

TEST REPORT

Applicant: Shenzhen Hollyland Technology Co., Ltd
Address: 8F, Building 5D, Skyworth Innovation Valley,
Tangtou Road, Shiyan Street, Baoan District,
Shenzhen, 518055 China
Equipment Type: Wireless Video Transmission System
Model Name: Vcore
Brand Name: HOLLYLAND, HOLLYVIEW, HOLLYVOX
FCC ID: 2ADZC-9330
Test Standard: 47 CFR Part 15 Subpart E
(refer to section 3.1)
Sample Arrival Date: Apr. 01, 2025
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ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.

**Tested by:** Li Ganming**Checked by:** Ye Hongji**Approved by:** Sunny Zou
(Technical Director)*Li Ganming**Ye Hongji**Sunny Zou*

Revision History

Version	Issue Date	Revisions
<u>Rev. 01</u>	<u>May 19, 2025</u>	<u>Initial Issue</u>

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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.

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	Shenzhen Hollyland Technology Co., Ltd
Address	8F, Building 5D, Skyworth Innovation Valley, Tangtou Road, Shiyan Street, Baoan District, Shenzhen, 518055 China

2.2 Manufacturer Information

Manufacturer	Shenzhen Hollyland Technology Co., Ltd
Address	8F, Building 5D, Skyworth Innovation Valley, Tangtou Road, Shiyan Street, Baoan District, Shenzhen, 518055 China

2.3 General Description for Equipment under Test (EUT)

EUT Name	Wireless Video Transmission System
Model Name Under Test	Vcore
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	V9330_MB_V38
Software Version	V1.0.2.4
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.4 Technical Information

Network and Wireless connectivity	WIFI 802.11a, 802.11n, 802.11ac
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The requirement for the following technical information of the EUT was tested in this report:

Frequency Range	U-NII-1: 5150 MHz to 5250 MHz, U-NII-3: 5725 MHz to 5850 MHz	
Product Type	☐ Mobile ☒ Portable ☐ Fix Location	
Modulation technology	OFDM	
Modulation Type	256QAM, 64QAM, 16QAM, BPSK, QPSK	
Transfer Rate (Mbps) (Single RF path)	802.11a: 54/ 48/ 36/ 24/ 18/ 12/ 9/ 6 Mbps 802.11n: up to 150 Mbps 802.11ac: up to VHT-MCS9	
Channel Bandwidth	802.11a: 20 MHz 802.11n: 20 MHz, 40 MHz 802.11ac: 20 MHz, 40 MHz, 80 MHz	
Maximum Output Power	U-NII-1: 33.50 mW U-NII-3: 30.83 mW	
Antenna System (eg., MIMO, Smart Antenna)	Cyclic Delay Diversity (CDD) for 802.11a Multi Input Multi Output (MIMO) for 802.11n/ac	
Categorization as Correlated or Completely Uncorrelated	Categorization as Correlated for 802.11a Categorization as Uncorrelated for 802.11n/ac	
Antenna Type	Main Antenna Aux. Antenna	PCB Antenna
Antenna Gain	Main Antenna Aux. Antenna	U-NII-1: 5150 MHz to 5250 MHz: 2.93 dBi U-NII-3: 5725 MHz to 5850 MHz: 4.7 dBi
Total directional gain	For power spectral density (PSD) measurements	Correlated: U-NII-1: 5150 MHz to 5250 MHz: 5.94 dBi U-NII-3: 5725 MHz to 5850 MHz: 7.71 dBi Formulas: Directional gain = $G_{ANT} + 10 \log(N_{ANT})$ dBi Uncorrelated: U-NII-1: 5150 MHz to 5250 MHz: 2.93 dBi U-NII-3: 5725 MHz to 5850 MHz: 4.7 dBi Formulas: Directional gain = G_{ANT}
	For power measurements	Correlated: U-NII-1: 5150 MHz to 5250 MHz: 5.94 dBi U-NII-3: 5725 MHz to 5850 MHz: 7.71 dBi Formulas: Directional gain = $G_{ANT} + 10 \log(N_{ANT})$ dBi Uncorrelated: U-NII-1: 5150 MHz to 5250 MHz: 2.93 dBi U-NII-3: 5725 MHz to 5850 MHz: 4.7 dBi

	Formulas: Directional gain = $GANT$
About the Product	The equipment is Wireless Video Transmission System, intended for used with information technology equipment.

Mode	Antenna		
	Main Antenna	Aux. Antenna	MIMO
802.11a	√	√	√
802.11n20	√	√	√
802.11n40	√	√	√
802.11ac20	√	√	√
802.11ac40	√	√	√
802.11ac80	√	√	√
Note: All the configurations were tested, but only the worst data was shown in this report.			

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		80 MHz	
Channel Number	Frequency (MHz)	Channel Number	Frequency (MHz)	Channel Number	Frequency (MHz)
36	5180	38	5190	42	5210
40	5200	46	5230	155	5775
44	5220	151	5755		
48	5240	159	5795		
149	5745				
153	5765				
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)/ac(VHT20)

U-NII-1 (5150 - 5250 MHz)			U-NII-3 (5725 - 5850 MHz)		
Channel Number	Channel	Frequency (MHz)	Channel Number	Channel	Frequency (MHz)
36	Low	5180	149	Low	5745
44	Mid	5220	157	Mid	5785
48	High	5240	165	High	5825

For 802.11n(HT40)/ac(VHT40)

U-NII-1 (5150 - 5250 MHz)			U-NII-3 (5725 - 5850 MHz)		
Channel Number	Channel	Frequency (MHz)	Channel Number	Channel	Frequency (MHz)
38	Low	5190	151	Low	5755
46	High	5230	159	High	5795

For 802.11ac(VHT80)

U-NII-1 (5150 - 5250 MHz)			U-NII-3 (5725 - 5850 MHz)		
Channel Number	Channel	Frequency (MHz)	Channel Number	Channel	Frequency (MHz)
42	Mid	5210	155	Mid	5775

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-1	U-NII-3
				Channel	Channel
RF Output Power	11a	6	BPSK	48/44/36	165/157/149
	11n(20 MHz)	6.5		48/44/36	165/157/149
	11n(40 MHz)	13.5		46/38	159/151
	11ac(20 MHz)	6.5		48/44/36	165/157/149
	11ac(40 MHz)	13.5		46/38	159/151
	11ac(80 MHz)	29.3		42	155
Emission Bandwidth & 99% Occupied Bandwidth	11a	6	BPSK	48/44/36	165/157/149
	11n(20 MHz)	6.5		48/44/36	165/157/149
	11n(40 MHz)	13.5		46/38	159/151
	11ac(20 MHz)	6.5		48/44/36	165/157/149
	11ac(40 MHz)	13.5		46/38	159/151
	11ac(80 MHz)	29.3		42	155
6 dB bandwidth	11a	6	BPSK	N/A	165/157/149
	11n(20 MHz)	6.5		N/A	165/157/149
	11n(40 MHz)	13.5		N/A	159/151
	11ac(20 MHz)	6.5		N/A	165/157/149
	11ac(40 MHz)	13.5		N/A	159/151
	11ac(80 MHz)	29.3		N/A	155
Power Spectral Density	11a	6	BPSK	48/44/36	165/157/149
	11n(20 MHz)	6.5		48/44/36	165/157/149
	11n(40 MHz)	13.5		46/38	159/151
	11ac(20 MHz)	6.5		48/44/36	165/157/149
	11ac(40 MHz)	13.5		46/38	159/151
	11ac(80 MHz)	29.3		42	155
Radiated Spurious Emissions	11a	6	BPSK	48/44/36	165/157/149
	11n(20 MHz)	6.5		48/44/36	165/157/149
	11n(40 MHz)	13.5		46/38	159/151
	11ac(20 MHz)	6.5		48/44/36	165/157/149
	11ac(40 MHz)	13.5		46/38	159/151
	11ac(80 MHz)	29.3		42	155
Band Edge (Restricted-band)	11a	6	BPSK	48/36	165/149
	11n(20 MHz)	6.5		48/36	165/149
	11n(40 MHz)	13.5		46/38	159/151
	11ac(20 MHz)	6.5		48/36	165/149
	11ac(40 MHz)	13.5		46/38	159/151
	11ac(80 MHz)	29.3		42	155

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	KDB Publication 789033 D02v02r01	Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E
3	KDB Publication 662911 D01v02r01	Emissions Testing of Transmitters with Multiple Outputs in the Same Band (e.g., MIMO, Smart Antenna, etc)
4	ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices

3.2 Test Verdict

No.	Description	FCC Part No.	Test Result	Verdict
1	Antenna Requirement	15.203	--	Pass ^{Note1}
2	RF Output Power	15.407(a)	ANNEX A.1	Pass
3	Emission Bandwidth & 99% Occupied Bandwidth	15.407(a)	ANNEX A.2	Pass
4	6 dB bandwidth	15.407(e)	ANNEX A.3	Pass
5	Power Spectral Density	15.407(a)	ANNEX A.4	Pass
6	Conducted Emission	15.207	ANNEX A.5	Pass
7	Radiated Spurious Emissions and Band Edge (Restricted-band)	15.407(b)	ANNEX A.6	Pass

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

Note ²: 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	46% to 59%	
Atmospheric Pressure	100 kPa to 102 kPa	
Temperature	NT (Normal Temperature)	+22.1℃ to +22.9℃
Working Voltage of the EUT	NV (Normal Voltage)	3.70V

4.2 Test Equipment List

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer	ROHDE&SCHWARZ	FSV-40	101544	2024.12.16	2025.12.15
Spectrum Analyzer	KEYSIGHT	N9020A	MY50330200	2024.05.08	2025.05.07
Power Sensor	KEYSIGHT	U2063XA	MY58000247	2024.07.04	2025.07.03
Spectrum Analyzer	KEYSIGHT	N9020A	MY50531259	2024.08.01	2025.07.31
Test Antenna-Horn	SCHWARZBECK	BBHA 9120D	02460	2024.05.16	2027.05.15
Test Antenna-Horn	A-INFO	LB-180400KF	J211060273	2024.06.15	2027.06.14
Anechoic Chamber	RAINFORD	9m*6m*6m	140	2024.07.28	2027.07.27
Amplifier	COM-MV	LSCX_LNA1-12G-01	7210214	2024.08.01	2025.07.31
Amplifier	COM-MV	XKu_LNA7-18G-01	7210209	2024.08.01	2025.07.31
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
Test Antenna-Loop	SCHWARZBECK	FMZB 1519	1519-037	2024.01.23	2027.01.22
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
EMI Receiver	KEYSIGHT	N9010B	MY57110309	2024.08.01	2025.07.31
LISN	SCHWARZBECK	NSLK 8127	8127-687	2024.05.09	2025.05.08
Shielded Enclosure	YiHeng Electronic Co., Ltd	3.5m*3.1m*2.8 m	112	2025.02.14	2028.02.13

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%

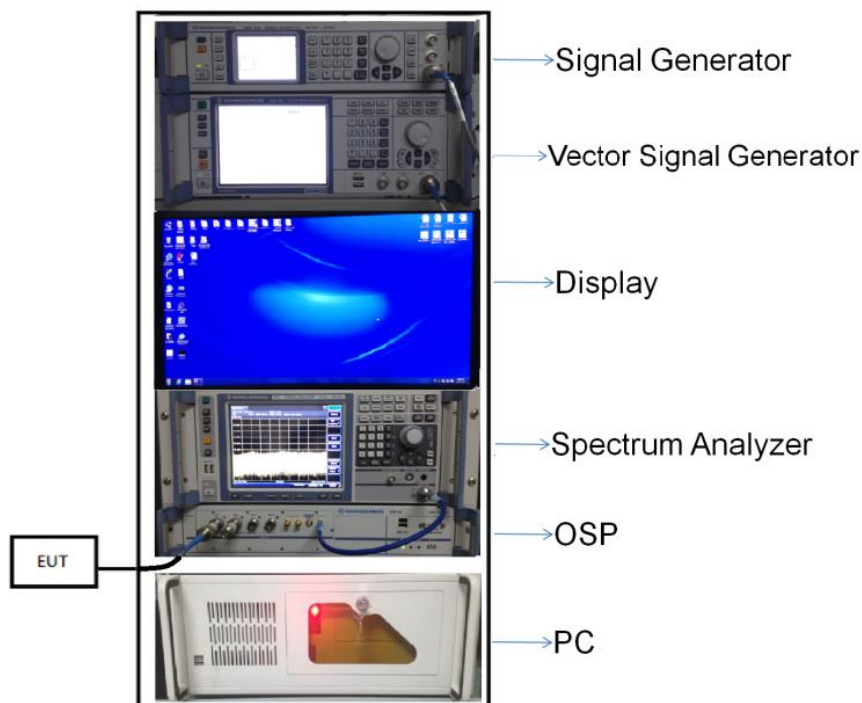
4.5 Description of Test Setup

4.5.1 For Antenna Port Test

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

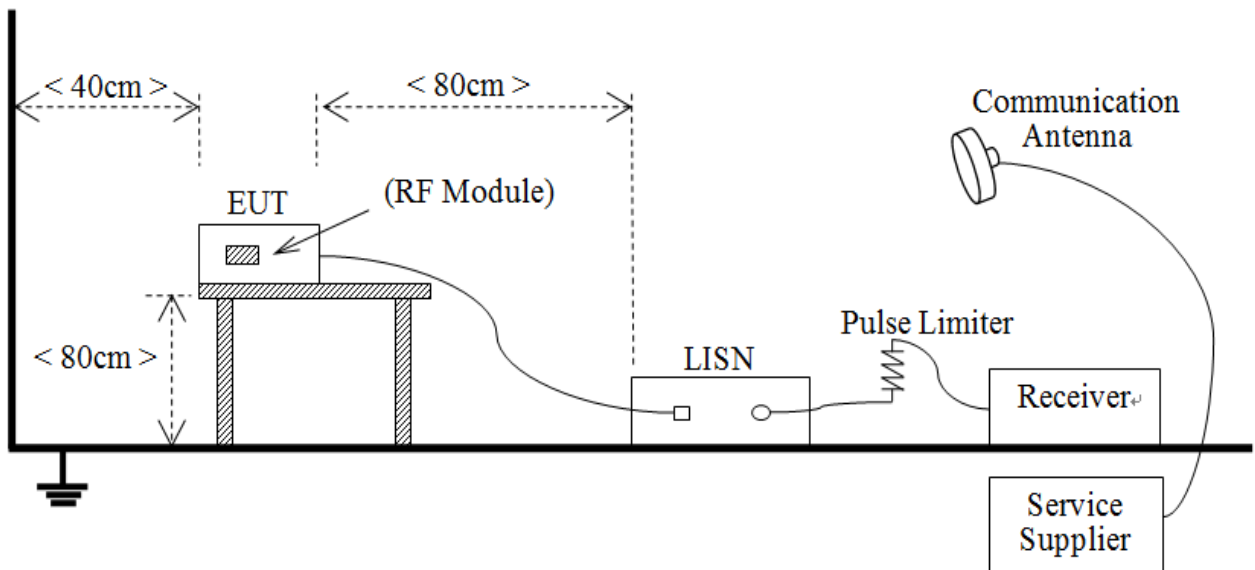
For example: the measurement value is 10 dBm and the cable 0.5dBm used, then the final result of EUT:

Conducted value (dBm) = 10 dBm + 0.5 dB = 10.5 dBm



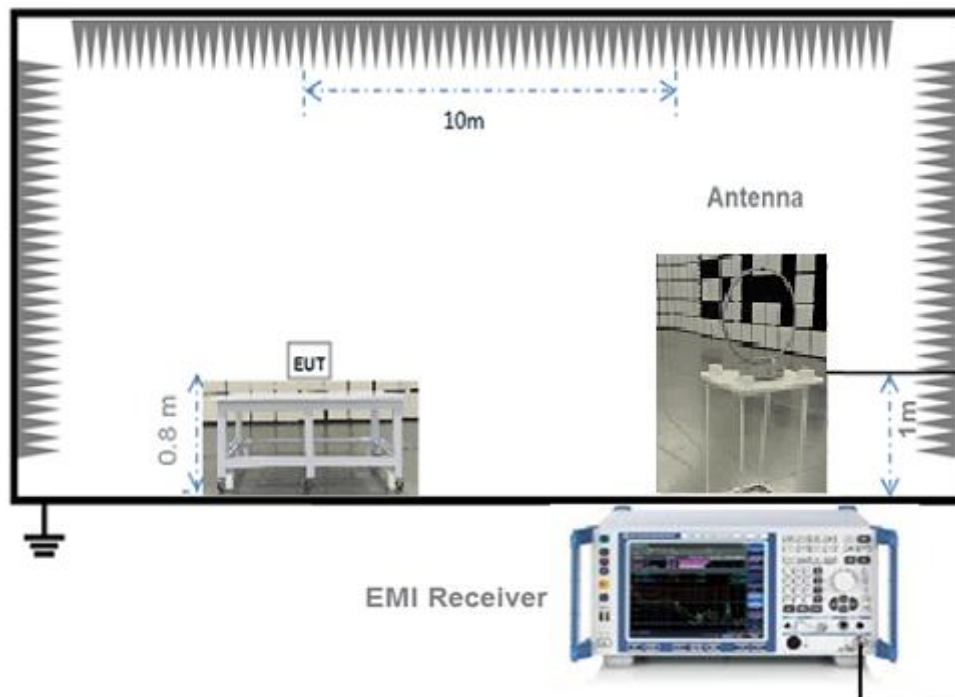
(Diagram 1)

4.5.2 For AC Power Supply Port Test



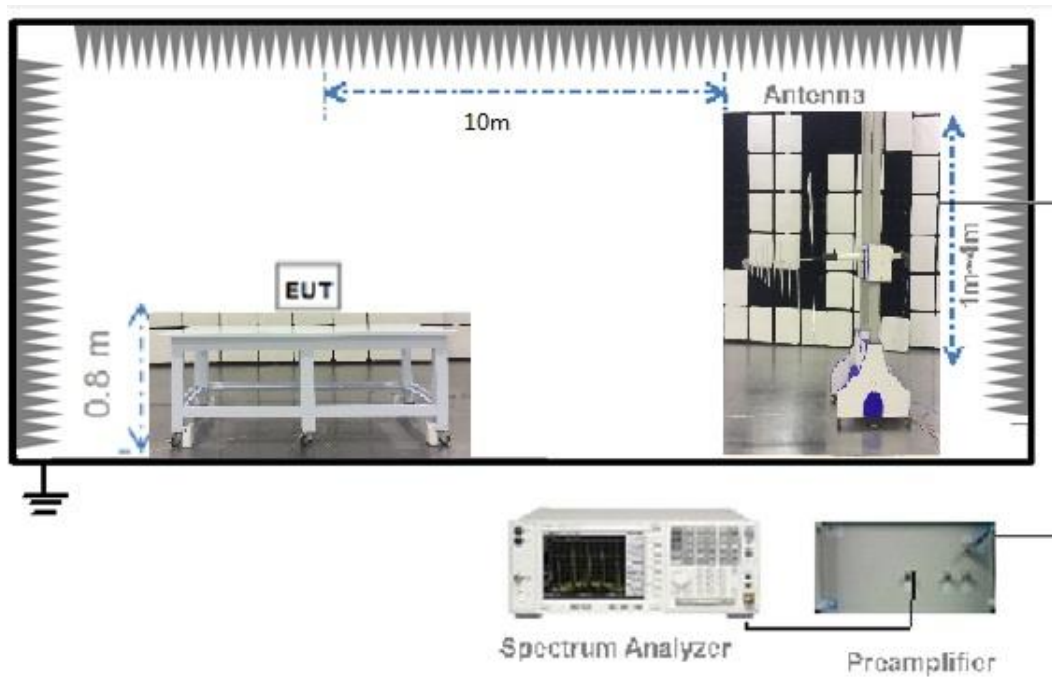
(Diagram 2)

4.5.3 For Radiated Test (Below 30 MHz)



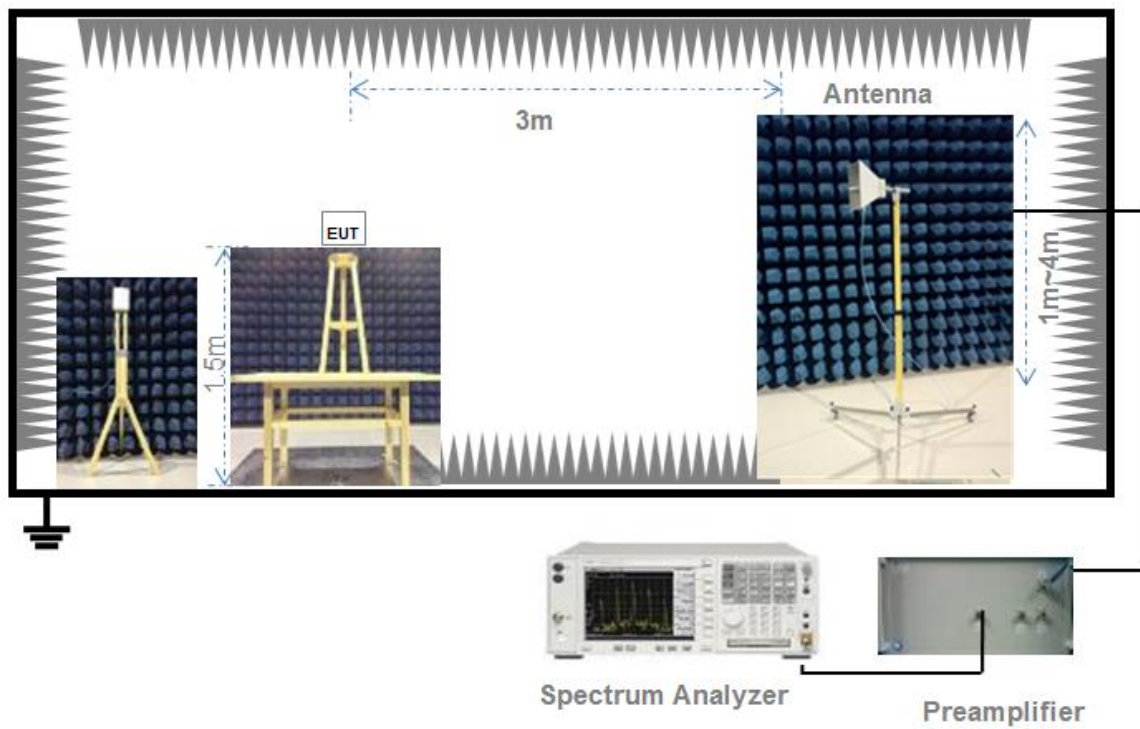
(Diagram 3)

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.	

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 $\geq$ 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 $T \leq 16.7$ 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)

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 $\geq 3 \times$ 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 $\geq 3 \times$ 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

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 $\geq 3 \times$ 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

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 50 μ H/50 Ω line impedance stabilization network (LISN).

Frequency range (MHz)	Conducted Limit (dB μ V)	
	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)

Frequency (MHz)	Field Strength ($\mu\text{V/m}$)	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.

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

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

$$E = \text{EIRP} - 20 \log D + 104.8$$

where:

E = electric field strength in dB μ V/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 $\geq 3 \times$ 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 $\geq 3 \times$ RBW.
- e) Detector = RMS, if $\text{span}/(\# \text{ of points in sweep}) \leq (\text{RBW}/2)$. 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 $f \geq 1$ GHz, 100 kHz for $f < 1$ GHz

VBW $\geq$ 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.

Duty Cycle

Test Mode	On Time (ms)	On+Off time (ms)	Duty Cycle	Duty Factor
11a	1.39	1.45	96.33%	0.16
11n(HT20)/11ac(VHT20)	1.30	1.36	96.09%	0.17
11n(HT40)/11ac(VHT40)	0.65	0.70	91.76%	0.37
11ac(VHT80)	0.32	0.38	85.45%	0.68

Test DataConducted PowerSISO-Main Antenna

U-NII-1 (5150 - 5250 MHz)					
Mode	Channel	Conducted Power (dBm)	Conducted Power (mW)	FCC Limit (mW)	Verdict
11a	CH36	14.92	31.05	250	Pass
11a	CH44	15.08	32.21	250	Pass
11a	CH48	14.89	30.83	250	Pass
11n(HT20)	CH36	14.47	27.99	250	Pass
11n(HT20)	CH44	14.64	29.11	250	Pass
11n(HT20)	CH48	14.81	30.27	250	Pass
11n(HT40)	CH38	14.84	30.48	250	Pass
11n(HT40)	CH46	15.25	33.50	250	Pass
11ac(VHT20)	CH36	14.53	28.38	250	Pass
11ac(VHT20)	CH44	15.08	32.21	250	Pass
11ac(VHT20)	CH48	14.85	30.55	250	Pass
11ac(VHT40)	CH38	14.82	30.34	250	Pass
11ac(VHT40)	CH46	15.19	33.04	250	Pass
11ac(VHT80)	CH42	14.71	29.58	250	Pass

U-NII-3 (5725 - 5850 MHz)					
Mode	Channel	Conducted Power (dBm)	Conducted Power (mW)	FCC Limit (mW)	Verdict
11a	CH149	14.41	27.61	1000	Pass
11a	CH157	14.89	30.83	1000	Pass
11a	CH165	14.61	28.91	1000	Pass
11n(HT20)	CH149	14.29	26.85	1000	Pass
11n(HT20)	CH157	14.81	30.27	1000	Pass
11n(HT20)	CH165	14.50	28.18	1000	Pass
11n(HT40)	CH151	14.72	29.65	1000	Pass
11n(HT40)	CH159	14.58	28.71	1000	Pass
11ac(VHT20)	CH149	14.24	26.55	1000	Pass
11ac(VHT20)	CH157	14.85	30.55	1000	Pass
11ac(VHT20)	CH165	14.48	28.05	1000	Pass
11ac(VHT40)	CH151	14.63	29.04	1000	Pass
11ac(VHT40)	CH159	14.60	28.84	1000	Pass
11ac(VHT80)	CH155	14.69	29.44	1000	Pass

SISO-Aux. Antenna

U-NII-1 (5150 - 5250 MHz)					
Mode	Channel	Conducted Power (dBm)	Conducted Power (mW)	FCC Limit (mW)	Verdict
11a	CH36	14.74	29.79	250	Pass
11a	CH44	15.01	31.70	250	Pass
11a	CH48	14.87	30.69	250	Pass
11n(HT20)	CH36	14.45	27.86	250	Pass
11n(HT20)	CH44	14.48	28.05	250	Pass
11n(HT20)	CH48	14.63	29.04	250	Pass
11n(HT40)	CH38	14.64	29.11	250	Pass
11n(HT40)	CH46	15.16	32.81	250	Pass
11ac(VHT20)	CH36	14.46	27.93	250	Pass
11ac(VHT20)	CH44	14.88	30.76	250	Pass
11ac(VHT20)	CH48	14.81	30.27	250	Pass
11ac(VHT40)	CH38	14.66	29.24	250	Pass
11ac(VHT40)	CH46	15.10	32.36	250	Pass
11ac(VHT80)	CH42	14.65	29.17	250	Pass

U-NII-3 (5725 - 5850 MHz)					
Mode	Channel	Conducted Power (dBm)	Conducted Power (mW)	FCC Limit (mW)	Verdict
11a	CH149	14.31	26.98	1000	Pass
11a	CH157	14.84	30.48	1000	Pass
11a	CH165	14.46	27.93	1000	Pass
11n(HT20)	CH149	14.12	25.82	1000	Pass
11n(HT20)	CH157	14.78	30.06	1000	Pass
11n(HT20)	CH165	14.33	27.10	1000	Pass
11n(HT40)	CH151	14.63	29.04	1000	Pass
11n(HT40)	CH159	14.50	28.18	1000	Pass
11ac(VHT20)	CH149	14.23	26.49	1000	Pass
11ac(VHT20)	CH157	14.80	30.20	1000	Pass
11ac(VHT20)	CH165	14.40	27.54	1000	Pass
11ac(VHT40)	CH151	14.58	28.71	1000	Pass
11ac(VHT40)	CH159	14.53	28.38	1000	Pass
11ac(VHT80)	CH155	14.51	28.25	1000	Pass

MIMO-Main Antenna

U-NII-1 (5150 - 5250 MHz)					
Mode	Channel	Conducted Power (dBm)	Conducted Power (mW)	FCC Limit (mW)	Verdict
11a	CH36	11.91	15.52	250	Pass
11a	CH44	11.90	15.49	250	Pass
11a	CH48	11.71	14.83	250	Pass
11n(HT20)	CH36	11.44	13.93	250	Pass
11n(HT20)	CH44	11.48	14.06	250	Pass
11n(HT20)	CH48	11.62	14.52	250	Pass
11n(HT40)	CH38	11.83	15.24	250	Pass
11n(HT40)	CH46	12.18	16.52	250	Pass
11ac(VHT20)	CH36	11.44	13.93	250	Pass
11ac(VHT20)	CH44	11.97	15.74	250	Pass
11ac(VHT20)	CH48	11.69	14.76	250	Pass
11ac(VHT40)	CH38	11.72	14.86	250	Pass
11ac(VHT40)	CH46	12.00	15.85	250	Pass
11ac(VHT80)	CH42	11.57	14.35	250	Pass

U-NII-3 (5725 - 5850 MHz)					
Mode	Channel	Conducted Power (dBm)	Conducted Power (mW)	FCC Limit (mW)	Verdict
11a	CH149	11.34	13.61	1000	Pass
11a	CH157	11.71	14.83	1000	Pass
11a	CH165	11.48	14.06	1000	Pass
11n(HT20)	CH149	11.13	12.97	1000	Pass
11n(HT20)	CH157	11.74	14.93	1000	Pass
11n(HT20)	CH165	11.46	14.00	1000	Pass
11n(HT40)	CH151	11.63	14.55	1000	Pass
11n(HT40)	CH159	11.49	14.09	1000	Pass
11ac(VHT20)	CH149	11.09	12.85	1000	Pass
11ac(VHT20)	CH157	11.77	15.03	1000	Pass
11ac(VHT20)	CH165	11.38	13.74	1000	Pass
11ac(VHT40)	CH151	11.57	14.35	1000	Pass
11ac(VHT40)	CH159	11.44	13.93	1000	Pass
11ac(VHT80)	CH155	11.55	14.29	1000	Pass

MIMO-Aux. Antenna

U-NII-1 (5150 - 5250 MHz)					
Mode	Channel	Conducted Power (dBm)	Conducted Power (mW)	FCC Limit (mW)	Verdict
11a	CH36	11.66	14.66	250	Pass
11a	CH44	11.99	15.81	250	Pass
11a	CH48	11.73	14.89	250	Pass
11n(HT20)	CH36	11.40	13.80	250	Pass
11n(HT20)	CH44	11.41	13.84	250	Pass
11n(HT20)	CH48	11.48	14.06	250	Pass
11n(HT40)	CH38	11.53	14.22	250	Pass
11n(HT40)	CH46	12.02	15.92	250	Pass
11ac(VHT20)	CH36	11.33	13.58	250	Pass
11ac(VHT20)	CH44	11.70	14.79	250	Pass
11ac(VHT20)	CH48	11.73	14.89	250	Pass
11ac(VHT40)	CH38	11.50	14.13	250	Pass
11ac(VHT40)	CH46	11.91	15.52	250	Pass
11ac(VHT80)	CH42	11.49	14.09	250	Pass

U-NII-3 (5725 - 5850 MHz)					
Mode	Channel	Conducted Power (dBm)	Conducted Power (mW)	FCC Limit (mW)	Verdict
11a	CH149	11.28	13.43	1000	Pass
11a	CH157	11.67	14.69	1000	Pass
11a	CH165	11.35	13.65	1000	Pass
11n(HT20)	CH149	10.98	12.53	1000	Pass
11n(HT20)	CH157	11.66	14.66	1000	Pass
11n(HT20)	CH165	11.31	13.52	1000	Pass
11n(HT40)	CH151	11.44	13.93	1000	Pass
11n(HT40)	CH159	11.32	13.55	1000	Pass
11ac(VHT20)	CH149	11.16	13.06	1000	Pass
11ac(VHT20)	CH157	11.66	14.66	1000	Pass
11ac(VHT20)	CH165	11.25	13.34	1000	Pass
11ac(VHT40)	CH151	11.56	14.32	1000	Pass
11ac(VHT40)	CH159	11.44	13.93	1000	Pass
11ac(VHT80)	CH155	11.44	13.93	1000	Pass

MIMO

U-NII-1 (5150 - 5250 MHz)					
Mode	Channel	Conducted Power (dBm)	Conducted Power (mW)	FCC Limit (mW)	Verdict
11a	CH36	14.80	30.18	250	Pass
11a	CH44	14.96	31.30	250	Pass
11a	CH48	14.73	29.72	250	Pass
11n(HT20)	CH36	14.43	27.74	250	Pass
11n(HT20)	CH44	14.46	27.90	250	Pass
11n(HT20)	CH48	14.56	28.58	250	Pass
11n(HT40)	CH38	14.69	29.46	250	Pass
11n(HT40)	CH46	15.11	32.44	250	Pass
11ac(VHT20)	CH36	14.40	27.51	250	Pass
11ac(VHT20)	CH44	14.85	30.53	250	Pass
11ac(VHT20)	CH48	14.72	29.65	250	Pass
11ac(VHT40)	CH38	14.62	28.98	250	Pass
11ac(VHT40)	CH46	14.97	31.37	250	Pass
11ac(VHT80)	CH42	14.54	28.45	250	Pass

U-NII-3 (5725 - 5850 MHz)					
Mode	Channel	Conducted Power (dBm)	Conducted Power (mW)	FCC Limit (mW)	Verdict
11a	CH149	14.32	27.04	1000	Pass
11a	CH157	14.70	29.51	1000	Pass
11a	CH165	14.43	27.71	1000	Pass
11n(HT20)	CH149	14.07	25.50	1000	Pass
11n(HT20)	CH157	14.71	29.58	1000	Pass
11n(HT20)	CH165	14.40	27.52	1000	Pass
11n(HT40)	CH151	14.55	28.49	1000	Pass
11n(HT40)	CH159	14.42	27.64	1000	Pass
11ac(VHT20)	CH149	14.14	25.91	1000	Pass
11ac(VHT20)	CH157	14.73	29.69	1000	Pass
11ac(VHT20)	CH165	14.33	27.08	1000	Pass
11ac(VHT40)	CH151	14.58	28.68	1000	Pass
11ac(VHT40)	CH159	14.45	27.86	1000	Pass
11ac(VHT80)	CH155	14.51	28.22	1000	Pass

A.2 Emission Bandwidth & 99% Bandwidth

Note ¹: Test plots please refer to the document “Annex No.: BL-SZ2540188-601 Data Part 1.pdf”.

Note ²: All antenna were tested, but only the worst case has been reported in this report.

Test Data

SISO-Main Antenna

U-NII-1 (5150 - 5250 MHz)			
Mode	Channel	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
11a	CH36	18.31	16.30
11a	CH44	18.49	16.33
11a	CH48	18.48	16.29
11n(HT20)	CH36	19.61	17.47
11n(HT20)	CH44	18.90	17.40
11n(HT20)	CH48	18.92	17.41
11n(HT40)	CH38	38.48	35.76
11n(HT40)	CH46	38.17	35.66
11ac(VHT20)	CH36	18.94	17.43
11ac(VHT20)	CH44	18.91	17.42
11ac(VHT20)	CH48	18.94	17.41
11ac(VHT40)	CH38	38.25	35.80
11ac(VHT40)	CH46	38.19	35.70
11ac(VHT80)	CH42	89.10	75.27

U-NII-3 (5725 - 5850 MHz)			
Mode	Channel	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
11a	CH149	18.57	16.30
11a	CH157	18.72	16.30
11a	CH165	18.73	16.33
11n(HT20)	CH149	19.00	17.43
11n(HT20)	CH157	18.93	17.43
11n(HT20)	CH165	18.99	17.44
11n(HT40)	CH151	38.16	35.78
11n(HT40)	CH159	38.12	35.70
11ac(VHT20)	CH149	18.99	17.43
11ac(VHT20)	CH157	19.03	17.43
11ac(VHT20)	CH165	18.99	17.45
11ac(VHT40)	CH151	38.23	35.76
11ac(VHT40)	CH159	38.14	35.66
11ac(VHT80)	CH155	78.92	75.12

A.3 6 dB Bandwidth

Note ¹: Test plots please refer to the document “Annex No.: BL-SZ2540188-601 Data Part 2.pdf”.

Note ²: All antenna were tested, but only the worst case has been reported in this report.

Test Data

SISO-Main Antenna

U-NII-3 (5725 - 5850 MHz)				
Mode	Channel	6 dB Bandwidth (MHz)	Limit (kHz)	Verdict
11a	CH149	15.90	500.00	Pass
11a	CH157	15.30	500.00	Pass
11a	CH165	15.30	500.00	Pass
11n(HT20)	CH149	17.30	500.00	Pass
11n(HT20)	CH157	15.30	500.00	Pass
11n(HT20)	CH165	16.50	500.00	Pass
11n(HT40)	CH151	35.30	500.00	Pass
11n(HT40)	CH159	35.30	500.00	Pass
11ac(VHT20)	CH149	15.90	500.00	Pass
11ac(VHT20)	CH157	15.60	500.00	Pass
11ac(VHT20)	CH165	15.60	500.00	Pass
11ac(VHT40)	CH151	34.10	500.00	Pass
11ac(VHT40)	CH159	35.30	500.00	Pass
11ac(VHT80)	CH155	75.30	500.00	Pass

A.4 Power Spectral Density

Note ¹: Test plots please refer to the document “Annex No.: BL-SZ2540188-601 Data Part 3.pdf”.

Note ²: All antenna were tested, but only the worst case has been reported in this report.

Test Data

SISO-Main Antenna

U-NII-1 (5150 - 5250 MHz)				
Mode	Channel	PSD (dBm/MHz)	FCC Limit (dBm/MHz)	Verdict
11a	CH36	4.14	11.00	Pass
11a	CH44	4.44	11.00	Pass
11a	CH48	4.29	11.00	Pass
11n(HT20)	CH36	3.72	11.00	Pass
11n(HT20)	CH44	3.71	11.00	Pass
11n(HT20)	CH48	3.90	11.00	Pass
11n(HT40)	CH38	0.81	11.00	Pass
11n(HT40)	CH46	1.18	11.00	Pass
11ac(VHT20)	CH36	3.76	11.00	Pass
11ac(VHT20)	CH44	4.16	11.00	Pass
11ac(VHT20)	CH48	3.90	11.00	Pass
11ac(VHT40)	CH38	0.92	11.00	Pass
11ac(VHT40)	CH46	1.31	11.00	Pass
11ac(VHT80)	CH42	-2.64	11.00	Pass

U-NII-3 (5725 - 5850 MHz)				
Mode	Channel	PSD (dBm/500kHz)	FCC Limit (dBm/500kHz)	Verdict
11a	CH149	1.12	30.00	Pass
11a	CH157	1.70	30.00	Pass
11a	CH165	1.23	30.00	Pass
11n(HT20)	CH149	0.83	30.00	Pass
11n(HT20)	CH157	1.61	30.00	Pass
11n(HT20)	CH165	1.02	30.00	Pass
11n(HT40)	CH151	-2.04	30.00	Pass
11n(HT40)	CH159	-1.95	30.00	Pass
11ac(VHT20)	CH149	0.98	30.00	Pass
11ac(VHT20)	CH157	1.41	30.00	Pass
11ac(VHT20)	CH165	1.01	30.00	Pass
11ac(VHT40)	CH151	-2.01	30.00	Pass
11ac(VHT40)	CH159	-1.94	30.00	Pass
11ac(VHT80)	CH155	-5.09	30.00	Pass

A.5 Conducted Emissions

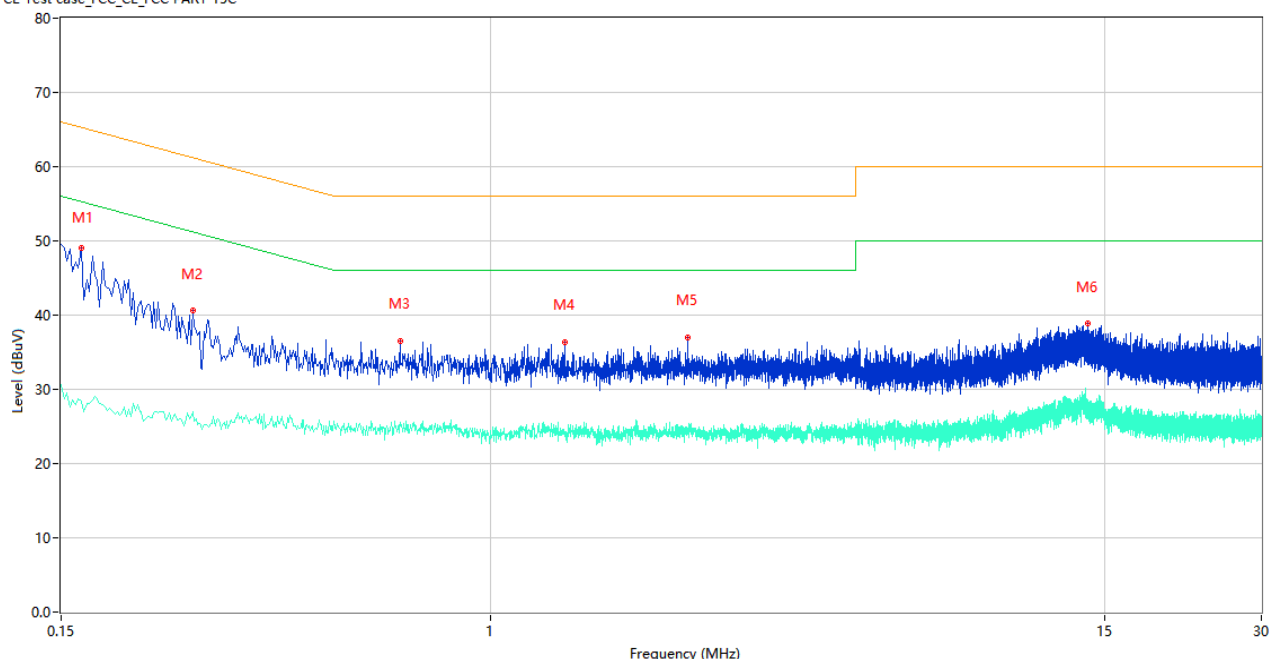
Note¹: The EUT is working in the Normal link mode. All modes have been tested and normal link mode is worst.

Note²: Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 60 Hz and 240 VAC, 50 Hz) for which the device is capable of operation. So, The configuration 120 VAC, 60 Hz and 240 VAC, 50 Hz were tested respectively, but only the worst configuration (120 VAC, 60 Hz) shown here.

Test Data and Plots

PHASE L

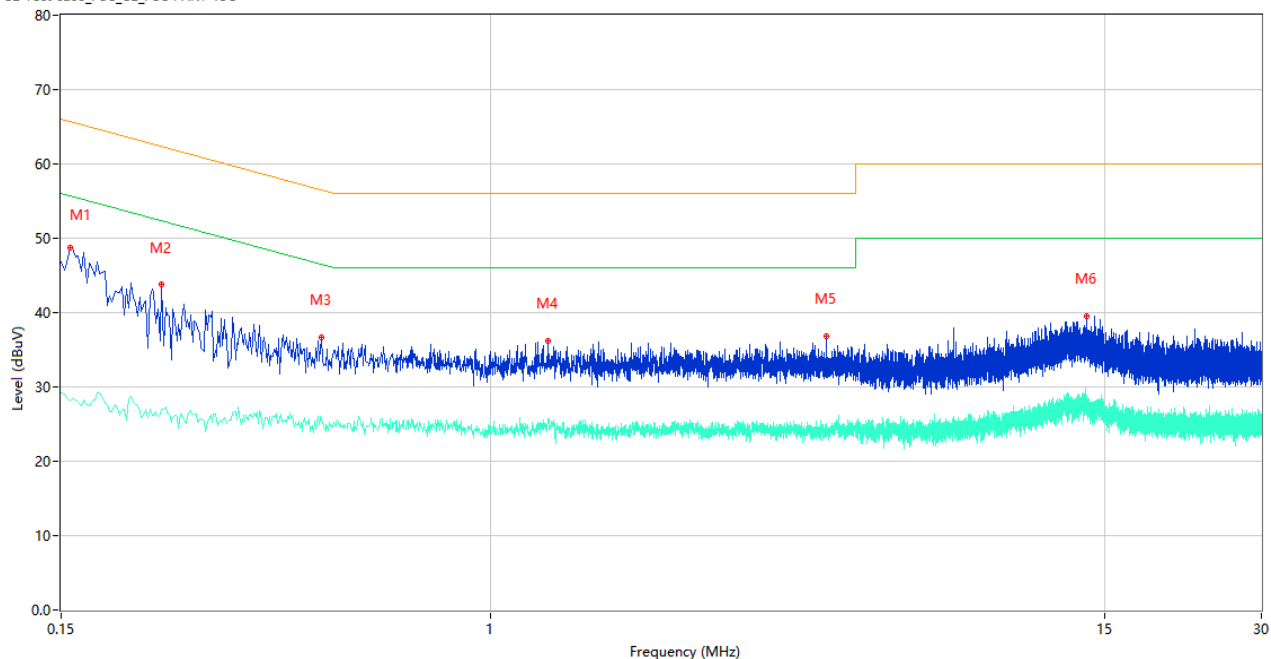
CE Test case_FCC_CE_FCC PART 15C



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.164	49.05	9.78	65.26	16.21	Peak	L	Pass
1**	0.164	28.48	9.78	55.26	26.78	AV	L	Pass
2	0.268	40.71	9.76	61.18	20.47	Peak	L	Pass
2**	0.268	26.91	9.76	51.18	24.27	AV	L	Pass
3	0.670	36.53	10.39	56.00	19.47	Peak	L	Pass
3**	0.670	25.59	10.39	46.00	20.41	AV	L	Pass
4	1.384	36.39	9.81	56.00	19.61	Peak	L	Pass
4**	1.384	24.35	9.81	46.00	21.65	AV	L	Pass
5	2.384	37.01	10.22	56.00	18.99	Peak	L	Pass
5**	2.384	24.66	10.22	46.00	21.34	AV	L	Pass
6	13.958	38.86	10.44	60.00	21.14	Peak	L	Pass
6**	13.958	28.59	10.44	50.00	21.41	AV	L	Pass

PHASE N

CE Test case_FCC_CE_FCC PART 15C



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.156	48.70	9.78	65.67	16.97	Peak	N	Pass
1**	0.156	28.06	9.78	55.67	27.61	AV	N	Pass
2	0.234	43.78	9.77	62.31	18.53	Peak	N	Pass
2**	0.234	26.91	9.77	52.31	25.40	AV	N	Pass
3	0.474	36.70	10.00	56.44	19.74	Peak	N	Pass
3**	0.474	25.62	10.00	46.44	20.82	AV	N	Pass
4	1.288	36.25	10.50	56.00	19.75	Peak	N	Pass
4**	1.288	25.33	10.50	46.00	20.67	AV	N	Pass
5	4.390	36.89	10.38	56.00	19.11	Peak	N	Pass
5**	4.390	24.45	10.38	46.00	21.55	AV	N	Pass
6	13.858	39.57	10.51	60.00	20.43	Peak	N	Pass
6**	13.858	28.90	10.51	50.00	21.10	AV	N	Pass

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

Note¹: The symbol of “--” in the table which means not application.

Note²: 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.

Note³: 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.

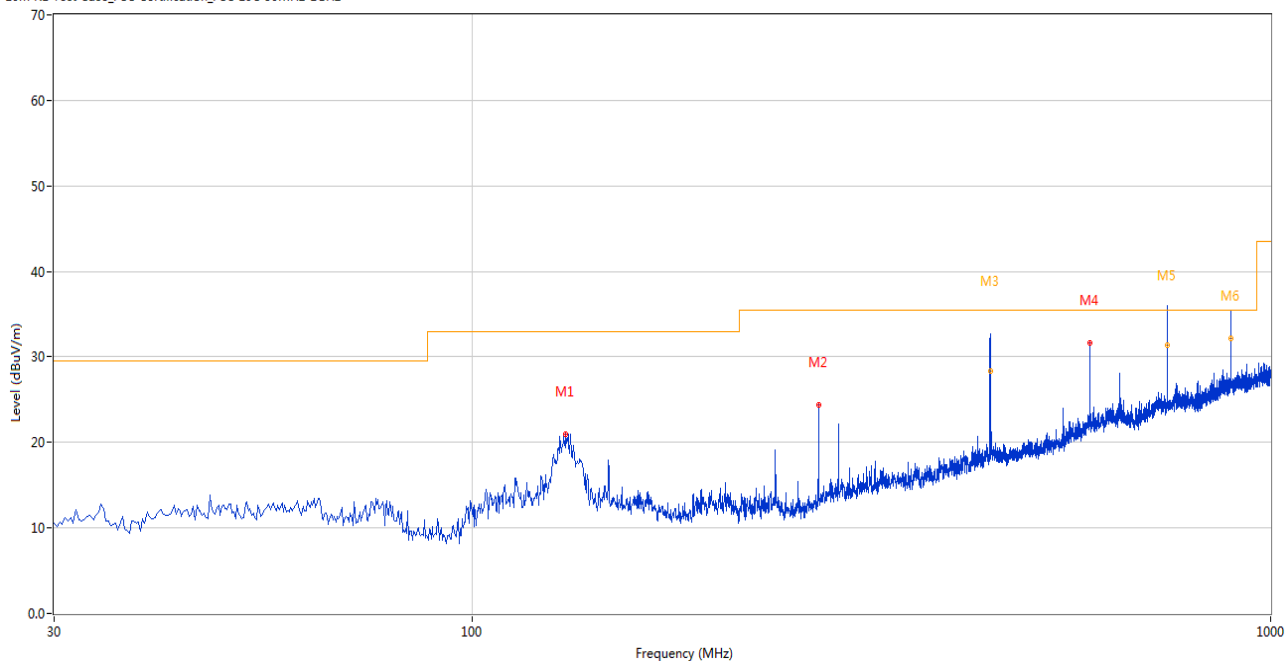
Note⁴: The EUT is working in the Normal link mode below 1 GHz. All modes have been tested and normal link mode is worst.

Note⁵: For Multiple transmitter output, the quantity $10 \log (NANT)$ dB is added to each spectrum value before comparing to the emission limit. When testing out-of-band and spurious emissions against relative emission limits, tests may be performed on each output individually without summing or adding $10 \log (NANT)$ if the measurements are made relative to the in-band emissions on the individual outputs.

Test Data and Plots

30 MHz to 1 GHz, ANT H

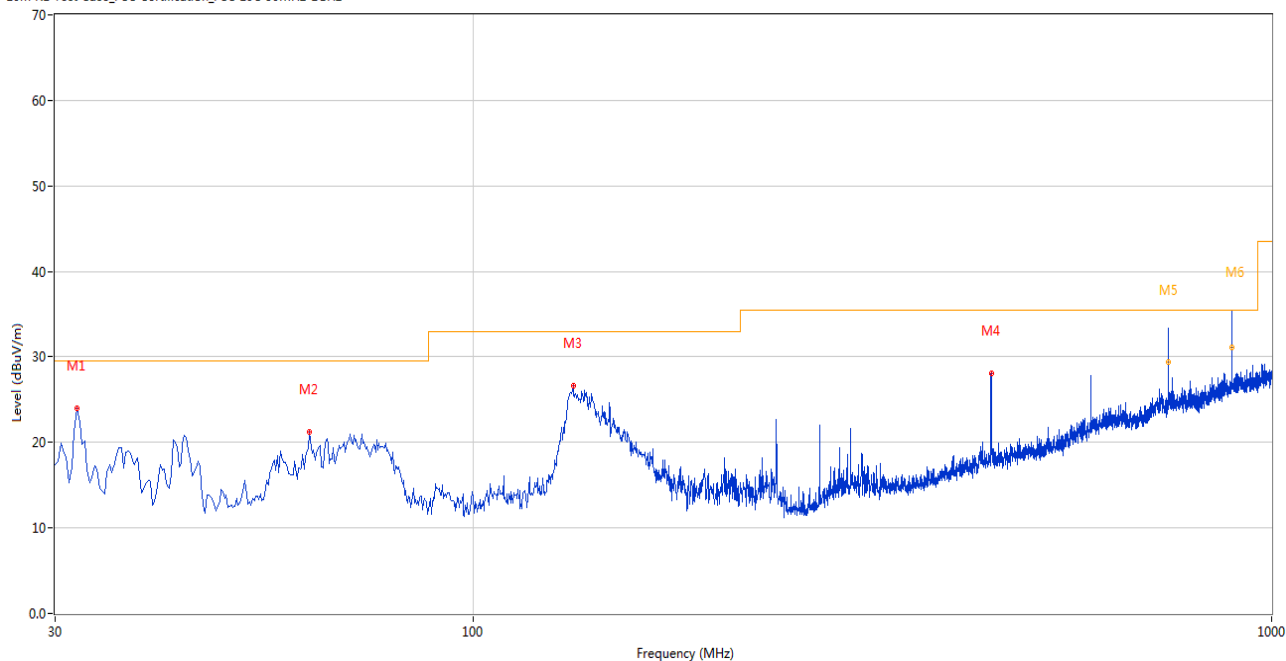
10m RE Test Case_FCC Certification_FCC 15C 30MHz-1GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	131.097	21.02	-27.09	33.0	11.98	Peak	329.00	400	Horizontal	Pass
2	271.955	24.44	-25.77	35.5	11.06	Peak	127.00	400	Horizontal	Pass
3	445.541	32.65	-20.71	35.5	2.85	Peak	180.00	200	Horizontal	N/A
3*	445.541	28.29	-20.71	35.5	7.21	QP	180.00	200	Horizontal	Pass
4	593.914	31.60	-16.95	35.5	3.90	Peak	226.00	100	Horizontal	Pass
5	742.529	35.97	-13.65	35.5	-0.47	Peak	239.00	100	Horizontal	N/A
5*	742.529	31.35	-13.65	35.5	4.15	QP	239.00	100	Horizontal	Pass
6	890.902	35.39	-10.88	35.5	0.11	Peak	239.00	100	Horizontal	N/A
6*	890.902	32.12	-10.88	35.5	3.38	QP	239.00	100	Horizontal	Pass

30 MHz to 1 GHz, ANT V

10m RE Test Case_FCC Certification_FCC 15C 30MHz-1GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	31.940	24.06	-27.60	29.5	5.44	Peak	350.00	100	Vertical	Pass
2	62.487	21.27	-26.94	29.5	8.23	Peak	96.00	300	Vertical	Pass
3	133.522	26.69	-26.79	33.0	6.31	Peak	275.00	100	Vertical	Pass
4	445.541	28.06	-20.71	35.5	7.44	Peak	195.00	100	Vertical	Pass
5	742.529	33.37	-13.65	35.5	2.13	Peak	198.00	300	Vertical	N/A
5*	742.529	29.35	-13.65	35.5	6.15	QP	198.00	300	Vertical	Pass
6	890.902	35.34	-10.88	35.5	0.16	Peak	286.00	200	Vertical	N/A
6*	890.902	31.12	-10.88	35.5	4.38	QP	286.00	200	Vertical	Pass

Note ¹: The spurious above 18G is noise only, do not show on the report.

Note ²: All antenna were tested, but only the worst case has been reported in this report.

SISO-Main Antenna

11a, U-NII-1, 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	1511.845	40.14	74.0	33.86	Peak	1.00	100	Horizontal	Pass
1**	1511.845	28.18	54.0	25.82	AV	1.00	100	Horizontal	Pass
2	2352.101	43.48	74.0	30.52	Peak	171.00	300	Horizontal	Pass
2**	2352.101	35.19	54.0	18.81	AV	171.00	300	Horizontal	Pass
3	4202.382	50.50	74.0	23.50	Peak	136.00	200	Horizontal	Pass
3**	4202.382	36.84	54.0	17.16	AV	136.00	200	Horizontal	Pass
4	7433.302	54.82	74.0	19.18	Peak	77.00	200	Horizontal	Pass
4**	7433.302	40.60	54.0	13.40	AV	77.00	200	Horizontal	Pass
5	12518.691	57.56	74.0	16.44	Peak	212.00	300	Horizontal	Pass
5**	12518.691	46.09	54.0	7.91	AV	212.00	300	Horizontal	Pass
6	16147.063	56.65	74.0	17.35	Peak	256.00	300	Horizontal	Pass
6**	16147.063	44.92	54.0	9.08	AV	256.00	300	Horizontal	Pass

11a, U-NII-1, 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	1572.364	39.02	74.0	34.98	Peak	334.00	100	Vertical	Pass
1**	1572.364	27.26	54.0	26.74	AV	334.00	100	Vertical	Pass
2	2345.979	43.99	74.0	30.01	Peak	78.00	100	Vertical	Pass
2**	2345.979	31.64	54.0	22.36	AV	78.00	100	Vertical	Pass
3	3913.168	42.93	74.0	31.07	Peak	225.00	200	Vertical	Pass
3**	3913.168	36.42	54.0	17.58	AV	225.00	200	Vertical	Pass
4	7679.946	52.61	74.0	21.39	Peak	105.00	300	Vertical	Pass
4**	7679.946	45.52	54.0	8.48	AV	105.00	300	Vertical	Pass
5	12527.762	55.18	74.0	18.82	Peak	255.00	400	Vertical	Pass
5**	12527.762	40.04	54.0	13.96	AV	255.00	400	Vertical	Pass
6	15380.690	51.44	74.0	22.56	Peak	1.00	200	Vertical	Pass
6**	15380.690	44.77	54.0	9.23	AV	1.00	200	Vertical	Pass

11a, U-NII-1, 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	1512.257	42.41	74.0	31.59	Peak	340.00	200	Horizontal	Pass
1**	1512.257	29.00	54.0	25.00	AV	340.00	200	Horizontal	Pass
2	2350.502	44.30	74.0	29.70	Peak	120.00	100	Horizontal	Pass
2**	2350.502	38.02	54.0	15.98	AV	120.00	100	Horizontal	Pass
3	4205.114	47.96	74.0	26.04	Peak	263.00	200	Horizontal	Pass
3**	4205.114	38.88	54.0	15.12	AV	263.00	200	Horizontal	Pass
4	7435.701	52.70	74.0	21.30	Peak	76.00	300	Horizontal	Pass
4**	7435.701	44.74	54.0	9.26	AV	76.00	300	Horizontal	Pass
5	12521.410	56.80	74.0	17.20	Peak	6.00	100	Horizontal	Pass
5**	12521.410	45.95	54.0	8.05	AV	6.00	100	Horizontal	Pass
6	16148.468	53.66	74.0	20.34	Peak	139.00	400	Horizontal	Pass
6**	16148.468	46.50	54.0	7.50	AV	139.00	400	Horizontal	Pass

11a, U-NII-1, 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	1566.801	35.24	74.0	38.76	Peak	310.00	100	Vertical	Pass
1**	1566.801	27.27	54.0	26.73	AV	310.00	100	Vertical	Pass
2	2344.384	43.00	74.0	31.00	Peak	336.00	200	Vertical	Pass
2**	2344.384	35.58	54.0	18.42	AV	336.00	200	Vertical	Pass
3	3915.057	45.22	74.0	28.78	Peak	265.00	200	Vertical	Pass
3**	3915.057	35.35	54.0	18.65	AV	265.00	200	Vertical	Pass
4	7683.315	52.71	74.0	21.29	Peak	89.00	100	Vertical	Pass
4**	7683.315	44.82	54.0	9.18	AV	89.00	100	Vertical	Pass
5	12530.493	58.05	74.0	15.95	Peak	303.00	300	Vertical	Pass
5**	12530.493	42.89	54.0	11.11	AV	303.00	300	Vertical	Pass
6	15385.070	54.84	74.0	19.16	Peak	43.00	400	Vertical	Pass
6**	15385.070	46.72	54.0	7.28	AV	43.00	400	Vertical	Pass

11a, U-NII-1, 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	1508.317	40.07	74.0	33.93	Peak	204.00	400	Horizontal	Pass
1**	1508.317	30.70	54.0	23.30	AV	204.00	400	Horizontal	Pass
2	2349.277	43.90	74.0	30.10	Peak	72.00	400	Horizontal	Pass
2**	2349.277	35.67	54.0	18.33	AV	72.00	400	Horizontal	Pass
3	4201.492	44.98	74.0	29.02	Peak	161.00	200	Horizontal	Pass
3**	4201.492	37.14	54.0	16.86	AV	161.00	200	Horizontal	Pass
4	7433.965	52.14	74.0	21.86	Peak	274.00	200	Horizontal	Pass
4**	7433.965	45.78	54.0	8.22	AV	274.00	200	Horizontal	Pass
5	12516.635	54.30	74.0	19.70	Peak	275.00	400	Horizontal	Pass
5**	12516.635	49.11	54.0	4.89	AV	275.00	400	Horizontal	Pass
6	16149.114	57.01	74.0	16.99	Peak	29.00	400	Horizontal	Pass
6**	16149.114	45.03	54.0	8.97	AV	29.00	400	Horizontal	Pass

11a, U-NII-1, 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	1572.296	35.07	74.0	38.93	Peak	100.00	200	Vertical	Pass
1**	1572.296	26.16	54.0	27.84	AV	100.00	200	Vertical	Pass
2	2348.599	44.03	74.0	29.97	Peak	316.00	200	Vertical	Pass
2**	2348.599	32.67	54.0	21.33	AV	316.00	200	Vertical	Pass
3	3914.007	45.93	74.0	28.07	Peak	143.00	200	Vertical	Pass
3**	3914.007	37.45	54.0	16.55	AV	143.00	200	Vertical	Pass
4	7678.053	52.60	74.0	21.40	Peak	56.00	300	Vertical	Pass
4**	7678.053	46.38	54.0	7.62	AV	56.00	300	Vertical	Pass
5	12528.275	55.87	74.0	18.13	Peak	186.00	200	Vertical	Pass
5**	12528.275	44.55	54.0	9.45	AV	186.00	200	Vertical	Pass
6	15381.321	56.07	74.0	17.93	Peak	48.00	200	Vertical	Pass
6**	15381.321	46.13	54.0	7.87	AV	48.00	200	Vertical	Pass

11n20, U-NII-1, 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	1510.024	37.78	74.0	36.22	Peak	132.00	400	Horizontal	Pass
1**	1510.024	27.71	54.0	26.29	AV	132.00	400	Horizontal	Pass
2	2349.413	43.09	74.0	30.91	Peak	297.00	200	Horizontal	Pass
2**	2349.413	38.36	54.0	15.64	AV	297.00	200	Horizontal	Pass
3	4207.983	47.37	74.0	26.63	Peak	235.00	200	Horizontal	Pass
3**	4207.983	38.03	54.0	15.97	AV	235.00	200	Horizontal	Pass
4	7432.309	55.24	74.0	18.76	Peak	304.00	200	Horizontal	Pass
4**	7432.309	41.42	54.0	12.58	AV	304.00	200	Horizontal	Pass
5	12517.740	53.06	74.0	20.94	Peak	287.00	400	Horizontal	Pass
5**	12517.740	49.15	54.0	4.85	AV	287.00	400	Horizontal	Pass
6	16144.215	55.51	74.0	18.49	Peak	207.00	400	Horizontal	Pass
6**	16144.215	40.98	54.0	13.02	AV	207.00	400	Horizontal	Pass

11n20, U-NII-1, 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	1571.746	38.63	74.0	35.37	Peak	331.00	400	Vertical	Pass
1**	1571.746	27.17	54.0	26.83	AV	331.00	400	Vertical	Pass
2	2345.142	47.33	74.0	26.67	Peak	333.00	300	Vertical	Pass
2**	2345.142	31.67	54.0	22.33	AV	333.00	300	Vertical	Pass
3	3919.767	41.82	74.0	32.18	Peak	265.00	200	Vertical	Pass
3**	3919.767	36.53	54.0	17.47	AV	265.00	200	Vertical	Pass
4	7680.795	49.97	74.0	24.03	Peak	119.00	400	Vertical	Pass
4**	7680.795	43.85	54.0	10.15	AV	119.00	400	Vertical	Pass
5	12531.490	54.80	74.0	19.20	Peak	59.00	400	Vertical	Pass
5**	12531.490	45.60	54.0	8.40	AV	59.00	400	Vertical	Pass
6	15384.948	50.26	74.0	23.74	Peak	111.00	100	Vertical	Pass
6**	15384.948	43.31	54.0	10.69	AV	111.00	100	Vertical	Pass

11n20, U-NII-1, 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	1511.820	40.50	74.0	33.50	Peak	78.00	400	Horizontal	Pass
1**	1511.820	28.70	54.0	25.30	AV	78.00	400	Horizontal	Pass
2	2352.218	47.34	74.0	26.66	Peak	231.00	300	Horizontal	Pass
2**	2352.218	36.82	54.0	17.18	AV	231.00	300	Horizontal	Pass
3	4208.262	49.93	74.0	24.07	Peak	334.00	200	Horizontal	Pass
3**	4208.262	39.55	54.0	14.45	AV	334.00	200	Horizontal	Pass
4	7434.081	57.05	74.0	16.95	Peak	234.00	400	Horizontal	Pass
4**	7434.081	44.53	54.0	9.47	AV	234.00	400	Horizontal	Pass
5	12515.368	52.92	74.0	21.08	Peak	116.00	100	Horizontal	Pass
5**	12515.368	47.84	54.0	6.16	AV	116.00	100	Horizontal	Pass
6	16149.731	51.90	74.0	22.10	Peak	140.00	100	Horizontal	Pass
6**	16149.731	42.10	54.0	11.90	AV	140.00	100	Horizontal	Pass

11n20, U-NII-1, 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	1573.149	36.61	74.0	37.39	Peak	75.00	200	Vertical	Pass
1**	1573.149	25.77	54.0	28.23	AV	75.00	200	Vertical	Pass
2	2349.629	46.29	74.0	27.71	Peak	6.00	100	Vertical	Pass
2**	2349.629	30.46	54.0	23.54	AV	6.00	100	Vertical	Pass
3	3920.432	42.43	74.0	31.57	Peak	95.00	200	Vertical	Pass
3**	3920.432	35.06	54.0	18.94	AV	95.00	200	Vertical	Pass
4	7679.480	53.36	74.0	20.64	Peak	302.00	400	Vertical	Pass
4**	7679.480	41.27	54.0	12.73	AV	302.00	400	Vertical	Pass
5	12530.487	58.74	74.0	15.26	Peak	333.00	400	Vertical	Pass
5**	12530.487	44.27	54.0	9.73	AV	333.00	400	Vertical	Pass
6	15379.716	53.80	74.0	20.20	Peak	265.00	200	Vertical	Pass
6**	15379.716	44.88	54.0	9.12	AV	265.00	200	Vertical	Pass

11n20, U-NII-1, 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	1509.793	41.43	74.0	32.57	Peak	86.00	200	Horizontal	Pass
1**	1509.793	29.08	54.0	24.92	AV	86.00	200	Horizontal	Pass
2	2350.820	44.61	74.0	29.39	Peak	356.00	300	Horizontal	Pass
2**	2350.820	38.11	54.0	15.89	AV	356.00	300	Horizontal	Pass
3	4208.220	45.58	74.0	28.42	Peak	272.00	200	Horizontal	Pass
3**	4208.220	40.67	54.0	13.33	AV	272.00	200	Horizontal	Pass
4	7433.569	55.54	74.0	18.46	Peak	120.00	300	Horizontal	Pass
4**	7433.569	41.05	54.0	12.95	AV	120.00	300	Horizontal	Pass
5	12514.287	58.63	74.0	15.37	Peak	170.00	100	Horizontal	Pass
5**	12514.287	48.72	54.0	5.28	AV	170.00	100	Horizontal	Pass
6	16148.177	56.17	74.0	17.83	Peak	242.00	200	Horizontal	Pass
6**	16148.177	43.88	54.0	10.12	AV	242.00	200	Horizontal	Pass

11n20, U-NII-1, 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	1573.778	35.70	74.0	38.30	Peak	180.00	100	Vertical	Pass
1**	1573.778	27.81	54.0	26.19	AV	180.00	100	Vertical	Pass
2	2350.125	47.42	74.0	26.58	Peak	42.00	100	Vertical	Pass
2**	2350.125	30.76	54.0	23.24	AV	42.00	100	Vertical	Pass
3	3916.386	44.00	74.0	30.00	Peak	95.00	200	Vertical	Pass
3**	3916.386	34.28	54.0	19.72	AV	95.00	200	Vertical	Pass
4	7678.710	50.14	74.0	23.86	Peak	291.00	400	Vertical	Pass
4**	7678.710	44.93	54.0	9.07	AV	291.00	400	Vertical	Pass
5	12531.515	53.65	74.0	20.35	Peak	214.00	300	Vertical	Pass
5**	12531.515	42.54	54.0	11.46	AV	214.00	300	Vertical	Pass
6	15379.427	55.26	74.0	18.74	Peak	310.00	400	Vertical	Pass
6**	15379.427	43.58	54.0	10.42	AV	310.00	400	Vertical	Pass

11n40, U-NII-1, 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	1515.271	36.74	74.0	37.26	Peak	295.00	100	Horizontal	Pass
1**	1515.271	28.04	54.0	25.96	AV	295.00	100	Horizontal	Pass
2	2345.663	42.33	74.0	31.67	Peak	239.00	300	Horizontal	Pass
2**	2345.663	36.56	54.0	17.44	AV	239.00	300	Horizontal	Pass
3	4202.264	48.65	74.0	25.35	Peak	162.00	200	Horizontal	Pass
3**	4202.264	35.47	54.0	18.53	AV	162.00	200	Horizontal	Pass
4	7432.736	52.04	74.0	21.96	Peak	67.00	300	Horizontal	Pass
4**	7432.736	42.46	54.0	11.54	AV	67.00	300	Horizontal	Pass
5	12515.236	58.52	74.0	15.48	Peak	103.00	200	Horizontal	Pass
5**	12515.236	46.80	54.0	7.20	AV	103.00	200	Horizontal	Pass
6	16145.231	55.00	74.0	19.00	Peak	144.00	100	Horizontal	Pass
6**	16145.231	41.01	54.0	12.99	AV	144.00	100	Horizontal	Pass

11n40, U-NII-1, 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	1569.284	34.53	74.0	39.47	Peak	0.00	400	Vertical	Pass
1**	1569.284	29.67	54.0	24.33	AV	0.00	400	Vertical	Pass
2	2346.374	46.59	74.0	27.41	Peak	327.00	400	Vertical	Pass
2**	2346.374	31.03	54.0	22.97	AV	327.00	400	Vertical	Pass
3	3914.592	44.67	74.0	29.33	Peak	281.00	200	Vertical	Pass
3**	3914.592	37.84	54.0	16.16	AV	281.00	200	Vertical	Pass
4	7682.789	53.34	74.0	20.66	Peak	5.00	200	Vertical	Pass
4**	7682.789	46.89	54.0	7.11	AV	5.00	200	Vertical	Pass
5	12529.091	53.15	74.0	20.85	Peak	245.00	200	Vertical	Pass
5**	12529.091	44.68	54.0	9.32	AV	245.00	200	Vertical	Pass
6	15383.850	53.35	74.0	20.65	Peak	153.00	100	Vertical	Pass
6**	15383.850	41.70	54.0	12.30	AV	153.00	100	Vertical	Pass

11n40, U-NII-1, 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	1513.432	42.53	74.0	31.47	Peak	178.00	100	Horizontal	Pass
1**	1513.432	29.71	54.0	24.29	AV	178.00	100	Horizontal	Pass
2	2348.813	45.45	74.0	28.55	Peak	239.00	300	Horizontal	Pass
2**	2348.813	38.76	54.0	15.24	AV	239.00	300	Horizontal	Pass
3	4208.502	49.82	74.0	24.18	Peak	3.00	200	Horizontal	Pass
3**	4208.502	38.84	54.0	15.16	AV	3.00	200	Horizontal	Pass
4	7436.995	56.42	74.0	17.58	Peak	215.00	300	Horizontal	Pass
4**	7436.995	44.94	54.0	9.06	AV	215.00	300	Horizontal	Pass
5	12520.373	55.28	74.0	18.72	Peak	41.00	100	Horizontal	Pass
5**	12520.373	50.03	54.0	3.97	AV	41.00	100	Horizontal	Pass
6	16146.098	55.53	74.0	18.47	Peak	75.00	300	Horizontal	Pass
6**	16146.098	46.42	54.0	7.58	AV	75.00	300	Horizontal	Pass

11n40, U-NII-1, 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	1567.513	39.21	74.0	34.79	Peak	74.00	100	Vertical	Pass
1**	1567.513	28.81	54.0	25.19	AV	74.00	100	Vertical	Pass
2	2347.447	44.01	74.0	29.99	Peak	224.00	200	Vertical	Pass
2**	2347.447	35.18	54.0	18.82	AV	224.00	200	Vertical	Pass
3	3914.386	46.70	74.0	27.30	Peak	50.00	200	Vertical	Pass
3**	3914.386	37.51	54.0	16.49	AV	50.00	200	Vertical	Pass
4	7677.231	51.18	74.0	22.82	Peak	117.00	400	Vertical	Pass
4**	7677.231	43.29	54.0	10.71	AV	117.00	400	Vertical	Pass
5	12527.018	58.00	74.0	16.00	Peak	195.00	300	Vertical	Pass
5**	12527.018	45.41	54.0	8.59	AV	195.00	300	Vertical	Pass
6	15382.923	53.06	74.0	20.94	Peak	1.00	100	Vertical	Pass
6**	15382.923	45.23	54.0	8.77	AV	1.00	100	Vertical	Pass

11ac20, U-NII-1, 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	1514.447	41.93	74.0	32.07	Peak	217.00	200	Horizontal	Pass
1**	1514.447	32.44	54.0	21.56	AV	217.00	200	Horizontal	Pass
2	2344.773	46.98	74.0	27.02	Peak	330.00	100	Horizontal	Pass
2**	2344.773	39.72	54.0	14.28	AV	330.00	100	Horizontal	Pass
3	4202.454	49.05	74.0	24.95	Peak	293.00	200	Horizontal	Pass
3**	4202.454	37.68	54.0	16.32	AV	293.00	200	Horizontal	Pass
4	7430.707	55.38	74.0	18.62	Peak	201.00	100	Horizontal	Pass
4**	7430.707	39.95	54.0	14.05	AV	201.00	100	Horizontal	Pass
5	12517.563	55.15	74.0	18.85	Peak	79.00	200	Horizontal	Pass
5**	12517.563	47.01	54.0	6.99	AV	79.00	200	Horizontal	Pass
6	16146.114	56.81	74.0	17.19	Peak	345.00	400	Horizontal	Pass
6**	16146.114	40.88	54.0	13.12	AV	345.00	400	Horizontal	Pass

11ac20, U-NII-1, 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	1569.652	39.23	74.0	34.77	Peak	34.00	100	Vertical	Pass
1**	1569.652	28.97	54.0	25.03	AV	34.00	100	Vertical	Pass
2	2343.434	45.41	74.0	28.59	Peak	83.00	300	Vertical	Pass
2**	2343.434	30.54	54.0	23.46	AV	83.00	300	Vertical	Pass
3	3913.891	46.38	74.0	27.62	Peak	53.00	200	Vertical	Pass
3**	3913.891	35.93	54.0	18.07	AV	53.00	200	Vertical	Pass
4	7683.311	51.56	74.0	22.44	Peak	303.00	100	Vertical	Pass
4**	7683.311	41.87	54.0	12.13	AV	303.00	100	Vertical	Pass
5	12526.136	56.01	74.0	17.99	Peak	61.00	200	Vertical	Pass
5**	12526.136	42.28	54.0	11.72	AV	61.00	200	Vertical	Pass
6	15379.711	52.19	74.0	21.81	Peak	5.00	100	Vertical	Pass
6**	15379.711	46.91	54.0	7.09	AV	5.00	100	Vertical	Pass

11ac20, U-NII-1, 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	1514.886	38.15	74.0	35.85	Peak	66.00	100	Horizontal	Pass
1**	1514.886	31.44	54.0	22.56	AV	66.00	100	Horizontal	Pass
2	2345.232	45.43	74.0	28.57	Peak	35.00	400	Horizontal	Pass
2**	2345.232	34.88	54.0	19.12	AV	35.00	400	Horizontal	Pass
3	4207.672	45.10	74.0	28.90	Peak	26.00	200	Horizontal	Pass
3**	4207.672	37.99	54.0	16.01	AV	26.00	200	Horizontal	Pass
4	7431.644	53.78	74.0	20.22	Peak	359.00	300	Horizontal	Pass
4**	7431.644	42.32	54.0	11.68	AV	359.00	300	Horizontal	Pass
5	12517.271	55.34	74.0	18.66	Peak	175.00	100	Horizontal	Pass
5**	12517.271	46.58	54.0	7.42	AV	175.00	100	Horizontal	Pass
6	16147.728	56.81	74.0	17.19	Peak	301.00	300	Horizontal	Pass
6**	16147.728	43.56	54.0	10.44	AV	301.00	300	Horizontal	Pass

11ac20, U-NII-1, 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	1568.842	35.56	74.0	38.44	Peak	203.00	200	Vertical	Pass
1**	1568.842	28.98	54.0	25.02	AV	203.00	200	Vertical	Pass
2	2351.010	42.83	74.0	31.17	Peak	68.00	200	Vertical	Pass
2**	2351.010	31.84	54.0	22.16	AV	68.00	200	Vertical	Pass
3	3916.215	45.92	74.0	28.08	Peak	110.00	200	Vertical	Pass
3**	3916.215	38.66	54.0	15.34	AV	110.00	200	Vertical	Pass
4	7681.259	53.17	74.0	20.83	Peak	89.00	100	Vertical	Pass
4**	7681.259	42.58	54.0	11.42	AV	89.00	100	Vertical	Pass
5	12532.697	58.47	74.0	15.53	Peak	209.00	400	Vertical	Pass
5**	12532.697	42.80	54.0	11.20	AV	209.00	400	Vertical	Pass
6	15385.701	54.14	74.0	19.86	Peak	336.00	100	Vertical	Pass
6**	15385.701	42.50	54.0	11.50	AV	336.00	100	Vertical	Pass

11ac20, U-NII-1, 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	1513.755	41.37	74.0	32.63	Peak	186.00	100	Horizontal	Pass
1**	1513.755	26.59	54.0	27.41	AV	186.00	100	Horizontal	Pass
2	2350.297	46.84	74.0	27.16	Peak	147.00	300	Horizontal	Pass
2**	2350.297	35.84	54.0	18.16	AV	147.00	300	Horizontal	Pass
3	4203.134	48.24	74.0	25.76	Peak	68.00	200	Horizontal	Pass
3**	4203.134	38.16	54.0	15.84	AV	68.00	200	Horizontal	Pass
4	7436.575	56.00	74.0	18.00	Peak	356.00	300	Horizontal	Pass
4**	7436.575	40.21	54.0	13.79	AV	356.00	300	Horizontal	Pass
5	12518.903	52.70	74.0	21.30	Peak	83.00	200	Horizontal	Pass
5**	12518.903	47.68	54.0	6.32	AV	83.00	200	Horizontal	Pass
6	16145.335	51.82	74.0	22.18	Peak	325.00	300	Horizontal	Pass
6**	16145.335	44.38	54.0	9.62	AV	325.00	300	Horizontal	Pass

11ac20, U-NII-1, 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	1570.473	36.59	74.0	37.41	Peak	99.00	100	Vertical	Pass
1**	1570.473	24.57	54.0	29.43	AV	99.00	100	Vertical	Pass
2	2343.948	46.67	74.0	27.33	Peak	3.00	100	Vertical	Pass
2**	2343.948	32.46	54.0	21.54	AV	3.00	100	Vertical	Pass
3	3914.413	45.04	74.0	28.96	Peak	59.00	200	Vertical	Pass
3**	3914.413	34.19	54.0	19.81	AV	59.00	200	Vertical	Pass
4	7679.044	50.01	74.0	23.99	Peak	92.00	400	Vertical	Pass
4**	7679.044	42.63	54.0	11.37	AV	92.00	400	Vertical	Pass
5	12529.896	57.63	74.0	16.37	Peak	82.00	200	Vertical	Pass
5**	12529.896	40.75	54.0	13.25	AV	82.00	200	Vertical	Pass
6	15383.141	54.60	74.0	19.40	Peak	326.00	100	Vertical	Pass
6**	15383.141	46.77	54.0	7.23	AV	326.00	100	Vertical	Pass

11ac40, U-NII-1, 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	1510.944	39.99	74.0	34.01	Peak	342.00	100	Horizontal	Pass
1**	1510.944	31.75	54.0	22.25	AV	342.00	100	Horizontal	Pass
2	2346.594	47.12	74.0	26.88	Peak	184.00	300	Horizontal	Pass
2**	2346.594	40.45	54.0	13.55	AV	184.00	300	Horizontal	Pass
3	4204.557	48.30	74.0	25.70	Peak	210.00	200	Horizontal	Pass
3**	4204.557	34.85	54.0	19.15	AV	210.00	200	Horizontal	Pass
4	7432.187	52.72	74.0	21.28	Peak	122.00	400	Horizontal	Pass
4**	7432.187	43.52	54.0	10.48	AV	122.00	400	Horizontal	Pass
5	12517.223	56.15	74.0	17.85	Peak	260.00	100	Horizontal	Pass
5**	12517.223	46.34	54.0	7.66	AV	260.00	100	Horizontal	Pass
6	16149.415	57.22	74.0	16.78	Peak	40.00	100	Horizontal	Pass
6**	16149.415	42.85	54.0	11.15	AV	40.00	100	Horizontal	Pass

11ac40, U-NII-1, 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	1571.583	37.73	74.0	36.27	Peak	155.00	100	Vertical	Pass
1**	1571.583	26.23	54.0	27.77	AV	155.00	100	Vertical	Pass
2	2343.946	44.62	74.0	29.38	Peak	120.00	200	Vertical	Pass
2**	2343.946	30.55	54.0	23.45	AV	120.00	200	Vertical	Pass
3	3917.483	43.24	74.0	30.76	Peak	197.00	200	Vertical	Pass
3**	3917.483	38.28	54.0	15.72	AV	197.00	200	Vertical	Pass
4	7677.434	50.49	74.0	23.51	Peak	112.00	300	Vertical	Pass
4**	7677.434	44.17	54.0	9.83	AV	112.00	300	Vertical	Pass
5	12527.105	53.78	74.0	20.22	Peak	222.00	300	Vertical	Pass
5**	12527.105	39.76	54.0	14.24	AV	222.00	300	Vertical	Pass
6	15384.371	50.22	74.0	23.78	Peak	298.00	300	Vertical	Pass
6**	15384.371	45.93	54.0	8.07	AV	298.00	300	Vertical	Pass

11ac40, U-NII-1, 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	1515.441	42.32	74.0	31.68	Peak	345.00	200	Horizontal	Pass
1**	1515.441	30.60	54.0	23.40	AV	345.00	200	Horizontal	Pass
2	2345.675	46.43	74.0	27.57	Peak	285.00	200	Horizontal	Pass
2**	2345.675	39.78	54.0	14.22	AV	285.00	200	Horizontal	Pass
3	4205.901	48.44	74.0	25.56	Peak	314.00	200	Horizontal	Pass
3**	4205.901	38.93	54.0	15.07	AV	314.00	200	Horizontal	Pass
4	7435.836	52.40	74.0	21.60	Peak	45.00	200	Horizontal	Pass
4**	7435.836	43.24	54.0	10.76	AV	45.00	200	Horizontal	Pass
5	12515.399	54.29	74.0	19.71	Peak	109.00	100	Horizontal	Pass
5**	12515.399	44.32	54.0	9.68	AV	109.00	100	Horizontal	Pass
6	16146.129	57.15	74.0	16.85	Peak	257.00	100	Horizontal	Pass
6**	16146.129	45.22	54.0	8.78	AV	257.00	100	Horizontal	Pass

11ac40, U-NII-1, 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	1574.085	34.11	74.0	39.89	Peak	89.00	400	Vertical	Pass
1**	1574.085	24.69	54.0	29.31	AV	89.00	400	Vertical	Pass
2	2345.259	47.70	74.0	26.30	Peak	335.00	400	Vertical	Pass
2**	2345.259	35.32	54.0	18.68	AV	335.00	400	Vertical	Pass
3	3919.346	47.11	74.0	26.89	Peak	344.00	200	Vertical	Pass
3**	3919.346	36.47	54.0	17.53	AV	344.00	200	Vertical	Pass
4	7678.063	51.21	74.0	22.79	Peak	123.00	100	Vertical	Pass
4**	7678.063	41.10	54.0	12.90	AV	123.00	100	Vertical	Pass
5	12526.525	54.63	74.0	19.37	Peak	10.00	300	Vertical	Pass
5**	12526.525	42.84	54.0	11.16	AV	10.00	300	Vertical	Pass
6	15381.188	53.49	74.0	20.51	Peak	239.00	100	Vertical	Pass
6**	15381.188	45.28	54.0	8.72	AV	239.00	100	Vertical	Pass

11ac80, U-NII-1, 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	1514.823	37.86	74.0	36.14	Peak	269.00	400	Horizontal	Pass
1**	1514.823	31.88	54.0	22.12	AV	269.00	400	Horizontal	Pass
2	2344.676	46.99	74.0	27.01	Peak	280.00	300	Horizontal	Pass
2**	2344.676	39.94	54.0	14.06	AV	280.00	300	Horizontal	Pass
3	4202.406	47.27	74.0	26.73	Peak	250.00	200	Horizontal	Pass
3**	4202.406	36.92	54.0	17.08	AV	250.00	200	Horizontal	Pass
4	7435.745	51.89	74.0	22.11	Peak	187.00	100	Horizontal	Pass
4**	7435.745	39.98	54.0	14.02	AV	187.00	100	Horizontal	Pass
5	12515.979	55.25	74.0	18.75	Peak	179.00	300	Horizontal	Pass
5**	12515.979	44.22	54.0	9.78	AV	179.00	300	Horizontal	Pass
6	16145.747	53.28	74.0	20.72	Peak	24.00	400	Horizontal	Pass
6**	16145.747	41.24	54.0	12.76	AV	24.00	400	Horizontal	Pass

11ac80, U-NII-1, 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	1570.992	35.72	74.0	38.28	Peak	5.00	300	Vertical	Pass
1**	1570.992	27.96	54.0	26.04	AV	5.00	300	Vertical	Pass
2	2343.743	44.47	74.0	29.53	Peak	331.00	300	Vertical	Pass
2**	2343.743	32.55	54.0	21.45	AV	331.00	300	Vertical	Pass
3	3916.904	45.91	74.0	28.09	Peak	322.00	200	Vertical	Pass
3**	3916.904	37.39	54.0	16.61	AV	322.00	200	Vertical	Pass
4	7680.062	49.64	74.0	24.36	Peak	161.00	200	Vertical	Pass
4**	7680.062	41.92	54.0	12.08	AV	161.00	200	Vertical	Pass
5	12526.803	55.20	74.0	18.80	Peak	21.00	400	Vertical	Pass
5**	12526.803	45.76	54.0	8.24	AV	21.00	400	Vertical	Pass
6	15384.951	56.13	74.0	17.87	Peak	223.00	200	Vertical	Pass
6**	15384.951	46.99	54.0	7.01	AV	223.00	200	Vertical	Pass

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	1520.473	38.46	74.0	35.54	Peak	213.00	400	Horizontal	Pass
1**	1520.473	30.64	54.0	23.36	AV	213.00	400	Horizontal	Pass
2	4017.934	44.41	74.0	29.59	Peak	206.00	400	Horizontal	Pass
2**	4017.934	38.02	54.0	15.98	AV	206.00	400	Horizontal	Pass
3	7595.934	55.65	74.0	18.35	Peak	31.00	200	Horizontal	Pass
3**	7595.934	44.17	54.0	9.83	AV	31.00	200	Horizontal	Pass
4	12456.393	51.84	74.0	22.16	Peak	110.00	100	Horizontal	Pass
4**	12456.393	45.87	54.0	8.13	AV	110.00	100	Horizontal	Pass
5	16096.001	52.40	74.0	21.60	Peak	161.00	100	Horizontal	Pass
5**	16096.001	44.07	54.0	9.93	AV	161.00	100	Horizontal	Pass
6	17421.386	56.37	74.0	17.63	Peak	36.00	100	Horizontal	Pass
6**	17421.386	45.31	54.0	8.69	AV	36.00	100	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	1329.820	44.09	74.0	29.91	Peak	171.00	300	Vertical	Pass
1**	1329.820	36.01	54.0	17.99	AV	171.00	300	Vertical	Pass
2	1437.395	41.28	74.0	32.72	Peak	327.00	100	Vertical	Pass
2**	1437.395	35.59	54.0	18.41	AV	327.00	100	Vertical	Pass
3	4308.241	48.00	74.0	26.00	Peak	279.00	200	Vertical	Pass
3**	4308.241	36.35	54.0	17.65	AV	279.00	200	Vertical	Pass
4	7594.332	50.04	74.0	23.96	Peak	26.00	200	Vertical	Pass
4**	7594.332	42.36	54.0	11.64	AV	26.00	200	Vertical	Pass
5	12534.492	56.40	74.0	17.60	Peak	282.00	100	Vertical	Pass
5**	12534.492	45.79	54.0	8.21	AV	282.00	100	Vertical	Pass
6	15908.553	56.28	74.0	17.72	Peak	108.00	300	Vertical	Pass
6**	15908.553	46.92	54.0	7.08	AV	108.00	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	1524.037	41.01	74.0	32.99	Peak	97.00	200	Horizontal	Pass
1**	1524.037	28.03	54.0	25.97	AV	97.00	200	Horizontal	Pass
2	4018.752	48.56	74.0	25.44	Peak	66.00	300	Horizontal	Pass
2**	4018.752	38.29	54.0	15.71	AV	66.00	300	Horizontal	Pass
3	7600.649	56.02	74.0	17.98	Peak	82.00	200	Horizontal	Pass
3**	7600.649	41.41	54.0	12.59	AV	82.00	200	Horizontal	Pass
4	12453.838	51.63	74.0	22.37	Peak	360.00	100	Horizontal	Pass
4**	12453.838	42.10	54.0	11.90	AV	360.00	100	Horizontal	Pass
5	16094.733	55.58	74.0	18.42	Peak	178.00	200	Horizontal	Pass
5**	16094.733	47.49	54.0	6.51	AV	178.00	200	Horizontal	Pass
6	17420.266	54.17	74.0	19.83	Peak	244.00	100	Horizontal	Pass
6**	17420.266	50.03	54.0	3.97	AV	244.00	100	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	1330.405	44.22	74.0	29.78	Peak	202.00	100	Vertical	Pass
1**	1330.405	32.34	54.0	21.66	AV	202.00	100	Vertical	Pass
2	1441.923	40.77	74.0	33.23	Peak	148.00	200	Vertical	Pass
2**	1441.923	37.67	54.0	16.33	AV	148.00	200	Vertical	Pass
3	4307.695	46.99	74.0	27.01	Peak	61.00	200	Vertical	Pass
3**	4307.695	39.22	54.0	14.78	AV	61.00	200	Vertical	Pass
4	7595.538	51.49	74.0	22.51	Peak	283.00	400	Vertical	Pass
4**	7595.538	44.60	54.0	9.40	AV	283.00	400	Vertical	Pass
5	12531.877	53.04	74.0	20.96	Peak	245.00	100	Vertical	Pass
5**	12531.877	41.63	54.0	12.37	AV	245.00	100	Vertical	Pass
6	15909.184	53.74	74.0	20.26	Peak	96.00	400	Vertical	Pass
6**	15909.184	45.31	54.0	8.69	AV	96.00	400	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	1521.658	39.03	74.0	34.97	Peak	51.00	200	Horizontal	Pass
1**	1521.658	31.82	54.0	22.18	AV	51.00	200	Horizontal	Pass
2	4016.002	48.49	74.0	25.51	Peak	76.00	400	Horizontal	Pass
2**	4016.002	38.90	54.0	15.10	AV	76.00	400	Horizontal	Pass
3	7600.141	52.95	74.0	21.05	Peak	199.00	200	Horizontal	Pass
3**	7600.141	42.13	54.0	11.87	AV	199.00	200	Horizontal	Pass
4	12453.209	54.65	74.0	19.35	Peak	60.00	400	Horizontal	Pass
4**	12453.209	43.39	54.0	10.61	AV	60.00	400	Horizontal	Pass
5	16092.984	56.47	74.0	17.53	Peak	302.00	400	Horizontal	Pass
5**	16092.984	46.84	54.0	7.16	AV	302.00	400	Horizontal	Pass
6	17420.226	55.25	74.0	18.75	Peak	27.00	200	Horizontal	Pass
6**	17420.226	49.41	54.0	4.59	AV	27.00	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	1332.196	41.95	74.0	32.05	Peak	18.00	200	Vertical	Pass
1**	1332.196	33.41	54.0	20.59	AV	18.00	200	Vertical	Pass
2	1443.522	41.77	74.0	32.23	Peak	76.00	400	Vertical	Pass
2**	1443.522	37.69	54.0	16.31	AV	76.00	400	Vertical	Pass
3	4312.489	44.72	74.0	29.28	Peak	266.00	200	Vertical	Pass
3**	4312.489	40.94	54.0	13.06	AV	266.00	200	Vertical	Pass
4	7590.338	52.57	74.0	21.43	Peak	57.00	400	Vertical	Pass
4**	7590.338	43.21	54.0	10.79	AV	57.00	400	Vertical	Pass
5	12532.970	54.11	74.0	19.89	Peak	325.00	400	Vertical	Pass
5**	12532.970	41.80	54.0	12.20	AV	325.00	400	Vertical	Pass
6	15903.825	57.00	74.0	17.00	Peak	161.00	300	Vertical	Pass
6**	15903.825	45.94	54.0	8.06	AV	161.00	300	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	1523.783	39.66	74.0	34.34	Peak	101.00	200	Horizontal	Pass
1**	1523.783	27.50	54.0	26.50	AV	101.00	200	Horizontal	Pass
2	4021.595	47.81	74.0	26.19	Peak	230.00	400	Horizontal	Pass
2**	4021.595	39.69	54.0	14.31	AV	230.00	400	Horizontal	Pass
3	7598.703	54.88	74.0	19.12	Peak	187.00	200	Horizontal	Pass
3**	7598.703	41.83	54.0	12.17	AV	187.00	200	Horizontal	Pass
4	12452.795	51.64	74.0	22.36	Peak	65.00	100	Horizontal	Pass
4**	12452.795	46.77	54.0	7.23	AV	65.00	100	Horizontal	Pass
5	16094.116	54.41	74.0	19.59	Peak	261.00	300	Horizontal	Pass
5**	16094.116	42.08	54.0	11.92	AV	261.00	300	Horizontal	Pass
6	17420.385	58.61	74.0	15.39	Peak	258.00	200	Horizontal	Pass
6**	17420.385	47.22	54.0	6.78	AV	258.00	200	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	1332.310	43.57	74.0	30.43	Peak	84.00	200	Vertical	Pass
1**	1332.310	36.59	54.0	17.41	AV	84.00	200	Vertical	Pass
2	1440.319	44.19	74.0	29.81	Peak	304.00	400	Vertical	Pass
2**	1440.319	36.34	54.0	17.66	AV	304.00	400	Vertical	Pass
3	4310.479	49.26	74.0	24.74	Peak	238.00	200	Vertical	Pass
3**	4310.479	37.33	54.0	16.67	AV	238.00	200	Vertical	Pass
4	7592.484	54.85	74.0	19.15	Peak	248.00	400	Vertical	Pass
4**	7592.484	42.51	54.0	11.49	AV	248.00	400	Vertical	Pass
5	12538.709	55.78	74.0	18.22	Peak	205.00	300	Vertical	Pass
5**	12538.709	42.63	54.0	11.37	AV	205.00	300	Vertical	Pass
6	15903.540	56.20	74.0	17.80	Peak	168.00	400	Vertical	Pass
6**	15903.540	47.52	54.0	6.48	AV	168.00	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	1520.078	38.36	74.0	35.64	Peak	32.00	100	Horizontal	Pass
1**	1520.078	28.24	54.0	25.76	AV	32.00	100	Horizontal	Pass
2	4022.753	46.02	74.0	27.98	Peak	179.00	100	Horizontal	Pass
2**	4022.753	33.95	54.0	20.05	AV	179.00	100	Horizontal	Pass
3	7601.069	52.73	74.0	21.27	Peak	185.00	200	Horizontal	Pass
3**	7601.069	45.81	54.0	8.19	AV	185.00	200	Horizontal	Pass
4	12455.494	53.06	74.0	20.94	Peak	130.00	200	Horizontal	Pass
4**	12455.494	45.68	54.0	8.32	AV	130.00	200	Horizontal	Pass
5	16095.940	55.42	74.0	18.58	Peak	347.00	400	Horizontal	Pass
5**	16095.940	42.91	54.0	11.09	AV	347.00	400	Horizontal	Pass
6	17419.893	56.12	74.0	17.88	Peak	64.00	300	Horizontal	Pass
6**	17419.893	46.05	54.0	7.95	AV	64.00	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	1333.236	42.83	74.0	31.17	Peak	349.00	400	Vertical	Pass
1**	1333.236	33.86	54.0	20.14	AV	349.00	400	Vertical	Pass
2	1441.873	42.72	74.0	31.28	Peak	326.00	200	Vertical	Pass
2**	1441.873	39.93	54.0	14.07	AV	326.00	200	Vertical	Pass
3	4311.476	49.29	74.0	24.71	Peak	331.00	200	Vertical	Pass
3**	4311.476	39.12	54.0	14.88	AV	331.00	200	Vertical	Pass
4	7598.107	51.84	74.0	22.16	Peak	153.00	300	Vertical	Pass
4**	7598.107	43.18	54.0	10.82	AV	153.00	300	Vertical	Pass
5	12537.895	53.64	74.0	20.36	Peak	1.00	400	Vertical	Pass
5**	12537.895	44.08	54.0	9.92	AV	1.00	400	Vertical	Pass
6	15902.881	54.84	74.0	19.16	Peak	289.00	300	Vertical	Pass
6**	15902.881	44.31	54.0	9.69	AV	289.00	300	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	1520.764	41.14	74.0	32.86	Peak	208.00	200	Horizontal	Pass
1**	1520.764	32.24	54.0	21.76	AV	208.00	200	Horizontal	Pass
2	4022.185	47.80	74.0	26.20	Peak	171.00	400	Horizontal	Pass
2**	4022.185	34.74	54.0	19.26	AV	171.00	400	Horizontal	Pass
3	7602.118	51.06	74.0	22.94	Peak	164.00	200	Horizontal	Pass
3**	7602.118	41.49	54.0	12.51	AV	164.00	200	Horizontal	Pass
4	12459.081	52.91	74.0	21.09	Peak	272.00	100	Horizontal	Pass
4**	12459.081	45.94	54.0	8.06	AV	272.00	100	Horizontal	Pass
5	16098.568	52.68	74.0	21.32	Peak	97.00	200	Horizontal	Pass
5**	16098.568	42.44	54.0	11.56	AV	97.00	200	Horizontal	Pass
6	17421.653	56.41	74.0	17.59	Peak	286.00	100	Horizontal	Pass
6**	17421.653	49.83	54.0	4.17	AV	286.00	100	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	1333.890	46.11	74.0	27.89	Peak	81.00	100	Vertical	Pass
1**	1333.890	31.63	54.0	22.37	AV	81.00	100	Vertical	Pass
2	1438.636	41.36	74.0	32.64	Peak	177.00	300	Vertical	Pass
2**	1438.636	38.97	54.0	15.03	AV	177.00	300	Vertical	Pass
3	4311.525	46.71	74.0	27.29	Peak	199.00	200	Vertical	Pass
3**	4311.525	40.29	54.0	13.71	AV	199.00	200	Vertical	Pass
4	7592.875	52.41	74.0	21.59	Peak	145.00	200	Vertical	Pass
4**	7592.875	42.15	54.0	11.85	AV	145.00	200	Vertical	Pass
5	12535.298	51.21	74.0	22.79	Peak	103.00	400	Vertical	Pass
5**	12535.298	41.74	54.0	12.26	AV	103.00	400	Vertical	Pass
6	15908.348	52.70	74.0	21.30	Peak	2.00	100	Vertical	Pass
6**	15908.348	46.59	54.0	7.41	AV	2.00	100	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	1521.243	38.27	74.0	35.73	Peak	358.00	200	Horizontal	Pass
1**	1521.243	32.43	54.0	21.57	AV	358.00	200	Horizontal	Pass
2	4023.007	46.59	74.0	27.41	Peak	177.00	400	Horizontal	Pass
2**	4023.007	36.35	54.0	17.65	AV	177.00	400	Horizontal	Pass
3	7601.549	53.05	74.0	20.95	Peak	273.00	200	Horizontal	Pass
3**	7601.549	45.43	54.0	8.57	AV	273.00	200	Horizontal	Pass
4	12457.721	52.63	74.0	21.37	Peak	122.00	300	Horizontal	Pass
4**	12457.721	43.09	54.0	10.91	AV	122.00	300	Horizontal	Pass
5	16097.226	55.50	74.0	18.50	Peak	44.00	100	Horizontal	Pass
5**	16097.226	41.84	54.0	12.16	AV	44.00	100	Horizontal	Pass
6	17420.464	55.50	74.0	18.50	Peak	226.00	400	Horizontal	Pass
6**	17420.464	44.72	54.0	9.28	AV	226.00	400	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	1335.667	44.07	74.0	29.93	Peak	123.00	200	Vertical	Pass
1**	1335.667	35.10	54.0	18.90	AV	123.00	200	Vertical	Pass
2	1436.688	40.65	74.0	33.35	Peak	340.00	300	Vertical	Pass
2**	1436.688	34.37	54.0	19.63	AV	340.00	300	Vertical	Pass
3	4312.690	46.45	74.0	27.55	Peak	67.00	200	Vertical	Pass
3**	4312.690	38.23	54.0	15.77	AV	67.00	200	Vertical	Pass
4	7591.641	51.28	74.0	22.72	Peak	37.00	100	Vertical	Pass
4**	7591.641	45.57	54.0	8.43	AV	37.00	100	Vertical	Pass
5	12538.298	52.13	74.0	21.87	Peak	67.00	300	Vertical	Pass
5**	12538.298	45.94	54.0	8.06	AV	67.00	300	Vertical	Pass
6	15907.293	52.32	74.0	21.68	Peak	185.00	300	Vertical	Pass
6**	15907.293	46.71	54.0	7.29	AV	185.00	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	1520.639	40.78	74.0	33.22	Peak	215.00	300	Horizontal	Pass
1**	1520.639	27.15	54.0	26.85	AV	215.00	300	Horizontal	Pass
2	4017.801	48.00	74.0	26.00	Peak	160.00	200	Horizontal	Pass
2**	4017.801	36.00	54.0	18.00	AV	160.00	200	Horizontal	Pass
3	7596.896	55.28	74.0	18.72	Peak	278.00	200	Horizontal	Pass
3**	7596.896	43.06	54.0	10.94	AV	278.00	200	Horizontal	Pass
4	12451.821	54.80	74.0	19.20	Peak	243.00	400	Horizontal	Pass
4**	12451.821	44.00	54.0	10.00	AV	243.00	400	Horizontal	Pass
5	16092.595	51.27	74.0	22.73	Peak	229.00	100	Horizontal	Pass
5**	16092.595	42.78	54.0	11.22	AV	229.00	100	Horizontal	Pass
6	17418.095	56.81	74.0	17.19	Peak	325.00	400	Horizontal	Pass
6**	17418.095	49.32	54.0	4.68	AV	325.00	400	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	1333.190	45.53	74.0	28.47	Peak	216.00	100	Vertical	Pass
1**	1333.190	31.02	54.0	22.98	AV	216.00	100	Vertical	Pass
2	1437.163	44.60	74.0	29.40	Peak	227.00	100	Vertical	Pass
2**	1437.163	35.44	54.0	18.56	AV	227.00	100	Vertical	Pass
3	4309.419	45.83	74.0	28.17	Peak	108.00	200	Vertical	Pass
3**	4309.419	35.64	54.0	18.36	AV	108.00	200	Vertical	Pass
4	7590.629	54.52	74.0	19.48	Peak	57.00	400	Vertical	Pass
4**	7590.629	44.81	54.0	9.19	AV	57.00	400	Vertical	Pass
5	12532.434	54.84	74.0	19.16	Peak	57.00	300	Vertical	Pass
5**	12532.434	41.77	54.0	12.23	AV	57.00	300	Vertical	Pass
6	15902.747	52.95	74.0	21.05	Peak	9.00	300	Vertical	Pass
6**	15902.747	44.18	54.0	9.82	AV	9.00	300	Vertical	Pass

11ac20, 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	1520.864	36.40	74.0	37.60	Peak	198.00	300	Horizontal	Pass
1**	1520.864	28.94	54.0	25.06	AV	198.00	300	Horizontal	Pass
2	4019.306	44.59	74.0	29.41	Peak	18.00	100	Horizontal	Pass
2**	4019.306	34.53	54.0	19.47	AV	18.00	100	Horizontal	Pass
3	7596.124	54.57	74.0	19.43	Peak	252.00	200	Horizontal	Pass
3**	7596.124	45.81	54.0	8.19	AV	252.00	200	Horizontal	Pass
4	12454.704	52.71	74.0	21.29	Peak	87.00	200	Horizontal	Pass
4**	12454.704	43.91	54.0	10.09	AV	87.00	200	Horizontal	Pass
5	16091.823	52.92	74.0	21.08	Peak	93.00	100	Horizontal	Pass
5**	16091.823	42.38	54.0	11.62	AV	93.00	100	Horizontal	Pass
6	17416.257	54.49	74.0	19.51	Peak	42.00	300	Horizontal	Pass
6**	17416.257	46.14	54.0	7.86	AV	42.00	300	Horizontal	Pass

11ac20, 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	1332.621	46.41	74.0	27.59	Peak	289.00	400	Vertical	Pass
1**	1332.621	34.35	54.0	19.65	AV	289.00	400	Vertical	Pass
2	1441.076	39.63	74.0	34.37	Peak	345.00	400	Vertical	Pass
2**	1441.076	39.06	54.0	14.94	AV	345.00	400	Vertical	Pass
3	4313.388	47.21	74.0	26.79	Peak	7.00	200	Vertical	Pass
3**	4313.388	39.72	54.0	14.28	AV	7.00	200	Vertical	Pass
4	7597.871	54.67	74.0	19.33	Peak	212.00	300	Vertical	Pass
4**	7597.871	45.72	54.0	8.28	AV	212.00	300	Vertical	Pass
5	12531.197	55.64	74.0	18.36	Peak	330.00	400	Vertical	Pass
5**	12531.197	46.69	54.0	7.31	AV	330.00	400	Vertical	Pass
6	15906.250	54.30	74.0	19.70	Peak	344.00	300	Vertical	Pass
6**	15906.250	46.95	54.0	7.05	AV	344.00	300	Vertical	Pass

11ac20, 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	1520.907	38.41	74.0	35.59	Peak	190.00	100	Horizontal	Pass
1**	1520.907	27.06	54.0	26.94	AV	190.00	100	Horizontal	Pass
2	4023.080	45.39	74.0	28.61	Peak	221.00	100	Horizontal	Pass
2**	4023.080	35.13	54.0	18.87	AV	221.00	100	Horizontal	Pass
3	7596.406	56.31	74.0	17.69	Peak	182.00	200	Horizontal	Pass
3**	7596.406	40.55	54.0	13.45	AV	182.00	200	Horizontal	Pass
4	12454.442	53.36	74.0	20.64	Peak	9.00	200	Horizontal	Pass
4**	12454.442	43.23	54.0	10.77	AV	9.00	200	Horizontal	Pass
5	16094.369	53.85	74.0	20.15	Peak	33.00	300	Horizontal	Pass
5**	16094.369	47.27	54.0	6.73	AV	33.00	300	Horizontal	Pass
6	17416.985	56.84	74.0	17.16	Peak	56.00	100	Horizontal	Pass
6**	17416.985	44.69	54.0	9.31	AV	56.00	100	Horizontal	Pass

11ac20, 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	1336.655	44.34	74.0	29.66	Peak	164.00	100	Vertical	Pass
1**	1336.655	32.50	54.0	21.50	AV	164.00	100	Vertical	Pass
2	1442.919	41.79	74.0	32.21	Peak	117.00	300	Vertical	Pass
2**	1442.919	36.95	54.0	17.05	AV	117.00	300	Vertical	Pass
3	4315.193	44.55	74.0	29.45	Peak	81.00	200	Vertical	Pass
3**	4315.193	37.15	54.0	16.85	AV	81.00	200	Vertical	Pass
4	7594.371	54.78	74.0	19.22	Peak	3.00	400	Vertical	Pass
4**	7594.371	44.53	54.0	9.47	AV	3.00	400	Vertical	Pass
5	12537.750	54.49	74.0	19.51	Peak	230.00	400	Vertical	Pass
5**	12537.750	43.47	54.0	10.53	AV	230.00	400	Vertical	Pass
6	15910.381	56.34	74.0	17.66	Peak	127.00	200	Vertical	Pass
6**	15910.381	43.21	54.0	10.79	AV	127.00	200	Vertical	Pass

11ac20, 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	1524.894	39.23	74.0	34.77	Peak	145.00	400	Horizontal	Pass
1**	1524.894	29.70	54.0	24.30	AV	145.00	400	Horizontal	Pass
2	4023.430	48.55	74.0	25.45	Peak	52.00	400	Horizontal	Pass
2**	4023.430	35.54	54.0	18.46	AV	52.00	400	Horizontal	Pass
3	7601.116	55.37	74.0	18.63	Peak	106.00	200	Horizontal	Pass
3**	7601.116	42.00	54.0	12.00	AV	106.00	200	Horizontal	Pass
4	12454.358	52.96	74.0	21.04	Peak	146.00	400	Horizontal	Pass
4**	12454.358	44.92	54.0	9.08	AV	146.00	400	Horizontal	Pass
5	16093.314	51.82	74.0	22.18	Peak	172.00	200	Horizontal	Pass
5**	16093.314	43.40	54.0	10.60	AV	172.00	200	Horizontal	Pass
6	17415.704	53.14	74.0	20.86	Peak	105.00	300	Horizontal	Pass
6**	17415.704	45.93	54.0	8.07	AV	105.00	300	Horizontal	Pass

11ac20, 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	1335.390	43.85	74.0	30.15	Peak	328.00	300	Vertical	Pass
1**	1335.390	32.82	54.0	21.18	AV	328.00	300	Vertical	Pass
2	1439.223	42.94	74.0	31.06	Peak	9.00	100	Vertical	Pass
2**	1439.223	38.71	54.0	15.29	AV	9.00	100	Vertical	Pass
3	4313.379	47.98	74.0	26.02	Peak	80.00	200	Vertical	Pass
3**	4313.379	38.41	54.0	15.59	AV	80.00	200	Vertical	Pass
4	7596.639	52.49	74.0	21.51	Peak	240.00	300	Vertical	Pass
4**	7596.639	43.79	54.0	10.21	AV	240.00	300	Vertical	Pass
5	12535.546	55.74	74.0	18.26	Peak	97.00	400	Vertical	Pass
5**	12535.546	45.49	54.0	8.51	AV	97.00	400	Vertical	Pass
6	15908.316	52.32	74.0	21.68	Peak	242.00	100	Vertical	Pass
6**	15908.316	46.60	54.0	7.40	AV	242.00	100	Vertical	Pass

11ac40, 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	1524.615	35.20	74.0	38.80	Peak	355.00	400	Horizontal	Pass
1**	1524.615	30.28	54.0	23.72	AV	355.00	400	Horizontal	Pass
2	4016.461	48.48	74.0	25.52	Peak	221.00	200	Horizontal	Pass
2**	4016.461	37.91	54.0	16.09	AV	221.00	200	Horizontal	Pass
3	7595.202	53.36	74.0	20.64	Peak	13.00	200	Horizontal	Pass
3**	7595.202	45.89	54.0	8.11	AV	13.00	200	Horizontal	Pass
4	12451.976	54.29	74.0	19.71	Peak	356.00	100	Horizontal	Pass
4**	12451.976	46.24	54.0	7.76	AV	356.00	100	Horizontal	Pass
5	16096.408	53.07	74.0	20.93	Peak	65.00	400	Horizontal	Pass
5**	16096.408	45.66	54.0	8.34	AV	65.00	400	Horizontal	Pass
6	17420.736	56.02	74.0	17.98	Peak	17.00	100	Horizontal	Pass
6**	17420.736	46.36	54.0	7.64	AV	17.00	100	Horizontal	Pass

11ac40, 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	1330.866	42.17	74.0	31.83	Peak	235.00	100	Vertical	Pass
1**	1330.866	31.16	54.0	22.84	AV	235.00	100	Vertical	Pass
2	1441.365	44.72	74.0	29.28	Peak	52.00	400	Vertical	Pass
2**	1441.365	36.08	54.0	17.92	AV	52.00	400	Vertical	Pass
3	4311.586	44.67	74.0	29.33	Peak	52.00	200	Vertical	Pass
3**	4311.586	38.03	54.0	15.97	AV	52.00	200	Vertical	Pass
4	7594.467	52.49	74.0	21.51	Peak	102.00	300	Vertical	Pass
4**	7594.467	45.05	54.0	8.95	AV	102.00	300	Vertical	Pass
5	12537.145	51.97	74.0	22.03	Peak	353.00	200	Vertical	Pass
5**	12537.145	44.34	54.0	9.66	AV	353.00	200	Vertical	Pass
6	15902.967	55.35	74.0	18.65	Peak	295.00	300	Vertical	Pass
6**	15902.967	43.45	54.0	10.55	AV	295.00	300	Vertical	Pass

11ac40, 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	1523.716	38.54	74.0	35.46	Peak	18.00	400	Horizontal	Pass
1**	1523.716	29.73	54.0	24.27	AV	18.00	400	Horizontal	Pass
2	4019.179	49.50	74.0	24.50	Peak	86.00	200	Horizontal	Pass
2**	4019.179	35.19	54.0	18.81	AV	86.00	200	Horizontal	Pass
3	7602.036	50.47	74.0	23.53	Peak	136.00	200	Horizontal	Pass
3**	7602.036	43.99	54.0	10.01	AV	136.00	200	Horizontal	Pass
4	12456.807	56.36	74.0	17.64	Peak	266.00	400	Horizontal	Pass
4**	12456.807	44.21	54.0	9.79	AV	266.00	400	Horizontal	Pass
5	16091.541	52.50	74.0	21.50	Peak	255.00	200	Horizontal	Pass
5**	16091.541	46.14	54.0	7.86	AV	255.00	200	Horizontal	Pass
6	17420.780	59.08	74.0	14.92	Peak	324.00	100	Horizontal	Pass
6**	17420.780	46.87	54.0	7.13	AV	324.00	100	Horizontal	Pass

11ac40, 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	1332.601	44.65	74.0	29.35	Peak	118.00	200	Vertical	Pass
1**	1332.601	33.40	54.0	20.60	AV	118.00	200	Vertical	Pass
2	1439.780	42.41	74.0	31.59	Peak	311.00	300	Vertical	Pass
2**	1439.780	35.37	54.0	18.63	AV	311.00	300	Vertical	Pass
3	4309.117	47.80	74.0	26.20	Peak	8.00	200	Vertical	Pass
3**	4309.117	36.59	54.0	17.41	AV	8.00	200	Vertical	Pass
4	7593.304	54.30	74.0	19.70	Peak	205.00	100	Vertical	Pass
4**	7593.304	43.77	54.0	10.23	AV	205.00	100	Vertical	Pass
5	12538.713	56.02	74.0	17.98	Peak	276.00	200	Vertical	Pass
5**	12538.713	42.50	54.0	11.50	AV	276.00	200	Vertical	Pass
6	15906.312	51.54	74.0	22.46	Peak	251.00	100	Vertical	Pass
6**	15906.312	47.97	54.0	6.03	AV	251.00	100	Vertical	Pass

11ac80, 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	1522.730	35.28	74.0	38.72	Peak	353.00	100	Horizontal	Pass
1**	1522.730	29.56	54.0	24.44	AV	353.00	100	Horizontal	Pass
2	4016.131	44.25	74.0	29.75	Peak	190.00	400	Horizontal	Pass
2**	4016.131	36.63	54.0	17.37	AV	190.00	400	Horizontal	Pass
3	7598.749	51.32	74.0	22.68	Peak	351.00	200	Horizontal	Pass
3**	7598.749	44.16	54.0	9.84	AV	351.00	200	Horizontal	Pass
4	12457.171	56.04	74.0	17.96	Peak	309.00	200	Horizontal	Pass
4**	12457.171	44.39	54.0	9.61	AV	309.00	200	Horizontal	Pass
5	16096.034	52.38	74.0	21.62	Peak	262.00	300	Horizontal	Pass
5**	16096.034	45.91	54.0	8.09	AV	262.00	300	Horizontal	Pass
6	17416.111	55.79	74.0	18.21	Peak	339.00	400	Horizontal	Pass
6**	17416.111	44.78	54.0	9.22	AV	339.00	400	Horizontal	Pass

11ac80, 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	1334.499	45.80	74.0	28.20	Peak	171.00	100	Vertical	Pass
1**	1334.499	36.62	54.0	17.38	AV	171.00	100	Vertical	Pass
2	1442.649	40.94	74.0	33.06	Peak	72.00	200	Vertical	Pass
2**	1442.649	38.89	54.0	15.11	AV	72.00	200	Vertical	Pass
3	4310.518	46.69	74.0	27.31	Peak	199.00	200	Vertical	Pass
3**	4310.518	40.61	54.0	13.39	AV	199.00	200	Vertical	Pass
4	7596.391	55.40	74.0	18.60	Peak	278.00	300	Vertical	Pass
4**	7596.391	44.58	54.0	9.42	AV	278.00	300	Vertical	Pass
5	12536.325	52.23	74.0	21.77	Peak	301.00	400	Vertical	Pass
5**	12536.325	42.60	54.0	11.40	AV	301.00	400	Vertical	Pass
6	15908.637	53.43	74.0	20.57	Peak	287.00	200	Vertical	Pass
6**	15908.637	46.32	54.0	7.68	AV	287.00	200	Vertical	Pass

A.6.2 Band Edge (Restricted-band)

Test Band	Mode	Channel	Verdict
U-NII-1	802.11a	Low	Pass
		High	Pass
	802.11n(HT20)	Low	Pass
		High	Pass
	802.11n(HT40)	Low	Pass
		High	Pass
	802.11ac(VHT20)	Low	Pass
		High	Pass
	802.11ac(VHT40)	Low	Pass
		High	Pass
	802.11ac(VHT80)	Middle	Pass
U-NII-3	802.11a	Low	Pass
		High	Pass
	802.11n(HT20)	Low	Pass
		High	Pass
	802.11n(HT40)	Low	Pass
		High	Pass
	802.11ac(VHT20)	Low	Pass
		High	Pass
	802.11ac(VHT40)	Low	Pass
		High	Pass
	802.11ac(VHT80)	Middle	Pass

Note: All antenna were tested, but only the worst case has been reported in this report.

Test Data

SISO-Main Antenna

U-NII-1 11a Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5077.186	57.67	74.0	16.33	Peak	39.00	200	Horizontal	Pass
1**	5077.186	43	54.0	11.00	AV	39.00	200	Horizontal	Pass
2	5150.000	56.18	74.0	17.82	Peak	227.00	100	Horizontal	Pass
2**	5150.000	44.62	54.0	9.38	AV	227.00	100	Horizontal	Pass

U-NII-1 11a High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5350.000	54.99	74.0	19.01	Peak	341.00	200	Horizontal	Pass
1**	5350.000	43.12	54.0	10.88	AV	341.00	200	Horizontal	Pass
2	5424.526	57.74	74.0	16.26	Peak	192.00	100	Horizontal	Pass
2**	5424.526	45.58	54.0	8.42	AV	192.00	100	Horizontal	Pass

U-NII-1 11n20 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5075.670	57.89	74.0	16.11	Peak	165.00	300	Horizontal	Pass
1**	5075.670	44.62	54.0	9.38	AV	165.00	300	Horizontal	Pass
2	5150.000	55.22	74.0	18.78	Peak	37.00	300	Horizontal	Pass
2**	5150.000	43.91	54.0	10.09	AV	37.00	300	Horizontal	Pass

U-NII-1 11n20 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5350.000	52.87	74.0	21.13	Peak	218.00	200	Horizontal	Pass
1**	5350.000	43.32	54.0	10.68	AV	218.00	200	Horizontal	Pass
2	5421.780	55.72	74.0	18.28	Peak	351.00	300	Horizontal	Pass
2**	5421.780	46.55	54.0	7.45	AV	351.00	300	Horizontal	Pass

U-NII-1 11n40 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5077.123	54.77	74.0	19.23	Peak	34.00	200	Horizontal	Pass
1**	5077.123	44.04	54.0	9.96	AV	34.00	200	Horizontal	Pass
2	5150.000	53.06	74.0	20.94	Peak	337.00	300	Horizontal	Pass
2**	5150.000	43.72	54.0	10.28	AV	337.00	300	Horizontal	Pass

U-NII-1 11n40 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5350.000	54.19	74.0	19.81	Peak	335.00	200	Horizontal	Pass
1**	5350.000	43.72	54.0	10.28	AV	335.00	200	Horizontal	Pass
2	5423.267	55.85	74.0	18.15	Peak	320.00	200	Horizontal	Pass
2**	5423.267	45.26	54.0	8.74	AV	320.00	200	Horizontal	Pass

U-NII-1 11ac20 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5077.284	57.9	74.0	16.10	Peak	319.00	200	Horizontal	Pass
1**	5077.284	45.62	54.0	8.38	AV	319.00	200	Horizontal	Pass
2	5150.000	56.25	74.0	17.75	Peak	79.00	200	Horizontal	Pass
2**	5150.000	44.88	54.0	9.12	AV	79.00	200	Horizontal	Pass

U-NII-1 11ac20 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5350.000	54.64	74.0	19.36	Peak	177.00	300	Horizontal	Pass
1**	5350.000	45.03	54.0	8.97	AV	177.00	300	Horizontal	Pass
2	5423.573	55	74.0	19.00	Peak	76.00	300	Horizontal	Pass
2**	5423.573	44.69	54.0	9.31	AV	76.00	300	Horizontal	Pass

U-NII-1 11ac40 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5076.395	54.7	74.0	19.30	Peak	217.00	300	Horizontal	Pass
1**	5076.395	45.74	54.0	8.26	AV	217.00	300	Horizontal	Pass
2	5150.000	52.79	74.0	21.21	Peak	91.00	300	Horizontal	Pass
2**	5150.000	43.1	54.0	10.90	AV	91.00	300	Horizontal	Pass

U-NII-1 11ac40 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5350.000	53.46	74.0	20.54	Peak	107.00	200	Horizontal	Pass
1**	5350.000	44.67	54.0	9.33	AV	107.00	200	Horizontal	Pass
2	5422.562	57.95	74.0	16.05	Peak	25.00	200	Horizontal	Pass
2**	5422.562	44.84	54.0	9.16	AV	25.00	200	Horizontal	Pass

U-NII-1 11ac80 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5077.883	54.79	74.0	19.21	Peak	85.00	200	Horizontal	Pass
1**	5077.883	45.32	54.0	8.68	AV	85.00	200	Horizontal	Pass
2	5150.000	55.82	74.0	18.18	Peak	292.00	200	Horizontal	Pass
2**	5150.000	44.11	54.0	9.89	AV	292.00	200	Horizontal	Pass

U-NII-1 11ac80 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5350.000	54.06	74.0	19.94	Peak	351.00	300	Horizontal	Pass
1**	5350.000	46.27	54.0	7.73	AV	351.00	300	Horizontal	Pass
2	5424.301	57.49	74.0	16.51	Peak	34.00	300	Horizontal	Pass
2**	5424.301	44.82	54.0	9.18	AV	34.00	300	Horizontal	Pass

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	5641.921	55.57	68.2	12.63	Peak	164.00	200	Horizontal	Pass
2	5650.000	55.15	68.2	13.05	Peak	164.00	200	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	54.67	68.2	13.53	Peak	52.00	200	Horizontal	Pass
2	5942.493	56.64	68.2	11.56	Peak	349.00	300	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	5641.190	55.27	68.2	12.93	Peak	87.00	100	Horizontal	Pass
2	5650.000	52.32	68.2	15.88	Peak	87.00	100	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	54.56	68.2	13.64	Peak	233.00	100	Horizontal	Pass
2	5942.604	55.5	68.2	12.70	Peak	326.00	100	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	5638.727	52.87	68.2	15.33	Peak	316.00	200	Horizontal	Pass
2	5650.000	51.1	68.2	17.10	Peak	316.00	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	53.22	68.2	14.98	Peak	201.00	300	Horizontal	Pass
2	5943.019	54.17	68.2	14.03	Peak	177.00	200	Horizontal	Pass

U-NII-3 11ac20 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5638.720	51.07	68.2	17.13	Peak	85.00	100	Horizontal	Pass
2	5650.000	49.18	68.2	19.02	Peak	85.00	100	Horizontal	Pass

U-NII-3 11ac20 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5925.000	50.28	68.2	17.92	Peak	137.00	100	Horizontal	Pass
2	5943.765	54.9	68.2	13.30	Peak	304.00	100	Horizontal	Pass

U-NII-3 11ac40 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5636.161	48.91	68.2	19.29	Peak	314.00	100	Horizontal	Pass
2	5650.000	48.91	68.2	19.29	Peak	314.00	100	Horizontal	Pass

U-NII-3 11ac40 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5925.000	49.16	68.2	19.04	Peak	269.00	100	Horizontal	Pass
2	5944.644	54.16	68.2	14.04	Peak	236.00	100	Horizontal	Pass

U-NII-3 11ac80 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5635.034	49.13	68.2	19.07	Peak	308.00	200	Horizontal	Pass
2	5650.000	46.68	68.2	21.52	Peak	308.00	200	Horizontal	Pass

U-NII-3 11ac80 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5925.000	47.46	68.2	20.74	Peak	228.00	200	Horizontal	Pass
2	5944.995	52.86	68.2	15.34	Peak	187.00	300	Horizontal	Pass

ANNEX B TEST SETUP PHOTOS

Please refer the document “BL-SZ2540188-AR.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ2540188-AW.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL-SZ2540188-AI.PDF”.

Statement

1. The laboratory guarantees the scientificity, accuracy and impartiality of the test, and is responsible for all the information in the report, except the information provided by the customer. The customer is responsible for the impact of the information provided on the validity of the results.
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