FCC TEST REPORT

FCC ID: 2BG9S-YR108T

Product	:	android tablet
Model Name	:	YR108T
Serial model	:	XR808T, YR156T, YR215T, ZR238T, ZR270T, ZR320T, R37T, R430T, R490T, R550T, HP101T, HP133T
Brand	:	N/A
Report No.	:	PTC24060500701E-FC04

Prepared for

The Looma Project

5540 Centerview Dr Ste 204 PMB 68853 Raleigh,NC 27606-8012 United States

Prepared by

Precise Testing & Certification Co., Ltd

Building 1, No. 6, Tongxin Road, Dongcheng Street, Dongguan, Guangdong, China

1 TEST RESULT CERTIFICATION

Applicant's name	:	The Looma Project
Address	:	5540 Centerview Dr Ste 204 PMB 68853 Raleigh,NC 27606-8012 United States
Manufacture's name	:	E-BUSINESS INTERNATIONAL
Address	:	15244 NW GREENBRIER PKWY BEAVERTON, OR 97006
Product name	:	android tablet
Model name	:	YR108T
Serial model	:	XR808T, YR156T, YR215T, ZR238T, ZR270T, ZR320T, R37T, R430T, R490T, R550T, HP101T, HP133T
Standards	:	FCC CFR47 Part 15 Section 15.407
Test procedure	:	ANSI C63.10:2013
Test Date	:	Jun. 27, 2024 to Jul. 9, 2024
Date of Issue	:	Jul. 25, 2024
Test Result	:	Pass

This device described above has been tested by PTC, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.
This report shall not be reproduced except in full, without the written approval of PTC, this document may be altered or revised by PTC, personal only, and shall be noted in the revision of the document.

Test Engineer:

Jack zhou / Engineer

Technical Manager:

Simon Pu / Manager

Contents

Page

1 TEST RESULT CERTIFICATION 2

2 TEST SUMMARY 5

3 GENERAL INFORMATION 6

3.1 GENERAL DESCRIPTION OF E.U.T. 6

3.2 CHANNEL LIST 7

3.3 TEST SITE 8

4 EQUIPMENT DURING TEST 9

4.1 EQUIPMENTS LIST 9

4.2 MEASUREMENT UNCERTAINTY 11

4.3 DESCRIPTION OF SUPPORT UNITS 12

5 CONDUCTED EMISSION 13

5.1 E.U.T. OPERATION 13

5.2 EUT SETUP 13

5.3 TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION) 14

5.4 MEASUREMENT PROCEDURE 14

5.5 CONDUCTED EMISSION LIMIT 14

5.6 MEASUREMENT DESCRIPTION 14

5.7 CONDUCTED EMISSION TEST RESULT 14

6 RADIATED SPURIOUS EMISSIONS 17

6.1 EUT OPERATION 18

6.2 TEST SETUP 19

6.3 SPECTRUM ANALYZER SETUP 20

6.4 TEST PROCEDURE 21

6.5 SUMMARY OF TEST RESULTS 22

6.6 BAND EDGE MEASUREMENTS 47

6.7 RESTRICTED BAND 59

7 EMISSION BANDWIDTH AND OCCUPIED BANDWIDTH 61

7.1 TEST PROCEDURE 61

7.2 TEST SETUP 62
7.3 TEST RESULT 62
8 MAXIMUM CONDUCTED OUTPUT POWER 84
8.1 TEST SETUP 84
8.2 TEST PROCEDURE 84
8.3 TEST RESULT 85
9 POWER SPECTRAL DENSITY 86
9.1 TEST PROCEDURE 87
9.2 TEST SETUP 87
9.3 TEST RESULT 88
9.4 ANTENNA REQUIREMENT 102
9.5 RESULT 102
10 FREQUENCY STABILITY 103
10.1 TEST PROCEDURE 103
10.2 TEST SETUP 103
10.3 TEST RESULT 104
11 TEST SETUP 111
12 EUT PHOTOS 113

2 Test Summary

Test Items	Test Requirement	Result
Conduct Emission	15.207	PASS
Radiated Spurious Emissions	15.205(a) 15.209 15.407(b)	PASS
Emission and Occupied Bandwidth	15.407(a)(e)	PASS
Maximum Conducted Output Power	15.407(a)	PASS
Power Spectral Density	15.407(a)	PASS
Frequency stability	15.407 (g)	PASS
Antenna Requirement	15.203	PASS

3 General Information

3.1 General Description of E.U.T.

Product Name	:	android tablet
Model Name	:	YR108T
Additional model	:	XR808T, YR156T, YR215T, ZR238T, ZR270T, ZR320T, R37T, R430T, R490T, R550T, HP101T, HP133T
Differences Description	:	The only difference is the model names.
Specification	:	802.11a/n HT20/HT40/ac20/ac40
Operation Frequency	:	5G Wi-Fi:5180-5240 MHz 5.8G Wi-Fi:5745MHz~5825MHz
Number of Channel	:	4 channels for 802.11a/n20/ac20 5180-5240 MHz 5 channels for 802.11a/n20/ac20 5745MHz~5825MHz 2 channels for 802.11n40/ac40 5180-5240 MHz 2 channels for 802.11n40/ac40 5745MHz~5825MHz
Type of Modulation	:	OFDM with BPSK/QPSK/16QAM/64QAM for 802.11g/n/a/ac
Antenna installation	:	PCB Antenna
Antenna Gain	:	5.2G:2.98 dBi 5.8G:2.37 dBi
Rated Power Supply	:	Adapter:JML-1202000-LW Input: 100-240V~50/60Hz 0.8A Output: 12.0V⎓2.0A
Hardware Version	:	RK3568
Software Version	:	XB-RK3568DF-SU-EN-05Y108-HNH9365-EDITION11-20240622
Test sample No.	:	PTC24060500701E-1/2, PTC24060500701E-2/2

3.2 Channel List

The EUT has been tested under its typical operating condition.

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

The Transmitter was operated in the normal operating mode. The TX frequency was fixed which was for the purpose of the measurements.

Test of channel included the lowest and middle and highest frequency to perform the test, then record on this report.

Those data rates (802.11a: 6 Mbps; 802.11n (HT20): MCS0; 802.11ac: MCS0) were used for all test.

Pre-defined engineering program for regulatory testing used to control the EUT for staying in continuous transmitting and receiving mode is programmed.

Frequency and Channel list for 802.11 a/N20/N40/AC20/AC40

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	46	5230	153	5765
38	5190	48	5240	157	5785
40	5200	149	5745	159	5795
44	5220	151	5755	161	5805
				165	5825

The maximum duty cycle as following table:

Test Mode	Duty Cycle(%)
802.11a	100%
802.11n/ac20	100%
802.11n/ac40	100%

3.3 Test Site

Precise Testing & Certification Co., Ltd

Address: Building 1, No. 6, Tongxin Road, Dongcheng Street, Dongguan, Guangdong, China

FCC Registration Number: 790290

A2LA Certificate No.: 4408.01

IC Registration Number: 12191A

FCC Designation Number: CN1219

4 Equipment During Test

4.1 Equipments List

RF Conducted Test

Name of Equipment	Manufacturer	Model	Serial No.	Characteristics	Last Calibration	Calibration Interval
MXG Signal Analyzer	Agilent	N9020A	SER MY5111038	10Hz-26.5GHz	Aug.17, 2023	1 Year
Coaxial Cable	CDS	79254	46107086	10Hz-30GHz	Aug.17, 2023	1 Year
Power Meter	Anritsu	ML2495A	0949003	300MHz-40GHz	Aug.17, 2023	1 Year
Power Sensor	Anritsu	MA2411B	0917017	300MHz-40GHz	Aug.17, 2023	1 Year
DC power Supply	Agilent	E3642A	MY52420017	0-8V,5A/0-20 ,2.5A	Aug.17, 2023	1 Year
Humidity Chamber	AISRY	ASR-HW2-1000	20230926003	-40℃-150℃	Feb.23 ,2024	1year
Test S/W	Tonscend	JS1120-3	/	/	/	/

Remark: The temporary antenna connector is soldered on the PCB board in order to perform conducted tests and this temporary antenna connector is listed in the equipment list.

Name of Equipment	Manufacturer	Model	Serial No.	Characteristics	Last Calibration	Calibration Interval
EMI Test Receiver	Rohde&Schwarz	ESPI7	101671	9KHz-7GHz	Aug. 17,2023	1 Year
Loop Antenna	Schwarzbeck	FMZB 1519	192	9 KHz -30MHz	Aug. 17,2023	1 Year
Bilog Antenna	SCHWARZBECK	VULB9160	9160-3355	25MHz-2GHz	Aug. 17,2023	1 Year
Preamplifier (low frequency)	SCHWARZBECK	BBV 9475	9745-0013	1MHz-1GHz	Aug. 17,2023	1 Year
Cable	IMRO	AK-9515E(9m)	Cable-L	9KHz-3GHz	Aug. 17,2023	1 Year
Spectrum Analyzer	Rohde&Schwarz	FSV40	6625-01-588-5515	9KHz-40GHz	Aug. 17,2023	1 Year

Horn Antenna	SCHWARZBECK	9120D	9120D-1246	1GHz-18GHz	Aug. 17,2023	1 Year
Power Amplifier	ZHINAN	ZN3380C	15002	1GHz-26.5GHz	Aug. 17,2023	1 Year
Horn Antenna	SCHWARZBECK	BBHA 9170	9170-1066	15GHz-40GHz	Jul. 19, 2023	1 Year
Amplifier	SCHWARZBECK	BBV 9721	9721-205	18GHz-40GHz	Jul. 19, 2023	1 Year
Cable	H+S	CBL-26	N/A	1GHz-26.5GHz	Aug. 17,2023	1 Year
RF Cable	R&S	R204	R21X	1GHz-40GHz	Aug. 17,2023	1 Year
Test S/W	Tonscend	TS+	/	/	/	/

Conducted Emissions

Name of Equipment	Manufacturer	Model	Serial No.	Characteristics	Calibration Date	Calibration Interval
EMI Test Receiver	Rohde&Schwarz	ESCI	101417	9KHz-3GHz	Aug. 17, 2023	1 Year
Artificial Mains Network	Rohde&Schwarz	ENV216	102453	9KHz-300MHz	Aug. 17, 2023	1 Year
Artificial Mains Network	Rohde&Schwarz	ENV216	101342	9KHz-300MHz	Aug. 17, 2023	1 Year
Limiter	R&S	ESH3-Z2	0357.8810.54-102808-NB	0Hz-30MHz	Aug. 16,2023	1 Year
RF Switch	DIAMOND ANTENNA	CX-210	/	0.09MHz-6GHz	Mar. 22,2024	1 Year
Test S/W	Tonscend	JS32-CE	/	/	/	/

4.2 Measurement Uncertainty

Parameter	Uncertainty
RF output power, conducted	±1.0dB
Power Spectral Density, conducted	±2.2dB
Radio Frequency	± 1 x 10^{-6}
Bandwidth	± 1.5 x 10^{-6}
Time	±2%
Duty Cycle	±2%
Temperature	±1°C
Humidity	±5%
DC and low frequency voltages	±3%
Conducted Emissions (150kHz~30MHz)	±3.64dB
Radiated Emission(9kHz~30MHz)	±3.15dB
Radiated Emission(30MHz~1GHz)	±5.03dB
Radiated Emission(1GHz~18GHz)	±4.74dB
Radiated Emission(18GHz~40GHz)	±3.20dB

4.3 Description of Support Units

Equipment	Model No.	Series No.	Parameters
Mouse	OP-300	SA8177323	N/A
Keyboard	G2	SA8173709103	N/A

5 Conducted Emission

Test Requirement:	:	FCC CFR 47 Part 15 Section 15.207
Test Method	:	ANSI C63.10: 2013
Test Result	:	PASS
Frequency Range	:	150kHz to 30MHz
Class/Severity	:	Class B

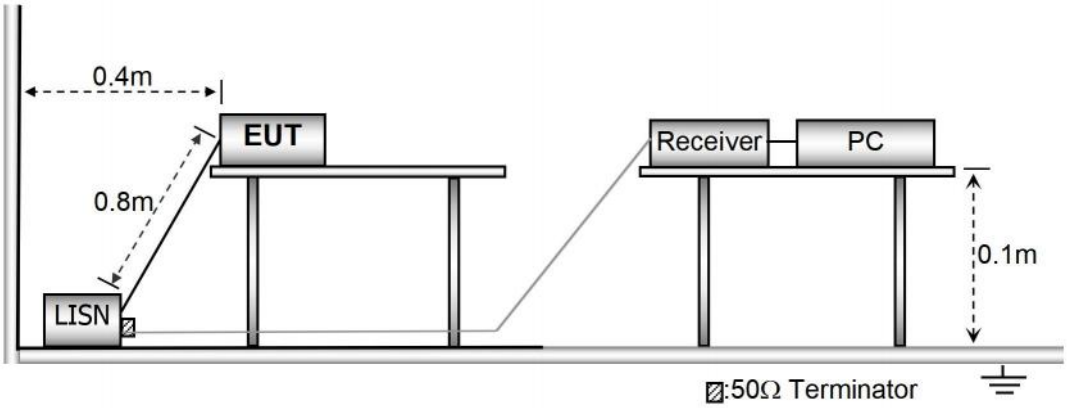
5.1 E.U.T. Operation

Operating Environment :

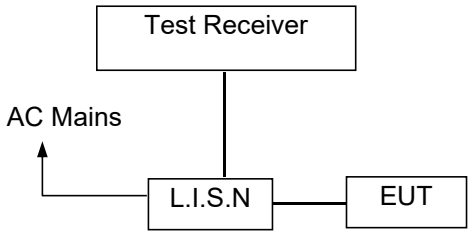
Temperature	:	23.9 °C
Humidity	:	51.4 % RH
Atmospheric Pressure	:	101.21kPa

5.2 EUT Setup

The conducted emission tests were performed using the setup accordance with the ANSI C63.10:2013.



5.3 Test SET-UP (Block Diagram of Configuration)



5.4 Measurement Procedure

1. The EUT was placed on a table, which is 0.1m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured was complete.

5.5 Conducted Emission Limit

Conducted Emission

Frequency(MHz)	Quasi-peak	Average
0.15-0.5	66-56	56-46
0.5-5.0	56	46
5.0-30.0	60	50

Note:
1. The lower limit shall apply at the transition frequencies
2.The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

5.6 Measurement Description

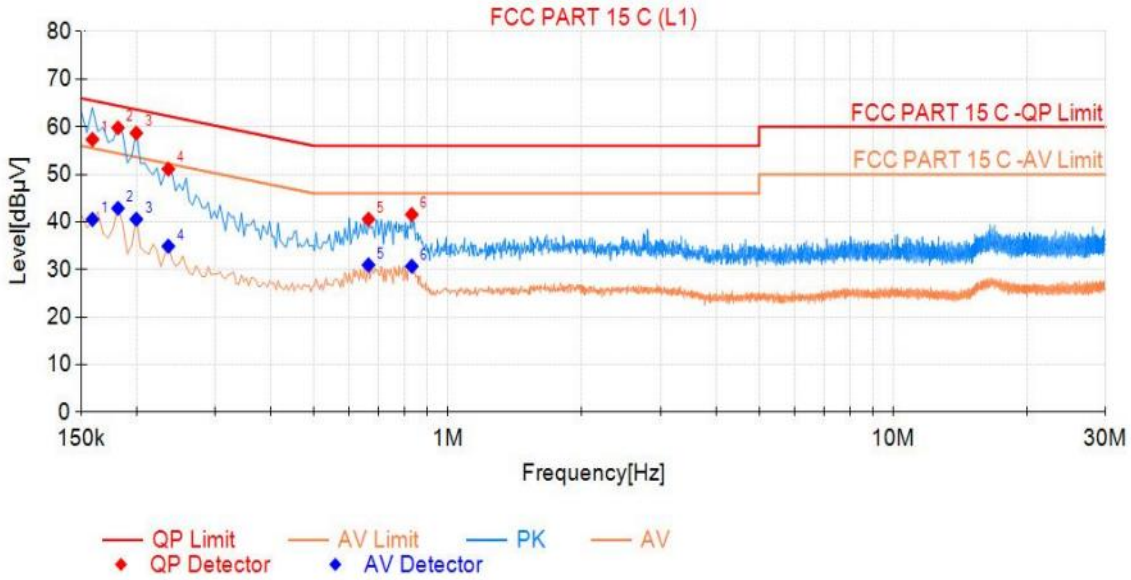
The maximised peak emissions from the EUT was scanned and measured for both the Live and Neutral Lines. Quasi-peak & average measurements were performed if peak emissions were within 6dB of the average limit line.

5.7 Conducted Emission Test Result

Pass.

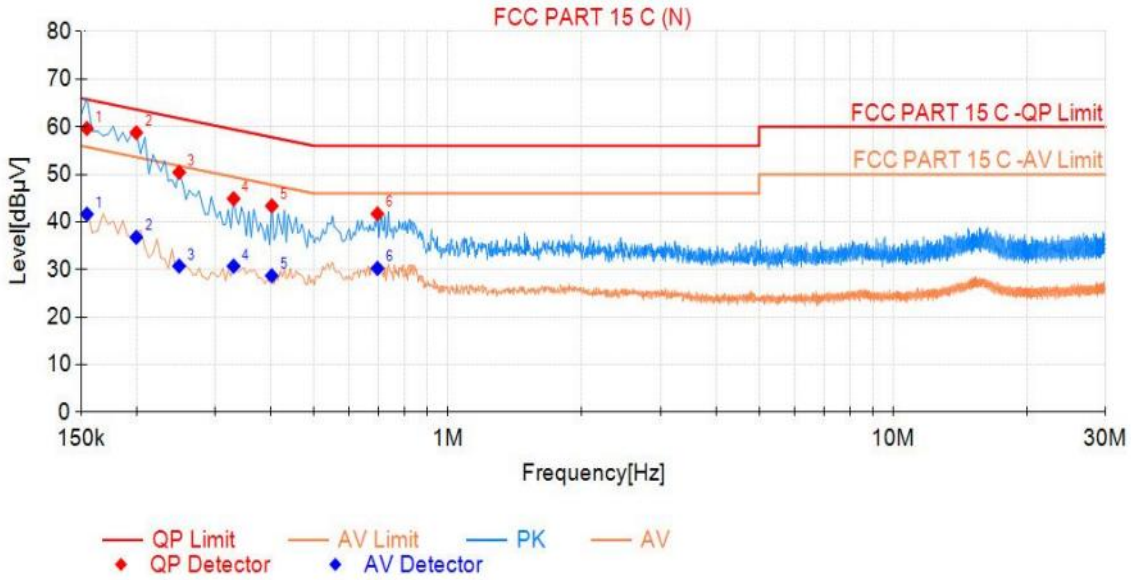
All the modulation modes were tested the data of the worst mode (AC 120V/60Hz, TX 5180MHz) are recorded in the following pages and the others modulation methods do not exceed the limits.

Line-AC 120V/60Hz



Final Data List											
NO.	Freq [MHz]	QP Reading [dBµV]	Factor [dB]	QP Value [dBµV]	QP Limit [dBµV]	QP Margin [dB]	AV Reading [dBµV]	AV Value [dBµV]	AV Limit [dBuV]	AV Margin [dB]	Verdict
1	0.159	38.14	19.21	57.35	65.52	8.17	21.32	40.53	55.52	14.99	PASS
2	0.182	40.61	19.18	59.79	64.42	4.63	23.70	42.88	54.42	11.54	PASS
3	0.200	39.53	19.15	58.68	63.63	4.95	21.43	40.58	53.63	13.05	PASS
4	0.236	31.98	19.13	51.11	62.25	11.14	15.78	34.91	52.25	17.34	PASS
5	0.663	21.32	19.27	40.59	56.00	15.41	11.69	30.96	46.00	15.04	PASS
6	0.830	22.30	19.27	41.57	56.00	14.43	11.44	30.71	46.00	15.29	PASS

Neutral-AC 120V/60Hz



Final Data List											
NO.	Freq. [MHz]	QP Reading [dBµV]	Factor [dB]	QP Value [dBµV]	QP Limit [dBµV]	QP Margin [dB]	AV Reading [dBµV]	AV Value [dBµV]	AV Limit [dBµV]	AV Margin [dB]	Verdict
1	0.155	40.65	19.01	59.66	65.75	6.09	22.63	41.64	55.75	14.11	PASS
2	0.200	39.70	19.08	58.78	63.63	4.85	17.71	36.79	53.63	16.84	PASS
3	0.249	31.38	19.05	50.43	61.79	11.36	11.69	30.74	51.79	21.05	PASS
4	0.330	25.72	19.18	44.90	59.45	14.55	11.54	30.72	49.45	18.73	PASS
5	0.402	24.18	19.20	43.38	57.81	14.43	9.51	28.71	47.81	19.10	PASS
6	0.695	22.50	19.22	41.72	56.00	14.28	11.03	30.25	46.00	15.75	PASS

Note: QP Margin[dB]= QP Limit[dBµV]- QP Value[dBµV], AV Margin[dB]= AV Limit[dBµV]- AV Value[dBµV].

6 Radiated Spurious Emissions

Test Requirement	:	FCC CFR47 Part 15 Section 15.209 & 15.407(b)
Test Method	:	ANSI C63.10:2013
Test Result	:	PASS
Measurement Distance	:	3m

Limit

(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band

shall not exceed an e.i.r.p. of −27 dBm/MHz.

(4) For transmitters operating in the 5.725-5.85 GHz band:

(i) 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.

(ii) Devices certified before March 2, 2017 with antenna gain greater than 10 dBi may demonstrate compliance with the emission limits in §15.247(d), but manufacturing, marketing and importing of devices certified under this alternative must cease by March 2, 2018. Devices certified before March 2, 2018 with antenna gain of 10 dBi or less may demonstrate compliance with the emission limits in §15.247(d), but manufacturing, marketing and importing of devices certified under this alternative must cease before March 2, 2020.

(5) The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.

(6) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209.

Further.

(7) The provisions of §15.205 apply to intentional radiators operating under this section.

(8) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the upper and lower frequency band edges as the design of the equipment permits.As per FCC §15.35(d): Unless otherwise specified, on any frequency or frequencies above 1000 MHz, the radiated emission limits are based on the use of measurement instrumentation employing an average detector function. Unless otherwise specified, measurements above 1000 MHz shall be performed using a minimum resolution bandwidth of 1MHz

As per FCC §15.209(a): Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength		Field Strength Limit at 3m Measurement Dist	
	uV/m	Distance (m)	uV/m	dBuV/m
0.009 ~ 0.490	2400/F(kHz)	300	10000 * 2400/F(kHz)	$20\log^{(2400/F(kHz))} + 80$
0.490 ~ 1.705	24000/F(kHz)	30	100 * 24000/F(kHz)	$20\log^{(24000/F(kHz))} + 40$
1.705 ~ 30	30	30	100 * 30	$20\log^{(30)} + 40$
30 ~ 88	100	3	100	$20\log^{(100)}$
88 ~ 216	150	3	150	$20\log^{(150)}$
216 ~ 960	200	3	200	$20\log^{(200)}$
Above 960	500	3	500	$20\log^{(500)}$

6.1 EUT Operation

Operating Environment :

Temperature: : 24.5 °C

Humidity: : 52 % RH

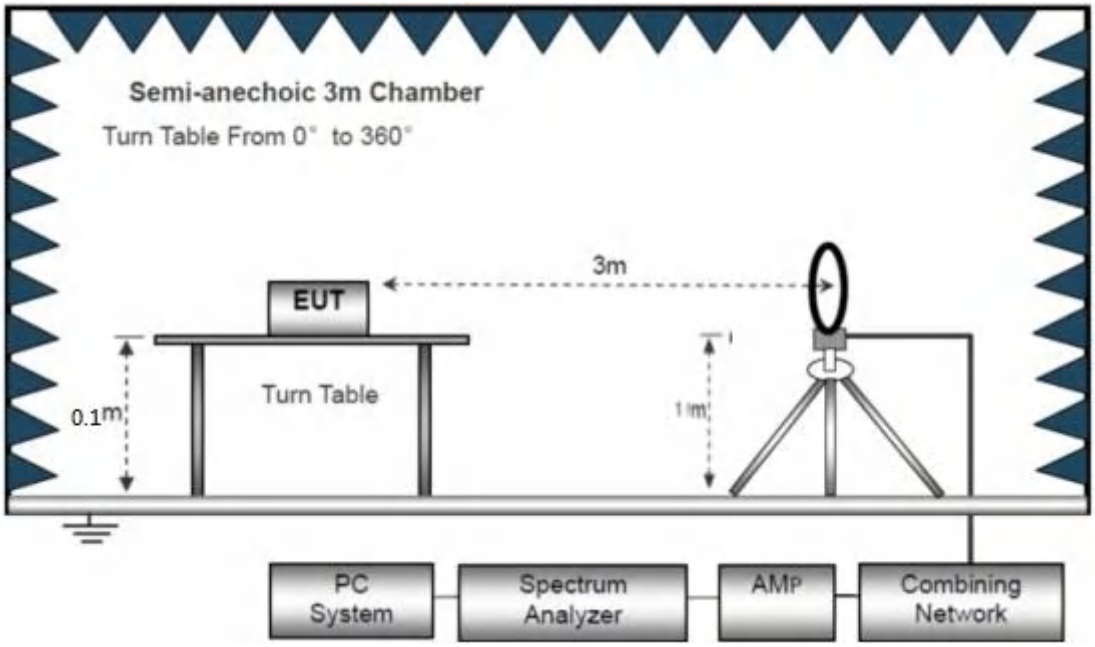
Atmospheric Pressure: : 101.3kPa

Test Voltage : AC 120V 60Hz

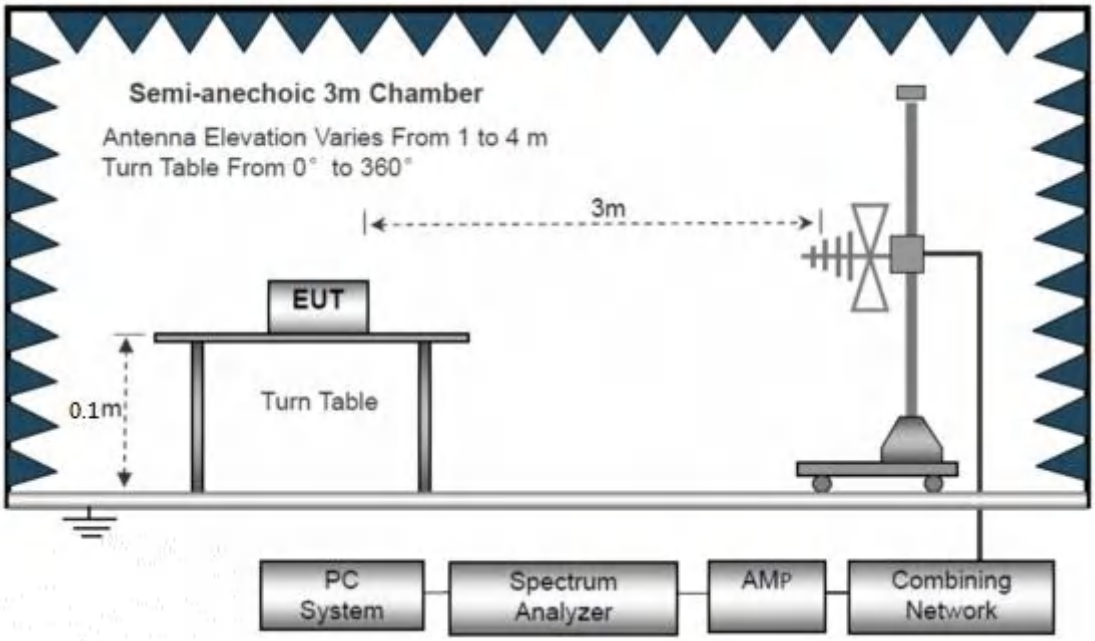
6.2 Test Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site

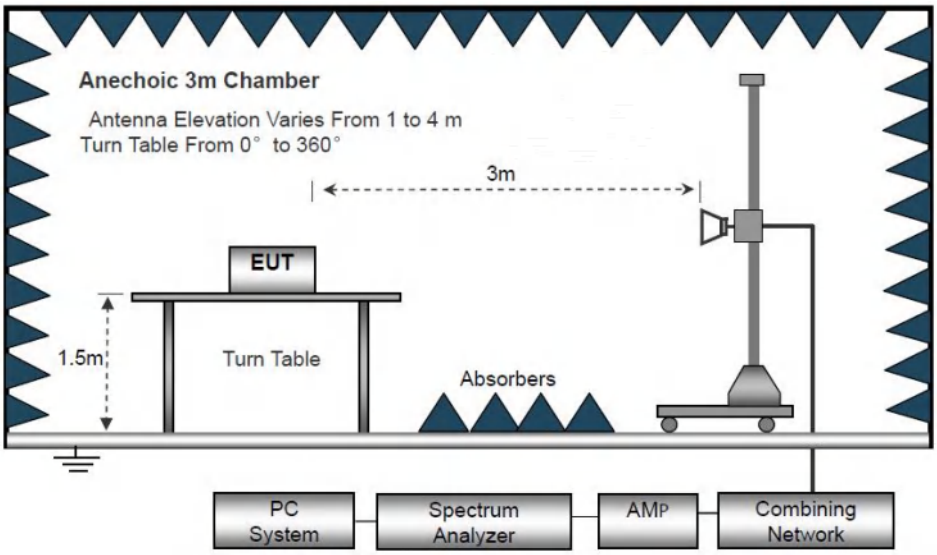
The test setup for emission measurement below 30MHz



The test setup for emission measurement from 30 MHz to 1 GHz.



The test setup for emission measurement above 1 GHz



6.3 Spectrum Analyzer Setup

	Frequency	Detector	RBW	VBW	Remark
Receiver Setup	Below 30MHz	--	10kHz	10kHz	--
	30MHz ~ 1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak Value
	Above 1GHz	Peak	1MHz	3MHz	Peak Value
		RMS	1MHz	3MHz	Average Value

6.4 Test Procedure

1. Below 1000MHz, The EUT was placed on a turn table which is 0.8m above ground plane, And above 1000MHz, The EUT was placed on a styrofoam table which is 1.5m above ground plane.

2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.

3. EUT is set 3m away from the receiving antenna, which is moved from 1m to 4m to find out the maximum emissions. The spectrum was investigated from the lowest radio frequency signal generated in the device, without going below 9 kHz, up to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.

4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.

5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.

6. Repeat above procedures until the measurements for all frequencies are complete.

7. The radiation measurements are tested under 3-axes(X,Y,Z) position(X denotes lying on the table, Y denotes side stand and Z denotes vertical stand), After pre-test, It was found that the worse radiation emission was get at the X position. So the data shown was the X position only.

8. The test above 1GHz must be use the fully anechoic room, and the test below 1GHz use the half anechoic room

6.5 Summary of Test Results

Test Frequency: 9KHz-30MHz

Freq. (MHz)	Ant.Pol. H/V	Emission Level (dBuV/m)	Limit 3m (dBuV/m)	Over (dB)
--	--	--	--	>20

Note:

The amplitude of spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.

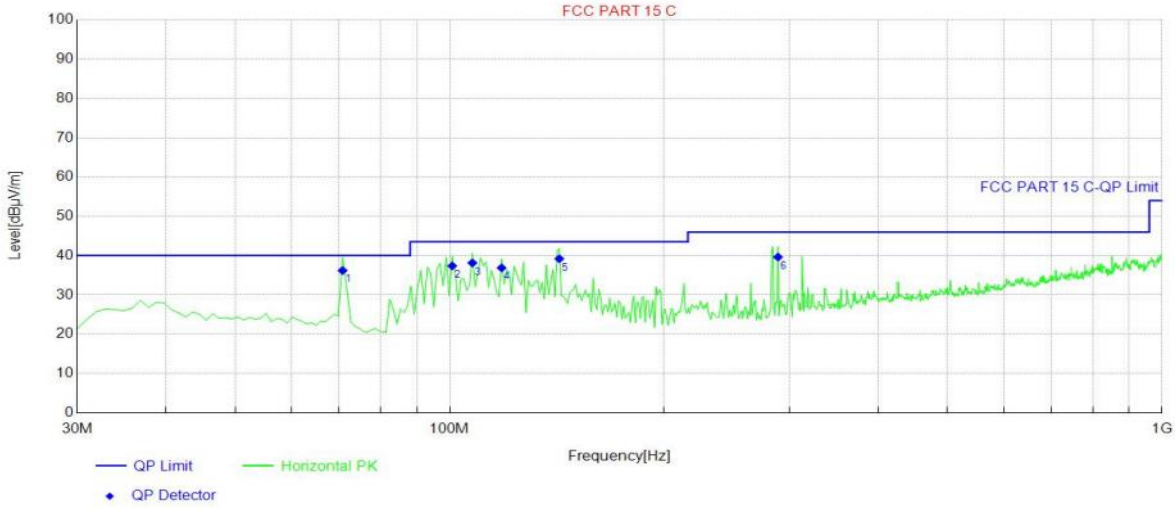
Distance extrapolation factor =40log(Specific distance/ test distance)(dB);
Limit line=Specific limits(dBuV) + distance extrapolation factor.

Test Frequency: 30MHz ~ 1GHz

All the modulation modes were tested the data of the worst mode (TX 802.11a Channel 36，CH149) are recorded in the following pages and the others modulation methods do not exceed the limits.

Please refer to the following test plots:

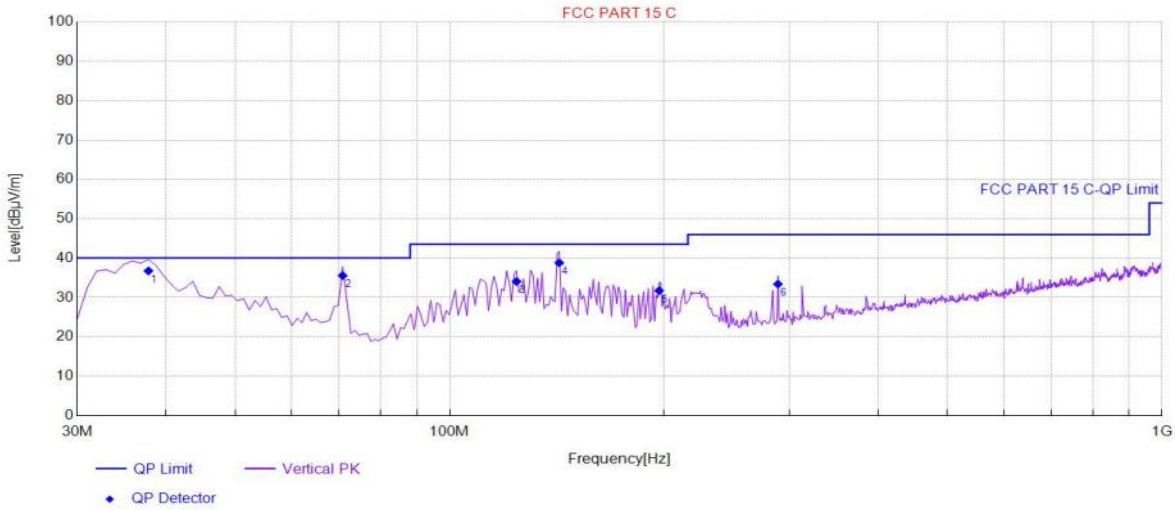
Antenna Polarization: Horizontal(CH36)



Final Data List[QP]								
NO.	Freq. [MHz]	QP Reading [dBµV]	Factor [dB/m]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Polarity	Verdict
1	70.74	55.44	-19.25	36.19	40.00	3.81	Horizontal	PASS
2	100.81	57.26	-19.89	37.37	43.50	6.13	Horizontal	PASS
3	107.60	57.28	-19.15	38.13	43.50	5.37	Horizontal	PASS
4	118.27	55.32	-18.45	36.87	43.50	6.63	Horizontal	PASS
5	142.52	55.34	-16.15	39.19	43.50	4.31	Horizontal	PASS
6	288.99	55.82	-16.20	39.62	46.00	6.38	Horizontal	PASS

Remark:Emission Level=Reading+Cable Loss+ANT Factor-AMP Factor

Antenna Polarization: Vertical (CH36)



Final Data List[QP]								
NO.	Freq. [MHz]	QP Reading [dBµV]	Factor [dB/m]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Polarity	Verdict
1	37.76	53.91	-17.17	36.74	40.00	3.26	Vertical	PASS
2	70.74	55.47	-19.93	35.54	40.00	4.46	Vertical	PASS
3	124.09	51.90	-17.84	34.06	43.50	9.44	Vertical	PASS
4	142.52	55.43	-16.63	38.80	43.50	4.70	Vertical	PASS
5	196.84	51.58	-19.86	31.72	43.50	11.78	Vertical	PASS
6	288.99	50.05	-16.65	33.40	46.00	12.60	Vertical	PASS

Remark:Emission Level=Reading+Cable Loss+ANT Factor-AMP Factor
Note: only the worst case recorded in the report.

Test Frequency: From 1GHz to 40GHz

Pre-scan all test modes

Only the worst case Main test data.

802.11a

Test Mode: 5180					Test channel: Lowest			
Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
10360	47.09	35.22	5.36	31.25	56.42	68.20	-11.78	V
15540	42.11	35.96	7.85	30.63	55.29	68.20	-12.91	V
20720	43.38	39.12	8.56	34.95	56.11	68.20	-12.09	V
10360	48.22	34.12	5.36	31.25	56.45	68.20	-11.75	H
15540	42.19	36.52	7.85	30.63	55.93	68.20	-12.27	H
20720	43.02	40.01	8.56	34.95	56.64	68.20	-11.56	H
Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
10360	33.34	35.22	5.36	31.25	42.67	54.00	-11.33	V
15540	30.37	35.96	7.85	30.63	43.55	54.00	-10.45	V
20720	28.16	39.12	8.56	34.95	40.89	54.00	-13.11	V
10360	32.33	34.12	5.36	31.25	40.56	54.00	-13.44	H
15540	24.42	36.52	7.85	30.63	38.16	54.00	-15.84	H
20720	26.97	40.01	8.56	34.95	40.59	54.00	-13.41	H

802.11a

Test Mode:5200					Test channel: Middle			
Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
10400	47.71	35.63	5.36	31.25	57.45	68.20	-10.75	V
15600	43.59	35.91	7.85	30.63	56.72	68.20	-11.48	V
20800	44.02	39.67	8.56	34.95	57.30	68.20	-10.90	V
10400	46.73	34.25	5.36	31.25	55.09	68.20	-13.11	H
15600	41.90	37.02	7.85	30.63	56.14	68.20	-12.06	H
20800	43.56	38.88	8.56	34.95	56.05	68.20	-12.15	H
Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
10400	33.90	35.63	5.36	31.25	43.64	54.00	-10.36	V
15600	29.11	35.91	7.85	30.63	42.24	54.00	-11.76	V
20800	29.30	39.67	8.56	34.95	42.58	54.00	-11.42	V
10400	33.34	34.25	5.36	31.25	41.70	54.00	-12.30	H
15600	28.98	37.02	7.85	30.63	43.22	54.00	-10.78	H
20800	29.91	38.88	8.56	34.95	42.40	54.00	-11.60	H

802.11a

Test Mode:5240					Test channel: High			
Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
10480	45.48	34.68	5.36	31.25	54.27	68.20	-13.93	V
17520	43.32	36.52	7.85	30.63	57.06	68.20	-11.14	V
20960	44.33	38.77	8.56	34.95	56.71	68.20	-11.49	V
10480	46.72	33.99	5.36	31.25	54.82	68.20	-13.38	H
17520	45.00	36.84	7.85	30.63	59.06	68.20	-9.14	H
20960	46.46	39.93	8.56	34.95	60.00	68.20	-8.20	H
Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
10480	33.53	34.68	5.36	31.25	42.32	54.00	-11.68	V
17520	29.15	36.52	7.85	30.63	42.89	54.00	-11.11	V
20960	29.77	38.77	8.56	34.95	42.15	54.00	-11.85	V
10480	32.55	33.99	5.36	31.25	40.65	54.00	-13.35	H
17520	26.82	36.84	7.85	30.63	40.88	54.00	-13.12	H
20960	29.46	39.93	8.56	34.95	43.00	54.00	-11.00	H

802.11a

Test Mode: 5745					Test channel: Lowest			
Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
11490	47.87	35.26	5.42	31.75	56.80	68.20	-11.43	V
17235	42.23	36.88	7.32	30.96	55.47	68.20	-12.76	V
22980	44.03	39.14	8.85	35.25	56.77	68.20	-11.46	V
11490	49.69	34.21	5.42	31.75	57.57	68.20	-10.66	H
17235	44.52	37.52	7.32	30.96	58.40	68.20	-9.83	H
22980	44.38	39.88	8.85	35.25	57.86	68.20	-10.37	H
Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
11490	32.14	35.26	5.42	31.75	41.07	54.00	-12.93	V
17235	29.81	36.88	7.32	30.96	43.05	54.00	-10.95	V
22980	29.38	39.14	8.85	35.25	42.12	54.00	-11.88	V
11490	31.75	34.21	5.42	31.75	39.63	54.00	-14.37	H
17235	28.98	37.52	7.32	30.96	42.86	54.00	-11.14	H
22980	29.15	39.88	8.85	35.25	42.63	54.00	-11.37	H

802.11a

Test Mode:5785					Test channel: Middle			
Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
11570	48.27	35.26	5.42	31.75	57.20	68.20	-11.03	V
17355	44.53	36.88	7.32	30.96	57.77	68.20	-10.46	V
23140	45.22	39.14	8.85	35.25	57.96	68.20	-10.27	V
11570	48.57	34.21	5.42	31.75	56.45	68.20	-11.78	H
17355	42.45	37.52	7.32	30.96	56.33	68.20	-11.90	H
23140	43.22	39.88	8.85	35.25	56.70	68.20	-11.53	H
Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
11570	33.11	35.26	5.42	31.75	42.04	54.00	-11.96	V
17355	29.62	36.88	7.32	30.96	42.86	54.00	-11.14	V
23140	28.75	39.14	8.85	35.25	41.49	54.00	-12.51	V
11570	34.32	34.21	5.42	31.75	42.20	54.00	-11.80	H
17355	29.57	37.52	7.32	30.96	43.45	54.00	-10.55	H
23140	29.19	39.88	8.85	35.25	42.67	54.00	-11.33	H

802.11a

Test Mode:5825					Test channel: High			
Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
11650	48.44	35.26	5.42	31.75	57.37	68.20	-10.86	V
17475	44.45	36.88	7.32	30.96	57.69	68.20	-10.54	V
23300	45.73	39.14	8.85	35.25	58.47	68.20	-9.76	V
11650	49.30	34.21	5.42	31.75	57.18	68.20	-11.05	H
17475	44.71	37.52	7.32	30.96	58.59	68.20	-9.64	H
23300	45.15	39.88	8.85	35.25	58.63	68.20	-9.60	H
Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
11650	34.52	35.26	5.42	31.75	43.45	54.00	-10.55	V
17475	28.40	36.88	7.32	30.96	41.64	54.00	-12.36	V
23300	30.20	39.14	8.85	35.25	42.94	54.00	-11.06	V
11650	33.94	34.21	5.42	31.75	41.82	54.00	-12.18	H
17475	28.53	37.52	7.32	30.96	42.41	54.00	-11.59	H
23300	28.59	39.88	8.85	35.25	42.07	54.00	-11.93	H

802.11n20

Test Mode: 5180					Test channel: Lowest			
Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
10360	45.23	34.56	5.36	31.25	53.90	68.20	-14.30	V
15540	43.29	36.22	7.85	30.63	56.73	68.20	-11.47	V
20720	44.38	38.97	8.56	34.95	56.96	68.20	-11.24	V
10360	48.95	33.57	5.36	31.25	56.63	68.20	-11.57	H
15540	40.04	36.49	7.85	30.63	53.75	68.20	-14.45	H
20720	41.84	39.92	8.56	34.95	55.37	68.20	-12.83	H
Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
10360	32.29	34.56	5.36	31.25	40.96	54.00	-13.04	V
15540	29.71	36.22	7.85	30.63	43.15	54.00	-10.85	V
20720	28.04	38.97	8.56	34.95	40.62	54.00	-13.38	V
10360	32.18	33.57	5.36	31.25	39.86	54.00	-14.14	H
15540	27.21	36.49	7.85	30.63	40.92	54.00	-13.08	H
20720	28.29	39.92	8.56	34.95	41.82	54.00	-12.18	H

802.11n20

Test Mode:5200					Test channel: Middle			
Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
10400	48.23	34.63	5.36	31.25	56.97	68.20	-11.23	V
15600	44.26	36.42	7.85	30.63	57.90	68.20	-10.30	V
20800	45.16	38.81	8.56	34.95	57.58	68.20	-10.62	V
10400	48.08	33.93	5.36	31.25	56.12	68.20	-12.08	H
15600	43.31	36.55	7.85	30.63	57.08	68.20	-11.12	H
20800	43.86	39.94	8.56	34.95	57.41	68.20	-10.79	H
Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
10400	32.37	34.63	5.36	31.25	41.11	54.00	-12.89	V
15600	28.33	36.42	7.85	30.63	41.97	54.00	-12.03	V
20800	29.07	38.81	8.56	34.95	41.49	54.00	-12.51	V
10400	33.47	33.93	5.36	31.25	41.51	54.00	-12.49	H
15600	28.64	36.55	7.85	30.63	42.41	54.00	-11.59	H
20800	29.51	39.94	8.56	34.95	43.06	54.00	-10.94	H

802.11n20

Test Mode:5240					Test channel: High			
Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
10480	45.36	34.68	5.36	31.25	54.15	68.20	-14.05	V
17520	44.85	36.52	7.85	30.63	58.59	68.20	-9.61	V
20960	43.06	38.77	8.56	34.95	55.44	68.20	-12.76	V
10480	46.65	33.99	5.36	31.25	54.75	68.20	-13.45	H
17520	45.87	36.84	7.85	30.63	59.93	68.20	-8.27	H
20960	44.35	39.93	8.56	34.95	57.89	68.20	-10.31	H
Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
10480	31.71	34.68	5.36	31.25	40.50	54.00	-13.50	V
17520	27.87	36.52	7.85	30.63	41.61	54.00	-12.39	V
20960	28.55	38.77	8.56	34.95	40.93	54.00	-13.07	V
10480	30.78	33.99	5.36	31.25	38.88	54.00	-15.12	H
17520	27.55	36.84	7.85	30.63	41.61	54.00	-12.39	H
20960	29.64	39.93	8.56	34.95	43.18	54.00	-10.82	H

802.11n20

Test Mode: 5745					Test channel: Lowest			
Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
11490	49.61	35.26	5.42	31.75	58.54	68.20	-9.69	V
17235	42.41	36.88	7.32	30.96	55.65	68.20	-12.58	V
22980	43.03	39.14	8.85	35.25	55.77	68.20	-12.46	V
11490	49.56	34.21	5.42	31.75	57.44	68.20	-10.79	H
17235	44.02	37.52	7.32	30.96	57.90	68.20	-10.33	H
22980	45.18	39.88	8.85	35.25	58.66	68.20	-9.57	H
Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
11490	33.62	35.26	5.42	31.75	42.55	54.00	-11.45	V
17235	30.14	36.88	7.32	30.96	43.38	54.00	-10.62	V
22980	29.65	39.14	8.85	35.25	42.39	54.00	-11.61	V
11490	33.36	34.21	5.42	31.75	41.24	54.00	-12.76	H
17235	28.43	37.52	7.32	30.96	42.31	54.00	-11.69	H
22980	28.92	39.88	8.85	35.25	42.40	54.00	-11.60	H

802.11n20

Test Mode:5785					Test channel: Middle			
Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
11570	45.78	35.26	5.42	31.75	54.71	68.20	-13.52	V
17355	43.94	36.88	7.32	30.96	57.18	68.20	-11.05	V
23140	45.18	39.14	8.85	35.25	57.92	68.20	-10.31	V
11570	48.51	34.21	5.42	31.75	56.39	68.20	-11.84	H
17355	42.91	37.52	7.32	30.96	56.79	68.20	-11.44	H
23140	41.73	39.88	8.85	35.25	55.21	68.20	-13.02	H
Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
11570	33.55	35.26	5.42	31.75	42.48	54.00	-11.52	V
17355	30.45	36.88	7.32	30.96	43.69	54.00	-10.31	V
23140	29.53	39.14	8.85	35.25	42.27	54.00	-11.73	V
11570	33.78	34.21	5.42	31.75	41.66	54.00	-12.34	H
17355	29.83	37.52	7.32	30.96	43.71	54.00	-10.29	H
23140	29.65	39.88	8.85	35.25	43.13	54.00	-10.87	H

802.11n20

Test Mode:5825					Test channel: High			
Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
11650	47.48	35.26	5.42	31.75	56.41	68.20	-11.82	V
17475	44.24	36.88	7.32	30.96	57.48	68.20	-10.75	V
23300	45.01	39.14	8.85	35.25	57.75	68.20	-10.48	V
11650	49.28	34.21	5.42	31.75	57.16	68.20	-11.07	H
17475	44.39	37.52	7.32	30.96	58.27	68.20	-9.96	H
23300	45.46	39.88	8.85	35.25	58.94	68.20	-9.29	H
Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
11650	35.67	35.26	5.42	31.75	44.60	54.00	-9.40	V
17475	28.76	36.88	7.32	30.96	42.00	54.00	-12.00	V
23300	28.10	39.14	8.85	35.25	40.84	54.00	-13.16	V
11650	33.18	34.21	5.42	31.75	41.06	54.00	-12.94	H
17475	28.30	37.52	7.32	30.96	42.18	54.00	-11.82	H
23300	29.21	39.88	8.85	35.25	42.69	54.00	-11.31	H

802.11ac20

Test Mode: 5180					Test channel: Lowest			
Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
10360	45.53	34.56	5.36	31.25	54.20	68.20	-14.00	V
15540	43.08	36.22	7.85	30.63	56.52	68.20	-11.68	V
20720	44.25	38.97	8.56	34.95	56.83	68.20	-11.37	V
10360	49.12	33.57	5.36	31.25	56.80	68.20	-11.40	H
15540	40.35	36.49	7.85	30.63	54.06	68.20	-14.14	H
20720	41.96	39.92	8.56	34.95	55.49	68.20	-12.71	H
Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
10360	32.31	34.56	5.36	31.25	40.98	54.00	-13.02	V
15540	29.76	36.22	7.85	30.63	43.20	54.00	-10.80	V
20720	28.24	38.97	8.56	34.95	40.82	54.00	-13.18	V
10360	31.80	33.57	5.36	31.25	39.48	54.00	-14.52	H
15540	27.14	36.49	7.85	30.63	40.85	54.00	-13.15	H
20720	28.10	39.92	8.56	34.95	41.63	54.00	-12.37	H

802.11ac20

Test Mode:5200					Test channel: Middle			
Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
10400	48.74	34.63	5.36	31.25	57.48	68.20	-10.72	V
15600	44.33	36.42	7.85	30.63	57.97	68.20	-10.23	V
20800	45.34	38.81	8.56	34.95	57.76	68.20	-10.44	V
10400	47.88	33.93	5.36	31.25	55.92	68.20	-12.28	H
15600	43.51	36.55	7.85	30.63	57.28	68.20	-10.92	H
20800	44.08	39.94	8.56	34.95	57.63	68.20	-10.57	H
Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
10400	32.85	34.63	5.36	31.25	41.59	54.00	-12.41	V
15600	28.69	36.42	7.85	30.63	42.33	54.00	-11.67	V
20800	29.26	38.81	8.56	34.95	41.68	54.00	-12.32	V
10400	33.40	33.93	5.36	31.25	41.44	54.00	-12.56	H
15600	28.64	36.55	7.85	30.63	42.41	54.00	-11.59	H
20800	29.51	39.94	8.56	34.95	43.06	54.00	-10.94	H

802.11ac20

Test Mode:5240					Test channel: High			
Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
10480	45.59	34.68	5.36	31.25	54.38	68.20	-13.82	V
17520	44.41	36.52	7.85	30.63	58.15	68.20	-10.05	V
20960	42.78	38.77	8.56	34.95	55.16	68.20	-13.04	V
10480	46.34	33.99	5.36	31.25	54.44	68.20	-13.76	H
17520	45.69	36.84	7.85	30.63	59.75	68.20	-8.45	H
20960	43.87	39.93	8.56	34.95	57.41	68.20	-10.79	H
Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
10480	31.37	34.68	5.36	31.25	40.16	54.00	-13.84	V
17520	28.07	36.52	7.85	30.63	41.81	54.00	-12.19	V
20960	28.63	38.77	8.56	34.95	41.01	54.00	-12.99	V
10480	30.65	33.99	5.36	31.25	38.75	54.00	-15.25	H
17520	27.40	36.84	7.85	30.63	41.46	54.00	-12.54	H
20960	29.81	39.93	8.56	34.95	43.35	54.00	-10.65	H

802.11ac20

Test Mode: 5745					Test channel: Lowest			
Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
11490	49.33	35.26	5.42	31.75	58.26	68.20	-9.97	V
17235	42.33	36.88	7.32	30.96	55.57	68.20	-12.66	V
22980	43.22	39.14	8.85	35.25	55.96	68.20	-12.27	V
11490	49.24	34.21	5.42	31.75	57.12	68.20	-11.11	H
17235	43.82	37.52	7.32	30.96	57.70	68.20	-10.53	H
22980	45.04	39.88	8.85	35.25	58.52	68.20	-9.71	H
Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
11490	33.83	35.26	5.42	31.75	42.76	54.00	-11.24	V
17235	29.96	36.88	7.32	30.96	43.20	54.00	-10.80	V
22980	29.77	39.14	8.85	35.25	42.51	54.00	-11.49	V
11490	33.08	34.21	5.42	31.75	40.96	54.00	-13.04	H
17235	28.34	37.52	7.32	30.96	42.22	54.00	-11.78	H
22980	29.37	39.88	8.85	35.25	42.85	54.00	-11.15	H

802.11ac20

Test Mode:5785					Test channel: Middle			
Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
11570	46.04	35.26	5.42	31.75	54.97	68.20	-13.26	V
17355	43.85	36.88	7.32	30.96	57.09	68.20	-11.14	V
23140	44.83	39.14	8.85	35.25	57.57	68.20	-10.66	V
11570	48.23	34.21	5.42	31.75	56.11	68.20	-12.12	H
17355	42.76	37.52	7.32	30.96	56.64	68.20	-11.59	H
23140	41.87	39.88	8.85	35.25	55.35	68.20	-12.88	H
Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
11570	33.68	35.26	5.42	31.75	42.61	54.00	-11.39	V
17355	30.42	36.88	7.32	30.96	43.66	54.00	-10.34	V
23140	29.55	39.14	8.85	35.25	42.29	54.00	-11.71	V
11570	33.88	34.21	5.42	31.75	41.76	54.00	-12.24	H
17355	29.83	37.52	7.32	30.96	43.71	54.00	-10.29	H
23140	29.26	39.88	8.85	35.25	42.74	54.00	-11.26	H

802.11ac20

Test Mode:5825					Test channel: High			
Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
11650	47.88	35.26	5.42	31.75	56.81	68.20	-11.42	V
17475	44.55	36.88	7.32	30.96	57.79	68.20	-10.44	V
23300	44.84	39.14	8.85	35.25	57.58	68.20	-10.65	V
11650	48.93	34.21	5.42	31.75	56.81	68.20	-11.42	H
17475	44.58	37.52	7.32	30.96	58.46	68.20	-9.77	H
23300	45.45	39.88	8.85	35.25	58.93	68.20	-9.30	H
Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
11650	35.44	35.26	5.42	31.75	44.37	54.00	-9.63	V
17475	28.75	36.88	7.32	30.96	41.99	54.00	-12.01	V
23300	27.74	39.14	8.85	35.25	40.48	54.00	-13.52	V
11650	32.87	34.21	5.42	31.75	40.75	54.00	-13.25	H
17475	28.35	37.52	7.32	30.96	42.23	54.00	-11.77	H
23300	29.02	39.88	8.85	35.25	42.50	54.00	-11.50	H

802.11n40

Test Mode:5190					Test channel: High			
Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
10380	47.82	35.26	5.42	31.75	56.75	68.20	-11.45	V
15570	44.60	36.88	7.32	30.96	57.84	68.20	-10.36	V
20760	45.30	39.14	8.85	35.25	58.04	68.20	-10.16	V
10380	49.05	34.21	5.42	31.75	56.93	68.20	-11.27	H
15570	44.91	37.52	7.32	30.96	58.79	68.20	-9.41	H
20760	45.52	39.88	8.85	35.25	59.00	68.20	-9.20	H
Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
10380	35.37	35.26	5.42	31.75	44.30	54.00	-9.70	V
15570	28.99	36.88	7.32	30.96	42.23	54.00	-11.77	V
20760	27.62	39.14	8.85	35.25	40.36	54.00	-13.64	V
10380	33.38	34.21	5.42	31.75	41.26	54.00	-12.74	H
15570	28.28	37.52	7.32	30.96	42.16	54.00	-11.84	H
20760	28.84	39.88	8.85	35.25	42.32	54.00	-11.68	H

802.11n40

Test Mode:5230					Test channel: High			
Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
10460	47.55	35.26	5.42	31.75	56.48	68.20	-11.72	V
15690	44.77	36.88	7.32	30.96	58.01	68.20	-10.19	V
20920	44.98	39.14	8.85	35.25	57.72	68.20	-10.48	V
10460	49.44	34.21	5.42	31.75	57.32	68.20	-10.88	H
15690	44.70	37.52	7.32	30.96	58.58	68.20	-9.62	H
20920	45.56	39.88	8.85	35.25	59.04	68.20	-9.16	H
Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
10460	35.62	35.26	5.42	31.75	44.55	54.00	-9.45	V
15690	29.02	36.88	7.32	30.96	42.26	54.00	-11.74	V
20920	27.84	39.14	8.85	35.25	40.58	54.00	-13.42	V
10460	33.38	34.21	5.42	31.75	41.26	54.00	-12.74	H
15690	28.50	37.52	7.32	30.96	42.38	54.00	-11.62	H
20920	29.22	39.88	8.85	35.25	42.70	54.00	-11.30	H

802.11ac40

Test Mode:5190					Test channel:LOW			
Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
10380	47.85	35.26	5.42	31.75	56.78	68.20	-11.42	V
15570	44.32	36.88	7.32	30.96	57.56	68.20	-10.64	V
20760	44.85	39.14	8.85	35.25	57.59	68.20	-10.61	V
10380	49.05	34.21	5.42	31.75	56.93	68.20	-11.27	H
15570	44.53	37.52	7.32	30.96	58.41	68.20	-9.79	H
20760	45.11	39.88	8.85	35.25	58.59	68.20	-9.61	H
Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
10380	35.66	35.26	5.42	31.75	44.59	54.00	-9.41	V
15570	28.99	36.88	7.32	30.96	42.23	54.00	-11.77	V
20760	28.10	39.14	8.85	35.25	40.84	54.00	-13.16	V
10380	33.10	34.21	5.42	31.75	40.98	54.00	-13.02	H
15570	28.71	37.52	7.32	30.96	42.59	54.00	-11.41	H
20760	28.77	39.88	8.85	35.25	42.25	54.00	-11.75	H

802.11ac40

Test Mode:5230					Test channel: High			
Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
10460	47.93	35.26	5.42	31.75	56.86	68.20	-11.34	V
15690	44.41	36.88	7.32	30.96	57.65	68.20	-10.55	V
20920	44.96	39.14	8.85	35.25	57.70	68.20	-10.50	V
10460	49.02	34.21	5.42	31.75	56.90	68.20	-11.30	H
15690	44.70	37.52	7.32	30.96	58.58	68.20	-9.62	H
20920	45.28	39.88	8.85	35.25	58.76	68.20	-9.44	H
Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
10460	35.36	35.26	5.42	31.75	44.29	54.00	-9.71	V
15690	29.22	36.88	7.32	30.96	42.46	54.00	-11.54	V
20920	27.74	39.14	8.85	35.25	40.48	54.00	-13.52	V
10460	33.24	34.21	5.42	31.75	41.12	54.00	-12.88	H
15690	28.73	37.52	7.32	30.96	42.61	54.00	-11.39	H
20920	29.09	39.88	8.85	35.25	42.57	54.00	-11.43	H

Note:

1. The testing has been conformed to 10*5825MHz=58250MHz.
2. All other emissions more than 30dB below the limit.
3. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
   Emission Level = Reading + Factor
   Margin=Emission Level-Limit
4. X-Axis, Y-Axis and Z-Axis were investigated. The results above show only the worst case.
5.E[dB μ V/m] = EIRP[dBm] + 95.2=68.2 dBuV/m, for EIPR[dBm]=-27dBm.

6.6 Band edge measurements

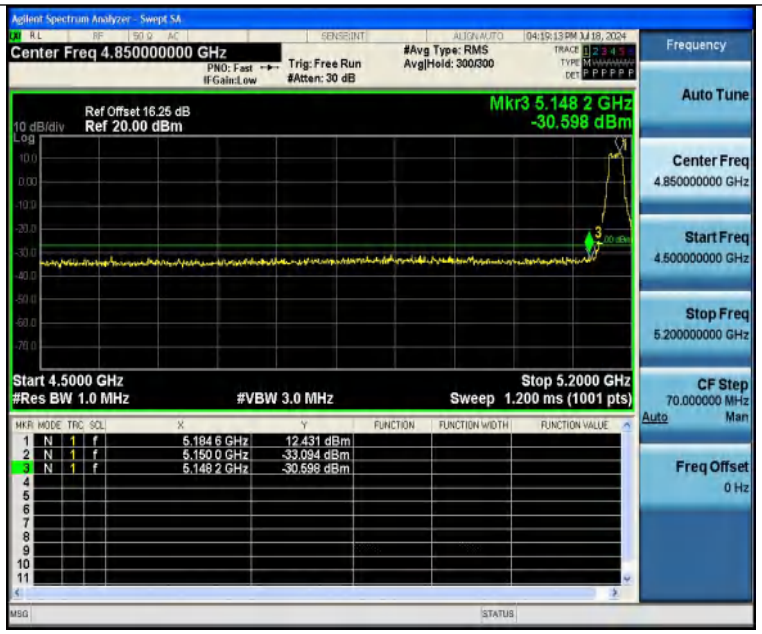
Test Result:

TestMode	Antenna	ChName	Frequency[MHz]	Result[dBm]	Limit[dBm]	Verdict
11A	Ant1	Low	5180	-30.6	≤-27	PASS
11A	Ant1	High	5240	-30.09	≤-27	PASS
11N20SISO	Ant1	Low	5180	-30.57	≤-27	PASS
11N20SISO	Ant1	High	5240	-29.98	≤-27	PASS
11N40SISO	Ant1	Low	5190	-30.93	≤-27	PASS
11N40SISO	Ant1	High	5230	-30.49	≤-27	PASS
11AC20SISO	Ant1	Low	5180	-31.13	≤-27	PASS
11AC20SISO	Ant1	High	5240	-30.62	≤-27	PASS
11AC40SISO	Ant1	Low	5190	-30.64	≤-27	PASS
11AC40SISO	Ant1	High	5230	-30.39	≤-27	PASS

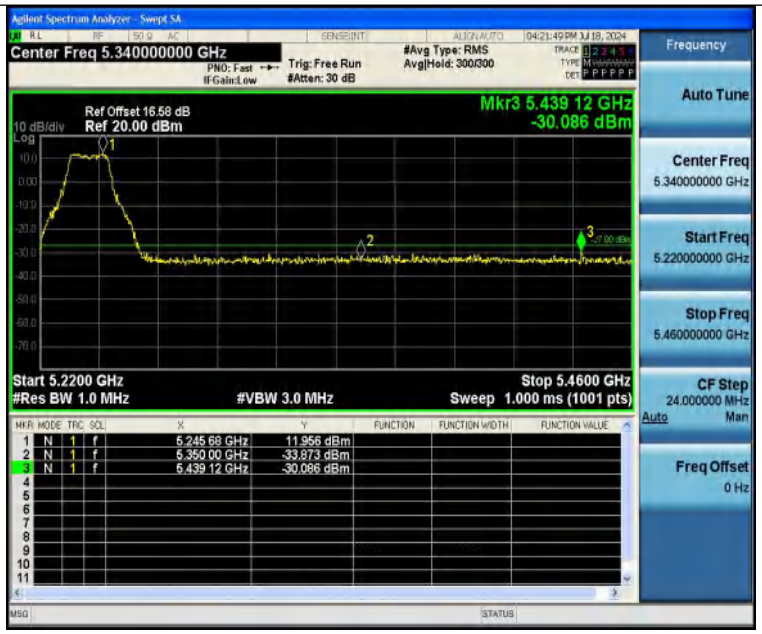
TestMode	Antenna	ChName	Frequency[MHz]	FreqRange [MHz]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	Low	5745	5720~5725	-28.35	≤24.47	PASS
11A	Ant1	Low	5745	5700~5720	-31.74	≤14.66	PASS
11A	Ant1	Low	5745	5650~5700	-32.57	≤2.91	PASS
11A	Ant1	Low	5745	5760~5650	-34.41	≤-27	PASS
11A	Ant1	High	5825	5850~5855	-31.79	≤26.87	PASS
11A	Ant1	High	5825	5855~5875	-30	≤15.54	PASS
11A	Ant1	High	5825	5875~5925	-30.67	≤4.31	PASS
11A	Ant1	High	5825	5925~5935	-30.36	≤-27	PASS
11N20SISO	Ant1	Low	5745	5720~5725	-25.4	≤22.37	PASS
11N20SISO	Ant1	Low	5745	5700~5720	-32.04	≤15.34	PASS
11N20SISO	Ant1	Low	5745	5650~5700	-33.15	≤-3.04	PASS
11N20SISO	Ant1	Low	5745	5760~5650	-34.12	≤-27	PASS
11N20SISO	Ant1	High	5825	5850~5855	-32.06	≤21.33	PASS
11N20SISO	Ant1	High	5825	5855~5875	-31.97	≤15.54	PASS
11N20SISO	Ant1	High	5825	5875~5925	-31.73	≤-24.86	PASS
11N20SISO	Ant1	High	5825	5925~5935	-31.59	≤-27	PASS
11N40SISO	Ant1	Low	5755	5720~5725	-25.4	≤26.51	PASS
11N40SISO	Ant1	Low	5755	5700~5720	-28.96	≤14.94	PASS
11N40SISO	Ant1	Low	5755	5650~5700	-32.68	≤-9.52	PASS
11N40SISO	Ant1	Low	5755	5780~5650	-34.17	≤-27	PASS
11N40SISO	Ant1	High	5795	5850~5855	-31.81	≤20.17	PASS
11N40SISO	Ant1	High	5795	5855~5875	-31.94	≤12.49	PASS
11N40SISO	Ant1	High	5795	5875~5925	-30.88	≤-18.50	PASS
11N40SISO	Ant1	High	5795	5925~5935	-31.47	≤-27	PASS
11AC20SISO	Ant1	Low	5745	5720~5725	-30.2	≤26.30	PASS
11AC20SISO	Ant1	Low	5745	5700~5720	-33.06	≤15.37	PASS
11AC20SISO	Ant1	Low	5745	5650~5700	-32.1	≤9.21	PASS
11AC20SISO	Ant1	Low	5745	5760~5650	-33.26	≤-27	PASS
11AC20SISO	Ant1	High	5825	5850~5855	-31.48	≤17.95	PASS
11AC20SISO	Ant1	High	5825	5855~5875	-31.62	≤10.82	PASS

11AC20SISO	Ant1	High	5825	5875~5925	-30.71	≤-3.38	PASS
11AC20SISO	Ant1	High	5825	5925~5935	-31.91	≤-27	PASS
11AC40SISO	Ant1	Low	5755	5720~5725	-26.32	≤23.74	PASS
11AC40SISO	Ant1	Low	5755	5700~5720	-27.81	≤15.54	PASS
11AC40SISO	Ant1	Low	5755	5650~5700	-32.72	≤-10.42	PASS
11AC40SISO	Ant1	Low	5755	5780~5650	-34.3	≤-27	PASS
11AC40SISO	Ant1	High	5795	5850~5855	-32.51	≤19.42	PASS
11AC40SISO	Ant1	High	5795	5855~5875	-31.89	≤15.26	PASS
11AC40SISO	Ant1	High	5795	5875~5925	-30.79	≤9.46	PASS
11AC40SISO	Ant1	High	5795	5925~5935	-32.85	≤-27	PASS

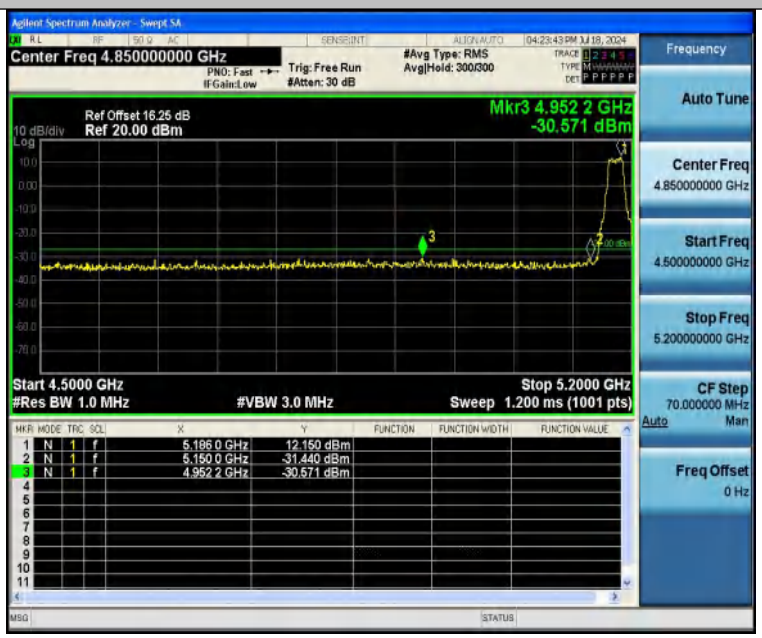
Test Graphs:



11A-Ant1-5180-PASS

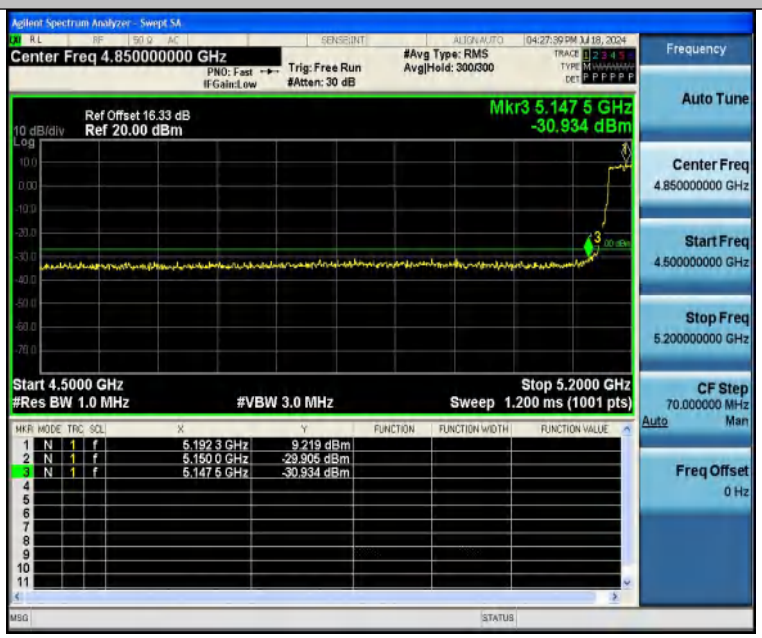


11A-Ant1-5240-PASS



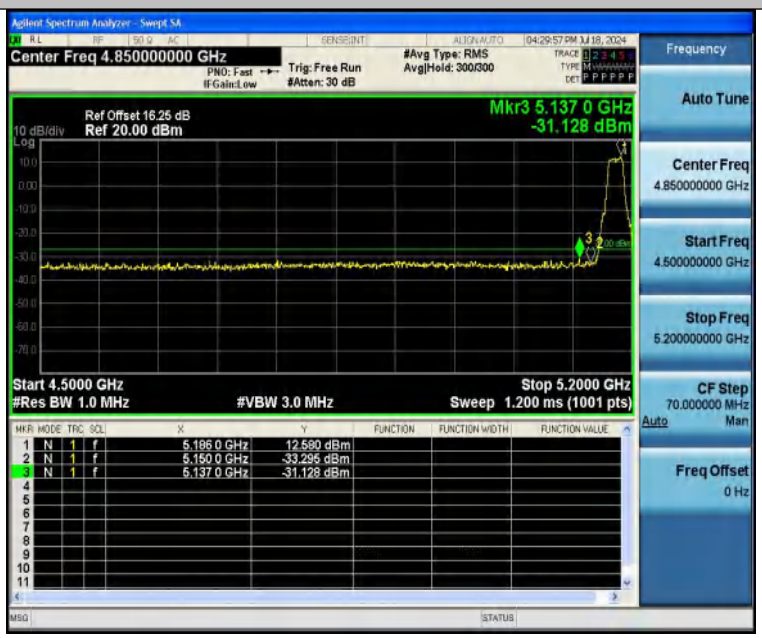
11N20SISO-Ant1-5180-PASS

11N20SISO-Ant1-5240-PASS



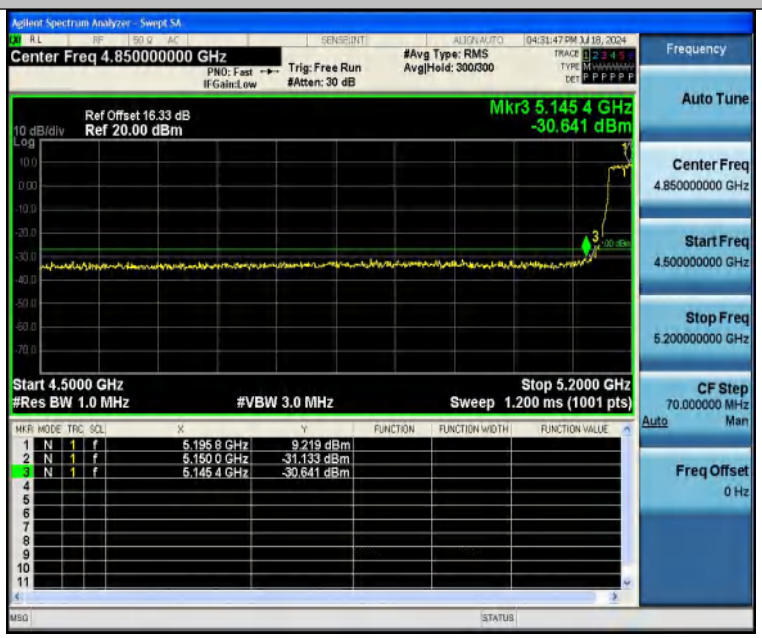
11N40SISO-Ant1-5190-PASS

11N40SISO-Ant1-5230-PASS



11AC20SISO-Ant1-5180-PASS

11AC20SISO-Ant1-5240-PASS



11AC40SISO-Ant1-5190-PASS

11AC40SISO-Ant1-5230-PASS

Test plots B4:

11A-Ant1-5745-PASS

11A-Ant1-5825-PASS

11N20SISO-Ant1-5745-PASS

11N20SISO-Ant1-5825-PASS

11N40SISO-Ant1-5755-PASS

11N40SISO-Ant1-5795-PASS

11AC20SISO-Ant1-5745-PASS

11AC20SISO-Ant1-5825-PASS

11AC40SISO-Ant1-5755-PASS

11AC40SISO-Ant1-5795-PASS

Note: The limits are based on EIRP, and the antenna gain and line loss are compensated to the instrument by the test system.

6.7 Restricted Band

Test Requirement : FCC Part15 E Section 15.407(b)

Test site : Measurement Distance: 3m

Test Limit :

Frequency	Limit (dBuV/m @3m)	Remark
Above 1GHz	74	Peak Value
	54	Average Value

Test Procedure:

1. The EUT was placed on a styrofoam table which is 1.5m above ground plane.

2. EUT is set 3m away from the receiving antenna, which is moved from 1m to 4m to find out the maximum emissions. The spectrum was investigated from the lowest radio frequency signal generated in the device, without going below 9 kHz, up to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.

4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.

5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.

6. Repeat above procedures until the measurements for all frequencies are complete.

7. The radiation measurements are tested under 3-axes(X,Y,Z) position(X denotes lying on the table, Y denotes side stand and Z denotes vertical stand), After pre-test, It was found that the worse radiation emission was get at the X position. So the data shown was the X position only.

8. The test above 1GHz must be use the fully anechoic room, and the test below 1GHz use the half anechoic room

Test Result:

Worst case mode:		802.11a(6Mbps)		Test channel:		36		
NO.	Freq. [MHz]	level [dBμV/m]	Factor [dB]	Emission level [dBμV/m]	Limit [dBμV/m]	Over [dB]	Polarity	Detector Type
1	5150	50.8	6.53	57.33	74	16.67	H	Peak
2	5150	39.96	6.53	46.49	54	7.51	H	Average
3	5150	49.47	6.53	56	74	18	V	Peak
4	5150	38.5	6.53	45.03	54	8.97	V	Average

Worst case mode:		802.11a(6Mbps)		Test channel:		48		
NO.	Freq. [MHz]	level [dBμV/m]	Factor [dB]	Emission level [dBμV/m]	Limit [dBμV/m]	Over [dB]	Polarity	Detector Type
1	5350	50.02	6.56	56.58	74	17.42	H	Peak
2	5350	39.88	6.56	46.44	54	7.56	H	Average
3	5350	49.58	6.56	56.14	74	17.86	V	Peak
4	5350	38.41	6.56	44.97	54	9.03	V	Average

Worst case mode:		802.11a(6Mbps)		Test channel:		165		
NO.	Freq. [MHz]	level [dBμV/m]	Factor [dB]	Emission level [dBμV/m]	Limit [dBμV/m]	Over [dB]	Polarity	Detector Type
1	5850	50.33	6.64	56.97	74	17.03	H	Peak
2	5850	39.65	6.64	46.29	54	7.71	H	Average
3	5850	49.34	6.64	55.98	74	18.02	V	Peak
4	5850	38.4	6.64	45.04	54	8.96	V	Average

Note: Only recorded the worst case in the report.

7 Emission Bandwidth and Occupied Bandwidth

Test Requirement	:	FCC CFR47 Part 15 Section 15.407(a)(e)
Test Method	:	ANSI C63.10:2013
Test Limit		According to FCC §15.407(a), The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test. If the device cannot be connected directly, alternative techniques acceptable to the Commission may be used. Measurements in the 5.725-5.85 GHz band are made over a reference bandwidth of 500 kHz or the 26 dB emission bandwidth of the device, whichever is less. Measurements in the 5.15-5.25 GHz, 5.25-5.35 GHz, and the 5.47-5.725 GHz bands are made over a bandwidth of 1 MHz or the 26 dB emission bandwidth of the device, whichever is less. A narrower resolution bandwidth can be used, provided that the measured power is integrated over the full reference bandwidth. As per FCC §15.407(e): for equipment operating in the band 5725 – 5850 MHz, the minimum 6 dB bandwidth of U-NII devices shall be 500 kHz.

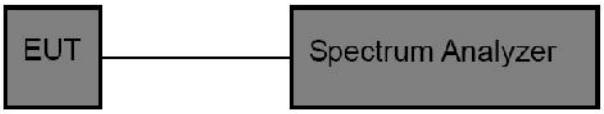
7.1 Test Procedure

According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01,
Emission Bandwidth (EBW)
a) Set RBW = approximately 1% of the emission bandwidth; b) Set the VBW > RBW; c) Detector = Peak; d) Trace mode = max hold; e) Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%;99% Occupied Bandwidth
The 99% occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5 % of the total mean power of the given emission. Measurement of the 99% occupied bandwidth is required only as a condition for using the optional band-edge measurement techniques described in II.G.3.d). Measurements of 99% occupied bandwidth may also optionally be used in lieu of the EBW to define the minimum frequency range over which the spectrum is integrated when measuring maximum conducted output power as described in II.E. However, the EBW must be measured to determine bandwidth dependent limits on maximum conducted output power in accordance with 15.407(a).

The following procedure shall be used for measuring (99 %) power bandwidth:
1. Set center frequency to the nominal EUT channel center frequency.
2. Set span = 1.5 times to 5.0 times the OBW.
3. Set RBW = 1 % to 5 % of the OBW
4. Set VBW ⩾ 3 • RBW
5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise,
peak detection and max hold mode (until the trace stabilizes) shall be used.
6. Use the 99 % power bandwidth function of the instrument (if available).
7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency.

The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

7.2 Test Setup



7.3 Test Result

PASS

Pre-scan has been conducted to determine the worst-case mode from all possible combinations between available modulations / data rates and antenna ports.
Following channel was selected for the final test as listed below.

26 dB emission bandwidth:

TestMode	Antenna	Frequency[MHz]	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	25.560	5167.080	5192.640	---	---
11A	Ant1	5200	24.400	5187.560	5211.960	---	---
11A	Ant1	5240	23.960	5228.200	5252.160	---	---
11A	Ant1	5745	24.360	5732.720	5757.080	---	---
11A	Ant1	5785	24.240	5772.440	5796.680	---	---
11A	Ant1	5825	24.000	5812.600	5836.600	---	---
11N20SISO	Ant1	5180	25.080	5167.400	5192.480	---	---
11N20SISO	Ant1	5200	25.280	5187.120	5212.400	---	---
11N20SISO	Ant1	5240	25.680	5227.280	5252.960	---	---
11N20SISO	Ant1	5745	25.280	5732.320	5757.600	---	---
11N20SISO	Ant1	5785	24.680	5772.520	5797.200	---	---
11N20SISO	Ant1	5825	25.160	5812.200	5837.360	---	---
11N40SISO	Ant1	5190	47.360	5166.480	5213.840	---	---
11N40SISO	Ant1	5230	46.480	5206.800	5253.280	---	---
11N40SISO	Ant1	5755	46.320	5731.640	5777.960	---	---
11N40SISO	Ant1	5795	46.640	5771.320	5817.960	---	---
11AC20SISO	Ant1	5180	25.200	5167.640	5192.840	---	---
11AC20SISO	Ant1	5200	25.040	5187.320	5212.360	---	---
11AC20SISO	Ant1	5240	24.280	5227.800	5252.080	---	---
11AC20SISO	Ant1	5745	25.480	5731.960	5757.440	---	---
11AC20SISO	Ant1	5785	24.480	5772.520	5797.000	---	---
11AC20SISO	Ant1	5825	25.480	5812.000	5837.480	---	---
11AC40SISO	Ant1	5190	46.400	5167.840	5214.240	---	---
11AC40SISO	Ant1	5230	46.080	5207.440	5253.520	---	---
11AC40SISO	Ant1	5755	47.200	5731.480	5778.680	---	---
11AC40SISO	Ant1	5795	46.320	5771.400	5817.720	---	---

minimum 6 dB bandwidth:

TestMode	Antenna	Frequency[MHz]	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	16.320	5736.800	5753.120	0.5	PASS
11A	Ant1	5785	16.320	5776.800	5793.120	0.5	PASS
11A	Ant1	5825	16.320	5816.800	5833.120	0.5	PASS
11N20SISO	Ant1	5745	17.640	5736.120	5753.760	0.5	PASS
11N20SISO	Ant1	5785	17.560	5776.160	5793.720	0.5	PASS
11N20SISO	Ant1	5825	17.560	5816.160	5833.720	0.5	PASS
11N40SISO	Ant1	5755	36.320	5736.760	5773.080	0.5	PASS
11N40SISO	Ant1	5795	36.000	5776.840	5812.840	0.5	PASS
11AC20SISO	Ant1	5745	17.600	5736.160	5753.760	0.5	PASS
11AC20SISO	Ant1	5785	17.560	5776.160	5793.720	0.5	PASS
11AC20SISO	Ant1	5825	17.520	5816.200	5833.720	0.5	PASS
11AC40SISO	Ant1	5755	36.320	5736.760	5773.080	0.5	PASS
11AC40SISO	Ant1	5795	35.760	5776.840	5812.600	0.5	PASS

Test Graphs：

11A-Ant1-5180

11A-Ant1-5200

11A-Ant1-5240

11A-Ant1-5745

11A-Ant1-5785

11A-Ant1-5825

11N20SISO-Ant1-5180

11N20SISO-Ant1-5200

11N20SISO-Ant1-5240

11N20SISO-Ant1-5745

11N20SISO-Ant1-5785

11N20SISO-Ant1-5825

11N40SISO-Ant1-5190

11N40SISO-Ant1-5230

11N40SISO-Ant1-5755

11N40SISO-Ant1-5795

11AC20SISO-Ant1-5180

11AC20SISO-Ant1-5200

11AC20SISO-Ant1-5240

11AC20SISO-Ant1-5745

11AC20SISO-Ant1-5785

11AC20SISO-Ant1-5825

11AC40SISO-Ant1-5190

11AC40SISO-Ant1-5230

11AC40SISO-Ant1-5755

11AC40SISO-Ant1-5795

Min emission bandwidth Test Graphs:

11A-Ant1-5745-PASS

11A-Ant1-5785-PASS

11A-Ant1-5825-PASS

11N20SISO-Ant1-5745-PASS

11N20SISO-Ant1-5785-PASS

11N20SISO-Ant1-5825-PASS

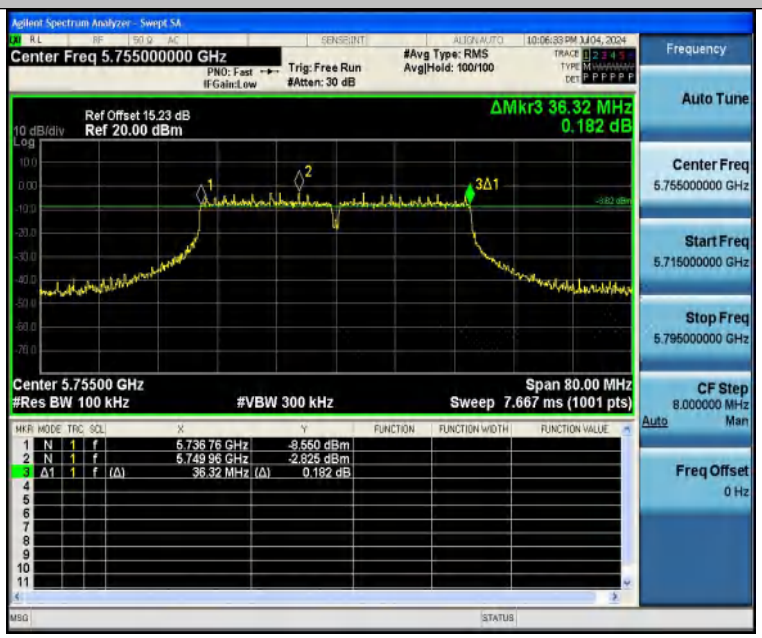
11N40SISO-Ant1-5755-PASS

11N40SISO-Ant1-5795-PASS

11AC20SISO-Ant1-5745-PASS

11AC20SISO-Ant1-5785-PASS

11AC20SISO-Ant1-5825-PASS



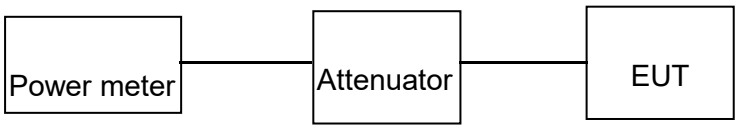
11AC40SISO-Ant1-5755-PASS

11AC40SISO-Ant1-5795-PASS

8 Maximum Conducted Output Power

Test Requirement	:	FCC CFR47 Part 15 Section 15.247
Test Method	:	ANSI C63.10:2013
Test Limit	:	For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

8.1 Test Setup



8.2 Test Procedure

According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, The use Power Meter 1. Place the EUT on a bench and set it in transmitting mode. 2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to a Power meter.

8.3 Test Result

Test Mode	Antenna	Frequency[MHz]	Conducted Power [dBm]	Limit [dBm]	Verdict
11A	Ant1	5180	11.15	≤23.98	PASS
11A	Ant1	5200	11.85	≤23.98	PASS
11A	Ant1	5240	13.09	≤23.98	PASS
11A	Ant1	5745	11.41	≤30.00	PASS
11A	Ant1	5785	11.53	≤30.00	PASS
11A	Ant1	5825	10.31	≤30.00	PASS
11N20SISO	Ant1	5180	11.15	≤23.98	PASS
11N20SISO	Ant1	5200	11.65	≤23.98	PASS
11N20SISO	Ant1	5240	12.94	≤23.98	PASS
11N20SISO	Ant1	5745	11.42	≤30.00	PASS
11N20SISO	Ant1	5785	11.44	≤30.00	PASS
11N20SISO	Ant1	5825	10.34	≤30.00	PASS
11AC20SISO	Ant1	5180	10.53	≤23.98	PASS
11AC20SISO	Ant1	5200	12.56	≤23.98	PASS
11AC20SISO	Ant1	5240	11.01	≤23.98	PASS
11N40SISO	Ant1	5190	10.90	≤23.98	PASS
11N40SISO	Ant1	5230	11.12	≤23.98	PASS
11N40SISO	Ant1	5755	11.70	≤30.00	PASS
11N40SISO	Ant1	5795	13.00	≤30.00	PASS
11AC20SISO	Ant1	5745	11.41	≤30.00	PASS
11AC20SISO	Ant1	5785	11.41	≤30.00	PASS
11AC20SISO	Ant1	5825	10.27	≤30.00	PASS
11AC40SISO	Ant1	5190	10.49	≤23.98	PASS
11AC40SISO	Ant1	5230	12.44	≤23.98	PASS
11AC40SISO	Ant1	5755	10.93	≤30.00	PASS
11AC40SISO	Ant1	5795	10.85	≤30.00	PASS

9 Power Spectral density

Test Requirement	:	FCC CFR47 Part 15 Section 15.2407(a)
Test Method	:	ANSI C63.10:2013
Test Limit	:	For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.. For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHzband. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-tomultipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations

9.1 Test Procedure

According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01 and ANSI 63.10: 2013 Sec 10.3.7.For devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in Section 15.407(a)(5). For devices operating in the band 5.725-5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, “provided that the measured power is integrated over the full reference bandwidth” to show the total power over the specified measurement bandwidth (i.e., 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 kHz bandwidth, the following adjustments to the procedures apply:

a) Set the RBW to 1 MHz.

b) Set the VBW to be at least 1 MHz (a VBW of 3 MHz is desirable).

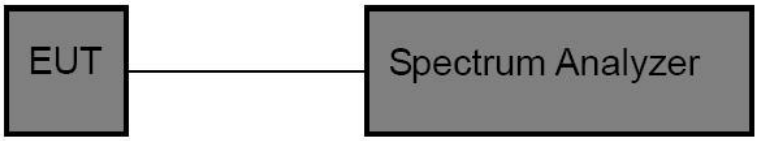
c) Set the frequency span to examine the spectrum across a convenient frequency segment (e.g., 600 MHz).

d) Select the power averaging (rms) detector.

e) Set the sweep time so that there is no more than a 1 ms integration period over each measurement bin.

f) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

9.2 Test Setup



9.3 Test Result

Pre-scan has been conducted to determine the worst-case mode from all possible combinations between available modulations / data rates and antenna ports.

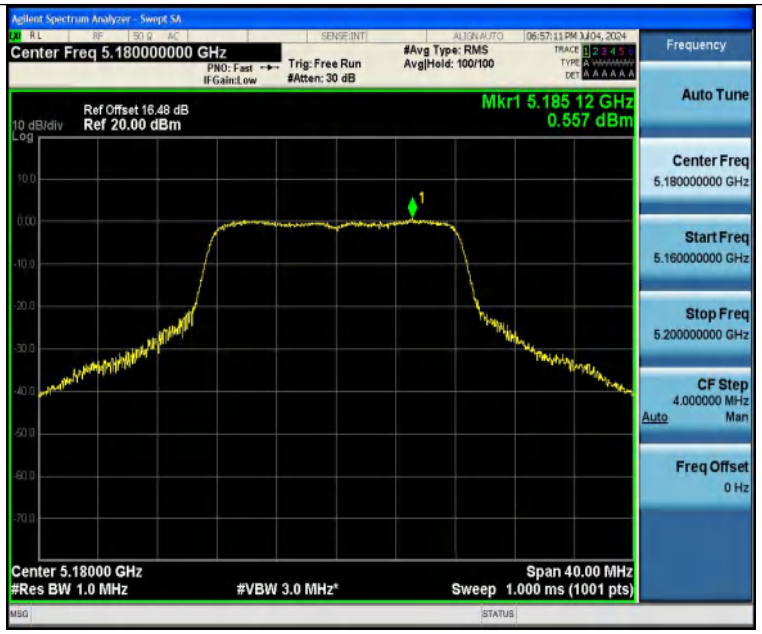
Following channel was selected for the final test as listed below

TestMode	Antenna	Frequency[MHz]	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	Ant1	5180	0.56	≤11.00	PASS
11A	Ant1	5200	1.12	≤11.00	PASS
11A	Ant1	5240	2.28	≤11.00	PASS
11A	Ant1	5745	-2.09	≤30.00	PASS
11A	Ant1	5785	-1.82	≤30.00	PASS
11A	Ant1	5825	-3.03	≤30.00	PASS
11N20SISO	Ant1	5180	-0.01	≤11.00	PASS
11N20SISO	Ant1	5200	0.68	≤11.00	PASS
11N20SISO	Ant1	5240	2.14	≤11.00	PASS
11N20SISO	Ant1	5745	-2.2	≤30.00	PASS
11N20SISO	Ant1	5785	-2.34	≤30.00	PASS
11N20SISO	Ant1	5825	-3.16	≤30.00	PASS
11N40SISO	Ant1	5190	-1.51	≤11.00	PASS
11N40SISO	Ant1	5230	-1.22	≤11.00	PASS
11N40SISO	Ant1	5755	-5.33	≤30.00	PASS
11N40SISO	Ant1	5795	-5.46	≤30.00	PASS
11AC20SISO	Ant1	5180	0.28	≤11.00	PASS
11AC20SISO	Ant1	5200	0.85	≤11.00	PASS
11AC20SISO	Ant1	5240	1.87	≤11.00	PASS
11AC20SISO	Ant1	5745	-1.92	≤30.00	PASS
11AC20SISO	Ant1	5785	-2.15	≤30.00	PASS
11AC20SISO	Ant1	5825	-3.71	≤30.00	PASS
11AC40SISO	Ant1	5190	-2.97	≤11.00	PASS
11AC40SISO	Ant1	5230	-1.14	≤11.00	PASS
11AC40SISO	Ant1	5755	-5.78	≤30.00	PASS
11AC40SISO	Ant1	5795	-5.33	≤30.00	PASS

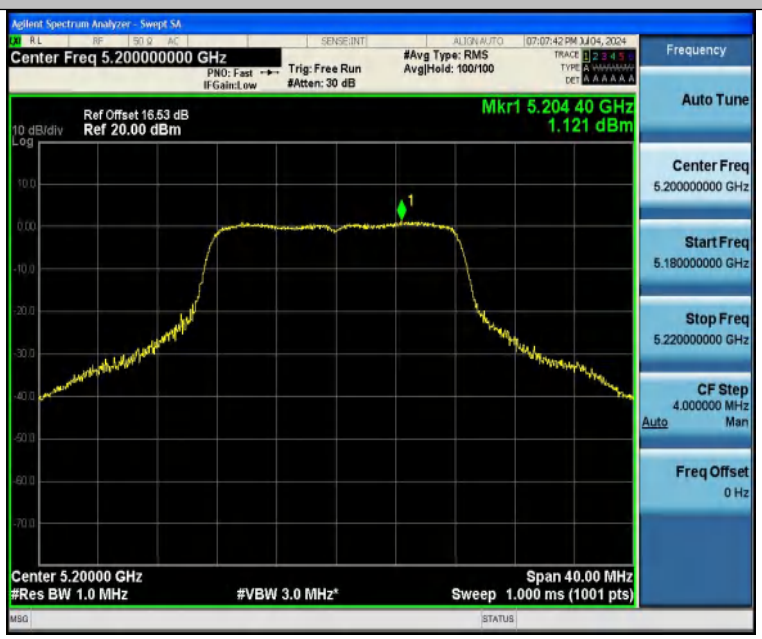
Note：1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.

2. in the band 5.725−5.85 GHz the test RBW select 300KHz,so the measured result corrected by Result+10 log (500 kHz/300kHz).

Test Graphs:

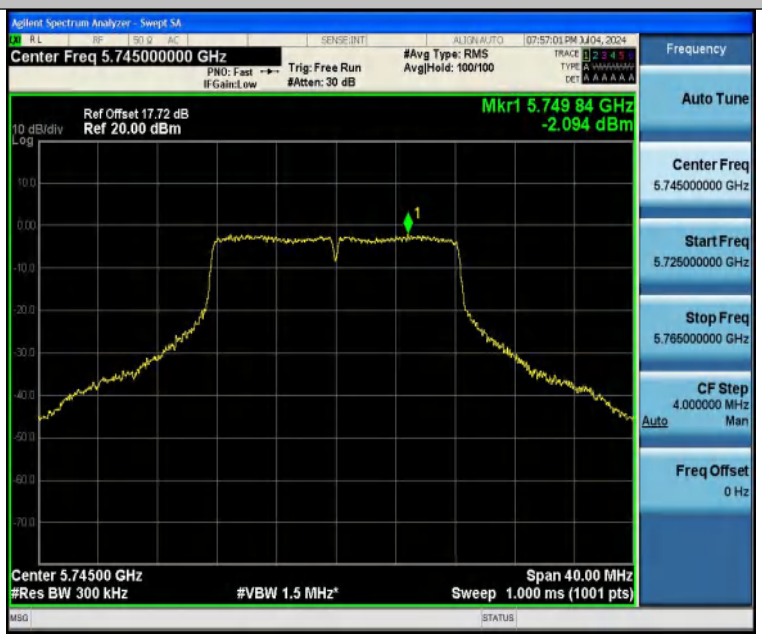


11A-Ant1-5180-PASS



11A-Ant1-5200-PASS

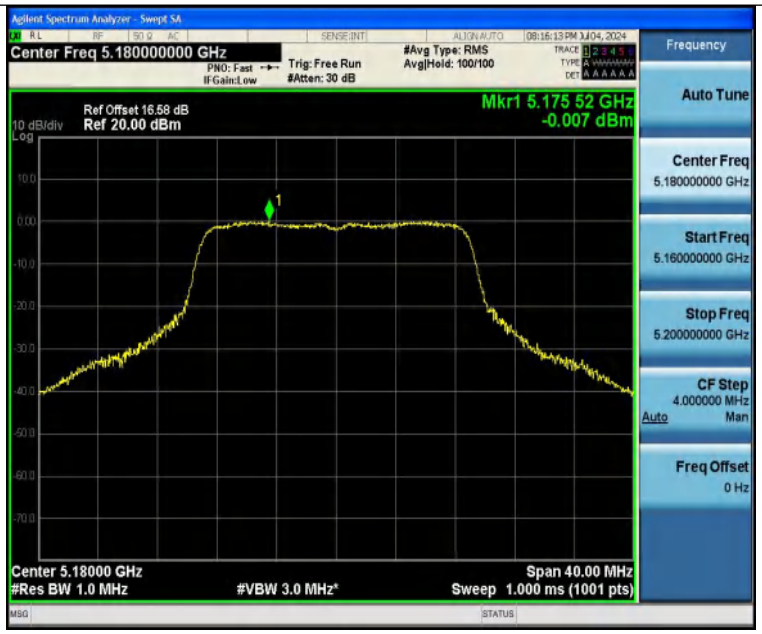
11A-Ant1-5240-PASS



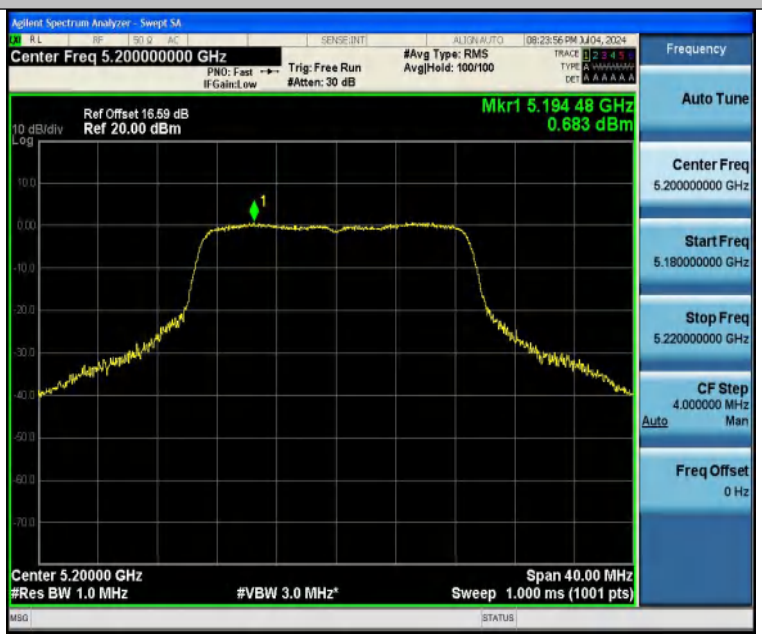
11A-Ant1-5745-PASS

11A-Ant1-5785-PASS

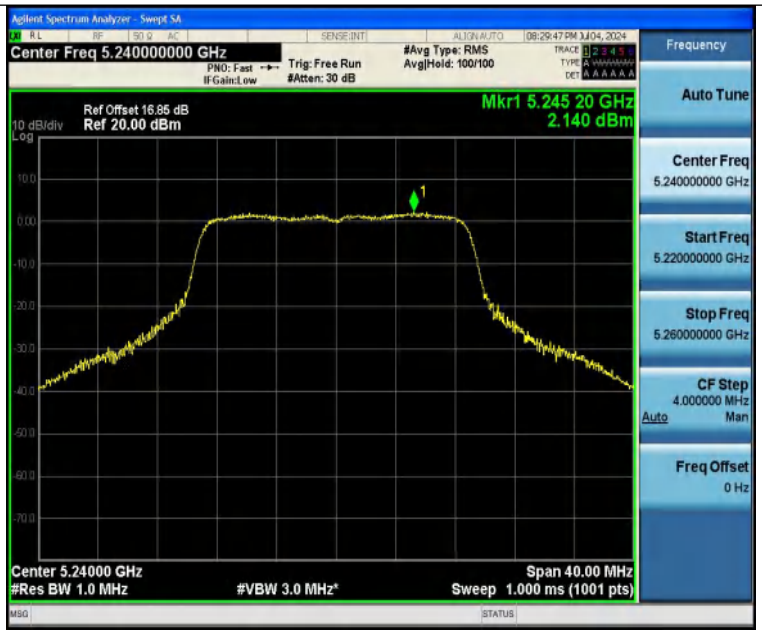
11A-Ant1-5825-PASS



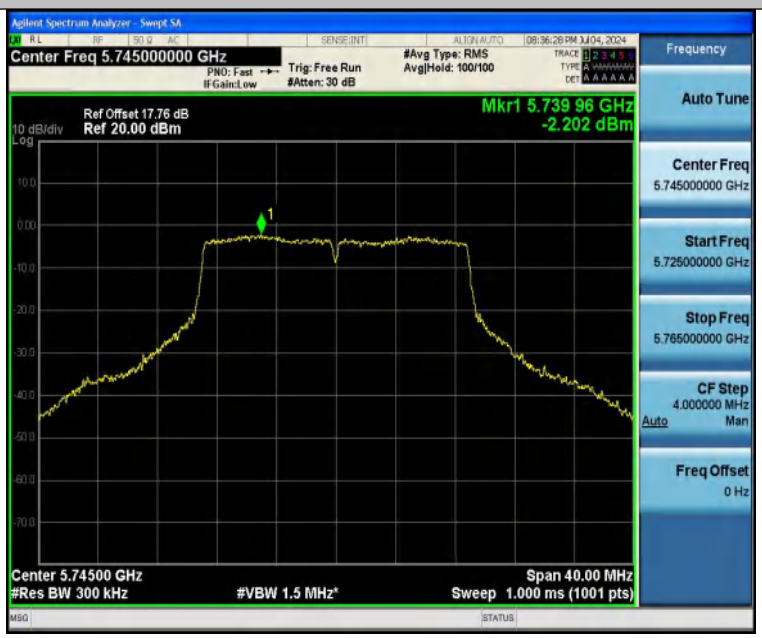
11N20SISO-Ant1-5180-PASS



11N20SISO-Ant1-5200-PASS

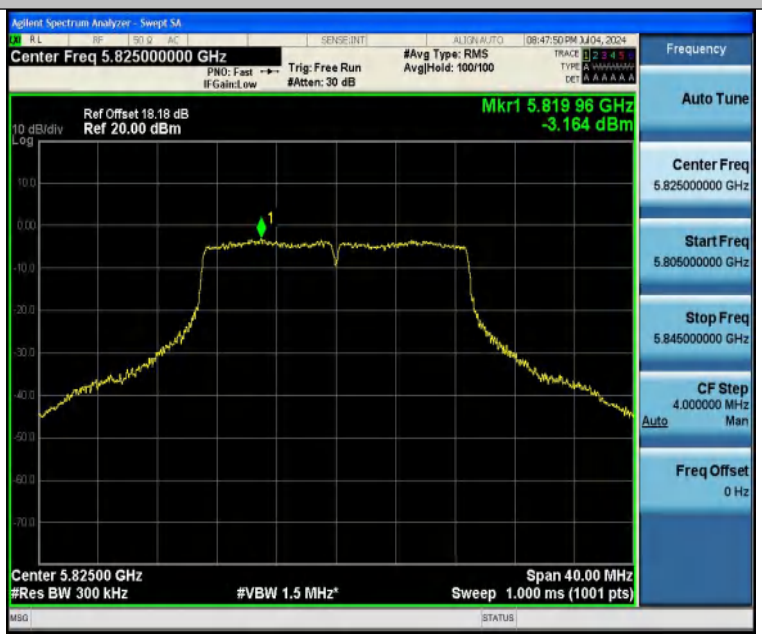


11N20SISO-Ant1-5240-PASS

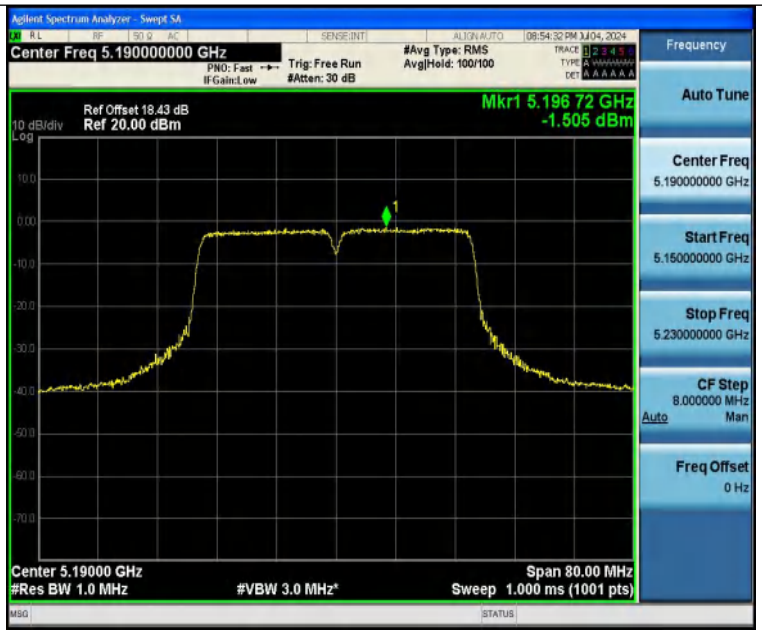


11N20SISO-Ant1-5745-PASS

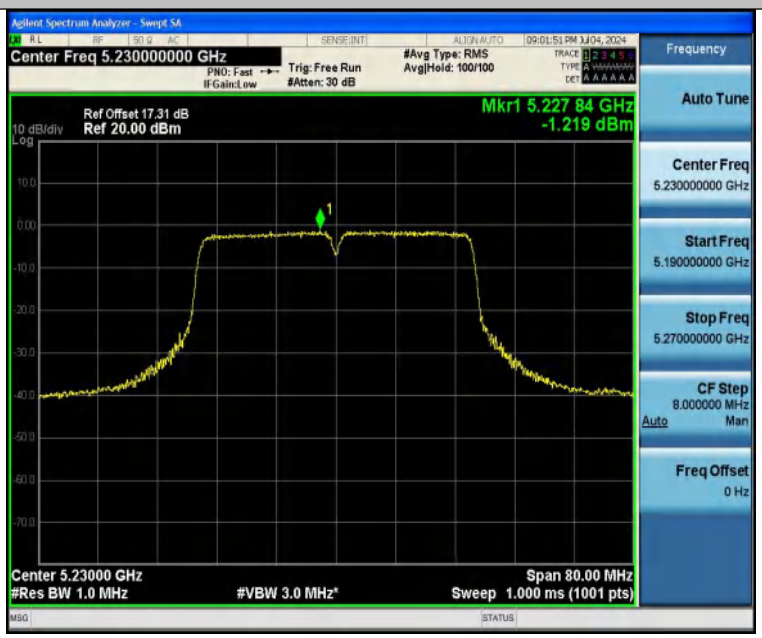
11N20SISO-Ant1-5785-PASS



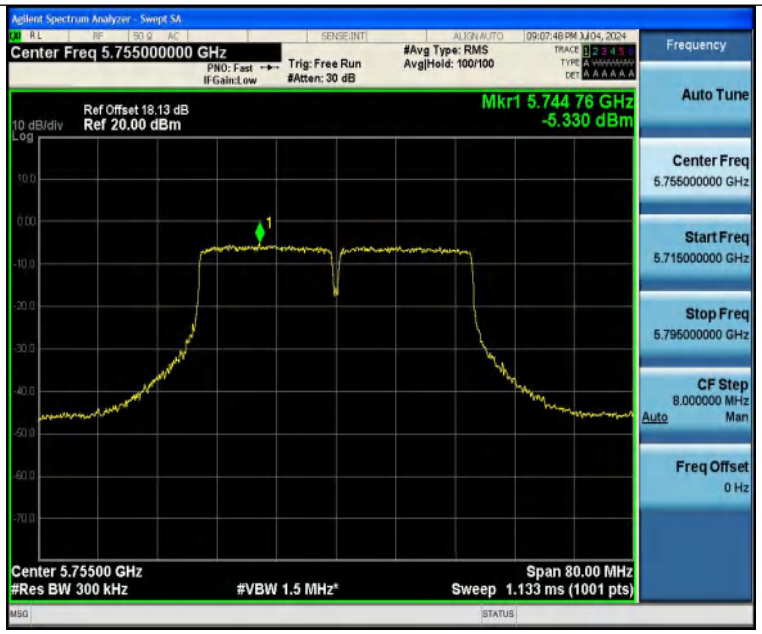
11N20SISO-Ant1-5825-PASS



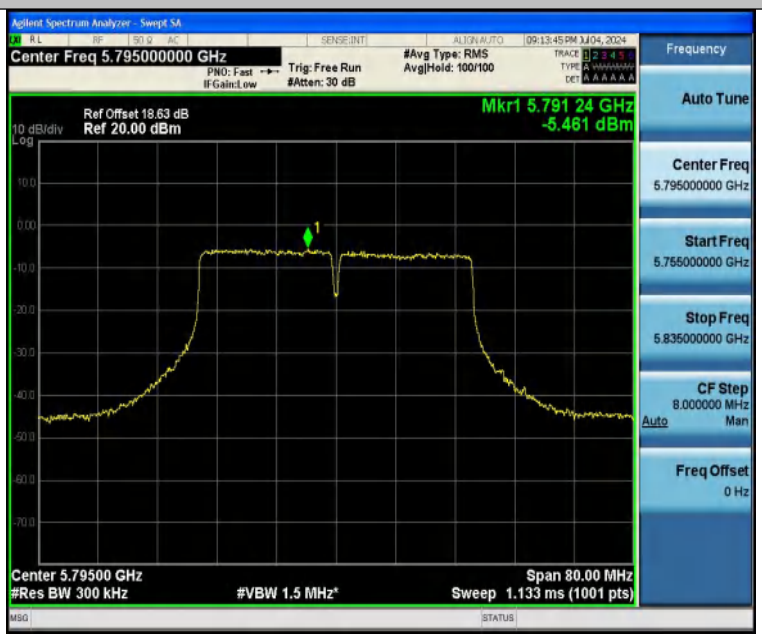
11N40SISO-Ant1-5190-PASS



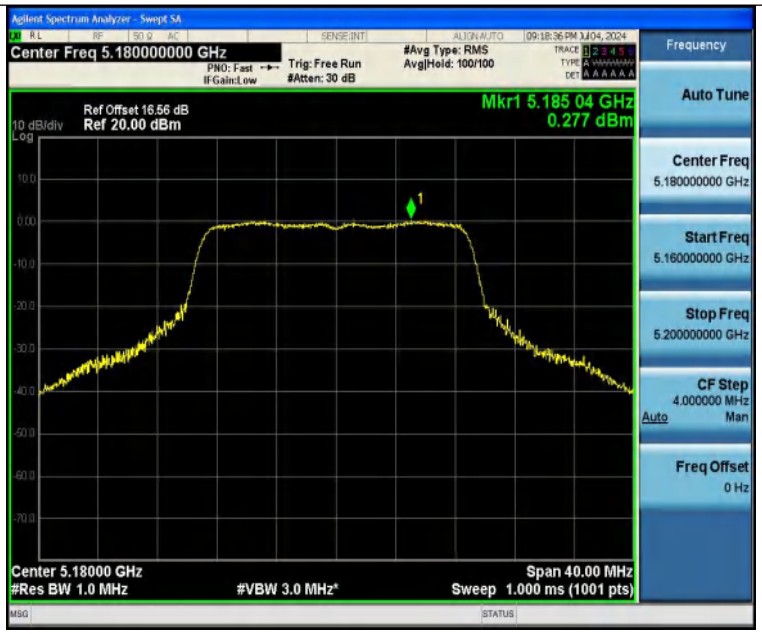
11N40SISO-Ant1-5230-PASS



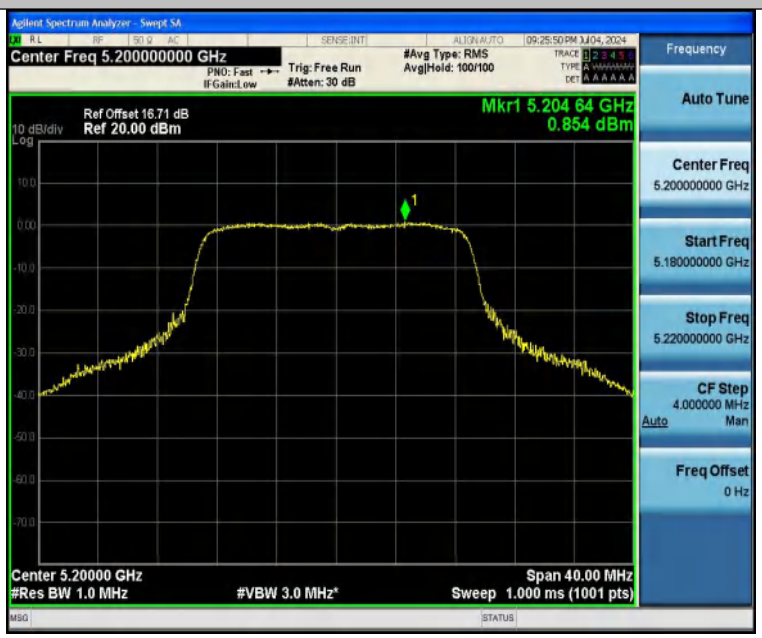
11N40SISO-Ant1-5755-PASS



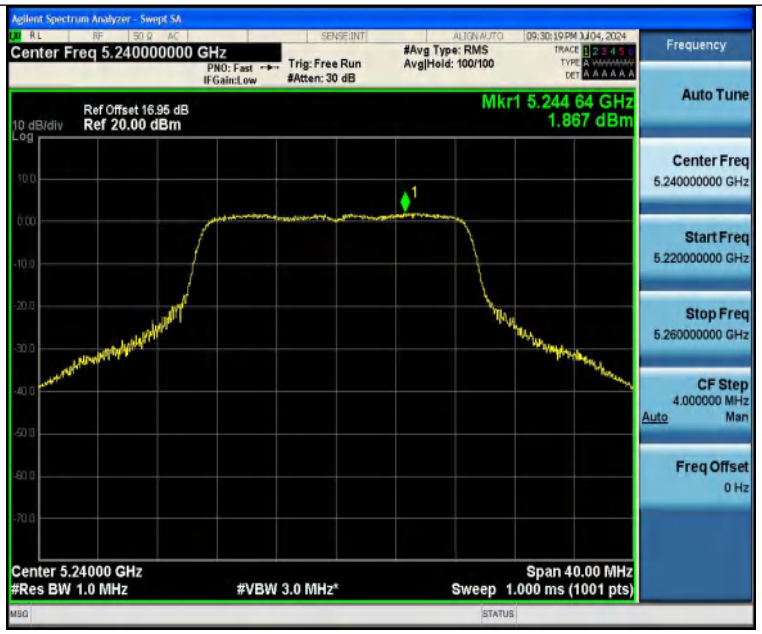
11N40SISO-Ant1-5795-PASS



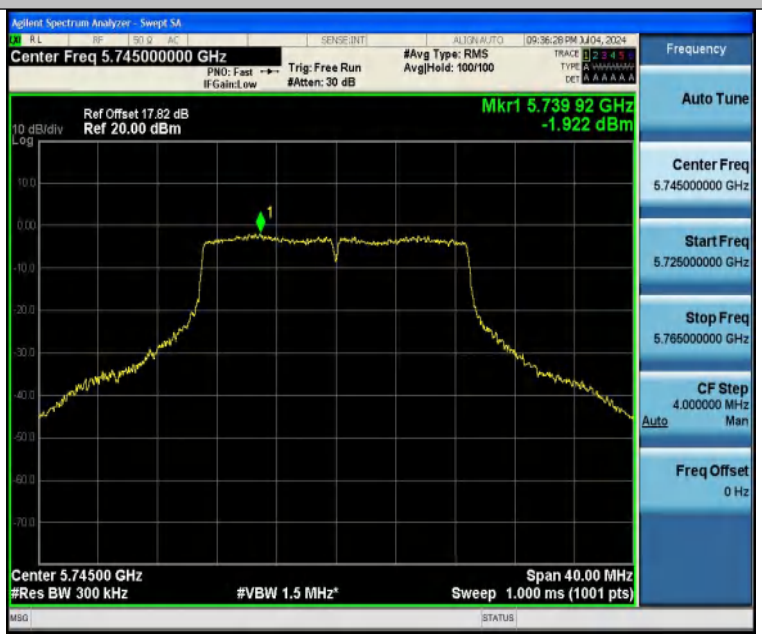
11AC20SISO-Ant1-5180-PASS



11AC20SISO-Ant1-5200-PASS



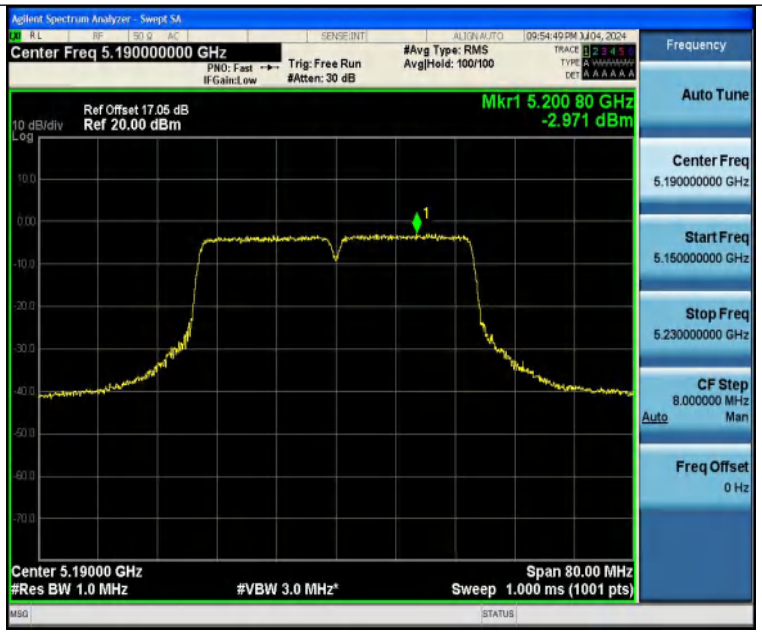
11AC20SISO-Ant1-5240-PASS



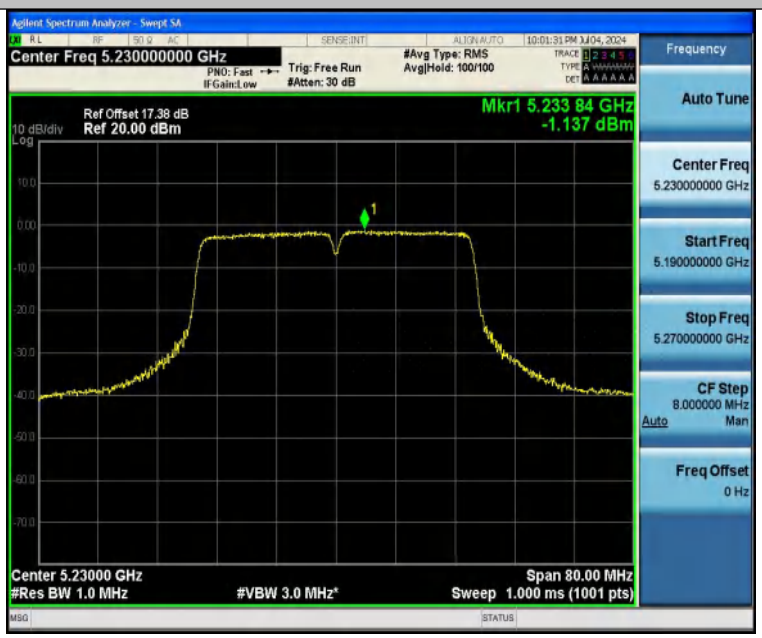
11AC20SISO-Ant1-5745-PASS

11AC20SISO-Ant1-5785-PASS

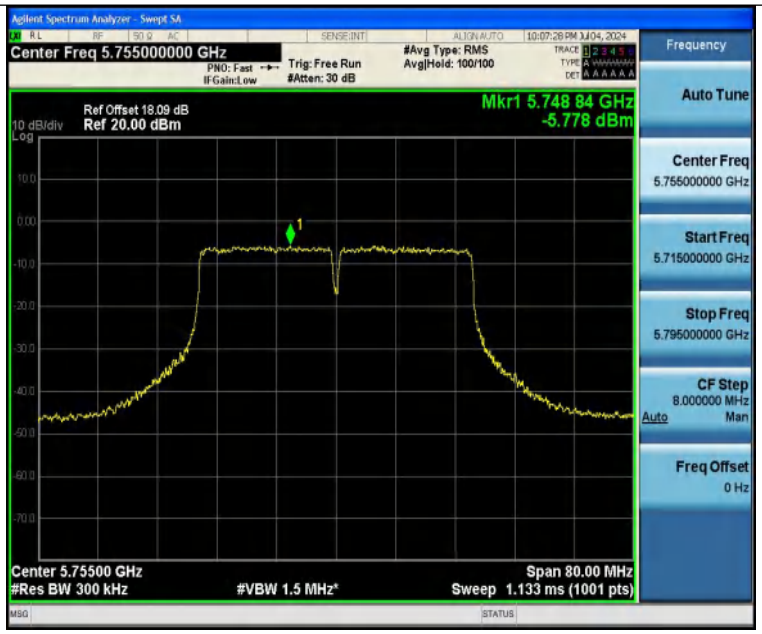
11AC20SISO-Ant1-5825-PASS



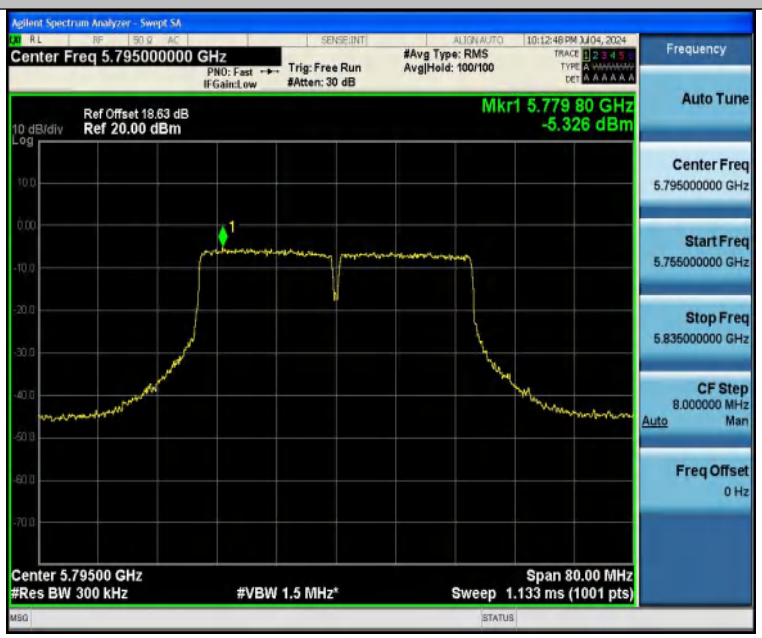
11AC40SISO-Ant1-5190-PASS



11AC40SISO-Ant1-5230-PASS



11AC40SISO-Ant1-5755-PASS



11AC40SISO-Ant1-5795-PASS

9.4 Antenna Requirement

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

9.5 Result

The EUT'S antenna, permanent attached antenna,is PCB Antenna. The antenna's gain is 5.2G:2.98 dBi;5.8G:2.37 dBi and meets the requirement.

10 Frequency Stability

Test Requirement : FCC Part15 E Section 15.407 (g)

Test Limit: Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

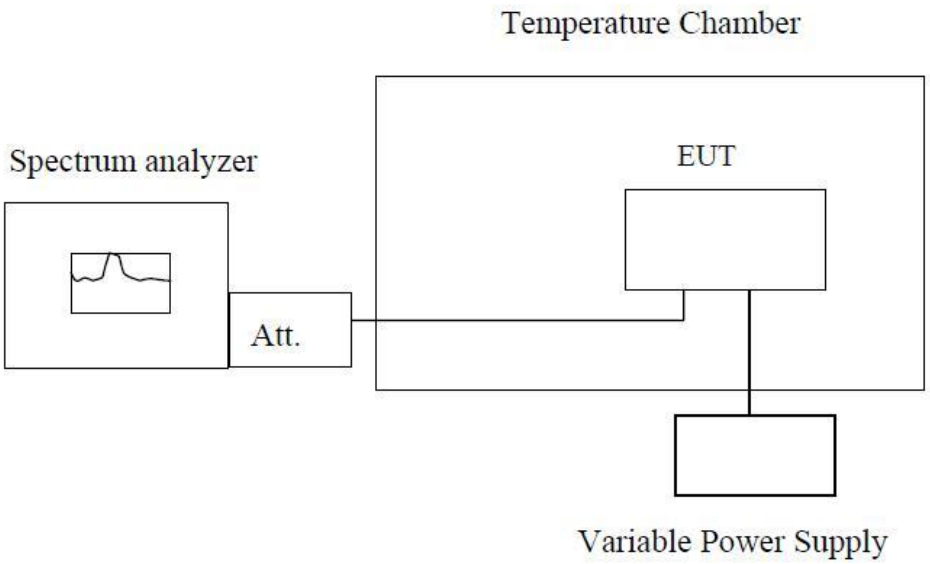
10.1 Test Procedure

1. The EUT is installed in an environment test chamber with external power source.
2. Set the chamber to operate at 50 centigrade and external power source to output at nominal voltage of EUT.
3. A sufficient stabilization period at each temperature is used prior to each frequency measurement.
4. When temperature is stabled, measure the frequency stability.
5. The test shall be performed under -30 to 50 centigrade and 85 to 115 percent of the nominal voltage. Change setting of chamber and external power source to complete all conditions.

Test voltage:

NV	LV	HV
12.0V	10.2V	13.8V

10.2 Test Setup



10.3 Test Result

TestMode	Antenna	Frequency[MHz]	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11A	Ant1	5180	NV	NT	-40000.00	-7.722008	20	PASS
11A	Ant1	5180	LV	NT	-40000.00	-7.722008	20	PASS
11A	Ant1	5180	HV	NT	-20000.00	-3.861004	20	PASS
11A	Ant1	5200	NV	NT	-40000.00	-7.692308	20	PASS
11A	Ant1	5200	LV	NT	-20000.00	-3.846154	20	PASS
11A	Ant1	5200	HV	NT	-40000.00	-7.692308	20	PASS
11A	Ant1	5240	NV	NT	-60000.00	-11.450382	20	PASS
11A	Ant1	5240	LV	NT	-40000.00	-7.633588	20	PASS
11A	Ant1	5240	HV	NT	-40000.00	-7.633588	20	PASS
11A	Ant1	5745	NV	NT	-60000.00	-10.443864	20	PASS
11A	Ant1	5745	LV	NT	-40000.00	-6.962576	20	PASS
11A	Ant1	5745	HV	NT	-40000.00	-6.962576	20	PASS
11A	Ant1	5785	NV	NT	-60000.00	-10.371651	20	PASS
11A	Ant1	5785	LV	NT	-40000.00	-6.914434	20	PASS
11A	Ant1	5785	HV	NT	-60000.00	-10.371651	20	PASS
11A	Ant1	5825	NV	NT	-40000.00	-6.866953	20	PASS
11A	Ant1	5825	LV	NT	-60000.00	-10.300429	20	PASS
11A	Ant1	5825	HV	NT	-40000.00	-6.866953	20	PASS
11N20SISO	Ant1	5180	NV	NT	-40000.00	-7.722008	20	PASS
11N20SISO	Ant1	5180	LV	NT	-40000.00	-7.722008	20	PASS
11N20SISO	Ant1	5180	HV	NT	-20000.00	-3.861004	20	PASS
11N20SISO	Ant1	5200	NV	NT	-60000.00	-11.538462	20	PASS
11N20SISO	Ant1	5200	LV	NT	-40000.00	-7.692308	20	PASS
11N20SISO	Ant1	5200	HV	NT	-40000.00	-7.692308	20	PASS
11N20SISO	Ant1	5240	NV	NT	-40000.00	-7.633588	20	PASS
11N20SISO	Ant1	5240	LV	NT	-20000.00	-3.816794	20	PASS
11N20SISO	Ant1	5240	HV	NT	-40000.00	-7.633588	20	PASS
11N20SISO	Ant1	5745	NV	NT	-40000.00	-6.962576	20	PASS
11N20SISO	Ant1	5745	LV	NT	-60000.00	-10.443864	20	PASS
11N20SISO	Ant1	5745	HV	NT	-40000.00	-6.962576	20	PASS
11N20SISO	Ant1	5785	NV	NT	-60000.00	-10.371651	20	PASS
11N20SISO	Ant1	5785	LV	NT	-40000.00	-6.914434	20	PASS
11N20SISO	Ant1	5785	HV	NT	-40000.00	-6.914434	20	PASS
11N20SISO	Ant1	5825	NV	NT	-60000.00	-10.300429	20	PASS
11N20SISO	Ant1	5825	LV	NT	-40000.00	-6.866953	20	PASS
11N20SISO	Ant1	5825	HV	NT	-40000.00	-6.866953	20	PASS
11N40SISO	Ant1	5190	NV	NT	-40000.00	-7.707129	20	PASS
11N40SISO	Ant1	5190	LV	NT	-40000.00	-7.707129	20	PASS
11N40SISO	Ant1	5190	HV	NT	-40000.00	-7.707129	20	PASS
11N40SISO	Ant1	5230	NV	NT	-40000.00	-7.648184	20	PASS
11N40SISO	Ant1	5230	LV	NT	-40000.00	-7.648184	20	PASS
11N40SISO	Ant1	5230	HV	NT	-40000.00	-7.648184	20	PASS
11N40SISO	Ant1	5755	NV	NT	-40000.00	-6.950478	20	PASS
11N40SISO	Ant1	5755	LV	NT	-40000.00	-6.950478	20	PASS
11N40SISO	Ant1	5755	HV	NT	-40000.00	-6.950478	20	PASS
11N40SISO	Ant1	5795	NV	NT	-40000.00	-6.902502	20	PASS
11N40SISO	Ant1	5795	LV	NT	-80000.00	-13.805004	20	PASS

11N40SISO	Ant1	5795	HV	NT	-80000.00	-13.805004	20	PASS
11AC20SISO	Ant1	5180	NV	NT	-40000.00	-7.722008	20	PASS
11AC20SISO	Ant1	5180	LV	NT	-40000.00	-7.722008	20	PASS
11AC20SISO	Ant1	5180	HV	NT	-40000.00	-7.722008	20	PASS
11AC20SISO	Ant1	5200	NV	NT	-40000.00	-7.692308	20	PASS
11AC20SISO	Ant1	5200	LV	NT	-60000.00	-11.538462	20	PASS
11AC20SISO	Ant1	5200	HV	NT	-40000.00	-7.692308	20	PASS
11AC20SISO	Ant1	5240	NV	NT	-60000.00	-11.450382	20	PASS
11AC20SISO	Ant1	5240	LV	NT	-40000.00	-7.633588	20	PASS
11AC20SISO	Ant1	5240	HV	NT	-40000.00	-7.633588	20	PASS
11AC20SISO	Ant1	5745	NV	NT	-60000.00	-10.443864	20	PASS
11AC20SISO	Ant1	5745	LV	NT	-60000.00	-10.443864	20	PASS
11AC20SISO	Ant1	5745	HV	NT	-60000.00	-10.443864	20	PASS
11AC20SISO	Ant1	5785	NV	NT	-60000.00	-10.371651	20	PASS
11AC20SISO	Ant1	5785	LV	NT	-40000.00	-6.914434	20	PASS
11AC20SISO	Ant1	5785	HV	NT	-60000.00	-10.371651	20	PASS
11AC20SISO	Ant1	5825	NV	NT	-40000.00	-6.866953	20	PASS
11AC20SISO	Ant1	5825	LV	NT	-40000.00	-6.866953	20	PASS
11AC20SISO	Ant1	5825	HV	NT	-40000.00	-6.866953	20	PASS
11AC40SISO	Ant1	5190	NV	NT	-40000.00	-7.707129	20	PASS
11AC40SISO	Ant1	5190	LV	NT	-40000.00	-7.707129	20	PASS
11AC40SISO	Ant1	5190	HV	NT	-40000.00	-7.707129	20	PASS
11AC40SISO	Ant1	5230	NV	NT	-40000.00	-7.648184	20	PASS
11AC40SISO	Ant1	5230	LV	NT	-40000.00	-7.648184	20	PASS
11AC40SISO	Ant1	5230	HV	NT	-40000.00	-7.648184	20	PASS
11AC40SISO	Ant1	5755	NV	NT	-40000.00	-6.950478	20	PASS
11AC40SISO	Ant1	5755	LV	NT	-40000.00	-6.950478	20	PASS
11AC40SISO	Ant1	5755	HV	NT	-40000.00	-6.950478	20	PASS
11AC40SISO	Ant1	5795	NV	NT	-40000.00	-6.902502	20	PASS
11AC40SISO	Ant1	5795	LV	NT	-40000.00	-6.902502	20	PASS
11AC40SISO	Ant1	5795	HV	NT	-80000.00	-13.805004	20	PASS

TestMode	Antenna	Frequency[MHz]	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11A	Ant1	5180	NV	-30	-20000.00	-3.861004	20	PASS
			NV	-20	-20000.00	-3.861004	20	PASS
			NV	-10	-40000.00	-7.722008	20	PASS
			NV	0	-40000.00	-7.722008	20	PASS
			NV	10	-40000.00	-7.722008	20	PASS
			NV	20	-40000.00	-7.722008	20	PASS
			NV	30	-20000.00	-3.861004	20	PASS
			NV	40	-40000.00	-7.722008	20	PASS
			NV	50	-20000.00	-3.861004	20	PASS
		5200	NV	-30	-40000.00	-7.692308	20	PASS
			NV	-20	-40000.00	-7.692308	20	PASS
			NV	-10	-40000.00	-7.692308	20	PASS
			NV	0	-20000.00	-3.846154	20	PASS
			NV	10	-20000.00	-3.846154	20	PASS
			NV	20	-40000.00	-7.692308	20	PASS
			NV	30	-40000.00	-7.692308	20	PASS
			NV	40	-40000.00	-7.692308	20	PASS
			NV	50	-40000.00	-7.692308	20	PASS
		5240	NV	-30	-60000.00	-11.450382	20	PASS
			NV	-20	-60000.00	-11.450382	20	PASS
			NV	-10	-40000.00	-7.633588	20	PASS
			NV	0	-20000.00	-3.816794	20	PASS
			NV	10	-40000.00	-7.633588	20	PASS
			NV	20	-40000.00	-7.633588	20	PASS
			NV	30	-20000.00	-3.816794	20	PASS
			NV	40	-40000.00	-7.633588	20	PASS
			NV	50	-40000.00	-7.633588	20	PASS
		5745	NV	-30	-60000.00	-10.443864	20	PASS
			NV	-20	-60000.00	-10.443864	20	PASS
			NV	-10	-40000.00	-6.962576	20	PASS
			NV	0	-60000.00	-10.443864	20	PASS
			NV	10	-60000.00	-10.443864	20	PASS
			NV	20	-60000.00	-10.443864	20	PASS
			NV	30	-40000.00	-6.962576	20	PASS
			NV	40	-40000.00	-6.962576	20	PASS
			NV	50	-60000.00	-10.443864	20	PASS
		5785	NV	-30	-60000.00	-10.371651	20	PASS
			NV	-20	-40000.00	-6.914434	20	PASS
			NV	-10	-40000.00	-6.914434	20	PASS
			NV	0	-60000.00	-10.371651	20	PASS
			NV	10	-40000.00	-6.914434	20	PASS
			NV	20	-40000.00	-6.914434	20	PASS
			NV	30	-60000.00	-10.371651	20	PASS
			NV	40	-60000.00	-10.371651	20	PASS
			NV	50	-60000.00	-10.371651	20	PASS
		5825	NV	-30	-40000.00	-6.866953	20	PASS
			NV	-20	-40000.00	-6.866953	20	PASS
			NV	-10	-40000.00	-6.866953	20	PASS
			NV	0	-60000.00	-10.300429	20	PASS
			NV	10	-60000.00	-10.300429	20	PASS
			NV	20	-40000.00	-6.866953	20	PASS
			NV	30	-60000.00	-10.300429	20	PASS

			NV	40	-40000.00	-6.866953	20	PASS
			NV	50	-60000.00	-10.300429	20	PASS
11N20SISO	Ant1	5180	NV	-30	-20000.00	-3.861004	20	PASS
			NV	-20	-40000.00	-7.722008	20	PASS
			NV	-10	-20000.00	-3.861004	20	PASS
			NV	0	-40000.00	-7.722008	20	PASS
			NV	10	-40000.00	-7.722008	20	PASS
			NV	20	-40000.00	-7.722008	20	PASS
			NV	30	-20000.00	-3.861004	20	PASS
			NV	40	-40000.00	-7.722008	20	PASS
			NV	50	-60000.00	-11.583012	20	PASS
		5200	NV	-30	-40000.00	-7.692308	20	PASS
			NV	-20	-40000.00	-7.692308	20	PASS
			NV	-10	-60000.00	-11.538462	20	PASS
			NV	0	-40000.00	-7.692308	20	PASS
			NV	10	-60000.00	-11.538462	20	PASS
			NV	20	-40000.00	-7.692308	20	PASS
			NV	30	-40000.00	-7.692308	20	PASS
			NV	40	-40000.00	-7.692308	20	PASS
			NV	50	-20000.00	-3.846154	20	PASS
		5240	NV	-30	-20000.00	-3.816794	20	PASS
			NV	-20	-40000.00	-7.633588	20	PASS
			NV	-10	-20000.00	-3.816794	20	PASS
			NV	0	-20000.00	-3.816794	20	PASS
			NV	10	-40000.00	-7.633588	20	PASS
			NV	20	-40000.00	-7.633588	20	PASS
			NV	30	-40000.00	-7.633588	20	PASS
			NV	40	-40000.00	-7.633588	20	PASS
			NV	50	-40000.00	-7.633588	20	PASS
		5745	NV	-30	-60000.00	-10.443864	20	PASS
			NV	-20	-20000.00	-3.481288	20	PASS
			NV	-10	-60000.00	-10.443864	20	PASS
			NV	0	-40000.00	-6.962576	20	PASS
			NV	10	-60000.00	-10.443864	20	PASS
			NV	20	-60000.00	-10.443864	20	PASS
			NV	30	-40000.00	-6.962576	20	PASS
			NV	40	-60000.00	-10.443864	20	PASS
			NV	50	-40000.00	-6.962576	20	PASS
		5785	NV	-30	-40000.00	-6.914434	20	PASS
			NV	-20	-40000.00	-6.914434	20	PASS
			NV	-10	-40000.00	-6.914434	20	PASS
			NV	0	-40000.00	-6.914434	20	PASS
			NV	10	-60000.00	-10.371651	20	PASS
			NV	20	-40000.00	-6.914434	20	PASS
			NV	30	-40000.00	-6.914434	20	PASS
			NV	40	-60000.00	-10.371651	20	PASS
			NV	50	-60000.00	-10.371651	20	PASS
		5825	NV	-30	-60000.00	-10.300429	20	PASS
			NV	-20	-40000.00	-6.866953	20	PASS
			NV	-10	-40000.00	-6.866953	20	PASS
			NV	0	-40000.00	-6.866953	20	PASS
			NV	10	-40000.00	-6.866953	20	PASS
			NV	20	-40000.00	-6.866953	20	PASS
			NV	30	-60000.00	-10.300429	20	PASS
			NV	40	-40000.00	-6.866953	20	PASS
			NV	50	-60000.00	-10.300429	20	PASS

11N40SISO	Ant1	5190	NV	-30	-40000.00	-7.707129	20	PASS
			NV	-20	-40000.00	-7.707129	20	PASS
			NV	-10	-40000.00	-7.707129	20	PASS
			NV	0	-40000.00	-7.707129	20	PASS
			NV	10	-40000.00	-7.707129	20	PASS
			NV	20	-40000.00	-7.707129	20	PASS
			NV	30	-40000.00	-7.707129	20	PASS
			NV	40	-40000.00	-7.707129	20	PASS
			NV	50	-40000.00	-7.707129	20	PASS
		5230	NV	-30	-40000.00	-7.648184	20	PASS
			NV	-20	-40000.00	-7.648184	20	PASS
			NV	-10	-40000.00	-7.648184	20	PASS
			NV	0	-40000.00	-7.648184	20	PASS
			NV	10	-40000.00	-7.648184	20	PASS
			NV	20	-40000.00	-7.648184	20	PASS
			NV	30	-40000.00	-7.648184	20	PASS
			NV	40	-40000.00	-7.648184	20	PASS
			NV	50	-40000.00	-7.648184	20	PASS
		5755	NV	-30	-40000.00	-6.950478	20	PASS
			NV	-20	-40000.00	-6.950478	20	PASS
			NV	-10	-40000.00	-6.950478	20	PASS
			NV	0	-40000.00	-6.950478	20	PASS
			NV	10	-40000.00	-6.950478	20	PASS
			NV	20	-40000.00	-6.950478	20	PASS
			NV	30	-40000.00	-6.950478	20	PASS
			NV	40	-40000.00	-6.950478	20	PASS
			NV	50	-40000.00	-6.950478	20	PASS
		5795	NV	-30	-40000.00	-6.902502	20	PASS
			NV	-20	-80000.00	-13.805004	20	PASS
			NV	-10	-40000.00	-6.902502	20	PASS
			NV	0	-40000.00	-6.902502	20	PASS
			NV	10	-40000.00	-6.902502	20	PASS
			NV	20	-40000.00	-6.902502	20	PASS
			NV	30	-40000.00	-6.902502	20	PASS
			NV	40	-40000.00	-6.902502	20	PASS
			NV	50	-40000.00	-6.902502	20	PASS
11AC20SISO	Ant1	5180	NV	-30	-60000.00	-11.583012	20	PASS
			NV	-20	-40000.00	-7.722008	20	PASS
			NV	-10	-40000.00	-7.722008	20	PASS
			NV	0	-40000.00	-7.722008	20	PASS
			NV	10	-60000.00	-11.583012	20	PASS
			NV	20	-40000.00	-7.722008	20	PASS
			NV	30	-60000.00	-11.583012	20	PASS
			NV	40	-40000.00	-7.722008	20	PASS
			NV	50	-40000.00	-7.722008	20	PASS
		5200	NV	-30	-40000.00	-7.692308	20	PASS
			NV	-20	-40000.00	-7.692308	20	PASS
			NV	-10	-60000.00	-11.538462	20	PASS
			NV	0	-60000.00	-11.538462	20	PASS
			NV	10	-60000.00	-11.538462	20	PASS
			NV	20	-40000.00	-7.692308	20	PASS
			NV	30	-60000.00	-11.538462	20	PASS
			NV	40	-40000.00	-7.692308	20	PASS
			NV	50	-40000.00	-7.692308	20	PASS
		5240	NV	-30	-40000.00	-7.633588	20	PASS
			NV	-20	-60000.00	-11.450382	20	PASS

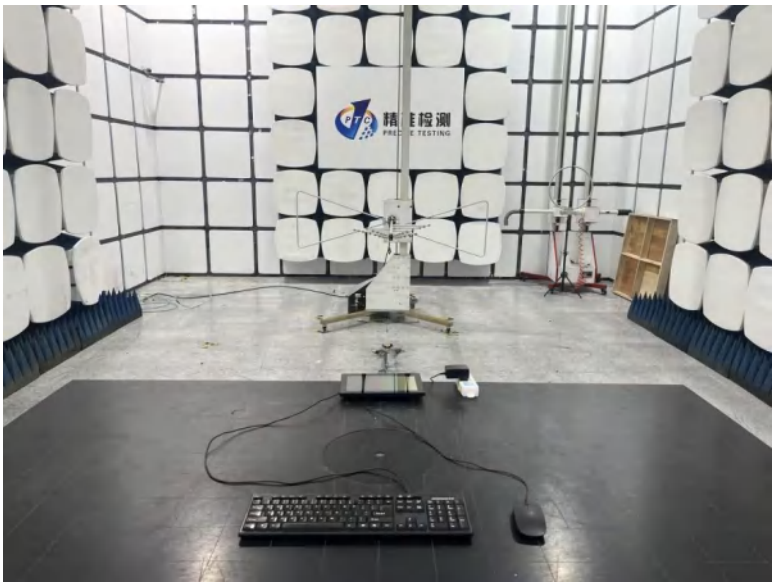
			NV	-10	-40000.00	-7.633588	20	PASS
			NV	0	-40000.00	-7.633588	20	PASS
			NV	10	-60000.00	-11.450382	20	PASS
			NV	20	-40000.00	-7.633588	20	PASS
			NV	30	-40000.00	-7.633588	20	PASS
			NV	40	-60000.00	-11.450382	20	PASS
			NV	50	-40000.00	-7.633588	20	PASS
		5745	NV	-30	-40000.00	-6.962576	20	PASS
			NV	-20	-40000.00	-6.962576	20	PASS
			NV	-10	-40000.00	-6.962576	20	PASS
			NV	0	-60000.00	-10.443864	20	PASS
			NV	10	-60000.00	-10.443864	20	PASS
			NV	20	-60000.00	-10.443864	20	PASS
			NV	30	-60000.00	-10.443864	20	PASS
			NV	40	-60000.00	-10.443864	20	PASS
			NV	50	-40000.00	-6.962576	20	PASS
		5785	NV	-30	-60000.00	-10.371651	20	PASS
			NV	-20	-60000.00	-10.371651	20	PASS
			NV	-10	-60000.00	-10.371651	20	PASS
			NV	0	-60000.00	-10.371651	20	PASS
			NV	10	-60000.00	-10.371651	20	PASS
			NV	20	-60000.00	-10.371651	20	PASS
			NV	30	-60000.00	-10.371651	20	PASS
			NV	40	-60000.00	-10.371651	20	PASS
			NV	50	-40000.00	-6.914434	20	PASS
		5825	NV	-30	-60000.00	-10.300429	20	PASS
			NV	-20	-40000.00	-6.866953	20	PASS
			NV	-10	-60000.00	-10.300429	20	PASS
			NV	0	-40000.00	-6.866953	20	PASS
			NV	10	-40000.00	-6.866953	20	PASS
			NV	20	-60000.00	-10.300429	20	PASS
			NV	30	-60000.00	-10.300429	20	PASS
			NV	40	-40000.00	-6.866953	20	PASS
			NV	50	-60000.00	-10.300429	20	PASS
11AC40SISO	Ant1	5190	NV	-30	-40000.00	-7.707129	20	PASS
			NV	-20	-40000.00	-7.707129	20	PASS
			NV	-10	-40000.00	-7.707129	20	PASS
			NV	0	-40000.00	-7.707129	20	PASS
			NV	10	-40000.00	-7.707129	20	PASS
			NV	20	-40000.00	-7.707129	20	PASS
			NV	30	-40000.00	-7.707129	20	PASS
			NV	40	-40000.00	-7.707129	20	PASS
			NV	50	-40000.00	-7.707129	20	PASS
		5230	NV	-30	-40000.00	-7.648184	20	PASS
			NV	-20	-40000.00	-7.648184	20	PASS
			NV	-10	-40000.00	-7.648184	20	PASS
			NV	0	-40000.00	-7.648184	20	PASS
			NV	10	-40000.00	-7.648184	20	PASS
			NV	20	-40000.00	-7.648184	20	PASS
			NV	30	-40000.00	-7.648184	20	PASS
			NV	40	-40000.00	-7.648184	20	PASS
			NV	50	-40000.00	-7.648184	20	PASS
		5755	NV	-30	-40000.00	-6.950478	20	PASS
			NV	-20	-40000.00	-6.950478	20	PASS
			NV	-10	-40000.00	-6.950478	20	PASS
			NV	0	-40000.00	-6.950478	20	PASS

			NV	10	-40000.00	-6.950478	20	PASS
			NV	20	-40000.00	-6.950478	20	PASS
			NV	30	-40000.00	-6.950478	20	PASS
			NV	40	-40000.00	-6.950478	20	PASS
			NV	50	-80000.00	-13.900956	20	PASS
		5795	NV	-30	-80000.00	-13.805004	20	PASS
			NV	-20	-80000.00	-13.805004	20	PASS
			NV	-10	-80000.00	-13.805004	20	PASS
			NV	0	-40000.00	-6.902502	20	PASS
			NV	10	-80000.00	-13.805004	20	PASS
			NV	20	-40000.00	-6.902502	20	PASS
			NV	30	-40000.00	-6.902502	20	PASS
			NV	40	-40000.00	-6.902502	20	PASS
			NV	50	-40000.00	-6.902502	20	PASS

11 Test Setup

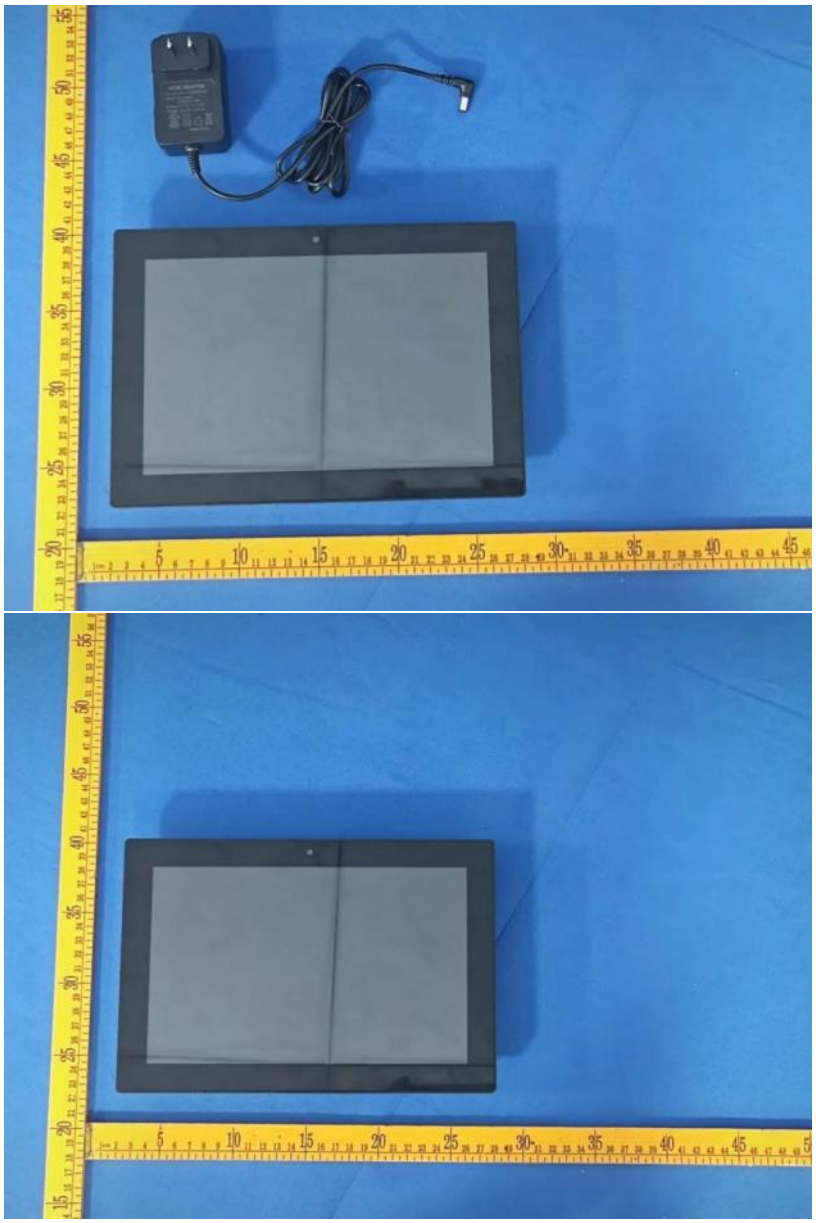
Conducted Emissions

Radiated Spurious Emissions
From 30MHz-1000MHz

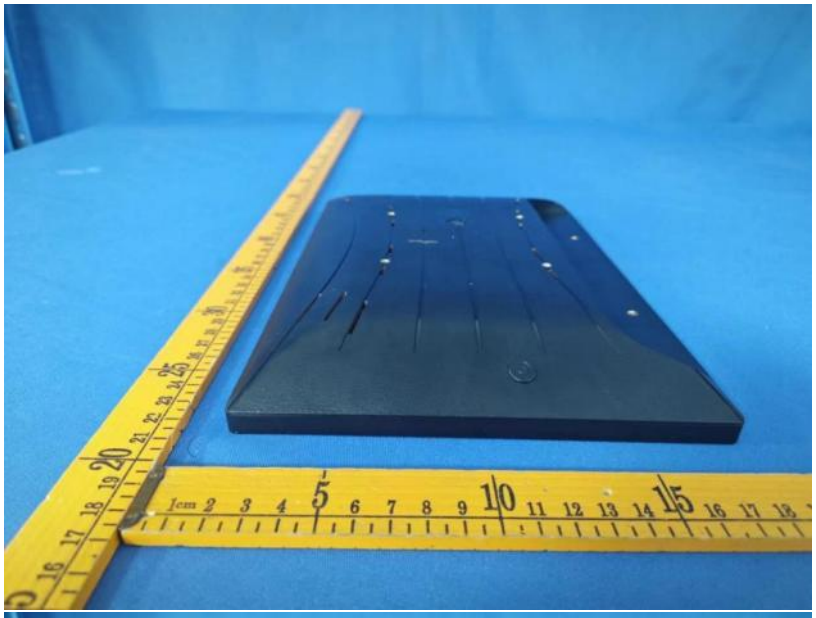


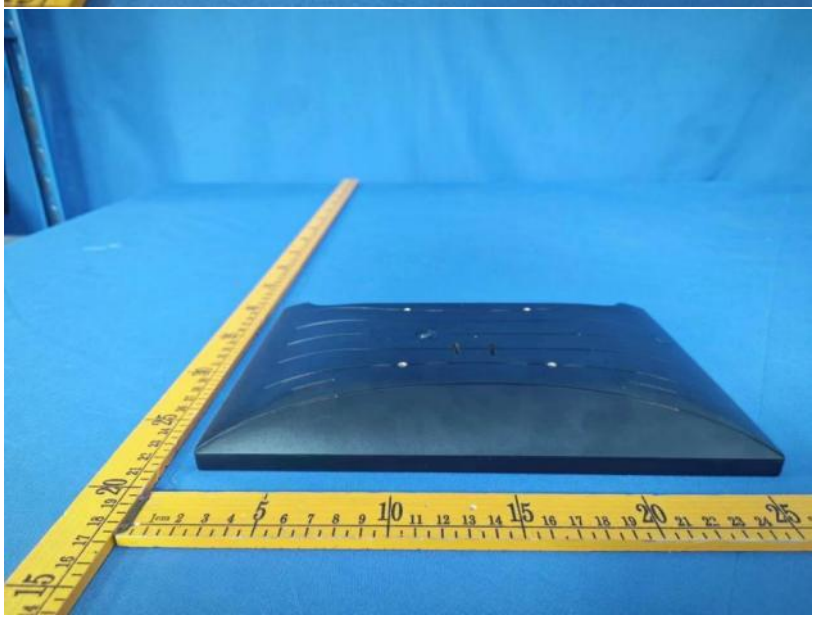
Test frequency from Above 1GHz

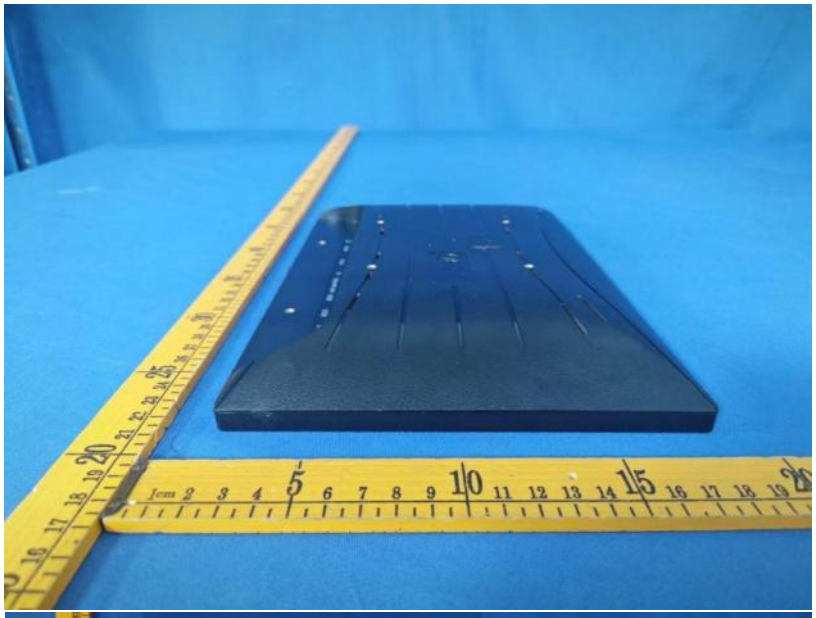
12 EUT PHOTOS

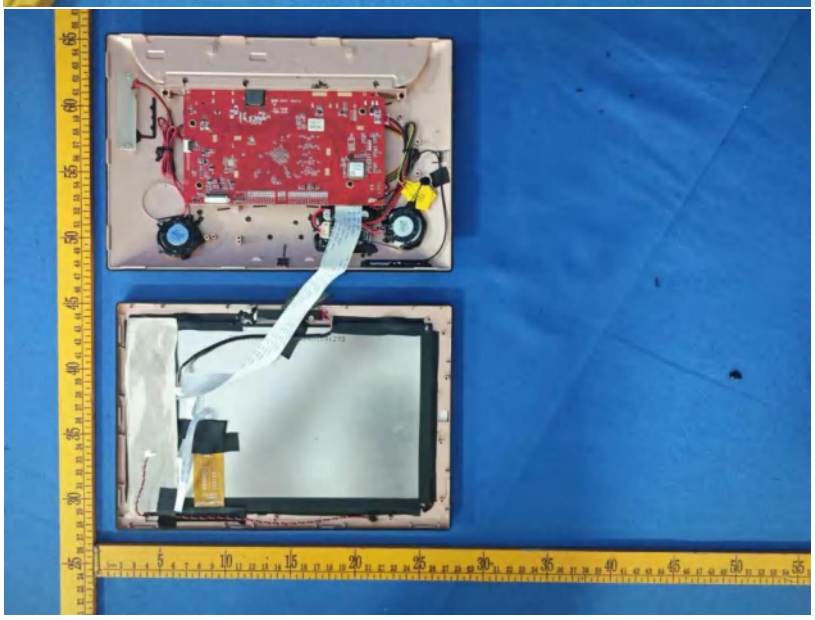


HDMI
RJ45
TF
Upgrade jack
USB
USB
DC IN

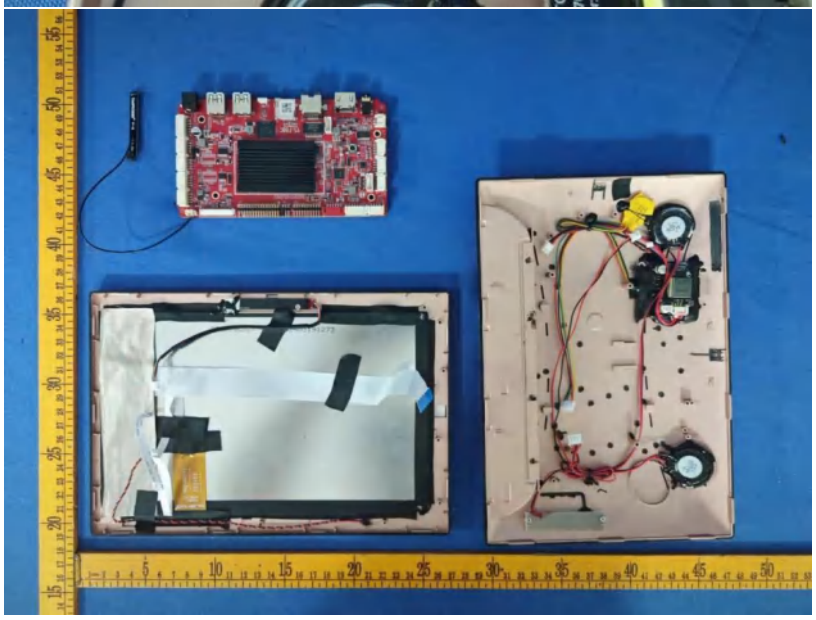


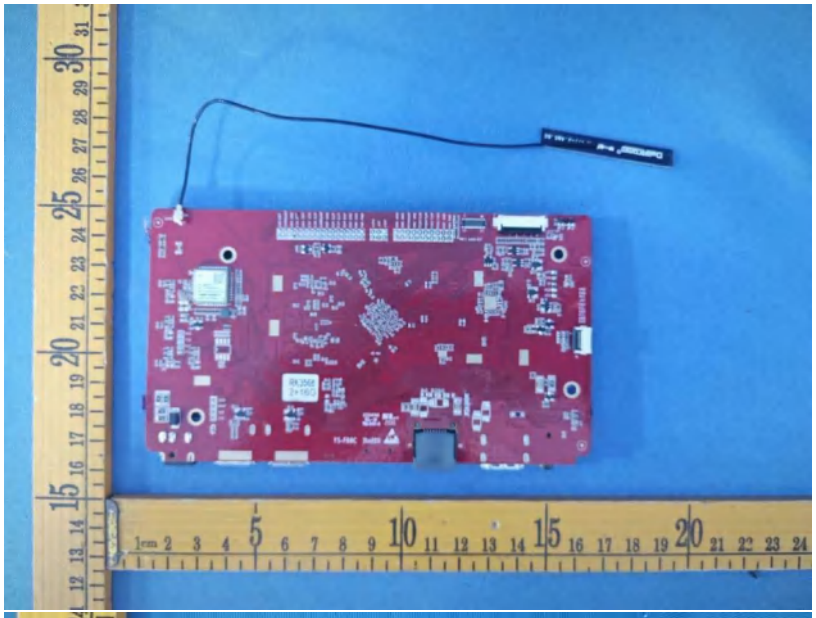


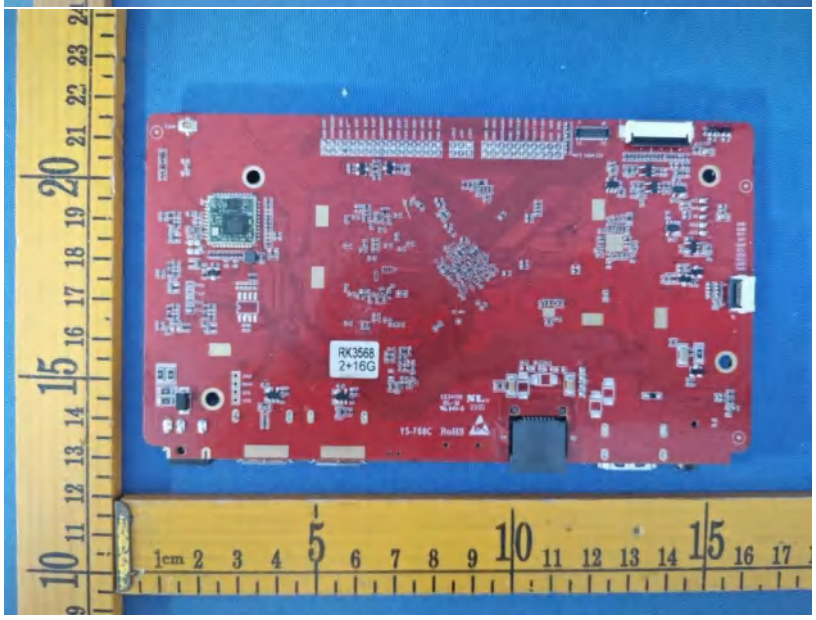


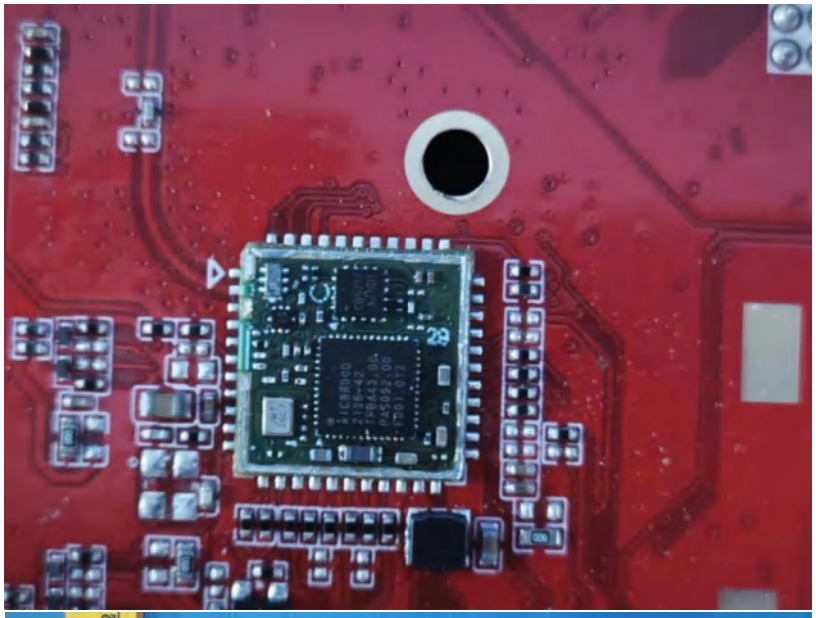


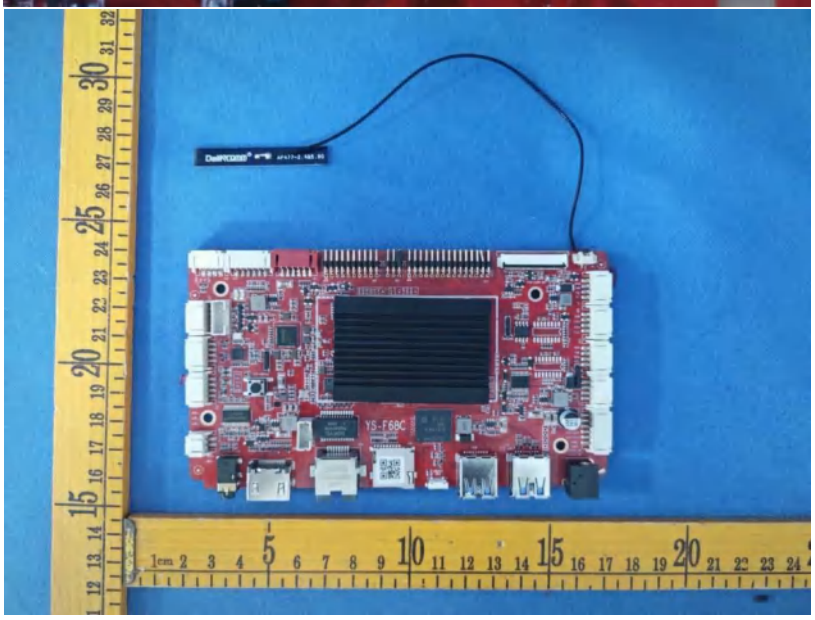
DellCOMM
AP4//-2.4G3

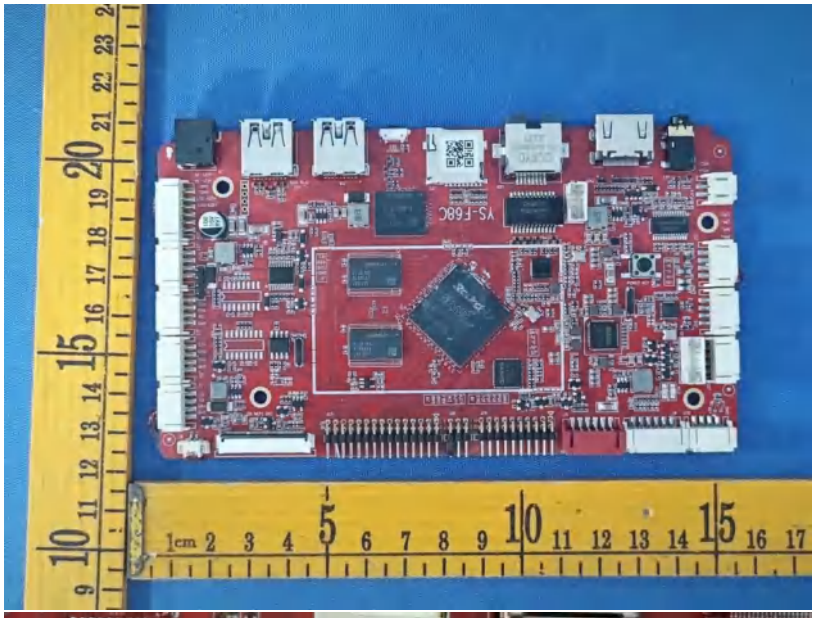




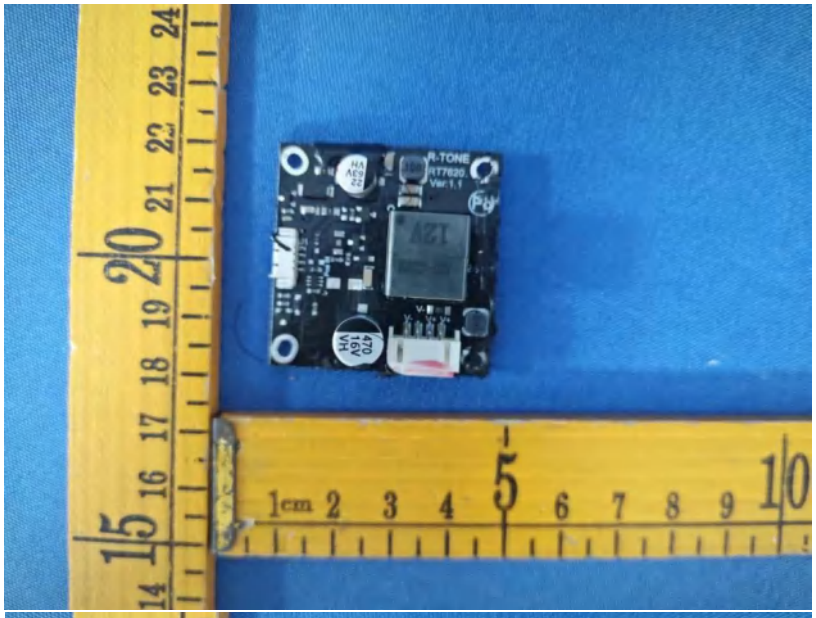

RK3568
2+16G

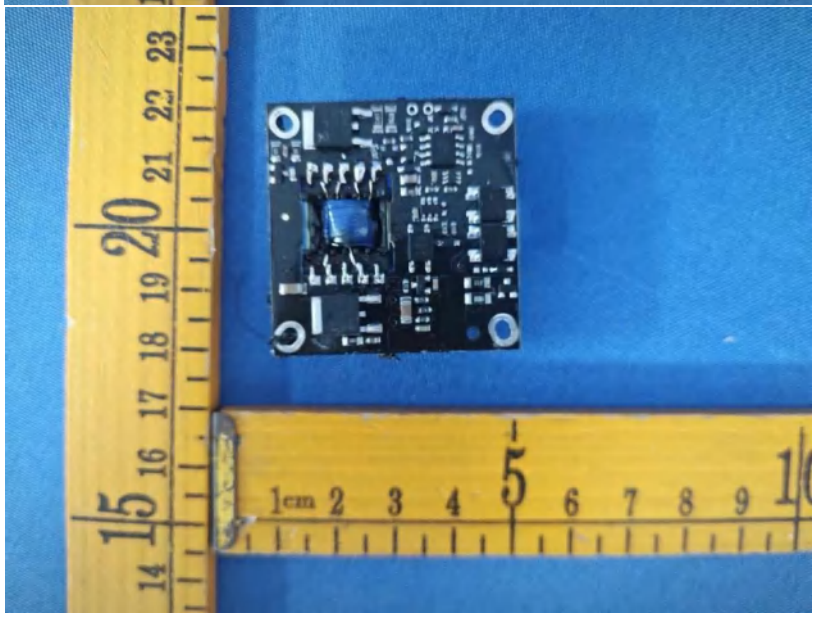


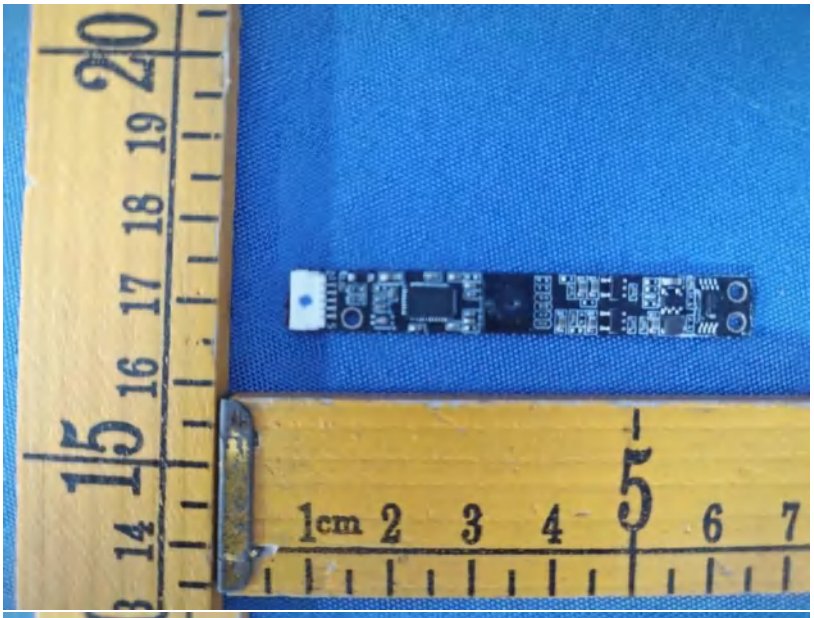

YS-F68C

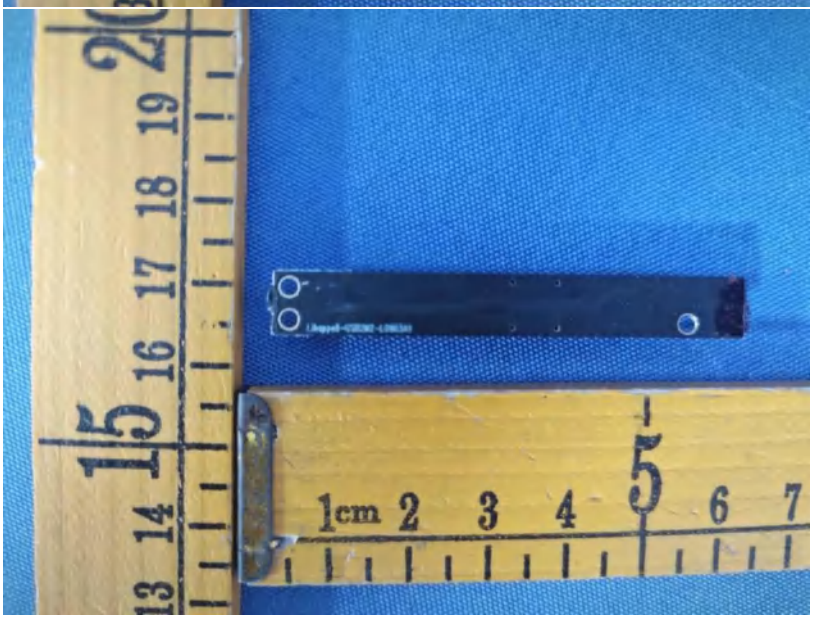

YS-F68C

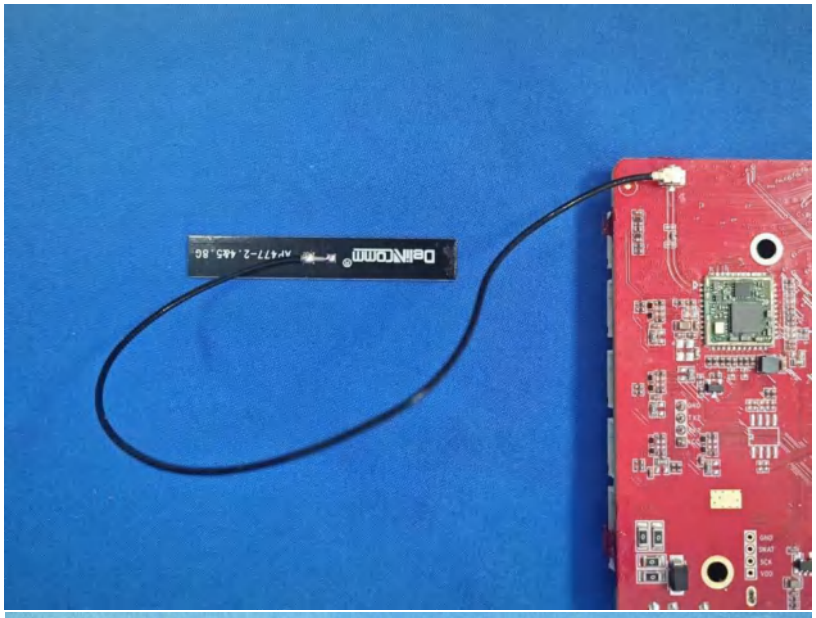
YS-F68C


R-TONE
RT7820
Ver:1.1
470
16V
1cm


1cm


1cm 2 3 4 5 6 7


1cm 2 3 4 5 6 7



********THE END REPORT********