



FCC PART 15, SUBPART E
IC RSS-247, ISSUE 1, MAY 2015

TEST AND MEASUREMENT REPORT

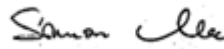
For

Vocera Communication, Inc.

525 Race Street,

San Jose, CA 95126, USA

FCC ID: QGZB3000N
IC: 4362A-B3000N

Report Type: CIIPC Report	Product Type: Communication Badge
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Report Number: R1506221-407	
Report Date: 2015-07-30	
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* This report may contain data that are not covered by the A2LA accreditation and are marked with an asterisk “*” (BAC-2)

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	R1506221-407	Initial	2015-07-30

1 General Description

1.1 Product Description for Equipment Under Test (EUT)

This test and measurement report was prepared on behalf of *Vocera Communication, Inc.*, and their product model: *B3000N*, FCC ID: *QGZB3000N*, IC: *4362A-B3000N* or the “EUT” as referred to in this report. The EUT is an 802.11 a/b/g/n + BT 2.0/3.0 communication badge.

1.2 Mechanical Description of EUT

The EUT measures approximately 9.8 cm (L) x 3.6 cm (W) x 1.8 cm (H) and weighs 54 g.

The test data gathered are from typical production sample, serial number: 36 assigned by Client.

1.3 Objective

This report is prepared on behalf of *Vocera Communication, Inc.* in accordance with Part 15, Subparts E of the Federal Communication Commission’s rules.

The objective is to determine compliance with FCC Part 15.407 rules and IC RSS-247 rules for power spectral density, Band Edges Measurement, Spurious Emissions, and Radiated Spurious Emissions.

1.4 Related Submittal(s)/Grant(s)

DTS and DSS submissions with FCC ID: QGZB3000N and IC: 4362A-B3000N.

1.5 Test Methodology

All measurements contained in this report were conducted in accordance with ANSI C63.10-2013, 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 789033 D02 General UNII Test Procedures New Rules v01: Guidelines for compliance testing of unlicensed national information infrastructure (U-NII) devices Part 15, Subpart E.

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 C63.10-2013 and FCC KDB 789033 D02.

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 PSD across all data rates bandwidths, and modulations.

2.2 EUT Exercise Software

Testing firmware version: 4.0.1.35, provided by *Vocera Communication, Inc.*, and was verified by Jin Yang 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

N/A

2.6 EUT Internal Configuration Details

Manufacturer	Description	Model	Serial Number
Vocera	PCB Board	211-01770E	-

3 Summary of Test Results

Results reported relate only to the product tested.

FCC & IC Rules	Description of Test	Results
FCC §15.407(f), §2.1093 IC RSS-102	RF Exposure	Compliant
FCC §15.407(a) IC RSS-247	Maximum Conducted Output Power	Compliant
FCC §15.203 IC RSS-Gen §8.3	Antenna Requirement	Compliant
FCC §15.205, §15.209, §15.407 IC RSS-247 §6.2.4	Radiated Spurious Emission	Compliant
FCC §15.407(b) IC RSS-247 §6.2.4	Spurious Emission at Antenna Port	Compliant
FCC §15.407(b) IC RSS-247 §6.2.4	Band Edge	Compliant
FCC §15.407(a)(3) IC RSS-247 §6.2.4	Power Spectral Density	Compliant

4 FCC §15.407 (f), §2.1093 & IC RSS-102 – RF Exposure

1.1 Applicable Standards

FCC §2.1093, §15.407(f)
IC RSS-102.

1.2 Test Result

Compliance, please refer to the SAR report.

5 FCC §15.203 & IC RSS-Gen §8.3 – Antenna Requirements

5.1 Applicable Standard

According to FCC §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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

According to IC RSS-Gen §8.3: Transmitter Antenna

The applicant for equipment certification, as per RSP-100, must provide a list of all antenna types that may be used with the licence-exempt transmitter, indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna.

Licence-exempt transmitters that have received equipment certification may operate with different types of antennas. However, it is not permissible to exceed the maximum equivalent isotropically radiated power (e.i.r.p.) limits specified in the applicable standard (RSS) for the licence-exempt apparatus.

Testing shall be performed using the highest gain antenna of each combination of licence-exempt transmitter and antenna type, with the transmitter output power set at the maximum level. 9 When a measurement at the antenna connector is used to determine RF output power, the effective gain of the device's antenna shall be stated, based on a measurement or on data from the antenna manufacturer.

User manuals for transmitters equipped with detachable antennas shall also contain the following notice in a conspicuous location:

This radio transmitter (identify the device by certification number) has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Immediately following the above notice, the manufacturer shall provide a list of all antenna types approved for use with the transmitter, indicating the maximum permissible antenna gain (in dBi).

5.2 Antenna Description

The antenna uses a unique coupling to the EUT, which complies with the antenna requirement. And the antenna gain is 3dBi. Please refer to the internal photos.

6 FCC §15.407(a) & IC RSS-247 §6.2.4 – Maximum Conducted Output Power

6.1 Applicable Standard

As per FCC §15.407(a):

(3) For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

As per IC RSS-247

For equipment operating in the band 5725-5850 MHz, the minimum 6 dB bandwidth shall be at least 500 kHz. The maximum conducted output power shall not exceed 1 W. The power spectral density shall not exceed 30 dBm in any 500 kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed point-to-point operations exclude the use of point-to-multipoint [Footnote 3](#) systems, omnidirectional applications and multiple collocated transmitters transmitting the same information.

6.2 Measurement Procedure

Test measurements are based on FCC KDB 789033 D02 General UNII Test Procedures New Rules v01

6.3 Test Equipment List and Details

Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
R & S	Signal Analyzer	FSQ	1155.5001.26	2015-03-09	1 year

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

6.4 Test Environmental Conditions

Temperature:	22-25° C
Relative Humidity:	40-43 %
ATM Pressure:	102.1-104.4 KPa

The testing was performed by Jin Yang on 2015-06-25 at RF site.

6.5 Test Results

Channel	Frequency (MHz)	Conducted Output Power (dBm)	Limit (dBm)	Result	Software Power Setting
802.11a					
Low	5745	12.16	30	Pass	16
Middle	5785	12.37	30	Pass	16
High	5825	12.50	30	Pass	16
802.11n-HT20					
Low	5745	12.19	30	Pass	16
Middle	5785	12.38	30	Pass	16
High	5825	12.53	30	Pass	16
802.11n-HT40					
Low	5755	12.07	30	Pass	16
High	5795	12.26	30	Pass	16

7 FCC §15.205, §15.209 & §15.407 & IC RSS-247 §6.2 –Radiated Spurious Emissions

7.1 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-Gen: 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) and RSS-Gen, 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 §15.407:

- (1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27dBm/MHz.
- (2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27dBm/MHz.
- (3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27dBm/MHz.
- (4) For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of -17dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of -27dBm/MHz.

As per IC RSS-247:

- (1) For transmitters operating in the 5.15-5.25 GHz band: all emissions outside the band 5150-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p. Any unwanted emissions that fall into the band 5250-5350 MHz must be 26 dBc, when measured using a resolution bandwidth between 1 and 5% of the occupied bandwidth, above 5.25 GHz. The 26 dB bandwidth may fall into the 5250-5350 MHz band; however, if the occupied bandwidth also falls within the 5250-5350 MHz band, the transmission is considered as intentional and the devices shall implement dynamic frequency selection (DFS) and transmitter power control (TPC) as per the requirements for the band 5250-5350 MHz, on the portion of the emission that resides in the 5250-5350 MHz band.
- (2) For devices with both operating frequencies and channel bandwidths contained within the band 5250-5350 MHz, the device shall comply with the following:
 - a. All emissions outside the band 5250-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p. if the equipment is intended for outdoor use; or
 - b. All emissions outside the band 5150-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p. and any emissions within the band 5150-5250 MHz shall meet the power spectral density limits of Section 6.2.1. The device shall be labelled or include in the user manual the following text “for indoor use only.”
- (3) For devices with operating frequencies in the band 5250-5350 MHz but having a channel bandwidth that overlaps the band 5150-5250 MHz, the devices’ unwanted emission shall not exceed -27 dBm/MHz e.i.r.p. outside the band 5150-5350 MHz and its power shall comply with the spectral power density for operation within the band 5150-5250 MHz. The device shall be labelled or include in the user manual the following text “for indoor use only.”
- (4) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27dBm/MHz.
- (5) For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of -17dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of -27dBm/MHz.

7.2 Test Setup

The radiated emissions tests were performed in the 5-meter Chamber, using the setup in accordance with ANSI C63.10-2013. The specification used was the FCC 15 Subpart E and IC RSS-247 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.

7.3 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.

For below 1GHz, 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. For above 1GHz, 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 1.5 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:

$$\text{RBW} = 100 \text{ kHz} / \text{VBW} = 300 \text{ kHz} / \text{Sweep} = \text{Auto}$$

Above 1000 MHz:

- (1) Peak: $\text{RBW} = 1\text{MHz} / \text{VBW} = 3\text{MHz} / \text{Sweep} = \text{Auto}$
- (2) Average: $\text{RBW} = 1\text{MHz} / \text{VBW} = 10\text{Hz} / \text{Sweep} = \text{Auto}$

7.4 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:

$$\text{CA} = \text{Ai} + \text{AF} + \text{CL} + \text{Atten} - \text{Ga}$$

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:

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

7.5 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	2014-09-17	1 year
HP/Agilent	Pre-amplifier	8449B	3008A0113	2015-05-19	1 year
Hewlett Packard	Pre-amplifier	8447D	2944A06639	2015-03-20	1 year
Agilent	Spectrum Analyzer	E4446A	US44300386	2014-09-03	1 year
EMCO	Horn Antenna	3115	9511-4627	2015-01-15	1 year
Rohde & Schwarz	EMI Test Receiver	ESCI 1166.5950K03	100337	2015-03-28	1 year
Wisewave	Horn Antenna	ARH-4223-02	10555-01	2012-08-09	3 years
Wisewave	Horn Antenna	ARH-2823-02	10555-02	2012-08-09	3 years
IW Microwave	High Frequency Cable	DC-1438	SPS-2303-3840-SPS	2014-09-23	1 year
Hewlett-Packard	5 ft N-type RF cable	-	1268	2014-07-24	1 year
-	SMA cable	-	C0002	Each time ¹	N/A

Note¹: cable and attenuator included in the test set-up will be checked each time before testing.

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

7.6 Test Environmental Conditions

Temperature:	22° C
Relative Humidity:	52 %
ATM Pressure:	101.9 kPa

The testing was performed by Jin Yang on 2015-06-25 in 5 m chamber 3.

7.7 Summary of Test Results

According to the data hereinafter, the EUT complied with FCC Title 47, Part 15E and IC RSS-247 standard's radiated emissions limits, and had the worst margin of:

30 MHz – 40 GHz:

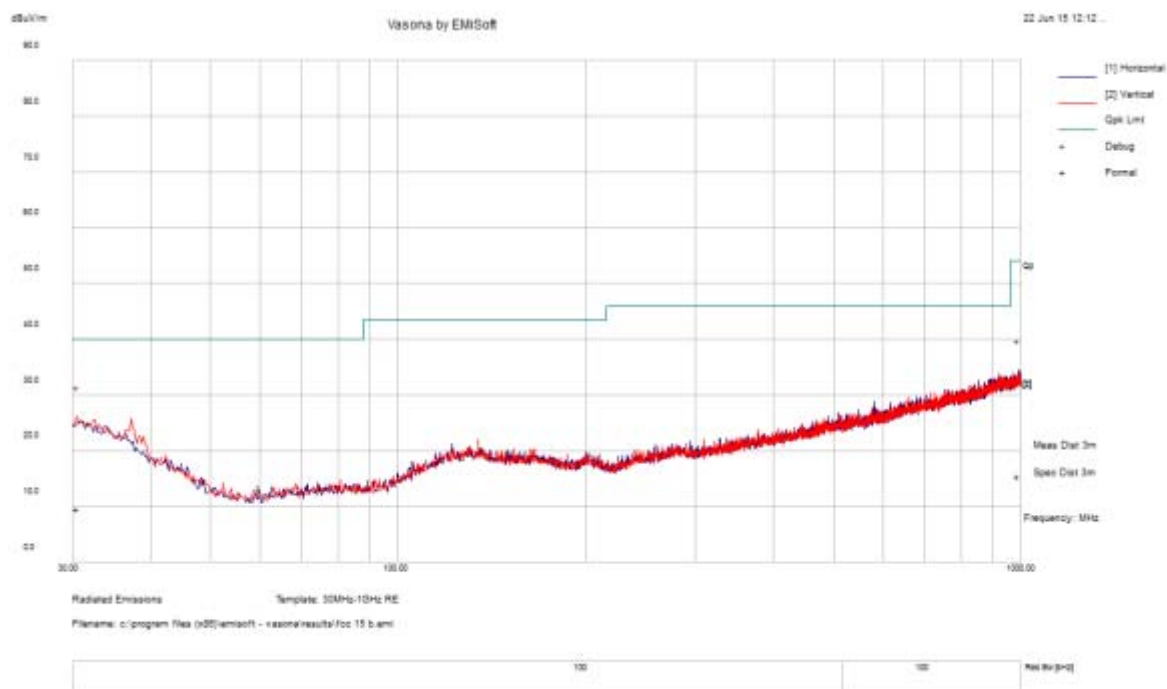
Mode: Transmitting			
Margin (dB)	Frequency (MHz)	Polarization (Horizontal/Vertical)	Mode, Channel
-0.29	10480	Vertical	5.2GHz 802.11a Low CH

Please refer to the following table and plots for specific test result details

7.8 Radiated Emissions Test Results

1) 30 MHz – 1 GHz, Measured at 3 meters

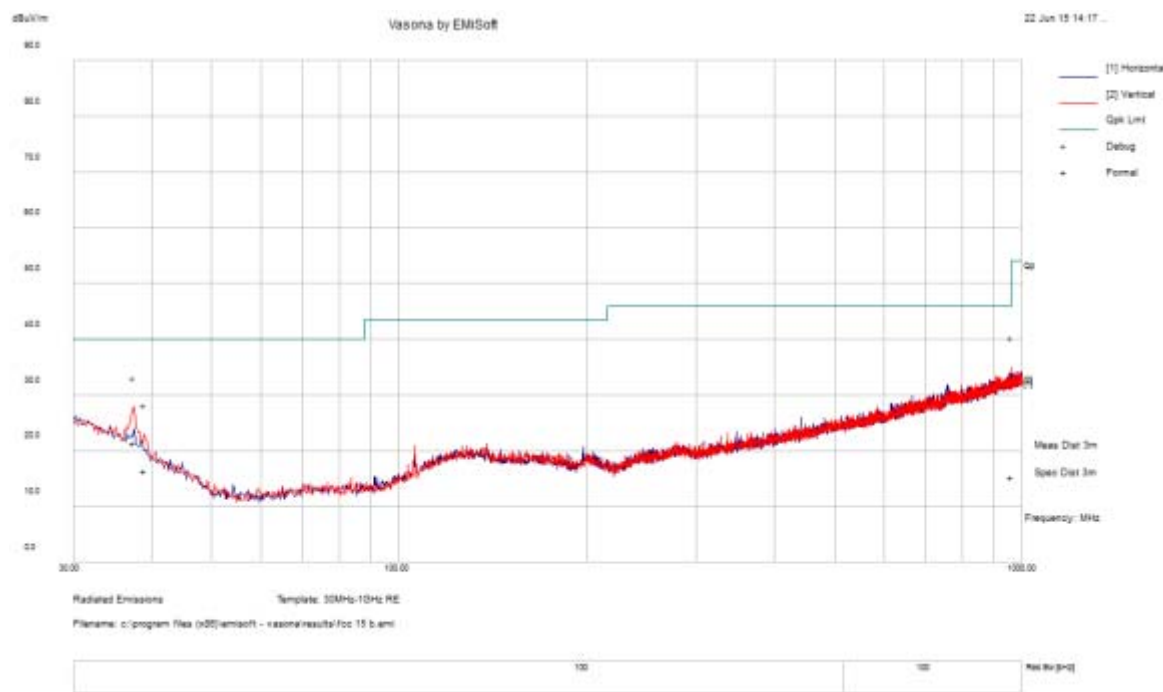
5.2 GHz Band 20 MHz Bandwidth, Quasi-Peak Measurements @ 3m, worst case



Frequency (MHz)	Corrected Amplitude (dBμV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Azimuth (degrees)	Limit (dBμV/m)	Measurement Type	Margin (dB)
30.47	9.71	108	H	110	40	QP	-30.29
989.12	15.44	170	H	349	54	QP	-38.56

Note: The worst case result was reported.

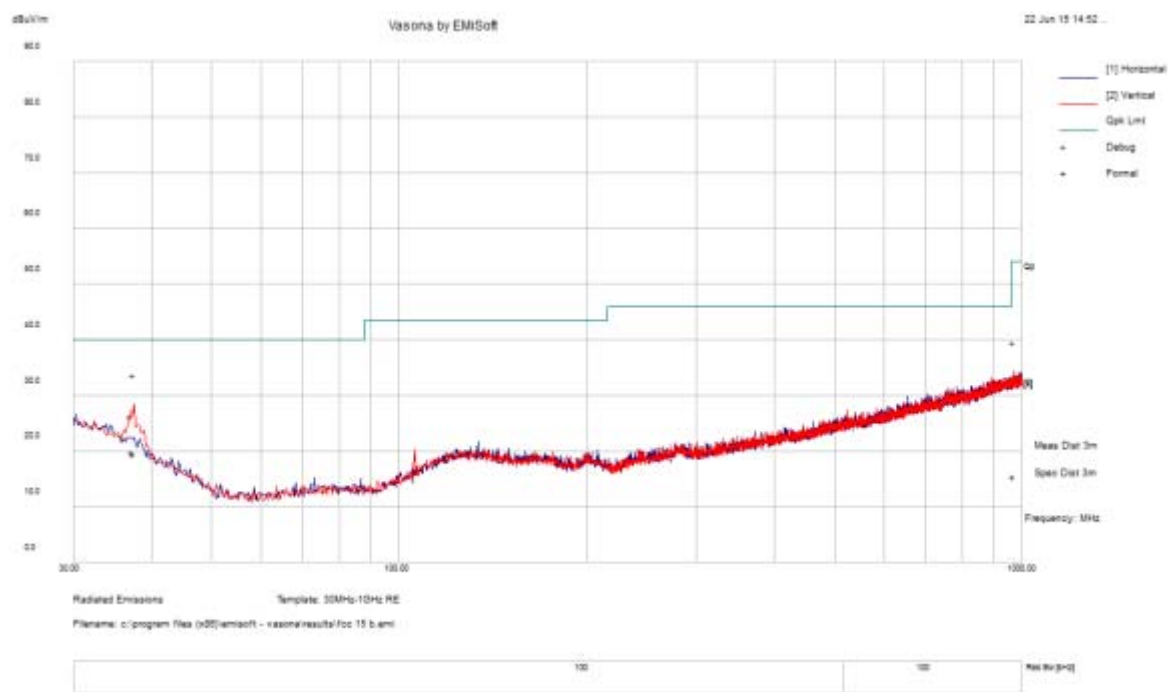
5.2 GHz Band 40 MHz Bandwidth, Quasi-Peak Measurements @ 3m, worst case



Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Azimuth (degrees)	Limit (dBµV/m)	Measurement Type	Margin (dB)
37.39675	21.42	126	V	360	40	QP	-18.58
38.98425	16.41	146	V	316	40	QP	-23.59
959.146	15.37	198	V	250	46	QP	-30.63

Note: The worst case result was reported.

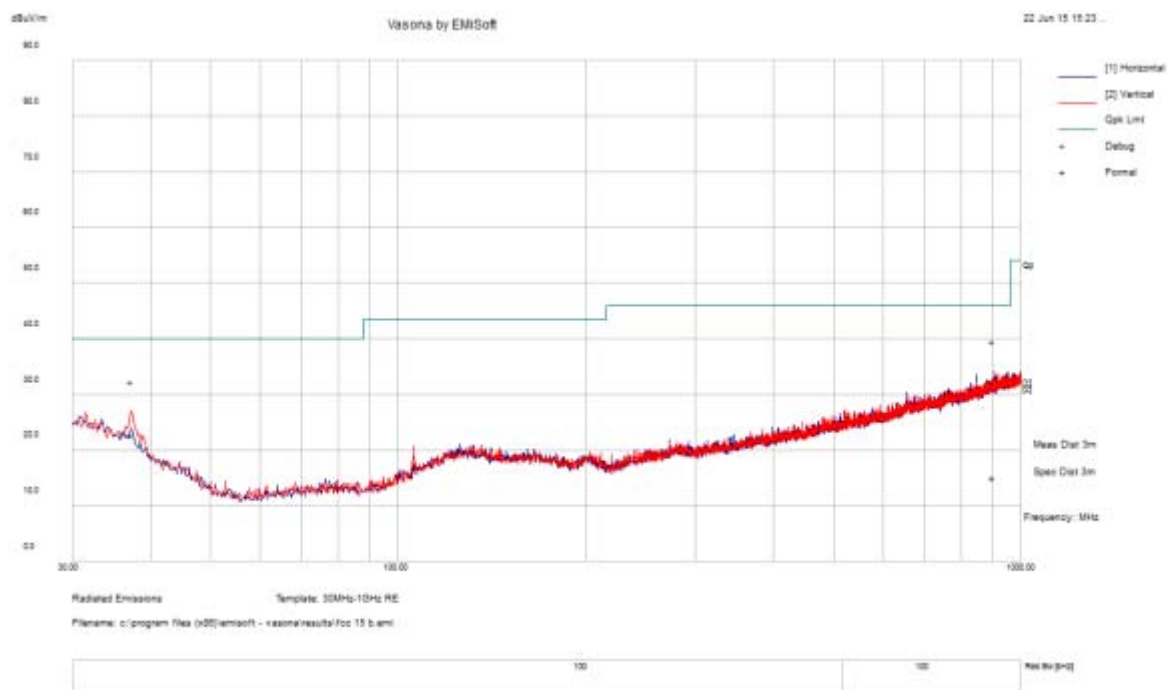
5.3 GHz Band 20 MHz Bandwidth, Quasi-Peak Measurements @ 3m, worst case



Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Azimuth (degrees)	Limit (dBµV/m)	Measurement Type	Margin (dB)
37.24852	19.9	113	V	150	40	QP	-20.1
37.41975	19.54	120	V	246	40	QP	-20.46
969.6415	15.56	284	H	29	54	QP	-38.44

Note: The worst case result was reported.

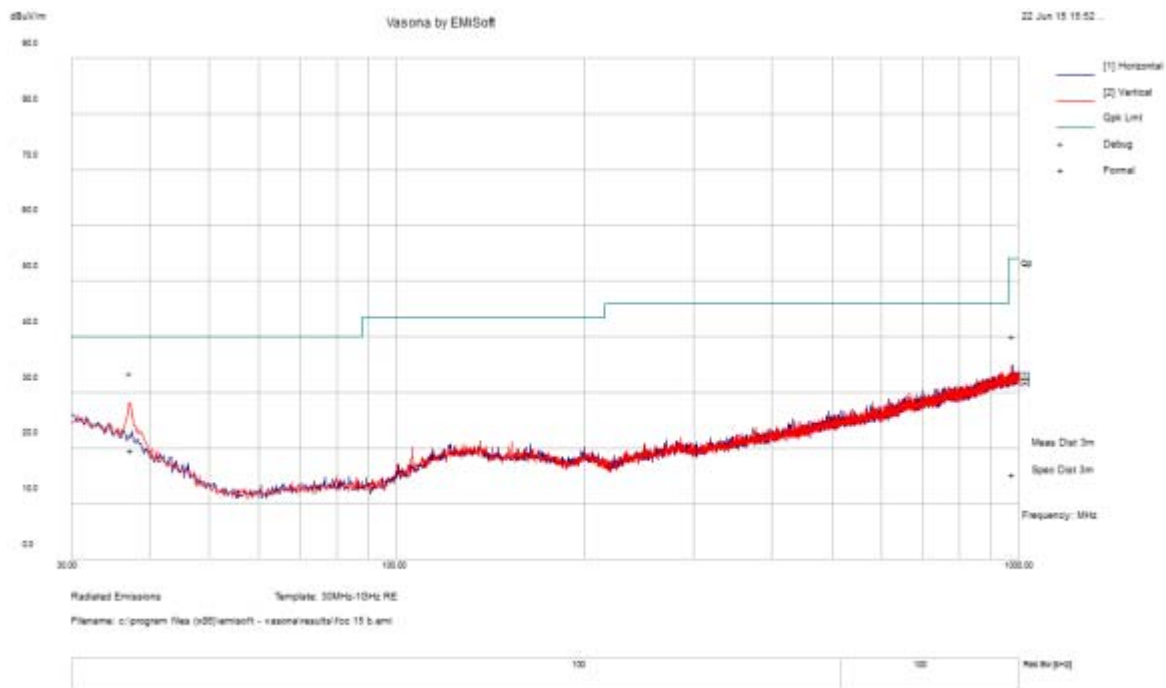
5.3 GHz Band 40 MHz Bandwidth, Quasi-Peak Measurements @ 3m, worst case



Frequency (MHz)	Corrected Amplitude (dBμV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Azimuth (degrees)	Limit (dBμV/m)	Measurement Type	Margin (dB)
37.3735	22.67	115	V	272	40	QP	-17.33
902.2158	15.17	187	V	19	46	QP	-30.83

Note: The worst case result was reported.

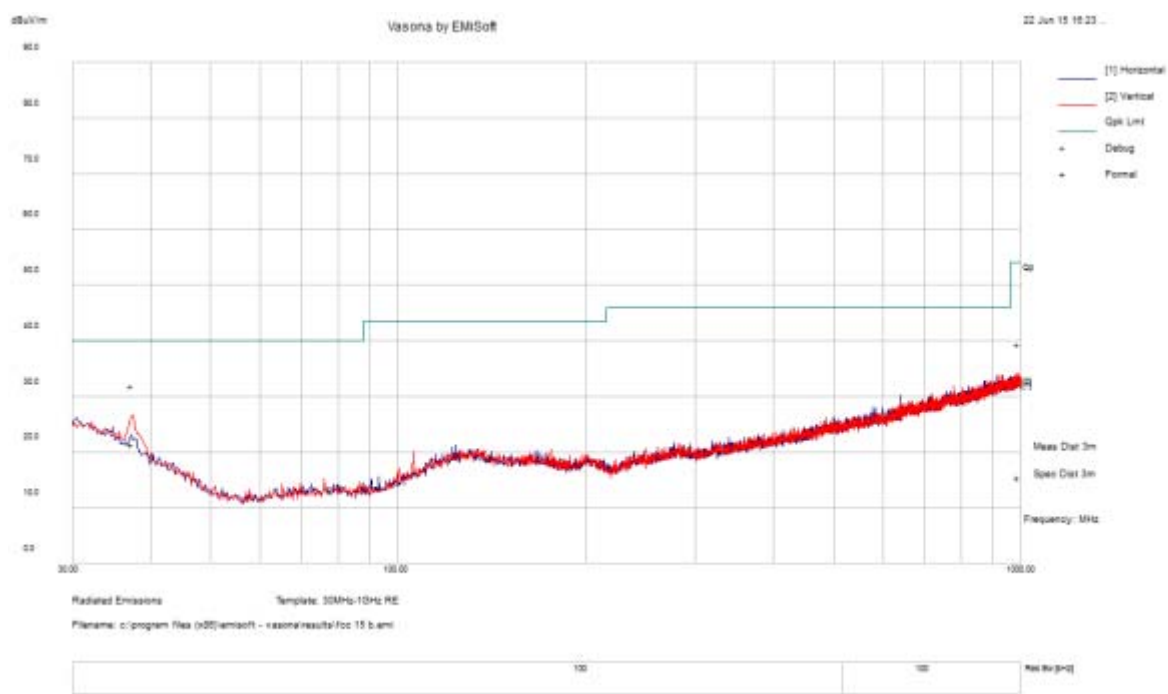
5.6 GHz Band 20 MHz Bandwidth, Quasi-Peak Measurements @ 3m, worst case



Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Azimuth (degrees)	Limit (dBµV/m)	Measurement Type	Margin (dB)
37.40025	19.68	168	V	126	40	QP	-20.32
975.6923	15.38	159	H	102	54	QP	-38.62

Note: The worst case result was reported.

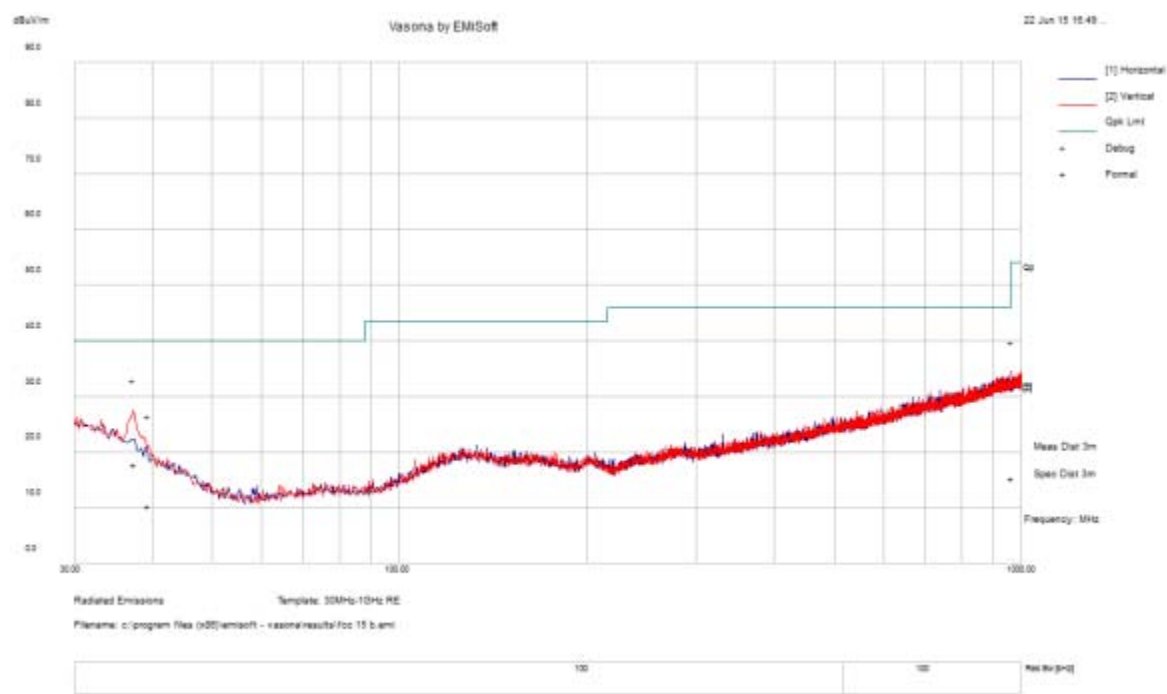
5.6 GHz Band 40 MHz Bandwidth, Quasi-Peak Measurements @ 3m, worst case



Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Azimuth (degrees)	Limit (dBµV/m)	Measurement Type	Margin (dB)
37.37925	21.44	119	V	126	40	QP	-18.56
989.5195	15.52	174	V	295	54	QP	-38.48

Note: The worst case result was reported.

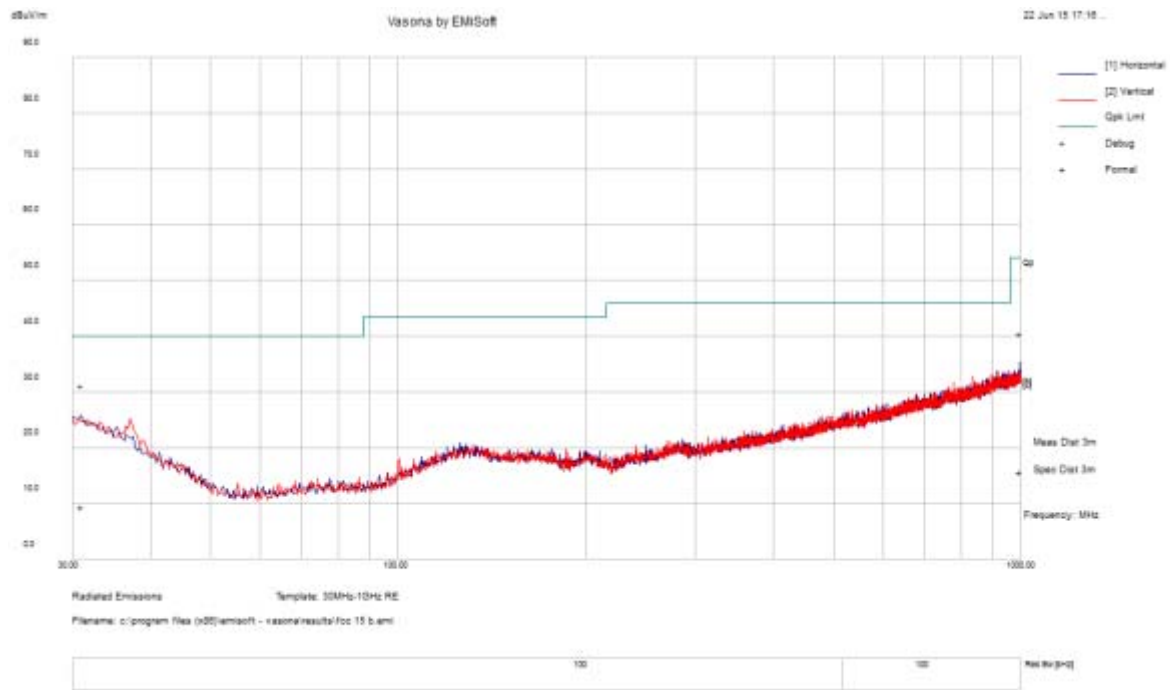
5.8 GHz Band 20 MHz Bandwidth, Quasi-Peak Measurements @ 3m, worst case



Frequency (MHz)	Corrected Amplitude (dBμV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Azimuth (degrees)	Limit (dBμV/m)	Measurement Type	Margin (dB)
37.422	17.8	101	V	22	40	QP	-22.2
39.51575	10.44	233	V	47	40	QP	-29.56
962.699	15.37	131	V	9	54	QP	-38.63

Note: The worst case result was reported.

5.8 GHz Band 40 MHz Bandwidth, Quasi-Peak Measurements @ 3m, worst case



Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Azimuth (degrees)	Limit (dBµV/m)	Measurement Type	Margin (dB)
31.0795	9.51	204	H	83	40	QP	-30.49
996.1043	15.63	277	H	320	54	QP	-38.37

Note: The worst case result was reported.

2) 1–40 GHz, Measured at 3 meters

5.2 GHz Band, 802.11a Mode

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)	
Low Channel 5180 MHz, measured at 3 meters											
5180	64.8	133	203	V	33.851	5.64	-	104.291	-	-	Peak
5180	55.28	208	100	H	33.84	5.64	-	94.76	-	-	Peak
5180	55.5	133	203	V	33.851	5.64	-	94.991	-	-	Ave
5180	44.7	208	100	H	33.84	5.64	-	84.18	-	-	Ave
5150	47.21	133	203	V	33.851	5.64	37.55	49.151	74	-24.849	Peak
5150	46.9	208	100	H	33.84	5.64	37.55	48.83	74	-25.17	Peak
5150	34.91	133	203	V	33.851	5.64	37.55	36.851	54	-17.149	Ave
5150	33.72	208	100	H	33.84	5.64	37.55	35.65	54	-18.35	Ave
10360	53.96	134	200	V	38.22	9.43	38.16	63.45	68.23	-4.78	Peak
10360	48.26	0	100	H	38.211	9.43	38.16	57.741	68.23	-10.489	Peak
15540	48.06	0	100	V	38.172	10.07	37.21	59.092	74	-14.908	Peak
15540	48.17	0	100	H	38.131	10.07	37.21	59.161	74	-14.839	Peak
15540	33.48	0	100	V	38.172	10.07	37.21	44.512	54	-9.488	Ave
15540	33.47	0	100	H	38.131	10.07	37.21	44.461	54	-9.539	Ave
20720	46.13	0	100	V	34.561	10.83	37.14	54.381	74	-19.619	Peak
20720	46.09	0	100	H	34.557	10.83	37.14	54.337	74	-19.663	Peak
20720	32.06	0	100	V	34.561	10.83	37.14	40.311	54	-13.689	Ave
20720	32.05	0	100	H	34.557	10.83	37.14	40.297	54	-13.703	Ave
Middle Channel 5200 MHz, measured at 3 meters											
5200	65.33	95	200	V	33.851	5.64	-	104.821	-	-	Peak
5200	55.31	208	100	H	33.84	5.64	-	94.79	-	-	Peak
5200	54.7	95	200	V	33.851	5.64	-	94.191	-	-	Ave
5200	44.57	208	100	H	33.84	5.64	-	84.05	-	-	Ave
10400	54.12	123	200	V	38.22	9.43	38.01	63.76	68.23	-4.47	Peak
10400	48.09	0	100	H	38.211	9.43	38.01	57.72	68.23	-10.51	Peak
15600	48.27	0	100	V	37.82	10.07	37.21	58.95	74	-15.05	Peak
15600	48.57	0	100	H	37.751	10.07	37.21	59.18	74	-14.82	Peak
15600	33.85	0	100	V	37.82	10.07	37.21	44.53	54	-9.47	Ave
15600	33.89	0	100	H	37.751	10.07	37.21	44.50	54	-9.50	Ave
20800	47.19	0	100	V	34.561	10.83	37.25	55.33	74	-18.67	Peak
20800	47.11	0	100	H	34.557	10.83	37.25	55.25	74	-18.75	Peak
20800	32.79	0	100	V	34.561	10.83	37.25	40.93	54	-13.07	Ave
20800	32.77	0	100	H	34.557	10.83	37.25	40.91	54	-13.09	Ave
6933.3	58.3	93	217	V	35.086	6.57	37.53	62.43	68.23	-5.80	Peak
6933.3	52.52	35	100	H	35.072	6.57	37.53	56.63	68.23	-11.60	Peak

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)	
High Channel 5240 MHz, measured at 3 meters											
5240	67.27	125	200	V	33.851	5.64	-	106.761	-	-	Peak
5240	55.48	338	100	H	33.84	5.64	-	94.96	-	-	Peak
5240	56.27	125	200	V	33.851	5.64	-	95.761	-	-	Ave
5240	44.48	338	100	H	33.84	5.64	-	83.96	-	-	Ave
6986.7	53	128	200	V	35.148	6.49	37.53	57.108	68.23	-11.122	Peak
6986.7	49.28	33	100	H	35.146	6.49	37.53	53.386	68.23	-14.844	Peak
10480	58.27	133	200	V	38.253	9.43	38.01	67.94	68.23	-0.29	Peak
10480	48.51	60	100	H	38.228	9.43	38.01	58.16	68.23	-10.07	Peak
15720	48.61	0	100	V	37.618	10.07	37.46	58.84	74	-15.16	Peak
15720	48.08	0	100	H	37.54	10.07	37.46	58.23	74	-15.77	Peak
15720	33.31	0	100	V	37.618	10.07	37.46	43.54	54	-10.46	Ave
15720	33.64	0	100	H	37.54	10.07	37.46	43.79	54	-10.21	Ave
20960	46.74	0	100	V	34.689	10.83	37.25	55.01	74	-18.99	Peak
20960	46.44	0	100	H	34.68	10.83	37.25	54.70	74	-19.30	Peak
20960	32.38	0	100	V	34.689	10.83	37.25	40.65	54	-13.35	Ave
20960	32.47	0	100	H	34.68	10.83	37.25	40.73	54	-13.27	Ave
5350	27.17	125	200	V	34.17	5.59	0.00	66.93	74	-7.07	Peak
5350	27.19	338	100	H	34.18	5.59	0.00	66.96	74	-7.04	Peak
5350	12.82	125	200	V	34.17	5.59	0.00	52.58	54	-1.42	Ave
5350	12.78	338	100	H	34.18	5.59	0.00	52.55	54	-1.45	Ave

Note: The limit for emissions outside of restrict band is -27 dBm/MHz for peak e.i.r.p.

5.2 GHz Band, 802.11n-HT20 Mode

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)	
Low Channel 5180 MHz, measured at 3 meters											
5180	64.72	76	195	V	33.851	5.64	-	104.211	-	-	Peak
5180	54.64	201	129	H	33.84	5.64	-	94.12	-	-	Peak
5180	54.54	76	195	V	33.851	5.64	-	94.031	-	-	Ave
5180	43.44	201	129	H	33.84	5.64	-	82.92	-	-	Ave
5150	49.65	76	195	V	33.851	5.64	37.55	51.591	74	-22.409	Peak
5150	46.66	201	129	H	33.84	5.64	37.55	48.59	74	-25.41	Peak
5150	35.2	76	195	V	33.851	5.64	37.55	37.141	54	-16.859	Ave
5150	33.57	201	129	H	33.84	5.64	37.55	35.5	54	-18.5	Ave
10360	53.48	109	196	V	38.22	9.43	38.16	62.97	68.23	-5.26	Peak
10360	47.64	0	100	H	38.211	9.43	38.16	57.121	68.23	-11.109	Peak
15540	47.9	0	100	V	38.172	10.07	37.21	58.932	74	-15.068	Peak
15540	47.96	0	100	H	38.131	10.07	37.21	58.951	74	-15.049	Peak
15540	33.36	0	100	V	38.172	10.07	37.21	44.392	54	-9.608	Ave
15540	33.77	0	100	H	38.131	10.07	37.21	44.761	54	-9.239	Ave
20720	46.18	0	100	V	34.561	10.83	37.14	54.431	74	-19.569	Peak
20720	47.03	0	100	H	34.557	10.83	37.14	55.277	74	-18.723	Peak
20720	32.04	0	100	V	34.561	10.83	37.14	40.291	54	-13.709	Ave
20720	32.46	0	100	H	34.557	10.83	37.14	40.707	54	-13.293	Ave
6906.7	62.85	94	220	V	35.086	6.57	37.53	66.976	68.23	-1.254	Peak
6906.7	57.02	30	100	H	35.072	6.57	37.53	61.132	68.23	-7.098	Peak
Middle Channel 5200 MHz, measured at 3 meters											
5200	65.92	25	198	V	33.851	5.64	-	105.411	-	-	Peak
5200	55.33	210	160	H	33.84	5.64	-	94.81	-	-	Peak
5200	55.06	25	198	V	33.851	5.64	-	94.551	-	-	Ave
5200	43.88	210	160	H	33.84	5.64	-	83.36	-	-	Ave
10400	55.98	0	195	V	38.22	9.43	38.01	65.62	68.23	-2.61	Peak
10400	48.11	0	100	H	38.211	9.43	38.01	57.74	68.23	-10.49	Peak
15600	48.63	0	100	V	37.82	10.07	37.21	59.31	74	-14.69	Peak
15600	47.61	0	100	H	37.751	10.07	37.21	58.22	74	-15.78	Peak
15600	33.48	0	100	V	37.82	10.07	37.21	44.16	54	-9.84	Ave
15600	33.50	0	100	H	37.751	10.07	37.21	44.11	54	-9.89	Ave
20800	47.05	0	100	V	34.561	10.83	37.25	55.19	74	-18.81	Peak
20800	46.94	0	100	H	34.557	10.83	37.25	55.08	74	-18.92	Peak
20800	33.10	0	100	V	34.561	10.83	37.25	41.24	54	-12.76	Ave
20800	32.89	0	100	H	34.557	10.83	37.25	41.03	54	-12.97	Ave
6933.3	58.64	126	194	V	35.086	6.57	37.53	62.77	68.23	-5.46	Peak
6933.3	51.51	143	100	H	35.072	6.57	37.53	55.62	68.23	-12.61	Peak

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)	
High Channel 5240 MHz, measured at 3 meters											
5240	65.86	39	155	V	33.851	5.64	-	105.351	-	-	Peak
5240	54.93	328	100	H	33.84	5.64	-	94.41	-	-	Peak
5240	55.68	39	155	V	33.851	5.64	-	95.171	-	-	Ave
5240	44.29	328	100	H	33.84	5.64	-	83.77	-	-	Ave
6986.7	53.37	126	200	V	35.148	6.49	37.53	57.478	68.23	-10.752	Peak
6986.7	48.64	319	112	H	35.146	6.49	37.53	52.746	68.23	-15.484	Peak
10480	55.58	137	197	V	38.253	9.43	38.01	65.25	68.23	-2.98	Peak
10480	47.29	0	100	H	38.228	9.43	38.01	56.94	68.23	-11.29	Peak
10480	38.88	137	197	V	38.253	9.43	38.01	48.55	54	-5.45	Ave
10480	33.05	0	100	H	38.228	9.43	38.01	42.70	54	-11.30	Ave
15720	47.68	0	100	V	37.618	10.07	37.46	57.91	74	-16.09	Peak
15720	47.56	0	100	H	37.54	10.07	37.46	57.71	74	-16.29	Peak
15720	33.44	0	100	V	37.618	10.07	37.46	43.67	54	-10.33	Ave
15720	33.39	0	100	H	37.54	10.07	37.46	43.54	54	-10.46	Ave
20960	46.89	0	100	V	34.689	10.83	37.25	55.16	74	-18.84	Peak
20960	46.24	0	100	H	34.68	10.83	37.25	54.50	74	-19.50	Peak
20960	32.23	0	100	V	34.689	10.83	37.25	40.50	54	-13.50	Ave
20960	32.31	0	100	H	34.68	10.83	37.25	40.57	54	-13.43	Ave
5350	27.57	39	155	V	34.17	5.59	0.00	67.33	74	-6.67	Peak
5350	26.95	328	100	H	34.18	5.59	0.00	66.72	74	-7.28	Peak
5350	13.29	39	155	V	34.17	5.59	0.00	53.05	54	-0.95	Ave
5350	13.22	328	100	H	34.18	5.59	0.00	52.99	54	-1.01	Ave

Note: The limit for emissions outside of restrict band is -27 dBm/MHz for peak e.i.r.p.

5.2 GHz Band, 802.11n-HT40 Mode

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)	
Low Channel 5190 MHz, measured at 3 meters											
5190	64.85	131	206	V	33.851	5.64	-	104.341	-	-	Peak
5190	57.3	6	104	H	33.84	5.64	-	96.78	-	-	Peak
5190	53.16	154	206	V	33.851	5.64	-	92.651	-	-	Ave
5190	45.15	6	104	H	33.84	5.64	-	84.63	-	-	Ave
5150	63.94	131	206	V	33.851	5.64	37.55	65.881	74	-8.119	Peak
5150	52.68	6	104	H	33.84	5.64	37.55	54.61	74	-19.39	Peak
5150	47.22	154	206	V	33.851	5.64	37.55	49.161	54	-4.839	Ave
5150	36.74	6	104	H	33.84	5.64	37.55	38.67	54	-15.33	Ave
10380	51.53	136	208	V	38.22	9.43	38.16	61.02	68.23	-7.21	Peak
10380	47.71	0	100	H	38.211	9.43	38.16	57.191	68.23	-11.039	Peak
15570	47.59	0	100	V	38.172	10.07	37.21	58.622	74	-15.378	Peak
15570	47.23	0	100	H	38.131	10.07	37.21	58.221	74	-15.779	Peak
15570	33.68	0	100	V	38.172	10.07	37.21	44.712	54	-9.288	Ave
15570	33.71	0	100	H	38.131	10.07	37.21	44.701	54	-9.299	Ave
20760	46.79	0	100	V	34.561	10.83	37.14	55.041	74	-18.959	Peak
20760	46.61	0	100	H	34.557	10.83	37.14	54.857	74	-19.143	Peak
20760	32.25	0	100	V	34.561	10.83	37.14	40.501	54	-13.499	Ave
20760	32.40	0	100	H	34.557	10.83	37.14	40.647	54	-13.353	Ave
6920	55.71	100	100	V	35.086	6.57	37.53	59.836	68.23	-8.394	Peak
6920	50.6	314	100	H	35.072	6.57	37.53	54.712	68.23	-13.518	Peak

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)	
High Channel 5240 MHz, measured at 3 meters											
5230	64.94	125	181	V	33.851	5.64	-	104.431	-	-	Peak
5230	56.36	338	100	H	33.84	5.64	-	95.84	-	-	Peak
5230	52.92	125	181	V	33.851	5.64	-	92.411	-	-	Ave
5230	44.52	338	100	H	33.84	5.64	-	84	-	-	Ave
6973.3	53.26	104	193	V	35.148	6.49	37.53	57.368	68.23	-10.862	Peak
6973.3	48.05	323	104	H	35.146	6.49	37.53	52.156	68.23	-16.074	Peak
10460	52.30	127	200	V	38.253	9.43	38.01	61.97	68.23	-6.26	Peak
10460	47.29	0	100	H	38.228	9.43	38.01	56.94	68.23	-11.29	Peak
15690	47.83	0	100	V	37.618	10.07	37.46	58.06	74	-15.94	Peak
15690	47.22	0	100	H	37.54	10.07	37.46	57.37	74	-16.63	Peak
15690	33.55	0	100	V	37.618	10.07	37.46	43.78	54	-10.22	Ave
15690	33.56	0	100	H	37.54	10.07	37.46	43.71	54	-10.29	Ave
20920	46.25	0	100	V	34.689	10.83	37.25	54.52	74	-19.48	Peak
20920	46.36	0	100	H	34.68	10.83	37.25	54.62	74	-19.38	Peak
20920	32.11	0	100	V	34.689	10.83	37.25	40.38	54	-13.62	Ave
20920	32.15	0	100	H	34.68	10.83	37.25	40.41	54	-13.59	Ave
5350	27.03	125	181	V	34.17	5.59	0.00	66.79	74	-7.21	Peak
5350	27.11	338	100	H	34.18	5.59	0.00	66.88	74	-7.12	Peak
5350	12.84	125	181	V	34.17	5.59	0.00	52.60	54	-1.40	Ave
5350	13.23	338	100	H	34.18	5.59	0.00	53.00	54	-1.00	Ave

Note: The limit for emissions outside of restrict band is -27 dBm/MHz for peak e.i.r.p.

5.3 GHz Band, 802.11a Mode

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)	
Low Channel 5260 MHz, measured at 3 meters											
5260	65.3	123	175	V	33.879	5.71	-	104.889	-	-	Peak
5260	56.49	43	100	H	33.869	5.71	-	96.069	-	-	Peak
5260	54.38	123	175	V	33.879	5.71	-	93.969	-	-	Ave
5260	46.19	43	100	H	33.869	5.71	-	85.769	-	-	Ave
5150	48.15	123	175	V	33.851	5.64	37.55	50.091	74	-23.909	Peak
5150	47.28	43	100	H	33.84	5.64	37.55	49.21	74	-24.79	Peak
5150	34.04	123	175	V	33.851	5.64	37.55	35.981	54	-18.019	Ave
5150	35.68	43	100	H	33.84	5.64	37.55	37.61	54	-16.39	Ave
10520	55.02	143	192	V	38.253	10.07	38.01	65.333	68.23	-2.897	Peak
10520	47.61	0	100	H	38.228	10.07	38.01	57.898	68.23	-10.332	Peak
15780	47.51	0	100	V	37.71	10.07	37.46	57.83	74	-16.17	Peak
15780	47.09	0	100	H	37.639	10.07	37.46	57.339	74	-16.661	Peak
15780	33.2	0	100	V	37.71	10.07	37.46	43.52	54	-10.48	Ave
15780	33.29	0	100	H	37.639	10.07	37.46	43.539	54	-10.461	Ave
21040	47.33	0	100	V	34.689	10.83	37.25	55.599	74	-18.401	Peak
21040	47.21	0	100	H	34.68	10.83	37.25	55.47	74	-18.53	Peak
21040	33.4	0	100	V	34.689	10.83	37.25	41.669	54	-12.331	Ave
21040	33.03	0	100	H	34.68	10.83	37.25	41.29	54	-12.71	Ave
7013.3	51.44	107	100	V	35.086	6.49	37.53	55.486	68.23	-12.744	Peak
7013.3	46.81	312	100	H	35.072	6.49	37.53	50.842	68.23	-17.388	Peak
Middle Channel 5300 MHz, measured at 3 meters											
5300	65.73	96	202	V	33.879	5.71	-	105.319	-	-	Peak
5300	57.24	225	137	H	33.869	5.71	-	96.819	-	-	Peak
5300	54.83	96	202	V	33.879	5.71	-	94.419	-	-	Ave
5300	46.63	225	137	H	33.869	5.71	-	86.209	-	-	Ave
10600	55.74	139	190	V	38.313	10.07	38.01	66.11	74	-7.89	Peak
10600	46.63	0	100	H	38.305	10.07	38.01	57.00	74	-17.01	Peak
10600	39.44	139	190	V	38.313	10.07	38.01	49.81	54	-4.19	Ave
10600	31.66	0	100	H	38.305	10.07	38.01	42.03	54	-11.98	Ave
15900	47.84	0	100	V	37.732	10.07	37.55	58.09	74	-15.91	Peak
15900	47.43	0	100	H	37.692	10.07	37.55	57.64	74	-16.36	Peak
15900	34.10	0	100	V	37.732	10.07	37.55	44.35	54	-9.65	Ave
15900	33.62	0	100	H	37.692	10.07	37.55	43.83	54	-10.17	Ave
21200	47.56	0	100	V	34.712	10.83	37.25	55.85	74	-18.15	Peak
21200	47.26	0	100	H	34.701	10.83	37.25	55.55	74	-18.45	Peak
21200	33.78	0	100	V	34.712	10.83	37.25	42.07	54	-11.93	Ave
21200	33.65	0	100	H	34.701	10.83	37.25	41.93	54	-12.07	Ave
7066.6	50.06	125	216	V	35.353	6.64	37.53	54.52	68.23	-13.71	Peak
7066.6	46.03	322	100	H	35.308	6.64	37.53	50.45	68.23	-17.78	Peak

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)	
High Channel 5320 MHz, measured at 3 meters											
5320	66.13	120	189	V	33.879	5.71	-	105.719	-	-	Peak
5320	56.83	221	110	H	33.869	5.71	-	96.409	-	-	Peak
5320	54.87	120	189	V	33.879	5.71	-	94.459	-	-	Ave
5320	46.46	221	110	H	33.869	5.71	-	86.039	-	-	Ave
7093.3	51.83	125	207	V	35.353	6.64	37.53	56.293	68.23	-11.937	Peak
7093.3	47.7	322	100	H	35.308	6.64	37.53	52.118	68.23	-16.112	Peak
10640	53.99	140	189	V	38.313	10.07	37.8	64.57	74	-9.43	Peak
10640	47.33	0	100	H	38.305	10.07	37.8	57.91	74	-16.10	Peak
10640	39.28	140	189	V	38.313	10.07	37.8	49.86	54	-4.14	Ave
10640	32.02	0	100	H	38.305	10.07	37.8	42.60	54	-11.41	Ave
15960	47.18	0	100	V	37.718	10.07	37.55	57.42	74	-16.58	Peak
15960	46.75	0	100	H	37.649	10.07	37.55	56.92	74	-17.08	Peak
15960	32.30	0	100	V	37.718	10.07	37.55	42.54	54	-11.46	Ave
15960	32.96	0	100	H	37.649	10.07	37.55	43.13	54	-10.87	Ave
21280	47.10	0	100	V	34.712	10.83	37.21	55.43	74	-18.57	Peak
21280	47.16	0	100	H	34.701	10.83	37.21	55.48	74	-18.52	Peak
21280	33.02	0	100	V	34.712	10.83	37.21	41.35	54	-12.65	Ave
21280	32.41	0	100	H	34.701	10.83	37.21	40.73	54	-13.27	Ave
5350	27.35	120	189	V	34.17	5.59	0.00	67.11	74	-6.89	Peak
5350	27.33	221	110	H	34.18	5.59	0.00	67.10	74	-6.90	Peak
5350	13.29	120	189	V	34.17	5.59	0.00	53.05	54	-0.95	Ave
5350	13.26	221	110	H	34.18	5.59	0.00	53.03	54	-0.97	Ave

Note: The limit for emissions outside of restrict band is -27dBm/MHz for peak e.i.r.p.

5.3 GHz Band, 802.11n-HT20 Mode

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)	
Low Channel 5260 MHz, measured at 3 meters											
5260	64.91	121	213	V	33.879	5.71	-	104.499	-	-	Peak
5260	58.41	31	123	H	33.869	5.71	-	97.989	-	-	Peak
5260	54.63	121	213	V	33.879	5.71	-	94.219	-	-	Ave
5260	47.5	31	123	H	33.869	5.71	-	87.079	-	-	Ave
5150	47.91	121	213	V	33.851	5.64	37.55	49.851	74	-24.149	Peak
5150	48.31	31	123	H	33.84	5.64	37.55	50.24	74	-23.76	Peak
5150	34.78	121	213	V	33.851	5.64	37.55	36.721	54	-17.279	Ave
5150	36.48	31	123	H	33.84	5.64	37.55	38.41	54	-15.59	Ave
10520	56.43	140	181	V	38.253	10.07	38.01	66.743	68.23	-1.487	Peak
10520	47.41	0	100	H	38.228	10.07	38.01	57.698	68.23	-10.532	Peak
15780	48.55	0	100	V	37.71	10.07	37.46	58.87	74	-15.13	Peak
15780	47.88	0	100	H	37.639	10.07	37.46	58.129	74	-15.871	Peak
15780	34.03	0	100	V	37.71	10.07	37.46	44.35	54	-9.65	Ave
15780	33.61	0	100	H	37.639	10.07	37.46	43.859	54	-10.141	Ave
21040	47.98	0	100	V	34.689	10.83	37.25	56.249	74	-17.751	Peak
21040	47.58	0	100	H	34.68	10.83	37.25	55.84	74	-18.16	Peak
21040	33	0	100	V	34.689	10.83	37.25	41.269	54	-12.731	Ave
21040	33.01	0	100	H	34.68	10.83	37.25	41.27	54	-12.73	Ave
7013.3	51.25	104	100	V	35.086	6.49	37.53	55.296	68.23	-12.934	Peak
7013.3	46.85	330	100	H	35.072	6.49	37.53	50.882	68.23	-17.348	Peak
Middle Channel 5300 MHz, measured at 3 meters											
5300	66.03	122	172	V	33.879	5.71	-	105.619	-	-	Peak
5300	58.38	348	100	H	33.869	5.71	-	97.959	-	-	Peak
5300	54.86	122	172	V	33.879	5.71	-	94.449	-	-	Ave
5300	47.79	348	100	H	33.869	5.71	-	87.369	-	-	Ave
10600	56.54	139	180	V	38.313	10.07	38.01	66.91	74	-7.09	Peak
10600	45.57	0	100	H	38.305	10.07	38.01	55.94	74	-18.07	Peak
10600	40.79	139	180	V	38.313	10.07	38.01	51.16	54	-2.84	Ave
10600	31.38	0	100	H	38.305	10.07	38.01	41.75	54	-12.26	Ave
15900	47.45	0	100	V	37.732	10.07	37.55	57.70	74	-16.30	Peak
15900	47.68	0	100	H	37.692	10.07	37.55	57.89	74	-16.11	Peak
15900	34.16	0	100	V	37.732	10.07	37.55	44.41	54	-9.59	Ave
15900	33.51	0	100	H	37.692	10.07	37.55	43.72	54	-10.28	Ave
21200	47.84	0	100	V	34.712	10.83	37.25	56.13	74	-17.87	Peak
21200	47.39	0	100	H	34.701	10.83	37.25	55.67	74	-18.33	Peak
21200	33.61	0	100	V	34.712	10.83	37.25	41.90	54	-12.10	Ave
21200	33.23	0	100	H	34.701	10.83	37.25	41.51	54	-12.49	Ave
7066.7	50.23	125	200	V	35.353	6.64	37.53	54.69	68.23	-13.54	Peak
7066.7	46.32	342	100	H	35.308	6.64	37.53	50.74	68.23	-17.49	Peak

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)	
High Channel 5320 MHz, measured at 3 meters											
5320	67.39	127	200	V	33.879	5.71	-	106.979	-	-	Peak
5320	58.19	230	147	H	33.869	5.71	-	97.769	-	-	Peak
5320	55.85	127	200	V	33.879	5.71	-	95.439	-	-	Ave
5320	46.74	230	147	H	33.869	5.71	-	86.319	-	-	Ave
7093.3	51.7	129	100	V	35.353	6.64	37.53	56.163	68.23	-12.067	Peak
7093.3	48.54	327	100	H	35.308	6.64	37.53	52.958	68.23	-15.272	Peak
10640	55.49	137	147	V	38.313	10.07	37.8	66.07	74	-7.93	Peak
10640	49.22	0	100	H	38.305	10.07	37.8	59.80	74	-14.21	Peak
10640	40.48	137	147	V	38.313	10.07	37.8	51.06	54	-2.94	Ave
10640	32.55	0	100	H	38.305	10.07	37.8	43.13	54	-10.88	Ave
15960	48.23	0	100	V	37.718	10.07	37.55	58.47	74	-15.53	Peak
15960	48.16	0	100	H	37.649	10.07	37.55	58.33	74	-15.67	Peak
15960	33.59	0	100	V	37.718	10.07	37.55	43.83	54	-10.17	Ave
15960	33.35	0	100	H	37.649	10.07	37.55	43.52	54	-10.48	Ave
21280	46.69	0	100	V	34.712	10.83	37.21	55.02	74	-18.98	Peak
21280	46.57	0	100	H	34.701	10.83	37.21	54.89	74	-19.11	Peak
21280	33.34	0	100	V	34.712	10.83	37.21	41.67	54	-12.33	Ave
21280	33.39	0	100	H	34.701	10.83	37.21	41.71	54	-12.29	Ave
5350	27.62	127	200	V	34.17	5.59	0.00	67.38	74	-6.62	Peak
5350	27.13	230	147	H	34.18	5.59	0.00	66.90	74	-7.10	Peak
5350	12.79	127	200	V	34.17	5.59	0.00	52.55	54	-1.45	Ave
5350	12.82	230	147	H	34.18	5.59	0.00	52.59	54	-1.41	Ave

Note: The limit for emissions outside of restrict band is -27dBm/MHz for peak e.i.r.p.

5.3 GHz Band, 802.11n-HT40 Mode

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)	
Low Channel 5270 MHz, measured at 3 meters											
5270	64.64	143	173	V	33.879	5.71	-	104.229	-	-	Peak
5270	56.88	348	101	H	33.869	5.71	-	96.459	-	-	Peak
5270	53	143	173	V	33.879	5.71	-	92.589	-	-	Ave
5270	44.81	348	101	H	33.869	5.71	-	84.389	-	-	Ave
5150	48.71	143	173	V	33.851	5.64	37.55	50.651	74	-23.349	Peak
5150	47.25	348	101	H	33.84	5.64	37.55	49.18	74	-24.82	Peak
5150	37.41	143	173	V	33.851	5.64	37.55	39.351	54	-14.649	Ave
5150	34.12	348	101	H	33.84	5.64	37.55	36.05	54	-17.95	Ave
10540	52.95	122	174	V	38.253	10.07	38.01	63.263	68.23	-4.967	Peak
10540	46.91	0	100	H	38.228	10.07	38.01	57.198	68.23	-11.032	Peak
15810	48.02	0	100	V	37.71	10.07	37.46	58.34	74	-15.66	Peak
15810	48	0	100	H	37.639	10.07	37.46	58.249	74	-15.751	Peak
15810	34.14	0	100	V	37.71	10.07	37.46	44.46	54	-9.54	Ave
15810	34.17	0	100	H	37.639	10.07	37.46	44.419	54	-9.581	Ave
21080	47.44	0	100	V	34.689	10.83	37.25	55.709	74	-18.291	Peak
21080	47.64	0	100	H	34.68	10.83	37.25	55.9	74	-18.1	Peak
21080	33.14	0	100	V	34.689	10.83	37.25	41.409	54	-12.591	Ave
21080	33.68	0	100	H	34.68	10.83	37.25	41.94	54	-12.06	Ave
7026.7	52.62	121	100	V	35.086	6.49	37.53	56.666	68.23	-11.564	Peak
7026.7	47.31	331	100	H	35.072	6.49	37.53	51.342	68.23	-16.888	Peak

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)	
High Channel 5310 MHz, measured at 3 meters											
5310	64.94	126	191	V	33.879	5.71	-	104.529	-	-	Peak
5310	57.75	207	124	H	33.869	5.71	-	97.329	-	-	Peak
5310	53.6	126	191	V	33.879	5.71	-	93.189	-	-	Ave
5310	45.85	207	124	H	33.869	5.71	-	85.429	-	-	Ave
7080	51.13	124	217	V	35.353	6.64	37.53	55.593	68.23	-12.637	Peak
7080	47.61	327	108	H	35.308	6.64	37.53	52.028	68.23	-16.202	Peak
10620	53.05	138	171	V	38.313	10.07	37.8	63.63	74	-10.37	Peak
10620	47.28	0	100	H	38.305	10.07	37.8	57.86	74	-16.15	Peak
10620	38.03	138	171	V	38.313	10.07	37.8	48.61	54	-5.39	Ave
10620	33.06	0	100	H	38.305	10.07	37.8	43.64	54	-10.37	Ave
15930	47.06	0	100	V	37.718	10.07	37.55	57.30	74	-16.70	Peak
15930	47.45	0	100	H	37.649	10.07	37.55	57.61	74	-16.39	Peak
15930	33.36	0	100	V	37.718	10.07	37.55	43.60	54	-10.40	Ave
15930	33.20	0	100	H	37.649	10.07	37.55	43.37	54	-10.63	Ave
21240	47.40	0	100	V	34.712	10.83	37.25	55.70	74	-18.30	Peak
21240	46.68	0	100	H	34.701	10.83	37.25	54.96	74	-19.04	Peak
21240	32.62	0	100	V	34.712	10.83	37.25	40.91	54	-13.09	Ave
21240	33.02	0	100	H	34.701	10.83	37.25	41.30	54	-12.70	Ave
5350	28.57	126	191	V	34.17	5.59	0.00	68.33	74	-5.67	Peak
5350	27.48	207	124	H	34.18	5.59	0.00	67.25	74	-6.75	Peak
5350	14.22	126	191	V	34.17	5.59	0.00	53.98	54	-0.02	Ave
5350	13.38	207	124	H	34.18	5.59	0.00	53.15	54	-0.85	Ave

Note: The limit for emissions outside of restrict band is -27dBm/MHz for peak e.i.r.p.

5.6 GHz Band, 802.11a Mode

Frequency (MHz)	S.A. Reading (dBμV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre- Amp. (dB)	Cord. Reading (dBμV/m)	FCC		Comments
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBμV/m)	Margin (dB)	
Low Channel 5500 MHz, measured at 3 meters											
5500	66.15	267	162	V	35.08	5.34	-	106.57	-	-	Peak
5500	56.55	160	122	H	35.076	5.34	-	96.966	-	-	Peak
5500	55.8	267	162	V	35.08	5.34	-	96.22	-	-	Ave
5500	46	160	122	H	35.076	5.34	-	86.416	-	-	Ave
5460	26.9	267	162	V	35.08	5.34	-	67.32	74	-6.68	Peak
5460	27.59	160	122	H	35.076	5.34	-	68.006	74	-5.994	Peak
5460	13.27	267	162	V	35.08	5.34	-	53.69	54	-0.31	Ave
5460	12.78	160	122	H	35.076	5.34	-	53.196	54	-0.804	Ave
11000	55.25	123	165	V	38.35	10.07	35.79	67.88	74	-6.12	Peak
11000	44.32	0	100	H	38.347	10.07	35.79	56.947	74	-17.053	Peak
11000	39.52	123	165	V	38.35	10.07	35.79	52.15	54	-1.85	Ave
11000	28.65	0	100	H	38.347	10.07	35.79	41.277	54	-12.723	Ave
16500	44.66	0	100	V	39.009	10.83	33.62	60.879	68.23	-7.351	Peak
16500	43.7	0	100	H	38.964	10.83	33.62	59.874	68.23	-8.356	Peak
22000	43.35	0	100	V	35.102	11.44	32.79	57.102	68.23	-11.128	Peak
22000	42.05	0	100	H	35.098	11.44	32.79	55.798	68.23	-12.432	Peak
7333.3	48.7	288	100	V	38.299	7.39	35.61	58.779	74	-15.221	Peak
7333.3	45.48	0	122	H	38.314	7.39	35.61	55.574	74	-18.426	Peak
7333.3	41.44	288	100	V	38.299	7.39	35.61	51.519	54	-2.481	Ave
7333.3	31.45	0	122	H	38.314	7.39	35.61	41.544	54	-12.456	Ave
Middle Channel 5580 MHz, measured at 3 meters											
5580	65.34	231	97	V	34.993	5.34	-	105.673	-	-	Peak
5580	58.48	150	197	H	35.032	5.34	-	98.852	-	-	Peak
5580	55.23	231	97	V	34.993	5.34	-	95.563	-	-	Ave
5580	47.8	150	197	H	35.032	5.34	-	88.172	-	-	Ave
11160	58.17	226	167	V	38.631	10.07	35.55	71.32	74	-2.68	Peak
11160	43.70	0	100	H	38.635	10.07	35.55	56.86	74	-17.15	Peak
11160	39.97	226	167	V	38.631	10.07	35.55	53.12	54	-0.88	Ave
11160	28.56	0	100	H	38.635	10.07	35.55	41.72	54	-12.29	Ave
16740	44.71	0	100	V	39.569	10.83	33.6	61.51	68.23	-6.72	Peak
16740	43.06	0	100	H	39.568	10.83	33.6	59.86	68.23	-8.37	Peak
22320	42.77	0	100	V	34.971	11.44	32.79	56.39	74	-17.61	Peak
22320	42.58	0	100	H	34.962	11.44	32.79	56.19	74	-17.81	Peak
22320	28.31	0	100	V	34.971	11.44	32.79	41.93	54	-12.07	Ave
22320	28.73	0	100	H	34.962	11.44	32.79	42.34	54	-11.66	Ave
7440	49.04	231.00	97.00	V	38.091	7.46	35.61	58.98	74	-15.02	Peak
7440	45.80	42.00	100.00	H	38.115	7.46	35.61	55.77	74	-18.24	Peak
7440	40.65	231.00	97.00	V	38.091	7.46	35.61	50.59	54	-3.41	Ave
7440	32.32	42.00	100.00	H	38.115	7.46	35.61	42.29	54	-11.72	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)	
High Channel 5700 MHz, measured at 3 meters											
5700	67.69	243	156	V	33.949	5.57	-	107.209	-	-	Peak
5700	58.06	141	191	H	33.958	5.57	-	97.588	-	-	Peak
5700	56.84	243	156	V	33.949	5.57	-	96.359	-	-	Ave
5700	47.03	141	191	H	33.958	5.57	-	86.558	-	-	Ave
7600	48.31	91	200	V	36.36	7.5	35.79	56.38	74	-17.62	Peak
7600	45.36	33	100	H	36.341	7.5	35.79	53.411	74	-20.589	Peak
7600	42.09	91	200	V	36.36	7.5	35.79	50.16	54	-3.84	Ave
7600	33.12	33	100	H	36.341	7.5	35.79	41.171	54	-12.829	Ave
11400	53.98	70	151	V	38.893	10.07	35.31	67.63	74	-6.37	Peak
11400	42.52	0	100	H	38.431	10.07	35.31	55.71	74	-18.29	Peak
11400	38.95	70	151	V	38.893	10.07	35.31	52.60	54	-1.40	Ave
11400	28.06	0	100	H	38.431	10.07	35.31	41.25	54	-12.75	Ave
17100	43.48	0	100	V	42.435	10.83	33.27	63.48	68.23	-4.76	Peak
17100	43.16	0	100	H	42.491	10.83	33.27	63.21	68.23	-5.02	Peak
22800	43.51	0	100	V	35.334	12.4	32.79	58.45	74	-15.55	Peak
22800	43.96	0	100	H	35.329	12.4	32.79	58.90	74	-15.10	Peak
22800	28.30	0	100	V	35.334	12.4	32.79	43.24	54	-10.76	Ave
22800	28.31	0	100	H	35.329	12.4	32.79	43.25	54	-10.75	Ave

Note: The limit for emissions outside of restrict band is -27dBm/MHz for peak e.i.r.p.

5.6 GHz Band, 802.11n-HT20 Mode

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)	
Low Channel 5500 MHz, measured at 3 meters											
5500	67.18	149	154	V	34.258	5.34	-	106.778	-	-	Peak
5500	56.06	227	100	H	34.234	5.34	-	95.634	-	-	Peak
5500	56.31	149	154	V	34.258	5.34	-	95.908	-	-	Ave
5500	45.23	227	100	H	34.234	5.34	-	84.804	-	-	Ave
5460	27.27	149	154	V	34.258	5.34	-	66.868	74	-7.132	Peak
5460	27.3	227	100	H	34.234	5.34	-	66.874	74	-7.126	Peak
5460	13.24	149	154	V	34.258	5.34	-	52.838	54	-1.162	Ave
5460	13.21	227	100	H	34.234	5.34	-	52.784	54	-1.216	Ave
11000	44.71	0	100	V	38.35	10.07	36.3	56.83	74	-17.17	Peak
11000	45	0	100	H	38.347	10.07	36.3	57.117	74	-16.883	Peak
11000	29.41	0	100	V	38.35	10.07	36.3	41.53	54	-12.47	Ave
11000	29.22	0	100	H	38.347	10.07	36.3	41.337	54	-12.663	Ave
16500	44.11	0	100	V	39.009	10.83	33.65	60.299	68.23	-7.931	Peak
16500	44.38	0	100	H	38.964	10.83	33.65	60.524	68.23	-7.706	Peak
22000	44.1	0	100	V	35.102	11.44	32.79	57.852	68.23	-10.378	Peak
22000	43.41	0	100	H	35.098	11.44	32.79	57.158	68.23	-11.072	Peak
7333.3	44.52	0	100	V	36.222	7.39	35.61	52.522	74	-21.478	Peak
7333.3	43.78	0	100	H	36.246	7.39	35.61	51.806	74	-22.194	Peak
7333.3	29.11	0	100	V	36.222	7.39	35.61	37.112	54	-16.888	Ave
7333.3	29.42	0	100	H	36.246	7.39	35.61	37.446	54	-16.554	Ave
Middle Channel 5580 MHz, measured at 3 meters											
5580	66.66	128	163	V	33.949	5.34	-	105.949	-	-	Peak
5580	56.68	213	100	H	34.106	5.34	-	96.126	-	-	Peak
5580	56.24	128	163	V	33.949	5.34	-	95.529	-	-	Ave
5580	46.22	213	100	H	34.106	5.34	-	85.666	-	-	Ave
11160	58.80	100	162	V	38.631	10.07	36.71	70.79	74	-3.21	Peak
11160	43.88	0	100	H	38.635	10.07	36.71	55.88	74	-18.13	Peak
11160	40.29	100	162	V	38.631	10.07	36.71	52.28	54	-1.719	Ave
11160	29.28	0	100	H	38.635	10.07	36.71	41.28	54	-12.73	Ave
16740	43.97	0	100	V	39.569	10.83	33.61	60.76	68.23	-7.47	Peak
16740	43.67	0	100	H	39.568	10.83	33.61	60.46	68.23	-7.77	Peak
22320	43.53	0	100	V	34.971	11.44	32.79	57.15	74	-16.85	Peak
22320	42.50	0	100	H	34.962	11.44	32.79	56.11	74	-17.89	Peak
22320	28.18	0	100	V	34.971	11.44	32.79	41.80	54	-12.20	Ave
22320	28.77	0	100	H	34.962	11.44	32.79	42.38	54	-11.62	Ave
7440	47.58	0	100	V	36.449	7.46	35.61	55.88	74	-18.12	Peak
7440	45.48	0	100	H	36.447	7.46	35.61	53.78	74	-20.22	Peak
7440	39.65	0	100	V	36.449	7.46	35.61	47.95	54	-6.05	Ave
7440	33.39	0	100	H	36.447	7.46	35.61	41.69	54	-12.31	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)	
High Channel 5700 MHz, measured at 3 meters											
5700	66.49	128	165	V	33.949	5.57	-	106.009	-	-	Peak
5700	57.38	226	100	H	33.958	5.57	-	96.908	-	-	Peak
5700	56.1	128	165	V	33.949	5.57	-	95.619	-	-	Ave
5700	46.64	226	100	H	33.958	5.57	-	86.168	-	-	Ave
7600	49.51	127	194	V	36.36	7.5	35.61	57.76	74	-16.24	Peak
7600	45.79	39	100	H	36.341	7.5	35.61	54.021	74	-19.979	Peak
7600	42.69	127	194	V	36.36	7.5	35.61	50.94	54	-3.06	Ave
7600	33.19	39	100	H	36.341	7.5	35.61	41.421	54	-12.579	Ave
11400	56.34	128	157	V	38.893	10.07	36.89	68.41	74	-5.59	Peak
11400	43.80	0	100	H	38.431	10.07	36.89	55.41	74	-18.59	Peak
11400	39.32	128	157	V	38.893	10.07	36.89	51.39	54	-2.607	Ave
11400	29.35	0	100	H	38.431	10.07	36.89	40.96	54	-13.04	Ave
17100	42.46	0	100	V	42.435	10.83	33.3	62.43	68.23	-5.80	Peak
17100	43.30	0	100	H	42.491	10.83	33.3	63.32	68.23	-4.91	Peak
22800	42.81	0	100	V	35.334	12.4	32.79	57.75	74	-16.25	Peak
22800	43.12	0	100	H	35.329	12.4	32.79	58.06	74	-15.94	Peak
22800	28.30	0	100	V	35.334	12.4	32.79	43.24	54	-10.76	Ave
22800	28.46	0	100	H	35.329	12.4	32.79	43.40	54	-10.60	Ave

Note: The limit for emissions outside of restrict band is -27dBm/MHz for peak e.i.r.p.

5.6 GHz Band, 802.11n-HT40 Mode

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)	
Low Channel 5510 MHz, measured at 3 meters											
5510	65.44	92	145	V	34.258	5.34	-	105.038	-	-	Peak
5510	56.09	202	135	H	34.234	5.34	-	95.664	-	-	Peak
5510	54.05	92	145	V	34.258	5.34	-	93.648	-	-	Ave
5510	43.65	202	135	H	34.234	5.34	-	83.224	-	-	Ave
5460	27.54	92	145	V	34.258	5.34	-	67.138	74	-6.862	Peak
5460	27.21	202	135	H	34.234	5.34	-	66.784	74	-7.216	Peak
5460	13.48	92	145	V	34.258	5.34	-	53.078	54	-0.922	Ave
5460	13.07	202	135	H	34.234	5.34	-	52.644	54	-1.356	Ave
11020	53.4	50	187	V	38.35	10.07	37.65	64.17	74	-9.83	Peak
11020	47.82	0	100	H	38.347	10.07	37.65	58.587	74	-15.413	Peak
11020	37.72	50	187	V	38.35	10.07	37.65	48.49	54	-5.51	Ave
11020	32.35	0	100	H	38.347	10.07	37.65	43.117	54	-10.883	Ave
16530	47.61	0	100	V	39.009	10.83	37.46	59.989	68.23	-8.241	Peak
16530	47.84	0	100	H	38.964	10.83	37.46	60.174	68.23	-8.056	Peak
22040	47.46	0	100	V	35.102	11.44	36.91	57.092	68.23	-11.138	Peak
22040	47.75	0	100	H	35.098	11.44	36.91	57.378	68.23	-10.852	Peak
7346.7	49.92	131	100	V	36.222	7.39	37.5	56.032	74	-17.968	Peak
7346.7	47.29	50	100	H	36.246	7.39	37.5	53.426	74	-20.574	Peak
7346.7	43	131	100	V	36.222	7.39	37.5	49.112	54	-4.888	Ave
7346.7	35.58	50	100	H	36.246	7.39	37.5	41.716	54	-12.284	Ave
Middle Channel 5550 MHz, measured at 3 meters											
5550	65.48	148	127	V	34.258	5.34	-	105.078	-	-	Peak
5550	55.24	205	142	H	34.234	5.34	-	94.814	-	-	Peak
5550	53.14	148	127	V	34.258	5.34	-	92.738	-	-	Ave
5550	43.4	205	142	H	34.234	5.34	-	82.974	-	-	Ave
11100	53.95	143	142	V	38.442	10.07	37.65	64.81	74	-9.19	Peak
11100	48.08	0	100	H	38.431	10.07	37.65	58.93	74	-15.07	Peak
11100	38.24	143	142	V	38.442	10.07	37.65	49.10	54	-4.898	Ave
11100	33.40	0	100	H	38.431	10.07	37.65	44.25	54	-9.75	Ave
16650	47.95	0	100	V	39.239	10.83	37.18	60.84	68.23	-7.39	Peak
16650	47.00	0	100	H	39.236	10.83	37.18	59.89	68.23	-8.34	Peak
22200	47.18	0	100	V	34.971	11.44	36.91	56.68	74	-17.32	Peak
22200	47.57	0	100	H	34.962	11.44	36.91	57.06	74	-16.94	Peak
22200	33.19	0	100	V	34.971	11.44	36.91	42.69	54	-11.31	Ave
22200	33.22	0	100	H	34.962	11.44	36.91	42.71	54	-11.29	Ave
7400	50.98	90	105	V	36.449	7.46	37.56	57.33	74	-16.67	Peak
7400	48.40	50	100	H	36.447	7.46	37.56	54.75	74	-19.25	Peak
7400	44.74	90	105	V	36.449	7.46	37.56	51.09	54	-2.91	Ave
7400	36.94	50.00	100.00	H	36.447	7.46	37.56	43.29	54	-10.71	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)	
High Channel 5670 MHz, measured at 3 meters											
5670	66.45	98	141	V	33.949	5.57	-	105.969	-	-	Peak
5670	55.81	205	142	H	33.958	5.57	-	95.338	-	-	Peak
5670	54.41	98	141	V	33.949	5.57	-	93.929	-	-	Ave
5670	43.67	205	142	H	33.958	5.57	-	83.198	-	-	Ave
7560	50.95	59	114	V	36.36	7.5	37.56	57.25	74	-16.75	Peak
7560	48	50	100	H	36.341	7.5	37.56	54.281	74	-19.719	Peak
7560	43.5	59	114	V	36.36	7.5	37.56	49.8	54	-4.2	Ave
7560	36.24	50	100	H	36.341	7.5	37.56	42.521	54	-11.479	Ave
11340	53.77	140	142	V	38.851	10.07	37.51	65.18	74	-8.82	Peak
11340	47.87	0	100	H	38.853	10.07	37.51	59.28	74	-14.72	Peak
11340	38.27	140	142	V	38.851	10.07	37.51	49.68	54	-4.319	Ave
11340	33.25	0	100	H	38.853	10.07	37.51	44.66	54	-9.34	Ave
17010	46.44	0	100	V	41.622	10.83	36.96	61.93	68.23	-6.30	Peak
17010	47.11	0	100	H	41.686	10.83	36.96	62.67	68.23	-5.56	Peak
22680	47.38	0	100	V	35.334	12.4	36.68	58.43	74	-15.57	Peak
22680	47.59	0	100	H	35.329	12.4	36.68	58.64	74	-15.36	Peak
22680	32.73	0	100	V	35.334	12.4	36.68	43.78	54	-10.22	Ave
22680	32.75	0	100	H	35.329	12.4	36.68	43.80	54	-10.20	Ave

Note: The limit for emissions outside of restrict band is -27dBm/MHz for peak e.i.r.p.

5.8 GHz Band, 802.11a Mode

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)	
Low Channel 5745 MHz, measured at 3 meters											
5745	66.68	159	100	V	33.949	5.57	-	106.199	-	-	Peak
5745	59.18	148	100	H	33.958	5.57	-	98.708	-	-	Peak
5745	55.95	159	100	V	33.949	5.57	-	95.469	-	-	Ave
5745	48.06	148	100	H	33.958	5.57	-	87.588	-	-	Ave
5725	29.93	159	100	V	33.949	5.57	-	69.449	78.23	-8.781	Peak
5725	27.69	148	100	H	33.958	5.57	-	67.218	78.23	-11.012	Peak
5715	27.99	159	100	V	33.949	5.57	-	67.509	68.23	-0.721	Peak
5715	27.62	148	100	H	33.958	5.57	-	67.148	68.23	-1.082	Peak
11490	52.9	70	118	V	39.115	10.07	37.43	64.655	74	-9.345	Peak
11490	45.38	0	100	H	39.14	10.07	37.43	57.16	74	-16.84	Peak
11490	37.44	70	118	V	39.115	10.07	37.43	49.195	54	-4.805	Ave
11490	32.02	0	100	H	39.14	10.07	37.43	43.8	54	-10.2	Ave
17235	47.9	0	100	V	43.128	10.83	36.7	65.158	68.23	-3.072	Peak
17235	46.91	0	100	H	43.185	10.83	36.7	64.225	68.23	-4.005	Peak
22980	46.55	0	100	V	35.221	12.4	36.42	57.751	74	-16.249	Peak
22980	47.17	0	100	H	35.219	12.4	36.42	58.369	74	-15.631	Peak
22980	32.41	0	100	V	35.221	12.4	36.42	43.611	54	-10.389	Ave
22980	32.27	0	100	H	35.219	12.4	36.42	43.469	54	-10.531	Ave
7660	51.36	105	223	V	36.309	7.32	37.61	57.379	74	-16.621	Peak
7660	48.58	236	100	H	36.271	7.32	37.61	54.561	74	-19.439	Peak
7660	45.94	105	223	V	36.309	7.32	37.61	51.959	54	-2.041	Ave
7660	35.82	236	100	H	36.271	7.32	37.61	41.801	54	-12.199	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)	
Middle Channel 5785 MHz, measured at 3 meters											
5785	66.59	137	100	V	33.896	5.63	-	106.116	-	-	Peak
5785	56.36	139	129	H	33.885	5.63	-	95.875	-	-	Peak
5785	56.72	137	100	V	33.896	5.63	-	96.246	-	-	Ave
5785	45.76	139	129	H	33.885	5.63	-	85.275	-	-	Ave
11570	52.31	120	126	V	39.305	10.07	37.43	64.26	74	-9.75	Peak
11570	46.15	0	100	H	39.338	10.07	37.43	58.13	74	-15.87	Peak
11570	37.19	120	126	V	39.305	10.07	37.43	49.14	54	-4.87	Ave
11570	31.80	0	100	H	39.338	10.07	37.43	43.78	54	-10.22	Ave
17355	46.65	0	100	V	45.292	10.83	36.7	66.07	68.23	-2.16	Peak
17355	46.52	0	100	H	45.323	10.83	36.7	65.97	68.23	-2.26	Peak
23140	47.07	0	100	V	35.382	12.4	36.42	58.43	68.23	-9.80	Peak
23140	47.28	0	100	H	35.276	12.4	36.42	58.54	68.23	-9.69	Peak
7713.3	51.43	104	200	V	36.309	7.32	37.61	57.45	74	-16.55	Peak
7713.3	48.2	221	134	H	36.271	7.32	37.61	54.18	74	-19.82	Peak
7713.3	44.89	104	200	V	36.309	7.32	37.61	50.91	54	-3.09	Ave
7713.3	34.85	221	134	H	36.271	7.32	37.61	40.83	54	-13.17	Ave
High Channel 5825 MHz, measured at 3 meters											
5825	66.42	132	100	V	33.896	5.63	-	105.946	-	-	Peak
5825	57.94	146	100	H	33.885	5.63	-	97.455	-	-	Peak
5825	55.75	132	100	V	33.896	5.63	-	95.276	-	-	Ave
5825	47.76	146	100	H	33.885	5.63	-	87.275	-	-	Ave
7766.7	50.68	129	220	V	36.35	7.7	37.61	57.12	68.23	-11.11	Peak
7766.7	48.08	331	100	H	36.363	7.7	37.61	54.533	68.23	-13.697	Peak
11650	49.08	100	186	V	39.472	10.07	37.49	61.13	74	-12.87	Peak
11650	41.52	0	100	H	39.508	10.07	37.49	53.61	74	-20.39	Peak
11650	34.18	100	186	V	39.472	10.07	37.49	46.23	54	-7.77	Ave
11650	27.11	0	100	H	39.508	10.07	37.49	39.20	54	-14.80	Ave
17475	47.40	0	100	V	46.706	10.83	36.56	68.38	68.23	0.15	Peak
17475	46.89	0	100	H	46.764	10.83	36.56	67.92	68.23	-0.31	Peak
23300	46.06	0	100	V	35.382	12.4	36.68	57.16	68.23	-11.07	Peak
23300	46.21	0	100	H	35.276	12.4	36.68	57.21	68.23	-11.02	Peak

5.8 GHz Band, 802.11n-HT20 Mode

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)	
Low Channel 5745 MHz, measured at 3 meters											
5745	67.39	112	165	V	33.949	5.57	-	106.909	-	-	Peak
5745	57.06	226	100	H	33.958	5.57	-	96.588	-	-	Peak
5745	56.57	112	165	V	33.949	5.57	-	96.089	-	-	Ave
5745	46.54	226	100	H	33.958	5.57	-	86.068	-	-	Ave
5725	31.8	112	165	V	33.949	5.57	-	71.319	78.23	-6.911	Peak
5725	28.07	226	100	H	33.958	5.57	-	67.598	78.23	-10.632	Peak
5715	28.17	112	165	V	33.949	5.57	-	67.689	68.23	-0.541	Peak
5715	27.83	226	100	H	33.958	5.57	-	67.358	68.23	-0.872	Peak
11490	53.9	38	112	V	39.115	10.07	37.43	65.655	74	-8.345	Peak
11490	46.68	0	100	H	39.14	10.07	37.43	58.46	74	-15.54	Peak
11490	37.93	38	112	V	39.115	10.07	37.43	49.685	54	-4.315	Ave
11490	32.6	0	100	H	39.14	10.07	37.43	44.38	54	-9.62	Ave
17235	46.56	0	100	V	43.128	10.83	36.7	63.818	68.23	-4.412	Peak
17235	46.94	0	100	H	43.185	10.83	36.7	64.255	68.23	-3.975	Peak
22980	47.75	0	100	V	35.221	12.4	36.42	58.951	74	-15.049	Peak
22980	48.25	0	100	H	35.219	12.4	36.42	59.449	74	-14.551	Peak
22980	32.36	0	100	V	35.221	12.4	36.42	43.561	54	-10.439	Ave
22980	32.37	0	100	H	35.219	12.4	36.42	43.569	54	-10.431	Ave
7660	51.37	123	220	V	36.309	7.32	37.61	57.389	74	-16.611	Peak
7660	47.85	326	100	H	36.271	7.32	37.61	53.831	74	-20.169	Peak
7660	45.68	123	220	V	36.309	7.32	37.61	51.699	54	-2.301	Ave
7660	34.32	326	100	H	36.271	7.32	37.61	40.301	54	-13.699	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)	
Middle Channel 5785 MHz, measured at 3 meters											
5785	66.2	135	175	V	33.896	5.63	-	105.726	-	-	Peak
5785	56.95	140	100	H	33.885	5.63	-	96.465	-	-	Peak
5785	55.64	135	175	V	33.896	5.63	-	95.166	-	-	Ave
5785	46.61	140	100	H	33.885	5.63	-	86.125	-	-	Ave
11570	56.27	129	132	V	39.305	10.07	37.43	68.22	74	-5.79	Peak
11570	47.23	0	100	H	39.338	10.07	37.43	59.21	74	-14.79	Peak
11570	39.91	129	132	V	39.305	10.07	37.43	51.86	54	-2.15	Ave
11570	32.74	0	100	H	39.338	10.07	37.43	44.72	54	-9.28	Ave
17355	46.16	0	100	V	45.292	10.83	36.7	65.58	68.23	-2.65	Peak
17355	45.59	0	100	H	45.323	10.83	36.7	65.04	68.23	-3.19	Peak
23140	46.56	0	100	V	35.382	12.4	36.42	57.92	68.23	-10.31	Peak
23140	47.28	0	100	H	35.276	12.4	36.42	58.54	68.23	-9.69	Peak
7713.3	51.08	88	221	V	36.309	7.32	37.61	57.10	74	-16.90	Peak
7713.3	47.86	315	100	H	36.271	7.32	37.61	53.84	74	-20.16	Peak
7713.3	44.09	88	221	V	36.309	7.32	37.61	50.11	54	-3.89	Ave
7713.3	34.04	315	100	H	36.271	7.32	37.61	40.02	54	-13.98	Ave
High Channel 5825 MHz, measured at 3 meters											
5825	66.97	126	176	V	33.896	5.63	-	106.496	-	-	Peak
5825	56.61	232	100	H	33.885	5.63	-	96.125	-	-	Peak
5825	56.15	126	176	V	33.896	5.63	-	95.676	-	-	Ave
5825	45.77	232	100	H	33.885	5.63	-	85.285	-	-	Ave
7766.7	51.04	135	200	V	36.35	7.7	37.61	57.48	68.23	-10.75	Peak
7766.7	47.97	232	121	H	36.363	7.7	37.61	54.423	68.23	-13.807	Peak
11650	55.89	43	100	V	39.472	10.07	37.49	67.94	74	-6.06	Peak
11650	47.59	0	100	H	39.508	10.07	37.49	59.68	74	-14.32	Peak
11650	39.39	43	100	V	39.472	10.07	37.49	51.44	54	-2.56	Ave
11650	32.98	0	100	H	39.508	10.07	37.49	45.07	54	-8.93	Ave
17475	46.88	0	100	V	46.706	10.83	36.56	67.86	68.23	-0.37	Peak
17475	46.41	0	100	H	46.764	10.83	36.56	67.44	68.23	-0.79	Peak
23300	45.37	0	100	V	35.382	12.4	36.68	56.47	68.23	-11.76	Peak
23300	46.05	0	100	H	35.276	12.4	36.68	57.05	68.23	-11.18	Peak

5.8 GHz Band, 802.11n-HT40 Mode

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)	
Low Channel 5755 MHz, measured at 3 meters											
5755	65.27	127	157	V	33.896	5.63	-	104.796	-	-	Peak
5755	55.25	225	135	H	33.885	5.63	-	94.765	-	-	Peak
5755	53.91	127	157	V	33.896	5.63	-	93.436	-	-	Ave
5755	42.99	225	135	H	33.885	5.63	-	82.505	-	-	Ave
5725	66.92	127	157	V	33.949	5.57	37.44	68.999	78.23	-9.231	Peak
5725	58.9	225	135	H	33.958	5.57	37.44	60.988	78.23	-17.242	Peak
5715	63.53	127	157	V	33.949	5.57	37.44	65.609	68.23	-2.621	Peak
5715	55.81	225	135	H	33.958	5.57	37.44	57.898	68.23	-10.332	Peak
11510	53.69	72	121	V	39.115	10.07	37.43	65.445	74	-8.555	Peak
11510	48.15	0	100	H	39.14	10.07	37.43	59.93	74	-14.07	Peak
11510	38.77	72	121	V	39.115	10.07	37.43	50.525	54	-3.475	Ave
11510	32.83	0	100	H	39.14	10.07	37.43	44.61	54	-9.39	Ave
17265	46.24	0	100	V	44.054	10.83	36.7	64.424	68.23	-3.806	Peak
17265	46.59	0	100	H	44.122	10.83	36.7	64.842	68.23	-3.388	Peak
23020	47.25	0	100	V	35.221	12.4	36.42	58.451	74	-15.549	Peak
23020	46.49	0	100	H	35.219	12.4	36.42	57.689	74	-16.311	Peak
23020	32.13	0	100	V	35.221	12.4	36.42	43.331	54	-10.669	Ave
23020	31.97	0	100	H	35.219	12.4	36.42	43.169	54	-10.831	Ave
7673.3	51.47	58	200	V	36.309	7.32	37.61	57.489	74	-16.511	Peak
7673.3	48.17	234	164	H	36.271	7.32	37.61	54.151	74	-19.849	Peak
7673.3	44.76	58	200	V	36.309	7.32	37.61	50.779	54	-3.221	Ave
7673.3	34.17	234	164	H	36.271	7.32	37.61	40.151	54	-13.849	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)	
High Channel 5795 MHz, measured at 3 meters											
5795	64.1	118	139	V	33.896	5.63	-	103.626	-	-	Peak
5795	54.04	139	117	H	33.885	5.63	-	93.555	-	-	Peak
5795	51.68	118	139	V	33.896	5.63	-	91.206	-	-	Ave
5795	41.92	139	117	H	33.885	5.63	-	81.435	-	-	Ave
5850	28.49	118	139	V	33.88	5.78	-	68.15	78.23	-10.08	Peak
5850	27.62	139	117	H	33.86	5.78	-	67.26	78.23	-10.97	Peak
5860	27.76	118	139	V	33.88	5.78	-	67.42	68.23	-0.81	Peak
5860	28.11	139	117	H	33.86	5.78	-	67.75	68.23	-0.48	Peak
7726.7	51.19	50	224	V	36.309	7.32	37.61	57.209	68.23	-11.021	Peak
7726.7	47.35	248	100	H	36.271	7.32	37.61	53.331	68.23	-14.899	Peak
11590	53.26	127	100	V	39.305	10.07	37.43	65.21	74	-8.80	Peak
11590	47.53	0	100	H	39.338	10.07	37.43	59.51	74	-14.49	Peak
11590	37.01	127	100	V	39.305	10.07	37.43	48.96	54	-5.05	Ave
11590	33.05	0	100	H	39.338	10.07	37.43	45.03	54	-8.97	Ave
17385	46.86	0	100	V	45.292	10.83	36.59	66.39	68.23	-1.84	Peak
17385	46.98	0	100	H	45.323	10.83	36.59	66.54	68.23	-1.69	Peak
23180	47.33	0	100	V	35.382	12.4	36.42	58.69	68.23	-9.54	Peak
23180	46.69	0	100	H	35.276	12.4	36.42	57.95	68.23	-10.28	Peak

Note: emissions at frequencies from the band edges to 10 MHz above or below the band edges shall not exceed -17dBm/MHz e.i.r.p. For emissions at frequencies more than 10 MHz above or below the band edges, the emissions power shall not exceed -27dBm/MHz.

8 FCC §15.407(b) & IC RSS-247 §6.2.4(2) - Spurious Emissions at Antenna Ports

8.1 Applicable Standards

Per FCC §15.407(b) and IC RSS-247: for transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of -27 dBm/MHz

8.2 Measurement Procedure

The measurements are based on FCC KDB 789033 D02 General UNII Test Procedures New Rules v01: Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices section G: Unwanted emissions measurement.

8.3 Test Equipment List and Details

Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
Agilent	Spectrum Analyzer	E4446A	US44300386	2014-10-24	1 year
Mini Circuit	Precision Fixed Attenuator, 10 dB	BW-S10W5	-	Each Time ¹	N/A

Note¹: cable and attenuator included in the test set-up will be checked each time before testing.

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

8.4 Test Environmental Conditions

Temperature:	22-24 °C
Relative Humidity:	40-41 %
ATM Pressure:	103.1-104.1 KPa

The testing was performed by Jin Yang on 2015-06-26 at RF site.

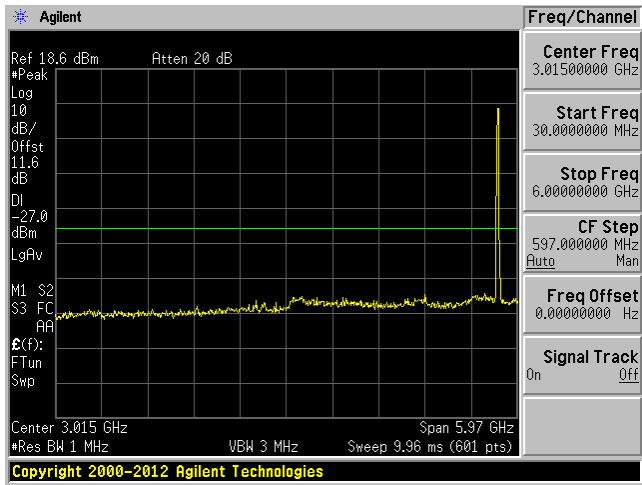
8.5 Test Results

Please refer to following plots of spurious emissions.

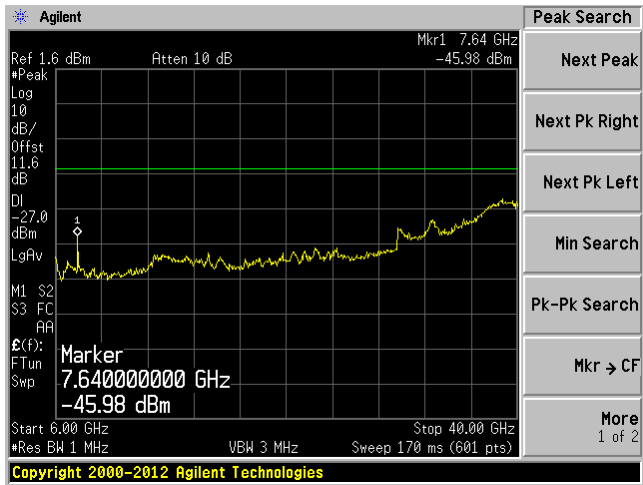
Note:

1. The offset include the attenuation, cable loss. And the margin between limit line and the emission covers other requirements in the KDB 789033.
2. The antenna gain is 3dBi, and the margin between limit line and the emission is over 10dB, so after add 3dBi antenna gain, the spurious emissions can still pass.

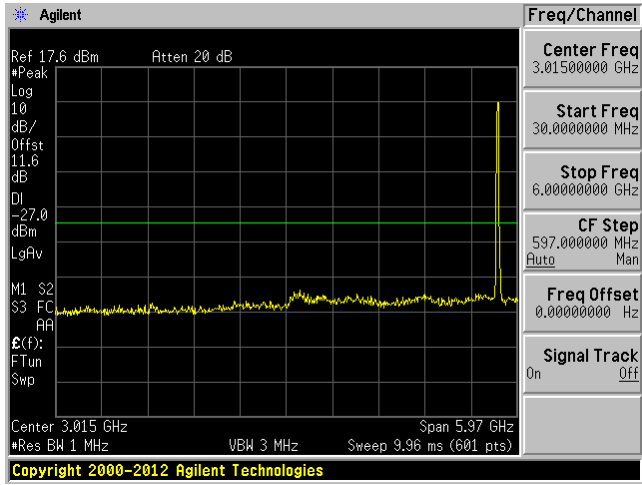
5745 MHz a mode (30 MHz-6 GHz)



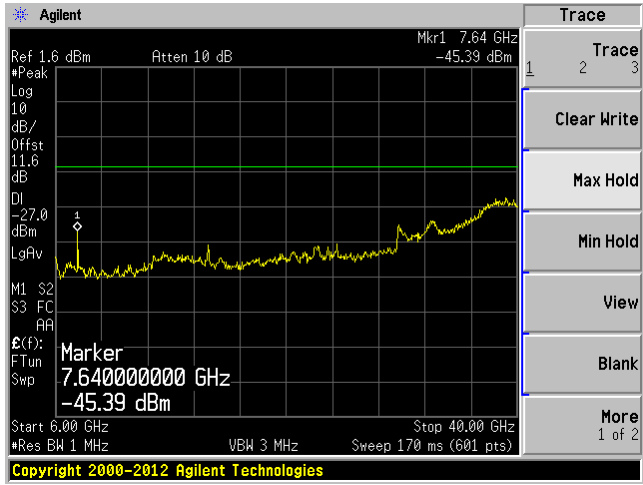
5745 MHz a mode (6 GHz-40 GHz)



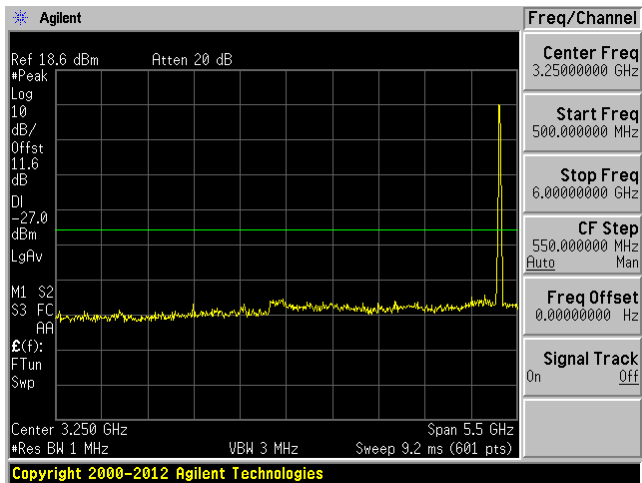
5745 MHz n20 mode (30 MHz-6 GHz)



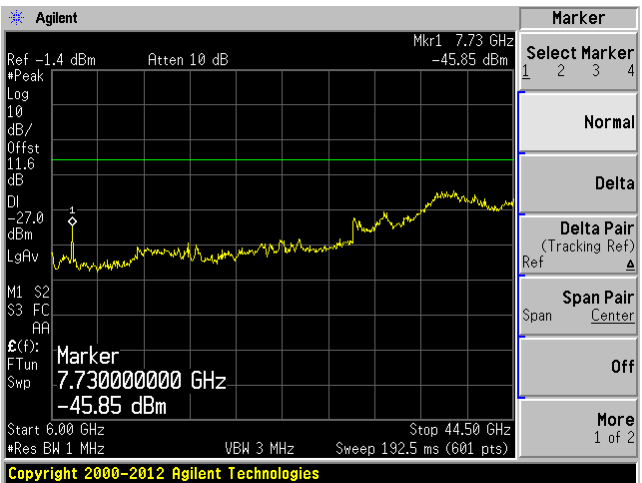
5745 MHz n20 mode (6 GHz-40 GHz)



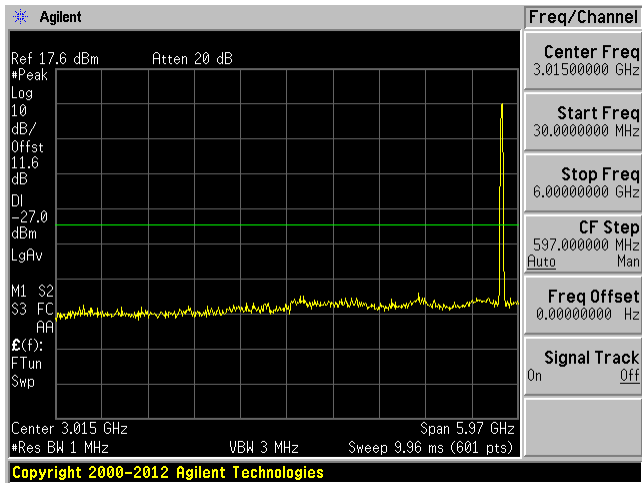
5785 MHz a mode (30 MHz-6 GHz)



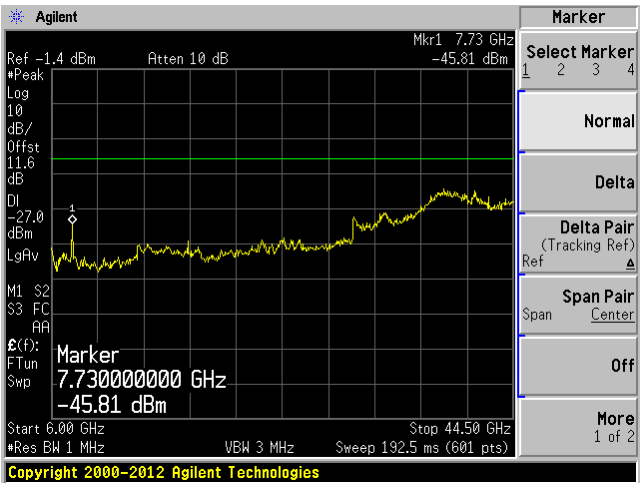
5785 MHz a mode (6 GHz-40 GHz)



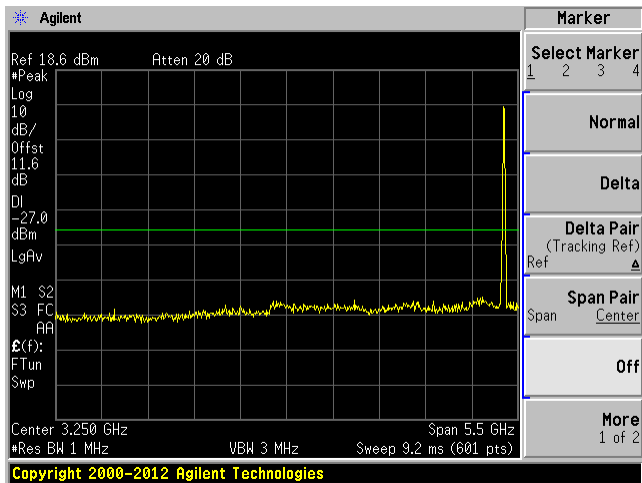
5785 MHz n20 mode (30 MHz-6 GHz)



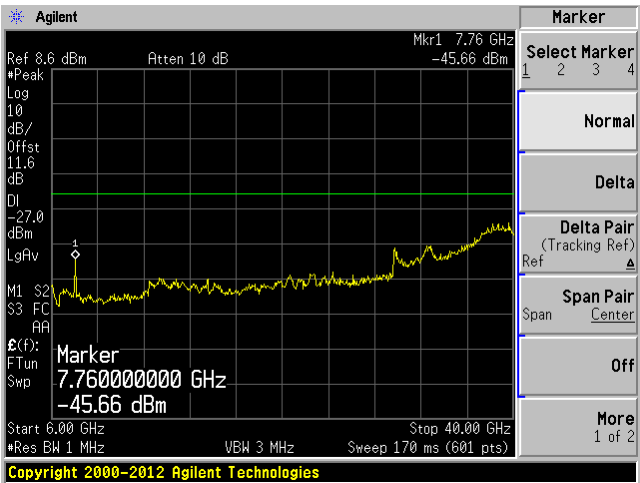
5785 MHz n20 mode (6 GHz-40 GHz)



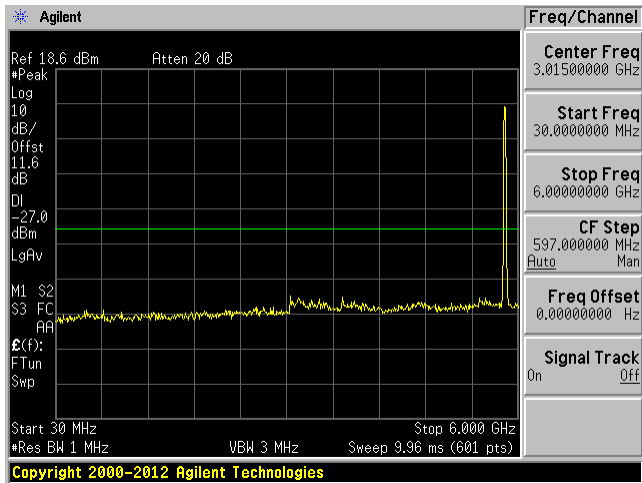
5825 MHz a mode (30 MHz-6 GHz)



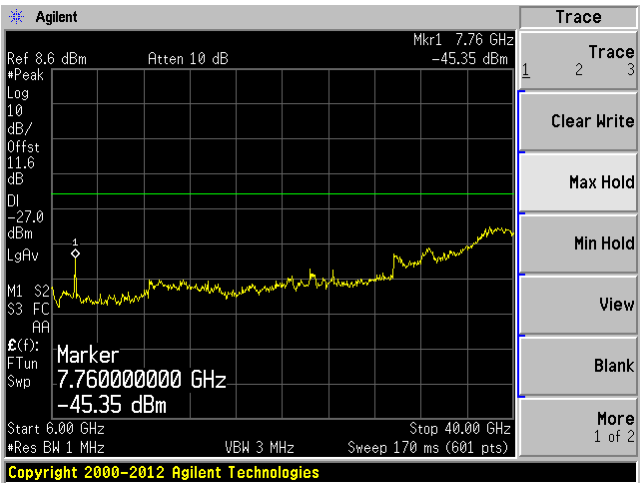
5825 MHz a mode (6 GHz-40 GHz)



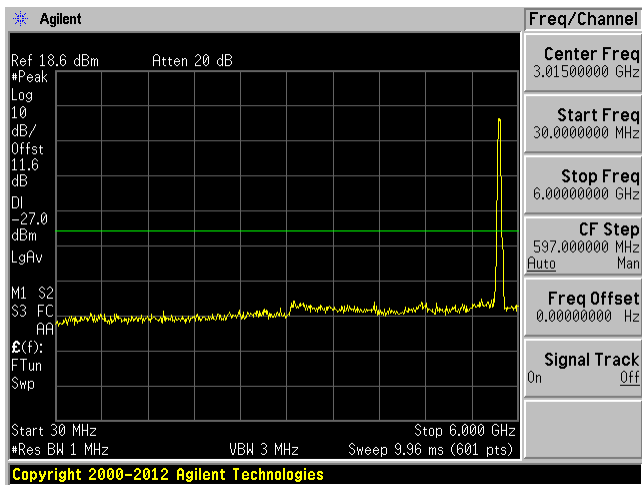
5825 MHz n20 mode (30 MHz-6 GHz)



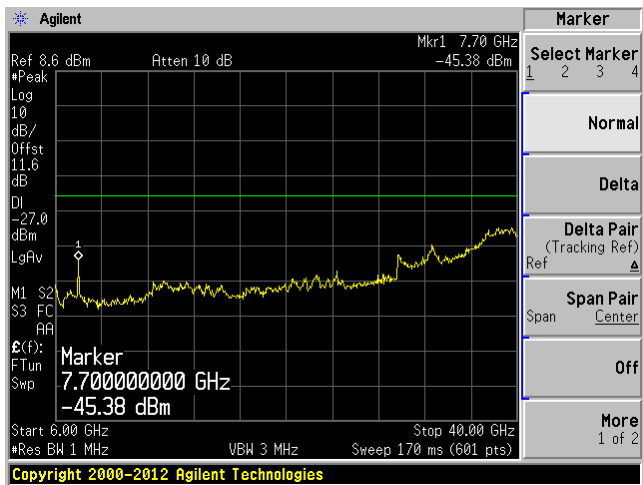
5825 MHz n20 mode (6 GHz-40 GHz)



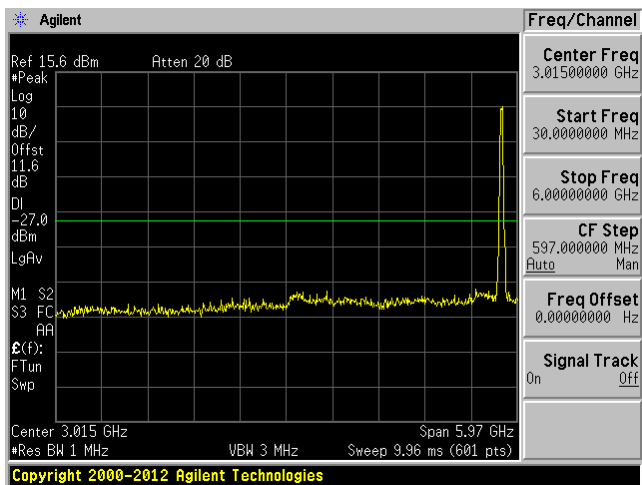
5755 MHz n40 mode (30 MHz-6 GHz)



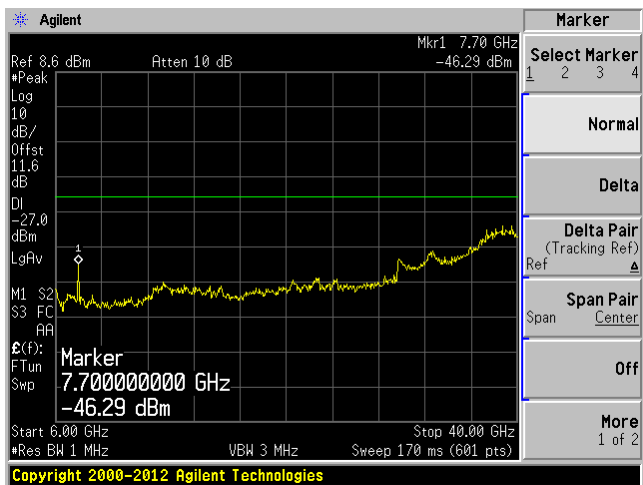
5755 MHz n40 mode (6 GHz-40 GHz)



5795 MHz n40 mode (30 MHz-6 GHz)



5795 MHz n40 mode (6 GHz-40 GHz)



9 FCC §15.407 & IC RSS-247 §6.2.4 (2) – Band Edge

9.1 Applicable Standard

Per FCC §15.407(b) and IC RSS-247: for transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of -17dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of -27dBm/MHz

9.2 Measurement Procedure

The measurements are base on FCC KDB 789033 D02 General UNII Test Procedures New Rules v01: Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices section G: Unwanted emissions measurement.

- Set RBW = 100 kHz
- Set VBW $\geq 3 \cdot$ RBW
- Perform a band-power integration across the 1 MHz bandwidth in which the band-edge emission level is to be measured. CAUTION: You must ensure that the spectrum analyzer or EMI receiver is set for peak-detection and max-hold for this measurement.

9.3 Test Equipment List and Details

Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
Agilent	Spectrum Analyzer	E4446A	US44300386	2014-10-24	1 year

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

9.4 Test Environmental Conditions

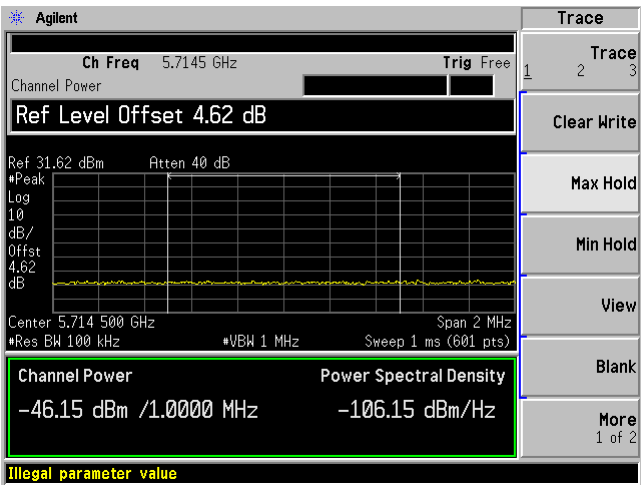
Temperature:	22 °C
Relative Humidity:	52 %
ATM Pressure:	101.9 kPa

The testing was performed by Jin Yang on 2015-06-26 at RF site.

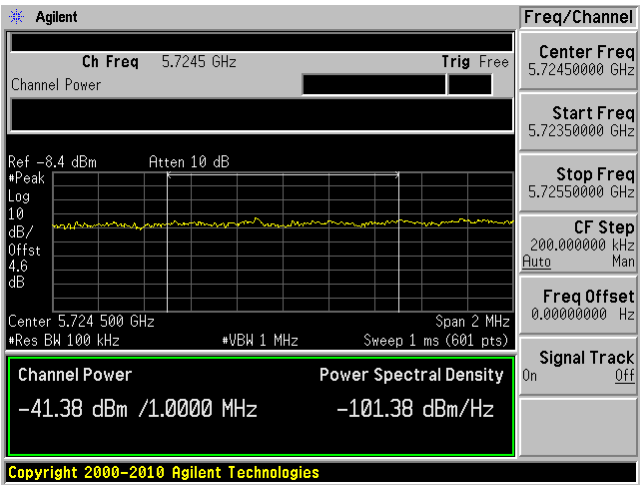
9.5 Test Results

Note: the antenna gain is 3dBi and has been added into the offset.

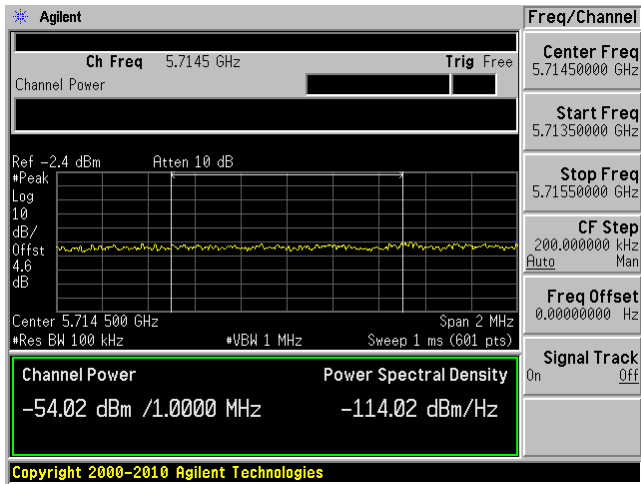
5745 MHz a mode (-27 dBm/MHz)



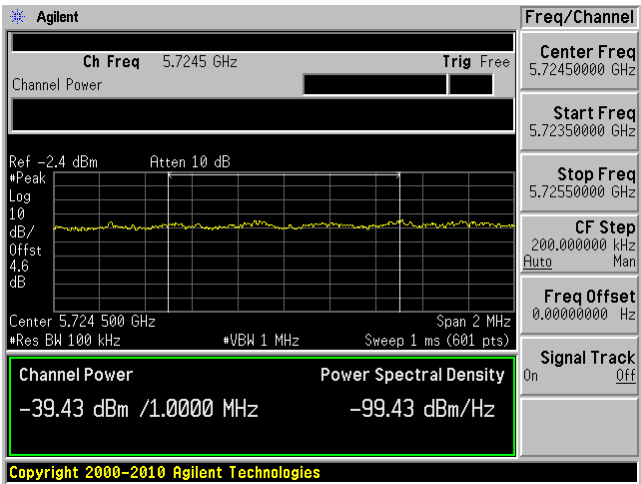
5745 MHz a mode (-17 dBm/MHz)



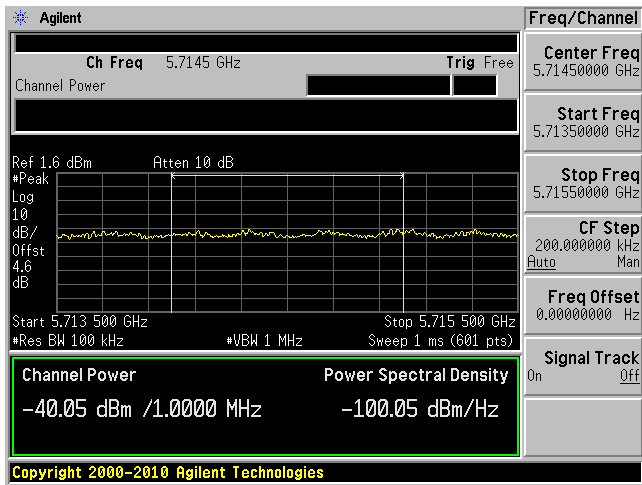
5745 MHz n20 mode (-27 dBm/MHz)



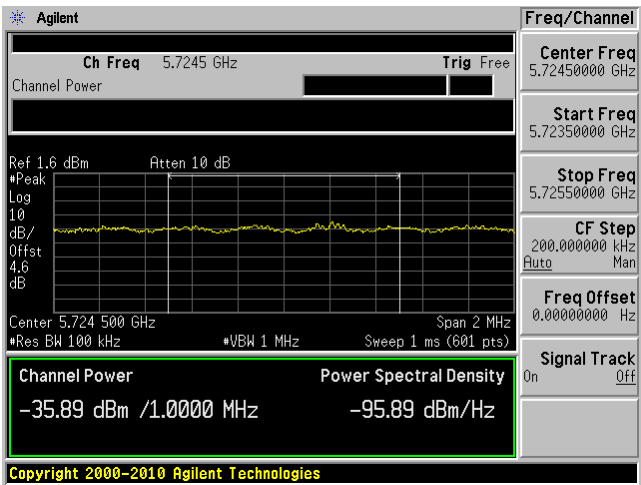
5745 MHz n20 mode (-17 dBm/MHz)



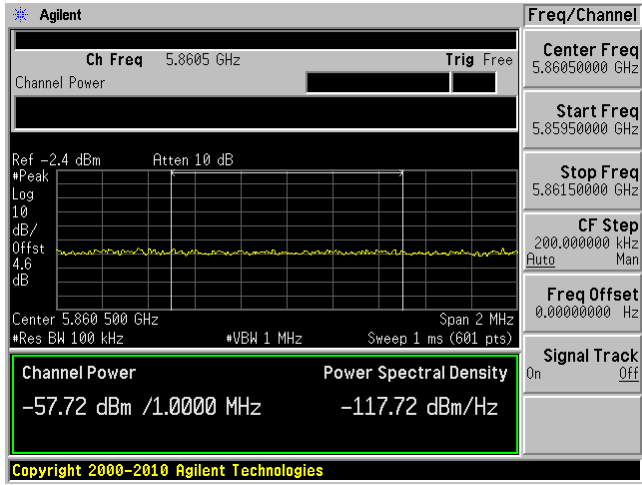
5755 MHz n40 mode (-27 dBm/MHz)



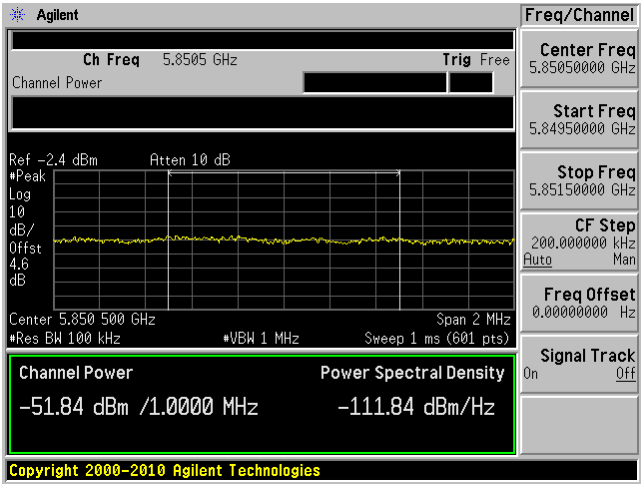
5755 MHz n40 mode (-17 dBm/MHz)



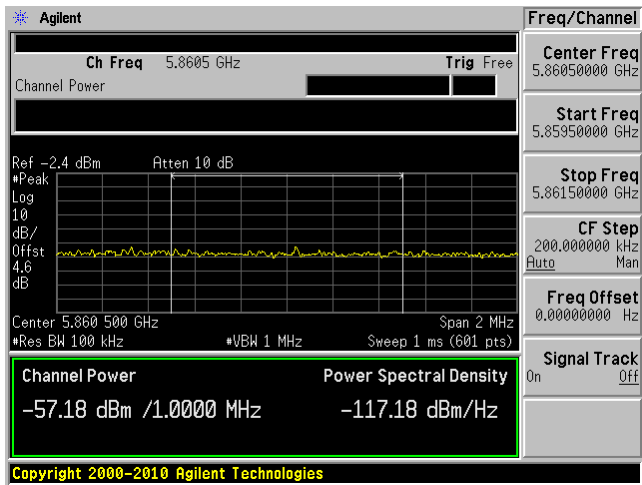
5825 MHz a mode (-27 dBm/MHz)



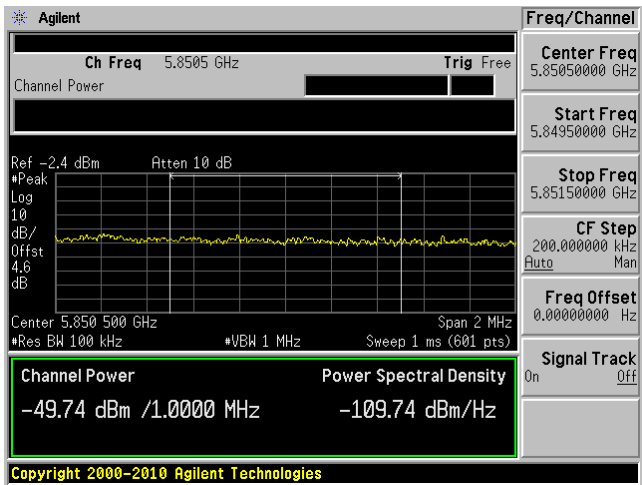
5825 MHz a mode (-17 dBm/MHz)



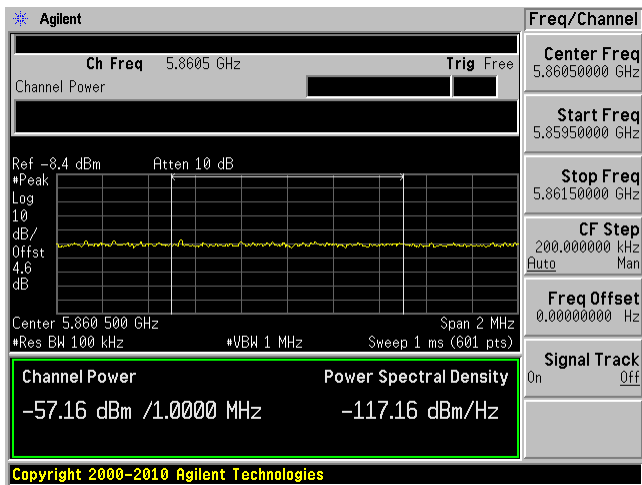
5825 MHz n20 mode (-27 dBm/MHz)



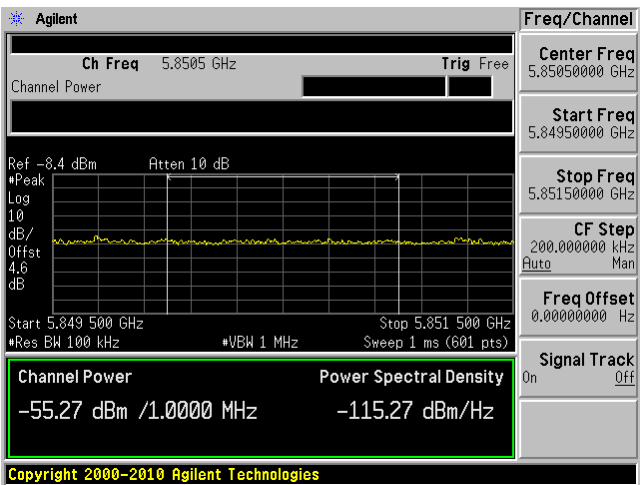
5825 MHz n20 mode (-17 dBm/MHz)



5795 MHz n40 mode (-27 dBm/MHz)



5795 MHz n40 mode (-17 dBm/MHz)



10 FCC §15.407(a) & IC RSS-247 §6.2.4 (1) – Power Spectral Density

10.1 Applicable Standard

According to FCC §15.407(a) and RSS-247 §6.2.4, for the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

10.2 Measurement Procedure

The measurements are base on FCC KDB 789033 D02 General UNII Test Procedures New Rules v01: Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices section F: Maximum power spectral density (PSD)

- Set RBW = 100 kHz
- Set VBW $\geq 3 \cdot$ RBW
- If measurement bandwidth of Maximum PSD is specified in 500 kHz, add $10\log(500\text{kHz}/\text{RBW})$ to the measured result, whereas RBW (< 500 KHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.

10.3 Test Equipment List and Details

Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
Agilent	Spectrum Analyzer	E4446A	US44300386	2014-10-24	1 year

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

10.4 Test Environmental Conditions

Temperature:	22 °C
Relative Humidity:	52 %
ATM Pressure:	101.9 kPa

The testing was performed by Jin Yang on 2014-06-26 in RF site.

10.5 Test Results

Radio Mode	Channel Frequency (MHz)	PSD @ 100 kHz (dBm)	PSD @ 500 kHz (dBm)	Limit (dBm)	Margin (dB)	Comment
802.11a	5745	-8.374	-1.3843	30	-31.3843	Pass
	5785	-7.575	-0.5853	30	-30.5853	Pass
	5825	-7.435	-0.4453	30	-30.4453	Pass
802.11n-HT20	5745	-7.806	-0.8163	30	-30.8163	Pass
	5785	-7.703	-0.7133	30	-30.7133	Pass
	5825	-7.325	-0.3353	30	-30.3353	Pass
802.11n-HT40	5755	-10.988	-3.9983	30	-33.9983	Pass
	5795	-10.629	-3.6393	30	-33.6393	Pass

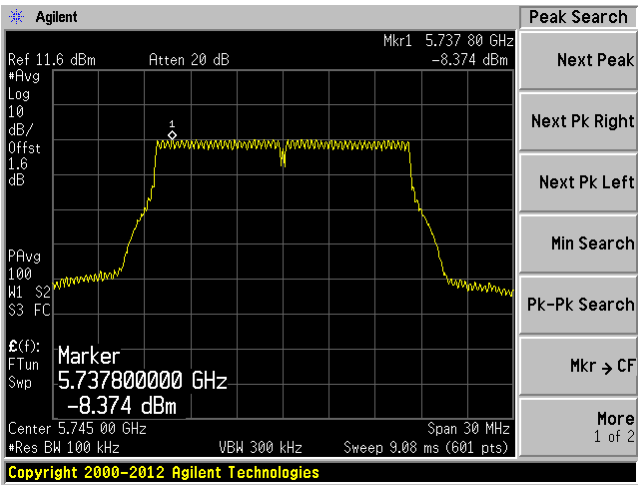
Note: convert PSD in 100kHz to 500kHz, by using equation

$$\text{PSD (500 kHz)} = \text{PSD (100 kHz)} + 10\log(500 \text{ kHz/RBW})$$

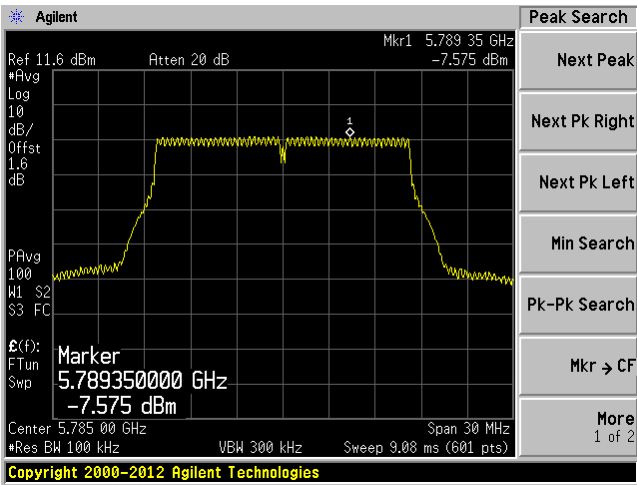
Please refer to the following plots for detailed test results:

802.11a

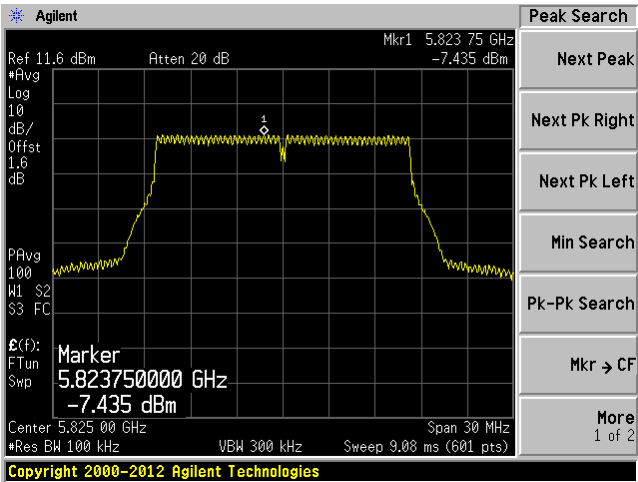
Low CH-5745 MHz



Middle CH- 5785 MHz

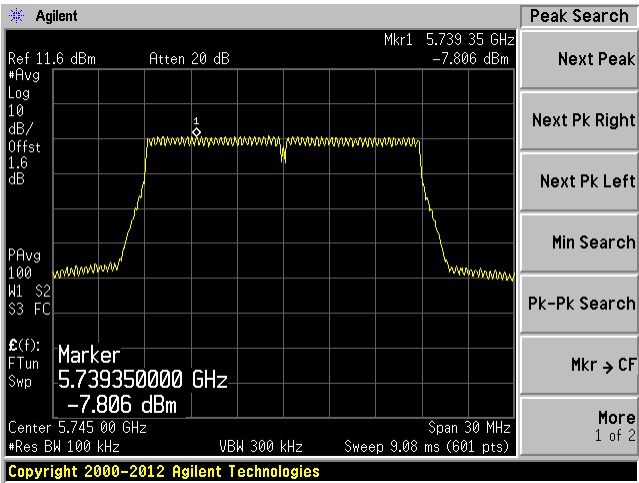


High CH- 5825 MHz

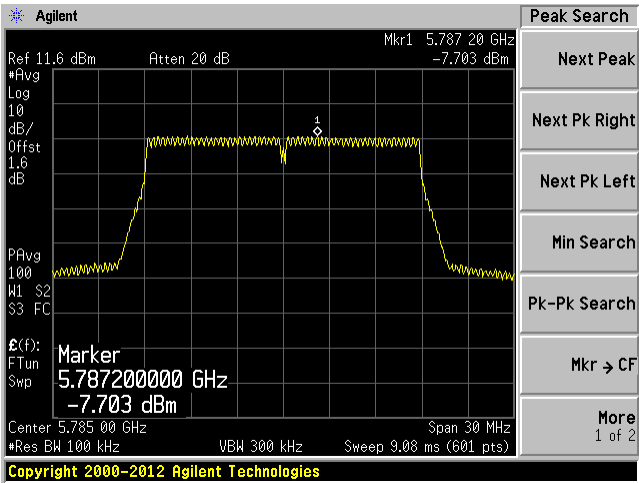


802.11n-HT20

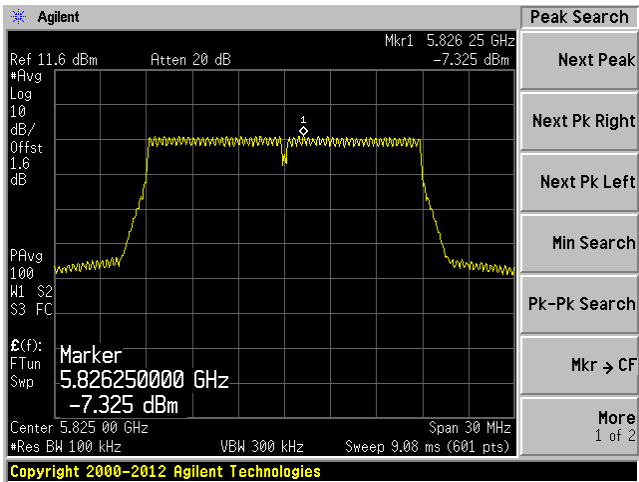
Low CH-5745 MHz



Middle CH- 5785 MHz

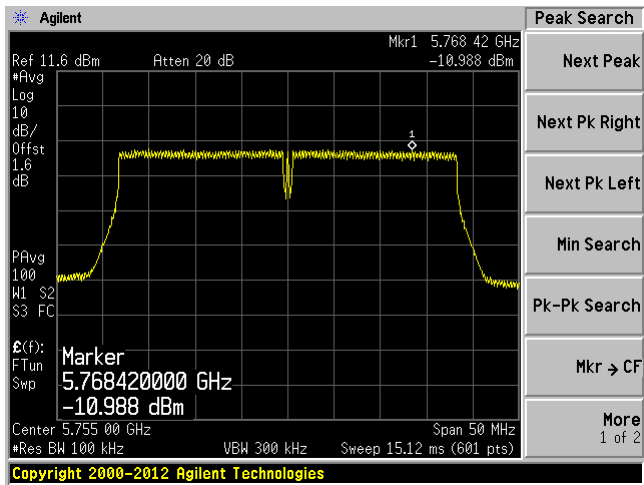


High CH- 5825 MHz



802.11n-HT40

Low CH-5755 MHz



High CH-5795 MHz

