FCC TEST REPORT

FCC ID: UCC-M360-X

On Behalf of

Altai Technologies Limited

Industrial Dual-Band Wi-Fi 6 CPE/AP

Model No.: M360-X

Prepared for	:	Altai Technologies Limited
Address	:	Unit 209, 2/F, Lakeside 2, 10 Science Park West Avenue, HK Science Park, Shatin, Hong Kong

Prepared By	:	Shenzhen Huaxin Information Technology Service Co., Ltd
Address	:	101, R & D Building, No.3 guansheng 4th Road, Luhu Community，Guanhu Street, Longhua District, Shenzhen, Guangdong, China

Report Number	:	HX240327R002
Date of Receipt	:	Mar 2th,2024
Date of Test	:	Mar 4th,2024 ~ Mar 27th,2024
Date of Report	:	Mar 27th, 2024
Version Number	:	V0

Contents

TEST REPORT DECLARATION

Applicant	:	Altai Technologies Limited
Address	:	Unit 209, 2/F, Lakeside 2, 10 Science Park West Avenue, HK Science Park, Shatin, Hong Kong
Manufacturer	:	Altai Technologies Limited
Address	:	Unit 209, 2/F, Lakeside 2, 10 Science Park West Avenue, HK Science Park, Shatin, Hong Kong
EUT Description	:	Industrial Dual-Band Wi-Fi 6 CPE/AP
		(A) Model No. : M360-X
		(B) Trademark : N/A

Measurement Standard Used:

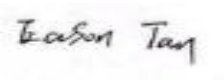
FCC Rules and Regulations Part 15 Subpart E

RSS-247 Issue 2, ANSI C63.4:2014, ANSI C63.10:2013

The device described above is tested by Shenzhen Huaxin Information Technology Service Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart E limits both conducted and radiated emissions. The test results are contained in this test report and Shenzhen Huaxin Information Technology Service Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests.

After the test, our opinion is that EUT compliance with the requirement of the above standards.

This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Shenzhen Huaxin Information Technology Service Co., Ltd..

Tested by (name + signature).....:	Eason Tan Project Engineer	
Approved by (name + signature).....:	Michael Wu Project Manager	
Date of issue..... .....:	Mar 27th, 2024	

Revision History

Revision	Issue Date	Revisions	Revised By
V0	Mar 27th, 2024	Initial released Issue	Eason Tan

1 Test Summary

Test Item	Section in CFR 47	Result
Antenna requirement	Section 15.203 Section 7.1.4 RSS-Gen Issue 5	PASS
Conducted Emission	Section 15.207 Section 7.2.4 RSS-GEN(8.8), ANSI C63.10	PASS
Radiated Emission	Section 15.407(b)&15.209 Section 5.5 RSS-Gen(8.9), RSS-247(5.5), ANSI C63.10	PASS
Maximum Output Power	Section 15.407(a), RSS-247 5.4(2)	PASS
Power Spectral Density	Section 15.407(a), RSS-247 5.2(2)	PASS
Emission Bandwidth and 99% Occupied Bandwidth	Section 15.407(e)	PASS
Band Edge Emission (Radiated)	15.205, RSS-247 Issue 2, ANSI C63.10	PASS
Frequency Stability	15.407(g), RSS-GEN(6.11)	PASS

Remark:

1.Pass: The EUT complies with the essential requirements in the standard.

2.Frequency Stability: The manufacturer stated in the user's manual.

3. Decision rules for the conclusion of this test report: decision by actual test data without considering measurement uncertainty.

1.1 Measurement Uncertainty

Item	MU	Remark
Conducted Emission（9K～0.15MHz）	2.18dB	
Conducted Emission（0.15M～30MHz）	2.17dB	
Radiation Emission ,3m (30MHz～1GHz)	4.45 dB	Polarize: V
	2.76 dB	Polarize: H
Radiation Emission, 3m (1GHz～6GHz)	4.02 dB	
Radiation Emission ,3m (6GHz～18GHz)	4.30 dB	
RF output power (conducted)	0.41 dB	
Power Spectral Density (conducted)	0.39 dB	
Spurious emissions (conducted)	0.59 dB	
Occupied Channel Bandwidth (conducted)	4.22%	
(95% confidence levels, k=2)		

2 General Information

2.1 General Description of EUT

EUT Name	:	Industrial Dual-Band Wi-Fi 6 CPE/AP
Trademark	:	N/A
Model No.	:	M360-X
DIFF.	:	N/A
Power supply	:	DC12V-48V or Passive PoE 48V

Radio Technology	**:**	**5G WIFI**
Operation Frequency	:	IEEE802.11a: 5180-5240MHz,5260-5320MHz,5500-5700MHz,5745-5825MHz IEEE 802.11n HT20: 5180-5240MHz,5260-5320MHz,5500-5700MHz,5745-5825MHz IEEE 802.11n HT40: 5190-5230MHz,5270-5310MHz,5510-5670MHz,5755-5795MHz IEEE 802. 11ac20: 5180-5240MHz,5260-5320MHz,5500-5700MHz,5745-5825MHz IEEE 802. 11ac40: 5190-5230MHz,5270-5310MHz,5510-5670MHz,5755-5795MHz IEEE 802. 11ac80: 5210MHz,5290MHz,5530MHz,5610MHz,5775MHz IEEE 802. 11ac160: 5250MHz,5570MHz IEEE 802. 11ax20: 5180-5240MHz,5260-5320MHz,5500-5700MHz,5745-5825MHz IEEE 802. 11ax40: 5190-5230MHz,5270-5310MHz,5510-5670MHz,5755-5795MHz IEEE 802. 11ax80: 5210MHz,5290MHz,5530MHz,5610MHz,5775MHz IEEE 802. 11ax160: 5250MHz,5570MHz
Channel separation	:	4 Channels for 20MHz bandwidth(5180-5240MHz) 4 Channels for 20MHz bandwidth(5260-5320MHz) 11 Channels for 20MHz bandwidth(5500-5700MHz) 5 channels for 20MHz bandwidth(5745-5825MHz) 2 channels for 40MHz bandwidth(5190~5230MHz) 2 channels for 40MHz bandwidth(5270~5310MHz) 5 Channels for 40MHz bandwidth(5510-5670MHz) 2 channels for 40MHz bandwidth(5755~5795MHz) 1 channel for 80MHz bandwidth(5210MHz)

		1 channel for 80MHz bandwidth(5290MHz)
		2 Channels for 80MHz bandwidth(5530MHz,5610MHz)
		1 channel for 80MHz bandwidth(5775MHz)
		1 Channel for 160MHz bandwidth(5250MHz)
		1 channel for 160MHz bandwidth(5570MHz)
Modulation technology:	:	IEEE 802.11a: OFDM(64QAM, 16QAM, QPSK, BPSK)
		IEEE 802.11n HT20: OFDM (64QAM, 16QAM, QPSK,BPSK)
		IEEE 802.11n HT40: OFDM (64QAM, 16QAM, QPSK,BPSK)
		IEEE 802.11ac20/40/80/160: OFDM(64QAM, 16QAM, QPSK, BPSK,256QAM)
		IEEE 802.11ax20/40/80/160: OFDM(64QAM, 16QAM, QPSK, BPSK,256QAM,1024QAM)
Antenna Type	:	External Antenna1, max. gain 3dBi
		External Antenna2, max. gain 3dBi
		Antenna information is provided by applicant.
Software version	:	11.4cs2
Hardware version	:	1.0
Intend use environment	:	Residential, commercial and light industrial environment

2.2 Test mode

Transmitting mode Keep the EUT in transmitting with modulation.
EUT was test with 99% duty cycle at its maximum power control level.

Remark: During the test, the test voltage was tuned from 85% to 115% of the nominal rated supply voltage, and found that the worst case was under the nominal rated supply condition. So the report just shows that condition's data.

2.3 Test Facility

Company Name:	Shenzhen Huaxin Information Technology Service Co., Ltd
Address:	101, R & D Building, No.3 guansheng 4th Road, Luhu Community， Guanhu Street, Longhua District, Shenzhen, Guangdong, China
Telephone:	0775-21018313
Fax:	0775-21018313
FCC Test Firm Registration Number: 932271 Designation Number: CN1344 CAB ID ： CN0147	

2.4 Description of Support Units

Accessories	:	AC adaptor
Manufacturer	:	MCP
Model	:	CHD-12068
Ratings	:	/
Note	:	Input:AC 100-240V 50/60Hz Output:DC 12V/2A

2.5 Deviation from Standards

None.

2.6 Abnormalities from Standard Conditions

None.

2.7 Other Information Requested by the Customer

None.

2.8 Additional instructions

Software (Used for test) from client

Channel	Power level
Lowest	Default
Middle	Default
Highest	Default

3 Test Instruments list

Equipment	Manufacturer	Model No.	Firmware version	Serial No.	Last cal.	Cal. Due day
9*6*6 anechoic chamber	Mao Rui	9*6*6m	/	N/A	2022.06.15	2025.06.14
EMI receiver	R&S	ESR7	5.812	102543	2023.10.20	2024.10.19
Spectrum analyzer	R&S	FSV40-N	V7.0-4-62-2	101795	2023.09.19	2024.09.18
Pre-amplifier	HP	8447D	/	1616A02061	2023.04.15	2024.04.14
Pre-amplifier	Agilent	8449B	/	9008A00551	2023.04.15	2024.04.14
Bilog Antenna	Schwarzbeck	VULB 9168	/	/	2022.06.19	2024.06.18
Horn antenna	A.H. System, Inc	SAS-571	/	915	2023.06.17	2024.06.16
Loop Antenna	Schwarzbeck	FMZB 1519B	/	/	2023.06.17	2024.06.16
LISN	R&S	ENV216		101291	2023.06.17	2024.06.16
LISN	R&S	ESH3-Z5		894981/024	2023.06.17	2024.06.16
Analog signal	Agilent	N5181A	A.01.87	MY47421151	2023.09.17	2024.09.16
Vector Signal	Keysight	N5182A	A.01.87	MY50140428	2023.09.17	2024.09.16
Wideband Radio communication tester	R&S	CMW500	V3.7.22	157762	2023.09.17	2024.09.16
Spectrum analyzer	Agilent	N9020A	A.14.16	MY51280803	2023.04.15	2024.04.14
RF Cable	/	(10G)9m	/	/	2023.09.17	2024.09.16
RF Cable	/	(10G)10m	/	/	2023.09.17	2024.09.16
RF Cable	/	(18G)10m	/	/	2023.09.17	2024.09.16
attenuation pad	/	6dB	/	/	2023.09.17	2024.09.16
attenuation pad	/	10dB	/	16280012	2023.09.17	2024.09.16
Temperature and humidity test chamber	Asprey	LX-150L	N/A	N/A	2023.04.15	2024.04.14

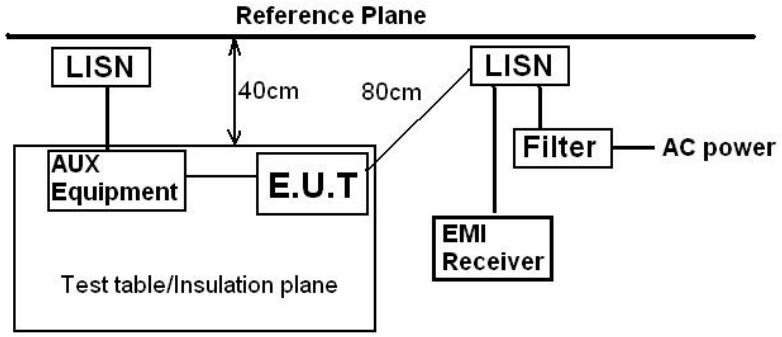
Software Information			
Test Item	Software Name	Manufacturer	Version
RE	EMC-I	SKET	V1.4.0.1
CE	EMC-I	SKET	V1.4.0.1
RF-CE	RTS	TACHOY	V1.0.0

4 Test results and Measurement Data

4.1 Antenna requirement:

Standard requirement:	FCC Part15 C Section 15.203
15.203 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 15.407 (a), 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.	
E.U.T Antenna:	
External antenna1,Maximum Gain is 3dBi,for 5150~5850MHz. External antenna2,Maximum Gain is 3dBi,for 5150~5850MHz. Note:The antenna gain is provided by the customer.	

4.2 Conducted Emission

<table>
<tr><td>Test Requirement:</td><td>FCC Part15 C Section 15.207</td></tr>
<tr><td>Test Method:</td><td>ANSI C63.10:2013</td></tr>
<tr><td>Test Frequency Range:</td><td>150KHz to 30MHz</td></tr>
<tr><td>Class / Severity:</td><td>Class B</td></tr>
<tr><td>Receiver setup:</td><td>RBW=9KHz, VBW=30KHz</td></tr>
<tr><td>Limit:</td><td>
<table>
<tr><td rowspan="2">Frequency range (MHz)</td><td colspan="2">Limit (dBuV)</td></tr>
<tr><td>Quasi-peak</td><td>Average</td></tr>
<tr><td>0.15-0.5</td><td>66 to 56*</td><td>56 to 46*</td></tr>
<tr><td>0.5-5</td><td>56</td><td>46</td></tr>
<tr><td>5-30</td><td>60</td><td>50</td></tr>
</table>
* Decreases with the logarithm of the frequency.
</td></tr>
<tr><td>Test procedure</td><td>The E.U.T and simulators are connected to the main power through a line impedance stabilization network(L.I.S.N.). The provide a 50ohm/50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs). Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10:2013 on conducted measurement.</td></tr>
<tr><td>Test setup:</td><td> 

Remark:
E.U.T: Equipment Under Test
LISN: Line Impedence Stabilization Network
Test table height=0.8m</td></tr>
<tr><td>Test Instruments:</td><td>Refer to section 5.10 for details</td></tr>
<tr><td>Test mode:</td><td>Refer to section 5.3 for details</td></tr>
<tr><td>Test results:</td><td>Pass</td></tr>
</table>

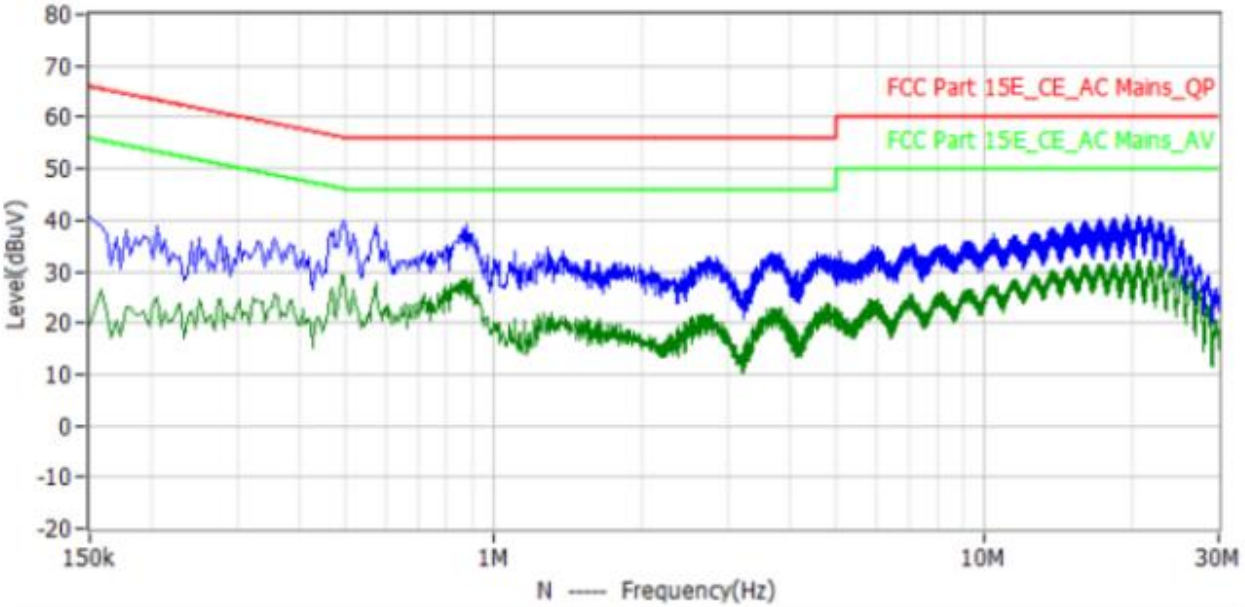
Measurement Data

An initial pre-scan was performed on the line and neutral lines with peak detector. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

Note:

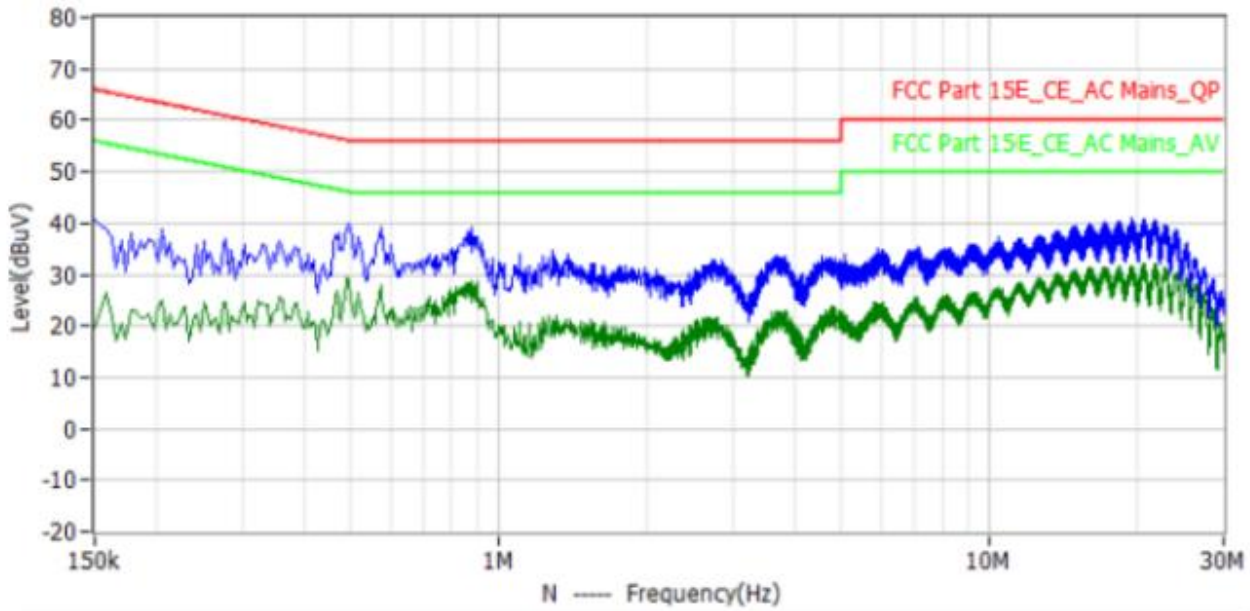
1. All modes and channels have been tested and only the 5745MHz mode with the worst data is listed.
2. Both 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz power supply have been tested, only the worst result of 120 VAC, 60 Hz was reported as below:

Line:



No.	Frequency	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Delta dB	Detector	Polar
1*	494.000kHz	30.3	9.7	40.0	56.1	-16.1	QP	N
2*	878.000kHz	29.4	9.6	39.0	56.0	-17.0	QP	N
3*	20.738MHz	30.6	10.2	40.8	60.0	-19.2	QP	N
4*	10.442MHz	27.3	9.9	37.2	60.0	-22.8	QP	N
5*	206.000kHz	28.8	9.9	38.7	63.4	-24.6	QP	N
6*	5.090MHz	24.1	9.9	34.0	60.0	-26.0	QP	N
7*	490.000kHz	19.6	9.7	29.3	46.2	-16.9	AV	N
8*	878.000kHz	19.3	9.6	28.9	46.0	-17.1	AV	N
9*	21.786MHz	21.8	10.2	32.0	50.0	-18.0	AV	N
10*	12.570MHz	19.3	10.1	29.4	50.0	-20.6	AV	N
11*	3.842MHz	13.1	9.8	22.9	46.0	-23.1	AV	N
12*	158.000kHz	16.7	9.9	26.6	55.6	-29.0	AV	N

Neutral:



No.	Frequency	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Delta dB	Detector	Polar
1*	494.000kHz	30.3	9.7	40.0	56.1	-16.1	QP	N
2*	878.000kHz	29.4	9.6	39.0	56.0	-17.0	QP	N
3*	20.738MHz	30.6	10.2	40.8	60.0	-19.2	QP	N
4*	10.442MHz	27.3	9.9	37.2	60.0	-22.8	QP	N
5*	206.000kHz	28.8	9.9	38.7	63.4	-24.6	QP	N
6*	5.090MHz	24.1	9.9	34.0	60.0	-26.0	QP	N
7*	490.000kHz	19.6	9.7	29.3	46.2	-16.9	AV	N
8*	878.000kHz	19.3	9.6	28.9	46.0	-17.1	AV	N
9*	21.786MHz	21.8	10.2	32.0	50.0	-18.0	AV	N
10*	12.570MHz	19.3	10.1	29.4	50.0	-20.6	AV	N
11*	3.842MHz	13.1	9.8	22.9	46.0	-23.1	AV	N
12*	158.000kHz	16.7	9.9	26.6	55.6	-29.0	AV	N

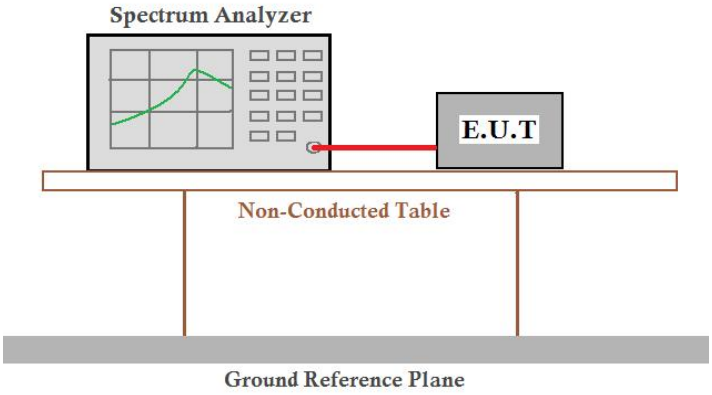
Note:

1. Level = Reading + Factor

2.Factor = LISN Factor + Cable Loss

3.Delta = Level - Limit

4.3 Emission Bandwidth and 99% Occupied Bandwidth

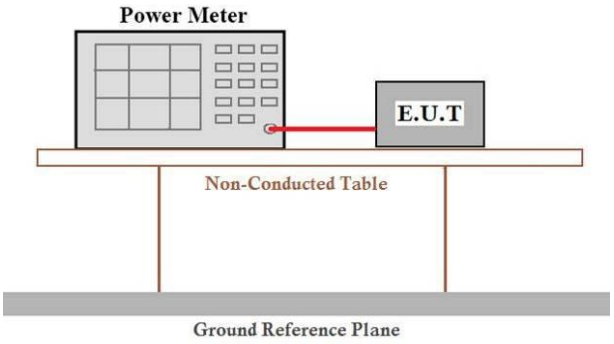
Test Requirement:	FCC Part15 E Section 15.407
Test Method:	KDB 789033 D02 General UNII Test Procedures New Rules v02r01
Limit:	N/A
Test setup:	
Test procedure:	According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
Test Instruments:	Refer to section 5.10 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

Measurement Data:

For the measurement records，refer to the appendix I.

Note: Both antennas have been tested and only the worst data of antenna 1 is shown.

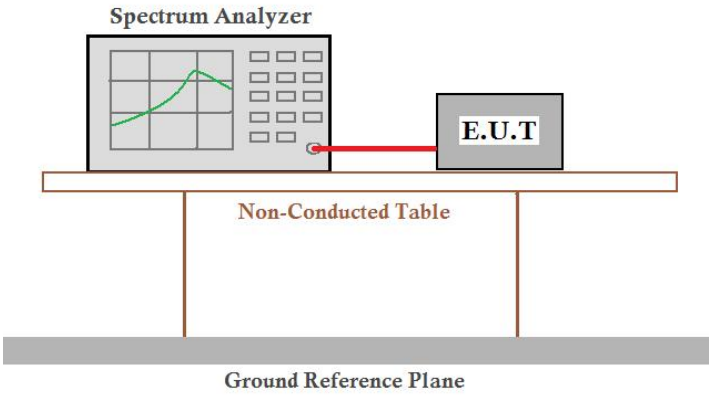
4.4 Maximum Output Power

Test Requirement:	FCC Part15 E Section 15.407
Test Method:	KDB 789033 D02 General UNII Test Procedures New Rules v02r01
Limit:	For the band 5.15-5.25GHz, 5.25-5.35GHz, 5.47-5.725GHz, the maximum conducted output power over the frequency bands of operation shall not exceed 250mW. For the band 5.725-5.85GHz, the maximum conducted output power over the frequency bands of operation shall not exceed 1W.
Test setup:	
Test procedure:	**Measurement using an RF average power meter** (i) Measurements may be performed using a wideband RF power meter with a thermocouple detector or equivalent if all of the conditions listed below are satisfied a) The EUT is configured to transmit continuously or to transmit with a constant duty cycle. b) At all times when the EUT is transmitting, it must be transmitting at its maximum power control level. c) The integration period of the power meter exceeds the repetition period of the transmitted signal by at least a factor of five. (ii) If the transmitter does not transmit continuously, measure the duty cycle, x, of the transmitter output signal as described in section B). (iii) Measure the average power of the transmitter. This measurement is an average over both the on and off periods of the transmitter. (iv) Adjust the measurement in dBm by adding 10 log(1/x) where x is the duty cycle (e.g., 10log(1/0.25) if the duty cycle is 25 percent).
Test Instruments:	Refer to section 5.10 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

Measurement Data

For the measurement records，refer to the appendix I.

4.5 Power Spectral Density

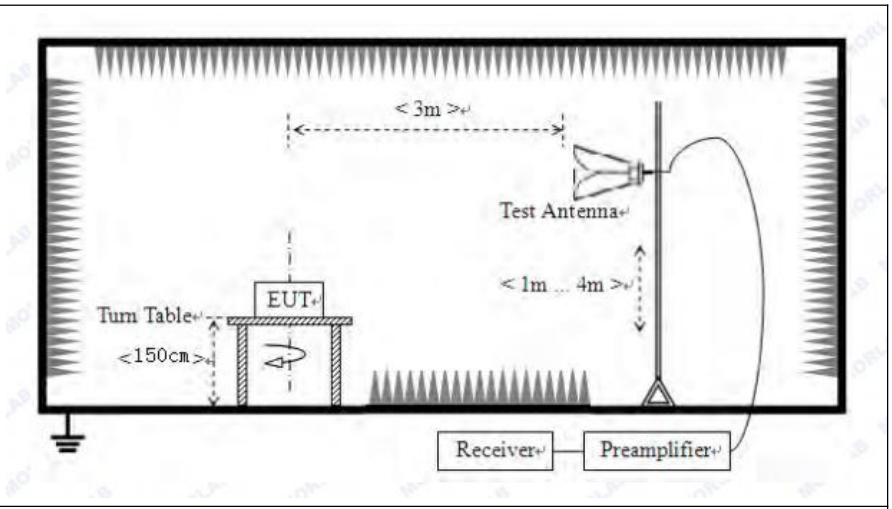
Test Requirement:	FCC Part15 E Section 15.407
Test Method:	KDB 789033 D02 General UNII Test Procedures New Rules v02r01
Limit:	≤11.00dBm/MHz for 5150MHz-5250MHz, 5250-5350MHz and 5470-5725 MHz ≤30.00dBm/500KHz for 5725MHz-5850MHz
Test setup:	
Test procedure:	1) Create an average power spectrum for the EUT operating mode being tested by following the instructions in section E)2) for measuring maximum conducted output power using a spectrum analyzer or EMI receiver: select the appropriate test method (SA-1, SA-2, SA-3, or alternatives to each) and apply it up to, but not including, the step labeled, “Compute power…”. 2) Use the peak search function on the instrument to find the peak of the spectrum. 3) Make the following adjustments to the peak value of the spectrum, if applicable: a) If Method SA-2 or SA-2 Alternative was used, add 10 log(1/x), where x is the duty cycle, to the peak of the spectrum. b) If Method SA-3 Alternative was used and the linear mode was used in step E)2)g)(viii), add 1 dB to the final result to compensate for the difference between linear averaging and power averaging. 4) The result is the PSD.
Test Instruments:	Refer to section 5.10 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

Measurement Data

For the measurement records，refer to the appendix I.

4.6 Band Edge Emission (Radiated)

<table>
<tr><td>Test Requirement:</td><td>FCC Part15 E Section 15.407 and 15.205</td></tr>
<tr><td>Test Method:</td><td>ANSI C63.10:2013</td></tr>
<tr><td>Test site:</td><td>Measurement Distance: 3m (Semi-Anechoic Chamber)</td></tr>
<tr><td>Receiver setup:</td><td>
<table>
<tr><th>Frequency</th><th>Detector</th><th>RBW</th><th>VBW</th><th>Remark</th></tr>
<tr><td>30MHz-1GHz</td><td>Quasi-peak</td><td>100KHz</td><td>300KHz</td><td>Quasi-peak Value</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak Value</td></tr>
<tr><td>AV</td><td>1MHz</td><td>3MHz</td><td>Average Value</td></tr>
</table>
</td></tr>
<tr><td>Limit:</td><td>
<table>
<tr><th>Frequency</th><th>Limit (dBuV/m @3m)</th><th>Remark</th></tr>
<tr><td>30MHz-88MHz</td><td>40.0</td><td>Quasi-peak Value</td></tr>
<tr><td>88MHz-216MHz</td><td>43.5</td><td>Quasi-peak Value</td></tr>
<tr><td>216MHz-960MHz</td><td>46.0</td><td>Quasi-peak Value</td></tr>
<tr><td>960MHz-1GHz</td><td>54.0</td><td>Quasi-peak Value</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>54.0</td><td>Average Value</td></tr>
<tr><td>68.2</td><td>Peak Value</td></tr>
</table>
Undesirable emission limits:
(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 EIRP 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 EIRP of -27 dBm/MHz. Devices operating in the 5.25-5.35 GHz band that generate emissions in the 5.15-5.25 GHz band must meet all applicable technical requirements for operation in the 5.15-5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5.15-5.25 GHz band.
(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 EIRP of −27 dBm/MHz.
</td></tr>
<tr><td>Test Procedure:</td><td>
a. The EUT was placed on the top of a rotating table 1.5 m above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
</td></tr>
<tr><td>Test setup:</td><td>Above 1GHz</td></tr>
</table>

	
Test Instruments:	Refer to section 5.10 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

Measurement Data:

For 1GHz to 40GHz

Note: All 802.11a / 802.11n HT20/ac (HT20) /802.11n HT40/ac (HT40)/ 802.11ac (HT80)/ 802.11ac (HT160)/ax(HT20)/ax (HT40)/ 802.11ax (HT80)/ 802.11ax (HT160) modes have been tested for above 1GHz test, only the worst case 802.11a was recorded.

5150-5250MHz:

U-NII 1 & 802.11a Mode (above 1GHz)

Tested Channel	Frequency (MHz)	Emission Level (dBuV/m)	Detector Mode	ANT Pol	Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre amplifier (dB)	Correction Factor (dB/m)
	5150.00	51.78	PK	H	68.20	16.42	70.68	29.91	5.87	54.68	-18.90
36.00	5150.00	39.52	AV	H	54.00	14.48	58.42	29.91	5.87	54.68	-18.90
(5180MHz)	10360.00	51.45	PK	H	68.20	16.75	58.37	37.62	10.02	54.56	-6.92
	--	--	--	--	--	--	--	--	--	--	--
40.00	10400.00	50.74	PK	H	68.20	17.46	57.16	37.81	10.14	54.37	-6.42
(5200MHz)	--	--	--	--	--	--	--	--	--	--	--
48.00	5350.50	51.83	PK	H	68.20	16.37	70.40	30.24	5.93	54.74	-18.57
(5240MHz)	10480.00	50.61	PK	H	68.20	17.59	57.13	37.95	10.17	54.64	-6.52
	--	--	--	--	--	--	--	--	--	--	--

Tested Channel	Frequency (MHz)	Emission Level (dBuV/m)	Detector Mode	ANT Pol	Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre amplifier (dB)	Correction Factor (dB/m)
	5150.00	51.78	PK	V	68.20	16.42	70.68	29.91	5.87	54.68	-18.90
36.00	5150.00	38.25	AV	V	54.00	15.75	57.15	29.91	5.87	54.68	-18.90
(5180MHz)	10360.00	52.47	PK	V	68.20	15.73	59.39	37.62	10.02	54.56	-6.92
	--	--	--	--	--	--	--	--	--	--	--
40.00	10400.00	51.82	PK	V	68.20	16.38	58.24	37.81	10.14	54.37	-6.42
(5200MHz)	--	--	--	--	--	--	--	--	--	--	--
48.00	5350.50	51.97	PK	V	68.20	16.23	70.54	30.24	5.93	54.74	-18.57
(5240MHz)	10480.00	50.45	PK	V	68.20	17.75	56.97	37.95	10.17	54.64	-6.52
	--	--	--	--	--	--	--	--	--	--	--

5260-5320MHz:

U-NII 1 & 802.11a Mode (above 1GHz)

Tested Channel	Frequency (MHz)	Emission Level (dBuV/m)	Detector Mode	ANT Pol	Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre amplifier (dB)	Correction Factor (dB/m)
	5150.00	50.04	PK	H	68.20	18.16	68.94	29.91	5.87	54.68	-18.90
52.00	5150.00	38.47	AV	H	54.00	15.53	57.37	29.91	5.87	54.68	-18.90
5260MHz	10520.00	52.35	PK	H	68.20	15.85	38.83	38.07	10.21	54.58	-6.30
	--	--	--	--	--	--	--	--	--	--	--
56.00	10560.00	51.67	PK	H	68.20	16.53	57.46	38.43	10.23	54.45	-5.79
5280MHz	--	--	--	--	--	--	--	--	--	--	--
64.00	5350.50	50.06	PK	H	68.20	18.14	68.63	30.24	5.93	54.74	-18.57
5320MHz	5350.50	38.72	AV	H	54.00	15.28	57.29	30.24	5.93	54.74	-18.57
	10480.00	51.33	PK	H	68.20	16.87	56.06	39.05	10.78	54.56	-4.73

Tested Channel	Frequency (MHz)	Emission Level (dBuV/m)	Detector Mode	ANT Pol	Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre amplifier (dB)	Correction Factor (dB/m)
	5150.00	51.13	PK	V	68.20	17.07	70.03	29.91	5.87	54.68	-18.90
52.00	5150.00	40.51	AV	V	54.00	13.49	59.41	29.91	5.87	54.68	-18.90
5260MHz	10520.00	50.74	PK	V	68.20	17.46	38.83	38.07	10.21	54.58	-6.30
	--		--	--	--	--	--	--	--	--	--
56.00	10560.00	51.82	PK	V	68.20	16.38	57.61	38.43	10.23	54.45	-5.79
5280MHz	--		--	--	--	--	--	--	--	--	--
64.00	5350.50	50.46	PK	V	68.20	17.74	69.03	30.24	5.93	54.74	-18.57
5320MHz	5350.50	39.24	AV	V	54.00	14.76	57.81	30.24	5.93	54.74	-18.57
	10480.00	51.82	PK	V	68.20	16.38	56.55	39.05	10.78	54.56	-4.73

5500-5700MHz:

Tested Channel	Frequency (MHz)	Emission Level (dBuV/m)	Detector Mode	ANT Pol	Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre amplifier (dB)	Correction Factor (dB/m)
	5460.00	53.42	PK	H	68.20	14.78	71.56	30.52	5.95	54.61	-18.14
100.00	5460.00	41.68	AV	H	54.00	12.32	59.82	30.52	5.95	54.61	-18.14
5500MHz	11000.00	50.72	PK	H	68.20	17.48	56.11	38.54	10.45	54.38	-5.39
	--		--	--	--	--	--	--	--	--	--
120.00	11160.00	51.22	PK	H	68.20	16.98	56.37	38.71	10.61	54.47	-5.15
5580MHz	--		--	--	--	--	--	--	--	--	--
140.00	5855.00	50.85	PK	H	68.20	17.35	68.39	30.94	6.15	54.63	-17.54
5700MHz	5855.00	39.64	AV	H	54.00	14.36	57.18	30.94	6.15	54.63	-17.54
	11400.00	51.43	PK	H	68.20	16.77	56.42	39.01	10.73	54.73	-4.99

Tested Channel	Frequency (MHz)	Emission Level (dBuV/m)	Detector Mode	ANT Pol	Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre amplifier (dB)	Correction Factor (dB/m)
	5460.00	50.48	PK	V	68.20	17.72	68.62	30.52	5.95	54.61	-18.14
100.00	5460.00	38.62	AV	V	54.00	15.38	56.76	30.52	5.95	54.61	-18.14
5500MHz	11000.00	51.71	PK	V	68.20	16.49	57.10	38.54	10.45	54.38	-5.39
	--		--	--	--	--	--	--	--	--	--
120.00	11160.00	50.93	PK	V	68.20	17.27	56.08	38.71	10.61	54.47	-5.15
5580MHz	--		--	--	--	--	--	--	--	--	--
140.00	5855.00	51.82	PK	V	68.20	16.38	69.36	30.94	6.15	54.63	-17.54
5700MHz	5855.00	40.15	AV	V	54.00	13.85	57.69	30.94	6.15	54.63	-17.54
	11400.00	50.47	PK	V	68.20	17.73	55.46	39.01	10.73	54.73	-4.99

5725-5850MHz:

Tested Channel	Frequency (MHz)	Emission Level (dBuV/m)	Detector Mode	ANT Pol	Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre amplifier (dB)	Correction Factor (dB/m)
	5720.00	52.61	PK	H	68.20	15.59	70.48	30.82	6.02	54.71	-17.87
149.00	5720.00	40.58	AV	H	54.00	13.42	58.45	30.82	6.02	54.71	-17.87
(5745MHz)	11490.00	50.46	PK	H	68.20	17.74	55.21	39.23	10.83	54.81	-4.75
	--	--	--	--	--	--		--	--	--	--
157.00	11570.00	50.73	PK	H	68.20	17.47	55.18	39.34	10.96	54.75	-4.45
(5785MHz)	--	--	--	--	--	--	--	--	--	--	--
165.00	5855.00	51.68	PK	H	68.20	16.52	69.22	30.94	6.15	54.63	-17.54
(5825MHz)	11650.00	49.72	PK	H	68.20	18.48	53.43	39.42	11.15	54.28	-3.71
	--	--	--	--	--	--	--	--	--	--	--

Tested Channel	Frequency (MHz)	Emission Level (dBuV/m)	Detector Mode	ANT Pol	Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre amplifier (dB)	Correction Factor (dB/m)
	5720.00	56.55	PK	V	68.20	11.65	74.42	30.82	6.02	54.71	-17.87
149.00	5720.00	43.17	AV	V	54.00	10.83	61.04	30.82	6.02	54.71	-17.87
(5745MHz)	11490.00	50.58	PK	V	68.20	17.62	55.33	39.23	10.83	54.81	-4.75
	--	--	--	--	--	--	--	--	--	--	--
157.00	11570.00	52.43	PK	V	68.20	15.77	56.88	39.34	10.96	54.75	-4.45
(5785MHz)	--	--	--	--	--	--	--	--	--	--	--
165.00	5855.00	51.48	PK	V	68.20	16.72	69.02	30.94	6.15	54.63	-17.54
(5825MHz)	11650.00	49.02	PK	V	68.20	19.18	52.73	39.42	11.15	54.28	-3.71
	--	--	--	--	--	--	--	--	--	--	--

Note :

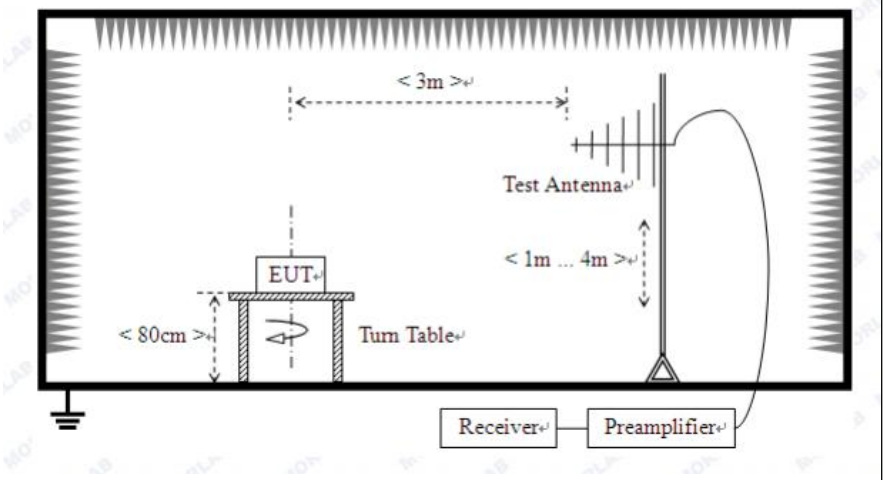
1. Emission level (dBuV/m) =Raw Value (dBuV)+Correction Factor (dB/m)
2. Correction Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
3. Margin value = Limit value- Emission level.
4. Mean the other emission levels were very low against the limit.
5. Except for mode b/g, other modes test the MIMO status.
6. The test result of SISO mode reflects the worst data between antenna 1 and antenna 2.

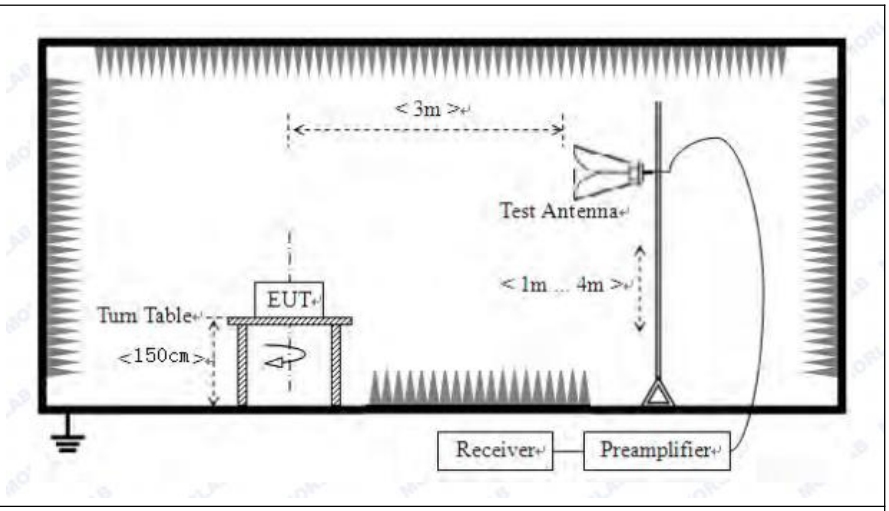
4.7 Radiated Emission

<table>
<tr><td>Test Requirement:</td><td>FCC Part15 C Section 15.209 and 15.205</td></tr>
<tr><td>Test Method:</td><td>ANSI C63.10:2013</td></tr>
<tr><td>Test Frequency Range:</td><td>30MHz to 40GHz</td></tr>
<tr><td>Test site:</td><td>Measurement Distance: 3m (Semi-Anechoic Chamber)</td></tr>
<tr><td>Receiver setup:</td><td>
<table>
<tr><th>Frequency</th><th>Detector</th><th>RBW</th><th>VBW</th><th>Value</th></tr>
<tr><td>30MHz-1GHz</td><td>Quasi-peak</td><td>100KHz</td><td>300KHz</td><td>Quasi-peak Value</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak Value</td></tr>
<tr><td>AV</td><td>1MHz</td><td>3MHz</td><td>Average Value</td></tr>
</table>
</td></tr>
<tr><td>Limit:</td><td>
<table>
<tr><th>Frequency</th><th>Limit (dBuV/m @3m)</th><th>Remark</th></tr>
<tr><td>30MHz-88MHz</td><td>40.0</td><td>Quasi-peak Value</td></tr>
<tr><td>88MHz-216MHz</td><td>43.5</td><td>Quasi-peak Value</td></tr>
<tr><td>216MHz-960MHz</td><td>46.0</td><td>Quasi-peak Value</td></tr>
<tr><td>960MHz-1GHz</td><td>54.0</td><td>Quasi-peak Value</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>74.0</td><td>Peak Value</td></tr>
<tr><td>54.0</td><td>Average Value</td></tr>
</table>
</td></tr>
<tr><td>Test Procedure:</td><td>
Substitution method was performed to determine the actual ERP emission levels of the EUT.
The following test procedure as below:

1>.Below 1GHz test procedure:
1. The EUT was placed on the top of a rotating table (0.8m for below 1GHz and 1.5 meters for above 1GHz) above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotable table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

2>.Above 1GHz test procedure:
1. On the test site as test setup graph above,the EUT shall be placed at the 1.5m support on the turntable and in the position closest to normal use as declared by the provider.
2. The test antenna shall be oriented initially for vertical polarization and shall be chosen to correspond to the frequency of the transmitter.The output of the test antenna shall be connected to the measuring receiver.
3. The transmitter shall be switched on, if possible, without modulation and the measuring receiver shall be tuned to the frequency of the transmitter under test.
</td></tr>
</table>

	4. The test antenna shall be raised and lowered from 1m to 4m until a maximum signal level is detected by the measuring receiver. Then the turntable should be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver. 5. Repeat step 4 for test frequency with the test antenna polarized horizontally. 6. Remove the transmitter and replace it with a substitution antenna 7. Feed the substitution antenna at the transmitter end with a signal generator connected to the antenna by means of a nonradiating cable. With the antennas at both ends vertically polarized, and with the signal generator tuned to a particular test frequency, raise and lower the test antenna to obtain a maximum reading at the spectrum analyzer. Adjust the level of the signal generator output until the previously recorded maximum reading for this set of conditions is obtained. This should be done carefully repeating the adjustment of the test antenna and generator output. 8. Repeat step 7 with both antennas horizontally polarized for each test frequency. 9. Calculate power in dBm into a reference ideal half-wave dipole antenna by reducing the readings obtained in steps 7 and 8 by the power loss in the cable between the generator and the antenna, and further corrected for the gain of the substitution antenna used relative to an ideal half-wave dipole antenna by the following formula: EIRP(dBm) = Pg(dBm) – cable loss (dB) + antenna gain (dBi) where: Pg is the generator output power into the substitution antenna.
Test setup:	Below 1GHz  Above 1GHz

	
Test Instruments:	Refer to section 5.10 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

Measurement Data:

Below 1GHz:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
33.55	48.17	11.45	0.79	30.28	30.14	40	-8.76	Vertical
54.41	40.78	12.41	1.29	30.44	24.04	40	-15.96	Vertical
120.51	46.91	9.75	1.71	29.92	28.45	43.5	-15.05	Vertical
172.12	42.96	8.74	1.94	29.55	24.09	43.5	-19.41	Vertical
440.93	36.75	16.55	3.31	29.67	26.94	46	-19.06	Vertical
860.28	33.30	21.95	4.81	29.26	30.81	46	-15.19	Vertical
64.85	36.54	8.93	1.10	30.09	16.48	40	-23.52	Horizontal
100.40	33.92	12.03	1.49	30.00	17.45	43.5	-26.05	Horizontal
270.32	45.17	13.01	2.70	30.27	30.61	46	-15.39	Horizontal
350.45	36.52	14.52	2.64	29.75	23.93	46	-22.07	Horizontal
628.23	36.09	19.48	3.88	29.32	30.13	46	-15.87	Horizontal
955.47	41.50	22.70	5.22	29.26	40.16	46	-5.84	Horizontal

Above 1GHz:

802.11a 5180MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.72	50.60	11.28	14.67	33.01	43.55	74	-30.45	Vertical
15540.12	51.73	12.04	17.98	34.93	46.83	74	-27.17	Vertical
10360.33	52.06	9.62	15.11	32.94	43.85	74	-30.15	Horizontal
15540.41	53.81	9.00	17.78	34.95	45.64	74	-28.36	Horizontal

802.11a 5200MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.23	50.59	11.29	15.09	33.08	43.89	74	-30.11	Vertical
15540.36	51.16	12.28	18.06	34.90	46.59	74	-27.41	Vertical
10360.25	52.20	9.55	14.63	32.96	43.43	74	-30.57	Horizontal
15540.38	53.99	8.98	17.90	34.57	46.30	74	-27.70	Horizontal

802.11a 5240MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.55	50.93	11.57	14.68	33.03	44.15	74	-29.85	Vertical
15540.54	51.81	12.29	18.10	34.81	47.39	74	-26.61	Vertical
10360.43	52.98	9.55	14.92	33.12	44.32	74	-29.68	Horizontal
15540.34	31.57	8.5	17.66	34.46	23.27	74	-50.73	Horizontal

802.11n(HT20) 5180MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.45	50.44	11.29	14.93	33.10	43.56	74	-30.44	Vertical
15540.34	51.68	12.19	17.74	34.77	46.85	74	-27.15	Vertical
10360.25	52.79	9.68	15.06	32.76	44.76	74	-29.24	Horizontal
15540.21	53.01	8.98	18.09	34.68	45.39	74	-28.61	Horizontal

802.11n(HT20) 5200MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.48	50.87	11.63	15.12	32.67	44.95	74	-29.05	Vertical
15540.86	51.15	11.97	17.98	34.85	46.24	74	-27.76	Vertical
10360.51	52.28	9.58	14.85	33.12	43.59	74	-30.41	Horizontal
15540.95	53.16	8.99	17.93	34.58	45.50	74	-28.50	Horizontal

802.11n(HT20) 5240MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.28	50.14	11.26	15.08	32.67	43.80	74	-30.20	Vertical
15540.92	51.69	12.11	17.84	34.67	46.97	74	-27.03	Vertical
10360.18	52.52	9.52	14.76	32.96	43.83	74	-30.17	Horizontal
15540.76	53.03	8.85	18.07	34.92	45.03	74	-28.97	Horizontal

802.11ac(HT20) 5180MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.06	50.75	11.25	14.72	32.69	44.03	74	-29.97	Vertical
15540.74	51.55	12.20	18.02	34.61	47.16	74	-26.84	Vertical
10360.92	52.75	9.60	14.76	32.84	44.27	74	-29.73	Horizontal
15540.38	53.82	8.87	18.10	34.65	46.14	74	-27.86	Horizontal

802.11ac(HT20) 5200MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.38	50.46	11.58	15.10	32.68	44.45	74	-29.55	Vertical
15540.13	51.35	11.98	17.88	34.58	46.62	74	-27.38	Vertical
10360.44	52.43	9.74	14.92	32.96	44.12	74	-29.88	Horizontal
15540.61	53.94	8.68	18.04	34.64	46.01	74	-27.99	Horizontal

802.11ac(HT20) 5240MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10361.00	50.24	11.41	14.68	32.67	43.66	74	-30.34	Vertical
15540.99	51.66	12.20	18.11	34.76	47.21	74	-26.79	Vertical
10360.30	52.15	9.42	14.98	32.89	43.67	74	-30.33	Horizontal
15540.15	53.10	8.90	18.03	34.70	45.33	74	-28.67	Horizontal

802.11n(HT40) 5190MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.54	50.76	11.68	14.91	32.73	44.63	74	-29.37	Vertical
15540.02	51.62	12.43	18.14	34.46	47.72	74	-26.28	Vertical
10360.95	52.83	9.59	14.83	32.99	44.27	74	-29.73	Horizontal
15540.26	53.35	8.87	17.81	34.47	45.55	74	-28.45	Horizontal

802.11n(HT40) 5230MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.41	50.41	11.25	14.74	33.09	43.31	74	-30.69	Vertical
15540.85	51.09	12.39	17.73	34.50	46.71	74	-27.29	Vertical
10360.90	52.07	9.76	14.74	32.77	43.79	74	-30.21	Horizontal
15540.24	53.53	8.86	17.94	34.56	45.77	74	-28.23	Horizontal

802.11ac(HT40) 5190MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.95	50.73	11.59	14.76	32.72	44.35	74	-29.65	Vertical
15540.14	51.80	12.33	18.13	34.90	47.36	74	-26.64	Vertical
10360.34	52.60	9.88	15.00	33.01	44.47	74	-29.53	Horizontal
15540.44	53.43	8.62	18.07	34.68	45.44	74	-28.56	Horizontal

802.11ac(HT40) 5230MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.31	50.86	11.55	14.73	33.02	44.12	74	-29.88	Vertical
15540.06	51.33	11.96	17.97	34.57	46.69	74	-27.31	Vertical
10360.93	52.90	9.84	14.63	32.74	44.63	74	-29.37	Horizontal
15540.02	53.59	8.61	18.10	34.53	45.76	74	-28.24	Horizontal

802.11ax20 5180MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.02	50.20	11.31	14.67	32.96	43.22	74	-30.78	Vertical
15540.09	51.78	12.10	17.70	34.71	46.87	74	-27.13	Vertical
10360.29	52.62	9.70	14.65	33.15	43.83	74	-30.17	Horizontal
15540.36	53.14	8.70	18.07	34.87	45.05	74	-28.95	Horizontal

802.11ax20 5200MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.05	50.90	11.59	14.79	32.72	44.55	74	-29.45	Vertical
15540.80	51.95	12.23	17.82	34.76	47.24	74	-26.76	Vertical
10360.72	53.00	9.63	14.78	33.08	44.33	74	-29.67	Horizontal
15540.93	53.45	9.00	17.70	34.69	45.46	74	-28.54	Horizontal

802.11ax20 5240MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.13	50.40	11.56	14.74	32.69	44.01	74	-29.99	Vertical
15540.37	51.48	11.96	18.10	34.60	46.93	74	-27.07	Vertical
10360.95	52.86	9.86	15.11	33.07	44.76	74	-29.24	Horizontal
15540.32	53.33	8.59	17.83	34.78	44.97	74	-29.03	Horizontal

802.11ax40 5190MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.64	50.72	11.26	14.74	32.74	43.98	74	-30.02	Vertical
15540.47	51.60	12.29	17.68	34.47	47.09	74	-26.91	Vertical
10360.19	52.09	9.46	15.04	33.10	43.49	74	-30.51	Horizontal
15540.29	53.98	8.77	17.86	34.84	45.77	74	-28.23	Horizontal

802.11ax40 5230MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.84	50.00	11.75	14.79	33.12	43.42	74	-30.58	Vertical
15540.49	51.38	12.10	17.66	34.81	46.33	74	-27.67	Vertical
10360.46	52.53	9.70	14.78	32.91	44.10	74	-29.90	Horizontal
15540.42	53.60	8.98	17.90	34.80	45.69	74	-28.31	Horizontal

802.11ac(HT80) 5210MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.69	50.29	11.46	14.95	32.66	44.04	74	-29.96	Vertical
15540.10	51.66	12.22	18.09	34.86	47.11	74	-26.89	Vertical
10360.36	52.68	9.49	14.62	33.03	43.76	74	-30.24	Horizontal
15540.89	32.31	8.5	17.66	34.46	24.01	74	-49.99	Horizontal

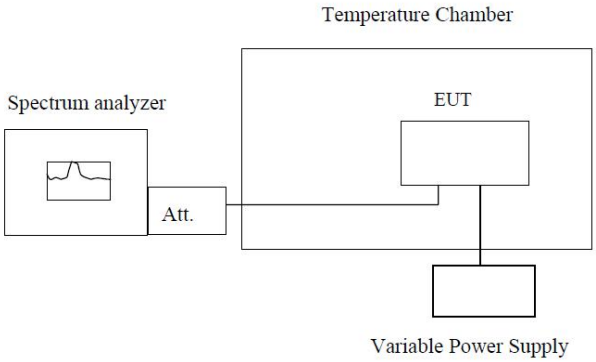
802.11ax(HT80) 5210MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.58	50.42	11.48	14.79	32.67	44.02	74	-29.98	Vertical
15540.41	51.77	12.40	17.93	34.50	47.60	74	-26.40	Vertical
10360.45	52.96	9.51	14.63	32.68	44.42	74	-29.58	Horizontal
15540.12	53.59	8.94	17.75	34.74	45.54	74	-28.46	Horizontal

Note:

1. Level = Read Level + Antenna Factor+ Cable loss- Preamp Factor.
2. The test trace is same as the ambient noise (the test frequency range: 18GHz~40GHz), therefore no data appear in the report.
3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.
4. This Report only show the test plots of the worst case (U-NII-1).
5. Except for mode b/g, other modes test the MIMO status.
6. The test result of SISO mode reflects the worst data between antenna 1 and antenna 2.

4.8 Frequency stability

Test Requirement:	FCC Part15 E Section 15.407
Test Method:	KDB 789033 D02 General UNII Test Procedures New Rules v02r01
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.
Test setup:	 **Note :** Measurement setup for testing on Antenna connector
Test procedure:	Frequency Stability under Temperature Variations: The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20℃ operating frequency as reference frequency. Turn EUT off and set the chamber temperature to - 20℃ . After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10℃ increased per stage until the highest temperature of +55℃ reached. Frequency Stability under Voltage Variations: Set chamber temperature to 20℃ . Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency. Reduce the input voltage to specify extreme voltage variation (±15%) and endpoint, record the maximum frequency change.
Test Instruments:	Refer to section 5.10 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

Measurement Data

For the measurement records，refer to the appendix I.

--------END OF THE REPORT-------