



FCC PART 15 SUBPART C
IC RSS-210, ISSUE 8, DECEMBER 2010
TEST AND MEASUREMENT REPORT

For

GainSpan Corporation

3590 N. First Street, Suite 300,
San Jose, CA 95134, USA

FCC ID: YOPGS2100MIE
IC: 9154A-GS2100MIE

Report Type: CIIPC Report	Product Type: 802.11 b/g/n(HT20) Wi-Fi Module
Prepared By: Chen Ge Test Engineer	<i>Chen Ge</i>
Report Number: R1410297-247	
Report Date: 2014-12-04 Bo Li	<i>Bo Li</i>
Reviewed By: RF Lead	
Bay Area Compliance Laboratories Corp. 1274 Anvilwood Avenue, Sunnyvale, CA 94089, USA Tel: (408) 732-9162 Fax: (408) 732-9164	

Note: This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. This report **must not** be used by the customer to claim product certification, approval, or endorsement by A2LA*, NIST, or any agency of the Federal Government.

* This report may contain data that are not covered by the A2LA accreditation and are marked with an asterisk “*” (Rev.12)

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	R1410297-247	CIIPC Report	2014-12-04

1 General Description

1.1 Product Description for Equipment Under Test (EUT)

This test and measurement report was prepared on behalf of *GainSpan Corporation.*, and their product model: GS2100MIE, FCC ID: YOPGS2100MIE, IC: 9154A-GS2100MIE or the “EUT” as referred on this report. The EUT is a Wi-Fi Module with 802.11 b/g/n (HT20) technology.

1.2 Mechanical Description of EUT

The “EUT” measures approximately “2.5”cm (L) x “1.8”cm (W) x “0.3”cm (H), and weighs approximately “2.3”g.

The test data gathered are from typical production sample, serial number: 20F85EA9ACFE provided by the manufacturer.

1.3 Objective

This report is prepared on behalf of *GainSpan Corporation* in accordance with Part 2, Subpart J, and Part 15, Subparts B and C of the Federal Communication Commission’s rules and IC RSS-210 Issue 8, Dec 2010.

The objective is to determine compliance with FCC Part 15.247 and IC RSS-210 rules for Output Power, Antenna Requirements, 6 dB Bandwidth, and power spectral density, 100 kHz Bandwidth of Band Edges Measurement, Spurious Emissions, Conducted and Radiated Spurious Emissions.

1.4 Related Submittal(s)/Grant(s)

R1404031-247

1.5 Test Methodology

All measurements contained in this report were conducted in accordance with ANSI C63.4-2009, 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 and FCC KDB 558074 D01 DTS Meas Guidance v03r01: Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247

1.6 Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in the field of EMC. 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.

The following calculation follows the procedures as set forth in clause 7.2.3, ETSI TR 100 028-1 V1.4.1 (2001-12), the expression of Uncertainty in Radiated RF Testing is in accordance to ISO/IEC 17025 and TR 100 028-1 V1.4.1 (2001-12).

The expanded Measurement Uncertainty value having a confidence factor of 95%, is within a range of 5.48 dB. This means that the value of conducted RF carrier power test will be within +/- 2.74 dB of the measuring radiated emissions power versus the expected value.

The expected value is defined as the power at the antenna of the Transmitter under Test.

1.7 Test Facility

Bay area compliance Laboratories Corp. (BACL) is:

1- An independent Commercial Test Laboratory accredited to **ISO 17025: 2005** by **A2LA**, in the fields of: Electromagnetic Compatibility & Telecommunications covering Emissions, Immunity, Radio, RF Exposure, Safety and Telecom. This includes NEBS (Network Equipment Building System), Wireless RF, Telecommunications Terminal Equipment (TTE); Network Equipment; Information Technology Equipment (ITE); Medical Electrical Equipment; Industrial, Commercial, and Medical Test Equipment; Professional Audio and Video Equipment; Electronic (Digital) Products; Industrial and Scientific Instruments; Cabled Distribution Systems and Energy Efficiency Lighting.

2- An ENERGY STAR Recognized Laboratory, for the LM80 Testing, a wide variety of Luminaires and Computers.

3- A NIST Designated Phase-I and Phase-II CAB including: ACMA (Australian Communication and Media Authority), BSMI (Bureau of Standards, Metrology and Inspection of Taiwan), IDA (Infocomm Development Authority of Singapore), IC (Industry Canada), Korea (Ministry of Communications Radio Research Laboratory), NCC (Formerly DGT; Directorate General of Telecommunication of Chinese Taipei) OFTA (Office of the Telecommunications Authority of Hong Kong), Vietnam, VCCI - Voluntary Control Council for Interference of Japan and a designated EU CAB (Conformity Assessment Body) (Notified Body) for the EMC and R&TTE Directives.

4- A Product Certification Body accredited to **ISO Guide 65: 1996** by **A2LA** to certify:

1- Unlicensed, Licensed radio frequency devices and Telephone Terminal Equipment for the FCC. Scope A1, A2, A3, A4, B1, B2, B3, B4 & C.

2. Radio Standards Specifications (RSS) in the Category I Equipment Standards List and All Broadcasting Technical Standards (BETS) in Category I Equipment Standards List for Industry Canada.

3. Radio Communication Equipment for Singapore.

4. Radio Equipment Specifications, GMDSS Marine Radio Equipment Specifications, and Fixed Network Equipment Specifications for Hong Kong.

5. Japan MIC Telecommunication Business Law (A1, A2) and Radio Law (B1, B2 and B3).

6. Audio/Video, Battery Charging Systems, Computers, Displays, Enterprise Servers, Imaging Equipment, Set-Top Boxes, Telephony, Televisions, Ceiling Fans, CFLs (Including GU24s), Decorative Light Strings, Integral LED Lamps, Luminaires, Residential Ventilating Fans.

The test site used by BACL Corp. to collect radiated and conducted emissions measurement data is located at its facility in Sunnyvale, California, USA.

The test site at BACL Corp. 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 have 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 test site also complies with the test methods and procedures set forth in CISPR 22:2008 §10.4 for measurements below 1 GHz and §10.6 for measurements above 1 GHz as well as ANSI C63.4-2009, ANSI C63.4-2009, TIA/EIA-603 & CISPR 24:2010.

The Federal Communications Commission and Voluntary Control Council for Interference have the reports on file and they are listed under FCC registration number: 90464 and VCCI Registration No.: A-0027. 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 Corp. is an American Association for Laboratory Accreditation (A2LA) accredited laboratory (Lab Code 3297-02). The current scope of accreditations can be found at

<http://www.a2la.org/scopepdf/3297-02.pdf?CFID=1132286&CFTOKEN=e42a3240dac3f6ba-6DE17DCB-1851-9E57-477422F667031258&jsessionid=8430d44f1f47cf2996124343c704b367816b>

2 System Test Configuration

2.1 Justification

The EUT was configured for testing according to ANSI C63.4-2009 and FCC KDB 558074 D01 DTS Meas Guidance v03r01

The EUT was tested in a testing mode to represent worst-case results during the final qualification test.

The worst-case data rates are determined to be as follows for each mode based upon investigation by measuring the average power, peak power and PPSD across all data rates bandwidths, and modulations.

2.2 EUT Exercise Software

The test utility used was “Tera Term” was provided by GainSpan Corporation., and was verified Chen Ge to comply with the standard requirements being tested against.

2.3 Special Equipment

There were no special accessories were required, included, or intended for use with EUT during these tests.

2.4 Equipment Modifications

No modifications were made to the EUT.

2.5 Local Support Equipment

Manufacturer	Description	Model	Serial Number
Dell	Laptop	D650	-

2.6 EUT Internal Configuration Details

Manufacturer	Description	Model	Serial Number
GainSpan	Motherboard	GS2100M-Daughter Card Rev 0	-
GainSpan	Module	GS2100MIE Rev 3.3	-

2.7 Interface Ports and Cables

Cable Description	Length (m)	To	From
RS-232/USB	<1.0	EUT	Laptop

2.8 External I/O Cabling List and AC Cord

Cable Description	Length (m)	From	To
RF Cable	<1.0	EUT	PSA

2.9 Power Supply List and Details

Manufacturer	Description	Model	Serial Number
PHIHONG	Switching Power Supply	PSA05R-033	-

3 Summary of Test Results

Results reported relate only to the product tested.

FCC & IC Rules	Description of Test	Results
FCC §15.247(i), §2.1091 IC RSS-102	RF Exposure	Compliant*
FCC §15.203 IC RSS-Gen §7.1.2	Antenna Requirement	Compliant*
FCC §15.207(a) IC RSS-Gen §7.2.4	AC Line Conducted Emissions	Compliant*
FCC §15.247(d) IC RSS-210 §A8.5	Spurious Emissions at Antenna Port	Compliant*
FCC §15.209, §15.247(d) IC RSS-210 §A8.5	Radiated Spurious Emissions	Compliant
FCC §15.247(a)(2) IC RSS-210 §A8.2	6 dB Emission Bandwidth	Compliant*
FCC §15.247(b)(3) IC RSS-210 §A8.4	Maximum Peak Output Power	Compliant*
FCC §15.247(d) IC RSS-210 §A8.5	100 kHz Bandwidth of Frequency Band Edge	Compliant*
FCC §15.247(e) IC RSS-210 §A8.2(b)	Power Spectral Density	Compliant*
IC RSS-210 §2.3 & RSS-Gen §4.10	Receiver Spurious Emission	Compliant*

Compliant*: Please refer to original reports released by BACL (Report #: R1404031-247).

4 FCC §15.247(b) & IC RSS-210 §A8.4 – Peak Output Power Measurement

4.1 Applicable Standard

According to FCC §15.247(b) and IC RSS-210 §A8.4 (4) for systems using digital modulation in the 902~928 MHz, 2400~2483.5 MHz, and 5725~5850 MHz bands: 1 Watt.

4.2 Measurement Procedure

The measurements are base on FCC KDB 558074 D01 DTS Meas Guidance v03r01: Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247 section 9: Fundamental emission output power

4.3 Test Equipment List and Details

Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
Agilent	Spectrum Analyzer	E4446A	US44300386	2014-09-29	1 year

Statement of Traceability: **BACL Corp.** attests that all calibrations have been performed per the A2LA requirements, traceable to the NIST.

4.4 Test Environmental Conditions

Temperature:	21 °C
Relative Humidity:	32 %
ATM Pressure:	101.84 kPa

The testing was performed by Chen Ge on 2014-11-11 in RF site.

4.5 Test Results

Channel	Frequency (MHz)	Conducted Output Power (dBm)	FCC/IC Limit (dBm)	Margin (dB)	Power Settings
802.11b mode					
Low	2412	17.63	30	-12.37	18
Middle	2437	17.81	30	-12.19	19
High	2462	16.41	30	-13.59	18
802.11g mode					
Low	2412	19.37	30	-10.63	25
Middle	2437	18.94	30	-11.06	25
High	2462	18.42	30	-11.58	24
802.11n-HT20 mode					
Low	2412	18.52	30	-11.48	23
Middle	2437	18.97	30	-11.03	25
High	2462	18.56	30	-11.44	24

Note: The output power levels are consistent with the original certified product.

5 FCC §15.247(d) & IC RSS-210 §A8.5 – Spurious Radiated Emissions

5.1 Applicable Standard

As per FCC §15.35(d): Unless otherwise specified, on any frequency or frequencies above 1000 MHz, the radiated emission limits are based on the use of measurement instrumentation employing an average detector function. Unless otherwise specified, measurements above 1000 MHz shall be performed using a minimum resolution bandwidth of 1 MHz.

As per FCC §15.209(a) and RSS-210: Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table

Frequency (MHz)	Field Strength (micro volts/meter)	Measurement Distance (meters)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100**	3
88 - 216	150**	3
216 - 960	200**	3
Above 960	500	3

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

As Per FCC §15.205(a) except as show 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	960 – 1240	4.5 – 5.15
0.495 – 0.505	16.69475 – 16.69525	1300 – 1427	5.35 – 5.46
2.1735 – 2.1905	25.5 – 25.67	1435 – 1626.5	7.25 – 7.75
4.125 – 4.128	37.5 – 38.25	1645.5 – 1646.5	8.025 – 8.5
4.17725 – 4.17775	73 – 74.6	1660 – 1710	9.0 – 9.2
4.20725 – 4.20775	74.8 – 75.2	1718.8 – 1722.2	9.3 – 9.5
6.215 – 6.218	108 – 121.94	2200 – 2300	10.6 – 12.7
6.26775 – 6.26825	123 – 138	2310 – 2390	13.25 – 13.4
6.31175 – 6.31225	149.9 – 150.05	2483.5 – 2500	14.47 – 14.5
8.291 – 8.294	156.52475 – 156.52525	2690 – 2900	15.35 – 16.2
8.362 – 8.366	156.7 – 156.9	3260 – 3267	17.7 – 21.4
8.37625 – 8.38675	162.0125 – 167.17	3.332 – 3.339	22.01 – 23.12
8.41425 – 8.41475	167.72 – 173.2	3.3458 – 3.358	23.6 – 24.0
12.29 – 12.293	240 – 285	3.600 – 4.400	31.2 – 31.8
12.51975 – 12.52025	322 – 335.4		36.43 – 36.5
12.57675 – 12.57725	399.9 – 410		Above 38.6
13.36 – 13.41	608 – 614		

As per FCC §15.247 (d) and IC RSS-210 §8.5, In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

5.2 Test Setup

The radiated emissions tests were performed in the 5-meter Chamber, using the setup in accordance with ANSI C63.4-2009. The specification used was the FCC 15 Subpart C and IC RSS-210 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.

5.3 Test Procedure

For the radiated emissions test, the EUT host, 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.

The EUT is set 3 meter away from the testing antenna, which is varied from 1-4 meter, and the EUT is placed on a turntable, which is 0.8 meter above ground plane, the table shall be rotated for 360 degrees to find out the highest emission. The receiving antenna should be changed the polarization both of horizontal and vertical.

The spectrum analyzer or receiver is set as:

Below 1000 MHz:

RBW = 100 kHz / VBW = 300 kHz / Sweep = Auto

Above 1000 MHz:

- (1) Peak: RBW = 1MHz / VBW = 1MHz / Sweep = Auto
- (2) Average: RBW = 1MHz / VBW = 10Hz / Sweep = Auto

5.4 Corrected Amplitude & Margin Calculation

The Corrected Amplitude (CA) is calculated by adding the Antenna Factor (AF), the Cable Loss (CL), the Attenuator Factor (Atten) and subtracting the Amplifier Gain (Ga) to indicated Amplitude (Ai) reading. The basic equation is as follows:

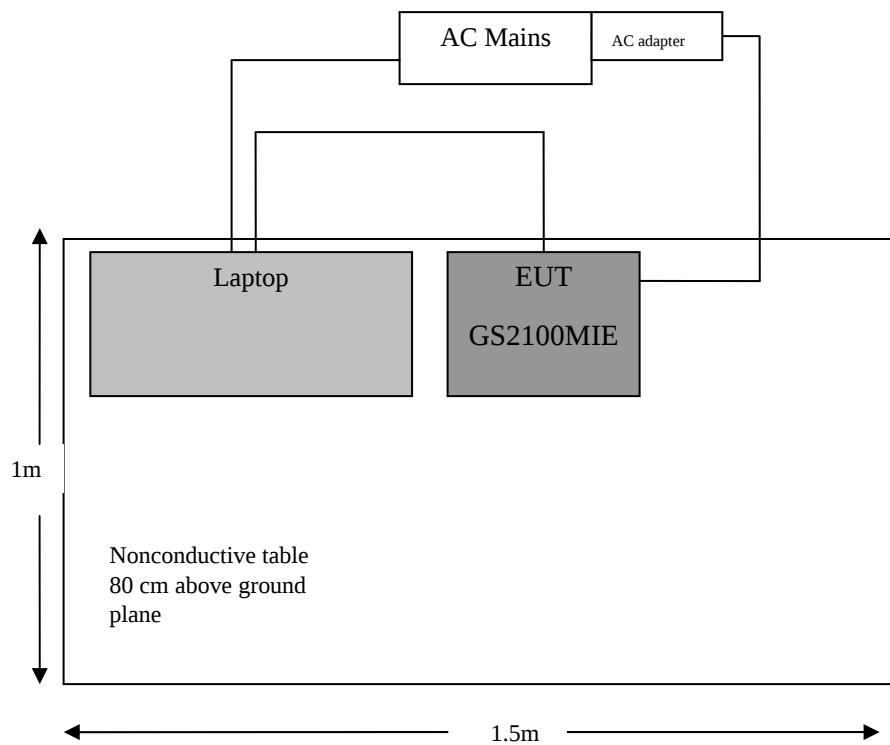
$$CA = Ai + AF + CL + Atten - Ga$$

For example, a corrected amplitude of 40.3 dBuV/m = Indicated Reading (32.5 dBuV) + Antenna Factor (+23.5dB) + Cable Loss (3.7 dB) + Attenuator (10 dB) - Amplifier Gain (29.4 dB)

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

$$\text{Margin} = \text{Corrected Amplitude} - \text{Limit}$$

5.5 Test Setup Block Diagram



5.6 Test Equipment List and Details

Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
Sunol Science Corp	System Controller	SC99V	122303-1	N/R	N/R
Sunol Science Corp	Combination Antenna	JB3	A020106-3	2014-06-18	1 year
Hewlett Packard	Pre-amplifier	8447D	2944A0663 9	2014-06-09	1 year
Agilent	Pre-amplifier	8449B	3008A0197 8	2014-02-04	1 year
WiseWave	Horn Antenna	ARH-4223-02	10555-01	2012-08-09	3 years
Agilent	Spectrum Analyzer	E4446A	US4430038 6	2014-09-29	1 year
EMCO	Horn Antenna	3315	9511-4627	2014-10-17	1 year
Rohde & Schwarz	EMI Test Receiver	ESCI 1166.5950K03	100337	2014-03-28	1 year

Statement of Traceability: BACL attests that all calibrations have been performed per the A2LA requirements, traceable to NIST.

5.7 Test Environmental Conditions

Temperature:	22 °C
Relative Humidity:	36 %
ATM Pressure:	101.55 kPa

The testing was performed by Chen Ge on 2014-11-12 in 5m chamber 3.

5.8 Summary of Test Results

According to the data hereinafter, the EUT complied with the FCC Title 47, Part 15C and IC RSS-210 standard's radiated emissions limits, and had the worst margin of:

With Dipole Antenna (2 dBi)

Mode: Transmitting			
Margin (dB)	Frequency (MHz)	Polarization (Horizontal/Vertical)	Mode
30-1000 MHz			
-4.76	263.0843	Vertical	802.11n-HT20
1-25 GHz			
-0.994	2390	Vertical	802.11n-HT20, Low Channel

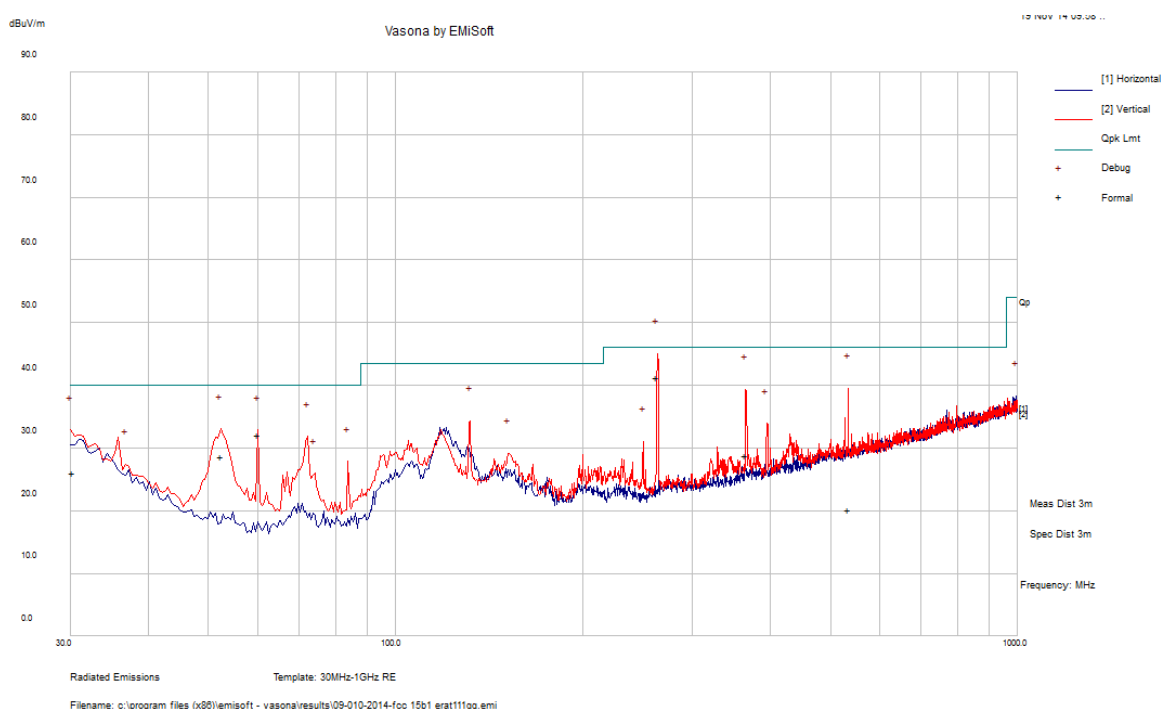
With PCB Antenna (1 dBi)

Mode: Transmitting			
Margin (dB)	Frequency (MHz)	Polarization (Horizontal/Vertical)	Mode
30-1000 MHz			
-4.47	264.1705	Vertical	802.11n-HT20
1-25 GHz			
-1.234	2390	Horizontal	802.11n-HT20, Low Channel

5.9 Radiated Emissions Test Data

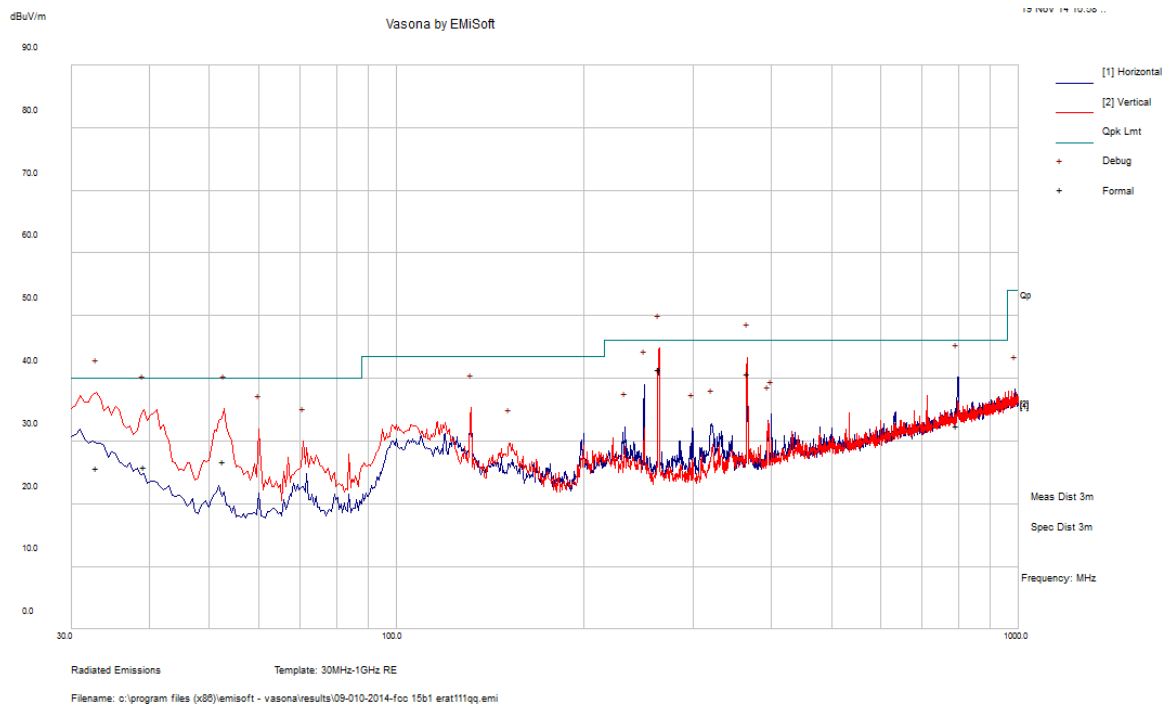
1) 30 MHz -1 GHz, Quasi-Peak Measured at 3 meters (Worst case)

With Dipole Antenna (2 dBi)



Frequency MHz	Cord. Reading (dBμV/m)	Measurement Type	Antenna Polarity (H/V)	Antenna Height (cm)	Turntable Azimuth (degrees)	Limit (dBμV/m)	Margin (dB)
30.24998	26.11	QP	V	148	232	40	-13.89
52.4095	28.67	QP	V	176	82	40	-11.33
60.0315	32.09	QP	V	100	100	40	-7.91
534.0638	20.17	QP	V	221	6	46	-25.83
365.0415	28.87	QP	V	296	164	46	-17.13
263.0843	41.24	QP	V	199	128	46	-4.76

With PCB Antenna (1 dBi)



Frequency MHz	Cord. Reading (dBµV/m)	Measurement Type	Antenna Polarity (H/V)	Antenna Height (cm)	Turntable Azimuth (degrees)	Limit (dBµV/m)	Margin (dB)
264.1705	41.53	QP	V	188	165	46	-4.47
32.99475	25.7	QP	V	191	61	40	-14.3
366.4648	40.75	QP	V	101	81	46	-5.25
52.591	26.78	QP	V	115	68	40	-13.22
39.34625	25.91	QP	V	142	245	40	-14.09
796.785	32.43	QP	h	101	163	46	-13.57

2) 1–25 GHz, Measured at 3 meters

With Dipole Antenna (2 dBi)

Frequency (MHz)	S.A. Reading (dBμV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre- Amp. (dB)	Cord. Reading (dBμV/m)	FCC/IC		Comments
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBμV/m)	Margin (dB)	
802.11b, Low Channel 2412 MHz											
2412	77.54	133	107	V	28.197	2.919	0	108.656	-	-	Peak
2412	69.68	129	100	H	28.197	2.919	0	100.792	-	-	Peak
2412	73.91	133	107	V	28.197	2.919	0	105.025	-	-	Ave
2412	65.99	129	100	H	28.197	2.919	0	97.110	-	-	Ave
2390	31.96	45	100	V	28.197	2.919	0	63.076	74	-10.924	Peak
2390	30.79	43	100	H	28.197	2.919	0	61.906	74	-12.094	Peak
2390	21.08	45	100	V	28.197	2.919	0	52.196	54	-1.804	Ave
2390	20.26	43	100	H	28.197	2.919	0	51.376	54	-2.624	Ave
4824	49.68	151	108	V	33.354	4.241	34.29	52.983	74	-21.017	Peak
4824	49.56	179	110	H	33.354	4.241	34.29	52.864	74	-21.136	Peak
4824	42.01	151	108	V	33.354	4.241	34.29	45.311	54	-8.689	Ave
4824	42.79	179	110	H	33.354	4.241	34.29	46.093	54	-7.907	Ave
7236	45.91	0	100	V	37.356	5.495	34.43	54.327	88.656	-34.329	Peak
7236	45.61	0	100	H	37.356	5.495	34.43	54.030	80.792	-26.762	Peak
7236	31.28	0	100	V	37.356	5.495	34.43	39.705	85.025	-45.320	Ave
7236	31.22	0	100	H	37.356	5.495	34.43	39.646	77.110	-37.464	Ave
802.11b, Middle Channel 2437 MHz											
2437	79.39	76	102	V	28.197	2.919	0	110.506	-	-	Peak
2437	68.45	38	105	H	28.197	2.919	0	99.566	-	-	Peak
2437	75.61	76	102	V	28.197	2.919	0	106.726	-	-	Ave
2437	64.8	38	105	H	28.197	2.919	0	95.916	-	-	Ave
4874	49.7178	112	106	V	33.354	4.241	34.29	53.0228	74	-20.9772	Peak
4874	50.1138	163	107	H	33.354	4.241	34.29	53.4188	74	-20.5812	Peak
4874	41.9859	112	106	V	33.354	4.241	34.29	45.2909	54	-8.7091	Ave
4874	43.3818	163	107	H	33.354	4.241	34.29	46.6868	54	-7.3132	Ave
7311	45.0351	0	100	V	37.356	5.495	34.43	53.4561	74	-20.5439	Peak
7311	45.441	0	100	H	37.356	5.495	34.43	53.862	74	-20.138	Peak
7311	30.8187	0	100	V	37.356	5.495	34.43	39.2397	54	-14.7603	Ave
7311	30.888	0	100	H	37.356	5.495	34.43	39.309	54	-14.691	Ave
9748	46.0251	0	100	V	38.913	6.241	34.95	56.2291	90.506	-34.2769	Peak
9748	45.3321	0	100	H	38.913	6.241	34.95	55.5361	79.566	-24.0299	Peak
9748	31.2246	0	100	V	38.913	6.241	34.95	41.4286	86.726	-45.2974	Ave
9748	31.1751	0	100	H	38.913	6.241	34.95	41.3791	75.916	-34.5369	Ave

Frequency (MHz)	S.A. Reading (dBμV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre- Amp. (dB)	Cord. Reading (dBμV/m)	FCC/IC		Comments
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBμV/m)	Margin (dB)	
802.11b, High Channel 2462 MHz											
2462	77.68	39	112	V	28.197	2.919	0	108.796	-	-	Peak
2462	68.95	158	100	H	28.197	2.919	0	100.066	-	-	Peak
2462	75.59	39	112	V	28.197	2.919	0	106.706	-	-	Ave
2462	64.53	158	100	H	28.197	2.919	0	95.646	-	-	Ave
2483.5	32.46	44	350	V	28.197	2.919	0	63.576	74	-10.424	Peak
2483.5	28.19	158	100	H	28.197	2.919	0	59.306	74	-14.694	Peak
2483.5	21.32	44	111	V	28.197	2.919	0	52.436	54	-1.564	Ave
2483.5	15.37	158	100	H	28.197	2.919	0	46.486	54	-7.514	Ave
4924	49.62	153	100	V	33.354	4.241	34.29	52.924	74	-21.0762	Peak
4924	49.59	68	100	H	33.354	4.241	34.29	52.894	74	-21.1059	Peak
4924	40.81	153	100	V	33.354	4.241	34.29	44.113	54	-9.8872	Ave
4924	42.46	68	100	H	33.354	4.241	34.29	45.766	54	-8.2339	Ave
7386	45.88	0	100	V	37.356	5.495	34.43	54.298	74	-19.7024	Peak
7386	45.23	0	100	H	37.356	5.495	34.43	53.654	74	-20.3459	Peak
7386	30.95	0	100	V	37.356	5.495	34.43	39.368	54	-14.6316	Ave
7386	30.91	0	100	H	37.356	5.495	34.43	39.329	54	-14.6712	Ave

Frequency (MHz)	S.A. Reading (dBμV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre- Amp. (dB)	Cord. Reading (dBμV/m)	FCC/IC		Comments
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBμV/m)	Margin (dB)	
802.11g, Low Channel 2412 MHz											
2412	78.74	14	100	V	28.197	2.919	0	109.861	-	-	Peak
2412	68.63	81	100	H	28.197	2.919	0	99.743	-	-	Peak
2412	68.42	14	100	V	28.197	2.919	0	99.535	-	-	Ave
2412	57.74	81	100	H	28.197	2.919	0	88.853	-	-	Ave
2390	39.31	22	103	V	28.197	2.919	0	70.426	74	-3.574	Peak
2390	29.09	81	103	H	28.197	2.919	0	60.206	74	-13.794	Peak
2390	19.62	22	103	V	28.197	2.919	0	50.736	54	-3.264	Ave
2390	13.11	81	103	H	28.197	2.919	0	44.226	54	-9.774	Ave
4824	49.60	73	100	V	33.354	4.241	34.29	52.904	74	-21.096	Peak
4824	49.74	19	100	H	33.354	4.241	34.29	53.043	74	-20.957	Peak
4824	42.07	73	100	V	33.354	4.241	34.29	45.370	54	-8.630	Ave
4824	40.37	19	100	H	33.354	4.241	34.29	43.677	54	-10.323	Ave
7236	44.57	0	100	V	37.356	5.495	34.43	52.991	89.861	-36.870	Peak
7236	44.85	0	100	H	37.356	5.495	34.43	53.268	79.743	-26.475	Peak
7236	30.48	0	100	V	37.356	5.495	34.43	38.903	79.535	-40.632	Ave
7236	30.59	0	100	H	37.356	5.495	34.43	39.012	68.853	-29.841	Ave
802.11g, Middle Channel 2437 MHz											
2437	79.30	27	100	V	28.197	2.919	0	110.415	-	-	Peak
2437	69.05	81	100	H	28.197	2.919	0	100.169	-	-	Peak
2437	68.85	27	100	V	28.197	2.919	0	99.971	-	-	Ave
2437	59.02	81	100	H	28.197	2.919	0	90.140	-	-	Ave
4874	49.17	22	103	V	33.354	4.241	34.29	52.478	74	-21.522	Peak
4874	48.82	81	103	H	33.354	4.241	34.29	52.122	74	-21.878	Peak
4874	42.92	22	103	V	33.354	4.241	34.29	46.222	54	-7.779	Ave
4874	40.44	81	103	H	33.354	4.241	34.29	43.747	54	-10.254	Ave
7311	44.24	0	100	V	37.356	5.495	34.43	52.664	74	-21.336	Peak
7311	44.34	0	100	H	37.356	5.495	34.43	52.763	74	-21.237	Peak
7311	30.62	0	100	V	37.356	5.495	34.43	39.042	54	-14.958	Ave
7311	30.73	0	100	H	37.356	5.495	34.43	39.151	54	-14.849	Ave
9748	45.31	0	100	V	38.913	6.241	34.95	55.516	90.415	-34.899	Peak
9748	45.19	0	100	H	38.913	6.241	34.95	55.398	80.169	-24.771	Peak
9748	31.02	0	100	V	38.913	6.241	34.95	41.221	79.971	-38.750	Ave
9748	31.09	0	100	H	38.913	6.241	34.95	41.290	70.140	-28.850	Ave

Frequency (MHz)	S.A. Reading (dBμV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre- Amp. (dB)	Cord. Reading (dBμV/m)	FCC/IC		Comments
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBμV/m)	Margin (dB)	
802.11g, High Channel 2462 MHz											
2462	78.66	73	100	V	28.197	2.919	0	109.772	-	-	Peak
2462	68.86	158	100	H	28.197	2.919	0	99.980	-	-	Peak
2462	68.65	73	100	V	28.197	2.919	0	99.763	-	-	Ave
2462	58.52	158	100	H	28.197	2.919	0	89.635	-	-	Ave
2483.5	39.95	69	100	V	28.197	2.919	0	71.066	74	-2.934	Peak
2483.5	30.99	161	100	H	28.197	2.919	0	62.106	74	-11.894	Peak
2483.5	19.7	69	100	V	28.197	2.919	0	50.816	54	-3.184	Ave
2483.5	14.39	161	100	H	28.197	2.919	0	45.506	54	-8.494	Ave
4924	48.84	38	112	V	33.354	4.241	34.29	52.142	74	-21.858	Peak
4924	49.14	156	100	H	33.354	4.241	34.29	52.449	74	-21.551	Peak
4924	41.37	38	112	V	33.354	4.241	34.29	44.677	54	-9.323	Ave
4924	41.79	156	100	H	33.354	4.241	34.29	45.093	54	-8.907	Ave
7386	44.23	0	100	V	37.356	5.495	34.43	52.654	74	-21.346	Peak
7386	44.35	0	100	H	37.356	5.495	34.43	52.773	74	-21.227	Peak
7386	30.61	0	100	V	37.356	5.495	34.43	39.032	54	-14.968	Ave
7386	30.67	0	100	H	37.356	5.495	34.43	39.091	54	-14.909	Ave

Frequency (MHz)	S.A. Reading (dBμV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre- Amp. (dB)	Cord. Reading (dBμV/m)	FCC/IC		Comments
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBμV/m)	Margin (dB)	
802.11n-HT20, Low Channel 2412 MHz											
2412	77.43	74	100	V	28.197	2.919	0	108.544	-	-	Peak
2412	67.11	136	117	H	28.197	2.919	0	98.228	-	-	Peak
2412	67.76	74	100	V	28.197	2.919	0	98.872	-	-	Ave
2412	57.01	136	117	H	28.197	2.919	0	88.130	-	-	Ave
2390	41.89	70	100	V	28.197	2.919	0	73.006	74	-0.994	Peak
2390	29.59	139	117	H	28.197	2.919	0	60.706	74	-13.294	Peak
2390	19.84	70	100	V	28.197	2.919	0	50.956	54	-3.044	Ave
2390	13.72	139	117	H	28.197	2.919	0	44.836	54	-9.164	Ave
4824	49.25	39	100	V	33.354	4.241	34.29	52.558	74	-21.443	Peak
4824	49.05	155	100	H	33.354	4.241	34.29	52.360	74	-21.641	Peak
4824	41.74	39	100	V	33.354	4.241	34.29	45.043	54	-8.957	Ave
4824	41.45	155	100	H	33.354	4.241	34.29	44.756	54	-9.244	Ave
7236	45.12	0	100	V	37.356	5.495	34.43	53.545	88.544	-34.999	Peak
7236	45.76	0	100	H	37.356	5.495	34.43	54.179	78.228	-24.049	Peak
7236	31.14	0	100	V	37.356	5.495	34.43	39.557	78.872	-39.315	Ave
7236	31.20	0	100	H	37.356	5.495	34.43	39.626	68.130	-28.504	Ave
802.11n-HT20, Middle Channel 2437 MHz											
2437	79.00	73	100	V	28.197	2.919	0	110.118	-	-	Peak
2437	68.09	120	100	H	28.197	2.919	0	99.208	-	-	Peak
2437	69.18	73	100	V	28.197	2.919	0	100.297	-	-	Ave
2437	58.03	120	100	H	28.197	2.919	0	89.150	-	-	Ave
4874	48.74	38	100	V	33.354	4.241	34.29	52.043	74	-21.957	Peak
4874	49.25	167	100	H	33.354	4.241	34.29	52.558	74	-21.443	Peak
4874	40.68	38	100	V	33.354	4.241	34.29	43.984	54	-10.016	Ave
4874	41.58	167	100	H	33.354	4.241	34.29	44.885	54	-9.115	Ave
7311	44.66	0	100	V	37.356	5.495	34.43	53.080	74	-20.920	Peak
7311	45.21	0	100	H	37.356	5.495	34.43	53.634	74	-20.366	Peak
7311	30.78	0	100	V	37.356	5.495	34.43	39.200	54	-14.800	Ave
7311	30.86	0	100	H	37.356	5.495	34.43	39.279	54	-14.721	Ave
9748	44.93	0	100	V	38.913	6.241	34.95	55.130	90.118	-34.988	Peak
9748	44.70	0	100	H	38.913	6.241	34.95	54.903	79.208	-24.306	Peak
9748	31.10	0	100	V	38.913	6.241	34.95	41.300	80.297	-38.997	Ave
9748	31.03	0	100	H	38.913	6.241	34.95	41.231	69.150	-27.919	Ave

Frequency (MHz)	S.A. Reading (dBμV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre- Amp. (dB)	Cord. Reading (dBμV/m)	FCC/IC		Comments
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBμV/m)	Margin (dB)	
802.11n-HT20, High Channel 2462 MHz											
2462	78.29	72	100	V	28.197	2.919	0	109.405	-	-	Peak
2462	68.57	120	100	H	28.197	2.919	0	99.683	-	-	Peak
2462	68.12	72	100	V	28.197	2.919	0	99.238	-	-	Ave
2462	57.91	120	100	H	28.197	2.919	0	89.021	-	-	Ave
2483.5	40.56	68	100	V	28.197	2.919	0	71.676	74	-2.324	Peak
2483.5	31.02	123	100	H	28.197	2.919	0	62.136	74	-11.864	Peak
2483.5	20.87	68	100	V	28.197	2.919	0	51.986	54	-2.014	Ave
2483.5	14.88	123	100	H	28.197	2.919	0	45.996	54	-8.004	Ave
4924	48.91	38	111	V	33.354	4.241	34.29	52.211	74	-21.789	Peak
4924	49.12	156	105	H	33.354	4.241	34.29	52.429	74	-21.571	Peak
4924	40.73	38	111	V	33.354	4.241	34.29	44.034	54	-9.966	Ave
4924	41.61	156	105	H	33.354	4.241	34.29	44.915	54	-9.085	Ave
7386	44.12	0	100	V	37.356	5.495	34.43	52.545	74	-21.455	Peak
7386	44.01	0	100	H	37.356	5.495	34.43	52.427	74	-21.574	Peak
7386	30.64	0	100	V	37.356	5.495	34.43	39.062	54	-14.939	Ave
7386	30.70	0	100	H	37.356	5.495	34.43	39.121	54	-14.879	Ave

With PCB Antenna (1 dBi)

Frequency (MHz)	S.A. Reading (dBμV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre- Amp. (dB)	Cord. Reading (dBμV/m)	FCC/IC		Comments
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBμV/m)	Margin (dB)	
802.11b, Low Channel 2412 MHz											
2412	73.02	112	108	V	28.197	2.919	0	104.136	-	-	Peak
2412	77.84	65	102	H	28.197	2.919	0	108.956	-	-	Peak
2412	69.78	112	108	V	28.197	2.919	0	100.896	-	-	Ave
2412	74.52	65	102	H	28.197	2.919	0	105.636	-	-	Ave
2390	28.22	103	100	V	28.197	2.919	0	59.336	74	-14.664	Peak
2390	30.24	25	109	H	28.197	2.919	0	61.356	74	-12.644	Peak
2390	18.06	103	100	V	28.197	2.919	0	49.176	54	-4.824	Ave
2390	20.57	25	109	H	28.197	2.919	0	51.686	54	-2.314	Ave
4824	48.14	62	100	V	33.354	4.241	34.29	51.449	74	-22.551	Peak
4824	48.86	330	106	H	33.354	4.241	34.29	52.162	74	-21.839	Peak
4824	38.42	62	100	V	33.354	4.241	34.29	41.727	54	-12.273	Ave
4824	40.02	330	106	H	33.354	4.241	34.29	43.321	54	-10.679	Ave
7236	43.14	0	100	V	37.356	5.495	34.43	51.565	84.136	-32.571	Peak
7236	43.52	0	100	H	37.356	5.495	34.43	51.941	88.956	-37.015	Peak
7236	30.02	0	100	V	37.356	5.495	34.43	38.438	80.896	-42.458	Ave
7236	29.28	0	100	H	37.356	5.495	34.43	37.705	85.636	-47.931	Ave
802.11b, Middle Channel 2437 MHz											
2437	72.83	110	100	V	28.197	2.919	0	103.950	-	-	Peak
2437	77.67	49	109	H	28.197	2.919	0	108.782	-	-	Peak
2437	69.52	110	100	V	28.197	2.919	0	100.634	-	-	Ave
2437	74.48	49	109	H	28.197	2.919	0	105.594	-	-	Ave
4874	48.21	156	100	V	33.354	4.241	34.29	51.518	74	-22.482	Peak
4874	48.59	18	100	H	33.354	4.241	34.29	51.894	74	-22.106	Peak
4874	38.46	156	100	V	33.354	4.241	34.29	41.767	54	-12.234	Ave
4874	40.37	18	100	H	33.354	4.241	34.29	43.677	54	-10.323	Ave
7311	44.48	0	100	V	37.356	5.495	34.43	52.902	74	-21.098	Peak
7311	44.75	0	100	H	37.356	5.495	34.43	53.169	74	-20.831	Peak
7311	30.80	0	100	V	37.356	5.495	34.43	39.220	54	-14.780	Ave
7311	30.78	0	100	H	37.356	5.495	34.43	39.200	54	-14.800	Ave
9748	44.46	0	100	V	38.913	6.241	34.95	54.665	83.950	-29.285	Peak
9748	44.10	0	100	H	38.913	6.241	34.95	54.309	88.782	-34.473	Peak
9748	30.75	0	100	V	38.913	6.241	34.95	40.953	80.634	-39.680	Ave
9748	30.67	0	100	H	38.913	6.241	34.95	40.874	85.594	-44.720	Ave

Frequency (MHz)	S.A. Reading (dBμV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre- Amp. (dB)	Cord. Reading (dBμV/m)	FCC/IC		Comments
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBμV/m)	Margin (dB)	
802.11b, High Channel 2462 MHz											
2462	74.86	203	109	V	28.197	2.919	0	105.980	-	-	Peak
2462	79.64	77	125	H	28.197	2.919	0	110.752	-	-	Peak
2462	71.32	203	109	V	28.197	2.919	0	102.436	-	-	Ave
2462	75.84	77	125	H	28.197	2.919	0	106.960	-	-	Ave
2483.5	29.66	78	100	V	28.197	2.919	0	60.776	74	-13.224	Peak
2483.5	32.25	95	106	H	28.197	2.919	0	63.366	74	-10.634	Peak
2483.5	15.35	78	100	V	28.197	2.919	0	46.466	54	-7.534	Ave
2483.5	20.14	95	106	H	28.197	2.919	0	51.256	54	-2.744	Ave
4924	48.40	66	100	V	33.354	4.241	34.29	51.706	74	-22.294	Peak
4924	49.37	165	105	H	33.354	4.241	34.29	52.676	74	-21.324	Peak
4924	40.29	66	100	V	33.354	4.241	34.29	43.598	54	-10.402	Ave
4924	43.34	165	105	H	33.354	4.241	34.29	46.647	54	-7.353	Ave
7386	43.66	0	100	V	37.356	5.495	34.43	52.080	74	-21.920	Peak
7386	44.78	0	100	H	37.356	5.495	34.43	53.199	74	-20.801	Peak
7386	30.16	0	100	V	37.356	5.495	34.43	38.576	54	-15.424	Ave
7386	30.25	0	100	H	37.356	5.495	34.43	38.675	54	-15.325	Ave

Frequency (MHz)	S.A. Reading (dBμV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre- Amp. (dB)	Cord. Reading (dBμV/m)	FCC/IC		Comments
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBμV/m)	Margin (dB)	
802.11g, Low Channel 2412 MHz											
2412	73.49	124	100	V	28.197	2.919	0	104.604	-	-	Peak
2412	79.40	24	107	H	28.197	2.919	0	110.514	-	-	Peak
2412	63.39	124	100	V	28.197	2.919	0	94.506	-	-	Ave
2412	69.17	24	107	H	28.197	2.919	0	100.287	-	-	Ave
2390	34.22	124	100	V	28.197	2.919	0	65.336	74	-8.664	Peak
2390	40	24	107	H	28.197	2.919	0	71.116	74	-2.884	Peak
2390	15.96	124	100	V	28.197	2.919	0	47.076	54	-6.924	Ave
2390	20.3	24	107	H	28.197	2.919	0	51.416	54	-2.584	Ave
4824	48.57	23	100	V	33.354	4.241	34.29	51.874	74	-22.1256	Peak
4824	47.65	123	100	H	33.354	4.241	34.29	50.954	74	-23.0463	Peak
4824	40.56	23	100	V	33.354	4.241	34.29	43.865	54	-10.1347	Ave
4824	36.87	123	100	H	33.354	4.241	34.29	40.173	54	-13.8274	Ave
7236	45.67	0	100	V	37.356	5.495	34.43	54.090	84.604	-30.514	Peak
7236	44.25	0	100	H	37.356	5.495	34.43	52.674	90.514	-37.840	Peak
7236	30.62	0	100	V	37.356	5.495	34.43	39.042	74.506	-35.464	Ave
7236	30.58	0	100	H	37.356	5.495	34.43	39.002	80.287	-41.285	Ave
802.11g, Middle Channel 2437 MHz											
2437	72.70	56	100	V	28.197	2.919	0	103.812	-	-	Peak
2437	77.56	25	104	H	28.197	2.919	0	108.673	-	-	Peak
2437	62.51	56	100	V	28.197	2.919	0	93.625	-	-	Ave
2437	67.76	25	104	H	28.197	2.919	0	98.872	-	-	Ave
4874	48.20	118	106	V	33.354	4.241	34.29	51.508	74	-22.492	Peak
4874	48.42	27	100	H	33.354	4.241	34.29	51.726	74	-22.274	Peak
4874	39.74	118	106	V	33.354	4.241	34.29	43.044	54	-10.956	Ave
4874	39.59	27	100	H	33.354	4.241	34.29	42.895	54	-11.105	Ave
7311	44.28	0	100	V	37.356	5.495	34.43	52.704	74	-21.296	Peak
7311	44.30	0	100	H	37.356	5.495	34.43	52.724	74	-21.277	Peak
7311	30.24	0	100	V	37.356	5.495	34.43	38.666	54	-15.335	Ave
7311	30.30	0	100	H	37.356	5.495	34.43	38.725	54	-15.275	Ave
9748	44.83	0	100	V	38.913	6.241	34.95	55.031	83.812	-28.781	Peak
9748	44.27	0	100	H	38.913	6.241	34.95	54.477	88.673	-34.196	Peak
9748	30.59	0	100	V	38.913	6.241	34.95	40.795	73.625	-32.830	Ave
9748	30.48	0	100	H	38.913	6.241	34.95	40.686	78.872	-38.186	Ave

Frequency (MHz)	S.A. Reading (dBμV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre- Amp. (dB)	Cord. Reading (dBμV/m)	FCC/IC		Comments
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBμV/m)	Margin (dB)	
802.11g, High Channel 2462 MHz											
2462	71.37	222	100	V	28.197	2.919	0	102.485	-	-	Peak
2462	77.24	43	104	H	28.197	2.919	0	108.356	-	-	Peak
2462	61.39	222	100	V	28.197	2.919	0	92.506	-	-	Ave
2462	67.08	43	104	H	28.197	2.919	0	98.198	-	-	Ave
2483.5	31.94	222	100	V	28.197	2.919	0	63.056	74	-10.944	Peak
2483.5	38.88	43	104	H	28.197	2.919	0	69.996	74	-4.004	Peak
2483.5	14.3	222	100	V	28.197	2.919	0	45.416	54	-8.584	Ave
2483.5	18.54	43	104	H	28.197	2.919	0	49.656	54	-4.344	Ave
4924	49.27	42	100	V	33.354	4.241	34.29	52.577	74	-21.4227	Peak
4924	47.17	221	100	H	33.354	4.241	34.29	50.479	74	-23.5215	Peak
4924	42.31	42	100	V	33.354	4.241	34.29	45.618	54	-8.3824	Ave
4924	35.54	221	100	H	33.354	4.241	34.29	38.846	54	-15.154	Ave
7386	43.94	0	100	V	37.356	5.495	34.43	52.357	74	-21.6428	Peak
7386	43.33	0	100	H	37.356	5.495	34.43	51.753	74	-22.2467	Peak
7386	30.03	0	100	V	37.356	5.495	34.43	38.448	54	-15.5523	Ave
7386	30.07	0	100	H	37.356	5.495	34.43	38.487	54	-15.5127	Ave

Frequency (MHz)	S.A. Reading (dBμV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre- Amp. (dB)	Cord. Reading (dBμV/m)	FCC/IC		Comments
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBμV/m)	Margin (dB)	
802.11n-HT20, Low Channel 2412 MHz											
2412	72.30	48	100	V	28.197	2.919	0	103.416	-	-	Peak
2412	78.50	25	105	H	28.197	2.919	0	109.613	-	-	Peak
2412	61.98	48	100	V	28.197	2.919	0	93.100	-	-	Ave
2412	68.35	25	105	H	28.197	2.919	0	99.466	-	-	Ave
2390	35.76	44	100	V	28.197	2.919	0	66.876	74	-7.124	Peak
2390	41.65	28	105	H	28.197	2.919	0	72.766	74	-1.234	Peak
2390	15.65	44	100	V	28.197	2.919	0	46.766	54	-7.234	Ave
2390	20.15	28	105	H	28.197	2.919	0	51.266	54	-2.734	Ave
4824	48.63	52	100	V	33.354	4.241	34.29	51.934	74	-22.066	Peak
4824	49.02	11	100	H	33.354	4.241	34.29	52.330	74	-21.670	Peak
4824	41.25	52	100	V	33.354	4.241	34.29	44.558	54	-9.442	Ave
4824	40.84	11	100	H	33.354	4.241	34.29	44.143	54	-9.858	Ave
7236	44.35	0	100	V	37.356	5.495	34.43	52.773	83.416	-30.643	Peak
7236	44.64	0	100	H	37.356	5.495	34.43	53.060	89.613	-36.553	Peak
7236	30.32	0	100	V	37.356	5.495	34.43	38.745	73.100	-34.355	Ave
7236	30.49	0	100	H	37.356	5.495	34.43	38.913	79.466	-40.553	Ave
802.11n-HT20, Middle Channel 2437 MHz											
2437	72.77	20	100	V	28.197	2.919	0	103.881	-	-	Peak
2437	77.22	25	106	H	28.197	2.919	0	108.336	-	-	Peak
2437	62.48	20	100	V	28.197	2.919	0	93.595	-	-	Ave
2437	66.95	25	106	H	28.197	2.919	0	98.070	-	-	Ave
4874	48.30	57	100	V	33.354	4.241	34.29	51.607	74	-22.393	Peak
4874	47.84	30	100	H	33.354	4.241	34.29	51.142	74	-22.858	Peak
4874	39.12	57	100	V	33.354	4.241	34.29	42.430	54	-11.570	Ave
4874	38.48	30	100	H	33.354	4.241	34.29	41.786	54	-12.214	Ave
7311	44.35	0	100	V	37.356	5.495	34.43	52.773	74	-21.227	Peak
7311	44.73	0	100	H	37.356	5.495	34.43	53.149	74	-20.851	Peak
7311	30.16	0	100	V	37.356	5.495	34.43	38.576	54	-15.424	Ave
7311	30.04	0	100	H	37.356	5.495	34.43	38.458	54	-15.542	Ave
9748	44.06	0	100	V	38.913	6.241	34.95	54.269	83.881	-29.612	Peak
9748	44.30	0	100	H	38.913	6.241	34.95	54.507	88.336	-33.830	Peak
9748	30.43	0	100	V	38.913	6.241	34.95	40.637	73.595	-32.958	Ave
9748	30.47	0	100	H	38.913	6.241	34.95	40.676	78.070	-37.394	Ave

Frequency (MHz)	S.A. Reading (dBμV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre- Amp. (dB)	Cord. Reading (dBμV/m)	FCC/IC		Comments
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBμV/m)	Margin (dB)	
802.11n-HT20, High Channel 2462 MHz											
2462	71.38	49	100	V	28.197	2.919	0	102.495	-	-	Peak
2462	77.00	24	104	H	28.197	2.919	0	108.118	-	-	Peak
2462	60.94	49	100	V	28.197	2.919	0	92.060	-	-	Ave
2462	66.95	24	104	H	28.197	2.919	0	98.070	-	-	Ave
2483.5	33.21	45	100	V	28.197	2.919	0	64.326	74	-9.674	Peak
2483.5	40.74	27	104	H	28.197	2.919	0	71.856	74	-2.144	Peak
2483.5	15.02	45	100	V	28.197	2.919	0	46.136	54	-7.864	Ave
2483.5	20.04	27	104	H	28.197	2.919	0	51.156	54	-2.844	Ave
4924	49.52	53	100	V	33.354	4.241	34.29	52.825	74	-21.175	Peak
4924	48.27	21	106	H	33.354	4.241	34.29	51.577	74	-22.423	Peak
4924	42.93	53	100	V	33.354	4.241	34.29	46.231	54	-7.769	Ave
4924	41.61	21	106	H	33.354	4.241	34.29	44.915	54	-9.085	Ave
7386	44.10	0	100	V	37.356	5.495	34.43	52.526	74	-21.475	Peak
7386	43.82	0	100	H	37.356	5.495	34.43	52.238	74	-21.762	Peak
7386	29.96	0	100	V	37.356	5.495	34.43	38.378	54	-15.622	Ave
7386	30.04	0	100	H	37.356	5.495	34.43	38.458	54	-15.542	Ave