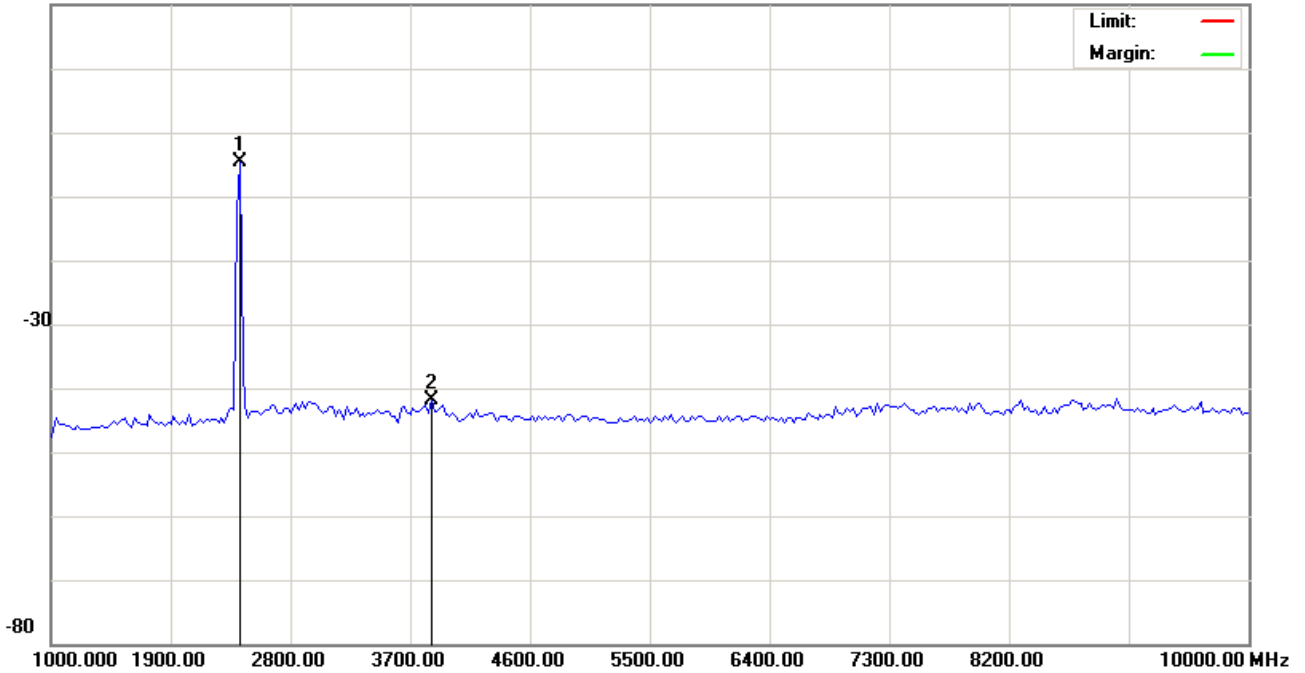
File :MS6030(20dB)(11b)

Data :#2

Date: 2008/03/05

Time:

20.0 dBm



Site

Polarization:

Temperature: 26 °C

Limit:

Power: AC 110V/60Hz

Humidity: 55 %

EUT:

Distance:

M/N: MS6030

Mode: 11b

Note: ch2412

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2417.500	-5.69	1.01	-4.68					peak
2		3857.500	-42.97	1.02	-41.95					peak

*:Maximum data x:Over limit !:over margin

●Reference Only



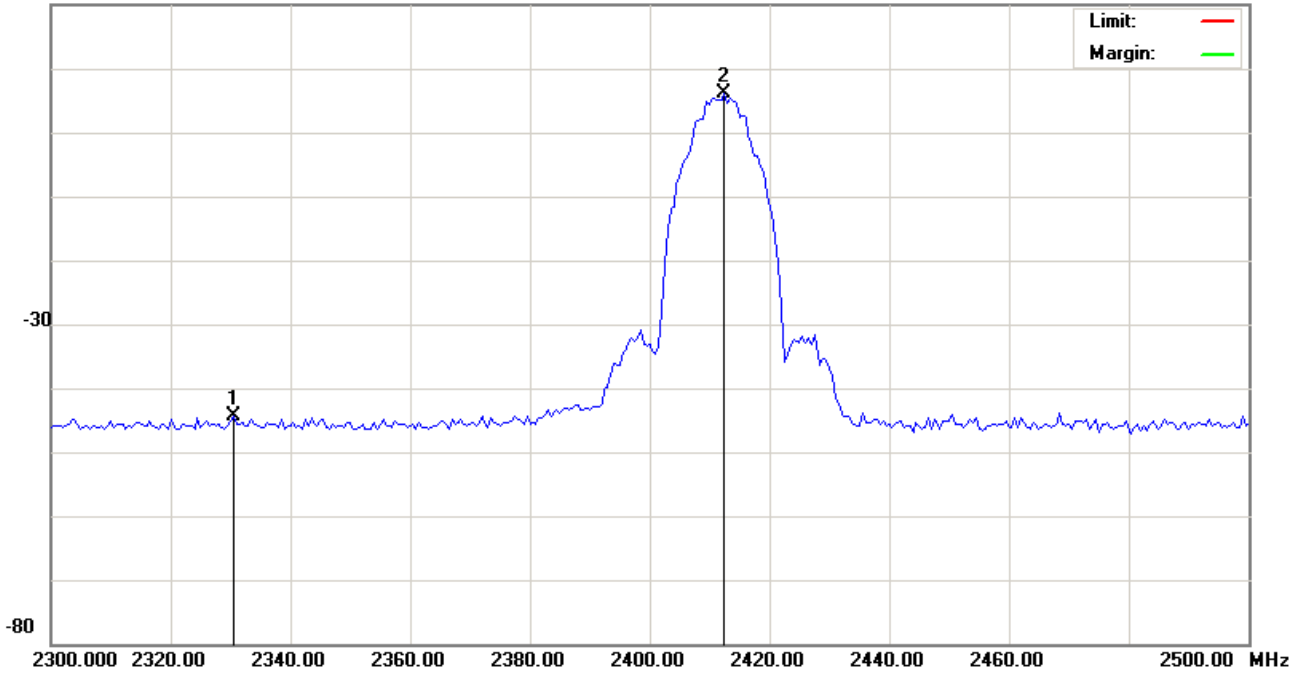
File :MS6030(20dB)(11b)

Data :#3

Date: 2008/03/05

Time:

20.0 dBm



Site

Polarization:

Temperature: 26 °C

Limit:

Power: AC 110V/60Hz

Humidity: 55 %

EUT:

Distance:

M/N: MS6030

Mode: 11b

Note: ch2412

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2330.500	-45.49	1.01	-44.48					peak
2	*	2412.500	5.07	1.01	6.08					peak

*:Maximum data x:Over limit !:over margin

●Reference Only



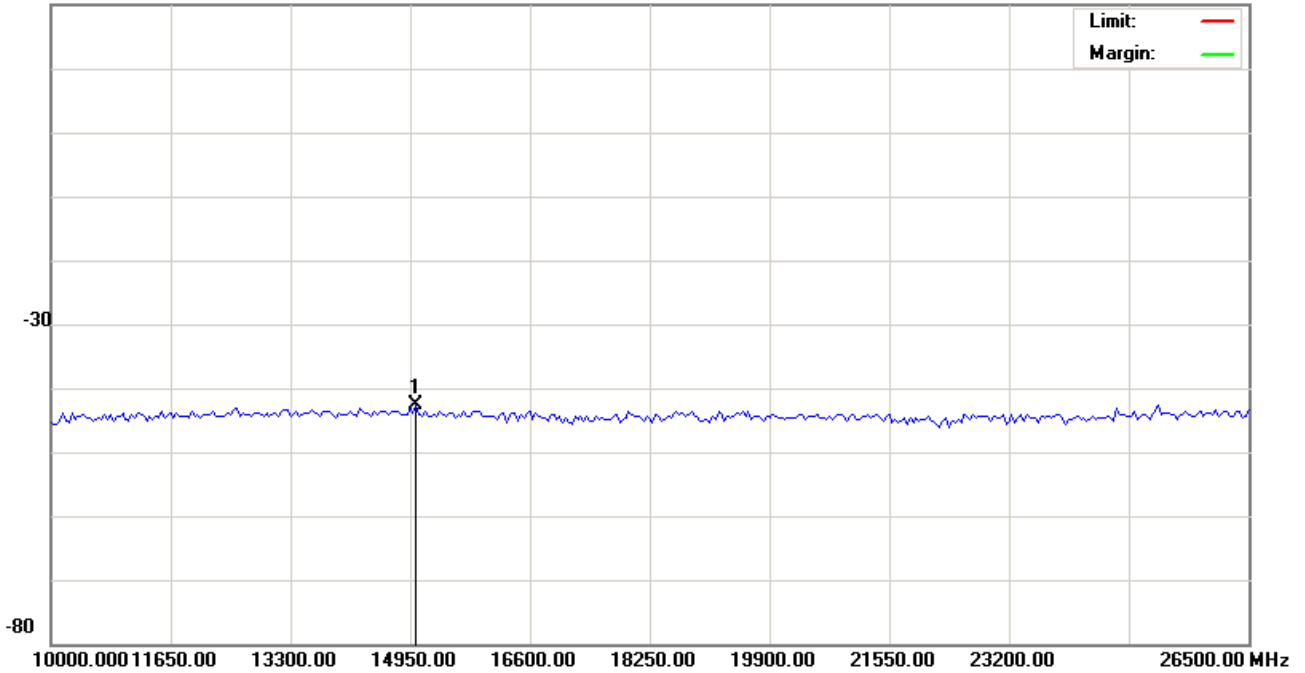
File :MS6030(20dB)(11b)

Data :#4

Date: 2008/03/05

Time:

20.0 dBm



Site

Polarization:

Temperature: 26 °C

Limit:

Power: AC 110V/60Hz

Humidity: 55 %

EUT:

Distance:

M/N: MS6030

Mode: 11b

Note: ch2412

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	15032.50	-43.67	1.06	-42.61					peak

*:Maximum data x:Over limit !:over margin

●Reference Only



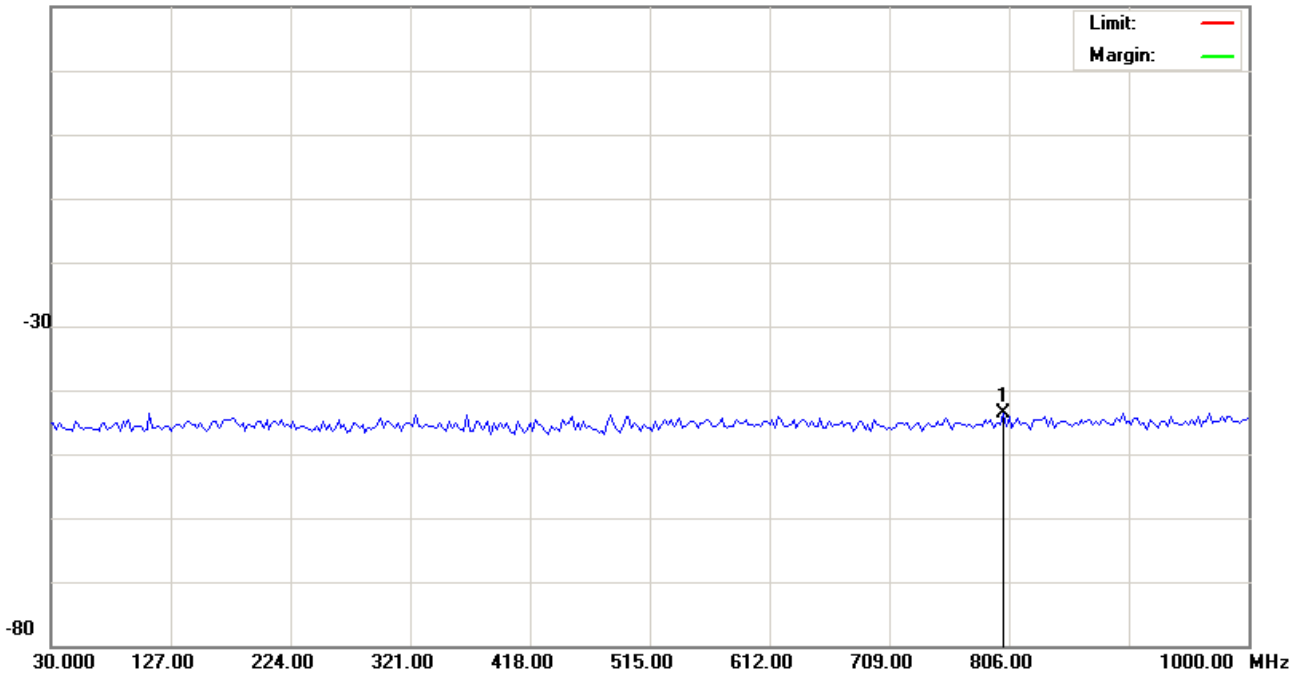
File :MS6030(20dB)(11b)

Data :#5

Date: 2008/03/05

Time:

20.0 dBm



Site

Polarization:

Temperature: 26 °C

Limit:

Power: AC 110V/60Hz

Humidity: 55 %

EUT:

Distance:

M/N: MS6030

Mode: 11b

Note: ch2437

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1	*	801.1500	-44.67	1.00	-43.67			peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



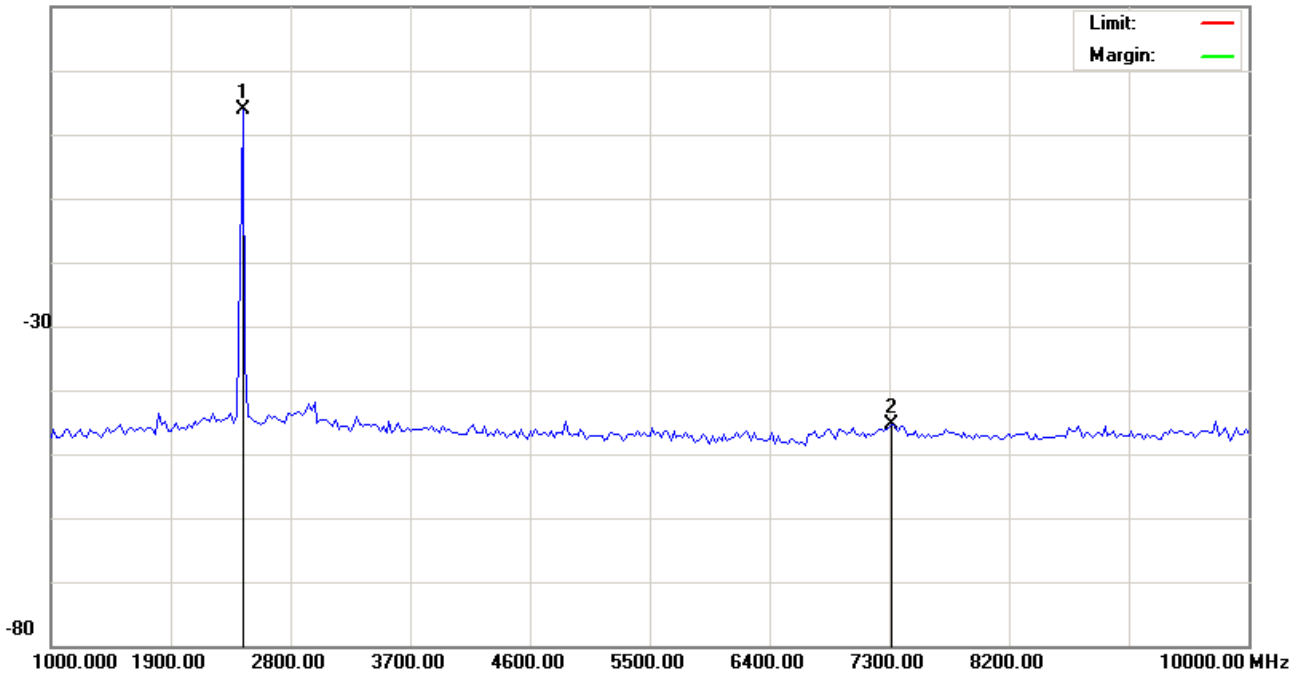
File :MS6030(20dB)(11b)

Data :#6

Date: 2008/03/05

Time:

20.0 dBm



Site
Limit:
EUT:
M/N: MS6030
Mode: 11b
Note: ch2437

Polarization:
Power: AC 110V/60Hz
Distance:

Temperature: 26 °C
Humidity: 55 %

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2440.000	2.78	1.01	3.79					peak
2		7322.500	-46.39	1.03	-45.36					peak

*:Maximum data x:Over limit !:over margin

●Reference Only



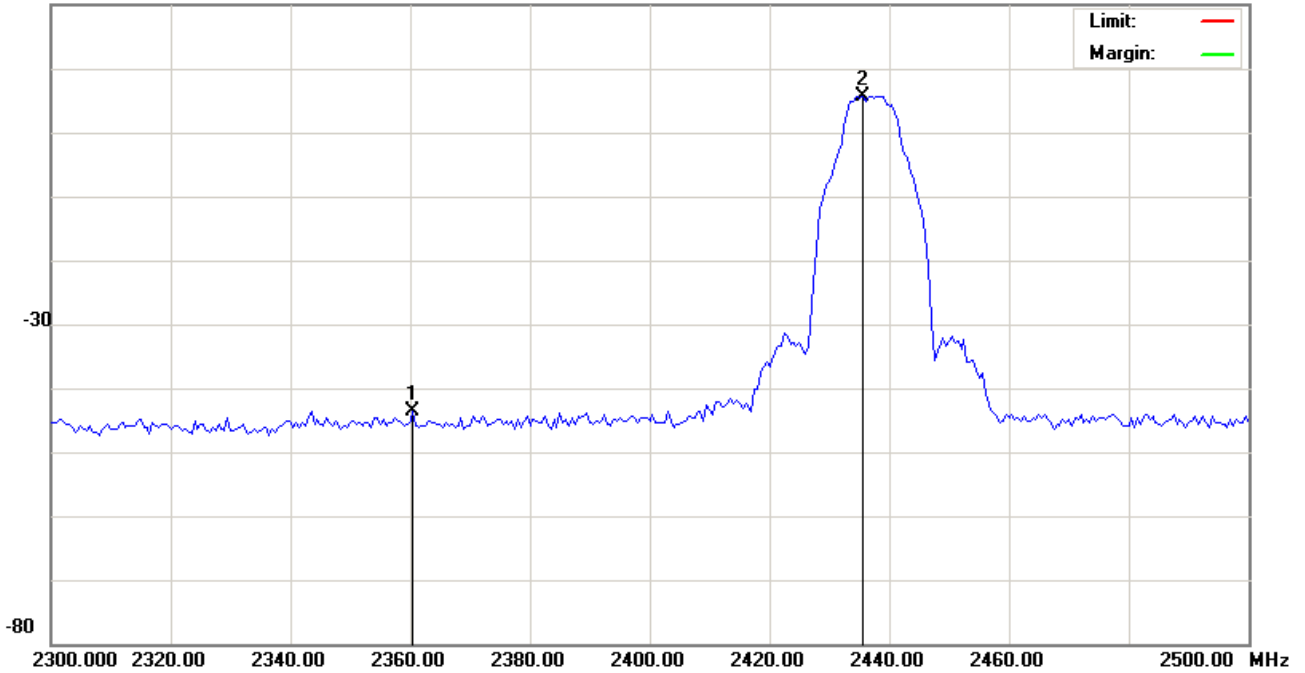
File :MS6030(20dB)(11b)

Data :#7

Date: 2008/03/05

Time:

20.0 dBm



Site
Limit:
EUT:
M/N: MS6030
Mode: 11b
Note: ch2437

Polarization:
Power: AC 110V/60Hz
Distance:

Temperature: 26 °C
Humidity: 55 %

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2360.500	-44.57	1.01	-43.56					peak
2	*	2435.500	4.71	1.01	5.72					peak

*:Maximum data x:Over limit !:over margin

●Reference Only



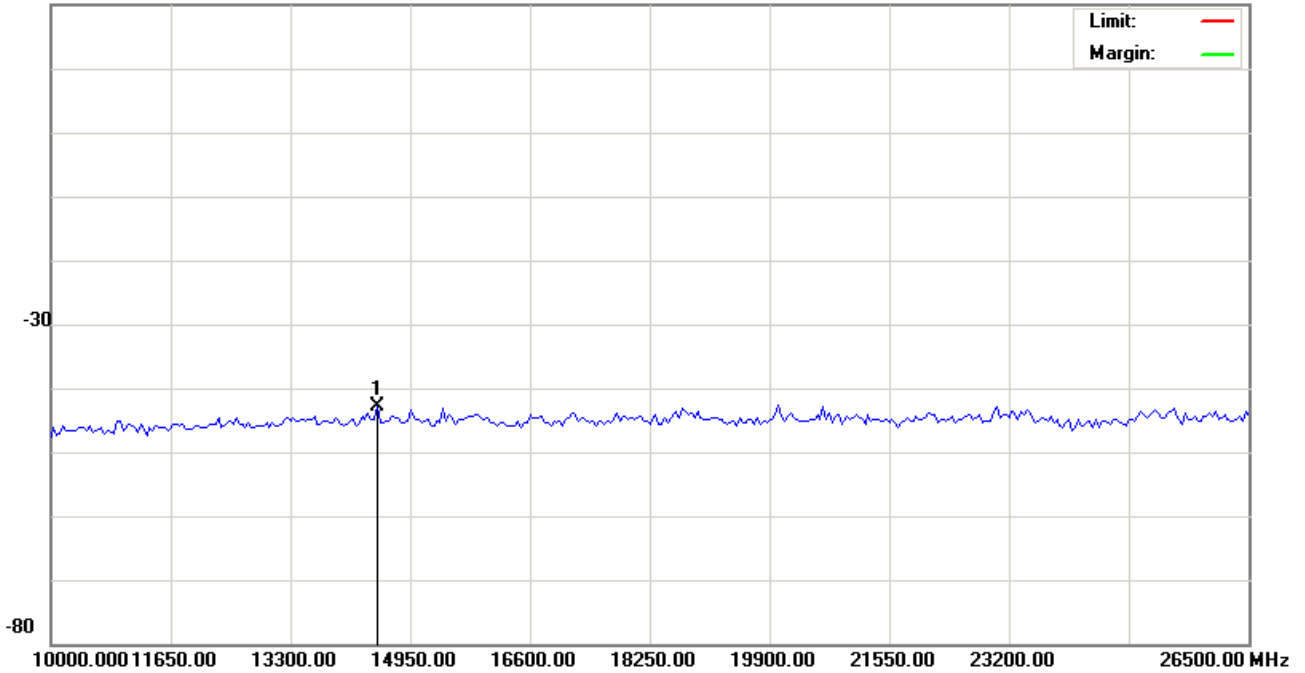
File :MS6030(20dB)(11b)

Data :#8

Date: 2008/03/05

Time:

20.0 dBm



Site
Limit:
EUT:
M/N: MS6030
Mode: 11b
Note: ch2437

Polarization:
Power: AC 110V/60Hz
Distance:
Temperature: 26 °C
Humidity: 55 %

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	14496.25	-43.91	1.06	-42.85					peak

*:Maximum data x:Over limit !:over margin

●Reference Only



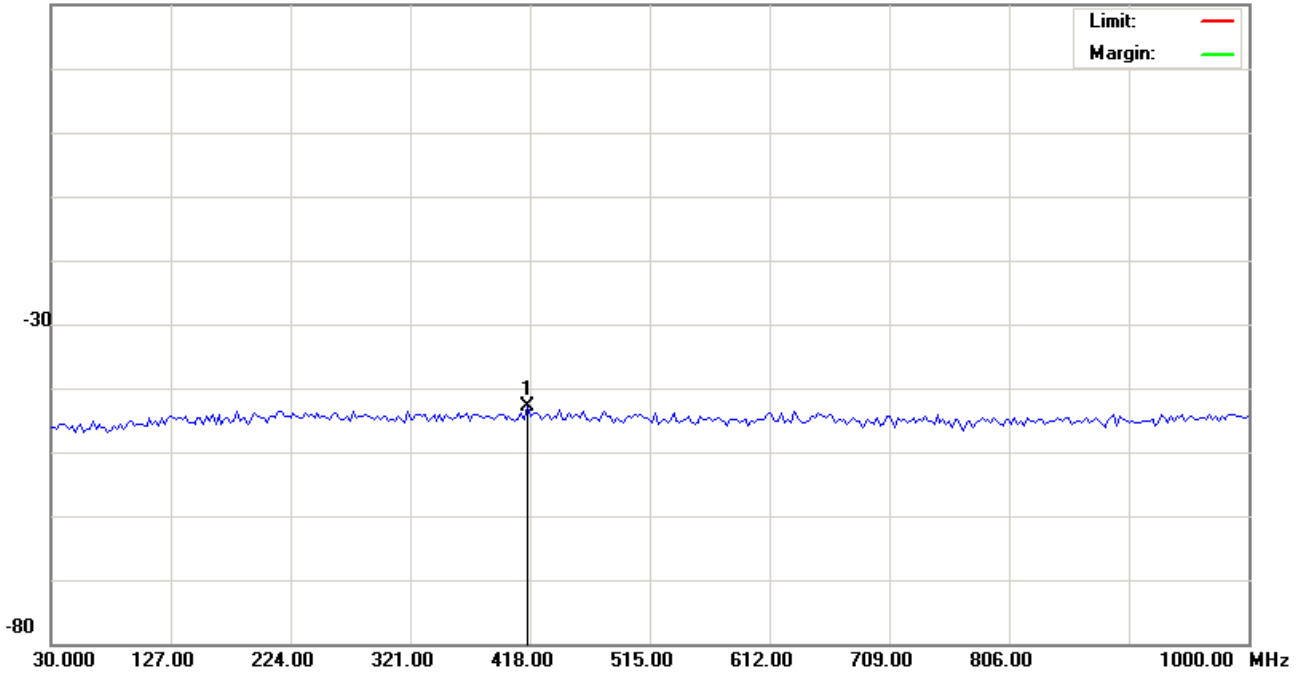
File :MS6030(20dB)(11b)

Data :#9

Date: 2008/03/05

Time:

20.0 dBm



Site

Polarization:

Temperature: 26 °C

Limit:

Power: AC 110V/60Hz

Humidity: 55 %

EUT:

Distance:

M/N: MS6030

Mode: 11b

Note: ch2462

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	415.5749	-43.94	1.00	-42.94					peak

*:Maximum data x:Over limit !:over margin

●Reference Only



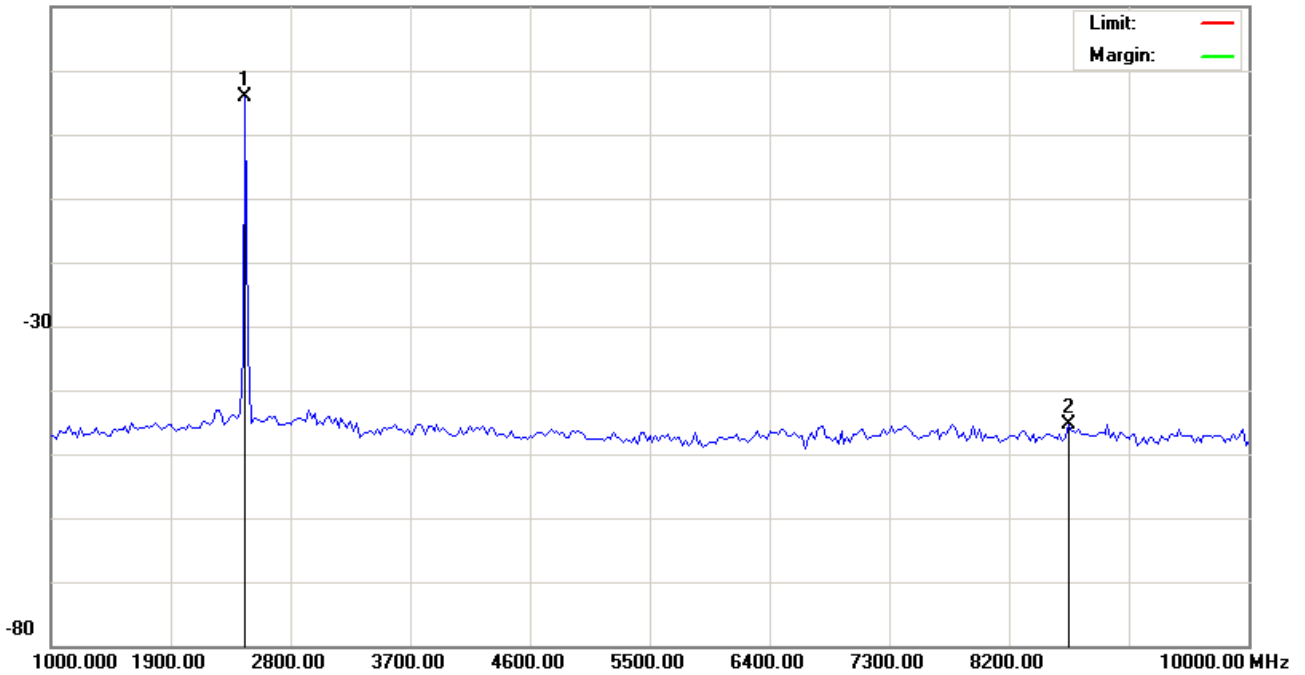
File :MS6030(20dB)(11b)

Data :#10

Date: 2008/03/05

Time:

20.0 dBm



Site

Polarization:

Temperature: 26 °C

Limit:

Power: AC 110V/60Hz

Humidity: 55 %

EUT:

Distance:

M/N: MS6030

Mode: 11b

Note: ch2462

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2462.500	4.75	1.01	5.76					peak
2		8650.000	-46.51	1.04	-45.47					peak

*:Maximum data x:Over limit !:over margin

●Reference Only



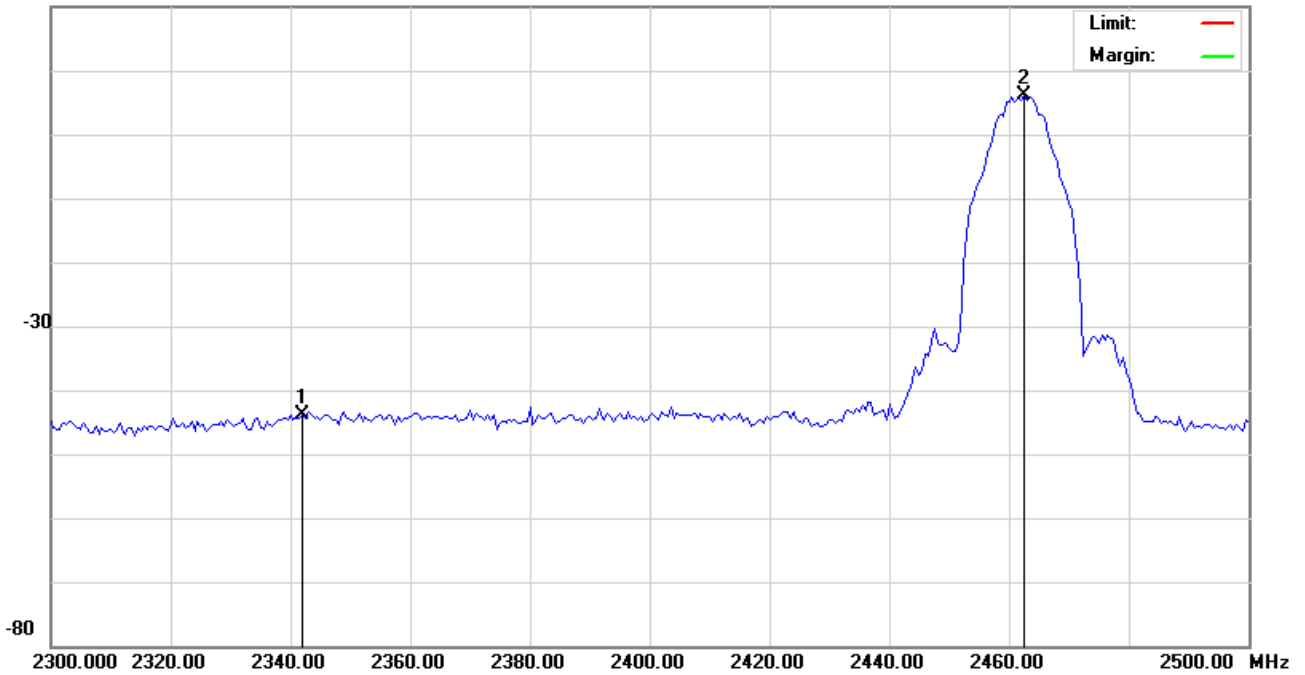
File :MS6030(20dB)(11b)

Data :#11

Date: 2008/03/05

Time:

20.0 dBm



Site

Polarization:

Temperature: 26 °C

Limit:

Power: AC 110V/60Hz

Humidity: 55 %

EUT:

Distance:

M/N: MS6030

Mode: 11b

Note: ch2462

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2342.000	-44.92	1.01	-43.91					peak
2	*	2462.500	5.14	1.01	6.15					peak

*:Maximum data x:Over limit !:over margin

●Reference Only



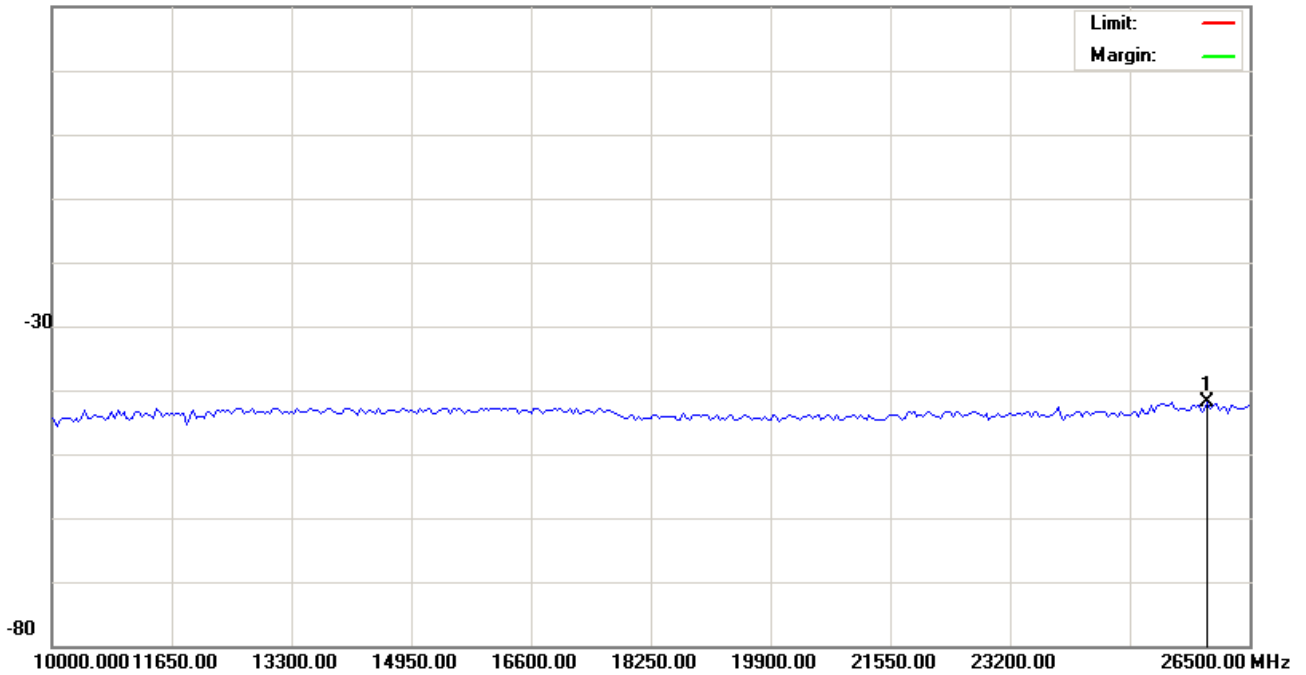
File :MS6030(20dB)(11b)

Data :#12

Date: 2008/03/05

Time:

20.0 dBm



Site

Polarization:

Temperature: 26 °C

Limit:

Power: AC 110V/60Hz

Humidity: 55 %

EUT:

Distance:

M/N: MS6030

Mode: 11b

Note: ch2462

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	25922.50	-42.99	1.11	-41.88					peak

*:Maximum data x:Over limit !:over margin

●Reference Only



7.5.2 802.11g Test Graphs

Please refer to next pager of detail testing data.



Radiated Emission Measurement

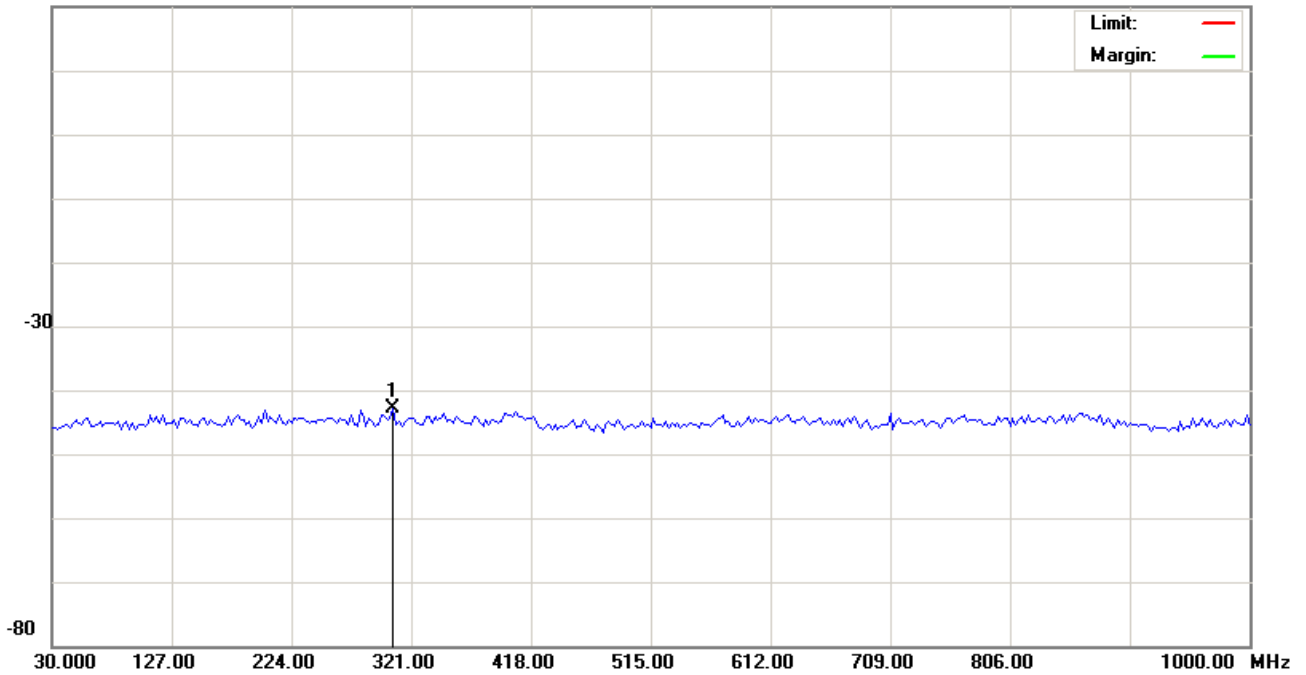
File :MD601B(20dB)(11g)

Data :#1

Date: 2008/03/05

Time:

20.0 dBm



Site	Polarization:	Temperature: 26 °C
Limit:	Power: AC 110V/60Hz	Humidity: 55 %
EUT:	Distance:	
M/N: MS6030		
Mode: 11g		
Note: ch2412		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1	*	306.4500	-43.83	1.00	-42.83			peak		Comment

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

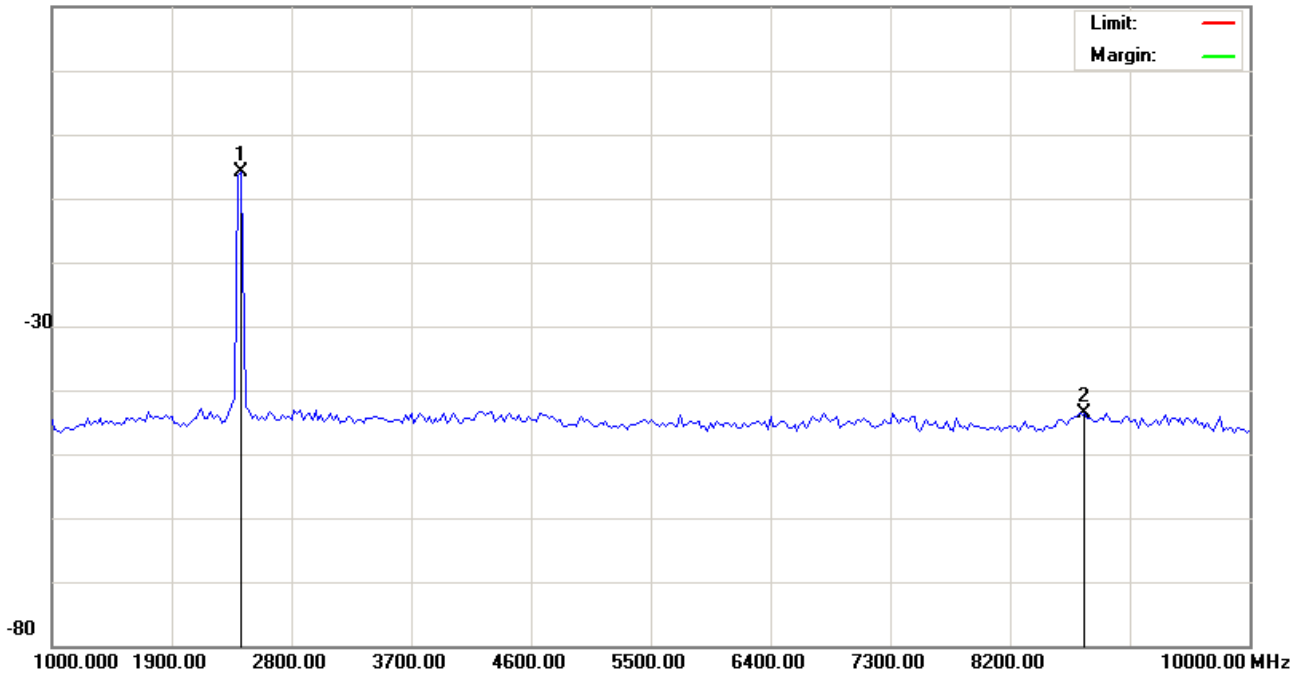
File :MD601B(20dB)(11g)

Data :#2

Date: 2008/03/05

Time:

20.0 dBm



Site Polarization: Temperature: 26 °C
Limit: Power: AC 110V/60Hz Humidity: 55 %
EUT: Distance:
M/N: MS6030
Mode: 11g
Note: ch2412

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2417.500	-6.80	1.01	-5.79					peak
2		8762.500	-44.63	1.04	-43.59					peak

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

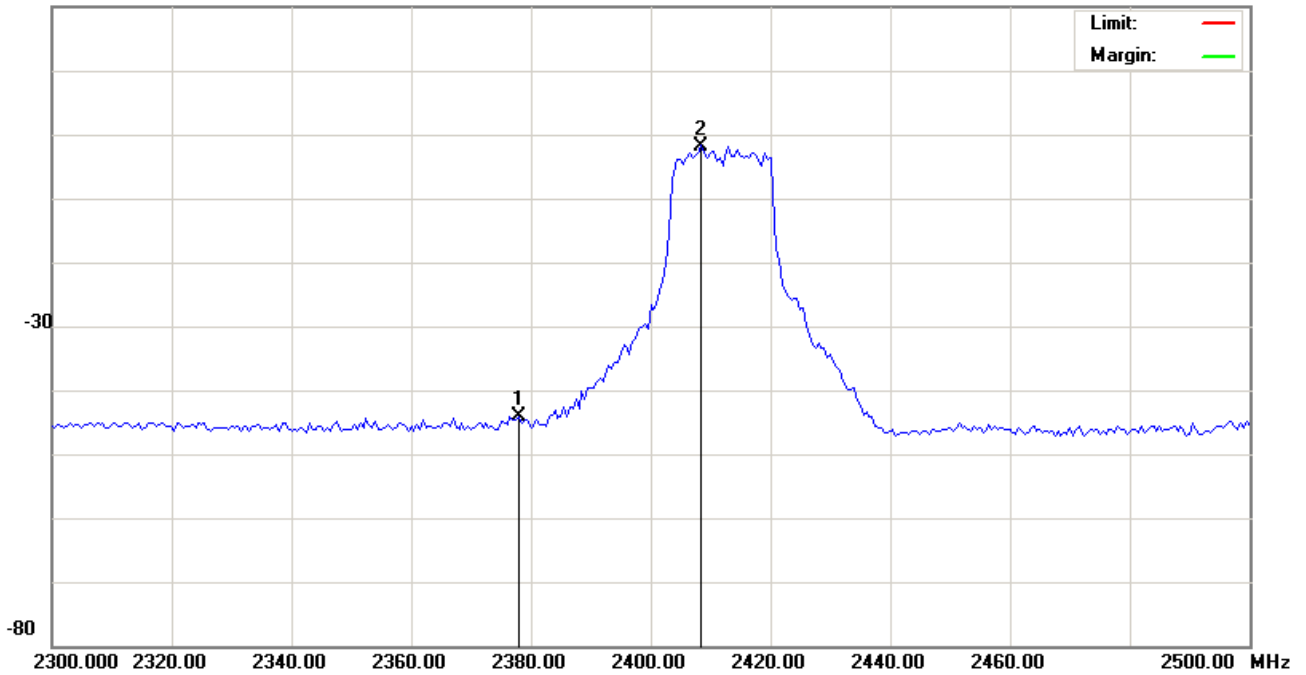
File :MD601B(20dB)(11g)

Data :#3

Date: 2008/03/05

Time:

20.0 dBm



Site

Polarization:

Temperature: 26 °C

Limit:

Power: AC 110V/60Hz

Humidity: 55 %

EUT:

Distance:

M/N: MS6030

Mode: 11g

Note: ch2412

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2378.000	-45.05	1.01	-44.04					peak
2	*	2408.500	-2.76	1.01	-1.75					peak

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

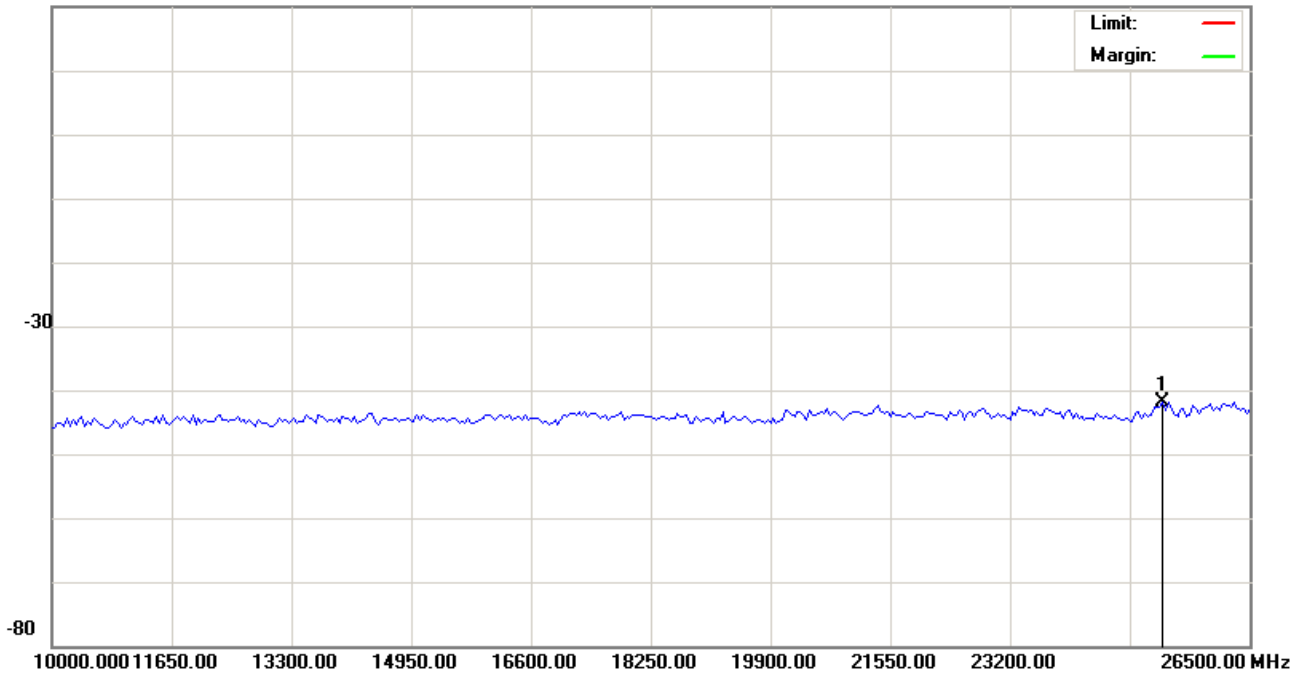
File :MD601B(20dB)(11g)

Data :#4

Date: 2008/03/05

Time:

20.0 dBm



Site Polarization: Temperature: 26 °C
Limit: Power: AC 110V/60Hz Humidity: 55 %
EUT: Distance:
M/N: MS6030
Mode: 11g
Note: ch2412

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1	*	25303.75	-42.87	1.11	-41.76			peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

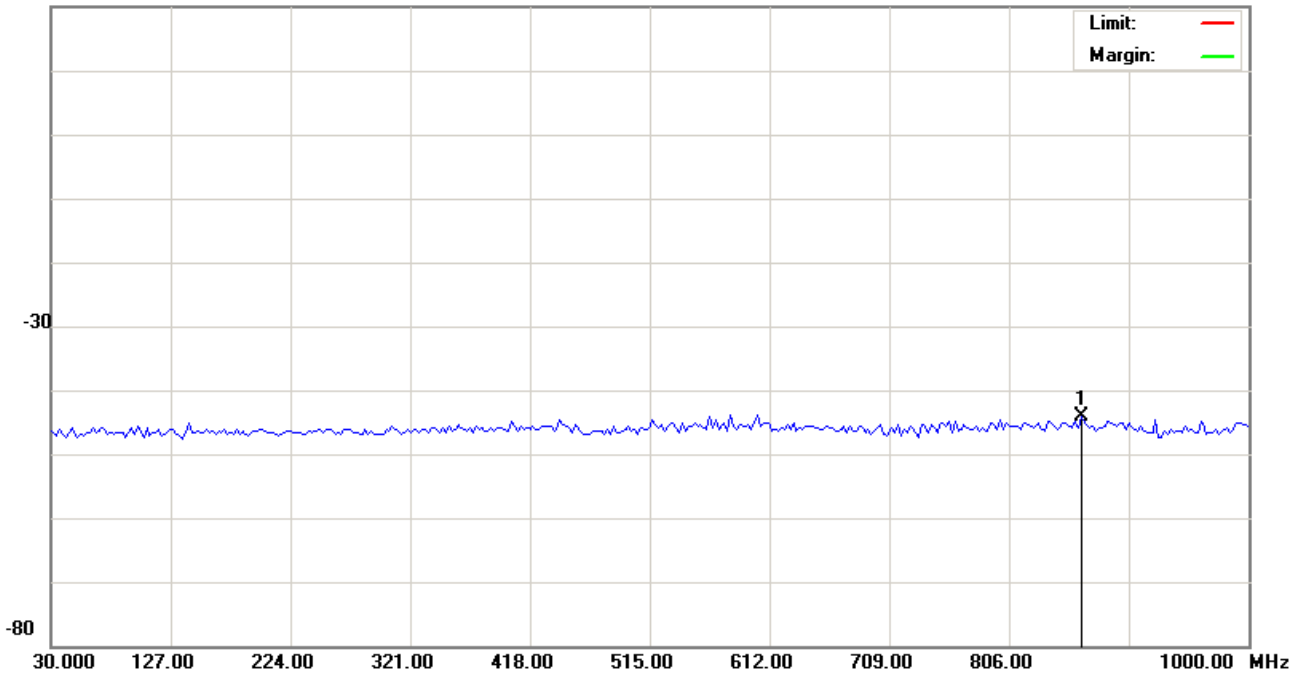
File :MD601B(20dB)(11g)

Data :#5

Date: 2008/03/05

Time:

20.0 dBm



Site
Limit:
EUT:
M/N: MS6030
Mode: 11g
Note: ch2437

Polarization:
Power: AC 110V/60Hz
Distance:
Temperature: 26 °C
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1	*	864.2000	-45.24	1.00	-44.24			peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

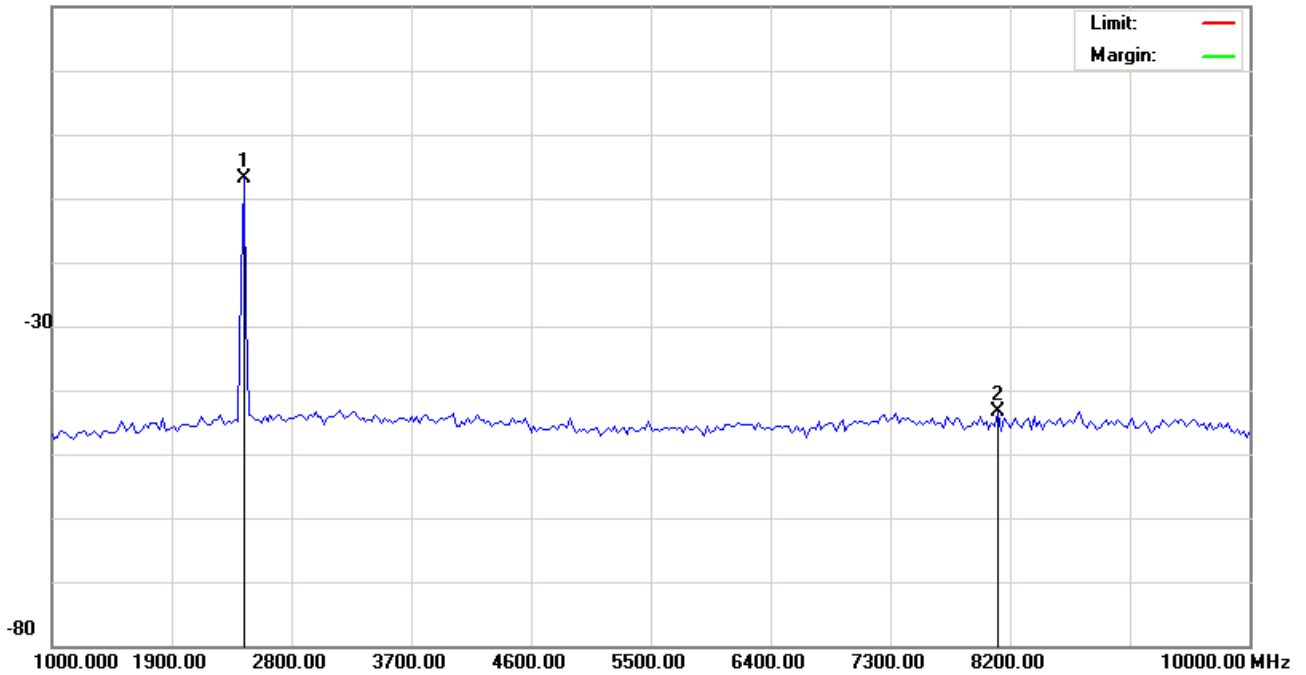
File :MD601B(20dB)(11g)

Data :#6

Date: 2008/03/05

Time:

20.0 dBm



Site

Polarization:

Temperature: 26 °C

Limit:

Power: AC 110V/60Hz

Humidity: 55 %

EUT:

Distance:

M/N: MS6030

Mode: 11g

Note: ch2437

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2440.000	-7.79	1.01	-6.78					peak
2		8110.000	-44.38	1.03	-43.35					peak

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

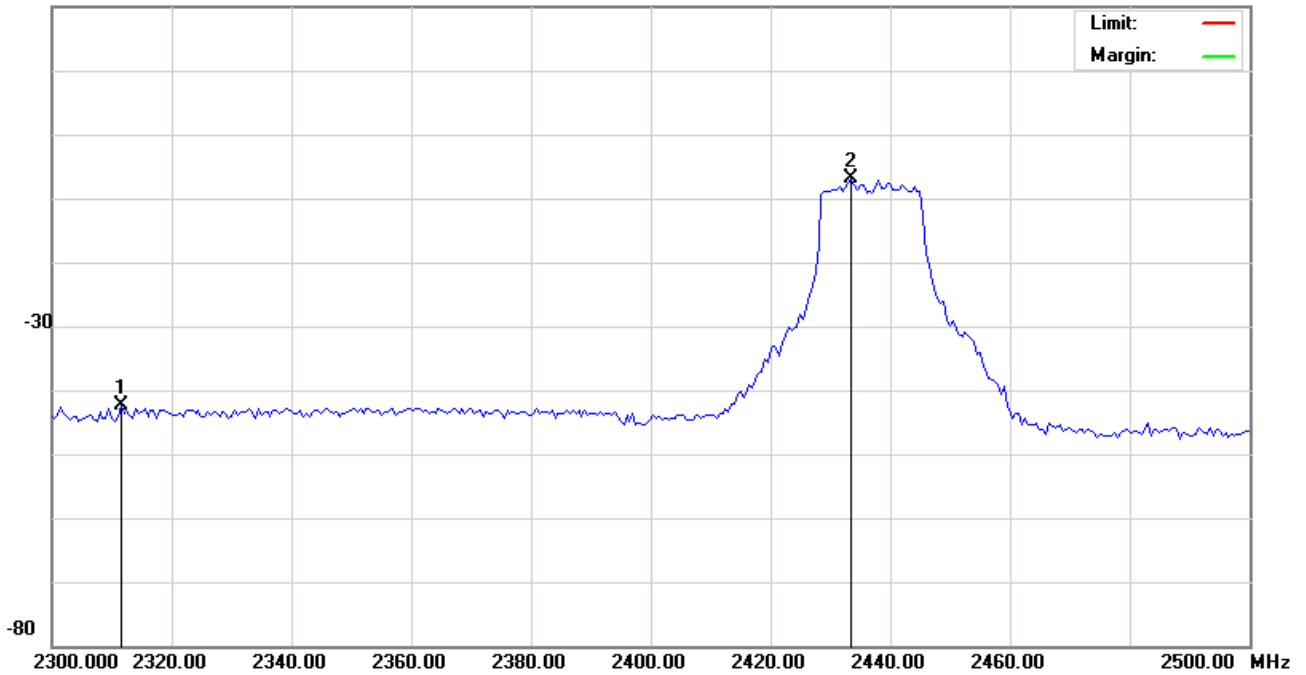
File :MD601B(20dB)(11g)

Data :#7

Date: 2008/03/05

Time:

20.0 dBm



Site

Polarization:

Temperature: 26 °C

Limit:

Power: AC 110V/60Hz

Humidity: 55 %

EUT:

Distance:

M/N: MS6030

Mode: 11g

Note: ch2437

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2311.500	-43.28	1.01	-42.27					peak
2	*	2433.500	-7.86	1.01	-6.85					peak

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

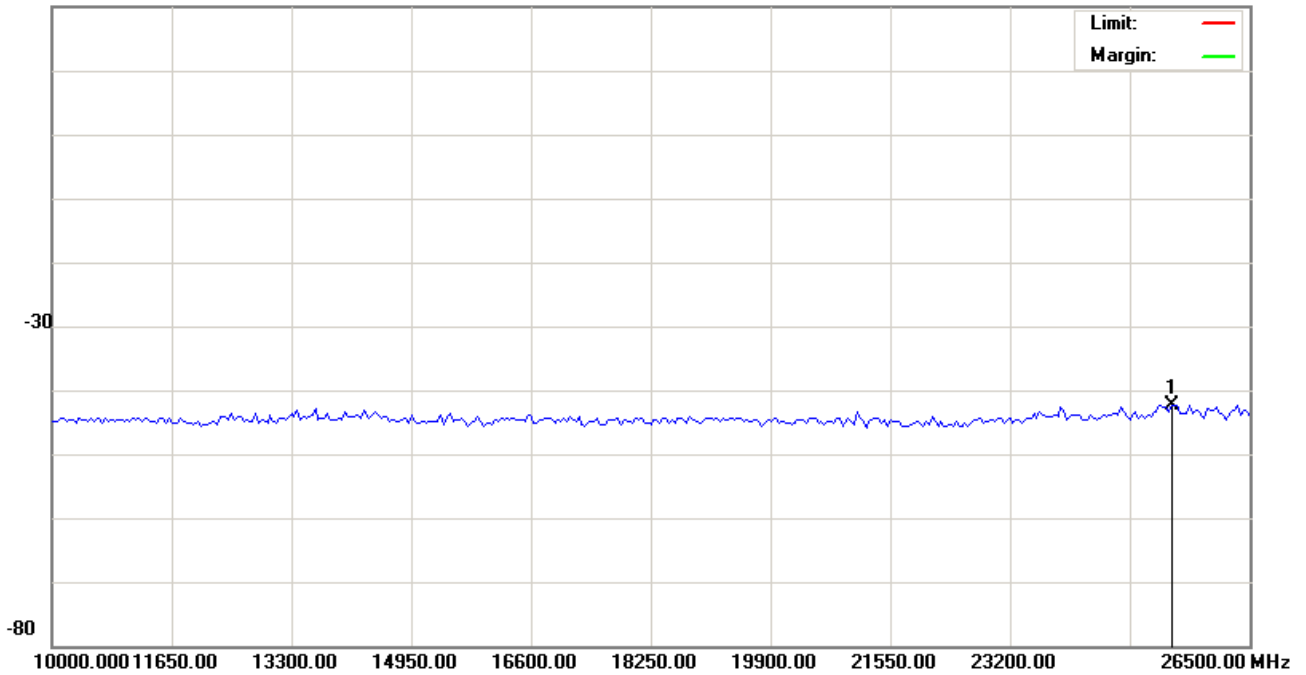
File :MD601B(20dB)(11g)

Data :#8

Date: 2008/03/05

Time:

20.0 dBm



Site

Polarization:

Temperature: 26 °C

Limit:

Power: AC 110V/60Hz

Humidity: 55 %

EUT:

Distance:

M/N: MS6030

Mode: 11g

Note: ch2437

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1	*	25427.50	-43.38	1.11	-42.27			peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

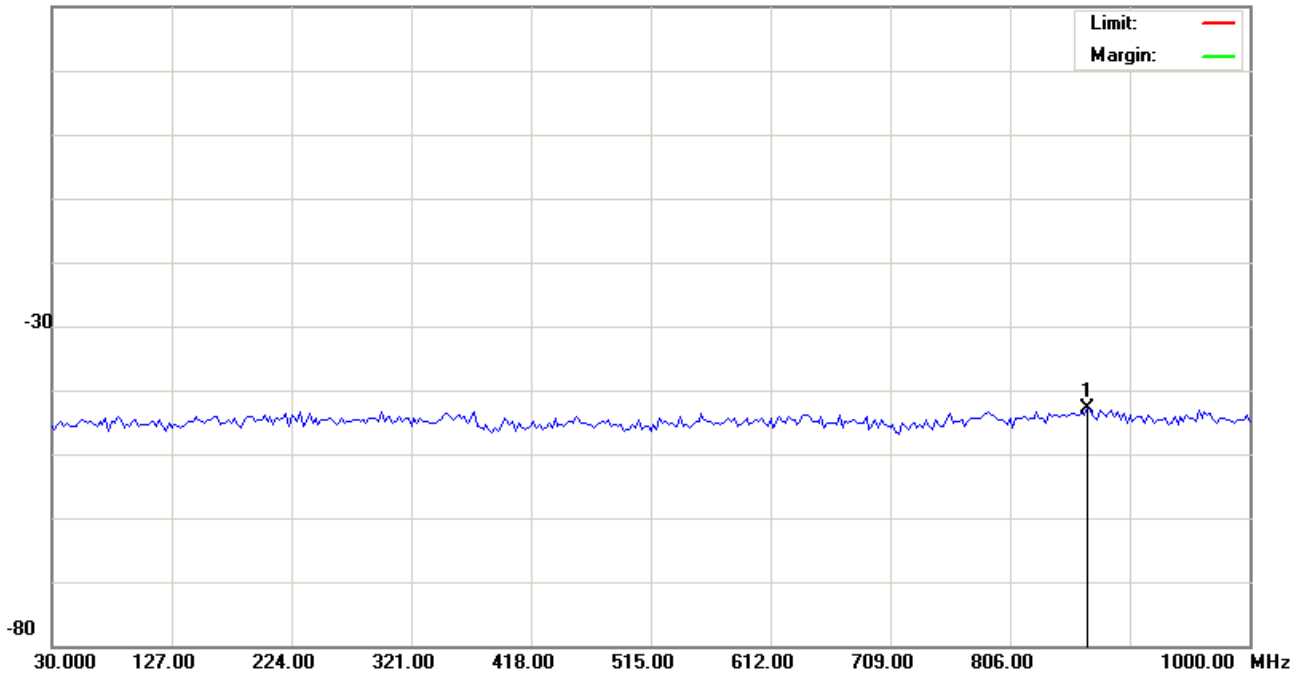
File :MD601B(20dB)(11g)

Data :#9

Date: 2008/03/05

Time:

20.0 dBm



Site

Polarization:

Temperature: 26 °C

Limit:

Power: AC 110V/60Hz

Humidity: 55 %

EUT:

Distance:

M/N: MS6030

Mode: 11g

Note: ch2462

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1	*	869.0500	-43.81	1.00	-42.81			peak		Comment

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

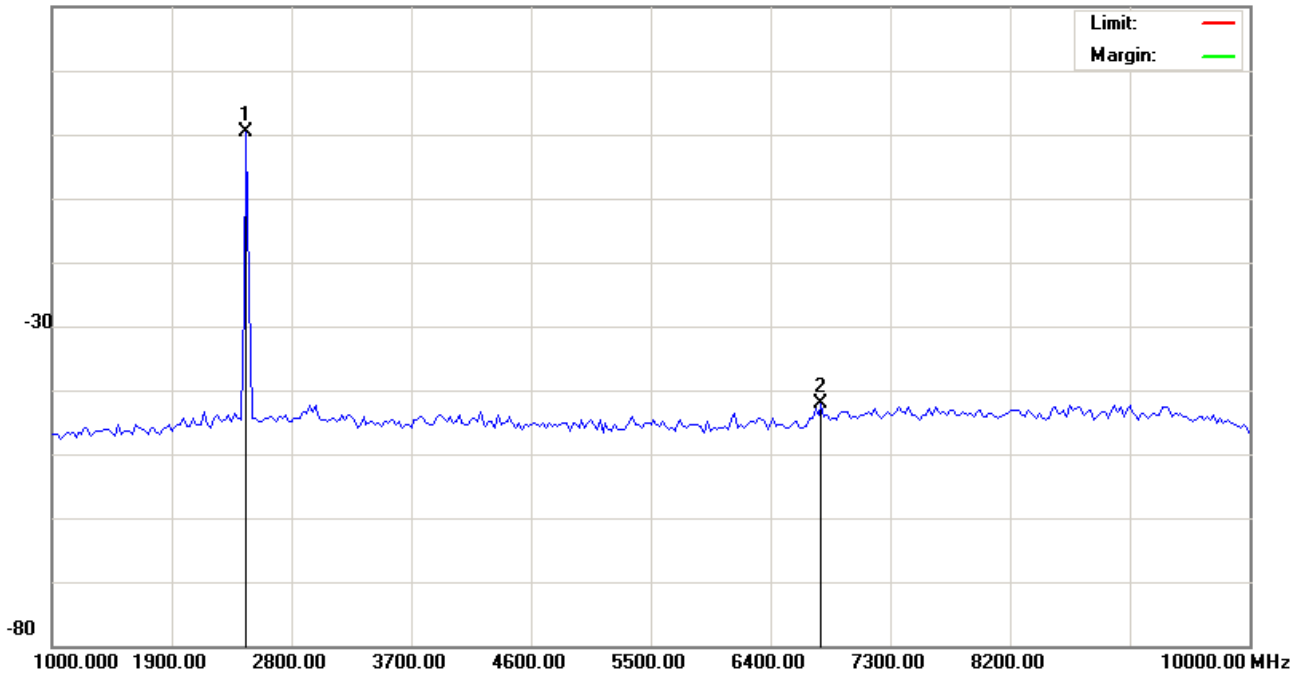
File :MD601B(20dB)(11g)

Data :#10

Date: 2008/03/05

Time:

20.0 dBm



Site: Polarization: Temperature: 26 °C
Limit: Power: AC 110V/60Hz Humidity: 55 %
EUT: Distance:
M/N: MS6030
Mode: 11g
Note: ch2462

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2462.500	-0.66	1.01	0.35					peak
2		6782.500	-43.26	1.03	-42.23					peak

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

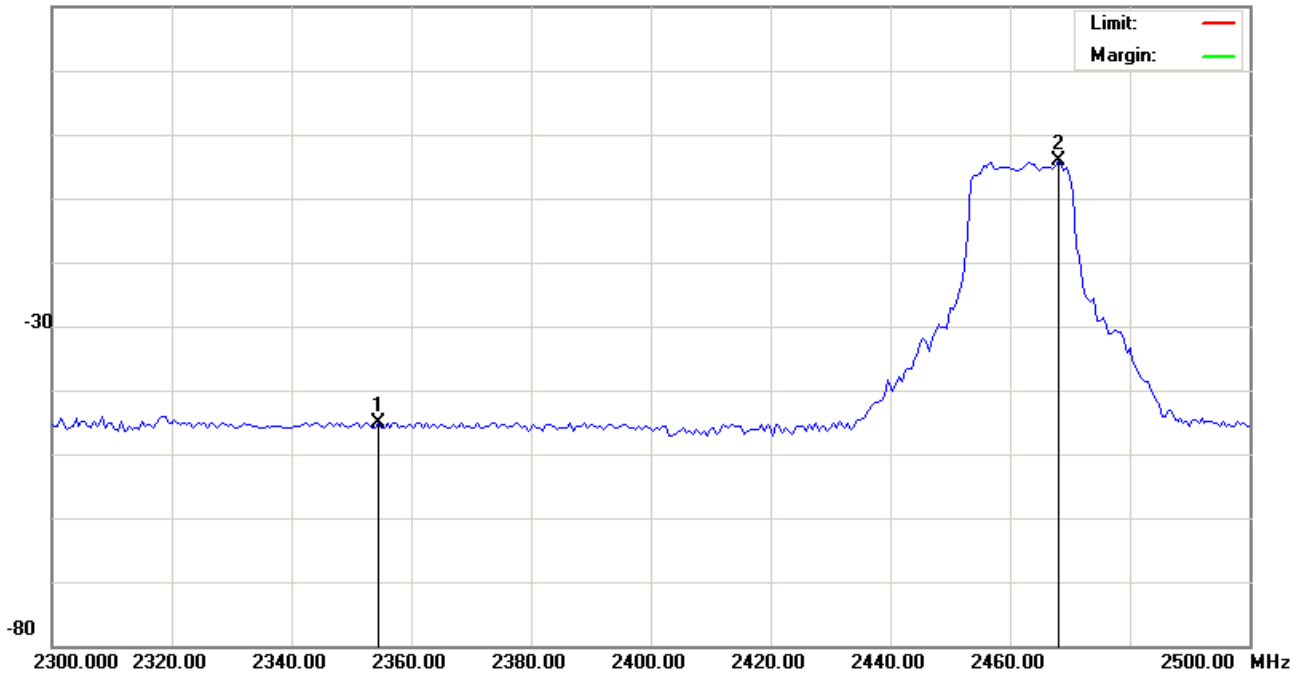
File :MD601B(20dB)(11g)

Data :#11

Date: 2008/03/05

Time:

20.0 dBm



Site

Polarization:

Temperature: 26 °C

Limit:

Power: AC 110V/60Hz

Humidity: 55 %

EUT:

Distance:

M/N: MS6030

Mode: 11g

Note: ch2462

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2354.500	-46.02	1.01	-45.01					peak
2	*	2468.000	-5.25	1.01	-4.24					peak

*:Maximum data x:Over limit !:over margin

●Reference Only



Radiated Emission Measurement

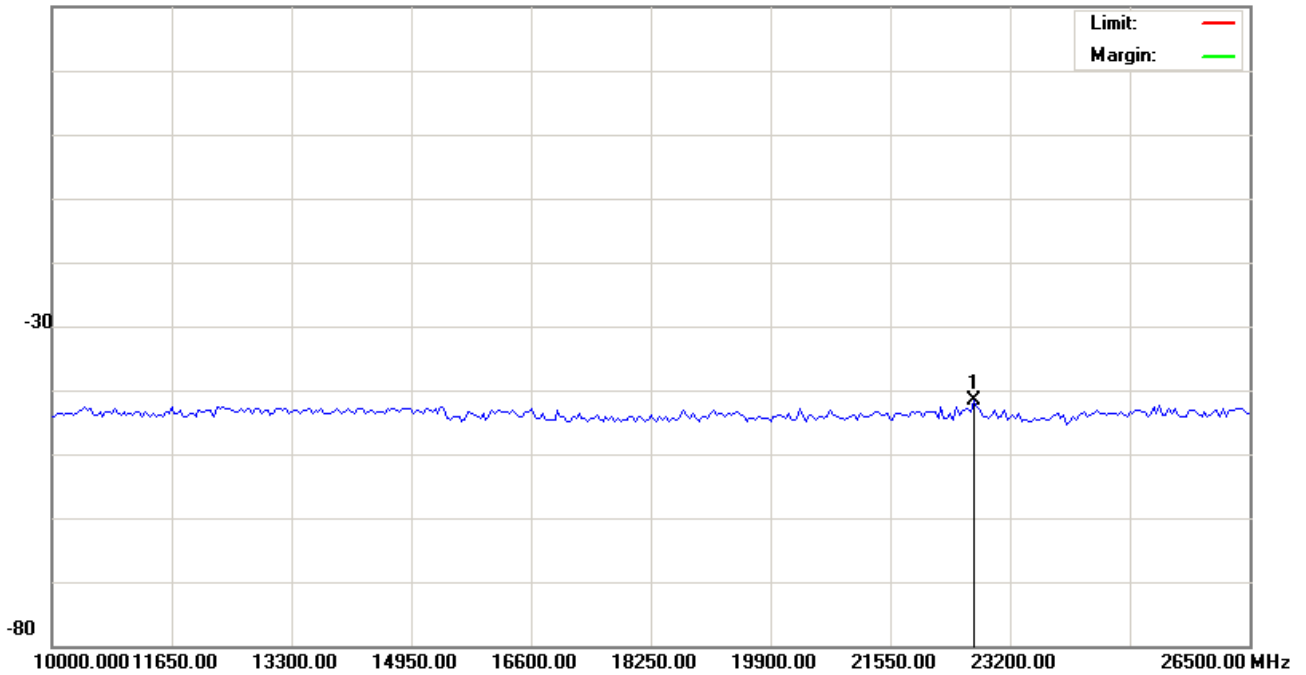
File :MD601B(20dB)(11g)

Data :#12

Date: 2008/03/05

Time:

20.0 dBm



Site	Polarization:	Temperature: 26 °C
Limit:	Power: AC 110V/60Hz	Humidity: 55 %
EUT:	Distance:	
M/N: MS6030		
Mode: 11g		
Note: ch2462		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1	*	22705.00	-42.76	1.09	-41.67			peak		

*:Maximum data x:Over limit !:over margin

●Reference Only

8. Band Edges Requirements

8.1 Test Condition & Setup:

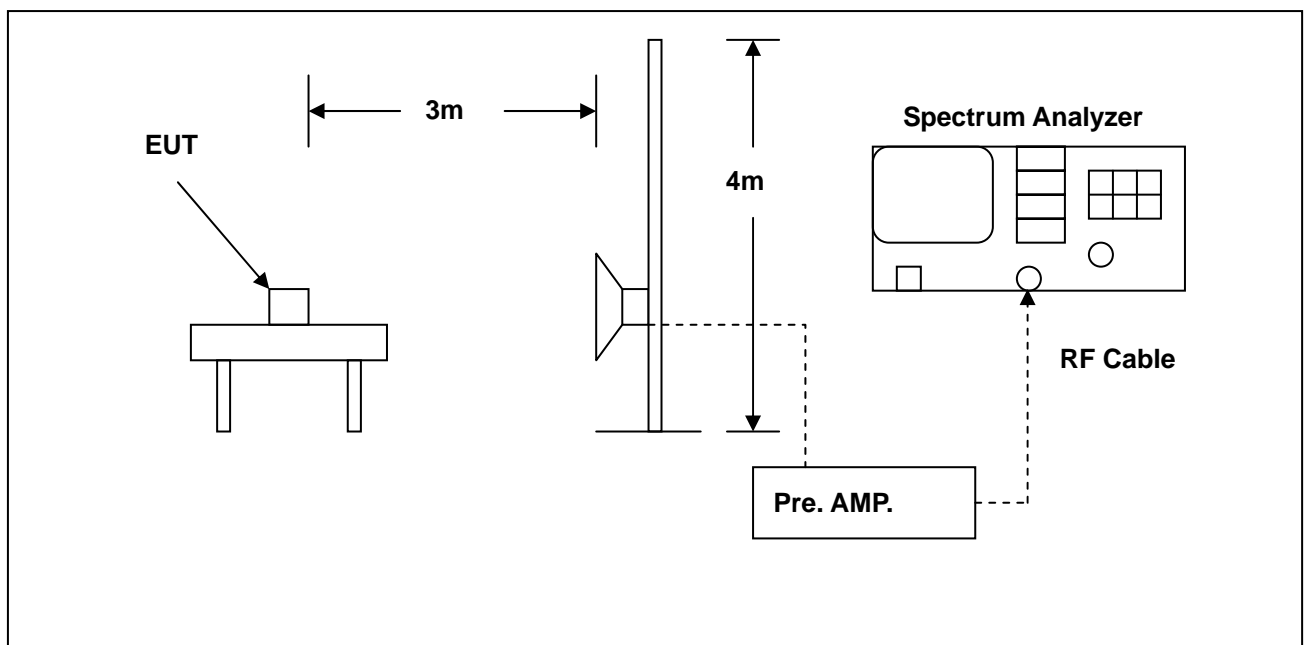
The EUT was setup to ANSI C63.4, 2003; tested to DTS test procedure of Oct 2002 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The emissions on the harmonics frequencies, the limits, and the margin of compliance are presented. These tests were made when the transmitter was in full radiated power. The additional test was performed to show compliance with the requirement at the band-edge frequency 2483.5 MHz and up to 2500 MHz and at 2390.0 MHz.

The transmitter was configured with the worst case antenna and setup to transmit at the highest channel. Then the field strength was measured at 2483.5 MHz.

The transmitter was then configured with the worst case antenna and setup to transmit at the lowest channel. Then the field strength was measured at 2390.0 MHz. These tests were performed at 4 different bit rates.

8.2 Test Instruments Configuration:





8.3 Test Equipment List:

Describe	Manufacturer	Model	Serial Number	Calibration	
				Cal. Date	Due Date
Spectrum Analyzer	Agilent	E4408B	MY45107753	May. 28, 2007	May. 28, 2008
Pre Amplifier	Agilent	8449B	3008A02237	May. 28, 2007	May. 28, 2008
Horn Antenna	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	9120D-550	Jun. 26, 2007	Jun. 26, 2008



8.4 Test Result:

8.4.1 Test Result:

Applicant : Innovation Wireless Inc.
Model No : MS6030
EUT : Wi-Fi IP Phone
Test Mode : 802.11b Low CH & High CH
Test Date : 03/08/2008

Test Graphs See next page.

Notes:

1. Margin= Amplitude - Limits
2. Height of table for EUT placed: 0.8 Meter.
3. ANT= Antenna height.
4. Duty= Duty cycle correction factor.
5. Dis= Distance extrapolation factor.
6. Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor
(Auto calculate in spectrum analyzer)
7. Actual Amp= Amplitude – Duty – Dis.



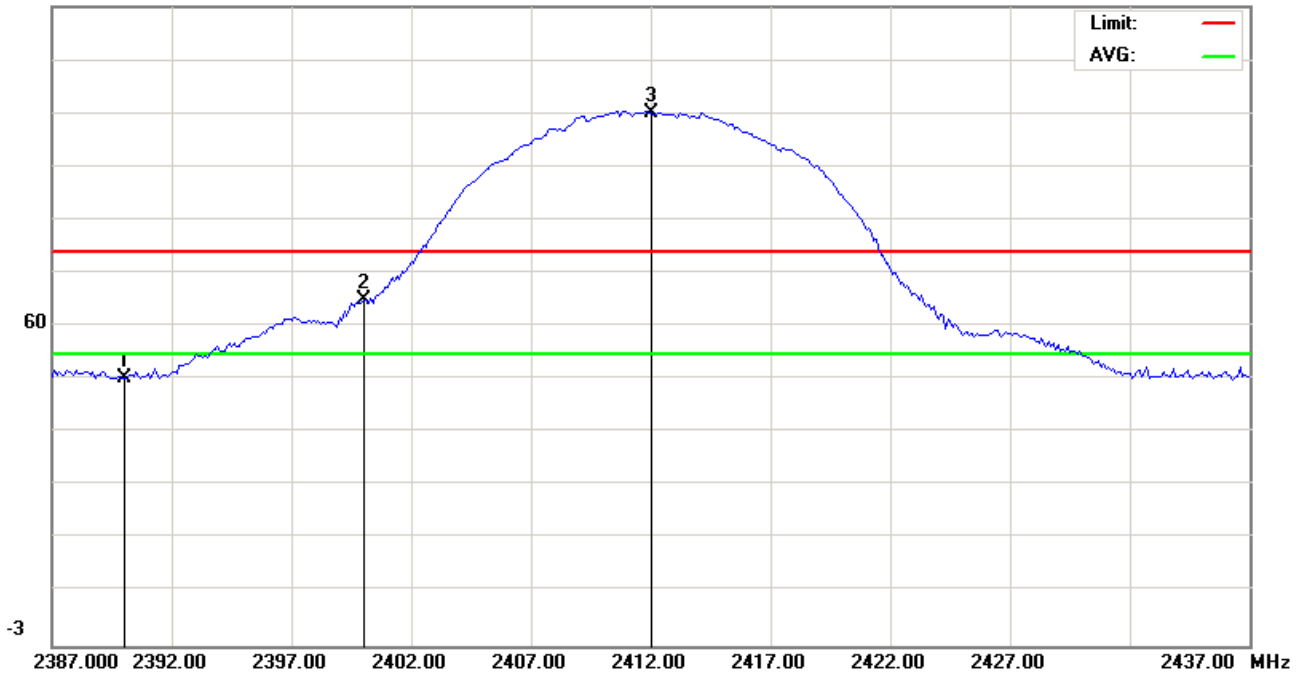
Radiated Emission Measurement

File :bandedge(11b)
122.0 dBuV/m

Data :#1

Date: 2008/3/08

Time: 上午 10:11:24



Site
Limit: FCC part 15 (PK)
EUT:
M/N: MS6030
Mode: 11b
Note: 2412MHz

Polarization: **Vertical**
Power:
Distance: 3m

Temperature: 22 °C
Humidity: 60 %

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2390.000	49.29	0.16	49.45	74.00	-24.55	peak		
2		2400.000	64.43	0.12	64.55	74.00	-9.45	peak		
3	*	2412.000	101.07	0.10	101.17	74.00	27.17	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



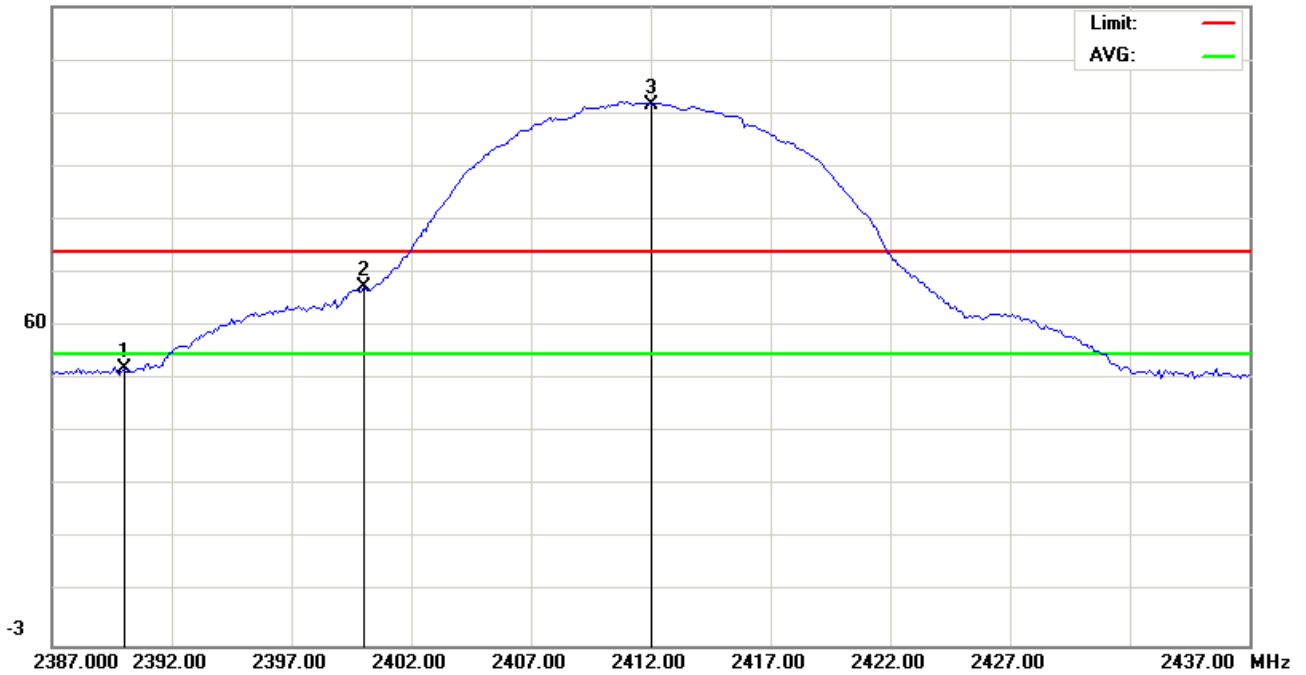
Radiated Emission Measurement

File :bandedge(11b)
122.0 dBuV/m

Data :#2

Date: 2008/3/08

Time: 上午 10:16:28



Site
Limit: FCC part 15 (PK)
EUT:
M/N: MS6030
Mode: 11b
Note: 2402MHz

Polarization: **Horizontal**
Power:
Distance: 3m

Temperature: 22 °C
Humidity: 60 %

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2390.000	51.19	0.16	51.35	74.00	-22.65	peak		
2		2400.000	66.90	0.12	67.02	74.00	-6.98	peak		
3	*	2412.000	102.78	0.10	102.88	74.00	28.88	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



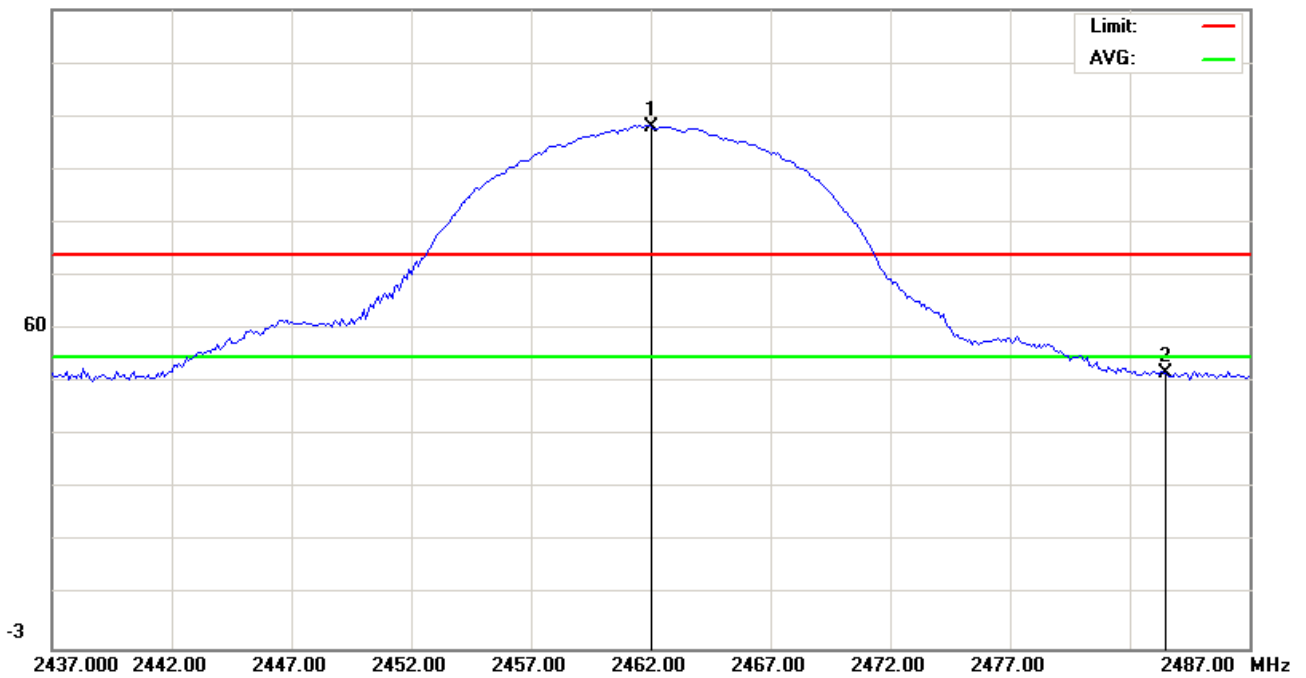
Radiated Emission Measurement

File :bandedge(11b)
122.0 dBuV

Data :#4

Date: 2008/3/08

Time: 上午 10:38:47



Site
Limit: FCC part 15 (PK)
EUT:
M/N: MS6030
Mode: 11b
Note: 2480MHz

Polarization: **Vertical**
Power:
Distance: 3m

Temperature: 22 °C
Humidity: 60 %

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2462.000	98.88	0.16	99.04	74.00	25.04	peak		
2		2483.500	50.80	0.25	51.05	74.00	-22.95	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



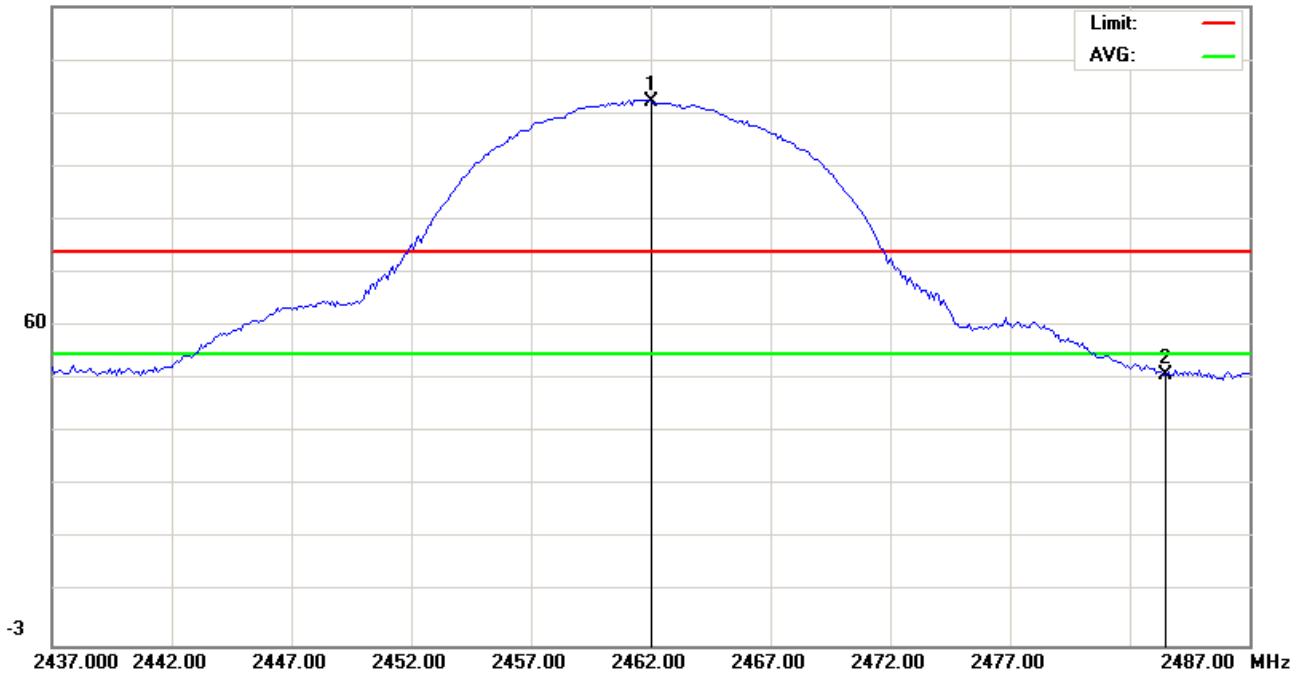
Radiated Emission Measurement

File :bandedge(11b)
122.0 dBuV

Data :#3

Date: 2008/3/08

Time: 上午 10:25:33



Site
Limit: FCC part 15 (PK)
EUT:
M/N: MS6030
Mode: 11b
Note: 2480MHz

Polarization: **Horizontal**
Power:
Distance: 3m

Temperature: 22 °C
Humidity: 60 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	cm	degree	Comment
1	*	2462.000	103.38	0.16	103.54	74.00	29.54	peak		
2		2483.500	49.81	0.25	50.06	74.00	-23.94	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



8.4.2 Test Result:

Applicant : Innovation Wireless Inc.
Model No : MS6030
EUT : Wi-Fi IP Phone
Test Mode : 802.11g Low CH & High CH
Test Date : 03/08/2008

Test Graphs See next page.

Notes:

1. Margin= Amplitude - Limits
2. Height of table for EUT placed: 0.8 Meter.
3. ANT= Antenna height.
4. Duty= Duty cycle correction factor.
5. Dis= Distance extrapolation factor.
6. Amplitude= Reading Amplitude – Amplifier gain + Cable loss + Antenna factor
(Auto calculate in spectrum analyzer)
7. Actual Amp= Amplitude – Duty – Dis.



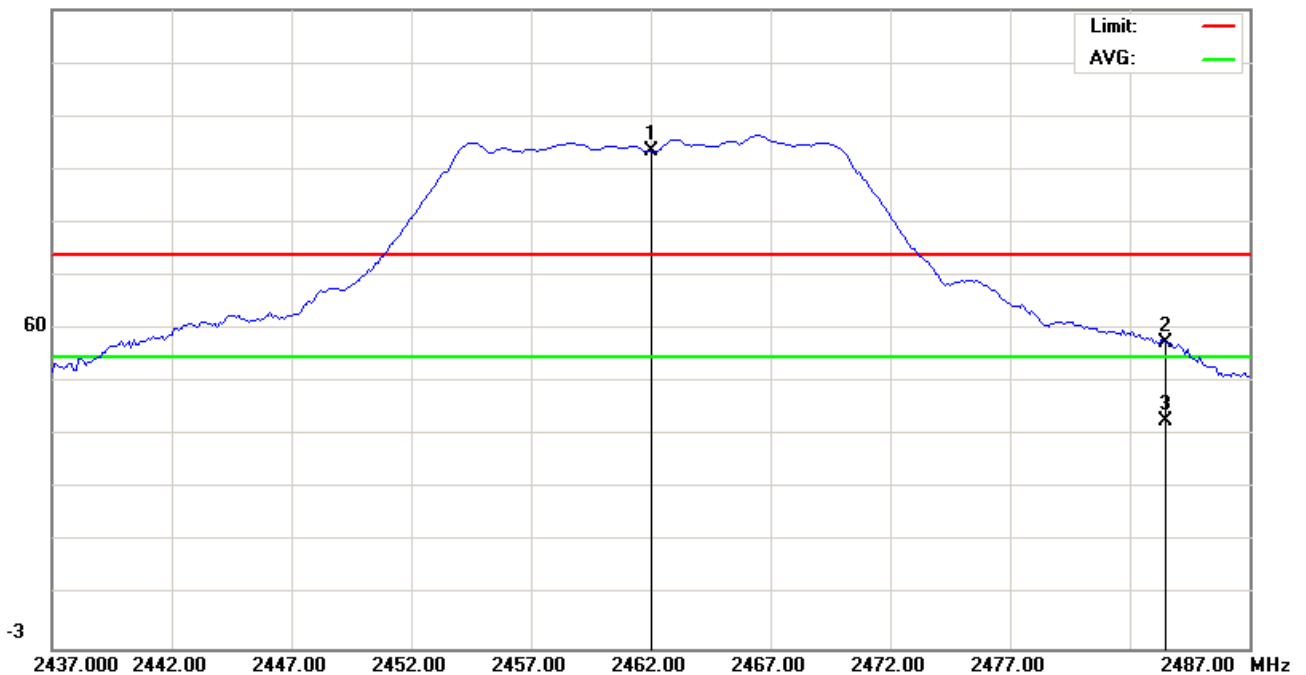
Radiated Emission Measurement

File :bandedge(11g)
122.0 dBuV

Data :#1

Date: 2008/3/08

Time: 下午 07:24:38



Site
Limit: FCC part 15 (PK)
EUT:
M/N: MS6030
Mode: 11g
Note: 2462MHz

Polarization: **Vertical**
Power:
Distance: 3m

Temperature: 22 °C
Humidity: 60 %

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2462.000	94.12	0.16	94.28	74.00	20.28	peak		
2		2483.500	56.61	0.25	56.86	74.00	-17.14	peak		
3		2483.500	41.43	0.25	41.68	54.00	-12.32	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



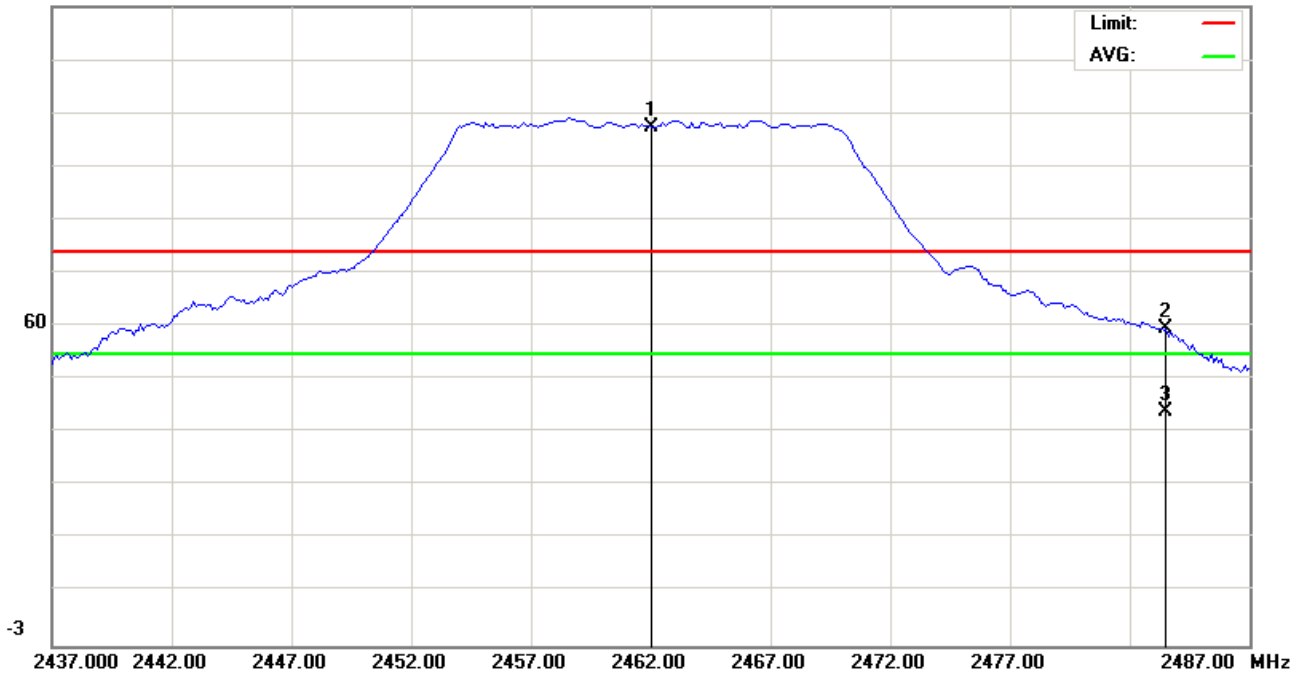
Radiated Emission Measurement

File :bandedge(11g)
122.0 dBuV

Data :#2

Date: 2008/3/08

Time: 下午 07:28:35



Site
Limit: FCC part 15 (PK)
EUT:
M/N: MS6030
Mode: 11g
Note: 2462MHz

Polarization: **Horizontal**
Power:
Distance: 3m

Temperature: 22 °C
Humidity: 60 %

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	2462.000	98.39	0.16	98.55	74.00	24.55	peak		
2		2483.500	58.66	0.25	58.91	74.00	-15.09	peak		
3		2483.500	42.50	0.25	42.75	54.00	-11.25	AVG		

*:Maximum data x:Over limit !:over margin

●Reference Only



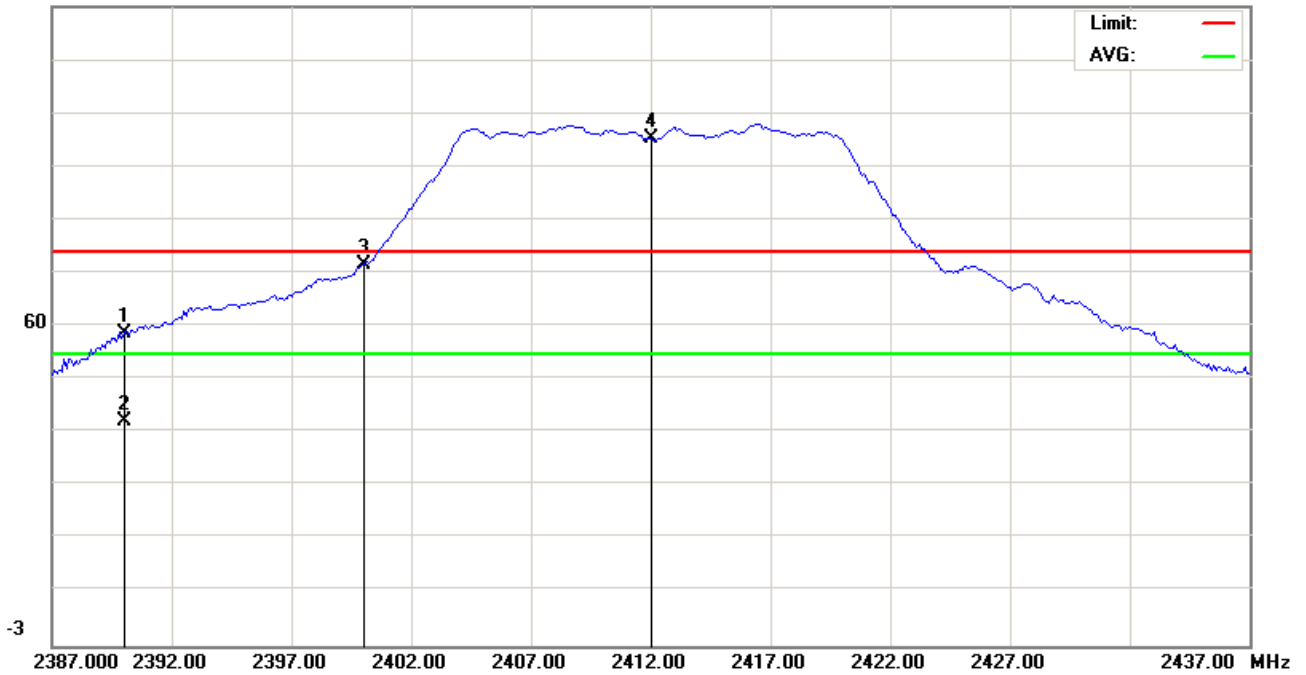
Radiated Emission Measurement

File :bandedge(11g)
122.0 dBuV

Data :#4

Date: 2008/3/08

Time: 下午 07:38:26



Site
Limit: FCC part 15 (PK)
EUT:
M/N: MS6030
Mode: 11g
Note: 2412MHz

Polarization: **Vertical**
Power:
Distance: 3m

Temperature: 22 °C
Humidity: 60 %

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2390.000	57.96	0.16	58.12	74.00	-15.88	peak		
2		2390.000	40.81	0.16	40.97	54.00	-13.03	AVG		
3		2400.000	71.28	0.12	71.40	74.00	-2.60	peak		
4	*	2412.000	96.06	0.10	96.16	74.00	22.16	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



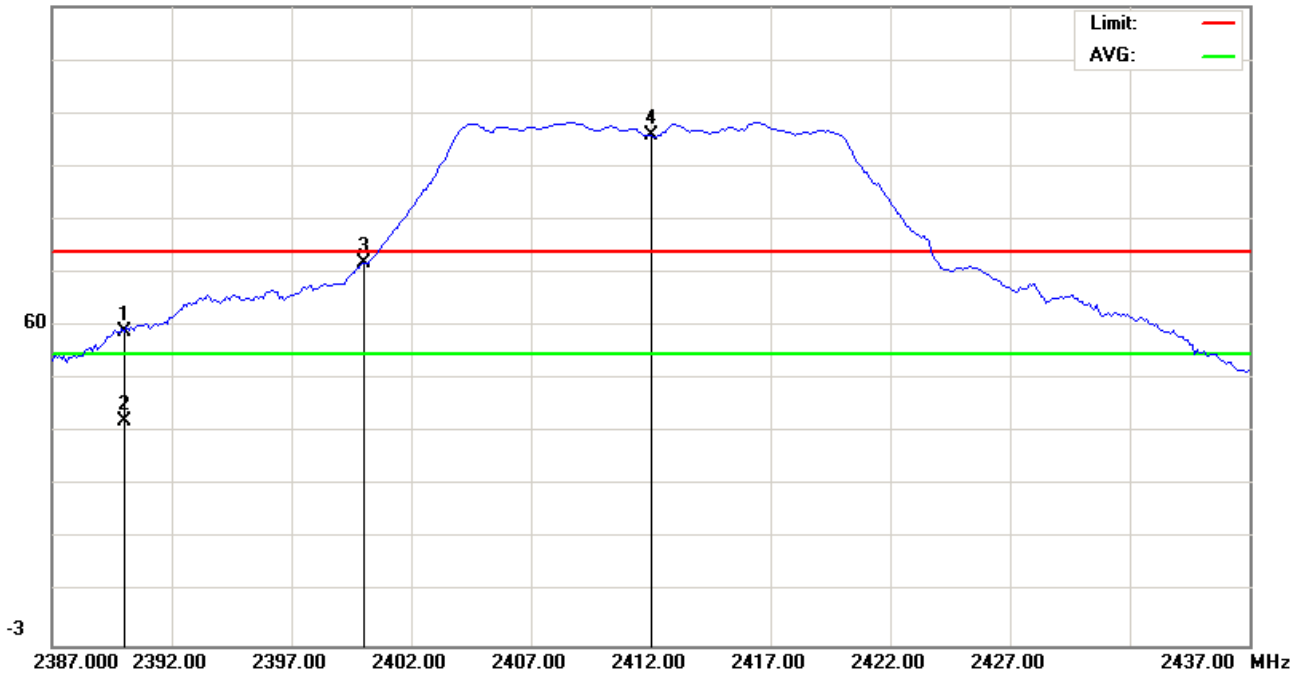
Radiated Emission Measurement

File :bandedge(11g)
122.0 dBuV

Data :#3

Date: 2008/3/08

Time: 下午 07:34:57



Site
Limit: FCC part 15 (PK)
EUT:
M/N: MS6030
Mode: 11g
Note: 2412MHz

Polarization: **Horizontal**
Power:
Distance: 3m

Temperature: 22 °C
Humidity: 60 %

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2390.000	58.14	0.16	58.30	74.00	-15.70	peak		
2		2390.000	40.80	0.16	40.96	54.00	-13.04	AVG		
3		2400.000	71.72	0.12	71.84	74.00	-2.16	peak		
4	*	2412.000	96.60	0.10	96.70	74.00	22.70	peak		

*:Maximum data x:Over limit !:over margin

●Reference Only



9. Antenna Requirements

9.1 Standard Applicable:

For intentional device, according to 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And According to 15.247 (b), if transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

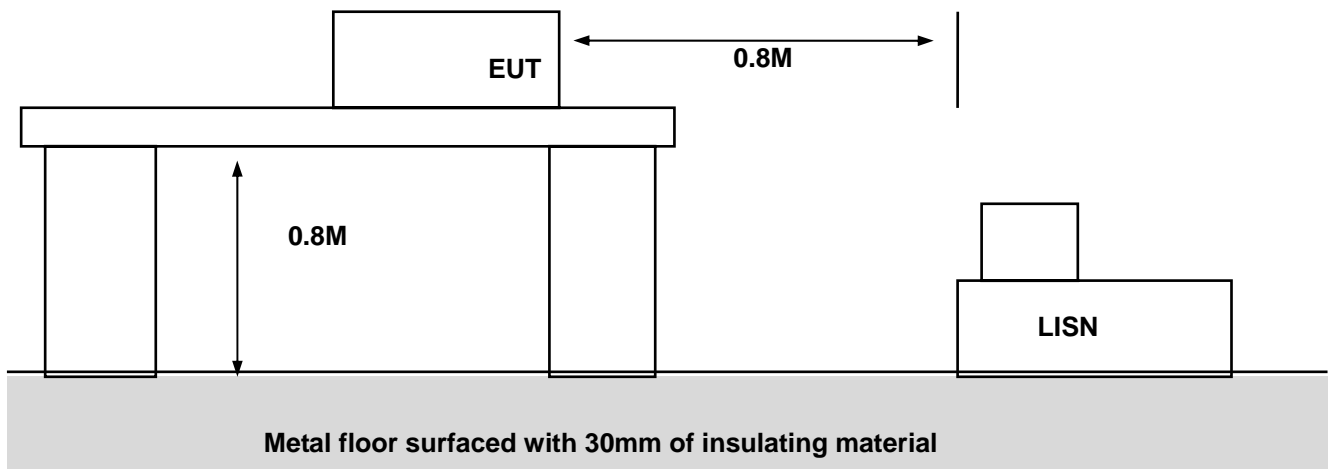
9.2 Antenna Connector Construction

The antenna used in this product is external Whip antenna. And the maximum Gain of this antenna is only **1.84** dBi.

Note: Test Graphs See next page

Appendix A - EUT Test SETUP

MEASUREMENT OF POWER LINE CONDUCTED RFI VOLTAGE



MEASUREMENT OF RADIATED EMISSION

