TEST REPORT

Report No.:	BCTC2307909509-4E
Applicant:	SHENZHEN NST INDUSTRY AND TRADE CO., LTD
Product Name:	10.1 inch tablet PC
Model/Type reference:	T10
Tested Date:	2023-07-31 to 2023-08-07
Issued Date:	2023-08-07

Shenzhen BCTC Testing Co., Ltd.

FCC ID: 2AAMS-SGINT10V2

Product Name:	10.1 inch tablet PC
Trademark:	N/A
Model/Type reference:	T10 M1045T
Prepared For:	SHENZHEN NST INDUSTRY AND TRADE CO., LTD
Address:	3-4/F, Bldg 1, Hongbang Intelligent Technology Park,No.30 Cuibao Road, Baolong Street, Longgang District, Shenzhen China
Manufacturer:	SHENZHEN NST INDUSTRY AND TRADE CO., LTD
Address:	3-4/F, Bldg 1, Hongbang Intelligent Technology Park,No.30 Cuibao Road, Baolong Street, Longgang District, Shenzhen China
Prepared By:	Shenzhen BCTC Testing Co., Ltd.
Address:	1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China
Sample Received Date:	2023-07-31
Sample tested Date:	2023-07-31 to 2023-08-07
Issue Date:	2023-08-07
Report No.:	BCTC2307909509-4E
Test Standards:	FCC Part15 15.407 ANSI C63.10-2013 KDB 662911 D01 v02r01 KDB 789033 D02 v02r01
Test Results:	PASS
Remark:	This is WIFI-5GHz band radio test report.

Tested by:

Brave Zeng/ Project Handler

Approved by:

Zero Zhou/Reviewer

The test report is effective only with both signature and specialized stamp.This result(s) shown in this report refer only to the sample(s) tested. Without written approval of Shenzhen BCTC Testing Co., Ltd, this report can't be reproduced except in full.The tested sample(s) and the sample information are provided by the client.

Table Of Content

(Note: N/A Means Not Applicable)

1. Version

Report No.	Issue Date	Description	Approved
BCTC2307909509-4E	2023-08-07	Original	Valid

2. Test Summary

The Product has been tested according to the following specifications:

1	Test Parameter	Clause No.	Results
1	Spurious Radiated Emissions	15.209(a), 15.407 (b)(1) 15.407 (b)(4) 15.407 (b)(8)	PASS
2	Conducted Emission	15.207	PASS
3	26 dB and 99% Emission Bandwidth	15.407 (a)(12) 15.1049	PASS
4	Minimum 6 dB bandwidth	15.407(e)	PASS
5	Maximum Conducted Output Power	15.407 (a)(1) 15.407 (a)(3)	PASS
6	Band Edge	2.1051, 15.407(b)(1) 15.407(b)(4)	PASS
7	Power Spectral Density	15.407 (a)(1) 15.407 (a)(3)	PASS
8	Spurious Emissions at Antenna Terminals	2.1051, 15.407(b)	PASS
9	Antenna Requirement	15.203	PASS

Note：The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure.

3. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

No.	Item	Uncertainty
1	3m chamber Radiated spurious emission(30MHz-1GHz)	U=4.3dB
2	3m chamber Radiated spurious emission(9KHz-30MHz)	U=3.7dB
3	3m chamber Radiated spurious emission(1GHz-18GHz)	U=4.5dB
4	3m chamber Radiated spurious emission(18GHz-40GHz)	U=3.34dB
5	Conducted Emission (150kHz-30MHz)	U=3.20dB
6	Conducted Adjacent channel power	U=1.38dB
7	Conducted output power uncertainty Above 1G	U=1.576dB
8	Conducted output power uncertainty below 1G	U=1.28dB
9	humidity uncertainty	U=5.3%
10	Temperature uncertainty	U=0.59℃

4. Product Information And Test Setup

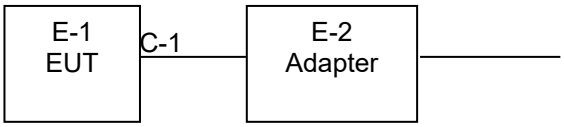
4.1 Product Information

Model/Type reference:	T10 M1045T
Model differences:	All the model are the same circuit and RF module, except model names.
Hardware Version:	P863 WT_P863_W_8183_BJJ_MB_WIFI_V2.2_20230509
Software Version:	N/A
IEEE 802.11 WLAN Mode Supported:	802.11a/n/ac(20MHz channel bandwidth) 802.11n/ac(40MHz channel bandwidth) 802.11ac(80MHz channel bandwidth)
Operation Frequency:	5180-5240MHz for 802.11a/n(HT20)/ac20; 5190-5230MHz for 802.11n(HT40)/ac40; 5210MHz for 802.11 ac80; 5745-5825 MHz for 802.11a/n(HT20)/ac20; 5755-5795 MHz for 802.11a/n(HT40)/ac40; 5775MHz for 802.11 ac80;
Data Rate:	802.11a: 6,9,12,18,24,36,48,54Mbps; 802.11n(HT20/HT40):MCS0-MCS15; 802.11ac(VHT20): NSS1, MCS0-MCS8 802.11ac(VHT40/VHT80):NSS1, MCS0-MCS
Type of Modulation:	OFDM with BPSK/QPSK/16QAM/64QAM/256QAM for 802.11a/n/ac;
Number Of Channel:	4 channels for 802.11a/n20 in the 5180-5240MHz band ; 2 channels for 802.11 n40 in the 5190-5230MHz band ; 1 channels for 802.11 ac80 in the 5210MHz band ; 5 channels for 802.11a/n20 in the 5745-5825MHz band ; 2 channels for 802.11 n40 in the 5755-5795MHz band ; 1 channels for 802.11 ac80 in the 5775MHz band ;
Antenna installation:	Internal antenna
Antenna Gain:	2.08 dBi
Ratings:	DC 5V from adapter
Adapter:	MOEDL: MK050200-T10USU INPUT: 100-240V ~50-60Hz 0.5A Max OUTPUT: 5.0V ⎓ 2.0A

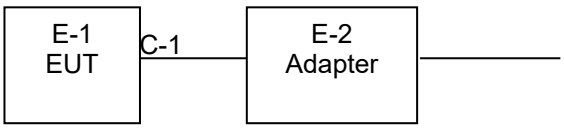
4.2 Test Setup Configuration

See test photographs attached in *EUT TEST SETUP PHOTOGRAPHS* for the actual connections between Product and support equipment.

Conducted Emission:



Radiated Spurious Emission



4.3 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
E-1	10.1 inch tablet PC	N/A	T10	M1045T	EUT
E-2	Adapter	N/A	MK050200-T10USU	N/A	Auxiliary

Item	Shielded Type	Ferrite Core	Length	Note
C-1	N/A	N/A	0.3M	DC cable unshielded

Notes:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.

2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

4.4 Channel List

Frequency and Channel list for 802.11a/n /ac (5180-5240MHz):

802.11a/n/ac(20MHz) Carrier Frequency Channel							
Channel	**Frequency (MHz)**	**Channel**	**Frequency (MHz)**	**Channel**	**Frequency (MHz)**	**Channel**	**Frequency (MHz)**
36	5180	44	5220	40	5200	48	5240

802.11n/ac(40MHz) Carrier Frequency Channel							
Channel	**Frequency (MHz)**	**Channel**	**Frequency (MHz)**	**Channel**	**Frequency (MHz)**	**Channel**	**Frequency (MHz)**
38	5190	46	5230	-	-	-	-

802.11ac (80MHz) Carrier Frequency Channel							
Channel	**Frequency (MHz)**	**Channel**	**Frequency (MHz)**	**Channel**	**Frequency (MHz)**	**Channel**	**Frequency (MHz)**
42	5210	-	-	-	-	-	-

Frequency and Channel list for 802.11a/n /ac (5745-5825MHz):

802.11a/n/ac(20MHz) Carrier Frequency Channel							
Channel	**Frequency (MHz)**	**Channel**	**Frequency (MHz)**	**Channel**	**Frequency (MHz)**	**Channel**	**Frequency (MHz)**
149	5745	153	5765	157	5785	161	5805
165	5825	-	-	-	-	-	-

802.11n/ac(40MHz) Carrier Frequency Channel							
Channel	**Frequency (MHz)**	**Channel**	**Frequency (MHz)**	**Channel**	**Frequency (MHz)**	**Channel**	**Frequency (MHz)**
151	5755	159	5795	-	-	-	-

802.11ac (80MHz) Carrier Frequency Channel							
Channel	**Frequency (MHz)**	**Channel**	**Frequency (MHz)**	**Channel**	**Frequency (MHz)**	**Channel**	**Frequency (MHz)**
155	5775	-	-	-	-	-	-

4.5 Test Mode

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	802.11a / n/ ac 20 CH36/ CH40/ CH 48 802.11a /n/ ac 20 CH149/ CH157/ CH 165
Mode 2	802.11n/ ac40 CH38/ CH 46 802.11n/ ac40 CH 151 / CH 159
Mode 3	802.11 ac80 CH 42/CH 155
Mode 4	Link Mode

Note: The measurements are performed at all Bit Rate of Transmitter, the worst data was reported.

4.6 Table Of Parameters Of Text Software Setting

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters

Test software Version	CMD		
Parameters	DEF	DEF	DEF

5. Test Facility And Test Instrument Used

5.1 Test Facility

All measurement facilities used to collect the measurement data are located at Shenzhen BCTC Testing Co., Ltd. Address:1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards.
FCC Test Firm Registration Number: 712850
FCC Designation Number: CN1212
ISED Registered No.: 23583
ISED CAB identifier: CN0017

5.2 Test Instrument Used

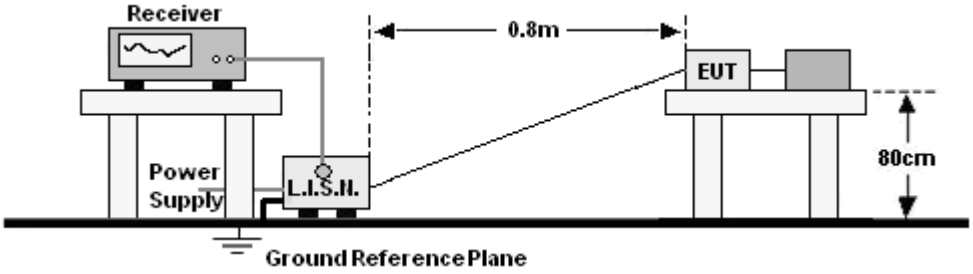
Conducted Emissions Test					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
Receiver	R&S	ESR3	102075	May 15, 2023	May 14, 2024
LISN	R&S	ENV216	101375	May 15, 2023	May 14, 2024
Software	Frad	EZ-EMC	EMC-CON 3A1	\	\
Attenuator	\	10dB DC-6GHz	1650	May 15, 2023	May 14, 2024

RF Conducted Test					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
Power Metter	Keysight	E4419	\	May 15, 2023	May 14, 2024
Power Sensor (AV)	Keysight	E9300A	\	May 15, 2023	May 14, 2024
Signal Analyzer20kHz-26.5GHz	Keysight	N9020A	MY49100060	May 15, 2023	May 14, 2024
Spectrum Analyzer9kHz-40GHz	R&S	FSP40	100363	May 15, 2023	May 14, 2024
Radio frequency control box	MAIWEI	MW100-RFCB	\	\	\
Software	MAIWEI	MTS 8310	\	\	\

Radiated Emissions Test (966 Chamber02)					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
966 chamber	SKET	966 Room	966	Nov. 02. 2021	Nov. 01.2024
Receiver	R&S	ESR3	102075	May 15, 2023	May 14, 2024
Receiver	R&S	ESRI7	100010	Nov. 08. 2022	Nov. 07.2023
Amplifier	SKET	LNPA-30M01G-30	SK2021082004	Nov. 08. 2022	Nov. 07.2023
TRILOG Broadband Antenna	Schwarzbeck	VULB9168	1323	Mar. 06, 2022	Mar. 05, 2024
Loop Antenna(9KHz-30MHz)	Schwarzbeck	FMZB1519B	00014	May 31, 2023	May 30, 2024
Amplifier	SKET	LAPA_01G18G-45dB	\	May 15, 2023	May 14, 2024
Horn Antenna	Schwarzbeck	BBHA9120D	1541	May 31, 2023	May 30, 2024
Amplifier(18GHz-40GHz)	MITEQ	TTA1840-35-HG	2034381	May 15, 2023	May 14, 2024
Horn Antenn(18GHz-40GHz)	Schwarzbeck	BBHA9170	00822	May 31, 2023	May 30, 2024
Spectrum Analyzer9kHz-40GHz	R&S	FSP40	100363	May 15, 2023	May 14, 2024
Software	Frad	EZ-EMC	FA-03A2 RE	\	\

6. Conducted Emissions

6.1 Block Diagram Of Test Setup



6.2 Limit

Frequency (MHz)	Limit (dBuV)	
	Quas-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00
Notes: 1. *Decreasing linearly with logarithm of frequency. 2. The lower limit shall apply at the transition frequencies.		

6.3 Test procedure

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

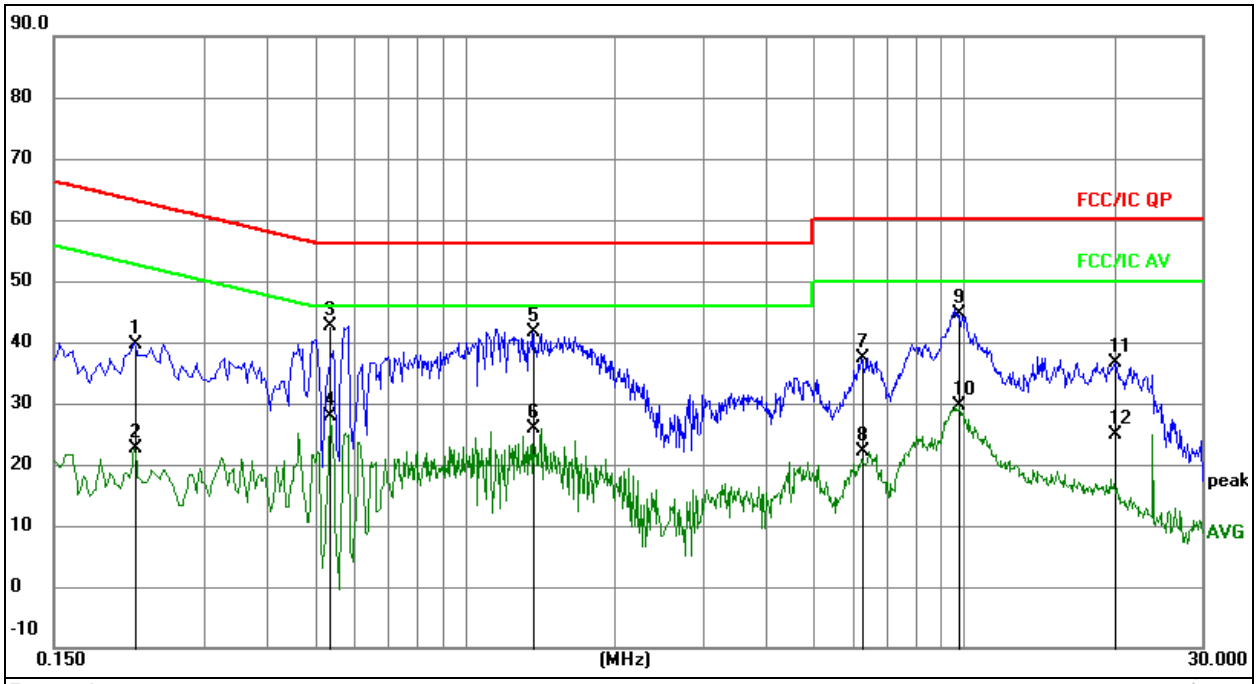
a. The Product was placed on a nonconductive table 0.8 m above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).
b. The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak and AVG detector in Max Hold mode. Run the receiver's pre-scan to record the maximum disturbance generated from Product in all power lines in the full band.
c. For each frequency whose maximum record was higher or close to limit, measure its QP and AVG values and record.

6.4 EUT operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.
We pretest AC 120V and AC 240V, the worst voltage was AC 120V and the data recording in the report.

6.5 Test Result

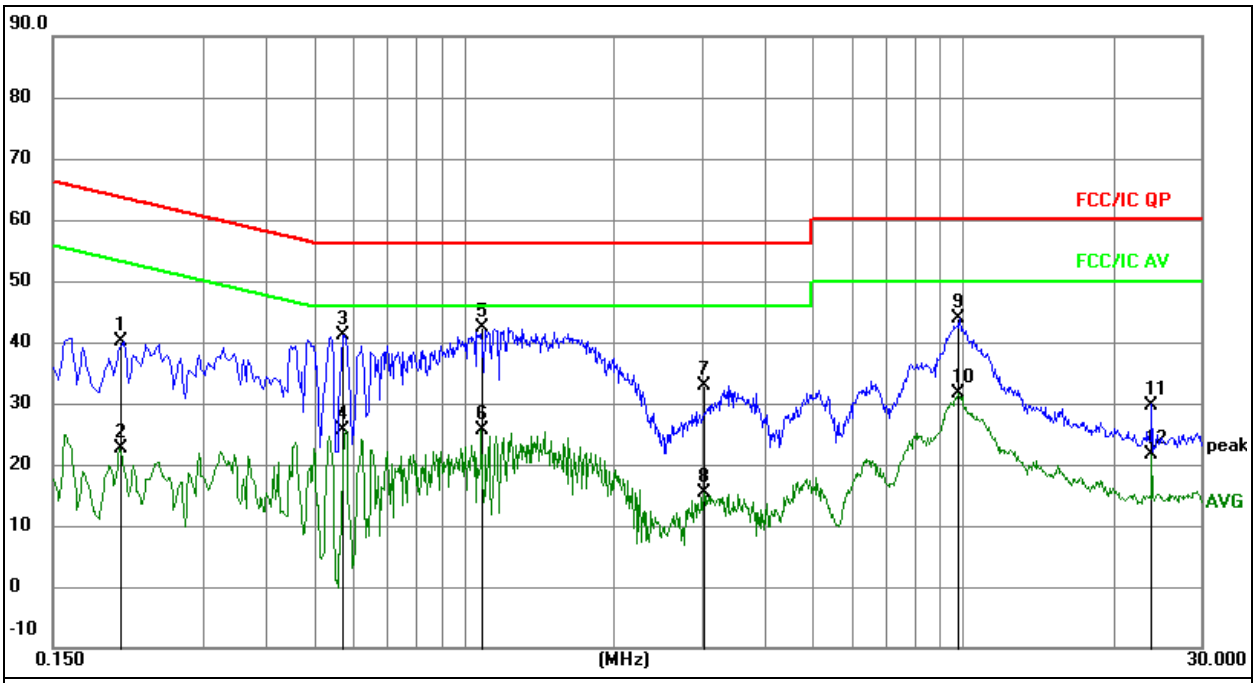
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC120V/60Hz
Test Mode:	Mode 4	Polarization :	L



Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement = Reading Level + Correct Factor
4. Over = Measurement - Limit

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz		dB	dBuV	dBuV	dB	Detector
1		0.2175	29.99	9.61	39.60	62.91	-23.31	QP
2		0.2175	12.91	9.61	22.52	52.91	-30.39	AVG
3	*	0.5370	32.97	9.62	42.59	56.00	-13.41	QP
4		0.5370	18.27	9.62	27.89	46.00	-18.11	AVG
5		1.3695	31.90	9.73	41.63	56.00	-14.37	QP
6		1.3695	16.14	9.73	25.87	46.00	-20.13	AVG
7		6.2295	27.49	9.77	37.26	60.00	-22.74	QP
8		6.2295	12.26	9.77	22.03	50.00	-27.97	AVG
9		9.7350	34.91	9.67	44.58	60.00	-15.42	QP
10		9.7350	20.02	9.67	29.69	50.00	-20.31	AVG
11		20.1390	26.93	9.78	36.71	60.00	-23.29	QP
12		20.1390	15.02	9.78	24.80	50.00	-25.20	AVG

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC120V/60Hz
Test Mode:	Mode 4	Polarization :	N



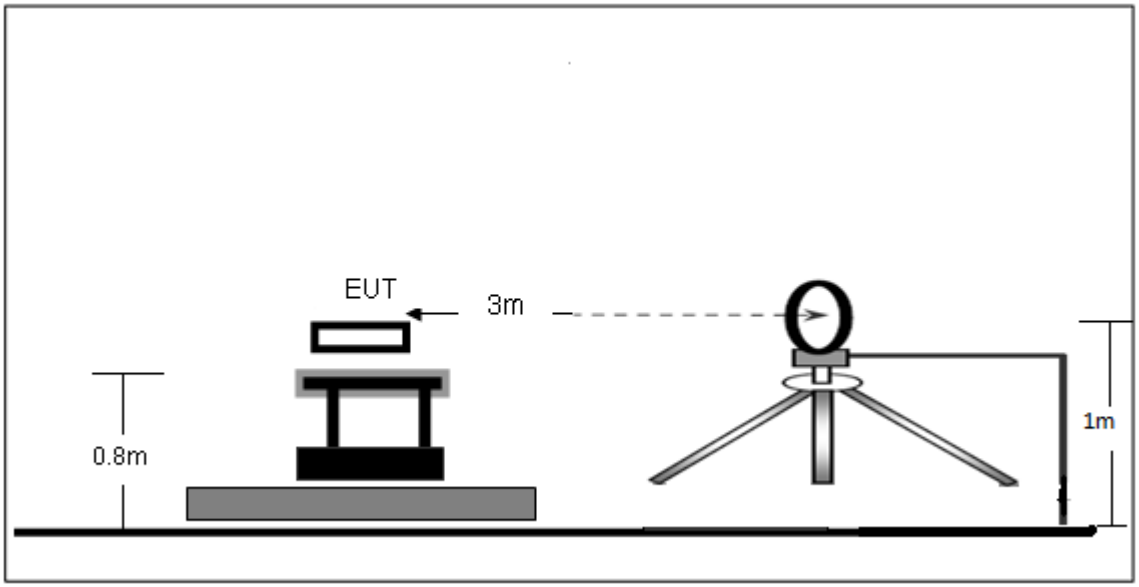
Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement = Reading Level + Correct Factor
4. Over = Measurement - Limit

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz		dB	dBuV	dBuV	dB	Detector
1		0.2040	30.46	9.61	40.07	63.45	-23.38	QP
2		0.2040	13.01	9.61	22.62	53.45	-30.83	AVG
3		0.5701	31.54	9.62	41.16	56.00	-14.84	QP
4		0.5701	16.06	9.62	25.68	46.00	-20.32	AVG
5	*	1.0824	32.54	9.73	42.27	56.00	-13.73	QP
6		1.0824	15.94	9.73	25.67	46.00	-20.33	AVG
7		3.0253	23.16	9.79	32.95	56.00	-23.05	QP
8		3.0253	5.66	9.79	15.45	46.00	-30.55	AVG
9		9.7567	34.14	9.67	43.81	60.00	-16.19	QP
10		9.7567	22.02	9.67	31.69	50.00	-18.31	AVG
11		23.8878	20.00	9.75	29.75	60.00	-30.25	QP
12		23.8878	11.90	9.75	21.65	50.00	-28.35	AVG

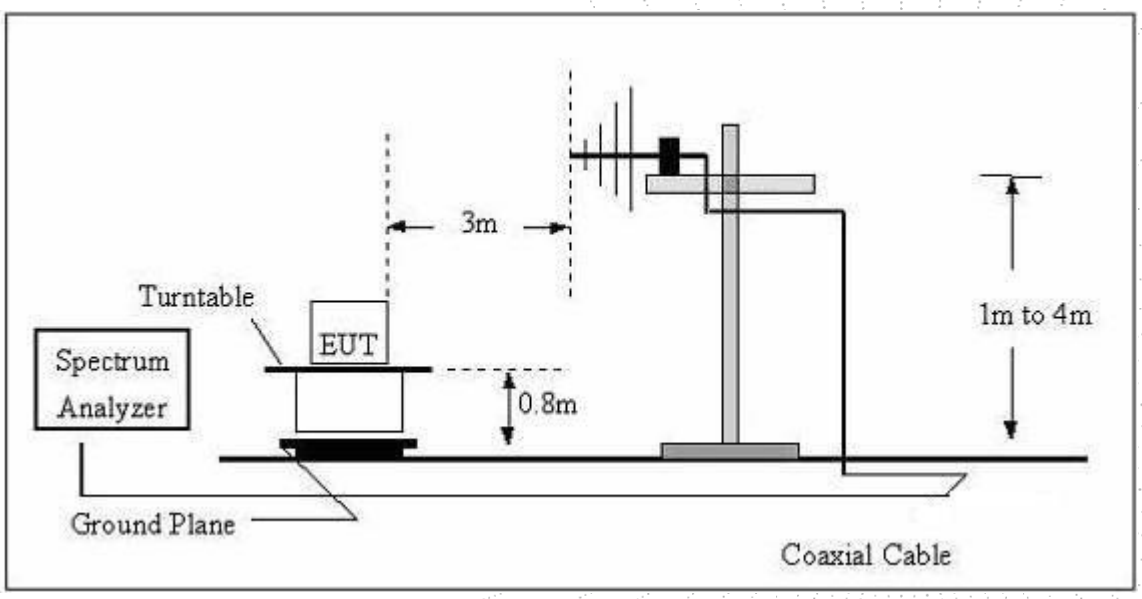
7. Radiated Emissions

7.1 Block Diagram Of Test Setup

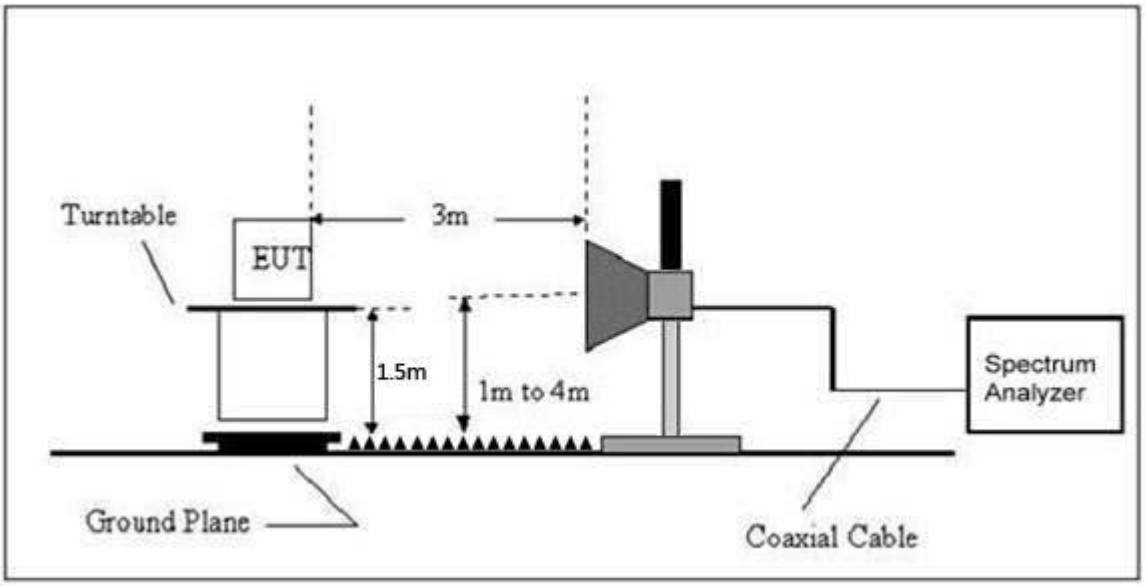
（A）Radiated Emission Test-Up Frequency Below 30MHz



（B）Radiated Emission Test-Up Frequency 30MHz~1GHz



（C）Radiated Emission Test-Up Frequency Above 1GHz



7.2 Limit

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequency	Field Strength	Distance	Field Strength Limit at 3m Distance	
(MHz)	uV/m	(m)	uV/m	dBuV/m
0.009 ~ 0.490	2400/F(kHz)	300	10000 * 2400/F(kHz)	$20\log^{(2400/F(kHz))}$ + 80
0.490 ~ 1.705	24000/F(kHz)	30	100 * 24000/F(kHz)	$20\log^{(24000/F(kHz))}$ + 40
1.705 ~ 30	30	30	100 * 30	$20\log^{(30)}$ + 40
30 ~ 88	100	3	100	$20\log^{(100)}$
88 ~ 216	150	3	150	$20\log^{(150)}$
216 ~ 960	200	3	200	$20\log^{(200)}$
Above 960	500	3	500	$20\log^{(500)}$

Limits Of Radiated Emission Measurement (Above 1000MHz)

Frequency (MHz)	Limit (dBuV/m) (at 3M)	
	Peak	Average
Above 1000	74	54

Notes:
(1)The limit for radiated test was performed according to FCC PART 15C.
(2)The tighter limit applies at the band edges.
(3) Emission level (dBuV/m)=20log Emission level (uV/m).

7.3 Test procedure

The test site semi-anechoic chamber has met the requirement of NSA tolerance 4 dB according to the standards: ANSI C63.10-2013. The test distance is 3m.The setup is according to the requirements in Section 13.1.4.1 of ANSI C63.10-2013 and CAN/CSA-CEI/IEC CISPR 22.
This test is required for any spurious emission that falls in a Restricted Band, as defined in Section 15.205.
It must be performed with the highest gain of each type of antenna proposed for use with the EUT.
Use the following spectrum analyzer settings:

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
b. The EUT was placed on the top of a rotating table 0.8 m for below 1GHz and 1.5m for above 1GHz the ground at a 3 meter. The table was rotated 360 degrees to determine the position of the highest radiation.
c. The height of the equipment or of the substitution antenna shall be 0.8 m for below 1GHz and 1.5m for above 1GHz; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

During the radiated emission test, the Spectrum Analyzer was set with the following configurations:

Frequency Band (MHz)	Function	Resolution bandwidth	Video Bandwidth
30 to 1000	QP	120 kHz	300 kHz
Above 1000	Peak	1 MHz	1 MHz
	Average	1 MHz	10 Hz

Note: for the frequency ranges below 30 MHz, a narrower RBW is used for these ranges but the measured value should add a RBW correction factor (RBWCF) where RBWCF [dB] =10*lg(100 [kHz]/narrower RBW [kHz]). , the narrower RBW is 1 kHz and RBWCF is 20 dB for the frequency 9 kHz to 150 kHz, and the
narrower RBW is 10 kHz and RBWCF is 10 dB for the frequency 150 kHz to 30 MHz.

7.4 EUT operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

7.5 Test Result

Below 30MHz

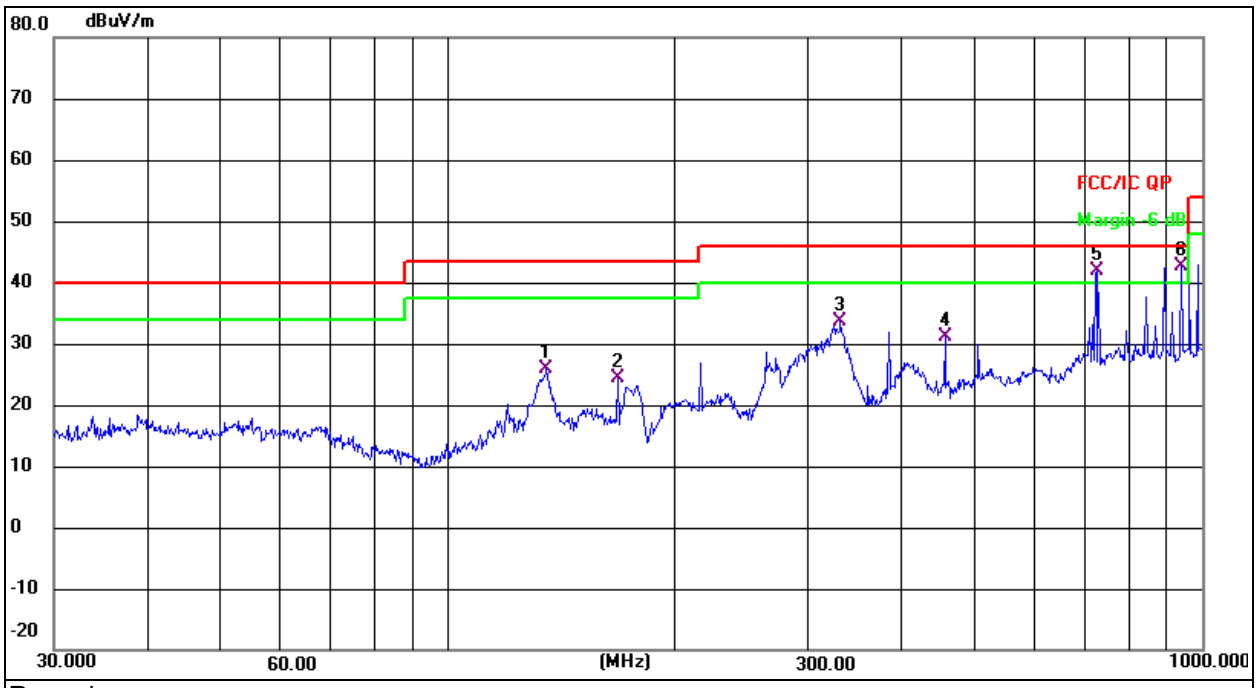
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC120V/60Hz
Test Mode:	Mode 4	Polarization :	---

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	PASS
--	--	--	--	PASS

Note:
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
Distance extrapolation factor =40 log (specific distance/test distance)(dB);
Limit line = specific limits(dBuv) + distance extrapolation factor.

Between 30MHz – 1GHz

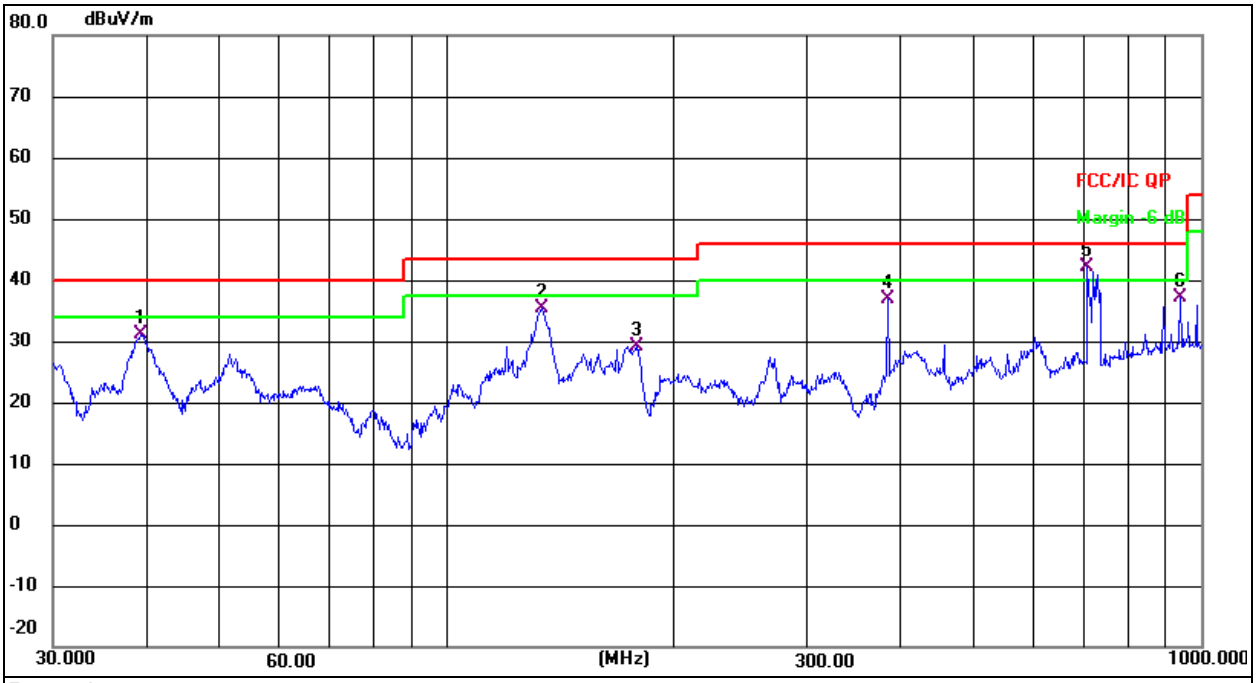
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC120V/60Hz
Test Mode:	Mode 4	Polarization :	Horizontal



Remark:
1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. Measurement = Reading Level + Correct Factor
3. Over = Measurement - Limit

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	135.0319	37.19	-11.32	25.87	43.50	-17.63	QP
2	167.8243	35.51	-11.01	24.50	43.50	-19.00	QP
3	331.3546	42.14	-8.51	33.63	46.00	-12.37	QP
4	455.9058	35.31	-4.08	31.23	46.00	-14.77	QP
5 !	724.2611	41.20	0.67	41.87	46.00	-4.13	QP
6 *	938.8326	38.57	4.11	42.68	46.00	-3.32	QP

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC120V/60Hz
Test Mode:	Mode 4	Polarization :	Vertical



Remark:
1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. Measurement = Reading Level + Correct Factor
3. Over = Measurement - Limit

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	39.1616	41.48	-10.40	31.08	40.00	-8.92	QP
2	133.6188	46.68	-11.39	35.29	43.50	-8.21	QP
3	178.1327	40.94	-11.86	29.08	43.50	-14.42	QP
4	383.9318	43.97	-7.21	36.76	46.00	-9.24	QP
5 *	706.6999	41.83	0.22	42.05	46.00	-3.95	QP
6	938.8326	33.00	4.11	37.11	46.00	-8.89	QP

Between 1GHz – 40GHz

Test Mode:	TX(5.1G) - 802.11a

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5180 MHz)-Above 1G									
V	4434.137	64.48	5.94	35.40	44.00	61.82	68.2	-6.38	PK
V	4434.137	43.67	5.94	35.40	44.00	41.01	54	-12.99	AV
V	10360.142	60.99	8.46	39.75	44.50	64.70	68.2	-3.50	PK
V	10360.142	43.03	8.46	39.75	44.50	46.74	54	-7.26	AV
V	15540.005	63.08	10.12	38.80	44.10	67.90	74	-6.10	PK
V	15540.005	43.80	10.12	38.80	42.70	50.02	54	-3.98	AV
H	4434.075	61.15	5.94	35.18	44.00	58.27	68.2	-9.93	PK
H	4434.075	43.80	5.94	35.18	44.00	40.92	54	-13.08	AV
H	10360.090	51.87	8.46	38.71	44.50	54.54	68.2	-13.66	PK
H	10360.090	42.99	8.46	38.71	44.50	45.66	54	-8.34	AV
H	15540.198	50.39	10.12	38.38	44.10	54.79	74	-19.21	PK
H	15540.198	44.90	10.12	38.38	44.10	49.30	54	-4.70	AV
Middle Channel (5200 MHz)-Above 1G									
V	4592.051	61.07	6.48	36.35	44.05	59.85	74	-14.15	PK
V	4592.051	43.40	6.48	36.35	44.05	42.18	54	-11.82	AV
V	10400.148	64.45	8.47	37.88	44.51	66.29	68.2	-1.91	PK
V	10400.148	43.29	8.47	37.88	44.51	45.13	54	-8.87	AV
V	15600.171	63.36	10.12	38.80	44.10	68.18	74	-5.82	PK
V	15600.171	43.48	10.12	38.80	42.70	49.70	54	-4.30	AV
H	4592.014	60.76	6.48	36.37	44.05	59.56	74	-14.44	PK
H	4592.014	43.98	6.48	36.37	44.05	42.78	54	-11.22	AV
H	10400.186	54.21	8.47	38.64	44.50	56.82	68.2	-11.38	PK
H	10400.186	44.66	8.47	38.64	44.50	47.27	54	-6.73	AV
H	15600.040	53.52	10.12	38.38	44.10	57.92	74	-16.08	PK
H	15600.040	41.65	10.12	38.38	44.10	46.05	54	-7.95	AV
High Channel (5240 MHz)-Above 1G									
V	4739.143	63.11	7.10	37.24	43.50	63.95	74	-10.05	PK
V	4739.143	43.99	7.10	37.24	43.50	44.83	54	-9.17	AV
V	10480.025	63.76	8.46	37.68	44.50	65.40	68.2	-2.80	PK
V	10480.025	43.82	8.46	37.68	44.50	45.46	54	-8.54	AV
V	15720.168	62.57	10.12	38.80	44.10	67.39	74	-6.61	PK
V	15720.168	43.80	10.12	38.80	42.70	50.02	54	-3.98	AV
H	4739.144	63.67	7.10	37.24	43.50	64.51	74	-9.49	PK
H	4739.144	43.70	7.10	37.24	43.50	44.54	54	-9.46	AV
H	10480.065	50.53	8.46	38.57	44.50	53.06	68.2	-15.14	PK
H	10480.065	43.95	8.46	38.57	44.50	46.48	54	-7.52	AV
H	15720.043	53.04	10.12	38.38	44.10	57.44	74	-16.56	PK
H	15720.043	40.32	10.12	38.38	44.10	44.72	54	-9.28	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode:	TX(5.1G) - 802.11n-HT20

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5180 MHz)-Above 1G									
V	4434.108	60.09	5.94	35.40	44.00	57.43	68.2	-10.77	PK
V	4434.108	43.94	5.94	35.40	44.00	41.28	54	-12.72	AV
V	10360.183	60.61	8.46	39.75	44.50	64.32	68.2	-3.88	PK
V	10360.183	43.16	8.46	39.75	44.50	46.87	54	-7.13	AV
V	15540.017	61.65	10.12	38.80	44.10	66.47	74	-7.53	PK
V	15540.017	43.53	10.12	38.80	42.70	49.75	54	-4.25	AV
H	4434.187	63.62	5.94	35.18	44.00	60.74	68.2	-7.46	PK
H	4434.187	43.99	5.94	35.18	44.00	41.11	54	-12.89	AV
H	10360.171	53.65	8.46	38.71	44.50	56.32	68.2	-11.88	PK
H	10360.171	40.20	8.46	38.71	44.50	42.87	54	-11.13	AV
H	15540.195	52.49	10.12	38.38	44.10	56.89	74	-17.11	PK
H	15540.195	41.18	10.12	38.38	44.10	45.58	54	-8.42	AV
Middle Channel (5200 MHz)-Above 1G									
V	4592.152	62.55	6.48	36.35	44.05	61.33	74	-12.67	PK
V	4592.152	43.26	6.48	36.35	44.05	42.04	54	-11.96	AV
V	10400.043	61.28	8.47	37.88	44.51	63.12	68.2	-5.08	PK
V	10400.043	43.81	8.47	37.88	44.51	45.65	54	-8.35	AV
V	15600.036	64.91	10.12	38.80	44.10	69.73	74	-4.27	PK
V	15600.036	43.80	10.12	38.80	42.70	50.02	54	-3.98	AV
H	4592.058	63.47	6.48	36.37	44.05	62.27	74	-11.73	PK
H	4592.058	43.14	6.48	36.37	44.05	41.94	54	-12.06	AV
H	10400.064	51.32	8.47	38.64	44.50	53.93	68.2	-14.27	PK
H	10400.064	43.65	8.47	38.64	44.50	46.26	54	-7.74	AV
H	15600.021	51.74	10.12	38.38	44.10	56.14	74	-17.86	PK
H	15600.021	40.10	10.12	38.38	44.10	44.50	54	-9.50	AV
High Channel (5240 MHz)-Above 1G									
V	4739.009	63.60	7.10	37.24	43.50	64.44	74	-9.56	PK
V	4739.009	43.31	7.10	37.24	43.50	44.15	54	-9.85	AV
V	10480.043	63.46	8.46	37.68	44.50	65.10	68.2	-3.10	PK
V	10480.043	43.48	8.46	37.68	44.50	45.12	54	-8.88	AV
V	15720.097	64.89	10.12	38.80	44.10	69.71	74	-4.29	PK
V	15720.097	43.21	10.12	38.80	42.70	49.43	54	-4.57	AV
H	4739.025	63.02	7.10	37.24	43.50	63.86	74	-10.14	PK
H	4739.025	43.66	7.10	37.24	43.50	44.50	54	-9.50	AV
H	10480.096	54.83	8.46	38.57	44.50	57.36	68.2	-10.84	PK
H	10480.096	43.81	8.46	38.57	44.50	46.34	54	-7.66	AV
H	15720.062	52.63	10.12	38.38	44.10	57.03	74	-16.97	PK
H	15720.062	40.31	10.12	38.38	44.10	44.71	54	-9.29	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode:	TX(5.1G) - 802.11n-HT40

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5190 MHz)-Above 1G									
V	4434.075	63.47	5.94	35.40	44.00	60.81	68.2	-7.39	PK
V	4434.075	43.92	5.94	35.40	44.00	41.26	54	-12.74	AV
V	10380.115	63.10	8.46	39.75	44.50	66.81	68.2	-1.39	PK
V	10380.115	43.52	8.46	39.75	44.50	47.23	54	-6.77	AV
V	15570.099	62.86	10.12	38.80	44.10	67.68	74	-6.32	PK
V	15570.099	43.47	10.12	38.80	42.70	49.69	54	-4.31	AV
H	4434.081	60.16	5.94	35.18	44.00	57.28	74	-16.72	PK
H	4434.081	43.40	5.94	35.18	44.00	40.52	54	-13.48	AV
H	10380.143	50.09	8.46	38.71	44.50	52.76	68.2	-15.44	PK
H	10380.143	40.05	8.46	38.71	44.50	42.72	54	-11.28	AV
H	15570.006	54.63	10.12	38.38	44.10	59.03	74	-14.97	PK
H	15570.006	40.06	10.12	38.38	44.10	44.46	54	-9.54	AV
High Channel (5230 MHz)-Above 1G									
V	4739.195	64.63	6.48	36.35	44.05	63.41	68.2	-4.79	PK
V	4739.195	43.12	6.48	36.35	44.05	41.90	54	-12.10	AV
V	10460.142	63.82	8.47	37.88	44.51	65.66	68.2	-2.54	PK
V	10460.142	43.04	8.47	37.88	44.51	44.88	54	-9.12	AV
V	15690.152	63.75	10.12	38.80	44.10	68.57	74	-5.43	PK
V	15690.152	43.24	10.12	38.80	42.70	49.46	54	-4.54	AV
H	4739.012	63.88	6.48	36.37	44.05	62.68	68.2	-5.52	PK
H	4739.012	43.53	6.48	36.37	44.05	42.33	54	-11.67	AV
H	10460.081	51.35	8.47	38.64	44.50	53.96	68.2	-14.24	PK
H	10460.081	41.99	8.47	38.64	44.50	44.60	54	-9.40	AV
H	15690.022	54.09	10.12	38.38	44.10	58.49	74	-15.51	PK
H	15690.022	42.42	10.12	38.38	44.10	46.82	54	-7.18	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode:	TX(5.1G) - 802.11ac-HT20

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5180 MHz)-Above 1G									
V	4434.131	60.88	5.94	35.40	44.00	58.22	68.2	-9.98	PK
V	4434.131	43.30	5.94	35.40	44.00	40.64	54	-13.36	AV
V	10360.016	61.67	8.46	39.75	44.50	65.38	68.2	-2.82	PK
V	10360.016	43.56	8.46	39.75	44.50	47.27	54	-6.73	AV
V	15540.029	60.67	10.12	38.80	44.10	65.49	74	-8.51	PK
V	15540.029	43.77	10.12	38.80	42.70	49.99	54	-4.01	AV
H	4434.185	63.50	5.94	35.18	44.00	60.62	68.2	-7.58	PK
H	4434.185	43.98	5.94	35.18	44.00	41.10	54	-12.90	AV
H	10360.138	50.75	8.46	38.71	44.50	53.42	68.2	-14.78	PK
H	10360.138	43.05	8.46	38.71	44.50	45.72	54	-8.28	AV
H	15540.105	54.06	10.12	38.38	44.10	58.46	74	-15.54	PK
H	15540.105	44.76	10.12	38.38	44.10	49.16	54	-4.84	AV
Middle Channel (5200 MHz)-Above 1G									
V	4592.081	61.95	6.48	36.35	44.05	60.73	74	-13.27	PK
V	4592.081	43.16	6.48	36.35	44.05	41.94	54	-12.06	AV
V	10400.141	64.90	8.47	37.88	44.51	66.74	68.2	-1.46	PK
V	10400.141	43.21	8.47	37.88	44.51	45.05	54	-8.95	AV
V	15600.088	64.76	10.12	38.80	44.10	69.58	74	-4.42	PK
V	15600.088	43.52	10.12	38.80	42.70	49.74	54	-4.26	AV
H	4592.175	63.60	6.48	36.37	44.05	62.40	74	-11.60	PK
H	4592.175	43.53	6.48	36.37	44.05	42.33	54	-11.67	AV
H	10400.132	54.93	8.47	38.64	44.50	57.54	68.2	-10.66	PK
H	10400.132	41.75	8.47	38.64	44.50	44.36	54	-9.64	AV
H	15600.029	50.66	10.12	38.38	44.10	55.06	74	-18.94	PK
H	15600.029	44.87	10.12	38.38	44.10	49.27	54	-4.73	AV
High Channel (5240 MHz)-Above 1G									
V	4739.115	62.76	7.10	37.24	43.50	63.60	74	-10.40	PK
V	4739.115	43.10	7.10	37.24	43.50	43.94	54	-10.06	AV
V	10480.054	62.34	8.46	37.68	44.50	63.98	68.2	-4.22	PK
V	10480.054	43.37	8.46	37.68	44.50	45.01	54	-8.99	AV
V	15720.184	61.08	10.12	38.80	44.10	65.90	74	-8.10	PK
V	15720.184	43.28	10.12	38.80	42.70	49.50	54	-4.50	AV
H	4739.141	61.32	7.10	37.24	43.50	62.16	74	-11.84	PK
H	4739.141	43.90	7.10	37.24	43.50	44.74	54	-9.26	AV
H	10480.112	52.96	8.46	38.57	44.50	55.49	68.2	-12.71	PK
H	10480.112	44.14	8.46	38.57	44.50	46.67	54	-7.33	AV
H	15720.008	53.72	10.12	38.38	44.10	58.12	74	-15.88	PK
H	15720.008	42.90	10.12	38.38	44.10	47.30	54	-6.70	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode:	TX(5.1G) - 802.11ac-HT40

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5190 MHz)-Above 1G									
V	4434.004	62.56	5.94	35.40	44.00	59.90	68.2	-8.30	PK
V	4434.004	43.19	5.94	35.40	44.00	40.53	54	-13.47	AV
V	10380.070	60.61	8.46	39.75	44.50	64.32	68.2	-3.88	PK
V	10380.070	43.77	8.46	39.75	44.50	47.48	54	-6.52	AV
V	15570.022	62.82	10.12	38.80	44.10	67.64	74	-6.36	PK
V	15570.022	43.81	10.12	38.80	42.70	50.03	54	-3.97	AV
H	4434.196	62.03	5.94	35.18	44.00	59.15	74	-14.85	PK
H	4434.196	43.42	5.94	35.18	44.00	40.54	54	-13.46	AV
H	10380.010	53.79	8.46	38.71	44.50	56.46	68.2	-11.74	PK
H	10380.010	44.58	8.46	38.71	44.50	47.25	54	-6.75	AV
H	15570.149	50.53	10.12	38.38	44.10	54.93	74	-19.07	PK
H	15570.149	43.10	10.12	38.38	44.10	47.50	54	-6.50	AV
High Channel (5230 MHz)-Above 1G									
V	4739.094	60.40	6.48	36.35	44.05	59.18	68.2	-9.02	PK
V	4739.094	43.03	6.48	36.35	44.05	41.81	54	-12.19	AV
V	10460.057	64.17	8.47	37.88	44.51	66.01	68.2	-2.19	PK
V	10460.057	43.01	8.47	37.88	44.51	44.85	54	-9.15	AV
V	15690.196	62.23	10.12	38.80	44.10	67.05	74	-6.95	PK
V	15690.196	43.23	10.12	38.80	42.70	49.45	54	-4.55	AV
H	4739.109	64.50	6.48	36.37	44.05	63.30	68.2	-4.90	PK
H	4739.109	43.23	6.48	36.37	44.05	42.03	54	-11.97	AV
H	10460.007	50.74	8.47	38.64	44.50	53.35	68.2	-14.85	PK
H	10460.007	40.00	8.47	38.64	44.50	42.61	54	-11.39	AV
H	15690.132	54.96	10.12	38.38	44.10	59.36	74	-14.64	PK
H	15690.132	41.41	10.12	38.38	44.10	45.81	54	-8.19	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode:	TX(5.1G) - 802.11ac-HT80

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
(5210 MHz)-Above 1G									
V	4434.131	63.76	5.94	35.40	44.00	61.10	68.2	-7.10	PK
V	4434.131	43.79	5.94	35.40	44.00	41.13	54	-12.87	AV
V	10420.116	60.90	8.46	39.75	44.50	64.61	68.2	-3.59	PK
V	10420.116	43.99	8.46	39.75	44.50	47.70	54	-6.30	AV
V	15630.133	62.39	10.12	38.80	44.10	67.21	74	-6.79	PK
V	15630.133	43.97	10.12	38.80	42.70	50.19	54	-3.81	AV
H	4434.091	63.56	5.94	35.18	44.00	60.68	68.2	-7.52	PK
H	4434.091	43.01	5.94	35.18	44.00	40.13	54	-13.87	AV
H	10420.062	51.12	8.46	38.71	44.50	53.79	68.2	-14.41	PK
H	10420.062	42.74	8.46	38.71	44.50	45.41	54	-8.59	AV
H	15630.053	52.89	10.12	38.38	44.10	57.29	74	-16.71	PK
H	15630.053	40.10	10.12	38.38	44.10	44.50	54	-9.50	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode:	TX(5.8G) - 802.11a

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5745 MHz)-Above 1G									
V	4679.052	58.25	5.94	35.40	44.00	55.59	74	-18.41	PK
V	4679.052	43.21	5.94	35.40	44.00	40.55	54	-13.45	AV
V	11490.085	55.25	8.46	39.75	44.50	58.96	68.2	-9.24	PK
V	11490.085	43.67	8.46	39.75	44.50	47.38	54	-6.62	AV
V	17235.047	60.48	10.12	38.80	44.10	65.30	68.2	-2.90	PK
V	17235.047	43.76	10.12	38.80	42.70	49.98	54	-4.02	AV
H	4679.190	55.70	5.94	35.18	44.00	52.82	74	-21.18	PK
H	4679.190	43.05	5.94	35.18	44.00	40.17	54	-13.83	AV
H	11490.046	51.67	8.46	38.71	44.50	54.34	68.2	-13.86	PK
H	11490.046	44.64	8.46	38.71	44.50	47.31	54	-6.69	AV
H	17235.015	50.57	10.12	38.38	44.10	54.97	68.2	-13.23	PK
H	17235.015	43.10	10.12	38.38	44.10	47.50	54	-6.50	AV
Middle Channel (5785 MHz)-Above 1G									
V	4592.060	54.59	6.48	36.35	44.05	53.37	74	-20.63	PK
V	4592.060	43.03	6.48	36.35	44.05	41.81	54	-12.19	AV
V	11570.062	58.54	8.47	37.88	44.51	60.38	68.2	-7.82	PK
V	11570.062	43.95	8.47	37.88	44.51	45.79	54	-8.21	AV
V	17355.036	59.24	10.12	38.80	44.10	64.06	68.2	-4.14	PK
V	17355.036	39.79	10.12	38.80	42.70	46.01	54	-7.99	AV
H	4592.198	59.96	6.48	36.37	44.05	58.76	74	-15.24	PK
H	4592.198	43.82	6.48	36.37	44.05	42.62	54	-11.38	AV
H	11570.181	53.24	8.47	38.64	44.50	55.85	68.2	-12.35	PK
H	11570.181	41.26	8.47	38.64	44.50	43.87	54	-10.13	AV
H	17355.090	54.13	10.12	38.38	44.10	58.53	68.2	-9.67	PK
H	17355.090	43.86	10.12	38.38	44.10	48.26	54	-5.74	AV
High Channel (5825 MHz)-Above 1G									
V	6039.043	56.15	7.10	37.24	43.50	56.99	68.2	-11.21	PK
V	6039.043	43.35	7.10	37.24	43.50	44.19	54	-9.81	AV
V	11650.166	62.91	8.46	37.68	44.50	64.55	74	-9.45	PK
V	11650.166	43.73	8.46	37.68	44.50	45.37	54	-8.63	AV
V	17475.094	53.17	10.12	38.80	44.10	57.99	68.2	-10.21	PK
V	17475.094	43.83	10.12	38.80	42.70	50.05	54	-3.95	AV
H	6039.130	54.17	7.10	37.24	43.50	55.01	68.2	-13.19	PK
H	6039.130	43.69	7.10	37.24	43.50	44.53	54	-9.47	AV
H	11650.149	50.49	8.46	38.57	44.50	53.02	74	-20.98	PK
H	11650.149	41.30	8.46	38.57	44.50	43.83	54	-10.17	AV
H	17475.116	51.08	10.12	38.38	44.10	55.48	68.2	-12.72	PK
H	17475.116	42.26	10.12	38.38	44.10	46.66	54	-7.34	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode:	TX(5.8G) - 802.11n-HT20

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5745 MHz)-Above 1G									
V	4679.015	58.59	5.94	35.40	44.00	55.93	74	-18.07	PK
V	4679.015	43.60	5.94	35.40	44.00	40.94	54	-13.06	AV
V	11490.028	53.11	8.46	39.75	44.50	56.82	68.2	-11.38	PK
V	11490.028	43.63	8.46	39.75	44.50	47.34	54	-6.66	AV
V	17235.082	59.81	10.12	38.80	44.10	64.63	68.2	-3.57	PK
V	17235.082	43.53	10.12	38.80	42.70	49.75	54	-4.25	AV
H	4679.037	59.81	5.94	35.18	44.00	56.93	74	-17.07	PK
H	4679.037	43.27	5.94	35.18	44.00	40.39	54	-13.61	AV
H	11490.160	50.38	8.46	38.71	44.50	53.05	68.2	-15.15	PK
H	11490.160	42.10	8.46	38.71	44.50	44.77	54	-9.23	AV
H	17235.008	50.87	10.12	38.38	44.10	55.27	68.2	-12.93	PK
H	17235.008	42.84	10.12	38.38	44.10	47.24	54	-6.76	AV
Middle Channel (5785 MHz)-Above 1G									
V	4592.062	61.99	6.48	36.35	44.05	60.77	74	-13.23	PK
V	4592.062	43.28	6.48	36.35	44.05	42.06	54	-11.94	AV
V	11570.074	55.14	8.47	37.88	44.51	56.98	68.2	-11.22	PK
V	11570.074	43.94	8.47	37.88	44.51	45.78	54	-8.22	AV
V	17355.196	61.71	10.12	38.80	44.10	66.53	68.2	-1.67	PK
V	17355.196	43.42	10.12	38.80	42.70	49.64	54	-4.36	AV
H	4592.030	57.61	6.48	36.37	44.05	56.41	74	-17.59	PK
H	4592.030	43.27	6.48	36.37	44.05	42.07	54	-11.93	AV
H	11570.070	54.42	8.47	38.64	44.50	57.03	68.2	-11.17	PK
H	11570.070	43.25	8.47	38.64	44.50	45.86	54	-8.14	AV
H	17355.085	50.93	10.12	38.38	44.10	55.33	68.2	-12.87	PK
H	17355.085	44.55	10.12	38.38	44.10	48.95	54	-5.05	AV
High Channel (5825 MHz)-Above 1G									
V	6039.077	55.84	7.10	37.24	43.50	56.68	68.2	-11.52	PK
V	6039.077	43.68	7.10	37.24	43.50	44.52	54	-9.48	AV
V	11650.112	56.58	8.46	37.68	44.50	58.22	74	-15.78	PK
V	11650.112	43.60	8.46	37.68	44.50	45.24	54	-8.76	AV
V	17475.133	56.47	10.12	38.80	44.10	61.29	68.2	-6.91	PK
V	17475.133	43.48	10.12	38.80	42.70	49.70	54	-4.30	AV
H	6039.004	55.00	7.10	37.24	43.50	55.84	68.2	-12.36	PK
H	6039.004	43.36	7.10	37.24	43.50	44.20	54	-9.80	AV
H	11650.169	51.76	8.46	38.57	44.50	54.29	74	-19.71	PK
H	11650.169	41.32	8.46	38.57	44.50	43.85	54	-10.15	AV
H	17475.185	54.78	10.12	38.38	44.10	59.18	68.2	-9.02	PK
H	17475.185	44.09	10.12	38.38	44.10	48.49	54	-5.51	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode:	TX(5.8G) - 802.11n-HT40

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5755 MHz)-Above 1G									
V	4679.057	58.10	5.94	35.40	44.00	55.44	74	-18.56	PK
V	4679.057	43.92	5.94	35.40	44.00	41.26	54	-12.74	AV
V	11510.198	55.44	8.46	39.75	44.50	59.15	74	-14.85	PK
V	11510.198	43.68	8.46	39.75	44.50	47.39	54	-6.61	AV
V	17265.079	58.52	10.12	38.80	44.10	63.34	68.2	-4.86	PK
V	17265.079	43.77	10.12	38.80	42.70	49.99	54	-4.01	AV
H	4679.151	60.74	5.94	35.18	44.00	57.86	74	-16.14	PK
H	4679.151	43.57	5.94	35.18	44.00	40.69	54	-13.31	AV
H	11510.170	51.02	8.46	38.71	44.50	53.69	74	-20.31	PK
H	11510.170	44.49	8.46	38.71	44.50	47.16	54	-6.84	AV
H	17265.077	54.86	10.12	38.38	44.10	59.26	68.2	-8.94	PK
H	17265.077	42.16	10.12	38.38	44.10	46.56	54	-7.44	AV
High Channel (5795 MHz)-Above 1G									
V	6039.179	57.49	6.48	36.35	44.05	56.27	68.2	-11.93	PK
V	6039.179	43.79	6.48	36.35	44.05	42.57	54	-11.43	AV
V	11590.157	55.20	8.47	37.88	44.51	57.04	74	-16.96	PK
V	11590.157	43.92	8.47	37.88	44.51	45.76	54	-8.24	AV
V	17385.000	55.15	10.12	38.80	44.10	59.97	68.2	-8.23	PK
V	17385.000	41.97	10.12	38.80	42.70	48.19	54	-5.81	AV
H	6039.080	56.74	6.48	36.37	44.05	55.54	68.2	-12.66	PK
H	6039.080	43.14	6.48	36.37	44.05	41.94	54	-12.06	AV
H	11590.111	54.52	8.47	38.64	44.50	57.13	74	-16.87	PK
H	11590.111	44.45	8.47	38.64	44.50	47.06	54	-6.94	AV
H	17385.151	54.03	10.12	38.38	44.10	58.43	68.2	-9.77	PK
H	17385.151	40.60	10.12	38.38	44.10	45.00	54	-9.00	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode:	TX(5.8G) - 802.11ac-HT20

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5745 MHz)-Above 1G									
V	4679.016	57.77	5.94	35.40	44.00	55.11	74	-18.89	PK
V	4679.016	43.43	5.94	35.40	44.00	40.77	54	-13.23	AV
V	11490.123	56.82	8.46	39.75	44.50	60.53	68.2	-7.67	PK
V	11490.123	43.76	8.46	39.75	44.50	47.47	54	-6.53	AV
V	17235.014	58.93	10.12	38.80	44.10	63.75	68.2	-4.45	PK
V	17235.014	43.92	10.12	38.80	42.70	50.14	54	-3.86	AV
H	4679.118	60.00	5.94	35.18	44.00	57.12	74	-16.88	PK
H	4679.118	43.16	5.94	35.18	44.00	40.28	54	-13.72	AV
H	11490.174	47.17	8.46	38.71	44.50	49.84	68.2	-18.36	PK
H	11490.174	41.68	8.46	38.71	44.50	44.35	54	-9.65	AV
H	17235.043	51.79	10.12	38.38	44.10	56.19	68.2	-12.01	PK
H	17235.043	40.01	10.12	38.38	44.10	44.41	54	-9.59	AV
Middle Channel (5785 MHz)-Above 1G									
V	4592.063	62.90	6.48	36.35	44.05	61.68	74	-12.32	PK
V	4592.063	43.90	6.48	36.35	44.05	42.68	54	-11.32	AV
V	11570.178	57.54	8.47	37.88	44.51	59.38	68.2	-8.82	PK
V	11570.178	43.27	8.47	37.88	44.51	45.11	54	-8.89	AV
V	17355.137	57.30	10.12	38.80	44.10	62.12	68.2	-6.08	PK
V	17355.137	43.09	10.12	38.80	42.70	49.31	54	-4.69	AV
H	4592.040	56.19	6.48	36.37	44.05	54.99	74	-19.01	PK
H	4592.040	43.54	6.48	36.37	44.05	42.34	54	-11.66	AV
H	11570.068	53.75	8.47	38.64	44.50	56.36	68.2	-11.84	PK
H	11570.068	44.18	8.47	38.64	44.50	46.79	54	-7.21	AV
H	17355.045	50.34	10.12	38.38	44.10	54.74	68.2	-13.46	PK
H	17355.045	44.98	10.12	38.38	44.10	49.38	54	-4.62	AV
High Channel (5825 MHz)-Above 1G									
V	6039.041	56.64	7.10	37.24	43.50	57.48	68.2	-10.72	PK
V	6039.041	43.98	7.10	37.24	43.50	44.82	54	-9.18	AV
V	11650.005	60.07	8.46	37.68	44.50	61.71	74	-12.29	PK
V	11650.005	43.02	8.46	37.68	44.50	44.66	54	-9.34	AV
V	17475.085	57.11	10.12	38.80	44.10	61.93	68.2	-6.27	PK
V	17475.085	43.94	10.12	38.80	42.70	50.16	54	-3.84	AV
H	6039.066	58.58	7.10	37.24	43.50	59.42	68.2	-8.78	PK
H	6039.066	43.63	7.10	37.24	43.50	44.47	54	-9.53	AV
H	11650.095	53.53	8.46	38.57	44.50	56.06	74	-17.94	PK
H	11650.095	40.98	8.46	38.57	44.50	43.51	54	-10.49	AV
H	17475.072	51.88	10.12	38.38	44.10	56.28	68.2	-11.92	PK
H	17475.072	41.31	10.12	38.38	44.10	45.71	54	-8.29	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode:	TX(5.8G) - 802.11ac-HT40

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5755 MHz)-Above 1G									
V	4679.091	60.61	5.94	35.40	44.00	57.95	74	-16.05	PK
V	4679.091	43.52	5.94	35.40	44.00	40.86	54	-13.14	AV
V	11510.180	55.92	8.46	39.75	44.50	59.63	74	-14.37	PK
V	11510.180	43.81	8.46	39.75	44.50	47.52	54	-6.48	AV
V	17265.176	58.36	10.12	38.80	44.10	63.18	68.2	-5.02	PK
V	17265.176	43.99	10.12	38.80	42.70	50.21	54	-3.79	AV
H	4679.074	56.60	5.94	35.18	44.00	53.72	74	-20.28	PK
H	4679.074	43.01	5.94	35.18	44.00	40.13	54	-13.87	AV
H	11510.032	50.15	8.46	38.71	44.50	52.82	74	-21.18	PK
H	11510.032	40.59	8.46	38.71	44.50	43.26	54	-10.74	AV
H	17265.171	50.38	10.12	38.38	44.10	54.78	68.2	-13.42	PK
H	17265.171	44.87	10.12	38.38	44.10	49.27	54	-4.73	AV
High Channel (5795 MHz)-Above 1G									
V	6039.174	59.60	6.48	36.35	44.05	58.38	68.2	-9.82	PK
V	6039.174	43.75	6.48	36.35	44.05	42.53	54	-11.47	AV
V	11590.007	57.72	8.47	37.88	44.51	59.56	74	-14.44	PK
V	11590.007	43.90	8.47	37.88	44.51	45.74	54	-8.26	AV
V	17385.145	55.05	10.12	38.80	44.10	59.87	68.2	-8.33	PK
V	17385.145	41.13	10.12	38.80	42.70	47.35	54	-6.65	AV
H	6039.140	57.30	6.48	36.37	44.05	56.10	68.2	-12.10	PK
H	6039.140	43.16	6.48	36.37	44.05	41.96	54	-12.04	AV
H	11590.063	52.77	8.47	38.64	44.50	55.38	74	-18.62	PK
H	11590.063	40.82	8.47	38.64	44.50	43.43	54	-10.57	AV
H	17385.059	50.60	10.12	38.38	44.10	55.00	68.2	-13.20	PK
H	17385.059	44.67	10.12	38.38	44.10	49.07	54	-4.93	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

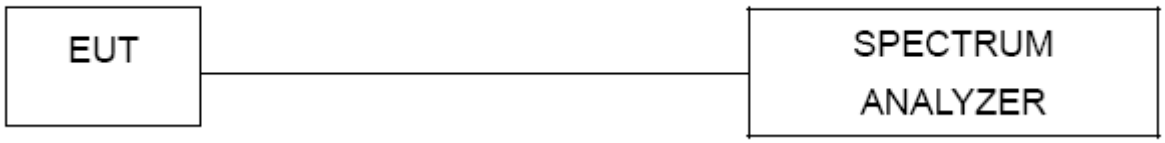
Test Mode:	TX(5.8G) - 802.11ac-HT80

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
(5775 MHz)-Above 1G									
V	4679.142	56.82	5.94	35.40	44.00	54.16	74	-19.84	PK
V	4679.142	43.44	5.94	35.40	44.00	40.78	54	-13.22	AV
V	11550.185	58.46	8.46	39.75	44.50	62.17	74	-11.83	PK
V	11550.185	43.24	8.46	39.75	44.50	46.95	54	-7.05	AV
V	17325.107	59.43	10.12	38.80	44.10	64.25	68.2	-3.95	PK
V	17325.107	41.31	10.12	38.80	42.70	47.53	54	-6.47	AV
H	4679.108	55.07	5.94	35.18	44.00	52.19	74	-21.81	PK
H	4679.108	43.60	5.94	35.18	44.00	40.72	54	-13.28	AV
H	11550.152	54.91	8.46	38.71	44.50	57.58	74	-16.42	PK
H	11550.152	43.38	8.46	38.71	44.50	46.05	54	-7.95	AV
H	17325.008	51.90	10.12	38.38	44.10	56.30	68.2	-11.90	PK
H	17325.008	40.33	10.12	38.38	44.10	44.73	54	-9.27	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

8. Power Spectral Density Test

8.1 Block Diagram Of Test Setup



8.2 Limit

For the band 5.15-5.25 GHz,
(i)For an outdoor Wifi Repeater operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor Wifi Repeater operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(iii) For fixed point-to-point Wifi Repeaters operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional
gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
For the band 5.725-5.85 GHz

(3)For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

8.3 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 RBW ≥ 1/T, where T is defined in section II.B.I.a).
b) Set VBW ≥ 3 RBW.
c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10log(500kHz/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 10log(1MHz/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.

8.4 EUT operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

8.5 Test Result

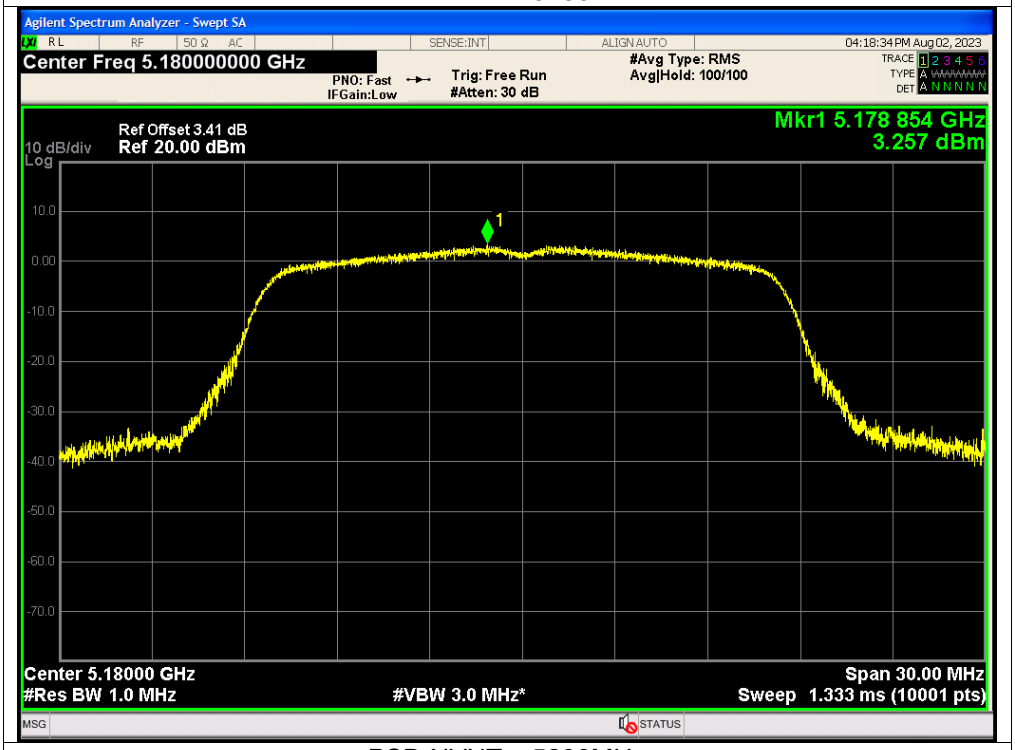
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC120V/60Hz
Test Mode:	(5180-5240MHz); (5745-5825MHz)		

Condition	Mode	Frequency (MHz)	Conducted PSD (dBm)	Limit (dBm)	Verdict
NVNT	a	5180	3.26	11	Pass
NVNT	a	5200	3.28	11	Pass
NVNT	a	5240	3.34	11	Pass
NVNT	n20	5180	1.53	11	Pass
NVNT	n20	5200	0.62	11	Pass
NVNT	n20	5240	0.86	11	Pass
NVNT	n40	5190	-3.25	11	Pass
NVNT	n40	5230	-4.03	11	Pass
NVNT	ac20	5180	0.50	11	Pass
NVNT	ac20	5200	0.85	11	Pass
NVNT	ac20	5240	1.10	11	Pass
NVNT	ac40	5190	-4.44	11	Pass
NVNT	ac40	5230	-4.12	11	Pass
NVNT	ac80	5210	-9.12	11	Pass

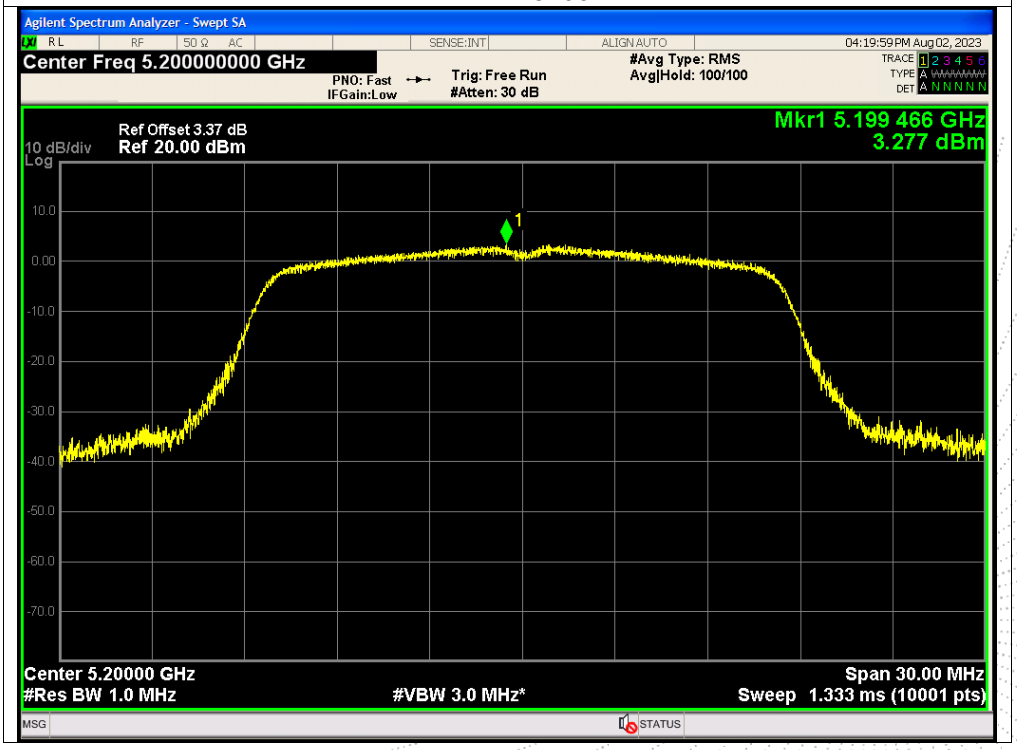
Condition	Mode	Frequency (MHz)	Conducted PSD (dBm)	Limit (dBm)	Verdict
NVNT	a	5745	-2.14	30	Pass
NVNT	a	5785	-1.77	30	Pass
NVNT	a	5825	-2.09	30	Pass
NVNT	n20	5745	-4.20	30	Pass
NVNT	n20	5785	-3.69	30	Pass
NVNT	n20	5825	-2.66	30	Pass
NVNT	n40	5755	-6.98	30	Pass
NVNT	n40	5795	-6.49	30	Pass
NVNT	ac20	5745	-3.73	30	Pass
NVNT	ac20	5785	-3.51	30	Pass
NVNT	ac20	5825	-3.43	30	Pass
NVNT	ac40	5755	-6.93	30	Pass
NVNT	ac40	5795	-6.99	30	Pass
NVNT	ac80	5775	-11.41	30	Pass

Test Graphs

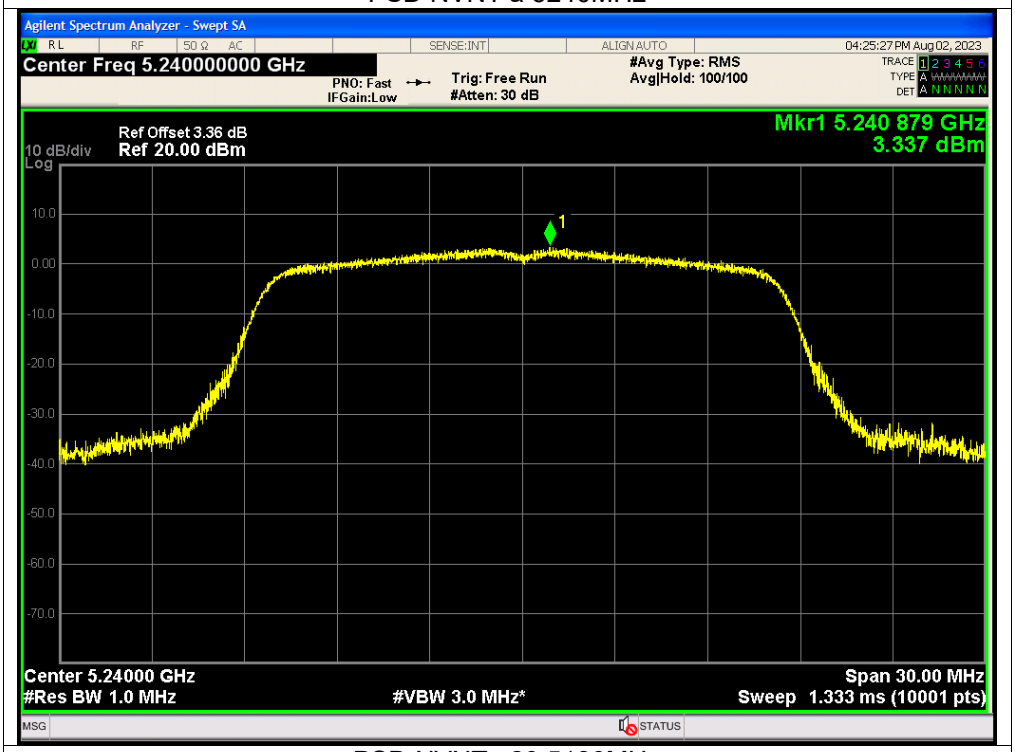
PSD NVNT a 5180MHz



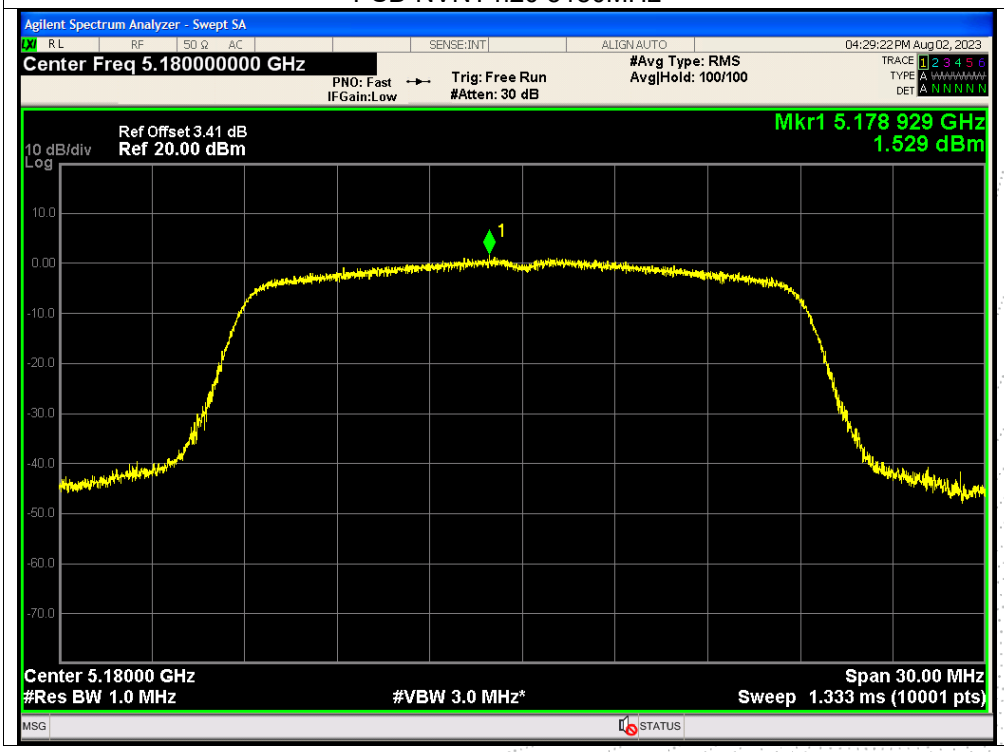
PSD NVNT a 5200MHz



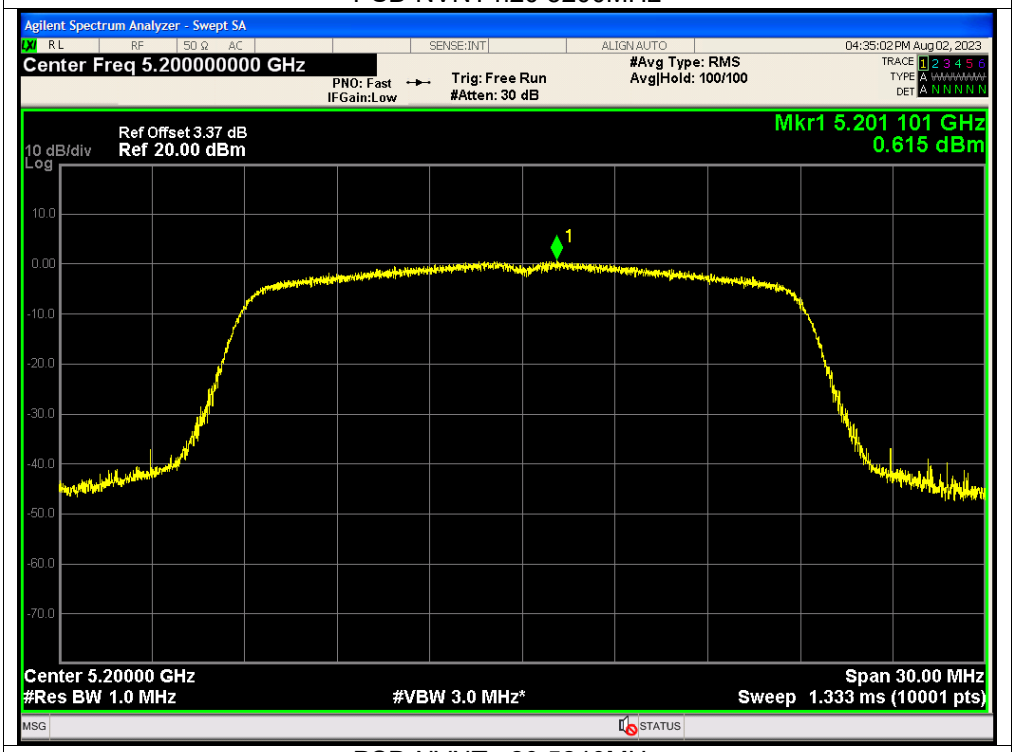
PSD NVNT a 5240MHz



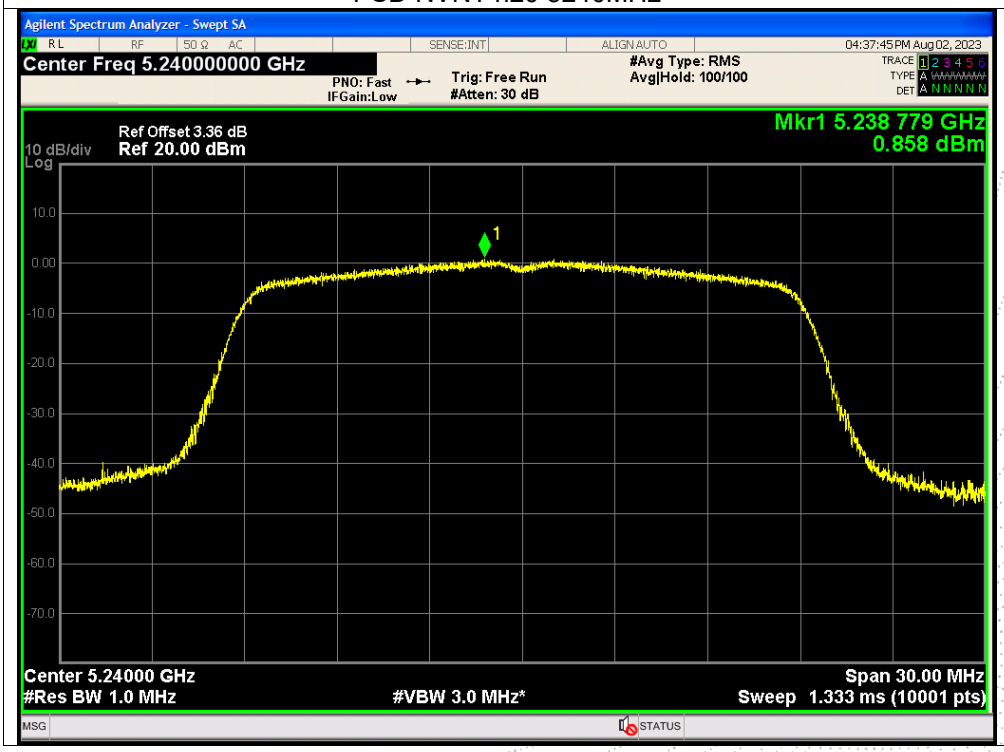
PSD NVNT n20 5180MHz



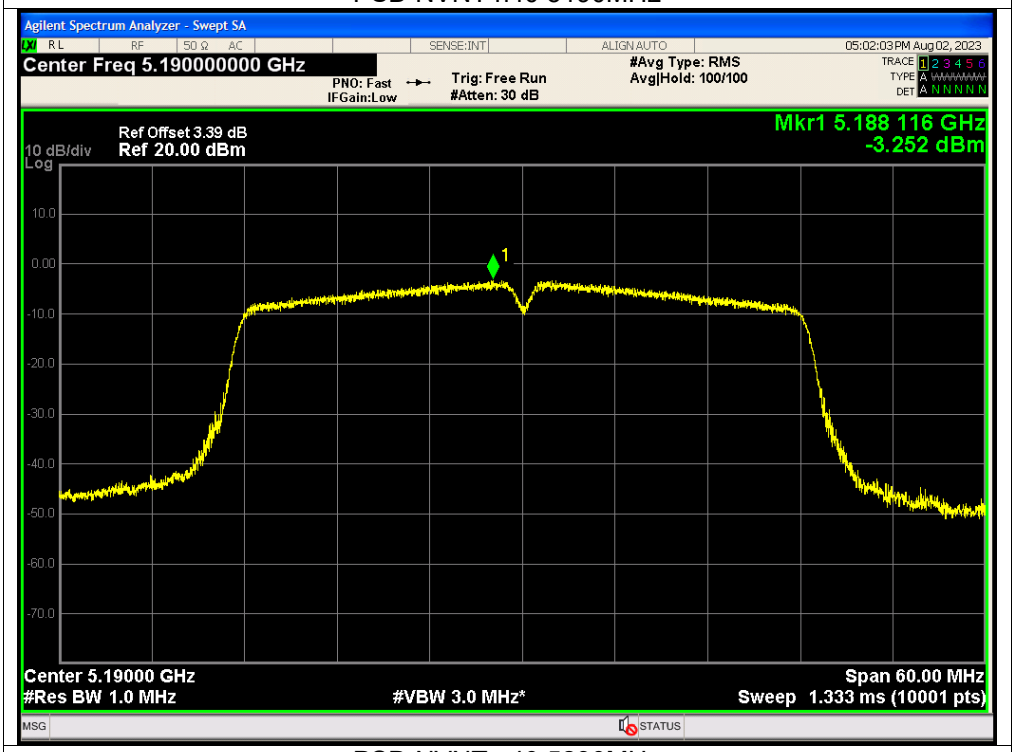
PSD NVNT n20 5200MHz



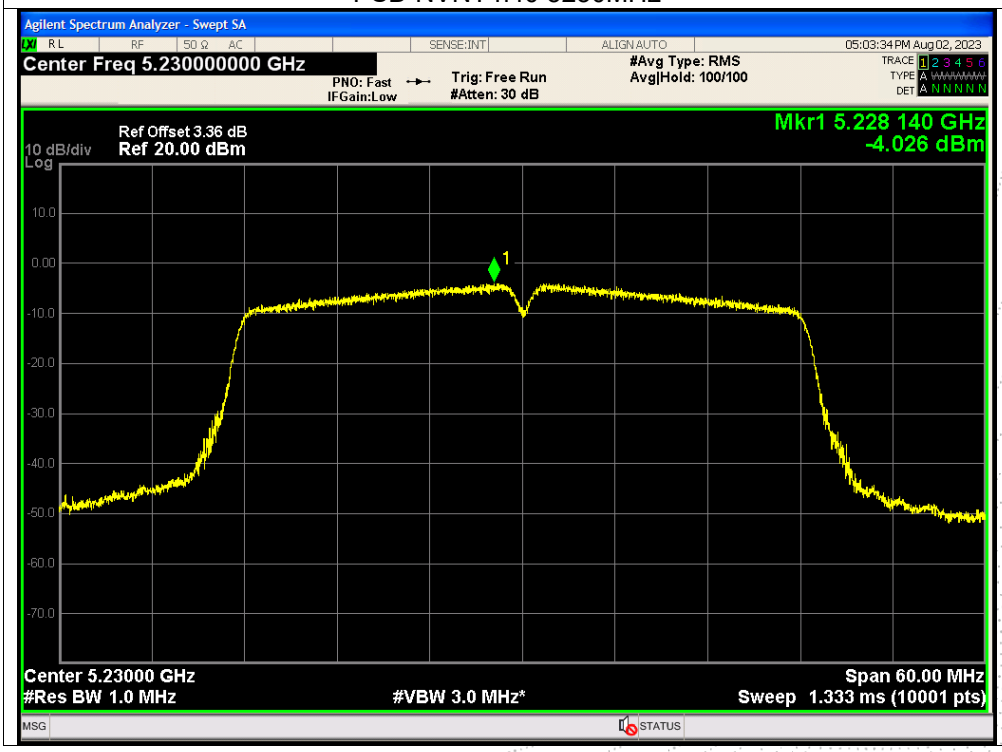
PSD NVNT n20 5240MHz



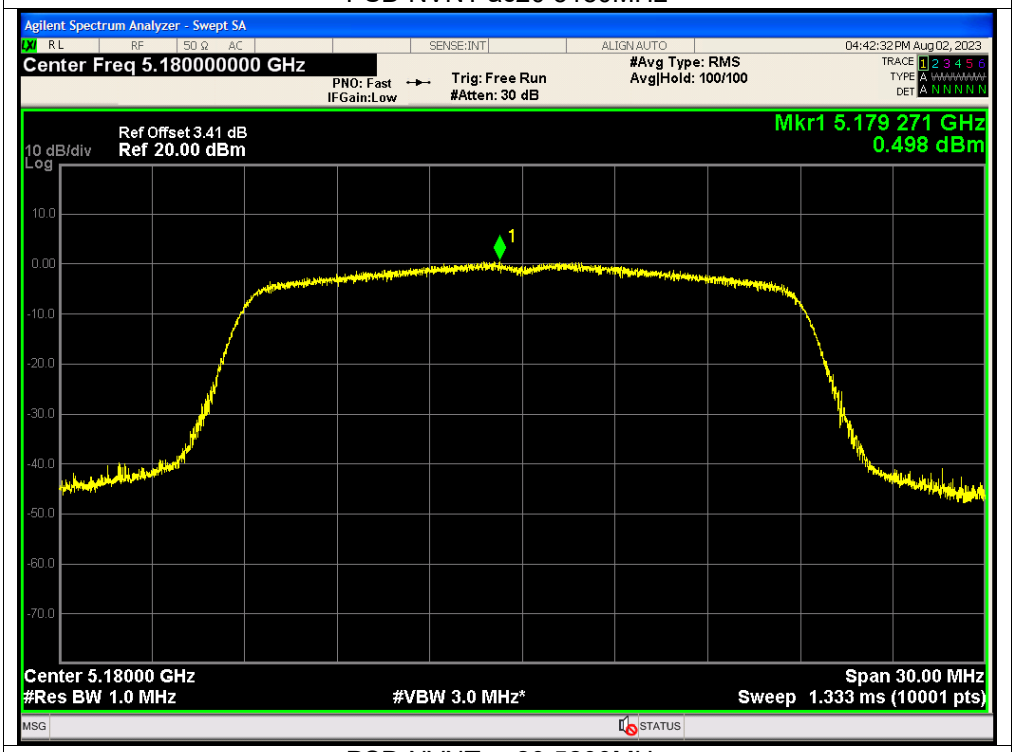
PSD NVNT n40 5190MHz



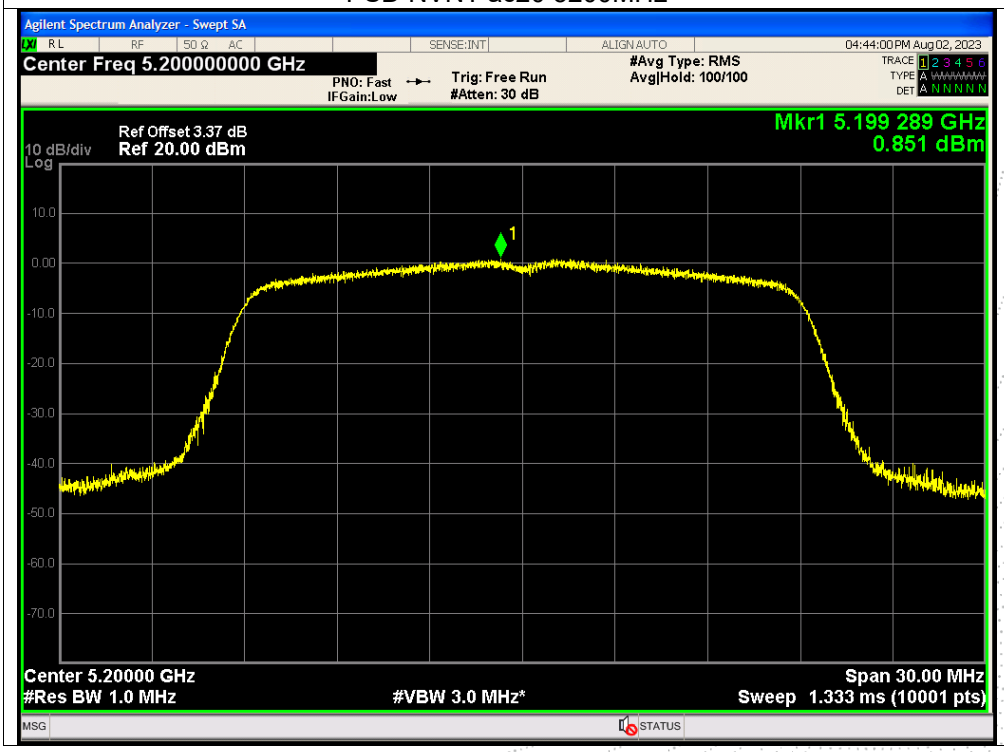
PSD NVNT n40 5230MHz



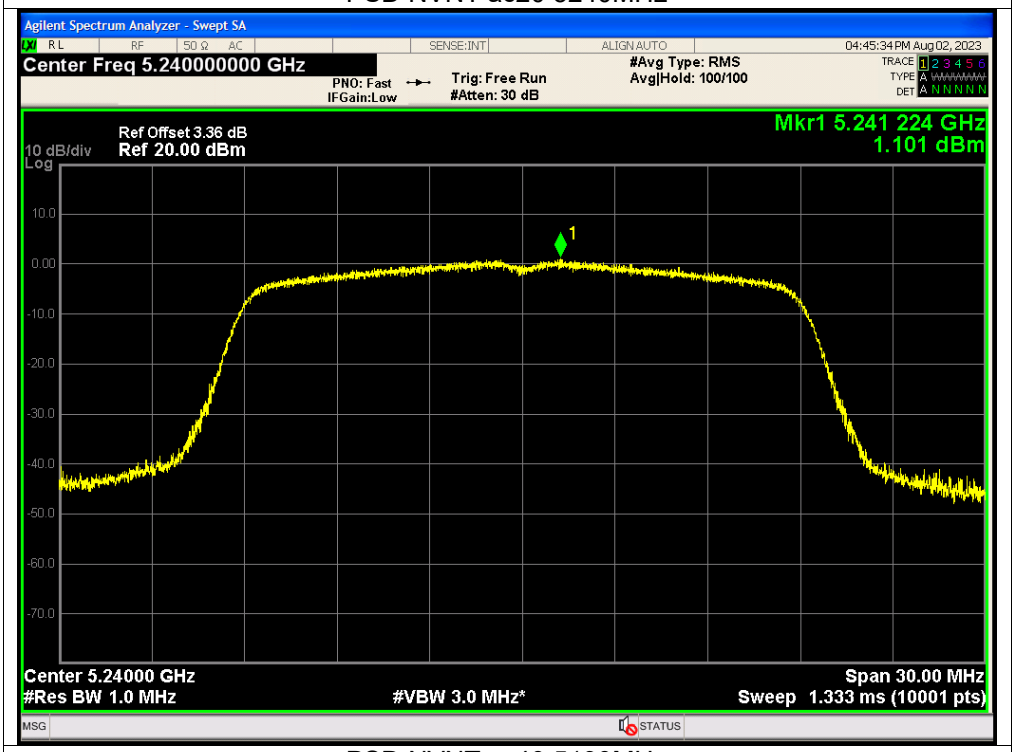
PSD NVNT ac20 5180MHz



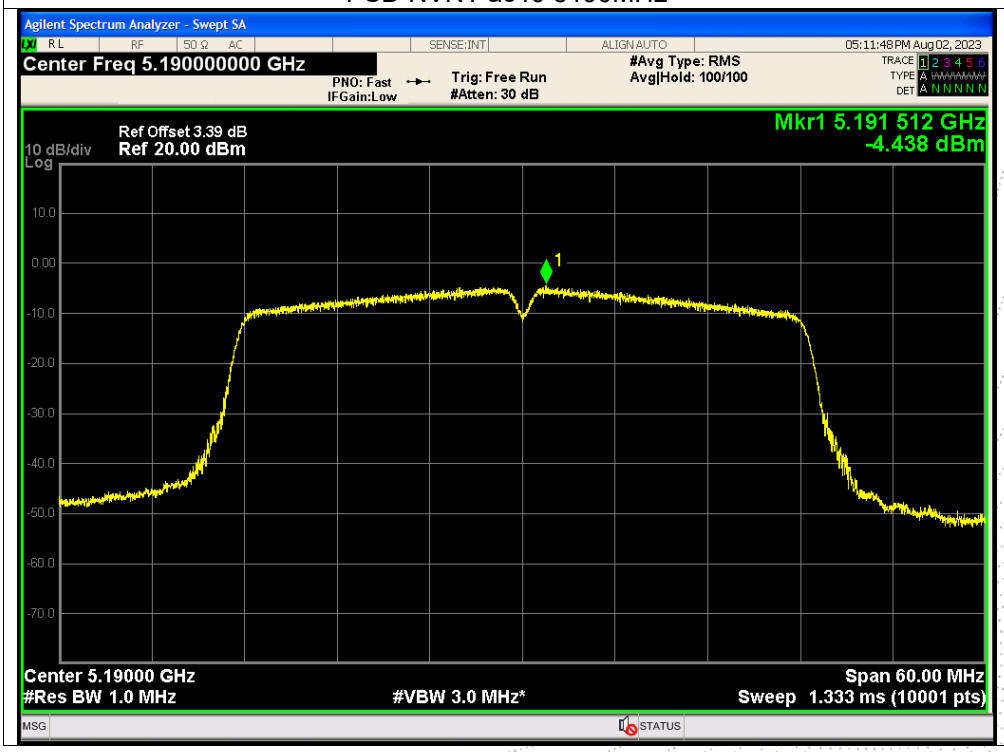
PSD NVNT ac20 5200MHz



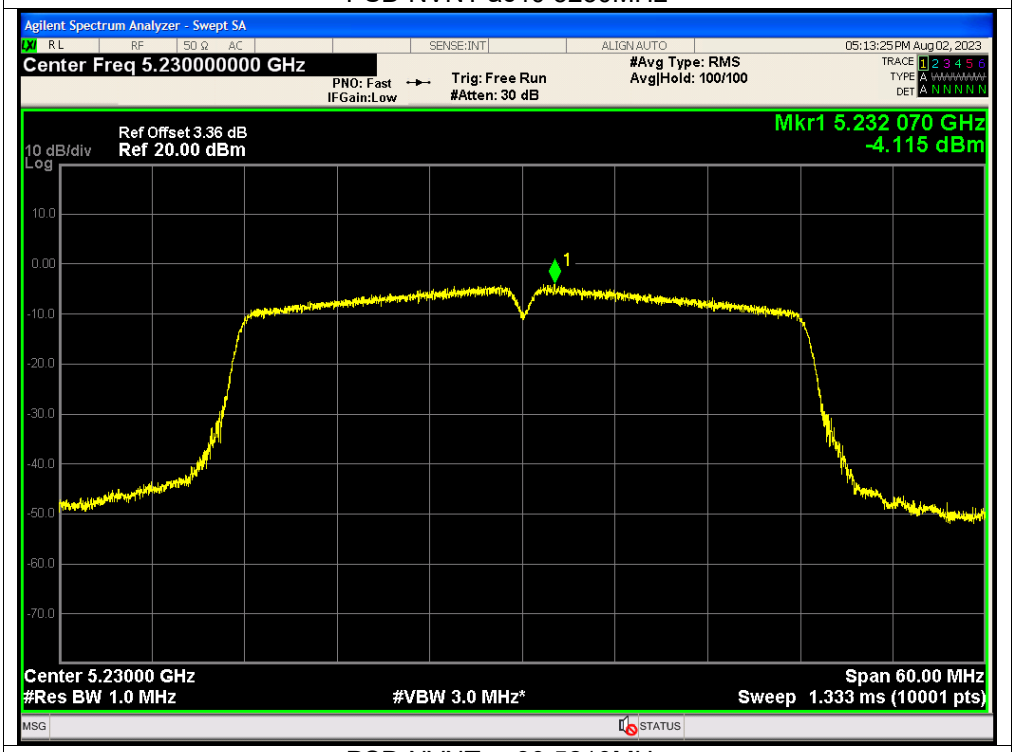
PSD NVNT ac20 5240MHz



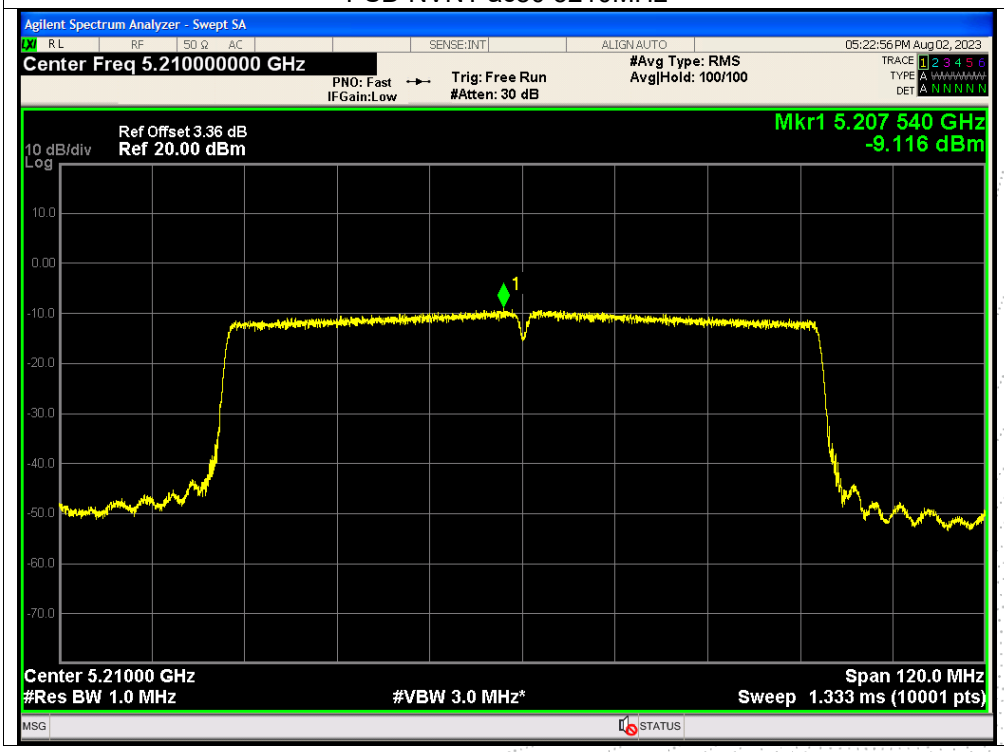
PSD NVNT ac40 5190MHz



PSD NVNT ac40 5230MHz

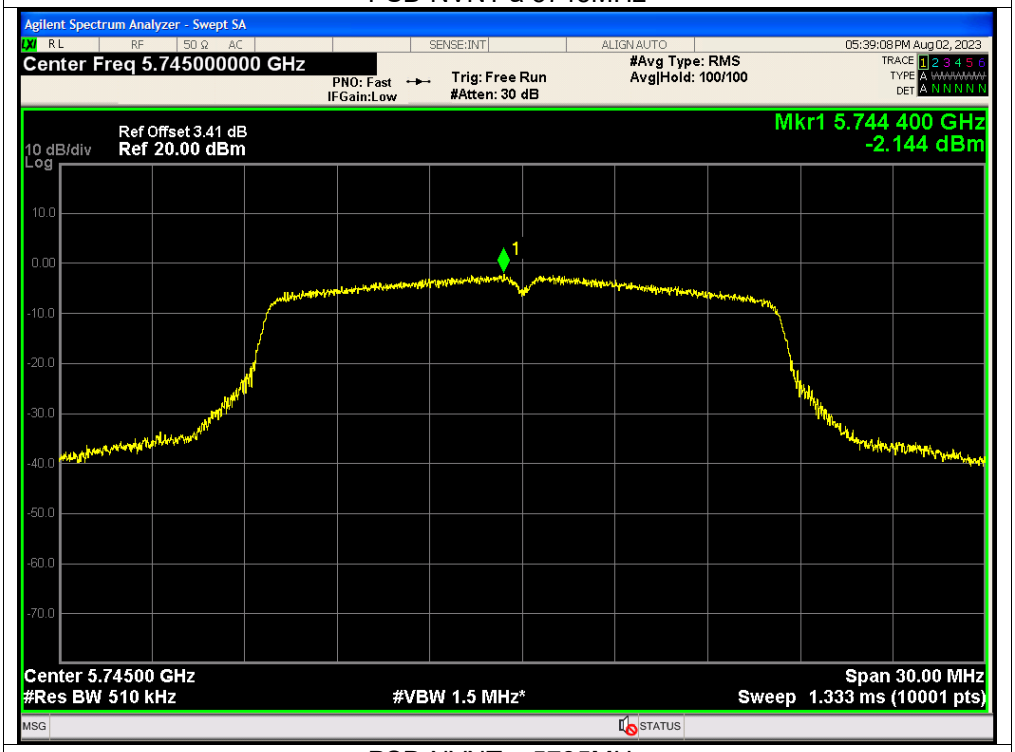


PSD NVNT ac80 5210MHz

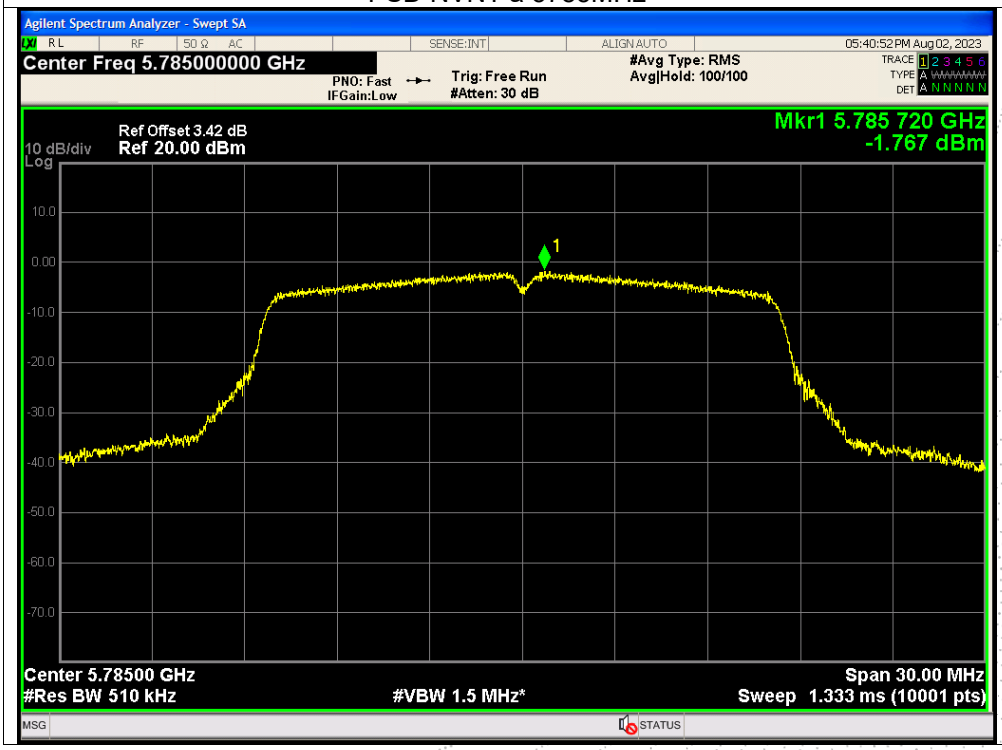


Test Graphs

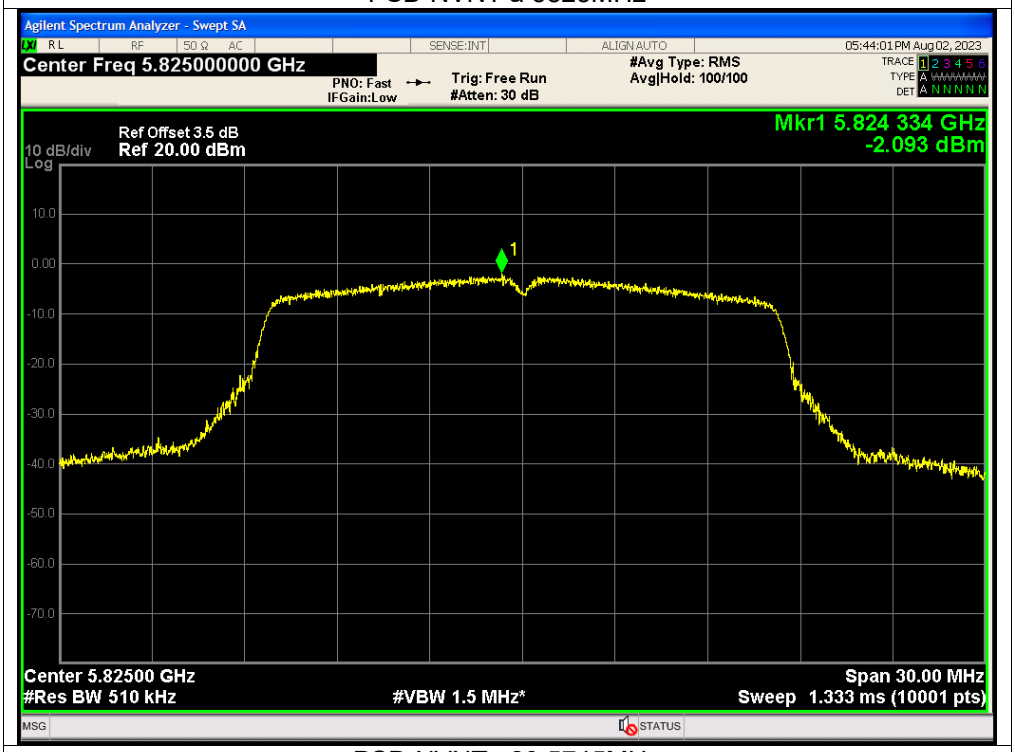
PSD NVNT a 5745MHz



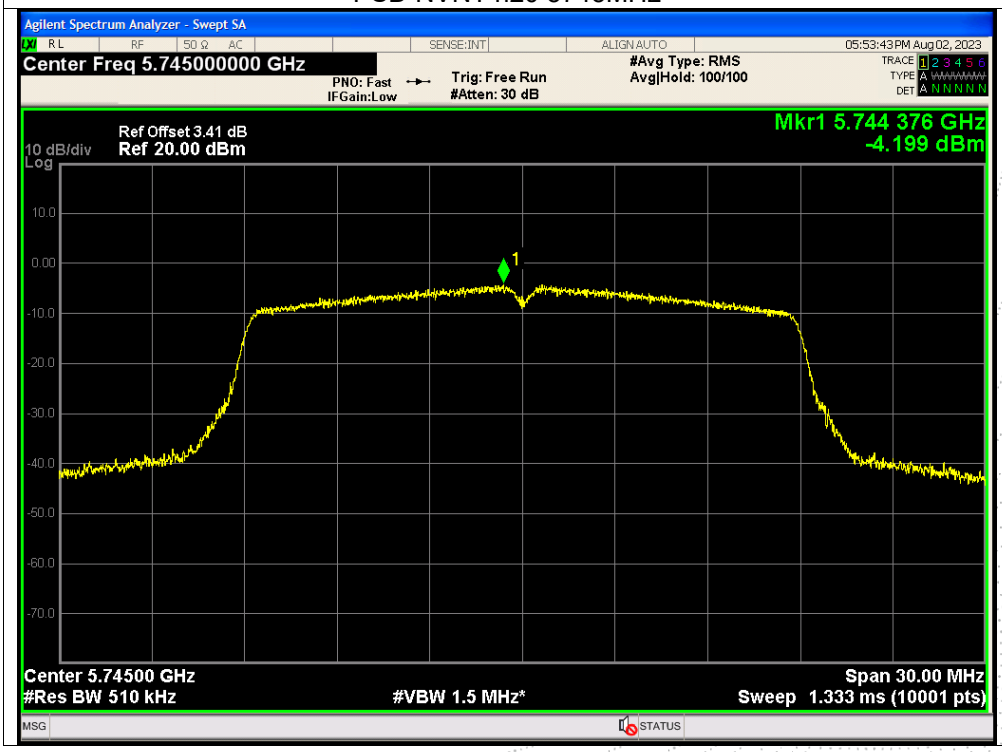
PSD NVNT a 5785MHz



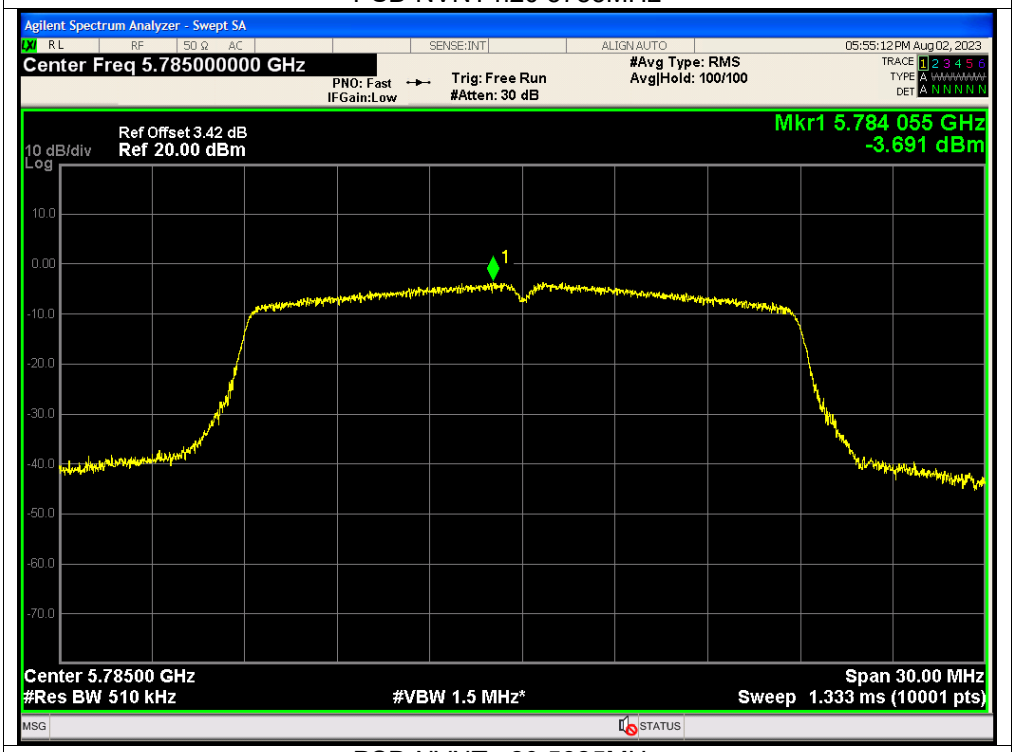
PSD NVNT a 5825MHz



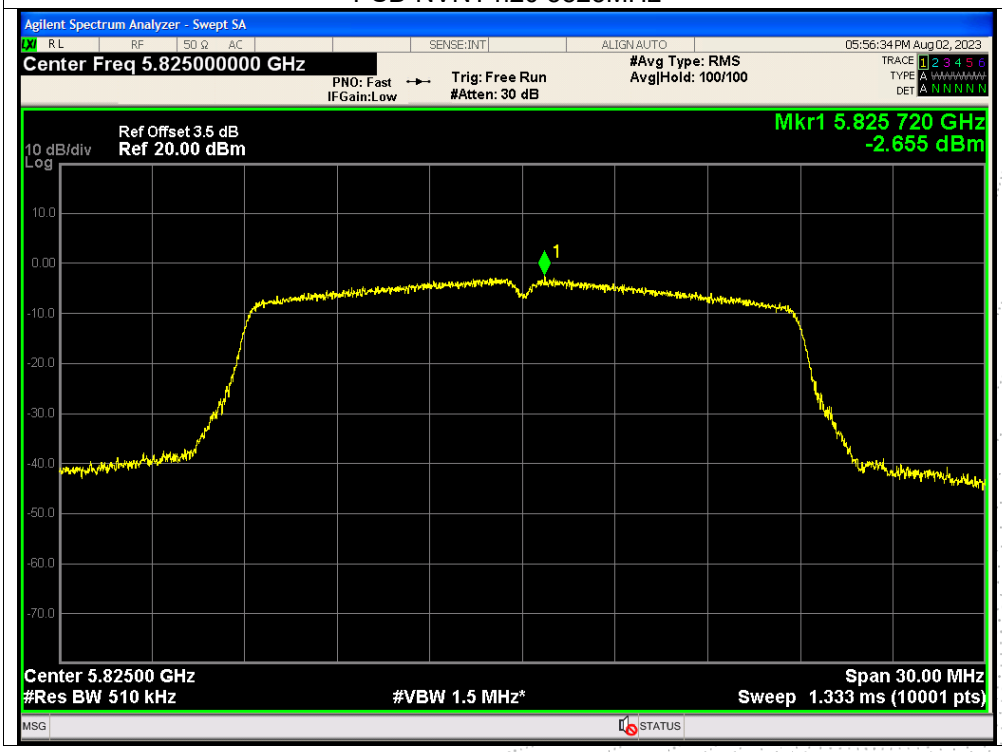
PSD NVNT n20 5745MHz



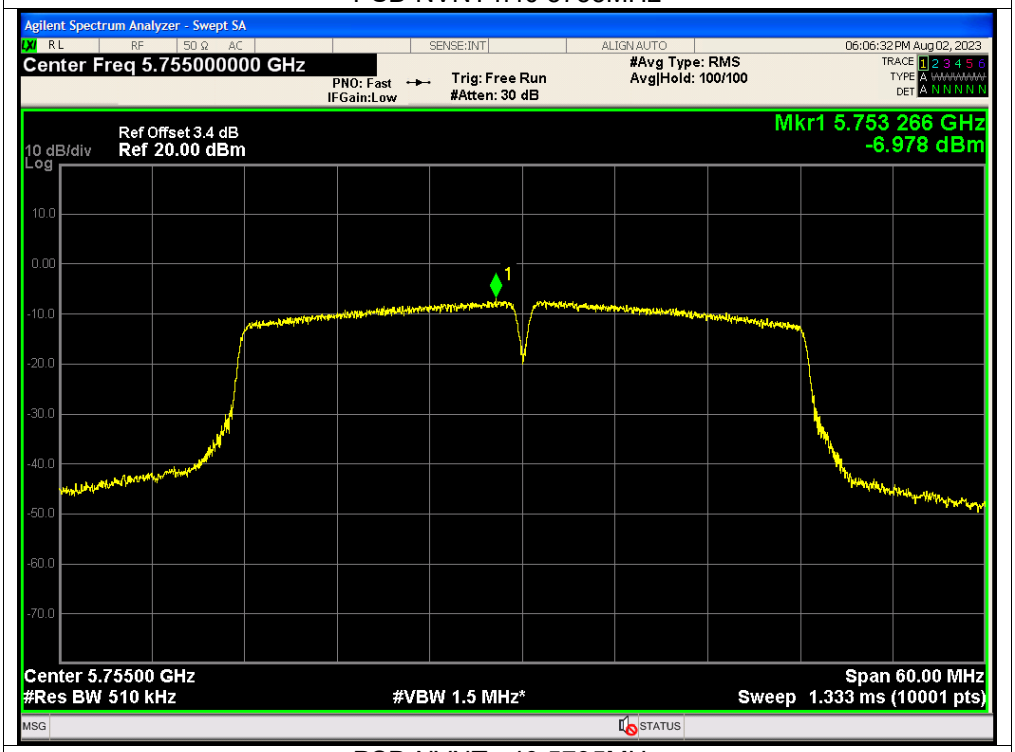
PSD NVNT n20 5785MHz



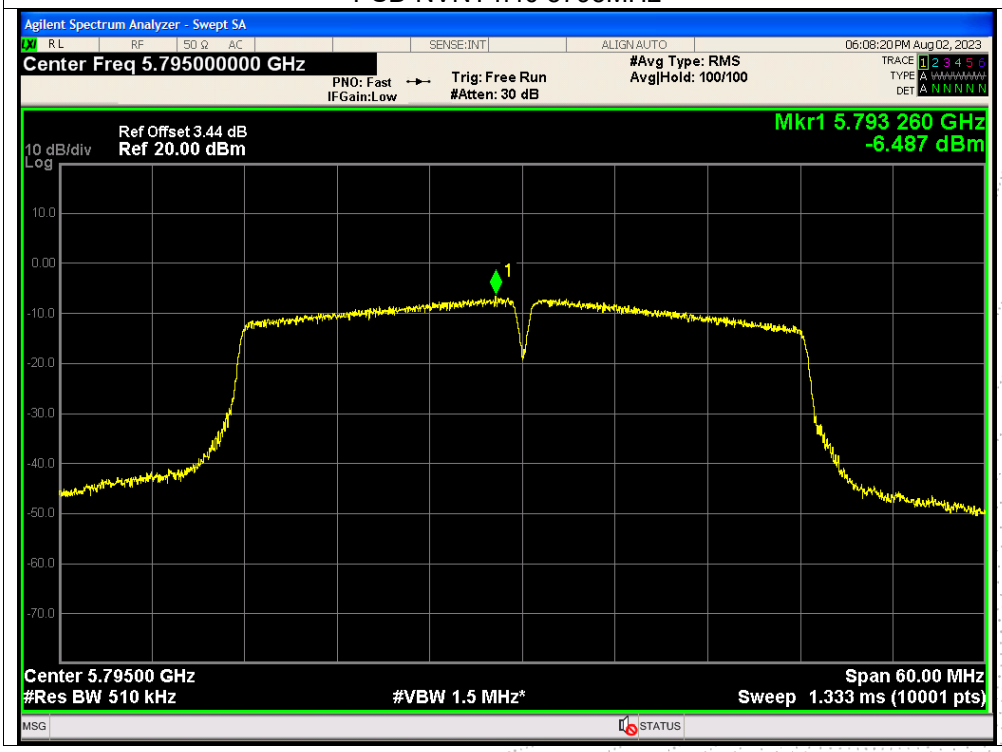
PSD NVNT n20 5825MHz



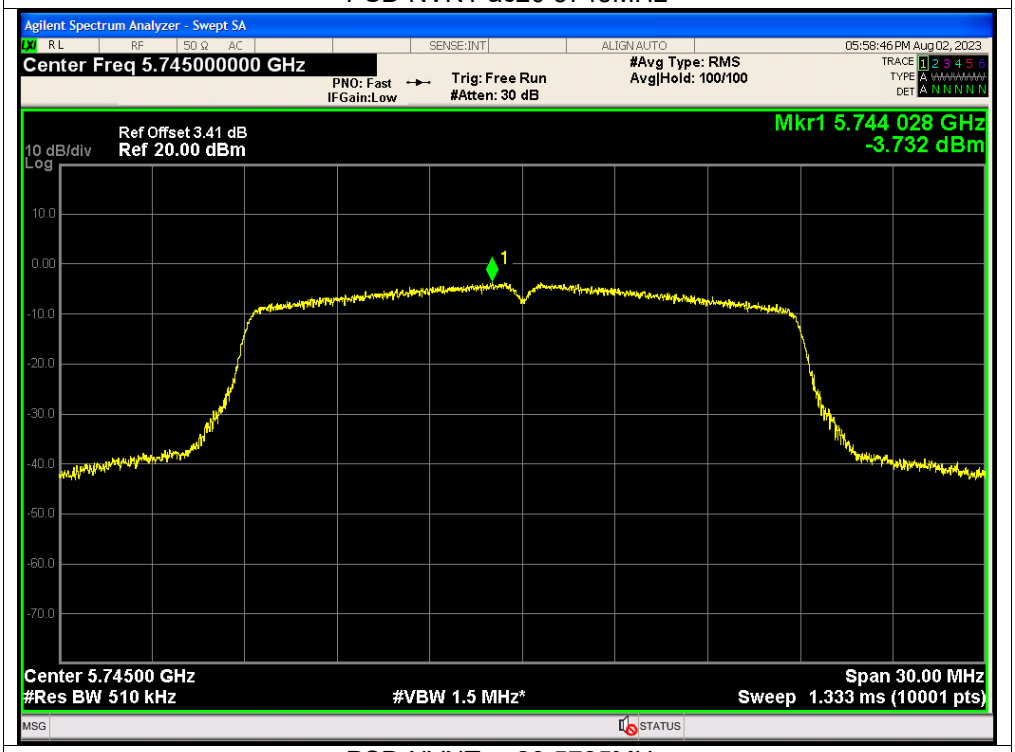
PSD NVNT n40 5755MHz



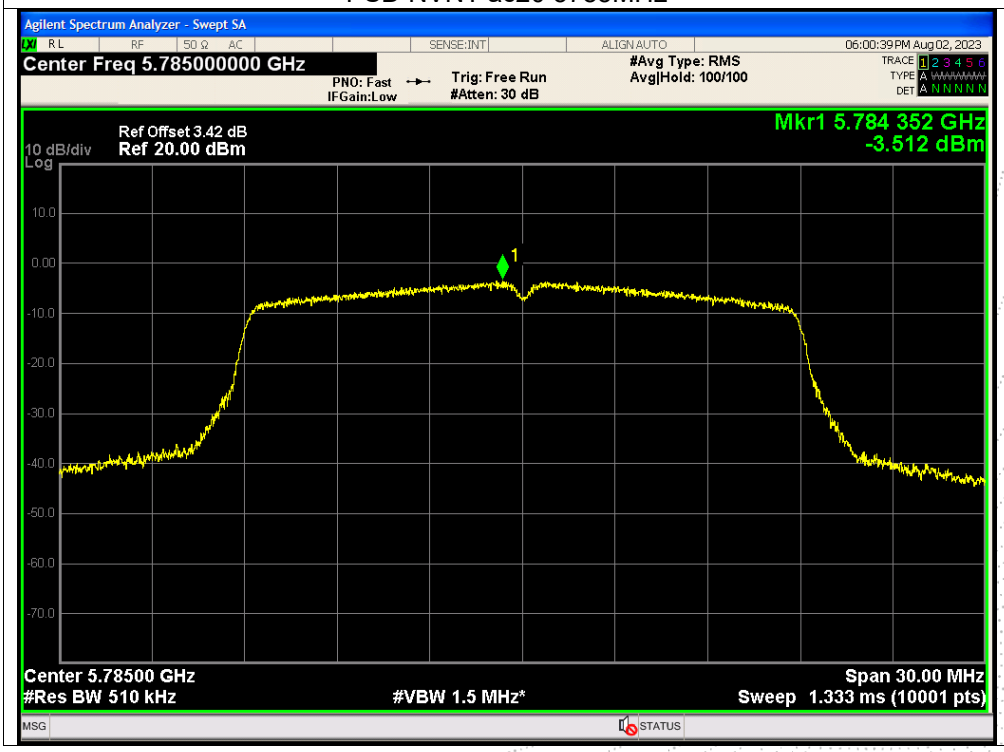
PSD NVNT n40 5795MHz



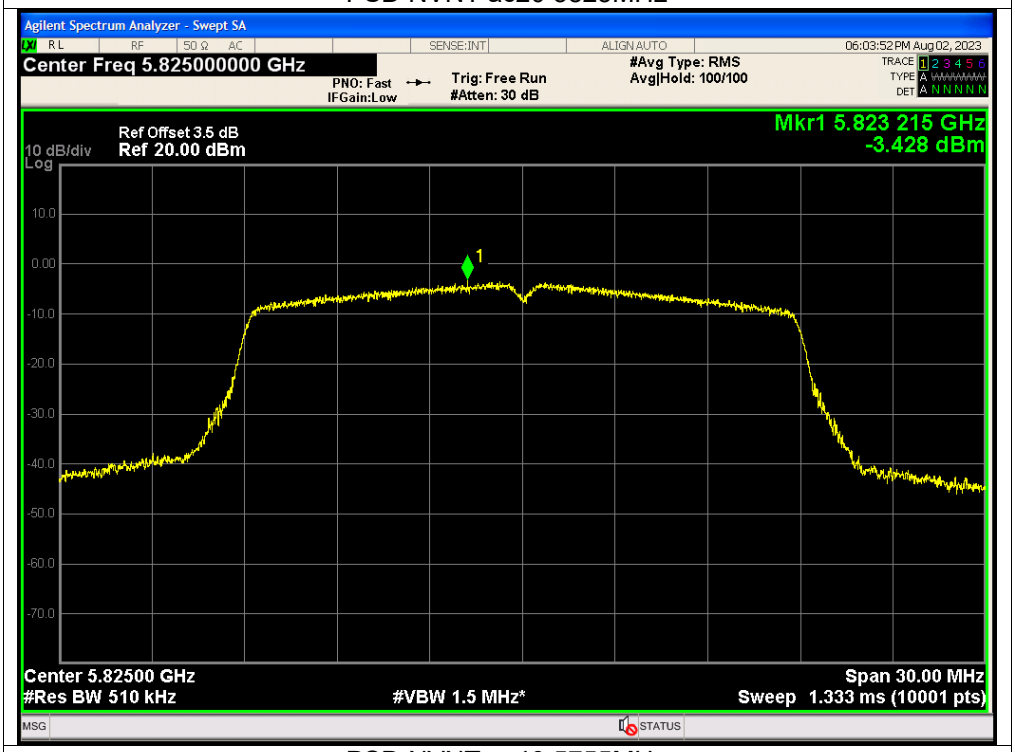
PSD NVNT ac20 5745MHz



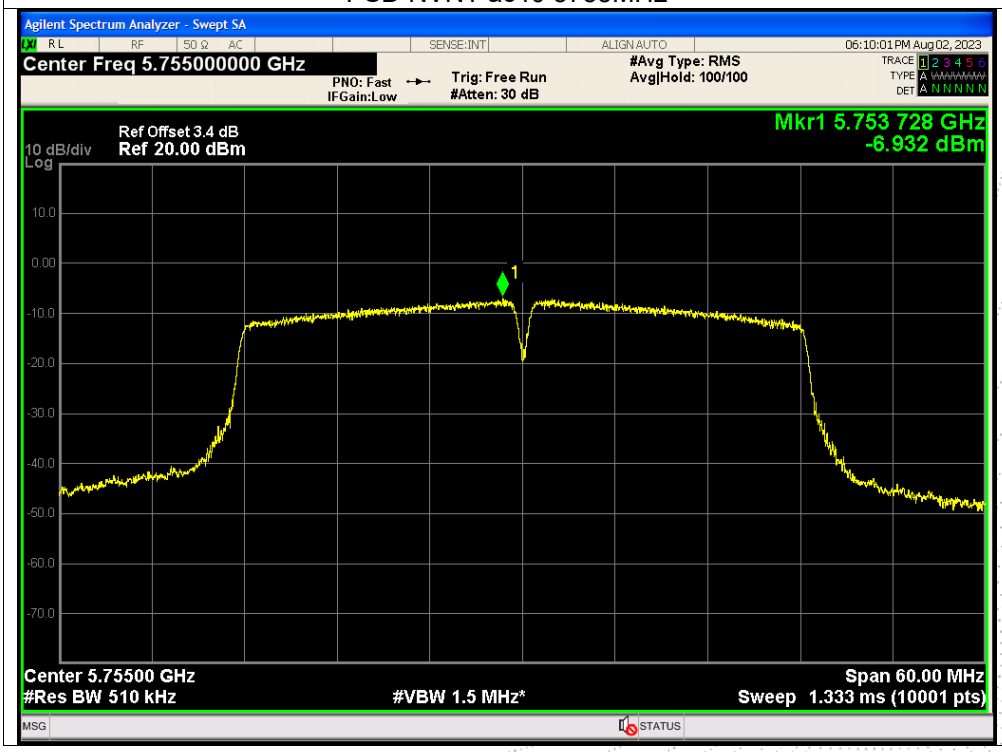
PSD NVNT ac20 5785MHz



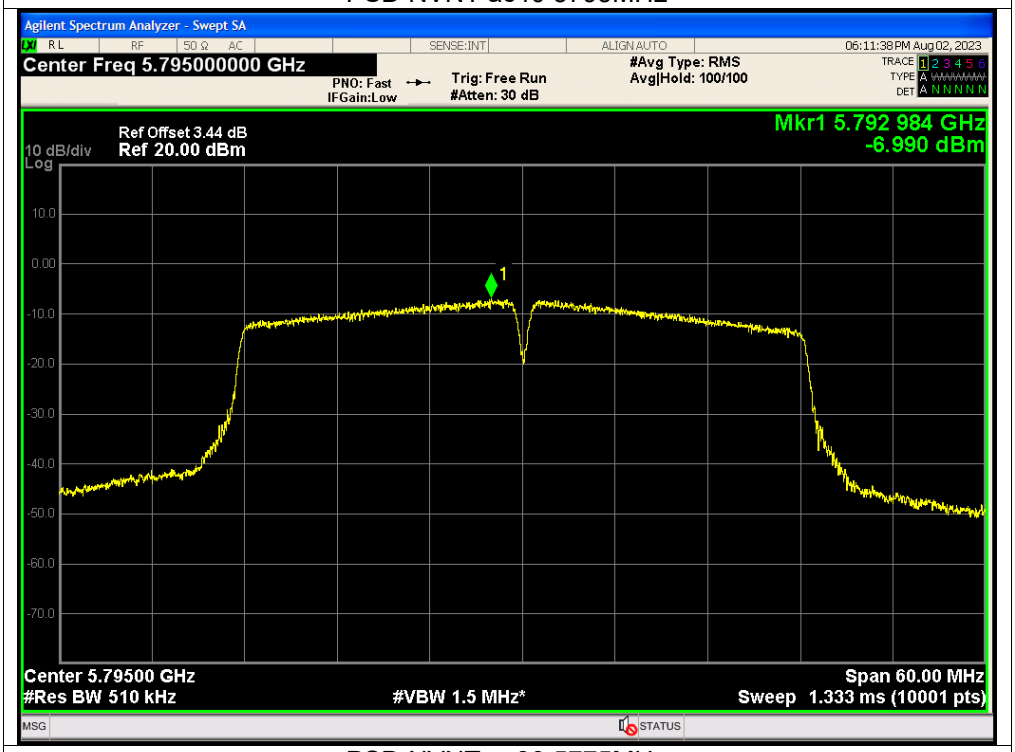
PSD NVNT ac20 5825MHz



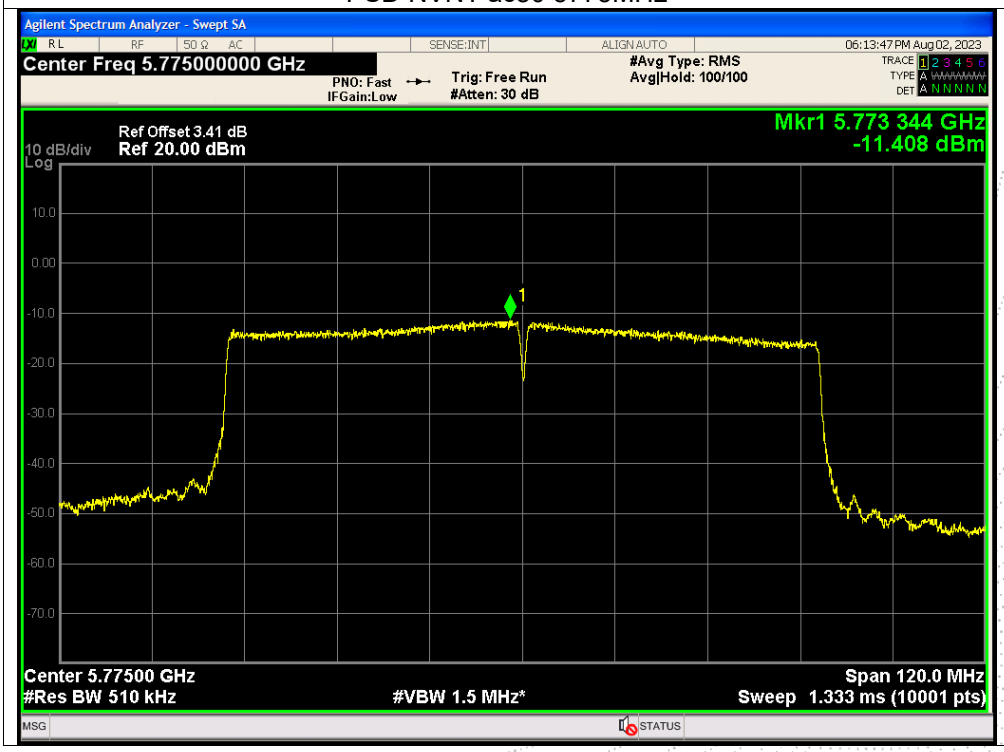
PSD NVNT ac40 5755MHz



PSD NVNT ac40 5795MHz

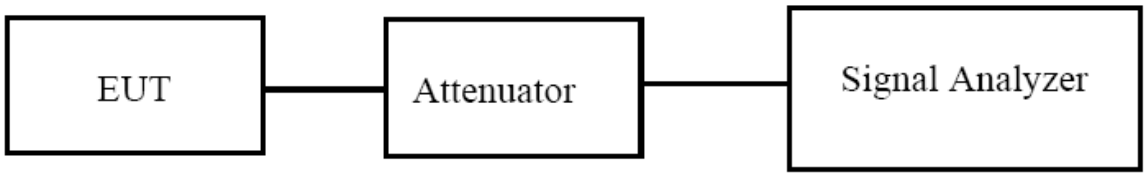


PSD NVNT ac80 5775MHz



9. 26dB & 6dB & 99% Emission Bandwidth

9.1 Block Diagram Of Test Setup



9.2 Limit

The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test. If the device cannot be connected directly, alternative techniques acceptable to the Commission may be used. Measurements in the 5.725-5.85 GHz band are made over a reference bandwidth of 500 kHz or the 26 dB emission bandwidth of the device, whichever is less. 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.

9.3 Test procedure

a) Set RBW = approximately 1% of the emission bandwidth.

b) Set the VBW > RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.
The following procedure shall be used for measuring (99 %) power bandwidth:
1. Set center frequency to the nominal EUT channel center frequency.
2. Set span = 1.5 times to 5.0 times the OBW.
3. Set RBW = 1 % to 5 % of the OBW
4. Set VBW ≥ 3 · RBW
5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
6. Use the 99 % power bandwidth function of the instrument (if available).
7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

9.4 EUT operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

9.5 Test Result

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC120V/60Hz
Test Mode:	(5180-5240MHz)		

Condition	Mode	Frequency (MHz)	-26 dB Bandwidth (MHz)	Verdict
NVNT	a	5180	23.117	Pass
NVNT	a	5200	22.737	Pass
NVNT	a	5240	23.076	Pass
NVNT	n20	5180	24.136	Pass
NVNT	n20	5200	23.099	Pass
NVNT	n20	5240	22.912	Pass
NVNT	n40	5190	43.792	Pass
NVNT	n40	5230	42.648	Pass
NVNT	ac20	5180	23.486	Pass
NVNT	ac20	5200	23.912	Pass
NVNT	ac20	5240	24.013	Pass
NVNT	ac40	5190	42.876	Pass
NVNT	ac40	5230	43.683	Pass
NVNT	ac80	5210	80.962	Pass

Condition	Mode	Frequency (MHz)	99% OBW (MHz)
NVNT	a	5180	16.406
NVNT	a	5200	16.432
NVNT	a	5240	16.41
NVNT	n20	5180	17.637
NVNT	n20	5200	17.62
NVNT	n20	5240	17.629
NVNT	n40	5190	36.025
NVNT	n40	5230	36.056
NVNT	ac20	5180	17.627
NVNT	ac20	5200	17.603
NVNT	ac20	5240	17.628
NVNT	ac40	5190	35.997
NVNT	ac40	5230	36.031
NVNT	ac80	5210	75.266

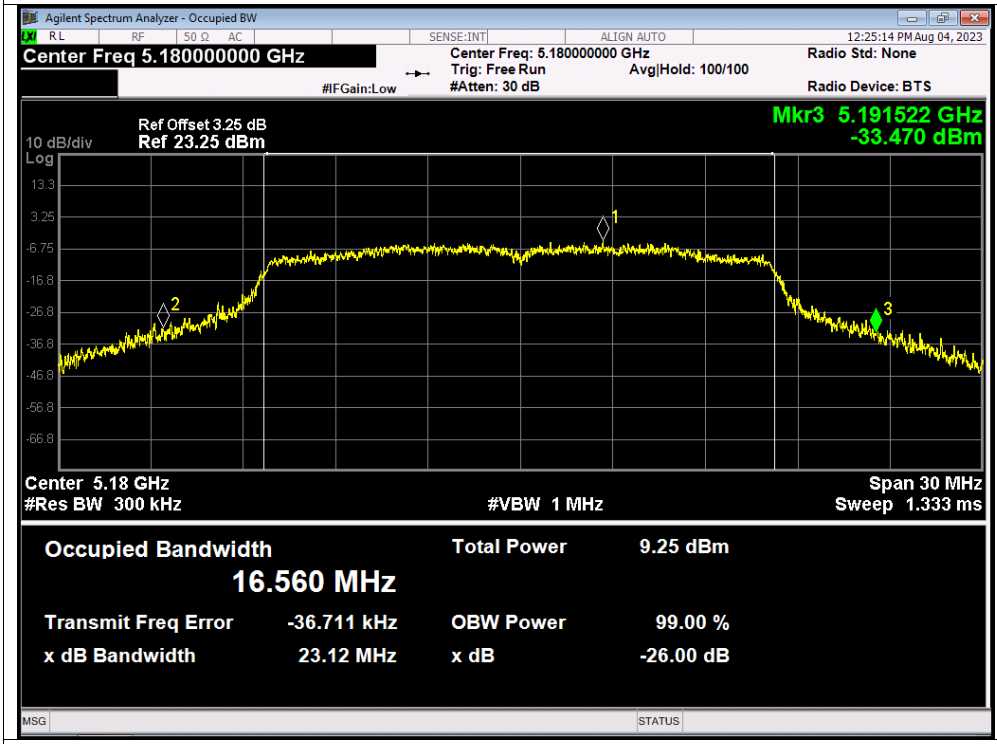
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC120V/60Hz
Test Mode:	(5745-5825MHz)		

Condition	Mode	Frequency (MHz)	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	a	5745	12.962	0.5	Pass
NVNT	a	5785	14.591	0.5	Pass
NVNT	a	5825	15.012	0.5	Pass
NVNT	n20	5745	13.835	0.5	Pass
NVNT	n20	5785	15.054	0.5	Pass
NVNT	n20	5825	13.992	0.5	Pass
NVNT	n40	5755	33.848	0.5	Pass
NVNT	n40	5795	35.1	0.5	Pass
NVNT	ac20	5745	15.034	0.5	Pass
NVNT	ac20	5785	12.792	0.5	Pass
NVNT	ac20	5825	13.773	0.5	Pass
NVNT	ac40	5755	33.865	0.5	Pass
NVNT	ac40	5795	35.086	0.5	Pass
NVNT	ac80	5775	75.097	0.5	Pass

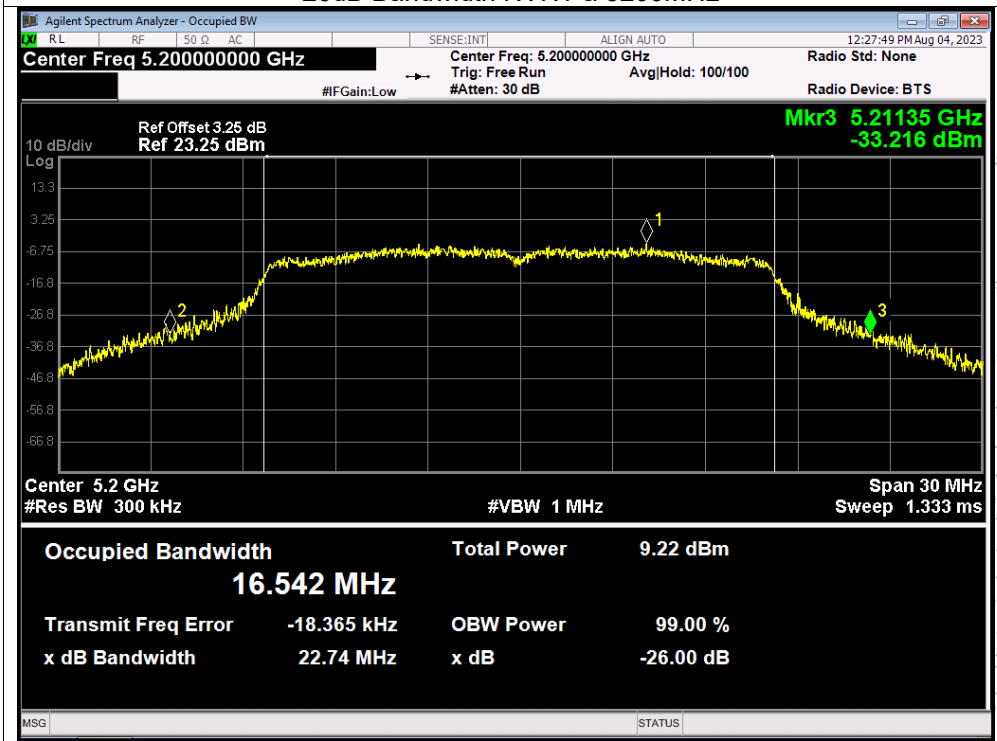
Condition	Mode	Frequency (MHz)	99% OBW (MHz)
NVNT	a	5745	16.455
NVNT	a	5785	16.433
NVNT	a	5825	16.478
NVNT	n20	5745	17.602
NVNT	n20	5785	17.603
NVNT	n20	5825	17.649
NVNT	n40	5755	36.078
NVNT	n40	5795	36.088
NVNT	ac20	5745	17.616
NVNT	ac20	5785	17.619
NVNT	ac20	5825	17.629
NVNT	ac40	5755	36.015
NVNT	ac40	5795	36.04
NVNT	ac80	5775	75.159

Test Graphs

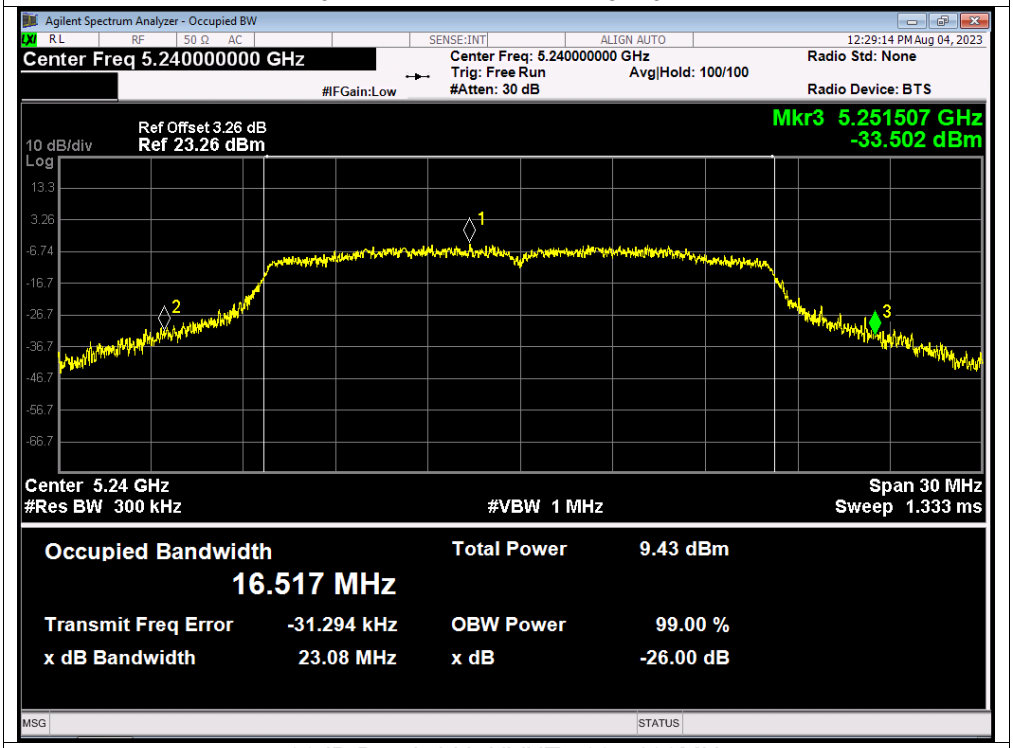
-26dB Bandwidth NVNT a 5180MHz



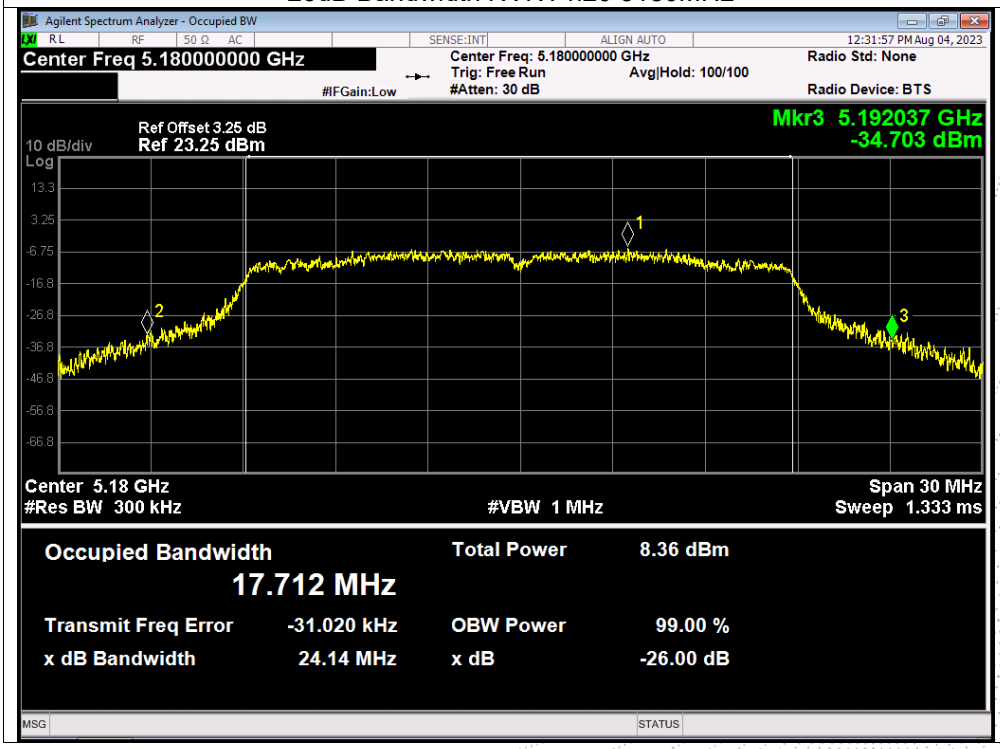
-26dB Bandwidth NVNT a 5200MHz



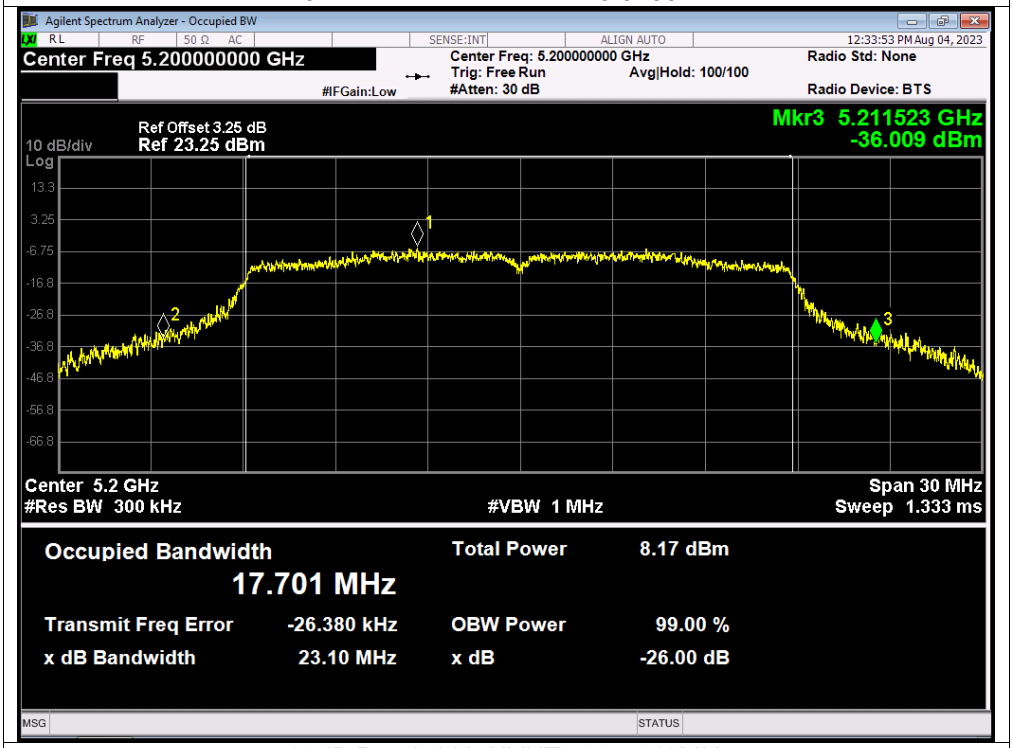
-26dB Bandwidth NVNT a 5240MHz



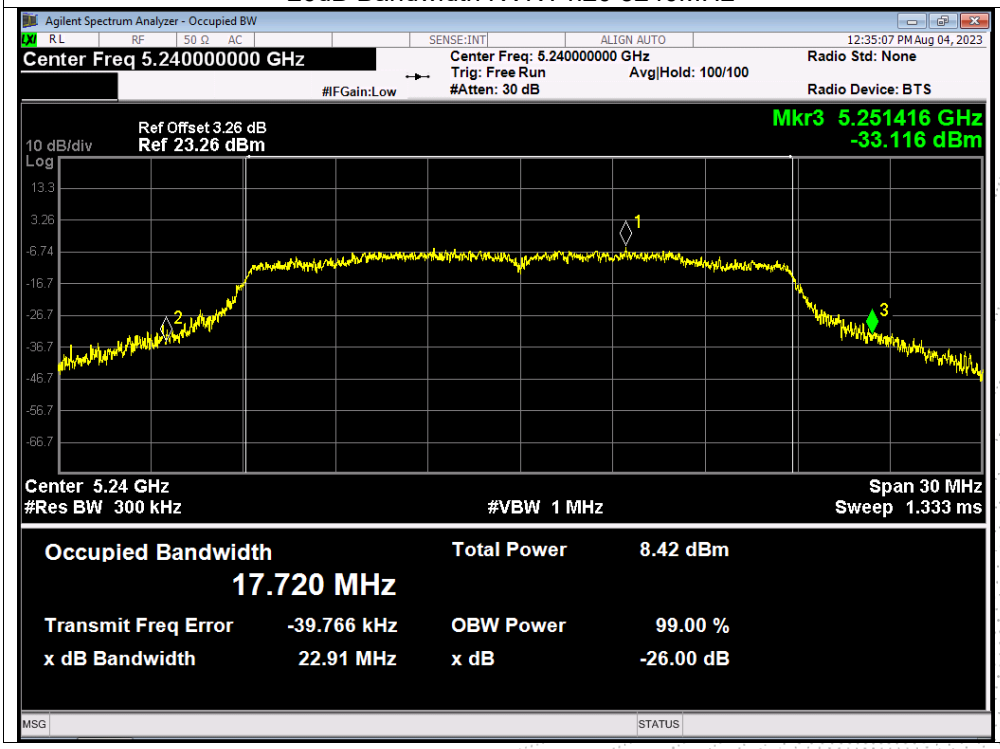
-26dB Bandwidth NVNT n20 5180MHz



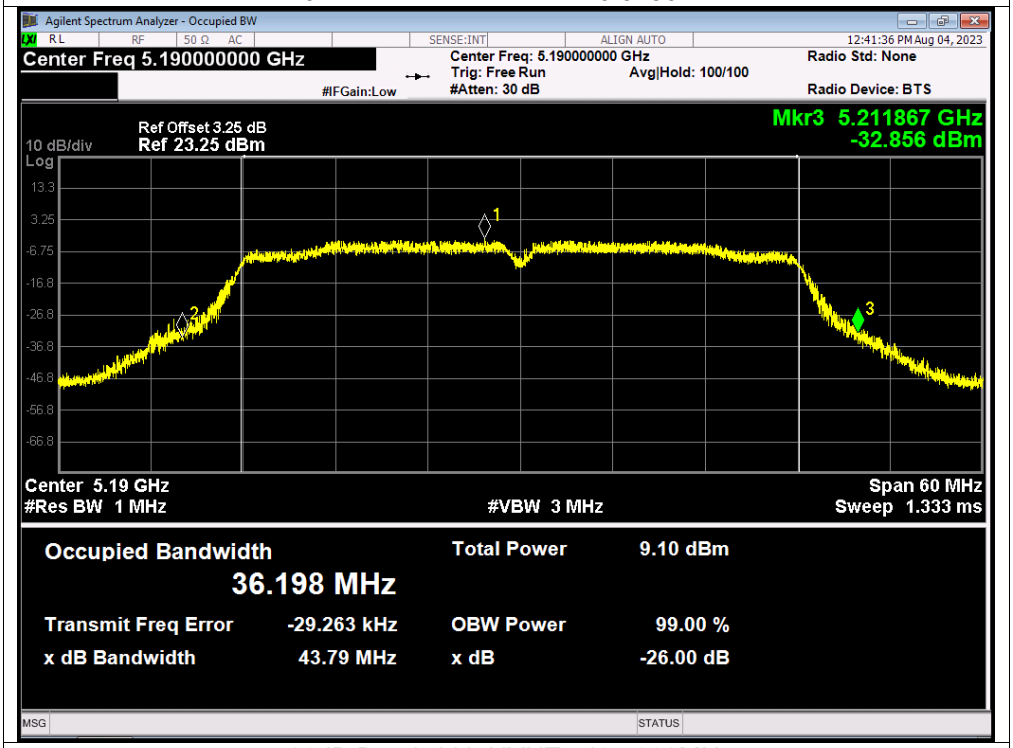
-26dB Bandwidth NVNT n20 5200MHz



-26dB Bandwidth NVNT n20 5240MHz



-26dB Bandwidth NVNT n40 5190MHz



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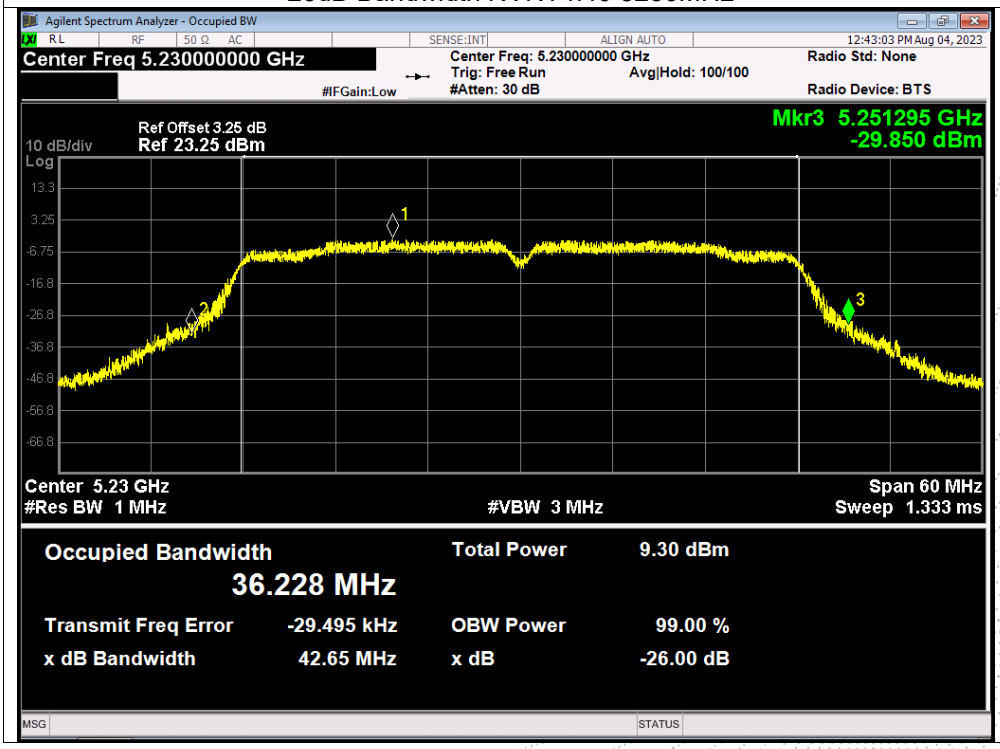
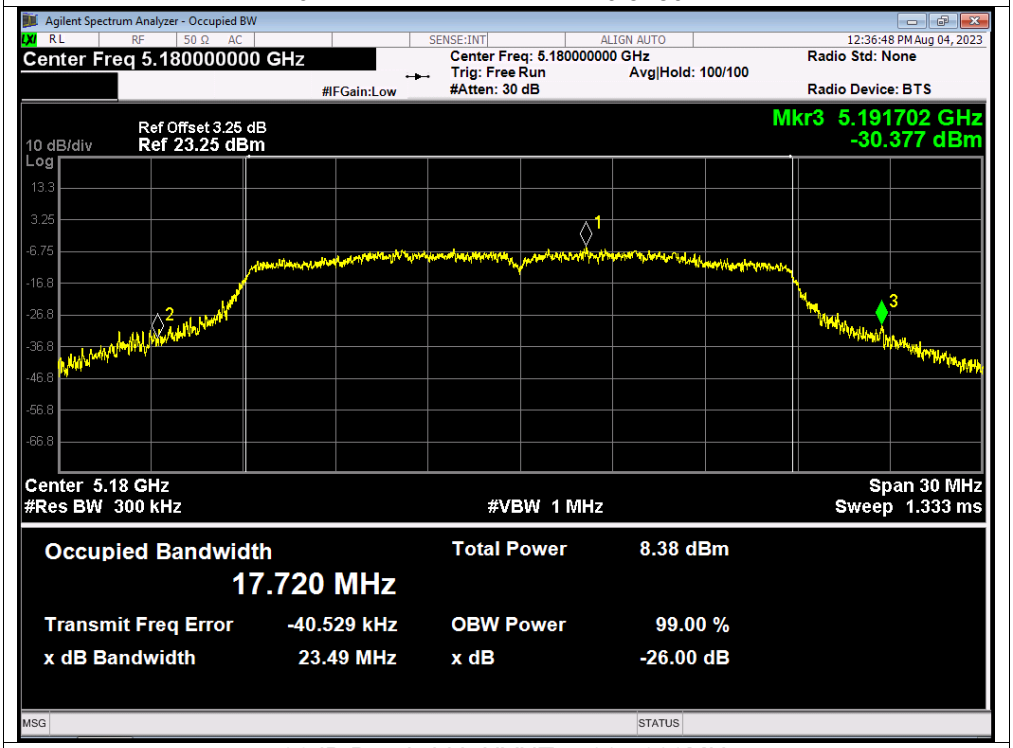
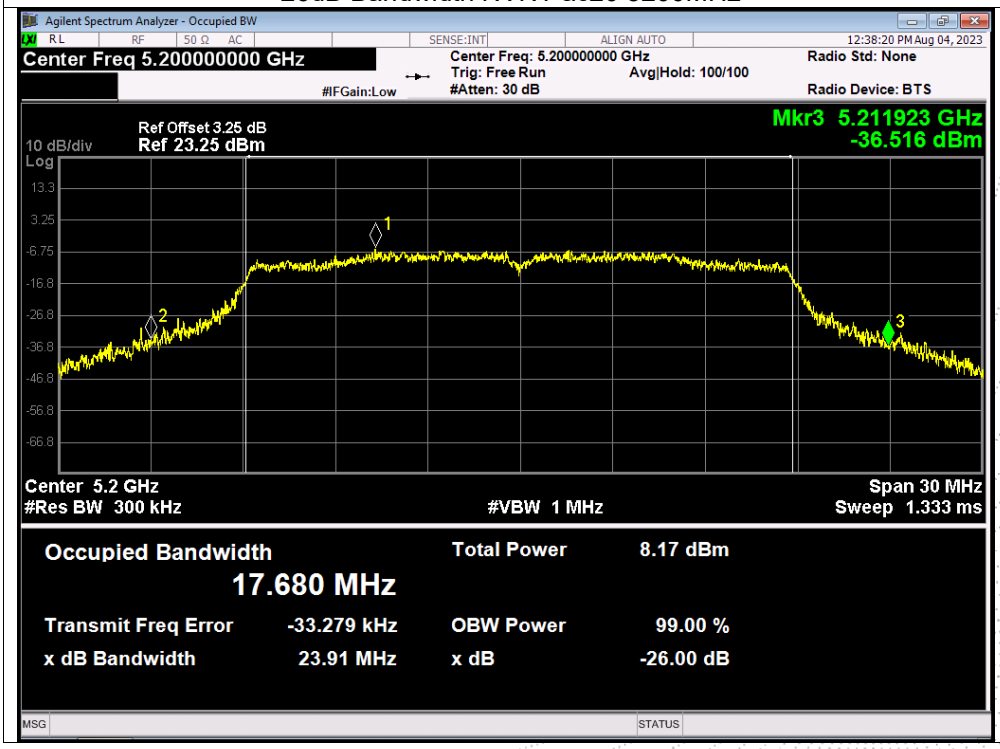


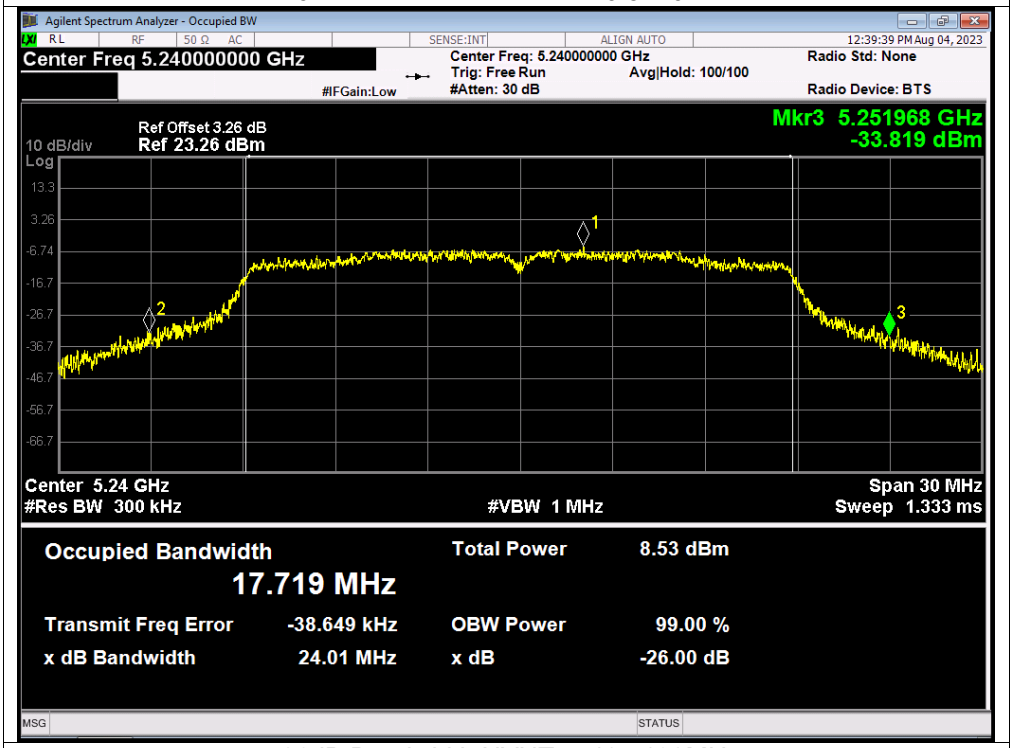
-26dB Bandwidth NVNT ac20 5180MHz



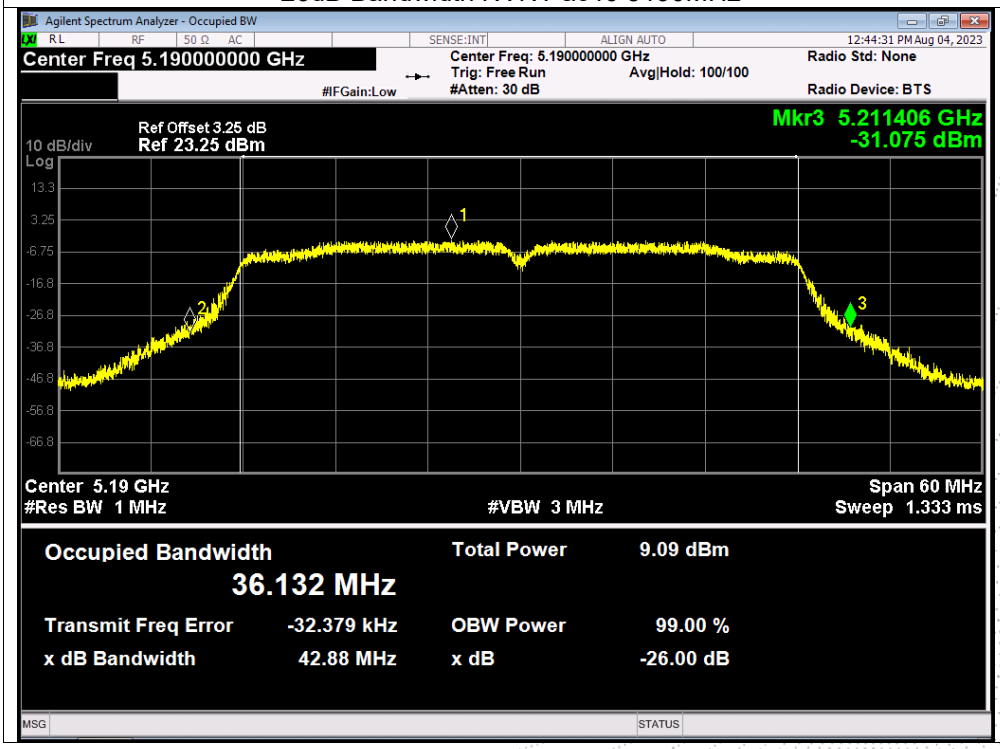
-26dB Bandwidth NVNT ac20 5200MHz



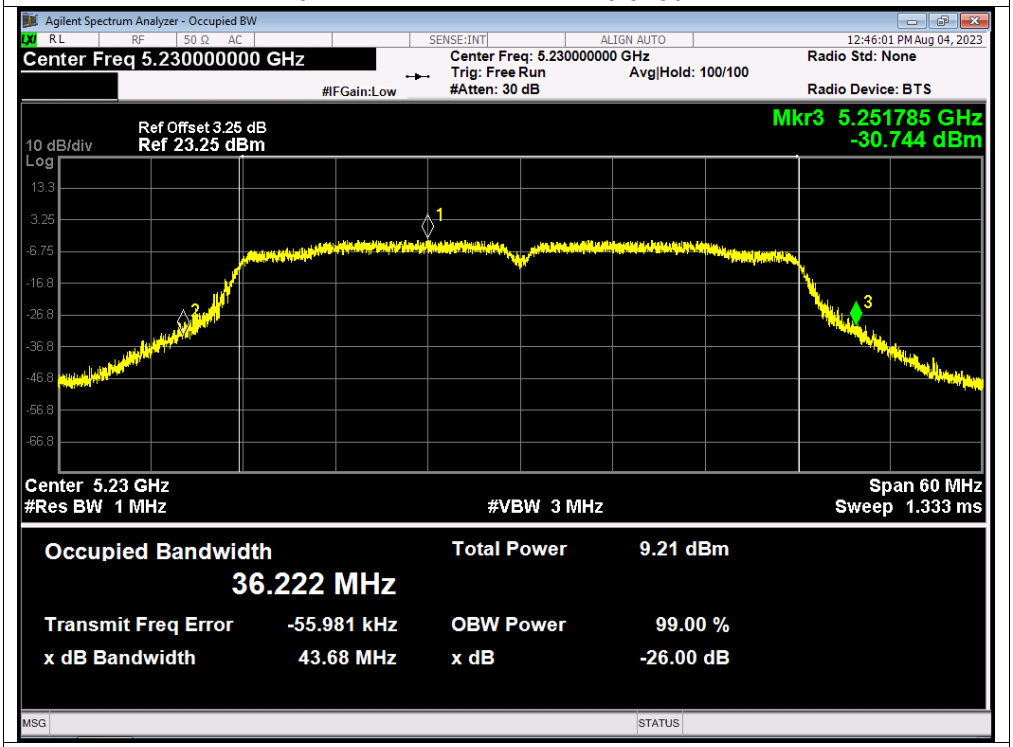
-26dB Bandwidth NVNT ac20 5240MHz



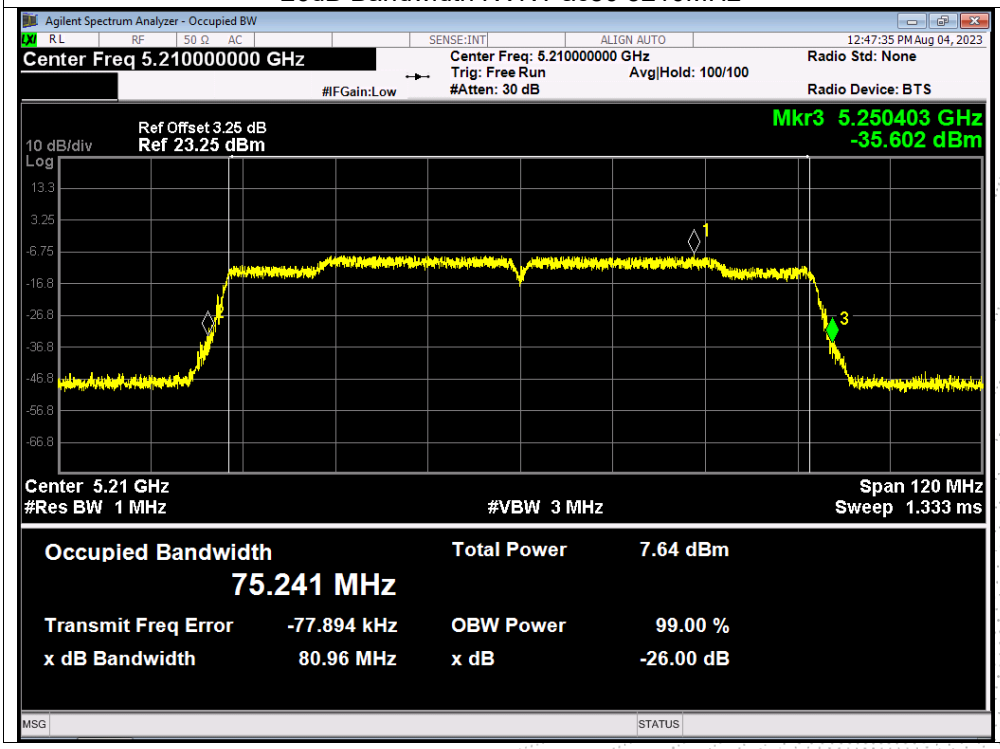
-26dB Bandwidth NVNT ac40 5190MHz



-26dB Bandwidth NVNT ac40 5230MHz

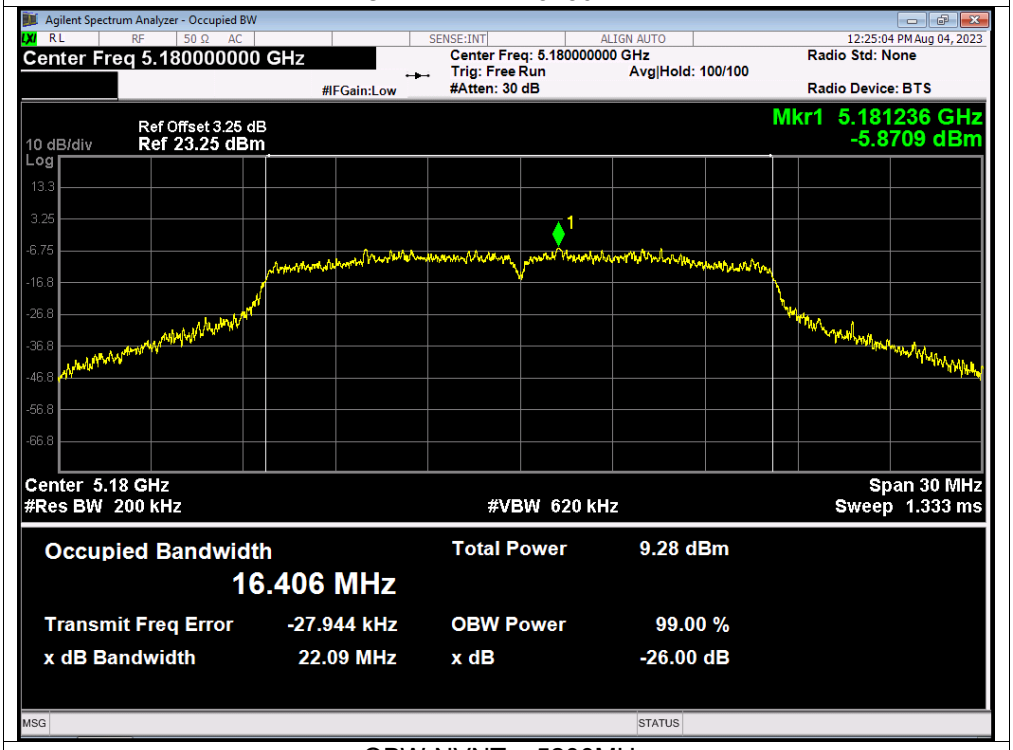


-26dB Bandwidth NVNT ac80 5210MHz

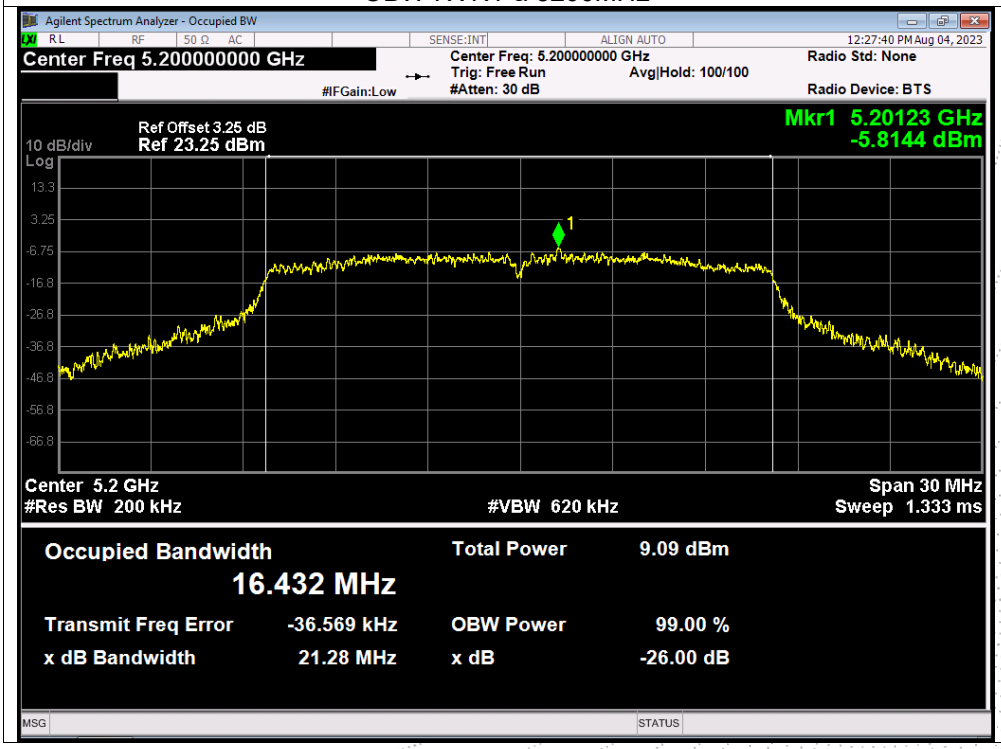


Test Graphs

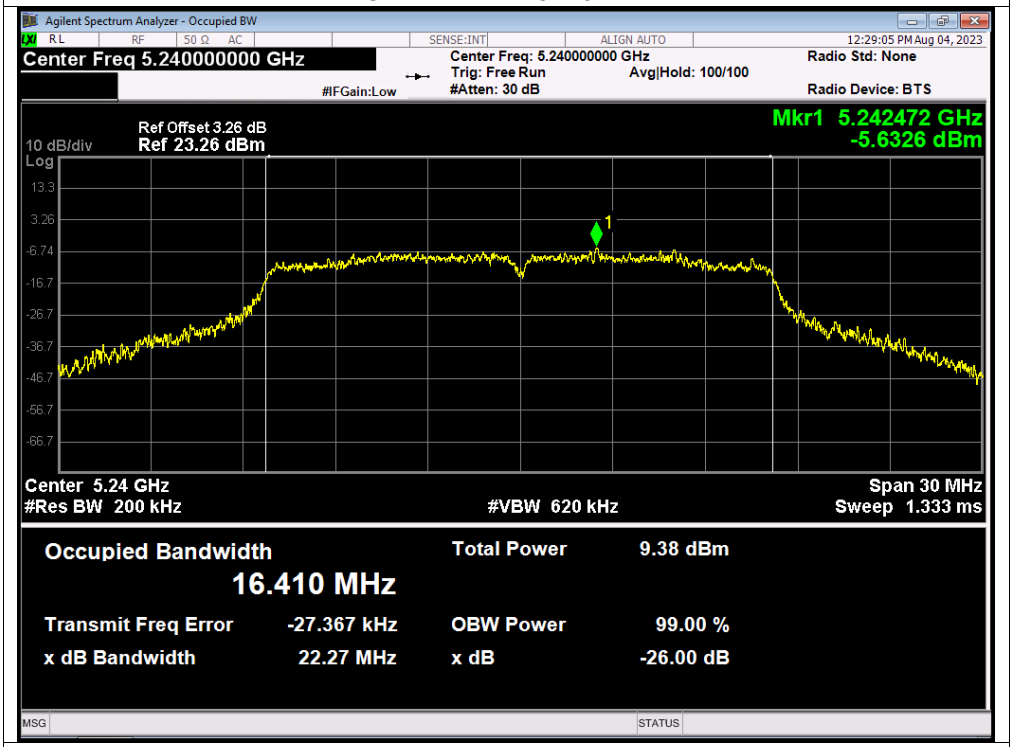
OBW NVNT a 5180MHz



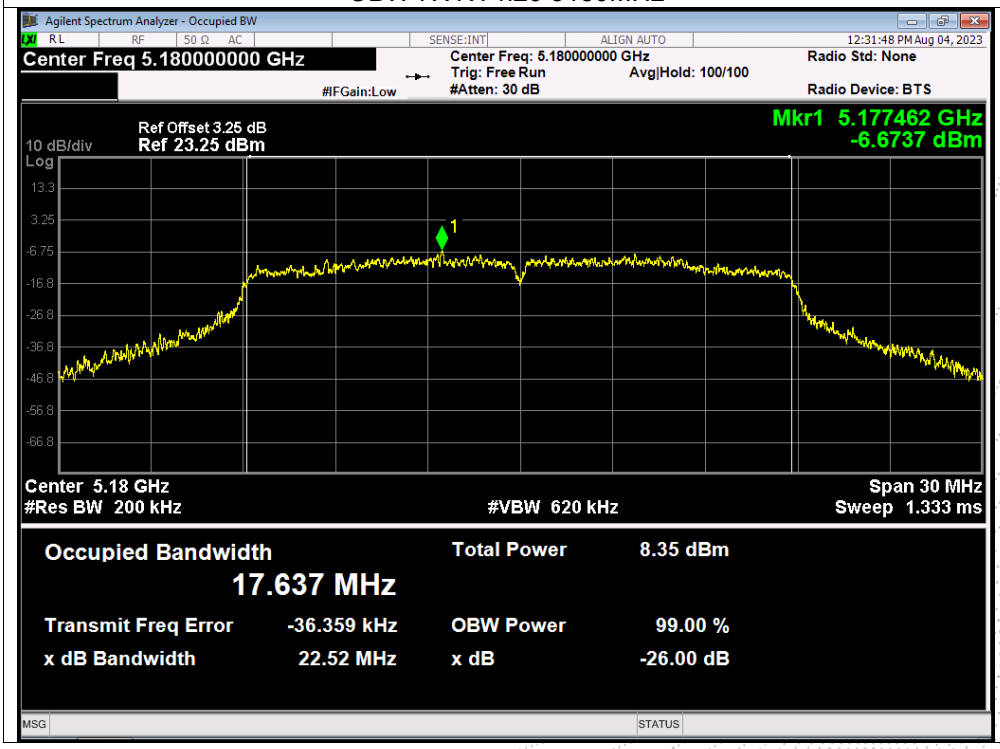
OBW NVNT a 5200MHz



OBW NVNT a 5240MHz



OBW NVNT n20 5180MHz



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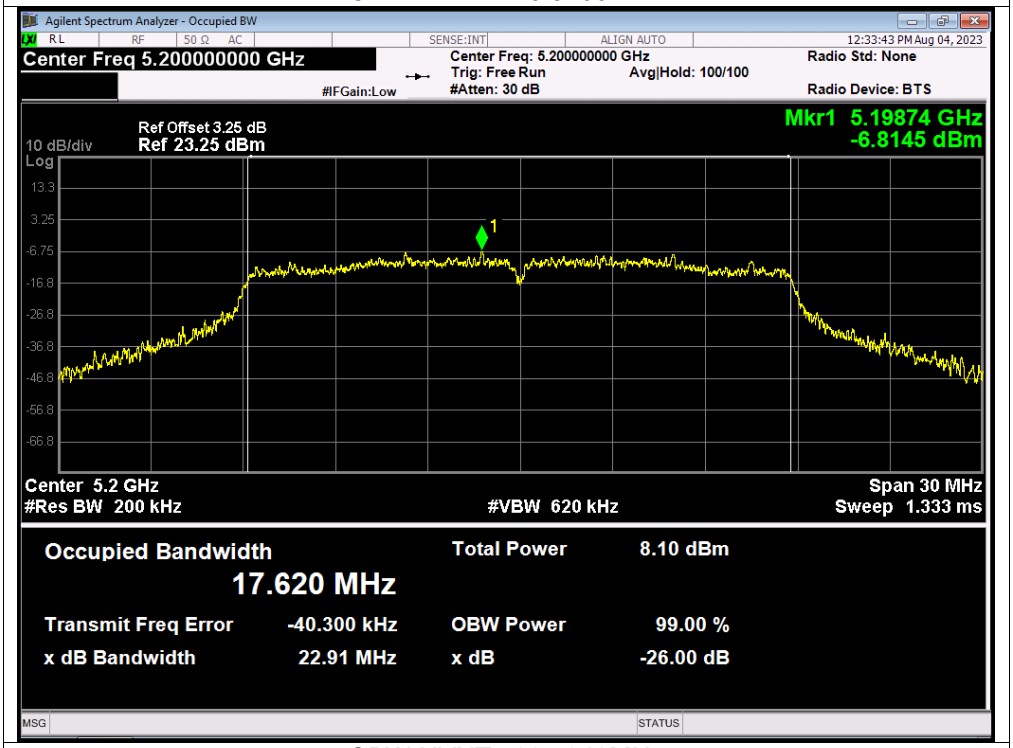

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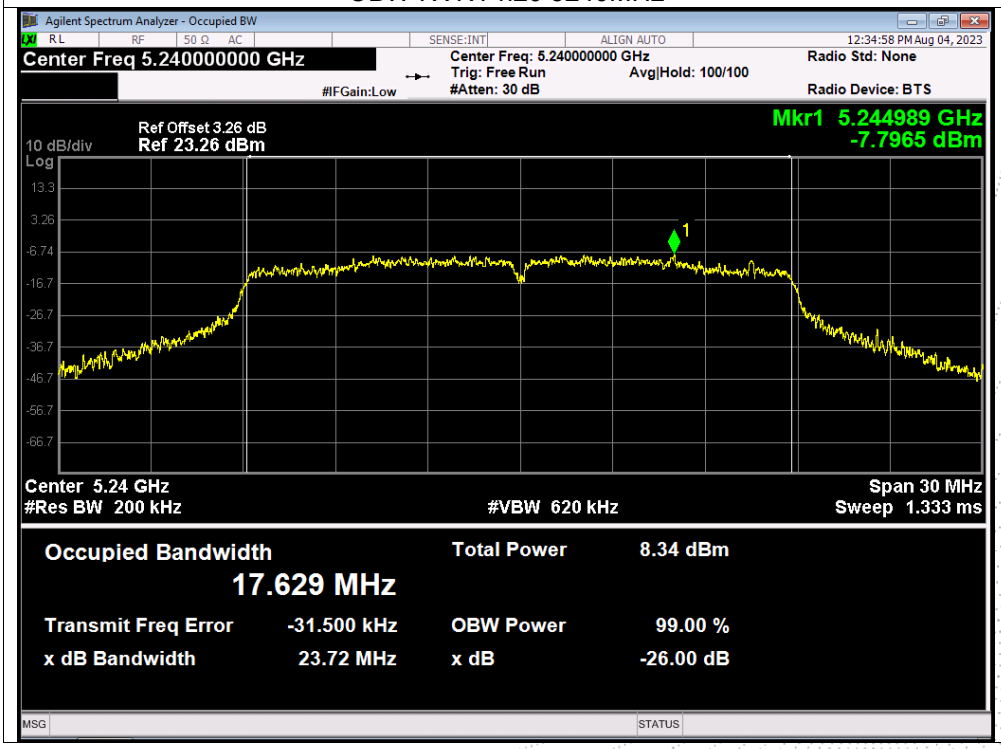
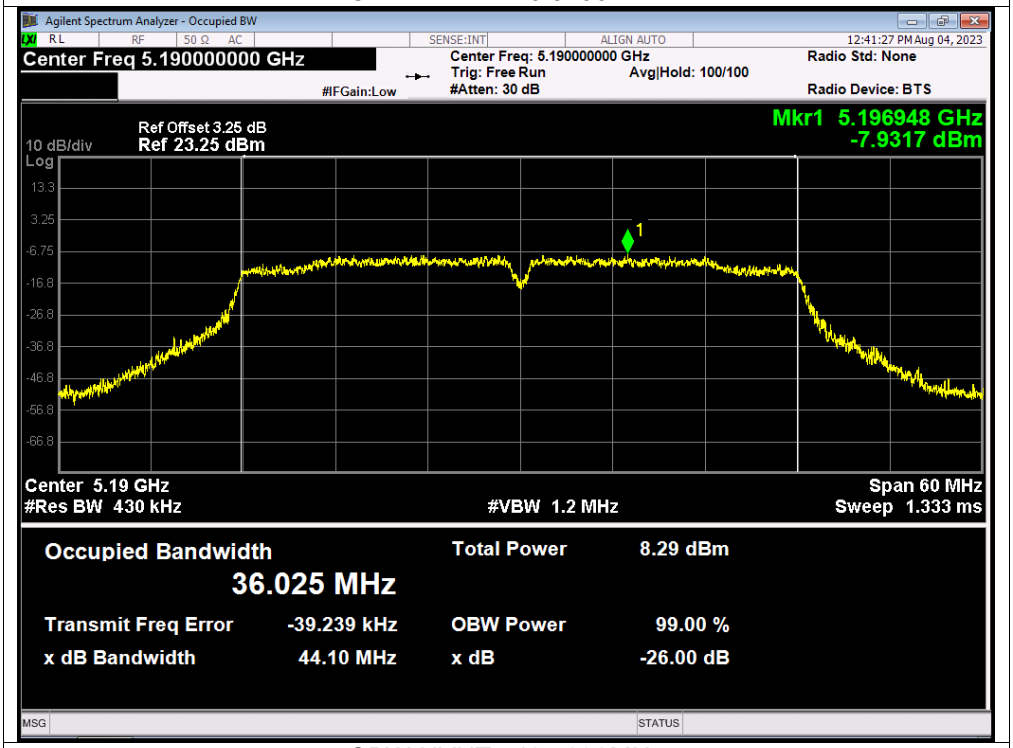
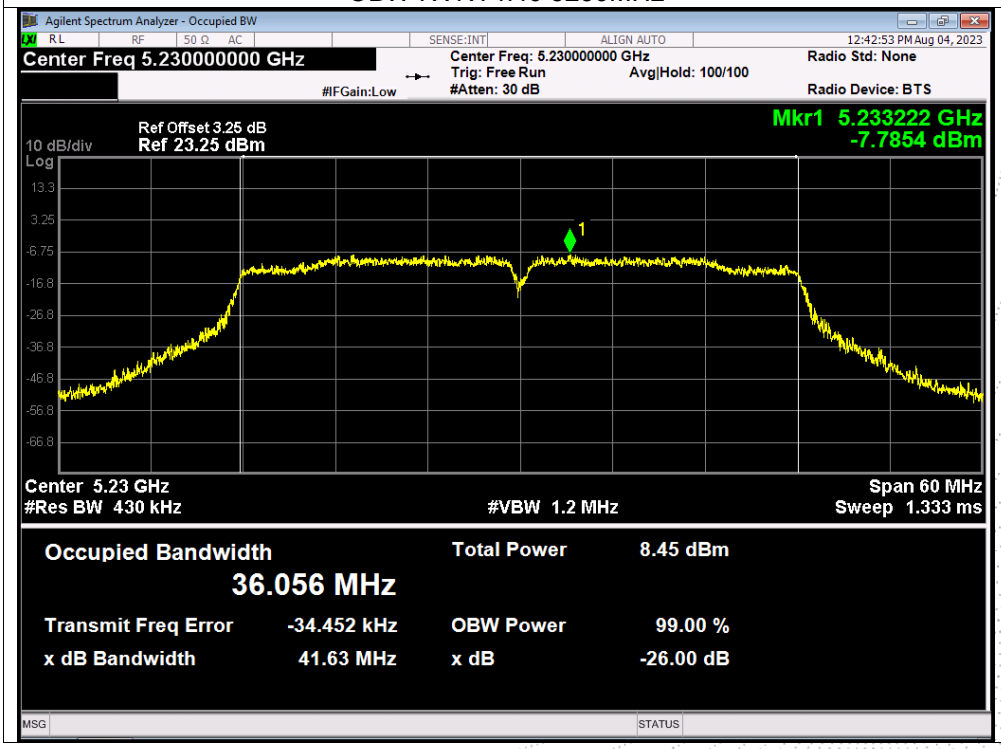


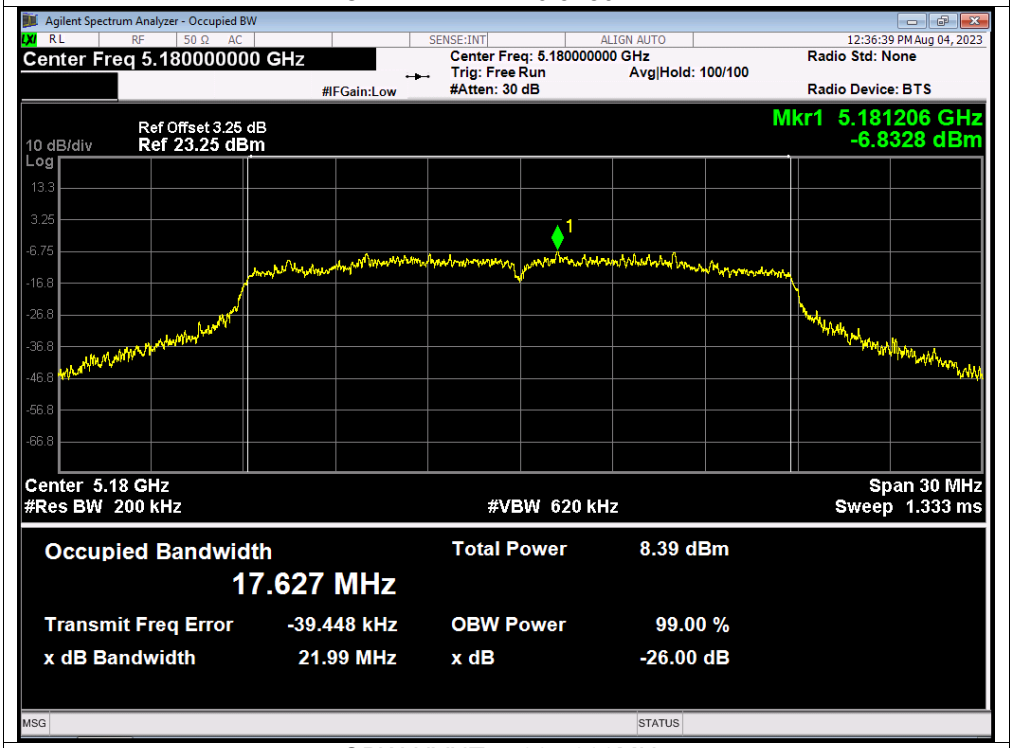
OBW NVNT n40 5190MHz



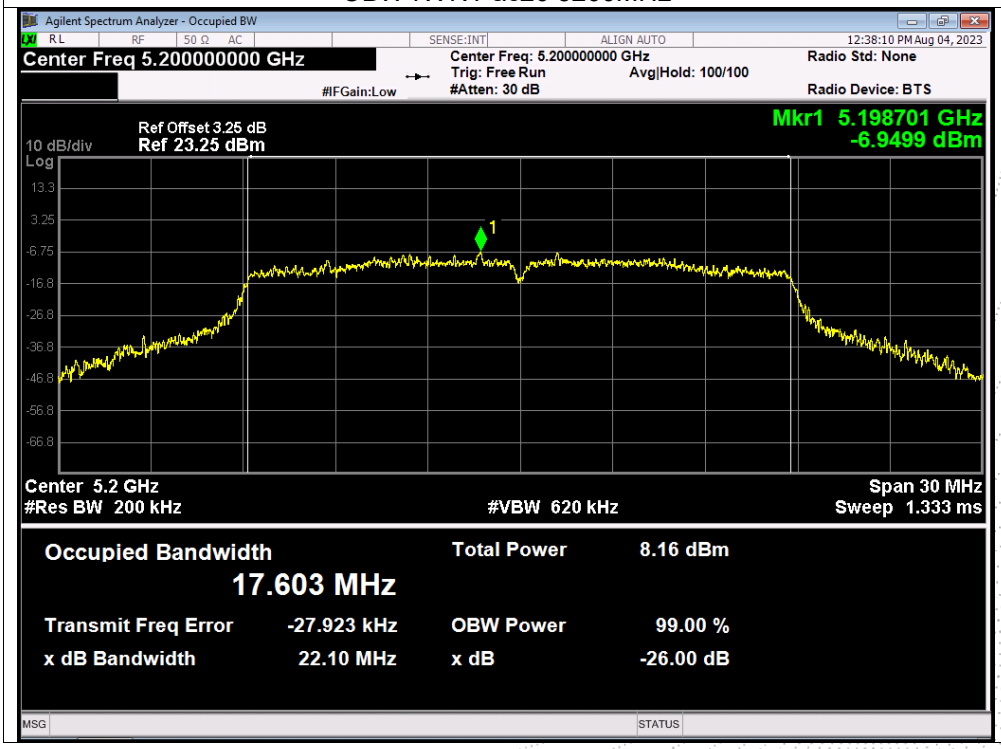
OBW NVNT n40 5230MHz



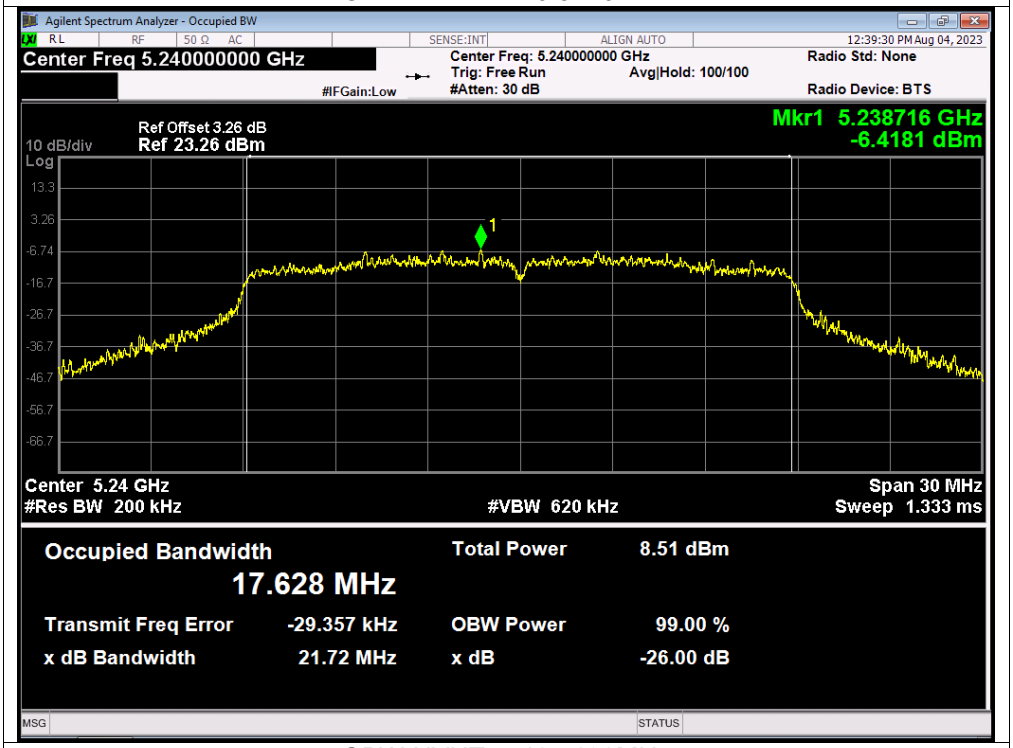
OBW NVNT ac20 5180MHz



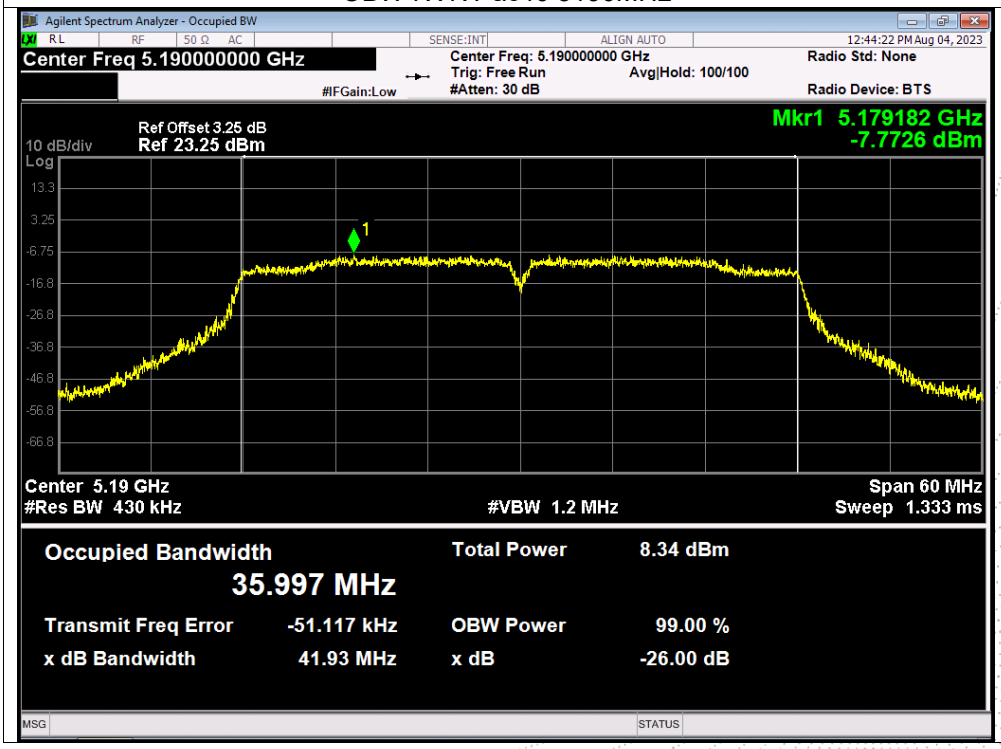
OBW NVNT ac20 5200MHz



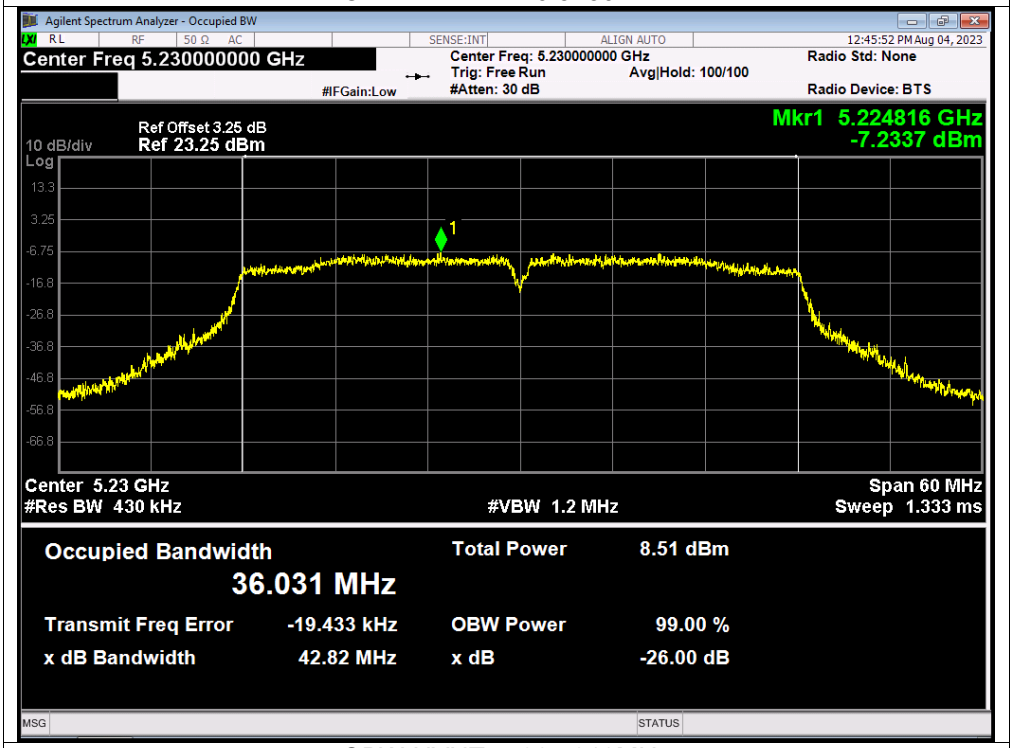
OBW NVNT ac20 5240MHz



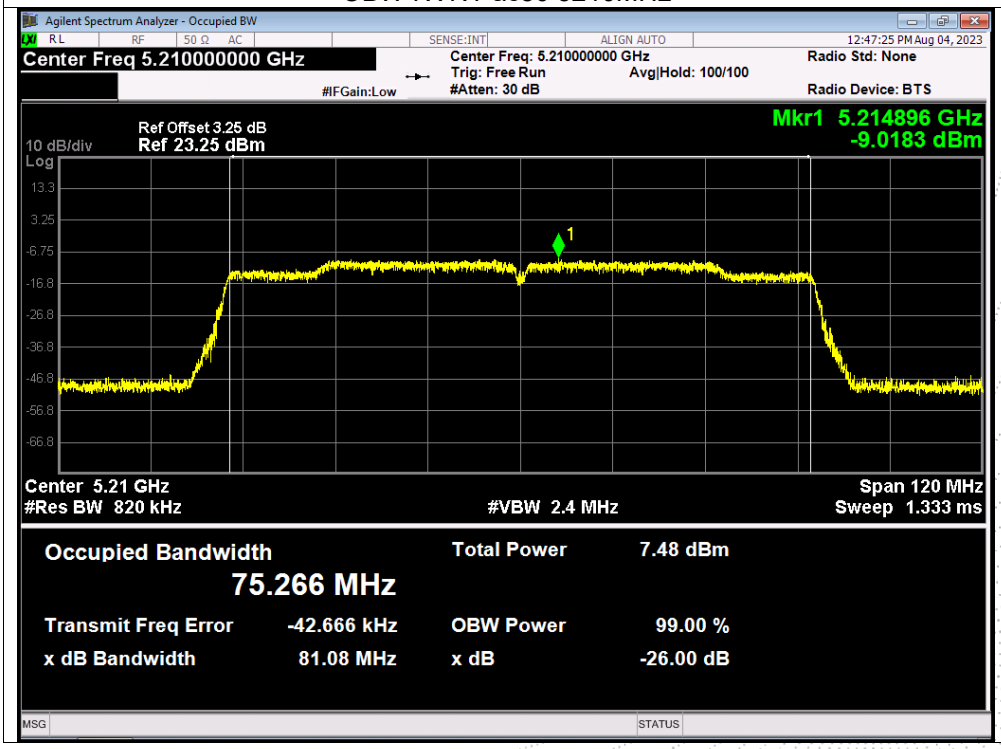
OBW NVNT ac40 5190MHz



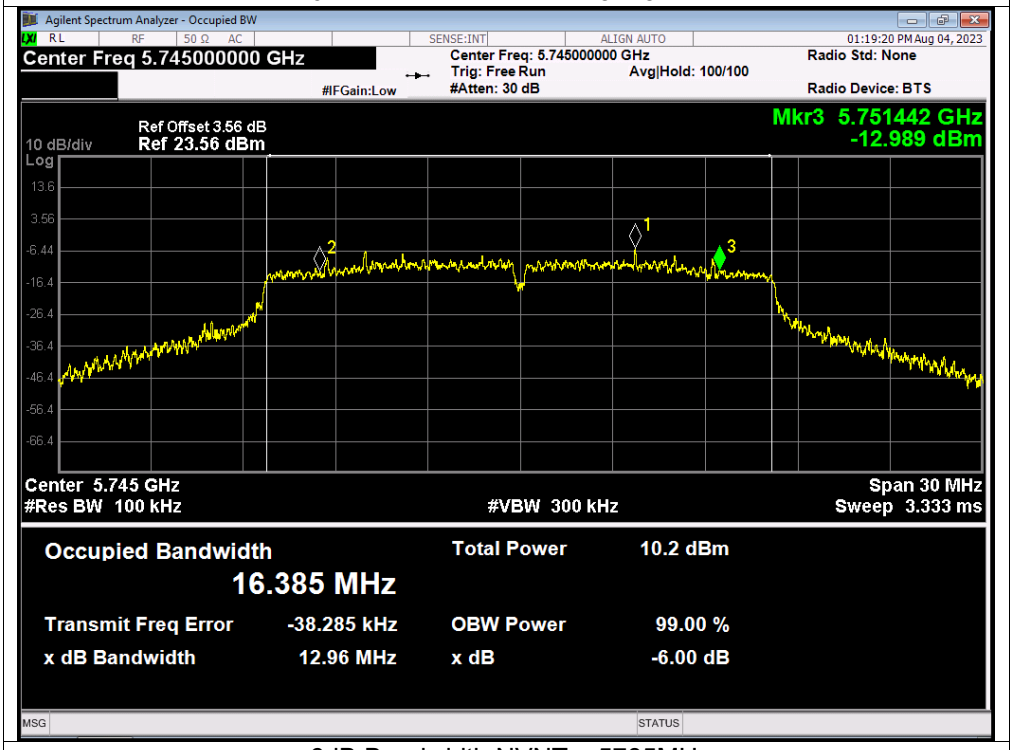
OBW NVNT ac40 5230MHz



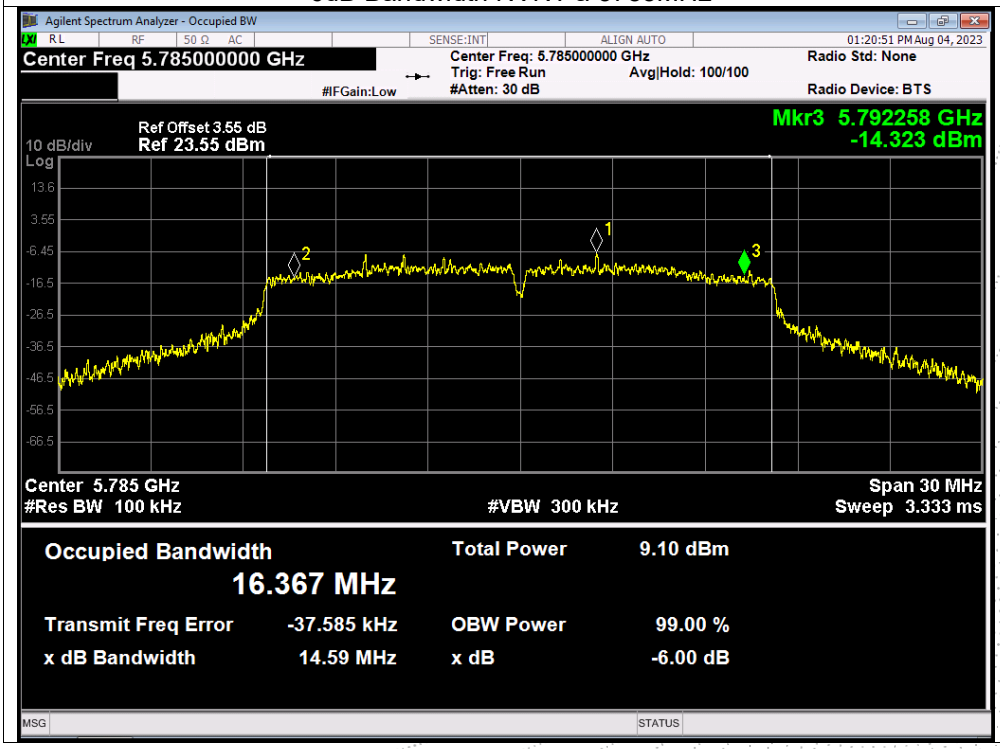
OBW NVNT ac80 5210MHz



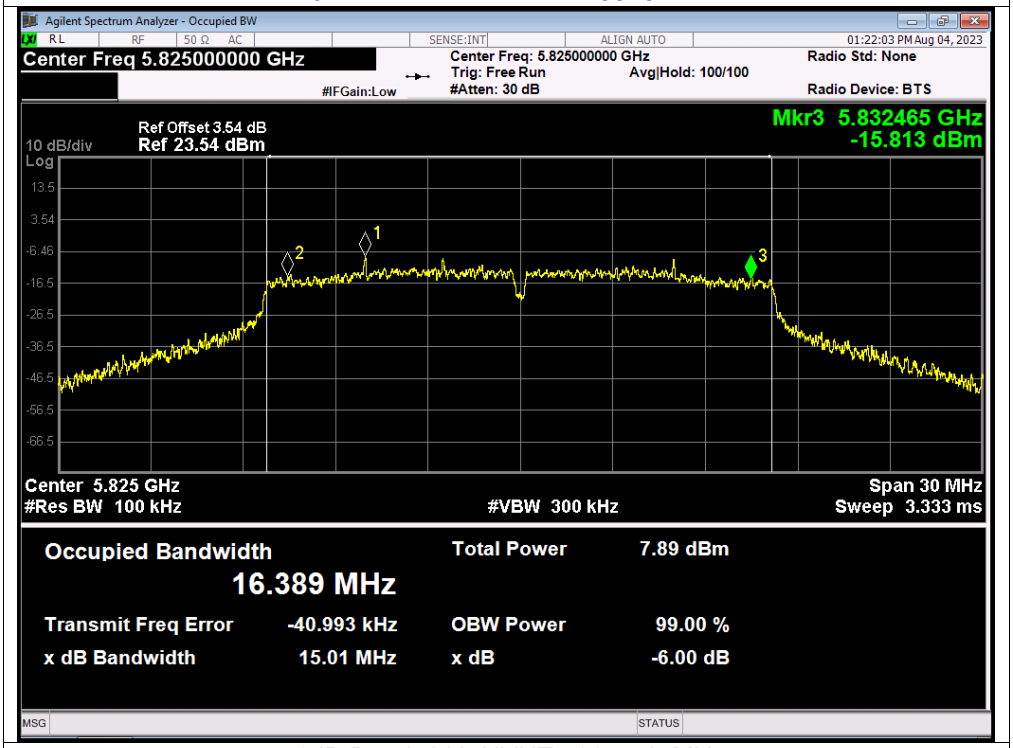
Test Graphs
-6dB Bandwidth NVNT a 5745MHz



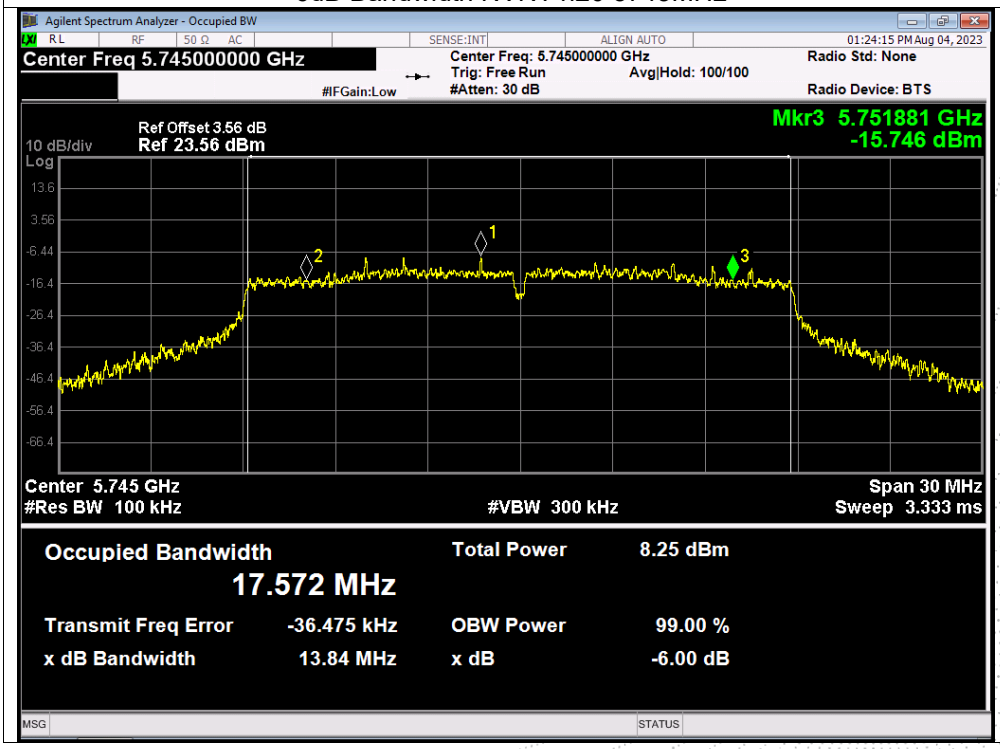
-6dB Bandwidth NVNT a 5785MHz



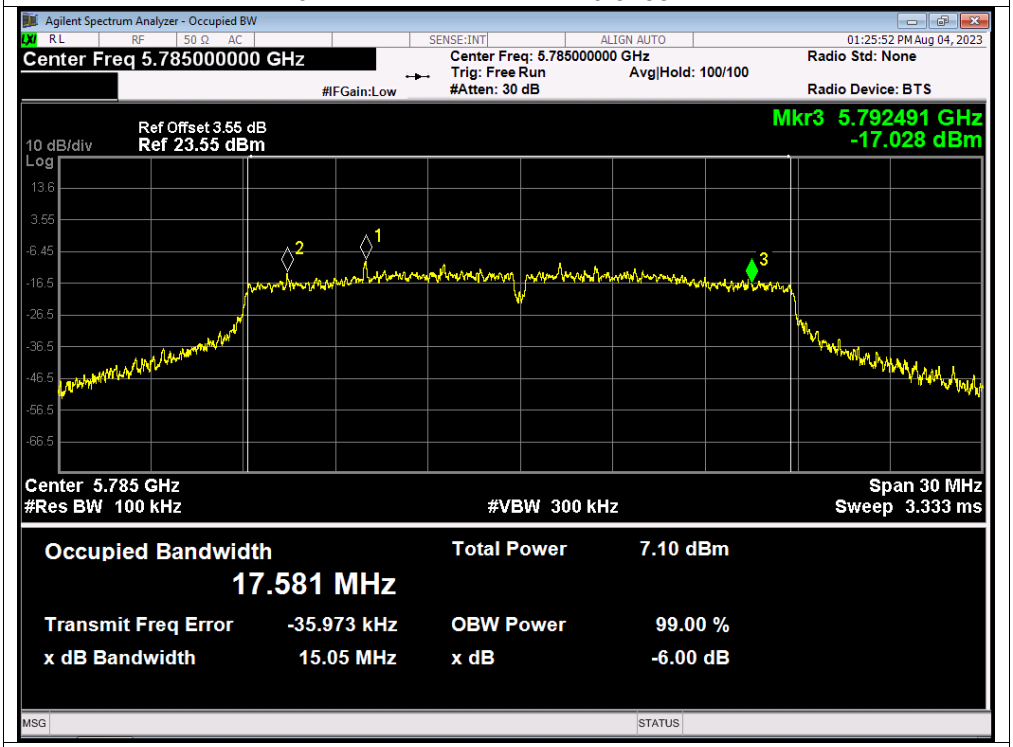
-6dB Bandwidth NVNT a 5825MHz



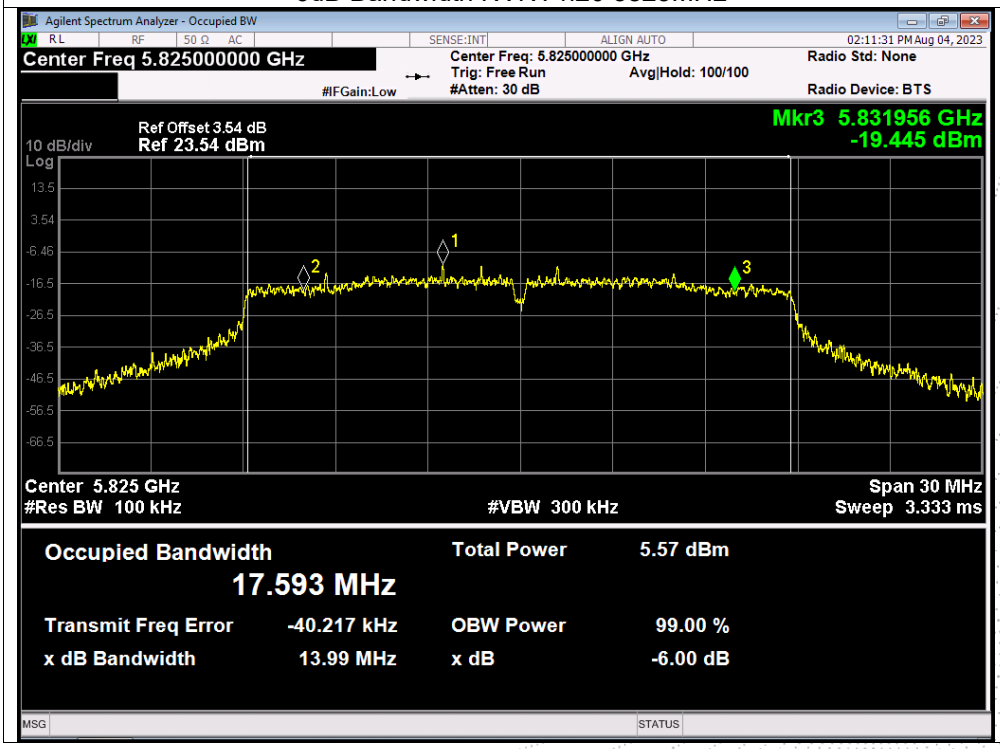
-6dB Bandwidth NVNT n20 5745MHz



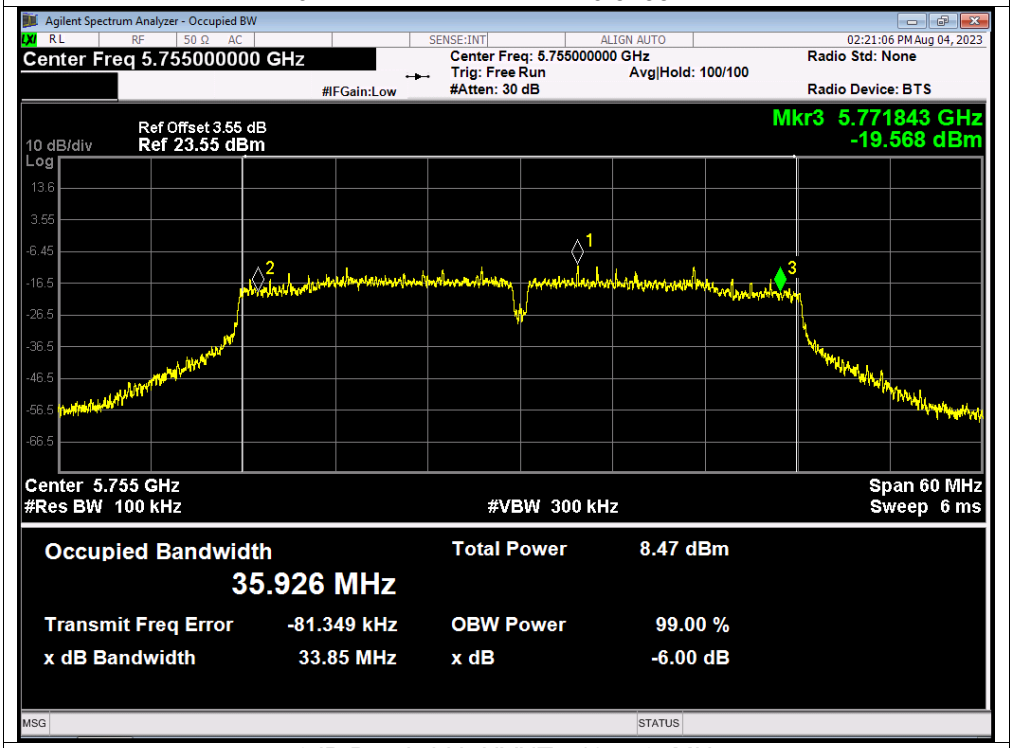
-6dB Bandwidth NVNT n20 5785MHz



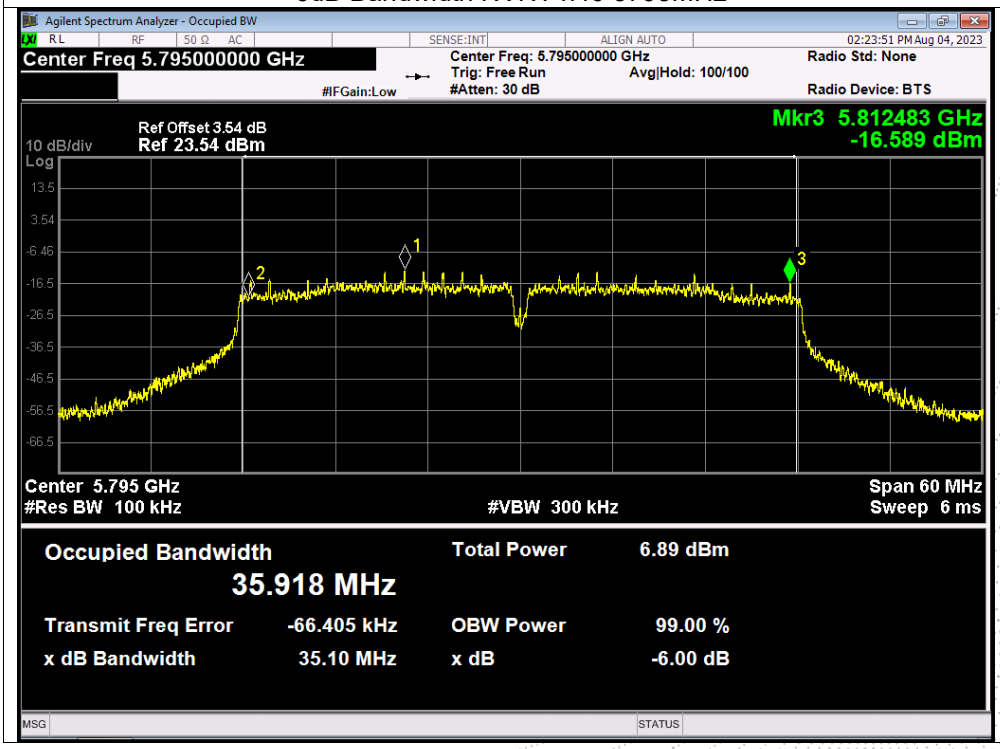
-6dB Bandwidth NVNT n20 5825MHz



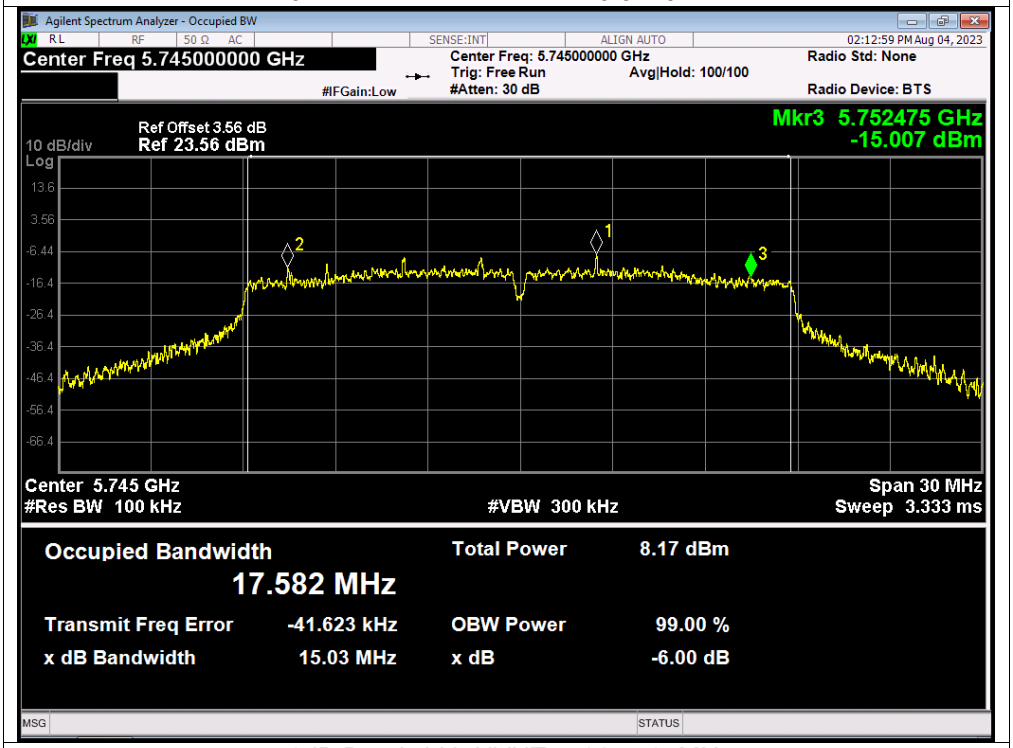
-6dB Bandwidth NVNT n40 5755MHz



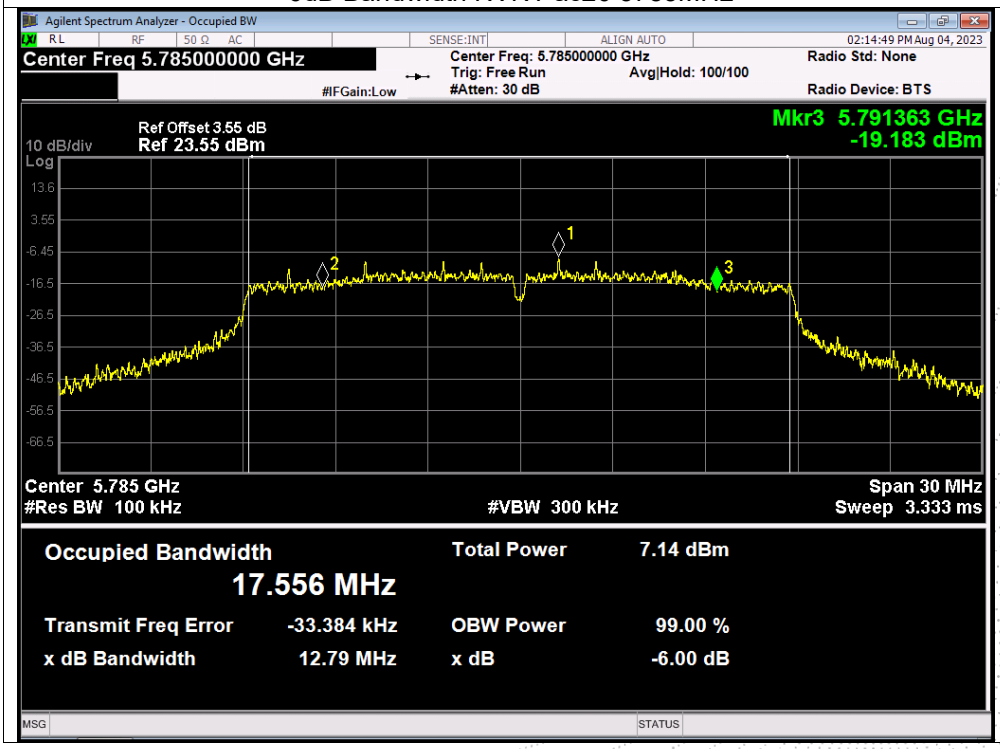
-6dB Bandwidth NVNT n40 5795MHz



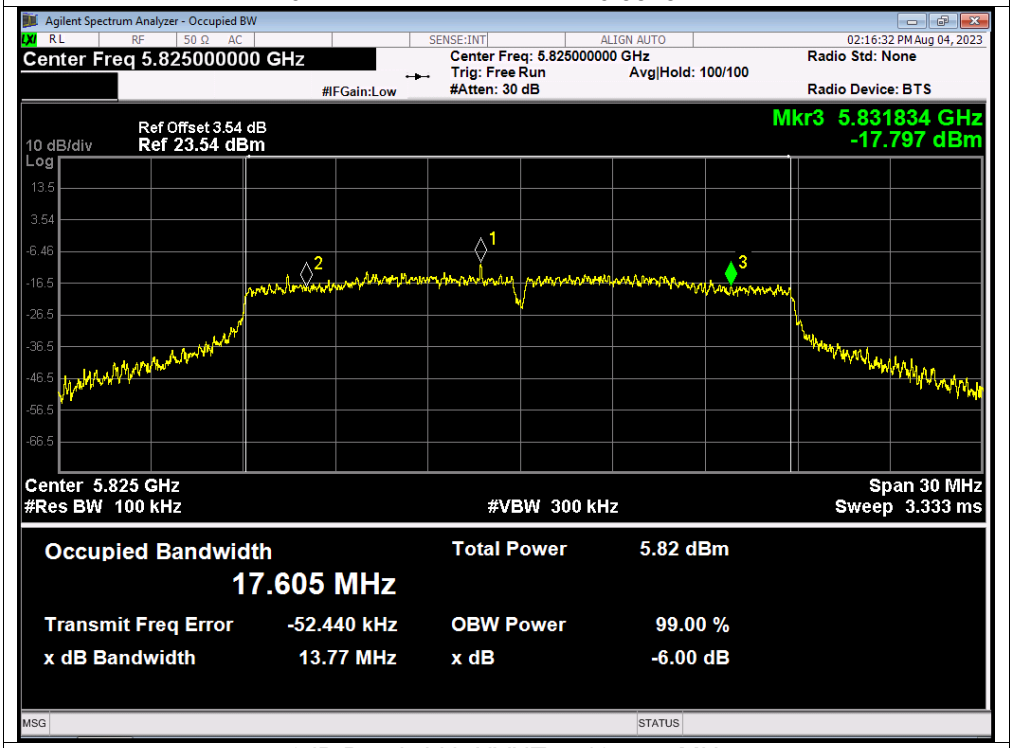
-6dB Bandwidth NVNT ac20 5745MHz



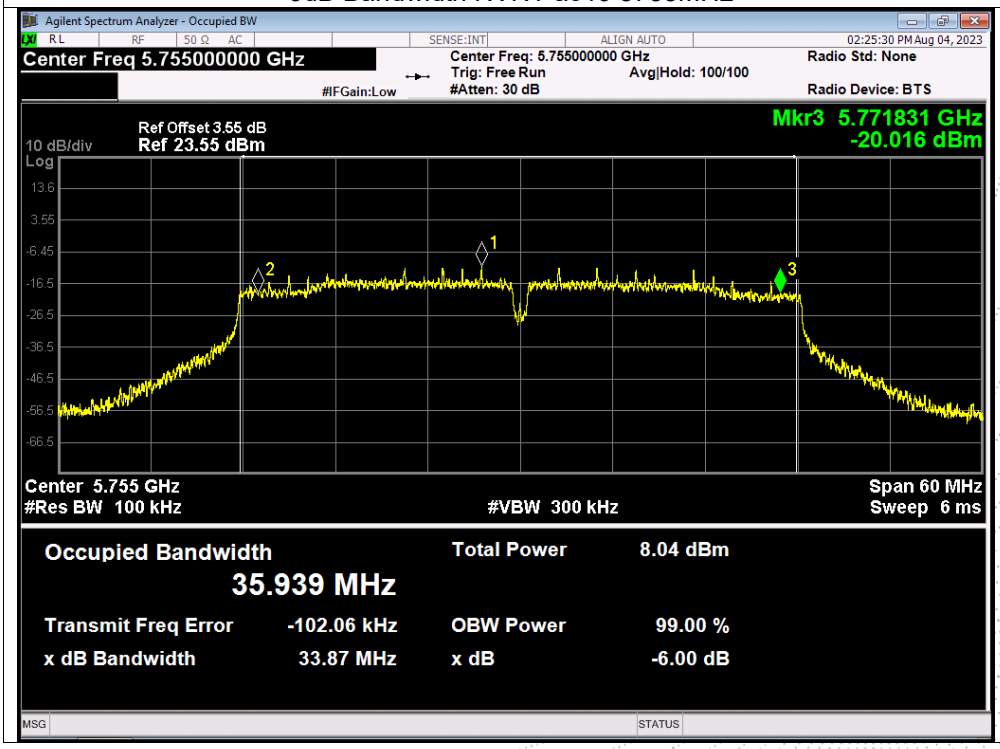
-6dB Bandwidth NVNT ac20 5785MHz



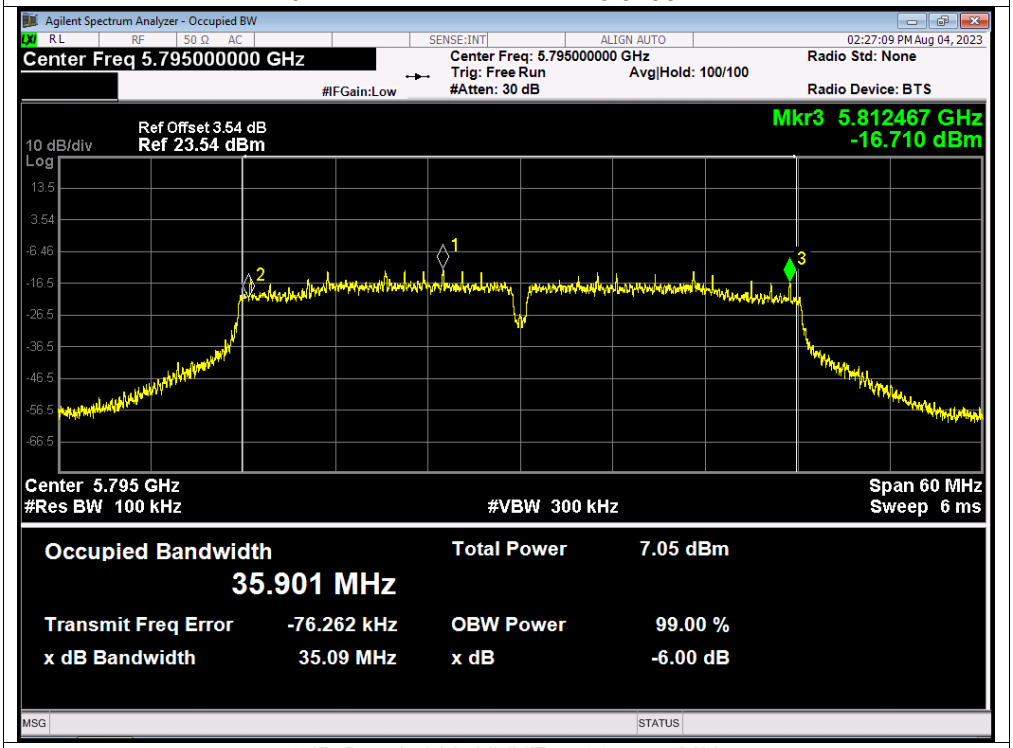
-6dB Bandwidth NVNT ac20 5825MHz



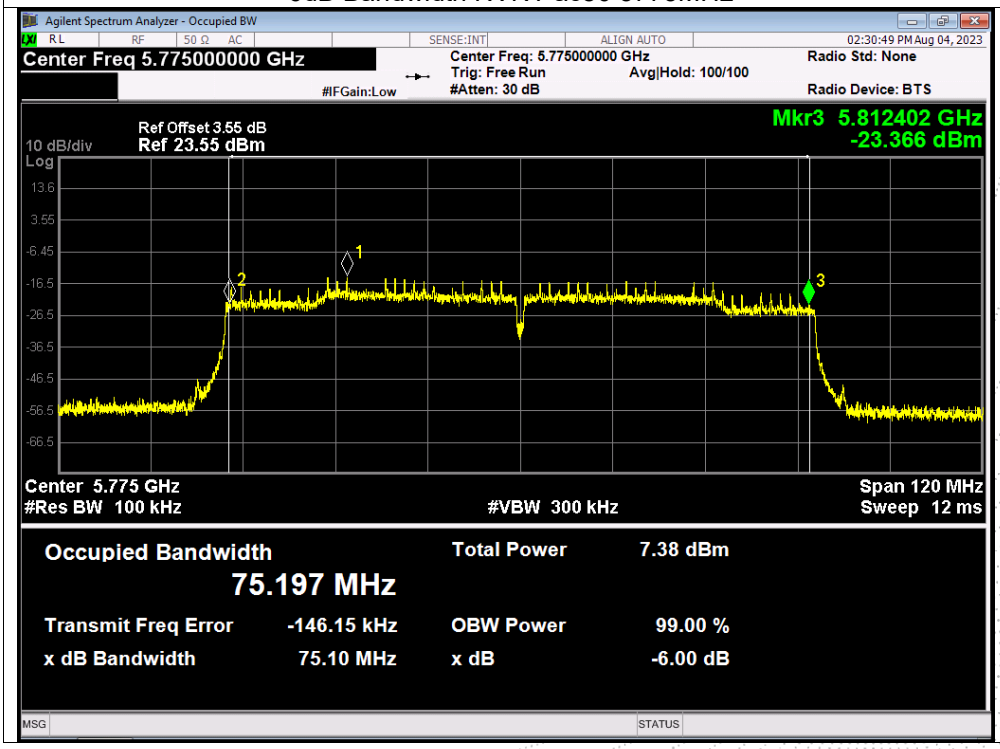
-6dB Bandwidth NVNT ac40 5755MHz



-6dB Bandwidth NVNT ac40 5795MHz

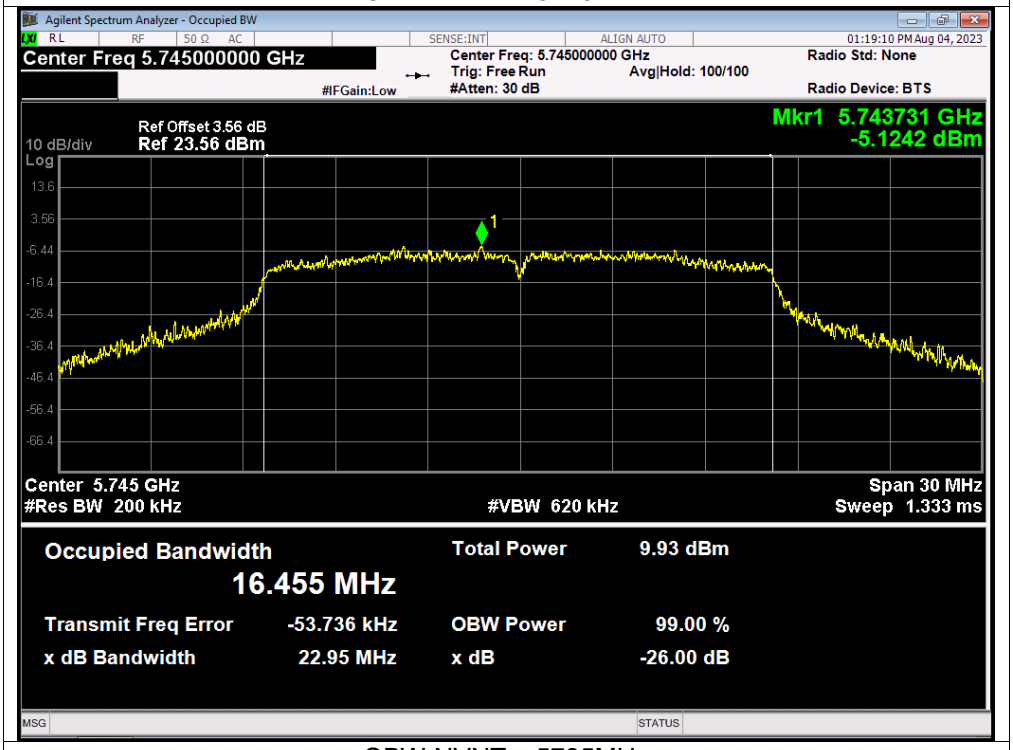


-6dB Bandwidth NVNT ac80 5775MHz

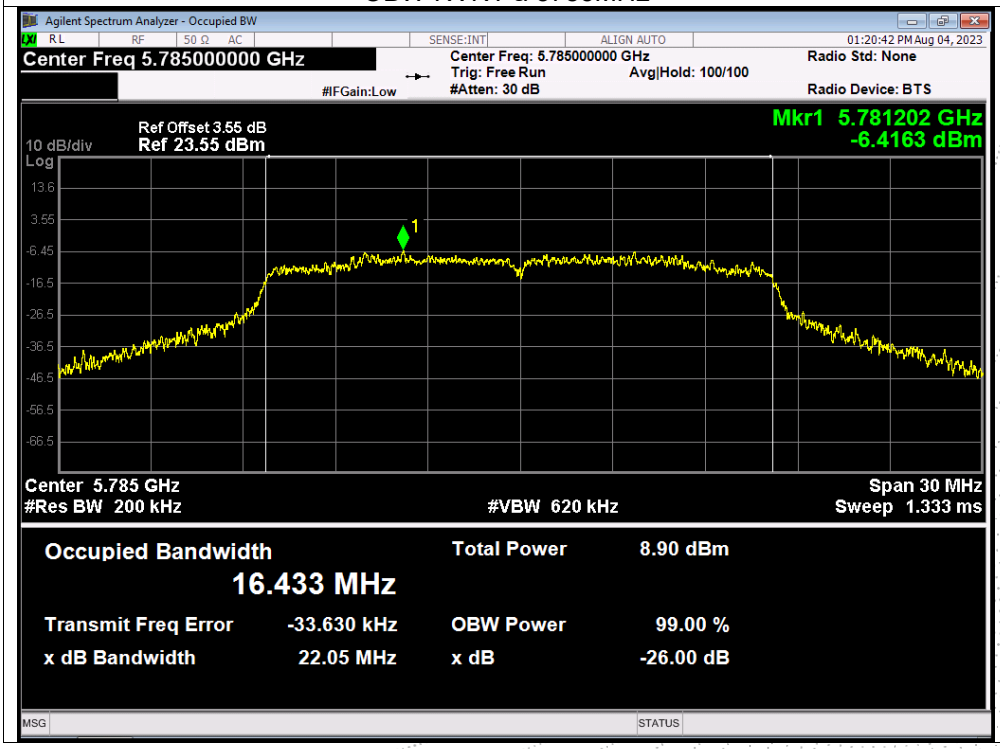


Test Graphs

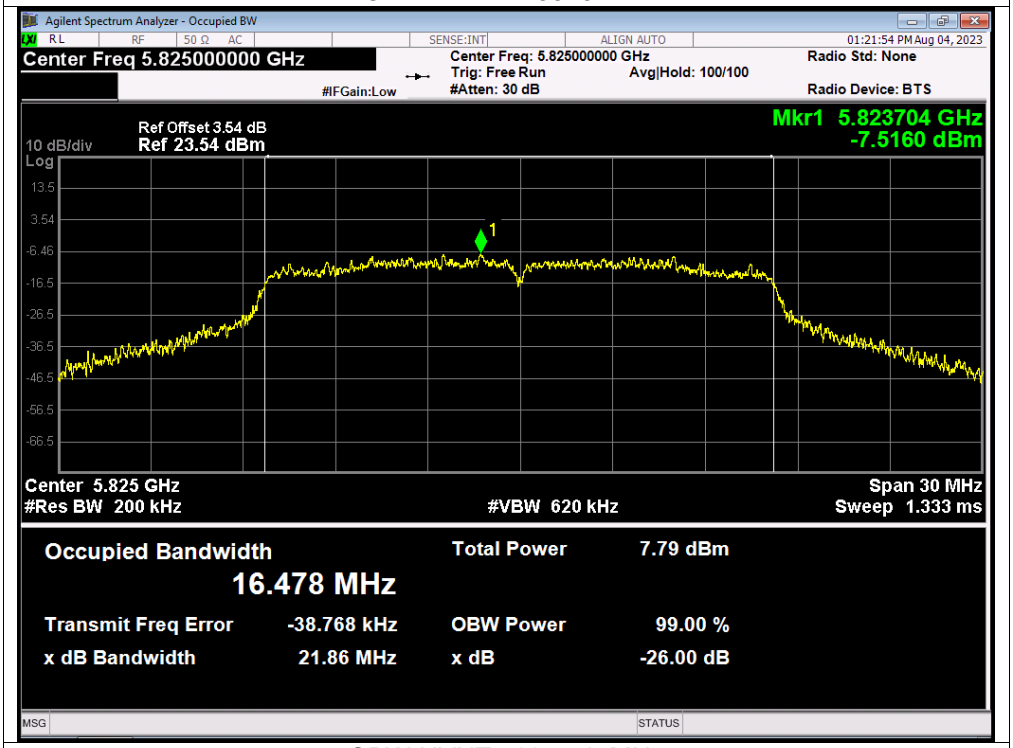
OBW NVNT a 5745MHz



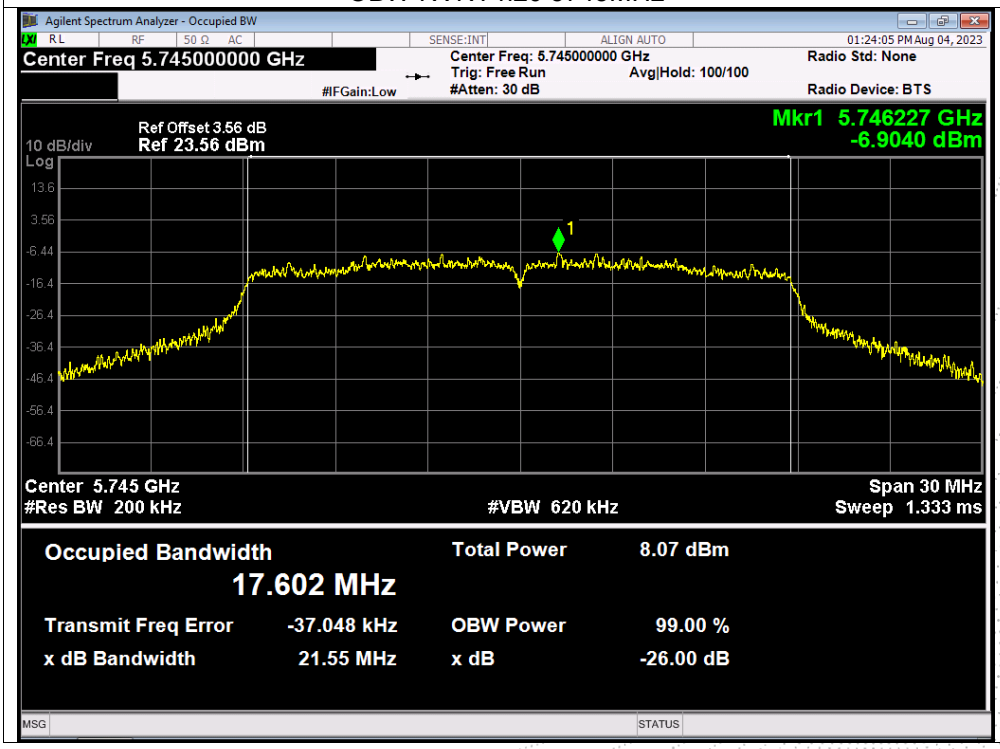
OBW NVNT a 5785MHz



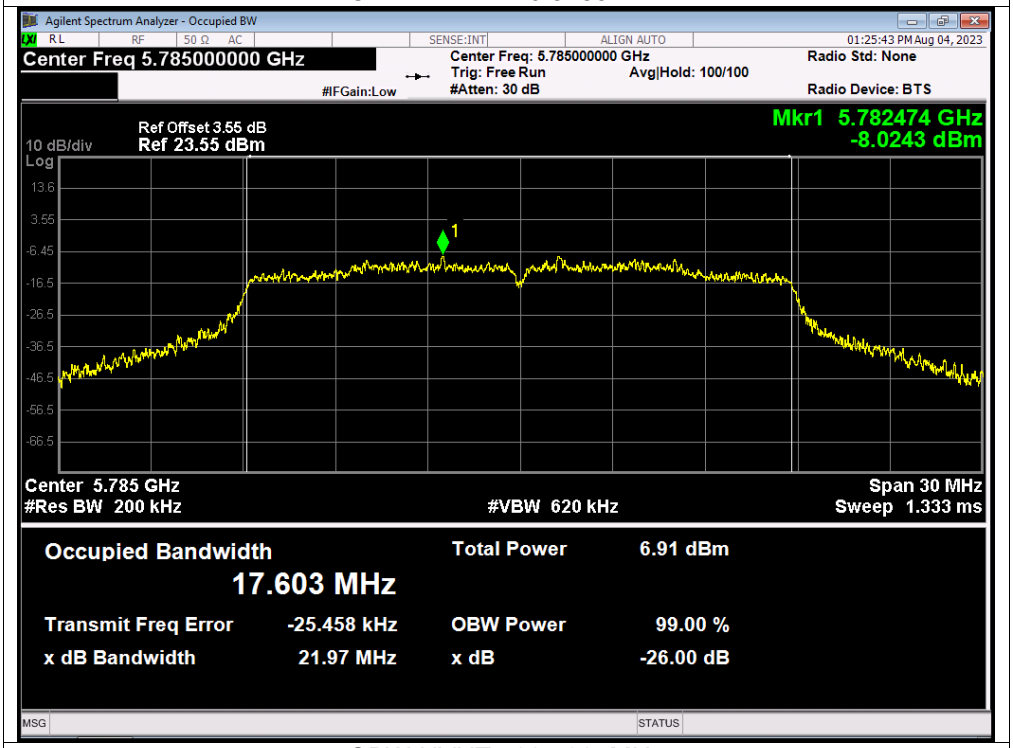
OBW NVNT a 5825MHz



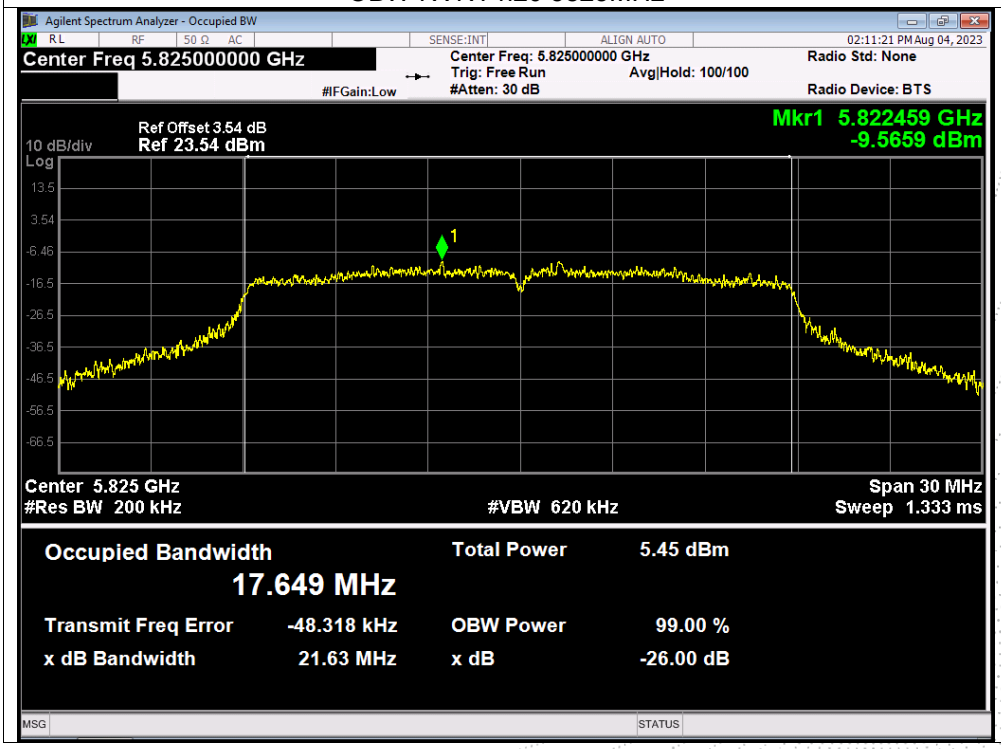
OBW NVNT n20 5745MHz



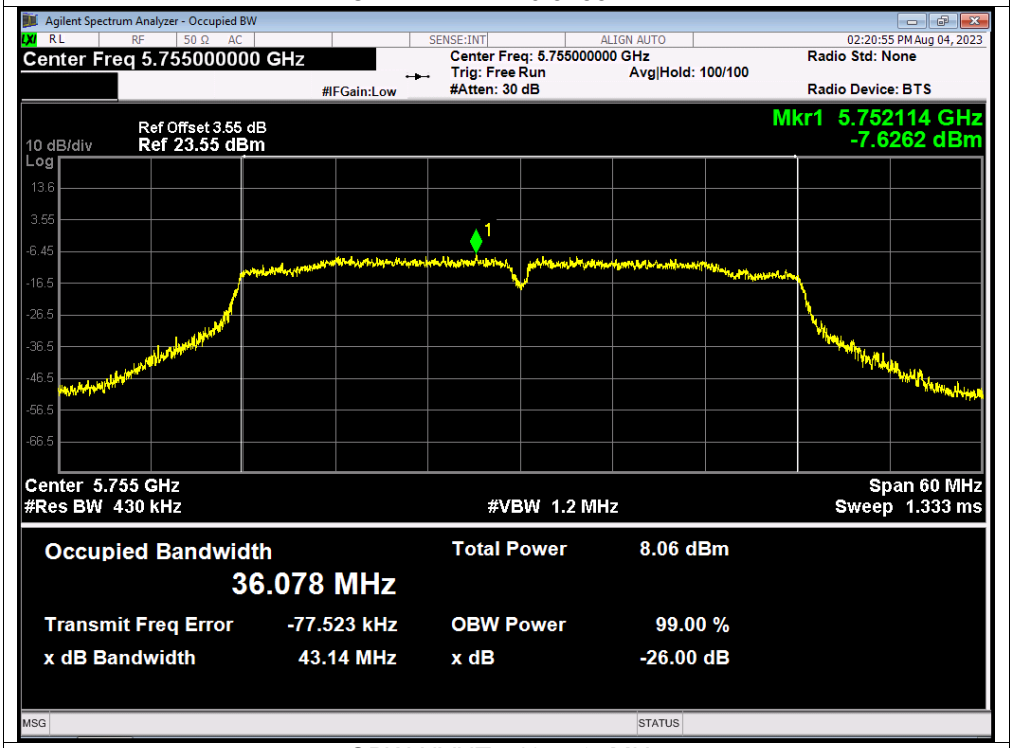
OBW NVNT n20 5785MHz



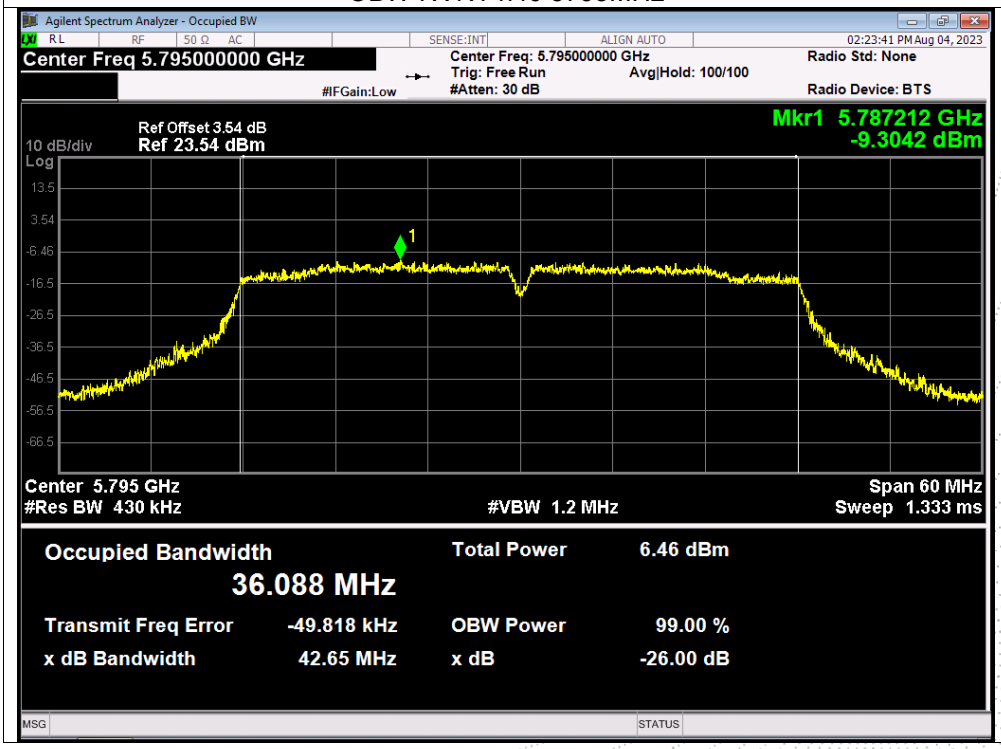
OBW NVNT n20 5825MHz



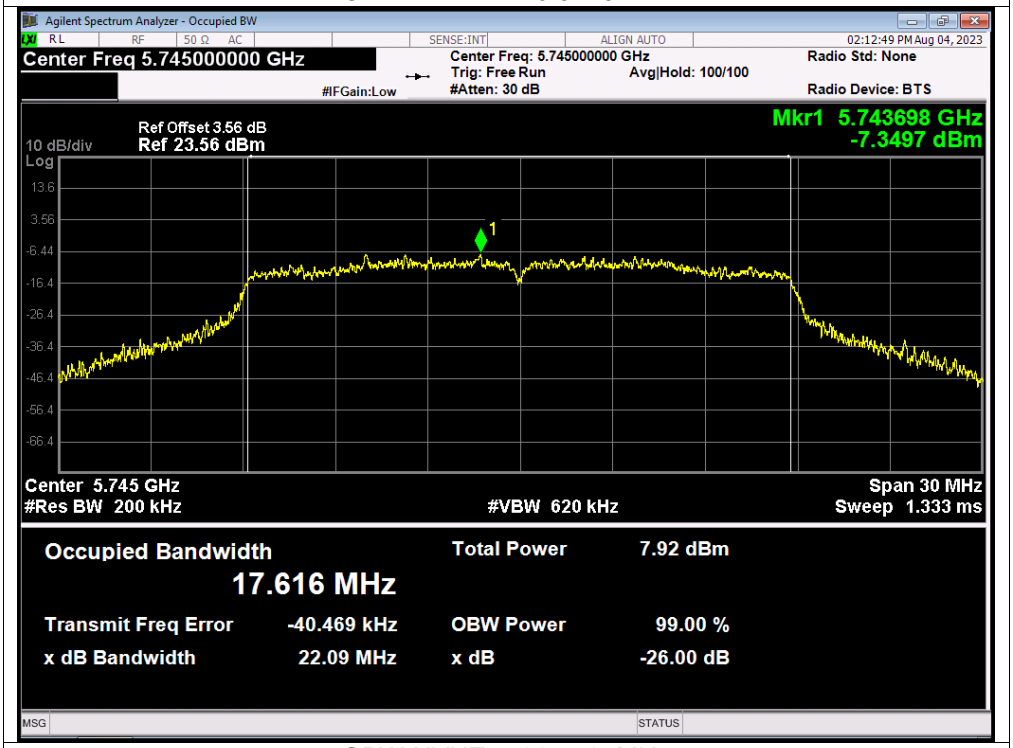
OBW NVNT n40 5755MHz



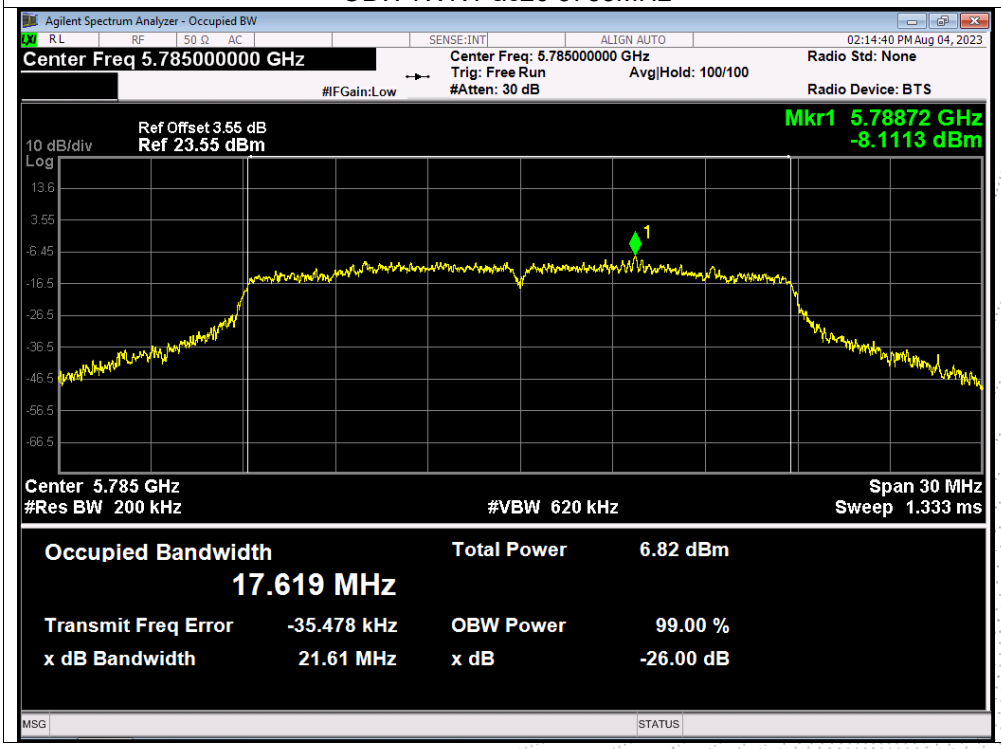
OBW NVNT n40 5795MHz



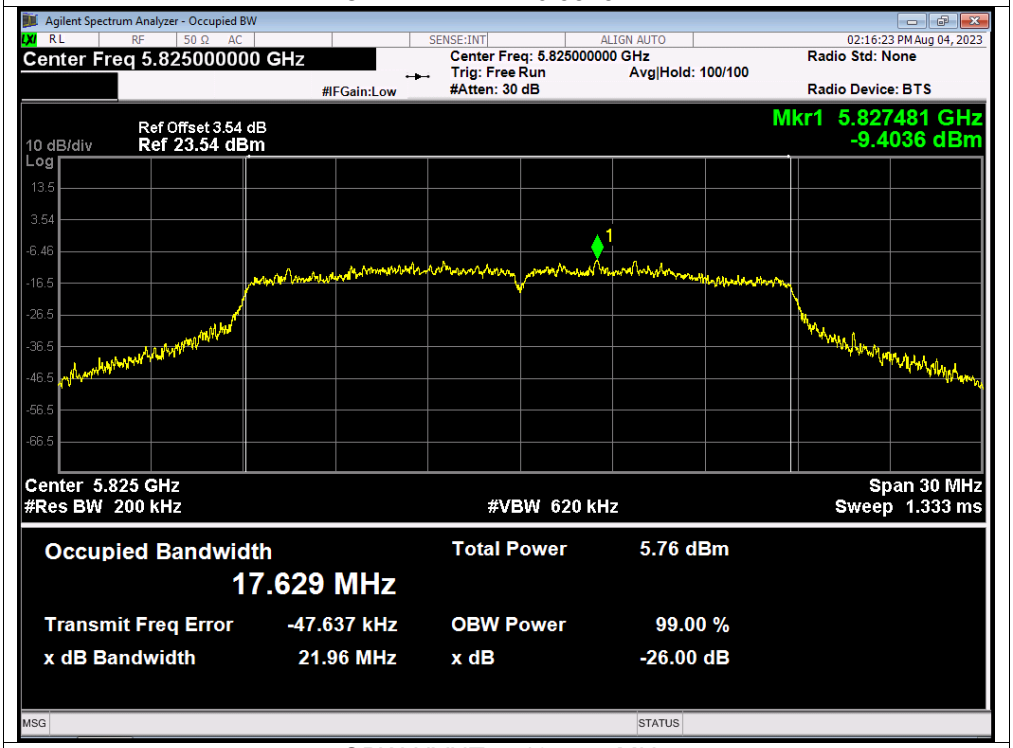
OBW NVNT ac20 5745MHz



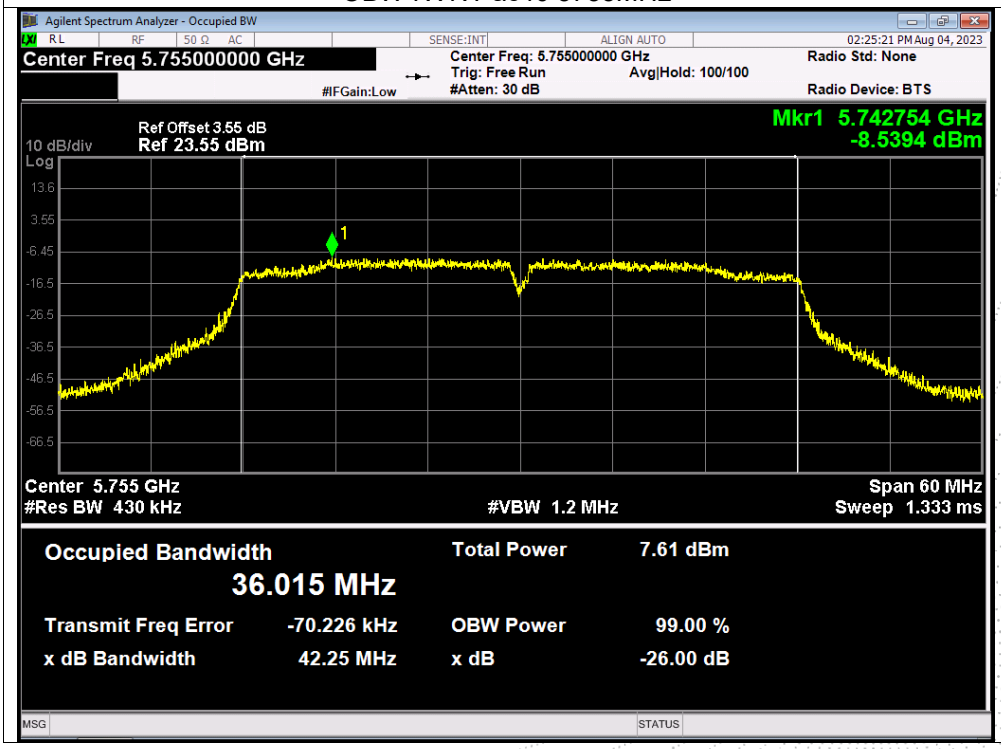
OBW NVNT ac20 5785MHz



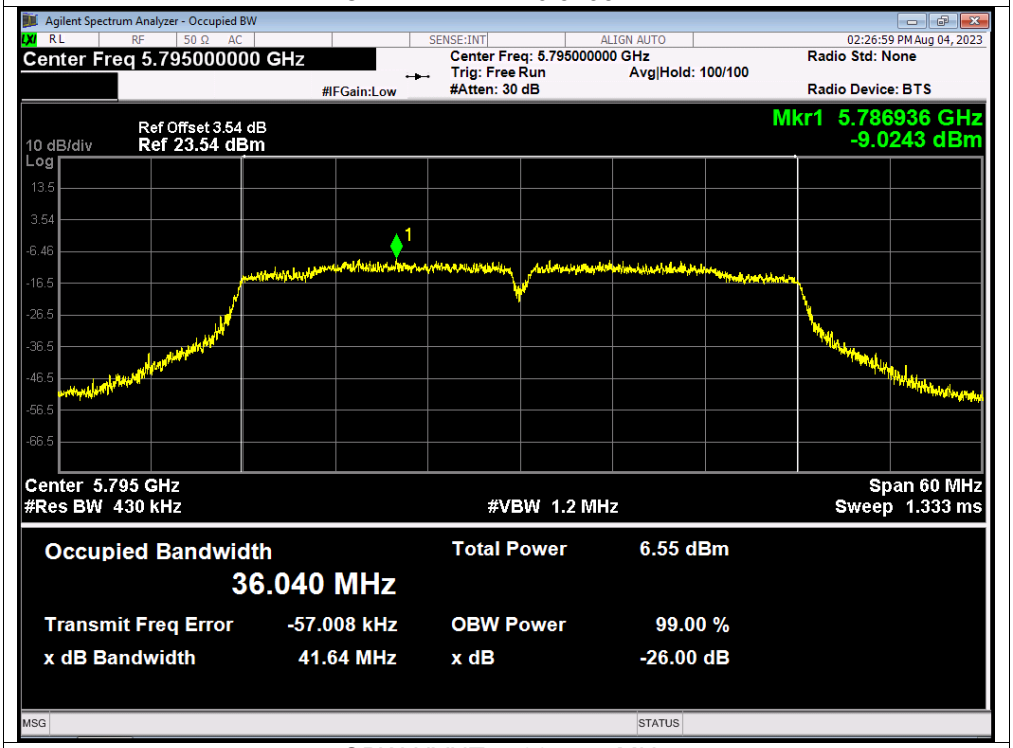
OBW NVNT ac20 5825MHz



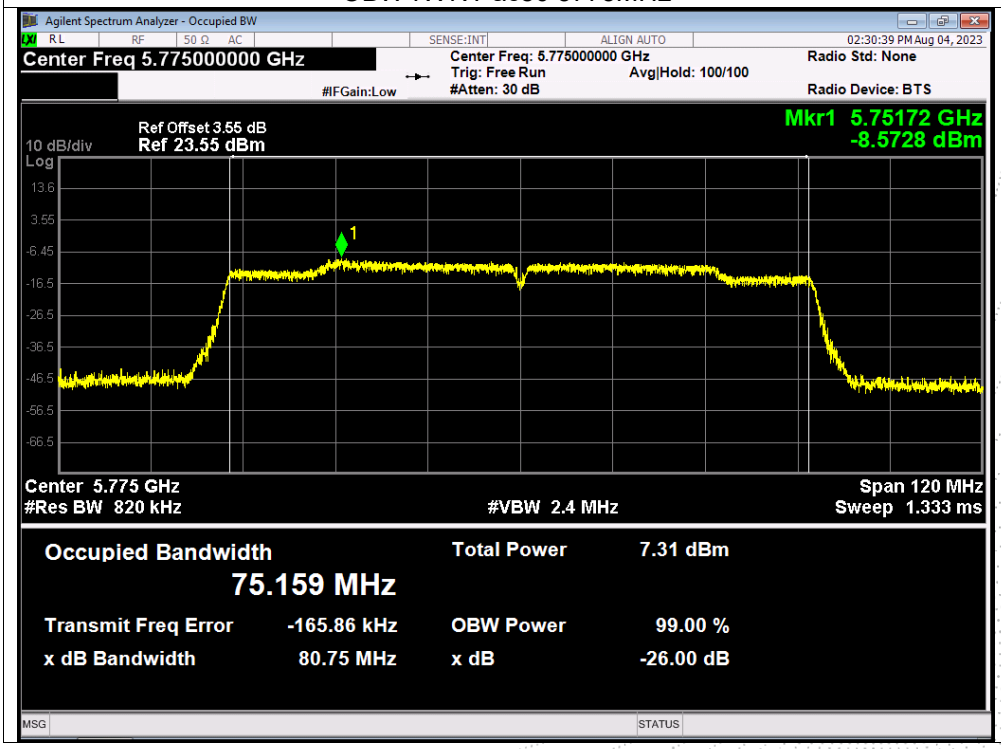
OBW NVNT ac40 5755MHz



OBW NVNT ac40 5795MHz

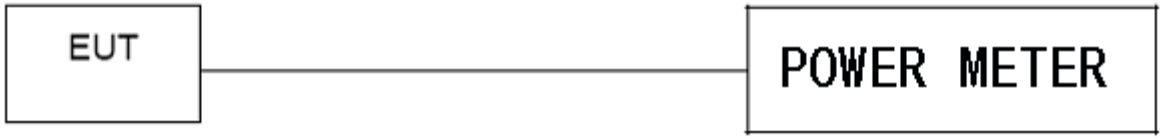


OBW NVNT ac80 5775MHz



10. Maximum Conducted Output Power

10.1 Block Diagram Of Test Setup



10.2 Limit

According to FCC §15.407
The maximum conduced output power should not exceed:

Frequency Band(MHz)	Limit
5150~5250	250mW
5725~5850	1W

10.3 Test procedure

Maximum conducted output power may be measured using a spectrum analyzer/EMI receiver or an RF power meter.

1. Device Configuration
If possible, configure or modify the operation of the EUT so that it transmits continuously at its maximum power control level (see section II.B.).

a) The intent is to test at 100 percent duty cycle; however a small reduction in duty cycle (to no lower than 98 percent) is permitted if required by the EUT for amplitude control purposes. Manufacturers are expected to provide software to the test lab to permit such continuous operation.

b) If continuous transmission (or at least 98 percent duty cycle) cannot be achieved due to hardware limitations (e.g., overheating), the EUT shall be operated at its maximum power control level with the transmit duration as long as possible and the duty cycle as high as possible.

2. Measurement using a Spectrum Analyzer or EMI Receiver (SA)
Measurement of maximum conducted output power using a spectrum analyzer requires integrating the spectrum across a frequency span that encompasses, at a minimum, either the EBW or the 99-percent occupied bandwidth of the signal.1 However, the EBW must be used to determine bandwidth dependent limits on maximum conducted output power in accordance with § 15.407(a).

a) The test method shall be selected as follows: (i) Method SA-1 or SA-1 Alternative (averaging with the EUT transmitting at full power throughout each sweep) shall be applied if either of the following conditions can be satisfied:

• The EUT transmits continuously (or with a duty cycle ≥ 98 percent).

• Sweep triggering or gating can be implemented in a way that the device transmits at the maximum power control level throughout the duration of each of the instrument sweeps to be averaged. This condition can generally be achieved by triggering the instrument's sweep if the duration of the sweep (with the analyzer configured as in Method SA-1, below) is equal to or shorter than the duration T of each transmission from the EUT and if those transmissions exhibit full power throughout their durations.

(ii) Method SA-2 or SA-2 Alternative (averaging across on and off times of the EUT transmissions, followed by duty cycle correction) shall be applied if the conditions of (i) cannot be achieved and the

transmissions exhibit a constant duty cycle during the measurement duration. Duty cycle will be considered to be constant if variations are less than ± 2 percent.

(iii) Method SA-3 (RMS detection with max hold) or SA-3 Alternative (reduced VBW with max hold) shall be applied if the conditions of (i) and (ii) cannot be achieved.

b) Method SA-1 (trace averaging with the EUT transmitting at full power throughout each sweep): (i) Set span to encompass the entire emission bandwidth (EBW) (or, alternatively, the entire 99% occupied bandwidth) of the signal.

(ii) Set RBW = 1 MHz.

(iii) Set VBW ≥ 3 MHz.

(iv) Number of points in sweep ≥ 2 Span / RBW. (This ensures that bin-to-bin spacing is ≤ RBW/2, so that narrowband signals are not lost between frequency bins.)

(v) Sweep time = auto.

(vi) Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.

(vii) If transmit duty cycle < 98 percent, use a video trigger with the trigger level set to enable triggering only on full power pulses. Transmitter must operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no off intervals) or at duty cycle ≥ 98 percent, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to “free run”.

(viii) Trace average at least 100 traces in power averaging (i.e., RMS) mode.

(ix) Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument’s band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum

10.4 EUT operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

10.5 Test Result

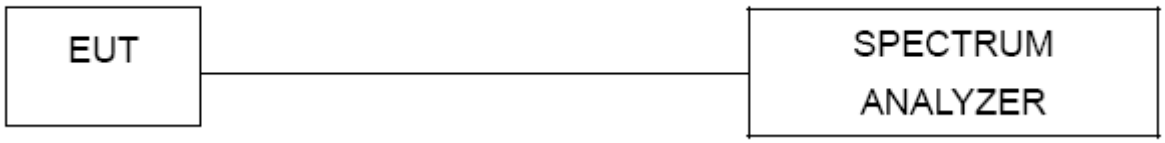
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC120V/60Hz
Test Mode:	(5180-5240MHz); (5745-5825MHz)		

Condition	Mode	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	a	5180	3.6	24	Pass
NVNT	a	5200	3.58	24	Pass
NVNT	a	5240	3.82	24	Pass
NVNT	n20	5180	2.73	24	Pass
NVNT	n20	5200	2.56	24	Pass
NVNT	n20	5240	2.85	24	Pass
NVNT	n40	5190	2.69	24	Pass
NVNT	n40	5230	2.84	24	Pass
NVNT	ac20	5180	2.75	24	Pass
NVNT	ac20	5200	2.59	24	Pass
NVNT	ac20	5240	2.88	24	Pass
NVNT	ac40	5190	2.65	24	Pass
NVNT	ac40	5230	2.8	24	Pass
NVNT	ac80	5210	0.91	24	Pass

Condition	Mode	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	a	5745	3.87	30	Pass
NVNT	a	5785	3.29	30	Pass
NVNT	a	5825	2.1	30	Pass
NVNT	n20	5745	2.4	30	Pass
NVNT	n20	5785	1.28	30	Pass
NVNT	n20	5825	-0.07	30	Pass
NVNT	n40	5755	1.56	30	Pass
NVNT	n40	5795	0.77	30	Pass
NVNT	ac20	5745	2.33	30	Pass
NVNT	ac20	5785	1.25	30	Pass
NVNT	ac20	5825	0.1	30	Pass
NVNT	ac40	5755	1.89	30	Pass
NVNT	ac40	5795	0.83	30	Pass
NVNT	ac80	5775	0.82	30	Pass

11. Out Of Band Emissions

11.1 Block Diagram Of Test Setup



11.2 Limit

According to FCC §15.407(b)
Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following 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 e.i.r.p. of −27 dBm/MHz.
(2) 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.

11.3 Test procedure

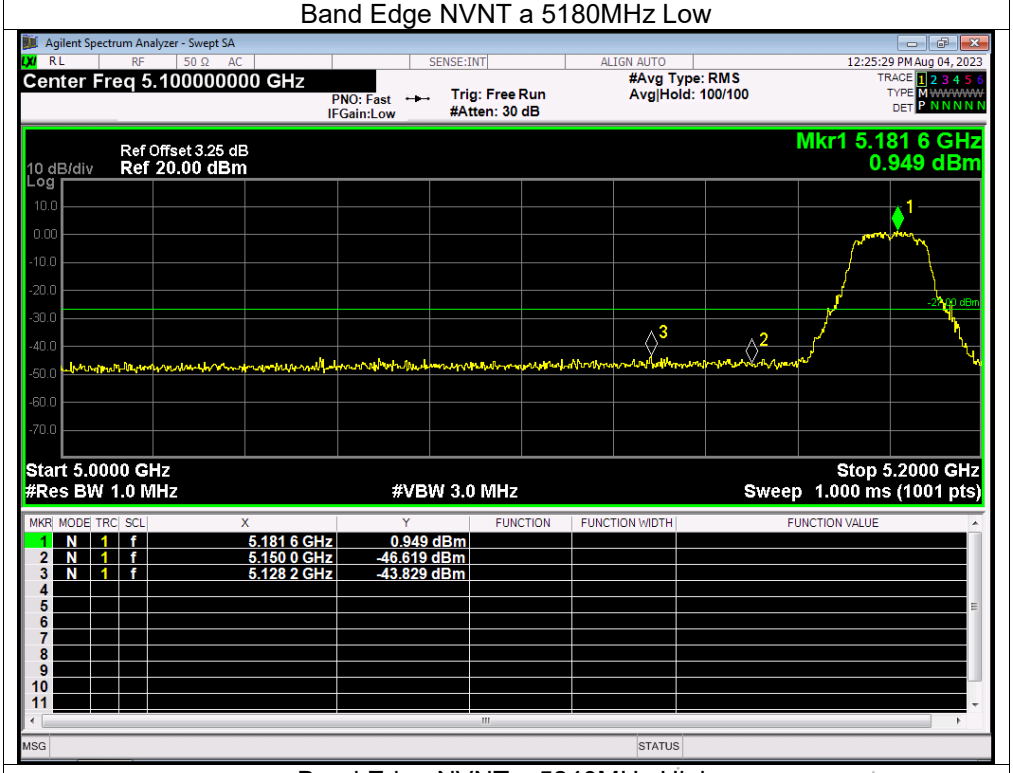
1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then 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.

11.4 EUT operating Conditions

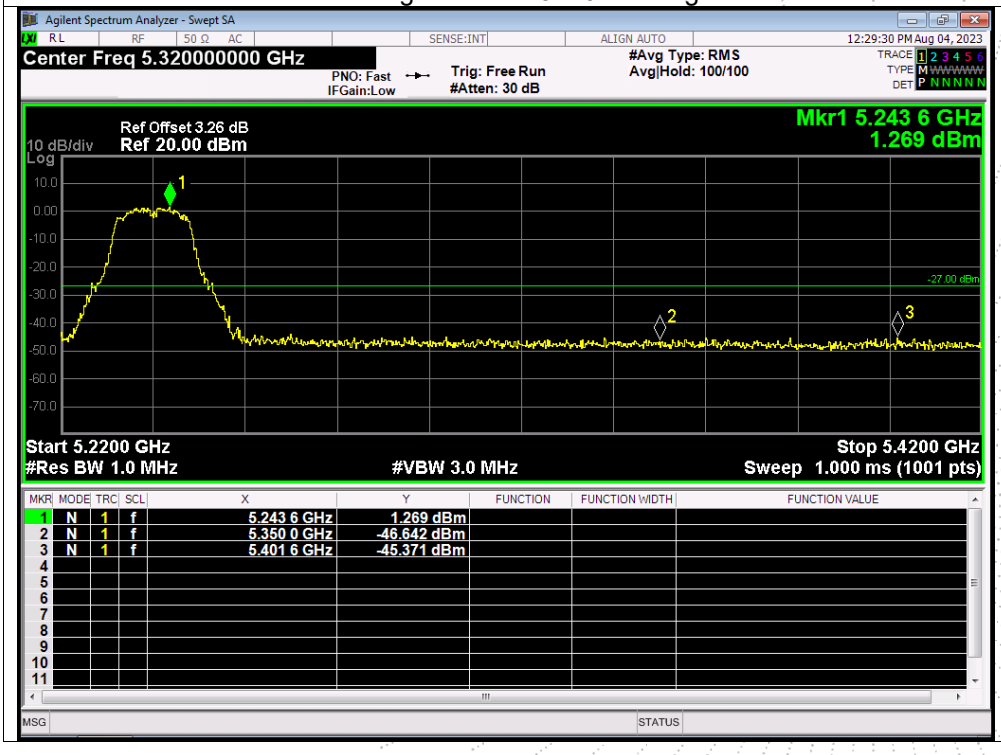
The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data

11.5 Test Result

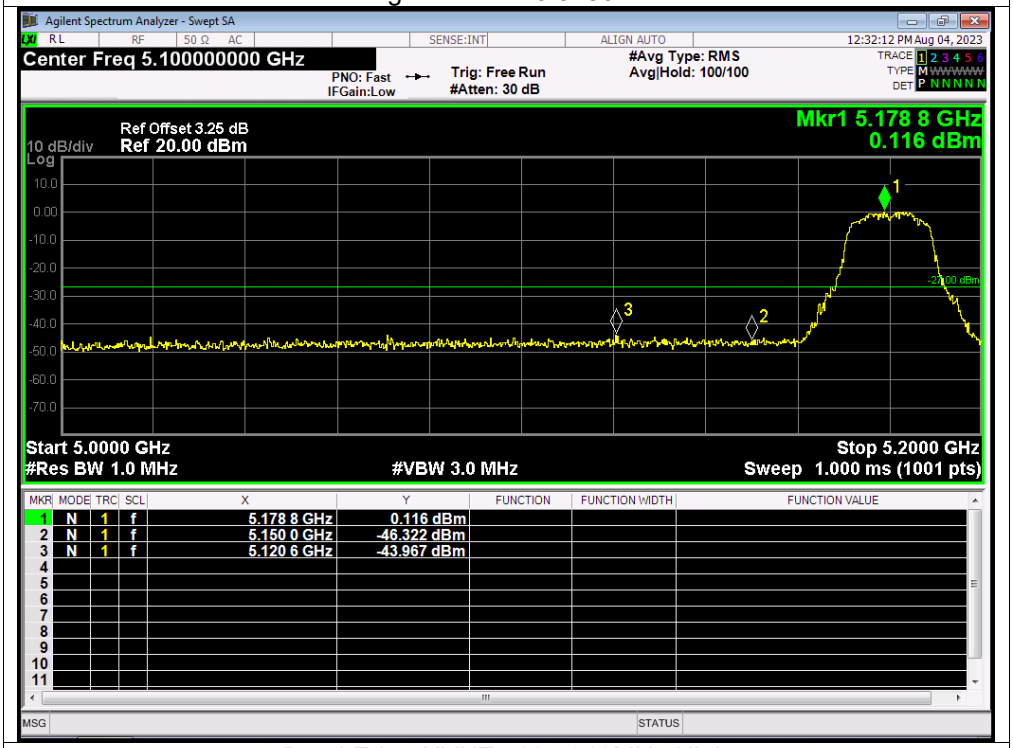
Test Graphs
Band Edge NVNT a 5180MHz Low



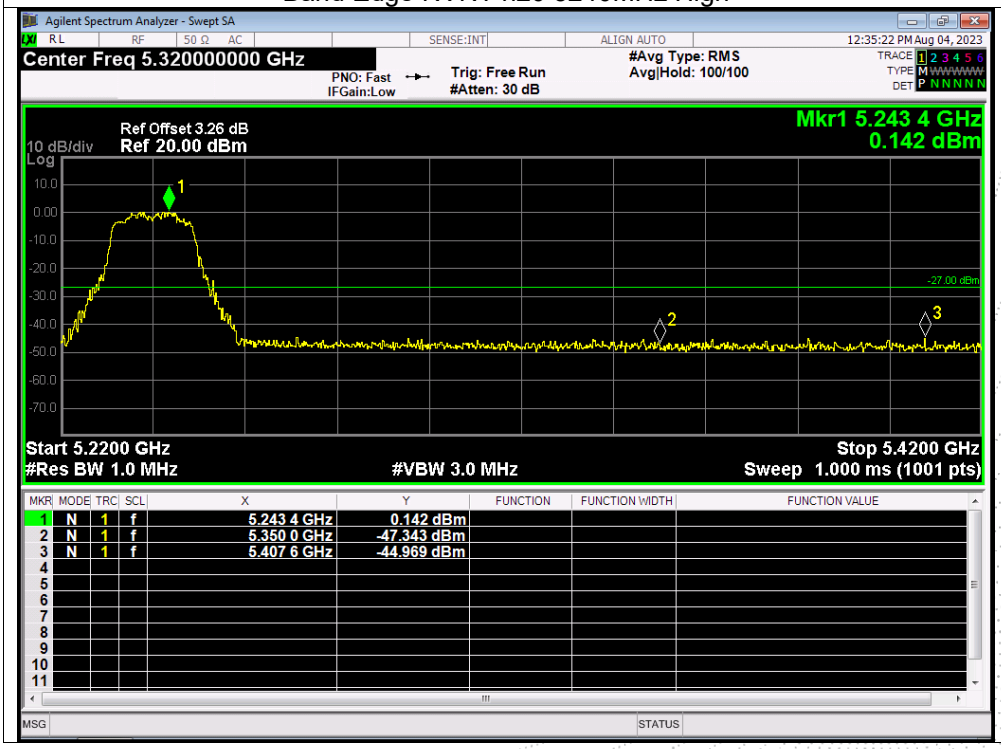
Band Edge NVNT a 5240MHz High



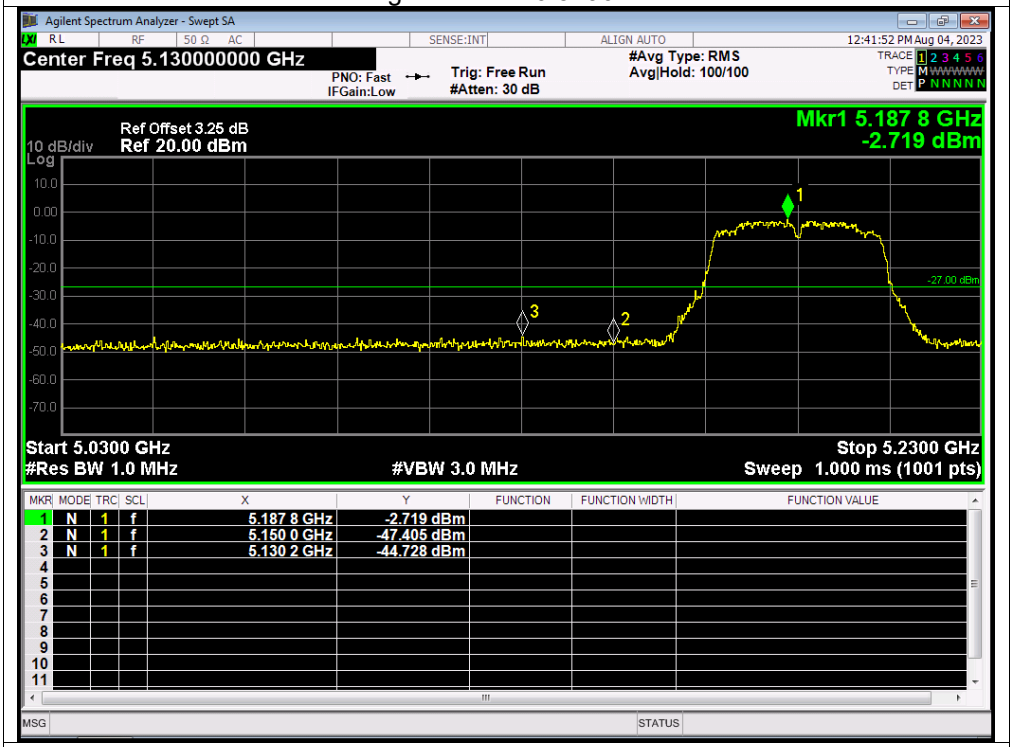
Band Edge NVNT n20 5180MHz Low



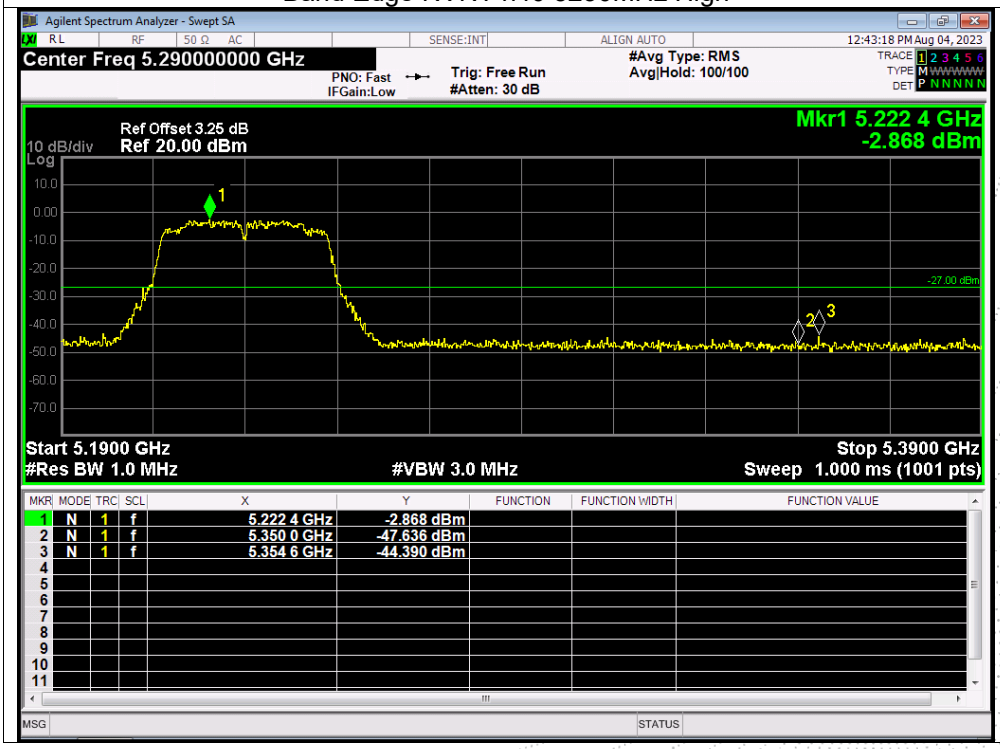
Band Edge NVNT n20 5240MHz High



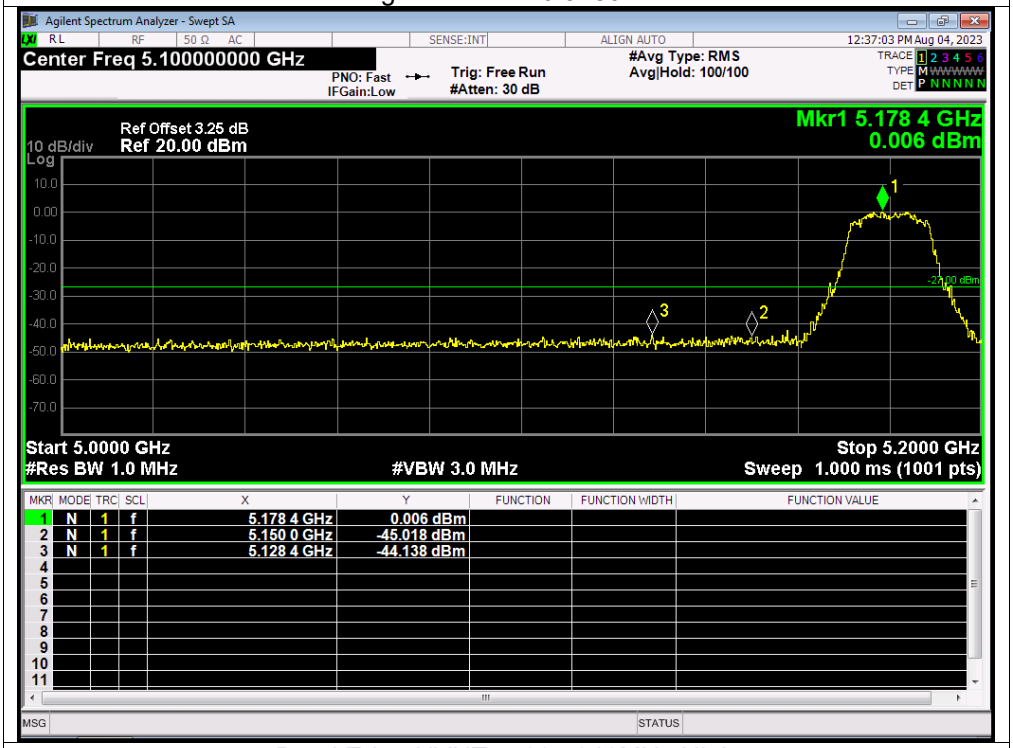
Band Edge NVNT n40 5190MHz Low



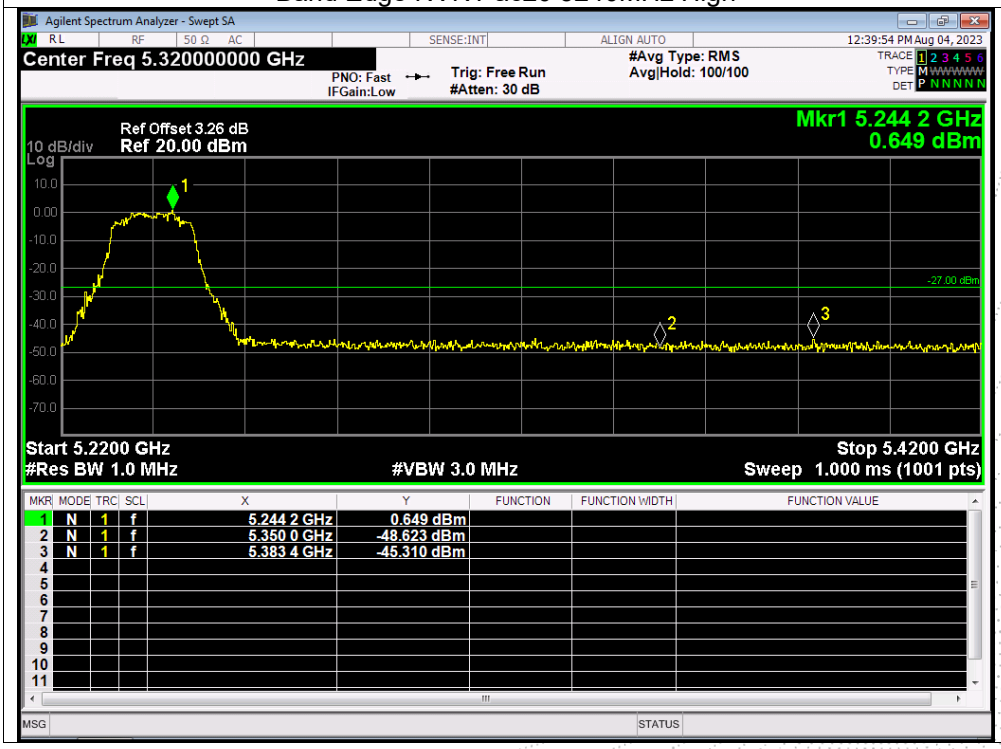
Band Edge NVNT n40 5230MHz High



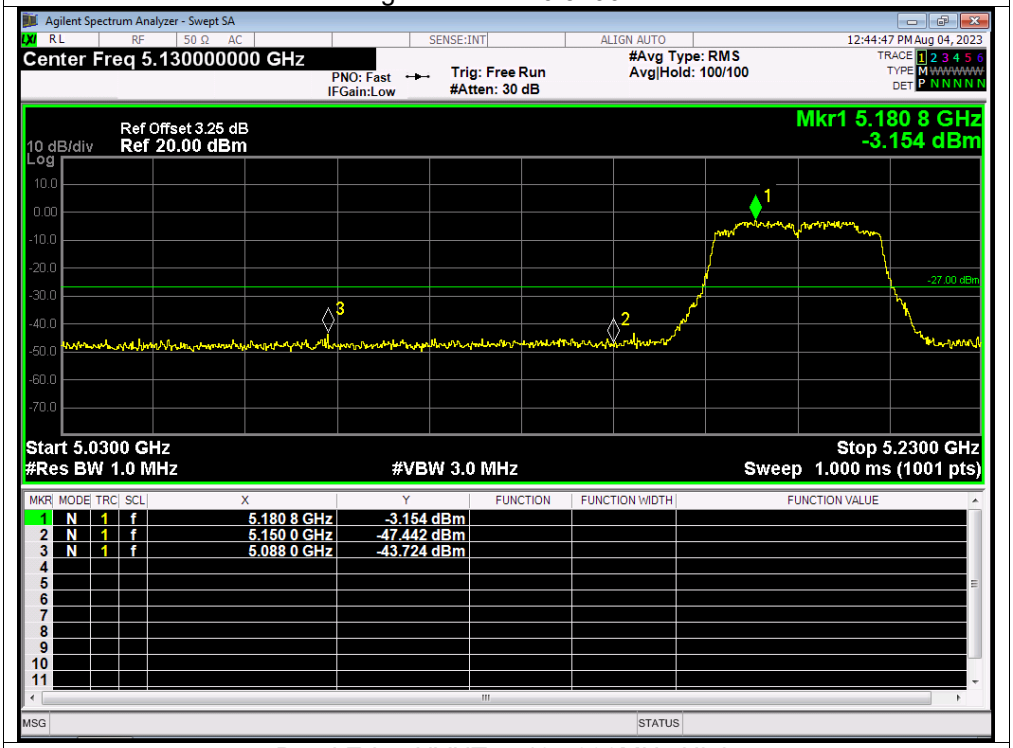
Band Edge NVNT ac20 5180MHz Low



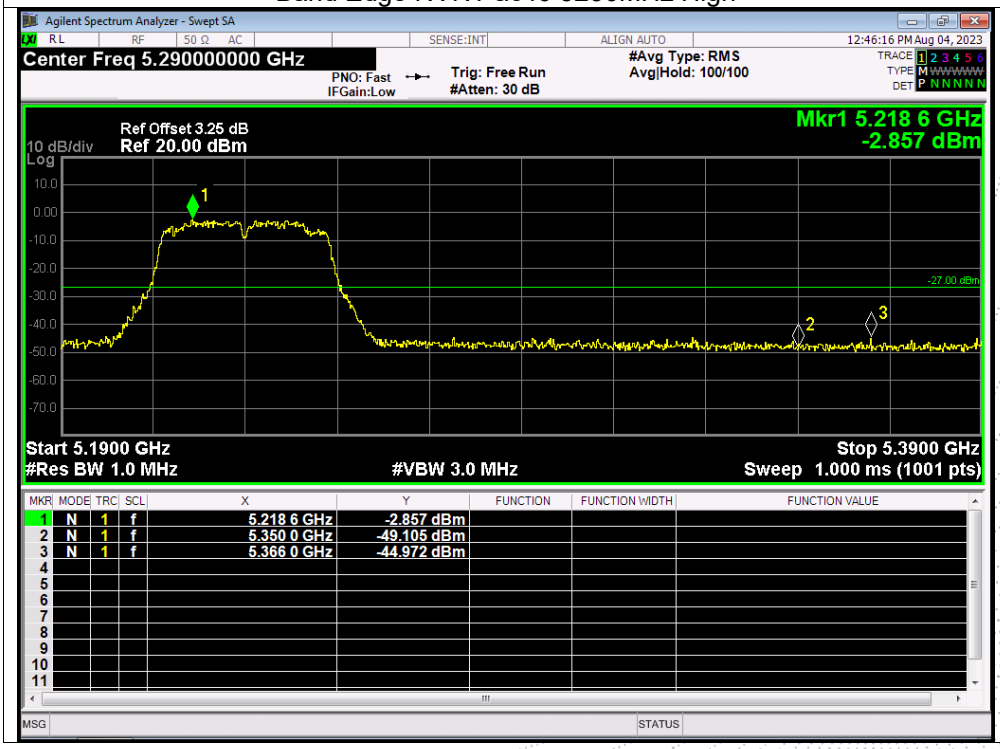
Band Edge NVNT ac20 5240MHz High



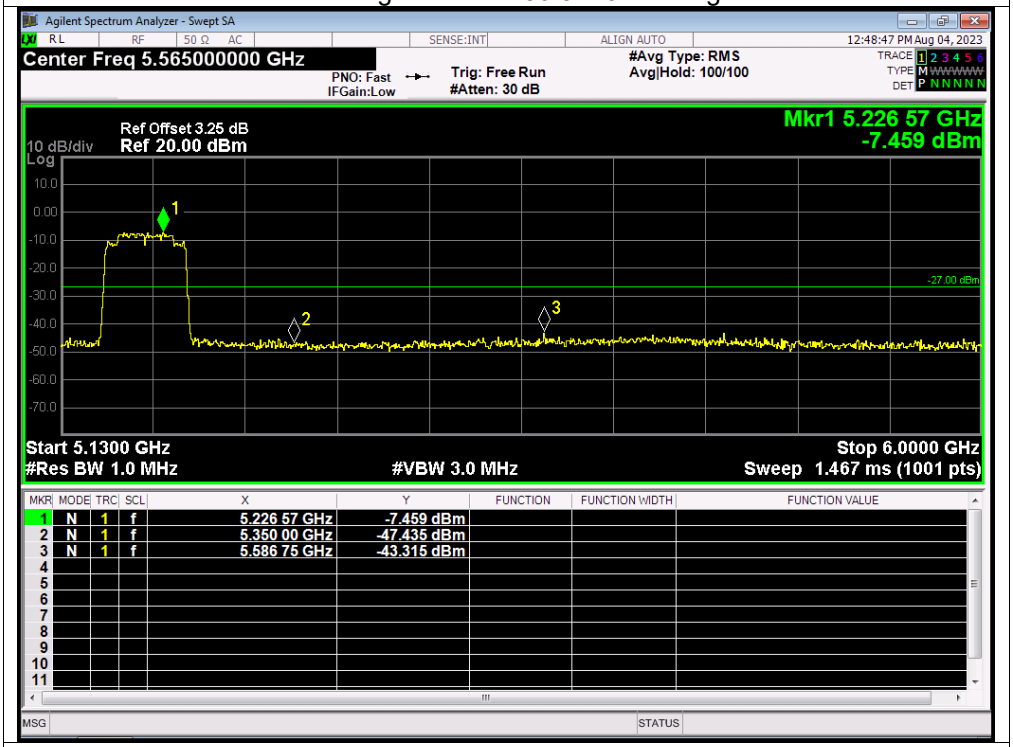
Band Edge NVNT ac40 5190MHz Low



Band Edge NVNT ac40 5230MHz High



Band Edge NVNT ac80 5210MHz High



Band Edge NVNT ac80 5210MHz Low