



TEST REPORT

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Manufacturer: Dongguan Sunvol Information Technology Co., Ltd.
Address of Manufacturer: Unit 1, Building 11, No. 5, Keji 10th Road, Songshanhu Park, Dongguan City, Guangdong Province, China
Product Name: SMART WHITEBOARD
Model No.: S4G750F2
Trade Mark: AMDOXTECH
FCC ID: 2BXEY-S4G750F2
Applicable standards: FCC CFR Title 47 Part 15 Subpart E Section 15.407
Date of Test: Aug.08, 2026-Aug.12, 2026
Date of report issued: Aug.13, 2026

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

Prepared By

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Report Revision History		
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Contents

Page

1	TEST SUMMARY	4
1.1	MEASUREMENT UNCERTAINTY	4
2	GENERAL INFORMATION	5
2.1	GENERAL DESCRIPTION OF EUT	5
2.2	TEST MODE	7
2.3	DESCRIPTION OF SUPPORT UNITS	8
2.4	TEST FACILITY	8
2.5	ADDITIONAL INSTRUCTIONS.....	8
3	TEST INSTRUMENTS LIST	9
4	TEST RESULTS AND MEASUREMENT DATA	10
4.1	ANTENNA REQUIREMENT	10
4.2	CONDUCTED EMISSIONS	11
4.3	DUTY CYCLE.....	14
4.4	CONDUCTED OUTPUT POWER	17
4.5	OCCUPY BANDWIDTH	18
4.6	BAND EDGE	35
4.6.1	Conducted test Method	35
4.6.2	Radiated test Method	43
4.7	SPURIOUS EMISSION	51
4.7.1	Radiated Emission Method	51
5	TEST SETUP PHOTO	58
6	EUT CONSTRUCTIONAL DETAILS.....	58

1 Test Summary

Test Item	Section in CFR 47	Result	Test by
Antenna requirement	47CFR part 15.203	Pass	/
AC Power Line Conducted Emission	47CFR part 15.207	Pass	Jason Huang
Conducted Output Power	47CFR part 15.407 (a)(1)/(a)(3)	Pass	Oliver Wang
26dB Bandwidth	47CFR part 15.407 (a)(12)	Pass	Oliver Wang
6dB Bandwidth	47CFR part 15.407 (e)	Pass	Oliver Wang
Power Spectral Density	47CFR part 15.407(a)(1)/(a)(3)	Pass	Oliver Wang
Band Edge	47CFR part 15.407(b)(1)/(b)(4)	Pass	Oliver Wang
Spurious Emission	47CFR part 15.205/15.209 47CFR part 15.407(b)(1)/(b)(4)/(b)(8)	Pass	Jason Huang

Remarks:

1. Pass: The EUT complies with the essential requirements in the standard.
2. Test according to ANSI C63.10-2020 + Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024 ,
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"

1.1 Measurement Uncertainty

Test Item	Measurement Uncertainty	Notes
Occupied Channel Bandwidth	0.72%	(1)
RF output power, conducted	±0.67 dB	(1)
Power Spectral Density, conducted	±0.51 dB	(1)
Unwanted Emissions, conducted	±0.64 dB	(1)
AC Power Line Conducted Emission	± 3.38 dB	(1)
Radiated emissions 9K-30MHz	±4.26 dB	(1)
Radiated emissions 30M- 1GHz	±4.88 dB	(1)
Radiated emissions 1GHz-18GHz	± 4.16 dB	(1)
Radiated emissions 18GHz-40GHz	±4.14 dB	(1)
Frequency error	Uc=6X10 ⁻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:	SMART WHITEBOARD
Model No.:	S4G750F2
Difference of model(s)	N/A
Test Model:	S4G750F2
Hardware Version:	N/A
Software Version:	N/A
Power supply:	AC 100-240V,50/60Hz 4A
Adapter information:	N/A
Battery:	N/A
Radio Technology:	5G RLAN
Operation Frequency:	☒ 5745-5825 MHz for 802.11a/n20/ac20; 5755-5795 MHz for 802.11n40/ac40; 5775MHz for 802.11 ac80
Channel numbers:	☒ 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/n20/ac20 : 20MHz 802.11n40/ac40 : 40MHz 802.11ac80: 80MHz
Modulation technology:	Orthogonal Frequency Division Multiplexing (OFDM) with BPSK/QPSK/16QAM/64QAM/256QAM/1024QAM
Antenna Type:	FPC antenna
Antenna gain:	5.51dBi
Note: <i>1.For more details, refer to the user's manual of the EUT.</i> <i>2.Antenna information is provided by applicant, Testing lab is not responsible for the accuracy of the information</i>	



Operation Frequency each of channel							
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	5745	5755	5775
Middle channel	5785		
Highest channel	5825		

2.2 Test mode

Transmitting mode	Keep the EUT in continuously transmitting mode.
<i>Remark: 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 20 CH149/CH157/CH165
Mode 2	802.11n 40/ac40 CH 151/CH159
Mode 3	802.11 ac80 CH155
Mode 4	/
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/ac 20 CH149/CH157/CH165
Mode 2	802.11n 40/ac40 CH 151/CH159
Mode 3	802.11 ac80 CH155
Mode 4	/

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	Monitor	SKYWORTH	2BU1	/
2	MOUSE	DELL	MS116	/

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	Manufacturer's special serial port method
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	102696	2026.3.05	2027.3.04
2	Artificial power network	schwarabeck	NSLK8127	8127483	2026.3.05	2027.3.04
3	Artificial power network	ETS	3186/2NM	1132	2026.3.05	2027.3.04
4	10dB attenuator	HUBER+SUHNER	10dB	/	2026.3.05	2027.3.04
5	Cable 4	HUBER SUNNER	3M	/	2026.3.05	2027.3.04
6	Absorbing Clamp	schwarabeck	MDS21	D69250	2026.3.05	2027.3.04

Radiated Emission & RF Conducted test:

Item	Equipment name	Manufacturer	Model	Serial No.	Calibration date	Due date
1	EMI Test Receiver	Rohde&schwarz	ESCI7	101032	2026.3.05	2027.3.04
2	Broadband antenna	schwarabeck	VULB9168	1064	2026.3.11	2028.3.10
3	Horn antenna	schwarabeck	BBHA9120D	9120D-1145	2026.3.08	2028.3.07
4	Amplifier	EMtrace	RP01A	50117	2026.3.05	2027.3.04
5	Amplifier	Space-Dtronics	EWLAN0118G-P40	19113001	2026.3.05	2027.3.04
6	Spectrum analyzer	KEYSIGHT	N9020A	MY55370280	2026.3.05	2027.3.04
7	Power detector meter	MWRFtest	MW100-PSB	MW201020JYT	2026.3.05	2027.3.04
8	Signal generator	Agilent	N5182A	MY49060455	2026.3.05	2027.3.04
9	Spectrum analyzer	Rohde&schwarz	FSV-40N	102137	2026.3.05	2027.3.04
10	Amplifier	SKET	LNPA_1840-50	SK2019040302	2026.3.05	2027.3.04
11	Horn antenna	schwarabeck	BBHA 9170	946	2026.3.08	2028.3.07
12	Loop antenna	schwarabeck	FMZB 1519 B	128	2026.3.08	2028.3.07
13	Cable 6	HUBER SUNNER	0.5M	/	2026.3.05	2027.3.04
14	Cable7	HUBER SUNNER	2.0M	/	2026.3.05	2027.3.04
15	Cable8	HUBER SUNNER	6.0M	/	2026.3.05	2027.3.04
16	Filter	Xin bo	XBLBQ-GTA29	210410-3-2	2026.3.05	2027.3.04
17	Power Sensor	Keysight	U2021XA	MY54111006	2026.3.05	2027.3.04
18	Temp. & Humidity Chamber	Jiecheng Instrument	QA-LP-80	20160705001	2026/3/06	2027/3/05

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:	47CFR Part 15.203
<i>15.203 requirement:</i> <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>	
E.U.T Antenna:	
<i>The antenna is FPC antenna, the best case gain of the antenna is 5.51dBi, reference to the ET-26083912IP for details.</i>	

4.2 Conducted Emissions

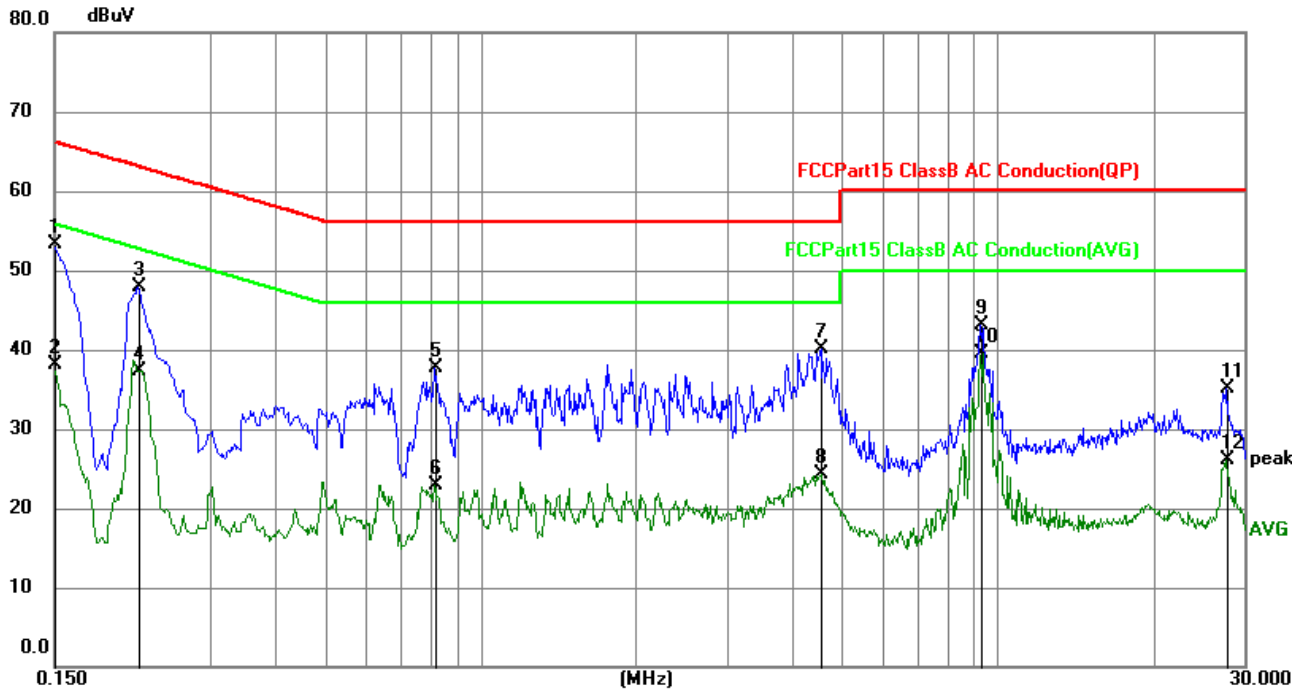
Test Requirement:	47CFR Part 15.207						
Test Method:	ANSI C63.10-2020 + Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024 §6.2						
Test Frequency Range:	150KHz to 30MHz						
Class / Severity:	Class B						
Receiver setup:	RBW=9KHz, VBW=30KHz, Sweep time=auto						
Limit:	Frequency range (MHz)		Limit (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:	Reference Plane 40cm LISN AUX Equipment E.U.T LISN 80cm Filter AC power EMI Receiver Remark E.U.T: Equipment Under Test LISN: Line Impedance Stabilization Network						
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 C63.10-2020 + Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024 on conducted measurement.						
Test Instruments:	Refer to section 3.0 for details						
Test mode:	Refer to section 2.2 for details						
Test environment:	Temp.:	27.4°C	Humid.:	66%	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 of 802.11ac20 (5745MHz)

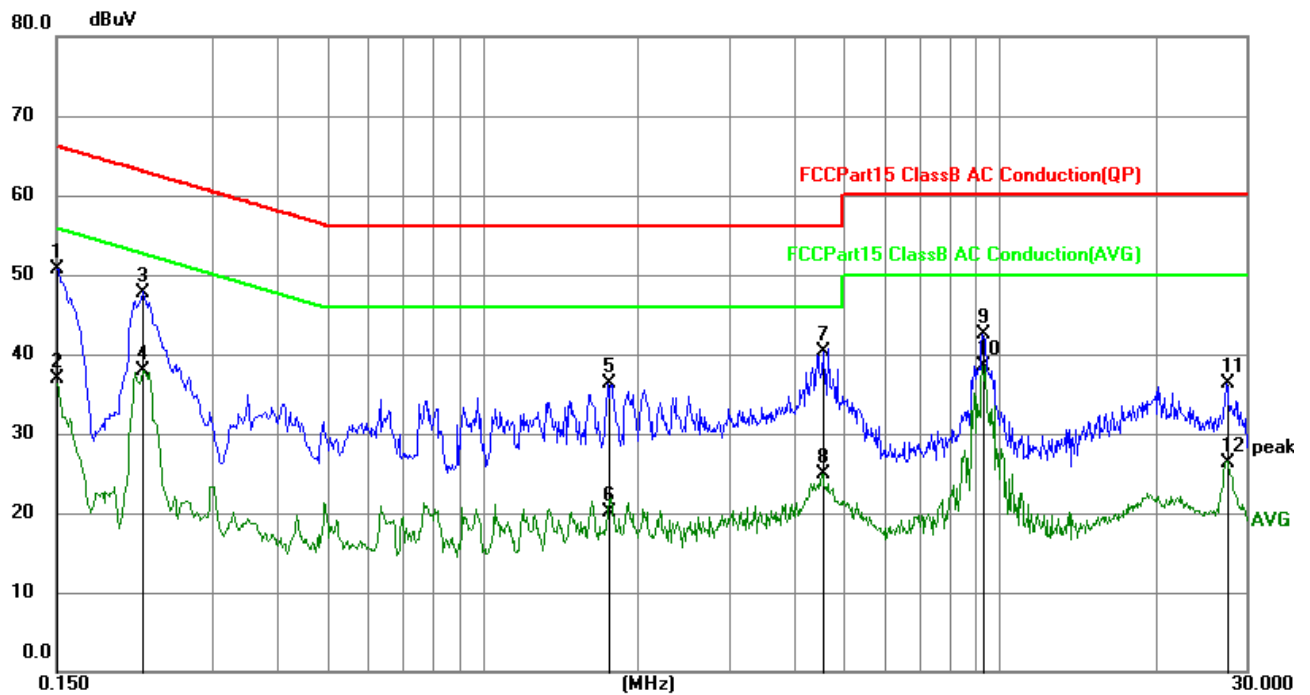
Measurement Result

Line:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1500	43.25	9.97	53.22	66.00	-12.78	QP
2	0.1500	28.23	9.97	38.20	56.00	-17.80	AVG
3	0.2174	37.85	9.98	47.83	62.92	-15.09	QP
4	0.2174	27.23	9.98	37.21	52.92	-15.71	AVG
5	0.8157	27.64	10.09	37.73	56.00	-18.27	QP
6	0.8157	12.91	10.09	23.00	46.00	-23.00	AVG
7	4.5510	30.03	10.03	40.06	56.00	-15.94	QP
8	4.5510	14.33	10.03	24.36	46.00	-21.64	AVG
9	9.2668	32.94	10.07	43.01	60.00	-16.99	QP
10	9.2668	29.49	10.07	39.56	50.00	-10.44	AVG
11	27.7978	25.33	9.80	35.13	60.00	-24.87	QP
12	27.7978	16.21	9.80	26.01	50.00	-23.99	AVG

Neutral:

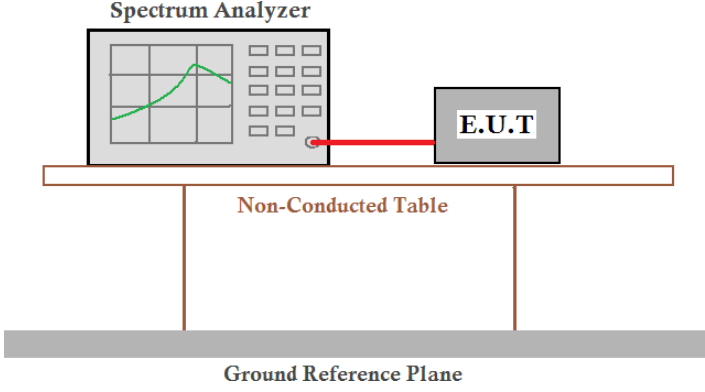


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1500	40.82	9.97	50.79	66.00	-15.21	QP
2	0.1500	27.00	9.97	36.97	56.00	-19.03	AVG
3	0.2195	37.82	9.98	47.80	62.84	-15.04	QP
4	0.2195	27.94	9.98	37.92	52.84	-14.92	AVG
5	1.7519	26.21	10.02	36.23	56.00	-19.77	QP
6	1.7519	10.16	10.02	20.18	46.00	-25.82	AVG
7	4.5644	30.22	10.03	40.25	56.00	-15.75	QP
8	4.5644	14.88	10.03	24.91	46.00	-21.09	AVG
9	9.2669	32.40	10.07	42.47	60.00	-17.53	QP
10	9.2669	28.48	10.07	38.55	50.00	-11.45	AVG
11	27.5279	26.60	9.80	36.40	60.00	-23.60	QP
12	27.5279	16.53	9.80	26.33	50.00	-23.67	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 C63.10-2020 + Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024§ 12.2	
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. 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.: 22.3°C	Humid.: 59%RH
Test voltage:	AC 120V 60HZ	
Test results:	Pass	



Measurement Result

5745-5825 MHz

Mode	Duty cycle (%)	Correction Factor (dB)
TX 802.11a Mode	100	0
TX 802.11n20 Mode	100	0
TX 802.11ac20 Mode	100	0
TX 802.11n40 Mode	100	0
TX 802.11ac40 Mode	100	0
TX 802.11ac80 Mode	100	0

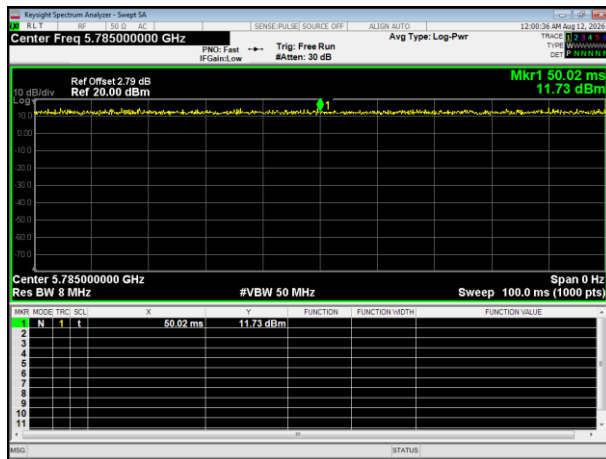
*Note: Duty cycle factor (dB) = $10 * \log (1 / \text{Duty cycle})$*



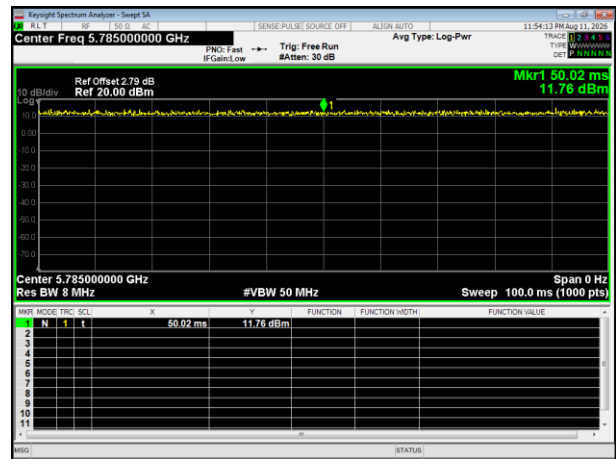
Test plot

5745-5825 MHz

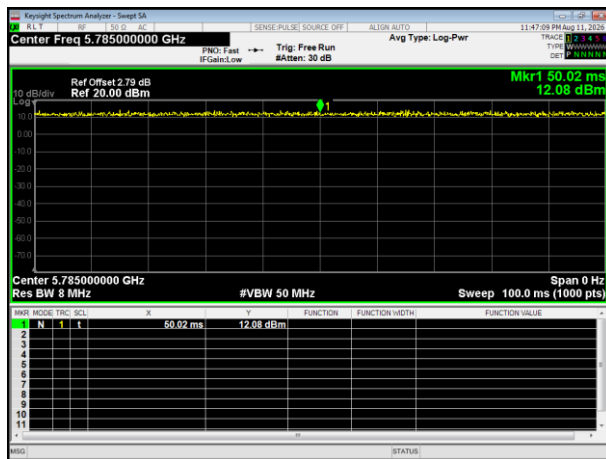
(802.11a) plot



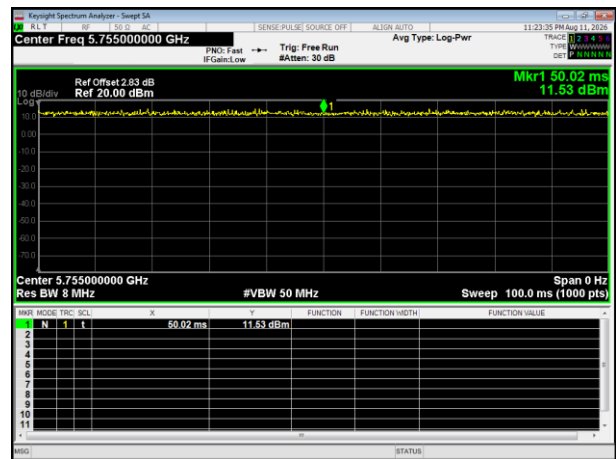
(802.11 n20) plot



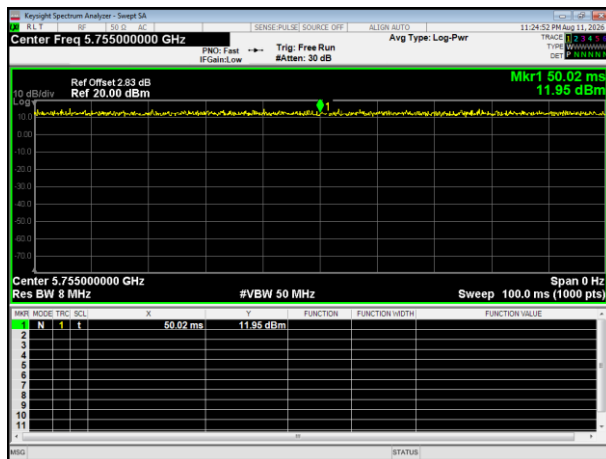
(802.11ac20) plot



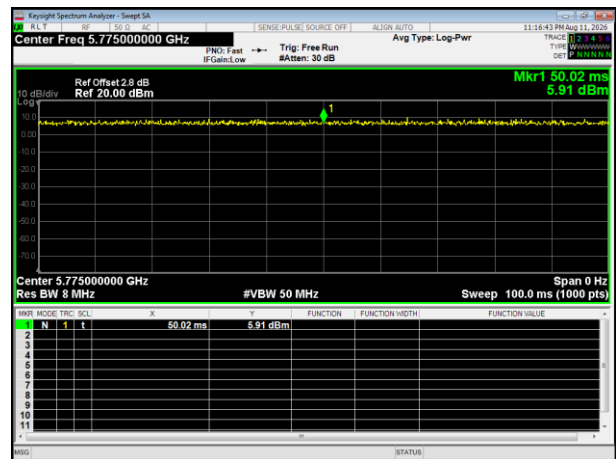
(802.11 n40) plot



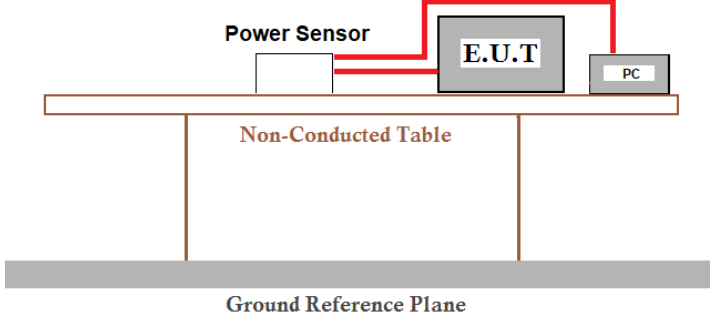
(802.11ac40) plot



(802.11ac80) plot



4.4 Conducted Output Power

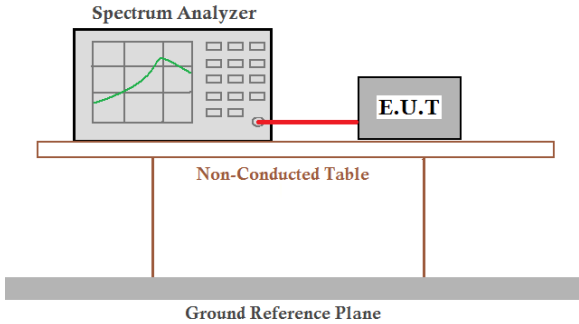
Test Requirement:	47CFR Part 15.407 (a)(1)/(a)(3)	
Test Method:	KDB 789033 D02 General U-NII Test Procedures New Rules v02r01 ANSI C63.10-2020 + Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024 § 12.4.3.1	
Limit:	5150-5250MHz : 250mW 5725~5850MHz : 1W	
Test setup:		
Test Instruments:	Refer to section 3.0 for details	
Test mode:	Refer to section 2.2 for details	
Test environment:	Temp.: 22.3°C	Humid.: 59%RH
Test voltage:	AC 120V 60HZ	
Test results:	Pass	

Measurement Result

5745-5825 MHz

Test Mode	Test Channel	Frequency	Correction Factor	Output power	Total Power	Result
		(MHz)	(dB)	(dBm)	(dBm)	
802.11a	CH149	5745	0	14.49	14.49	Pass
	CH157	5785	0	14.28	14.28	Pass
	CH165	5825	0	14.15	14.15	Pass
802.11n20	CH149	5745	0	14.65	14.65	Pass
	CH157	5785	0	14.56	14.56	Pass
	CH165	5825	0	14.33	14.33	Pass
802.11ac20	CH149	5745	0	14.76	14.76	Pass
	CH157	5785	0	14.58	14.58	Pass
	CH165	5825	0	14.42	14.42	Pass
802.11n40	CH151	5755	0	13.81	13.81	Pass
	CH159	5795	0	13.58	13.58	Pass
802.11ac40	CH151	5755	0	13.60	13.60	Pass
	CH159	5795	0	13.69	13.69	Pass
802.11ac80	CH155	5775	0	12.62	12.62	Pass

4.5 Occupancy Bandwidth

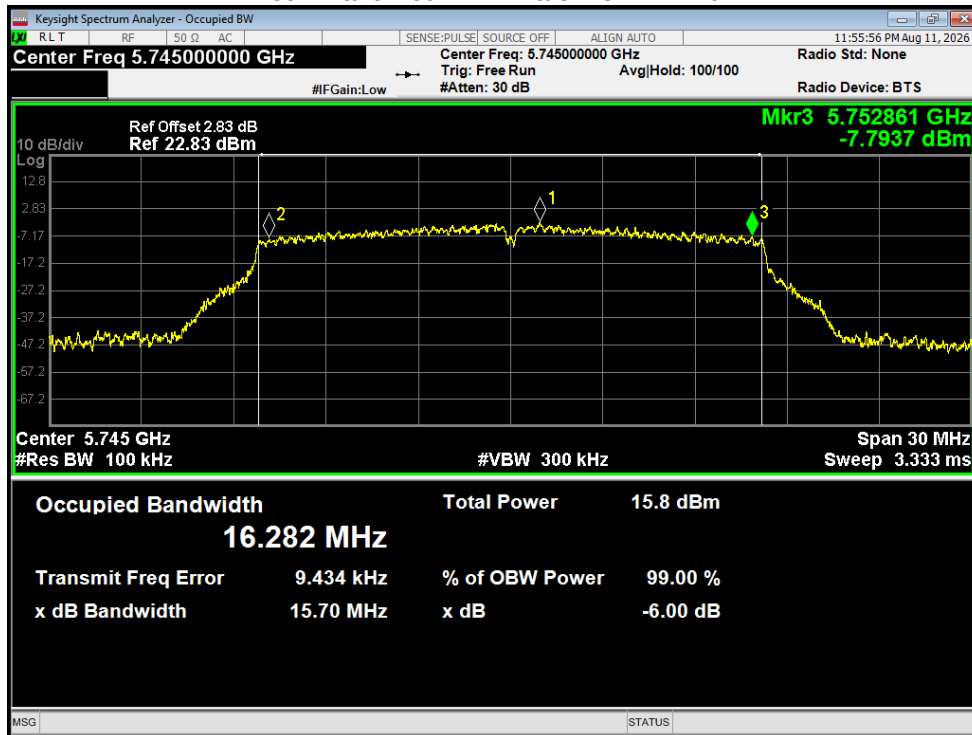
Test Requirement:	47CFR Part 15.407(a)(12)&15.407(e),	
Test Method:	KDB 789033 D02 General U-NII Test Procedures New Rules v02r01, ANSI C63.10-2020 + Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024§12.5	
Limit:	Measurements in the 5.725-5.85 GHz band, the minimum bandwidth 6 dB bandwidth of U-NII devices 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.: 22.3°C	Humid.: 59%RH
Test voltage:	AC 120V 60HZ	
Test results:	Pass	

Measurement Result

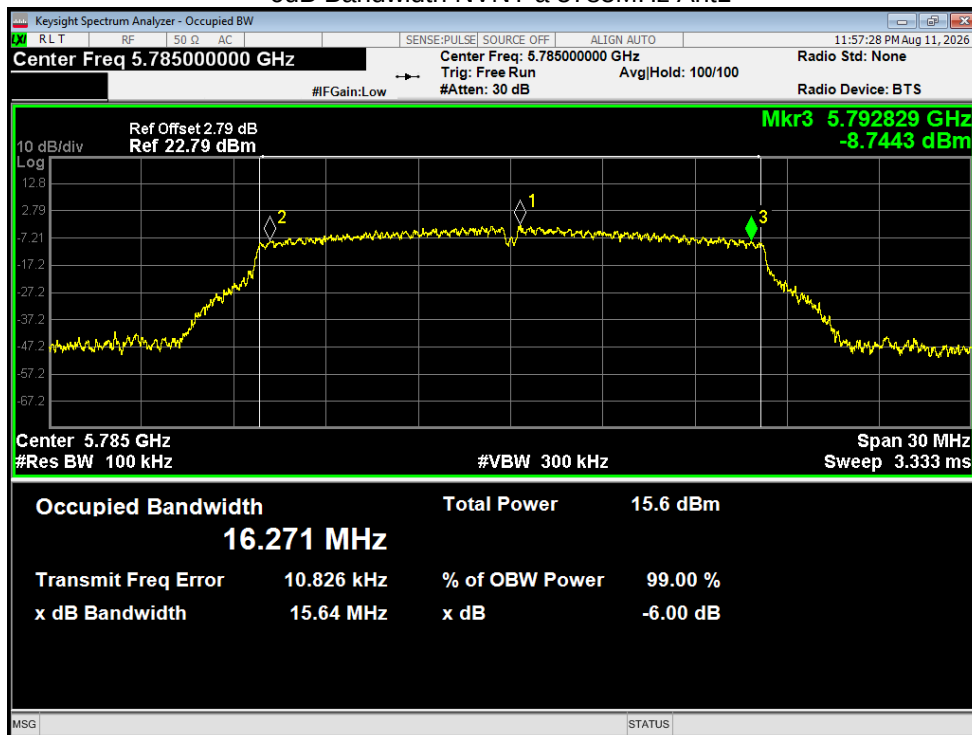
5745-5825MHz

Condition	Mode	Frequency (MHz)	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	a	5745	15.70	0.5	Pass
NVNT	a	5785	15.64	0.5	Pass
NVNT	a	5825	15.99	0.5	Pass
NVNT	n20	5745	16.09	0.5	Pass
NVNT	n20	5785	16.64	0.5	Pass
NVNT	n20	5825	16.58	0.5	Pass
NVNT	n40	5755	35.40	0.5	Pass
NVNT	n40	5795	33.90	0.5	Pass
NVNT	ac20	5745	16.72	0.5	Pass
NVNT	ac20	5785	15.10	0.5	Pass
NVNT	ac20	5825	16.65	0.5	Pass
NVNT	ac40	5755	34.75	0.5	Pass
NVNT	ac40	5795	36.24	0.5	Pass
NVNT	ac80	5775	76.44	0.5	Pass

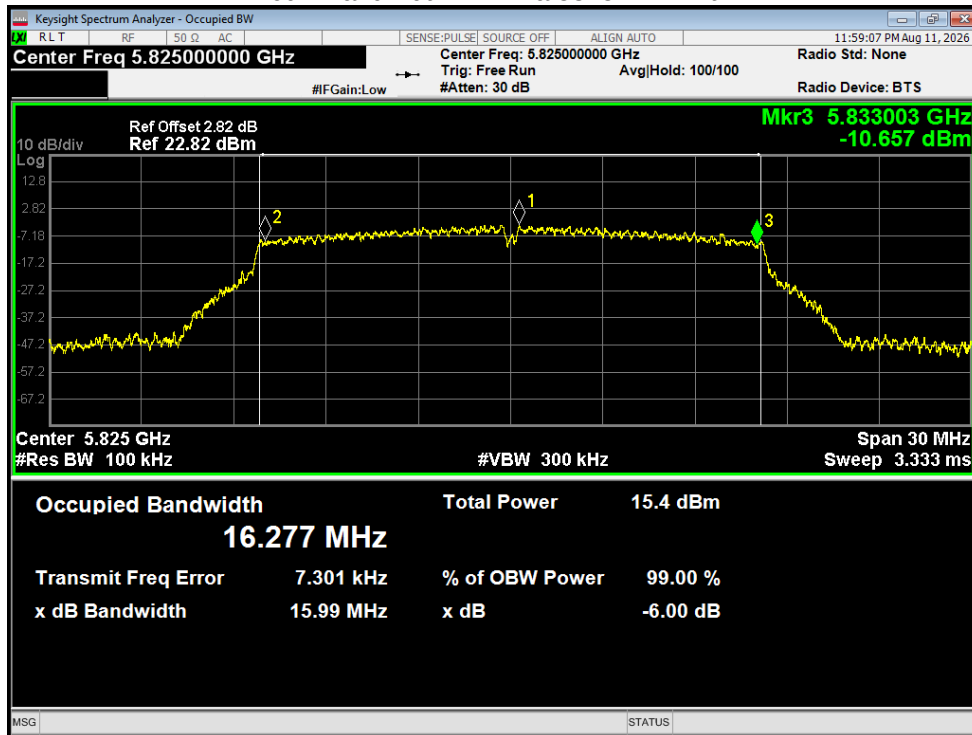
-6dB Bandwidth NVNT a 5745MHz Ant1



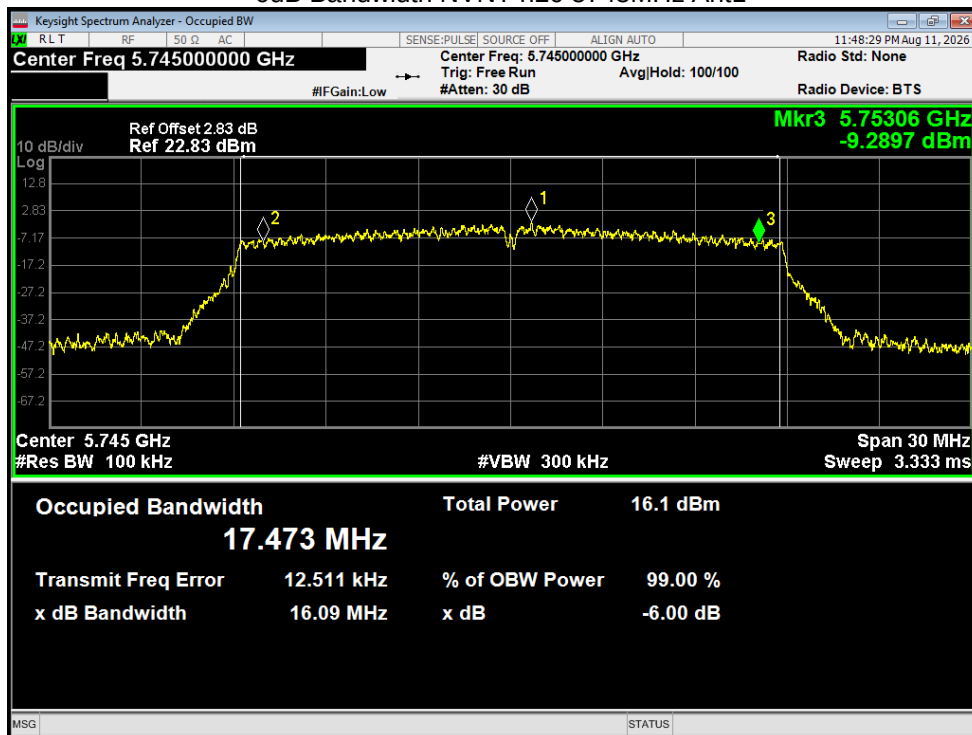
-6dB Bandwidth NVNT a 5785MHz Ant1



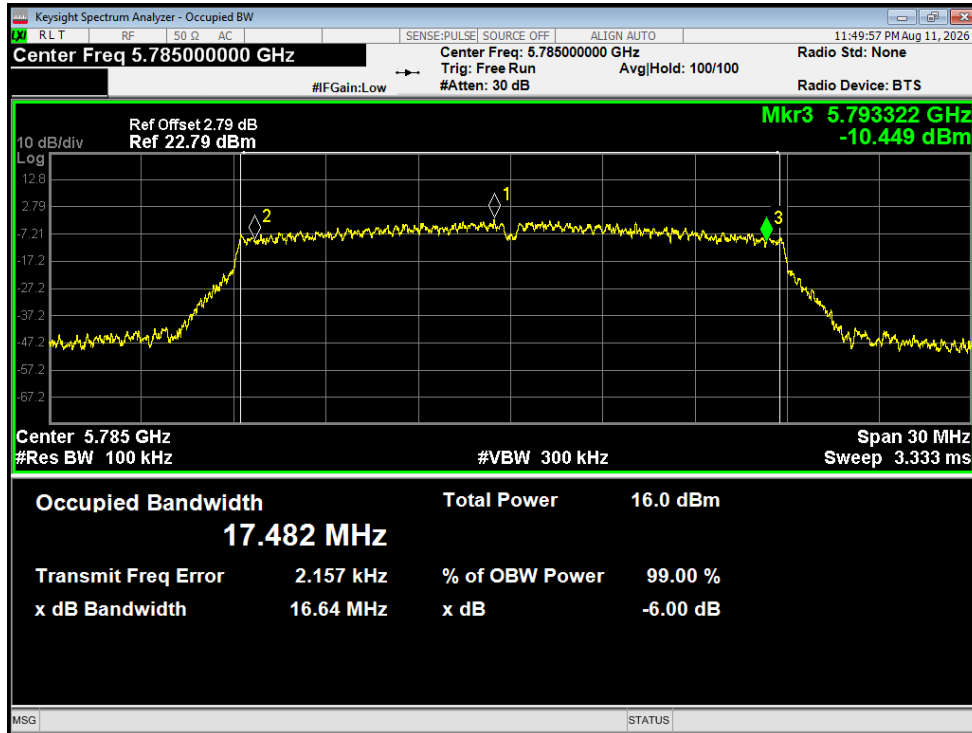
-6dB Bandwidth NVNT a 5825MHz Ant1



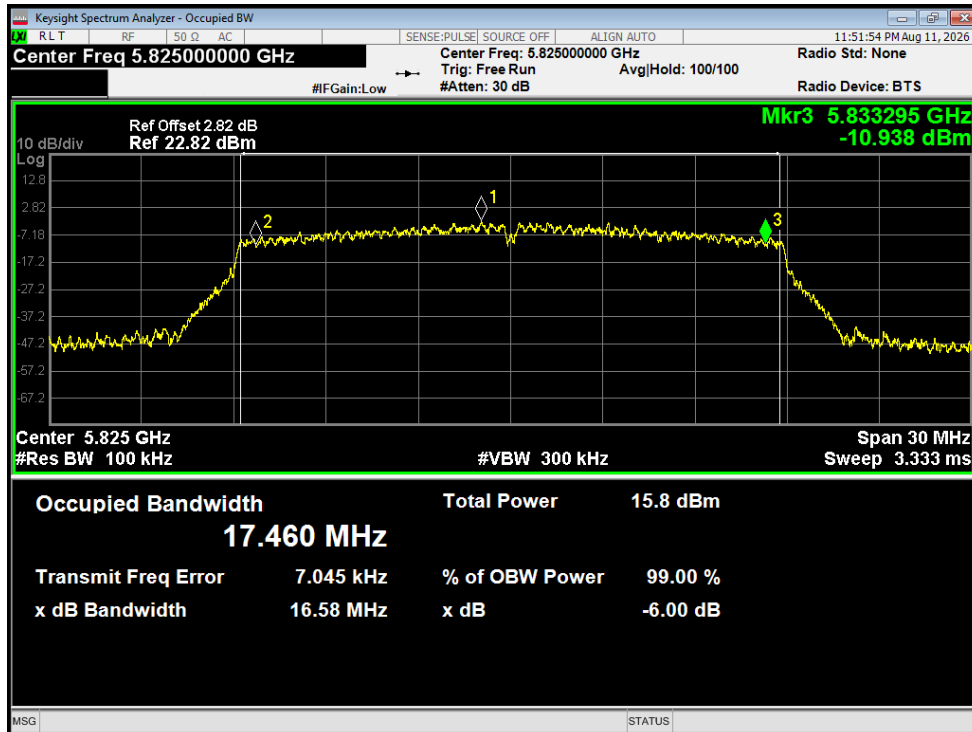
-6dB Bandwidth NVNT n20 5745MHz Ant1



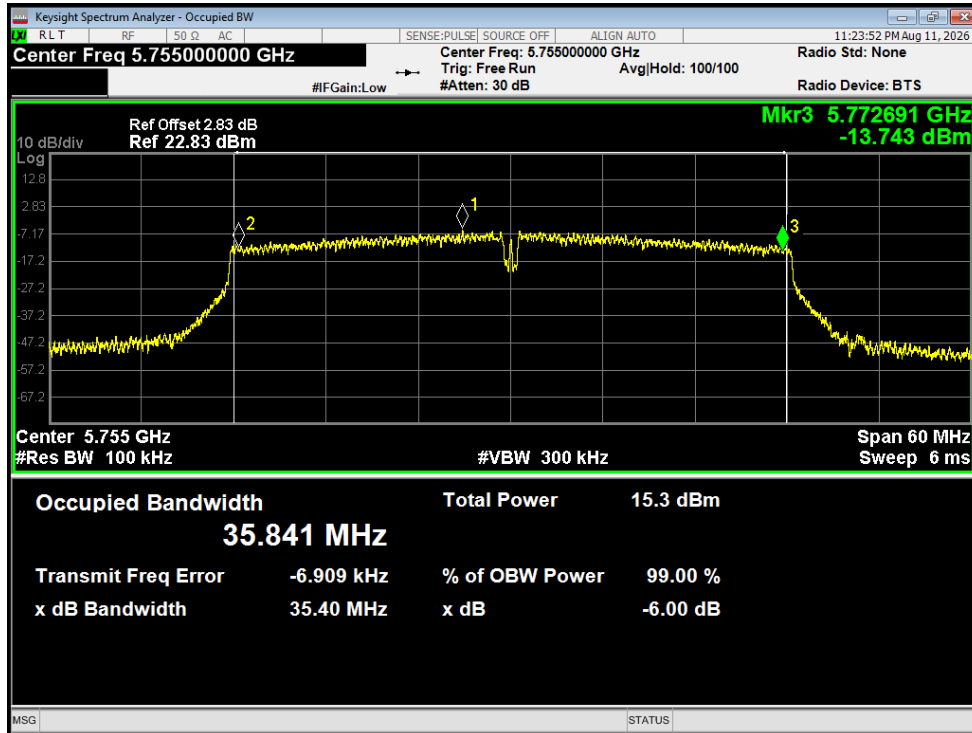
-6dB Bandwidth NVNT n20 5785MHz Ant1



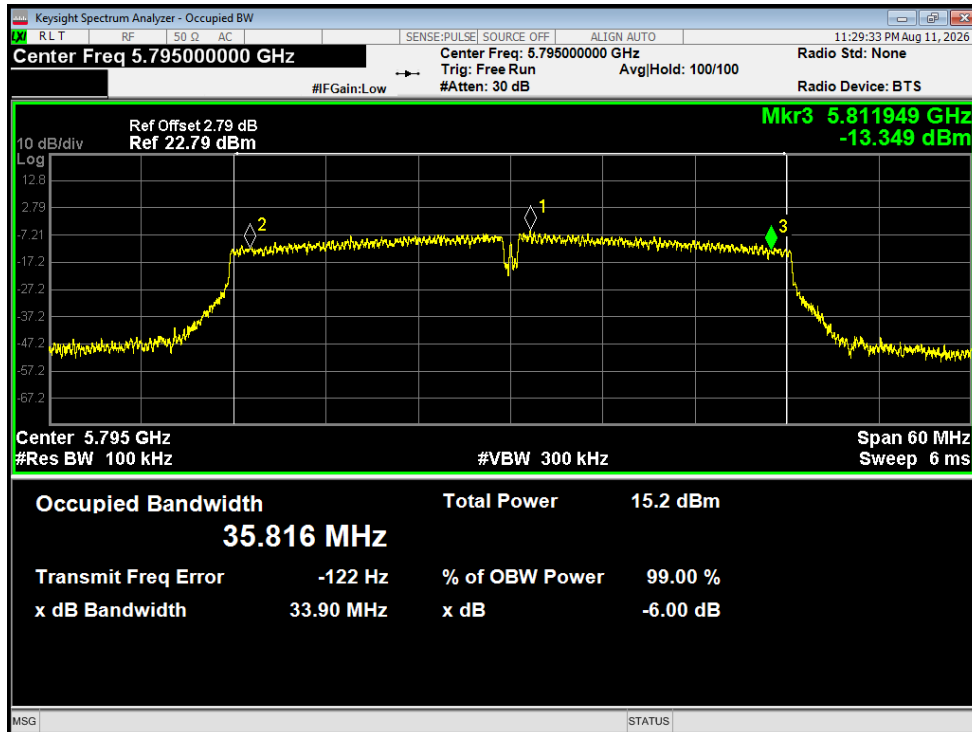
-6dB Bandwidth NVNT n20 5825MHz Ant1



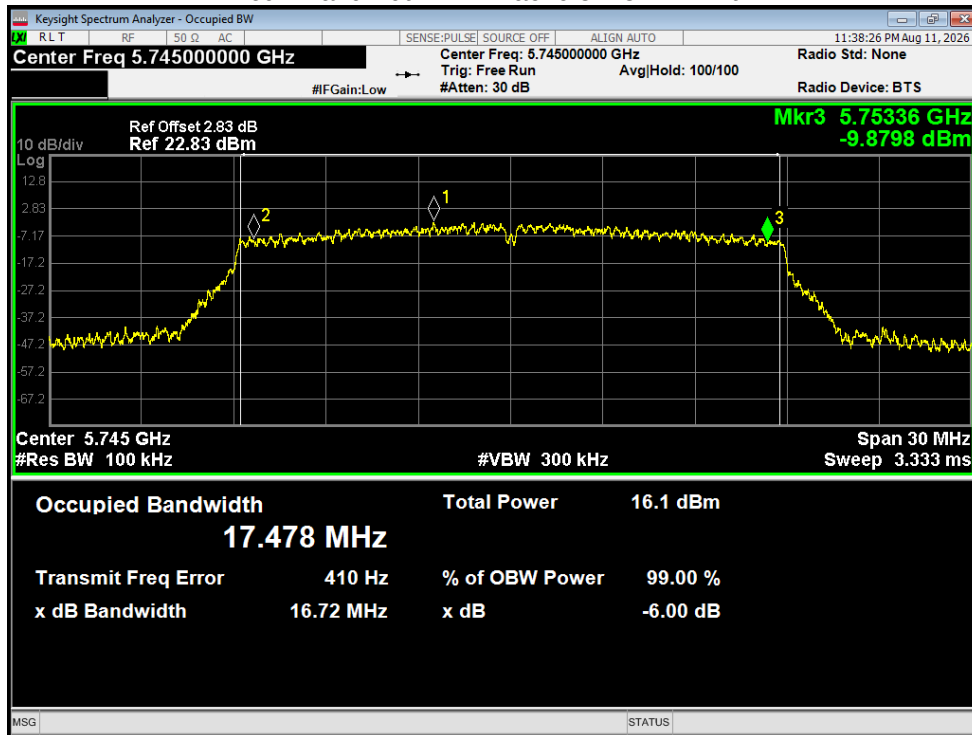
-6dB Bandwidth NVNT n40 5755MHz Ant1



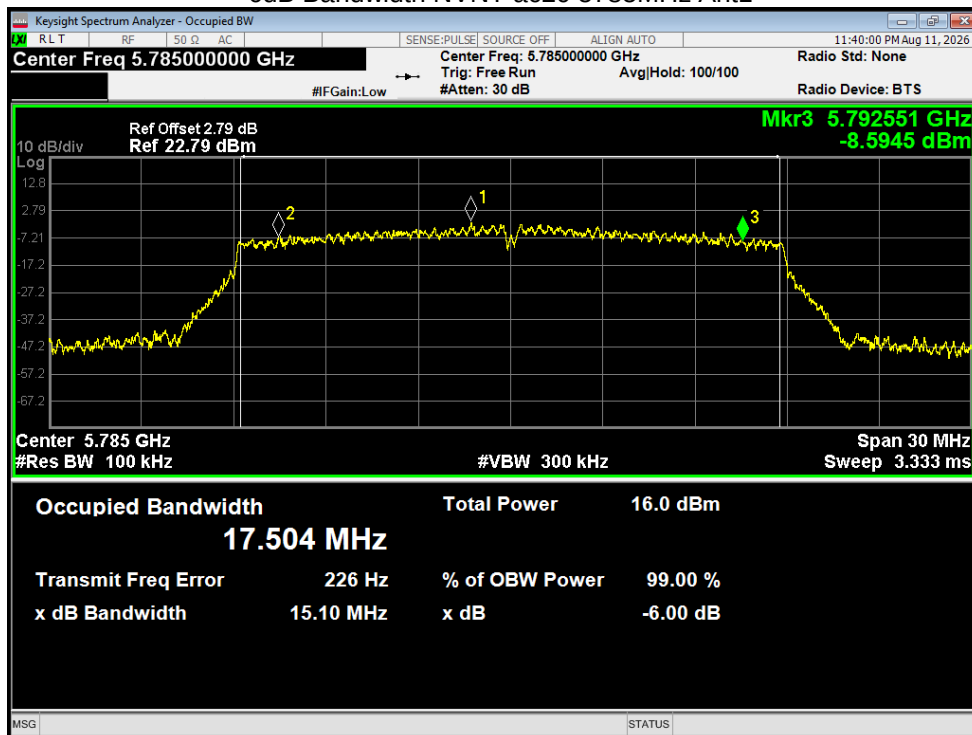
-6dB Bandwidth NVNT n40 5795MHz Ant1



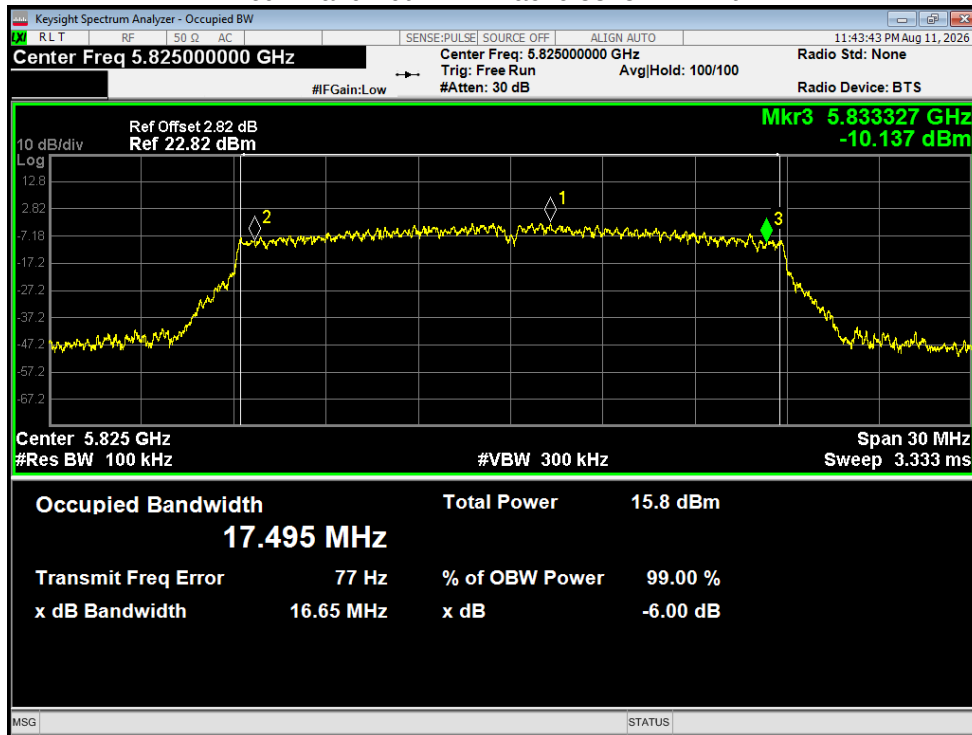
-6dB Bandwidth NVNT ac20 5745MHz Ant1



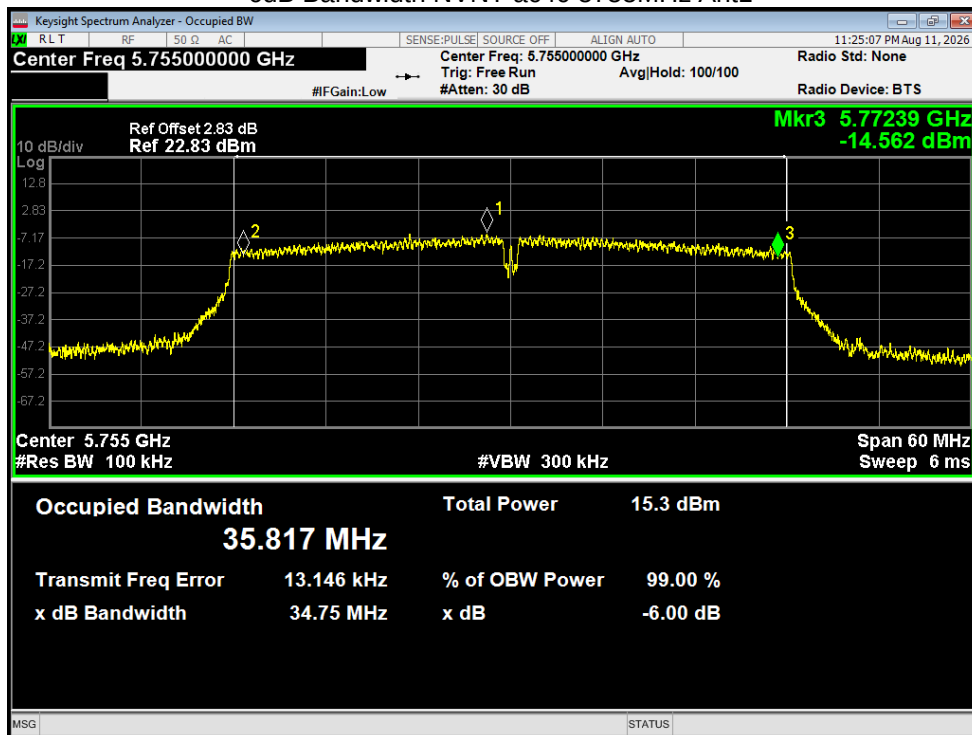
-6dB Bandwidth NVNT ac20 5785MHz Ant1



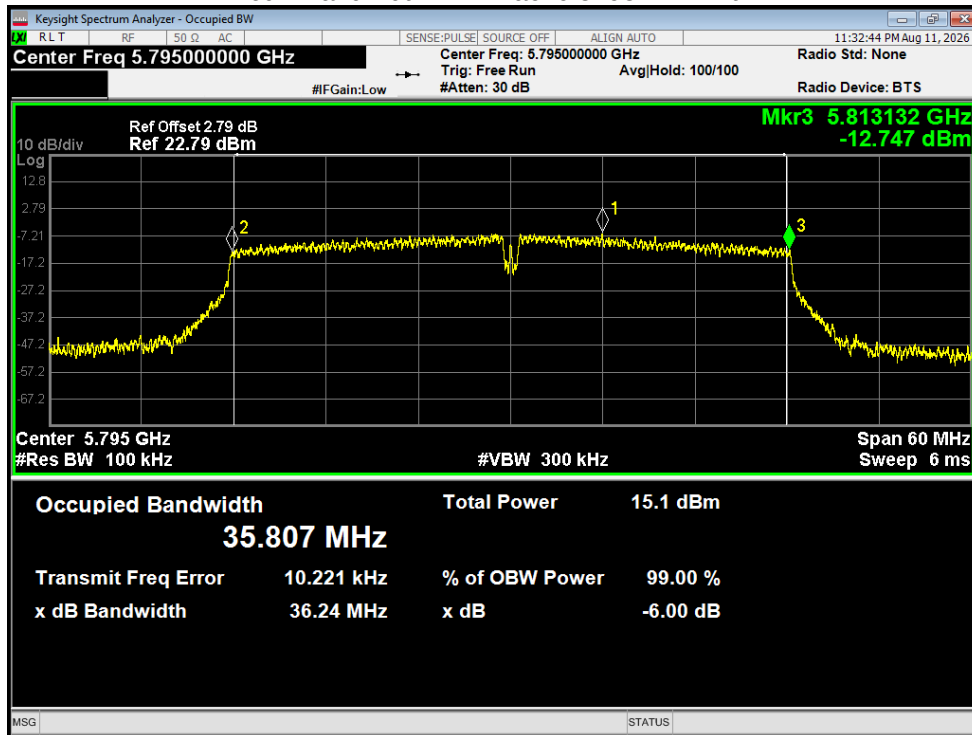
-6dB Bandwidth NVNT ac20 5825MHz Ant1



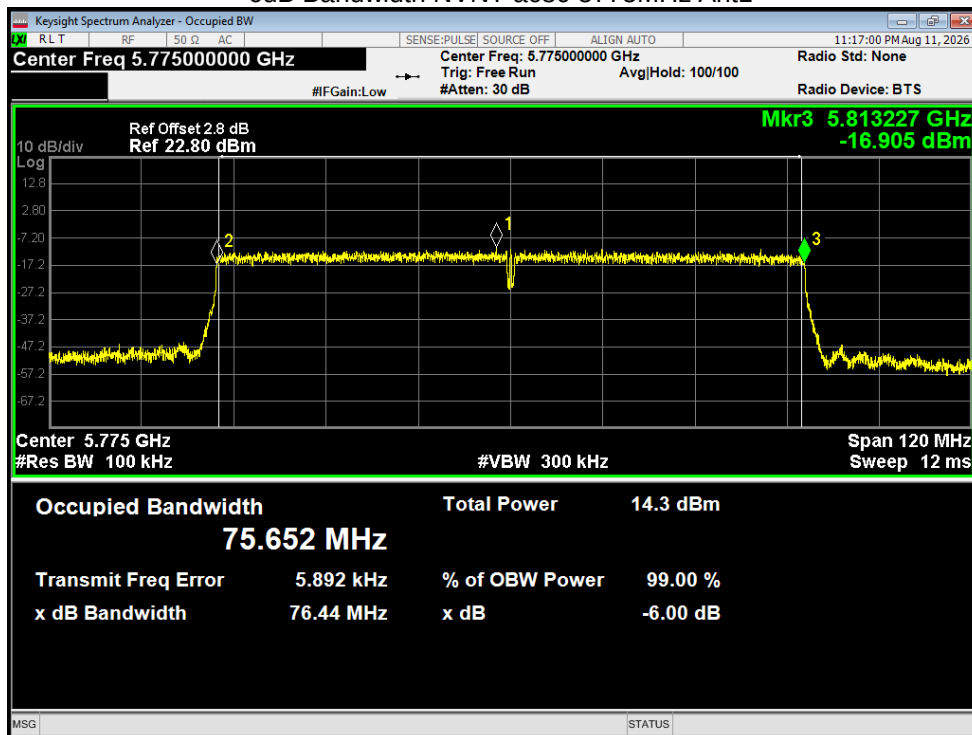
-6dB Bandwidth NVNT ac40 5755MHz Ant1



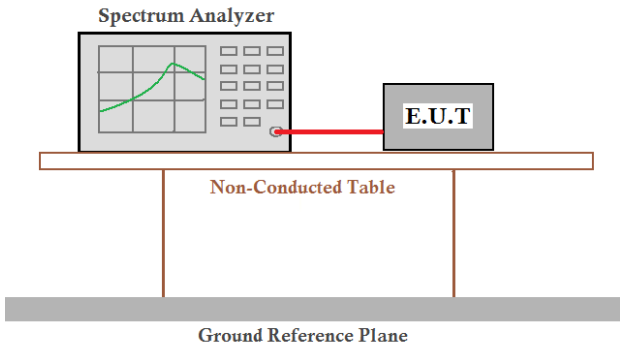
-6dB Bandwidth NVNT ac40 5795MHz Ant1



-6dB Bandwidth NVNT ac80 5775MHz Ant1



4.6 Power Spectral Density

Test Requirement:	47CFR Part 15.407(a)(1)/ (a)(3)	
Test Method:	KDB 789033 D02 General U-NII Test Procedures New Rules v02r01, ANSI C63.10-2020 + Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024§12.6	
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.: 22.3°C	Humid.: 59%RH
Test voltage:	AC 120V 60HZ	
Test results:	Pass	



Measurement Result

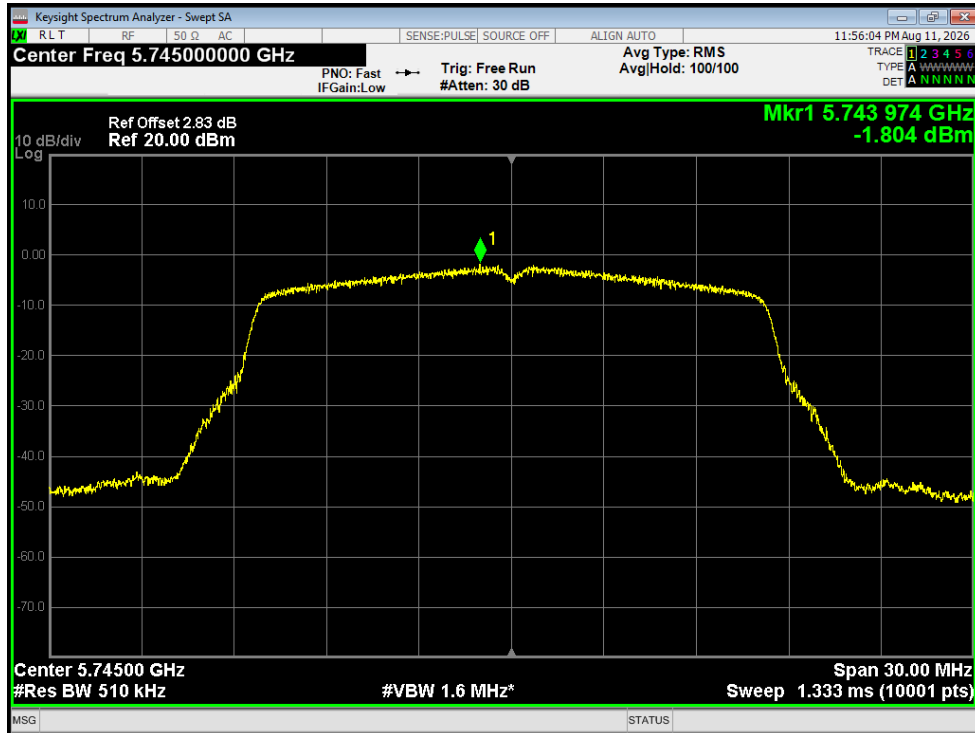
Mode	Frequency MHz	Measured Power Density (dBm/510KHz)	Measured Power Density (dBm/500KHz)	Correction Factor (dB)	Total Measured Power Density (dBm/500KHz)	Limit (dBm/500kHz)
802.11a	5745	-1.804	-1.890	0	-1.890	30
	5785	-2.100	-2.186	0	-2.186	30
	5825	-2.587	-2.673	0	-2.673	30
802.11n20	5745	-2.374	-2.460	0	-2.460	30
	5785	-2.695	-2.781	0	-2.781	30
	5825	-2.884	-2.970	0	-2.970	30
802.11ac20	5745	-2.174	-2.260	0	-2.260	30
	5785	-2.822	-2.908	0	-2.908	30
	5825	-2.545	-2.631	0	-2.631	30
802.11n40	5755	-6.623	-6.709	0	-6.709	30
	5795	-6.750	-6.836	0	-6.836	30
802.11ac40	5755	-6.876	-6.962	0	-6.962	30
	5795	-6.771	-6.857	0	-6.857	30
802.11ac80	5775	-12.324	-12.410	0	-12.410	30

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

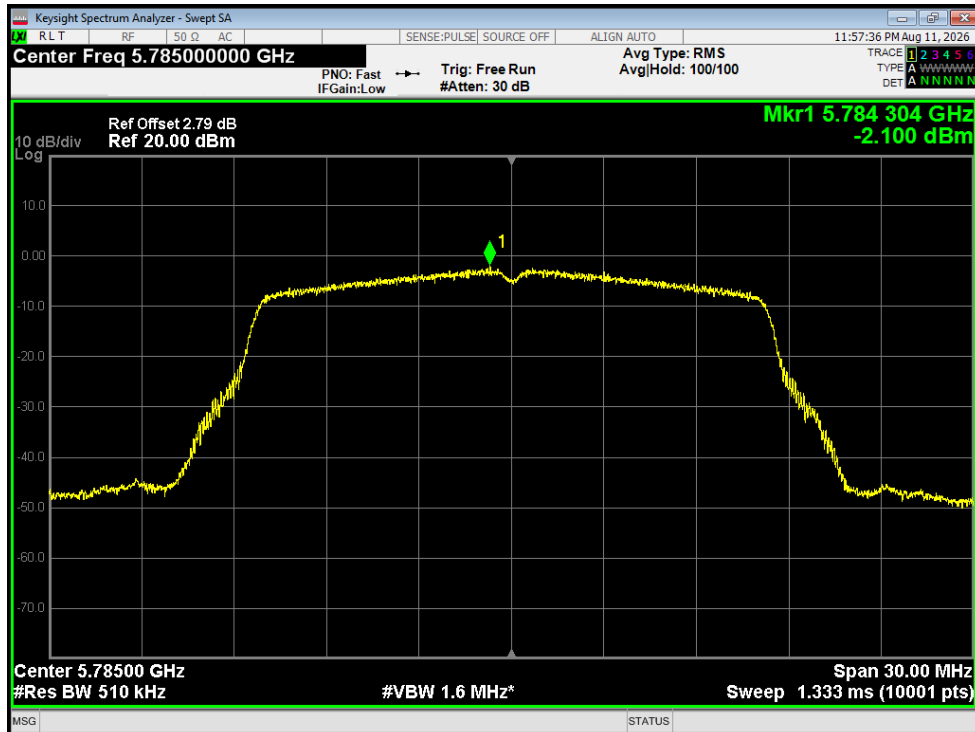
2. Correction Factor (dB)= duty cycle factor

3. Total PSD= Measured PSD (dBm/500kHz) + Correction factor duty cycle (dB)

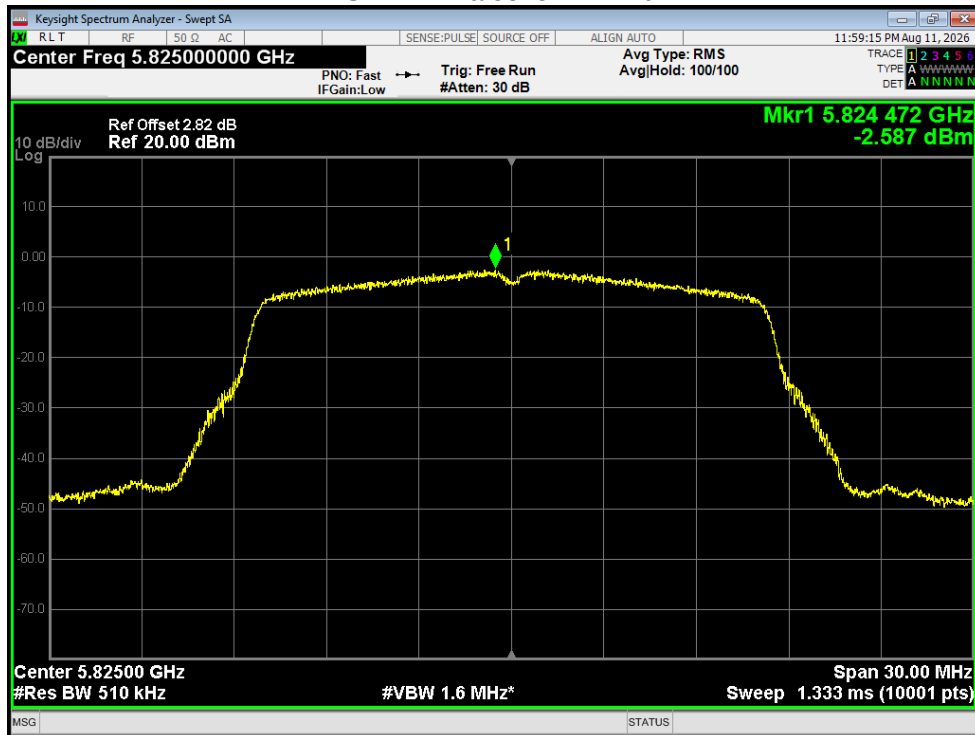
PSD NVNT a 5745MHz Ant1



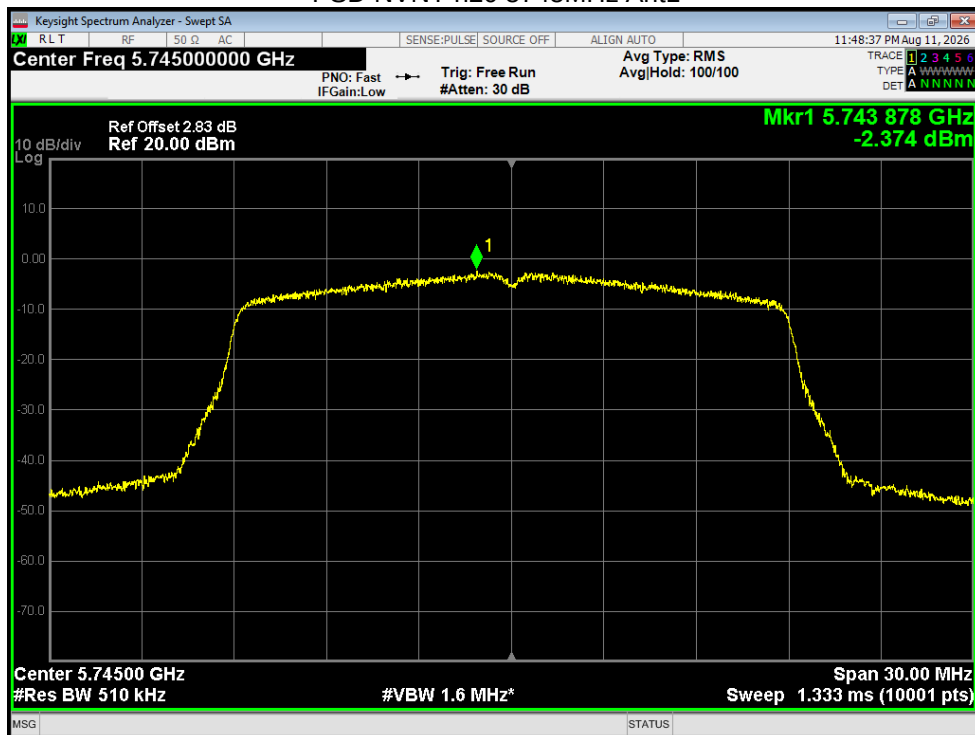
PSD NVNT a 5785MHz Ant1



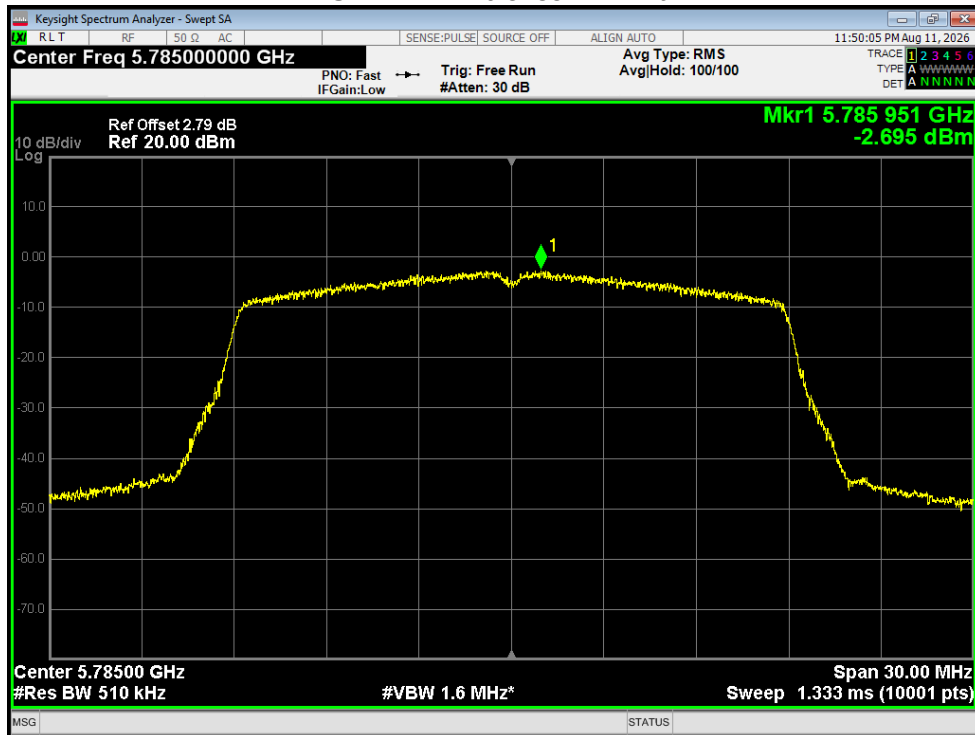
PSD NVNT a 5825MHz Ant1



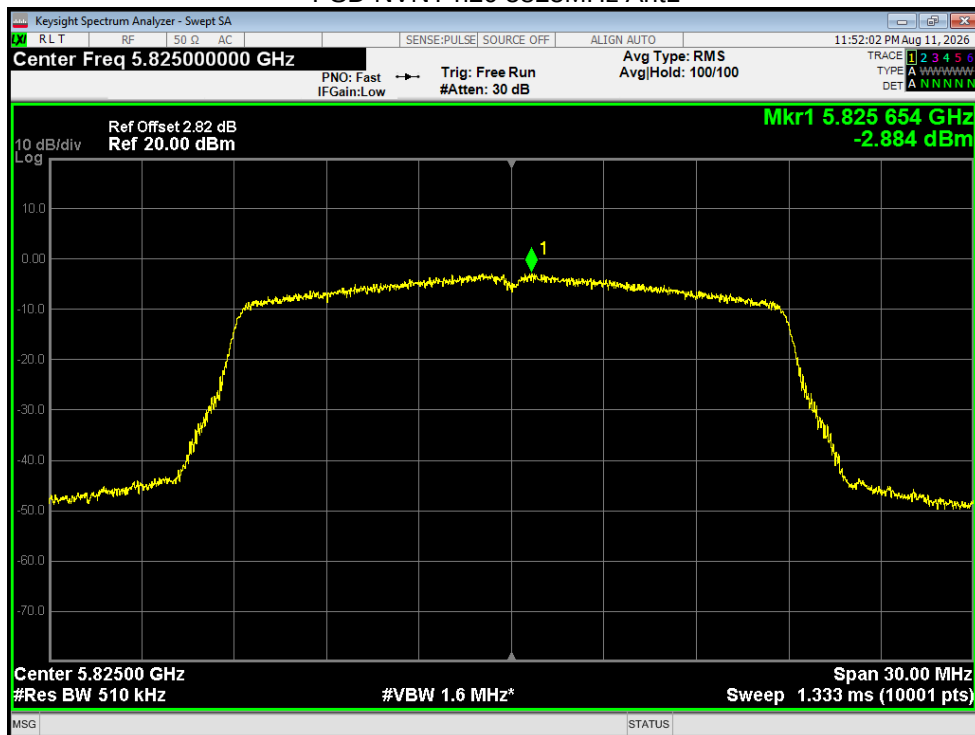
PSD NVNT n20 5745MHz Ant1



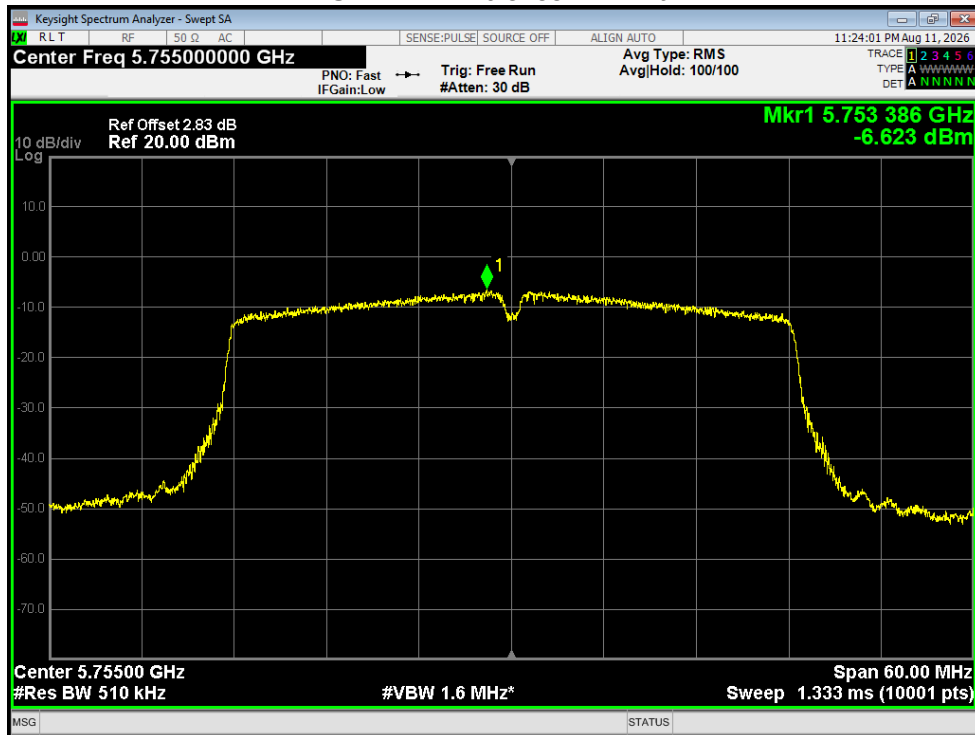
PSD NVNT n20 5785MHz Ant1



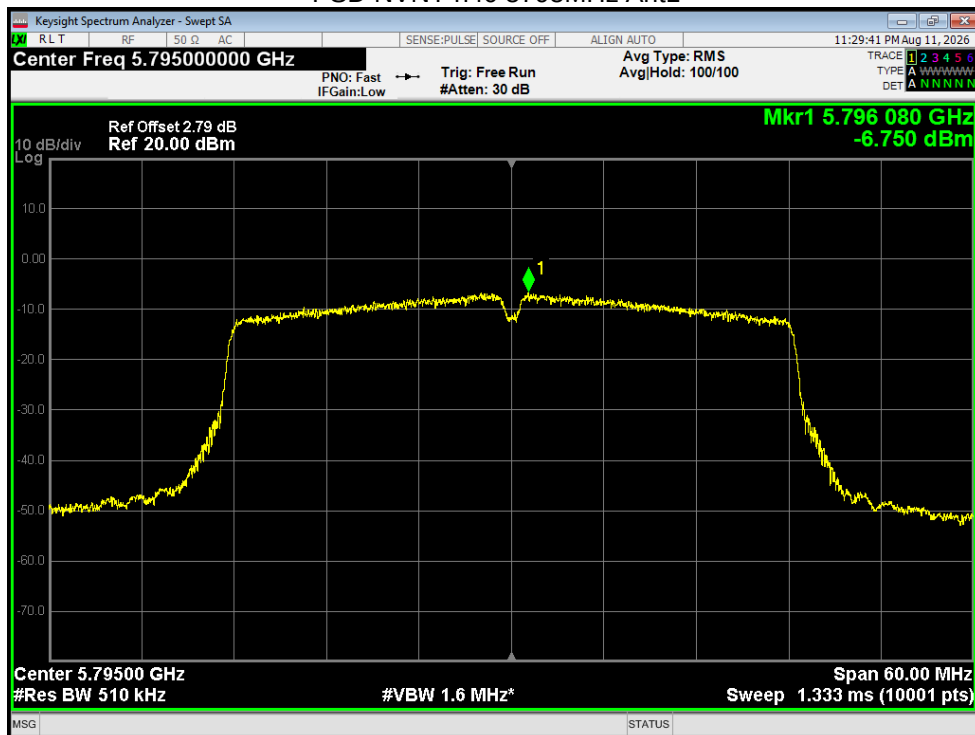
PSD NVNT n20 5825MHz Ant1



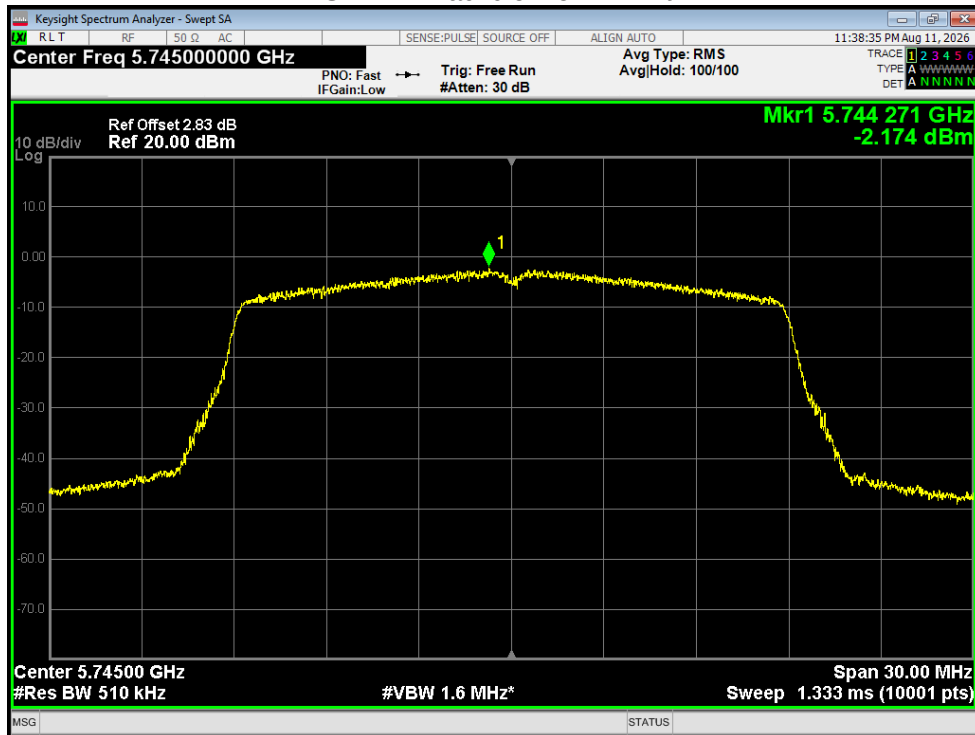
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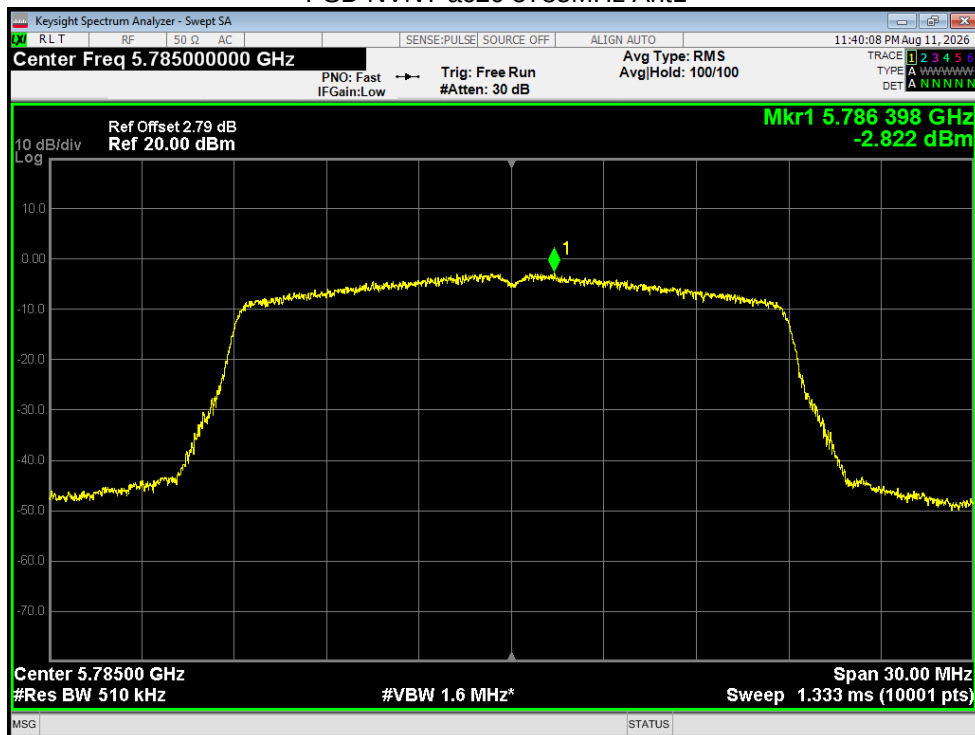
PSD NVNT n40 5795MHz Ant1



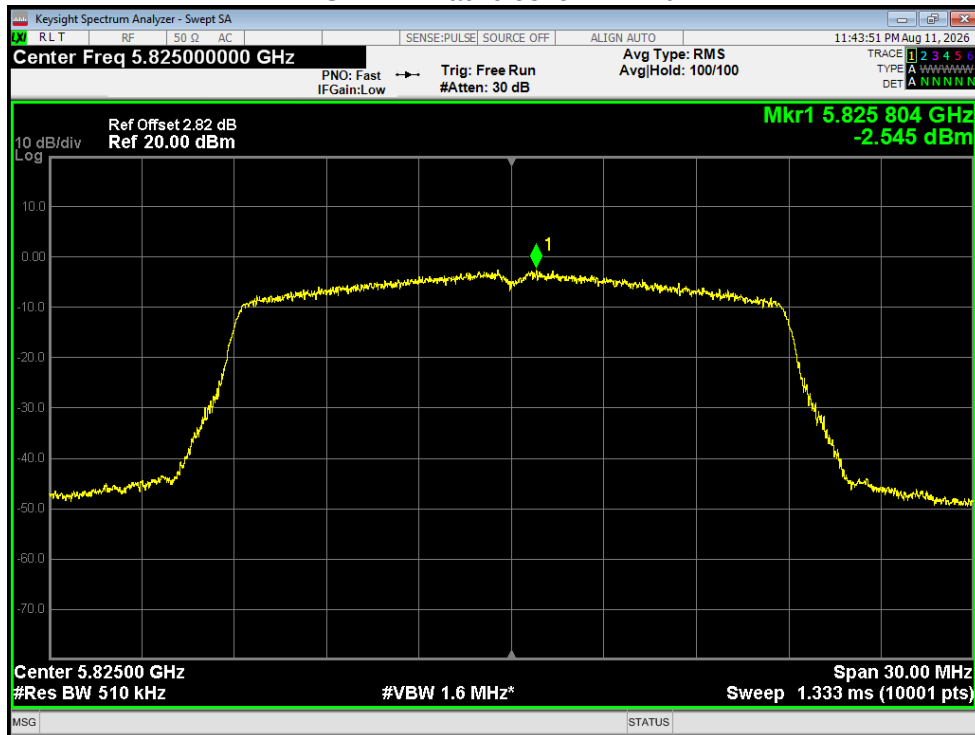
PSD NVNT ac20 5745MHz Ant1



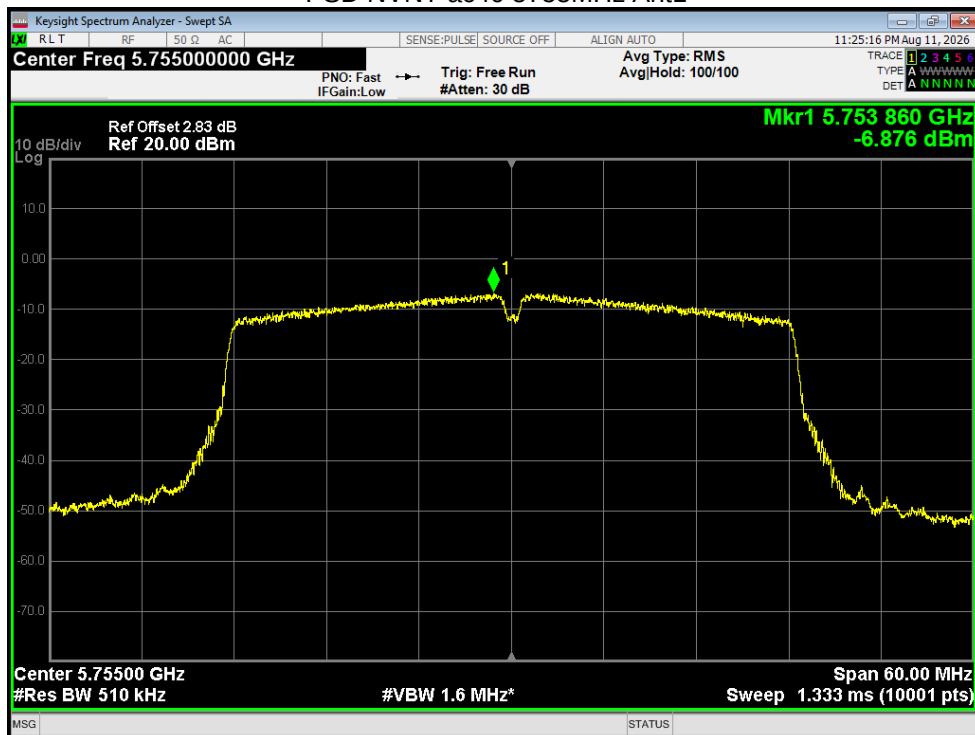
PSD NVNT ac20 5785MHz Ant1



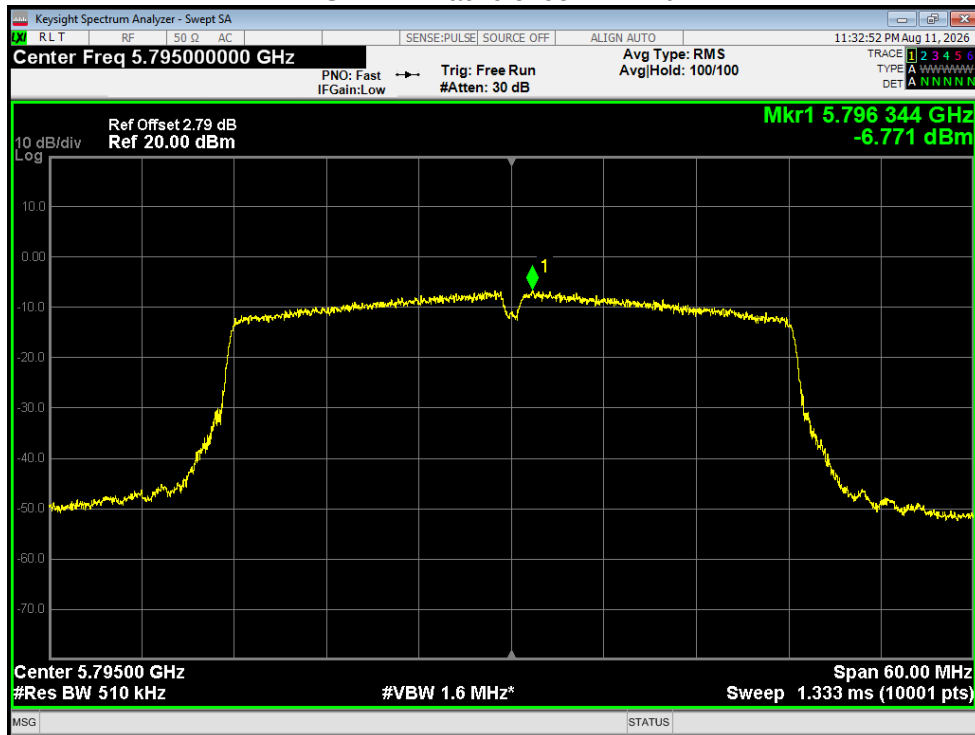
PSD NVNT ac20 5825MHz Ant1



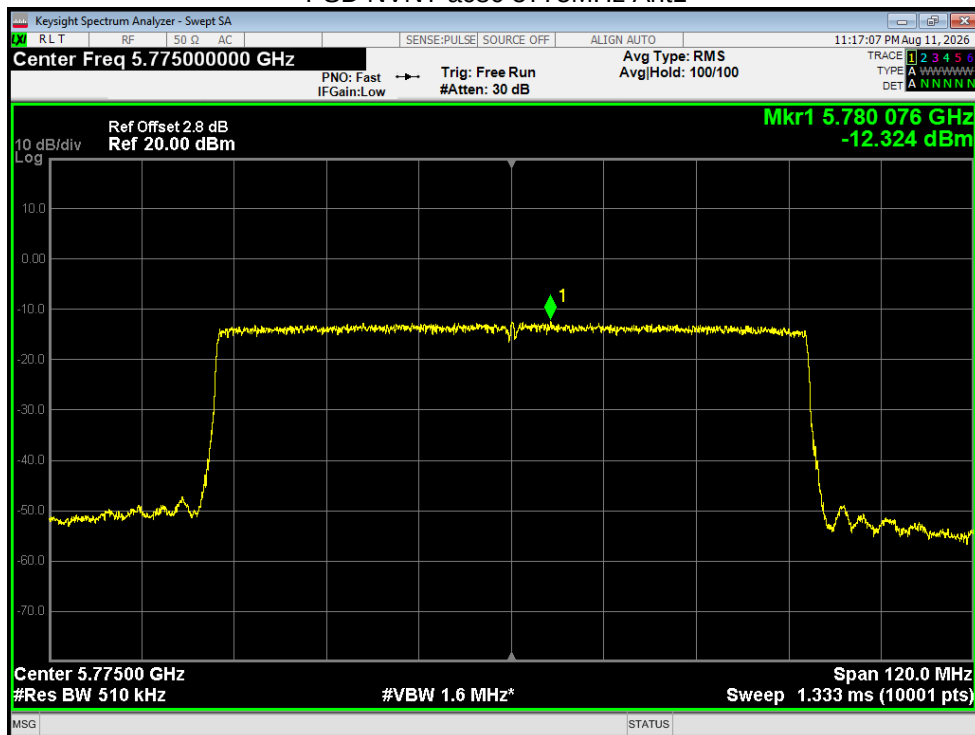
PSD NVNT ac40 5755MHz Ant1



PSD NVNT ac40 5795MHz Ant1

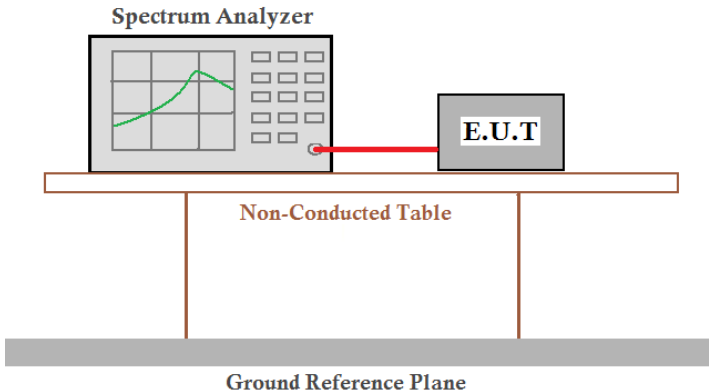


PSD NVNT ac80 5775MHz Ant1



4.6 Band edge

4.6.1 Conducted test Method

Test Requirement:	47CFR Part 15.209 and 15.205	
Test Method:	ANSI C63.10-2020 + Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024 §6.10.2	
Limit:	For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz. (2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz. (3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz. (4) For transmitters operating solely in the 5.725-5.850 GHz band: (i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.	
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. The table 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.: 22.3°C	Humid.: 59%RH
Test voltage:	AC 120V 60HZ	
Test results:	Pass	



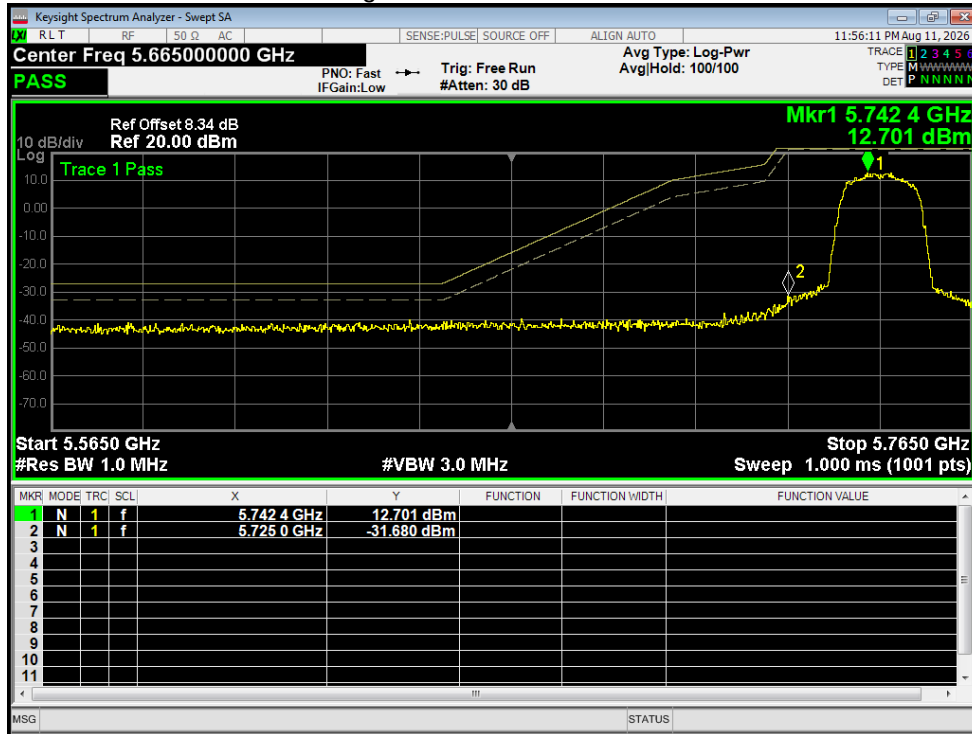
Remark: Antenna gain and cable loss data included in Offset.

UNII-3

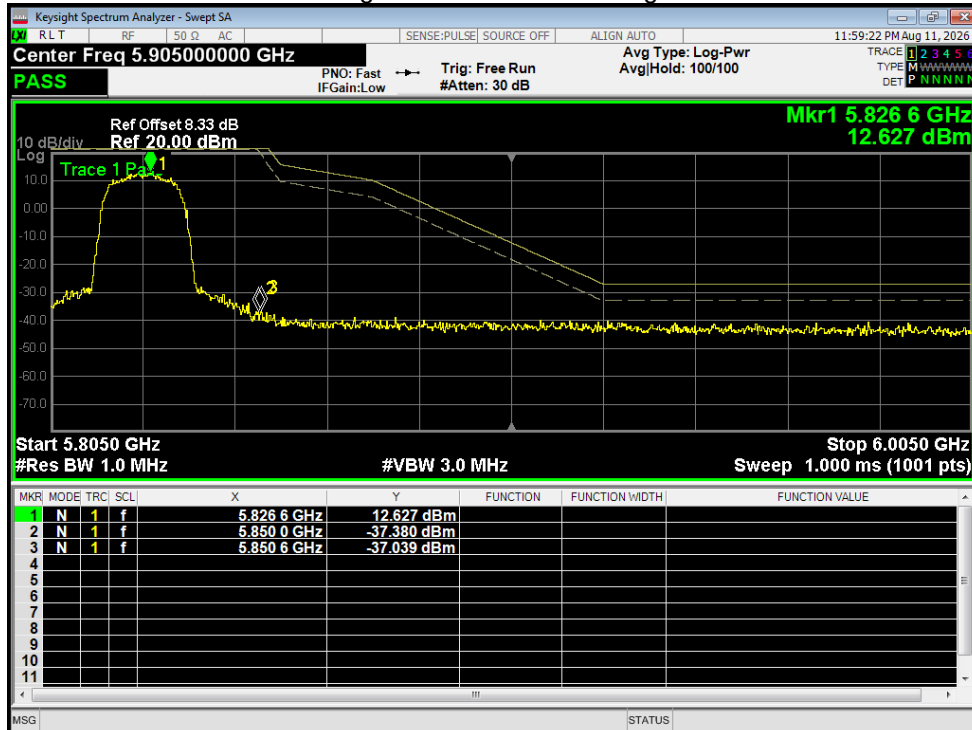
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBm)	Verdict
NVNT	a	5745	Ant1	-31.68	Pass
NVNT	a	5825	Ant1	-37.03	Pass
NVNT	n20	5745	Ant1	-33.05	Pass
NVNT	n20	5825	Ant1	-36.33	Pass
NVNT	n40	5755	Ant1	-31.54	Pass
NVNT	n40	5795	Ant1	-39.31	Pass
NVNT	ac20	5745	Ant1	-32.12	Pass
NVNT	ac20	5825	Ant1	-36.49	Pass
NVNT	ac40	5755	Ant1	-31.49	Pass
NVNT	ac40	5795	Ant1	-39.33	Pass
NVNT	ac80	5775	Ant1	-32.52	Pass

Note: The limit values are detailed in the test diagram

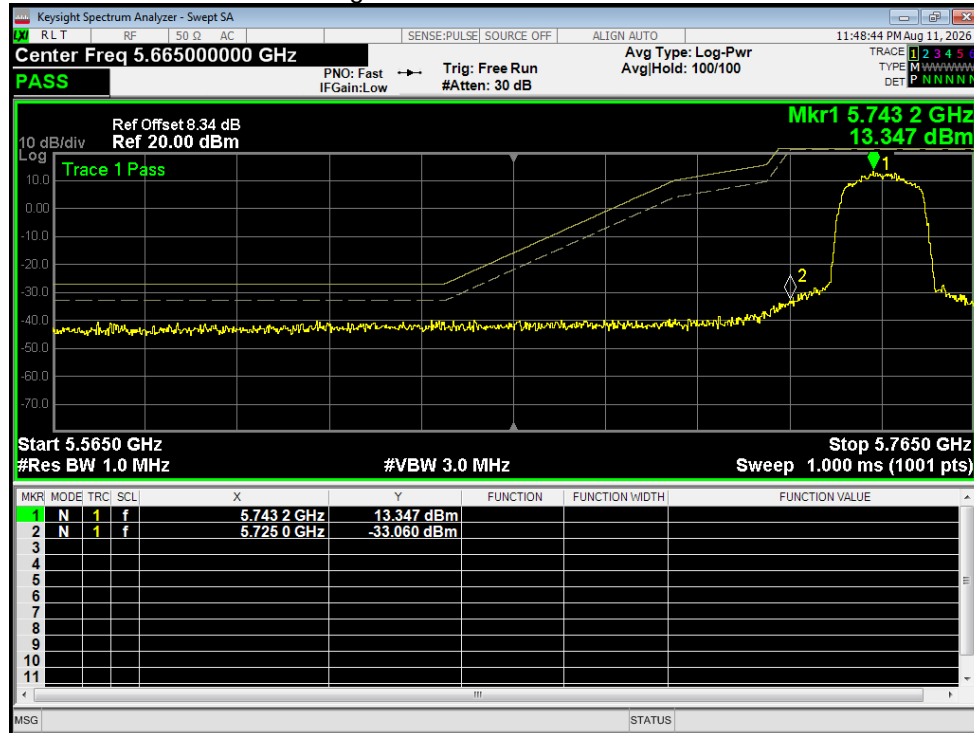
Band Edge NVNT a 5745MHz Low Ant1



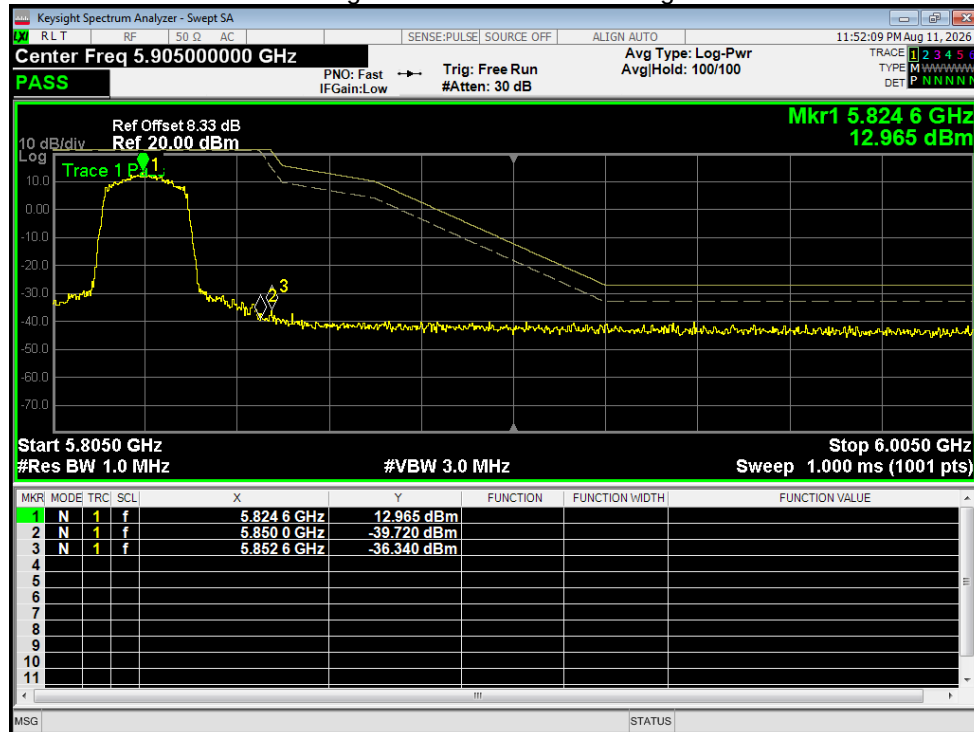
Band Edge NVNT a 5825MHz High Ant1



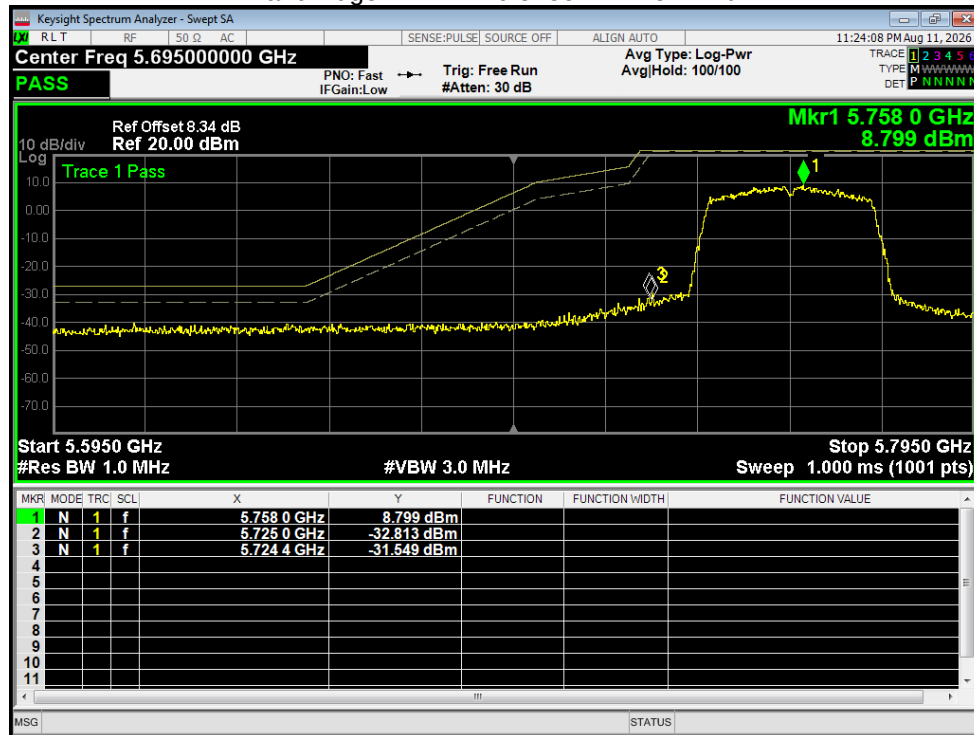
Band Edge NVNT n20 5745MHz Low Ant1



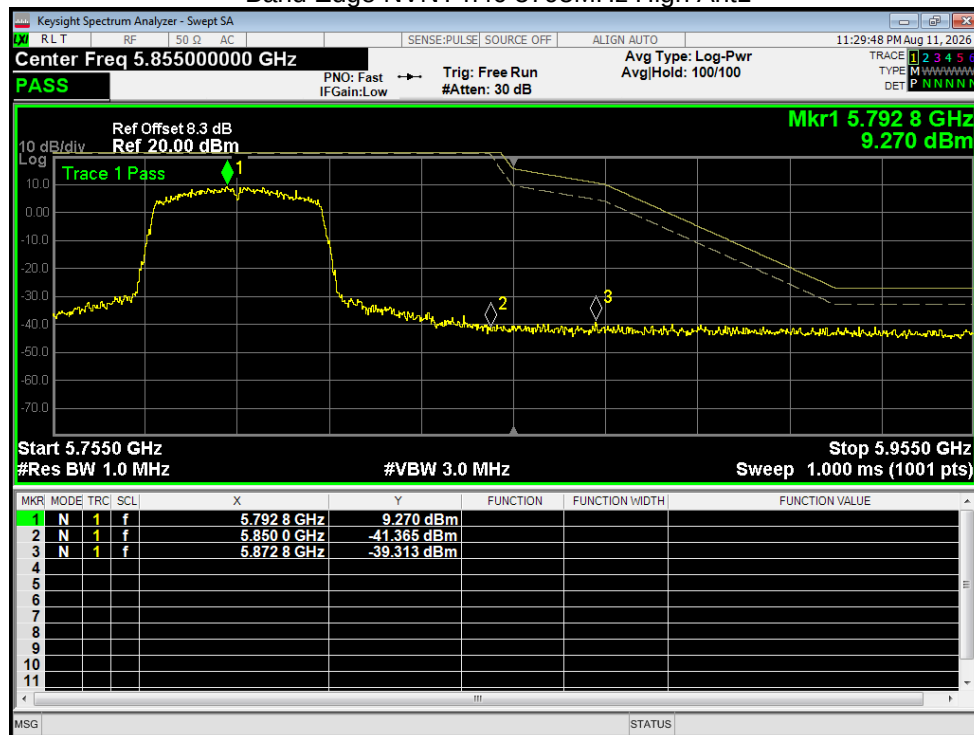
Band Edge NVNT n20 5825MHz High Ant1



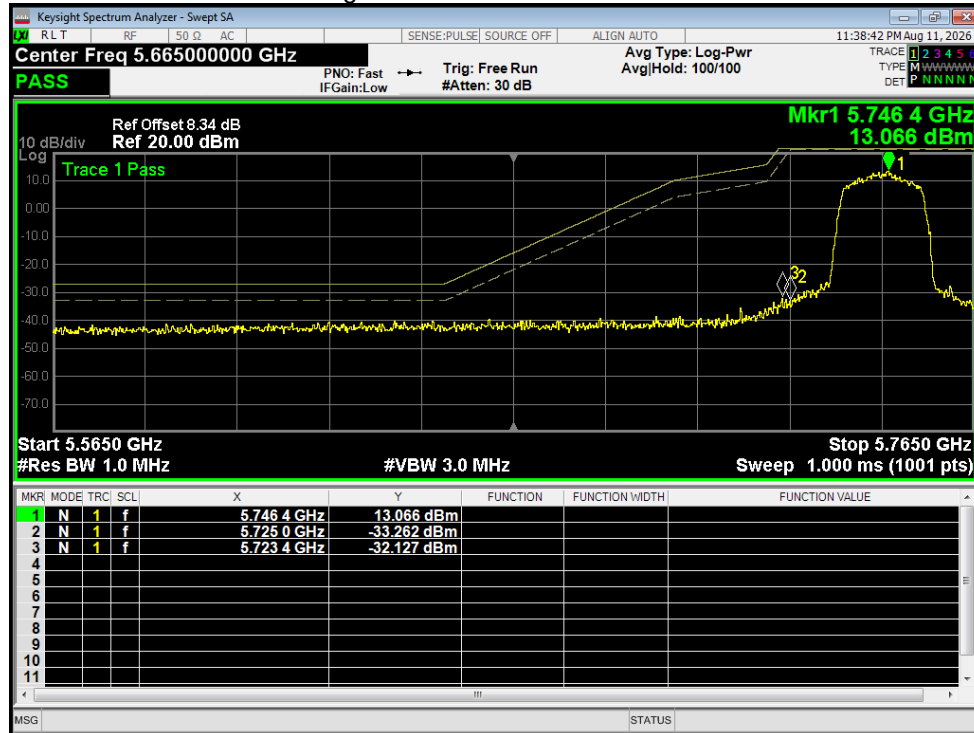
Band Edge NVNT n40 5755MHz Low Ant1



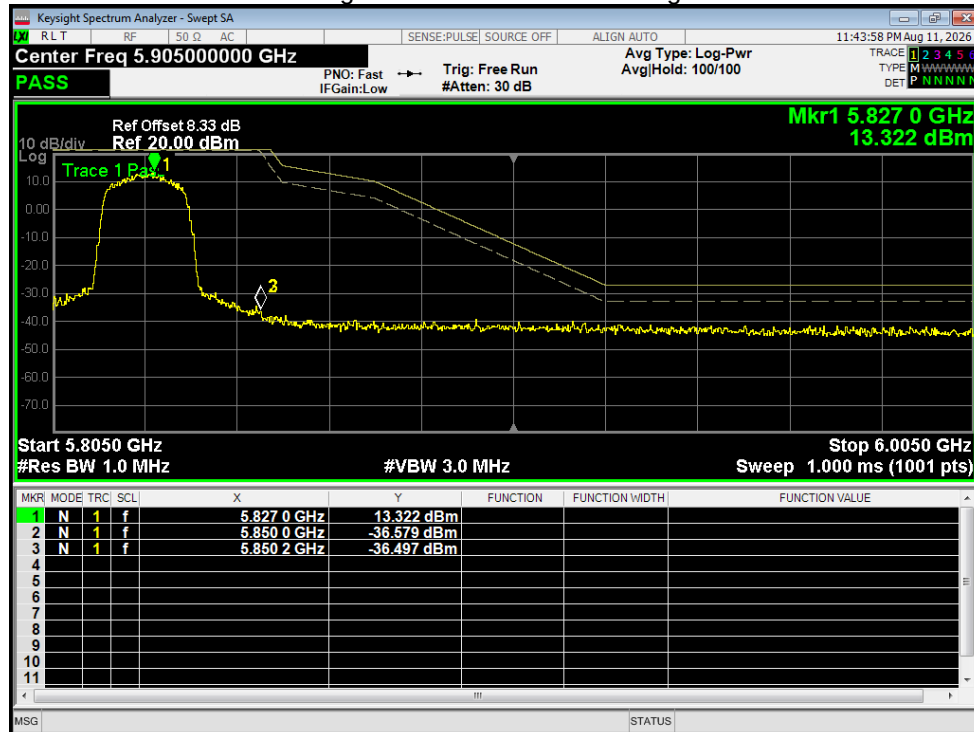
Band Edge NVNT n40 5795MHz High Ant1



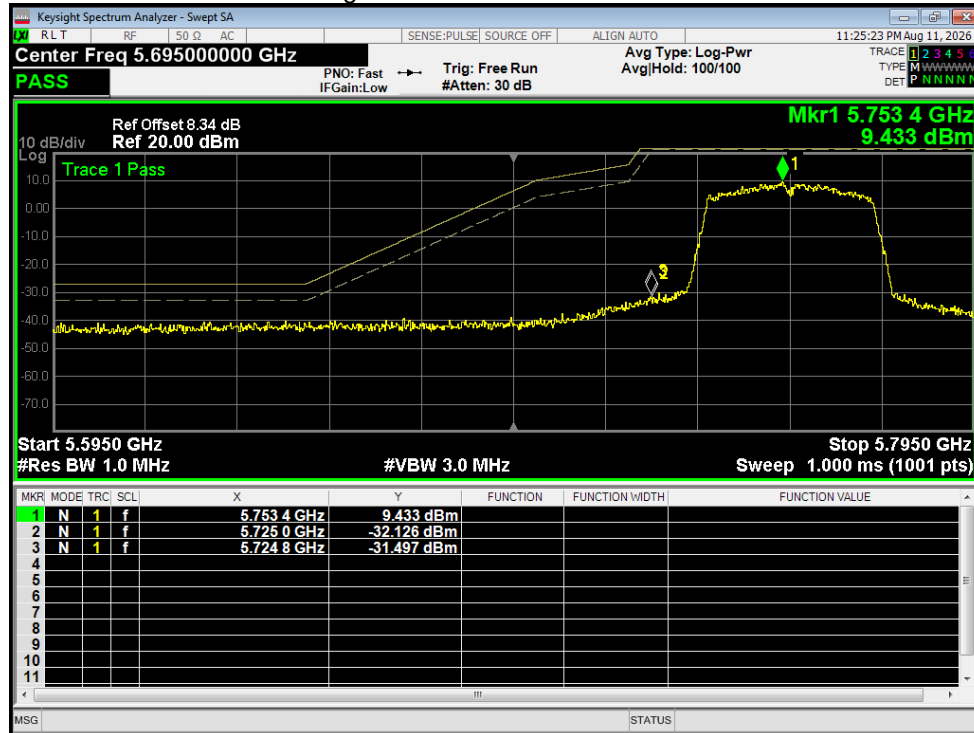
Band Edge NVNT ac20 5745MHz Low Ant1



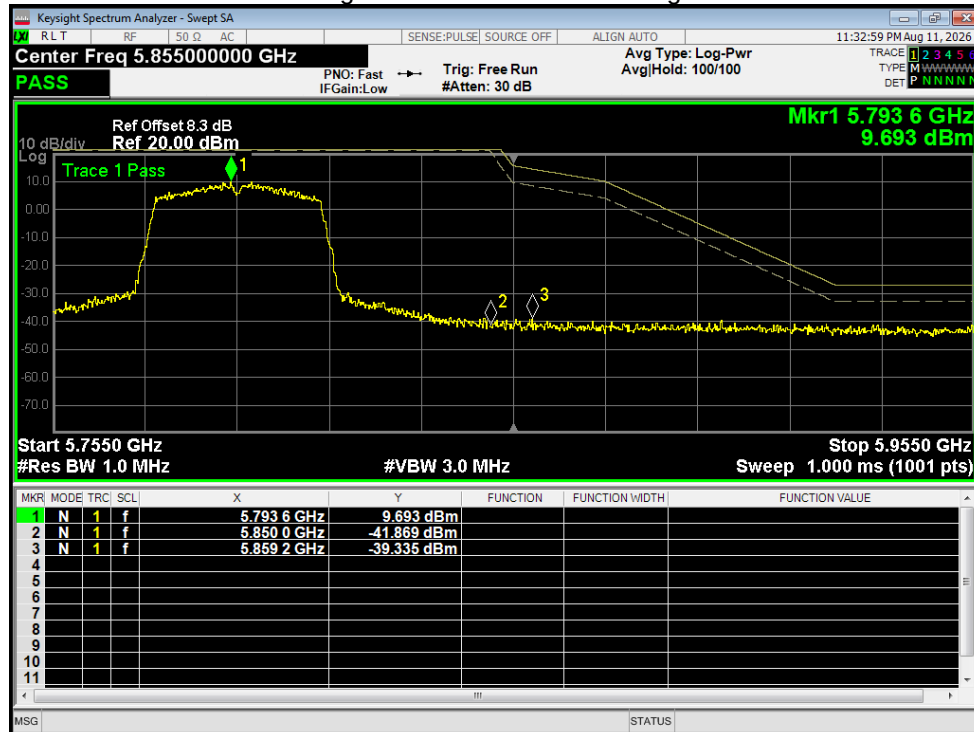
Band Edge NVNT ac20 5825MHz High Ant1



Band Edge NVNT ac40 5755MHz Low Ant1

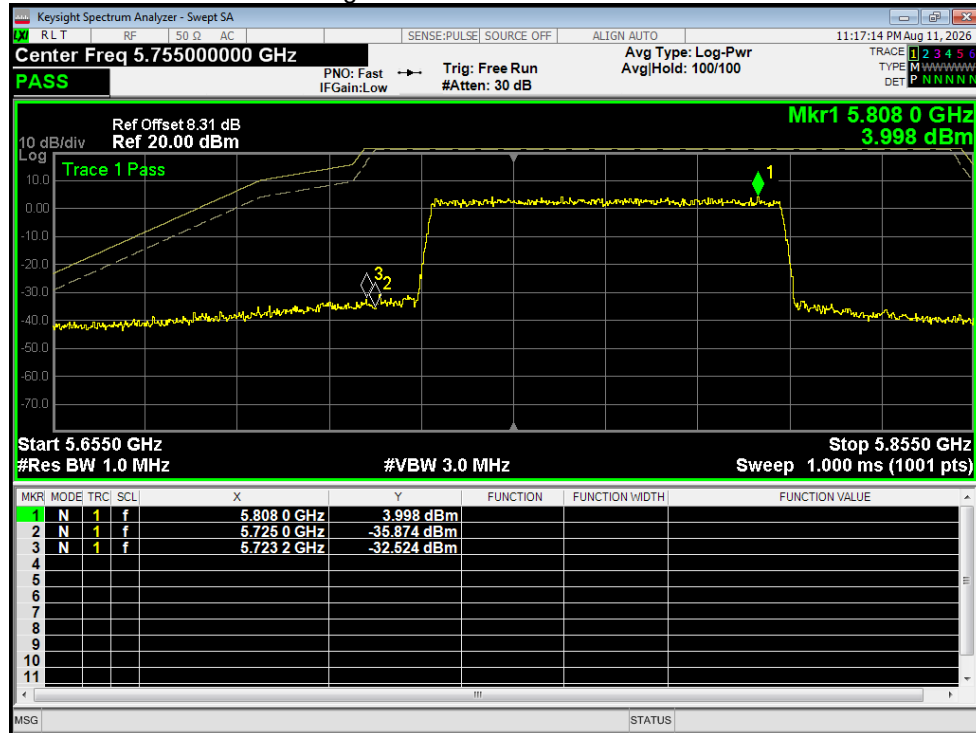


Band Edge NVNT ac40 5795MHz High Ant1

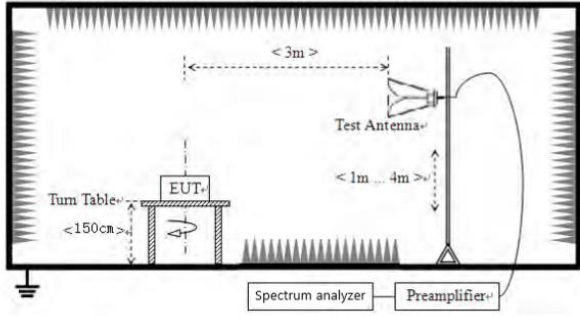




Band Edge NVNT ac80 5775MHz Low Ant1



4.6.2 Radiated test Method

Test Requirement:	47CFR Part 15.209 and 15.205				
Test Method:	ANSI C63.10-2020 + Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024 § 6.10				
Test site:	Measurement Distance: 3m (Semi-Anechoic Chamber)				
Receiver setup:	Frequency	Detector	RBW	VBW	Remark
	30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak Value
	Above 1GHz	Peak	1MHz	3MHz	Peak Value
		AV	1MHz	3MHz	Average Value
Limit:	Frequency		Limit (dBuV/m @3m)		Remark
	30MHz-88MHz		40.0		Quasi-peak Value
	88MHz-216MHz		43.5		Quasi-peak Value
	216MHz-960MHz		46.0		Quasi-peak Value
	960MHz-1GHz		54.0		Quasi-peak Value
	Above 1GHz		54.0		Average Value
			68.2		Peak Value
	Undesirable emission limits:				
	(1) For transmitters operating in the 5.15-5.25 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz.				
	(2) For transmitters operating in the 5.25-5.35 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz. Devices operating in the 5.25-5.35 GHz band that generate emissions in the 5.15-5.25 GHz band must meet all applicable technical requirements for operation in the 5.15-5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5.15-5.25 GHz band.				
(3) For transmitters operating in the 5.47-5.725 GHz band: all emissions outside of the 5.47-5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz.					
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:	Above 1GHz				
					

Test Procedure:	- The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. - The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. - 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. - For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. - The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. - 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 EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. - The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. - 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. - 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. - The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. - 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 environment:	Temp.: 22.3°C	Humid.: 59%RH
Test voltage:	AC 120V 60HZ	
Test results:	Pass	

Remark:

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. Two antennas are tested, only the worst case's (Main Antenna) data was showed.
4. The pre-test were performed on lowest, middle and highest frequencies, only the worst case's (lowest and highest frequencies) data was showed.
5. According to KDB 789033 D02v02r01 section G) 1) d), for measurements above 1000 MHz @3m distance, the limit of field strength is computed as follows:

$$E[dBuV/m] = EIRP[dBm] + 95.2;$$
For example, if $EIRP = -27dBm$

$$E[dBuV/m] = -27 + 95.2 = 68.2dBuV/m.$$

$$E[dBuV/m] = 10 + 95.2 = 105.2dBuV/m.$$

$$E[dBuV/m] = 15.6 + 95.2 = 110.8dBuV/m.$$

$$E[dBuV/m] = 27 + 95.2 = 122.2dBuV/m$$



Measurement data:

IEEE 802.11a							
Operation Frequency:5745MHz							
Frequency (MHz)	Read Level (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Detect or Type
5650	46.14	-6.34	39.80	68.20	-28.40	Horizontal	PK
5650	34.57	-6.34	28.23	54.00	-25.77	Horizontal	AV
5700	43.80	-6.22	37.58	105.20	-67.62	Horizontal	PK
5700	33.31	-6.22	27.09	54.00	-26.91	Horizontal	AV
5720	46.81	-6.17	40.64	110.80	-70.16	Horizontal	PK
5720	36.24	-6.17	30.07	54.00	-23.93	Horizontal	AV
5725	48.18	-6.16	42.02	122.20	-80.18	Horizontal	PK
5725	37.33	-6.16	31.17	54.00	-22.83	Horizontal	AV
5650	48.55	-6.34	42.21	68.20	-25.99	Vertical	PK
5650	37.35	-6.34	31.01	54.00	-22.99	Vertical	AV
5700	52.40	-6.22	46.18	105.20	-59.02	Vertical	PK
5700	41.48	-6.22	35.26	54.00	-18.74	Vertical	AV
5720	49.40	-6.17	43.23	110.80	-67.57	Vertical	PK
5720	42.53	-6.17	36.36	54.00	-17.64	Vertical	AV
5725	47.14	-6.16	40.98	122.20	-81.22	Vertical	PK
5725	37.81	-6.16	31.65	54.00	-22.35	Vertical	AV

IEEE 802.11a							
Operation Frequency:5825MHz							
Frequency (MHz)	Read Level (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Detect or Type
5850	54.88	-5.87	49.01	122.20	-73.19	Vertical	PK
5850	41.61	-5.87	35.74	54.00	-18.26	Vertical	AV
5855	51.57	-5.85	45.72	110.80	-65.08	Vertical	PK
5855	42.53	-5.85	36.68	54.00	-17.32	Vertical	AV
5875	46.63	-5.80	40.83	105.20	-64.37	Vertical	PK
5875	35.16	-5.80	29.36	54.00	-24.64	Vertical	AV
5925	45.87	-5.68	40.19	68.20	-28.01	Vertical	PK
5925	36.25	-5.68	30.57	54.00	-23.43	Vertical	AV
5850	43.66	-5.87	37.79	122.20	-84.41	Horizontal	PK
5850	33.01	-5.87	27.14	54.00	-26.86	Horizontal	AV
5855	42.09	-5.85	36.24	110.80	-74.56	Horizontal	PK
5855	33.52	-5.85	27.67	54.00	-26.33	Horizontal	AV
5875	46.62	-5.80	40.82	105.20	-64.38	Horizontal	PK
5875	35.81	-5.80	30.01	54.00	-23.99	Horizontal	AV
5925	54.92	-5.68	49.24	68.20	-18.96	Horizontal	PK
5925	39.22	-5.68	33.54	54.00	-20.46	Horizontal	AV



IEEE 802.11n20							
Operation Frequency:5745MHz							
Frequency (MHz)	Read Level (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit Line (dBUV/m)	Over Limit (dB)	Polarization	Detect or Type
5650	50.97	-6.34	44.63	68.20	-23.57	Horizontal	PK
5650	38.42	-6.34	32.08	54.00	-21.92	Horizontal	AV
5700	48.42	-6.22	42.20	105.20	-63.00	Horizontal	PK
5700	37.03	-6.22	30.81	54.00	-23.19	Horizontal	AV
5720	51.72	-6.17	45.55	110.80	-65.25	Horizontal	PK
5720	40.25	-6.17	34.08	54.00	-19.92	Horizontal	AV
5725	53.19	-6.16	47.03	122.20	-75.17	Horizontal	PK
5725	41.40	-6.16	35.24	54.00	-18.76	Horizontal	AV
5650	53.58	-6.34	47.24	68.20	-20.96	Vertical	PK
5650	41.43	-6.34	35.09	54.00	-18.91	Vertical	AV
5700	57.75	-6.22	51.53	105.20	-53.67	Vertical	PK
5700	45.92	-6.22	39.70	54.00	-14.30	Vertical	AV
5720	54.50	-6.17	48.33	110.80	-62.47	Vertical	PK
5720	47.05	-6.17	40.88	54.00	-13.12	Vertical	AV
5725	52.04	-6.16	45.88	122.20	-76.32	Vertical	PK
5725	41.93	-6.16	35.77	54.00	-18.23	Vertical	AV

IEEE 802.11n20							
Operation Frequency:5825MHz							
Frequency (MHz)	Read Level (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit Line (dBUV/m)	Over Limit (dB)	Polarization	Detect or Type
5850	63.87	-5.87	58.00	122.20	-64.20	Vertical	PK
5850	48.63	-5.87	42.76	54.00	-11.24	Vertical	AV
5855	60.08	-5.85	54.23	110.80	-56.57	Vertical	PK
5855	49.71	-5.85	43.86	54.00	-10.14	Vertical	AV
5875	54.41	-5.80	48.61	105.20	-56.59	Vertical	PK
5875	41.24	-5.80	35.44	54.00	-18.56	Vertical	AV
5925	53.56	-5.68	47.88	68.20	-20.32	Vertical	PK
5925	42.50	-5.68	36.82	54.00	-17.18	Vertical	AV
5850	51.02	-5.87	45.15	122.20	-77.05	Horizontal	PK
5850	38.81	-5.87	32.94	54.00	-21.06	Horizontal	AV
5855	49.19	-5.85	43.34	110.80	-67.46	Horizontal	PK
5855	39.37	-5.85	33.52	54.00	-20.48	Horizontal	AV
5875	54.40	-5.80	48.60	105.20	-56.60	Horizontal	PK
5875	42.00	-5.80	36.20	54.00	-17.80	Horizontal	AV
5925	63.91	-5.68	58.23	68.20	-9.97	Horizontal	PK
5925	45.90	-5.68	40.22	54.00	-13.78	Horizontal	AV



IEEE 802.11ac20 Operation Frequency:5745MHz							
Frequency (MHz)	Read Level (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Detect or Type
5650	52.30	-6.34	45.96	68.20	-22.24	Horizontal	PK
5650	39.33	-6.34	32.99	54.00	-21.01	Horizontal	AV
5700	49.67	-6.22	43.45	105.20	-61.75	Horizontal	PK
5700	37.89	-6.22	31.67	54.00	-22.33	Horizontal	AV
5720	53.05	-6.17	46.88	110.80	-63.92	Horizontal	PK
5720	41.23	-6.17	35.06	54.00	-18.94	Horizontal	AV
5725	54.58	-6.16	48.42	122.20	-73.78	Horizontal	PK
5725	42.41	-6.16	36.25	54.00	-17.75	Horizontal	AV
5650	55.00	-6.34	48.66	68.20	-19.54	Vertical	PK
5650	42.43	-6.34	36.09	54.00	-17.91	Vertical	AV
5700	59.31	-6.22	53.09	105.20	-52.11	Vertical	PK
5700	47.08	-6.22	40.86	54.00	-13.14	Vertical	AV
5720	55.98	-6.17	49.81	110.80	-60.99	Vertical	PK
5720	48.25	-6.17	42.08	54.00	-11.92	Vertical	AV
5725	53.43	-6.16	47.27	122.20	-74.93	Vertical	PK
5725	42.95	-6.16	36.79	54.00	-17.21	Vertical	AV

IEEE 802.11ac20 Operation Frequency:5825MHz							
Frequency (MHz)	Read Level (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Detect or Type
5850	62.09	-5.87	56.22	122.20	-65.98	Vertical	PK
5850	47.20	-5.87	41.33	54.00	-12.67	Vertical	AV
5855	58.36	-5.85	52.51	110.80	-58.29	Vertical	PK
5855	48.25	-5.85	42.40	54.00	-11.60	Vertical	AV
5875	52.82	-5.80	47.02	105.20	-58.18	Vertical	PK
5875	39.97	-5.80	34.17	54.00	-19.83	Vertical	AV
5925	52.01	-5.68	46.33	68.20	-21.87	Vertical	PK
5925	41.24	-5.68	35.56	54.00	-18.44	Vertical	AV
5850	49.51	-5.87	43.64	122.20	-78.56	Horizontal	PK
5850	37.57	-5.87	31.70	54.00	-22.30	Horizontal	AV
5855	47.74	-5.85	41.89	110.80	-68.91	Horizontal	PK
5855	38.15	-5.85	32.30	54.00	-21.70	Horizontal	AV
5875	52.81	-5.80	47.01	105.20	-58.19	Horizontal	PK
5875	40.73	-5.80	34.93	54.00	-19.07	Horizontal	AV
5925	62.11	-5.68	56.43	68.20	-11.77	Horizontal	PK
5925	44.53	-5.68	38.85	54.00	-15.15	Horizontal	AV



IEEE 802.11n40 Operation Frequency:5755MHz							
Frequency (MHz)	Read Level (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit Line (dBUV/m)	Over Limit (dB)	Polarization	Detect or Type
5650	51.13	-6.34	44.79	68.20	-23.41	Horizontal	PK
5650	37.91	-6.34	31.57	54.00	-22.43	Horizontal	AV
5700	48.46	-6.22	42.24	105.20	-62.96	Horizontal	PK
5700	36.45	-6.22	30.23	54.00	-23.77	Horizontal	AV
5720	51.92	-6.17	45.75	110.80	-65.05	Horizontal	PK
5720	39.84	-6.17	33.67	54.00	-20.33	Horizontal	AV
5725	53.48	-6.16	47.32	122.20	-74.88	Horizontal	PK
5725	41.05	-6.16	34.89	54.00	-19.11	Horizontal	AV
5650	53.91	-6.34	47.57	68.20	-20.63	Vertical	PK
5650	41.07	-6.34	34.73	54.00	-19.27	Vertical	AV
5700	58.31	-6.22	52.09	105.20	-53.11	Vertical	PK
5700	45.83	-6.22	39.61	54.00	-14.39	Vertical	AV
5720	54.88	-6.17	48.71	110.80	-62.09	Vertical	PK
5720	47.01	-6.17	40.84	54.00	-13.16	Vertical	AV
5725	52.28	-6.16	46.12	122.20	-76.08	Vertical	PK
5725	41.60	-6.16	35.44	54.00	-18.56	Vertical	AV

IEEE 802.11n40 Operation Frequency:5795MHz							
Frequency (MHz)	Read Level (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit Line (dBUV/m)	Over Limit (dB)	Polarization	Detect or Type
5850	61.15	-5.87	55.28	122.20	-66.92	Vertical	PK
5850	45.94	-5.87	40.07	54.00	-13.93	Vertical	AV
5855	57.36	-5.85	51.51	110.80	-59.29	Vertical	PK
5855	47.01	-5.85	41.16	54.00	-12.84	Vertical	AV
5875	51.70	-5.80	45.90	105.20	-59.30	Vertical	PK
5875	38.56	-5.80	32.76	54.00	-21.24	Vertical	AV
5925	50.86	-5.68	45.18	68.20	-23.02	Vertical	PK
5925	39.85	-5.68	34.17	54.00	-19.83	Vertical	AV
5850	48.30	-5.87	42.43	122.20	-79.77	Horizontal	PK
5850	36.13	-5.87	30.26	54.00	-23.74	Horizontal	AV
5855	46.51	-5.85	40.66	110.80	-70.14	Horizontal	PK
5855	36.70	-5.85	30.85	54.00	-23.15	Horizontal	AV
5875	51.69	-5.80	45.89	105.20	-59.31	Horizontal	PK
5875	39.34	-5.80	33.54	54.00	-20.46	Horizontal	AV
5925	61.18	-5.68	55.50	68.20	-12.70	Horizontal	PK
5925	43.21	-5.68	37.53	54.00	-16.47	Horizontal	AV



IEEE 802.11ac40 Operation Frequency:5755MHz							
Frequency (MHz)	Read Level (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Detect or Type
5650	58.00	-6.34	51.66	68.20	-16.54	Horizontal	PK
5650	43.15	-6.34	36.81	54.00	-17.19	Horizontal	AV
5700	54.97	-6.22	48.75	105.20	-56.45	Horizontal	PK
5700	41.48	-6.22	35.26	54.00	-18.74	Horizontal	AV
5720	58.84	-6.17	52.67	110.80	-58.13	Horizontal	PK
5720	45.29	-6.17	39.12	54.00	-14.88	Horizontal	AV
5725	60.63	-6.16	54.47	122.20	-67.73	Horizontal	PK
5725	46.66	-6.16	40.50	54.00	-13.50	Horizontal	AV
5650	61.10	-6.34	54.76	68.20	-13.44	Vertical	PK
5650	46.68	-6.34	40.34	54.00	-13.66	Vertical	AV
5700	66.02	-6.22	59.80	105.20	-45.40	Vertical	PK
5700	52.02	-6.22	45.80	54.00	-8.20	Vertical	AV
5720	62.20	-6.17	56.03	110.80	-54.77	Vertical	PK
5720	53.36	-6.17	47.19	54.00	-6.81	Vertical	AV
5725	59.27	-6.16	53.11	122.20	-69.09	Vertical	PK
5725	47.28	-6.16	41.12	54.00	-12.88	Vertical	AV

IEEE 802.11ac40 Operation Frequency:5795MHz							
Frequency (MHz)	Read Level (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Detect or Type
5850	69.21	-5.87	63.34	122.20	-58.86	Vertical	PK
5850	52.17	-5.87	46.30	54.00	-7.70	Vertical	AV
5855	64.94	-5.85	59.09	110.80	-51.71	Vertical	PK
5855	53.36	-5.85	47.51	54.00	-6.49	Vertical	AV
5875	58.62	-5.80	52.82	105.20	-52.38	Vertical	PK
5875	43.87	-5.80	38.07	54.00	-15.93	Vertical	AV
5925	57.64	-5.68	51.96	68.20	-16.24	Vertical	PK
5925	45.29	-5.68	39.61	54.00	-14.39	Vertical	AV
5850	54.80	-5.87	48.93	122.20	-73.27	Horizontal	PK
5850	41.13	-5.87	35.26	54.00	-18.74	Horizontal	AV
5855	52.78	-5.85	46.93	110.80	-63.87	Horizontal	PK
5855	41.79	-5.85	35.94	54.00	-18.06	Horizontal	AV
5875	58.60	-5.80	52.80	105.20	-52.40	Horizontal	PK
5875	44.73	-5.80	38.93	54.00	-15.07	Horizontal	AV
5925	59.76	-5.68	54.08	68.20	-14.12	Horizontal	PK
5925	49.08	-5.68	43.40	54.00	-10.60	Horizontal	AV



IEEE 802.11ac80 Operation Frequency:5775MHz							
Frequency (MHz)	Read Level (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit Line (dBUV/m)	Over Limit (dB)	Polarization	Detect or Type
5650	49.23	-6.34	42.89	68.20	-25.31	Horizontal	PK
5650	38.39	-6.34	32.05	54.00	-21.95	Horizontal	AV
5700	47.01	-6.22	40.79	105.20	-64.41	Horizontal	PK
5700	37.20	-6.22	30.98	54.00	-23.02	Horizontal	AV
5720	49.84	-6.17	43.67	110.80	-67.13	Horizontal	PK
5720	39.96	-6.17	33.79	54.00	-20.21	Horizontal	AV
5725	51.11	-6.16	44.95	122.20	-77.25	Horizontal	PK
5725	40.96	-6.16	34.80	54.00	-19.20	Horizontal	AV
5650	51.47	-6.34	45.13	68.20	-23.07	Vertical	PK
5650	41.00	-6.34	34.66	54.00	-19.34	Vertical	AV
5700	55.07	-6.22	48.85	105.20	-56.35	Vertical	PK
5700	44.88	-6.22	38.66	54.00	-15.34	Vertical	AV
5720	52.28	-6.17	46.11	110.80	-64.69	Vertical	PK
5720	45.85	-6.17	39.68	54.00	-14.32	Vertical	AV
5725	50.15	-6.16	43.99	122.20	-78.21	Vertical	PK
5725	41.43	-6.16	35.27	54.00	-18.73	Vertical	AV

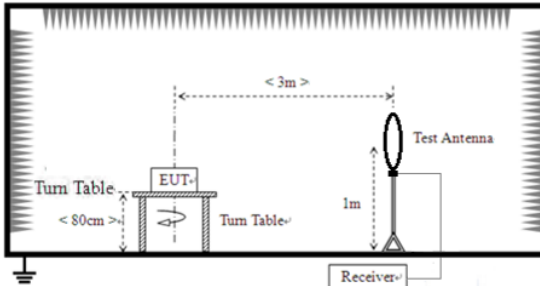
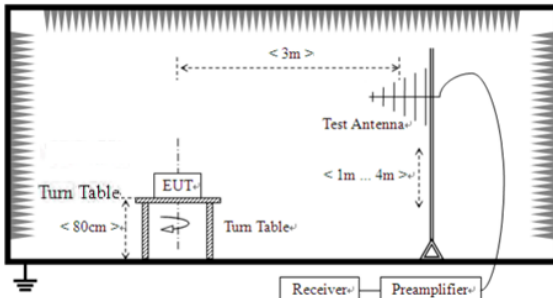
IEEE 802.11ac80 Operation Frequency:5775MHz							
Frequency (MHz)	Read Level (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit Line (dBUV/m)	Over Limit (dB)	Polarization	Detect or Type
5850	55.51	-5.87	49.64	122.20	-72.56	Vertical	PK
5850	43.18	-5.87	37.31	54.00	-16.69	Vertical	AV
5855	52.44	-5.85	46.59	110.80	-64.21	Vertical	PK
5855	44.06	-5.85	38.21	54.00	-15.79	Vertical	AV
5875	47.85	-5.80	42.05	105.20	-63.15	Vertical	PK
5875	37.19	-5.80	31.39	54.00	-22.61	Vertical	AV
5925	47.16	-5.68	41.48	68.20	-26.72	Vertical	PK
5925	38.24	-5.68	32.56	54.00	-21.44	Vertical	AV
5850	45.08	-5.87	39.21	122.20	-82.99	Horizontal	PK
5850	35.22	-5.87	29.35	54.00	-24.65	Horizontal	AV
5855	43.62	-5.85	37.77	110.80	-73.03	Horizontal	PK
5855	35.69	-5.85	29.84	54.00	-24.16	Horizontal	AV
5875	47.83	-5.80	42.03	105.20	-63.17	Horizontal	PK
5875	37.82	-5.80	32.02	54.00	-21.98	Horizontal	AV
5925	55.55	-5.68	49.87	68.20	-18.33	Horizontal	PK
5925	40.96	-5.68	35.28	54.00	-18.72	Horizontal	AV

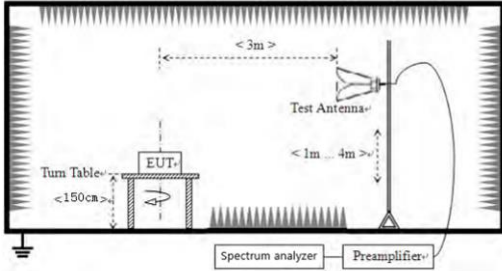
Remark:

Factor =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor

4.7 Spurious Emission

4.7.1 Radiated Emission Method

Test Requirement:	47CFR Part 15.209, Part 15E Section 15.407(b)(4)				
Test Method:	ANSI C63.10-2020 + Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024§6.4&6.5&6.6				
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	360KHz	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. 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. 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.
3. All models and modes have been tested, and the report only displays the worst mode data

Measurement Data:

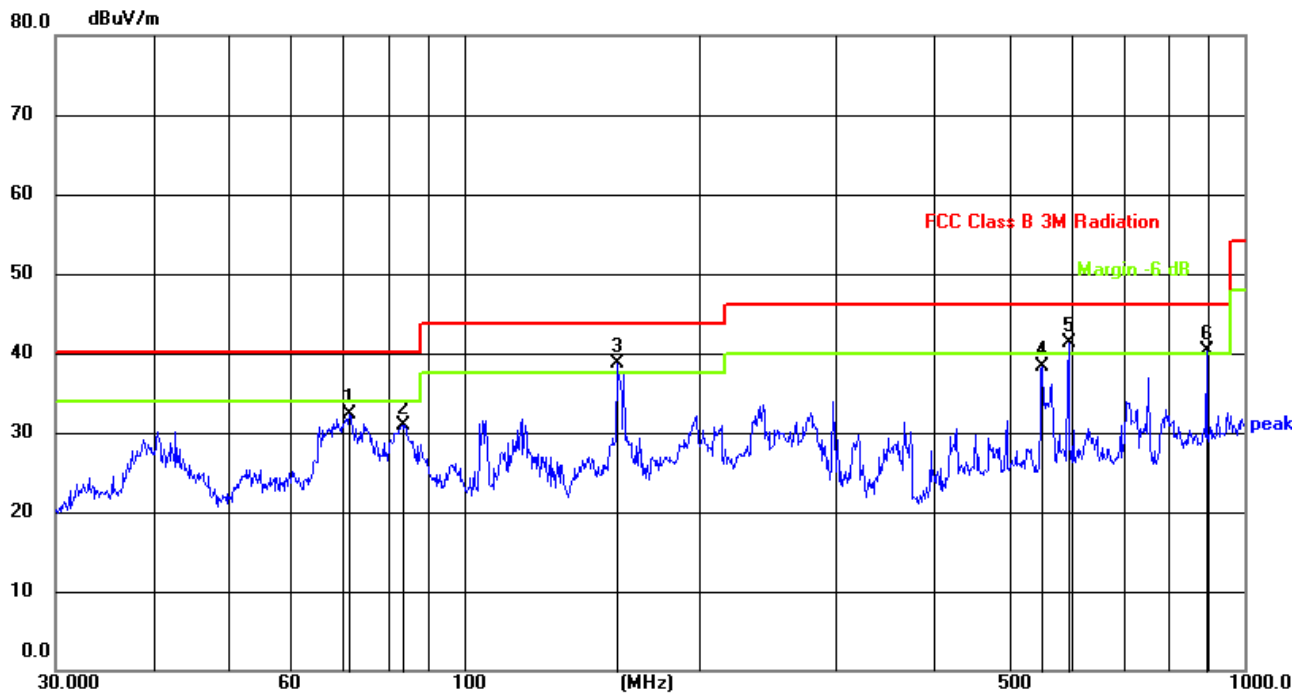
9 kHz ~ 30 MHz

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

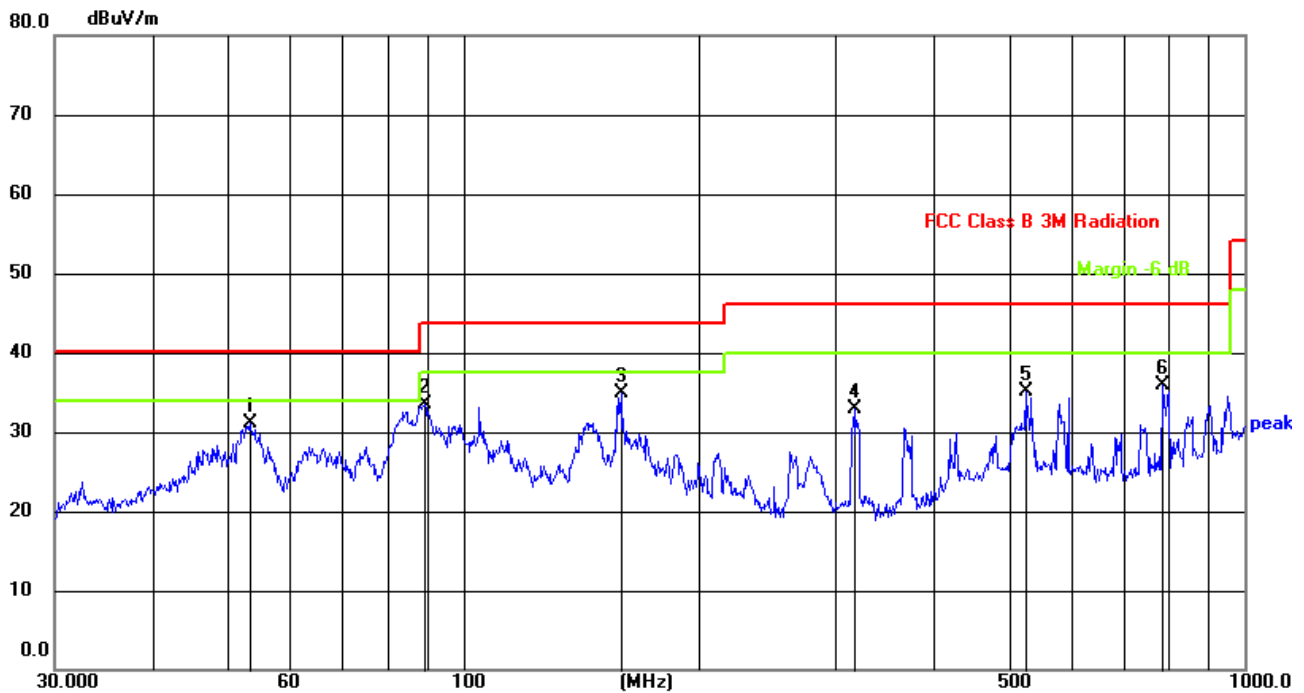
Temperature:	22.3℃	Relative Humidity:	59%RH
Pressure:	101.2kPa	Test Voltage :	AC 120V 60HZ
Test Mode :	TX- 802.11ac20 (5745MHz)		

Horizontal:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	71.3300	56.93	-24.71	32.22	40.00	-7.78	QP
2	83.5220	57.08	-26.15	30.93	40.00	-9.07	QP
3	157.0072	59.70	-20.92	38.78	43.50	-4.72	QP
4	550.9479	50.85	-12.56	38.29	46.00	-7.71	QP
5	595.1326	52.97	-11.61	41.36	46.00	-4.64	QP
6	893.8564	45.59	-5.24	40.35	46.00	-5.65	QP

Vertical:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	53.3179	53.41	-22.32	31.09	40.00	-8.91	QP
2	89.2762	59.21	-25.74	33.47	43.50	-10.03	QP
3	159.2248	55.76	-20.95	34.81	43.50	-8.69	QP
4	316.5889	52.86	-19.97	32.89	46.00	-13.11	QP
5	524.5538	48.42	-13.27	35.15	46.00	-10.85	QP
6	785.0932	42.65	-6.81	35.84	46.00	-10.16	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.



Above 1GHz:

Temperature:	22.3℃	Relative Humidity:	59%RH
Pressure:	101.2kPa	Test Voltage :	AC 120V 60HZ
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	45.39	3.31	48.70	74.00	-25.30	PK
V	11490.00	35.53	3.31	38.84	54.00	-15.16	AV
V	17235.00	33.36	10.10	43.46	68.20	-24.74	PK
V	17235.00	28.94	10.10	39.04	54.00	-14.96	AV
V	22980.00	51.62	-4.61	47.01	74.00	-26.99	PK
V	22980.00	41.63	-4.61	37.02	54.00	-16.98	AV
V	28725.00	44.58	0.87	45.45	68.20	-22.75	PK
V	28725.00	39.11	0.87	39.98	54.00	-14.02	AV
V	34470.00	42.04	3.82	45.86	68.20	-22.34	PK
V	34470.00	36.99	3.82	40.81	54.00	-13.19	AV
H	11490.00	43.86	3.31	47.17	74.00	-26.83	PK
H	11490.00	33.92	3.31	37.23	54.00	-16.77	AV
H	17235.00	32.90	10.10	43.00	68.20	-25.20	PK
H	17235.00	28.44	10.10	38.54	54.00	-15.46	AV
H	22980.00	53.81	-4.61	49.20	74.00	-24.80	PK
H	22980.00	43.25	-4.61	38.64	54.00	-15.36	AV
H	28725.00	44.72	0.87	45.59	68.20	-22.61	PK
H	28725.00	39.73	0.87	40.60	54.00	-13.40	AV
H	34470.00	42.55	3.82	46.37	68.20	-21.83	PK
H	34470.00	37.92	3.82	41.74	54.00	-12.26	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:5785MHz							
V	11570.00	48.64	3.34	51.98	74.00	-22.02	PK
V	11570.00	37.27	3.34	40.61	54.00	-13.39	AV
V	17355.00	34.28	10.52	44.80	68.20	-23.40	PK
V	17355.00	30.36	10.52	40.88	54.00	-13.12	AV
V	23140.00	55.66	-4.66	51.00	74.00	-23.00	PK
V	23140.00	44.75	-4.66	40.09	54.00	-13.91	AV
V	28925.00	45.33	1.36	46.69	68.20	-21.51	PK
V	28925.00	40.39	1.36	41.75	54.00	-12.25	AV
V	34710.00	44.98	3.95	48.93	68.20	-19.27	PK
V	34710.00	39.24	3.95	43.19	54.00	-10.81	AV
H	11570.00	48.37	3.34	51.71	74.00	-22.29	PK
H	11570.00	37.06	3.34	40.40	54.00	-13.60	AV
H	17355.00	34.96	10.52	45.48	68.20	-22.72	PK
H	17355.00	30.00	10.52	40.52	54.00	-13.48	AV
H	23140.00	59.83	-4.66	55.17	74.00	-18.83	PK
H	23140.00	47.66	-4.66	43.00	54.00	-11.00	AV
H	28925.00	47.66	1.36	49.02	68.20	-19.18	PK
H	28925.00	41.88	1.36	43.24	54.00	-10.76	AV
H	34710.00	46.00	3.95	49.95	68.20	-18.25	PK
H	34710.00	40.57	3.95	44.52	54.00	-9.48	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	43.98	3.36	47.34	74.00	-26.66	PK
V	11650.00	33.53	3.36	36.89	54.00	-17.11	AV
V	17475.00	32.97	10.93	43.90	68.20	-24.30	PK
V	17475.00	28.26	10.93	39.19	54.00	-14.81	AV
V	23300.00	49.48	-4.77	44.71	68.20	-23.49	PK
V	23300.00	44.07	-4.77	39.30	54.00	-14.70	AV
V	29125.00	40.57	1.65	42.22	68.20	-25.98	PK
V	29125.00	36.63	1.65	38.28	54.00	-15.72	AV
V	34950.00	40.41	4.09	44.50	68.20	-23.70	PK
V	34950.00	36.55	4.09	40.64	54.00	-13.36	AV
H	11650.00	44.15	3.36	47.51	74.00	-26.49	PK
H	11650.00	34.38	3.36	37.74	54.00	-16.26	AV
H	17475.00	32.71	10.93	43.64	68.20	-24.56	PK
H	17475.00	28.39	10.93	39.32	54.00	-14.68	AV
H	23300.00	47.99	-4.77	43.22	68.20	-24.98	PK
H	23300.00	43.41	-4.77	38.64	54.00	-15.36	AV
H	29125.00	43.74	1.65	45.39	68.20	-22.81	PK
H	29125.00	38.96	1.65	40.61	54.00	-13.39	AV
H	34950.00	41.85	4.09	45.94	68.20	-22.26	PK
H	34950.00	37.62	4.09	41.71	54.00	-12.29	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.



5 Test Setup Photo

Reference to the file No.: ET-26083912SP for details.

6 EUT Constructional Details

Reference to the file No.: ET-26083912EP and ET-26083912IP for details

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