Test Report

Product Name : 802.11g Wireless ADSL2+ 4-port Gateway

Model No. : P-660HW-T1 v2

FCC ID No. : I88P660HWT1V2

Applicant : ZyXEL Communications Corporation

Address : No. 6, Innovation Rd Ⅱ, Science-Based Industrial Park, Hsin-Chu, Taiwan, R.O.C

Date of Receipt : 2006/09/05

Issued Date : 2006/09/20

Report No. : 069S004-RF-US-P13V01

The test results relate only to the samples tested.
The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.
This report must not be used to claim product endorsement by CNLA, NVLAP or any agency of the Government.
The test report shall not be reproduced except in full without the written approval of QuieTek Corporation.

Test Report Certification

Issued Date : 2006/09/20
Report No. : 069S004-RF-US-P13V01

QuieTek

Product Name	:	802.11g Wireless ADSL2+ 4-port Gateway
Applicant	:	ZyXEL Communications Corporation
Address	:	No. 6, Innovation Rd Ⅱ, Science-Based Industrial Park, Hsin-Chu, Taiwan, R.O.C Province, P.R.C.
Manufacturer	:	ZyXEL Communications(WuXi) Co., Ltd.
Model No.	:	P-660HW-T1 v2
FCC ID No.	:	I88P660HWT1V2
Rated Voltage	:	AC 120V/60Hz
EUT Voltage	:	DC 12V 1A
Trade Name	:	ZyXEL
Applicable Standard	:	FCC Part 15 Subpart C: 2005 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

Documented By : Mandy Liu

(Mandy Liu)

Reviewed By : Dream Cao

(Dream Cao)

Approved By : Gene Chang

(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:

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NVLAP Lab Code : 200347-0

1313

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NVLAP Lab Code: 200533-0

0914

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TEL : +86-512-6251-5088 / FAX : 86-512-6251-5098 E-Mail : service@quietek.com

NVLAP Lab Code : 200743-0

1596

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1. General Information

1.1. EUT Description

Product Name	802.11g Wireless ADSL2+ 4-port Gateway
Trade Name	ZyXEL
Model No.	P-660HW-T1 v2
FCC ID No.	I88P660HWT1V2
Frequency Range	802.11b/g: 2412-2462MHz
Channel Number	802.11b/g: 11CH
Type of Modulation	DSSS/OFDM
Data Speed	DSSS: 1, 2, 5.5, 11Mbps OFDM: 6, 9, 12, 18, 24, 36, 48, 54Mbps
Antenna Gain	2.14 dBi
Channel Control	Auto
Antenna Type	Dipole

Component	
Power Adapter	M/N: AA-121A Input: AC 1120, 60Hz, 18W Output: AC 12V, 1A Cable Out: Non-Shielded, 1.8m

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 802.11b
Mode 2: Transmit 802.11g
Final Test Mode
Mode 1: Transmit 802.11b
Mode 2: Transmit 802.11g

Note:

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 069S004-RF-US-P01V02, certified under Declaration of Conformity.

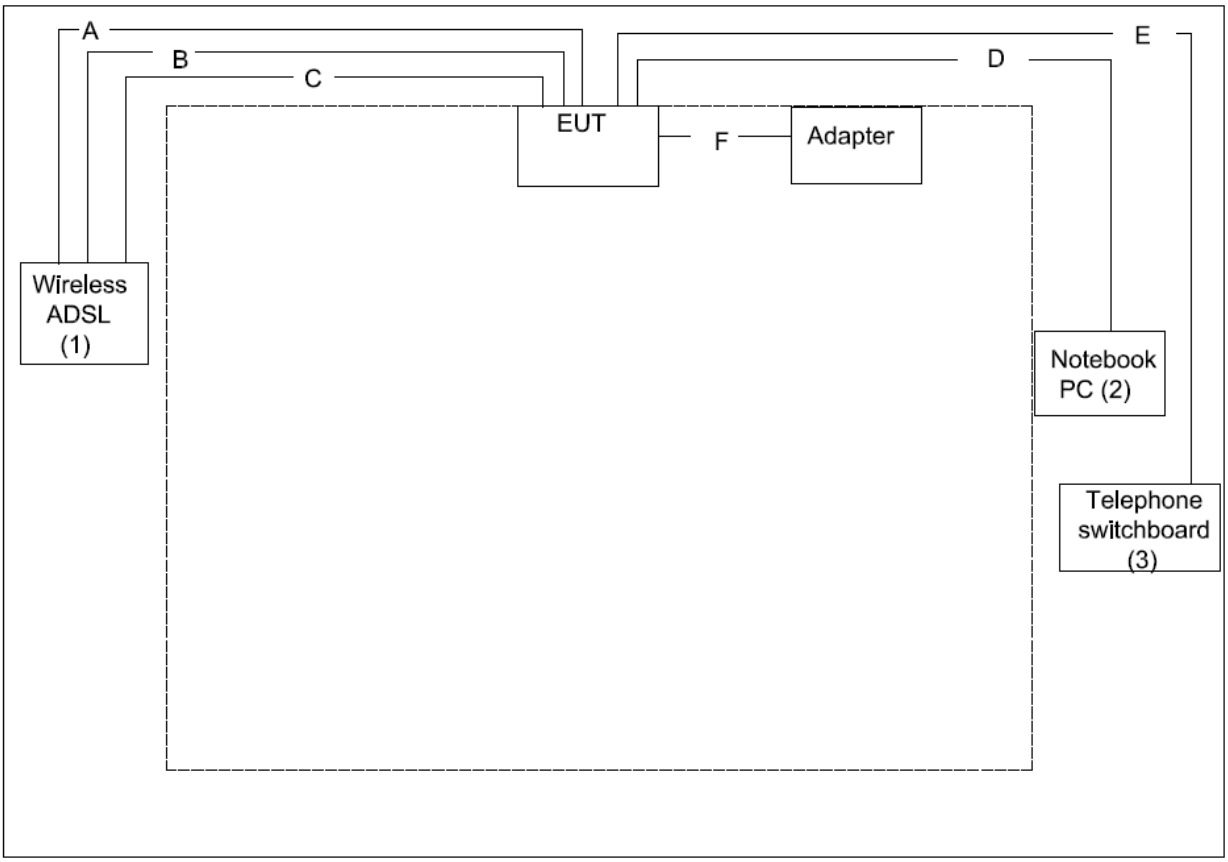
1.3. Tested System Details

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	ADSL	ZyXEL	P-660H-D1	N/A	N/A
2	Notebook P.C.	ASUS	M5200N	45NP067576	Non-Shielded 1.8m
3	Telephone switchboard	ZyXEL	IES-1000	N/A	Non-Shielded 1.8m

1.4. Configuration of Tested System

Connection Diagram



Signal Cable Type		Signal cable Description
A	LAN Cable	Non-Shielded, >10m
B	LAN Cable	Non-Shielded, >10m
C	LAN Cable	Non-Shielded, >10m
D	LAN Cable	Non-Shielded, >10m
E	Telephone Cable	Non-Shielded, >10m

1.5. EUT Exercise Software

1	Setup the EUT and simulators as shown on 1.4;
2	Turn on the power of all equipment;
3	EUT Connect the Notebook. P.C through LAN Port;
4	EUT Connect the Telephone Switchboard through Telephone Port;
5	Let EUT Communication with Notebook. P.C and Telephone Switchboard during testing.
6	Let EUT USE Wireless communication by Transmit mode with Notebook. P.C.

2. Technical Test

2.1. Summary of Test Result

☒ No deviations from the test standards

☐ Deviations from the test standards as below description:

For 802.11b/g (FCC 15C)

Emission			
Performed Item	Normative References	Test Performed	Deviation
Conducted Emission	FCC Part 15 Subpart C Paragraph 15.207	Yes	No
Peak Output Power	FCC Part 15 Subpart C Paragraph 15.247	Yes	No
Radiated Emission	FCC Part 15 Subpart C Paragraph 15.247	Yes	No
Band Edge	FCC Part 15 Subpart C Paragraph 15.247	Yes	No
Occupied Bandwidth	FCC Part 15 Subpart C Paragraph 15.247	Yes	No
Peak Power Spectral Density	FCC Part 15 Subpart C Paragraph 15.247	Yes	No

2.2. List of Test Equipment

Conducted Emission / SR-1

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
EMI Test Receiver	R&S	ESCI	100175	2005/11/25
Two-Line V-Network	R&S	ENV216	100013	2005/11/25
Two-Line V-Network	R&S	ENV216	100014	2005/11/25
V-Network	R&S	ESH3-Z6	100248	2005/11/25
V-Network	R&S	ESH3-Z6	100249	2005/11/25
ISN	Schaffner	ISN T400	21648	2005/11/25
Current Probe	R&S	EZ-17	100252	2006/04/18
50ohm Coaxial Switch	ANRITSU	MP59B	6200447305	2005/11/25
50ohm Impedance	SHX	50ohmI	QT-IM001	2006/03/20
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH004	2006/03/30

Radiated Emission / AC-2

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2006/03/11
EMI Test Receiver	R&S	ESCI	100175	2005/11/25
Preamplifier	Quietek	AP-025C	QT-AP003	2005/11/25
Preamplifier	Quietek	AP-180C	CHM-0602013	2006/03/20
Bilog Type Antenna	Schaffner	CBL6112B	2932	2005/10/26
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	496	2006/09/30
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2006/03/30
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH002	2006/03/11

Peak Output Power / AC-3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2006/03/11
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH003	2006/03/30

Peak Power Spectral Density / AC-3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2006/03/11
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH003	2006/03/30

Occupied Bandwidth / AC-3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2006/03/11
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH003	2006/03/30

Band Edge / AC-2

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2006/03/11
EMI Test Receiver	R&S	ESCI	100175	2005/11/25
Preamplifier	Quietek	AP-025C	QT-AP003	2005/11/25
Preamplifier	Quietek	AP-180C	CHM-0602013	2006/03/20
Bilog Type Antenna	Schaffner	CBL6112B	2932	2005/10/26
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	496	2006/09/30
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2006/03/30
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH002	2006/03/11

2.3. Measurement Uncertainty

Conducted Emission

The measurement uncertainty is evaluated as ± 2.26 dB.

Radiated Emission

The measurement uncertainty is evaluated as ± 3.19 dB.

2.4. Test Environment

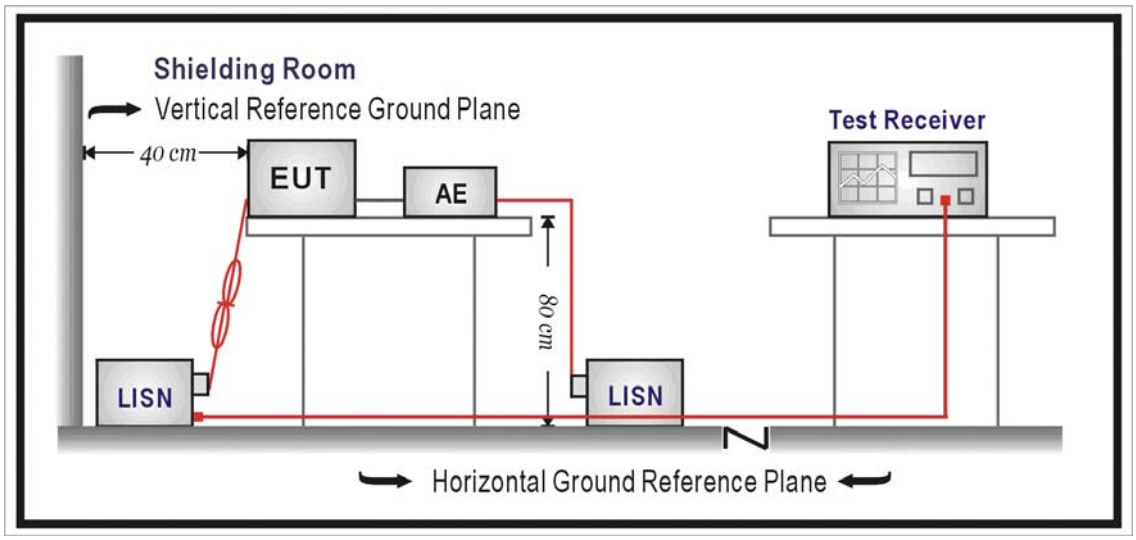
Performed Item	Items	Required	Actual
Conducted Emission	Temperature (°C)	15-35	23
	Humidity (%RH)	25-75	48
	Barometric pressure (mbar)	860-1060	950-1000
Radiated Emission	Temperature (°C)	15-35	25
	Humidity (%RH)	25-75	51
	Barometric pressure (mbar)	860-1060	950-1000

3. Conducted Emission

3.1. Test Specification

According to EMC Standard: FCC Part 15 Subpart C Paragraph 15.207

3.2. Test Setup



3.3. Limit

Limits (dBuV)		
Frequency	QP	AV
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 AC 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.

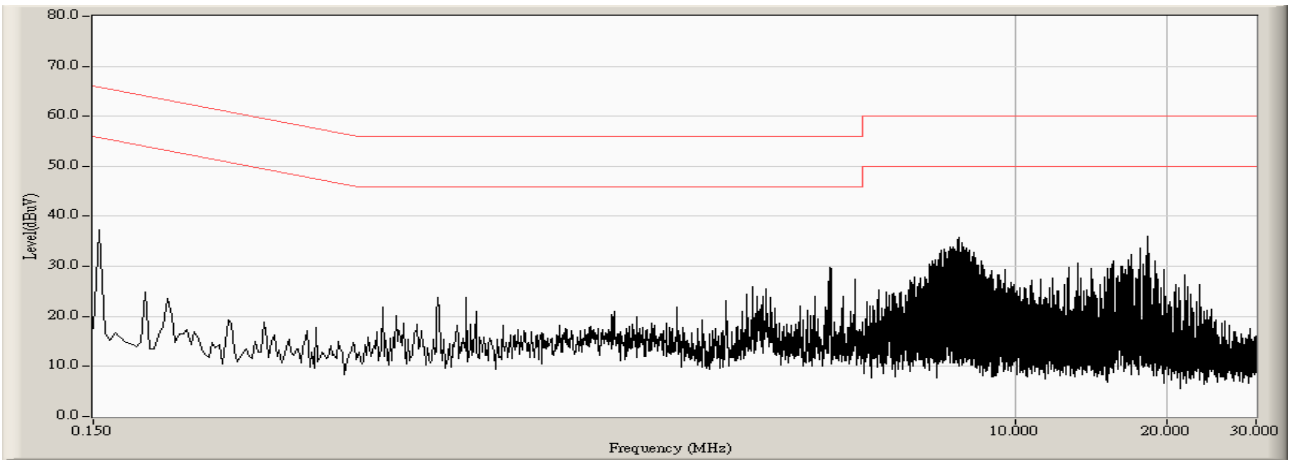
The bandwidth of the field strength meter is 9kHz.

3.5. Deviation from Test Standard

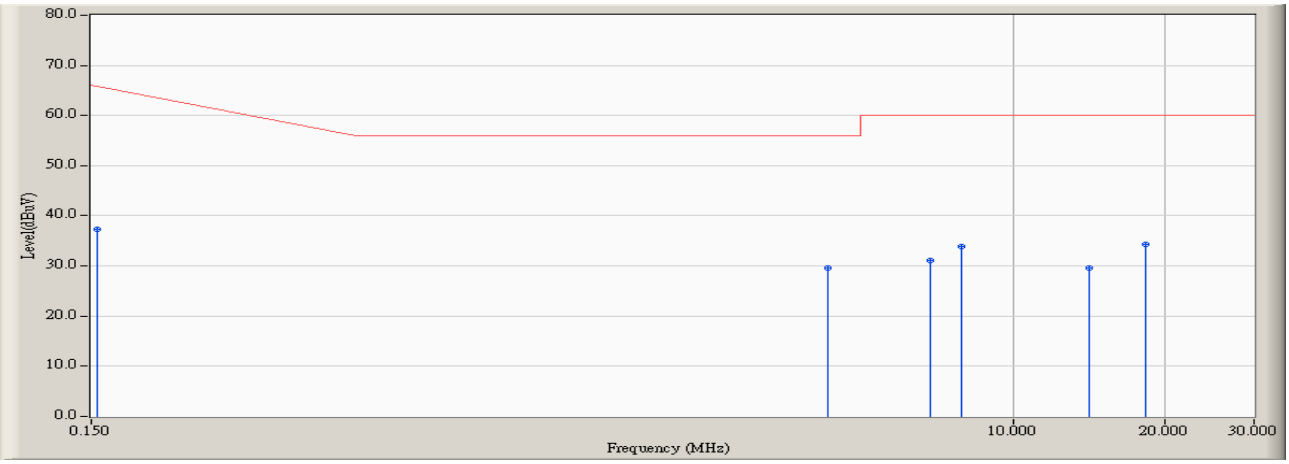
No deviation.

3.6. Test Result

Engineer : Johnwang	
Site : SR-1	**Time : 2006/09/10 - 12:36**
Limit : FCC_Part15_C_209_QP	**Margin : 10**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : ENV216 - Line1**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b(2437MHz)**



Engineer : Johnwang	
Site : SR-1	**Time : 2006/09/10 - 12:38**
Limit : FCC_Part15_C_209_QP	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : ENV216 - Line1**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b(2437MHz)**

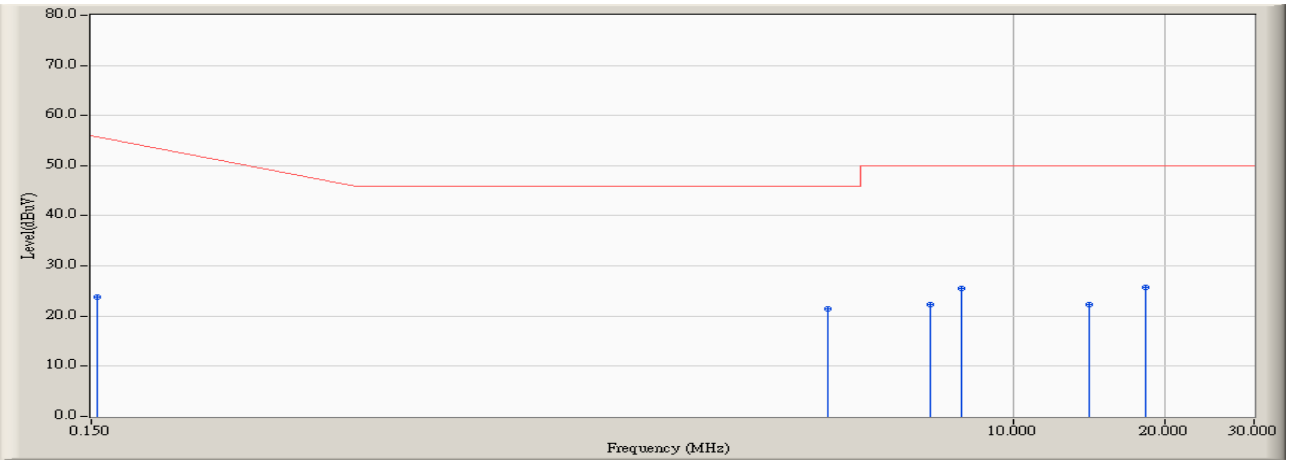


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.154	10.190	27.038	37.228	-28.658	65.886	QUASIPEAK
2		4.290	9.803	19.860	29.663	-26.337	56.000	QUASIPEAK
3		6.870	9.840	21.284	31.124	-28.876	60.000	QUASIPEAK
4		7.921	9.870	23.975	33.845	-26.155	60.000	QUASIPEAK
5		14.153	10.000	19.500	29.500	-30.500	60.000	QUASIPEAK
6	*	18.305	10.180	24.166	34.346	-25.654	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	**Time : 2006/09/10 - 12:38**
Limit : FCC_Part15_C_209_AV	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : ENV216 - Line1**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b(2437MHz)**

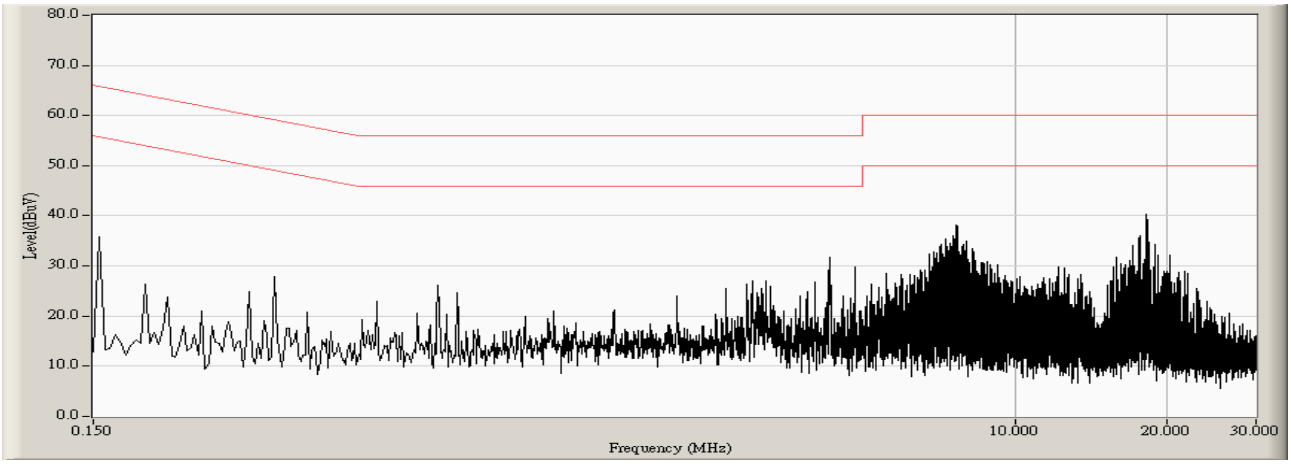


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.154	10.190	13.550	23.740	-32.146	55.886	AVERAGE
2		4.290	9.803	11.660	21.463	-24.537	46.000	AVERAGE
3		6.870	9.840	12.540	22.380	-27.620	50.000	AVERAGE
4		7.921	9.870	15.650	25.520	-24.480	50.000	AVERAGE
5		14.153	10.000	12.260	22.260	-27.740	50.000	AVERAGE
6	*	18.305	10.180	15.560	25.740	-24.260	50.000	AVERAGE

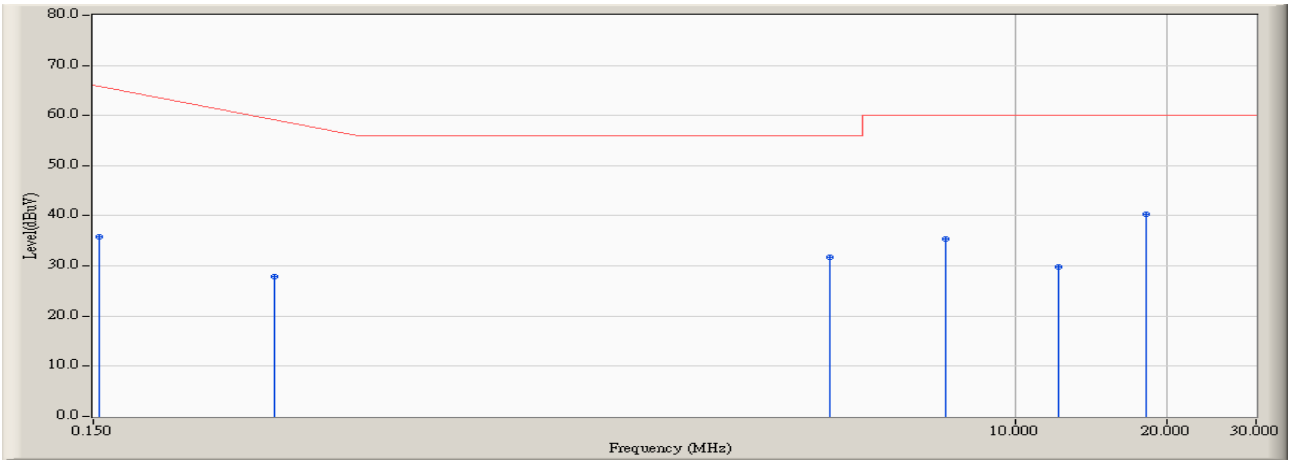
Note:

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	**Time : 2006/09/10 - 12:40**
Limit : FCC_Part15_C_209_QP	**Margin : 10**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : ENV216 - Line2**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b(2437MHz)**



Engineer : Johnwang	
Site : SR-1 (Conducted Emission and Power Test)	**Time : 2006/09/10 - 12:42**
Limit : FCC_Part15_C_209_QP	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : ENV216 - Line2**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b(2437MHz)**

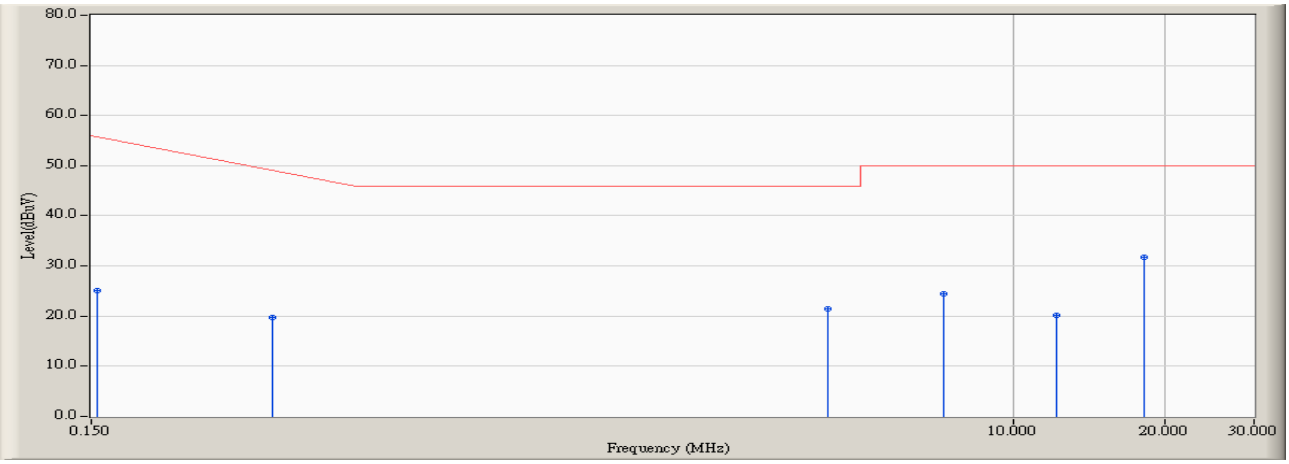


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.154	9.670	26.245	35.915	-29.971	65.886	QUASIPEAK
2		0.342	9.563	18.293	27.856	-32.658	60.514	QUASIPEAK
3		4.290	9.723	21.965	31.688	-24.312	56.000	QUASIPEAK
4		7.270	9.790	25.672	35.462	-24.538	60.000	QUASIPEAK
5		12.197	10.064	19.829	29.893	-30.107	60.000	QUASIPEAK
6	*	18.241	10.100	30.127	40.227	-19.773	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	**Time : 2006/09/10 - 12:42**
Limit : FCC_Part15_C_209_AV	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : ENV216 - Line2**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b(2437MHz)**

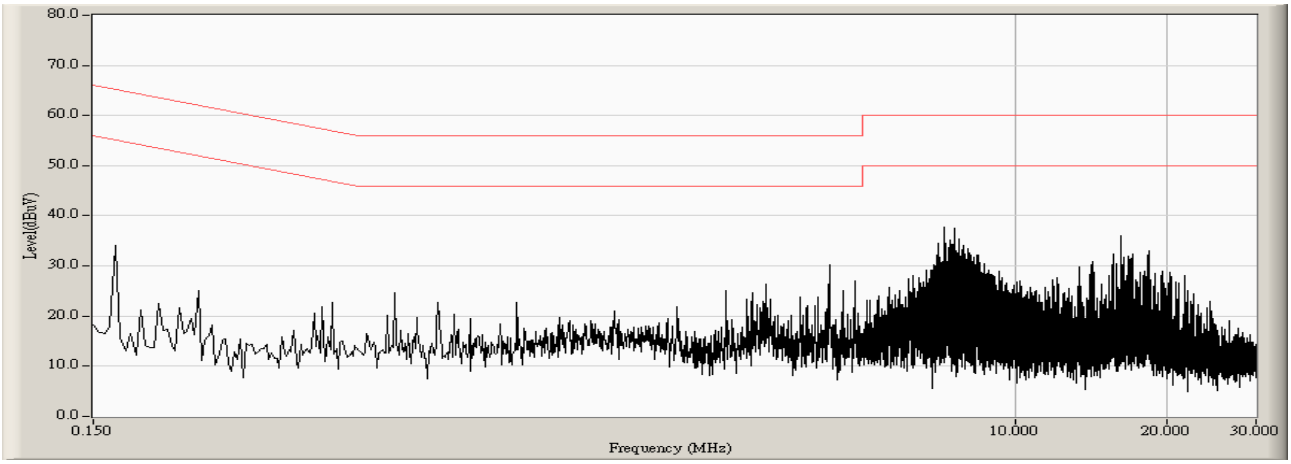


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.154	9.670	15.330	25.000	-30.886	55.886	AVERAGE
2		0.342	9.563	10.240	19.803	-30.711	50.514	AVERAGE
3		4.290	9.723	11.680	21.403	-24.597	46.000	AVERAGE
4		7.270	9.790	14.586	24.376	-25.624	50.000	AVERAGE
5		12.197	10.064	10.140	20.204	-29.796	50.000	AVERAGE
6	*	18.241	10.100	21.680	31.780	-18.220	50.000	AVERAGE

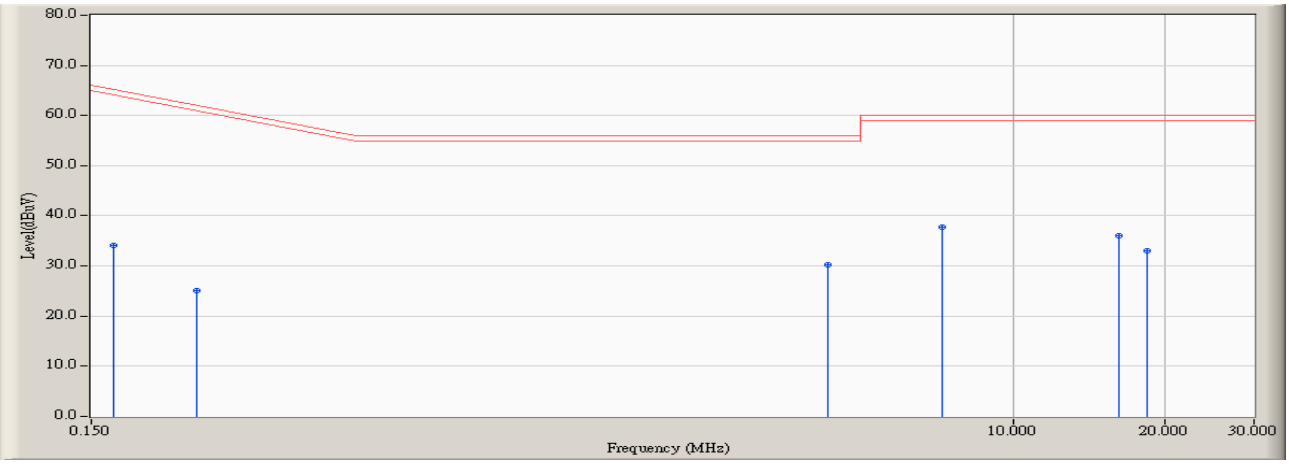
Note:

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	**Time : 2006/09/10 - 12:46**
Limit : FCC_Part15_C_209_QP	**Margin : 10**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : ENV216 - Line1**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g(2437MHz)**



Engineer : Johnwang	
Site : SR-1	**Time : 2006/09/10 - 12:46**
Limit : FCC_Part15_C_209_QP	**Margin : 1**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : ENV216 - Line1**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g(2437MHz)**

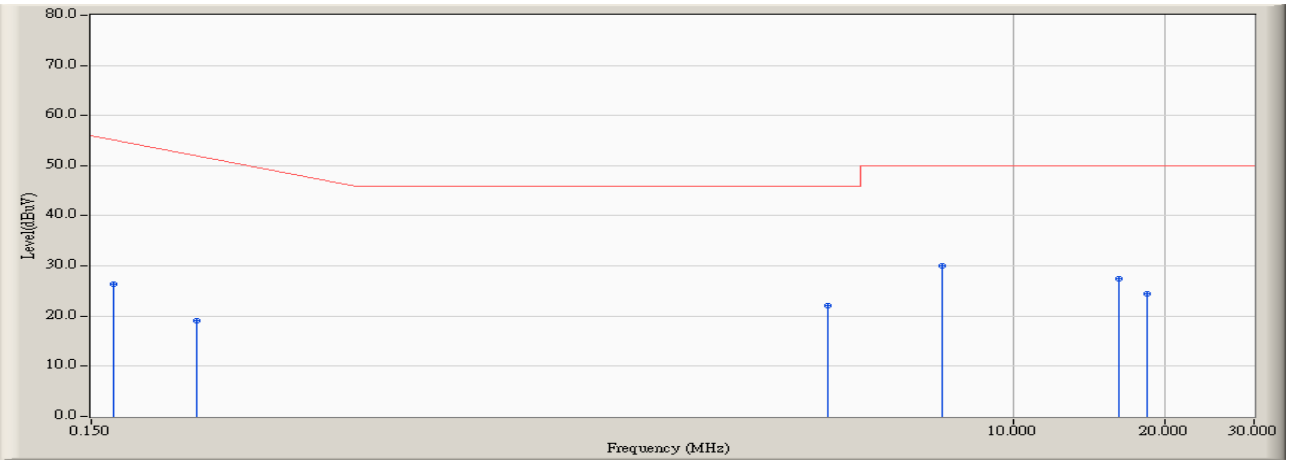


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.166	10.048	24.089	34.137	-31.406	65.543	QUASIPEAK
2		0.242	9.332	15.747	25.079	-38.292	63.371	QUASIPEAK
3		4.306	9.797	20.450	30.247	-25.753	56.000	QUASIPEAK
4	*	7.226	9.860	27.952	37.812	-22.188	60.000	QUASIPEAK
5		16.225	10.120	25.847	35.967	-24.033	60.000	QUASIPEAK
6		18.485	10.179	22.957	33.136	-26.864	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	**Time : 2006/09/10 - 12:46**
Limit : FCC_Part15_C_209_AV	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : ENV216 - Line1**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g(2437MHz)**

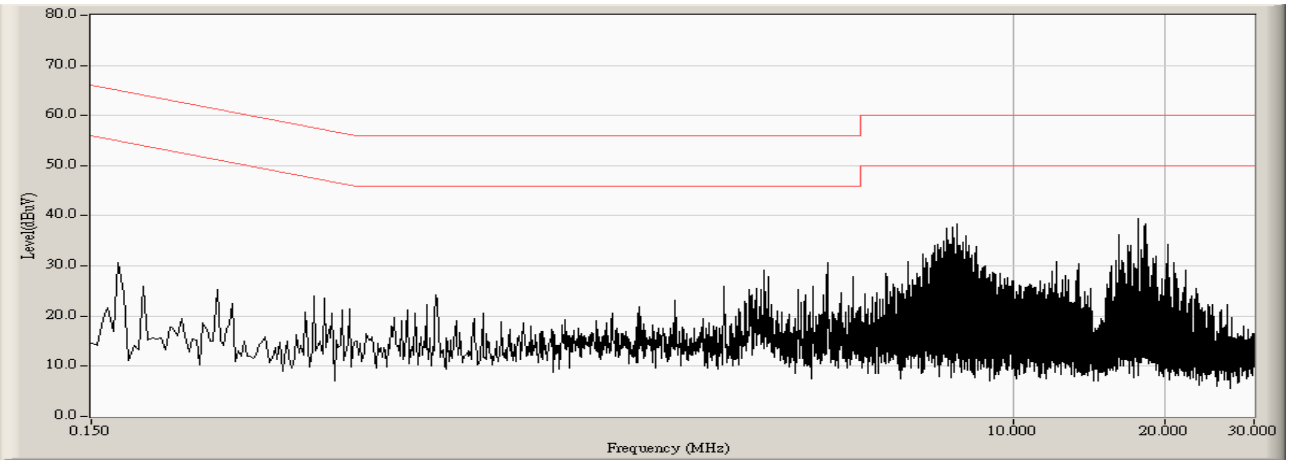


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.166	10.048	16.360	26.408	-29.135	55.543	AVERAGE
2		0.242	9.332	9.850	19.182	-34.189	53.371	AVERAGE
3		4.306	9.797	12.220	22.017	-23.983	46.000	AVERAGE
4	*	7.226	9.860	20.180	30.040	-19.960	50.000	AVERAGE
5		16.225	10.120	17.350	27.470	-22.530	50.000	AVERAGE
6		18.485	10.179	14.330	24.509	-25.491	50.000	AVERAGE

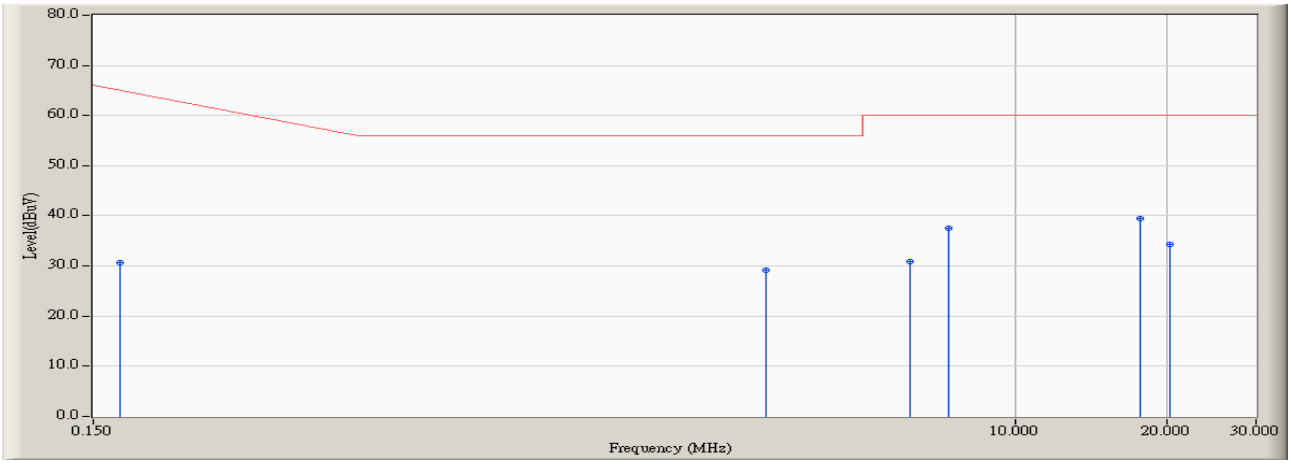
Note:

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	**Time : 2006/09/10 - 12:48**
Limit : FCC_Part15_C_209_QP	**Margin : 10**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : ENV216 - Line2**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g(2437MHz)**



Engineer : Johnwang	
Site : SR-1	**Time : 2006/09/10 - 12:51**
Limit : FCC_Part15_C_209_QP	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : ENV216 - Line2**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g(2437MHz)**

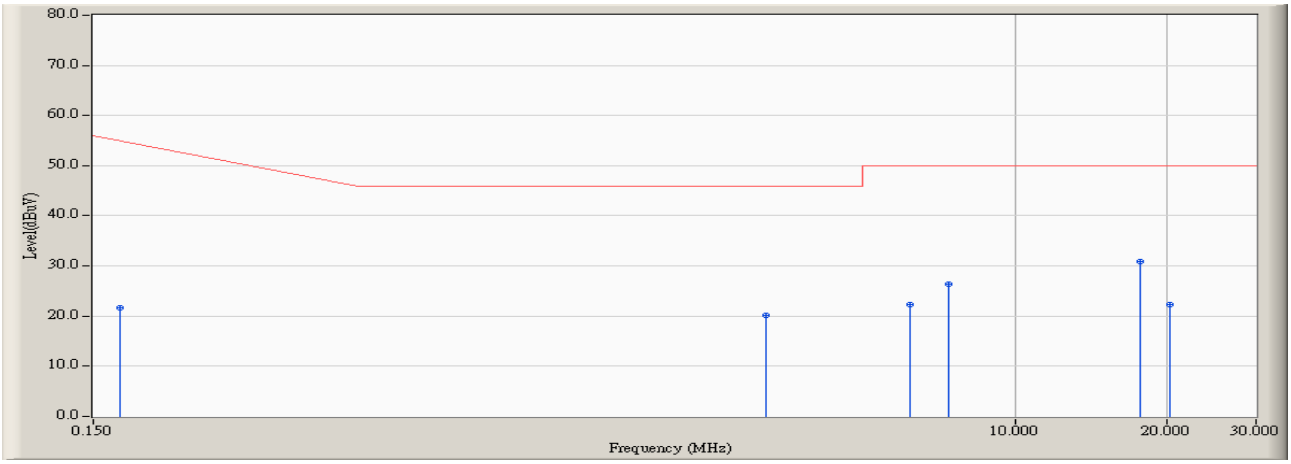


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.170	9.590	21.114	30.704	-34.725	65.429	QUASIPEAK
2		3.222	9.750	19.441	29.191	-26.809	56.000	QUASIPEAK
3		6.186	9.742	21.163	30.905	-29.095	60.000	QUASIPEAK
4		7.394	9.793	27.807	37.600	-22.400	60.000	QUASIPEAK
5	*	17.693	10.120	29.398	39.518	-20.482	60.000	QUASIPEAK
6		20.257	10.100	24.301	34.401	-25.599	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	**Time : 2006/09/10 - 12:51**
Limit : FCC_Part15_C_209_AV	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**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		0.170	9.590	12.150	21.740	-33.689	55.429	AVERAGE
2		3.222	9.750	10.450	20.200	-25.800	46.000	AVERAGE
3		6.186	9.742	12.620	22.362	-27.638	50.000	AVERAGE
4		7.394	9.793	16.550	26.343	-23.657	50.000	AVERAGE
5	*	17.693	10.120	20.750	30.870	-19.130	50.000	AVERAGE
6		20.257	10.100	12.250	22.350	-27.650	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: Transmitter 802.11b

Description : Front View of Conducted Test for Main

Test Mode : Mode 1: Transmitter 802.11b

Description : Back View of Conducted Test for Main

Test Mode : Mode 2: Transmitter 802.11g

Description : Front View of Conducted Test for Main

Test Mode : Mode 2: Transmitter 802.11g

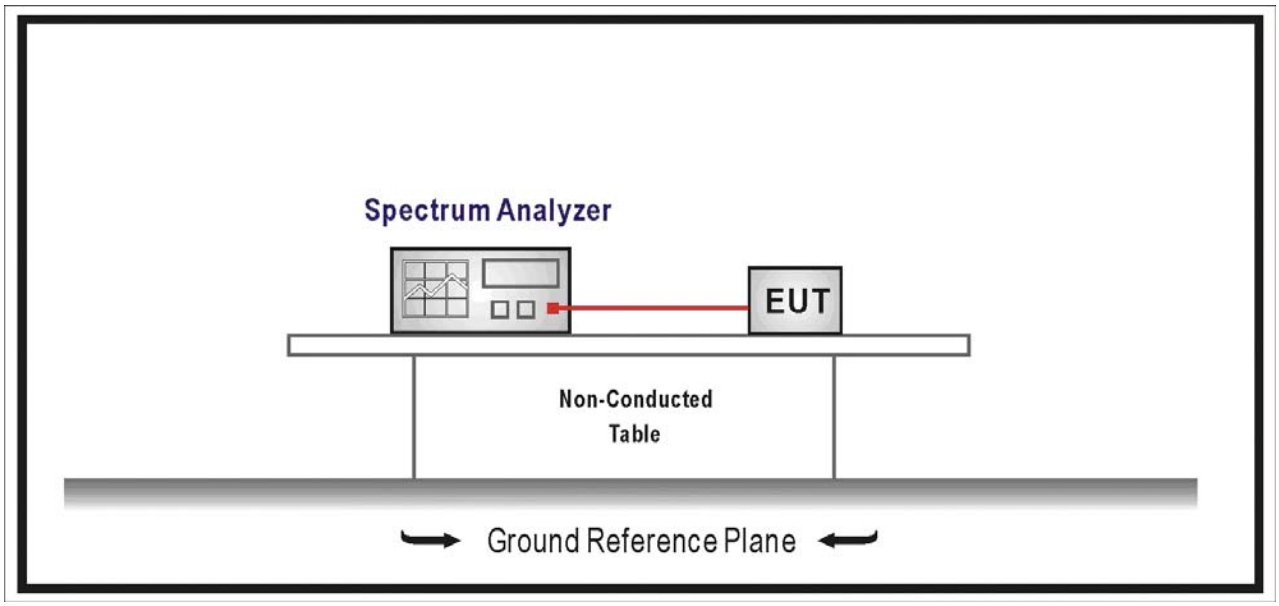
Description : Back View of Conducted Test for Main

4. Peak Output Power

4.1. Test Specification

According to EMC Standard: FCC Part 15 Subpart C Paragraph 15.247

4.2. Test Setup



4.3. Limit

The maximum peak power shall be less 1 Watt.

4.4. Deviation from Test Standard

No deviation.

4.5. Test Result

Product	802.11g Wireless ADSL 2+4-port Gateway		
Test Item	Peak Output Power		
Test Mode	Mode 1: Transmitter 802.11b		
Date of Test	2006/09/19	Test Site	AC-3

Channel No.	Frequency (MHz)	Measurement (dBm)	Required Limit (dBm)	Result
01	2412.00	14.97	1 Watt= 30 dBm	Pass
06	2437.00	15.29	1 Watt= 30 dBm	Pass
11	2467.00	14.50	1 Watt= 30 dBm	Pass

Figure Channel 01 (2412MHz)

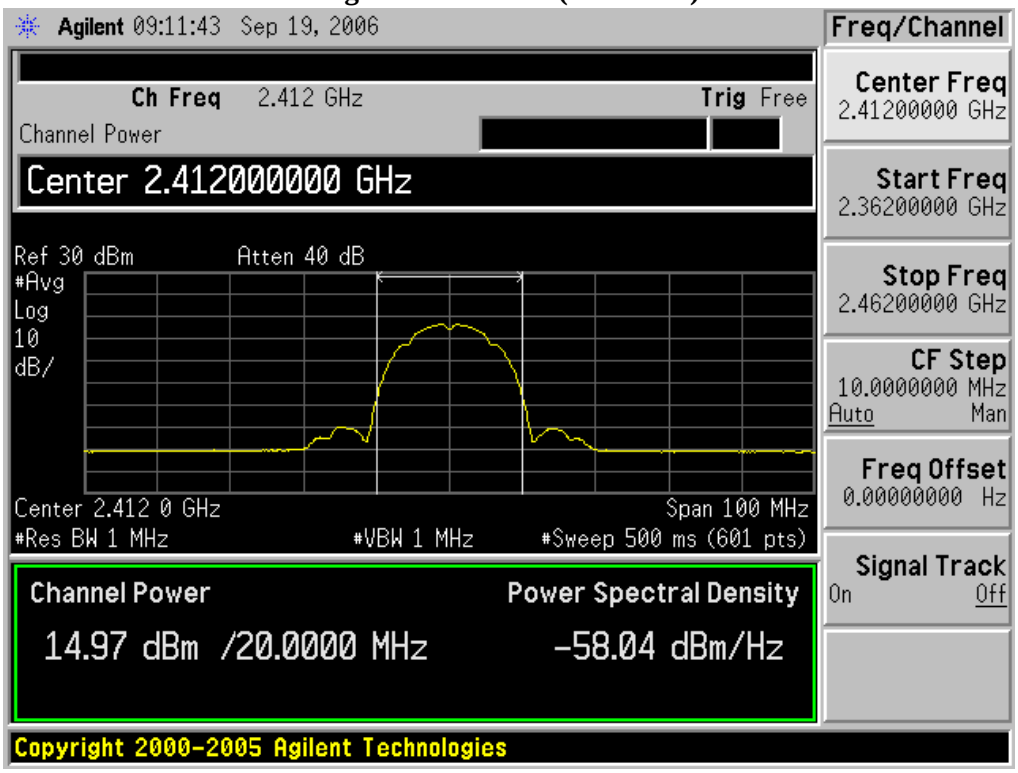


Figure Channel 06 (2437MHz)

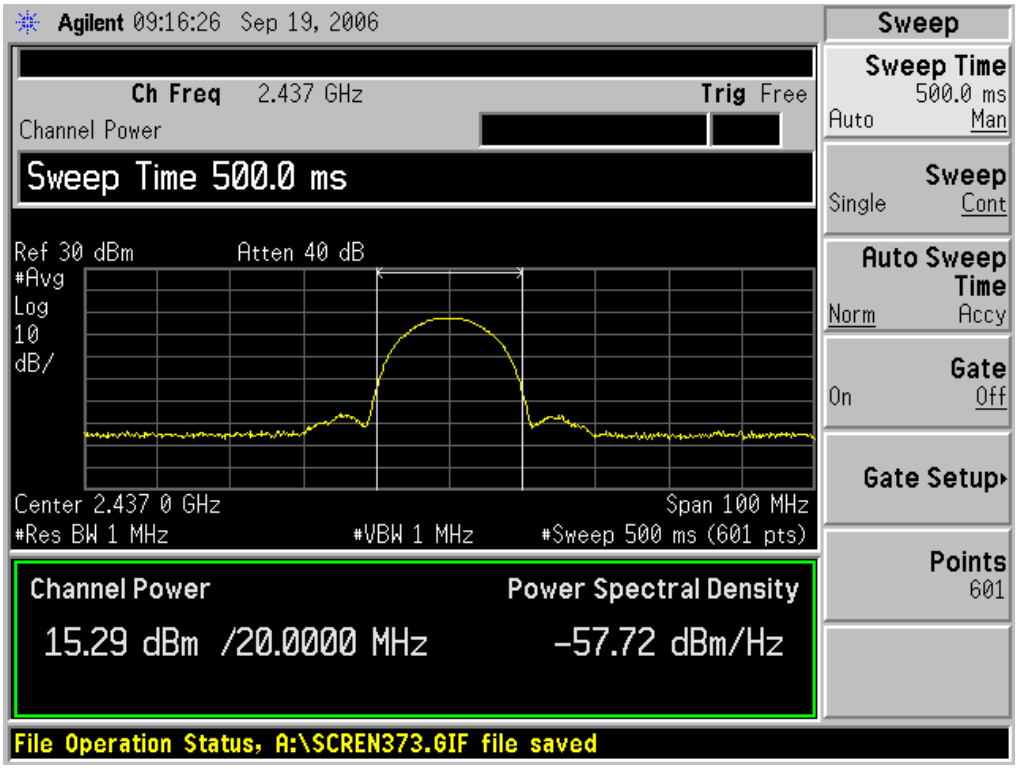
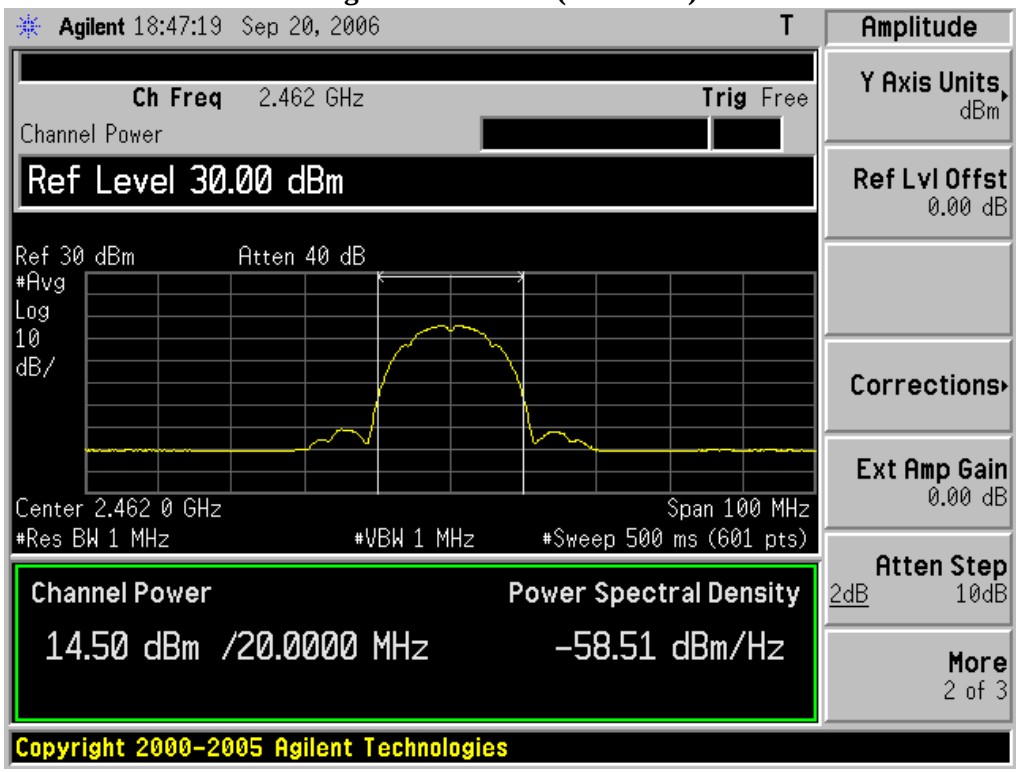


Figure Channel 11 (2462MHz)



Product	802.11g Wireless ADSL 2+4-port Gateway		
Test Item	Peak Output Power		
Test Mode	Mode 2: Transmitter 802.11g		
Date of Test	2006/09/19	Test Site	AC-3

Channel No.	Frequency (MHz)	Measurement (dBm)	Required Limit (dBm)	Result
01	2412.00	13.21	1 Watt= 30 dBm	Pass
06	2437.00	13.93	1 Watt= 30 dBm	Pass
11	2467.00	12.82	1 Watt= 30 dBm	Pass

Figure Channel 01 (2412MHz)

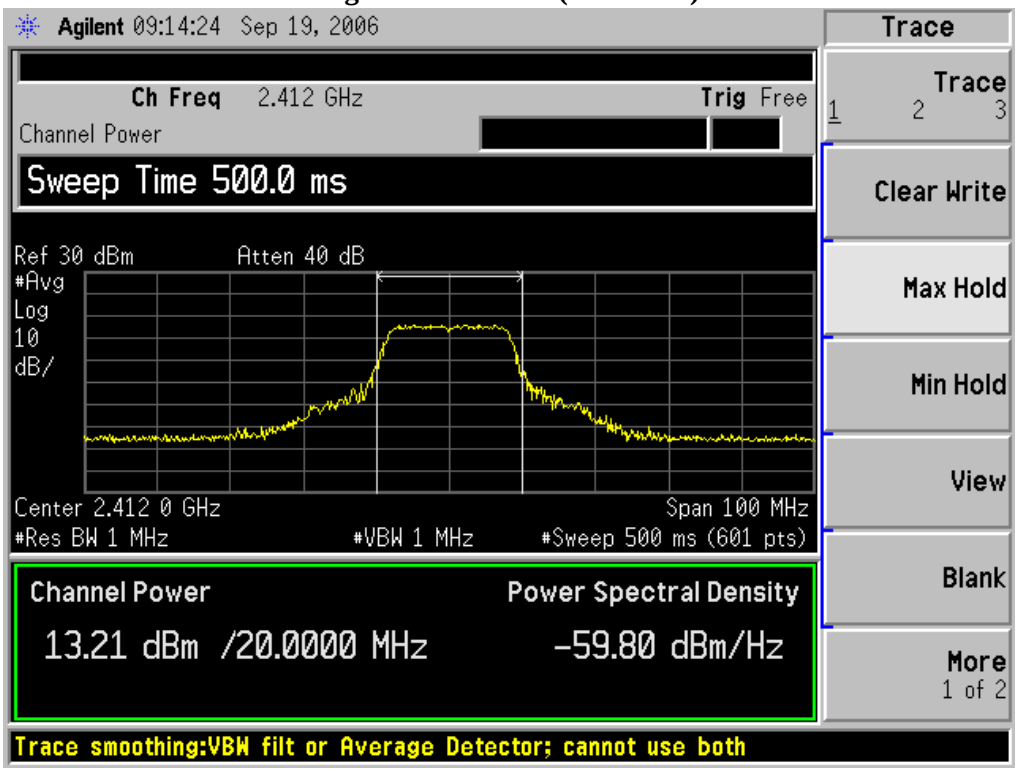


Figure Channel 06 (2437MHz)

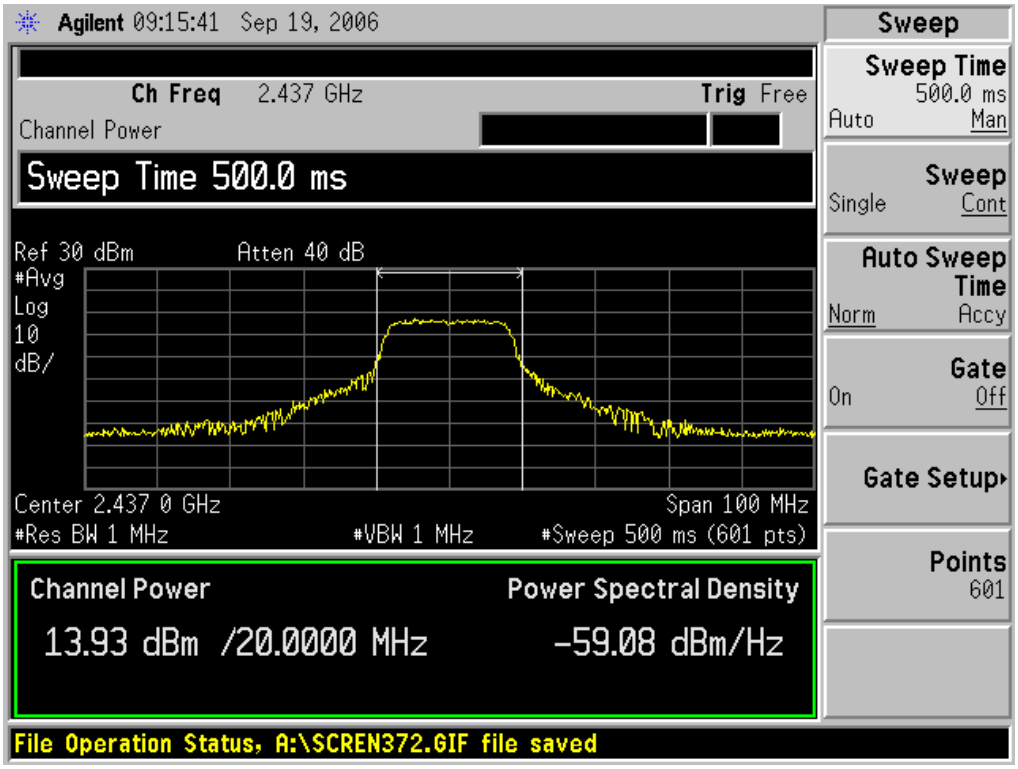
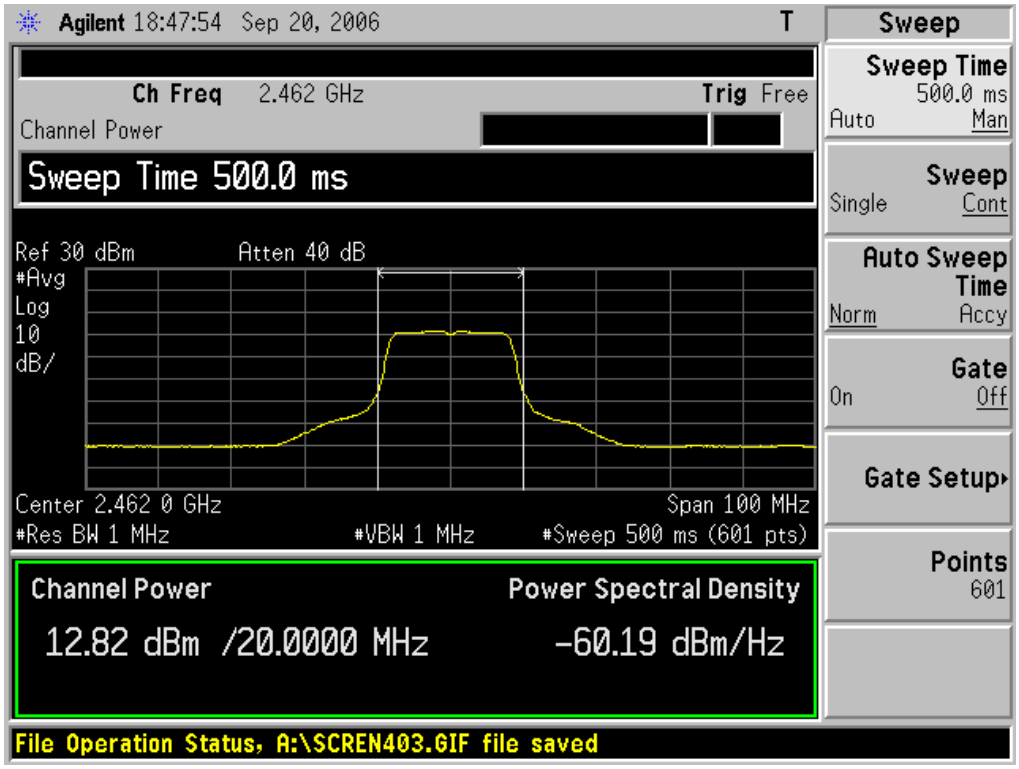


Figure Channel 11 (2462MHz)



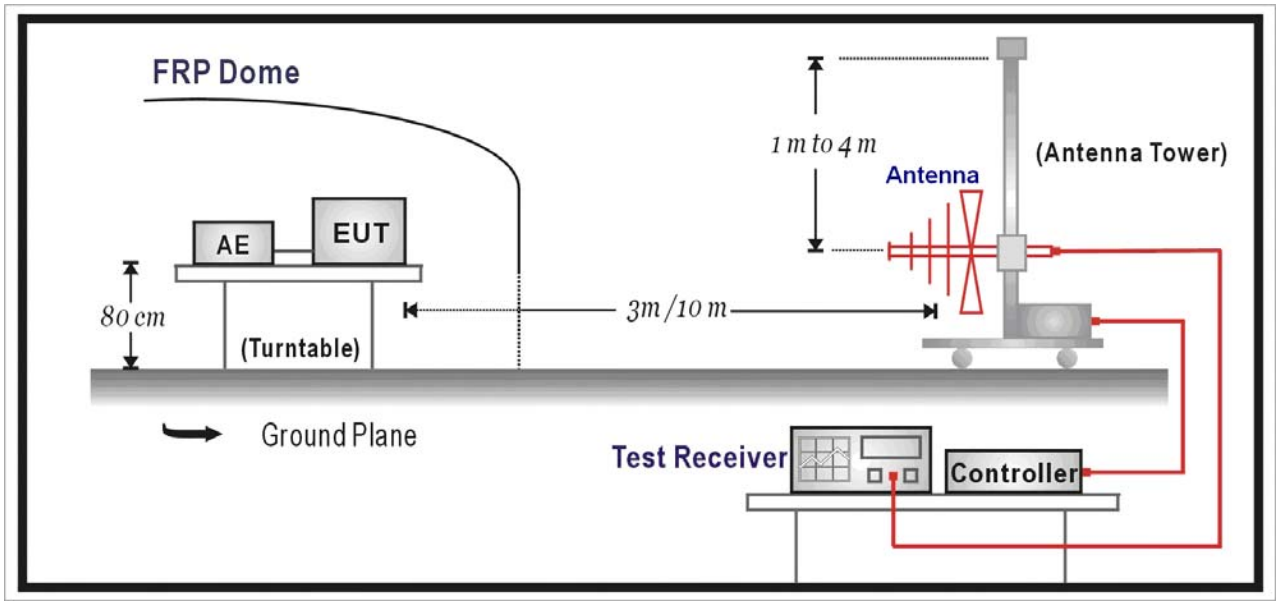
5. Radiated Emission

5.1. Test Specification

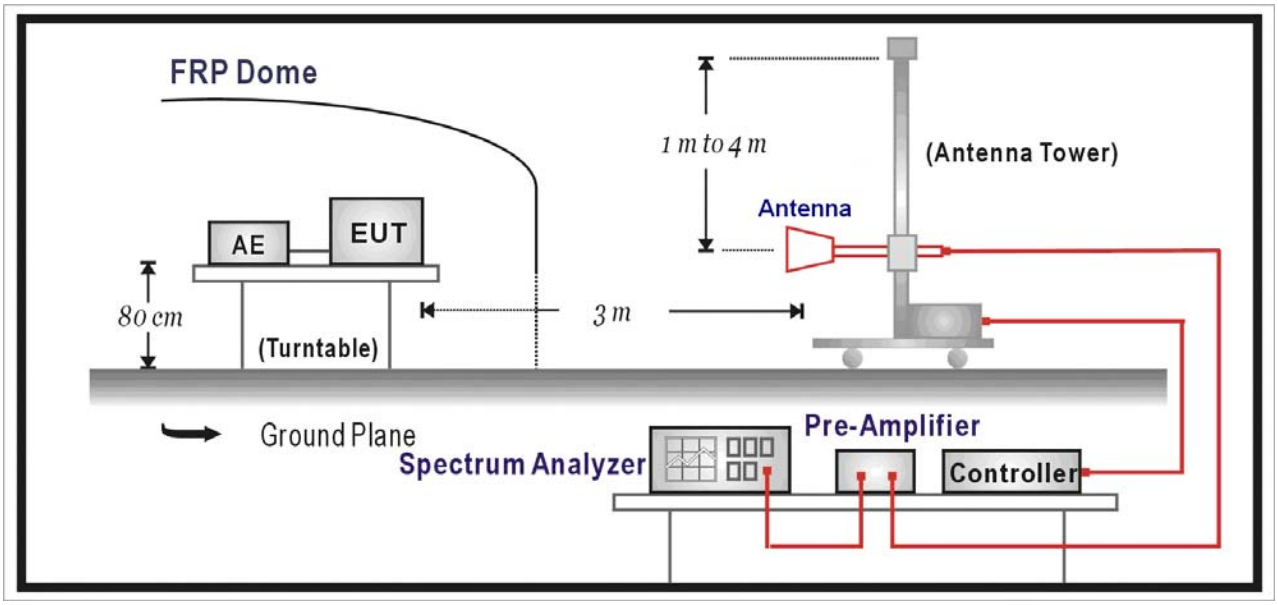
According to EMC Standard: FCC Part 15 Subpart C Paragraph 15.209

5.2. Test Setup

Under 1GHz Test Setup



Above 1GHz Test Setup



5.3. Limit

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209 Limits			
Frequency MHz	uV/m	dBuV/m	Measurement distance (meter)
0.009-0.490	2400/F(kHz)	See Remark[1]	300
0.490-1.705	24000/F(kHz)	See Remark[1]	30
1.705-30	30	29.5	30
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

Remarks : 1. RF Voltage (dBuV) = 20 log RF Voltage (uV)

2. In the Above Table, the tighter limit applies at the band edges.

3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

5.4. 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. 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 according to ANSI C63.4 on radiated measurement.
On the field strength of fundamental and harmonics, the limits shown are based on measuring equipment employing a average detector function. As an alternative, compliance with the limits may be based on the use of measurement instrumentation with a CISPR quasi-peak detector.
On the field strength of spurious electric, on any frequency or frequencies below or equal to 1000 MHz, the limits shown are based on measuring equipment employing a quasi-peak detector function and on any frequency or frequencies above 1000 MHz the radiated limits shown are based upon the use of measurement instrumentation employing an average detector function.

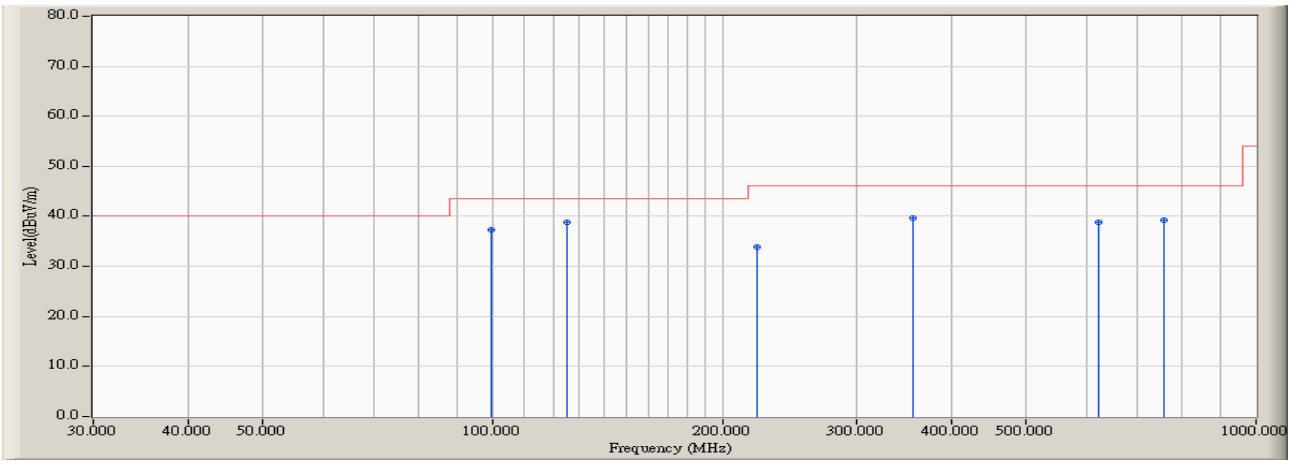
When average radiated emission measurement are included emission measurement below 1000 MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit.
The bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

5.5. Deviation from Test Standard

No deviation.

5.6. Test Result

Engineer : Johnwang	
Site : AC-2	**Time : 2006/09/18 - 17:03**
Limit : FCC_SpartC_15.209_03M_QP	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : CBL6141A_4278(30-2000MHz) - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b(2412MHz)**

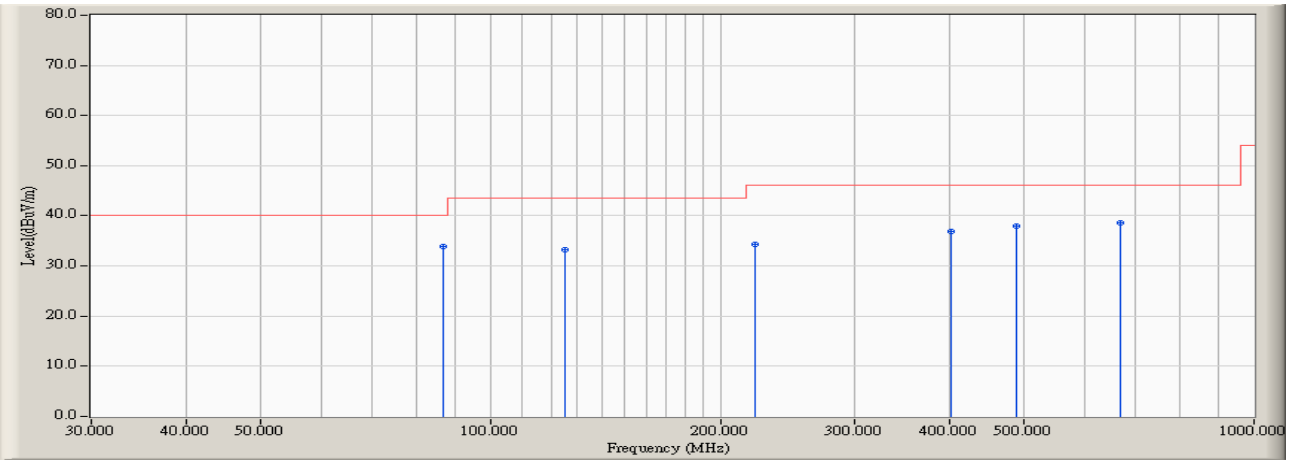


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		99.517	-14.125	51.338	37.212	-6.308	43.520	QUASIPEAK
2	*	125.383	-12.138	50.864	38.726	-4.794	43.520	QUASIPEAK
3		222.383	-11.042	45.013	33.971	-12.049	46.020	QUASIPEAK
4		354.950	-8.281	47.986	39.705	-6.315	46.020	QUASIPEAK
5		621.700	-3.242	41.997	38.755	-7.265	46.020	QUASIPEAK
6		755.883	-0.451	39.672	39.221	-6.799	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	**Time : 2006/09/18 - 17:04**
Limit : FCC_SpartC_15.209_03M_QP	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : CBL6141A_4278(30-2000MHz) - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b(2412MHz)**

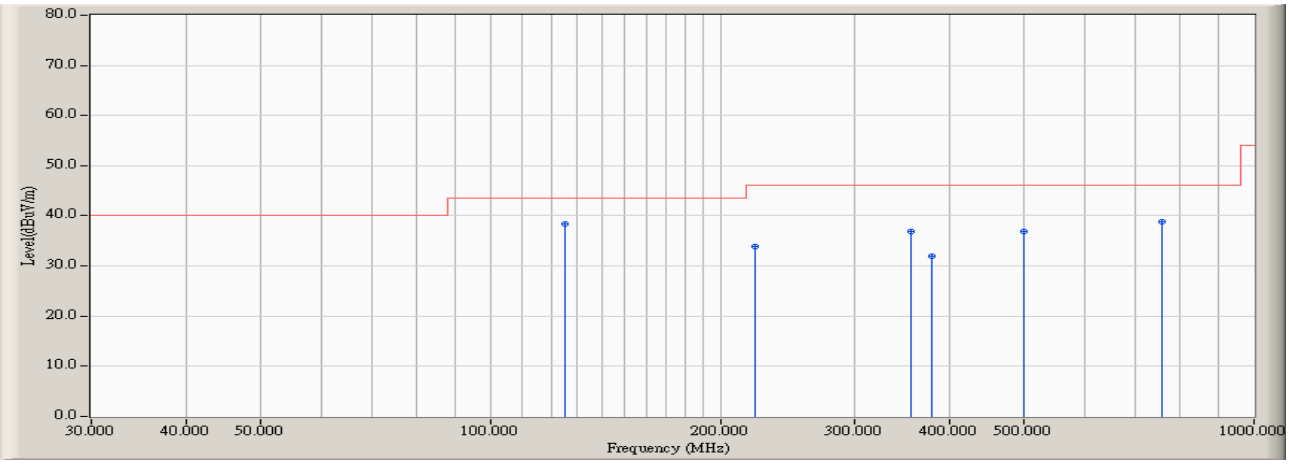


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	86.583	-15.616	49.514	33.898	-6.102	40.000	QUASIPEAK
2		125.383	-12.138	45.368	33.230	-10.290	43.520	QUASIPEAK
3		222.383	-11.042	45.351	34.309	-11.711	46.020	QUASIPEAK
4		400.217	-7.126	44.046	36.920	-9.100	46.020	QUASIPEAK
5		489.133	-5.729	43.679	37.950	-8.070	46.020	QUASIPEAK
6		666.967	-2.073	40.612	38.539	-7.481	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	**Time : 2006/09/18 - 17:06**
Limit : FCC_SpartC_15.209_03M_QP	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : CBL6141A_4278(30-2000MHz) - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b(2437MHz)**

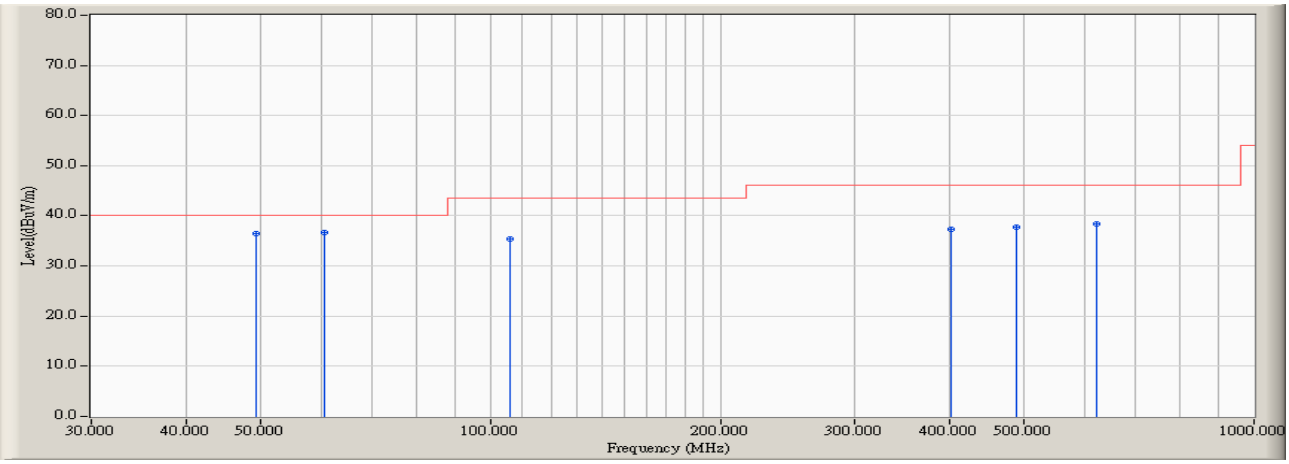


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	125.383	-12.138	50.442	38.304	-5.216	43.520	QUASIPEAK
2		222.383	-11.042	44.868	33.826	-12.194	46.020	QUASIPEAK
3		354.950	-8.281	45.161	36.880	-9.140	46.020	QUASIPEAK
4		377.583	-7.938	39.992	32.055	-13.965	46.020	QUASIPEAK
5		500.450	-5.504	42.489	36.985	-9.035	46.020	QUASIPEAK
6		755.883	-0.451	39.179	38.728	-7.292	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	**Time : 2006/09/18 - 17:10**
Limit : FCC_SpartC_15.209_03M_QP	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : CBL6141A_4278(30-2000MHz) - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b(2437MHz)**

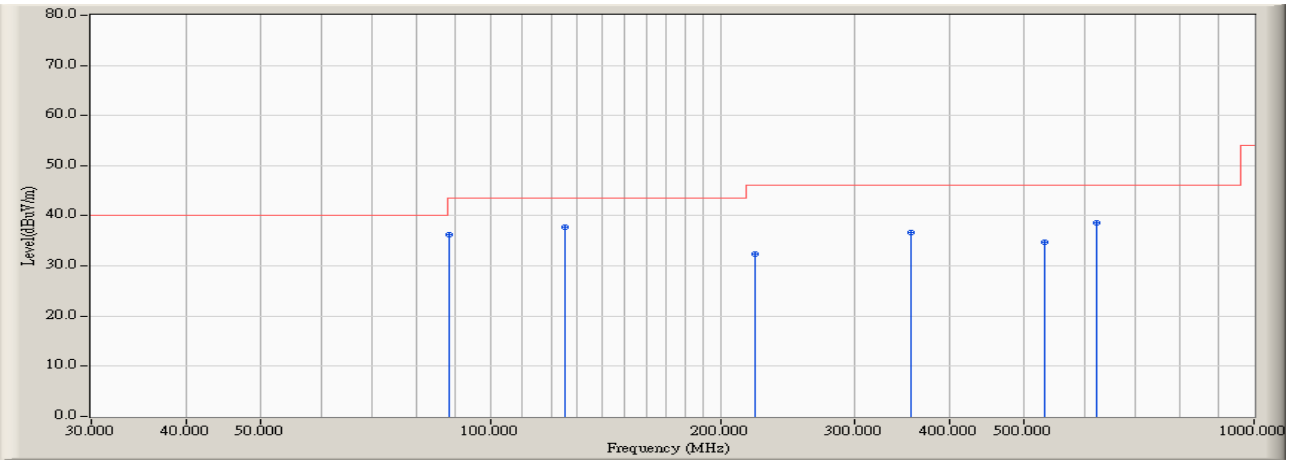


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		49.400	-10.857	47.417	36.560	-3.440	40.000	QUASIPEAK
2	*	60.717	-15.655	52.281	36.625	-3.375	40.000	QUASIPEAK
3		105.983	-13.523	48.873	35.350	-8.170	43.520	QUASIPEAK
4		400.217	-7.126	44.426	37.300	-8.720	46.020	QUASIPEAK
5		489.133	-5.729	43.394	37.665	-8.355	46.020	QUASIPEAK
6		621.700	-3.242	41.699	38.457	-7.563	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	**Time : 2006/09/18 - 17:13**
Limit : FCC_SpartC_15.209_03M_QP	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : CBL6141A_4278(30-2000MHz) - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b(2462MHz)**

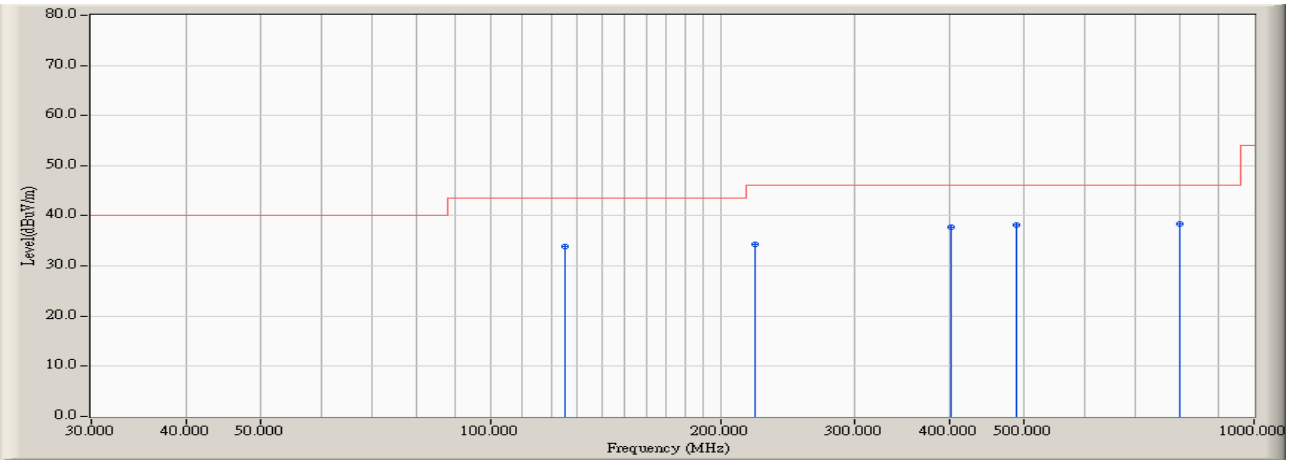


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		88.200	-15.405	51.643	36.238	-7.282	43.520	QUASIPEAK
2	*	125.383	-12.138	49.907	37.769	-5.751	43.520	QUASIPEAK
3		222.383	-11.042	43.346	32.304	-13.716	46.020	QUASIPEAK
4		354.950	-8.281	44.857	36.576	-9.444	46.020	QUASIPEAK
5		532.783	-5.321	40.041	34.720	-11.300	46.020	QUASIPEAK
6		621.700	-3.242	41.835	38.593	-7.427	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	**Time : 2006/09/18 - 17:15**
Limit : FCC_SpartC_15.209_03M_QP	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : CBL6141A_4278(30-2000MHz) - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b(2462MHz)**

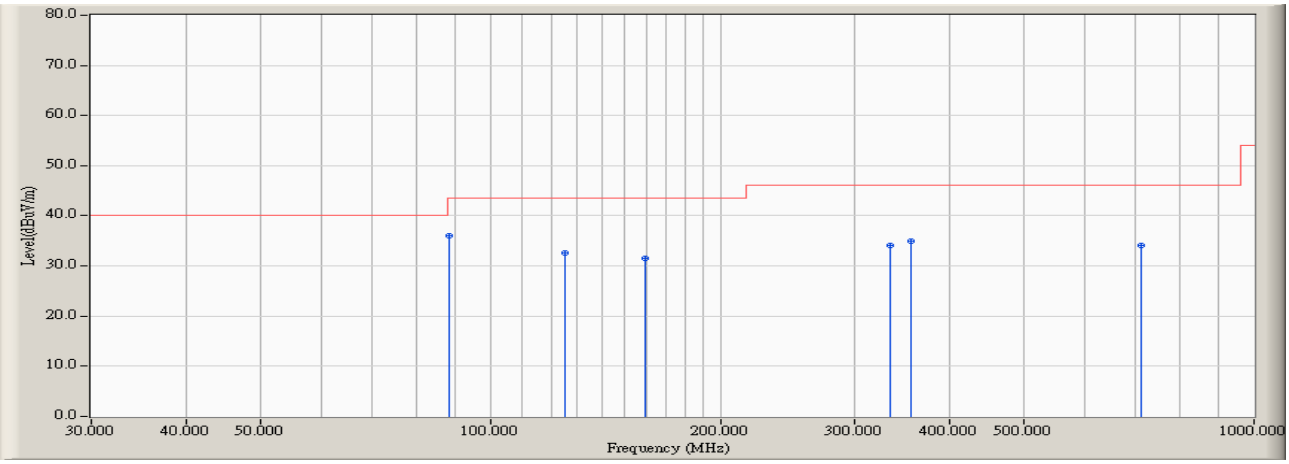


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		125.383	-12.138	46.085	33.947	-9.573	43.520	QUASIPEAK
2		222.383	-11.042	45.356	34.314	-11.706	46.020	QUASIPEAK
3		400.217	-7.126	44.816	37.690	-8.330	46.020	QUASIPEAK
4		489.133	-5.729	43.922	38.193	-7.827	46.020	QUASIPEAK
5	*	799.533	-0.713	39.160	38.447	-7.573	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	**Time : 2006/09/18 - 17:19**
Limit : FCC_SpartC_15.209_03M_QP	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : CBL6141A_4278(30-2000MHz) - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g(2412MHz)**

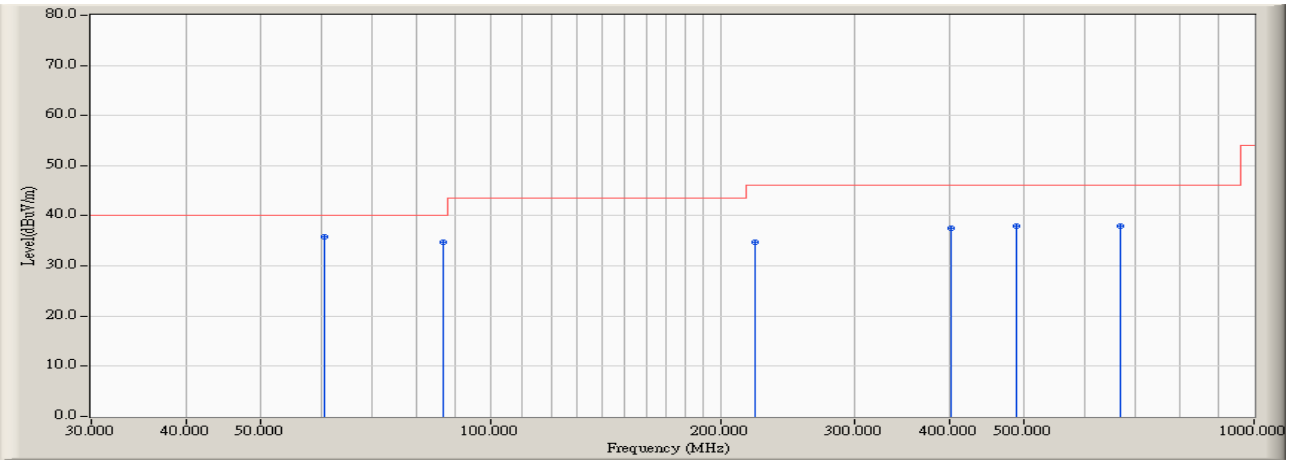


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	88.200	-15.405	51.332	35.927	-7.593	43.520	QUASIPEAK
2		125.383	-12.138	44.839	32.701	-10.819	43.520	QUASIPEAK
3		159.333	-12.239	43.735	31.496	-12.024	43.520	QUASIPEAK
4		333.933	-8.796	42.849	34.053	-11.967	46.020	QUASIPEAK
5		354.950	-8.281	43.139	34.858	-11.162	46.020	QUASIPEAK
6		710.617	-1.460	35.540	34.080	-11.940	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	**Time : 2006/09/18 - 17:21**
Limit : FCC_SpartC_15.209_03M_QP	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : CBL6141A_4278(30-2000MHz) - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g(2412MHz)**

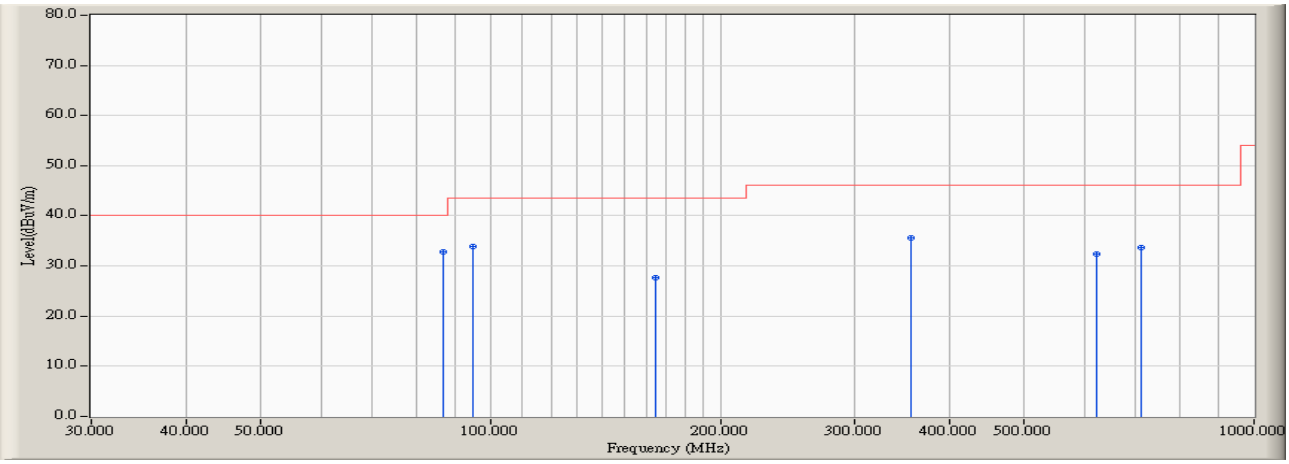


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	60.717	-15.655	51.490	35.834	-4.166	40.000	QUASIPEAK
2		86.583	-15.616	50.331	34.715	-5.285	40.000	QUASIPEAK
3		222.383	-11.042	45.766	34.724	-11.296	46.020	QUASIPEAK
4		400.217	-7.126	44.721	37.595	-8.425	46.020	QUASIPEAK
5		489.133	-5.729	43.624	37.895	-8.125	46.020	QUASIPEAK
6		666.967	-2.073	39.945	37.872	-8.148	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	**Time : 2006/09/18 - 17:24**
Limit : FCC_SpartC_15.209_03M_QP	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : CBL6141A_4278(30-2000MHz) - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g(2437MHz)**

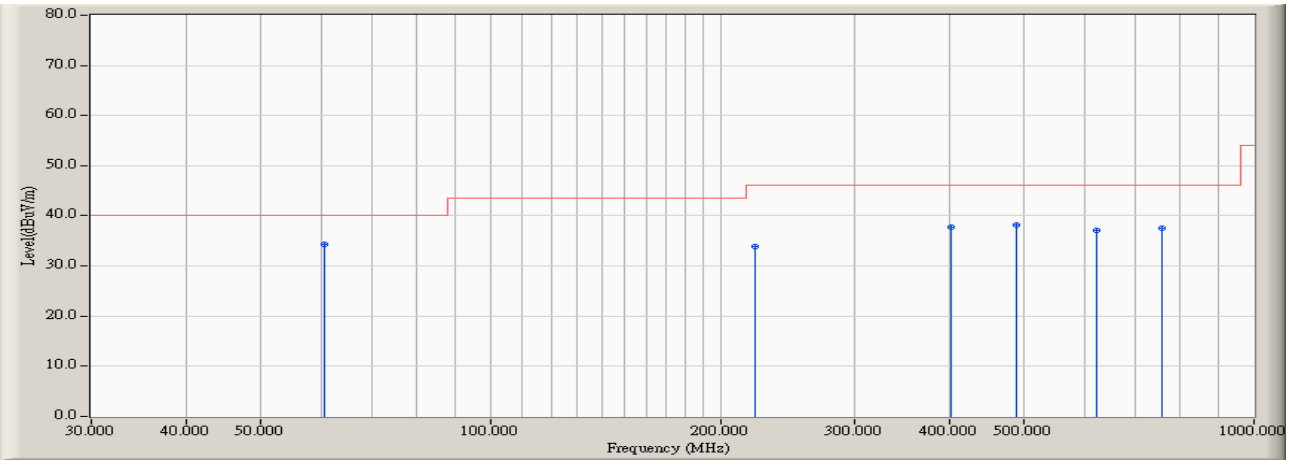


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	86.583	-15.616	48.453	32.837	-7.163	40.000	QUASIPEAK
2		94.667	-14.731	48.614	33.883	-9.637	43.520	QUASIPEAK
3		164.183	-12.616	40.250	27.634	-15.886	43.520	QUASIPEAK
4		354.950	-8.281	43.844	35.563	-10.457	46.020	QUASIPEAK
5		621.700	-3.242	35.713	32.471	-13.549	46.020	QUASIPEAK
6		710.617	-1.460	35.050	33.590	-12.430	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	**Time : 2006/09/18 - 17:25**
Limit : FCC_SpartC_15.209_03M_QP	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : CBL6141A_4278(30-2000MHz) - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g(2437MHz)**

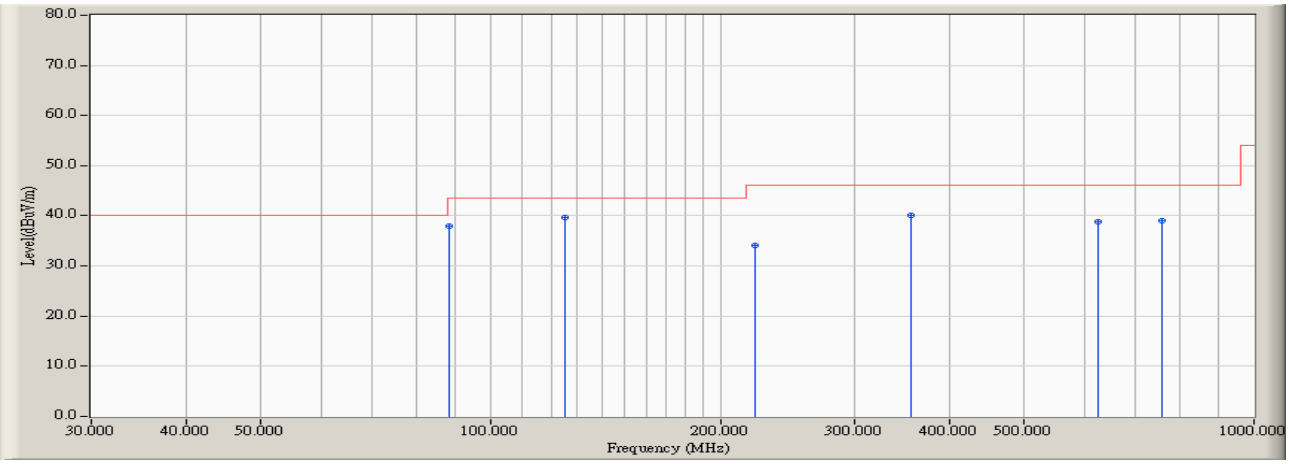


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	60.717	-15.655	49.942	34.286	-5.714	40.000	QUASIPEAK
2		222.383	-11.042	44.862	33.820	-12.200	46.020	QUASIPEAK
3		400.217	-7.126	44.902	37.776	-8.244	46.020	QUASIPEAK
4		489.133	-5.729	43.896	38.167	-7.853	46.020	QUASIPEAK
5		621.700	-3.242	40.436	37.194	-8.826	46.020	QUASIPEAK
6		755.883	-0.451	38.018	37.567	-8.453	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	**Time : 2006/09/18 - 17:29**
Limit : FCC_SpartC_15.209_03M_QP	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : CBL6141A_4278(30-2000MHz) - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g(2462MHz)**

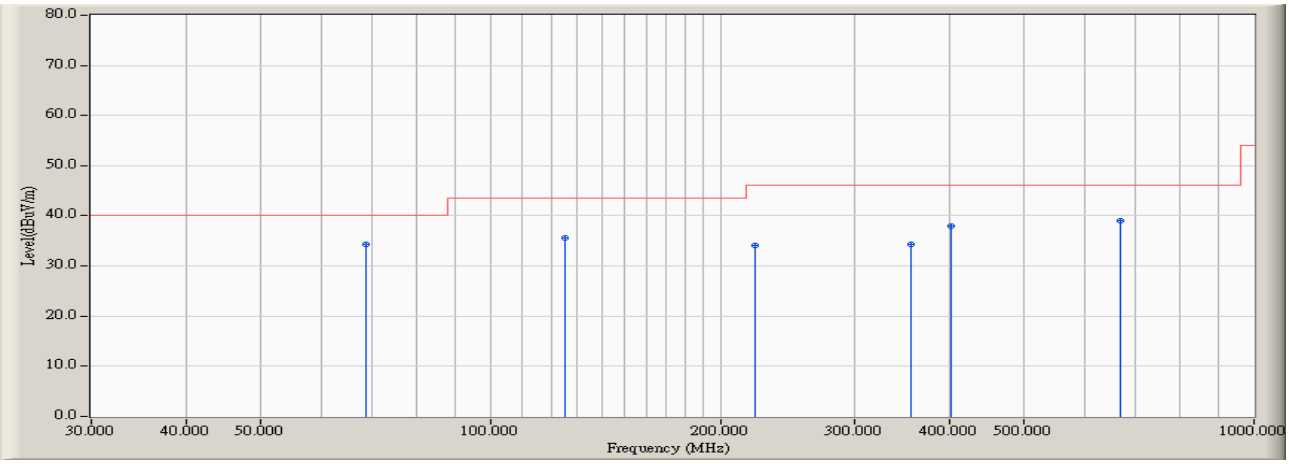


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		88.200	-15.405	53.377	37.972	-5.548	43.520	QUASIPEAK
2	*	125.383	-12.138	51.906	39.768	-3.752	43.520	QUASIPEAK
3		222.383	-11.042	45.102	34.060	-11.960	46.020	QUASIPEAK
4		354.950	-8.281	48.475	40.194	-5.826	46.020	QUASIPEAK
5		624.933	-3.144	41.880	38.736	-7.284	46.020	QUASIPEAK
6		755.883	-0.451	39.386	38.935	-7.085	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	**Time : 2006/09/18 - 17:31**
Limit : FCC_SpartC_15.209_03M_QP	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : CBL6141A_4278(30-2000MHz) - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g(2462MHz)**

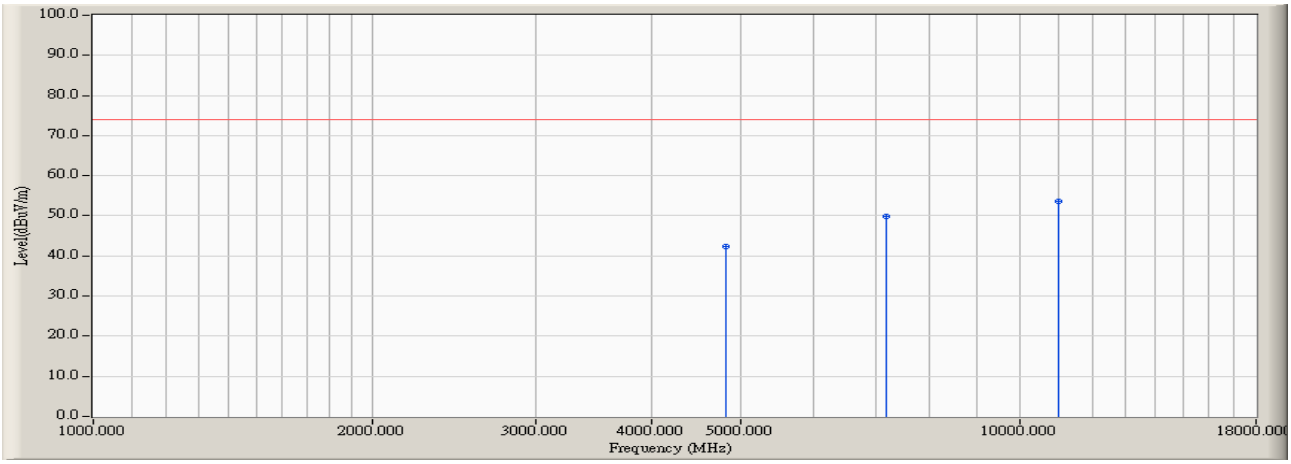


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	68.800	-16.992	51.368	34.376	-5.624	40.000	QUASIPEAK
2		125.383	-12.138	47.828	35.690	-7.830	43.520	QUASIPEAK
3		222.383	-11.042	45.085	34.043	-11.977	46.020	QUASIPEAK
4		354.950	-8.281	42.665	34.384	-11.636	46.020	QUASIPEAK
5		400.217	-7.126	45.178	38.052	-7.968	46.020	QUASIPEAK
6		666.967	-2.073	41.143	39.070	-6.950	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	**Time : 2006/09/18 - 10:27**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : 9120D_(1G-18G) - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b(2412MHz)**

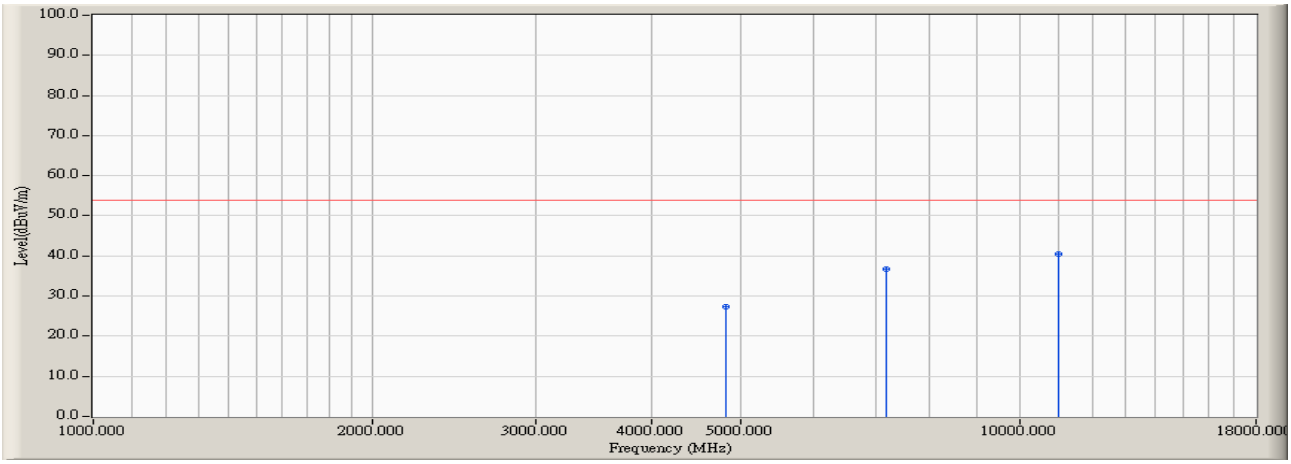


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4825.000	4.900	37.393	42.293	-31.677	73.970	PEAK
2		7176.667	15.347	34.521	49.868	-24.102	73.970	PEAK
3	*	11001.667	20.244	33.363	53.606	-20.364	73.970	PEAK

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-2	**Time : 2006/09/18 - 10:27**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : 9120D_(1G-18G) - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b(2412MHz)**

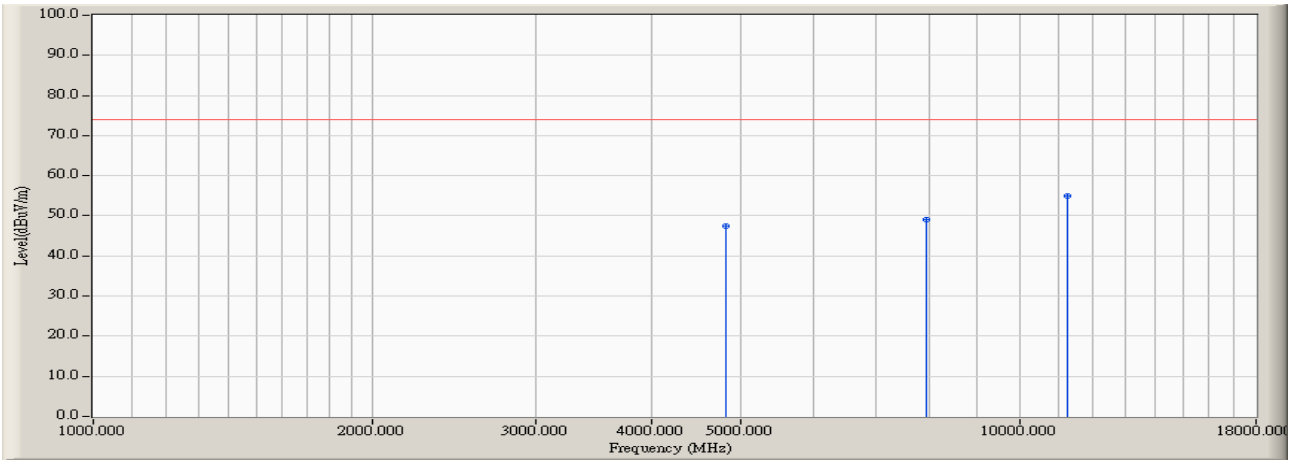


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4825.000	4.900	22.560	27.460	-26.510	53.970	AVERAGE
2		7176.667	15.347	21.380	36.727	-17.243	53.970	AVERAGE
3	*	11001.667	20.244	20.190	40.433	-13.537	53.970	AVERAGE

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-2	**Time : 2006/09/18 - 10:30**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : 9120D_(1G-18G) - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b(2412MHz)**

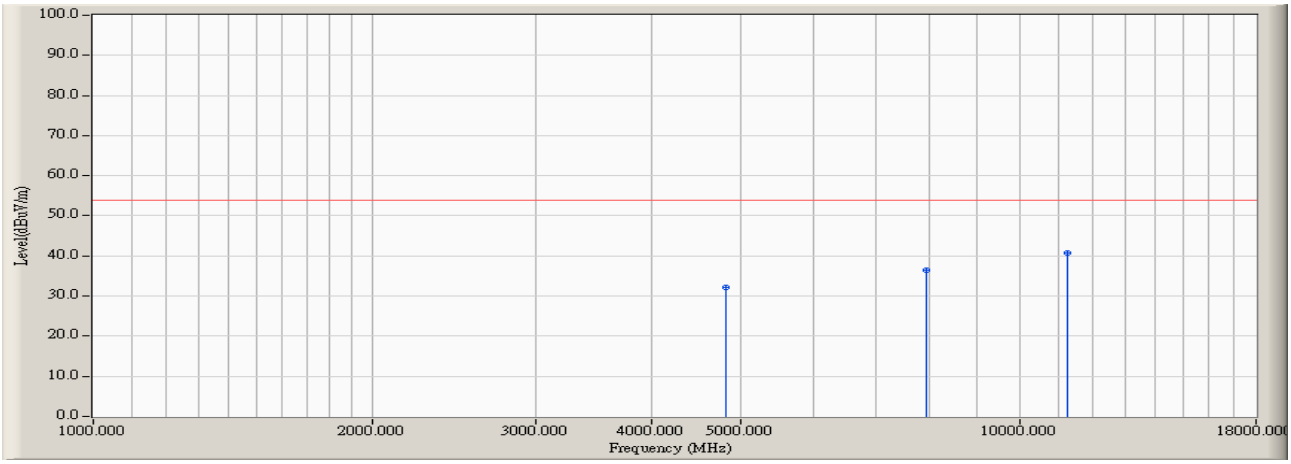


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4825.000	4.900	42.674	47.574	-26.396	73.970	PEAK
2		7941.667	14.083	34.984	49.067	-24.903	73.970	PEAK
3	*	11256.667	19.880	34.946	54.826	-19.144	73.970	PEAK

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-2	**Time : 2006/09/18 - 10:30**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : 9120D_(1G-18G) - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b(2412MHz)**

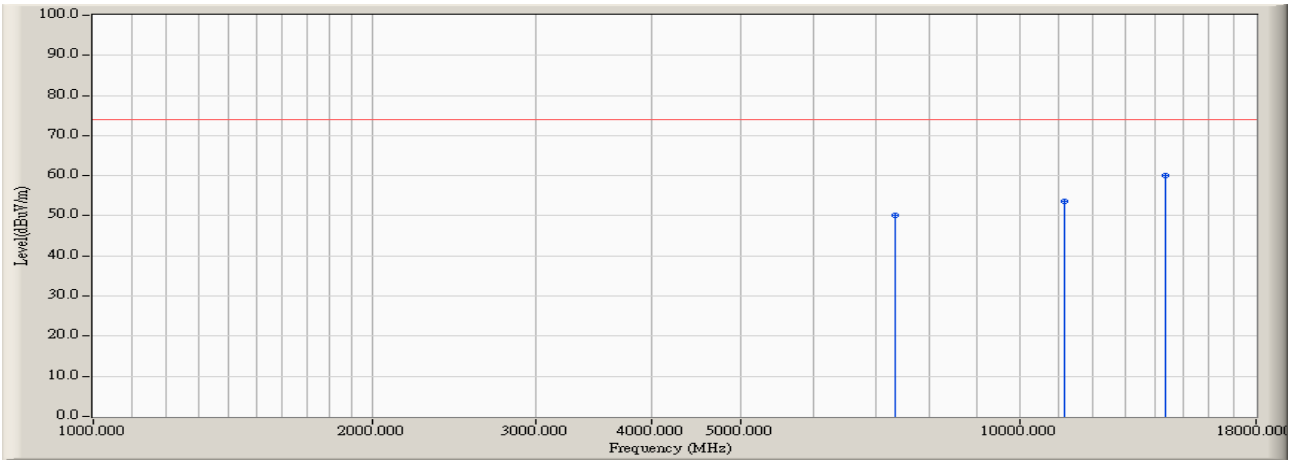


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4825.000	4.900	27.310	32.210	-21.760	53.970	AVERAGE
2		7941.667	14.083	22.360	36.443	-17.527	53.970	AVERAGE
3	*	11256.667	19.880	20.740	40.620	-13.350	53.970	AVERAGE

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-2	**Time : 2006/09/18 - 10:34**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : 9120D_(1G-18G) - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b(2437MHz)**

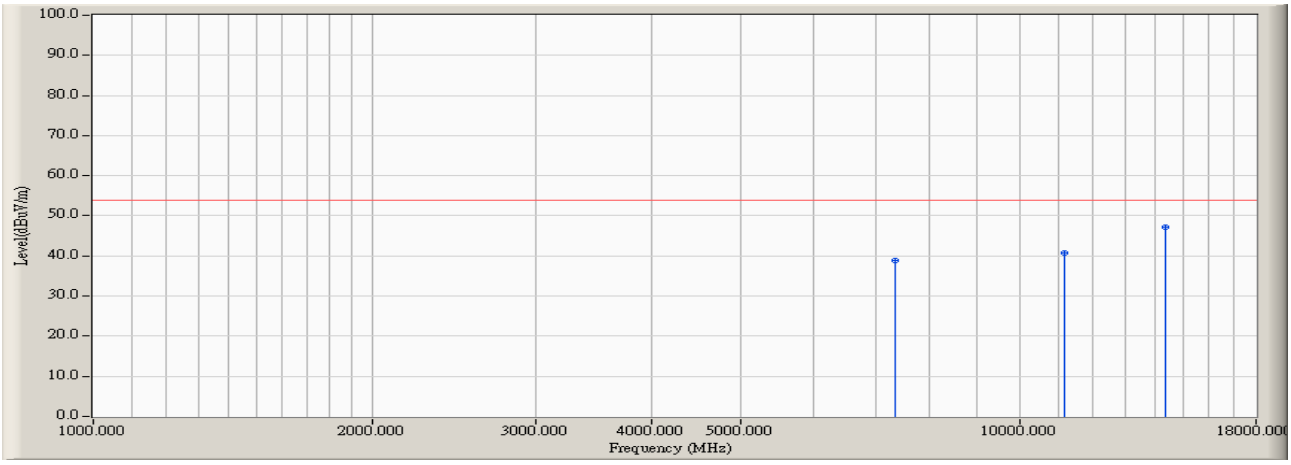


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		7346.667	15.280	34.871	50.151	-23.819	73.970	PEAK
2		11171.667	20.000	33.593	53.593	-20.377	73.970	PEAK
3	*	14373.333	25.817	34.116	59.933	-14.037	73.970	PEAK

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-2	**Time : 2006/09/18 - 10:34**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : 9120D_(1G-18G) - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b(2437MHz)**

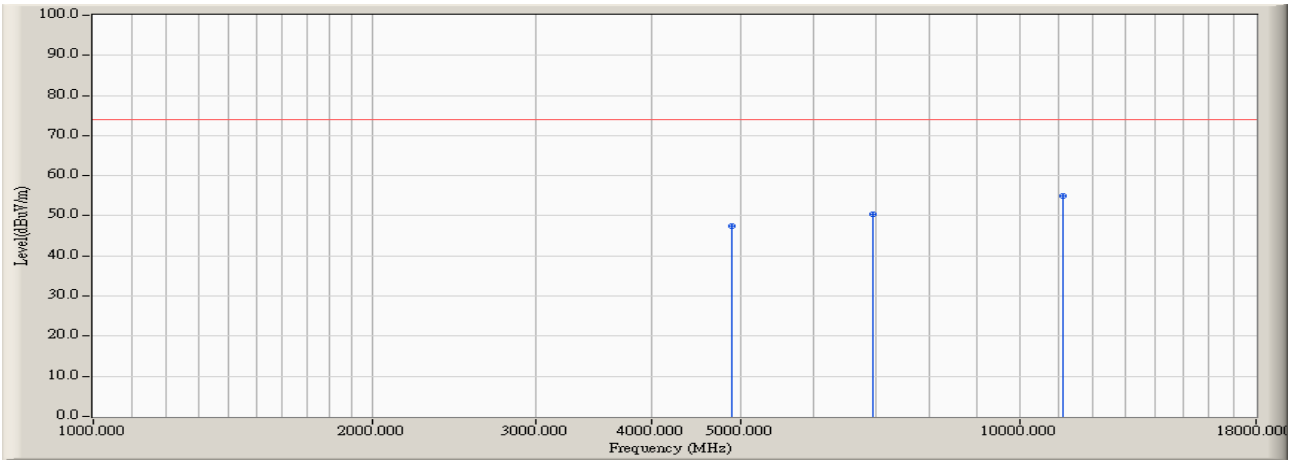


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		7346.667	15.280	23.470	38.750	-15.220	53.970	AVERAGE
2		11171.667	20.000	20.660	40.660	-13.310	53.970	AVERAGE
3	*	14373.333	25.817	21.460	47.277	-6.693	53.970	AVERAGE

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-2	**Time : 2006/09/18 - 10:37**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : 9120D_(1G-18G) - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b(2437MHz)**

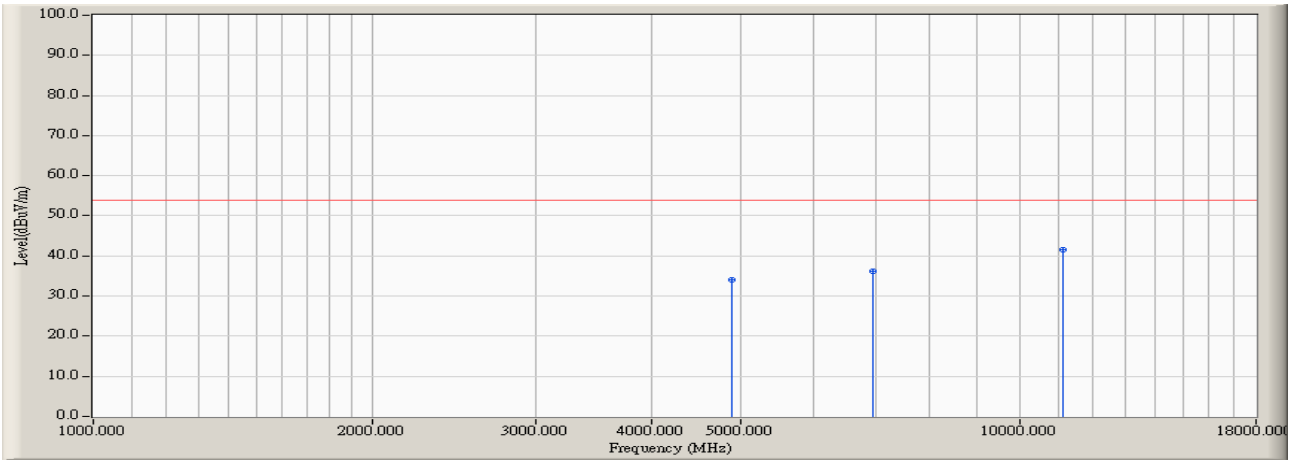


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4881.667	5.034	42.487	47.520	-26.450	73.970	PEAK
2		6950.000	14.500	35.895	50.395	-23.575	73.970	PEAK
3	*	11143.333	20.044	34.955	54.998	-18.972	73.970	PEAK

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-2	**Time : 2006/09/18 - 10:37**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : 9120D_(1G-18G) - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b(2437MHz)**

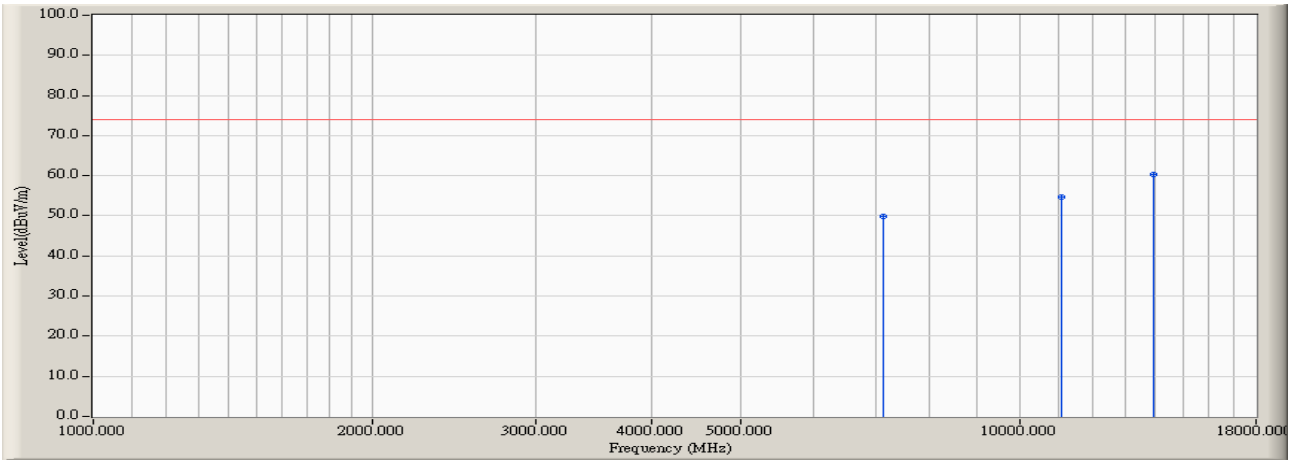


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4881.667	5.034	28.990	34.023	-19.947	53.970	AVERAGE
2		6950.000	14.500	21.580	36.080	-17.890	53.970	AVERAGE
3	*	11143.333	20.044	21.580	41.623	-12.347	53.970	AVERAGE

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-2	**Time : 2006/09/18 - 10:41**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : 9120D_(1G-18G) - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b(2462MHz)**

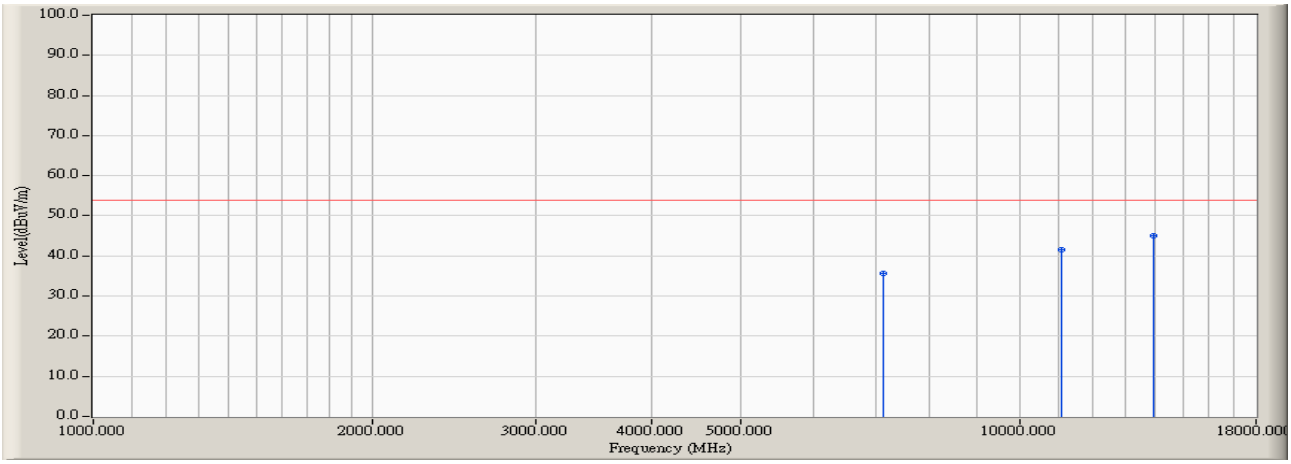


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		7120.000	15.120	34.873	49.993	-23.977	73.970	PEAK
2		11115.000	20.080	34.547	54.627	-19.343	73.970	PEAK
3	*	13948.333	24.627	35.669	60.296	-13.674	73.970	PEAK

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-2	**Time : 2006/09/18 - 10:41**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : 9120D_(1G-18G) - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b(2462MHz)**

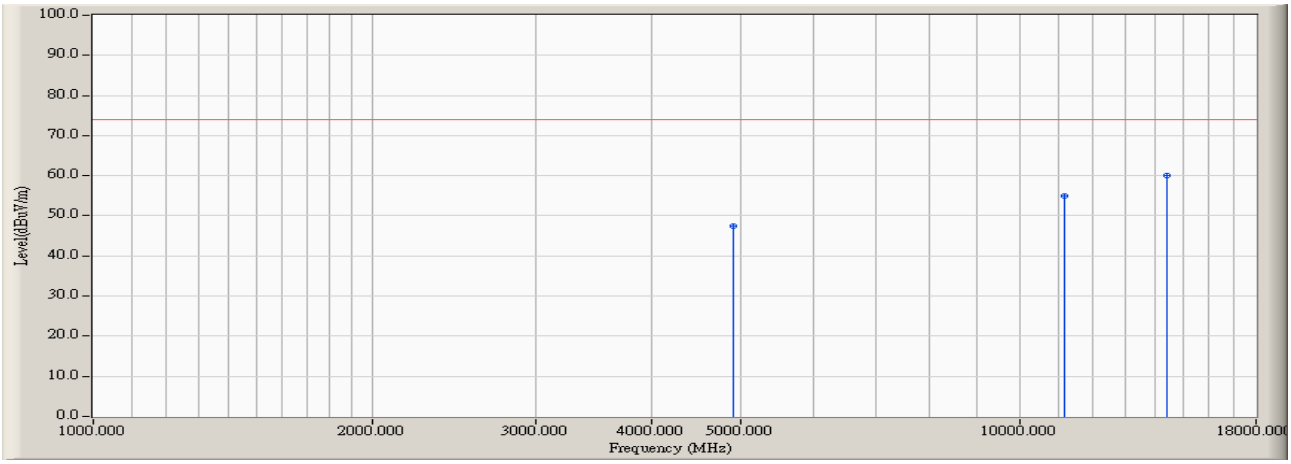


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		7120.000	15.120	20.480	35.600	-18.370	53.970	AVERAGE
2		11115.000	20.080	21.350	41.430	-12.540	53.970	AVERAGE
3	*	13948.333	24.627	20.470	45.097	-8.873	53.970	AVERAGE

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-2	**Time : 2006/09/18 - 10:46**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : 9120D_(1G-18G) - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b(2462MHz)**

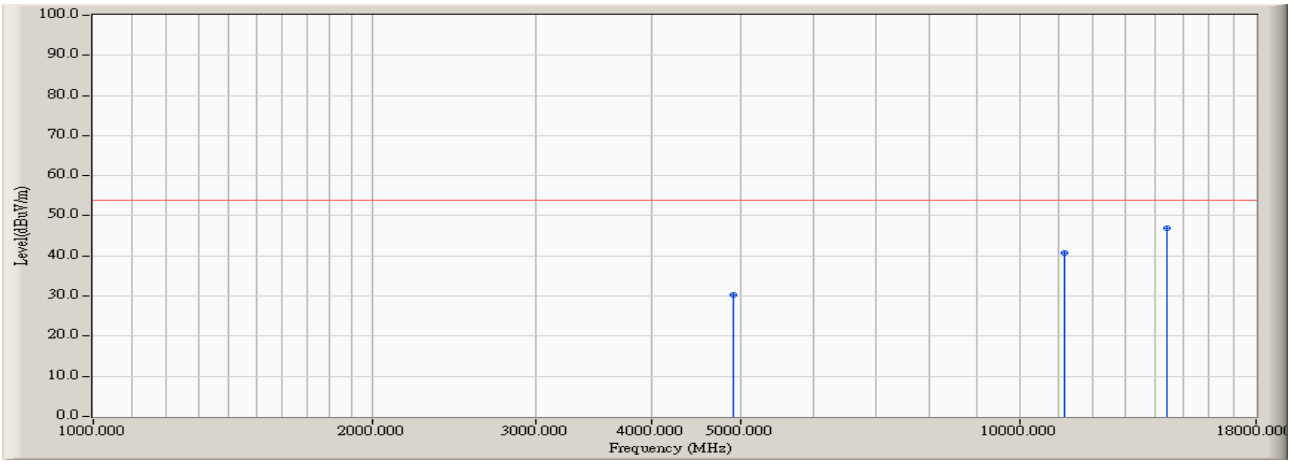


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4910.000	5.100	42.404	47.504	-26.466	73.970	PEAK
2		11171.667	20.000	34.916	54.916	-19.054	73.970	PEAK
3	*	14401.667	25.893	34.039	59.932	-14.038	73.970	PEAK

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-2	**Time : 2006/09/18 - 10:46**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : 9120D_(1G-18G) - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b(2462MHz)**

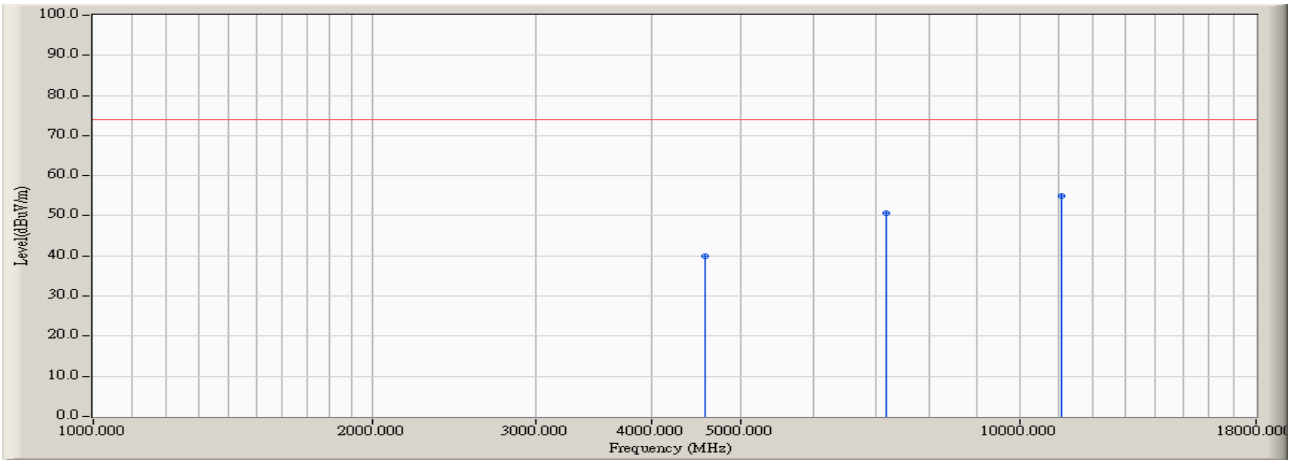


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4910.000	5.100	25.110	30.210	-23.760	53.970	AVERAGE
2		11171.667	20.000	20.680	40.680	-13.290	53.970	AVERAGE
3	*	14401.667	25.893	21.030	46.923	-7.047	53.970	AVERAGE

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-2	**Time : 2006/09/18 - 10:55**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : 9120D_(1G-18G) - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g(2412MHz)**

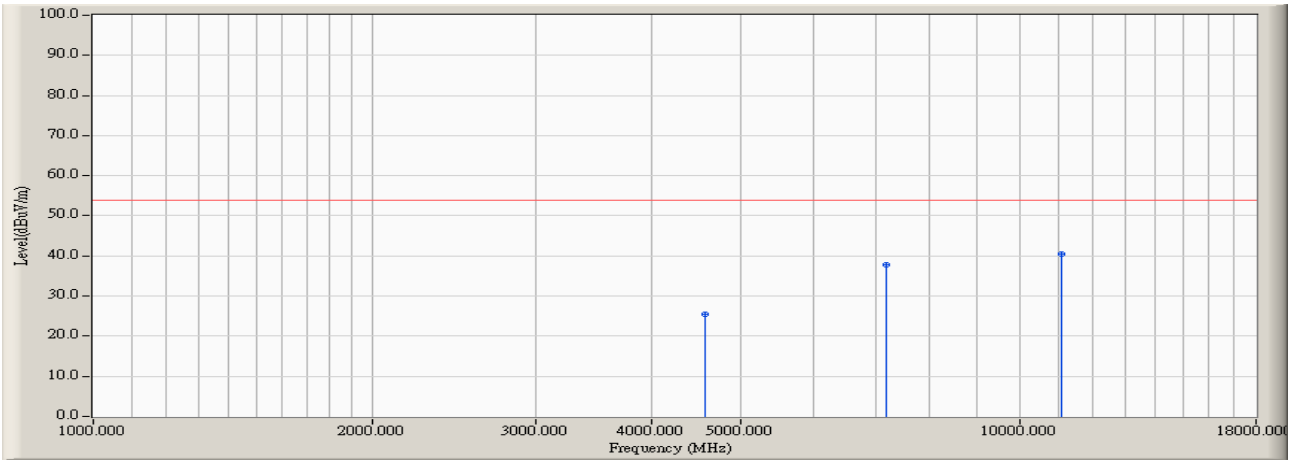


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4570.000	4.050	35.773	39.823	-34.147	73.970	PEAK
2		7176.667	15.347	35.245	50.592	-23.378	73.970	PEAK
3	*	11115.000	20.080	34.748	54.828	-19.142	73.970	PEAK

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-2	**Time : 2006/09/18 - 10:55**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : 9120D_(1G-18G) - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g(2412MHz)**

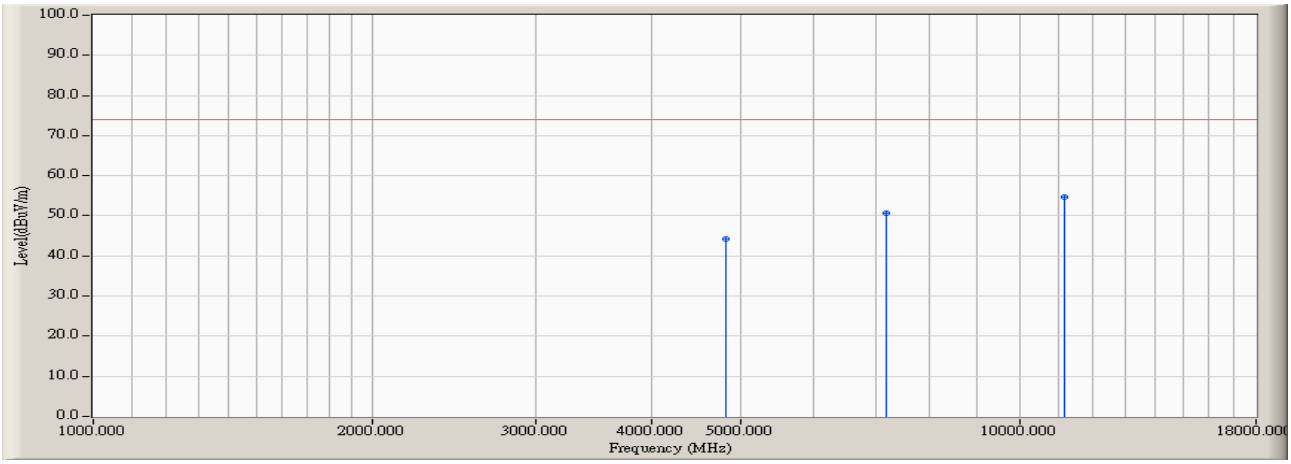


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4570.000	4.050	21.440	25.490	-28.480	53.970	AVERAGE
2		7176.667	15.347	22.580	37.927	-16.043	53.970	AVERAGE
3	*	11115.000	20.080	20.470	40.550	-13.420	53.970	AVERAGE

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-2	**Time : 2006/09/18 - 10:59**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : 9120D_(1G-18G) - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g(2412MHz)**

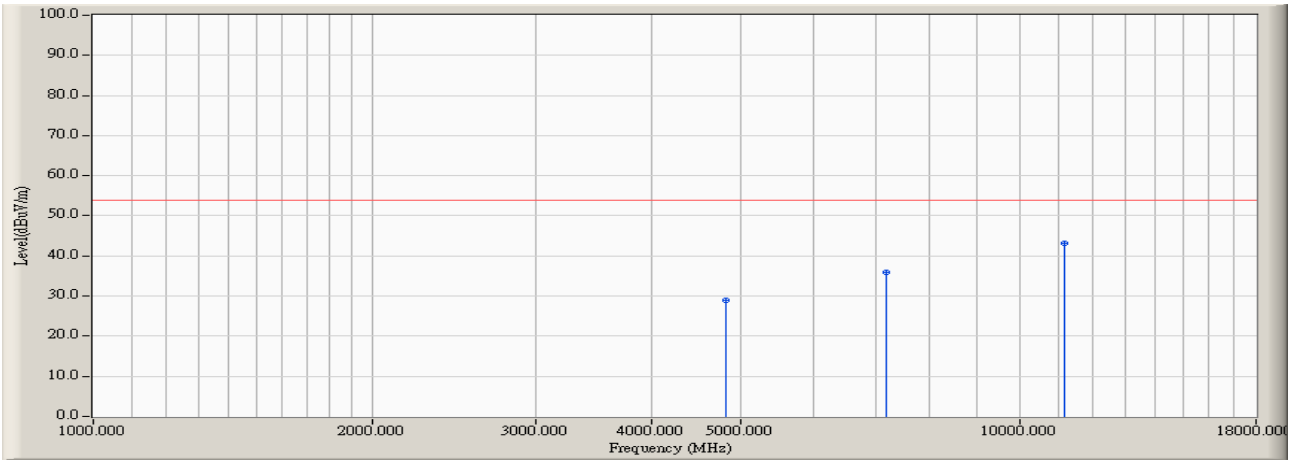


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4825.000	4.900	39.440	44.340	-29.630	73.970	PEAK
2		7176.667	15.347	35.326	50.673	-23.297	73.970	PEAK
3	*	11171.667	20.000	34.770	54.770	-19.200	73.970	PEAK

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-2	**Time : 2006/09/18 - 10:59**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : 9120D_(1G-18G) - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g(2412MHz)**

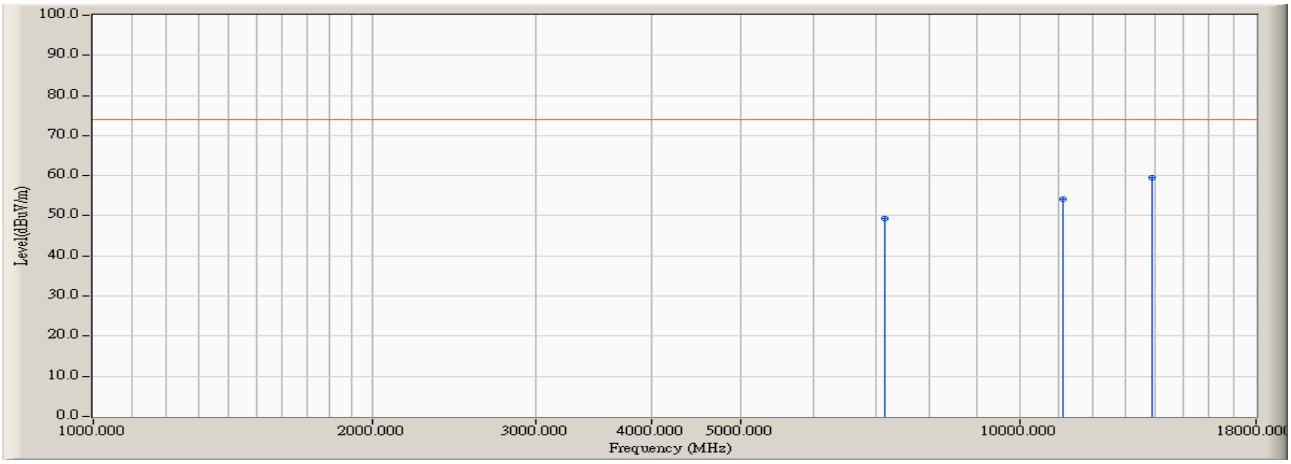


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4825.000	4.900	24.150	29.050	-24.920	53.970	AVERAGE
2		7176.667	15.347	20.480	35.827	-18.143	53.970	AVERAGE
3	*	11171.667	20.000	23.080	43.080	-10.890	53.970	AVERAGE

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-2	**Time : 2006/09/18 - 11:01**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : 9120D_(1G-18G) - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g(2437MHz)**

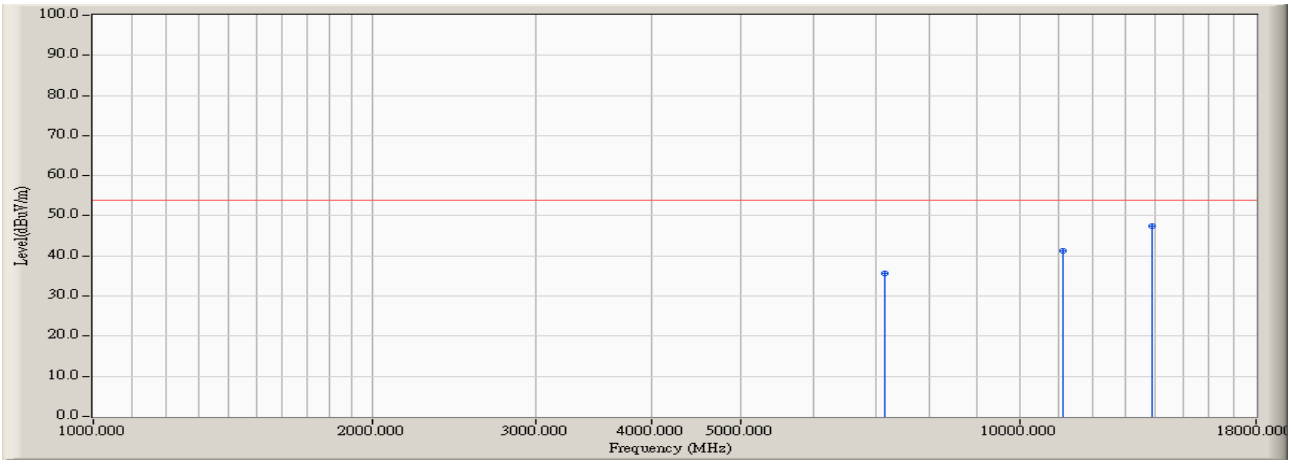


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		7148.333	15.236	33.997	49.234	-24.736	73.970	PEAK
2		11143.333	20.044	34.048	54.091	-19.879	73.970	PEAK
3	*	13920.000	24.520	34.932	59.452	-14.518	73.970	PEAK

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-2	**Time : 2006/09/18 - 11:01**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : 9120D_(1G-18G) - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g(2437MHz)**

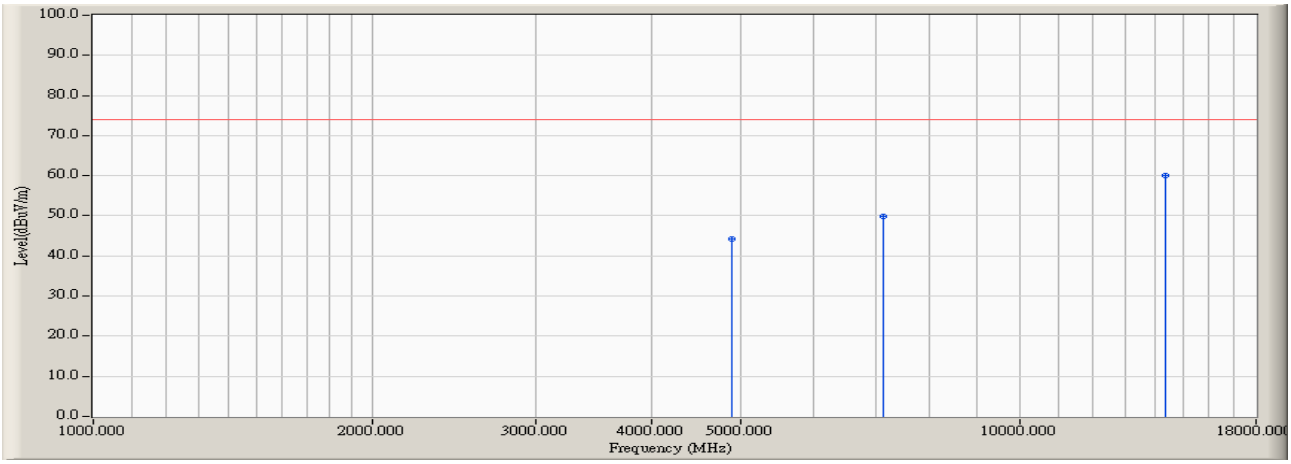


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		7148.333	15.236	20.480	35.717	-18.253	53.970	AVERAGE
2		11143.333	20.044	21.150	41.193	-12.777	53.970	AVERAGE
3	*	13920.000	24.520	22.850	47.370	-6.600	53.970	AVERAGE

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-2	**Time : 2006/09/18 - 11:04**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : 9120D_(1G-18G) - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g(2437MHz)**

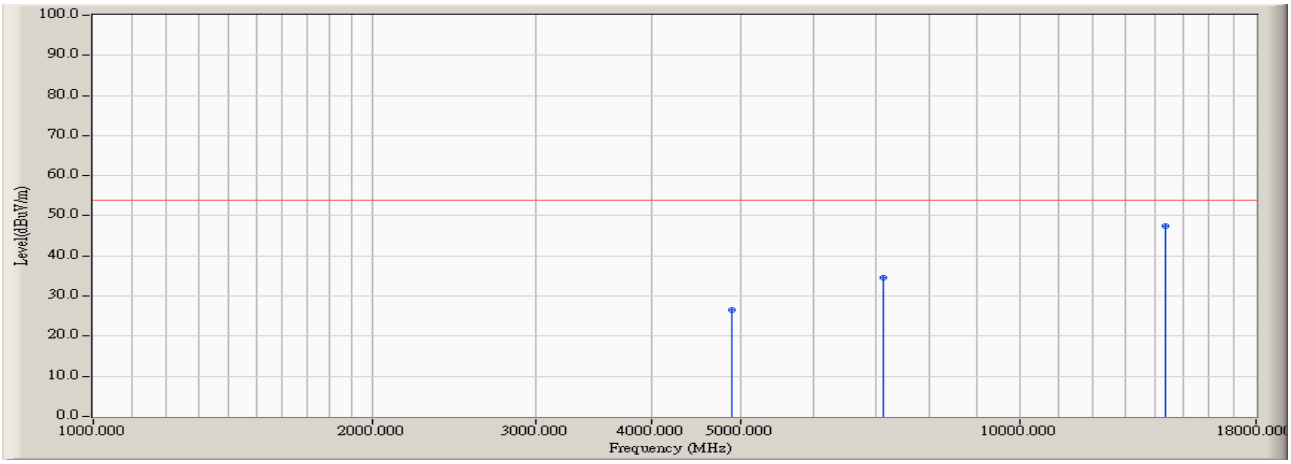


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4881.667	5.034	39.100	44.133	-29.837	73.970	PEAK
2		7120.000	15.120	34.702	49.822	-24.148	73.970	PEAK
3	*	14373.333	25.817	34.143	59.960	-14.010	73.970	PEAK

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-2	**Time : 2006/09/18 - 11:04**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : 9120D_(1G-18G) - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g(2437MHz)**

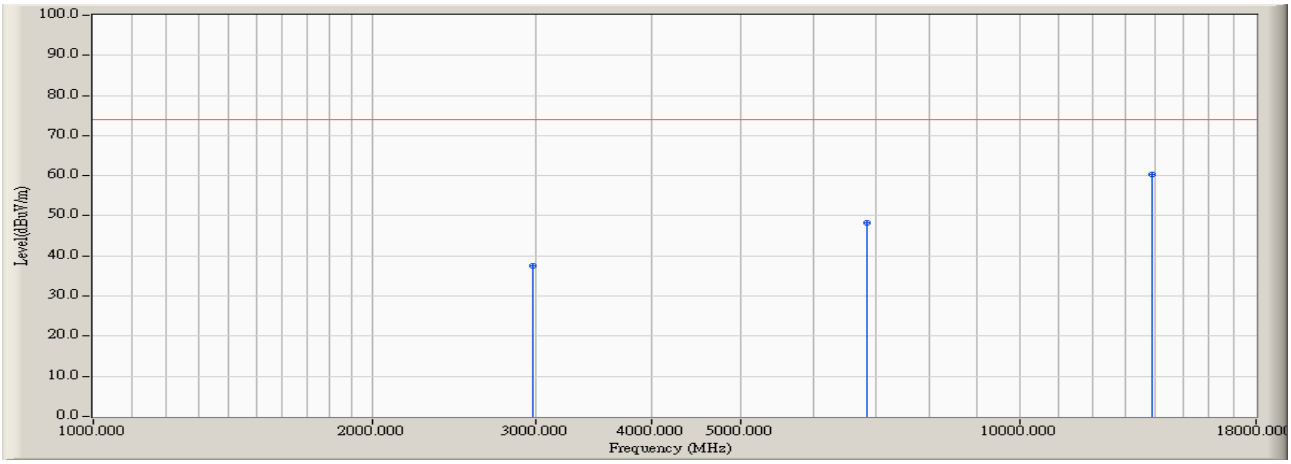


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4881.667	5.034	21.580	26.613	-27.357	53.970	AVERAGE
2		7120.000	15.120	19.580	34.700	-19.270	53.970	AVERAGE
3	*	14373.333	25.817	21.580	47.397	-6.573	53.970	AVERAGE

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-2	**Time : 2006/09/18 - 11:06**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : 9120D_(1G-18G) - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g(2462MHz)**

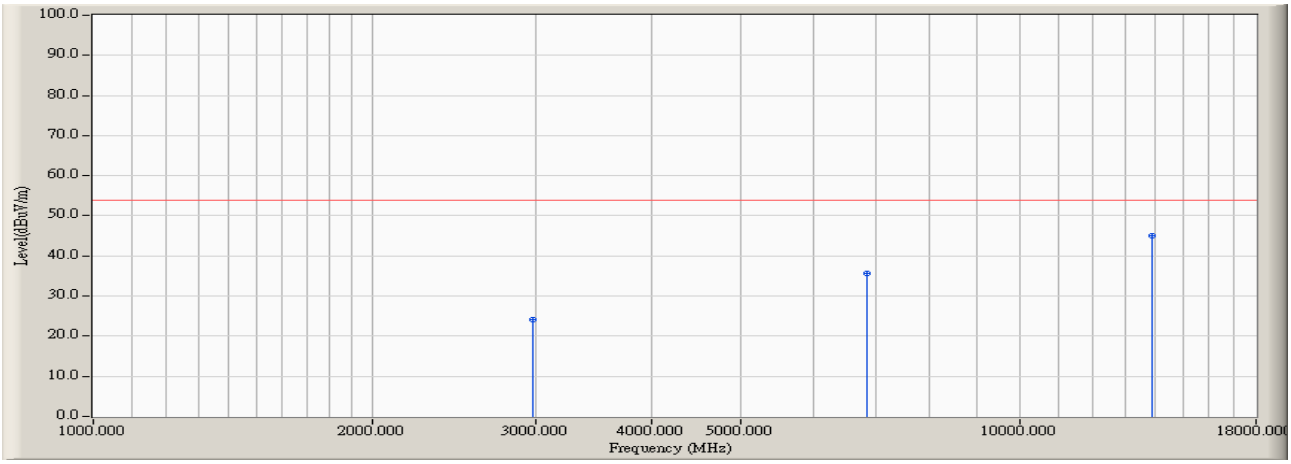


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2983.333	-0.577	38.089	37.512	-36.458	73.970	PEAK
2		6836.667	14.174	34.034	48.207	-25.763	73.970	PEAK
3	*	13920.000	24.520	35.892	60.412	-13.558	73.970	PEAK

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-2	**Time : 2006/09/18 - 11:06**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : 9120D_(1G-18G) - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g(2462MHz)**

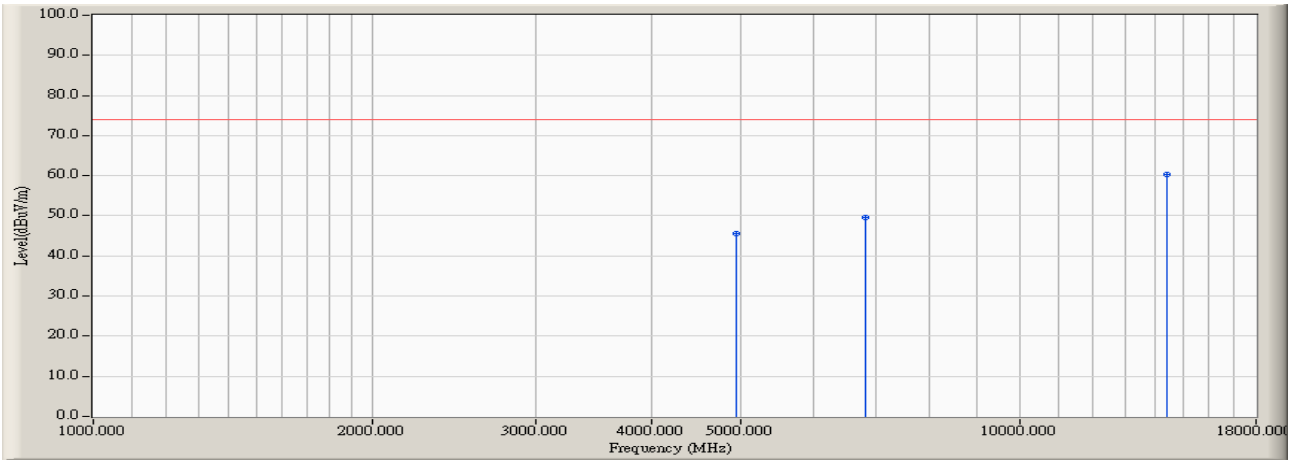


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2983.333	-0.577	24.650	24.073	-29.897	53.970	AVERAGE
2		6836.667	14.174	21.440	35.613	-18.357	53.970	AVERAGE
3	*	13920.000	24.520	20.470	44.990	-8.980	53.970	AVERAGE

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-2	**Time : 2006/09/18 - 11:10**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : 9120D_(1G-18G) - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g(2462MHz)**

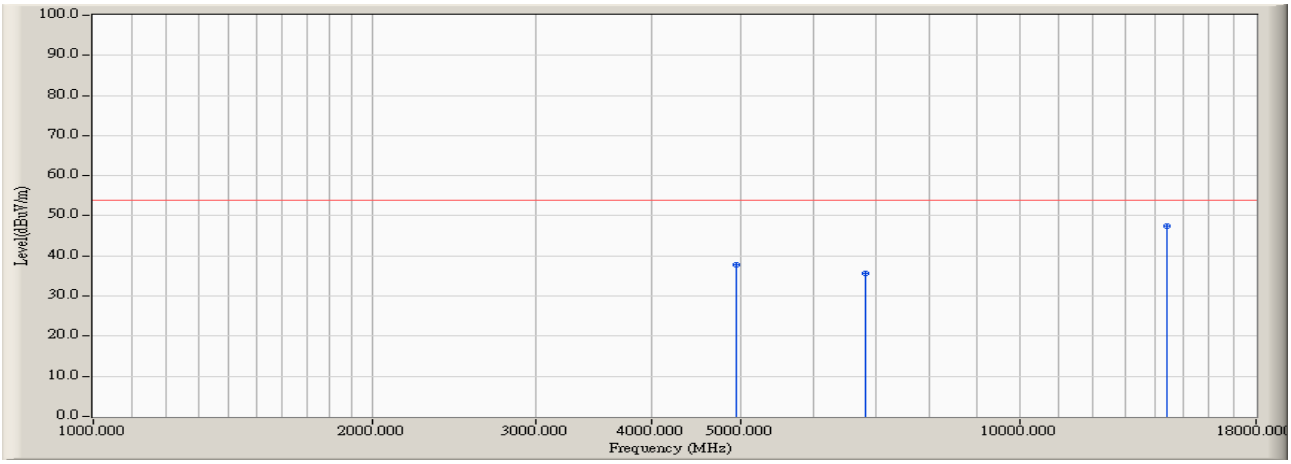


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4938.333	5.169	40.386	45.556	-28.414	73.970	PEAK
2		6808.333	14.093	35.378	49.471	-24.499	73.970	PEAK
3	*	14401.667	25.893	34.526	60.419	-13.551	73.970	PEAK

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-2	**Time : 2006/09/18 - 11:10**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : 802.11g Wireless ADSL 2+4-port Gateway	**Probe : 9120D_(1G-18G) - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g(2462MHz)**

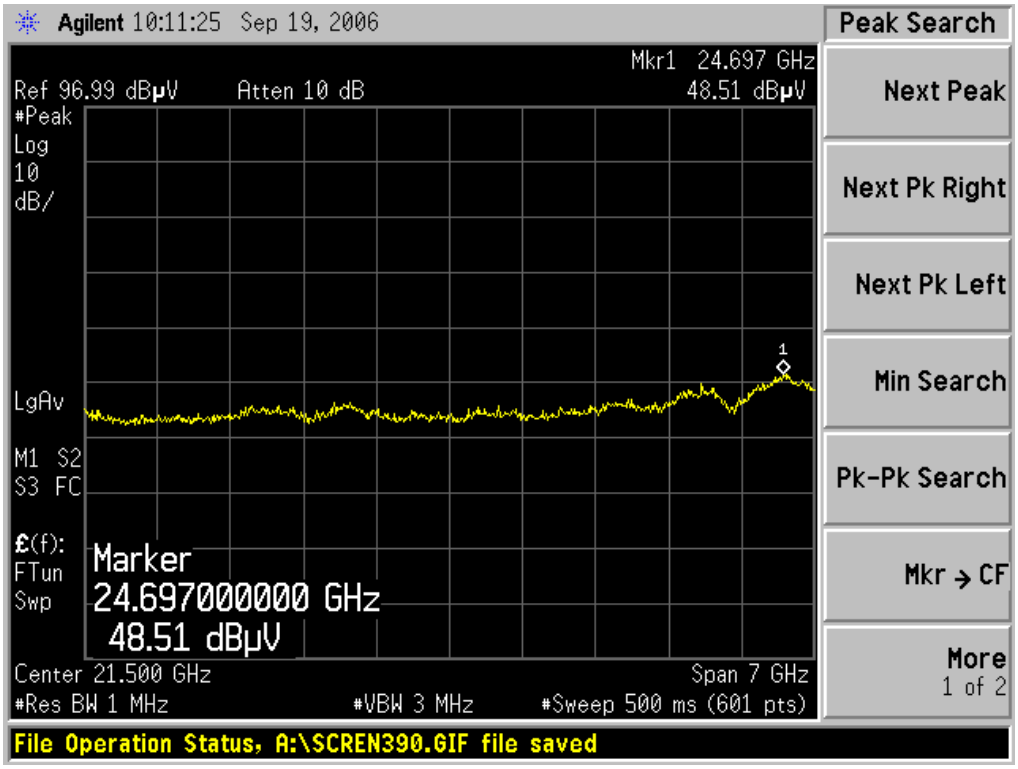


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4938.333	5.169	32.650	37.820	-16.150	53.970	AVERAGE
2		6808.333	14.093	21.540	35.633	-18.337	53.970	AVERAGE
3	*	14401.667	25.893	21.550	47.443	-6.527	53.970	AVERAGE

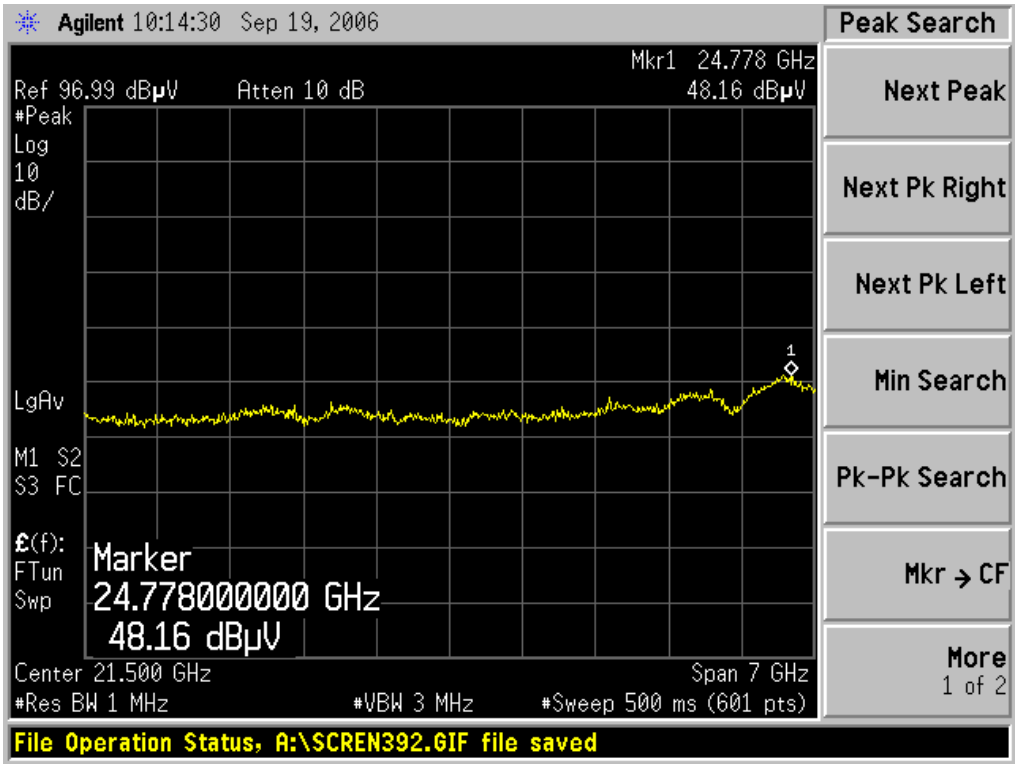
Note:

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

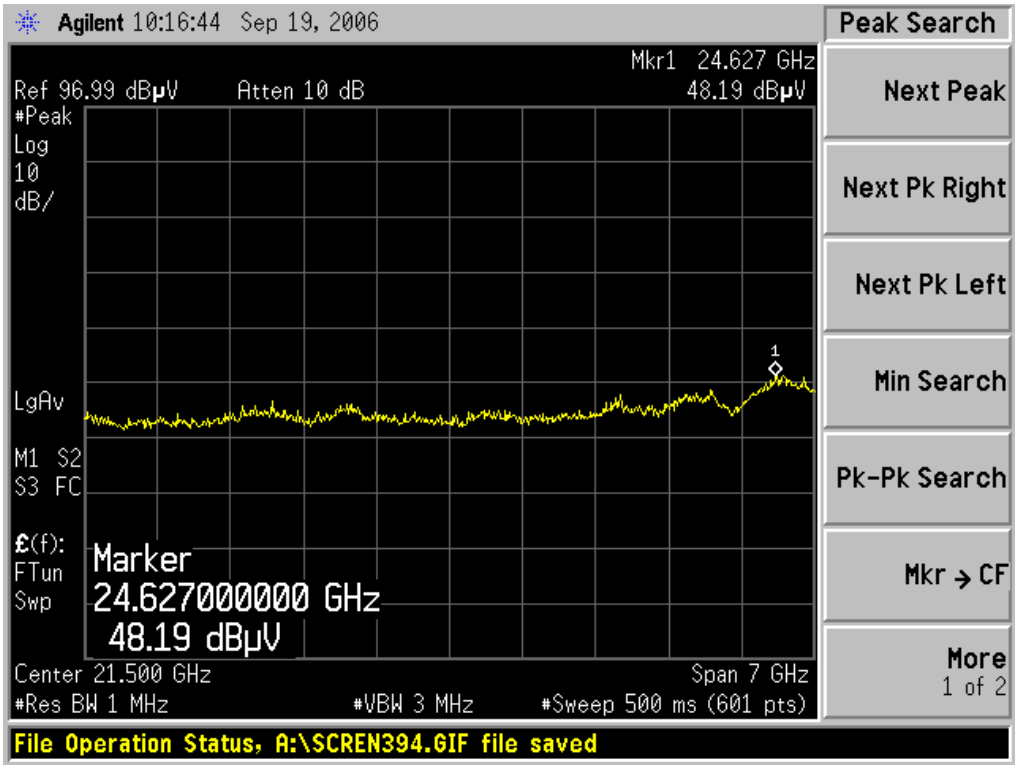
Conducted Spurious Emission Test for 802.11b - Figure Channel 01 (2412MHz)



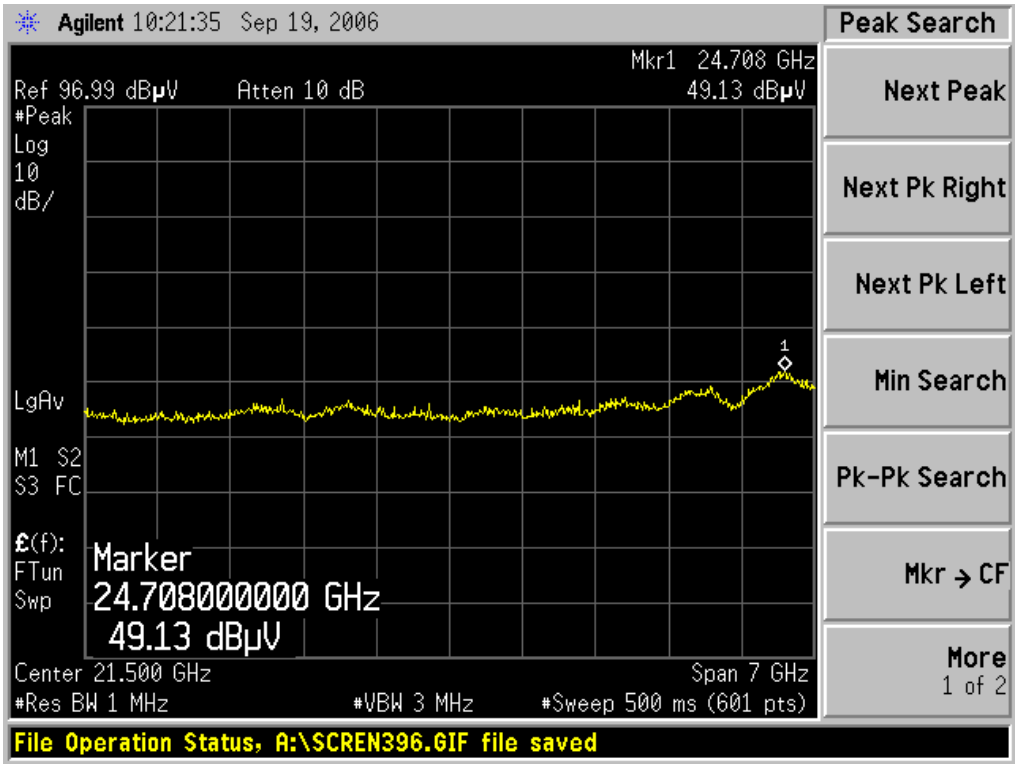
Conducted Spurious Emission Test for 802.11b - Figure Channel 06 (2437MHz)



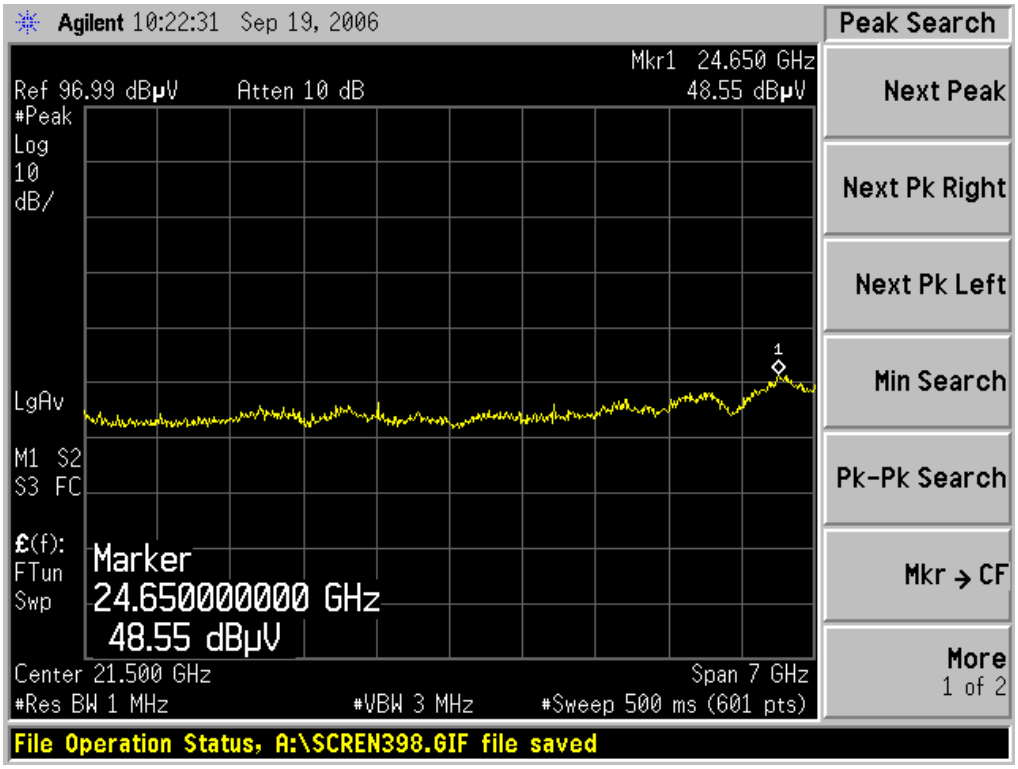
Conducted Spurious Emission Test for 802.11b - Figure Channel 11 (2462MHz)



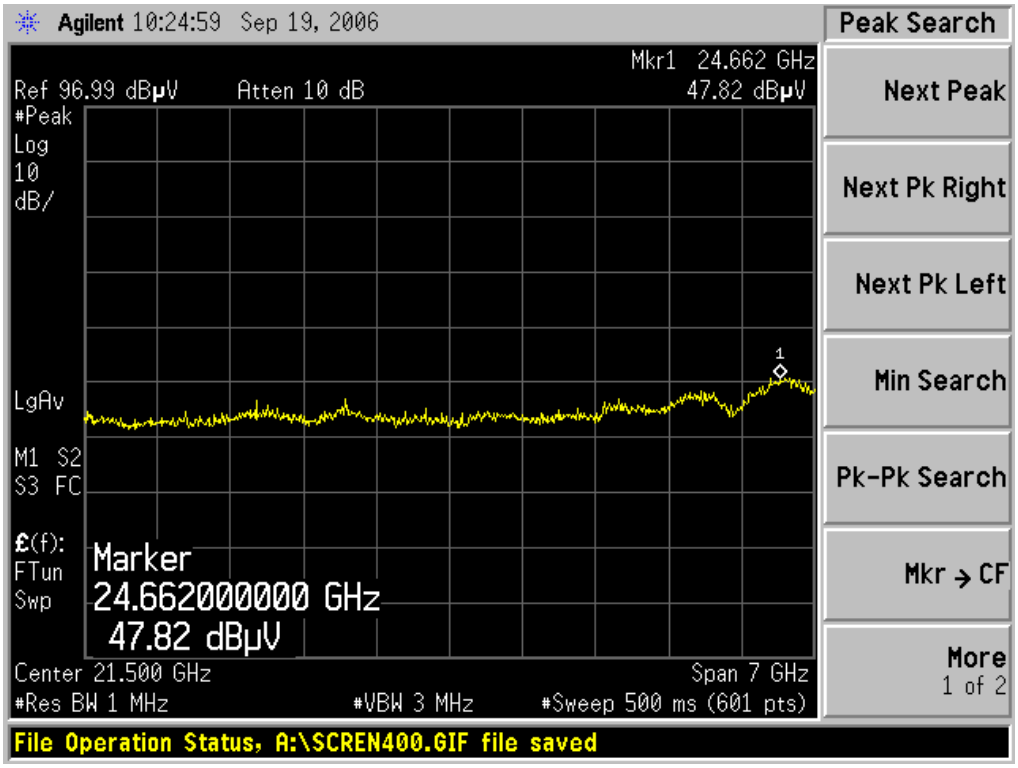
Conducted Spurious Emission Test for 802.11g - Figure Channel 01 (2412MHz)



Conducted Spurious Emission Test for 802.11g - Figure Channel 06 (2437MHz)



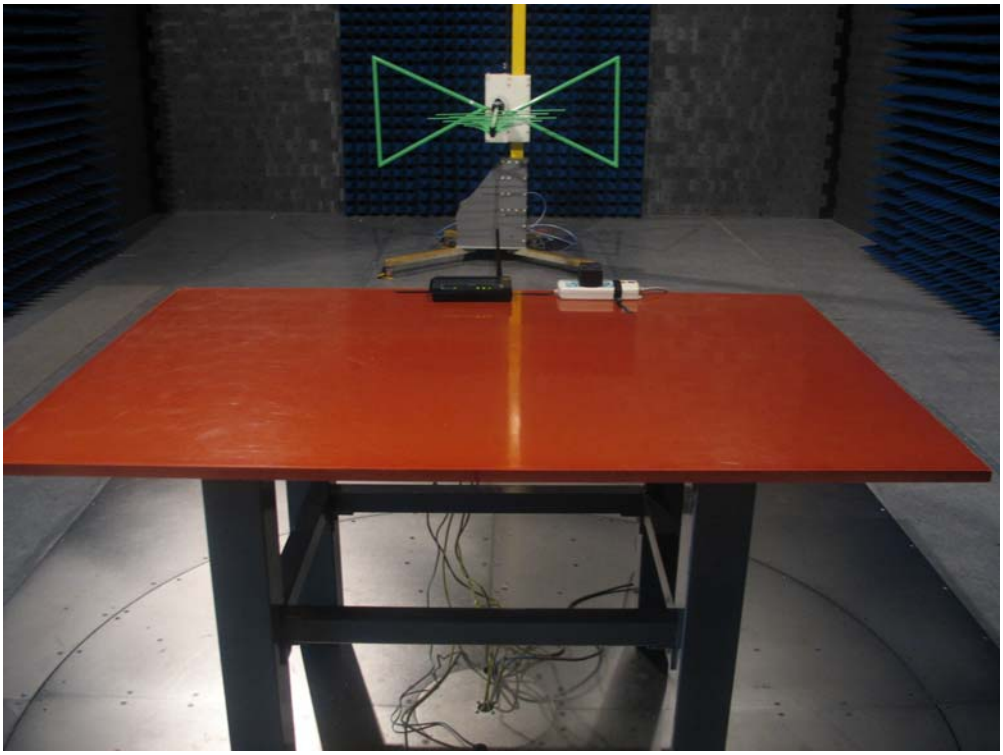
Conducted Spurious Emission Test for 802.11g - Figure Channel 11 (2462MHz)



5.7. Test Photograph

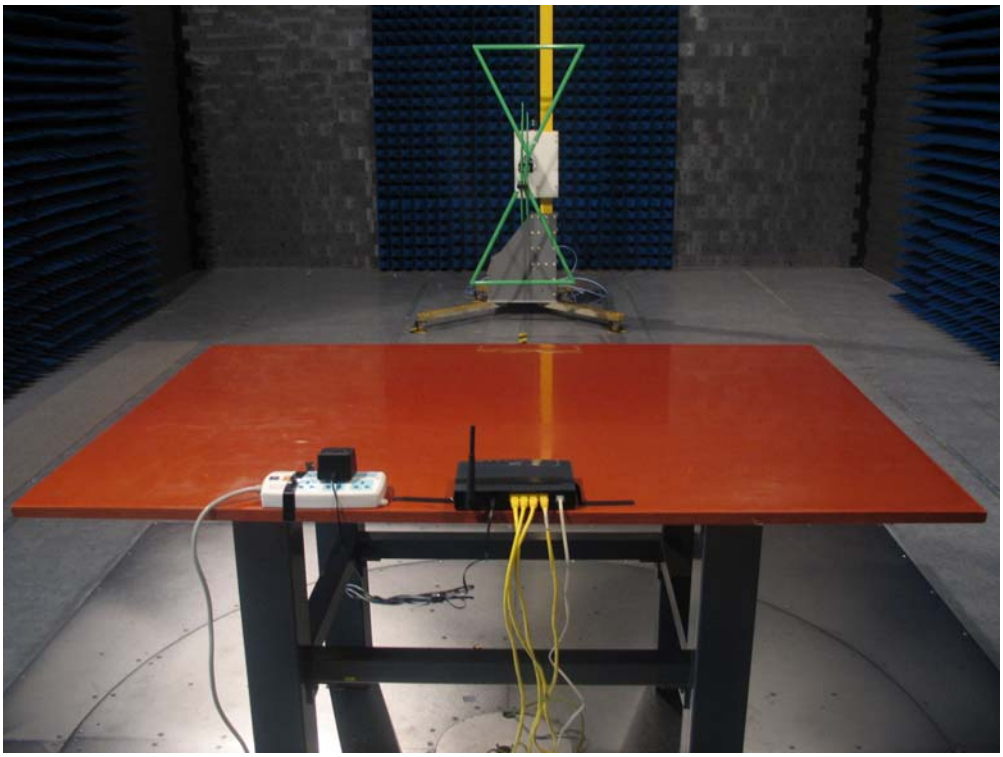
Test Mode: Mode 1: Transmitter by 802.11b

Description: Front View of Radiated Test for Under 1GHz



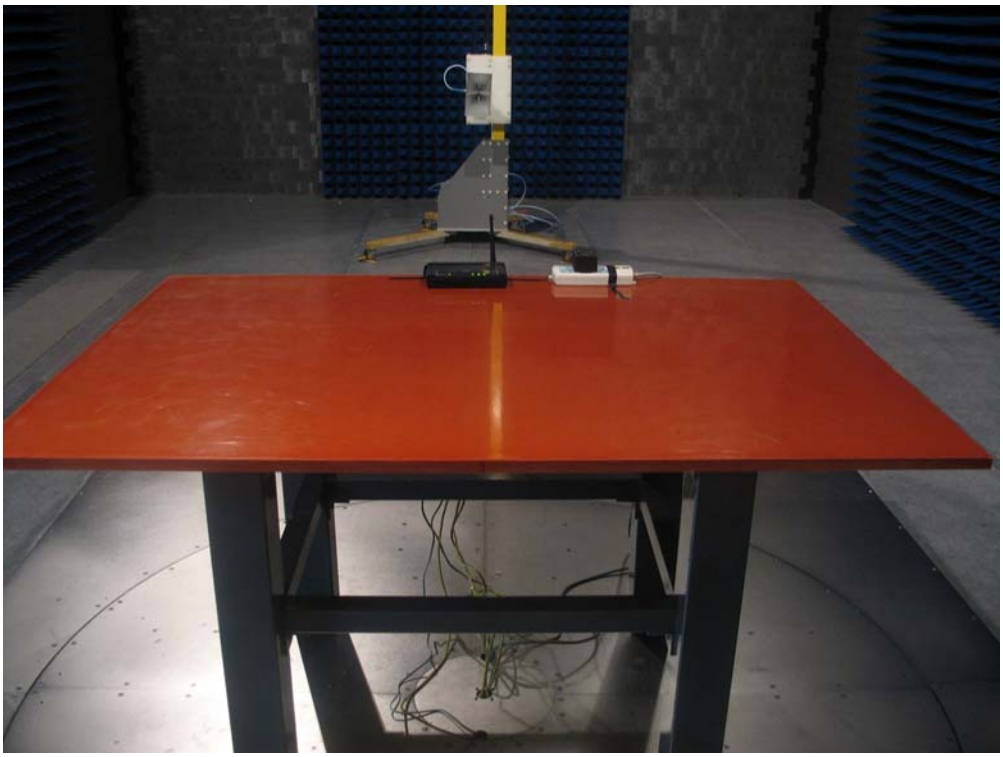
Test Mode: Mode 1: Transmitter by 802.11b

Description: Back View of Radiated Test for Under 1GHz



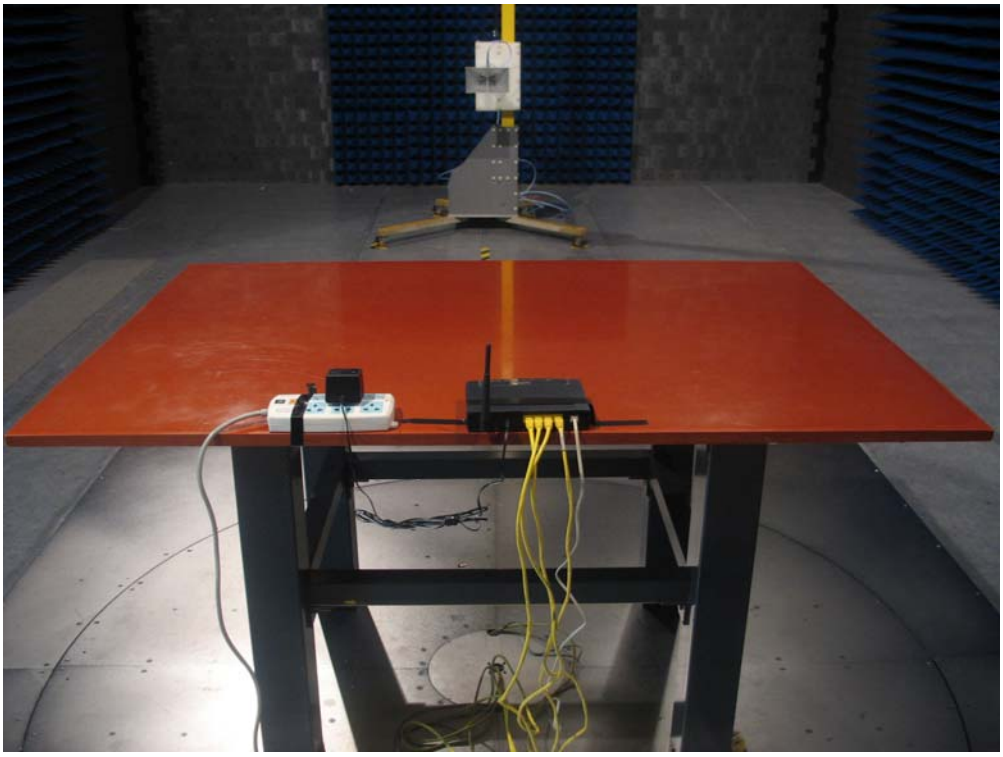
Test Mode: Mode 1: Transmitter by 802.11b

Description: Front View of Radiated Test for Above 1GHz



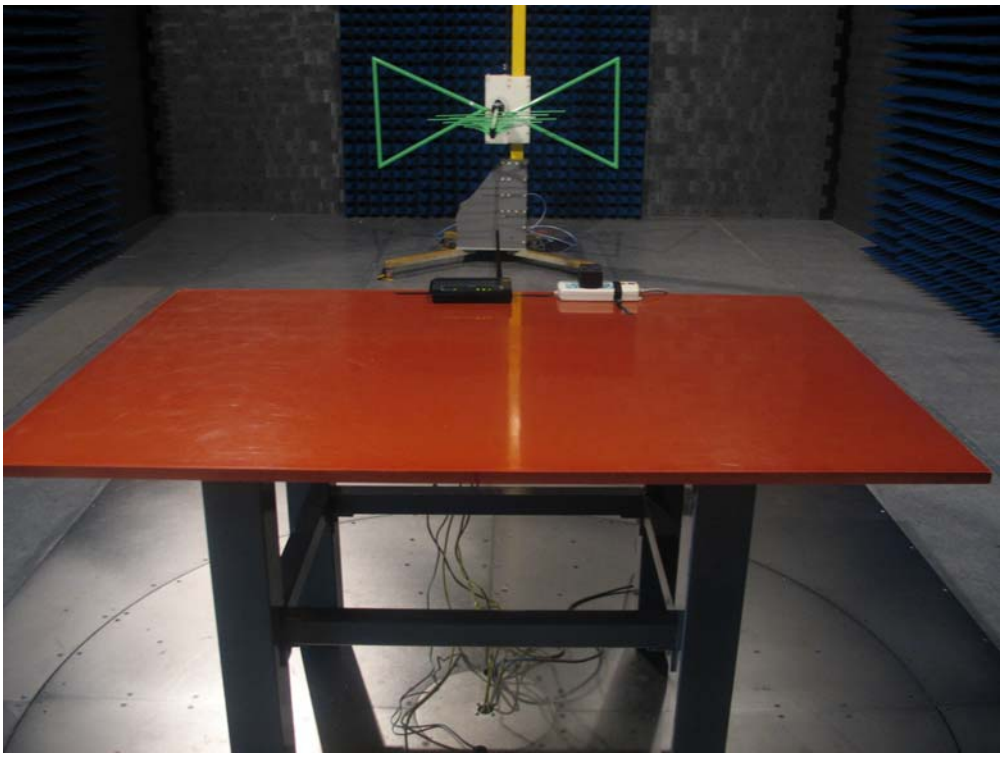
Test Mode: Mode 1: Transmitter by 802.11b

Description: Back View of Radiated Test for Above 1GHz



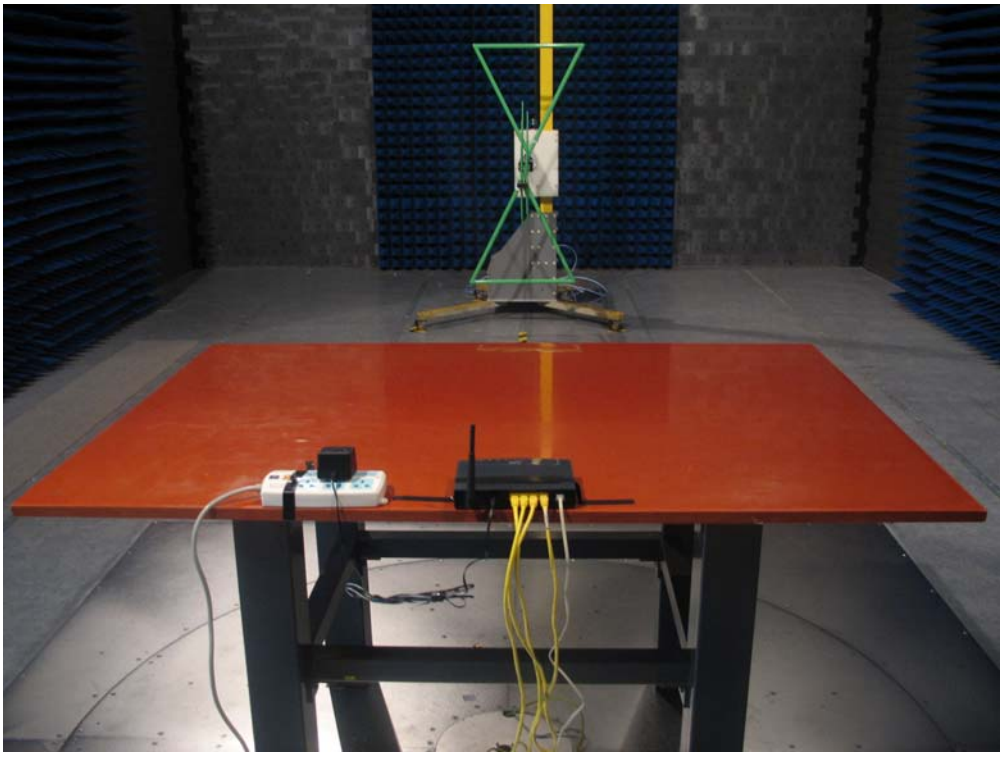
Test Mode: Mode 2: Transmitter by 802.11g

Description: Front View of Radiated Test for Under 1GHz



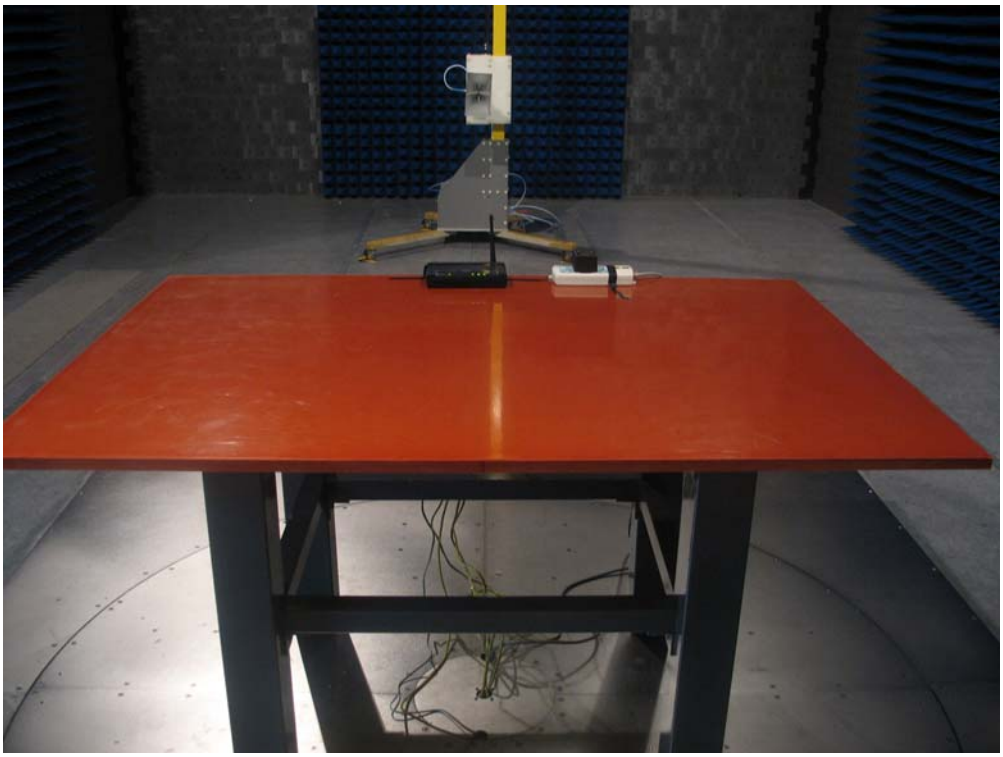
Test Mode: Mode 2: Transmitter by 802.11g

Description: Back View of Radiated Test for Under 1GHz



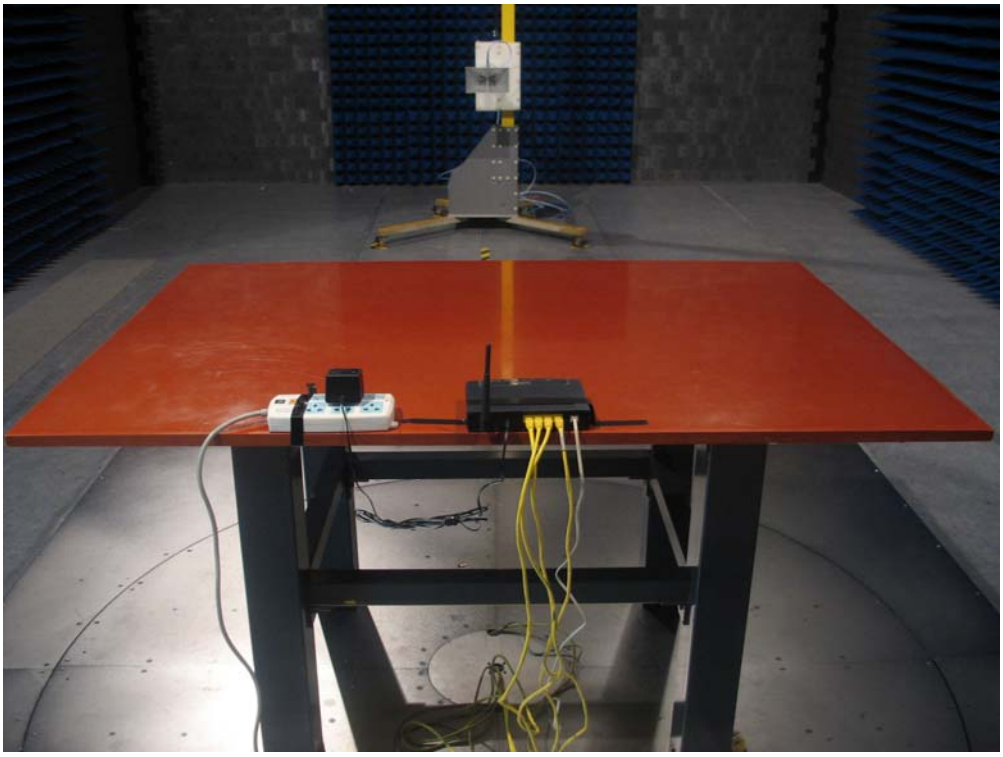
Test Mode: Mode 2: Transmitter by 802.11g

Description: Front View of Radiated Test for Above 1GHz



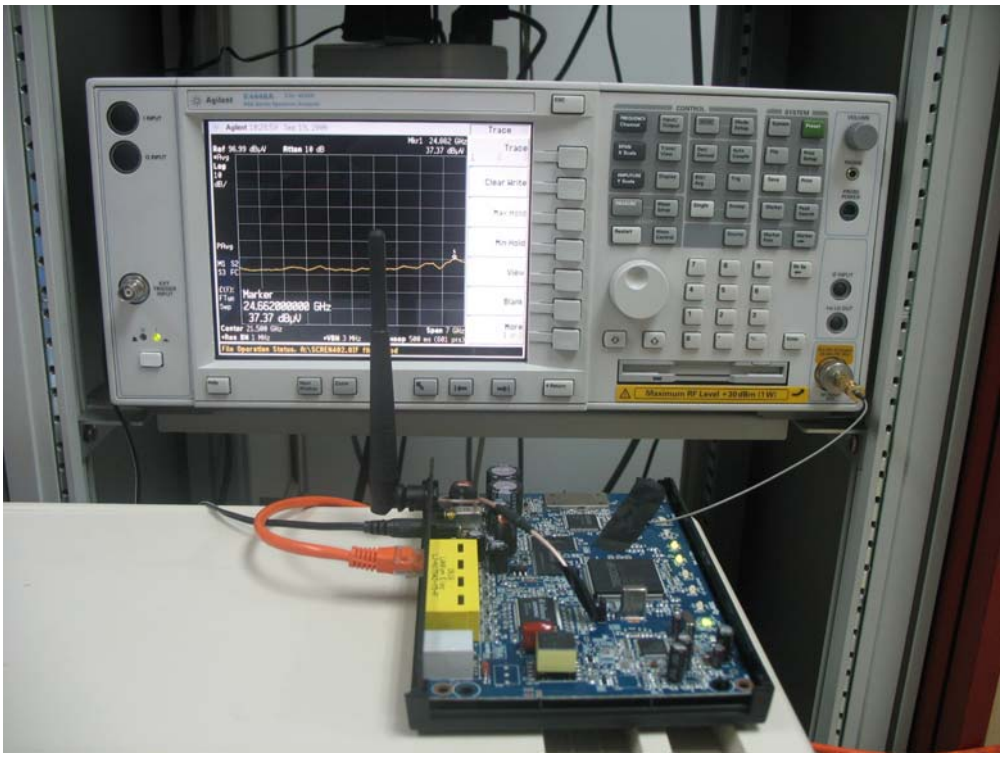
Test Mode: Mode 2: Transmitter by 802.11g

Description: Back View of Radiated Test for Above 1GHz



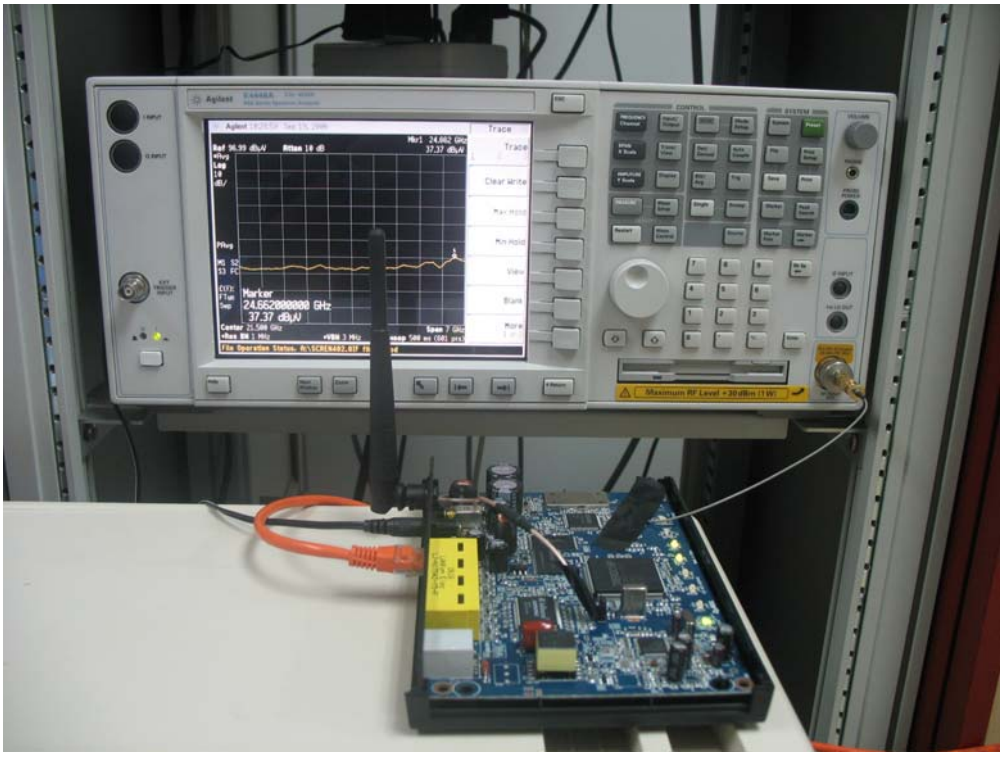
Test Mode: Mode 1: Transmitter by 802.11b

Description: Conducted Spurious Emission Test for 18G-25G



Test Mode: Mode 2: Transmitter by 802.11g

Description: Conducted Spurious Emission Test for 18G-25G



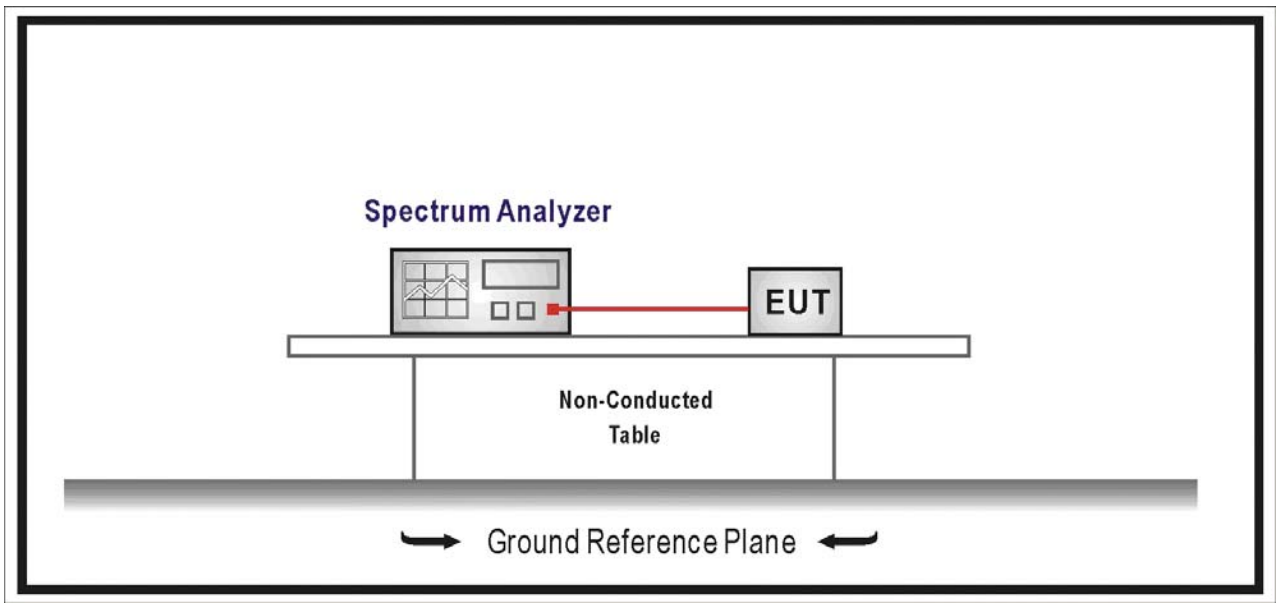
6. Band Edge

6.1. Test Specification

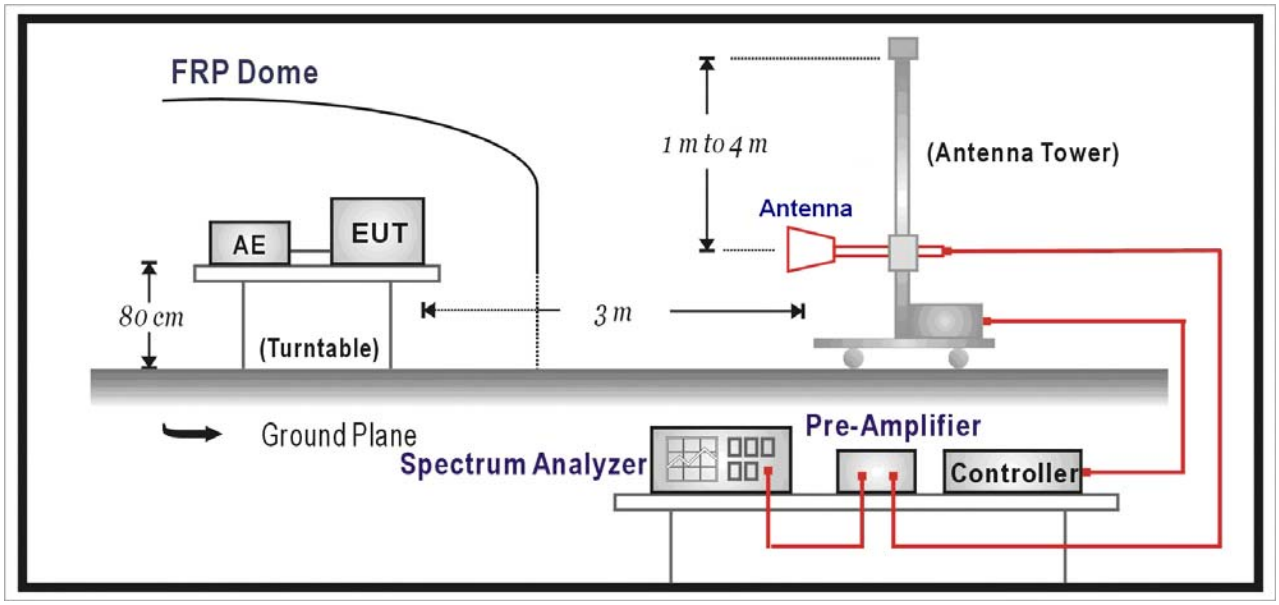
According to EMC Standard: FCC Part 15 Subpart C Paragraph 15.247

6.2. Test Setup

RF Conducted Measurement



RF Radiated Measurement



6.3. 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)).

6.4. Deviation from Test Standard

No deviation.

6.5. Test Result

Product	802.11g Wireless ADSL 2+4-port Gateway		
Test Item	Band Edge		
Test Mode	Mode1: Transmitter by 802.11b		
Date of Test	2006/09/18	Test Site	AC-2

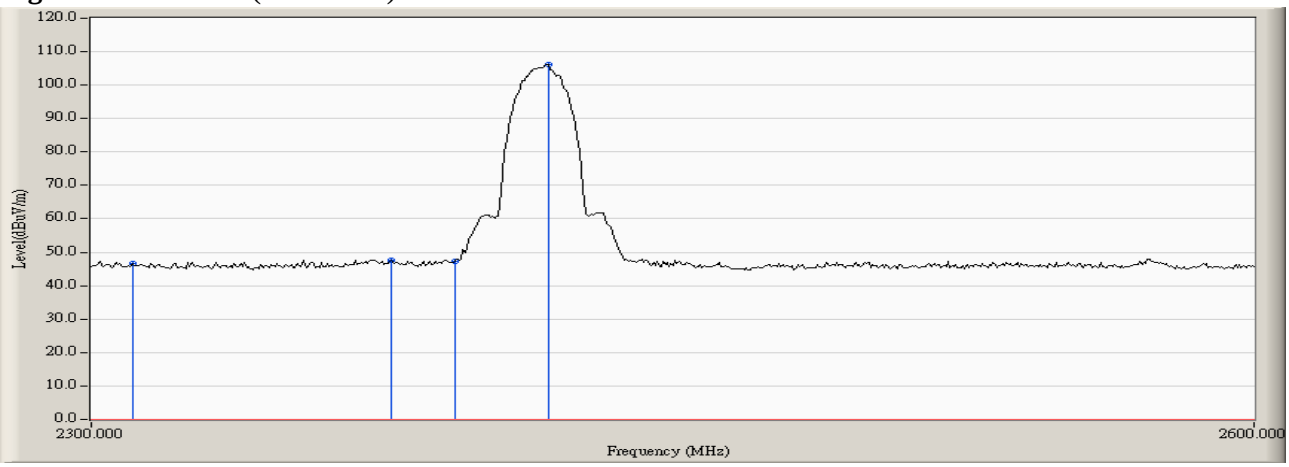
RF Measurement:

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	49.022	47.357	74.00	54.00	Pass
01 (Average)	--	--	--	74.00	54.00	Pass

Figure Channel 01: (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	802.11g Wireless ADSL 2+4-port Gateway		
Test Item	Band Edge		
Test Mode	Mode 1: Transmitter by 802.11b		
Date of Test	2006/09/18	Test Site	AC-2

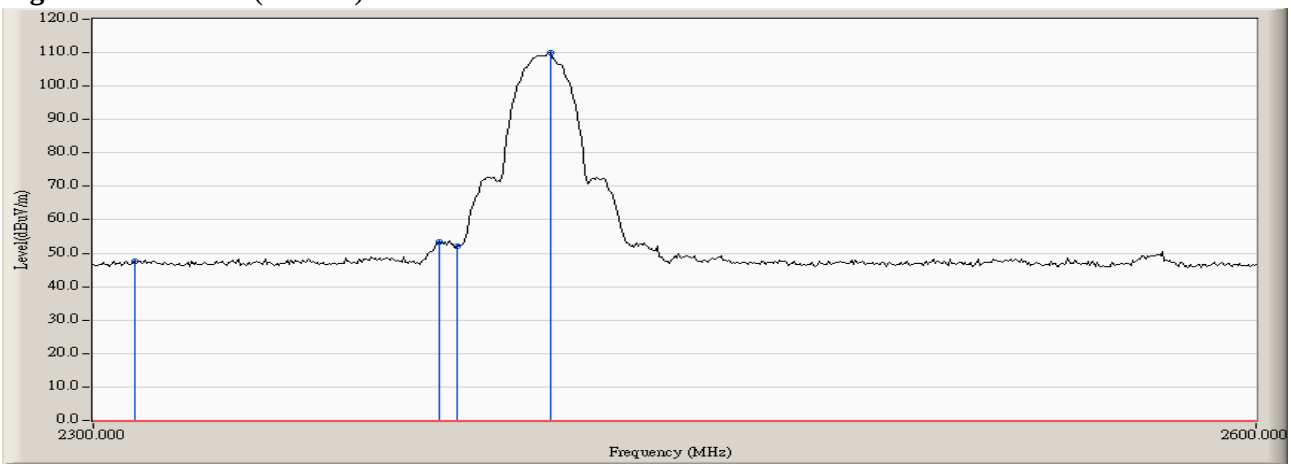
RF Measurement:

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	53.778	52.113	74.00	54.00	Pass
01 (Average)	--	--	--	74.00	54.00	Pass

Figure Channel 01: (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	802.11g Wireless ADSL 2+4-port Gateway		
Test Item	Band Edge		
Test Mode	Mode 1: Transmitter by 802.11b		
Date of Test	2006/09/18	Test Site	AC-2

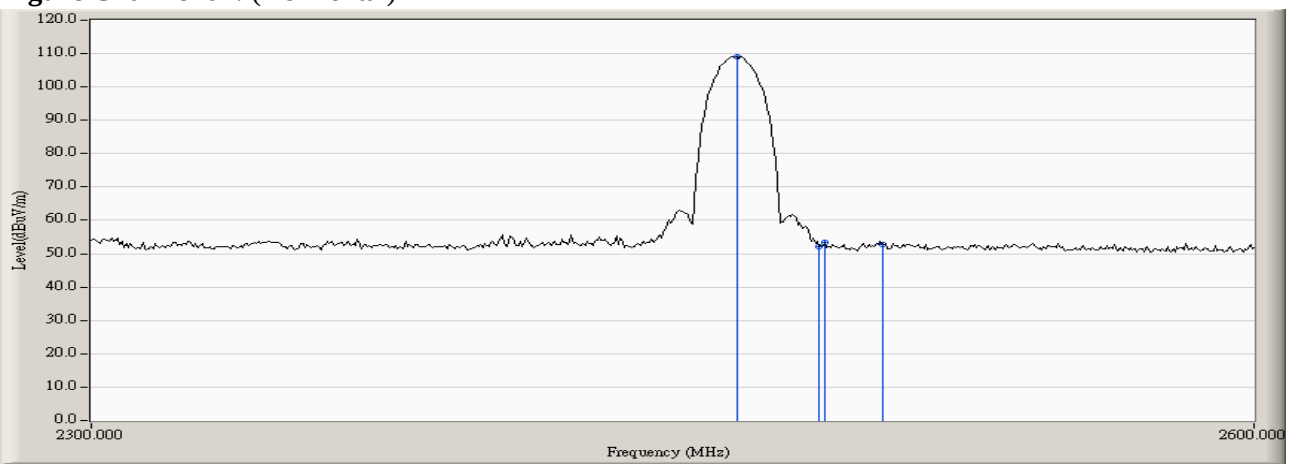
RF Measurement:

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
01 (Peak)	2483.500	40.749	52.069	74.00	54.00	Pass
01 (Average)	--	--	--	74.00	54.00	Pass

Figure Channel 01: (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	802.11g Wireless ADSL 2+4-port Gateway		
Test Item	Band Edge		
Test Mode	Mode 1: Transmitter by 802.11b		
Date of Test	2006/09/18	Test Site	AC-2

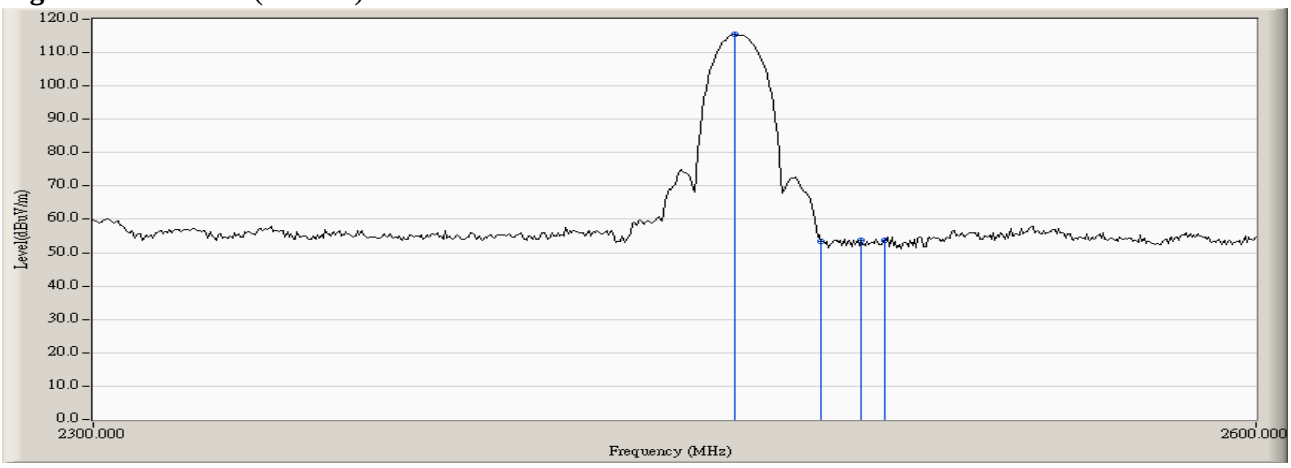
RF Measurement:

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
01 (Peak)	2483.500	42.156	53.476	74.00	54.00	Pass
01 (Average)	--	--	--	74.00	54.00	Pass

Figure Channel 01: (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	802.11g Wireless ADSL 2+4-port Gateway		
Test Item	Band Edge		
Test Mode	Mode 2: Transmitter by 802.11g		
Date of Test	2006/09/18	Test Site	AC-2

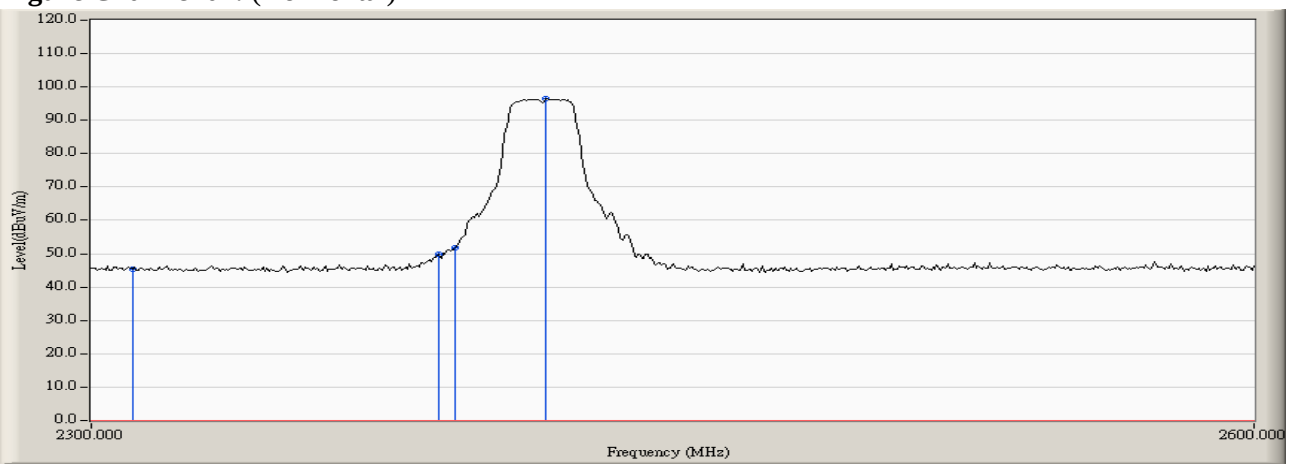
RF Measurement:

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	53.440	51.775	74.00	54.00	Pass
01 (Average)	--	--	--	74.00	54.00	Pass

Figure Channel 01: (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	802.11g Wireless ADSL 2+4-port Gateway		
Test Item	Band Edge		
Test Mode	Mode 2: Transmitter by 802.11g		
Date of Test	2006/09/18	Test Site	AC-2

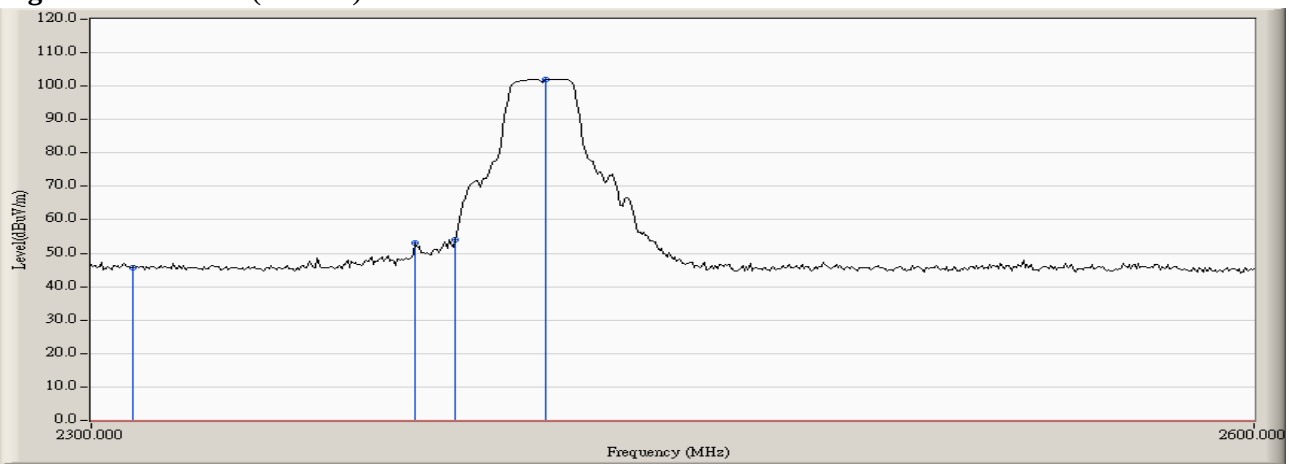
RF Measurement:

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	55.554	53.889	74.00	54.00	Pass
01 (Average)	--	--	--	74.00	54.00	Pass

Figure Channel 01: (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	802.11g Wireless ADSL 2+4-port Gateway		
Test Item	Band Edge		
Test Mode	Mode 2: Transmitter by 802.11g		
Date of Test	2006/09/18	Test Site	AC-2

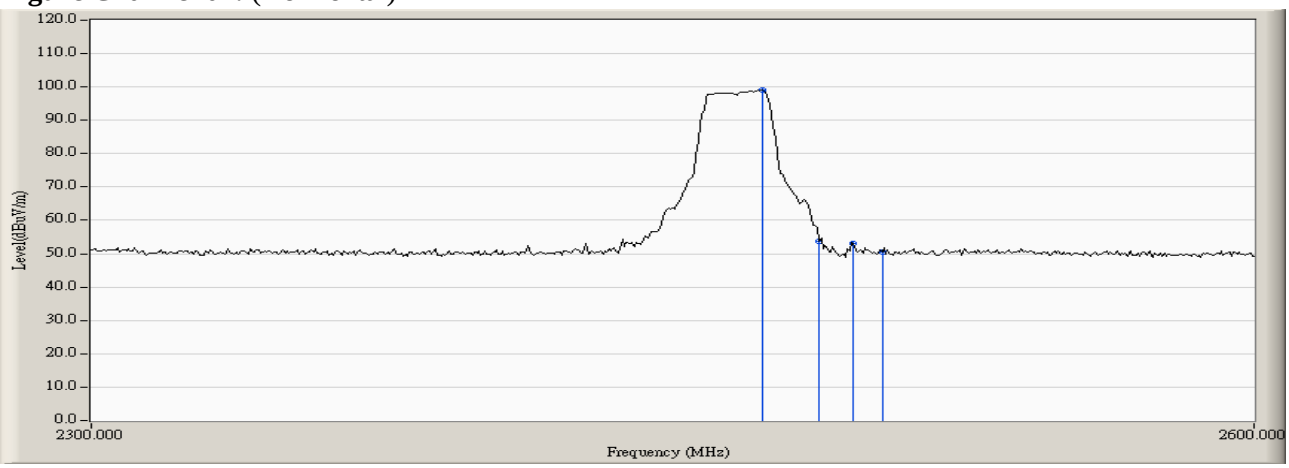
RF Measurement:

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
01 (Peak)	2483.500	42.287	53.607	74.00	54.00	Pass
01 (Average)	--	--	--	74.00	54.00	Pass

Figure Channel 01: (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	802.11g Wireless ADSL 2+4-port Gateway		
Test Item	Band Edge		
Test Mode	Mode 2: Transmitter by 802.11g		
Date of Test	2006/09/18	Test Site	AC-2

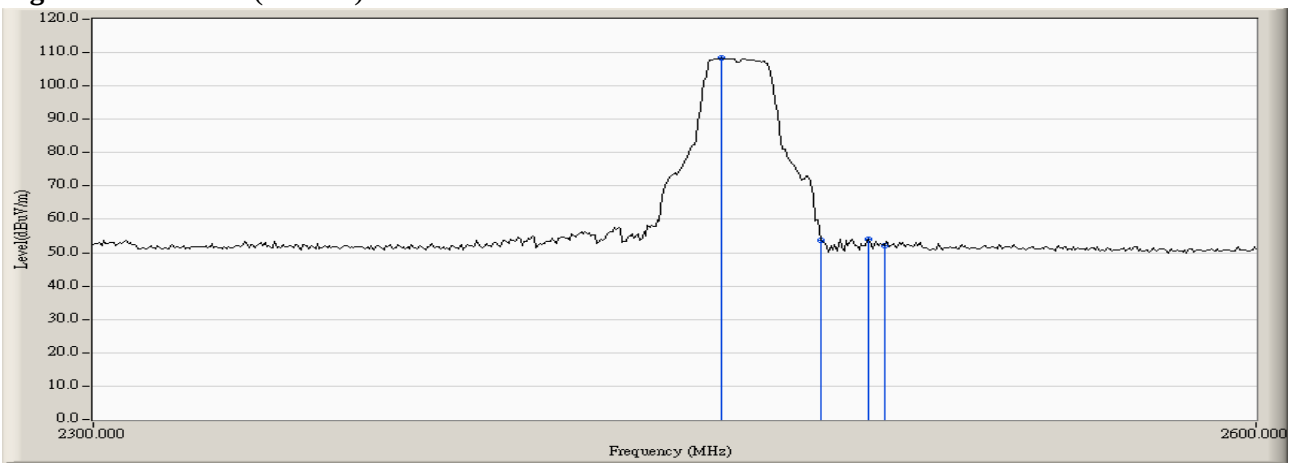
RF Measurement:

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
01 (Peak)	2483.500	42.422	53.742	74.00	54.00	Pass
01 (Average)	--	--	--	74.00	54.00	Pass

Figure Channel 01: (Vertical)



Note:

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

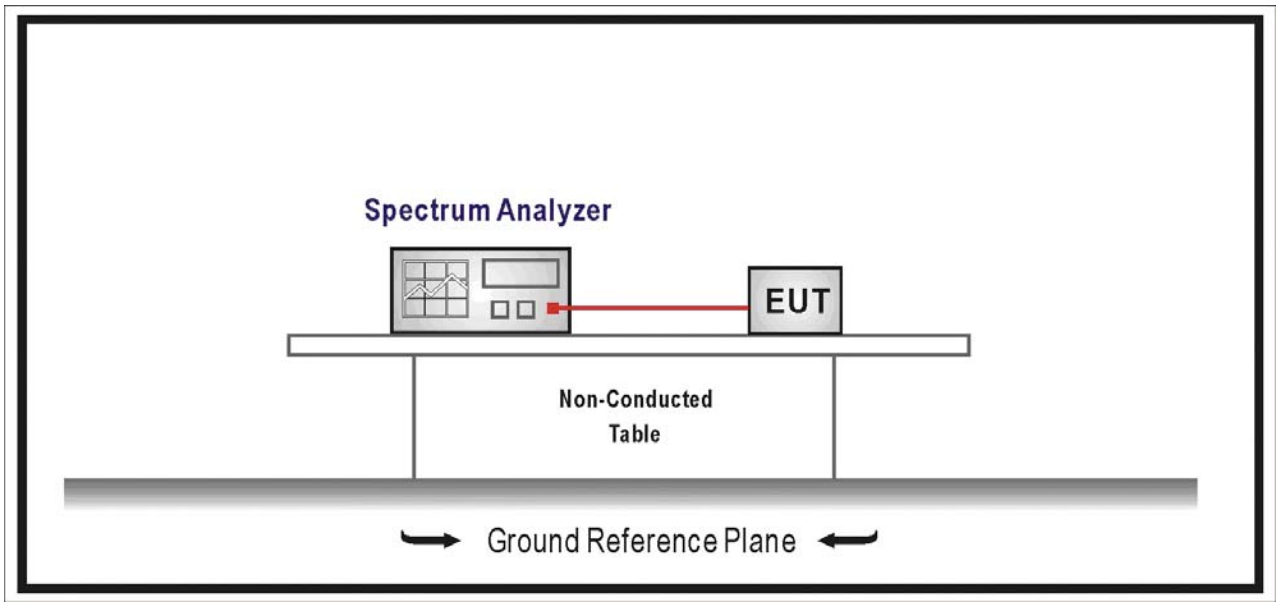
Note: The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

7. Occupied Bandwidth

7.1. Test Specification

According to EMC Standard: FCC Part 15 Subpart C Paragraph 15.247

7.2. Test Setup



7.3. Limit

The minimum 6dB bandwidth shall be at least 500kHz.

7.4. Deviation from Test Standard

No deviation.

7.5. Test Result

Product	802.11g Wireless ADSL 2+4-port Gateway		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Transmitter by 802.11b		
Date of Test	2006/09/19	Test Site	AC-3

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	2412	9420	500	Pass
06	2437	9580	500	Pass
11	2462	9830	500	Pass

Figure Channel 01 (2412MHz)

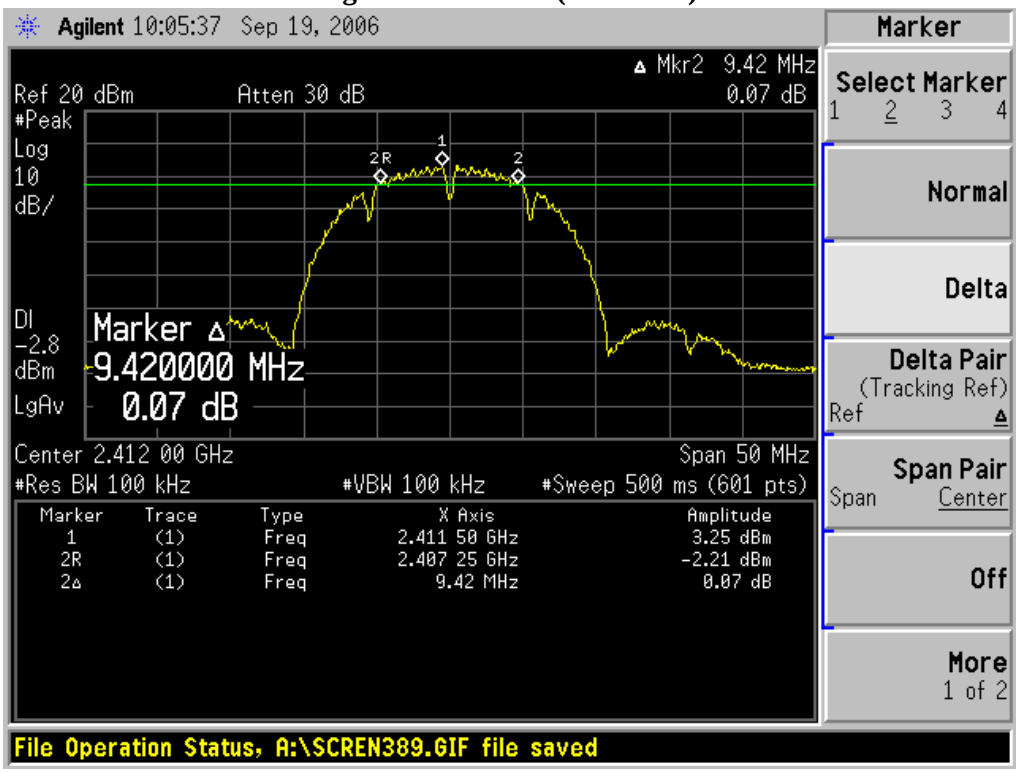


Figure Channel 06 (2437MHz)

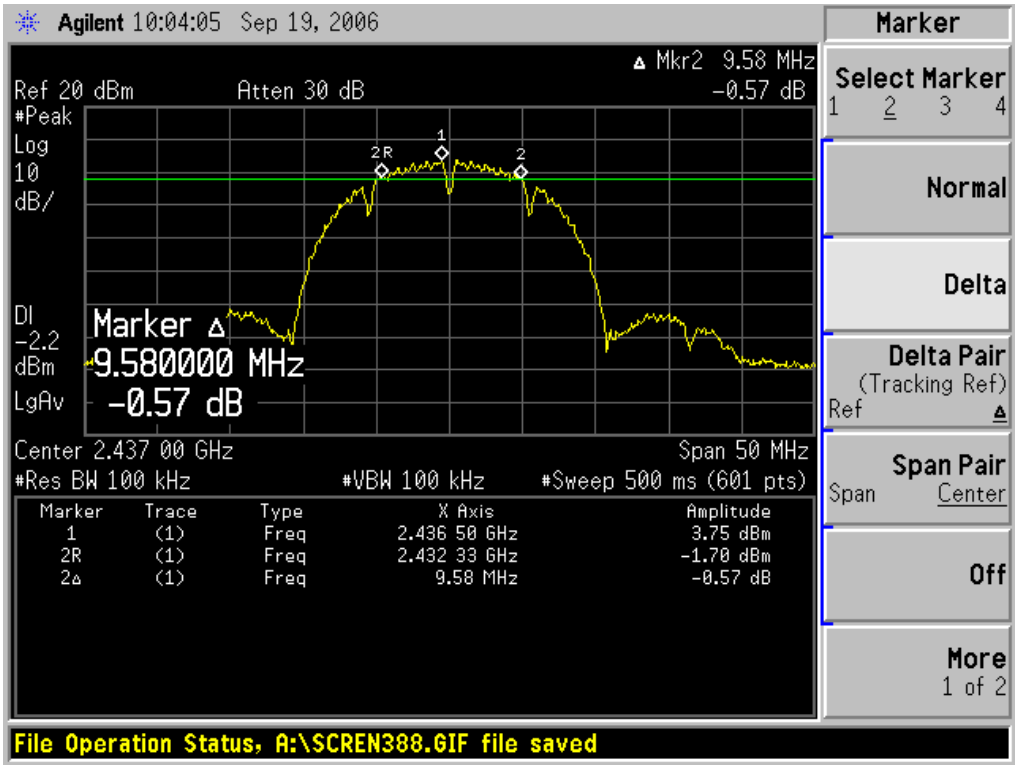
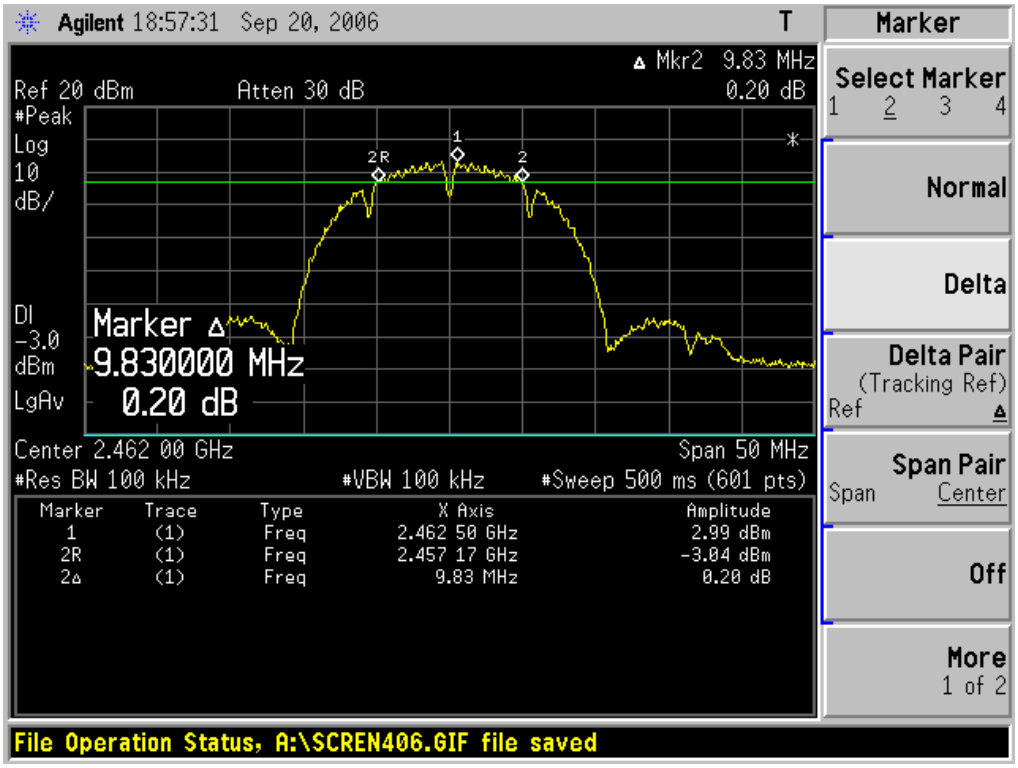


Figure Channel 11 (2462MHz)



Product	802.11g Wireless ADSL 2+4-port Gateway		
Test Item	Occupied Bandwidth		
Test Mode	Mode 2: Transmitter by 802.11g		
Date of Test	2006/09/19	Test Site	AC-3

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	2412	16580	500	Pass
06	2437	16500	500	Pass
11	2462	16580	500	Pass

Figure Channel 01 (2412MHz)

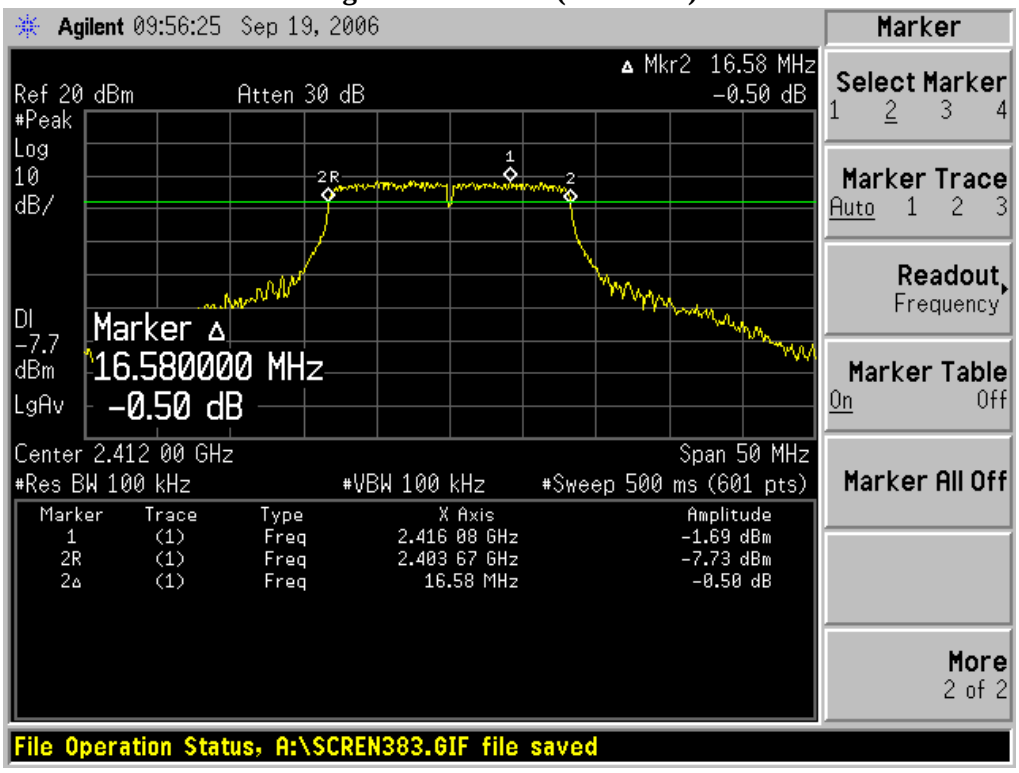


Figure Channel 06 (2437MHz)

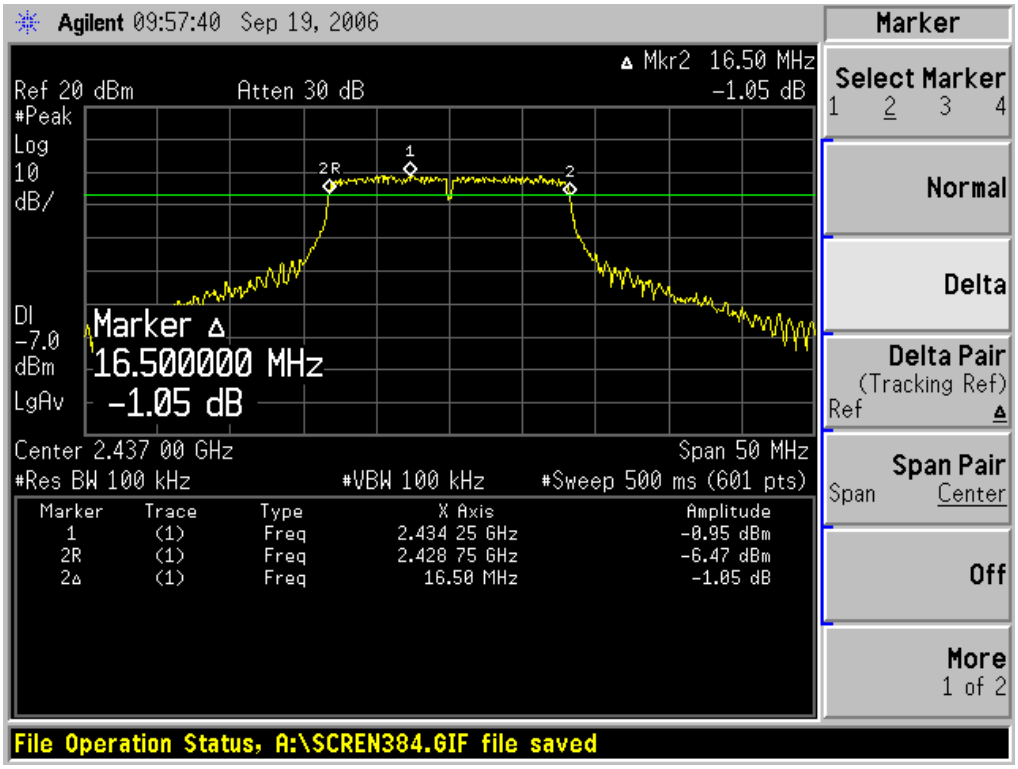
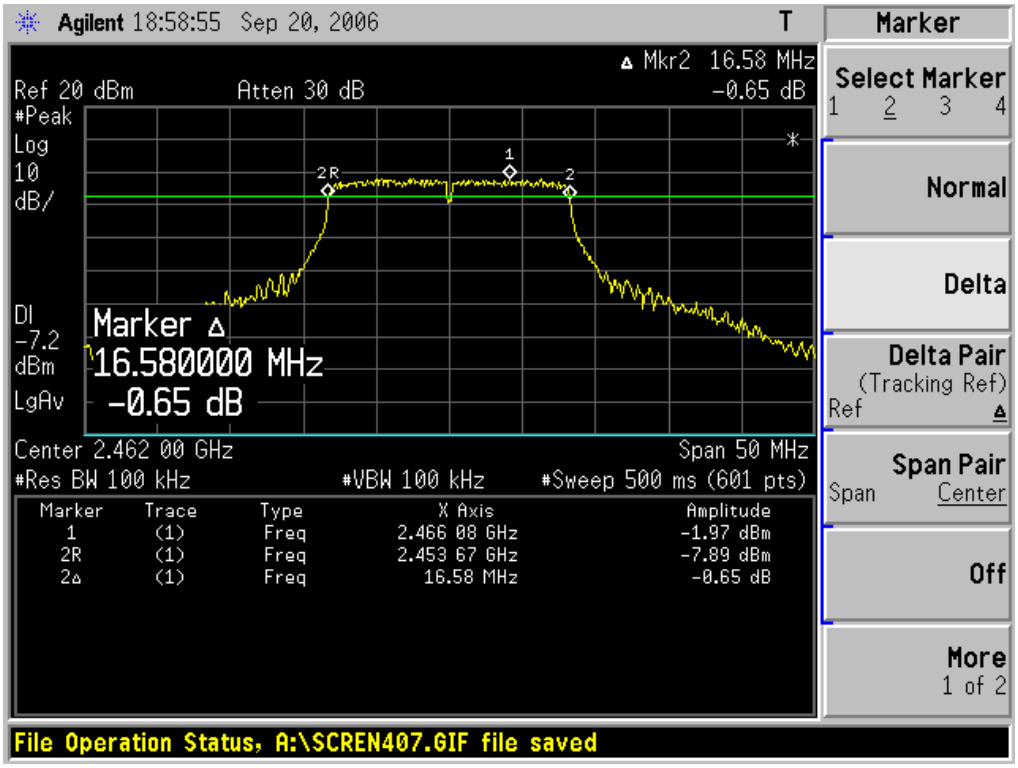


Figure Channel 11 (2462MHz)

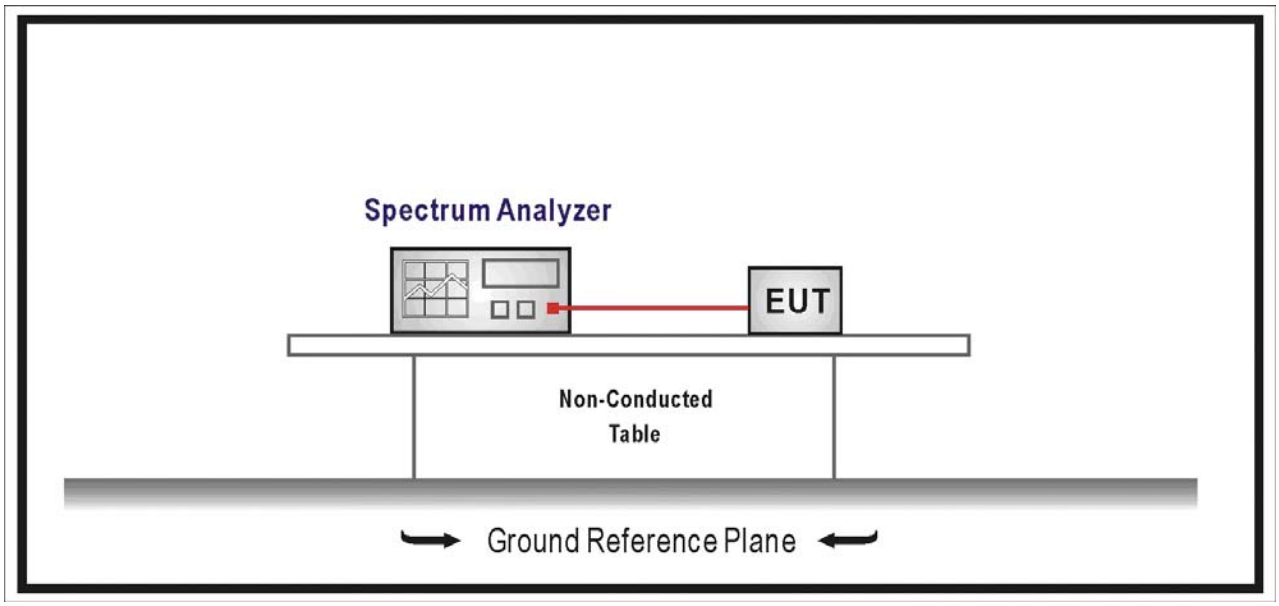


8. Peak Power Spectral Density

8.1. Test Specification

According to EMC Standard: FCC Part 15 Subpart C Paragraph 15.247

8.2. Test Setup



8.3. Limit

The peak 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.

8.4. Deviation from Test Standard

No deviation.

8.5. Test Result

Product	802.11g Wireless ADSL 2+4-port Gateway		
Test Item	Peak Power Spectral Density		
Test Mode	Mode 1: Transmitter by 802.11b		
Date of Test	2006/09/19	Test Site	AC-3

Channel	Freq. (MHz)	Power Spectral Density (dBm/3kHz)	Limit (dBm /3kHz)	Result
01	2412	-20.99	8	PASS
06	2437	-20.48	8	PASS
11	2462	-21.31	8	PASS

Figure Channel 01 (2412MHz)

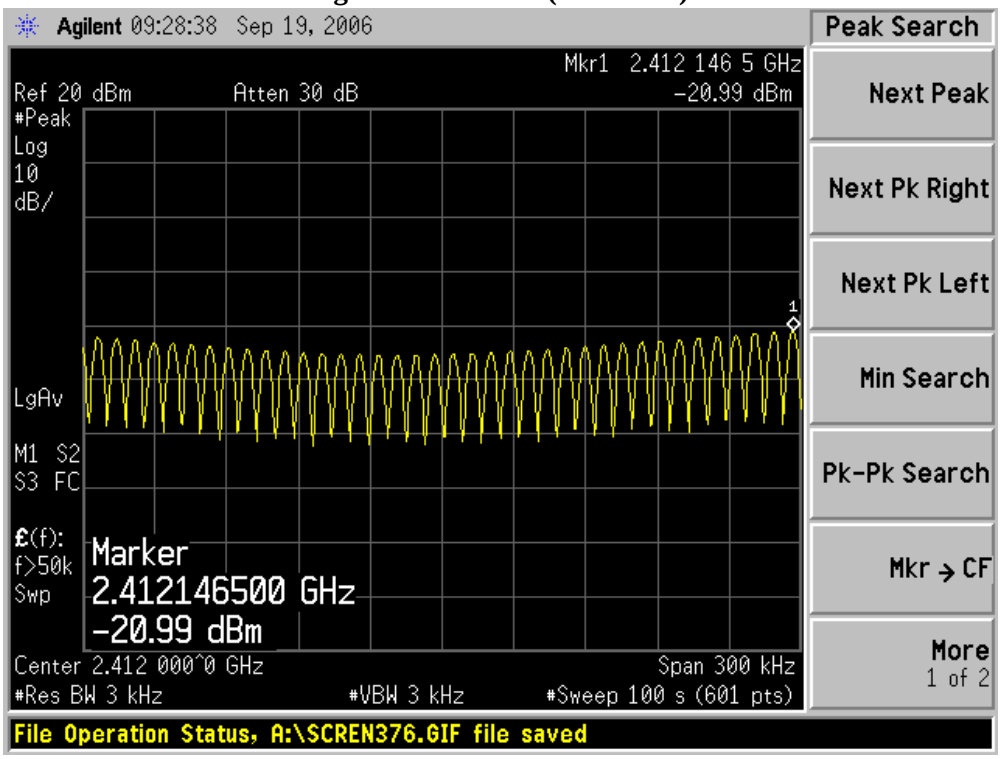


Figure Channel 06 (2437MHz)

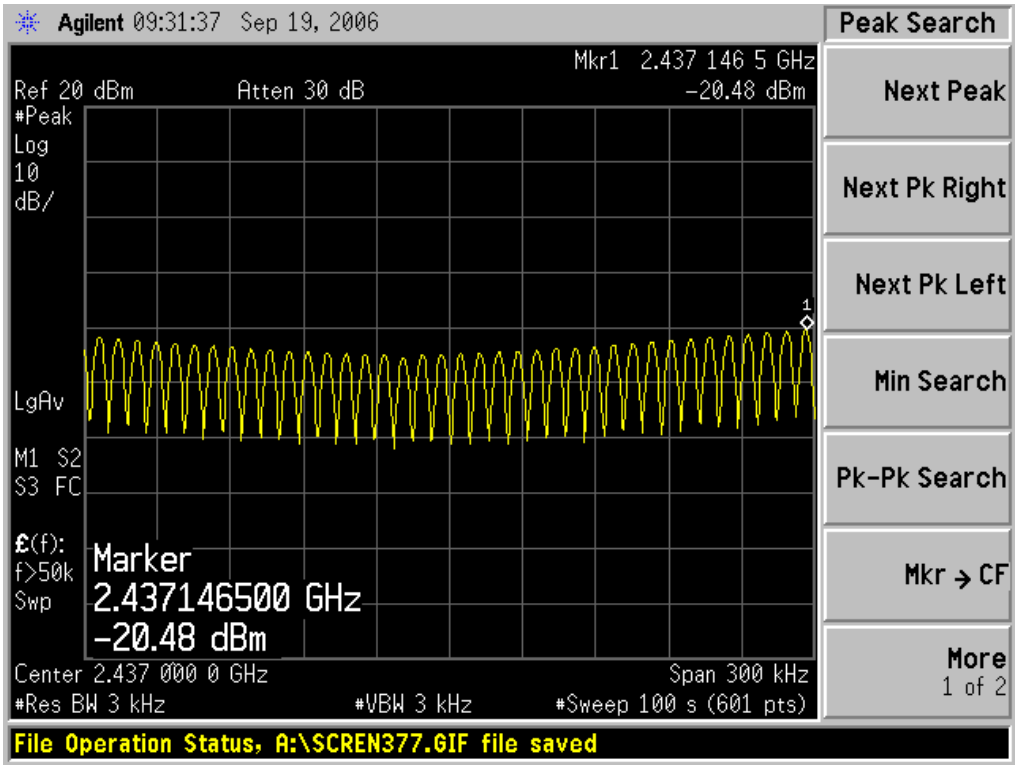
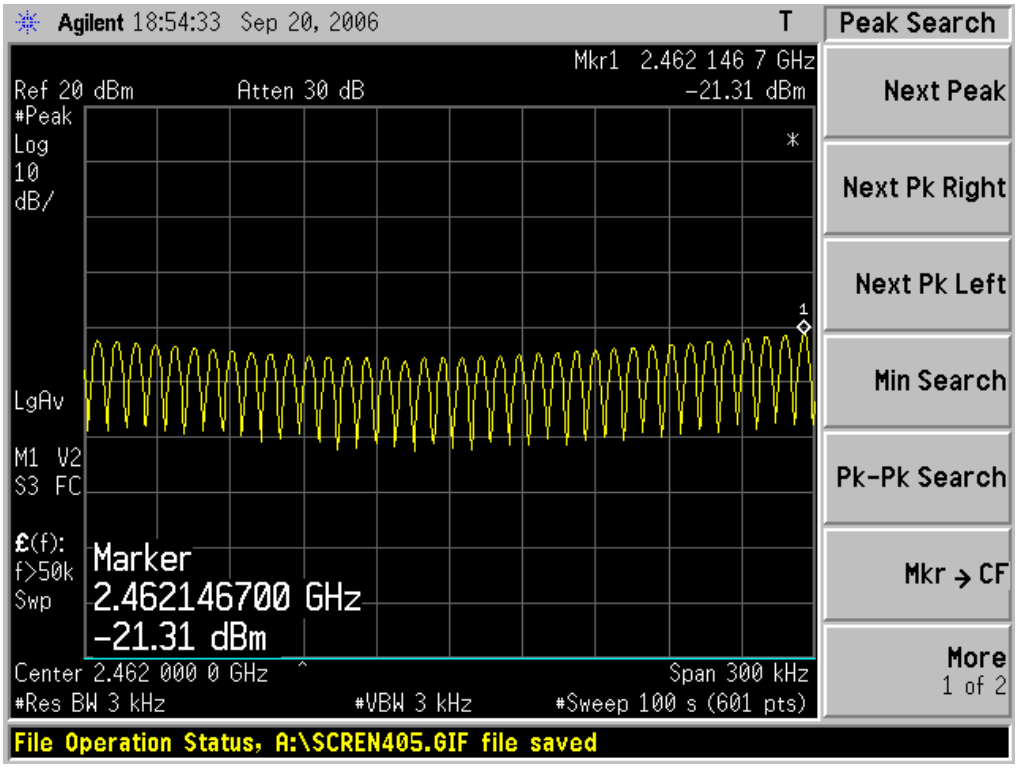


Figure Channel 11 (2462MHz)



Product	802.11g Wireless ADSL 2+4-port Gateway		
Test Item	Peak Power Spectral Density		
Test Mode	Mode 2: Transmitter by 802.11g		
Date of Test	2006/09/19	Test Site	AC-3

Channel	Freq. (MHz)	Power Spectral Density (dBm/3kHz)	Limit (dBm /3kHz)	Result
01	2412	-21.79	8	PASS
06	2437	-22.04	8	PASS
11	2462	-22.53	8	PASS

Figure Channel 01 (2412MHz)

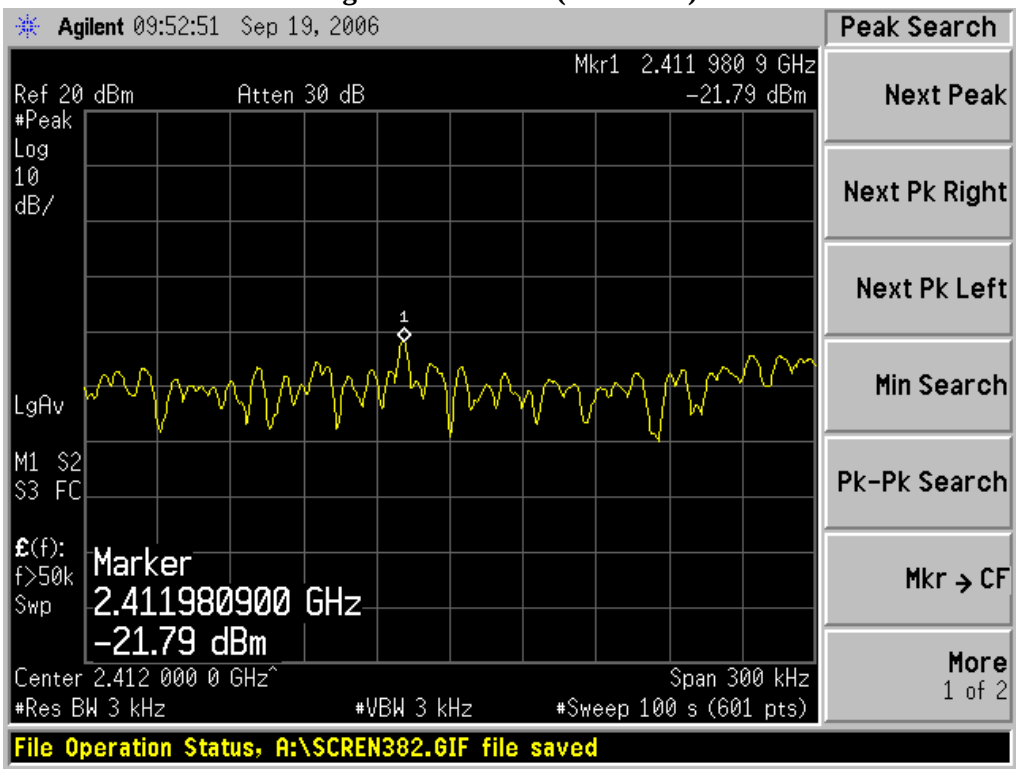


Figure Channel 06 (2437MHz)

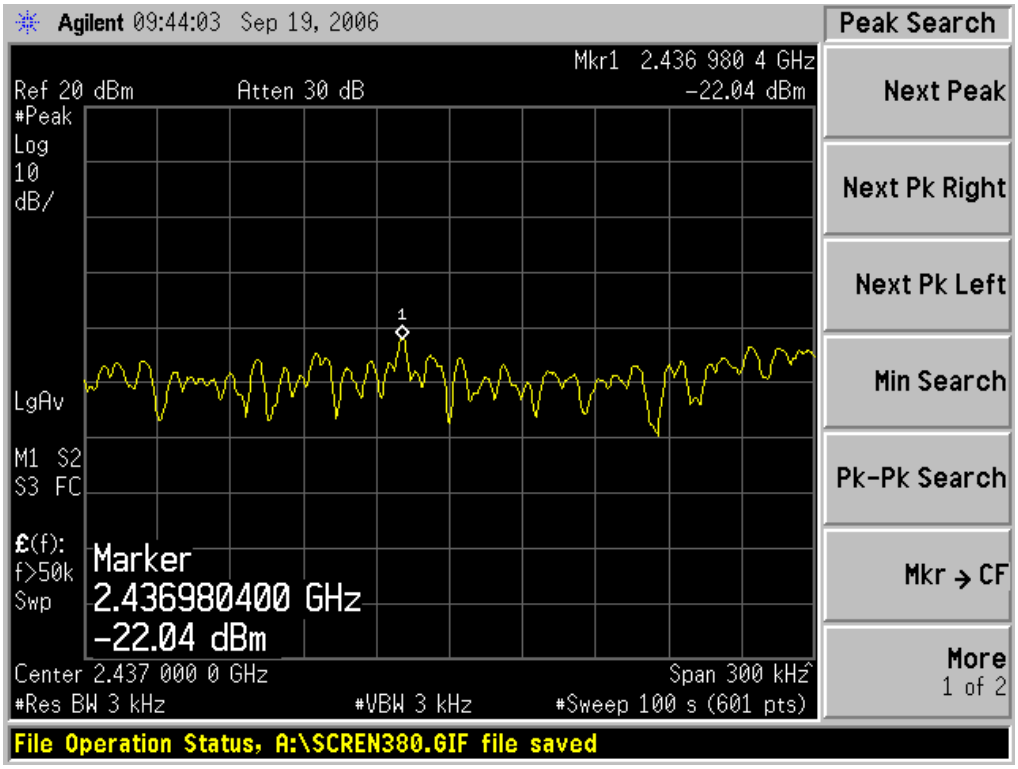
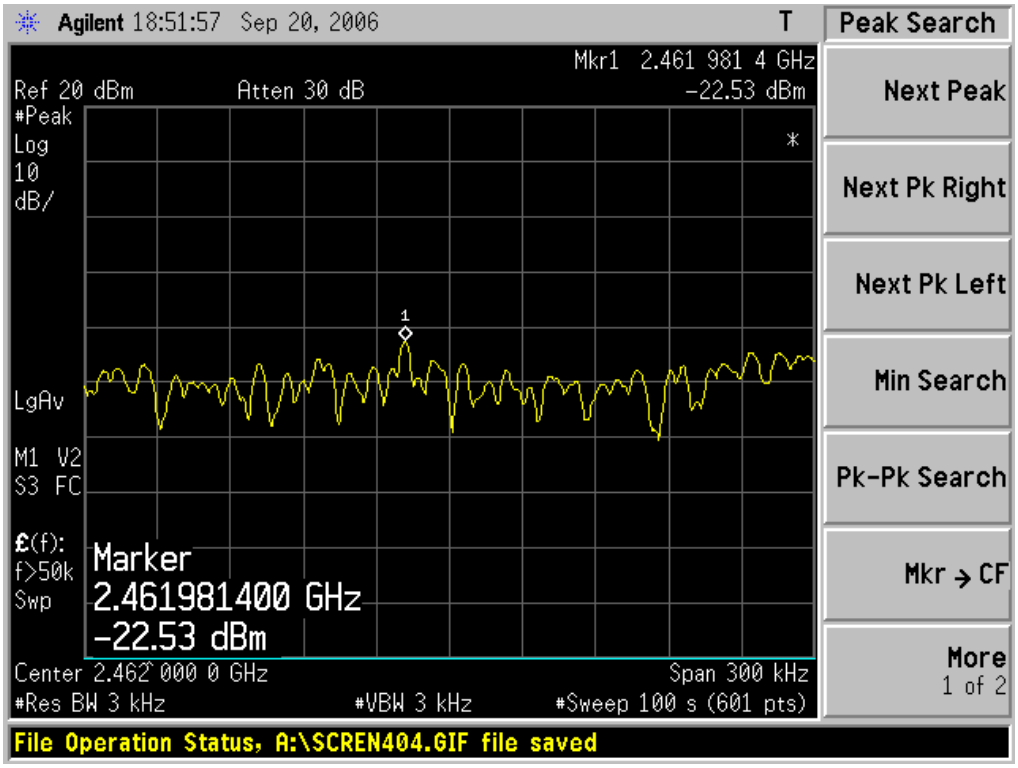



Figure Channel 11 (2462MHz)