



TEST REPORT

Applicant: Stratech Global LLC
Address of Applicant: 8445 Camino Santa Fe, Suite 203, San Diego CA 92121
Manufacturer: Stratech Global LLC
Address of Manufacturer: 8445 Camino Santa Fe, Suite 203, San Diego CA 92121
Product Name: Digital Signage Totem
Model No.: ST055BW-T,ST055BW-T2C,ST055BW-DT4C,ST050BW-T2C,
ST043BW-T,ST043BW-T2C,ST043BW-DT4C,ST070BA,ST070BW-
T2C,ST070BW-DT4C
Trade Mark: Stratech
FCC ID: 2BRLT-055BWT2C
Applicable standards: CFR Title 47 Part 15.407
Date of Test: Jul.21, 2025-Aug.05, 2025
Date of report issued: Aug.06, 2025

Remark:

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

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1 Test Summary

Test Item	Section	Result	Test by
Antenna requirement	47CRF part 15.203	Pass	/
AC Power Line Conducted Emission	47CRF part 15.207	Pass	Jason Huang
Conducted Output Power	47CRF part 15.407 (a)(1)/(a)(3)	Pass	Kara Wu
26dB Bandwidth and 99% Occupied Bandwidth	47CRF part 15.407 (a)(12)	Pass	Kara Wu
6dB Bandwidth	47CRF part 15.407 (e)	Pass	Kara Wu
Power Spectral Density	47CRF part 15.407(a)(1)/(a)(3)	Pass	Kara Wu
Band Edge	47CRF part 15.407(b)(1)/(b)(4)	Pass	Kara Wu
Spurious Emission	47CRF part 15.205/15.209 47CRF part 15.407(b)(1)/(b)(4)/(b)(8)	Pass	Jason Huang
Frequency Stability	47CRF part 15.407(g)	Pass	Kara Wu

Remarks:

1. Pass: The EUT complies with the essential requirements in the standard.
2. Test according to ANSI C63.10:2013 and KDB 789033 D02 General U-NII Test Procedures New Rules v02r01.
3. Note: Compliance determination rules
 - 1).The Compliance determination of test results does not take into account measurement uncertainty. Measurement results are determined based on regulatory limitations or requirements specified by the applicant/manufacturer. If measurement uncertainty is taken into account, the applicant/manufacturer will bear all possible risks of non-compliance.
 - 2).The measurement uncertainty please refer to each test result in the "Measurement Uncertainty"

Measurement Uncertainty

Test Item	Measurement Uncertainty	Notes
Occupied Channel Bandwidth	0.55%	(1)
RF output power, conducted	±0.57 dB	(1)
Power Spectral Density, conducted	±0.61 dB	(1)
Unwanted Emissions, conducted	±0.64 dB	(1)
AC Power Line Conducted Emission	± 2.55 dB	(1)
Radiated emissions 9K-30MHz	±3.79 dB	(1)
Radiated emissions 30M- 1GHz	± 4.24 dB	(1)
Radiated emissions 1GHz-18GHz	± 4.26 dB	(1)
Radiated emissions 18GHz-40GHz	±4.17 dB	(1)
Frequency error	Uc=1X10-7	(1)
Duty Cycle	0.03%	(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:	Digital Signage Totem
Model No.:	ST055BW-T,ST055BW-T2C,ST055BW-DT4C,ST050BW-T2C,ST043BW-T,ST043BW-T2C,ST043BW-DT4C,ST070BA,ST070BW-T2C,ST070BW-DT4C
Difference of model(s)	All the model are the same circuit and RF module, except the model names
Test Model:	ST055BW-T2C
Hardware Version:	N/A
Software Version:	N/A
Sample(s) Status:	Engineer sample
Operation Frequency:	☒ 5180-5240MHz for 802.11a/n20/ac20; 5190-5230MHz for 802.11n40/ac40; 5210MHz for 802.11ac80 ☒ 5745-5825 MHz for 802.11a/n20/ac20; 5755-5795 MHz for 802.11n40/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/802.11n20/ 802.11ac20/ : 20MHz 802.11n(HT40)/ 802.11ac40 : 40MHz 802.11ac(VHT80) : 80MHz
Data Rate	802.11a: 6,9,12,18,24,36,48,54Mbps; 802.11n(20/40):MCS0-MCS15; 802.11ac(20/40/80):NSS1, MCS0-MCS9
Modulation technology:	Orthogonal Frequency Division Multiplexing (OFDM) with BPSK/QPSK/16QAM/64QAM/256QAM/1024QAM
Antenna Type:	Integrated Antenna
Antenna gain:	2.55 dBi(Declare by applicant) Note: Antenna information is provided by applicant, Testing lab is not responsible for the accuracy of the information.
Power supply:	110-240Vac
Battery	N/A
Adapter Model:	N/A

For more details, refer to the user's manual of the EUT.

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 /n20/ac20/	802.11 n40/ac40/	802.11ac80
Lowest channel	5180	5190	5210
Middle channel	5200	X	
Highest channel	5240		

Test channel	Frequency (MHz)		
	802.11 a /n20/ac20	802.11 n40/ac40	802.11ac80
Lowest channel	5745	5755	5775
Middle channel	5785	X	
Highest channel	5825		

2.2 Test mode

Transmitting mode	Keep the EUT in continuously transmitting mode.
<i>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.</i>	

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/ac 20CH36/CH40/CH48 802.11a / n 20/ac 20CH149/CH157/CH165
Mode 2	802.11n40/CH38/CH46 802.11n 40CH 151/CH159
Mode 3	802.11 ac80 CH 42/CH155
Mode 4	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/ac20CH36/ CH40/ CH 48 802.11a/n 20/ac 20CH149/ CH157/ CH165
Mode 2	802.11n40CH38/ CH46 802.11n40CH 151/CH159
Mode 3	802.11 ac80 CH 42/CH155

Note: 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	MOUSE	DELL	MS116	/
2	KEYBOARD	DELL	KB216T	/

2.4 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
IC Company Number:	28440
IC CAB identifier:	CN0132
Laboratory location:	No.103, No.10, Phase I, Zone 3, Xinxing Industrial Park, Xinhe, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

2.5 Additional Instructions

Test Software	MP TOOL.EXE
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	2025.3.06	2026.3.05
2	Artificial power network	schwarabeck	NSLK8127	8127483	2025.3.06	2026.3.05
3	Artificial power network	ETS	3186/2NM	1132	2025.3.06	2026.3.05
4	10dB attenuator	HUBER+SUHNER	10dB	/	2025.3.06	2026.3.05
5	Cable 4	HUBER SUNNER	3M	/	2025.3.06	2026.3.05
6	Absorbing Clamp	schwarabeck	MDS21	D69250	2025.3.06	2026.3.05

Radiated Emission & RF Conducted test:

Item	Equipment name	Manufacturer	Model	Serial No.	Calibration date	Due date
1	EMI Test Receiver	Rohde&schwarz	ESCI7	101032	2025.3.06	2026.3.05
2	Broadband antenna	schwarabeck	VULB9168	1064	2024.3.26	2026.3.25
3	Horn antenna	schwarabeck	BBHA9120D	9120D-1145	2024.3.22	2026.3.21
4	Amplifier	EMtrace	RP01A	50117	2025.3.06	2026.3.05
5	Amplifier	Space-Dtronic	EWLAN0118G-P40	19113001	2025.3.06	2026.3.05
6	Spectrum analyzer	KEYSIGHT	N9020A	MY55370280	2025.3.06	2026.3.05
7	Power detector meter	MWRFTtest	MW100-PSB	MW201020JYT	2025.3.06	2026.3.05
8	Signal generator	Agilent	N5182A	MY49060455	2025.3.06	2026.3.05
9	Spectrum analyzer	Rohde&schwarz	FSV-40N	101321	2025.3.06	2026.3.05
10	Amplifier	SKET	LNPA_1840-50	SK2019040302	2025.3.06	2026.3.05
11	Horn antenna	schwarabeck	BBHA 9170	946	2024.3.22	2026.3.21
12	Loop antenna	schwarabeck	FMZB 1519 B	1519	2024.3.22	2026.3.21
13	Cable 6	HUBER SUNNER	0.5M	/	2025.3.06	2026.3.05
14	Cable7	HUBER SUNNER	2.0M	/	2025.3.06	2026.3.05
15	Cable8	HUBER SUNNER	6.0M	/	2025.3.06	2026.3.05
16	Filter	Xin bo	XBLBQ-GTA29	210410-3-2	2025.3.06	2026.3.05
17	Power Sensor	Keysight	U2021XA	MY54111006	2025.3.06	2026.3.05
18	Temp. & Humidity Chamber	Jiecheng Instrument	QA-LP-80	20160705001	2025/3/07	2026/3/06

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	MWRFTtest	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:	47CRF Part 15.203
15.203 requirement: <i>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.</i>	
EUT Antenna:	
The antenna is Integrated Antenna, the best case gain of the is 2.55dBi, reference to the Internal photos for details.	

4.2 Conducted Emissions

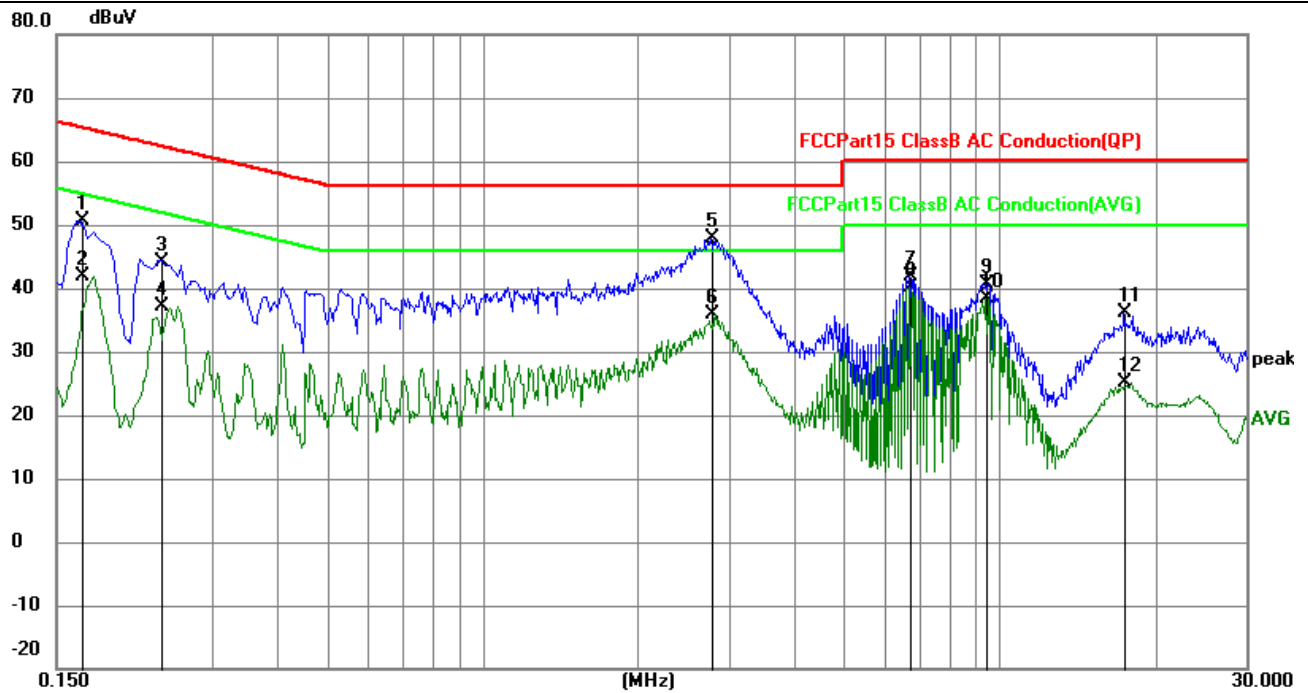
Test Requirement:	47CRF Part 15.207						
Test Method:	ANSI C63.10:2013						
Test Frequency Range:	150KHz to 30MHz						
Receiver setup:	RBW=9KHz, VBW=30KHz, Sweep time=auto						
Limit:	Frequency range (MHz)		Limit (dBuV)				
			Quasi-peak		Average		
	0.15-0.5		66 to 56*		56 to 46*		
	0.5-5		56		46		
	5-30		60		50		
* Decreases with the logarithm of the frequency.							
Test setup:	Reference Plane <i>Remark: E.U.T: Equipment Under Test LISN: Line Impedance Stabilization Network</i>						
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.:	26.1°C	Humid.:	51%	Press.:	1012mbar	
Test voltage:	AC 120V 60Hz						
Test results:	Pass						

Remark:

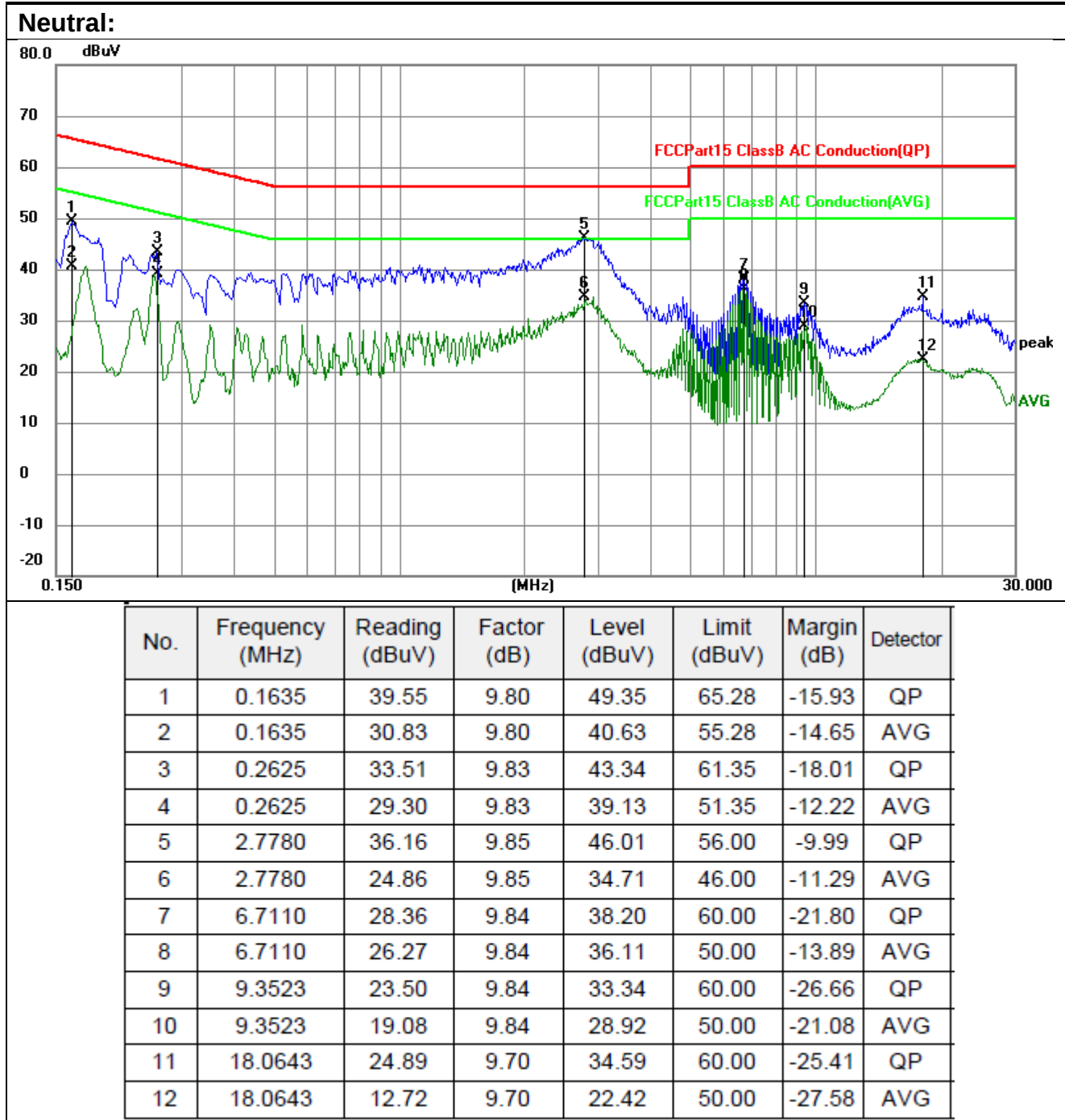
1. Both high voltage and low voltage have been tested, and the report only shows the worst case data with AC 120V/60Hz.
2. All mode have been tested, the report only shows the worst mode (802.11ac20 5825MHz)

Measurement Result

Line:



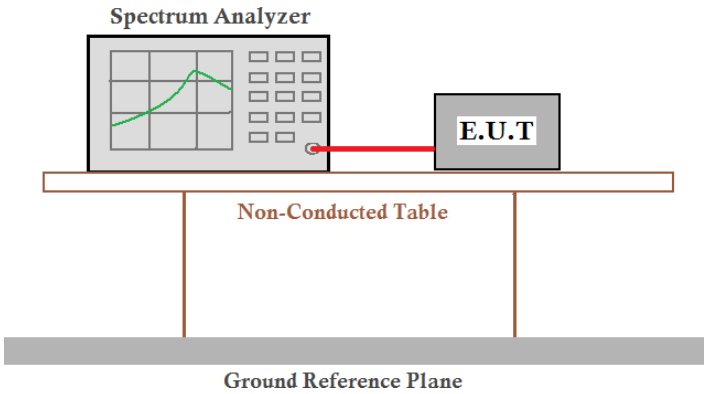
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1680	40.82	9.81	50.63	65.06	-14.43	QP
2	0.1680	32.12	9.81	41.93	55.06	-13.13	AVG
3	0.2403	34.28	9.82	44.10	62.09	-17.99	QP
4	0.2403	27.20	9.82	37.02	52.09	-15.07	AVG
5	2.7690	37.91	9.85	47.76	56.00	-8.24	QP
6	2.7690	26.13	9.85	35.98	46.00	-10.02	AVG
7	6.7020	32.12	9.84	41.96	60.00	-18.04	QP
8	6.7020	30.34	9.84	40.18	50.00	-9.82	AVG
9	9.4425	30.86	9.83	40.69	60.00	-19.31	QP
10	9.4425	28.47	9.83	38.30	50.00	-11.70	AVG
11	17.4345	26.41	9.71	36.12	60.00	-23.88	QP
12	17.4345	15.37	9.71	25.08	50.00	-24.92	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 Duty cycle

Test Method :	ANSI C63.10:2013	
Limit:	/	
Test setup:	 The diagram illustrates the test setup. A Spectrum Analyzer is connected via a red cable to an E.U.T. (Equipment Under Test). Both are placed on a Non-Conducted Table. The table is supported by two vertical legs and sits on a Ground Reference Plane.	
Test Instruments:	Refer to section 3.0 for details	
Test mode:	Refer to section 2.2 for details	
Test environment:	Temp.: 22.8°C	Humid.: 66%RH
Test voltage:	120V ac	
Test results:	Pass	



Measurement Result

5180-5240MHz

Mode	Duty cycle (%)	Correction Factor (dB)
TX 802.11a Mode	98.09	0.08
TX 802.11n20 Mode	96.06	0.17
TX 802.11ac20 Mode	96.04	0.18
TX 802.11n40 Mode	86.30	0.64
TX 802.11a40 Mode	83.02	0.81
TX 802.11ac80 Mode	77.75	1.09

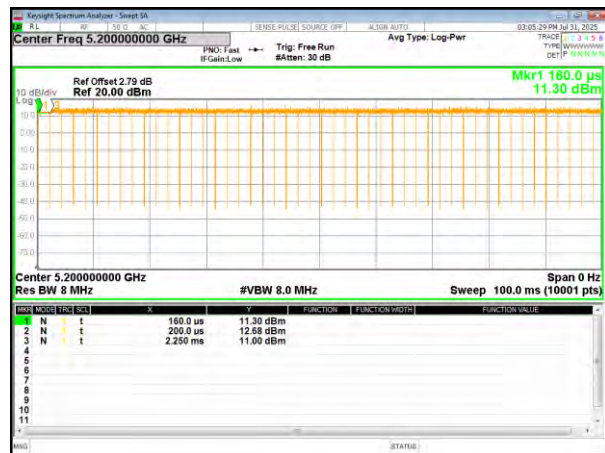
5745-5825 MHz

Mode	Duty cycle (%)	Correction Factor (dB)
TX 802.11a Mode	98.59	0.06
TX 802.11n20 Mode	91.84	0.37
TX 802.11ac20 Mode	93.88	0.27
TX 802.11n40 Mode	88.89	0.51
TX 802.11ac40 Mode	85.71	0.67
TX 802.11ac80 Mode	91.67	0.38

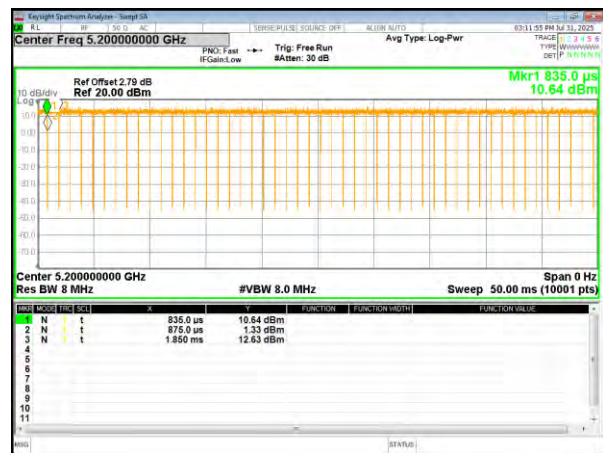
Test plot

5180-5240MHz

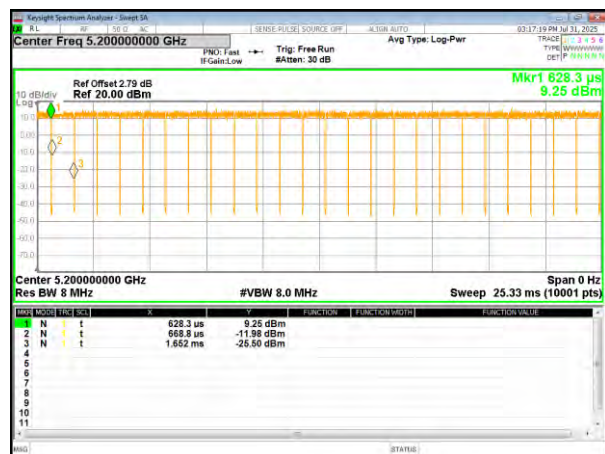
(802.11a) plot



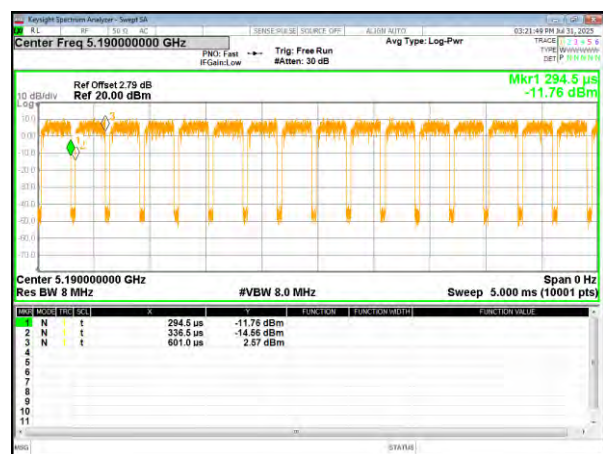
(802.11 n20) plot



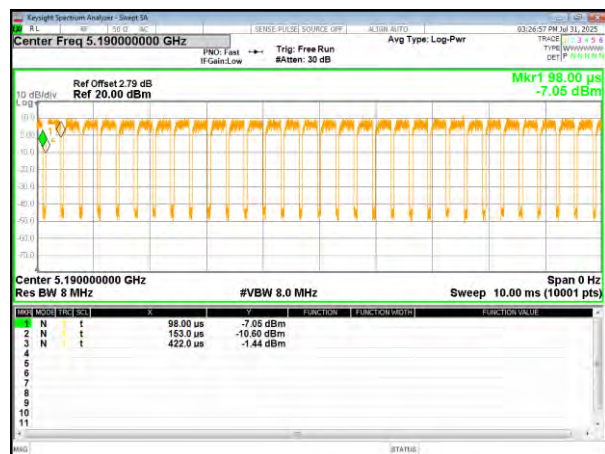
(802.11 ac20) plot



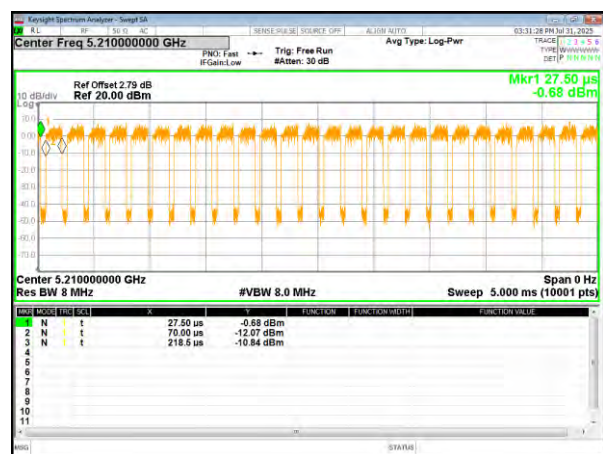
(802.11 n40) plot



(802.11 ac40) plot



(802.11 ac80) plot

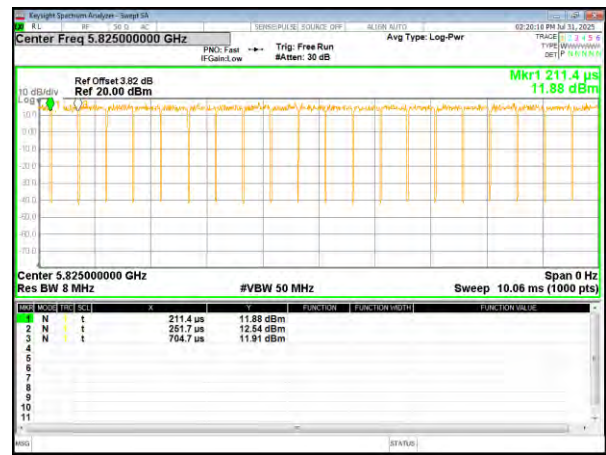


5745-5825 MHz

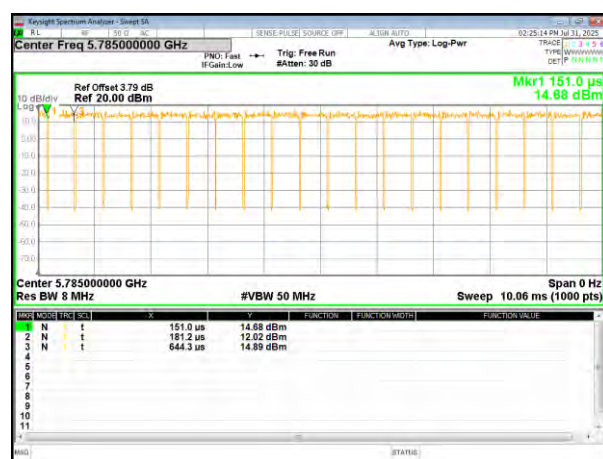
(802.11a) plot



(802.11 n20) plot



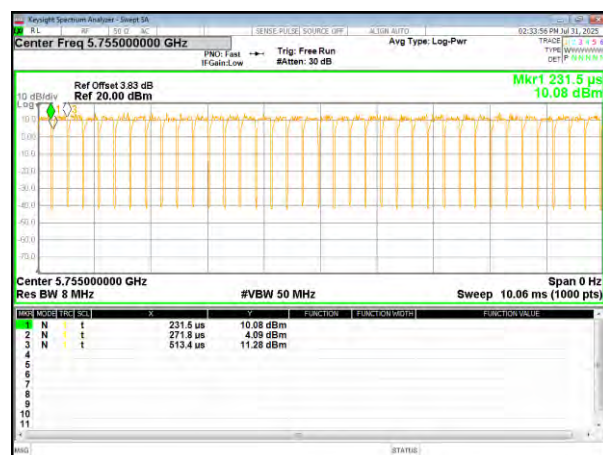
(802.11ac20) plot



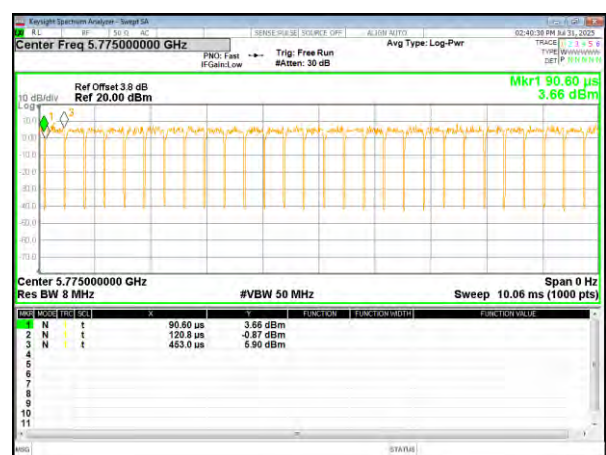
(802.11 n40) plot



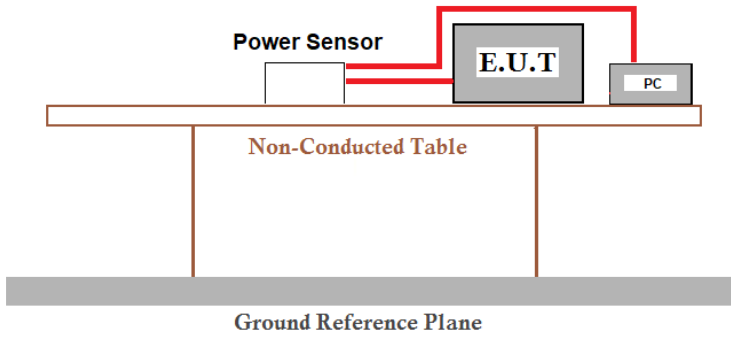
(802.11 ac40) plot



(802.11 ac80) plot



4.4 Conducted Output Power

Test Requirement:	47CRF Part 15.407 (a)(1)/(a)(3)	
Test Method:	KDB 789033 D02 General U-NII Test Procedures New Rules v02r01 ANSI C63.10-2013	
Limit:	5150-5250MHz : 250mW 5725~5850MHz : 1W	
Test setup:	 The diagram illustrates the test setup. A Power Sensor is connected via red lines to an E.U.T. (Equipment Under Test) and a PC. The E.U.T. is placed on a Non-Conducted Table, which is supported by a Ground Reference Plane.	
Test Instruments:	Refer to section 3.0 for details	
Test mode:	Refer to section 2.2 for details	
Test environment:	Temp.: 22.8°C	Humid.: 66%RH
Test voltage:	120V ac	
Test results:	Pass	

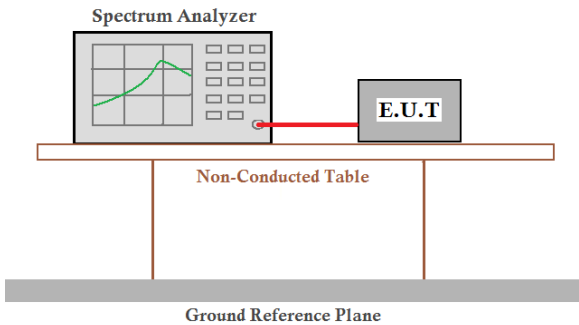
Measurement Result
5180-5240MHz

Test Channel	Frequency	Correction Factor	Maximum output power	Total Power	LIMIT	Result
	(MHz)	(dB)	(dBm)	(dBm)	dBm	
TX 802.11a Mode						
CH36	5180	0.08	14.60	14.68	23.98	Pass
CH40	5200	0.08	14.87	14.95	23.98	Pass
CH48	5240	0.08	14.41	14.49	23.98	Pass
TX 802.11 n20 Mode						
CH36	5180	0.17	14.03	14.20	23.98	Pass
CH40	5200	0.17	14.31	14.48	23.98	Pass
CH48	5240	0.17	14.05	14.22	23.98	Pass
TX 802.11 ac20 Mode						
CH36	5180	0.18	14.28	14.46	23.98	Pass
CH40	5200	0.18	14.11	14.29	23.98	Pass
CH48	5240	0.18	14.19	14.37	23.98	Pass
TX 802.11 n40 Mode						
CH38	5190	0.64	13.08	13.72	23.98	Pass
CH46	5230	0.64	13.48	14.12	23.98	Pass
TX 802.11 ac40 Mode						
CH38	5190	0.81	13.20	14.01	23.98	Pass
CH46	5230	0.81	13.77	14.58	23.98	Pass
TX 802.11 ac80 Mode						
CH42	5210	1.09	12.60	13.69	23.98	Pass

5745-5825 MHz

Test Channel	Frequency	Correction Factor	Maximum output power	Total Power	Limit	Result
	(MHz)	(dB)	(dBm)	(dBm)	dBm	
TX 802.11a Mode						
CH149	5745	0.06	14.25	14.31	30	Pass
CH157	5785	0.06	14.89	14.95	30	Pass
CH165	5825	0.06	14.64	14.70	30	Pass
TX 802.11 n20 Mode						
CH149	5745	0.37	13.90	14.27	30	Pass
CH157	5785	0.37	14.31	14.68	30	Pass
CH165	5825	0.37	14.62	14.99	30	Pass
TX 802.11 ac20 Mode						
CH149	5745	0.27	14.29	14.56	30	Pass
CH157	5785	0.27	14.23	14.50	30	Pass
CH165	5825	0.27	14.74	15.01	30	Pass
TX 802.11 n40 Mode						
CH151	5755	0.51	13.85	14.36	30	Pass
CH159	5795	0.51	13.42	13.93	30	Pass
TX 802.11 ac40 Mode						
CH151	5755	0.67	13.38	14.05	30	Pass
CH159	5795	0.67	13.42	14.09	30	Pass
TX 802.11 ac80 Mode						
CH155	5775	0.38	12.98	13.36	30	Pass

4.5 Bandwidth

Test Requirement:	47CRF Part 15.407(a)(12)&15.407(e),	
Test Method:	KDB 789033 D02 General U-NII Test Procedures New Rules v02r01, ANSI C63.10:2013	
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 environment:	Temp.: 22.8°C	Humid.: 66%RH
Test voltage:	120V ac	
Test results:	Pass	

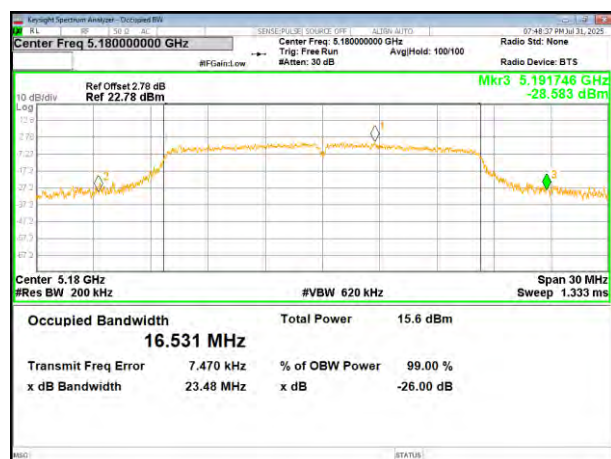
Measurement Result

5180-5240MHz

Test CH	-26dB Channel Bandwidth (MHz)						Result
	802.11a	802.11n20	802.11ac20	802.11n40	802.11ac40	802.11ac80	
Lowest	23.48	23.22	24.19	52.78	39.73	--	Pass
Middle	23.80	23.02	20.28	--	--	79.57	
Highest	19.85	19.88	19.84	39.77	39.57	--	

Remark: "---"is not applicable

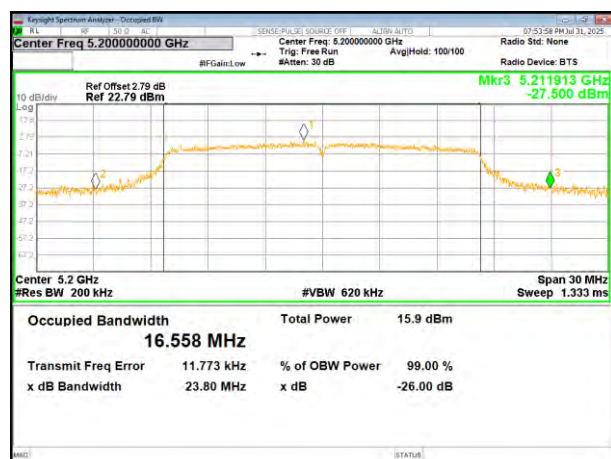
(802.11a) plot on channel 36



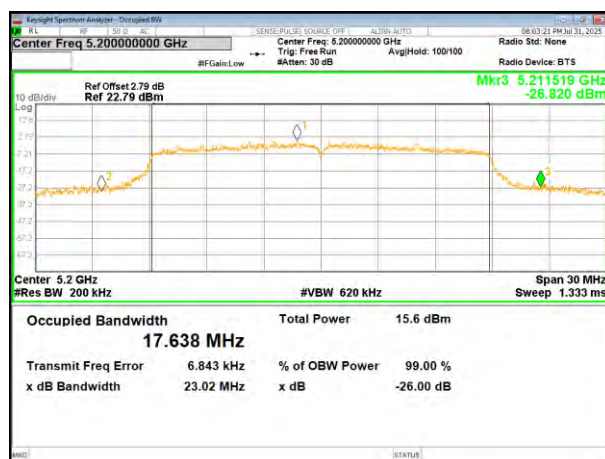
(802.11 n20) plot on channel 36



(802.11a) plot on channel 40



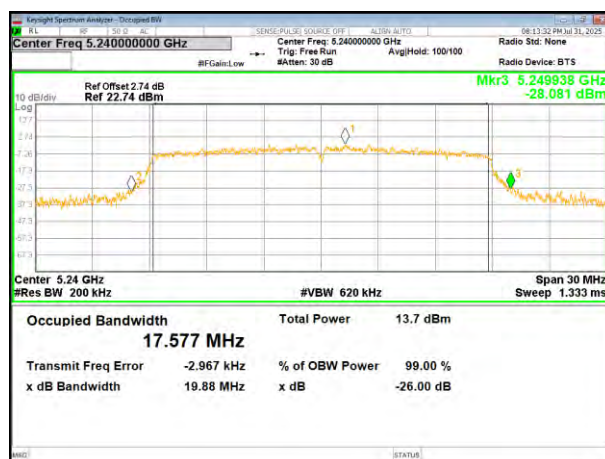
(802.11 n20) plot on channel 40



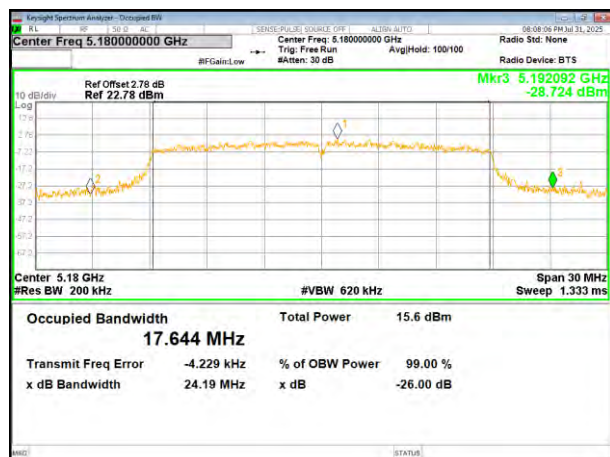
(802.11a) plot on channel 48



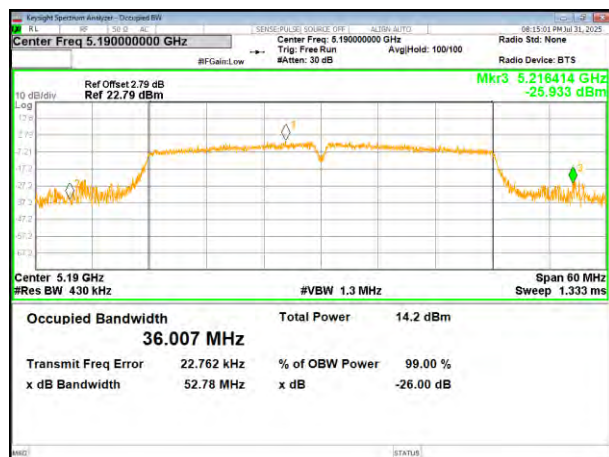
(802.11 n20) plot on channel 48



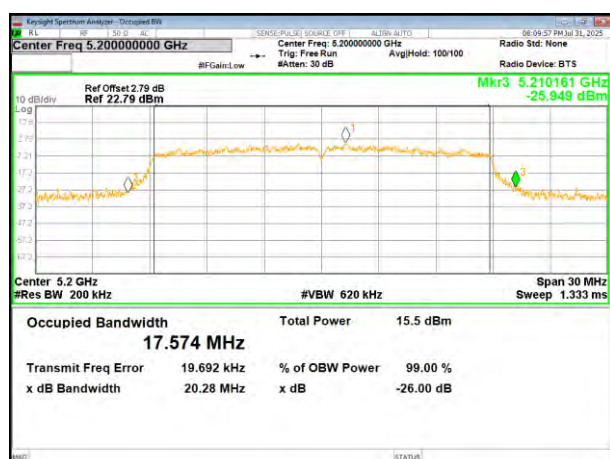
(802.11ac20) plot on channel 36



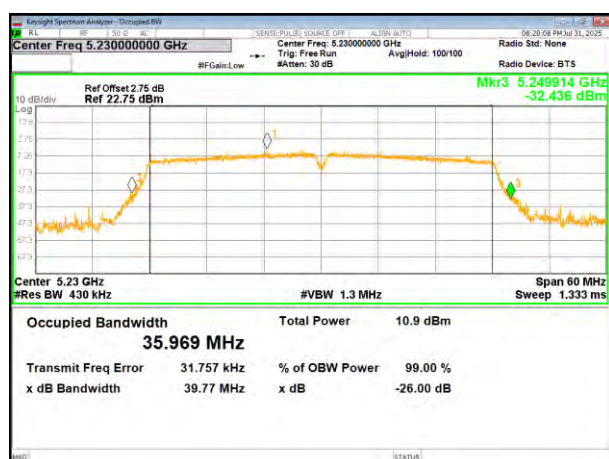
(802.11n40) plot on channel 38



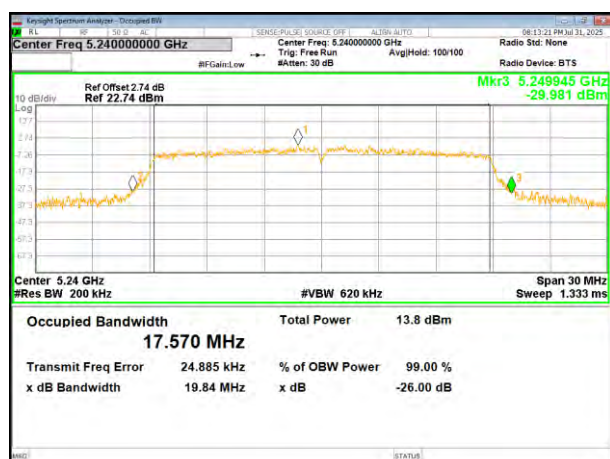
(802.11ac20) plot on channel 40



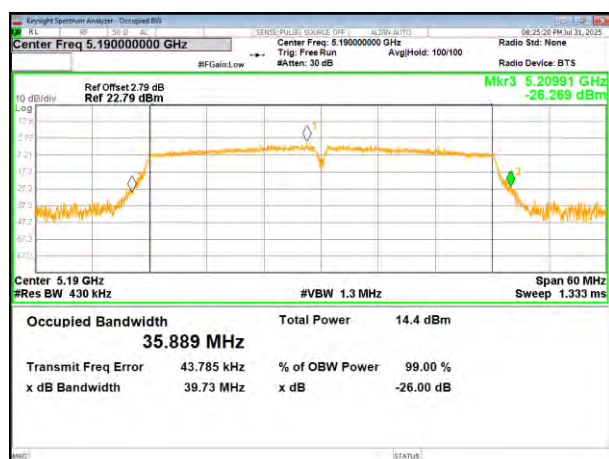
(802.11n40) plot on channel 46

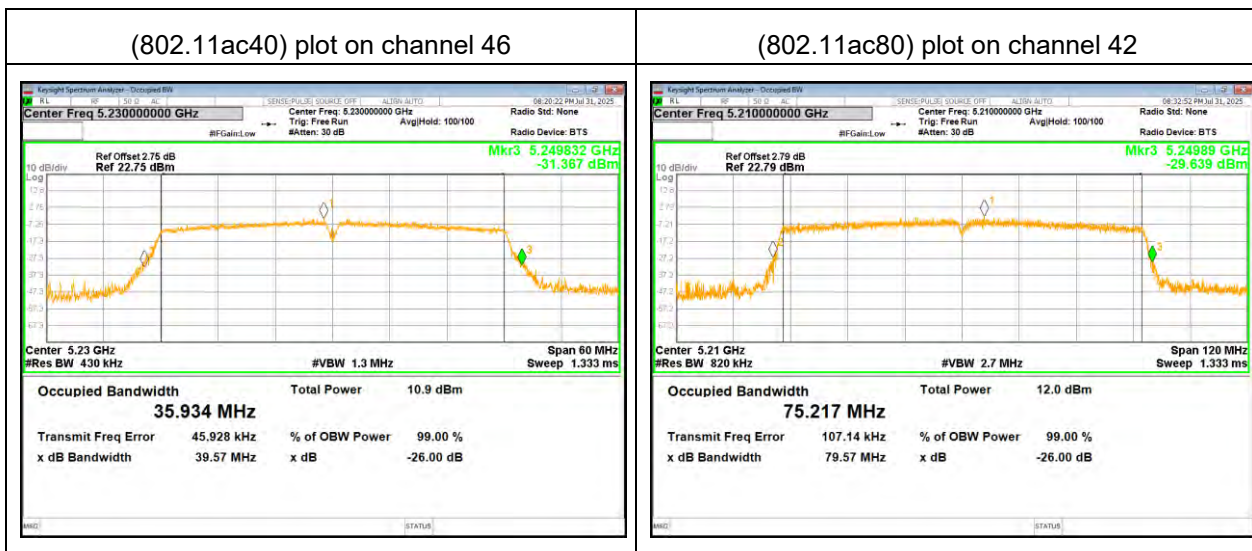


(802.11ac20) plot on channel 48



(802.11ac40) plot on channel 38







5745-5825MHz

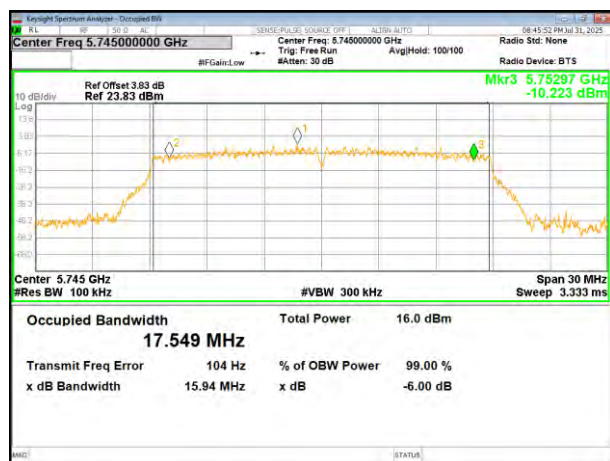
Test CH	-6dB Channel Bandwidth (MHz)						Limit (KHz)	Result
	802.11a	802.11n 20	802.11ac 20	802.11n 40	802.11ac 40	802.11ac 80		
Lowest	16.04	15.99	15.94	33.81	35.05	--	>500	Pass
Middle	14.38	15.09	16.66	--	--	75.06		
Highest	16.31	15.68	17.28	33.83	35.08	--		

Remark: “---”is not applicable

Test plot -6dB Channel Bandwidth



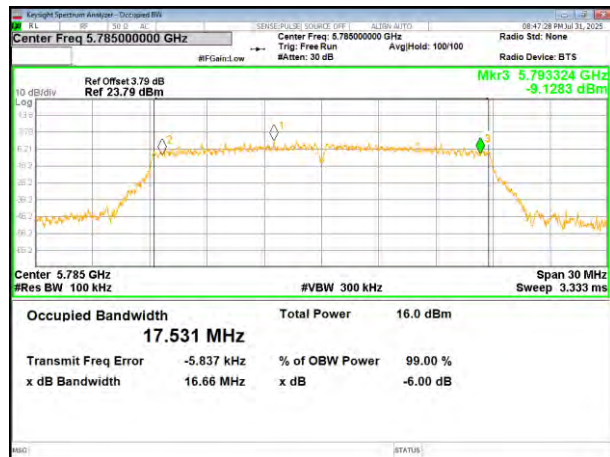
(802.11ac20) plot on channel 149



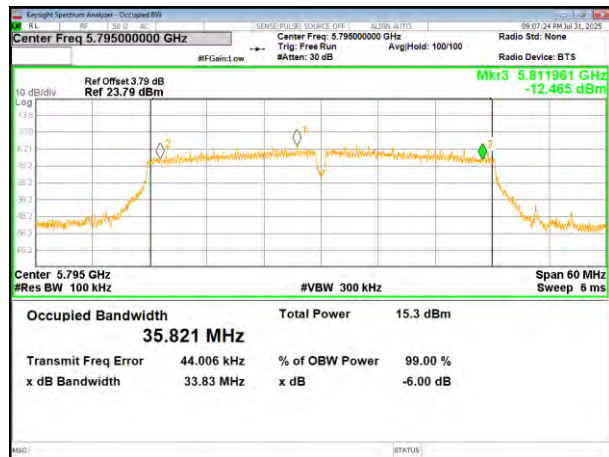
(802.11 n40) plot on channel 151



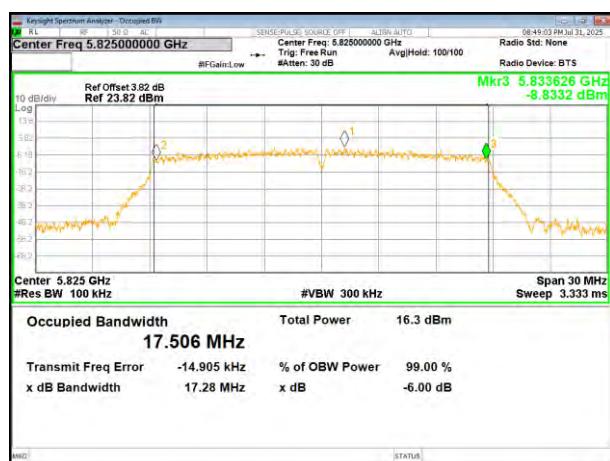
(802.11ac20) plot on channel 157



(802.11 n40) plot on channel 159



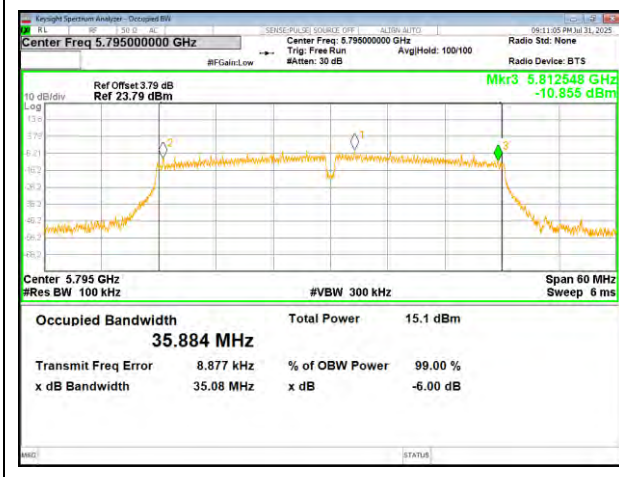
(802.11ac20) plot on channel 165



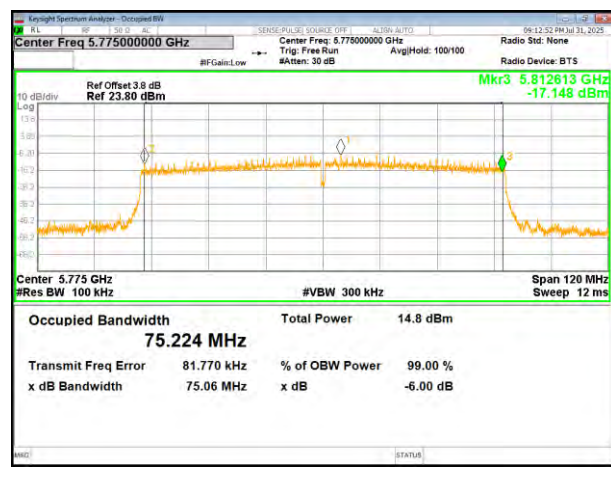
(802.11 ac40) plot on channel 151



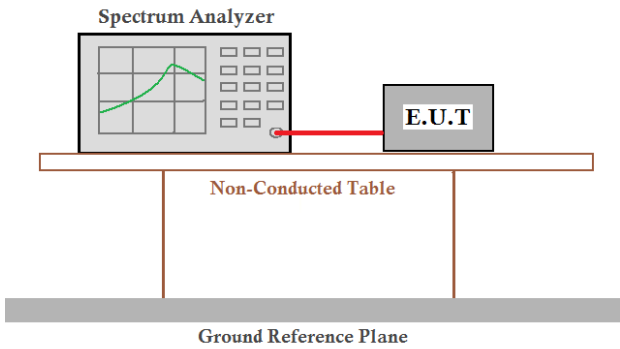
(802.11 ac40) plot on channel 159



(802.11 ac80) plot on channel 155



4.6 Power Spectral Density

Test Requirement:	47CRF Part 15.407(a)(1)/ (a)(3)	
Test Method:	KDB 789033 D02 General U-NII Test Procedures New Rules v02r01, ANSI C63.10:2013	
Limit:	Frequency band (MHz)	Limit
	5150-5250	≤17dBm/1MHz for master device
		≤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:	 The diagram illustrates the test setup. A Spectrum Analyzer is connected via a red cable to an E.U.T. (Equipment Under Test). Both are placed on a Non-Conducted Table. Below the table is a Ground Reference Plane.	
Test Instruments:	Refer to section 3.0 for details	
Test mode:	Refer to section 2.2 for details	
Test environment:	Temp.: 22.8°C	Humid.: 66%RH
Test voltage:	120V ac	
Test results:	Pass	

Measurement Result See next page



5180-5240MHz

Mode	Frequency	Measured Power Density (dBm/MHz)	Correction Factor (dB)	Total Measured Power Density (dBm/MHz)	Limit (dBm/MHz)
802.11 a	5180 MHz	0.377	0.08	0.457	11
	5200 MHz	0.423	0.08	0.503	11
	5240 MHz	-0.022	0.08	0.058	11
802.11 n20	5180 MHz	-0.757	0.17	-0.587	11
	5200 MHz	-0.508	0.17	-0.338	11
	5240 MHz	-1.119	0.17	-0.949	11
802.11 ac20	5180 MHz	-1.848	0.18	-1.668	11
	5200 MHz	-2.073	0.18	-1.893	11
	5240 MHz	-1.876	0.18	-1.696	11
802.11 n40	5190 MHz	-6.448	0.64	-5.808	11
	5230 MHz	-6.933	0.64	-6.293	11
802.11 ac40	5190 MHz	-6.776	0.81	-5.966	11
	5230 MHz	-5.324	0.81	-4.514	11
802.11 ac80	5210 MHz	-10.414	1.09	-9.324	11

(802.11a) PSD plot on channel 36



(802.11n20) PSD plot on channel 36



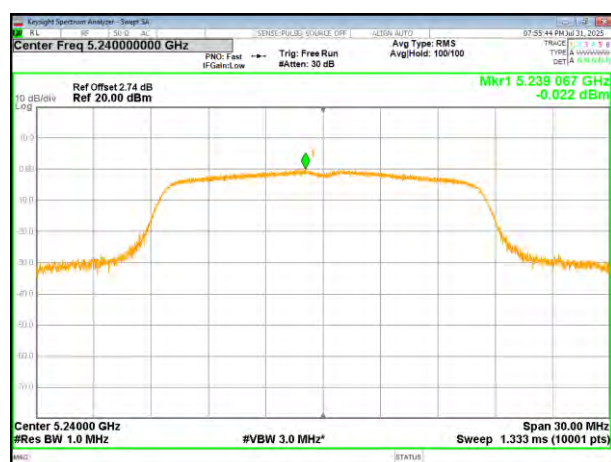
(802.11a) PSD plot on channel 40



(802.11n20) PSD plot on channel 40



(802.11a) PSD plot on channel 48



(802.11n20) PSD plot on channel 48



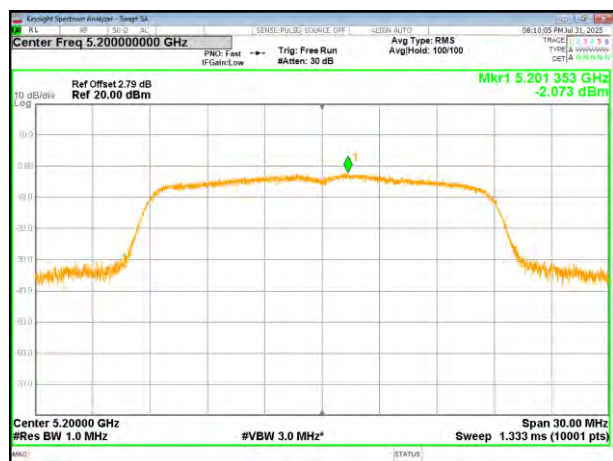
(802.11ac20) PSD plot on channel 36



(802.11n40) PSD plot on channel 38



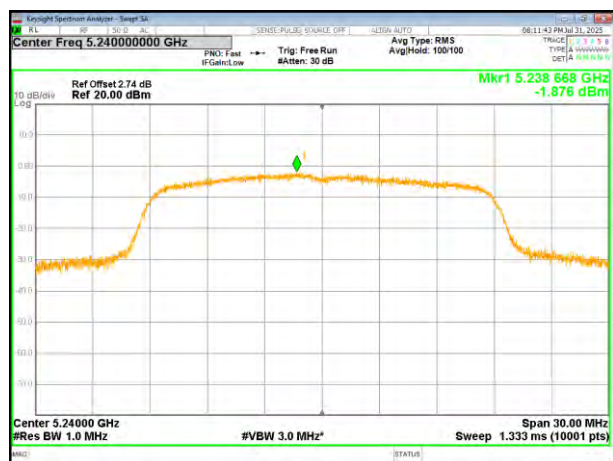
(802.11ac20) PSD plot on channel 40



(802.11n40) PSD plot on channel 46

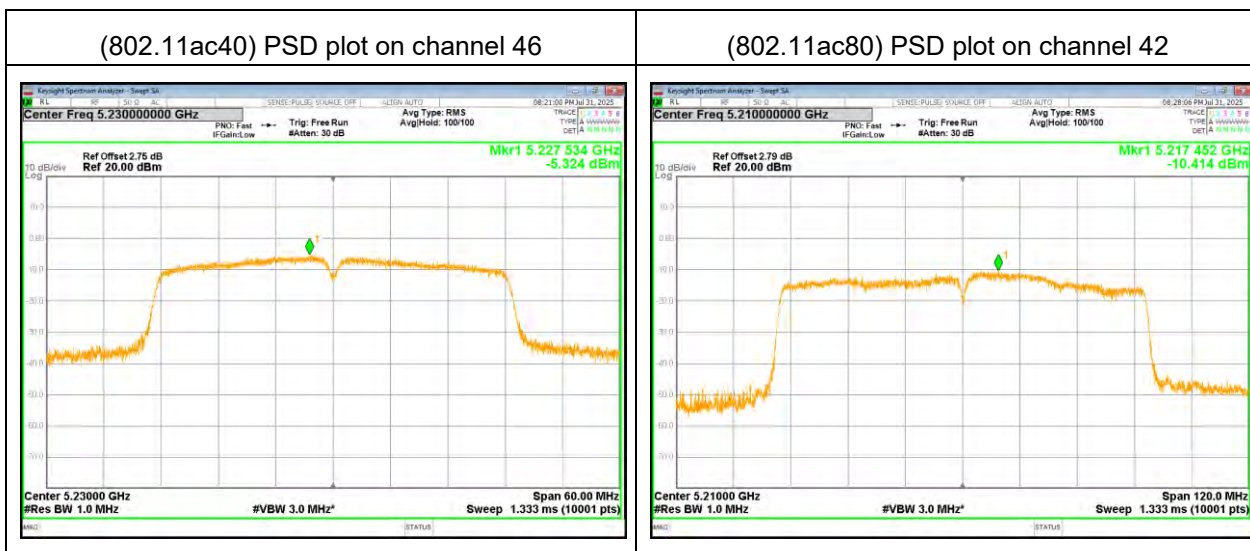


(802.11ac20) PSD plot on channel 48



(802.11ac40) PSD plot on channel 38





5745-5825MHz

Mode	Frequency	Measured Power Density (dBm/510KHz)	Measured Power Density (dBm/500KHz)	Correction Factor (dB)	Total Measured Power Density (dBm/500KHz)	Limit (dBm/MHz)
802.11 a	5745 MHz	-3.002	-3.088	0.060	-3.028	30
	5785 MHz	-2.479	-2.565	0.060	-2.505	30
	5825 MHz	-2.586	-2.672	0.060	-2.612	30
802.11 n20	5745 MHz	-4.362	-4.448	0.370	-4.078	30
	5785 MHz	-3.960	-4.046	0.370	-3.676	30
	5825 MHz	-3.766	-3.852	0.370	-3.482	30
802.11ac20	5745 MHz	-4.410	-4.496	0.270	-4.226	30
	5785 MHz	-3.885	-3.971	0.270	-3.701	30
	5825 MHz	-3.892	-3.978	0.270	-3.708	30
802.11 n40	5755 MHz	-8.204	-8.290	0.510	-7.780	30
	5795 MHz	-8.049	-8.135	0.510	-7.625	30
802.11ac40	5755 MHz	-9.008	-9.094	0.670	-8.424	30
	5795 MHz	-8.424	-8.510	0.670	-7.840	30
802.11ac80	5775 MHz	-13.223	-13.309	0.380	-12.929	30

Note: 1. If the measurement is X dBm/510kHz, thus $X \text{ dBm/510kHz} = (10^{X/10}) \cdot (500 / 510) \text{ dBm/500kHz}$

2. Correction Factor (dB)= duty cycle factor

(802.11a) PSD plot on channel 149



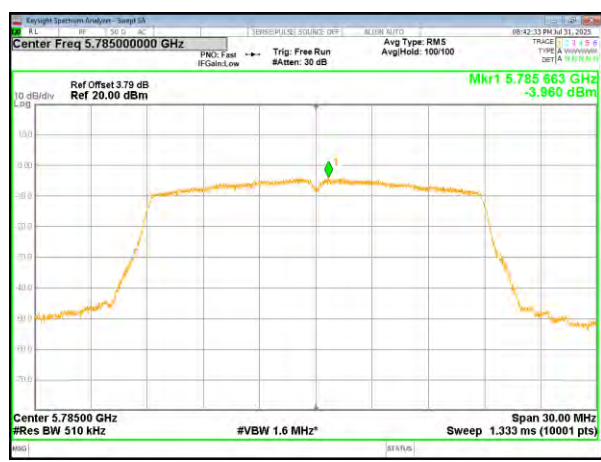
(802.11n20) PSD plot on channel 149



(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



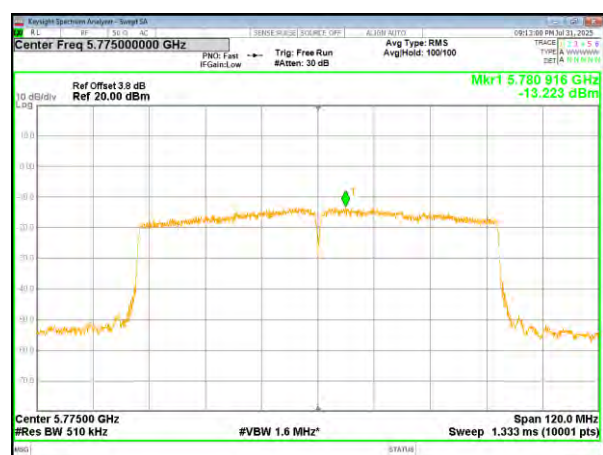
(802.11ac40) PSD plot on channel 151



(802.11ac40) PSD plot on channel 159

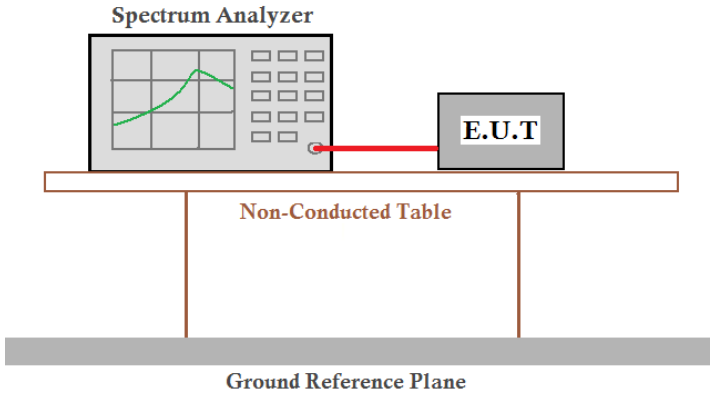


(802.11ac80) PSD plot on channel 155



4.7 Band edge

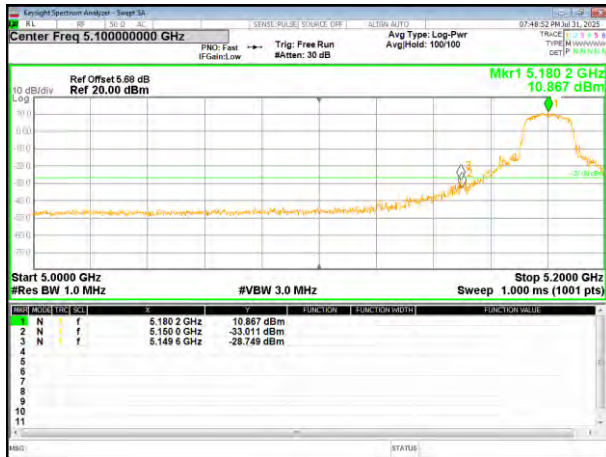
4.7.1 Conducted test Method

Test Requirement:	47CRF Part 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:	 The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both are placed on a Non-Conducted Table, which is supported by a Ground Reference Plane.	
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 environment:	Temp.: 22.8°C	Humid.: 66%RH
Test voltage:	120V ac	
Test results:	Pass	

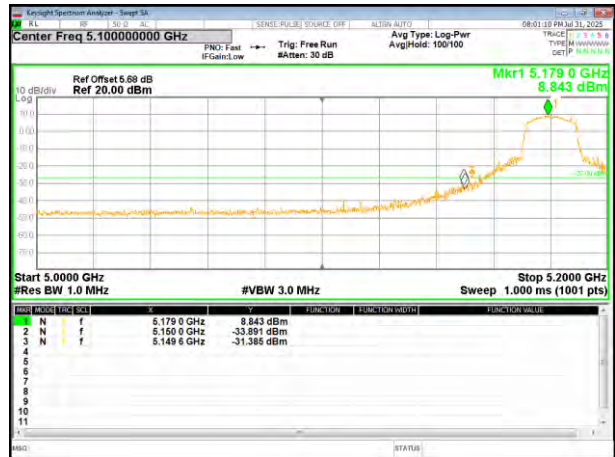


5.180~5.240 GHz

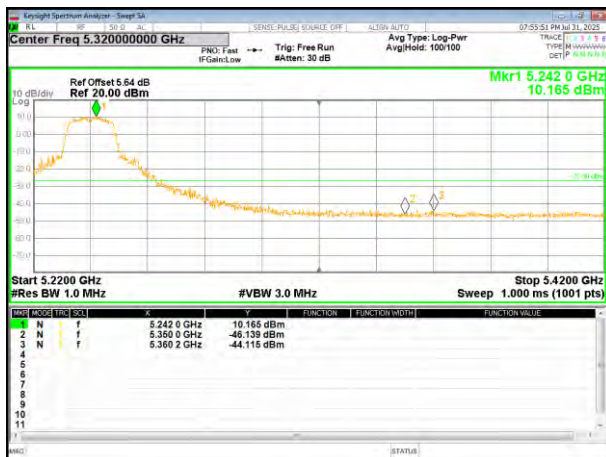
(802.11a) Band Edge, Left Side



(802.11n20) Band Edge, Left Side



(802.11a) Band Edge, Right Side

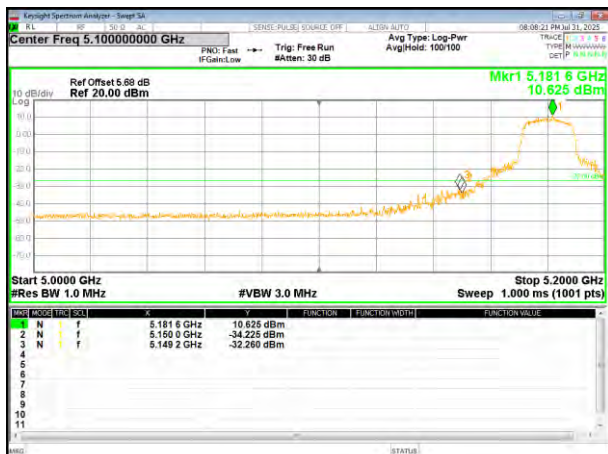


(802.11n20) Band Edge, Right Side

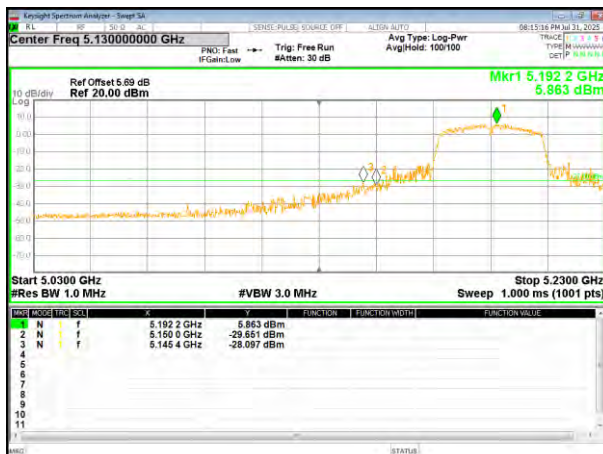


Remark: The antenna gain and cable loss were not compensated in the test data, and the margin value of the Band Edge test was greater than the sum of the antenna gain and cable loss, so the test met the requirements

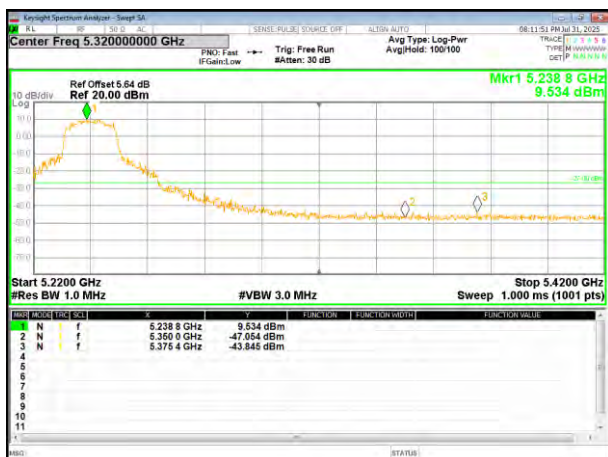
(802.11ac20) Band Edge, Left Side



(802.11n40) Band Edge, Left Side



(802.11ac20) Band Edge, Right Side

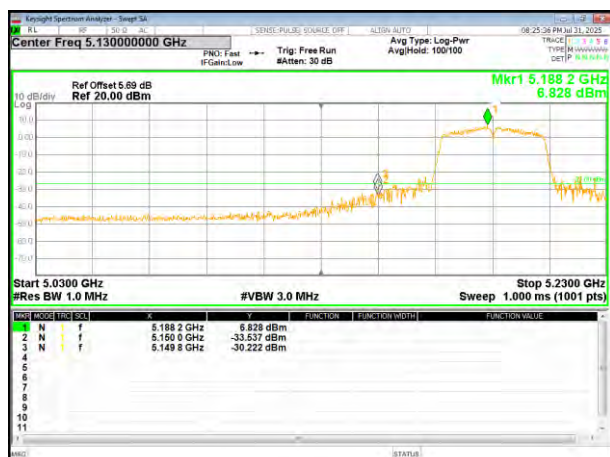


(802.11n40) Band Edge, Right Side



Remark: The antenna gain and cable loss were not compensated in the test data, and the margin value of the Band Edge test was greater than the sum of the antenna gain and cable loss, so the test met the requirements

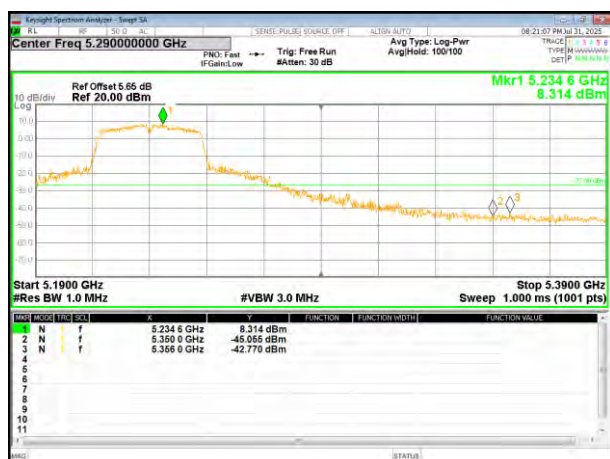
(802.11ac40) Band Edge, Left Side



(802.11ac80) Band Edge



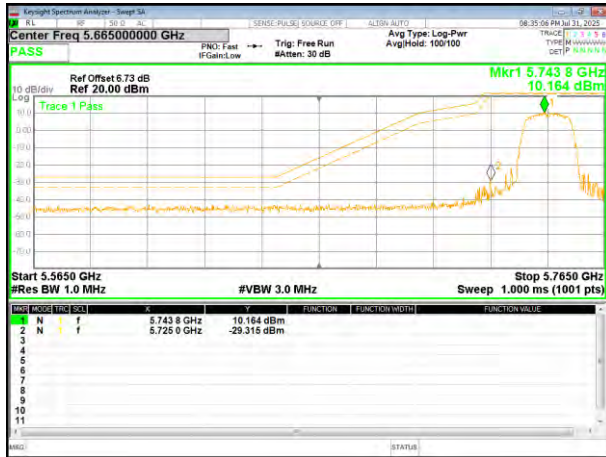
(802.11ac40) Band Edge, Right Side



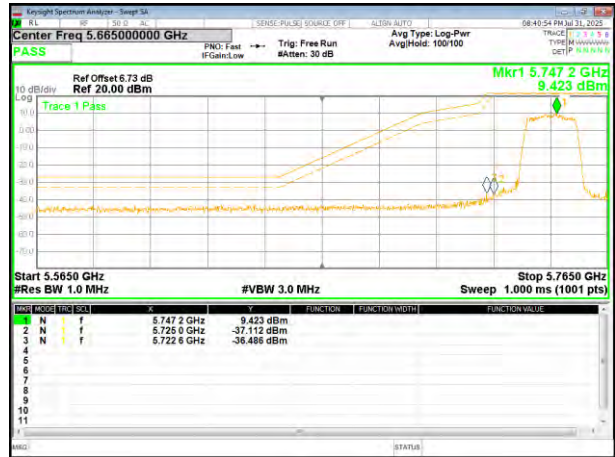
Remark: The antenna gain and cable loss were not compensated in the test data, and the margin value of the Band Edge test was greater than the sum of the antenna gain and cable loss, so the test met the requirements

5.745~5.825 GHz

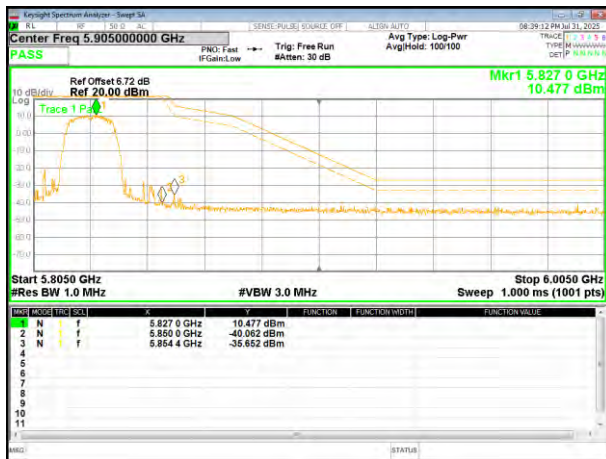
(802.11a) Band Edge, Left Side



(802.11n20) Band Edge, Left Side



(802.11a) Band Edge, Right Side

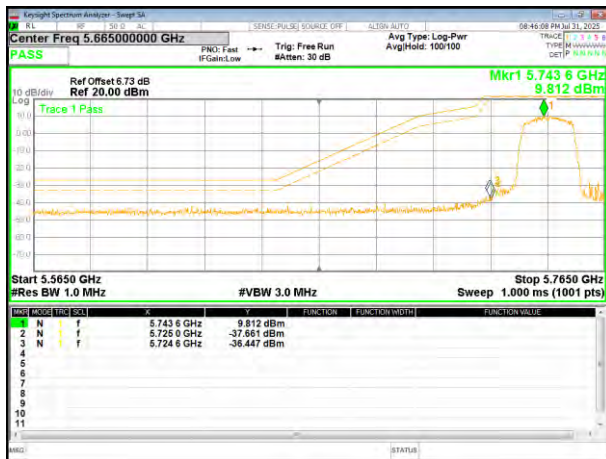


(802.11n20) Band Edge, Right Side

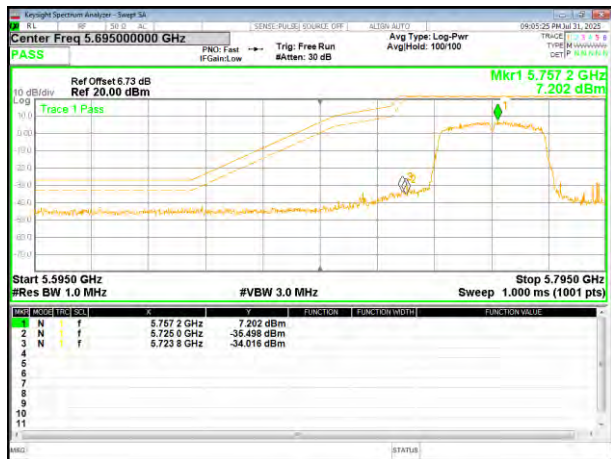


Remark: Antenna gain and cable loss data included in Offset.

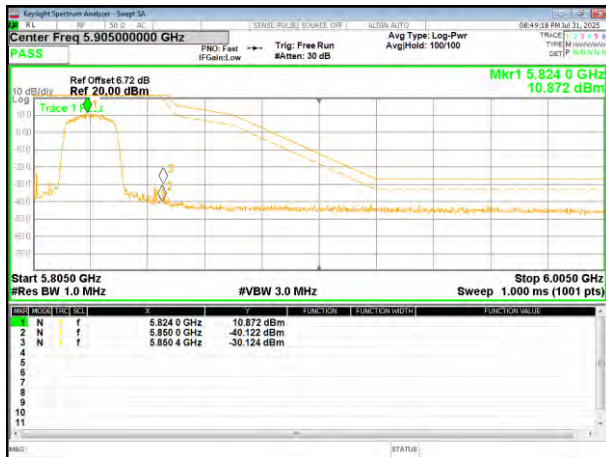
(802.11ac20) Band Edge, Left Side



(802.11n40) Band Edge, Left Side



(802.11ac20) Band Edge, Right Side



(802.11n40) Band Edge, Right Side

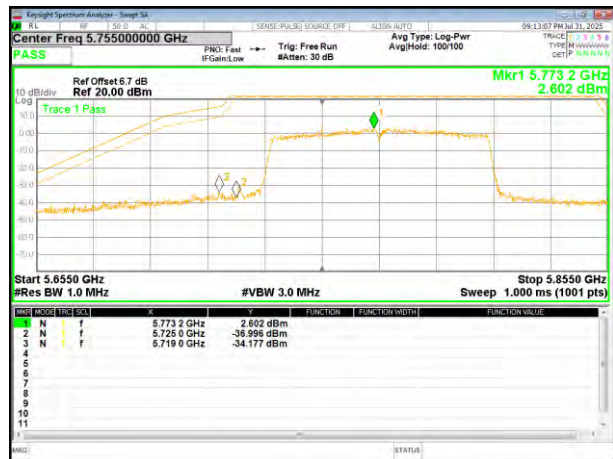


Remark: Antenna gain and cable loss data included in Offset.

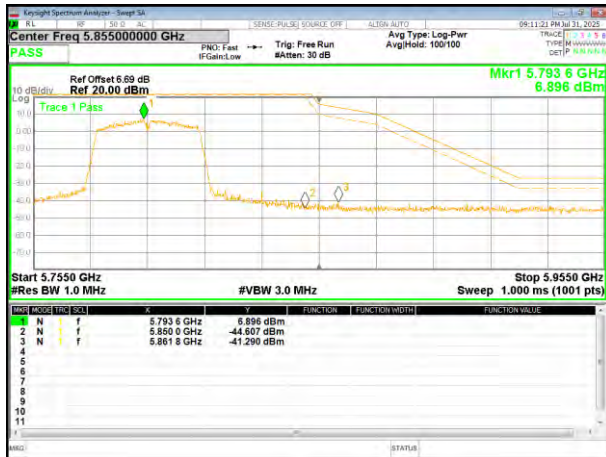
(802.11ac40) Band Edge, Left Side



(802.11ac80) Band Edge



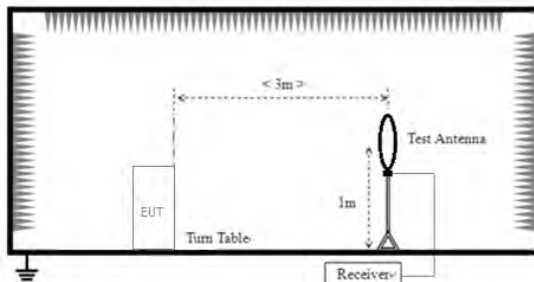
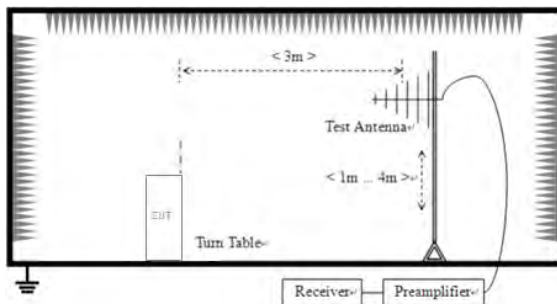
(802.11ac40) Band Edge, Right Side

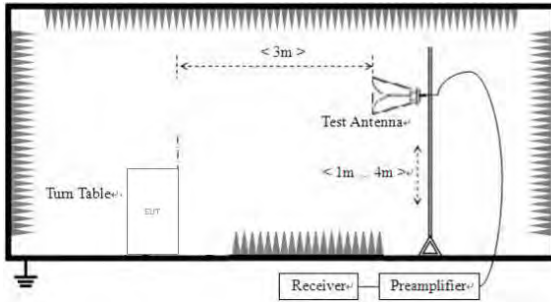


Remark: Antenna gain and cable loss data included in Offset.

4.8 Spurious Emission

4.8.1 Radiated Emission Method

Test Requirement:	47CRF Part 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				
					
Test setup:	For radiated emissions from 30MHz to 1GHz				
					

	For radiated emissions above 1GHz 
Test Procedure:	1. Place the EUT on the top of the rotating table (0.1 meter insulation board) 3 meters above the ground. Rotate the table 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. 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 results:	Pass

Remarks:

1. The report only shows the worst mode.
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:

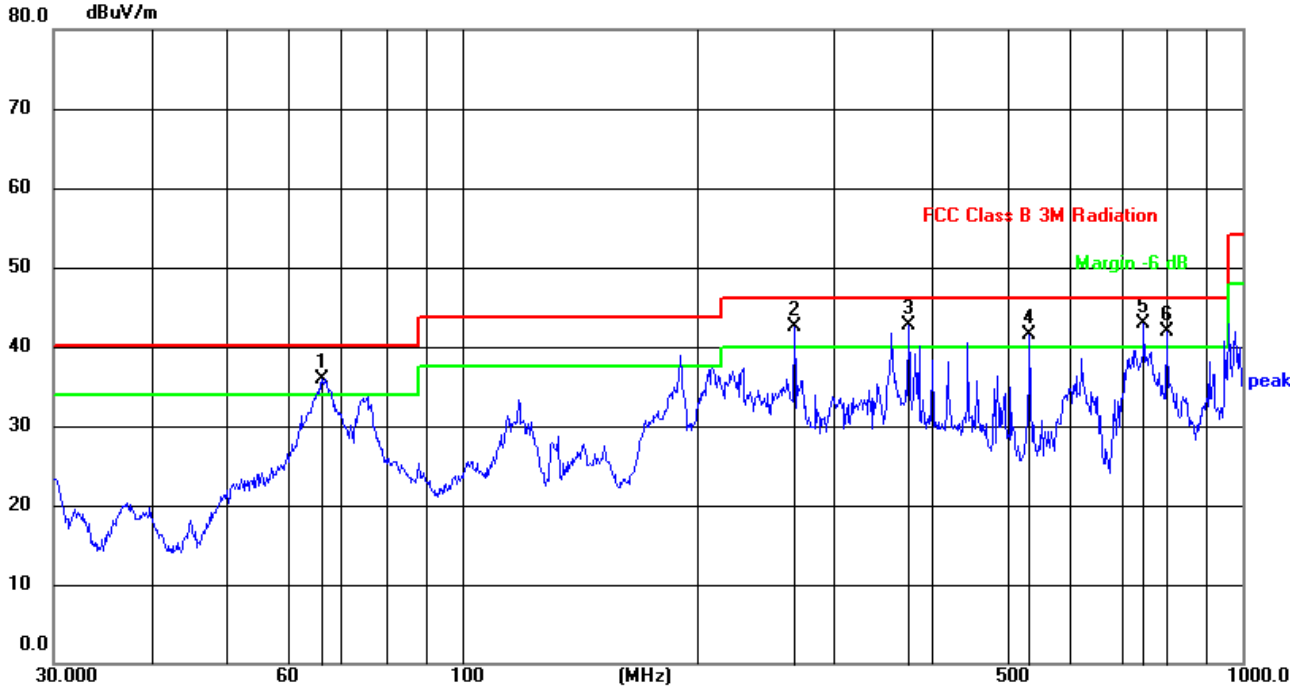
9 kHz ~ 30 MHz

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

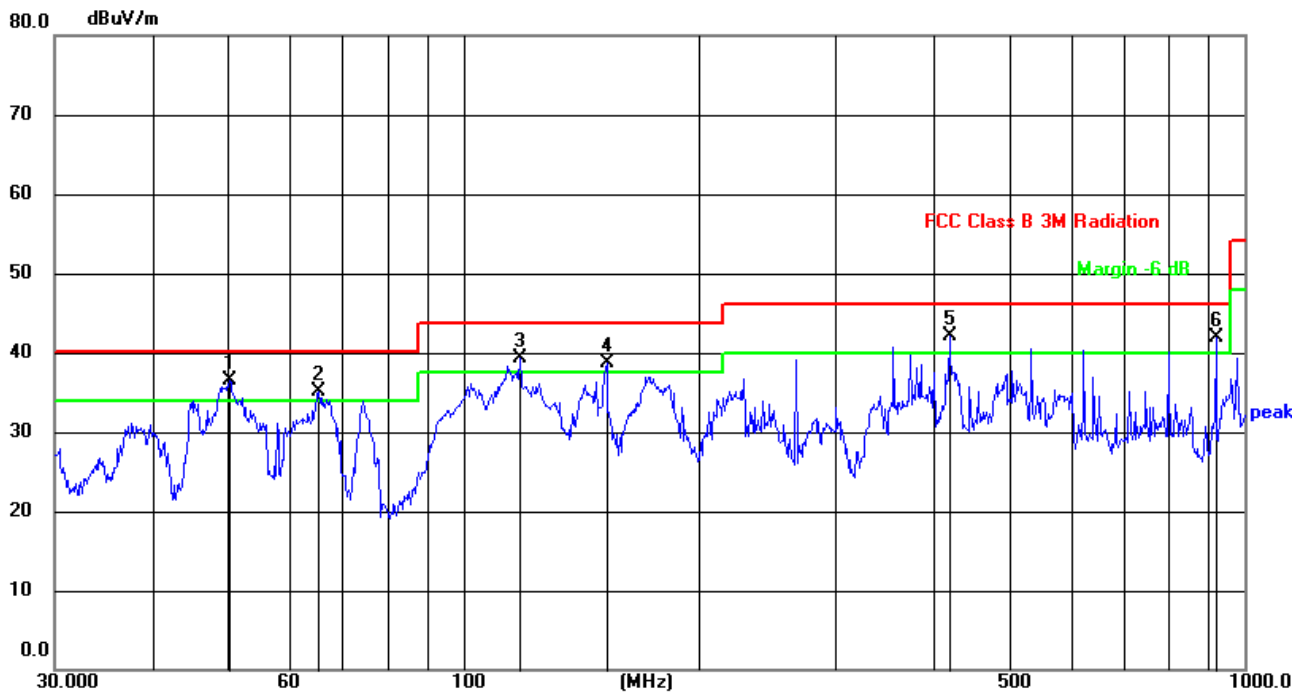
Temperature:	22.8℃	Relative Humidity:	66%RH
Pressure:	101.2kPa	Test Voltage :	120v ac
Test Mode :	TX- 802.11ac20 (5825MHz)		

Horizontal:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	66.2660	56.65	-20.67	35.98	40.00	-4.02	QP
2	266.6089	60.78	-18.22	42.56	46.00	-3.44	QP
3	373.3110	59.67	-17.02	42.65	46.00	-3.35	QP
4	533.8318	54.45	-12.94	41.51	46.00	-4.49	QP
5	747.4823	51.16	-8.29	42.87	46.00	-3.13	QP
6	798.9796	49.42	-7.51	41.91	46.00	-4.09	QP

Vertical:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	50.2323	57.56	-20.98	36.58	40.00	-3.42	QP
2	65.3431	55.72	-20.61	35.11	40.00	-4.89	QP
3	118.1860	58.60	-19.22	39.38	43.50	-4.12	QP
4	152.6639	57.63	-18.96	38.67	43.50	-4.83	QP
5	419.1080	57.94	-15.92	42.02	46.00	-3.98	QP
6	919.2865	47.47	-5.55	41.92	46.00	-4.08	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:****Remark: The test data shows only the worst case 802.11a mode.**

Temperature:	22.8℃	Relative Humidity:	66%RH
Pressure:	101.2kPa	Test Voltage :	120V ac
Test Mode :	5.2G TX- 802.11a		

Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detect or Type
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
Low Channel:5180MHz							
V	10360.00	41.78	1.77	43.55	68.20	-24.65	PK
V	10360.00	37.01	1.77	38.78	54.00	-15.22	AV
V	15540.00	44.17	7.72	51.89	74.00	-22.11	PK
V	15540.00	33.18	7.72	40.90	54.00	-13.10	AV
V	20720.00	48.64	-5.73	42.91	68.20	-25.29	PK
V	20720.00	43.16	-5.73	37.43	54.00	-16.57	AV
V	25900.00	45.80	-2.89	42.91	68.20	-25.29	PK
V	25900.00	41.02	-2.89	38.13	54.00	-15.87	AV
V	31080.00	47.38	1.66	49.04	68.20	-19.16	PK
V	31080.00	41.45	1.66	43.11	54.00	-10.89	AV
V	36260.00	44.40	4.63	49.03	68.20	-19.17	PK
V	36260.00	38.40	4.63	43.03	54.00	-10.97	AV
H	10360.00	42.09	1.77	43.86	68.20	-24.34	PK
H	10360.00	37.17	1.77	38.94	54.00	-15.06	AV
H	15540.00	43.57	7.72	51.29	74.00	-22.71	PK
H	15540.00	33.29	7.72	41.01	54.00	-12.99	AV
H	20720.00	47.77	-5.73	42.04	68.20	-26.16	PK
H	20720.00	41.93	-5.73	36.20	54.00	-17.80	AV
H	25900.00	45.77	-2.89	42.88	68.20	-25.32	PK
H	25900.00	40.26	-2.89	37.37	54.00	-16.63	AV
H	31080.00	46.42	1.66	48.08	68.20	-20.12	PK
H	31080.00	41.07	1.66	42.73	54.00	-11.27	AV
H	36260.00	43.94	4.63	48.57	68.20	-19.63	PK
H	36260.00	38.79	4.63	43.42	54.00	-10.58	AV

Remark:

1. Emission Level = Meter Reading + Factor,
Factor=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.



Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detect or Type
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
Middle Channel:5200Hz							
V	10400.00	41.74	1.85	43.59	68.20	-24.61	PK
V	10400.00	37.00	1.85	38.85	54.00	-15.15	AV
V	15600.00	43.55	7.64	51.19	74.00	-22.81	PK
V	15600.00	32.56	7.64	40.20	54.00	-13.80	AV
V	20800.00	51.90	-5.67	46.23	68.20	-21.97	PK
V	20800.00	47.35	-5.67	41.68	54.00	-12.32	AV
V	26000.00	46.26	-2.85	43.41	68.20	-24.79	PK
V	26000.00	41.09	-2.85	38.24	54.00	-15.76	AV
V	31200.00	44.95	1.57	46.52	68.20	-21.68	PK
V	31200.00	41.11	1.57	42.68	54.00	-11.32	AV
V	36400.00	44.58	4.93	49.51	68.20	-18.69	PK
V	36400.00	39.64	4.93	44.57	54.00	-9.43	AV
H	10400.00	41.91	1.85	43.76	68.20	-24.44	PK
H	10400.00	37.41	1.85	39.26	54.00	-14.74	AV
H	15600.00	43.36	7.64	51.00	74.00	-23.00	PK
H	15600.00	32.78	7.64	40.42	54.00	-13.58	AV
H	20800.00	48.67	-5.67	43.00	68.20	-25.20	PK
H	20800.00	43.91	-5.67	38.24	54.00	-15.76	AV
H	26000.00	47.86	-2.85	45.01	68.20	-23.19	PK
H	26000.00	42.93	-2.85	40.08	54.00	-13.92	AV
H	31200.00	46.71	1.57	48.28	68.20	-19.92	PK
H	31200.00	41.28	1.57	42.85	54.00	-11.15	AV
H	36400.00	44.04	4.93	48.97	68.20	-19.23	PK
H	36400.00	39.48	4.93	44.41	54.00	-9.59	AV

Remark:

1. Emission Level = Meter Reading + Factor,
Factor=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.



Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detect or Type
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
High Channel:5240MHz							
V	10480.00	39.67	2.02	41.69	68.20	-26.51	PK
V	10480.00	34.67	2.02	36.69	54.00	-17.31	AV
V	15720.00	40.07	7.46	47.53	74.00	-26.47	PK
V	15720.00	30.38	7.46	37.84	54.00	-16.16	AV
V	20960.00	45.60	-5.56	40.04	68.20	-28.16	PK
V	20960.00	40.94	-5.56	35.38	54.00	-18.62	AV
V	26200.00	43.37	-2.50	40.87	68.20	-27.33	PK
V	26200.00	39.31	-2.50	36.81	54.00	-17.19	AV
V	31440.00	44.58	1.39	45.97	68.20	-22.23	PK
V	31440.00	40.09	1.39	41.48	54.00	-12.52	AV
V	36680.00	40.90	5.25	46.15	68.20	-22.05	PK
V	36680.00	36.72	5.25	41.97	54.00	-12.03	AV
H	10480.00	40.06	2.02	42.08	68.20	-26.12	PK
H	10480.00	35.52	2.02	37.54	54.00	-16.46	AV
H	15720.00	40.34	7.46	47.80	74.00	-26.20	PK
H	15720.00	30.43	7.46	37.89	54.00	-16.11	AV
H	20960.00	45.41	-5.56	39.85	68.20	-28.35	PK
H	20960.00	41.04	-5.56	35.48	54.00	-18.52	AV
H	26200.00	45.29	-2.50	42.79	68.20	-25.41	PK
H	26200.00	42.11	-2.50	39.61	54.00	-14.39	AV
H	31440.00	43.96	1.39	45.35	68.20	-22.85	PK
H	31440.00	39.41	1.39	40.80	54.00	-13.20	AV
H	36680.00	41.15	5.15	46.30	68.20	-21.90	PK
H	36680.00	36.43	5.15	41.58	54.00	-12.42	AV

Remark:

1. Emission Level = Meter Reading + Factor,
Factor=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.



Temperature:	22.8℃	Relative Humidity:	66%RH
Pressure:	101.2kPa	Test Voltage :	120V ac
Test Mode :	5.8G TX- 802.11ac20		

Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detect or Type
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
Low Channel:5745MHz							
V	11490.00	47.14	3.31	50.45	74.00	-23.55	PK
V	11490.00	37.08	3.31	40.39	54.00	-13.61	AV
V	17235.00	36.39	10.10	46.49	68.20	-21.71	PK
V	17235.00	31.37	10.10	41.47	54.00	-12.53	AV
V	22980.00	53.81	-4.61	49.20	74.00	-24.80	PK
V	22980.00	42.90	-4.61	38.29	54.00	-15.71	AV
V	28725.00	44.48	0.87	45.35	68.20	-22.85	PK
V	28725.00	40.10	0.87	40.97	54.00	-13.03	AV
V	34470.00	45.03	3.82	48.85	68.20	-19.35	PK
V	34470.00	39.66	3.82	43.48	54.00	-10.52	AV
H	11490.00	47.80	3.31	51.11	74.00	-22.89	PK
H	11490.00	37.26	3.31	40.57	54.00	-13.43	AV
H	17235.00	35.50	10.10	45.60	68.20	-22.60	PK
H	17235.00	30.63	10.10	40.73	54.00	-13.28	AV
H	22980.00	53.39	-4.61	48.78	74.00	-25.22	PK
H	22980.00	42.67	-4.61	38.06	54.00	-15.94	AV
H	28725.00	46.79	0.87	47.66	68.20	-20.54	PK
H	28725.00	42.54	0.87	43.41	54.00	-10.59	AV
H	34470.00	45.53	3.82	49.35	68.20	-18.85	PK
H	34470.00	40.97	3.82	44.79	54.00	-9.21	AV

Remark:

- Emission Level = Meter Reading + Factor,
Factor=Antenna Factor + Cable Loss – Pre-amplifier
Margin= Emission Level – Limit
- If peak below the average limit, the average emission was no test.
- The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detect or Type
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
Low Channel:5785MHz							
V	11570.00	46.46	3.34	49.80	74.00	-24.20	PK
V	11570.00	36.35	3.34	39.69	54.00	-14.31	AV
V	17355.00	34.62	10.52	45.14	68.20	-23.06	PK
V	17355.00	29.98	10.52	40.50	54.00	-13.50	AV
V	23140.00	52.95	-4.66	48.29	74.00	-25.71	PK
V	23140.00	42.81	-4.66	38.15	54.00	-15.85	AV
V	28925.00	45.86	1.36	47.22	68.20	-20.98	PK
V	28925.00	40.99	1.36	42.35	54.00	-11.65	AV
V	34710.00	45.43	3.95	49.38	68.20	-18.82	PK
V	34710.00	40.21	3.95	44.16	54.00	-9.84	AV
H	11570.00	47.51	3.34	50.85	74.00	-23.15	PK
H	11570.00	37.40	3.34	40.74	54.00	-13.26	AV
H	17355.00	33.77	10.52	44.29	68.20	-23.91	PK
H	17355.00	30.33	10.52	40.85	54.00	-13.15	AV
H	23140.00	53.50	-4.66	48.84	74.00	-25.16	PK
H	23140.00	42.66	-4.66	38.00	54.00	-16.00	AV
H	28925.00	46.63	1.36	47.99	68.20	-20.21	PK
H	28925.00	42.27	1.36	43.63	54.00	-10.37	AV
H	34710.00	46.02	3.95	49.97	68.20	-18.23	PK
H	34710.00	40.56	3.95	44.51	54.00	-9.49	AV

Remark:

1. Emission Level = Meter Reading + Factor,
Factor=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.

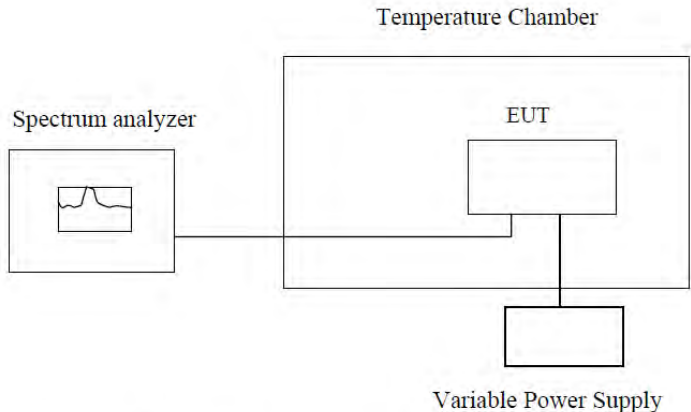


Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detect or Type
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
Low Channel:5825MHz							
V	11650.00	44.52	3.36	47.88	74.00	-26.12	PK
V	11650.00	34.49	3.36	37.85	54.00	-16.15	AV
V	17475.00	32.59	10.93	43.52	68.20	-24.69	PK
V	17475.00	28.95	10.93	39.88	54.00	-14.12	AV
V	23300.00	46.02	-4.77	41.25	68.20	-26.95	PK
V	23300.00	41.64	-4.77	36.87	54.00	-17.13	AV
V	29125.00	43.69	1.65	45.34	68.20	-22.86	PK
V	29125.00	38.49	1.65	40.14	54.00	-13.86	AV
V	34950.00	42.00	4.09	46.09	68.20	-22.11	PK
V	34950.00	37.86	4.09	41.95	54.00	-12.05	AV
H	11650.00	44.91	3.36	48.27	74.00	-25.73	PK
H	11650.00	35.00	3.36	38.36	54.00	-15.64	AV
H	17475.00	32.00	10.93	42.93	68.20	-25.27	PK
H	17475.00	27.21	10.93	38.14	54.00	-15.86	AV
H	23300.00	45.60	-4.77	40.83	68.20	-27.37	PK
H	23300.00	41.09	-4.77	36.32	54.00	-17.68	AV
H	29125.00	42.59	1.65	44.24	68.20	-23.96	PK
H	29125.00	39.45	1.65	41.10	54.00	-12.90	AV
H	34950.00	42.93	4.09	47.02	68.20	-21.18	PK
H	34950.00	38.04	4.09	42.13	54.00	-11.87	AV

Remark:

1. Emission Level = Meter Reading + Factor,
Factor=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.

4.9 Frequency stability

Test Requirement:	47CRF Part 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: 120V ac					
Temp. (°C)	Operating Frequency (MHz)	0 minute Measured Frequency (MHz)	2 minute Measured Frequency (MHz)	5 minute Measured Frequency (MHz)	10 minute Measured Frequency (MHz)
-30	5180	5179.995	5179.992	5179.999	5179.978
	5190	5189.991	5189.993	5189.990	5190.009
	5200	5199.986	5199.984	5199.998	5200.034
	5210	5209.992	5209.992	5209.990	5210.018
	5220	5219.987	5219.984	5220.011	5220.009
	5230	5229.985	5230.005	5229.989	5230.037
	5240	5239.998	5239.983	5240.007	5240.025
-20	5180	5179.947	5179.992	5179.987	5180.021
	5190	5189.977	5189.993	5189.998	5190.017
	5200	5199.972	5199.984	5199.989	5200.019
	5210	5209.986	5209.992	5209.990	5210.020
	5220	5219.977	5219.984	5219.997	5220.035
	5230	5229.985	5230.005	5230.005	5230.028
	5240	5239.993	5239.983	5239.987	5240.036
-10	5180	5179.985	5179.992	5179.999	5179.985
	5190	5189.986	5189.993	5189.990	5190.016
	5200	5199.977	5199.984	5199.998	5200.021
	5210	5209.985	5209.992	5209.990	5210.025
	5220	5219.977	5219.984	5220.011	5220.016
	5230	5229.998	5230.005	5229.989	5230.024
	5240	5239.976	5239.983	5240.007	5240.032
0	5180	5179.937	5179.995	5180.005	5180.023
	5190	5189.933	5189.991	5189.995	5190.024
	5200	5199.928	5199.986	5200.005	5200.035
	5210	5209.934	5209.992	5209.955	5210.036
	5220	5219.929	5219.997	5220.001	5220.021
	5230	5229.927	5230.001	5230.007	5230.038
	5240	5239.990	5240.001	5240.008	5240.023
10	5180	5179.974	5179.993	5179.999	5180.026
	5190	5189.985	5189.984	5189.990	5190.027
	5200	5199.976	5199.992	5199.998	5200.023
	5210	5209.977	5209.984	5209.990	5210.018
	5220	5219.984	5220.005	5220.011	5220.034
	5230	5229.992	5229.983	5229.989	5230.019
	5240	5239.974	5240.001	5240.007	5240.017
20	5180	5179.995	5179.992	5179.999	5179.978
	5190	5189.991	5189.993	5189.990	5190.009



	5200	5199.986	5199.984	5199.998	5200.034
	5210	5209.992	5299.992	5209.990	5210.018
	5220	5219.987	5219.984	5220.011	5220.009
	5230	5229.985	5230.005	5229.989	5230.037
	5240	5239.958	5239.983	5240.007	5240.025
30	5180	5179.925	5179.990	5179.998	5180.027
	5190	5189.921	5190.004	5189.829	5190.032
	5200	5199.916	5199.987	5199.997	5200.017
	5210	5209.922	5209.990	5209.999	5210.038
	5220	5219.917	5220.005	5220.000	5220.029
	5230	5229.914	5229.998	5229.997	5230.024
	5240	5239.887	5240.006	5240.001	5240.029
40	5180	5179.985	5179.981	5179.999	5180.016
	5190	5189.986	5189.992	5189.990	5190.018
	5200	5199.916	5199.992	5200.007	5200.017
	5210	5209.922	5209.990	5209.999	5210.025
	5220	5219.917	5219.997	5220.000	5220.029
	5230	5229.998	5229.999	5229.989	5230.030
	5240	5239.976	5239.981	5240.007	5240.008
50	5180	5179.947	5179.992	5179.987	5180.031
	5190	5189.977	5189.993	5189.998	5190.017
	5200	5199.992	5199.984	5199.989	5200.029
	5210	5209.922	5210.004	5209.999	5210.029
	5220	5219.917	5219.999	5220.006	5220.030
	5230	5229.914	5230.006	5230.001	5230.028
	5240	5239.987	5240.004	5239.995	5240.029



Frequency stability versus Voltage					
Temperature: 25°C					
Power Supply (VDC)	Operating Frequency (MHz)	0 minute Measured Frequency (MHz)	2 minute Measured Frequency (MHz)	5 minute Measured Frequency (MHz)	10 minute Measured Frequency (MHz)
102V AC	5180	5179.911	5180.005	5179.997	5180.022
	5190	5189.987	5189.995	5189.998	5190.021
	5200	5199.985	5199.997	5199.999	5200.025
	5210	5209.988	5209.982	5209.995	5210.035
	5220	5219.998	5219.990	5219.999	5220.024
	5230	5229.975	5229.995	5229.998	5300.028
	5240	5239.983	5240.004	5240.007	5240.025
120V AC	5180	5179.925	5180.000	5179.998	5180.027
	5190	5189.981	5189.994	5189.999	5190.012
	5200	5199.986	5199.982	5199.997	5200.017
	5210	5209.922	5209.990	5209.973	5210.035
	5220	5219.917	5220.005	5220.000	5220.029
	5230	5229.914	5229.997	5229.997	5230.021
	5240	5239.987	5240.004	5240.001	5240.029
138V AC	5180	5179.995	5180.002	5179.987	5180.005
	5190	5189.991	5189.998	5189.998	5190.017
	5200	5199.986	5199.993	5199.989	5200.007
	5210	5209.992	5209.999	5209.990	5210.009
	5220	5219.987	5219.994	5219.997	5220.016
	5230	5229.985	5229.992	5230.002	5230.039
	5240	5239.988	5239.995	5239.987	5240.006



Frequency stability versus Temp.					
Power Supply: 120V ac					
Temp. (°C)	Operating Frequency (MHz)	0 minute Measured Frequency (MHz)	2 minute Measured Frequency (MHz)	5 minute Measured Frequency (MHz)	10 minute Measured Frequency (MHz)
-30	5745	5744.997	5744.995	5745.000	5745.031
	5755	5754.985	5754.991	5755.004	5755.013
	5775	5774.977	5774.990	5775.005	5775.022
	5785	5784.986	5784.993	5785.008	5785.013
	5795	5794.977	5795.004	5794.991	5795.024
	5825	5824.988	5824.985	5824.987	5825.028
-20	5745	5744.891	5744.975	5745.001	5745.014
	5755	5754.916	5754.991	5755.003	5755.040
	5775	5774.896	5774.990	5775.006	5775.036
	5785	5784.905	5784.993	5784.998	5785.020
	5795	5794.983	5795.004	5794.989	5795.009
	5825	5824.988	5824.985	5824.998	5825.024
-10	5745	5744.977	5744.986	5744.985	5745.028
	5755	5754.984	5754.993	5755.010	5755.023
	5775	5774.976	5774.990	5774.991	5775.027
	5785	5784.968	5784.986	5785.000	5785.028
	5795	5794.975	5794.982	5794.998	5795.031
	5825	5824.984	5824.985	5825.008	5825.033
0	5745	5744.971	5744.985	5744.991	5745.033
	5755	5754.981	5754.992	5754.998	5755.032
	5775	5774.992	5774.984	5775.002	5775.023
	5785	5784.978	5784.976	5784.991	5785.020
	5795	5794.974	5794.983	5794.987	5795.038
	5825	5824.972	5824.992	5824.990	5825.031
10	5745	5744.968	5744.996	5744.985	5745.024
	5755	5754.983	5754.998	5755.010	5755.038
	5775	5774.982	5775.001	5774.991	5775.023
	5785	5784.985	5784.993	5785.000	5785.010
	5795	5794.995	5794.984	5794.998	5795.004
	5825	5824.977	5824.993	5825.008	5825.039
20	5745	5744.988	5744.985	5745.001	5745.013
	5755	5754.990	5755.002	5755.005	5755.032
	5775	5774.987	5775.003	5775.000	5775.012
	5785	5784.974	5784.985	5784.987	5785.039
	5795	5794.968	5795.002	5794.981	5795.031
	5825	5824.994	5825.000	5824.951	5825.041
30	5745	5744.967	5744.996	5744.985	5745.032
	5755	5754.983	5754.998	5755.010	5755.038
	5775	5774.982	5775.001	5774.991	5775.023
	5785	5784.985	5784.993	5785.000	5785.010
	5795	5794.996	5794.984	5794.998	5795.004
	5825	5824.977	5824.993	5825.008	5825.039
40	5745	5744.978	5744.985	5744.985	5745.008
	5755	5754.985	5755.002	5755.010	5755.033
	5775	5774.977	5775.003	5774.991	5775.014
	5785	5784.969	5784.985	5785.000	5785.023
	5795	5794.976	5795.002	5794.998	5795.021
	5825	5824.995	5825.000	5825.008	5825.032



50	5745	5744.972	5744.985	5744.990	5745.014
	5755	5754.997	5755.002	5754.997	5755.021
	5775	5774.978	5775.003	5774.989	5775.038
	5785	5784.987	5784.985	5784.981	5785.014
	5795	5794.985	5795.002	5794.988	5795.010
	5825	5824.995	5825.000	5824.917	5825.014



Frequency stability versus Voltage					
Temperature: 25°C					
Power Supply (VDC)	Operating Frequency (MHz)	0 minute Measured Frequency (MHz)	2 minute Measured Frequency (MHz)	5 minute Measured Frequency (MHz)	10 minute Measured Frequency (MHz)
102V AC	5745	5744.987	5744.995	5745.001	5745.028
	5755	5754.983	5754.992	5755.007	5755.033
	5775	5774.982	5774.984	5775.008	5775.014
	5785	5784.985	5784.976	5784.990	5785.023
	5795	5794.996	5794.983	5795.008	5795.021
	5825	5824.977	5825.002	5825.005	5825.032
120V AC	5745	5744.967	5744.996	5744.985	5745.024
	5755	5754.983	5754.998	5755.010	5755.038
	5775	5774.982	5775.001	5774.991	5775.023
	5785	5784.985	5784.993	5785.000	5785.010
	5795	5794.992	5794.984	5794.998	5795.004
	5825	5824.977	5824.993	5825.008	5825.039
138V AC	5745	5744.897	5744.993	5745.001	5745.041
	5755	5754.984	5755.005	5755.005	5755.029
	5775	5774.990	5774.989	5775.000	5775.039
	5785	5784.996	5785.989	5784.987	5785.035
	5795	5794.995	5794.984	5794.998	5795.004
	5825	5824.977	5824.993	5825.008	5825.039



5 Test Setup Photo

Reference to the file No.: ET-25072544SP for details.

6 EUT Constructional Details

Reference to the file No.: ET-25072544EP and ET-25072544IP for details.

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