FCC 47 CFR PART 15 SUBPART C

Product Type	:	WLAN Module
Applicant	:	Acer Incorporated
Address	:	8F, 88, Sec.1, Hsin Tai Wu Rd. Hsichih, Taipei Hsien 221 Taiwan, R.O.C.
Trade Name	:	acer
Model Number	:	AR5B97
Test Specification	:	FCC 47 CFR PART 15 SUBPART C: Oct, 2008 Canada RSS-210 ISSUE 7: Jun, 2007 Canada RSS-Gen ISSUE 2: Jun, 2007 ANSI C63.4-2003
Application Purpose	:	Class II Permissive Change
Issue Date	:	Mar. 08, 2010

Issue by

A Test Lab Techno Corp.
No. 140-1, Changan Street, Bade City,
Taoyuan Country 334, Taiwan R.O.C.
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Taiwan Accreditation Foundation accreditation number: 1330

Revision History

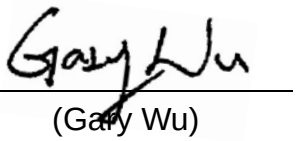
Rev.	Issue Date	Revisions	Revised By
00	Mar. 08, 2010	Initial Issue	

Test Report Verification

Issued Date: 2010/03/08

Product Type	:	WLAN Module
Applicant	:	Acer Incorporated
Address	:	8F, 88, Sec.1, Hsin Tai Wu Rd. Hsichih, Taipei Hsien 221 Taiwan, R.O.C.
Trade Name	:	acer
Model Number	:	AR5B97
FCC ID	:	HLZ-AR5B97
IC ID	:	1754F-AR5B97
EUT Rated Voltage	:	AC 100-240V, 50-60Hz, 1A
Test Voltage	:	120 Vac / 60 Hz
Applicable Standard	:	FCC 47 CFR PART 15 SUBPART C: Oct, 2008 Canada RSS-210 ISSUE 7: Jun, 2007 Canada RSS-Gen ISSUE 2: Jun, 2007 ANSI C63.4-2003
Application Purpose	:	Class II Permissive Change
Test Result	:	Complied
Performed Lab.	:	A Test Lab Techno Corp. No. 140-1, Changan Street, Bade City, Taoyuan Country 334, Taiwan R.O.C. Tel：+86-3-2710188 / Fax：+86-3-2710190 Taiwan Accreditation Foundation accreditation number: 1330 http://www.atl-lab.com.tw/e-index.htm

The above equipment has been tested by A Test Lab Techno Corp., and found compliance with the requirements set forth in the Electromagnetic Compatibility Directive 2004/108/EC and technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Approved By	:		Reviewed By	:	
(Manager)		(Miller Lee)	(Testing Engineer)		(Gary Wu)

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1 General Information

1.1 Summary of Test Result

Standard		Item	Result	Remark
15.247	RSS-210			
15.247(b)(3)	A8.4	Max. Output Power	PASS	-----
15.247(d)	A8.5	Transmitter Radiated Emissions	PASS	-----
15.247(d)	A8.5	Band Edge Measurement	PASS	-----
15.203	-	Antenna Requirement	PASS	-----

The test results of this report relate only to the tested sample(s) identified in this report. Manufacturer or whom it may concern should recognize the pass or fail of the test result.

1.2 Measurement Uncertainty

Conducted Emission

The measurement uncertainty is evaluated as ± 2.24 dB.

Radiated Emission

The measurement uncertainty of 30 MHz - 1GHz is evaluated as ± 3.072dB.

2 EUT Description

Product	:	WLAN Module
Trade Name	:	acer
Model Number	:	AR5B97
Applicant	:	Acer Incorporated 8F, 88, Sec.1, Hsin Tai Wu Rd. Hsichih, Taipei Hsien 221 Taiwan, R.O.C.
Manufacturer	:	Quanta Computer Inc. No.211, Wen Hwa 2nd Rd., Kuei Shan Hsiang, Tao Yuan Shien, Taiwan, R.O.C.
FCC ID	:	HLZ-AR5B97
IC ID	:	1754F-AR5B97
Frequency Range	:	IEEE 802.11b / IEEE 802.11g: 2412MHz~2462MHz draft 802.11n Standard-20MHz: 2412MHz~2462MHz draft 802.11n Wide-40MHz: 2422MHz~2452MHz
Modulation Type	:	IEEE 802.11b:DSSS(CCK, DQPSK, DBPSK) IEEE 802.11g:DSSS(CCK, DQPSK, DBPSK)+ OFDM(QPSK, BPSK, 16-QAM, 64-QAM) draft 802.11n Standard-20MHz channel mode: OFDM(6.5,7.2, 13,14.4, 14.44, 19.5,217,26,28.89,28.9,39.43.3,43.33,52,57.78, 57.8, 58.5, 65.0, 72.2, 78, 86.67,104,115.56,117,130 and 144.44 Mbps) draft 802.11n Wide-40MHz channel mode: OFDM(13.5,15,27,30,40.5, 45,54,60,81,90,108,120, 121.5,135,150,162,180,216,240,243,270 and 300 Mbps)
Antenna Type	:	PIFA Type
Antenna Gain	:	Main: -0.71 dBi, Aux: 0.27 dBi
Max. RF Output Power	:	IEEE 802.11b: 0.168 W / 22.25 dBm IEEE 802.11g: 0.505 W / 27.03 dBm draft 802.11n Standard-20MHz: 0.501 W / 27.00 dBm draft 802.11n Wide-40MHz: 0.502 W / 27.01 dBm
Component		
Power Adapter	:	HIPRO, HP-A00301R3 Input: 100-240 Vac, 50-60 Hz, 1 A Output: 19 Vdc, 1.58 A Cable in: Non-Shielded, 1.7 m Cable out: Non-Shielded, 1.5 m
Battery	:	11.1 Vdc, 4400mAh

3 Test Methodology

3.1. Mode of Operation

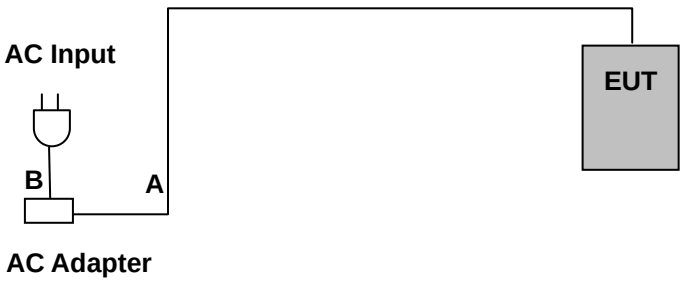
Decision of Test ATL has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Test Mode
Mode 1: Normal Operation Mode
Mode 2: IEEE 802.11b Link Mode
Mode 3: IEEE 802.11g Link Mode
Mode 4: draft 802.11n Standard-20MHz Link Mode
Mode 5: draft 802.11n Wide-40MHz Link Mode
Mode 6: Receiver Mode

3.2. EUT Exercise Software

1.	Turn on the power of all equipment.
2.	EUT run ART test program.

3.3. Configuration of Test System Details



Signal Cable Type		Signal Cable Description
A	DC Power Cable	Cable out: Non-Shielded, 1.5 m
B	AC Power Cable	Cable in: Non-Shielded, 1.7 m

3.4. Test Site Environment

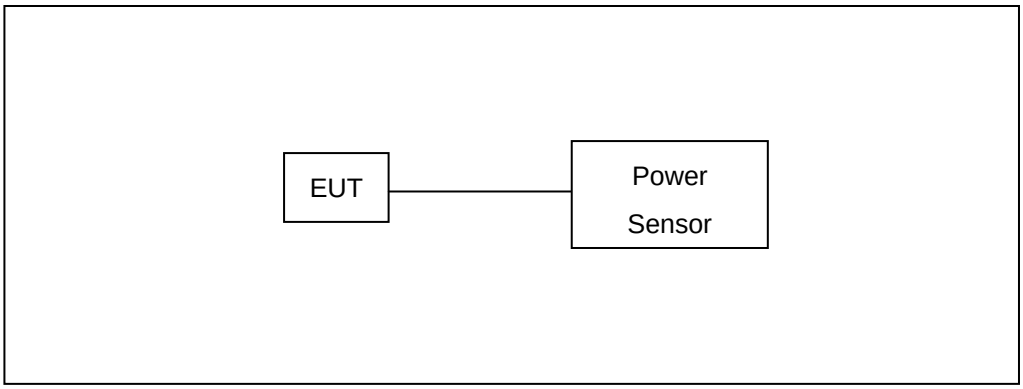
Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	25
Humidity (%RH)	25-75	50
Barometric pressure (mbar)	860-1060	950-1000

4 Maximum Conducted Output Power Measurement

4.1. Limit

For systems using digital modulation in the 2400-2483.5MHz, the limit for peak output power is 30dBm.

4.2. Test Setup



4.3. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Power Sensor	R&S	NRP-Z81	100017	05/17/2009	(2)
Test Site	ATL	TE06	TE06	N.C.R.	-----

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

4.4. Test Procedure

The tests below are run with the EUT's transmitter set at high power in TX mode. The EUT is needed to force selection of output power level and channel number. While testing, EUT was set to transmit continuously. Remove the Subjective device's antenna and connect the RF output port to power sensor. The maximum peak output power shall not exceed 1 watt.

Use a direct connection between the antenna port of transmitter and the power sensor, for prevent the power sensor input attenuation 40-50 dB. Set the RBW Bandwidth of the emission or use a channel power meter mode.

For antennas with gains of 6 dBi or less, maximum allowed transmitter output is 1 watt (+30 dBm). For antennas with gains greater than 6 dBi, transmitter output level must be decreased by an amount equal to (GAIN - 6)/3 dBm.

The antenna port of the EUT was connected to the input of a power sensor. Power was read directly and cable loss correction was added to the reading to obtain power at the EUT antenna terminals.

4.5. Test Result

Product	WLAN Module					
Test Item	Maximum Conducted Output Power					
Test Mode	Mode 2: IEEE 802.11b Link Mode					
Date of Test	02/25/2010			Test Site	TE06	
Frequency (MHz)	Data Rate	Average		Peak		Limit (dBm)
		(dBm)	(W)	(dBm)	(W)	
2412	1	19.70	0.093	22.06	0.161	< 30
2437	1	19.96	0.099	**22.25**	**0.168**	< 30
2462	1	19.10	0.081	21.37	0.137	< 30

Product	WLAN Module					
Test Item	Maximum Conducted Output Power					
Test Mode	Mode 3: IEEE 802.11g Link Mode					
Date of Test	02/25/2010			Test Site	TE06	
Frequency (MHz)	Data Rate	Average		Peak		Limit (dBm)
		(dBm)	(W)	(dBm)	(W)	
2412	6	17.53	0.057	25.85	0.385	< 30
2437	6	20.45	0.111	**27.03**	**0.505**	< 30
2462	6	15.06	0.032	24.16	0.261	< 30

Product	WLAN Module					
Test Item	Maximum Conducted Output Power					
Test Mode	Mode 4: draft 802.11n Standard-20MHz Link Mode					
Date of Test	02/25/2010			Test Site	TE06	
Frequency (MHz)	Data Rate	Average		Peak		Limit (dBm)
		(dBm)	(W)	(dBm)	(W)	
2412	6.5	17.06	0.051	25.46	0.352	< 30
2437	6.5	20.38	0.109	**27.00**	**0.501**	< 30
2462	6.5	14.36	0.027	23.95	0.248	< 30

Product	WLAN Module					
Test Item	Maximum Conducted Output Power					
Test Mode	Mode 5: draft 802.11n Wide-40MHz Link Mode					
Date of Test	02/25/2010			Test Site	TE06	
Frequency (MHz)	Data Rate	Average		Peak		Limit (dBm)
		(dBm)	(W)	(dBm)	(W)	
2422	13.5	15.42	0.035	25.67	0.369	< 30
2437	13.5	18.13	0.065	**27.01**	**0.502**	< 30
2452	13.5	12.93	0.020	24.13	0.259	< 30

5 Transmitter Radiated Emissions Measurement

5.1. Limit

Frequency Range (MHz)	Peak (dBuV/m)
30 to 88	40
88 to 216	43.5
216 to 960	46
Above 960	54

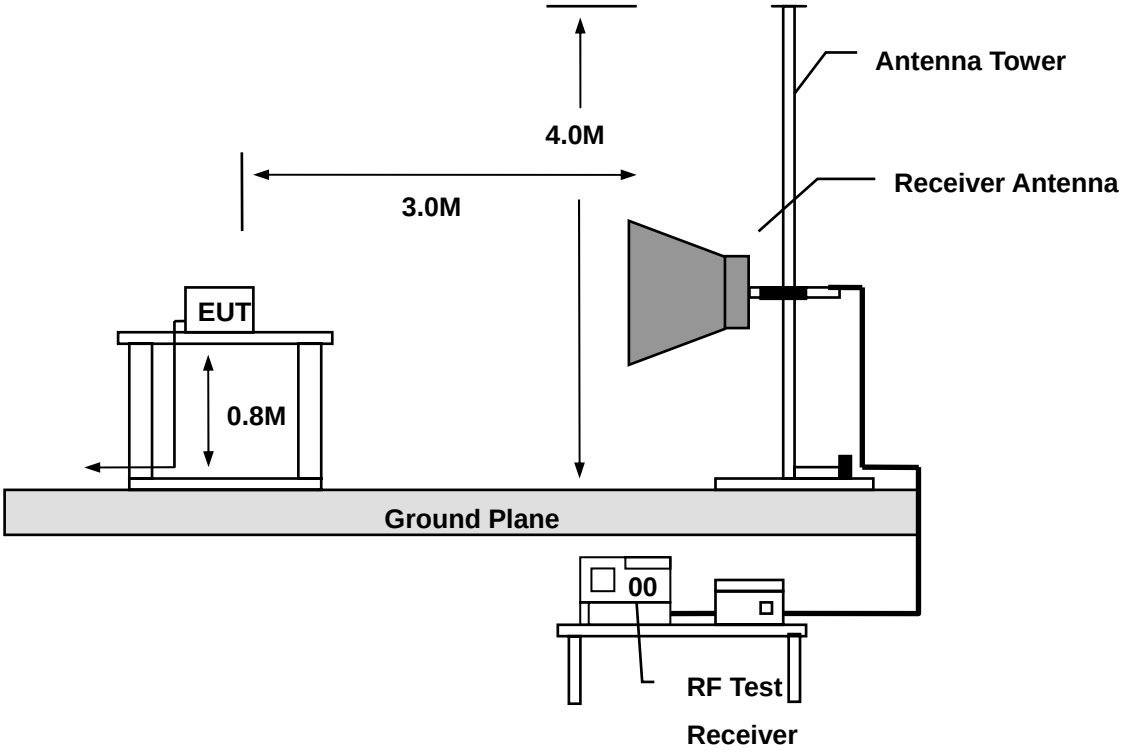
5.2. Test Instruments

3 Meter Chamber					
Equipment	**Manufacturer**	**Model Number**	**Serial Number**	**Cal. Date**	**Remark**
RF Pre-selector	Agilent	N9039A	MY46520256	01/27/2009	(2)
Spectrum Analyzer	Agilent	E4446A	MY46180578	01/20/2009	(2)
Pre Amplifier	Agilent	8449B	3008A02237	07/01/2009	(1)
Pre Amplifier	Agilent	8447D	2944A10961	06/30/2009	(1)
Broadband Antenna (30MHz~1GHz)	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	9163-270	06/23/2009	(2)
Horn Antenna (1~18GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	9120D-550	07/01/2009	(2)
Horn Antenna (18~40GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9170	9170-320	06/30/2009	(2)
Test Site	ATL	TE01	TE01	N.C.R.	-----

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

5.3. Setup



5.4. Test Procedure

Final radiation measurements were made on a three-meter, Semi 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 250 MHz to 2.5 GHz in order to cover the whole spectrum below 10th harmonic which could generate from the EUT. During the test, EUT was set to transmit continuously & Measurements spectrum range from 30 MHz to 26.5 GHz is investigated.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, and then the video bandwidth is set to 1 MHz for peak measurements and 10 Hz for average measurements.

A nonconductive material surrounded the EUT to supporting the EUT for standing on tree orthogonal planes. At each condition, 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.

SCHWARZBECK MESS-ELEKTRONIK Biconilog Antenna (mode VULB9163) at 3 Meter and the SCHWARZBECK Double Ridged Guide Antenna (model BBHA9120D&9170) was used in frequencies 1 – 26.5 GHz at a distance of 1 meter. All test results were extrapolated to equivalent signal at 3 meters utilizing an inverse linear distance extrapolation Factor (20dB/decade).

For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

Appropriate preamplifiers were used for improving sensitivity and precautions were taken to avoid overloading or desensitizing the spectrum analyzer. No post – detector video filters were used in the test.

The spectrum analyzer's 6 dB bandwidth was set to 1 MHz, and the analyzer was operated in the peak detection mode, for frequencies both below and up 1 GHz. The average levels were obtained by subtracting the duty cycle correction factor from the peak readings.

The following procedures were used to convert the emission levels measured in decibels referenced to 1 microvolt (dBuV) into field intensity in micro volts pre meter (uV/m).

The actual field intensity in decibels referenced to 1 microvolt in to field intensity in micro colts per meter (dBuV/m).

The actual field is intensity in referenced to 1 microvolt per meter (dBuV/m) is determined by algebraically adding the measured reading in dBuV, the antenna factor (dB), and cable loss (dB) and Subtracting the gain of preamplifier (dB) is auto calculate in spectrum analyzer.

(1) Amplitude (dBuV/m) = FI (dBuV) +AF (dBuV) +CL (dBuV)-Gain (dB)

FI= Reading of the field intensity.

AF= Antenna factor.

CL= Cable loss.

P.S Amplitude is auto calculate in spectrum analyzer.

(2) Actual Amplitude (dBuV/m) = Amplitude (dBuV)-Dis(dB)

The FCC specified emission limits were calculated according the EUT operating frequency and by following linear interpolation equations:

(a) For fundamental frequency : Transmitter Output < +30dBm

(b) For spurious frequency : Spurious emission limits = fundamental emission limit /10

5.5. Test Result

Below 1GHz

Product	WLAN Module						
Test Item	Transmitter Radiated Emissions						
Test Mode	Mode 1: Normal Operation Mode						
Date of Test	03/01/2010				Test Site	TE02	
Freq	Polarization (V/H)	Rd_level (dBuV)	Factor	Level (dBuV/m)	Limit (dBuV/m)	Over	detector
35.00	V	43.56	-13.19	30.37	40.00	-9.63	QP
110.60	V	44.85	-12.61	32.24	43.50	-11.26	QP
154.88	V	46.53	-15.91	30.62	43.50	-12.88	QP
174.86	V	43.08	-14.66	28.42	43.50	-15.08	QP
216.30	V	43.38	-12.63	30.75	46.00	-15.25	QP
271.79	V	42.25	-10.88	31.37	46.00	-14.63	QP
333.25	V	40.37	-9.32	31.05	46.00	-14.95	QP
431.60	V	37.52	-8.03	29.49	46.00	-16.51	QP
504.05	V	30.58	-6.82	23.76	46.00	-22.24	QP
651.75	V	28.42	-4.23	24.19	46.00	-21.81	QP
796.30	V	27.63	-2.35	25.28	46.00	-20.72	QP
997.55	V	25.39	0.69	26.08	54.00	-27.92	QP
35.67	H	45.39	-13.02	32.37	40.00	-7.63	QP
92.64	H	38.84	-12.57	26.27	43.50	-17.23	QP
124.91	H	40.15	-15.02	25.13	43.50	-18.37	QP
156.09	H	42.52	-15.81	26.71	43.50	-16.79	QP
215.90	H	42.54	-12.65	29.89	43.50	-13.61	QP
266.52	H	40.37	-11.00	29.37	46.00	-16.63	QP
345.15	H	39.89	-9.08	30.81	46.00	-15.19	QP
398.70	H	34.05	-8.37	25.68	46.00	-20.32	QP
666.80	H	27.98	-4.40	23.58	46.00	-22.42	QP
779.85	H	27.11	-2.36	24.75	46.00	-21.25	QP
883.80	H	25.89	-0.26	25.63	46.00	-20.37	QP
993.35	H	25.08	0.83	25.91	54.00	-28.09	QP

Above 1GHz

Product	WLAN Module						
Test Item	Transmitter Radiated Emissions						
Test Mode	Mode 2: IEEE 802.11b Link Mode				Frequency	2412MHz	
Date of Test	03/01/2010				Test Site	TE02	
Freq	Polarization (V/H)	Rd_level (dBuV)	Factor	Level (dBuV/m)	Limit (dBuV/m)	Over	detector
2623.50	V	56.66	0.82	57.48	74.00	-16.52	peak
2623.50	V	39.85	0.82	40.67	54.00	-13.33	AVG
2700.00	V	40.67	22.58	63.25	74.00	-10.75	peak
2700.00	V	19.02	22.58	41.60	54.00	-12.40	AVG
4824.30	V	44.40	7.49	51.89	74.00	-22.11	peak
4824.30	V	42.68	7.49	50.17	54.00	-3.83	AVG
9277.30	V	36.61	16.68	53.29	74.00	-20.71	peak
9277.30	V	23.07	16.68	39.75	54.00	-14.25	AVG
14300.00	V	28.94	28.15	57.09	74.00	-16.91	peak
14300.00	V	17.60	28.15	45.75	54.00	-8.25	AVG
18000.00	V	27.88	35.11	62.99	74.00	-11.01	peak
18000.00	V	7.42	35.11	42.53	54.00	-11.47	AVG
18637.50	V	38.07	23.08	61.15	74.00	-12.85	peak
18637.50	V	19.61	23.08	42.69	54.00	-11.31	AVG
21973.75	V	38.06	21.13	59.19	74.00	-14.81	peak
21973.75	V	19.49	21.13	40.62	54.00	-13.38	AVG
26011.25	V	40.18	18.54	58.72	74.00	-15.28	peak
26011.25	V	21.76	18.54	40.30	54.00	-13.70	AVG
2523.20	H	57.58	0.42	58.00	74.00	-16.00	peak
2523.20	H	39.97	0.42	40.39	54.00	-13.61	AVG
2703.65	H	41.31	21.89	63.20	74.00	-10.80	peak
2703.65	H	18.93	21.89	40.82	54.00	-13.18	AVG
4824.30	H	41.64	7.49	49.13	74.00	-24.87	peak
9883.20	H	35.25	17.82	53.07	74.00	-20.93	peak
9883.20	H	23.18	17.82	41.00	54.00	-13.00	AVG
14200.00	H	28.85	28.40	57.25	74.00	-16.75	peak
14200.00	H	17.61	28.40	46.01	54.00	-7.99	AVG
18000.00	H	27.88	35.11	62.99	74.00	-11.01	peak
18000.00	H	7.91	35.11	43.02	54.00	-10.98	AVG
18361.25	H	38.16	23.16	61.32	74.00	-12.68	peak
18361.25	H	20.13	23.16	43.29	54.00	-10.71	AVG
22526.25	H	38.59	20.89	59.48	74.00	-14.52	peak
22526.25	H	19.71	20.89	40.60	54.00	-13.40	AVG
25947.50	H	40.42	18.60	59.02	74.00	-14.98	peak
25947.50	H	21.72	18.60	40.32	54.00	-13.68	AVG

Product	WLAN Module						
Test Item	Transmitter Radiated Emissions						
Test Mode	Mode 2: IEEE 802.11b Link Mode				Frequency	2437MHz	
Date of Test	03/01/2010				Test Site	TE02	
Freq	Polarization (V/H)	Rd_level (dBuV)	Factor	Level (dBuV/m)	Limit (dBuV/m)	Over	detector
2218.05	V	57.33	0.35	57.68	74.00	-16.32	peak
2218.05	V	39.88	0.35	40.23	54.00	-13.77	AVG
2700.00	V	40.09	22.58	62.67	74.00	-11.33	peak
2700.00	V	18.35	22.58	40.93	54.00	-13.07	AVG
4875.40	V	45.52	7.73	53.25	74.00	-20.75	peak
4875.40	V	44.77	7.73	52.50	54.00	-1.50	AVG
9594.85	V	35.82	17.40	53.22	74.00	-20.78	peak
9594.85	V	23.25	17.40	40.65	54.00	-13.35	AVG
14120.00	V	28.35	28.41	56.76	74.00	-17.24	peak
14120.00	V	17.58	28.41	45.99	54.00	-8.01	AVG
18000.00	V	27.80	35.11	62.91	74.00	-11.09	peak
18000.00	V	7.67	35.11	42.78	54.00	-11.22	AVG
18212.50	V	38.25	23.22	61.47	74.00	-12.53	peak
18212.50	V	20.87	23.22	44.09	54.00	-9.91	AVG
21527.50	V	37.95	21.35	59.30	74.00	-14.70	peak
21527.50	V	19.72	21.35	41.07	54.00	-12.93	AVG
25990.00	V	40.31	18.56	58.87	74.00	-15.13	peak
25990.00	V	22.02	18.56	40.58	54.00	-13.42	AVG
2252.90	H	57.11	0.48	57.59	74.00	-16.41	peak
2252.90	H	39.45	0.48	39.93	54.00	-14.07	AVG
2703.65	H	40.71	21.89	62.60	74.00	-11.40	peak
2703.65	H	18.67	21.89	40.56	54.00	-13.44	AVG
4875.40	H	40.92	7.73	48.65	74.00	-25.35	peak
9937.95	H	35.17	17.78	52.95	74.00	-21.05	peak
9937.95	H	23.68	17.78	41.46	54.00	-12.54	AVG
14240.00	H	28.73	28.25	56.98	74.00	-17.02	peak
14240.00	H	17.88	28.25	46.13	54.00	-7.87	AVG
17900.00	H	28.68	34.50	63.18	74.00	-10.82	peak
17900.00	H	7.79	34.50	42.29	54.00	-11.71	AVG
18743.75	H	38.28	23.13	61.41	74.00	-12.59	peak
18743.75	H	19.33	23.13	42.46	54.00	-11.54	AVG
21803.75	H	38.07	21.21	59.28	74.00	-14.72	peak
21803.75	H	19.89	21.21	41.10	54.00	-12.90	AVG
25076.25	H	40.00	19.31	59.31	74.00	-14.69	peak
25076.25	H	20.50	19.31	39.81	54.00	-14.19	AVG

Product	WLAN Module						
Test Item	Transmitter Radiated Emissions						
Test Mode	Mode 2: IEEE 802.11b Link Mode				Frequency	2462MHz	
Date of Test	03/01/2010				Test Site	TE02	
Freq	Polarization (V/H)	Rd_level (dBuV)	Factor	Level (dBuV/m)	Limit (dBuV/m)	Over	detector
2258.00	V	56.60	0.46	57.06	74.00	-16.94	peak
2258.00	V	39.37	0.46	39.83	54.00	-14.17	AVG
2700.00	V	40.81	22.58	63.39	74.00	-10.61	peak
2700.00	V	18.54	22.58	41.12	54.00	-12.88	AVG
4944.75	V	43.53	7.72	51.25	74.00	-22.75	peak
4944.75	V	40.44	7.72	48.16	54.00	-5.84	AVG
9952.55	V	35.43	17.78	53.21	74.00	-20.79	peak
9952.55	V	23.38	17.78	41.16	54.00	-12.84	AVG
14200.00	V	28.56	28.40	56.96	74.00	-17.04	peak
14200.00	V	17.86	28.40	46.26	54.00	-7.74	AVG
17920.00	V	28.66	34.38	63.04	74.00	-10.96	peak
17920.00	V	7.77	34.38	42.15	54.00	-11.85	AVG
18085.00	V	38.02	23.25	61.27	74.00	-12.73	peak
18085.00	V	20.53	23.25	43.78	54.00	-10.22	AVG
21952.50	V	38.08	21.15	59.23	74.00	-14.77	peak
21952.50	V	19.71	21.15	40.86	54.00	-13.14	AVG
25820.00	V	40.03	18.71	58.74	74.00	-15.26	peak
25820.00	V	21.23	18.71	39.94	54.00	-14.06	AVG
2388.05	H	57.37	0.16	57.53	74.00	-16.47	peak
2388.05	H	39.25	0.16	39.41	54.00	-14.59	AVG
2700.00	H	40.72	22.58	63.30	74.00	-10.70	peak
2700.00	H	18.47	22.58	41.05	54.00	-12.95	AVG
4924.00	H	36.17	7.65	43.82	74.00	-30.18	peak
9864.95	H	35.24	17.85	53.09	74.00	-20.91	peak
9864.95	H	23.64	17.85	41.49	54.00	-12.51	AVG
14320.00	H	28.75	28.11	56.86	74.00	-17.14	peak
14320.00	H	17.55	28.11	45.66	54.00	-8.34	AVG
18000.00	H	27.63	35.11	62.74	74.00	-11.26	peak
18000.00	H	7.51	35.11	42.62	54.00	-11.38	AVG
18340.00	H	38.31	23.18	61.49	74.00	-12.51	peak
18340.00	H	20.23	23.18	43.41	54.00	-10.59	AVG
21888.75	H	38.20	21.18	59.38	74.00	-14.62	peak
21888.75	H	20.18	21.18	41.36	54.00	-12.64	AVG
25947.50	H	40.14	18.60	58.74	74.00	-15.26	peak
25947.50	H	21.57	18.60	40.17	54.00	-13.83	AVG

Product	WLAN Module						
Test Item	Transmitter Radiated Emissions						
Test Mode	Mode 3: IEEE 802.11g Link Mode				Frequency	2412Hz	
Date of Test	03/01/2010				Test Site	TE02	
Freq	Polarization (V/H)	Rd_level (dBuV)	Factor	Level (dBuV/m)	Limit (dBuV/m)	Over	detector
2304.75	V	57.16	0.47	57.63	74.00	-16.37	peak
2304.75	V	40.35	0.47	40.82	54.00	-13.18	AVG
2700.00	V	40.06	22.58	62.64	74.00	-11.36	peak
2700.00	V	18.93	22.58	41.51	54.00	-12.49	AVG
4824.30	V	39.91	7.49	47.40	74.00	-26.60	peak
9802.90	V	35.09	17.68	52.77	74.00	-21.23	peak
9802.90	V	22.89	17.68	40.57	54.00	-13.43	AVG
13880.00	V	29.14	27.92	57.06	74.00	-16.94	peak
13880.00	V	17.60	27.92	45.52	54.00	-8.48	AVG
17980.00	V	27.74	34.75	62.49	74.00	-11.51	peak
17980.00	V	7.58	34.75	42.33	54.00	-11.67	AVG
18233.75	V	38.24	23.21	61.45	74.00	-12.55	peak
18233.75	V	20.14	23.21	43.35	54.00	-10.65	AVG
21633.75	V	37.97	21.28	59.25	74.00	-14.75	peak
21633.75	V	19.41	21.28	40.69	54.00	-13.31	AVG
25947.50	V	41.10	18.60	59.70	74.00	-14.30	peak
25947.50	V	21.51	18.60	40.11	54.00	-13.89	AVG
2305.60	H	56.57	0.46	57.03	74.00	-16.97	peak
2305.60	H	39.69	0.46	40.15	54.00	-13.85	AVG
2700.00	H	39.88	22.58	62.46	74.00	-11.54	peak
2700.00	H	18.93	22.58	41.51	54.00	-12.49	AVG
4824.00	H	36.97	7.48	44.45	74.00	-29.55	peak
9879.55	H	35.39	17.82	53.21	74.00	-20.79	peak
9879.55	H	23.38	17.82	41.20	54.00	-12.80	AVG
14280.00	H	28.43	28.17	56.60	74.00	-17.40	peak
14280.00	H	17.60	28.17	45.77	54.00	-8.23	AVG
17980.00	H	28.02	34.75	62.77	74.00	-11.23	peak
17980.00	H	7.98	34.75	42.73	54.00	-11.27	AVG
18828.75	H	38.25	23.15	61.40	74.00	-12.60	peak
18828.75	H	19.31	23.15	42.46	54.00	-11.54	AVG
21931.25	H	38.14	21.15	59.29	74.00	-14.71	peak
21931.25	H	19.85	21.15	41.00	54.00	-13.00	AVG
26053.75	H	40.27	18.52	58.79	74.00	-15.21	peak
26053.75	H	21.33	18.52	39.85	54.00	-14.15	AVG

Product	WLAN Module						
Test Item	Transmitter Radiated Emissions						
Test Mode	Mode 3: IEEE 802.11g Link Mode				Frequency	2437MHz	
Date of Test	03/01/2010				Test Site	TE02	
Freq	Polarization (V/H)	Rd_level (dBuV)	Factor	Level (dBuV/m)	Limit (dBuV/m)	Over	detector
2312.40	V	57.05	0.35	57.40	74.00	-16.60	peak
2312.40	V	39.57	0.35	39.92	54.00	-14.08	AVG
2703.65	V	41.61	21.89	63.50	74.00	-10.50	peak
2703.65	V	18.69	21.89	40.58	54.00	-13.42	AVG
4871.75	V	46.72	7.72	54.44	74.00	-19.56	peak
4871.75	V	36.28	7.72	44.00	54.00	-10.00	AVG
9839.40	V	35.77	17.85	53.62	74.00	-20.38	peak
9839.40	V	23.54	17.85	41.39	54.00	-12.61	AVG
14240.00	V	29.00	28.25	57.25	74.00	-16.75	peak
14240.00	V	17.59	28.25	45.84	54.00	-8.16	AVG
17980.00	V	29.03	34.75	63.78	74.00	-10.22	peak
17980.00	V	7.78	34.75	42.53	54.00	-11.47	AVG
18850.00	V	38.54	23.15	61.69	74.00	-12.31	peak
18850.00	V	18.90	23.15	42.05	54.00	-11.95	AVG
21888.75	V	38.20	21.18	59.38	74.00	-14.62	peak
21888.75	V	20.14	21.18	41.32	54.00	-12.68	AVG
25990.00	V	40.54	18.56	59.10	74.00	-14.90	peak
25990.00	V	21.33	18.56	39.89	54.00	-14.11	AVG
2700.00	H	40.58	22.58	63.16	74.00	-10.84	peak
2700.00	H	18.64	22.58	41.22	54.00	-12.78	AVG
4868.10	H	41.75	7.70	49.45	74.00	-24.55	peak
9441.55	H	36.37	17.02	53.39	74.00	-20.61	peak
9441.55	H	23.84	17.02	40.86	54.00	-13.14	AVG
14040.00	H	28.37	28.20	56.57	74.00	-17.43	peak
14040.00	H	17.71	28.20	45.91	54.00	-8.09	AVG
17900.00	H	28.67	34.50	63.17	74.00	-10.83	peak
17900.00	H	8.11	34.50	42.61	54.00	-11.39	AVG
18850.00	H	38.07	23.15	61.22	74.00	-12.78	peak
18850.00	H	18.90	23.15	42.05	54.00	-11.95	AVG
21931.25	H	37.98	21.15	59.13	74.00	-14.87	peak
21931.25	H	19.77	21.15	40.92	54.00	-13.08	AVG
24481.25	H	40.10	19.67	59.77	74.00	-14.23	peak
24481.25	H	20.96	19.67	40.63	54.00	-13.37	AVG

Product	WLAN Module						
Test Item	Transmitter Radiated Emissions						
Test Mode	Mode 3: IEEE 802.11g Link Mode				Frequency	2462MHz	
Date of Test	03/01/2010				Test Site	TE02	
Freq	Polarization (V/H)	Rd_level (dBuV)	Factor	Level (dBuV/m)	Limit (dBuV/m)	Over	detector
2202.75	V	56.87	0.50	57.37	74.00	-16.63	peak
2202.75	V	40.34	0.50	40.84	54.00	-13.16	AVG
2703.65	V	41.46	21.89	63.35	74.00	-10.65	peak
2703.65	V	18.74	21.89	40.63	54.00	-13.37	AVG
4981.25	V	41.39	7.89	49.28	74.00	-24.72	peak
9941.60	V	35.19	17.77	52.96	74.00	-21.04	peak
9941.60	V	23.45	17.77	41.22	54.00	-12.78	AVG
13920.00	V	28.88	28.08	56.96	74.00	-17.04	peak
13920.00	V	18.09	28.08	46.17	54.00	-7.83	AVG
18000.00	V	27.19	35.11	62.30	74.00	-11.70	peak
18000.00	V	7.88	35.11	42.99	54.00	-11.01	AVG
18743.75	V	38.11	23.13	61.24	74.00	-12.76	peak
18743.75	V	19.28	23.13	42.41	54.00	-11.59	AVG
21633.75	V	38.21	21.28	59.49	74.00	-14.51	peak
21633.75	V	19.52	21.28	40.80	54.00	-13.20	AVG
25522.50	V	39.79	18.97	58.76	74.00	-15.24	peak
25522.50	V	21.22	18.97	40.19	54.00	-13.81	AVG
2306.45	H	56.98	0.44	57.42	74.00	-16.58	peak
2306.45	H	39.45	0.44	39.89	54.00	-14.11	AVG
2700.00	H	41.27	22.58	63.85	74.00	-10.15	peak
2700.00	H	18.24	22.58	40.82	54.00	-13.18	AVG
4924.00	H	36.16	7.65	43.81	74.00	-30.19	peak
10000.00	H	35.44	17.94	53.38	74.00	-20.62	peak
10000.00	H	23.33	17.94	41.27	54.00	-12.73	AVG
14040.00	H	28.79	28.20	56.99	74.00	-17.01	peak
14040.00	H	18.15	28.20	46.35	54.00	-7.65	AVG
18000.00	H	27.71	35.11	62.82	74.00	-11.18	peak
18000.00	H	8.11	35.11	43.22	54.00	-10.78	AVG
19168.75	H	38.28	22.95	61.23	74.00	-12.77	peak
19168.75	H	18.92	22.95	41.87	54.00	-12.13	AVG
21548.75	H	37.91	21.33	59.24	74.00	-14.76	peak
21548.75	H	19.87	21.33	41.20	54.00	-12.80	AVG
25947.50	H	40.18	18.60	58.78	74.00	-15.22	peak
25947.50	H	21.61	18.60	40.21	54.00	-13.79	AVG

Product	WLAN Module						
Test Item	Transmitter Radiated Emissions						
Test Mode	Mode 4: draft 802.11n Standard-20MHz Link Mode				Frequency	2412MHz	
Date of Test	03/01/2010				Test Site	TE02	
Freq	Polarization (V/H)	Rd_level (dBuV)	Factor	Level (dBuV/m)	Limit (dBuV/m)	Over	detector
2247.80	V	57.29	0.48	57.77	74.00	-16.23	peak
2247.80	V	39.87	0.48	40.35	54.00	-13.65	AVG
2700.00	V	40.72	22.58	63.30	74.00	-10.70	peak
2700.00	V	19.06	22.58	41.64	54.00	-12.36	AVG
4827.95	V	40.50	7.53	48.03	74.00	-25.97	peak
4827.95	V	29.33	7.53	36.86	54.00	-17.14	AVG
9959.85	V	35.78	17.82	53.60	74.00	-20.40	peak
9959.85	V	23.38	17.82	41.20	54.00	-12.80	AVG
14100.00	V	28.93	28.44	57.37	74.00	-16.63	peak
14100.00	V	17.60	28.44	46.04	54.00	-7.96	AVG
17980.00	V	28.74	34.75	63.49	74.00	-10.51	peak
17980.00	V	7.49	34.75	42.24	54.00	-11.76	AVG
18233.75	V	38.20	23.21	61.41	74.00	-12.59	peak
18233.75	V	20.85	23.21	44.06	54.00	-9.94	AVG
21888.75	V	38.11	21.18	59.29	74.00	-14.71	peak
21888.75	V	19.60	21.18	40.78	54.00	-13.22	AVG
25798.75	V	41.35	18.72	60.07	74.00	-13.93	peak
25798.75	V	21.41	18.72	40.13	54.00	-13.87	AVG
2286.90	H	56.50	0.41	56.91	74.00	-17.09	peak
2286.90	H	40.15	0.41	40.56	54.00	-13.44	AVG
2700.00	H	40.98	22.58	63.56	74.00	-10.44	peak
2700.00	H	18.89	22.58	41.47	54.00	-12.53	AVG
4824.00	H	37.23	7.48	44.71	74.00	-29.29	peak
9467.10	H	36.44	16.93	53.37	74.00	-20.63	peak
9467.10	H	23.54	16.93	40.47	54.00	-13.53	AVG
14240.00	H	27.20	28.25	55.45	74.00	-18.55	peak
14240.00	H	17.74	28.25	45.99	54.00	-8.01	AVG
17900.00	H	27.48	34.50	61.98	74.00	-12.02	peak
17900.00	H	7.54	34.50	42.04	54.00	-11.96	AVG
18361.25	H	38.24	23.16	61.40	74.00	-12.60	peak
18361.25	H	20.07	23.16	43.23	54.00	-10.77	AVG
21548.75	H	38.45	21.33	59.78	74.00	-14.22	peak
21548.75	H	19.67	21.33	41.00	54.00	-13.00	AVG
24417.50	H	39.94	19.71	59.65	74.00	-14.35	peak
24417.50	H	20.44	19.71	40.15	54.00	-13.85	AVG

Product	WLAN Module						
Test Item	Transmitter Radiated Emissions						
Test Mode	Mode 4: draft 802.11n Standard-20MHz Link Mode				Frequency	2437MHz	
Date of Test	03/01/2010				Test Site	TE02	
Freq	Polarization (V/H)	Rd_level (dBuV)	Factor	Level (dBuV/m)	Limit (dBuV/m)	Over	detector
2275.00	V	57.00	0.44	57.44	74.00	-16.56	peak
2275.00	V	39.57	0.44	40.01	54.00	-13.99	AVG
2703.65	V	40.86	21.89	62.75	74.00	-11.25	peak
2703.65	V	18.67	21.89	40.56	54.00	-13.44	AVG
4864.45	V	48.94	7.69	56.63	74.00	-17.37	peak
4864.45	V	34.69	7.69	42.38	54.00	-11.62	AVG
9401.40	V	36.33	17.08	53.41	74.00	-20.59	peak
9401.40	V	23.64	17.08	40.72	54.00	-13.28	AVG
14240.00	V	29.00	28.25	57.25	74.00	-16.75	peak
14240.00	V	17.59	28.25	45.84	54.00	-8.16	AVG
17980.00	V	29.03	34.75	63.78	74.00	-10.22	peak
17980.00	V	7.78	34.75	42.53	54.00	-11.47	AVG
18850.00	V	38.54	23.15	61.69	74.00	-12.31	peak
18850.00	V	18.90	23.15	42.05	54.00	-11.95	AVG
21888.75	V	38.20	21.18	59.38	74.00	-14.62	peak
21888.75	V	20.14	21.18	41.32	54.00	-12.68	AVG
25990.00	V	40.54	18.56	59.10	74.00	-14.90	peak
25990.00	V	21.33	18.56	39.89	54.00	-14.11	AVG
2303.05	H	57.16	0.50	57.66	74.00	-16.34	57.16
2303.05	H	40.02	0.50	40.52	54.00	-13.48	40.02
2700.00	H	40.82	22.58	63.40	74.00	-10.60	40.82
2700.00	H	18.74	22.58	41.32	54.00	-12.68	18.74
4879.05	H	41.03	7.74	48.77	74.00	-25.23	41.03
9266.35	H	36.55	16.58	53.13	74.00	-20.87	36.55
9266.35	H	23.57	16.58	40.15	54.00	-13.85	23.57
14040.00	H	28.37	28.20	56.57	74.00	-17.43	28.37
14040.00	H	17.71	28.20	45.91	54.00	-8.09	17.71
17900.00	H	28.67	34.50	63.17	74.00	-10.83	28.67
17900.00	H	8.11	34.50	42.61	54.00	-11.39	8.11
18850.00	H	38.07	23.15	61.22	74.00	-12.78	38.07
18850.00	H	18.90	23.15	42.05	54.00	-11.95	18.90
21931.25	H	37.98	21.15	59.13	74.00	-14.87	37.98
21931.25	H	19.77	21.15	40.92	54.00	-13.08	19.77
24481.25	H	40.10	19.67	59.77	74.00	-14.23	40.10
24481.25	H	20.96	19.67	40.63	54.00	-13.37	20.96

Product	WLAN Module						
Test Item	Transmitter Radiated Emissions						
Test Mode	Mode 4: draft 802.11n Standard-20MHz Link Mode				Frequency	2462MHz	
Date of Test	03/01/2010				Test Site	TE02	
Freq	Polarization (V/H)	Rd_level (dBuV)	Factor	Level (dBuV/m)	Limit (dBuV/m)	Over	detector
2270.75	V	57.75	0.42	58.17	74.00	-15.83	peak
2270.75	V	39.67	0.42	40.09	54.00	-13.91	AVG
2700.00	V	40.61	22.58	63.19	74.00	-10.81	peak
2700.00	V	18.27	22.58	40.85	54.00	-13.15	AVG
4995.85	V	39.33	8.01	47.34	74.00	-26.66	peak
9901.45	V	35.44	17.78	53.22	74.00	-20.78	peak
9901.45	V	23.47	17.78	41.25	54.00	-12.75	AVG
13920.00	V	28.88	28.08	56.96	74.00	-17.04	peak
13920.00	V	18.09	28.08	46.17	54.00	-7.83	AVG
18000.00	V	27.19	35.11	62.30	74.00	-11.70	peak
18000.00	V	7.88	35.11	42.99	54.00	-11.01	AVG
18743.75	V	38.11	23.13	61.24	74.00	-12.76	peak
18743.75	V	19.28	23.13	42.41	54.00	-11.59	AVG
21633.75	V	38.21	21.28	59.49	74.00	-14.51	peak
21633.75	V	19.52	21.28	40.80	54.00	-13.20	AVG
25522.50	V	39.79	18.97	58.76	74.00	-15.24	peak
25522.50	V	21.22	18.97	40.19	54.00	-13.81	AVG
2257.15	H	57.32	0.46	57.78	74.00	-16.22	peak
2257.15	H	39.52	0.46	39.98	54.00	-14.02	AVG
2700.00	H	40.85	22.58	63.43	74.00	-10.57	peak
2700.00	H	18.47	22.58	41.05	54.00	-12.95	AVG
4924.00	H	35.74	7.65	43.39	74.00	-30.61	peak
9470.75	H	36.21	16.91	53.12	74.00	-20.88	peak
9470.75	H	23.14	16.91	40.05	54.00	-13.95	AVG
14040.00	H	28.79	28.20	56.99	74.00	-17.01	peak
14040.00	H	18.15	28.20	46.35	54.00	-7.65	AVG
18000.00	H	27.71	35.11	62.82	74.00	-11.18	peak
18000.00	H	8.11	35.11	43.22	54.00	-10.78	AVG
19168.75	H	38.28	22.95	61.23	74.00	-12.77	peak
19168.75	H	18.92	22.95	41.87	54.00	-12.13	AVG
21548.75	H	37.91	21.33	59.24	74.00	-14.76	peak
21548.75	H	19.87	21.33	41.20	54.00	-12.80	AVG
25947.50	H	40.18	18.60	58.78	74.00	-15.22	peak
25947.50	H	21.61	18.60	40.21	54.00	-13.79	AVG

Product	WLAN Module						
Test Item	Transmitter Radiated Emissions						
Test Mode	Mode 5: draft 802.11n Wide-40MHz Link Mode				Frequency	2422MHz	
Date of Test	03/01/2010				Test Site	TE02	
Freq	Polarization (V/H)	Rd_level (dBuV)	Factor	Level (dBuV/m)	Limit (dBuV/m)	Over	detector
2286.90	V	57.58	0.41	57.99	74.00	-16.01	peak
2286.90	V	39.82	0.41	40.23	54.00	-13.77	AVG
2703.65	V	41.71	21.89	63.60	74.00	-10.40	peak
2703.65	V	18.41	21.89	40.30	54.00	-13.70	AVG
4988.55	V	43.20	7.96	51.16	74.00	-22.84	peak
4988.55	V	25.42	7.96	33.38	54.00	-20.62	AVG
9941.60	V	35.84	17.77	53.61	74.00	-20.39	peak
9941.60	V	22.85	17.77	40.62	54.00	-13.38	AVG
14260.00	V	28.79	28.20	56.99	74.00	-17.01	peak
14260.00	V	17.65	28.20	45.85	54.00	-8.15	AVG
18000.00	V	27.88	35.11	62.99	74.00	-11.01	peak
18000.00	V	7.44	35.11	42.55	54.00	-11.45	AVG
18361.25	V	38.33	23.16	61.49	74.00	-12.51	peak
18361.25	V	20.19	23.16	43.35	54.00	-10.65	AVG
21867.50	V	39.04	21.19	60.23	74.00	-13.77	peak
21867.50	V	19.69	21.19	40.88	54.00	-13.12	AVG
25416.25	V	40.60	19.03	59.63	74.00	-14.37	peak
25416.25	V	21.35	19.03	40.38	54.00	-13.62	AVG
2261.40	H	56.98	0.45	57.43	74.00	-16.57	peak
2261.40	H	39.75	0.45	40.20	54.00	-13.80	AVG
2703.65	H	40.94	21.89	62.83	74.00	-11.17	peak
2703.65	H	18.41	21.89	40.30	54.00	-13.70	AVG
4844.00	H	36.16	7.67	43.83	74.00	-30.17	peak
9912.40	H	35.72	17.78	53.50	74.00	-20.50	peak
9912.40	H	23.48	17.78	41.26	54.00	-12.74	AVG
13980.00	H	28.99	28.16	57.15	74.00	-16.85	peak
13980.00	H	17.87	28.16	46.03	54.00	-7.97	AVG
17980.00	H	27.91	34.75	62.66	74.00	-11.34	peak
17980.00	H	7.79	34.75	42.54	54.00	-11.46	AVG
18510.00	H	38.08	23.10	61.18	74.00	-12.82	peak
18510.00	H	19.45	23.10	42.55	54.00	-11.45	AVG
22398.75	H	39.83	20.93	60.76	74.00	-13.24	peak
22398.75	H	19.22	20.93	40.15	54.00	-13.85	AVG
25947.50	H	40.60	18.60	59.20	74.00	-14.80	peak
25947.50	H	21.57	18.60	40.17	54.00	-13.83	AVG

Product	WLAN Module						
Test Item	Transmitter Radiated Emissions						
Test Mode	Mode 5: draft 802.11n Wide-40MHz Link Mode				Frequency	2437MHz	
Date of Test	03/01/2010				Test Site	TE02	
Freq	Polarization (V/H)	Rd_level (dBuV)	Factor	Level (dBuV/m)	Limit (dBuV/m)	Over	detector
2289.45	V	57.19	0.40	57.59	74.00	-16.41	peak
2289.45	V	39.78	0.40	40.18	54.00	-13.82	AVG
2703.65	V	40.73	21.89	62.62	74.00	-11.38	peak
2703.65	V	18.67	21.89	40.56	54.00	-13.44	AVG
4864.45	V	41.24	7.69	48.93	74.00	-25.07	peak
9901.45	V	35.69	17.78	53.47	74.00	-20.53	peak
9901.45	V	23.62	17.78	41.40	54.00	-12.60	AVG
14080.00	V	28.80	28.35	57.15	74.00	-16.85	peak
14080.00	V	17.95	28.35	46.30	54.00	-7.70	AVG
17900.00	V	28.47	34.50	62.97	74.00	-11.03	peak
17900.00	V	7.95	34.50	42.45	54.00	-11.55	AVG
19147.50	V	38.28	22.97	61.25	74.00	-12.75	peak
19147.50	V	19.48	22.97	42.45	54.00	-11.55	AVG
22547.50	V	38.10	20.89	58.99	74.00	-15.01	peak
22547.50	V	19.52	20.89	40.41	54.00	-13.59	AVG
25947.50	V	40.03	18.60	58.63	74.00	-15.37	peak
25947.50	V	21.60	18.60	40.20	54.00	-13.80	AVG
2290.30	H	57.20	0.40	57.60	74.00	-16.40	peak
2290.30	H	39.71	0.40	40.11	54.00	-13.89	AVG
2700.00	H	41.09	22.58	63.67	74.00	-10.33	peak
2700.00	H	18.62	22.58	41.20	54.00	-12.80	AVG
4874.00	H	37.70	7.72	45.42	74.00	-28.58	peak
9817.50	H	35.19	17.75	52.94	74.00	-21.06	peak
9817.50	H	23.41	17.75	41.16	54.00	-12.84	AVG
14160.00	H	28.77	28.37	57.14	74.00	-16.86	peak
14160.00	H	17.88	28.37	46.25	54.00	-7.75	AVG
18000.00	H	27.56	35.11	62.67	74.00	-11.33	peak
18000.00	H	7.48	35.11	42.59	54.00	-11.41	AVG
18382.50	H	38.12	23.16	61.28	74.00	-12.72	peak
18382.50	H	20.03	23.16	43.19	54.00	-10.81	AVG
21867.50	H	38.04	21.19	59.23	74.00	-14.77	peak
21867.50	H	19.91	21.19	41.10	54.00	-12.90	AVG
25395.00	H	40.18	19.04	59.22	74.00	-14.78	peak
25395.00	H	21.34	19.04	40.38	54.00	-13.62	AVG

Product	WLAN Module						
Test Item	Transmitter Radiated Emissions						
Test Mode	Mode 5: draft 802.11n Wide-40MHz Link Mode				Frequency	2452MHz	
Date of Test	03/01/2010				Test Site	TE02	
Freq	Polarization (V/H)	Rd_level (dBuV)	Factor	Level (dBuV/m)	Limit (dBuV/m)	Over	detector
2251.20	V	57.15	0.49	57.64	74.00	-16.36	peak
2251.20	V	40.03	0.49	40.52	54.00	-13.48	AVG
2700.00	V	40.62	22.58	63.20	74.00	-10.80	peak
2700.00	V	18.57	22.58	41.15	54.00	-12.85	AVG
4992.20	V	42.49	7.98	50.47	74.00	-23.53	peak
9609.45	V	36.12	17.32	53.44	74.00	-20.56	peak
9609.45	V	23.74	17.32	41.06	54.00	-12.94	AVG
14060.00	V	28.94	28.26	57.20	74.00	-16.80	peak
14060.00	V	17.90	28.26	46.16	54.00	-7.84	AVG
18000.00	V	27.72	35.11	62.83	74.00	-11.17	peak
18000.00	V	7.75	35.11	42.86	54.00	-11.14	AVG
18318.75	V	38.03	23.19	61.22	74.00	-12.78	peak
18318.75	V	20.28	23.19	43.47	54.00	-10.53	AVG
21548.75	V	38.32	21.33	59.65	74.00	-14.35	peak
21548.75	V	20.23	21.33	41.56	54.00	-12.44	AVG
25990.00	V	40.06	18.56	58.62	74.00	-15.38	peak
25990.00	V	21.90	18.56	40.46	54.00	-13.54	AVG
2269.05	H	56.93	0.42	57.35	74.00	-16.65	peak
2269.05	H	39.45	0.42	39.87	54.00	-14.13	AVG
2703.65	H	41.58	21.89	63.47	74.00	-10.53	peak
2703.65	H	18.20	21.89	40.09	54.00	-13.91	AVG
4904.00	H	36.43	7.71	44.14	74.00	-29.86	peak
9372.20	H	36.89	17.01	53.90	74.00	-20.10	peak
9372.20	H	23.41	17.01	40.42	54.00	-13.58	AVG
14300.00	H	29.39	28.15	57.54	74.00	-16.46	peak
14300.00	H	17.79	28.15	45.94	54.00	-8.06	AVG
18000.00	H	27.48	35.11	62.59	74.00	-11.41	peak
18000.00	H	7.58	35.11	42.69	54.00	-11.31	AVG
18425.00	H	38.09	23.14	61.23	74.00	-12.77	peak
18425.00	H	19.84	23.14	42.98	54.00	-11.02	AVG
21527.50	H	37.72	21.35	59.07	74.00	-14.93	peak
21527.50	H	20.00	21.35	41.35	54.00	-12.65	AVG
25522.50	H	40.54	18.97	59.51	74.00	-14.49	peak
25522.50	H	21.56	18.97	40.53	54.00	-13.47	AVG

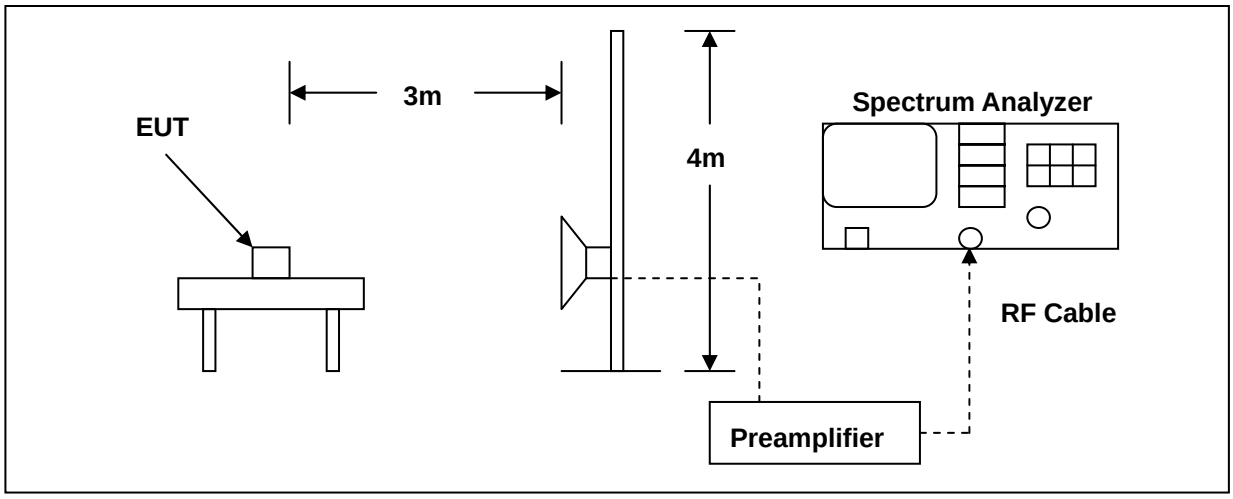
Product	WLAN Module						
Test Item	Transmitter Radiated Emissions						
Test Mode	Mode 6: Receiver Mode						
Date of Test	03/01/2010				Test Site	TE02	
Freq	Polarization (V/H)	Rd_level (dBuV)	Factor	Level (dBuV/m)	Limit (dBuV/m)	Over	detector
2533.40	V	55.88	0.46	56.34	74.00	-17.66	peak
2533.40	V	39.85	0.46	40.31	54.00	-13.69	AVG
2700.00	V	40.09	22.58	62.67	74.00	-11.33	peak
2700.00	V	18.49	22.58	41.07	54.00	-12.93	AVG
9602.15	V	34.23	17.40	51.63	74.00	-22.37	peak
9602.15	V	23.83	17.40	41.23	54.00	-12.77	AVG
14260.00	V	27.96	28.20	56.16	74.00	-17.84	peak
14260.00	V	17.38	28.20	45.58	54.00	-8.42	AVG
17960.00	V	27.58	34.38	61.96	74.00	-12.04	peak
17960.00	V	7.59	34.38	41.97	54.00	-12.03	AVG
18722.50	V	37.13	23.12	60.25	74.00	-13.75	peak
18722.50	V	20.73	23.12	43.85	54.00	-10.15	AVG
22250.00	V	37.03	21.00	58.03	74.00	-15.97	peak
22250.00	V	20.05	21.00	41.05	54.00	-12.95	AVG
26117.50	V	38.97	18.47	57.44	74.00	-16.56	peak
26117.50	V	22.06	18.47	40.53	54.00	-13.47	AVG
2641.35	H	55.16	0.98	56.14	74.00	-17.86	55.16
2641.35	H	40.02	0.98	41.00	54.00	-13.00	40.02
2703.65	H	40.71	21.89	62.60	74.00	-11.40	40.71
2703.65	H	18.65	21.89	40.54	54.00	-13.46	18.65
9616.75	H	35.04	17.25	52.29	74.00	-21.71	35.04
9616.75	H	23.73	17.25	40.98	54.00	-13.02	23.73
14220.00	H	27.70	28.32	56.02	74.00	-17.98	27.70
14220.00	H	17.85	28.32	46.17	54.00	-7.83	17.85
17960.00	H	27.19	34.38	61.57	74.00	-12.43	27.19
17960.00	H	7.83	34.38	42.21	54.00	-11.79	7.83
18956.25	H	36.90	23.11	60.01	74.00	-13.99	36.90
18956.25	H	20.02	23.11	43.13	54.00	-10.87	20.02
22526.25	H	37.13	20.89	58.02	74.00	-15.98	37.13
22526.25	H	20.16	20.89	41.05	54.00	-12.95	20.16
25713.75	H	39.71	18.82	58.53	74.00	-15.47	39.71
25713.75	H	21.15	18.82	39.97	54.00	-14.03	21.15

6 Band Edges Measurement

6.1. Limit

In any 100 kHz bandwidth outside the intentional radiation frequency band, the radio frequency power shall be at least 20 dB below the highest level of the radiated power. In addition, radiated emissions which fall in the restricted bands must also comply with the radiated emission limits.

6.2. Test Setup



6.3. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4408B	MY45107753	01/27/2009	(2)
Pre Amplifier	Agilent	8449B	3008A02237	01/20/2009	(1)
Horn Antenna	SCHWARZBECK MESS-ELEKTRONIK	9120D	9120D-550	07/01/2009	(2)
Test Site	ATL	TE06	TE06	N.C.R.	-----

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

NOTE: N.C.R. = No Calibration Request.

6.4. Test Procedure

The EUT was setup to ANSI C63.4, 2003; tested to DTS test procedure of Oct 2002 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The emissions on the harmonics frequencies, the limits, and the margin of compliance are presented. These tests were made when the transmitter was in full radiated power. The additional test was performed to show compliance with the requirement at the band-edge frequency 2483.5 MHz and up to 2500 MHz and at 2390.0 MHz.

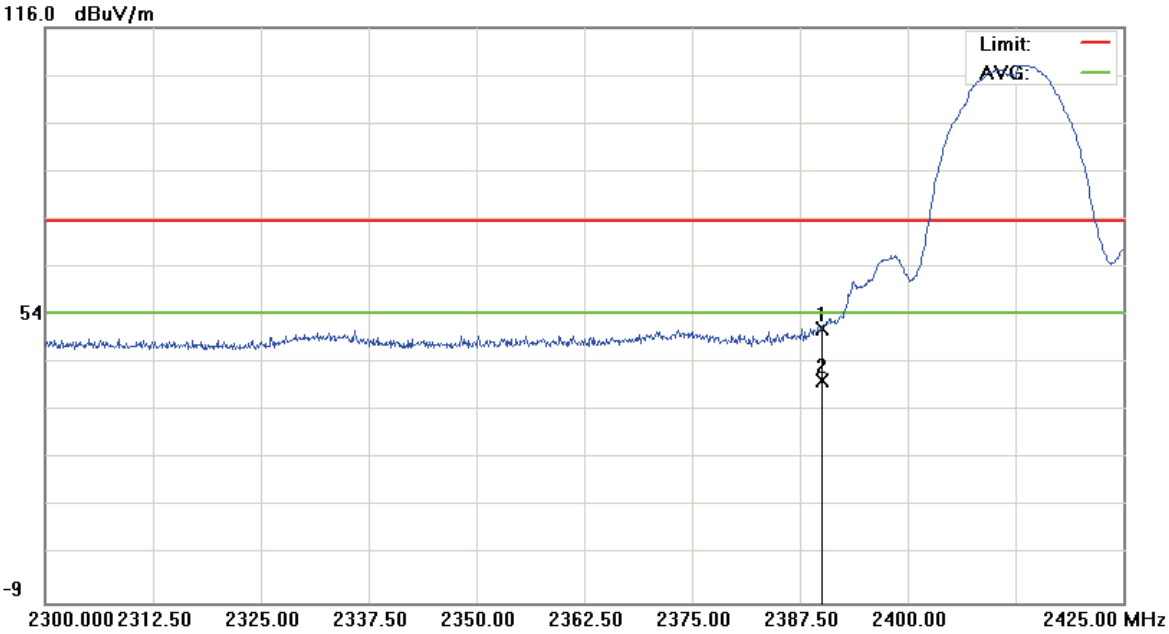
The transmitter was configured with the worst case antenna and setup to transmit at the highest channel. Then the field strength was measured at 2483.5 MHz.

The transmitter was then configured with the worst case antenna and setup to transmit at the lowest channel. Then the field strength was measured at 2390.0 MHz. These tests were performed at 4 different bit rates.

6.5. Test Graphs

Product	WLAN Module		
Test Item	Band Edges		
Test Mode	Mode 2: IEEE 802.11b Link Mode Mode 3: IEEE 802.11g Link Mode Mode 4: draft 802.11n Standard-20MHz Link Mode Mode 5: draft 802.11n Wide-40MHz Link Mode		
Date of Test	03/02 ~ 03/03/2010	Test Site	TE02

File :AR5B97(Band Edge) Data :#1 Date: 2010/3/2 Time: 上午 10:49:32



Site: : 966 Chamber
Limit: FCC part 15 (PK)
EUT: WLAN Module
M/N: AR5B97
Mode: 2
Note: CH01(2412MHz)

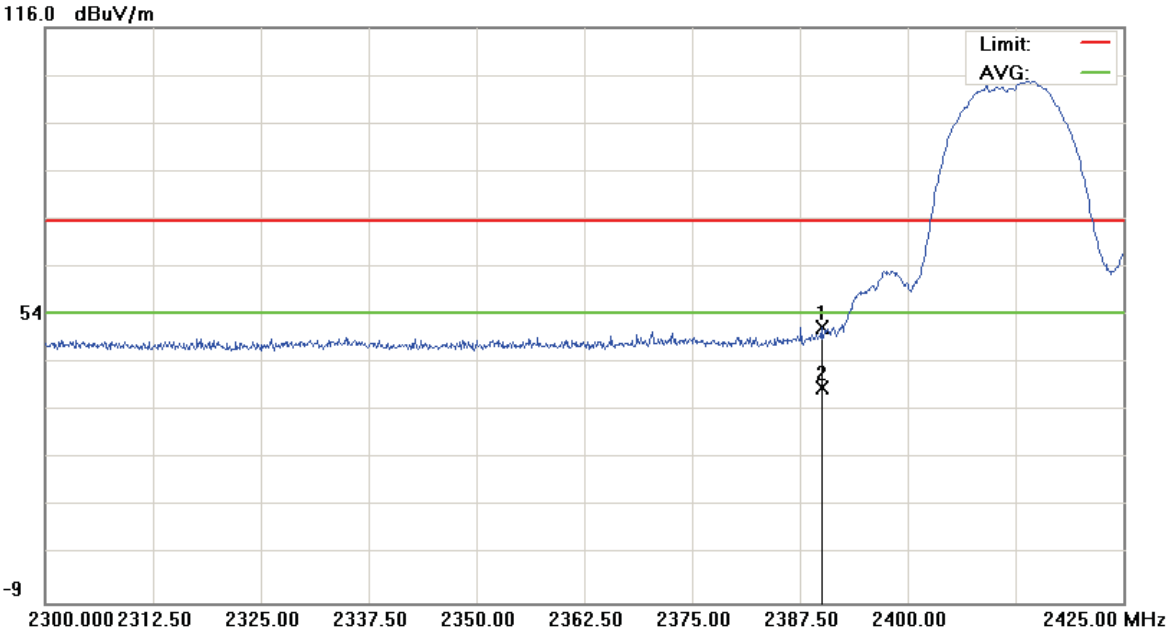
Polarization: *Vertical*
Power: AC 120V/60Hz
Distance: 3m

Temperature: 22 ℃
Humidity: 60 %
RBW: 1000 KHz VBW: 1000 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2390.000	50.38	0.19	50.57	74.00	-23.43	peak			
2	*	2390.000	39.04	0.19	39.23	54.00	-14.77	AVG			

*:Maximum data x:Over limit !:over margin

File :AR5B97(Band Edge) Data :#5 Date: 2010/3/2 Time: 上午 10:57:26



Site: : 966 Chamber
Limit: FCC part 15 (PK)
EUT: WLAN Module
M/N: AR5B97
Mode: 2
Note: CH01(2412MHz)

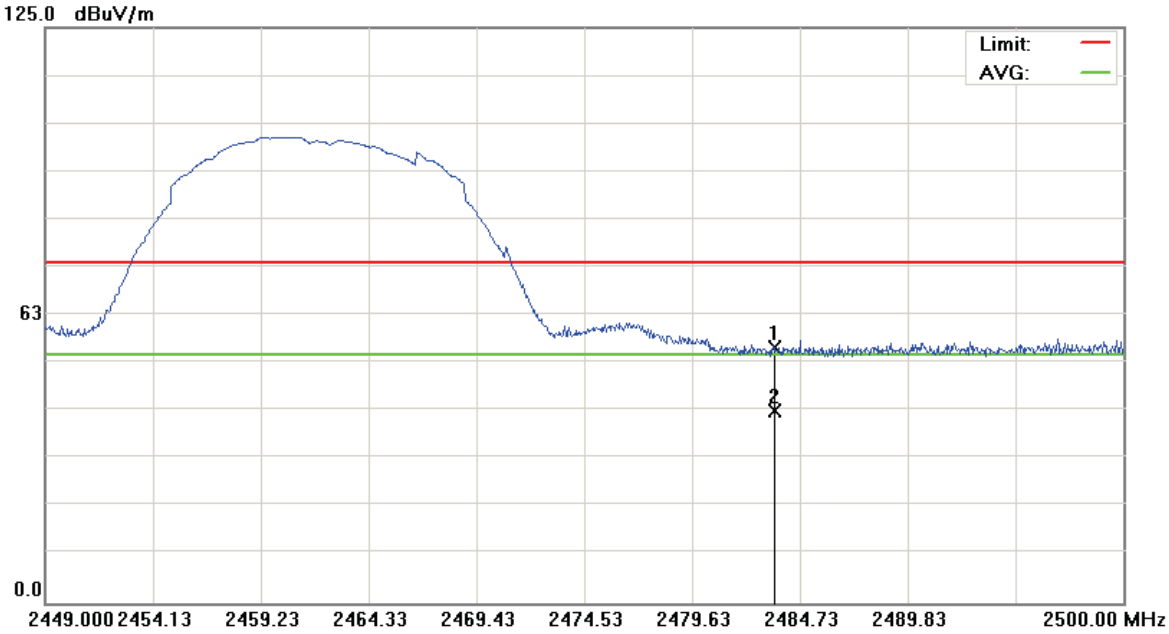
Polarization: *Horizontal*
Power: AC 120V/60Hz
Distance: 3m

Temperature: 22 ℃
Humidity: 60 %
RBW: 1000 KHz VBW: 1000 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2390.000	50.57	0.19	50.76	74.00	-23.24	peak			
2	*	2390.000	37.61	0.19	37.80	54.00	-16.20	AVG			

*:Maximum data x:Over limit !:over margin

File :AR5B97(Band Edge) Data :#3 Date: 2010/3/3 Time: 上午 03:44:47



Site: : 966 Chamber
Limit: FCC part 15 (PK)
EUT: WLAN Module
M/N: AR5B97
Mode: 2
Note: CH11(2462MHz)

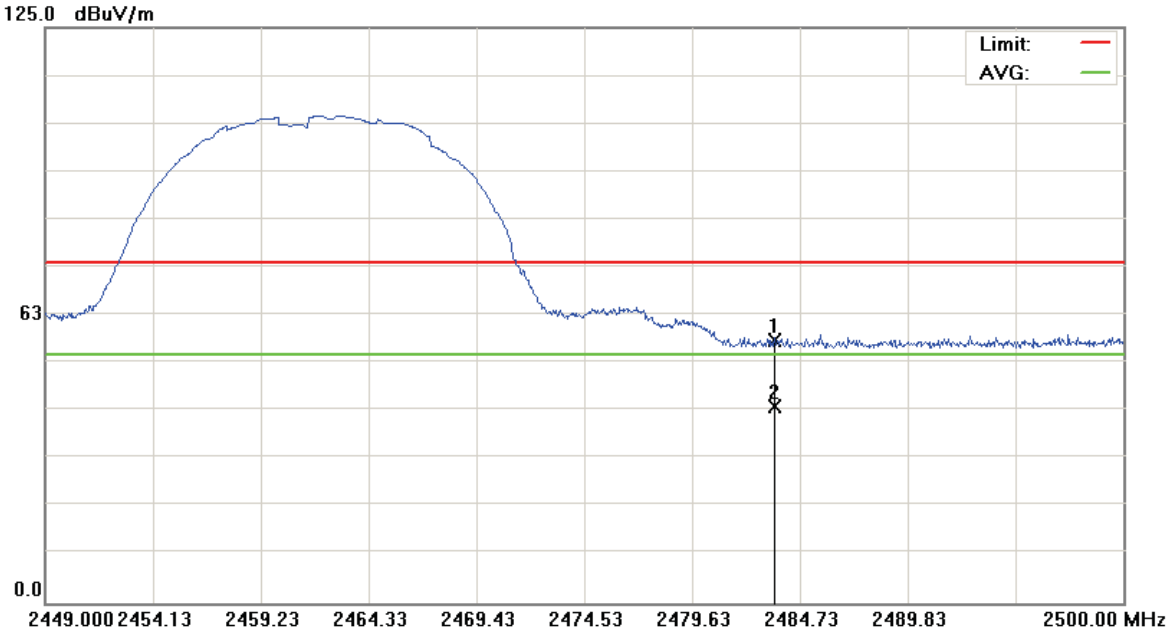
Polarization: *Vertical*
Power: AC 120V/60Hz
Distance: 3m

Temperature: 22 ℃
Humidity: 60 %
RBW: 1000 KHz VBW: 1000 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2483.510	55.32	0.25	55.57	74.00	-18.43	peak			
2	*	2483.510	41.41	0.25	41.66	54.00	-12.34	AVG			

*:Maximum data x:Over limit !:over margin

File :AR5B97(Band Edge) Data :#7 Date: 2010/3/3 Time: 上午 03:49:03



Site: : 966 Chamber
Limit: FCC part 15 (PK)
EUT: WLAN Module
M/N: AR5B97
Mode: 2
Note: CH11(2462MHz)

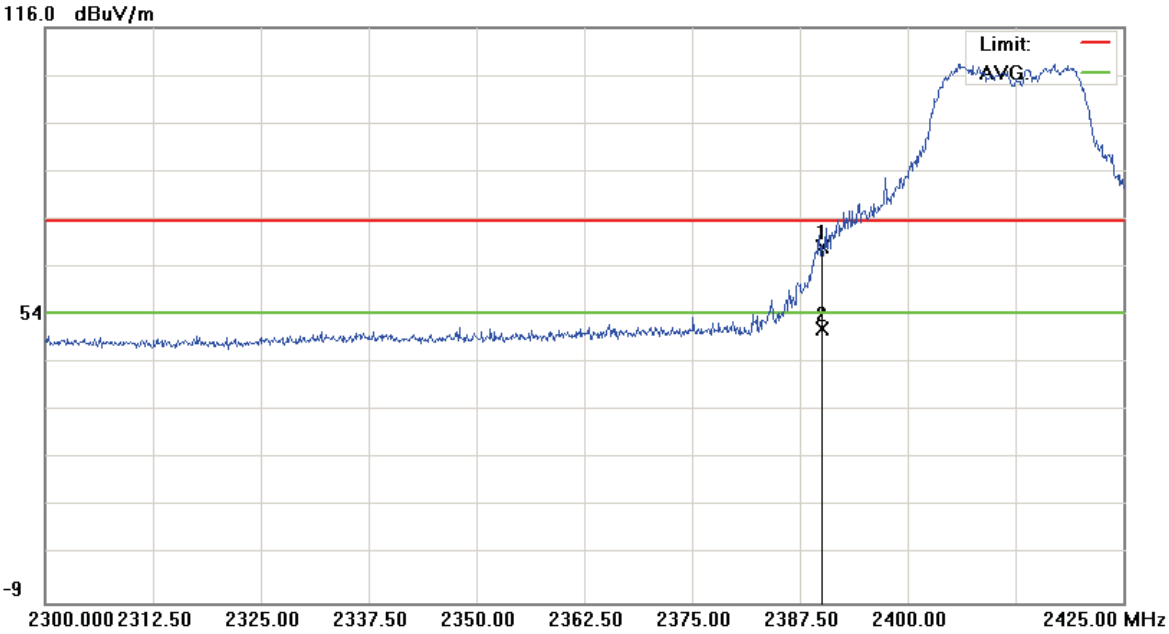
Polarization: *Horizontal*
Power: AC 120V/60Hz
Distance: 3m

Temperature: 22 ℃
Humidity: 60 %
RBW: 1000 KHz VBW: 1000 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2483.510	56.66	0.25	56.91	74.00	-17.09	peak			
2	*	2483.510	42.34	0.25	42.59	54.00	-11.41	AVG			

*:Maximum data x:Over limit !:over margin

File :AR5B97(Band Edge) Data :#1 Date: 2010/3/2 Time: 下午 12:04:59



Site: : 966 Chamber
Limit: FCC part 15 (PK)
EUT: WLAN Module
M/N: AR5B97
Mode: 3
Note: CH01(2412MHz)

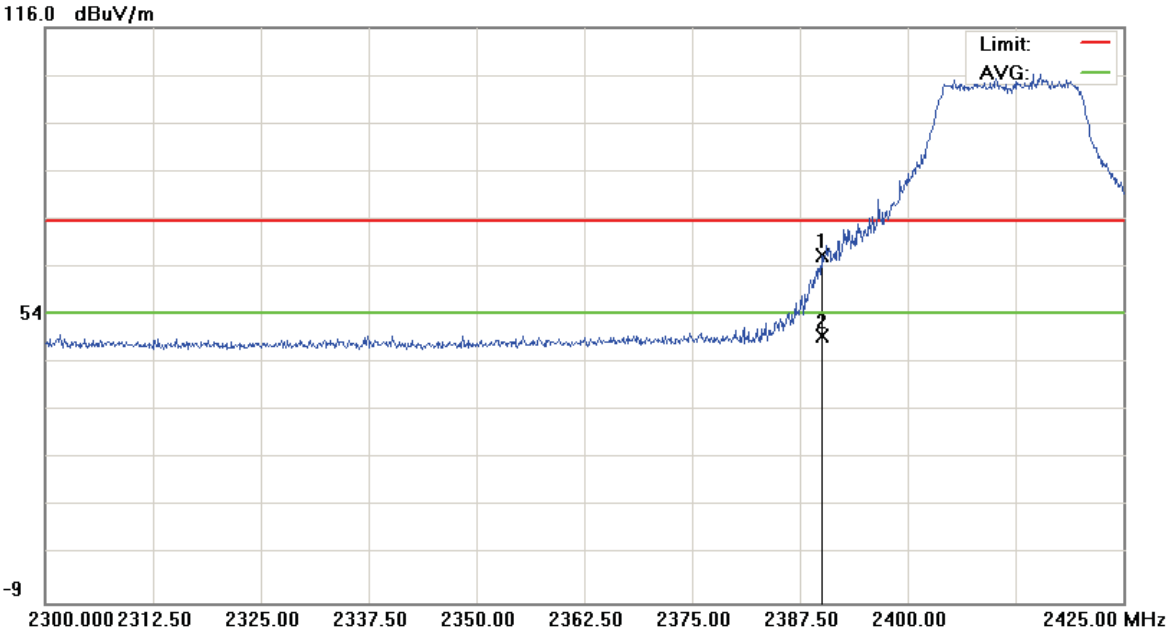
Polarization: *Vertical*
Power: AC 120V/60Hz
Distance: 3m

Temperature: 22 ℃
Humidity: 60 %
RBW: 1000 KHz VBW: 1000 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2390.000	68.14	0.19	68.33	74.00	-5.67	peak			
2	*	2390.000	50.34	0.19	50.53	54.00	-3.47	AVG			

*:Maximum data x:Over limit !:over margin

File :AR5B97(Band Edge) Data :#5 Date: 2010/3/2 Time: 下午 12:21:39



Site: : 966 Chamber
Limit: FCC part 15 (PK)
EUT: WLAN Module
M/N: AR5B97
Mode: 3
Note: CH01(2412MHz)

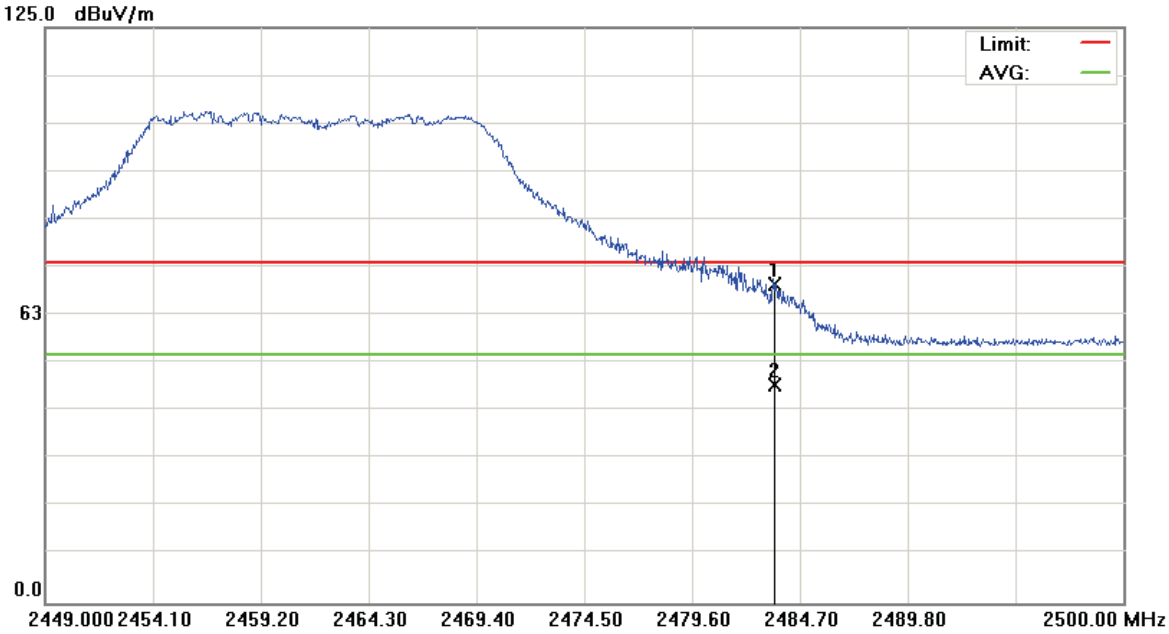
Polarization: *Horizontal*
Power: AC 120V/60Hz
Distance: 3m

Temperature: 22 ℃
Humidity: 60 %
RBW: 1000 KHz VBW: 1000 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2390.000	66.42	0.19	66.61	74.00	-7.39	peak			
2	*	2390.000	48.91	0.19	49.10	54.00	-4.90	AVG			

*:Maximum data x:Over limit !:over margin

File :AR5B97(Band Edge) Data :#3 Date: 2010/3/3 Time: 上午 03:36:26



Site: : 966 Chamber
Limit: FCC part 15 (PK)
EUT: WLAN Module
M/N: AR5B97
Mode: 3
Note: CH11(2462MHz)

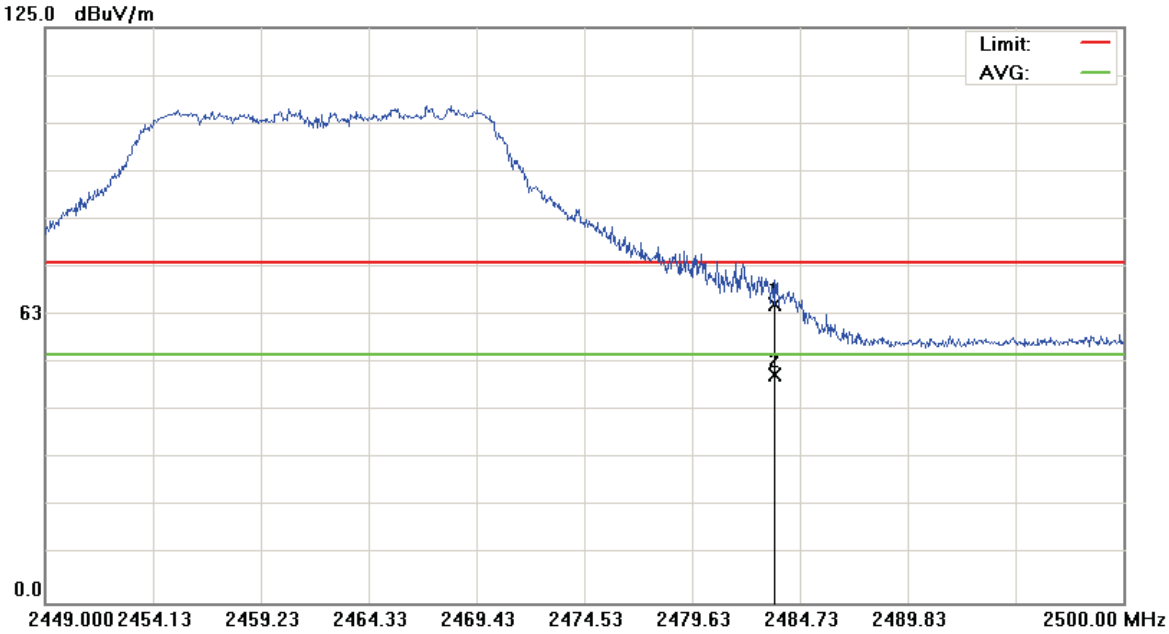
Polarization: *Vertical*
Power: AC 120V/60Hz
Distance: 3m

Temperature: 22 ℃
Humidity: 60 %
RBW: 1000 KHz VBW: 1000 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	2483.510	68.95	0.25	69.20	74.00	-4.80	peak			
2		2483.510	47.12	0.25	47.37	54.00	-6.63	AVG			

*:Maximum data x:Over limit !:over margin

File :AR5B97(Band Edge) Data :#7 Date: 2010/3/3 Time: 上午 03:40:17



Site: : 966 Chamber
Limit: FCC part 15 (PK)
EUT: WLAN Module
M/N: AR5B97
Mode: 3
Note: CH11(2462MHz)

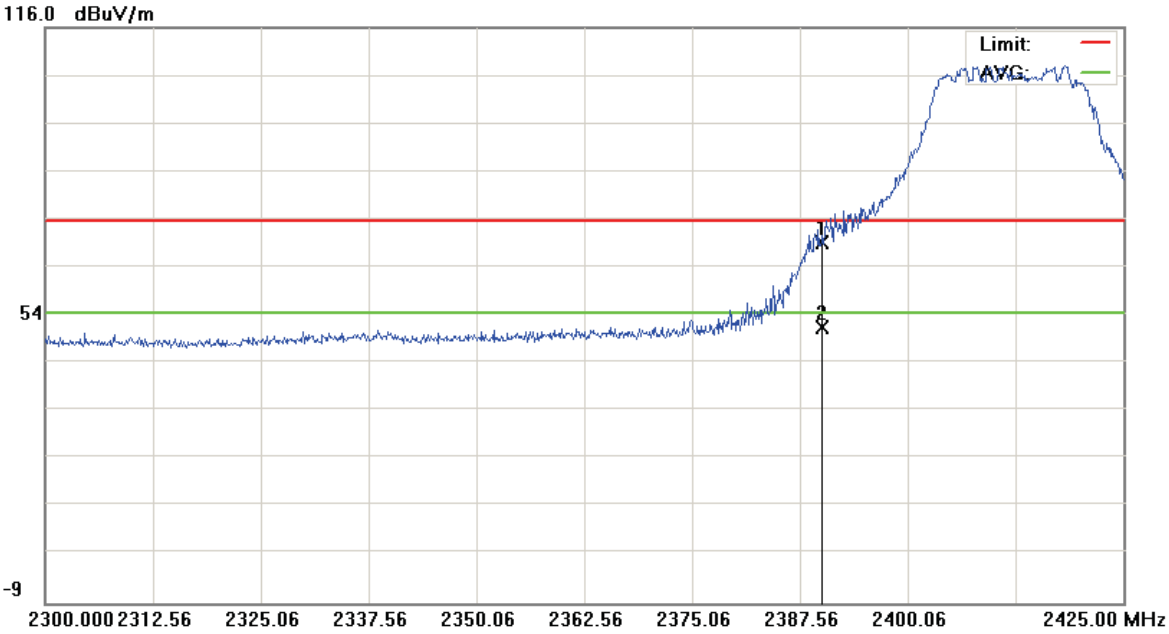
Polarization: ***Horizontal***
Power: AC 120V/60Hz
Distance: 3m

Temperature: 22 ℃
Humidity: 60 %
RBW: 1000 KHz VBW: 1000 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2483.510	64.55	0.25	64.80	74.00	-9.20	peak			
2	*	2483.510	49.19	0.25	49.44	54.00	-4.56	AVG			

*:Maximum data x:Over limit !:over margin

File :AR5B97(Band Edge) Data :#1 Date: 2010/3/2 Time: 上午 11:20:11



Site: : 966 Chamber
Limit: FCC part 15 (PK)
EUT: WLAN Module
M/N: AR5B97
Mode: 4
Note: CH01(2412MHz)

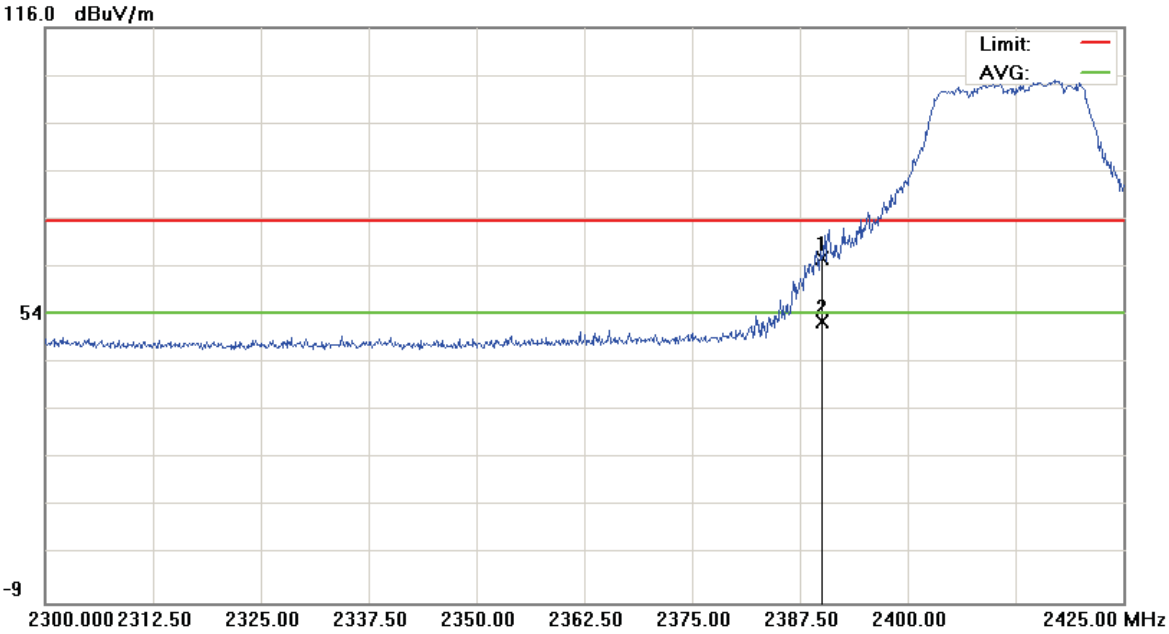
Polarization: *Vertical*
Power: AC 120V/60Hz
Distance: 3m

Temperature: 22 ℃
Humidity: 60 %
RBW: 1000 KHz VBW: 1000 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2390.000	69.12	0.19	69.31	74.00	-4.69	peak			
2	*	2390.000	50.81	0.19	51.00	54.00	-3.00	AVG			

*:Maximum data x:Over limit !:over margin

File :AR5B97(Band Edge) Data :#5 Date: 2010/3/2 Time: 上午 11:27:15



Site: : 966 Chamber
Limit: FCC part 15 (PK)
EUT: WLAN Module
M/N: AR5B97
Mode: 4
Note: CH01(2412MHz)

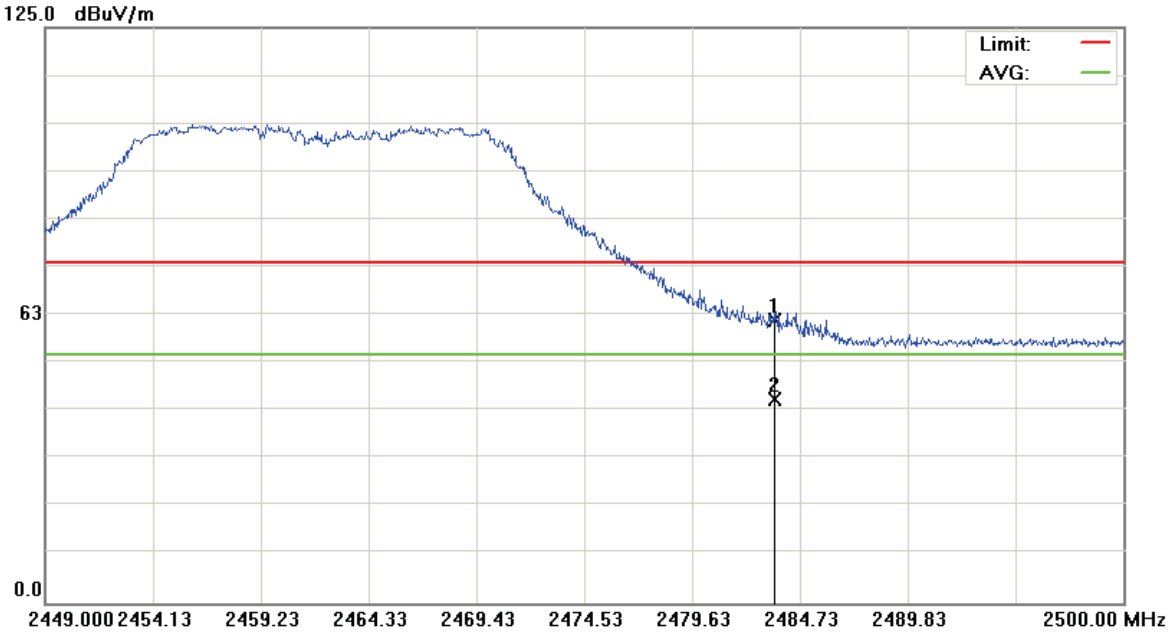
Polarization: *Horizontal*
Power: AC 120V/60Hz
Distance: 3m

Temperature: 22 ℃
Humidity: 60 %
RBW: 1000 KHz VBW: 1000 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2390.000	65.72	0.19	65.91	74.00	-8.09	peak			
2	*	2390.000	51.76	0.19	51.95	54.00	-2.05	AVG			

*:Maximum data x:Over limit !:over margin

File :AR5B97(Band Edge) Data :#3 Date: 2010/3/3 Time: 上午 03:19:39



Site: : 966 Chamber
Limit: FCC part 15 (PK)
EUT: WLAN Module
M/N: AR5B97
Mode: 4
Note: CH11(2462MHz)

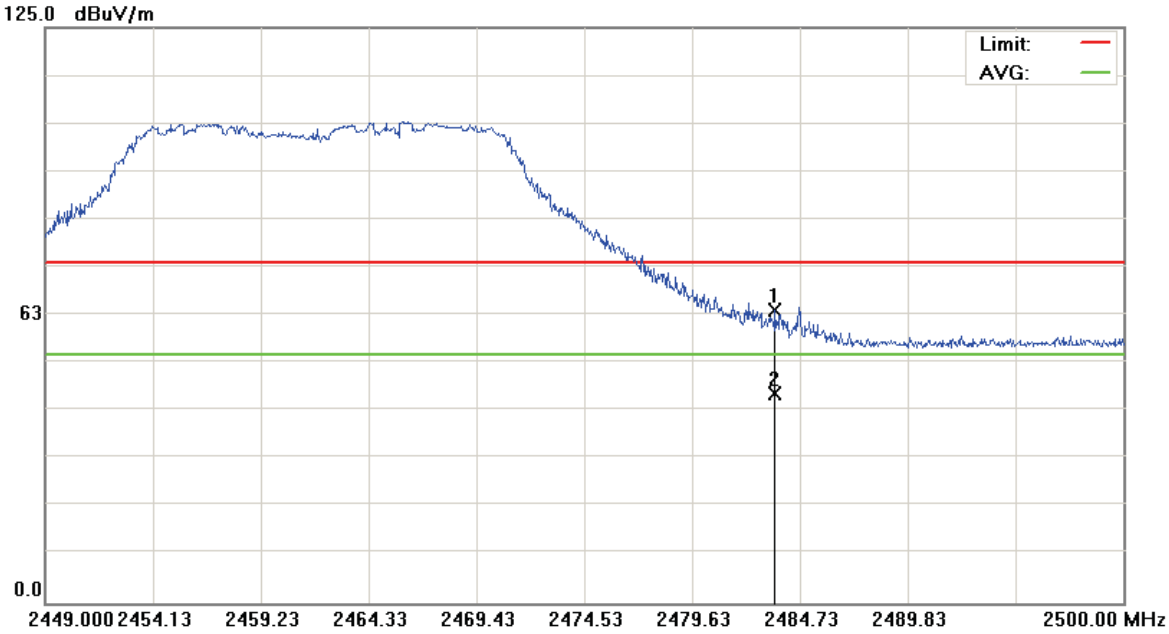
Polarization: *Vertical*
Power: AC 120V/60Hz
Distance: 3m

Temperature: 22 ℃
Humidity: 60 %
RBW: 1000 KHz VBW: 1000 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2483.510	61.07	0.25	61.32	74.00	-12.68	peak			
2	*	2483.510	44.01	0.25	44.26	54.00	-9.74	AVG			

*:Maximum data x:Over limit !:over margin

File :AR5B97(Band Edge) Data :#7 Date: 2010/3/3 Time: 上午 03:23:48



Site: : 966 Chamber
Limit: FCC part 15 (PK)
EUT: WLAN Module
M/N: AR5B97
Mode: 4
Note: CH11(2462MHz)

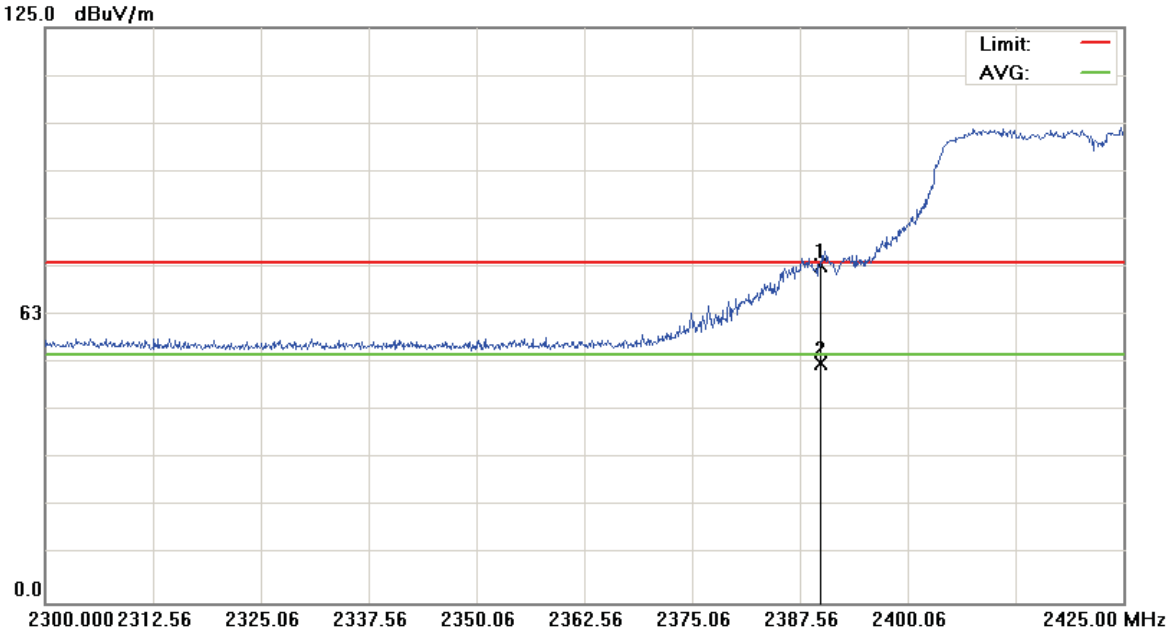
Polarization: *Horizontal*
Power: AC 120V/60Hz
Distance: 3m

Temperature: 22 ℃
Humidity: 60 %
RBW: 1000 KHz VBW: 1000 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2483.510	63.50	0.25	63.75	74.00	-10.25	peak			
2	*	2483.510	45.17	0.25	45.42	54.00	-8.58	AVG			

*:Maximum data x:Over limit !:over margin

File :AR5B97(Band Edge) Data :#1 Date: 2010/3/3 Time: 上午 02:47:14



Site: : 966 Chamber
Limit: FCC part 15 (PK)
EUT: WLAN Module
M/N: AR5B97
Mode: 5
Note: CH03(2422MHz)

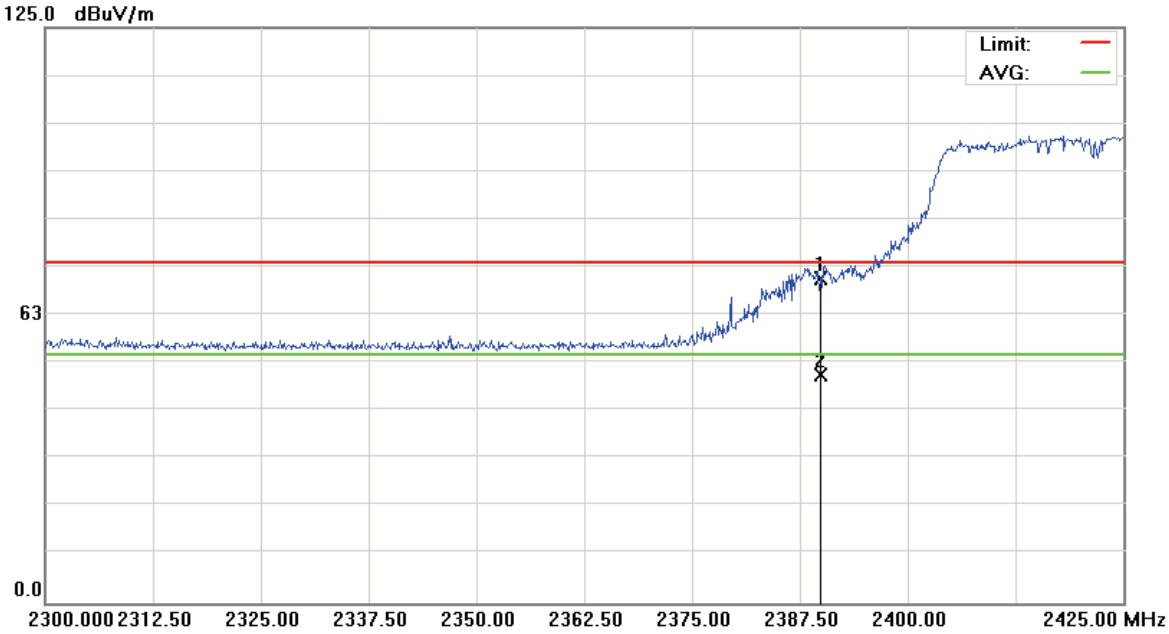
Polarization: *Vertical*
Power: AC 120V/60Hz
Distance: 3m

Temperature: 22 ℃
Humidity: 60 %
RBW: 1000 KHz VBW: 1000 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	2389.800	73.02	0.16	73.18	74.00	-0.82	peak			
2		2389.800	51.99	0.16	52.15	54.00	-1.85	AVG			

*:Maximum data x:Over limit !:over margin

File :AR5B97(Band Edge) Data :#5 Date: 2010/3/3 Time: 上午 02:51:15



Site: : 966 Chamber
Limit: FCC part 15 (PK)
EUT: WLAN Module
M/N: AR5B97
Mode: 5
Note: CH03(2422MHz)

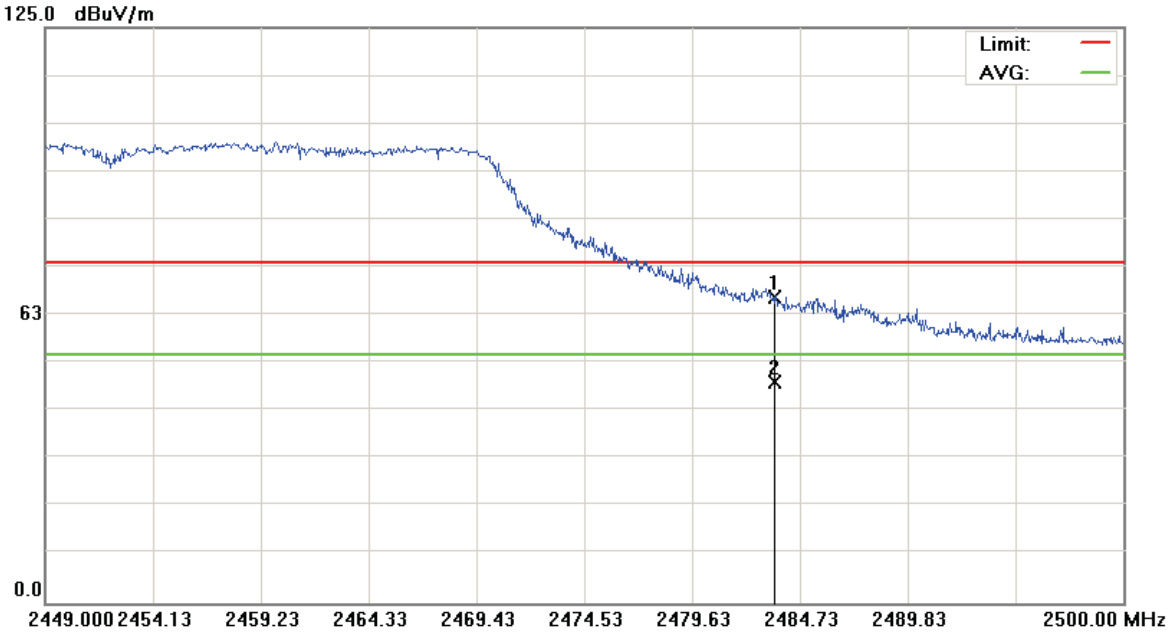
Polarization: *Horizontal*
Power: AC 120V/60Hz
Distance: 3m

Temperature: 22 ℃
Humidity: 60 %
RBW: 1000 KHz VBW: 1000 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	2389.800	70.25	0.16	70.41	74.00	-3.59	peak			
2		2389.800	49.37	0.16	49.53	54.00	-4.47	AVG			

*:Maximum data x:Over limit !:over margin

File :AR5B97(Band Edge) Data :#3 Date: 2010/3/3 Time: 上午 02:57:10



Site: : 966 Chamber
Limit: FCC part 15 (PK)
EUT: WLAN Module
M/N: AR5B97
Mode: 5
Note: CH09(2452MHz)

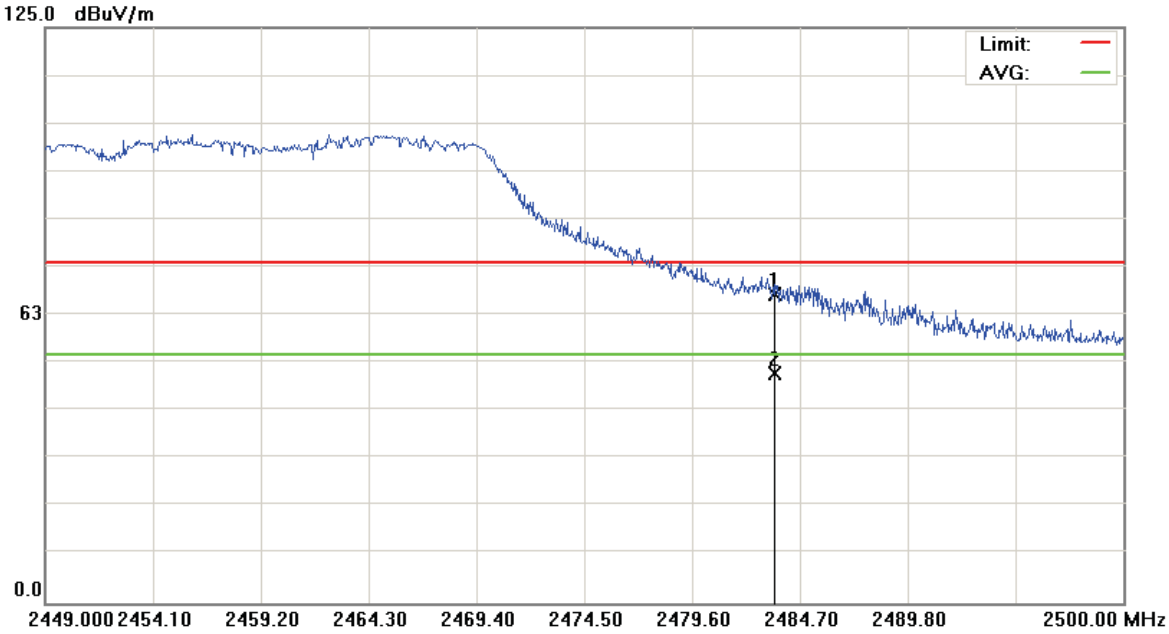
Polarization: *Vertical*
Power: AC 120V/60Hz
Distance: 3m

Temperature: 22 ℃
Humidity: 60 %
RBW: 1000 KHz VBW: 1000 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2483.510	66.03	0.25	66.28	74.00	-7.72	peak			
2	*	2483.510	47.57	0.25	47.82	54.00	-6.18	AVG			

*:Maximum data x:Over limit !:over margin

File :AR5B97(Band Edge) Data :#7 Date: 2010/3/3 Time: 上午 03:00:52



Site: : 966 Chamber
Limit: FCC part 15 (PK)
EUT: WLAN Module
M/N: AR5B97
Mode: 5
Note: CH09(2452MHz)

Polarization: *Horizontal*
Power: AC 120V/60Hz
Distance: 3m

Temperature: 22 ℃
Humidity: 60 %
RBW: 1000 KHz VBW: 1000 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2483.510	66.82	0.25	67.07	74.00	-6.93	peak			
2	*	2483.510	49.55	0.25	49.80	54.00	-4.20	AVG			

*:Maximum data x:Over limit !:over margin

7 Antenna Requirements

7.1. Limit

For intentional device, 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 (b), 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 6dBi.

7.2. Antenna Connector Construction

The antenna used in this product is **PIFA antenna**. The gain of the main antenna is -0.71dBi and aux antenna is 0.27dBi.