Report No.: ET-22080647E03

TEST REPORT

Applicant:	Bigme Cloud Literacy Technology Co., Ltd.
Address of Applicant:	01 18F.,COFCO PROPERTY TOWER,BAOMIN NO.1RD.,BAO AN 3RD DISTRICT,SHENZHEN, CHINA
Manufacturer/Factory:	Bigme Cloud Literacy Technology Co., Ltd.
Address of Manufacturer	01 18F.,COFCO PROPERTY TOWER,BAOMIN NO.1RD.,BAO AN 3RD DISTRICT,SHENZHEN, CHINA
Product Name:	AINote
Model No.:	inkNote Color,inkNoteS Color,inkNoteM Color,inkNoteL Color , inkNoteX Color,inkNote,inkNoteS,inkNoteM,inkNoteL, inkNoteX
Trade Mark:	Bigme
FCC ID:	2A8EM-INKNOTEC
Applicable standards:	FCC CFR Title 47 Part 15 Subpart E Section 15.407
Date of Test:	Aug.15, 2022 - Aug.24, 2022
Date of report issued:	Aug.25,2022
Test Result :	PASS *

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

The 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

Prepared By

Shenzhen ETR Standard Technology Co., Ltd.

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Compiled by:	Reviewed by:	Approved by:
Carr Kong	Smith Chen	
Project Engineer	Project Manager	Authorized Signature

Report Revision History		
Report No.	Description	Issue Date
ET-22080647E03	Original	Aug.25,2022

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1 Test Summary

Test Item	Section in CFR 47	Result	Test by
Antenna requirement	15.203	Pass	/
AC Power Line Conducted Emission	15.207	Pass	Carr Kang
Conducted Output Power	15.407 (a)(1)/(a)(3)	Pass	Yvan Fan
26dB Bandwidth and 99% Occupied Bandwidth	15.407 (a)(12)	Pass	Yvan Fan
6dB Bandwidth	15.407 (e)	Pass	Yvan Fan
Power Spectral Density	15.407(a)(1)/(a)(3)	Pass	Yvan Fan
Band Edge	15.407(b)(1)/(b)(4)	Pass	Yvan Fan
Spurious Emission	15.205/15.209 15.407(b)(1)/(b)(4)/(b)(8)	Pass	Qiao Li
Frequency Stability	15.407(g)	Pass	Yvan Fan

Remarks:

1. *Pass: The EUT complies with the essential requirements in the standard.*
2. *Test according to ANSI C63.10:2013.*

1.1 Measurement Uncertainty

Test Item	Measurement Uncertainty	Notes
Occupied Channel Bandwidth	±0.55%	(1)
RF output power, conducted	±0.99dB	(1)
Power Spectral Density, conducted	±0.61dB	(1)
Unwanted Emissions, conducted	±0.64dB	(1)
AC Power Line Conducted Emission	± 3.02dB	(1)
Radiated emissions 9K-30MHz	±3.98dB	(1)
Radiated emissions 30M- 1GHz	±4.30dB	(1)
Radiated emissions 1GHz-18GHz	±4.35dB	(1)
Radiated emissions 18GHz-40GHz	±4.59 dB	(1)
Note (1): The measurement uncertainty is for coverage factor of k=2 and a level of confidence of 95%.		

2 General Information

2.1 General Description of EUT

Product Name:	AINote
Model No.:	inkNote Color,inkNoteS Color,inkNoteM Color,inkNoteL Color , inkNoteX Color,inkNote,inkNoteS,inkNoteM,inkNoteL, inkNoteX
Difference of model(s)	All the models are the same circuit and RF module, except the appearance color.
Test Model:	inkNote Color
Hardware Version:	N/A
Software Version:	N/A
Sample(s) Status:	Engineer sample
Operation Frequency:	☒5180-5240MHz for 802.11a/n(HT20)/ac20; 5190-5230MHz for 802.11n(HT40)/ac40; 5210MHz for 802.11 ac80; ☒5745-5825 MHz for 802.11a/n(HT20)/ac20; 5755-5795 MHz for 802.11n(HT40)/ac40; 5775MHz for 802.11 ac80;
Channel numbers:	☒4 channels for 802.11a/n20/ac20 in the 5180-5240MHz band; 2 channels for 802.11 n40/ac40 in the 5190-5230MHz band ; 1 channels for 802.11 ac80 in the 5210MHz band ; ☒5 channels for 802.11a/n20/ac20 in the 5745-5825MHz band ; 2 channels for 802.11 n40/ac40 in the 5755-5795MHz band ; 1 channels for 802.11 ac80 in the 5775MHz band
Channel bandwidth:	802.11a/802.11n(HT20)/ 802.11ac(HT20): 20MHz 802.11n(HT40)/ 802.11ac(HT40) : 40MHz 802.11ac(HT80) : 80MHz
Data Rate	802.11a: 6,9,12,18,24,36,48,54Mbps; 802.11n(HT20/HT40):MCS0-MCS15; 802.11ac(VHT/20/40/80):NSS1, MCS0-MCS9
Modulation technology:	Orthogonal Frequency Division Multiplexing (OFDM) with BPSK/QPSK/16QAM/64QAM/256QAM
Antenna Type:	Integrated antenna
Antenna gain:	-1.0dBi Max
Power supply:	DC5V form adapter with AC 100-240V 50/60Hz or DC 3.7V Battery

Operation Frequency each of channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
36	5180MHz	38	5190MHz	40	5200MHz	42	5210MHz
44	5220MHz	46	5230MHz	48	5240MHz	/	/
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
149	5745MHz	151	5755MHz	153	5765MHz	155	5775MHz
157	5785MHz	159	5795MHz	161	5805MHz	/	/
165	5825MHz	/					

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Test channel	Frequency (MHz)		
	802.11 a /n(HT20)/ac(HT20)	802.11 n(HT40)/ac(HT40)	802.11ac(HT80)
Lowest channel	5180	5190	5210
Middle channel	5200		
Highest channel	5240	5230	

Test channel	Frequency (MHz)		
	802.11 a /n(HT20)/ac(HT20)	802.11 n(HT40)/ac(HT40)	802.11ac(HT80)
Lowest channel	5745	5755	5775
Middle channel	5785		
Highest channel	5825	5795	

2.2 Test mode

Transmitting mode	Keep the EUT in continuously transmitting mode(or with a duty cycle ≥ 98%)
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.	

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:

Pretest Mode	Description
Mode 1	802.11a / n 20 CH36/ CH40/ CH 48 802.11a /n 20 CH149/ CH157/ CH 165
Mode 2	802.11n 40 CH38/ CH 46 802.11n 40 CH 151 / CH 159
Mode 3	802.11 ac80 CH 42/CH 155
Mode 4	802.11a / n 20 CH36/ CH40/ CH 48 802.11a /n 20 CH149/ CH157/ CH 165
Mode 5	Link Mode

Conducted Emission	
Final Test Mode	Description
Mode 5	Link Mode

For Radiated Emission	
Final Test Mode	Description
Mode 1	802.11a / n 20 CH36/ CH40/ CH 48 802.11a /n 20 CH149/ CH157/ CH 165
Mode 2	802.11n 40 CH38/ CH 46 802.11n 40 CH 151 / CH 159
Mode 3	802.11 ac80 CH 42/CH 155
Mode 4	802.11a / n 20 CH36/ CH40/ CH 48 802.11a /n 20 CH149/ CH157/ CH 165

Note:

(1) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported.

2.3 Description of Support Units

No.	Description	Manufacturer	Model	Serial Number
1	Adapter	HUAWEI	5V/2A	/

2.4 Deviation from Standards

None.

2.5 Abnormalities from Standard Conditions

None.

2.6 Test Facility

Test laboratory:	Shenzhen ETR Standard Technology Co., Ltd.
CNAS Registration Number:	L11864
A2LA Certificate Number:	6640.01
FCC Designation Number:	CN1326
FCC Test Firm Registration:	183064

2.7 Test Location

All tests were performed at:	
Laboratory location:	No.103, No.10, Phase I, Zone 3, Xinxing Industrial Park, Xinhe, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China
Telephone:	+86 755 85259392

2.8 Additional Instructions

Test Software	Prototype Engineering Mode
Power level setup	Default

3 Test Instruments list

Conducted Emission

Item	Equipment name	Manufacturer	Model	Serial No.	Calibration date	Due date
1	EMI Test Receiver	Rohde&schwarz	ESCI3	100605	2022.3.09	2023.3.08
2	amplifier	EMtrace	RP01A	50117	2022.3.09	2023.3.08
3	Artificial power network	schwarabeck	NSLK8127	8127483	2022.3.09	2023.3.08
4	Artificial power network	ETS	3186/2NM	1132	2022.3.09	2023.3.08
5	10dB attenuator	HUBER+SUHNER	10dB	/	2022.3.09	2023.3.08
6	Cable 4	HUBER SUNNER	3M	/	2022.3.09	2022.3.08
7	Absorbing Clamp	schwarabeck	MDS21	D69250	2022.3.11	2023.3.10

Radiated Emission &RF Conducted test:

Item	Equipment name	Manufacturer	Model	Serial No.	Calibration date	Due date
1	EMI Test Receiver	Rohde&schwarz	ESPI7	100605	2022.3.09	2023.3.08
2	Broadband antenna	schwarabeck	VULB9168	1064	2022.3.11	2024.3.10
3	Horn antenna	schwarabeck	BBHA9120D	9120D-1145	2022.3.11	2024.3.10
4	amplifier	EMtrace	RP01A	50117	2022.3.09	2023.3.08
5	amplifier	Space-Dtronics	EWLAN0118G-P40	19113001	2022.3.09	2023.3.08
6	Spectrum analyzer	KEYSIGHT	N9020A	MY55370280	2022.3.09	2023.3.08
7	Power detector box	MWRFtest	MW100-PSB	MW201020JYT	2021.11.19	2022.11.18
8	Signal generator	Agilent	N5182A	MY49060455	2021.11.19	2022.11.18
9	Spectrum analyzer	Rohde&schwarz	FSV40	100363	2022.3.09	2023.3.08
10	amplifier	Aeroflex	DLE-161	097	2022.3.09	2023.3.08
11	Horn antenna	Com-Power	SAS-574	588	2022.3.11	2024.3.10
12	Loop antenna	schwarabeck	FMZB 1519 B	1519	2022.3.11	2024.3.10
13	Cable 6	HUBER SUNNER	0.5M	/	2022.3.09	2023.3.08
14	Cable7	HUBER SUNNER	2.0M	/	2022.3.09	2023.3.08
15	Cable8	HUBER SUNNER	6.0M	/	2022.3.09	2023.3.08

Note: the calibration interval of the above test instruments is 12 or 24 months and the calibrations are traceable to international system unit (SI).

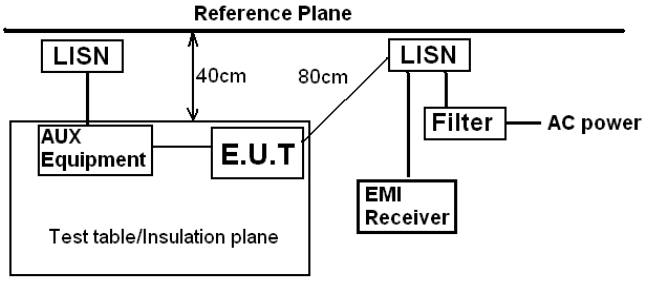
Software Name	Manufacturer	Model	Version
RF test software	MWRFtest	MTS 8310	V2.0.0.0
Conducted test software	EZ-EMC	Farad	Ver.EMC-CON 3A1.1
Radiated test software	EZ-EMC	Farad	Ver.FA-03A2 RE

4 Test results and Measurement Data

4.1 Antenna requirement

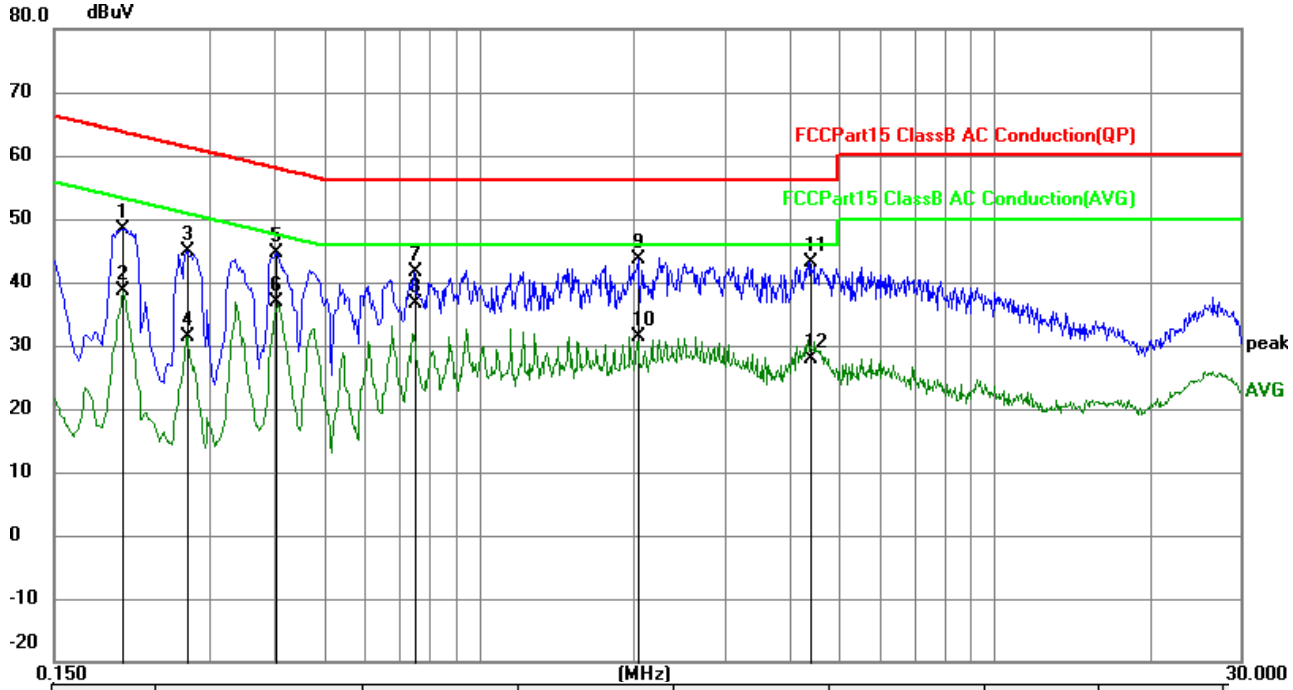
Standard requirement:	FCC Part15 C Section 15.203
15.203 requirement: *An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling 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.*	
E.U.T Antenna:	
The antennas are Integrated antenna, the best case gain of the antennas are -1.0dBi Max, reference to the appendix II for details	

4.2 Conducted Emissions

Test Requirement:	FCC Part15 C Section 15.207
Test Method:	ANSI C63.10:2013
Test Frequency Range:	150KHz to 30MHz
Class / Severity:	Class B
Receiver setup:	RBW=9KHz, VBW=30KHz, Sweep time=auto
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 setup:	 *Remark:* *E.U.T: Equipment Under Test* *LISN: Line Impedence Stabilization Network* *Test table height=0.8m*
Test procedure:	1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). 3. 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.
Test Instruments:	Refer to section 3.0 for details
Test mode:	Refer to section 2.2 for details
Test environment:	Temp.: 24.7°C / Humid.: 50% / Press.: 1012mbar
Test voltage:	AC 120V, 60Hz
Test results:	Pass

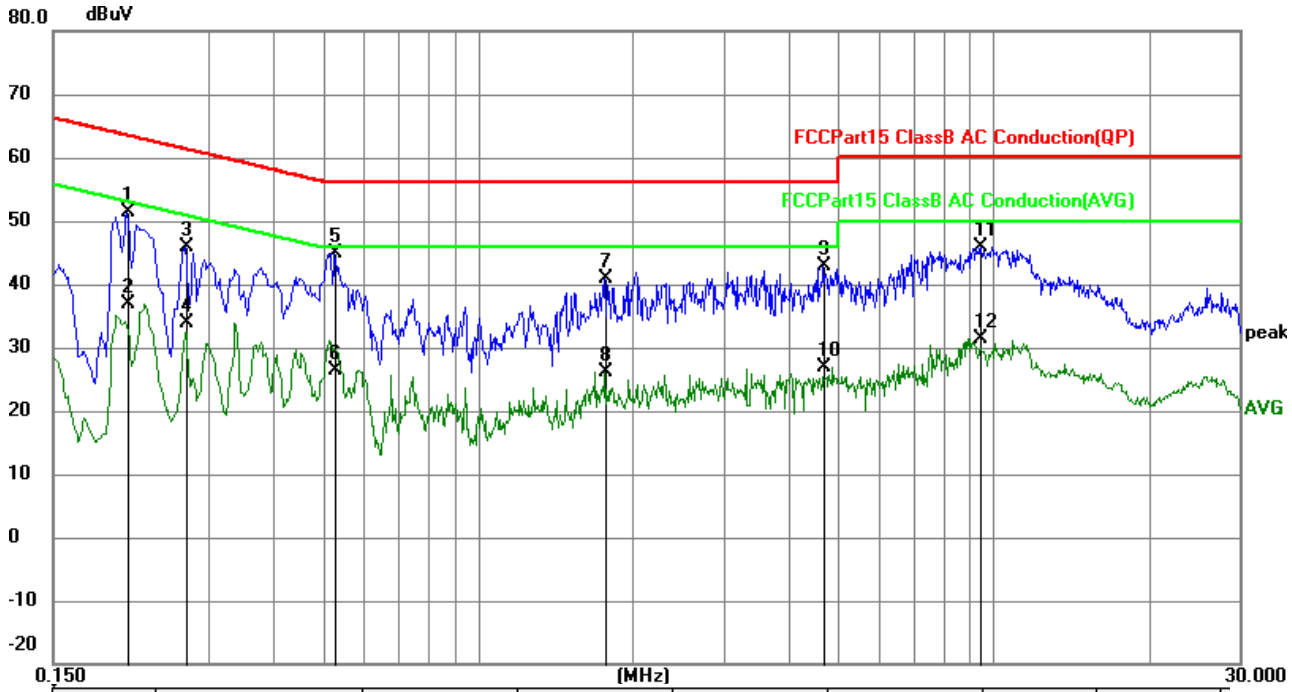
Measurement data

Line:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.2038	36.02	12.45	48.47	63.45	-14.98	QP
2	0.2038	26.11	12.45	38.56	53.45	-14.89	AVG
3	0.2714	32.42	12.41	44.83	61.07	-16.24	QP
4	0.2714	19.03	12.41	31.44	51.07	-19.63	AVG
5	0.4040	32.23	12.37	44.60	57.77	-13.17	QP
6	0.4040	24.57	12.37	36.94	47.77	-10.83	AVG
7	0.7480	29.23	12.33	41.56	56.00	-14.44	QP
8	0.7480	24.28	12.33	36.61	46.00	-9.39	AVG
9	2.0354	31.25	12.30	43.55	56.00	-12.45	QP
10	2.0354	19.15	12.30	31.45	46.00	-14.55	AVG
11	4.4069	30.84	12.33	43.17	56.00	-12.83	QP
12	4.4069	15.60	12.33	27.93	46.00	-18.07	AVG

Neutral:

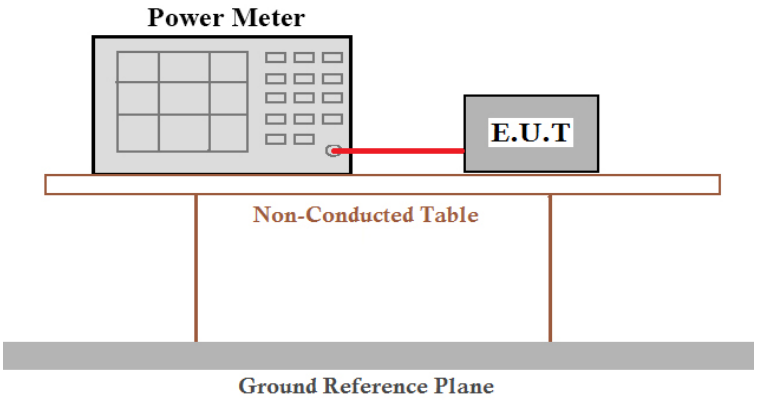


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.2084	38.81	12.45	51.26	63.27	-12.01	QP
2	0.2084	24.35	12.45	36.80	53.27	-16.47	AVG
3	0.2714	33.40	12.41	45.81	61.07	-15.26	QP
4	0.2714	21.38	12.41	33.79	51.07	-17.28	AVG
5	0.5279	32.51	12.36	44.87	56.00	-11.13	QP
6	0.5279	13.92	12.36	26.28	46.00	-19.72	AVG
7	1.7654	28.63	12.30	40.93	56.00	-15.07	QP
8	1.7654	13.76	12.30	26.06	46.00	-19.94	AVG
9	4.6768	30.46	12.33	42.79	56.00	-13.21	QP
10	4.6768	14.61	12.33	26.94	46.00	-19.06	AVG
11	9.4512	33.54	12.39	45.93	60.00	-14.07	QP
12	9.4512	18.97	12.39	31.36	50.00	-18.64	AVG

Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level =Receiver Read level + LISN Factor + Cable Loss
4. If the average limit is met when using a quasi-peak detector receiver, the EUT shall be deemed to meet both *limits and measurement with the average detector receiver is unnecessary.*

4.3 Conducted Peak Output Power

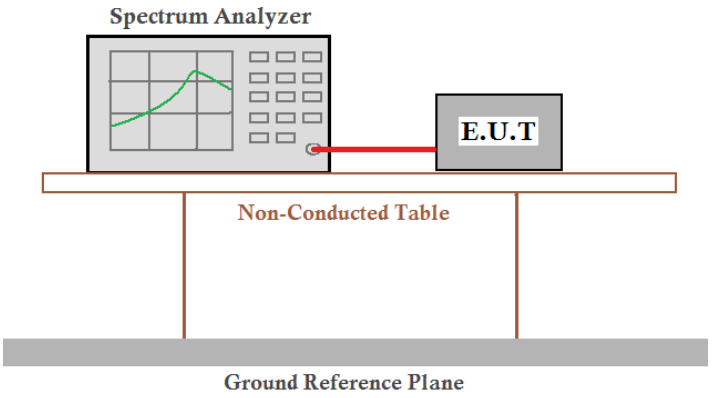
Test Requirement:	FCC Part15 E Section 15.407 (a)(1)/(a)(3)
Test Method:	ANSI C63.10:2013 and KDB 789033 D02 General U-NII Test Procedures New Rules v02r01
Limit:	5150-5250MHz : 250mW 5725~5850MHz : 1W
Test setup:	
Test Instruments:	Refer to section 3.0 for details
Test mode:	Refer to section 2.2 for details
Test results:	Pass

Measurement Data

Test Channel	Frequency (MHz)	Maximum output power (dBm)	LIMIT dBm	Result
TX 802.11a Mode				
CH36	5180	7.13	23.98	Pass
CH40	5200	6.62	23.98	Pass
CH48	5240	7.53	23.98	Pass
TX 802.11 n20 Mode				
CH36	5180	6.90	23.98	Pass
CH40	5200	6.72	23.98	Pass
CH48	5240	7.29	23.98	Pass
TX 802.11 ac20 Mode				
CH36	5180	6.28	23.98	Pass
CH40	5200	6.92	23.98	Pass
CH48	5240	7.35	23.98	Pass
TX 802.11 n40 Mode				
CH38	5190	5.91	23.98	Pass
CH46	5230	6.33	23.98	Pass
TX 802.11 ac40 Mode				
CH38	5190	6.05	23.98	Pass
CH46	5230	6.23	23.98	Pass
TX 802.11 ac80 Mode				
CH42	5210	5.03	23.98	Pass

Test Channel	Frequency (MHz)	Maximum output power. (dBm)	LIMIT dBm	Result
TX 802.11a Mode				
CH149	5745	7.10	30	Pass
CH157	5785	7.32	30	Pass
CH165	5825	7.52	30	Pass
TX 802.11 n20 Mode				
CH149	5745	6.93	30	Pass
CH157	5785	6.94	30	Pass
CH165	5825	6.64	30	Pass
TX 802.11 ac20 Mode				
CH149	5745	5.98	30	Pass
CH157	5785	6.21	30	Pass
CH165	5825	6.63	30	Pass
TX 802.11 n40 Mode				
CH151	5755	5.46	30	Pass
CH159	5795	5.80	30	Pass
TX 802.11 ac40 Mode				
CH151	5755	5.32	30	Pass
CH159	5795	5.95	30	Pass
TX 802.11 ac80 Mode				
CH155	5775	4.42	30	Pass

4.4 Channel Bandwidth

Test Requirement:	FCC Part15 E Section 15.407(a)(12)&15.407(e)
Test Method:	ANSI C63.10:2013 and KDB 789033 D02 General U-NII Test Procedures New Rules v02r01
Limit:	Measurements in the 5.725-5.85 GHz band, the minimum bandwidth 6 dB bandwidth of U-NII devices shall be at least 500KHz. Measurements in the 5.15-5.25 GHz, 5.25-5.35 GHz, and the 5.47-5.725 GHz bands are made over a bandwidth of 1 MHz or the 26 dB emission bandwidth of the device, whichever is less. A narrower resolution bandwidth can be used, provided that the measured power is integrated over the full reference bandwidth.
Test setup:	
Test Instruments:	Refer to section 3.0 for details
Test mode:	Refer to section 2.2 for details
Test results:	Pass

Measurement Data

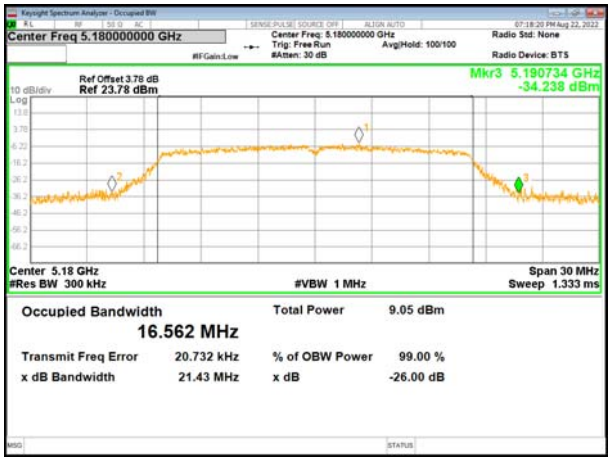
5180-5240MHz

Test CH	-26dB Channel Bandwidth (MHz)						Result
	802.11a	802.11n (HT20)	802.11ac (HT20)	802.11n (HT40)	802.11ac (HT40)	802.11ac (HT80)	
Lowest	21.43	24.20	20.86	39.68	40.09	--	Pass
Middle	21.38	23.88	21.97	--	--	79.16	
Highest	28.28	27.53	24.56	39.65	39.85	--	

Test CH	99% Occupy Bandwidth (MHz)						Result
	802.11a	802.11n (HT20)	802.11ac (HT20)	802.11n (HT40)	802.11ac (HT40)	802.11ac (HT80)	
Lowest	16.44	17.56	17.56	35.98	36.01	--	Pass
Middle	16.44	17.61	17.55	--	--	75.18	
Highest	16.56	17.66	17.56	35.89	35.90	--	

Test plot

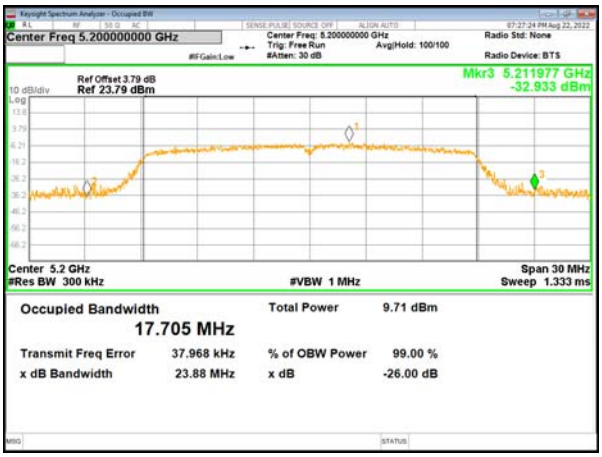
(802.11a) plot on channel 36



(802.11 n20) plot on channel 36

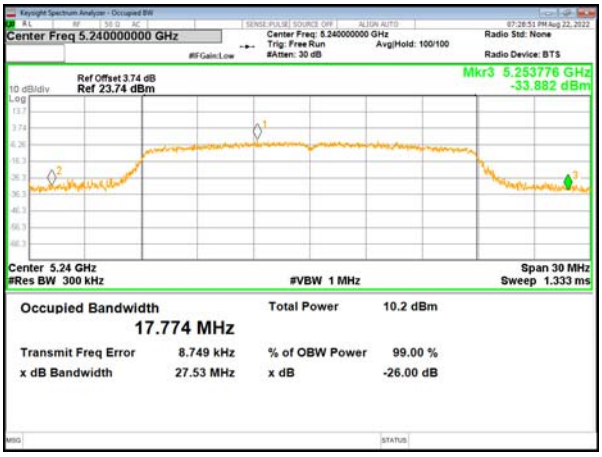
(802.11a) plot on channel 40

(802.11 n20) plot on channel 40



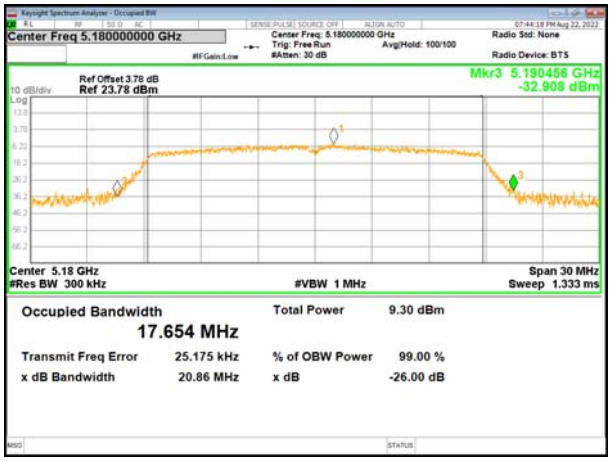
(802.11a) plot on channel 48

(802.11 n20) plot on channel 48

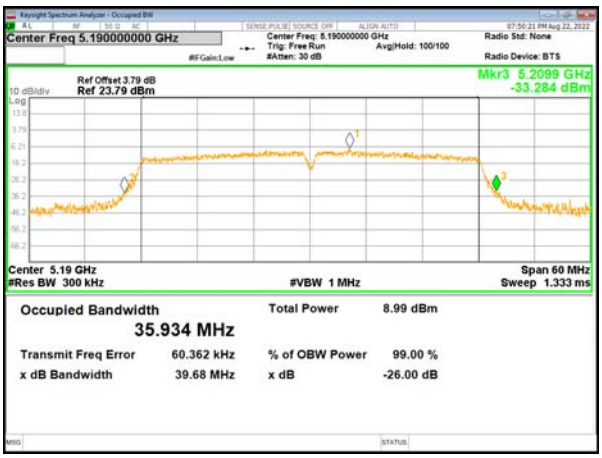


Test plot

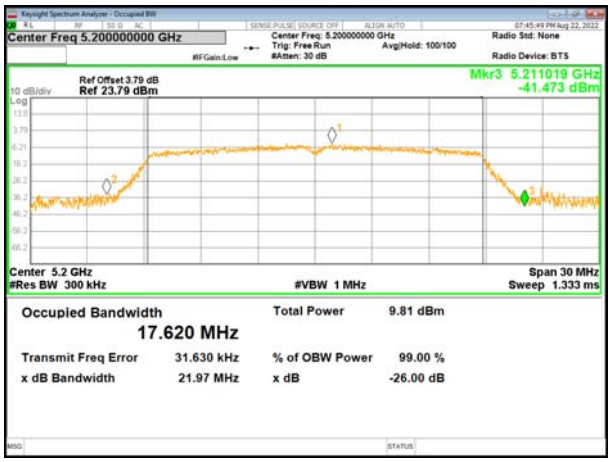
(802.11ac20) plot on channel 36



(802.11 n40) plot on channel 38



(802.11ac20) plot on channel 40

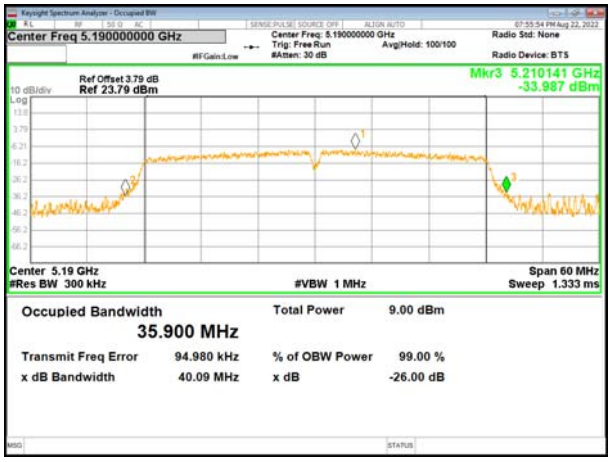


(802.11 n40) plot on channel 46

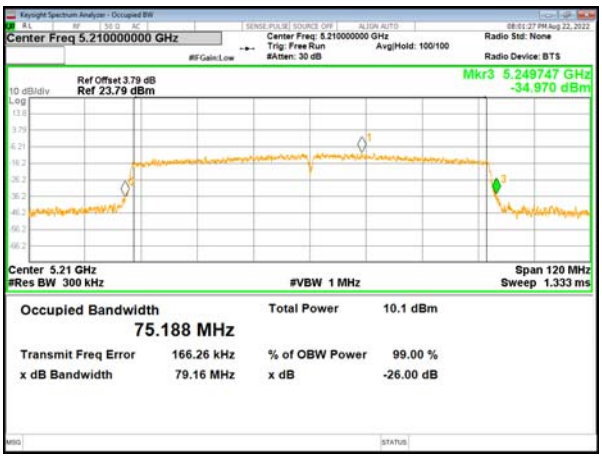
(802.11ac20) plot on channel 48

Test plot

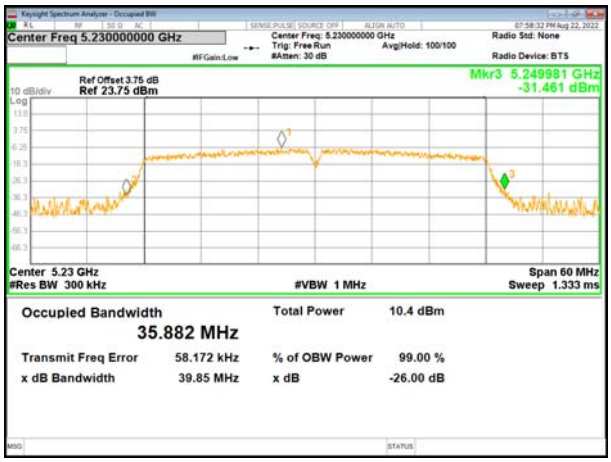
(802.11ac40) plot on channel 38



(802.11ac80) plot on channel 42



(802.11ac40) plot on channel 46



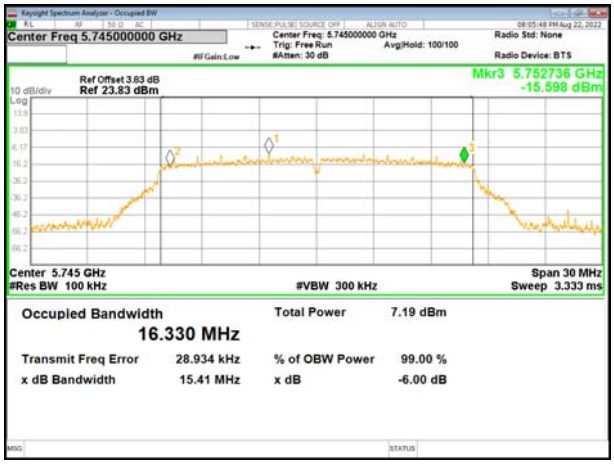
5745-5825MHz

Test CH	-6dB Channel Bandwidth (MHz)						Limit (KHz)	Result
	802.11a	802.11n (HT20)	802.11ac (HT20)	802.11n (HT40)	802.11ac (HT40)	802.11ac (HT80)		
Lowest	15.41	14.16	15.86	33.87	35.03	--	>500	Pass
Middle	15.47	13.86	13.20	--	--	75.06		
Highest	15.12	15.00	15.05	33.87	33.85	--		

Remark: “---“is not applicable

Test plot

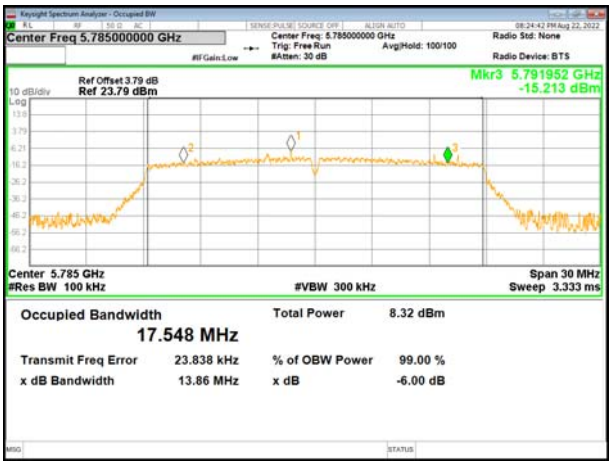
(802.11a) plot on channel 149



(802.11 n20) plot on channel 149

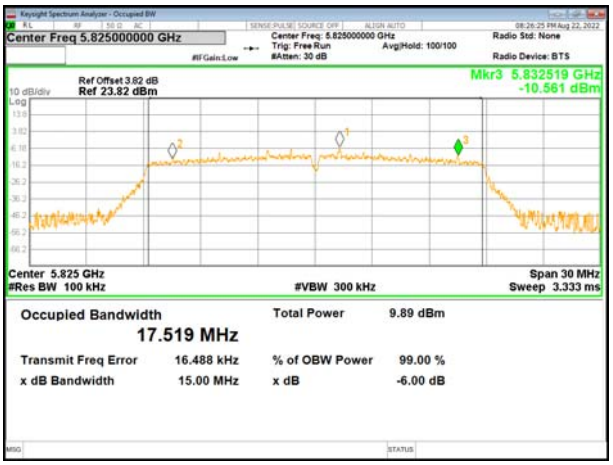
(802.11a) plot on channel 157

(802.11 n20) plot on channel 157



(802.11a) plot on channel 165

(802.11 n20) plot on channel 165



Test plot

(802.11ac20) plot on channel 149

(802.11 n40) plot on channel 151

(802.11ac20) plot on channel 157

(802.11 n40) plot on channel 159

(802.11ac20) plot on channel 165

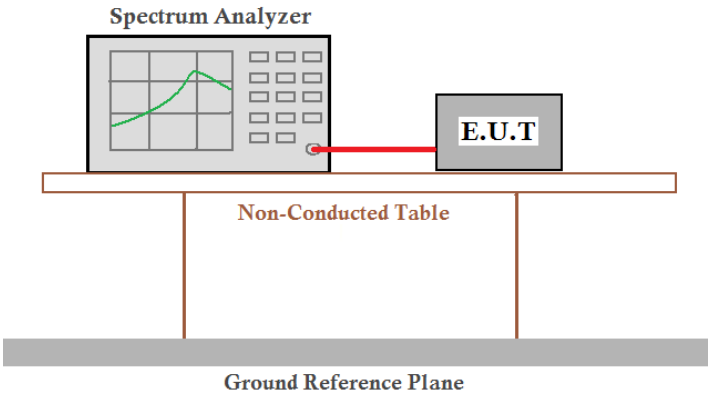
Test plot

(802.11 ac40) plot on channel 151

(802.11 ac80) plot on channel 155

(802.11 ac40) plot on channel 159

4.5 Power Spectral Density

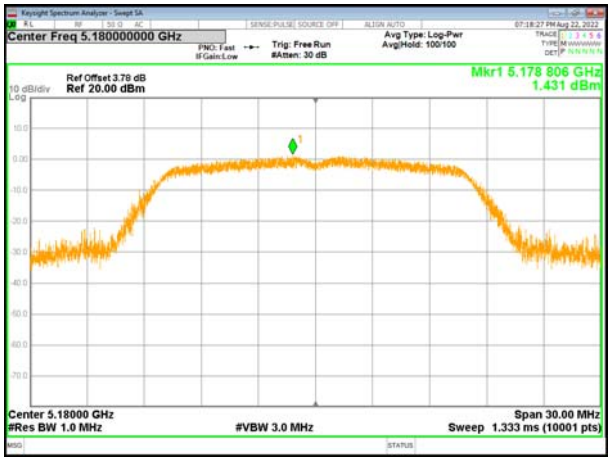
Test Requirement:	FCC Part15 E Section 15.407(a)(1)/ (a)(3)
Test Method:	ANSI C63.10:2013 and KDB 789033 D02 General U-NII Test Procedures New Rules v02r01
Limit:	Frequency band (MHz) / Limit 5150-5250 / ≤17dBm/1MHz for master device 5150-5250 / ≤11dBm/1MHz for client device 5250-5350 / ≤11dBm/1MHz for client device 5470-5725 / ≤11dBm/1MHz for client device 5725-5850 / ≤30dBm/500kHz
Test setup:	
Test Instruments:	Refer to section 3.0 for details
Test mode:	Refer to section 2.2 for details
Test results:	Pass

Measurement Data

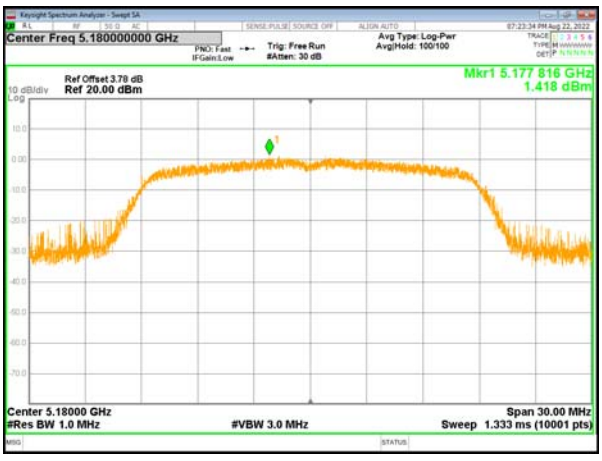
5180-5240MHz

Mode	Frequency	Measured Power Density (dBm/MHz)	Limit (dBm/MHz)
802.11 a	5180 MHz	1.431	11
	5200 MHz	2.685	11
	5240 MHz	2.958	11
802.11 n20	5180 MHz	1.418	11
	5200 MHz	1.589	11
	5240 MHz	1.98	11
802.11 ac20	5180 MHz	1.427	11
	5200 MHz	2.904	11
	5240 MHz	2.817	11
802.11 n40	5190 MHz	-1.841	11
	5230 MHz	-0.824	11
802.11 ac40	5190 MHz	-2.12	11
	5230 MHz	-0.749	11
802.11 ac80	5210 MHz	-4.096	11

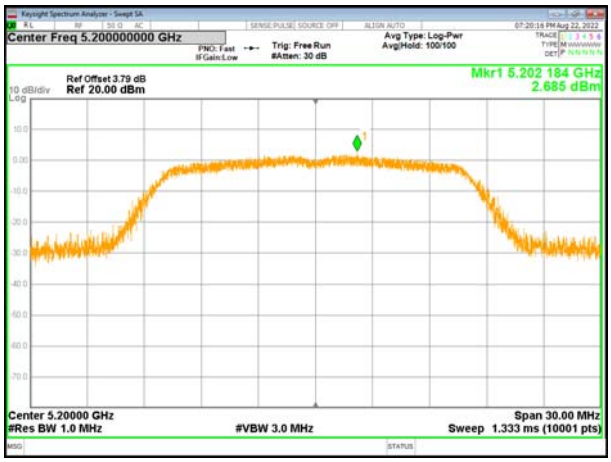
(802.11a) PSD plot on channel 36



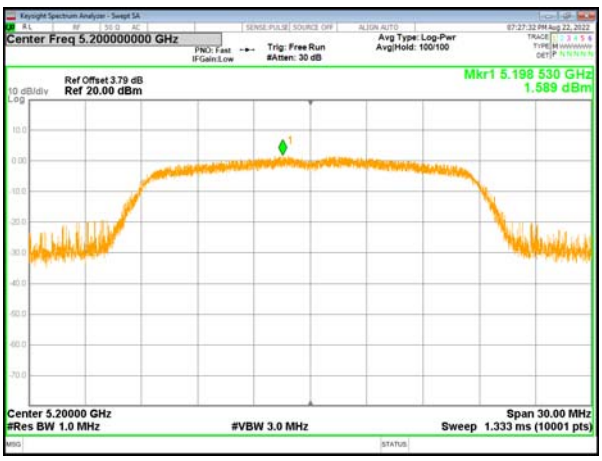
(802.11n20) PSD plot on channel 36



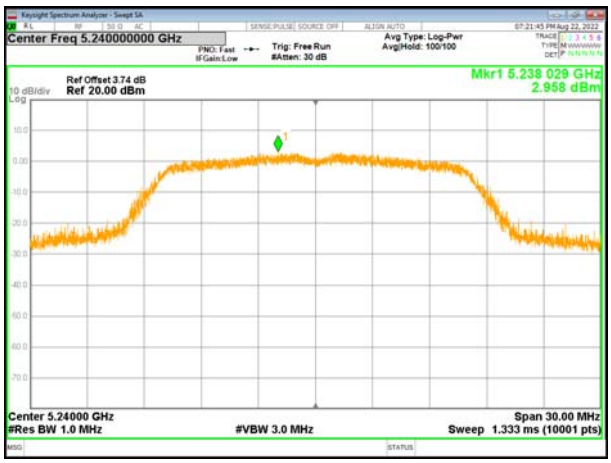
(802.11a) PSD plot on channel 40



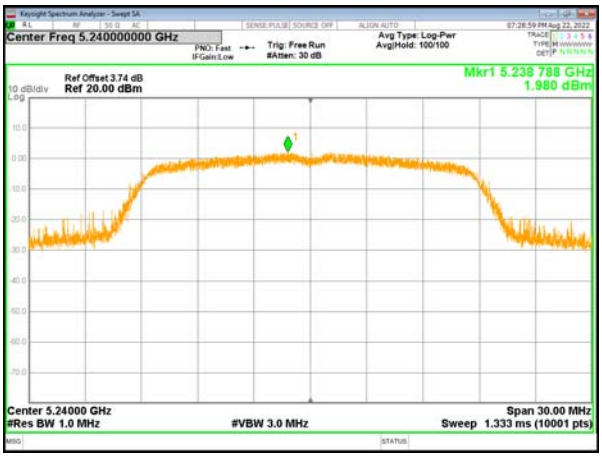
(802.11n20) PSD plot on channel 40



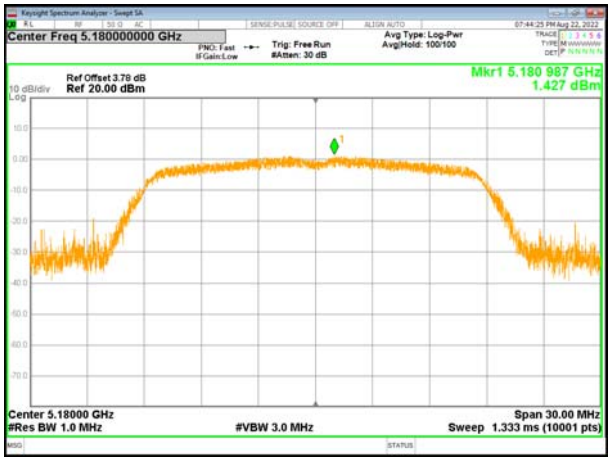
(802.11a) PSD plot on channel 48



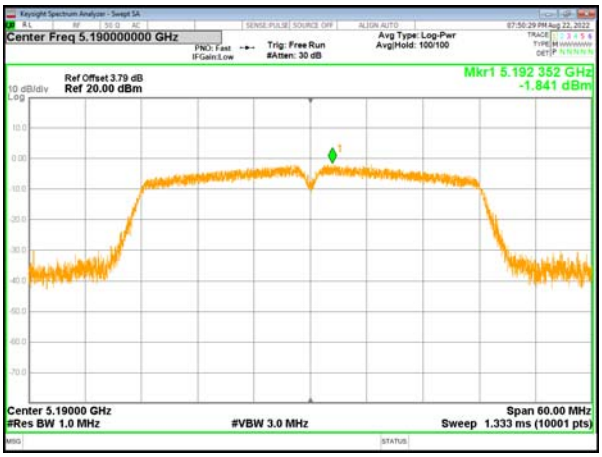
(802.11n20) PSD plot on channel 48



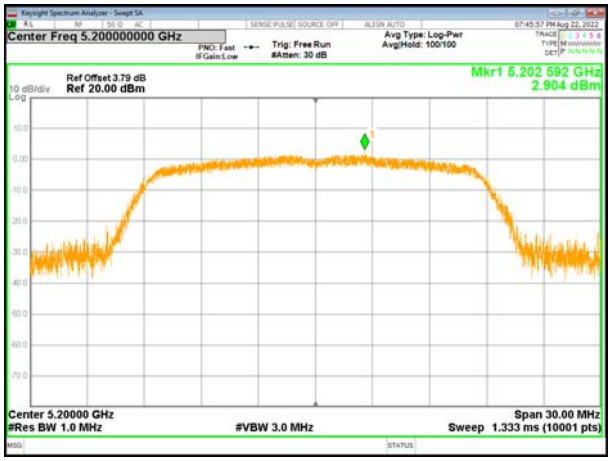
(802.11ac20) PSD plot on channel 36



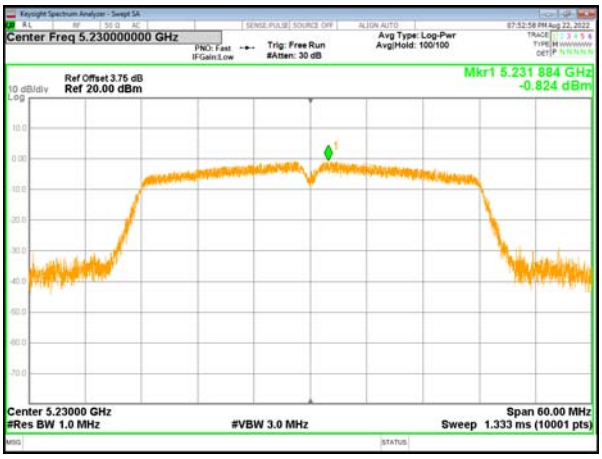
(802.11n40) PSD plot on channel 38



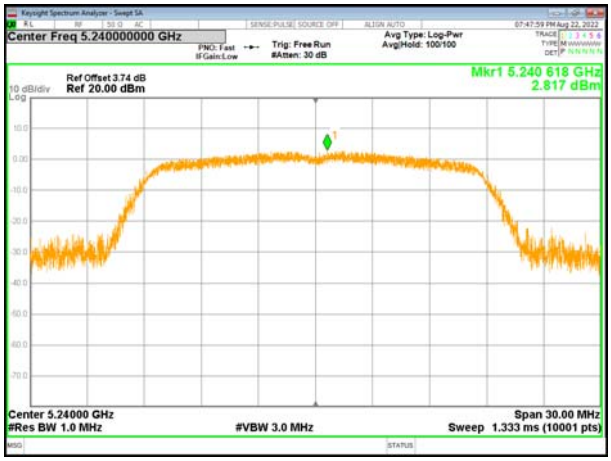
(802.11ac20) PSD plot on channel 40



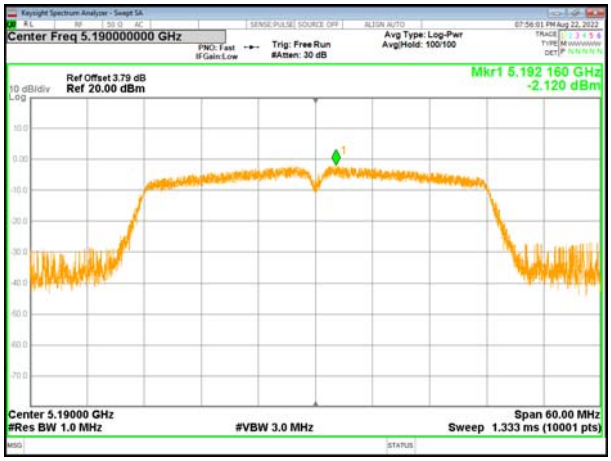
(802.11n40) PSD plot on channel 46



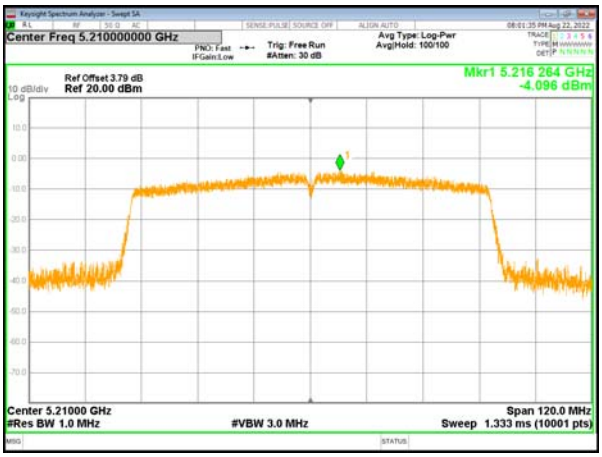
(802.11ac20) PSD plot on channel 48



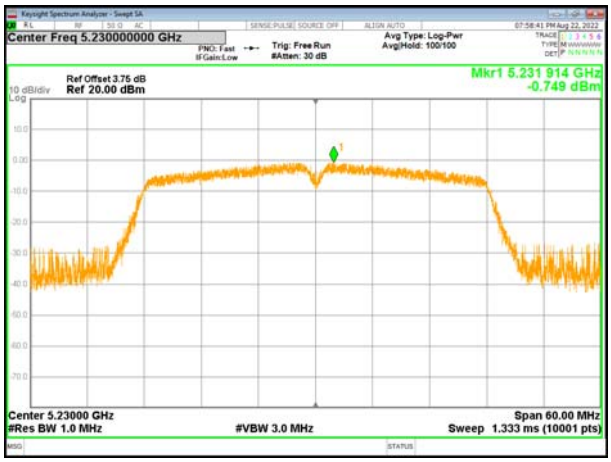
(802.11ac40) PSD plot on channel 38



(802.11ac80) PSD plot on channel 42



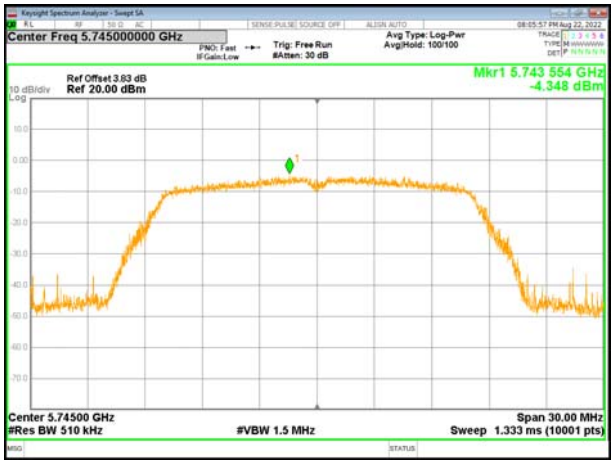
(802.11ac40) PSD plot on channel 46



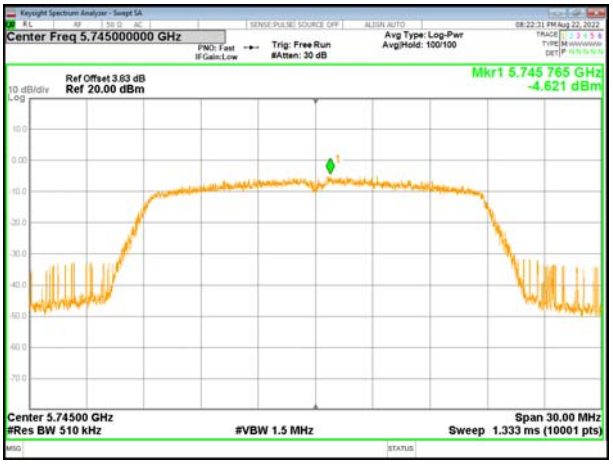
Mode	Frequency	Measured Power Density (dBm/510KHz)	Measured Power Density (dBm/500KHz)	Limit (dBm/MHz)
802.11 a	5745 MHz	1.208	1.122	30
	5785 MHz	1.155	1.069	30
	5825 MHz	1.431	1.345	30
802.11 n20	5745 MHz	0.817	0.731	30
	5785 MHz	0.187	0.101	30
	5825 MHz	0.371	0.285	30
802.11 ac20	5745 MHz	0.567	0.481	30
	5785 MHz	0.525	0.439	30
	5825 MHz	0.997	0.911	30
802.11 n40	5755 MHz	-2.615	-2.701	30
	5795 MHz	-2.477	-2.563	30
802.11 ac40	5755 MHz	-3.156	-3.242	30
	5795 MHz	-2.627	-2.713	30
802.11 AC80	5775 MHz	-6.326	-6.412	30

Note: If the measurement is X dBm/510kHz, thus X dBm/510kHz = $(10^{X/10})$*(500 / 510) dBm/500kHz

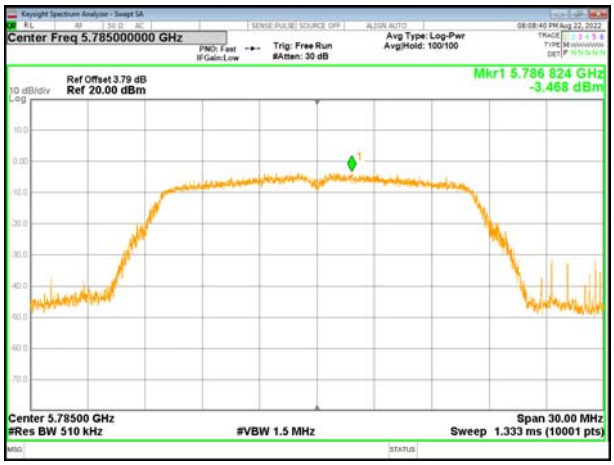
(802.11a) PSD plot on channel 149



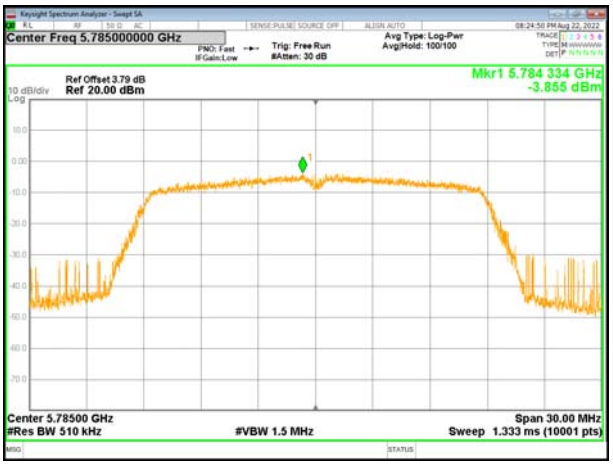
(802.11n20) PSD plot on channel 149



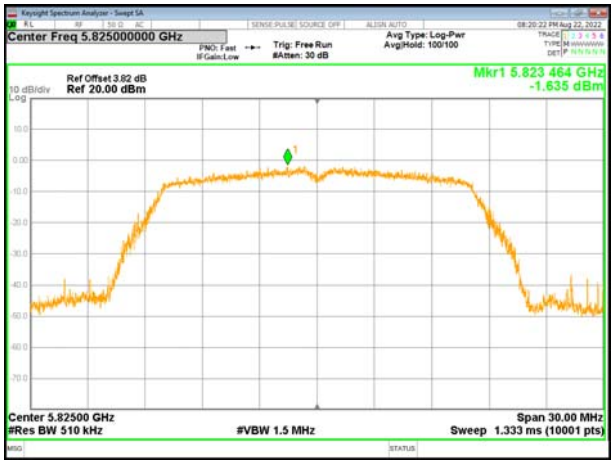
(802.11a) PSD plot on channel 157



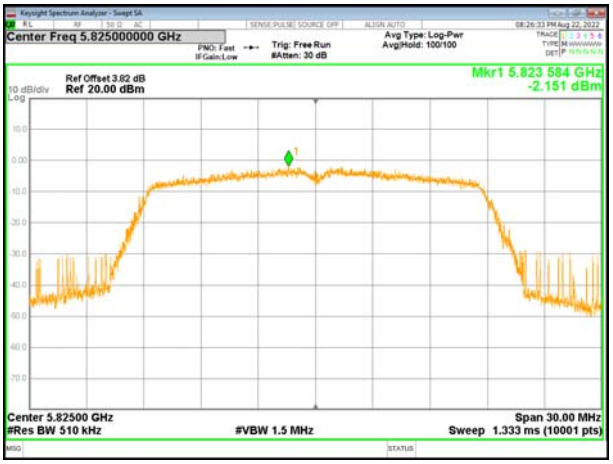
(802.11n20) PSD plot on channel 157



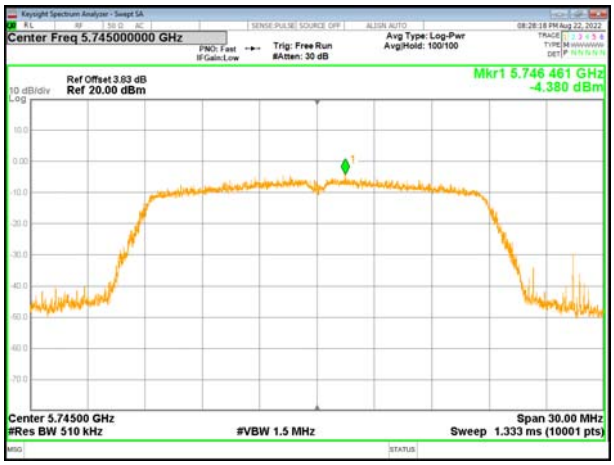
(802.11a) PSD plot on channel 165



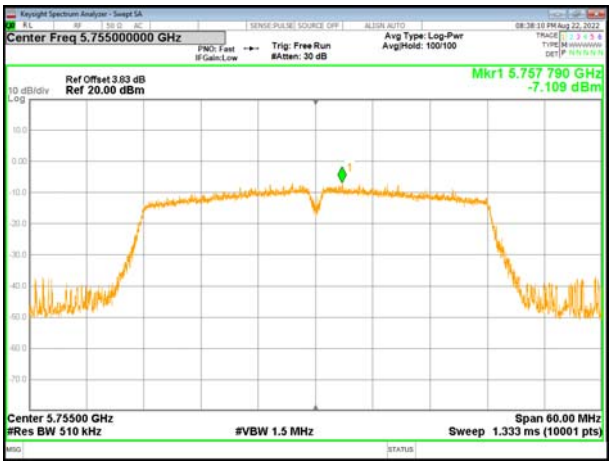
(802.11n20) PSD plot on channel 165



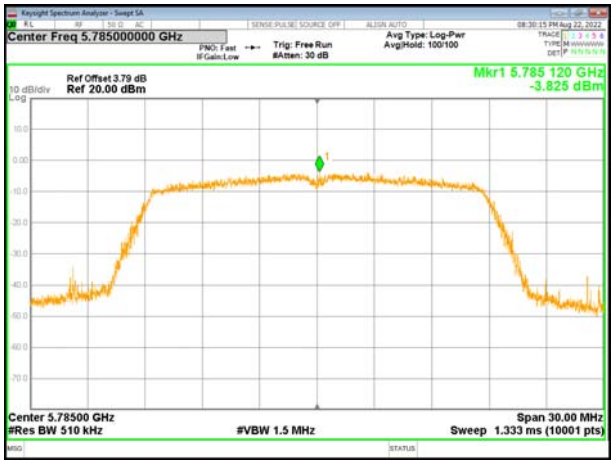
(802.11ac20) PSD plot on channel 149



(802.11n40) PSD plot on channel 151

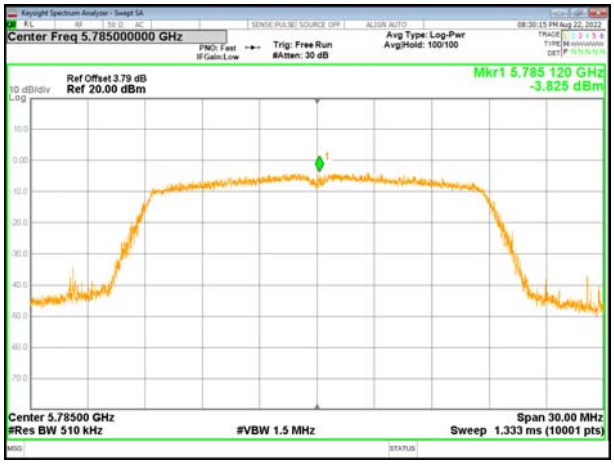


(802.11ac20) PSD plot on channel 157

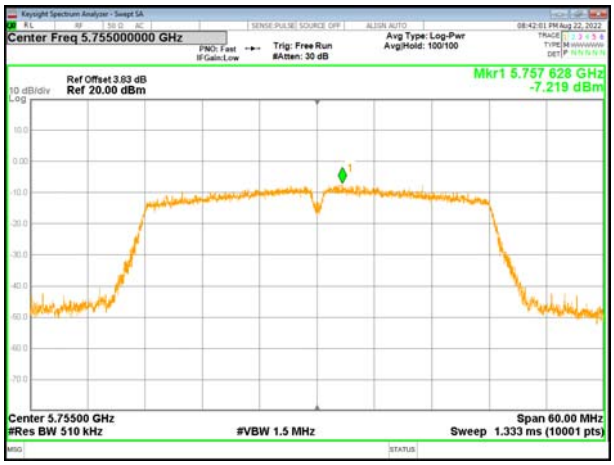


(802.11n40) PSD plot on channel 159

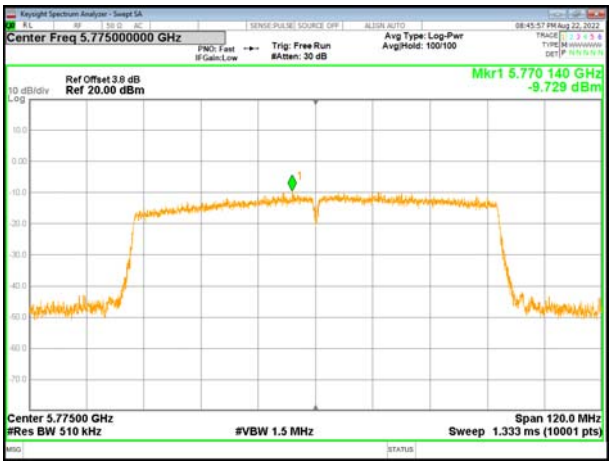
(802.11ac20) PSD plot on channel 165



(802.11ac40) PSD plot on channel 151



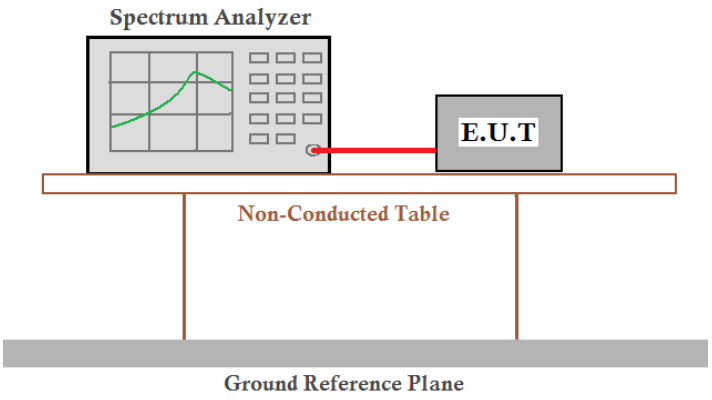
(802.11ac80) PSD plot on channel 155



(802.11ac40) PSD plot on channel 159

4.6 Band edge

4.6.1 Conducted test Method

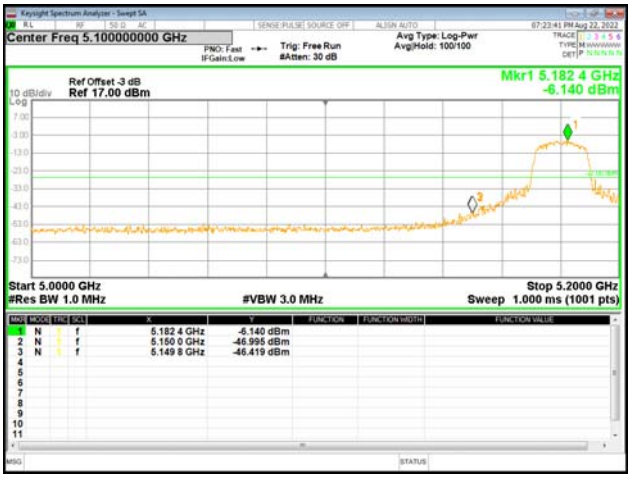
Test Requirement:	FCC Part15 C Section 15.209 and 15.205
Test Method:	ANSI C63.10: 2013
Limit:	All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.
Test setup:	
Test Procedure:	1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator. 2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range. 3. Set RBW of spectrum analyzer to 1 MHz with a convenient frequency span. 4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency. 5. Repeat above procedures until all measured frequencies were complete..
Test Instruments:	Refer to section 3.0 for details
Test mode:	Refer to section 2.2 for details
Test results:	Pass

Remarks:/

5.180~5.240 GHz

(802.11a) Band Edge, Left Side

(802.11n20) Band Edge, Left Side



(802.11a) Band Edge, Right Side

(802.11n20) Band Edge, Right Side

5.180~5.240 GHz

(802.11ac20) Band Edge, Left Side

(802.11n40) Band Edge, Left Side

(802.11ac20) Band Edge, Right Side

(802.11n40) Band Edge, Right Side

5.180~5.240 GHz

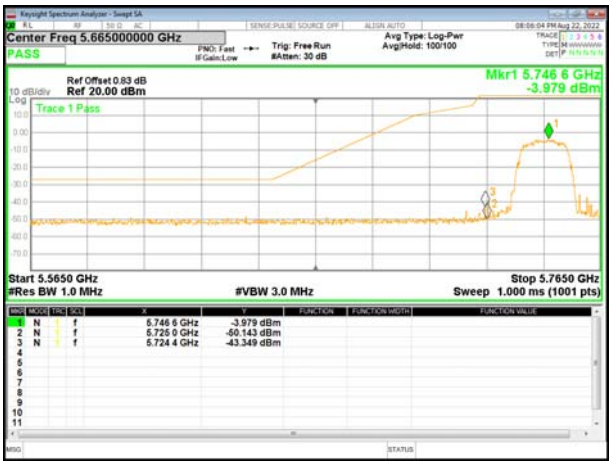
(802.11ac40) Band Edge, Left Side

(802.11ac80) Band Edge

(802.11ac40) Band Edge, Right Side

5.745~5.825 GHz

(802.11a) Band Edge, Left Side



(802.11n20) Band Edge, Left Side

(802.11a) Band Edge, Right Side

(802.11n20) Band Edge, Right Side

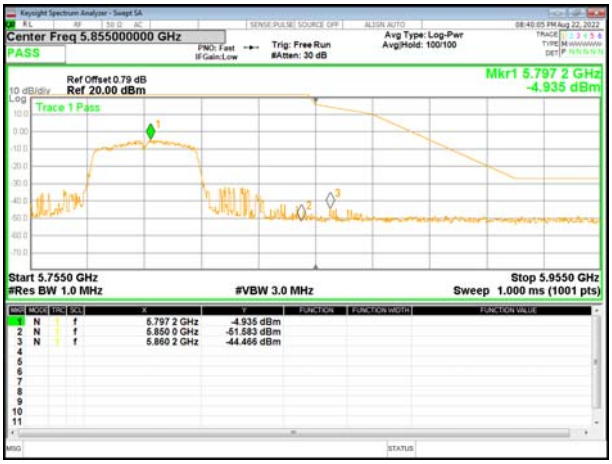
5.745~5.825 GHz

(802.11ac20) Band Edge, Left Side

(802.11n40) Band Edge, Left Side

(802.11ac20) Band Edge, Right Side

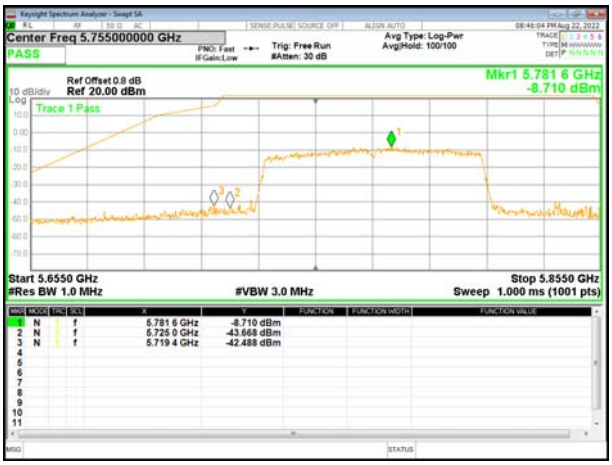
(802.11n40) Band Edge, Right Side



5.745~5.825 GHz

(802.11ac40) Band Edge, Left Side

(802.11ac80) Band Edge



(802.11ac40) Band Edge, Right Side

4.7 Spurious Emission

4.7.1 Radiated Emission Method

Test Requirement:	FCC Part15 C Section 15.209, Part 15E Section 15.407(b)(4)
Test Method:	ANSI C63.10:2013
Test Frequency Range:	9kHz to 40GHz
Test site:	Measurement Distance: 3m

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

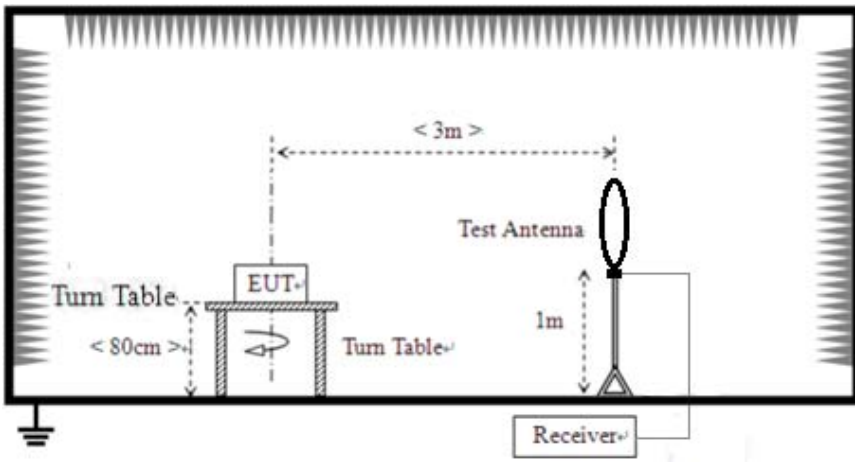
Limit:

Frequency	Limit (uV/m)	Value	Measurement Distance
0.009MHz-0.490MHz	2400/F(KHz)	QP	300m
0.490MHz-1.705MHz	24000/F(KHz)	QP	300m
1.705MHz-30MHz	30	QP	30m
30MHz-88MHz	100	QP	3m
88MHz-216MHz	150	QP	
216MHz-960MHz	200	QP	
960MHz-1GHz	500	QP	

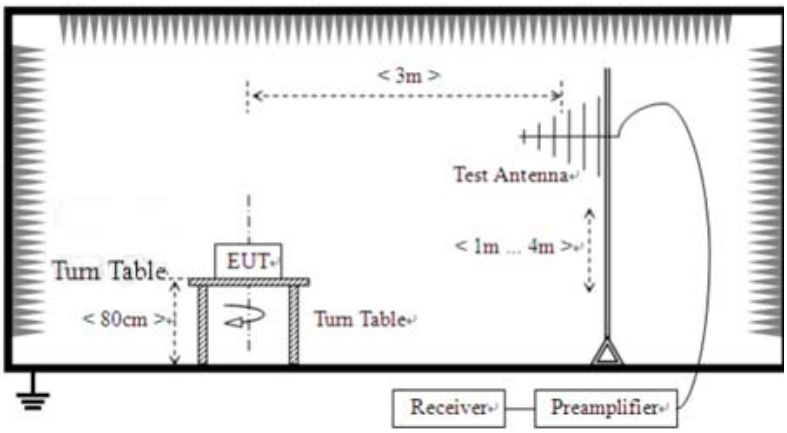
Frequency	Limit (dBm/MHz)	Remark
Above 1GHz	-27.0	Peak Value

Test setup:

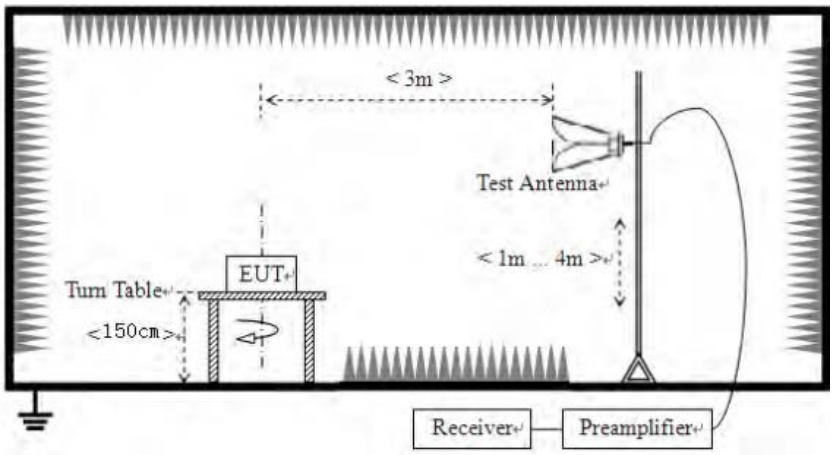
For radiated emissions from 9kHz to 30MHz



For radiated emissions from 30MHz to1GHz



For radiated emissions above 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 rota 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. 7. The radiation measurements are performed in X, Y, Z axis positioning. And found the X axis positioning which it is worse case, only the test worst case mode is recorded in the report.					
Test Instruments:	Refer to section 3.0 for details					
Test mode:	Refer to section 2.2 for details					
Test environment:	Temp.:	24.9 °C	Humid.:	51%	Press.:	1012mbar
Test voltage:	DC 5V from adapter					
Test results:	Pass					

Remarks:

1. *All antennas was tested, only show the worst case 802.11n20 mode test data.*
2. *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:

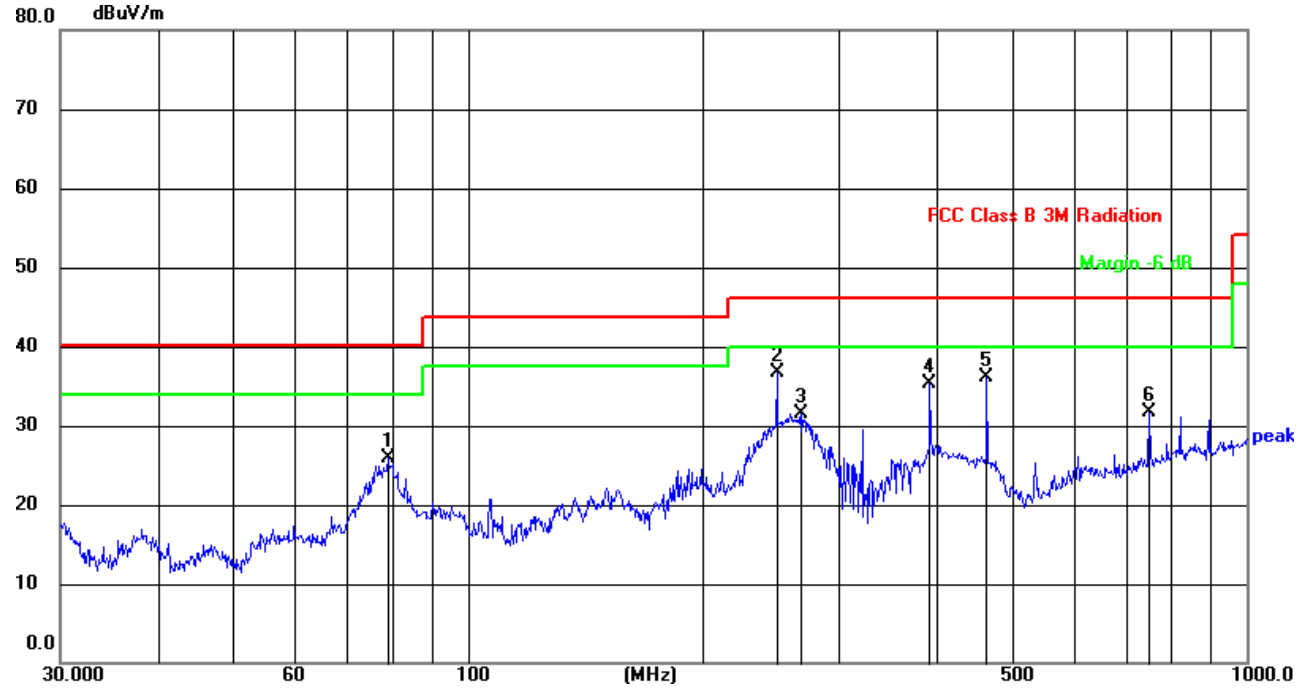
9 kHz ~ 30 MHz

The emission from 9 kHz to 30MHz was pre-tested and found the result was 20dB lower than the limit, and according to 15.31(o) & RSS-Gen 6.13, the test result no need to reported.

Below 1GHz

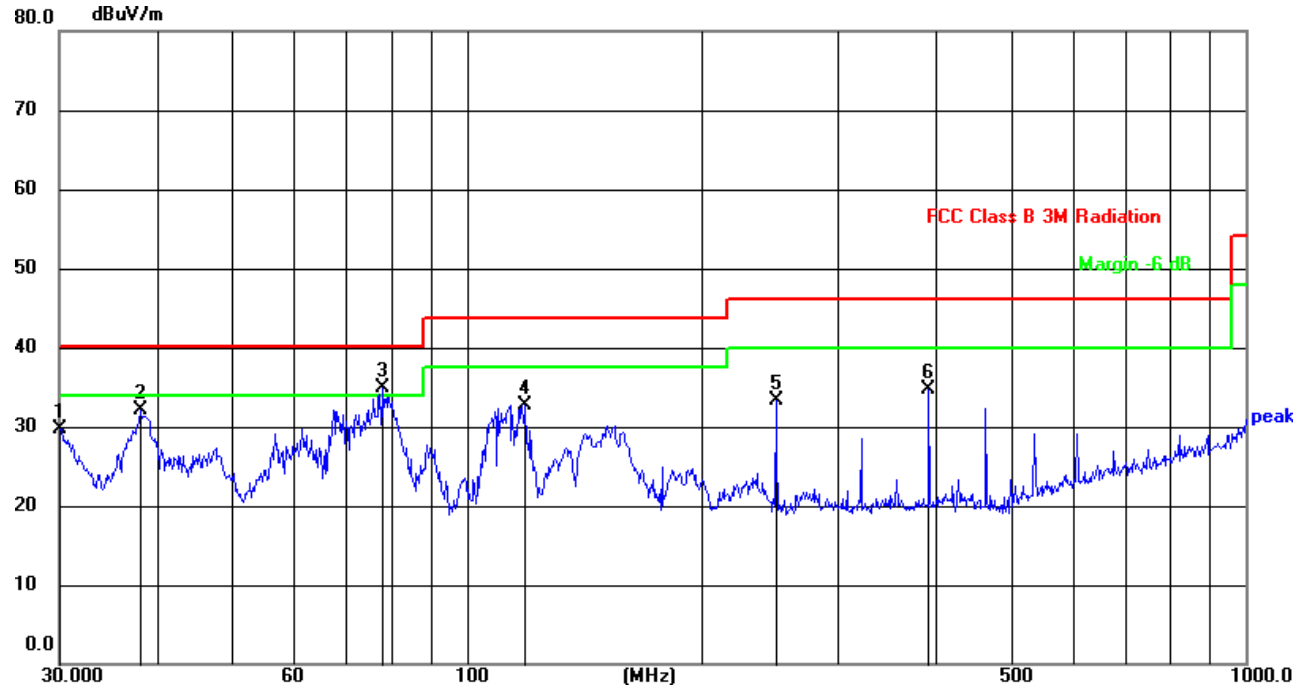
Temperature：	24.9℃	Relative Humidity：	51%
Pressure：	1010 hPa	Test Voltage ：	DC5V
Test Mode ：	5.2G TX- 802.11n20		

Horizontal:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	78.9651	46.42	-20.51	25.91	40.00	-14.09	QP
2	249.4250	55.01	-18.21	36.80	46.00	-9.20	QP
3	268.4852	49.65	-18.21	31.44	46.00	-14.56	QP
4	392.0950	51.89	-16.61	35.28	46.00	-10.72	QP
5	463.9696	50.59	-14.49	36.10	46.00	-9.90	QP
6	750.1082	39.88	-8.17	31.71	46.00	-14.29	QP

Vertical:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	30.0000	51.32	-21.52	29.80	40.00	-10.20	QP
2	38.0782	52.91	-20.86	32.05	40.00	-7.95	QP
3	77.8653	55.24	-20.34	34.90	40.00	-5.10	QP
4	119.0177	51.88	-19.13	32.75	43.50	-10.75	QP
5	249.4250	51.53	-18.21	33.32	46.00	-12.68	QP
6	392.0950	51.38	-16.61	34.77	46.00	-11.23	QP

Remarks:
1. Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.
3. The test data shows only the worst case 802.11n20 mode

Above 1GHz:

Temperature：	24.9℃	Relative Humidity：	51%
Pressure：	1010 hPa	Test Voltage ：	DC5V
Test Mode ：	5.2G TX- 802.11n20		

802.11n20

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel:5180MHz									
V	10360.00	47.05	46.20	8.27	38.50	47.62	68.20	-26.38	PK
V	10360.00	37.54	46.20	8.27	38.50	38.11	54.00	-15.89	AV
V	15540.00	44.30	46.30	10.35	38.70	47.05	74.00	-26.95	PK
V	15540.00	34.73	46.30	10.35	38.70	37.48	54.00	-16.52	AV
V	20720.00	52.98	57.40	11.93	37.80	45.31	68.20	-28.69	PK
V	20720.00	43.41	57.40	11.93	37.80	35.74	54.00	-18.26	AV
V	25900.00	50.73	56.50	13.45	39.70	47.38	68.20	-26.62	PK
V	25900.00	40.78	56.50	13.45	39.70	37.43	54.00	-16.57	AV
H	10360.00	46.98	46.20	8.27	38.50	47.55	68.20	-26.45	PK
H	10360.00	36.23	46.20	8.27	38.50	36.80	54.00	-17.20	AV
H	15540.00	43.36	46.30	10.35	38.70	46.11	74.00	-27.89	PK
H	15540.00	32.40	46.30	10.35	38.70	35.15	54.00	-18.85	AV
H	20720.00	55.10	57.40	11.93	37.80	47.43	68.20	-26.57	PK
H	20720.00	44.27	57.40	11.93	37.80	36.60	54.00	-17.40	AV
H	25900.00	51.70	56.50	13.45	39.70	48.35	68.20	-25.65	PK
H	25900.00	40.82	56.50	13.45	39.70	37.47	54.00	-16.53	AV

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Middle Channel:5200MHz									
V	10400.00	50.14	46.2	8.27	38.5	50.71	68.20	-23.29	PK
V	10400.00	39.90	46.2	8.27	38.5	40.47	54.00	-13.53	AV
V	15600.00	48.35	46.3	10.35	38.4	50.80	74.00	-23.20	PK
V	15600.00	38.59	46.3	10.35	38.4	41.04	54.00	-12.96	AV
V	20800.00	59.38	57.4	11.93	37.8	51.71	68.20	-22.29	PK
V	20800.00	48.65	57.4	11.93	37.8	40.98	54.00	-13.02	AV
V	26000.00	54.00	56.5	13.45	39.8	50.75	68.20	-23.25	PK
V	26000.00	45.30	56.5	13.45	39.8	42.05	54.00	-11.95	AV
H	10400.00	50.82	46.2	8.27	38.5	51.39	68.20	-22.61	PK
H	10400.00	40.20	46.2	8.27	38.5	40.77	54.00	-13.23	AV
H	15600.00	48.33	46.3	10.35	38.4	50.78	74.00	-23.22	PK
H	15600.00	38.59	46.3	10.35	38.4	41.04	54.00	-12.96	AV
H	20800.00	58.21	57.4	11.93	37.8	50.54	68.20	-23.46	PK
H	20800.00	46.33	57.4	11.93	37.8	38.66	54.00	-15.34	AV
H	26000.00	53.68	56.5	13.45	39.8	50.43	68.20	-23.57	PK
H	26000.00	44.41	56.5	13.45	39.8	41.16	54.00	-12.84	AV

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
High Channel:5240MHz									
V	10480.00	49.81	46.20	8.27	38.60	50.48	68.20	-23.52	PK
V	10480.00	39.11	46.20	8.27	38.60	39.78	54.00	-14.22	AV
V	15720.00	47.21	46.30	10.35	38.40	49.66	74.00	-24.34	PK
V	15720.00	36.68	46.30	10.35	38.40	39.13	54.00	-14.87	AV
V	20960.00	58.02	57.40	11.93	37.50	50.05	68.20	-23.95	PK
V	20960.00	48.85	57.40	11.93	37.50	40.88	54.00	-13.12	AV
V	26200.00	53.73	56.50	13.45	40.10	50.78	68.20	-23.22	PK
V	26200.00	43.64	56.50	13.45	40.10	40.69	54.00	-13.31	AV
H	10480.00	50.07	46.20	8.27	38.60	50.74	68.20	-23.26	PK
H	10480.00	39.11	46.20	8.27	38.60	39.78	54.00	-14.22	AV
H	15720.00	47.56	46.30	10.35	38.40	50.01	74.00	-23.99	PK
H	15720.00	36.79	46.30	10.35	38.40	39.24	54.00	-14.76	AV
H	20960.00	58.21	57.40	11.93	37.50	50.24	68.20	-23.76	PK
H	20960.00	48.74	57.40	11.93	37.50	40.77	54.00	-13.23	AV
H	26200.00	53.41	56.50	13.45	40.10	50.46	68.20	-23.54	PK
H	26200.00	42.98	56.50	13.45	40.10	40.03	54.00	-13.97	AV

Remark:
1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
4. The worst mode is 802.11n20, only the worst data is recorded.

Temperature：	24.9℃	Relative Humidity：	51%
Pressure：	1010 hPa	Test Voltage ：	DC5V
Test Mode ：	5.8G TX- 802.11n20		

802.11n20

Polar (H/V)	Frequency (MHz)	Meter Readi g (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenn Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detect or Typ
Low Channel:5745MHz									
V	11490.00	51.02	46.10	8.77	39.10	52.79	74.00	-21.21	PK
V	11490.00	41.95	46.10	8.77	39.10	43.72	54.00	-10.28	AV
V	17235.00	48.32	47.60	11.10	38.70	50.52	68.20	-23.48	PK
V	17235.00	40.21	47.60	11.10	38.70	42.41	54.00	-11.59	AV
V	22980.00	58.02	56.90	12.73	37.70	51.55	74.00	-22.45	PK
V	22980.00	49.13	56.90	12.73	37.70	42.66	54.00	-11.34	AV
V	28725.00	54.47	55.60	14.25	40.30	53.42	68.20	-20.58	PK
V	28725.00	45.03	55.60	14.25	40.30	43.98	54.00	-10.02	AV
H	11490.00	51.54	46.10	8.77	39.10	53.31	74.00	-20.69	PK
H	11490.00	41.75	46.10	8.77	39.10	43.52	54.00	-10.48	AV
H	17235.00	49.45	47.60	11.10	38.70	51.65	68.20	-22.35	PK
H	17235.00	40.68	47.60	11.10	38.70	42.88	54.00	-11.12	AV
H	22980.00	60.47	56.90	12.73	37.70	54.00	74.00	-20.00	PK
H	22980.00	48.88	56.90	12.73	37.70	42.41	54.00	-11.59	AV
H	28725.00	56.66	55.60	14.25	40.30	55.61	68.20	-18.39	PK
H	28725.00	45.73	55.60	14.25	40.30	44.68	54.00	-9.32	AV

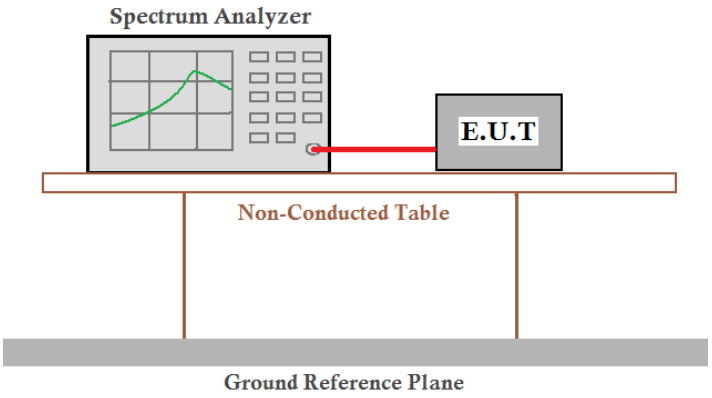
Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detect or Type
Middle Channel:5785MHz									
V	11570.00	41.18	46.10	8.77	39.10	42.95	74.00	-31.05	PK
V	11570.00	32.98	46.10	8.77	39.10	34.75	54.00	-19.25	AV
V	17355.00	40.26	47.70	11.10	38.40	42.06	68.20	-31.94	PK
V	17355.00	32.90	47.70	11.10	38.40	34.70	54.00	-19.30	AV
V	23140.00	47.79	56.90	12.73	37.80	41.42	74.00	-32.58	PK
V	23140.00	39.73	56.90	12.73	37.80	33.36	54.00	-20.64	AV
V	28925.00	44.17	55.60	14.25	40.50	43.32	68.20	-30.68	PK
V	28925.00	36.81	55.60	14.25	40.50	35.96	54.00	-18.04	AV
H	11570.00	42.76	46.10	8.77	39.10	44.53	74.00	-29.47	PK
H	11570.00	34.05	46.10	8.77	39.10	35.82	54.00	-18.18	AV
H	17355.00	39.95	47.70	11.10	38.40	41.75	68.20	-32.25	PK
H	17355.00	32.42	47.70	11.10	38.40	34.22	54.00	-19.78	AV
H	23140.00	48.60	56.90	12.73	37.80	42.23	74.00	-31.77	PK
H	23140.00	40.90	56.90	12.73	37.80	34.53	54.00	-19.47	AV
H	28925.00	45.56	55.60	14.25	40.50	44.71	68.20	-29.29	PK
H	28925.00	37.54	55.60	14.25	40.50	36.69	54.00	-17.31	AV

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detect or

	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Type
High Channel:5825MHz									
V	11650.00	44.04	46.10	8.77	39.10	45.81	74.00	-28.19	PK
V	11650.00	35.14	46.10	8.77	39.10	36.91	54.00	-17.09	AV
V	17475.00	41.95	47.90	11.23	38.90	44.18	68.20	-29.82	PK
V	17475.00	34.44	47.90	11.23	38.90	36.67	54.00	-17.33	AV
V	23300.00	51.43	57.10	12.73	37.80	44.86	68.20	-29.14	PK
V	23300.00	42.23	57.10	12.73	37.80	35.66	54.00	-18.34	AV
V	29125.00	48.23	55.80	14.25	40.50	47.18	68.20	-26.82	PK
V	29125.00	39.52	55.80	14.25	40.50	38.47	54.00	-15.53	AV
H	11650.00	46.00	46.10	8.77	39.10	47.77	74.00	-26.23	PK
H	11650.00	37.49	46.10	8.77	39.10	39.26	54.00	-14.74	AV
H	17475.00	43.14	47.90	11.23	38.90	45.37	68.20	-28.63	PK
H	17475.00	35.69	47.90	11.23	38.90	37.92	54.00	-16.08	AV
H	23300.00	52.81	57.10	12.73	37.80	46.24	68.20	-27.76	PK
H	23300.00	43.64	57.10	12.73	37.80	37.07	54.00	-16.93	AV
H	29125.00	49.26	55.80	14.25	40.50	48.21	68.20	-25.79	PK
H	29125.00	40.25	55.80	14.25	40.50	39.20	54.00	-14.80	AV

Remark:
1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
4. The worst mode is 802.11n20, only the worst data is recorded.

4.7.2 Conducted Emission Method

Test Requirement:	FCC Part15 C Section 15.209, Part 15E Section 15.407(b)(4)
Test Method:	ANSI C63.10:2013
Limit:	-27dBm/MHz
Test setup:	
Test Instruments:	Refer to section 3.0 for details
Test mode:	Refer to section 2.2 for details
Test results:	Pass

5180-5240MHz

Test Plot

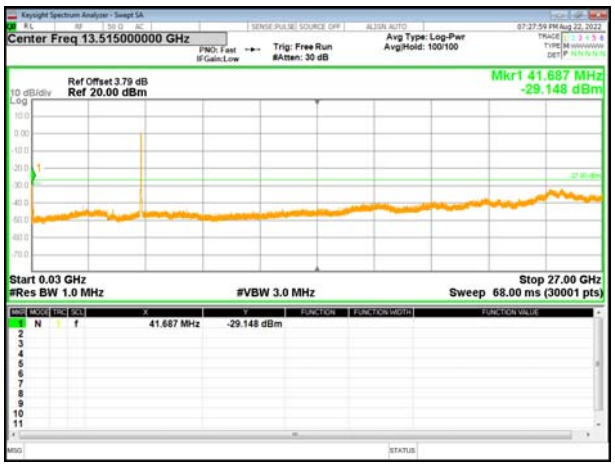
802.11a on channel 36

802.11a on channel 40

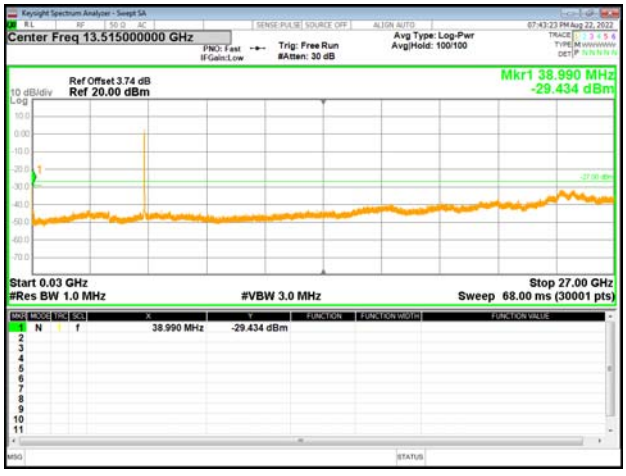
802.11a on channel 48

802.11n20 on channel 36

802.11n20 on channel 40

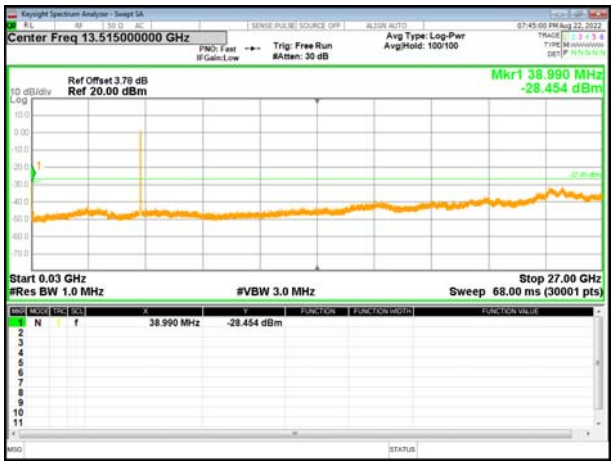


802.11n20 on channel 48



Test Plot

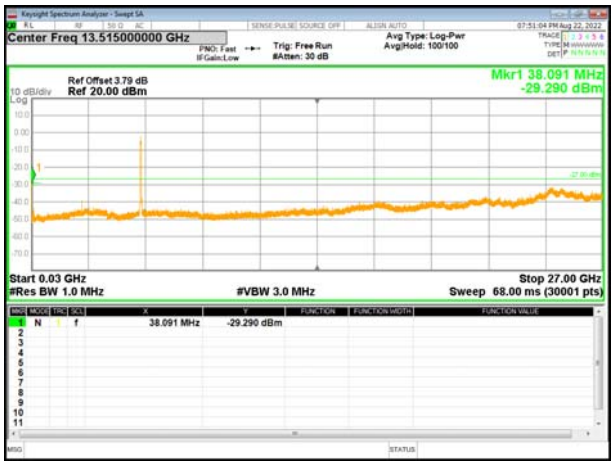
802.11ac20 on channel 36



802.11ac20 on channel 40

802.11ac20 on channel 48

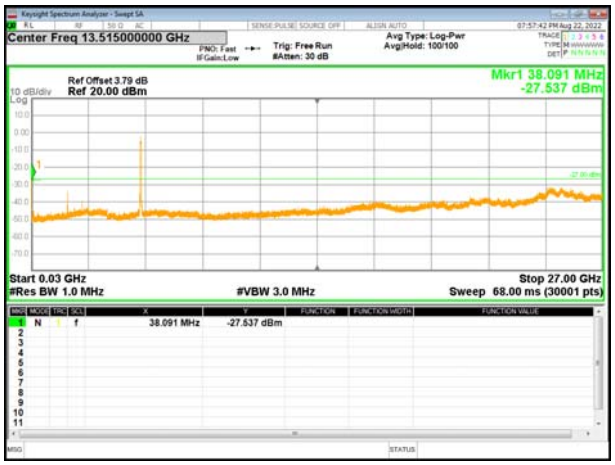
802.11n40 on channel 38



802.11n40 on channel 46

Test Plot

802.11ac40 on channel 38



802.11ac40 on channel 46

802.11ac80 on channel 42

5745-5825MHz

Test Plot

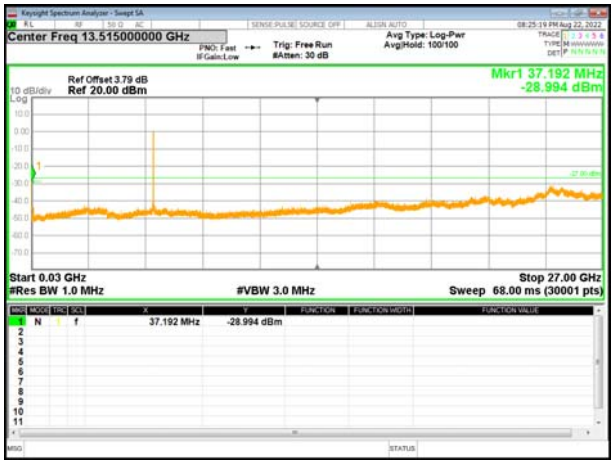
802.11a on channel 149

802.11a on channel 157

802.11a on channel 165

802.11n20 on channel 149

802.11n20 on channel 157



802.11n20 on channel 165

Test Plot

802.11ac20 on channel 149

802.11ac20 on channel 157

802.11ac20 on channel 165

802.11n40 on channel 151

802.11n40 on channel 159

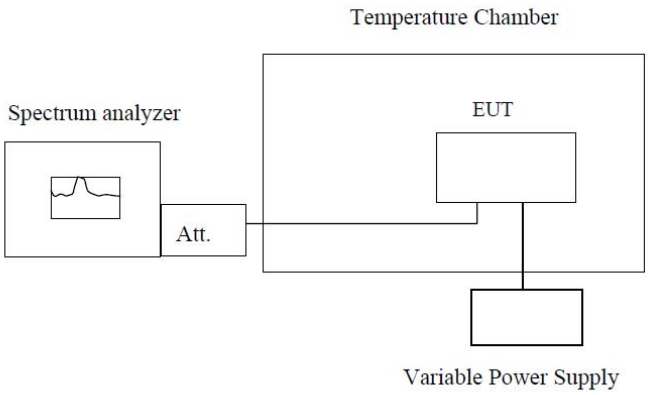
Test Plot

802.11ac40 on channel 151

802.11ac40 on channel 159

802.11ac80 on channel 155

4.8 Frequency stability

Test Requirement:	FCC Part15 C Section 15.407(g)
Test Method:	ANSI C63.10:2013, FCC Part 2.1055
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:	a. The EUT was placed inside the environmental test chamber and powered by nominal DC voltage. b. Turn the EUT on and couple its output to a spectrum analyzer. c. Turn the EUT off and set the chamber to the highest temperature specified. d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 Minutes. e. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature. f. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 Minute s. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.
Test setup:	 **Note :** Measurement setup for testing on Antenna connector
Test Instruments:	Refer to section 3.0 for details
Test mode:	Refer to section 2.2 for details
Test results:	Pass

Remark: Set the EUT transmits at un-modulation mode to test frequency stability.

Measurement data:

Frequency stability versus Temp.					
Power Supply: DC 5V					
Temp. (°C)	Operating Frequency (MHz)	0 minute	2 minute	5 minute	10 minute
		Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
-30	5180	5179.9820	5180.0600	5179.7900	5179.9290
	5190	5189.9780	5199.9340	5199.6640	5189.9400
	5200	5199.9730	5199.9590	5199.6890	5199.9310
	5210	5209.9790	5209.9370	5209.6660	5209.9320
	5220	5219.9740	5219.9520	5219.6810	5219.9380
	5230	5229.9720	5229.9450	5229.6730	5229.9560
	5240	5239.9450	5239.9530	5239.6810	5239.9410
-20	5180	5179.9730	5179.9360	5179.6750	5179.9500
	5190	5189.9640	5189.9260	5189.6740	5189.9460
	5200	5199.9720	5199.9340	5199.6670	5199.9410
	5210	5209.9640	5209.9260	5209.6560	5209.9470
	5220	5219.9850	5219.9470	5219.6660	5219.9410
	5230	5229.9630	5229.9250	5299.6590	5229.9390
	5240	5239.9810	5239.9430	5239.6670	5239.9120
-10	5180	5179.9820	5179.9450	5179.6540	5179.9290
	5190	5189.9780	5189.9400	5189.6650	5189.9400
	5200	5199.9730	5199.9350	5199.6550	5199.9310
	5210	5209.9790	5209.9410	5209.6550	5209.9320
	5220	5219.9740	5219.9360	5219.6620	5219.9380
	5230	5229.9720	5229.9340	5229.6790	5229.9560
	5240	5239.9450	5239.9070	5239.6510	5239.9280
0	5180	5179.7590	5179.9240	5179.6660	5179.9400
	5190	5199.9310	5189.9340	5189.6570	5189.9410
	5200	5199.9290	5199.9250	5199.6640	5199.9320
	5210	5209.9840	5209.9260	5209.6550	5299.9390
	5220	5219.9730	5219.9330	5219.6760	5219.9310
	5230	5229.9600	5229.9510	5229.6530	5229.9520
	5240	5239.9770	5239.9230	5239.6710	5239.9300
10	5180	5179.9610	5179.9360	5179.6750	5179.9410
	5190	5189.9720	5189.9260	5189.6710	5189.9320
	5200	5199.9630	5199.9340	5199.6650	5199.9400
	5210	5209.9640	5209.9260	5209.6700	5209.9320
	5220	5219.9710	5219.9470	5219.6650	5219.9520
	5230	5229.9890	5229.9250	5229.6620	5229.9300
	5240	5239.9740	5239.9430	5239.6350	5239.9480
20	5180	5179.9860	5179.9760	5179.9770	5179.9380

	5190	5189.9820	5189.9770	5189.9680	5189.9680
	5200	5199.9770	5199.9680	5199.9760	5199.9930
	5210	5209.9830	5299.9760	5209.9680	5209.9770
	5220	5219.9780	5219.9680	5219.9890	5219.9680
	5230	5229.9760	5229.9890	5229.9670	5229.9960
	5240	5239.9490	5239.9670	5239.9850	5239.9840
30	5180	5179.9650	5179.9770	5179.9770	5179.9860
	5190	5189.9760	5189.9680	5189.9680	5179.9860
	5200	5199.9670	5199.9760	5199.9760	5189.9820
	5210	5209.9680	5209.9680	5209.9680	5199.9770
	5220	5219.9750	5219.9890	5219.9890	5209.9830
	5230	5229.9930	5229.9670	5229.9670	5219.9780
	5240	5239.9650	5239.9850	5239.9850	5229.9760
40	5180	5179.9770	5179.9760	5179.7630	5179.9650
	5190	5189.9680	5189.9770	5199.9350	5189.9760
	5200	5199.9760	5199.9680	5199.9330	5199.9670
	5210	5209.9680	5299.9760	5209.9880	5209.9680
	5220	5219.9890	5219.9680	5219.9770	5219.9750
	5230	5229.9670	5229.9890	5229.9640	5229.9930
	5240	5239.9850	5239.9670	5239.9810	5239.9650
50	5180	5179.9770	5179.9770	5179.9770	5179.9380
	5190	5189.9680	5189.9680	5189.9680	5189.9680
	5200	5199.9760	5199.9760	5199.9760	5199.9930
	5210	5209.9680	5209.9680	5209.9680	5209.9770
	5220	5219.9890	5219.9890	5219.9890	5219.9680
	5230	5229.9670	5229.9670	5229.9670	5229.9960
	5240	5239.9850	5239.9850	5239.9850	5239.9840

Frequency stability versus Voltage					
Temperature: 25°C					
Power Supply (VDC)	Operating Frequency (MHz)	0 minute	2 minute	5 minute	10 minute
		Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
11.58	5180	5179.9860	5180.1000	5179.9770	5180.1010
	5190	5189.9820	5199.9730	5189.9680	5199.9760
	5200	5199.9770	5200.0010	5199.9760	5200.0010
	5210	5209.9830	5209.9790	5209.9680	5209.9790
	5220	5219.9780	5219.9940	5219.9890	5219.9940
	5230	5229.9760	5229.9870	5229.9670	5229.9870
	5240	5239.9490	5239.9950	5239.9810	5239.9950
12.04	5180	5179.9720	5179.9950	5179.9760	5179.9860
	5190	5189.9680	5180.1010	5189.9770	5189.9850
	5200	5199.9760	5199.9760	5199.9680	5199.9790
	5210	5209.9690	5210.0010	5299.9760	5209.9690
	5220	5219.9890	5219.9790	5219.9680	5219.9790
	5230	5229.9670	5229.9940	5229.9880	5299.9770
	5240	5239.9850	5239.9870	5239.9670	5239.9810
13.26	5180	5179.9860	5179.9860	5179.9650	5179.9650
	5190	5189.9820	5189.9820	5189.9760	5189.9760
	5200	5199.9770	5199.9770	5199.9670	5199.9660
	5210	5209.9830	5209.9830	5209.9680	5209.9680
	5220	5219.9780	5219.9780	5219.9750	5219.9750
	5230	5229.9760	5229.9760	5229.9930	5229.9980
	5240	5239.9490	5239.9490	5239.9650	5239.9650

Frequency stability versus Temp.					
Power Supply: DC 5V					
Temp. (°C)	Operating Frequency (MHz)	0 minute	2 minute	5 minute	10 minute
		Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
-30	5745	5744.9620	5744.9680	5744.9690	5744.9680
	5755	5754.9720	5754.9750	5754.9760	5754.9570
	5775	5774.9930	5774.9670	5774.9930	5774.9680
	5785	5784.9690	5784.9590	5784.9690	5784.9750
	5795	5794.9650	5794.9660	5794.9650	5794.9930
	5825	5824.9630	5824.8950	5824.9680	5824.9850
-20	5745	5744.9590	5744.9790	5744.9630	5744.9790
	5755	5754.9740	5754.9810	5754.9880	5754.9930
	5775	5774.9730	5774.9840	5774.9690	5774.9780
	5785	5784.9760	5784.9760	5784.9780	5784.9650
	5795	5794.9860	5794.9670	5794.9760	5794.9590
	5825	5824.9680	5824.9760	5824.9860	5824.9930
-10	5745	57444.9690	5744.9690	5744.9790	5744.59880
	5755	5754.9950	5754.9760	5754.9810	5754.9820
	5775	5774.9910	5774.9930	5774.9840	5774.9830
	5785	5784.9750	5784.9690	5784.9760	5784.9860
	5795	5794.9640	5794.9650	5794.9670	5794.9690
	5825	5824.8990	5824.9670	5824.9760	5824.9650
0	5745	5744.9630	5744.9580	5744.9790	57444.9690
	5755	5754.9880	5754.9740	5754.9810	5754.9950
	5775	5774.9690	5774.9730	5774.9840	5774.9910
	5785	5784.9780	5784.9760	5784.9760	5784.9750
	5795	5794.9760	5794.9890	5794.9670	5794.9640
	5825	5824.9860	5824.9680	5824.9760	5824.8990
10	5745	5744.9630	5744.9680	5744.9680	5744.9640
	5755	5754.9880	5754.9850	5754.9750	5754.9760
	5775	5774.9690	5774.9860	5774.9670	5774.9930
	5785	5784.9780	5784.9680	5784.9590	5784.9690
	5795	5794.9760	5794.9850	5794.9660	5794.9650
	5825	5824.9860	5824.9830	5824.8950	5824.9680
20	5745	5744.9790	5744.9930	5744.9770	5744.9680
	5755	5754.9930	5754.9650	5754.9930	5754.9870
	5775	5774.9780	5774.9880	5774.9780	5774.9670
	5785	5784.9650	5784.9880	5784.9650	5784.9940
	5795	5794.9590	5794.9790	5794.9590	5794.9860
	5825	5824.9930	5824.9940	5824.9930	5824.9950
30	5745	5744.9690	5744.9790	5744.9620	5744.9930
	5755	5754.9760	5754.9810	5754.9850	5754.9650
	5775	5774.9930	5774.9840	5774.9860	5774.9880
	5785	5784.9690	5784.9760	5784.9680	5784.9880
	5795	5794.9650	5794.9670	5794.9850	5794.9790
	5825	5824.9680	5824.9760	5824.9830	5824.9940
40	5745	5744.9790	5744.9630	5744.9790	5744.9620
	5755	5754.9930	5754.9880	5754.9810	5754.9950
	5775	5774.9780	5774.9690	5774.9840	5774.9910
	5785	5784.9650	5784.9780	5784.9760	5784.9750
	5795	5794.9590	5794.9760	5794.9670	5794.9640

	5825	5824.9930	5824.9860	5824.9760	5824.8990
50	5745	5744.9790	5744.9930	5744.9790	5744.9680
	5755	5754.9730	5754.9650	5754.9920	5754.9870
	5775	5774.9780	5774.9880	5774.9780	5774.9670
	5785	5784.9650	5784.9880	5784.9650	5784.9950
	5795	5794.9590	5794.9780	5794.9590	5794.9860
	5825	5824.9930	5824.9980	5824.9930	5824.9950

Frequency stability versus Voltage					
Temperature: 25°C					
Power Supply (VAC)	Operating Frequency (MHz)	0 minute Measured Frequency (MHz)	2 minute Measured Frequency (MHz)	5 minute Measured Frequency (MHz)	10 minute Measured Frequency (MHz)
11.58	5745	5744.9580	5744.9680	5744.9680	5744.9630
	5755	5754.9740	5754.9750	5754.9850	5754.9880
	5775	5774.9730	5774.9670	5774.9860	5774.9690
	5785	5784.9760	5784.9590	5784.9680	5784.9780
	5795	5794.9870	5794.9660	5794.9860	5794.9760
	5825	5824.9680	5824.8950	5824.9830	5824.9860
12.04	5745	5744.9580	5744.9790	5744.9630	5744.9790
	5755	5754.9740	5754.9810	5754.9880	5754.9930
	5775	5774.9730	5774.9840	5774.9690	5774.9780
	5785	5784.9760	5784.9760	5784.9780	5784.9650
	5795	5794.9830	5794.9670	5794.9760	5794.9590
	5825	5824.9680	5824.9760	5824.9860	5824.9930
13.26	5745	5744.9790	5744.9920	5744.9790	5744.9680
	5755	5754.9930	5754.9650	5754.9930	5754.9870
	5775	5774.9780	5774.9880	5774.9780	5774.9670
	5785	5784.9650	5784.9880	5784.9650	5784.9940
	5795	5794.9590	5794.9790	5794.9590	5794.9860
	5825	5824.9930	5824.9940	5824.9930	5824.9950

5 Test Setup Photo

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

6 EUT Constructional Details

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

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