

MEASUREMENT REPORT
of
CLASS II PERMISSIVE CHANGE
for
Wireless LAN Mini-PCI Module

Applicant : ASUSTek Computer Inc.
EUT : Wireless LAN Mini-PCI Module
Model No. : WL-120g
FCC ID : MSQWL120G
Report No. : A5415482

Tested by :

Training Research Co., Ltd.

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No. 255, Nanyang Street, Shijr, Taipei Hsien 221, Taiwan, R.O.C.

CERTIFICATION

We here by verify that:

The test data, data evaluation, test procedures and equipment configurations shown in this report were made mainly in accordance with the procedures given in ANSI C63.4 (1992) as a reference. All test were conducted by *Training Research Co., Ltd.*, 255 Nanyang Street, Shijr, Taipei Hsien 221, Taiwan, R.O.C. Also, we attest to the accuracy of each.

We further submit that the energy emitted by the sample EUT tested as described in the report is **in compliance with** the technical requirements set forth in the FCC Rules Part 15 Subpart B (Declaration of Conformity) and C Section 15.247.

Applicant : ASUSTek Computer Inc.
Applicant address : 4F, No. 150, Li-Te Rd., Peitou, Taipei, Taiwan, R.O.C.
Product Name : Wireless Local Area Network Card
Model Name : WL-120g
Granted FCC ID : MSQWL120G
Test Date : February 9, 2004

Prepared by: 
Jack Tsai

Approved by: 
Frank Tsai

Conditions of issue :

- (1) **This test report shall not be reproduced except in full, without written approval of TRC. And the test result contained within this report only relate to the sample submitted for testing.**
- (2) **This report must not be used by the client to claim product endorsement by NVLAP or any agency of U.S. Government.**
- (3) **This test report, measurements made by TRC are traceable to the NIST only Conducted and Radiated Method.**

★ **NVLAP LAB CODE: 200174-0**

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I . GENERAL

1.1 Introduction

The following measurement report is submitted on behalf of applicant in support that the certification in accordance with Part 2 Subpart J and Part 15 Subpart A, B and C of the Commission's Rules and Regulations.

1.2 Description of EUT

Product Name	:	Wireless Local Area Network Card
Model Name	:	WL-120g
Granted FCC ID	:	MSQWL120G
Frequency Range	:	2.412 GHz ~ 2.462GHz
Support Channel	:	11 Channel
Modulation Skill	:	DBPSK, DQPSK, CCK, OFDM
Power Type	:	Power by Mini-PCI interface of client's device

1.3 Test method

1. Insert the EUT into the PCI interface of the test fixture (which is transferred from PCMCIA to mini-PCI interface)
2. Using the notebook computer and software provided by the manufacturer to control EUT. The software is operated under the Windows to control the EUT in the continuous transmission mode, the test is performed under the specific conditions.
3. Set different data rate and channel (CH1/CH6/CH11) being tested and repeat the procedures above.
 - (a) Radiated for Intentional test:
making EUT to the mode of continuous transmission
 - (b) Conducted test:
making EUT to the linking (Rx/Tx) mode with far support equipments

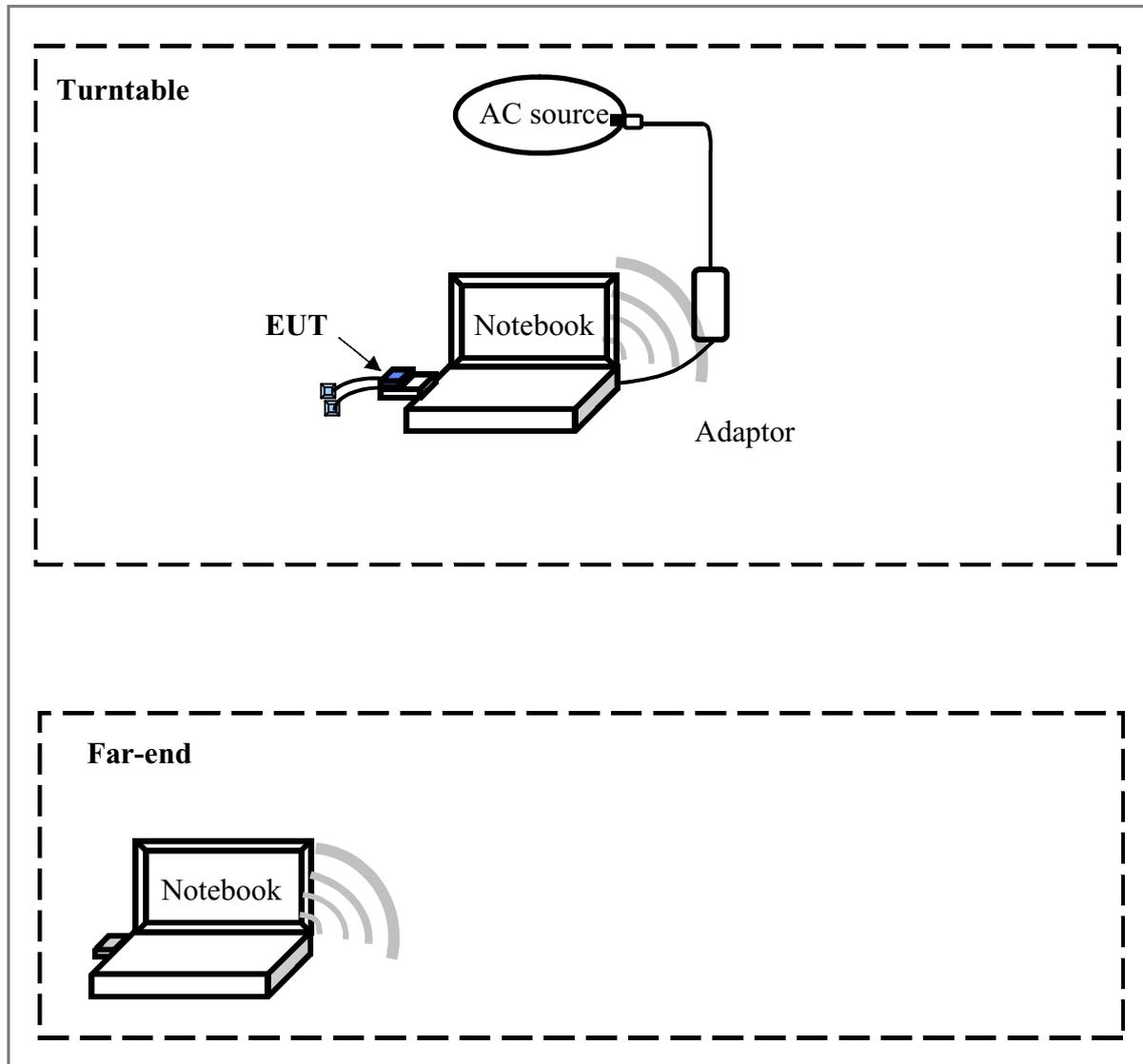
1.4 Description of Support Equipment

In order to construct the minimum testing, following equipment were used as the support units.

Notebook	:	ASUS
Model No.	:	M2400E
FCC ID	:	N/A, DoC Approved
Adaptor	:	DELTA ELECTRONICS, INC.
Model No.	:	ADP-65DB REV.B
Serial No.	:	Q3W0311044403
FCC ID	:	N/A, CE Approved
檢磁	:	3882B596
Power type	:	I/P: 100 ~ 240vac, 50 ~ 60 Hz, 1.5A ; O/P: 19Vdc, 3.42A
Power cable	:	Non-shielded, 1.85m length, Plastic hood, No ferrite core (Between power adaptor and AC power source)
Power cable	:	Non-Shielded, 1.70m length, with ferrite core (Between power adaptor and notebook)
Notebook	:	ASUSTek Computer
Model No.	:	AB00F
Serial No.	:	24NP016361
FCC ID	:	DoC Approved
BSMI	:	41016012
Power type	:	100 ~ 240VAC, 1A 50/60 Hz, Switching
Adaptor of PC	:	LITE-ON Electronics, Inc.
Model No.	:	PA-1530-01
Serial No.	:	00151184
FCC ID	:	Doc Approved
檢磁	:	3882B259
Power cable	:	Non-shielded, 1.72m length, Plastic hood, No ferrite core (Between power adaptor and AC power source)
Power cable	:	Shielded, 1.48m length, Plastic hood, with ferrite core (Between power adaptor and notebook)
WLAN Card	:	Gemtek Technology Co., Ltd.
Model No.	:	C911003
FCC ID	:	MXF-C911003

1.5 Configuration of System Under Test

(Radiated of Intentional Test)



Connections of Computer:

- *Parallel Port --- a printer
- *PS/2 Port --- a P/2 mouse
- *PCMCIA Port --- **EUT (via fixture)**

The tests below are carried with the EUT transmitter set at high power in TDD mode. The EUT is forced to select of output power level and channel number by notebook computer.

The setting up procedure was recorded in 1.3 test method.

1.6 Verify the Frequency and Channel

CH	0	1	2	3	4	5	6	7	8	9
0		2412	2417	2422	2427	2432	2437	2442	2447	2452
1	2457	2462	2467	2472	---	---	---	---	---	---

Note:

1. This is for confirming that all frequencies are in 2.412GHz to 2.462GHz.
2. Section 15.31(m): Measurements on intentional radiators or receivers shall be performed at three frequencies for operating frequency range over 10 MHz. (The locations of these frequencies one near the top, one near the middle and one near the bottom.)
3. After test, the EUT operating frequencies are in 2.412GHz to 2.462GHz. So all the items as followed in testing report are need to test these three frequencies:
 Top: Channel – 1; Middle: Channel – 6; Bottom: Channel – 11.

1.7 Test Procedure

All measurements contained in this report were performed mainly according to the techniques described in ANSI C63.4 (1992) and the pre-setup was written on 1.3 test method, the detail setup was written on each test item.

1.8 Location of the Test Site

The radiated emissions measurements required by the rules were performed on the **three-meter, Anechoic Chamber (FCC Registration Number: 93906)** maintained by *Training Research Co., Ltd.* 1F, No. 255 Nanyang Street, Shijr, Taipei Hsien 221, Taiwan, R.O.C. Complete description and measurement data have been placed on file with the commission. The conducted power line emissions tests and other test items were performed in a anechoic chamber also located at Training Research Co., Ltd.

No. 255 Nanyang Street, Shijr, Taipei Hsien 221, Taiwan, R.O.C. *Training Research Co., Ltd.* is listed by the FCC as a facility available to do measurement work for others on a contract basis.

1.9 General Test Condition

The conditions under which the EUT operates were varied to determine their effect on the equipment's emission characteristics. The final configuration of the test system and the mode of operation used during these tests were chosen as that which produced the highest emission levels. However, only those conditions, which the EUT was considered likely to encounter in normal use were investigated.

In test, they were set in high power and continuously transmitting mode that controlled by computer. The ch01, ch06 and ch11 of EUT were all tested. The setting up procedure is recorded on 1.3 test method.

II. Section 15.203: Antenna requirement

The EUT can be equipped with detachable antenna. The detachable external antenna is affixed to the EUT using the unique connectors; the antenna requirement stated in Section 15.203 is inapplicable to this EUT.

The antenna types used in this product are PCB antenna and Dipole antenna with SMA connector. The Maximum Gain of the antenna is 3dBi.

Two custom antenna specification of list as below:

Antenna Model	Antenna Type	Manufacturer	Antenna Gain (Max.)
L5G	PCB	Walsin Technology Corp.	3.0 dBi
ADA06-1K10000	Patch	ADVANCED-CONNECTEK INC.	1.9 dBi

Note: For more detailed features description, please reference to the Antenna Specifications
(Please see attached, RF Exposure Information)

III. Section 15.207: Power Line Conducted Emissions for AC Powered Units

3.1 Test Condition & Setup

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

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

The spectrum was scanned from 150 KHz to 30 MHz. The physical arrangement of the test system and associated cabling was varied (within the scope of arrangements likely to be encountered in actual use) to determine the effect on the unit's emanations in amplitude and frequency. All spurious emission frequencies were observed. The highest emission amplitudes relative to the appropriate limit were measured and have been recorded in paragraph 2.4.

There is a test condition apply in this test item, the test procedure description as <1.3>. Three channels were tested, one in the top (CH01), one in the middle (CH06) and the other in bottom (CH11).

3.2 List of Test Instruments

Instrument Name	Model	Brand	Serial No.	Calibration Date	
				Last time	Next time
EMI Receiver	8546A	HP	3520A00242	07/28/03	07/28/04
RF Filter Section	85460A	HP	3448A00217	07/28/03	07/28/04
LISN (EUT)	LISN-01	TRC	99-05	06/21/03	06/21/04
LISN (Support E.)	LISN-01	TRC	9912-03, 04	07/21/03	07/21/04
Pre-amplifier	15542 ZFL-500	Mini – Circuits	0 0117	05/20/03	05/20/04
6dB Attenuator	MCL BW-S6W2	Mini – Circuits	9915 – Conducted	05/20/03	05/20/04
10dB Attenuator	A5542 VAT010	Mini – Circuits	0215 – Conducted	05/20/03	05/20/04
Coaxial Cable (2 meter)	A30A30-0058-50FS-2M	Jyebao	SMA-08	05/20/03	05/20/04
Coaxial Cable (1.1 meter)	A30A30-0058-50FS-1M	Jyebao	SMA-09	05/20/03	05/20/04
Coaxial Cable (20 meter)	RG-214/U	Jyebao	NP-01	05/20/03	05/20/04
Coaxial Cable (20 meter)	RG-214/U	Jyebao	NP-02	05/20/03	05/20/04
Auto Switch Box (< 30MHz)	ASB-01	TRC	9904-01	05/20/03	05/20/04

3.3 Test Result of Power Line Conducted Emissions

The following table shows a summary of the highest emissions of power line conducted emissions on the LIVE and NETURAL conductors of the EUT power cord. Show as follows.

Test Conditions: Temperature : 25 °C Humidity : 73 % RH

Test mode: Antenna model: L5G, Standby mode

<i>Power Connected Emissions</i>					<i>FCC Class B</i>		
<i>Conductor</i>	<i>Frequency (KHz)</i>	<i>Peak (dBµV)</i>	<i>QP (dBµV)</i>	<i>Average (dBµV)</i>	<i>QP-limit (dBµV)</i>	<i>AVG-limit (dBµV)</i>	<i>Margin (dB)</i>
Line 1	421.000	32.65	---	---	58.26	48.26	-15.61
	504.000	34.24	---	---	56.00	46.00	-11.76
	1503.000	30.19	---	---	56.00	46.00	-15.81
	2179.000	32.27	---	---	56.00	46.00	-13.73
	2689.000	33.83	---	---	56.00	46.00	-12.17
	3349.000	35.42	---	---	56.00	46.00	-10.58
	3936.000	33.48	---	---	56.00	46.00	-12.52
Line 2	417.000	36.09	---	---	58.37	48.37	-12.28
	841.000	35.31	---	---	56.00	46.00	-10.69
	1424.000	35.49	---	---	56.00	46.00	-10.51
	1924.000	34.49	---	---	56.00	46.00	-11.51
	3936.000	34.85	---	---	56.00	46.00	-11.15
	4762.000	34.56	---	---	56.00	46.00	-11.44
	7890.000	32.03	---	---	60.00	50.00	-17.97

NOTE:

- (1)Margin = Peak Amplitude – Limit, *The reading amplitudes are all under limit.*
- (2)A "+" sign in the margin column means the emission is OVER the Class B Limit and "-" sign of means UNDER the Class B limit

Test mode: Antenna model: L5G, IEEE 802.11b, Channel 1

<i>Power Connected Emissions</i>					<i>FCC Class B</i>		
<i>Conductor</i>	<i>Frequency (KHz)</i>	<i>Peak (dBμV)</i>	<i>QP (dBμV)</i>	<i>Average (dBμV)</i>	<i>QP-limit (dBμV)</i>	<i>AVG-limit (dBμV)</i>	<i>Margin (dB)</i>
Line 1	169.000	39.77	---	---	65.46	55.46	-15.69
	587.000	30.01	---	---	56.00	46.00	-15.99
	919.000	28.42	---	---	56.00	46.00	-17.58
	1424.000	28.72	---	---	56.00	46.00	-17.28
	2029.000	30.13	---	---	56.00	46.00	-15.87
	4092.000	35.40	---	---	56.00	46.00	-10.60
Line 2	499.000	36.18	---	---	56.03	46.03	-9.85
	668.000	34.23	---	---	56.00	46.00	-11.77
	1333.000	35.60	---	---	56.00	46.00	-10.40
	2265.000	33.19	---	---	56.00	46.00	-12.81
	3606.000	32.31	---	---	56.00	46.00	-13.69
	5110.000	34.94	---	---	60.00	50.00	-15.06

Test mode: Antenna model: L5G, IEEE 802.11b, Channel 6

<i>Power Connected Emissions</i>					<i>FCC Class B</i>		
<i>Conductor</i>	<i>Frequency (KHz)</i>	<i>Peak (dBμV)</i>	<i>QP (dBμV)</i>	<i>Average (dBμV)</i>	<i>QP-limit (dBμV)</i>	<i>AVG-limit (dBμV)</i>	<i>Margin (dB)</i>
Line 1	169.000	38.94	---	---	65.46	55.46	-16.52
	499.000	32.03	---	---	56.03	46.03	-14.00
	752.000	29.62	---	---	56.00	46.00	-16.38
	1503.000	29.30	---	---	56.00	46.00	-16.70
	2506.000	33.07	---	---	56.00	46.00	-12.93
	4092.000	36.30	---	---	56.00	46.00	-9.70
Line 2	499.000	36.65	---	---	56.03	46.03	-9.38
	752.000	35.88	---	---	56.00	46.00	-10.12
	832.000	36.13	---	---	56.00	46.00	-9.87
	919.000	35.15	---	---	56.00	46.00	-10.85
	1333.000	36.83	---	---	56.00	46.00	-9.17
	1836.000	36.42	---	---	56.00	46.00	-9.58

Test mode: Antenna model: L5G, IEEE 802.11b, Channel 11

<i>Power Connected Emissions</i>					<i>FCC Class B</i>		
<i>Conductor</i>	<i>Frequency (KHz)</i>	<i>Peak (dBμV)</i>	<i>QP (dBμV)</i>	<i>Average (dBμV)</i>	<i>QP-limit (dBμV)</i>	<i>AVG-limit (dBμV)</i>	<i>Margin (dB)</i>
Line 1	166.000	48.90	---	---	65.54	55.54	-6.64
	201.000	40.10	---	---	64.54	54.54	-14.44
	499.000	35.06	---	---	56.03	46.03	-10.97
	587.000	32.57	---	---	58.60	48.60	-16.03
	2767.000	32.10	---	---	56.00	46.00	-13.90
	4014.000	36.37	---	---	56.00	46.00	-9.63
Line 2	236.000	41.79	---	---	63.54	53.54	-11.75
	499.000	34.71	---	---	56.03	46.03	-11.32
	587.000	38.48	---	---	56.00	46.00	-7.52
	998.000	35.58	---	---	56.00	46.00	-10.42
	1503.000	35.58	---	---	56.00	46.00	-10.42
	2584.000	33.43	---	---	56.00	46.00	-12.57

Test mode: Antenna model: L5G, IEEE 802.11g, Channel 1

<i>Power Connected Emissions</i>					<i>FCC Class B</i>		
<i>Conductor</i>	<i>Frequency (KHz)</i>	<i>Peak (dBμV)</i>	<i>QP (dBμV)</i>	<i>Average (dBμV)</i>	<i>QP-limit (dBμV)</i>	<i>AVG-limit (dBμV)</i>	<i>Margin (dB)</i>
Line 1	166.000	40.66	---	---	65.54	55.54	-14.88
	499.000	34.33	---	---	56.03	46.03	-11.70
	1836.000	26.64	---	---	56.00	46.00	-19.36
	2506.000	31.25	---	---	56.00	46.00	-14.75
	4171.000	33.73	---	---	56.00	46.00	-12.27
	17000.000	29.90	---	---	60.00	50.00	-20.10
Line 2	499.000	35.99	---	---	56.03	46.03	-10.04
	832.000	35.17	---	---	56.00	46.00	-10.83
	1091.000	33.32	---	---	56.00	46.00	-12.68
	1256.000	34.78	---	---	56.00	46.00	-11.22
	1748.000	34.85	---	---	56.00	46.00	-11.15
	2767.000	31.32	---	---	56.00	46.00	-14.68

Test mode: Antenna model: L5G, IEEE 802.11g, Channel 6

<i>Power Connected Emissions</i>					<i>FCC Class B</i>		
<i>Conductor</i>	<i>Frequency (KHz)</i>	<i>Peak (dBμV)</i>	<i>QP (dBμV)</i>	<i>Average (dBμV)</i>	<i>QP-limit (dBμV)</i>	<i>AVG-limit (dBμV)</i>	<i>Margin (dB)</i>
Line 1	167.000	40.21	---	---	65.51	55.51	-15.30
	417.000	30.58	---	---	58.37	48.37	-17.79
	499.000	32.06	---	---	56.03	46.03	-13.97
	832.000	28.35	---	---	56.00	46.00	-17.65
	1924.000	28.79	---	---	56.00	46.00	-17.21
	2925.000	33.34	---	---	56.00	46.00	-12.66
Line 2	499.000	35.85	---	---	56.03	46.03	-10.18
	832.000	35.13	---	---	56.00	46.00	-10.87
	1333.000	35.65	---	---	56.00	46.00	-10.35
	1748.000	34.96	---	---	56.00	46.00	-11.04
	2329.000	32.77	---	---	56.00	46.00	-13.23
	5030.000	34.73	---	---	60.00	50.00	-15.27

Test mode: Antenna model: L5G, IEEE 802.11g, Channel 11

<i>Power Connected Emissions</i>					<i>FCC Class B</i>		
<i>Conductor</i>	<i>Frequency (KHz)</i>	<i>Peak (dBμV)</i>	<i>QP (dBμV)</i>	<i>Average (dBμV)</i>	<i>QP-limit (dBμV)</i>	<i>AVG-limit (dBμV)</i>	<i>Margin (dB)</i>
Line 1	167.000	40.52	---	---	65.51	55.51	-14.99
	587.000	30.45	---	---	56.00	46.00	-15.55
	1424.000	28.47	---	---	56.00	46.00	-17.53
	2029.000	29.64	---	---	56.00	46.00	-16.36
	3004.000	34.23	---	---	56.00	46.00	-11.77
	4092.000	35.60	---	---	56.00	46.00	-10.40
Line 2	499.000	36.27	---	---	56.03	46.03	-9.76
	832.000	34.73	---	---	56.00	46.00	-11.27
	1333.000	35.49	---	---	56.00	46.00	-10.51
	1836.000	35.15	---	---	56.00	46.00	-10.85
	2846.000	31.32	---	---	56.00	46.00	-14.68
	4092.000	32.03	---	---	56.00	46.00	-13.97

Test mode: Antenna model: ADA06-1K10000, Standby mode

<i>Power Connected Emissions</i>					<i>FCC Class B</i>		
<i>Conductor</i>	<i>Frequency (KHz)</i>	<i>Peak (dBμV)</i>	<i>QP (dBμV)</i>	<i>Average (dBμV)</i>	<i>QP-limit (dBμV)</i>	<i>AVG-limit (dBμV)</i>	<i>Margin (dB)</i>
Line 1	504.000	34.64	---	---	56.00	46.00	-11.36
	1598.000	30.63	---	---	56.00	46.00	-15.37
	2179.000	32.84	---	---	56.00	46.00	-13.16
	2689.000	33.41	---	---	56.00	46.00	-12.59
	3285.000	34.90	---	---	56.00	46.00	-11.10
	3858.000	35.56	---	---	56.00	46.00	-10.44
Line 2	504.000	35.82	---	---	56.00	46.00	-10.18
	919.000	35.52	---	---	56.00	46.00	-10.48
	1424.000	35.66	---	---	56.00	46.00	-10.34
	1924.000	34.54	---	---	56.00	46.00	-11.46
	3936.000	33.26	---	---	56.00	46.00	-12.74
	4952.000	33.65	---	---	56.00	46.00	-12.35

Test mode: Antenna model: ADA06-1K10000, IEEE 802.11b, Channel 1

<i>Power Connected Emissions</i>					<i>FCC Class B</i>		
<i>Conductor</i>	<i>Frequency (KHz)</i>	<i>Peak (dBμV)</i>	<i>QP (dBμV)</i>	<i>Average (dBμV)</i>	<i>QP-limit (dBμV)</i>	<i>AVG-limit (dBμV)</i>	<i>Margin (dB)</i>
Line 1	166.000	47.63	---	---	65.54	55.54	-7.91
	494.000	33.90	---	---	56.17	46.17	-12.27
	1477.000	29.69	---	---	56.00	46.00	-16.31
	2308.000	30.90	---	---	56.00	46.00	-15.10
	3030.000	33.19	---	---	56.00	46.00	-12.81
	5740.000	34.24	---	---	60.00	50.00	-15.76
Line 2	166.000	47.76	---	---	65.54	55.54	-7.78
	575.000	37.80	---	---	56.00	46.00	-8.20
	989.000	34.94	---	---	56.00	46.00	-11.06
	1320.000	34.85	---	---	56.00	46.00	-11.15
	1801.000	35.04	---	---	56.00	46.00	-10.96
	2222.000	33.76	---	---	56.00	46.00	-12.24

Test mode: Antenna model: ADA06-1K10000, IEEE 802.11b, Channel 6

<i>Power Connected Emissions</i>					<i>FCC Class B</i>		
<i>Conductor</i>	<i>Frequency (KHz)</i>	<i>Peak (dBμV)</i>	<i>QP (dBμV)</i>	<i>Average (dBμV)</i>	<i>QP-limit (dBμV)</i>	<i>AVG-limit (dBμV)</i>	<i>Margin (dB)</i>
Line 1	164.000	40.43	---	---	65.60	55.60	-15.17
	197.000	39.82	---	---	64.66	54.66	-14.84
	494.000	33.62	---	---	56.17	46.17	-12.55
	2394.000	30.36	---	---	56.00	46.00	-15.64
	2977.000	32.36	---	---	56.00	46.00	-13.64
	3780.000	32.13	---	---	56.00	46.00	-13.87
Line 2	494.000	34.38	---	---	56.17	46.17	-11.79
	575.000	36.57	---	---	56.00	46.00	-9.43
	989.000	33.67	---	---	56.00	46.00	-12.33
	1398.000	34.64	---	---	56.00	46.00	-11.36
	1906.000	34.47	---	---	56.00	46.00	-11.53
	5630.000	36.85	---	---	60.00	50.00	-13.15

Test mode: Antenna model: ADA06-1K10000, IEEE 802.11b, Channel 11

<i>Power Connected Emissions</i>					<i>FCC Class B</i>		
<i>Conductor</i>	<i>Frequency (KHz)</i>	<i>Peak (dBμV)</i>	<i>QP (dBμV)</i>	<i>Average (dBμV)</i>	<i>QP-limit (dBμV)</i>	<i>AVG-limit (dBμV)</i>	<i>Margin (dB)</i>
Line 1	163.000	44.36	---	---	65.63	55.63	-11.27
	413.000	30.54	---	---	58.49	48.49	-17.95
	494.000	33.34	---	---	56.17	46.17	-12.83
	2715.000	30.86	---	---	56.00	46.00	-15.14
	3638.000	31.50	---	---	56.00	46.00	-14.50
	5800.000	35.24	---	---	60.00	50.00	-14.76
Line 2	581.000	35.70	---	---	56.00	46.00	-10.30
	824.000	34.10	---	---	56.00	46.00	-11.90
	1155.000	33.65	---	---	56.00	46.00	-12.35
	1661.000	35.04	---	---	56.00	46.00	-10.96
	2308.000	33.90	---	---	56.00	46.00	-12.10
	5460.000	38.48	---	---	60.00	50.00	-11.52

Test mode: Antenna model: ADA06-1K10000, IEEE 802.11g, Channel 1

<i>Power Connected Emissions</i>					<i>FCC Class B</i>		
<i>Conductor</i>	<i>Frequency (KHz)</i>	<i>Peak (dBμV)</i>	<i>QP (dBμV)</i>	<i>Average (dBμV)</i>	<i>QP-limit (dBμV)</i>	<i>AVG-limit (dBμV)</i>	<i>Margin (dB)</i>
Line 1	164.000	40.55	---	---	65.60	55.60	-15.05
	499.000	32.57	---	---	56.03	46.03	-13.46
	2308.000	28.91	---	---	56.00	46.00	-17.09
	2820.000	31.16	---	---	56.00	46.00	-14.84
	4288.000	31.11	---	---	56.00	46.00	-14.89
	5460.000	36.48	---	---	60.00	50.00	-13.52
Line 2	581.000	35.73	---	---	56.00	46.00	-10.27
	824.000	34.78	---	---	56.00	46.00	-11.22
	1243.000	34.85	---	---	56.00	46.00	-11.15
	1582.000	35.13	---	---	56.00	46.00	-10.87
	2243.000	33.67	---	---	56.00	46.00	-12.33
	5390.000	39.34	---	---	60.00	50.00	-10.66

Test mode: Antenna model: ADA06-1K10000, IEEE 802.11g, Channel 6

<i>Power Connected Emissions</i>					<i>FCC Class B</i>		
<i>Conductor</i>	<i>Frequency (KHz)</i>	<i>Peak (dBμV)</i>	<i>QP (dBμV)</i>	<i>Average (dBμV)</i>	<i>QP-limit (dBμV)</i>	<i>AVG-limit (dBμV)</i>	<i>Margin (dB)</i>
Line 1	166.000	39.94	---	---	65.54	55.54	-15.60
	499.000	32.04	---	---	56.03	46.03	-13.99
	2415.000	30.63	---	---	56.00	46.00	-15.37
	2899.000	31.35	---	---	56.00	46.00	-14.65
	4484.000	32.75	---	---	56.00	46.00	-13.25
	5390.000	36.46	---	---	60.00	50.00	-13.54
Line 2	499.000	35.04	---	---	56.03	46.03	-10.99
	832.000	34.74	---	---	56.00	46.00	-11.26
	1333.000	34.85	---	---	56.00	46.00	-11.15
	1661.000	35.04	---	---	56.00	46.00	-10.96
	2243.000	33.71	---	---	56.00	46.00	-12.29
	5490.000	38.10	---	---	60.00	50.00	-11.90

Test mode: Antenna model: ADA06-1K10000, IEEE 802.11g, Channel 11

<i>Power Connected Emissions</i>					<i>FCC Class B</i>		
<i>Conductor</i>	<i>Frequency (KHz)</i>	<i>Peak (dBμV)</i>	<i>QP (dBμV)</i>	<i>Average (dBμV)</i>	<i>QP-limit (dBμV)</i>	<i>AVG-limit (dBμV)</i>	<i>Margin (dB)</i>
Line 1	499.000	32.48	---	---	56.03	46.03	-13.55
	2480.000	31.82	---	---	56.00	46.00	-14.18
	3004.000	31.89	---	---	56.00	46.00	-14.11
	4571.000	32.41	---	---	56.00	46.00	-13.59
	5490.000	35.75	---	---	60.00	50.00	-14.25
	9980.000	33.17	---	---	60.00	50.00	-16.83
Line 2	499.000	35.59	---	---	56.03	46.03	-10.44
	668.000	34.28	---	---	56.00	46.00	-11.72
	832.000	35.21	---	---	56.00	46.00	-10.79
	1333.000	35.18	---	---	56.00	46.00	-10.82
	1836.000	34.74	---	---	56.00	46.00	-11.26
	5490.000	37.78	---	---	60.00	50.00	-12.22

IV. Section 15.247(b): Power Output

4.1 Test Condition & Setup



1. The output of the transmitter is connected to the BOONTON RF Power Meter.
2. The calibration is performed before every test. The values of the output power of the EUT will shown in the dBm directly are the transmitter output peak power. Recording as follows.

4.2 List of Test Instruments

Instrument Name	Model No.	Brand	Serial No.	Last time	Next time
RF Power Meter	4532	BOONTON	117501	04/12/03	04/12/04
Peak Power Sensor	57340	BOONTON	2698	04/12/03	04/12/04

4.3 Test Result

<p>Formula: $RF\ Output\ of\ EUT + Cable\ loss = Output\ peak\ power$</p>
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IEEE 802.11b

Channel	RF Output	Cable Loss	Output Peak Power	
	dBm		dBm	dBm
CH 1	16.89	0.70	17.59	57.412
CH 6	17.58	0.70	18.28	67.298
CH 11	17.72	0.70	18.42	69.502

IEEE 802.11g

Channel	RF Output	Cable Loss	Output Peak Power	
	dBm		dBm	dBm
CH 1	20.13	0.70	20.83	121.060
CH 6	20.46	0.70	21.16	130.617
CH 11	20.57	0.70	21.27	133.968

V. Section 15.247 (C): Spurious Emissions (Radiated)

5.1 Test Condition & Setup

We'd performed the test by the *radiated emission* skill: The EUT was placed in an anechoic chamber, and set the EUT transmitting continuously and scanned at 3-meter distance to determine its emission characteristics. The physical arrangement of the EUT was varied (within the scope of arrangements likely to be encountered in actual use) to determine the effect on the unit's emanations in amplitude, directivity, and frequency. The exact system configuration, which produced the highest emissions was noted so it could be reproduced later during the final tests. For the measurement above 1GHz, according to the guidance we'd set the spectrum analyzer's 6dB bandwidth RBW to 1MHz.

This was done to ensure that the final measurements would demonstrate the worst-case interference potential of the EUT.

Final radiation measurements were made on a three-meter, anechoic chamber. The EUT system was placed on a nonconductive turntable, which is 0.8 meters height, top surface 1.0 x 1.5 meter.

The spectrum was examined from 30 MHz to 1000 MHz using an Hewlett Packard 85460A EMI Receiver, SCHWARZECK whole range Small Biconical Antenna (Model No.: UBAA9114 & BBVU9135) is used to measure frequency from 30 MHz to 1GHz. The final test is used the HP 85460A spectrum and 8564E spectrum was examined from 1GHz to 25GHz using an Hewlett Packard Spectrum Analyzer, EMCO/HP Horn Antenna (Model 3115 / 84125-80008) for 1G - 25GHz.

At each frequency, the EUT was rotated 360 degrees, and the antenna was raised and lowered from one to four meters to find the maximum emission levels. Measurements were taken using both horizontal and vertical antenna polarization.

Appropriate preamplifiers were used for improving sensitivity and precautions were taken to avoid overloading or desensitizing the spectrum analyzer. There are two spectrum analyzers use on this testing, HP 85460A for frequency 30MHz to 1000MHz, and 8564E for frequency 1GHz to 25GHz. No post-detector video filters were used in the test. The spectrum analyzer's 6dB bandwidth was set to 120KHz (spectrum was examined from 30 MHz to 1000 MHz), the spectrum analyzer's 6 dB bandwidth was set to 1 MHz (spectrum was examined from 1GHz to 25GHz) and the analyzer was operated in the maximum hold mode. There is a test condition applies in this test item, the test procedure description as the following:

Three channels were tested, one in the top (CH01), one in the middle (CH06) and the other in bottom (CH11). The setting up procedure is recorded on <1.3>

With the transmitter operating from a AC source and using the internal of EUT, radiates spurious emissions falling within the restricted bands of 15.209 were measured at operating frequencies corresponding to upper, middle and bottom channels in the 2400 ~ 2483.5 MHz band.

The actual field intensity in decibels referenced to 1 microvolt per meter (dB μ V/m) is determined by algebraically adding the measured reading in dB μ V, the antenna factor (dB), and cable loss (dB) at the appropriate frequency. Since the EUT was set to transmit continuously, no *duty cycle* is present.

For frequency between 30MHz to 1000MHz

$$F_{Ia} \text{ (dB}\mu\text{V/m)} = F_{Ir} \text{ (dB}\mu\text{V)} + \text{Correction Factors}$$

F_{Ia} : Actual Field Intensity

F_{Ir} : Reading of the Field Intensity

Correction Factors = Antenna Factor + Cable Loss – Amplifier Gain

For frequency between 1GHz to 25GHz

$$F_{Ia} \text{ (dB}\mu\text{V/m)} = F_{Ir} \text{ (dB}\mu\text{V)} + \text{Correction Factor}$$

F_{Ia} : Actual Field Intensity

F_{Ir} : Reading of the Field Intensity

Correction Factors = Antenna Factor + Cable Loss – Amplifier Gain

5.2 List of Test Instruments

Instrument Name	Model	Brand	Serial No.	Calibration Date	
				Last time	Next time
EMI Receiver	8546A	HP	3520A00242	07/28/03	07/28/04
RF Filter Section	85460A	HP	3448A00217	07/28/03	07/28/04
Small Biconical Antenna	UBAA9114 & BBVU9135	SCHWARZECK	127	06/21/03	06/21/04
Pre-amplifier	PA1F	TRC	1FAC	05/20/03	05/20/04
Auto Switch Box (>30MHz)	ASB-01	TRC	9904-01	05/20/03	05/20/04
Coaxial Cable (Double shielded, 15 meter)	A30A30-0058-50FS-15M	JYEBAO	SMA-01	05/20/03	05/20/04
Coaxial Cable (1.1 meter)	A30A30-0058-50FS-1M	JYEBAO	SMA-02	05/20/03	05/20/04
Spectrum Analyzer	8564E	HP	3720A00840	07/23/03	07/23/04
Microwave Pre-amplifier	84125C	HP	US36433002	07/30/03	07/30/04
Horn Antenna	3115	EMCO	9104-3668	12/18/03	12/18/04
Standard Guide Horn Antenna	84125-80008	HP	18-26.5GHz	09/18/03	09/18/04
Standard Guide Horn Antenna	84125-80001	HP	26.5-40GHz	09/18/03	09/18/04
Pre-amplifier	84125C	HP	US36433002	11/19/03	11/19/04
Horn Antenna	1196E (3115)	HP (EMCO)	9704-5178	12/12/03	12/12/04
Pre-amplifier	PA2F	TRC	2F1GZ	05/20/03	05/20/04
Coaxial Cable (3 miter)	A30A30-0058-50FST118	JYEBAO	MSA-05	05/20/03	05/20/04
Coaxial Cable (1 meter)	A30A30-0058-50FST118	JYEBAO	MSA-04	05/20/03	05/20/04

5.3 Test Result of Spurious Radiated Emissions

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

Test Conditions: Temperature : 16.6 ° C Humidity : 57.0 % RH

Test mode: Antenna model L5G, Standby mode [Horizontal]

Radiated Emission				Correction Factors (dB)	Corrected Amplitude (dBµV/m)	FCC Class B (3 m)	
Frequency (MHz)	Amplitude (dBµV)	Ant. H. (m)	Table (°)			Limit (dBµV/m)	Margin (dB)
208.24	37.75	1.00	322	-2.57	35.18	43.50	-8.32
234.91	41.02	1.00	255	-2.62	38.40	46.00	-7.60
255.52	42.29	1.14	342	-2.68	39.61	46.00	-6.39
268.86	45.35	1.00	30	-2.82	42.53	46.00	-3.47
302.81	40.10	1.00	113	-2.24	37.86	46.00	-8.14
329.49	40.03	1.00	183	-1.78	38.25	46.00	-7.75

Test mode: Antenna model L5G, Standby mode [Vertical]

Radiated Emission				Correction Factors (dB)	Corrected Amplitude (dBµV/m)	FCC Class B (3 m)	
Frequency (MHz)	Amplitude (dBµV)	Ant. H. (m)	Table (°)			Limit (dBµV/m)	Margin (dB)
168.22	36.34	1.00	215	-2.46	33.88	43.50	-9.62
234.91	38.50	1.00	359	-2.62	35.88	46.00	-10.12
393.75	36.69	1.00	242	0.47	37.16	46.00	-8.84
528.34	30.95	1.00	202	5.76	36.71	46.00	-9.29
567.14	30.05	1.00	220	7.59	37.64	46.00	-8.36
721.12	25.09	1.00	255	12.40	37.49	46.00	-8.51

Note:

1. Margin = Amplitude – limit, if margin is minus means under limit.
2. Corrected Amplitude = Reading Amplitude + Correction Factors
3. Correction factor = Antenna factor + (Cable Loss – Amplitude gain)

Test mode: Antenna model L5G, 802.11b for 30MHz to 1GHz [Horizontal]

<i>Radiated Emission</i>				<i>Correction Factors</i>	<i>Corrected Amplitude</i>	<i>FCC Class B (3 m)</i>	
<i>Frequency (MHz)</i>	<i>Amplitude (dBμV)</i>	<i>Ant. H. (m)</i>	<i>Table (°)</i>			<i>Limit (dBμV/m)</i>	<i>Margin (dB)</i>
66.37	25.51	1.00	185	2.24	27.75	40.00	-12.25
167.01	35.06	1.00	338	-2.47	32.59	43.50	-10.91
234.91	38.34	1.00	342	-2.62	35.72	46.00	-10.28
267.65	38.50	1.00	270	-2.81	35.69	46.00	-10.31
325.85	41.03	1.00	133	-1.85	39.18	46.00	-6.82
392.54	33.46	1.00	168	0.42	33.88	46.00	-12.12

Test mode: Antenna model L5G, 802.11b for 30MHz to 1GHz [Vertical]

<i>Radiated Emission</i>				<i>Correction Factors</i>	<i>Corrected Amplitude</i>	<i>FCC Class B (3 m)</i>	
<i>Frequency (MHz)</i>	<i>Amplitude (dBμV)</i>	<i>Ant. H. (m)</i>	<i>Table (°)</i>			<i>Limit (dBμV/m)</i>	<i>Margin (dB)</i>
66.37	32.08	1.00	319	2.24	34.32	40.00	-5.68
234.91	36.79	1.00	351	-2.62	34.17	46.00	-11.83
268.86	38.88	1.00	33	-2.82	36.06	46.00	-9.94
528.34	29.62	1.00	211	5.76	35.38	46.00	-10.62
563.50	27.37	1.00	196	7.43	34.80	46.00	-11.20
721.12	23.23	1.00	173	12.40	35.63	46.00	-10.37

Test mode: Antenna model L5G, 802.11g for 30MHz to 1GHz [Horizontal]

Radiated Emission				Correction Factors	Corrected Amplitude	FCC Class B (3 m)	
Frequency (MHz)	Amplitude (dBμV)	Ant. H. (m)	Table (°)			Limit (dBμV/m)	Margin (dB)
200.96	33.79	1.00	150	-2.26	31.53	43.50	-11.97
233.70	41.69	1.00	335	-2.61	39.08	46.00	-6.92
265.23	42.99	1.00	258	-2.78	40.21	46.00	-5.79
325.85	38.25	1.00	184	-1.85	36.40	46.00	-9.60
392.54	37.01	1.00	315	0.42	37.43	46.00	-8.57
528.34	29.37	1.00	280	5.76	35.13	46.00	-10.87

Test mode: Antenna model L5G, 802.11g for 30MHz to 1GHz [Vertical]

Radiated Emission				Correction Factors	Corrected Amplitude	FCC Class B (3 m)	
Frequency (MHz)	Amplitude (dBμV)	Ant. H. (m)	Table (°)			Limit (dBμV/m)	Margin (dB)
55.46	32.35	1.00	310	3.31	35.66	40.00	-4.34
60.31	33.03	1.00	304	2.66	35.69	40.00	-4.31
80.92	33.78	1.00	137	1.59	35.37	40.00	-4.63
248.25	45.28	1.00	10	-2.63	42.65	46.00	-3.35
393.75	35.73	1.00	212	0.47	36.20	46.00	-9.80
528.34	30.58	1.00	232	5.76	36.34	46.00	-9.66

Test mode: Antenna model L5G, Standby mode for 1GHz to 25GHz [Horizontal]

Radiated Emission				Corrected Amplitude		FCC Class B (3m)		
Frequency (MHz)	Ant. H. (m)	Table (°)	Correction Factors (dB)	(dBµV/m)		Limit (dBµV/m)		Margin (dB)
				Peak	Average	Peak	Ave.	
1325.83	1.00	12	0.70	36.44	---	74.00	53.96	-17.52
2700.00	1.00	204	8.15	39.06	---	74.00	53.96	-14.90
3280.83	1.00	173	9.78	43.69	---	74.00	53.96	-10.27
8047.92	1.00	241	22.48	46.06	---	74.00	53.96	-7.90

Test mode: Antenna model L5G, Standby mode for 1GHz to 25GHz [Vertical]

Radiated Emission				Corrected Amplitude		FCC Class B (3m)		
Frequency (MHz)	Ant. H. (m)	Table (°)	Correction Factors (dB)	(dBµV/m)		Limit (dBµV/m)		Margin (dB)
				Peak	Average	Peak	Ave.	
1191.25	1.00	267	0.99	38.39	---	74.00	53.96	-15.57
1460.42	1.00	148	0.16	37.07	---	74.00	53.96	-16.89
1595.00	1.00	302	0.30	37.20	---	74.00	53.96	-16.76
3280.83	1.00	181	9.78	40.19	---	74.00	53.96	-13.77
4683.33	1.00	182	14.10	41.84	---	74.00	53.96	-12.12
8805.83	1.00	259	23.03	46.61	---	74.00	53.96	-7.35

Note:

1. Margin = Corrected - Limit.
2. The EUT utilizes a *permanently attached antenna*. In addition the spurious RF radiated emissions levels do comply with the *20dBc limit* both at its bandedges and other spurious emissions.
3. As stated in Section 15.35(b), for any frequencies above 1000MHz, radiated limits shown are based upon the use of measurement instrumentation employing an average detector function. As the results of our test, the peak amplitudes are already below the FCC limit. Thus the average amplitudes of the rest are omitted.

Test mode: Antenna model L5G, Channel 1 of IEEE 802.11b for 1GHz to 25GHz [Horizontal]

Radiated Emission				Corrected Amplitude		FCC Class B (3m)		
Frequency (MHz)	Ant. H. (m)	Table (°)	Correction Factors (dB)	(dBµV/m)		Limit (dBµV/m)		Margin (dB)
				Peak	Average	Peak	Ave.	
4823.12	1.00	282	3.76	46.36	---	74.00	53.96	-7.60
7238.25	1.00	285	10.10	52.35	---	74.00	53.96	-1.61
9647.80	1.00	282	11.46	50.58	---	74.00	53.96	-3.38
12061.04	1.00	85	9.81	45.75	---	74.00	53.96	-8.21

Test mode: Antenna model L5G, Channel 1 of IEEE 802.11b for 1GHz to 25GHz [Vertical]

Radiated Emission				Corrected Amplitude		FCC Class B (3m)		
Frequency (MHz)	Ant. H. (m)	Table (°)	Correction Factors (dB)	(dBµV/m)		Limit (dBµV/m)		Margin (dB)
				Peak	Average	Peak	Ave.	
4823.12	1.00	269	269	43.03	---	74.00	53.96	-10.93
7227.71	1.00	18	18	47.48	---	74.00	53.96	-6.48
9650.42	1.00	88	88	47.91	---	74.00	53.96	-6.05
12061.04	1.00	104	104	46.91	---	74.00	53.96	-7.05

Test mode: Antenna model L5G, Channel 6 of IEEE 802.11b for 1GHz to 25GHz [Horizontal]

Radiated Emission				Corrected Amplitude		FCC Class B (3m)		
Frequency (MHz)	Ant. H. (m)	Table (°)	Correction Factors (dB)	(dBµV/m)		Limit (dBµV/m)		Margin (dB)
				Peak	Average	Peak	Ave.	
4871.46	1.00	247	3.95	44.39	---	74.00	53.96	-9.57
7308.64	1.00	262	10.29	53.74	45.90	74.00	53.96	-8.06
9747.80	1.00	259	11.89	49.66	---	74.00	53.96	-4.30
12187.92	1.00	24	9.74	47.34	---	74.00	53.96	-6.62

Test mode: Antenna model L5G, Channel 6 of IEEE 802.11b for 1GHz to 25GHz [Vertical]

Radiated Emission				Corrected Amplitude		FCC Class B (3m)		
Frequency (MHz)	Ant. H. (m)	Table (°)	Correction Factors (dB)	(dBµV/m)		Limit (dBµV/m)		Margin (dB)
				Peak	Average	Peak	Ave.	
4871.46	1.00	350	3.95	41.72	---	74.00	53.96	-12.24
7306.25	1.00	278	10.29	47.73	---	74.00	53.96	-6.23
9747.08	1.00	329	11.89	44.99	---	74.00	53.96	-8.97
12187.92	1.00	231	9.74	46.84	---	74.00	53.96	-7.12

Test mode: Antenna model L5G, Channel 11 of IEEE 802.11b for 1GHz to 25GHz [Horizontal]

Radiated Emission				Corrected Amplitude		FCC Class B (3m)		
Frequency (MHz)	Ant. H. (m)	Table (°)	Correction Factors (dB)	(dBµV/m)		Limit (dBµV/m)		Margin (dB)
				Peak	Average	Peak	Ave.	
1597.92	1.00	93	3.30	41.63	---	74.00	53.96	-12.33
4925.83	1.00	346	4.13	40.74	---	74.00	53.96	-13.22
7390.83	1.00	169	10.41	42.85	---	74.00	53.96	-11.11
9849.79	1.00	261	11.93	44.54	---	74.00	53.96	-9.42
12314.79	1.00	291	9.52	45.13	---	74.00	53.96	-8.83

Test mode: Antenna model L5G, Channel 11 of IEEE 802.11b for 1GHz to 25GHz [Vertical]

Radiated Emission				Corrected Amplitude		FCC Class B (3m)		
Frequency (MHz)	Ant. H. (m)	Table (°)	Correction Factors (dB)	(dBµV/m)		Limit (dBµV/m)		Margin (dB)
				Peak	Average	Peak	Ave.	
3210.42	1.00	138	4.65	40.15	---	74.00	53.96	-13.81
4925.83	1.00	17	4.13	40.24	---	74.00	53.96	-13.72
7390.83	1.00	137	10.41	43.02	---	74.00	53.96	-10.94
9849.79	1.00	65	11.93	45.87	---	74.00	53.96	-8.09
12314.79	1.00	198	9.52	46.63	---	74.00	53.96	-7.33

Test mode: Antenna model L5G, Channel 1 of IEEE 802.11g for 1GHz to 25GHz [Horizontal]

Radiated Emission				Corrected Amplitude		FCC Class B (3m)		
Frequency (MHz)	Ant. H. (m)	Table (°)	Correction Factors (dB)	(dBµV/m)		Limit (dBµV/m)		Margin (dB)
				Peak	Average	Peak	Ave.	
2537.50	1.00	307	3.55	41.22	---	74.00	53.96	-12.74
4823.12	1.00	357	3.76	41.70	---	74.00	53.96	-12.26
7239.79	1.00	328	10.11	44.05	---	74.00	53.96	-9.91
9644.37	1.00	315	11.44	47.05	---	74.00	53.96	-6.91
12061.04	1.00	159	9.81	46.91	---	74.00	53.96	-7.05

Test mode: Antenna model L5G, Channel 1 of IEEE 802.11g for 1GHz to 25GHz [Vertical]

Radiated Emission				Corrected Amplitude		FCC Class B (3m)		
Frequency (MHz)	Ant. H. (m)	Table (°)	Correction Factors (dB)	(dBµV/m)		Limit (dBµV/m)		Margin (dB)
				Peak	Average	Peak	Ave.	
3227.08	1.00	67	4.69	39.69	---	74.00	53.96	-14.27
4823.12	1.00	282	3.76	43.03	---	74.00	53.96	-10.93
7239.79	1.00	35	10.11	44.55	---	74.00	53.96	-9.41
9644.37	1.00	137	11.44	47.05	---	74.00	53.96	-6.91
12061.04	1.00	217	9.81	46.08	---	74.00	53.96	-7.88

Test mode: Antenna model L5G, Channel 6 of IEEE 802.11g for 1GHz to 25GHz [Horizontal]

<i>Radiated Emission</i>				<i>Corrected Amplitude</i>		<i>FCC Class B (3m)</i>		
<i>Frequency (MHz)</i>	<i>Ant. H. (m)</i>	<i>Table (°)</i>	<i>Correction Factors (dB)</i>	<i>(dBμV/m)</i>		<i>Limit (dBμV/m)</i>		<i>Margin (dB)</i>
				<i>Peak</i>	<i>Average</i>	<i>Peak</i>	<i>Ave.</i>	
4877.50	1.00	269	3.97	41.24	---	74.00	53.96	-12.72
7312.29	1.00	193	10.30	44.57	---	74.00	53.96	-9.39
9747.08	1.00	248	11.89	44.66	---	74.00	53.96	-9.30
12187.92	1.00	271	9.74	46.68	---	74.00	53.96	-7.28

Test mode: Antenna model L5G, Channel 6 of IEEE 802.11g for 1GHz to 25GHz [Vertical]

<i>Radiated Emission</i>				<i>Corrected Amplitude</i>		<i>FCC Class B (3m)</i>		
<i>Frequency (MHz)</i>	<i>Ant. H. (m)</i>	<i>Table (°)</i>	<i>Correction Factors (dB)</i>	<i>(dBμV/m)</i>		<i>Limit (dBμV/m)</i>		<i>Margin (dB)</i>
				<i>Peak</i>	<i>Average</i>	<i>Peak</i>	<i>Ave.</i>	
4877.50	1.00	111	3.97	41.08	---	74.00	53.96	-12.88
7312.29	1.00	28	10.30	43.57	---	74.00	53.96	-10.39
9747.08	1.00	51	11.89	46.16	---	74.00	53.96	-7.80
12187.92	1.00	185	9.74	46.84	---	74.00	53.96	-7.12

Test mode: Antenna model L5G, Channel 11 of IEEE 802.11g for 1GHz to 25GHz [Horizontal]

Radiated Emission				Corrected Amplitude		FCC Class B (3m)		
Frequency (MHz)	Ant. H. (m)	Table (°)	Correction Factors (dB)	(dBµV/m)		Limit (dBµV/m)		Margin (dB)
				Peak	Average	Peak	Ave.	
2775.00	1.00	89	3.86	40.70	---	74.00	53.96	-13.26
4925.83	1.00	100	4.13	40.24	---	74.00	53.96	-13.72
7390.83	1.00	159	10.41	44.35	---	74.00	53.96	-9.61
9849.79	1.00	194	11.93	44.71	---	74.00	53.96	-9.25
12314.79	1.00	330	9.52	45.63	---	74.00	53.96	-8.33

Test mode: Antenna model L5G, Channel 11 of IEEE 802.11g for 1GHz to 25GHz [Vertical]

Radiated Emission				Corrected Amplitude		FCC Class B (3m)		
Frequency (MHz)	Ant. H. (m)	Table (°)	Correction Factors (dB)	(dBµV/m)		Limit (dBµV/m)		Margin (dB)
				Peak	Average	Peak	Ave.	
4925.83	1.00	254	4.13	39.74	---	74.00	53.96	-14.22
7390.83	1.00	290	10.41	43.02	---	74.00	53.96	-10.94
9849.79	1.00	306	11.93	45.21	---	74.00	53.96	-8.75
12314.79	1.00	126	9.52	45.79	---	74.00	53.96	-8.17

Test mode: Antenna model ADA06-1K10000, Standby mode for 30MHz to 1GHz [Horizontal]

Radiated Emission				Correction Factors	Corrected Amplitude	FCC Class B (3 m)	
Frequency (MHz)	Amplitude (dBμV)	Ant. H. (m)	Table (°)			Limit (dBμV/m)	Margin (dB)
167.01	42.54	1.00	232	-2.47	40.07	43.50	-3.43
173.07	40.79	1.00	66	-2.54	38.25	43.50	-5.25
186.41	39.16	1.00	353	-2.62	36.54	43.50	-6.96
194.90	39.10	1.00	323	-2.39	36.71	43.50	-6.79
261.59	43.80	1.00	170	-2.75	41.05	46.00	-4.95
325.85	42.40	1.00	135	-1.85	40.55	46.00	-5.45

Test mode: Antenna model ADA06-1K10000, Standby mode for 30MHz to 1GHz [Vertical]

Radiated Emission				Correction Factors	Corrected Amplitude	FCC Class B (3 m)	
Frequency (MHz)	Amplitude (dBμV)	Ant. H. (m)	Table (°)			Limit (dBμV/m)	Margin (dB)
167.01	39.11	1.00	89	-2.47	36.64	43.50	-6.86
181.56	36.38	1.00	191	-2.72	33.66	43.50	-9.84
192.47	33.21	1.00	34	-2.47	30.74	43.50	-12.76
327.06	35.86	1.00	237	-1.82	34.04	46.00	-11.96
528.34	30.79	1.00	187	5.76	36.55	46.00	-9.45
567.14	28.81	1.00	213	7.59	36.40	46.00	-9.60

Test mode: Antenna model ADA06-1K10000, 802.11b for 30MHz to 1GHz [Horizontal]

Radiated Emission				Correction Factors	Corrected Amplitude	FCC Class B (3 m)	
Frequency (MHz)	Amplitude (dBμV)	Ant. H. (m)	Table (°)			Limit (dBμV/m)	Margin (dB)
200.96	35.87	1.00	193	-2.26	33.61	43.50	-9.89
236.12	42.88	1.00	175	-2.64	40.24	46.00	-5.76
261.59	40.77	1.00	167	-2.75	38.02	46.00	-7.98
300.39	38.01	1.00	171	-2.28	35.73	46.00	-10.27
325.85	43.23	1.00	137	-1.85	41.38	46.00	-4.62
392.54	33.92	1.00	154	0.42	34.34	46.00	-11.66

Test mode: Antenna model ADA06-1K10000, 802.11b for 30MHz to 1GHz [Vertical]

Radiated Emission				Correction Factors	Corrected Amplitude	FCC Class B (3 m)	
Frequency (MHz)	Amplitude (dBμV)	Ant. H. (m)	Table (°)			Limit (dBμV/m)	Margin (dB)
167.01	42.26	1.00	0	-2.47	39.79	43.50	-3.71
234.91	38.86	1.00	270	-2.62	36.24	46.00	-9.76
327.06	35.95	1.00	13	-1.82	34.13	46.00	-11.87
391.32	33.61	1.00	225	0.36	33.97	46.00	-12.03
528.34	30.86	1.00	225	5.76	36.62	46.00	-9.38
567.14	28.72	1.00	227	7.59	36.31	46.00	-9.69

Test mode: Antenna model ADA06-1K10000, 802.11g for 30MHz to 1GHz [Horizontal]

Radiated Emission				Correction Factors (dB)	Corrected Amplitude (dBμV/m)	FCC Class B (3 m)	
Frequency (MHz)	Amplitude (dBμV)	Ant. H. (m)	Table (°)			Limit (dBμV/m)	Margin (dB)
174.29	38.40	1.00	210	-2.57	35.83	43.50	-7.67
187.62	40.72	1.00	179	-2.60	38.12	43.50	-5.38
193.69	41.71	1.00	195	-2.43	39.28	43.50	-4.22
205.81	41.43	1.00	222	-2.47	38.96	43.50	-4.54
325.85	39.82	1.00	199	-1.85	37.97	46.00	-8.03
528.34	30.33	1.00	258	5.76	36.09	46.00	-9.91

Test mode: Antenna model ADA06-1K10000, 802.11g for 30MHz to 1GHz [Vertical]

Radiated Emission				Correction Factors (dB)	Corrected Amplitude (dBμV/m)	FCC Class B (3 m)	
Frequency (MHz)	Amplitude (dBμV)	Ant. H. (m)	Table (°)			Limit (dBμV/m)	Margin (dB)
147.61	35.82	1.00	93	-1.89	33.93	43.50	-9.57
167.01	39.91	1.00	77	-2.47	37.44	43.50	-6.06
199.75	40.15	1.00	146	-2.23	37.92	43.50	-5.58
213.09	43.81	1.00	233	-2.57	41.24	43.50	-2.26
228.85	43.69	1.00	25	-2.54	41.15	46.00	-4.85
528.34	30.22	1.00	261	5.76	35.98	46.00	-10.02

Test mode: Antenna model ADA06-1K10000, Standby mode for 1GHz to 25GHz [Horizontal]

Radiated Emission				Corrected Amplitude		FCC Class B (3m)		
Frequency (MHz)	Ant. H. (m)	Table (°)	Correction Factors (dB)	(dBµV/m)		Limit (dBµV/m)		Margin (dB)
				Peak	Average	Peak	Ave.	
1911.25	1.00	224	0.99	35.23	---	74.00	53.96	-18.73
1325.83	1.00	278	0.70	37.27	---	74.00	53.96	-16.69
2062.50	1.00	0	4.67	36.41	---	74.00	53.96	-17.55
3217.08	1.00	354	9.63	43.03	---	74.00	53.96	-10.93
5611.25	1.00	308	17.22	43.63	---	74.00	53.96	-10.33

Test mode: Antenna model ADA06-1K10000, Standby mode for 1GHz to 25GHz [Vertical]

Radiated Emission				Corrected Amplitude		FCC Class B (3m)		
Frequency (MHz)	Ant. H. (m)	Table (°)	Correction Factors (dB)	(dBµV/m)		Limit (dBµV/m)		Margin (dB)
				Peak	Average	Peak	Ave.	
1198.33	1.00	255	0.99	41.06	---	74.00	53.96	-12.90
1460.42	1.00	128	0.16	37.90	---	74.00	53.96	-16.06
1595.00	1.00	283	0.30	37.20	---	74.00	53.96	-16.76
2473.33	1.00	157	6.77	38.51	---	74.00	53.96	-15.45
3217.08	1.00	187	9.63	40.70	---	74.00	53.96	-13.26
4194.58	1.00	199	12.78	42.02	---	74.00	53.96	-11.94

Test mode: Antenna model ADA06-1K10000, Channel 1 of 802.11b for 1GHz to 25GHz [Horizontal]

Radiated Emission				Corrected Amplitude		FCC Class B (3m)		
Frequency (MHz)	Ant. H. (m)	Table (°)	Correction Factors (dB)	(dBµV/m)		Limit (dBµV/m)		Margin (dB)
				Peak	Average	Peak	Ave.	
3216.67	1.00	264	4.67	40.17	---	74.00	53.96	-13.79
4823.12	1.00	70	3.76	40.03	---	74.00	53.96	-13.93
7239.79	1.00	165	10.11	46.55	---	74.00	53.96	-7.41
9650.42	1.00	250	11.47	45.74	---	74.00	53.96	-8.22
12061.04	1.00	214	9.81	45.41	---	74.00	53.96	-8.55

Test mode: Antenna model ADA06-1K10000, Channel 1 of 802.11b for 1GHz to 25GHz [Vertical]

Radiated Emission				Corrected Amplitude		FCC Class B (3m)		
Frequency (MHz)	Ant. H. (m)	Table (°)	Correction Factors (dB)	(dBµV/m)		Limit (dBµV/m)		Margin (dB)
				Peak	Average	Peak	Ave.	
2250.00	1.00	265	2.67	40.00	---	74.00	53.96	-13.96
3216.67	1.00	300	4.67	41.00	---	74.00	53.96	-12.96
4823.12	1.00	320	3.76	40.20	---	74.00	53.96	-13.76
7233.75	1.00	52	10.07	46.18	---	74.00	53.96	-7.78
9650.42	1.00	103	11.47	44.91	---	74.00	53.96	-9.05
12061.04	1.00	328	9.81	47.25	---	74.00	53.96	-6.71

Test mode: Antenna model ADA06-1K10000, Channel 6 of 802.11b for 1GHz to 25GHz [Horizontal]

Radiated Emission				Corrected Amplitude		FCC Class B (3m)		
Frequency (MHz)	Ant. H. (m)	Table (°)	Correction Factors (dB)	(dBµV/m)		Limit (dBµV/m)		Margin (dB)
				Peak	Average	Peak	Ave.	
4871.46	1.00	73	3.95	39.55	---	74.00	53.96	-14.41
7306.25	1.00	11	10.29	48.23	---	74.00	53.96	-5.73
9747.08	1.00	10	11.89	44.83	---	74.00	53.96	-9.13
12187.92	1.00	232	9.74	47.68	---	74.00	53.96	-6.28

Test mode: Antenna model ADA06-1K10000, Channel 6 of 802.11b for 1GHz to 25GHz [Vertical]

Radiated Emission				Corrected Amplitude		FCC Class B (3m)		
Frequency (MHz)	Ant. H. (m)	Table (°)	Correction Factors (dB)	(dBµV/m)		Limit (dBµV/m)		Margin (dB)
				Peak	Average	Peak	Ave.	
3250.00	1.00	52	4.75	42.24	---	74.00	53.96	-11.72
4871.46	1.00	287	3.95	41.22	---	74.00	53.96	-12.74
7312.29	1.00	154	10.30	46.91	---	74.00	53.96	-7.05
9747.08	1.00	94	11.89	45.33	---	74.00	53.96	-8.63
12187.92	1.00	212	9.74	46.84	---	74.00	53.96	-7.12

Test mode: Antenna model ADA06-1K10000, Channel 11 of 802.11b for 1GHz to 25GHz [Horizontal]

Radiated Emission				Corrected Amplitude		FCC Class B (3m)		
Frequency (MHz)	Ant. H. (m)	Table (°)	Correction Factors (dB)	(dBμV/m)		Limit (dBμV/m)		Margin (dB)
				Peak	Average	Peak	Ave.	
4925.83	1.00	290	4.13	42.07	---	74.00	53.96	-11.89
7384.79	1.00	336	10.42	46.36	---	74.00	53.96	-7.60
9849.79	1.00	280	11.93	45.71	---	74.00	53.96	-8.25
12308.75	1.00	276	9.56	44.00	---	74.00	53.96	-9.96

Test mode: Antenna model ADA06-1K10000, Channel 11 of 802.11b for 1GHz to 25GHz [Vertical]

Radiated Emission				Corrected Amplitude		FCC Class B (3m)		
Frequency (MHz)	Ant. H. (m)	Table (°)	Correction Factors (dB)	(dBμV/m)		Limit (dBμV/m)		Margin (dB)
				Peak	Average	Peak	Ave.	
2593.75	1.00	4	3.62	43.29	---	74.00	53.96	-10.67
4925.83	1.00	58	4.13	41.57	---	74.00	53.96	-12.39
7390.83	1.00	300	10.41	47.19	---	74.00	53.96	-6.77
9849.79	1.00	249	11.93	46.71	---	74.00	53.96	-7.25
12308.75	1.00	33	9.56	44.00	---	74.00	53.96	-9.96

Test mode: Antenna model ADA06-1K10000, Channel 1 of 802.11g for 1GHz to 25GHz [Horizontal]

Radiated Emission				Corrected Amplitude		FCC Class B (3m)		
Frequency (MHz)	Ant. H. (m)	Table (°)	Correction Factors (dB)	(dBμV/m)		Limit (dBμV/m)		Margin (dB)
				Peak	Average	Peak	Ave.	
4823.12	1.00	282	3.76	41.53	---	74.00	53.96	-12.43
7233.75	1.00	23	10.07	47.51	---	74.00	53.96	-6.45
9650.42	1.00	59	11.47	46.08	---	74.00	53.96	-7.88
12061.04	1.00	297	9.81	47.58	---	74.00	53.96	-6.38

Test mode: Antenna model ADA06-1K10000, Channel 1 of 802.11g for 1GHz to 25GHz [Vertical]

Radiated Emission				Corrected Amplitude		FCC Class B (3m)		
Frequency (MHz)	Ant. H. (m)	Table (°)	Correction Factors (dB)	(dBμV/m)		Limit (dBμV/m)		Margin (dB)
				Peak	Average	Peak	Ave.	
2685.42	1.00	1	3.74	42.74	---	74.00	53.96	-11.22
4823.12	1.00	328	3.76	40.36	---	74.00	53.96	-13.60
7233.75	1.00	250	10.07	46.68	---	74.00	53.96	-7.28
9650.42	1.00	235	11.47	45.58	---	74.00	53.96	-8.38
12061.04	1.00	87	9.81	46.41	---	74.00	53.96	-7.55

Test mode: Antenna model ADA06-1K10000, Channel 6 of 802.11g for 1GHz to 25GHz [Horizontal]

Radiated Emission				Corrected Amplitude		FCC Class B (3m)		
Frequency (MHz)	Ant. H. (m)	Table (°)	Correction Factors (dB)	(dBµV/m)		Limit (dBµV/m)		Margin (dB)
				Peak	Average	Peak	Ave.	
1820.83	1.00	213	2.49	39.82	---	74.00	53.96	-14.14
2675.00	1.00	329	3.73	40.56	---	74.00	53.96	-13.40
4871.46	1.00	49	3.95	42.22	---	74.00	53.96	-11.74
7312.29	1.00	165	10.30	46.91	---	74.00	53.96	-7.05
9747.08	1.00	167	11.89	45.83	---	74.00	53.96	-8.13
12187.92	1.00	235	9.74	48.84	---	74.00	53.96	-5.12

Test mode: Antenna model ADA06-1K10000, Channel 6 of 802.11g for 1GHz to 25GHz [Vertical]

Radiated Emission				Corrected Amplitude		FCC Class B (3m)		
Frequency (MHz)	Ant. H. (m)	Table (°)	Correction Factors (dB)	(dBµV/m)		Limit (dBµV/m)		Margin (dB)
				Peak	Average	Peak	Ave.	
2691.67	1.00	10	3.75	43.42	---	74.00	53.96	-10.54
4871.46	1.00	88	3.95	42.39	---	74.00	53.96	-11.57
7312.29	1.00	115	10.30	45.74	---	74.00	53.96	-8.22
9747.08	1.00	202	11.89	45.83	---	74.00	53.96	-8.13
12187.92	1.00	213	9.74	47.51	---	74.00	53.96	-6.45

Test mode: Antenna model ADA06-1K10000, Channel 11 of 802.11g for 1GHz to 25GHz [Horizontal]

Radiated Emission				Corrected Amplitude		FCC Class B (3m)		
Frequency (MHz)	Ant. H. (m)	Table (°)	Correction Factors (dB)	(dBµV/m)		Limit (dBµV/m)		Margin (dB)
				Peak	Average	Peak	Ave.	
2664.58	1.00	268	3.72	39.55	---	74.00	53.96	-14.41
3283.33	1.00	282	4.82	41.66	---	74.00	53.96	-12.30
4925.83	1.00	345	4.13	42.74	---	74.00	53.96	-11.22
7390.83	1.00	260	10.41	45.02	---	74.00	53.96	-8.94
9849.79	1.00	70	11.93	47.04	---	74.00	53.96	-6.92
12308.75	1.00	37	9.56	45.67	---	74.00	53.96	-8.29

Test mode: Antenna model ADA06-1K10000, Channel 11 of 802.11g for 1GHz to 25GHz [Vertical]

Radiated Emission				Corrected Amplitude		FCC Class B (3m)		
Frequency (MHz)	Ant. H. (m)	Table (°)	Correction Factors (dB)	(dBµV/m)		Limit (dBµV/m)		Margin (dB)
				Peak	Average	Peak	Ave.	
4925.83	1.00	183	4.13	42.90	---	74.00	53.96	-11.06
7390.83	1.00	241	10.41	44.02	---	74.00	53.96	-9.94
9849.79	1.00	201	11.93	46.37	---	74.00	53.96	-7.59
12308.75	1.00	134	9.56	44.33	---	74.00	53.96	-9.63

5.4 Test Result of the Bandedge

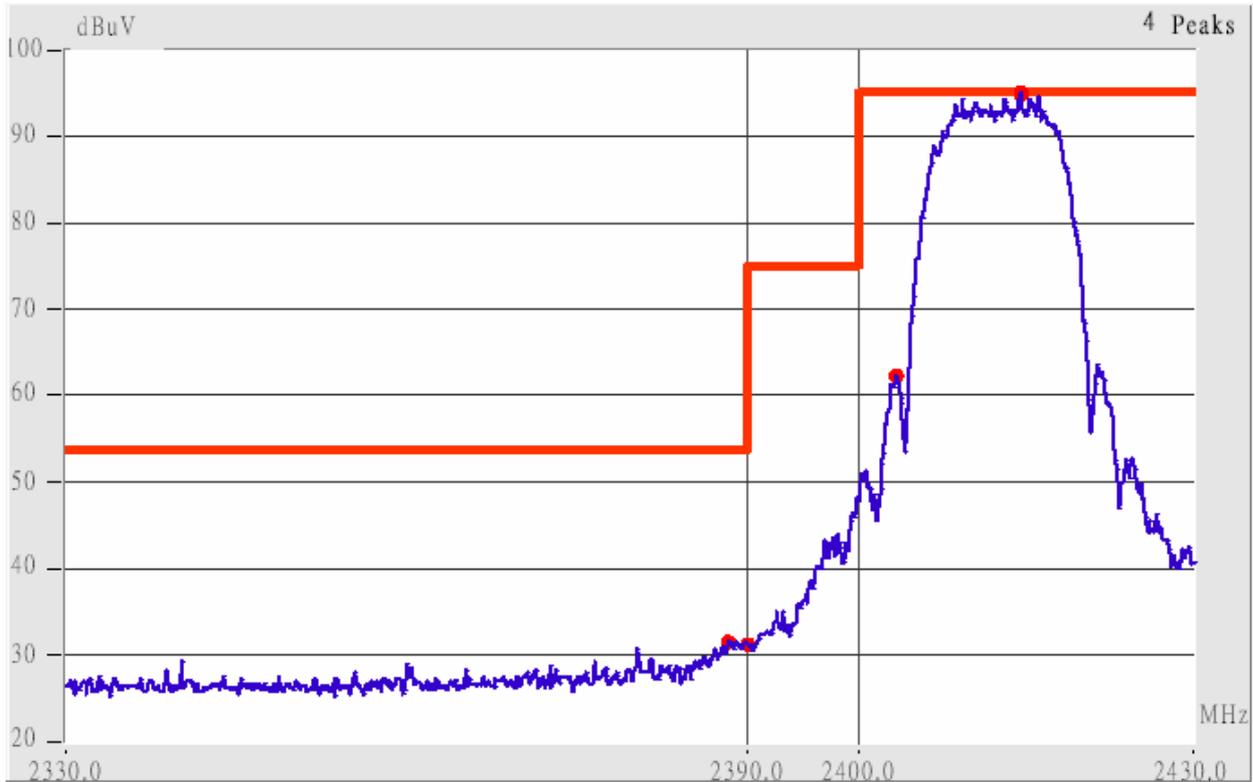
If any 100 kHz bandwidth outside these frequency bands, the radio frequency power that is produced by the modulation products of the spreading sequence, the information sequence and the carrier frequency shall be either *at least 20 dB below that in any 100 kHz bandwidth within the band that contains the highest level of the desired power or shall not exceed the general levels specified in § 15.209(a)*,

We perform this section by the *radiated manner*, the RBW is set to 100kHz and VBW>RBW. We'd made the observation *up to 10th harmonics and the criterion is all the harmonic/spurious emissions must be 20dB below the highest emission level measured*. If the emissions fall in the restricted bands stated in the Part15.205(a) must also *comply with the radiated emission limits specified in Part15.209(a)*. (*Peak mode: RBW=VBW=1MHz, Average mode: RBW=1MHz; VBW=10Hz*)

The following pages show our observations referring to the channel 1 and 11 respectively.

Test Condition & Setup: same as < 5.1 >

Antenna model L5G, Channel 1 of IEEE 802.11b

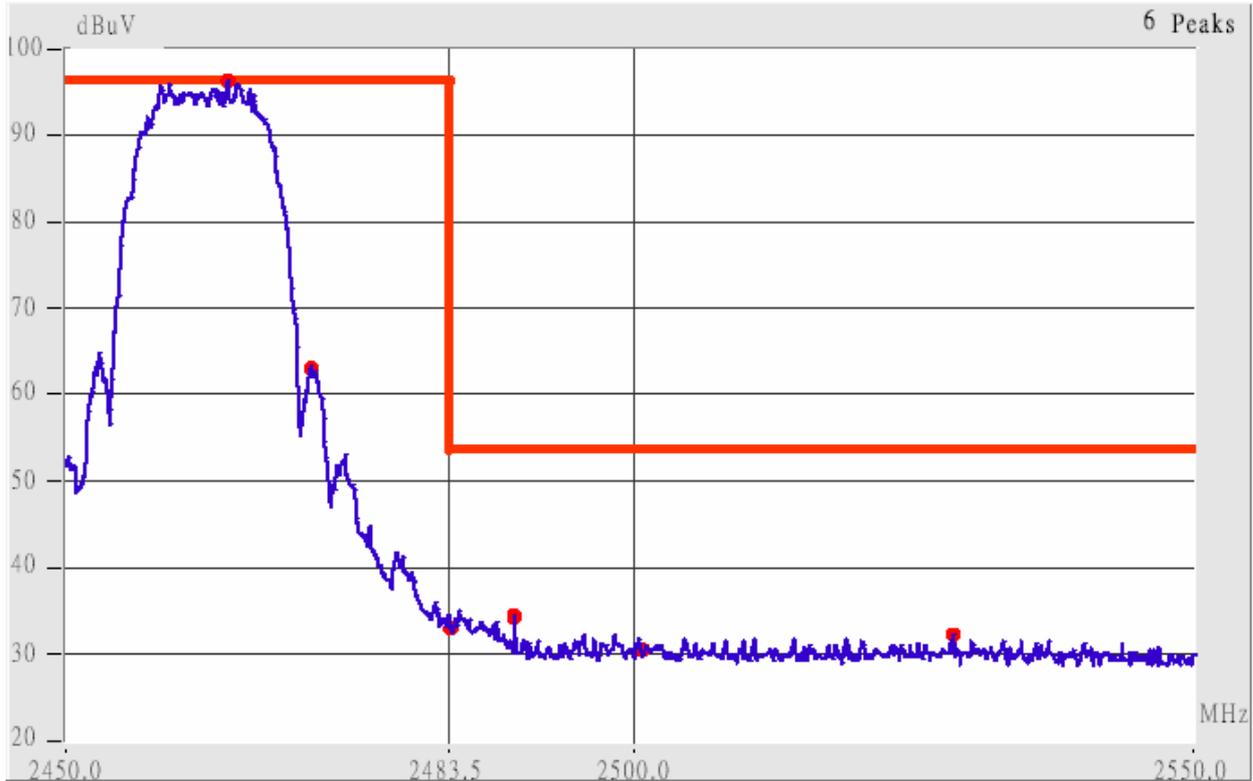


This is the hard copy of our bandedge measurement generated by our bandedge testing program. The plot shown above is the bandedge of channel 1.

1. The lobe left by the fundamental side is already 20dB below the highest emission level.
2. The emissions recorded in the restricted band is do comply with the Part 15.209(a) – as below.

<i>Radiated Emission</i>					<i>Corrected Amplitude</i>		<i>FCC Class B (3m)</i>		
<i>Frequency (MHz)</i>	<i>Ant. P.</i>	<i>Ant. H. (m)</i>	<i>Table (°)</i>	<i>Factors (dB)</i>	<i>(dBµV/m)</i>		<i>Limit (dBµV/m)</i>		<i>Margin (dB)</i>
					<i>Peak</i>	<i>Average</i>	<i>Peak</i>	<i>Ave.</i>	
2388.12	Hor	1.00	146	3.13	41.96	---	74.00	53.96	-12.00
2390.07	Hor	1.00	333	3.14	41.14	---	74.00	53.96	-12.82
2387.90	Ver	1.00	137	3.13	39.29	---	74.00	53.96	-14.67
2390.02	Ver	1.00	44	3.13	37.63	---	74.00	53.96	-16.33

Antenna model L5G, Channel 11 of IEEE 802.11b

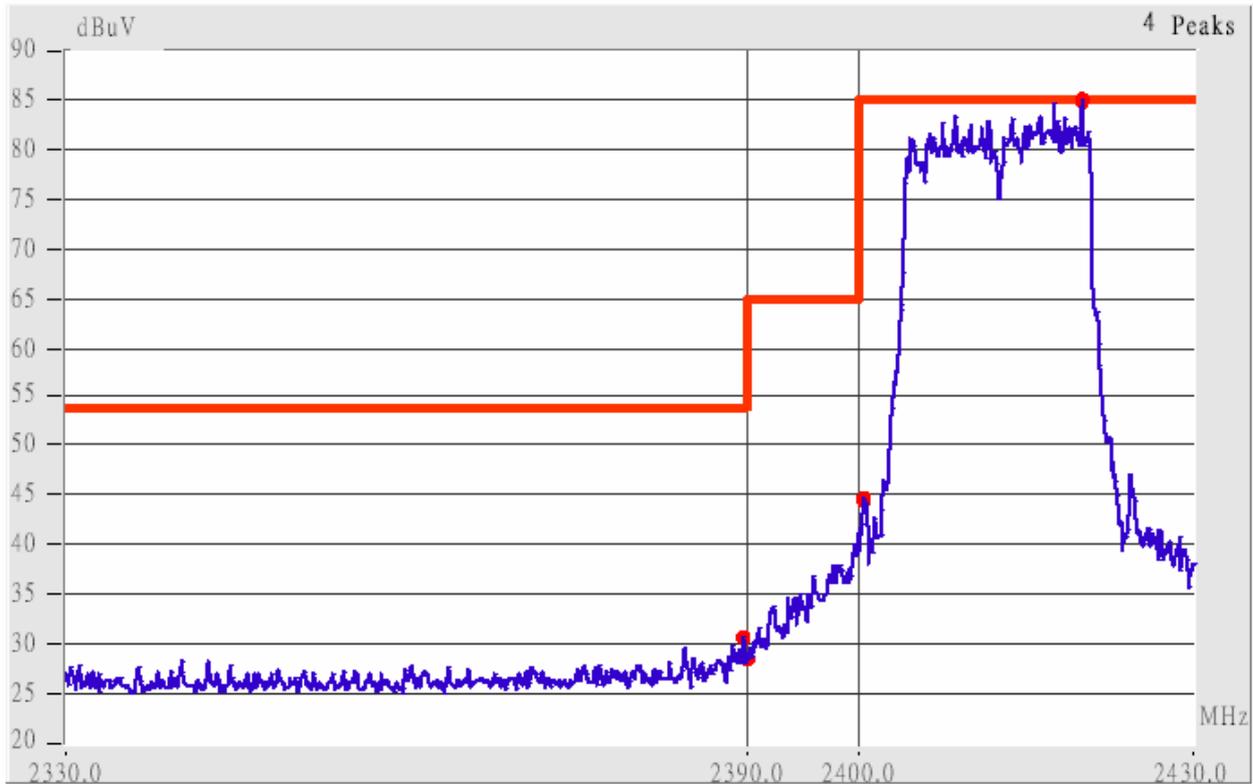


This is the hard copy of our bandedge measurement generated by our bandedge testing program. The plot shown above is the bandedge of channel 11.

- 3. The lobe right by the fundamental side is already 20dB below the highest emission level.
- 4. The emissions recorded in the restricted band is do comply with the Part 15.209(a) – as below

Radiated Emission					Corrected Amplitude		FCC Class B (3m)		
Frequency (MHz)	Ant. P.	Ant. H. (m)	Table (°)	Factors (dB)	(dBµV/m)		Limit (dBµV/m)		Margin (dB)
					Peak	Average	Peak	Ave.	
2483.50	Hor	1.00	243	3.45	43.61	---	74.00	53.96	-10.35
2484.49	Hor	1.00	93	3.45	44.78	---	74.00	53.96	-9.18
2500.07	Hor	1.00	144	3.50	41.17	---	74.00	53.96	-12.79
2492.54	Ver	1.00	74	3.48	39.48	---	74.00	53.96	-14.48
2500.07	Ver	1.00	302	3.50	37.00	---	74.00	53.96	-16.96
2517.33	Ver	1.00	245	3.52	39.19	---	74.00	53.96	-14.77

Antenna model L5G, Channel 1 of IEEE 802.11g



This is the hard copy of our bandedge measurement generated by our bandedge testing program. The plot shown above is the bandedge of channel 1.

- 5. The lobe left by the fundamental side is already 20dB below the highest emission level.
- 6. The emissions recorded in the restricted band is do comply with the Part 15.209(a) – as below.

<i>Radiated Emission</i>					<i>Corrected Amplitude</i>		<i>FCC Class B (3m)</i>		
<i>Frequency (MHz)</i>	<i>Ant. P.</i>	<i>Ant. H. (m)</i>	<i>Table (°)</i>	<i>Factors (dB)</i>	<i>(dBµV/m)</i>		<i>Limit (dBµV/m)</i>		<i>Margin (dB)</i>
					<i>Peak</i>	<i>Average</i>	<i>Peak</i>	<i>Ave.</i>	
2389.15	Hor	1.00	141	3.13	42.97	---	74.00	53.96	-10.99
2390.02	Hor	1.00	17	3.13	42.97	---	74.00	53.96	-10.99
2379.83	Hor	1.00	157	3.10	38.43	---	74.00	53.96	-15.53
2390.02	Ver	1.00	131	3.13	36.63	---	74.00	53.96	-17.33

Antenna model L5G, Channel 11 of IEEE 802.11g

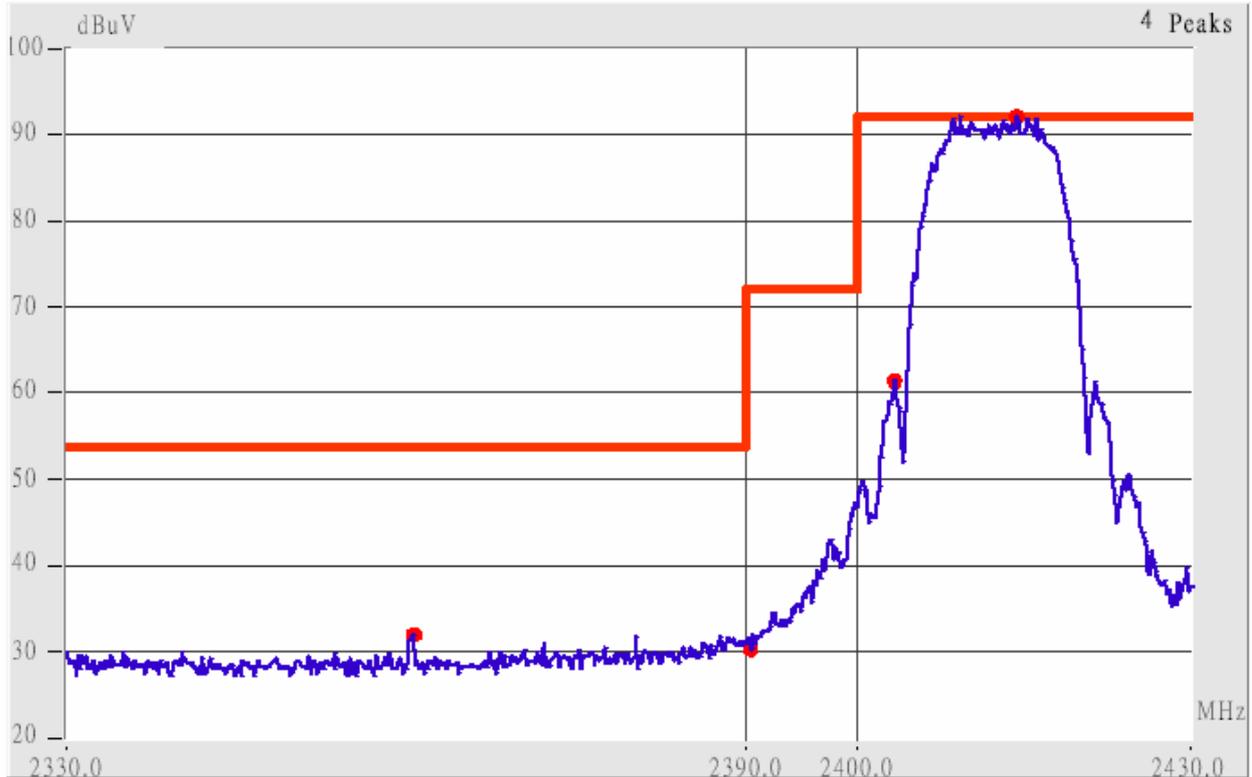


This is the hard copy of our bandedge measurement generated by our bandedge testing program. The plot shown above is the bandedge of channel 11.

- 7. The lobe right by the fundamental side is already 20dB below the highest emission level.
- 8. The emissions recorded in the restricted band is do comply with the Part 15.209(a) – as below

<i>Radiated Emission</i>					<i>Corrected Amplitude</i>		<i>FCC Class B (3m)</i>		
<i>Frequency (MHz)</i>	<i>Ant. P.</i>	<i>Ant. H. (m)</i>	<i>Table (°)</i>	<i>Factors (dB)</i>	<i>(dBµV/m)</i>		<i>Limit (dBµV/m)</i>		<i>Margin (dB)</i>
					<i>Peak</i>	<i>Average</i>	<i>Peak</i>	<i>Ave.</i>	
2483.50	Hor	1.00	180	3.45	45.61	---	74.00	53.96	-8.35
2485.72	Hor	1.00	180	3.45	47.62	---	74.00	53.96	-6.34
2500.01	Hor	1.00	181	3.50	39.33	---	74.00	53.96	-14.63
2494.23	Ver	1.00	206	3.48	38.98	---	74.00	53.96	-14.98
2527.72	Ver	1.00	289	3.54	39.20	---	74.00	53.96	-14.76

Antenna model ADA06-1K10000, Channel 1 of IEEE 802.11b

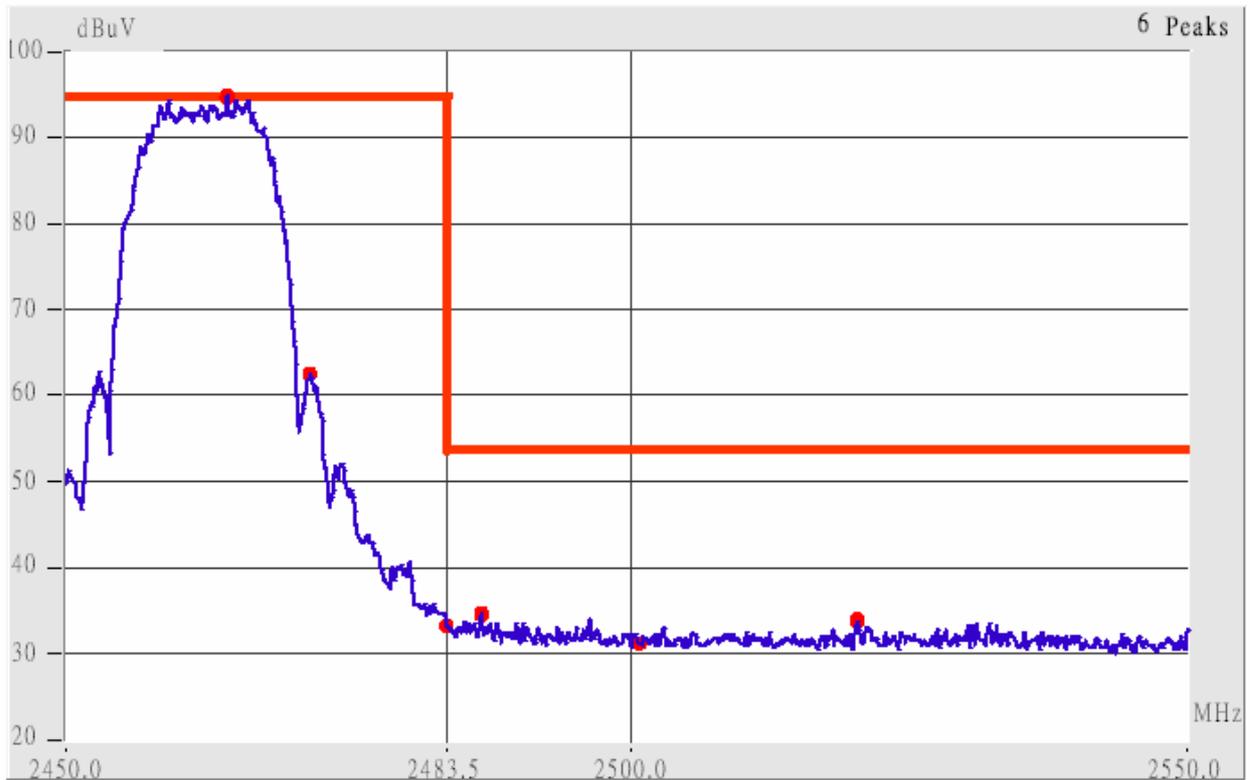


This is the hard copy of our bandedge measurement generated by our bandedge testing program. The plot shown above is the bandedge of channel 1.

1. The lobe left by the fundamental side is already 20dB below the highest emission level.
2. The emissions recorded in the restricted band is do comply with the Part 15.209(a) – as below.

<i>Radiated Emission</i>					<i>Corrected Amplitude</i>		<i>FCC Class B (3m)</i>		
<i>Frequency (MHz)</i>	<i>Ant. P.</i>	<i>Ant. H. (m)</i>	<i>Table (°)</i>	<i>Factors (dB)</i>	<i>(dBµV/m)</i>		<i>Limit (dBµV/m)</i>		<i>Margin (dB)</i>
					<i>Peak</i>	<i>Average</i>	<i>Peak</i>	<i>Ave.</i>	
2381.40	Hor	1.00	110	3.11	38.77	---	74.00	53.96	-15.19
2390.02	Hor	1.00	183	3.13	36.47	---	74.00	53.96	-17.49
2389.91	Ver	1.00	331	3.13	42.30	---	74.00	53.96	-11.66
2390.02	Ver	1.00	179	3.13	41.47	---	74.00	53.96	-12.49

Antenna model ADA06-1K10000, Channel 11 of IEEE 802.11b

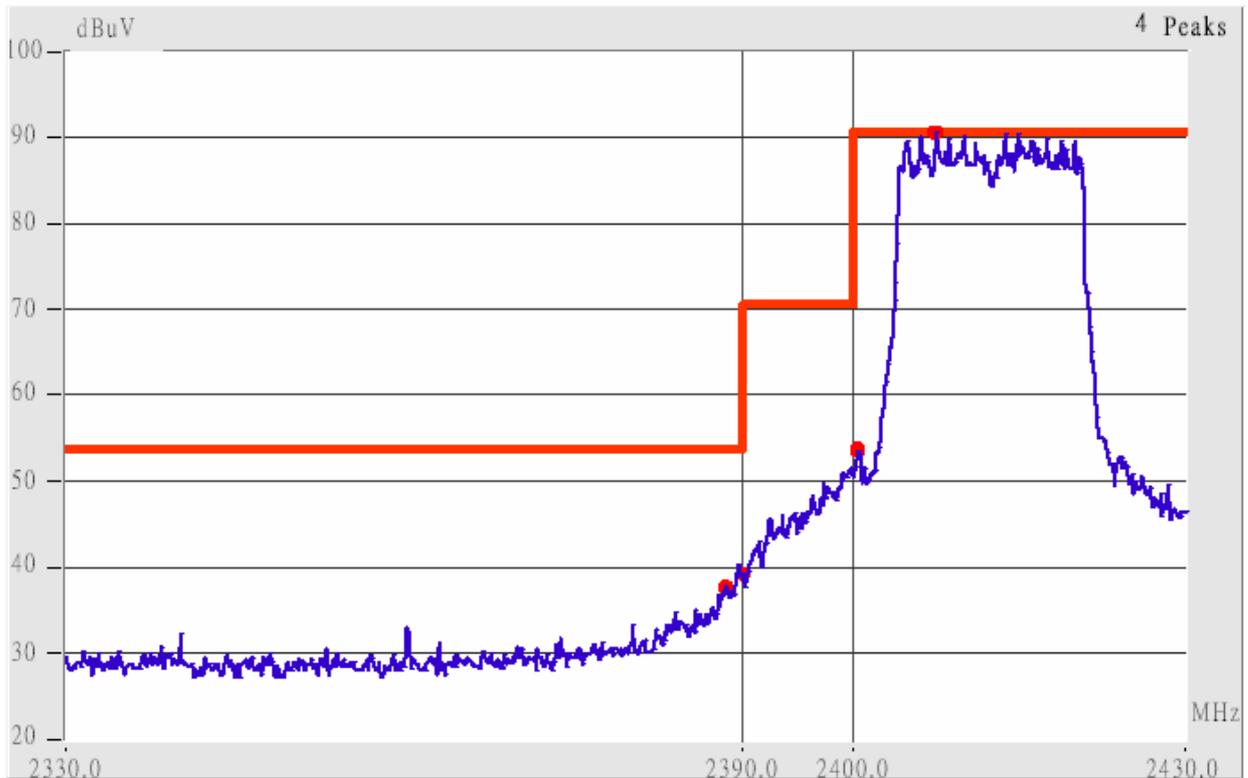


This is the hard copy of our bandedge measurement generated by our bandedge testing program. The plot shown above is the bandedge of channel 11.

- 3. The lobe right by the fundamental side is already 20dB below the highest emission level.
- 4. The emissions recorded in the restricted band is do comply with the Part 15.209(a) – as below

Radiated Emission					Corrected Amplitude		FCC Class B (3m)		
Frequency (MHz)	Ant. P.	Ant. H. (m)	Table (°)	Factors (dB)	(dBµV/m)		Limit (dBµV/m)		Margin (dB)
					Peak	Average	Peak	Ave.	
2490.15	Hor	1.00	292	3.47	39.47	---	74.00	53.96	-14.49
2501.87	Hor	1.00	137	3.50	39.84	---	74.00	53.96	-14.12
2483.50	Ver	1.00	0	3.45	42.11	---	74.00	53.96	-11.85
2484.20	Ver	1.00	60	3.45	43.78	---	74.00	53.96	-10.18
2500.01	Ver	1.00	123	3.50	41.00	---	74.00	53.96	-12.96
2513.37	Ver	1.00	112	3.52	43.52	---	74.00	53.96	-10.44

Antenna model ADA06-1K10000, Channel 1 of IEEE 802.11g

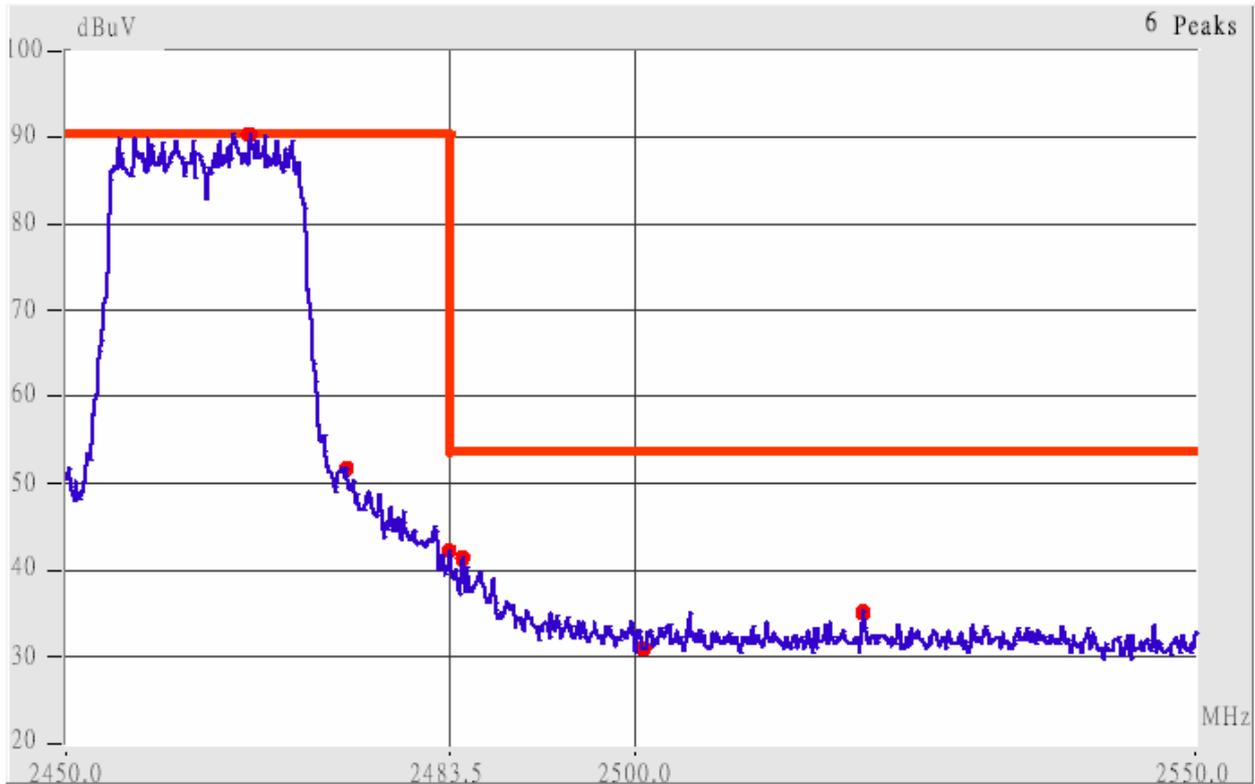


This is the hard copy of our bandedge measurement generated by our bandedge testing program. The plot shown above is the bandedge of channel 1.

- 5. The lobe left by the fundamental side is already 20dB below the highest emission level.
- 6. The emissions recorded in the restricted band is do comply with the Part 15.209(a) – as below.

<i>Radiated Emission</i>					<i>Corrected Amplitude</i>		<i>FCC Class B (3m)</i>		
<i>Frequency (MHz)</i>	<i>Ant. P.</i>	<i>Ant. H. (m)</i>	<i>Table (°)</i>	<i>Factors (dB)</i>	<i>(dBµV/m)</i>		<i>Limit (dBµV/m)</i>		<i>Margin (dB)</i>
					<i>Peak</i>	<i>Average</i>	<i>Peak</i>	<i>Ave.</i>	
2389.37	Hor	1.00	1	3.13	44.30	---	74.00	53.96	-9.66
2390.02	Hor	1.00	308	3.13	42.63	---	74.00	53.96	-11.33
2389.53	Ver	1.00	319	3.13	51.63	---	74.00	53.96	-2.33
2390.02	Ver	1.00	31	3.13	51.80	---	74.00	53.96	-2.16

Antenna model ADA06-1K10000, Channel 11 of IEEE 802.11g



This is the hard copy of our bandedge measurement generated by our bandedge testing program. The plot shown above is the bandedge of channel 11.

- 7. The lobe right by the fundamental side is already 20dB below the highest emission level.
- 8. The emissions recorded in the restricted band is do comply with the Part 15.209(a) – as below

Radiated Emission					Corrected Amplitude		FCC Class B (3m)		
Frequency (MHz)	Ant. P.	Ant. H. (m)	Table (°)	Factors (dB)	(dBµV/m)		Limit (dBµV/m)		Margin (dB)
					Peak	Average	Peak	Ave.	
2483.50	Hor	1.00	357	3.45	40.95	---	74.00	53.96	-13.01
2485.19	Hor	1.00	359	3.45	41.12	---	74.00	53.96	-12.84
2483.50	Ver	1.00	281	3.45	49.28	---	74.00	53.96	-4.68
2484.49	Ver	1.00	355	3.45	51.12	---	74.00	53.96	-2.84
2500.01	Ver	1.00	350	3.50	42.83	---	74.00	53.96	-11.13
2520.07	Ver	1.00	330	3.53	45.03	---	74.00	53.96	-8.93