TEST REPORT

Applicant:	Botslab Inc.
Address:	919 North Market Street, Suite 950, Wilmington, New Castle, Delaware, USA
Equipment Type:	Dash Cam
Model Name:	DC-BD08-M5
Brand Name:	Botslab
FCC ID:	2A22Z-G980HMC
ISED Number:	27673-G980HMC
Test Standard:	47 CFR Part 15 Subpart E RSS-Gen Issue 5 RSS-247 Issue 3 (refer to section 3.1)
Sample Arrival Date:	Mar. 14, 2025
Test Date:	Mar. 25, 2025 - Mar. 30, 2025
Date of Issue:	May 07, 2025

ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.

Tested by: Julie Zhu

Checked by: Ye Hongji

Approved by: Sunny Zou

(Technical Director)

Revision History

Version	Issue Date	Revisions
Rev. 01	Apr. 22, 2025	Initial Issue
Rev. 02	May 07, 2025	Corrected the Maximum Output Power in Section 2.4.

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1 GENERAL INFORMATION

1.1 Test Laboratory

Name	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Phone Number	+86 755 6685 0100

1.2 Test Location

Name	Shenzhen BALUN Technology Co., Ltd.
Location	☑ Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
	☐ 1/F, Building B, Ganghongji High-tech Intelligent Industrial Park, No. 1008, Songbai Road, Yangguang Community, Xili Sub-district, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Accreditation Certificate	The laboratory is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1196. The laboratory has been listed by Industry Canada to perform electromagnetic emission measurements. The recognition numbers of test site are 11524A.

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	Botslab Inc.
Address	919 North Market Street, Suite 950, Wilmington, New Castle, Delaware, USA

2.2 Manufacturer Information

Manufacturer	Botslab Inc.
Address	919 North Market Street, Suite 950, Wilmington, New Castle, Delaware, USA

2.3 General Description for Equipment under Test (EUT)

EUT Name	Dash Cam
Model Name Under Test	DC-BD08-M5
Series Model Name	N/A
Description of Model name differentiation	N/A
Serial Number	TYANGA215120000001
Hardware Version	G980H MC_Main_V02
Software Version	G980HMCN5291-0.0.30-E
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.4 Technical Information

Network and Wireless connectivity	Bluetooth (BLE) WIFI 802.11a, 802.11b, 802.11g and 802.11n GPS, BDS

The requirement for the following technical information of the EUT was tested in this report:

Frequency Range	U-NII-3: 5725 MHz to 5850 MHz
Product Type	☒ Mobile ☐ Portable ☐ Fix Location Indoor for IC standard
Modulation technology	OFDM
Modulation Type	64QAM, 16QAM, BPSK, QPSK
Transfer Rate (Mbps) (Single RF path)	802.11n: up to 150 Mbps
Channel Bandwidth	802.11n: 20 MHz, 40 MHz
Maximum Output Power	U-NII-3: 14.86 mW
Antenna System (eg., MIMO, Smart Antenna)	N/A
Categorization as Correlated or Completely Uncorrelated	N/A
Antenna Type	Copper-Nickel-Zinc Alloy Antenna
Antenna Gain	U-NII-3: 5725 MHz to 5850 MHz: 3.74 dBi
About the Product	The equipment is Dash Cam, intended for used with information technology equipment.

Note: The above EUT information in section 2.4 was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

2.5 Channel List

20 MHz		40 MHz	
Channel Number	Frequency (MHz)	Channel Number	Frequency (MHz)
149	**5745**	**151**	**5755**
153	5765	**159**	**5795**
157	**5785**		
161	5805		
165	**5825**		

The Lowest frequency, the middle frequency and the highest frequency of channel were selected to perform the test, and the selected channel see below:

For 802.11a/n(HT20)

U-NII-3 (5725 - 5850 MHz)		
Channel Number	Channel	Frequency (MHz)
149	Low	5745
157	Mid	5785
165	High	5825

For 802.11n(HT40)

U-NII-3 (5725 - 5850 MHz)		
Channel Number	Channel	Frequency (MHz)
151	Low	5755
159	High	5795

Note: Preliminary tests were performed in different data rate in above table to find the worst radiated emission. The data rate shown in the table below is the worst-case rate with respect to the specific test item. Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

Test Items	Mode	Data Rate	Modulation Type	U-NII-3 Channel
RF Output Power	11a	6	BPSK	165/157/149
	11n(20 MHz)	6.5		165/157/149
	11n(40 MHz)	13.5		159/151
Emission Bandwidth & 99% Occupied Bandwidth	11a	6	BPSK	165/157/149
	11n(20 MHz)	6.5		165/157/149
	11n(40 MHz)	13.5		159/151
6 dB bandwidth	11a	6	BPSK	165/157/149
	11n(20 MHz)	6.5		165/157/149
	11n(40 MHz)	13.5		159/151
Power Spectral Density	11a	6	BPSK	165/157/149
	11n(20 MHz)	6.5		165/157/149
	11n(40 MHz)	13.5		159/151
Radiated Spurious Emissions	11a	6	BPSK	165/157/149
	11n(20 MHz)	6.5		165/157/149
	11n(40 MHz)	13.5		159/151
Band Edge (Restricted-band)	11a	6	BPSK	165/157/149
	11n(20 MHz)	6.5		165/157/149
	11n(40 MHz)	13.5		159/151

3 SUMMARY OF TEST RESULTS

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 15 Subpart E	Unlicensed National Information Infrastructure Devices
2	RSS-Gen Issue 5	General Requirements for Compliance of Radio Apparatus
3	RSS-247 Issue 3	Digital Transmission Systems (DTSs), Frequency Hopping Systems(FHSs) and Licence-Exemp Local Area Network (LE-LAN) Devices
4	KDB Publication 789033 D02v02r01	Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E
5	ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices

3.2 Test Verdict

No.	Description	FCC Part No.	RSS Part No.	Test Result	Verdict
1	Antenna Requirement	15.203	RSS-247, 6.2	--	Pass Note1
2	RF Output Power	15.407(a)	RSS-247, 6.2	ANNEX A.1	Pass
3	Emission Bandwidth & 99% Occupied Bandwidth	15.407(a)	RSS-247, 6.2	ANNEX A.2	Pass
4	6 dB bandwidth	15.407(e)	RSS-247, 6.2	ANNEX A.3	Pass
5	Power Spectral Density	15.407(a)	RSS-247, 6.2	ANNEX A.4	Pass
6	Conducted Emission	15.207	RSS-GEN, 8.8	ANNEX A.5	N/A Note 2
7	Radiated Spurious Emissions and Band Edge (Restricted-band)	15.407(b)	RSS-247, 6.2	ANNEX A.6	Pass
8	Receiver Spurious Emission	--	RSS-Gen, 7.1.2	--	N/A Note 3

Note [1]: The EUT has a permanently and irreplaceable attached antenna, which complies with the requirement FCC 15.203.

Note [2]: The EUT is a vehicle equipment, so the Conducted Emission test is not applicable.

Note [3]: Only radio communication receivers operating in stand-alone mode within the U-NII-30-960 MHz, as well as scanner receivers, are subject to Industry Canada requirements, so this test is not applicable.

Note [4]: Under all normal operating conditions specified in the user manual, frequency stability can keep radiation within the operating frequency band.

4 GENERAL TEST CONFIGURATIONS

4.1 Test Environments

During the measurement, the normal environmental conditions were within the listed ranges:

Relative Humidity	40% to 65%	
Atmospheric Pressure	100 kPa to 102 kPa	
Temperature	NT (Normal Temperature)	+20.3℃ to +24.8℃
Working Voltage of the EUT	NV (Normal Voltage)	5 V

4.2 Test Equipment List

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer	KEYSIGHT	N9020A	MY46471071	2024.07.04	2025.07.03
Spectrum Analyzer	ROHDE&SCHWARZ	FSV-40	101544	2023.12.27	2024.12.26
Power Sensor	KEYSIGHT	U2063XA	MY58000247	2024.07.04	2025.07.03
Spectrum Analyzer	KEYSIGHT	N9020A	MY52510065	2024.08.01	2025.07.31
Test Antenna-Horn	SCHWARZBECK	BBHA 9120D	01631	2025.02.22	2028.02.21
Test Antenna-Horn	A-INFO	LB-180400KF	J211060273	2024.06.15	2027.06.14
Anechoic Chamber	RAINFORD	9m*6m*6m	144	2022.02.19	2025.09.03
Amplifier	COM-MV	LSCX_LNA1-12G-01	180602	2024.08.01	2025.07.31
Amplifier	COM-MV	XKu_LNA7-18G-01	180601	2024.08.01	2025.07.31
Amplifier	COM-MV	KA LNA18 40G-01	18050001	2024.12.05	2025.12.04
EMI Receiver	ROHDE&SCHWARZ	ESRP	101036	2024.08.01	2025.07.31
Test Antenna-Loop	SCHWARZBECK	FMZB 1519	1519-037	2024.01.23	2027.01.22
Amplifier	COM-MV	ZT30-1000M	B2018054558	2024.11.28	2025.11.27
Anechoic Chamber	EMC Electronic Co., Ltd	20.10*11.60*7.35m	130	2024.07.13	2027.07.12
EMI Receiver	KEYSIGHT	N9038A	MY53220118	2024.08.01	2025.07.31
Test Antenna-Bi-Log	SCHWARZBECK	VULB 9163	9163-624	2024.07.06	2027.07.05
Amplifier	COM-MV	ZT30-1000M	B2017119082	2024.11.28	2025.11.27
Anechoic Chamber	RAINFORD	9m*6m*6m	101	2023.03.04	2026.03.03

4.3 Test Software List

Description	Manufacturer	Software Version	Serial No.	Applicable test Setup
BL410R	BALUN	V2.1.1.488	N/A	The section 4.5.1
BL410E	BALUN	V22.930	N/A	The section 4.5.2&4.5.3&4.5.4&4.5.5

4.4 Measurement Uncertainty

The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2.

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

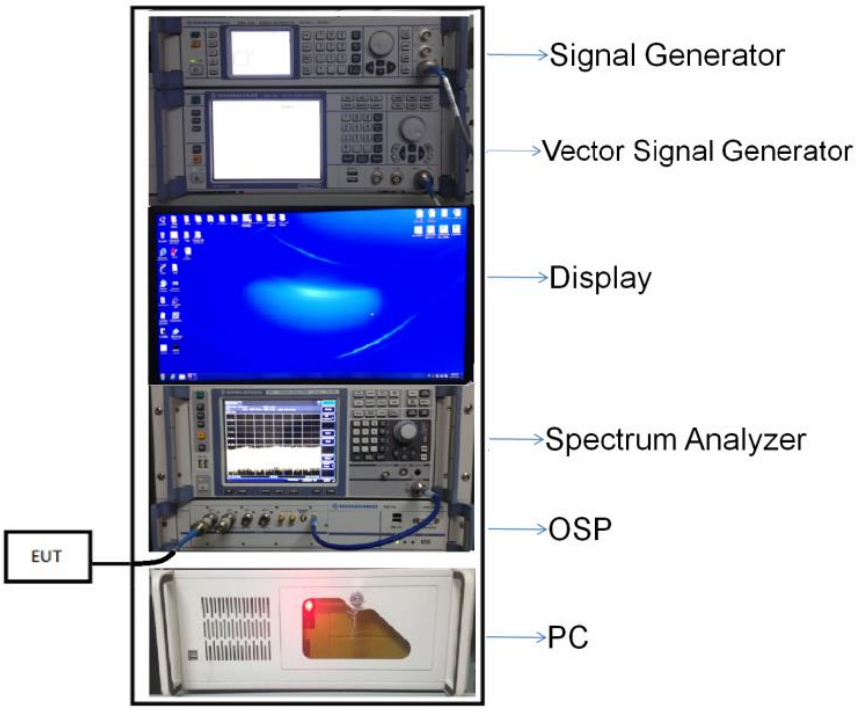
Parameters	Uncertainty
Occupied Channel Bandwidth	2.8%
RF output power, conducted	1.28 dB
Power Spectral Density, conducted	1.30 dB
Unwanted Emissions, conducted	1.84 dB
All emissions, radiated	5.36 dB
Temperature	0.8°C
Humidity	4%

4.5 Description of Test Setup

4.5.1 For Antenna Port Test

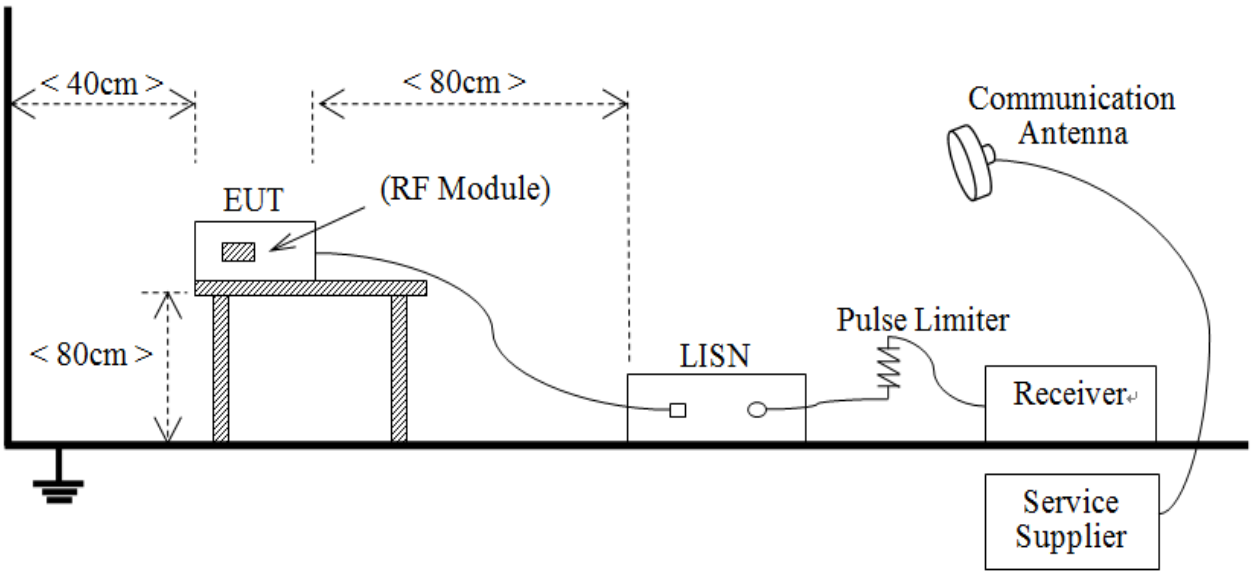
Conducted value (dBm) = Measurement value (dBm) + cable loss (dB)

For example: the measurement value is 10 dBm and the cable 0.5dBm used, then the final result of EUT:
Conducted value (dBm) = 10 dBm + 0.5 dB = 10.5 dBm



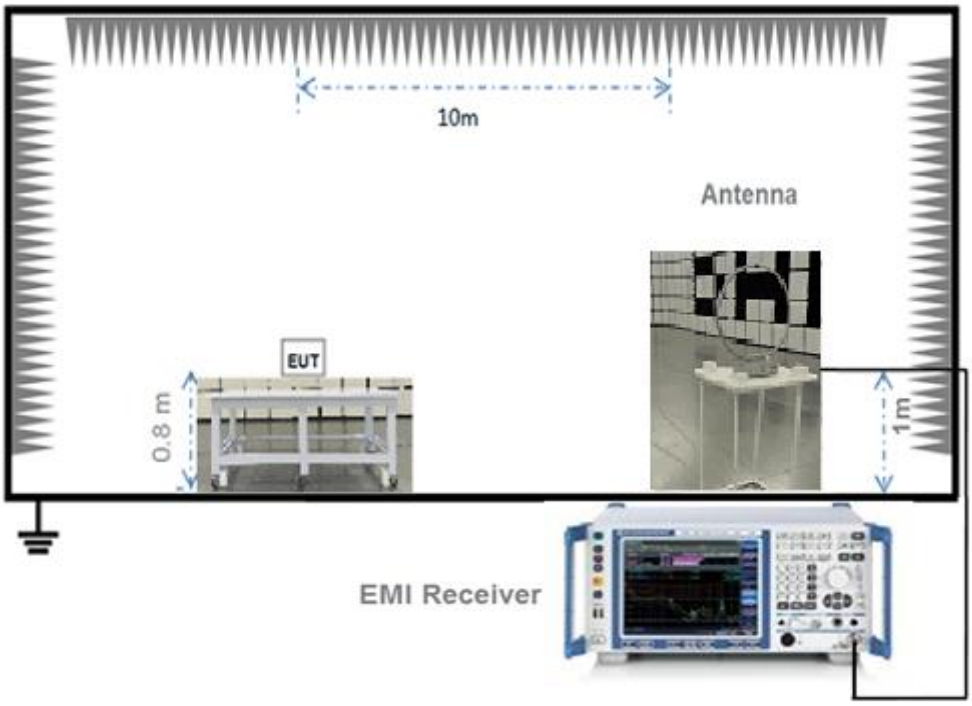
(Diagram 1)

4.5.2 For AC Power Supply Port Test



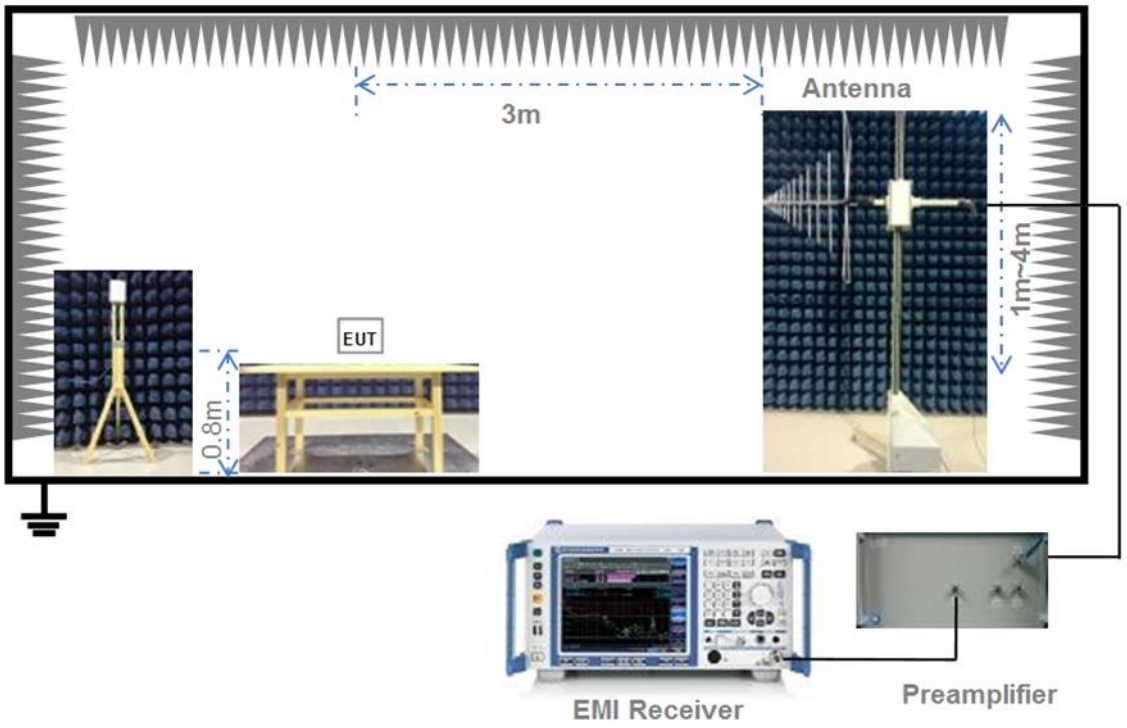
(Diagram 2)

4.5.3 For Radiated Test (Below 30 MHz)



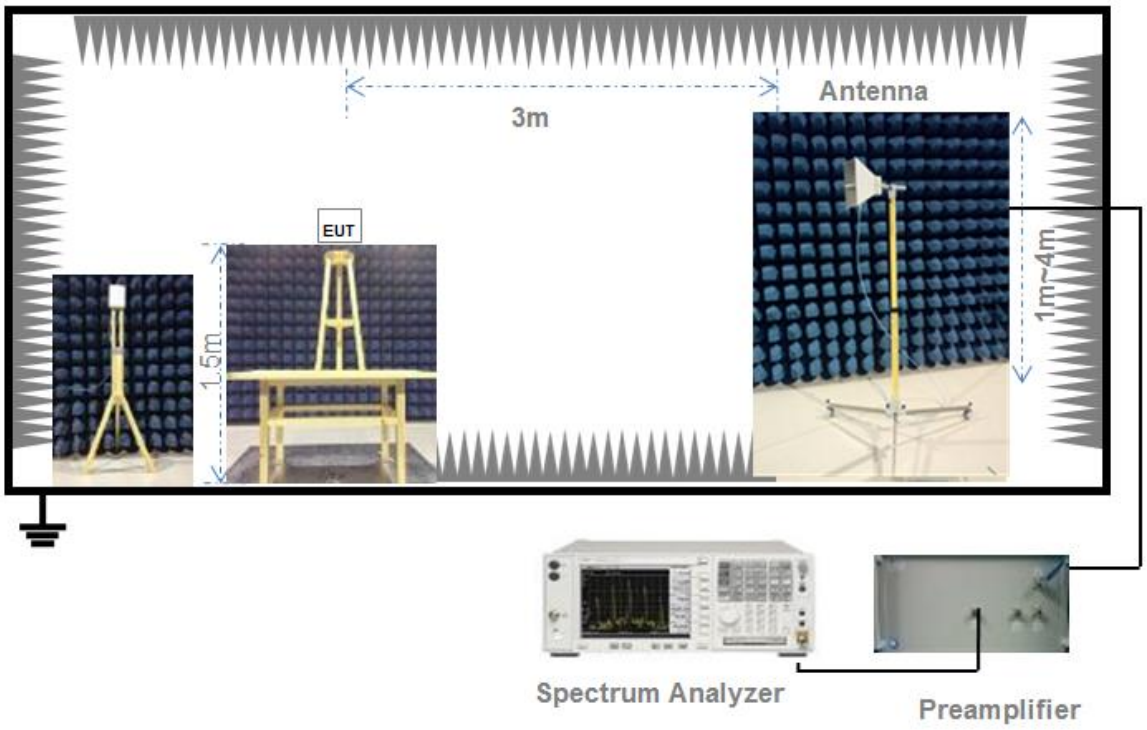
(Diagram 3)

4.5.4 For Radiated Test (30 MHz-1 GHz)



(Diagram 4)

4.5.5 For Radiated Test (Above 1 GHz)



(Diagram 5)

5 TEST ITEMS

5.1 RF Output Power

5.1.1 Test Limit

FCC §15.407(a)

The maximum conducted output power should not exceed:

Frequency Band (MHz)	Limit
5150-5250	250 mW
5250-5350	250 mW or 11 dBm + 10log B, whichever is less.
5470-5725	250 mW or 11 dBm + 10log B, whichever is less.
5725-5850	1 W
Note: Where “B” is the 26 dB emissions bandwidth in MHz.	

RSS-247, 6.2

The maximum conducted output power shall not exceed:

Frequency Band (MHz)	Limit
5150-5250	N/A
5250-5350	250 mW or 11 dBm + 10log B, whichever is less.
5470-5725	250 mW or 11 dBm + 10log B, whichever is less.
5725-5850	1 W
Note: Where “B” is the 99% emissions bandwidth in MHz.	

The maximum e.i.r.p. shall not exceed:

Frequency Band (MHz)	Limit
5150-5250	200 mW or 10 dBm + 10log B, whichever is less.
5250-5350	1W or 17 dBm + 10log B, whichever is less.
5470-5725	1W or 17 dBm + 10log B, whichever is less.
5725-5850	N/A
Note1: Where “B” is the 99% emissions bandwidth in MHz. Note2: EIRP= maximum conducted output power+ Antenna Gain.	

5.1.2 Test Setup

The section 4.5.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

5.1.3 Test Procedure

Maximum conducted (average) output power

a) Measurements may be performed using a wideband RF power meter with a thermocouple detector or equivalent if all of the conditions listed below are satisfied.

1) The EUT is configured to transmit continuously or to transmit with a constant duty cycle.

2) At all times when the EUT is transmitting, it shall be transmitting at its maximum power control level.

3) The integration period of the power meter exceeds the repetition period of the transmitted signal by

at least a factor of five.

b) If the transmitter does not transmit continuously, measure the duty cycle (x) of the transmitter output signal.

c) Measure the average power of the transmitter. This measurement is an average over both the on and off periods of the transmitter.

d) Adjust the measurement in dBm by adding 10 log (1/x) where x is the duty cycle.

Measurements of duty cycle

The zero-span mode on a spectrum analyzer or EMI receiver if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the on and off times of the transmitted signal.

Set the center frequency of the instrument to the center frequency of the transmission.

Set RBW ≥ OBW if possible; otherwise, set RBW to the largest available value.

Set VBW ≥ RBW. Set detector = peak or average.

The zero-span measurement method shall not be used unless both RBW and VBW are > 50/T and the number of sweep points across duration T exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring duty cycle shall not be used if T ≤ 16.7 microseconds.)

The E.I.R.P used radiated test method. At a test site that has been validated using the procedures of ANSI C63.4 or the latest CISPR 16-1-4 for measurements above 1 GHz, so as to simulate a near free-space environment.

5.1.4 Test Result

Please refer to ANNEX A.1.

5.2 Emission Bandwidth and 6 dB Bandwidth

5.2.1 Limit

FCC §15.407(a), RSS-247, 6.2

Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

5.2.2 Test Setup

The test setup photo please refer to 4.5.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

5.2.3 Test Procedure

Emission bandwidth

1. Set RBW = approximately 1% of the emission bandwidth.

2. Set VBW ≥ 3*RBW,

3. Detector = Peak.

4. Trace mode = Max hold.

5. Measure the maximum width of the emission that is 26 dB down from the peak of the emission.

Occupied Bandwidth

1. Set Span = 1.5 times to 5.0 times the OBW

2. Set RBW = 1% to 5% of the OBW.

3. Set VBW ≥ 3*RBW, Detector = Peak.

4. Trace mode = Max hold.

5. Use the 99% power bandwidth function of the instrument.

6 dB bandwidth

1. Set RBW = 100 kHz, VBW = 300 kHz.

2. Detector = Peak.Trace mode = Max hold.

3. Allow the trace to stabilize.

4. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

5.2.4 Test Result

Please refer to ANNEX A.2 and ANNEX A.3.

5.3 Power Spectral density (PSD)

5.3.1 Limit

FCC §15.407(a)

The maximum power spectral density should not exceed:

Frequency Band (MHz)	Limit
5150-5250	11 dBm/MHz
5250-5350	11 dBm/MHz
5470-5725	11 dBm/MHz
5725-5850	30 dBm/500kHz

RSS-247, 6.2

The maximum power spectral density should not exceed:

Frequency Band (MHz)	Limit
5150-5250	N/A
5250-5350	11 dBm/MHz
5470-5725	11 dBm/MHz
5725-5850	30 dBm/500kHz

The e.i.r.p. spectral density should not exceed:

Frequency Band (MHz)	Limit
5150-5250	10 dBm/MHz
5250-5350	N/A
5470-5725	N/A
5725-5850	N/A
e.i.r.p. spectral density= maximum power spectral density+ Antenna Gain.	

5.3.2 Test Setup

The section 4.5.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

5.3.3 Test Procedure

Set the spectrum analyzer or EMI receiver span to view the entire emission bandwidth.

1. Set RBW = 510 kHz/1 MHz, VBW ≥ 3*RBW, Sweep time = Auto, Detector = RMS.
2. Allow the sweeps to continue until the trace stabilizes.
3. Use the peak marker function to determine the maximum amplitude level.
4. The E.I.R.P spectral density used radiated test method. At a test site that has been validated using the procedures of ANSI C63.4 or the latest CISPR 16-1-4 for measurements above 1 GHz, so as to simulate a near free-space environment.

5.3.4 Test Result

Please refer to ANNEX A.4.

5.4 Conducted Emission

5.4.1 Limit

FCC §15.207, RSS-GEN, 8.8

For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the U-NII-150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50μH/50Ω line impedance stabilization network (LISN).

Frequency range (MHz)	Conducted Limit (dBμV)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
0.50 - 30	60	50

5.4.2 Test Setup

The section 4.5.2 (Diagram 2) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

5.4.3 Test Procedure

The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Refer to recorded points and plots below.

5.4.4 Test Result

Please refer to ANNEX A.5.

5.5 Radiated Spurious Emissions and Band Edge (Restricted-band)

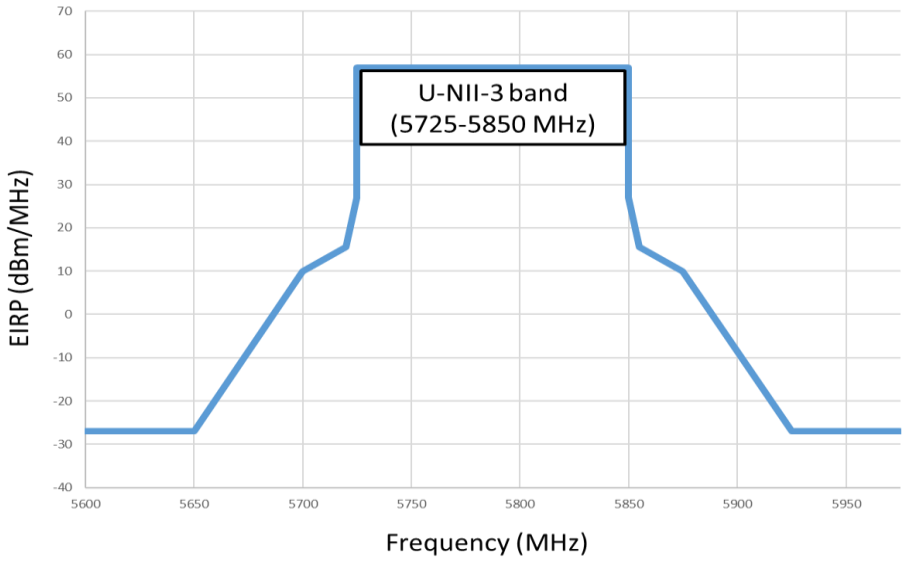
5.5.1 Limit

FCC §15.209 & 15.407(b), RSS-247, 6.2

Frequency (MHz)	Field Strength (μV/m)	Measurement Distance (m)
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

Note [1]: The Limit for radiated test was performed according to FCC Part 15C

Note [2]: The tighter limit applies at the band edge.

Un-restricted band emissions	
Out Operating Band (MHz)	Limit
5150 - 5250	e.i.r.p. -27 dBm (68.2 dBuV/m@3m)
5250 - 5350	e.i.r.p. -27 dBm (68.2 dBuV/m@3m)
5470 - 5725	e.i.r.p. -27 dBm (68.2 dBuV/m@3m)
5725 - 5850	All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge. 

Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength.

5.5.2 Test Setup

The section 4.5.3-4.5.5 (Diagram 3 - Diagram 5) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

5.5.3 Test Procedure

Since the emission limits are specified in terms of radiated field strength levels, measurements performed to demonstrate compliance have traditionally relied on a radiated test configuration. Radiated measurements remain the principal method for demonstrating compliance to the specified limits; however antenna-port conducted measurements are also now acceptable to demonstrate compliance (see below for details). When radiated measurements are utilized, test site requirements and procedures for maximizing and measuring radiated emissions that are described in ANSI C63.10 shall be followed.

Antenna-port conducted measurements may also be used as an alternative to radiated measurements for demonstrating compliance in the restricted frequency bands. If conducted measurements are performed, then proper impedance matching must be ensured and an additional radiated test for cabinet/case spurious emissions is required.

General Procedure for conducted measurements in restricted bands

a) Measure the conducted output power (in dBm) using the detector specified (see guidance regarding measurement procedures for determining quasi-peak, peak, and average conducted output power, respectively).

b) Add the appropriate maximum ground reflection factor to the EIRP level (6 dB for frequencies ≤ 30 MHz, 4.7 dB for frequencies between 30 MHz and 1000 MHz, inclusive and 0 dB for frequencies > 1000 MHz).

c) For devices with multiple antenna-ports, measure the power of each individual chain and sum the EIRP of all chains in linear terms (e.g., Watts, mW).

d) Convert the resultant EIRP level to an equivalent electric field strength using the following relationship:

E = EIRP – 20log D + 104.8

where:

E = electric field strength in dBμV/m,

EIRP = equivalent isotropic radiated power in dBm

D = specified measurement distance in meters.

e) Compare the resultant electric field strength level to the applicable limit.

f) Perform radiated spurious emission test.

Quasi-Peak measurement procedure

The specifications for measurements using the CISPR quasi-peak detector can be found in Publication 16 of the International Special Committee on Radio Frequency Interference (CISPR) of the International Electrotechnical Commission.

As an alternative to CISPR quasi-peak measurement, compliance can be demonstrated to the applicable

emission limits using a peak detector.

Peak power measurement procedure

Peak emission levels are measured by setting the instrument as follows:

a) RBW = as specified in Table 1.

b) VBW ≥ 3 x RBW.

c) Detector = Peak.

d) Sweep time = auto.

e) Trace mode = max hold.

f) Allow sweeps to continue until the trace stabilizes. (Note that the required measurement time may be longer for low duty cycle applications).

Table 1—RBW as a function of frequency

Frequency	RBW
9-150 kHz	200-300 Hz
0.15-30 MHz	9-10 kHz
30-1000 MHz	100-120 kHz
> 1000 MHz	1 MHz

If the peak-detected amplitude can be shown to comply with the average limit, then it is not necessary to perform a separate average measurement.

Trace averaging across on and off times of the EUT transmissions followed by duty cycle correction

If continuous transmission of the EUT (i.e., duty cycle ≥ 98 percent) cannot be achieved and the duty cycle is constant (i.e., duty cycle variations are less than ± 2 percent), then the following procedure shall be used:

a) The EUT shall be configured to operate at the maximum achievable duty cycle.

b) Measure the duty cycle, x, of the transmitter output signal as described in section 6.0.

c) RBW = 1 MHz (unless otherwise specified).

d) VBW ≥ 3 x RBW.

e) Detector = RMS, if span/(# of points in sweep) ≤ (RBW/2). Satisfying this condition may require increasing the number of points in the sweep or reducing the span. If this condition cannot be satisfied, then the detector mode shall be set to peak.

f) Averaging type = power (i.e., RMS).

1) As an alternative, the detector and averaging type may be set for linear voltage averaging.

2) Some instruments require linear display mode in order to use linear voltage averaging. Log or dB averaging shall not be used.

g) Sweep time = auto.

h) Perform a trace average of at least 100 traces.

i) A correction factor shall be added to the measurement results prior to comparing to the emission limit in order to compute the emission level that would have been measured had the test been performed at 100 percent duty cycle. The correction factor is computed as follows:

1) If power averaging (RMS) mode was used in step f), then the applicable correction factor is 10 log(1/x), where x is the duty cycle.

2) If linear voltage averaging mode was used in step f), then the applicable correction factor is 20 log(1/x), where x is the duty cycle.

3) If a specific emission is demonstrated to be continuous (≥ 98 percent duty cycle) rather than turning on and off with the transmit cycle, then no duty cycle correction is required for that emission.

NOTE: Reduction of the measured emission amplitude levels to account for operational duty factor is not permitted. Compliance is based on emission levels occurring during transmission - not on an average across on and off times of the transmitter.

Determining the applicable transmit antenna gain

A conducted power measurement will determine the maximum output power associated with a restricted band emission; however, in order to determine the associated EIRP level, the gain of the transmitting antenna (in dBi) must be added to the measured output power (in dBm).

Since the out-of-band characteristics of the EUT transmit antenna will often be unknown, the use of a conservative antenna gain value is necessary. Thus, when determining the EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2 dBi, whichever is greater. However, for devices that operate in multiple frequency bands while using the same transmit antenna, the highest gain of the antenna within the operating band nearest in frequency to the restricted band emission being measured may be used in lieu of the overall highest gain when the emission is at a frequency that is within 20 percent of the nearest band edge frequency, but in no case shall a value less than 2 dBi be used.

See KDB 662911 for guidance on calculating the additional array gain term when determining the effective antenna gain for a EUT with multiple outputs occupying the same or overlapping frequency ranges in the same band.

Radiated spurious emission test

An additional consideration when performing conducted measurements of restricted band emissions is that unwanted emissions radiating from the EUT cabinet, control circuits, power leads, or intermediate circuit elements will likely go undetected in a conducted measurement configuration. To address this concern, a radiated test shall be performed to ensure that emissions emanating from the EUT cabinet (rather than the antenna port) also comply with the applicable limits.

For these cabinet radiated spurious emission measurements the EUT transmit antenna may be replaced with a termination matching the nominal impedance of the antenna. Procedures for performing radiated measurements are specified in ANSI C63.10. All detected emissions shall comply with the applicable limits.

The measurement frequency range is from 30 MHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented.

The power of the EUT transmitting frequency should be ignored.

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured
RBW = 1 MHz for f ≥ 1 GHz, 100 kHz for f < 1 GHz
VBW ≥ RBW
Sweep = auto
Detector function = peak
Trace = max hold

5.5.4 Test Result

Please refer to ANNEX A.6.

ANNEX A TEST RESULT

A.1 RF Output Power

Note: For FCC standard, if transmitting antennas of directional gain greater than 6 dBi are used, all band maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Note [2]: For IC standard, the U-NII-3 (5725 - 5850 MHz) maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Duty Cycle

Test Mode	On Time (ms)	On+Off time (ms)	Duty Cycle	Duty Factor
11a	1.36	1.41	96.31%	0.16
11n(HT20)	1.27	1.32	95.99%	0.18
11n(HT40)	0.63	0.68	92.36%	0.34

Test Data

Conducted Power

U-NII-3 (5725 - 5850 MHz)					
Mode	Channel	Conducted Power (dBm)	Conducted Power (mW)	FCC Limit (mW)	Verdict
11a	CH149	11.55	14.29	1000	Pass
11a	CH157	11.72	14.86	1000	Pass
11a	CH165	11.70	14.79	1000	Pass
11n(HT20)	CH149	11.38	13.74	1000	Pass
11n(HT20)	CH157	11.52	14.19	1000	Pass
11n(HT20)	CH165	11.46	14.00	1000	Pass
11n(HT40)	CH151	11.29	13.46	1000	Pass
11n(HT40)	CH159	11.49	14.09	1000	Pass

E.I.R.P

U-NII-3 (5725 - 5850 MHz)				
Mode	Channel	E.I.R.P (dBm)	E.I.R.P (mW)	Verdict
11a	CH149	12.68	18.54	Pass
11a	CH157	12.85	19.28	Pass
11a	CH165	12.83	19.19	Pass
11n(HT20)	CH149	12.51	17.82	Pass
11n(HT20)	CH157	12.65	18.41	Pass
11n(HT20)	CH165	12.59	18.16	Pass
11n(HT40)	CH151	12.42	17.46	Pass
11n(HT40)	CH159	12.62	18.28	Pass

A.2 Emission Bandwidth & 99% Bandwidth

Note: Test plots please refer to the document “Annex No.: BL-SZ2530909-603 Data Part 1.pdf”.

Test Data

U-NII-3 (5725 - 5850 MHz)			
Mode	Channel	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
11a	CH149	19.10	16.25
11a	CH157	19.07	16.24
11a	CH165	19.08	16.25
11n(HT20)	CH149	20.11	17.38
11n(HT20)	CH157	20.08	17.36
11n(HT20)	CH165	20.09	17.36
11n(HT40)	CH151	37.99	35.33
11n(HT40)	CH159	37.94	35.29

A.3 6 dB Bandwidth

Note: Test plots please refer to the document “Annex No.: BL-SZ2530909-603 Data Part 2.pdf”.

Test Data

U-NII-3 (5725 - 5850 MHz)				
Mode	Channel	6 dB Bandwidth (MHz)	Limit (kHz)	Verdict
11a	CH149	15.30	500.00	Pass
11a	CH157	15.30	500.00	Pass
11a	CH165	15.30	500.00	Pass
11n(HT20)	CH149	14.50	500.00	Pass
11n(HT20)	CH157	14.00	500.00	Pass
11n(HT20)	CH165	14.00	500.00	Pass
11n(HT40)	CH151	30.30	500.00	Pass
11n(HT40)	CH159	32.70	500.00	Pass

A.4 Power Spectral Density

Note: Test plots please refer to the document “Annex No.: BL-SZ2530909-603 Data Part 3.pdf”.

Test Data

U-NII-3 (5725 - 5850 MHz)				
Mode	Channel	PSD (dBm/500kHz)	FCC Limit (dBm/500kHz)	Verdict
11a	CH149	-1.44	30.00	Pass
11a	CH157	-1.18	30.00	Pass
11a	CH165	-1.39	30.00	Pass
11n(HT20)	CH149	-1.66	30.00	Pass
11n(HT20)	CH157	-1.62	30.00	Pass
11n(HT20)	CH165	-1.66	30.00	Pass
11n(HT40)	CH151	-4.60	30.00	Pass
11n(HT40)	CH159	-4.47	30.00	Pass

E.I.R.P PSD

U-NII-3 (5725 - 5850 MHz)			
Mode	Channel	PSD (dBm/MHz)	Verdict
11a	CH149	-0.31	Pass
11a	CH157	-0.05	Pass
11a	CH165	-0.26	Pass
11n(HT20)	CH149	-0.53	Pass
11n(HT20)	CH157	-0.49	Pass
11n(HT20)	CH165	-0.53	Pass
11n(HT40)	CH151	-3.47	Pass
11n(HT40)	CH159	-3.34	Pass

A.5 Conducted Emissions

Note: Not applicable.

A.6 Radiated Spurious Emissions and Band Edge (Restricted-band)

Note [1]: The symbol of "--" in the table which means not application.

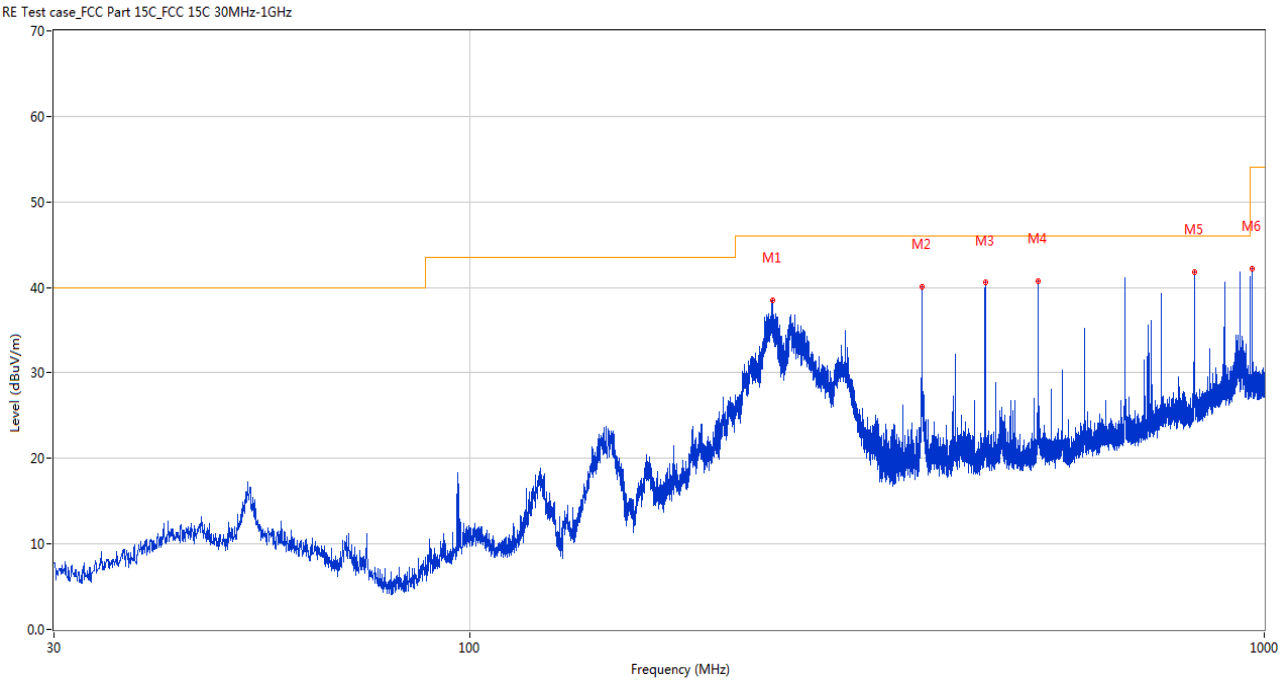
Note [2]: For the test data above 1 GHz, According the ANSI C63.4, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

Note [3]: The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.

Note [4]: The EUT is working in the Normal link mode below 1 GHz. All modes have been tested and normal link mode is worst.

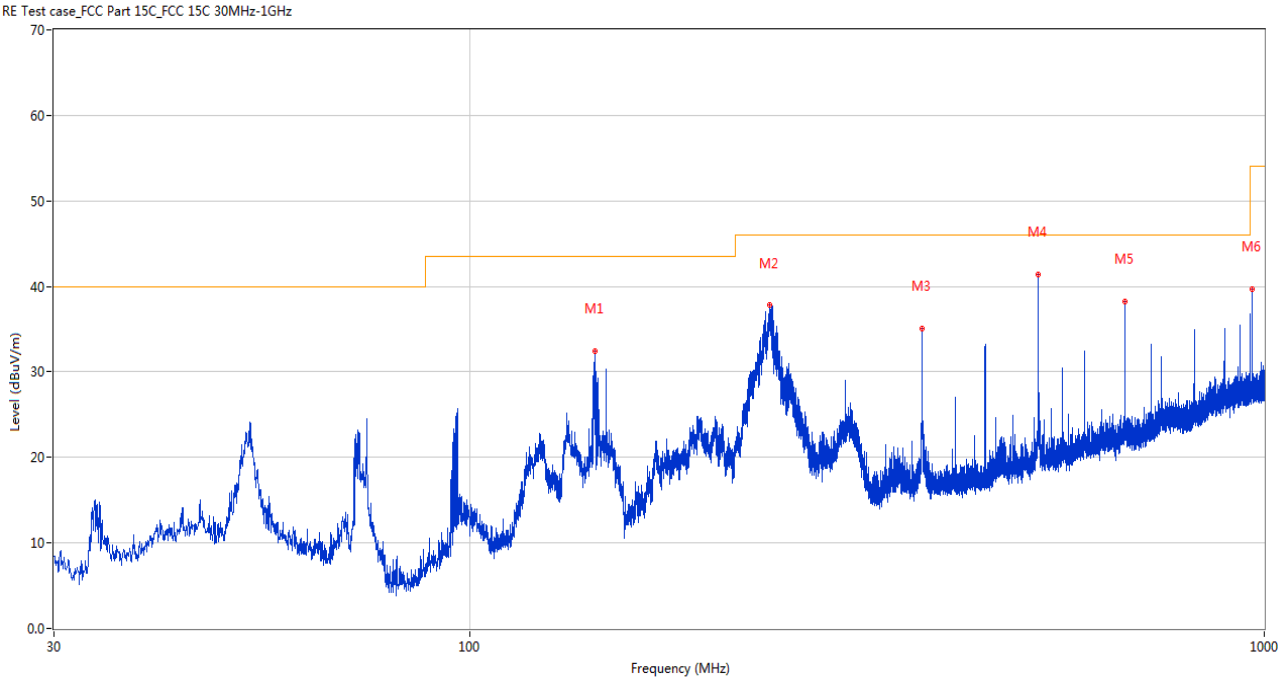
Test Data and Plots

30 MHz to 1 GHz, ANT H



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	240.442	38.52	-24.79	46.0	7.48	Peak	259.70	100	Horizontal	Pass
2	371.294	40.05	-21.50	46.0	5.95	Peak	45.60	100	Horizontal	Pass
3	445.500	40.54	-19.70	46.0	5.46	Peak	217.40	100	Horizontal	Pass
4	519.753	40.68	-17.76	46.0	5.32	Peak	153.50	100	Horizontal	Pass
5	816.767	41.77	-11.32	46.0	4.23	Peak	57.60	100	Horizontal	Pass
6	965.226	42.16	-8.44	54.0	11.84	Peak	153.50	100	Horizontal	Pass

30 MHz to 1 GHz, ANT V



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	143.926	32.47	-29.65	43.5	11.03	Peak	0.40	100	Vertical	Pass
2	238.889	37.78	-24.89	46.0	8.22	Peak	187.90	100	Vertical	Pass
3	371.246	35.12	-21.50	46.0	10.88	Peak	267.00	100	Vertical	Pass
4	519.753	41.43	-17.76	46.0	4.57	Peak	336.20	100	Vertical	Pass
5	668.260	38.17	-14.14	46.0	7.83	Peak	156.40	100	Vertical	Pass
6	965.274	39.73	-8.44	54.0	14.27	Peak	0.40	100	Vertical	Pass

Note: The spurious above 18G is noise only, do not show on the report.

11a, U-NII-3, 1 GHz to 18 GHz, Low Channel, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1521.622	36.48	74.0	37.52	Peak	214.00	400	Horizontal	Pass
1**	1521.622	30.04	54.0	23.96	AV	214.00	400	Horizontal	Pass
2	4022.487	49.89	74.0	24.11	Peak	79.00	400	Horizontal	Pass
2**	4022.487	37.14	54.0	16.86	AV	79.00	400	Horizontal	Pass
3	7596.330	52.63	74.0	21.37	Peak	67.00	200	Horizontal	Pass
3**	7596.330	43.79	54.0	10.21	AV	67.00	200	Horizontal	Pass
4	12455.438	54.26	74.0	19.74	Peak	253.00	400	Horizontal	Pass
4**	12455.438	45.97	54.0	8.03	AV	253.00	400	Horizontal	Pass
5	16095.011	53.17	74.0	20.83	Peak	32.00	400	Horizontal	Pass
5**	16095.011	43.51	54.0	10.49	AV	32.00	400	Horizontal	Pass
6	17417.138	56.74	74.0	17.26	Peak	316.00	200	Horizontal	Pass
6**	17417.138	46.74	54.0	7.26	AV	316.00	200	Horizontal	Pass

11a, U-NII-3, 1 GHz to 18 GHz, Low Channel, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1330.937	46.88	74.0	27.12	Peak	110.00	400	Vertical	Pass
1**	1330.937	34.31	54.0	19.69	AV	110.00	400	Vertical	Pass
2	1438.049	42.72	74.0	31.28	Peak	53.00	300	Vertical	Pass
2**	1438.049	35.28	54.0	18.72	AV	53.00	300	Vertical	Pass
3	4310.314	48.18	74.0	25.82	Peak	348.00	200	Vertical	Pass
3**	4310.314	38.54	54.0	15.46	AV	348.00	200	Vertical	Pass
4	7590.989	54.18	74.0	19.82	Peak	135.00	100	Vertical	Pass
4**	7590.989	44.52	54.0	9.48	AV	135.00	100	Vertical	Pass
5	12538.761	52.12	74.0	21.88	Peak	67.00	100	Vertical	Pass
5**	12538.761	44.18	54.0	9.82	AV	67.00	100	Vertical	Pass
6	15902.961	54.76	74.0	19.24	Peak	102.00	300	Vertical	Pass
6**	15902.961	44.10	54.0	9.90	AV	102.00	300	Vertical	Pass

11a, U-NII-3, 1 GHz to 18 GHz, Middle Channel, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1523.334	40.33	74.0	33.67	Peak	65.00	400	Horizontal	Pass
1**	1523.334	30.23	54.0	23.77	AV	65.00	400	Horizontal	Pass
2	4023.438	45.81	74.0	28.19	Peak	282.00	200	Horizontal	Pass
2**	4023.438	39.10	54.0	14.90	AV	282.00	200	Horizontal	Pass
3	7597.779	55.88	74.0	18.12	Peak	145.00	200	Horizontal	Pass
3**	7597.779	44.02	54.0	9.98	AV	145.00	200	Horizontal	Pass
4	12457.564	52.02	74.0	21.98	Peak	283.00	300	Horizontal	Pass
4**	12457.564	42.14	54.0	11.86	AV	283.00	300	Horizontal	Pass
5	16099.242	50.73	74.0	23.27	Peak	357.00	300	Horizontal	Pass
5**	16099.242	45.99	54.0	8.01	AV	357.00	300	Horizontal	Pass
6	17420.019	57.19	74.0	16.81	Peak	213.00	200	Horizontal	Pass
6**	17420.019	47.62	54.0	6.38	AV	213.00	200	Horizontal	Pass

11a, U-NII-3, 1 GHz to 18 GHz, Middle Channel, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1334.014	47.25	74.0	26.75	Peak	198.00	400	Vertical	Pass
1**	1334.014	31.56	54.0	22.44	AV	198.00	400	Vertical	Pass
2	1439.327	40.63	74.0	33.37	Peak	243.00	100	Vertical	Pass
2**	1439.327	39.57	54.0	14.43	AV	243.00	100	Vertical	Pass
3	4314.815	47.67	74.0	26.33	Peak	153.00	200	Vertical	Pass
3**	4314.815	35.73	54.0	18.27	AV	153.00	200	Vertical	Pass
4	7596.203	50.19	74.0	23.81	Peak	191.00	100	Vertical	Pass
4**	7596.203	45.38	54.0	8.62	AV	191.00	100	Vertical	Pass
5	12535.357	54.32	74.0	19.68	Peak	241.00	400	Vertical	Pass
5**	12535.357	45.47	54.0	8.53	AV	241.00	400	Vertical	Pass
6	15903.195	52.12	74.0	21.88	Peak	204.00	100	Vertical	Pass
6**	15903.195	43.14	54.0	10.86	AV	204.00	100	Vertical	Pass

11a, U-NII-3, 1 GHz to 18 GHz, High Channel, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1518.403	36.56	74.0	37.44	Peak	355.00	400	Horizontal	Pass
1**	1518.403	27.40	54.0	26.60	AV	355.00	400	Horizontal	Pass
2	4019.158	47.23	74.0	26.77	Peak	226.00	200	Horizontal	Pass
2**	4019.158	36.65	54.0	17.35	AV	226.00	200	Horizontal	Pass
3	7602.419	53.05	74.0	20.95	Peak	133.00	200	Horizontal	Pass
3**	7602.419	43.16	54.0	10.84	AV	133.00	200	Horizontal	Pass
4	12456.559	54.01	74.0	19.99	Peak	278.00	300	Horizontal	Pass
4**	12456.559	45.94	54.0	8.06	AV	278.00	300	Horizontal	Pass
5	16092.660	51.45	74.0	22.55	Peak	151.00	400	Horizontal	Pass
5**	16092.660	43.85	54.0	10.15	AV	151.00	400	Horizontal	Pass
6	17419.859	56.20	74.0	17.80	Peak	54.00	200	Horizontal	Pass
6**	17419.859	48.08	54.0	5.92	AV	54.00	200	Horizontal	Pass

11a, U-NII-3, 1 GHz to 18 GHz, High Channel, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1330.091	42.24	74.0	31.76	Peak	246.00	300	Vertical	Pass
1**	1330.091	36.13	54.0	17.87	AV	246.00	300	Vertical	Pass
2	1442.209	39.69	74.0	34.31	Peak	54.00	300	Vertical	Pass
2**	1442.209	35.02	54.0	18.98	AV	54.00	300	Vertical	Pass
3	4310.958	46.98	74.0	27.02	Peak	27.00	200	Vertical	Pass
3**	4310.958	35.64	54.0	18.36	AV	27.00	200	Vertical	Pass
4	7595.829	52.25	74.0	21.75	Peak	277.00	400	Vertical	Pass
4**	7595.829	42.98	54.0	11.02	AV	277.00	400	Vertical	Pass
5	12535.135	52.19	74.0	21.81	Peak	109.00	100	Vertical	Pass
5**	12535.135	44.39	54.0	9.61	AV	109.00	100	Vertical	Pass
6	15909.069	56.26	74.0	17.74	Peak	224.00	400	Vertical	Pass
6**	15909.069	42.73	54.0	11.27	AV	224.00	400	Vertical	Pass

11n20, U-NII-3, 1 GHz to 18 GHz, Low Channel, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1517.198	40.37	74.0	33.63	Peak	41.00	300	Horizontal	Pass
1**	1517.198	30.04	54.0	23.96	AV	41.00	300	Horizontal	Pass
2	4020.962	46.24	74.0	27.76	Peak	2.00	200	Horizontal	Pass
2**	4020.962	38.89	54.0	15.11	AV	2.00	200	Horizontal	Pass
3	7594.683	55.79	74.0	18.21	Peak	48.00	200	Horizontal	Pass
3**	7594.683	40.87	54.0	13.13	AV	48.00	200	Horizontal	Pass
4	12455.865	54.05	74.0	19.95	Peak	267.00	100	Horizontal	Pass
4**	12455.865	46.83	54.0	7.17	AV	267.00	100	Horizontal	Pass
5	16098.916	52.86	74.0	21.14	Peak	158.00	100	Horizontal	Pass
5**	16098.916	45.51	54.0	8.49	AV	158.00	100	Horizontal	Pass
6	17422.549	53.93	74.0	20.07	Peak	332.00	400	Horizontal	Pass
6**	17422.549	46.34	54.0	7.66	AV	332.00	400	Horizontal	Pass

11n20, U-NII-3, 1 GHz to 18 GHz, Low Channel, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1335.874	44.16	74.0	29.84	Peak	262.00	100	Vertical	Pass
1**	1335.874	34.45	54.0	19.55	AV	262.00	100	Vertical	Pass
2	1438.158	43.16	74.0	30.84	Peak	290.00	100	Vertical	Pass
2**	1438.158	36.53	54.0	17.47	AV	290.00	100	Vertical	Pass
3	4308.077	46.76	74.0	27.24	Peak	146.00	200	Vertical	Pass
3**	4308.077	39.77	54.0	14.23	AV	146.00	200	Vertical	Pass
4	7590.667	54.28	74.0	19.72	Peak	114.00	100	Vertical	Pass
4**	7590.667	42.71	54.0	11.29	AV	114.00	100	Vertical	Pass
5	12532.747	50.81	74.0	23.19	Peak	232.00	200	Vertical	Pass
5**	12532.747	45.28	54.0	8.72	AV	232.00	200	Vertical	Pass
6	15909.235	53.36	74.0	20.64	Peak	220.00	400	Vertical	Pass
6**	15909.235	44.87	54.0	9.13	AV	220.00	400	Vertical	Pass

11n20, U-NII-3, 1 GHz to 18 GHz, Middle Channel, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1517.866	38.46	74.0	35.54	Peak	86.00	100	Horizontal	Pass
1**	1517.866	29.63	54.0	24.37	AV	86.00	100	Horizontal	Pass
2	4023.348	47.15	74.0	26.85	Peak	21.00	100	Horizontal	Pass
2**	4023.348	38.81	54.0	15.19	AV	21.00	100	Horizontal	Pass
3	7601.238	54.58	74.0	19.42	Peak	259.00	200	Horizontal	Pass
3**	7601.238	44.58	54.0	9.42	AV	259.00	200	Horizontal	Pass
4	12453.090	55.27	74.0	18.73	Peak	268.00	100	Horizontal	Pass
4**	12453.090	41.70	54.0	12.30	AV	268.00	100	Horizontal	Pass
5	16098.142	54.87	74.0	19.13	Peak	45.00	200	Horizontal	Pass
5**	16098.142	47.27	54.0	6.73	AV	45.00	200	Horizontal	Pass
6	17418.084	58.92	74.0	15.08	Peak	289.00	300	Horizontal	Pass
6**	17418.084	45.92	54.0	8.08	AV	289.00	300	Horizontal	Pass

11n20, U-NII-3, 1 GHz to 18 GHz, Middle Channel, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1334.414	46.95	74.0	27.05	Peak	57.00	200	Vertical	Pass
1**	1334.414	35.98	54.0	18.02	AV	57.00	200	Vertical	Pass
2	1441.878	42.91	74.0	31.09	Peak	266.00	300	Vertical	Pass
2**	1441.878	38.60	54.0	15.40	AV	266.00	300	Vertical	Pass
3	4313.633	46.11	74.0	27.89	Peak	13.00	200	Vertical	Pass
3**	4313.633	36.30	54.0	17.70	AV	13.00	200	Vertical	Pass
4	7595.013	52.77	74.0	21.23	Peak	61.00	200	Vertical	Pass
4**	7595.013	43.27	54.0	10.73	AV	61.00	200	Vertical	Pass
5	12534.031	51.49	74.0	22.51	Peak	7.00	300	Vertical	Pass
5**	12534.031	43.51	54.0	10.49	AV	7.00	300	Vertical	Pass
6	15902.859	56.82	74.0	17.18	Peak	334.00	100	Vertical	Pass
6**	15902.859	48.19	54.0	5.81	AV	334.00	100	Vertical	Pass

11n20, U-NII-3, 1 GHz to 18 GHz, High Channel, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1519.093	40.61	74.0	33.39	Peak	173.00	400	Horizontal	Pass
1**	1519.093	31.13	54.0	22.87	AV	173.00	400	Horizontal	Pass
2	4018.325	49.52	74.0	24.48	Peak	84.00	300	Horizontal	Pass
2**	4018.325	38.84	54.0	15.16	AV	84.00	300	Horizontal	Pass
3	7598.242	54.00	74.0	20.00	Peak	322.00	200	Horizontal	Pass
3**	7598.242	44.05	54.0	9.95	AV	322.00	200	Horizontal	Pass
4	12459.450	52.66	74.0	21.34	Peak	153.00	300	Horizontal	Pass
4**	12459.450	43.97	54.0	10.03	AV	153.00	300	Horizontal	Pass
5	16096.602	51.38	74.0	22.62	Peak	4.00	400	Horizontal	Pass
5**	16096.602	46.91	54.0	7.09	AV	4.00	400	Horizontal	Pass
6	17422.236	58.57	74.0	15.43	Peak	192.00	300	Horizontal	Pass
6**	17422.236	47.21	54.0	6.79	AV	192.00	300	Horizontal	Pass

11n20, U-NII-3, 1 GHz to 18 GHz, High Channel, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1331.425	45.10	74.0	28.90	Peak	134.00	200	Vertical	Pass
1**	1331.425	34.17	54.0	19.83	AV	134.00	200	Vertical	Pass
2	1436.907	40.17	74.0	33.83	Peak	245.00	300	Vertical	Pass
2**	1436.907	37.68	54.0	16.32	AV	245.00	300	Vertical	Pass
3	4312.830	44.91	74.0	29.09	Peak	54.00	200	Vertical	Pass
3**	4312.830	37.28	54.0	16.72	AV	54.00	200	Vertical	Pass
4	7591.315	53.16	74.0	20.84	Peak	74.00	300	Vertical	Pass
4**	7591.315	43.27	54.0	10.73	AV	74.00	300	Vertical	Pass
5	12533.845	53.05	74.0	20.95	Peak	140.00	400	Vertical	Pass
5**	12533.845	41.66	54.0	12.34	AV	140.00	400	Vertical	Pass
6	15908.485	51.61	74.0	22.39	Peak	50.00	400	Vertical	Pass
6**	15908.485	48.60	54.0	5.40	AV	50.00	400	Vertical	Pass

11n40, U-NII-3, 1 GHz to 18 GHz, Low Channel, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1522.393	38.14	74.0	35.86	Peak	11.00	400	Horizontal	Pass
1**	1522.393	31.94	54.0	22.06	AV	11.00	400	Horizontal	Pass
2	4019.317	46.71	74.0	27.29	Peak	150.00	300	Horizontal	Pass
2**	4019.317	36.94	54.0	17.06	AV	150.00	300	Horizontal	Pass
3	7597.071	53.47	74.0	20.53	Peak	151.00	200	Horizontal	Pass
3**	7597.071	46.04	54.0	7.96	AV	151.00	200	Horizontal	Pass
4	12455.944	56.04	74.0	17.96	Peak	19.00	200	Horizontal	Pass
4**	12455.944	44.03	54.0	9.97	AV	19.00	200	Horizontal	Pass
5	16099.248	53.00	74.0	21.00	Peak	127.00	400	Horizontal	Pass
5**	16099.248	46.28	54.0	7.72	AV	127.00	400	Horizontal	Pass
6	17423.000	53.93	74.0	20.07	Peak	289.00	100	Horizontal	Pass
6**	17423.000	48.49	54.0	5.51	AV	289.00	100	Horizontal	Pass

11n40, U-NII-3, 1 GHz to 18 GHz, Low Channel, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1330.509	44.96	74.0	29.04	Peak	115.00	200	Vertical	Pass
1**	1330.509	36.70	54.0	17.30	AV	115.00	200	Vertical	Pass
2	1438.732	40.60	74.0	33.40	Peak	28.00	300	Vertical	Pass
2**	1438.732	36.97	54.0	17.03	AV	28.00	300	Vertical	Pass
3	4307.437	44.75	74.0	29.25	Peak	314.00	200	Vertical	Pass
3**	4307.437	35.78	54.0	18.22	AV	314.00	200	Vertical	Pass
4	7592.005	52.39	74.0	21.61	Peak	50.00	300	Vertical	Pass
4**	7592.005	45.01	54.0	8.99	AV	50.00	300	Vertical	Pass
5	12535.469	52.97	74.0	21.03	Peak	153.00	400	Vertical	Pass
5**	12535.469	43.00	54.0	11.00	AV	153.00	400	Vertical	Pass
6	15906.445	54.99	74.0	19.01	Peak	283.00	300	Vertical	Pass
6**	15906.445	48.44	54.0	5.56	AV	283.00	300	Vertical	Pass

11n40, U-NII-3, 1 GHz to 18 GHz, High Channel, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1517.125	39.82	74.0	34.18	Peak	319.00	100	Horizontal	Pass
1**	1517.125	29.79	54.0	24.21	AV	319.00	100	Horizontal	Pass
2	4018.352	49.36	74.0	24.64	Peak	157.00	200	Horizontal	Pass
2**	4018.352	34.63	54.0	19.37	AV	157.00	200	Horizontal	Pass
3	7596.556	54.65	74.0	19.35	Peak	192.00	200	Horizontal	Pass
3**	7596.556	46.28	54.0	7.72	AV	192.00	200	Horizontal	Pass
4	12458.808	55.36	74.0	18.64	Peak	184.00	400	Horizontal	Pass
4**	12458.808	41.31	54.0	12.69	AV	184.00	400	Horizontal	Pass
5	16096.148	52.92	74.0	21.08	Peak	226.00	400	Horizontal	Pass
5**	16096.148	45.40	54.0	8.60	AV	226.00	400	Horizontal	Pass
6	17419.411	58.37	74.0	15.63	Peak	15.00	200	Horizontal	Pass
6**	17419.411	46.51	54.0	7.49	AV	15.00	200	Horizontal	Pass

11n40, U-NII-3, 1 GHz to 18 GHz, High Channel, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1333.814	43.77	74.0	30.23	Peak	160.00	400	Vertical	Pass
1**	1333.814	34.04	54.0	19.96	AV	160.00	400	Vertical	Pass
2	1441.662	41.57	74.0	32.43	Peak	132.00	400	Vertical	Pass
2**	1441.662	39.97	54.0	14.03	AV	132.00	400	Vertical	Pass
3	4307.745	50.40	74.0	23.60	Peak	220.00	200	Vertical	Pass
3**	4307.745	37.59	54.0	16.41	AV	220.00	200	Vertical	Pass
4	7596.202	52.44	74.0	21.56	Peak	245.00	300	Vertical	Pass
4**	7596.202	40.78	54.0	13.22	AV	245.00	300	Vertical	Pass
5	12531.491	54.30	74.0	19.70	Peak	15.00	300	Vertical	Pass
5**	12531.491	41.09	54.0	12.91	AV	15.00	300	Vertical	Pass
6	15910.460	56.58	74.0	17.42	Peak	86.00	300	Vertical	Pass
6**	15910.460	44.75	54.0	9.25	AV	86.00	300	Vertical	Pass

A.6.2 Band Edge (Restricted-band)

Test Band	Mode	Channel	Verdict
U-NII-3	802.11a	Low	Pass
		High	Pass
	802.11n(HT20)	Low	Pass
		High	Pass
	802.11n(HT40)	Low	Pass
		High	Pass

Test Data

U-NII-3 11a Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5641.970	55.39	68.2	12.81	Peak	344.00	300	Horizontal	Pass
2	5650.000	53.46	68.2	14.74	Peak	344.00	300	Horizontal	Pass

U-NII-3 11a High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5925.000	54.39	68.2	13.81	Peak	310.00	200	Horizontal	Pass
2	5943.840	55.79	68.2	12.41	Peak	312.00	200	Horizontal	Pass

U-NII-3 11n20 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5639.999	55.75	68.2	12.45	Peak	8.00	200	Horizontal	Pass
2	5650.000	52.27	68.2	15.93	Peak	8.00	200	Horizontal	Pass

U-NII-3 11n20 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5925.000	52.46	68.2	15.74	Peak	16.00	200	Horizontal	Pass
2	5944.144	53.44	68.2	14.76	Peak	247.00	200	Horizontal	Pass

U-NII-3 11n40 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5639.834	52.81	68.2	15.39	Peak	264.00	200	Horizontal	Pass
2	5650.000	51.14	68.2	17.06	Peak	264.00	200	Horizontal	Pass

U-NII-3 11n40 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5925.000	49.75	68.2	18.45	Peak	154.00	100	Horizontal	Pass
2	5947.120	52.39	68.2	15.81	Peak	43.00	300	Horizontal	Pass

ANNEX B TEST SETUP PHOTOS

Please refer the document “BL-SZ2530909-AR.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ2530909-AW.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL-SZ2530909-AI.PDF”.

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