

FCC

RF

TEST REPORT

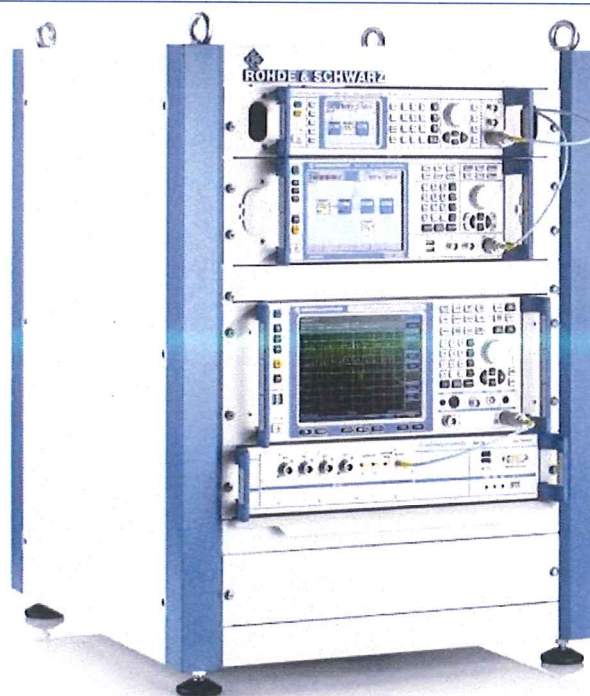
ISSUED BY  
Shenzhen BALUN Technology Co., Ltd.



FOR  
**Dual Band Combo Module**

ISSUED TO  
Edan Instruments, Inc

#15 Jinhui Road, Jinsha Community, Kengzi Sub-District, Pingshan District, 518122 Shenzhen P.R.China

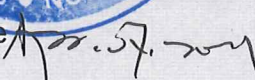


Prepared by:   
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Date:   
Apr. 07, 2021

Approved by: 

Wei Yanquan  
(Chief Engineer)

Date:   
Apr. 07, 2021

Report No.: BL-SZ2120056-602

EUT Name: Dual Band Combo Module

Model Name: RS9113

Brand Name: EDAN

Test Standard: 47 CFR Part 15 Subpart E

FCC ID: SMQ9113EDAN

Test Conclusion: Pass

Test Date: Mar. 05, 2021 ~ Mar. 26, 2021

Date of Issue: Apr. 07, 2021

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### Revision History

<u>Version</u>	<u>Issue Date</u>	<u>Revisions Content</u>
<u>Rev. 01</u>	<u>Apr. 07, 2021</u>	<u>Initial Issue</u>

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# 1 ADMINISTRATIVE DATA (GENERAL INFORMATION)

## 1.1 Identification of the Testing Laboratory

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

## 1.2 Identification of the Responsible Testing Location

Test Location	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, 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.
Description	All measurement facilities used to collect the measurement data are located at Block B, FL 1, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China 518055

## 1.3 Laboratory Condition

Ambient Temperature	20°C to 25°C
Ambient Relative Humidity	45% to 55%
Ambient Pressure	100 kPa to 102 kPa

## 1.4 Announce

- (1) The test report reference to the report template version v4.4.
- (2) The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.
- (3) The test report is invalid if there is any evidence and/or falsification.
- (4) The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein.
- (5) This document may not be altered or revised in any way unless done so by BALUN and all revisions are duly noted in the revisions section.
- (6) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.
- (7) The laboratory is only responsible for the data released by the laboratory, except for the part provided by the applicant.

## 2 PRODUCT INFORMATION

### 2.1 Applicant

Applicant	Edan Instruments, Inc
Address	#15 Jinhui Road, Jinsha Community, Kengzi Sub-District, Pingshan District, 518122 Shenzhen P.R.China

### 2.2 Manufacturer

Manufacturer	Edan Instruments, Inc
Address	#15 Jinhui Road, Jinsha Community, Kengzi Sub-District, Pingshan District, 518122 Shenzhen P.R.China

### 2.3 Factory

Factory	N/A
Address	N/A

### 2.4 General Description for Equipment under Test (EUT)

EUT Name	Dual Band Combo Module
Model Name Under Test	RS9113
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	N/A
Software Version	N/A
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

## 2.5 Technical Information

Network and Wireless connectivity	WIFI 802.11a, 802.11b, 802.11g, 802.11n U-NII-1/2A/2C/3
-----------------------------------	---

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	<input type="checkbox"/> Mobile <input type="checkbox"/> Portable <input checked="" type="checkbox"/> Fix Location
Modulation technology	OFDM
Modulation Type	64QAM, 16QAM, BPSK, QPSK
Product Type	Mobile and portable for FCC standard
Transfer Rate (Mbps) (Single RF path)	802.11a: 54/ 48/ 36/ 24/ 18/ 12/ 9/ 6 Mbps 802.11n: up to 150 Mbps
Channel Bandwidth	802.11a: 20 MHz 802.11n: 20 MHz
Maximum Output Power	U-NII-1: 11.48 dBm U-NII-2A: 11.80 dBm U-NII-2C: 11.52 dBm U-NII-3: 9.55 dBm
Antenna System (eg., MIMO, Smart Antenna)	N/A
Categorization as Correlated or Completely Uncorrelated	N/A
About the Product	The equipment is Dual Band Combo Module, intended for used with information technology equipment.

Antenna Manufacturer	Model	Antenna Type	Antenna Gain
Edan	iM3s	PIFA	2 dBi
	iM3	PIFA	2 dBi
	X8	PIFA	2 dBi
	SE-1202	PIFA	2 dBi
	iSE-301	PIFA	2 dBi
	SE-301	PIFA	2 dBi

Note 1: EUT has the 5 kind of alternate antennas, per antenna is tested.

Note 2: iSE-301 and SE-301 only differ in model name.

## 2.6 Additional Instructions

EUT Software Settings:

Mode	<input checked="" type="checkbox"/> Special software is used. The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.
------	--

During testing, Channel and Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

Test Software Version	Mobaxterm		
Support Units (Software installation media)	Description	Manufacturer	Model
	Notebook	Lenovo	X220

U-NII-1 (5150 - 5250 MHz) Power level setup in software			
Mode	Channel	Frequency (MHz)	Soft Set
11a	CH36	5180	9
11a	CH44	5220	10
11a	CH48	5240	7
11n (HT20)	CH36	5180	8
11n (HT20)	CH44	5220	10
11n (HT20)	CH48	5240	8

U-NII-2A (5250 - 5350 MHz) Power level setup in software			
Mode	Channel	Frequency (MHz)	Soft Set
11a	CH52	5260	7
11a	CH60	5300	10
11a	CH64	5320	7
11n (HT20)	CH52	5260	8
11n (HT20)	CH60	5300	10
11n (HT20)	CH64	5320	8

U-NII-2C (5470 - 5725 MHz) Power level setup in software			
Mode	Channel	Frequency (MHz)	Soft Set
11a	CH100	5500	6
11a	CH116	5580	10
11a	CH140	5700	6
11n (HT20)	CH100	5500	6
11n (HT20)	CH116	5580	10
11n (HT20)	CH140	5700	6

U-NII-3 (5725 - 5850 MHz) Power level setup in software			
Mode	Channel	Frequency (MHz)	Soft Set
11a	CH149	5745	10
11a	CH157	5785	10
11a	CH165	5825	10
11n (HT20)	CH149	5745	10
11n (HT20)	CH157	5785	10
11n (HT20)	CH165	5825	10

Run Software

```

[EDAN] ./transmit rpine0 10 mcs0 750 1 157 0 1 0 0 0 255
TX PWR is 10

--Tx TEST CONFIGURATION--
Tx POWER      : 10
Tx RATE       : mcs0
PACKET_LENGTH : 750
Tx MODE       : CONTINUOUS
CHANNEL_NUM   : 157
RATE_FLAGS    : 1
CHAN_WIDTH    : 0
AGGR_ENABLE   : 0
NO OF PACKETS : 0
DELAY         : 0
CTRY_REGION   : 255
Tx Started
[EDAN] ./transmit rpine0 0
Tx Stopped
[EDAN] ./transmit rpine0 10 mcs0 750 1 165 0 1 0 0 0 255
TX PWR is 10

--Tx TEST CONFIGURATION--
Tx POWER      : 10
Tx RATE       : mcs0
PACKET_LENGTH : 750
Tx MODE       : CONTINUOUS
CHANNEL_NUM   : 165
RATE_FLAGS    : 1
CHAN_WIDTH    : 0
AGGR_ENABLE   : 0
NO OF PACKETS : 0
DELAY         : 0
CTRY_REGION   : 255
Tx Started
[EDAN] ./transmit rpine0 0
Tx Stopped
[EDAN]
  
```



## 2.7 Channel List

20 MHz	
Channel Number	Frequency (MHz)
<b>36</b>	<b>5180</b>
40	5200
<b>44</b>	<b>5220</b>
<b>48</b>	<b>5240</b>
<b>52</b>	<b>5260</b>
56	5280
<b>60</b>	<b>5300</b>
<b>64</b>	<b>5320</b>
<b>100</b>	<b>5500</b>
104	5520
108	5540
112	5560
<b>116</b>	<b>5580</b>
132	5660
136	5680
<b>140</b>	<b>5700</b>
<b>149</b>	<b>5745</b>
153	5765
<b>157</b>	<b>5785</b>
161	5805
<b>165</b>	<b>5825</b>

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

For 802.11a/n(HT20)

U-NII-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
44	Mid	5220	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

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-2A	U-NII-2C	U-NII-3
				Channel	Channel	Channel	Channel
RF Output Power	11a	6	BPSK	48/44/36	64/60/52	140/116/100	165/157/149
	11n(20 MHz)	6.5		48/44/36	64/60/52	140/116/100	165/157/149
Emission Bandwidth & 99% Occupied Bandwidth	11a	6	BPSK	48/44/36	64/60/52	140/116/100	165/157/149
	11n(20 MHz)	6.5		48/44/36	64/60/52	140/116/100	165/157/149
6 dB bandwidth	11a	6	BPSK	N/A	N/A	N/A	165/157/149
	11n(20 MHz)	6.5		N/A	N/A	N/A	165/157/149
Power Spectral Density	11a	6	BPSK	48/44/36	64/60/52	140/116/100	165/157/149
	11n(20 MHz)	6.5		48/44/36	64/60/52	140/116/100	165/157/149
Radiated Spurious Emissions	11a	6	BPSK	48/44/36	64/60/52	140/116/100	165/157/149
	11n(20 MHz)	6.5		48/44/36	64/60/52	140/116/100	165/157/149
Band Edge (Restricted-band)	11a	6	BPSK	48/36	64/52	140/100	165/149
	11n(20 MHz)	6.5		48/36	64/52	140/100	165/149

### 3 SUMMARY OF TEST RESULTS

#### 3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 15 Subpart E (10-1-16 Edition)	Unlicensed National Information Infrastructure Devices
2	KDB Publication 789033 D02v01r04	Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E
3	ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices

#### 3.2 Verdict

No.	Description	FCC Part No.	Test Result	Verdict
1	Antenna Requirement	15.203	--	Pass <sup>Note1</sup>
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
8	Receiver Spurious Emissions	--	--	N/A <sup>Note2</sup>

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

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

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

Note<sup>4</sup>: Because EUT has five antenna suppliers, so radiation tests were conducted separately, and the data is distinguished by the antenna model.

Note<sup>5</sup>: The only difference between the EUT (test samples in this report) and testing sample of report BL-SZ19B0657-602, which was issued by Shenzhen BALUN Technology Co., Ltd. on Mar. 25, 2020 as shown below:

1. Add two antenna models (iSE-301 and SE-301), iSE-301 and SE-301 are the same, only the model names are different.

And others hardware circuit and software were all the same. so just Radiated Spurious Emissions and Band Edge (Restricted-band) were retested in this report, only the iSE-301 model was reported in this report, other test data please refer the report BL-SZ19B0657-602, which was issued by Shenzhen BALUN Technology Co., Ltd. on Mar. 25, 2020.

## 4 GENERAL TEST CONFIGURATIONS

### 4.1 Test Environments

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

Relative Humidity	45% to 55%	
Atmospheric Pressure	100 kPa to 102 kPa	
Temperature	NT (Normal Temperature)	+22°C to +25°C
	LT (Low Temperature)	0°C
	HT (High Temperature)	+40°C
Working Voltage of the EUT	NV (Normal Voltage)	3.3 V
	LV (Low Voltage)	3.0 V
	HV (High Voltage)	3.5 V

### 4.2 Test Equipment List

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer	ROHDE&SCHWARZ	FSV-30	103118	2020.06.08	2021.06.07
Switch Unit with OSP-B157	ROHDE&SCHWARZ	OSP120	101270	2020.06.08	2021.06.07
EMI Receiver	KEYSIGHT	N9038A	MY53220118	2020.06.09	2021.06.08
EMI Receiver	ROHDE&SCHWARZ	ESRP	101036	2020.06.09	2021.06.08
LISN	SCHWARZBECK	NSLK 8127	8127-687	2020.06.09	2021.06.08
Bluetooth Tester	ROHDE&SCHWARZ	CBT	101005	2020.06.08	2021.06.07
DC Power Supply	ROHDE&SCHWARZ	HMP2020	018141664	2020.06.08	2021.06.07
Power Splitter	KMW	DCPD-LDC	1305003215	--	--
Power Sensor	ROHDE&SCHWARZ	NRP-Z21	103971	2020.06.08	2021.06.07
Attenuator (20 dB)	KMW	ZA-S1-201	110617091	--	--
Attenuator (6 dB)	KMW	ZA-S1-61	1305003189	--	--
Temperature Chamber	AHK	SP20	1412	2020.06.10	2021.06.09
Test Antenna-Loop(9 kHz-30 MHz)	SCHWARZBECK	FMZB 1519	1519-037	2019.10.29	2021.10.28
Test Antenna-Bi-Log(30 MHz-3 GHz)	SCHWARZBECK	VULB 9163	9163-624	2019.07.02	2021.07.01
Test Antenna-Horn(1-18 GHz)	SCHWARZBECK	BBHA 9120D	9120D-1917	2019.07.02	2021.07.01
Test Antenna-Horn (18-40 GHz)	A-INFO	LB-180400KF	J211060273	2021.01.05	2023.01.04
Anechoic Chamber	RAINFORD	9m*6m*6m	N/A	2017.02.21	2022.02.20
Anechoic Chamber	EMC Electronic Co., Ltd	20.10*11.60*7.35m	N/A	2018.08.08	2021.08.07
Shielded Enclosure	ChangNing	CN-130701	130703	--	--
Signal Generator	ROHDE&SCHWARZ	SMB100A	177746	2020.06.08	2021.06.07
Power Amplifier	OPHIR RF	5225F	1037	2021.02.18	2022.02.17
Power Amplifier	OPHIR RF	5273F	1016	2021.02.18	2022.02.17
Directional Coupler	Werlantone	C5982-10	109275	N/A	N/A
Directional Coupler	Werlantone	CHP-273E	S00801z-01	N/A	N/A

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Sound Level Meter	B&K	NL-20	00844023	2020.10.23	2021.10.22
Ear Simulator	B&K	4192-L-001	3038758	2021.02.18	2022.02.17
Audio analyzer	B&K	UPL 16	100129	2021.02.27	2022.02.26

### 4.3 Measurement Uncertainty

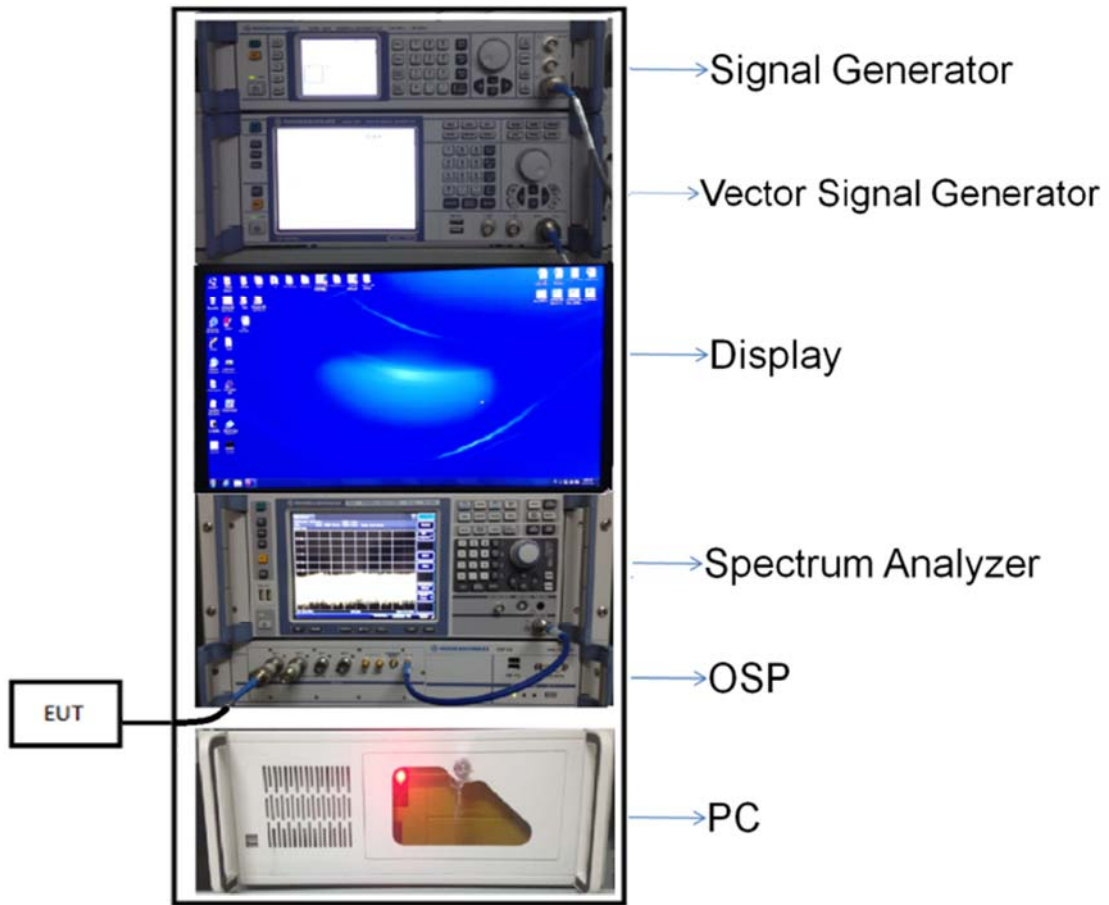
The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2.

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

Measurement	Value
Occupied Channel Bandwidth	$\pm 4\%$
RF output power, conducted	$\pm 1.4$ dB
Power Spectral Density, conducted	$\pm 2.5$ dB
Unwanted Emissions, conducted	$\pm 2.8$ dB
All emissions, radiated	$\pm 5.4$ dB
Temperature	$\pm 1^\circ\text{C}$
Humidity	$\pm 4\%$

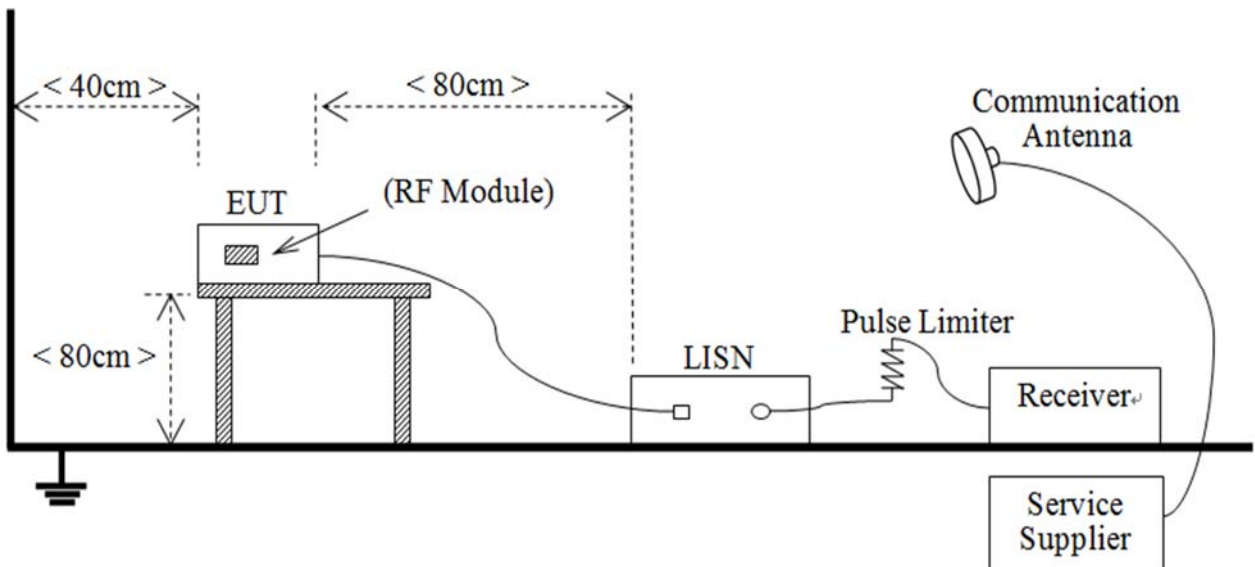
### 4.4 Description of Test Setup

#### 4.4.1 For Antenna Port Test



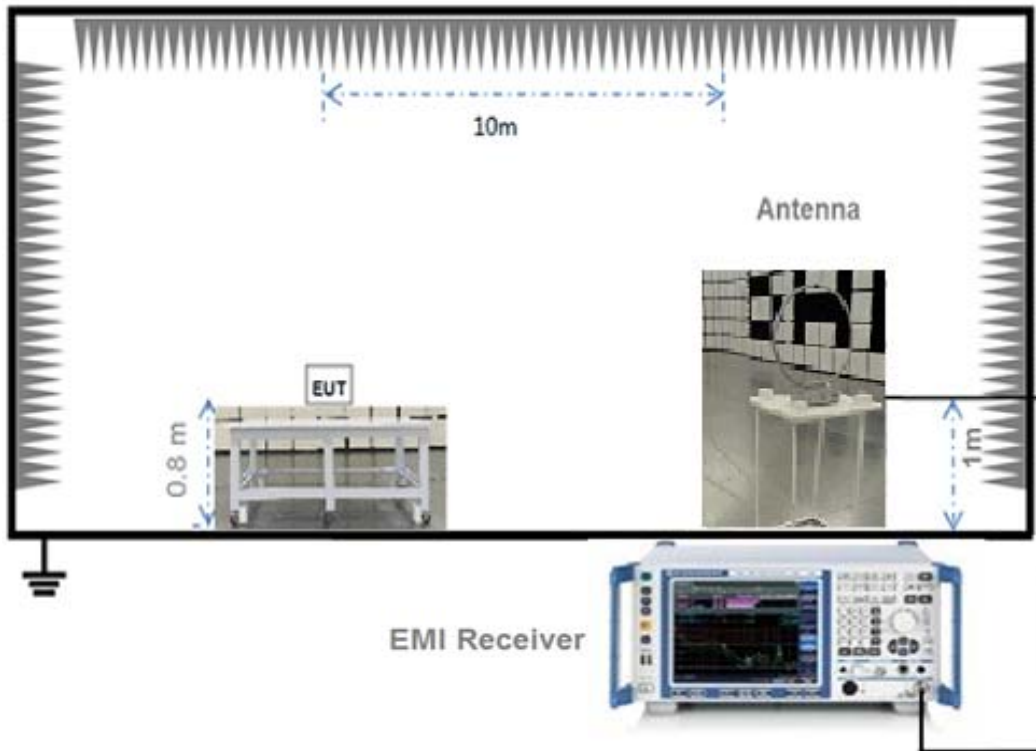
(Diagram 1)

#### 4.4.2 For AC Power Supply Port Test



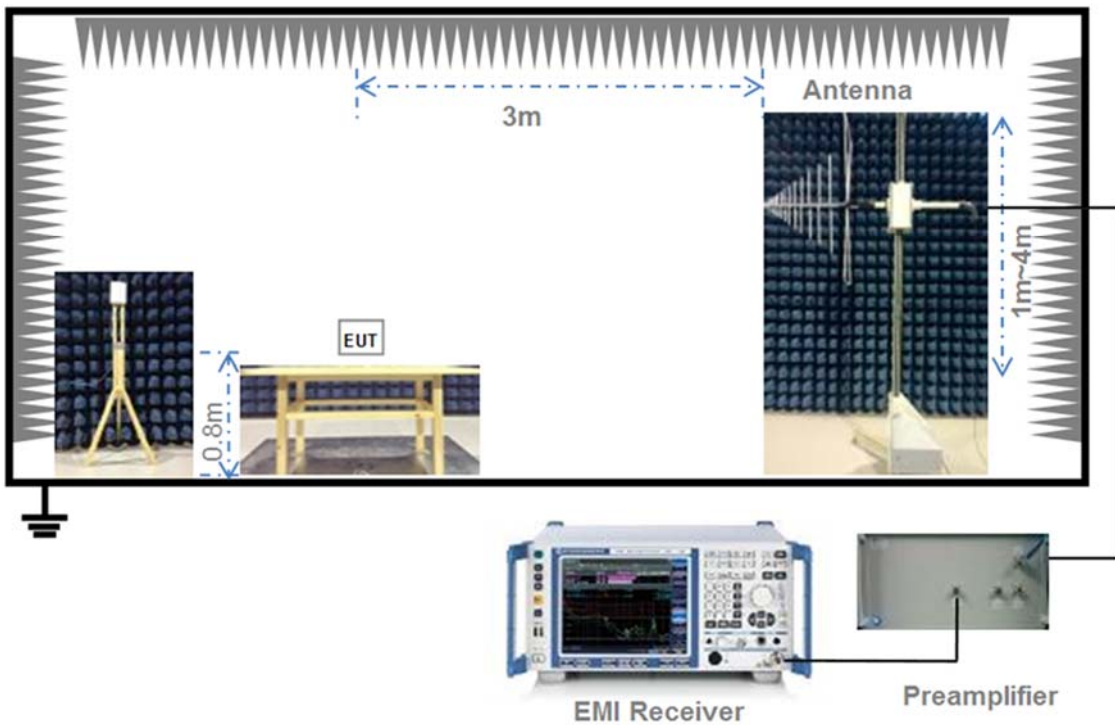
(Diagram 2)

4.4.3 For Radiated Test (Below 30 MHz)



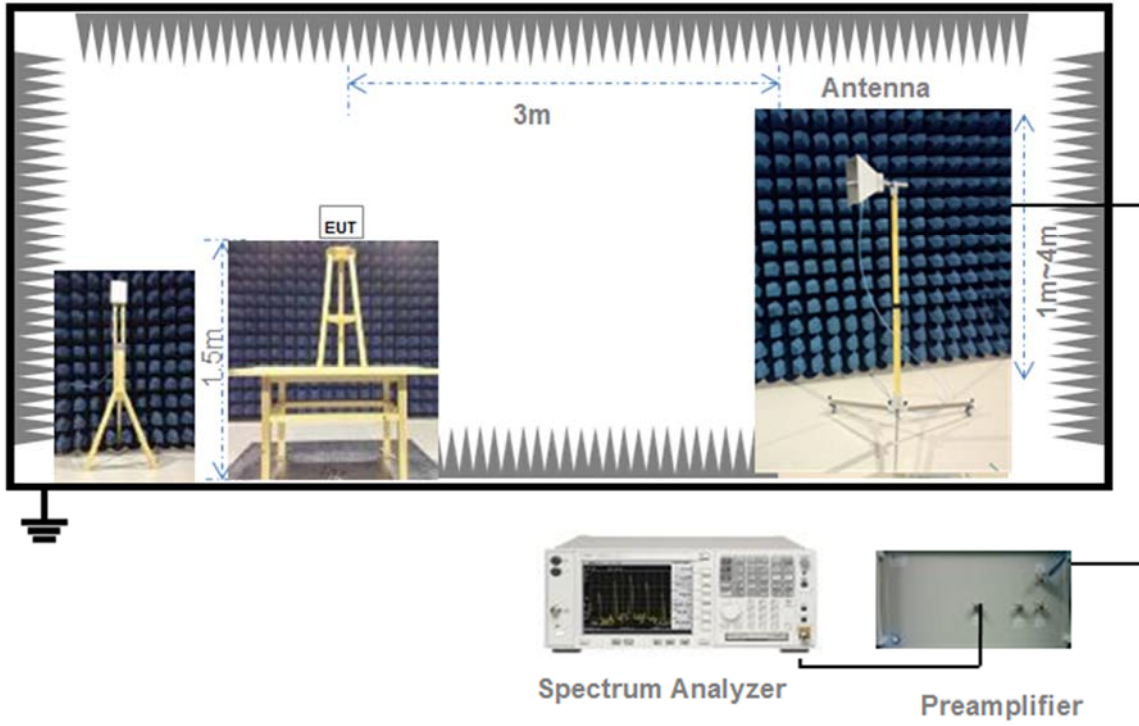
(Diagram 3)

4.4.4 For Radiated Test (30 MHz-1 GHz)



(Diagram 4)

4.4.5 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
Note: Where "B" is the 99% emissions bandwidth in MHz.	

#### 5.1.2 Test Setup

The section 4.4.1 (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

The maximum peak conducted output power may be measured using a broadband Average RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the emission bandwidth and utilize a fast-responding diode detector.

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 4.4.1 (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

#### 5.3.2 Test Setup

The section 4.4.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

#### 5.3.3 Test Procedure

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

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

#### 5.3.4 Test Result

Please refer to ANNEX A.4.

## 5.4 Conducted Emission

### 5.4.1 Limit

FCC §15.207, RSS-GEN, 8.8

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

Frequency range (MHz)	Conducted Limit (dB $\mu$ 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 4.4.2 (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 ( $\mu\text{V}/\text{m}$ )	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<sup>1</sup>: The Limit for radiated test was performed according to FCC Part 15C

Note<sup>2</sup>: 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	<p>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.</p>

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

### 5.5.2 Test Setup

The section 4.4.3-4.4.5 (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 maximum transmit antenna gain (in dBi) to the measured output power level to determine the EIRP level (see guidance on determining the applicable antenna gain)
- c) Add the appropriate maximum ground reflection factor to the EIRP level (6 dB for frequencies  $\leq 30$  MHz, 4.7 dB for frequencies between 30 MHz and 1000 MHz, inclusive and 0 dB for frequencies  $> 1000$  MHz).
- d) 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).
- e) 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 $\mu$ V/m,

EIRP = equivalent isotropic radiated power in dBm

D = specified measurement distance in meters.

- f) Compare the resultant electric field strength level to the applicable limit.
- g) 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  $\geq 98$  percent) cannot be achieved and the duty cycle is constant (i.e., duty cycle variations are less than  $\pm 2$  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 ( $\geq 98$  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  $0^\circ$  to  $360^\circ$ , 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: The RF Output Power please refer to the Report No. BL-SZ19B0657-602, which was issued by Shenzhen BALUN Technology Co., Ltd. on Mar. 25, 2020, **Section A.1 RF Output Power.**

### A.2 Emission Bandwidth & 99% Bandwidth

Note: The Emission Bandwidth & 99% Bandwidth please refer to the Report No. BL-SZ19B0657-602, which was issued by Shenzhen BALUN Technology Co., Ltd. on Mar. 25, 2020, **Section A.2 Emission Bandwidth & 99% Bandwidth.**

### A.3 6 dB Bandwidth

Note: The 6 dB Bandwidth please refer to the Report No. BL-SZ19B0657-602, which was issued by Shenzhen BALUN Technology Co., Ltd. on Mar. 25, 2020, **Section A.3 6 dB Bandwidth.**

### A.4 Power Spectral Density

Note: The Power Spectral Density please refer to the Report No. BL-SZ19B0657-602, which was issued by Shenzhen BALUN Technology Co., Ltd. on Mar. 25, 2020, **Section A.4 Power Spectral Density.**

### A.5 Conducted Emissions

Note: The Conducted Emissions please refer to the Report No. BL-SZ19B0657-602, which was issued by Shenzhen BALUN Technology Co., Ltd. on Mar. 25, 2020, **Section A.5 Conducted Emissions.**

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

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

Note<sup>2</sup>: 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<sup>3</sup>: 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.

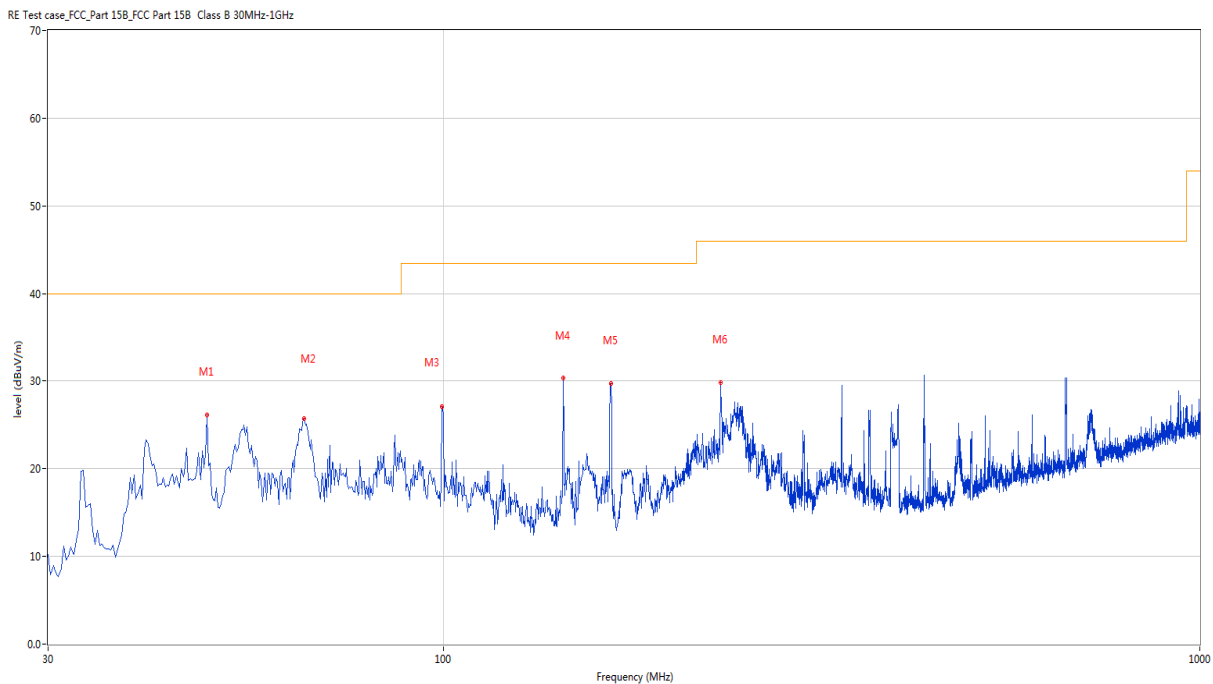
Note<sup>4</sup>: The EUT is working in the Normal link mode below 1 GHz.

Note<sup>5</sup>: The Model (iM3s, iM3, X8, SE-1202) Radiated Emissions please refer to the Report No. BL-SZ19B0657-602, which was issued by Shenzhen BALUN Technology Co., Ltd. on Mar. 25, 2020, **Section A.6 Radiated Spurious Emissions and Band Edge (Restricted-band)**.

### Test Data and Plots

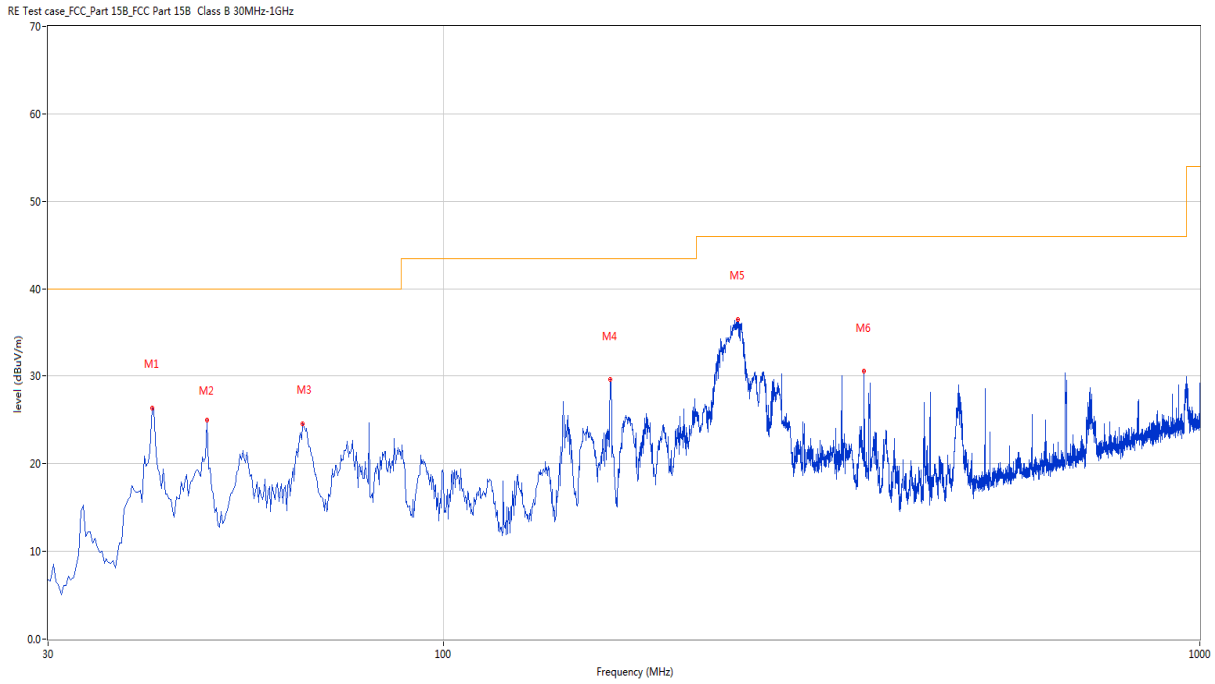
#### iSE-301

#### 30 MHz to 1 GHz, ANT V



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	48.672	26.06	-22.50	40.0	-13.94	Peak	74.10	100	Vertical	Pass
2	65.405	25.70	-25.07	40.0	-14.30	Peak	100.00	100	Vertical	Pass
3	99.598	27.08	-24.79	43.5	-16.42	Peak	81.40	100	Vertical	Pass
4	143.975	30.31	-27.70	43.5	-13.19	Peak	81.40	100	Vertical	Pass
5	166.528	29.72	-26.82	43.5	-13.78	Peak	19.00	100	Vertical	Pass
6	232.488	29.83	-23.27	46.0	-16.17	Peak	221.90	200	Vertical	Pass

30 MHz to 1 GHz, ANT H



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	41.155	26.36	-23.74	40.0	-13.64	Peak	360.00	200	Horizontal	Pass
2	48.672	24.93	-22.50	40.0	-15.07	Peak	360.00	200	Horizontal	Pass
3	65.162	24.57	-25.05	40.0	-15.43	Peak	359.70	200	Horizontal	Pass
4	166.042	29.60	-26.71	43.5	-13.90	Peak	108.70	200	Horizontal	Pass
5	245.098	36.54	-22.92	46.0	-9.46	Peak	360.00	200	Horizontal	Pass
6	360.042	30.54	-19.86	46.0	-15.46	Peak	196.60	100	Horizontal	Pass

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

Note 2: The Model (iM3s, iM3, X8, SE-1202) Radiated Spurious Emission please refer to the Report No. BL-SZ19B0657-602, which was issued by Shenzhen BALUN Technology Co., Ltd. on Mar. 25, 2020, **Section A.6 Radiated Spurious Emissions and Band Edge (Restricted-band)**.

### iSE-301

#### 11a, U-NII-1, 1 GHz to 18 GHz, Low channel, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1584.100	39.65	-17.65	74.0	-34.35	Peak	118.00	150	Vertical	Pass
1**	1584.100	33.45	-17.65	54.0	-20.55	AV	118.00	150	Vertical	Pass
2	2823.200	42.88	-10.52	74.0	-31.12	Peak	360.00	150	Vertical	Pass
2**	2823.200	33.96	-10.52	54.0	-20.04	AV	360.00	150	Vertical	Pass
3	4051.000	46.98	-5.42	74.0	-27.02	Peak	115.00	150	Vertical	Pass
3**	4051.000	37.49	-5.42	54.0	-16.51	AV	115.00	150	Vertical	Pass
4	5183.400	83.41	-3.23	--	7.41	Peak	76.00	150	Vertical	N/A
4**	5183.400	75.20	-3.23	--	75.20	AV	76.00	150	Vertical	N/A
5	7489.325	48.44	-1.83	74.0	-25.56	Peak	48.00	150	Vertical	Pass
5**	7489.325	39.05	-1.83	54.0	-14.95	AV	48.00	150	Vertical	Pass
6	11673.600	51.54	2.46	74.0	-22.46	Peak	252.00	150	Vertical	Pass
6**	11673.600	42.39	2.46	54.0	-11.61	AV	252.00	150	Vertical	Pass

#### 11a, U-NII-1, 1 GHz to 18 GHz, Low channel, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1516.200	37.70	-17.76	74.0	-36.30	Peak	17.00	150	Horizontal	Pass
1**	1516.200	29.48	-17.76	54.0	-24.52	AV	17.00	150	Horizontal	Pass
2	2720.700	42.91	-11.08	74.0	-31.09	Peak	205.00	150	Horizontal	Pass
2**	2720.700	33.43	-11.08	54.0	-20.57	AV	205.00	150	Horizontal	Pass
3	4076.800	47.14	-5.23	74.0	-26.86	Peak	352.00	150	Horizontal	Pass
3**	4076.800	37.04	-5.23	54.0	-16.96	AV	352.00	150	Horizontal	Pass
4	5181.800	93.18	-3.20	--	-92.82	Peak	186.00	150	Horizontal	N/A
4**	5181.800	86.22	-3.20	--	86.22	AV	186.00	150	Horizontal	N/A
5	7392.437	48.39	-1.71	74.0	-25.61	Peak	222.00	150	Horizontal	Pass
5**	7392.437	39.18	-1.71	54.0	-14.82	AV	222.00	150	Horizontal	Pass
6	11650.025	51.78	2.56	74.0	-22.22	Peak	222.00	150	Horizontal	Pass
6**	11650.025	41.60	2.56	54.0	-12.40	AV	222.00	150	Horizontal	Pass

## 11a, U-NII-1, 1 GHz to 18 GHz, Middle channel, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1595.500	40.67	-17.83	74.0	-33.33	Peak	97.00	150	Vertical	Pass
1**	1595.500	29.20	-17.83	54.0	-24.80	AV	97.00	150	Vertical	Pass
2	2791.800	43.43	-11.14	74.0	-30.57	Peak	0.00	150	Vertical	Pass
2**	2791.800	33.73	-11.14	54.0	-20.27	AV	0.00	150	Vertical	Pass
3	3947.800	46.58	-6.21	74.0	-27.42	Peak	332.00	150	Vertical	Pass
3**	3947.800	37.32	-6.21	54.0	-16.68	AV	332.00	150	Vertical	Pass
4	5217.600	87.31	-3.43	--	-19.69	Peak	107.00	150	Vertical	N/A
4**	5217.600	78.85	-3.43	--	78.85	AV	107.00	150	Vertical	N/A
5	7391.575	48.65	-1.72	74.0	-25.35	Peak	0.00	150	Vertical	Pass
5**	7391.575	39.80	-1.72	54.0	-14.20	AV	0.00	150	Vertical	Pass
6	12231.638	51.65	2.62	74.0	-22.35	Peak	0.00	150	Vertical	Pass
6**	12231.638	42.15	2.62	54.0	-11.85	AV	0.00	150	Vertical	Pass

## 11a, U-NII-1, 1 GHz to 18 GHz, Middle channel, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1551.200	38.46	-17.65	74.0	-35.54	Peak	360.00	150	Horizontal	Pass
1**	1551.200	29.06	-17.65	54.0	-24.94	AV	360.00	150	Horizontal	Pass
2	2809.600	43.43	-10.84	74.0	-30.57	Peak	265.00	150	Horizontal	Pass
2**	2809.600	34.08	-10.84	54.0	-19.92	AV	265.00	150	Horizontal	Pass
3	4028.400	46.95	-5.47	74.0	-27.05	Peak	107.00	150	Horizontal	Pass
3**	4028.400	37.46	-5.47	54.0	-16.54	AV	107.00	150	Horizontal	Pass
4	5224.200	95.32	-3.47	--	-90.68	Peak	186.00	150	Horizontal	N/A
4**	5224.200	87.55	-3.47	--	87.55	AV	186.00	150	Horizontal	N/A
5	7554.300	48.00	-1.56	74.0	-26.00	Peak	110.00	150	Horizontal	Pass
5**	7554.300	39.66	-1.56	54.0	-14.34	AV	110.00	150	Horizontal	Pass
6	12191.674	51.54	2.44	74.0	-22.46	Peak	360.00	150	Horizontal	Pass
6**	12191.674	41.98	2.44	54.0	-12.02	AV	360.00	150	Horizontal	Pass

## 11a, U-NII-1, 1 GHz to 18 GHz, High channel, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1595.300	40.89	-17.83	74.0	-33.11	Peak	92.00	150	Vertical	Pass
1**	1595.300	29.08	-17.83	54.0	-24.92	AV	92.00	150	Vertical	Pass
2	2812.300	42.98	-10.82	74.0	-31.02	Peak	255.00	150	Vertical	Pass
2**	2812.300	34.74	-10.82	54.0	-19.26	AV	255.00	150	Vertical	Pass
3	4078.600	46.65	-5.19	74.0	-27.35	Peak	317.00	150	Vertical	Pass
3**	4078.600	37.34	-5.19	54.0	-16.66	AV	317.00	150	Vertical	Pass
4	5238.200	82.95	-3.65	--	-21.05	Peak	104.00	150	Vertical	N/A
4**	5238.200	74.80	-3.65	--	74.80	AV	104.00	150	Vertical	N/A
5	7552.862	48.57	-1.56	74.0	-25.43	Peak	88.00	150	Vertical	Pass
5**	7552.862	39.53	-1.56	54.0	-14.47	AV	88.00	150	Vertical	Pass
6	12337.724	51.81	2.10	74.0	-22.19	Peak	0.00	150	Vertical	Pass
6**	12337.724	42.31	2.10	54.0	-11.69	AV	0.00	150	Vertical	Pass

## 11a, U-NII-1, 1 GHz to 18 GHz, High channel, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1543.800	38.48	-17.76	74.0	-35.52	Peak	249.00	150	Horizontal	Pass
1**	1543.800	29.69	-17.76	54.0	-24.31	AV	249.00	150	Horizontal	Pass
2	2813.300	43.05	-10.82	74.0	-30.95	Peak	149.00	150	Horizontal	Pass
2**	2813.300	34.28	-10.82	54.0	-19.72	AV	149.00	150	Horizontal	Pass
3	4032.200	46.55	-5.37	74.0	-27.45	Peak	341.00	150	Horizontal	Pass
3**	4032.200	37.88	-5.37	54.0	-16.12	AV	341.00	150	Horizontal	Pass
4	5238.000	92.59	-3.65	--	-73.41	Peak	166.00	150	Horizontal	N/A
4**	5238.000	84.66	-3.65	--	84.66	AV	166.00	150	Horizontal	N/A
5	7493.350	48.12	-1.86	74.0	-25.88	Peak	209.00	150	Horizontal	Pass
5**	7493.350	38.96	-1.86	54.0	-15.04	AV	209.00	150	Horizontal	Pass
6	11639.099	51.79	2.44	74.0	-22.21	Peak	67.00	150	Horizontal	Pass
6**	11639.099	42.23	2.44	54.0	-11.77	AV	67.00	150	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)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1328.800	43.01	-17.67	74.0	-30.99	Peak	0.00	150	Vertical	Pass
1**	1328.800	29.06	-17.67	54.0	-24.94	AV	0.00	150	Vertical	Pass
2	2771.800	43.06	-11.22	74.0	-30.94	Peak	15.00	150	Vertical	Pass
2**	2771.800	33.62	-11.22	54.0	-20.38	AV	15.00	150	Vertical	Pass
3	4086.000	47.11	-5.01	74.0	-26.89	Peak	240.00	150	Vertical	Pass
3**	4086.000	37.33	-5.01	54.0	-16.67	AV	240.00	150	Vertical	Pass
4	5178.200	84.00	-3.14	--	-101.00	Peak	185.00	150	Vertical	N/A
4**	5178.200	76.96	-3.14	--	76.96	AV	185.00	150	Vertical	N/A
5	7485.587	48.16	-1.88	74.0	-25.84	Peak	344.00	150	Vertical	Pass
5**	7485.587	38.94	-1.88	54.0	-15.06	AV	344.00	150	Vertical	Pass
6	11637.375	51.31	2.42	74.0	-22.69	Peak	360.00	150	Vertical	Pass
6**	11637.375	42.18	2.42	54.0	-11.82	AV	360.00	150	Vertical	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1496.400	39.41	-17.73	74.0	-34.59	Peak	212.00	150	Horizontal	Pass
1**	1496.400	29.29	-17.73	54.0	-24.71	AV	212.00	150	Horizontal	Pass
2	2765.100	43.62	-11.19	74.0	-30.38	Peak	311.00	150	Horizontal	Pass
2**	2765.100	33.48	-11.19	54.0	-20.52	AV	311.00	150	Horizontal	Pass
3	3870.400	46.40	-6.46	74.0	-27.60	Peak	202.00	150	Horizontal	Pass
3**	3870.400	37.20	-6.46	54.0	-16.80	AV	202.00	150	Horizontal	Pass
4	5175.600	93.02	-3.15	--	-77.98	Peak	171.00	150	Horizontal	N/A
4**	5175.600	84.02	-3.15	--	84.02	AV	171.00	150	Horizontal	N/A
5	7394.737	48.80	-1.59	74.0	-25.20	Peak	282.00	150	Horizontal	Pass
5**	7394.737	39.63	-1.59	54.0	-14.37	AV	282.00	150	Horizontal	Pass
6	12270.737	51.34	2.49	74.0	-22.66	Peak	119.00	150	Horizontal	Pass
6**	12270.737	41.98	2.49	54.0	-12.02	AV	119.00	150	Horizontal	Pass



## 11n20, U-NII-1, 1 GHz to 18 GHz, Middle channel, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1331.400	41.99	-17.73	74.0	-32.01	Peak	0.00	150	Vertical	Pass
1**	1331.400	30.89	-17.73	54.0	-23.11	AV	0.00	150	Vertical	Pass
2	2775.800	42.83	-11.18	74.0	-31.17	Peak	176.00	150	Vertical	Pass
2**	2775.800	32.90	-11.18	54.0	-21.10	AV	176.00	150	Vertical	Pass
3	4268.200	48.10	-4.82	74.0	-25.90	Peak	319.00	150	Vertical	Pass
3**	4268.200	38.26	-4.82	54.0	-15.74	AV	319.00	150	Vertical	Pass
4	5218.000	86.92	-3.45	--	-232.08	Peak	319.00	150	Vertical	N/A
4**	5218.000	79.08	-3.45	--	79.08	AV	319.00	150	Vertical	N/A
5	7597.138	48.47	-2.33	74.0	-25.53	Peak	203.00	150	Vertical	Pass
5**	7597.138	39.87	-2.33	54.0	-14.13	AV	203.00	150	Vertical	Pass
6	12231.925	51.43	2.62	74.0	-22.57	Peak	314.00	150	Vertical	Pass
6**	12231.925	42.36	2.62	54.0	-11.64	AV	314.00	150	Vertical	Pass

## 11n20, U-NII-1, 1 GHz to 18 GHz, Middle channel, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1550.300	38.70	-17.67	74.0	-35.30	Peak	112.00	150	Horizontal	Pass
1**	1550.300	28.52	-17.67	54.0	-25.48	AV	112.00	150	Horizontal	Pass
2	2793.000	42.65	-11.18	74.0	-31.35	Peak	170.00	150	Horizontal	Pass
2**	2793.000	33.16	-11.18	54.0	-20.84	AV	170.00	150	Horizontal	Pass
3	4287.600	47.52	-4.76	74.0	-26.48	Peak	13.00	150	Horizontal	Pass
3**	4287.600	38.45	-4.76	54.0	-15.55	AV	13.00	150	Horizontal	Pass
4	5218.200	95.98	-3.45	--	-78.02	Peak	174.00	150	Horizontal	N/A
4**	5218.200	87.94	-3.45	--	87.94	AV	174.00	150	Horizontal	N/A
5	7350.175	48.37	-2.48	74.0	-25.63	Peak	262.00	150	Horizontal	Pass
5**	7350.175	38.34	-2.48	54.0	-15.66	AV	262.00	150	Horizontal	Pass
6	11672.450	51.10	2.47	74.0	-22.90	Peak	171.00	150	Horizontal	Pass
6**	11672.450	43.12	2.47	54.0	-10.88	AV	171.00	150	Horizontal	Pass

## 11n20, U-NII-1, 1 GHz to 18 GHz, High channel, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1333.400	43.30	-17.75	74.0	-30.70	Peak	360.00	150	Vertical	Pass
1**	1333.400	30.79	-17.75	54.0	-23.21	AV	360.00	150	Vertical	Pass
2	2724.500	43.02	-10.77	74.0	-30.98	Peak	317.00	150	Vertical	Pass
2**	2724.500	33.55	-10.77	54.0	-20.45	AV	317.00	150	Vertical	Pass
3	4022.600	47.31	-5.61	74.0	-26.69	Peak	88.00	150	Vertical	Pass
3**	4022.600	37.08	-5.61	54.0	-16.92	AV	88.00	150	Vertical	Pass
4	5242.400	84.73	-3.72	--	-42.27	Peak	127.00	150	Vertical	N/A
4**	5242.400	76.34	-3.72	--	76.34	AV	127.00	150	Vertical	N/A
5	7421.475	47.67	-2.07	74.0	-26.33	Peak	241.00	150	Vertical	Pass
5**	7421.475	38.21	-2.07	54.0	-15.79	AV	241.00	150	Vertical	Pass
6	11662.963	51.24	2.50	74.0	-22.76	Peak	210.00	150	Vertical	Pass
6**	11662.963	42.54	2.50	54.0	-11.46	AV	210.00	150	Vertical	Pass

## 11n20, U-NII-1, 1 GHz to 18 GHz, High channel, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1599.200	39.68	-17.73	74.0	-34.32	Peak	57.00	150	Horizontal	Pass
1**	1599.200	30.18	-17.73	54.0	-23.82	AV	57.00	150	Horizontal	Pass
2	2763.700	42.97	-11.15	74.0	-31.03	Peak	198.00	150	Horizontal	Pass
2**	2763.700	33.46	-11.15	54.0	-20.54	AV	198.00	150	Horizontal	Pass
3	4031.600	47.49	-5.38	74.0	-26.51	Peak	352.00	150	Horizontal	Pass
3**	4031.600	36.91	-5.38	54.0	-17.09	AV	352.00	150	Horizontal	Pass
4	5241.200	94.19	-3.70	--	-75.81	Peak	170.00	150	Horizontal	N/A
4**	5241.200	86.27	-3.70	--	86.27	AV	170.00	150	Horizontal	N/A
5	7560.625	48.55	-1.78	74.0	-25.45	Peak	302.00	150	Horizontal	Pass
5**	7560.625	39.57	-1.78	54.0	-14.43	AV	302.00	150	Horizontal	Pass
6	12207.776	52.89	2.57	74.0	-21.11	Peak	139.00	150	Horizontal	Pass
6**	12207.776	41.86	2.57	54.0	-12.14	AV	139.00	150	Horizontal	Pass

## 11a, U-NII-2A, 1 GHz to 18 GHz, Low channel, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1332.500	40.53	-17.75	74.0	-33.47	Peak	216.00	150	Vertical	Pass
1**	1332.500	29.20	-17.75	54.0	-24.80	AV	216.00	150	Vertical	Pass
2	2797.100	44.41	-11.14	74.0	-29.59	Peak	344.00	150	Vertical	Pass
2**	2797.100	36.28	-11.14	54.0	-17.72	AV	344.00	150	Vertical	Pass
3	4050.200	46.54	-5.40	74.0	-27.46	Peak	254.00	150	Vertical	Pass
3**	4050.200	37.40	-5.40	54.0	-16.60	AV	254.00	150	Vertical	Pass
4	5261.600	83.86	-3.81	--	-44.14	Peak	128.00	150	Vertical	N/A
4**	5261.600	77.05	-3.81	--	77.05	AV	128.00	150	Vertical	N/A
5	7481.563	48.84	-1.84	74.0	-25.16	Peak	345.00	150	Vertical	Pass
5**	7481.563	38.72	-1.84	54.0	-15.28	AV	345.00	150	Vertical	Pass
6	12232.212	51.88	2.62	74.0	-22.12	Peak	131.00	150	Vertical	Pass
6**	12232.212	42.18	2.62	54.0	-11.82	AV	131.00	150	Vertical	Pass

## 11a, U-NII-2A, 1 GHz to 18 GHz, Low channel, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1524.100	38.13	-17.68	74.0	-35.87	Peak	130.00	150	Horizontal	Pass
1**	1524.100	29.57	-17.68	54.0	-24.43	AV	130.00	150	Horizontal	Pass
2	2810.800	42.97	-10.83	74.0	-31.03	Peak	255.00	150	Horizontal	Pass
2**	2810.800	34.18	-10.83	54.0	-19.82	AV	255.00	150	Horizontal	Pass
3	4133.800	46.86	-5.59	74.0	-27.14	Peak	360.00	150	Horizontal	Pass
3**	4133.800	37.25	-5.59	54.0	-16.75	AV	360.00	150	Horizontal	Pass
4	5256.800	93.98	-3.83	--	-71.02	Peak	165.00	150	Horizontal	N/A
4**	5256.800	86.36	-3.83	--	86.36	AV	165.00	150	Horizontal	N/A
5	7547.975	49.09	-1.58	74.0	-24.91	Peak	264.00	150	Horizontal	Pass
5**	7547.975	39.24	-1.58	54.0	-14.76	AV	264.00	150	Horizontal	Pass
6	12215.825	51.92	2.59	74.0	-22.08	Peak	0.00	150	Horizontal	Pass
6**	12215.825	41.82	2.59	54.0	-12.18	AV	0.00	150	Horizontal	Pass

## 11a, U-NII-2A, 1 GHz to 18 GHz, Middle channel, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1331.600	39.41	-17.73	74.0	-34.59	Peak	1.00	150	Vertical	Pass
1**	1331.600	30.79	-17.73	54.0	-23.21	AV	1.00	150	Vertical	Pass
2	2789.000	42.38	-11.08	74.0	-31.62	Peak	353.00	150	Vertical	Pass
2**	2789.000	34.03	-11.08	54.0	-19.97	AV	353.00	150	Vertical	Pass
3	3981.400	46.61	-5.91	74.0	-27.39	Peak	24.00	150	Vertical	Pass
3**	3981.400	37.67	-5.91	54.0	-16.33	AV	24.00	150	Vertical	Pass
4	5302.600	88.35	-3.28	--	-114.65	Peak	203.00	150	Vertical	N/A
4**	5302.600	80.07	-3.28	--	80.07	AV	203.00	150	Vertical	N/A
5	7408.825	48.38	-1.75	74.0	-25.62	Peak	89.00	150	Vertical	Pass
5**	7408.825	38.88	-1.75	54.0	-15.12	AV	89.00	150	Vertical	Pass
6	12220.713	52.42	2.60	74.0	-21.58	Peak	130.00	150	Vertical	Pass
6**	12220.713	42.07	2.60	54.0	-11.93	AV	130.00	150	Vertical	Pass

## 11a, U-NII-2A, 1 GHz to 18 GHz, Middle channel, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1580.400	38.38	-17.53	74.0	-35.62	Peak	335.00	150	Horizontal	Pass
1**	1580.400	29.00	-17.53	54.0	-25.00	AV	335.00	150	Horizontal	Pass
2	2813.600	42.96	-10.82	74.0	-31.04	Peak	321.00	150	Horizontal	Pass
2**	2813.600	33.31	-10.82	54.0	-20.69	AV	321.00	150	Horizontal	Pass
3	3956.800	46.22	-5.84	74.0	-27.78	Peak	299.00	150	Horizontal	Pass
3**	3956.800	37.02	-5.84	54.0	-16.98	AV	299.00	150	Horizontal	Pass
4	5298.800	97.00	-3.34	--	-83.00	Peak	180.00	150	Horizontal	N/A
4**	5298.800	89.28	-3.34	--	89.28	AV	180.00	150	Horizontal	N/A
5	7551.425	48.31	-1.58	74.0	-25.69	Peak	360.00	150	Horizontal	Pass
5**	7551.425	39.63	-1.58	54.0	-14.37	AV	360.00	150	Horizontal	Pass
6	12206.050	51.81	2.57	74.0	-22.19	Peak	222.00	150	Horizontal	Pass
6**	12206.050	41.83	2.57	54.0	-12.17	AV	222.00	150	Horizontal	Pass

## 11a, U-NII-2A, 1 GHz to 18 GHz, High channel, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1594.000	40.93	-17.81	74.0	-33.07	Peak	103.00	150	Vertical	Pass
1**	1594.000	29.36	-17.81	54.0	-24.64	AV	103.00	150	Vertical	Pass
2	2780.300	43.32	-11.17	74.0	-30.68	Peak	127.00	150	Vertical	Pass
2**	2780.300	33.00	-11.17	54.0	-21.00	AV	127.00	150	Vertical	Pass
3	4189.200	47.21	-5.25	74.0	-26.79	Peak	35.00	150	Vertical	Pass
3**	4189.200	37.55	-5.25	54.0	-16.45	AV	35.00	150	Vertical	Pass
4	5323.200	85.06	-3.25	--	7.06	Peak	78.00	150	Vertical	N/A
4**	5323.200	77.55	-3.25	--	77.55	AV	78.00	150	Vertical	N/A
5	7554.013	48.28	-1.56	74.0	-25.72	Peak	190.00	150	Vertical	Pass
5**	7554.013	38.93	-1.56	54.0	-15.07	AV	190.00	150	Vertical	Pass
6	11757.263	51.36	1.47	74.0	-22.64	Peak	130.00	150	Vertical	Pass
6**	11757.263	41.53	1.47	54.0	-12.47	AV	130.00	150	Vertical	Pass

## 11a, U-NII-2A, 1 GHz to 18 GHz, High channel, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1593.200	39.45	-17.80	74.0	-34.55	Peak	139.00	150	Horizontal	Pass
1**	1593.200	29.52	-17.80	54.0	-24.48	AV	139.00	150	Horizontal	Pass
2	2806.000	43.10	-11.00	74.0	-30.90	Peak	192.00	150	Horizontal	Pass
2**	2806.000	33.79	-11.00	54.0	-20.21	AV	192.00	150	Horizontal	Pass
3	4050.400	46.68	-5.40	74.0	-27.32	Peak	102.00	150	Horizontal	Pass
3**	4050.400	38.23	-5.40	54.0	-15.77	AV	102.00	150	Horizontal	Pass
4	5321.600	94.20	-3.24	--	-62.80	Peak	157.00	150	Horizontal	N/A
4**	5321.600	87.63	-3.24	--	87.63	AV	157.00	150	Horizontal	N/A
5	7619.562	48.64	-2.16	74.0	-25.36	Peak	73.00	150	Horizontal	Pass
5**	7619.562	38.62	-2.16	54.0	-15.38	AV	73.00	150	Horizontal	Pass
6	11681.937	51.38	2.43	74.0	-22.62	Peak	196.00	150	Horizontal	Pass
6**	11681.937	42.66	2.43	54.0	-11.34	AV	196.00	150	Horizontal	Pass

## 11n20, U-NII-2A, 1 GHz to 18 GHz, Low channel, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1329.200	43.71	-17.68	74.0	-30.29	Peak	185.00	150	Vertical	Pass
1**	1329.200	28.12	-17.68	54.0	-25.88	AV	185.00	150	Vertical	Pass
2	2811.000	42.79	-10.83	74.0	-31.21	Peak	1.00	150	Vertical	Pass
2**	2811.000	33.80	-10.83	54.0	-20.20	AV	1.00	150	Vertical	Pass
3	4041.200	46.43	-5.38	74.0	-27.57	Peak	360.00	150	Vertical	Pass
3**	4041.200	37.49	-5.38	54.0	-16.51	AV	360.00	150	Vertical	Pass
4	5258.200	84.27	-3.82	--	-47.73	Peak	132.00	150	Vertical	N/A
4**	5258.200	76.11	-3.82	--	76.11	AV	132.00	150	Vertical	N/A
5	7502.550	49.27	-1.88	74.0	-24.73	Peak	6.00	150	Vertical	Pass
5**	7502.550	38.45	-1.88	54.0	-15.55	AV	6.00	150	Vertical	Pass
6	11635.651	51.07	2.40	74.0	-22.93	Peak	270.00	150	Vertical	Pass
6**	11635.651	41.81	2.40	54.0	-12.19	AV	270.00	150	Vertical	Pass

## 11n20, U-NII-2A, 1 GHz to 18 GHz, Low channel, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1507.400	38.97	-17.80	74.0	-35.03	Peak	220.00	150	Horizontal	Pass
1**	1507.400	28.26	-17.80	54.0	-25.74	AV	220.00	150	Horizontal	Pass
2	2855.900	44.00	-10.65	74.0	-30.00	Peak	351.00	150	Horizontal	Pass
2**	2855.900	33.34	-10.65	54.0	-20.66	AV	351.00	150	Horizontal	Pass
3	4256.200	47.50	-4.75	74.0	-26.50	Peak	85.00	150	Horizontal	Pass
3**	4256.200	37.86	-4.75	54.0	-16.14	AV	85.00	150	Horizontal	Pass
4	5260.800	95.72	-3.81	--	-76.28	Peak	172.00	150	Horizontal	N/A
4**	5260.800	87.22	-3.81	--	87.22	AV	172.00	150	Horizontal	N/A
5	7552.575	48.37	-1.56	74.0	-25.63	Peak	291.00	150	Horizontal	Pass
5**	7552.575	39.27	-1.56	54.0	-14.73	AV	291.00	150	Horizontal	Pass
6	11660.375	51.59	2.51	74.0	-22.41	Peak	359.00	150	Horizontal	Pass
6**	11660.375	41.91	2.51	54.0	-12.09	AV	359.00	150	Horizontal	Pass

## 11n20, U-NII-2A, 1 GHz to 18 GHz, Middle channel, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1331.800	40.21	-17.73	74.0	-33.79	Peak	6.00	150	Vertical	Pass
1**	1331.800	29.98	-17.73	54.0	-24.02	AV	6.00	150	Vertical	Pass
2	2809.700	43.58	-10.84	74.0	-30.42	Peak	346.00	150	Vertical	Pass
2**	2809.700	34.09	-10.84	54.0	-19.91	AV	346.00	150	Vertical	Pass
3	4120.800	47.38	-5.50	74.0	-26.62	Peak	142.00	150	Vertical	Pass
3**	4120.800	37.69	-5.50	54.0	-16.31	AV	142.00	150	Vertical	Pass
4	5299.200	87.60	-3.32	--	-108.40	Peak	196.00	150	Vertical	N/A
4**	5299.200	80.55	-3.32	--	80.55	AV	196.00	150	Vertical	N/A
5	7388.125	47.73	-1.73	74.0	-26.27	Peak	314.00	150	Vertical	Pass
5**	7388.125	38.87	-1.73	54.0	-15.13	AV	314.00	150	Vertical	Pass
6	11680.213	51.83	2.44	74.0	-22.17	Peak	247.00	150	Vertical	Pass
6**	11680.213	42.87	2.44	54.0	-11.13	AV	247.00	150	Vertical	Pass

## 11n20, U-NII-2A, 1 GHz to 18 GHz, Middle channel, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1355.700	38.30	-17.55	74.0	-35.70	Peak	299.00	150	Horizontal	Pass
1**	1355.700	28.62	-17.55	54.0	-25.38	AV	299.00	150	Horizontal	Pass
2	2799.800	42.92	-11.13	74.0	-31.08	Peak	360.00	150	Horizontal	Pass
2**	2799.800	33.63	-11.13	54.0	-20.37	AV	360.00	150	Horizontal	Pass
3	4074.000	46.87	-5.29	74.0	-27.13	Peak	288.00	150	Horizontal	Pass
3**	4074.000	38.15	-5.29	54.0	-15.85	AV	288.00	150	Horizontal	Pass
4	5295.600	97.58	-3.36	--	-77.42	Peak	175.00	150	Horizontal	N/A
4**	5295.600	88.24	-3.36	--	88.24	AV	175.00	150	Horizontal	N/A
5	7357.075	49.01	-2.34	74.0	-24.99	Peak	153.00	150	Horizontal	Pass
5**	7357.075	38.62	-2.34	54.0	-15.38	AV	153.00	150	Horizontal	Pass
6	11653.188	51.86	2.54	74.0	-22.14	Peak	360.00	150	Horizontal	Pass
6**	11653.188	42.58	2.54	54.0	-11.42	AV	360.00	150	Horizontal	Pass

## 11n20, U-NII-2A, 1 GHz to 18 GHz, High channel, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1596.400	40.46	-17.81	74.0	-33.54	Peak	137.00	150	Vertical	Pass
1**	1596.400	31.06	-17.81	54.0	-22.94	AV	137.00	150	Vertical	Pass
2	2789.800	43.26	-11.09	74.0	-30.74	Peak	115.00	150	Vertical	Pass
2**	2789.800	33.72	-11.09	54.0	-20.28	AV	115.00	150	Vertical	Pass
3	3962.000	46.56	-5.44	74.0	-27.44	Peak	28.00	150	Vertical	Pass
3**	3962.000	36.93	-5.44	54.0	-17.07	AV	28.00	150	Vertical	Pass
4	5317.600	87.48	-3.24	--	-109.52	Peak	197.00	150	Vertical	N/A
4**	5317.600	78.94	-3.24	--	78.94	AV	197.00	150	Vertical	N/A
5	7381.513	49.01	-1.72	74.0	-24.99	Peak	16.00	150	Vertical	Pass
5**	7381.513	38.83	-1.72	54.0	-15.17	AV	16.00	150	Vertical	Pass
6	12263.838	51.82	2.55	74.0	-22.18	Peak	263.00	150	Vertical	Pass
6**	12263.838	41.52	2.55	54.0	-12.48	AV	263.00	150	Vertical	Pass

## 11n20, U-NII-2A, 1 GHz to 18 GHz, High channel, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1508.000	38.73	-17.80	74.0	-35.27	Peak	229.00	150	Horizontal	Pass
1**	1508.000	30.45	-17.80	54.0	-23.55	AV	229.00	150	Horizontal	Pass
2	2793.600	43.80	-11.20	74.0	-30.20	Peak	286.00	150	Horizontal	Pass
2**	2793.600	35.23	-11.20	54.0	-18.77	AV	286.00	150	Horizontal	Pass
3	4037.800	46.44	-5.32	74.0	-27.56	Peak	295.00	150	Horizontal	Pass
3**	4037.800	37.52	-5.32	54.0	-16.48	AV	295.00	150	Horizontal	Pass
4	5315.200	95.73	-3.23	--	-60.27	Peak	156.00	150	Horizontal	N/A
4**	5315.200	87.18	-3.23	--	87.18	AV	156.00	150	Horizontal	N/A
5	7556.025	48.65	-1.63	74.0	-25.35	Peak	6.00	150	Horizontal	Pass
5**	7556.025	39.59	-1.63	54.0	-14.41	AV	6.00	150	Horizontal	Pass
6	12226.750	52.14	2.61	74.0	-21.86	Peak	245.00	150	Horizontal	Pass
6**	12226.750	42.51	2.61	54.0	-11.49	AV	245.00	150	Horizontal	Pass



## 11a, U-NII-2C, 1 GHz to 18 GHz, Low channel, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1600.200	41.30	-17.73	74.0	-32.70	Peak	103.00	150	Vertical	Pass
1**	1600.200	28.54	-17.73	54.0	-25.46	AV	103.00	150	Vertical	Pass
2	2827.600	43.97	-10.56	74.0	-30.03	Peak	97.00	150	Vertical	Pass
2**	2827.600	33.47	-10.56	54.0	-20.53	AV	97.00	150	Vertical	Pass
3	4265.200	47.26	-4.80	74.0	-26.74	Peak	360.00	150	Vertical	Pass
3**	4265.200	37.82	-4.80	54.0	-16.18	AV	360.00	150	Vertical	Pass
4	5497.600	86.29	-2.80	--	10.29	Peak	76.00	150	Vertical	N/A
4**	5497.600	78.63	-2.80	--	78.63	AV	76.00	150	Vertical	N/A
5	7440.737	48.02	-2.35	74.0	-25.98	Peak	232.00	150	Vertical	Pass
5**	7440.737	38.30	-2.35	54.0	-15.70	AV	232.00	150	Vertical	Pass
6	11673.888	51.17	2.46	74.0	-22.83	Peak	232.00	150	Vertical	Pass
6**	11673.888	42.51	2.46	54.0	-11.49	AV	232.00	150	Vertical	Pass

## 11a, U-NII-2C, 1 GHz to 18 GHz, Low channel, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1539.600	38.84	-17.75	74.0	-35.16	Peak	133.00	150	Horizontal	Pass
1**	1539.600	28.48	-17.75	54.0	-25.52	AV	133.00	150	Horizontal	Pass
2	2817.200	43.01	-10.63	74.0	-30.99	Peak	20.00	150	Horizontal	Pass
2**	2817.200	33.61	-10.63	54.0	-20.39	AV	20.00	150	Horizontal	Pass
3	4057.200	46.54	-5.45	74.0	-27.46	Peak	253.00	150	Horizontal	Pass
3**	4057.200	37.32	-5.45	54.0	-16.68	AV	253.00	150	Horizontal	Pass
4	5501.200	93.57	-2.86	--	-56.43	Peak	150.00	150	Horizontal	N/A
4**	5501.200	85.77	-2.86	--	85.77	AV	150.00	150	Horizontal	N/A
5	7605.763	48.56	-2.29	74.0	-25.44	Peak	193.00	150	Horizontal	Pass
5**	7605.763	39.54	-2.29	54.0	-14.46	AV	193.00	150	Horizontal	Pass
6	11502.825	51.66	1.02	74.0	-22.34	Peak	150.00	150	Horizontal	Pass
6**	11502.825	41.30	1.02	54.0	-12.70	AV	150.00	150	Horizontal	Pass

## 11a, U-NII-2C, 1 GHz to 18 GHz, Middle channel, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1328.200	39.95	-17.65	74.0	-34.05	Peak	352.00	150	Vertical	Pass
1**	1328.200	30.70	-17.65	54.0	-23.30	AV	352.00	150	Vertical	Pass
2	2803.300	43.06	-11.09	74.0	-30.94	Peak	95.00	150	Vertical	Pass
2**	2803.300	34.33	-11.09	54.0	-19.67	AV	95.00	150	Vertical	Pass
3	4031.400	47.27	-5.38	74.0	-26.73	Peak	316.00	150	Vertical	Pass
3**	4031.400	37.32	-5.38	54.0	-16.68	AV	316.00	150	Vertical	Pass
4	5582.600	88.83	-3.26	--	-156.17	Peak	245.00	150	Vertical	N/A
4**	5582.600	81.92	-3.26	--	81.92	AV	245.00	150	Vertical	N/A
5	7522.962	48.71	-1.61	74.0	-25.29	Peak	278.00	150	Vertical	Pass
5**	7522.962	38.89	-1.61	54.0	-15.11	AV	278.00	150	Vertical	Pass
6	11632.775	51.33	2.37	74.0	-22.67	Peak	39.00	150	Vertical	Pass
6**	11632.775	42.11	2.37	54.0	-11.89	AV	39.00	150	Vertical	Pass

## 11a, U-NII-2C, 1 GHz to 18 GHz, Middle channel, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1472.700	38.85	-17.66	74.0	-35.15	Peak	309.00	150	Horizontal	Pass
1**	1472.700	28.41	-17.66	54.0	-25.59	AV	309.00	150	Horizontal	Pass
2	2822.700	43.22	-10.52	74.0	-30.78	Peak	256.00	150	Horizontal	Pass
2**	2822.700	35.57	-10.52	54.0	-18.43	AV	256.00	150	Horizontal	Pass
3	4228.000	47.31	-4.89	74.0	-26.69	Peak	25.00	150	Horizontal	Pass
3**	4228.000	38.24	-4.89	54.0	-15.76	AV	25.00	150	Horizontal	Pass
4	5577.000	97.08	-3.17	--	-242.92	Peak	340.00	150	Horizontal	N/A
4**	5577.000	88.83	-3.17	--	88.83	AV	340.00	150	Horizontal	N/A
5	7389.275	48.11	-1.74	74.0	-25.89	Peak	224.00	150	Horizontal	Pass
5**	7389.275	39.62	-1.74	54.0	-14.38	AV	224.00	150	Horizontal	Pass
6	12001.063	51.42	1.07	74.0	-22.58	Peak	277.00	150	Horizontal	Pass
6**	12001.063	41.29	1.07	54.0	-12.71	AV	277.00	150	Horizontal	Pass

## 11a, U-NII-2C, 1 GHz to 18 GHz, High channel, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1329.000	40.96	-17.67	74.0	-33.04	Peak	187.00	150	Vertical	Pass
1**	1329.000	32.26	-17.67	54.0	-21.74	AV	187.00	150	Vertical	Pass
2	2811.600	43.26	-10.82	74.0	-30.74	Peak	146.00	150	Vertical	Pass
2**	2811.600	34.44	-10.82	54.0	-19.56	AV	146.00	150	Vertical	Pass
3	4215.200	47.50	-4.83	74.0	-26.50	Peak	170.00	150	Vertical	Pass
3**	4215.200	38.29	-4.83	54.0	-15.71	AV	170.00	150	Vertical	Pass
4	5701.200	84.07	-3.90	--	-93.93	Peak	178.00	150	Vertical	N/A
4**	5701.200	76.79	-3.90	--	76.79	AV	178.00	150	Vertical	N/A
5	7426.075	48.30	-2.12	74.0	-25.70	Peak	360.00	150	Vertical	Pass
5**	7426.075	39.20	-2.12	54.0	-14.80	AV	360.00	150	Vertical	Pass
6	11650.312	51.74	2.55	74.0	-22.26	Peak	152.00	150	Vertical	Pass
6**	11650.312	42.42	2.55	54.0	-11.58	AV	152.00	150	Vertical	Pass

## 11a, U-NII-2C, 1 GHz to 18 GHz, High channel, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1528.500	39.20	-17.74	74.0	-34.80	Peak	267.00	150	Horizontal	Pass
1**	1528.500	28.77	-17.74	54.0	-25.23	AV	267.00	150	Horizontal	Pass
2	2770.600	42.44	-11.22	74.0	-31.56	Peak	56.00	150	Horizontal	Pass
2**	2770.600	33.45	-11.22	54.0	-20.55	AV	56.00	150	Horizontal	Pass
3	4057.200	46.84	-5.45	74.0	-27.16	Peak	106.00	150	Horizontal	Pass
3**	4057.200	37.49	-5.45	54.0	-16.51	AV	106.00	150	Horizontal	Pass
4	5702.600	93.98	-3.88	--	-69.02	Peak	163.00	150	Horizontal	N/A
4**	5702.600	85.80	-3.88	--	85.80	AV	163.00	150	Horizontal	N/A
5	7554.013	48.83	-1.56	74.0	-25.17	Peak	49.00	150	Horizontal	Pass
5**	7554.013	39.76	-1.56	54.0	-14.24	AV	49.00	150	Horizontal	Pass
6	11674.750	51.77	2.46	74.0	-22.23	Peak	38.00	150	Horizontal	Pass
6**	11674.750	42.40	2.46	54.0	-11.60	AV	38.00	150	Horizontal	Pass

## 11n20, U-NII-2C, 1 GHz to 18 GHz, Low channel, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1331.400	41.05	-17.73	74.0	-32.95	Peak	360.00	150	Vertical	Pass
1**	1331.400	30.54	-17.73	54.0	-23.46	AV	360.00	150	Vertical	Pass
2	2818.000	43.38	-10.61	74.0	-30.62	Peak	208.00	150	Vertical	Pass
2**	2818.000	34.11	-10.61	54.0	-19.89	AV	208.00	150	Vertical	Pass
3	4267.200	47.49	-4.81	74.0	-26.51	Peak	316.00	150	Vertical	Pass
3**	4267.200	38.08	-4.81	54.0	-15.92	AV	316.00	150	Vertical	Pass
4	5498.200	87.15	-2.81	--	7.15	Peak	80.00	150	Vertical	N/A
4**	5498.200	79.32	-2.81	--	79.32	AV	80.00	150	Vertical	N/A
5	7549.987	49.61	-1.61	74.0	-24.39	Peak	108.00	150	Vertical	Pass
5**	7549.987	39.47	-1.61	54.0	-14.53	AV	108.00	150	Vertical	Pass
6	11644.562	51.23	2.50	74.0	-22.77	Peak	334.00	150	Vertical	Pass
6**	11644.562	42.23	2.50	54.0	-11.77	AV	334.00	150	Vertical	Pass

## 11n20, U-NII-2C, 1 GHz to 18 GHz, Low channel, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1525.700	39.52	-17.75	74.0	-34.48	Peak	138.00	150	Horizontal	Pass
1**	1525.700	29.11	-17.75	54.0	-24.89	AV	138.00	150	Horizontal	Pass
2	2802.900	42.67	-11.10	74.0	-31.33	Peak	1.00	150	Horizontal	Pass
2**	2802.900	33.10	-11.10	54.0	-20.90	AV	1.00	150	Horizontal	Pass
3	4267.400	47.62	-4.81	74.0	-26.38	Peak	270.00	150	Horizontal	Pass
3**	4267.400	38.68	-4.81	54.0	-15.32	AV	270.00	150	Horizontal	Pass
4	5497.800	94.43	-2.81	--	-65.57	Peak	160.00	150	Horizontal	N/A
4**	5497.800	85.68	-2.81	--	85.68	AV	160.00	150	Horizontal	N/A
5	7387.837	48.14	-1.73	74.0	-25.86	Peak	98.00	150	Horizontal	Pass
5**	7387.837	39.53	-1.73	54.0	-14.47	AV	98.00	150	Horizontal	Pass
6	12223.013	52.46	2.61	74.0	-21.54	Peak	360.00	150	Horizontal	Pass
6**	12223.013	42.04	2.61	54.0	-11.96	AV	360.00	150	Horizontal	Pass

## 11n20, U-NII-2C, 1 GHz to 18 GHz, Middle channel, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1332.500	43.46	-17.75	74.0	-30.54	Peak	360.00	150	Vertical	Pass
1**	1332.500	29.51	-17.75	54.0	-24.49	AV	360.00	150	Vertical	Pass
2	2819.400	43.45	-10.63	74.0	-30.55	Peak	102.00	150	Vertical	Pass
2**	2819.400	34.93	-10.63	54.0	-19.07	AV	102.00	150	Vertical	Pass
3	4011.400	46.28	-5.81	74.0	-27.72	Peak	355.00	150	Vertical	Pass
3**	4011.400	37.04	-5.81	54.0	-16.96	AV	355.00	150	Vertical	Pass
4	5578.800	89.45	-3.16	--	-124.55	Peak	214.00	150	Vertical	N/A
4**	5578.800	82.10	-3.16	--	82.10	AV	214.00	150	Vertical	N/A
5	7538.775	48.49	-1.69	74.0	-25.51	Peak	291.00	150	Vertical	Pass
5**	7538.775	39.45	-1.69	54.0	-14.55	AV	291.00	150	Vertical	Pass
6	11627.600	50.96	2.31	74.0	-23.04	Peak	57.00	150	Vertical	Pass
6**	11627.600	41.69	2.31	54.0	-12.31	AV	57.00	150	Vertical	Pass

## 11n20, U-NII-2C, 1 GHz to 18 GHz, Middle channel, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1527.600	38.32	-17.73	74.0	-35.68	Peak	324.00	150	Horizontal	Pass
1**	1527.600	28.64	-17.73	54.0	-25.36	AV	324.00	150	Horizontal	Pass
2	2812.200	43.51	-10.82	74.0	-30.49	Peak	359.00	150	Horizontal	Pass
2**	2812.200	34.13	-10.82	54.0	-19.87	AV	359.00	150	Horizontal	Pass
3	4217.200	47.47	-4.78	74.0	-26.53	Peak	191.00	150	Horizontal	Pass
3**	4217.200	38.00	-4.78	54.0	-16.00	AV	191.00	150	Horizontal	Pass
4	5577.800	96.68	-3.15	--	-244.32	Peak	341.00	150	Horizontal	N/A
4**	5577.800	89.05	-3.15	--	89.05	AV	341.00	150	Horizontal	N/A
5	7404.513	48.08	-1.70	74.0	-25.92	Peak	327.00	150	Horizontal	Pass
5**	7404.513	39.46	-1.70	54.0	-14.54	AV	327.00	150	Horizontal	Pass
6	11660.375	51.64	2.51	74.0	-22.36	Peak	194.00	150	Horizontal	Pass
6**	11660.375	42.86	2.51	54.0	-11.14	AV	194.00	150	Horizontal	Pass

## 11n20, U-NII-2C, 1 GHz to 18 GHz, High channel, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1528.200	39.95	-17.73	74.0	-34.05	Peak	125.00	150	Vertical	Pass
1**	1528.200	29.76	-17.73	54.0	-24.24	AV	125.00	150	Vertical	Pass
2	2822.000	42.98	-10.52	74.0	-31.02	Peak	15.00	150	Vertical	Pass
2**	2822.000	33.49	-10.52	54.0	-20.51	AV	15.00	150	Vertical	Pass
3	3967.000	46.66	-5.34	74.0	-27.34	Peak	126.00	150	Vertical	Pass
3**	3967.000	36.76	-5.34	54.0	-17.24	AV	126.00	150	Vertical	Pass
4	5702.400	83.70	-3.88	--	-167.30	Peak	251.00	150	Vertical	N/A
4**	5702.400	76.38	-3.88	--	76.38	AV	251.00	150	Vertical	N/A
5	7389.562	48.22	-1.73	74.0	-25.78	Peak	100.00	150	Vertical	Pass
5**	7389.562	39.49	-1.73	54.0	-14.51	AV	100.00	150	Vertical	Pass
6	12256.938	51.32	2.60	74.0	-22.68	Peak	295.00	150	Vertical	Pass
6**	12256.938	41.83	2.60	54.0	-12.17	AV	295.00	150	Vertical	Pass

## 11n20, U-NII-2C, 1 GHz to 18 GHz, High channel, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1513.400	38.94	-17.81	74.0	-35.06	Peak	211.00	150	Horizontal	Pass
1**	1513.400	28.95	-17.81	54.0	-25.05	AV	211.00	150	Horizontal	Pass
2	2821.800	42.81	-10.53	74.0	-31.19	Peak	26.00	150	Horizontal	Pass
2**	2821.800	34.24	-10.53	54.0	-19.76	AV	26.00	150	Horizontal	Pass
3	4148.800	47.01	-5.24	74.0	-26.99	Peak	152.00	150	Horizontal	Pass
3**	4148.800	38.81	-5.24	54.0	-15.19	AV	152.00	150	Horizontal	Pass
4	5702.400	93.97	-3.88	--	-128.03	Peak	222.00	150	Horizontal	N/A
4**	5702.400	85.66	-3.88	--	85.66	AV	222.00	150	Horizontal	N/A
5	7534.750	48.06	-1.75	74.0	-25.94	Peak	46.00	150	Horizontal	Pass
5**	7534.750	39.47	-1.75	54.0	-14.53	AV	46.00	150	Horizontal	Pass
6	12244.000	52.19	2.65	74.0	-21.81	Peak	0.00	150	Horizontal	Pass
6**	12244.000	41.78	2.65	54.0	-12.22	AV	0.00	150	Horizontal	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1327.500	39.54	-17.65	74.0	-34.46	Peak	3.00	150	Vertical	Pass
1**	1327.500	30.40	-17.65	54.0	-23.60	AV	3.00	150	Vertical	Pass
2	2794.900	42.62	-11.20	74.0	-31.38	Peak	340.00	150	Vertical	Pass
2**	2794.900	34.90	-11.20	54.0	-19.10	AV	340.00	150	Vertical	Pass
3	4244.800	47.85	-4.87	74.0	-26.15	Peak	245.00	150	Vertical	Pass
3**	4244.800	37.71	-4.87	54.0	-16.29	AV	245.00	150	Vertical	Pass
4	5743.200	90.10	-3.60	--	-162.90	Peak	253.00	150	Vertical	N/A
4**	5743.200	82.90	-3.60	--	82.90	AV	253.00	150	Vertical	N/A
5	7426.937	48.36	-2.13	74.0	-25.64	Peak	68.00	150	Vertical	Pass
5**	7426.937	39.03	-2.13	54.0	-14.97	AV	68.00	150	Vertical	Pass
6	11631.912	51.14	2.36	74.0	-22.86	Peak	274.00	150	Vertical	Pass
6**	11631.912	42.83	2.36	54.0	-11.17	AV	274.00	150	Vertical	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1536.000	39.18	-17.68	74.0	-34.82	Peak	260.00	150	Horizontal	Pass
1**	1536.000	28.83	-17.68	54.0	-25.17	AV	260.00	150	Horizontal	Pass
2	2805.600	42.92	-11.02	74.0	-31.08	Peak	122.00	150	Horizontal	Pass
2**	2805.600	33.30	-11.02	54.0	-20.70	AV	122.00	150	Horizontal	Pass
3	4255.800	47.88	-4.74	74.0	-26.12	Peak	9.00	150	Horizontal	Pass
3**	4255.800	38.04	-4.74	54.0	-15.96	AV	9.00	150	Horizontal	Pass
4	5749.200	97.57	-3.59	--	-42.43	Peak	140.00	150	Horizontal	N/A
4**	5749.200	90.03	-3.59	--	90.03	AV	140.00	150	Horizontal	N/A
5	7391.575	49.14	-1.72	74.0	-24.86	Peak	57.00	150	Horizontal	Pass
5**	7391.575	38.81	-1.72	54.0	-15.19	AV	57.00	150	Horizontal	Pass
6	12233.938	51.33	2.63	74.0	-22.67	Peak	294.00	150	Horizontal	Pass
6**	12233.938	42.28	2.63	54.0	-11.72	AV	294.00	150	Horizontal	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1332.300	40.51	-17.74	74.0	-33.49	Peak	169.00	150	Vertical	Pass
1**	1332.300	31.98	-17.74	54.0	-22.02	AV	169.00	150	Vertical	Pass
2	2831.300	43.11	-10.69	74.0	-30.89	Peak	17.00	150	Vertical	Pass
2**	2831.300	34.39	-10.69	54.0	-19.61	AV	17.00	150	Vertical	Pass
3	4171.600	47.05	-4.90	74.0	-26.95	Peak	120.00	150	Vertical	Pass
3**	4171.600	37.22	-4.90	54.0	-16.78	AV	120.00	150	Vertical	Pass
4	5787.200	90.46	-2.97	--	-96.54	Peak	187.00	150	Vertical	N/A
4**	5787.200	83.40	-2.97	--	83.40	AV	187.00	150	Vertical	N/A
5	7518.938	48.38	-1.68	74.0	-25.62	Peak	311.00	150	Vertical	Pass
5**	7518.938	38.45	-1.68	54.0	-15.55	AV	311.00	150	Vertical	Pass
6	11661.237	51.61	2.51	74.0	-22.39	Peak	128.00	150	Vertical	Pass
6**	11661.237	41.76	2.51	54.0	-12.24	AV	128.00	150	Vertical	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1515.200	38.26	-17.77	74.0	-35.74	Peak	137.00	150	Horizontal	Pass
1**	1515.200	28.88	-17.77	54.0	-25.12	AV	137.00	150	Horizontal	Pass
2	2817.200	42.69	-10.63	74.0	-31.31	Peak	40.00	150	Horizontal	Pass
2**	2817.200	33.41	-10.63	54.0	-20.59	AV	40.00	150	Horizontal	Pass
3	4088.000	46.69	-4.97	74.0	-27.31	Peak	125.00	150	Horizontal	Pass
3**	4088.000	38.74	-4.97	54.0	-15.26	AV	125.00	150	Horizontal	Pass
4	5782.800	98.88	-3.07	--	-67.12	Peak	166.00	150	Horizontal	N/A
4**	5782.800	91.70	-3.07	--	91.70	AV	166.00	150	Horizontal	N/A
5	7578.450	48.13	-2.18	74.0	-25.87	Peak	359.00	150	Horizontal	Pass
5**	7578.450	38.49	-2.18	54.0	-15.51	AV	359.00	150	Horizontal	Pass
6	12267.000	51.86	2.52	74.0	-22.14	Peak	172.00	150	Horizontal	Pass
6**	12267.000	42.08	2.52	54.0	-11.92	AV	172.00	150	Horizontal	Pass



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

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1583.800	40.24	-17.64	74.0	-33.76	Peak	120.00	150	Vertical	Pass
1**	1583.800	32.45	-17.64	54.0	-21.55	AV	120.00	150	Vertical	Pass
2	2825.700	43.18	-10.49	74.0	-30.82	Peak	77.00	150	Vertical	Pass
2**	2825.700	33.53	-10.49	54.0	-20.47	AV	77.00	150	Vertical	Pass
3	4063.200	46.88	-5.40	74.0	-27.12	Peak	340.00	150	Vertical	Pass
3**	4063.200	37.39	-5.40	54.0	-16.61	AV	340.00	150	Vertical	Pass
4	5822.800	90.17	-2.75	--	-144.83	Peak	235.00	150	Vertical	N/A
4**	5822.800	82.81	-2.75	--	82.81	AV	235.00	150	Vertical	N/A
5	7592.538	48.54	-2.36	74.0	-25.46	Peak	47.00	150	Vertical	Pass
5**	7592.538	39.00	-2.36	54.0	-15.00	AV	47.00	150	Vertical	Pass
6	11626.450	51.88	2.30	74.0	-22.12	Peak	98.00	150	Vertical	Pass
6**	11626.450	41.86	2.30	54.0	-12.14	AV	98.00	150	Vertical	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1583.300	38.37	-17.63	74.0	-35.63	Peak	1.00	150	Horizontal	Pass
1**	1583.300	29.01	-17.63	54.0	-24.99	AV	1.00	150	Horizontal	Pass
2	2827.200	43.37	-10.54	74.0	-30.63	Peak	49.00	150	Horizontal	Pass
2**	2827.200	33.69	-10.54	54.0	-20.31	AV	49.00	150	Horizontal	Pass
3	4089.800	47.16	-5.02	74.0	-26.84	Peak	360.00	150	Horizontal	Pass
3**	4089.800	37.94	-5.02	54.0	-16.06	AV	360.00	150	Horizontal	Pass
4	5828.800	98.42	-2.73	--	-60.58	Peak	159.00	150	Horizontal	N/A
4**	5828.800	90.58	-2.73	--	90.58	AV	159.00	150	Horizontal	N/A
5	7390.712	48.35	-1.73	74.0	-25.65	Peak	346.00	150	Horizontal	Pass
5**	7390.712	39.08	-1.73	54.0	-14.92	AV	346.00	150	Horizontal	Pass
6	12232.787	51.75	2.63	74.0	-22.25	Peak	314.00	150	Horizontal	Pass
6**	12232.787	42.41	2.63	54.0	-11.59	AV	314.00	150	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)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1333.200	40.55	-17.75	74.0	-33.45	Peak	360.00	150	Vertical	Pass
1**	1333.200	31.95	-17.75	54.0	-22.05	AV	360.00	150	Vertical	Pass
2	2823.100	43.07	-10.52	74.0	-30.93	Peak	169.00	150	Vertical	Pass
2**	2823.100	34.68	-10.52	54.0	-19.32	AV	169.00	150	Vertical	Pass
3	4221.200	47.32	-4.72	74.0	-26.68	Peak	105.00	150	Vertical	Pass
3**	4221.200	37.67	-4.72	54.0	-16.33	AV	105.00	150	Vertical	Pass
4	5743.800	89.04	-3.59	--	-95.96	Peak	185.00	150	Vertical	N/A
4**	5743.800	82.35	-3.59	--	82.35	AV	185.00	150	Vertical	N/A
5	7527.275	48.38	-1.61	74.0	-25.62	Peak	323.00	150	Vertical	Pass
5**	7527.275	38.53	-1.61	54.0	-15.47	AV	323.00	150	Vertical	Pass
6	11759.563	51.83	1.45	74.0	-22.17	Peak	128.00	150	Vertical	Pass
6**	11759.563	41.20	1.45	54.0	-12.80	AV	128.00	150	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)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1516.600	39.17	-17.75	74.0	-34.83	Peak	141.00	150	Horizontal	Pass
1**	1516.600	31.55	-17.75	54.0	-22.45	AV	141.00	150	Horizontal	Pass
2	2734.600	43.19	-10.77	74.0	-30.81	Peak	182.00	150	Horizontal	Pass
2**	2734.600	32.65	-10.77	54.0	-21.35	AV	182.00	150	Horizontal	Pass
3	4233.200	47.50	-5.07	74.0	-26.50	Peak	290.00	150	Horizontal	Pass
3**	4233.200	38.03	-5.07	54.0	-15.97	AV	290.00	150	Horizontal	Pass
4	5742.000	98.01	-3.63	--	-40.99	Peak	139.00	150	Horizontal	N/A
4**	5742.000	90.61	-3.63	--	90.61	AV	139.00	150	Horizontal	N/A
5	7608.637	48.52	-2.27	74.0	-25.48	Peak	97.00	150	Horizontal	Pass
5**	7608.637	39.30	-2.27	54.0	-14.70	AV	97.00	150	Horizontal	Pass
6	11724.488	51.37	1.93	74.0	-22.63	Peak	159.00	150	Horizontal	Pass
6**	11724.488	41.31	1.93	54.0	-12.69	AV	159.00	150	Horizontal	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1463.500	40.61	-17.68	74.0	-33.39	Peak	341.00	150	Vertical	Pass
1**	1463.500	27.78	-17.68	54.0	-26.22	AV	341.00	150	Vertical	Pass
2	2789.200	44.60	-11.08	74.0	-29.40	Peak	341.00	150	Vertical	Pass
2**	2789.200	33.65	-11.08	54.0	-20.35	AV	341.00	150	Vertical	Pass
3	3963.400	46.47	-5.32	74.0	-27.53	Peak	278.00	150	Vertical	Pass
3**	3963.400	37.12	-5.32	54.0	-16.88	AV	278.00	150	Vertical	Pass
4	5788.400	91.76	-2.94	--	-92.24	Peak	184.00	150	Vertical	N/A
4**	5788.400	83.40	-2.94	--	83.40	AV	184.00	150	Vertical	N/A
5	7407.675	47.99	-1.73	74.0	-26.01	Peak	276.00	150	Vertical	Pass
5**	7407.675	39.05	-1.73	54.0	-14.95	AV	276.00	150	Vertical	Pass
6	11653.474	51.82	2.54	74.0	-22.18	Peak	172.00	150	Vertical	Pass
6**	11653.474	42.12	2.54	54.0	-11.88	AV	172.00	150	Vertical	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1528.400	39.49	-17.73	74.0	-34.51	Peak	127.00	150	Horizontal	Pass
1**	1528.400	32.17	-17.73	54.0	-21.83	AV	127.00	150	Horizontal	Pass
2	2789.700	43.02	-11.09	74.0	-30.98	Peak	360.00	150	Horizontal	Pass
2**	2789.700	33.72	-11.09	54.0	-20.28	AV	360.00	150	Horizontal	Pass
3	4103.400	46.93	-5.31	74.0	-27.07	Peak	30.00	150	Horizontal	Pass
3**	4103.400	37.31	-5.31	54.0	-16.69	AV	30.00	150	Horizontal	Pass
4	5786.400	100.17	-2.99	--	-63.83	Peak	164.00	150	Horizontal	N/A
4**	5786.400	92.50	-2.99	--	92.50	AV	164.00	150	Horizontal	N/A
5	7422.050	48.29	-2.09	74.0	-25.71	Peak	93.00	150	Horizontal	Pass
5**	7422.050	38.59	-2.09	54.0	-15.41	AV	93.00	150	Horizontal	Pass
6	11630.474	52.20	2.34	74.0	-21.80	Peak	114.00	150	Horizontal	Pass
6**	11630.474	42.24	2.34	54.0	-11.76	AV	114.00	150	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)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1593.600	41.24	-17.81	74.0	-32.76	Peak	255.00	150	Vertical	Pass
1**	1593.600	29.51	-17.81	54.0	-24.49	AV	255.00	150	Vertical	Pass
2	2805.900	43.10	-11.01	74.0	-30.90	Peak	19.00	150	Vertical	Pass
2**	2805.900	33.51	-11.01	54.0	-20.49	AV	19.00	150	Vertical	Pass
3	4025.400	46.71	-5.56	74.0	-27.29	Peak	232.00	150	Vertical	Pass
3**	4025.400	37.87	-5.56	54.0	-16.13	AV	232.00	150	Vertical	Pass
4	5828.000	90.12	-2.74	--	-174.88	Peak	265.00	150	Vertical	N/A
4**	5828.000	82.60	-2.74	--	82.60	AV	265.00	150	Vertical	N/A
5	7474.950	48.10	-1.96	74.0	-25.90	Peak	359.00	150	Vertical	Pass
5**	7474.950	39.27	-1.96	54.0	-14.73	AV	359.00	150	Vertical	Pass
6	11654.625	50.83	2.54	74.0	-23.17	Peak	208.00	150	Vertical	Pass
6**	11654.625	42.00	2.54	54.0	-12.00	AV	208.00	150	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)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1542.300	39.27	-17.72	74.0	-34.73	Peak	137.00	150	Horizontal	Pass
1**	1542.300	28.75	-17.72	54.0	-25.25	AV	137.00	150	Horizontal	Pass
2	2762.300	43.20	-11.11	74.0	-30.80	Peak	41.00	150	Horizontal	Pass
2**	2762.300	32.88	-11.11	54.0	-21.12	AV	41.00	150	Horizontal	Pass
3	4087.400	46.65	-4.98	74.0	-27.35	Peak	9.00	150	Horizontal	Pass
3**	4087.400	37.69	-4.98	54.0	-16.31	AV	9.00	150	Horizontal	Pass
4	5827.200	98.85	-2.74	--	-58.15	Peak	157.00	150	Horizontal	N/A
4**	5827.200	91.39	-2.74	--	91.39	AV	157.00	150	Horizontal	N/A
5	7545.675	48.23	-1.58	74.0	-25.77	Peak	85.00	150	Horizontal	Pass
5**	7545.675	39.81	-1.58	54.0	-14.19	AV	85.00	150	Horizontal	Pass
6	11653.188	51.40	2.54	74.0	-22.60	Peak	0.00	150	Horizontal	Pass
6**	11653.188	41.66	2.54	54.0	-12.34	AV	0.00	150	Horizontal	Pass

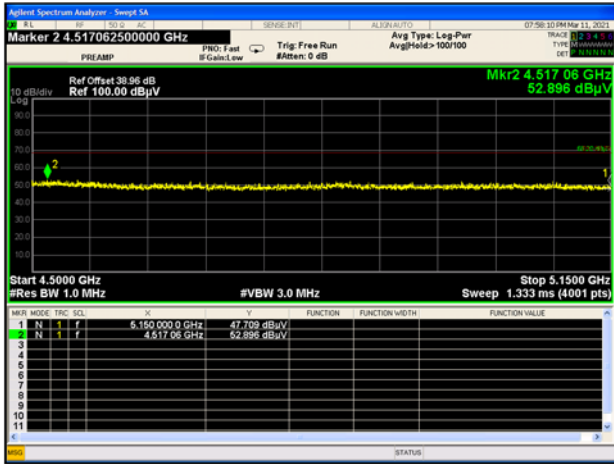
## A.6.2 Band Edge (Restricted-band)

Note: The Model (iM3s, iM3, X8, SE-1202) Band Edge (Restricted-band) please refer to the Report No. BL-SZ19B0657-602, which was issued by Shenzhen BALUN Technology Co., Ltd. on Mar. 25, 2020, **Section A.6.2 Band Edge (Restricted-band)**.

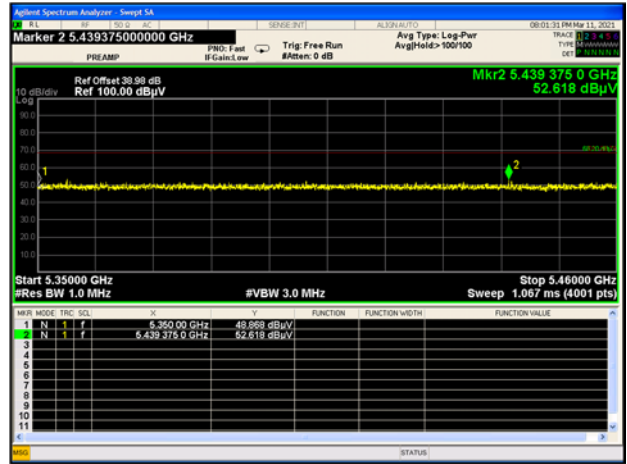
Test Band	Mode	Channel	Verdict
U-NII-1	802.11a	Low	Pass
		High	Pass
	802.11n(HT20)	Low	Pass
		High	Pass
U-NII-2A	802.11a	Low	Pass
		High	Pass
	802.11n(HT20)	Low	Pass
		High	Pass
U-NII-2C	802.11a	Low	Pass
		High	Pass
	802.11n(HT20)	Low	Pass
		High	Pass
U-NII-3	802.11a	Low	Pass
		High	Pass
	802.11n(HT20)	Low	Pass
		High	Pass

Test Plots  
ISE-301

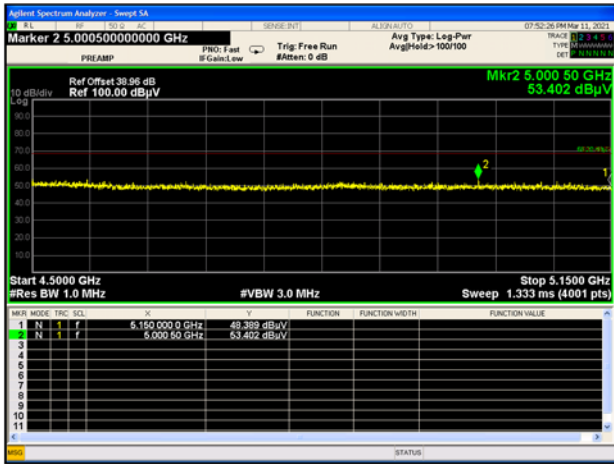
U-NII-1 11a CH36 Peak



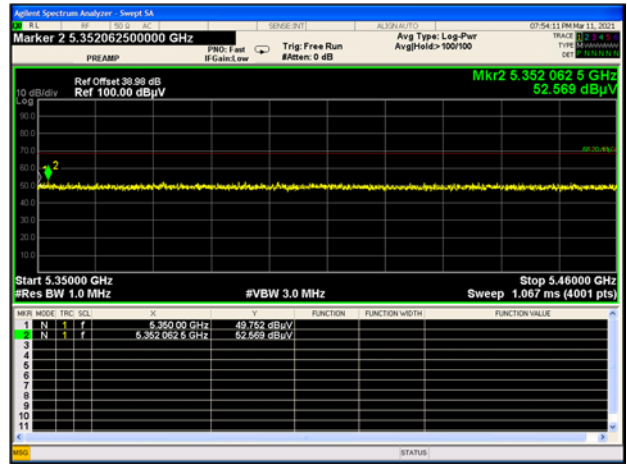
U-NII-1 11a CH48 Peak



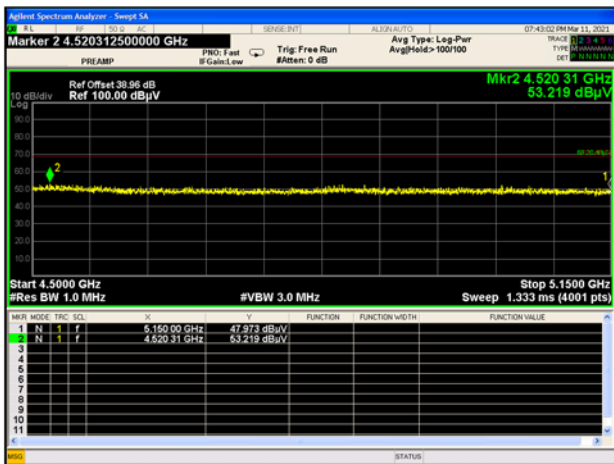
U-NII-1 11n20 CH36 Peak



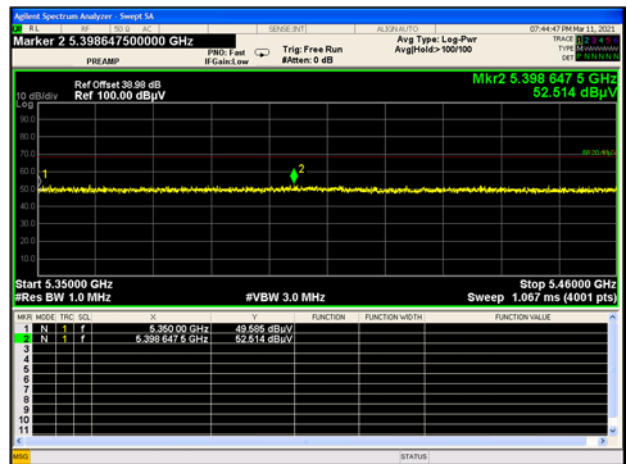
U-NII-1 11n20 CH48 Peak



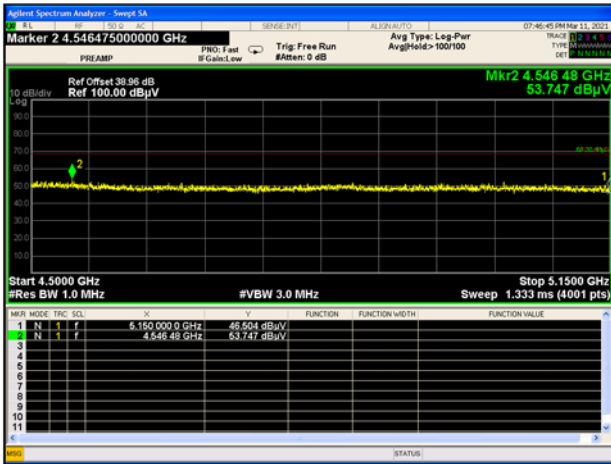
U-NII-2A 11a CH52 Peak



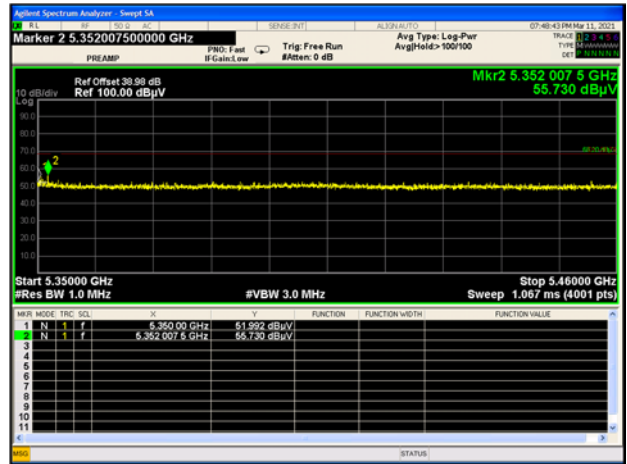
U-NII-2A 11a CH64 Peak



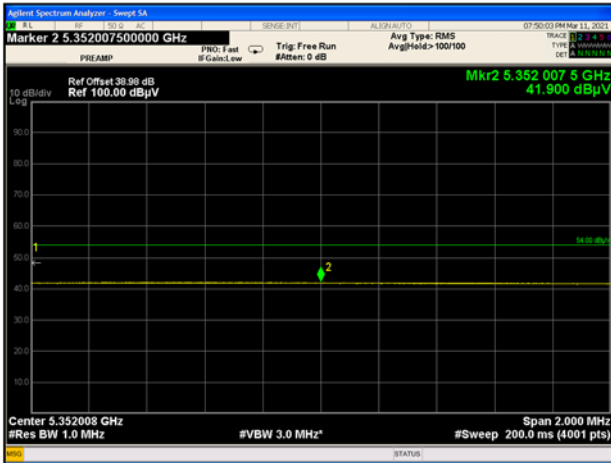
U-NII-2A 11n20 CH52 Peak



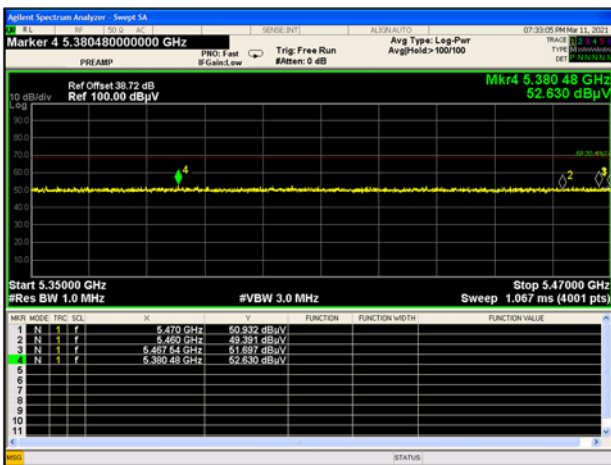
U-NII-2A 11n20 CH64 Peak



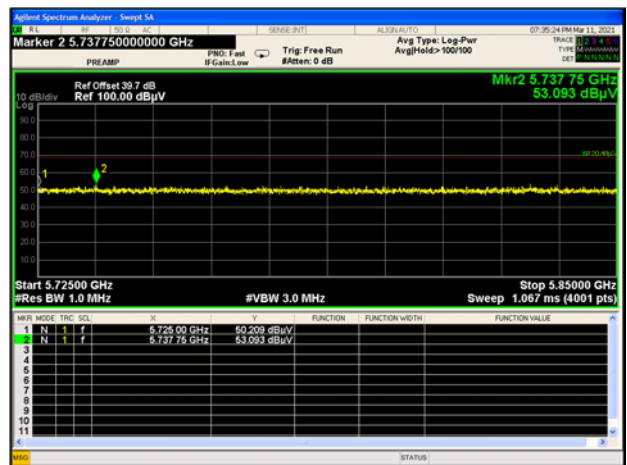
U-NII-2A 11n20 CH64 AV



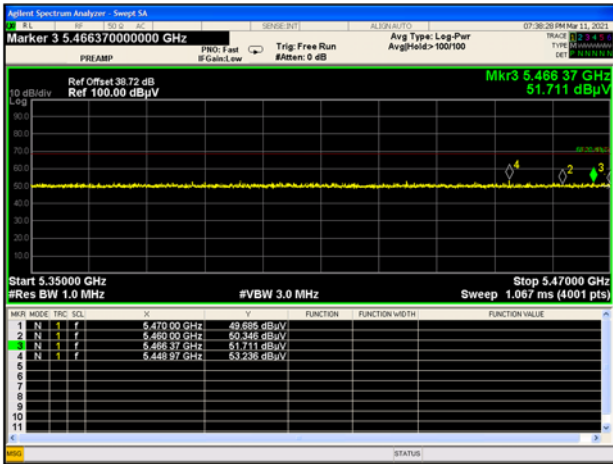
U-NII-2C 11a CH100 Peak



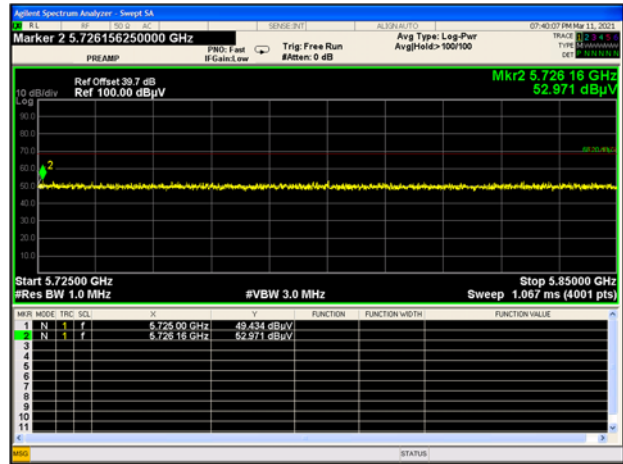
U-NII-2C 11a CH140 Peak



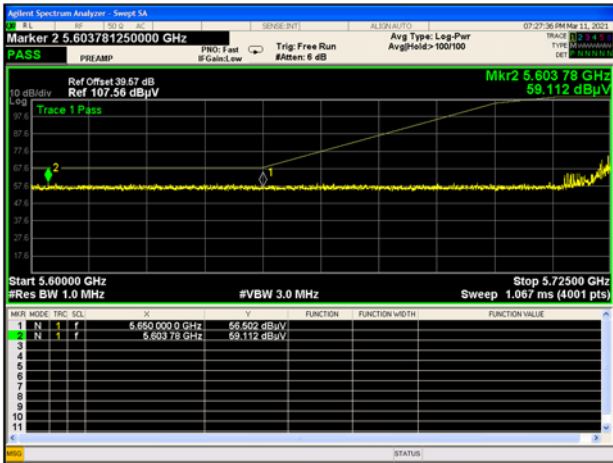
U-NII-2C 11n20 CH100 Peak



U-NII-2C 11n20 CH140 Peak



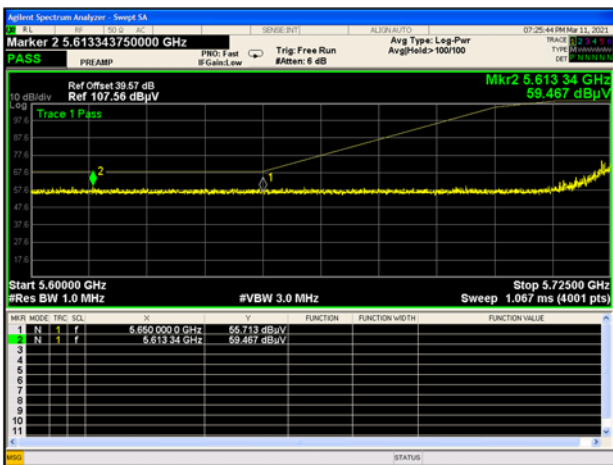
U-NII-3 11a CH149 Peak



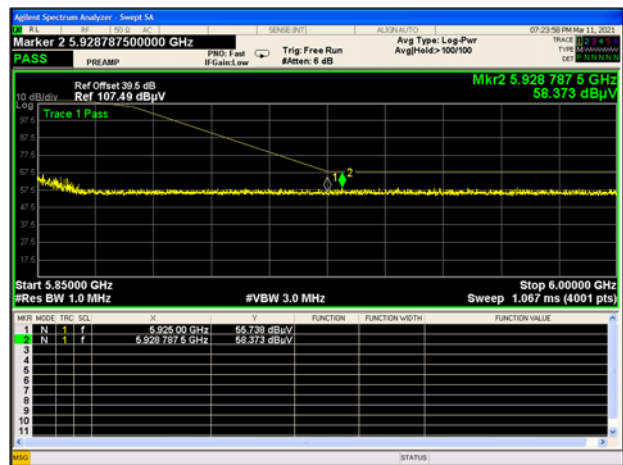
U-NII-3 11a CH165 Peak



U-NII-3 11n20 CH149 Peak



U-NII-3 11n20 CH165 Peak





## **ANNEX B TEST SETUP PHOTOS**

Please refer the document "BL-SZ2120056-AR.PDF".

## **ANNEX C EUT EXTERNAL PHOTOS**

Please refer the document "BL-SZ2120056-AW.PDF".

## **ANNEX D EUT INTERNAL PHOTOS**

Please refer the document "BL-SZ2120056-AI.pdf".

--END OF REPORT--