Test Report

Product Name ： 54M Wireless Cardbus Adapter

Model No. ： TL-WN310G

FCC ID ： TE7WN310G

Applicant ： TP-LINK Technologies Co., Ltd

Address ： Building 7, Section 2, Honghualing Industrial Park, Xili, Nanshan District, Shenzhen, P.R.C.

Date of Receipt ： 2007/04/11

Issued Date ： 2007/04/25

Report No. ： 074S033-RF-US-P05V01

Test Report Certification

Issued Date : 2007/04/25
Report No. : 074S033-RF-US-P05V01

QuieTek

Product Name	:	54M Wireless Cardbus Adapter
Applicant	:	TP-LINK Technologies Co., Ltd
Address	:	Building 7, Section 2, Honghualing Industrial Park, Xili, Nanshan District, Shenzhen, P.R.C.
Manufacturer	:	TP-LINK Technologies Co., Ltd
Model No.	:	TE7WN310G
FCC ID	:	TL7WN310G
EUT Voltage	:	DC 3.3V
Trade Name	:	TP-LINK
Applicable Standard	:	FCC CFR Title 47 Part 15 Subpart C: 2006 ANSI C63.4: 2003
Test Result	:	Complied
Performed Location	:	SuZhou EMC laboratory No.99 Hongye Rd., Suzhou Industrial Park Loufeng Hi-Tech Development Zone., SuZhou, China TEL: +86-512-6251-5088 / FAX:+86-512-6251-5098 FCC Registration number: 800392

Documented By : 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:

HsinChu Testing Laboratory :

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

NVLAP Lab Code : 200347-0

1313

LinKou Testing Laboratory :

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

NVLAP Lab Code: 200533-0

0914

Suzhou Testing Laboratory :

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

NVLAP Lab Code : 200743-0

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1. General Information

1.1. EUT Description

Product Name	54M Wireless Cardbus Adapter
Trade Name	TP-LINK
Model No.	TL-WN310G
FCC ID	TE7WN310G
Working Voltage	DC 3.3V
Frequency Range	802.11b/g: 2412-2462MHz
Channel Number	11
Type of Modulation	802.11b: DSSS 802.11g: OFDM
Channel Control	Auto
Antenna type	Microstrip
Antenna Gain	0dBi

Antenna List

No.	Manufacturer	Model No.	Part No.	Peak Gain
1	Ling Cheng Tech. Int'l Co., Ltd.	N/A	N/A	0dBi

Frequency of Each Channel:

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

1.2. Mode of Operation

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

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

Note:

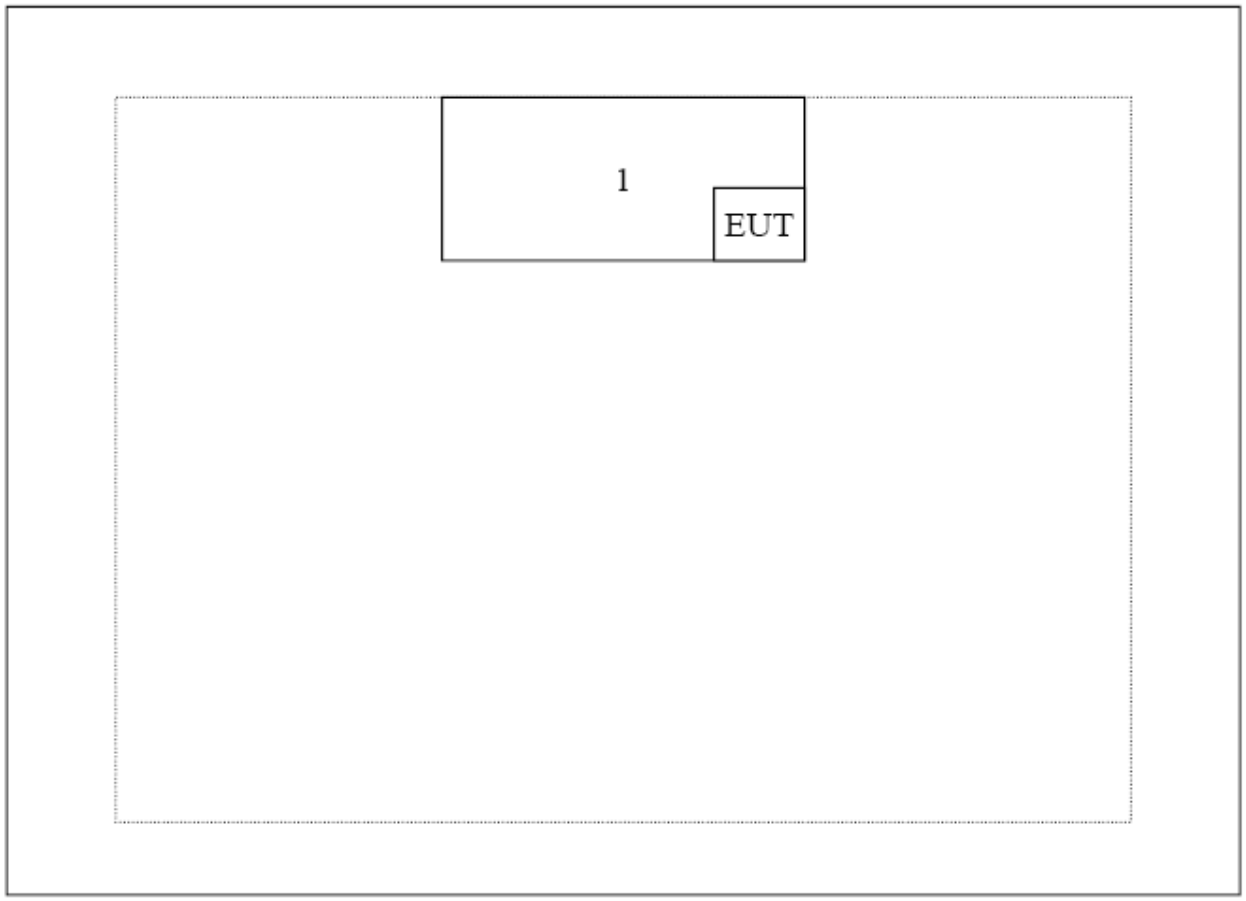
1. Regards to the frequency band operation: the lowest、middle and highest frequency of channel were selected to perform the test, then shown on this report.
2. This device is a composite device in accordance with Part 15 Subpart B regulations. The function for the receiver was measured and made a test report that the report number is 074S033-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	Notebook	ASUS	T11S	N/A	Non-Shielded, 1.8m, with one ferrite core

1.4. Configuration of Tested System

Connection Diagram


Signal Cable Type		Signal cable Description
N/A	N/A	N/A

1.5. EUT Exercise Software

1	Plug the EUT in ancillary notebook and setup them as shown above.
2	Turn on the power switch for Notebook.
3	Run the control program for wireless cardbus adapter.
4	Set the test channel and the test mode press ok to start the continue transmit condition.

2. Technical Test

2.1. Summary of Test Result

☒ No deviations from the test standards

☐ Deviations from the test standards as below description:

Emission			
Performed Test Item	Normative References	Test Performed	Deviation
Conducted Emission	FCC CFR Title 47 Part 15 Subpart C: 2006 Section 15.207	Yes	No
Radiated Emission	FCC CFR Title 47 Part 15 Subpart C: 2006 Section 15.209	Yes	No
Peak Output Power	FCC CFR Title 47 Part 15 Subpart C: 2006 Section 15.247(b)(3)	Yes	No
Occupied Bandwidth	FCC CFR Title 47 Part 15 Subpart C: 2006 Section 15.247(a)(2)	Yes	No
Band Edge	FCC CFR Title 47 Part 15 Subpart C: 2006 Section 15.247(d)	Yes	No
Peak Power Spectral Density	FCC CFR Title 47 Part 15 Subpart C: 2006 Section 15.247(e)	Yes	No

2.2. Test Environment

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

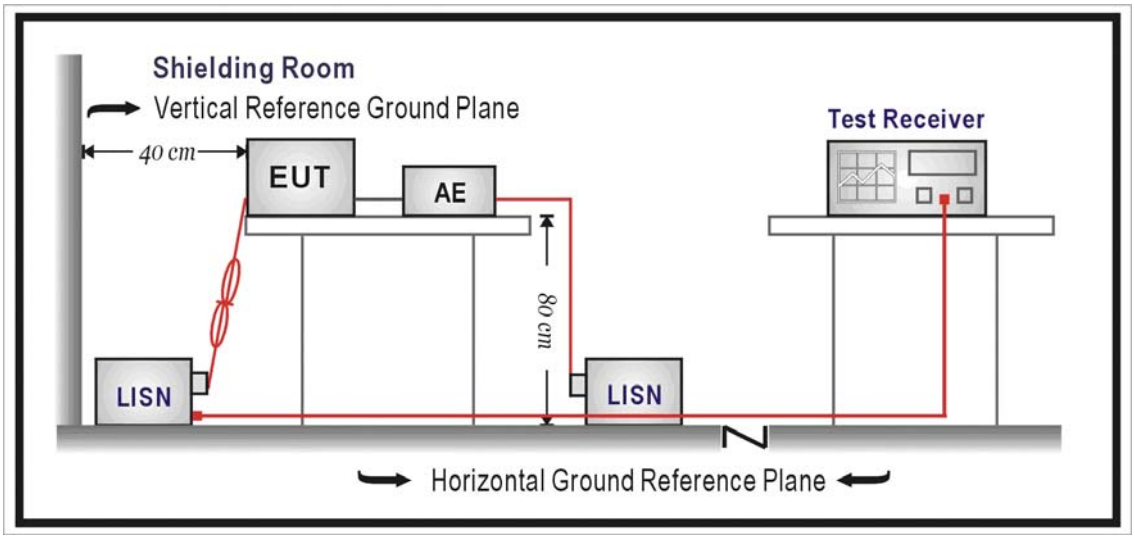
3. Conducted Emission

3.1. Test Equipment

Conducted Emission / SR-1

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
EMI Test Receiver	R&S	ESCI	100175	2006/11/20
Two-Line V-Network	R&S	ENV216	100013	2006/11/20
Two-Line V-Network	R&S	ENV216	100014	2006/11/20
V-Network	R&S	ESH3-Z6	100248	2006/11/20
V-Network	R&S	ESH3-Z6	100249	2006/11/20
ISN	Schaffner	ISN T400	21648	2006/11/20
Current Probe	R&S	EZ-17	100252	2007/04/18
50ohm Coaxial Switch	ANRITSU	MP59B	6200447305	2006/11/25
50ohm Impedance	SHX	50ohmI	QT-IM001	2007/03/20
Matching network	SHX	TZ25	06062901	N/A
Matching network	SHX	TZ25	06062902	N/A
Matching network	SHX	TZ25	06062903	N/A
Combining network	SHX	N-50KKK	N/A	N/A
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH004	2007/03/30

3.2. Test Setup



3.3. Limit

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

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

3.4. Test Procedure

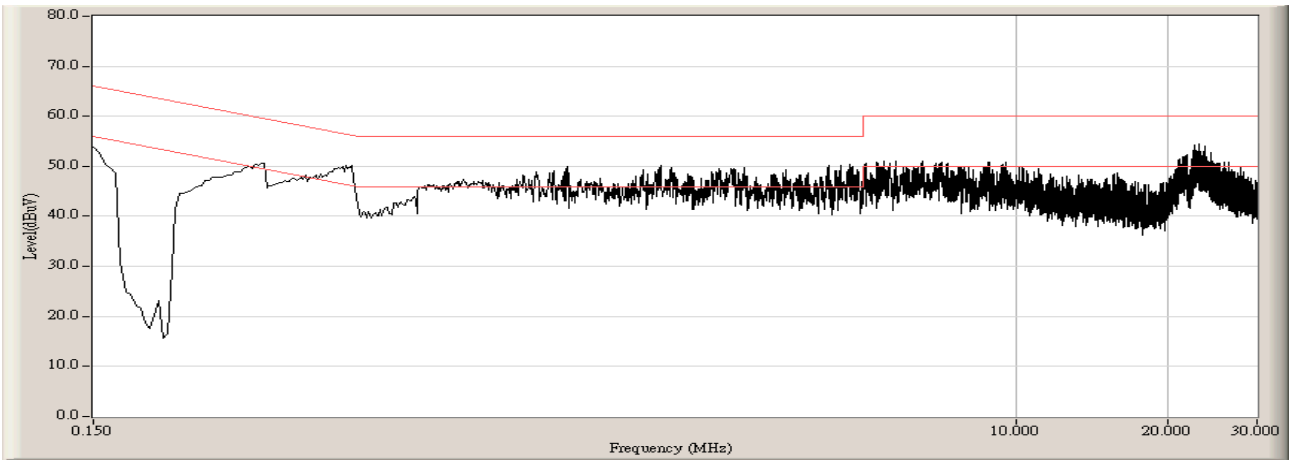
The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling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

3.5. Uncertainty

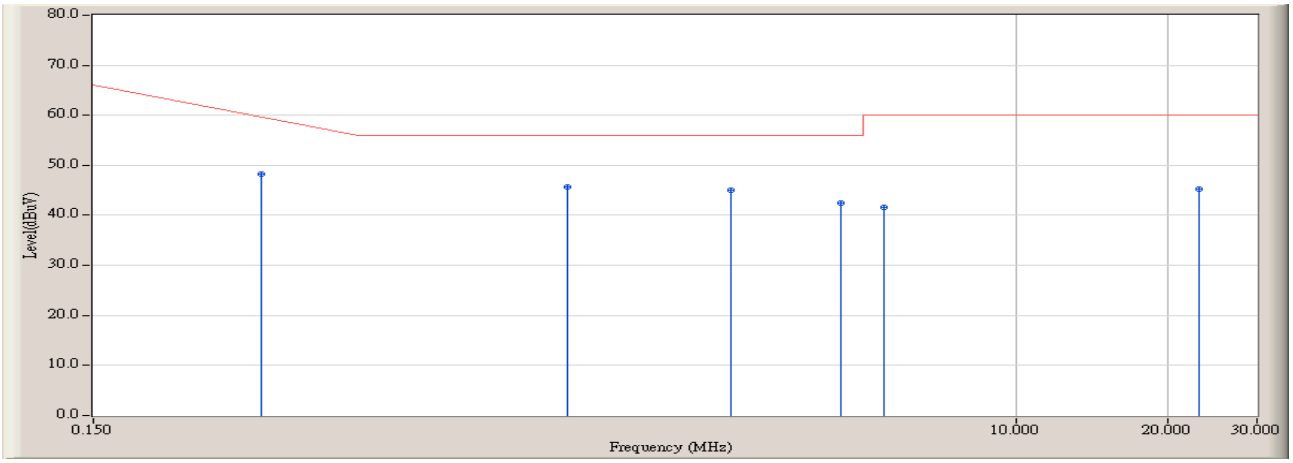
The measurement uncertainty is defined as ± 2.02 dB

3.6. Test Result

Engineer : Marlin	
Site : SR-1 (Conducted Emission)	**Time : 2007/04/23 - 15:20**
Limit : FCC_PART15_B_00M_QP	**Margin : 10**
EUT : 54M Wireless Cardbus Adapter (M/N: TL-WN310G)	**Probe : ENV216 - Line1**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b (2437MHz)**



Engineer : Marlin	
Site : SR-1 (Conducted Emission)	**Time : 2007/04/23 - 15:25**
Limit : FCC_PART15_B_00M_QP	**Margin : 0**
EUT : 54M Wireless Cardbus Adapter (M/N: TL-WN310G)	**Probe : ENV216 - Line1**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b (2437MHz)**

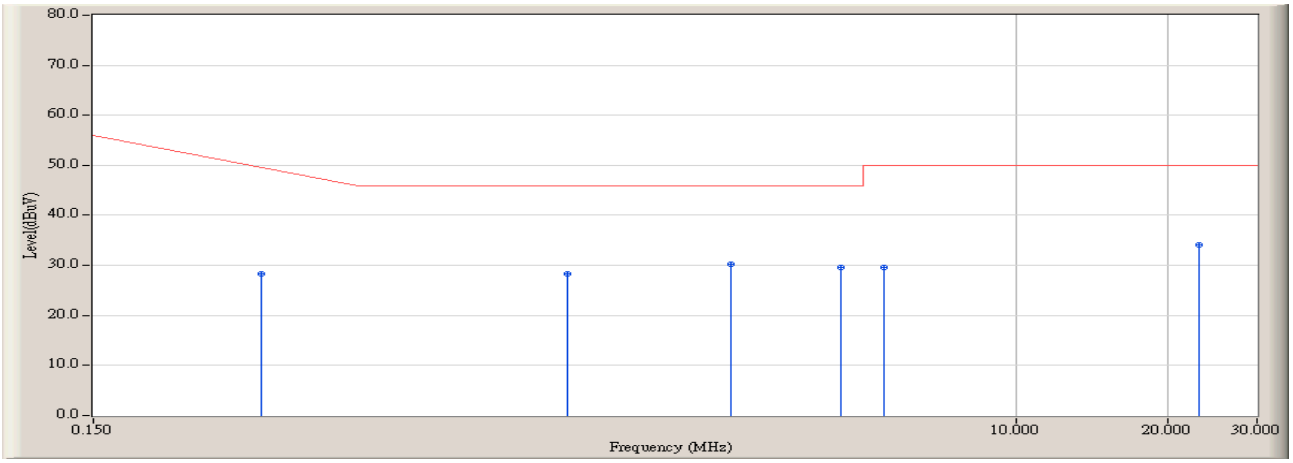


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.322	9.427	38.800	48.227	-12.859	61.086	QUASIPEAK
2	*	1.302	9.684	35.900	45.584	-10.416	56.000	QUASIPEAK
3		2.742	9.830	35.200	45.030	-10.970	56.000	QUASIPEAK
4		4.514	9.800	32.600	42.400	-13.600	56.000	QUASIPEAK
5		5.498	9.800	31.900	41.700	-18.300	60.000	QUASIPEAK
6		22.986	10.300	34.900	45.200	-14.800	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 : Marlin	
Site : SR-1 (Conducted Emission)	**Time : 2007/04/23 - 15:25**
Limit : FCC_PART15_B_00M_AV	**Margin : 0**
EUT : 54M Wireless Cardbus Adapter (M/N: TL-WN310G)	**Probe : ENV216 - Line1**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b (2437MHz)**

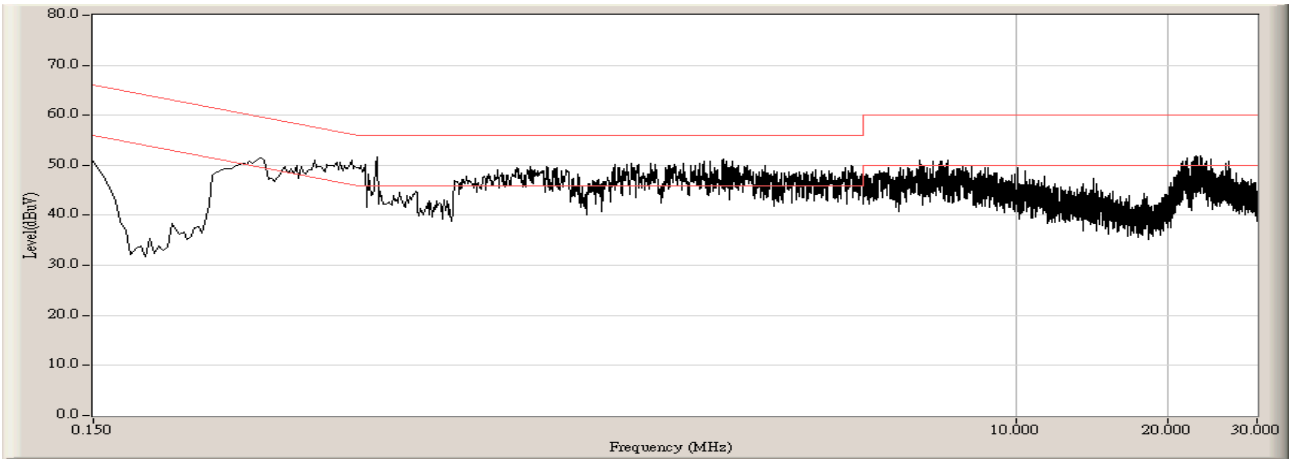


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.322	9.427	18.900	28.327	-22.759	51.086	AVERAGE
2		1.302	9.684	18.700	28.384	-17.616	46.000	AVERAGE
3	*	2.742	9.830	20.500	30.330	-15.670	46.000	AVERAGE
4		4.514	9.800	19.900	29.700	-16.300	46.000	AVERAGE
5		5.498	9.800	19.900	29.700	-20.300	50.000	AVERAGE
6		22.986	10.300	23.900	34.200	-15.800	50.000	AVERAGE

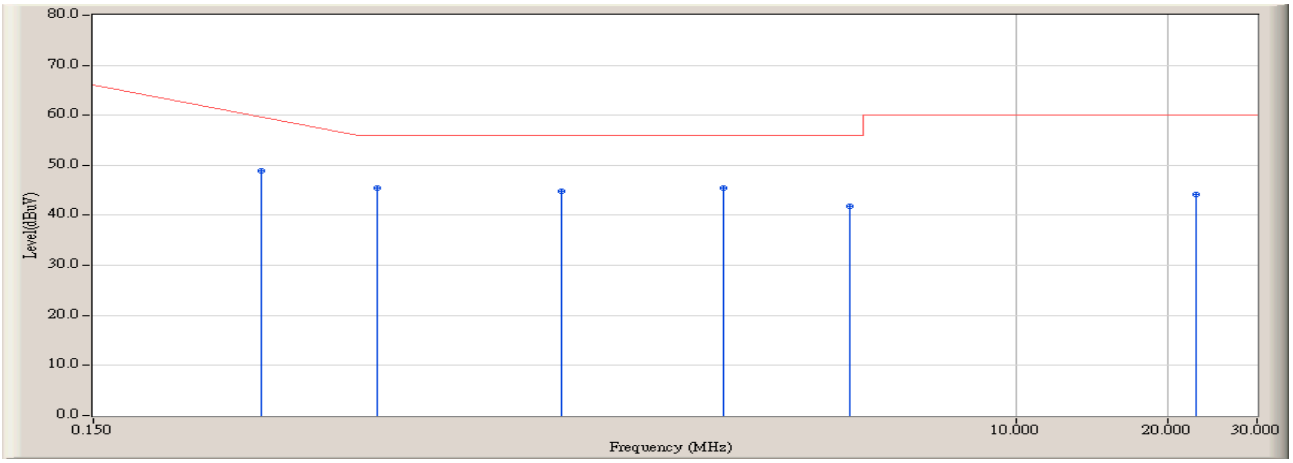
Note:

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 : Marlin	
Site : SR-1 (Conducted Emission)	**Time : 2007/04/23 - 15:37**
Limit : FCC_PART15_B_00M_QP	**Margin : 10**
EUT : 54M Wireless Cardbus Adapter (M/N: TL-WN310G)	**Probe : ENV216 - Line2**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b (2437MHz)**



Engineer : Marlin	
Site : SR-1 (Conducted Emission)	**Time : 2007/04/23 - 15:40**
Limit : FCC_PART15_B_00M_QP	**Margin : 0**
EUT : 54M Wireless Cardbus Adapter (M/N: TL-WN310G)	**Probe : ENV216 - Line2**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b (2437MHz)**

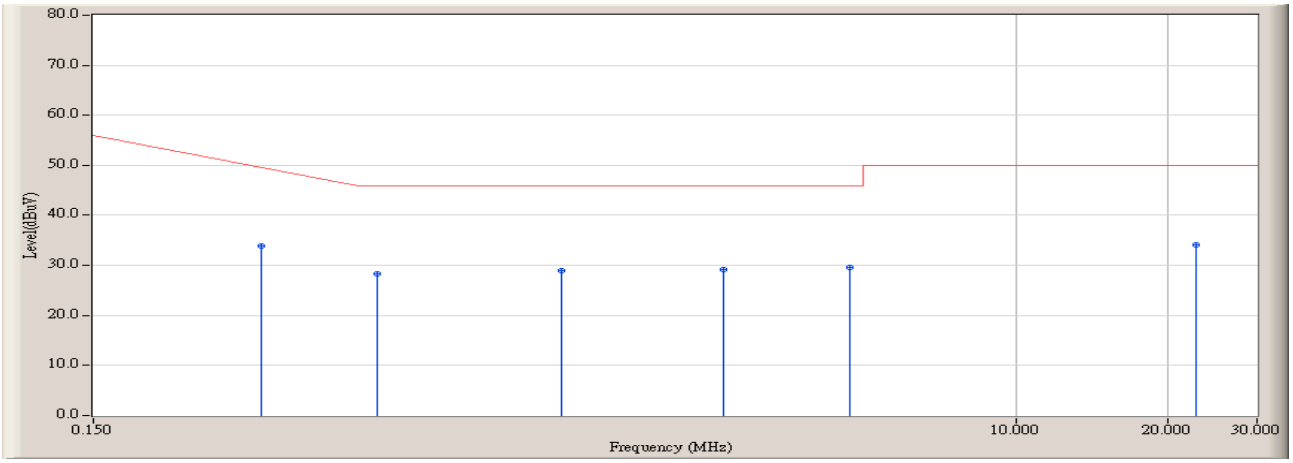


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.322	9.543	39.300	48.843	-12.243	61.086	QUASIPEAK
2		0.546	9.701	35.800	45.501	-10.499	56.000	QUASIPEAK
3		1.262	9.758	35.000	44.758	-11.242	56.000	QUASIPEAK
4	*	2.638	9.770	35.800	45.570	-10.430	56.000	QUASIPEAK
5		4.702	9.705	32.200	41.905	-14.095	56.000	QUASIPEAK
6		22.806	10.300	33.800	44.100	-15.900	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 : Marlin	
Site : SR-1 (Conducted Emission)	**Time : 2007/04/23 - 15:40**
Limit : FCC_PART15_B_00M_AV	**Margin : 0**
EUT : 54M Wireless Cardbus Adapter (M/N: TL-WN310G)	**Probe : ENV216 - Line2**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b (2437MHz)**

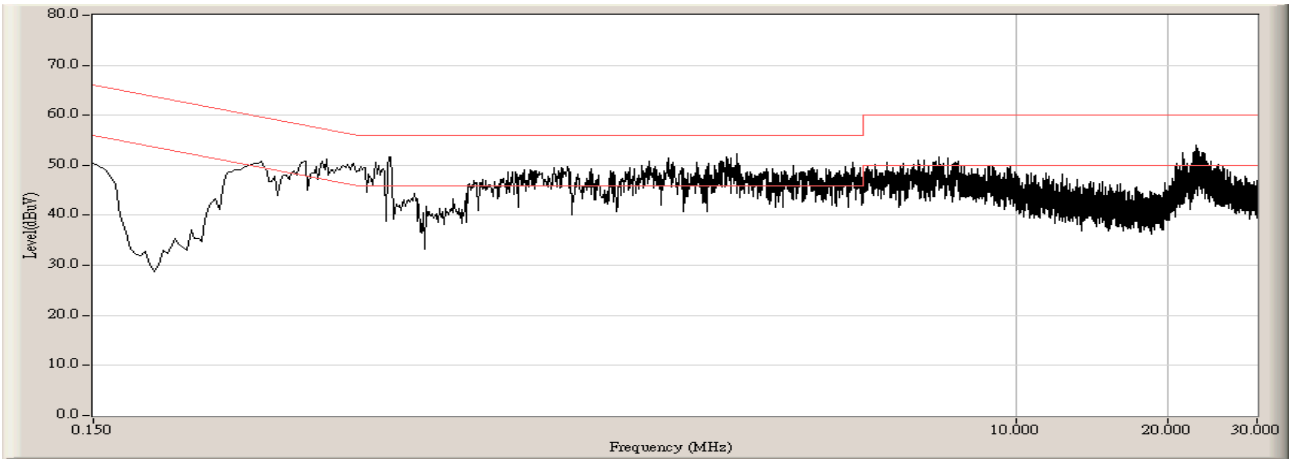


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.322	9.543	24.300	33.843	-17.243	51.086	AVERAGE
2		0.546	9.701	18.600	28.301	-17.699	46.000	AVERAGE
3		1.262	9.758	19.300	29.058	-16.942	46.000	AVERAGE
4		2.638	9.770	19.400	29.170	-16.830	46.000	AVERAGE
5		4.702	9.705	19.800	29.505	-16.495	46.000	AVERAGE
6	*	22.806	10.300	23.800	34.100	-15.900	50.000	AVERAGE

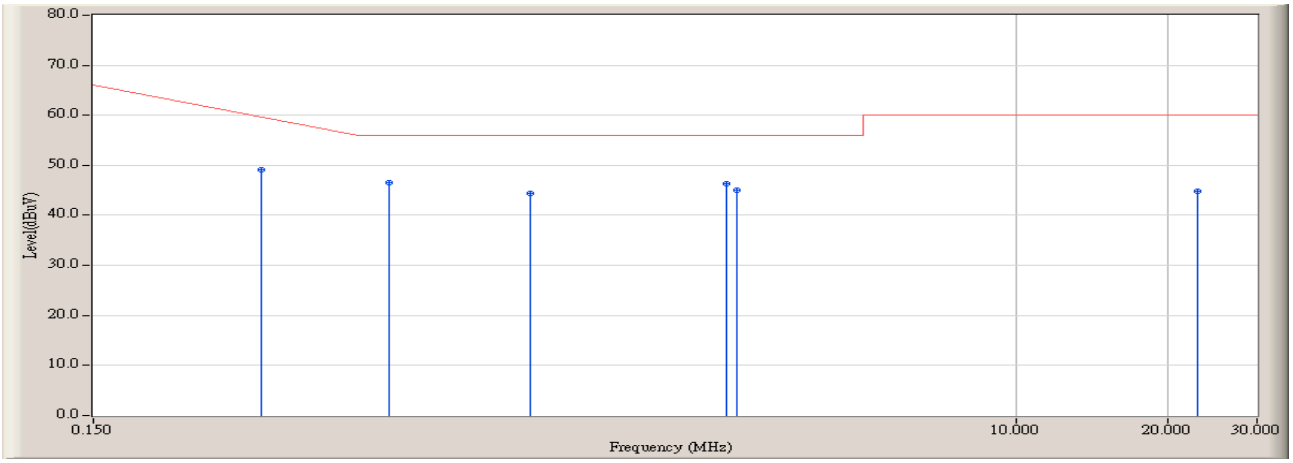
Note:

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 : Marlin	
Site : SR-1 (Conducted Emission)	**Time : 2007/04/23 - 15:44**
Limit : FCC_PART15_B_00M_QP	**Margin : 10**
EUT : 54M Wireless Cardbus Adapter (M/N: TL-WN310G)	**Probe : ENV216 - Line1**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g (2437MHz)**



Engineer : Marlin	
Site : SR-1 (Conducted Emission)	**Time : 2007/04/23 - 15:47**
Limit : FCC_PART15_B_00M_QP	**Margin : 0**
EUT : 54M Wireless Cardbus Adapter (M/N: TL-WN310G)	**Probe : ENV216 - Line1**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g (2437MHz)**

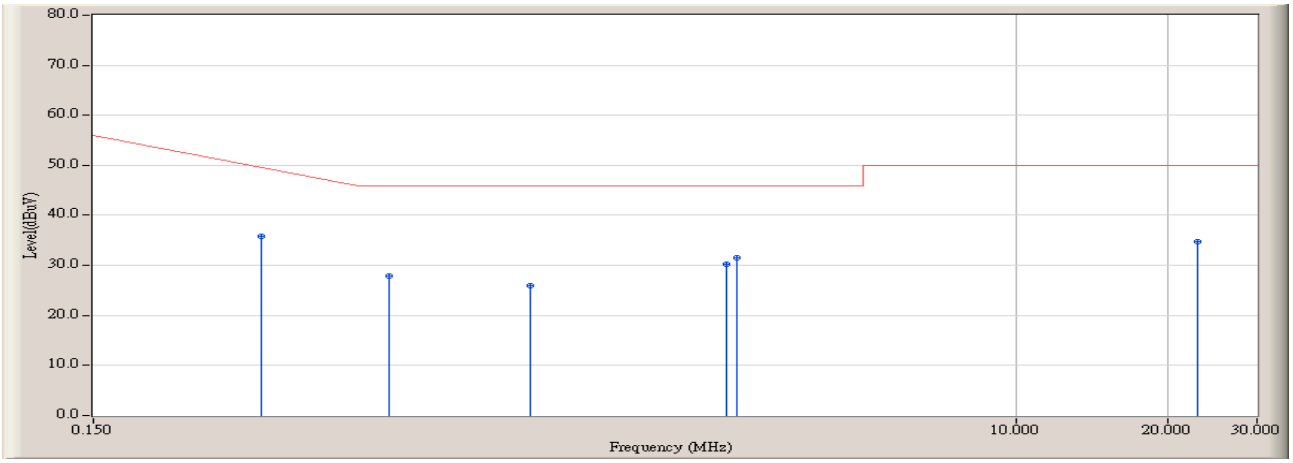


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.322	9.427	39.600	49.027	-12.059	61.086	QUASIPEAK
2	*	0.578	9.650	36.900	46.550	-9.450	56.000	QUASIPEAK
3		1.094	9.646	34.800	44.446	-11.554	56.000	QUASIPEAK
4		2.686	9.827	36.500	46.327	-9.673	56.000	QUASIPEAK
5		2.806	9.830	35.200	45.030	-10.970	56.000	QUASIPEAK
6		22.810	10.300	34.600	44.900	-15.100	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 : Marlin	
Site : SR-1 (Conducted Emission)	**Time : 2007/04/23 - 15:47**
Limit : FCC_PART15_B_00M_AV	**Margin : 0**
EUT : 54M Wireless Cardbus Adapter (M/N: TL-WN310G)	**Probe : ENV216 - Line1**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g (2437MHz)**

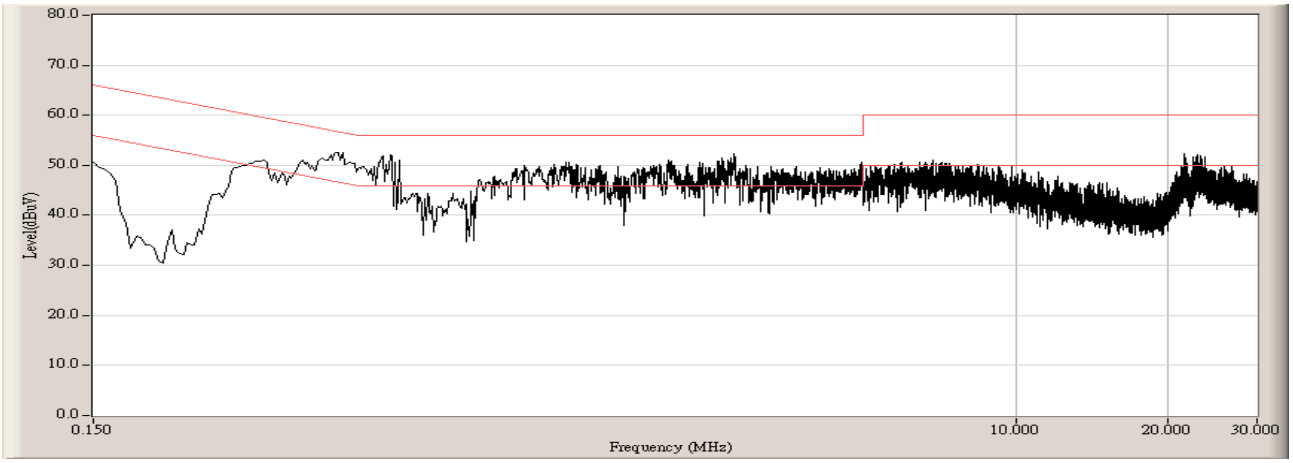


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.322	9.427	26.300	35.727	-15.359	51.086	AVERAGE
2		0.578	9.650	18.300	27.950	-18.050	46.000	AVERAGE
3		1.094	9.646	16.400	26.046	-19.954	46.000	AVERAGE
4		2.686	9.827	20.400	30.227	-15.773	46.000	AVERAGE
5	*	2.806	9.830	21.800	31.630	-14.370	46.000	AVERAGE
6		22.810	10.300	24.500	34.800	-15.200	50.000	AVERAGE

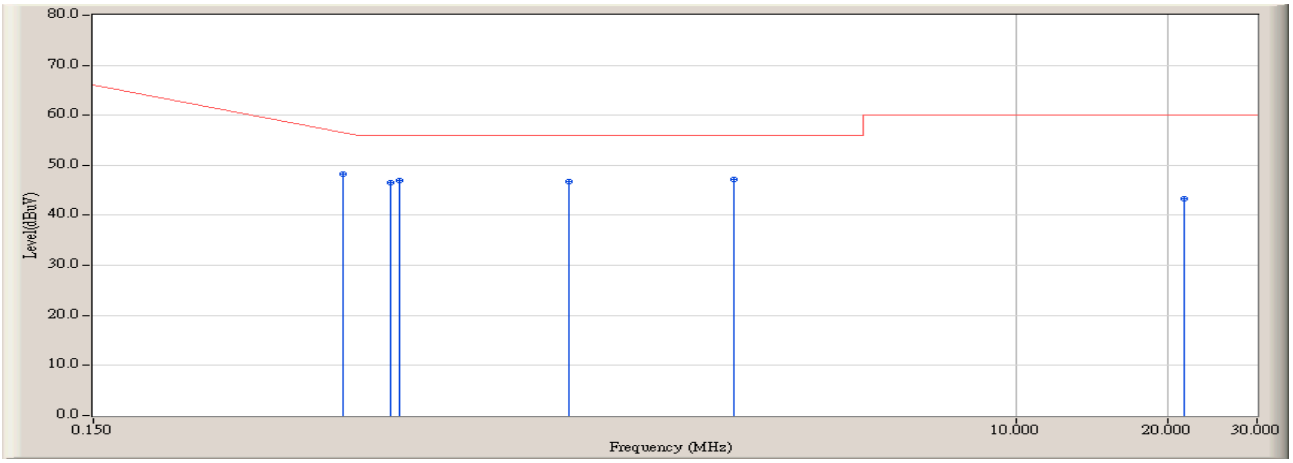
Note:

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 : Marlin	
Site : SR-1 (Conducted Emission)	**Time : 2007/04/23 - 15:50**
Limit : FCC_PART15_B_00M_QP	**Margin : 10**
EUT : 54M Wireless Cardbus Adapter (M/N: TL-WN310G)	**Probe : ENV216 - Line2**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g (2437MHz)**



Engineer : Marlin	
Site : SR-1 (Conducted Emission)	**Time : 2007/04/23 - 15:52**
Limit : FCC_PART15_B_00M_QP	**Margin : 0**
EUT : 54M Wireless Cardbus Adapter (M/N: TL-WN310G)	**Probe : ENV216 - Line2**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g (2437MHz)**

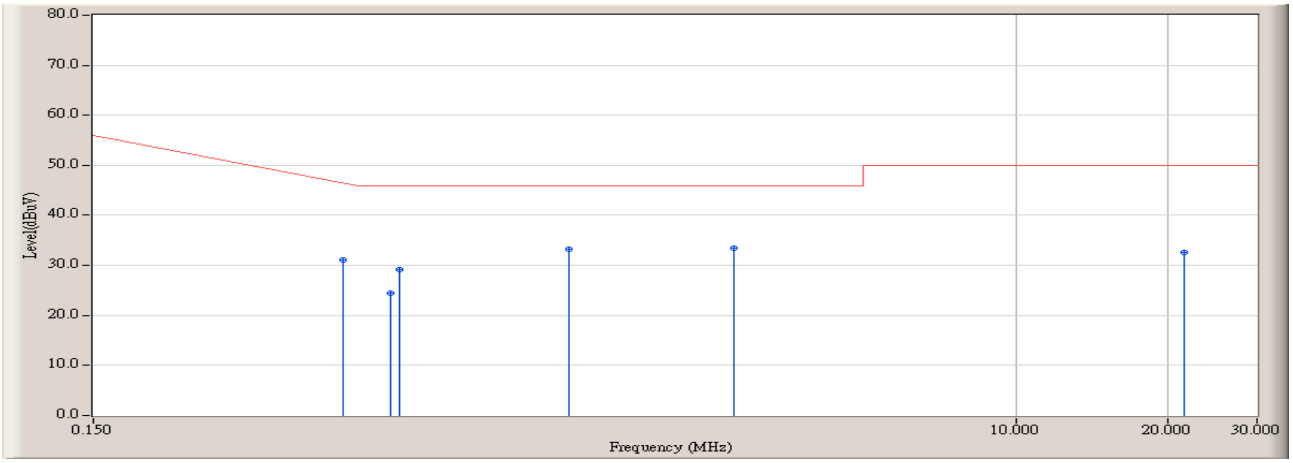


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.466	9.677	38.600	48.277	-8.694	56.971	QUASIPEAK
2		0.582	9.679	36.900	46.579	-9.421	56.000	QUASIPEAK
3		0.606	9.671	37.200	46.871	-9.129	56.000	QUASIPEAK
4		1.310	9.751	36.900	46.651	-9.349	56.000	QUASIPEAK
5		2.774	9.770	37.500	47.270	-8.730	56.000	QUASIPEAK
6		21.570	10.229	33.000	43.229	-16.771	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 : Marlin	
Site : SR-1 (Conducted Emission)	**Time : 2007/04/23 - 15:52**
Limit : FCC_PART15_B_00M_AV	**Margin : 0**
EUT : 54M Wireless Cardbus Adapter (M/N: TL-WN310G)	**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		0.466	9.677	21.500	31.177	-15.794	46.971	AVERAGE
2		0.582	9.679	14.800	24.479	-21.521	46.000	AVERAGE
3		0.606	9.671	19.400	29.071	-16.929	46.000	AVERAGE
4		1.310	9.751	23.500	33.251	-12.749	46.000	AVERAGE
5	*	2.774	9.770	23.600	33.370	-12.630	46.000	AVERAGE
6		21.570	10.229	22.400	32.629	-17.371	50.000	AVERAGE

Note:

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

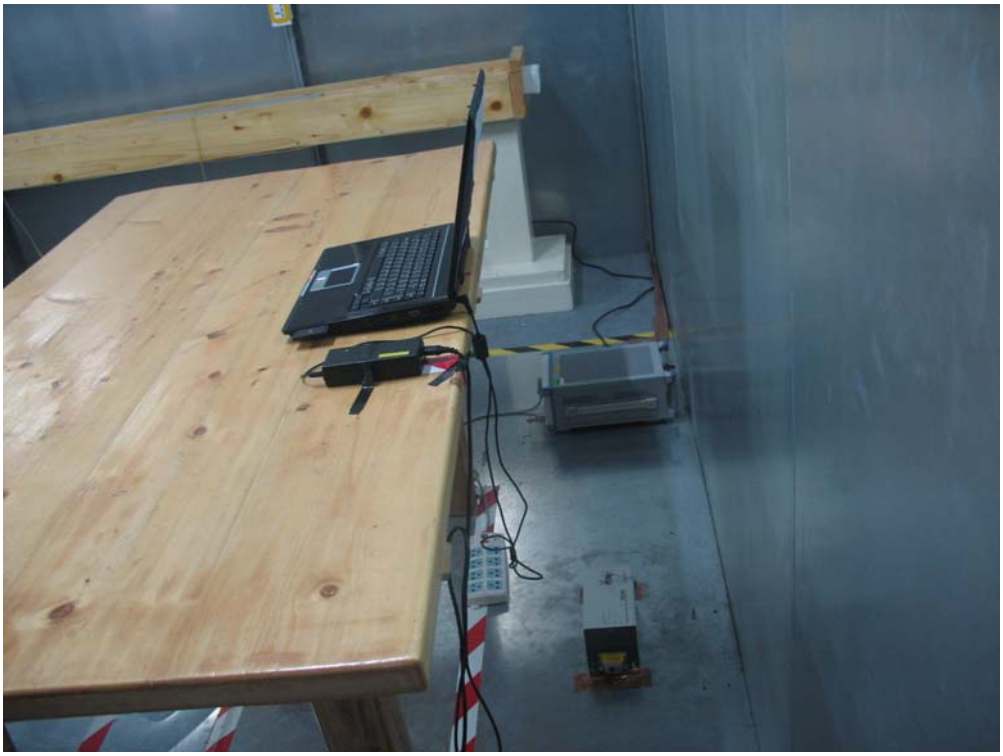
3.7. Test Photograph

Test Mode: Mode 1: Transmit by 802.11b

Description: Front View of Conduction Test

Test Mode: Mode 1: Transmit by 802.11b

Description: Back View of Conduction Test

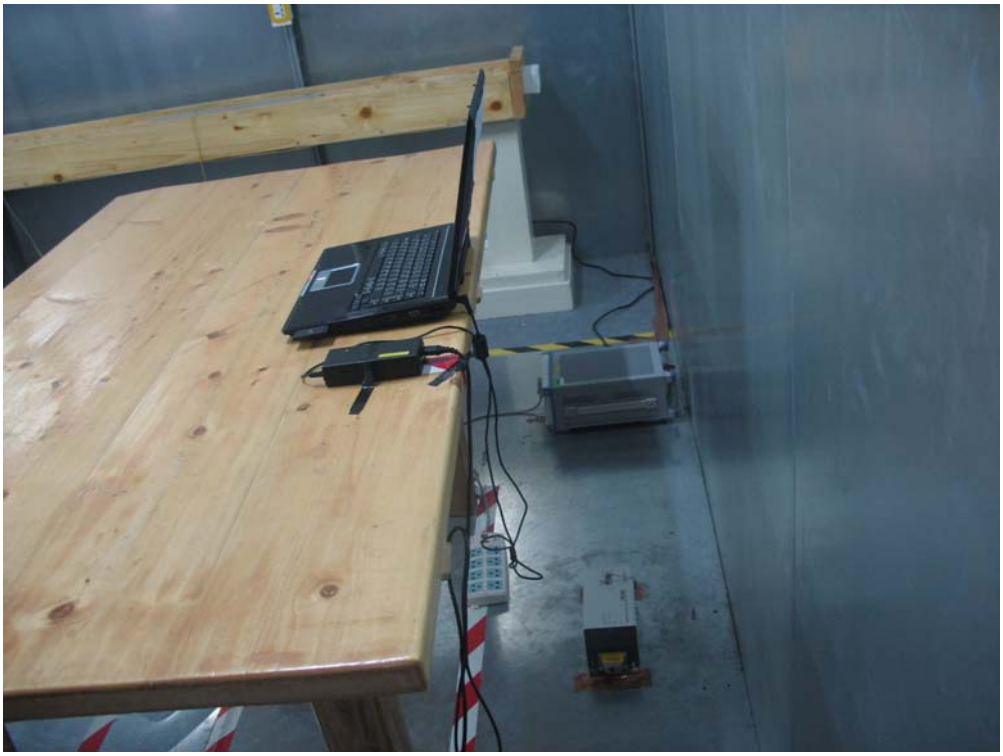


Test Mode: Mode 2: Transmit by 802.11g

Description: Front View of Conduction Test

Test Mode: Mode 2: Transmit by 802.11g

Description: Back View of Conduction Test



4. Radiated Emission

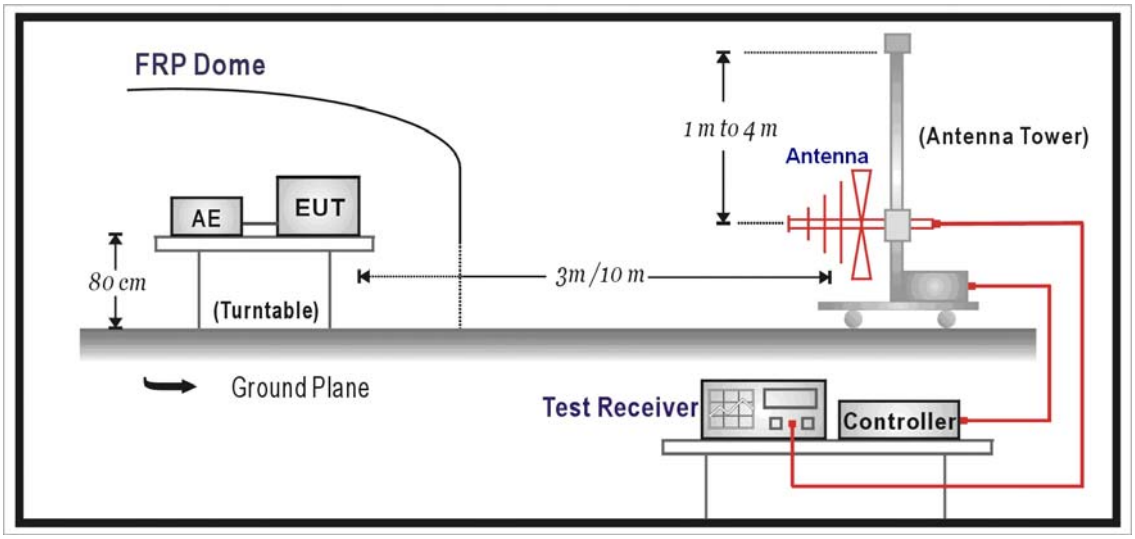
4.1. Test Equipment

Radiated Emission / AC-2

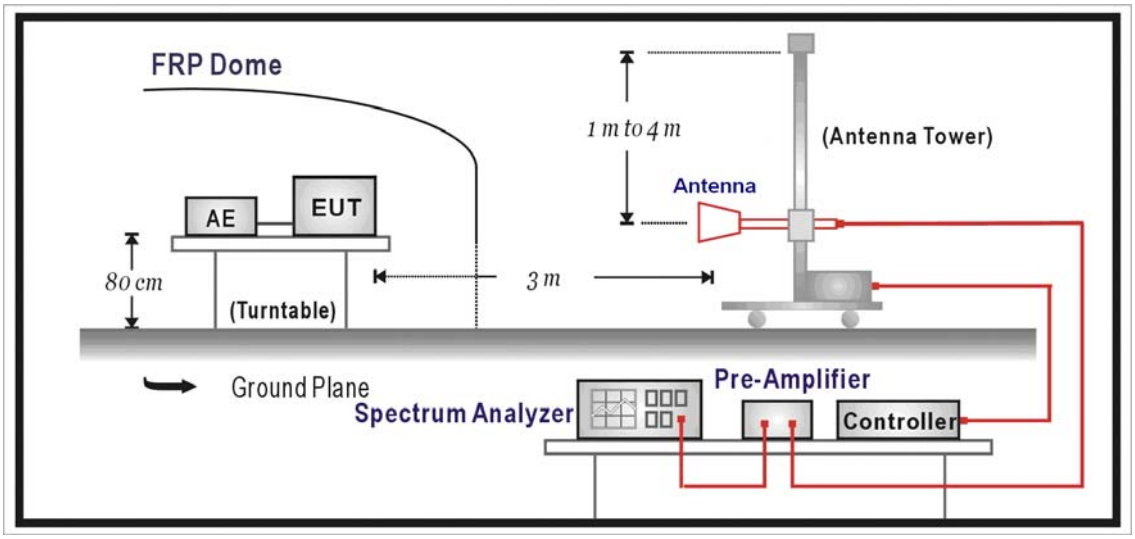
Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4408B	MY45102679	2006/11/20
EMI Test Receiver	R&S	ESCI	100175	2006/11/25
Preamplifier	Quietek	AP-025C	QT-AP003	2006/11/25
Preamplifier	Quietek	AP-180C	CHM-0602013	2006/11/25
Bilog Type Antenna	Schaffner	CBL6112B	2932	2006/10/26
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	496	2006/11/30
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2006/11/30
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH002	2007/03/30

4.2. Test Setup

Under 1GHz Test Setup:



Above 1GHz Test Setup:



4.3. Limit

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

Remark:

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

4.4. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground.

The turn table can rotate 360 degrees to determine the position of the maximum emission level and the antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated on radiated measurement.

The additional latch filter below 1GHz was used to measure the level of harmonics radiated emission during field strength of harmonics measurement.

The bandwidth below 1GHz setting on the field strength meter (R&S Test Receiver ESCI) is 120 kHz and above 1GHz is 1MHz.

The frequency range from 30MHz to 10^{th} harmonic is checked.

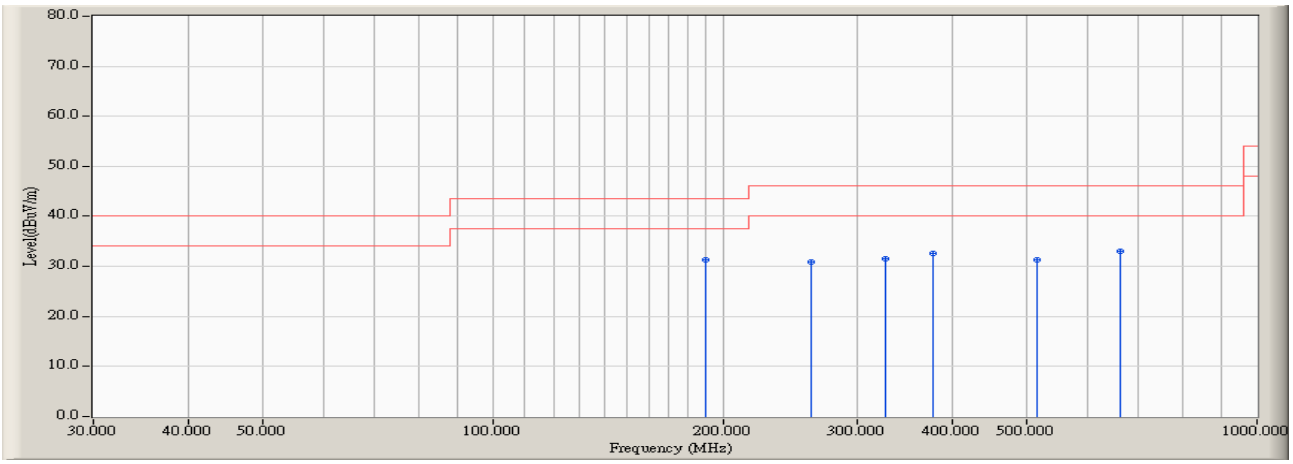
4.5. Uncertainty

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

under 1G is defined as ± 3.8 dB

4.6. Test Result

Engineer : Marlin	
Site : AC-2 (3m Radiated Emission Chamber)	**Time : 2007/04/21 - 09:58**
Limit : FCC_SpartC_15.209_03M_QP	**Margin : 6**
EUT : TL-WN310G	**Probe : CBL6112B_2932(30-2000MHz) - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b (2412MHz)**

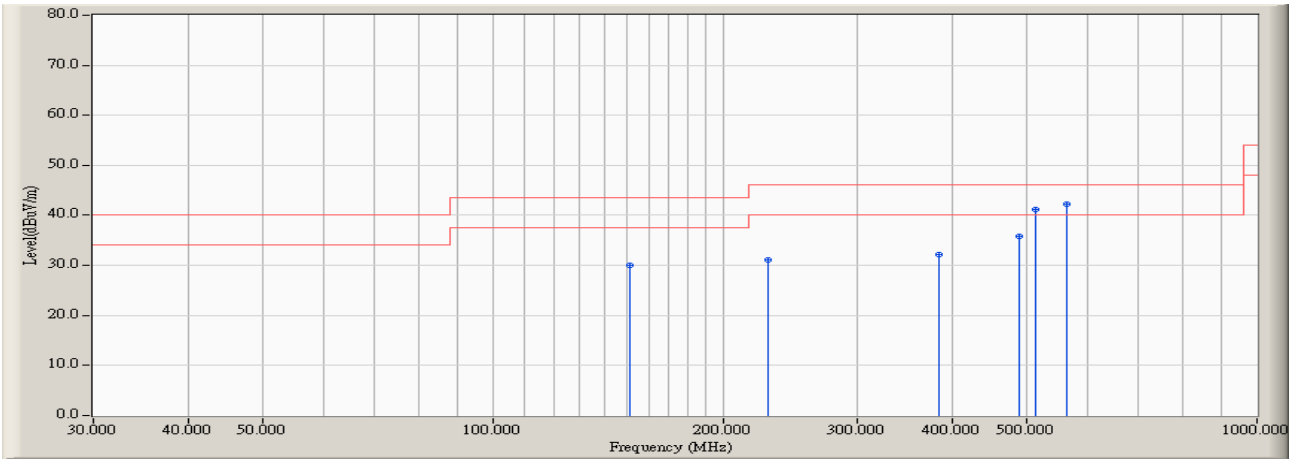


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	190.050	-12.011	43.286	31.275	-12.245	43.520	QUASIPEAK
2		260.375	-7.227	38.116	30.889	-15.131	46.020	QUASIPEAK
3		325.850	-5.915	37.541	31.626	-14.394	46.020	QUASIPEAK
4		376.775	-4.379	36.919	32.540	-13.480	46.020	QUASIPEAK
5		515.000	-1.346	32.647	31.301	-14.719	46.020	QUASIPEAK
6		662.925	0.298	32.701	32.999	-13.021	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 : Marlin	
Site : AC-2 (3m Radiated Emission Chamber)	**Time : 2007/04/21 - 10:01**
Limit : FCC_SpartC_15.209_03M_QP	**Margin : 6**
EUT : TL-WN310G	**Probe : CBL6112B_2932(30-2000MHz) - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b (2412MHz)**

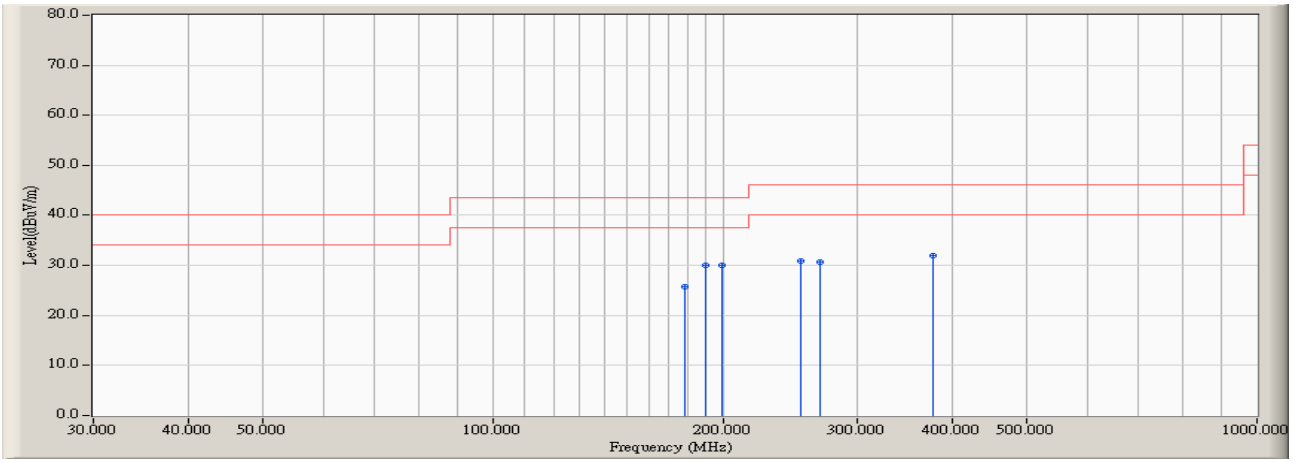


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		151.250	-10.657	40.582	29.925	-13.595	43.520	QUASIPEAK
2		228.850	-10.766	41.802	31.036	-14.984	46.020	QUASIPEAK
3		384.050	-4.167	36.362	32.195	-13.825	46.020	QUASIPEAK
4		488.325	-1.757	37.610	35.853	-10.167	46.020	QUASIPEAK
5		512.575	-1.381	42.638	41.257	-4.763	46.020	QUASIPEAK
6	*	563.500	0.130	42.165	42.295	-3.725	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 : Marlin	
Site : AC-2 (3m Radiated Emission Chamber)	**Time : 2007/04/21 - 10:04**
Limit : FCC_SpartC_15.209_03M_QP	**Margin : 6**
EUT : TL-WN310G	**Probe : CBL6112B_2932(30-2000MHz) - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b (2437MHz)**

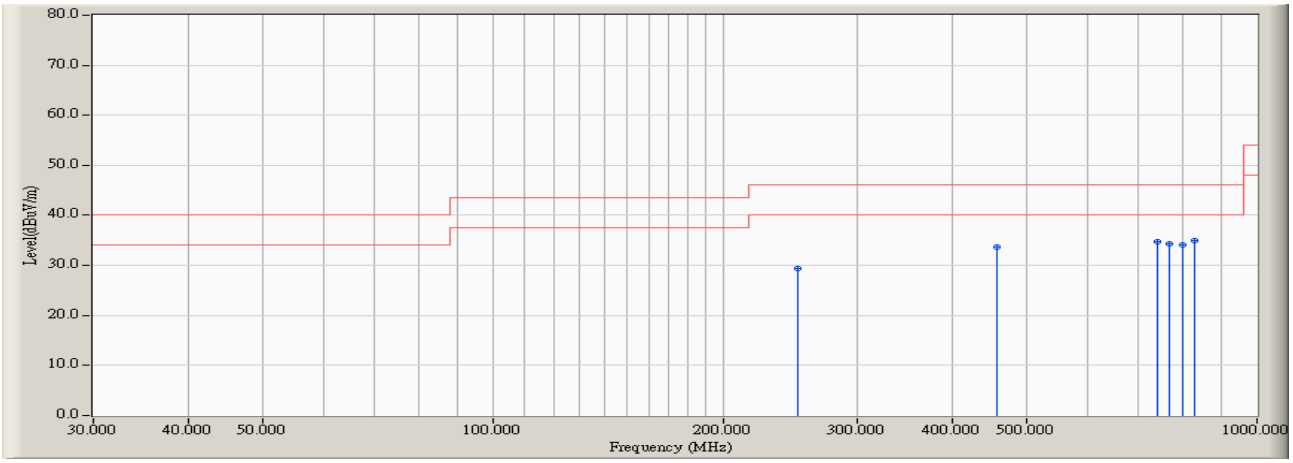


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		177.925	-12.026	37.816	25.790	-17.730	43.520	QUASIPEAK
2	*	190.050	-12.011	42.065	30.054	-13.466	43.520	QUASIPEAK
3		199.750	-11.675	41.617	29.942	-13.578	43.520	QUASIPEAK
4		253.100	-7.825	38.683	30.858	-15.162	46.020	QUASIPEAK
5		267.650	-7.342	37.909	30.567	-15.453	46.020	QUASIPEAK
6		376.775	-4.379	36.316	31.937	-14.083	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 : Marlin	
Site : AC-2 (3m Radiated Emission Chamber)	**Time : 2007/04/21 - 10:08**
Limit : FCC_SpartC_15.209_03M_QP	**Margin : 6**
EUT : TL-WN310G	**Probe : CBL6112B_2932(30-2000MHz) - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b (2437MHz)**

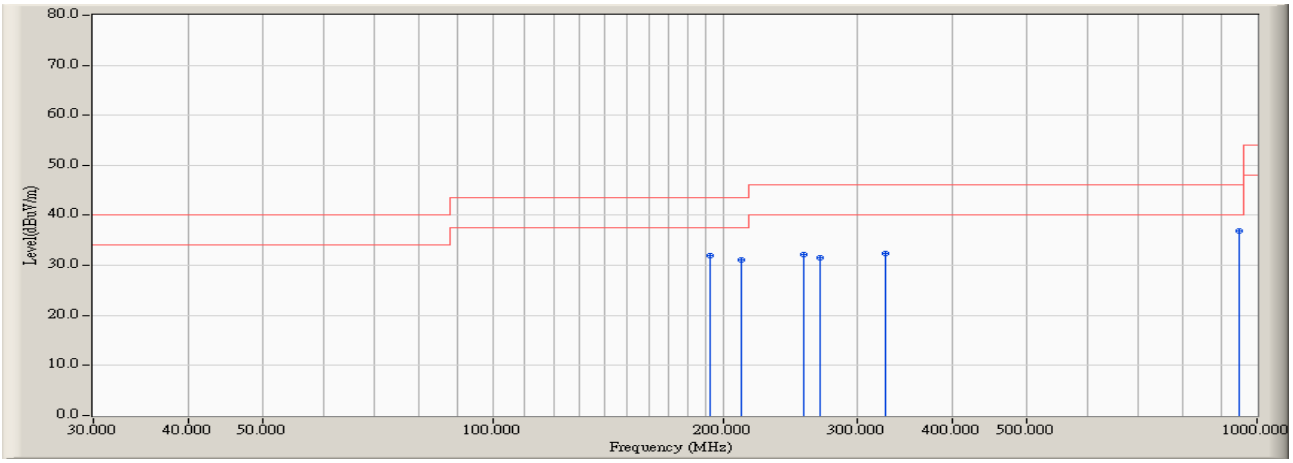


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		250.675	-8.042	37.380	29.338	-16.682	46.020	QUASIPEAK
2		456.800	-2.564	36.138	33.574	-12.446	46.020	QUASIPEAK
3		740.525	1.988	32.802	34.790	-11.230	46.020	QUASIPEAK
4		767.200	1.910	32.341	34.251	-11.769	46.020	QUASIPEAK
5		798.725	1.864	32.295	34.159	-11.861	46.020	QUASIPEAK
6	*	830.250	2.440	32.541	34.981	-11.039	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 : Marlin	
Site : AC-2 (3m Radiated Emission Chamber)	**Time : 2007/04/21 - 10:12**
Limit : FCC_SpartC_15.209_03M_QP	**Margin : 6**
EUT : TL-WN310G	**Probe : CBL6112B_2932(30-2000MHz) - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b (2462MHz)**

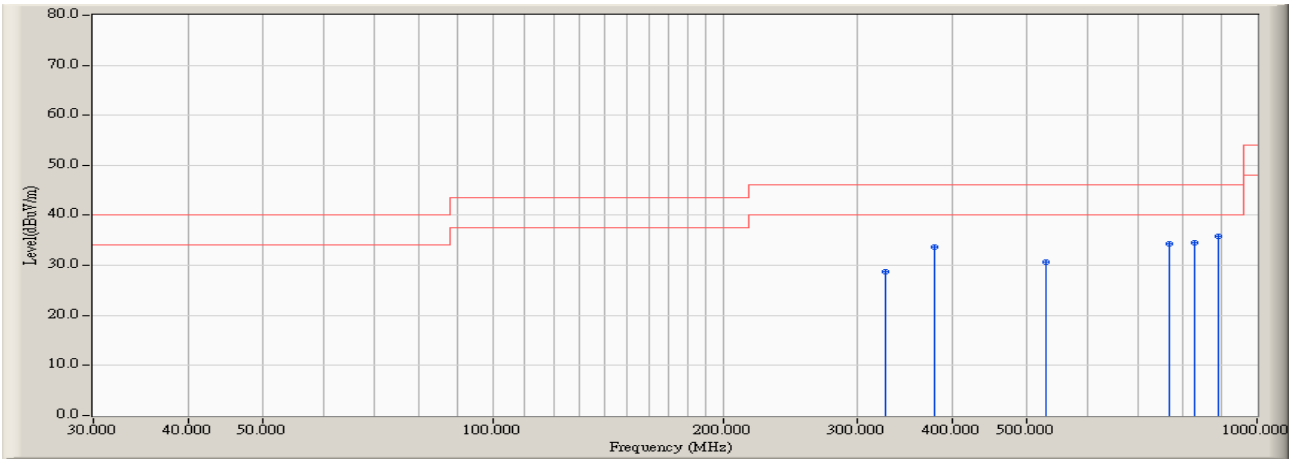


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		192.475	-11.907	43.864	31.957	-11.563	43.520	QUASIPEAK
2		211.875	-11.810	42.816	31.006	-12.514	43.520	QUASIPEAK
3		255.525	-7.649	39.754	32.105	-13.915	46.020	QUASIPEAK
4		267.650	-7.342	38.856	31.514	-14.506	46.020	QUASIPEAK
5		325.850	-5.915	38.244	32.329	-13.691	46.020	QUASIPEAK
6	*	946.650	3.706	33.163	36.869	-9.151	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 : Marlin	
Site : AC-2 (3m Radiated Emission Chamber)	**Time : 2007/04/21 - 10:17**
Limit : FCC_SpartC_15.209_03M_QP	**Margin : 6**
EUT : TL-WN310G	**Probe : CBL6112B_2932(30-2000MHz) - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b (2462MHz)**

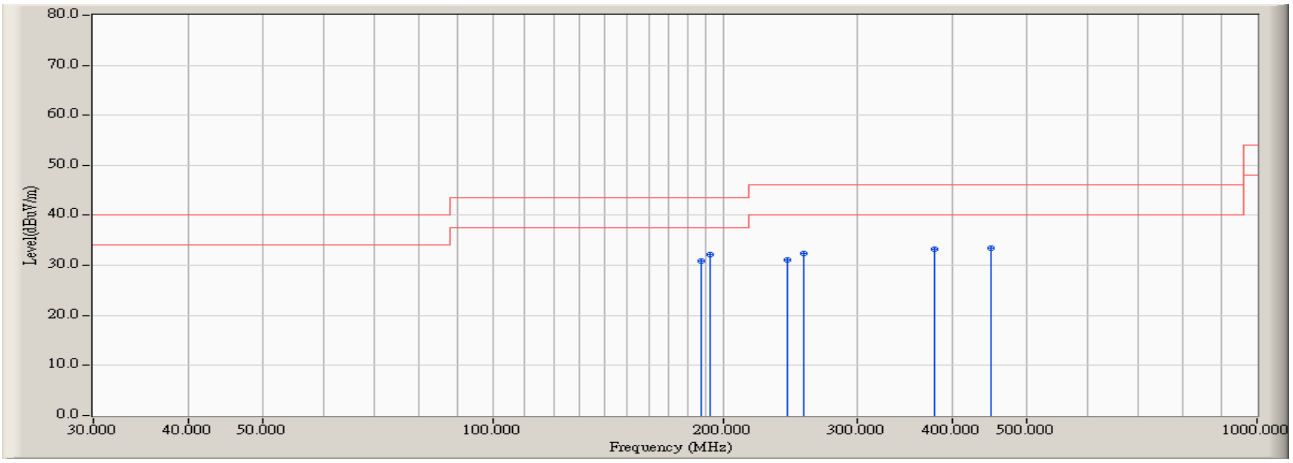


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		325.850	-5.915	34.655	28.740	-17.280	46.020	QUASIPEAK
2		379.200	-4.357	37.972	33.615	-12.405	46.020	QUASIPEAK
3		529.550	-0.831	31.498	30.667	-15.353	46.020	QUASIPEAK
4		767.200	1.910	32.350	34.260	-11.760	46.020	QUASIPEAK
5		830.250	2.440	32.125	34.565	-11.455	46.020	QUASIPEAK
6	*	890.875	2.690	33.113	35.803	-10.217	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 : Marlin	
Site : AC-2 (3m Radiated Emission Chamber)	**Time : 2007/04/21 - 10:21**
Limit : FCC_SpartC_15.209_03M_QP	**Margin : 6**
EUT : TL-WN310G	**Probe : CBL6112B_2932(30-2000MHz) - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g (2412MHz)**

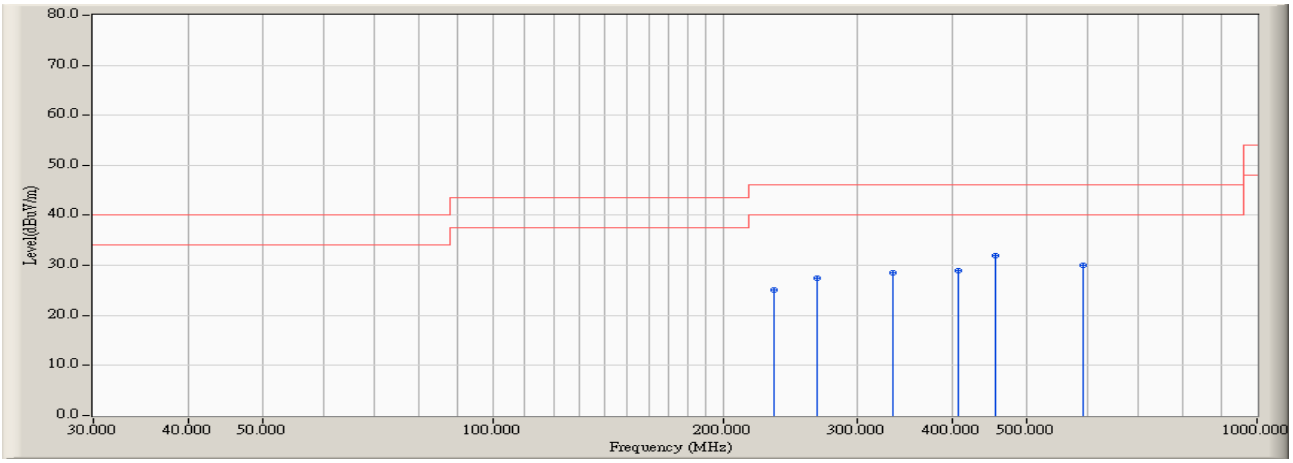


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		187.625	-12.084	43.016	30.932	-12.588	43.520	QUASIPEAK
2	*	192.475	-11.907	44.074	32.167	-11.353	43.520	QUASIPEAK
3		243.400	-8.892	39.921	31.029	-14.991	46.020	QUASIPEAK
4		255.525	-7.649	39.954	32.305	-13.715	46.020	QUASIPEAK
5		379.200	-4.357	37.680	33.323	-12.697	46.020	QUASIPEAK
6		449.525	-2.806	36.355	33.549	-12.471	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 : Marlin	
Site : AC-2 (3m Radiated Emission Chamber)	**Time : 2007/04/21 - 10:25**
Limit : FCC_SpartC_15.209_03M_QP	**Margin : 6**
EUT : TL-WN310G	**Probe : CBL6112B_2932(30-2000MHz) - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g (2412MHz)**

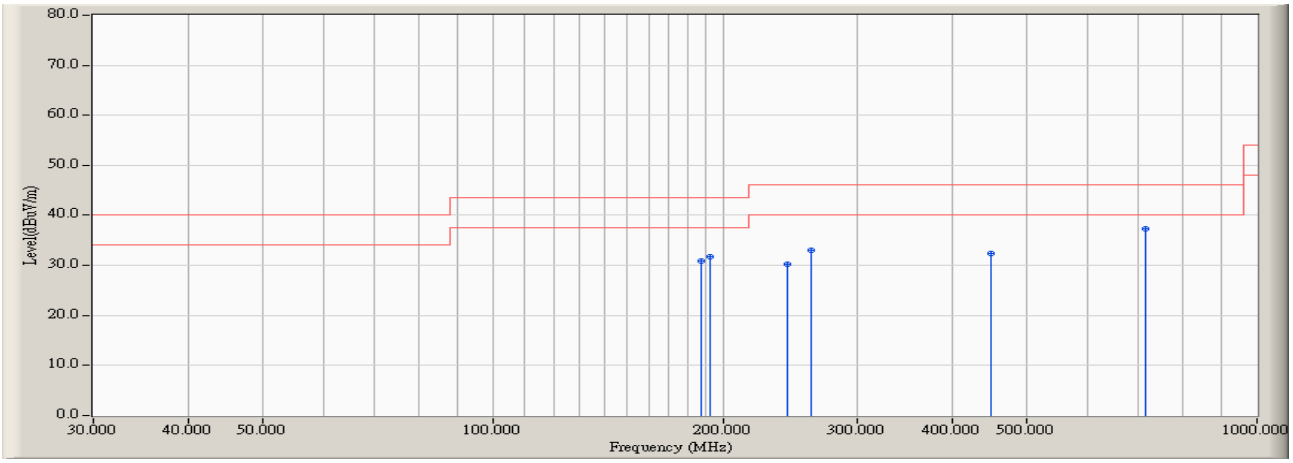


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		233.700	-10.112	35.290	25.178	-20.842	46.020	QUASIPEAK
2		265.225	-7.159	34.558	27.399	-18.621	46.020	QUASIPEAK
3		333.125	-5.749	34.359	28.610	-17.410	46.020	QUASIPEAK
4		405.875	-3.161	32.085	28.924	-17.096	46.020	QUASIPEAK
5	*	454.375	-2.733	34.722	31.989	-14.031	46.020	QUASIPEAK
6		592.600	0.066	29.872	29.938	-16.082	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 : Marlin	
Site : AC-2 (3m Radiated Emission Chamber)	**Time : 2007/04/21 - 10:28**
Limit : FCC_SpartC_15.209_03M_QP	**Margin : 6**
EUT : TL-WN310G	**Probe : CBL6112B_2932(30-2000MHz) - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g (2437MHz)**

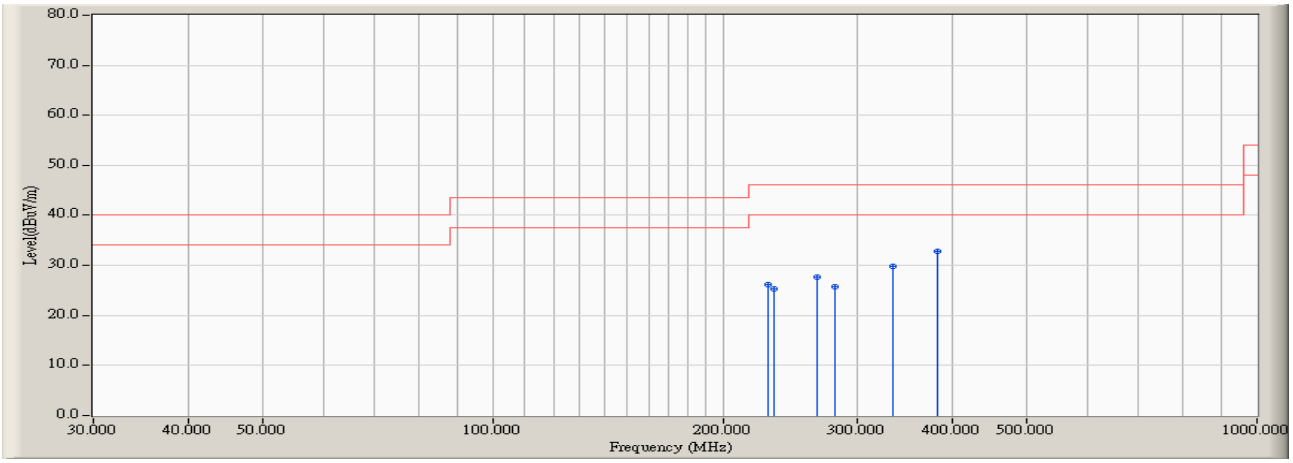


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		187.625	-12.084	42.971	30.887	-12.633	43.520	QUASIPEAK
2		192.475	-11.907	43.632	31.725	-11.795	43.520	QUASIPEAK
3		243.400	-8.892	39.210	30.318	-15.702	46.020	QUASIPEAK
4		260.375	-7.227	40.219	32.992	-13.028	46.020	QUASIPEAK
5		449.525	-2.806	35.165	32.359	-13.661	46.020	QUASIPEAK
6	*	716.275	1.129	36.102	37.231	-8.789	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 : Marlin	
Site : AC-2 (3m Radiated Emission Chamber)	**Time : 2007/04/21 - 10:32**
Limit : FCC_SpartC_15.209_03M_QP	**Margin : 6**
EUT : TL-WN310G	**Probe : CBL6112B_2932(30-2000MHz) - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g (2437MHz)**

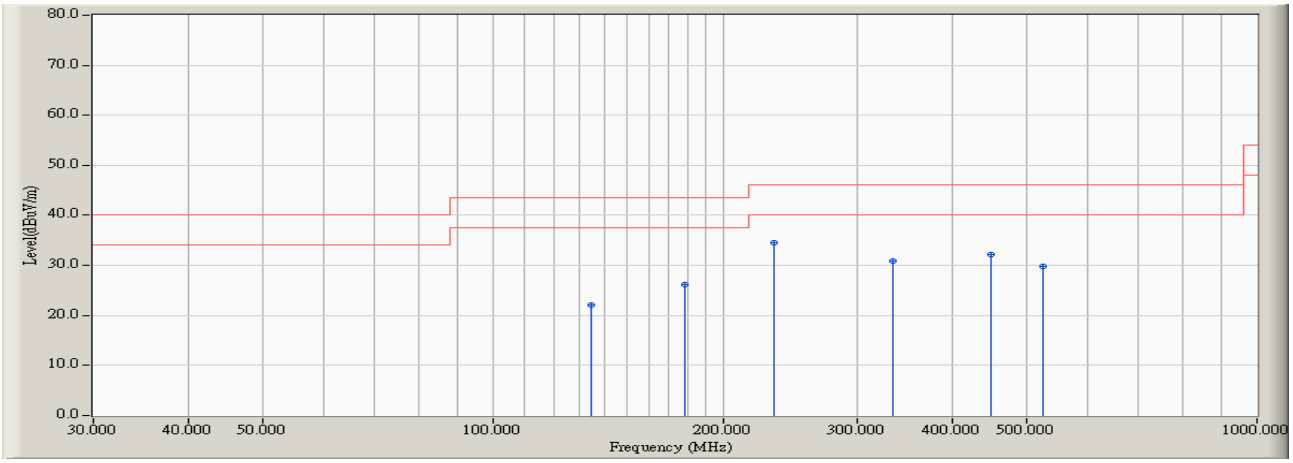


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		228.850	-10.766	36.980	26.214	-19.806	46.020	QUASIPEAK
2		233.700	-10.112	35.395	25.283	-20.737	46.020	QUASIPEAK
3		265.225	-7.159	34.878	27.719	-18.301	46.020	QUASIPEAK
4		279.775	-7.439	33.280	25.841	-20.179	46.020	QUASIPEAK
5		333.125	-5.749	35.656	29.907	-16.113	46.020	QUASIPEAK
6	*	381.625	-4.281	37.014	32.733	-13.287	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 : Marlin	
Site : AC-2 (3m Radiated Emission Chamber)	**Time : 2007/04/21 - 10:35**
Limit : FCC_SpartC_15.209_03M_QP	**Margin : 6**
EUT : TL-WN310G	**Probe : CBL6112B_2932(30-2000MHz) - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g (2462MHz)**

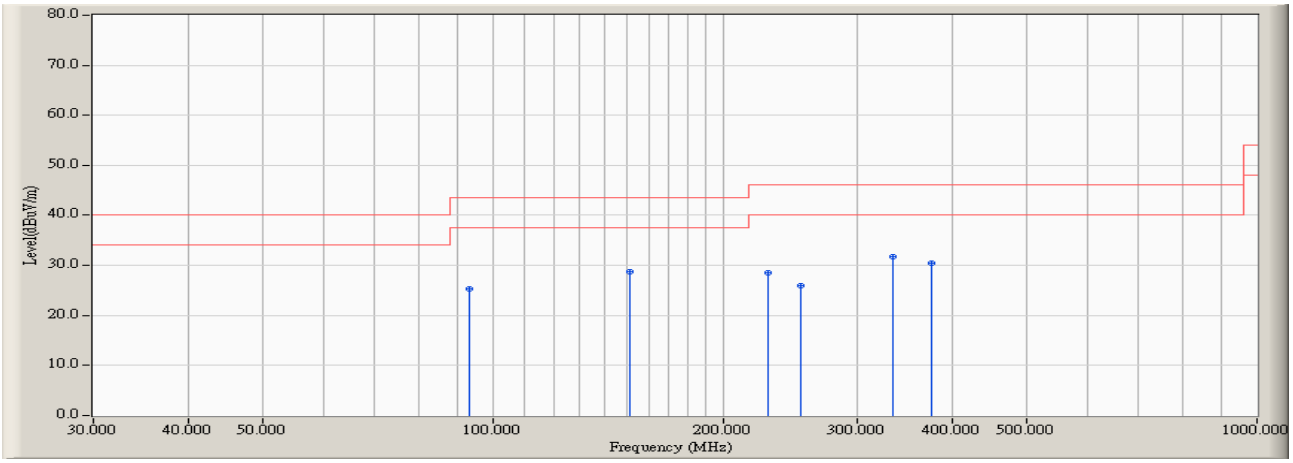


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		134.275	-9.435	31.546	22.111	-21.409	43.520	QUASIPEAK
2		177.925	-12.026	38.101	26.075	-17.445	43.520	QUASIPEAK
3	*	233.700	-10.112	44.720	34.608	-11.412	46.020	QUASIPEAK
4		333.125	-5.749	36.617	30.868	-15.152	46.020	QUASIPEAK
5		449.525	-2.806	34.933	32.127	-13.893	46.020	QUASIPEAK
6		524.700	-1.064	30.786	29.722	-16.298	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 : Marlin	
Site : AC-2 (3m Radiated Emission Chamber)	**Time : 2007/04/21 - 10:38**
Limit : FCC_SpartC_15.209_03M_QP	**Margin : 6**
EUT : TL-WN310G	**Probe : CBL6112B_2932(30-2000MHz) - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g (2462MHz)**

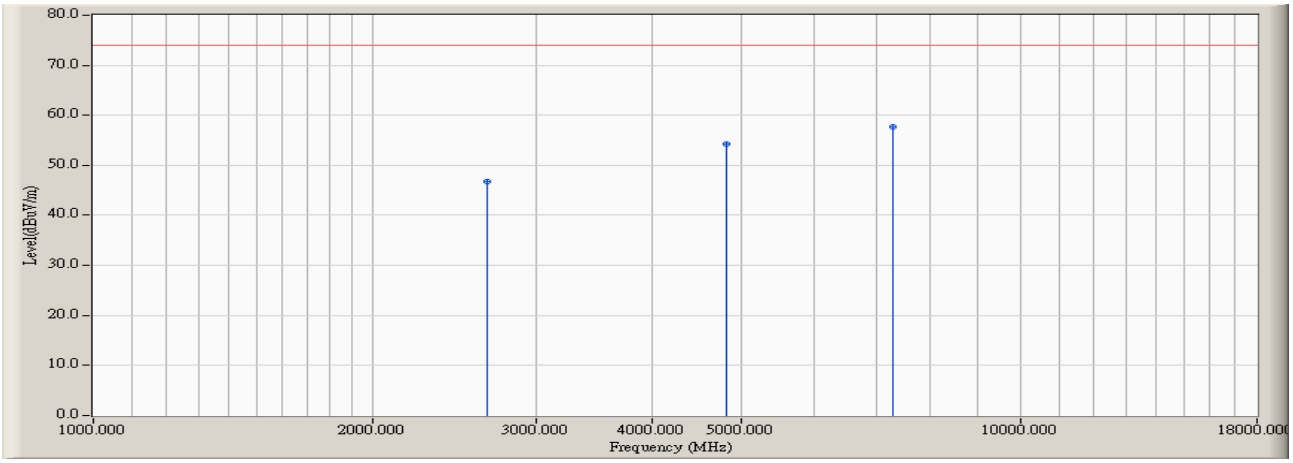


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		93.050	-11.548	36.954	25.406	-18.114	43.520	QUASIPEAK
2		151.250	-10.657	39.424	28.767	-14.753	43.520	QUASIPEAK
3		228.850	-10.766	39.291	28.525	-17.495	46.020	QUASIPEAK
4		253.100	-7.825	33.754	25.929	-20.091	46.020	QUASIPEAK
5	*	333.125	-5.749	37.526	31.777	-14.243	46.020	QUASIPEAK
6		374.350	-4.318	34.676	30.358	-15.662	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 : Marlin	
Site : AC-2 (3m Radiated Emission Chamber)	**Time : 2007/04/21 - 21:34**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : TL-WN310G	**Probe : BBHA9120D_499(1-18GHz) - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b (2412MHz)**

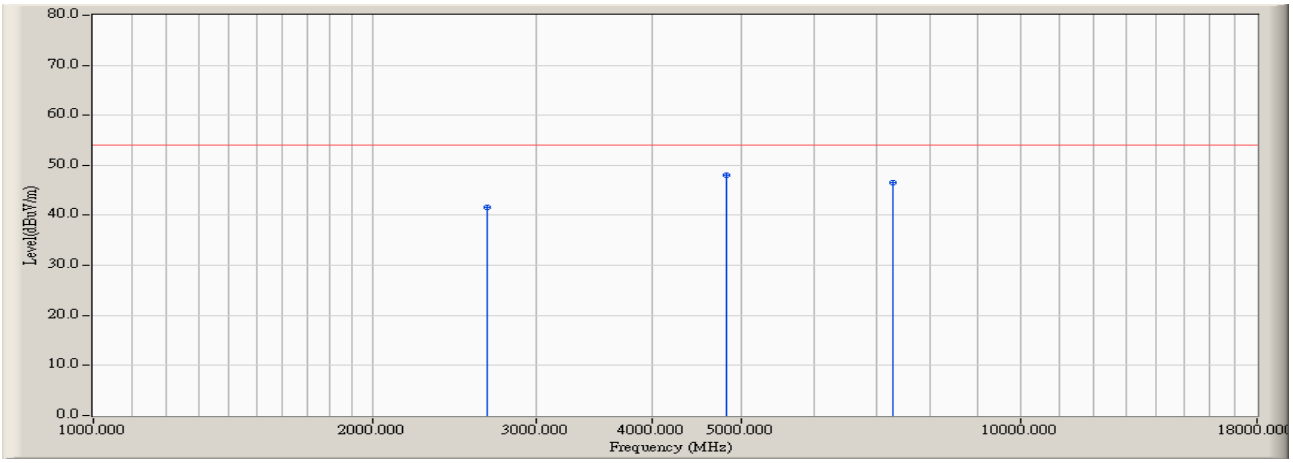


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2657.500	-1.760	48.482	46.722	-27.248	73.970	PEAK
2		4825.000	5.040	49.325	54.365	-19.605	73.970	PEAK
3	*	7290.000	13.690	43.965	57.655	-16.315	73.970	PEAK

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 : Marlin	
Site : AC-2 (3m Radiated Emission Chamber)	**Time : 2007/04/21 - 21:34**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : TL-WN310G	**Probe : BBHA9120D_499(1-18GHz) - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b (2412MHz)**

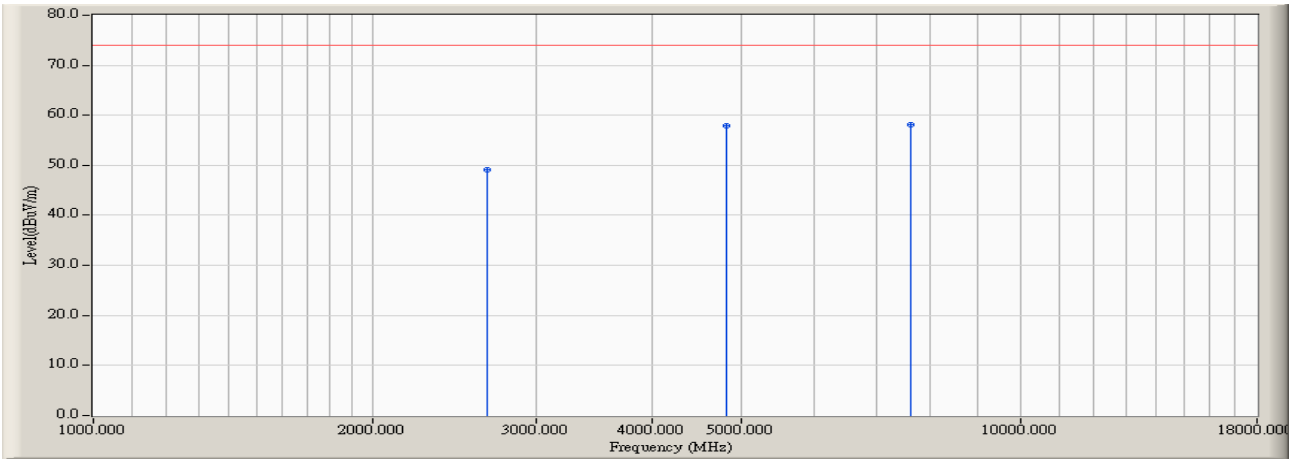


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2657.500	-1.760	43.400	41.640	-12.330	53.970	AVERAGE
2	*	4825.000	5.040	42.980	48.020	-5.950	53.970	AVERAGE
3		7290.000	13.690	32.900	46.590	-7.380	53.970	AVERAGE

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 : Marlin	
Site : AC-2 (3m Radiated Emission Chamber)	**Time : 2007/04/21 - 21:44**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : TL-WN310G	**Probe : BBHA9120D_499(1-18GHz) - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b (2412MHz)**

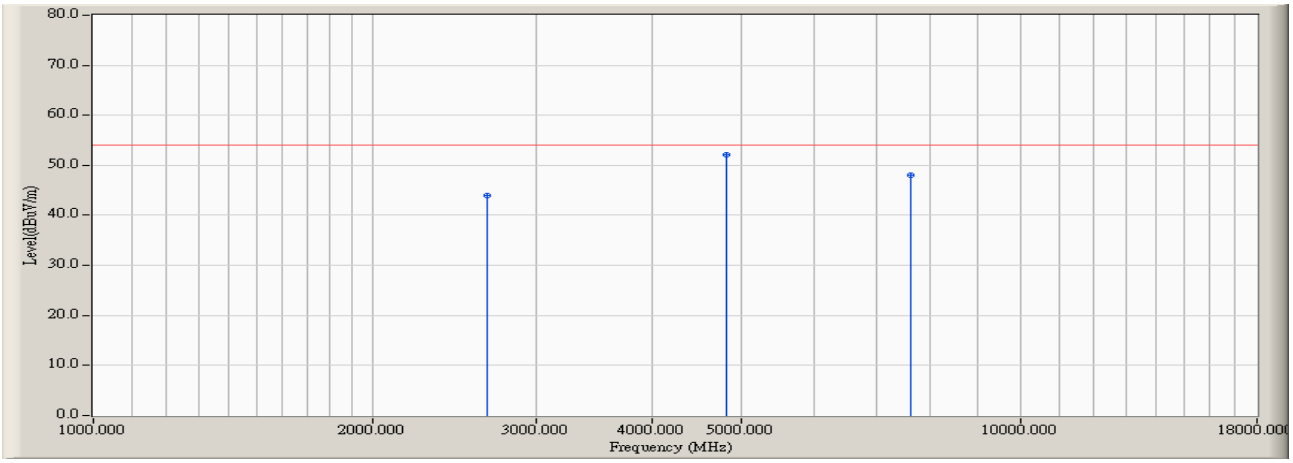


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2657.500	-1.760	50.944	49.184	-24.786	73.970	PEAK
2		4825.000	5.040	52.792	57.832	-16.138	73.970	PEAK
3	*	7630.000	15.760	42.270	58.030	-15.940	73.970	PEAK

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 : Marlin	
Site : AC-2 (3m Radiated Emission Chamber)	**Time : 2007/04/21 - 21:44**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : TL-WN310G	**Probe : BBHA9120D_499(1-18GHz) - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b (2412MHz)**

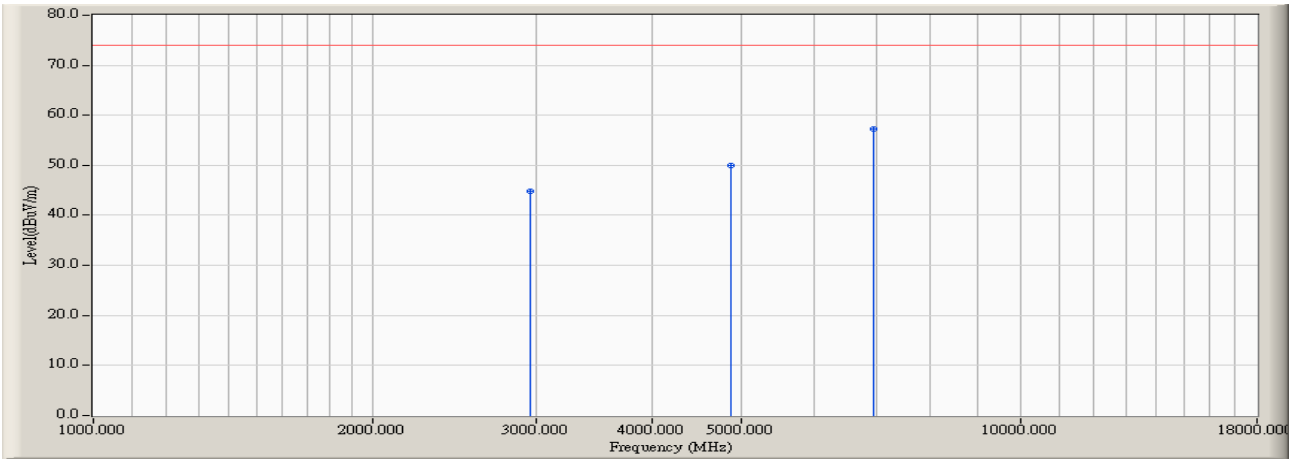


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2657.500	-1.760	45.780	44.020	-9.950	53.970	AVERAGE
2	*	4825.000	5.040	47.100	52.140	-1.830	53.970	AVERAGE
3		7630.000	15.760	32.200	47.960	-6.010	53.970	AVERAGE

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 : Marlin	
Site : AC-2 (3m Radiated Emission Chamber)	**Time : 2007/04/21 - 21:48**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : TL-WN310G	**Probe : BBHA9120D_499(1-18GHz) - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b (2437MHz)**

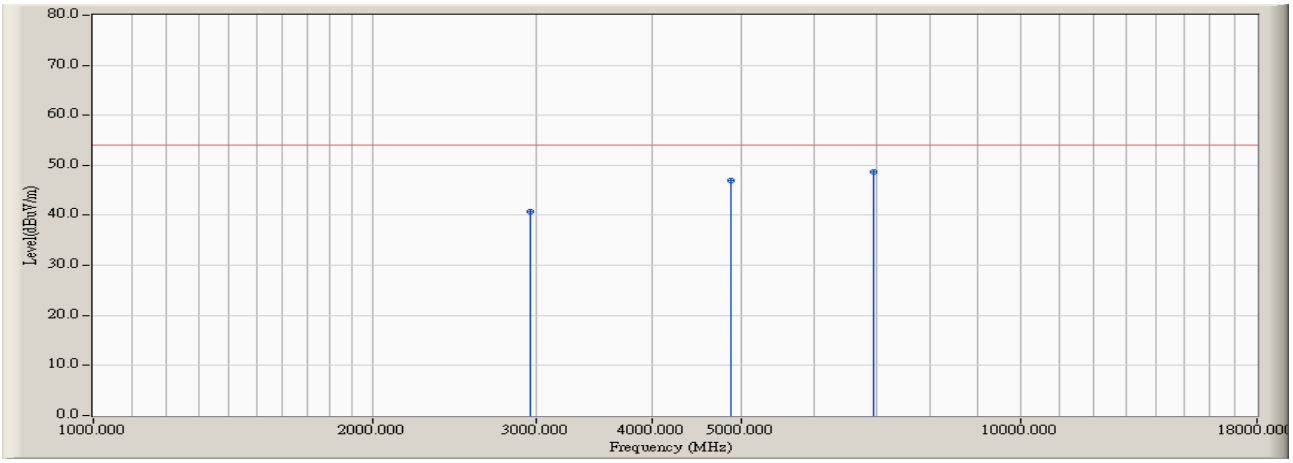


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2955.000	0.190	44.660	44.850	-29.120	73.970	PEAK
2		4867.500	5.445	44.445	49.890	-24.080	73.970	PEAK
3	*	6950.000	14.540	42.669	57.209	-16.761	73.970	PEAK

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 : Marlin	
Site : AC-2 (3m Radiated Emission Chamber)	**Time : 2007/04/21 - 21:48**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : TL-WN310G	**Probe : BBHA9120D_499(1-18GHz) - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b (2437MHz)**

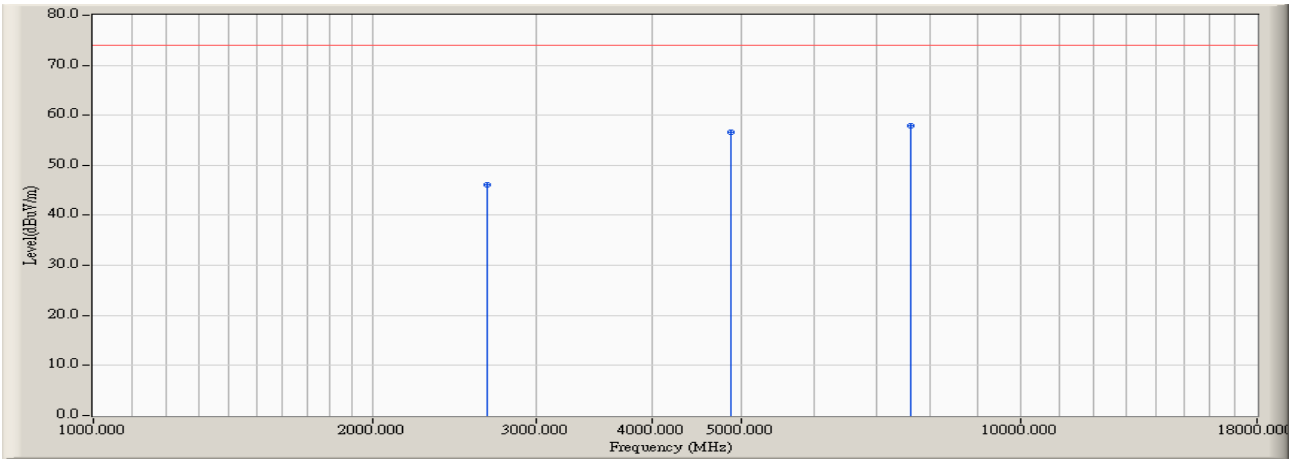


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2955.000	0.190	40.600	40.790	-13.180	53.970	AVERAGE
2		4867.500	5.445	41.600	47.045	-6.925	53.970	AVERAGE
3	*	6950.000	14.540	34.200	48.740	-5.230	53.970	AVERAGE

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 : Marlin	
Site : AC-2 (3m Radiated Emission Chamber)	**Time : 2007/04/21 - 21:53**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : TL-WN310G	**Probe : BBHA9120D_499(1-18GHz) - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b (2437MHz)**

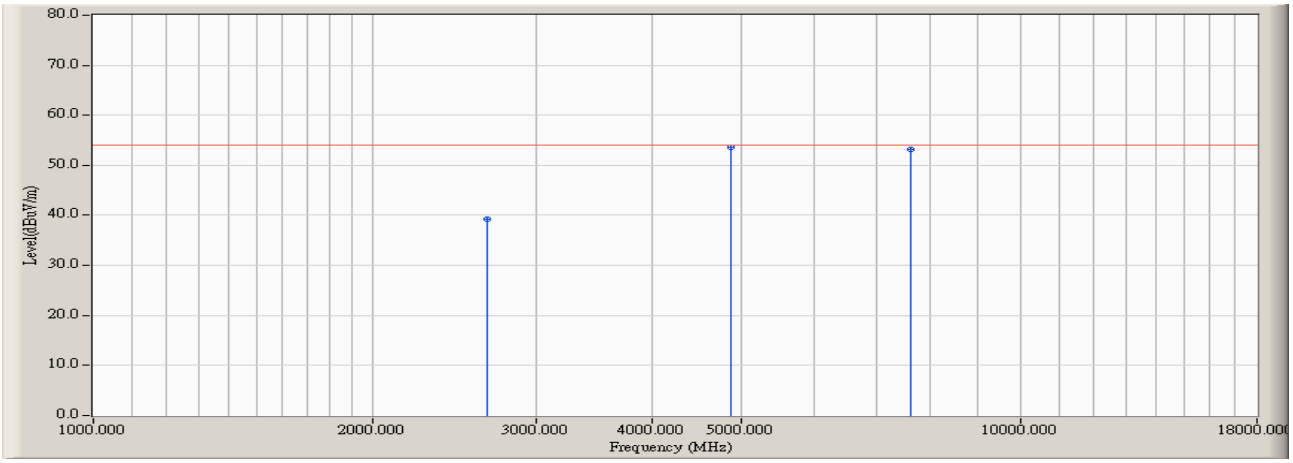


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2657.500	-1.760	47.942	46.182	-27.788	73.970	PEAK
2		4867.500	5.445	51.116	56.561	-17.409	73.970	PEAK
3	*	7630.000	15.760	42.092	57.852	-16.118	73.970	PEAK

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 : Marlin	
Site : AC-2 (3m Radiated Emission Chamber)	**Time : 2007/04/21 - 21:53**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : TL-WN310G	**Probe : BBHA9120D_499(1-18GHz) - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b (2437MHz)**

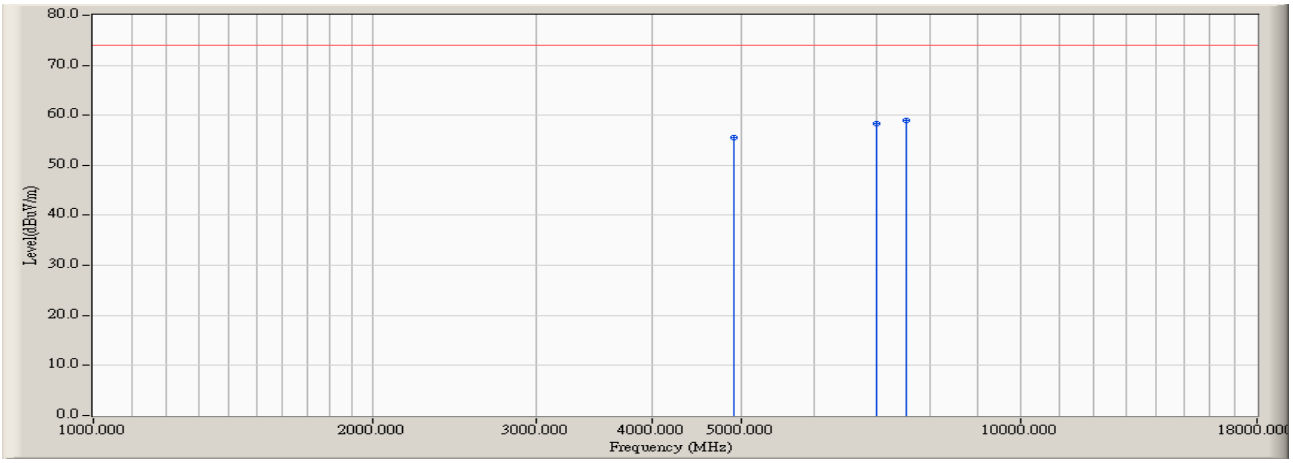


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2657.500	-1.760	41.000	39.240	-14.730	53.970	AVERAGE
2	*	4867.500	5.445	48.200	53.645	-0.325	53.970	AVERAGE
3		7630.000	15.760	37.500	53.260	-0.710	53.970	AVERAGE

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 : Marlin	
Site : AC-2 (3m Radiated Emission Chamber)	**Time : 2007/04/21 - 21:58**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : TL-WN310G	**Probe : BBHA9120D_499(1-18GHz) - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b (2462MHz)**

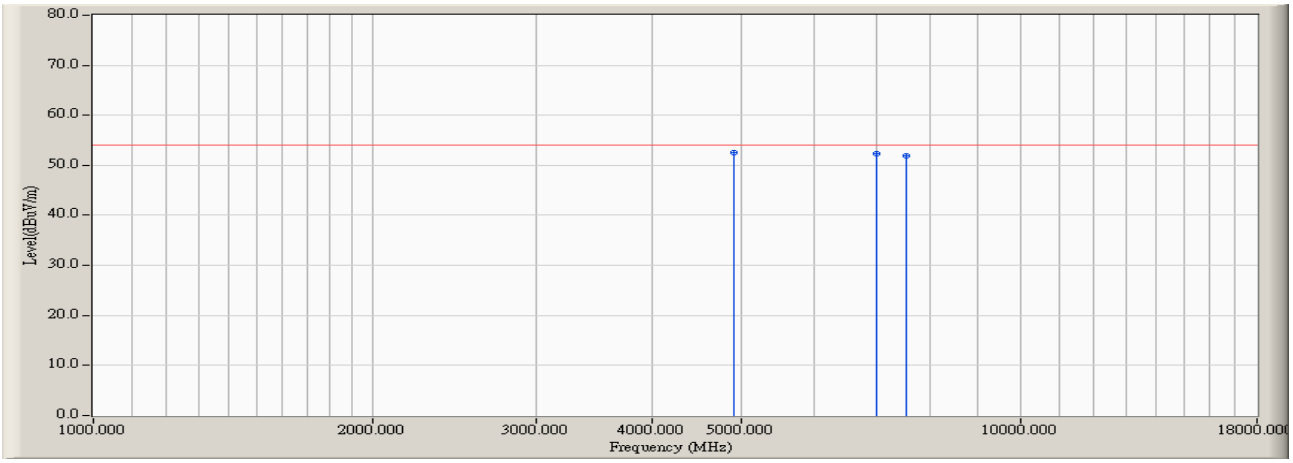


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4910.000	5.790	49.845	55.635	-18.335	73.970	PEAK
2		6992.500	14.895	43.365	58.260	-15.710	73.970	PEAK
3	*	7545.000	15.160	43.777	58.937	-15.033	73.970	PEAK

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 : Marlin	
Site : AC-2 (3m Radiated Emission Chamber)	**Time : 2007/04/21 - 21:58**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : TL-WN310G	**Probe : BBHA9120D_499(1-18GHz) - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b (2462MHz)**

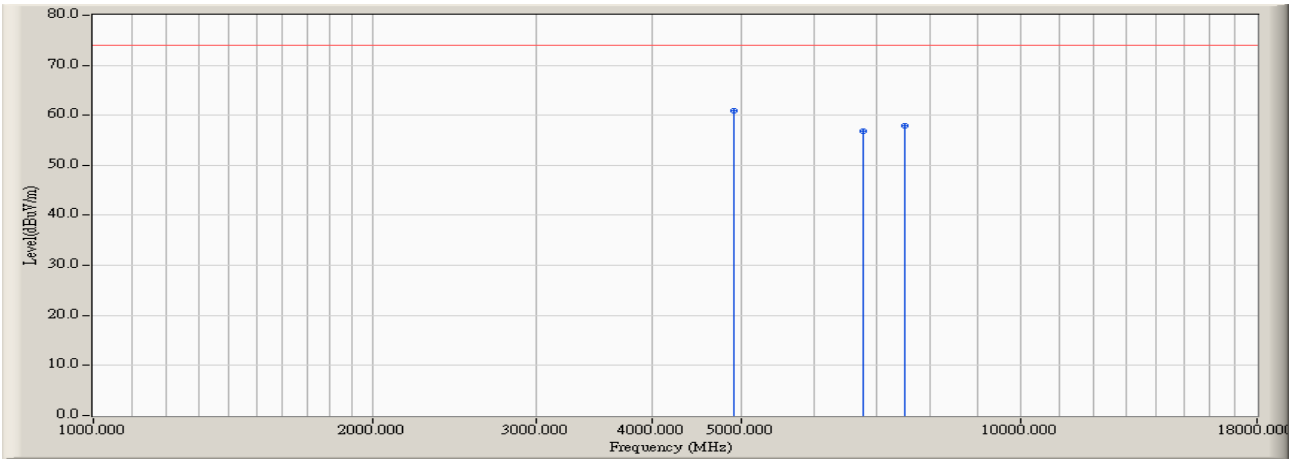


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	4910.000	5.790	46.790	52.580	-1.390	53.970	AVERAGE
2		6992.500	14.895	37.400	52.295	-1.675	53.970	AVERAGE
3		7545.000	15.160	36.800	51.960	-2.010	53.970	AVERAGE

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 : Marlin	
Site : AC-2 (3m Radiated Emission Chamber)	**Time : 2007/04/21 - 22:03**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : TL-WN310G	**Probe : BBHA9120D_499(1-18GHz) - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b (2462MHz)**

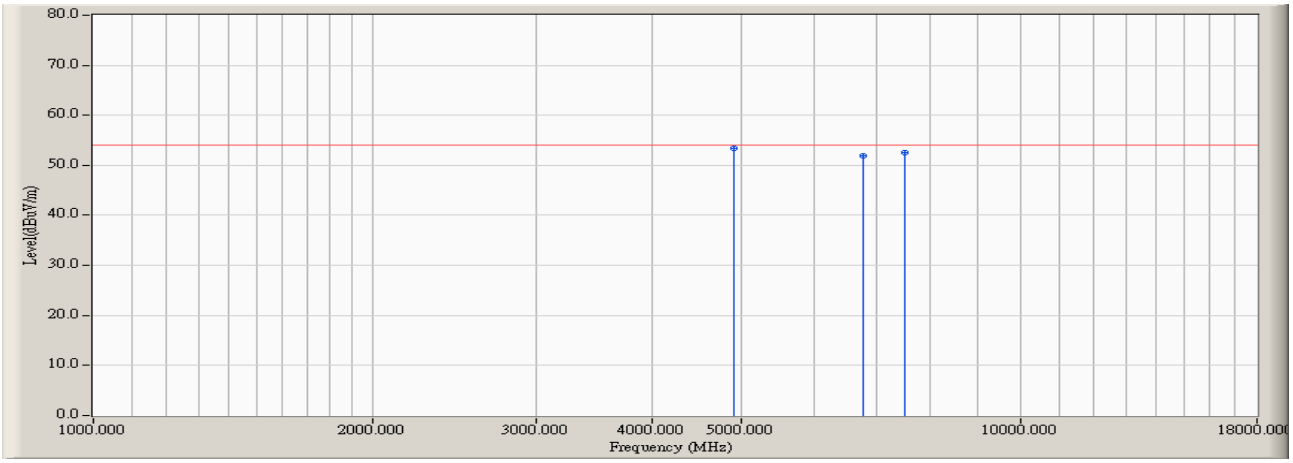


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	4910.000	5.790	55.034	60.824	-13.146	73.970	PEAK
2		6780.000	12.990	43.941	56.931	-17.039	73.970	PEAK
3		7502.500	14.660	43.246	57.906	-16.064	73.970	PEAK

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 : Marlin	
Site : AC-2 (3m Radiated Emission Chamber)	**Time : 2007/04/21 - 22:03**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : TL-WN310G	**Probe : BBHA9120D_499(1-18GHz) - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 1: Transmit by 802.11b (2462MHz)**

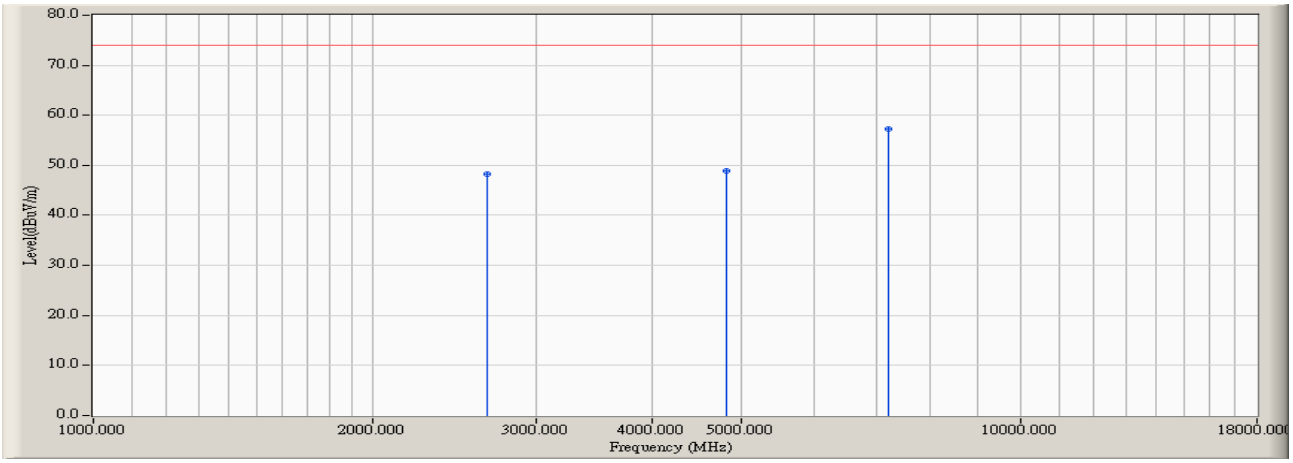


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	4910.000	5.790	47.600	53.390	-0.580	53.970	AVERAGE
2		6780.000	12.990	38.900	51.890	-2.080	53.970	AVERAGE
3		7502.500	14.660	37.800	52.460	-1.510	53.970	AVERAGE

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 : Marlin	
Site : AC-2 (3m Radiated Emission Chamber)	**Time : 2007/04/21 - 22:08**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : TL-WN310G	**Probe : BBHA9120D_499(1-18GHz) - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g (2412MHz)**

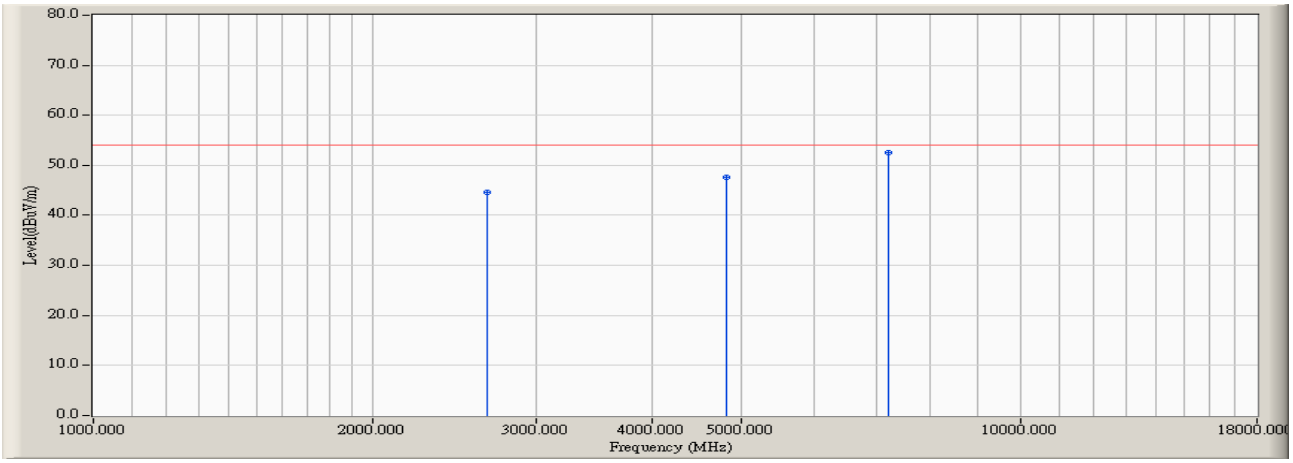


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2657.500	-1.760	49.991	48.231	-25.739	73.970	PEAK
2		4825.000	5.040	43.866	48.906	-25.064	73.970	PEAK
3	*	7205.000	13.860	43.399	57.259	-16.711	73.970	PEAK

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 : Marlin	
Site : AC-2 (3m Radiated Emission Chamber)	**Time : 2007/04/21 - 22:08**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : TL-WN310G	**Probe : BBHA9120D_499(1-18GHz) - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g (2412MHz)**

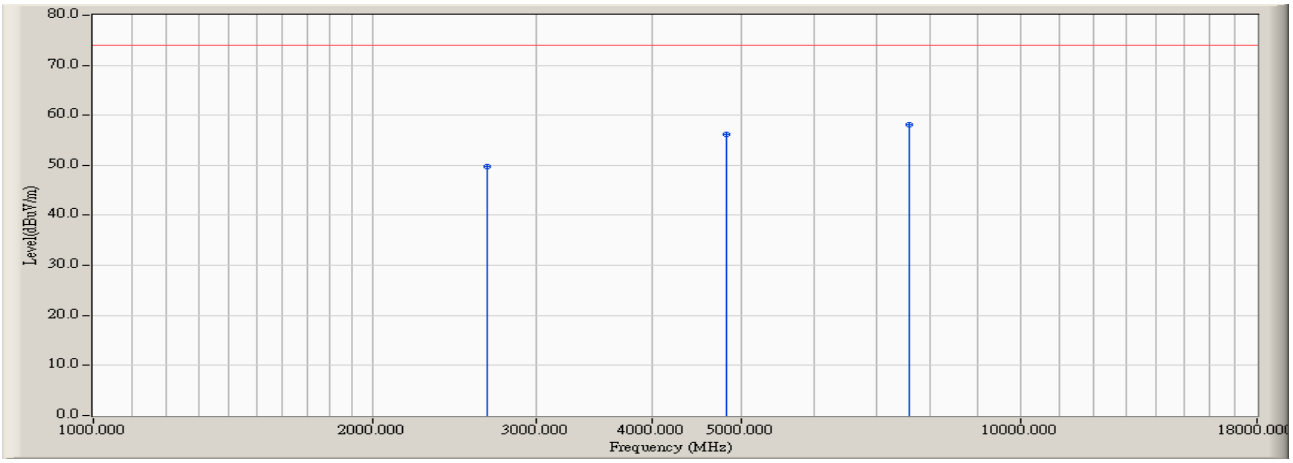


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2657.500	-1.760	46.300	44.540	-9.430	53.970	AVERAGE
2		4825.000	5.040	42.500	47.540	-6.430	53.970	AVERAGE
3	*	7205.000	13.860	38.700	52.560	-1.410	53.970	AVERAGE

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 : Marlin	
Site : AC-2 (3m Radiated Emission Chamber)	**Time : 2007/04/21 - 22:11**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : TL-WN310G	**Probe : BBHA9120D_499(1-18GHz) - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g (2412MHz)**

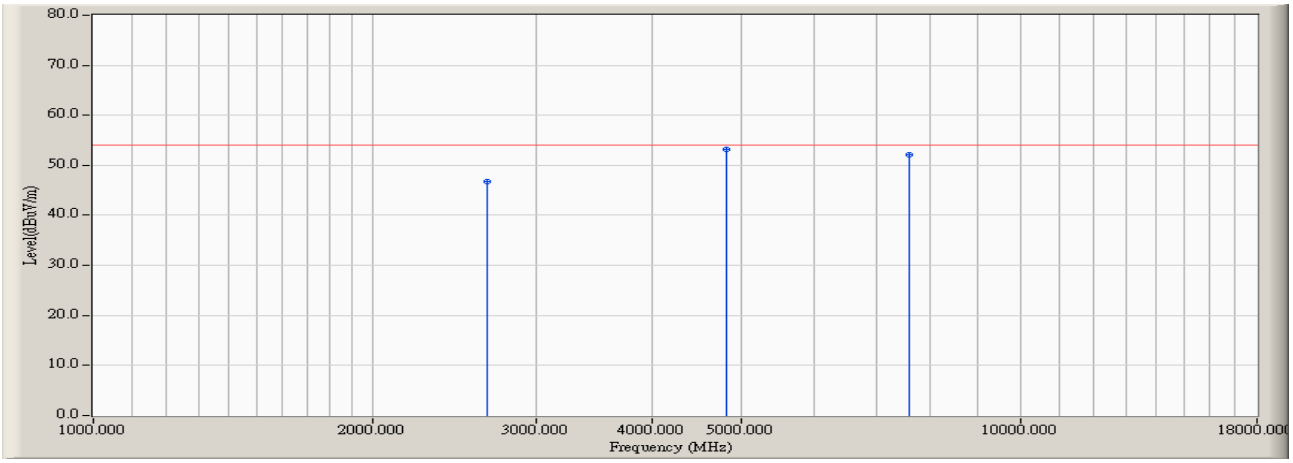


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2657.500	-1.760	51.446	49.686	-24.284	73.970	PEAK
2		4825.000	5.040	51.057	56.097	-17.873	73.970	PEAK
3	*	7587.500	15.660	42.464	58.124	-15.846	73.970	PEAK

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 : Marlin	
Site : AC-2 (3m Radiated Emission Chamber)	**Time : 2007/04/21 - 22:11**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : TL-WN310G	**Probe : BBHA9120D_499(1-18GHz) - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g (2412MHz)**

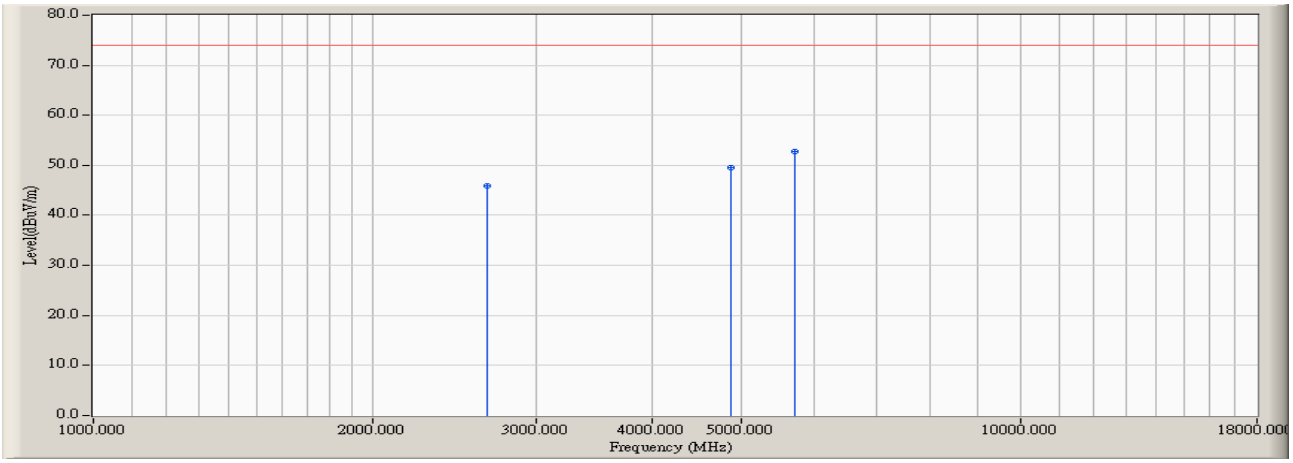


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2657.500	-1.760	48.500	46.740	-7.230	53.970	AVERAGE
2	*	4825.000	5.040	48.200	53.240	-0.730	53.970	AVERAGE
3		7587.500	15.660	36.400	52.060	-1.910	53.970	AVERAGE

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 : Marlin	
Site : AC-2 (3m Radiated Emission Chamber)	**Time : 2007/04/21 - 22:15**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : TL-WN310G	**Probe : BBHA9120D_499(1-18GHz) - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g (2437MHz)**

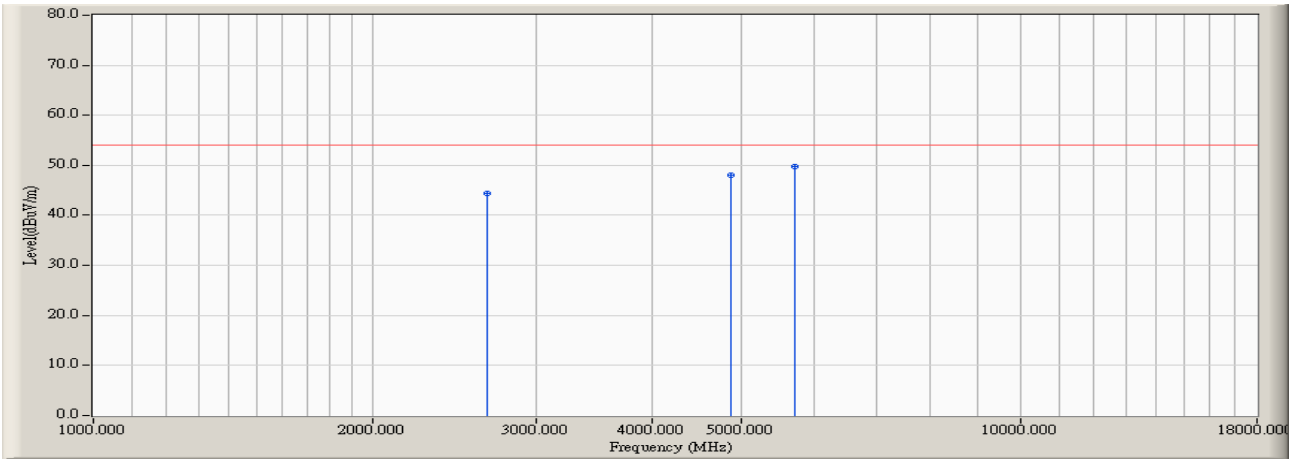


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2657.500	-1.760	47.619	45.859	-28.111	73.970	PEAK
2		4867.500	5.445	44.189	49.634	-24.336	73.970	PEAK
3	*	5717.500	9.365	43.295	52.660	-21.310	73.970	PEAK

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 : Marlin	
Site : AC-2 (3m Radiated Emission Chamber)	**Time : 2007/04/21 - 22:15**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : TL-WN310G	**Probe : BBHA9120D_499(1-18GHz) - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g (2437MHz)**

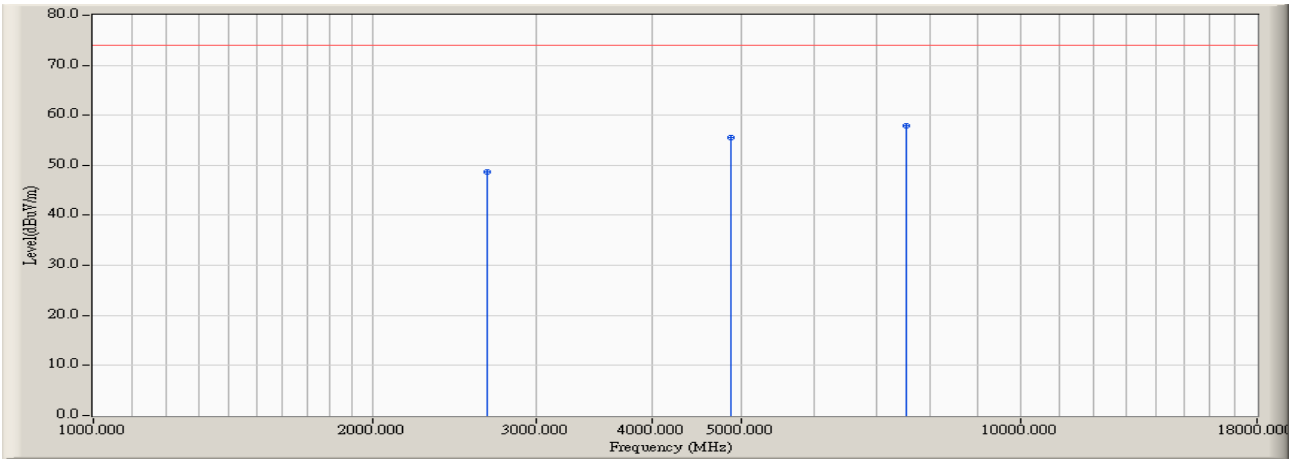


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2657.500	-1.760	46.200	44.440	-9.530	53.970	AVERAGE
2		4867.500	5.445	42.500	47.945	-6.025	53.970	AVERAGE
3	*	5717.500	9.365	40.400	49.765	-4.205	53.970	AVERAGE

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 : Marlin	
Site : AC-2 (3m Radiated Emission Chamber)	**Time : 2007/04/21 - 22:18**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : TL-WN310G	**Probe : BBHA9120D_499(1-18GHz) - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g (2437MHz)**

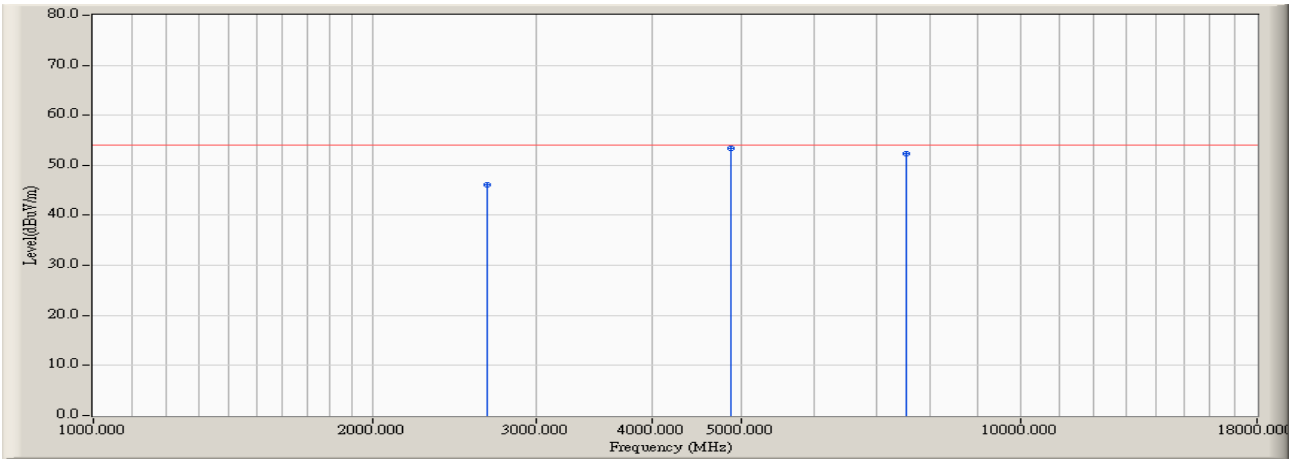


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2657.500	-1.760	50.380	48.620	-25.350	73.970	PEAK
2		4867.500	5.445	50.037	55.482	-18.488	73.970	PEAK
3	*	7545.000	15.160	42.803	57.963	-16.007	73.970	PEAK

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 : Marlin	
Site : AC-2 (3m Radiated Emission Chamber)	**Time : 2007/04/21 - 22:18**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : TL-WN310G	**Probe : BBHA9120D_499(1-18GHz) - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g (2437MHz)**

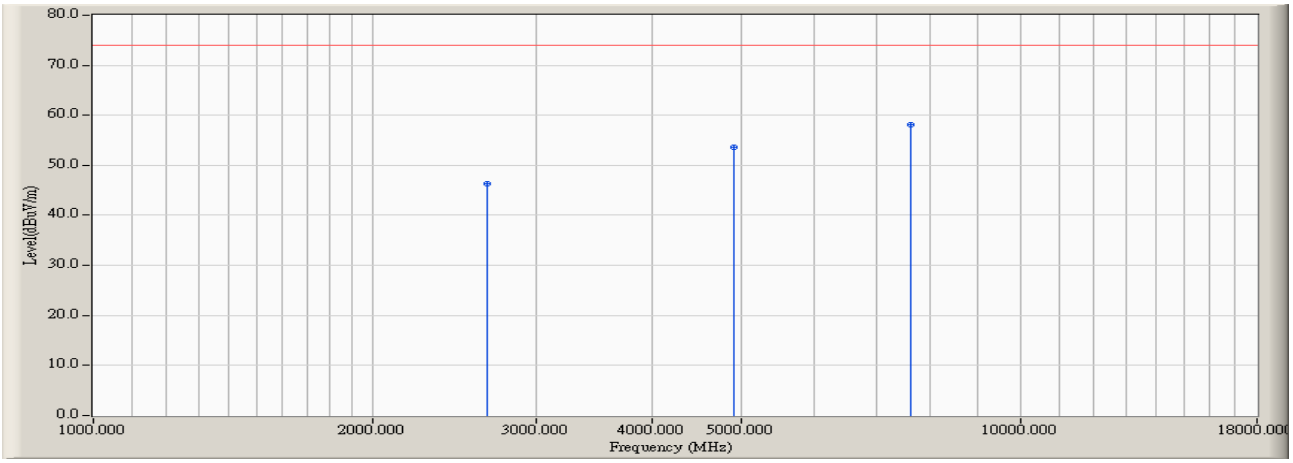


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2657.500	-1.760	47.800	46.040	-7.930	53.970	AVERAGE
2	*	4867.500	5.445	48.020	53.465	-0.505	53.970	AVERAGE
3		7545.000	15.160	37.200	52.360	-1.610	53.970	AVERAGE

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 : Marlin	
Site : AC-2 (3m Radiated Emission Chamber)	**Time : 2007/04/21 - 22:21**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : TL-WN310G	**Probe : BBHA9120D_499(1-18GHz) - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g (2462MHz)**

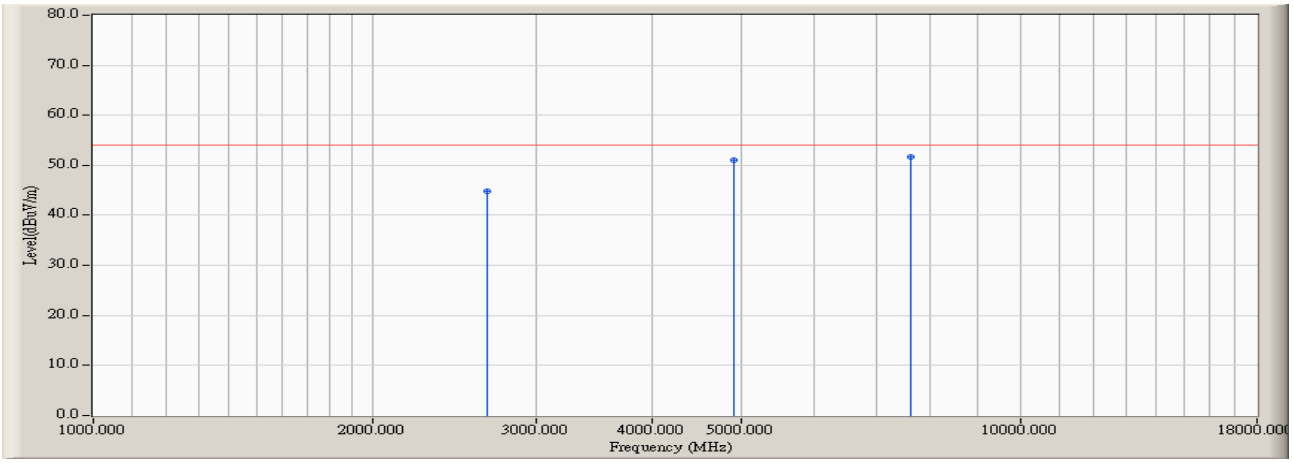


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2657.500	-1.760	48.047	46.287	-27.683	73.970	PEAK
2		4910.000	5.790	47.827	53.617	-20.353	73.970	PEAK
3	*	7630.000	15.760	42.451	58.211	-15.759	73.970	PEAK

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 : Marlin	
Site : AC-2 (3m Radiated Emission Chamber)	**Time : 2007/04/21 - 22:21**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : TL-WN310G	**Probe : BBHA9120D_499(1-18GHz) - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g (2462MHz)**

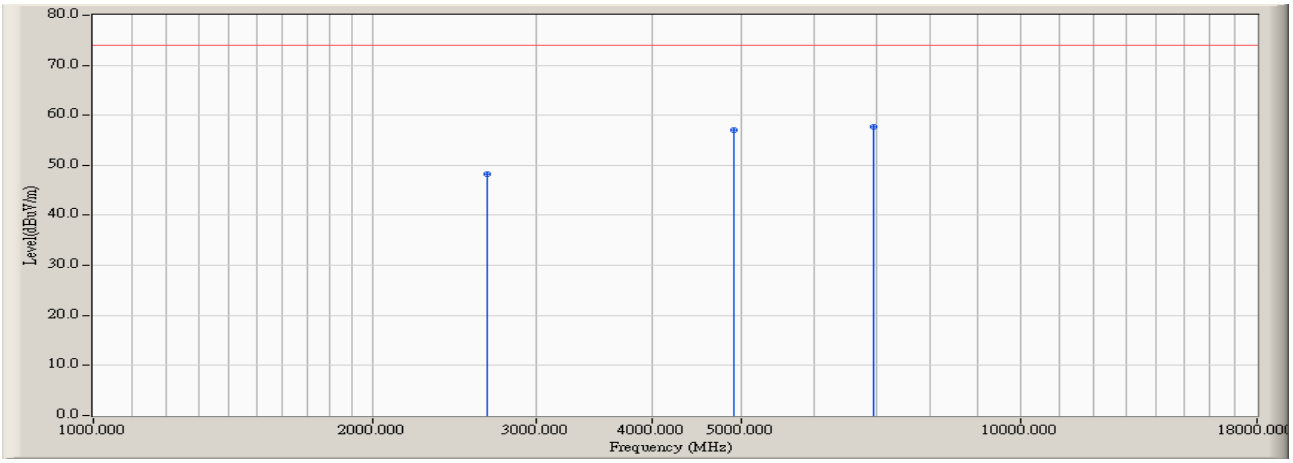


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2657.500	-1.760	46.500	44.740	-9.230	53.970	AVERAGE
2		4910.000	5.790	45.300	51.090	-2.880	53.970	AVERAGE
3	*	7630.000	15.760	35.900	51.660	-2.310	53.970	AVERAGE

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 : Marlin	
Site : AC-2 (3m Radiated Emission Chamber)	**Time : 2007/04/21 - 22:24**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
EUT : TL-WN310G	**Probe : BBHA9120D_499(1-18GHz) - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g (2462MHz)**

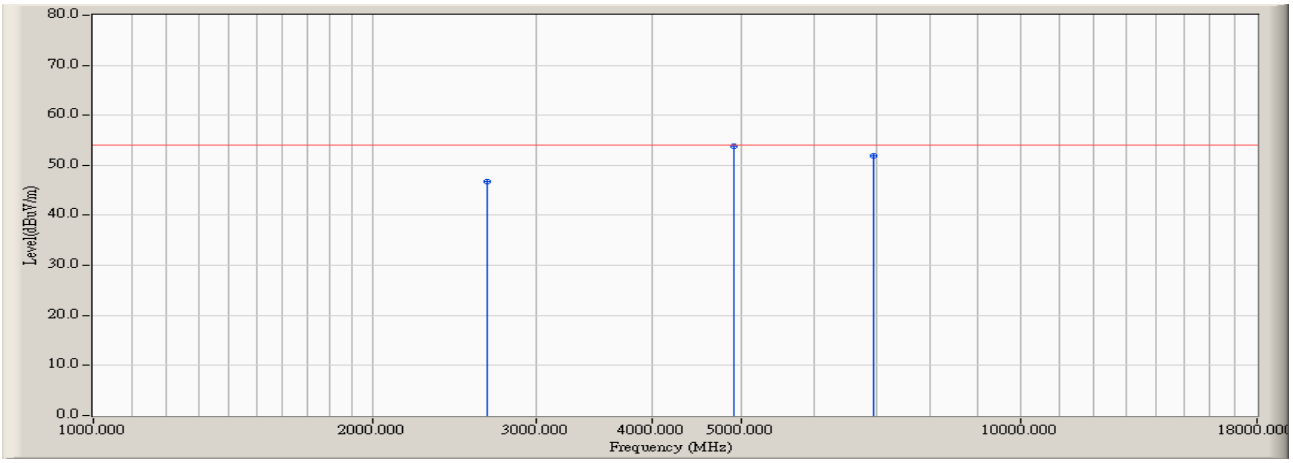


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2657.500	-1.760	50.037	48.277	-25.693	73.970	PEAK
2		4910.000	5.790	51.341	57.131	-16.839	73.970	PEAK
3	*	6950.000	14.540	43.145	57.685	-16.285	73.970	PEAK

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 : Marlin	
Site : AC-2 (3m Radiated Emission Chamber)	**Time : 2007/04/21 - 22:24**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
EUT : TL-WN310G	**Probe : BBHA9120D_499(1-18GHz) - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 2: Transmit by 802.11g (2462MHz)**

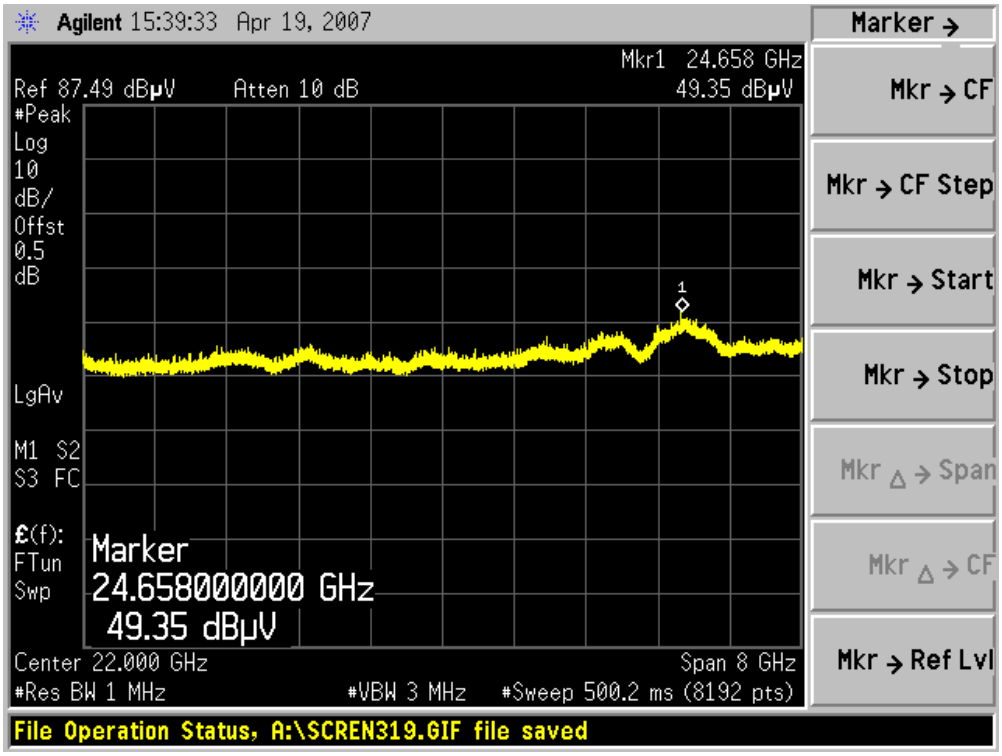


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2657.500	-1.760	48.600	46.840	-7.130	53.970	AVERAGE
2	*	4910.000	5.790	48.030	53.820	-0.150	53.970	AVERAGE
3		6950.000	14.540	37.400	51.940	-2.030	53.970	AVERAGE

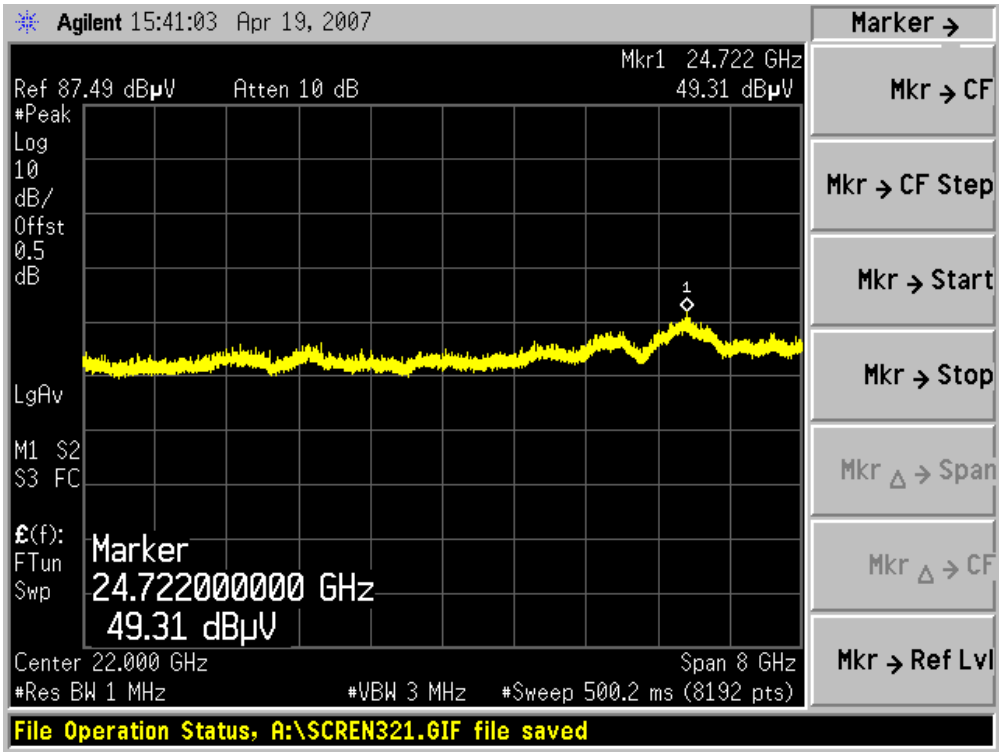
Note:

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

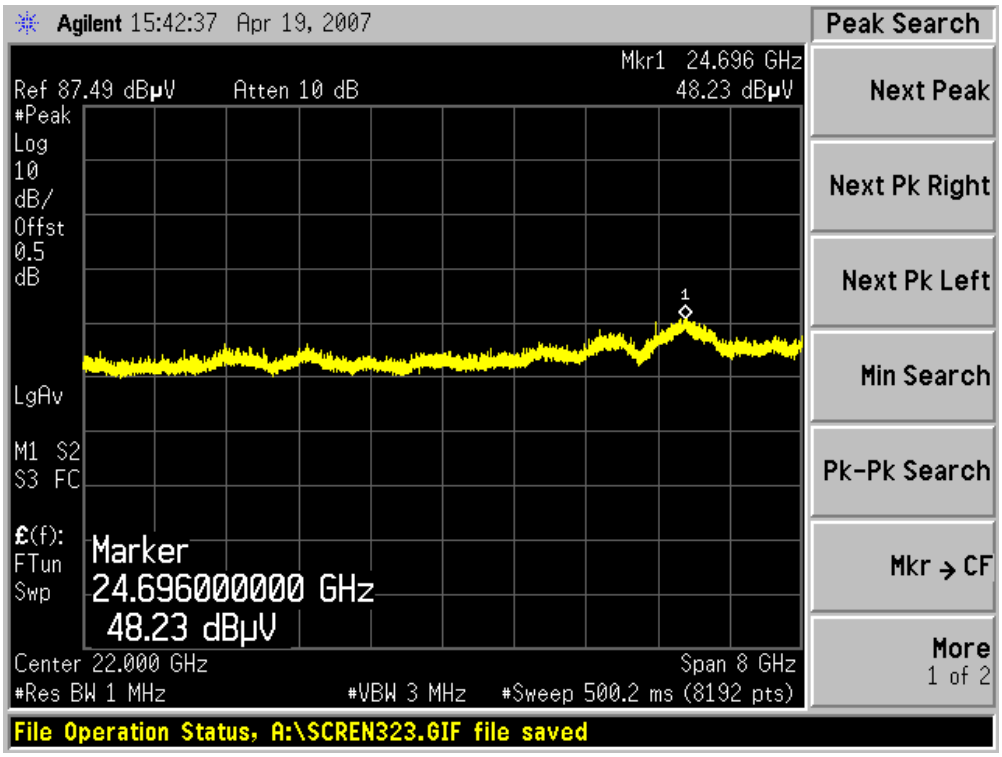
Conducted Spurious - Channel 01 (2412MHz) - 802.11b



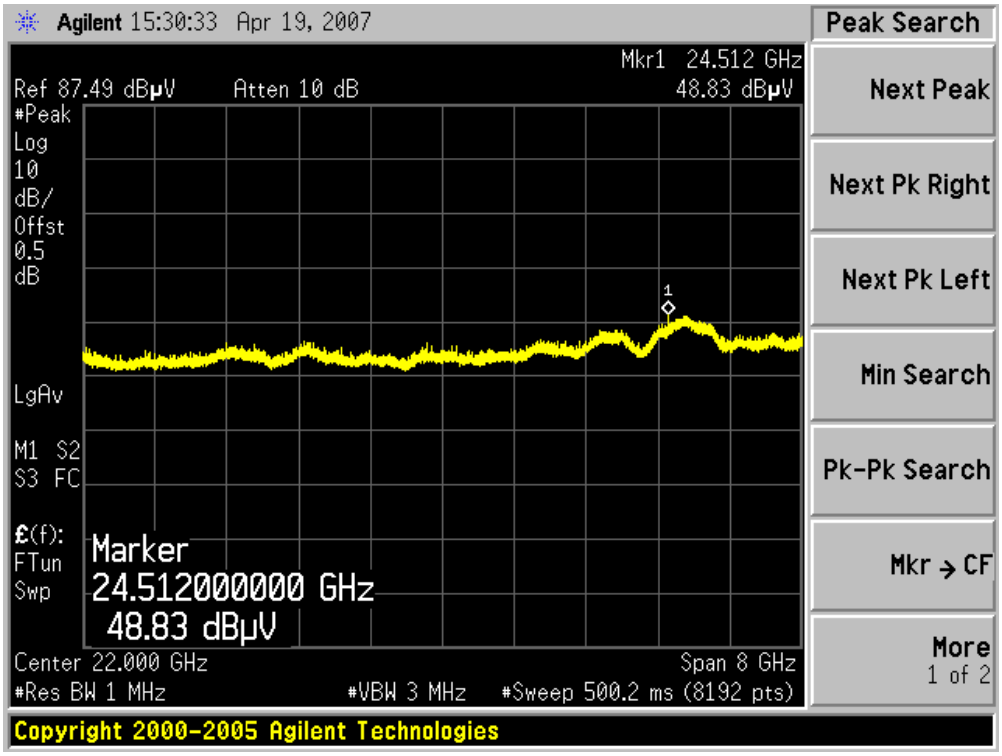
Conducted Spurious - Channel 06 (2437MHz) - 802.11b



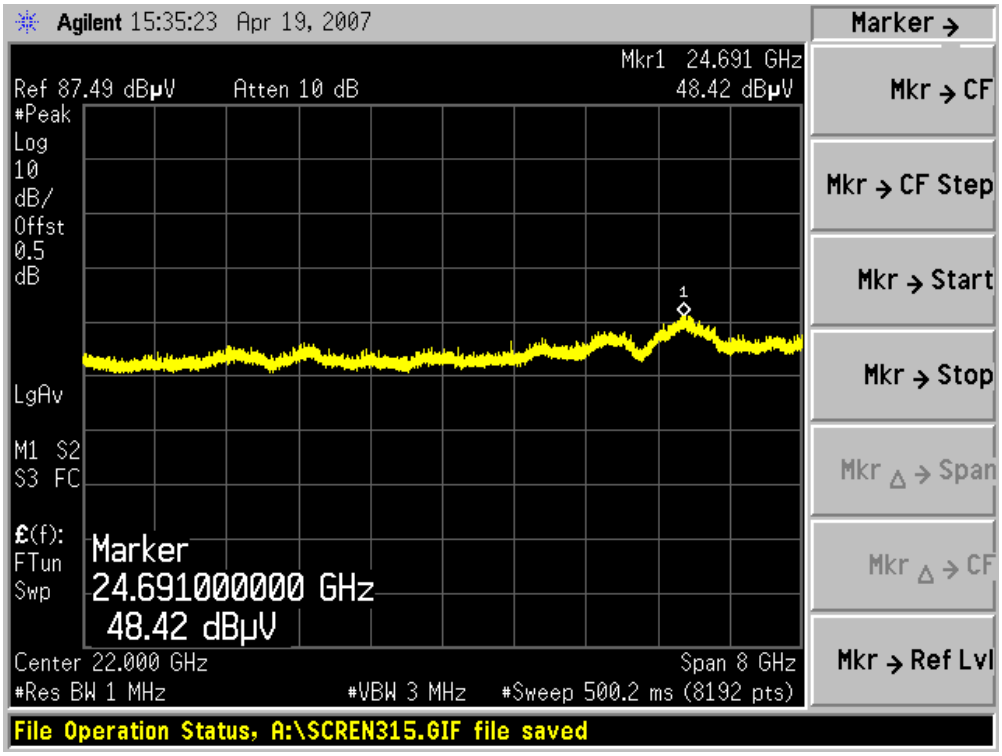
Conducted Spurious - Channel 11 (2462MHz) - 802.11b



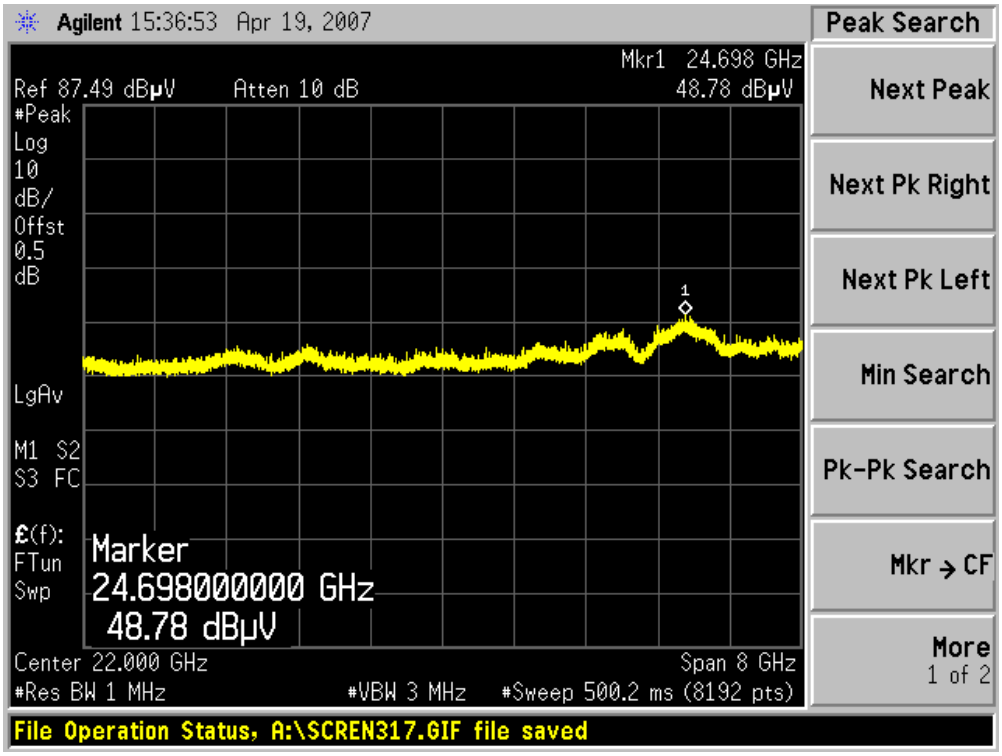
Conducted Spurious - Channel 01 (2412MHz) - 802.11g



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



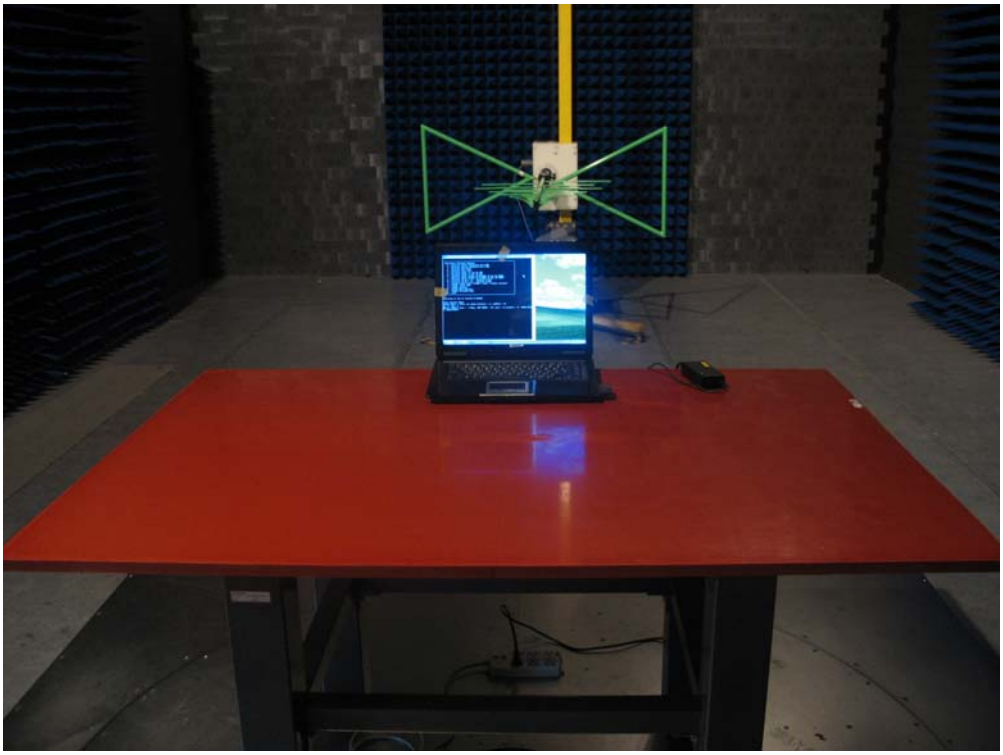
Conducted Spurious - Channel 11 (2462MHz) - 802.11g



4.7. Test Photograph

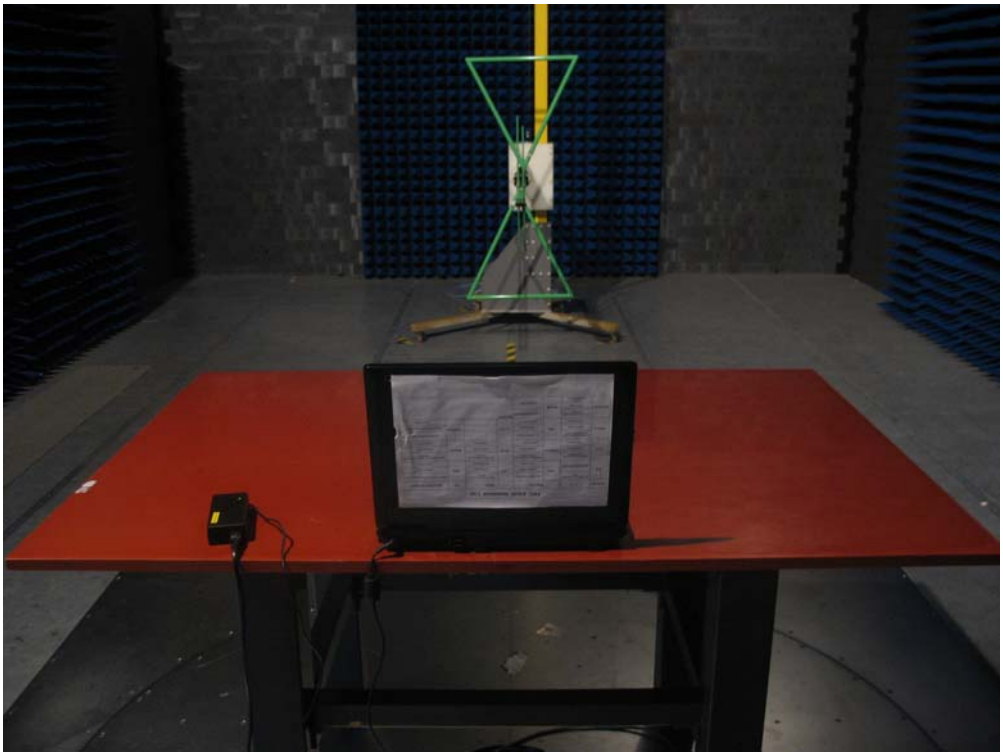
Test Mode: Mode 1: Transmit by 802.11b

Description: Front View of Radiated Test for Under 1GHz



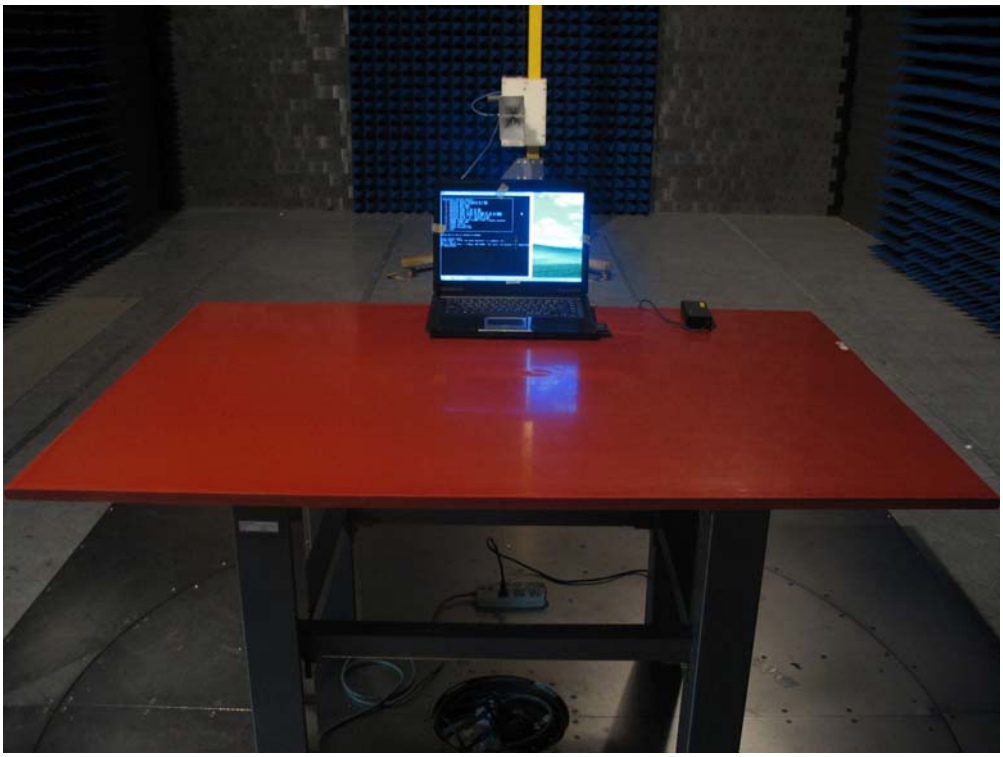
Test Mode: Mode 1: Transmit by 802.11b

Description: Back View of Radiated Test for Under 1GHz



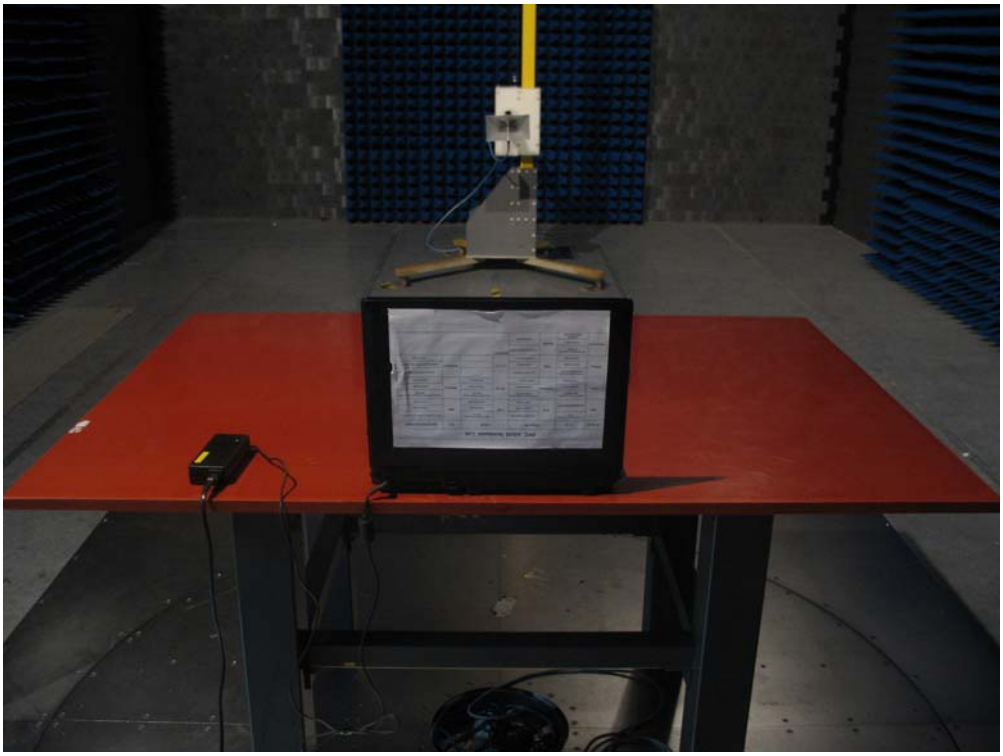
Test Mode: Mode 1: Transmit by 802.11b

Description: Front View of Radiated Test for Above 1GHz



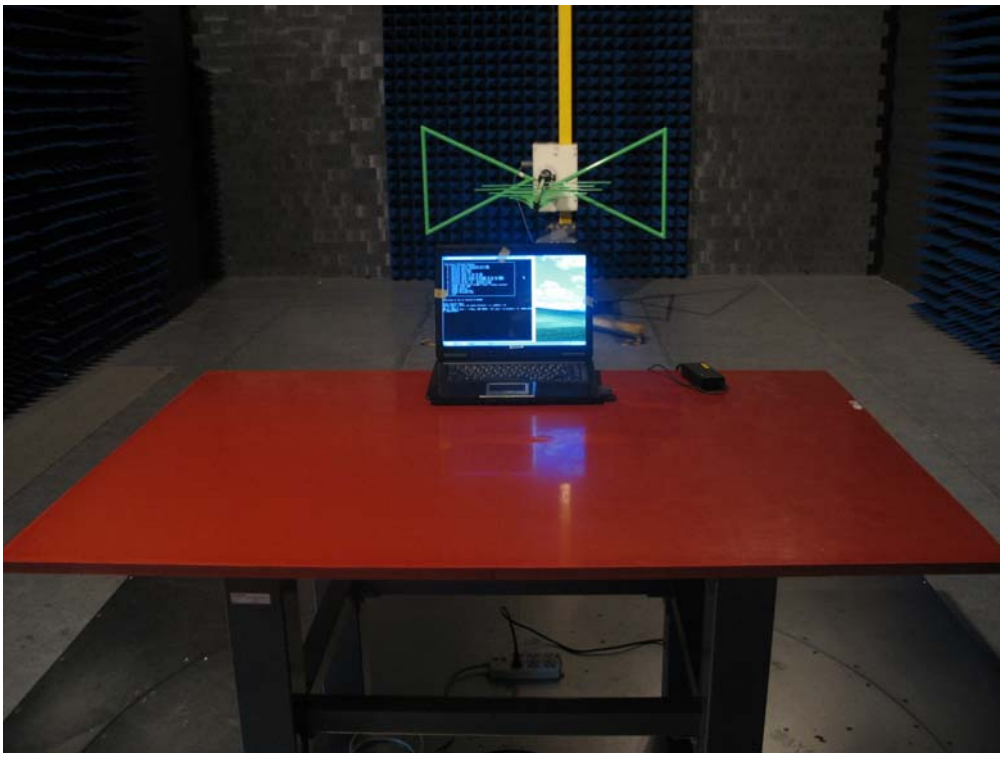
Test Mode: Mode 1: Transmit by 802.11b

Description: Back View of Radiated Test for Above 1GHz



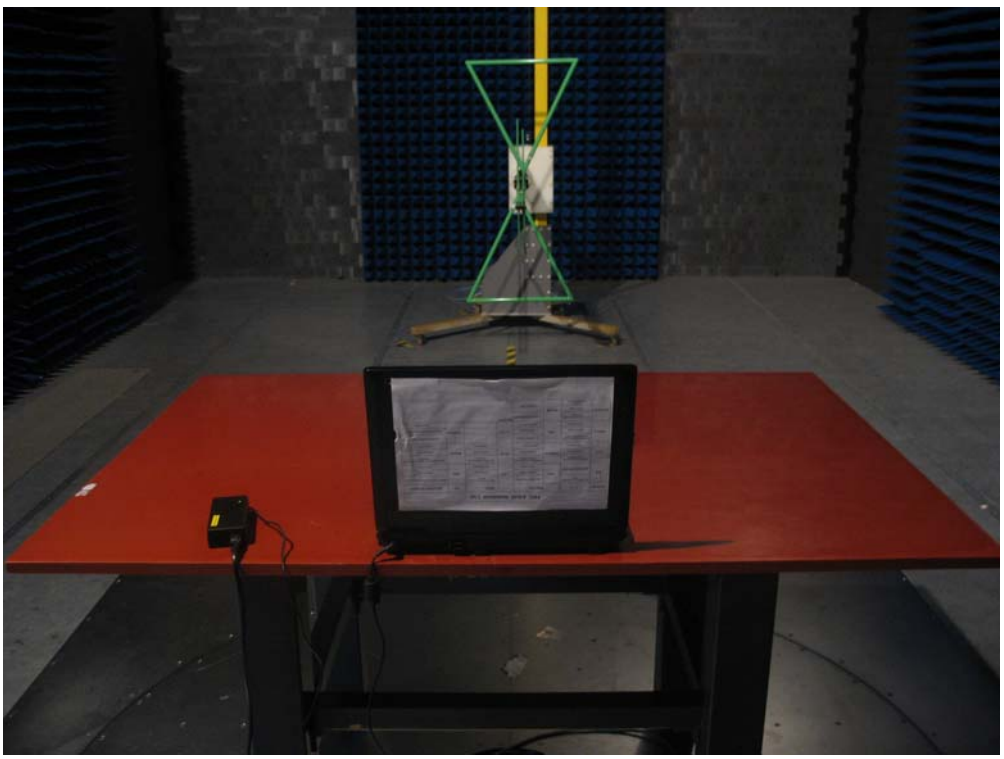
Test Mode: Mode 2: Transmit by 802.11g

Description: Front View of Radiated Test for Under 1GHz



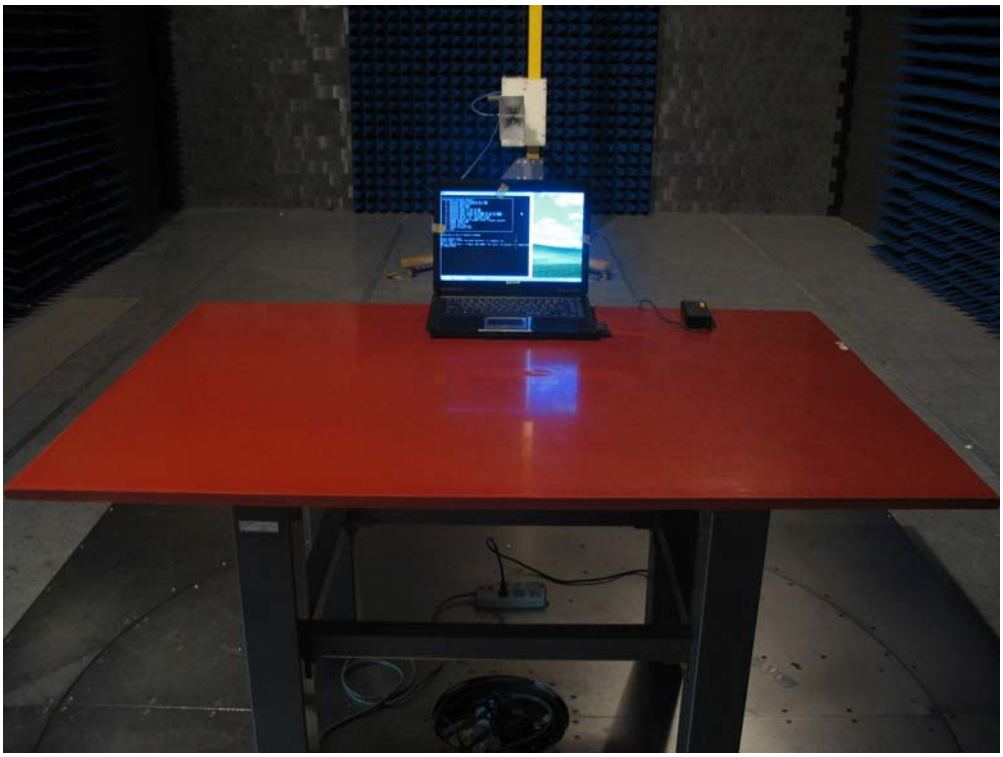
Test Mode: Mode 2: Transmit by 802.11g

Description: Back View of Radiated Test for Under 1GHz



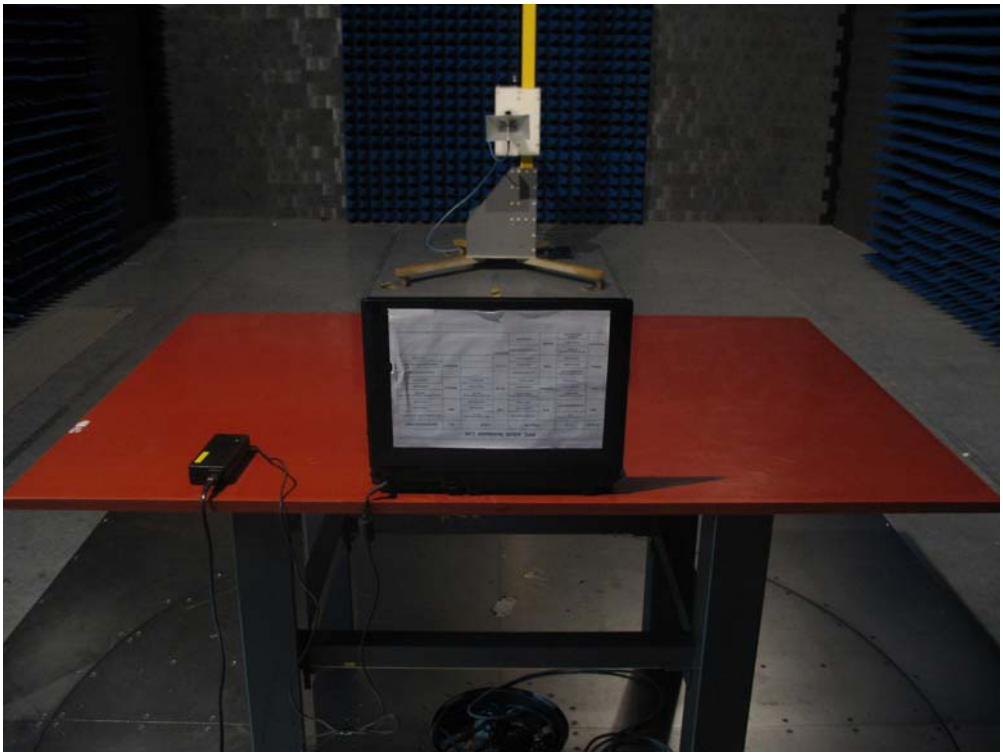
Test Mode: Mode 2: Transmit by 802.11g

Description: Front View of Radiated Test for Above 1GHz



Test Mode: Mode 2: Transmit by 802.11g

Description: Back View of Radiated Test for Above 1GHz



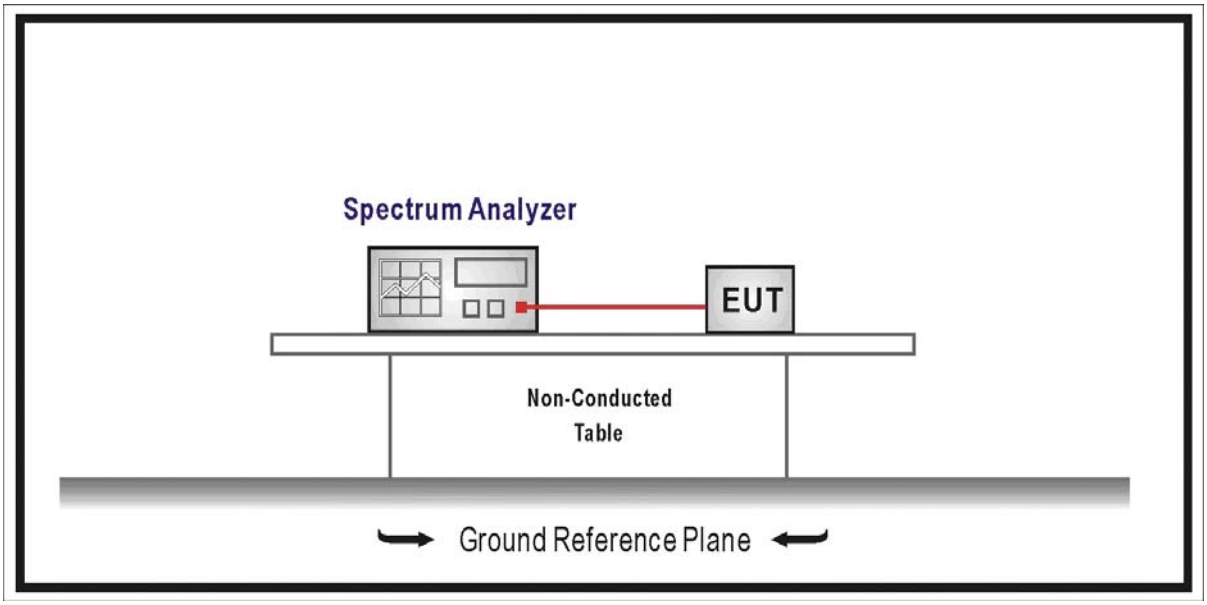
5. Peak Power Output

5.1. Test Equipment

Radiated Emission / AC-3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2007/03/23
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH003	2007/03/30

5.2. Test Setup



5.3. Limit

The maximum peak power shall be less 1Watt.

5.4. Test Procedure

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

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

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

5.5. Uncertainty

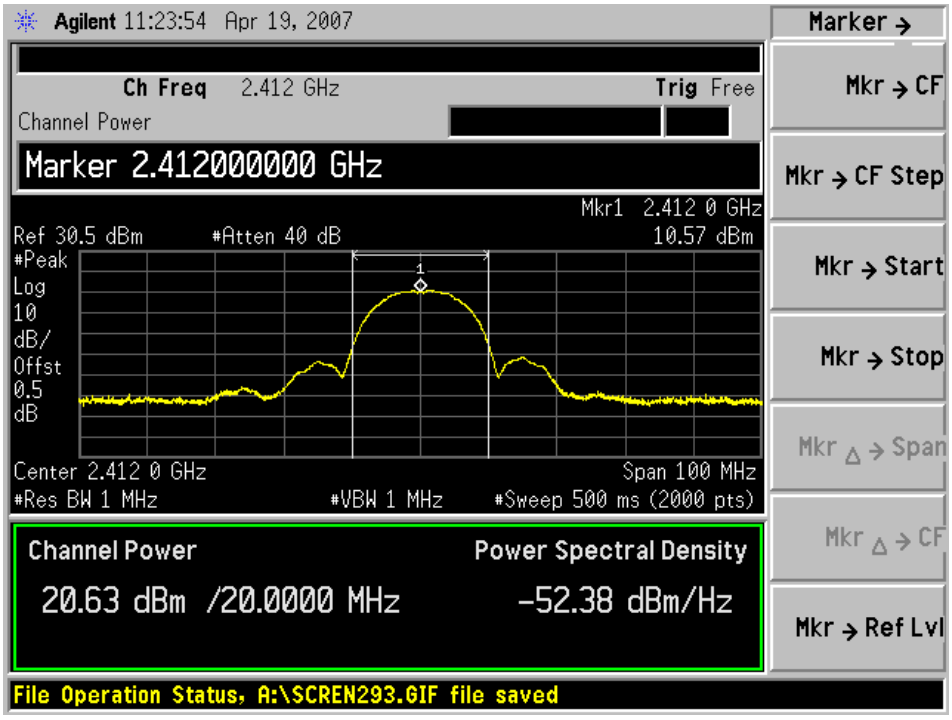
The measurement uncertainty is defined as ± 1.27 dB

5.6. Test Result

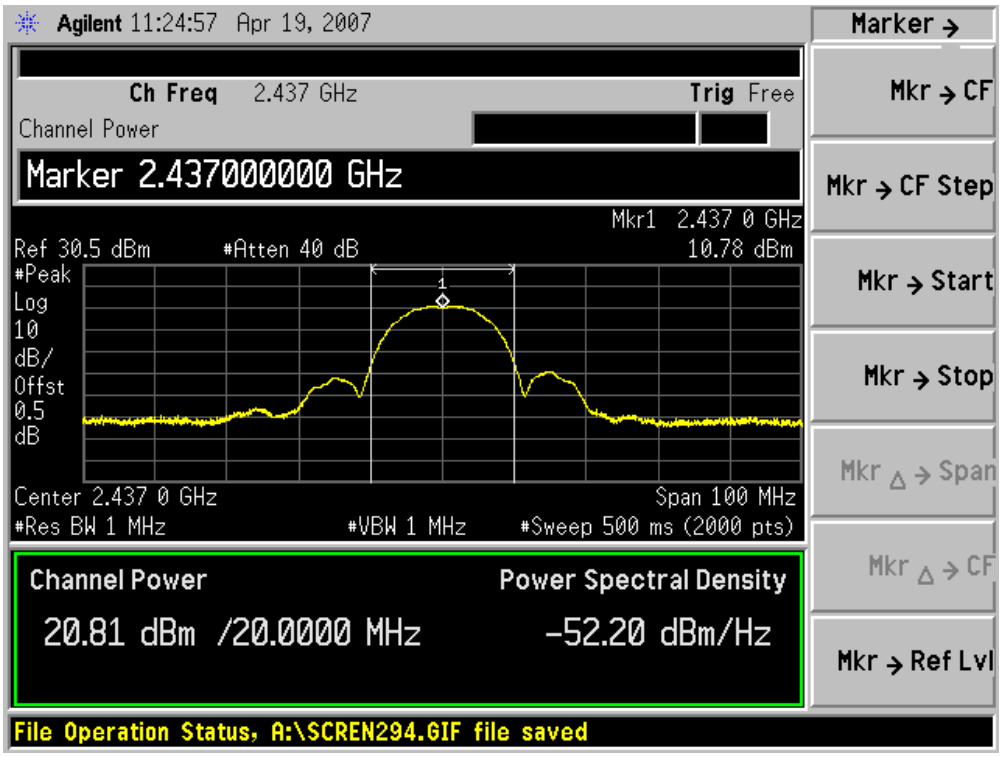
Product	:	54M Wireless Cardbus Adapter
Test Item	:	Peak Power Output
Test Site	:	AC-3
Test Mode	:	Mode 1: Transmitter by 802.11b

Channel No.	Frequency (MHz)	Measurement (dBm)	Required Limit (dBm)	Result
Channel 01	2412.00	20.63	1 Watt= 30 dBm	Pass
Channel 06	2437.00	20.81	1 Watt= 30 dBm	Pass
Channel 11	2462.00	19.70	1 Watt= 30 dBm	Pass

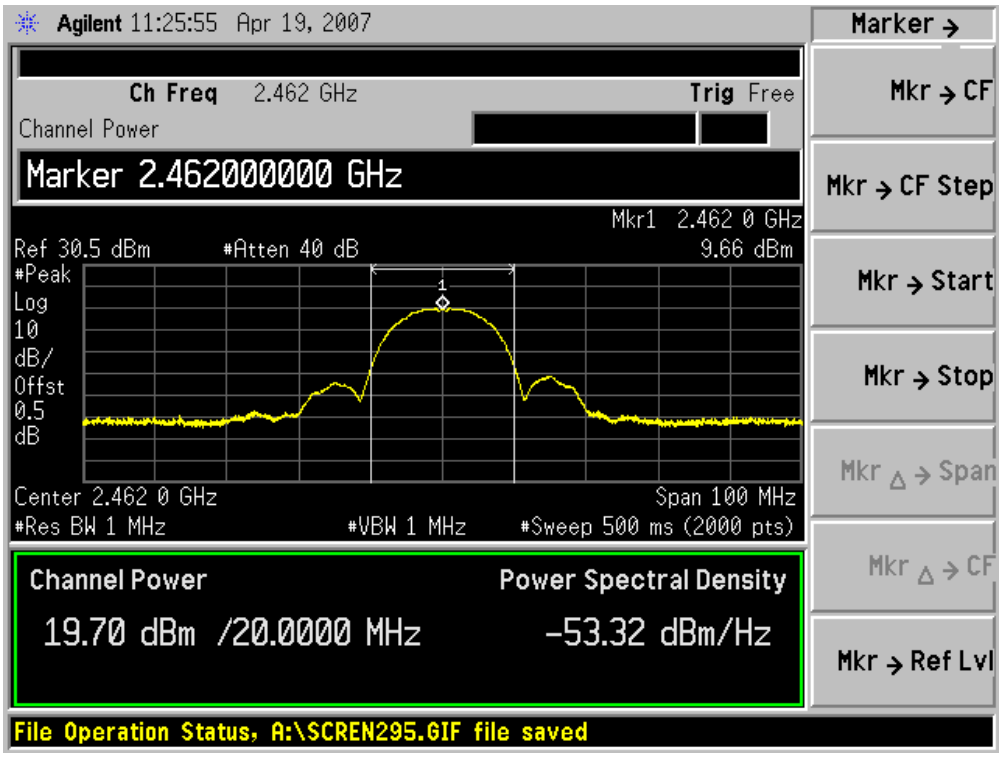
Channel 01 (2412MHz)



Channel 06 (2437MHz)



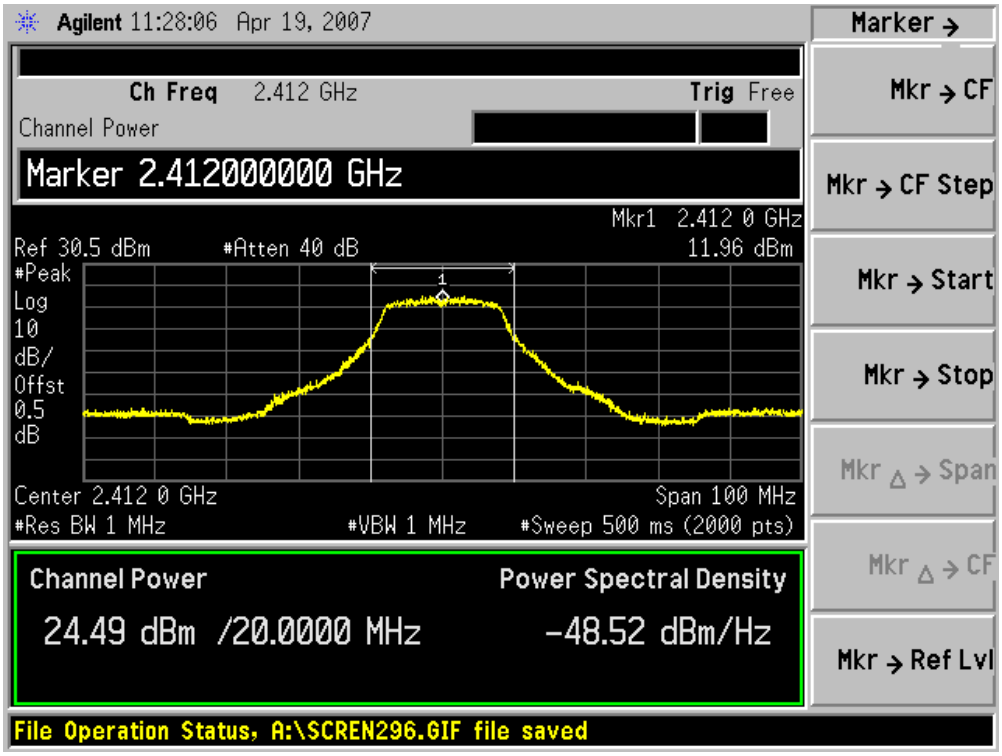
Channel 11 (2462MHz)



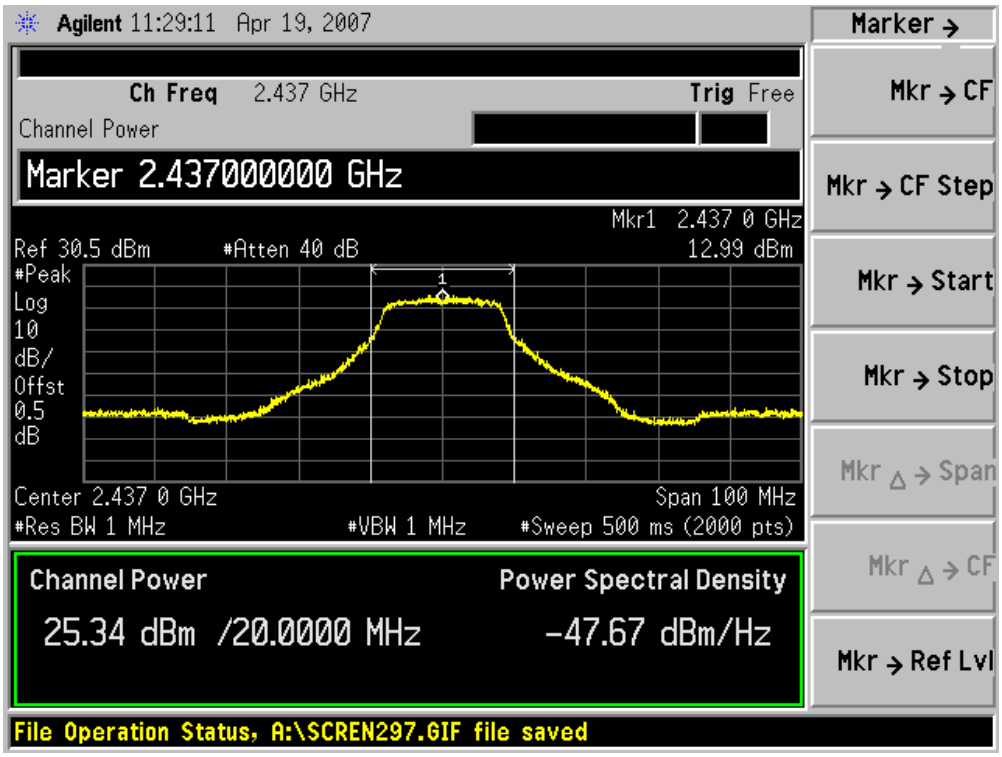
Product	:	54M Wireless Cardbus Adapter
Test Item	:	Peak Power Output
Test Site	:	AC-3
Test Mode	:	Mode 2: Transmitter by 802.11g

Channel No.	Frequency (MHz)	Measurement (dBm)	Required Limit (dBm)	Result
Channel 01	2412.00	24.49	1 Watt= 30 dBm	Pass
Channel 06	2437.00	25.34	1 Watt= 30 dBm	Pass
Channel 11	2462.00	23.78	1 Watt= 30 dBm	Pass

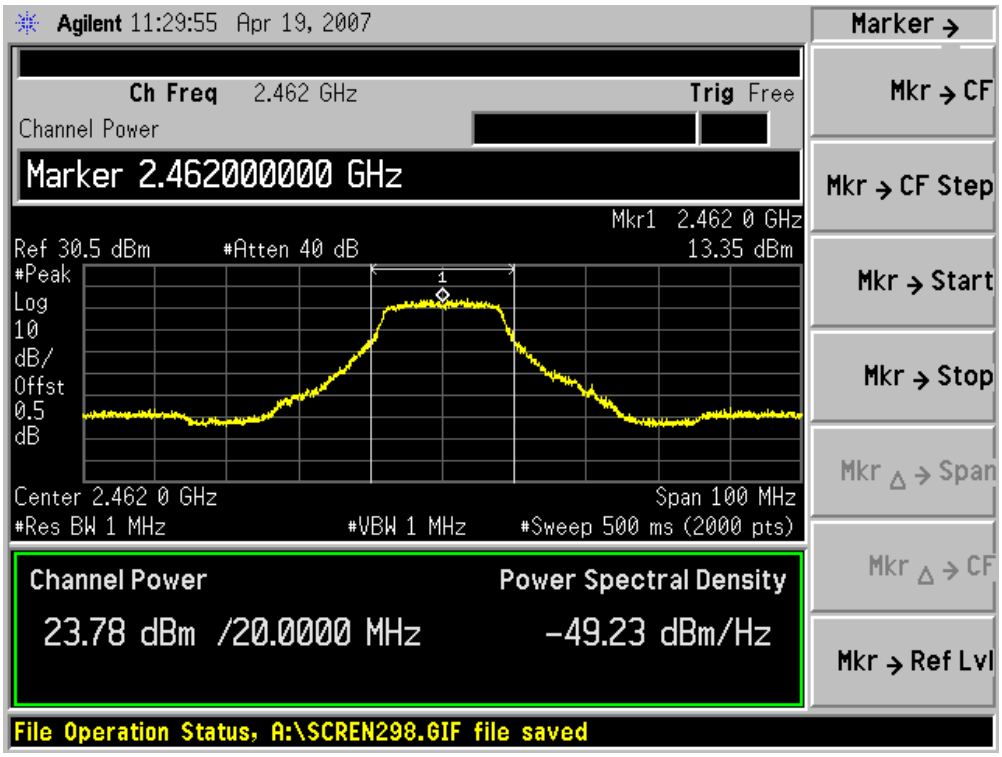
Channel 01 (2412MHz)



Channel 06 (2437MHz)



Channel 11 (2462MHz)



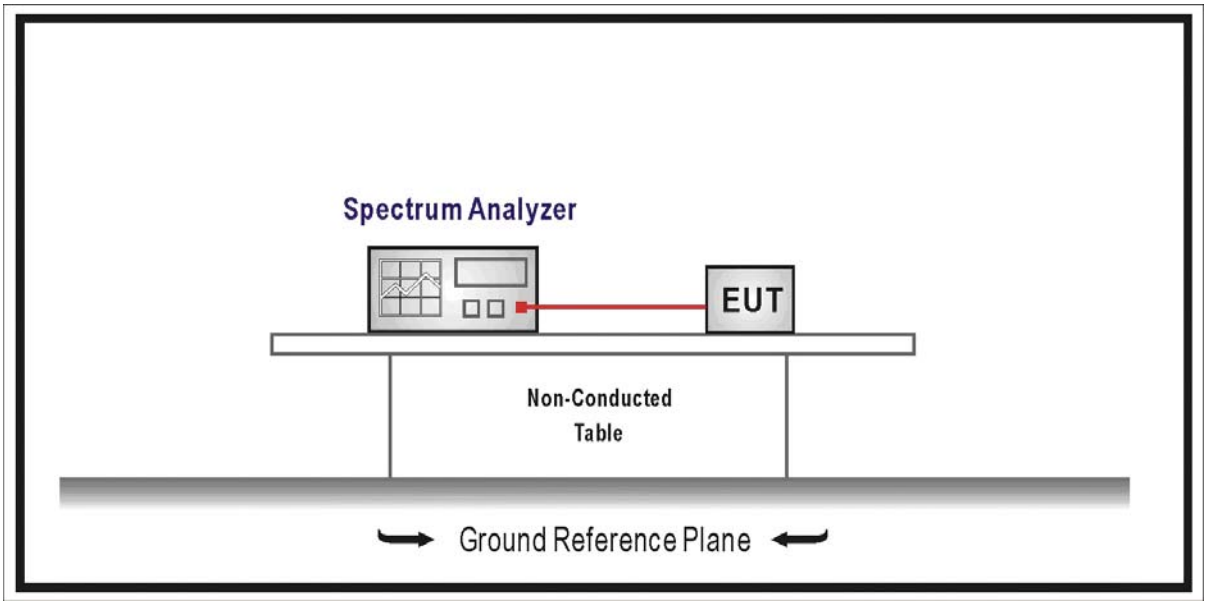
6. Occupied Bandwidth

6.1. Test Equipment

Radiated Emission / AC-3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2007/03/23
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH003	2007/03/30

6.2. Test Setup



6.3. Limit

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

6.4. Test Procedure

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

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

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

6.5. Uncertainty

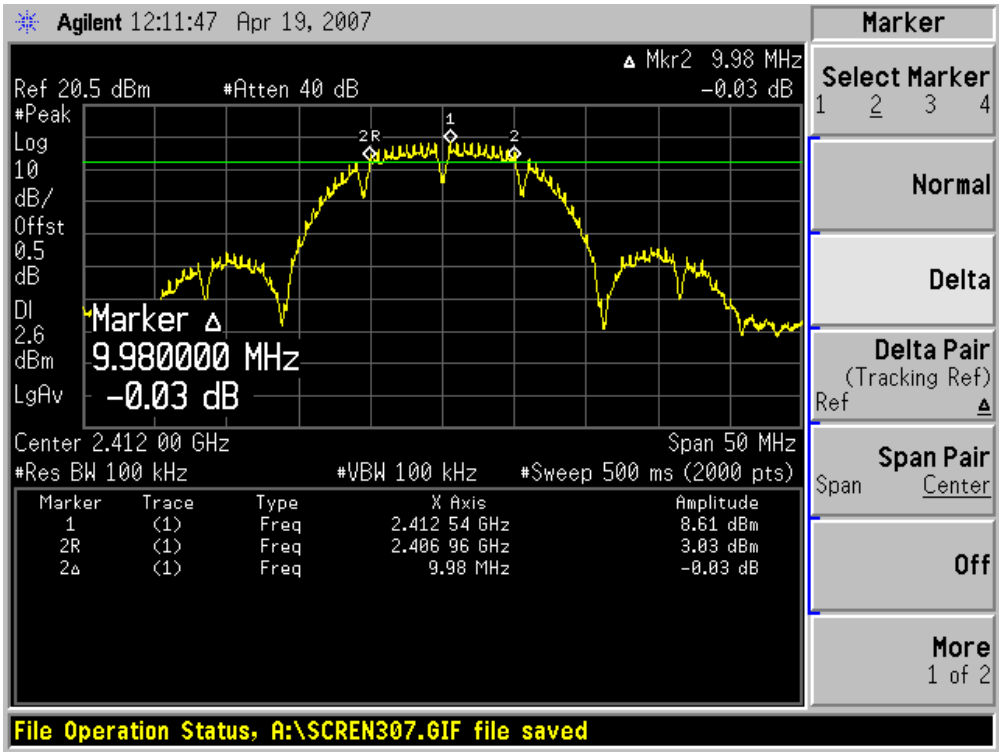
The measurement uncertainty is defined as ± 100 Hz

6.6. Test Result

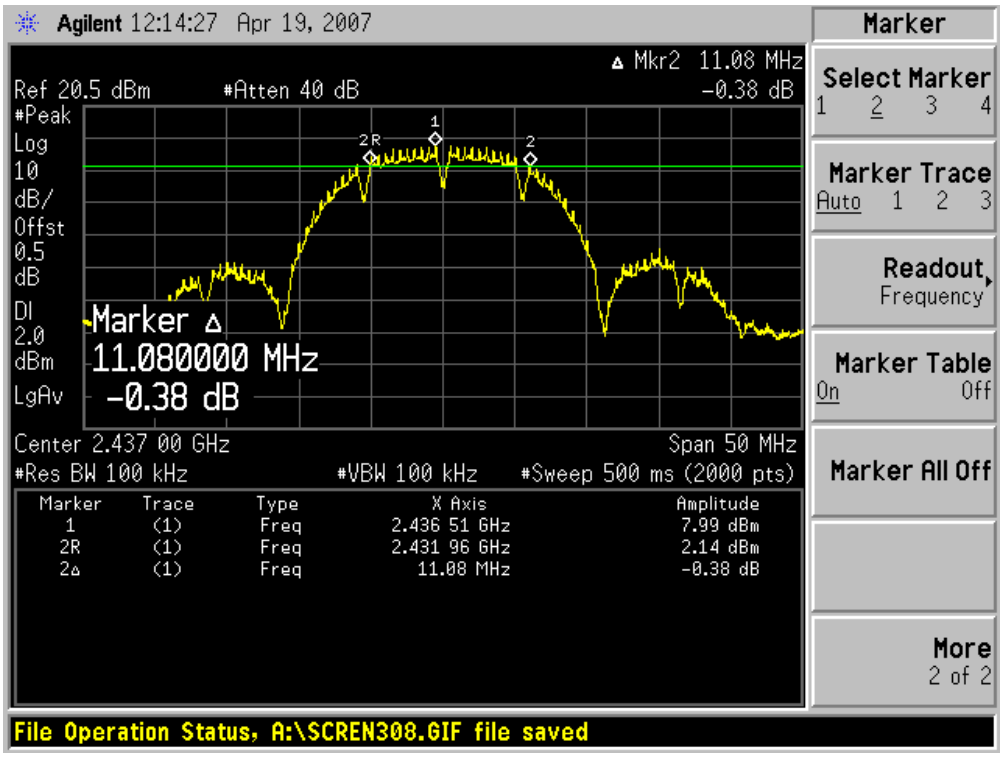
Product	:	54M Wireless Cardbus Adapter
Test Item	:	Occupied Bandwidth
Test Site	:	AC-3
Test Mode	:	Mode 1: Transmitter by 802.11b

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
Channel 01	2412	9980	500	Pass
Channel 06	2437	11080	500	Pass
Channel 11	2462	10110	500	Pass

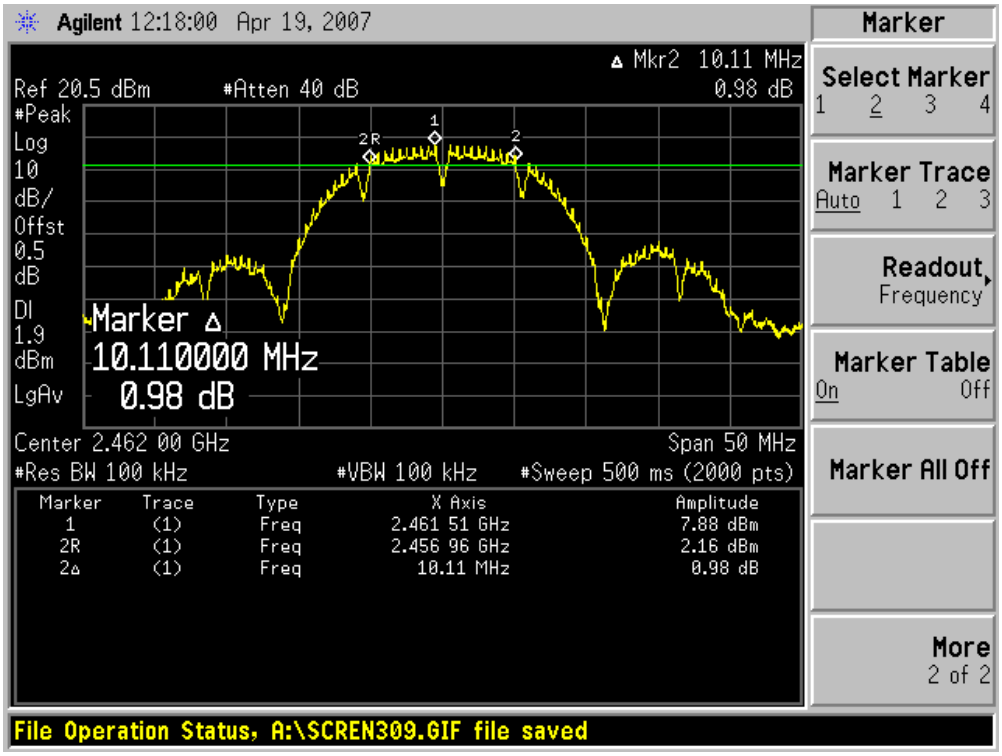
Channel 01 (2412MHz)



Channel 06 (2437MHz)



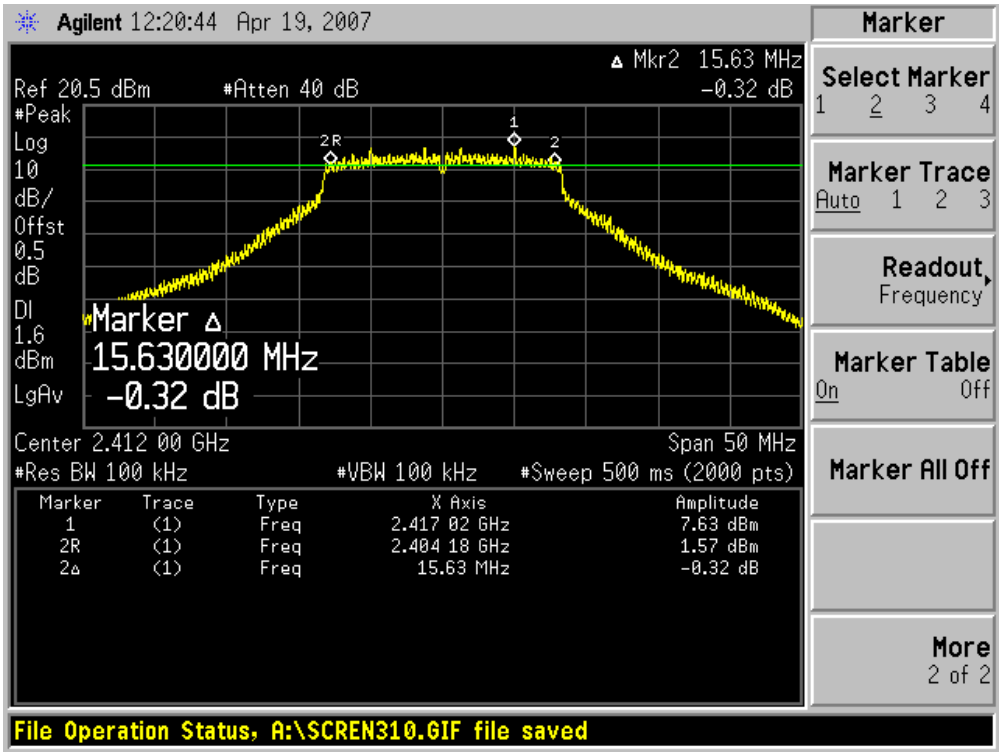
Channel 11 (2462MHz)



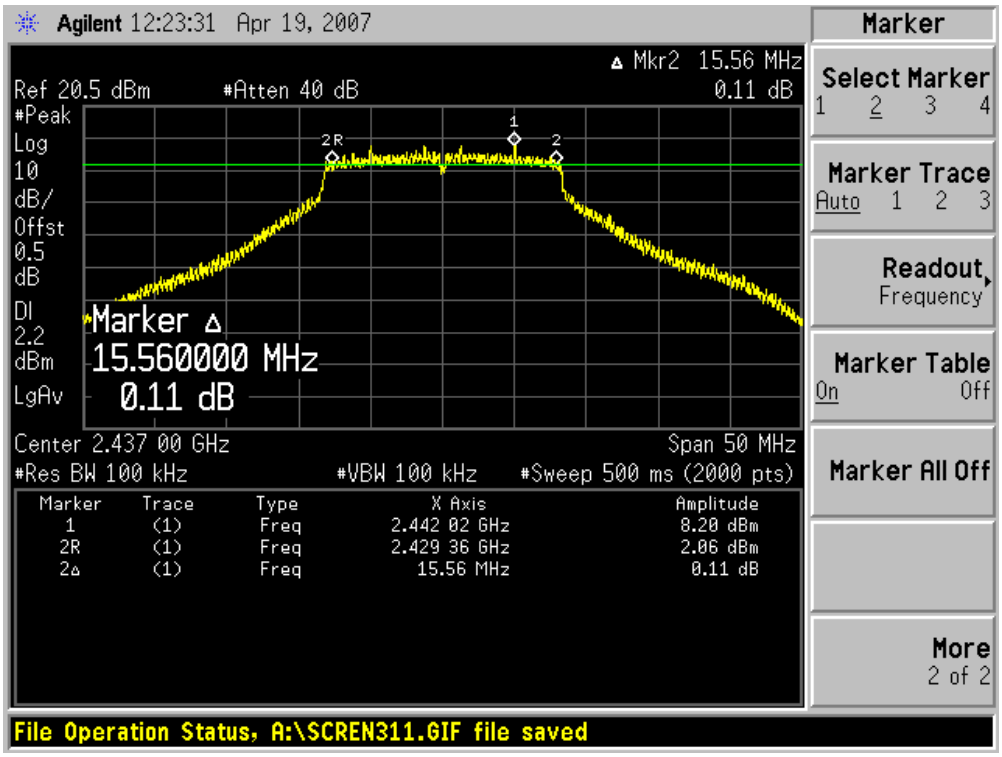
Product	:	54M Wireless Cardbus Adapter
Test Item	:	Occupied Bandwidth
Test Site	:	AC-3
Test Mode	:	Mode 2: Transmitter by 802.11g

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
Channel 01	2412	15630	500	Pass
Channel 06	2437	15560	500	Pass
Channel 11	2462	15010	500	Pass

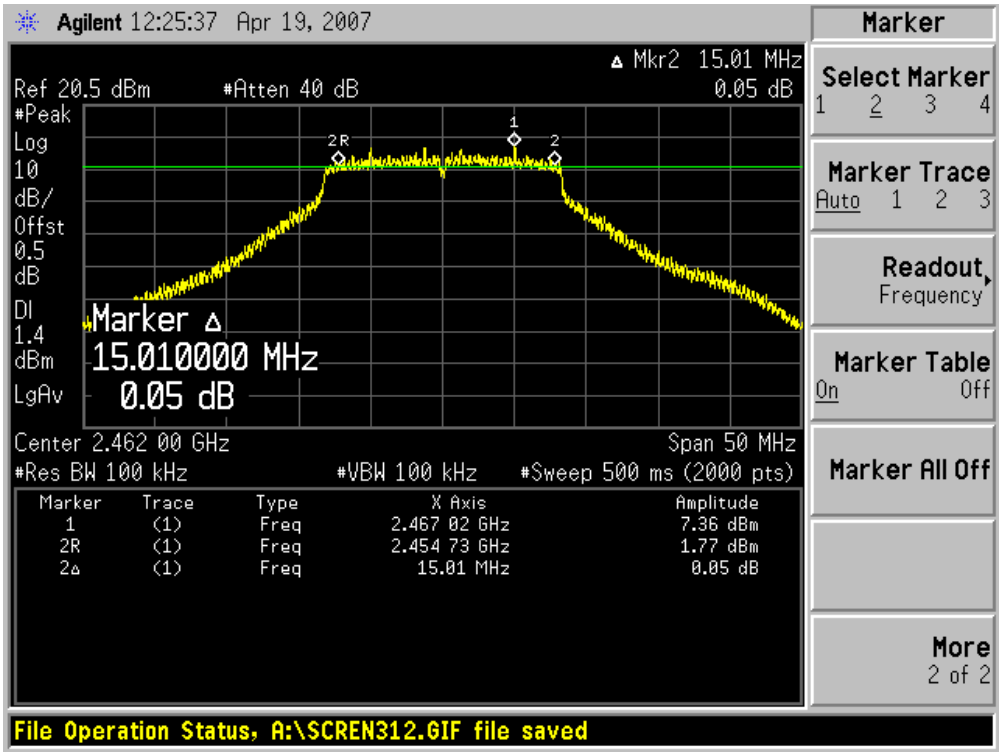
Channel 01 (2412MHz)



Channel 06 (2437MHz)



Channel 11 (2462MHz)



7. Band Edge

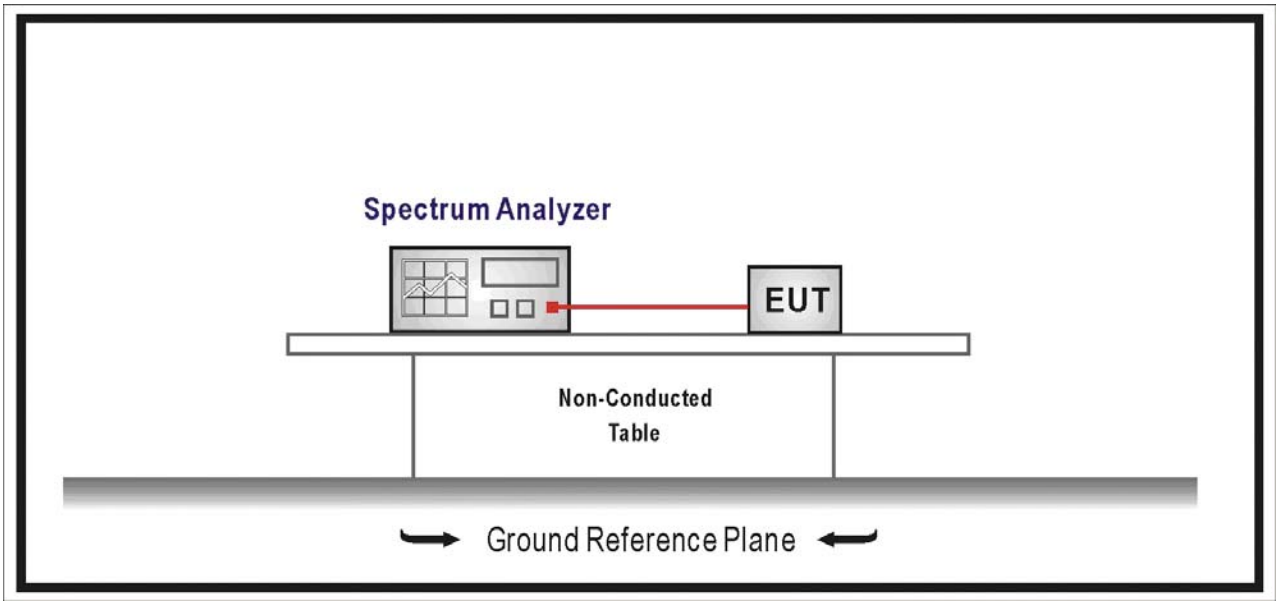
7.1. Test Equipment

Radiated Emission / AC-2

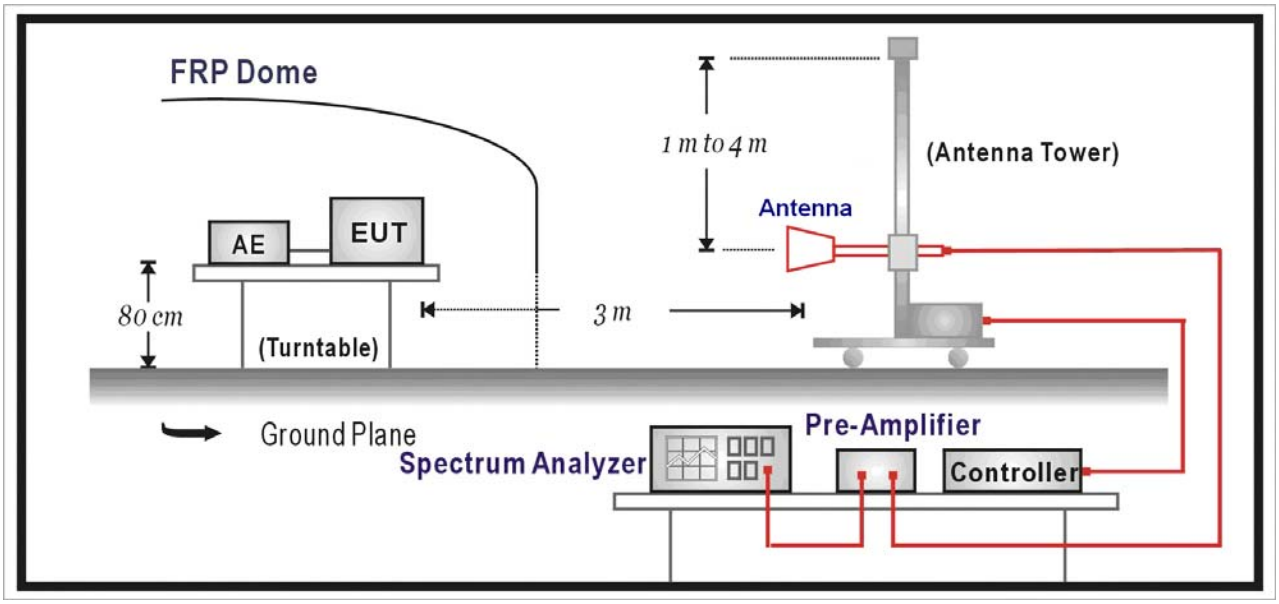
Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4408B	MY45102679	2006/11/20
EMI Test Receiver	R&S	ESCI	100175	2006/11/25
Preamplifier	Quietek	AP-025C	QT-AP003	2006/11/25
Preamplifier	Quietek	AP-180C	CHM-0602013	2006/11/25
Bilog Type Antenna	Schaffner	CBL6112B	2932	2006/10/26
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	496	2006/11/30
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2006/11/30
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH002	2007/03/30

7.2. Test Setup

RF Conducted Measurement



RF Radiated Measurement



7.3. 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)).

7.4. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground.

The turn table can rotate 360 degrees to determine the position of the maximum emission level and the antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated on radiated measurement.

The additional latch filter below 1GHz was used to measure the level of harmonics radiated emission during field strength of harmonics measurement.

The bandwidth below 1GHz setting on the field strength meter (R&S Test Receiver ESCI) is 120 kHz and above 1GHz is 1MHz.

7.5. Uncertainty

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

under 1G is defined as ± 3.8 dB

7.6. Test Result

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

RF Radiated Measurement:

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

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2390.000	51.126	48.978	73.970	53.970	Pass
01 (Average)	2390.000	41.022	38.874	73.970	53.970	Pass

Figure Channel 01: 2412MHz (Horizontal) (Peak)

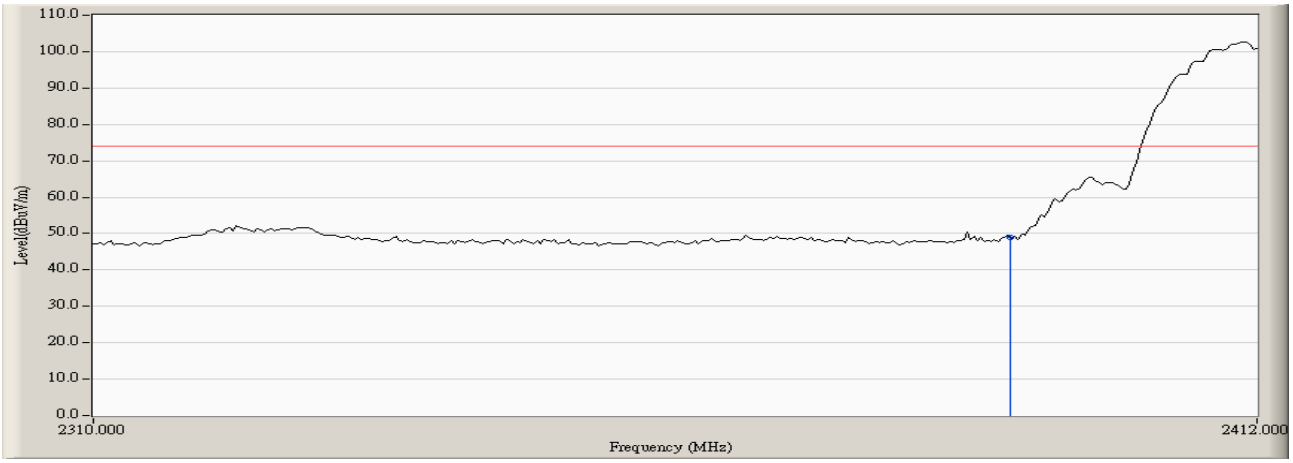
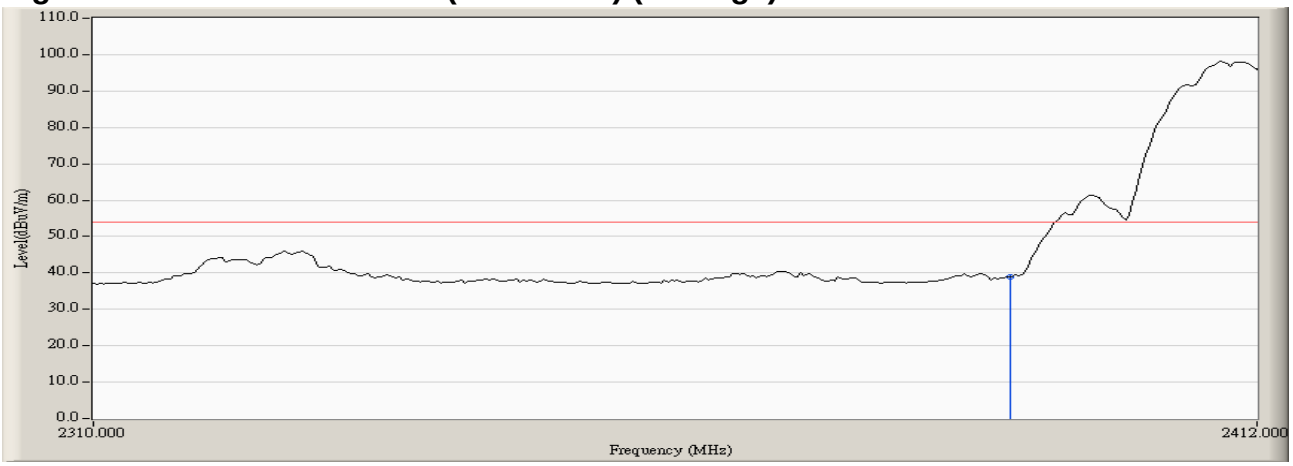


Figure Channel 01: 2412MHz (Horizontal) (Average)



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	:	54M Wireless Cardbus Adapter
Test Item	:	Band Edge
Test Site	:	AC-2
Test Mode	:	Mode 1: Transmitter by 802.11b (2412MHz)

RF Radiated Measurement:

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

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2390.000	49.978	47.830	73.970	53.970	Pass
01 (Average)	2390.000	40.473	38.325	73.970	53.970	Pass

Figure Channel 01: 2412MHz (Vertical) (Peak)

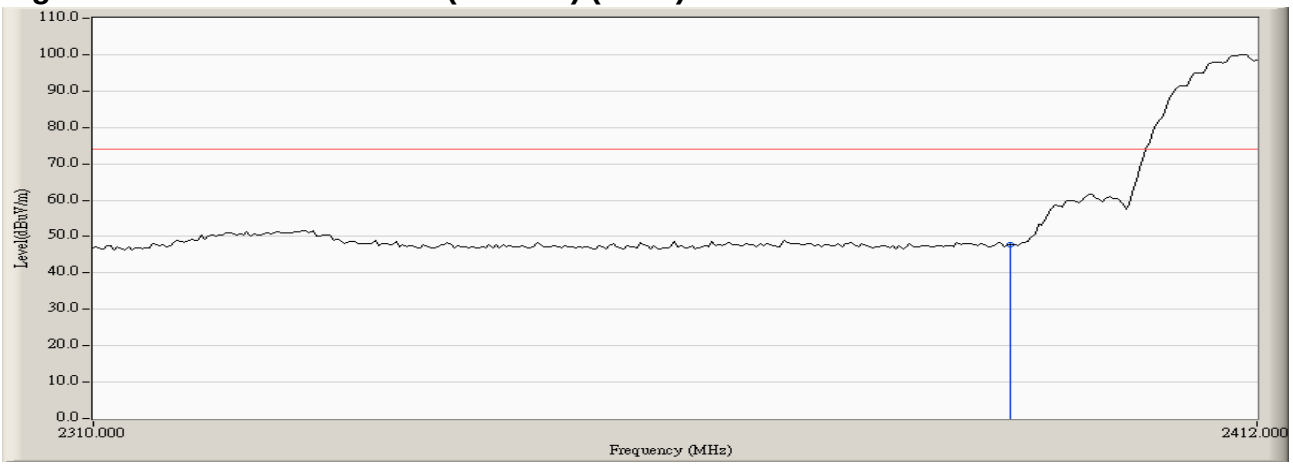
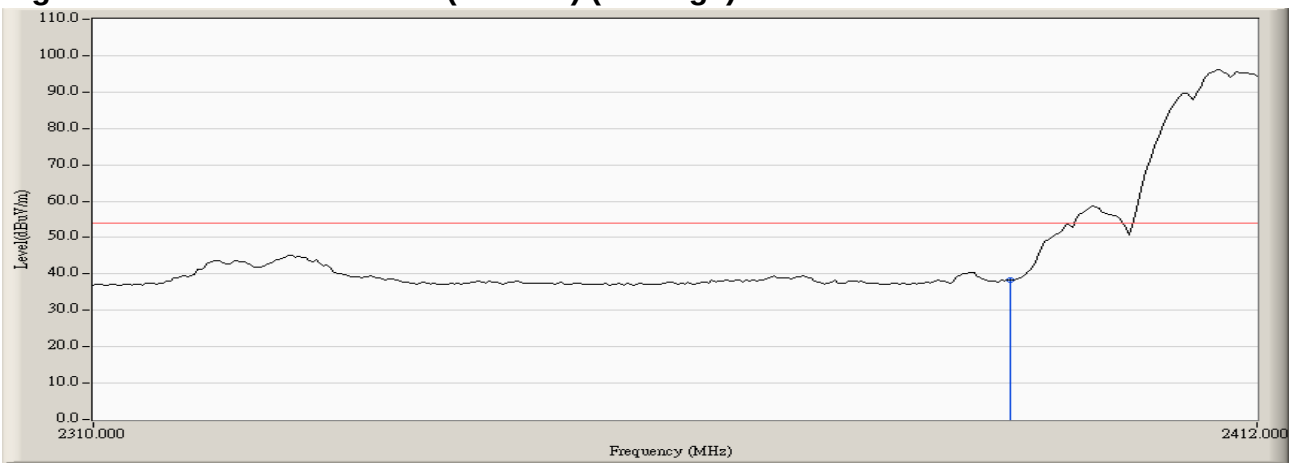


Figure Channel 01: 2412MHz (Vertical) (Average)



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	:	54M Wireless Cardbus Adapter
Test Item	:	Band Edge
Test Site	:	AC-2
Test Mode	:	Mode 1: Transmitter by 802.11b (2462MHz)

RF Radiated Measurement:

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

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11(Peak)	2483.500	48.511	46.358	73.970	53.970	Pass
11(Average)	2483.500	40.351	38.198	73.970	53.970	Pass

Figure Channel 11: 2462MHz (Horizontal) (Peak)

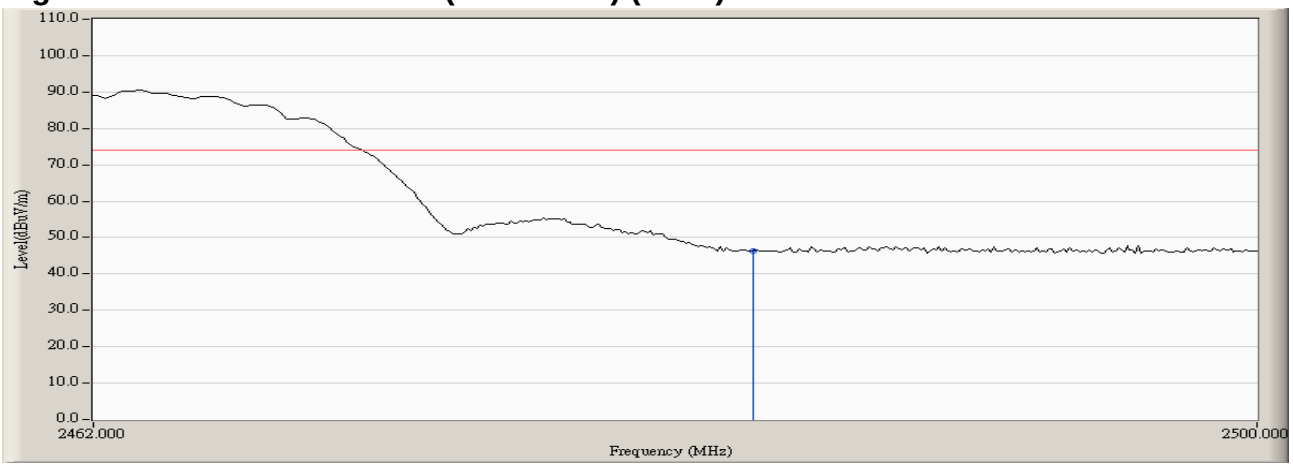
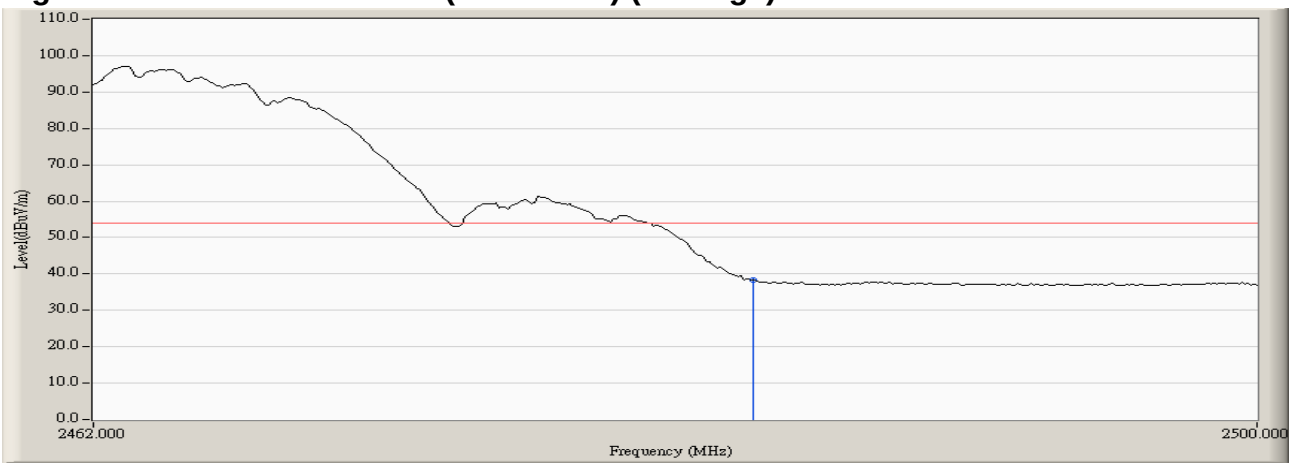


Figure Channel 11: 2462MHz (Horizontal) (Average)



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	:	54M Wireless Cardbus Adapter
Test Item	:	Band Edge
Test Site	:	AC-2
Test Mode	:	Mode 1: Transmitter by 802.11b (2462MHz)

RF Radiated Measurement:

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

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11(Peak)	2483.500	50.291	48.138	73.970	53.970	Pass
11(Average)	2483.500	39.983	37.830	73.970	53.970	Pass

Figure Channel 11: 2462MHz (Vertical) (Peak)

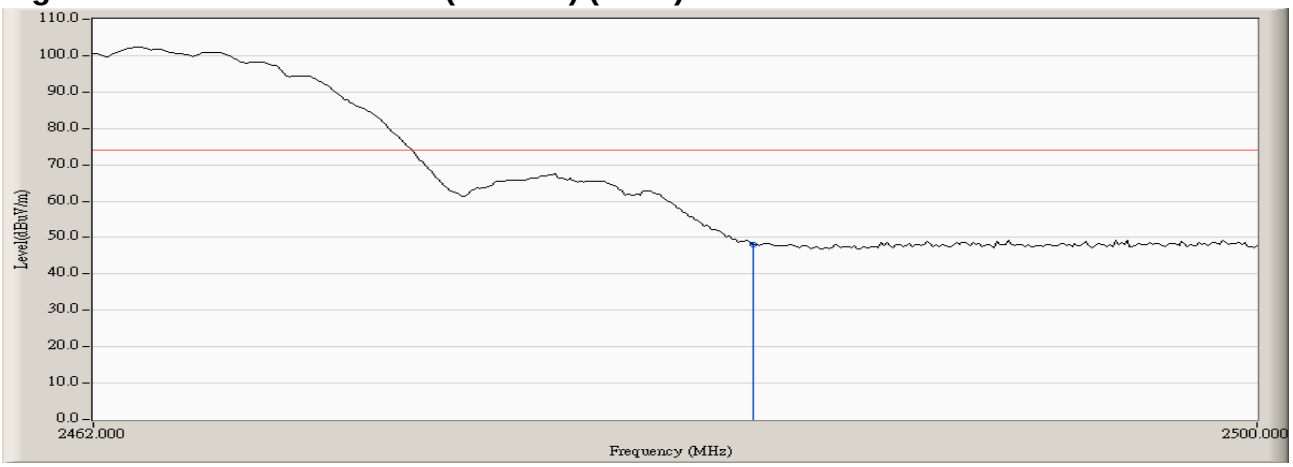
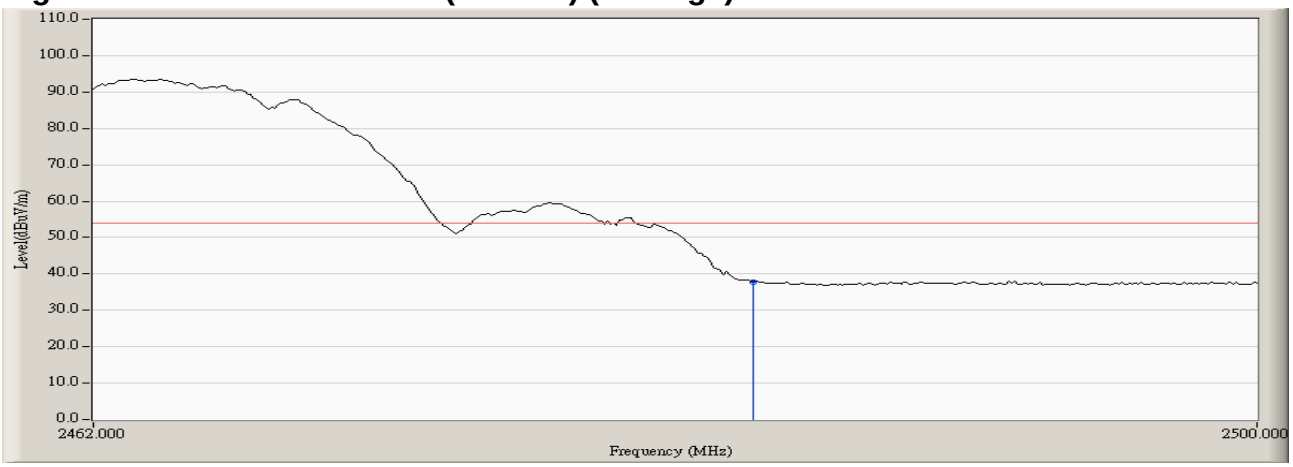


Figure Channel 11: 2462MHz (Vertical) (Average)



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	:	54M Wireless Cardbus Adapter
Test Item	:	Band Edge
Test Site	:	AC-2
Test Mode	:	Mode 2: Transmitter by 802.11g (2412MHz)

RF Radiated Measurement:

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

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2390.000	56.425	54.277	73.970	53.970	Pass
01 (Average)	2390.000	44.739	42.591	73.970	53.970	Pass

Figure Channel 01: 2412MHz (Horizontal) (Peak)

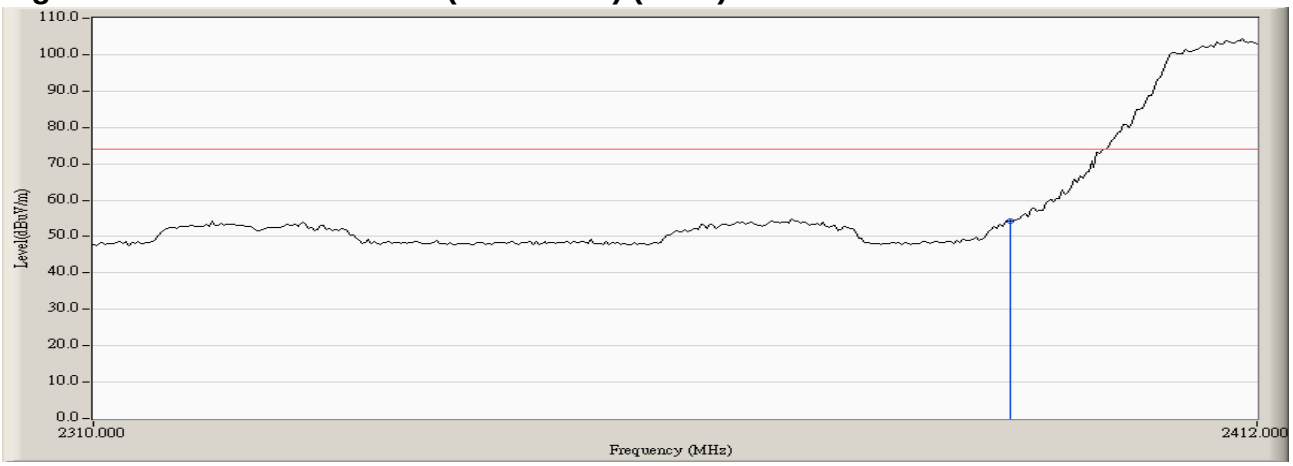
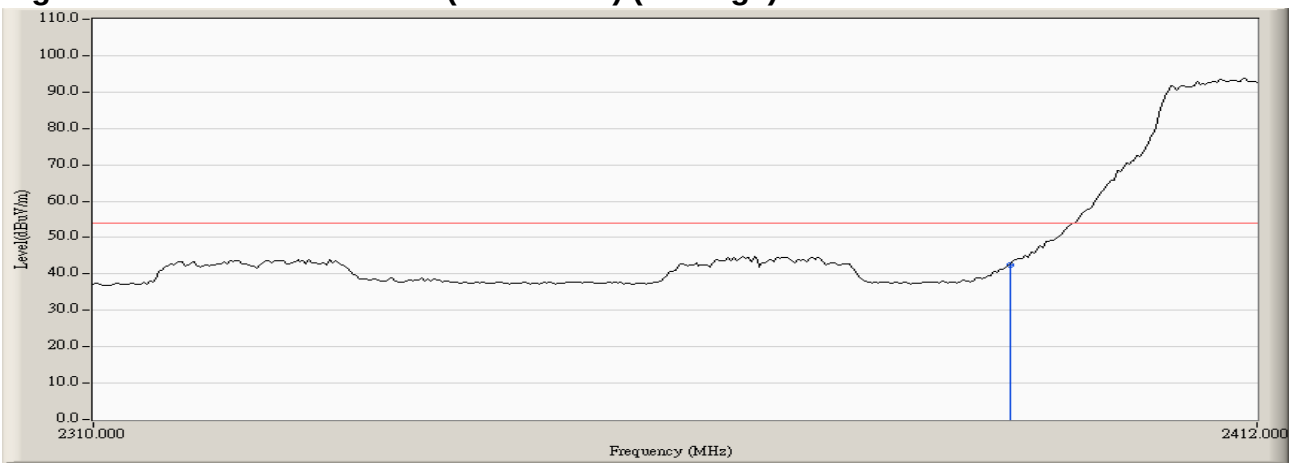


Figure Channel 01: 2412MHz (Horizontal) (Average)



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	:	54M Wireless Cardbus Adapter
Test Item	:	Band Edge
Test Site	:	AC-2
Test Mode	:	Mode 2: Transmitter by 802.11g (2412MHz)

RF Radiated Measurement:

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

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2390.000	58.138	55.990	73.970	53.970	Pass
00 (Average)	2390.000	46.529	44.381	73.970	53.970	Pass

Figure Channel 01: 2412MHz (Vertical) (Peak)

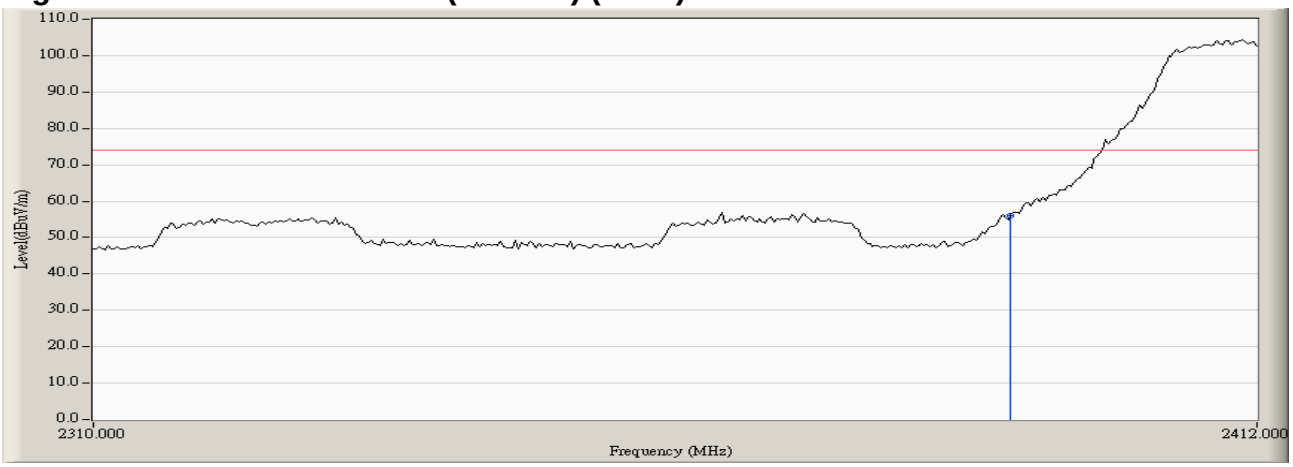
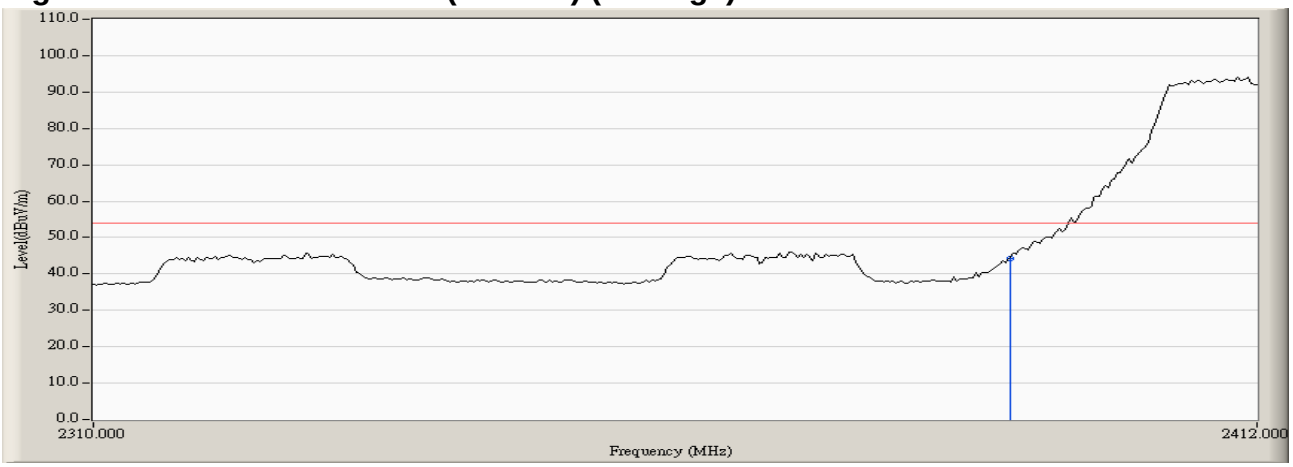


Figure Channel 01: 2412MHz (Vertical) (Average)



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	:	54M Wireless Cardbus Adapter
Test Item	:	Band Edge
Test Site	:	AC-2
Test Mode	:	Mode 2: Transmitter by 802.11g (2462MHz)

RF Radiated Measurement:

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

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11(Peak)	2483.500	61.980	59.827	73.970	53.970	Pass
11(Average)	2483.500	48.620	46.467	73.970	53.970	Pass

Figure Channel 11: 2462MHz (Horizontal) (Peak)

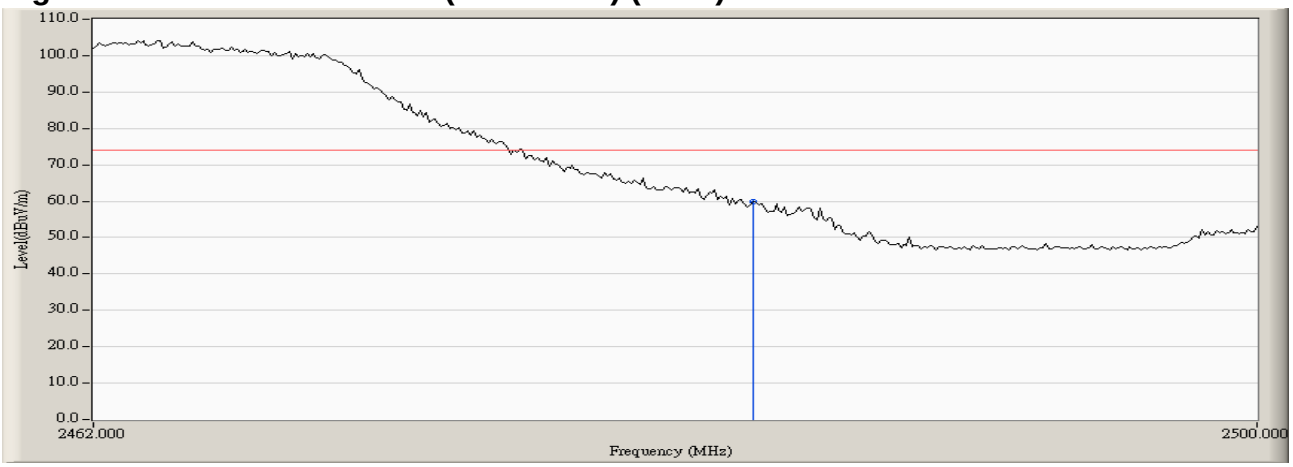
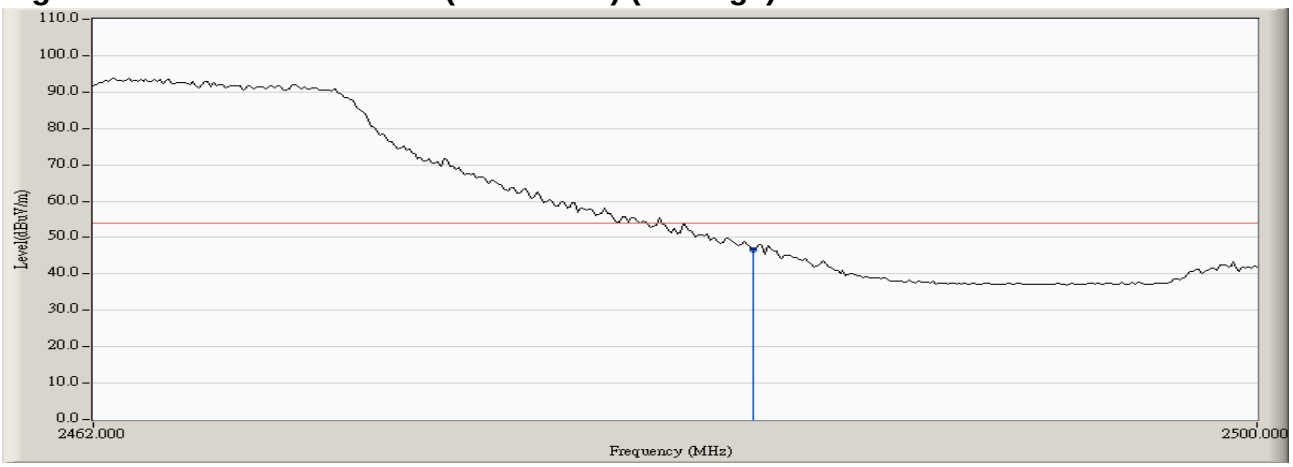


Figure Channel 11: 2462MHz (Horizontal) (Average)



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	:	54M Wireless Cardbus Adapter
Test Item	:	Band Edge
Test Site	:	AC-2
Test Mode	:	Mode 2: Transmitter by 802.11g (2462MHz)

RF Radiated Measurement:

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

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11(Peak)	2483.500	62.925	60.772	73.970	53.970	Pass
11(Average)	2483.500	50.269	48.116	73.970	53.970	Pass

Figure Channel 11: 2462MHz (Vertical) (Peak)

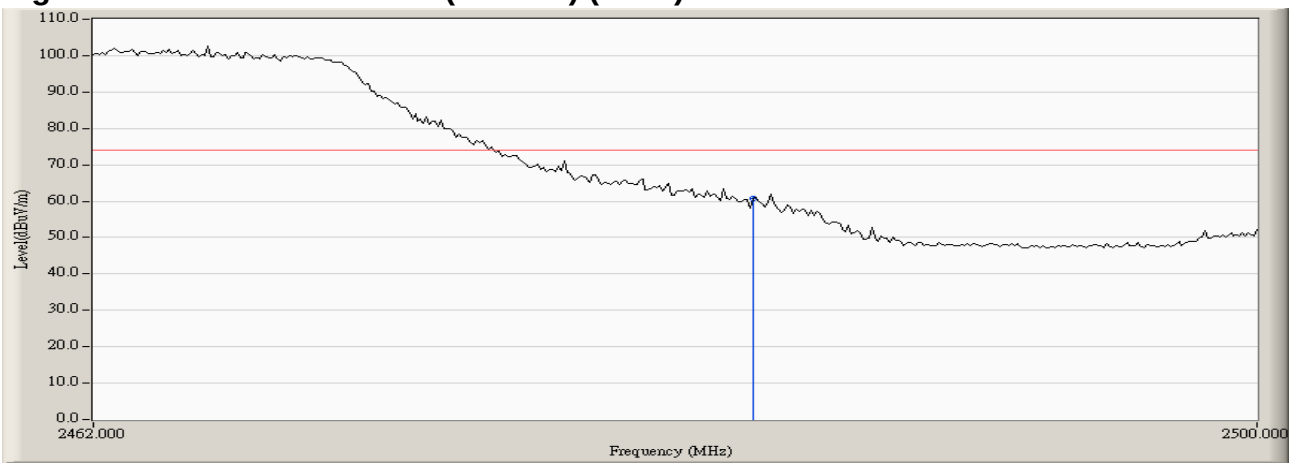
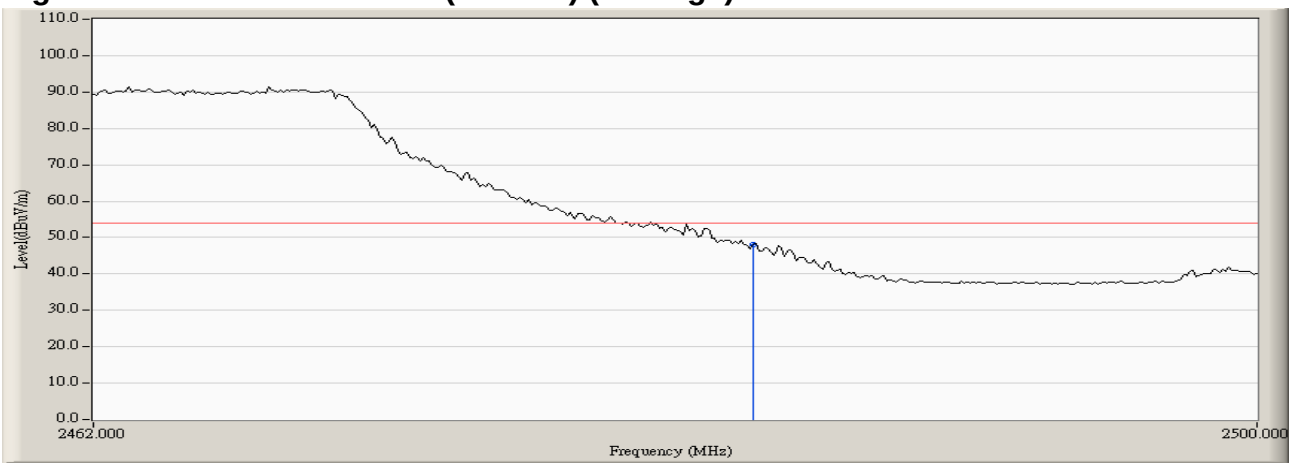


Figure Channel 11: 2462MHz (Vertical) (Average)



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.

8. Peak Power Spectral Density

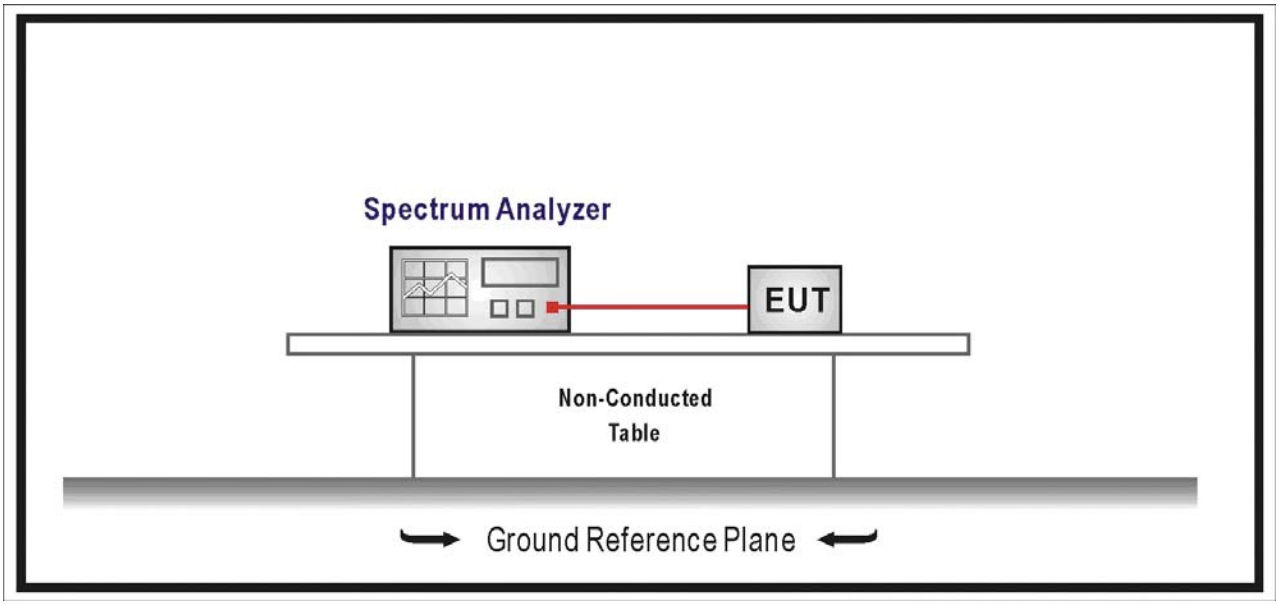
8.1. Test Equipment

Radiated Emission / AC-2

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2007/03/11
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH003	2007/03/30

8.2. Test Setup

RF Conducted Measurement



8.3. Limit

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

8.4. Test Procedure

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

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

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

8.5. Uncertainty

The measurement uncertainty is defined as ± 1.27 dB

8.6. Test Result

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

Channel	Freq. (MHz)	Power Spectral Density (dBm/3kHz)	Limit (dBm /3kHz)	Result
01	2412	-5.64	8	Pass
06	2437	-6.19	8	Pass
11	2462	-5.85	8	Pass

Figure Channel 01 (2412MHz)

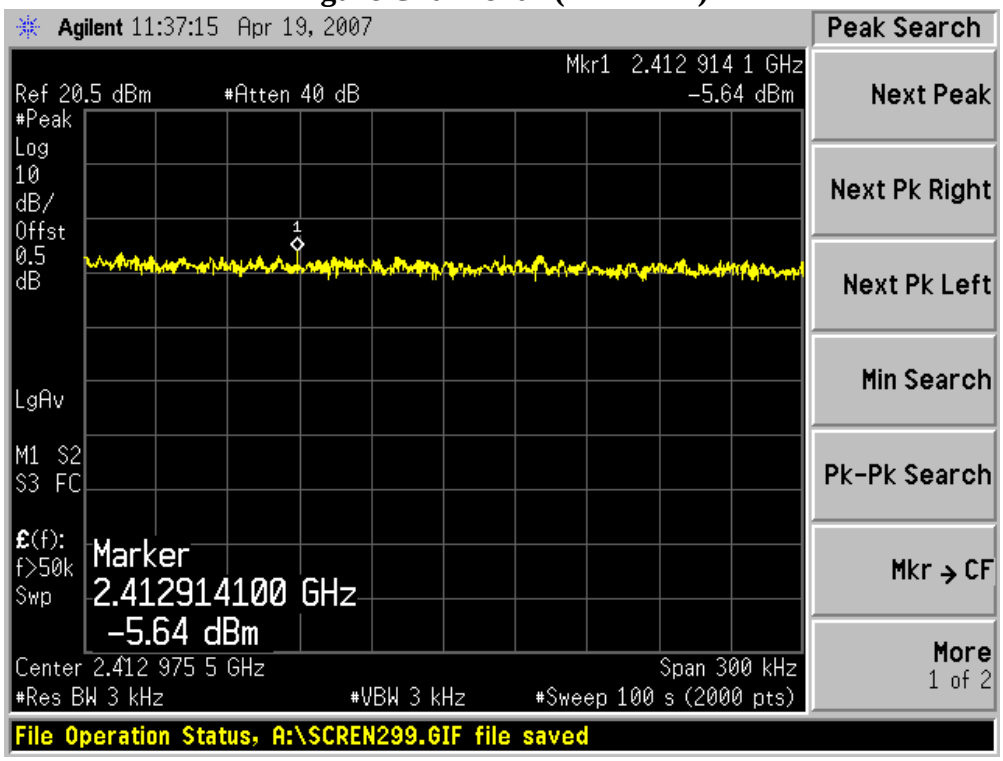


Figure Channel 06 (2437MHz)

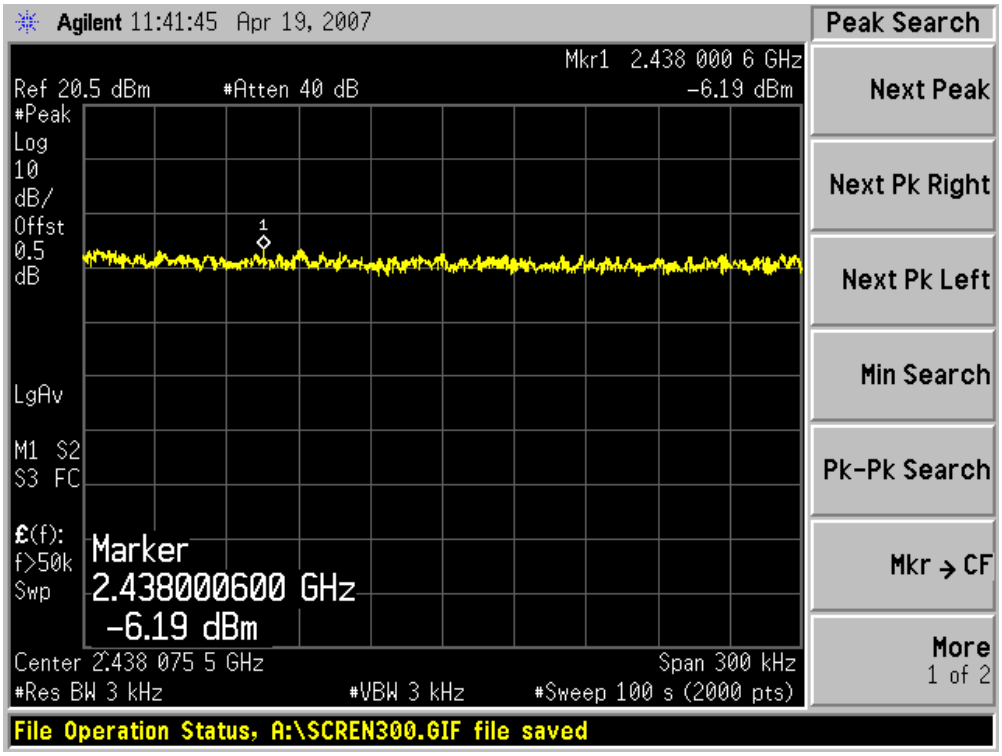
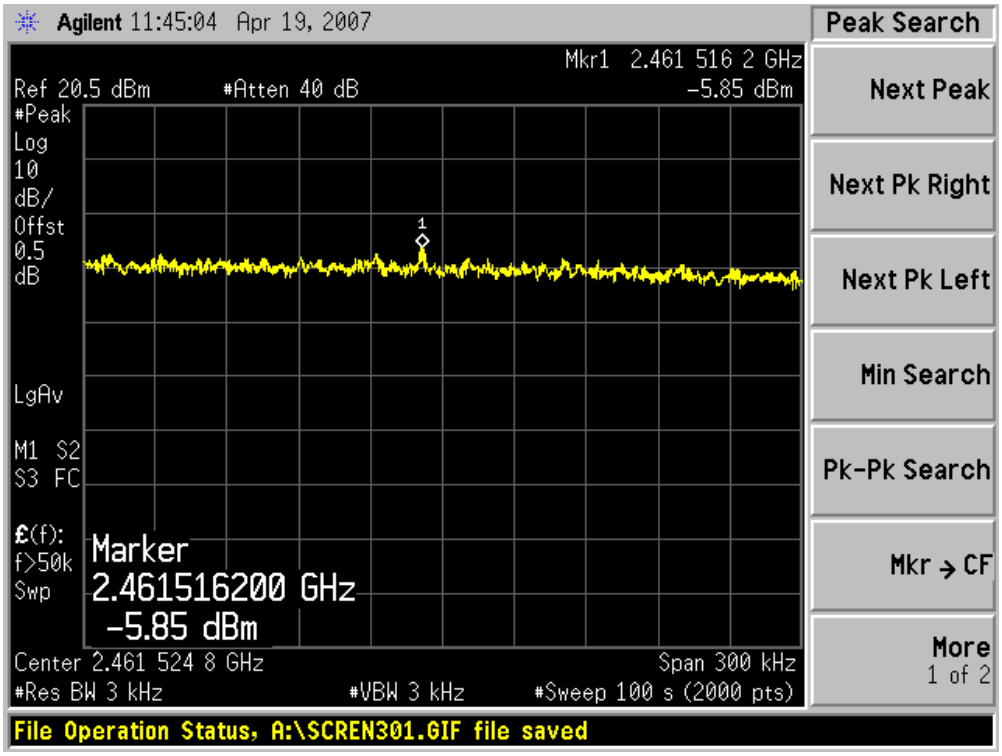


Figure Channel 11 (2462MHz)



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

Channel	Freq. (MHz)	Power Spectral Density (dBm/3kHz)	Limit (dBm /3kHz)	Result
01	2412	-9.50	8	Pass
06	2437	-8.81	8	Pass
11	2462	-8.60	8	Pass

Figure Channel 01 (2412MHz)

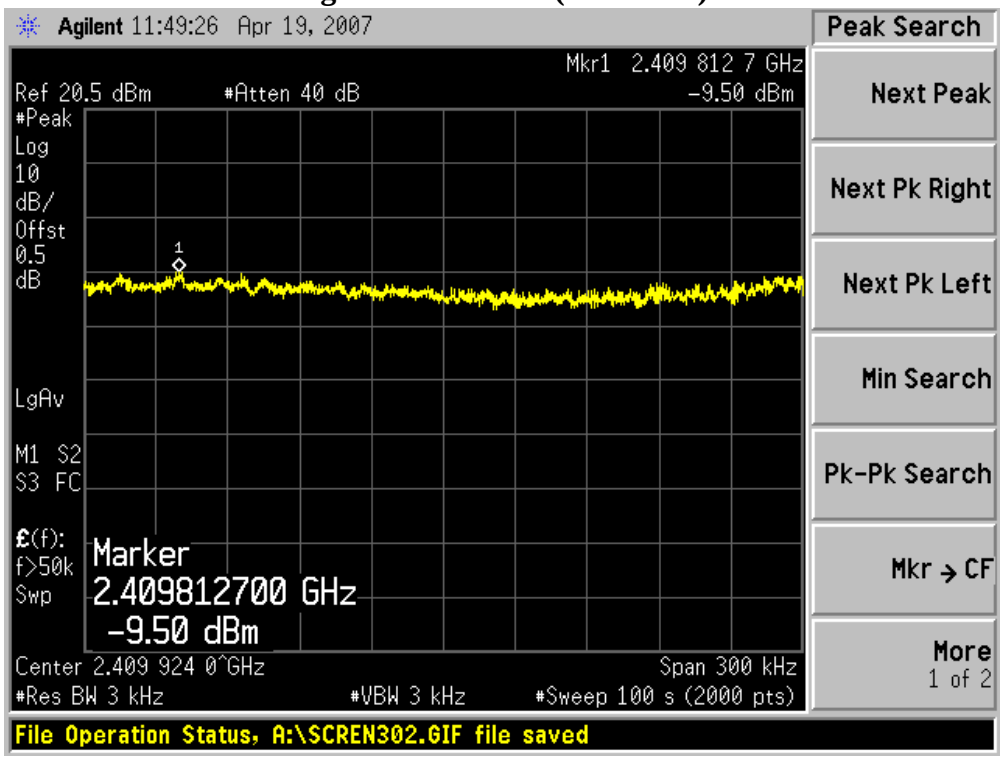


Figure Channel 06 (2437MHz)

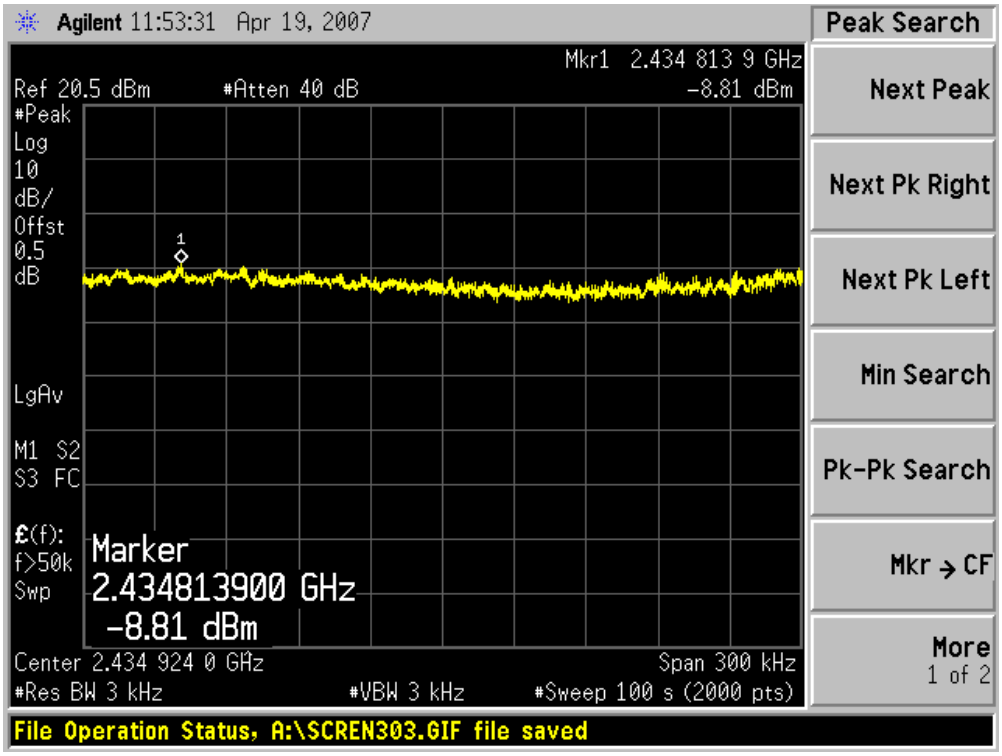
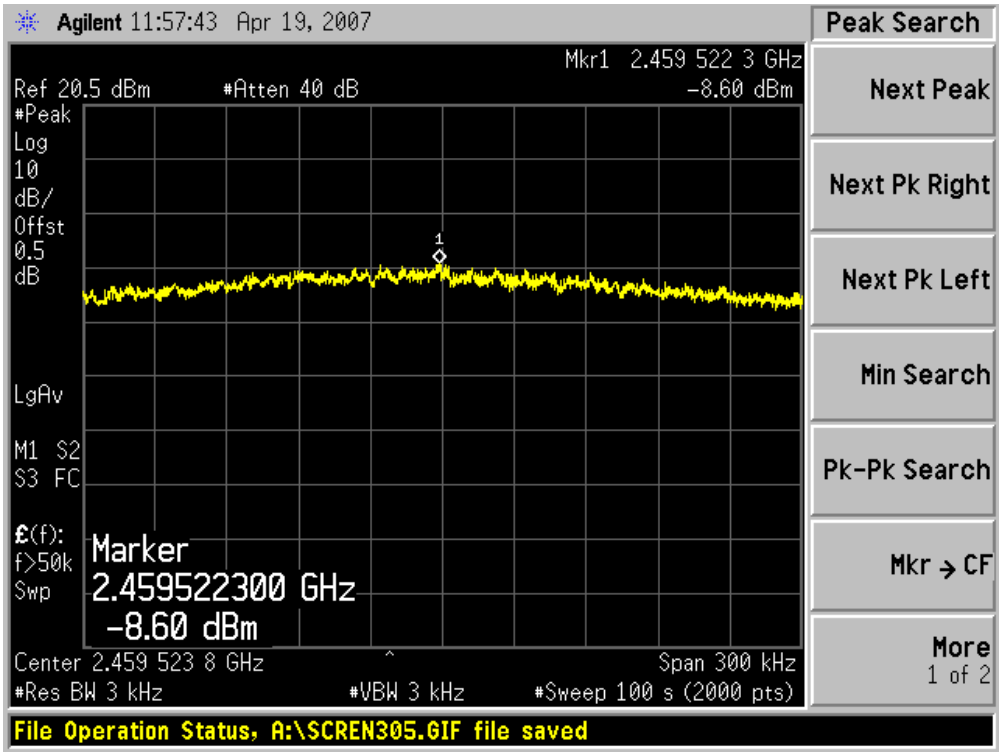


Figure Channel 11 (2462MHz)



9. Attachment

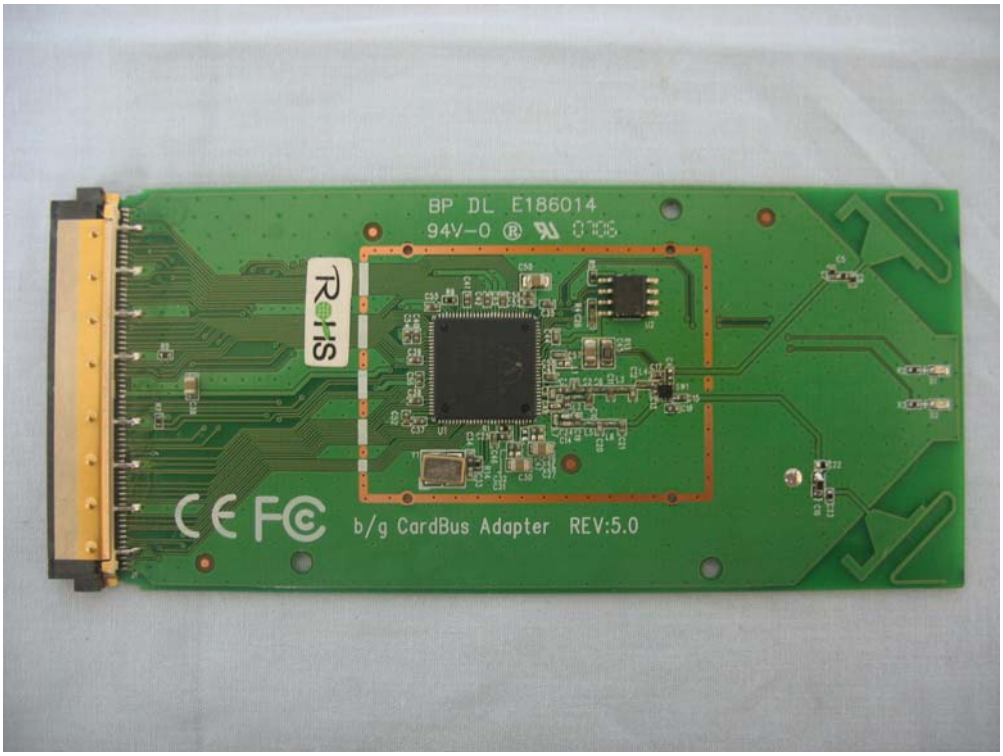
➢ EUT Photograph

(1) EUT Photo

(2) EUT Photo

(3) EUT Photo

(4) EUT Photo



(5) EUT Photo