Test Report

Product Name ： 54Mbps Wireless Builder

Model No. ： V11

FCC ID ： UFHV11

Applicant ： SDT Information Technology

Address ： 2F, Samil B/D 5-63, Hyochang-dong, Yongsan-ku, Seoul, Korea 140-120

Date of Receipt ： 2007/09/07

Issued Date ： 2007/09/28

Report No. ： 079S027-RF-US-P05V01

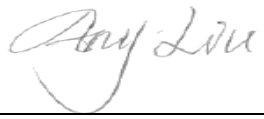
This report is copy QTK NO: 074S025, only to change Applicant、Model and Trade Name.

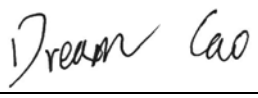
Test Report Certification

Issued Date : 2007/09/28
Report No. : 079S027-RF-US-P05V01

QuieTek

Product Name	:	54Mbps Wireless Builder
Applicant	:	SDT Information Technology
Address	:	2F, Samil B/D 5-63, Hyochang-dong, Yongsan-ku, Seoul, Korea 140-120
Manufacturer	:	Netcore Technology INC.
Model No.	:	V11
FCC ID	:	UFHV11
EUT Voltage	:	AC 100-240V, 50/60Hz
Trade Name	:	ZIO
Applicable Standard	:	FCC CFR Title 47 Part 15 Subpart C: 2007 ANSI C63.4: 2003
Test Result	:	Complied
Performed Location	:	SuZhou EMC laboratory No.99 Hongye Rd., Suzhou Industrial Park Loufeng Hi-Tech Development Zone., SuZhou, China TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098 FCC Registration number: 800392

Documented By : 
(Any Liu)

Reviewed By : 
(Dream Cao)

Approved By : 
(Gene Chang)

Laboratory Information

We , **QuieTek Corporation**, are an independent EMC and safety consultancy that was established the whole facility in our laboratories. The test facility has been accredited by the following accreditation Bodies in compliance with ISO 17025, EN 45001 and Guide 25:

Taiwan R.O.C.	**:**	**BSMI, DGT, CNLA**
Germany	**:**	**TUV Rheinland**
Norway	**:**	**Nemko, DNV**
USA	**:**	**FCC, NVLAP**
Japan	**:**	**VCCI**

The related certificate for our laboratories about the test site and management system can be downloaded from QuieTek Corporation's Web Site : http://tw.quietek.com/modules/myalbum/
The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site : http://www.quietek.com/
If you have any comments, Please don't hesitate to contact us. Our contact information is as below:

HsinChu Testing Laboratory :

No.75-2, 3rd Lin, Wangye Keng, Yonghxing Tsuen, Qionglin Shiang, Hsinchu County 307, Taiwan, R.O.C.
TEL:+886-3-592-8858 / FAX:+886-3-592-8859 E-Mail : service@quietek.com

NVLAP Lab Code : 200347-0

1313

LinKou Testing Laboratory :

No. 5-22, Ruei-Shu Valley, Ruei-Ping Tsuen, Lin-Kou Shiang, Taipei, Taiwan, R.O.C.
TEL : 886-2-8601-3788 / FAX : 886-2-8601-3789 E-Mail : service@quietek.com

NVLAP Lab Code: 200533-0

0914

Suzhou Testing Laboratory :

No.99 Hongye Rd., Suzhou Industrial Park Loufeng Hi-Tech Development Zone., SuZhou, China
TEL : +86-512-6251-5088 / FAX : 86-512-6251-5098 E-Mail : service@quietek.com

NVLAP Lab Code : 200743-0

1596

TABLE OF CONTENTS

Description Page
1. General Information 6
1.1. EUT Description 6
1.2. Mode of Operation 8
1.3. Tested System Details 9
1.4. Configuration of Tested System 10
1.5. EUT Exercise Software 11
2. Technical Test 12
2.1. Summary of Test Result 12
2.2. Test Environment 13
3. Conducted Emission 14
3.1. Test Equipment 14
3.2. Test Setup 14
3.3. Limit….. 15
3.4. Test Procedure 15
3.5. Uncertainty 15
3.6. Test Result 16
3.7. Test Photograph 28
4. Radiated Emission 30
4.1. Test Equipment 30
4.2. Test Setup 30
4.3. Limit…. 31
4.4. Test Procedure 32
4.5. Uncertainty 32
4.6. Test Result 33
4.7. Test Photograph 71
5. Conducted Spurious At Antenna Terminals 75
5.1. Test Equipment 75
5.2. Test Setup 75
5.3. Limit….. 75
5.4. Test Procedure 76
5.5. Uncertainty 76
5.6. Test Result 77
6. Peak Power Output 81
6.1. Test Equipment 81
6.2. Test Setup 81
6.3. Limit….. 81

6.4. Test Procedure 82
6.5. Uncertainty 82
6.6. Test Result 83
7. Occupied Bandwidth 87
7.1. Test Equipment 87
7.2. Test Setup 87
7.3. Limit….. 87
7.4. Test Procedure 88
7.5. Uncertainty 88
7.6. Test Result 89
8. Band Edge 93
8.1. Test Equipment 93
8.2. Test Setup 93
8.3. Limit….. 94
8.4. Test Procedure 94
8.5. Uncertainty 95
8.6. Test Result 96
9. Peak Power Spectral Density 104
9.1. Test Equipment 104
9.2. Test Setup 104
9.3. Limit….. 104
9.4. Test Procedure 105
9.5. Uncertainty 105
9.6. Test Result 106

1. General Information

1.1. EUT Description

Product Name	54Mbps Wireless Builder
Trade Name	ZIO
Model No.	V11
FCC ID	UFHV11
Working Voltage	AC 100-240V, 50/60Hz
Frequency Range	802.11b/g: 2412-2462MHz
Channel Number	11
Type of Modulation	802.11b: DSSS 802.11g: OFDM
Channel Control	Auto
Antenna type	Dipole
Antenna Gain	2dBi

Component	
AC Adapter	Manufacturer: POWER SUPPLY M/N: TP090700A Input: 100-240V~, 0.2A 50/60Hz Output: 9VDC, 0.7A Cable Out: Non-Shielded, 1.2m

Antenna List

No.	Manufacturer	Model No.	Part No.	Peak Gain
1	ShenZhen HuaDeChang Technology Co.Ltd	N/A	H1-102411-055	2dBi

Frequency of Each Channel:

802.11b/g Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
01	2412 MHz	02	2417 MHz	03	2422 MHz	04	2427 MHz
05	2432 MHz	06	2437 MHz	07	2442 MHz	08	2447 MHz
09	2452 MHz	10	2457 MHz	11	2462 MHz	--	--

1.2. Mode of Operation

QuieTek has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Pre-Test Mode	
Mode 1: Transmit by 802.11b	
Mode 2: Transmit by 802.11g	
Final Test Mode	
Emission	Mode 1: Transmit by 802.11b
	Mode 2: Transmit by 802.11g

Note:

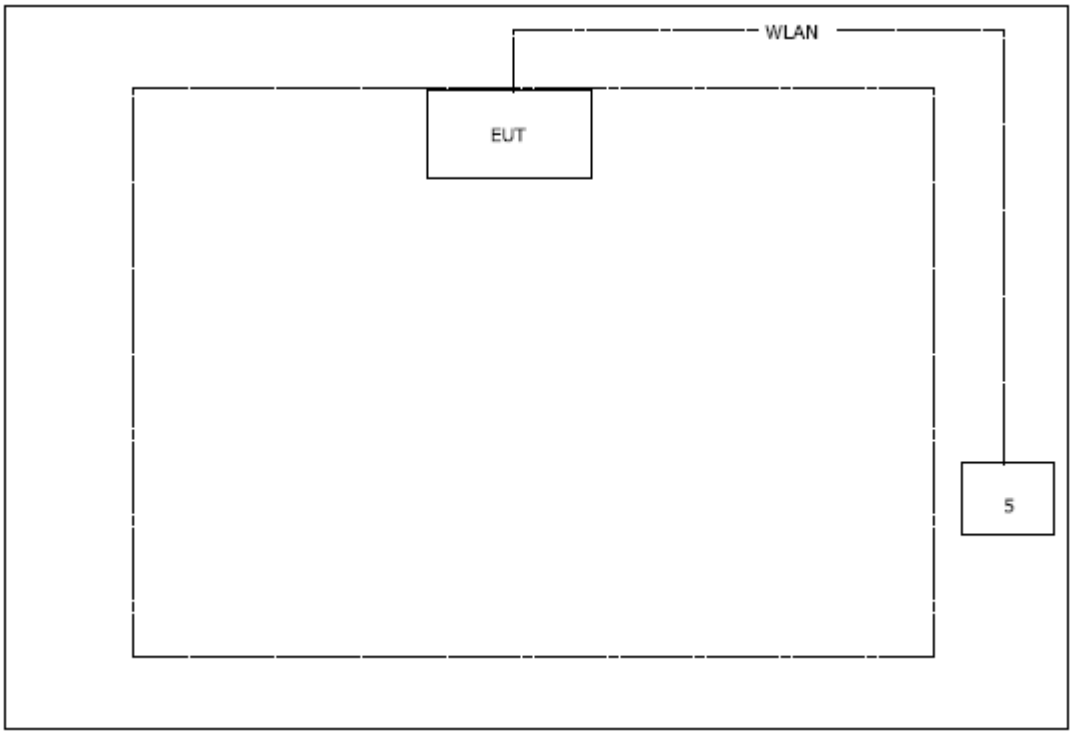
1. Regards to the frequency band operation: the lowest、middle and highest frequency of channel were selected to perform the test, then shown on this report.
2. This device is a composite device in accordance with Part 15 Subpart B regulations. The function for the receiver was measured and made a test report that the report number is 079S027-RF-US-P01V02-W, certified under Declaration of Conformity.

1.3. Tested System Details

The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook	DELL	PPP19L	JH097A01	Power by adapter

1.4. Configuration of Tested System

Connection Diagram


Signal Cable Type		Signal cable Description
A	LAN Cable	Non-Shielded, >10m

1.5. EUT Exercise Software

1	Setup the EUT and simulators as shown on above.
2	Execute the test software on the EUT.
3	Setup the test channel and the test mode press ok to start transmitting.

2. Technical Test

2.1. Summary of Test Result

☒ No deviations from the test standards

☐ Deviations from the test standards as below description:

Emission			
Performed Test Item	Normative References	Test Performed	Deviation
Conducted Emission	FCC CFR Title 47 Part 15 Subpart C: 2007 Section 15.207	Yes	No
Radiated Emission	FCC CFR Title 47 Part 15 Subpart C: 2007 Section 15.209	Yes	No
Peak Output Power	FCC CFR Title 47 Part 15 Subpart C: 2007 Section 15.247(b)(3)	Yes	No
Occupied Bandwidth	FCC CFR Title 47 Part 15 Subpart C: 2007 Section 15.247(a)(2)	Yes	No
Band Edge	FCC CFR Title 47 Part 15 Subpart C: 2007 Section 15.247(d)	Yes	No
Peak Power Spectral Density	FCC CFR Title 47 Part 15 Subpart C: 2007 Section 15.247(e)	Yes	No

2.2. Test Environment

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	21
Humidity (%RH)	25-75	50
Barometric pressure (mbar)	860-1060	950-1000

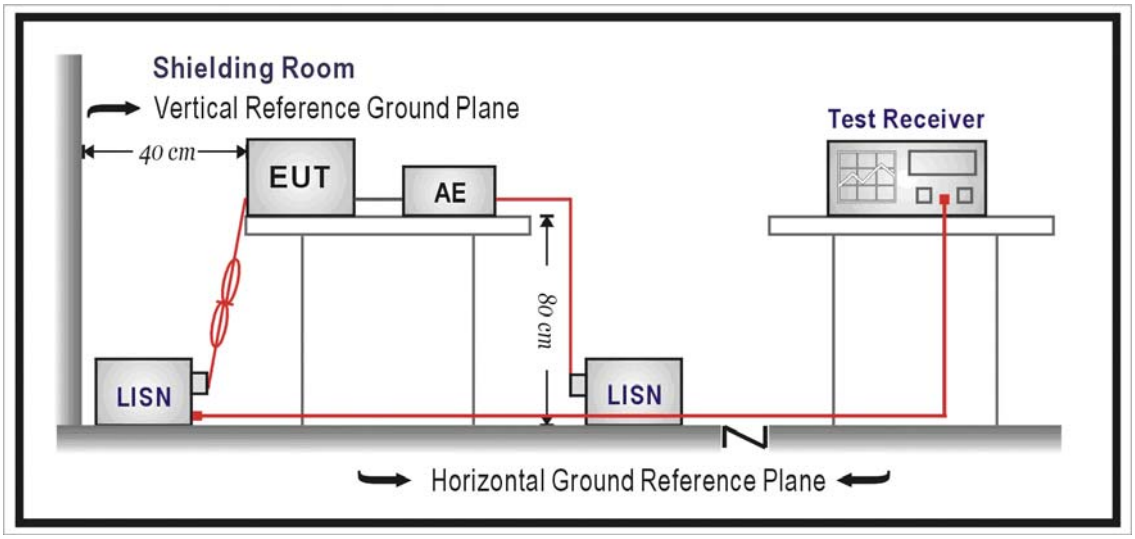
3. Conducted Emission

3.1. Test Equipment

Conducted Emission / SR-1

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
EMI Test Receiver	R&S	ESCI	100176	2006/11/22
Two-Line V-Network	R&S	ENV216	100013	2006/11/20
Two-Line V-Network	R&S	ENV216	100014	2006/11/20
50ohm Coaxial Switch	ANRITSU	MP59B	6200464462	2006/11/25
50ohm Termination	SHX	50ohmI	QT-IM001	2007/03/20
Coaxial Cable	Luthi	RG214	519358	2006/11/25
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH004	2007/03/31

3.2. Test Setup



3.3. Limit

FCC Part 15 Subpart C Paragraph 15.207 Limits (dBuV)		
Frequency (MHz)	QP (dBuV)	AV (dBuV)
0.15 - 0.50	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Remarks: In the above table, the tighter limit applies at the band edges.

3.4. Test Procedure

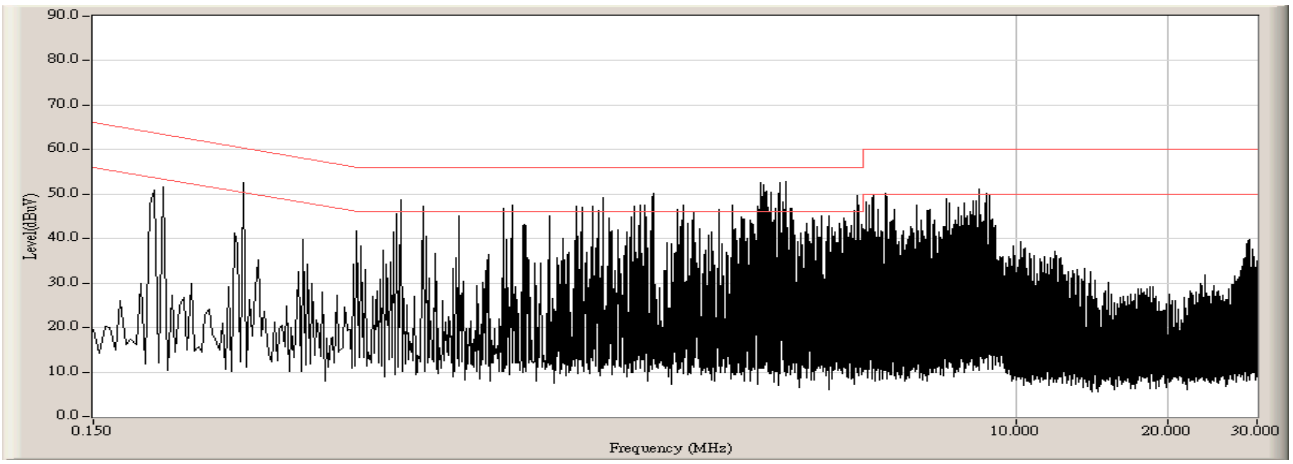
The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination.
(Please refers to the block diagram of the test setup and photographs.)
Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed on conducted measurement.
Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

3.5. Uncertainty

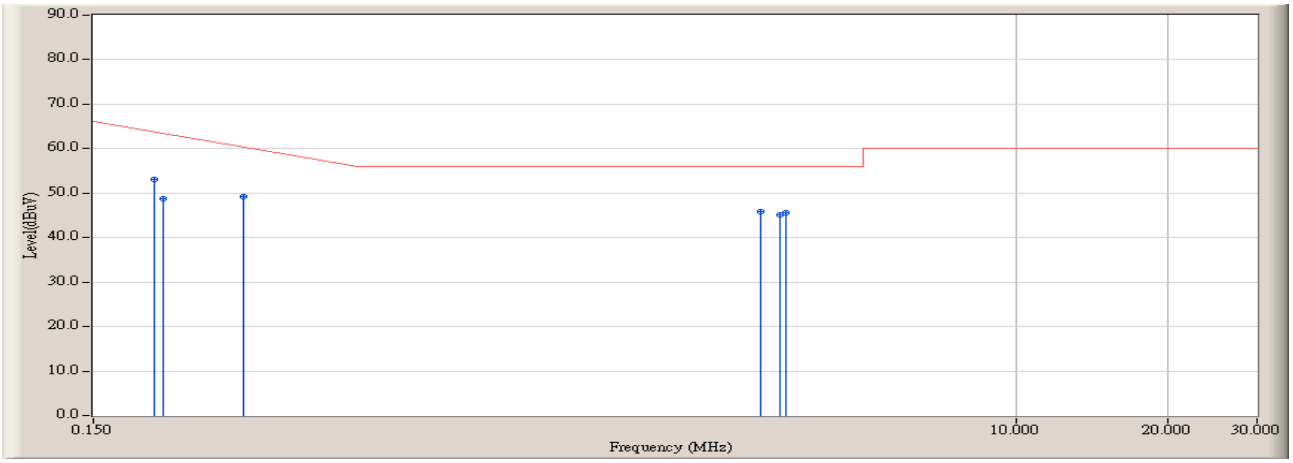
The measurement uncertainty is defined as ± 2.02 dB

3.6. Test Result

Engineer : Johnwang	
Site : SR-1 (Conducted Emission)	**Time : 2007/06/22 - 09:40**
Limit : FCC_Part15_C_00M_QP	**Margin : 10**
EUT : 54Mbps Wireless Builder	**Probe : ENV216 - Line1**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b(2437MHz)**



Engineer : Johnwang	
Site : SR-1 (Conducted Emission)	**Time : 2007/06/22 - 09:40**
Limit : FCC_Part15_C_00M_QP	**Margin : 0**
EUT : 54Mbps Wireless Builder	**Probe : ENV216 - Line1**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b(2437MHz)**

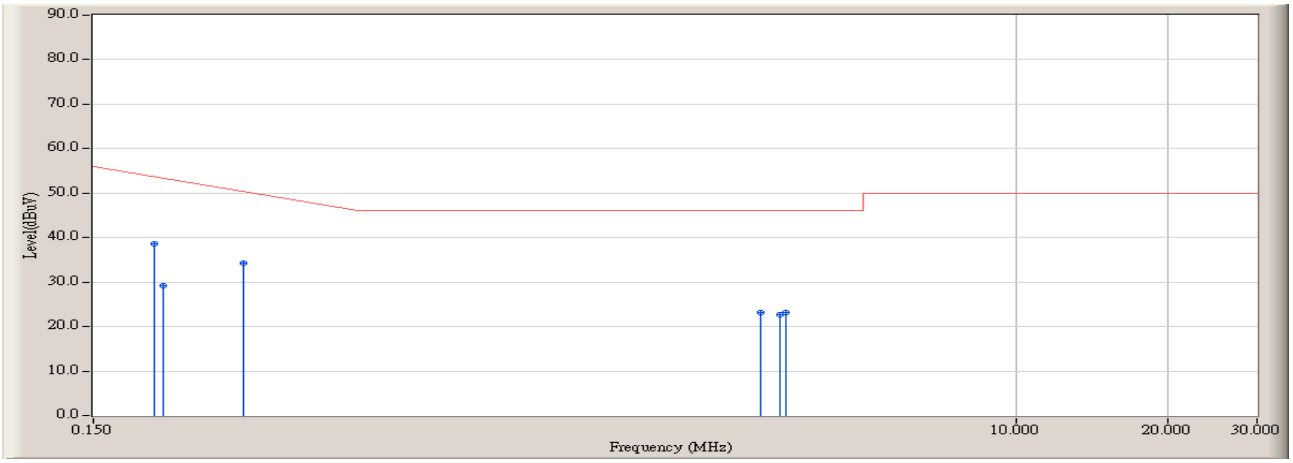


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.198	9.457	43.600	53.057	-11.572	64.629	QUASIPEAK
2		0.206	9.398	39.400	48.798	-15.602	64.400	QUASIPEAK
3		0.298	9.399	39.800	49.199	-12.572	61.771	QUASIPEAK
4	*	3.126	9.820	36.100	45.920	-10.080	56.000	QUASIPEAK
5		3.414	9.820	35.400	45.220	-10.780	56.000	QUASIPEAK
6		3.506	9.814	35.800	45.614	-10.386	56.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : SR-1 (Conducted Emission)	**Time : 2007/06/22 - 09:40**
Limit : FCC_Part15_C_00M_AV	**Margin : 0**
EUT : 54Mbps Wireless Builder	**Probe : ENV216 - Line1**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b(2437MHz)**

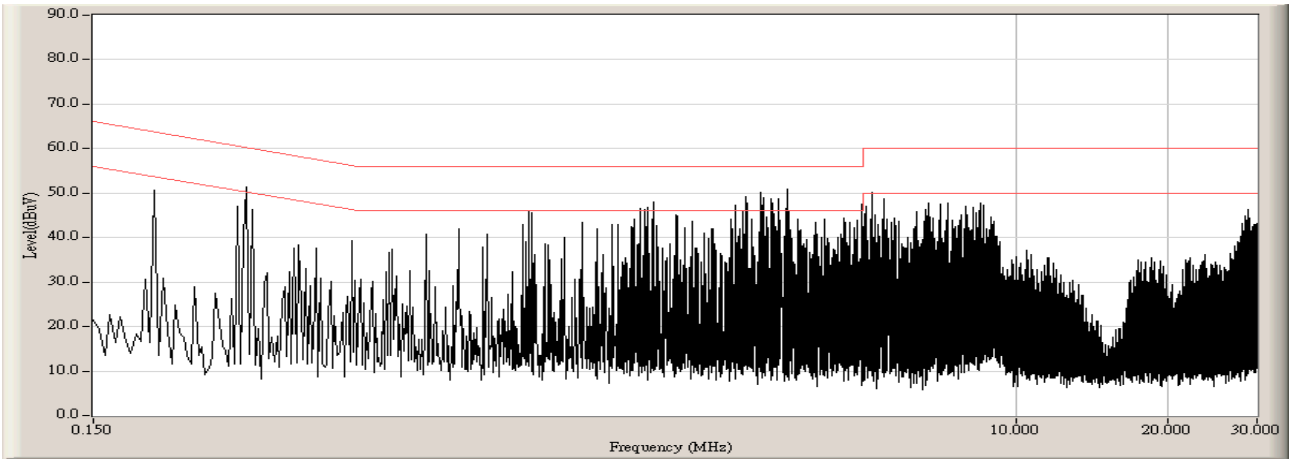


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.198	9.457	29.100	38.557	-16.072	54.629	AVERAGE
2		0.206	9.398	19.700	29.098	-25.302	54.400	AVERAGE
3		0.298	9.399	24.800	34.199	-17.572	51.771	AVERAGE
4		3.126	9.820	13.300	23.120	-22.880	46.000	AVERAGE
5		3.414	9.820	12.800	22.620	-23.380	46.000	AVERAGE
6		3.506	9.814	13.300	23.114	-22.886	46.000	AVERAGE

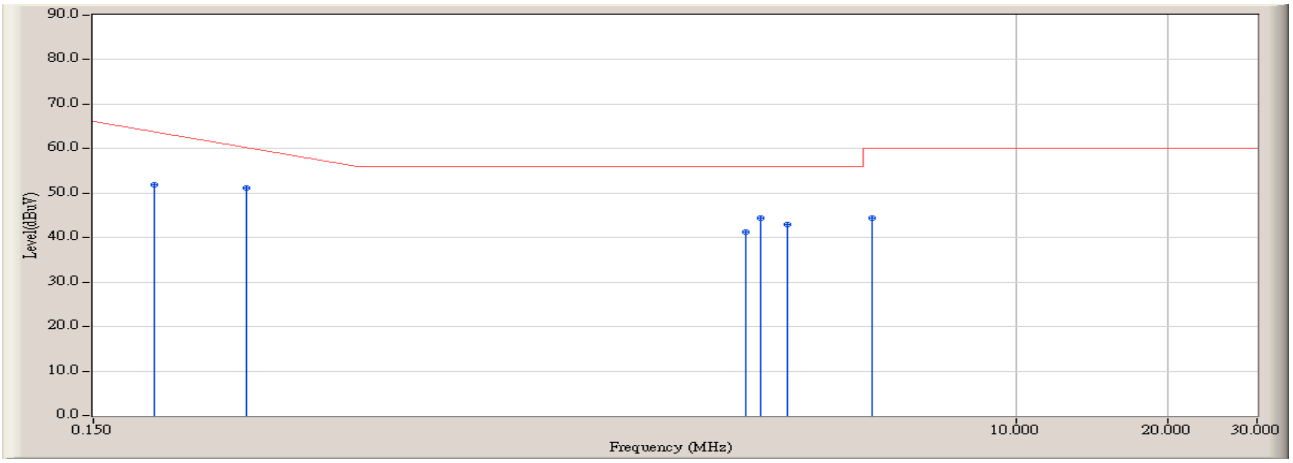
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : SR-1 (Conducted Emission)	**Time : 2007/06/22 - 09:57**
Limit : FCC_Part15_C_00M_QP	**Margin : 10**
EUT : 54Mbps Wireless Builder	**Probe : ENV216 - Line2**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b(2437MHz)**



Engineer : Johnwang	
Site : SR-1 (Conducted Emission)	**Time : 2007/06/22 - 09:57**
Limit : FCC_Part15_C_00M_QP	**Margin : 0**
EUT : 54Mbps Wireless Builder	**Probe : ENV216 - Line2**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b(2437MHz)**

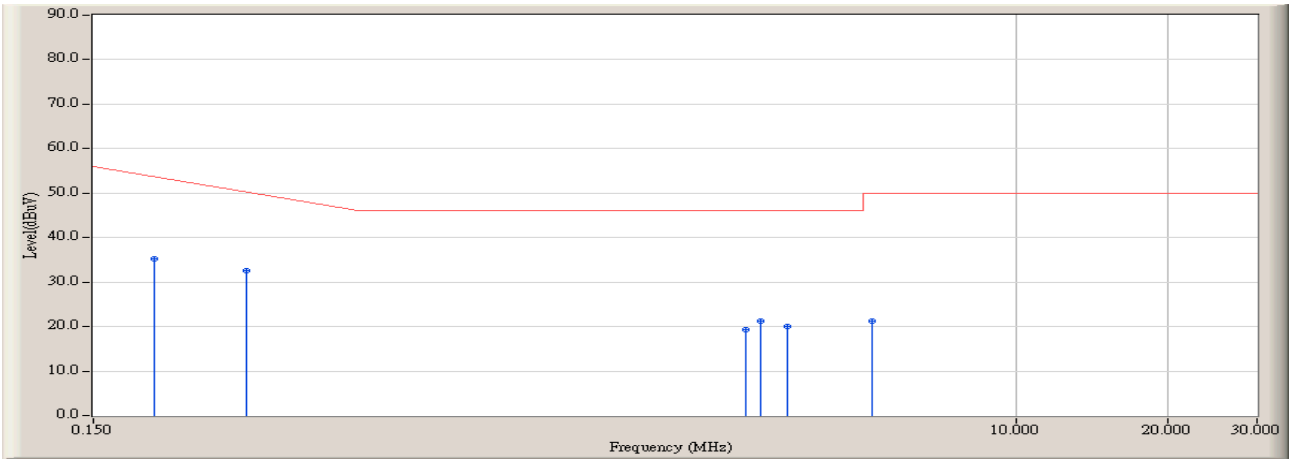


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.198	9.461	42.300	51.761	-12.868	64.629	QUASIPEAK
2	*	0.302	9.523	41.700	51.223	-10.434	61.657	QUASIPEAK
3		2.918	9.770	31.600	41.370	-14.630	56.000	QUASIPEAK
4		3.138	9.760	34.700	44.460	-11.540	56.000	QUASIPEAK
5		3.546	9.750	33.100	42.850	-13.150	56.000	QUASIPEAK
6		5.210	9.710	34.700	44.410	-15.590	60.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : SR-1 (Conducted Emission)	**Time : 2007/06/22 - 09:57**
Limit : FCC_Part15_C_00M_AV	**Margin : 0**
EUT : 54Mbps Wireless Builder	**Probe : ENV216 - Line2**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b(2437MHz)**

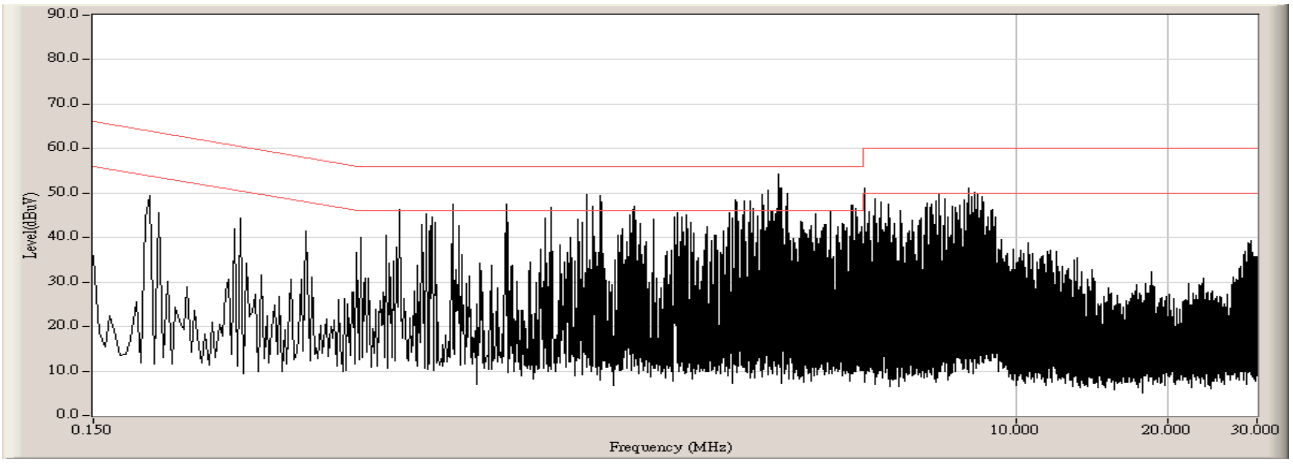


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.198	9.461	25.700	35.161	-19.468	54.629	AVERAGE
2	*	0.302	9.523	23.000	32.523	-19.134	51.657	AVERAGE
3		2.918	9.770	9.500	19.270	-26.730	46.000	AVERAGE
4		3.138	9.760	11.400	21.160	-24.840	46.000	AVERAGE
5		3.546	9.750	10.300	20.050	-25.950	46.000	AVERAGE
6		5.210	9.710	11.500	21.210	-28.790	50.000	AVERAGE

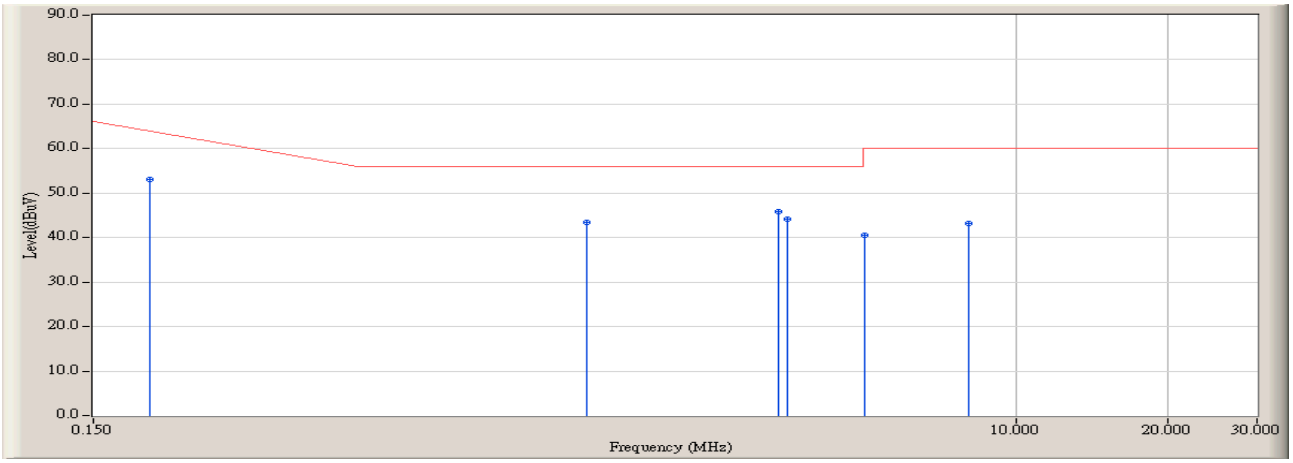
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : SR-1 (Conducted Emission)	**Time : 2007/06/22 - 10:03**
Limit : FCC_Part15_C_00M_QP	**Margin : 10**
EUT : 54Mbps Wireless Builder	**Probe : ENV216 - Line1**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g(2437MHz)**



Engineer : Johnwang	
Site : SR-1 (Conducted Emission)	**Time : 2007/06/22 - 10:03**
Limit : FCC_Part15_C_00M_QP	**Margin : 0**
EUT : 54Mbps Wireless Builder	**Probe : ENV216 - Line1**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g(2437MHz)**

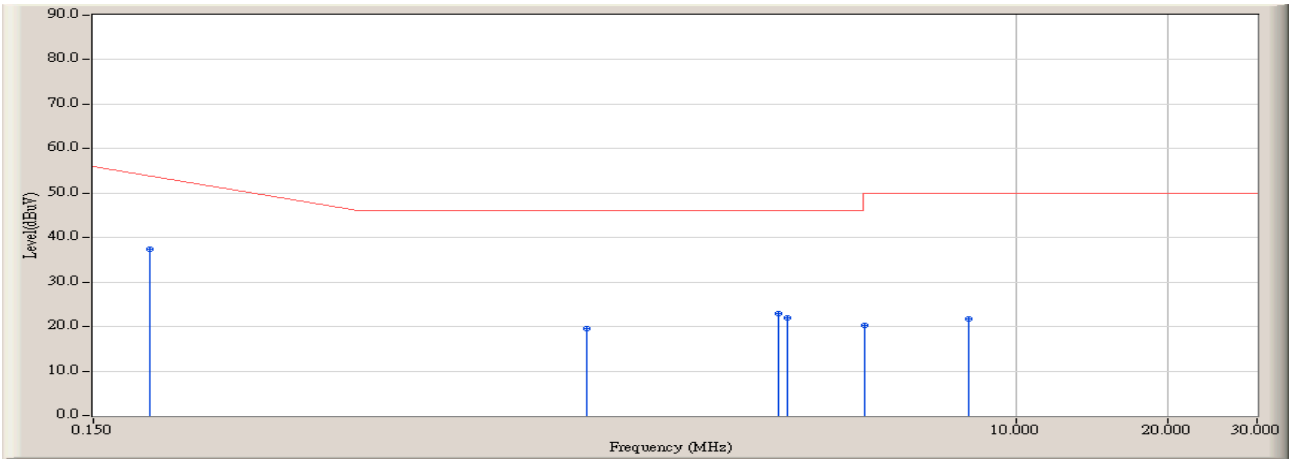


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.194	9.486	43.500	52.986	-11.757	64.743	QUASIPEAK
2		1.414	9.708	33.700	43.408	-12.592	56.000	QUASIPEAK
3	*	3.406	9.820	36.100	45.920	-10.080	56.000	QUASIPEAK
4		3.538	9.810	34.400	44.210	-11.790	56.000	QUASIPEAK
5		5.034	9.790	30.800	40.590	-19.410	60.000	QUASIPEAK
6		8.086	9.880	33.300	43.180	-16.820	60.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : SR-1 (Conducted Emission)	**Time : 2007/06/22 - 10:03**
Limit : FCC_Part15_C_00M_AV	**Margin : 0**
EUT : 54Mbps Wireless Builder	**Probe : ENV216 - Line1**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g(2437MHz)**

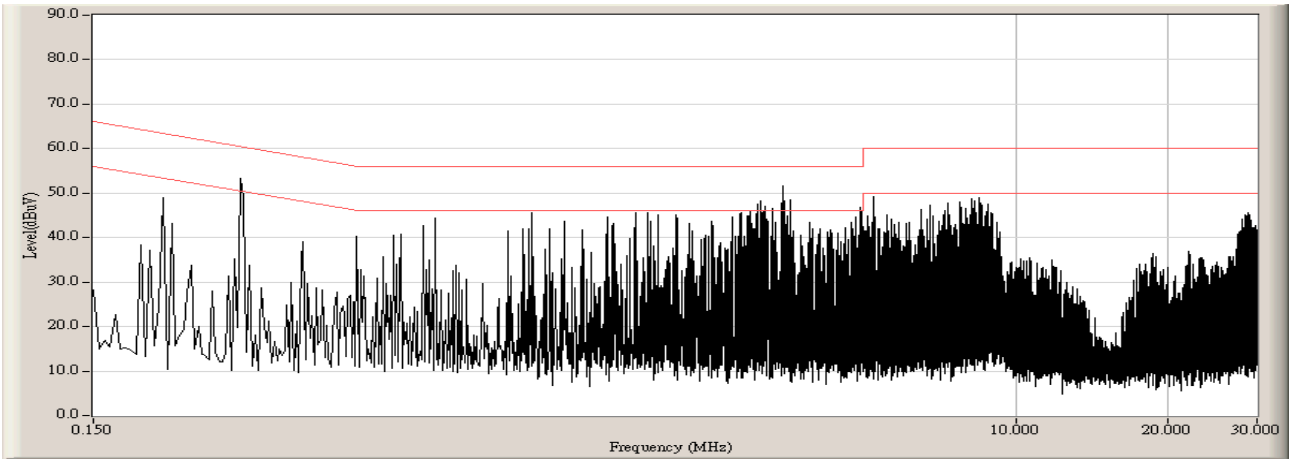


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.194	9.486	27.800	37.286	-17.457	54.743	AVERAGE
2		1.414	9.708	9.900	19.608	-26.392	46.000	AVERAGE
3		3.406	9.820	13.100	22.920	-23.080	46.000	AVERAGE
4		3.538	9.810	12.100	21.910	-24.090	46.000	AVERAGE
5		5.034	9.790	10.400	20.190	-29.810	50.000	AVERAGE
6		8.086	9.880	11.900	21.780	-28.220	50.000	AVERAGE

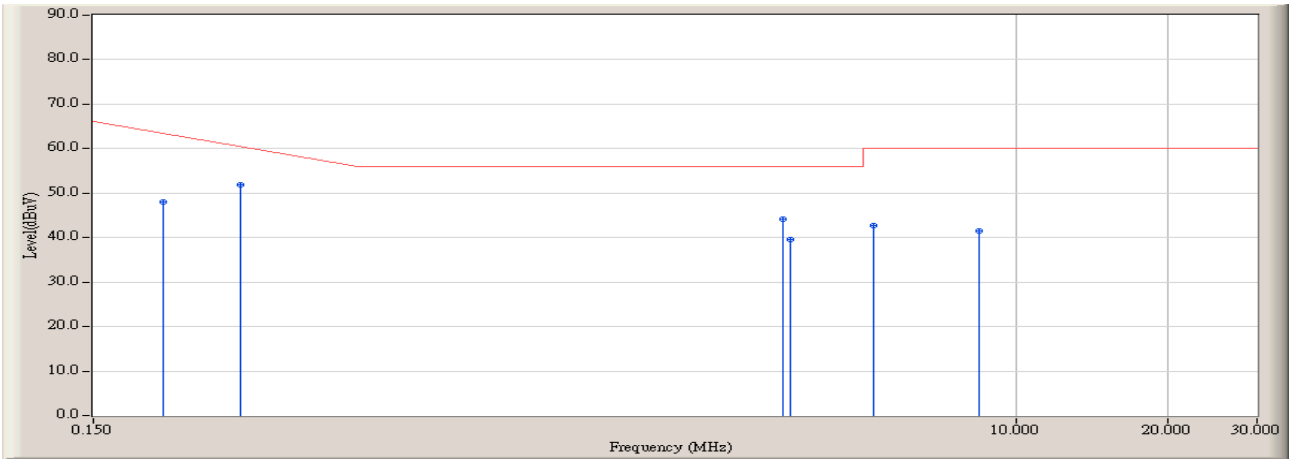
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : SR-1 (Conducted Emission)	**Time : 2007/06/22 - 10:09**
Limit : FCC_Part15_C_00M_QP	**Margin : 10**
EUT : 54Mbps Wireless Builder	**Probe : ENV216 - Line2**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g(2437MHz)**



Engineer : Johnwang	
Site : SR-1 (Conducted Emission)	**Time : 2007/06/22 - 10:09**
Limit : FCC_Part15_C_00M_QP	**Margin : 0**
EUT : 54Mbps Wireless Builder	**Probe : ENV216 - Line2**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g(2437MHz)**

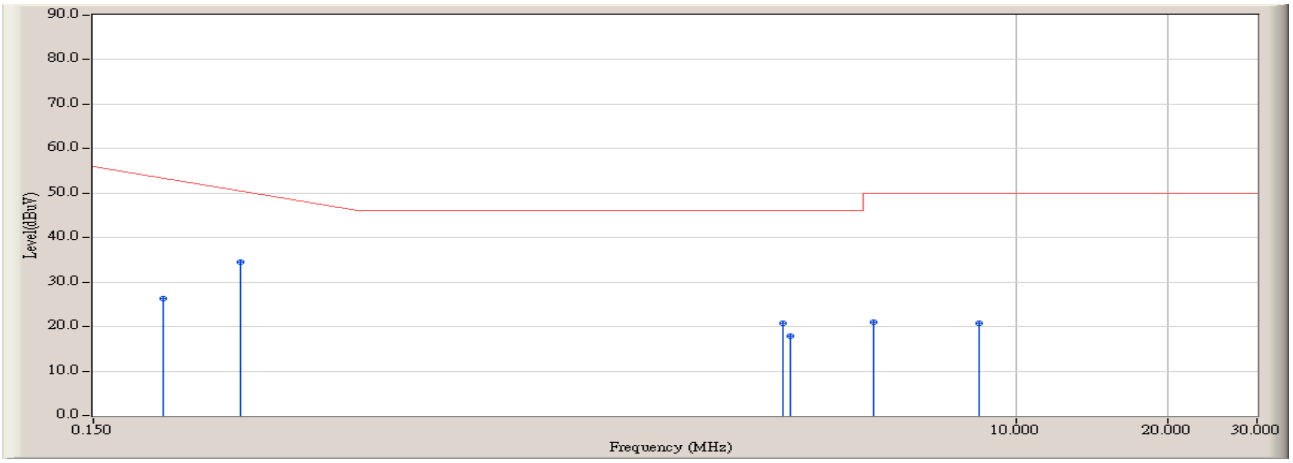


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.206	9.451	38.500	47.950	-16.450	64.400	QUASIPEAK
2	*	0.294	9.515	42.300	51.815	-10.071	61.886	QUASIPEAK
3		3.458	9.750	34.400	44.150	-11.850	56.000	QUASIPEAK
4		3.590	9.746	29.800	39.546	-16.454	56.000	QUASIPEAK
5		5.230	9.710	33.000	42.710	-17.290	60.000	QUASIPEAK
6		8.486	9.860	31.600	41.460	-18.540	60.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : SR-1 (Conducted Emission)	**Time : 2007/06/22 - 10:09**
Limit : FCC_Part15_C_00M_AV	**Margin : 0**
EUT : 54Mbps Wireless Builder	**Probe : ENV216 - Line2**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g(2437MHz)**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.206	9.451	16.900	26.350	-28.050	54.400	AVERAGE
2	*	0.294	9.515	25.000	34.515	-17.371	51.886	AVERAGE
3		3.458	9.750	11.000	20.750	-25.250	46.000	AVERAGE
4		3.590	9.746	8.100	17.846	-28.154	46.000	AVERAGE
5		5.230	9.710	11.200	20.910	-29.090	50.000	AVERAGE
6		8.486	9.860	11.000	20.860	-29.140	50.000	AVERAGE

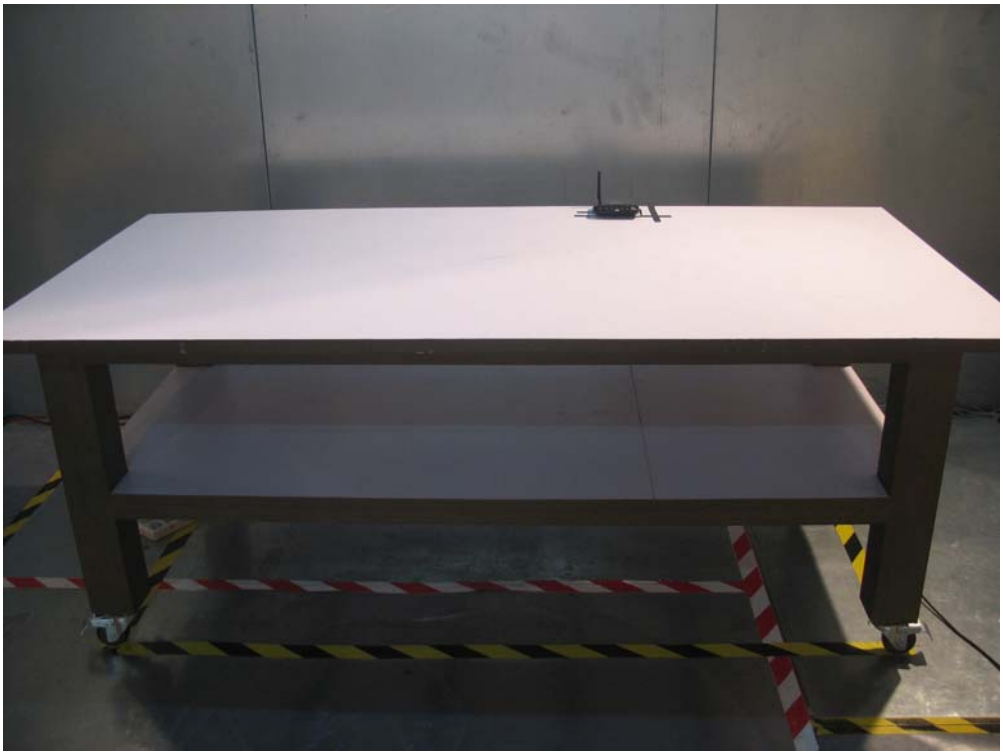
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

3.7. Test Photograph

Test Mode: Mode 1: Transmit by 802.11b

Description: Front View of Conduction Test

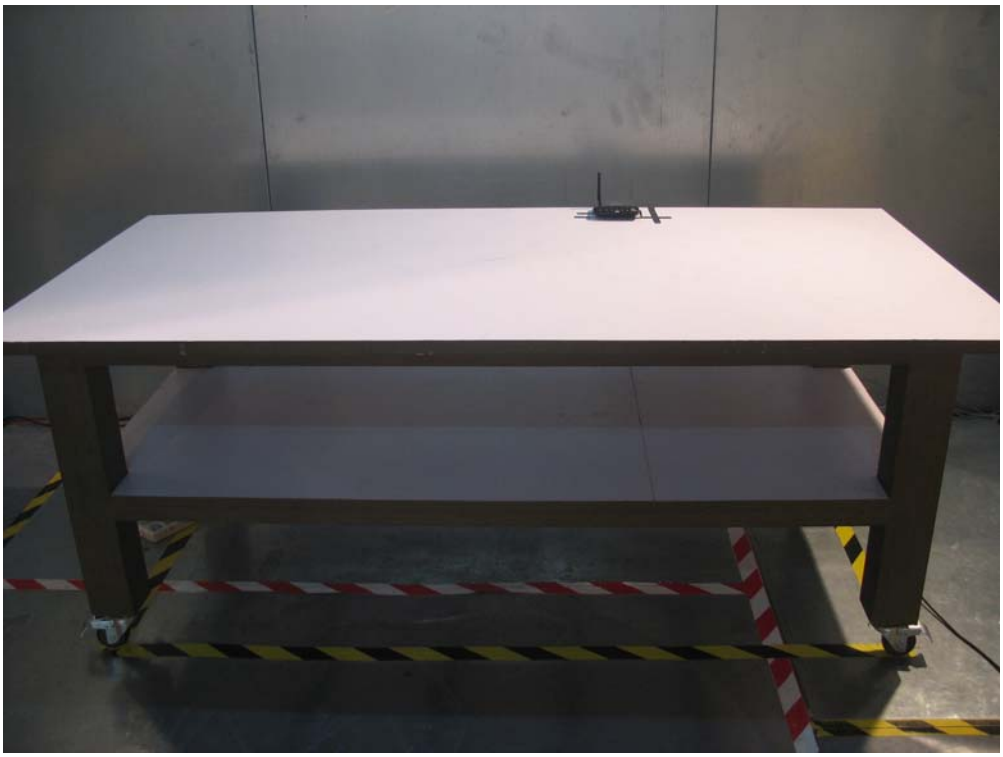


Test Mode: Mode 1: Transmit by 802.11b

Description: Back View of Conduction Test

Test Mode: Mode 2: Transmit by 802.11g

Description: Front View of Conduction Test



Test Mode: Mode 2: Transmit by 802.11g

Description: Back View of Conduction Test

4. Radiated Emission

4.1. Test Equipment

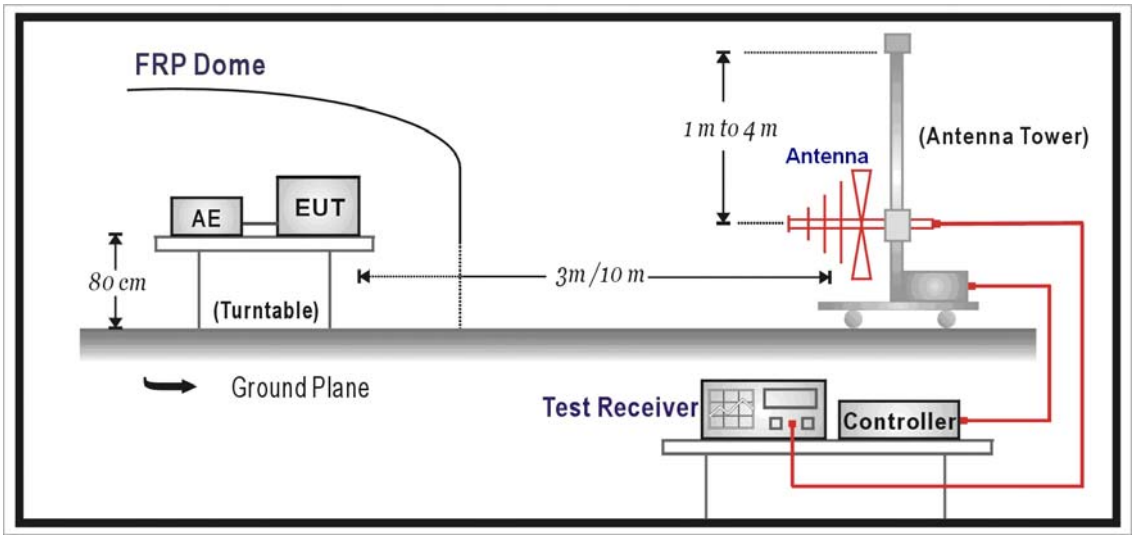
Radiated Emission / AC-2

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4408B	MY45102679	2006/11/20
EMI Test Receiver	R&S	ESCI	100176	2006/11/22
Preamplifier	Quietek	AP-025C	QT-AP003	2006/11/25
Preamplifier	Quietek	AP-180C	CHM-0602013	2006/11/25
Bilog Type Antenna	Schaffner	CBL6112B	2932	2006/11/22
*Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	496	2005/11/25
50ohm Coaxial Switch	ANRITSU	MP59B	6200447304	2006/11/25
Coaxial Cable	Huber+Suhner	AC2-C	04	2006/11/25
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH002	2007/03/30

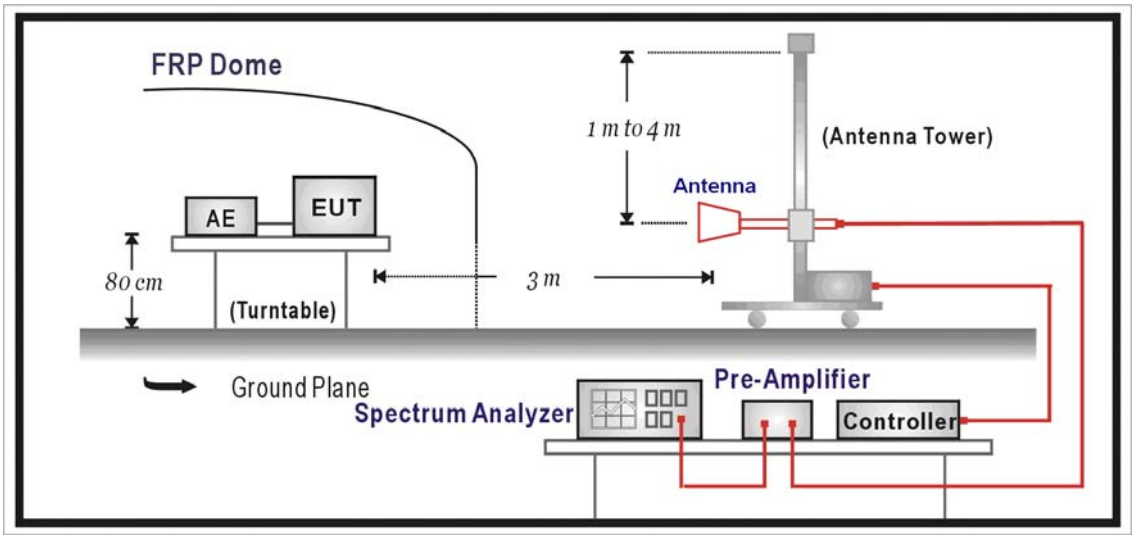
Note: “*” means the test device calibration period for two years.

4.2. Test Setup

Under 1GHz Test Setup:



Above 1GHz Test Setup:



4.3. Limit

FCC Part 15 Subpart C Paragraph 15.209 Limits (dBuV/m)		
Frequency (MHz)	Distance (m)	dBuV/m
30-88	3	40
88-216	3	43.5
216-960	3	46
Above 960	3	54

Remark:

1. The tighter limit shall apply at the edge between two frequency bands.
2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
3. RF Voltage (dBuV/m) = 20 log RF Voltage (uV/m)

4.4. Test Procedure

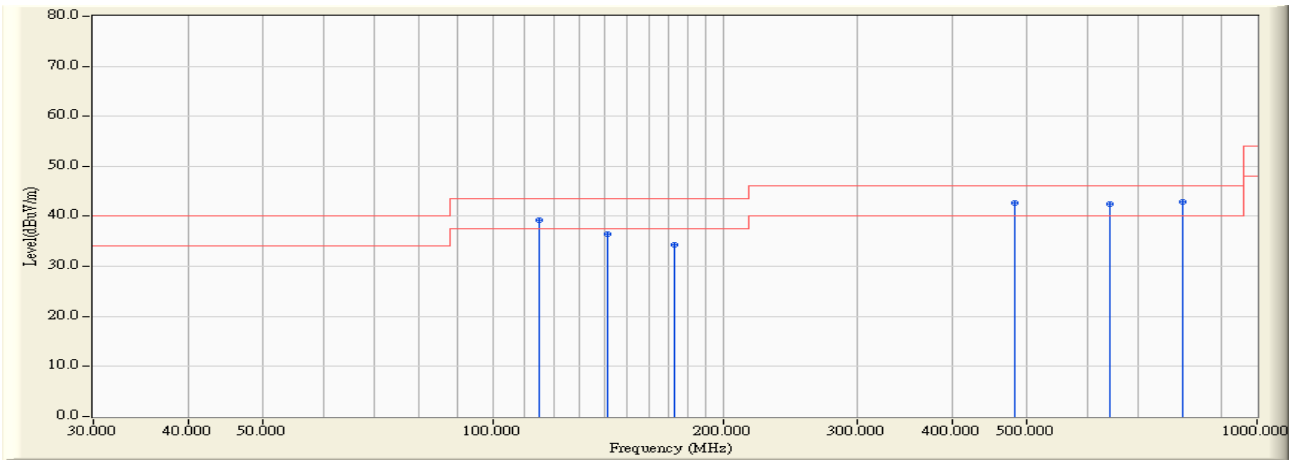
The EUT and its simulators are placed on a turn table which is 0.8 meter above ground.
The turn table can rotate 360 degrees to determine the position of the maximum emission level and the antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.
Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated on radiated measurement.
The additional latch filter below 1GHz was used to measure the level of harmonics radiated emission during field strength of harmonics measurement.
The bandwidth below 1GHz setting on the field strength meter (R&S Test Receiver ESCI) is 120 kHz and above 1GHz is 1MHz.
The frequency range from 30MHz to 10th harmonic is checked.

4.5. Uncertainty

The measurement uncertainty above 1G is defined as ± 3.9 dB
under 1G is defined as ± 3.8 dB

4.6. Test Result

Engineer : Johnwang	
Site : AC-2 (Radiated Emission)	**Time : 2007/06/21 - 21:07**
Limit : FCC_SpartC_15.209_03M_QP	**Margin : 6**
EUT : 54Mbps Wireless Builder	**Probe : CBL6112B_2932(30-2000MHz) - HORIZONTAL**
Power : AC 120V/50Hz	**Note : Mode 1: Transmit by 802.11b(2412MHz)**

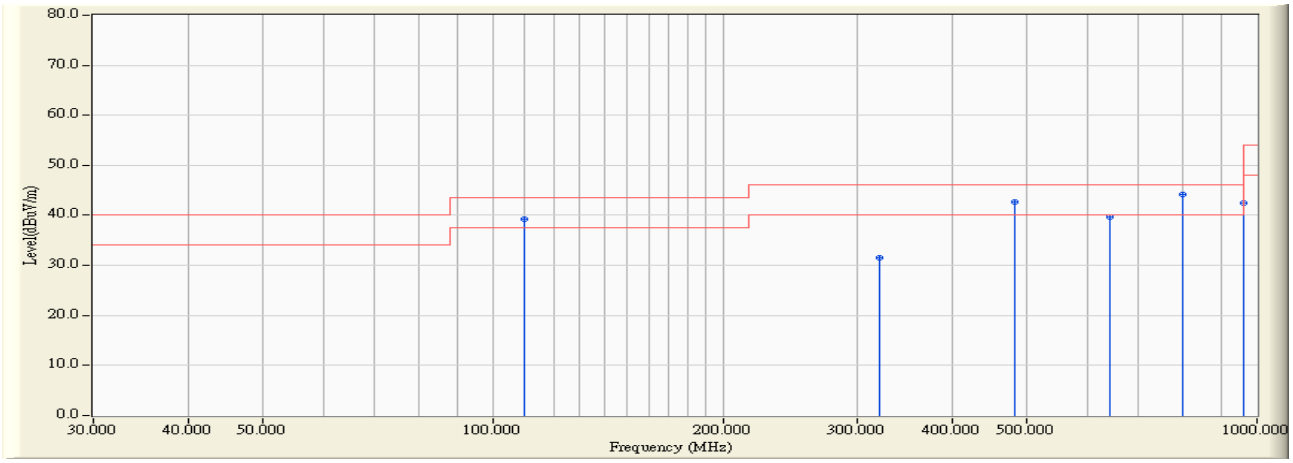


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		114.875	-9.423	48.698	39.275	-4.245	43.520	QUASIPEAK
2		141.550	-9.864	46.284	36.420	-7.100	43.520	QUASIPEAK
3		173.075	-11.705	46.075	34.370	-9.150	43.520	QUASIPEAK
4		481.050	-1.642	44.291	42.649	-3.371	46.020	QUASIPEAK
5		641.100	0.424	42.081	42.505	-3.515	46.020	QUASIPEAK
6	*	801.150	1.989	40.905	42.894	-3.126	46.020	QUASIPEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-2 (Radiated Emission)	**Time : 2007/06/21 - 21:19**
Limit : FCC_SpartC_15.209_03M_QP	**Margin : 6**
EUT : 54Mbps Wireless Builder	**Probe : CBL6112B_2932(30-2000MHz) - VERTICAL**
Power : AC 120V/50Hz	**Note : Mode 1: Transmit by 802.11b(2412MHz)**

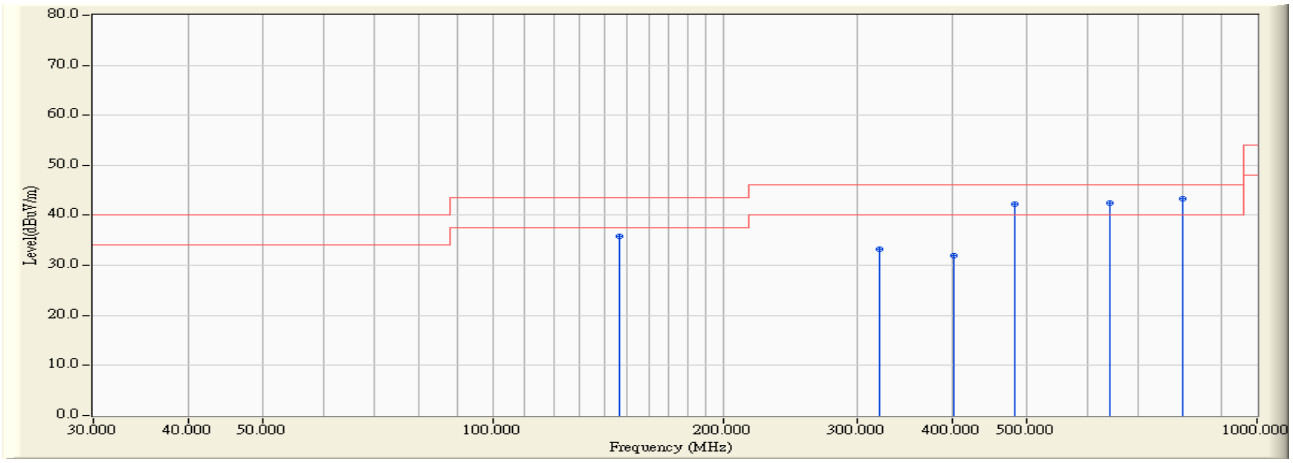


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		110.025	-9.540	48.871	39.331	-4.189	43.520	QUASIPEAK
2		321.000	-6.031	37.662	31.631	-14.389	46.020	QUASIPEAK
3		481.050	-1.642	44.422	42.780	-3.240	46.020	QUASIPEAK
4		641.100	0.424	39.237	39.661	-6.359	46.020	QUASIPEAK
5	*	801.150	1.989	42.264	44.253	-1.767	46.020	QUASIPEAK
6		961.200	3.714	38.803	42.517	-11.453	53.970	QUASIPEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-2 (Radiated Emission)	**Time : 2007/06/21 - 21:21**
Limit : FCC_SpartC_15.209_03M_QP	**Margin : 6**
EUT : 54Mbps Wireless Builder	**Probe : CBL6112B_2932(30-2000MHz) - HORIZONTAL**
Power : AC 120V/50Hz	**Note : Mode 1: Transmit by 802.11b(2437MHz)**

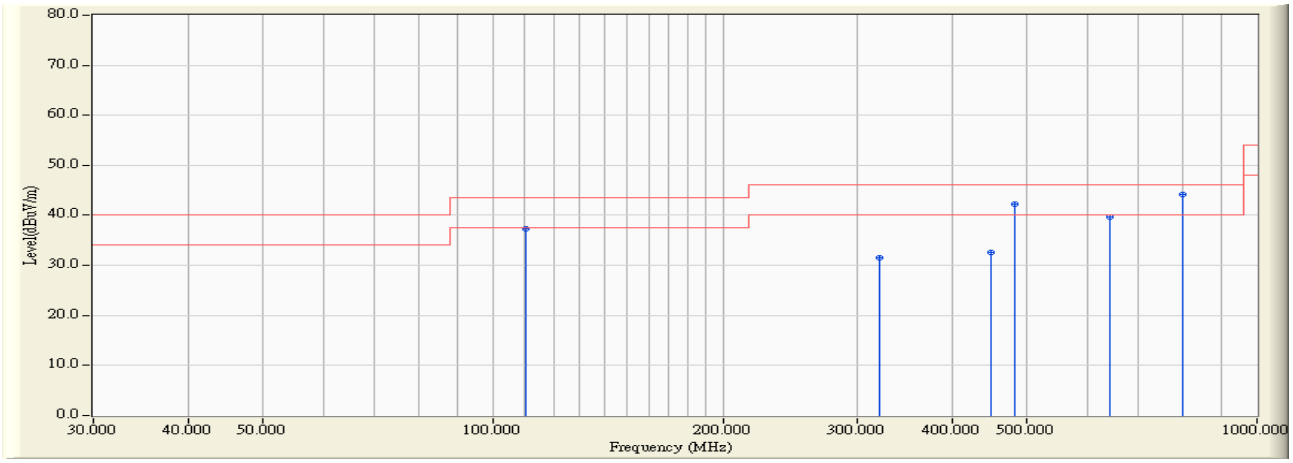


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		146.400	-10.267	46.096	35.829	-7.691	43.520	QUASIPEAK
2		321.000	-6.031	39.192	33.161	-12.859	46.020	QUASIPEAK
3		401.025	-3.448	35.462	32.014	-14.006	46.020	QUASIPEAK
4		481.050	-1.642	43.791	42.149	-3.871	46.020	QUASIPEAK
5		641.100	0.424	42.081	42.505	-3.515	46.020	QUASIPEAK
6	*	801.150	1.989	41.305	43.294	-2.726	46.020	QUASIPEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-2 (Radiated Emission)	**Time : 2007/06/21 - 21:22**
Limit : FCC_SpartC_15.209_03M_QP	**Margin : 6**
EUT : 54Mbps Wireless Builder	**Probe : CBL6112B_2932(30-2000MHz) - VERTICAL**
Power : AC 120V/50Hz	**Note : Mode 1: Transmit by 802.11b(2437MHz)**

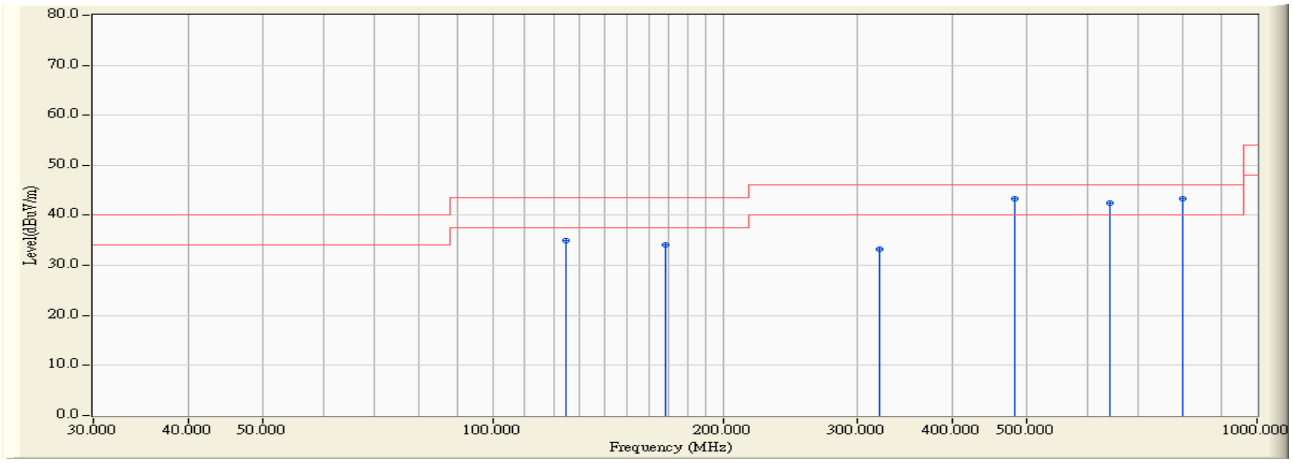


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		110.432	-9.516	46.848	37.333	-6.187	43.520	QUASIPEAK
2		321.000	-6.031	37.662	31.631	-14.389	46.020	QUASIPEAK
3		449.525	-2.806	35.513	32.707	-13.313	46.020	QUASIPEAK
4		481.050	-1.642	43.922	42.280	-3.740	46.020	QUASIPEAK
5		641.100	0.424	39.237	39.661	-6.359	46.020	QUASIPEAK
6	*	801.150	1.989	42.264	44.253	-1.767	46.020	QUASIPEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-2 (Radiated Emission)	**Time : 2007/06/21 - 21:23**
Limit : FCC_SpartC_15.209_03M_QP	**Margin : 6**
EUT : 54Mbps Wireless Builder	**Probe : CBL6112B_2932(30-2000MHz) - HORIZONTAL**
Power : AC 120V/50Hz	**Note : Mode 1: Transmit by 802.11b(2462MHz)**

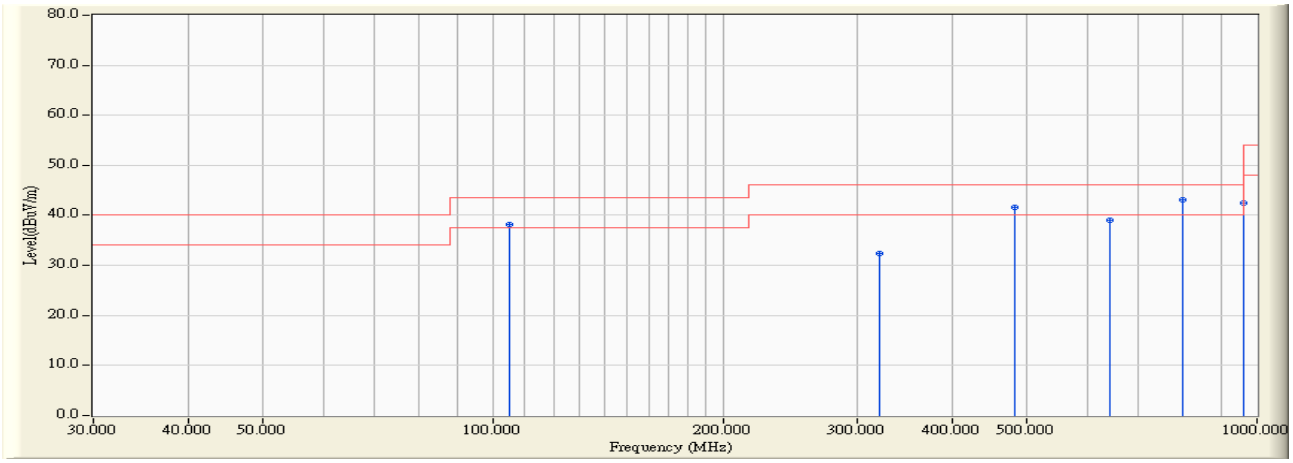


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		124.575	-9.060	44.016	34.956	-8.564	43.520	QUASIPEAK
2		168.225	-11.328	45.438	34.110	-9.410	43.520	QUASIPEAK
3		321.000	-6.031	39.192	33.161	-12.859	46.020	QUASIPEAK
4		481.050	-1.642	44.991	43.349	-2.671	46.020	QUASIPEAK
5		641.100	0.424	42.081	42.505	-3.515	46.020	QUASIPEAK
6	*	801.150	1.989	41.405	43.394	-2.626	46.020	QUASIPEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-2 (Radiated Emission)	**Time : 2007/06/21 - 21:23**
Limit : FCC_SpartC_15.209_03M_QP	**Margin : 6**
EUT : 54Mbps Wireless Builder	**Probe : CBL6112B_2932(30-2000MHz) - VERTICAL**
Power : AC 120V/50Hz	**Note : Mode 1: Transmit by 802.11b(2462MHz)**

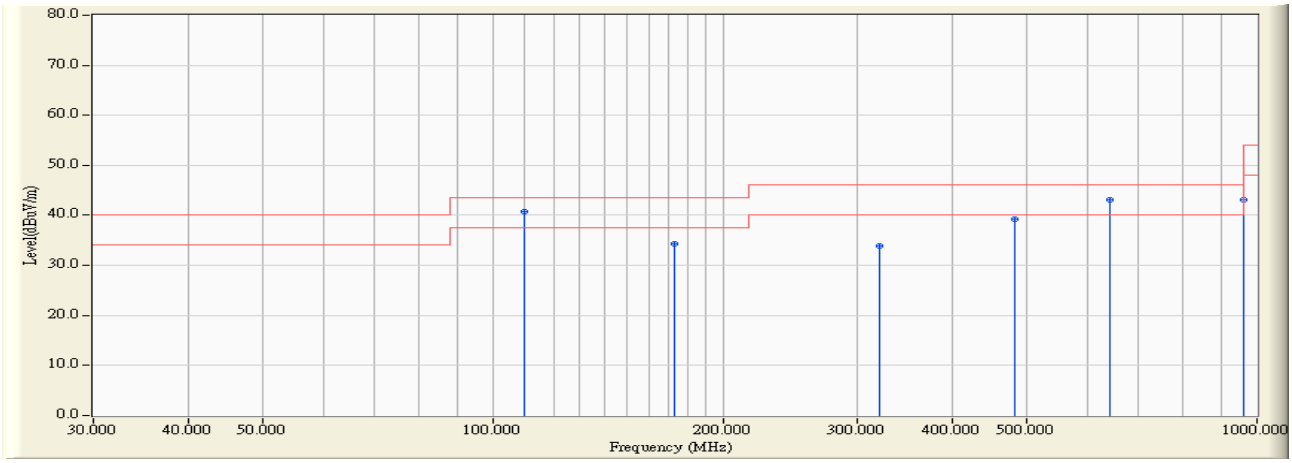


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		105.175	-9.801	47.998	38.197	-5.323	43.520	QUASIPEAK
2		320.618	-6.051	38.384	32.333	-13.687	46.020	QUASIPEAK
3		481.050	-1.642	43.222	41.580	-4.440	46.020	QUASIPEAK
4		641.100	0.424	38.537	38.961	-7.059	46.020	QUASIPEAK
5	*	801.150	1.989	41.064	43.053	-2.967	46.020	QUASIPEAK
6		961.200	3.714	38.803	42.517	-11.453	53.970	QUASIPEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-2 (Radiated Emission)	**Time : 2007/06/21 - 21:25**
Limit : FCC_SpartB_15.109_03M_QP	**Margin : 6**
EUT : 54Mbps Wireless Builder	**Probe : CBL6112B_2932(30-2000MHz) - HORIZONTAL**
Power : AC 120V/50Hz	**Note : Mode 2: Transmit by 802.11g(2412MHz)**

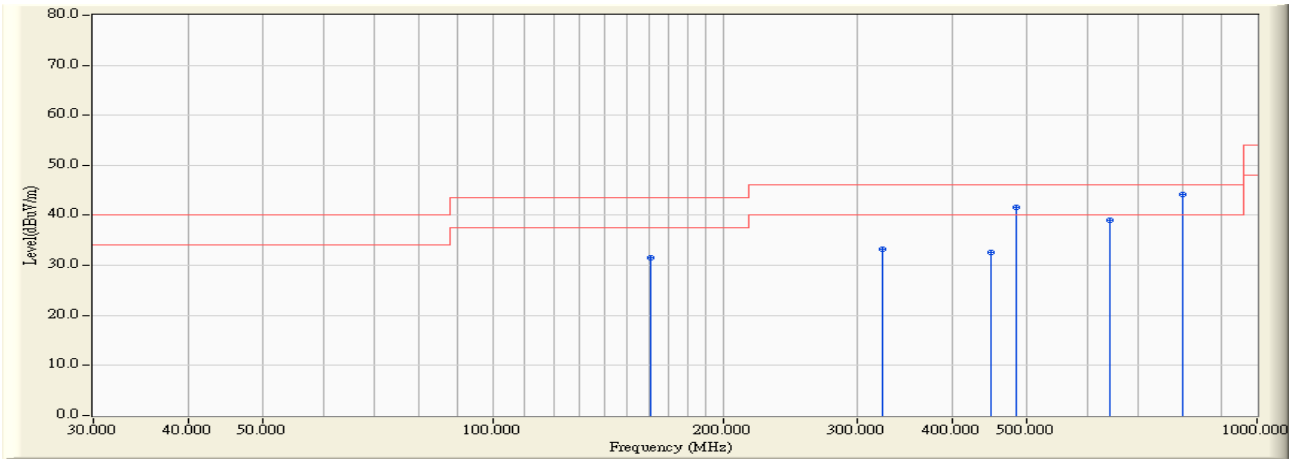


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	110.025	-9.540	50.199	40.659	-2.861	43.520	QUASIPEAK
2		173.075	-11.705	46.075	34.370	-9.150	43.520	QUASIPEAK
3		321.000	-6.031	39.892	33.861	-12.159	46.020	QUASIPEAK
4		481.050	-1.642	40.891	39.249	-6.771	46.020	QUASIPEAK
5		641.100	0.424	42.681	43.105	-2.915	46.020	QUASIPEAK
6		961.200	3.714	39.302	43.016	-10.954	53.970	QUASIPEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-2 (Radiated Emission)	**Time : 2007/06/21 - 21:26**
Limit : FCC_SpartB_15.109_03M_QP	**Margin : 6**
EUT : 54MBPS WIRELESS BUILDER	**Probe : CBL6112B_2932(30-2000MHz) - VERTICAL**
Power : AC 120V/50Hz	**Note : Mode 2: Transmit by 802.11g(2412MHz)**

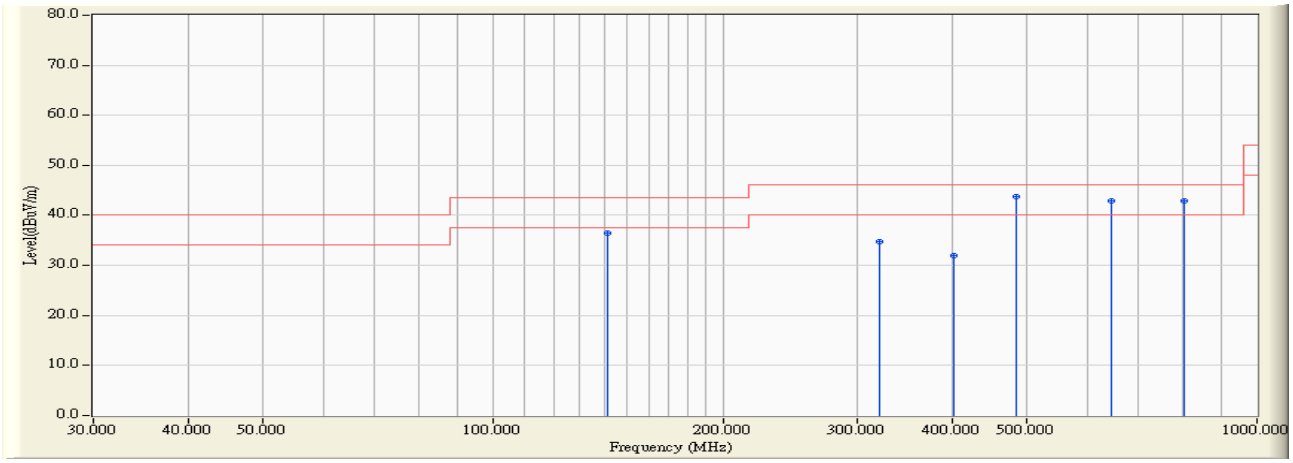


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		160.950	-11.068	42.677	31.609	-11.911	43.520	QUASIPEAK
2		323.425	-5.967	39.214	33.247	-12.773	46.020	QUASIPEAK
3		449.525	-2.806	35.513	32.707	-13.313	46.020	QUASIPEAK
4		483.475	-1.646	43.307	41.661	-4.359	46.020	QUASIPEAK
5		641.100	0.424	38.637	39.061	-6.959	46.020	QUASIPEAK
6	*	801.150	1.989	42.264	44.253	-1.767	46.020	QUASIPEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-2 (Radiated Emission)	**Time : 2007/06/21 - 21:27**
Limit : FCC_SpartB_15.109_03M_QP	**Margin : 6**
EUT : 54MBPS WIRELESS BUILDER	**Probe : CBL6112B_2932(30-2000MHz) - HORIZONTAL**
Power : AC 120V/50Hz	**Note : Mode 2: Transmit by 802.11g(2437MHz)**

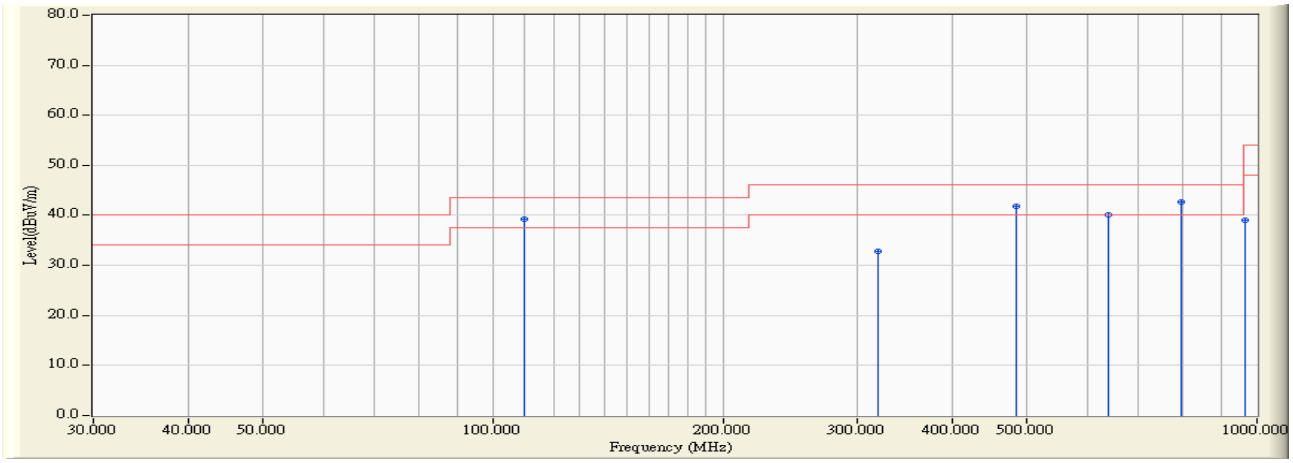


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		141.550	-9.864	46.284	36.420	-7.100	43.520	QUASIPEAK
2		321.000	-6.031	40.792	34.761	-11.259	46.020	QUASIPEAK
3		401.025	-3.448	35.462	32.014	-14.006	46.020	QUASIPEAK
4	*	483.475	-1.646	45.472	43.826	-2.194	46.020	QUASIPEAK
5		645.950	0.450	42.427	42.877	-3.143	46.020	QUASIPEAK
6		803.575	1.974	40.940	42.914	-3.106	46.020	QUASIPEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-2 (Radiated Emission)	**Time : 2007/06/21 - 21:28**
Limit : FCC_SpartB_15.109_03M_QP	**Margin : 6**
EUT : 54Mbps Wireless Builder	**Probe : CBL6112B_2932(30-2000MHz) - VERTICAL**
Power : AC 120V/50Hz	**Note : Mode 2: Transmit by 802.11g(2437MHz)**

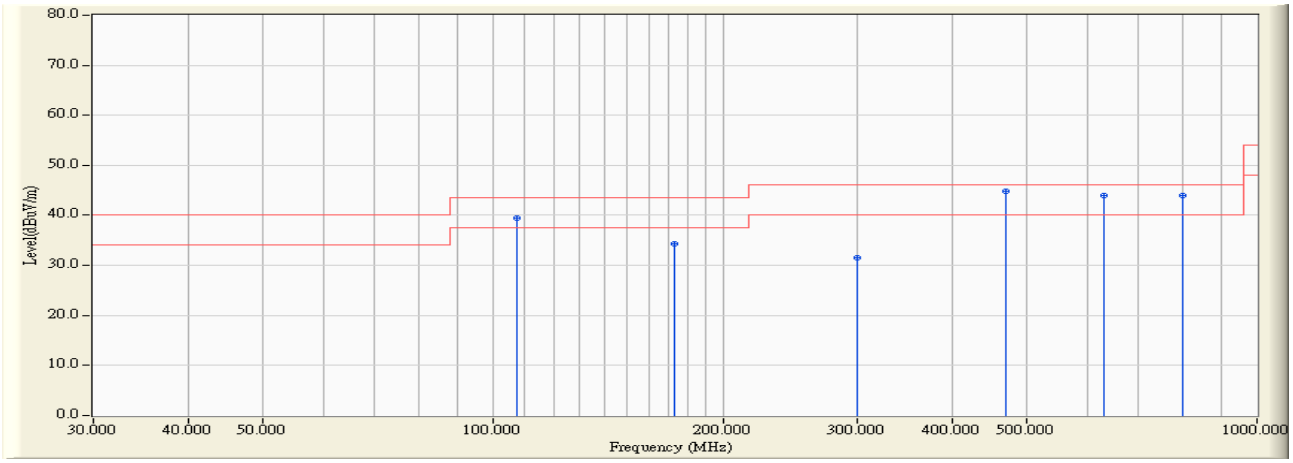


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		110.025	-9.540	48.871	39.331	-4.189	43.520	QUASIPEAK
2		318.575	-6.146	39.049	32.903	-13.117	46.020	QUASIPEAK
3		483.475	-1.646	43.507	41.861	-4.159	46.020	QUASIPEAK
4		638.675	0.385	39.639	40.024	-5.996	46.020	QUASIPEAK
5	*	796.300	1.730	40.884	42.614	-3.406	46.020	QUASIPEAK
6		963.625	3.763	35.344	39.107	-14.863	53.970	QUASIPEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-2 (Radiated Emission)	**Time : 2007/06/21 - 21:29**
Limit : FCC_SpartB_15.109_03M_QP	**Margin : 6**
EUT : 54Mbps Wireless Builder	**Probe : CBL6112B_2932(30-2000MHz) - HORIZONTAL**
Power : AC 120V/50Hz	**Note : Mode 2: Transmit by 802.11g(2462MHz)**

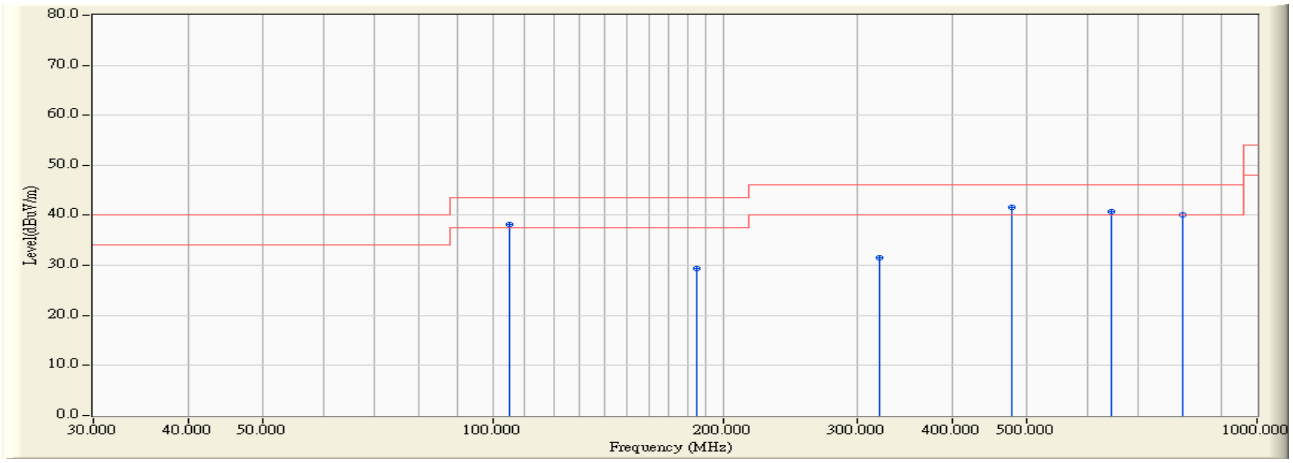


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		107.600	-9.691	49.226	39.535	-3.985	43.520	QUASIPEAK
2		173.075	-11.705	46.075	34.370	-9.150	43.520	QUASIPEAK
3		299.175	-6.760	38.295	31.535	-14.485	46.020	QUASIPEAK
4	*	468.925	-2.072	46.843	44.771	-1.249	46.020	QUASIPEAK
5		631.400	0.463	43.502	43.965	-2.055	46.020	QUASIPEAK
6		801.150	1.989	41.905	43.894	-2.126	46.020	QUASIPEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-2 (Radiated Emission)	**Time : 2007/06/21 - 21:30**
Limit : FCC_SpartB_15.109_03M_QP	**Margin : 6**
EUT : 54Mbps Wireless Builder	**Probe : CBL6112B_2932(30-2000MHz) - VERTICAL**
Power : AC 120V/50Hz	**Note : Mode 2: Transmit by 802.11g(2462MHz)**

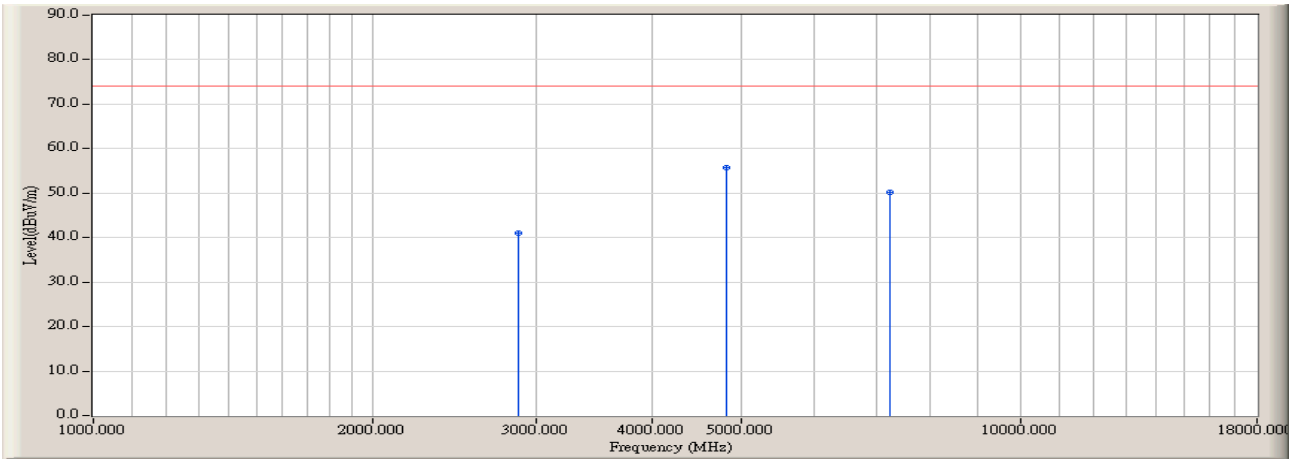


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		105.175	-9.801	47.998	38.197	-5.323	43.520	QUASIPEAK
2		185.200	-12.124	41.597	29.473	-14.047	43.520	QUASIPEAK
3		321.000	-6.031	37.662	31.631	-14.389	46.020	QUASIPEAK
4	*	478.625	-1.804	43.346	41.542	-4.478	46.020	QUASIPEAK
5		643.525	0.517	40.268	40.785	-5.235	46.020	QUASIPEAK
6		801.150	1.989	38.164	40.153	-5.867	46.020	QUASIPEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-3	**Time : 2007/04/10 - 11:36**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : 54Mbps Wireless Builder	**Probe : 9120D_(1G-18G) - HORIZONTAL**
Power : AC 120V/50Hz	**Note : Mode 1: Transmit by 802.11b(2412MHz)**

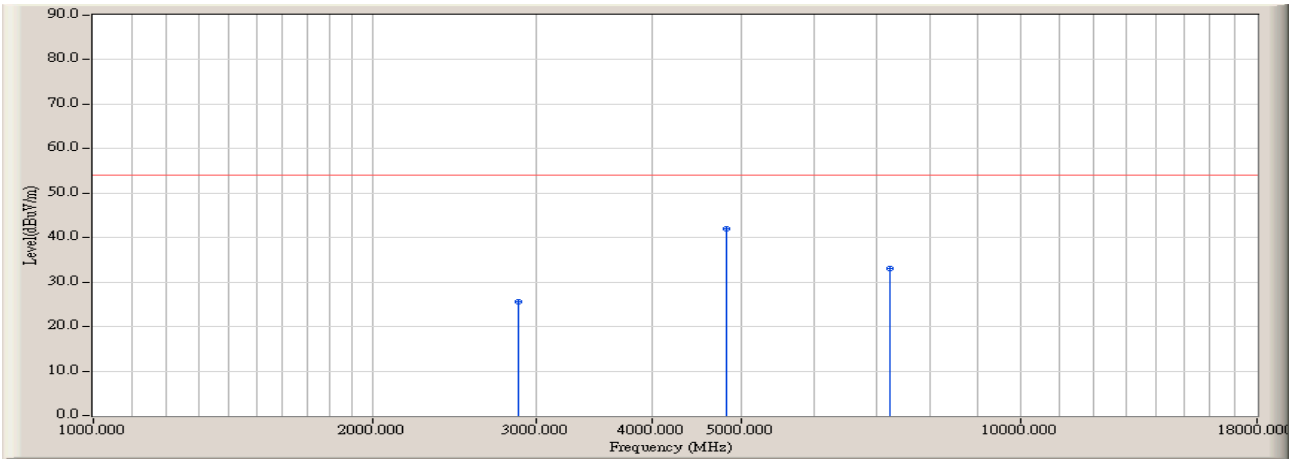


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2870.000	-0.890	41.884	40.994	-32.976	73.970	PEAK
2	*	4825.000	4.900	50.821	55.721	-18.249	73.970	PEAK
3		7233.333	15.403	34.724	50.127	-23.843	73.970	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-3	**Time : 2007/04/10 - 11:36**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : 54Mbps Wireless Builder	**Probe : 9120D_(1G-18G) - HORIZONTAL**
Power : AC 120V/50Hz	**Note : Mode 1: Transmit by 802.11b(2412MHz)**

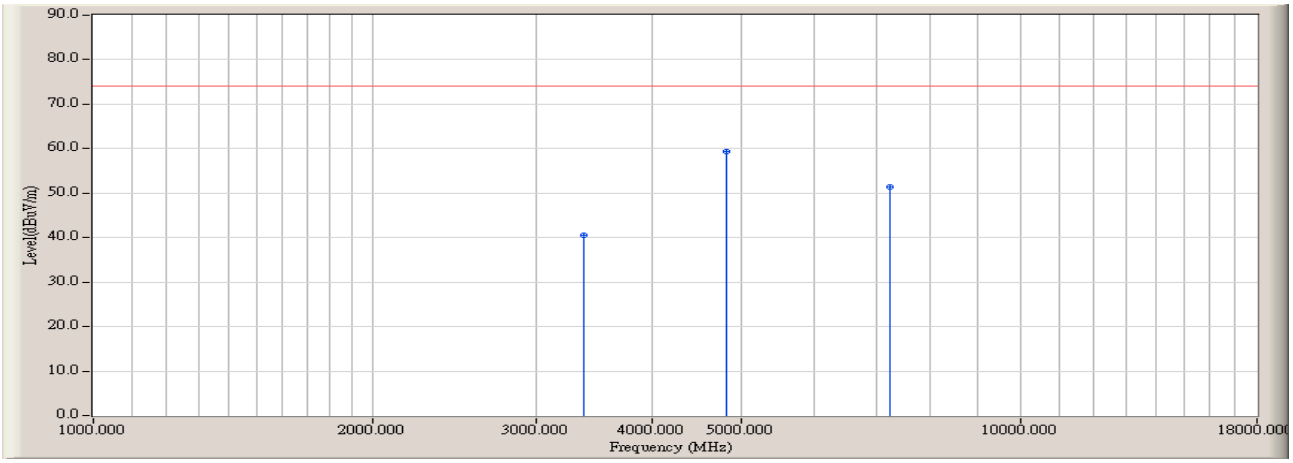


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2870.000	-0.890	26.480	25.590	-28.380	53.970	AVERAGE
2	*	4825.000	4.900	37.114	42.014	-11.956	53.970	AVERAGE
3		7233.333	15.403	17.550	32.953	-21.017	53.970	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-3	**Time : 2007/04/10 - 11:55**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : 54Mbps Wireless Builder	**Probe : 9120D_(1G-18G) - VERTICAL**
Power : AC 120V/50Hz	**Note : Mode 1: Transmit by 802.11b(2412MHz)**

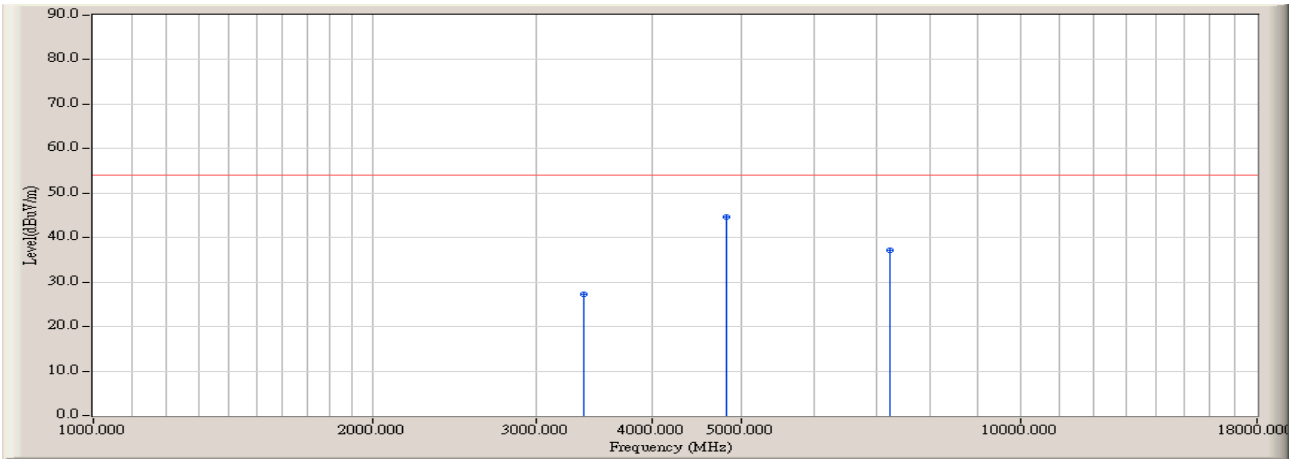


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		3380.000	-0.140	40.637	40.497	-33.473	73.970	PEAK
2	*	4825.000	4.900	54.400	59.300	-14.670	73.970	PEAK
3		7233.333	15.403	35.893	51.296	-22.674	73.970	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-3	**Time : 2007/04/10 - 11:55**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : 54Mbps Wireless Builder	**Probe : 9120D_(1G-18G) - VERTICAL**
Power : AC 120V/50Hz	**Note : Mode 1: Transmit by 802.11b(2412MHz)**

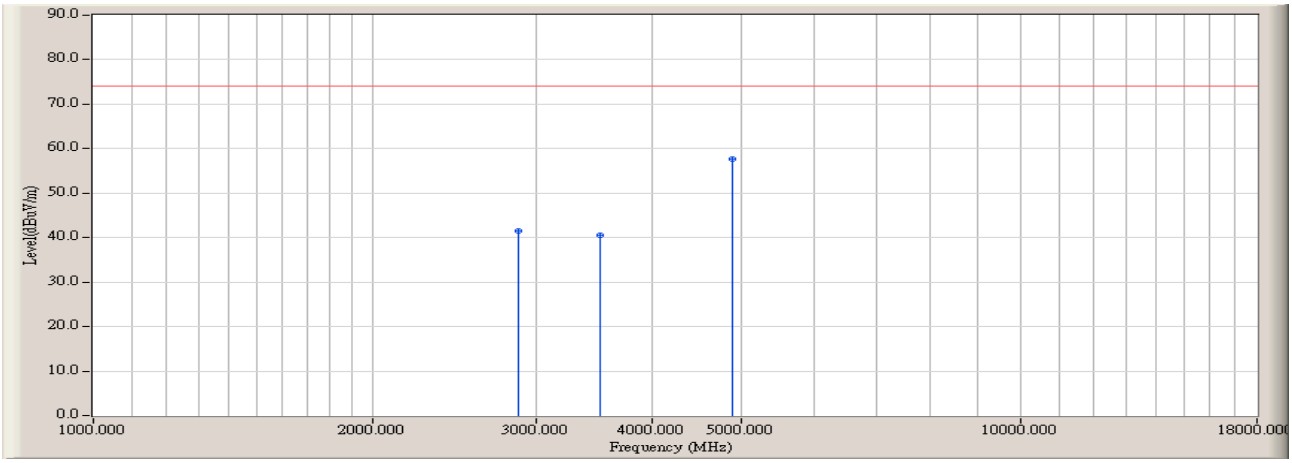


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		3380.000	-0.140	27.448	27.308	-26.662	53.970	AVERAGE
2	*	4825.000	4.900	39.730	44.630	-9.340	53.970	AVERAGE
3		7233.333	15.403	21.850	37.253	-16.717	53.970	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-3	**Time : 2007/04/10 - 13:00**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : 54Mbps Wireless Builder	**Probe : 9120D_(1G-18G) - HORIZONTAL**
Power : AC 120V/50Hz	**Note : Mode 1: Transmit by 802.11b(2437MHz)**

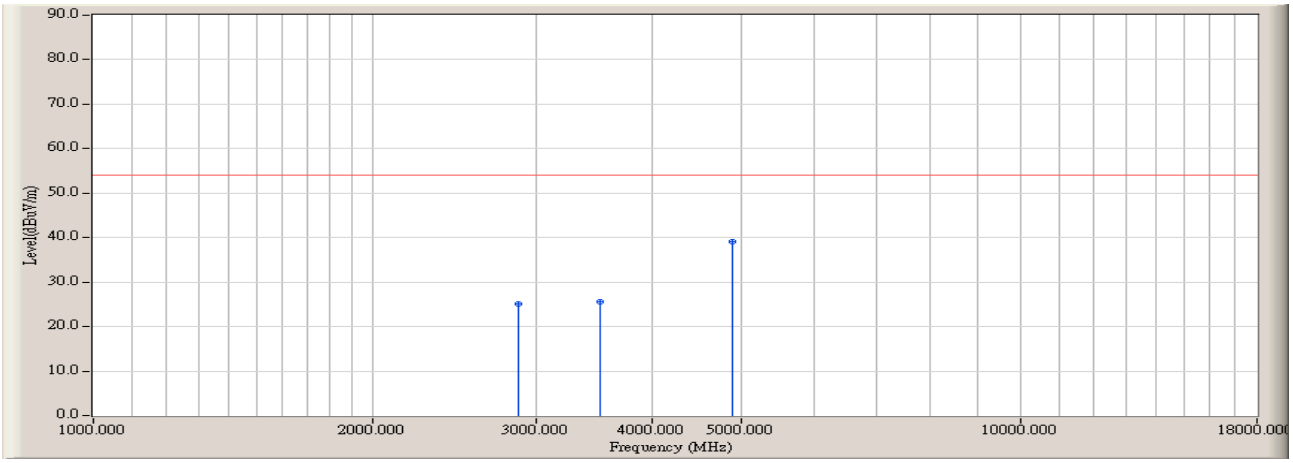


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2870.000	-0.890	42.395	41.505	-32.465	73.970	PEAK
2		3521.667	0.837	39.710	40.547	-33.423	73.970	PEAK
3	*	4881.667	5.034	52.519	57.552	-16.418	73.970	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-3	**Time : 2007/04/10 - 13:00**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : 54Mbps Wireless Builder	**Probe : 9120D_(1G-18G) - HORIZONTAL**
Power : AC 120V/50Hz	**Note : Mode 1: Transmit by 802.11b(2437MHz)**

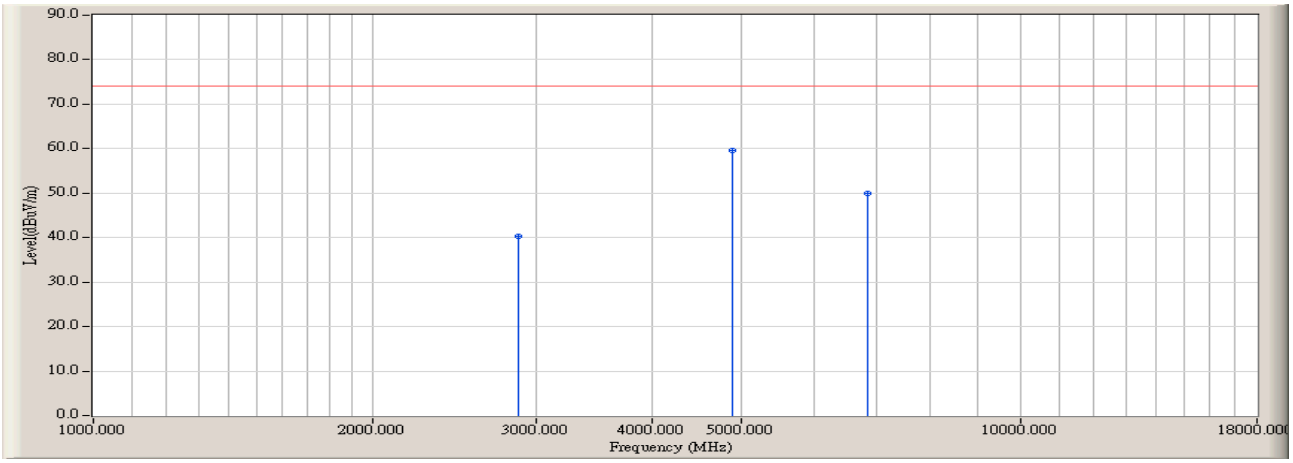


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2870.000	-0.890	26.001	25.111	-28.859	53.970	AVERAGE
2		3521.667	0.837	24.780	25.617	-28.353	53.970	AVERAGE
3	*	4881.667	5.034	34.085	39.118	-14.852	53.970	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-3	**Time : 2007/04/10 - 13:03**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : 54Mbps Wireless Builder	**Probe : 9120D_(1G-18G) - VERTICAL**
Power : AC 120V/50Hz	**Note : Mode 1: Transmit by 802.11b(2437MHz)**

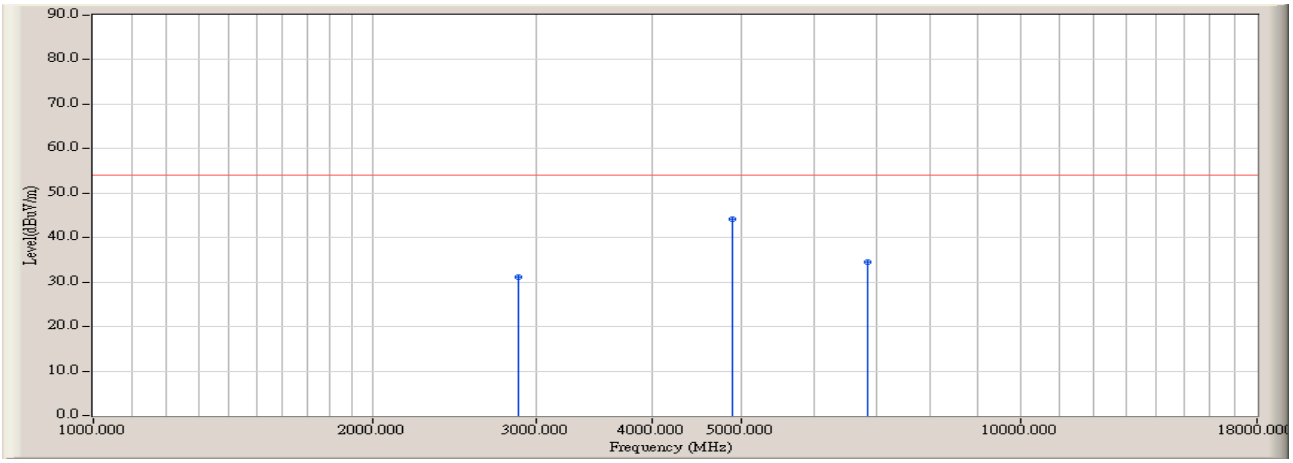


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2870.000	-0.890	41.072	40.182	-33.788	73.970	PEAK
2	*	4881.667	5.034	54.485	59.518	-14.452	73.970	PEAK
3		6836.667	14.174	35.777	49.950	-24.020	73.970	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-3	**Time : 2007/04/10 - 13:03**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : 54Mbps Wireless Builder	**Probe : 9120D_(1G-18G) - VERTICAL**
Power : AC 120V/50Hz	**Note : Mode 1: Transmit by 802.11b(2437MHz)**

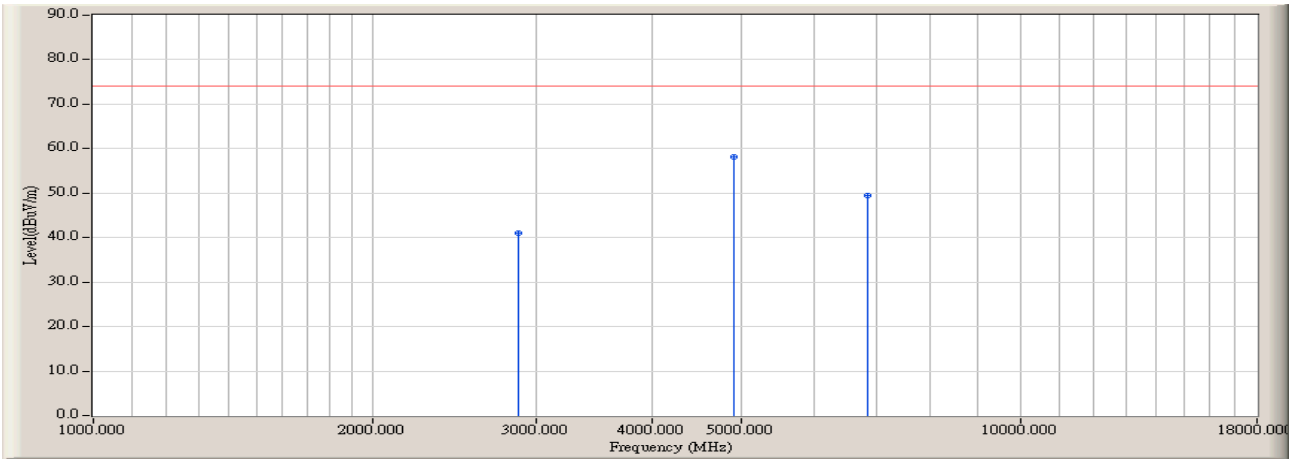


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2870.000	-0.890	32.080	31.190	-22.780	53.970	AVERAGE
2	*	4881.667	5.034	39.227	44.260	-9.710	53.970	AVERAGE
3		6836.667	14.174	20.240	34.413	-19.557	53.970	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-3	**Time : 2007/04/10 - 13:06**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : 54Mbps Wireless Builder	**Probe : 9120D_(1G-18G) - HORIZONTAL**
Power : AC 120V/50Hz	**Note : Mode 1: Transmit by 802.11b(2462MHz)**

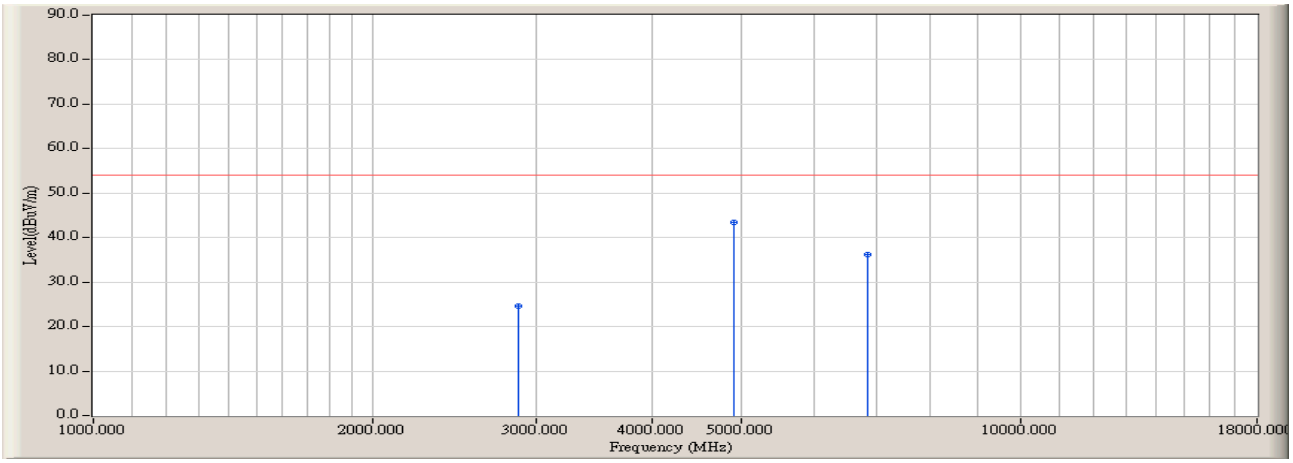


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2870.000	-0.890	41.947	41.057	-32.913	73.970	PEAK
2	*	4910.000	5.100	53.150	58.250	-15.720	73.970	PEAK
3		6836.667	14.174	35.295	49.468	-24.502	73.970	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-3	**Time : 2007/04/10 - 13:06**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : 54Mbps Wireless Builder	**Probe : 9120D_(1G-18G) - HORIZONTAL**
Power : AC 120V/50Hz	**Note : Mode 1: Transmit by 802.11b(2462MHz)**

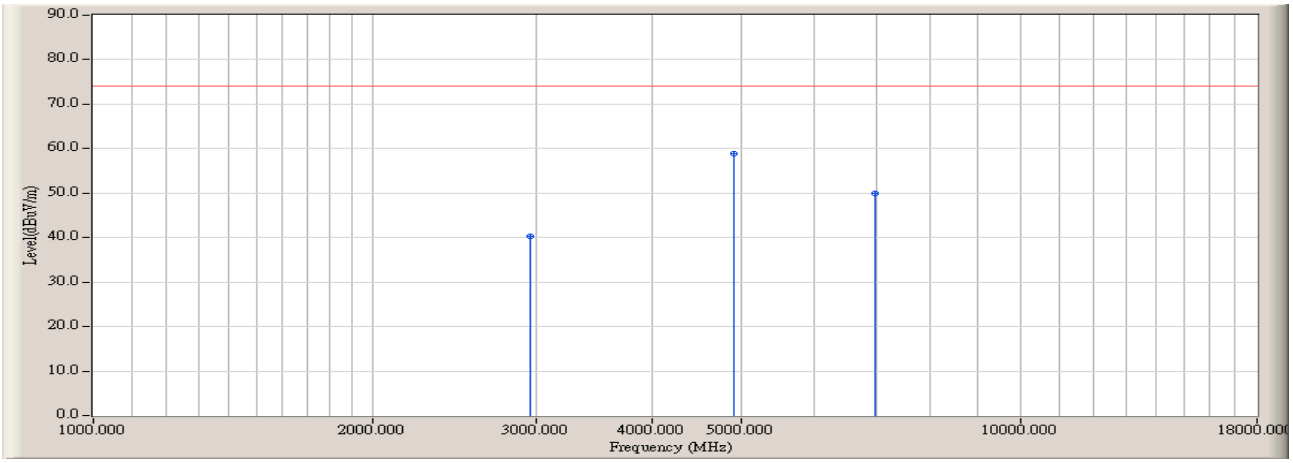


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2870.000	-0.890	25.460	24.570	-29.400	53.970	AVERAGE
2	*	4910.000	5.100	38.440	43.540	-10.430	53.970	AVERAGE
3		6836.667	14.174	22.100	36.273	-17.697	53.970	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-3	**Time : 2007/04/10 - 13:09**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : 54Mbps Wireless Builder	**Probe : 9120D_(1G-18G) - VERTICAL**
Power : AC 120V/50Hz	**Note : Mode 1: Transmit by 802.11b(2462MHz)**

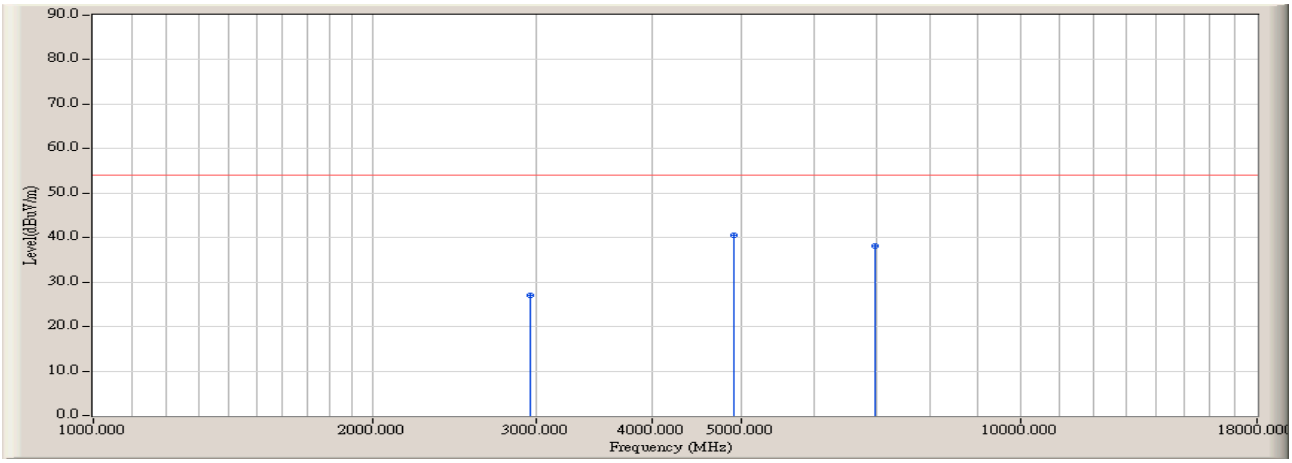


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2955.000	-0.660	40.976	40.316	-33.654	73.970	PEAK
2	*	4910.000	5.100	53.695	58.795	-15.175	73.970	PEAK
3		6978.333	14.583	35.322	49.905	-24.065	73.970	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-3	**Time : 2007/04/10 - 13:09**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : 54Mbps Wireless Builder	**Probe : 9120D_(1G-18G) - VERTICAL**
Power : AC 120V/50Hz	**Note : Mode 1: Transmit by 802.11b(2462MHz)**

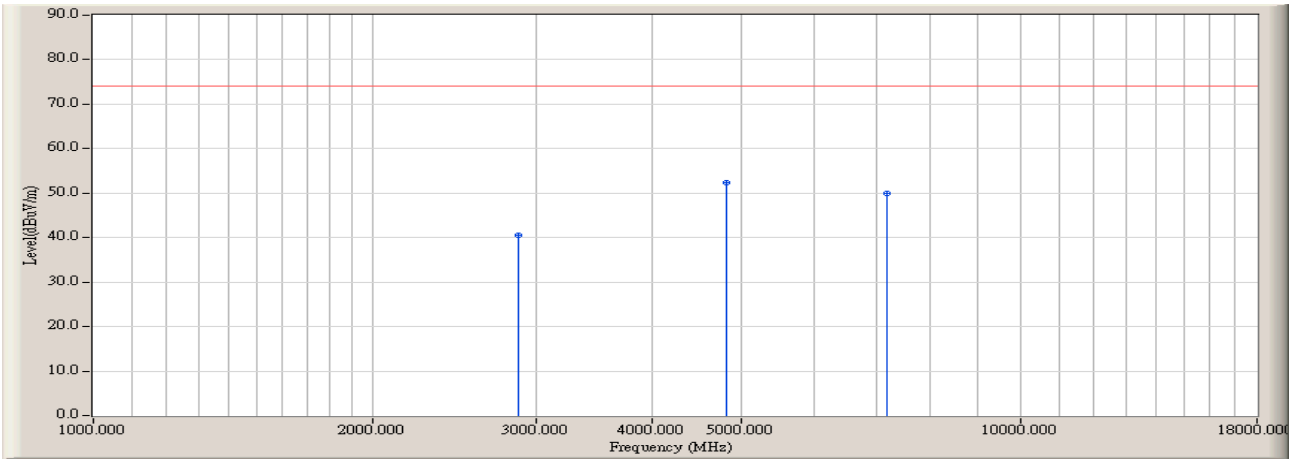


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2955.000	-0.660	27.620	26.960	-27.010	53.970	AVERAGE
2	*	4910.000	5.100	35.360	40.460	-13.510	53.970	AVERAGE
3		6978.333	14.583	23.540	38.123	-15.847	53.970	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-3	**Time : 2007/04/10 - 13:16**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : 54Mbps Wireless Builder	**Probe : 9120D_(1G-18G) - HORIZONTAL**
Power : AC 120V/50Hz	**Note : Mode 2: Transmit by 802.11g(2412MHz)**

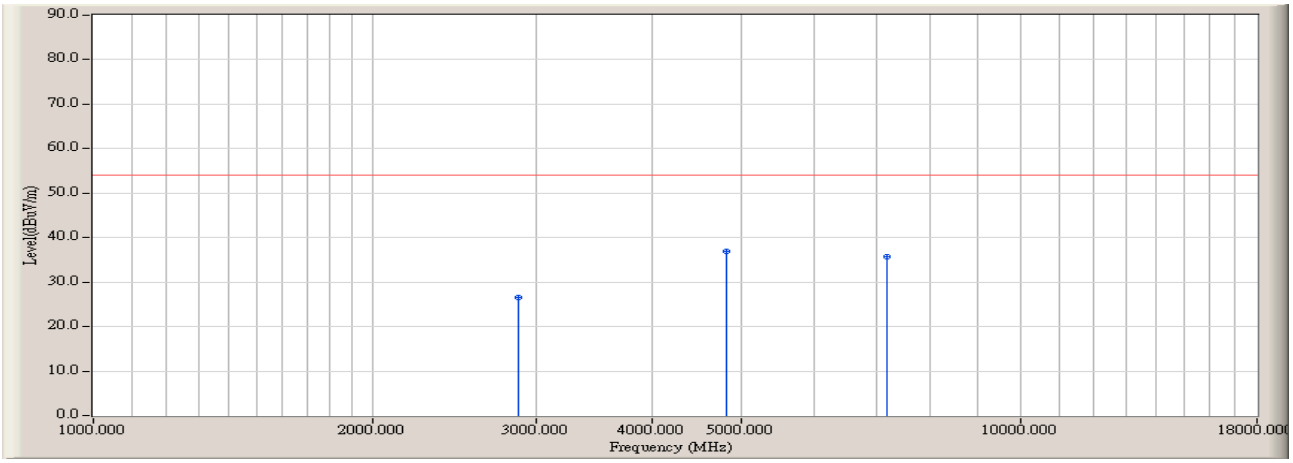


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2870.000	-0.890	41.494	40.604	-33.366	73.970	PEAK
2	*	4825.000	4.900	47.369	52.269	-21.701	73.970	PEAK
3		7176.667	15.347	34.605	49.952	-24.018	73.970	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-3	**Time : 2007/04/10 - 13:16**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : 54Mbps Wireless Builder	**Probe : 9120D_(1G-18G) - HORIZONTAL**
Power : AC 120V/50Hz	**Note : Mode 2: Transmit by 802.11g(2412MHz)**

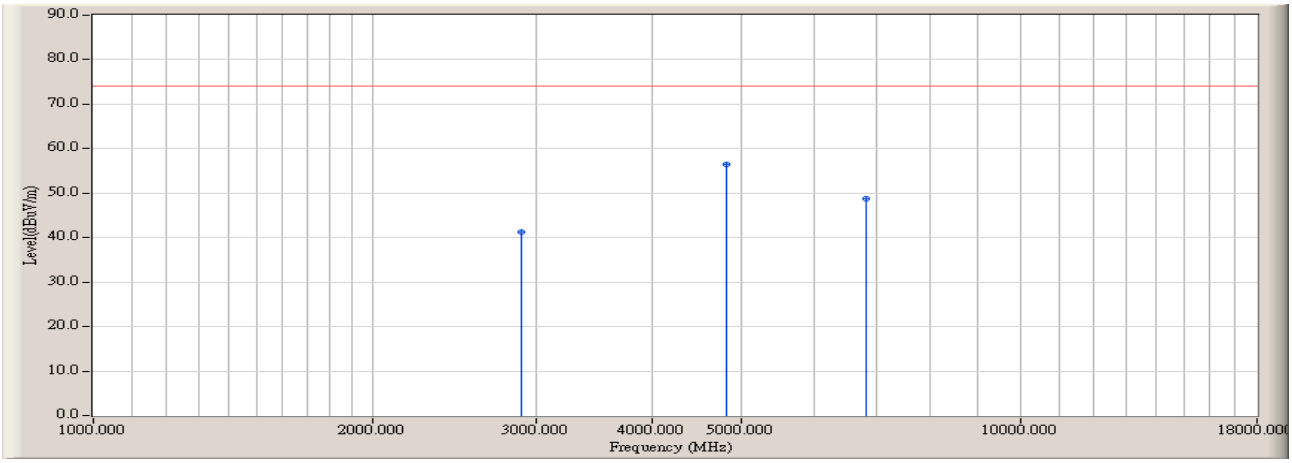


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2870.000	-0.890	27.550	26.660	-27.310	53.970	AVERAGE
2	*	4825.000	4.900	32.080	36.980	-16.990	53.970	AVERAGE
3		7176.667	15.347	20.250	35.597	-18.373	53.970	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-3	**Time : 2007/04/10 - 13:22**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : 54Mbps Wireless Builder	**Probe : 9120D_(1G-18G) - VERTICAL**
Power : AC 120V/50Hz	**Note : Mode 2: Transmit by 802.11g(2412MHz)**

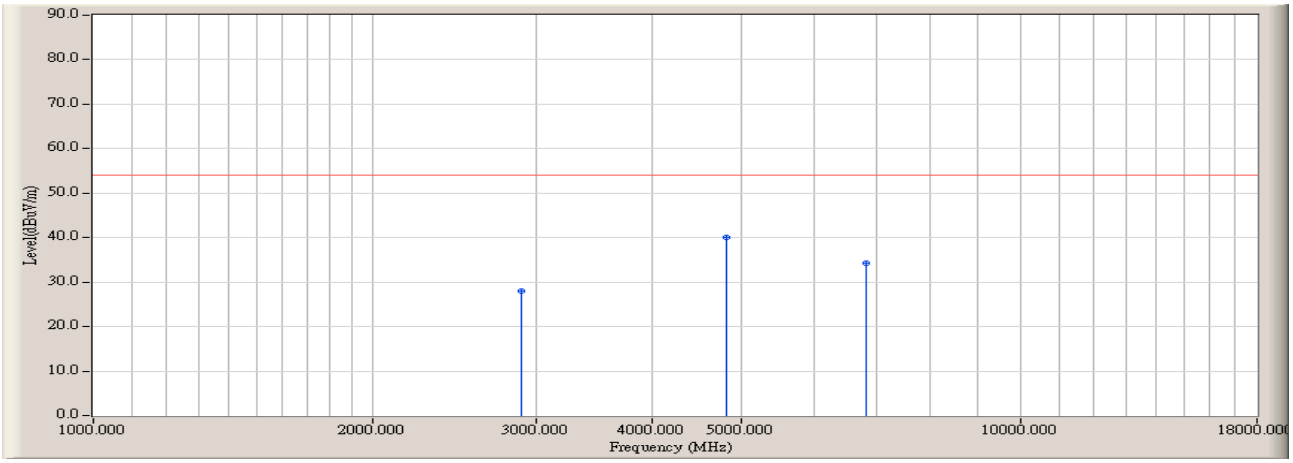


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2898.333	-0.830	42.076	41.246	-32.724	73.970	PEAK
2	*	4825.000	4.900	51.586	56.486	-17.484	73.970	PEAK
3		6808.333	14.093	34.709	48.802	-25.168	73.970	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-3	**Time : 2007/04/10 - 13:22**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : 54Mbps Wireless Builder	**Probe : 9120D_(1G-18G) - VERTICAL**
Power : AC 120V/50Hz	**Note : Mode 2: Transmit by 802.11g(2412MHz)**

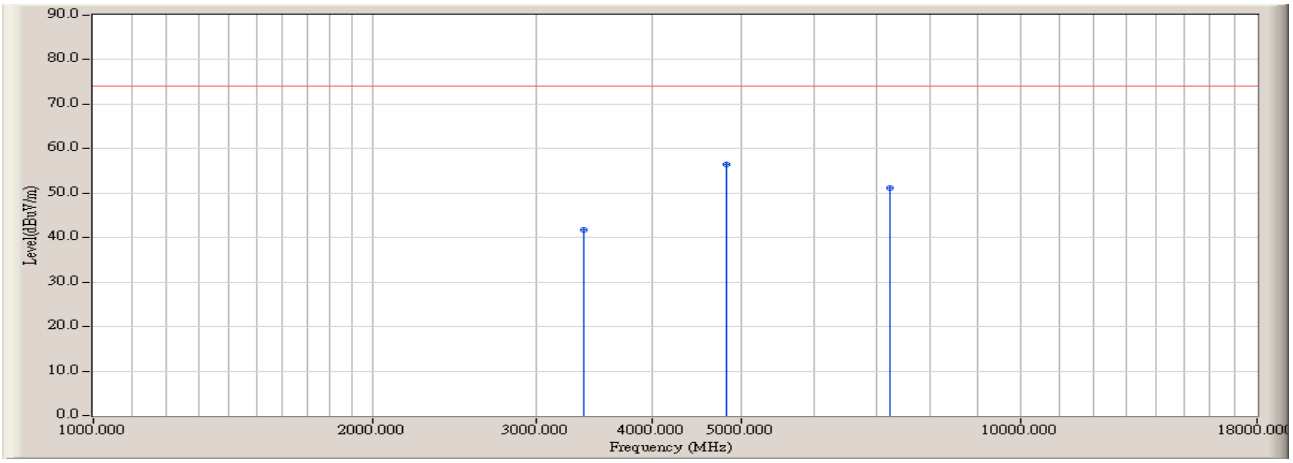


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2898.333	-0.830	28.750	27.920	-26.050	53.970	AVERAGE
2	*	4825.000	4.900	35.220	40.120	-13.850	53.970	AVERAGE
3		6808.333	14.093	20.110	34.203	-19.767	53.970	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-3	**Time : 2007/04/10 - 13:25**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : 54Mbps Wireless Builder	**Probe : 9120D_(1G-18G) - VERTICAL**
Power : AC 120V/50Hz	**Note : Mode 2: Transmit by 802.11g(2412MHz)**

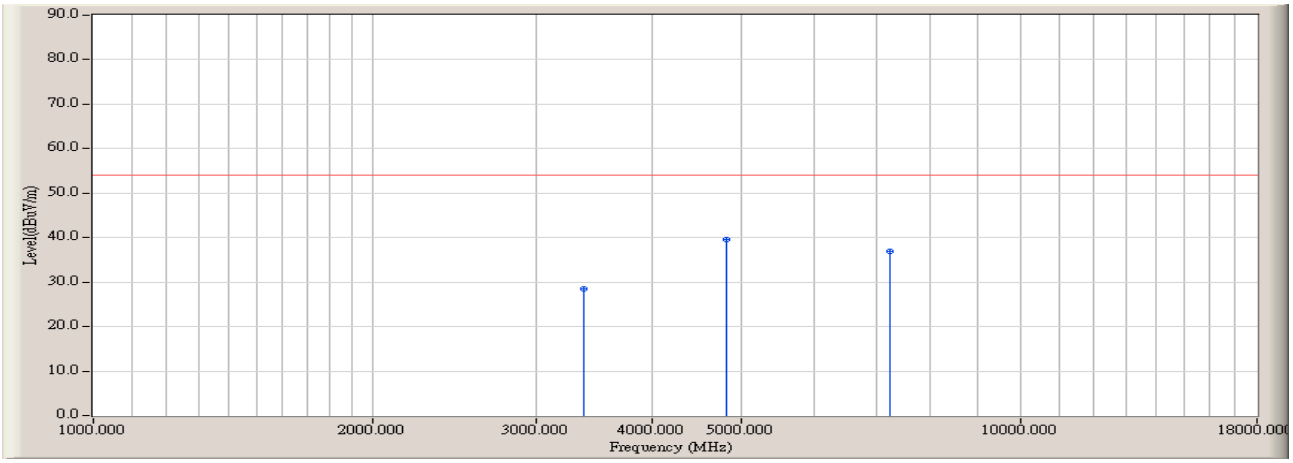


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		3380.000	-0.140	41.930	41.790	-32.180	73.970	PEAK
2	*	4825.000	4.900	51.586	56.486	-17.484	73.970	PEAK
3		7233.333	15.403	35.652	51.055	-22.915	73.970	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-3	**Time : 2007/04/10 - 13:25**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : 54Mbps Wireless Builder	**Probe : 9120D_(1G-18G) - VERTICAL**
Power : AC 120V/50Hz	**Note : Mode 2: Transmit by 802.11g(2412MHz)**

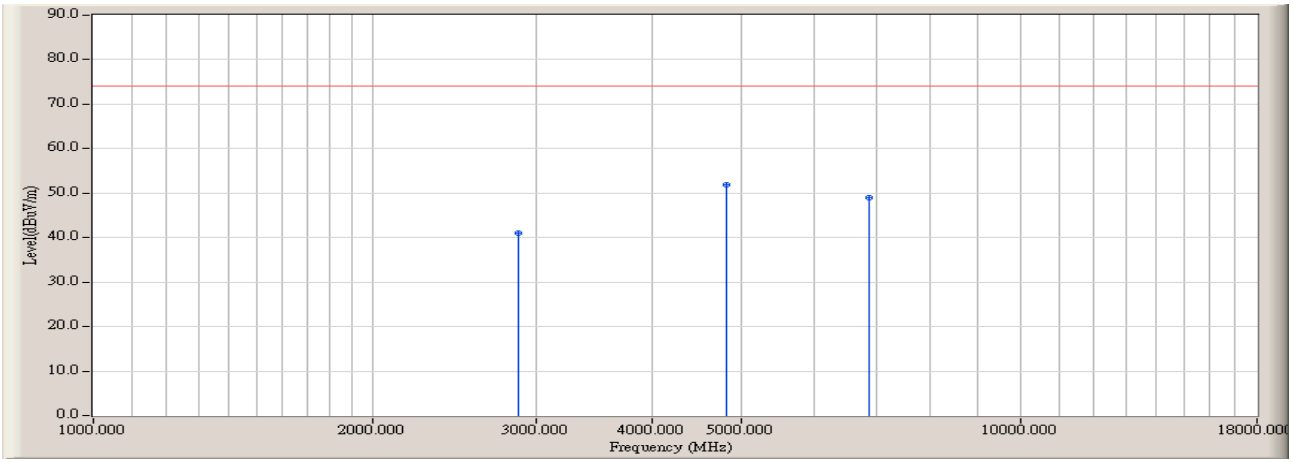


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		3380.000	-0.140	28.664	28.524	-25.446	53.970	AVERAGE
2	*	4825.000	4.900	34.760	39.660	-14.310	53.970	AVERAGE
3		7233.333	15.403	21.490	36.893	-17.077	53.970	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-3	**Time : 2007/04/10 - 13:33**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : 54Mbps Wireless Builder	**Probe : 9120D_(1G-18G) - HORIZONTAL**
Power : AC 120V/50Hz	**Note : Mode 2: Transmit by 802.11g(2437MHz)**

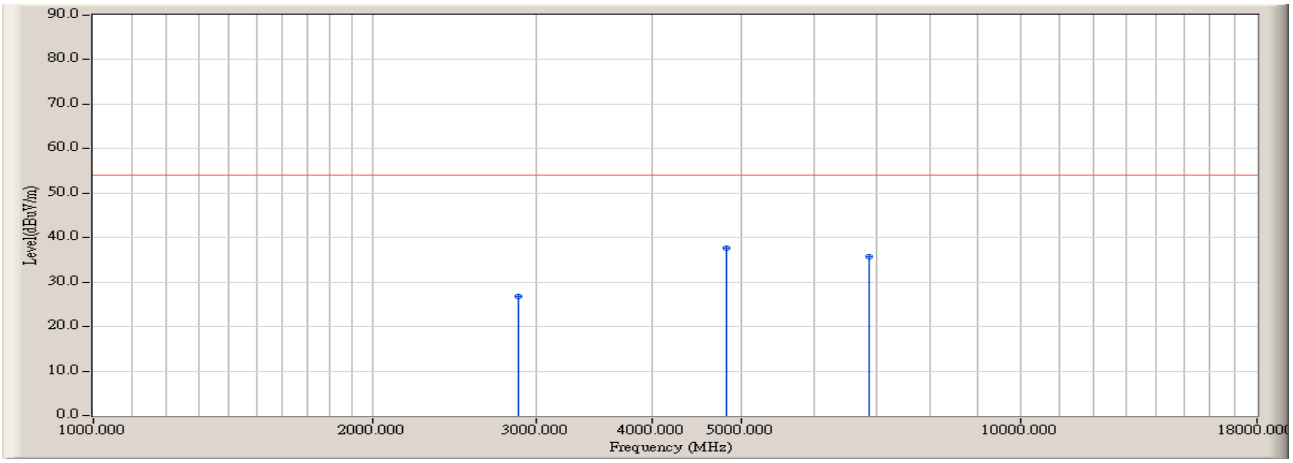


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2870.000	-0.890	41.853	40.963	-33.007	73.970	PEAK
2	*	4825.000	4.900	46.858	51.758	-22.212	73.970	PEAK
3		6865.000	14.260	34.780	49.040	-24.930	73.970	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-3	**Time : 2007/04/10 - 13:33**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : 54Mbps Wireless Builder	**Probe : 9120D_(1G-18G) - HORIZONTAL**
Power : AC 120V/50Hz	**Note : Mode 2: Transmit by 802.11g(2437MHz)**

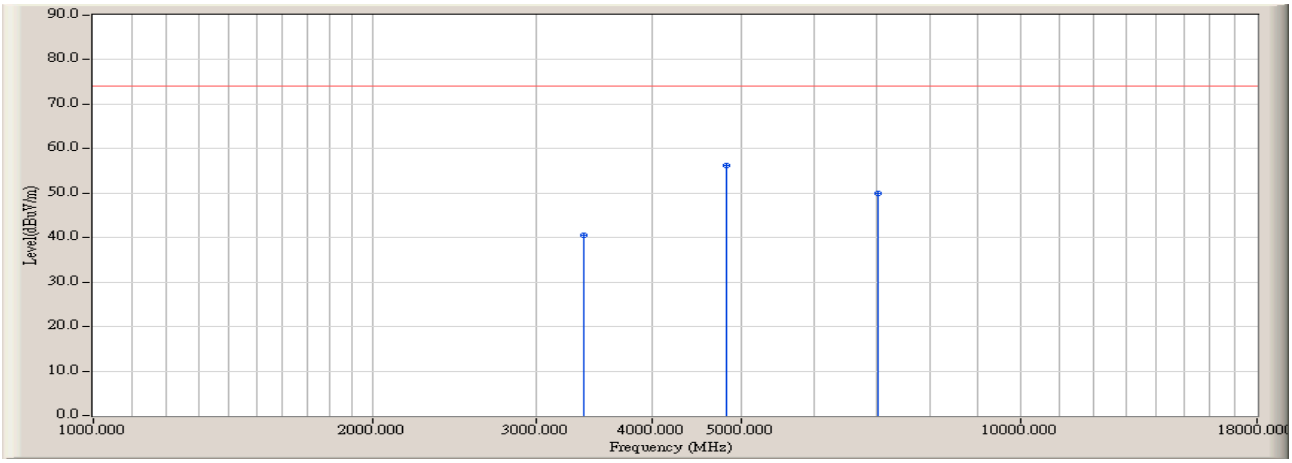


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2870.000	-0.890	27.669	26.779	-27.191	53.970	AVERAGE
2	*	4825.000	4.900	32.665	37.565	-16.405	53.970	AVERAGE
3		6865.000	14.260	21.360	35.620	-18.350	53.970	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-3	**Time : 2007/04/10 - 13:38**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : 54Mbps Wireless Builder	**Probe : 9120D_(1G-18G) - VERTICAL**
Power : AC 120V/50Hz	**Note : Mode 2: Transmit by 802.11g(2437MHz)**

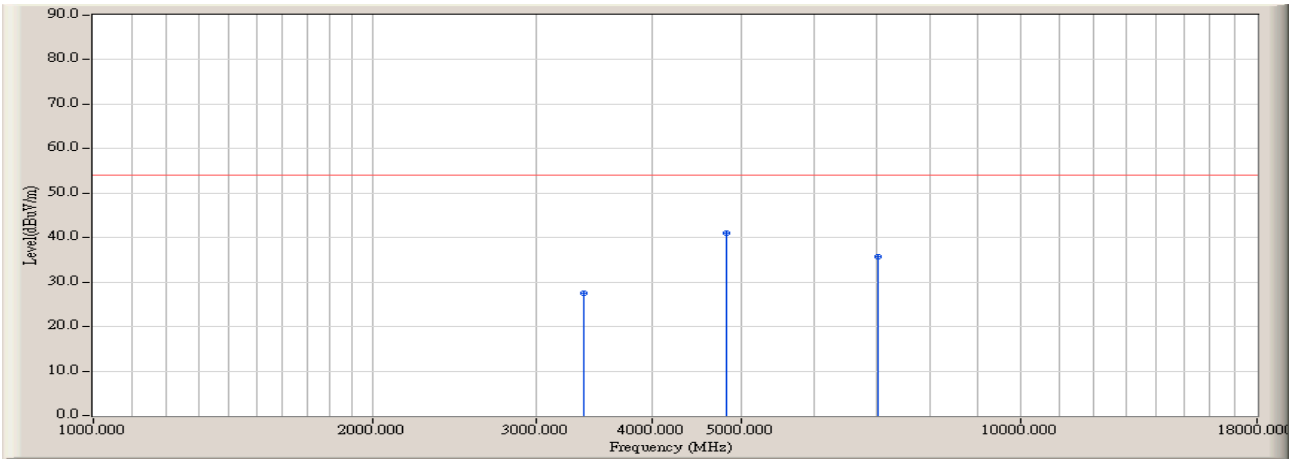


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		3380.000	-0.140	40.691	40.551	-33.419	73.970	PEAK
2	*	4825.000	4.900	51.327	56.227	-17.743	73.970	PEAK
3		7035.000	14.790	35.184	49.974	-23.996	73.970	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-3	**Time : 2007/04/10 - 13:38**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : 54Mbps Wireless Builder	**Probe : 9120D_(1G-18G) - VERTICAL**
Power : AC 120V/50Hz	**Note : Mode 2: Transmit by 802.11g(2437MHz)**

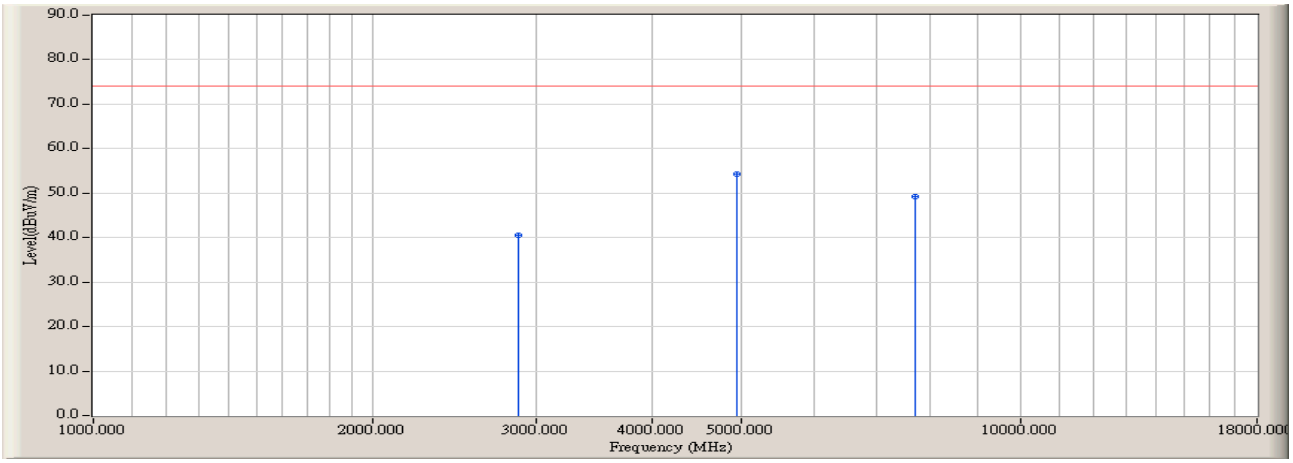


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		3380.000	-0.140	27.665	27.525	-26.445	53.970	AVERAGE
2	*	4825.000	4.900	36.002	40.902	-13.068	53.970	AVERAGE
3		7035.000	14.790	21.008	35.798	-18.172	53.970	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-3	**Time : 2007/04/10 - 13:44**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : 54Mbps Wireless Builder	**Probe : 9120D_(1G-18G) - HORIZONTAL**
Power : AC 120V/50Hz	**Note : Mode 2: Transmit by 802.11g(2462MHz)**

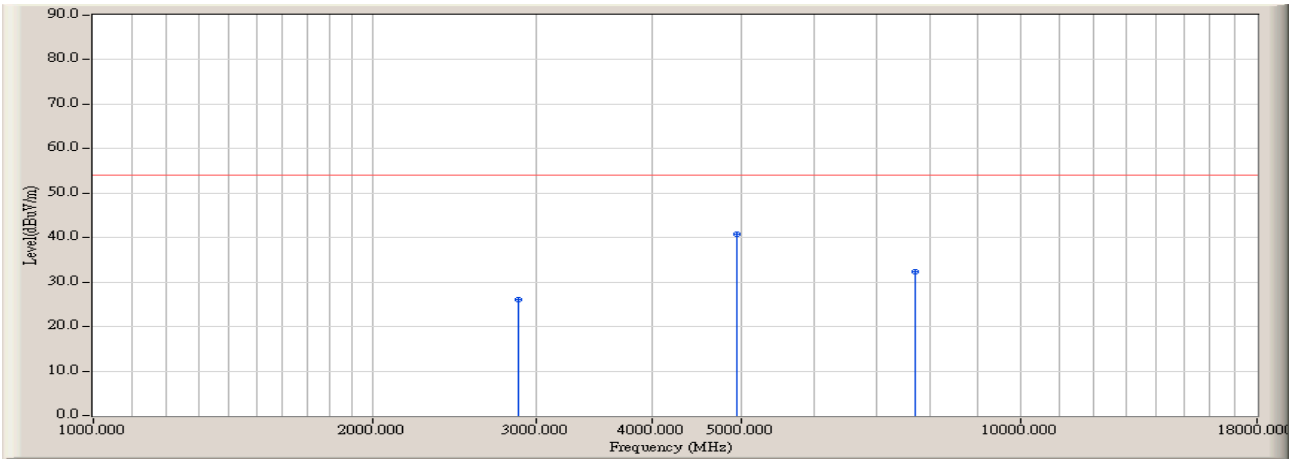


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2870.000	-0.890	41.312	40.422	-33.548	73.970	PEAK
2	*	4938.333	5.169	49.219	54.389	-19.581	73.970	PEAK
3		7715.000	14.380	34.838	49.218	-24.752	73.970	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-3	**Time : 2007/04/10 - 13:44**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : 54Mbps Wireless Builder	**Probe : 9120D_(1G-18G) - HORIZONTAL**
Power : AC 120V/50Hz	**Note : Mode 2: Transmit by 802.11g(2462MHz)**

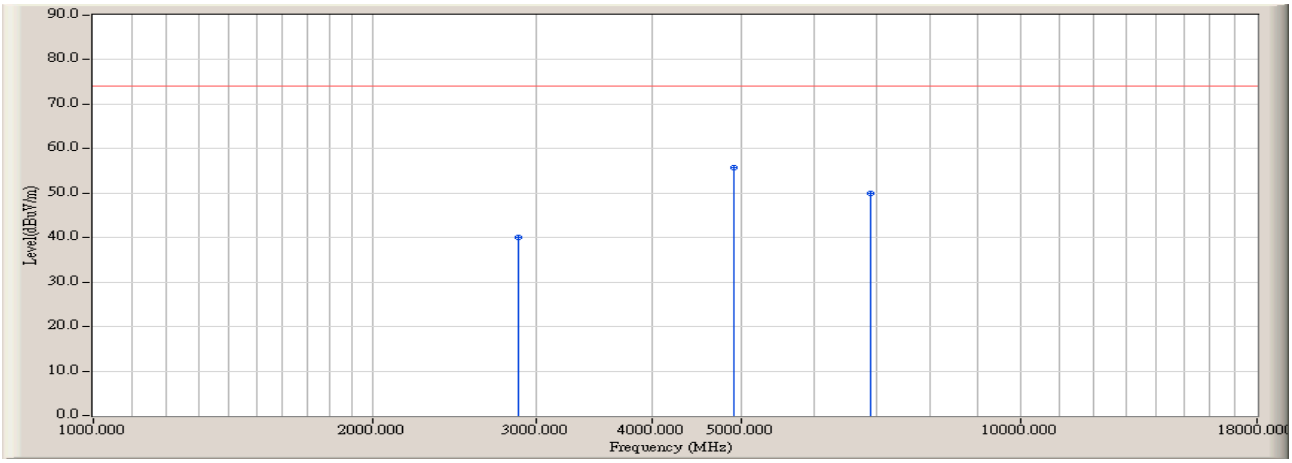


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2870.000	-0.890	26.870	25.980	-27.990	53.970	AVERAGE
2	*	4938.333	5.169	35.670	40.840	-13.130	53.970	AVERAGE
3		7715.000	14.380	17.950	32.330	-21.640	53.970	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-3	**Time : 2007/04/10 - 13:48**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : 54Mbps Wireless Builder	**Probe : 9120D_(1G-18G) - VERTICAL**
Power : AC 120V/50Hz	**Note : Mode 2: Transmit by 802.11g(2462MHz)**

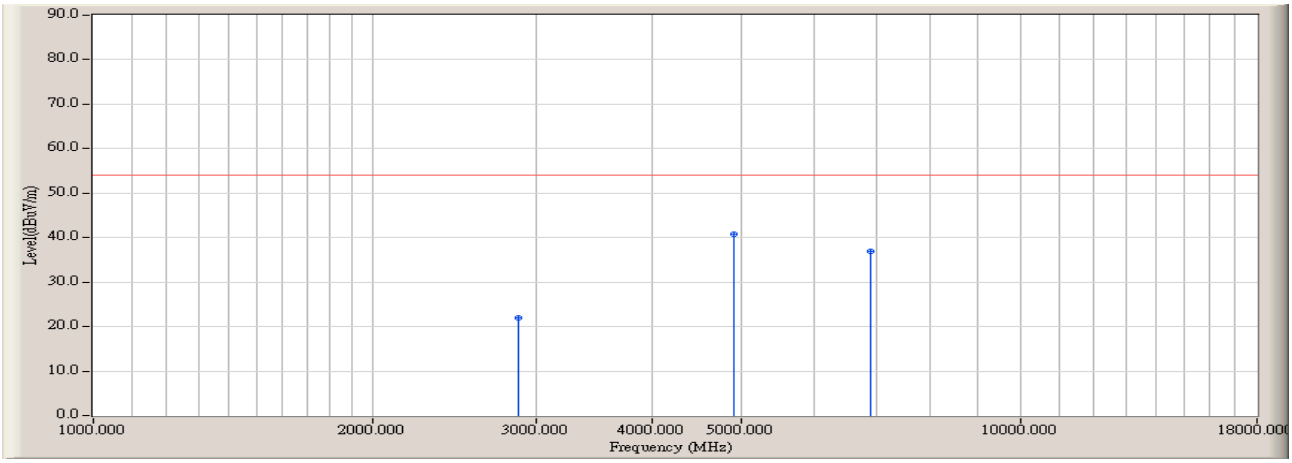


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2870.000	-0.890	40.871	39.981	-33.989	73.970	PEAK
2	*	4910.000	5.100	50.660	55.760	-18.210	73.970	PEAK
3		6893.333	14.340	35.624	49.964	-24.006	73.970	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-3	**Time : 2007/04/10 - 13:48**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : 54Mbps Wireless Builder	**Probe : 9120D_(1G-18G) - VERTICAL**
Power : AC 120V/50Hz	**Note : Mode 2: Transmit by 802.11g(2462MHz)**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2870.000	-0.890	22.850	21.960	-32.010	53.970	AVERAGE
2	*	4910.000	5.100	35.620	40.720	-13.250	53.970	AVERAGE
3		6893.333	14.340	22.640	36.980	-16.990	53.970	AVERAGE

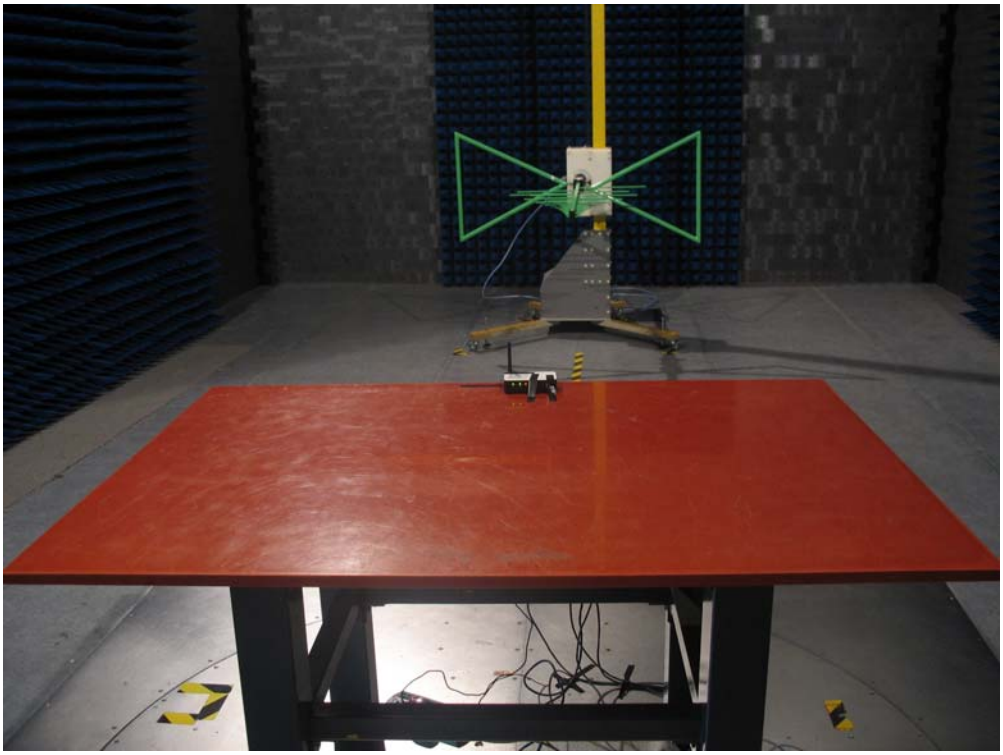
Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

4.7. Test Photograph

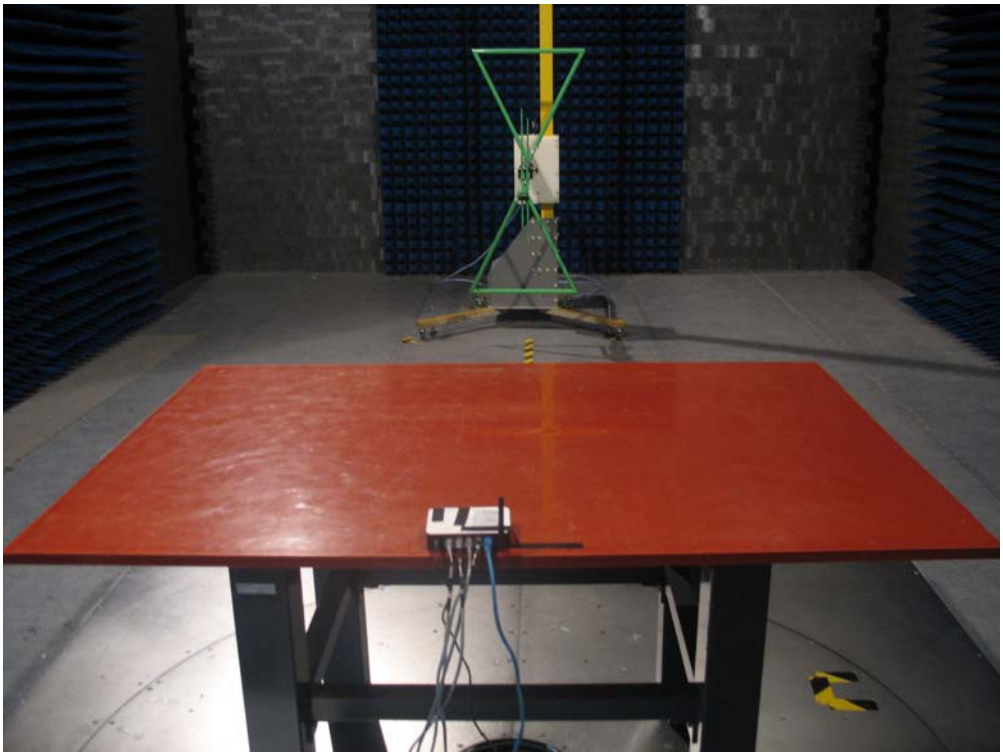
Test Mode: Mode 1: Transmit by 802.11b

Description: Front View of Radiated Test for Under 1GHz



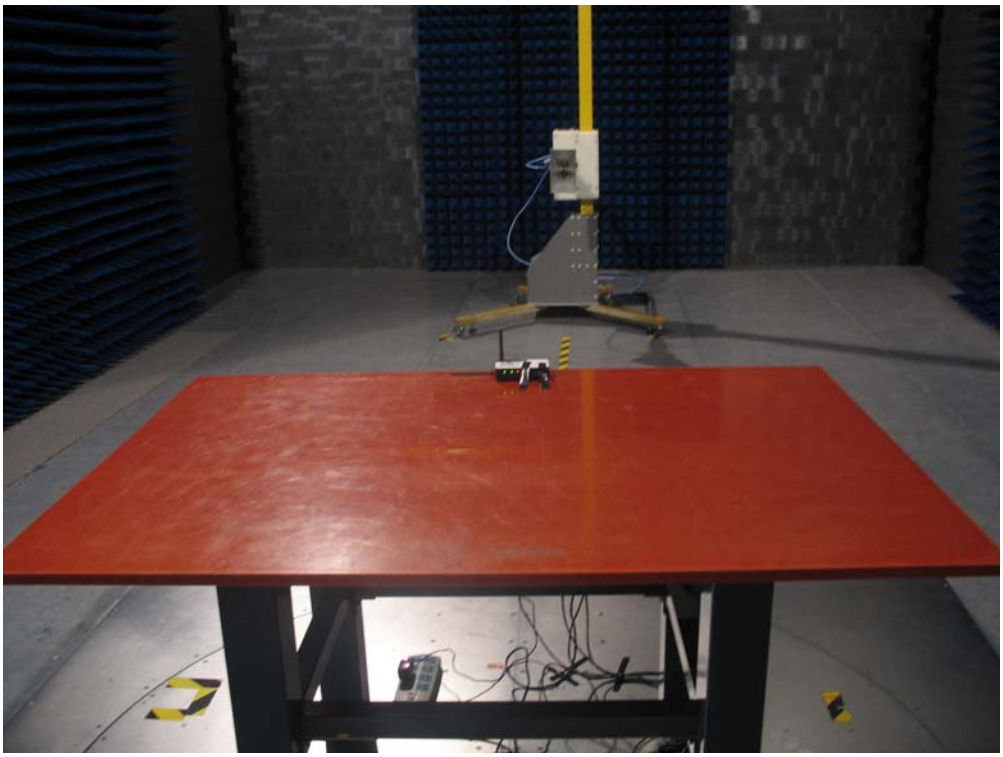
Test Mode: Mode 1: Transmit by 802.11b

Description: Back View of Radiated Test for Under 1GHz



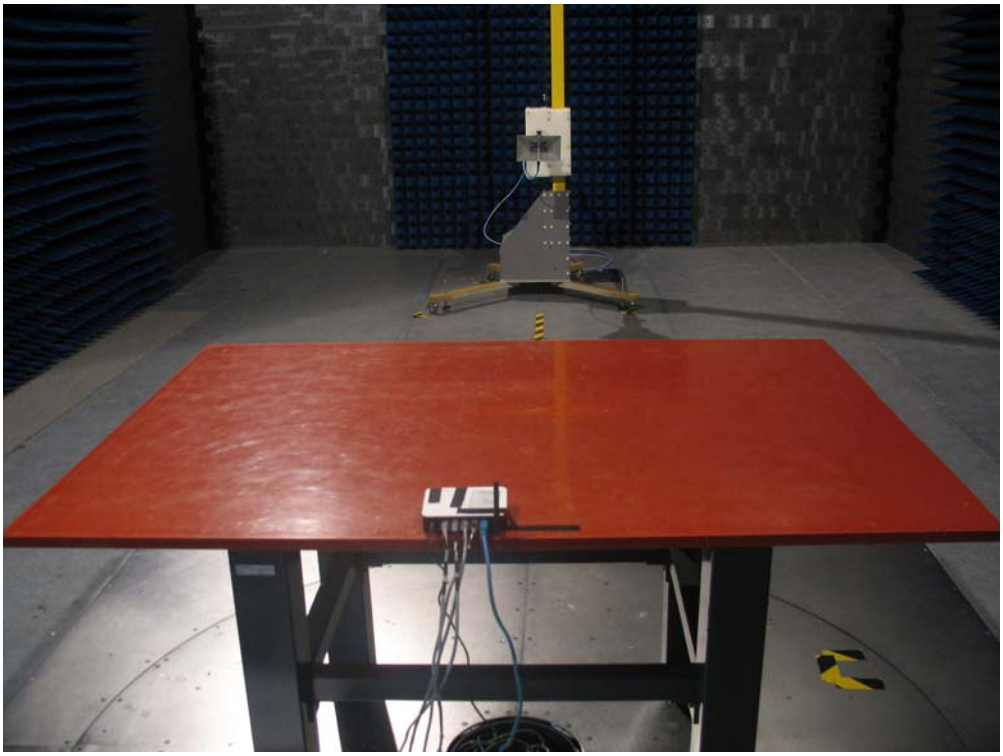
Test Mode: Mode 1: Transmit by 802.11b

Description: Front View of Radiated Test for Above 1GHz



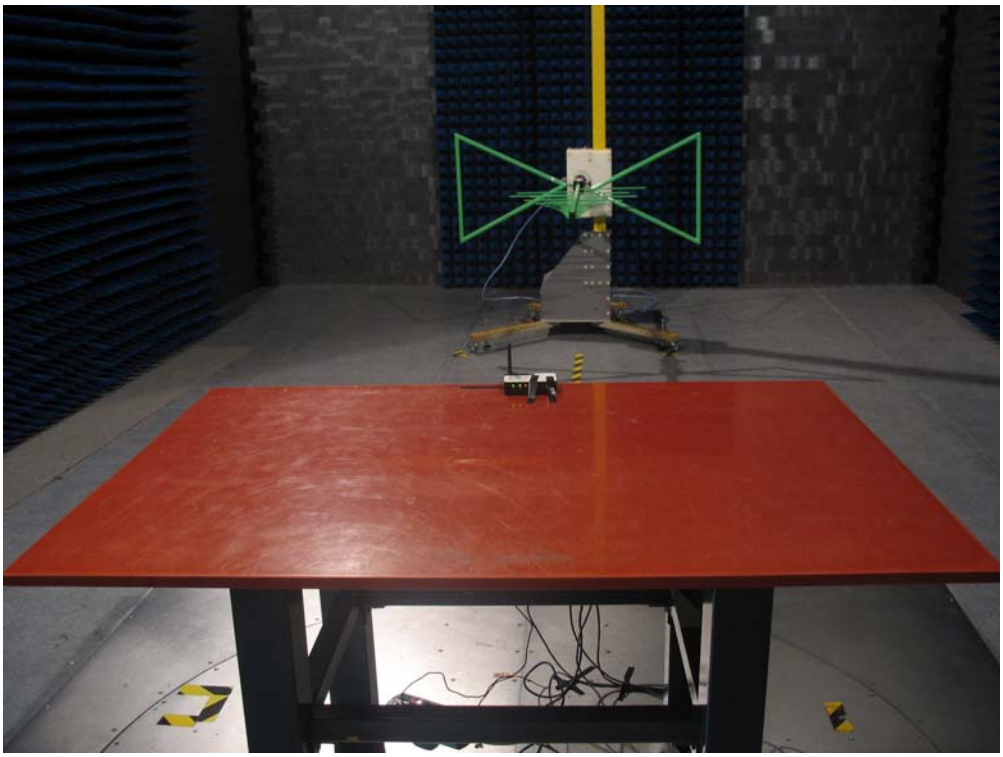
Test Mode: Mode 1: Transmit by 802.11b

Description: Back View of Radiated Test for Above 1GHz



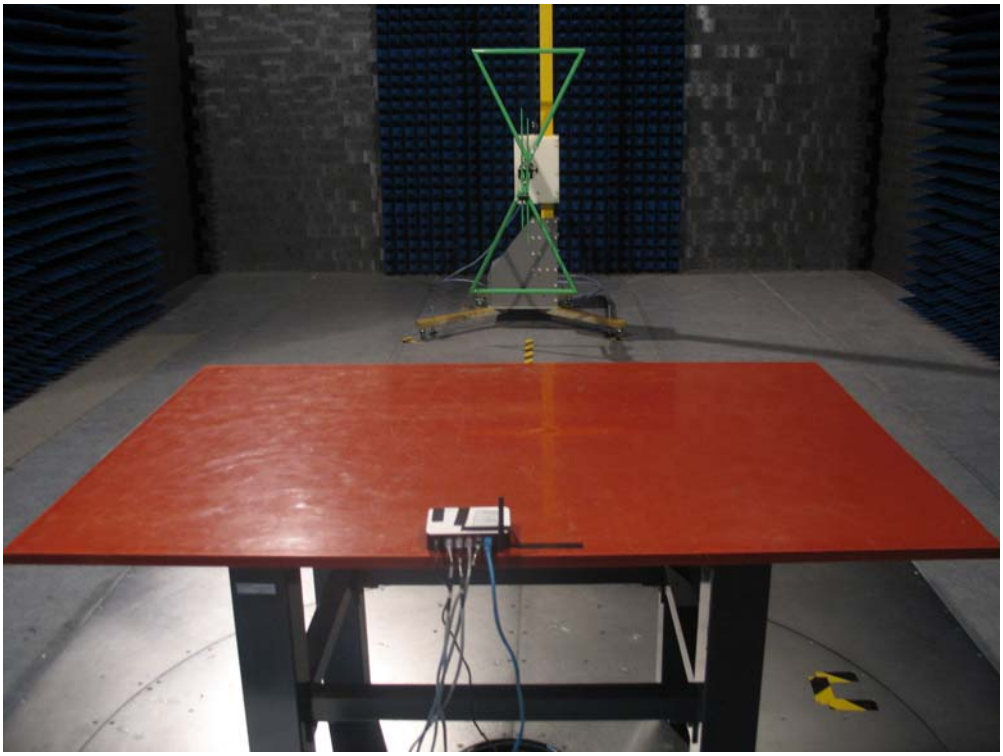
Test Mode: Mode 2: Transmit by 802.11g

Description: Front View of Radiated Test for Under 1GHz



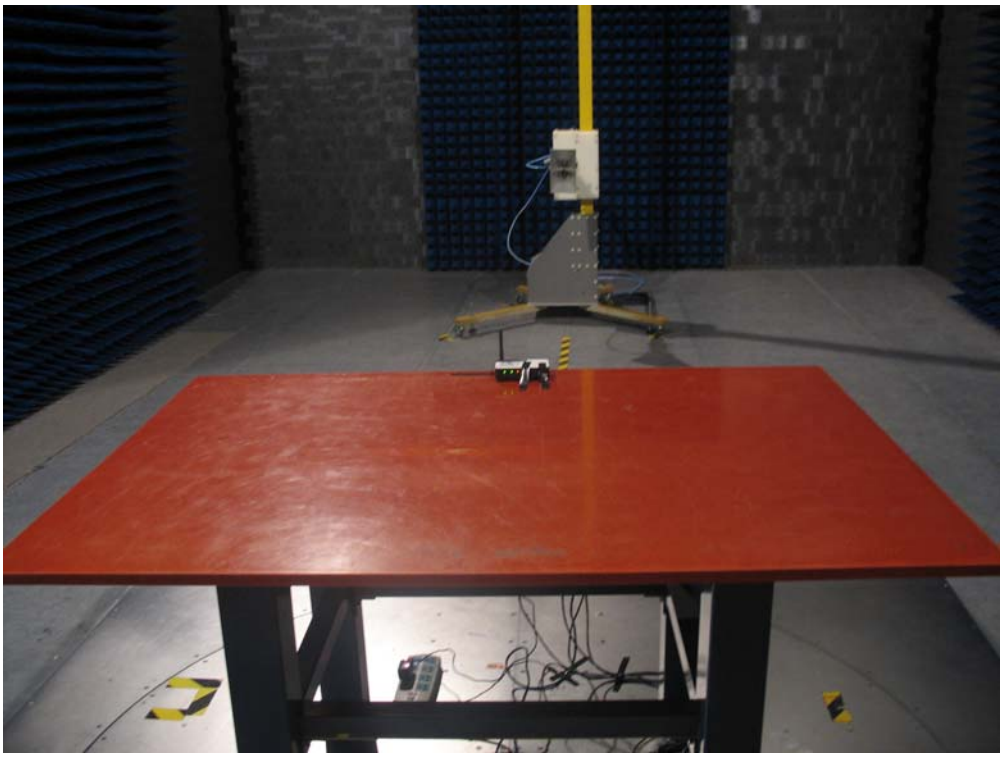
Test Mode: Mode 2: Transmit by 802.11g

Description: Back View of Radiated Test for Under 1GHz



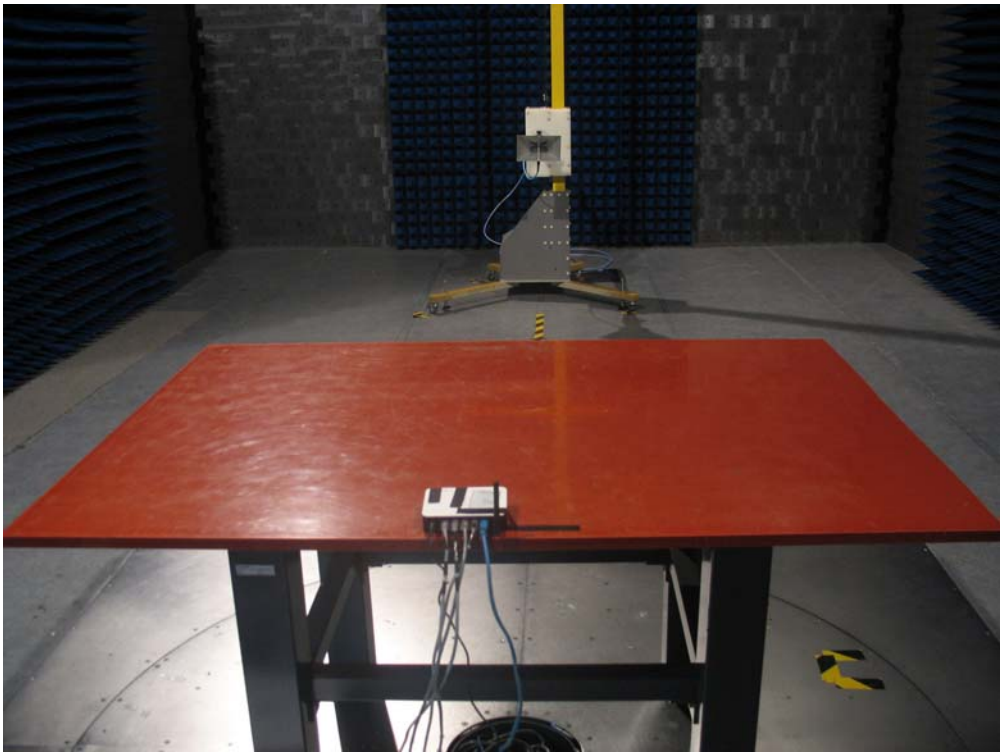
Test Mode: Mode 2: Transmit by 802.11g

Description: Front View of Radiated Test for Above 1GHz



Test Mode: Mode 2: Transmit by 802.11g

Description: Back View of Radiated Test for Above 1GHz



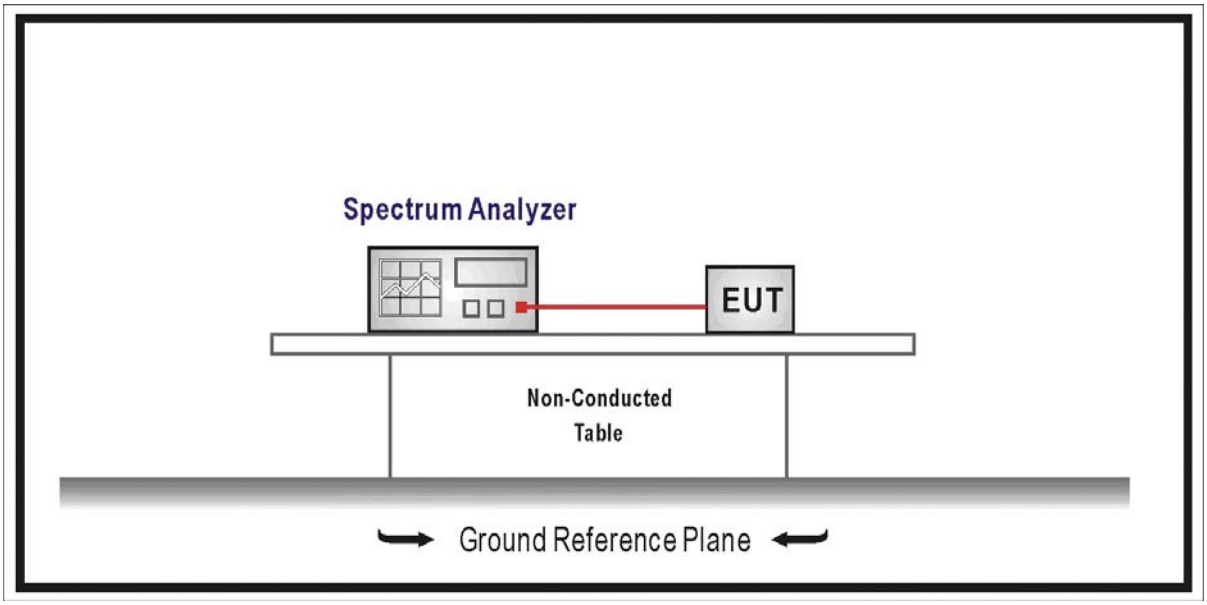
5. Conducted Spurious At Antenna Terminals

5.1. Test Equipment

Radiated Emission / AC-3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2007/06/11
Coaxial Cable	Huber+Suhner	AC3-RF	08	2006/11/25
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH003	2007/03/31

5.2. Test Setup



5.3. Limit

N/A

5.4. Test Procedure

a) Place the EUT on a bench and set it in transmitting mode.

b) Connect a low loss RF cable from the antenna port to a spectrum analyzer.

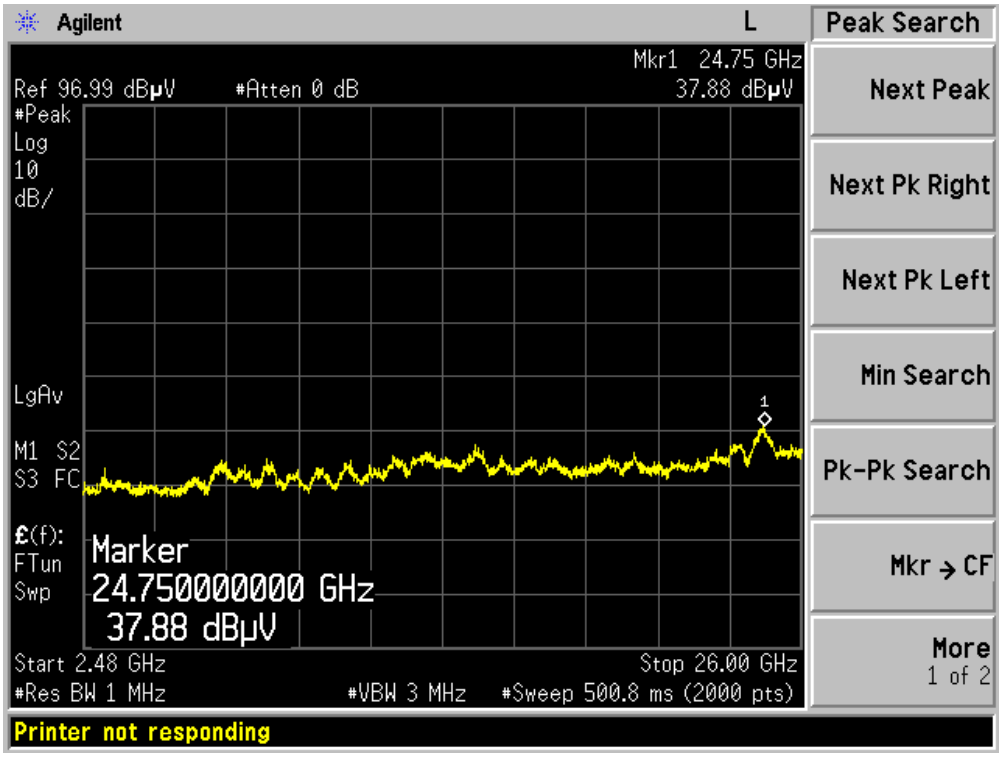
c) Add a correction factor to the display, and then test.

5.5. Uncertainty

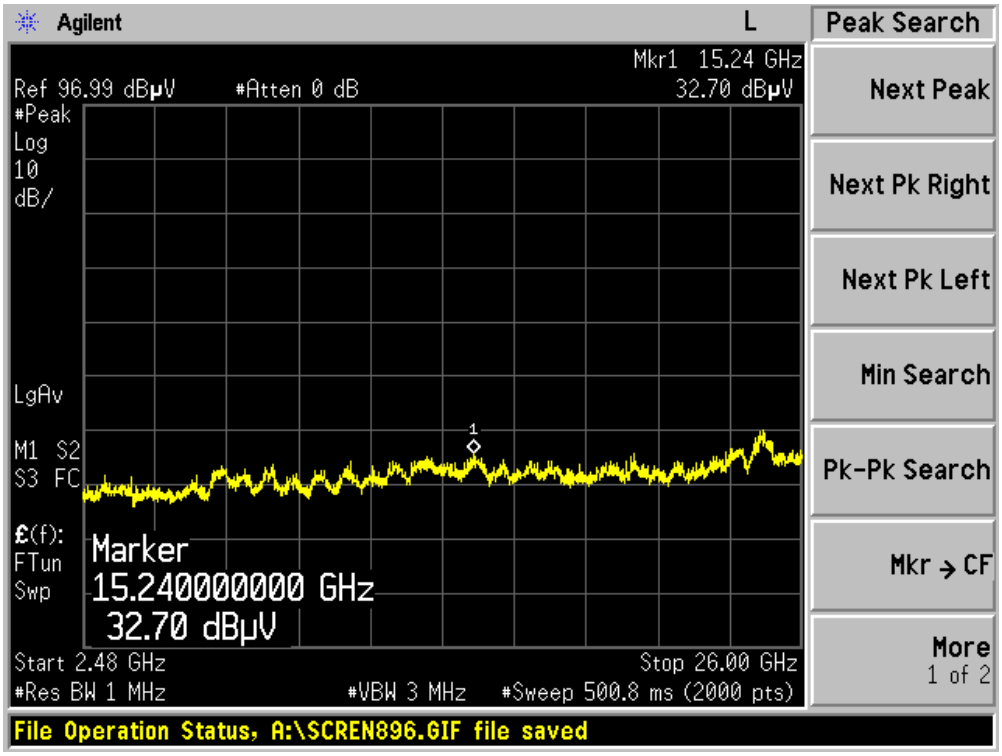
The measurement uncertainty is defined as ± 1.27 dB

5.6. Test Result

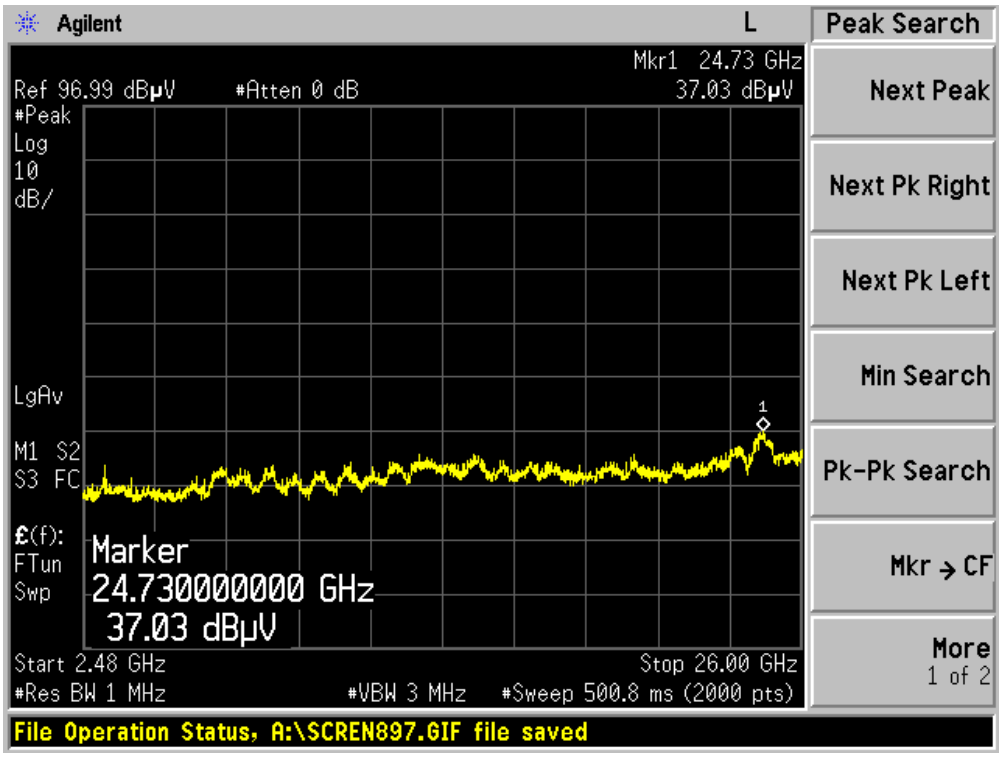
Conducted Spurious - Channel 01 (2412MHz) - 802.11b Peak



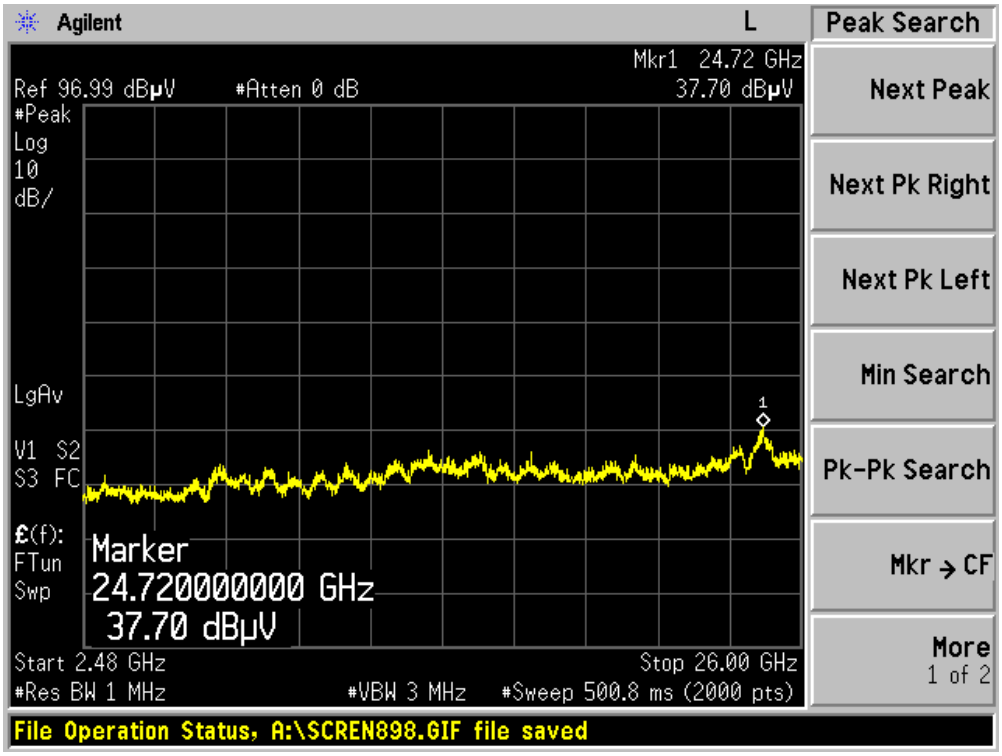
Conducted Spurious - Channel 06 (2437MHz) - 802.11b Peak



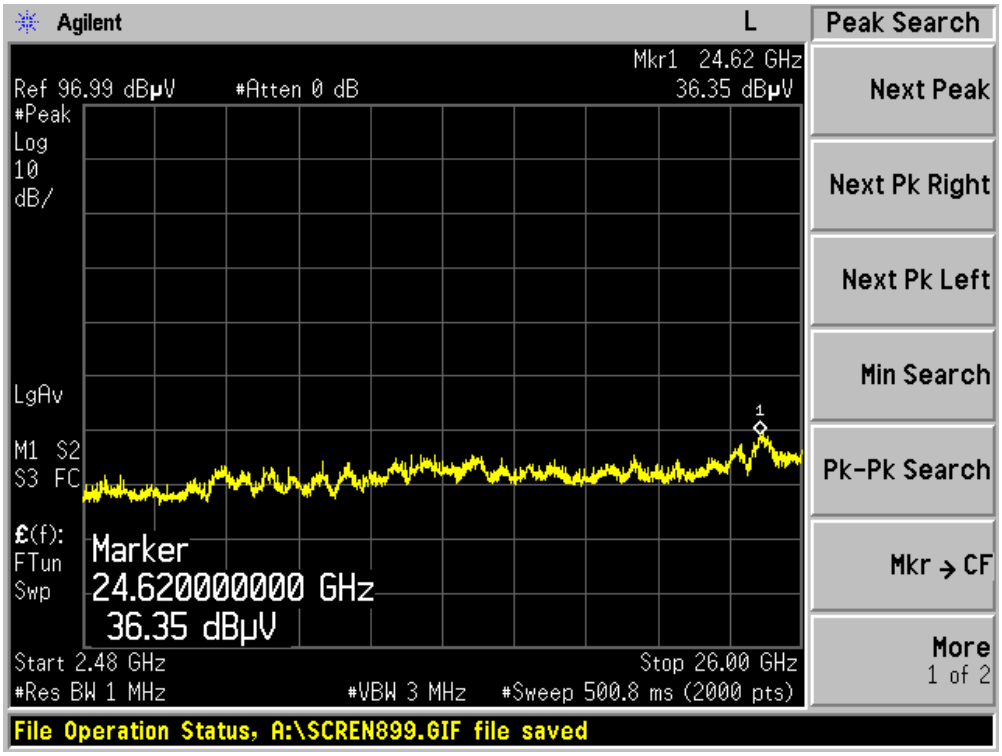
Conducted Spurious - Channel 11 (2462MHz) - 802.11b Peak



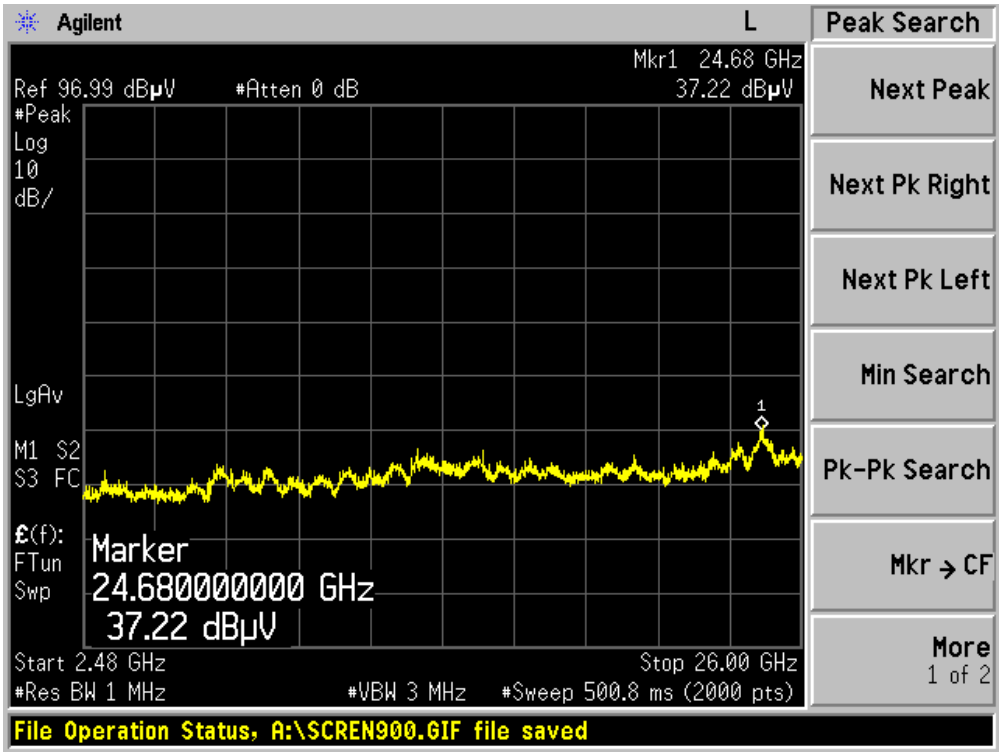
Conducted Spurious - Channel 01 (2412MHz) - 802.11g Peak



Conducted Spurious - Channel 06 (2437MHz) - 802.11g Peak



Conducted Spurious - Channel 11 (2462MHz) - 802.11g Peak



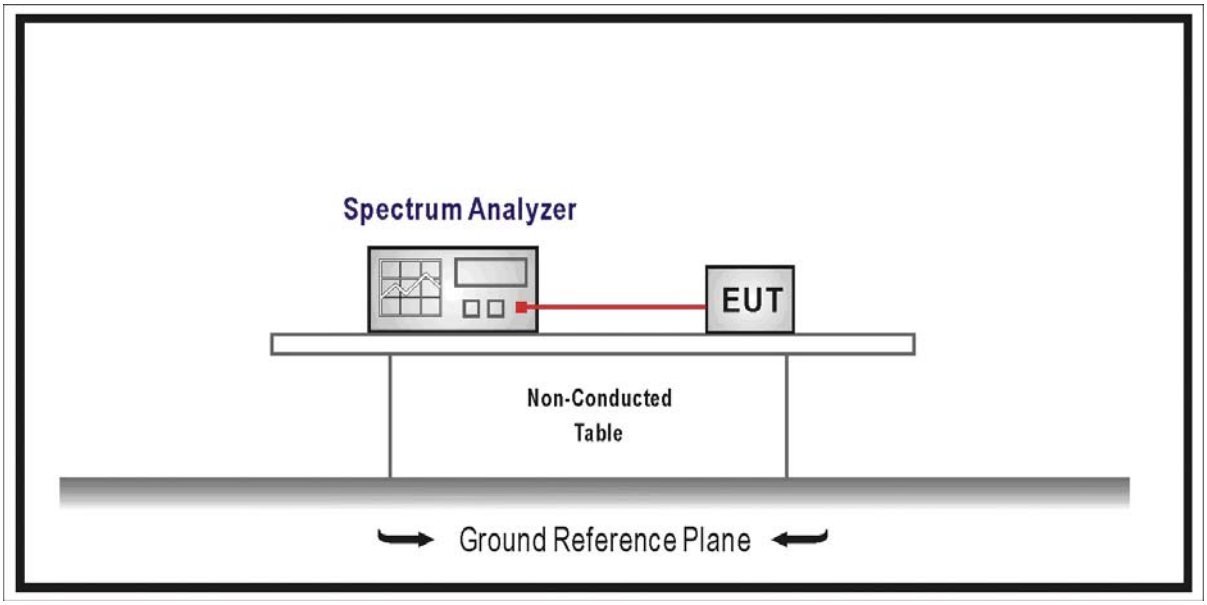
6. Peak Power Output

6.1. Test Equipment

Radiated Emission / AC-3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2007/06/11
Coaxial Cable	Huber+Suhner	AC3-RF	08	2006/11/25
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH003	2007/03/31

6.2. Test Setup



6.3. Limit

The maximum peak power shall be less 1Watt.

6.4. Test Procedure

a) Place the EUT on a bench and set it in transmitting mode.

b) Connect a low loss RF cable from the antenna port to a spectrum analyzer.

c) Add a correction factor to the display, and then test.

6.5. Uncertainty

The measurement uncertainty is defined as ± 1.27 dB

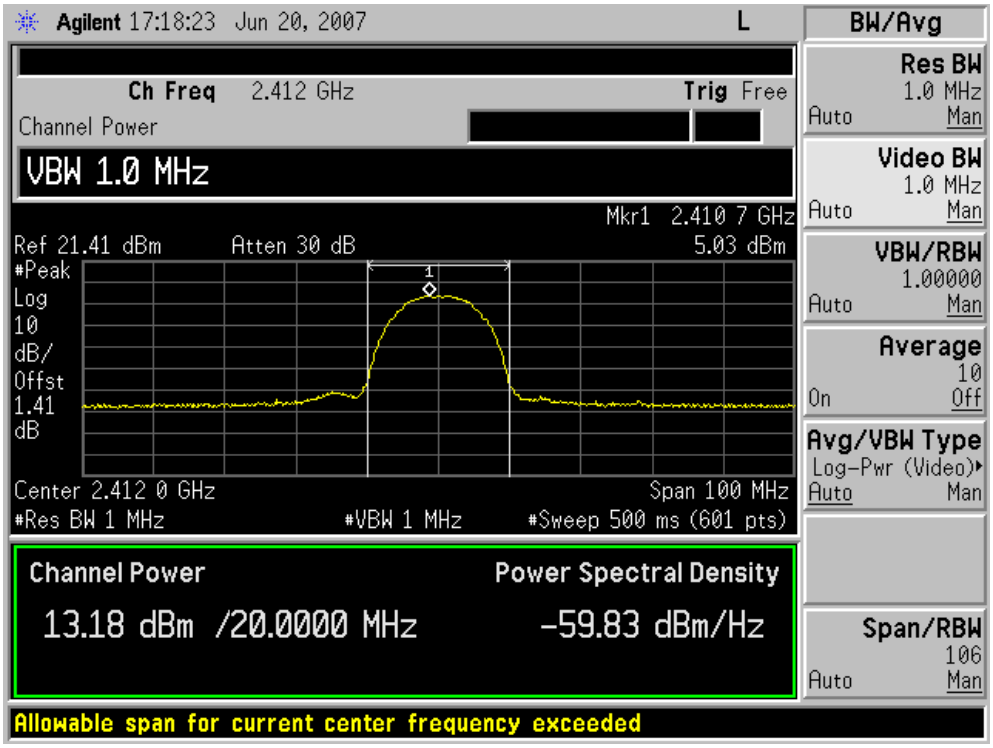
6.6. Test Result

Product	:	54Mbps Wireless Builder
Test Item	:	Peak Power Output
Test Site	:	AC-3
Test Mode	:	Mode 1: Transmitter by 802.11b

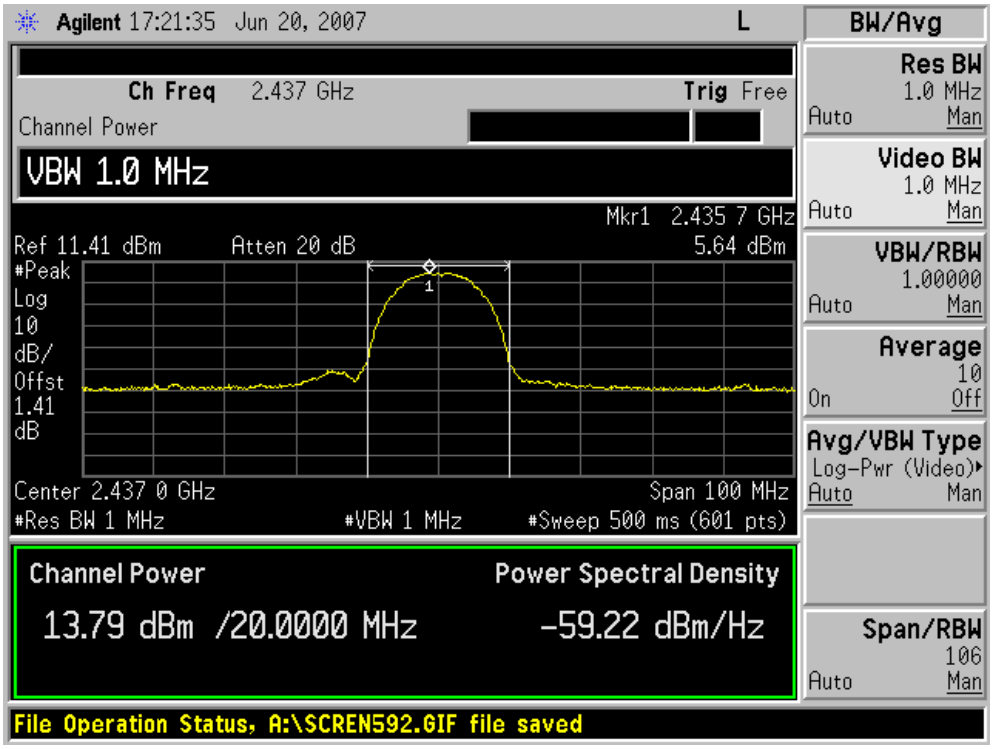
Channel No.	Frequency (MHz)	Measurement (dBm)	Required Limit (dBm)	Result
Channel 01	2412.00	13.18	1 Watt= 30 dBm	Pass
Channel 06	2437.00	13.79	1 Watt= 30 dBm	Pass
Channel 11	2462.00	13.65	1 Watt= 30 dBm	Pass

Note: We checked the RF power using all data rate (1/2/5.5/11 Mbps), and found that the RF conducted power using data rates of 1Mbps is maximum.

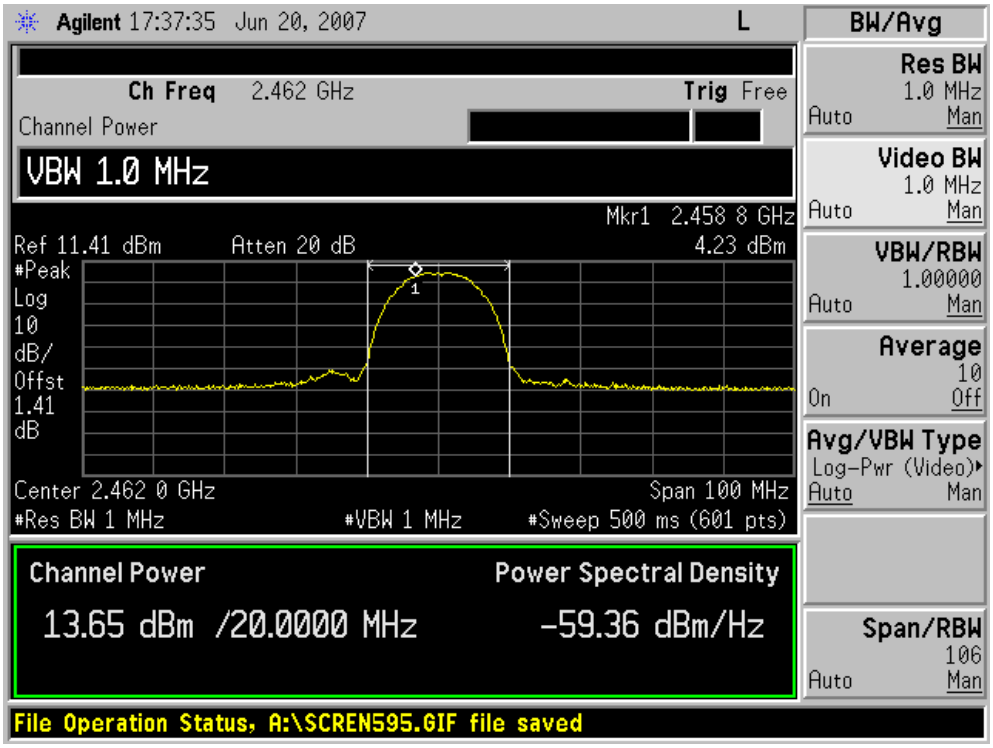
Channel 01 (2412MHz)



Channel 06 (2437MHz)



Channel 11 (2462MHz)

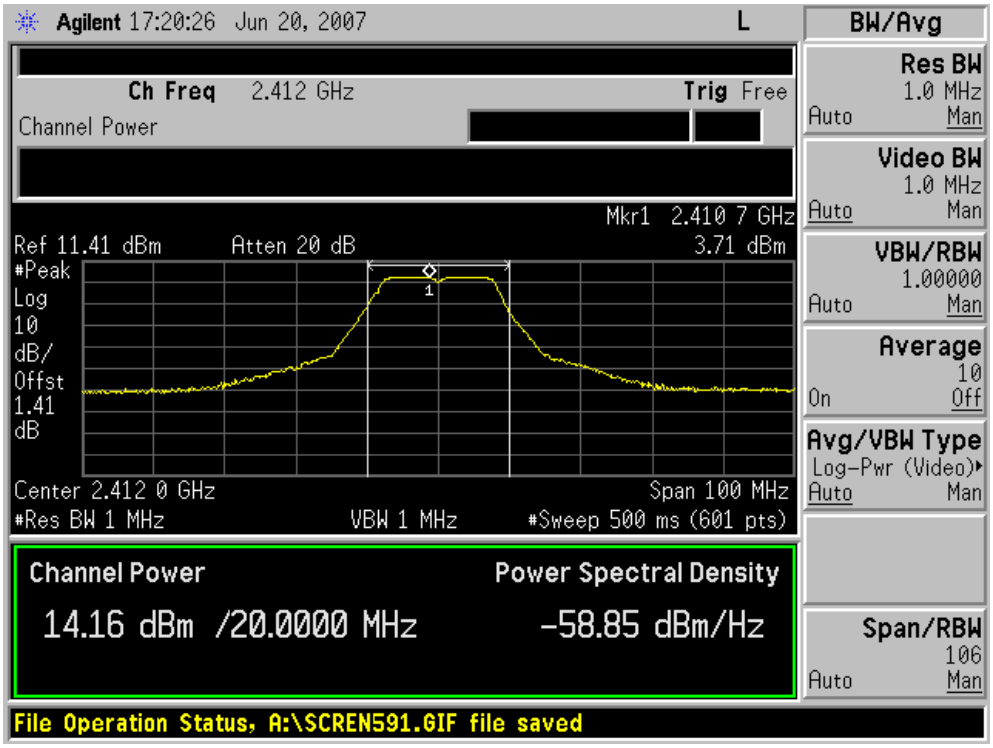


Product	:	54Mbps Wireless Builder
Test Item	:	Peak Power Output
Test Site	:	AC-3
Test Mode	:	Mode 2: Transmitter by 802.11g

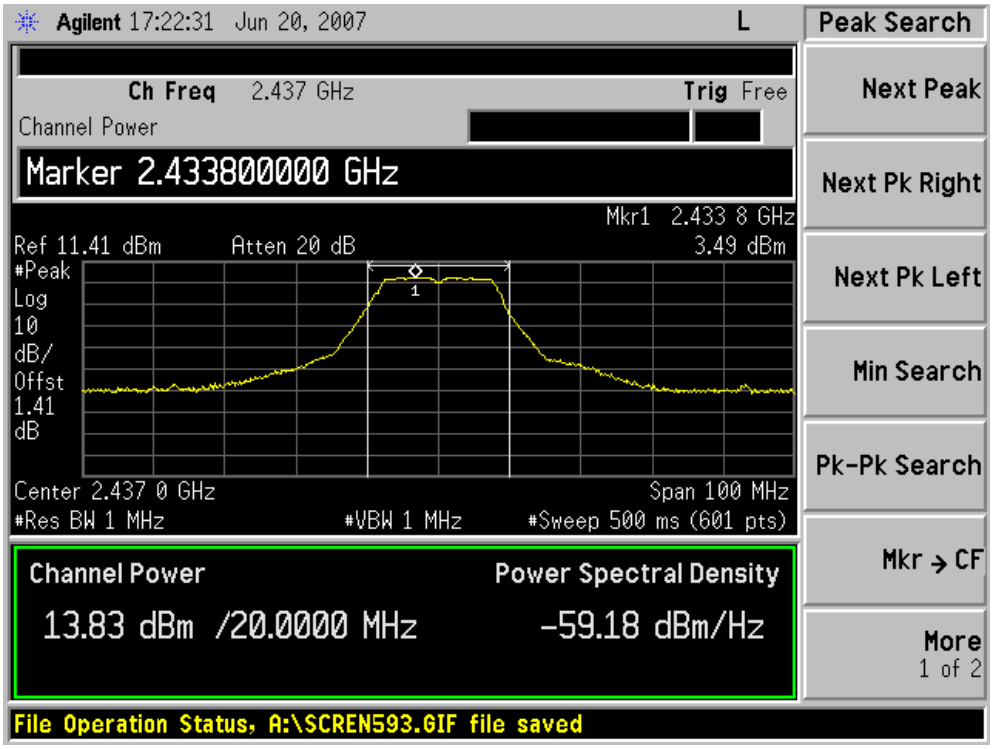
Channel No.	Frequency (MHz)	Measurement (dBm)	Required Limit (dBm)	Result
Channel 01	2412.00	14.16	1 Watt= 30 dBm	Pass
Channel 06	2437.00	13.83	1 Watt= 30 dBm	Pass
Channel 11	2462.00	15.45	1 Watt= 30 dBm	Pass

Note: We checked the RF power using all data rate (6/9/12/18/24/36/48/54 Mbps), and found that the RF conducted power using data rates of 6Mbps is maximum.

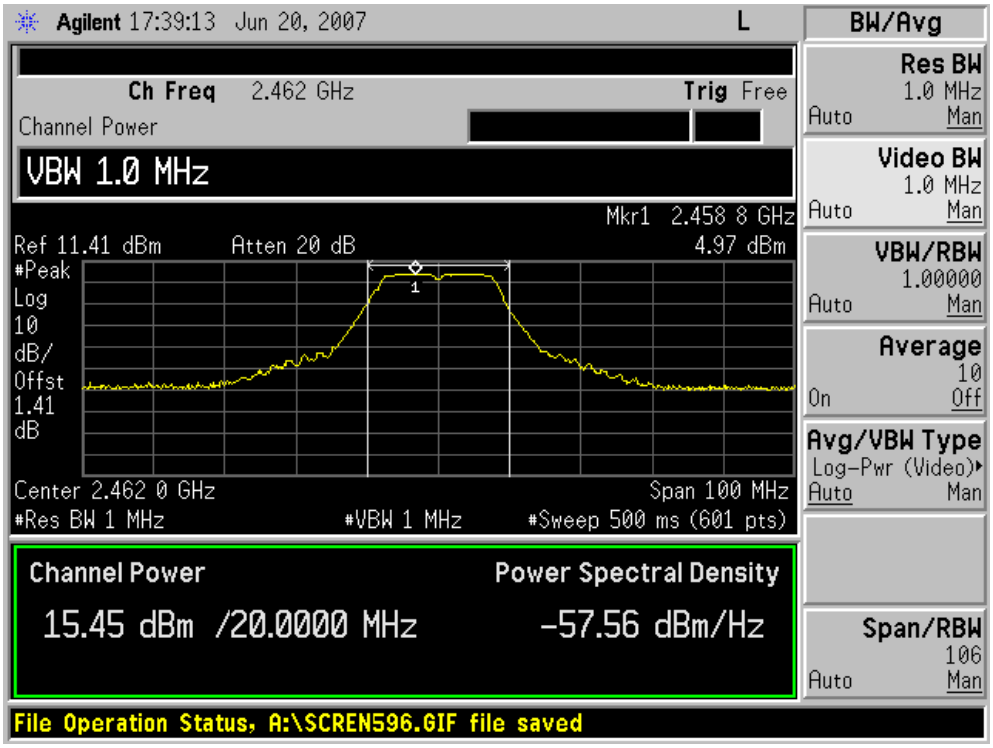
Channel 01 (2412MHz)



Channel 06 (2437MHz)



Channel 11 (2462MHz)



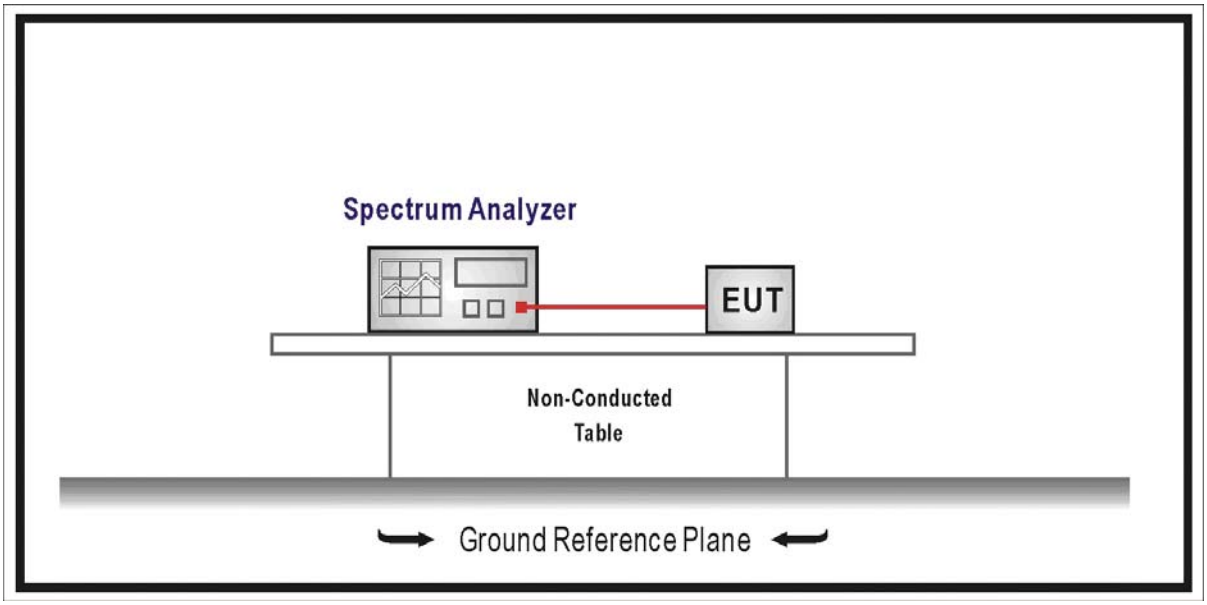
7. Occupied Bandwidth

7.1. Test Equipment

Radiated Emission / AC-3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2007/06/11
Coaxial Cable	Huber+Suhner	AC3-RF	08	2006/11/25
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH003	2007/03/31

7.2. Test Setup



7.3. Limit

Systems using digital modulation techniques may operate in the 902 – 928 MHz, 2400 – 2483.5 MHz, and 5725 5850 MHz band. The minimum 6dB bandwidth shall be at least 500 kHz.

7.4. Test Procedure

a) Place the EUT on a bench and set it in transmitting mode.

b) Connect a low loss RF cable from the antenna port to a spectrum analyzer.

c) Add a correction factor to the display, and then test.

7.5. Uncertainty

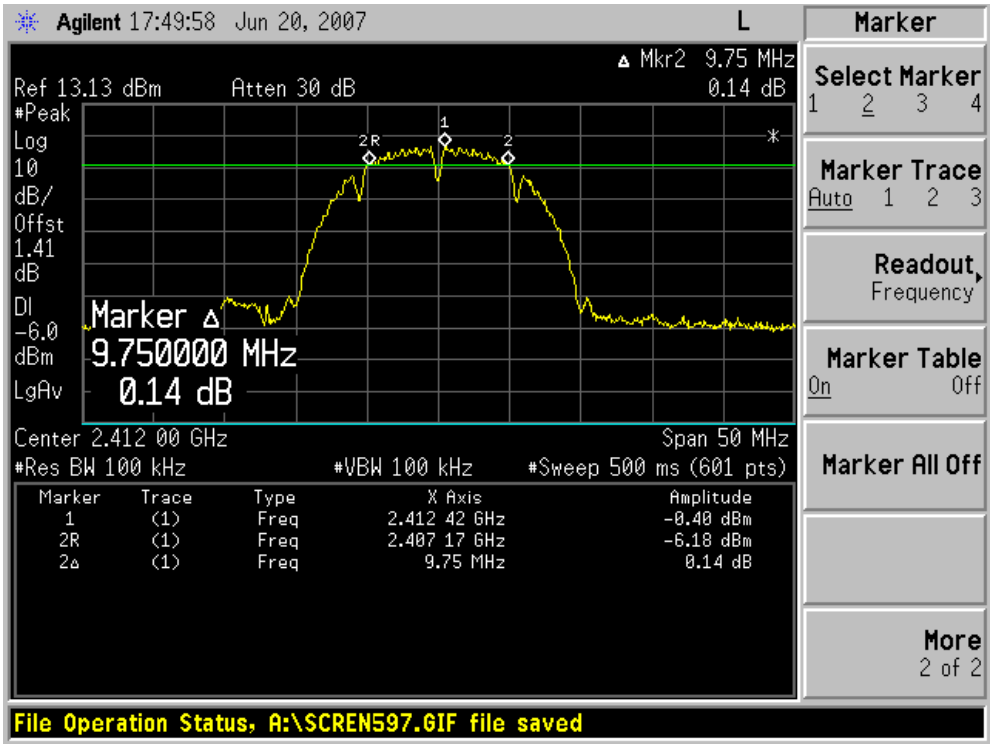
The measurement uncertainty is defined as ± 100 Hz

7.6. Test Result

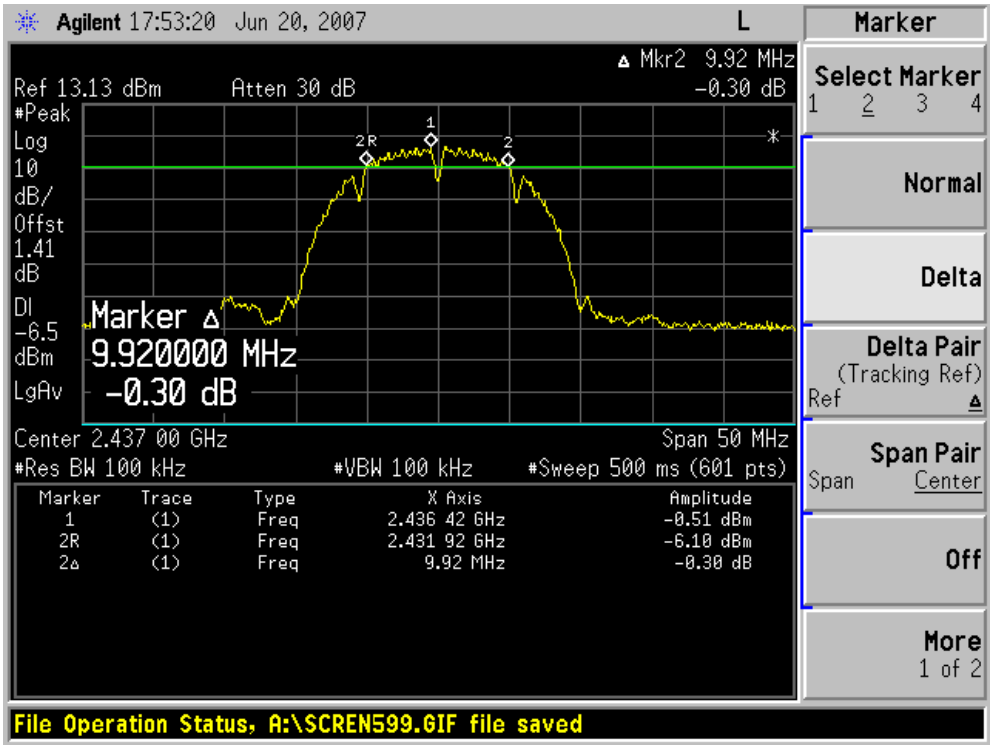
Product	:	54Mbps Wireless Builder
Test Item	:	Occupied Bandwidth
Test Site	:	AC-3
Test Mode	:	Mode 1: Transmitter by 802.11b

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
Channel 01	2412	9750	500	Pass
Channel 06	2437	9920	500	Pass
Channel 11	2462	9750	500	Pass

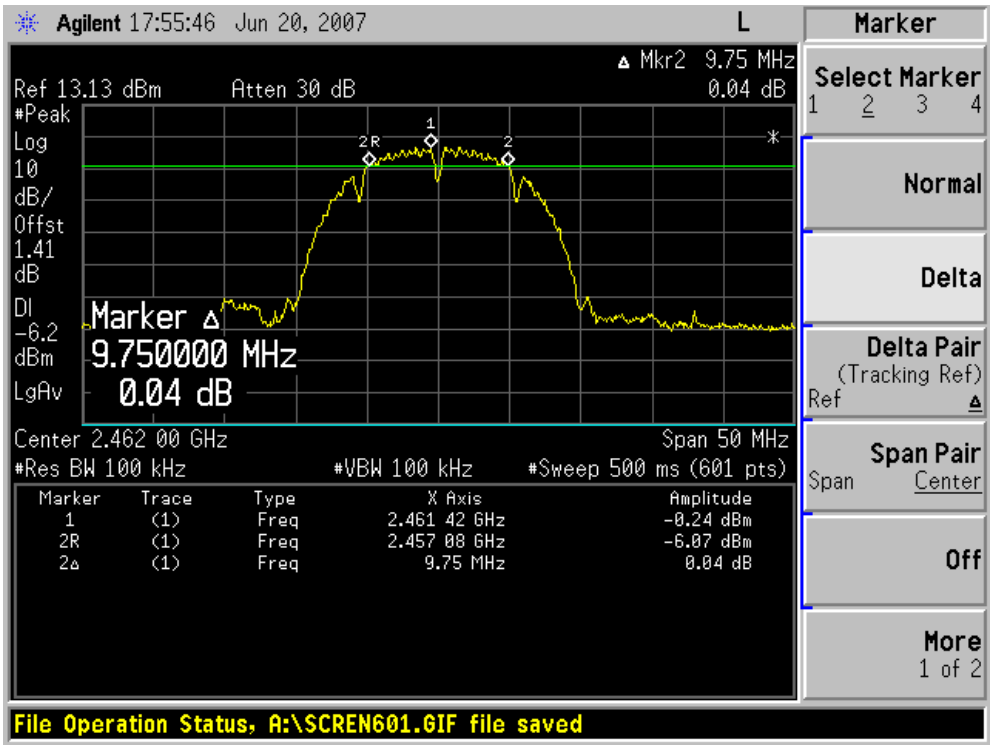
Channel 01 (2412MHz)



Channel 06 (2437MHz)



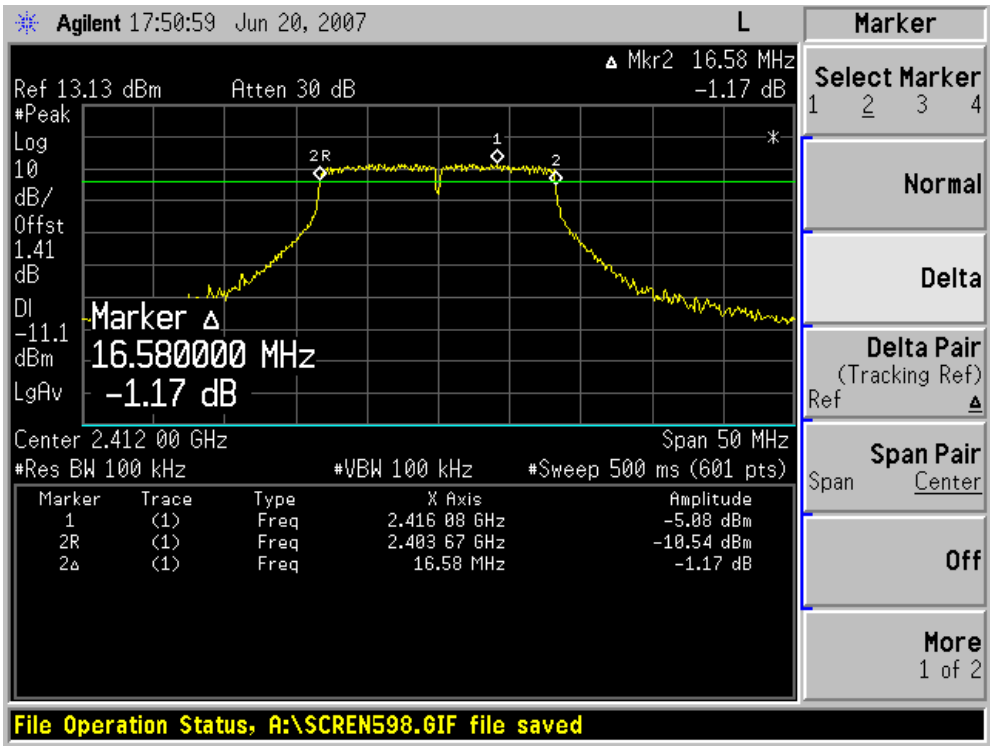
Channel 11 (2462MHz)



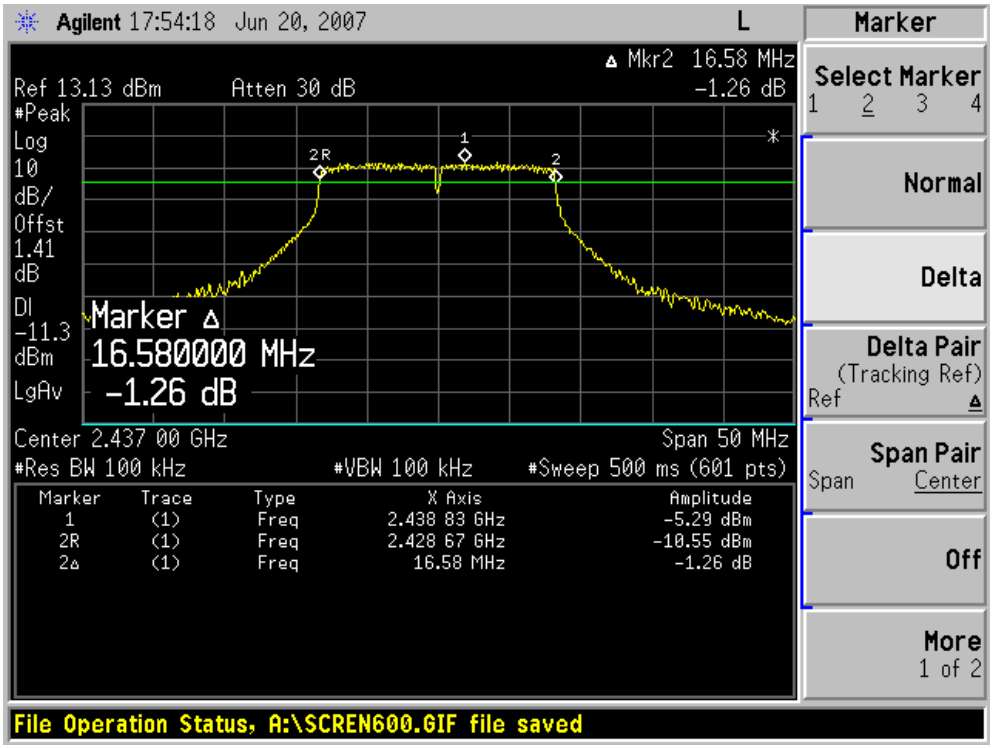
Product	:	54Mbps Wireless Builder
Test Item	:	Occupied Bandwidth
Test Site	:	AC-3
Test Mode	:	Mode 2: Transmitter by 802.11g

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
Channel 01	2412	16580	500	Pass
Channel 06	2437	16580	500	Pass
Channel 11	2462	16580	500	Pass

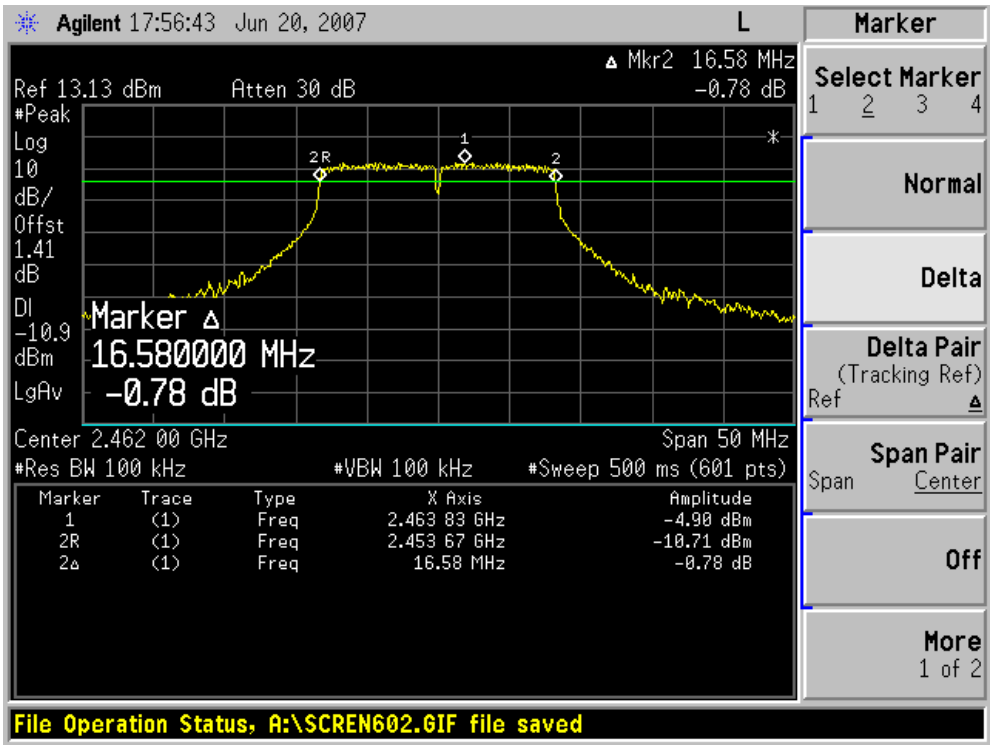
Channel 01 (2412MHz)



Channel 06 (2437MHz)



Channel 11 (2462MHz)



8. Band Edge

8.1. Test Equipment

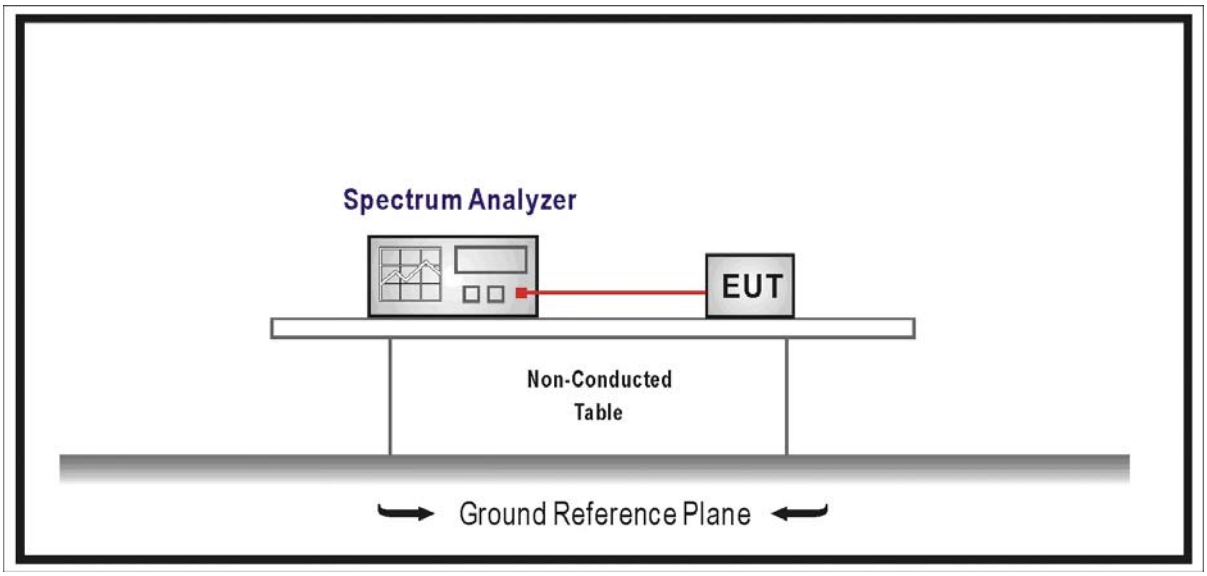
Radiated Emission / AC-2

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4408B	MY45102679	2006/11/20
Preamplifier	Quietek	AP-180C	CHM-0602013	2006/11/25
Bilog Type Antenna	Schaffner	CBL6112B	2932	2006/11/22
*Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	496	2005/11/25
50ohm Coaxial Switch	ANRITSU	MP59B	6200447304	2006/11/25
Coaxial Cable	Huber+Suhner	AC2-C	04	2006/11/25
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH002	2007/03/30

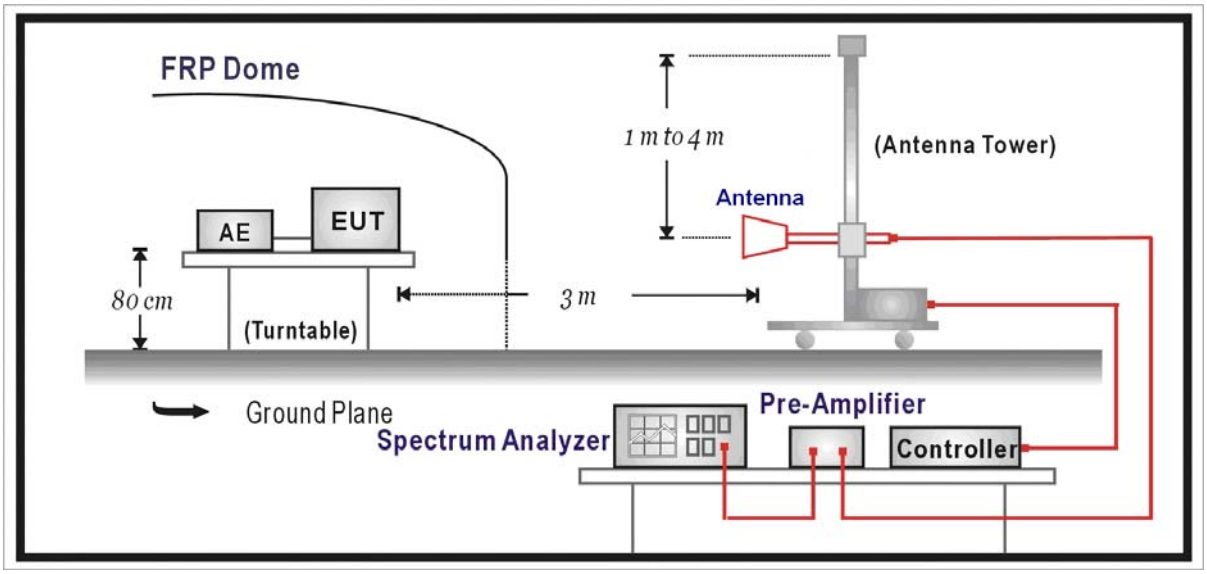
Note: “*” means the test device calibration period for two years.

8.2. Test Setup

RF Conducted Measurement



RF Radiated Measurement



8.3. Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

8.4. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground.
The turn table can rotate 360 degrees to determine the position of the maximum emission level and the antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.
Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated on radiated measurement.
The additional latch filter below 1GHz was used to measure the level of harmonics radiated emission during field strength of harmonics measurement.
The bandwidth below 1GHz setting on the field strength meter (R&S Test Receiver ESCI) is 120 kHz and above 1GHz is 1MHz.

8.5. Uncertainty

The measurement uncertainty above 1G is defined as ± 3.9 dB

under 1G is defined as ± 3.8 dB

8.6. Test Result

Product	:	54Mbps Wireless Builder
Test Item	:	Band Edge
Test Site	:	AC-2
Test Mode	:	Mode 1: Transmitter by 802.11b (2412MHz)

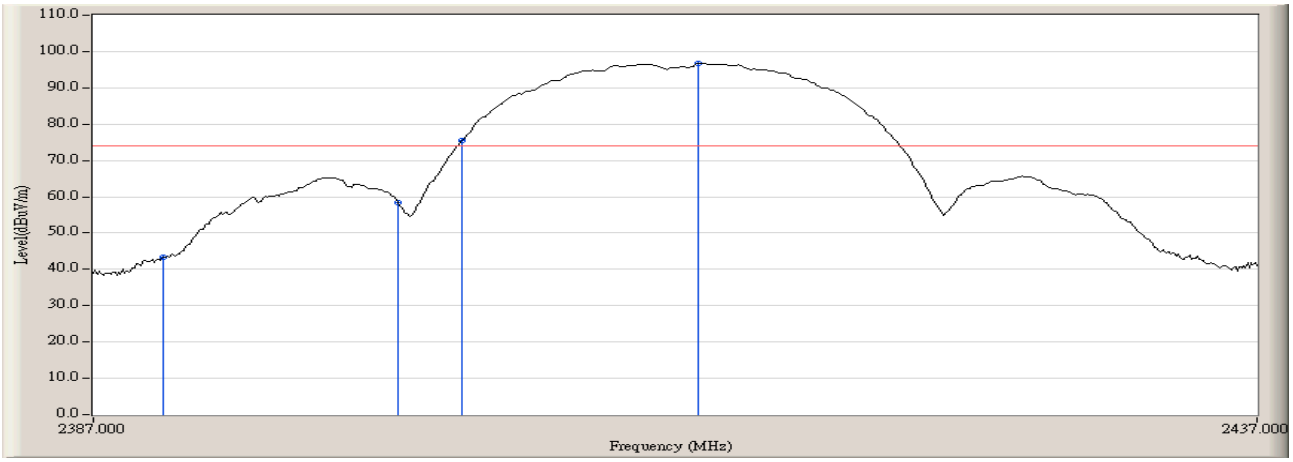
RF Radiated Measurement:

Channel No.	Frequency (MHz)	Required Limit (dBc)	Result
01	<2400	>20	Pass

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2390.000	45.129	43.464	74.00	N/A	Pass
01 (Average)	2390.000	34.844	33.179	N/A	54.00	Pass
01 (Peak)	2400.000	59.962	58.292	N/A	N/A	N/A
01 (Peak)	2402.750	77.301	75.631	N/A	N/A	N/A
01 (Peak)	2412.833	98.264	96.596	N/A	N/A	N/A

Figure Channel 01: 2412MHz (Horizontal)



Note:

RBW=1MHz, VBW=1MHz, Sweep Time=500ms.

Note: The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product	:	54Mbps Wireless Builder
Test Item	:	Band Edge
Test Site	:	AC-2
Test Mode	:	Mode 1: Transmitter by 802.11b (2412MHz)

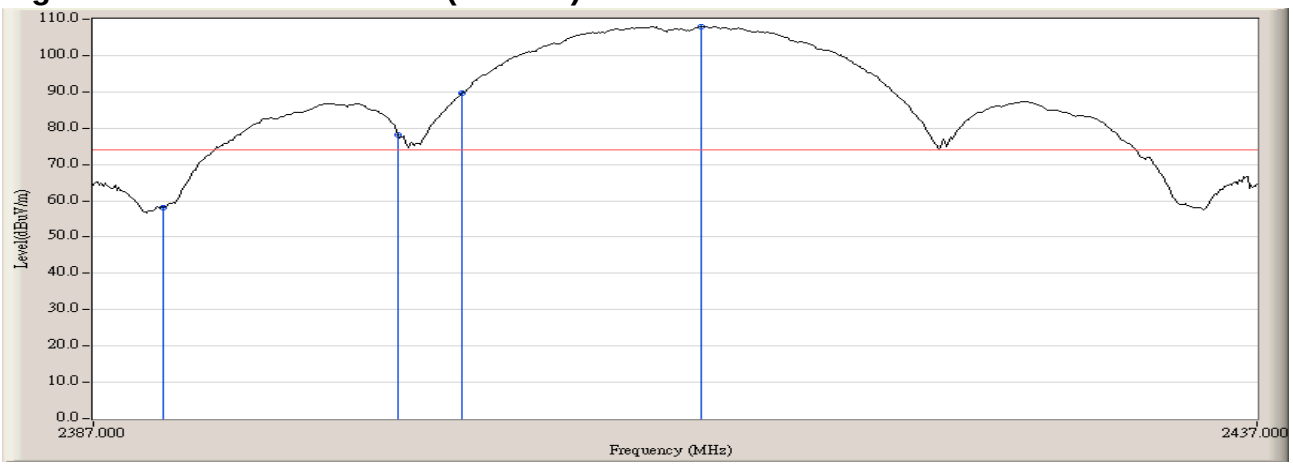
RF Radiated Measurement:

Channel No.	Frequency (MHz)	Required Limit (dBc)	Result
01	<2400	>20	Pass

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2390.000	59.888	58.223	74.00	N/A	Pass
00 (Average)	2390.000	47.666	46.001	N/A	54.00	Pass
01 (Peak)	2400.000	79.857	78.187	N/A	N/A	N/A
01 (Peak)	2402.750	91.236	89.566	N/A	N/A	N/A
01 (Peak)	2413.000	109.606	107.938	N/A	N/A	N/A

Figure Channel 01: 2412MHz (Vertical)



Note:
RBW=1MHz, VBW=1MHz, Sweep Time=500ms.

Note: The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product	:	54Mbps Wireless Builder
Test Item	:	Band Edge
Test Site	:	AC-2
Test Mode	:	Mode 1: Transmitter by 802.11b (2462MHz)

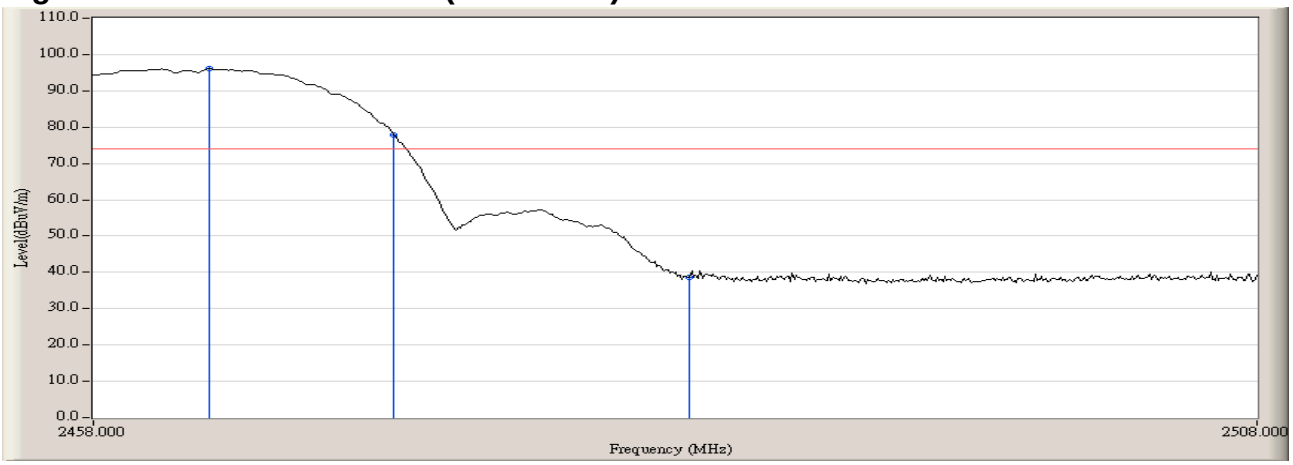
RF Radiated Measurement:

Channel No.	Frequency (MHz)	Required Limit (dBc)	Result
11	>2483.5	>20	Pass

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11(Peak)	2462.917	97.630	96.000	N/A	N/A	N/A
11(Peak)	2470.833	79.556	77.926	N/A	N/A	N/A
11(Peak)	2483.500	40.385	38.755	74.00	N/A	Pass
11(Average)	2483.500	31.749	30.119	N/A	54.00	Pass

Figure Channel 11: 2462MHz (Horizontal)



Note:
RBW=1MHz, VBW=1MHz, Sweep Time=500ms.

Note: The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product	:	54Mbps Wireless Builder
Test Item	:	Band Edge
Test Site	:	AC-2
Test Mode	:	Mode 1: Transmitter by 802.11b (2462MHz)

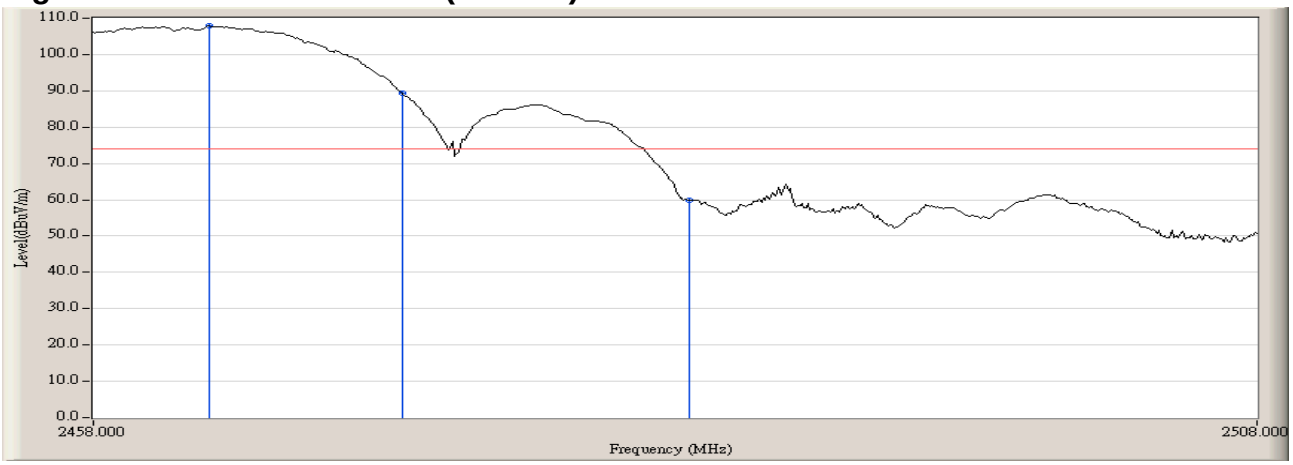
RF Radiated Measurement:

Channel No.	Frequency (MHz)	Required Limit (dBc)	Result
11	>2483.5	>20	Pass

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11(Peak)	2462.917	109.424	107.794	N/A	N/A	N/A
11(Peak)	2471.167	90.985	89.355	N/A	N/A	N/A
11(Peak)	2483.500	61.555	59.925	74.00	N/A	Pass
11(Average)	2483.500	49.500	47.870	N/A	54.00	Pass

Figure Channel 11: 2462MHz (Vertical)



Note:
RBW=1MHz, VBW=1MHz, Sweep Time=500ms.

Note: The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product	:	54Mbps Wireless Builder
Test Item	:	Band Edge
Test Site	:	AC-2
Test Mode	:	Mode 2: Transmitter by 802.11g (2412MHz)

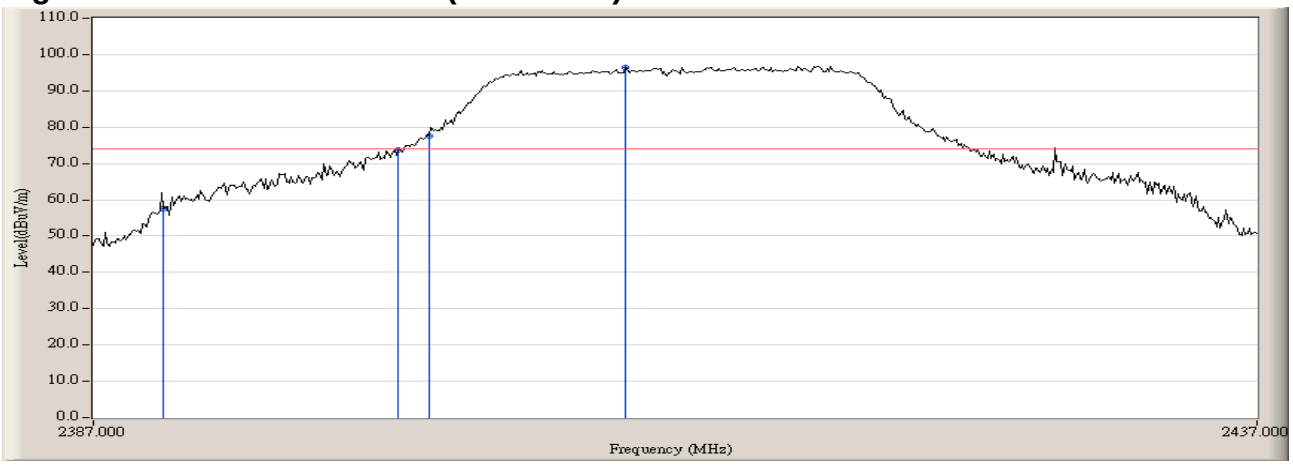
RF Radiated Measurement:

Channel No.	Frequency (MHz)	Required Limit (dBc)	Result
01	<2400	>20	Pass

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2390.000	59.090	57.425	74.00	N/A	Pass
01 (Average)	2390.000	45.160	43.495	N/A	54.00	Pass
01 (Peak)	2400.000	75.434	73.764	N/A	N/A	N/A
01 (Peak)	2401.333	79.106	77.436	N/A	N/A	N/A
01 (Peak)	2409.750	98.156	96.486	N/A	N/A	N/A

Figure Channel 01: 2412MHz (Horizontal)



Note:
RBW=1MHz, VBW=1MHz, Sweep Time=500ms.

Note: The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product	:	54Mbps Wireless Builder
Test Item	:	Band Edge
Test Site	:	AC-2
Test Mode	:	Mode 2: Transmitter by 802.11g (2412MHz)

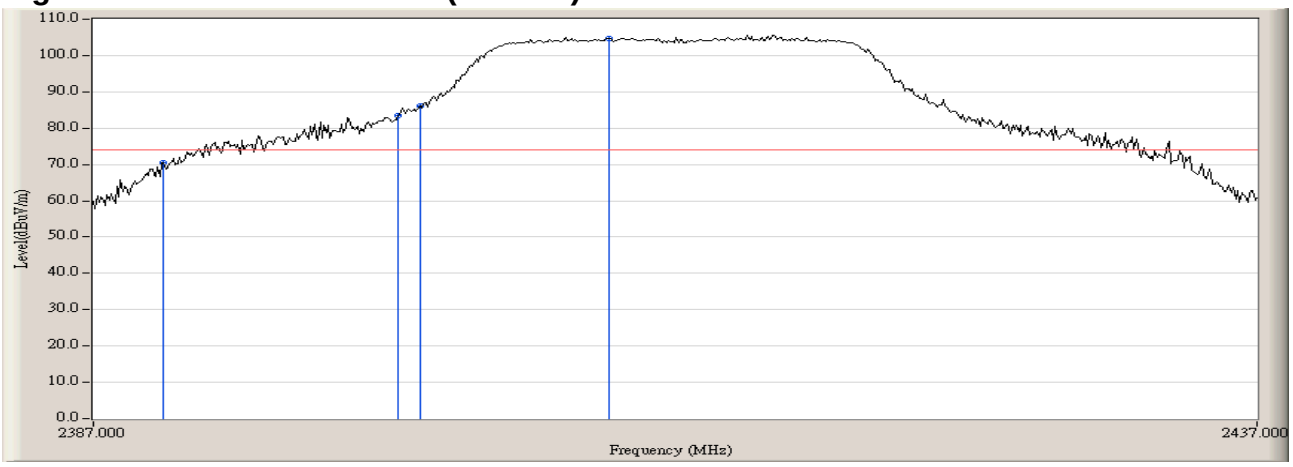
RF Radiated Measurement:

Channel No.	Frequency (MHz)	Required Limit (dBc)	Result
01	<2400	>20	Pass

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2390.000	72.153	70.488	74.00	N/A	Pass
00 (Average)	2390.000	44.987	43.322	N/A	54.00	Pass
01 (Peak)	2400.000	85.163	83.493	N/A	N/A	N/A
01 (Peak)	2400.917	87.682	86.012	N/A	N/A	N/A
01 (Peak)	2409.000	106.477	104.807	N/A	N/A	N/A

Figure Channel 01: 2412MHz (Vertical)



Note:
RBW=1MHz, VBW=1MHz, Sweep Time=500ms.

Note: The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product	:	54Mbps Wireless Builder
Test Item	:	Band Edge
Test Site	:	AC-2
Test Mode	:	Mode 2: Transmitter by 802.11g (2462MHz)

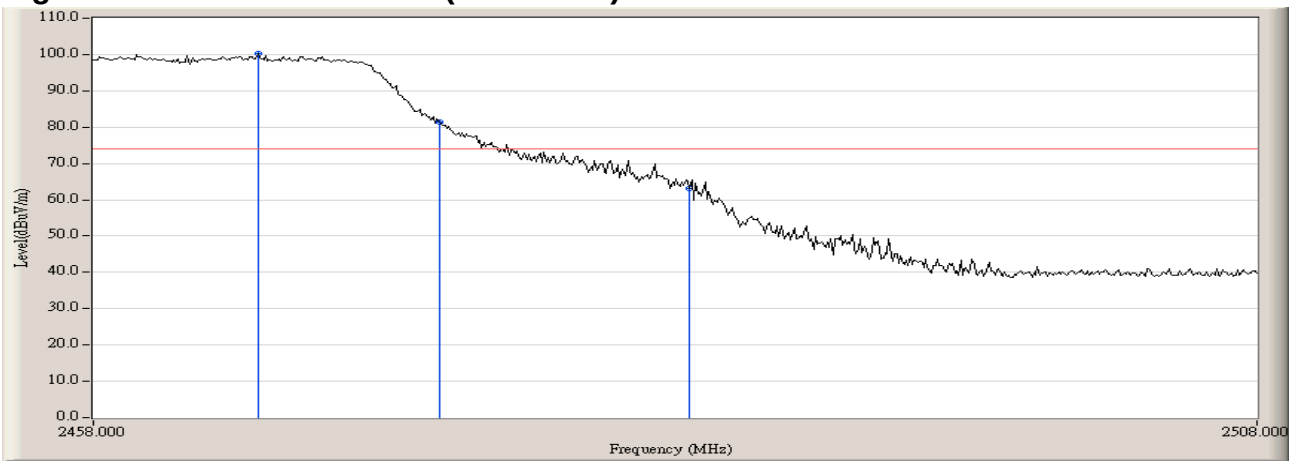
RF Radiated Measurement:

Channel No.	Frequency (MHz)	Required Limit (dBc)	Result
11	>2483.5	>20	Pass

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11(Peak)	2465.000	101.844	100.214	N/A	N/A	N/A
11(Peak)	2472.750	83.159	81.529	N/A	N/A	N/A
11(Peak)	2483.500	64.693	63.063	74.00	N/A	Pass
11(Average)	2483.500	47.856	46.226	N/A	54.00	Pass

Figure Channel 11: 2462MHz (Horizontal)



Note:
RBW=1MHz, VBW=1MHz, Sweep Time=500ms.

Note: The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product	:	54Mbps Wireless Builder
Test Item	:	Band Edge
Test Site	:	AC-2
Test Mode	:	Mode 2: Transmitter by 802.11g (2462MHz)

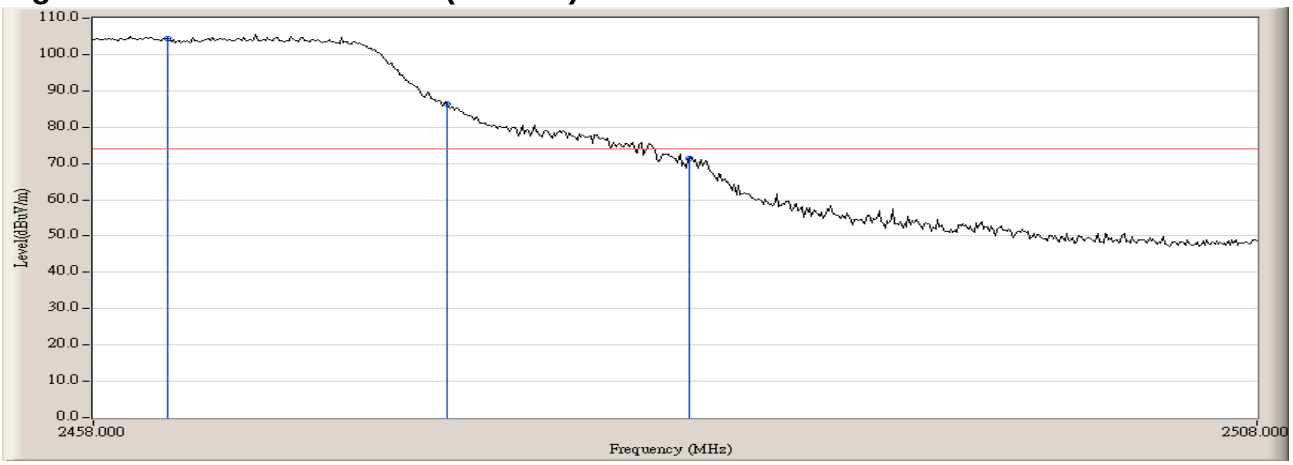
RF Radiated Measurement:

Channel No.	Frequency (MHz)	Required Limit (dBc)	Result
11	>2483.5	>20	Pass

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11(Peak)	2461.167	106.110	104.479	N/A	N/A	N/A
11(Peak)	2473.083	87.943	86.313	N/A	N/A	N/A
11(Peak)	2483.500	72.860	71.230	74.00	N/A	Pass
11(Average)	2483.500	52.154	50.524	N/A	54.00	Pass

Figure Channel 11: 2462MHz (Vertical)



Note:
RBW=1MHz, VBW=1MHz, Sweep Time=500ms.

Note: The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

9. Peak Power Spectral Density

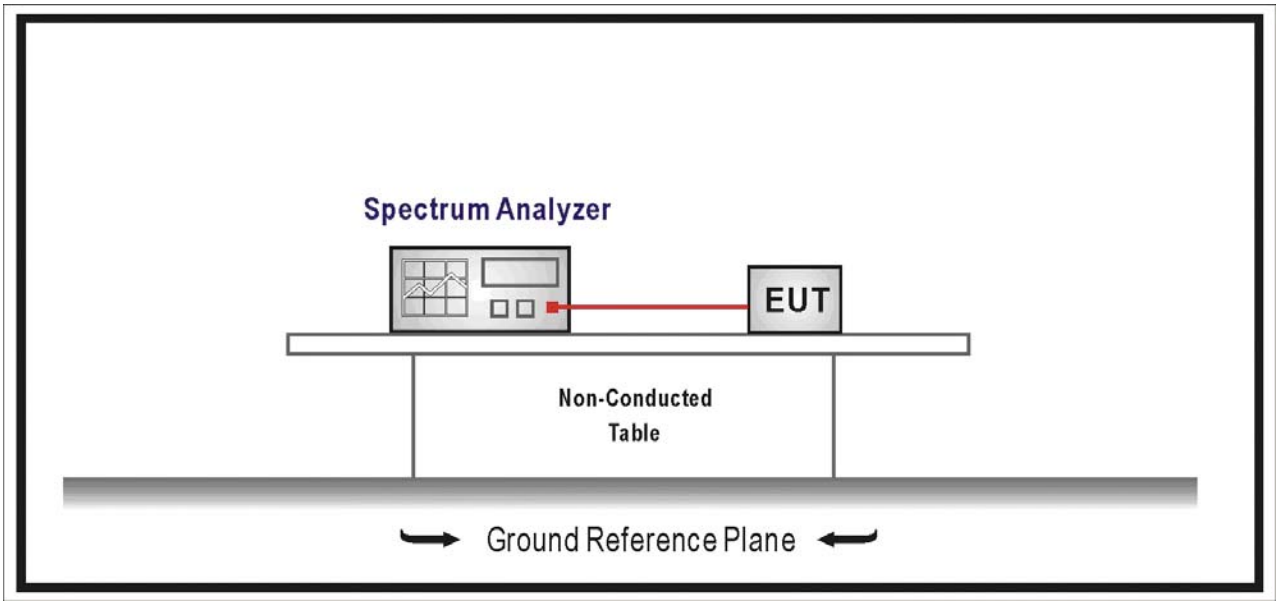
9.1. Test Equipment

Radiated Emission / AC-2

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2007/06/11
Coaxial Cable	Huber+Suhner	AC3-RF	08	2006/11/25
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH003	2007/03/31

9.2. Test Setup

RF Conducted Measurement



9.3. Limit

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

9.4. Test Procedure

a) Place the EUT on a bench and set it in transmitting mode.

b) Connect a low loss RF cable from the antenna port to a spectrum analyzer.

c) Add a correction factor to the display, and then test.

9.5. Uncertainty

The measurement uncertainty is defined as ± 1.27 dB

9.6. Test Result

Product	:	54Mbps Wireless Builder
Test Item	:	Peak Power Spectral Density
Test Site	:	AC-3
Test Mode	:	Mode 1: Transmitter by 802.11b

Channel	Freq. (MHz)	Power Spectral Density (dBm/3kHz)	Limit (dBm /3kHz)	Result
01	2412	-14.66	8	Pass
06	2437	-14.75	8	Pass
11	2462	-15.08	8	Pass

Figure Channel 01 (2412MHz)

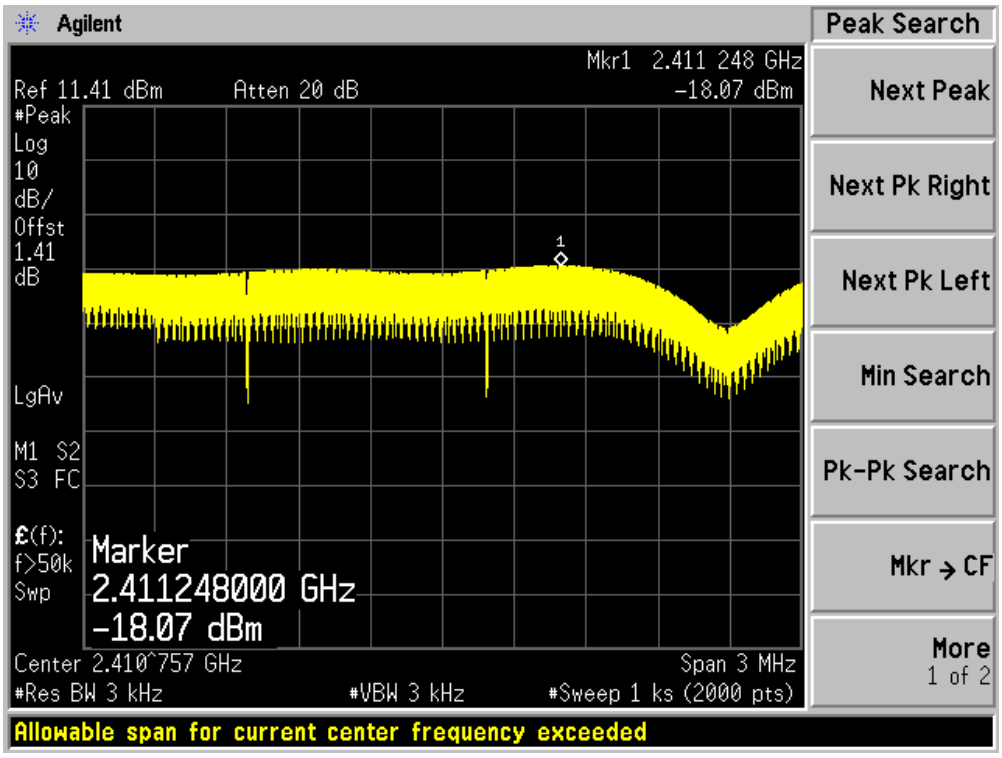


Figure Channel 06 (2437MHz)

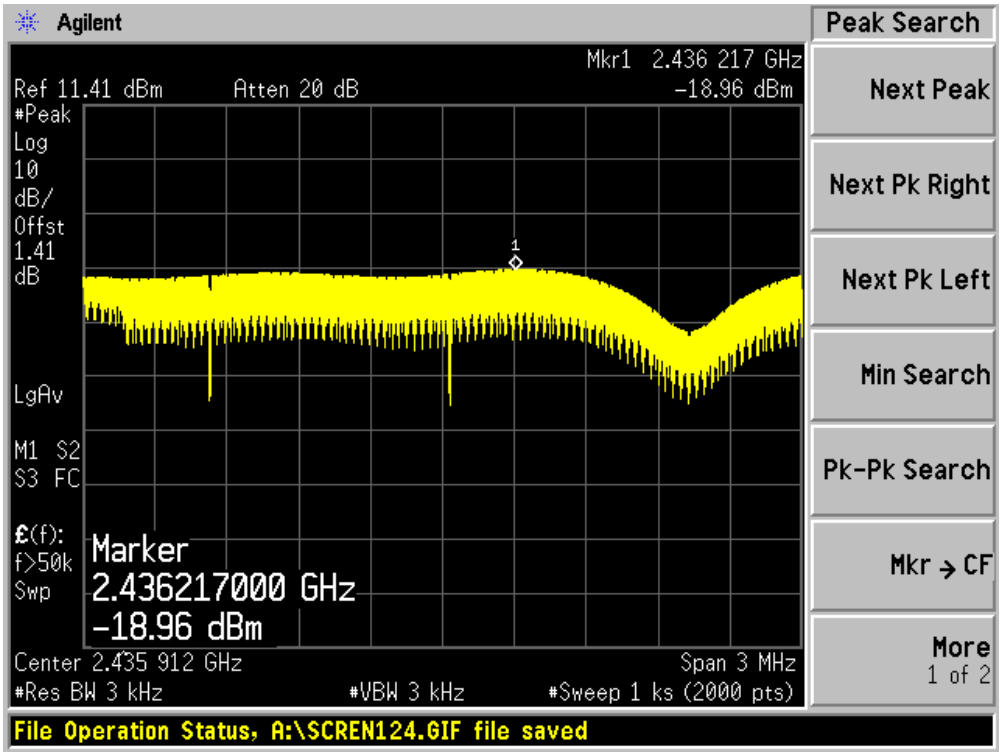
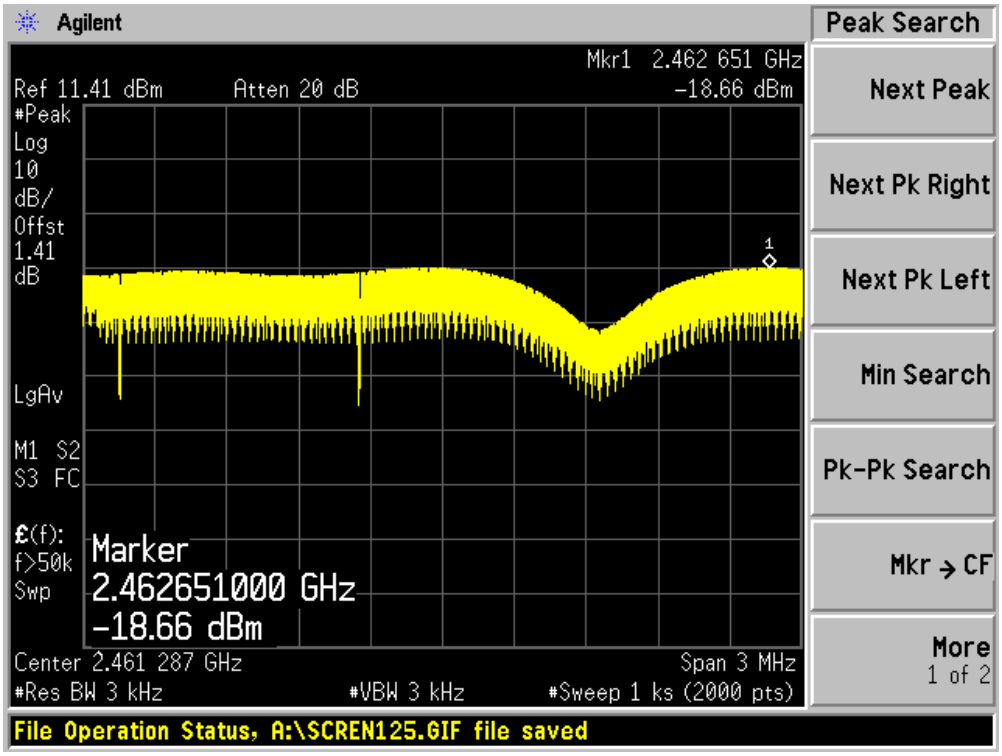


Figure Channel 11 (2462MHz)



Product	:	54Mbps Wireless Builder
Test Item	:	Peak Power Spectral Density
Test Site	:	AC-3
Test Mode	:	Mode 2: Transmitter by 802.11g

Channel	Freq. (MHz)	Power Spectral Density (dBm/3kHz)	Limit (dBm /3kHz)	Result
01	2412	-15.97	8	Pass
06	2437	-16.42	8	Pass
11	2462	-16.56	8	Pass

Figure Channel 01 (2412MHz)

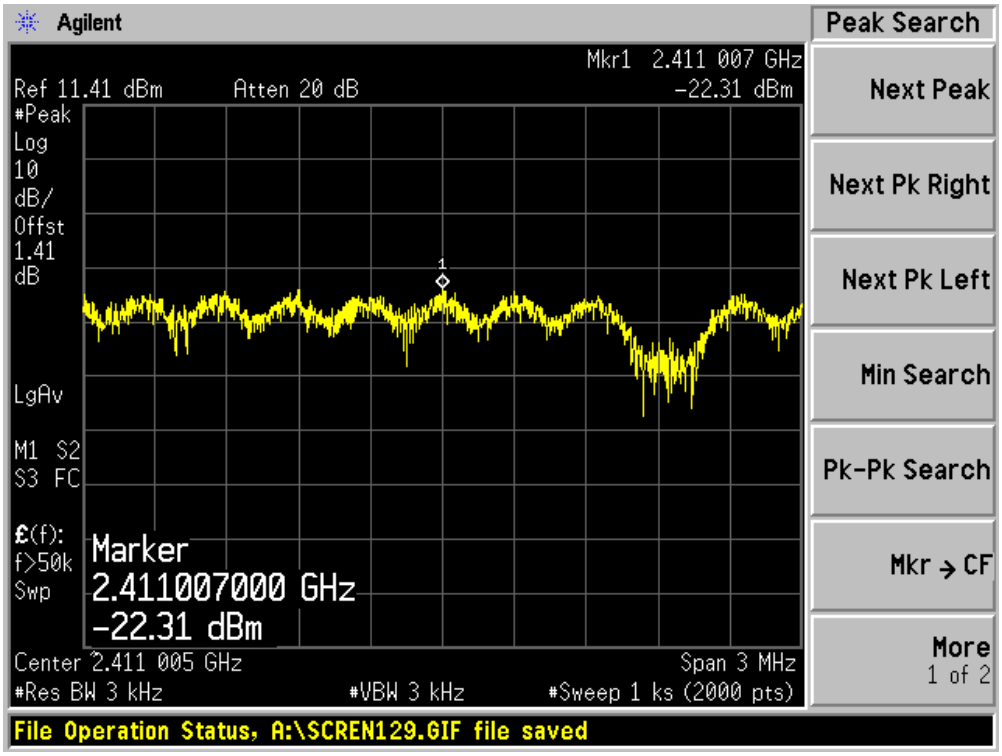


Figure Channel 06 (2437MHz)

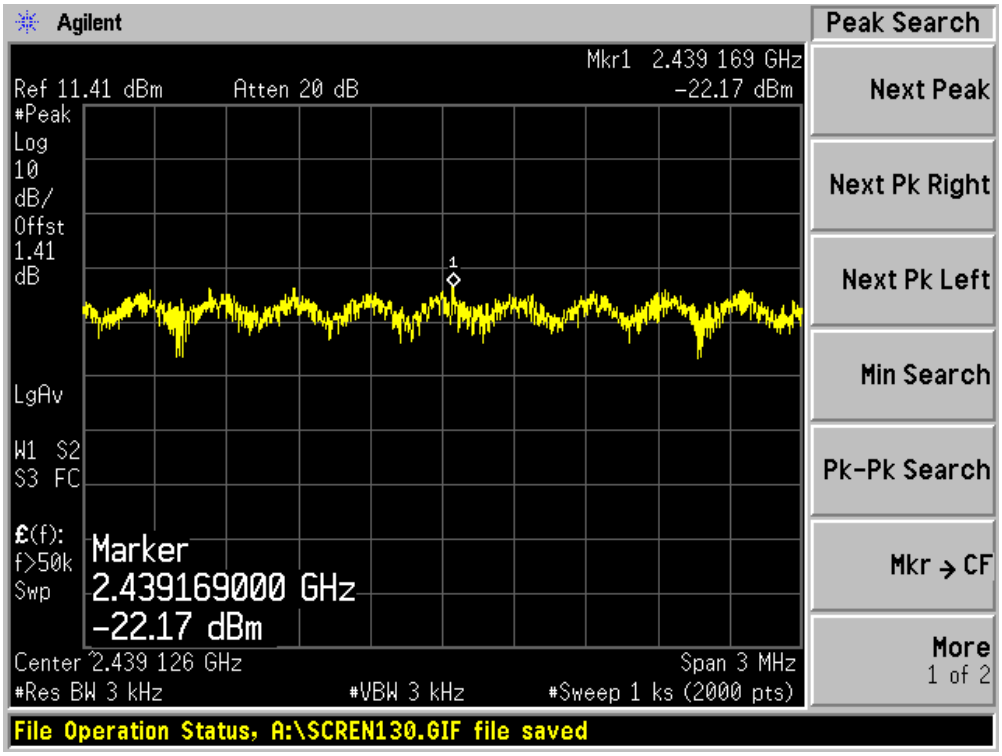


Figure Channel 11 (2462MHz)