

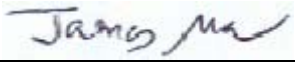

FCC PART 15.247
EMI MEASUREMENT AND TEST REPORT

For

Actiontec Electronics, Inc.

760 N. Mary Avenue, Sunnyvale, CA 94085

FCC ID: LNQ802MRG

This Report Concerns: <input checked="" type="checkbox"/> Class II Permissive Change	Equipment Type: 802.11b/g Wireless Modular
Test Engineer: James Ma 	
Report No.: R0511021	
Report Date: 2005-11-10	
Reviewed By: Daniel Deng 	
Prepared By: Bay Area Compliance Laboratory Corporation 230 Commercial Street Sunnyvale, CA 94085 Tel (408) 732-9162 Fax (408) 732-9164	

Note: The test report is specially limited to the above company and this particular sample only. It may not be duplicated without prior written consent of Bay Area Compliance Laboratory Corporation. This report **must not** be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the US Government.

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GENERAL INFORMATION

Product Description for Equipment Under Test (EUT)

The *Actiontec Electronics, Inc.* product, FCC ID: *LNQ802MRG* or the "EUT" as referred to in this report is a 802.11b/g Wireless Modular which measures approximately 61mmL x 52mmW x 3mmH.

The emission designator is 12M1G1D (802.11b) & 16M5G1D (802.11g).

** The test data gathered are from production sample, serial number: PCI#1, provided by the manufacturer.*

Objective

This type approval report is prepared on behalf of *Actiontec Electronics, Inc.* in accordance with Part 2, Subpart J, Part 15, Subparts A, B and C of the Federal Communication Commissions rules.

The objective is to determine compliance with FCC rules for Conducted Output Power, Spurious Emission, Conducted and Spurious Radiated Emission.

This is a C2PC application. The original application was granted on 10/12/2005. The difference between the original and the current one is the change of antenna. Please refer to the antenna spec for details. For the previous testing, please refer to BACL's test report R0509211.

Related Submittal(s)/Grant(s)

Original application was granted on 10/12/2005.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.4 - 2003, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

All radiated and conducted emissions measurement was performed at Bay Area Compliance Laboratory, Corp.

Test Facility

The Open Area Test site used by BACL to collect radiated and conducted emission measurement data is located in the back parking lot of the building at 230 Commercial Street, Sunnyvale, California, USA with registration number:90464.

Test site at BACL has been fully described in reports submitted to the Federal Communication Commission (FCC) and Voluntary Control Council for Interference (VCCI). The details of these reports has been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on February 11 and December 10, 1997 and Article 8 of the VCCI regulations on December 25, 1997. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2003.

The Federal Communications Commission and Voluntary Control Council for Interference has the reports on file and is listed under FCC file 31040/SIT 1300F2 and VCCI Registration No.: C-1298 and R-1234.

The test site has been approved by the FCC and VCCI for public use and is listed in the FCC Public Access Link (PAL) database.

Additionally, BACL is a National Institute of Standards and Technology (NIST) accredited laboratory, under the National Voluntary Laboratory Accredited Program (Lab Code 200167-0). The current scope of accreditations can be found at <http://ts.nist.gov/ts/htdocs/210/214/scopes/2001670.htm>

SYSTEM TEST CONFIGURATION

Justification

The EUT was configured for testing according to ANSI C63.4-2003.

Schematics and Block Diagram

Please refer to Appendix A.

Equipment Modifications

No modifications were made to the EUT.

Local Support Equipment

Manufacturer	Description	Model	Serial Number	FCC ID
Matsonic	Main board	MS9087C	/	DOC
Seagate	Hard drive	ST340014A	5JX71GVN	DOC
Sony	CD-ROM Drive	CDU5211	10BD0239226	DOC
Tigerpro	Power supply	TP-300	D2B003696	DOC
Compaq	Monitor	HSTND-1L01	CNN4240LBU	DOC
Compaq	Keyboard with mouse	KPM3B34	404236261V6	DOC

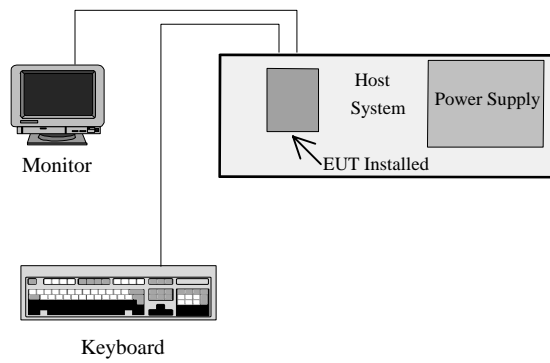
External I/O Cabling List and Details

Cable Description	Length (M)	From	To
Shielded Cable	1.5	Keyboard	Host
Shielded Video Cable	1.5	Monitor	Host

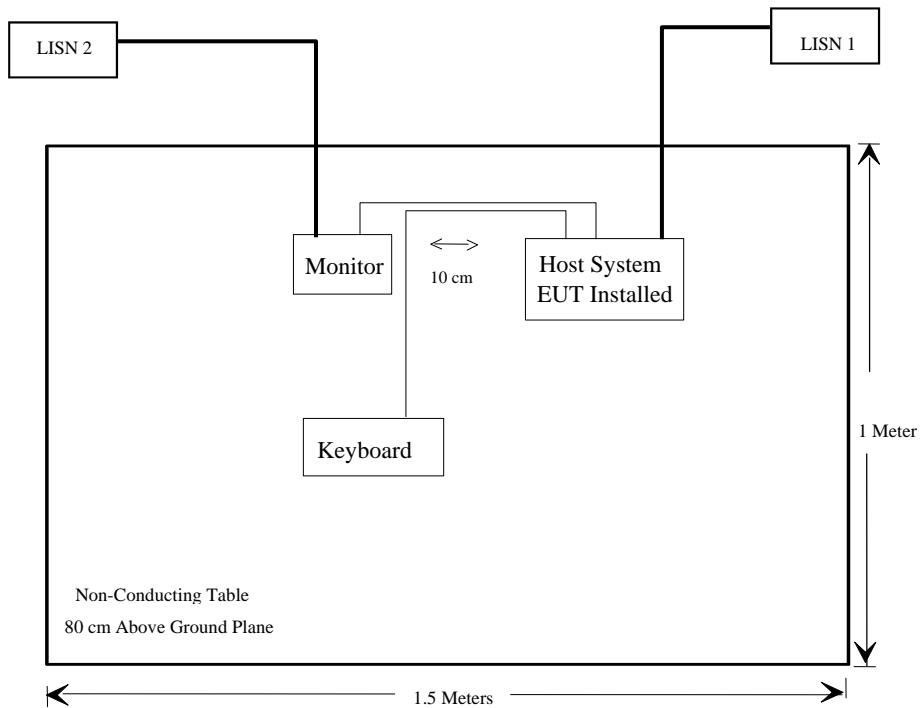
Power Supply and Line Filters

Manufacturer	Description	Model	Serial Number	FCC ID
Tigerpro	Power supply	TP-300	D2B003696	DOC

Configuration of Test System



Test Setup Block Diagram



SUMMARY OF TEST RESULTS FOR FCC PART 15.247

Results reported relate only to the product tested.

FCC RULES	DESCRIPTION OF TEST	RESULT
§2.1091	RF Exposure	Pass
§15.203	Antenna Requirement	Pass
§15.205	Restricted Band	Pass
§ 15.207 (a)	Conducted Emissions	Pass
§2.1051	Spurious Emission at Antenna Port	N/A
§15.209 (a)	Radiated Emission	Pass
§15.247 (a)(2)	6 dB Bandwidth	N/A
§15.247 (b)(3)	Maximum Peak Output Power	Pass
§ 15.247 (d)	100 kHz Bandwidth of Frequency Band Edge	N/A
§15.247 (e)	Peak Power Spectral Density	N/A

§1.1307(b)(1) & §2.1091 - RF EXPOSURE

According to §15.247(b)(5) and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

According to §1.1310 and §2.1091 RF exposure is calculated.

Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minute)
Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

f = frequency in MHz

* = Plane-wave equivalent power density

MPE Prediction

Predication of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG/4\pi R^2$$

Where: S = power density

P = power input to antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

Maximum peak output power at antenna input terminal: 17.20 (dBm)

Maximum peak output power at antenna input terminal: 52.48 (mW)

Predication frequency: 2450 (MHz)

Antenna Gain (typical): 5 (dBi)

antenna gain: 3.16(numeric)

Prediction distance: 20 (cm)

Power density at predication frequency at 20 cm: 0.03 (mW/cm²)

MPE limit for uncontrolled exposure at prediction frequency: 1.0 (mW/cm²)

Test Result

The EUT is a mobile device. The Power density at predication frequency at 20 cm is 0.03 mW/cm² within the limit of 1.0 mW/cm².

ANTENNA REQUIREMENT

According to § 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to § 15.247 (1), if transmitting antennas of directional gain greater than 6 dBi are used the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

The antenna used in this product is an Omni antenna with maximum Gain of 5dBi.

§15.207(a) - CONDUCTED EMISSIONS

Measurement Uncertainty

All measurements involve certain levels of uncertainties. The factors contributing to uncertainties are spectrum analyzer, cable loss, and LISN.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement at BACL is ± 2.4 dB.

EUT Setup

The measurement was performed in the shield room, using the same setup per ANSI C63.4-2003 measurement procedure. The specification used was FCC 15 Subpart C limits.

The spacing between the peripherals was 10 centimeters.

External I/O cables were draped along the edge of the test table and bundle when necessary.

Spectrum Analyzer Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30Mhz.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Cal. Date
R&S	Receiver, EMI Test	ESCS30	100176	9/15/2004
R&S	LISN, Artificial Mains	ESH2-Z5	871884/039	8/16/2004

* **Statement of Traceability:** BACL attests that all calibrations have been performed per the NVLAP requirements, traceable to NIST.

Test Procedure

During the conducted emission test, the power cord of the host system was connected to the auxiliary outlet of the first LISN.

Maximizing procedure was performed on the six (6) highest emissions of each modes tested to ensure EUT is compliant with all installation combination.

All data was recorded in the peak detection mode. Quasi-peak readings were only performed when an emission was found to be marginal (within -4 dB μ V of specification limits). Quasi-peak readings are distinguished with a "Qp".

Summary of Test Results

According to the recorded data in following table, the EUT complies with the FCC Conducted margin, with the *worst* margin reading of:

-10.8 dB at 0.175 MHz in the Line mode, 802.11g, CH1
-11.0 dB at 0.175 MHz in the Line mode, 802.11g, CH6
-11.0 dB at 0.175 MHz in the Line mode, 802.11g, CH11

Environmental Conditions

Temperature:	22° C
Relative Humidity:	48%
ATM Pressure:	1021 mbar

The testing was performed by James Ma on 2005-11-04.

Conducted Emissions Test Data**802.11g, CH1**

LINE CONDUCTED EMISSIONS				FCC PART 15 CLASS B	
Frequency MHz	Amplitude dBμV	Detector Qp/Ave/Peak	Phase Line/Neutral	Limit dBμV	Margin dB
0.175	43.9	Ave	Line	54.72	-10.8
0.440	32.5	Ave	Line	47.06	-14.6
0.175	39.3	Ave	Neutral	54.72	-15.4
0.440	31.7	Ave	Neutral	47.06	-15.4
16.000	34.3	Ave	Line	50.00	-15.7
0.260	31.7	Ave	Line	51.43	-19.7
0.175	44.3	QP	Line	64.72	-20.4
0.260	30.9	Ave	Neutral	51.43	-20.5
16.000	29.2	Ave	Neutral	50.00	-20.8
0.175	42.3	QP	Neutral	64.72	-22.4
16.000	37.5	QP	Line	60.00	-22.5
0.440	33.9	QP	Line	57.06	-23.2
0.440	33.8	QP	Neutral	57.06	-23.3
0.260	35.2	QP	Neutral	61.43	-26.2
16.000	33.6	QP	Neutral	60.00	-26.4
0.260	31.9	QP	Line	61.43	-29.5

802.11g, CH 6

LINE CONDUCTED EMISSIONS				FCC PART 15 CLASS B	
Frequency MHz	Amplitude dBμV	Detector Qp/Ave/Peak	Phase Line/Neutral	Limit dBμV	Margin dB
0.175	43.7	Ave	Line	54.72	-11.0
0.440	32.4	Ave	Neutral	47.06	-14.7
0.175	39.4	Ave	Neutral	54.72	-15.3
0.440	31.8	Ave	Line	47.06	-15.3
16.000	33.7	Ave	Neutral	50.00	-16.3
16.000	33.3	Ave	Line	50.00	-16.7
0.175	44.3	QP	Line	64.72	-20.4
0.175	42.4	QP	Neutral	64.72	-22.3
16.000	37.6	QP	Line	60.00	-22.4
16.000	37.4	QP	Neutral	60.00	-22.6
0.440	33.6	QP	Neutral	57.06	-23.5
0.440	33.6	QP	Line	57.06	-23.5
15.100	36.0	QP	Line	60.00	-24.0
15.100	35.6	QP	Neutral	60.00	-24.4
15.100	23.8	Ave	Line	50.00	-26.2
15.100	22.2	Ave	Neutral	50.00	-27.8

802.11g, CH 11

LINE CONDUCTED EMISSIONS				FCC PART 15 CLASS B	
Frequency MHz	Amplitude dBμV	Detector Qp/Ave/Peak	Phase Line/Neutral	Limit dBμV	Margin dB
0.175	43.7	Ave	Line	54.72	-11.0
0.175	39.4	Ave	Neutral	54.72	-15.3
16.000	34.2	Ave	Neutral	50.00	-15.8
16.000	34.2	Ave	Line	50.00	-15.8
0.285	32.2	Ave	Neutral	50.67	-18.5
0.285	31.8	Ave	Line	50.67	-18.9
0.175	44.3	QP	Line	64.72	-20.4
0.175	42.6	QP	Neutral	64.72	-22.1
16.000	37.8	QP	Neutral	60.00	-22.2
16.000	37.3	QP	Line	60.00	-22.7
15.100	35.8	QP	Neutral	60.00	-24.2
15.100	35.8	QP	Line	60.00	-24.2
15.100	23.8	Ave	Line	50.00	-26.2
15.100	23.0	Ave	Neutral	50.00	-27.0
0.285	33.6	QP	Neutral	60.67	-27.1
0.285	31.9	QP	Line	60.67	-28.8

Plot of Conducted Emissions Test Data

Plot(s) of Conducted Emissions Test Data is presented hereinafter as reference.

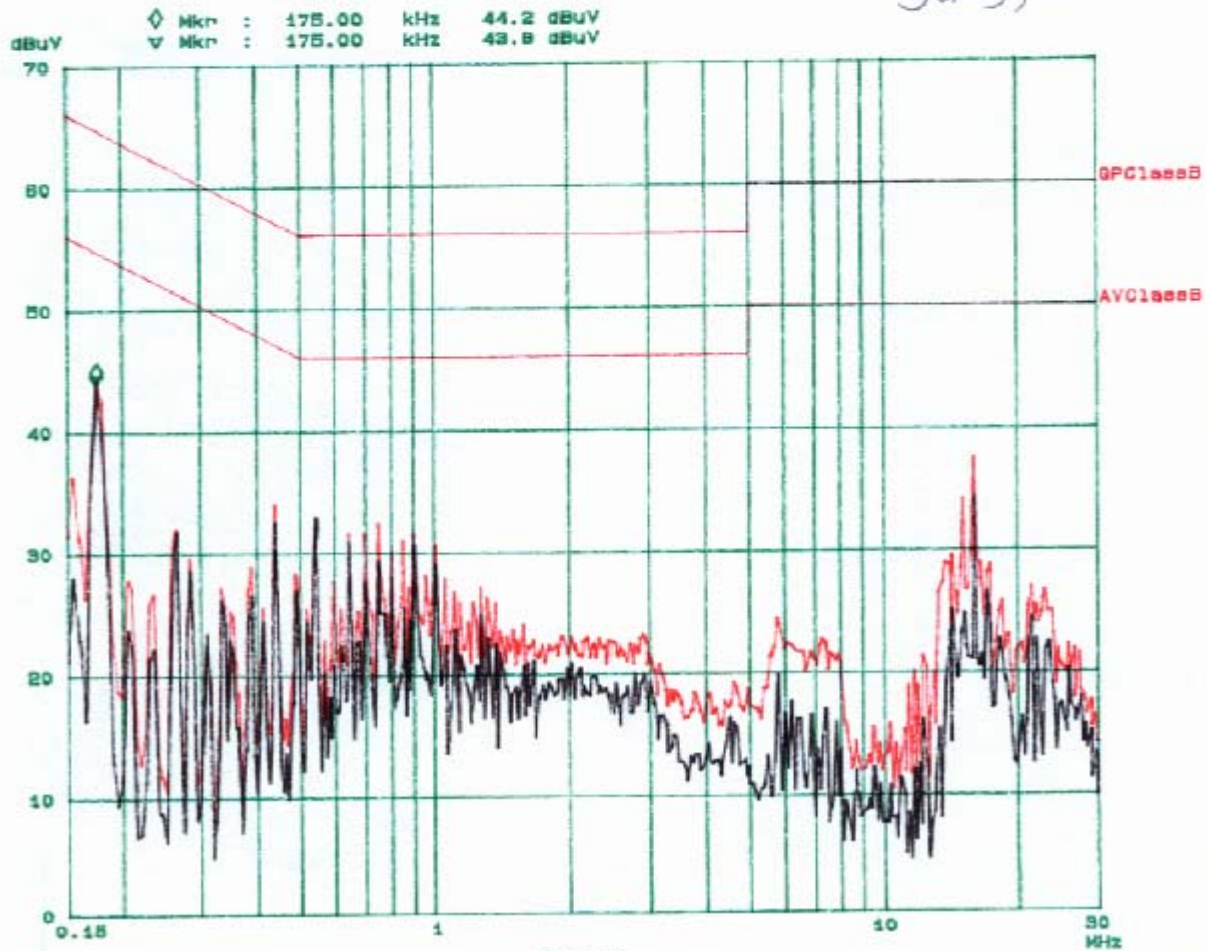
Bay Area Compliance Laboratory Corp
Class B

03. Nov 05 15:47

EUT: MLAN CARD 802 MRG
Manuf: Actiontec
Op Cond: Normal
Operator: James
Test Spec: 802.11g- CH1
Comment: 1
120Vac

Scan Settings (3 Ranges)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Presamp
150k	1M	5k	9k	QP+AV	20ms	15dB LN	OFF
1M	5M	10k	9k	QP+AV	1ms	15dB LN	OFF
5M	30M	100k	9k	QP+AV	1ms	15dB LN	OFF



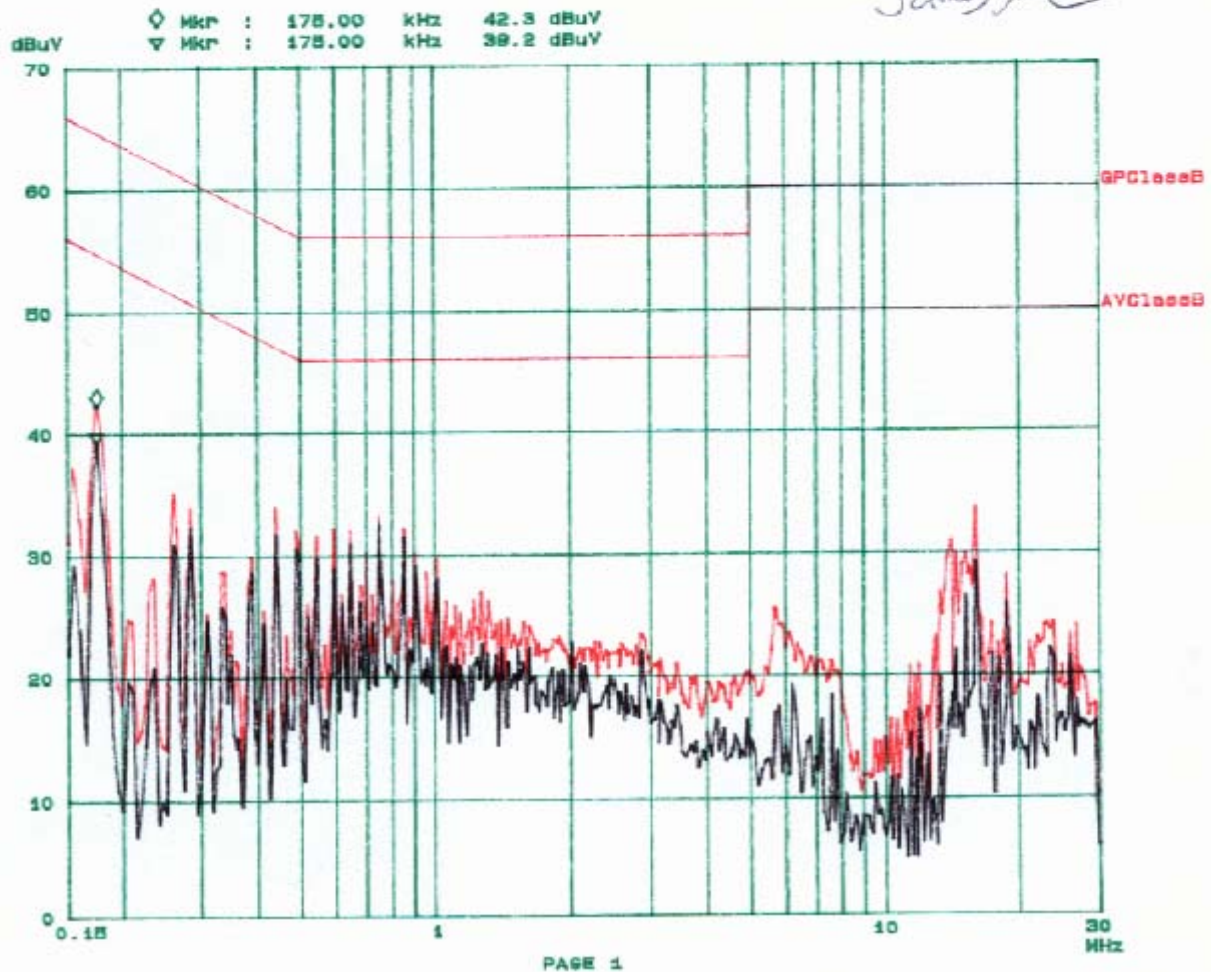
Bay Area Compliance Laboratory Corp
Class B

03. Nov 05 14:59

EUT: WLAN CARD 802 MRB
Manuf: Actiontec
Op Cond: Normal
Operator: James
Test Spec: 802.11g- CH1
Comment: N
120Vac

Scan Settings (3 Ranges)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp
150k	1M	5k	9k	QP+AV	20ms	15dB LN	OFF
1M	5M	10k	9k	QP+AV	1ms	15dB LN	OFF
5M	30M	100k	9k	QP+AV	1ms	15dB LN	OFF



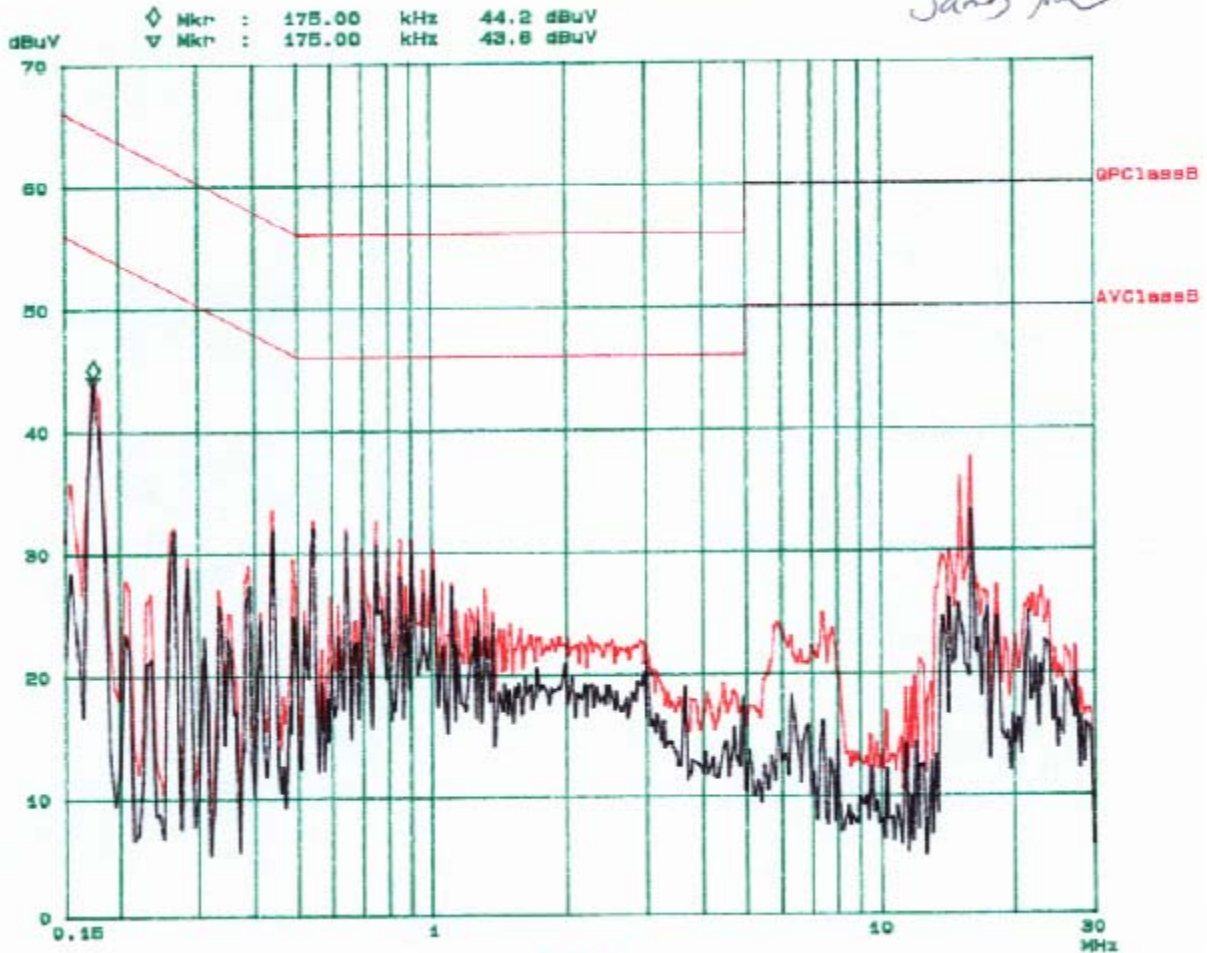
Bay Area Compliance Laboratory Corp
Class B

03. Nov 05 16:12

EUT: WLAN CARD 802 MRB
Manuf: Actiontec
Op Cond: Normal
Operator: James
Test Spec: 802.11g- CHB
Comment: L
120Vac

Scan Settings (3 Ranges)

Start	Stop	Step	IF BW	Detector	M-Time	Atten	Presamp
150k	1M	5K	9K	QP+AV	20ms	15dB LN	OFF
1M	5M	10K	9K	QP+AV	1ms	15dB LN	OFF
5M	30M	100K	9K	QP+AV	1ms	15dB LN	OFF



Bay Area Compliance Laboratory Corp
Class B

05. Nov 05 16:41

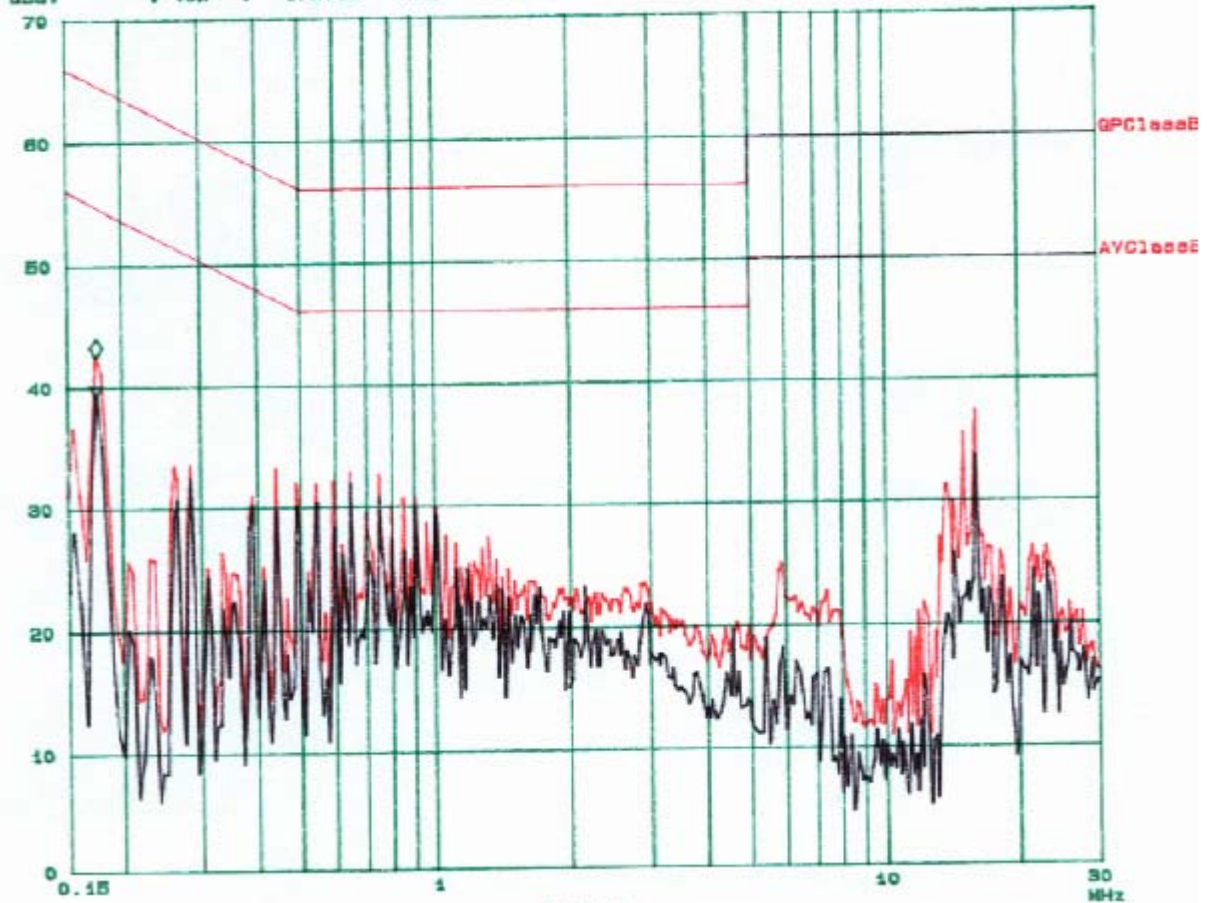
EUT: WLAN CARD 802 MRB
Manuf: Actiontec
Op Cond: Normal
Operator: James
Test Spec: 802.11g- CH6
Comment: N
120Vac

Scan Settings (3 Ranges)

Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp
150k	1M	5k	9k	QP+AV	20ms	15dB LN	OFF
1M	5M	10k	9k	QP+AV	1ms	15dB LN	OFF
5M	30M	100k	9k	QP+AV	1ms	15dB LN	OFF

Receiver Settings

◇ Mkr : 175.00 kHz 42.4 dBuV
▽ Mkr : 175.00 kHz 39.2 dBuV



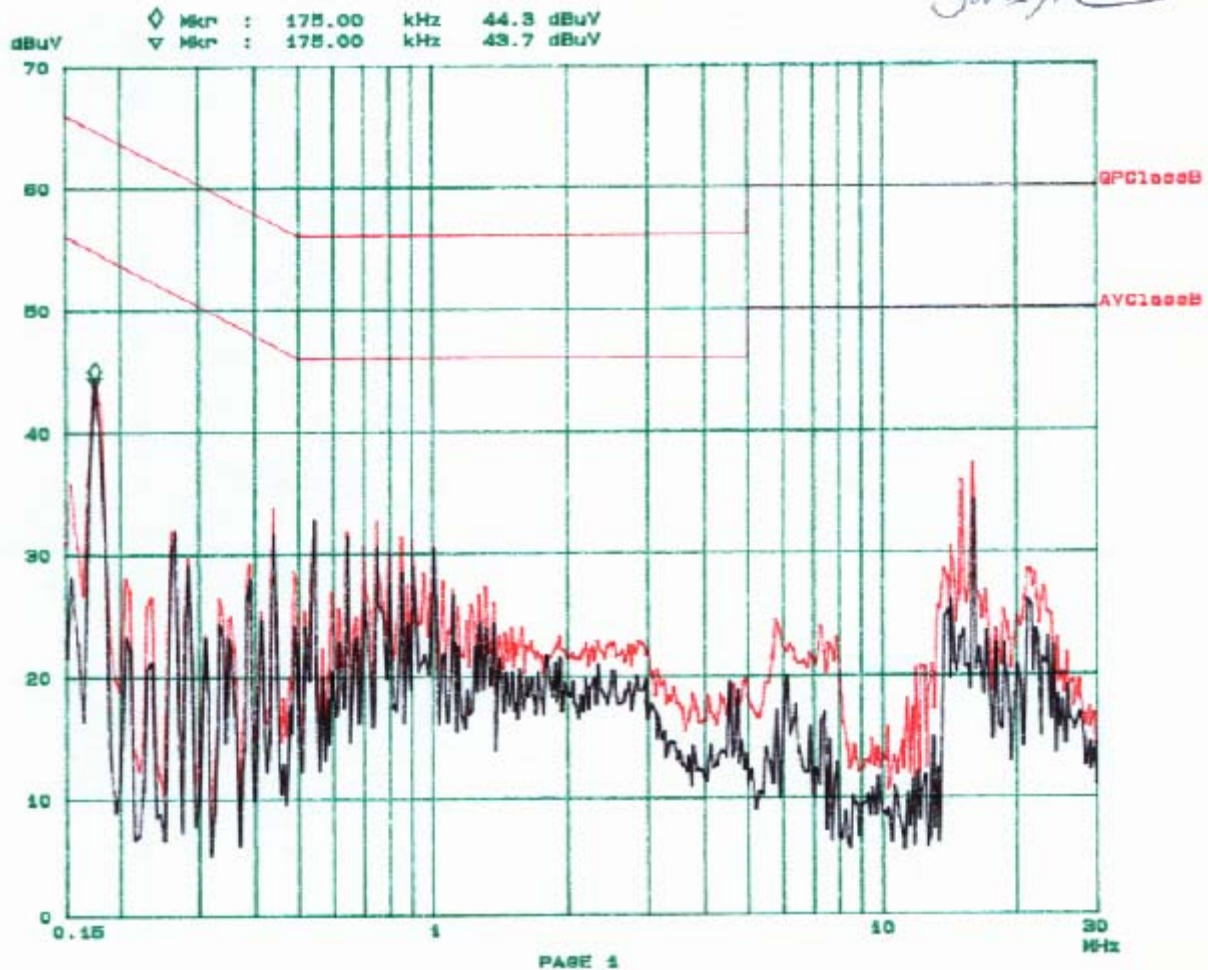
Bay Area Compliance Laboratory Corp
Class B

03. Nov 05 17:31

EUT: WLAN CARD 802 MRS
Manuf: Actiontec
Op Cond: Normal
Operator: James
Test Spec: 802.11g- CH11
Comment: L
120Vac

Scan Settings (3 Ranges)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp
150k	1M	5k	9k	QP+AV	20ms	15dB LN	OFF
1M	5M	10k	9k	QP+AV	1ms	15dB LN	OFF
5M	30M	100k	9k	QP+AV	1ms	15dB LN	OFF



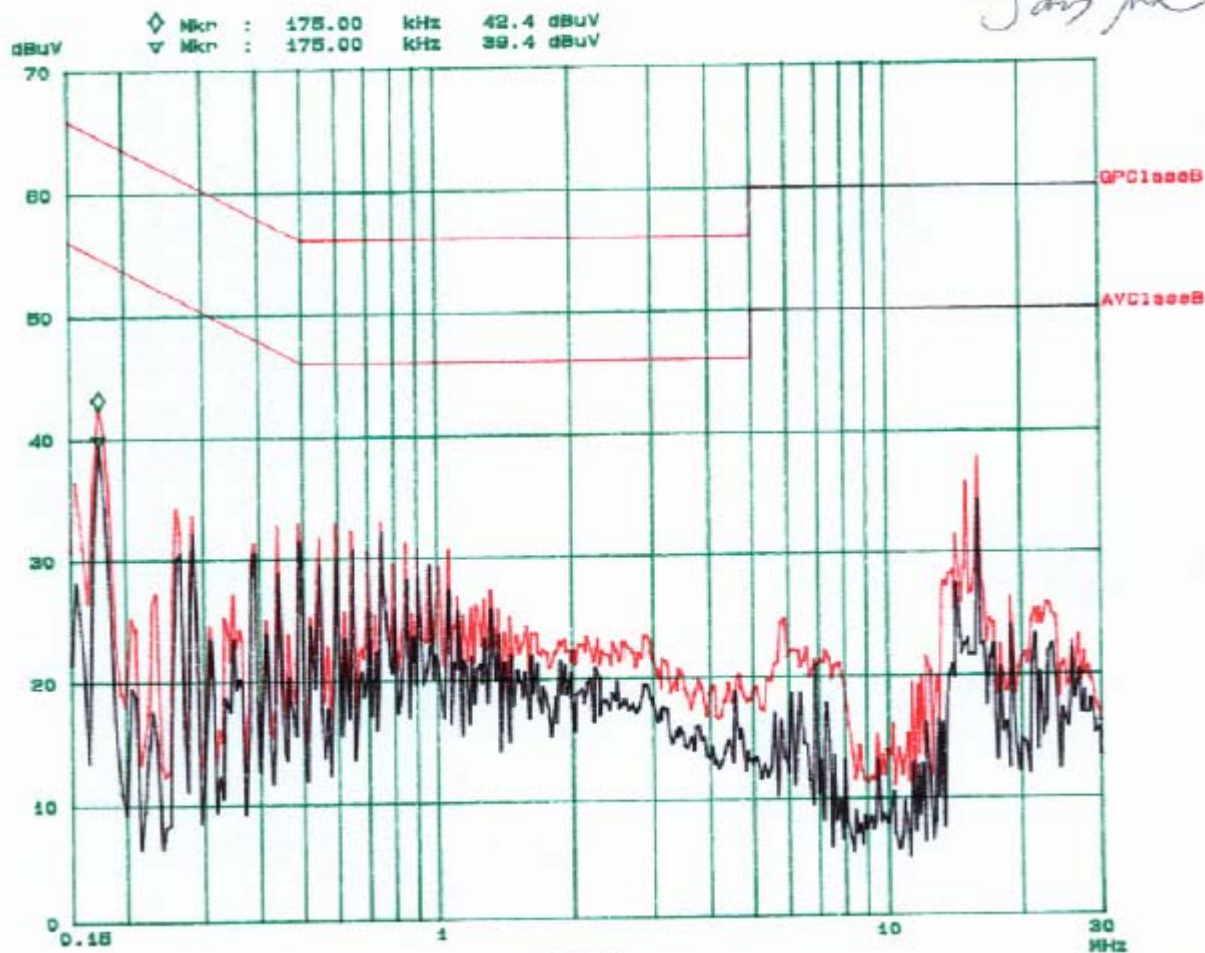
Bay Area Compliance Laboratory Corp
Class B

03. Nov 05 17:07

EUT: WLAN CARD 802 MRG
Manuf: Actiontec
Op Cond: Normal
Operator: James
Test Spec: 802.11g- GH11
Comment: N
120Vac

Scan Settings (3 Ranges)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp
150k	1M	5k	9k	QP+AV	20ms	150BLN	OFF
1M	5M	10k	9k	QP+AV	1ms	150BLN	OFF
5M	30M	100k	9k	QP+AV	1ms	150BLN	OFF



§15.205 & §15.209 - SPURIOUS RADIATED EMISSION

Measurement Uncertainty

All measurements involve certain levels of uncertainties. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of a radiation emissions measurement at BACL is ± 4.0 dB.

According to §15.205, except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 – 0.110	16.42 – 16.423	399.9 – 410	4.5 – 5.15
¹ 0.495 – 0.505	16.69475 – 16.69525	608 – 614	5.35 – 5.46
2.1735 – 2.1905	16.80425 – 16.80475	960 – 1240	7.25 – 7.75
4.125 – 4.128	25.5 – 25.67	1300 – 1427	8.025 – 8.5
4.17725 – 4.17775	37.5 – 38.25	1435 – 1626.5	9.0 – 9.2
4.20725 – 4.20775	73 – 74.6	1645.5 – 1646.5	9.3 – 9.5
6.215 – 6.218	74.8 – 75.2	1660 – 1710	10.6 – 12.7
6.26775 – 6.26825	108 – 121.94	1718.8 – 1722.2	13.25 – 13.4
6.31175 – 6.31225	123 – 138	2200 – 2300	14.47 – 14.5
8.291 – 8.294	149.9 – 150.05	2310 – 2390	15.35 – 16.2
8.362 – 8.366	156.52475 – 156.52525	2483.5 – 2500	17.7 – 21.4
8.37625 – 8.38675	156.7 – 156.9	2655 – 2900	22.01 – 23.12
8.41425 – 8.41475	162.0125 – 167.17	3260 – 3267	23.6 – 24.0
12.29 – 12.293	167.72 – 173.2	3332 – 3339	31.2 – 31.8
12.51975 – 12.57725	240 – 285	3345.8 – 3358	36.43 – 36.5
13.36 – 13.41	322 – 335.4	3600 – 4400	(²)

¹ Until February 1, 1999, this restricted band shall be 0.490-0.510MHz

² Above 38.6

Except as provided in paragraph (d) and (e), the filed strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

According to §15.209, the device shall meet radiated emission general requirements.

Except for Class A device, the filed strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency of Emission (MHz)	Field Strength	
	(Microvolts/meter)	(dB μ V/meter)
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

EUT Setup

The radiated emission tests were performed in the open area 3-meter test site, using the setup accordance with the ANSI C63.4-2003. The specification used was the FCC 15.209 limits.

The spacing between the peripherals was 10 centimeters.

External I/O cables were draped along the edge of the test table and bundle when necessary.

The EUT was connected to the power adapter which is connected with 120Vac/60Hz power source.

Spectrum Analyzer Setup

According to FCC Rules, 47 CFR, Section 15.33, the frequency was investigated from 30 to 25000 MHz.

During the radiated emission test, the spectrum analyzer was set with the following configurations:

<u>Frequency Range</u>	<u>RBW</u>	<u>Video B/W</u>
Below 30MHz	10kHz	10kHz
30 – 1000MHz	100kHz	100kHz
Above 1000MHz	1MHz	1MHz

For Average measurement: RBW = 1MHz, VBW = 10Hz (above 1000MHz)

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Cal. Date
Agilent	Analyzer, Spectrum	8564E	3943A01781	10/4/2004
ETS	Antenna, Log-Periodic	3148	4-1155	12/14/2004
ETS	Antenna, Biconical	3110B	9603-2315	12/14/2004
HP	Amplifier, Pre	8447D	2944A10198	8/17/2005
HP	Amplifier, Pre, Microwave	8449B	3147A00400	8/10/2005
Rohde & Schwarz	Generator, Signal	SMIQ03	849192/0085	5/2/2005
A. H. Systems	Antenna, Horn, DRG	SAS-200/571	261	4/20/2005
HP	Generator, Signal	83650B	3614A00276	5/10/2005
A.R.A.	Antenna, Horn	DRG-118/A	1132	9/30/2003
Sunol Sciences	Antenna	JB1	A013105-3	2/11/2005
A.R.A.	Antenna, Horn	DRG-118/A	1132	8/17/2005
Rohde & Schwarz	Receiver, EMI Test	ESCI 1166.5950K03	100044	9/29/2004

* **Statement of Traceability:** BACL attests that all calibrations have been performed per the NVLAP requirements, traceable to NIST.

Test Procedure

For the radiated emissions test, the EUT, and all support equipment power cords was connected to the AC floor outlet.

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

All data was recorded in the peak detection mode. Quasi-peak readings performed only when an emission was found to be marginal (within -4 dB μ V of specification limits), and are distinguished with a "Qp" in the data table.

Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

$$\text{Corr. Ampl.} = \text{Indicated Reading} + \text{Antenna Factor} + \text{Cable Factor} - \text{Amplifier Gain}$$

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7dB means the emission is 7dB below the maximum limit for Class B. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Corr. Ampl.} - \text{FCC 15.209 Limit}$$

Environmental Conditions

Temperature:	22° C
Relative Humidity:	48%
ATM Pressure:	1021 mbar

The testing was performed by James Ma on 2005-11-04.

Summary of Test Results

According to the recorded data in following table, the EUT complies with the FCC Part15 Subpart C Radiated margin, with the *worst* margin reading of:

802.11b:

-12.5 dB at **4824.00 MHz** in the **Vertical** polarization, Low Channel

-9.5 dB at **4874.00 MHz** in the **Horizontal** polarization, Middle Channel

-11.9 dB at **4924.00 MHz** in the **Horizontal** polarization, High Channel

802.11g:

-12.2 dB at **4824.00 MHz** in the **Horizontal** polarization, Low Channel

-4.7 dB at **7308.00 MHz** in the **Vertical** polarization, Middle Channel

-13.2 dB at **4924.00 MHz** in the **Vertical** polarization, High Channel

Radiated Emission Test Result for 802.11b

INDICATED			TABLE	ANTENNA		CORRECTION FACTOR			CORRECTED AMPLITUDE	FCC 15 SUBPART C	
Frequency MHz	Ampl. dBμV/m	Comments	Angle Degree	Height Meter	Polar H/ V	Antenna dB	Cable dB	Amp. dB	Corr. Ampl. dBμV/m	Limit dBμV/m	Margin dB
Low Channel, 1-25GHz											
4824.0000	40.7	Ave	200	1.0	v	32.5	3.1	34.8	41.5	54	-12.5
4824.0000	40.1	Ave	230	1.5	h	32.5	3.1	34.8	40.9	54	-13.1
7236.0000	32.0	Ave	260	2.0	v	36.7	4.3	34.7	38.3	54	-15.7
7236.0000	32.0	Ave	200	1.5	h	36.7	4.3	34.7	38.3	54	-15.7
4824.0000	51.0	Peak	200	1.0	v	32.5	3.1	34.8	51.8	74	-22.2
4824.0000	49.0	Peak	230	1.5	h	32.5	3.1	34.8	49.8	74	-24.2
7236.0000	38.0	Peak	260	2.0	v	36.7	4.3	34.7	44.3	74	-29.7
7236.0000	38.0	Peak	200	1.5	h	36.7	4.3	34.7	44.3	74	-29.7
Middle Channel, 1-25GHz											
4874.0000	43.7	Ave	200	1.5	h	32.5	3.1	34.8	44.5	54	-9.5
7308.0000	32.0	Ave	200	1.5	v	36.7	4.3	34.7	38.3	54	-15.7
7308.0000	32.0	Ave	270	1.5	h	36.7	4.3	34.7	38.3	54	-15.7
4874.0000	37.2	Ave	200	1.5	v	32.5	3.1	34.8	38.0	54	-16.0
4874.0000	54.0	Peak	200	1.5	h	32.5	3.1	34.8	54.8	74	-19.2
4874.0000	48.5	Peak	200	1.5	v	32.5	3.1	34.8	49.3	74	-24.7
7308.0000	38.0	Peak	200	1.5	v	36.7	4.3	34.7	44.3	74	-29.7
7308.0000	38.0	Peak	270	1.5	h	36.7	4.3	34.7	44.3	74	-29.7
High Channel, 1-25GHz											
4924.0000	41.3	Ave	90	2.5	h	32.5	3.1	34.8	42.1	54	-11.9
4924.0000	40.3	Ave	180	1.5	v	32.5	3.1	34.8	41.1	54	-12.9
7386.0000	32.0	Ave	200	1.5	v	36.7	4.3	34.7	38.3	54	-15.7
7386.0000	32.0	Ave	200	1.5	h	36.7	4.3	34.7	38.3	54	-15.7
4924.0000	52.0	Peak	90	2.5	h	32.5	3.1	34.8	52.8	74	-21.2
4924.0000	50.3	Peak	180	1.5	v	32.5	3.1	34.8	51.1	74	-22.9
7386.0000	38.0	Peak	200	1.5	v	36.7	4.3	34.7	44.3	74	-29.7
7386.0000	38.0	Peak	200	1.5	h	36.7	4.3	34.7	44.3	74	-29.7

Radiated Emission Test Result for 802.11g

INDICATED			TABLE	ANTENNA		CORRECTION FACTOR			CORRECTED AMPLITUDE	FCC 15 SUBPART C	
Frequency MHz	Ampl. dBμV/m	Comments	Angle Degree	Height Meter	Polar H/ V	Antenna dB	Cable dB	Amp. dB	Corr. Ampl. dBμV/m	Limit dBμV/m	Margin dB
Low Channel, 1-25GHz											
4824.0000	41.0	Ave	230	1.5	h	32.5	3.1	34.8	41.8	54	-12.2
4824.0000	40.0	Ave	200	1.0	v	32.5	3.1	34.8	40.8	54	-13.2
7236.0000	32.0	Ave	260	2.0	v	36.7	4.3	34.7	38.3	54	-15.7
7236.0000	32.0	Ave	200	1.5	h	36.7	4.3	34.7	38.3	54	-15.7
4824.0000	46.0	Peak	200	1.0	v	32.5	3.1	34.8	46.8	74	-27.2
4824.0000	46.0	Peak	230	1.5	h	32.5	3.1	34.8	46.8	74	-27.2
7236.0000	38.0	Peak	260	2.0	v	36.7	4.3	34.7	44.3	74	-29.7
7236.0000	38.0	Peak	200	1.5	h	36.7	4.3	34.7	44.3	74	-29.7
Middle Channel, 1-25GHz											
7308.0000	43.0	Ave	200	1.5	v	36.7	4.3	34.7	49.3	54	-4.7
7308.0000	43.0	Ave	270	1.5	h	36.7	4.3	34.7	49.3	54	-4.7
4874.0000	38.0	Ave	200	1.5	v	32.5	3.1	34.8	38.8	54	-15.2
4874.0000	38.0	Ave	200	1.5	h	32.5	3.1	34.8	38.8	54	-15.2
7308.0000	50.0	Peak	200	1.5	v	36.7	4.3	34.7	56.3	74	-17.7
7308.0000	43.0	Peak	270	1.5	h	36.7	4.3	34.7	49.3	74	-24.7
4874.0000	45.0	Peak	200	1.5	h	32.5	3.1	34.8	45.8	74	-28.2
4874.0000	44.0	Peak	200	1.5	v	32.5	3.1	34.8	44.8	74	-29.2
High Channel, 1-25GHz											
4924.0000	40.0	Ave	180	1.5	v	32.5	3.1	34.8	40.8	54	-13.2
4924.0000	38.0	Ave	90	2.5	h	32.5	3.1	34.8	38.8	54	-15.2
7386.0000	32.0	Ave	200	1.5	v	36.7	4.3	34.7	38.3	54	-15.7
7386.0000	32.0	Ave	200	1.5	h	36.7	4.3	34.7	38.3	54	-15.7
4924.0000	48.0	Peak	180	1.5	v	32.5	3.1	34.8	48.8	74	-25.2
7386.0000	38.0	Peak	200	1.5	v	36.7	4.3	34.7	44.3	74	-29.7
7386.0000	38.0	Peak	200	1.5	h	36.7	4.3	34.7	44.3	74	-29.7
4924.0000	42.0	Peak	90	2.5	h	32.5	3.1	34.8	42.8	74	-31.2

FUND = Fundamental

AVG = average