



Test Report

Product Name : Wireless Broadband Router
Model No. : DI-524UP
FCC ID. : KA2DI524UP

Applicant : D-Link Corporation
Address : 2F, No. 233-2, Pao-Chiao Road, Hsin-Tien, Taipei,
Taiwan, R.O.C.

Date of Receipt : 2005/05/19
Issued Date : 2005/05/27
Report No. : 055H049-F-R02-T

The test results relate only to the samples tested.

The test report shall not be reproduced except in full without the written approval of QuieTek Corporation.

Test Report Certification

Issued Date : 2005/05/27

Report No. : 055H049-F-R02-T



Product Name : Wireless Broadband Router
 Applicant : D-Link Corporation
 Address : 2F, No. 233-2, Pao-Chiao Road, Hsin-Tien, Taipei, Taiwan,
 R.O.C.
 Manufacturer : Advance Multimedia Internet Technology
 Model No. : DI-524UP
 FCC ID. : KA2DI524UP
 Rated Voltage : AC 120 V / 60 Hz
 EUT Voltage : AC 120 V / 60 Hz
 Trade Name : D-Link
 Applicable Standard : FCC CFR Title 47 Part 15 Subpart C Section 15.247
 Test Result : Complied

The test results relate only to the samples tested.

The test report shall not be reproduced except in full without the written approval of QuieTek Corporation.

Documented By : Sandy Chuang

(Sandy Chuang)

Tested By : Louis Hsu

(Louis Hsu)

Approved By : James Chang

(James Chang)

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Reference : Laboratory of License

1. General Information

1.1. EUT Description

Product Name	Wireless Broadband Router
Trade Name	D-Link
Model No.	DI-524UP
Frequency Range	2412~2462MHz
Channel Number	11
Type of Modulation (IEEE 802.11b)	Direct Sequence Spread Spectrum (DSSS)
Type of Modulation (IEEE 802.11g)	Orthogonal Frequency Division Multiplexing (OFDM)
Data Speed (IEEE 802.11b)	1Mbps, 2Mbps, 5.5Mbps, 11Mbps
Data Speed (IEEE 802.11g)	6Mbps,9Mbps,12Mbps,18Mbps,24Mbps,36Mbps,48Mbps,54Mbps
Antenna Gain	1.8dBi
Channel Control	Auto
Antenna Type	Connector
Antenna Joint Type	Reverse SMA

Component	
Power Adapter	D-Link, JTA0302A Cable Out: Non-Shielded, 1.8m

Working Frequency of Each Channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
001	2412 MHz	002	2417 MHz	003	2422 MHz	004	2427 MHz
005	2432 MHz	006	2437 MHz	007	2442 MHz	008	2447 MHz
009	2452 MHz	010	2457 MHz	011	2462 MHz		

Note:

1. This device is a Wireless Broadband Router included a 2.4GHz receiving function, and 2.4GHz transmitting function.
2. These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 15 Subpart C Paragraph 15.247 for spread spectrum devices.
3. Regards to the frequency band operation; the highest rate that was included the lowest 、middle and highest frequency of channel were selected to perform the test, and then shown on this report.
4. This device is a composite device in accordance with Part 15 regulations. The function receiving was measured and made a test report that the report number is 055H049-F-R01 under Declaration of Conformity.

1.3. Test Mode

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:

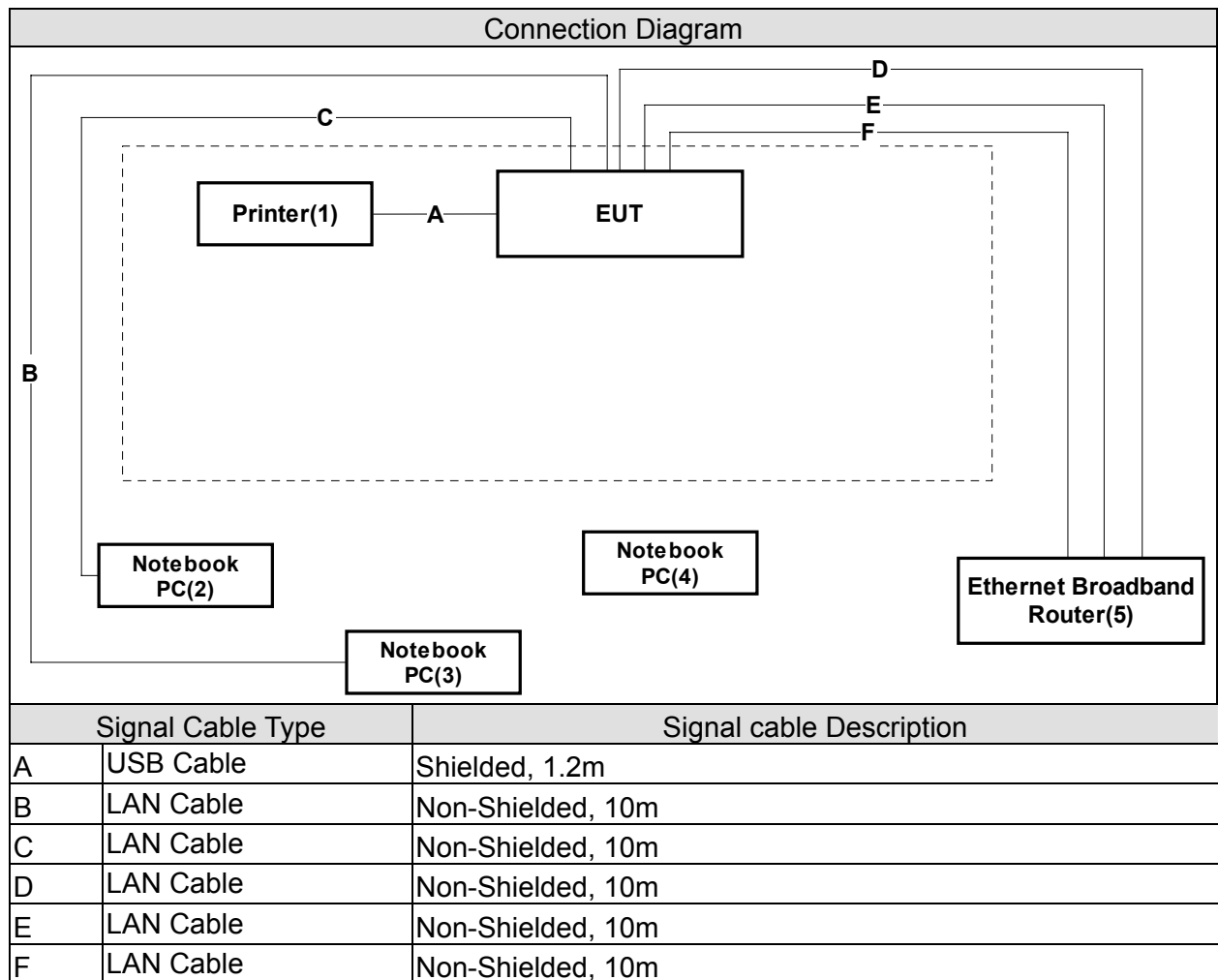
Pre-Test Mode	
EMI	Mode 1: Transmit
Final Test Mode	
TX	Mode 1: Transmit

1.4. 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	Printer	HP	5652	N/A	--
2	Notebook PC	DELL	Latitude 600	N/A	Non-Shielded, 1.7m, a ferrite core bonded
3	Notebook PC	DELL	Latitude 610	N/A	Non-Shielded, 1.7m, a ferrite core bonded
4	Notebook PC	DELL	Latitude 610	N/A	Non-Shielded, 1.7m, a ferrite core bonded
5	Ethernet Broadband Router	D-Link	DI-604UP	N/A	--

1.5. Configuration of tested System



1.6. EUT Exercise Software

1	Setup the EUT and simulators as shown on 1.5.
2	Turn on the power of all equipment.
3	Boot the PC from Hard Disk.
4	Data will communicate between personal computer and partner personal computer through EUT.
5	The personal computer' s and partner computer' s monitor will show the transmitting and receiving characteristics when the communication is success.
6	Repeat the above procedure (4) to (5).

1.7. Test Facility

Ambient conditions in the laboratory:

Items	Test Item	Required (IEC 68-1)	Actual
Temperature (°C)	FCC PART 15 C 15.207 Conducted Emission	15 - 35	22
Humidity (%RH)		25 - 75	50
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Band Edge (DSSS)	15 - 35	25
Humidity (%RH)		25 - 75	50
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Occupied Bandwidth (DSSS)	15 - 35	25
Humidity (%RH)		25 - 75	50
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Peak Power Output (DSSS)	15 - 35	25
Humidity (%RH)		25 - 75	50
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Power Density (DSSS)	15 - 35	25
Humidity (%RH)		25 - 75	50
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Radiated Emission (DSSS)	15 - 35	25
Humidity (%RH)		25 - 75	50
Barometric pressure (mbar)		860 - 1060	950-1000

Site Description:

January 24, 2005 File on
Federal Communications Commission
Laboratory Division
7435 Oakland Mills Road
Columbia, MD 21046
Registration Number: 365520

Accredited by CNLA
Accreditation Number: 1313
Effective through: September 27, 2007

Accredited by NVLAP
NVLAP Lab Code: 200347-0
Effective through: September 30, 2005

Site Name: Quietek Corporation

Site Address: No.75-1, Wang-Yeh Valley, Yung-Hsing,
Chiung-Lin, Hsin-Chu County,
Taiwan, R.O.C.
TEL : 886-3-592-8858 / FAX : 886-3-592-8859
E-Mail : service@quietek.com



1313

ILAC MRA



2. Conducted Emission

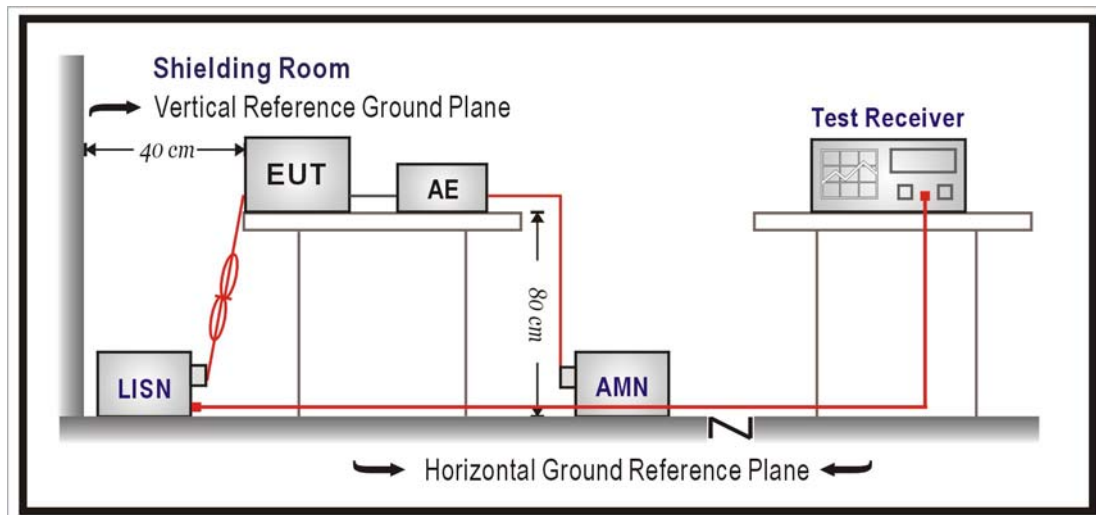
2.1. Test Equipment

The following test equipment are used during the test:

Item	Equipment	Manufacturer	Model No. / Serial No.	Last Cal.	Remark
1	Test Receiver	R & S	ESCS 30/825442/018	Sep., 2004	
2	Artificial Mains Network	R & S	ENV4200/848411/10	Feb., 2005	Peripherals
3	LISN	R & S	ESH3-Z5/825562/002	Feb., 2005	EUT
4	Pulse Limiter	R & S	ESH3-Z2/357.8810.52	Feb., 2005	
5	No.2 Shielded Room			N/A	

Note: All equipment upon which need to calibrated are with calibration period of 1 year.

2.2. Test Setup



2.3. Limits

FCC Part 15 Subpart C Paragraph 15.207 Limits (dBuV)		
Frequency MHz	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.

2.4. 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 according to ANSI C63.4: 2003 on conducted measurement.

Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

2.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.207: 2003

2.6. Test Result

Product	Wireless Broadband Router		
Test Item	Conducted Emission		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/20	Test Site	No.2 Shielded Room

IEEE 802.11b

Frequency	Cable	LISN	Reading	Emission	Limits
	Loss	Factor	Level	Level	
MHz	dB	dB	dBuV	dBuV	dBuV
=====					
Line 1					
Quasi-Peak					
0.181	0.01	0.12	47.92	48.05	64.43
0.366	0.05	0.18	38.88	39.11	58.59
1.094	0.11	0.29	33.85	34.24	56.00
* 2.488	0.16	0.37	44.12	44.64	56.00
5.056	0.20	0.43	30.83	31.46	60.00
23.125	0.37	0.58	40.45	41.40	60.00
Average					
0.181	0.01	0.12	40.30	40.43	54.44
0.366	0.05	0.18	36.30	36.53	48.59
1.094	0.11	0.29	30.40	30.79	46.00
* 2.488	0.16	0.37	36.10	36.62	46.00
5.056	0.20	0.43	29.30	29.93	50.00
23.125	0.37	0.58	38.70	39.65	50.00

Note:

1. All Reading Levels are Quasi-Peak and Average value.
2. " * ", means this data is the worst emission level.
3. Emission Level = Reading Level + LISN Factor + Cable Loss.

Product	Wireless Broadband Router		
Test Item	Conducted Emission		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/20	Test Site	No.2 Shielded Room

IEEE 802.11b

Frequency	Cable	LISN	Reading	Emission	Limits
	Loss	Factor	Level	Level	
MHz	dB	dB	dBuV	dBuV	dBuV

=====

Line 2

Quasi-Peak

0.184	0.01	0.12	43.38	43.51	64.31
0.369	0.05	0.19	35.93	36.16	58.53
0.740	0.08	0.25	36.59	36.92	56.00
* 2.096	0.15	0.35	43.35	43.85	56.00
3.607	0.18	0.40	37.41	37.99	56.00
23.129	0.37	0.58	38.78	39.73	60.00

Average

0.184	0.01	0.12	37.20	37.33	54.30
0.369	0.05	0.19	33.70	33.93	48.52
0.740	0.08	0.25	36.10	36.43	46.00
* 2.096	0.15	0.35	36.70	37.20	46.00
3.607	0.18	0.40	36.20	36.78	46.00
23.129	0.37	0.58	34.60	35.55	50.00

Note:

1. All Reading Levels are Quasi-Peak and Average value.
2. " * ", means this data is the worst emission level.
3. Emission Level = Reading Level + LISN Factor + Cable Loss.

Product	Wireless Broadband Router		
Test Item	Conducted Emission		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/20	Test Site	No.2 Shielded Room

IEEE 802.11g

Frequency	Cable	LISN	Reading	Emission	Limits
	Loss	Factor	Level	Level	
MHz	dB	dB	dBuV	dBuV	dBuV

=====

Line 1

Quasi-Peak

0.185	0.01	0.12	46.20	46.33	64.25
0.492	0.06	0.21	36.85	37.12	56.13
0.925	0.10	0.27	36.39	36.76	56.00
* 2.037	0.14	0.35	44.16	44.65	56.00
4.687	0.20	0.42	31.73	32.35	56.00
25.508	0.38	0.58	35.45	36.42	60.00

Average

0.185	0.01	0.12	38.90	39.03	54.26
0.492	0.06	0.21	35.70	35.97	46.13
0.925	0.10	0.27	34.10	34.47	46.00
* 2.037	0.14	0.35	38.10	38.59	46.00
4.687	0.20	0.42	30.20	30.82	46.00
25.508	0.38	0.58	29.20	30.17	50.00

Note:

1. All Reading Levels are Quasi-Peak and Average value.
2. " * ", means this data is the worst emission level.
3. Emission Level = Reading Level + LISN Factor + Cable Loss.

Product	Wireless Broadband Router		
Test Item	Conducted Emission		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/20	Test Site	No.2 Shielded Room

IEEE 802.11g

Frequency	Cable	LISN	Reading	Emission	Limits
	Loss	Factor	Level	Level	
MHz	dB	dB	dBuV	dBuV	dBuV

=====

Line 1

Quasi-Peak

0.184	0.01	0.12	43.28	43.41	64.29
0.493	0.06	0.21	35.73	36.00	56.12
0.927	0.10	0.27	36.45	36.82	56.00
* 2.039	0.14	0.35	44.12	44.61	56.00
3.893	0.18	0.41	35.41	36.00	56.00
24.533	0.38	0.58	40.96	41.92	60.00

Average

0.184	0.01	0.12	37.10	37.23	54.30
0.493	0.06	0.21	33.60	33.88	46.12
0.927	0.10	0.27	33.20	33.57	46.00
* 2.039	0.14	0.35	38.30	38.79	46.00
3.893	0.18	0.41	27.20	27.79	46.00
24.533	0.38	0.58	36.60	37.56	50.00

Note:

1. All Reading Levels are Quasi-Peak and Average value.
2. " * ", means this data is the worst emission level.
3. Emission Level = Reading Level + LISN Factor + Cable Loss.

3. Peak Power Output

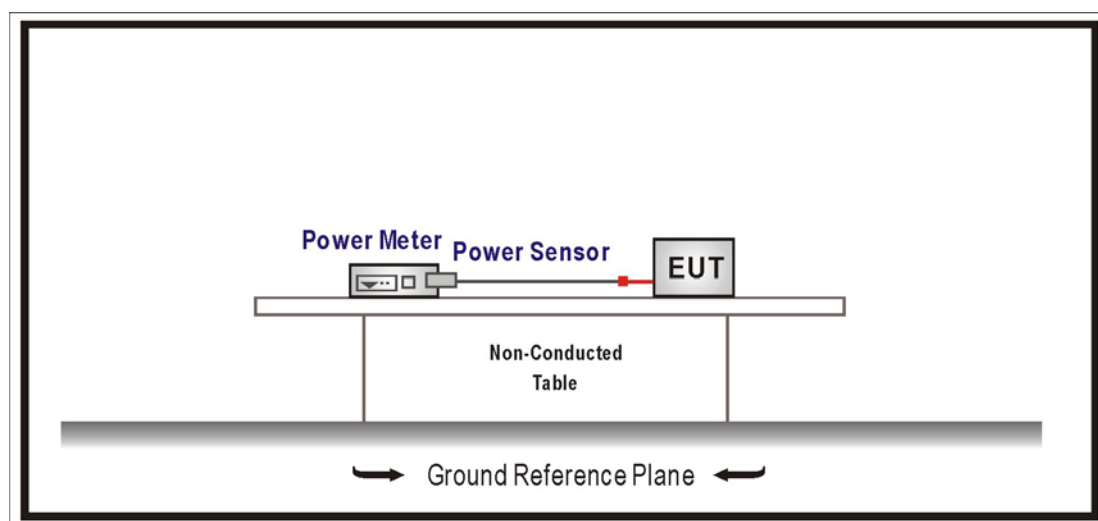
3.1. Test Equipment

The following test equipment are used during the test:

Item	Equipment	Manufacturer	Model No. / Serial No.	Last Cal.
1	Power Meter	Agilent	E4416A / GB41291630	May, 2005
2	Power Sensor	Agilent	E9323A / US40411166	Apr., 2005
3	No.1 OATS			Sep., 2004

Note: All equipment upon which need to calibrated are with calibration period of 1 year.

3.2. Test Setup



3.3. Limits

The maximum peak power shall be less 1 Watt.

3.4. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2003

3.5. Test Result

Product	Wireless Broadband Router		
Test Item	Peak Power Output		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/27	Test Site	No.1 OATS

IEEE 802.11b				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	18.31	1Watt = 30 dBm	Pass
6	2437	17.79	1Watt= 30 dBm	Pass
11	2462	18.07	1Watt= 30 dBm	Pass

Product	Wireless Broadband Router		
Test Item	Peak Power Output		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/27	Test Site	No.1 OATS

IEEE 802.11g				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	16.45	1Watt = 30 dBm	Pass
6	2437	15.92	1Watt= 30 dBm	Pass
11	2462	16.15	1Watt= 30 dBm	Pass

4. Radiated Emission

4.1. Test Equipment

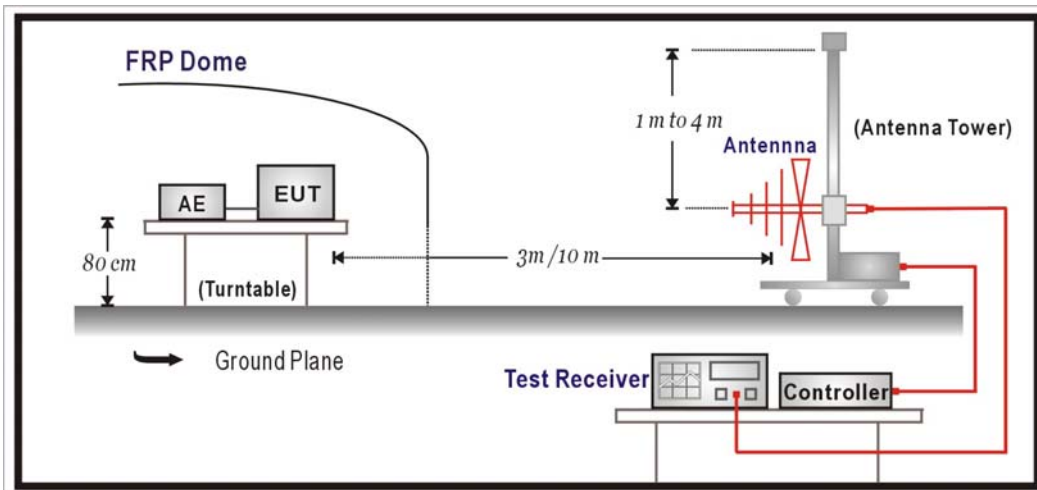
The following test equipment are used during the test:

Item		Equipment	Manufacturer	Model No. / Serial No.	Last Cal.
1	X	Test Receiver	R & S	ESCS 30 / 825442/017	Jan., 2005
2	X	Spectrum Analyzer	Advantest	R3261C / 81720266	N/A
3	X	Pre-Amplifier	HP	8447D / 2944A09276	N/A
4	X	Bilog Antenna	Chase	CBL6112B / 2455	Sep., 2004
5	X	Spectrum Analyzer	R & S	FSP40 / 100005	Aug., 2004
6	X	Pre-Amplifier	HP	8449B / 3008A01123	Feb., 2005
7	X	Horn Antenna	Schwarzbeck	BBHA 9120D / BBHA9120D312	Jul., 2004
8		No.1 OATS			Sep., 2004

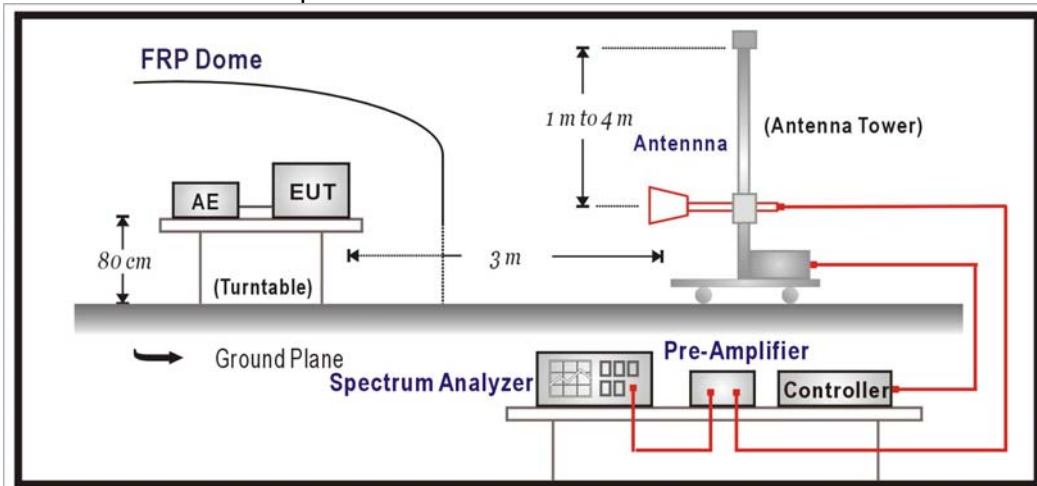
Note: 1. All equipments that need to calibrate are with calibration period of 1 year.
2. Mark "X" test instruments are used to measure the final test results.

4.2. Test Setup

Under 1GHz Test Setup:



Above 1GHz Test Setup:



4.3. Limits

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
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

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.

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. 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 C63.4:2003 on radiated measurement.

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.

4.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2003

4.6. Test Result

Product	Wireless Broadband Router		
Test Item	Radiated Emission		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/21	Test Site	No.1 OATS

IEEE 802.11b, Channel 1

Frequency	Cable	Probe	PreAMP	Reading	Emission	Margin	Limit
	Loss	Factor		Level	Level		
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
=====							
Horizontal							
Peak							
4824.200	4.24	31.22	31.95	41.27	44.79	29.21	74.00
7239.800	5.63	35.95	32.67	41.66	50.57	23.43	74.00
9648.200	7.01	38.05	31.88	34.06	47.24	26.76	74.00
12060.02	8.40	38.59	31.32	32.84	48.50	25.50	74.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz.
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz.
4. Emission Level = Reading Level + Probe Factor + Cable Loss – PreAMP.
5. 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	Wireless Broadband Router		
Test Item	Radiated Emission		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/21	Test Site	No.1 OATS

IEEE 802.11b, Channel 1

Frequency	Cable	Probe	PreAMP	Reading	Emission	Margin	Limit
	Loss	Factor		Level	Level		
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
=====							
Vertical							
Peak							
4823.800	4.24	31.22	31.95	40.39	43.91	30.09	74.00
7239.800	5.63	35.95	32.67	44.58	53.49	20.51	74.00
9648.000	7.01	38.05	31.88	34.66	47.84	26.16	74.00
12060.00	8.40	38.59	31.32	33.54	49.20	24.80	74.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz.
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz.
4. Emission Level = Reading Level + Probe Factor + Cable Loss – PreAMP.
5. 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	Wireless Broadband Router		
Test Item	Radiated Emission		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/21	Test Site	No.1 OATS

IEEE 802.11b, Channel 6

Frequency	Cable	Probe	PreAMP	Reading	Emission	Margin	Limit
	Loss	Factor		Level	Level		
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
=====							
Horizontal							
Peak							
4874.000	4.27	31.32	31.95	43.38	47.02	26.98	74.00
7307.000	5.67	36.09	32.60	40.23	49.38	24.62	74.00
9748.200	7.07	38.07	31.66	33.95	47.43	26.57	74.00
12185.20	8.47	38.51	31.21	32.86	48.62	25.38	74.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz.
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz.
4. Emission Level = Reading Level + Probe Factor + Cable Loss – PreAMP.
5. 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	Wireless Broadband Router		
Test Item	Radiated Emission		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/21	Test Site	No.1 OATS

IEEE 802.11b, Channel 6

Frequency	Cable	Probe	PreAMP	Reading	Emission	Margin	Limit
	Loss	Factor		Level	Level		
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
=====							
Vertical							
Peak							
4874.000	4.27	31.32	31.95	41.80	45.44	28.56	74.00
7314.000	5.67	36.09	32.60	41.86	51.01	22.99	74.00
9748.200	7.07	38.07	31.66	33.58	47.06	26.94	74.00
12185.01	8.47	38.51	31.21	33.21	48.97	25.03	74.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz.
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz.
4. Emission Level = Reading Level + Probe Factor + Cable Loss – PreAMP.
5. 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	Wireless Broadband Router		
Test Item	Radiated Emission		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/22	Test Site	No.1 OATS

IEEE 802.11b, Channel 11

Frequency	Cable	Probe	PreAMP	Reading	Emission	Margin	Limit
	Loss	Factor		Level	Level		
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
=====							
Horizontal							
Peak							
4924.000	4.30	31.41	31.96	47.04	50.80	23.20	74.00
7385.000	5.72	36.26	32.51	40.35	49.81	24.19	74.00
9847.800	7.12	38.09	31.48	33.76	47.49	26.51	74.00
12310.00	8.53	38.43	31.10	32.96	48.82	25.18	74.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz.
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz.
4. Emission Level = Reading Level + Probe Factor + Cable Loss – PreAMP.
5. 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	Wireless Broadband Router		
Test Item	Radiated Emission		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/22	Test Site	No.1 OATS

IEEE 802.11b, Channel 11

Frequency	Cable	Probe	PreAMP	Reading	Emission	Margin	Limit
	Loss	Factor		Level	Level		
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
=====							
Vertical							
Peak							
4924.000	4.30	31.41	31.96	47.82	51.58	22.42	74.00
7389.800	5.72	36.26	32.51	43.71	53.17	20.83	74.00
9848.400	7.12	38.09	31.48	34.50	48.23	25.77	74.00
12310.20	8.54	38.42	31.09	33.48	49.35	24.65	74.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz.
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz.
4. Emission Level = Reading Level + Probe Factor + Cable Loss – PreAMP.
5. 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	Wireless Broadband Router		
Test Item	Radiated Emission		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/22	Test Site	No.1 OATS

IEEE 802.11g, Channel 1

Frequency	Cable	Probe	PreAMP	Reading	Emission	Margin	Limit
	Loss	Factor		Level	Level		
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
=====							
Horizontal							
Peak							
4825.000	4.24	31.22	31.95	37.51	41.03	32.97	74.00
7237.200	5.63	35.95	32.67	37.72	46.63	27.37	74.00
9648.800	7.01	38.05	31.88	33.46	46.64	27.36	74.00
12060.80	8.40	38.59	31.32	32.94	48.60	25.40	74.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz.
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz.
4. Emission Level = Reading Level + Probe Factor + Cable Loss – PreAMP.
5. 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	Wireless Broadband Router		
Test Item	Radiated Emission		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/22	Test Site	No.1 OATS

IEEE 802.11g, Channel 1

Frequency	Cable	Probe	PreAMP	Reading	Emission	Margin	Limit
	Loss	Factor		Level	Level		
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
=====							
Vertical							
Peak							
4824.400	4.24	31.22	31.95	37.04	40.56	33.44	74.00
7233.600	5.62	35.92	32.69	40.36	49.20	24.80	74.00
9648.800	7.01	38.05	31.88	33.62	46.80	27.20	74.00
12060.40	8.40	38.59	31.32	32.53	48.19	25.81	74.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz.
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz.
4. Emission Level = Reading Level + Probe Factor + Cable Loss – PreAMP.
5. 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	Wireless Broadband Router		
Test Item	Radiated Emission		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/22	Test Site	No.1 OATS

IEEE 802.11g, Channel 6

Frequency	Cable	Probe	PreAMP	Reading	Emission	Margin	Limit
	Loss	Factor		Level	Level		
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
=====							
Horizontal							
Peak							
4874.020	4.27	31.32	31.95	37.81	41.45	32.55	74.00
7307.000	5.67	36.09	32.60	40.12	49.27	24.73	74.00
9748.200	7.07	38.07	31.66	34.02	47.50	26.50	74.00
12185.20	8.47	38.51	31.21	32.56	48.32	25.68	74.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz.
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz.
4. Emission Level = Reading Level + Probe Factor + Cable Loss – PreAMP.
5. 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	Wireless Broadband Router		
Test Item	Radiated Emission		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/22	Test Site	No.1 OATS

IEEE 802.11g, Channel 6

Frequency	Cable	Probe	PreAMP	Reading	Emission	Margin	Limit
	Loss	Factor		Level	Level		
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
=====							
Vertical							
Peak							
4874.600	4.27	31.32	31.95	39.54	43.18	30.82	74.00
7310.600	5.67	36.09	32.60	37.12	46.27	27.73	74.00
9748.000	7.07	38.07	31.66	34.29	47.77	26.23	74.00
12185.20	8.47	38.51	31.21	32.59	48.35	25.65	74.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz.
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz.
4. Emission Level = Reading Level + Probe Factor + Cable Loss – PreAMP.
5. 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	Wireless Broadband Router		
Test Item	Radiated Emission		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/22	Test Site	No.1 OATS

IEEE 802.11g, Channel 11

Frequency	Cable	Probe	PreAMP	Reading	Emission	Margin	Limit
	Loss	Factor		Level	Level		
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
=====							
Horizontal							
Peak							
4929.400	4.30	31.41	31.96	41.27	45.03	28.97	74.00
7387.000	5.72	36.26	32.51	36.83	46.29	27.71	74.00
9847.400	7.12	38.09	31.48	33.48	47.21	26.79	74.00
12309.40	8.53	38.43	31.10	33.24	49.10	24.90	74.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz.
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz.
4. Emission Level = Reading Level + Probe Factor + Cable Loss – PreAMP.
5. 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	Wireless Broadband Router		
Test Item	Radiated Emission		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/22	Test Site	No.1 OATS

IEEE 802.11g, Channel 11

Frequency	Cable	Probe	PreAMP	Reading	Emission	Margin	Limit
	Loss	Factor		Level	Level		
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
=====							
Vertical							
Peak							
4922.000	4.30	31.41	31.96	42.23	45.99	28.01	74.00
7387.000	5.72	36.26	32.51	41.43	50.89	23.11	74.00
9847.600	7.12	38.09	31.48	34.24	47.97	26.03	74.00
12309.60	8.53	38.43	31.10	33.25	49.11	24.89	74.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz.
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz.
4. Emission Level = Reading Level + Probe Factor + Cable Loss – PreAMP.
5. 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	Wireless Broadband Router		
Test Item	Radiated Emission		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/24	Test Site	No.1 OATS

IEEE 802.11b, Channel 1

Frequency	Cable	Probe	PreAMP	Reading	Emission	Margin	Limit
	Loss	Factor		Level	Level		
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
=====							
Horizontal							
Quasi-Peak							
131.160	0.48	10.46	22.60	37.53	25.87	17.63	43.50
264.190	0.68	13.46	22.60	39.34	30.88	15.12	46.00
495.600	1.02	20.85	22.60	37.70	36.97	9.03	46.00
661.890	1.27	23.75	22.60	33.16	35.58	10.42	46.00
* 794.910	1.47	24.60	22.60	35.20	38.67	7.33	46.00
926.560	1.66	25.43	22.60	34.18	38.67	7.33	46.00

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. Emission Level = Reading Level + Probe Factor + Cable Loss.

Product	Wireless Broadband Router		
Test Item	Radiated Emission		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/24	Test Site	No.1 OATS

IEEE 802.11b, Channel 1

Frequency	Cable	Probe	PreAMP	Reading	Emission	Margin	Limit
	Loss	Factor		Level	Level		
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
=====							

Vertical

Quasi-Peak

*	104.830	0.44	19.18	22.60	42.30	39.32	4.18	43.50
	199.060	0.58	14.03	22.60	41.78	33.79	9.71	43.50
	370.890	0.84	17.59	22.60	39.73	35.55	10.45	46.00
	620.310	1.21	21.26	22.60	32.96	32.82	13.18	46.00
	794.910	1.47	23.07	22.60	35.90	37.83	8.17	46.00
	925.170	1.66	23.54	22.60	35.99	38.59	7.41	46.00

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. Emission Level = Reading Level + Probe Factor + Cable Loss.

Product	Wireless Broadband Router		
Test Item	Radiated Emission		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/24	Test Site	No.1 OATS

IEEE 802.11b, Channel 6

Frequency	Cable	Probe	PreAMP	Reading	Emission	Margin	Limit
	Loss	Factor		Level	Level		
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
=====							
Horizontal							
Quasi-Peak							
131.590	0.48	10.42	22.60	37.38	25.68	17.82	43.50
264.190	0.68	13.46	22.60	38.95	30.49	15.51	46.00
496.130	1.02	20.87	22.60	37.59	36.88	9.12	46.00
661.050	1.27	23.75	22.60	33.52	35.94	10.06	46.00
794.760	1.46	24.60	22.60	35.16	38.62	7.38	46.00
* 927.280	1.66	25.44	22.60	34.27	38.77	7.23	46.00

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. Emission Level = Reading Level + Probe Factor + Cable Loss.

Product	Wireless Broadband Router		
Test Item	Radiated Emission		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/24	Test Site	No.1 OATS

IEEE 802.11b, Channel 6

Frequency	Cable	Probe	PreAMP	Reading	Emission	Margin	Limit
MHz	Loss	Factor		Level	Level		
	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m

=====

Vertical

Quasi-Peak

*	104.550	0.44	19.18	22.60	42.37	39.39	4.11	43.50
	199.280	0.58	14.00	22.60	41.91	33.89	9.61	43.50
	372.160	0.84	17.58	22.60	40.05	35.86	10.14	46.00
	621.080	1.21	21.26	22.60	32.91	32.77	13.23	46.00
	795.340	1.47	23.07	22.60	35.58	37.51	8.49	46.00
	925.460	1.66	23.54	22.60	35.84	38.44	7.56	46.00

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. Emission Level = Reading Level + Probe Factor + Cable Loss.

Product	Wireless Broadband Router		
Test Item	Radiated Emission		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/24	Test Site	No.1 OATS

IEEE 802.11b, Channel 11

Frequency	Cable	Probe	PreAMP	Reading	Emission	Margin	Limit
	Loss	Factor		Level	Level		
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
=====							
Horizontal							
Quasi-Peak							
131.050	0.48	10.46	22.60	37.35	25.69	17.81	43.50
264.220	0.68	13.46	22.60	39.44	30.98	15.02	46.00
496.600	1.02	20.87	22.60	37.50	36.79	9.21	46.00
662.060	1.27	23.76	22.60	33.25	35.68	10.32	46.00
* 794.950	1.47	24.60	22.60	35.09	38.56	7.44	46.00
927.150	1.66	25.44	22.60	33.83	38.33	7.67	46.00

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. Emission Level = Reading Level + Probe Factor + Cable Loss.

Product	Wireless Broadband Router		
Test Item	Radiated Emission		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/24	Test Site	No.1 OATS

IEEE 802.11b, Channel 11

Frequency	Cable	Probe	PreAMP	Reading	Emission	Margin	Limit
	Loss	Factor		Level	Level		
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
=====							

Vertical

Quasi-Peak

*	105.030	0.44	19.18	22.60	42.54	39.56	3.94	43.50
	199.290	0.58	14.00	22.60	41.87	33.85	9.65	43.50
	372.040	0.84	17.58	22.60	39.14	34.95	11.05	46.00
	621.120	1.21	21.26	22.60	32.99	32.85	13.15	46.00
	794.490	1.46	23.02	22.60	35.66	37.55	8.45	46.00
	925.840	1.66	23.56	22.60	35.48	38.10	7.90	46.00

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. Emission Level = Reading Level + Probe Factor + Cable Loss.

Product	Wireless Broadband Router		
Test Item	Radiated Emission		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/24	Test Site	No.1 OATS

IEEE 802.11g, Channel 1

Frequency	Cable	Probe	PreAMP	Reading	Emission	Margin	Limit
	Loss	Factor		Level	Level		
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
=====							
Horizontal							
Quasi-Peak							
132.050	0.48	10.42	22.60	36.84	25.14	18.36	43.50
264.970	0.68	13.57	22.60	38.47	30.12	15.88	46.00
495.100	1.02	20.83	22.60	36.83	36.08	9.92	46.00
662.130	1.27	23.76	22.60	32.61	35.04	10.96	46.00
796.420	1.47	24.61	22.60	34.20	37.68	8.32	46.00
* 927.280	1.66	25.44	22.60	34.12	38.62	7.38	46.00

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. Emission Level = Reading Level + Probe Factor + Cable Loss.

Product	Wireless Broadband Router		
Test Item	Radiated Emission		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/24	Test Site	No.1 OATS

IEEE 802.11g, Channel 1

Frequency	Cable	Probe	PreAMP	Reading	Emission	Margin	Limit
	Loss	Factor		Level	Level		
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m

=====

Vertical

Quasi-Peak

*	104.580	0.44	19.18	22.60	42.14	39.16	4.34	43.50
	198.970	0.58	14.03	22.60	41.04	33.05	10.45	43.50
	370.280	0.84	17.59	22.60	39.19	35.01	10.99	46.00
	620.130	1.21	21.27	22.60	32.38	32.25	13.75	46.00
	794.250	1.46	23.02	22.60	35.45	37.34	8.66	46.00
	925.040	1.66	23.54	22.60	35.79	38.39	7.61	46.00

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. Emission Level = Reading Level + Probe Factor + Cable Loss.

Product	Wireless Broadband Router		
Test Item	Radiated Emission		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/24	Test Site	No.1 OATS

IEEE 802.11g, Channel 6

Frequency	Cable	Probe	PreAMP	Reading	Emission	Margin	Limit
	Loss	Factor		Level	Level		
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
=====							
Horizontal							
Quasi-Peak							
131.260	0.48	10.46	22.60	36.88	25.22	18.28	43.50
264.560	0.68	13.57	22.60	38.61	30.26	15.74	46.00
495.260	1.02	20.85	22.60	37.24	36.51	9.49	46.00
662.050	1.27	23.76	22.60	32.85	35.28	10.72	46.00
* 794.640	1.46	24.60	22.60	34.69	38.15	7.85	46.00
927.240	1.66	25.44	22.60	33.51	38.01	7.99	46.00

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. Emission Level = Reading Level + Probe Factor + Cable Loss.

Product	Wireless Broadband Router		
Test Item	Radiated Emission		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/24	Test Site	No.1 OATS

IEEE 802.11g, Channel 6

Frequency	Cable	Probe	PreAMP	Reading	Emission	Margin	Limit
	Loss	Factor		Level	Level		
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
=====							

Vertical

Quasi-Peak

*	104.340	0.44	19.18	22.60	42.02	39.04	4.46	43.50
	199.520	0.58	14.00	22.60	41.11	33.09	10.41	43.50
	371.050	0.84	17.58	22.60	39.43	35.25	10.75	46.00
	620.460	1.21	21.26	22.60	32.26	32.12	13.88	46.00
	794.590	1.46	23.02	22.60	35.34	37.23	8.77	46.00
	925.080	1.66	23.54	22.60	35.56	38.16	7.84	46.00

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. Emission Level = Reading Level + Probe Factor + Cable Loss.

Product	Wireless Broadband Router		
Test Item	Radiated Emission		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/24	Test Site	No.1 OATS

IEEE 802.11g, Channel 11

Frequency	Cable	Probe	PreAMP	Reading	Emission	Margin	Limit
	Loss	Factor		Level	Level		
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
=====							
Horizontal							
Quasi-Peak							
131.530	0.48	10.42	22.60	37.36	25.66	17.84	43.50
264.350	0.68	13.57	22.60	38.56	30.21	15.79	46.00
495.210	1.02	20.85	22.60	37.58	36.85	9.15	46.00
662.030	1.27	23.76	22.60	33.19	35.62	10.38	46.00
* 795.020	1.47	24.60	22.60	34.99	38.46	7.54	46.00
926.360	1.66	25.43	22.60	33.88	38.37	7.63	46.00

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. Emission Level = Reading Level + Probe Factor + Cable Loss.

Product	Wireless Broadband Router		
Test Item	Radiated Emission		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/24	Test Site	No.1 OATS

IEEE 802.11g, Channel 11

Frequency	Cable	Probe	PreAMP	Reading	Emission	Margin	Limit
MHz	Loss	Factor		Level	Level		
	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m

=====

Vertical

Quasi-Peak

*	104.260	0.44	19.18	22.60	42.32	39.34	4.16	43.50
	199.370	0.58	14.00	22.60	41.28	33.26	10.24	43.50
	370.670	0.84	17.59	22.60	39.61	35.43	10.57	46.00
	620.510	1.21	21.26	22.60	32.37	32.23	13.77	46.00
	795.610	1.47	23.07	22.60	35.63	37.56	8.44	46.00
	926.070	1.66	23.56	22.60	35.57	38.19	7.81	46.00

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. Emission Level = Reading Level + Probe Factor + Cable Loss.

5. Band Edge

5.1. Test Equipment

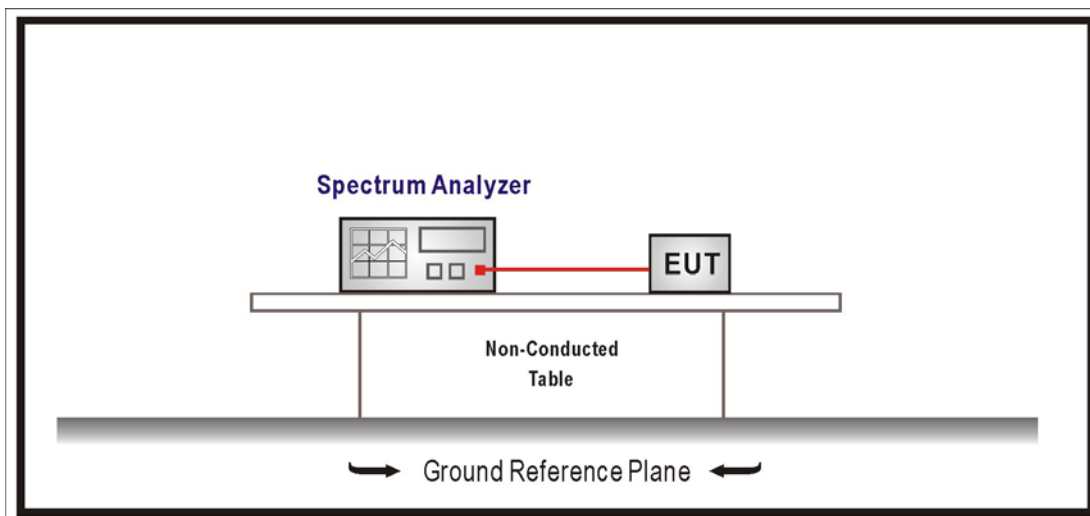
The following test equipment are used during the test:

RF Conducted Measurement:					
Item	Equipment		Manufacturer	Model No. / Serial No.	Last Cal.
1	Spectrum Analyzer		R & S	FSP / 100561	Mar., 2005
2	No.1 OATS				Sep., 2004
RF Radiated Measurement:					
Item	Equipment		Manufacturer	Model No. / Serial No.	Last Cal.
1	X	Spectrum Analyzer	R & S	FSP40 / 100005	Aug., 2004
2	X	Pre-Amplifier	HP	8449B / 3008A01123	Feb., 2005
3		Loop Antenna	R & S	HFH2-Z2 / 833799/004	Sep., 2004
4		BiconiLog Antenna	Schwarzbeck	VULB 9166 / 1061	Sep., 2004
5		Bilog Antenna	Chase	CBL6112B / 2455	Sep., 2004
6	X	Horn Antenna	Schwarzbeck	BBHA 9120D / BBHA9120D312	Sep., 2004
7	No.1 OATS				Sep., 2004

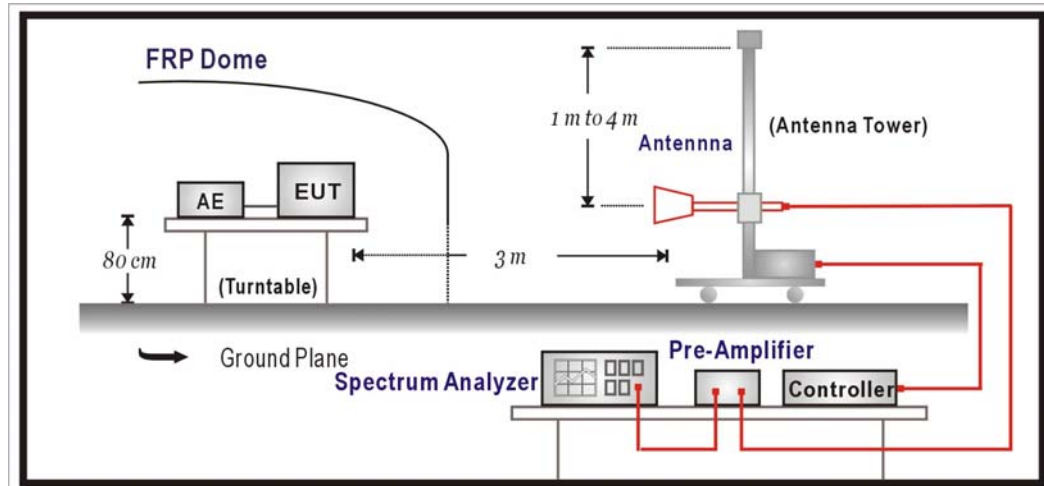
- Note: 1. All equipments that need to calibrate are with calibration period of 1 year.
2. Mark "X" test instruments are used to measure the final test results.

5.2. Test Setup

RF Conducted Measurement:



RF Radiated Measurement:



5.3. Limits

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)).

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 EUT was positioned such that the distance from antenna to the EUT was 3 meters.

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 C63.4:2003 on radiated measurement.

The bandwidth below 1GHz setting on the field strength meter is 120 kHz, above 1GHz are 1 MHz.

5.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2003

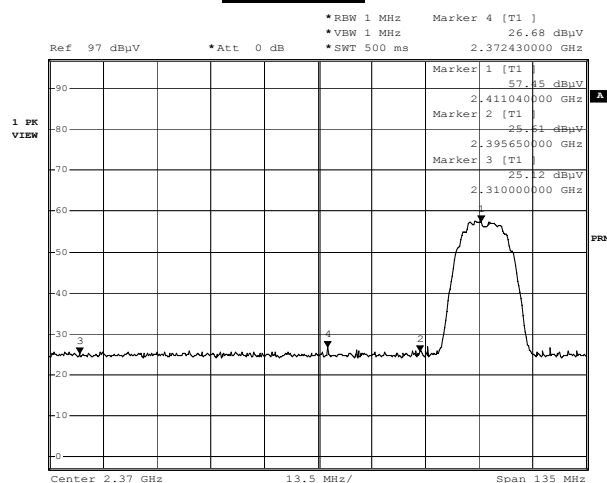
5.6. Test Result

Product	Wireless Broadband Router		
Test Item	Band Edge		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/23	Test Site	No.1 OATS

RF Radiated Measurement: (Peak Detector)

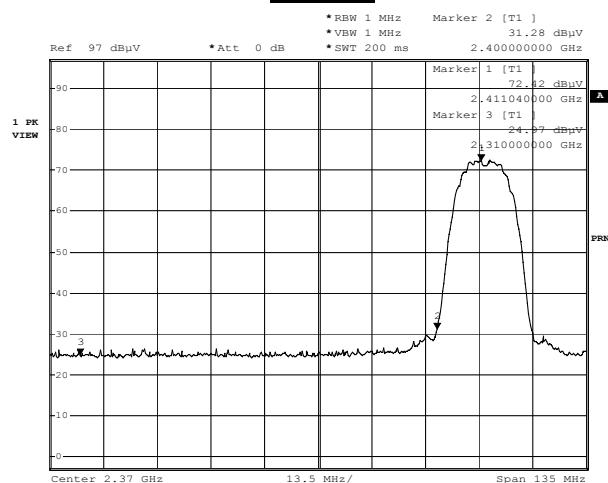
IEEE 802.11b								
Channel No.	Frequency (MHz)	Reading Level (dBuV)	Probe Factor (dB/m)	Cable Loss (dB)	PreAMP (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Result
1(Horizontal)	2372.430	26.68	27.15	2.84	00.00	56.67	74	Pass
1(Vertical)	2400.000	31.28	27.21	2.85	00.00	61.34	74	Pass

Horizontal



Date: 23.MAY.2005 11:08:25

Vertical



Date: 23.MAY.2005 10:57:52

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.

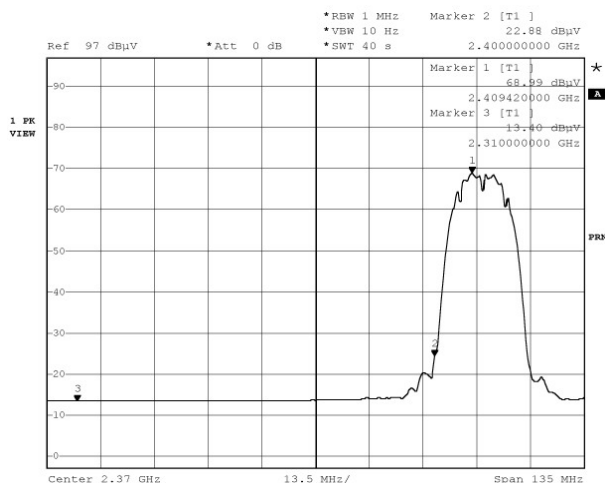
Product	Wireless Broadband Router		
Test Item	Band Edge		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/23	Test Site	No.1 OATS

RF Radiated Measurement: (Average Detector)

IEEE 802.11b

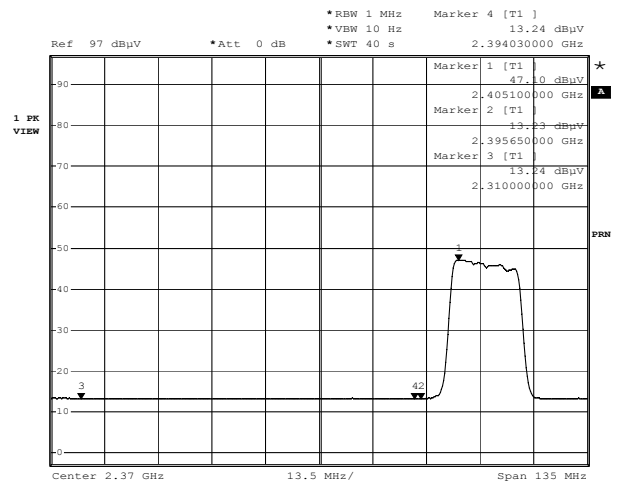
Channel No.	Frequency (MHz)	Reading Level (dBuV)	Probe Factor (dB/m)	Cable Loss (dB)	PreAMP (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Result
1(Horizontal)	2372.430	13.21	27.15	2.84	00.00	43.20	54	Pass
1(Vertical)	2400.000	22.88	27.21	2.85	00.00	52.94	54	Pass

Horizontal



Date: 23.MAY.2005 10:59:37

Vertical



Date: 23.MAY.2005 11:17:22

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.

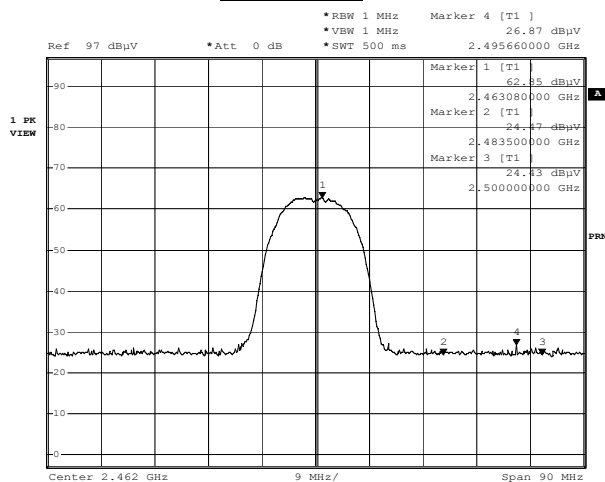
Product	Wireless Broadband Router		
Test Item	Band Edge		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/23	Test Site	No.1 OATS

RF Radiated Measurement: (Peak Detector)

IEEE 802.11b

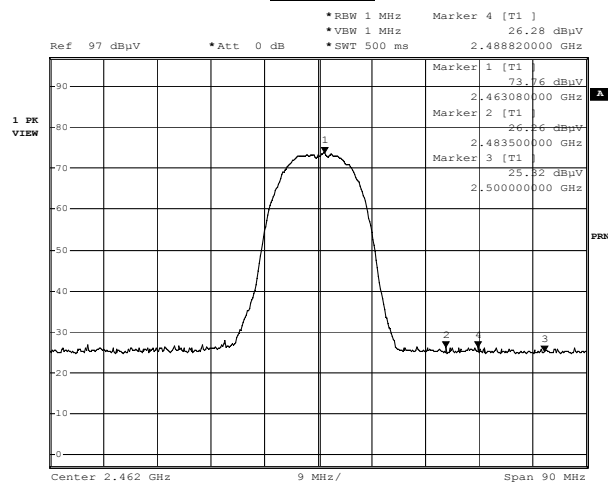
Channel No.	Frequency (MHz)	Reading Level (dBuV)	Probe Factor (dB/m)	Cable Loss (dB)	PreAMP (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Result
11(Horizontal)	2495.660	26.87	27.58	2.91	00.00	57.36	74	Pass
11(Vertical)	2488.820	26.28	27.58	2.91	00.00	56.77	74	Pass

Horizontal



Date: 23.MAY.2005 11:47:26

Vertical



Date: 23.MAY.2005 11:55:16

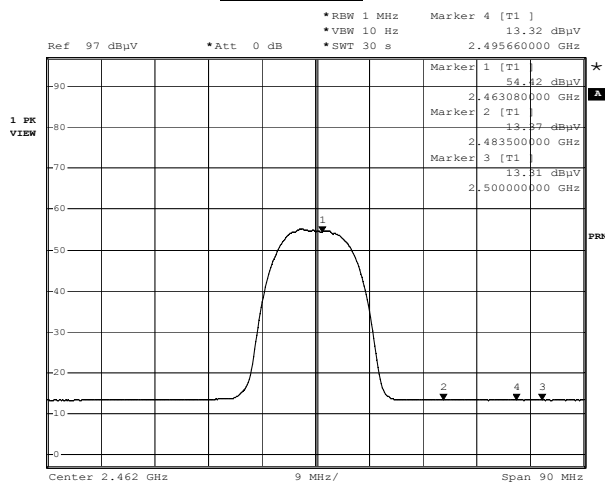
Note: The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product	Wireless Broadband Router		
Test Item	Band Edge		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/23	Test Site	No.1 OATS

RF Radiated Measurement: (Average Detector)

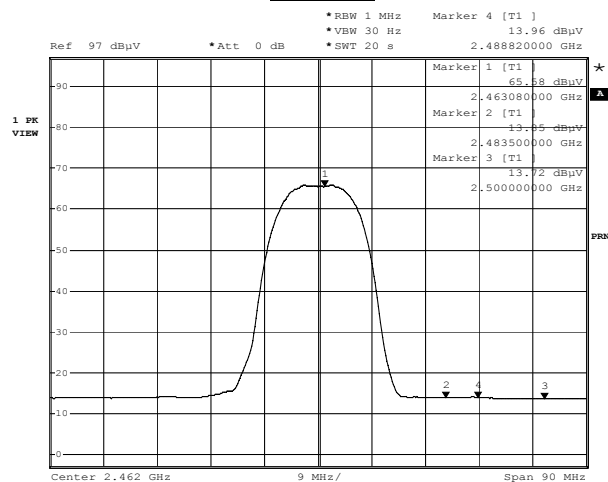
IEEE 802.11b								
Channel No.	Frequency (MHz)	Reading Level (dBuV)	Probe Factor (dB/m)	Cable Loss (dB)	PreAMP (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Result
11(Horizontal)	2495.660	13.32	27.58	2.91	00.00	43.81	54	Pass
11(Vertical)	248.820	13.96	27.58	2.91	00.00	44.45	54	Pass

Horizontal



Date: 23.MAY.2005 11:48:26

Vertical



Date: 23.MAY.2005 11:56:49

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.

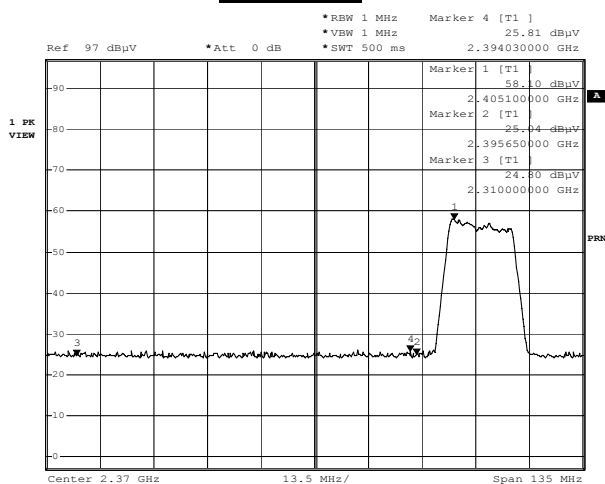
Product	Wireless Broadband Router		
Test Item	Band Edge		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/23	Test Site	No.1 OATS

RF Radiated Measurement: (Peak Detector)

IEEE 802.11g

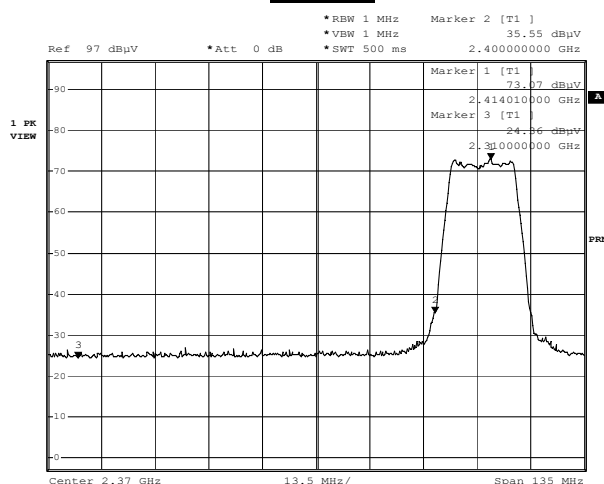
Channel No.	Frequency (MHz)	Reading Level (dBuV)	Probe Factor (dB/m)	Cable Loss (dB)	PreAMP (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Result
1(Horizontal)	2394.030	25.81	27.21	2.85	00.00	55.87	74	Pass
1(Vertical)	2400.000	35.55	27.21	2.85	00.00	65.61	74	Pass

Horizontal



Date: 23.MAY.2005 11:16:00

Vertical



Date: 23.MAY.2005 11:21:19

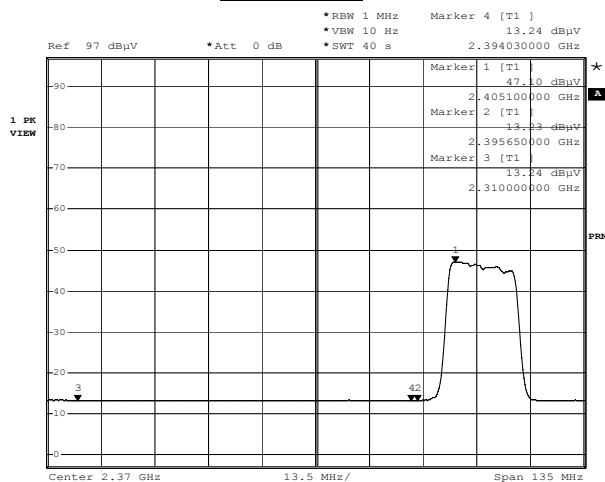
Note: The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product	Wireless Broadband Router		
Test Item	Band Edge		
Test Mode	Mode 1: Transmit		
Date of Test	22005/05/23	Test Site	No.1 OATS

RF Radiated Measurement: (Average Detector)

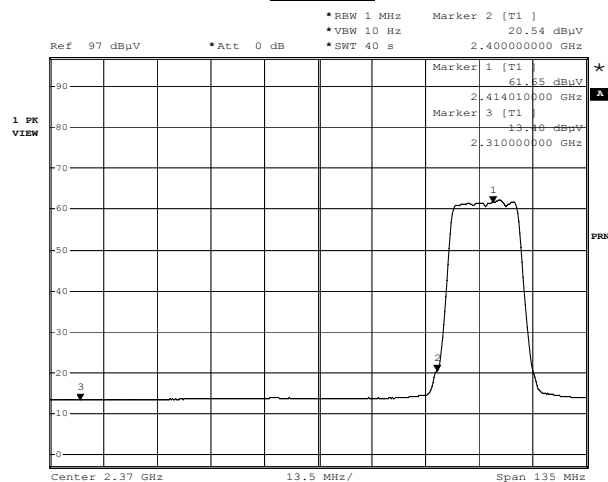
IEEE 802.11b								
Channel No.	Frequency (MHz)	Reading Level (dBuV)	Probe Factor (dB/m)	Cable Loss (dB)	PreAMP (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Result
1(Horizontal)	2394.030	13.24	27.21	2.85	00.00	43.30	54	Pass
1(Vertical)	2400.000	20.54	27.21	2.85	00.00	50.60	54	Pass

Horizontal



Date: 23.MAY.2005 11:17:22

Vertical



Date: 23.MAY.2005 11:24:54

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.

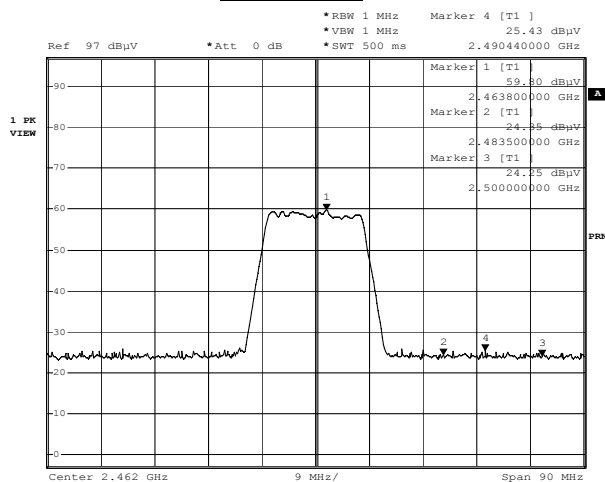
Product	Wireless Broadband Router		
Test Item	Band Edge		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/23	Test Site	No.1 OATS

RF Radiated Measurement: (Peak Detector)

IEEE 802.11g

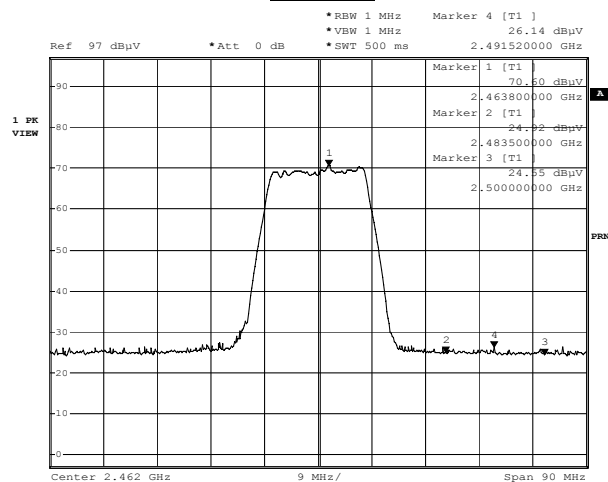
Channel No.	Frequency (MHz)	Reading Level (dBuV)	Probe Factor (dB/m)	Cable Loss (dB)	PreAMP (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Result
11(Horizontal)	2490.440	25.43	27.58	2.91	00.00	55.92	74	Pass
11(Vertical)	2491.520	26.14	27.58	2.91	00.00	56.63	74	Pass

Horizontal



Date: 23.MAY.2005 11:39:35

Vertical



Date: 23.MAY.2005 11:32:23

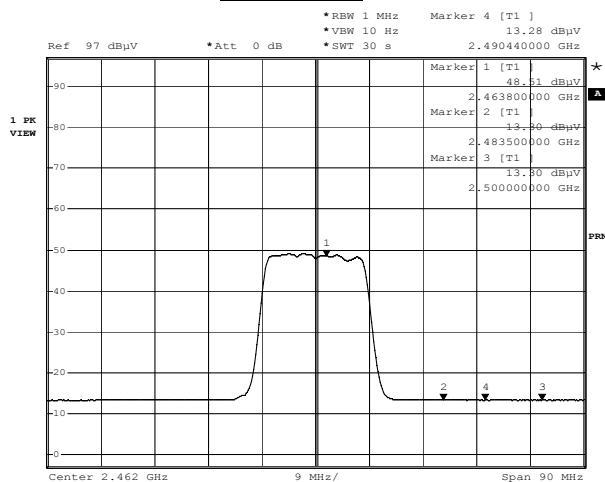
Note: The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product	Wireless Broadband Router		
Test Item	Band Edge		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/23	Test Site	No.1 OATS

RF Radiated Measurement: (Average Detector)

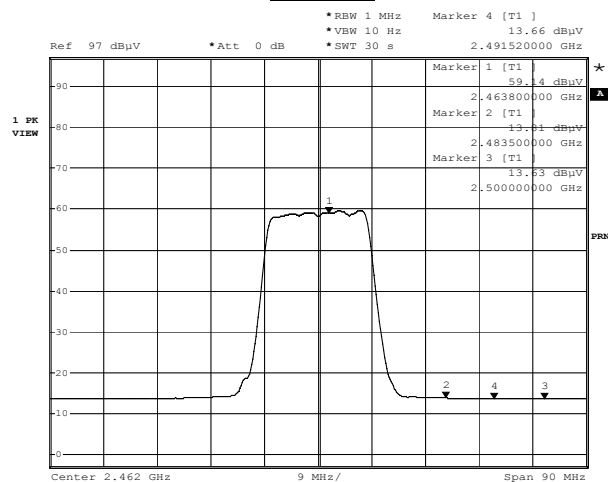
IEEE 802.11g								
Channel No.	Frequency (MHz)	Reading Level (dBuV)	Probe Factor (dB/m)	Cable Loss (dB)	PreAMP (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Result
11(Horizontal)	2490.440	13.28	27.58	2.91	00.00	43.77	54	Pass
11(Vertical)	2491.520	13.66	27.58	2.91	00.00	44.15	54	Pass

Horizontal



Date: 23.MAY.2005 11:40:56

Vertical



Date: 23.MAY.2005 11:34:01

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.

6. Occupied Bandwidth

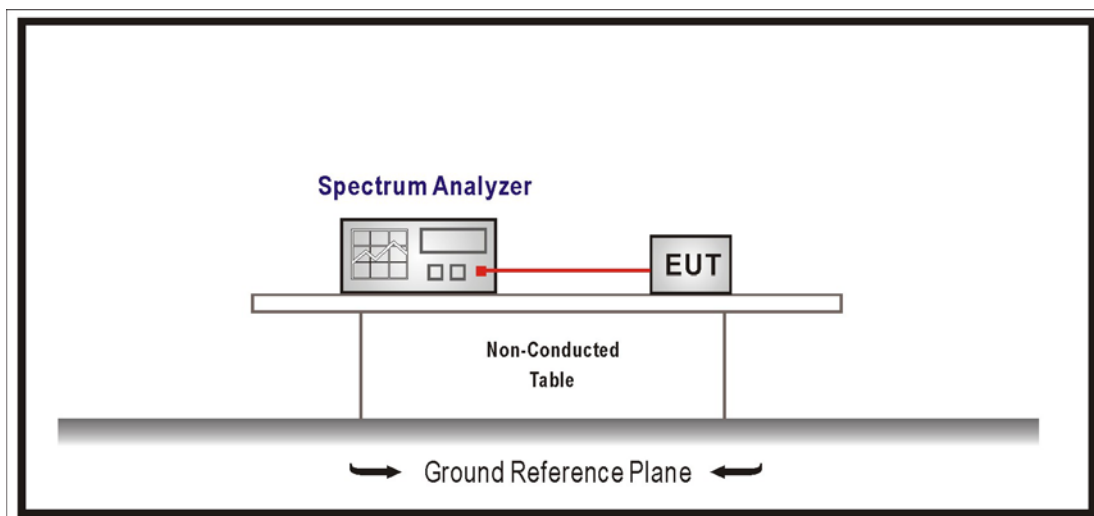
6.1. Test Equipment

The following test equipment are used during the test:

Item	Equipment	Manufacturer	Model No. / Serial No.	Last Cal.
1	Spectrum Analyzer	R & S	FSP / 100561	Mar., 2005
2	No.1 OATS			Sep., 2004

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

6.2. Test Setup



6.3. Limits

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

6.4. Test Specification

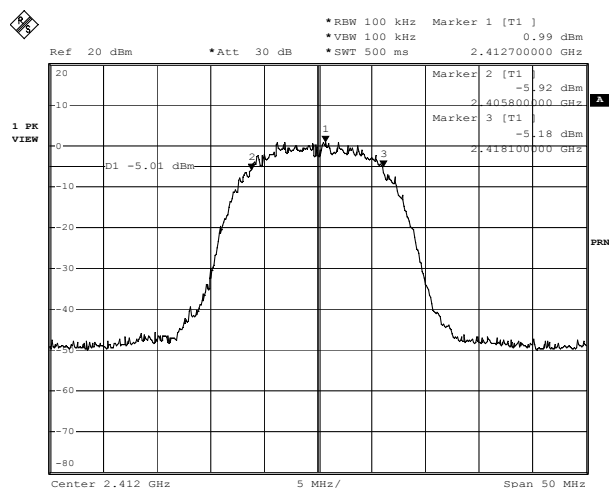
According to FCC Part 15 Subpart C Paragraph 15.247: 2003

6.5. Test Result

Product	Wireless Broadband Router		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/20	Test Site	No.1 OATS

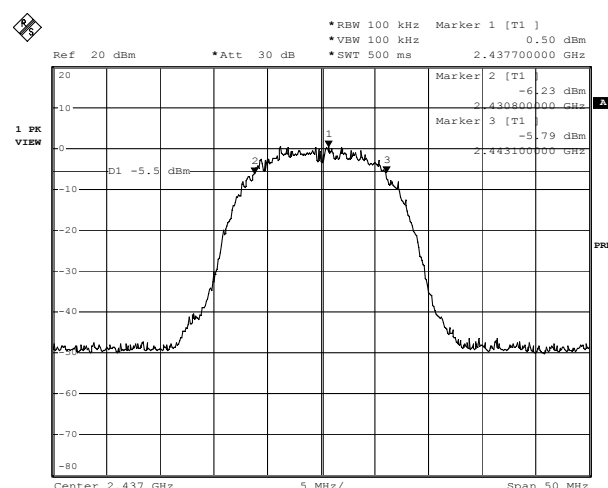
IEEE 802.11b				
Channel No.	Frequency (MHz)	Measure Level (kHz)	Limit (kHz)	Result
1	2412	12300	>500	Pass
6	2437	12300	>500	Pass
11	2462	12300	>500	Pass

Channel 1



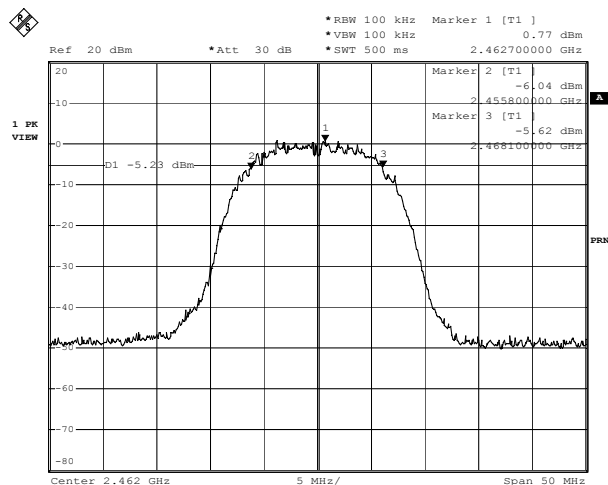
Date: 19.MAY.2005 18:18:23

Channel 6



Date: 19.MAY.2005 18:24:12

Channel 11

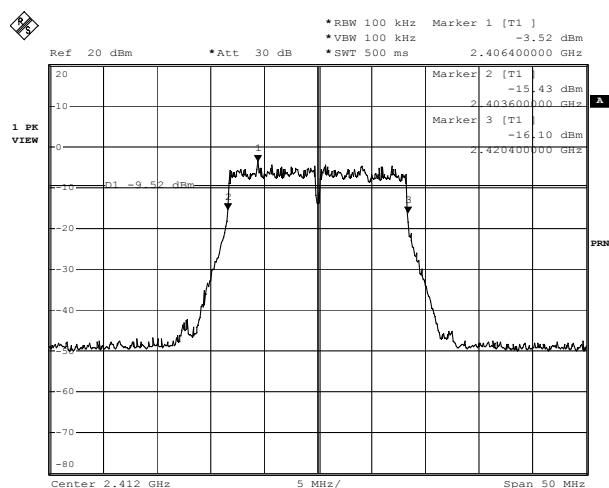


Date: 19.MAY.2005 18:22:27

Product	Wireless Broadband Router		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/20	Test Site	No.1 OATS

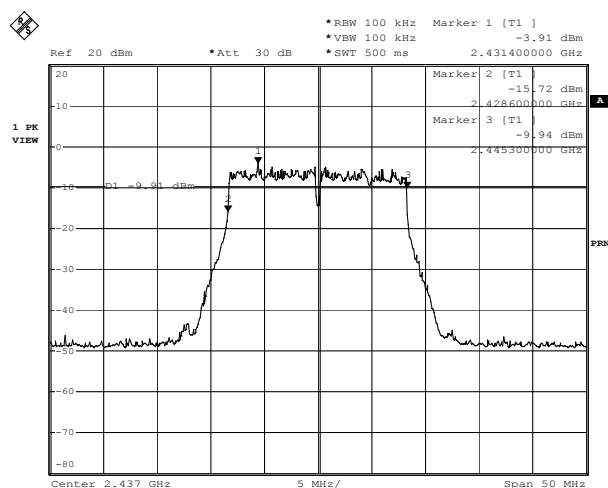
IEEE 802.11g				
Channel No.	Frequency (MHz)	Measure Level (kHz)	Limit (kHz)	Result
1	2412	16800	>500	Pass
6	2437	16700	>500	Pass
11	2462	16700	>500	Pass

Channel 1



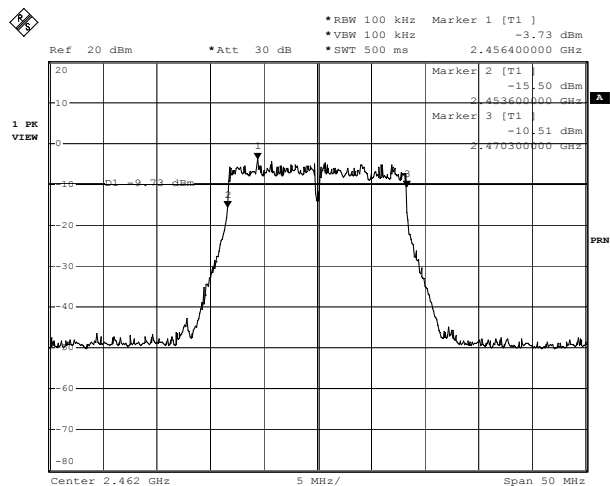
Date: 19.MAY.2005 18:31:19

Channel 6



Date: 19.MAY.2005 18:29:20

Channel 11



Date: 19.MAY.2005 18:32:48

7. Power Density

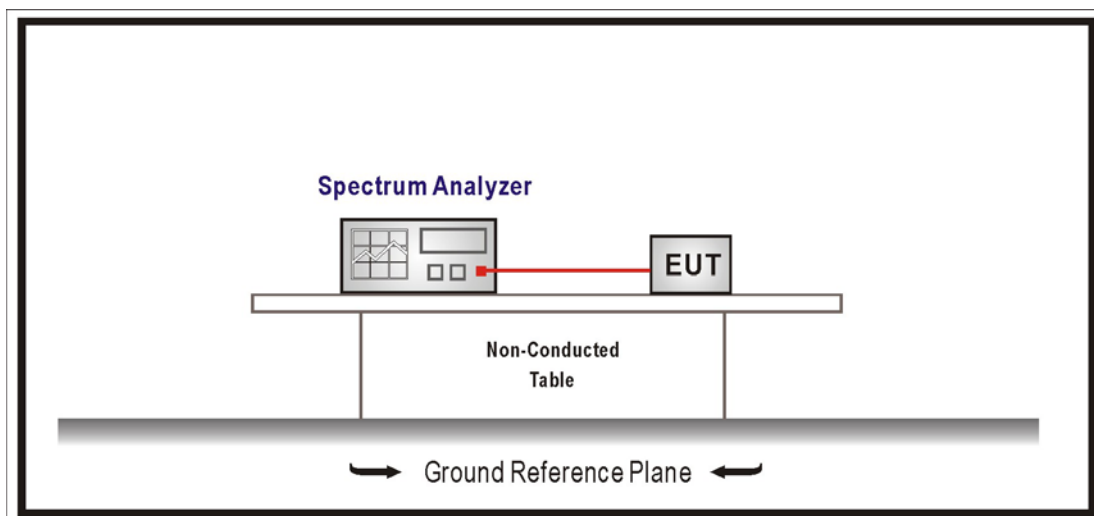
7.1. Test Equipment

The following test equipment are used during the test:

Item	Equipment	Manufacturer	Model No. / Serial No.	Last Cal.
1	Spectrum Analyzer	R & S	FSP / 100561	Mar., 2005
2	No.1 OATS			Sep., 2004

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

7.2. Test Setup



7.3. Limits

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.

7.4. Test Specification

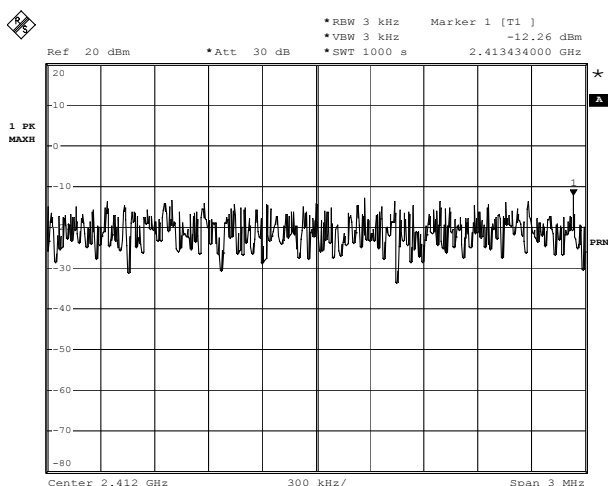
According to FCC Part 15 Subpart C Paragraph 15.247: 2003

7.5. Test Result

Product	Wireless Broadband Router		
Test Item	Power Density		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/19	Test Site	No.1 OATS

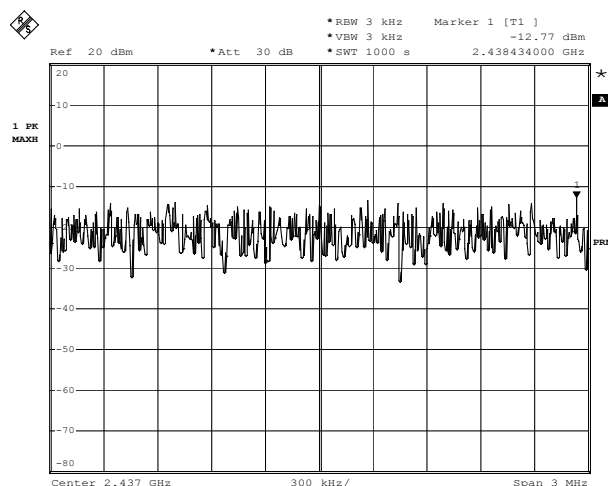
IEEE 802.11b				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	-12.26	< 8dBm	Pass
6	2437	-12.77	< 8dBm	Pass
11	2462	-12.40	< 8dBm	Pass

Channel 1



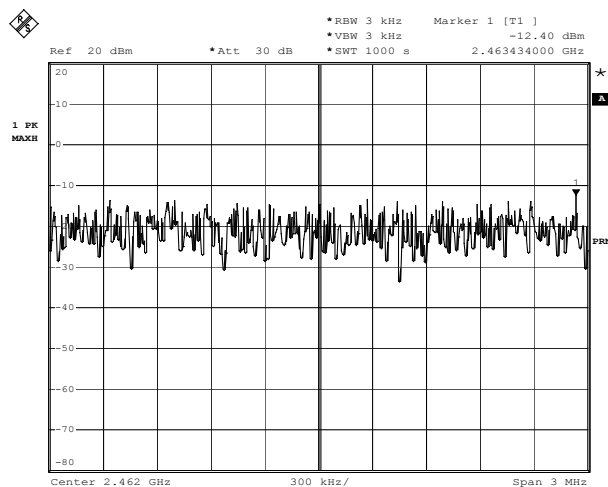
Date: 19.MAY.2005 19:06:40

Channel 6



Date: 19.MAY.2005 19:05:34

Channel 11

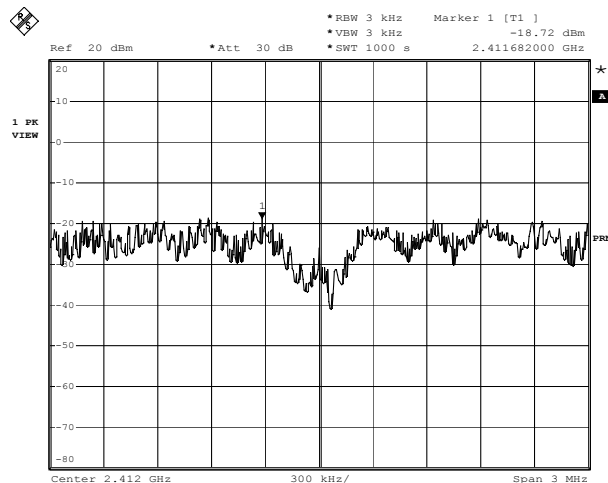


Date: 19.MAY.2005 19:03:45

Product	Wireless Broadband Router		
Test Item	Power Density		
Test Mode	Mode 1: Transmit		
Date of Test	2005/05/19	Test Site	No.1 OATS

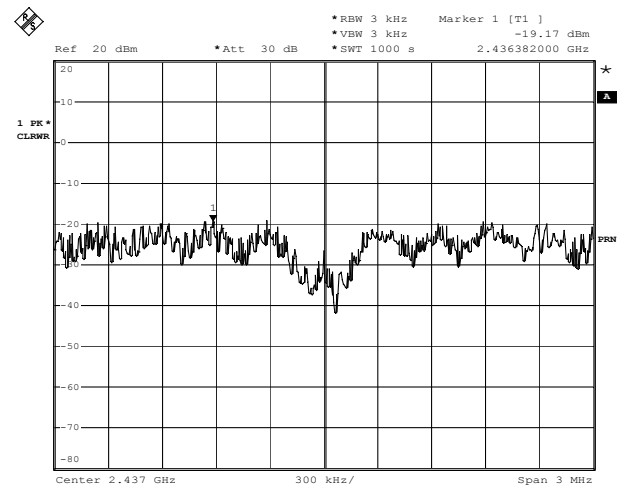
IEEE 802.11g				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	-18.72	< 8dBm	Pass
6	2437	-19.17	< 8dBm	Pass
11	2462	-18.96	< 8dBm	Pass

Channel 1



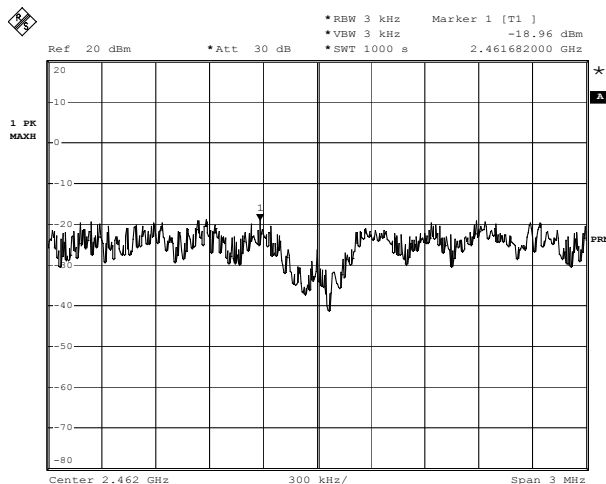
Date: 19.MAY.2005 19:01:04

Channel 6



Date: 19.MAY.2005 18:59:33

Channel 11



Date: 19.MAY.2005 19:02:24