

TEST REPORT

Applicant: Glimpse LLC
Address: 101a Clay Street #144, San Francisco, CA 94111, USA
Equipment Type: 27 inch Digital Calendar Max
Model Name: 270-CAL
Brand Name: SKYLIGHT
FCC ID: 2BF8S-270-2
ISED Number: 26595-2702
HVIN: 270-CAL-2
Test Standard: 47 CFR Part 15 Subpart E
RSS-Gen Issue 5
RSS-247 Issue 3
(refer to section 3.1)
Sample Arrival Date: Apr. 17, 2024
Test Date: Apr. 26, 2024 - May 22, 2024
Date of Issue: May 31, 2024

ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.

Tested by: Li Ganming**Checked by:** Ye Hongji**Approved by:** Liao Jianming
(Technical Director)

Revision History

Version	Issue Date	Revisions
<u>Rev. 01</u>	<u>May 31, 2024</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. The laboratory has been listed by Industry Canada to perform electromagnetic emission measurements. The recognition numbers of test site are 11524A.

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	Glimpse LLC
Address	101a Clay Street #144, San Francisco, CA 94111, USA

2.2 Manufacturer Information

Manufacturer	Glimpse LLC
Address	101a Clay Street #144, San Francisco, CA 94111, USA

2.3 General Description for Equipment under Test (EUT)

EUT Name	27 inch Digital Calendar Max
Model Name Under Test	270-CAL
Series Model Name	N/A
Description of Model name differentiation	N/A
Serial Number	HNC444DGT00001D
Hardware Version	V2
Software Version	AY7081A-rk3566_27_max-build-20240331001002
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.4 Technical Information

Network and Wireless connectivity	Bluetooth (BR+EDR+BLE) WIFI 802.11a, 802.11b, 802.11g, 802.11n, 802.11ac and 802.11ax U-NII-1/2A/2C/3
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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-2A: 5250 MHz to 5350 MHz, U-NII-2C: 5470 MHz to 5725 MHz, U-NII-3: 5725 MHz to 5850 MHz
Product Type	☐ Mobile ☒ Portable ☐ Fix Location Indoor for IC standard
Modulation technology	OFDM, OFDMA
Modulation Type	1024QAM, 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 802.11ax up to 600 Mbps
Channel Bandwidth	802.11a: 20 MHz 802.11n: 20 MHz, 40 MHz 802.11ac: 20 MHz, 40 MHz, 80 MHz 802.11ax: 20 MHz, 40 MHz, 80 MHz
Maximum Output Power	U-NII-1: 30.55 mW U-NII-2A: 30.90 mW U-NII-2C: 55.98 mW U-NII-3: 32.14 mW
Antenna System (eg., MIMO, Smart Antenna)	N/A
Categorization as Correlated or Completely Uncorrelated	N/A
Antenna Type	FPC Antenna
Antenna Gain	U-NII-1: 5150 MHz to 5250 MHz: 5.98 dBi U-NII-2A: 5250 MHz to 5350 MHz: 6.18 dBi U-NII-2C: 5470 MHz to 5725 MHz: 5.96 dBi U-NII-3: 5725 MHz to 5850 MHz: 6.33 dBi
About the Product	The equipment is 27 inch Digital Calendar Max, intended for used with information technology equipment.

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	58	5290
44	5220	54	5270	106	5530
48	5240	62	5310	122	5610
52	5260	102	5510	138	5690
56	5280	110	5550	155	5775
60	5300	118	5590		
64	5320	126	5630		
100	5500	134	5670		
104	5520	142	5710		
108	5540	151	5755		
112	5560	159	5795		
116	5580				
120	5600				
124	5620				
128	5640				
132	5660				
136	5680				
140	5700				
144	5720				
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)/ax(HE20)

U-NII-1 (5150 - 5250 MHz)			U-NII-2A (5250 - 5350 MHz)		
Channel Number	Channel	Frequency (MHz)	Channel Number	Channel	Frequency (MHz)
36	Low	5180	52	Low	5260
40	Mid	5200	60	Mid	5300
48	High	5240	64	High	5320

U-NII-2C (5470 - 5725 MHz)			U-NII-3 (5725 - 5850 MHz)		
Channel Number	Channel	Frequency (MHz)	Channel Number	Channel	Frequency (MHz)
100	Low	5500	149	Low	5745
116	Mid	5580	157	Mid	5785
140	High	5700	165	High	5825
144	--	5720			

For 802.11n(HT40)/ac(VHT40)/ax(HE40)

U-NII-1 (5150 - 5250 MHz)			U-NII-2A (5250 - 5350 MHz)		
Channel Number	Channel	Frequency (MHz)	Channel Number	Channel	Frequency (MHz)
38	Low	5190	54	Low	5270
46	High	5230	62	High	5310

U-NII-2C (5470 - 5725 MHz)			U-NII-3 (5725 - 5850 MHz)		
Channel Number	Channel	Frequency (MHz)	Channel Number	Channel	Frequency (MHz)
102	Low	5510	151	Low	5755
110	Mid	5550	159	High	5795
134	High	5670			
142	--	5710			

For 802.11ac(VHT80)/ax(HE80)

U-NII-1 (5150 - 5250 MHz)			U-NII-2A (5250 - 5350 MHz)		
Channel Number	Channel	Frequency (MHz)	Channel Number	Channel	Frequency (MHz)
42	Mid	5210	58	Mid	5290

U-NII-2C (5470 - 5725 MHz)			U-NII-3 (5725 - 5850 MHz)		
Channel Number	Channel	Frequency (MHz)	Channel Number	Channel	Frequency (MHz)
106	Low	5530	155	Mid	5775
122	High	5610			
138	--	5690			

3 SUMMARY OF TEST RESULTS

3.1 Test Standards

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

3.2 Test Verdict

No.	Description	FCC Part No.	RSS Part No.	Test Result	Verdict
1	Antenna Requirement	15.203	RSS-247, 6.2	--	Pass ^{Note1}
2	RF Output Power	15.407(a)	RSS-247, 6.2	ANNEX A.1	Pass ^{Note4}
3	Emission Bandwidth & 99% Occupied Bandwidth	15.407(a)	RSS-247, 6.2	ANNEX A.2	-- ^{Note4}
4	6 dB bandwidth	15.407(e)	RSS-247, 6.2	ANNEX A.3	-- ^{Note4}
5	Power Spectral Density	15.407(a)	RSS-247, 6.2	ANNEX A.4	-- ^{Note4}
6	Conducted Emission	15.207	RSS-GEN, 8.8	ANNEX A.5	Pass ^{Note4}
7	Radiated Spurious Emissions and Band Edge (Restricted-band)	15.407(b)	RSS-247, 6.2	ANNEX A.6	Pass ^{Note4}
8	Receiver Spurious Emission	--	RSS-Gen, 7.1.2	--	N/A ^{Note2}

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

Note ²: Only radio communication receivers operating in stand-alone mode within the U-NII-30-960 MHz, as well as scanner receivers, are subject to Industry Canada requirements, so this test is not applicable.

Note ³: Under all normal operating conditions specified in the user manual, frequency stability can keep radiation within the operating frequency band.

Note ⁴: The RF module (Model Name: SW6621-44B1) installed in the EUT is electronically and mechanically identical to the original certified module in the test report No. 18220WC40009704 (FCC ID: VYV-SW6621-44B1) & No. 18220WC40012804 (ISED Number: 27588-SW662144B1), so just RF Output Power & Conducted Emission & Radiated Spurious Emissions and Band Edge (Restricted-band) were retested in this report. Other test items please refer to the report No. 18220WC40009704 (FCC ID: VYV-SW6621-44B1) & No. 18220WC40012804 (ISED Number: 27588-SW662144B1).

Report No. 18220WC40009704 (FCC ID: VYV-SW6621-44B1) issued by Shenzhen Anbotek Compliance Laboratory Limited on Apr. 08, 2024.

Report No. 18220WC40012804 (ISED Number: 27588-SW662144B1) issued by Shenzhen Anbotek Compliance Laboratory Limited on Apr. 15, 2024.

4 GENERAL TEST CONFIGURATIONS

4.1 Test Environments

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

Relative Humidity	49% to 68%	
Atmospheric Pressure	100 kPa to 102 kPa	
Temperature	NT (Normal Temperature)	+22.9℃ to +25.8℃
	LT (Low Temperature)	0.0℃
	HT (High Temperature)	+45.0℃
Working Voltage of the EUT	NV (Normal Voltage)	12.0 V
	LV (Low Voltage)	10.8 V
	HV (High Voltage)	13.2 V

Note: The extreme test conditions please refer to the Report No. 18220WC40009704 (FCC ID: VYV-SW6621-44B1) issued by Shenzhen Anbotek Compliance Laboratory Limited on Apr. 08, 2024.

Report No. 18220WC40012804 (ISED Number: 27588-SW662144B1) issued by Shenzhen Anbotek Compliance Laboratory Limited on Apr. 15, 2024.

4.2 Test Equipment List

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Power Sensor	KEYSIGHT	U2063XA	MY58000251	2023.07.12	2024.07.11
Spectrum Analyzer	ROHDE&SCHWARZ	FSV-40	101544	2023.12.27	2024.12.26
Spectrum Analyzer	KEYSIGHT	N9020A	MY50531259	2023.09.05	2024.09.04
Signaling Unit	ROHDE&SCHWARZ	CMW500	171150	2023.06.19	2024.06.18
Test Antenna-Horn	SCHWARZBECK	BBHA 9120D	02460	2021.05.20	2024.05.19
				2024.05.16	2027.05.15
Test Antenna-Horn	A-INFO	LB-180400KF	J211060273	2021.07.02	2024.07.01
Anechoic Chamber	RAINFORD	9m*6m*6m	140	2022.02.19	2024.08.15
Amplifier	COM-MV	LSCX_LNA1-12G-01	7210214	2023.09.05	2024.09.04
Amplifier	COM-MV	XKu_LNA7-18G-01	7210209	2023.09.05	2024.09.04
Amplifier	COM-MV	KA LNA18 40G-01	18050001	2023.12.06	2024.12.05
EMI Receiver	Agilent	N9038A	MY55330120	2023.09.05	2024.09.04
Test Antenna-Bi-Log	SCHWARZBECK	VULB 9168	9168-00867	2022.04.12	2025.04.11
Test Antenna-Loop	SCHWARZBECK	FMZB 1519	1519-037	2024.01.23	2027.01.22
Amplifier	COM-MV	ZT30-1000M	B2017119081	2023.12.05	2024.12.04
Anechoic Chamber	YiHeng	9m*6m*6m	142	2021.08.19	2024.08.18
EMI Receiver	KEYSIGHT	N9010B	MY57110309	2023.09.05	2024.09.04
LISN	SCHWARZBECK	NSLK 8127	8127-687	2023.05.16	2024.05.15
				2024.05.09	2025.05.08

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Shielded Enclosure	YiHeng Electronic Co., Ltd	3.5m*3.1m*2.8 m	112	2022.02.19	2025.02.18

4.3 Test Software List

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

4.4 Measurement Uncertainty

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

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

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

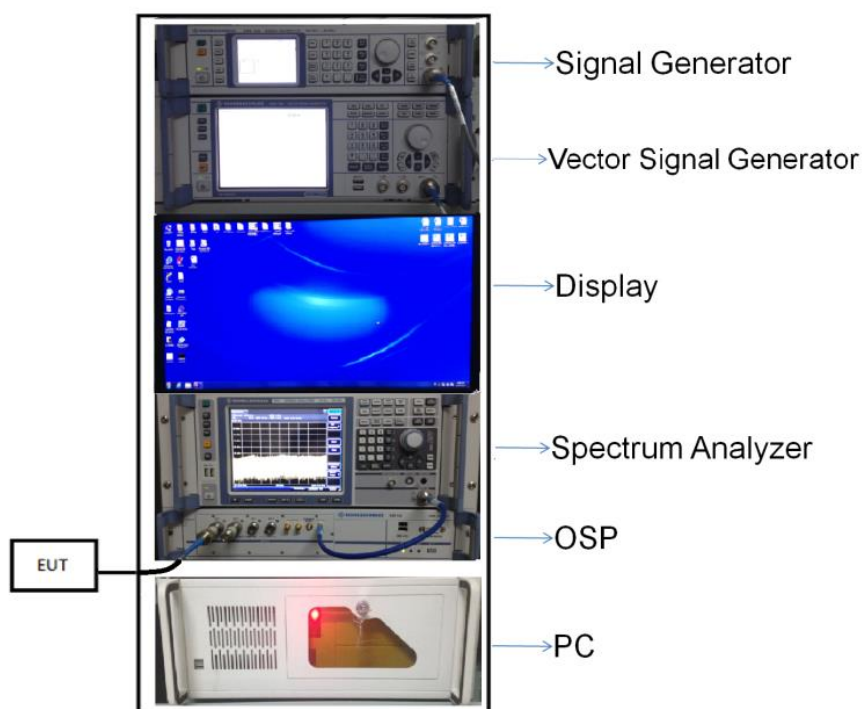
4.5 Description of Test Setup

4.5.1 For Antenna Port Test

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

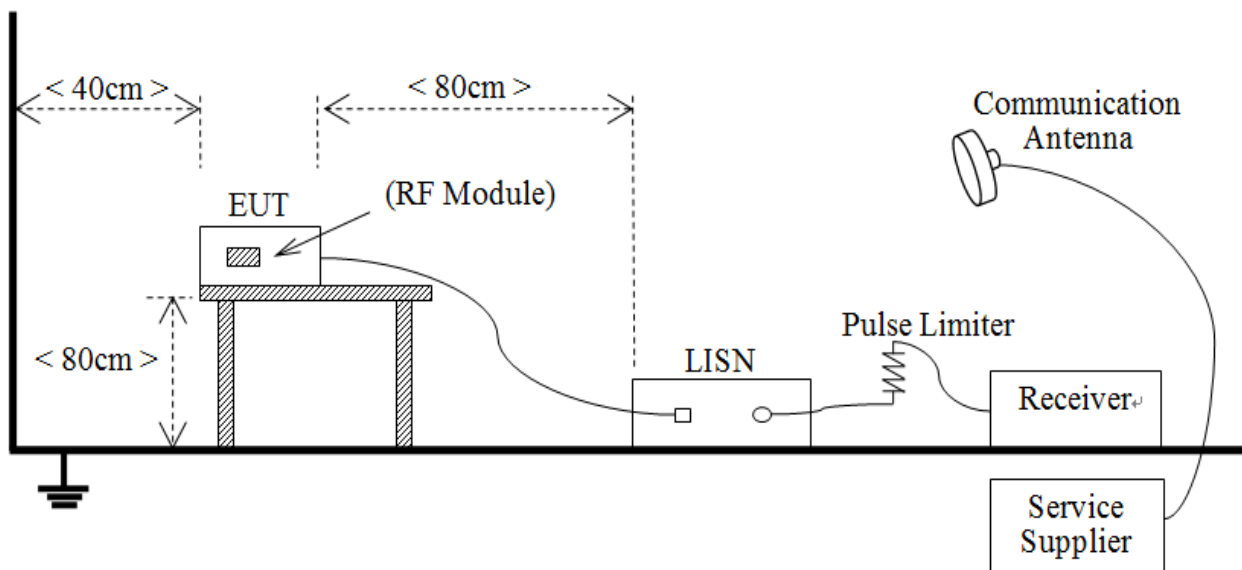
For example: the measurement value is 10 dBm and the cable 0.5dBm used, then the final result of EUT:

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



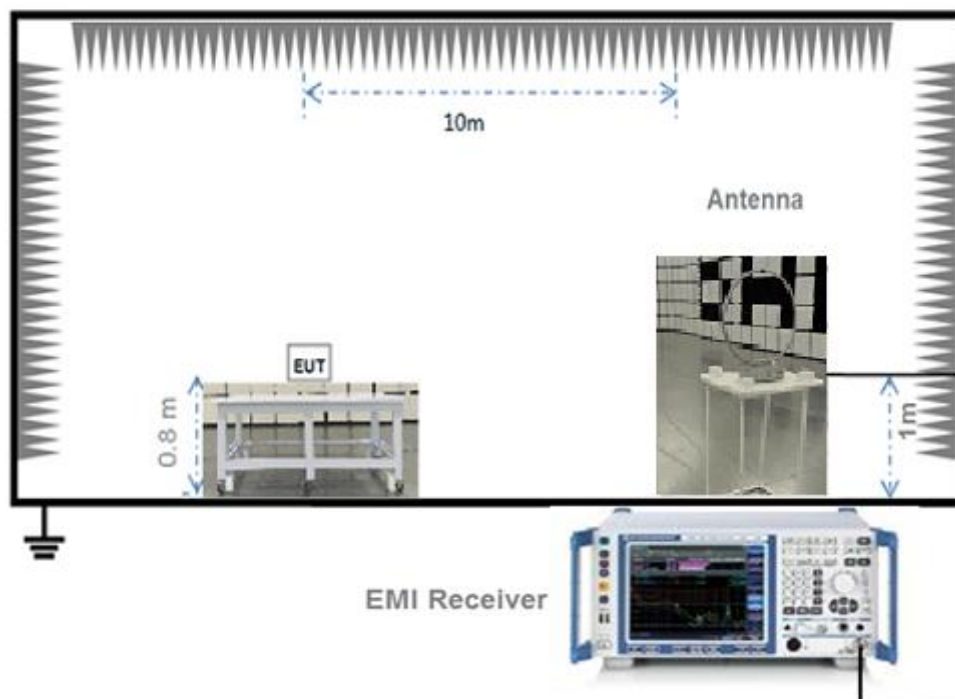
(Diagram 1)

4.5.2 For AC Power Supply Port Test



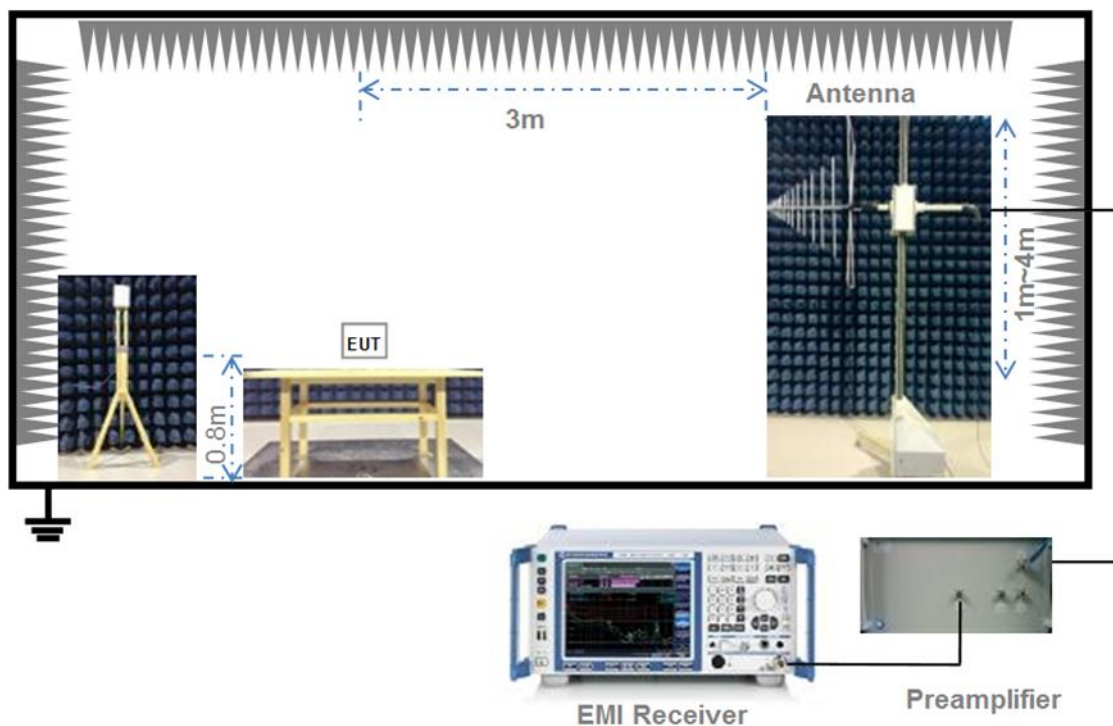
(Diagram 2)

4.5.3 For Radiated Test (Below 30 MHz)



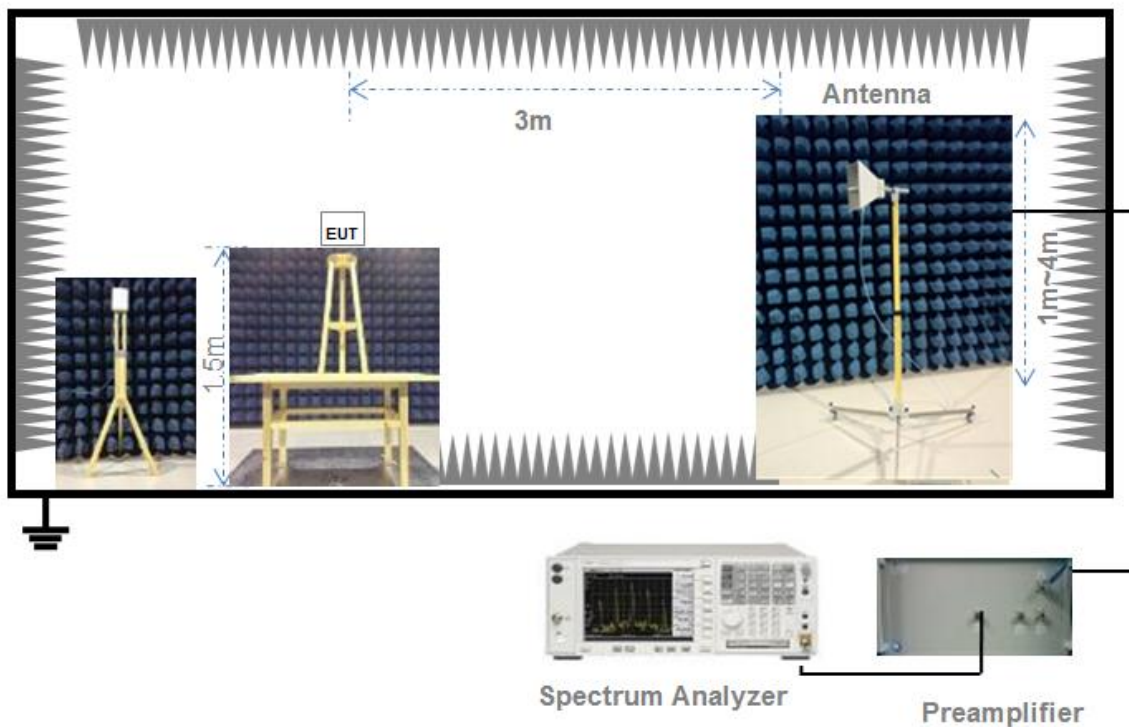
(Diagram 3)

4.5.4 For Radiated Test (30 MHz-1 GHz)



(Diagram 4)

4.5.5 For Radiated Test (Above 1 GHz)



(Diagram 5)

5 TEST ITEMS

5.1 RF Output Power

5.1.1 Test Limit

FCC §15.407(a)

The maximum conducted output power should not exceed:

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

RSS-247, 6.2

The maximum conducted output power shall not exceed:

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

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

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

5.1.2 Test Setup

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

5.1.3 Test Procedure

Maximum conducted (average) output power

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

- 1) The EUT is configured to transmit continuously or to transmit with a constant duty cycle.
- 2) At all times when the EUT is transmitting, it shall be transmitting at its maximum power control level.
- 3) The integration period of the power meter exceeds the repetition period of the transmitted signal by

at least a factor of five.

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

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

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

Measurements of duty cycle

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

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

Set $RBW \geq OBW$ 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), RSS-247, 6.2

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

5.2.2 Test Setup

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

5.2.3 Test Procedure

Emission bandwidth

1. Set RBW = approximately 1% of the emission bandwidth.
2. Set VBW $\geq 3 \times$ 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

RSS-247, 6.2

The maximum power spectral density should not exceed:

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

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

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

5.3.2 Test Setup

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

5.3.3 Test Procedure

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

1. Set RBW = 510 kHz/1 MHz, VBW $\geq 3 \times$ 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, RSS-GEN, 8.8

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

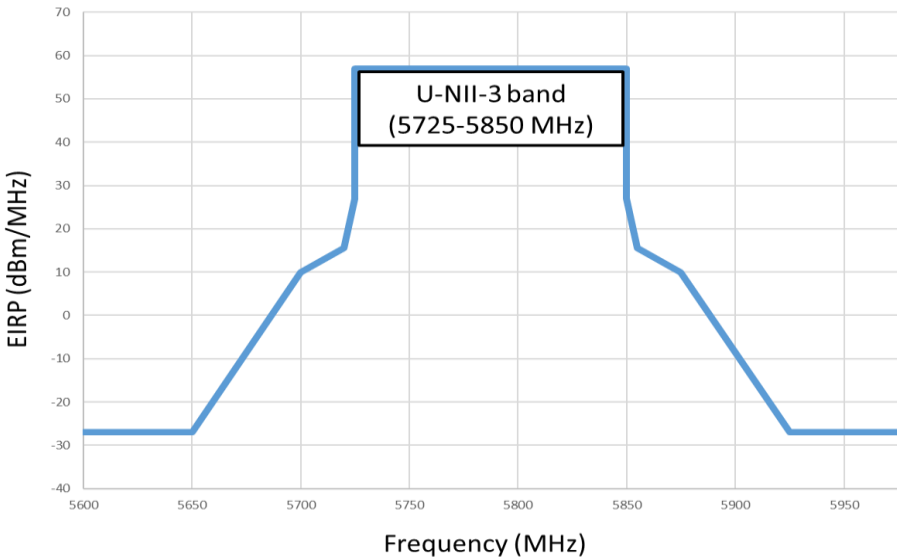
5.5.1 Limit

FCC §15.209 & 15.407(b), RSS-247, 6.2

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.

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

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

5.5.2 Test Setup

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

5.5.3 Test Procedure

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

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

General Procedure for conducted measurements in restricted bands

- a) Measure the conducted output power (in dBm) using the detector specified (see guidance regarding measurement procedures for determining quasi-peak, peak, and average conducted output power, respectively).
- b) Add the appropriate maximum ground reflection factor to the EIRP level (6 dB for frequencies ≤ 30 MHz, 4.7 dB for frequencies between 30 MHz and 1000 MHz, inclusive and 0 dB for frequencies > 1000 MHz).
- c) For devices with multiple antenna-ports, measure the power of each individual chain and sum the EIRP of all chains in linear terms (e.g., Watts, mW).
- d) Convert the resultant EIRP level to an equivalent electric field strength using the following relationship:

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

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 ¹: For FCC standard, if transmitting antennas of directional gain greater than 6 dBi are used, all band maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

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

Note ³: All the configurations were tested, but only the worst data was shown in this report.

Test Data

Conducted Power

U-NII-1 (5150 - 5250 MHz)					
Mode	Channel	Conducted Power (dBm)	Conducted Power (mW)	FCC Limit (mW)	Verdict
11a	CH36	13.75	23.71	250.00	Pass
11a	CH40	12.57	18.07	250.00	Pass
11a	CH48	13.56	22.70	250.00	Pass
11n (HT20)	CH36	13.95	24.83	250.00	Pass
11n (HT20)	CH40	13.75	23.71	250.00	Pass
11n (HT20)	CH48	12.27	16.87	250.00	Pass
11n (HT40)	CH38	13.04	20.14	250.00	Pass
11n (HT40)	CH46	12.24	16.75	250.00	Pass
11ac (VHT20)	CH36	13.94	24.77	250.00	Pass
11ac (VHT20)	CH40	12.81	19.10	250.00	Pass
11ac (VHT20)	CH48	14.23	26.49	250.00	Pass
11ac (VHT40)	CH38	13.12	20.51	250.00	Pass
11ac (VHT40)	CH46	14.02	25.23	250.00	Pass
11ac (VHT80)	CH42	12.74	18.79	250.00	Pass
11ax (HE20) (SU)	CH36	13.97	24.95	250.00	Pass
11ax (HE20) (SU)	CH40	13.02	20.04	250.00	Pass
11ax (HE20) (SU)	CH48	12.43	17.50	250.00	Pass
11ax (HE40) (SU)	CH38	14.12	25.82	250.00	Pass
11ax (HE40) (SU)	CH46	12.46	17.62	250.00	Pass
11ax (HE80) (SU)	CH42	14.85	30.55	250.00	Pass

U-NII-2A (5250 - 5350 MHz)

Note⁴: Transmitting antennas of directional gain in U-NII-2A(5250 MHz to 5350 MHz) is 6.13 dBi

Formulas: Directional gain = GANT + Array Gain, *Array Gain* = 0.

Note⁵: The limit is 250 mW or 11 dBm + 10log B, whichever is less. In IC Standard, Where “B” is the 99% emissions bandwidth in MHz. In FCC Standard, Where “B” is the 26dB emissions bandwidth in MHz.

(Please refer to the section A.2).

Note⁶:The final FCC Limit={24dBm(250 mW) or 11 dBm + 10log B, whichever is less} -(6.13-6)dbi

Mode	Channel	Conducted Power (dBm)	Conducted Power (mW)	FCC Limit (mW)	IC Limit (mW)	Verdict
11a	CH52	13.27	21.23	242.66	221	Pass
11a	CH60	11.67	14.69	242.66	221	Pass
11a	CH64	10.61	11.51	242.66	221	Pass
11n (HT20)	CH52	12.39	17.34	242.66	232	Pass
11n (HT20)	CH60	12.54	17.95	242.66	232	Pass
11n (HT20)	CH64	11.43	13.90	242.66	232	Pass
11n (HT40)	CH54	13.27	21.23	242.66	250	Pass
11n (HT40)	CH62	10.82	12.08	242.66	250	Pass
11ac (VHT20)	CH52	14.90	30.90	242.66	233	Pass
11ac (VHT20)	CH60	10.74	11.86	242.66	233	Pass
11ac (VHT20)	CH64	12.82	19.14	242.66	233	Pass
11ac (VHT40)	CH54	12.81	19.10	242.66	250	Pass
11ac (VHT40)	CH62	12.77	18.92	242.66	250	Pass
11ac (VHT80)	CH58	13.94	24.77	242.66	250	Pass
11ax (HE20) (SU)	CH52	13.04	20.14	242.66	244	Pass
11ax (HE20) (SU)	CH60	12.83	19.19	242.66	244	Pass
11ax (HE20) (SU)	CH64	14.28	26.79	242.66	244	Pass
11ax (HE40) (SU)	CH54	14.41	27.61	242.66	250	Pass
11ax (HE40) (SU)	CH62	11.83	15.24	242.66	250	Pass
11ax (HE80) (SU)	CH58	13.44	22.08	242.66	250	Pass

U-NII-2C (5470 - 5725 MHz)						
Mode	Channel	Conducted Power (dBm)	Conducted Power (mW)	FCC Limit (mW)	IC Limit (mW)	Verdict
11a	CH100	11.00	12.59	250.00	222	Pass
11a	CH116	12.86	19.32	250.00	222	Pass
11a	CH140	13.99	25.06	250.00	222	Pass
11n (HT20)	CH100	11.85	15.31	250.00	232	Pass
11n (HT20)	CH116	13.08	20.32	250.00	232	Pass
11n (HT20)	CH140	11.77	15.03	250.00	232	Pass
11n (HT40)	CH102	15.97	39.54	250.00	250	Pass
11n (HT40)	CH110	17.48	55.98	250.00	250	Pass
11n (HT40)	CH134	15.06	32.06	250.00	250	Pass
11ac (VHT20)	CH100	11.95	15.67	250.00	234	Pass
11ac (VHT20)	CH116	13.72	23.55	250.00	234	Pass
11ac (VHT20)	CH140	12.18	16.52	250.00	234	Pass
11ac (VHT40)	CH102	12.54	17.95	250.00	250	Pass
11ac (VHT40)	CH110	15.31	33.96	250.00	250	Pass
11ac (VHT40)	CH134	13.72	23.55	250.00	250	Pass
11ac (VHT80)	CH106	11.88	15.42	250.00	250	Pass
11ac (VHT80)	CH122	14.14	25.94	250.00	250	Pass
11ax (HE20) (SU)	CH100	12.54	17.95	250.00	243	Pass
11ax (HE20) (SU)	CH116	12.38	17.30	250.00	243	Pass
11ax (HE20) (SU)	CH140	12.76	18.88	250.00	243	Pass
11ax (HE40) (SU)	CH102	15.43	34.91	250.00	250	Pass
11ax (HE40) (SU)	CH110	14.18	26.18	250.00	250	Pass
11ax (HE40) (SU)	CH134	14.12	25.82	250.00	250	Pass
11ax (HE80) (SU)	CH106	13.95	24.83	250.00	250	Pass
11ax (HE80) (SU)	CH122	13.34	21.58	250.00	250	Pass

U-NII-3 (5725 - 5850 MHz)

Note ⁷: Transmitting antennas of directional gain in U-NII-3 (5725 MHz to 5850 MHz) is 6.33 dBi

Formulas: Directional gain = GANT + Array Gain, *Array Gain* = 0.

Mode	Channel	Conducted Power (dBm)	Conducted Power (mW)	FCC Limit (mW)	IC Limit (mW)	Verdict
11a	CH149	13.76	23.77	926.83	1000	Pass
11a	CH157	12.78	18.97	926.83	1000	Pass
11a	CH165	13.89	24.49	926.83	1000	Pass
11n (HT20)	CH149	14.02	25.23	926.83	1000	Pass
11n (HT20)	CH157	13.11	20.46	926.83	1000	Pass
11n (HT20)	CH165	14.05	25.41	926.83	1000	Pass
11n (HT40)	CH151	13.89	24.49	926.83	1000	Pass
11n (HT40)	CH159	13.24	21.09	926.83	1000	Pass
11ac (VHT20)	CH149	13.91	24.60	926.83	1000	Pass
11ac (VHT20)	CH157	13.31	21.43	926.83	1000	Pass
11ac (VHT20)	CH165	14.04	25.35	926.83	1000	Pass
11ac (VHT40)	CH151	13.70	23.44	926.83	1000	Pass
11ac (VHT40)	CH159	12.24	16.75	926.83	1000	Pass
11ac (VHT80)	CH155	13.43	22.03	926.83	1000	Pass
11ax (HE20) (SU)	CH149	13.95	24.83	926.83	1000	Pass
11ax (HE20) (SU)	CH157	13.42	21.98	926.83	1000	Pass
11ax (HE20) (SU)	CH165	13.79	23.93	926.83	1000	Pass
11ax (HE40) (SU)	CH151	13.99	25.06	926.83	1000	Pass
11ax (HE40) (SU)	CH159	13.34	21.58	926.83	1000	Pass
11ax (HE80) (SU)	CH155	15.07	32.14	926.83	1000	Pass

E.I.R.P

U-NII-1 (5150 - 5250 MHz)

Note⁸: The limit is 200 mW or 10 dBm + 10log B, whichever is less. Where “B” is the 99% emissions bandwidth in MHz (Please refer to the section A.2).

Mode	Channel	E.I.R.P (dBm)	E.I.R.P (mW)	E.I.R.P Limit (mW)	Verdict
11a	CH36	19.73	93.97	176	Pass
11a	CH40	18.55	71.61	176	Pass
11a	CH48	19.54	89.95	176	Pass
11n (HT20)	CH36	19.93	98.40	185	Pass
11n (HT20)	CH40	19.73	93.97	185	Pass
11n (HT20)	CH48	18.25	66.83	185	Pass
11n (HT40)	CH38	19.02	79.80	200	Pass
11n (HT40)	CH46	18.22	66.37	200	Pass
11ac (VHT20)	CH36	19.92	98.17	185	Pass
11ac (VHT20)	CH40	18.79	75.68	185	Pass
11ac (VHT20)	CH48	20.21	104.95	185	Pass
11ac (VHT40)	CH38	19.10	81.28	200	Pass
11ac (VHT40)	CH46	20.00	100.00	200	Pass
11ac (VHT80)	CH42	18.72	74.47	200	Pass
11ax (HE20) (SU)	CH36	19.95	98.86	193	Pass
11ax (HE20) (SU)	CH40	19.00	79.43	193	Pass
11ax (HE20) (SU)	CH48	18.41	69.34	193	Pass
11ax (HE40) (SU)	CH38	20.10	102.33	200	Pass
11ax (HE40) (SU)	CH46	18.44	69.82	200	Pass
11ax (HE80) (SU)	CH42	20.83	121.06	200	Pass

U-NII-2A (5250 - 5350 MHz)					
Note ⁹ : The limit is 1W or 17 dBm + 10log B, whichever is less. Where “B” is the 99% emissions bandwidth in MHz (Please refer to the section A.2).					
Mode	Channel	E.I.R.P (dBm)	E.I.R.P (mW)	E.I.R.P Limit (mW)	Verdict
11a	CH52	19.40	87.10	881	Pass
11a	CH60	17.80	60.26	881	Pass
11a	CH64	16.74	47.21	881	Pass
11n (HT20)	CH52	18.52	71.12	925	Pass
11n (HT20)	CH60	18.67	73.62	925	Pass
11n (HT20)	CH64	17.56	57.02	925	Pass
11n (HT40)	CH54	19.40	87.10	1000	Pass
11n (HT40)	CH62	16.95	49.55	1000	Pass
11ac (VHT20)	CH52	21.03	126.77	927	Pass
11ac (VHT20)	CH60	16.87	48.64	927	Pass
11ac (VHT20)	CH64	18.95	78.52	927	Pass
11ac (VHT40)	CH54	18.94	78.34	1000	Pass
11ac (VHT40)	CH62	18.90	77.62	1000	Pass
11ac (VHT80)	CH58	20.07	101.62	1000	Pass
11ax (HE20) (SU)	CH52	19.17	82.60	971	Pass
11ax (HE20) (SU)	CH60	18.96	78.70	971	Pass
11ax (HE20) (SU)	CH64	20.41	109.90	971	Pass
11ax (HE40) (SU)	CH54	20.54	113.24	1000	Pass
11ax (HE40) (SU)	CH62	17.96	62.52	1000	Pass
11ax (HE80) (SU)	CH58	19.57	90.57	1000	Pass

U-NII-2C (5470 - 5725 MHz)					
Note ¹⁰ : The limit is 1W or 17 dBm + 10log B, whichever is less. Where “B” is the 99% emissions bandwidth in MHz (Please refer to the section A.2)					
Mode	Channel	E.I.R.P (dBm)	E.I.R.P (mW)	E.I.R.P Limit (mW)	Verdict
11a	CH100	16.96	49.66	885	Pass
11a	CH116	18.82	76.21	885	Pass
11a	CH140	19.95	98.86	885	Pass
11n (HT20)	CH100	17.81	60.39	925	Pass
11n (HT20)	CH116	19.04	80.17	925	Pass
11n (HT20)	CH140	17.73	59.29	925	Pass
11n (HT40)	CH102	21.93	155.96	1000	Pass
11n (HT40)	CH110	23.44	220.80	1000	Pass
11n (HT40)	CH134	21.02	126.47	1000	Pass
11ac (VHT20)	CH100	17.91	61.80	931	Pass
11ac (VHT20)	CH116	19.68	92.90	931	Pass
11ac (VHT20)	CH140	18.14	65.16	931	Pass
11ac (VHT40)	CH102	18.50	70.79	1000	Pass
11ac (VHT40)	CH110	21.27	133.97	1000	Pass
11ac (VHT40)	CH134	19.68	92.90	1000	Pass
11ac (VHT80)	CH106	17.84	60.81	1000	Pass
11ax (HE20) (SU)	CH100	18.50	70.79	968	Pass
11ax (HE20) (SU)	CH116	18.34	68.23	968	Pass
11ax (HE20) (SU)	CH140	18.72	74.47	968	Pass
11ax (HE40) (SU)	CH102	21.39	137.72	1000	Pass
11ax (HE40) (SU)	CH110	20.14	103.28	1000	Pass
11ax (HE40) (SU)	CH134	20.08	101.86	1000	Pass
11ax (HE80) (SU)	CH106	19.91	97.95	1000	Pass

U-NII-3 (5725 - 5850 MHz)				
Mode	Channel	E.I.R.P (dBm)	E.I.R.P (mW)	Verdict
11a	CH149	20.09	102.09	Pass
11a	CH157	19.11	81.47	Pass
11a	CH165	20.22	105.20	Pass
11n (HT20)	CH149	20.35	108.39	Pass
11n (HT20)	CH157	19.44	87.90	Pass
11n (HT20)	CH165	20.38	109.14	Pass
11n (HT40)	CH151	20.22	105.20	Pass
11n (HT40)	CH159	19.57	90.57	Pass
11ac (VHT20)	CH149	20.24	105.68	Pass
11ac (VHT20)	CH157	19.64	92.04	Pass
11ac (VHT20)	CH165	20.37	108.89	Pass
11ac (VHT40)	CH151	20.03	100.69	Pass
11ac (VHT40)	CH159	18.57	71.94	Pass
11ac (VHT80)	CH155	19.76	94.62	Pass
11ax (HE20) (SU)	CH149	20.28	106.66	Pass
11ax (HE20) (SU)	CH157	19.75	94.41	Pass
11ax (HE20) (SU)	CH165	20.12	102.80	Pass
11ax (HE40) (SU)	CH151	20.32	107.65	Pass
11ax (HE40) (SU)	CH159	19.67	92.68	Pass
11ax (HE80) (SU)	CH155	21.40	138.04	Pass

A.2 Emission Bandwidth & 99% Bandwidth

Note: Not applicable.

A.3 6 dB Bandwidth

Note: Not applicable.

A.4 Power Spectral Density

Note: Not applicable.

A.5 Conducted Emissions

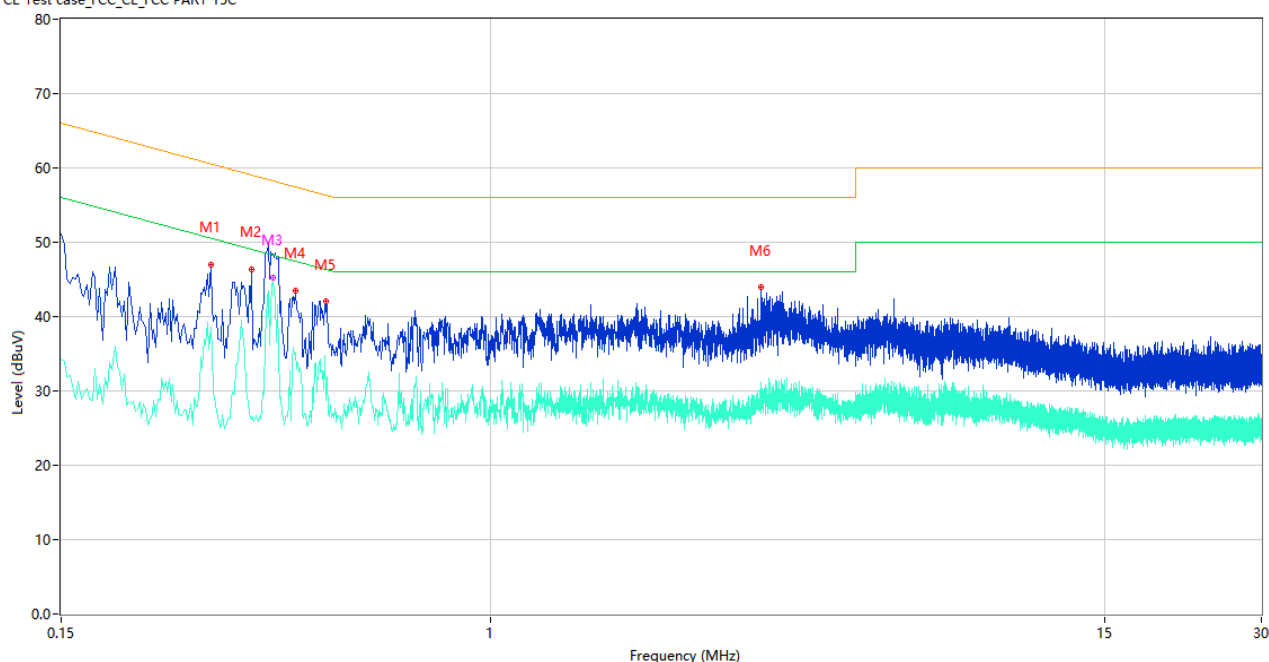
Note ¹: The EUT is working in the Normal link mode. All modes have been tested and normal link mode is worst.

Note ²: 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

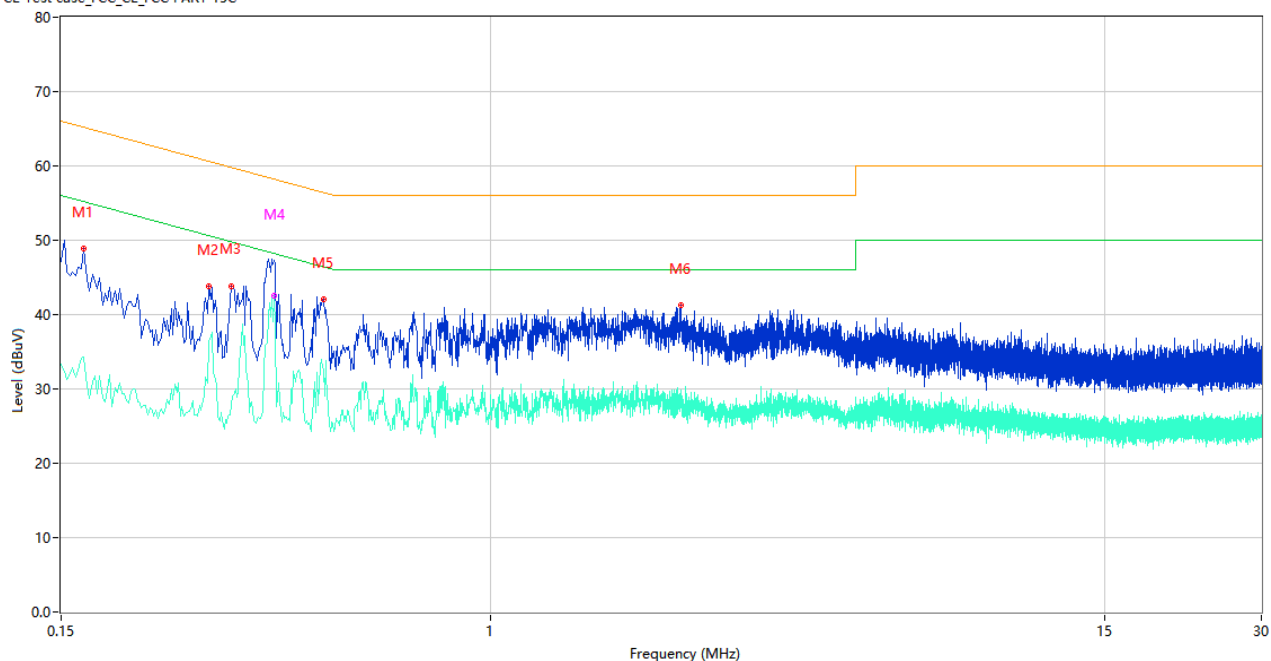
CE Test case_FCC_CE_FCC PART 15C



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.290	47.02	9.76	60.52	13.50	Peak	L	Pass
1**	0.290	38.57	9.76	50.52	11.95	AV	L	Pass
2	0.348	46.38	10.72	59.01	12.63	Peak	L	Pass
2**	0.348	26.13	10.72	49.01	22.88	AV	L	Pass
3	0.382	48.39	10.63	58.24	9.85	Peak	L	Pass
3**	0.382	45.23	10.63	48.24	3.01	AV	L	Pass
4	0.422	43.53	10.32	57.41	13.88	Peak	L	Pass
4**	0.422	35.06	10.32	47.41	12.35	AV	L	Pass
5	0.484	42.00	10.00	56.27	14.27	Peak	L	Pass
5**	0.484	31.77	10.00	46.27	14.50	AV	L	Pass
6	3.300	43.92	10.34	56.00	12.08	Peak	L	Pass
6**	3.300	31.08	10.34	46.00	14.92	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	0.166	48.87	9.78	65.16	16.29	Peak	N	Pass
1**	0.166	34.35	9.78	55.16	20.81	AV	N	Pass
2	0.288	43.80	9.76	60.58	16.78	Peak	N	Pass
2**	0.288	36.31	9.76	50.58	14.27	AV	N	Pass
3	0.318	43.88	10.12	59.76	15.88	Peak	N	Pass
3**	0.318	28.01	10.12	49.76	21.75	AV	N	Pass
4	0.384	47.30	10.62	58.19	10.89	Peak	N	Pass
4**	0.384	42.55	10.62	48.19	5.64	AV	N	Pass
5	0.478	42.01	10.00	56.37	14.36	Peak	N	Pass
5**	0.478	32.64	10.00	46.37	13.73	AV	N	Pass
6	2.310	41.19	10.25	56.00	14.81	Peak	N	Pass
6**	2.310	29.86	10.25	46.00	16.14	AV	N	Pass

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

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

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

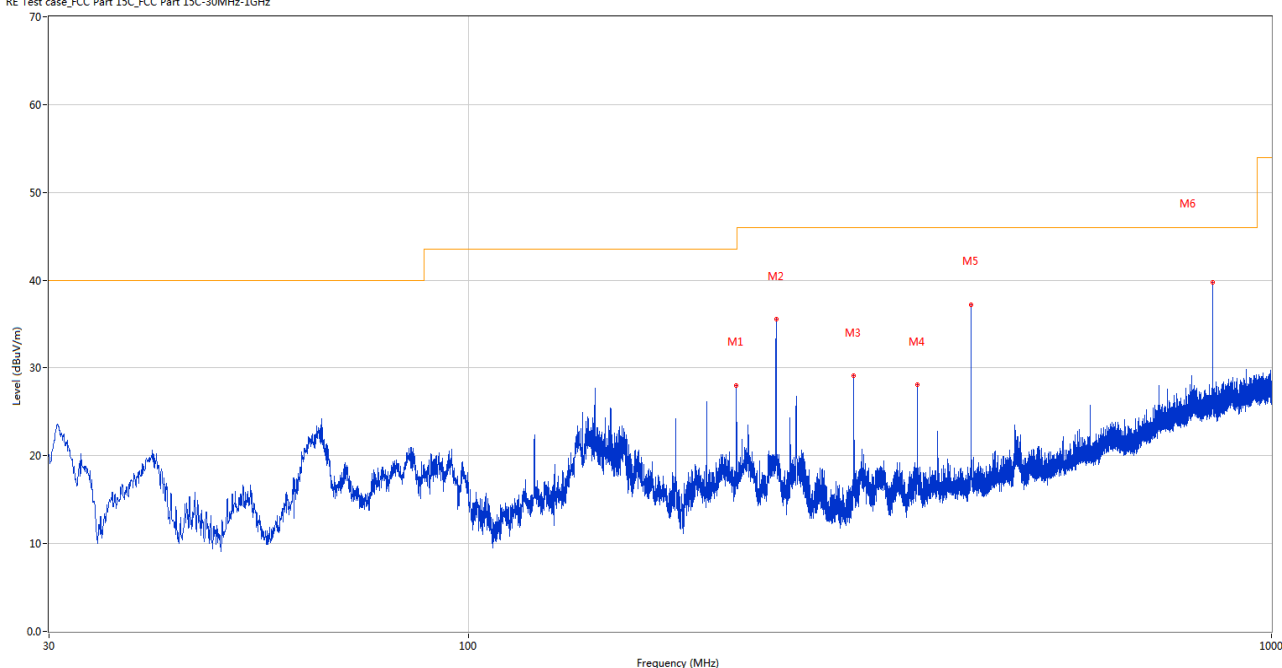
Note ³: The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.

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

Test Data and Plots

30 MHz to 1 GHz, ANT H

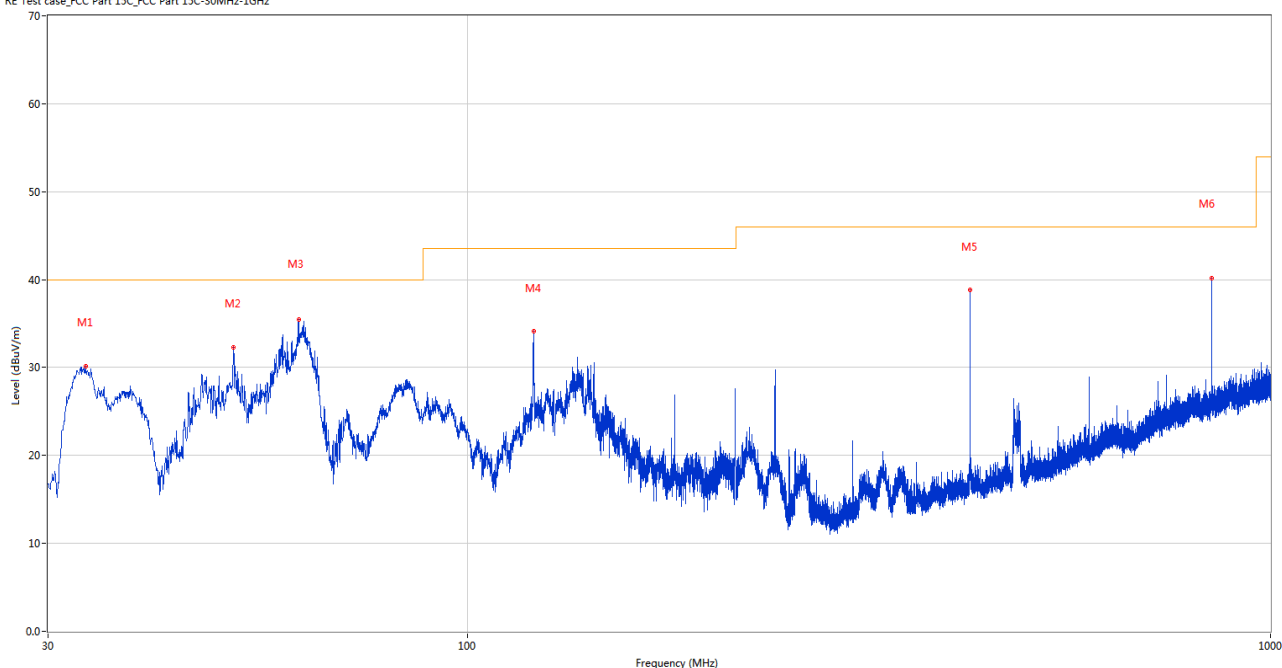
RE Test case_FCC Part 15C_FCC Part 15C-30MHz-1GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	215.416	28.01	-29.24	43.5	15.49	Peak	128.00	200	Horizontal	Pass
2	241.508	35.52	-27.13	46.0	10.48	Peak	89.00	100	Horizontal	Pass
3	301.891	29.08	-24.73	46.0	16.92	Peak	259.00	100	Horizontal	Pass
4	362.225	28.06	-23.15	46.0	17.94	Peak	70.00	100	Horizontal	Pass
5	422.608	37.22	-20.97	46.0	8.78	Peak	29.00	100	Horizontal	Pass
6	845.140	39.78	-11.95	46.0	6.22	Peak	137.00	100	Horizontal	Pass

30 MHz to 1 GHz, ANT V

RE Test case_FCC Part 15C_FCC Part 15C-30MHz-1GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	33.395	30.17	-27.46	40.0	9.83	Peak	339.00	100	Vertical	Pass
2	51.097	32.31	-26.25	40.0	7.69	Peak	73.00	100	Vertical	Pass
3	61.574	35.42	-27.34	40.0	4.58	Peak	129.00	100	Vertical	Pass
4	120.743	34.09	-27.97	43.5	9.41	Peak	161.00	100	Vertical	Pass
5	422.608	38.79	-20.97	46.0	7.21	Peak	170.00	100	Vertical	Pass
6	845.140	40.13	-11.95	46.0	5.87	Peak	342.00	200	Vertical	Pass

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

Note 2: All mode has been pre tested, only show worst data on this report.

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

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1453.600	39.31	-16.98	74.0	34.69	Peak	110.00	300	Horizontal	Pass
1**	1453.600	29.44	-16.98	54.0	24.56	AV	110.00	300	Horizontal	Pass
2	4708.750	54.62	-3.84	74.0	19.38	Peak	17.00	300	Horizontal	Pass
2**	4708.750	51.00	-3.84	54.0	3.00	AV	17.00	300	Horizontal	Pass
3	5187.750	101.47	-2.46	--	--	Peak	17.00	100	Horizontal	N/A
3**	5187.750	93.98	-2.46	--	--	AV	17.00	100	Horizontal	N/A
4	7431.000	52.96	1.14	74.0	21.04	Peak	248.00	100	Horizontal	Pass
4**	7431.000	44.55	1.14	54.0	9.45	AV	248.00	100	Horizontal	Pass
5	12256.474	53.15	1.03	74.0	20.85	Peak	0.00	150	Horizontal	Pass
5**	12256.474	43.05	1.03	54.0	10.95	AV	0.00	150	Horizontal	Pass
6	16117.349	54.64	1.89	74.0	19.36	Peak	304.00	300	Horizontal	Pass
6**	16117.349	46.33	1.89	54.0	7.67	AV	304.00	300	Horizontal	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1584.000	42.45	-17.10	74.0	31.55	Peak	360.00	400	Vertical	Pass
1**	1584.000	33.18	-17.10	54.0	20.82	AV	360.00	400	Vertical	Pass
2	4352.750	47.37	-4.62	74.0	26.63	Peak	259.00	200	Vertical	Pass
2**	4352.750	37.93	-4.62	54.0	16.07	AV	259.00	200	Vertical	Pass
3	5173.750	90.26	-2.69	--	--	Peak	55.00	100	Vertical	N/A
3**	5173.750	82.35	-2.69	--	--	AV	55.00	100	Vertical	N/A
4	7425.500	53.21	1.31	74.0	20.79	Peak	14.00	400	Vertical	Pass
4**	7425.500	43.90	1.31	54.0	10.10	AV	14.00	400	Vertical	Pass
5	12445.050	52.71	1.04	74.0	21.29	Peak	312.00	100	Vertical	Pass
5**	12445.050	42.88	1.04	54.0	11.12	AV	312.00	100	Vertical	Pass
6	16094.775	54.45	1.68	74.0	19.55	Peak	149.00	300	Vertical	Pass
6**	16094.775	46.04	1.68	54.0	7.96	AV	149.00	300	Vertical	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1583.800	39.29	-17.08	74.0	34.71	Peak	76.00	300	Horizontal	Pass
1**	1583.800	29.69	-17.08	54.0	24.31	AV	76.00	300	Horizontal	Pass
2	4800.250	52.55	-3.38	74.0	21.45	Peak	360.00	200	Horizontal	Pass
2**	4800.250	50.52	-3.38	54.0	3.48	AV	360.00	200	Horizontal	Pass
3	5186.250	106.44	-2.42	--	--	Peak	23.00	200	Horizontal	N/A
3**	5186.250	97.85	-2.42	--	--	AV	23.00	200	Horizontal	N/A
4	7710.500	53.46	1.96	74.0	20.54	Peak	360.00	200	Horizontal	Pass
4**	7710.500	45.51	1.96	54.0	8.49	AV	360.00	200	Horizontal	Pass
5	12250.299	52.41	1.10	74.0	21.59	Peak	243.00	200	Horizontal	Pass
5**	12250.299	42.62	1.10	54.0	11.38	AV	243.00	200	Horizontal	Pass
6	15651.937	54.51	2.12	74.0	19.49	Peak	273.00	300	Horizontal	Pass
6**	15651.937	44.69	2.12	54.0	9.31	AV	273.00	300	Horizontal	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1584.100	48.78	-17.11	74.0	25.22	Peak	0.00	300	Vertical	Pass
1**	1584.100	37.21	-17.11	54.0	16.79	AV	0.00	300	Vertical	Pass
2	4348.500	46.94	-4.65	74.0	27.06	Peak	281.00	200	Vertical	Pass
2**	4348.500	37.12	-4.65	54.0	16.88	AV	281.00	200	Vertical	Pass
3	5197.000	94.33	-2.70	--	--	Peak	281.00	150	Vertical	N/A
3**	5197.000	87.23	-2.70	--	--	AV	281.00	150	Vertical	N/A
4	7720.500	53.08	1.30	74.0	20.92	Peak	159.00	400	Vertical	Pass
4**	7720.500	43.43	1.30	54.0	10.57	AV	159.00	400	Vertical	Pass
5	11994.512	52.33	0.35	74.0	21.67	Peak	33.00	100	Vertical	Pass
5**	11994.512	43.15	0.35	54.0	10.85	AV	33.00	100	Vertical	Pass
6	16089.263	54.81	1.61	74.0	19.19	Peak	171.00	300	Vertical	Pass
6**	16089.263	45.03	1.61	54.0	8.97	AV	171.00	300	Vertical	Pass

11ac80, U-NII-1, 1 GHz to 18 GHz, Middle Channel, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1584.300	40.98	-17.10	74.0	33.02	Peak	66.00	300	Horizontal	Pass
1**	1584.300	34.61	-17.10	54.0	19.39	AV	66.00	300	Horizontal	Pass
2	4800.250	53.45	-3.38	74.0	20.55	Peak	65.00	200	Horizontal	Pass
2**	4800.250	50.97	-3.38	54.0	3.03	AV	65.00	200	Horizontal	Pass
3	5188.000	100.02	-2.45	--	--	Peak	19.00	200	Horizontal	N/A
3**	5188.000	92.12	-2.45	--	--	AV	19.00	200	Horizontal	N/A
4	7702.000	52.98	1.48	74.0	21.02	Peak	250.00	300	Horizontal	Pass
4**	7702.000	45.19	1.48	54.0	8.81	AV	250.00	300	Horizontal	Pass
5	12288.300	52.65	0.68	74.0	21.35	Peak	1.00	150	Horizontal	Pass
5**	12288.300	42.17	0.68	54.0	11.83	AV	1.00	150	Horizontal	Pass
6	16127.849	55.73	1.97	74.0	18.27	Peak	360.00	100	Horizontal	Pass
6**	16127.849	44.67	1.97	54.0	9.33	AV	360.00	100	Horizontal	Pass

11ac80, U-NII-1, 1 GHz to 18 GHz, Middle Channel, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1584.400	43.02	-17.08	74.0	30.98	Peak	327.00	200	Vertical	Pass
1**	1584.400	34.44	-17.08	54.0	19.56	AV	327.00	200	Vertical	Pass
2	4332.250	47.64	-4.70	74.0	26.36	Peak	41.00	300	Vertical	Pass
2**	4332.250	38.38	-4.70	54.0	15.62	AV	41.00	300	Vertical	Pass
3	5207.000	88.81	-2.32	--	--	Peak	65.00	100	Vertical	N/A
3**	5207.000	80.46	-2.32	--	--	AV	65.00	100	Vertical	N/A
4	7422.500	53.30	1.35	74.0	20.70	Peak	89.00	300	Vertical	Pass
4**	7422.500	44.77	1.35	54.0	9.23	AV	89.00	300	Vertical	Pass
5	12417.738	52.08	1.08	74.0	21.92	Peak	336.00	200	Vertical	Pass
5**	12417.738	42.57	1.08	54.0	11.43	AV	336.00	200	Vertical	Pass
6	15910.237	54.75	1.85	74.0	19.25	Peak	0.00	300	Vertical	Pass
6**	15910.237	44.85	1.85	54.0	9.15	AV	0.00	300	Vertical	Pass

11ax20 (SU), U-NII-2A, 1 GHz to 18 GHz, Low Channel, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1584.200	38.97	-17.11	74.0	35.03	Peak	356.00	100	Horizontal	Pass
1**	1584.200	29.12	-17.11	54.0	24.88	AV	356.00	100	Horizontal	Pass
2	4788.750	56.01	-3.84	74.0	17.99	Peak	38.00	150	Horizontal	Pass
2**	4788.750	50.96	-3.84	54.0	3.04	AV	38.00	150	Horizontal	Pass
3	5259.000	103.14	-2.95	--	--	Peak	38.00	150	Horizontal	N/A
3**	5259.000	93.99	-2.95	--	--	AV	38.00	150	Horizontal	N/A
4	7704.750	53.19	2.00	74.0	20.81	Peak	270.00	400	Horizontal	Pass
4**	7704.750	44.75	2.00	54.0	9.25	AV	270.00	400	Horizontal	Pass
5	12383.062	52.44	1.02	74.0	21.56	Peak	300.00	100	Horizontal	Pass
5**	12383.062	43.04	1.02	54.0	10.96	AV	300.00	100	Horizontal	Pass
6	16117.613	54.71	1.89	74.0	19.29	Peak	353.00	400	Horizontal	Pass
6**	16117.613	45.71	1.89	54.0	8.29	AV	353.00	400	Horizontal	Pass

11ax20 (SU), U-NII-2A, 1 GHz to 18 GHz, Low Channel, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1584.000	47.13	-17.10	74.0	26.87	Peak	360.00	300	Vertical	Pass
1**	1584.000	34.20	-17.10	54.0	19.80	AV	360.00	300	Vertical	Pass
2	4290.500	47.60	-4.67	74.0	26.40	Peak	89.00	200	Vertical	Pass
2**	4290.500	37.95	-4.67	54.0	16.05	AV	89.00	200	Vertical	Pass
3	5262.750	91.91	-3.07	--	--	Peak	62.00	100	Vertical	N/A
3**	5262.750	84.12	-3.07	--	--	AV	62.00	100	Vertical	N/A
4	7702.500	53.21	1.37	74.0	20.79	Peak	360.00	200	Vertical	Pass
4**	7702.500	43.88	1.37	54.0	10.12	AV	360.00	200	Vertical	Pass
5	11802.138	53.51	-0.17	74.0	20.49	Peak	260.00	100	Vertical	Pass
5**	11802.138	42.75	-0.17	54.0	11.25	AV	260.00	100	Vertical	Pass
6	16123.650	54.67	1.94	74.0	19.33	Peak	326.00	100	Vertical	Pass
6**	16123.650	46.02	1.94	54.0	7.98	AV	326.00	100	Vertical	Pass

11ax20 (SU), U-NII-2A, 1 GHz to 18 GHz, High Channel, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1599.700	38.36	-16.88	74.0	35.64	Peak	66.00	200	Horizontal	Pass
1**	1599.700	28.21	-16.88	54.0	25.79	AV	66.00	200	Horizontal	Pass
2	4828.750	56.48	-3.70	74.0	17.52	Peak	360.00	200	Horizontal	Pass
2**	4828.750	50.34	-3.70	54.0	3.66	AV	360.00	200	Horizontal	Pass
3	5308.250	106.67	-3.20	--	--	Peak	65.00	200	Horizontal	N/A
3**	5308.250	97.42	-3.20	--	--	AV	65.00	200	Horizontal	N/A
4	7695.250	53.52	1.15	74.0	20.48	Peak	159.00	100	Horizontal	Pass
4**	7695.250	44.17	1.15	54.0	9.83	AV	159.00	100	Horizontal	Pass
5	12265.026	52.75	0.94	74.0	21.25	Peak	244.00	200	Horizontal	Pass
5**	12265.026	43.21	0.94	54.0	10.79	AV	244.00	200	Horizontal	Pass
6	16111.050	54.18	1.84	74.0	19.82	Peak	269.00	200	Horizontal	Pass
6**	16111.050	45.46	1.84	54.0	8.54	AV	269.00	200	Horizontal	Pass

11ax20 (SU), U-NII-2A, 1 GHz to 18 GHz, High Channel, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1586.200	45.13	-17.27	74.0	28.87	Peak	200.00	100	Vertical	Pass
1**	1586.200	28.63	-17.27	54.0	25.37	AV	200.00	100	Vertical	Pass
2	4344.750	47.22	-5.03	74.0	26.78	Peak	177.00	400	Vertical	Pass
2**	4344.750	37.25	-5.03	54.0	16.75	AV	177.00	400	Vertical	Pass
3	5298.750	95.89	-2.76	--	--	Peak	77.00	100	Vertical	N/A
3**	5298.750	85.22	-2.76	--	--	AV	77.00	100	Vertical	N/A
4	7710.250	53.20	1.90	74.0	20.80	Peak	319.00	400	Vertical	Pass
4**	7710.250	44.41	1.90	54.0	9.59	AV	319.00	400	Vertical	Pass
5	11752.500	52.88	-0.19	74.0	21.12	Peak	202.00	150	Vertical	Pass
5**	11752.500	42.74	-0.19	54.0	11.26	AV	202.00	150	Vertical	Pass
6	16122.075	55.00	1.93	74.0	19.00	Peak	77.00	100	Vertical	Pass
6**	16122.075	45.61	1.93	54.0	8.39	AV	77.00	100	Vertical	Pass

11n40, U-NII-2C, 1 GHz to 18 GHz, Low Channel, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1583.900	40.91	-17.09	74.0	33.09	Peak	100.00	400	Horizontal	Pass
1**	1583.900	36.32	-17.09	54.0	17.68	AV	100.00	400	Horizontal	Pass
2	4800.250	50.58	-3.38	74.0	23.42	Peak	14.00	400	Horizontal	Pass
2**	4800.250	47.31	-3.38	54.0	6.69	AV	14.00	400	Horizontal	Pass
3	5493.500	106.47	-2.24	--	--	Peak	35.00	100	Horizontal	N/A
3**	5493.500	99.04	-2.24	--	--	AV	35.00	100	Horizontal	N/A
4	7508.500	53.06	-0.03	74.0	20.94	Peak	237.00	200	Horizontal	Pass
4**	7508.500	42.66	-0.03	54.0	11.34	AV	237.00	200	Horizontal	Pass
5	12030.612	52.54	0.05	74.0	21.46	Peak	17.00	150	Horizontal	Pass
5**	12030.612	42.71	0.05	54.0	11.29	AV	17.00	150	Horizontal	Pass
6	16128.900	54.63	1.98	74.0	19.37	Peak	209.00	400	Horizontal	Pass
6**	16128.900	45.62	1.98	54.0	8.38	AV	209.00	400	Horizontal	Pass

11n40, U-NII-2C, 1 GHz to 18 GHz, Low Channel, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1584.400	43.48	-17.08	74.0	30.52	Peak	170.00	300	Vertical	Pass
1**	1584.400	31.25	-17.08	54.0	22.75	AV	170.00	300	Vertical	Pass
2	4336.750	47.18	-4.63	74.0	26.82	Peak	264.00	400	Vertical	Pass
2**	4336.750	38.56	-4.63	54.0	15.44	AV	264.00	400	Vertical	Pass
3	5494.500	96.40	-2.43	--	--	Peak	69.00	150	Vertical	N/A
3**	5494.500	89.01	-2.43	--	--	AV	69.00	150	Vertical	N/A
4	7691.750	53.33	0.76	74.0	20.67	Peak	45.00	400	Vertical	Pass
4**	7691.750	44.12	0.76	54.0	9.88	AV	45.00	400	Vertical	Pass
5	12258.612	52.41	1.01	74.0	21.59	Peak	200.00	200	Vertical	Pass
5**	12258.612	43.49	1.01	54.0	10.51	AV	200.00	200	Vertical	Pass
6	16082.437	55.57	1.52	74.0	18.43	Peak	203.00	100	Vertical	Pass
6**	16082.437	45.45	1.52	54.0	8.55	AV	203.00	100	Vertical	Pass

11n40, U-NII-2C, 1 GHz to 18 GHz, Middle Channel, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1583.300	40.50	-16.83	74.0	33.50	Peak	138.00	300	Horizontal	Pass
1**	1583.300	29.57	-16.83	54.0	24.43	AV	138.00	300	Horizontal	Pass
2	4800.250	49.59	-3.38	74.0	24.41	Peak	0.00	200	Horizontal	Pass
2**	4800.250	46.85	-3.38	54.0	7.15	AV	0.00	200	Horizontal	Pass
3	5546.750	106.58	-2.20	--	--	Peak	39.00	200	Horizontal	N/A
3**	5546.750	98.61	-2.20	--	--	AV	39.00	200	Horizontal	N/A
4	7688.500	53.44	1.01	74.0	20.56	Peak	248.00	200	Horizontal	Pass
4**	7688.500	43.20	1.01	54.0	10.80	AV	248.00	200	Horizontal	Pass
5	12514.875	52.53	1.35	74.0	21.47	Peak	41.00	200	Horizontal	Pass
5**	12514.875	43.40	1.35	54.0	10.60	AV	41.00	200	Horizontal	Pass
6	16134.674	54.41	2.03	74.0	19.59	Peak	126.00	300	Horizontal	Pass
6**	16134.674	45.12	2.03	54.0	8.88	AV	126.00	300	Horizontal	Pass

11n40, U-NII-2C, 1 GHz to 18 GHz, Middle Channel, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1583.700	44.42	-17.02	74.0	29.58	Peak	181.00	300	Vertical	Pass
1**	1583.700	34.04	-17.02	54.0	19.96	AV	181.00	300	Vertical	Pass
2	4223.250	46.63	-5.00	74.0	27.37	Peak	319.00	400	Vertical	Pass
2**	4223.250	37.48	-5.00	54.0	16.52	AV	319.00	400	Vertical	Pass
3	5533.000	97.34	-2.49	--	--	Peak	61.00	100	Vertical	N/A
3**	5533.000	89.68	-2.49	--	--	AV	61.00	100	Vertical	N/A
4	7260.750	53.29	-0.46	74.0	20.71	Peak	61.00	300	Vertical	Pass
4**	7260.750	42.45	-0.46	54.0	11.55	AV	61.00	300	Vertical	Pass
5	12268.112	52.50	0.91	74.0	21.50	Peak	106.00	100	Vertical	Pass
5**	12268.112	42.66	0.91	54.0	11.34	AV	106.00	100	Vertical	Pass
6	16052.513	54.29	1.12	74.0	19.71	Peak	266.00	300	Vertical	Pass
6**	16052.513	44.71	1.12	54.0	9.29	AV	266.00	300	Vertical	Pass

11n40, U-NII-2C, 1 GHz to 18 GHz, High Channel, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1570.200	38.62	-17.14	74.0	35.38	Peak	150.00	100	Horizontal	Pass
1**	1570.200	29.48	-17.14	54.0	24.52	AV	150.00	100	Horizontal	Pass
2	4800.250	50.49	-3.38	74.0	23.51	Peak	0.00	200	Horizontal	Pass
2**	4800.250	45.14	-3.38	54.0	8.86	AV	0.00	200	Horizontal	Pass
3	5658.750	106.75	-2.64	--	--	Peak	27.00	200	Horizontal	N/A
3**	5658.750	98.83	-2.64	--	--	AV	27.00	200	Horizontal	N/A
4	7708.750	53.80	1.82	74.0	20.20	Peak	51.00	100	Horizontal	Pass
4**	7708.750	44.95	1.82	54.0	9.05	AV	51.00	100	Horizontal	Pass
5	12469.276	52.66	1.19	74.0	21.34	Peak	175.00	200	Horizontal	Pass
5**	12469.276	43.16	1.19	54.0	10.84	AV	175.00	200	Horizontal	Pass
6	16102.912	55.55	1.77	74.0	18.45	Peak	199.00	100	Horizontal	Pass
6**	16102.912	45.82	1.77	54.0	8.18	AV	199.00	100	Horizontal	Pass

11n40, U-NII-2C, 1 GHz to 18 GHz, High Channel, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1584.100	43.54	-17.11	74.0	30.46	Peak	171.00	300	Vertical	Pass
1**	1584.100	38.11	-17.11	54.0	15.89	AV	171.00	300	Vertical	Pass
2	4260.250	47.06	-4.42	74.0	26.94	Peak	322.00	100	Vertical	Pass
2**	4260.250	37.67	-4.42	54.0	16.33	AV	322.00	100	Vertical	Pass
3	5652.750	95.84	-2.11	--	--	Peak	46.00	100	Vertical	N/A
3**	5652.750	87.48	-2.11	--	--	AV	46.00	100	Vertical	N/A
4	7611.750	53.54	0.27	74.0	20.46	Peak	88.00	200	Vertical	Pass
4**	7611.750	43.23	0.27	54.0	10.77	AV	88.00	200	Vertical	Pass
5	12174.775	52.68	0.19	74.0	21.32	Peak	33.00	150	Vertical	Pass
5**	12174.775	41.96	0.19	54.0	12.04	AV	33.00	150	Vertical	Pass
6	16087.162	54.43	1.58	74.0	19.57	Peak	193.00	300	Vertical	Pass
6**	16087.162	45.99	1.58	54.0	8.01	AV	193.00	300	Vertical	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1582.800	39.53	-16.90	74.0	34.47	Peak	121.00	300	Horizontal	Pass
1**	1582.800	29.44	-16.90	54.0	24.56	AV	121.00	300	Horizontal	Pass
2	4172.250	46.62	-5.39	74.0	27.38	Peak	252.00	100	Horizontal	Pass
2**	4172.250	37.01	-5.39	54.0	16.99	AV	252.00	100	Horizontal	Pass
3	5750.500	107.50	-2.12	--	--	Peak	57.00	150	Horizontal	N/A
3**	5750.500	99.98	-2.12	--	--	AV	57.00	150	Horizontal	N/A
4	7690.000	52.92	1.28	74.0	21.08	Peak	143.00	100	Horizontal	Pass
4**	7690.000	44.33	1.28	54.0	9.67	AV	143.00	100	Horizontal	Pass
5	12222.513	52.44	0.72	74.0	21.56	Peak	309.00	150	Horizontal	Pass
5**	12222.513	42.94	0.72	54.0	11.06	AV	309.00	150	Horizontal	Pass
6	15945.675	55.30	1.23	74.0	18.70	Peak	152.00	400	Horizontal	Pass
6**	15945.675	45.04	1.23	54.0	8.96	AV	152.00	400	Horizontal	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1584.000	45.85	-17.10	74.0	28.15	Peak	0.00	400	Vertical	Pass
1**	1584.000	35.63	-17.10	54.0	18.37	AV	0.00	400	Vertical	Pass
2	4167.000	47.79	-5.38	74.0	26.21	Peak	97.00	100	Vertical	Pass
2**	4167.000	37.80	-5.38	54.0	16.20	AV	97.00	100	Vertical	Pass
3	5737.000	96.19	-2.19	--	--	Peak	77.00	100	Vertical	N/A
3**	5737.000	88.42	-2.19	--	--	AV	77.00	100	Vertical	N/A
4	7705.000	54.00	2.03	74.0	20.00	Peak	118.00	100	Vertical	Pass
4**	7705.000	46.61	2.03	54.0	7.39	AV	118.00	100	Vertical	Pass
5	12001.162	52.39	0.45	74.0	21.61	Peak	143.00	200	Vertical	Pass
5**	12001.162	44.60	0.45	54.0	9.40	AV	143.00	200	Vertical	Pass
6	15921.000	55.01	1.66	74.0	18.99	Peak	349.00	100	Vertical	Pass
6**	15921.000	44.98	1.66	54.0	9.02	AV	349.00	100	Vertical	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1449.400	39.53	-16.93	74.0	34.47	Peak	145.00	300	Horizontal	Pass
1**	1449.400	28.56	-16.93	54.0	25.44	AV	145.00	300	Horizontal	Pass
2	4660.250	49.96	-4.00	74.0	24.04	Peak	14.00	200	Horizontal	Pass
2**	4660.250	45.93	-4.00	54.0	8.07	AV	14.00	200	Horizontal	Pass
3	5821.000	106.60	-2.44	--	--	Peak	34.00	200	Horizontal	N/A
3**	5821.000	99.21	-2.44	--	--	AV	34.00	200	Horizontal	N/A
4	7311.750	53.60	0.59	74.0	20.40	Peak	239.00	200	Horizontal	Pass
4**	7311.750	42.87	0.59	54.0	11.13	AV	239.00	200	Horizontal	Pass
5	11764.850	53.01	-0.18	74.0	20.99	Peak	0.00	200	Horizontal	Pass
5**	11764.850	43.13	-0.18	54.0	10.87	AV	0.00	200	Horizontal	Pass
6	16081.125	54.40	1.50	74.0	19.60	Peak	360.00	200	Horizontal	Pass
6**	16081.125	45.58	1.50	54.0	8.42	AV	360.00	200	Horizontal	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1583.300	46.39	-16.83	74.0	27.61	Peak	35.00	400	Vertical	Pass
1**	1583.300	30.35	-16.83	54.0	23.65	AV	35.00	400	Vertical	Pass
2	4387.000	46.97	-4.61	74.0	27.03	Peak	0.00	100	Vertical	Pass
2**	4387.000	37.45	-4.61	54.0	16.55	AV	0.00	100	Vertical	Pass
3	5820.250	96.11	-2.27	--	--	Peak	43.00	100	Vertical	N/A
3**	5820.250	89.37	-2.27	--	--	AV	43.00	100	Vertical	N/A
4	7702.250	53.32	1.52	74.0	20.68	Peak	304.00	200	Vertical	Pass
4**	7702.250	45.39	1.52	54.0	8.61	AV	304.00	200	Vertical	Pass
5	11521.412	52.70	-0.87	74.0	21.30	Peak	360.00	150	Vertical	Pass
5**	11521.412	42.72	-0.87	54.0	11.28	AV	360.00	150	Vertical	Pass
6	16077.450	54.86	1.45	74.0	19.14	Peak	90.00	200	Vertical	Pass
6**	16077.450	44.91	1.45	54.0	9.09	AV	90.00	200	Vertical	Pass

11ax80 (SU), U-NII-3, 1 GHz to 18 GHz, Middle Channel, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1584.100	41.35	-17.11	74.0	32.65	Peak	102.00	100	Horizontal	Pass
1**	1584.100	34.45	-17.11	54.0	19.55	AV	102.00	100	Horizontal	Pass
2	4800.250	51.38	-3.38	74.0	22.62	Peak	57.00	150	Horizontal	Pass
2**	4800.250	48.58	-3.38	54.0	5.42	AV	57.00	150	Horizontal	Pass
3	5755.250	102.64	-2.36	--	--	Peak	57.00	150	Horizontal	N/A
3**	5755.250	94.24	-2.36	--	--	AV	57.00	150	Horizontal	N/A
4	7705.000	55.03	2.03	74.0	18.97	Peak	216.00	100	Horizontal	Pass
4**	7705.000	45.38	2.03	54.0	8.62	AV	216.00	100	Horizontal	Pass
5	12261.224	52.36	0.98	74.0	21.64	Peak	354.00	100	Horizontal	Pass
5**	12261.224	43.56	0.98	54.0	10.44	AV	354.00	100	Horizontal	Pass
6	16110.788	55.04	1.84	74.0	18.96	Peak	313.00	400	Horizontal	Pass
6**	16110.788	46.08	1.84	54.0	7.92	AV	313.00	400	Horizontal	Pass

11ax80 (SU), U-NII-3, 1 GHz to 18 GHz, Middle Channel, ANT V

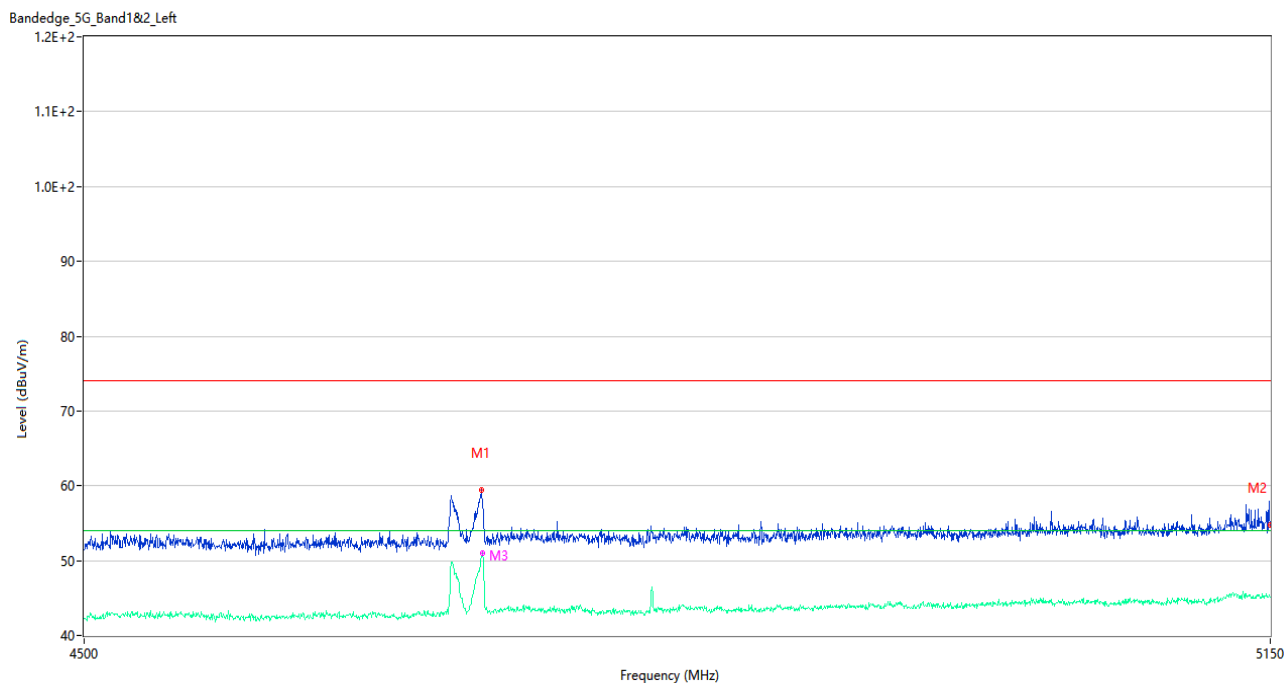
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1583.800	49.22	-17.08	74.0	24.78	Peak	193.00	200	Vertical	Pass
1**	1583.800	37.77	-17.08	54.0	16.23	AV	193.00	200	Vertical	Pass
2	4322.250	47.39	-5.05	74.0	26.61	Peak	174.00	400	Vertical	Pass
2**	4322.250	37.49	-5.05	54.0	16.51	AV	174.00	400	Vertical	Pass
3	5767.000	91.79	-2.34	--	--	Peak	74.00	150	Vertical	N/A
3**	5767.000	84.38	-2.34	--	--	AV	74.00	150	Vertical	N/A
4	7423.000	53.37	1.54	74.0	20.63	Peak	113.00	300	Vertical	Pass
4**	7423.000	44.70	1.54	54.0	9.30	AV	113.00	300	Vertical	Pass
5	11776.012	52.47	-0.17	74.0	21.53	Peak	270.00	200	Vertical	Pass
5**	11776.012	43.06	-0.17	54.0	10.94	AV	270.00	200	Vertical	Pass
6	16059.862	55.03	1.22	74.0	18.97	Peak	14.00	300	Vertical	Pass
6**	16059.862	45.37	1.22	54.0	8.63	AV	14.00	300	Vertical	Pass

A.6.2 Band Edge (Restricted-band)

Note: All mode has been pre tested, only show worst data on this report.

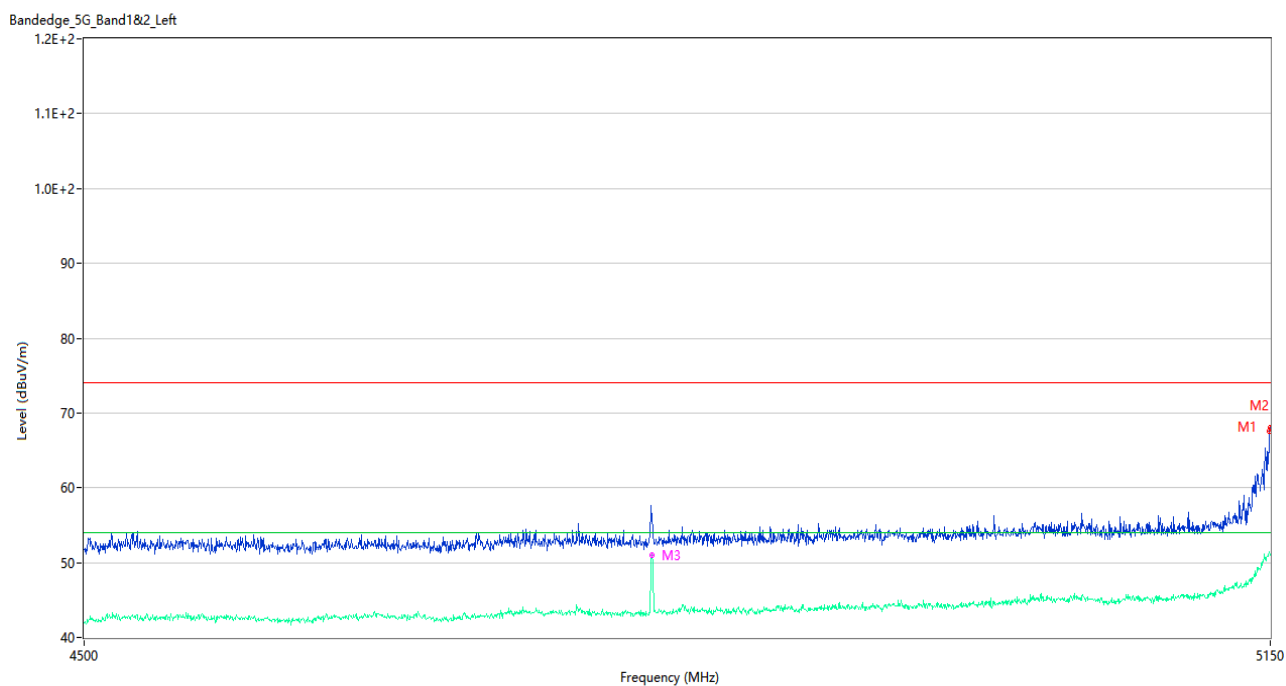
Test Data and Plots

U-NII-1 11n20 Low Channel



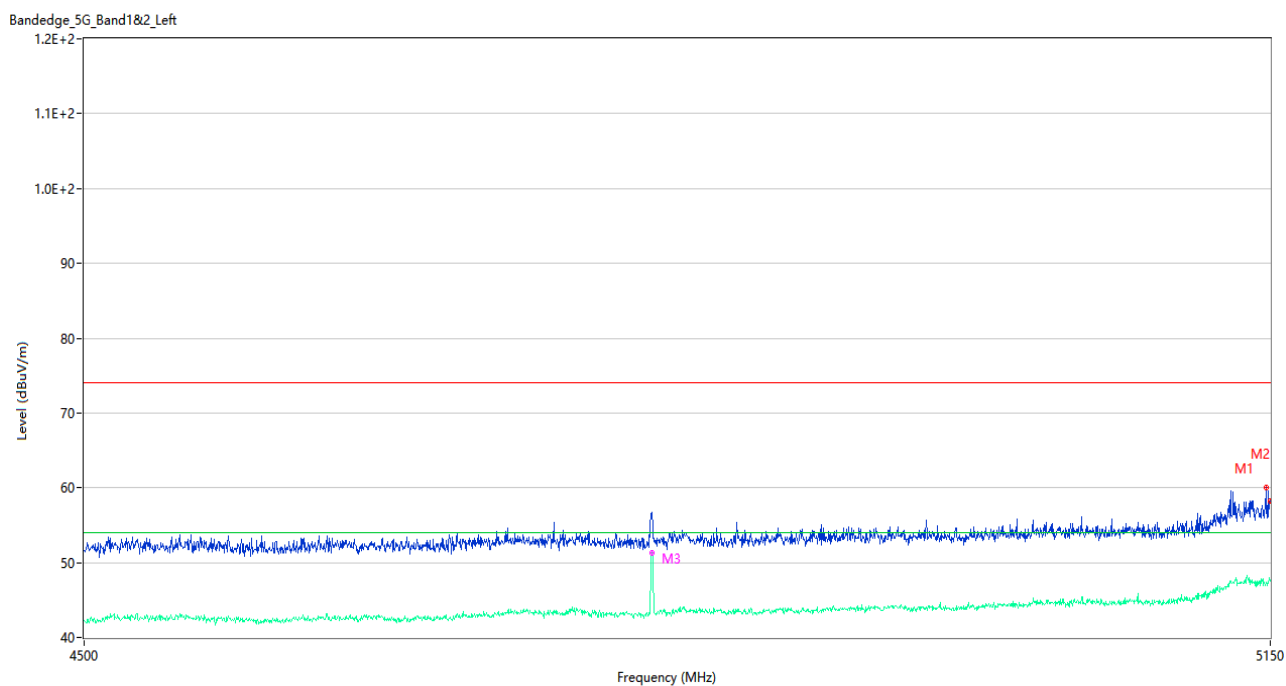
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	4708.000	59.43	2.37	74.0	14.57	Peak	360.00	150	Horizontal	Pass
1**	4708.000	50.47	2.37	54.0	3.53	AV	360.00	150	Horizontal	Pass
2	5150.000	54.79	2.86	74.0	19.21	Peak	74.00	200	Horizontal	Pass
2**	5150.000	45.09	2.86	54.0	8.91	AV	74.00	200	Horizontal	Pass
3	4708.650	57.86	2.34	74.0	16.14	Peak	0.00	200	Horizontal	Pass
3**	4708.650	50.96	2.34	54.0	3.04	AV	0.00	200	Horizontal	Pass

U-NII-1 11n40 Low Channel



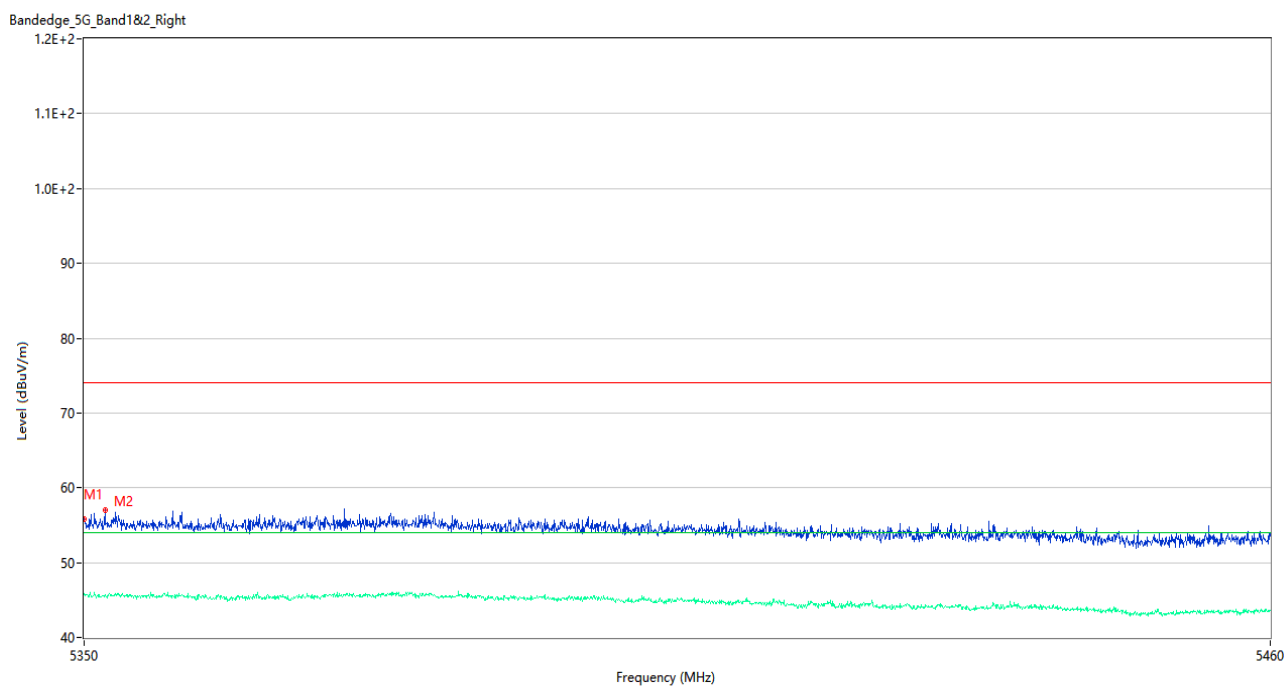
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5149.675	67.54	2.85	74.0	6.46	Peak	15.00	150	Horizontal	Pass
1**	5149.675	50.99	2.85	54.0	3.01	AV	15.00	150	Horizontal	Pass
2	5150.000	68.06	2.86	74.0	5.94	Peak	18.00	150	Horizontal	Pass
2**	5150.000	50.95	2.86	54.0	3.05	AV	18.00	150	Horizontal	Pass
3	4800.300	55.67	2.31	74.0	18.33	Peak	360.00	150	Horizontal	Pass
3**	4800.300	51.00	2.31	54.0	3.00	AV	360.00	150	Horizontal	Pass

U-NII-1 11ac80 Middle Channel



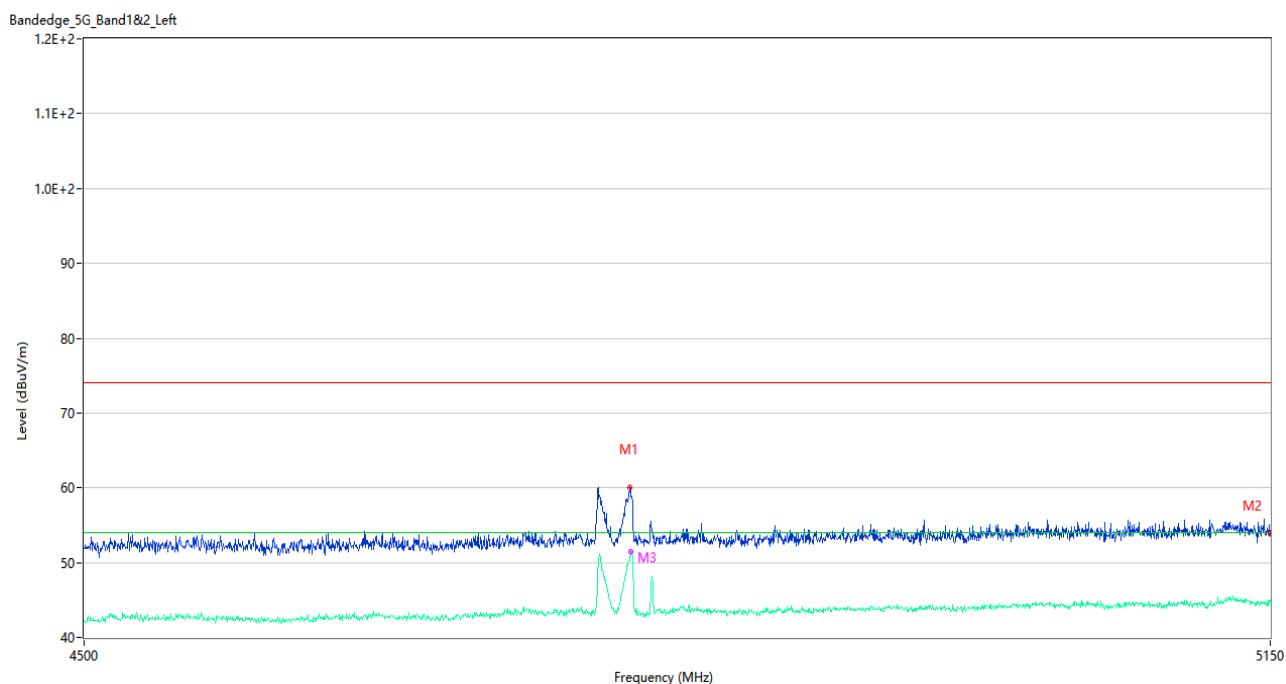
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5147.400	60.03	2.94	74.0	13.97	Peak	30.00	100	Horizontal	Pass
1**	5147.400	47.31	2.94	54.0	6.69	AV	30.00	100	Horizontal	Pass
2	5150.000	58.23	2.86	74.0	15.77	Peak	13.00	100	Horizontal	Pass
2**	5150.000	47.51	2.86	54.0	6.49	AV	13.00	100	Horizontal	Pass
3	4800.300	56.71	2.31	74.0	17.29	Peak	360.00	100	Horizontal	Pass
3**	4800.300	50.94	2.31	54.0	3.06	AV	360.00	100	Horizontal	Pass

U-NII-1 11ac80 Middle Channel



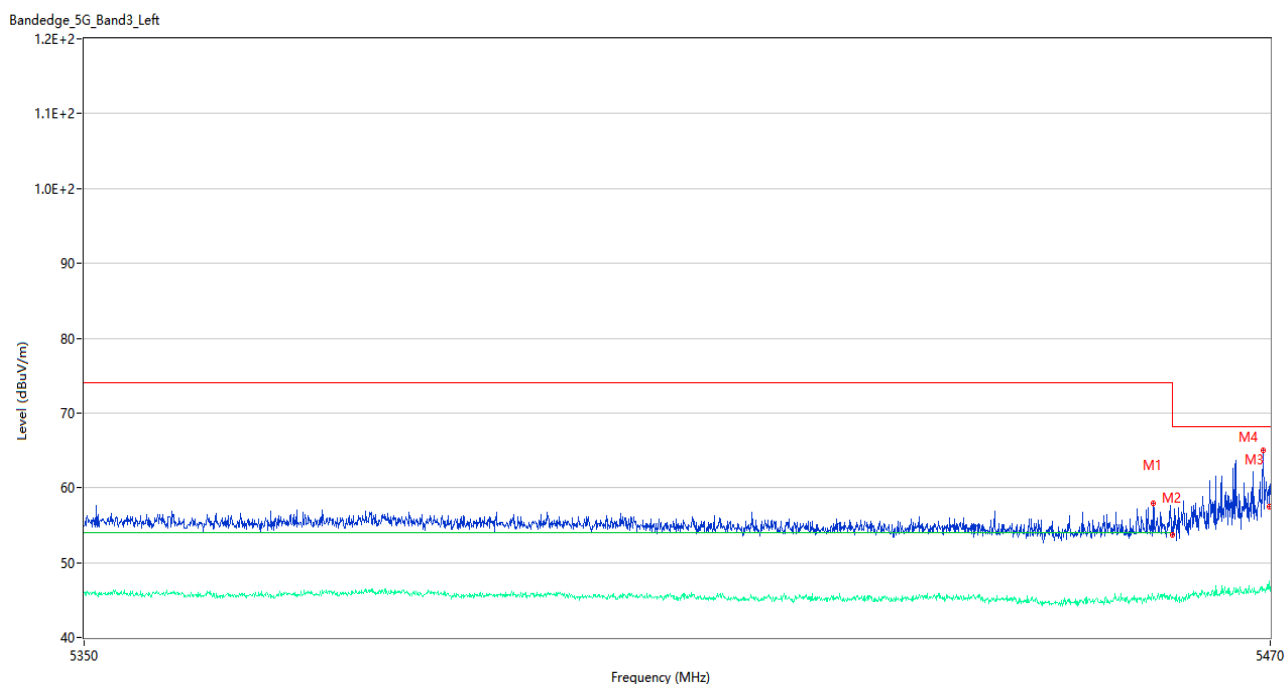
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1	5350.000	55.85	3.32	74.0	18.15	Peak	252.00	200	Horizontal	Pass
1**	5350.000	45.80	3.32	54.0	8.20	AV	252.00	200	Horizontal	Pass
2	5351.925	56.96	3.08	74.0	17.04	Peak	284.00	150	Horizontal	Pass
2**	5351.925	45.75	3.08	54.0	8.25	AV	284.00	150	Horizontal	Pass

U-NII-2A 11ax20 (SU) Low Channel



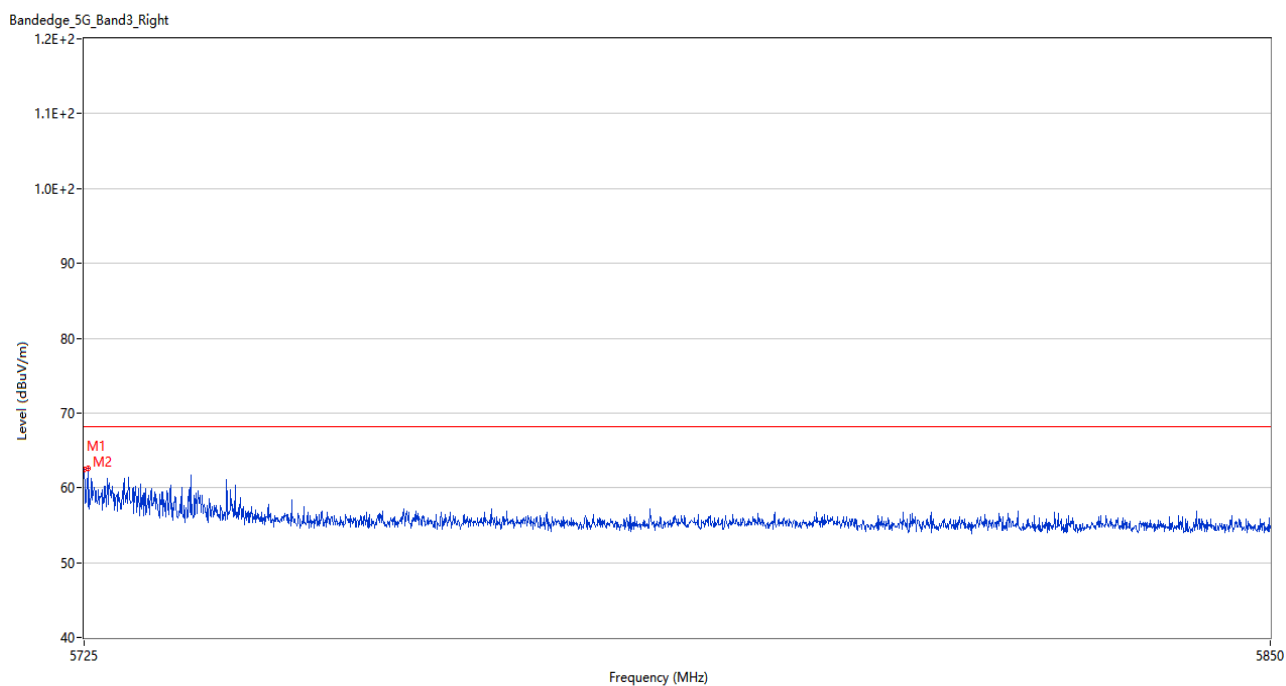
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	4787.950	60.11	2.13	74.0	13.89	Peak	6.00	150	Horizontal	Pass
1**	4787.950	50.27	2.13	54.0	3.73	AV	6.00	150	Horizontal	Pass
2	5150.000	53.80	2.86	74.0	20.20	Peak	0.00	150	Horizontal	Pass
2**	5150.000	44.96	2.86	54.0	9.04	AV	0.00	150	Horizontal	Pass
3	4788.925	58.86	1.76	74.0	15.14	Peak	9.00	150	Horizontal	Pass
3**	4788.925	50.98	1.76	54.0	3.02	AV	9.00	150	Horizontal	Pass

U-NII-2C 11n40 Low Channel



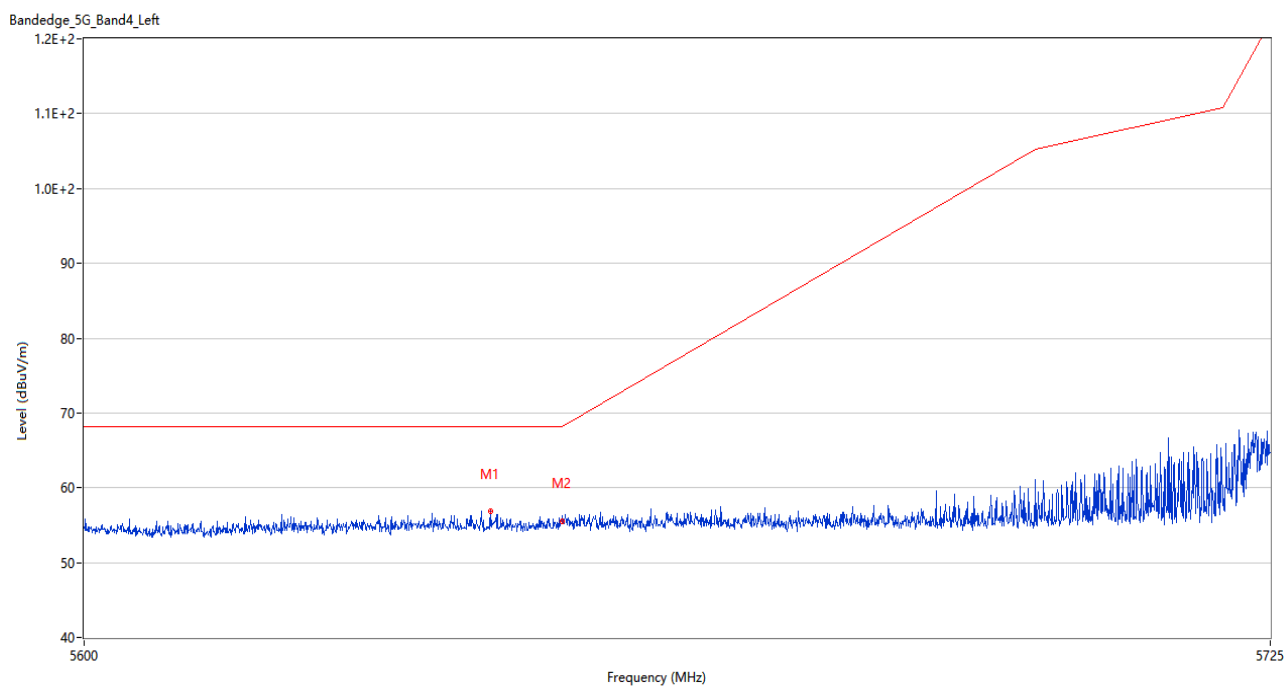
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5458.000	57.99	3.50	74.0	16.01	Peak	51.00	150	Horizontal	Pass
1**	5458.000	45.06	3.50	54.0	8.94	AV	51.00	150	Horizontal	Pass
2	5459.980	53.73	3.49	74.0	20.27	Peak	360.00	150	Horizontal	Pass
2**	5459.980	45.38	3.49	54.0	8.62	AV	360.00	150	Horizontal	Pass
3	5469.280	65.04	3.23	68.2	3.16	Peak	44.00	100	Horizontal	Pass
3**	5469.280	46.26	3.23	--	--	AV	44.00	100	Horizontal	N/A
4	5469.940	57.55	3.29	68.2	10.65	Peak	60.00	200	Horizontal	Pass
4**	5469.940	47.49	3.29	--	--	AV	60.00	200	Horizontal	N/A

U-NII-2C 11n40 High Channel



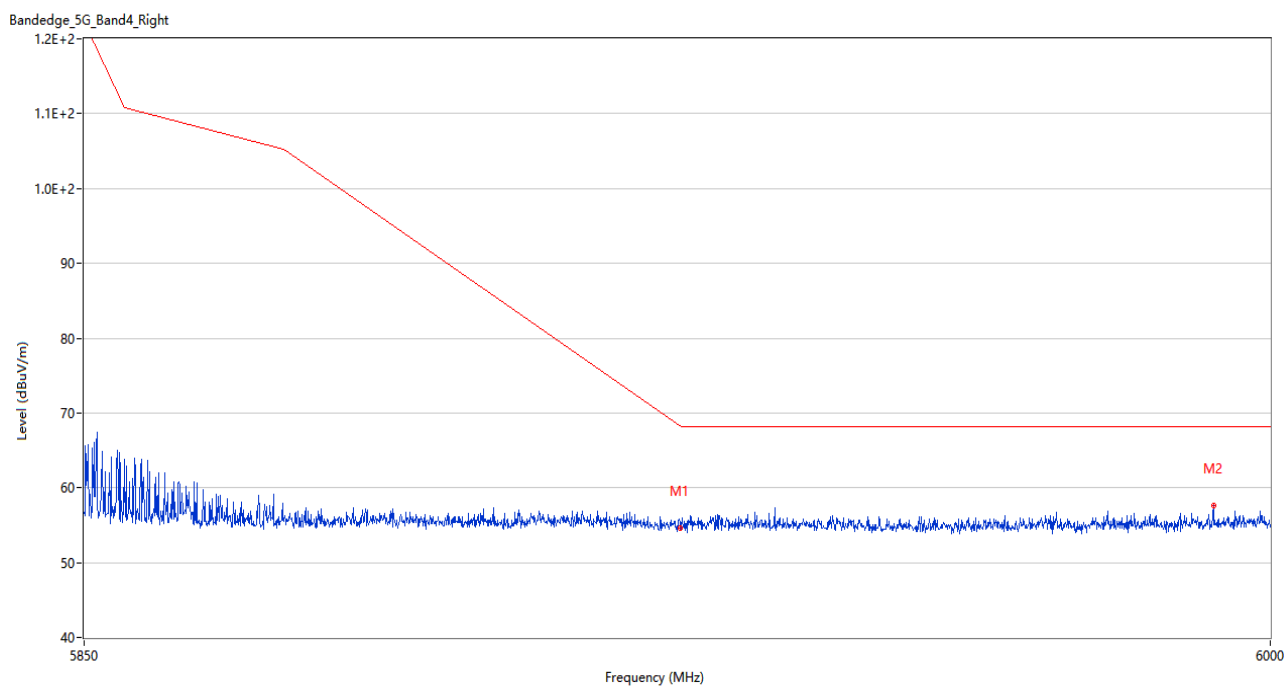
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5725.000	62.46	3.51	68.2	5.74	Peak	19.00	150	Horizontal	Pass
2	5725.375	62.60	3.34	68.2	5.60	Peak	50.00	200	Horizontal	Pass

U-NII-3 11n20 Low Channel



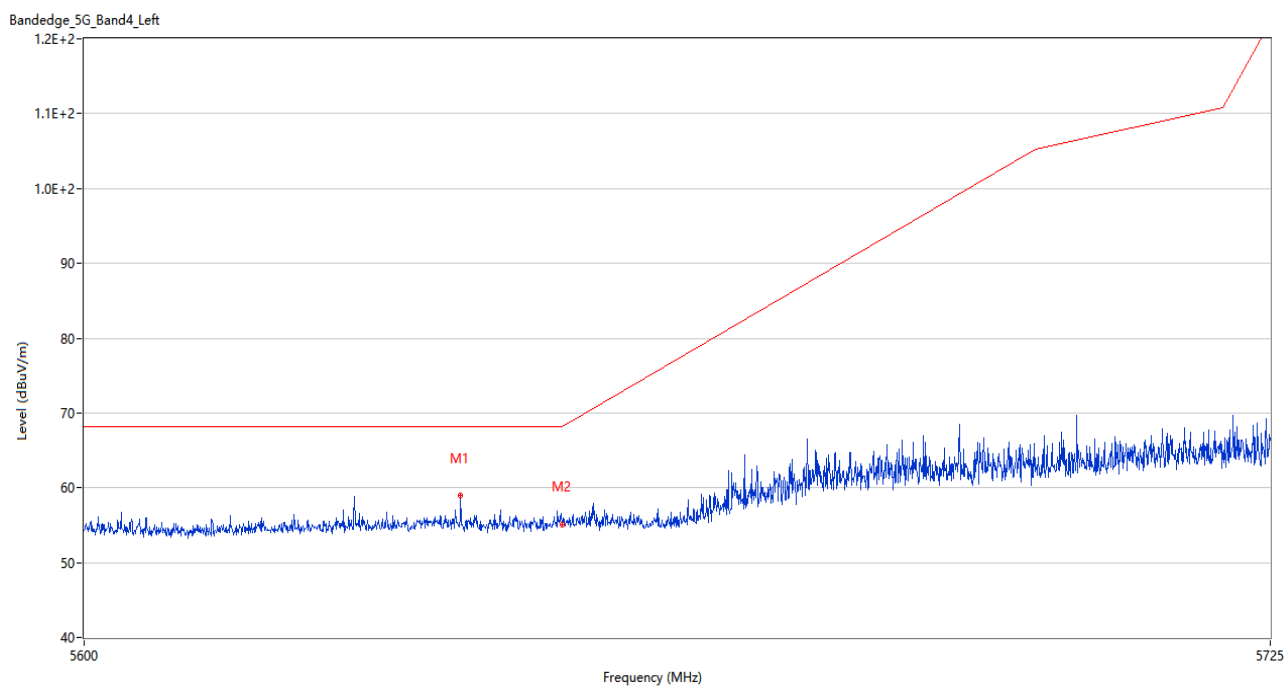
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5642.563	56.83	3.36	68.2	11.37	Peak	22.00	200	Horizontal	Pass
2	5650.000	55.57	3.72	68.2	12.63	Peak	51.00	100	Horizontal	Pass

U-NII-3 11n20 High Channel



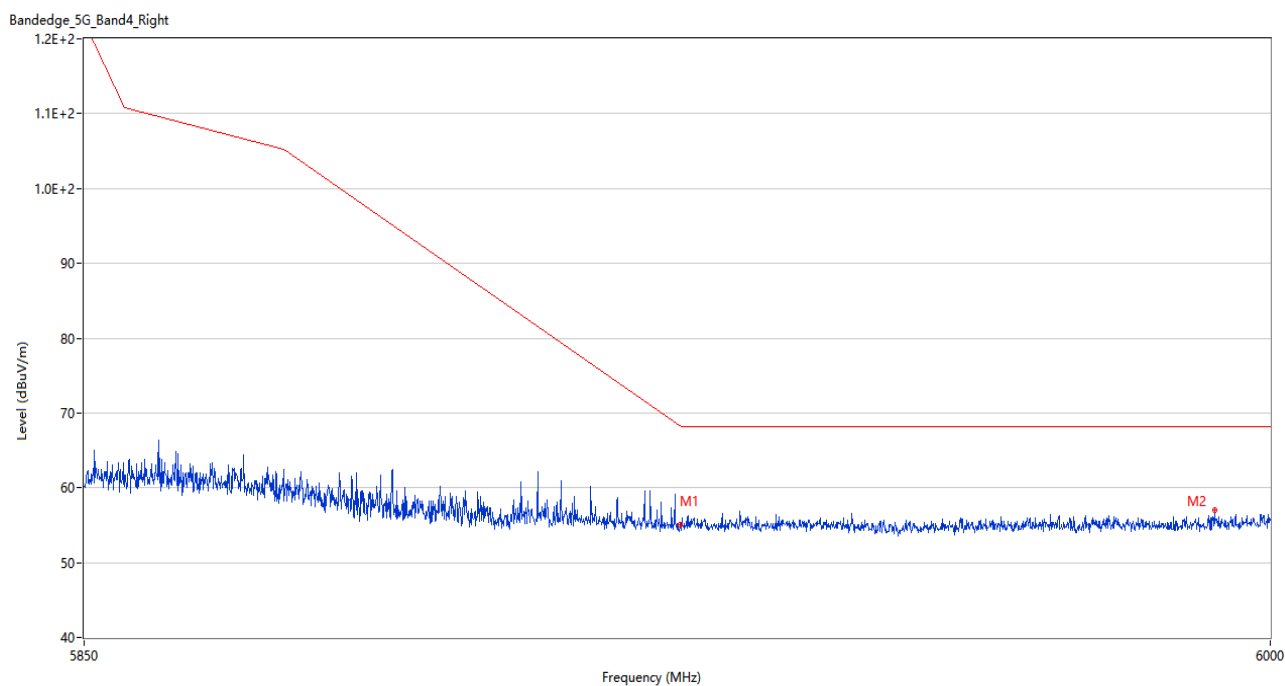
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5924.925	54.61	3.42	68.3	13.69	Peak	265.00	100	Horizontal	Pass
2	5992.725	57.60	4.64	68.2	10.60	Peak	109.00	150	Horizontal	Pass

U-NII-3 11ax80 (SU) Middle Channel



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5639.375	58.91	3.50	68.2	9.29	Peak	61.00	150	Horizontal	Pass
2	5650.000	55.11	3.72	68.2	13.09	Peak	61.00	200	Horizontal	Pass

U-NII-3 11ax80 (SU) Middle Channel



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5924.925	55.10	3.42	68.3	13.20	Peak	36.00	150	Horizontal	Pass
2	5992.875	56.96	4.69	68.2	11.24	Peak	204.00	100	Horizontal	Pass

ANNEX B TEST SETUP PHOTOS

Please refer the document “BL-SZ2440655-AR-2.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ2440655-AW-1.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL-SZ2440655-AI-1.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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--END OF REPORT--