



FCC TEST REPORT

FCC ID: 2BTCY-CAL150

On Behalf of

NEXURA INNOVATION PTE. LTD.

Snugee Family Calendar

Model No.: CAL-150,
CAL-270, CAL-180, CAL-110, CAL-100

Prepared for : NEXURA INNOVATION PTE. LTD.
Address : 60 PAYA LEBAR ROAD, #08-26, PAYA LEBAR SQUARE,
SINGAPORE 409051

Prepared By : Shenzhen PSI Testing Co., Ltd.
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Address : Road, Shajing Subdistrict, Bao'an District, Shenzhen, Guangdong,
China

Report Number : psi2512199-C01-R02
Date of Receipt : Nov. 28, 2025
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TABLE OF CONTENTS

Description
Page

1 Test Summary	5
1.1 MEASUREMENT UNCERTAINTY	5
2 General Information	6
2.1 GENERAL DESCRIPTION OF EUT	6
2.2 TEST MODE	7
2.3 TEST FACILITY	7
2.4 DESCRIPTION OF SUPPORT UNITS	7
2.5 DEVIATION FROM STANDARDS	8
2.6 ABNORMALITIES FROM STANDARD CONDITIONS	8
2.7 OTHER INFORMATION REQUESTED BY THE CUSTOMER	8
2.8 ADDITIONAL INSTRUCTIONS	8
2.9 TEST CONDITIONS	8
3 Test Instruments list	9
4 Test results and Measurement Data	11
4.1 ANTENNA REQUIREMENT:	11
4.2 CONDUCTED EMISSIONS	12
4.3 EMISSION BANDWIDTH AND 99% OCCUPIED BANDWIDTH	15
-6DB BANDWIDTH	23
4.4 MAXIMUM CONDUCTED OUTPUT POWER	31
4.5 POWER SPECTRAL DENSITY	42
4.6 BAND EDGE	51
4.7 RADIATED EMISSION	55
4.8 FREQUENCY STABILITY	63
5 Photos Of Test Setup	64
6 Photos Of EUT	64

TEST REPORT DECLARATION

Applicant : NEXURA INNOVATION PTE. LTD.
Address : 60 PAYA LEBAR ROAD, #08-26, PAYA LEBAR SQUARE, SINGAPORE 409051
Manufacturer : ShenZhen JOYHONG Tech CO.,Ltd
Address : B6 Building, Western Industry Factory Zone, Tantou Community, Songgang
Street, Bao'an District, Shenzhen, Chin
EUT Description : Snugee Family Calendar
(A) Model No. : CAL-150, CAL-270, CAL-180, CAL-110, CAL-100
(B) Trademark : Snugee

Measurement Standard Used:

FCC Rules and Regulations Part 15 Subpart E

RSS-247 Issue 4, ANSI C63.4:2014, ANSI C63.10:2020

Test Result: PASS

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

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

This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Shenzhen PSI Testing Co., Ltd.

Tested by (name + signature).....:	Felix Pang Test Engineer	
Approved by (name + signature).....:	Simple Guan Project Manager	
Date of issue.....:	Jan. 8, 2026	

Revision History

Revision	Issue Date	Revisions	Revised By
V0	Jan. 8, 2026	Initial released Issue	Felix Pang



1 Test Summary

Test Item	Section in CFR 47	Result
Antenna requirement	15.203 Section 7.1.4	PASS
AC Power Line Conducted Emission	15.207 Section 7.2.4, 15.407(b)(9)	PASS
Occupied bandwidth	15.407(a), 15.407(e)	PASS
Duty Cycle	15.407(a)(1)(iv)-(B1), (a)(2)-(B2/3), (a)(3)(i)-(B4)	PASS
Maximum Conducted Output Power	15.407(a)(1)(iv)-(B1), (a)(3)(i)-(B4)	PASS
Power Spectral Density	15.407(a)(1)(iv)-(B1), (a)(3)(i)-(B4)	PASS
Radiated Emission	15.205, 15.209, 15.407(b)(1)-(B1), (4) -(B4)	PASS
Band Edge	15.407(b), 15.209	PASS
Frequency Stability	15.407(g)	PASS

Remark:

1. Pass: The EUT complies with the essential requirements in the standard.
2. Frequency Stability: The manufacturer stated in the user's manual.
3. The conclusion of this test report is judged by actual test data without considering measurement uncertainty.
4. Measurement-method usage KDB 789033 D02 General UNII Test Procedures New Rules v02r01
5. All tests are according to ANSI C63.10-2020.

1.1 Measurement Uncertainty

Item	Uncertainty
Power Line Conducted Emissions Test	2.13dB
Radiation Emission test in 3m chamber(Below 30MHz)	4.07dB
Radiation Emission test in 3m chamber(30MHz to 1GHz)	4.51dB
Radiation Emission test in 3m chamber(1GHz to 18GHz)	5.07dB
Radiation Emission test in 3m chamber(18GHz to 40GHz)	5.21dB
Radio Frequency	48.24KHz
Conducted RF Power	0.41dB
Power Spectral Density	0.39 dB
Occupied-Bandwidth	968Hz
Duty Cycle	1%
Conducted-Spurious Emission	1.26dB

2 General Information

2.1 General Description of EUT

EUT Name	: Snugee Family Calendar
Model	: CAL-150, CAL-270, CAL-180, CAL-110, CAL-100
Diff	: CAL-150 is tested model, other models are derivative models .The models are identical in circuit, only different on the model names and colors. So the test data of CAL-150 can represent the remaining models.
Power supply	: DC 12V / 1.5A

Radio Technology	: 5G WIFI
Operation frequency	: 802.11a/802.11ac20/802.11n(HT20): 5745-5845MHz 802.11ac40/802.11n(HT40): 5755-5795MHz
Channel separation	: 20MHz for 802.11a/802.11ac20/802.11n(HT20) 40MHz for 802.11ac40/ 802.11n(HT40)
Modulation technology:	: IEEE 802.11n: OFDM (64QAM,16QAM,QPSK,BPSK) IEEE 802.11a: OFDM (64QAM,16QAM,QPSK,BPSK) IEEE 802.11ac: OFDM (64QAM,16QAM, 256QAM,QPSK,BPSK)
Antenna Type	: PCB antenna , Maximum Gain is 3.63dBi.
PMN	: N/A
HVIN	: N/A
Software version	: N/A
Hardware version FVIN	: N/A
Note	: Antenna information is provided by applicant. Testing lab is not responsible for the accuracy of the information.

2.2 Test mode

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

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

2.3 Test Facility

Shenzhen PSI Testing Co., Ltd.

1-2/F., Building 5, Yudafu Industrial Park, No.10, Xingye West Road, Shajing Subdistrict, Bao'an District, Shenzhen, Guangdong, China

September 13, 2023 File on Federal Communication Commission
Registration Number: 916281

September 21, 2023 Certificated by IC
Registration Number: 31123
CAB identifier: CN0158

2.4 Description of Support Units

Accessories 1 : SWITCHING ADAPTER
Manufacturer : SiChuan Province GangQi Electronics Co.Ltd
Model : SCGQ18-120150-CU
Rating : Input: 100-240V-50/60Hz 0.5A Max
Output: 12 V  1.5A

2.5 Deviation from Standards

None.

2.6 Abnormalities from Standard Conditions

None.

2.7 Other Information Requested by the Customer

None.

2.8 Additional instructions

Software (Used for test) from client

Channel	Power level
Lowest	Default
Middle	Default
Highest	Default

2.9 Test Conditions

Items	Required	Actual
Temperature range:	15-35℃	26℃
Humidity range:	25-75%	54%
Pressure range:	86-106kPa	101kPa

3 Test Instruments list

Item	Equipment	Manufacturer	Model No.	Serial No.	Firmware Version	Last Cal.	Cal. Interval
1.	9*6*6 anechoic chamber	SKET	9*6*6	N/A	/	2025.12.19	3 Year
2.	Test Receiver	Rohde&Schwarz	ESCI 7	101032/003	4.42 SP3	2025.12.18	1 Year
3.	L.I.S.N.#1	Rohde&Schwarz	ENV 216	102282	/	2025.12.18	1 Year
4.	L.I.S.N.#2	EMCO	3810-2	00094944	/	2025.12.18	1 Year
5.	Loop Antenna	Schwarz beck	FMZB 1519B	00128	/	2025.01.02	2 Year
6.	Bilog Antenna	Schwarz beck	VULB 9168	01448	/	2025.01.02	2 Year
7.	Spectrum Analyzer	Rohde&Schwarz	FSV40-N	101648	3.70	2025.12.18	1 Year
8.	Horn Antenna	Schwarz beck	BBHA 9120 D	02706	/	2025.01.02	2 Year
9.	Amplifier	SKET	LNPA_0118 G-50	SK20220329 01	/	2025.12.18	1 Year
10.	Horn Antenna	Schwarz beck	BBHA 9170	00946	/	2024.12.31	2 Year
11.	Amplifier	SKET	LNPA_1840 G-50	SK20190403 02	/	2025.12.18	1 Year
12.	RF Power Probe	Rohde&Schwarz	NRP-Z11	1138.3004.0 2-1111533-Fz	/	2025.12.18	1 Year
13.	RF Sensor Unit	Tachoy	TR1029-2	20220428P0 08	/	2025.12.18	1 Year
14.	Spectrum Analyzer	Agilent	N9020A	MY51281067	A.14.03	2025.12.18	1 Year
15.	Temp. & Humid Chamber	Auchno	9606	/	/	2025.12.18	1 Year
16.	Regulated DC Power Supply	Xinouhua	ADC120V10 A	2022112516 38	/	2025.12.18	1 Year
17.	Cable	SKET	Cable-RE-1	#02/#03	/	2025.12.18	1 Year
18.	Cable	SKET	Cable-RE-2	#01	/	2025.12.18	1 Year
19.	Cable	SKET	Cable-RE-3	#04	/	2025.12.18	1 Year
20.	Cable	SKET	Cable-CE-1	A-E-24	/	2025.12.18	1 Year
21.	6dB Attenuator	Schwarzbeck	DGA 9552N 6dB	CK4186	/	2025.12.18	1 Year

22.	Power meter	Agilent	E4419B	GB40202121	/	2025.12.18	1 Year
23.	Comprehensive Test Instrument	Rohde&Schwarz	CMW 500	145266	/	2025.12.18	1 Year

For Test Software Information

Item	Software Name	Manufacturer	Version
RE	EZ_EMC	Farad	PSI-3A1
CE	EZ_EMC	Farad	PSI-3A1
RF	RTS	TACHOY	V1.0.0



4 Test results and Measurement Data

4.1 Antenna requirement:

Standard requirement:	FCC Part15 C Section 15.203 Section 7.1.4
15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.	
E.U.T Antenna:	
PCB antenna, Maximum Gain is 3.63dBi, for 5745-5845MHz	



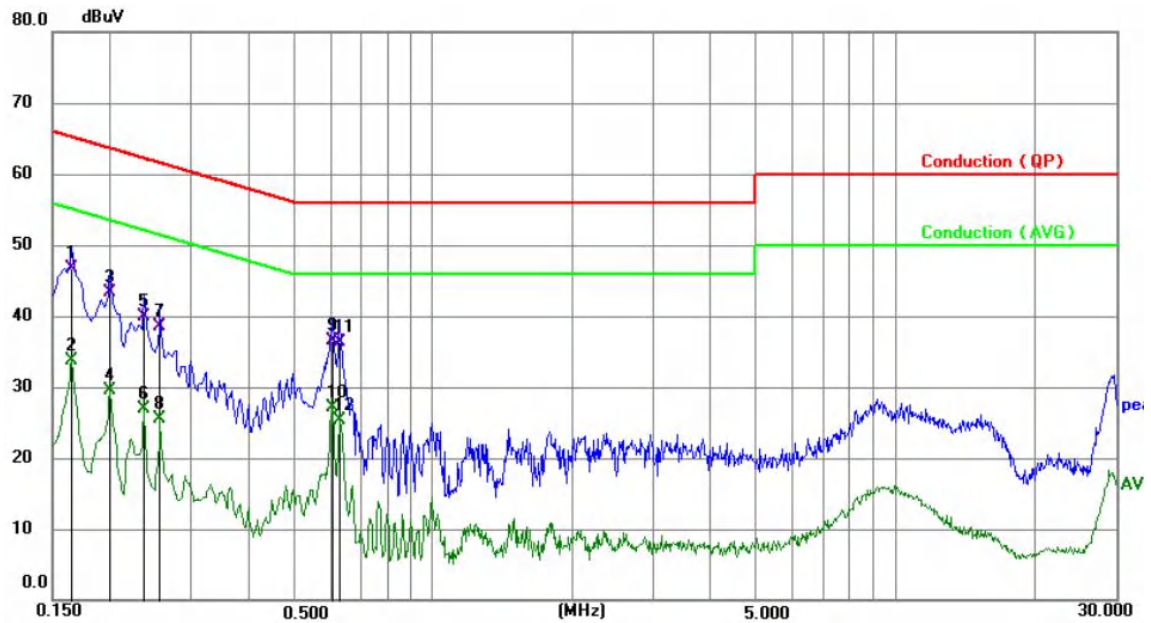
4.2 Conducted Emissions

Test Requirement:	FCC Part15 C Section 15.207 Section 7.2.4, 15.407(b)(9)		
Test Method:	ANSI C63.10-2020		
Test Frequency Range:	150KHz to 30MHz		
Class / Severity:	Class B		
Receiver setup:	RBW=9KHz, VBW=30KHz		
Limit:	Frequency range (MHz)	Limit (dBuV)	
		Quasi-peak	Average
	0.15-0.5	66 to 56*	56 to 46*
	0.5-5	56	46
	5-30	60	50
* Decreases with the logarithm of the frequency.			
Test procedure	The E.U.T and simulators are connected to the main power through a line impedance stabilization network(L.I.S.N.). The provide a 50ohm/50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs). Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10-2020 on conducted measurement.		
Test setup:	Reference Plane LISN AUX Equipment E.U.T 40cm 80cm LISN Filter EMI Receiver AC power Test table/Insulation plane Remark E.U.T: Equipment Under Test LISN: Line Impedance Stabilization Network Test table height=0.8m		
Test Instruments:	Refer to section 3.0 for details		
Test mode:	Refer to section 2.2 for details		
Test results:	Pass		

Measurement Data

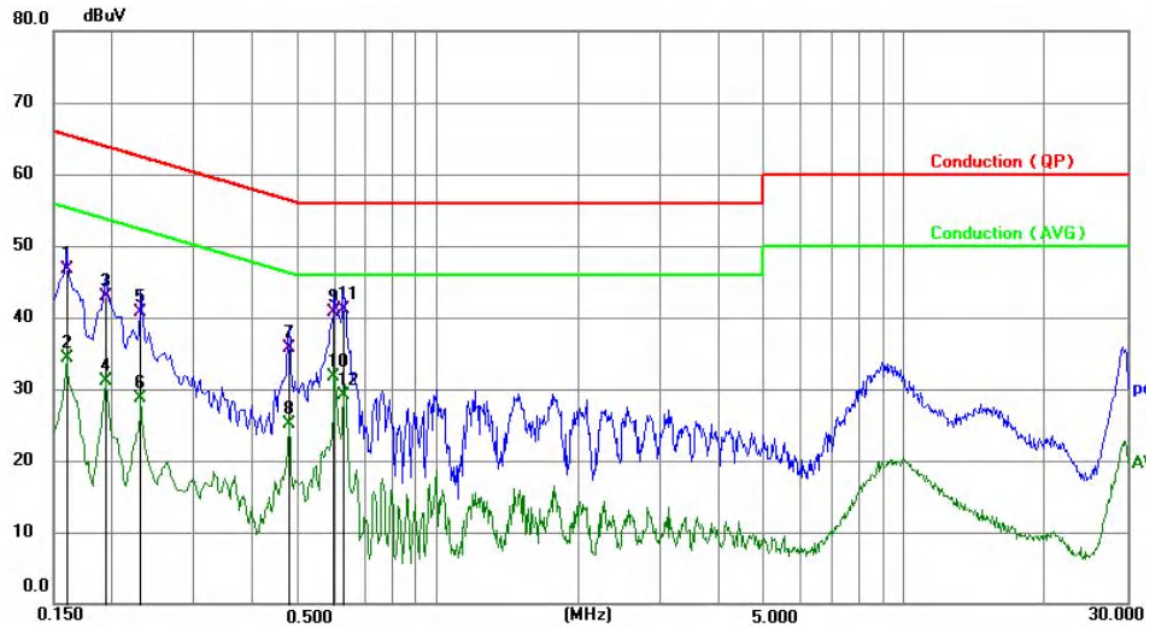
An initial pre-scan was performed on the line and neutral lines with peak detector. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

Line:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1 *	0.1650	36.89	9.90	46.79	65.21	-18.42	QP	P	
2	0.1650	23.82	9.90	33.72	55.21	-21.49	AVG	P	
3	0.1995	33.39	9.91	43.30	63.63	-20.33	QP	P	
4	0.1995	19.58	9.91	29.49	53.63	-24.14	AVG	P	
5	0.2354	30.01	9.92	39.93	62.26	-22.33	QP	P	
6	0.2354	16.91	9.92	26.83	52.26	-25.43	AVG	P	
7	0.2561	28.56	9.93	38.49	61.56	-23.07	QP	P	
8	0.2561	15.58	9.93	25.51	51.56	-26.05	AVG	P	
9	0.6045	26.51	10.03	36.54	56.00	-19.46	QP	P	
10	0.6045	17.08	10.03	27.11	46.00	-18.89	AVG	P	
11	0.6270	26.27	10.03	36.30	56.00	-19.70	QP	P	
12	0.6270	15.22	10.03	25.25	46.00	-20.75	AVG	P	

Note: *:Maximum data x:Over limit !:over margin Level = Reading + Factor Margin = Level - Limit

Neutral:

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1598	36.84	9.89	46.73	65.47	-18.74	QP	P	
2	0.1598	24.49	9.89	34.38	55.47	-21.09	AVG	P	
3	0.1934	32.95	9.91	42.86	63.89	-21.03	QP	P	
4	0.1934	21.20	9.91	31.11	53.89	-22.78	AVG	P	
5	0.2303	30.76	9.92	40.68	62.44	-21.76	QP	P	
6	0.2303	18.70	9.92	28.62	52.44	-23.82	AVG	P	
7	0.4784	25.61	10.01	35.62	56.37	-20.75	QP	P	
8	0.4784	15.16	10.01	25.17	46.37	-21.20	AVG	P	
9	0.5980	30.67	10.03	40.70	56.00	-15.30	QP	P	
10 *	0.5980	21.58	10.03	31.61	46.00	-14.39	AVG	P	
11	0.6270	31.03	10.03	41.06	56.00	-14.94	QP	P	
12	0.6270	19.05	10.03	29.08	46.00	-16.92	AVG	P	

Note: *:Maximum data x:Over limit !:over margin Level = Reading + Factor Margin = Level - Limit

All modes and channels have been tested and only the A 5745MHz mode with the worst data is listed.

4.3 Emission Bandwidth and 99% Occupied Bandwidth

Test Requirement:	FCC Part15 E Section 15.407(a), 15.407(e)
Test Method:	KDB 789033 D02 General UNII Test Procedures New Rules v02r01
Limit:	N/A
Test setup:	 The diagram shows a green Spectrum Analyzer connected by a cable to a yellow EUT (Equipment Under Test).
Test procedure:	According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
Test Instruments:	Refer to section 3.0 for details
Test mode:	Refer to section 2.2 for details
Test results:	Pass

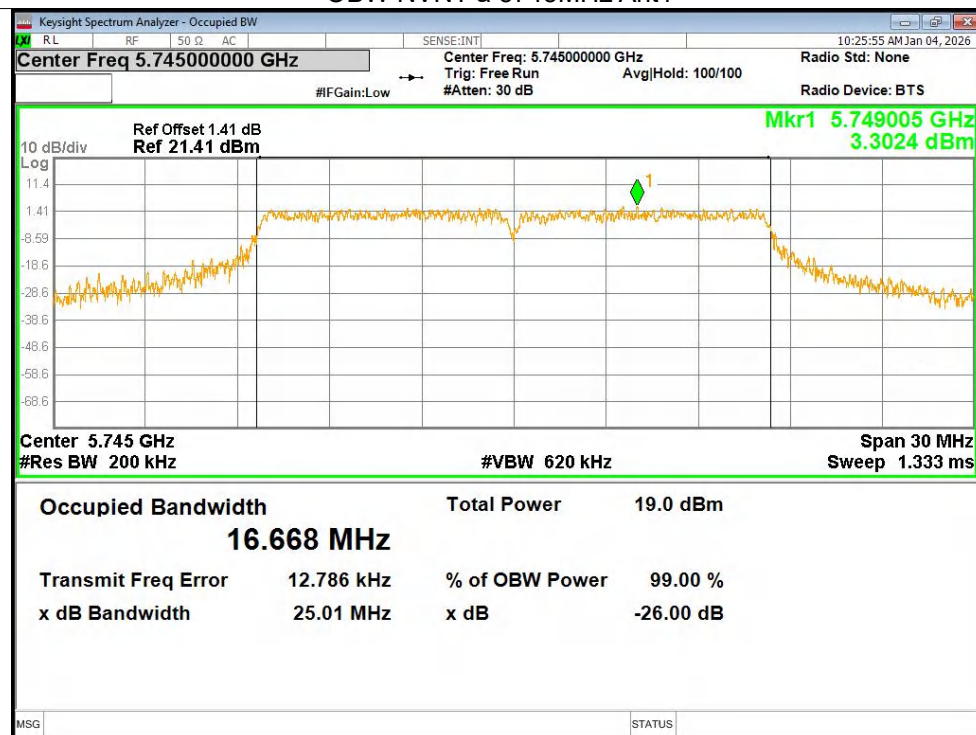
Measurement Data:

Band 1 (5745-5795 MHz):

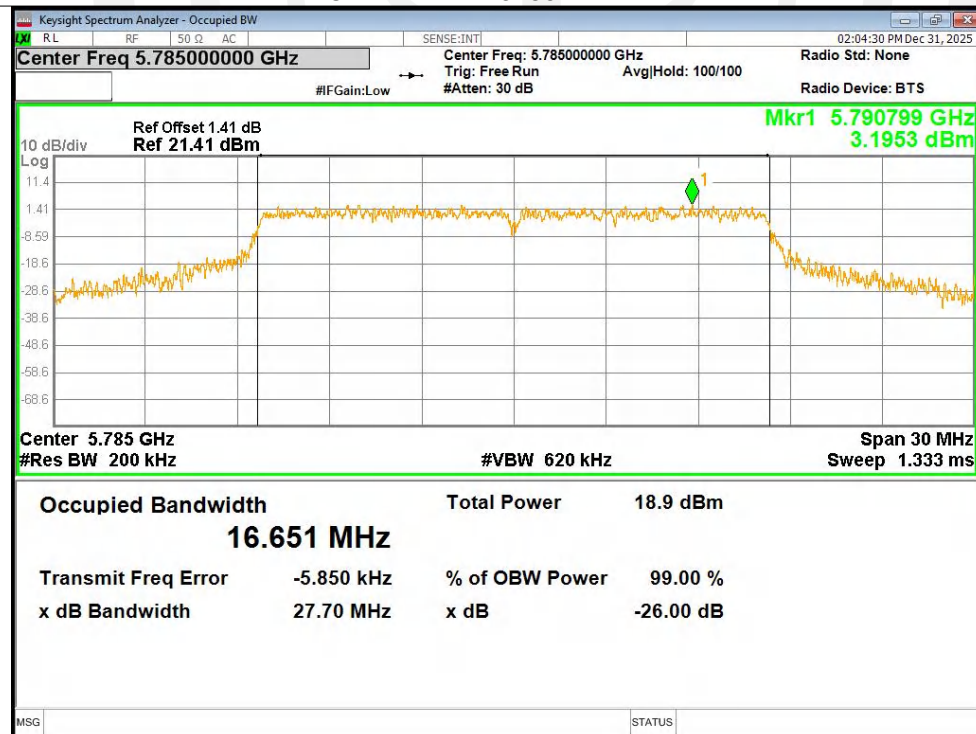
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	a	5745	Ant1	16.668
NVNT	a	5785	Ant1	16.651
NVNT	a	5825	Ant1	16.751
NVNT	n20	5745	Ant1	17.815
NVNT	n20	5785	Ant1	17.787
NVNT	n20	5825	Ant1	17.837
NVNT	n40	5755	Ant1	36.413
NVNT	n40	5795	Ant1	36.436
NVNT	ac20	5745	Ant1	17.776
NVNT	ac20	5785	Ant1	17.841
NVNT	ac20	5825	Ant1	17.825
NVNT	ac40	5755	Ant1	36.428
NVNT	ac40	5795	Ant1	36.37

Test Graphs

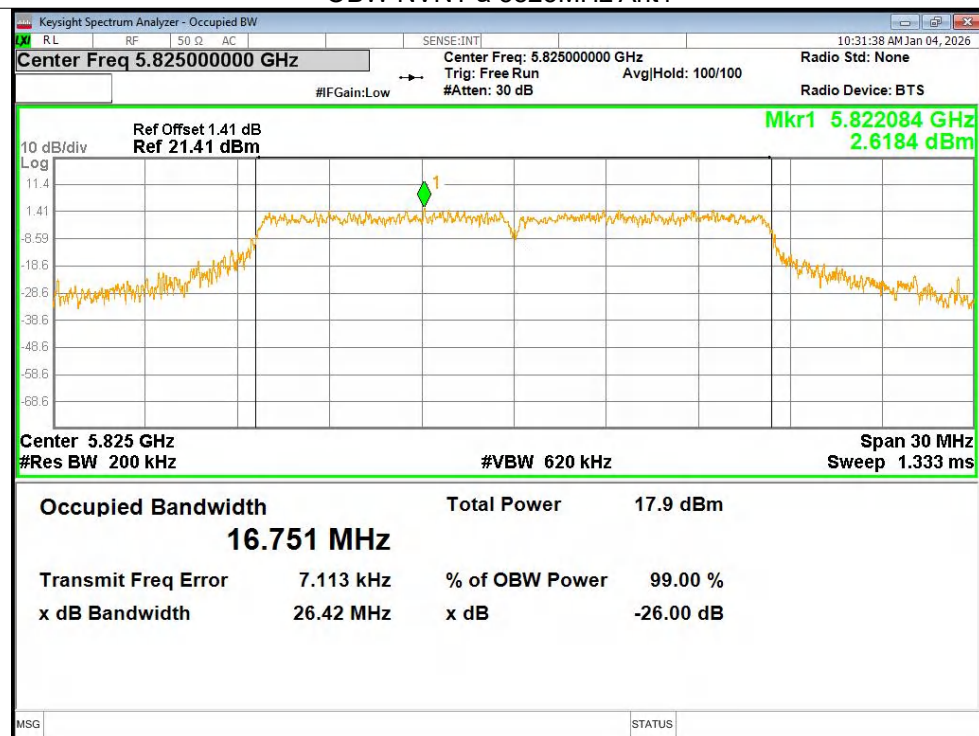
OBW NVNT a 5745MHz Ant1



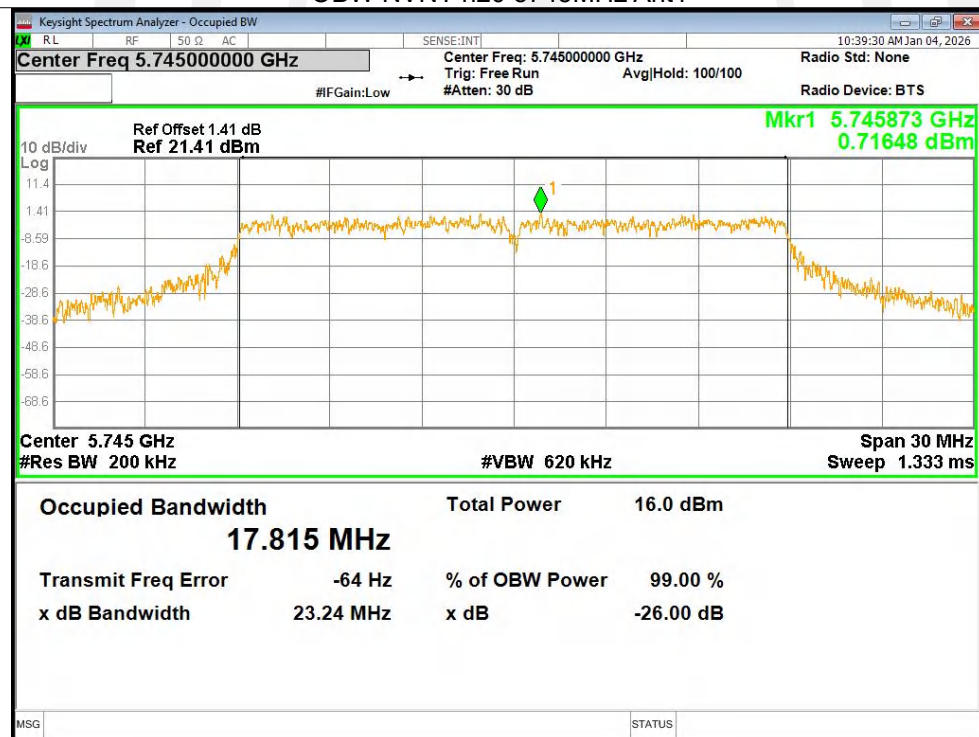
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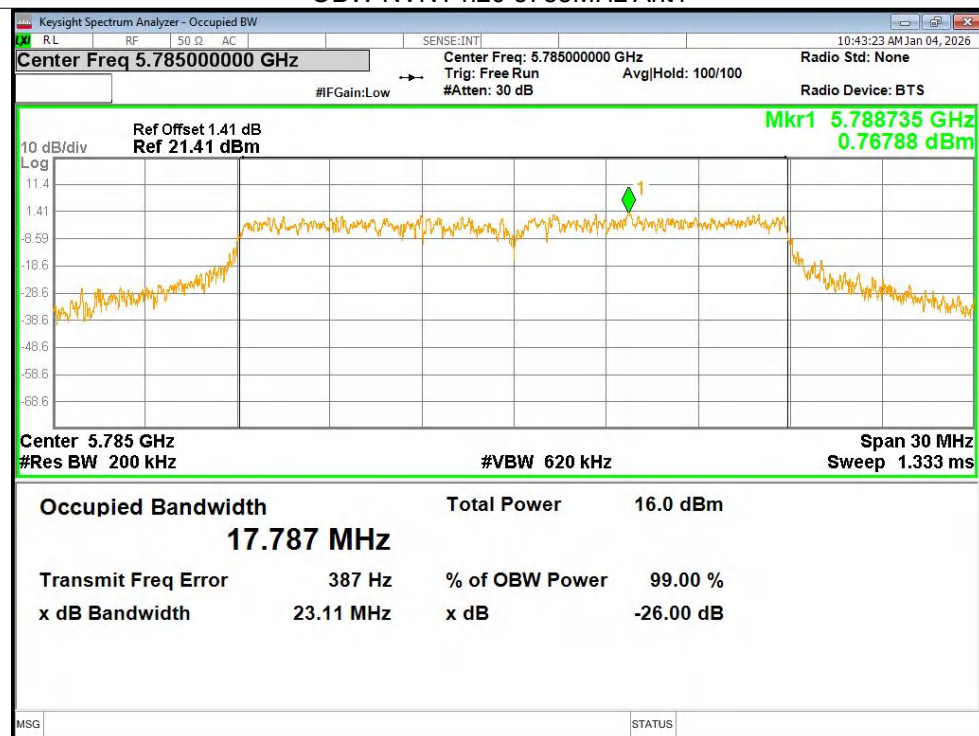
OBW NVNT a 5825MHz Ant1



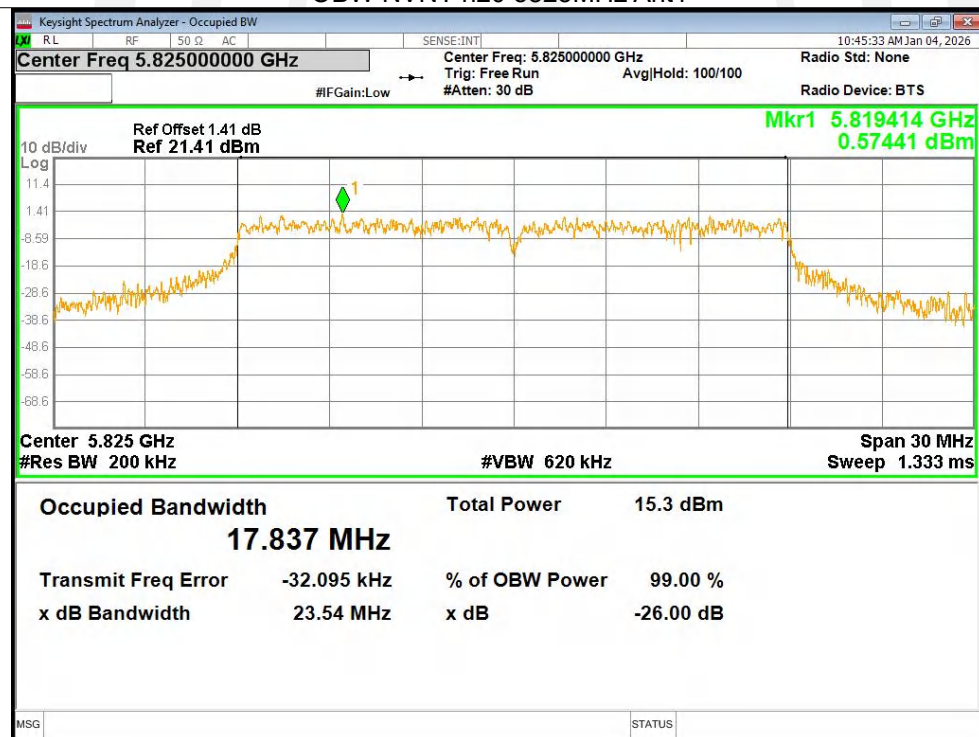
OBW NVNT n20 5745MHz Ant1



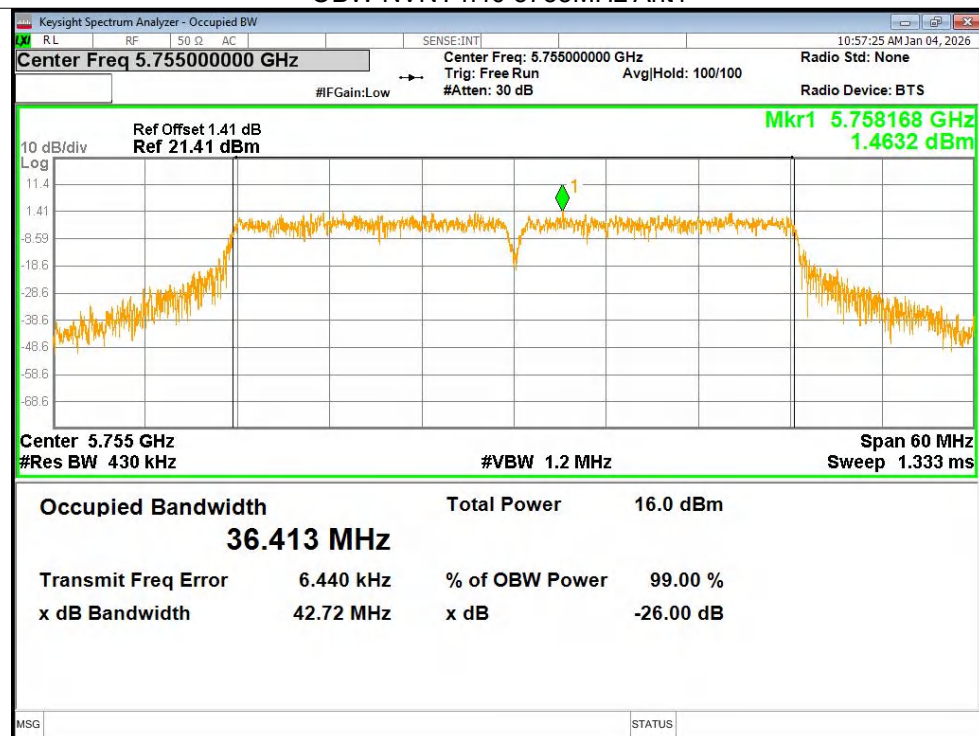
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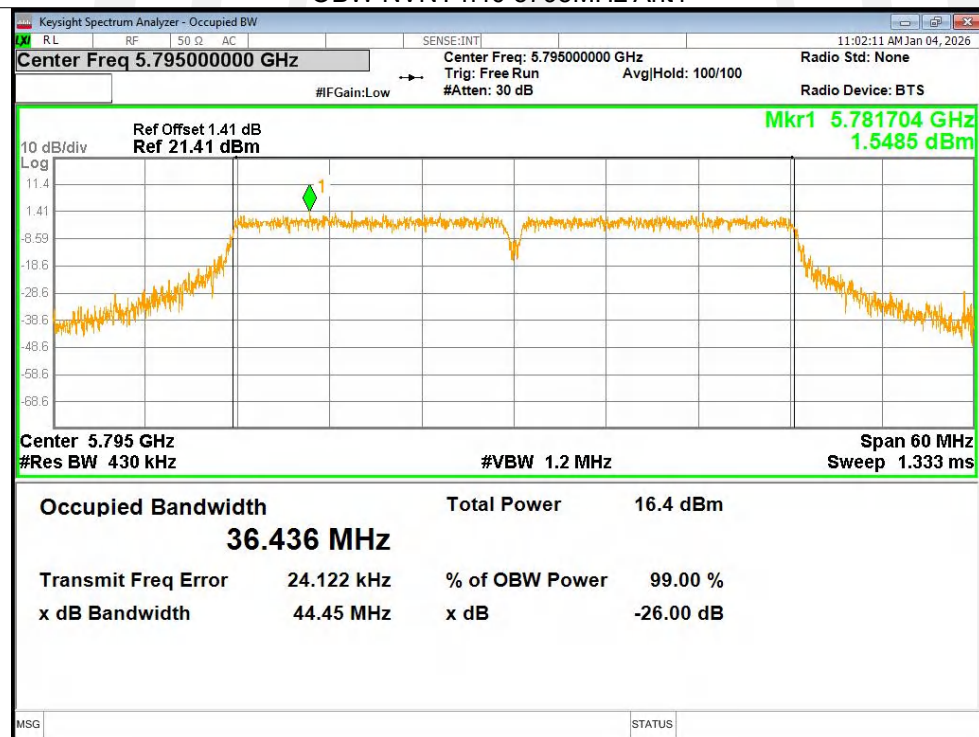
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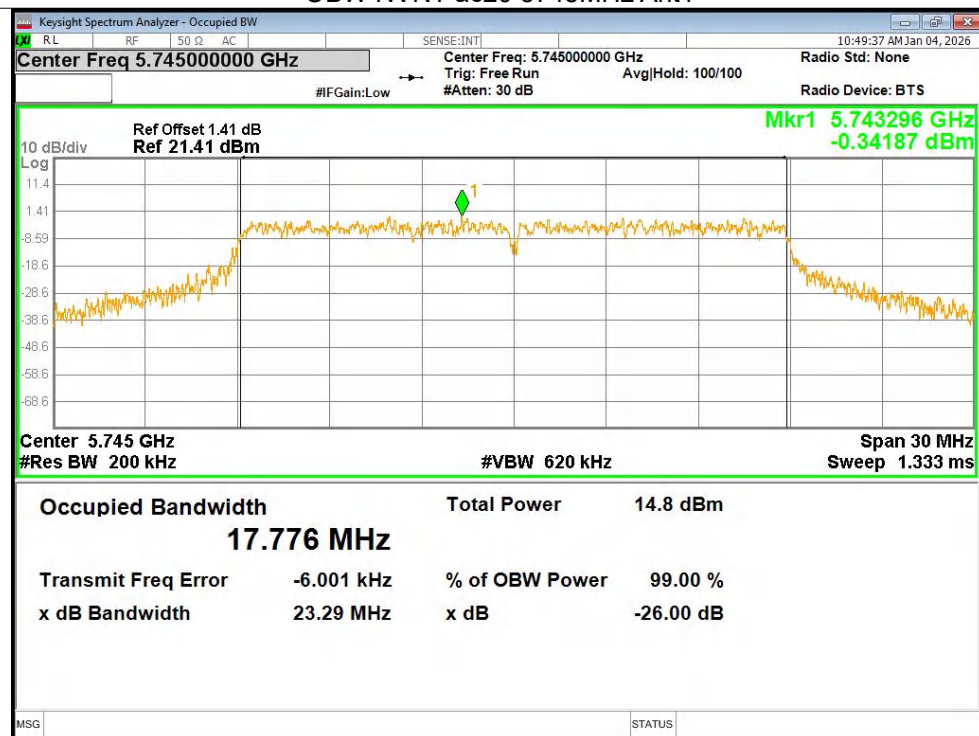
OBW NVNT n40 5755MHz Ant1



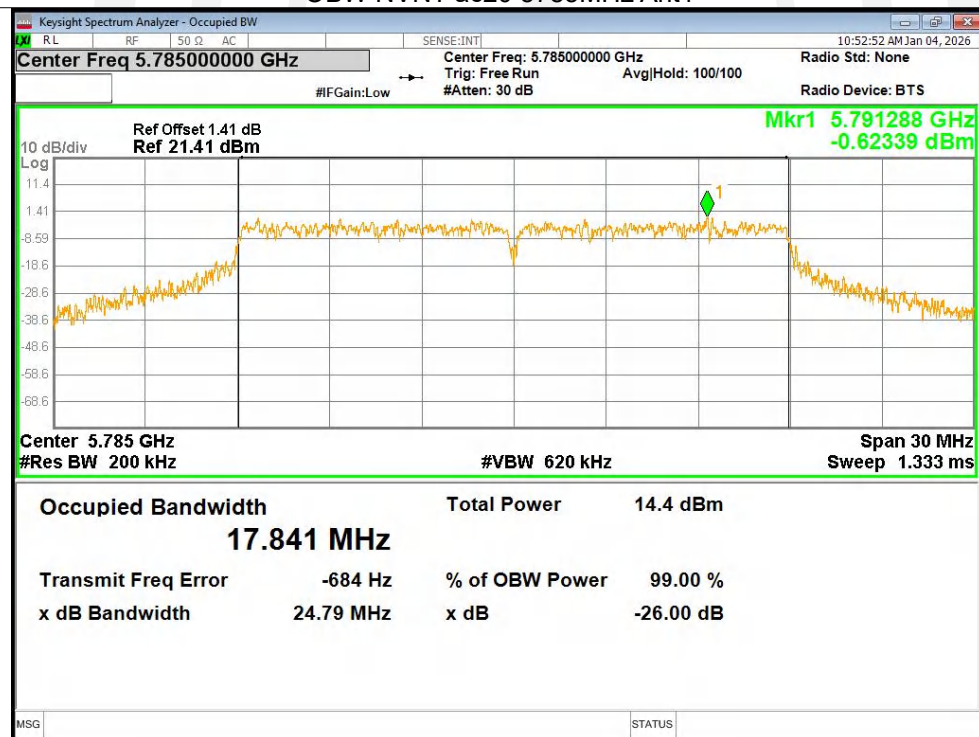
OBW NVNT n40 5795MHz Ant1



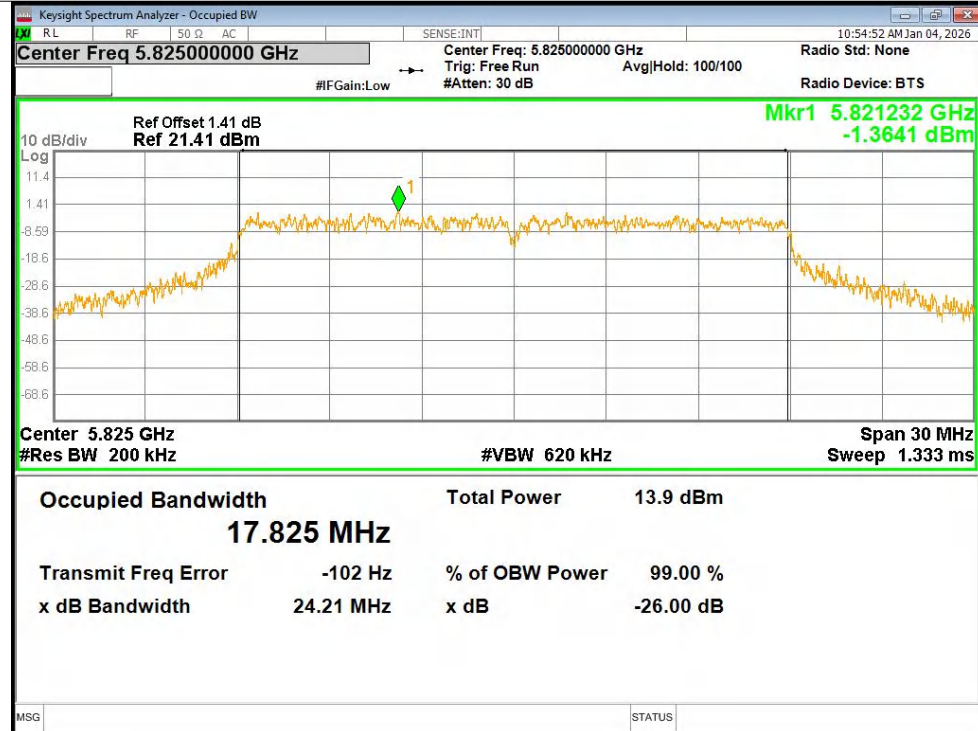
OBW NVNT ac20 5745MHz Ant1



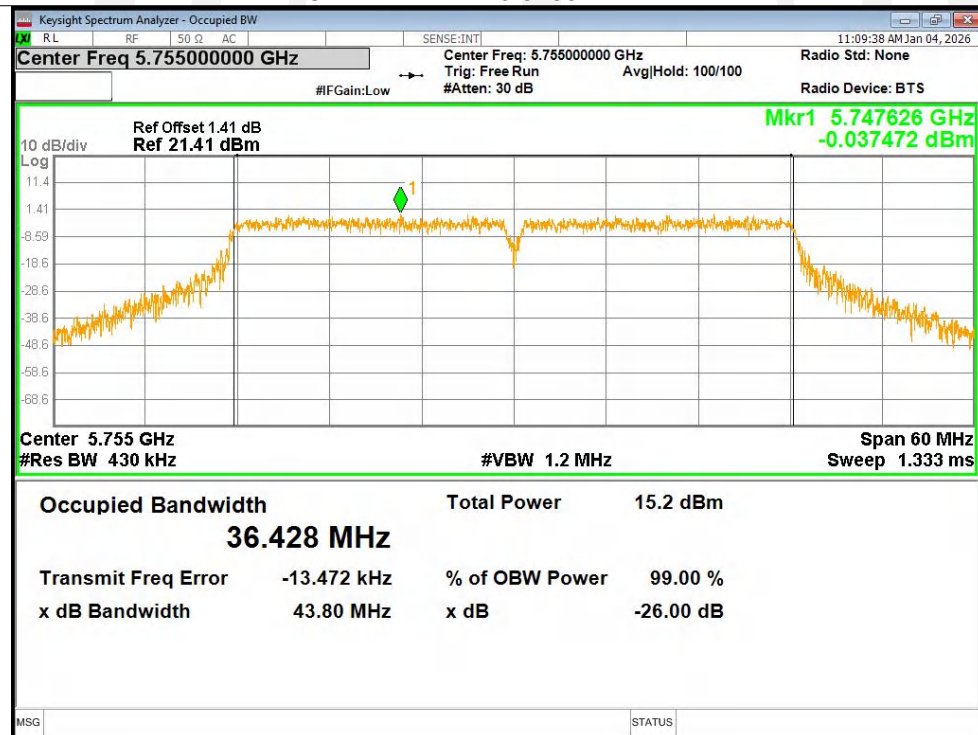
OBW NVNT ac20 5785MHz Ant1

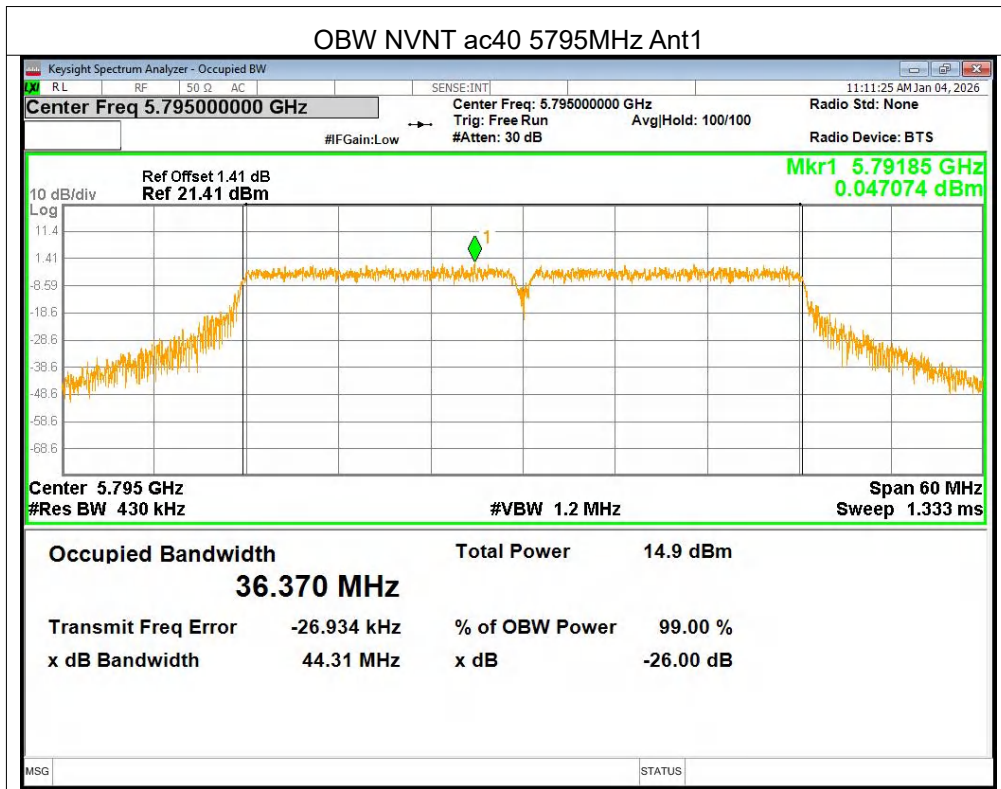


OBW NVNT ac20 5825MHz Ant1



OBW NVNT ac40 5755MHz Ant1



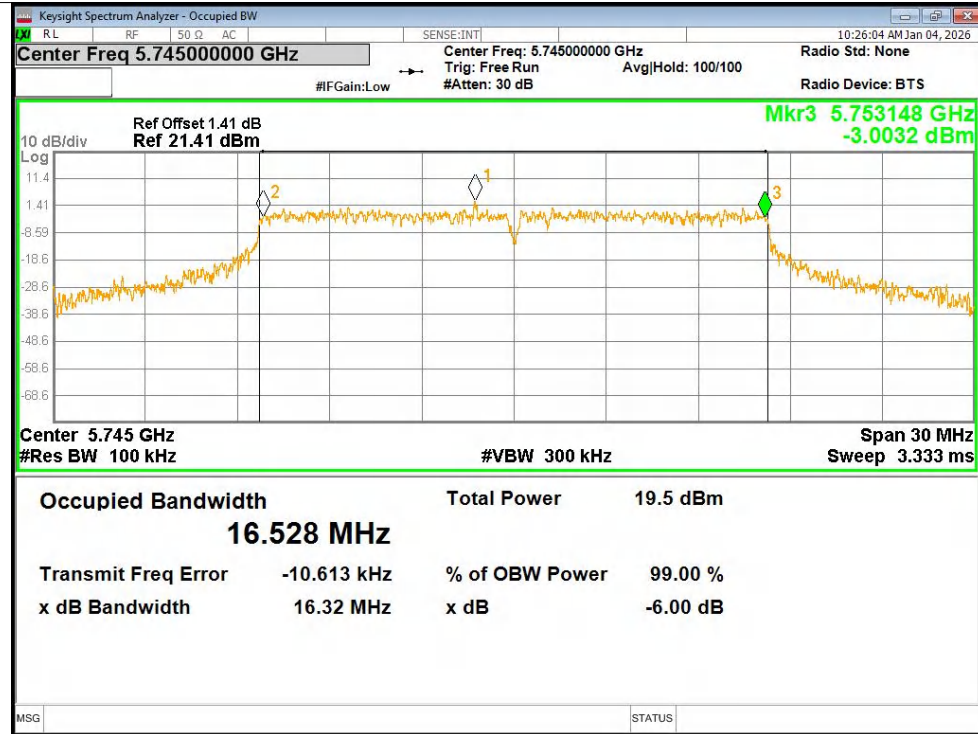


-6dB Bandwidth

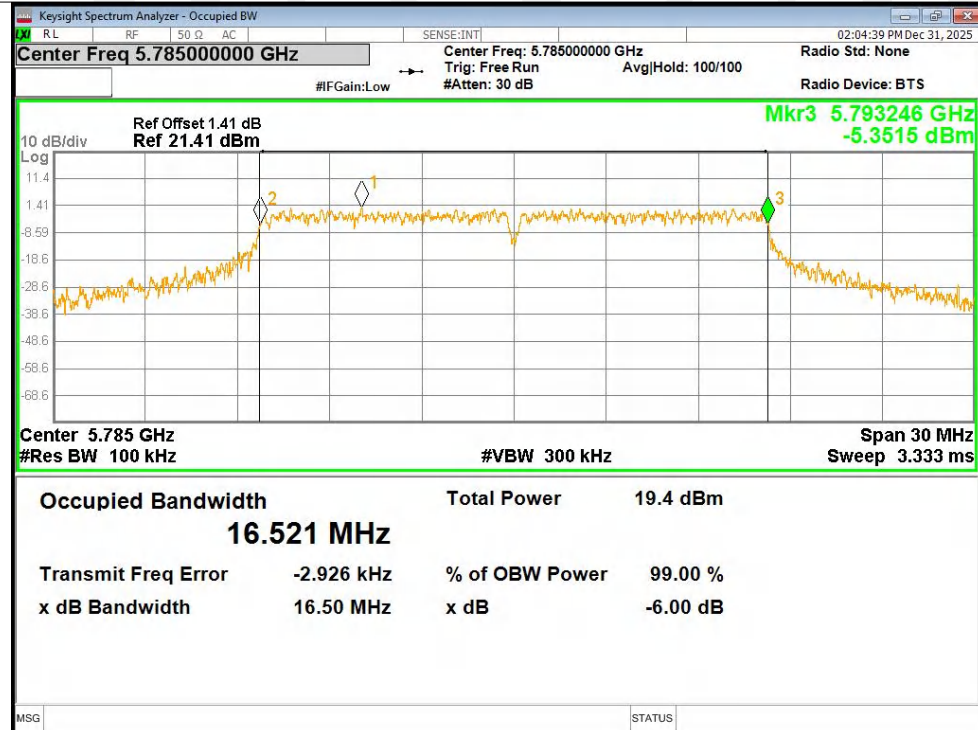
Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
a	5745	Ant1	16.317	0.5	Pass
a	5785	Ant1	16.498	0.5	Pass
a	5825	Ant1	16.348	0.5	Pass
n20	5745	Ant1	17.704	0.5	Pass
n20	5785	Ant1	17.554	0.5	Pass
n20	5825	Ant1	17.628	0.5	Pass
n40	5755	Ant1	36.072	0.5	Pass
n40	5795	Ant1	36.391	0.5	Pass
ac20	5745	Ant1	17.645	0.5	Pass
ac20	5785	Ant1	17.715	0.5	Pass
ac20	5825	Ant1	17.629	0.5	Pass
ac40	5755	Ant1	36.483	0.5	Pass
ac40	5795	Ant1	36.432	0.5	Pass

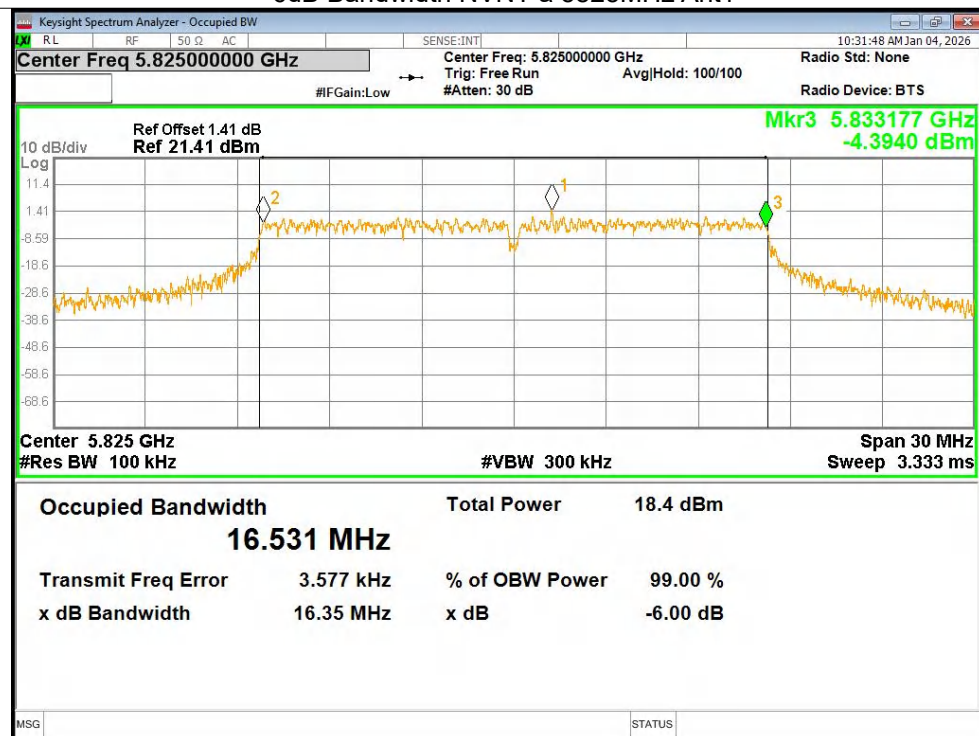
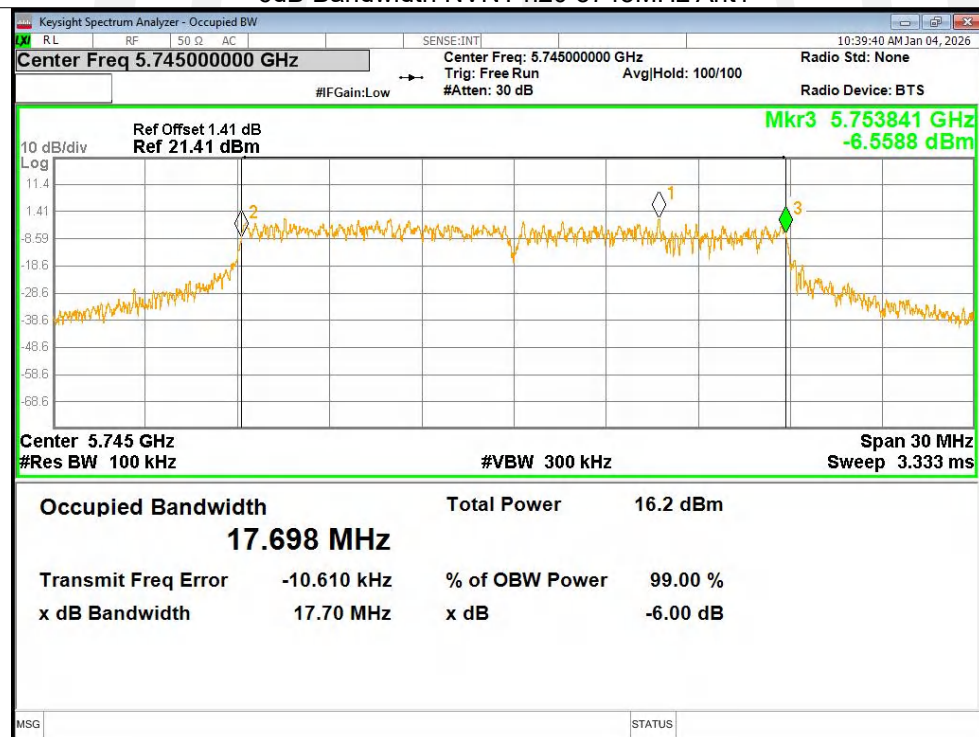
Test Graphs

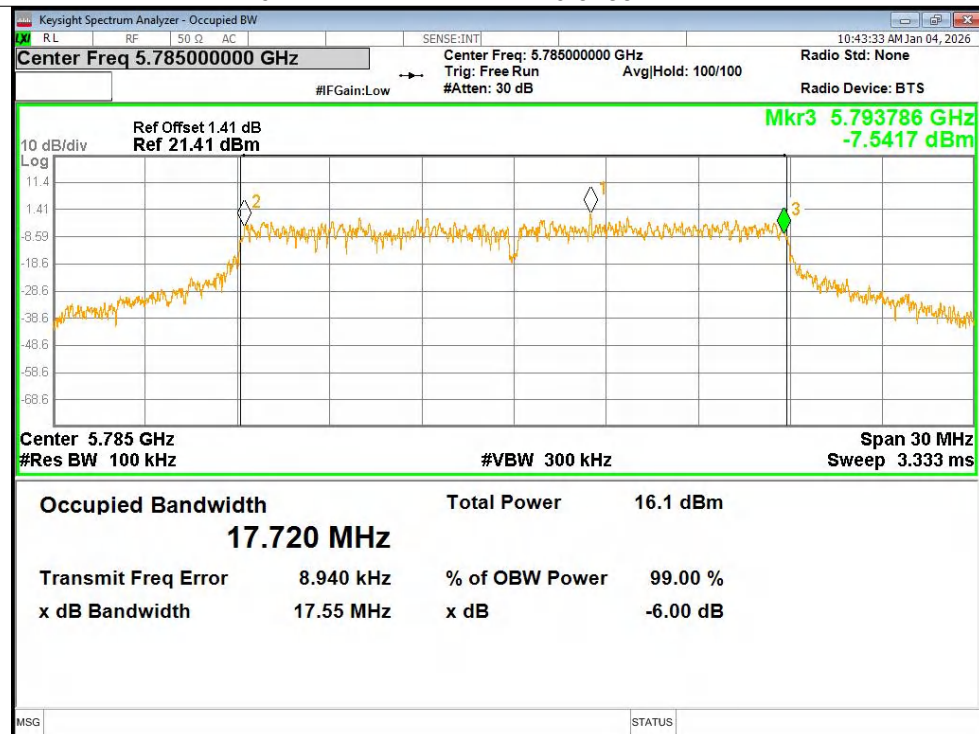
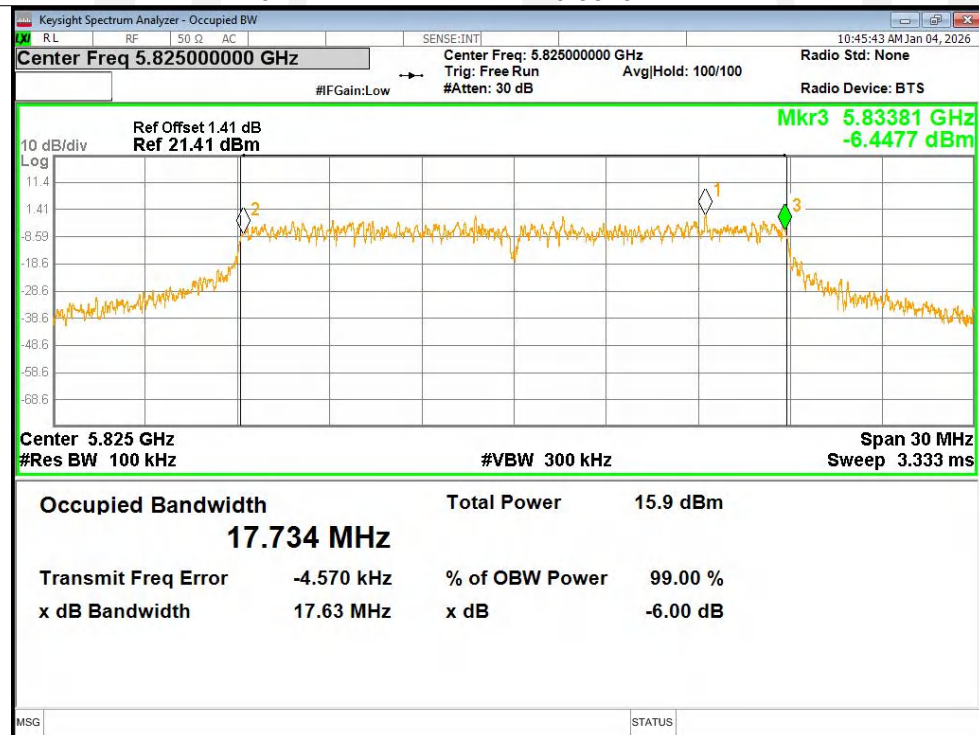
-6dB Bandwidth NVNT a 5745MHz Ant1

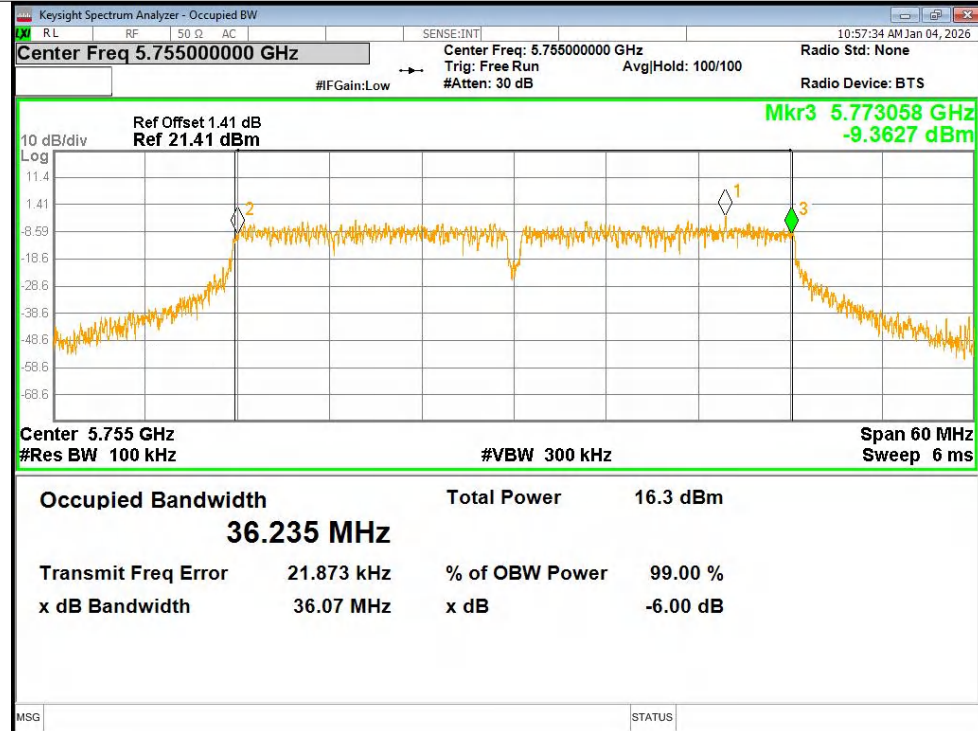
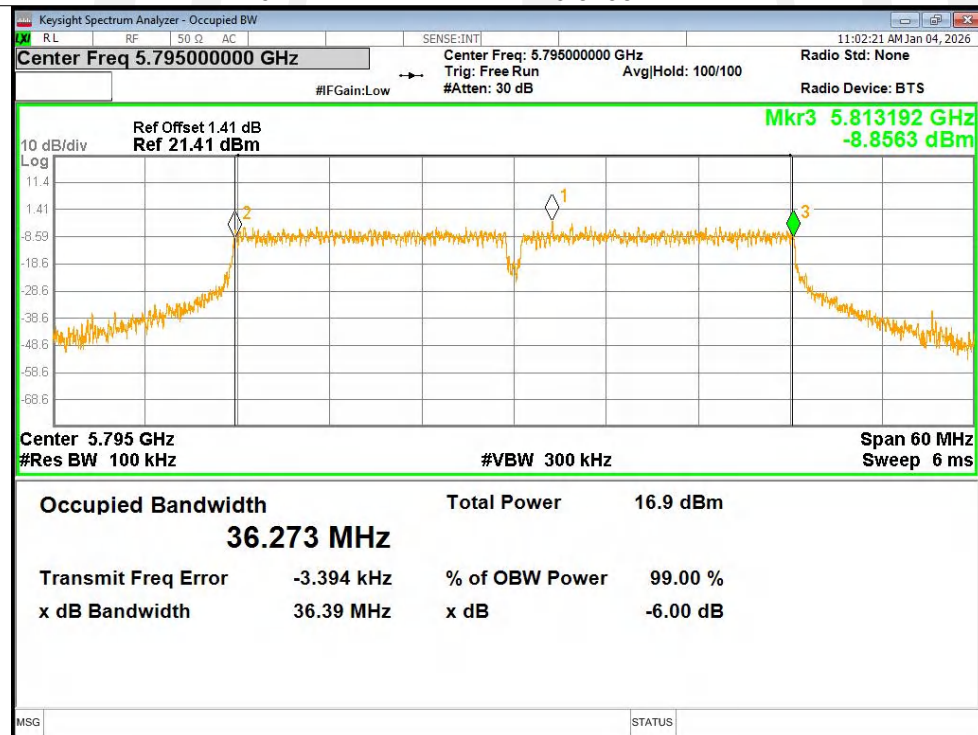


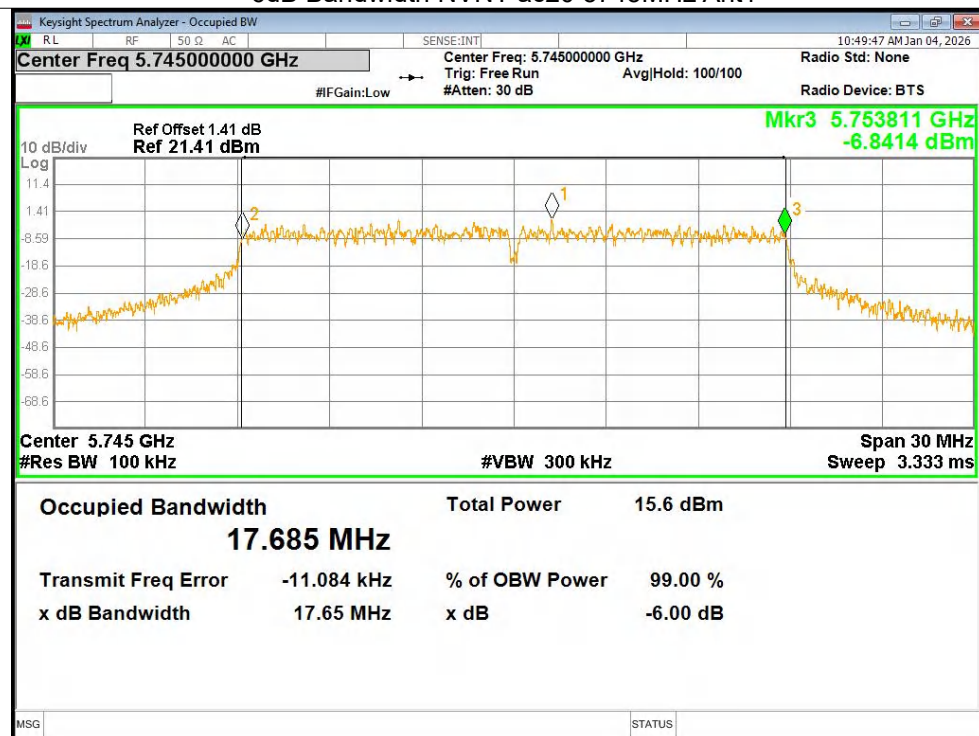
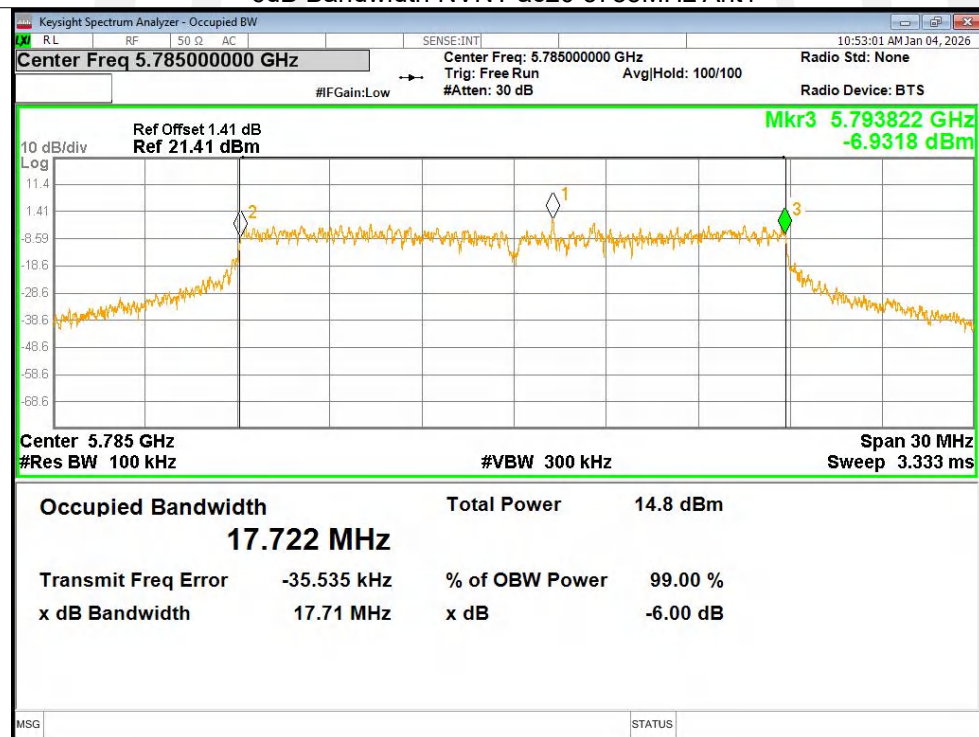
-6dB Bandwidth NVNT a 5785MHz Ant1

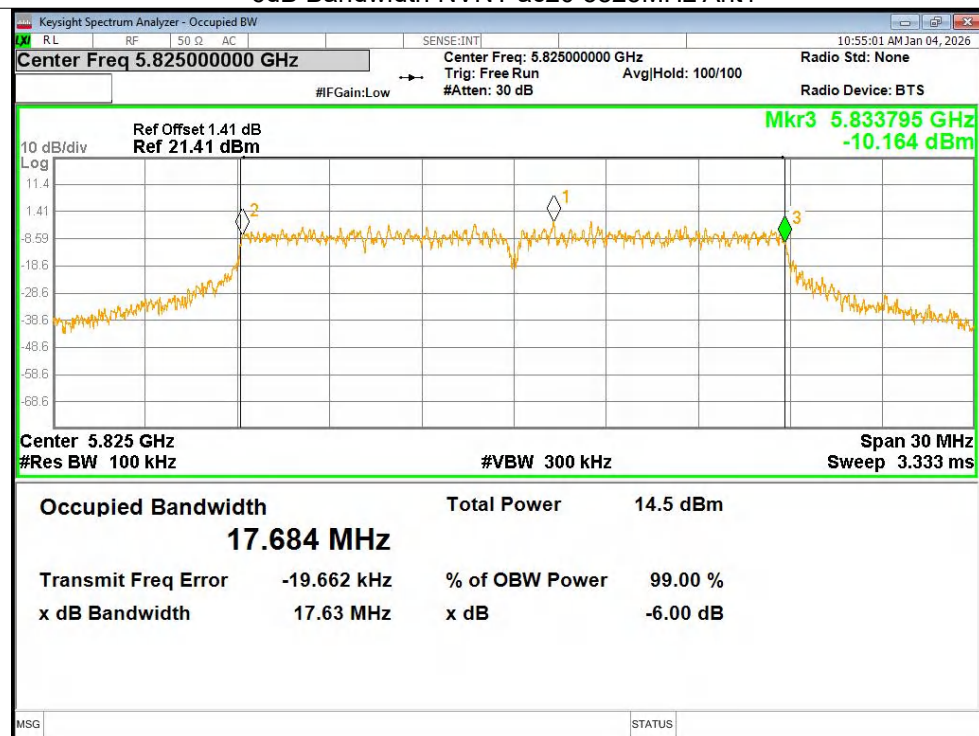
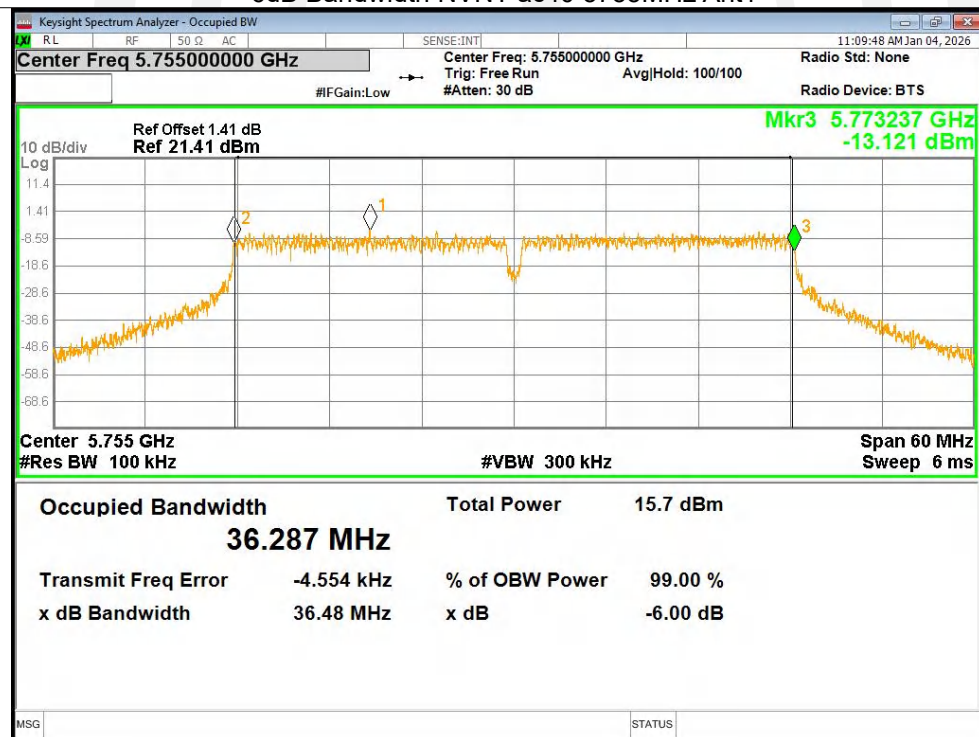


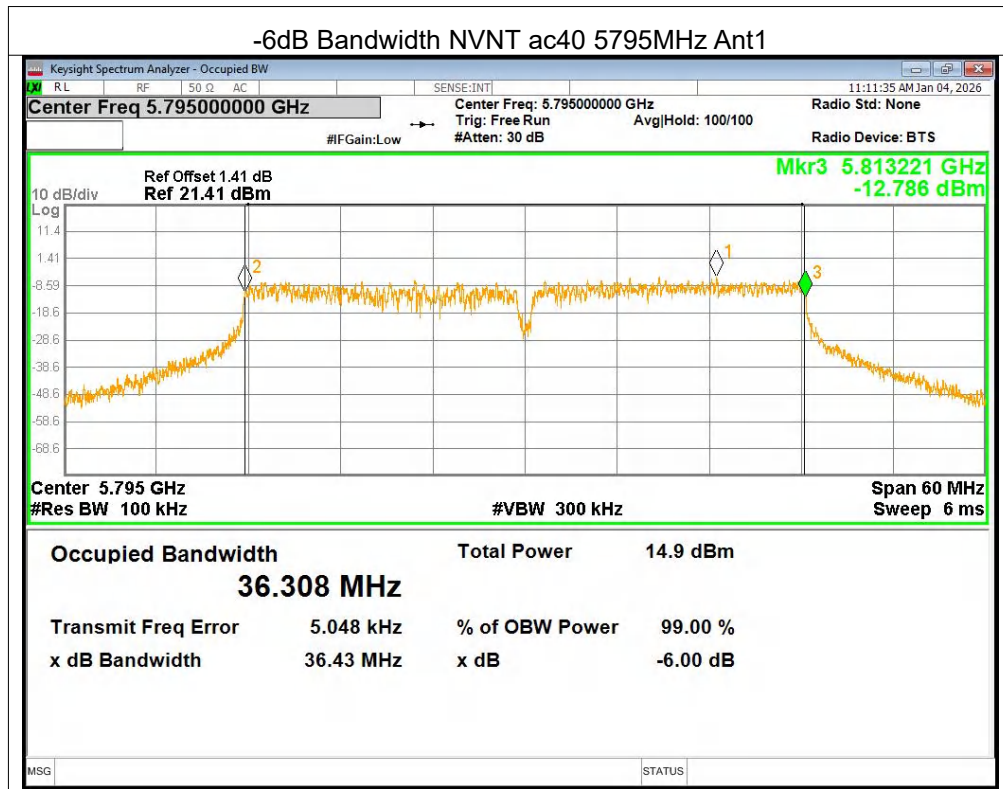
-6dB Bandwidth NVNT a 5825MHz Ant1**-6dB Bandwidth NVNT n20 5745MHz Ant1**

-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**



4.4 Duty Cycle

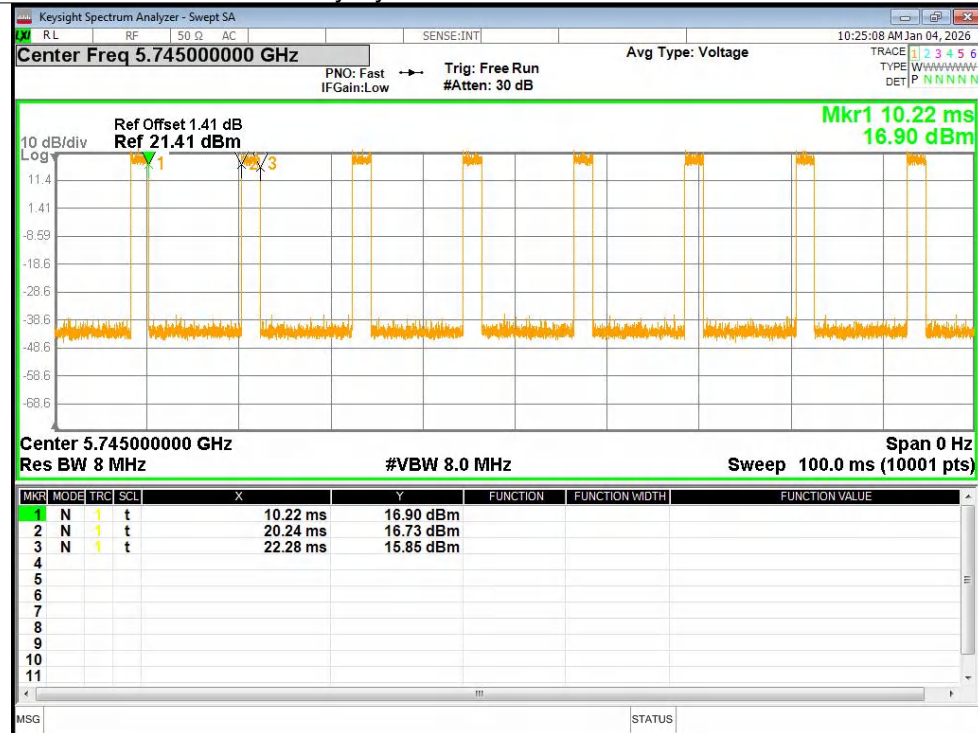
Test Requirement:	All measurements are to be performed with the EUT transmitting at 100% duty cycle at its maximum power control level; however, if 100% duty cycle cannot be achieved, measurements of duty cycle, x, and maximum-power transmission duration, T, are required for each tested mode of operation.
Test Method:	Please refer to ANSI C63.10-2020 Section 12.2
Limit:	No limits
Test setup:	 The diagram illustrates the test setup. On the left is a green Spectrum Analyzer with a screen and two small red dots. A black cable connects it to a yellow rectangular box on the right labeled 'EUT'.
Test procedure:	i) Set the center frequency of the instrument to the center frequency of the transmission. ii) Set RBW $\geq$ EBW if possible; otherwise, set RBW to the largest available value. iii) Set VBW $\geq$ RBW. iv) Set detector = peak. v) The zero-span measurement method shall not be used unless both RBW and VBW are $> 50/T$, where T is defined in item a1) of 12.2, and the number of sweep points across duration T exceeds 100.
Test Instruments:	Refer to section 3.0 for details
Test mode:	Refer to section 2.2 for details
Test results:	Pass

Data:

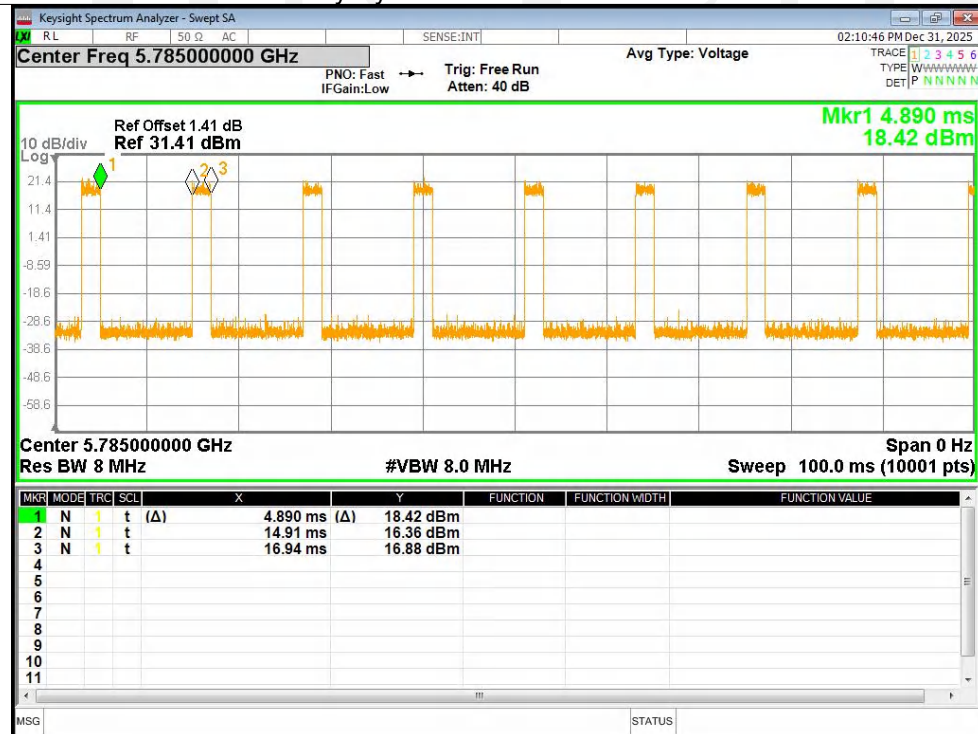
Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
a	5745	Ant1	16.92	7.72	0.49
a	5785	Ant1	16.85	7.73	0.49
a	5825	Ant1	16.93	7.71	0.49
n20	5745	Ant1	9.49	10.23	0.95
n20	5785	Ant1	9.49	10.23	0.95
n20	5825	Ant1	9.49	10.23	0.95
n40	5755	Ant1	17.39	7.6	0.47
n40	5795	Ant1	17.39	7.6	0.47
ac20	5745	Ant1	13.62	8.66	0.63
ac20	5785	Ant1	13.62	8.66	0.63
ac20	5825	Ant1	13.62	8.66	0.63
ac40	5755	Ant1	18.4	7.35	0.44
ac40	5795	Ant1	18.47	7.34	0.44

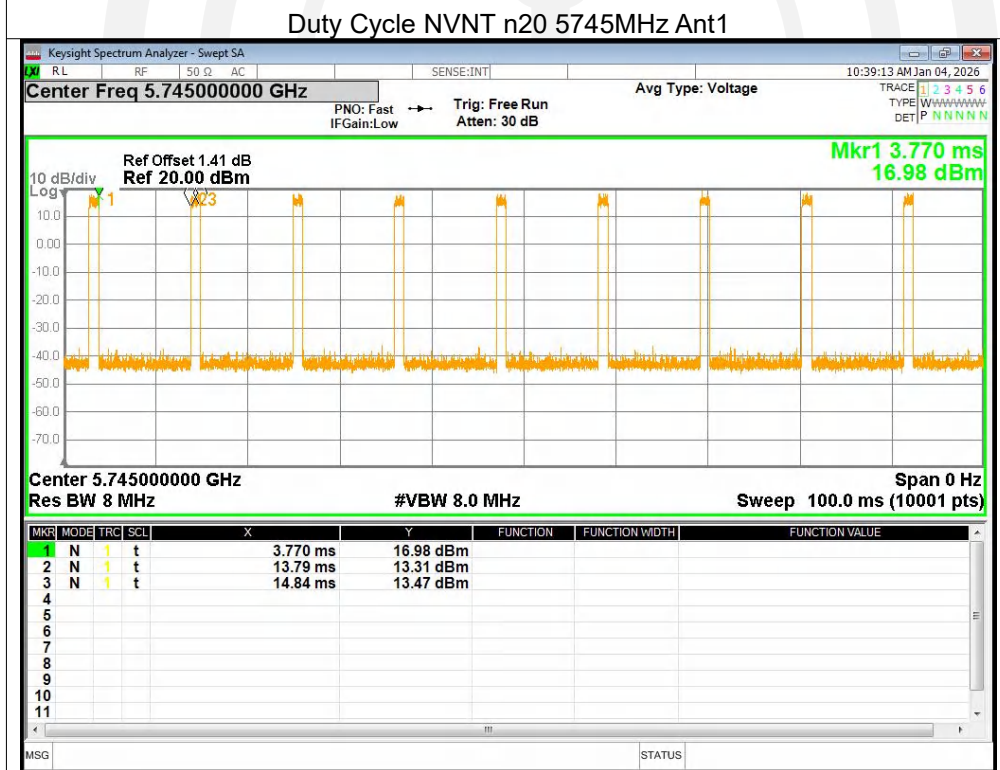
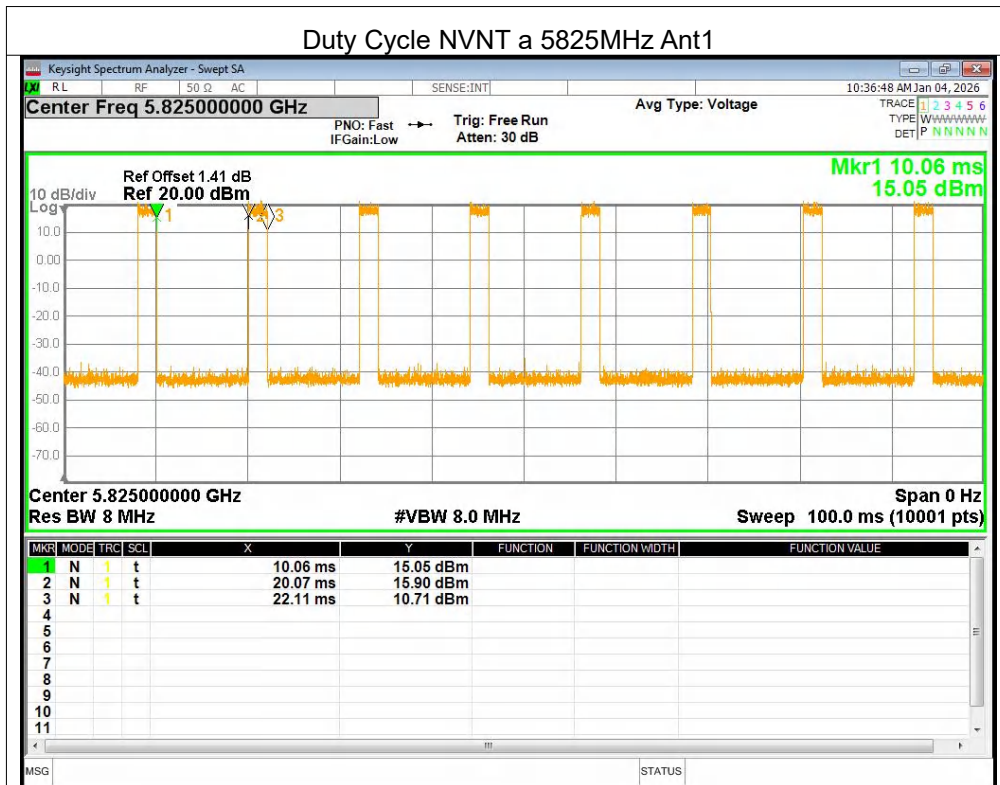
Test Graphs

Duty Cycle NVNT a 5745MHz Ant1

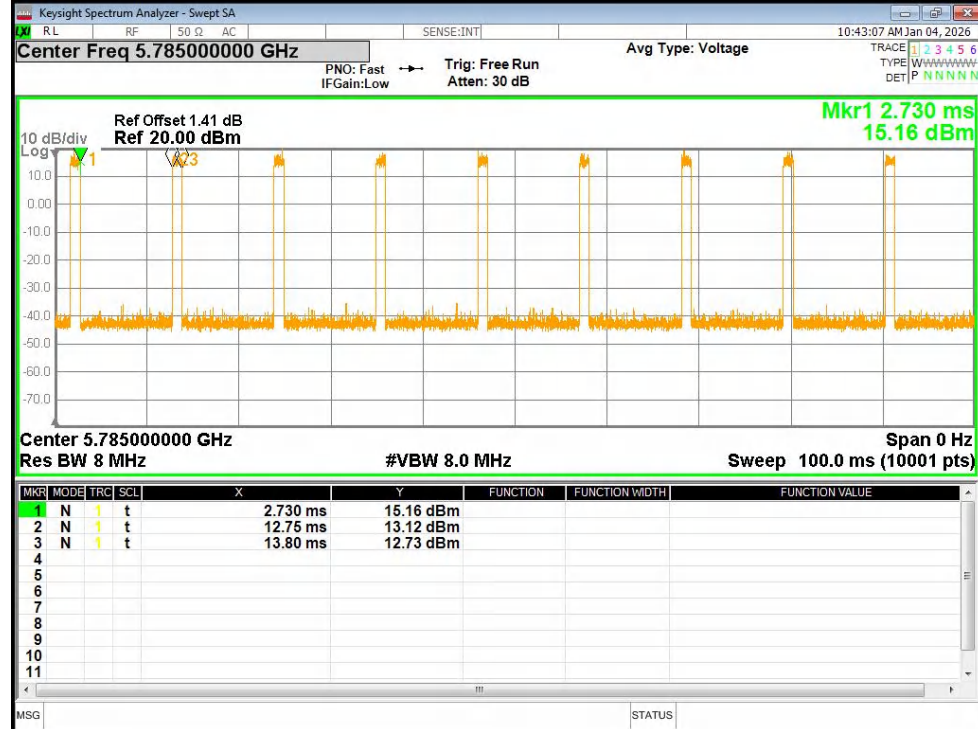


Duty Cycle NVNT a 5785MHz Ant1

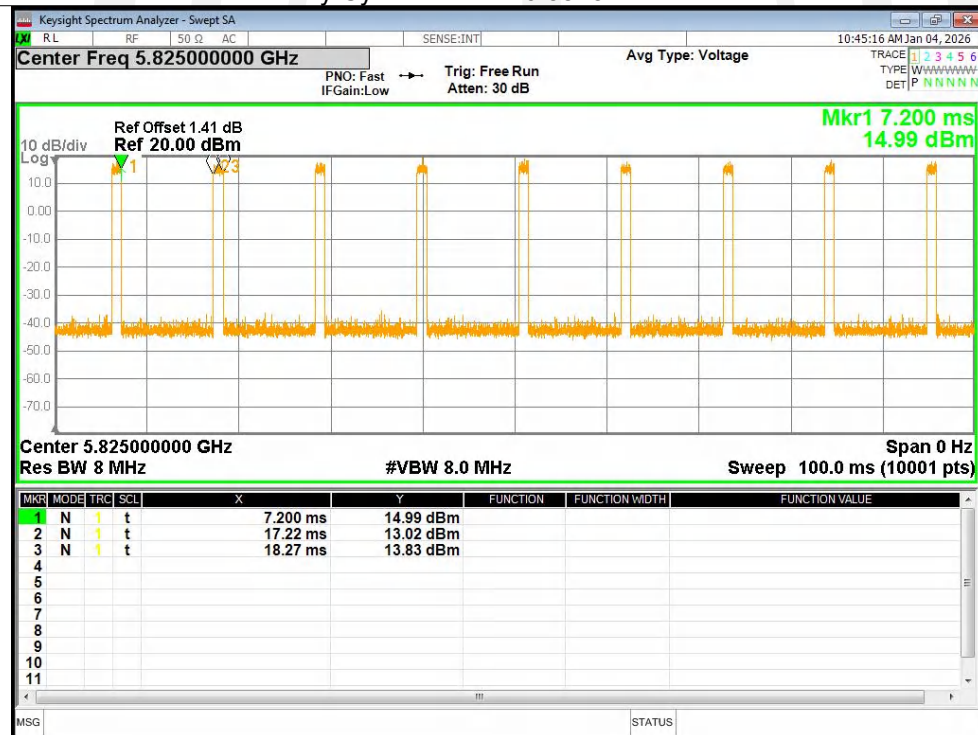




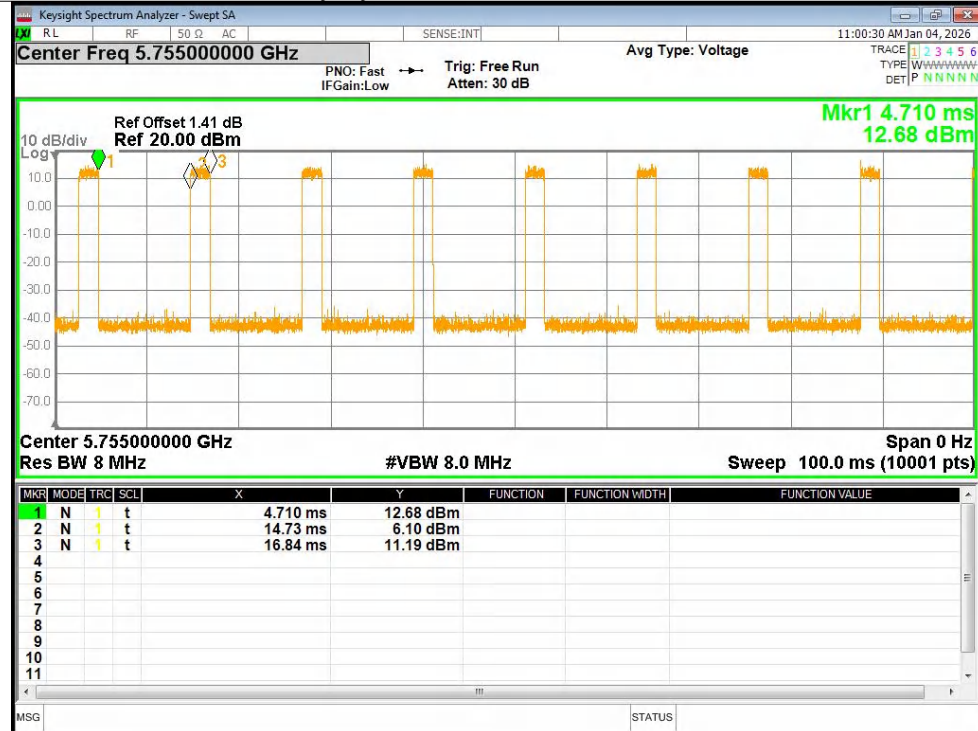
Duty Cycle NVNT n20 5785MHz Ant1



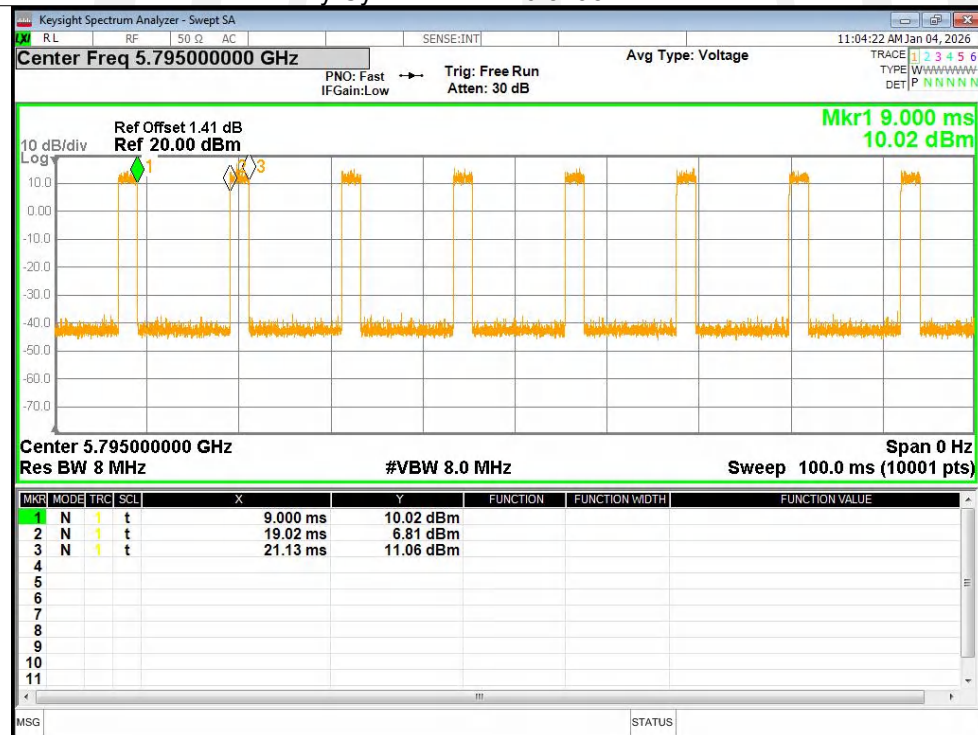
Duty Cycle NVNT n20 5825MHz Ant1



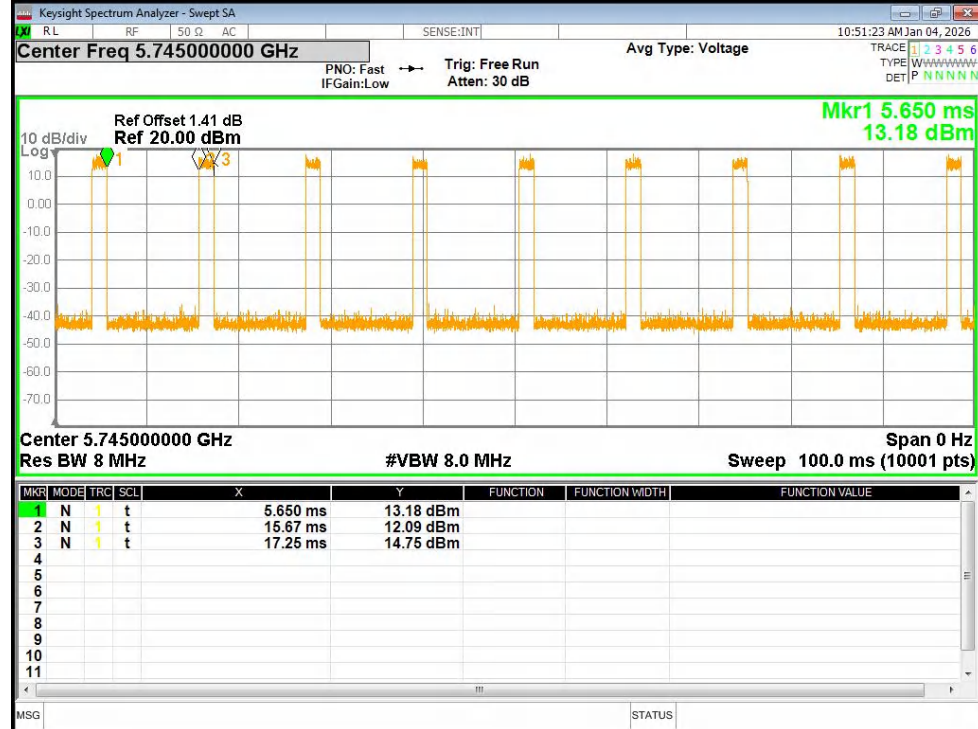
Duty Cycle NVNT n40 5755MHz Ant1



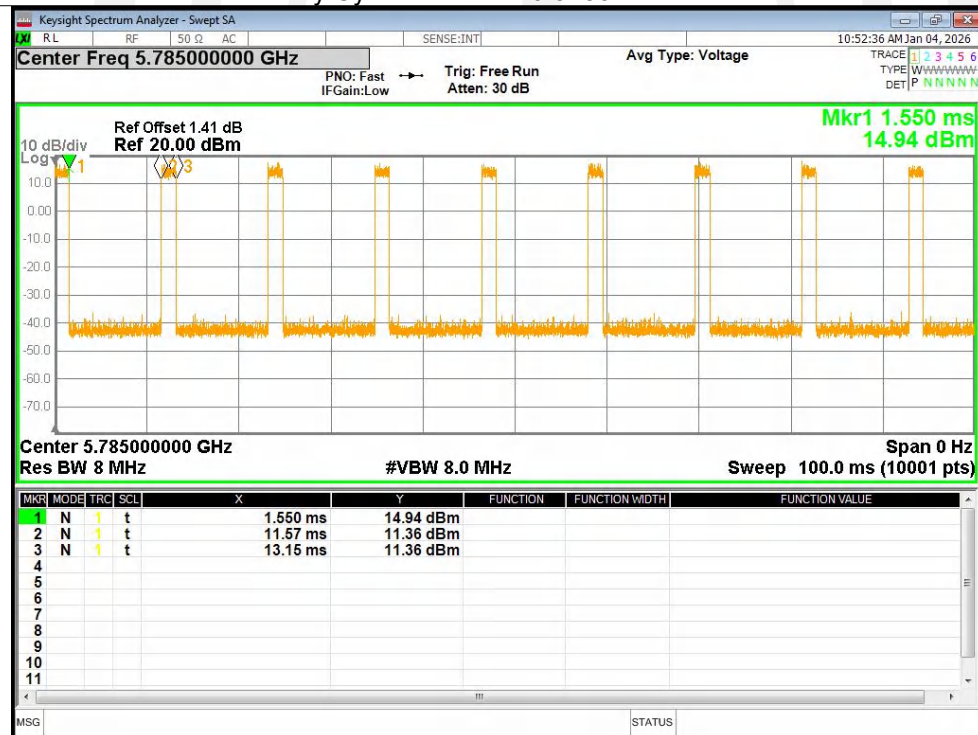
Duty Cycle NVNT n40 5795MHz Ant1



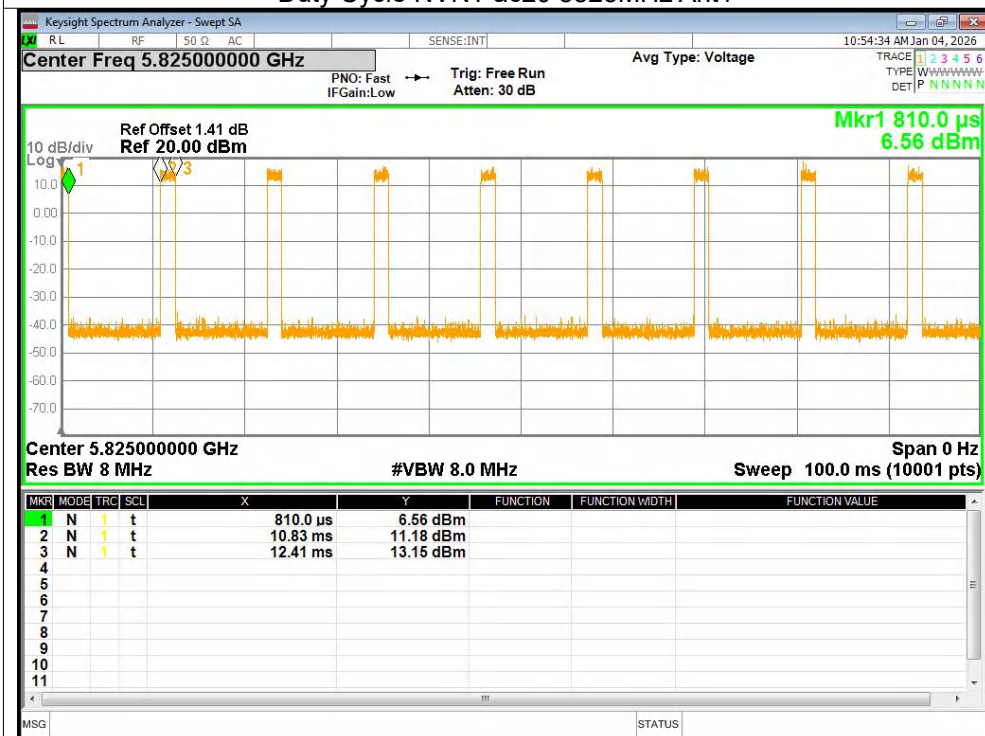
Duty Cycle NVNT ac20 5745MHz Ant1



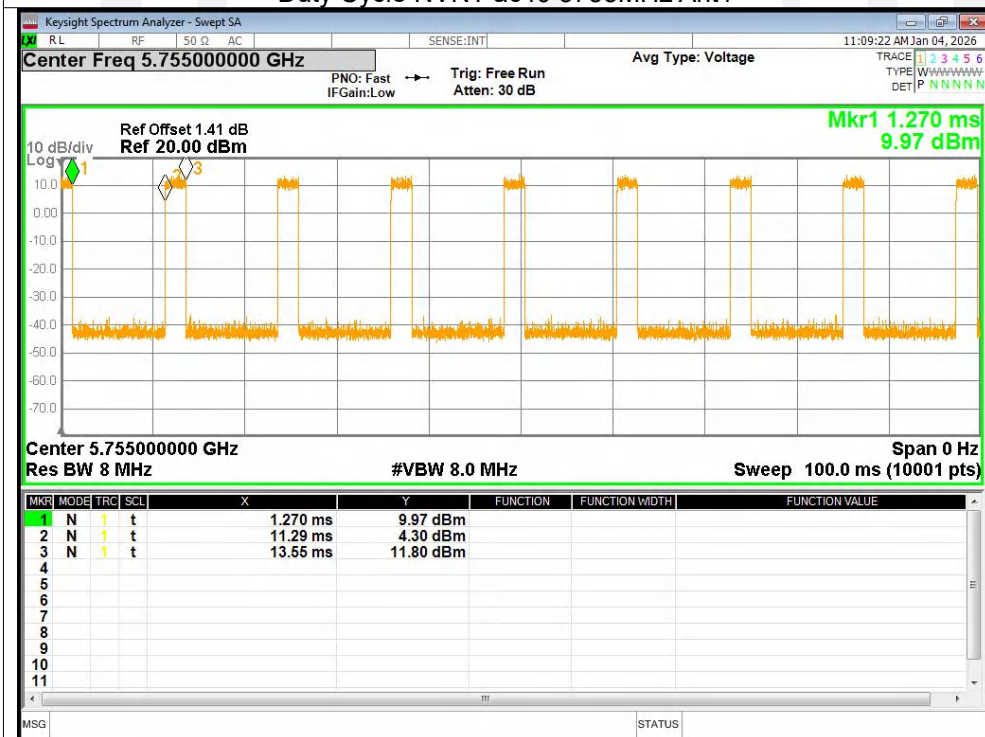
Duty Cycle NVNT ac20 5785MHz Ant1

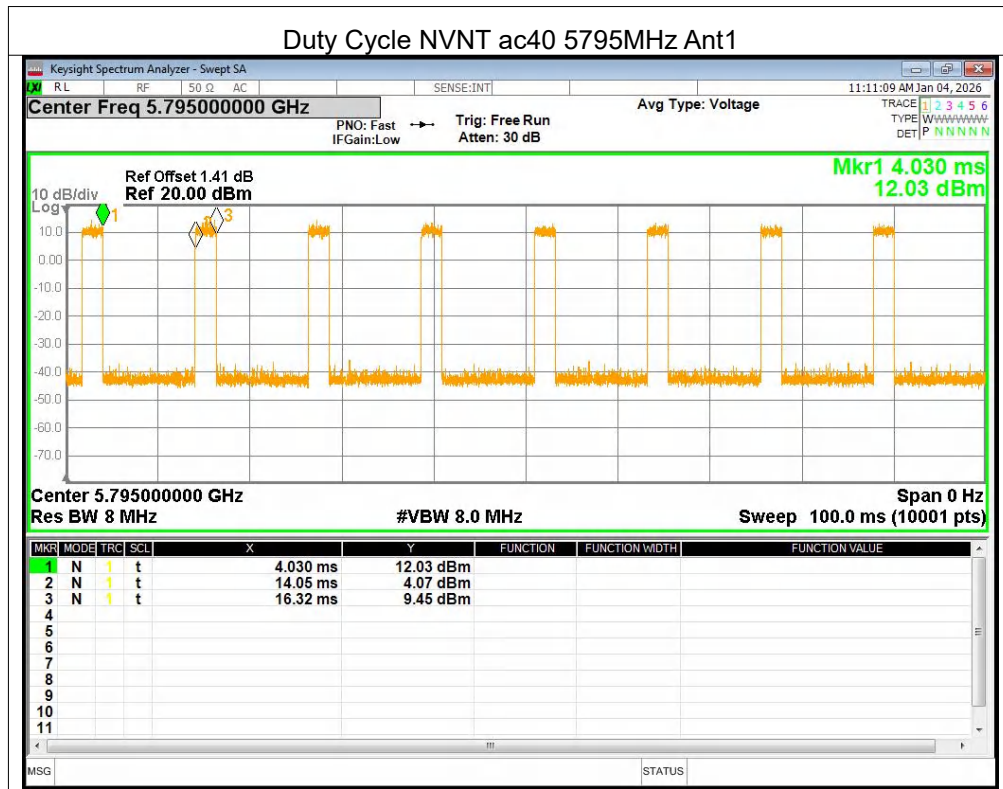


Duty Cycle NVNT ac20 5825MHz Ant1

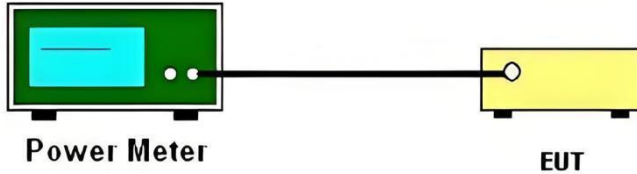


Duty Cycle NVNT ac40 5755MHz Ant1





4.5 Maximum Conducted Output Power

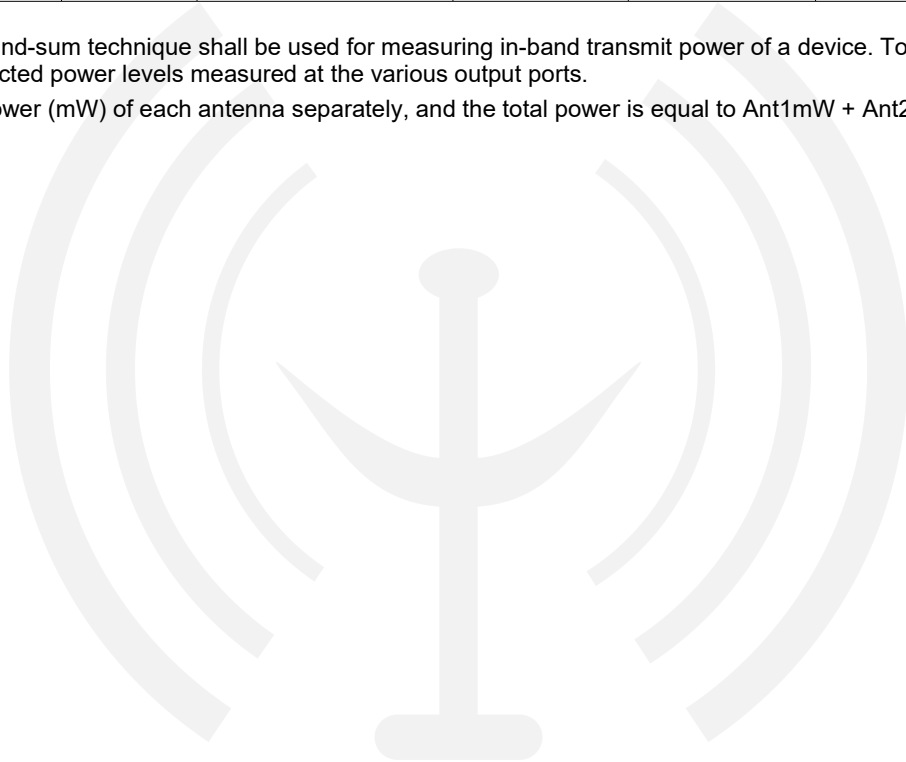
Test Requirement:	FCC Part15 E Section 15.407(a)(1)(iv)-(B1), (a)(3)(i)-(B4)&RSS-247 §7.3
Test Method:	KDB 789033 D02 General UNII Test Procedures New Rules v02r01&ANSI C63.10:2020
Limit:	For the band 5.15-5.25GHz, 5.25-5.35GHz, 5.47-5.725GHz, the maximum conducted output power over the frequency bands of operation shall not exceed 250mW. For the band 5.725-5.85GHz, the maximum conducted output power over the frequency bands of operation shall not exceed 1W. For Straddle Channel, According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, If the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance. If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
Test setup:	 The diagram illustrates the test setup. On the left is a green rectangular box labeled 'Power Meter' with a blue screen and two small white circles. A black line representing a cable connects the Power Meter to a yellow rectangular box on the right labeled 'EUT' (Equipment Under Test).
Test procedure:	Measurement using an RF average power meter (i) Measurements may be performed using a wideband RF power meter with a thermocouple detector or equivalent if all of the conditions listed below are satisfied a) The EUT is configured to transmit continuously or to transmit with a constant duty cycle. b) At all times when the EUT is transmitting, it must be transmitting at its maximum power control level. c) The integration period of the power meter exceeds the repetition period of the transmitted signal by at least a factor of five. (ii) If the transmitter does not transmit continuously, measure the duty cycle, x, of the transmitter output signal as described in section B). (iii) Measure the average power of the transmitter. This measurement is an average over both the on and off periods of the transmitter. (iv) Adjust the measurement in dBm by adding $10 \log(1/x)$ where x is the duty cycle (e.g., $10 \log(1/0.25)$ if the duty cycle is 25 percent).
Test Instruments:	Refer to section 3.0 for details
Test mode:	Refer to section 2.2 for details
Test results:	Pass

Measurement Data

Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
a	5745	Ant1	8.75	7.72	16.47	30	Pass
a	5785	Ant1	8.61	7.73	16.34	30	Pass
a	5825	Ant1	7.9	7.71	15.61	30	Pass
n20	5745	Ant1	7.95	10.23	18.18	30	Pass
n20	5785	Ant1	7.78	10.23	18.01	30	Pass
n20	5825	Ant1	7.6	10.23	17.83	30	Pass
n40	5755	Ant1	6.33	7.6	13.93	30	Pass
n40	5795	Ant1	5.22	7.6	12.82	30	Pass
ac20	5745	Ant1	6.38	8.66	15.04	30	Pass
ac20	5785	Ant1	6.02	8.66	14.68	30	Pass
ac20	5825	Ant1	5.46	8.66	14.12	30	Pass
ac40	5755	Ant1	3.46	7.35	10.81	30	Pass
ac40	5795	Ant1	4.59	7.34	11.93	30	Pass

Note: The measure-and-sum technique shall be used for measuring in-band transmit power of a device. Total power is the sum of the conducted power levels measured at the various output ports.

(First measure the power (mW) of each antenna separately, and the total power is equal to Ant1mW + Ant2mW+....)



4.6 Power Spectral Density

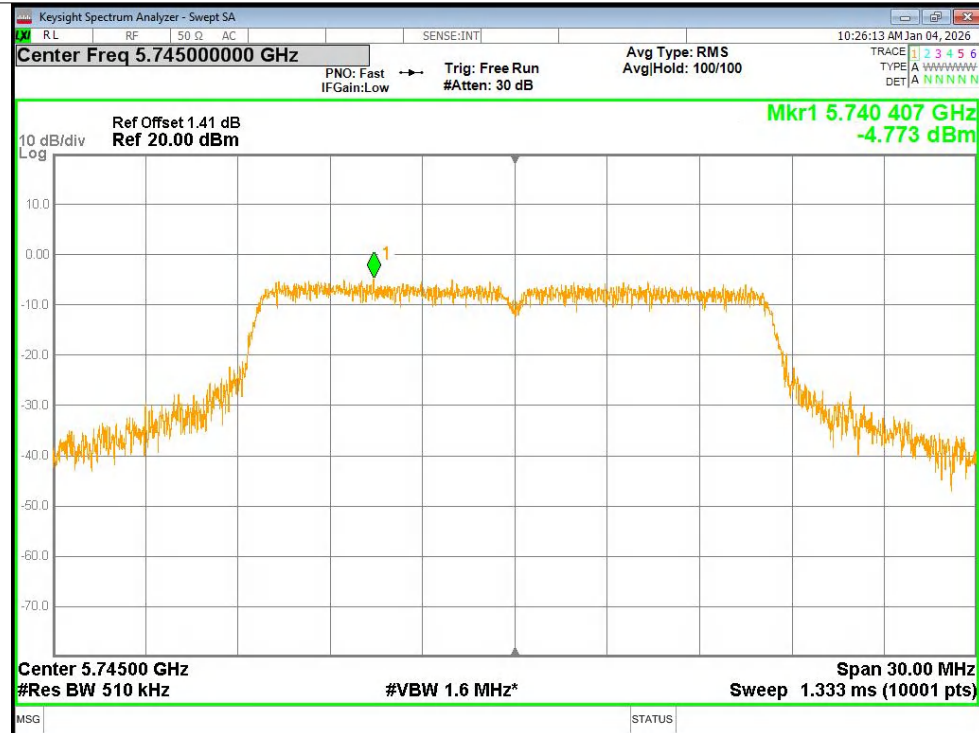
Test Requirement:	FCC Part15 E Section 15.407(a)(1)(iv)-(B1), (a)(3)(i)-(B4)
Test Method:	KDB 789033 D02 General UNII Test Procedures New Rules v02r01
Limit:	FCC: $1 \leq 11.00 \text{ dBm/MHz}$ for 5150MHz-5250MHz, 5250-5350MHz and 5470-5725 MHz $2 \leq 30.00 \text{ dBm/500KHz}$ for 5725MHz-5850MHz
Test setup:	 Spectrum Analyzer EUT
Test procedure:	For devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in § 15.407(a)(5). For devices operating in the band 5.725-5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, “provided that the measured power is integrated over the full reference bandwidth” to show the total power over the specified measurement bandwidth (i.e., 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or <500 kHz) and integrated over 1 MHz, or 500 KHz bandwidth, the following adjustments to the procedures apply: a) Set $\text{RBW} \geq 1/T$, where T is defined in section II.B.I.a). b) Set $\text{VBW} \geq 3 \text{ RBW}$. c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add $10\log(500\text{kHz}/\text{RBW})$ to the measured result, whereas RBW (< 500 KHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement. d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add $10\log(1\text{MHz}/\text{RBW})$ to the measured result, whereas RBW (< 1 MHz) is the reduced resolution bandwidth of spectrum analyzer set during measurement. e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle. Note: As a practical matter, it is recommended to use reduced RBW of 100 KHz for the sections 5.c) and 5.d) above, since RBW=100 KHz is available on nearly all spectrum analyzers.
Test Instruments:	Refer to section 3.0 for details
Test mode:	Refer to section 2.2 for details
Test results:	Pass

Measurement Data

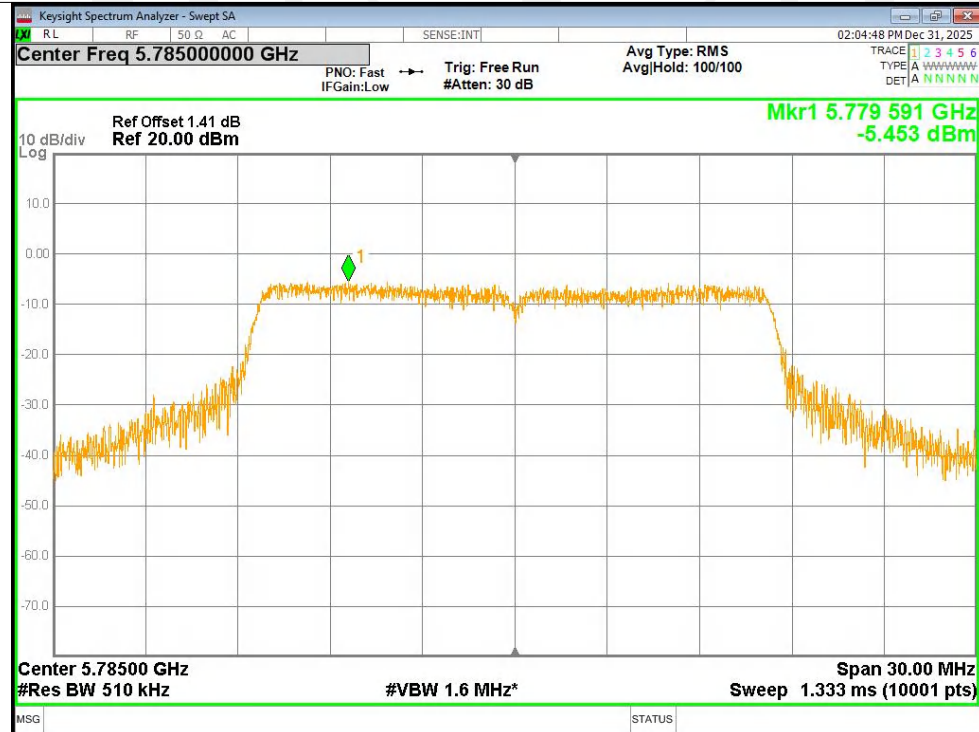
Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm)	Duty Factor (dB)	Total PSD (dBm)	Limit (dBm)	Verdict
a	5745	Ant1	-4.77	7.72	2.95	30	Pass
a	5785	Ant1	-5.45	7.73	2.28	30	Pass
a	5825	Ant1	-7.06	7.71	0.65	30	Pass
n20	5745	Ant1	-10.16	10.23	0.07	30	Pass
n20	5785	Ant1	-9.41	10.23	0.82	30	Pass
n20	5825	Ant1	-9.73	10.23	0.5	30	Pass
n40	5755	Ant1	-11.6	10.71	-0.89	30	Pass
n40	5795	Ant1	-11.15	7.58	-3.57	30	Pass
ac20	5745	Ant1	-10.79	8.63	-2.16	30	Pass
ac20	5785	Ant1	-10.72	8.66	-2.06	30	Pass
ac20	5825	Ant1	-12.24	8.66	-3.58	30	Pass
ac40	5755	Ant1	-11.94	7.35	-4.59	30	Pass
ac40	5795	Ant1	-12.74	7.34	-5.4	30	Pass

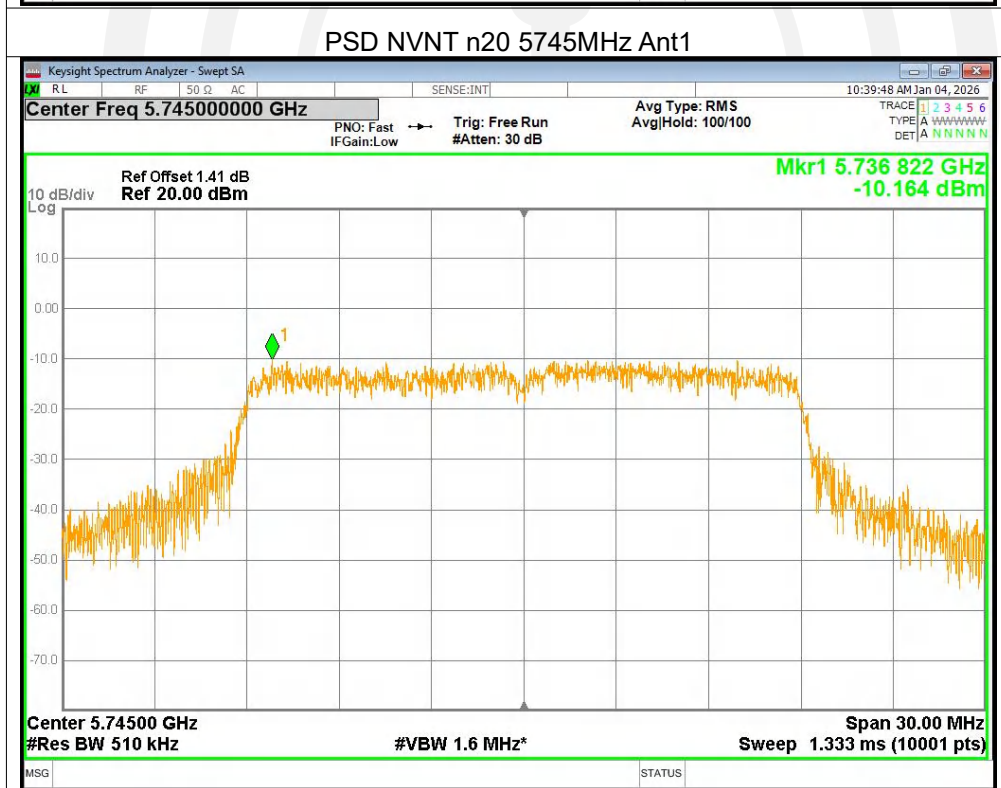
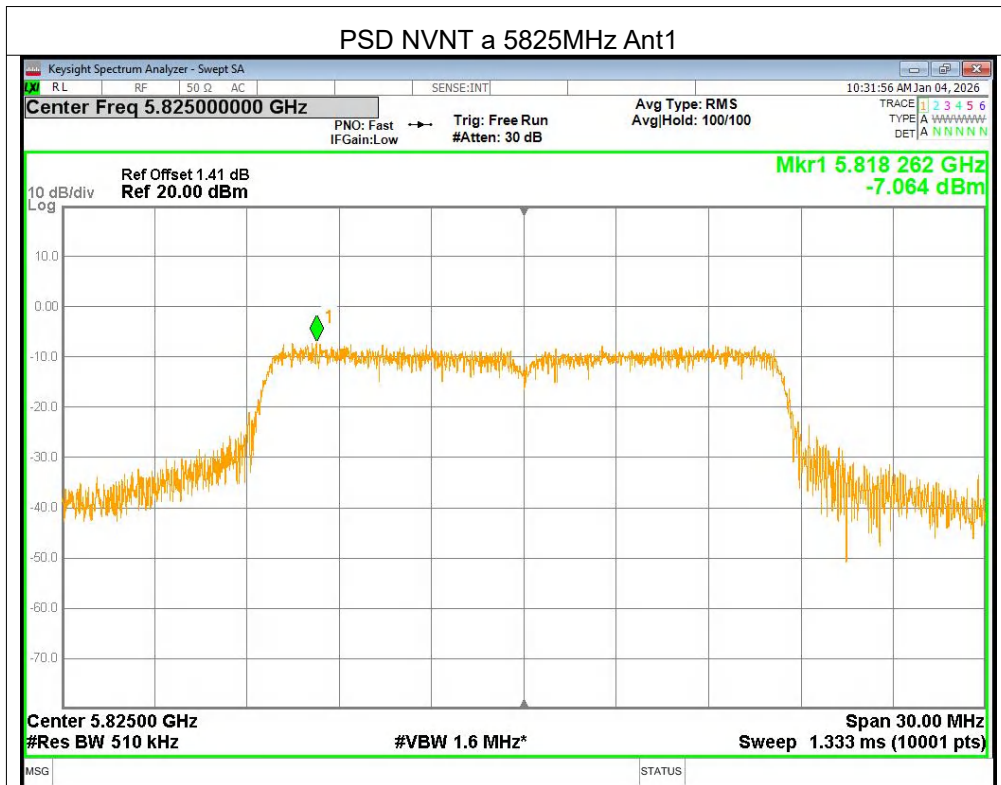
Test Graphs

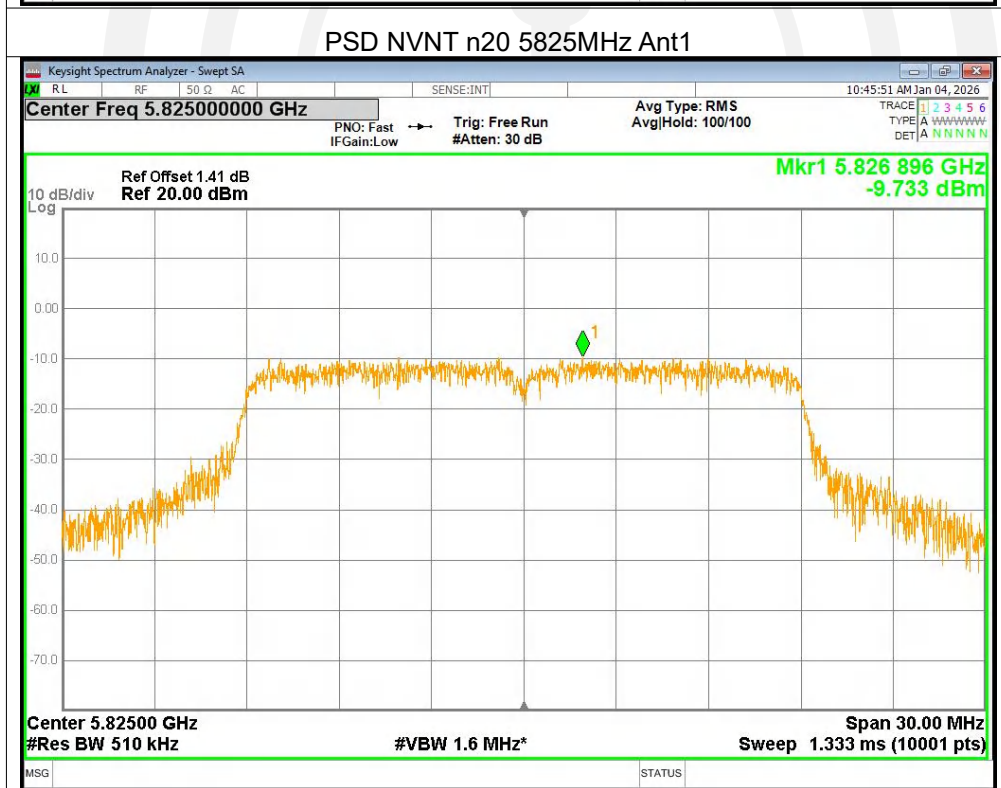
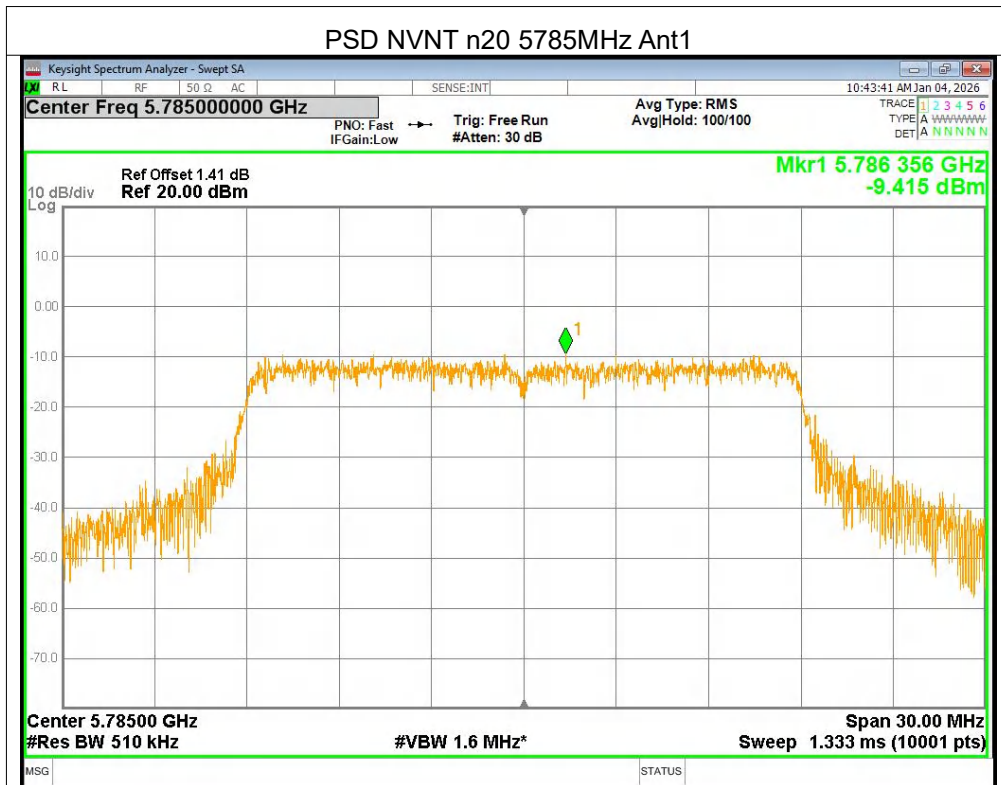
PSD NVNT a 5745MHz Ant1

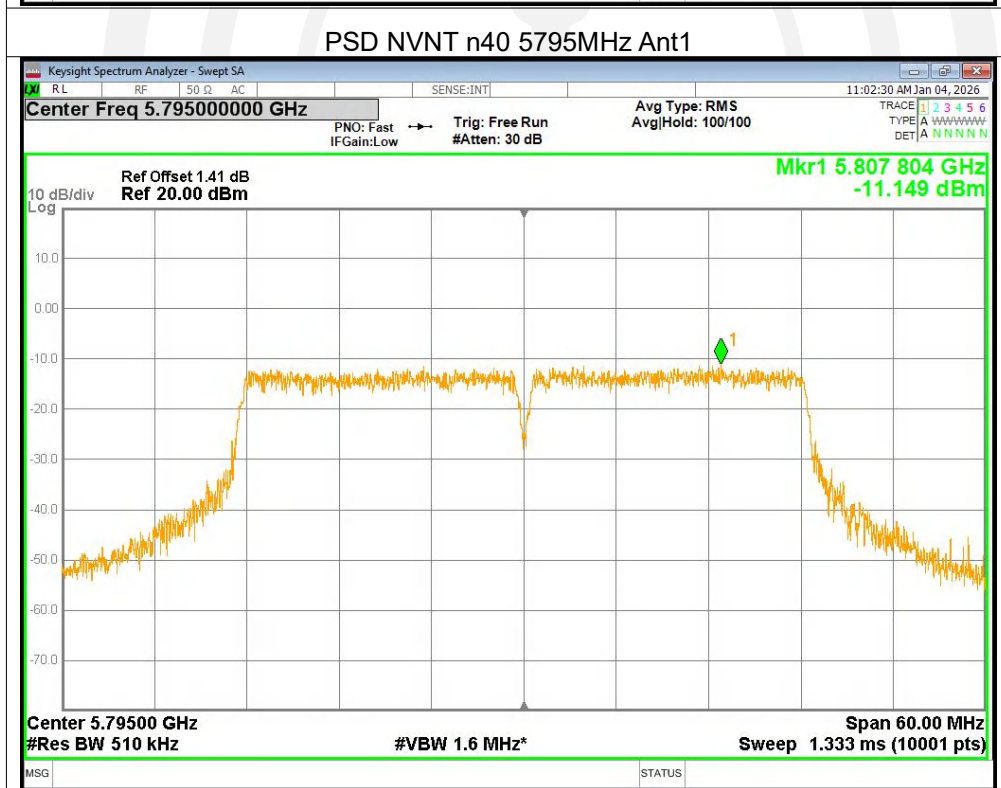
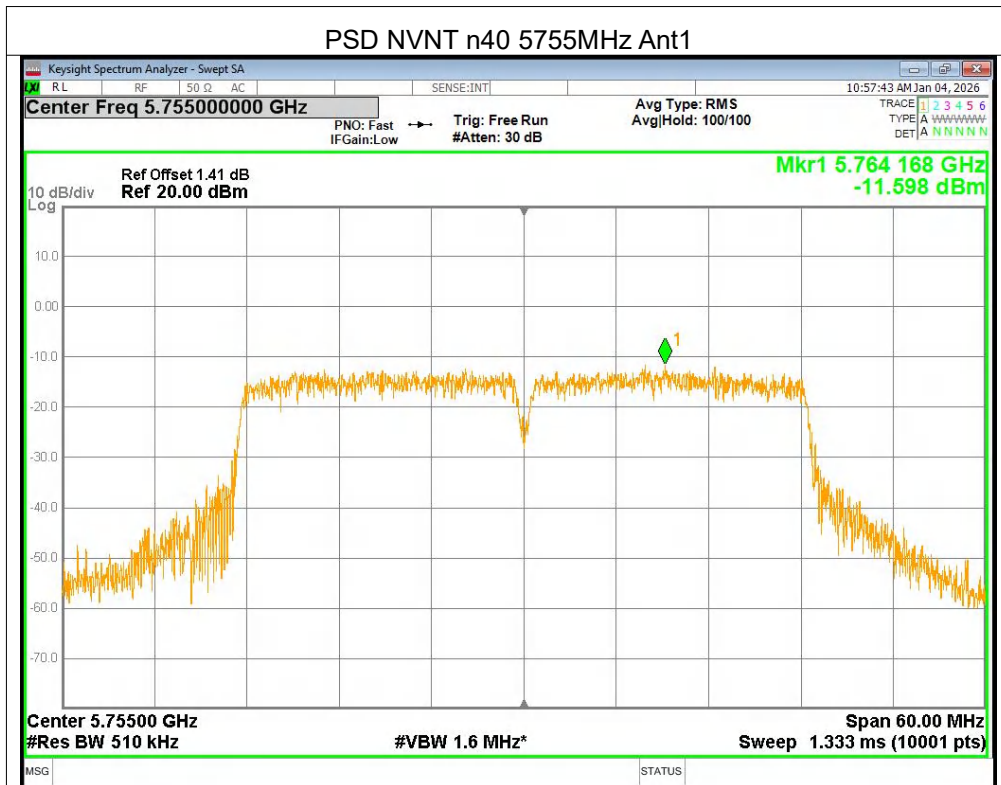


PSD NVNT a 5785MHz Ant1

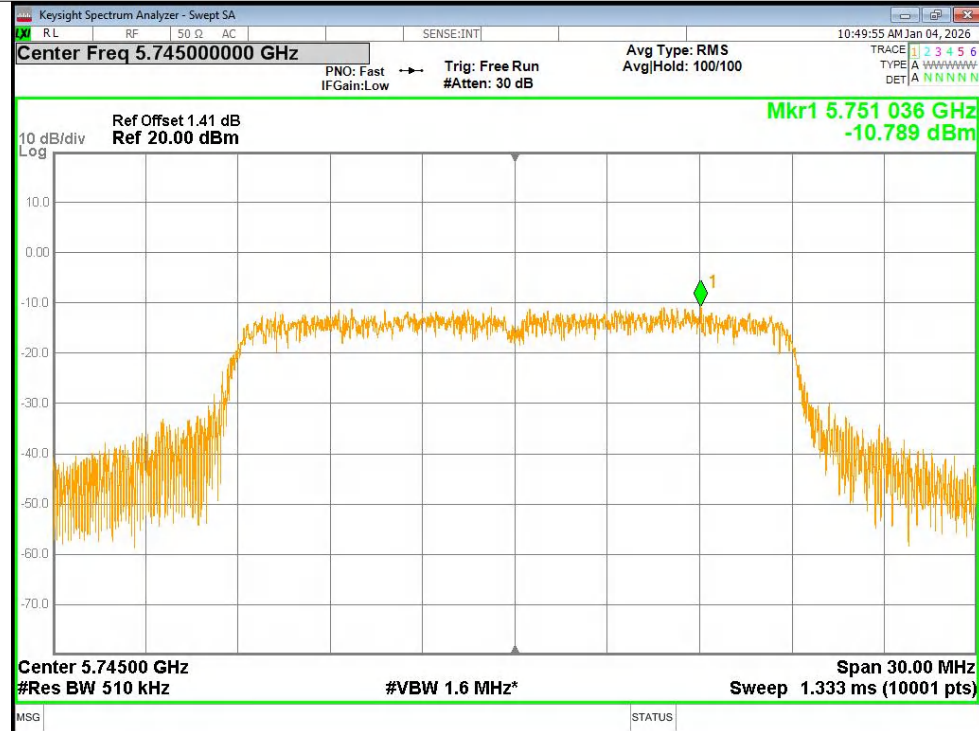




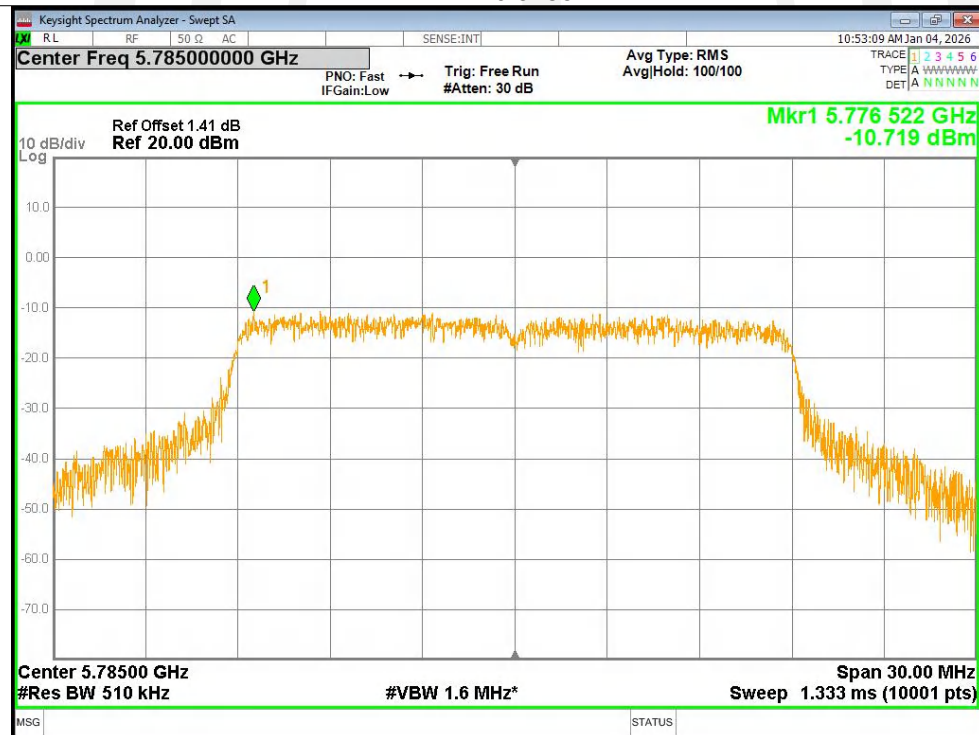




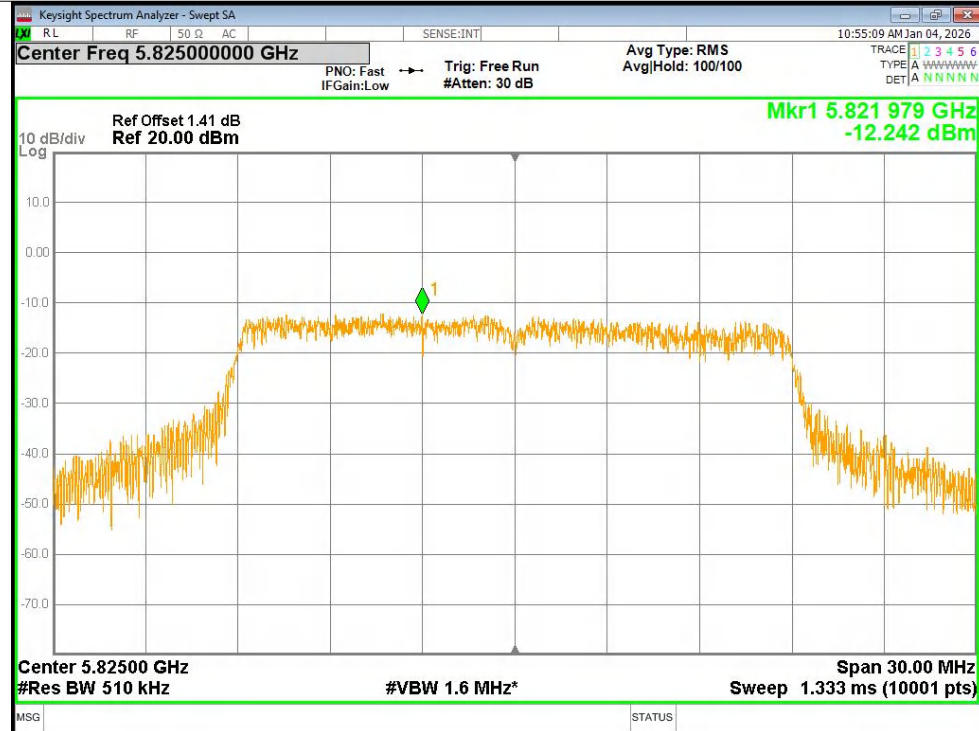
PSD NVNT ac20 5745MHz Ant1



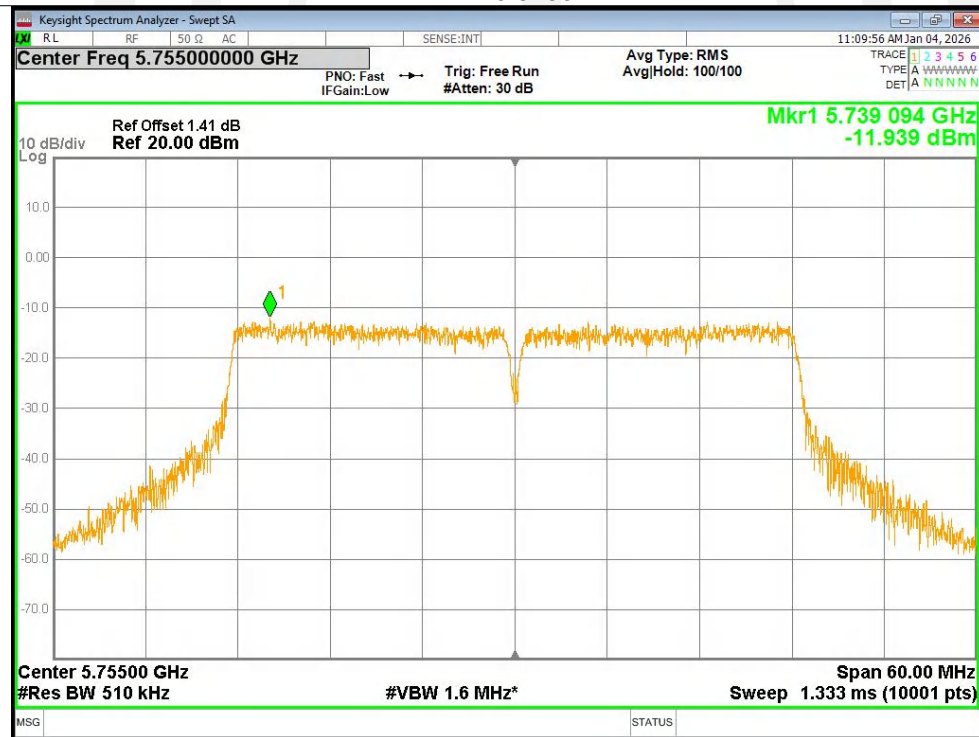
PSD NVNT ac20 5785MHz Ant1



PSD NVNT ac20 5825MHz Ant1

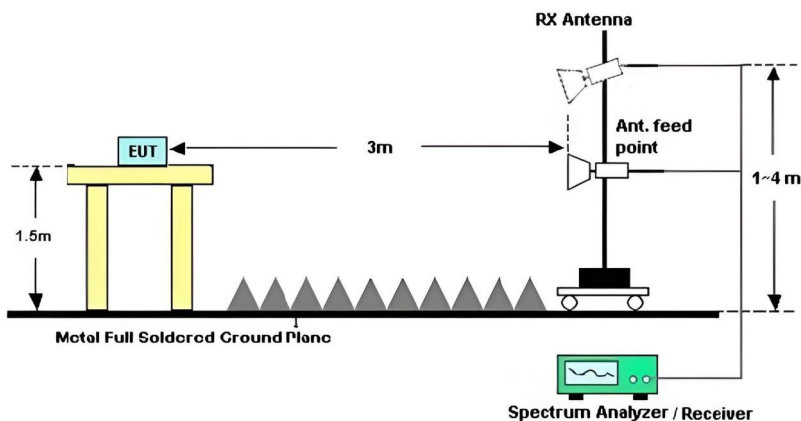


PSD NVNT ac40 5755MHz Ant1



4.7 Band Edge

Test Requirement:	FCC Part15 E Section 15.407 and 15.205, 15.209																								
Test Method:	ANSI C63.10-2020																								
Test site:	Measurement Distance: 3m (Semi-Anechoic Chamber)																								
Receiver setup:	<table><tr><td>Frequency</td><td>Detector</td><td>RBW</td><td>VBW</td><td>Remark</td></tr><tr><td>30MHz-1GHz</td><td>Quasi-peak</td><td>100KHz</td><td>300KHz</td><td>Quasi-peak Value</td></tr><tr><td rowspan="2">Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak Value</td></tr><tr><td>AV</td><td>1MHz</td><td>3MHz</td><td>Average Value</td></tr></table>					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	
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:	<table><tr><td>Frequency</td><td>Limit (dBuV/m @3m)</td><td>Remark</td></tr><tr><td>30MHz-88MHz</td><td>40.0</td><td>Quasi-peak Value</td></tr><tr><td>88MHz-216MHz</td><td>43.5</td><td>Quasi-peak Value</td></tr><tr><td>216MHz-960MHz</td><td>46.0</td><td>Quasi-peak Value</td></tr><tr><td>960MHz-1GHz</td><td>54.0</td><td>Quasi-peak Value</td></tr><tr><td rowspan="2">Above 1GHz</td><td>54.0</td><td>Average Value</td></tr><tr><td>68.2</td><td>Peak Value</td></tr></table> Undesirable emission limits: (1) For transmitters operating in the 5.15-5.25 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz. (2) For transmitters operating in the 5.25-5.35 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz. Devices operating in the 5.25-5.35 GHz band that generate emissions in the 5.15-5.25 GHz band must meet all applicable technical requirements for operation in the 5.15-5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5.15-5.25 GHz band. (3) For transmitters operating in the 5.47-5.725 GHz band: all emissions outside of the 5.47-5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz. (4) For transmitters operating in the 5.725-5.85 GHz band: 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.					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
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																							
Test Procedure:	a. The EUT was placed on the top of a rotating table 1.5 m above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values																								

	of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
Test setup:	Above 1GHz 
Test Instruments:	Refer to section 3.0 for details
Test mode:	Refer to section 2.2 for details
Test results:	Pass

Remark:

According to KDB 789033 D02 v02r01 section G) 1) (d), for For measurements above 1000 MHz @ 3m distance, the limit of field strength is computed as follows:

$$E[\text{dBuV/m}] = \text{EIRP}[\text{dBm}] + 95.2,$$

For example, if EIRP = -27dBm

$$E[\text{dBuV/m}] = -27 + 95.2 = 68.2\text{dBuV/m}.$$

Measurement Data:

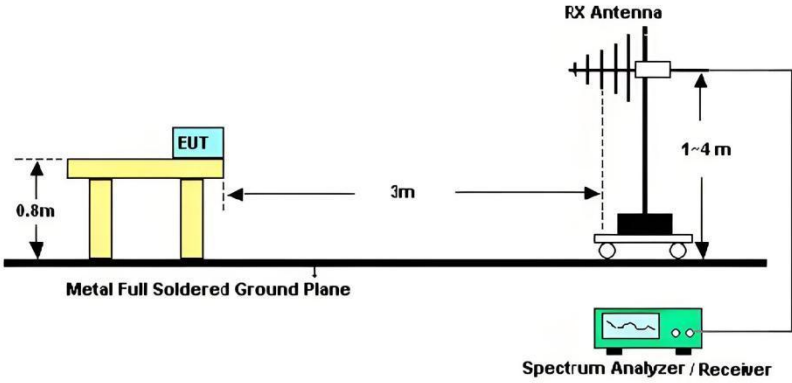
Mode:		802.11a		Frequency:		5700MHz	
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
H	5725.00	58.6	-11.6	47	68.2	-21.2	PK
V	5725.00	55.15	-11.6	43.55	68.2	-24.65	PK
Mode:		802.11a		Frequency:		5700MHz	
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
H	5725.00	43.74	-11.6	32.14	54	-21.86	AV
V	5725.00	43.63	-11.6	32.03	54	-21.97	AV
Mode:		802.11n(HT20)		Frequency:		5700MHz	
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
H	5725.00	55.84	-11.6	44.24	68.2	-23.96	PK
V	5725.00	56.12	-11.6	44.52	68.2	-23.68	PK
Mode:		802.11n(HT20)		Frequency:		5700MHz	
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
H	5725.00	44.24	-11.6	32.64	54	-21.36	AV
V	5725.00	43.03	-11.6	31.43	54	-22.57	AV
Mode:		802.11ac(HT20)		Frequency:		5700MHz	
Antenna Pol.	Frequency (MHz)	Reading Level	Factor	Measure Level	Limit (dBuV/m)	Over limit(dB)	Detector
		(dBuV)	(dB/m)	(dBuV/m)			
H	5725.00	55.85	-11.6	44.25	68.2	-23.95	PK
V	5725.00	55.98	-11.6	44.38	68.2	-23.82	PK
Mode:		802.11ac(HT20)		Frequency:		5700MHz	
Antenna Pol.	Frequency (MHz)	Reading Level	Factor	Measure Level	Limit (dBuV/m)	Over limit(dB)	Detector
		(dBuV)	(dB/m)	(dBuV/m)			
H	5725.00	44.07	-11.6	32.47	54	-21.53	AV
V	5725.00	41.81	-11.6	30.21	54	-23.79	AV

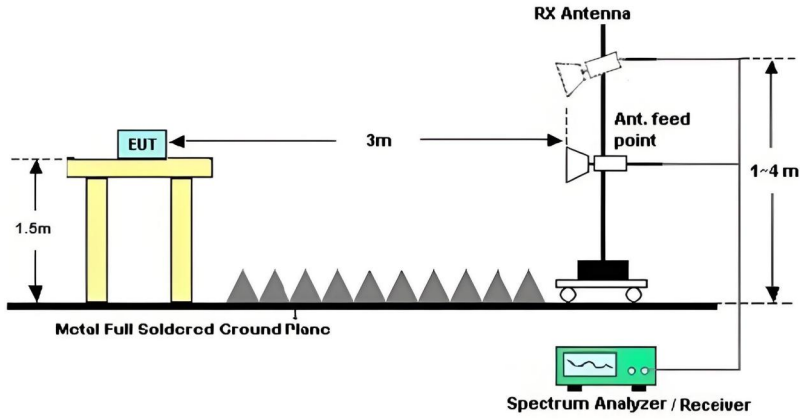
Mode: 802.11n(HT40) Frequency: 5670MHz							
Antenna Pol.	Frequency (MHz)	Reading Level	Factor	Measure Level	Limit (dBuV/m)	Over limit(dB)	Detector
		(dBuV)	(dB/m)	(dBuV/m)			
H	5725.00	56.37	-11.6	44.77	68.2	-23.43	PK
V	5725.00	59.67	-11.6	48.07	68.2	-20.13	PK
Mode: 802.11n(HT40) Frequency: 5670MHz							
Antenna Pol.	Frequency (MHz)	Reading Level	Factor	Measure Level	Limit (dBuV/m)	Over limit(dB)	Detector
		(dBuV)	(dB/m)	(dBuV/m)			
H	5725.00	43.5	-11.6	31.9	54	-22.1	AV
V	5725.00	41.34	-11.6	29.74	54	-24.26	AV
Mode: 802.11ac(HT40) Frequency: 5670MHz							
Antenna Pol.	Frequency (MHz)	Reading Level	Factor	Measure Level	Limit (dBuV/m)	Over limit(dB)	Detector
		(dBuV)	(dB/m)	(dBuV/m)			
H	5725.00	59.93	-11.6	48.33	68.2	-19.87	PK
V	5725.00	56.12	-11.6	44.52	68.2	-23.68	PK
Mode: 802.11ac(HT40) Frequency: 5670MHz							
Antenna Pol.	Frequency (MHz)	Reading Level	Factor	Measure Level	Limit (dBuV/m)	Over limit(dB)	Detector
		(dBuV)	(dB/m)	(dBuV/m)			
H	5725.00	43.99	-11.6	32.39	54	-21.61	AV
V	5725.00	44.09	-11.6	32.49	54	-21.51	AV

Note: 1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.

4.8 Radiated Emission

Test Requirement:	FCC Part15 C Section 15.209 and 15.205				
Test Method:	ANSI C63.10-2020				
Test Frequency Range:	30MHz to 40GHz				
Test site:	Measurement Distance: 3m (Semi-Anechoic Chamber)				
Receiver setup:	Frequency	Detector	RBW	VBW	Value
	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		74.0		Peak Value
			54.0		Average Value
Test Procedure:	Substitution method was performed to determine the actual ERP emission levels of the EUT. The following test procedure as below:				
	1>.Below 1GHz test procedure:				
	1. The EUT was placed on the top of a rotating table (0.8m for below 1GHz and 1.5 meters for above 1GHz) above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. 2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. 4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.				
	2>.Above 1GHz test procedure:				
	1. On the test site as test setup graph above,the EUT shall be placed at the 1.5m support on the turntable and in the position closest to normal use as declared by the provider. 2. The test antenna shall be oriented initially for vertical polarization and shall be chosen to correspond to the frequency of the transmitter.The output of the test antenna shall be connected to the measuring receiver. 3. The transmitter shall be switched on, if possible, without modulation and the measuring receiver shall be tuned to the frequency of the				

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

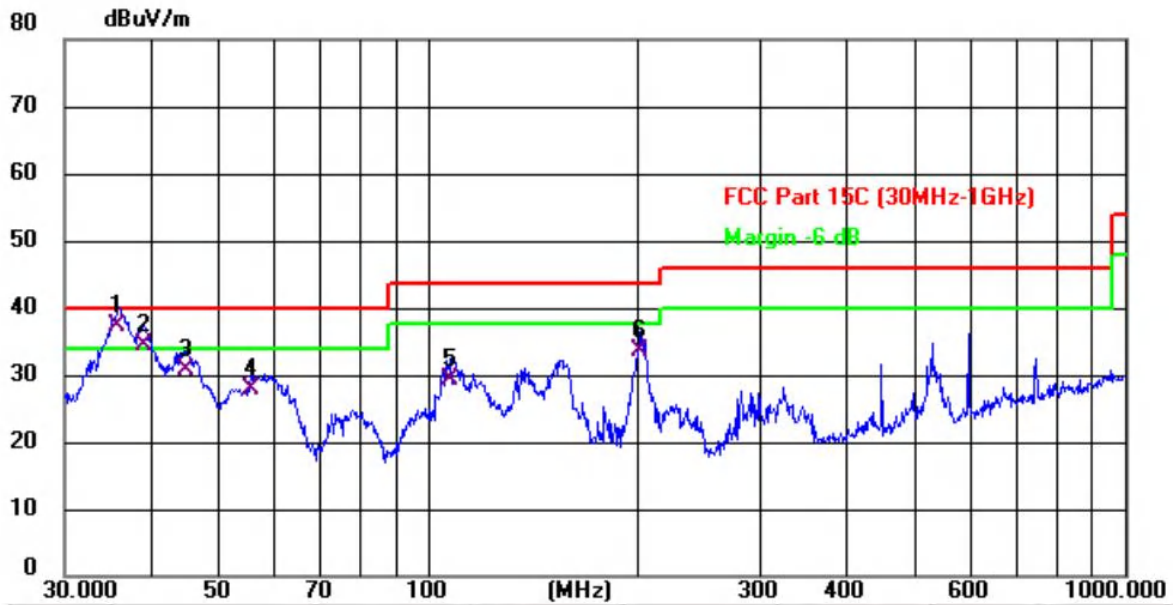
	
Test Instruments:	Refer to section 3.0 for details
Test mode:	Refer to section 2.2 for details
Test results:	Pass

Measurement Data:

We have scanned from 9kHz to the 10th harmonic of the EUT's highest frequency.
Detailed information please see the following page.

From 9KHz to 30MHz:	
Test Date :	Temperature : 24℃
Test Engineer : Felix Pang	Humidity : 56%
Test Mode : IEEE 802.11ac mode	
Test Results : PASS	
Note:	The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

From 30MHz to 1000MHz:	
Test Date :	Temperature : 24℃
Test Engineer : Felix Pang	Humidity : 56%
Test Mode : IEEE 802.11ac mode	
Test Results : PASS	
Note:	1. The test results are listed in next pages. 2. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector and quasi-peak detector need not be carried out. 3. All modes and channels have been tested, and only worst data of IEEE 802.11ac(VHT40)_MIMO 5745MHz was listed in this report.

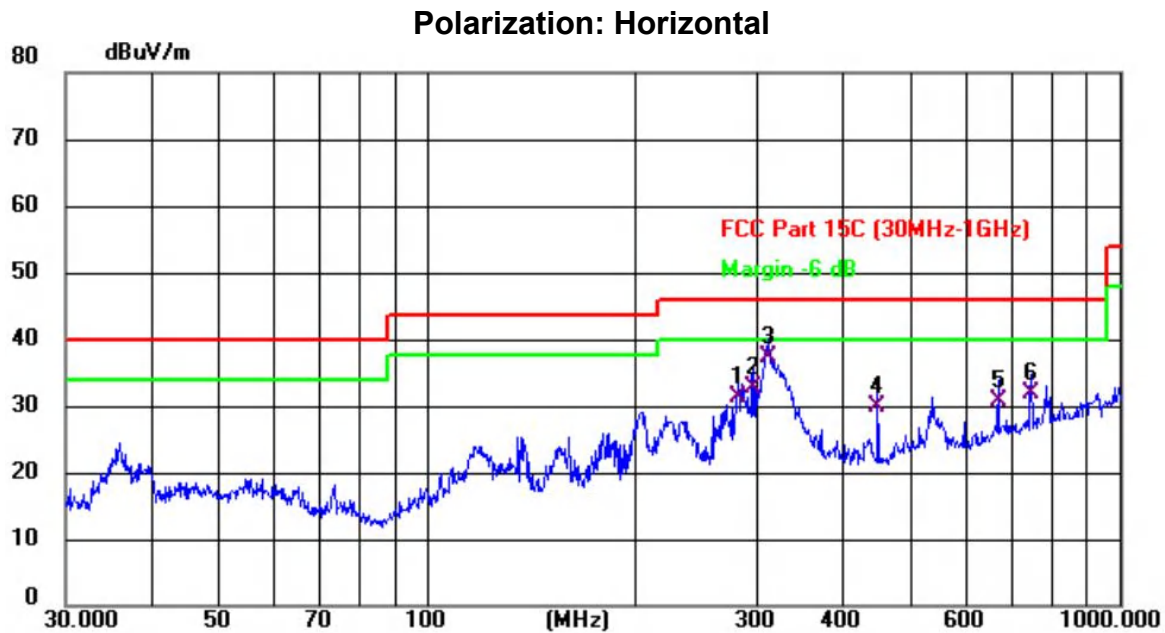
Polarization: Vertical

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	35.7490	46.86	-9.50	37.36	40.00	-2.64	QP
2 !	39.0244	43.59	-9.15	34.44	40.00	-5.56	QP
3	44.9006	39.35	-8.75	30.60	40.00	-9.40	QP
4	55.6093	36.77	-8.98	27.79	40.00	-12.21	QP
5	107.1337	39.91	-10.50	29.41	43.50	-14.09	QP
6	201.3930	43.45	-9.93	33.52	43.50	-9.98	QP

Remark:

Result(dBμV/m) = Reading(dBμV) + Factor(dB/m);

Over Limit(dB) = Result(dBμV/m) - Limit(dBμV/m)



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	281.0074	38.89	-7.56	31.33	46.00	-14.67	QP
2	296.1836	39.97	-7.28	32.69	46.00	-13.31	QP
3 *	311.0866	44.18	-6.97	37.21	46.00	-8.79	QP
4	446.4140	34.00	-4.26	29.74	46.00	-16.26	QP
5	668.1422	30.84	-0.12	30.72	46.00	-15.28	QP
6	744.8660	30.63	1.13	31.76	46.00	-14.24	QP

Remark:

Result(dBμV/m) = Reading(dBμV) + Factor(dB/m);

Over Limit(dB) = Result(dBμV/m) - Limit(dBμV/m)

Above 1GHz:**802.11a 5745MHz**

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11490.94	50.62	11.54	14.97	32.78	45.35	68.2	-28.65	Vertical
17235.50	51.27	12.30	17.82	34.54	48.06	74	-25.94	Vertical
11490.94	52.15	9.47	14.71	33.04	43.71	68.2	-30.29	Horizontal
17235.50	53.80	8.98	18.14	34.61	46.25	74	-27.75	Horizontal

802.11a 5785MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11570.91	50.58	11.70	14.83	33.03	44.4	68.2	-29.6	Vertical
17355.58	51.79	12.28	17.89	34.89	46.73	74	-27.27	Vertical
11570.91	52.84	9.64	14.79	32.82	44.25	68.2	-29.75	Horizontal
17355.58	53.83	8.57	18.11	34.57	45.82	74	-28.18	Horizontal

802.11a 5825MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11650.54	50.02	11.43	14.99	33.15	43.54	68.2	-30.46	Vertical
17475.06	51.13	12.17	18.04	34.93	47.05	74	-26.95	Vertical
11650.54	52.68	9.51	14.72	32.95	43.92	68.2	-30.08	Horizontal
17475.06	53.44	8.55	17.93	34.47	45.2	74	-28.8	Horizontal

802.11n(HT20) 5745MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11490.94	50.51	11.52	14.81	33.06	43.44	68.2	-30.56	Vertical
17235.50	51.70	12.17	17.83	34.58	47	74	-27	Vertical
11490.94	52.09	9.41	14.91	32.92	44.01	68.2	-29.99	Horizontal
17235.50	53.91	8.82	17.99	34.69	46.06	74	-27.94	Horizontal

802.11n(HT20) 5785MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11570.91	50.33	11.69	15.05	32.93	44.56	68.2	-29.44	Vertical
17355.58	51.74	11.98	17.71	34.78	46.1	74	-27.9	Vertical
11570.91	52.01	9.68	14.73	32.87	43.58	68.2	-30.42	Horizontal
17355.58	53.93	8.59	17.71	34.90	45.36	74	-28.64	Horizontal

802.11n(HT20) 5825MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11650.54	50.94	11.72	15.08	32.98	44.76	68.2	-29.24	Vertical
17475.06	51.61	12.12	17.88	34.67	46.94	74	-27.06	Vertical
11650.54	52.53	9.63	14.84	32.78	44.22	68.2	-29.78	Horizontal
17475.06	53.76	8.60	17.99	34.75	45.6	74	-28.4	Horizontal

802.11ac(HT20) 5745MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11490.94	50.57	11.63	14.87	33.08	43.99	68.2	-30.01	Vertical
17235.50	51.69	12.37	17.66	34.95	46.77	74	-27.23	Vertical
11490.94	52.74	9.88	14.77	33.05	44.34	68.2	-29.66	Horizontal
17235.50	53.28	8.60	18.14	34.72	45.3	74	-28.7	Horizontal

802.11ac(HT20) 5785MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11570.91	50.47	11.52	14.86	32.86	43.99	68.2	-30.01	Vertical
17355.58	51.96	12.13	17.81	34.80	47.1	74	-26.9	Vertical
11570.91	52.57	9.67	15.12	33.09	44.27	68.2	-29.73	Horizontal
17355.58	53.64	8.80	18.03	34.96	45.51	74	-30.01	Horizontal

802.11ac(HT20) 5825MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11650.54	50.75	11.42	14.92	33.01	44.08	68.2	-29.92	Vertical
17475.06	51.81	12.19	18.09	34.67	47.42	74	-26.58	Vertical
11650.54	52.93	9.51	15.08	32.97	44.55	68.2	-29.45	Horizontal
17475.06	53.47	8.53	17.81	34.59	45.22	74	-28.78	Horizontal

802.11n(HT40) 5755MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11510.77	50.66	11.52	15.00	32.75	44.43	68.2	-29.57	Vertical
17265.62	51.52	11.97	17.84	34.91	46.42	74	-27.58	Vertical
11510.77	52.84	9.62	14.65	32.68	44.43	68.2	-29.57	Horizontal
17265.62	53.93	8.56	18.15	34.88	45.76	74	-28.24	Horizontal

802.11n(HT40) 5795MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11590.38	51.29	11.36	14.78	33.08	44.35	68.2	-29.65	Vertical
17385.58	53.97	12.03	18.06	34.90	49.16	74	-24.84	Vertical
11590.38	53.28	9.61	15.09	32.73	45.25	68.2	-28.75	Horizontal
17385.58	56.56	8.57	18.08	34.94	48.27	74	-25.73	Horizontal

802.11ac(HT40) 5755MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11510.77	52.35	11.52	15.04	33.10	45.81	68.2	-28.19	Vertical
17265.62	52.68	12.09	17.89	34.82	47.84	74	-26.16	Vertical
11510.77	53.41	9.71	14.65	32.82	44.95	68.2	-29.05	Horizontal
17265.62	53.94	8.73	17.71	34.74	45.64	74	-28.36	Horizontal

802.11ac(HT40) 5795MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11590.38	50.37	11.73	14.77	32.92	43.95	68.2	-30.05	Vertical
17385.58	51.82	12.29	17.99	34.78	47.32	74	-26.68	Vertical
11590.38	51.56	9.83	15.08	33.15	43.32	68.2	-30.68	Horizontal
17385.58	53.64	8.76	17.67	34.68	45.39	74	-28.61	Horizontal

Note:

1. Level = Read Level + Factor. (Factor=Antenna Factor+ Cable loss- Preamp Factor)
2. The test trace is same as the ambient noise (the test frequency range: 18GHz~40GHz), therefore no data appear in the report.
3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

4.9 Frequency stability

Test Standard	15.407(g)
Test limit	Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.
Test results:	Pass

Measurement Data:

Voltage						
Test Mode	Channel	Voltage [Vdc]	Temperature (°C)	Measured Frequency (MHz)	Limit (MHz)	Verdict
a	5745	NV	NT	5744.98	Within 5725-5850MHz	Pass
		LV	NT	5744.98		
		HV	NT	5745		
Temperature						
Test Mode	Channel	Voltage [Vdc]	Temperature (°C)	Measured Frequency (MHz)	Limit (MHz)	Verdict
a	5745	NV	-30	5744.99	Within 5725-5850MHz	Pass
		NV	-20	5744.95		
		NV	-10	5744.95		
		NV	0	5745.03		
		NV	10	5744.98		
		NV	20	5744.98		
		NV	30	57401.00		
		NV	40	5744.99		
		NV	50	5744.94		

Note: Only show the worst case 802.11 a Mode 5745MHz.

5 Photos Of Test Setup

Reference to the **appendix I Test Setup Photo** for details.

6 Photos Of EUT

Reference to the **appendix II external photos** and **appendix III internal photos** for details.

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

