FCC TEST REPORT

FCC ID: 2ANIV-F4

Product	:	SELFIE MONITOR SCREEN
Model Name	:	F4
Additional Model	:	F4B
Brand	:	NEEWER
Report No.	:	PTC25071514809E-FC01

Prepared for

Shenzhen Neewer Technology Co., Ltd.

Room 3001, Yuecai Plaza (North) 3008 Taibai Road, Luohu District Shenzhen , Guangdong China

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	:	Shenzhen Neewer Technology Co., Ltd.
Address	:	Room 3001, Yuecai Plaza (North) 3008 Taibai Road, Luohu District Shenzhen , Guangdong China
Manufacture's name	:	Shenzhen Neewer Technology Co., Ltd.
Address	:	Room 3001, Yuecai Plaza (North) 3008 Taibai Road, Luohu District Shenzhen , Guangdong China
Product name	:	SELFIE MONITOR SCREEN
Model name	:	F4
Additional Model	:	F4B
Standards	:	FCC CFR47 Part 15 Section 15.407
Test procedure	:	ANSI C63.10-2020
Test Date	:	December 02, 2025 to May 19, 2026
Date of Issue	:	May 19, 2026
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.
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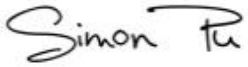
Test Engineer:

Jack zhou / Engineer

Technical Manager:



Simon Pu / Manager

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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	:	SELFIE MONITOR SCREEN
Model Name	:	F4
Additional Model	:	F4B
Models Difference	:	The model names differ.
Specification	:	802.11a/n HT20
Operation Frequency	:	5G Wi-Fi:5180-5180 MHz
Number of Channel	:	1 channels for 802.11a/n20 5180-5180 MHz
Type of Modulation	:	OFDM with BPSK/QPSK/16QAM/64QAM for 802.11a/n
Antenna installation	:	FPC Antenna
Antenna Gain	:	1.39 dBi
Power supply	:	USB-C Input: DC 5V, 2A Battery: 3.7V 1800mAh 6.66Wh
Hardware Version	:	V1.1
Software Version	:	V1.0.1
Test sample No.	:	PTC25071514809E-1/2, PTC25071514809E-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) 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

Channel	Frequency(MHz)
36	5180

The maximum duty cycle as following table:

Test Mode	Duty Cycle(%)
802.11a	100%
802.11n	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. 14, 2025	1 Year
Coaxial Cable	CDS	79254	46107086	10Hz-30GHz	Aug. 14, 2025	1 Year
Power Meter	Anritsu	ML2495A	0949003	300MHz-40GHz	Aug. 14, 2025	1 Year
Power Sensor	Anritsu	MA2411B	0917017	300MHz-40GHz	Aug. 14, 2025	1 Year
DC power Supply	Agilent	E3642A	MY52420017	0-8V,5A/0-20 ,2.5A	Aug. 14, 2025	1 Year
Humidity Chamber	AISRY	ASR-HW2-1000	20230926003	-40℃-150℃	Feb. 23 ,2025	1Year
Humidity Chamber	AISRY	ASR-HW2-1000	20230926003	-40℃-150℃	Feb. 22 ,2026	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. 14, 2025	1 Year
Loop Antenna	Schwarzbeck	FMZB 1519	192	9 KHz -30MHz	Nov. 27, 2025	1 Year
Bilog Antenna	SCHWARZBECK	VULB9160	9160-3355	25MHz-2GHz	Sep. 10, 2025	1 Year
Preamplifier (low frequency)	SCHWARZBECK	BBV 9475	9745-0013	9KHz-1GHz	Mar. 21, 2025	1 Year
Preamplifier (low frequency)	SCHWARZBECK	BBV 9475	9745-0013	9KHz-1GHz	Mar. 20, 2026	1 Year
Cable	IMRO	AK-	Cable-L	9KHz-3GHz	Aug. 14, 2025	1 Year

		9515E(9m)				
Spectrum Analyzer	Rohde&Schwarz	FSV40	6625-01-588-5515	9KHz-40GHz	Aug. 14, 2025	1 Year
Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-1246	1GHz-18GHz	Dec.11, 2025	1 Year
Power Amplifier	ZHINAN	ZN3380C	15002	1GHz-26.5GHz	Aug. 14, 2025	1 Year
Horn Antenna	SCHWARZBECK	BBHA 9170	9170-1066	15GHz-40GHz	Jun. 24, 2025	1 Year
Amplifier	SCHWARZBECK	BBV 9721	9721-205	18GHz-40GHz	Jun. 23, 2025	1 Year
Cable	H+S	CBL-26	N/A	1GHz-26.5GHz	Aug. 14, 2025	1 Year
RF Cable	R&S	R204	R21X	1GHz-40GHz	Aug. 14, 2025	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	ESCI3	101417	9KHz-3GHz	Aug.14, 2025	1 Year
Artificial Mains Network	Rohde&Schwarz	ENV216	102453	9KHz-300MHz	Oct. 29, 2025	1 Year
Artificial Mains Network	Rohde&Schwarz	ENV216	101342	9KHz-300MHz	Oct. 29, 2025	1 Year
Limiter	R&S	ESH3-Z2	0357.8810.54-102808-NB	0Hz-30MHz	Aug. 14, 2025	1 Year
RF Switch	DIAMOND ANTENNA	CX-210	/	0.09MHz-6GHz	Mar. 21,2025	1 Year
RF Switch	DIAMOND ANTENNA	CX-210	/	0.09MHz-6GHz	Mar. 20,2026	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.
Adapter	Model: PS65B050Y3000S	N/A

5 Conducted Emission

Test Requirement:	:	FCC CFR 47 Part 15 Section 15.207
Test Method	:	ANSI C63.10-2020
Test Result	:	PASS
Frequency Range	:	150kHz to 30MHz
Class/Severity	:	Class B

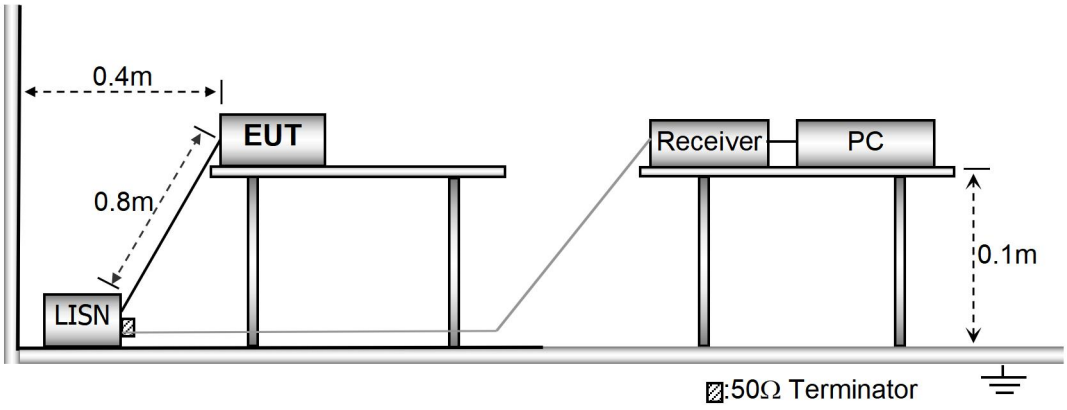
5.1 E.U.T. Operation

Operating Environment :

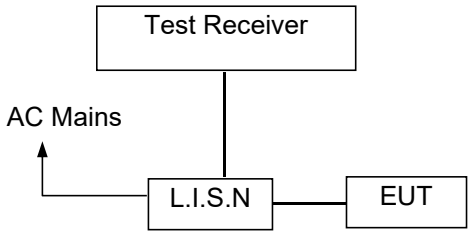
Temperature	:	23.9 °C
Humidity	:	51.4 % RH
Atmospheric Pressure	:	101.21kPa

5.2 EUT Setup

The conducted emission tests were performed using the setup accordance with the ANSI C63.10-2020.



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

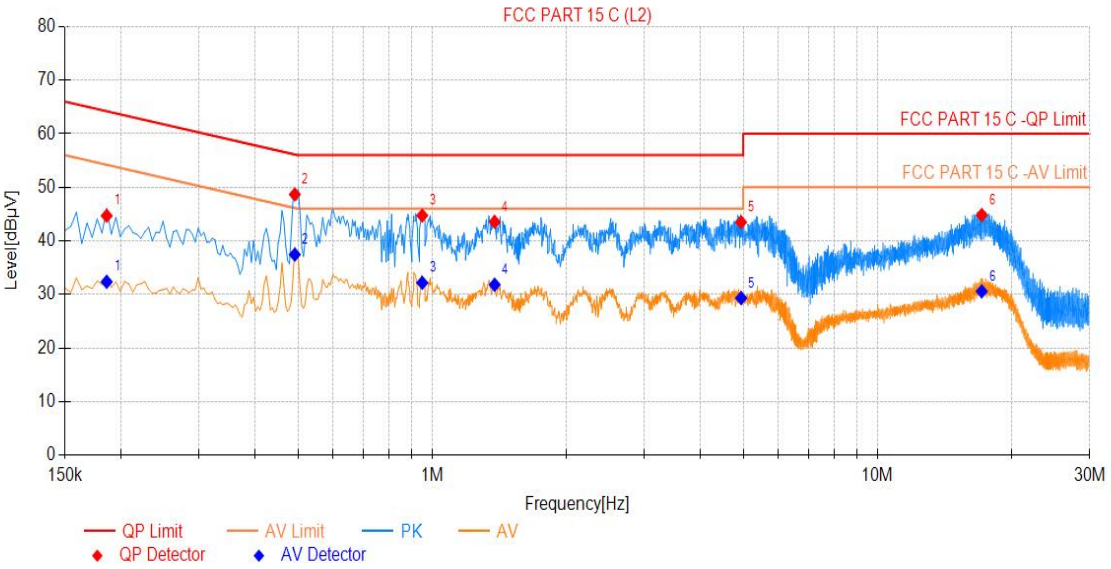
The maximised peak emissions from the EUT was scanned and measured for both the Live and Neutral Lines. Quasi-peak & average measurements were performed if peak emissions were within 6dB of the average limit line.

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.

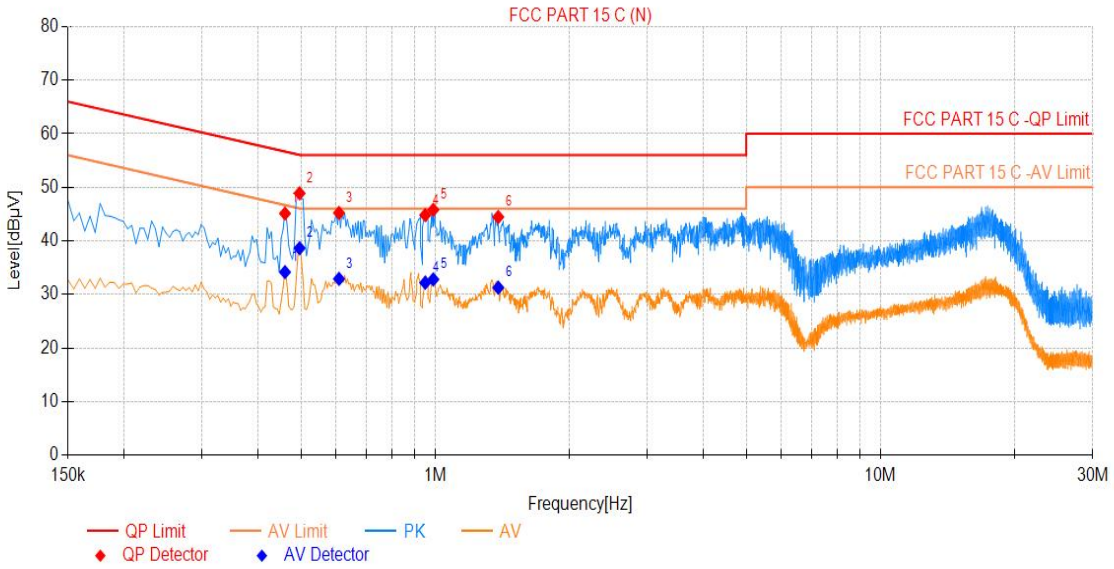
Line-AC 120V/60Hz



Final Data List

NO.	Freq. [MHz]	QP Reading	Factor [dB]	QP Value	QP Limit	QP Margin	AV Reading	AV Value	AV Limit	AV Margin	Verdict
1	0.186	34.80	9.89	44.69	64.21	19.52	22.47	32.36	54.21	21.85	PASS
2	0.492	38.72	9.95	48.67	56.13	7.46	27.48	37.43	46.13	8.70	PASS
3	0.951	34.72	10.00	44.72	56.00	11.28	22.17	32.17	46.00	13.83	PASS
4	1.383	33.57	9.98	43.55	56.00	12.45	21.83	31.81	46.00	14.19	PASS
5	4.947	33.21	10.28	43.49	56.00	12.51	19.04	29.32	46.00	16.68	PASS
6	17.169	34.36	10.47	44.83	60.00	15.17	20.10	30.57	50.00	19.43	PASS

Neutral-AC 120V/60Hz



Final Data List											
NO.	Freq. [MHz]	QP Reading	Factor [dB]	QP Value	QP Limit	QP Margin	AV Reading	AV Value	AV Limit	AV Margin	Verdict
1	0.461	35.15	9.96	45.11	56.68	11.57	24.21	34.17	46.68	12.51	PASS
2	0.497	38.93	9.96	48.89	56.06	7.17	28.67	38.63	46.06	7.43	PASS
3	0.609	35.27	9.95	45.22	56.00	10.78	22.95	32.90	46.00	13.10	PASS
4	0.951	34.86	9.96	44.82	56.00	11.18	22.23	32.19	46.00	13.81	PASS
5	0.992	35.84	9.96	45.80	56.00	10.20	22.85	32.81	46.00	13.19	PASS
6	1.388	34.50	9.96	44.46	56.00	11.54	21.31	31.27	46.00	14.73	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 C63.10-2020
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

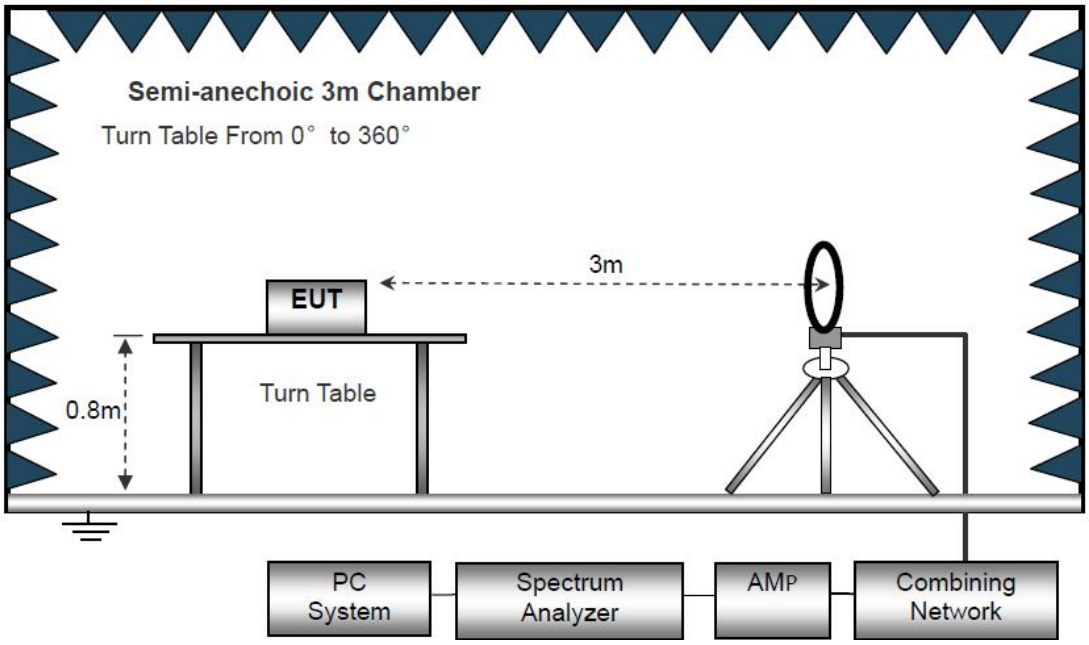
Atmospheric Pressure: : 101.3kPa

Test Voltage : AC 120V 60Hz

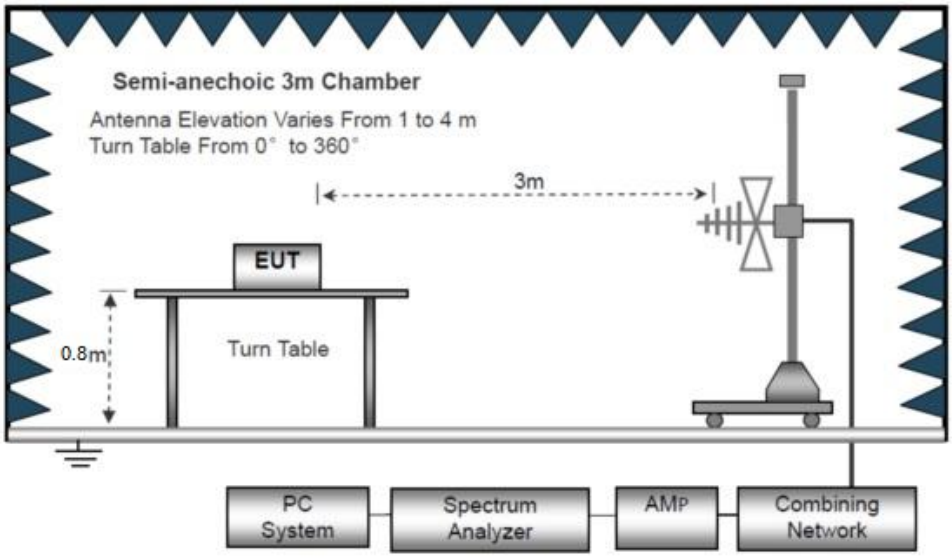
6.2 Test Setup

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

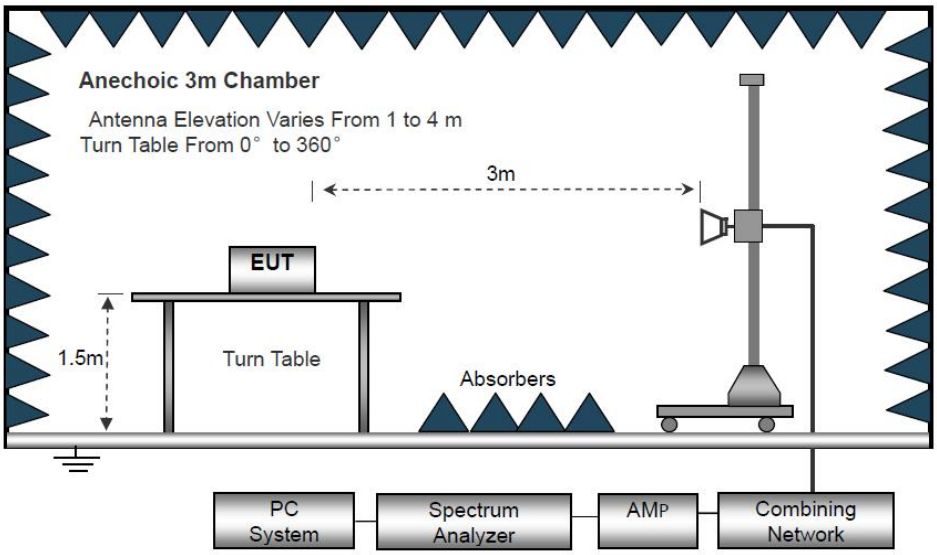
The test setup for emission measurement below 30MHz



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

Note:

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

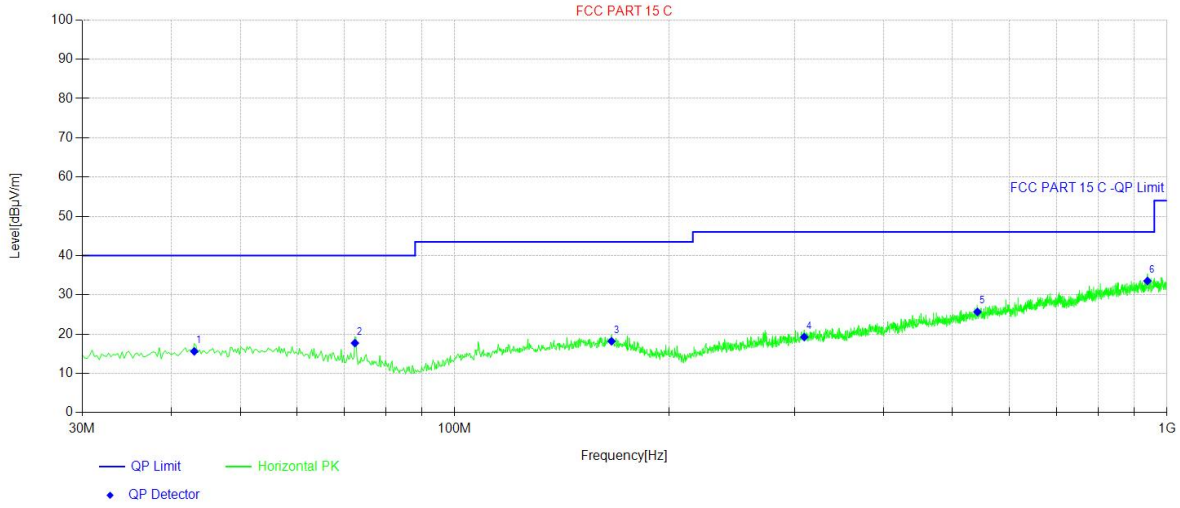
Distance extrapolation factor =40log(Specific distance/ test distance)(dB);
Limit line=Specific limits(dBuV) + distance extrapolation factor.

Test Frequency: 30MHz ~ 1GHz

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

Please refer to the following test plots:

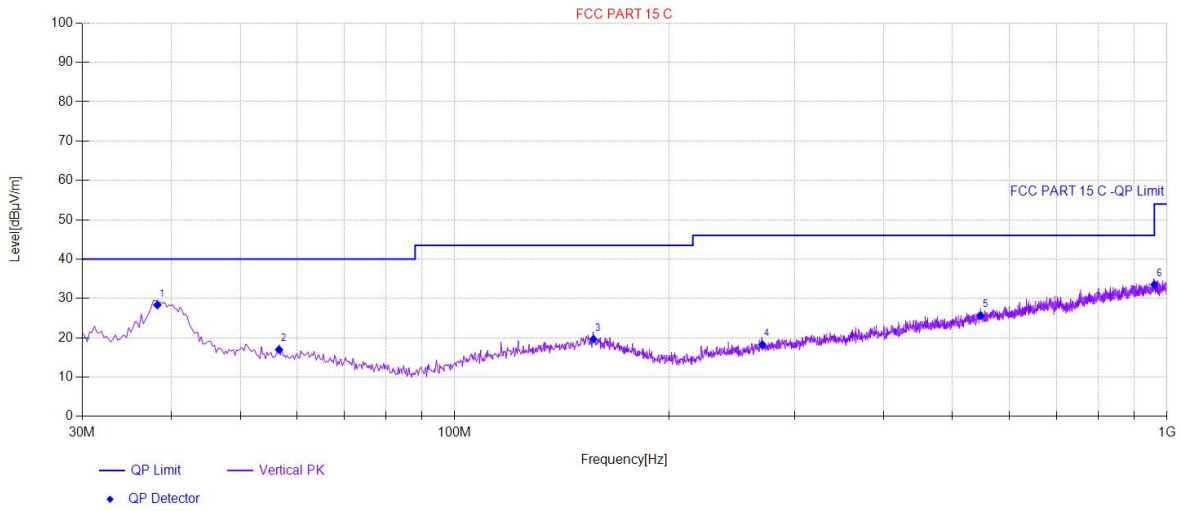
Antenna Polarization: Horizontal(CH36)



Final Data List[QP]								
NO.	Freq. [MHz]	QP Reading [dBµV/m]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Polarity	Verdict
1	43.10	25.87	-10.25	15.62	40.00	24.38	Horizontal	PASS
2	72.44	30.43	-12.70	17.73	40.00	22.27	Horizontal	PASS
3	166.04	26.39	-8.21	18.18	43.50	25.32	Horizontal	PASS
4	309.60	26.12	-6.86	19.26	46.00	26.74	Horizontal	PASS
5	541.92	26.84	-1.17	25.67	46.00	20.33	Horizontal	PASS
6	938.89	27.52	6.02	33.54	46.00	12.46	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/m]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Polarity	Verdict
1	38.25	39.1	-10.76	28.34	40.00	11.66	Vertical	PASS
2	56.68	27.31	-10.32	16.99	40.00	23.01	Vertical	PASS
3	156.59	27.89	-8.25	19.64	43.50	23.86	Vertical	PASS
4	270.32	26.32	-8.03	18.29	46.00	27.71	Vertical	PASS
5	547.50	26.63	-0.98	25.65	46.00	20.35	Vertical	PASS
6	959.99	26.99	6.55	33.54	46.00	12.46	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	47.03	38.98	5.36	31.25	60.12	68.23	-8.11	V
15540	42.15	39.58	7.85	30.63	58.95	68.23	-9.28	V
20720	43.22	37.92	8.56	34.95	54.75	68.23	-13.48	V
10360	48.42	38.98	5.36	31.25	61.51	68.23	-6.72	H
15540	42.51	39.58	7.85	30.63	59.31	68.23	-8.92	H
20720	42.92	37.92	8.56	34.95	54.45	68.23	-13.78	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	32.97	38.98	5.36	31.25	46.06	54	-7.94	V
15540	30.10	39.58	7.85	30.63	46.90	54	-7.10	V
20720	28.05	37.92	8.56	34.95	39.58	54	-14.42	V
10360	32.60	38.98	5.36	31.25	45.69	54	-8.31	H
15540	24.82	39.58	7.85	30.63	41.62	54	-12.38	H
20720	27.26	37.92	8.56	34.95	38.79	54	-15.21	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	47.17	38.98	5.36	31.25	60.26	68.23	-7.97	V
15540	42.34	39.58	7.85	30.63	59.14	68.23	-9.09	V
20720	43.12	37.92	8.56	34.95	54.65	68.23	-13.58	V
10360	48.39	38.98	5.36	31.25	61.48	68.23	-6.75	H
15540	42.72	39.58	7.85	30.63	59.52	68.23	-8.71	H
20720	42.85	37.92	8.56	34.95	54.38	68.23	-13.85	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	32.97	38.98	5.36	31.25	46.06	54	-7.94	V
15540	30.31	39.58	7.85	30.63	47.11	54	-6.89	V
20720	28.33	37.92	8.56	34.95	39.86	54	-14.14	V
10360	32.78	38.98	5.36	31.25	45.87	54	-8.13	H
15540	24.87	39.58	7.85	30.63	41.67	54	-12.33	H
20720	27.19	37.92	8.56	34.95	38.72	54	-15.28	H

Note:

1. The testing has been conformed to 40GHz.
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.

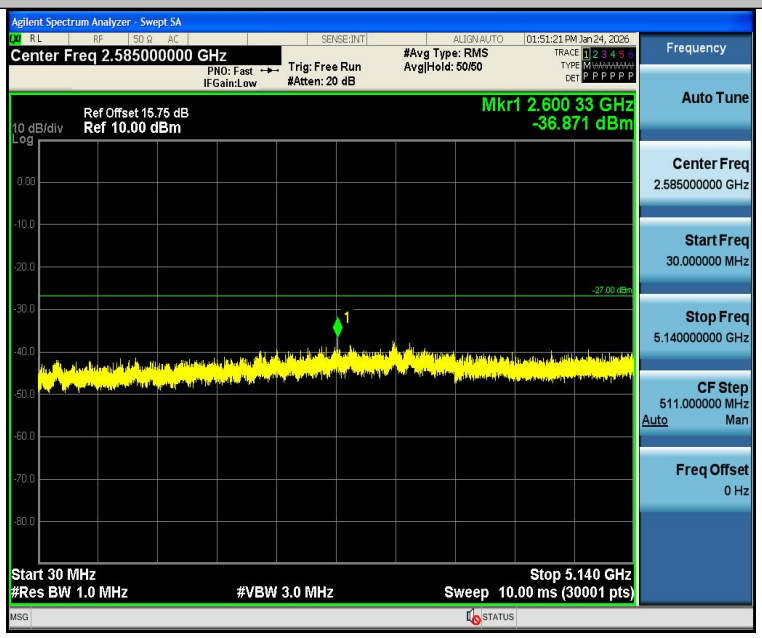
Undesirable emission

TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	Max. Fre [MHz]	Max. Level [dBm]	Limit [dBm]	Verdict
11A	Ant1	5180	30~5140	2600.33	-36.87	≤-27	PASS
11A	Ant1	5180	5360~40000	25949.74	-32.25	≤-27	PASS
11N20SISO	Ant1	5180	30~5140	3232.95	-38.02	≤-27	PASS
11N20SISO	Ant1	5180	5360~40000	25421.72	-33.19	≤-27	PASS

Note: 27~40GHz at least have 20dB margin. No recording in the test report.

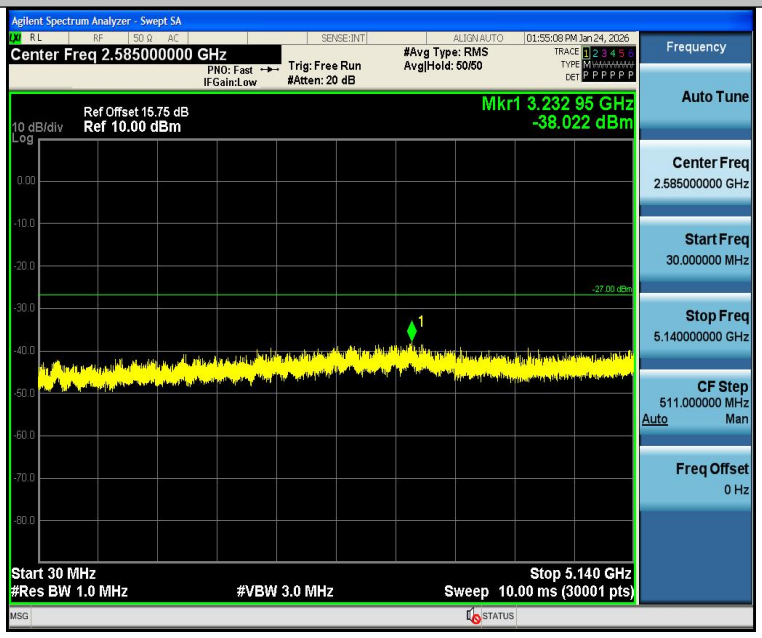
Test Graphs:

11A-Ant1-5180-30~5140-PASS

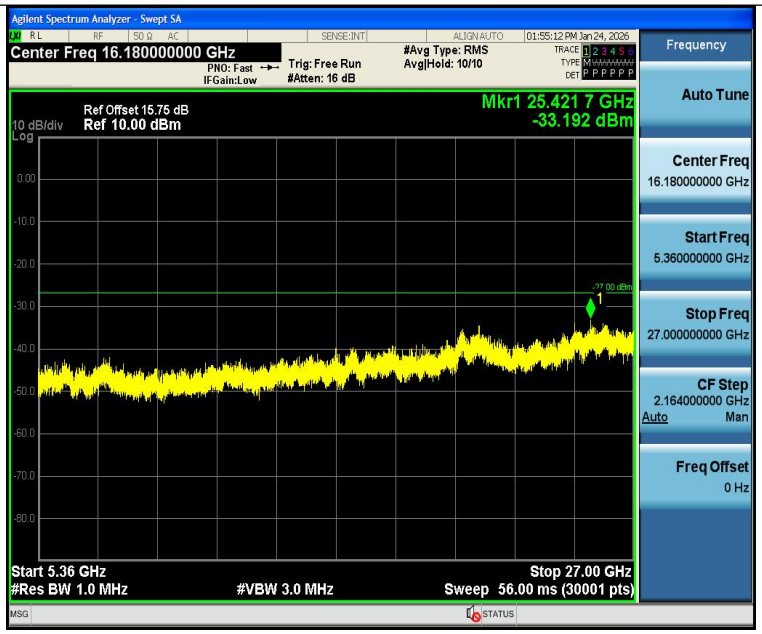


11A-Ant1-5180-5360~40000-PASS

11N20SISO-Ant1-5180-30~5140-PASS



11N20SISO-Ant1-5180-5360~40000-PASS



Note: 27~40GHz at least have 20dB margin. No recording in the test report.

6.6 Band edge measurements

Test Result:

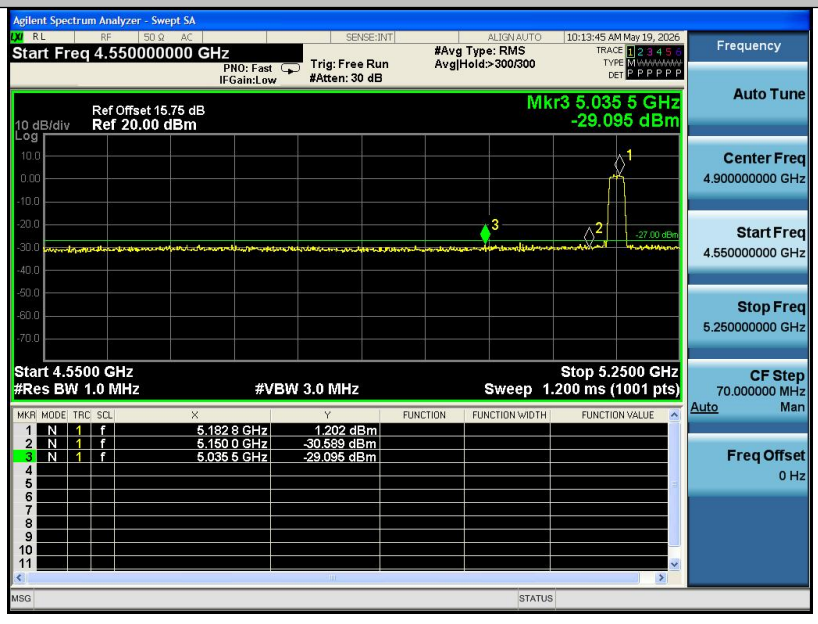
TestMode	Antenna	Test Frequency[MHz]	Frequency[MHz]	Result[dBm]	Limit[dBm]	Verdict
11A	Ant1	5150	5180	-29.10	≤-27	PASS
11A	Ant1	5250	5180	-30.13	≤-27	PASS
11N20SISO	Ant1	5150	5180	-29.46	≤-27	PASS
11N20SISO	Ant1	5250	5180	-31.34	≤-27	PASS

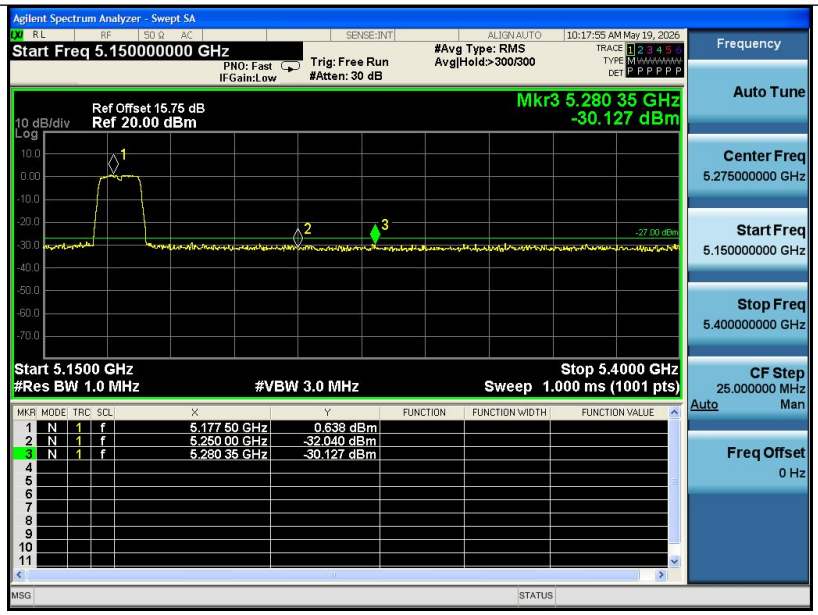
Note: 1.27~40GHz at least have 20dB margin. No recording in the test report.

2. The Max. Level has been corrected by the cable loss and antenna gain**.**

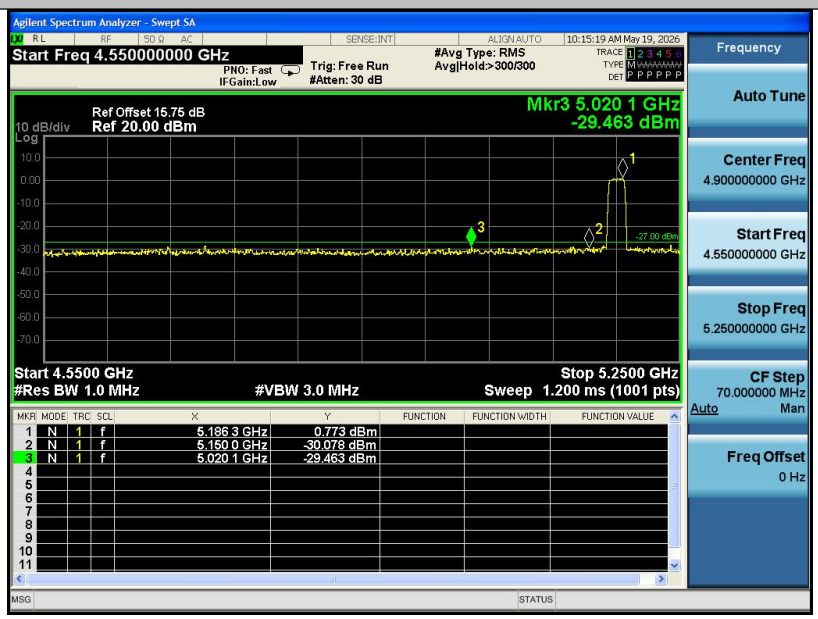
Test Graphs:

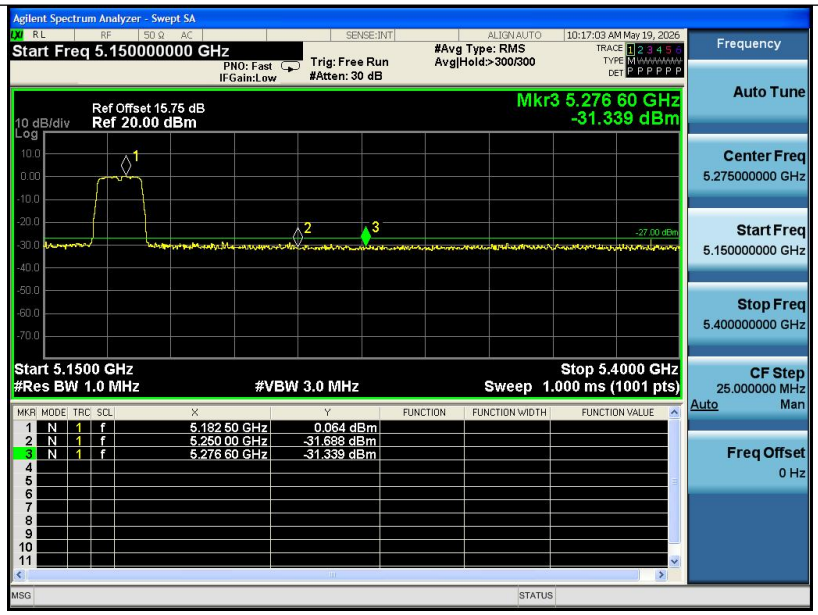
11A-Ant1-5180-PASS





11N20SISO-Ant1-5180-PASS





Note: 27~40GHz at least have 20dB margin. No recording in the test report.

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]	Margin [dB]	Polarity	Detector Type
1	5150	50.55	6.53	57.08	68.23	11.15	H	Peak
2	5150	39.87	6.53	46.4	54	7.6	H	Average
3	5150	49.51	6.53	56.04	68.23	12.19	V	Peak
4	5150	38.35	6.53	44.88	54	9.12	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 C63.10-2020
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.

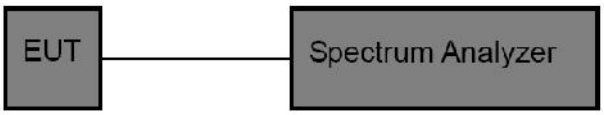
7.1 Test Procedure

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 $\geqslant$ 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

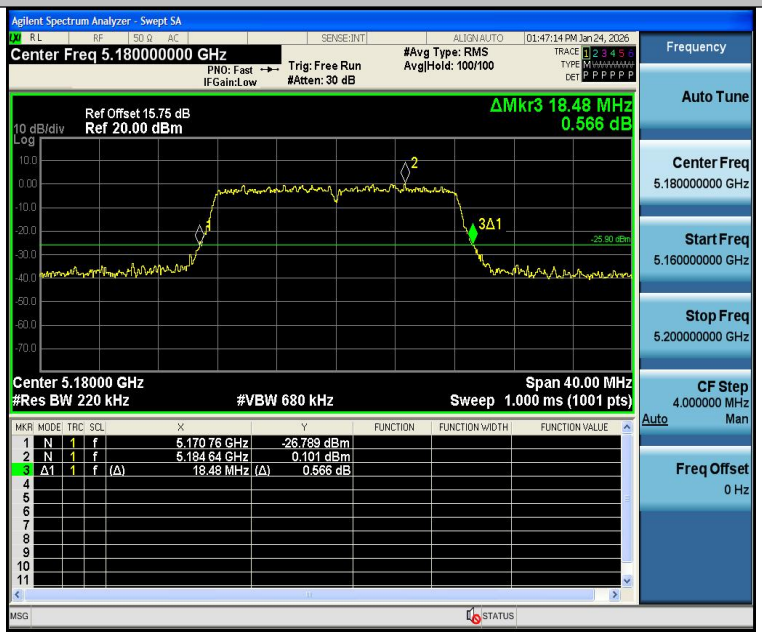
Pre-scan has been conducted to determine the worst-case mode from all possible combinations between available modulations / data rates and antenna ports.
Following channel was selected for the final test as listed below.

26 dB emission bandwidth:

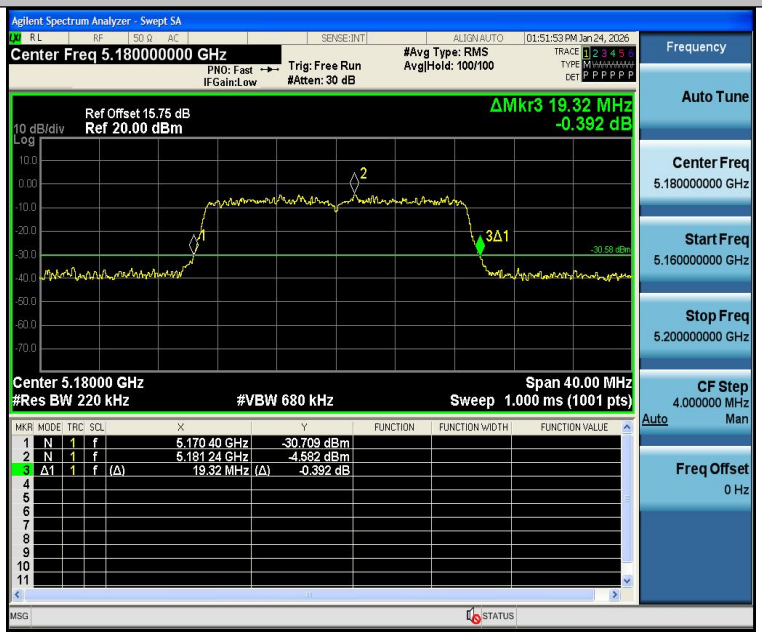
TestMode	Antenna	Frequency[MHz]	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	18.480	5170.760	5189.240	---	---
11N20SISO	Ant1	5180	19.320	5170.400	5189.720	---	---

Test Graphs：

11A-Ant1-5180



11N20SISO-Ant1-5180



8 Maximum Conducted Output Power

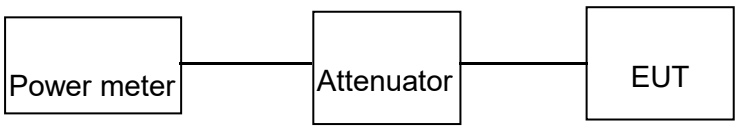
Test Requirement : FCC CFR47 Part 15 Section 15.407(a)

Test Method : ANSI C63.10-2020

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]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	5180	-1.02	≤23.98	PASS
11N20SISO	Ant1	5180	-0.94	≤23.98	PASS

9 Power Spectral density

Test Requirement	:	FCC CFR47 Part 15 Section 15.2407(a)
Test Method	:	ANSI C63.10-2020
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).

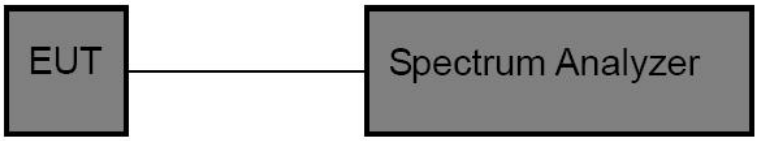
c) Set the frequency span to examine the spectrum across a convenient frequency segment (e.g., 600 MHz).

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

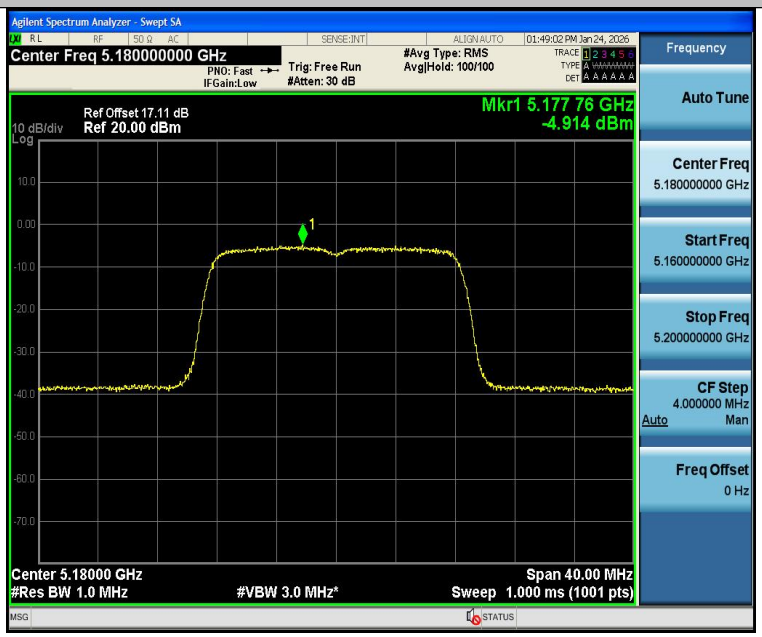
Pre-scan has been conducted to determine the worst-case mode from all possible combinations between available modulations / data rates and antenna ports.

Following channel was selected for the final test as listed below

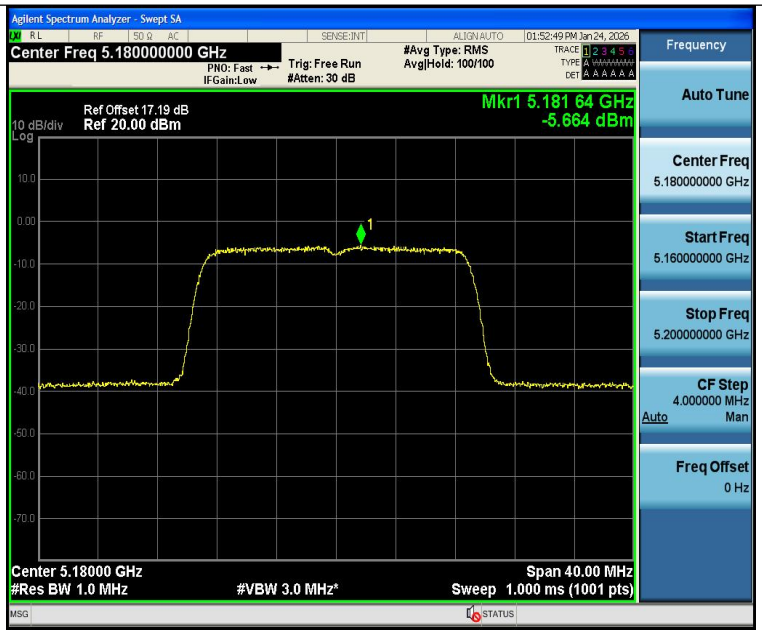
TestMode	Antenna	Frequency[MHz]	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	Ant1	5180	-4.91	≤11.00	PASS
11N20SISO	Ant1	5180	-5.66	≤11.00	PASS

Test Graphs:

11A-Ant1-5180-PASS



11N20SISO-Ant1-5180-PASS


Agilent Spectrum Analyzer - Swept SA
Center Freq 5.180000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
Avg|Hold: 100/100
01:52:49 PM Jan 24, 2026
Ref Offset 17.19 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr1 5.181 64 GHz
-5.664 dBm
Center 5.18000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Span 40.00 MHz
Sweep 1.000 ms (1001 pts)
Frequency
Auto Tune
Center Freq
5.180000000 GHz
Start Freq
5.160000000 GHz
Stop Freq
5.200000000 GHz
CF Step
4.000000 MHz
Auto
Man
Freq Offset
0 Hz

10 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.

10.1 Result

The EUT'S antenna, permanent attached antenna,is FPC Antenna. The antenna's gain is 1.39 dBi and meets the requirement.

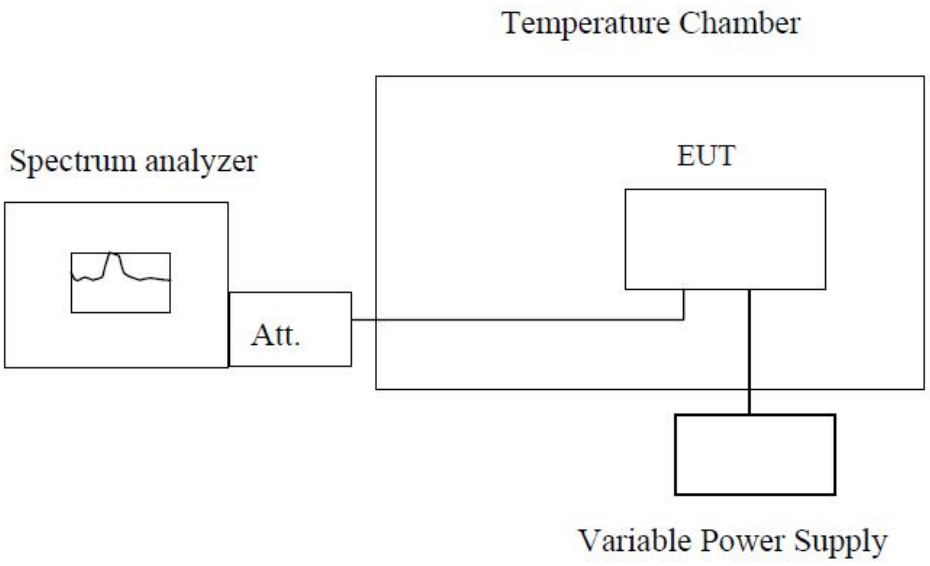
11 Frequency Stability

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.

11.1 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.

11.2 Test Setup



11.3 Test Result

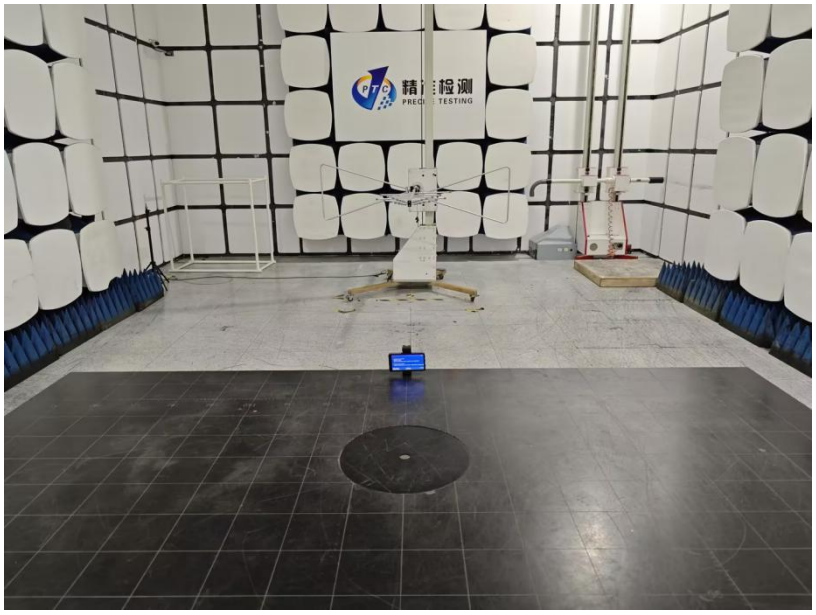
TestMode	Antenna	Frequency[MHz]	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11A	Ant1	5180	NV	NT	-18000.00	-3.474903	20	PASS
11A	Ant1	5180	LV	NT	-18000.00	-3.474903	20	PASS
11A	Ant1	5180	HV	NT	-18000.00	-3.474903	20	PASS
11N20SISO	Ant1	5180	NV	NT	-15000.00	-2.895753	20	PASS
11N20SISO	Ant1	5180	LV	NT	-14000.00	-2.702703	20	PASS
11N20SISO	Ant1	5180	HV	NT	-14000.00	-2.702703	20	PASS

TestMode	Antenna	Frequency[MHz]	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11A	Ant1	5180	NV	-30	-17000.00	-3.281853	20	PASS
11A	Ant1	5180	NV	-20	-17000.00	-3.281853	20	PASS
11A	Ant1	5180	NV	-10	-17000.00	-3.281853	20	PASS
11A	Ant1	5180	NV	0	-17000.00	-3.281853	20	PASS
11A	Ant1	5180	NV	10	-16000.00	-3.088803	20	PASS
11A	Ant1	5180	NV	20	-16000.00	-3.088803	20	PASS
11A	Ant1	5180	NV	30	-16000.00	-3.088803	20	PASS
11A	Ant1	5180	NV	40	-16000.00	-3.088803	20	PASS
11A	Ant1	5180	NV	50	-15000.00	-2.895753	20	PASS
11N20SISO	Ant1	5180	NV	-30	-14000.00	-2.702703	20	PASS
11N20SISO	Ant1	5180	NV	-20	-14000.00	-2.702703	20	PASS
11N20SISO	Ant1	5180	NV	-10	-14000.00	-2.702703	20	PASS
11N20SISO	Ant1	5180	NV	0	-14000.00	-2.702703	20	PASS
11N20SISO	Ant1	5180	NV	10	-14000.00	-2.702703	20	PASS
11N20SISO	Ant1	5180	NV	20	-14000.00	-2.702703	20	PASS
11N20SISO	Ant1	5180	NV	30	-14000.00	-2.702703	20	PASS
11N20SISO	Ant1	5180	NV	40	-14000.00	-2.702703	20	PASS
11N20SISO	Ant1	5180	NV	50	-13000.00	-2.509653	20	PASS

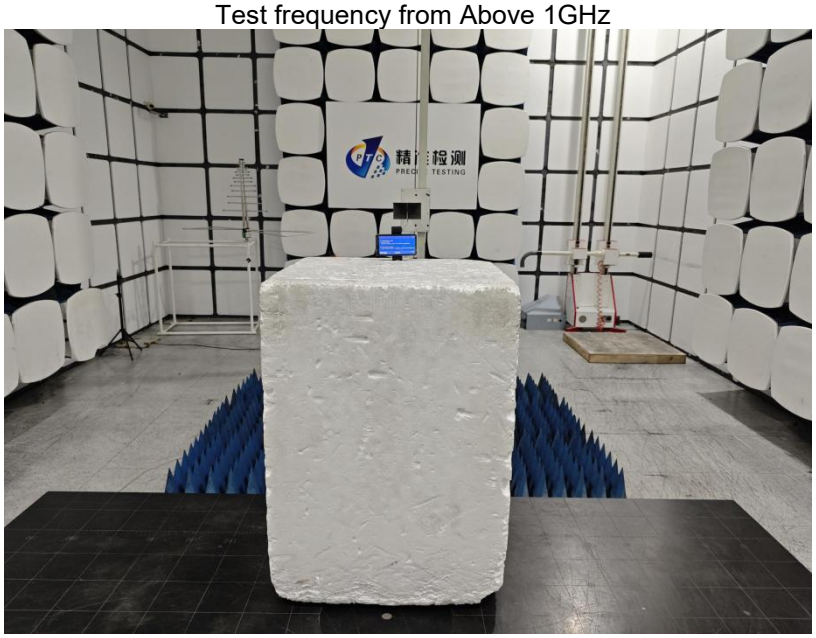
12 Test Setup

Conducted Emissions

Radiated Spurious Emissions
From 30MHz-1000MHz



Test frequency from Above 1GHz



13 EUT PHOTOS

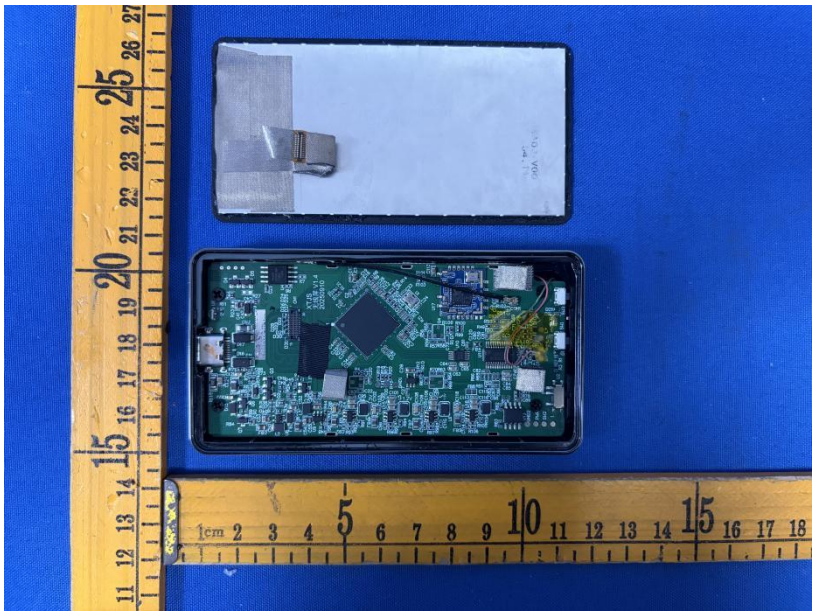

NEEWER
F4

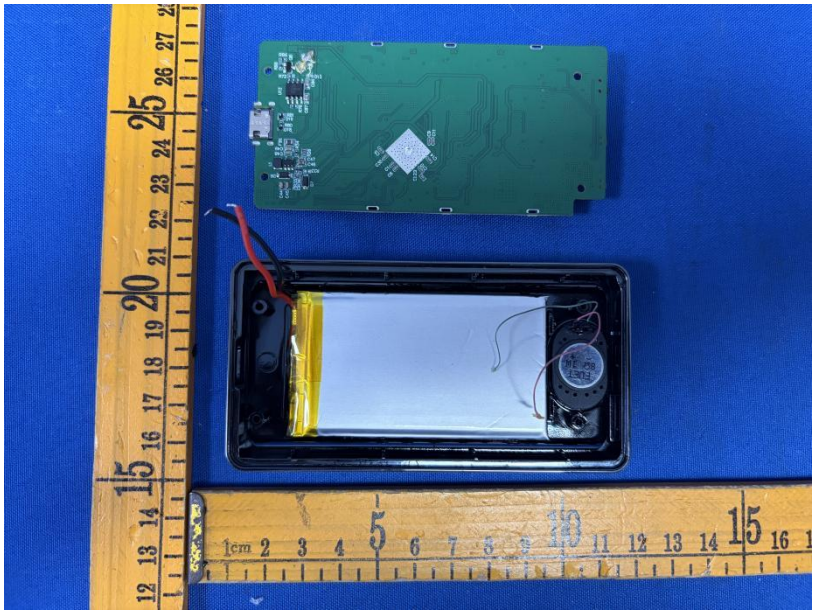

NEEWER
F4

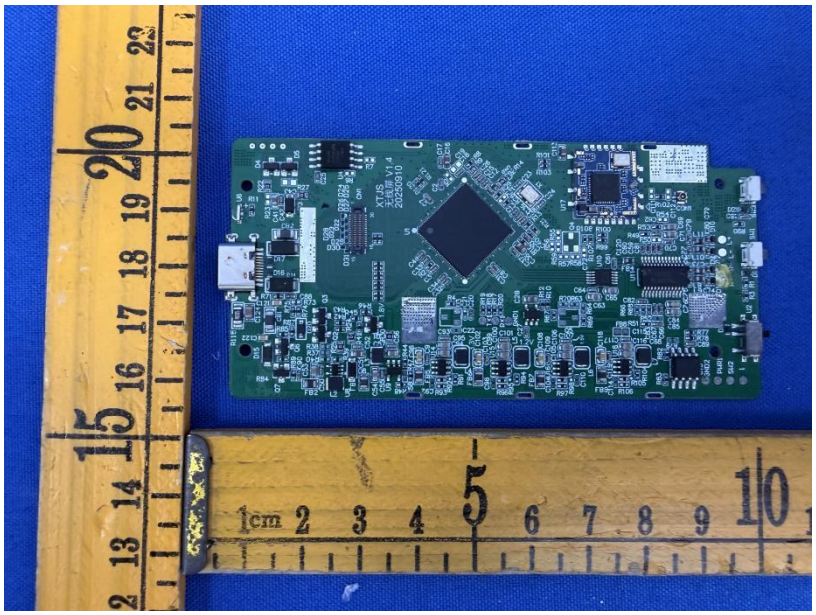

NEEWER

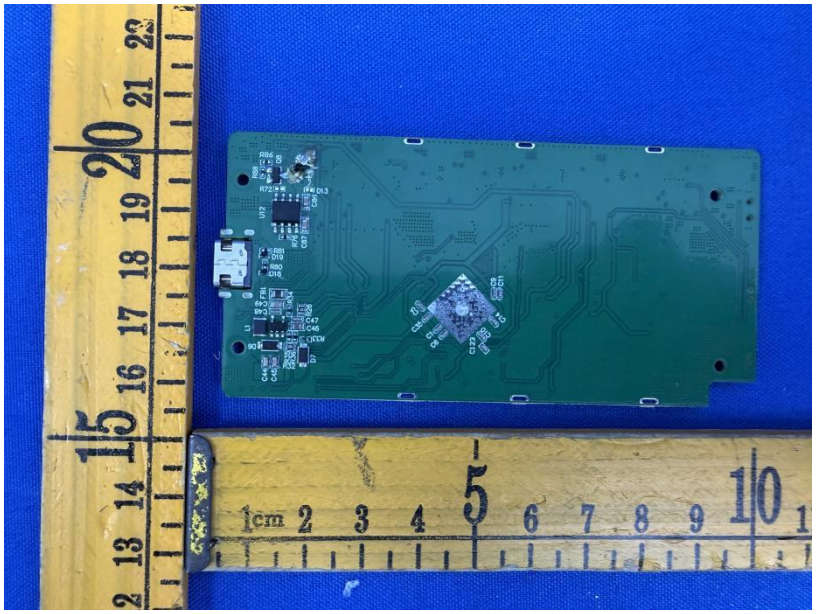

NEEWER
F4


NEEWER
F4





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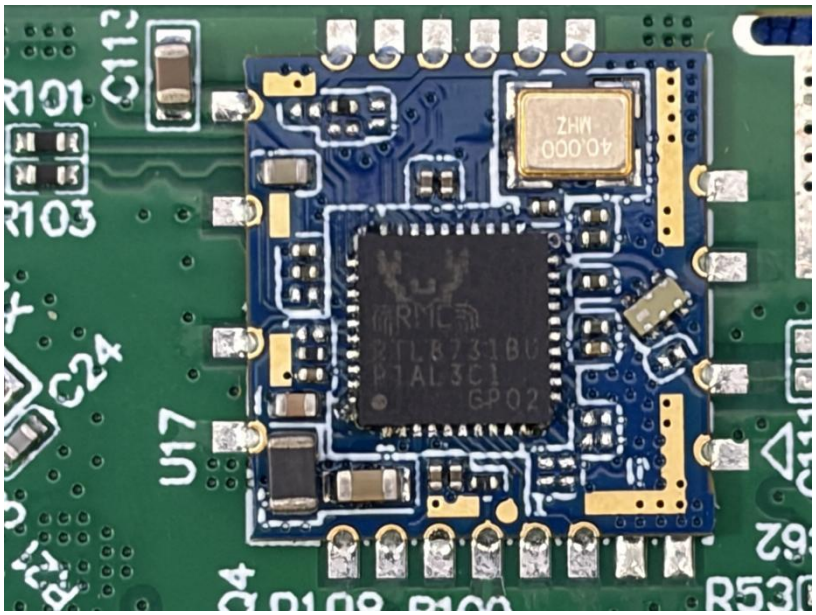
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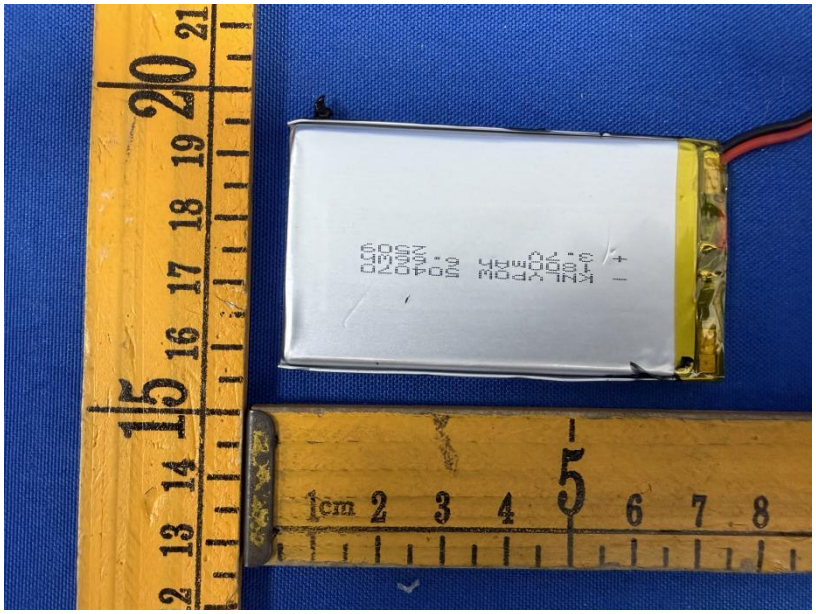

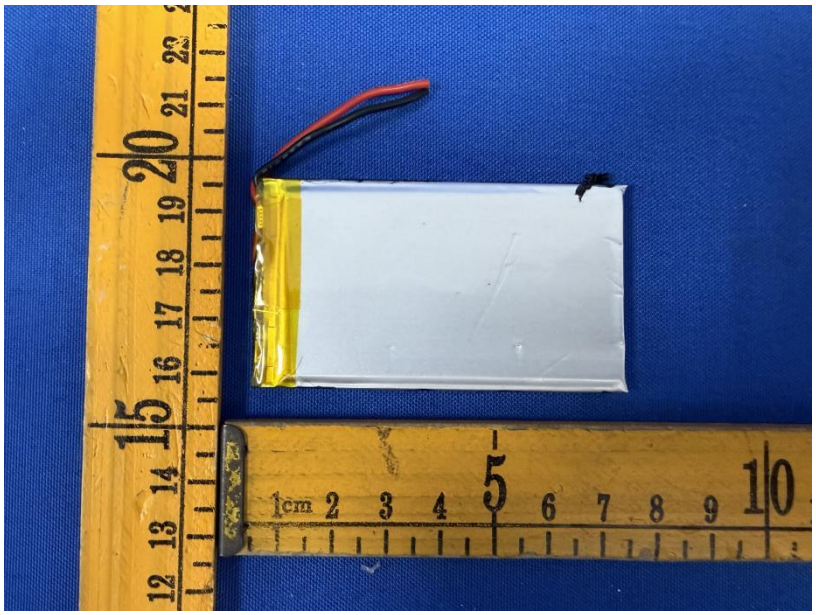

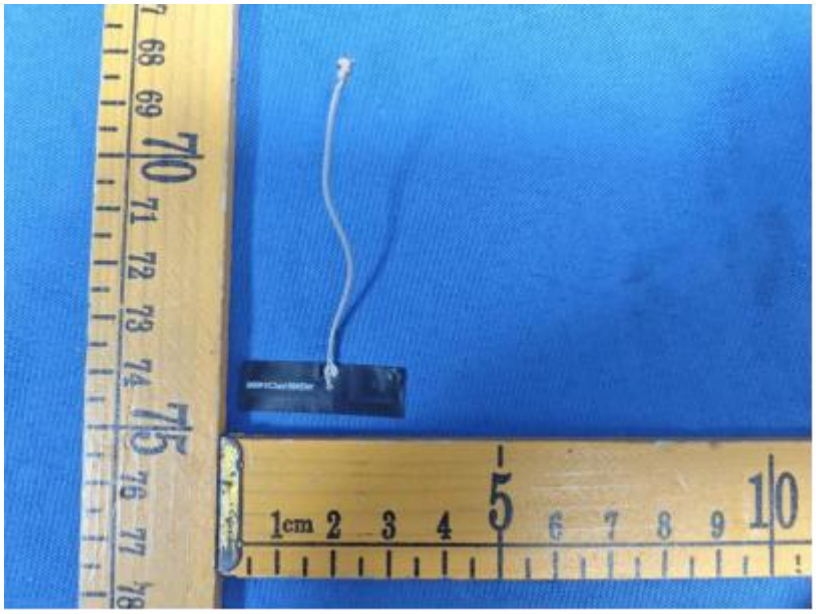

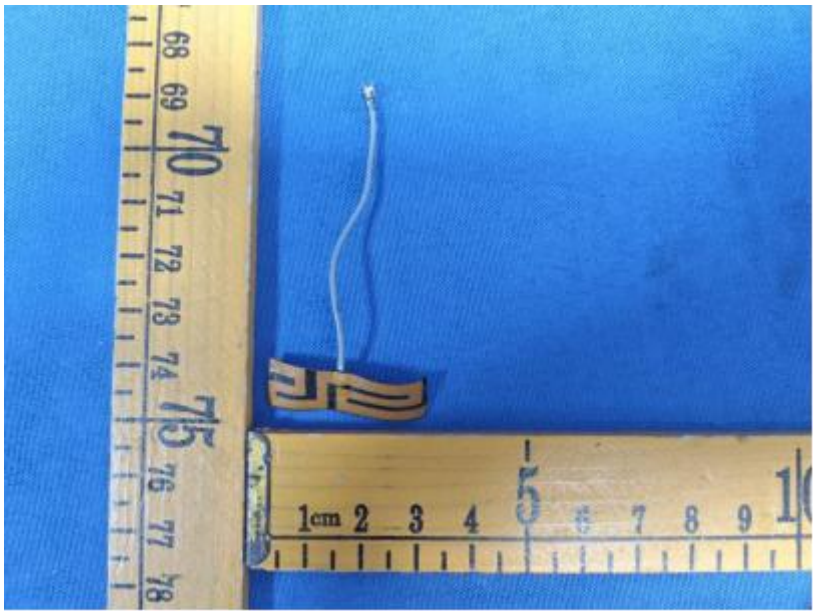

********THE END REPORT********