

TEST REPORT

Applicant: Hankook Technology Commerce Limited

Address of Applicant: FLAT E, 23/F GOLDEN SUN CENTRE 56-67 BONHAM
STRAND WEST SHEUNG WAN HK

Manufacturer: Hankook Technology Commerce Limited

**Address of
Manufacturer:** FLAT E, 23/F GOLDEN SUN CENTRE 56-67 BONHAM
STRAND WEST SHEUNG WAN HK

Equipment Under Test (EUT)

Product Name: 5G Mobile Phone

Model No.: NX809J

FCC ID: 2BTCR-NX809J

Applicable standards: FCC CFR Title 47 Part 15 Subpart E Section 15.407

Date of sample receipt: November 18, 2025

Date of Test: November 19, 2025-December 15, 2025

Date of report issue: December 15, 2025

Test Result : PASS *

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



Laboratory Manager

This results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

2 Version

Version No.	Date	Description
00	December 15, 2025	Original

Tested By:

Josh. Cai

Date:

December 15, 2025

Test Engineer

Prepared By:

Jessie Lu

Date:

December 15, 2025

Project Engineer

Check By:

Robinson Lu

Date:

December 15, 2025

Reviewer

3 Contents

	Page
1 COVER PAGE	1
2 VERSION	2
3 CONTENTS	3
4 TEST SUMMARY	4
4.1 MEASUREMENT UNCERTAINTY.....	4
5 GENERAL INFORMATION.....	5
5.1 GENERAL DESCRIPTION OF EUT	5
5.2 CHANNEL LIST	6
5.3 TEST MODE	8
5.4 TEST FACILITY	10
5.5 TEST LOCATION.....	10
5.6 DESCRIPTION OF SUPPORT UNITS	10
5.7 DEVIATION FROM STANDARDS	10
6 TEST INSTRUMENTS LIST	11
7 TEST RESULTS AND MEASUREMENT DATA.....	13
7.1 ANTENNA REQUIREMENT:	13
7.2 AC POWER LINE CONDUCTED EMISSION	14
7.3 EMISSION BANDWIDTH AND OCCUPIED BANDWIDTH.....	17
7.4 MAXIMUM CONDUCTED OUTPUT POWER.....	18
7.5 POWER SPECTRAL DENSITY.....	19
7.6 RADIATED BAND EDGES AND SPURIOUS EMISSION	20
7.7 FREQUENCY STABILITY	38
8 TEST SETUP PHOTO.....	39
9 EUT CONSTRUCTIONAL DETAILS	39

4 Test Summary

Test Item	Section	Result
Antenna requirement	FCC part 15.203	PASS
AC Power Line Conducted Emission	FCC part 15.207	PASS
Emission Bandwidth and Occupied Bandwidth	FCC part 15.407(a)(12)	PASS
6dB Emission Bandwidth	FCC part 15.407(e)	PASS
Maximum Conducted Output Power	FCC part 15.407(a)(1)(iv) FCC part 15.407 (a)(2) FCC part 15.407(a)(3)(i)	PASS
Power Spectral Density	FCC part 15.407(a)(1)(iv) FCC part 15.407 (a)(2) FCC part 15.407(a)(3)(i)	PASS
Radiated Band Edges and Spurious Emission	FCC part 15.205 FCC part 15.209 FCC part 15.407(b)(1), (2), (3), (4)	PASS
Frequency Stability	FCC part 15.407(g)	PASS

Remark:

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

4.1 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radio Frequency	$\pm 7.25 \times 10^{-8}$
2	Duty cycle	$\pm 0.37\%$
3	Occupied Bandwidth	$\pm 3\%$
4	RF conducted power	$\pm 0.75\text{dB}$
5	RF power density	$\pm 3\text{dB}$
6	Conducted Spurious emissions	$\pm 2.58\text{dB}$
7	AC Power Line Conducted Emission	$\pm 3.44\text{dB}$ (0.15MHz ~ 30MHz)
8	Radiated Spurious emission test	$\pm 3.1\text{dB}$ (9kHz-30MHz)
		$\pm 3.8039\text{dB}$ (30MHz-200MHz)
		$\pm 3.9679\text{dB}$ (200MHz-1GHz)
		$\pm 4.29\text{dB}$ (1GHz-18GHz)
		$\pm 3.30\text{dB}$ (18GHz-40GHz)
9	Temperature test	$\pm 1^\circ\text{C}$
10	Humidity test	$\pm 3\%$
11	Time	$\pm 3\%$

5 General Information

5.1 General Description of EUT

Product Name:	5G Mobile Phone			
Model No.:	NX809J			
Test sample(s) ID:	GTSL2025120078F-2, GTSL2025120078F-3			
Sample(s) Status:	Engineer sample			
Operation Frequency:	Band	Mode	Frequency Range (MHz)	Number of channels
	U-NII-1	IEEE 802.11a	5180-5240	4
		IEEE 802.11n/ac/ax 20MHz	5180-5240	4
		IEEE 802.11n/ac/ax 40MHz	5190-5230	2
		IEEE 802.11ac/ax 80MHz	5210	1
	U-NII-2a	IEEE 802.11a	5260-5320	4
		IEEE 802.11n/ac/ax 20MHz	5260-5320	4
		IEEE 802.11n/ac/ax 40MHz	5270-5310	2
		IEEE 802.11ac/ax 80MHz	5290	1
		IEEE 802.11ac/ax 160MHz	5250	1
	U-NII-2c	IEEE 802.11a	5500-5700	11
		IEEE 802.11n/ac/ax 20MHz	5500-5700	11
		IEEE 802.11n/ac/ax 40MHz	5510-5670	5
		IEEE 802.11ac/ax 80MHz	5530-5610	2
		IEEE 802.11ac/ax 160MHz	5570	1
	U-NII-3	IEEE 802.11a	5745-5825	5
		IEEE 802.11n/ac/ax 20MHz	5745-5825	5
		IEEE 802.11n/ac/ax 40MHz	5755-5955	2
		IEEE 802.11ac/ax 80MHz	5775	1
Modulation technology:	802.11a/n/ac: OFDM 802.11ax/be: OFDM, OFDMA			
Modulation Type:	802.11a: BPSK/QPSK/16QAM/64QAM 802.11n: BPSK/QPSK/16QAM/64QAM 802.11ac: BPSK/QPSK/16QAM/64QAM/256QAM 802.11ax: BPSK/QPSK/16QAM/64QAM/256QAM/1024QAM			
Antenna Type:	Integral Antenna			
Antenna gain:	Ant6: -1.8dBi Ant8: -3.1dBi			
Power supply:	Rechargeable Li-ion Polymer Battery DC 3.79V/7500mAh			

Disclaimer statement:

1. Antenna gain information provided by the customer, and the laboratory is not responsible for its authenticity.
2. The information in this section is provided by the applicant or manufacturer, GTS is not liable to the accuracy, suitability, reliability or/and integrity of the information.

5.2 Channel List

Operated band in 5150 MHz ~ 5250MHz

4 channels are provided for 802.11a, 802.11n-HT20, 802.11ac-VHT20 and 802.11ax-HE20.

Channel	Frequency(MHz)	Channel	Frequency(MHz)
36	5180	44	5220
40	5200	48	5240

2 channels are provided for 802.11n-HT40, 802.11ac-VHT40 and 802.11ax-HE40.

Channel	Frequency(MHz)	Channel	Frequency(MHz)
38	5190	46	5230

1 channels are provided for 802.11ac-VHT80 and 802.11ax-HE80.

Channel	Frequency(MHz)	Channel	Frequency(MHz)
42	5210	/	/

Operated band in 5250 MHz ~ 5350MHz

4 channels are provided for 802.11a, 802.11n-HT20, 802.11ac-VHT20 and 802.11ax-HE20.

Channel	Frequency(MHz)	Channel	Frequency(MHz)
52	5260	60	5300
56	5280	64	5320

2 channels are provided for 802.11n-HT40, 802.11ac-VHT40 and 802.11ax-HE40.

Channel	Frequency(MHz)	Channel	Frequency(MHz)
54	5270	62	5310

1 channels are provided for 802.11ac-VHT80 and 802.11ax-HE80.

Channel	Frequency(MHz)	Channel	Frequency(MHz)
58	5290	/	/

1 channels are provided for 802.11ac-VHT160 and 802.11ax-HE160.

Channel	Frequency(MHz)	Channel	Frequency(MHz)
50	5250	/	/

Operated band in 5470 MHz ~ 5725MHz

11 channels are provided for 802.11a, 802.11n-HT20, 802.11ac-VHT20 and 802.11ax-HE20.

Channel	Frequency(MHz)	Channel	Frequency(MHz)	Channel	Frequency(MHz)
100	5500	116	5580	132	5660
104	5520	120	5600	136	5680
108	5540	124	5620	140	5700
112	5560	128	5640	/	/

5 channels are provided for 802.11n-HT40, 802.11ac-VHT40 and 802.11ax-HE40.

Channel	Frequency(MHz)	Channel	Frequency(MHz)	Channel	Frequency(MHz)
102	5510	118	5590	134	5670
110	5550	126	5630	/	/

2 channels are provided for 802.11ac-VHT80 and 802.11ax-HE80.

Channel	Frequency(MHz)	Channel	Frequency(MHz)	Channel	Frequency(MHz)
106	5530	122	5610	/	/

1 channels are provided for 802.11ac-VHT160 and 802.11ax-HE160.

Channel	Frequency(MHz)	Channel	Frequency(MHz)	Channel	Frequency(MHz)
114	5570	/	/	/	/

Operated band in 5725 MHz ~ 5850MHz

5 channels are provided for 802.11a, 802.11n-HT20, 802.11ac-VHT20, 802.11ax-HE20.

Channel	Frequency(MHz)	Channel	Frequency(MHz)
149	5745	161	5805
153	5765	165	5825
157	5785	/	/

2 channels are provided for 802.11n-HT40, 802.11ac-VHT40, 802.11ax-HE40.

Channel	Frequency(MHz)	Channel	Frequency(MHz)
151	5755	159	5795

1 channel are provided for 802.11ac-VHT80, 802.11ax-HE80.

Channel	Frequency(MHz)	Channel	Frequency(MHz)
155	5775	/	/

5.3 Test mode

Transmitting mode	Keep the EUT in transmitting with modulation.
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We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:

For Frequency band 5150 ~ 5250 MHz				
Test Mode	Frequency(MHz)			Data rate
	LCH	MCH	HCH	
802.11a	5180	5200	5240	6 Mbps
802.11n-HT20/ac-VHT20/ax-HE20	5180	5200	5240	MCS 0
802.11n-HT40/ac-VHT40/ax-HE40	5190	/	5230	MCS 0
802.11ac-VHT80/ax-HE80	/	5210	/	MCS 0
Note 1: After scanning all modulation types and data rates for all test patterns, the above list was found to be the worst case.				

For Frequency band 5250 ~ 5350 MHz				
Test Mode	Frequency(MHz)			Data rate
	LCH	MCH	HCH	
802.11a	5260	5300	5320	6 Mbps
802.11n-HT20/ac-VHT20/ax-HE20	5260	5300	5320	MCS 0
802.11n-HT40/ac-VHT40/ax-HE40	5270	/	5310	MCS 0
802.11ac-VHT80/ax-HE80	/	5290	/	MCS 0
802.11ac-VHT160/ax-HE160	/	5250	/	MCS 0
Note 1: After scanning all modulation types and data rates for all test patterns, the above list was found to be the worst case.				

For Frequency band 5470 ~ 5725 MHz				
Test Mode	Frequency(MHz)			Data rate
	LCH	MCH	HCH	
802.11a	5500	5600	5700	6 Mbps
802.11n-HT20/ac-VHT20/ax-HE20	5500	5600	5700	MCS 0
802.11n-HT40/ac-VHT40/ax-HE40	5510	5590	5670	MCS 0
802.11ac-VHT80/ax-HE80	5530	/	5610	MCS 0
802.11ac-VHT160/ax-HE160	/	5570	/	MCS 0
Note 1: After scanning all modulation types and data rates for all test patterns, the above list was found to be the worst case.				

For Frequency band 5725 ~ 5850 MHz				
Test Mode	Frequency(MHz)			Data rate
	LCH	MCH	HCH	
802.11a	5745	5785	5825	6 Mbps
802.11n-HT20/ac-VHT20/ax-HE20	5745	5785	5825	MCS 0
802.11n-HT40/ac-VHT40/ax-HE40	5755	/	5795	MCS 0
802.11ac-VHT80/ax-HE80	/	5775	/	MCS 0
Note 1: After scanning all modulation types and data rates for all test patterns, the above list was found to be the worst case.				

RU type and bandwidth configuration:

RU Types	802.11ax20	802.11ax40	802.11ax80	802.11ax160
26-Tone RU	26-Tone_0	26-Tone_0	26-Tone_0	26-Tone_0
	26-Tone_8	26-Tone_8	26-Tone_8	26-Tone_8
52-Tone RU	52-Tone_37	52-Tone_37	52-Tone_37	52-Tone_37
	52-Tone_40	52-Tone_40	52-Tone_40	52-Tone_40
106-Tone RU	106-Tone_53	106-Tone_53	106-Tone_53	106-Tone_53
	106-Tone_54	106-Tone_54	106-Tone_54	106-Tone_54
242-Tone RU	/	242-Tone_61 242-Tone_62	242-Tone_61 242-Tone_62	242-Tone_61 242-Tone_62
484-Tone RU	/	/	484-Tone_65 484-Tone_66	484-Tone_65 484-Tone_66
996-Tone RU	/	/	/	996-Tone_67 996-Tone_68

Note 1: All RU modes of 802.11be were tested, but only the worst case (26-Tone RU) was reported.

5.4 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **FCC —Registration No.: 381383**

Designation Number: CN5029

Global United Technology Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in files.

- **ISED—Registration No.: 9079A**

CAB identifier: CN0091

The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. has been registered by Certification and Engineering Bureau of ISED for radio equipment testing .

- **NVLAP (LAB CODE:600179-0)**

Global United Technology Services Co., Ltd., is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP).

5.5 Test Location

All tests were performed at:

Global United Technology Services Co., Ltd.

Address: No. 123-128, Tower A, Jinyuan Business Building, No.2, Laodong Industrial Zone, Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102

Tel: 0755-27798480

Fax: 0755-27798960

5.6 Description of Support Units

Manufacturer	Description	Model	Serial Number
Lenovo	PC Host	M6900	EA05257893

5.7 Deviation from Standards

None.

6 Test Instruments list

Radiated Emission:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.2(L)*6.2(W)* 6.4(H)	GTS250	Apr. 11, 2025	Apr. 10, 2026
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS251	N/A	N/A
3	EMI Test Receiver	Rohde & Schwarz	ESU26	GTS203	Apr. 12, 2025	Apr. 11, 2026
4	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9168	GTS640	Apr. 12, 2025	Apr. 11, 2026
5	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120 D	GTS208	Apr. 11, 2025	Apr. 10, 2026
6	Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	GTS575	Jul. 01, 2025	Jun. 30, 2026
7	Loop Antenna	ZHINAN	ZN30900A	GTS534	Nov.15, 2025	Nov.14, 2026
8	Broadband Preamplifier	SCHWARZBECK	BBV9718	GTS535	Apr. 11, 2025	Apr. 10, 2026
9	Amplifier(1GHz-26.5GHz)	HP	8449B	GTS601	Apr. 11, 2025	Apr. 10, 2026
10	Horn Antenna (18GH-40GHz)	Schwarzbeck	BBHA 9170	GTS691	Apr. 11, 2025	Apr. 10, 2026
11	FSV·Signal Analyzer (10Hz-40GHz)	Keysight	FSV-40-N	GTS666	Mar. 11, 2025	Mar. 10, 2026
12	Amplifier	/	LNA-1000-30S	GTS650	Apr. 11, 2025	Apr. 10, 2026
13	CDNE M2+M3-16A	HCT	30MHz-300MHz	GTS692	Nov. 12, 2025	Nov. 11, 2026
14	Wideband Amplifier	/	WDA-01004000-15P35	GTS602	Apr. 11, 2025	Apr. 10, 2026
15	Thermo meter	JINCHUANG	GSP-8A	GTS643	Apr. 15, 2025	Apr. 14, 2026
16	RE cable 1	GTS	N/A	GTS675	Jul. 11, 2025	Jul. 10, 2026
17	RE cable 2	GTS	N/A	GTS676	Jul. 11, 2025	Jul. 10, 2026
18	RE cable 3	GTS	N/A	GTS677	Jul. 11, 2025	Jul. 10, 2026
19	RE cable 4	GTS	N/A	GTS678	Jul. 11, 2025	Jul. 10, 2026
20	RE cable 5	GTS	N/A	GTS679	Jul. 11, 2025	Jul. 10, 2026
21	RE cable 6	GTS	N/A	GTS680	Jul. 11, 2025	Jul. 10, 2026
22	RE cable 7	GTS	N/A	GTS681	Jul. 11, 2025	Jul. 10, 2026
23	RE cable 8	GTS	N/A	GTS682	Jul. 11, 2025	Jul. 10, 2026
24	EMI Test Software	AUDIX	E3-6.100614a	GTS725	N/A	N/A

Conducted Emission						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Shielding Room	ZhongYu Electron	7.3(L)x3.1(W)x2.9(H)	GTS252	Jul. 12, 2022	Jul. 11, 2027
2	EMI Test Receiver	R&S	ESCI 7	GTS552	Apr. 12, 2025	Apr. 11, 2026
3	LISN	ROHDE & SCHWARZ	ENV216	GTS226	Apr. 11, 2025	Apr. 10, 2026
4	Coaxial Cable	GTS	N/A	GTS227	N/A	N/A
5	Thermo meter	JINCHUANG	GSP-8A	GTS642	Apr. 15, 2025	Apr. 14, 2026
6	Absorbing clamp	Elektronik-Feinmechanik	MDS21	GTS229	Apr. 12, 2025	Apr. 11, 2026
7	ISN	SCHWARZBECK	NTFM 8158	GTS565	Apr. 11, 2025	Apr. 10, 2026
8	High voltage probe	SCHWARZBECK	TK9420	GTS537	Apr. 11, 2025	Apr. 10, 2026
9	Antenna end assembly	Weinschel	1870A	GTS560	Apr. 11, 2025	Apr. 10, 2026
10	EMI Test Software	AUDIX	E3-6.100622	GTS726	N/A	N/A
11	Current probe	CYBERTEK	EM5011	GTS698	Jan. 13, 2025	Jan. 12, 2026

RF Conducted Test:						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	MXA Signal Analyzer	Agilent	N9020A	GTS566	Apr. 11, 2025	Apr. 10, 2026
2	EMI Test Receiver	R&S	ESCI 7	GTS552	Apr. 12, 2025	Apr. 11, 2026
3	PSA Series Spectrum Analyzer	Agilent	E4440A	GTS536	Apr. 11, 2025	Apr. 10, 2026
4	MXG vector Signal Generator	Agilent	N5182A	GTS567	Apr. 11, 2025	Apr. 10, 2026
5	ESG Analog Signal Generator	Agilent	E4428C	GTS568	Apr. 11, 2025	Apr. 10, 2026
6	Wideband Power Meter	Keysight	N1924A	GTS673	Apr. 11, 2025	Apr. 10, 2026
7	USB RF Power Sensor	DARE	RPR3006W	GTS569	Apr. 11, 2025	Apr. 10, 2026
8	RF Switch Box	Shongyi	RFSW3003328	GTS571	Apr. 11, 2025	Apr. 10, 2026
9	Programmable Constant Temp & Humi Test Chamber	WEWON	WHTH-150L-40-880	GTS572	Apr. 11, 2025	Apr. 10, 2026
10	Thermo meter	JINCHUANG	GSP-8A	GTS641	Apr. 15, 2025	Apr. 14, 2026

General used equipment:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Barometer	KUMAO	SF132	GTS647	Jul. 16, 2025	Jul. 15, 2026

7 Test results and Measurement Data

7.1 Antenna requirement:

Standard requirement:	FCC Part15 C Section 15.203								
15.203 requirement: 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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. According to FCC 15.407(a)(1): For client devices in the 5.15-5.25 GHz 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. According to FCC 15.407(a)(2): For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, 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. According to FCC 15.407(a)(3): For the band 5.725-5.850 GHz, 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.									
E.U.T Antenna:	Internal Antenna								
Tx chains are uncorrelated for power and correlated for PSD due to the device supporting CDD in all MIMO modes. The directional gains are as follows: <table><tr><td>Ant6 Antenna Gain (dBi)</td><td>Ant8 Antenna Gain (dBi)</td><td>Uncorrelated Chains Directional gain</td><td>Correlated Chains Directional gain</td></tr><tr><td>-1.8dBi</td><td>-3.1dBi</td><td>-2.4dBi</td><td>0.58dBi</td></tr></table> Note 1: Uncorrelated directional gain = $10 \cdot \log[(10^{Ant6/10} + 10^{Ant8/10}) / N_{ANT}]$ dBi. Note 2: Uncorrelated directional gain = $10 \cdot \log[(10^{Ant6/20} + 10^{Ant8/20})^2 / N_{ANT}]$ dBi.		Ant6 Antenna Gain (dBi)	Ant8 Antenna Gain (dBi)	Uncorrelated Chains Directional gain	Correlated Chains Directional gain	-1.8dBi	-3.1dBi	-2.4dBi	0.58dBi
Ant6 Antenna Gain (dBi)	Ant8 Antenna Gain (dBi)	Uncorrelated Chains Directional gain	Correlated Chains Directional gain						
-1.8dBi	-3.1dBi	-2.4dBi	0.58dBi						

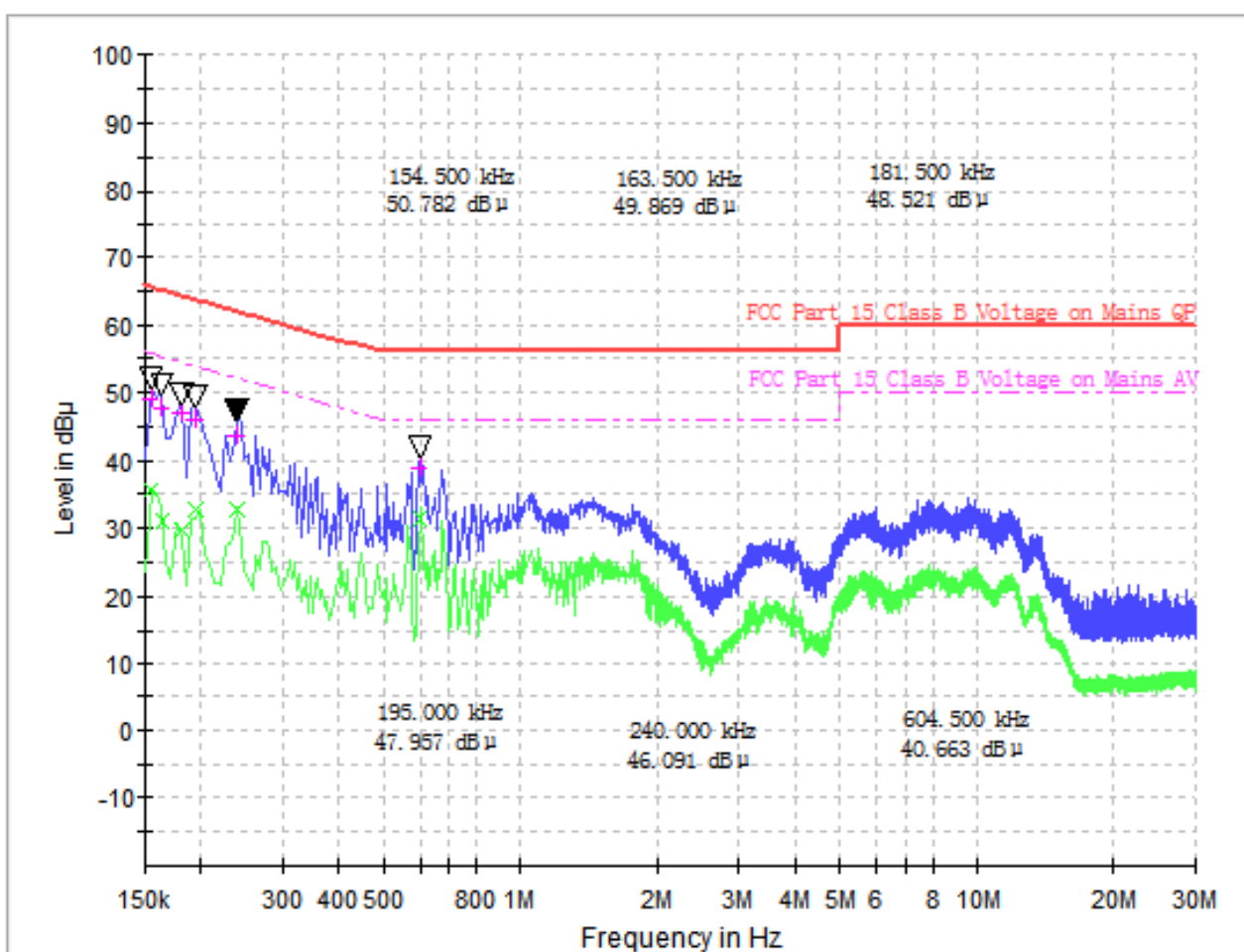
7.2 AC Power Line Conducted Emission

Test Requirement:	FCC Part15 C Section 15.207						
Test Method:	ANSI C63.10:2020						
Test Frequency Range:	150kHz to 30MHz						
Receiver setup:	RBW=9kHz, VBW=30kHz						
Limit:	Frequency range (MHz)	Limit (dBuV)					
		Quasi-peak			Average		
	0.15-0.5	66 to 56*			56 to 46*		
	0.5-5	56			46		
	5-30	60			50		
* Decreases with the logarithm of the frequency.							
Test procedure	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 C63.10:2020 on conducted measurement.						
Test setup:	Reference Plane 40cm LISN AUX Equipment E.U.T 40cm Test table/Insulation plane 80cm 40cm LISN Filter AC power EMI Receiver Remark E.U.T: Equipment Under Test LISN: Line Impedance Stabilization Network Test table height=0.8m						
Test Instruments:	Refer to section 6.0 for details						
Test mode:	Refer to section 5.3 for details						
Test environment:	Temp.:	25 °C	Humid.:	52%	Press.:	1012mbar	
Test voltage:	AC 120V, 60Hz						
Test results:	Pass						

Measurement data:

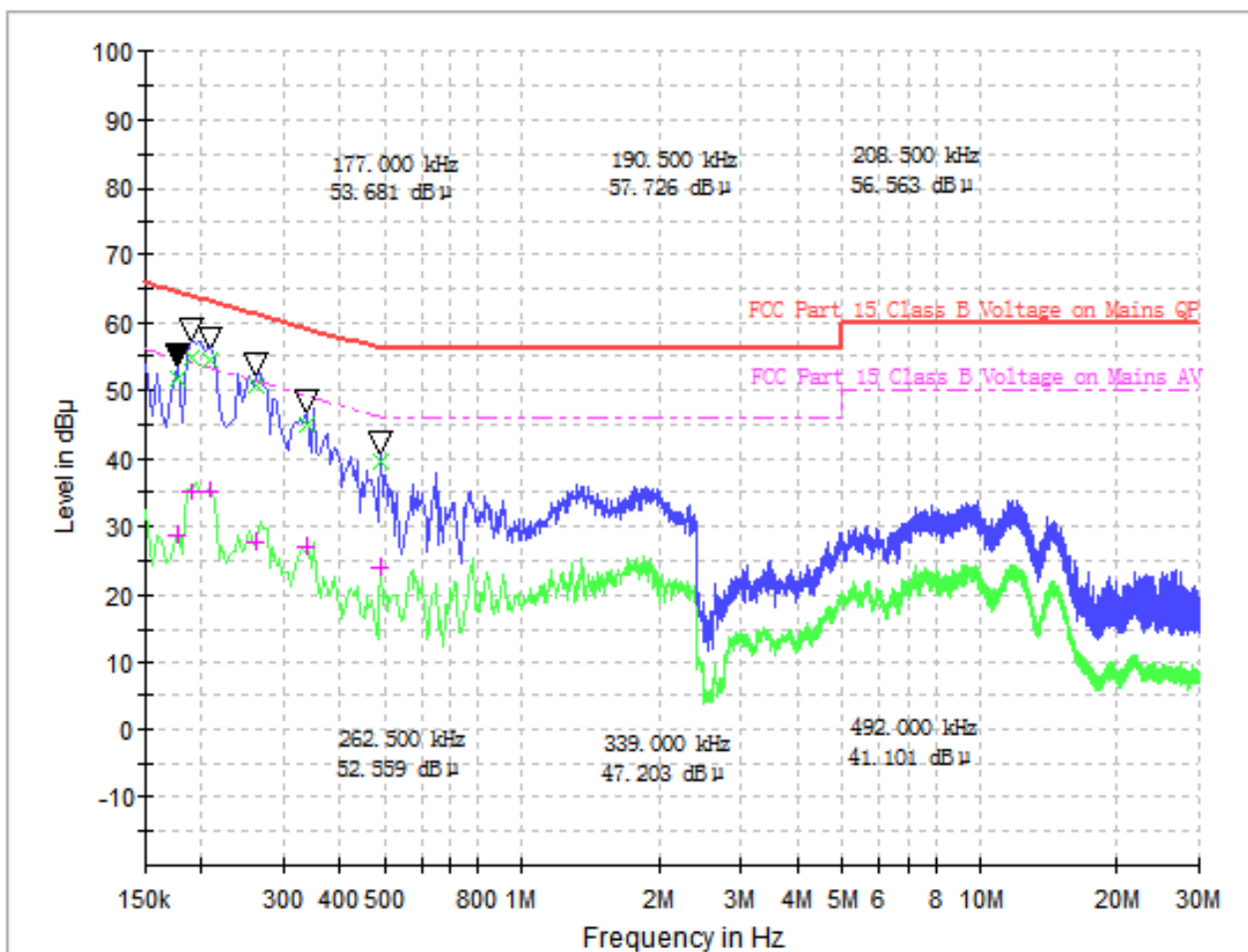
Pre-scan all test modes, found worst case at 802.11a 5600MHz (Ant8), and so only show the test result of it.

Line:



Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBμV)	Margin - AV (dB)	Limit - AV (dBμV)
0.154500	48.89	35.70	10.3	16.86	65.75	20.05	55.75
0.163500	47.87	30.97	10.3	17.41	65.28	24.31	55.28
0.181500	46.91	29.69	10.4	17.51	64.42	24.73	54.42
0.195000	45.94	32.49	10.5	17.88	63.82	21.33	53.82
0.240000	43.82	32.66	10.7	18.28	62.10	19.44	52.10
0.604500	38.85	31.15	10.7	17.15	56.00	14.85	46.00

Neutral:

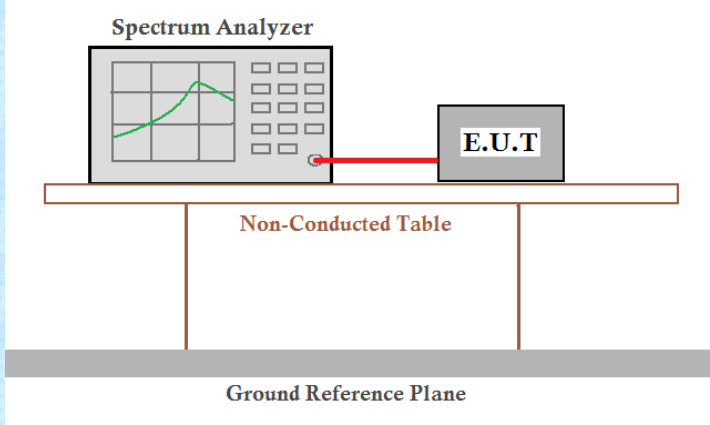


Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBμV)	Margin - AV (dB)	Limit - AV (dBμV)
0.177000	51.61	28.55	10.7	13.02	64.63	26.08	54.63
0.190500	54.64	35.10	10.8	9.37	64.01	18.91	54.01
0.208500	54.25	35.30	10.9	9.01	63.26	17.96	53.26
0.262500	50.61	27.69	10.8	10.74	61.35	23.66	51.35
0.339000	45.02	26.79	10.6	14.21	59.23	22.44	49.23
0.492000	39.56	24.04	10.5	16.57	56.13	22.09	46.13

Notes:

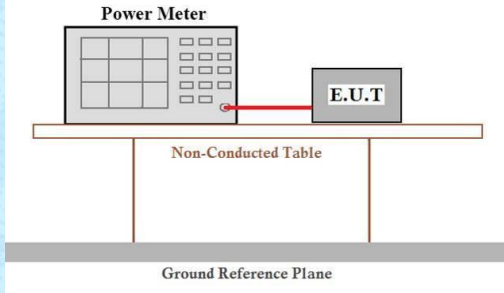
1. Final Level = Receiver Read level + Correction factor.

7.3 Emission Bandwidth and Occupied Bandwidth

Test Requirement :	FCC Part15 E Section 15.407
Test Method :	KDB 789033 D02 v02r01 Section II.C.D and ANSI C63.10-2020 Section 12.5
Limit:	26dB Emission Bandwidth and 99% Occupied Bandwidth no Bandwidth limit. The minimum 6dB bandwidth of U-NII-3 shall be at least 500 kHz.
Test setup:	 The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T (Equipment Under Test) via a red cable. Both the Spectrum Analyzer and the E.U.T are placed on a Non-Conducted Table. The table is supported by a Ground Reference Plane.
Test procedure:	According to KDB 789033 D02 General U-NII Test Procedures New Rules v02r01.
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

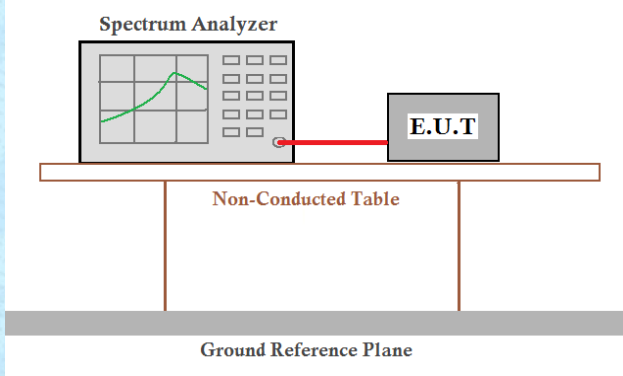
Measurement Data: The detailed test data see Appendix for 5G WIFI.

7.4 Maximum Conducted Output Power

Test Requirement	FCC Part15 E Section 15.407	
Test Method :	KDB 789033 D02 v02r01 Section II.E.2.b and ANSI C63.10-2020 Section 12.4.2.2	
Limit:	Frequency band (MHz)	Limit
	5150-5250	$\leq 1\text{W}(30\text{dBm})$ for master device
		$\leq 250\text{Mw}(23.98\text{dBm})$ for client device
	5250-5350	$\leq 250\text{Mw}(23.98\text{dBm})$ for client device or $11\text{dBm}+10\log B^*$
	5470-5725	$\leq 250\text{Mw}(23.98\text{dBm})$ for client device or $11\text{dBm}+10\log B^*$
	5725-5850	$\leq 1\text{W} (30 \text{ dBm})$
Remark: *Where B is the 26dB emission bandwidth in MHz. The maximum conducted output power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage.		
Test setup:		
Duty Cycle set up:	RBW=VBW=8MHz	
Test procedure:	(i) The RF output of EUT was connected to spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement. (ii) Power is calculated by integrating over the spectrum of the entire 99% OBW signal using the instrument's band power measurement feature. (iii) Set span to encompass the entire 99% OBW of the signal. (iv) Set RBW = 1MHz, VBW $\geq$ 3MHz, Sweep time = Auto, Detector = power averaging (RMS). Adjust the measurement in dBm by adding $10 \log(1/x)$ where x is the duty cycle (e.g., $10\log(1/0.25)$ if the duty cycle is 25 percent). (v) Number of points in sweep $\geq 2 \times \text{span} / \text{RBW}$. (vi) Trace average at least 100 traces in power averaging (rms) mode. (vii) Replace the EUT center frequency and repeat steps (i)~(vi).	
Test Instruments:	Refer to section 6.0 for details	
Test mode:	Refer to section 5.3 for details	
Test results:	Pass	

Measurement Data: The detailed test data see Appendix for 5G WIFI.

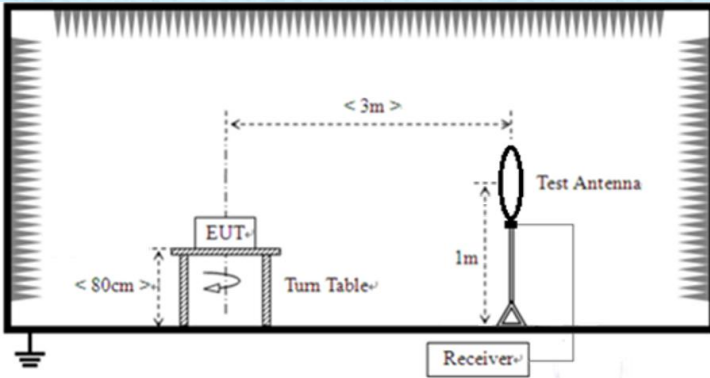
7.5 Power Spectral Density

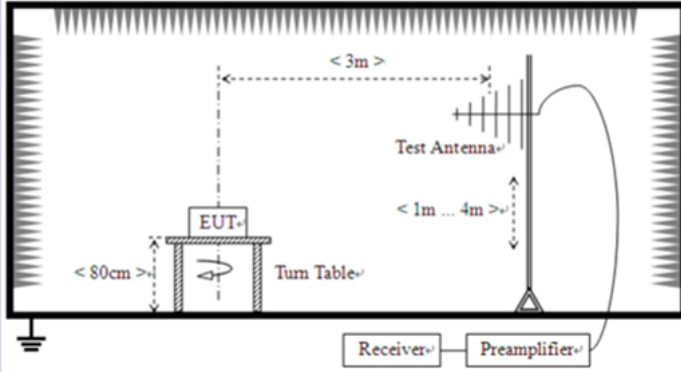
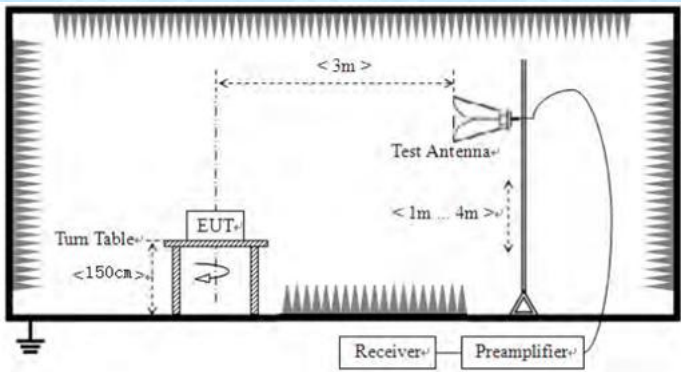
Test Requirement:	FCC Part15 E Section 15.407	
Test Method :	KDB 789033 D02 v02r01 Section II.F and ANSI C63.10-2020 Section 12.6	
Limit:	Frequency band (MHz)	Limit
	5150-5250	≤17dBm in 1MHz for master device
		≤11dBm in 1MHz for client device
	5250-5350	≤11dBm in 1MHz for client device
	5470-5725	≤11dBm in 1MHz for client device
	5725-5850	30dBm/500kHz
	Remark: The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test.	
Test setup:		
Test procedure:	(i) The RF output of EUT was connected to spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement. (ii) Set span to encompass the entire 99% OBW of the signal. (iii) For U-NII-1, U-NII-2a, U-NII-2c Band: Set RBW = 1MHz, VBW ≥ 3MHz, Sweep time = Auto, Detector = power averaging (RMS). (iv) For U-NII-3 Band: Set RBW = 500kHz, VBW ≥ 2MHz, Sweep time = Auto, Detector = power averaging (RMS). Number of points in sweep $\geq 2 \times \text{span} / \text{RBW}$. (v) TNumber of points in sweep $\geq 2 \times \text{span} / \text{RBW}$. (vi) Trace average at least 100 traces in power averaging (rms) mode. (vii) Use the peak search function on the instrument to find the peak of the spectrum. (viii) Replace the EUT center frequency and repeat steps (i)~(vii).	
Test Instruments:	Refer to section 6.0 for details	
Test mode:	Refer to section 5.3 for details	
Test results:	Pass	

Measurement Data: The detailed test data see Appendix for 5G WIFI.

7.6 Radiated Band Edges and Spurious Emission

Test Requirement :	FCC Part15 C Section 15.209 and 15.205																												
Test Method :	ANSI C63.10: 2020																												
Test Frequency Range:	9kHz to 40GHz																												
Test site:	Measurement Distance: 3m (Semi-Anechoic Chamber)																												
Receiver setup:	Frequency	Detector	RBW	VBW	Value																								
	9kHz-150KHz	Quasi-peak	200Hz	1kHz	Quasi-peak Value																								
	150kHz-30MHz	Quasi-peak	9kHz	30kHz	Quasi-peak Value																								
	30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak Value																								
	Above 1GHz	Peak	1MHz	3MHz	Peak Value																								
		AV	1MHz	3MHz	Average Value																								
Note: For Duty cycle ≥ 98%, average detector set as above For Duty cycle < 98%, average detector set as below: VBW ≥ 1 / T																													
Limit:	<table><tr><th>Frequency (MHz)</th><th>Field strength (microvolts/meter)</th><th>Measurement distance (meters)</th></tr><tr><td>0.009-0.490</td><td>2400/F(kHz)</td><td>300</td></tr><tr><td>0.490-1.705</td><td>24000/F(kHz)</td><td>30</td></tr><tr><td>1.705-30.0</td><td>30</td><td>30</td></tr><tr><td>30-88</td><td>100**</td><td>3</td></tr><tr><td>88-216</td><td>150**</td><td>3</td></tr><tr><td>216-960</td><td>200**</td><td>3</td></tr><tr><td>Above 960</td><td>500</td><td>3</td></tr></table>					Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)	0.009-0.490	2400/F(kHz)	300	0.490-1.705	24000/F(kHz)	30	1.705-30.0	30	30	30-88	100**	3	88-216	150**	3	216-960	200**	3	Above 960	500	3
	Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)																										
	0.009-0.490	2400/F(kHz)	300																										
	0.490-1.705	24000/F(kHz)	30																										
	1.705-30.0	30	30																										
	30-88	100**	3																										
	88-216	150**	3																										
	216-960	200**	3																										
	Above 960	500	3																										
	The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.																												
Test Procedure:	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 rotatable 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 0.8m 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. 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: $EIRP(dBm) = P_g(dBm) - \text{cable loss (dB)} + \text{antenna gain (dBi)}$ where: P_g is the generator output power into the substitution antenna.
Test setup:	For radiated emissions from 9kHz to 30MHz  For radiated emissions from 30MHz to 1GHz

						
For radiated emissions above 1GHz						
						
Test Instruments:	Refer to section 6.0 for details					
Test mode:	Refer to section 5.3 for details					
Test environment:	Temp.:	25 °C	Humid.:	52%	Press.:	1012mbar
Test voltage:	AC 120V, 60Hz					
Test results:	Pass					

Remarks:

1. Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis which it is worse case.

Measurement Data:

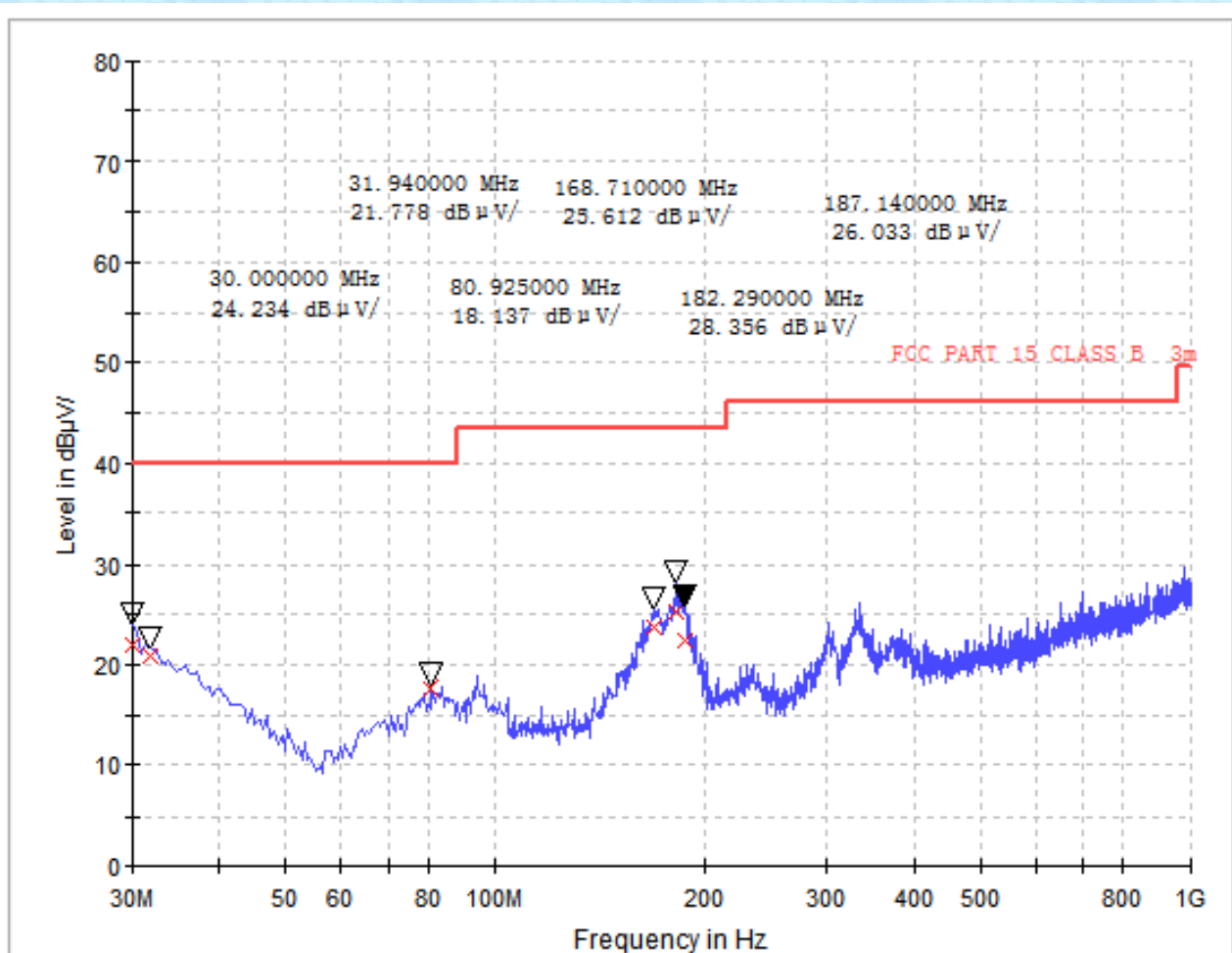
9 kHz ~ 30 MHz

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

30MHz~ 1GHz

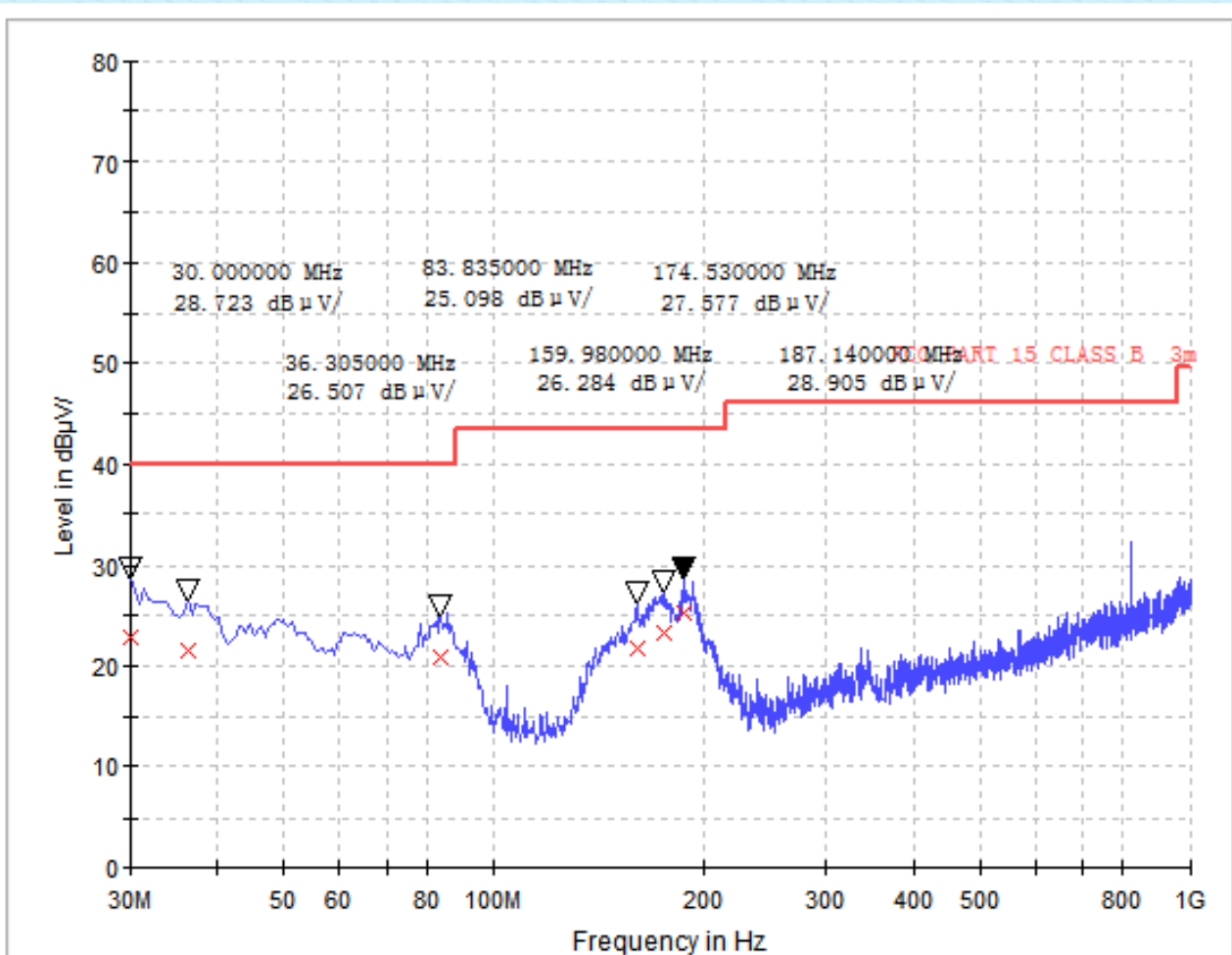
Pre-scan all test modes, found worst case at 802.11a 5600MHz (Ant8), and so only show the test result of it.

Horizontal:



Frequency (MHz)	QuasiPeak (dBμV/m)	Bandwidth (kHz)	Height (cm)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBμV/m)	Comment
30.000000	21.82	120.000	100.0	H	19.4	18.18	40.0	312
31.940000	20.83	120.000	100.0	H	18.3	19.17	40.0	14
80.925000	17.71	120.000	100.0	H	8.0	22.29	40.0	189
168.710000	23.58	120.000	100.0	H	11.9	19.92	43.5	32
182.290000	25.26	120.000	100.0	H	11.8	18.24	43.5	224
187.140000	22.36	120.000	100.0	H	11.8	21.14	43.5	188

Vertical:



Frequency (MHz)	QuasiPeak (dBμV/m)	Bandwidth (kHz)	Height (cm)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBμV/m)	Comment
30.000000	22.74	120.000	100.0	V	19.4	17.26	40.0	193
36.305000	21.52	120.000	100.0	V	16.0	18.48	40.0	321
83.835000	20.81	120.000	100.0	V	8.3	19.19	40.0	45
159.980000	21.74	120.000	100.0	V	12.0	21.76	43.5	78
174.530000	23.27	120.000	100.0	V	11.9	20.23	43.5	325
187.140000	25.31	120.000	100.0	V	11.8	18.19	43.5	173

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m).
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB).
3. Margin value = Emission Level – Limit value
4. The emission levels of other frequencies are very lower than the limit and not show in test report.
5. Only the antenna height (from 1m to 4m) at maximum reading are recorded.

■ Above 1GHz

For Above 1GHz, Only worst-case (Ant6) data is reported.

U-NII-1:

U-NII-1_802.11a_5180MHz									
Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)	Polarity	Detector
5150.00	46.83	68.20	-21.37	1.50	240	46.39	0.44	Horizontal	Peak
5150.00	38.69	54.00	-15.31	1.50	240	38.25	0.44	Horizontal	Average
10360.00	53.90	68.20	-14.30	1.50	240	43.44	10.46	Horizontal	Peak
10360.00	43.23	54.00	-10.77	1.50	240	32.77	10.46	Horizontal	Average
5150.00	48.06	68.20	-20.14	1.50	110	47.62	0.44	Vertical	Peak
5150.00	37.66	54.00	-16.34	1.50	110	37.22	0.44	Vertical	Average
10360.00	54.14	68.20	-14.06	1.50	110	43.68	10.46	Vertical	Peak
10360.00	43.83	54.00	-10.17	1.50	110	33.37	10.46	Vertical	Average
U-NII-1_802.11a_5240MHz									
Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)	Polarity	Detector
5350.00	47.43	68.20	-20.77	1.50	240	47.18	0.25	Horizontal	Peak
5350.00	36.95	54.00	-17.05	1.50	240	36.70	0.25	Horizontal	Average
10480.00	53.20	68.20	-15.00	1.50	240	42.20	11.00	Horizontal	Peak
10480.00	44.20	54.00	-9.80	1.50	240	33.20	11.00	Horizontal	Average
5350.00	46.61	68.20	-21.59	1.50	110	46.36	0.25	Vertical	Peak
5350.00	38.88	54.00	-15.12	1.50	110	38.63	0.25	Vertical	Average
10480.00	54.76	68.20	-13.44	1.50	110	43.76	11.00	Vertical	Peak
10480.00	43.40	54.00	-10.60	1.50	110	32.40	11.00	Vertical	Average

U-NII-1_802.11n-HT40_5190MHz									
Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)	Polarity	Detector
5150.00	47.33	68.20	-20.87	1.50	240	46.89	0.44	Horizontal	Peak
5150.00	39.24	54.00	-14.76	1.50	240	38.80	0.44	Horizontal	Average
10380.00	54.31	68.20	-13.89	1.50	240	43.78	10.53	Horizontal	Peak
10380.00	42.93	54.00	-11.07	1.50	240	32.40	10.53	Horizontal	Average
5150.00	47.57	68.20	-20.63	1.50	110	47.13	0.44	Vertical	Peak
5150.00	38.29	54.00	-15.71	1.50	110	37.85	0.44	Vertical	Average
10380.00	53.79	68.20	-14.41	1.50	110	43.26	10.53	Vertical	Peak
10380.00	44.08	54.00	-9.92	1.50	110	33.55	10.53	Vertical	Average
U-NII-1_802.11n-HT40_5230MHz									
Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)	Polarity	Detector
5350.00	47.52	68.20	-20.68	1.50	240	47.27	0.25	Horizontal	Peak
5350.00	37.36	54.00	-16.64	1.50	240	37.11	0.25	Horizontal	Average
10460.00	53.59	68.20	-14.61	1.50	240	42.68	10.91	Horizontal	Peak
10460.00	44.39	54.00	-9.61	1.50	240	33.48	10.91	Horizontal	Average
5350.00	47.34	68.20	-20.86	1.50	110	47.09	0.25	Vertical	Peak
5350.00	39.16	54.00	-14.84	1.50	110	38.91	0.25	Vertical	Average
10460.00	53.71	68.20	-14.49	1.50	110	42.80	10.91	Vertical	Peak
10460.00	42.51	54.00	-11.49	1.50	110	31.60	10.91	Vertical	Average

U-NII-1_802.11ac-VHT80_5210MHz									
Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)	Polarity	Detector
5150.00	68.56	68.20	0.36	1.50	240	68.12	0.44	Horizontal	Peak
5150.00	54.01	54.00	0.01	1.50	240	53.57	0.44	Horizontal	Average
5350.00	47.43	68.20	-20.77	1.50	240	47.18	0.25	Horizontal	Peak
5350.00	37.01	54.00	-16.99	1.50	240	36.76	0.25	Horizontal	Average
10420.00	53.36	68.20	-14.84	1.50	240	42.65	10.71	Horizontal	Peak
10420.00	44.91	54.00	-9.09	1.50	110	34.20	10.71	Horizontal	Average
5150.00	47.02	68.20	-21.18	1.50	110	46.58	0.44	Vertical	Peak
5150.00	38.09	54.00	-15.91	1.50	110	37.65	0.44	Vertical	Average
5350.00	47.42	68.20	-20.78	1.50	110	47.17	0.25	Vertical	Peak
5350.00	39.15	54.00	-14.85	1.50	110	38.90	0.25	Vertical	Average
10420.00	53.51	68.20	-14.69	1.50	110	42.80	10.71	Vertical	Peak
10420.00	43.10	54.00	-10.90	1.50	110	32.39	10.71	Vertical	Average

U-NII-2a:

U-NII-2a_802.11a_5260MHz									
Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)	Polarity	Detector
5150.00	47.54	68.20	-20.66	1.50	240	47.10	0.44	Horizontal	Peak
5150.00	38.51	54.00	-15.49	1.50	240	38.07	0.44	Horizontal	Average
10520.00	53.92	68.20	-14.28	1.50	240	42.74	11.18	Horizontal	Peak
10520.00	43.23	54.00	-10.77	1.50	240	32.05	11.18	Horizontal	Average
5150.00	47.77	68.20	-20.43	1.50	110	47.33	0.44	Vertical	Peak
5150.00	37.54	54.00	-16.46	1.50	110	37.10	0.44	Vertical	Average
10520.00	54.41	68.20	-13.79	1.50	110	43.23	11.18	Vertical	Peak
10520.00	42.71	54.00	-11.29	1.50	110	31.53	11.18	Vertical	Average
U-NII-2a_802.11a_5320MHz									
Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)	Polarity	Detector
5350.00	46.77	68.20	-21.43	1.50	240	46.52	0.25	Horizontal	Peak
5350.00	37.13	54.00	-16.87	1.50	240	36.88	0.25	Horizontal	Average
10640.00	53.45	68.20	-14.75	1.50	240	42.13	11.32	Horizontal	Peak
10640.00	43.23	54.00	-10.77	1.50	240	31.91	11.32	Horizontal	Average
5350.00	46.92	68.20	-21.28	1.50	110	46.67	0.25	Vertical	Peak
5350.00	39.10	54.00	-14.90	1.50	110	38.85	0.25	Vertical	Average
10640.00	54.71	68.20	-13.49	1.50	110	43.39	11.32	Vertical	Peak
10640.00	43.02	54.00	-10.98	1.50	110	31.70	11.32	Vertical	Average

U-NII-2a_802.11n-HT40_5270MHz									
Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)	Polarity	Detector
5150.00	47.92	68.20	-20.28	1.50	240	47.48	0.44	Horizontal	Peak
5150.00	38.14	54.00	-15.86	1.50	240	37.70	0.44	Horizontal	Average
10540.00	53.89	68.20	-14.31	1.50	240	42.63	11.26	Horizontal	Peak
10540.00	43.65	54.00	-10.35	1.50	240	32.39	11.26	Horizontal	Average
5150.00	48.31	68.20	-19.89	1.50	110	47.87	0.44	Vertical	Peak
5150.00	37.58	54.00	-16.42	1.50	110	37.14	0.44	Vertical	Average
10540.00	54.38	68.20	-13.82	1.50	110	43.12	11.26	Vertical	Peak
10540.00	42.60	54.00	-11.40	1.50	110	31.34	11.26	Vertical	Average
U-NII-2a_802.11n-HT40_5310MHz									
Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)	Polarity	Detector
5350.00	46.09	68.20	-22.11	1.50	240	45.84	0.25	Horizontal	Peak
5350.00	38.21	54.00	-15.79	1.50	240	37.96	0.25	Horizontal	Average
10620.00	54.13	68.20	-14.07	1.50	240	42.72	11.41	Horizontal	Peak
10620.00	43.15	54.00	-10.85	1.50	240	31.74	11.41	Horizontal	Average
5350.00	47.61	68.20	-20.59	1.50	110	47.36	0.25	Vertical	Peak
5350.00	39.03	54.00	-14.97	1.50	110	38.78	0.25	Vertical	Average
10620.00	53.77	68.20	-14.43	1.50	110	42.36	11.41	Vertical	Peak
10620.00	42.43	54.00	-11.57	1.50	110	31.02	11.41	Vertical	Average

U-NII-2a_802.11ac-VHT80_5290MHz									
Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)	Polarity	Detector
5150.00	68.59	68.20	0.39	1.50	240	68.15	0.44	Horizontal	Peak
5150.00	54.37	54.00	0.37	1.50	240	53.93	0.44	Horizontal	Average
5350.00	47.92	68.20	-20.28	1.50	240	47.67	0.25	Horizontal	Peak
5350.00	36.87	54.00	-17.13	1.50	240	36.62	0.25	Horizontal	Average
10580.00	52.90	68.20	-15.30	1.50	240	41.46	11.44	Horizontal	Peak
10580.00	44.45	54.00	-9.55	1.50	240	33.01	11.44	Horizontal	Average
5150.00	47.17	68.20	-21.03	1.50	110	46.73	0.44	Vertical	Peak
5150.00	38.15	54.00	-15.85	1.50	110	37.71	0.44	Vertical	Average
5350.00	47.72	68.20	-20.48	1.50	110	47.47	0.25	Vertical	Peak
5350.00	39.24	54.00	-14.76	1.50	110	38.99	0.25	Vertical	Average
10580.00	53.70	68.20	-14.50	1.50	110	42.26	11.44	Vertical	Peak
10580.00	43.21	54.00	-10.79	1.50	110	31.77	11.44	Vertical	Average
U-NII-2a_802.11ax-HE160_5250MHz									
Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)	Polarity	Detector
5150.00	68.41	68.20	0.21	1.50	240	67.97	0.44	Horizontal	Peak
5150.00	54.71	54.00	0.71	1.50	240	54.27	0.44	Horizontal	Average
5350.00	47.90	68.20	-20.30	1.50	240	47.65	0.25	Horizontal	Peak
5350.00	37.21	54.00	-16.79	1.50	240	36.96	0.25	Horizontal	Average
10500.00	52.90	68.20	-15.30	1.50	240	41.81	11.09	Horizontal	Peak
10500.00	44.61	54.00	-9.39	1.50	240	33.52	11.09	Horizontal	Average
5150.00	47.44	68.20	-20.76	1.50	110	47.00	0.44	Vertical	Peak
5150.00	37.90	54.00	-16.10	1.50	110	37.46	0.44	Vertical	Average
5350.00	47.72	68.20	-20.48	1.50	110	47.47	0.25	Vertical	Peak
5350.00	39.74	54.00	-14.26	1.50	110	39.49	0.25	Vertical	Average
10500.00	53.51	68.20	-14.69	1.50	110	42.42	11.09	Vertical	Peak
10500.00	43.59	54.00	-10.41	1.50	110	32.50	11.09	Vertical	Average

U-NII-2c:

U-NII-2c_802.11a_5500MHz									
Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)	Polarity	Detector
5470.00	45.93	68.20	-22.27	1.50	240	45.97	-0.04	Horizontal	Peak
5470.00	37.97	54.00	-16.03	1.50	240	38.01	-0.04	Horizontal	Average
11000.00	54.13	68.20	-14.07	1.50	240	42.71	11.42	Horizontal	Peak
11000.00	43.47	54.00	-10.53	1.50	240	32.05	11.42	Horizontal	Average
5470.00	48.37	68.20	-19.83	1.50	110	48.41	-0.04	Vertical	Peak
5470.00	37.77	54.00	-16.23	1.50	110	37.81	-0.04	Vertical	Average
11000.00	53.38	68.20	-14.82	1.50	110	41.96	11.42	Vertical	Peak
11000.00	43.96	54.00	-10.04	1.50	110	32.54	11.42	Vertical	Average
U-NII-2c_802.11a_5700MHz									
Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)	Polarity	Detector
5725.00	47.50	68.20	-20.70	1.50	240	46.20	1.30	Horizontal	Peak
5725.00	38.19	54.00	-15.81	1.50	240	36.89	1.30	Horizontal	Average
11400.00	54.55	68.20	-13.65	1.50	240	43.08	11.47	Horizontal	Peak
11400.00	43.52	54.00	-10.48	1.50	240	32.05	11.47	Horizontal	Average
5725.00	48.38	68.20	-19.82	1.50	110	47.08	1.30	Vertical	Peak
5725.00	39.10	54.00	-14.90	1.50	110	37.80	1.30	Vertical	Average
11400.00	53.38	68.20	-14.82	1.50	110	41.91	11.47	Vertical	Peak
11400.00	43.90	54.00	-10.10	1.50	110	32.43	11.47	Vertical	Average

U-NII-2c_802.11n-HT40_5510MHz									
Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)	Polarity	Detector
5470.00	45.68	68.20	-22.52	1.50	240	45.72	-0.04	Horizontal	Peak
5470.00	38.62	54.00	-15.38	1.50	240	38.66	-0.04	Horizontal	Average
11020.00	54.65	68.20	-13.55	1.50	240	43.19	11.46	Horizontal	Peak
11020.00	43.33	54.00	-10.67	1.50	240	31.87	11.46	Horizontal	Average
5470.00	49.45	68.20	-18.75	1.50	110	49.49	-0.04	Vertical	Peak
5470.00	38.20	54.00	-15.80	1.50	110	38.24	-0.04	Vertical	Average
11020.00	52.69	68.20	-15.51	1.50	110	41.23	11.46	Vertical	Peak
11020.00	44.49	54.00	-9.51	1.50	110	33.03	11.46	Vertical	Average
U-NII-2c_802.11n-HT40_5670MHz									
Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)	Polarity	Detector
5725.00	47.67	68.20	-20.53	1.50	240	46.37	1.30	Horizontal	Peak
5725.00	39.02	54.00	-14.98	1.50	240	37.72	1.30	Horizontal	Average
11340.00	54.31	68.20	-13.89	1.50	240	42.89	11.42	Horizontal	Peak
11340.00	44.15	54.00	-9.85	1.50	240	32.73	11.42	Horizontal	Average
5725.00	48.54	68.20	-19.66	1.50	110	47.24	1.30	Vertical	Peak
5725.00	38.74	54.00	-15.26	1.50	110	37.44	1.30	Vertical	Average
11340.00	52.89	68.20	-15.31	1.50	110	41.47	11.42	Vertical	Peak
11340.00	43.55	54.00	-10.45	1.50	110	32.13	11.42	Vertical	Average

U-NII-2c_802.11ac-VHT80_5530MHz									
Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)	Polarity	Detector
5470.00	44.79	68.20	-23.41	1.50	240	44.83	-0.04	Horizontal	Peak
5470.00	39.02	54.00	-14.98	1.50	240	39.06	-0.04	Horizontal	Average
11060.00	55.42	68.20	-12.78	1.50	240	43.89	11.53	Horizontal	Peak
11060.00	43.39	54.00	-10.61	1.50	240	31.86	11.53	Horizontal	Average
5470.00	49.92	68.20	-18.28	1.50	110	49.96	-0.04	Horizontal	Peak
5470.00	37.61	54.00	-16.39	1.50	110	37.65	-0.04	Horizontal	Average
11060.00	52.89	68.20	-15.31	1.50	110	41.36	11.53	Vertical	Peak
11060.00	44.93	54.00	-9.07	1.50	110	33.40	11.53	Vertical	Average
5470.00	44.79	68.20	-23.41	1.50	240	44.83	-0.04	Vertical	Peak
5470.00	39.02	54.00	-14.98	1.50	240	39.06	-0.04	Vertical	Average
11060.00	55.42	68.20	-12.78	1.50	240	43.89	11.53	Vertical	Peak
11060.00	43.39	54.00	-10.61	1.50	240	31.86	11.53	Vertical	Average
U-NII-2c_802.11ac-VHT80_5610MHz									
Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)	Polarity	Detector
5725.00	47.39	68.20	-20.81	1.50	240	46.09	1.30	Horizontal	Peak
5725.00	39.21	54.00	-14.79	1.50	240	37.91	1.30	Horizontal	Average
11220.00	54.48	68.20	-13.72	1.50	240	43.43	11.05	Horizontal	Peak
11220.00	44.33	54.00	-9.67	1.50	240	33.28	11.05	Horizontal	Average
5725.00	49.00	68.20	-19.20	1.50	110	47.70	1.30	Horizontal	Peak
5725.00	39.20	54.00	-14.80	1.50	110	37.90	1.30	Horizontal	Average
11220.00	52.11	68.20	-16.09	1.50	110	41.06	11.05	Vertical	Peak
11220.00	43.19	54.00	-10.81	1.50	110	32.14	11.05	Vertical	Average
5725.00	47.39	68.20	-20.81	1.50	240	46.09	1.30	Vertical	Peak
5725.00	39.21	54.00	-14.79	1.50	240	37.91	1.30	Vertical	Average
11220.00	54.48	68.20	-13.72	1.50	240	43.43	11.05	Vertical	Peak
11220.00	44.33	54.00	-9.67	1.50	240	33.28	11.05	Vertical	Average

U-NII-2c_802.11ax-HE160_5570MHz									
Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)	Polarity	Detector
5470.00	45.82	68.20	-22.38	1.50	240	45.86	-0.04	Horizontal	Peak
5470.00	38.33	54.00	-15.67	1.50	240	38.37	-0.04	Horizontal	Average
5725.00	47.72	68.20	-20.48	1.50	240	46.42	1.30	Horizontal	Peak
5725.00	38.51	54.00	-15.49	1.50	240	37.21	1.30	Horizontal	Average
11140.00	54.20	68.20	-14.00	1.50	240	42.85	11.35	Horizontal	Peak
11140.00	44.91	54.00	-9.09	1.50	240	33.56	11.35	Horizontal	Average
5470.00	49.52	68.20	-18.68	1.50	110	49.56	-0.04	Vertical	Peak
5470.00	38.31	54.00	-15.69	1.50	110	38.35	-0.04	Vertical	Average
5725.00	48.91	68.20	-19.29	1.50	110	47.61	1.30	Vertical	Peak
5725.00	38.59	54.00	-15.41	1.50	110	37.29	1.30	Vertical	Average
11140.00	52.78	68.20	-15.42	1.50	110	41.43	11.35	Vertical	Peak
11140.00	43.52	54.00	-10.48	1.50	110	32.17	11.35	Vertical	Average

U-NII-3:

U-NII-3_802.11a_5745MHz									
Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)	Polarity	Detector
5650.00	50.59	68.20	-17.61	1.50	240	49.79	0.80	Horizontal	Peak
5700.00	50.99	105.20	-54.21	1.50	240	49.75	1.24	Horizontal	Average
5720.00	51.51	110.80	-59.29	1.50	240	50.23	1.28	Horizontal	Peak
5725.00	52.28	122.20	-69.92	1.50	240	50.98	1.30	Horizontal	Average
11490.00	52.50	68.20	-15.70	1.50	240	40.95	11.55	Vertical	Peak
11490.00	42.52	54.00	-11.48	1.50	240	30.97	11.55	Vertical	Average
5650.00	51.77	68.20	-16.43	1.50	110	50.97	0.80	Vertical	Peak
5700.00	50.46	105.20	-54.74	1.50	110	49.22	1.24	Vertical	Average
U-NII-3_802.11a_5825MHz									
Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)	Polarity	Detector
5850.00	52.53	122.20	-69.67	1.50	240	50.71	1.82	Horizontal	Peak
5855.00	51.17	110.80	-59.63	1.50	240	49.32	1.85	Horizontal	Average
5875.00	53.33	105.20	-51.87	1.50	240	51.35	1.98	Horizontal	Peak
5925.00	54.14	68.20	-14.06	1.50	240	52.02	2.12	Horizontal	Average
11650.00	52.85	68.20	-15.35	1.50	240	41.21	11.64	Vertical	Peak
11650.00	42.19	54.00	-11.81	1.50	240	30.55	11.64	Vertical	Average
5850.00	50.61	122.20	-71.59	1.50	110	48.79	1.82	Vertical	Peak
5855.00	51.79	110.80	-59.01	1.50	110	49.94	1.85	Vertical	Average

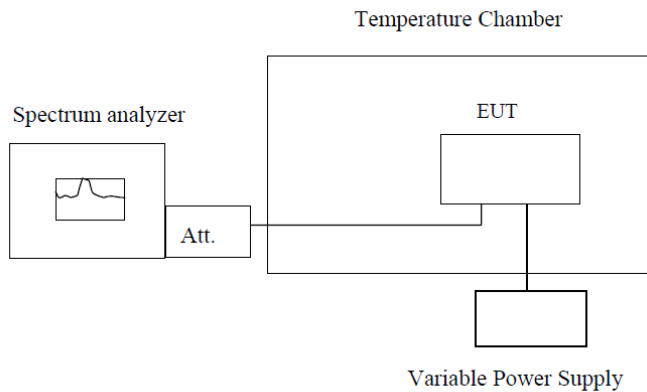
U-NII-3_802.11n-HT40_5755MHz									
Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)	Polarity	Detector
5650.00	51.29	68.20	-16.91	1.50	240	50.49	0.80	Horizontal	Peak
5700.00	51.17	105.20	-54.03	1.50	240	49.93	1.24	Horizontal	Average
5720.00	51.65	110.80	-59.15	1.50	240	50.37	1.28	Horizontal	Peak
5725.00	52.46	122.20	-69.74	1.50	240	51.16	1.30	Horizontal	Average
11510.00	52.81	68.20	-15.39	1.50	240	41.25	11.56	Vertical	Peak
11510.00	42.19	54.00	-11.81	1.50	240	30.63	11.56	Vertical	Average
5650.00	51.11	68.20	-17.09	1.50	110	50.31	0.80	Vertical	Peak
5700.00	50.74	105.20	-54.46	1.50	110	49.50	1.24	Vertical	Average
U-NII-3_802.11n-HT40_5795MHz									
Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)	Polarity	Detector
5850.00	52.07	122.20	-70.13	1.50	240	50.25	1.82	Horizontal	Peak
5855.00	51.30	110.80	-59.50	1.50	240	49.45	1.85	Horizontal	Average
5875.00	53.19	105.20	-52.01	1.50	240	51.21	1.98	Horizontal	Peak
5925.00	54.30	68.20	-13.90	1.50	240	52.18	2.12	Horizontal	Average
11590.00	52.50	68.20	-15.70	1.50	240	40.99	11.51	Vertical	Peak
11590.00	42.63	54.00	-11.37	1.50	240	31.12	11.51	Vertical	Average
5850.00	50.26	122.20	-71.94	1.50	110	48.44	1.82	Vertical	Peak
5855.00	51.82	110.80	-58.98	1.50	110	49.97	1.85	Vertical	Average

U-NII-3_802.11ac-VHT80_5775MHz									
Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)	Polarity	Detector
5650.00	51.55	68.20	-16.65	1.50	240	50.75	0.80	Horizontal	Peak
5700.00	51.21	105.20	-53.99	1.50	240	49.97	1.24	Horizontal	Peak
5720.00	51.22	110.80	-59.58	1.50	240	49.94	1.28	Horizontal	Peak
5725.00	52.55	122.20	-69.65	1.50	240	51.25	1.30	Horizontal	Peak
5850.00	51.80	122.20	-70.40	1.50	240	49.98	1.82	Horizontal	Peak
5855.00	50.75	110.80	-60.05	1.50	240	48.90	1.85	Horizontal	Peak
5875.00	52.74	105.20	-52.46	1.50	240	50.76	1.98	Horizontal	Peak
5925.00	54.56	68.20	-13.64	1.50	240	52.44	2.12	Horizontal	Peak
11550.00	52.57	68.20	-15.63	1.50	240	41.03	11.54	Horizontal	Peak
11550.00	41.94	54.00	-12.06	1.50	240	30.40	11.54	Horizontal	Average
5650.00	50.48	68.20	-17.72	1.50	110	49.68	0.80	Vertical	Peak
5700.00	50.12	105.20	-55.08	1.50	110	48.88	1.24	Vertical	Peak
5720.00	50.75	110.80	-60.05	1.50	110	49.47	1.28	Vertical	Peak
5725.00	53.10	122.20	-69.10	1.50	110	51.80	1.30	Vertical	Peak
5850.00	49.91	122.20	-72.29	1.50	110	48.09	1.82	Vertical	Peak
5855.00	51.86	110.80	-58.94	1.50	110	50.01	1.85	Vertical	Peak
5875.00	53.08	105.20	-52.12	1.50	110	51.10	1.98	Vertical	Peak
5925.00	53.67	68.20	-14.53	1.50	110	51.55	2.12	Vertical	Peak
11550.00	52.29	68.20	-15.91	1.50	110	40.75	11.54	Vertical	Peak
11550.00	42.12	54.00	-11.88	1.50	110	30.58	11.54	Vertical	Average

Remarks:

- $Emission\ Level(dBuV/m) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
- $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB)$
- $Margin\ value = Emission\ Level - Limit\ value$
- The emission levels of other frequencies are very lower than the limit and not show in test report.
Tnly the antenna height (from 1m to 4m) and turntable angle (from 0 degrees to 360 degrees) at maximum reading are recorded.

7.7 Frequency stability

Test Requirement:	FCC Part15 C Section 15.407(g)
Test Method:	KDB 789033 D02 v02r01 Section II.A.3 and ANSI C63.10-2020 Section 6.8
Limit:	Manufactures 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
Test Procedure:	The EUT was setup to ANSI C63.4, 2003; tested to 2.1055 for compliance to FCC Part 15.407(g) requirements.
Test setup:	 Note : Measurement setup for testing on Antenna connector
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

Measurement Data: The detailed test data see Appendix for 5G WIFI.

8 Test Setup Photo

Reference to the **appendix I** for details.

9 EUT Constructional Details

Reference to the **appendix II** for details.

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