TEST REPORT

Report No.:	BCTC2307013404-4E
Applicant:	SHENZHEN NST INDUSTRY AND TRADE CO.,LTD
Product Name:	17.3 inch laptop
Model/Type reference:	M17Pro
Tested Date:	2023-07-28 to 2023-08-07
Issued Date:	2023-08-07

Shenzhen BCTC Testing Co., Ltd.

FCC ID: 2AAMS-SGINM17V2

Product Name:	17.3 inch laptop
Trademark:	N/A
Model/Type reference:	M17Pro M173CJ
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
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
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:	2023-07-28
Sample tested Date:	2023-07-28 to 2023-08-07
Issue Date:	2023-08-07
Report No.:	BCTC2307013404-4E
Test Standards:	FCC Part15 15.407 ANSI C63.10-2013 KDB 662911 D01 v02r01 KDB 789033 D02 v02r01
Test Results:	PASS

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
BCTC2307013404-4E	2023-08-07	Original	Valid

2. Test Summary

The Product has been tested according to the following specifications:

No.	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(9kHz-30MHz)	U=3.7dB
2	3m chamber Radiated spurious emission(30MHz-1GHz)	U=4.3dB
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

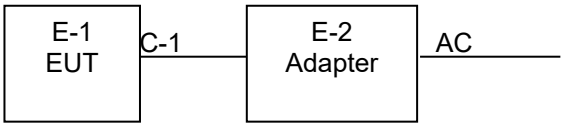
4.1 Product Information

Model/Type Ref.:	M17Pro M173CJ
Model differences:	All the model are the same circuit and RF module, except model names.
Hardware Version:	X133GRX200
Software Version:	win11 home
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); 5190-5230MHz for 802.11n(HT40); 5210MHz for 802.11 ac80; 5745-5825 MHz for 802.11a/n(HT20); 5755-5795 MHz for 802.11n(HT40); 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:	2.67 dBi
Ratings:	DC 12V from adapter
Adapter Information:	MODEL: J302-1203000UX INPUT: 100-240V~50/60Hz 1.5A OUTPUT: DC 12.0V 3.0A 36.0W

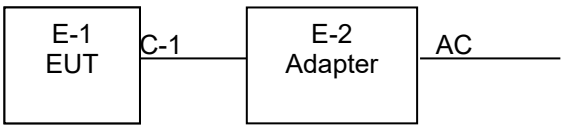
4.2 Test Setup Configuration

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	17.3 inch laptop	N/A	M17Pro	N/A	EUT
E-2	Adapter	N/A	J302-1203000UX	N/A	Auxiliary

Item	Shielded Type	Ferrite Core	Length	Note
C-1	N/A	N/A	1M	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

5.1G

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)
42	5210

5.8G

802.11a/n/ac(20 MHz) 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)
151	5755	159	5795	-	-

802.11ac 80MHz Carrier Frequency Channel	
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:

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

(2) We're testing antenna A data.

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
A2LA certificate registration number is: CN1212
ISED Registered No.: 23583
ISED CAB identifier: CN0017

5.2 Test Instrument Used

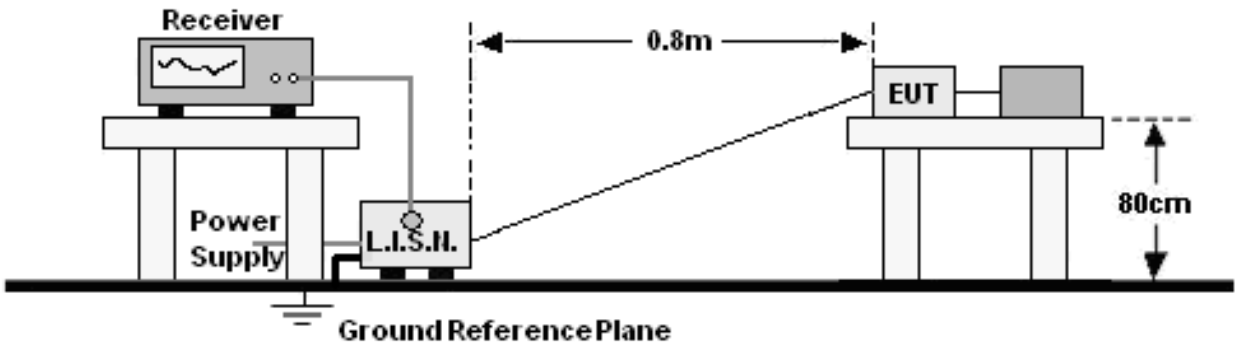
Conducted Emissions Test					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
Receiver	R&S	ESR3	102075	May 15, 2023	May 14, 2024
LISN	R&S	ENV216	101375	May 15, 2023	May 14, 2024
Software	Frad	EZ-EMC	EMC-CON 3A1	\	\
Attenuator	\	10dB DC-6GHz	1650	May 15, 2023	May 14, 2024

RF Conducted Test					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
Power Meter	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 Antenna(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

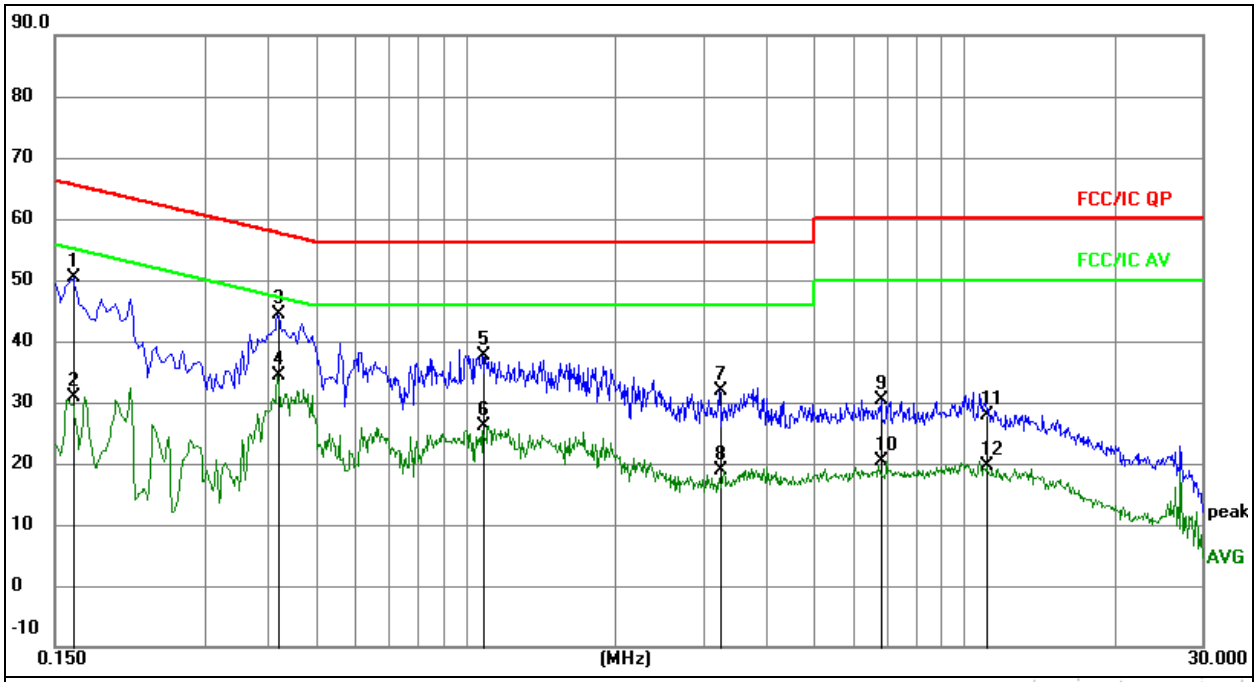
a. The Product was placed on a nonconductive table 0.8 m above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).
b. The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak 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.

6.5 Test Result

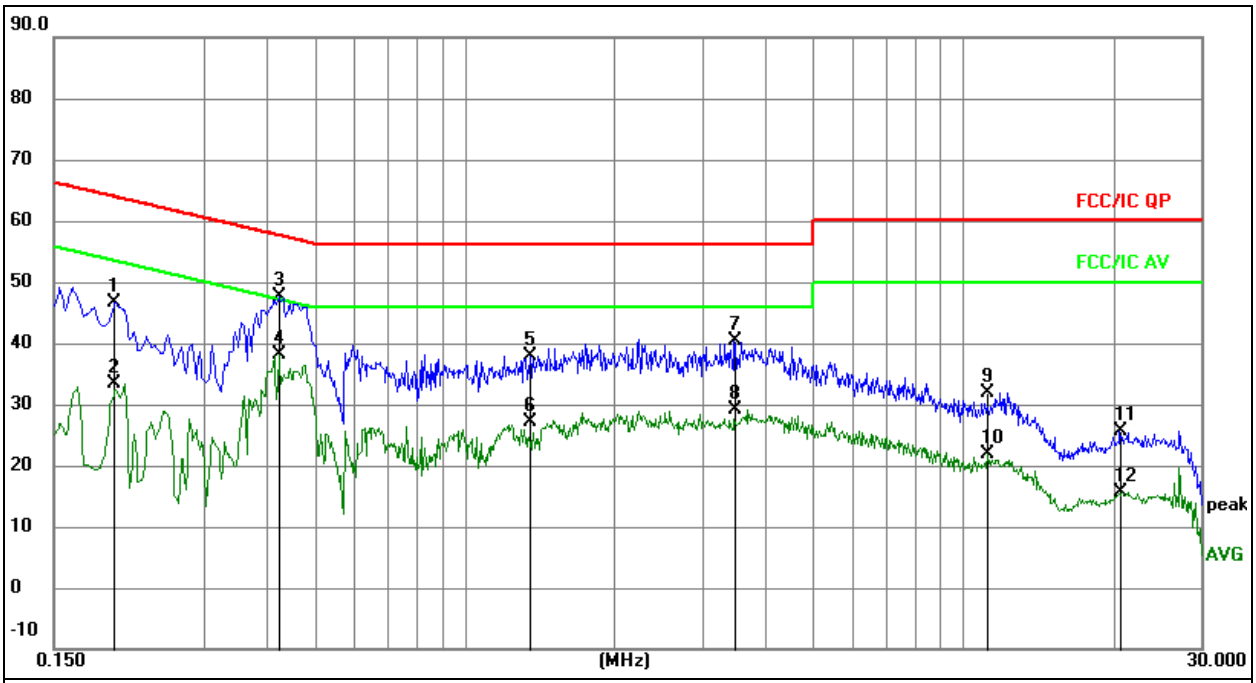
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Phase :	L
Test Mode:	Mode 4	Test Voltage :	AC120V/60Hz



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		0.1635	40.94	9.54	50.48	65.28	-14.80	QP
2		0.1635	21.46	9.54	31.00	55.28	-24.28	AVG
3	*	0.4200	34.85	9.62	44.47	57.45	-12.98	QP
4		0.4200	24.71	9.62	34.33	47.45	-13.12	AVG
5		1.0859	28.01	9.73	37.74	56.00	-18.26	QP
6		1.0859	16.44	9.73	26.17	46.00	-19.83	AVG
7		3.2280	22.11	9.80	31.91	56.00	-24.09	QP
8		3.2280	8.98	9.80	18.78	46.00	-27.22	AVG
9		6.8325	20.69	9.75	30.44	60.00	-29.56	QP
10		6.8325	10.61	9.75	20.36	50.00	-29.64	AVG
11		11.1345	18.34	9.66	28.00	60.00	-32.00	QP
12		11.1345	10.03	9.66	19.69	50.00	-30.31	AVG

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



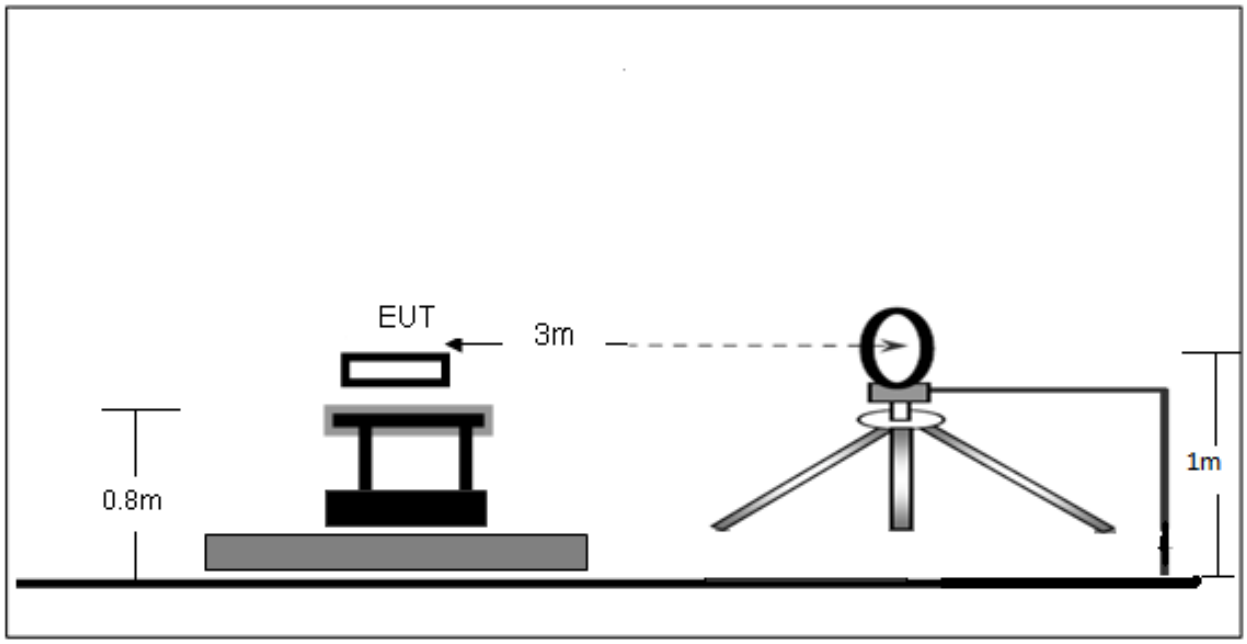
Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement=Reading Level+ Correct Factor
4. Over1 Measurement-Limit

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz		dB	dBuV	dBuV	dB	Detector
1		0.1986	37.10	9.61	46.71	63.67	-16.96	QP
2		0.1986	23.71	9.61	33.32	53.67	-20.35	AVG
3		0.4237	37.91	9.62	47.53	57.38	-9.85	QP
4	*	0.4237	28.40	9.62	38.02	47.38	-9.36	AVG
5		1.3521	28.19	9.73	37.92	56.00	-18.08	QP
6		1.3521	17.52	9.73	27.25	46.00	-18.75	AVG
7		3.4722	30.63	9.81	40.44	56.00	-15.56	QP
8		3.4722	19.30	9.81	29.11	46.00	-16.89	AVG
9		11.1977	22.10	9.66	31.76	60.00	-28.24	QP
10		11.1977	12.27	9.66	21.93	50.00	-28.07	AVG
11		20.5944	15.81	9.78	25.59	60.00	-34.41	QP
12		20.5944	5.79	9.78	15.57	50.00	-34.43	AVG

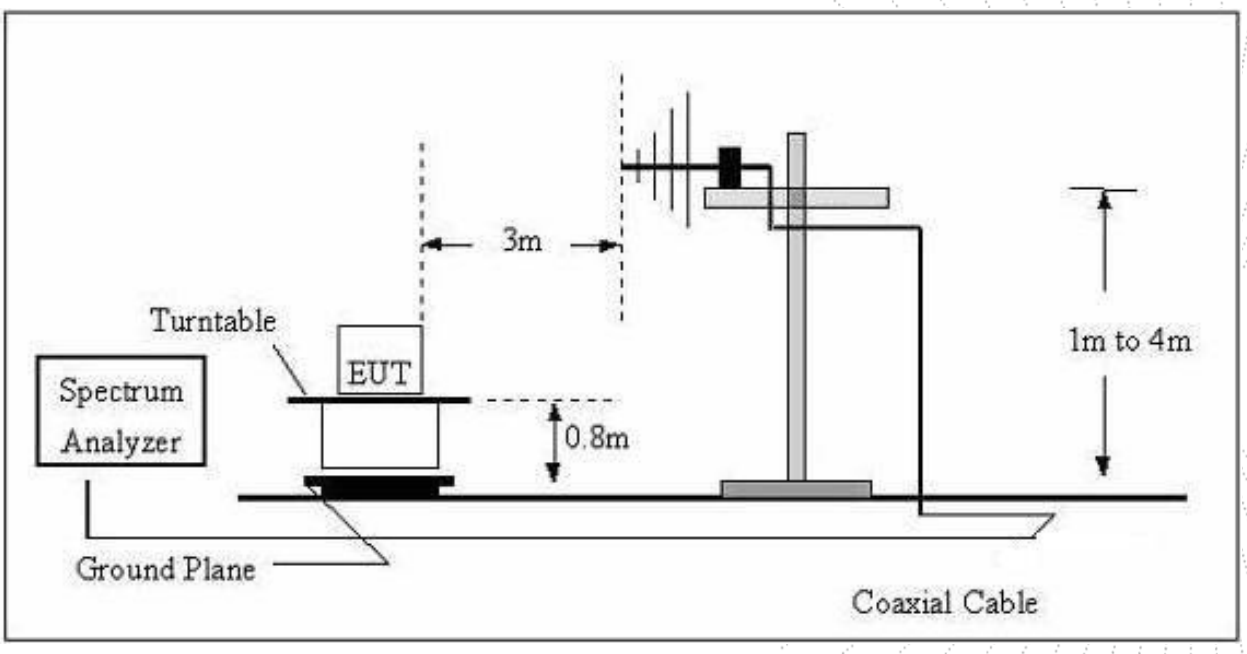
7. Radiated Emissions

7.1 Block Diagram Of Test Setup

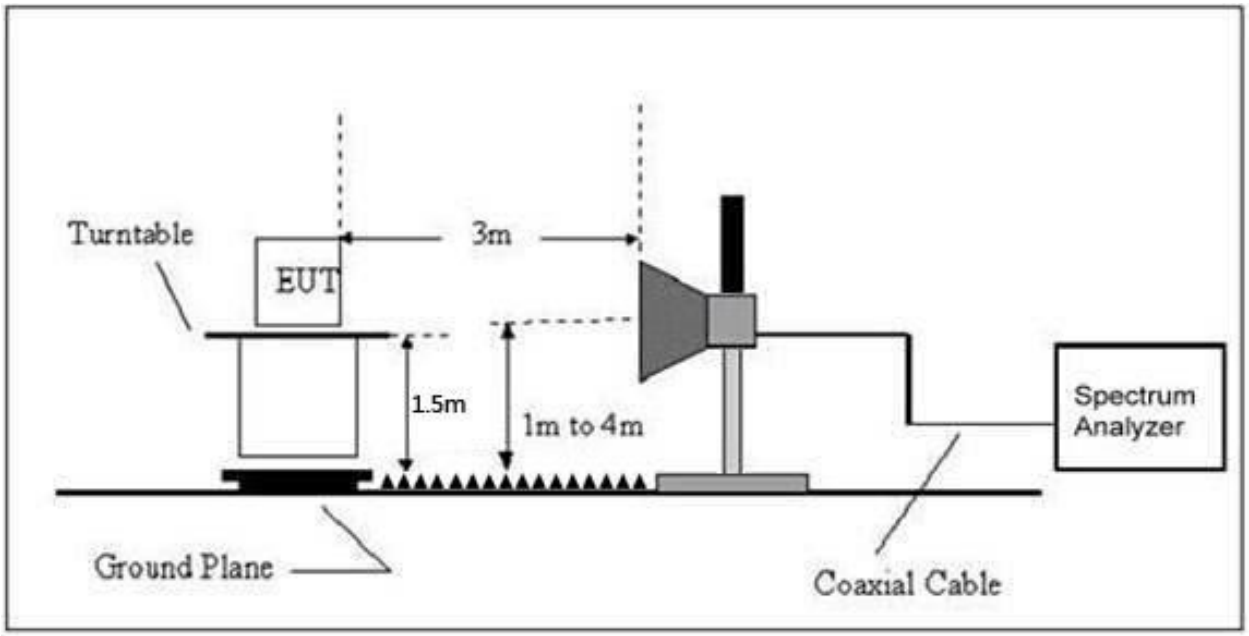
（A）Radiated Emission Test-Up Frequency Below 30MHz



（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

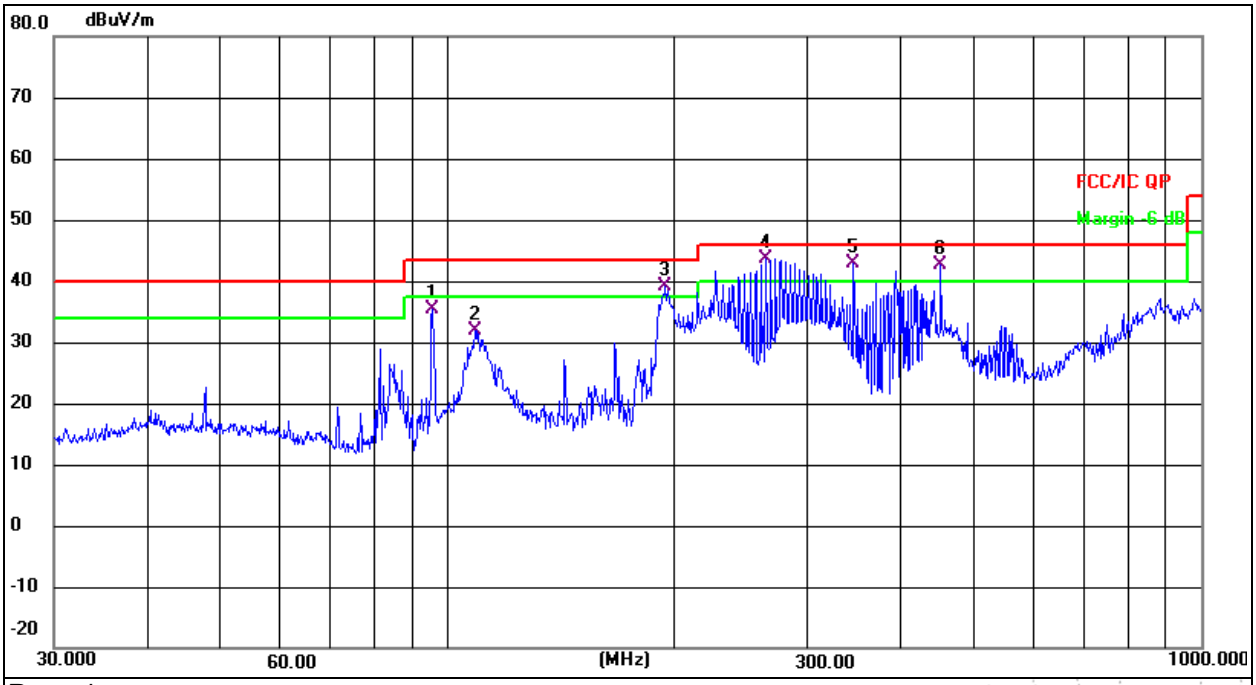
Temperature:	26℃	Relative Humidity:	54%
Pressure:	101 kPa	Test Voltage:	AC120V/60Hz
Test Mode:	Mode 4	Polarization:	--

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

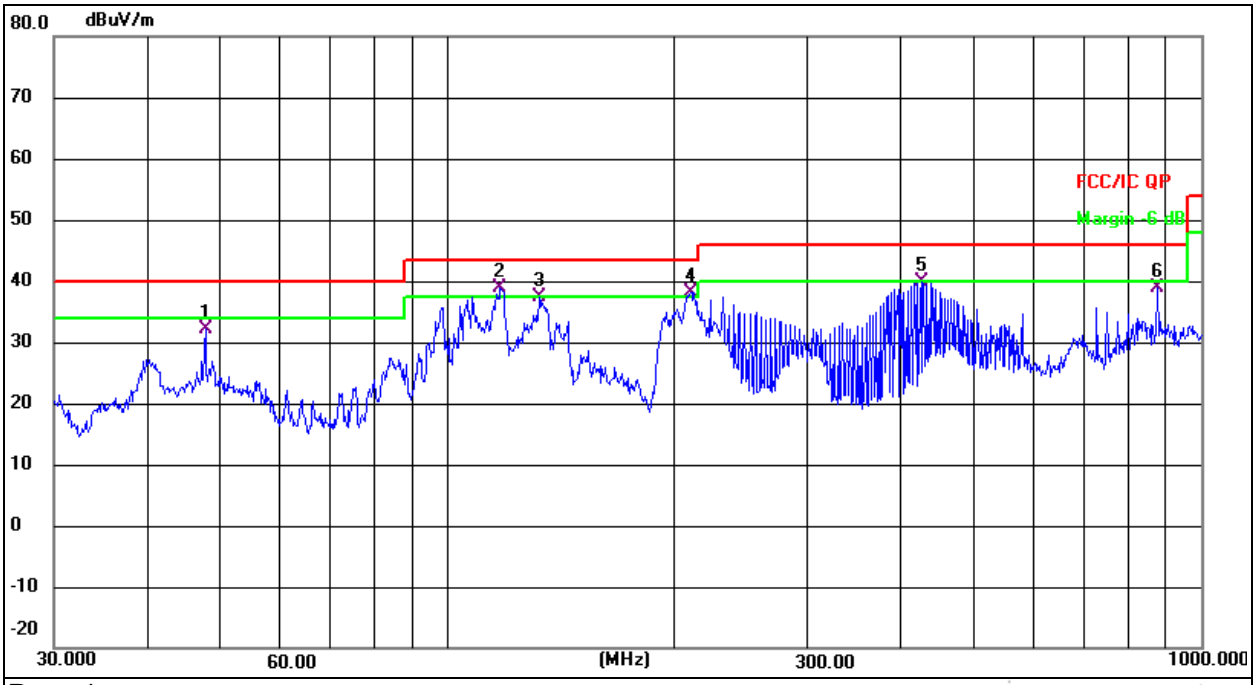
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Phase :	Horizontal
Test Mode:	Mode 4	Test Voltage :	AC120V/60Hz



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	95.4270	51.13	-15.74	35.39	43.50	-8.11	QP
2	108.6470	45.91	-13.91	32.00	43.50	-11.50	QP
3 !	194.4534	52.12	-13.11	39.01	43.50	-4.49	QP
4 *	264.7457	54.40	-10.78	43.62	46.00	-2.38	QP
5 !	345.5952	51.11	-8.15	42.96	46.00	-3.04	QP
6 !	451.1350	47.04	-4.31	42.73	46.00	-3.27	QP

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



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	47.6586	42.74	-10.59	32.15	40.00	-7.85	QP
2 *	117.3603	51.28	-12.51	38.77	43.50	-4.73	QP
3	132.2206	48.82	-11.46	37.36	43.50	-6.14	QP
4 !	210.0482	51.39	-13.15	38.24	43.50	-5.26	QP
5	425.0280	45.55	-5.59	39.96	46.00	-6.04	QP
6	875.2470	35.56	3.44	39.00	46.00	-7.00	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	4434.178	62.71	5.94	35.40	44.00	60.05	68.2	-8.15	PK
V	4434.178	43.38	5.94	35.40	44.00	40.72	54	-13.28	AV
V	10360.165	61.36	8.46	39.75	44.50	65.07	68.2	-3.13	PK
V	10360.165	43.56	8.46	39.75	44.50	47.27	54	-6.73	AV
V	15540.138	63.78	10.12	38.80	44.10	68.60	74	-5.40	PK
V	15540.138	43.12	10.12	38.80	42.70	49.34	54	-4.66	AV
H	4434.177	61.83	5.94	35.18	44.00	58.95	68.2	-9.25	PK
H	4434.177	43.02	5.94	35.18	44.00	40.14	54	-13.86	AV
H	10360.125	51.12	8.46	38.71	44.50	53.79	68.2	-14.41	PK
H	10360.125	44.80	8.46	38.71	44.50	47.47	54	-6.53	AV
H	15540.027	51.84	10.12	38.38	44.10	56.24	74	-17.76	PK
H	15540.027	42.83	10.12	38.38	44.10	47.23	54	-6.77	AV
middle Channel (5200 MHz)-Above 1G									
V	4592.083	62.87	6.48	36.35	44.05	61.65	74	-12.35	PK
V	4592.083	43.22	6.48	36.35	44.05	42.00	54	-12.00	AV
V	10400.133	61.53	8.47	37.88	44.51	63.37	68.2	-4.83	PK
V	10400.133	43.64	8.47	37.88	44.51	45.48	54	-8.52	AV
V	15600.117	64.97	10.12	38.80	44.10	69.79	74	-4.21	PK
V	15600.117	43.75	10.12	38.80	42.70	49.97	54	-4.03	AV
H	4592.168	61.38	6.48	36.37	44.05	60.18	74	-13.82	PK
H	4592.168	43.77	6.48	36.37	44.05	42.57	54	-11.43	AV
H	10400.183	52.66	8.47	38.64	44.50	55.27	68.2	-12.93	PK
H	10400.183	40.78	8.47	38.64	44.50	43.39	54	-10.61	AV
H	15600.096	53.58	10.12	38.38	44.10	57.98	74	-16.02	PK
H	15600.096	42.00	10.12	38.38	44.10	46.40	54	-7.60	AV
High Channel (5240 MHz)-Above 1G									
V	4739.090	63.00	7.10	37.24	43.50	63.84	74	-10.16	PK
V	4739.090	43.24	7.10	37.24	43.50	44.08	54	-9.92	AV
V	10480.018	62.30	8.46	37.68	44.50	63.94	68.2	-4.26	PK
V	10480.018	43.97	8.46	37.68	44.50	45.61	54	-8.39	AV
V	15720.197	63.67	10.12	38.80	44.10	68.49	74	-5.51	PK
V	15720.197	43.56	10.12	38.80	42.70	49.78	54	-4.22	AV
H	4739.024	62.81	7.10	37.24	43.50	63.65	74	-10.35	PK
H	4739.024	43.29	7.10	37.24	43.50	44.13	54	-9.87	AV
H	10480.060	54.78	8.46	38.57	44.50	57.31	68.2	-10.89	PK
H	10480.060	42.00	8.46	38.57	44.50	44.53	54	-9.47	AV
H	15720.144	50.79	10.12	38.38	44.10	55.19	74	-18.81	PK
H	15720.144	41.83	10.12	38.38	44.10	46.23	54	-7.77	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	4434.012	60.62	5.94	35.40	44.00	57.96	68.2	-10.24	PK
V	4434.012	43.48	5.94	35.40	44.00	40.82	54	-13.18	AV
V	10360.149	63.45	8.46	39.75	44.50	67.16	68.2	-1.04	PK
V	10360.149	43.05	8.46	39.75	44.50	46.76	54	-7.24	AV
V	15540.045	61.12	10.12	38.80	44.10	65.94	74	-8.06	PK
V	15540.045	43.25	10.12	38.80	42.70	49.47	54	-4.53	AV
H	4434.111	63.87	5.94	35.18	44.00	60.99	68.2	-7.21	PK
H	4434.111	43.54	5.94	35.18	44.00	40.66	54	-13.34	AV
H	10360.105	54.04	8.46	38.71	44.50	56.71	68.2	-11.49	PK
H	10360.105	42.81	8.46	38.71	44.50	45.48	54	-8.52	AV
H	15540.179	50.17	10.12	38.38	44.10	54.57	74	-19.43	PK
H	15540.179	41.97	10.12	38.38	44.10	46.37	54	-7.63	AV
middle Channel (5200 MHz)-Above 1G									
V	4592.110	60.77	6.48	36.35	44.05	59.55	74	-14.45	PK
V	4592.110	43.46	6.48	36.35	44.05	42.24	54	-11.76	AV
V	10400.007	63.07	8.47	37.88	44.51	64.91	68.2	-3.29	PK
V	10400.007	44.00	8.47	37.88	44.51	45.84	54	-8.16	AV
V	15600.005	61.39	10.12	38.80	44.10	66.21	74	-7.79	PK
V	15600.005	43.68	10.12	38.80	42.70	49.90	54	-4.10	AV
H	4592.114	64.13	6.48	36.37	44.05	62.93	74	-11.07	PK
H	4592.114	43.56	6.48	36.37	44.05	42.36	54	-11.64	AV
H	10400.103	53.64	8.47	38.64	44.50	56.25	68.2	-11.95	PK
H	10400.103	42.29	8.47	38.64	44.50	44.90	54	-9.10	AV
H	15600.021	50.23	10.12	38.38	44.10	54.63	74	-19.37	PK
H	15600.021	41.39	10.12	38.38	44.10	45.79	54	-8.21	AV
High Channel (5240 MHz)-Above 1G									
V	4739.125	62.95	7.10	37.24	43.50	63.79	74	-10.21	PK
V	4739.125	43.84	7.10	37.24	43.50	44.68	54	-9.32	AV
V	10480.188	61.99	8.46	37.68	44.50	63.63	68.2	-4.57	PK
V	10480.188	43.75	8.46	37.68	44.50	45.39	54	-8.61	AV
V	15720.036	60.34	10.12	38.80	44.10	65.16	74	-8.84	PK
V	15720.036	43.27	10.12	38.80	42.70	49.49	54	-4.51	AV
H	4739.074	64.16	7.10	37.24	43.50	65.00	74	-9.00	PK
H	4739.074	43.15	7.10	37.24	43.50	43.99	54	-10.01	AV
H	10480.114	53.69	8.46	38.57	44.50	56.22	68.2	-11.98	PK
H	10480.114	41.72	8.46	38.57	44.50	44.25	54	-9.75	AV
H	15720.029	50.91	10.12	38.38	44.10	55.31	74	-18.69	PK
H	15720.029	44.52	10.12	38.38	44.10	48.92	54	-5.08	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	4434.050	64.45	5.94	35.40	44.00	61.79	68.2	-6.41	PK
V	4434.050	43.78	5.94	35.40	44.00	41.12	54	-12.88	AV
V	10380.071	61.50	8.46	39.75	44.50	65.21	68.2	-2.99	PK
V	10380.071	43.94	8.46	39.75	44.50	47.65	54	-6.35	AV
V	15570.055	64.98	10.12	38.80	44.10	69.80	74	-4.20	PK
V	15570.055	43.14	10.12	38.80	42.70	49.36	54	-4.64	AV
H	4434.043	64.82	5.94	35.18	44.00	61.94	74	-12.06	PK
H	4434.043	43.83	5.94	35.18	44.00	40.95	54	-13.05	AV
H	10380.144	54.61	8.46	38.71	44.50	57.28	68.2	-10.92	PK
H	10380.144	43.11	8.46	38.71	44.50	45.78	54	-8.22	AV
H	15570.172	52.79	10.12	38.38	44.10	57.19	74	-16.81	PK
H	15570.172	44.01	10.12	38.38	44.10	48.41	54	-5.59	AV
middle Channel (5230 MHz)-Above 1G									
V	4739.180	62.15	6.48	36.35	44.05	60.93	68.2	-7.27	PK
V	4739.180	43.05	6.48	36.35	44.05	41.83	54	-12.17	AV
V	10460.109	63.76	8.47	37.88	44.51	65.60	68.2	-2.60	PK
V	10460.109	43.95	8.47	37.88	44.51	45.79	54	-8.21	AV
V	15690.195	60.16	10.12	38.80	44.10	64.98	74	-9.02	PK
V	15690.195	43.08	10.12	38.80	42.70	49.30	54	-4.70	AV
H	4739.075	61.00	6.48	36.37	44.05	59.80	68.2	-8.40	PK
H	4739.075	43.60	6.48	36.37	44.05	42.40	54	-11.60	AV
H	10460.066	52.47	8.47	38.64	44.50	55.08	68.2	-13.12	PK
H	10460.066	41.64	8.47	38.64	44.50	44.25	54	-9.75	AV
H	15690.112	52.68	10.12	38.38	44.10	57.08	74	-16.92	PK
H	15690.112	40.56	10.12	38.38	44.10	44.96	54	-9.04	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	4434.127	62.77	5.94	35.40	44.00	60.11	68.2	-8.09	PK
V	4434.127	43.27	5.94	35.40	44.00	40.61	54	-13.39	AV
V	10360.130	61.46	8.46	39.75	44.50	65.17	68.2	-3.03	PK
V	10360.130	43.04	8.46	39.75	44.50	46.75	54	-7.25	AV
V	15540.049	62.52	10.12	38.80	44.10	67.34	74	-6.66	PK
V	15540.049	43.62	10.12	38.80	42.70	49.84	54	-4.16	AV
H	4434.113	60.79	5.94	35.18	44.00	57.91	68.2	-10.29	PK
H	4434.113	43.22	5.94	35.18	44.00	40.34	54	-13.66	AV
H	10360.061	51.52	8.46	38.71	44.50	54.19	68.2	-14.01	PK
H	10360.061	41.70	8.46	38.71	44.50	44.37	54	-9.63	AV
H	15540.141	50.86	10.12	38.38	44.10	55.26	74	-18.74	PK
H	15540.141	40.79	10.12	38.38	44.10	45.19	54	-8.81	AV
middle Channel (5200 MHz)-Above 1G									
V	4592.075	62.38	6.48	36.35	44.05	61.16	74	-12.84	PK
V	4592.075	43.85	6.48	36.35	44.05	42.63	54	-11.37	AV
V	10400.065	62.40	8.47	37.88	44.51	64.24	68.2	-3.96	PK
V	10400.065	43.59	8.47	37.88	44.51	45.43	54	-8.57	AV
V	15600.148	61.60	10.12	38.80	44.10	66.42	74	-7.58	PK
V	15600.148	43.43	10.12	38.80	42.70	49.65	54	-4.35	AV
H	4592.161	63.36	6.48	36.37	44.05	62.16	74	-11.84	PK
H	4592.161	43.82	6.48	36.37	44.05	42.62	54	-11.38	AV
H	10400.053	54.06	8.47	38.64	44.50	56.67	68.2	-11.53	PK
H	10400.053	42.53	8.47	38.64	44.50	45.14	54	-8.86	AV
H	15600.002	53.82	10.12	38.38	44.10	58.22	74	-15.78	PK
H	15600.002	44.88	10.12	38.38	44.10	49.28	54	-4.72	AV
High Channel (5240 MHz)-Above 1G									
V	4739.130	63.73	7.10	37.24	43.50	64.57	74	-9.43	PK
V	4739.130	43.34	7.10	37.24	43.50	44.18	54	-9.82	AV
V	10480.122	61.98	8.46	37.68	44.50	63.62	68.2	-4.58	PK
V	10480.122	43.96	8.46	37.68	44.50	45.60	54	-8.40	AV
V	15720.018	62.49	10.12	38.80	44.10	67.31	74	-6.69	PK
V	15720.018	43.62	10.12	38.80	42.70	49.84	54	-4.16	AV
H	4739.194	64.48	7.10	37.24	43.50	65.32	74	-8.68	PK
H	4739.194	43.04	7.10	37.24	43.50	43.88	54	-10.12	AV
H	10480.055	51.20	8.46	38.57	44.50	53.73	68.2	-14.47	PK
H	10480.055	40.68	8.46	38.57	44.50	43.21	54	-10.79	AV
H	15720.175	52.23	10.12	38.38	44.10	56.63	74	-17.37	PK
H	15720.175	44.46	10.12	38.38	44.10	48.86	54	-5.14	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	4434.084	63.61	5.94	35.40	44.00	60.95	68.2	-7.25	PK
V	4434.084	43.21	5.94	35.40	44.00	40.55	54	-13.45	AV
V	10380.119	62.19	8.46	39.75	44.50	65.90	68.2	-2.30	PK
V	10380.119	43.07	8.46	39.75	44.50	46.78	54	-7.22	AV
V	15570.050	63.43	10.12	38.80	44.10	68.25	74	-5.75	PK
V	15570.050	43.64	10.12	38.80	42.70	49.86	54	-4.14	AV
H	4434.131	64.61	5.94	35.18	44.00	61.73	74	-12.27	PK
H	4434.131	43.71	5.94	35.18	44.00	40.83	54	-13.17	AV
H	10380.058	51.64	8.46	38.71	44.50	54.31	68.2	-13.89	PK
H	10380.058	43.57	8.46	38.71	44.50	46.24	54	-7.76	AV
H	15570.003	54.74	10.12	38.38	44.10	59.14	74	-14.86	PK
H	15570.003	41.31	10.12	38.38	44.10	45.71	54	-8.29	AV
middle Channel (5230 MHz)-Above 1G									
V	4739.169	61.15	6.48	36.35	44.05	59.93	68.2	-8.27	PK
V	4739.169	43.32	6.48	36.35	44.05	42.10	54	-11.90	AV
V	10460.067	63.05	8.47	37.88	44.51	64.89	68.2	-3.31	PK
V	10460.067	43.44	8.47	37.88	44.51	45.28	54	-8.72	AV
V	15690.076	61.41	10.12	38.80	44.10	66.23	74	-7.77	PK
V	15690.076	43.83	10.12	38.80	42.70	50.05	54	-3.95	AV
H	4739.032	62.88	6.48	36.37	44.05	61.68	68.2	-6.52	PK
H	4739.032	43.10	6.48	36.37	44.05	41.90	54	-12.10	AV
H	10460.186	51.47	8.47	38.64	44.50	54.08	68.2	-14.12	PK
H	10460.186	44.86	8.47	38.64	44.50	47.47	54	-6.53	AV
H	15690.026	53.12	10.12	38.38	44.10	57.52	74	-16.48	PK
H	15690.026	41.00	10.12	38.38	44.10	45.40	54	-8.60	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 80

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 (5210 MHz)-Above 1G									
V	4434.023	64.03	5.94	35.40	44.00	61.37	68.2	-6.83	PK
V	4434.023	43.02	5.94	35.40	44.00	40.36	54	-13.64	AV
V	10420.101	62.31	8.46	39.75	44.50	66.02	68.2	-2.18	PK
V	10420.101	43.87	8.46	39.75	44.50	47.58	54	-6.42	AV
V	15630.067	61.53	10.12	38.80	44.10	66.35	74	-7.65	PK
V	15630.067	43.07	10.12	38.80	42.70	49.29	54	-4.71	AV
H	4434.108	64.94	5.94	35.18	44.00	62.06	68.2	-6.14	PK
H	4434.108	43.97	5.94	35.18	44.00	41.09	54	-12.91	AV
H	10420.146	53.57	8.46	38.71	44.50	56.24	68.2	-11.96	PK
H	10420.146	43.90	8.46	38.71	44.50	46.57	54	-7.43	AV
H	15630.160	51.66	10.12	38.38	44.10	56.06	74	-17.94	PK
H	15630.160	42.20	10.12	38.38	44.10	46.60	54	-7.40	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	4679.154	55.74	5.94	35.40	44.00	53.08	74	-20.92	PK
V	4679.154	43.32	5.94	35.40	44.00	40.66	54	-13.34	AV
V	11490.190	55.92	8.46	39.75	44.50	59.63	68.2	-8.57	PK
V	11490.190	43.17	8.46	39.75	44.50	46.88	54	-7.12	AV
V	17235.027	58.56	10.12	38.80	44.10	63.38	68.2	-4.82	PK
V	17235.027	43.45	10.12	38.80	42.70	49.67	54	-4.33	AV
H	4679.034	56.87	5.94	35.18	44.00	53.99	74	-20.01	PK
H	4679.034	43.35	5.94	35.18	44.00	40.47	54	-13.53	AV
H	11490.086	52.20	8.46	38.71	44.50	54.87	68.2	-13.33	PK
H	11490.086	41.00	8.46	38.71	44.50	43.67	54	-10.33	AV
H	17235.161	50.68	10.12	38.38	44.10	55.08	68.2	-13.12	PK
H	17235.161	43.08	10.12	38.38	44.10	47.48	54	-6.52	AV
middle Channel (5785 MHz)-Above 1G									
V	4592.079	54.91	6.48	36.35	44.05	53.69	74	-20.31	PK
V	4592.079	43.93	6.48	36.35	44.05	42.71	54	-11.29	AV
V	11570.195	58.76	8.47	37.88	44.51	60.60	68.2	-7.60	PK
V	11570.195	43.94	8.47	37.88	44.51	45.78	54	-8.22	AV
V	17355.149	56.81	10.12	38.80	44.10	61.63	68.2	-6.57	PK
V	17355.149	39.85	10.12	38.80	42.70	46.07	54	-7.93	AV
H	4592.088	59.07	6.48	36.37	44.05	57.87	74	-16.13	PK
H	4592.088	43.02	6.48	36.37	44.05	41.82	54	-12.18	AV
H	11570.071	52.47	8.47	38.64	44.50	55.08	68.2	-13.12	PK
H	11570.071	44.56	8.47	38.64	44.50	47.17	54	-6.83	AV
H	17355.139	52.92	10.12	38.38	44.10	57.32	68.2	-10.88	PK
H	17355.139	42.45	10.12	38.38	44.10	46.85	54	-7.15	AV
High Channel (5825 MHz)-Above 1G									
V	6039.043	59.03	7.10	37.24	43.50	59.87	68.2	-8.33	PK
V	6039.043	43.27	7.10	37.24	43.50	44.11	54	-9.89	AV
V	11650.043	58.47	8.46	37.68	44.50	60.11	74	-13.89	PK
V	11650.043	43.06	8.46	37.68	44.50	44.70	54	-9.30	AV
V	17475.102	55.86	10.12	38.80	44.10	60.68	68.2	-7.52	PK
V	17475.102	43.99	10.12	38.80	42.70	50.21	54	-3.79	AV
H	6039.061	57.54	7.10	37.24	43.50	58.38	68.2	-9.82	PK
H	6039.061	43.99	7.10	37.24	43.50	44.83	54	-9.17	AV
H	11650.133	51.51	8.46	38.57	44.50	54.04	74	-19.96	PK
H	11650.133	40.29	8.46	38.57	44.50	42.82	54	-11.18	AV
H	17475.178	50.25	10.12	38.38	44.10	54.65	68.2	-13.55	PK
H	17475.178	41.84	10.12	38.38	44.10	46.24	54	-7.76	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	4679.138	60.95	5.94	35.40	44.00	58.29	74	-15.71	PK
V	4679.138	43.11	5.94	35.40	44.00	40.45	54	-13.55	AV
V	11490.119	54.16	8.46	39.75	44.50	57.87	68.2	-10.33	PK
V	11490.119	43.64	8.46	39.75	44.50	47.35	54	-6.65	AV
V	17235.156	61.71	10.12	38.80	44.10	66.53	68.2	-1.67	PK
V	17235.156	43.46	10.12	38.80	42.70	49.68	54	-4.32	AV
H	4679.020	59.60	5.94	35.18	44.00	56.72	74	-17.28	PK
H	4679.020	43.56	5.94	35.18	44.00	40.68	54	-13.32	AV
H	11490.154	50.85	8.46	38.71	44.50	53.52	68.2	-14.68	PK
H	11490.154	41.10	8.46	38.71	44.50	43.77	54	-10.23	AV
H	17235.101	51.48	10.12	38.38	44.10	55.88	68.2	-12.32	PK
H	17235.101	40.38	10.12	38.38	44.10	44.78	54	-9.22	AV
middle Channel (5785 MHz)-Above 1G									
V	4592.189	58.96	6.48	36.35	44.05	57.74	74	-16.26	PK
V	4592.189	43.05	6.48	36.35	44.05	41.83	54	-12.17	AV
V	11570.154	56.15	8.47	37.88	44.51	57.99	68.2	-10.21	PK
V	11570.154	44.00	8.47	37.88	44.51	45.84	54	-8.16	AV
V	17355.161	57.92	10.12	38.80	44.10	62.74	68.2	-5.46	PK
V	17355.161	43.15	10.12	38.80	42.70	49.37	54	-4.63	AV
H	4592.054	59.59	6.48	36.37	44.05	58.39	74	-15.61	PK
H	4592.054	43.19	6.48	36.37	44.05	41.99	54	-12.01	AV
H	11570.144	53.85	8.47	38.64	44.50	56.46	68.2	-11.74	PK
H	11570.144	44.38	8.47	38.64	44.50	46.99	54	-7.01	AV
H	17355.122	54.39	10.12	38.38	44.10	58.79	68.2	-9.41	PK
H	17355.122	44.17	10.12	38.38	44.10	48.57	54	-5.43	AV
High Channel (5825 MHz)-Above 1G									
V	6039.124	58.32	7.10	37.24	43.50	59.16	68.2	-9.04	PK
V	6039.124	43.78	7.10	37.24	43.50	44.62	54	-9.38	AV
V	11650.167	59.15	8.46	37.68	44.50	60.79	74	-13.21	PK
V	11650.167	43.70	8.46	37.68	44.50	45.34	54	-8.66	AV
V	17475.129	56.43	10.12	38.80	44.10	61.25	68.2	-6.95	PK
V	17475.129	43.90	10.12	38.80	42.70	50.12	54	-3.88	AV
H	6039.114	56.18	7.10	37.24	43.50	57.02	68.2	-11.18	PK
H	6039.114	43.17	7.10	37.24	43.50	44.01	54	-9.99	AV
H	11650.077	50.90	8.46	38.57	44.50	53.43	74	-20.57	PK
H	11650.077	44.16	8.46	38.57	44.50	46.69	54	-7.31	AV
H	17475.177	51.66	10.12	38.38	44.10	56.06	68.2	-12.14	PK
H	17475.177	42.68	10.12	38.38	44.10	47.08	54	-6.92	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	4679.043	56.95	5.94	35.40	44.00	54.29	74	-19.71	PK
V	4679.043	43.16	5.94	35.40	44.00	40.50	54	-13.50	AV
V	11510.006	56.25	8.46	39.75	44.50	59.96	74	-14.04	PK
V	11510.006	43.61	8.46	39.75	44.50	47.32	54	-6.68	AV
V	17265.102	55.23	10.12	38.80	44.10	60.05	68.2	-8.15	PK
V	17265.102	43.70	10.12	38.80	42.70	49.92	54	-4.08	AV
H	4679.155	58.69	5.94	35.18	44.00	55.81	74	-18.19	PK
H	4679.155	43.54	5.94	35.18	44.00	40.66	54	-13.34	AV
H	11510.067	51.61	8.46	38.71	44.50	54.28	74	-19.72	PK
H	11510.067	42.29	8.46	38.71	44.50	44.96	54	-9.04	AV
H	17265.015	50.98	10.12	38.38	44.10	55.38	68.2	-12.82	PK
H	17265.015	44.46	10.12	38.38	44.10	48.86	54	-5.14	AV
middle Channel (5795 MHz)-Above 1G									
V	6039.118	59.97	6.48	36.35	44.05	58.75	68.2	-9.45	PK
V	6039.118	43.76	6.48	36.35	44.05	42.54	54	-11.46	AV
V	11590.087	57.78	8.47	37.88	44.51	59.62	74	-14.38	PK
V	11590.087	43.78	8.47	37.88	44.51	45.62	54	-8.38	AV
V	17385.173	55.22	10.12	38.80	44.10	60.04	68.2	-8.16	PK
V	17385.173	41.19	10.12	38.80	42.70	47.41	54	-6.59	AV
H	6039.015	58.72	6.48	36.37	44.05	57.52	68.2	-10.68	PK
H	6039.015	43.44	6.48	36.37	44.05	42.24	54	-11.76	AV
H	11590.138	53.02	8.47	38.64	44.50	55.63	74	-18.37	PK
H	11590.138	44.92	8.47	38.64	44.50	47.53	54	-6.47	AV
H	17385.159	50.51	10.12	38.38	44.10	54.91	68.2	-13.29	PK
H	17385.159	43.72	10.12	38.38	44.10	48.12	54	-5.88	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	4679.062	60.38	5.94	35.40	44.00	57.72	74	-16.28	PK
V	4679.062	43.18	5.94	35.40	44.00	40.52	54	-13.48	AV
V	11490.160	54.57	8.46	39.75	44.50	58.28	68.2	-9.92	PK
V	11490.160	43.18	8.46	39.75	44.50	46.89	54	-7.11	AV
V	17235.020	57.61	10.12	38.80	44.10	62.43	68.2	-5.77	PK
V	17235.020	43.32	10.12	38.80	42.70	49.54	54	-4.46	AV
H	4679.144	56.03	5.94	35.18	44.00	53.15	74	-20.85	PK
H	4679.144	43.03	5.94	35.18	44.00	40.15	54	-13.85	AV
H	11490.184	51.83	8.46	38.71	44.50	54.50	68.2	-13.70	PK
H	11490.184	41.08	8.46	38.71	44.50	43.75	54	-10.25	AV
H	17235.058	52.54	10.12	38.38	44.10	56.94	68.2	-11.26	PK
H	17235.058	40.36	10.12	38.38	44.10	44.76	54	-9.24	AV
middle Channel (5785 MHz)-Above 1G									
V	4592.054	61.46	6.48	36.35	44.05	60.24	74	-13.76	PK
V	4592.054	43.97	6.48	36.35	44.05	42.75	54	-11.25	AV
V	11570.080	57.95	8.47	37.88	44.51	59.79	68.2	-8.41	PK
V	11570.080	43.13	8.47	37.88	44.51	44.97	54	-9.03	AV
V	17355.070	59.06	10.12	38.80	44.10	63.88	68.2	-4.32	PK
V	17355.070	43.49	10.12	38.80	42.70	49.71	54	-4.29	AV
H	4592.032	59.71	6.48	36.37	44.05	58.51	74	-15.49	PK
H	4592.032	43.86	6.48	36.37	44.05	42.66	54	-11.34	AV
H	11570.009	54.97	8.47	38.64	44.50	57.58	68.2	-10.62	PK
H	11570.009	41.96	8.47	38.64	44.50	44.57	54	-9.43	AV
H	17355.015	53.49	10.12	38.38	44.10	57.89	68.2	-10.31	PK
H	17355.015	41.60	10.12	38.38	44.10	46.00	54	-8.00	AV
High Channel (5825 MHz)-Above 1G									
V	6039.106	57.84	7.10	37.24	43.50	58.68	68.2	-9.52	PK
V	6039.106	43.28	7.10	37.24	43.50	44.12	54	-9.88	AV
V	11650.078	59.73	8.46	37.68	44.50	61.37	74	-12.63	PK
V	11650.078	43.17	8.46	37.68	44.50	44.81	54	-9.19	AV
V	17475.187	56.98	10.12	38.80	44.10	61.80	68.2	-6.40	PK
V	17475.187	43.22	10.12	38.80	42.70	49.44	54	-4.56	AV
H	6039.040	58.13	7.10	37.24	43.50	58.97	68.2	-9.23	PK
H	6039.040	43.72	7.10	37.24	43.50	44.56	54	-9.44	AV
H	11650.040	53.25	8.46	38.57	44.50	55.78	74	-18.22	PK
H	11650.040	43.81	8.46	38.57	44.50	46.34	54	-7.66	AV
H	17475.118	52.76	10.12	38.38	44.10	57.16	68.2	-11.04	PK
H	17475.118	40.05	10.12	38.38	44.10	44.45	54	-9.55	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	4679.195	59.04	5.94	35.40	44.00	56.38	74	-17.62	PK
V	4679.195	43.72	5.94	35.40	44.00	41.06	54	-12.94	AV
V	11510.182	55.26	8.46	39.75	44.50	58.97	74	-15.03	PK
V	11510.182	43.94	8.46	39.75	44.50	47.65	54	-6.35	AV
V	17265.116	56.33	10.12	38.80	44.10	61.15	68.2	-7.05	PK
V	17265.116	43.02	10.12	38.80	42.70	49.24	54	-4.76	AV
H	4679.116	57.94	5.94	35.18	44.00	55.06	74	-18.94	PK
H	4679.116	43.20	5.94	35.18	44.00	40.32	54	-13.68	AV
H	11510.078	54.09	8.46	38.71	44.50	56.76	74	-17.24	PK
H	11510.078	41.09	8.46	38.71	44.50	43.76	54	-10.24	AV
H	17265.024	51.72	10.12	38.38	44.10	56.12	68.2	-12.08	PK
H	17265.024	43.45	10.12	38.38	44.10	47.85	54	-6.15	AV
middle Channel (5795 MHz)-Above 1G									
V	6039.042	57.37	6.48	36.35	44.05	56.15	68.2	-12.05	PK
V	6039.042	43.26	6.48	36.35	44.05	42.04	54	-11.96	AV
V	11590.109	58.89	8.47	37.88	44.51	60.73	74	-13.27	PK
V	11590.109	43.12	8.47	37.88	44.51	44.96	54	-9.04	AV
V	17385.195	55.15	10.12	38.80	44.10	59.97	68.2	-8.23	PK
V	17385.195	41.95	10.12	38.80	42.70	48.17	54	-5.83	AV
H	6039.127	57.50	6.48	36.37	44.05	56.30	68.2	-11.90	PK
H	6039.127	43.64	6.48	36.37	44.05	42.44	54	-11.56	AV
H	11590.104	54.10	8.47	38.64	44.50	56.71	74	-17.29	PK
H	11590.104	40.58	8.47	38.64	44.50	43.19	54	-10.81	AV
H	17385.120	51.53	10.12	38.38	44.10	55.93	68.2	-12.27	PK
H	17385.120	42.29	10.12	38.38	44.10	46.69	54	-7.31	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.

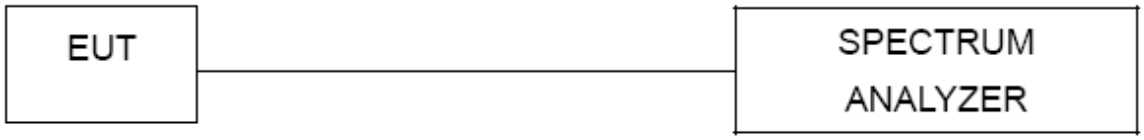
Test Mode :	TX (5.8G) -- 802.11ac 80

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 (5775 MHz)-Above 1G									
V	4679.101	56.09	5.94	35.40	44.00	53.43	74	-20.57	PK
V	4679.101	43.66	5.94	35.40	44.00	41.00	54	-13.00	AV
V	11550.015	55.52	8.46	39.75	44.50	59.23	74	-14.77	PK
V	11550.015	43.02	8.46	39.75	44.50	46.73	54	-7.27	AV
V	17325.071	57.63	10.12	38.80	44.10	62.45	68.2	-5.75	PK
V	17325.071	41.76	10.12	38.80	42.70	47.98	54	-6.02	AV
H	4679.098	57.13	5.94	35.18	44.00	54.25	74	-19.75	PK
H	4679.098	43.52	5.94	35.18	44.00	40.64	54	-13.36	AV
H	11550.080	50.84	8.46	38.71	44.50	53.51	74	-20.49	PK
H	11550.080	42.40	8.46	38.71	44.50	45.07	54	-8.93	AV
H	17325.194	51.57	10.12	38.38	44.10	55.97	68.2	-12.23	PK
H	17325.194	43.94	10.12	38.38	44.10	48.34	54	-5.66	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 access point 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 access point 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 access points 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.

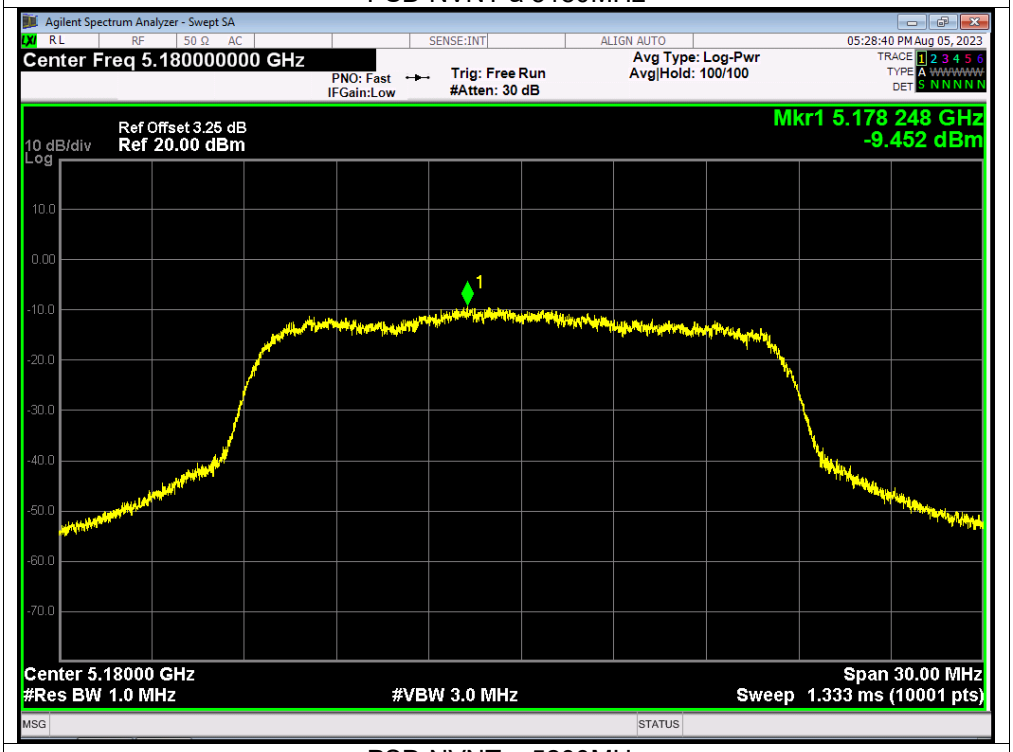
8.5 Test Result

Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	101kPa	Test Voltage ：	DC 12V
Test Mode ：	(5180-5240MHz); (5745-5825MHz)		

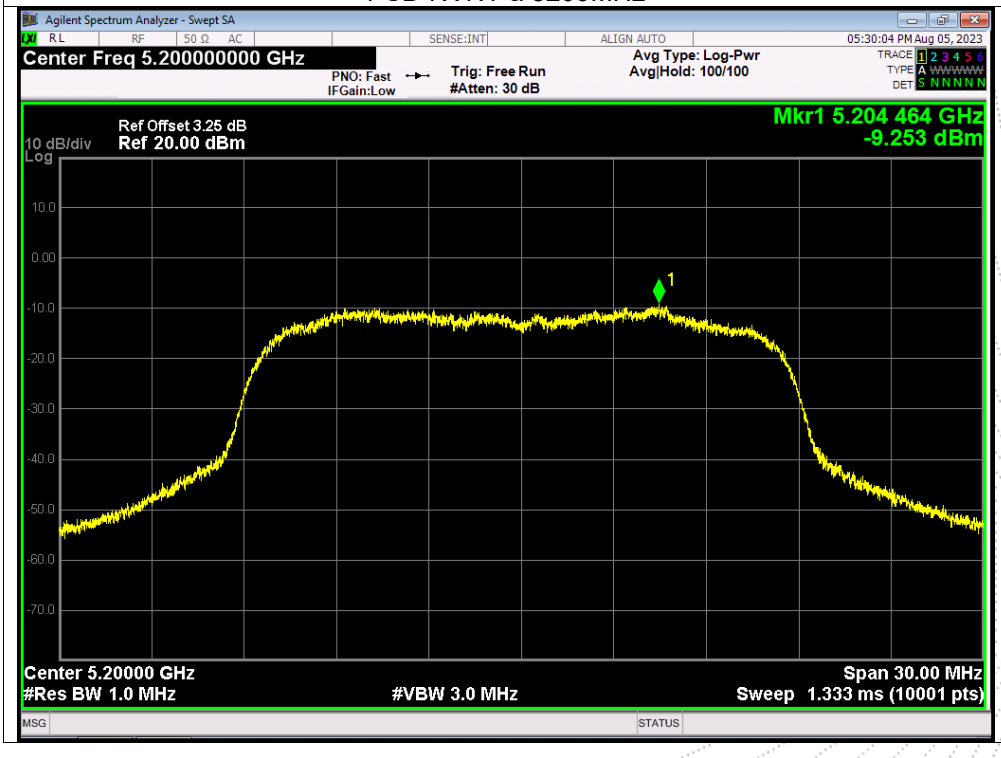
Condition	Mode	Frequency (MHz)	Conducted PSD (dBm)	Limit (dBm)	Verdict
NVNT	a	5180	-9.45	11	Pass
NVNT	a	5200	-9.25	11	Pass
NVNT	a	5240	-8.58	11	Pass
NVNT	n20	5180	-12.73	11	Pass
NVNT	n20	5200	-9.72	11	Pass
NVNT	n20	5240	-10.89	11	Pass
NVNT	n40	5190	-16.64	11	Pass
NVNT	n40	5230	-17.09	11	Pass
NVNT	ac20	5180	-11.35	11	Pass
NVNT	ac20	5200	-11.77	11	Pass
NVNT	ac20	5240	-12.86	11	Pass
NVNT	ac40	5190	-16.95	11	Pass
NVNT	ac40	5230	-18.77	11	Pass
NVNT	ac80	5210	-25.33	11	Pass

Condition	Mode	Frequency (MHz)	Conducted PSD (dBm)	Limit (dBm)	Verdict
NVNT	a	5745	-13.89	30	Pass
NVNT	a	5785	-14.87	30	Pass
NVNT	a	5825	-14.47	30	Pass
NVNT	n20	5745	-14.88	30	Pass
NVNT	n20	5785	-14.7	30	Pass
NVNT	n20	5825	-15.35	30	Pass
NVNT	n40	5755	-21.92	30	Pass
NVNT	n40	5795	-20.85	30	Pass
NVNT	ac20	5745	-14.79	30	Pass
NVNT	ac20	5785	-15.85	30	Pass
NVNT	ac20	5825	-16.65	30	Pass
NVNT	ac40	5755	-19.21	30	Pass
NVNT	ac40	5795	-21.13	30	Pass
NVNT	ac80	5775	-27.37	30	Pass

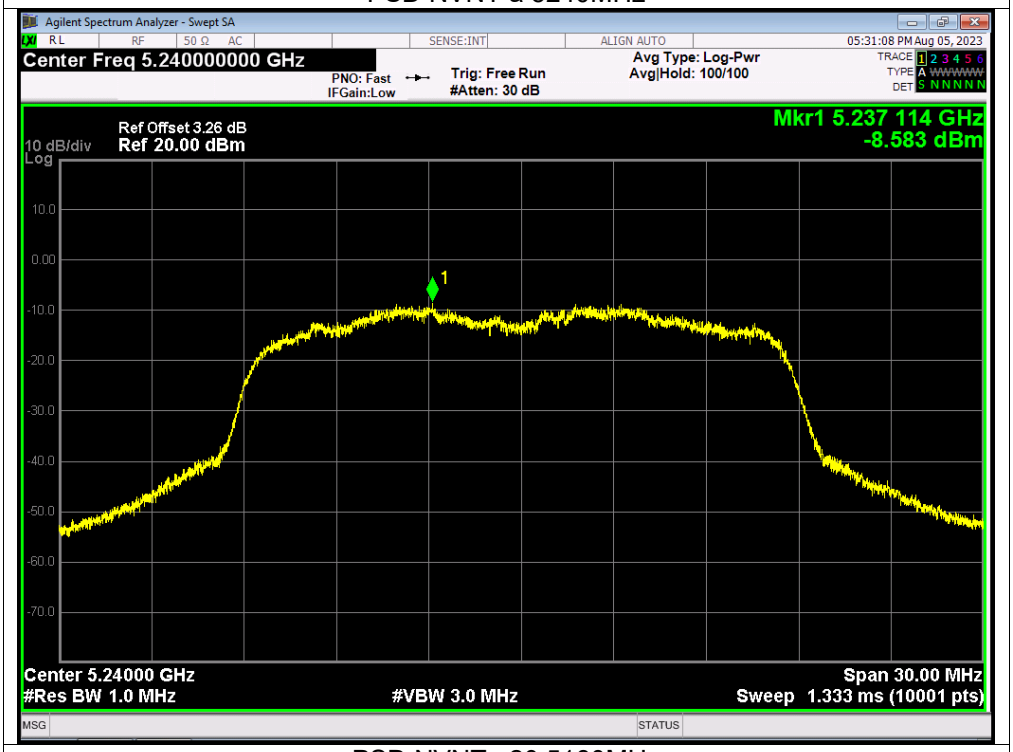
Test Graphs
PSD NVNT a 5180MHz



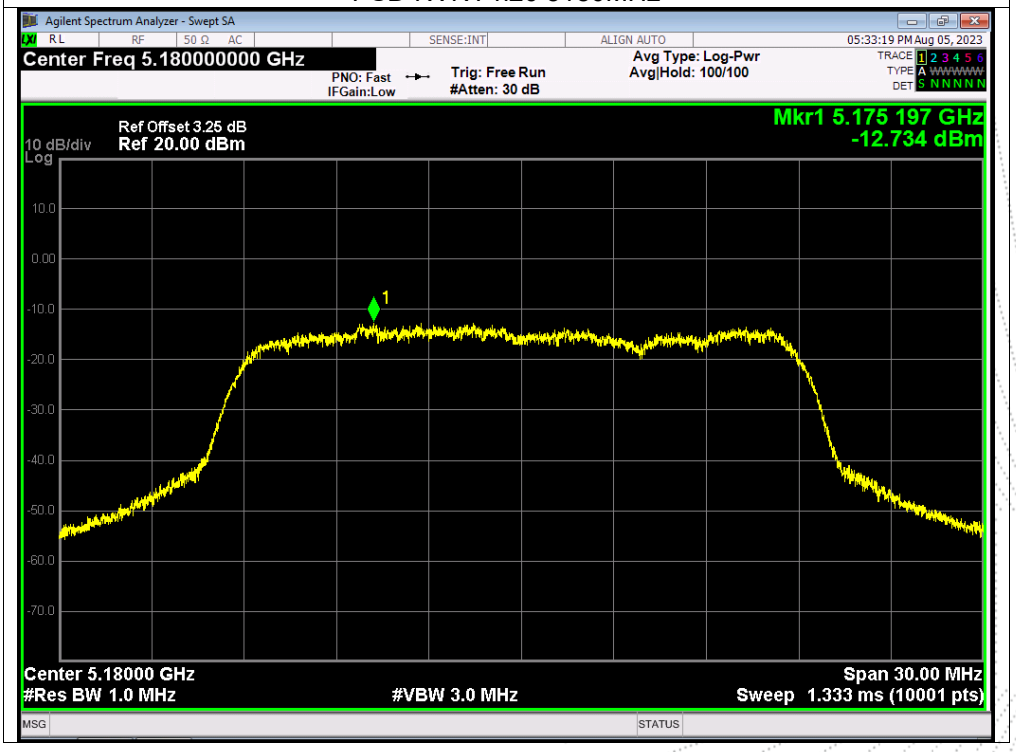
PSD NVNT a 5200MHz



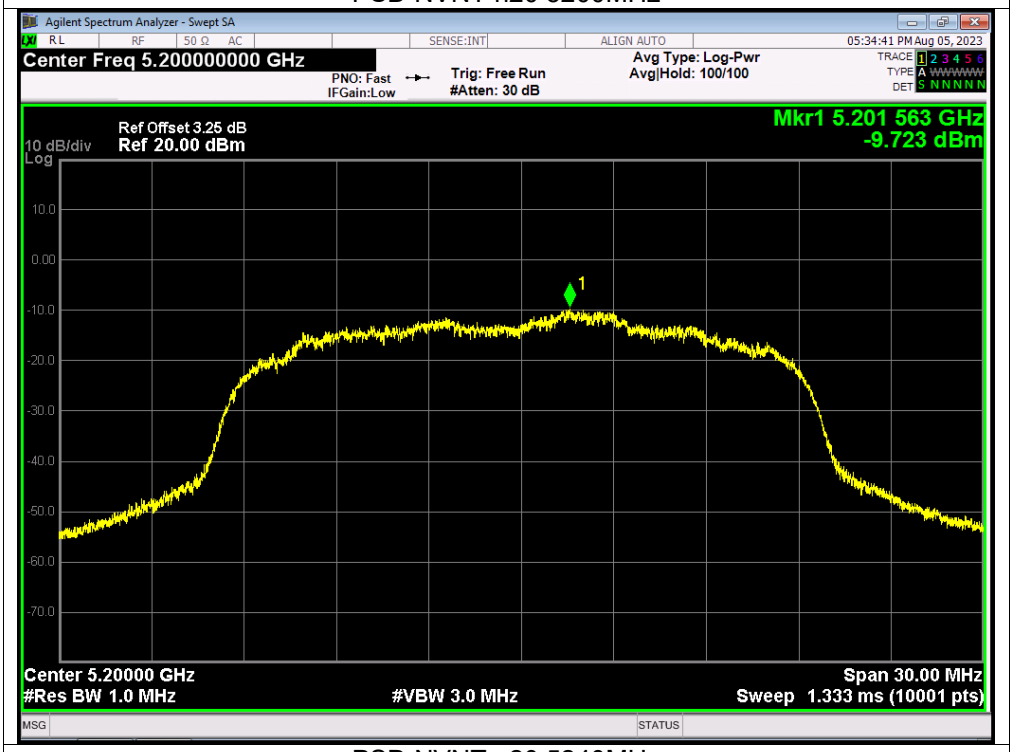
PSD NVNT a 5240MHz



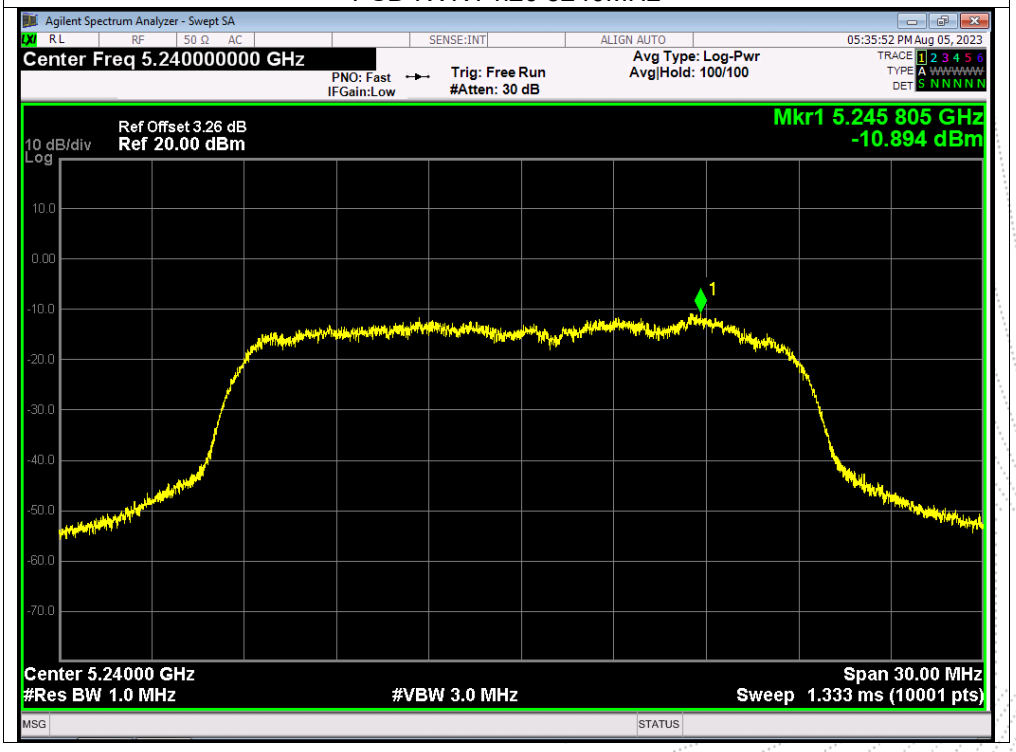
PSD NVNT n20 5180MHz



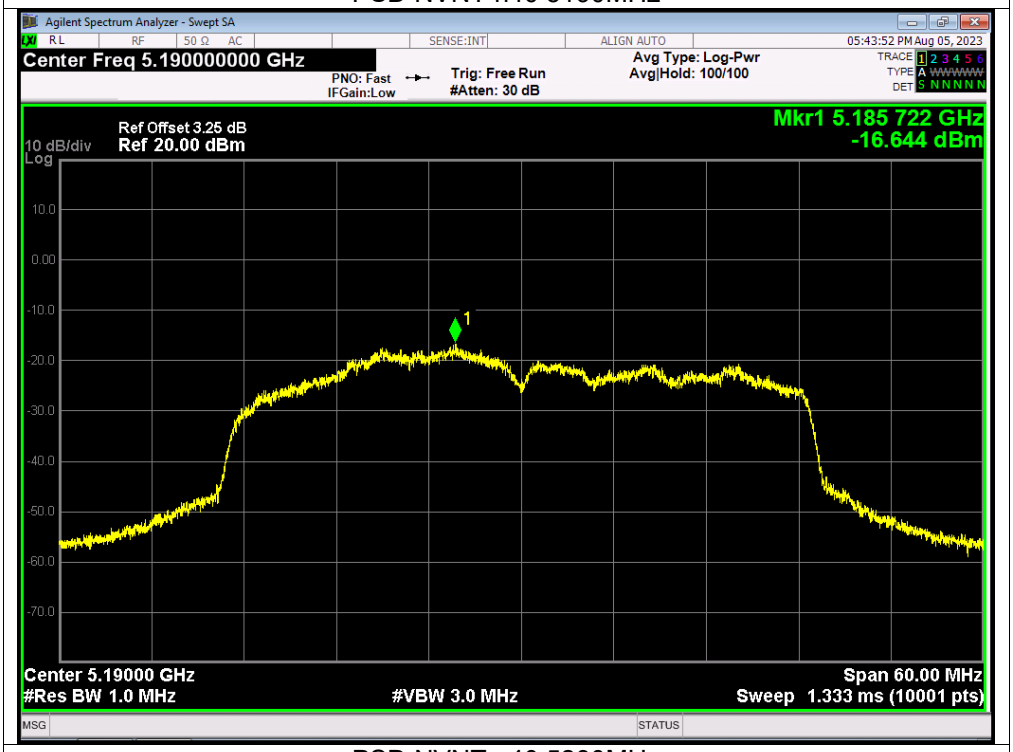
PSD NVNT n20 5200MHz



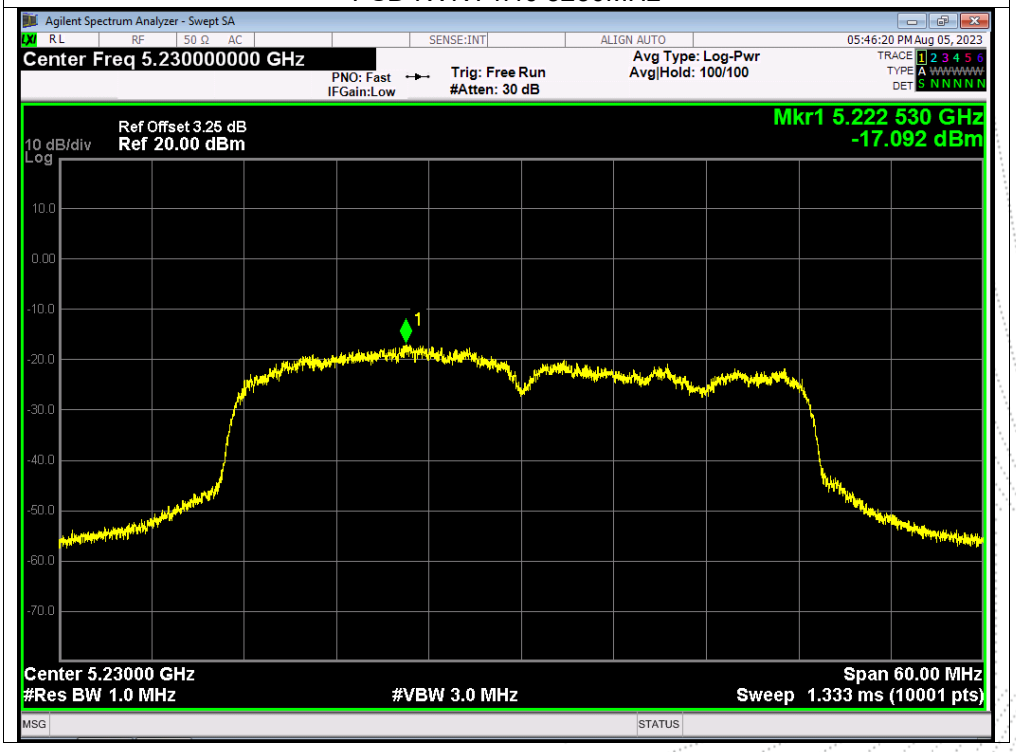
PSD NVNT n20 5240MHz



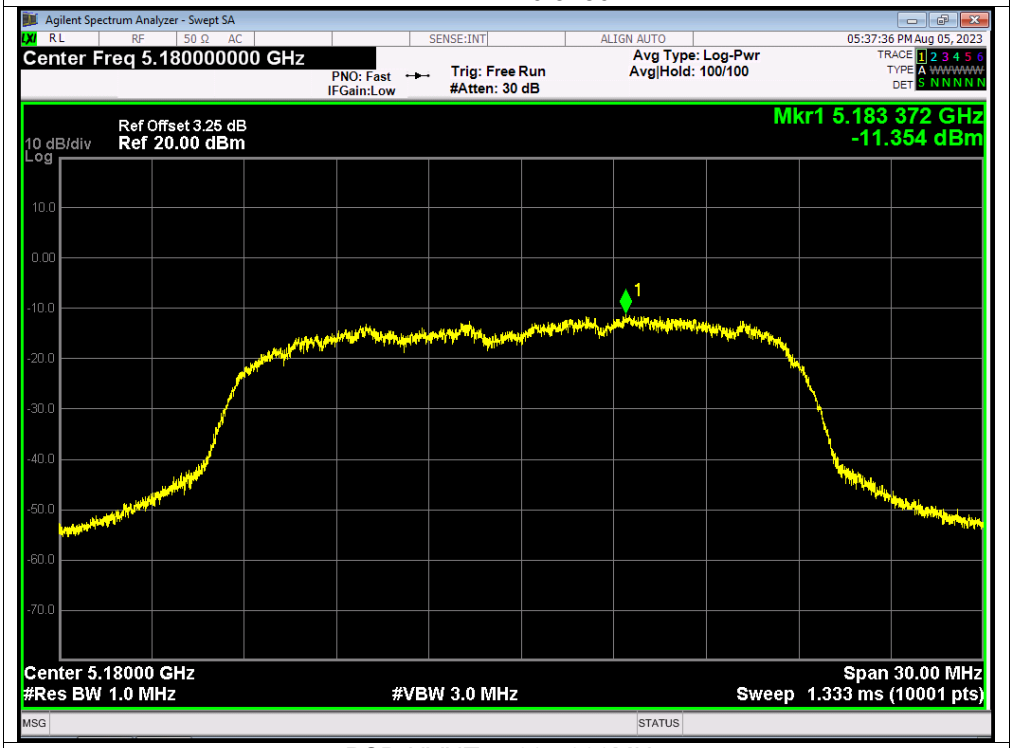
PSD NVNT n40 5190MHz



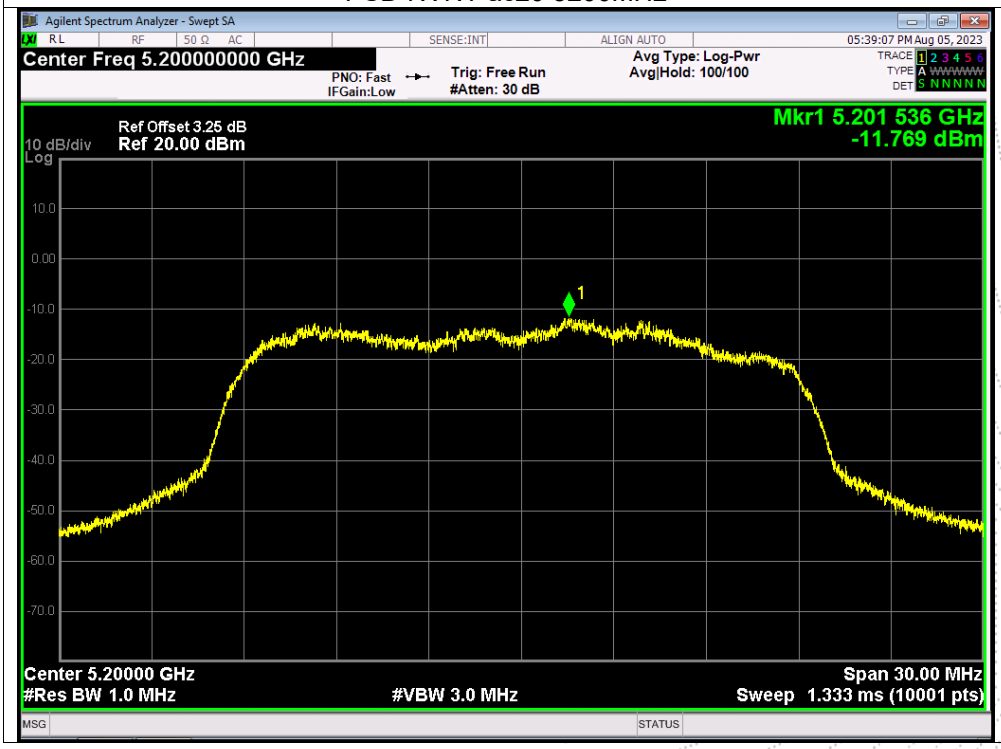
PSD NVNT n40 5230MHz



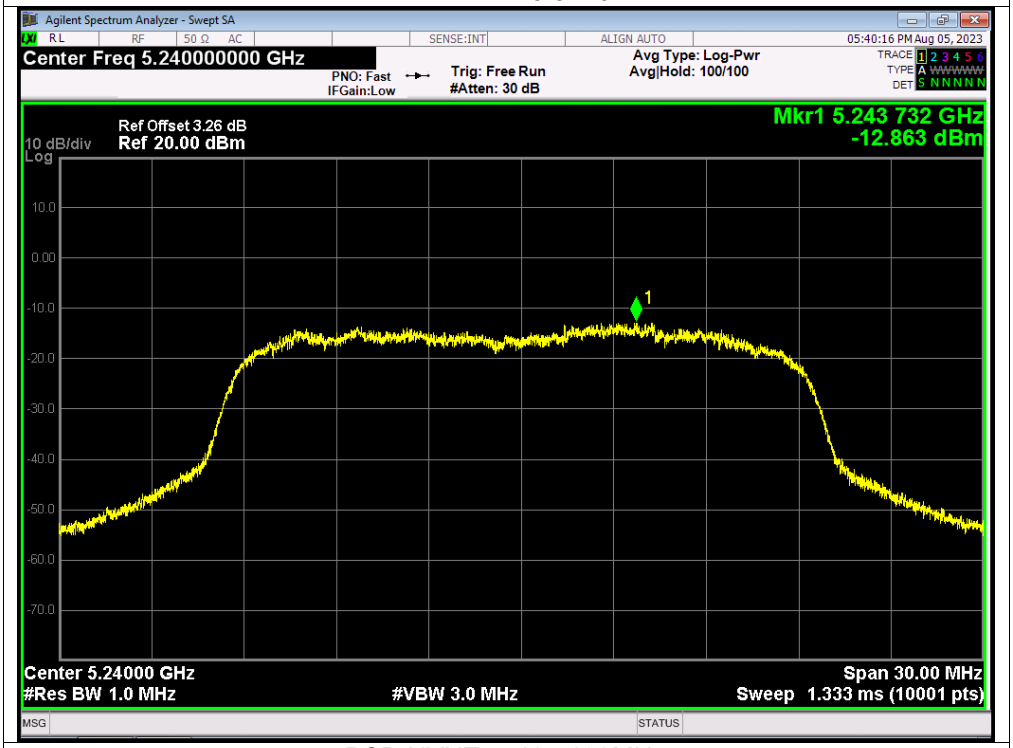
PSD NVNT ac20 5180MHz



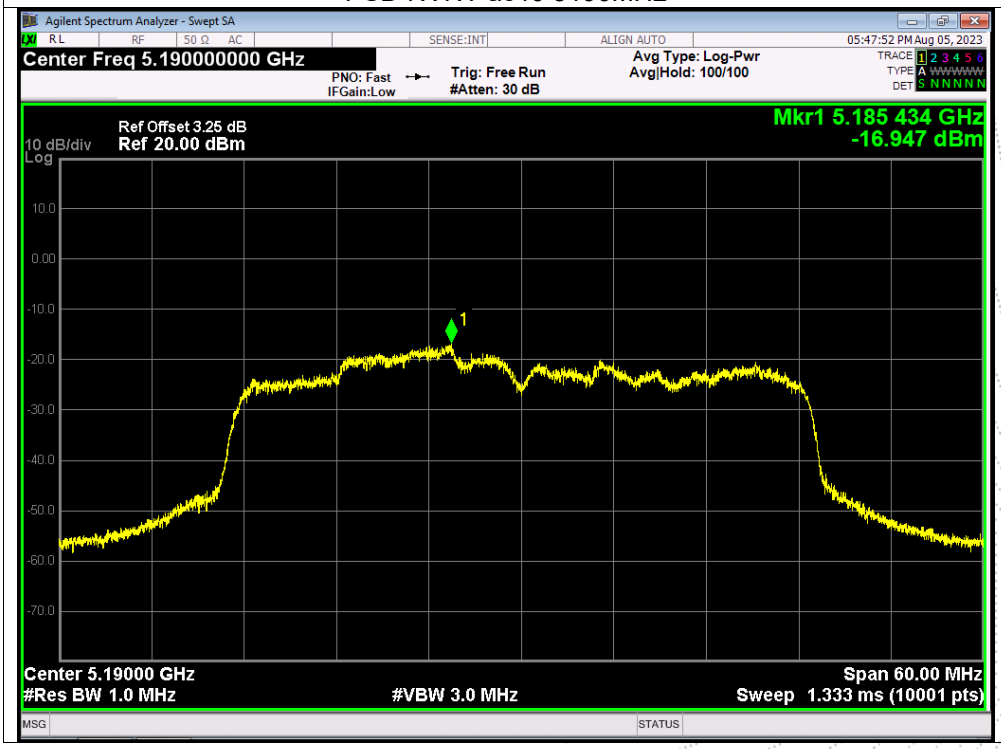
PSD NVNT ac20 5200MHz



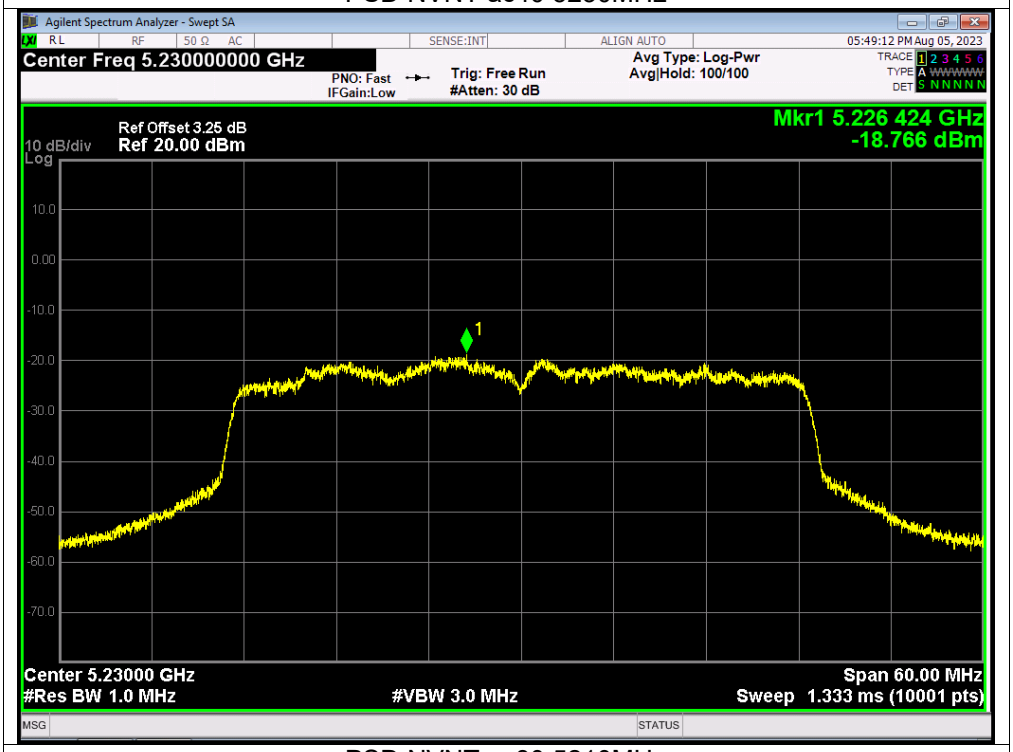
PSD NVNT ac20 5240MHz



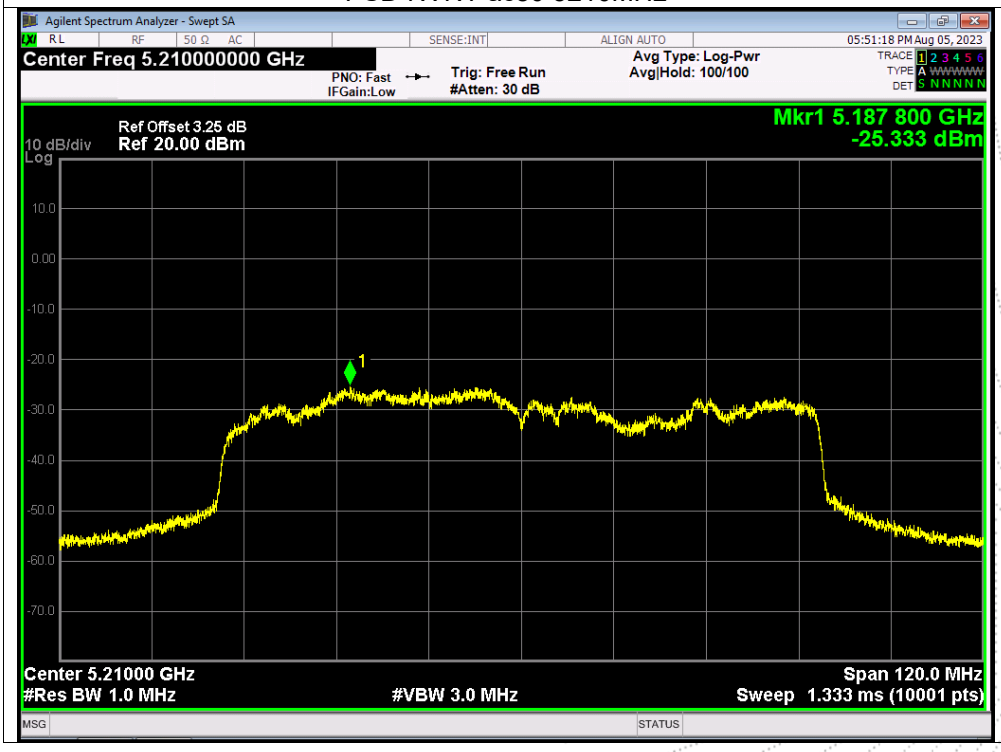
PSD NVNT ac40 5190MHz



PSD NVNT ac40 5230MHz

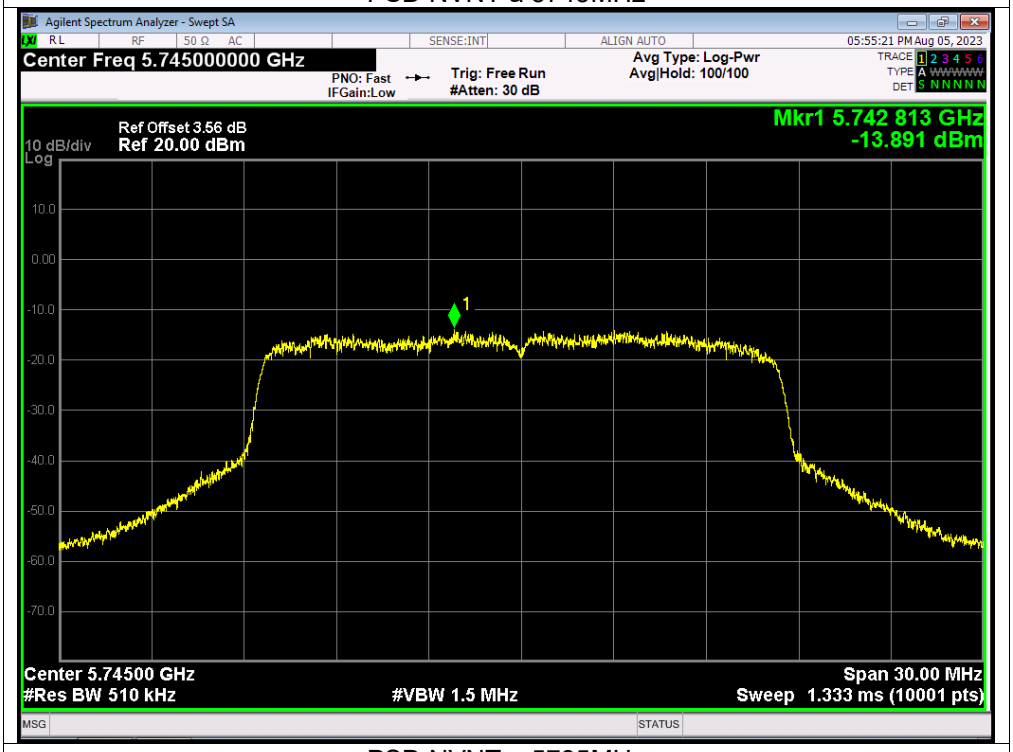


PSD NVNT ac80 5210MHz

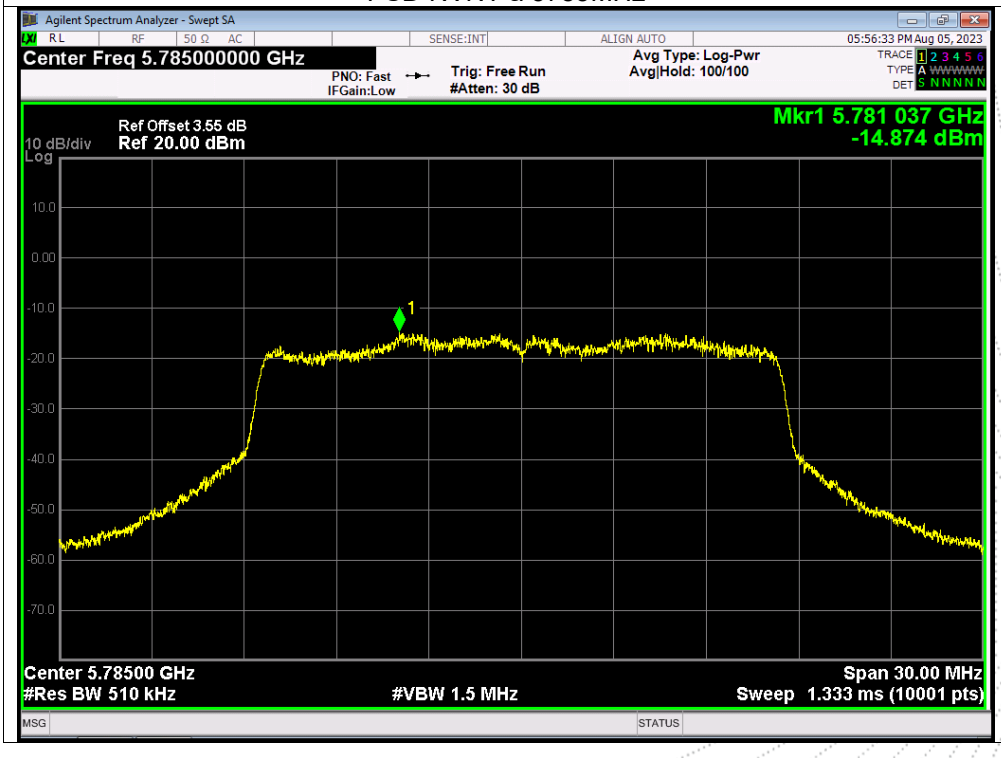


Test Graphs

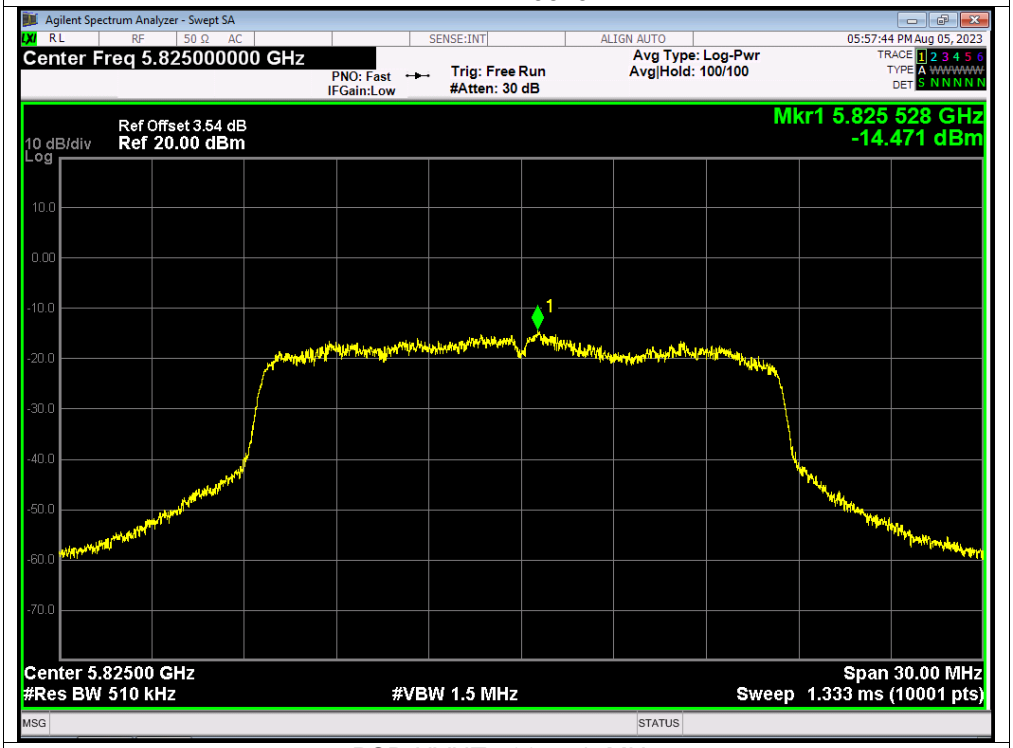
PSD NVNT a 5745MHz



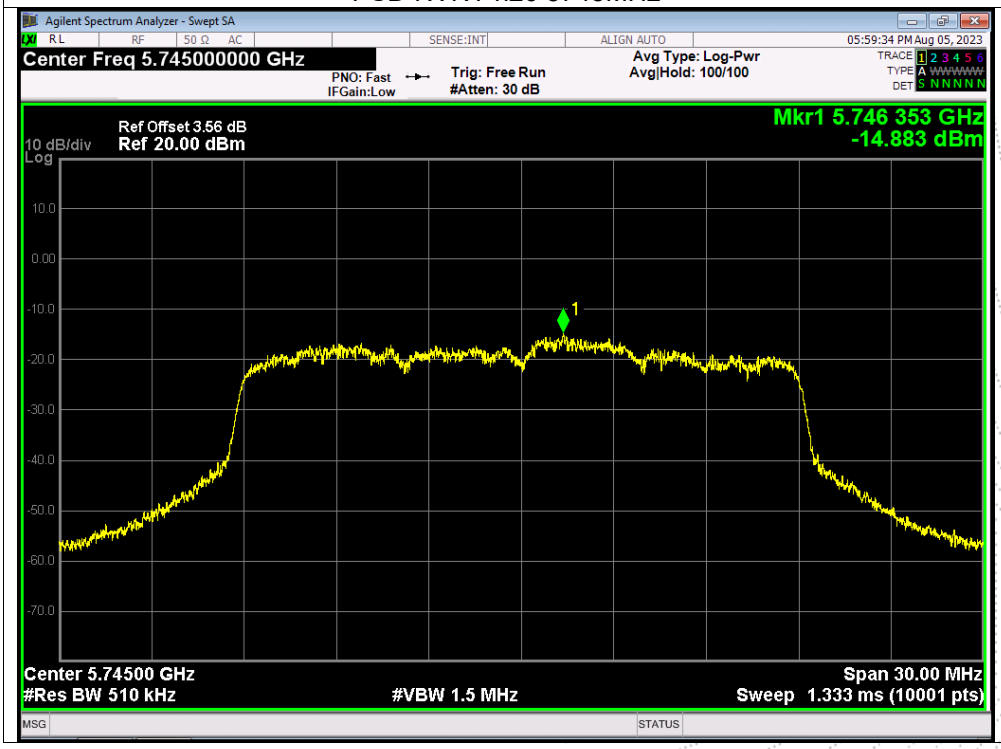
PSD NVNT a 5785MHz



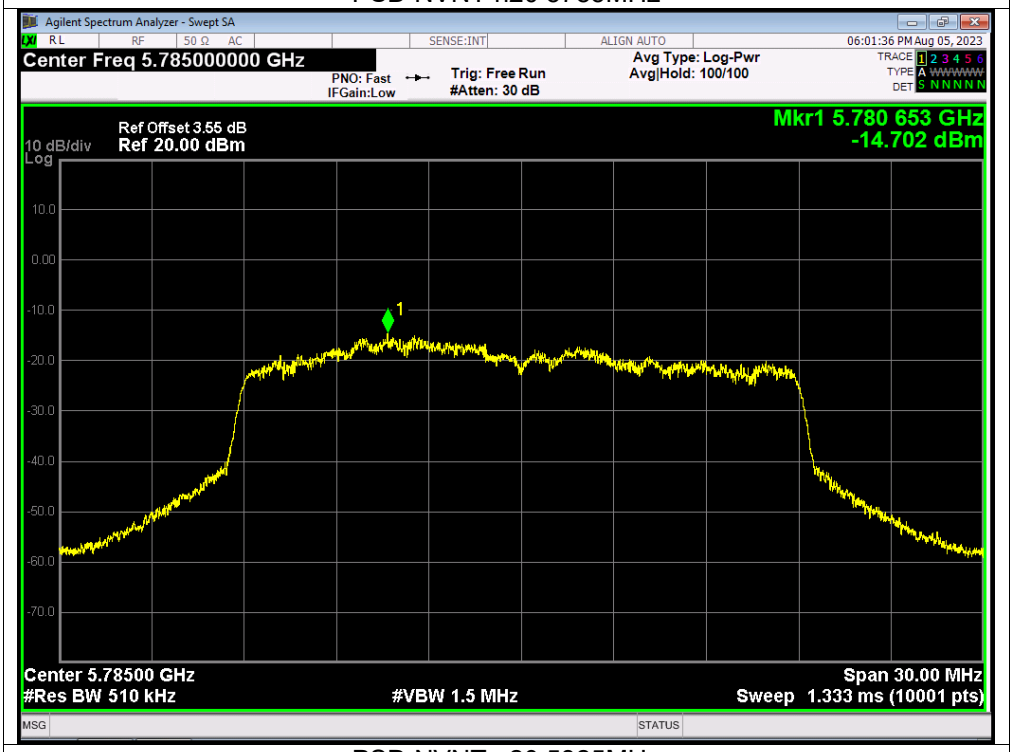
PSD NVNT a 5825MHz



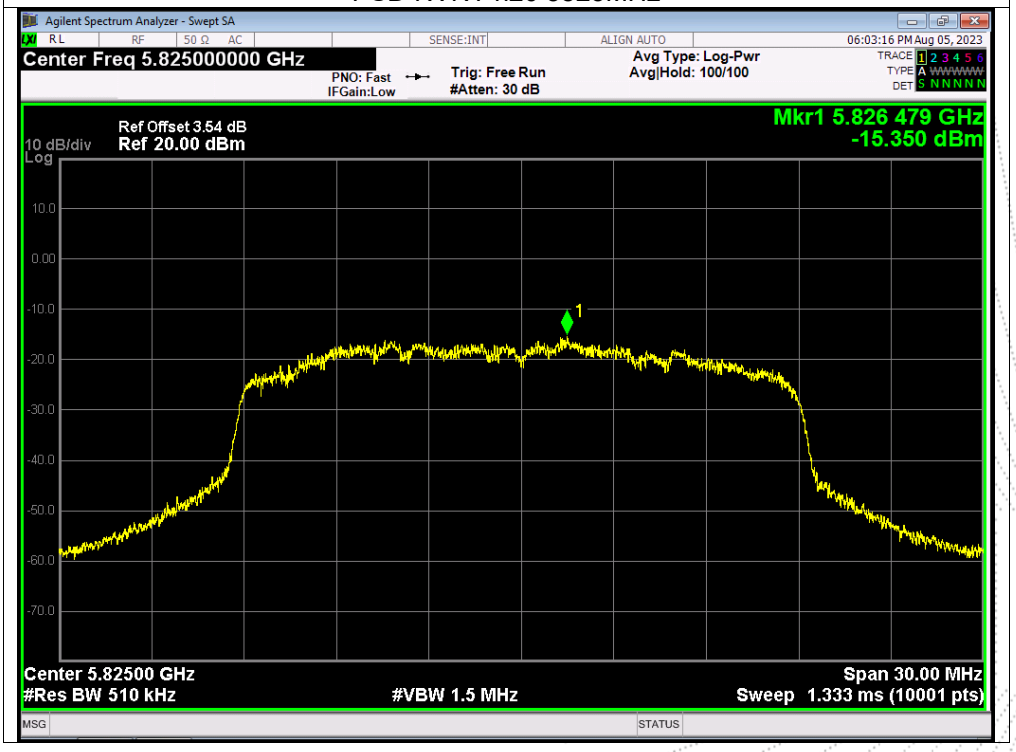
PSD NVNT n20 5745MHz



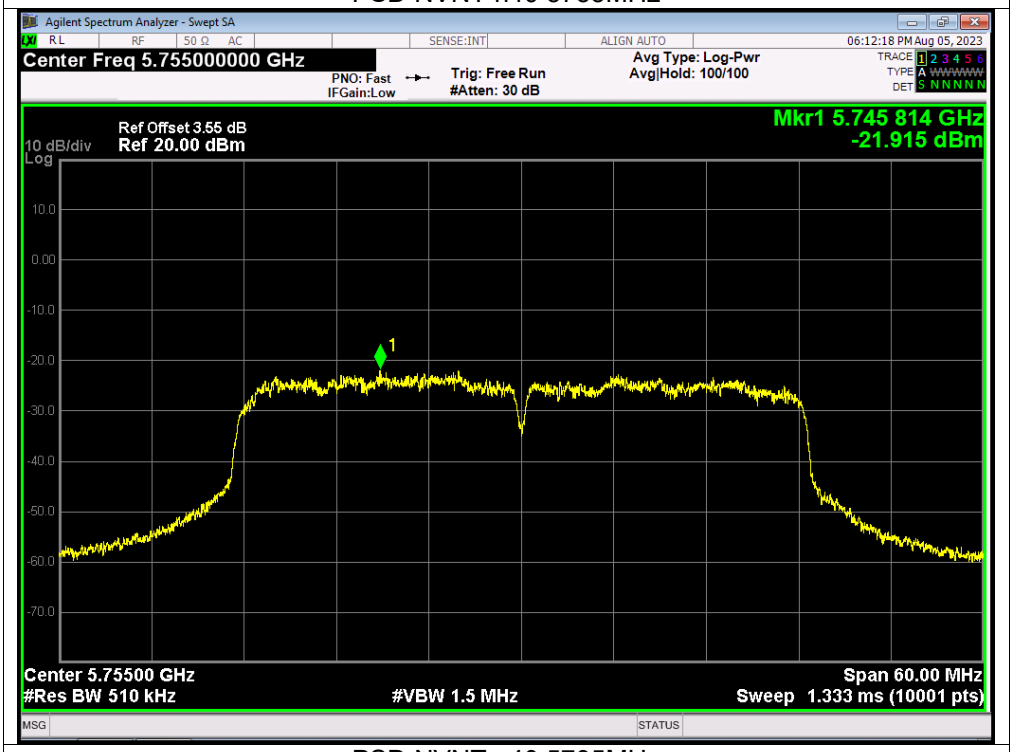
PSD NVNT n20 5785MHz



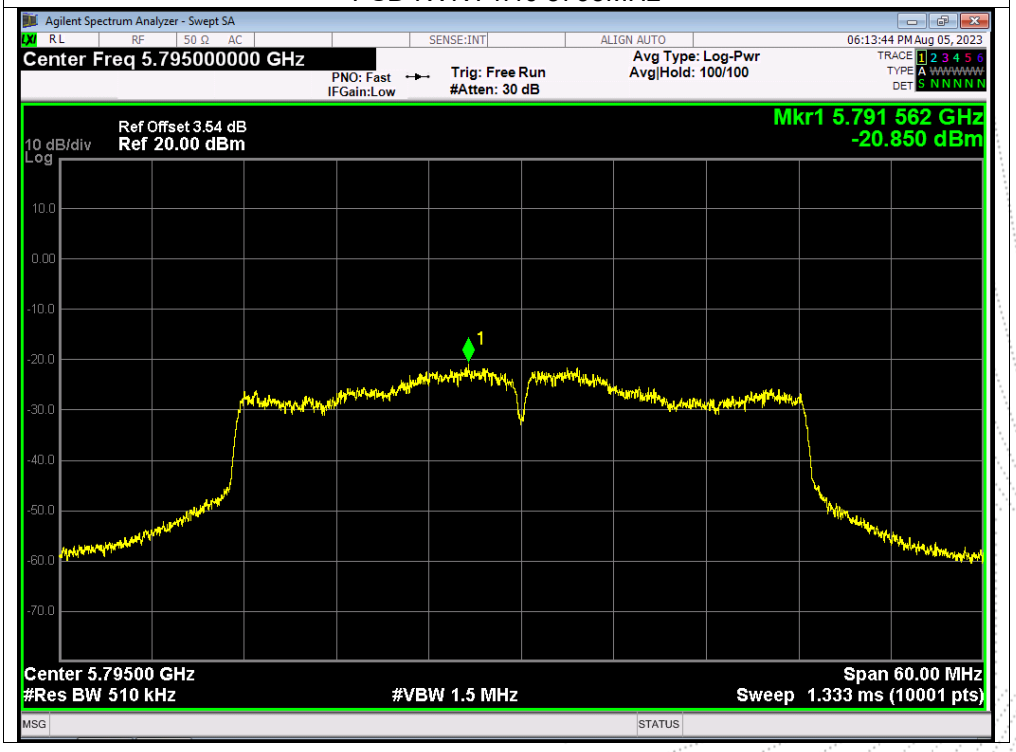
PSD NVNT n20 5825MHz



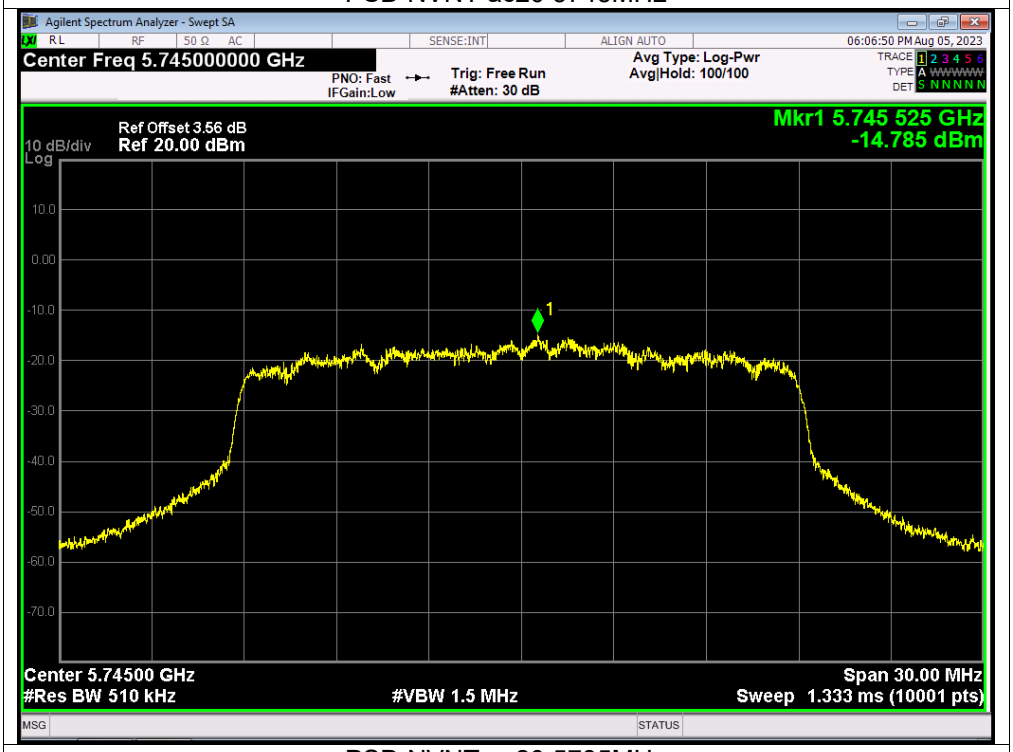
PSD NVNT n40 5755MHz



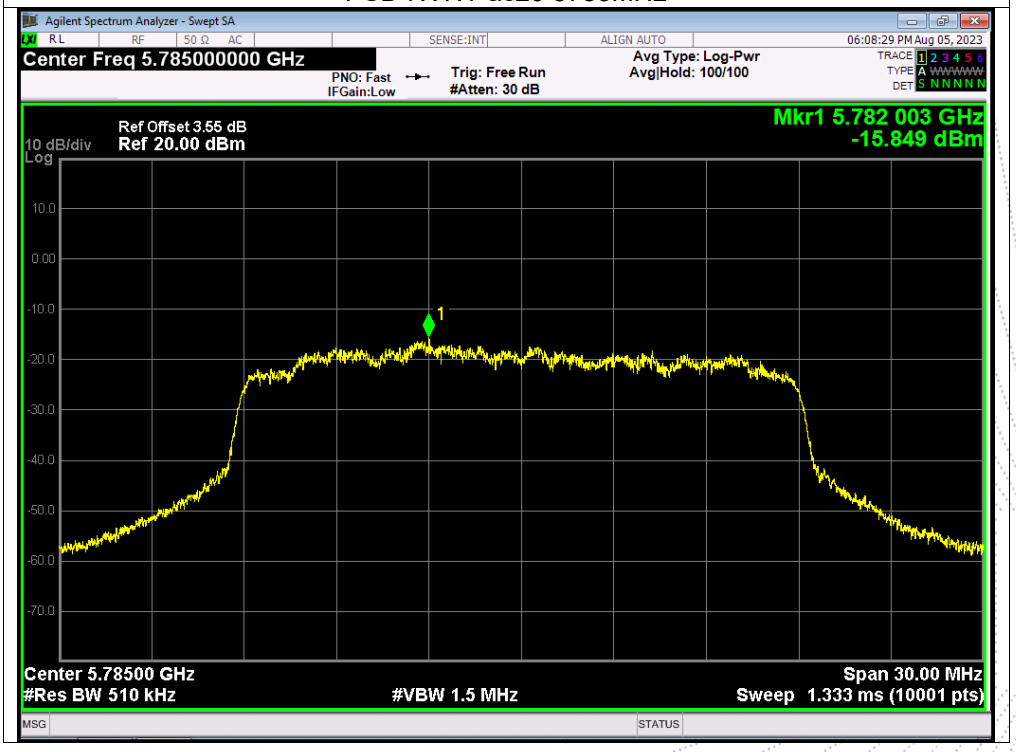
PSD NVNT n40 5795MHz



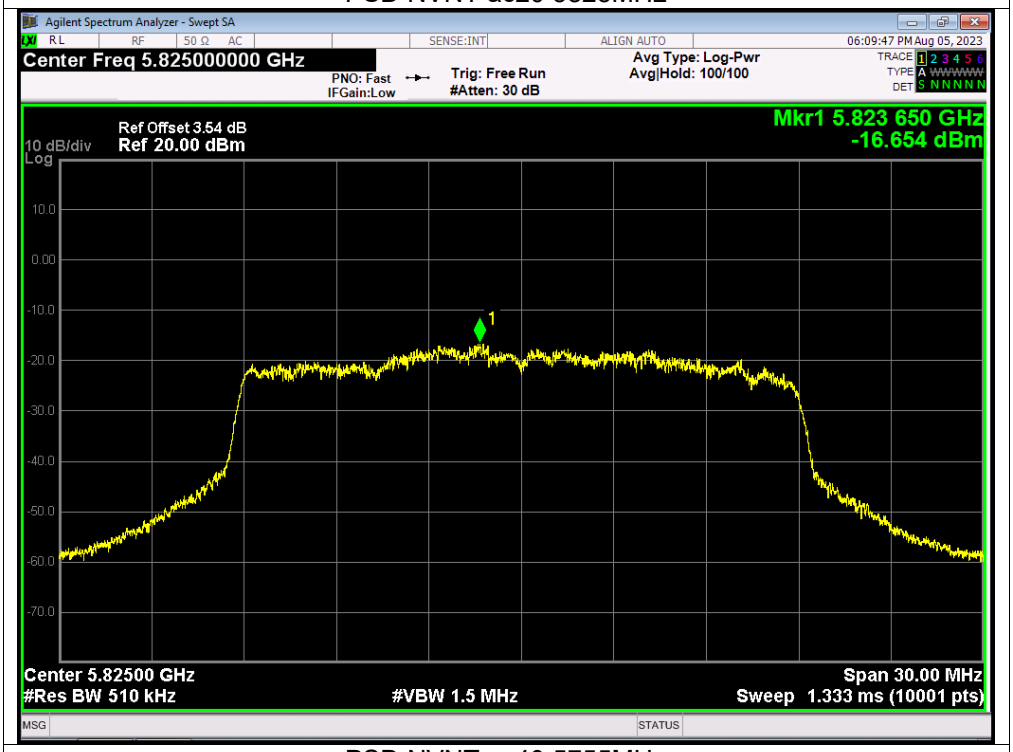
PSD NVNT ac20 5745MHz



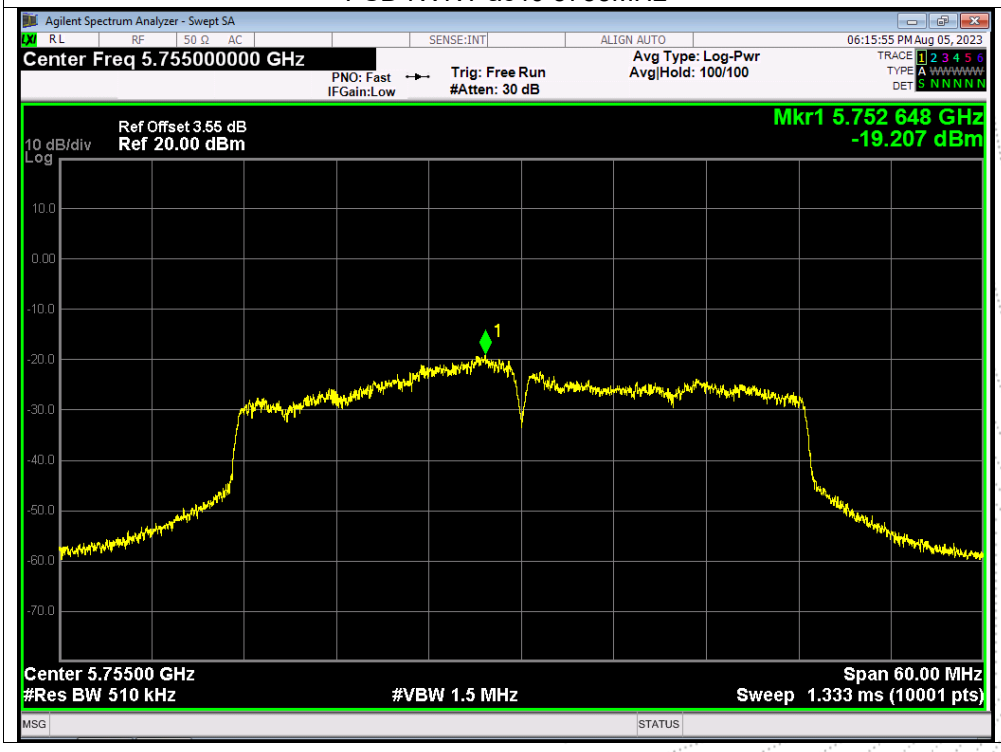
PSD NVNT ac20 5785MHz



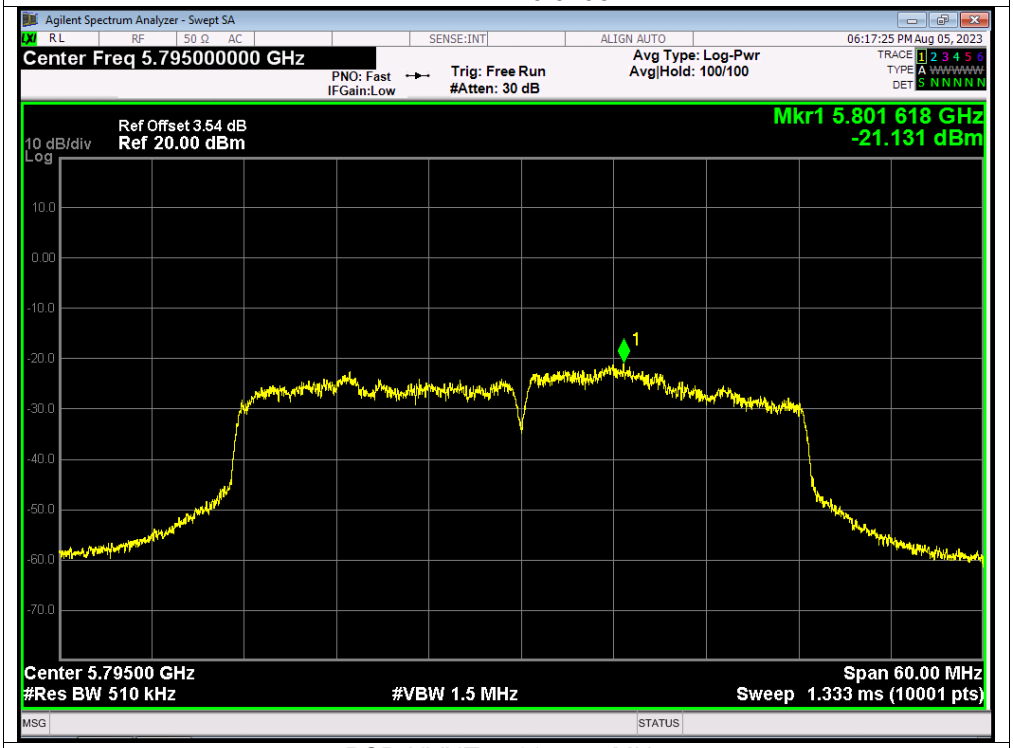
PSD NVNT ac20 5825MHz



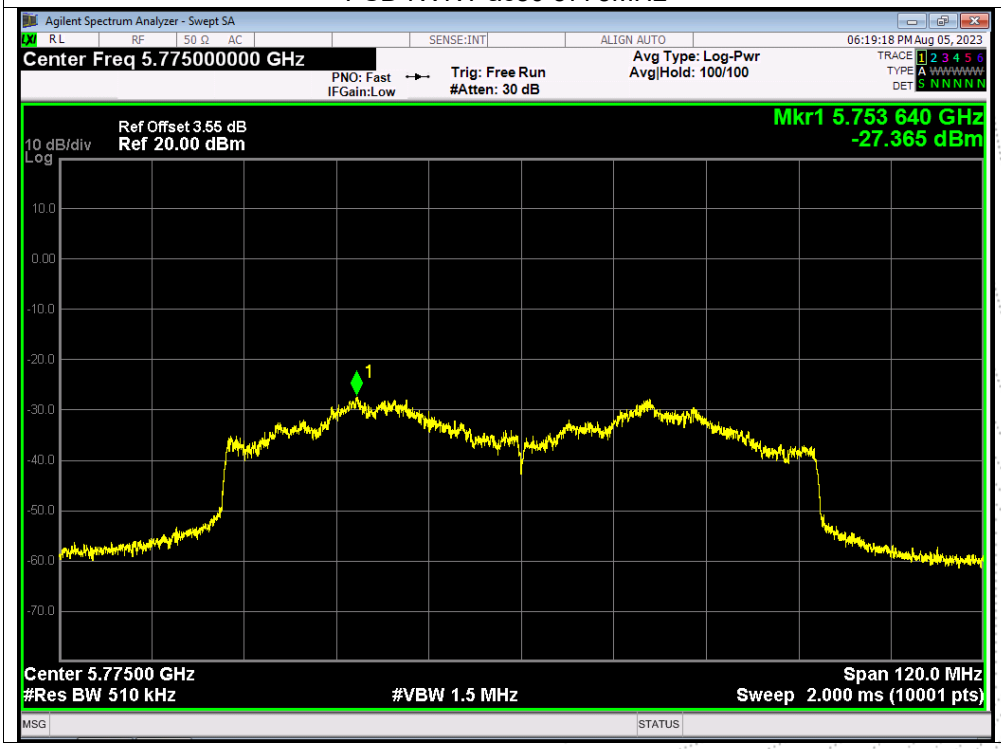
PSD NVNT ac40 5755MHz



PSD NVNT ac40 5795MHz

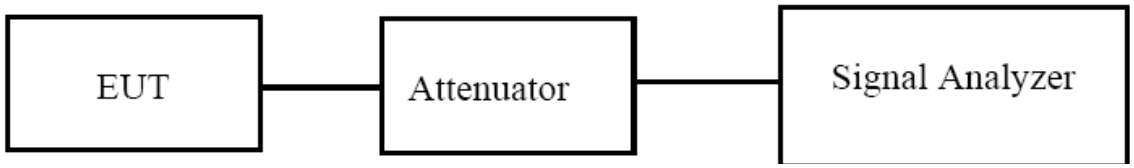


PSD NVNT ac80 5775MHz



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.
(6dB bandwidth)>500kHz

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.

6dB
1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW) ≥ 3 x RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.

6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

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.

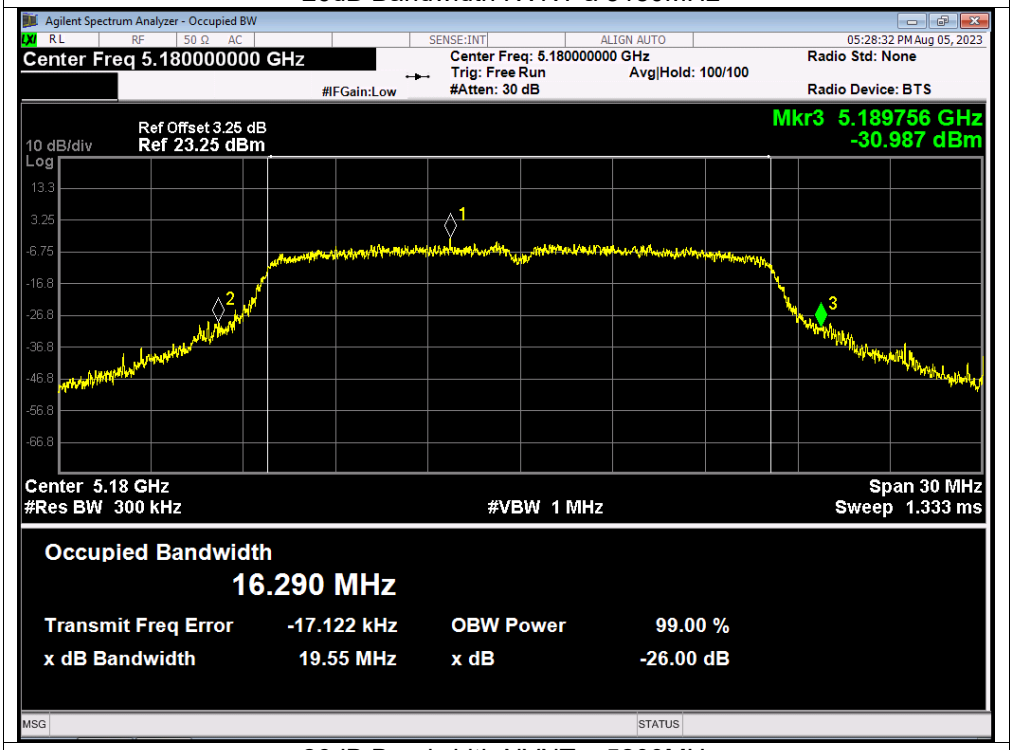
9.5 Test Result

Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	101kPa	Test Voltage ：	DC 12V
Test Mode ：	TX Frequency U-NII-1 (5180-5240MHz)		

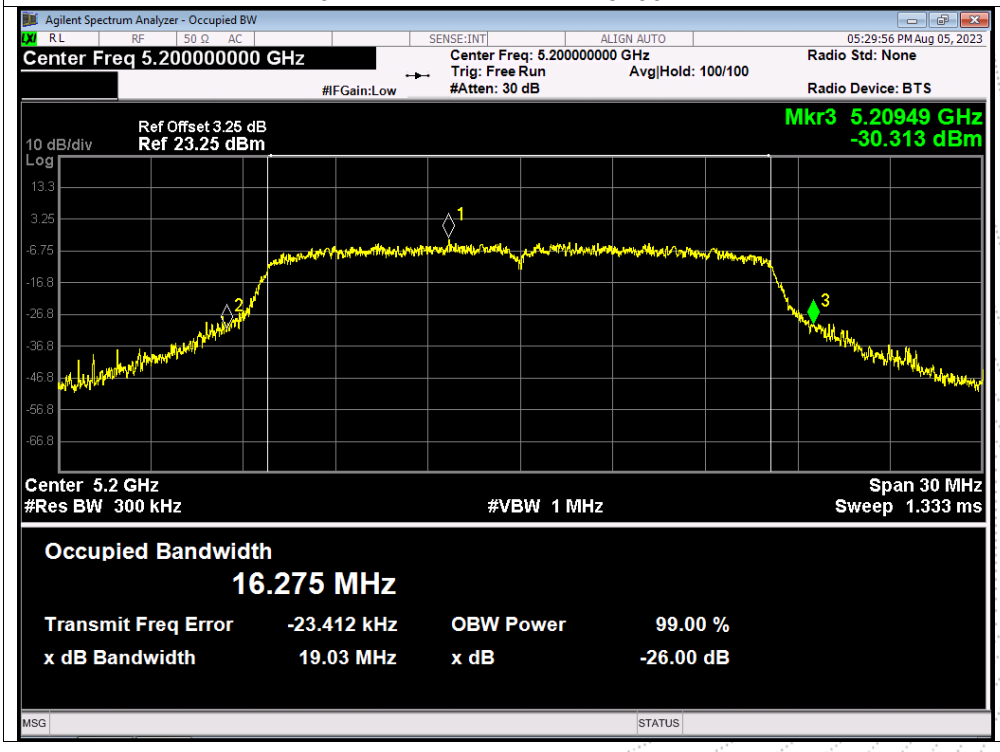
Condition	Mode	**Frequency (MHz)**	**99% bandwidth (MHz)**	**26dB bandwidth (MHz)**	**Result**
NVNT	a	5180	16.241	19.547	Pass
NVNT	a	5200	16.231	19.026	Pass
NVNT	a	5240	16.257	20.286	Pass
NVNT	n20	5180	17.407	20.025	Pass
NVNT	n20	5200	17.399	19.998	Pass
NVNT	n20	5240	17.394	20.345	Pass
NVNT	n40	5190	35.768	42.666	Pass
NVNT	n40	5230	35.76	40.419	Pass
NVNT	ac20	5180	17.409	19.892	Pass
NVNT	ac20	5200	17.416	20.194	Pass
NVNT	ac20	5240	17.403	20.259	Pass
NVNT	ac40	5190	35.748	41.679	Pass
NVNT	ac40	5230	35.686	41.024	Pass
NVNT	ac80	5210	75.055	82.112	Pass

Test Graphs

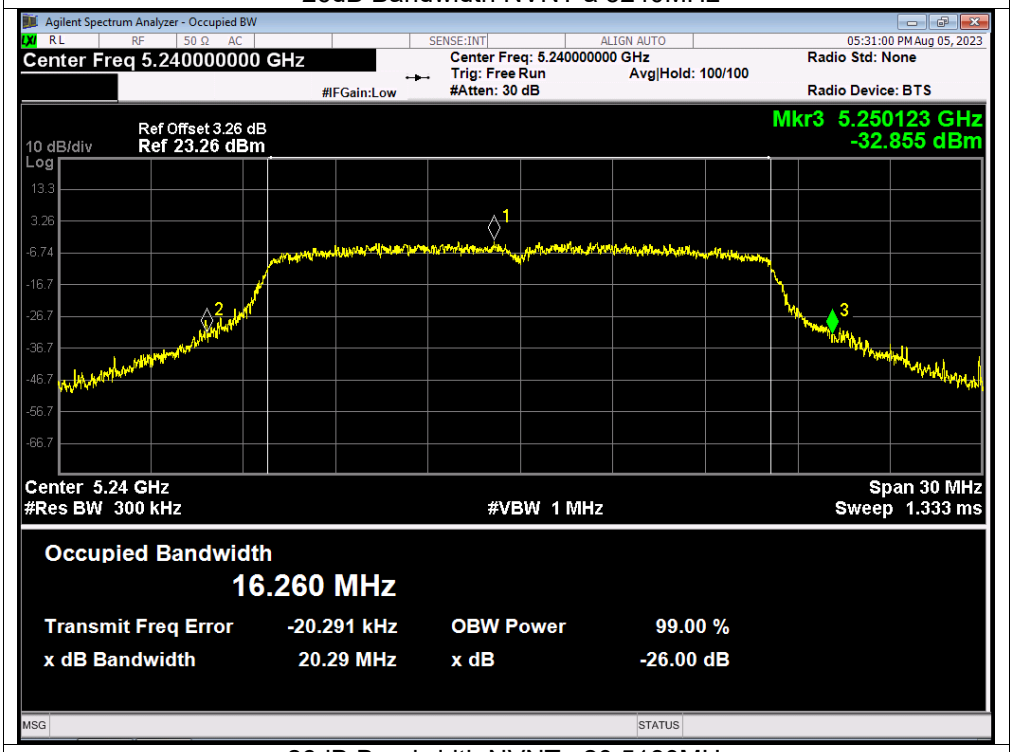
-26dB Bandwidth NVNT a 5180MHz



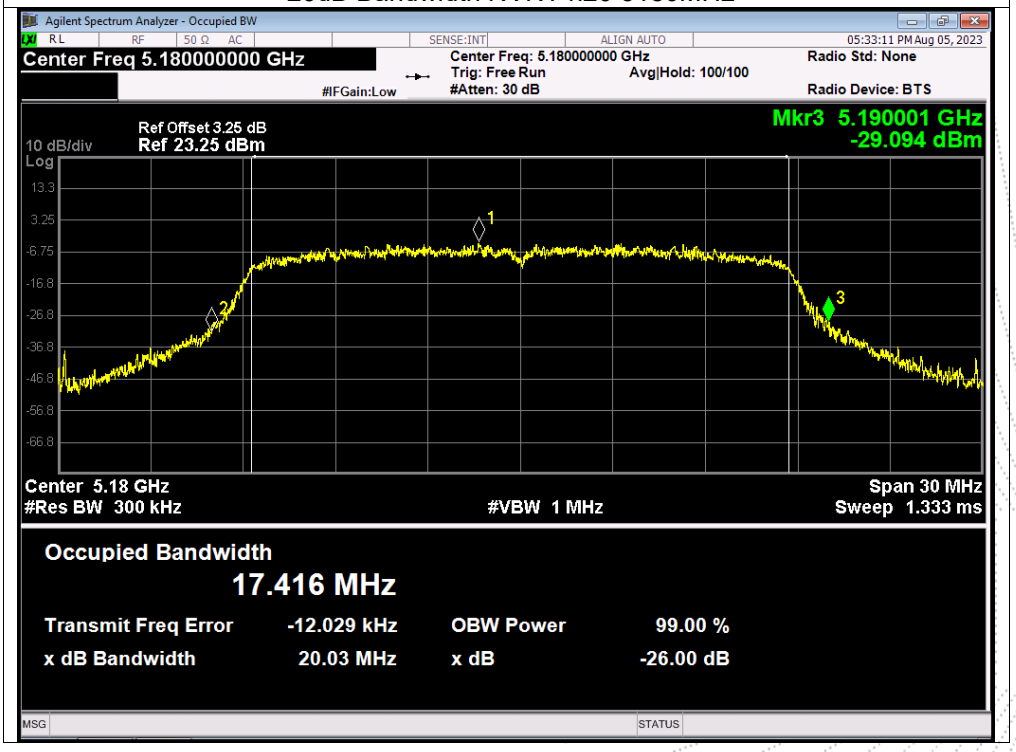
-26dB Bandwidth NVNT a 5200MHz



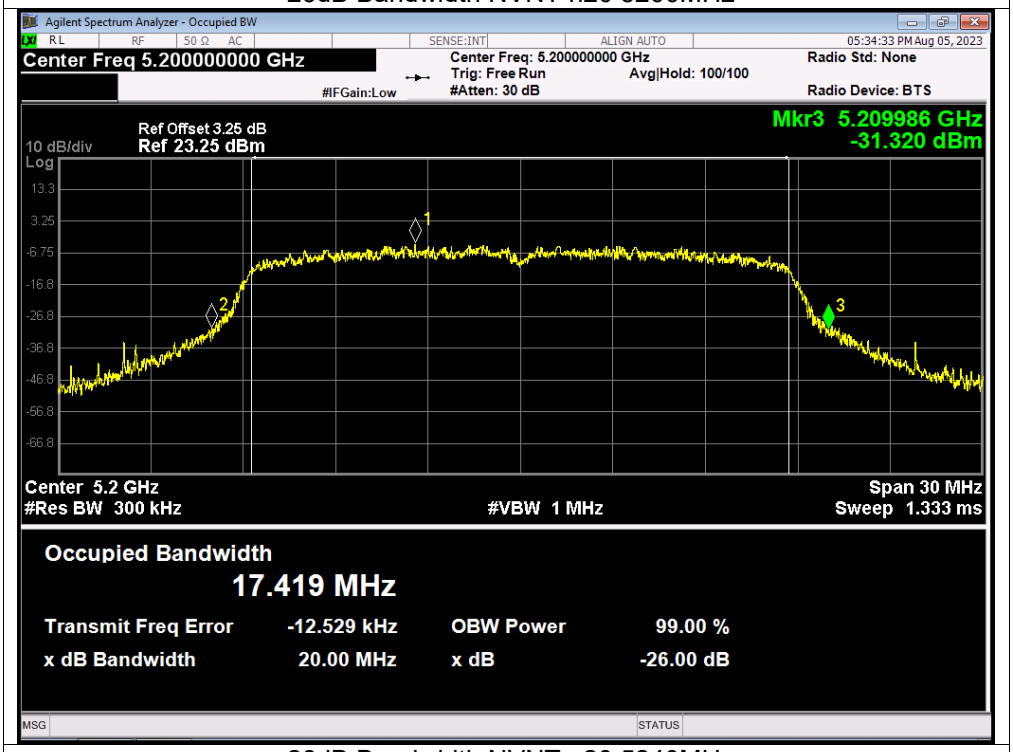
-26dB Bandwidth NVNT a 5240MHz



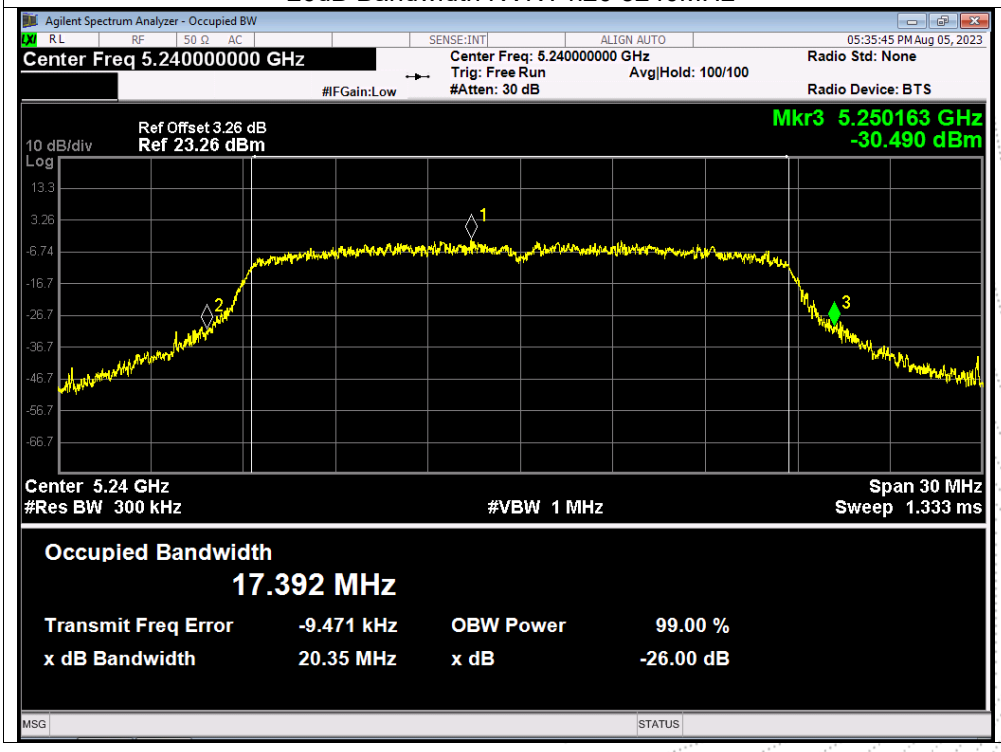
-26dB Bandwidth NVNT n20 5180MHz



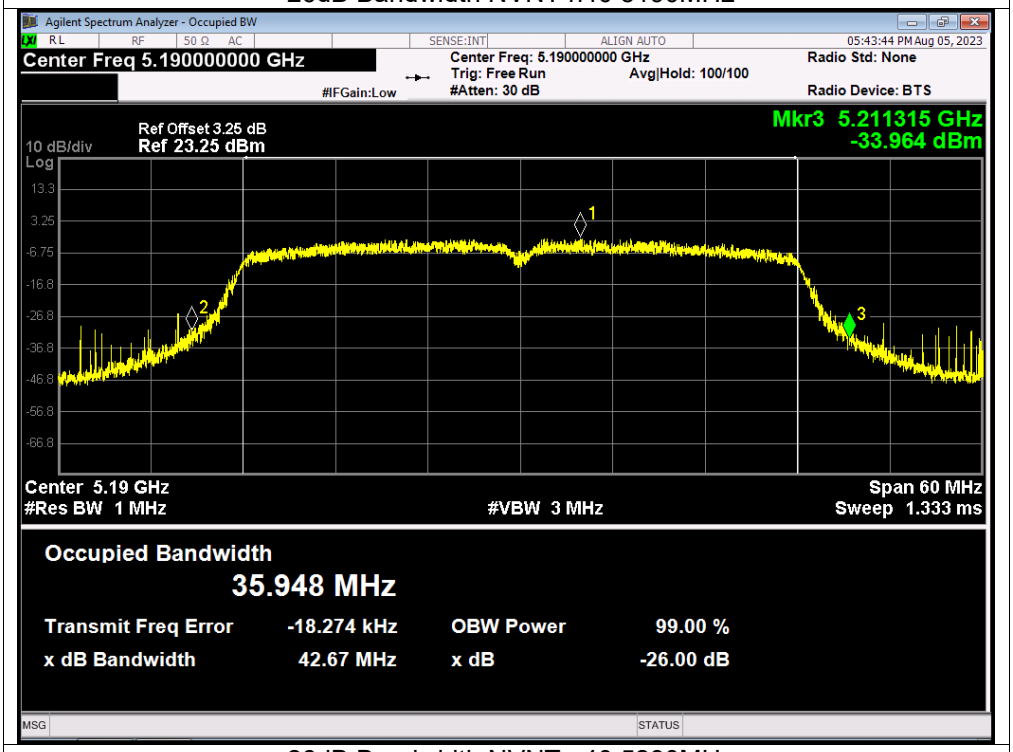
-26dB Bandwidth NVNT n20 5200MHz



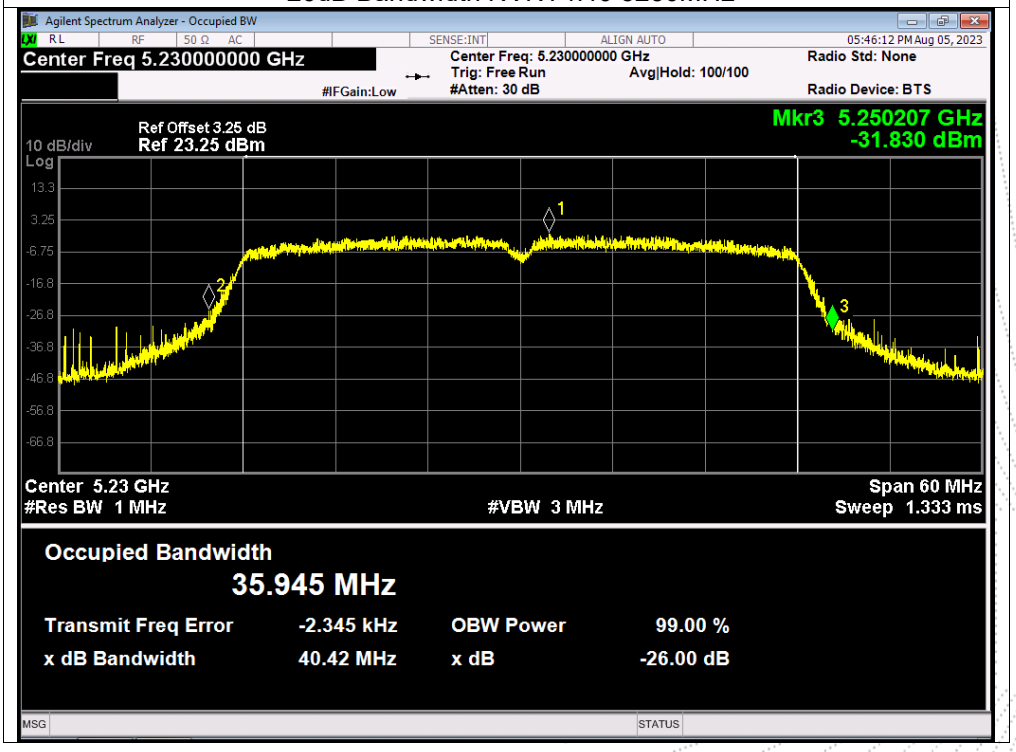
-26dB Bandwidth NVNT n20 5240MHz



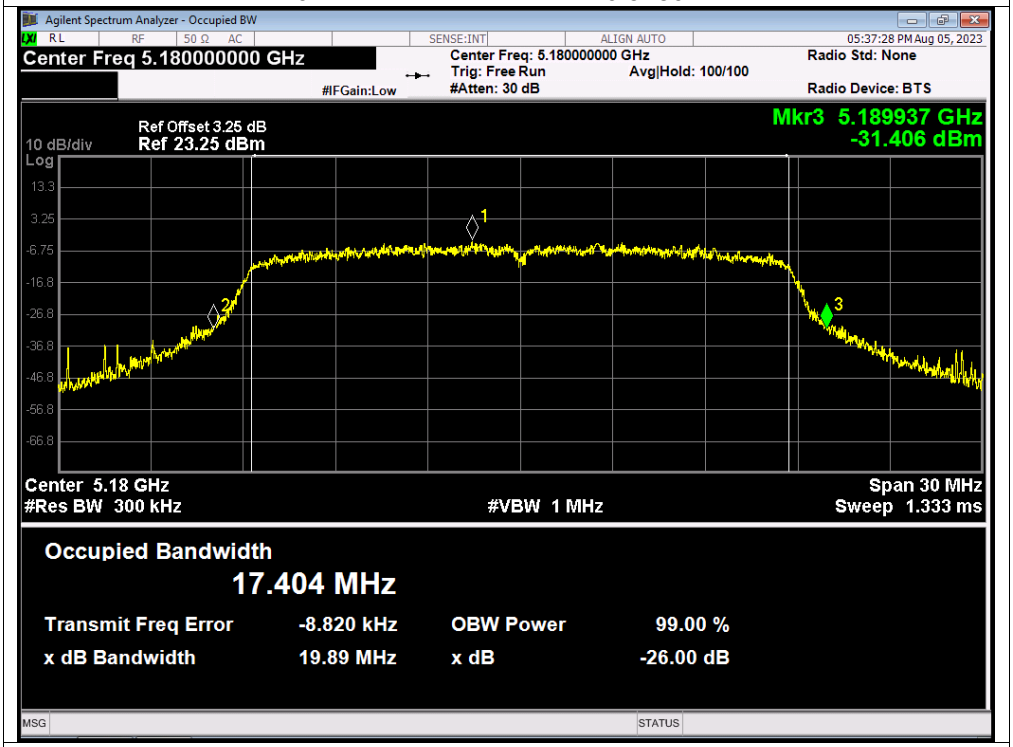
-26dB Bandwidth NVNT n40 5190MHz



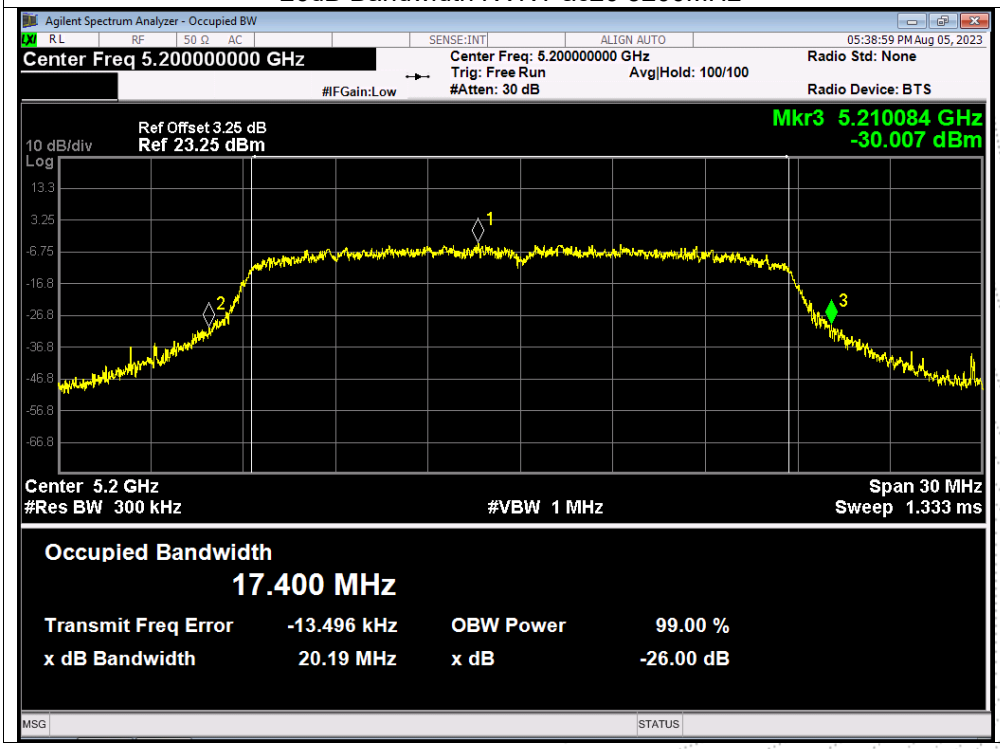
-26dB Bandwidth NVNT n40 5230MHz



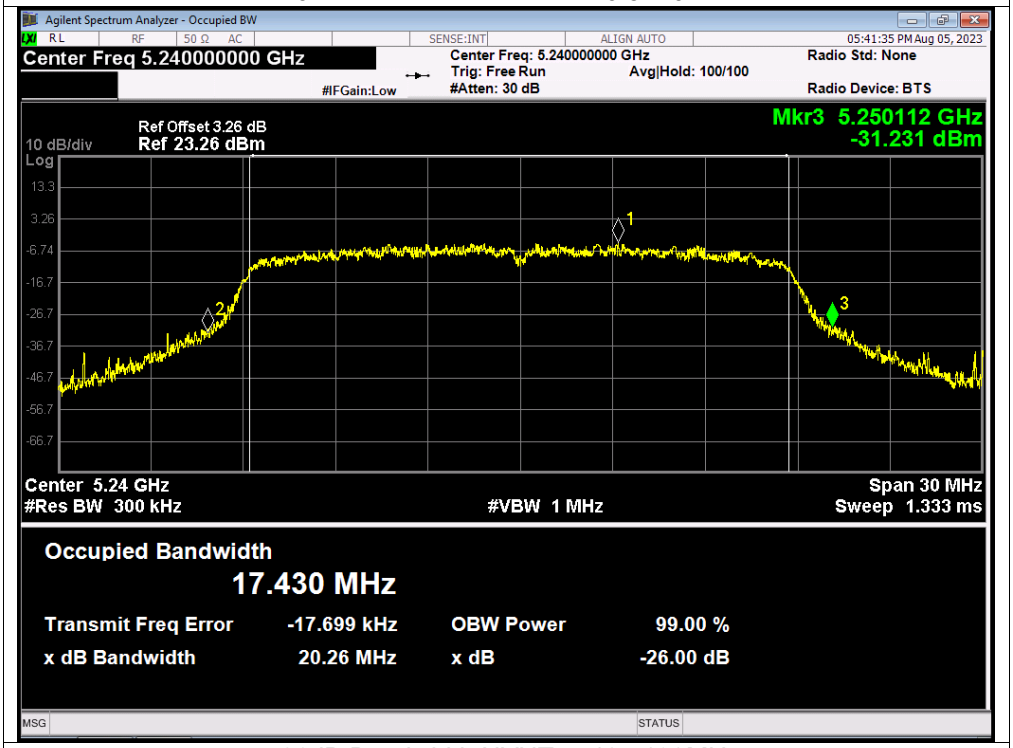
-26dB Bandwidth NVNT ac20 5180MHz



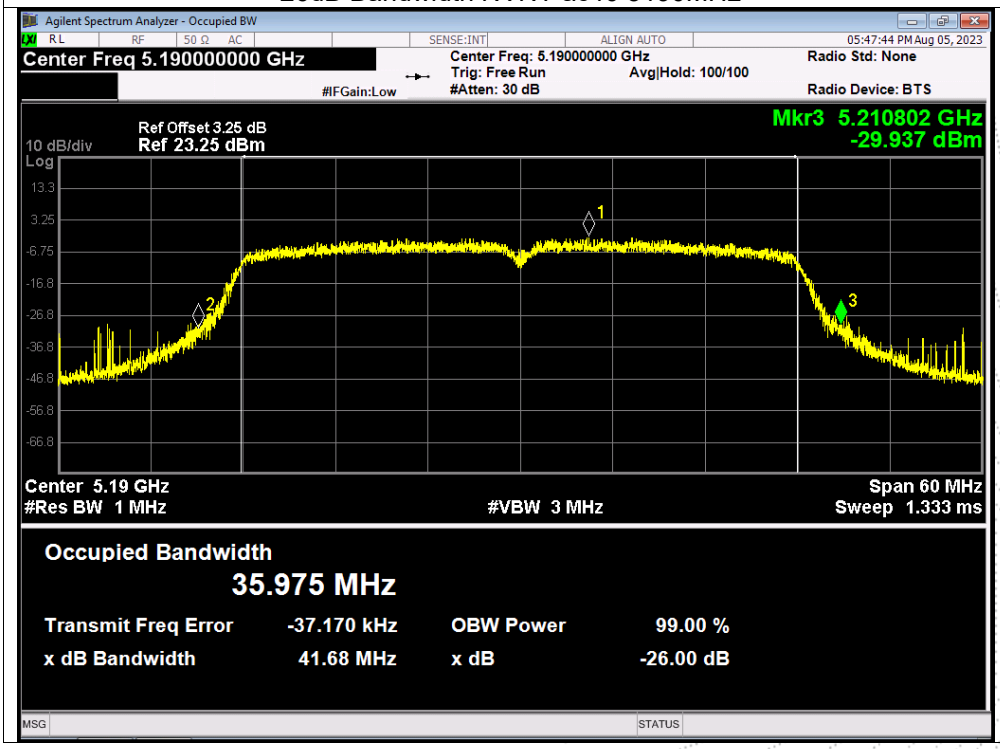
-26dB Bandwidth NVNT ac20 5200MHz



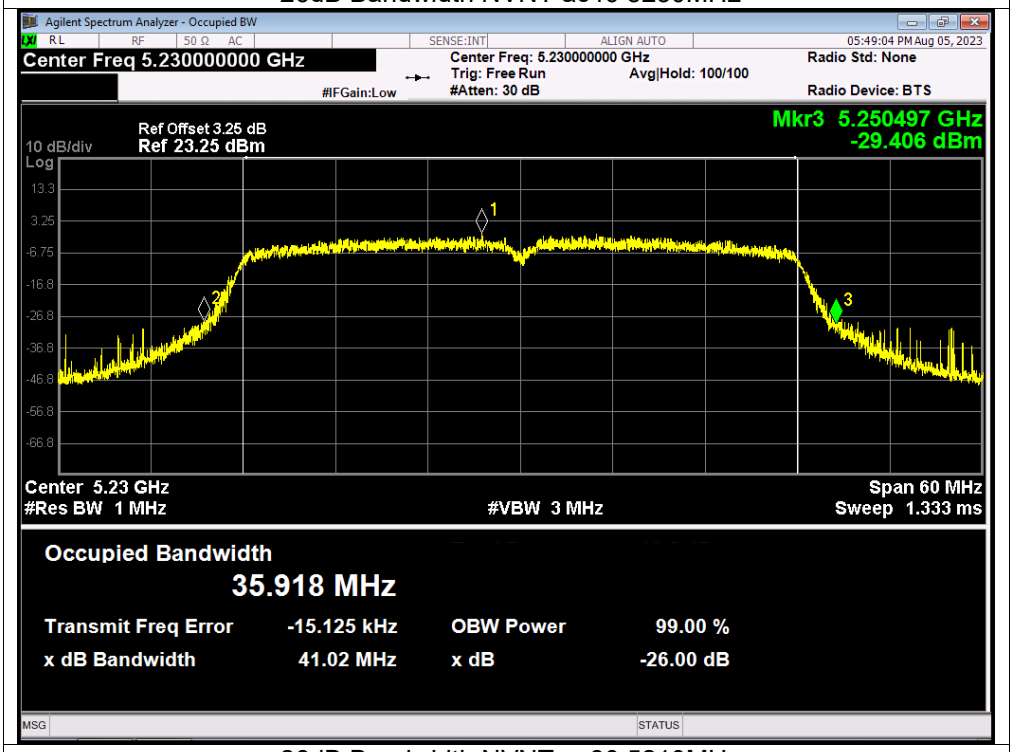
-26dB Bandwidth NVNT ac20 5240MHz



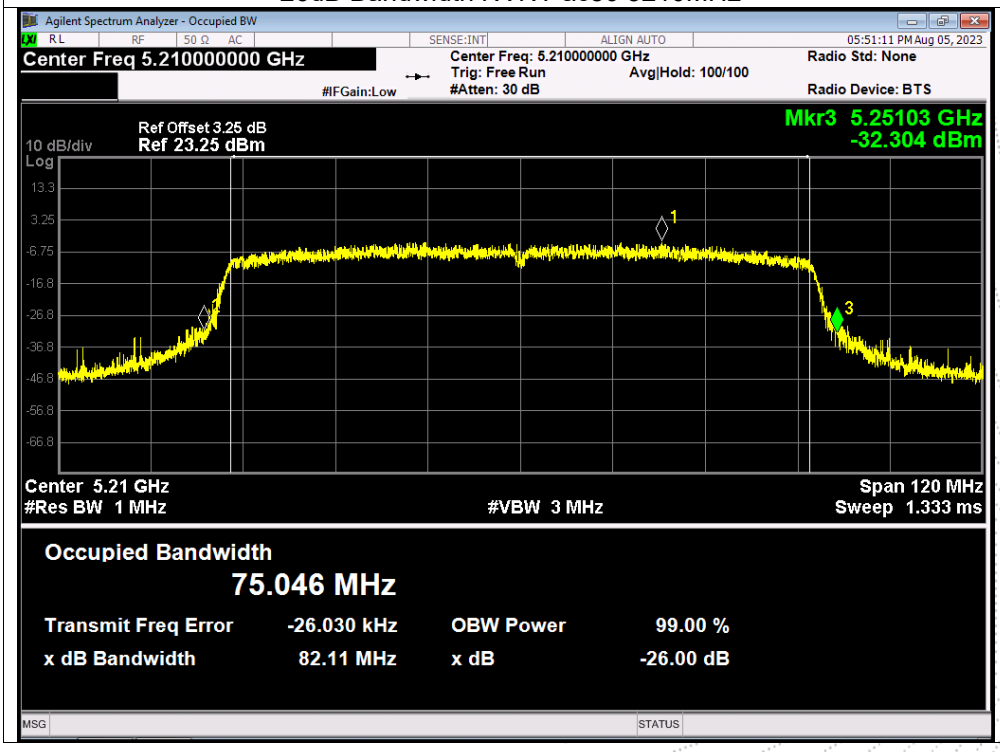
-26dB Bandwidth NVNT ac40 5190MHz



-26dB Bandwidth NVNT ac40 5230MHz

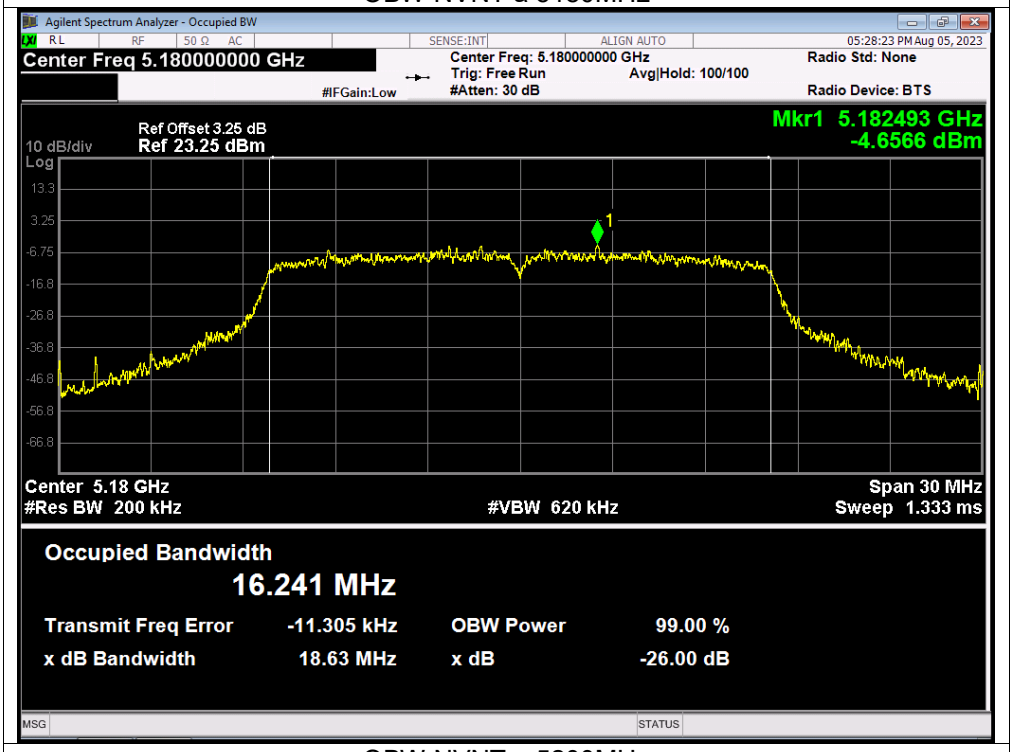


-26dB Bandwidth NVNT ac80 5210MHz

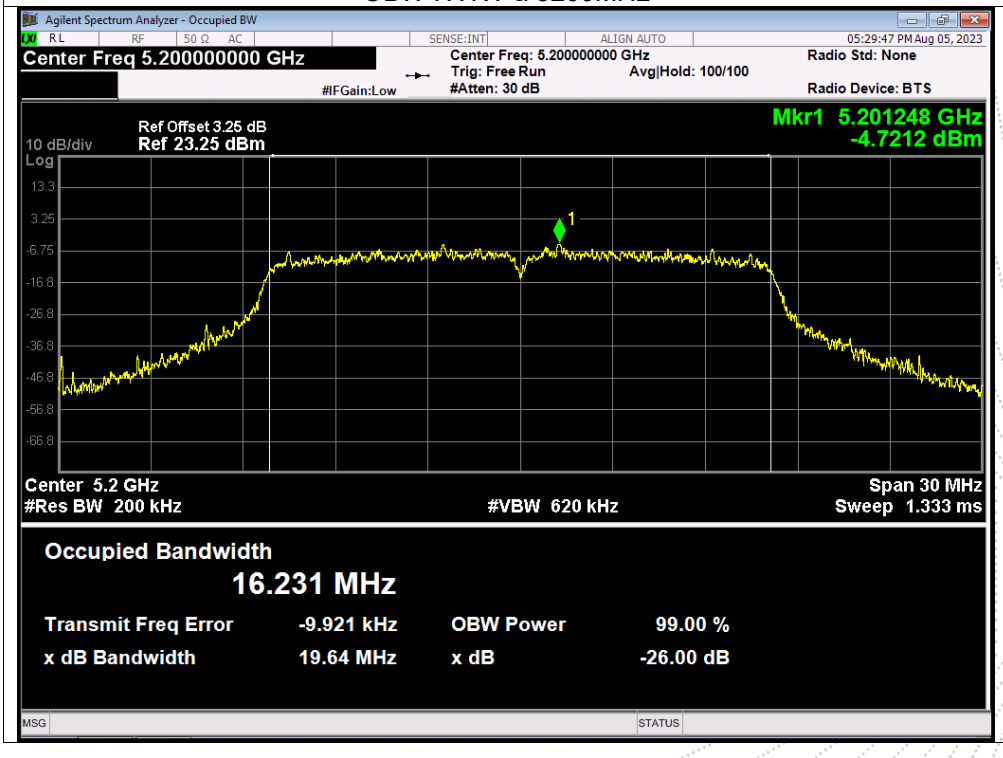


Test Graphs

OBW NVNT a 5180MHz



OBW NVNT a 5200MHz



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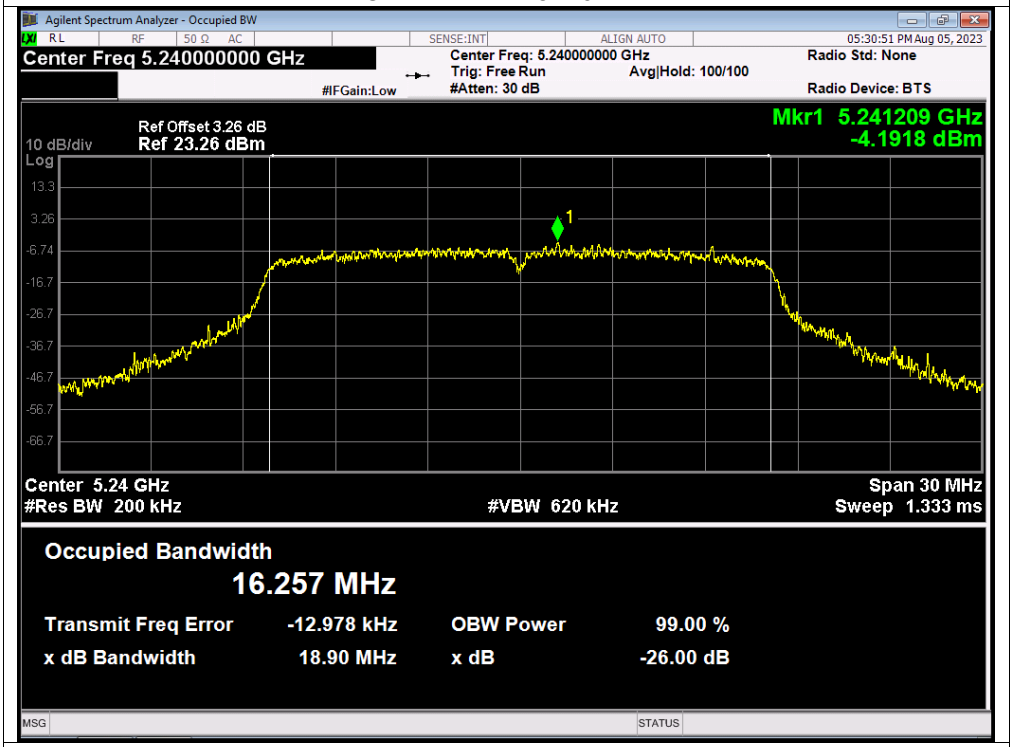
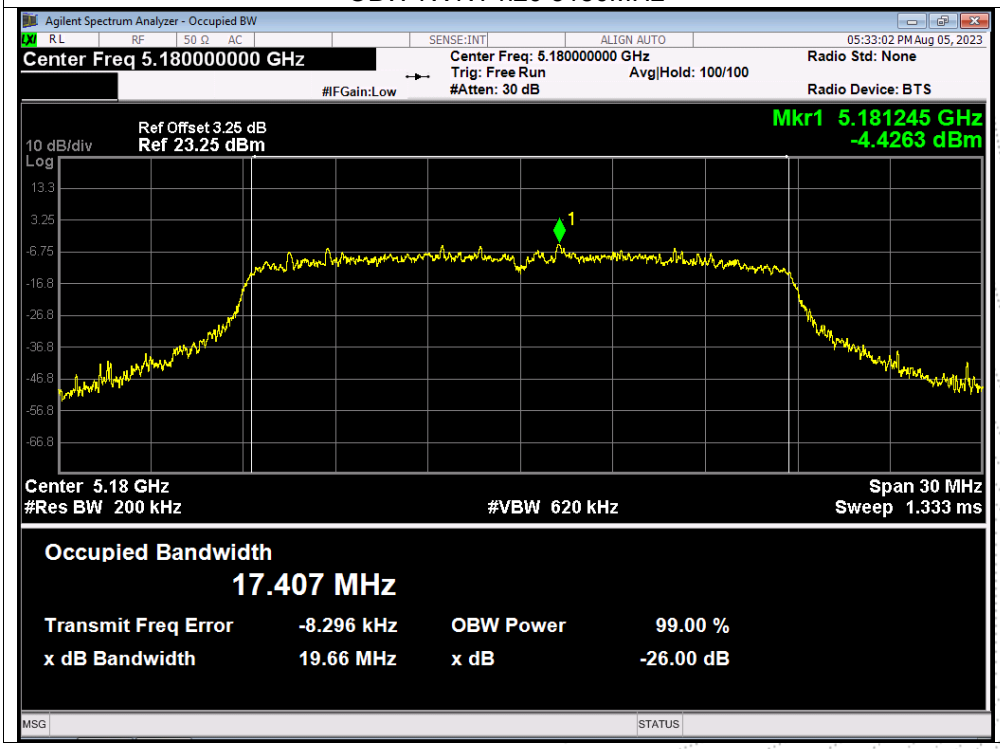
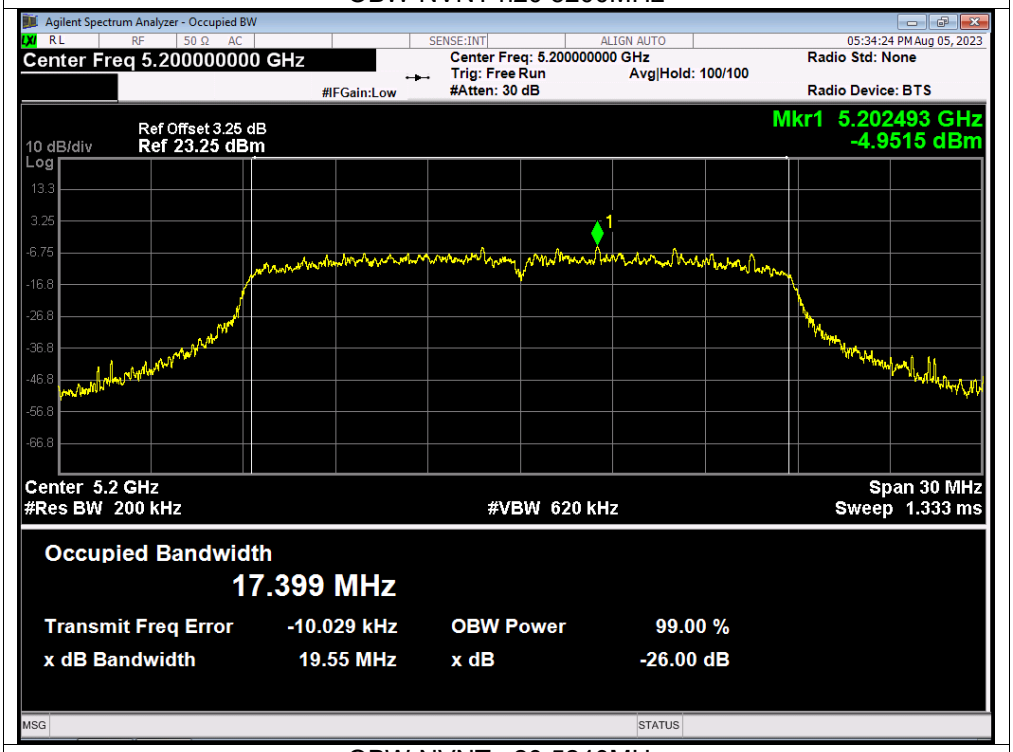


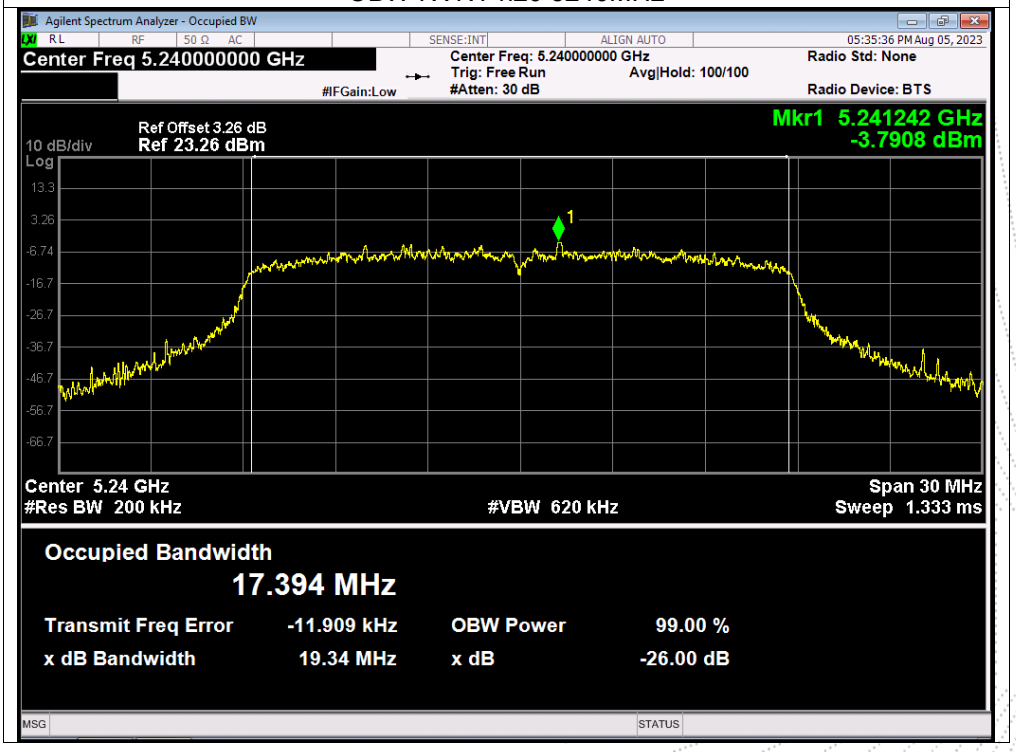
OBW NVNT n20 5180MHz



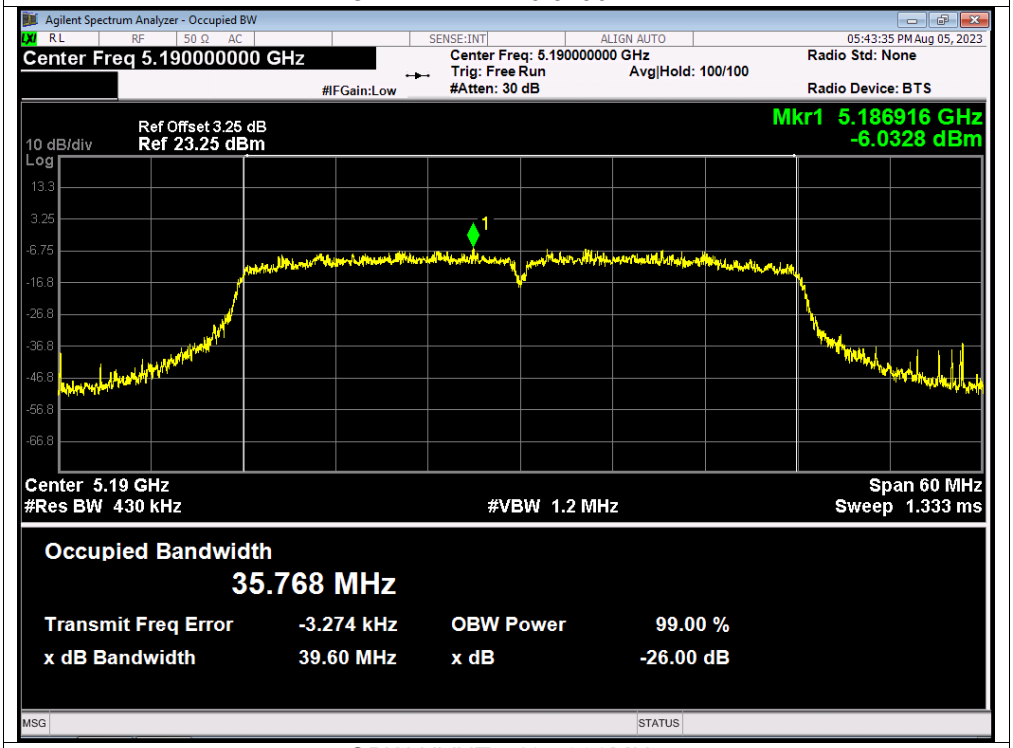
OBW NVNT n20 5200MHz



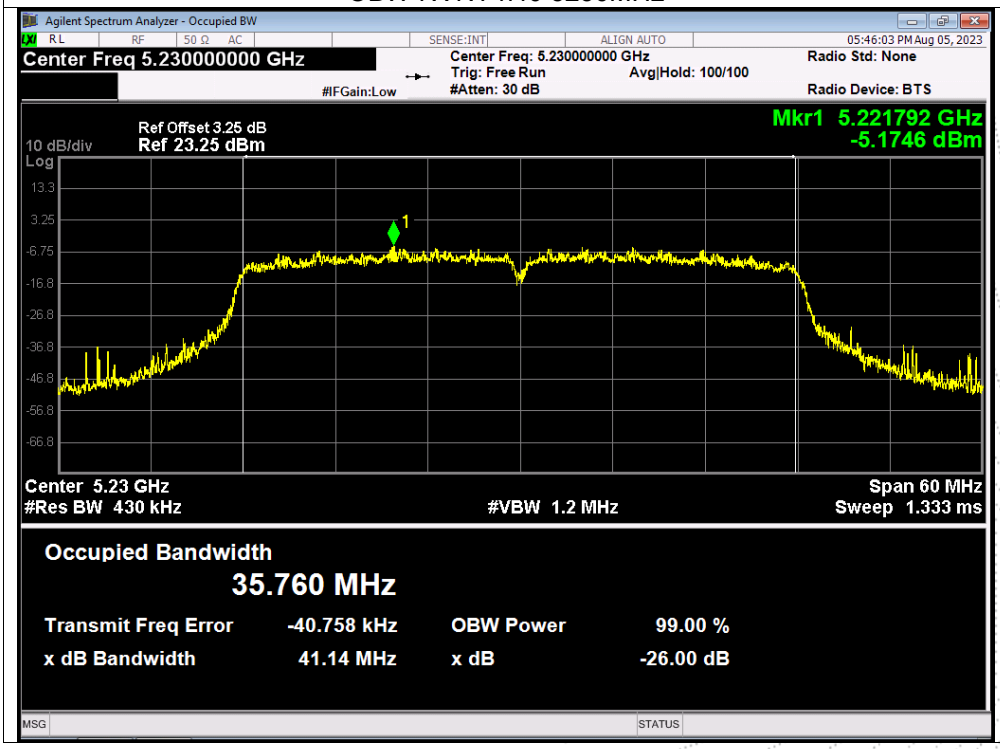
OBW NVNT n20 5240MHz



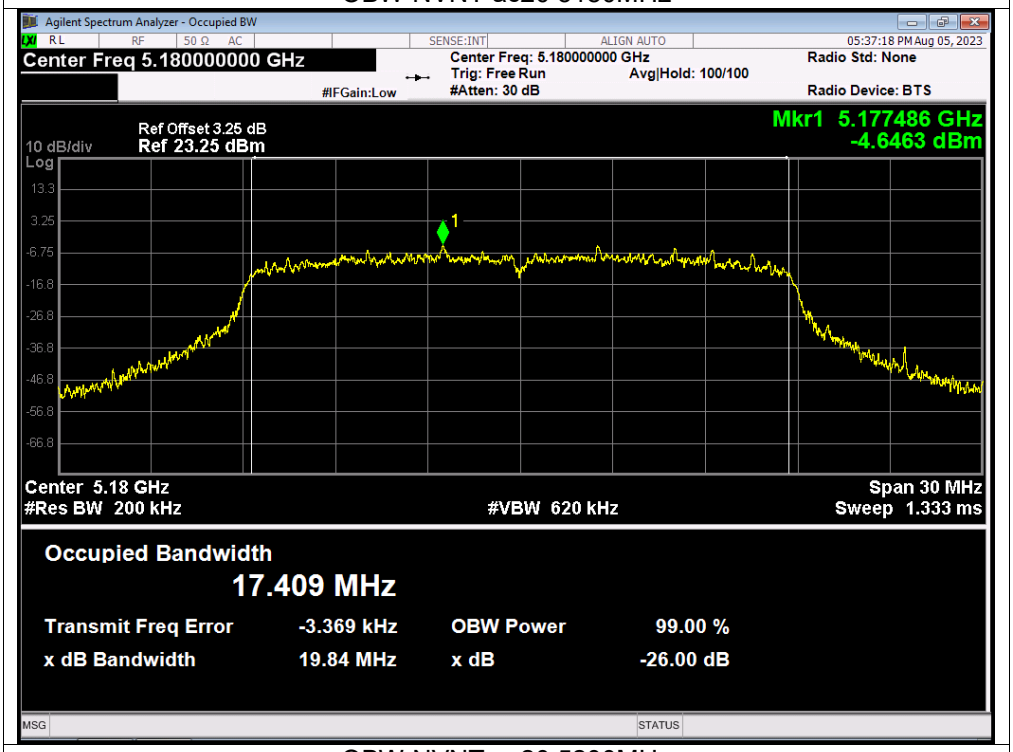
OBW NVNT n40 5190MHz



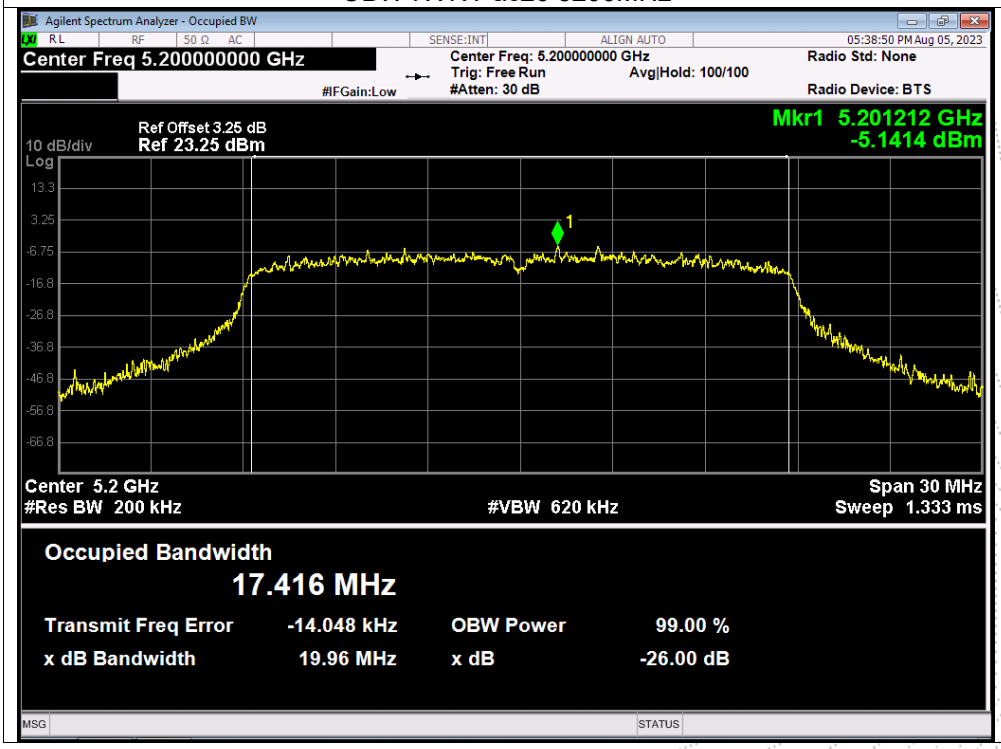
OBW NVNT n40 5230MHz



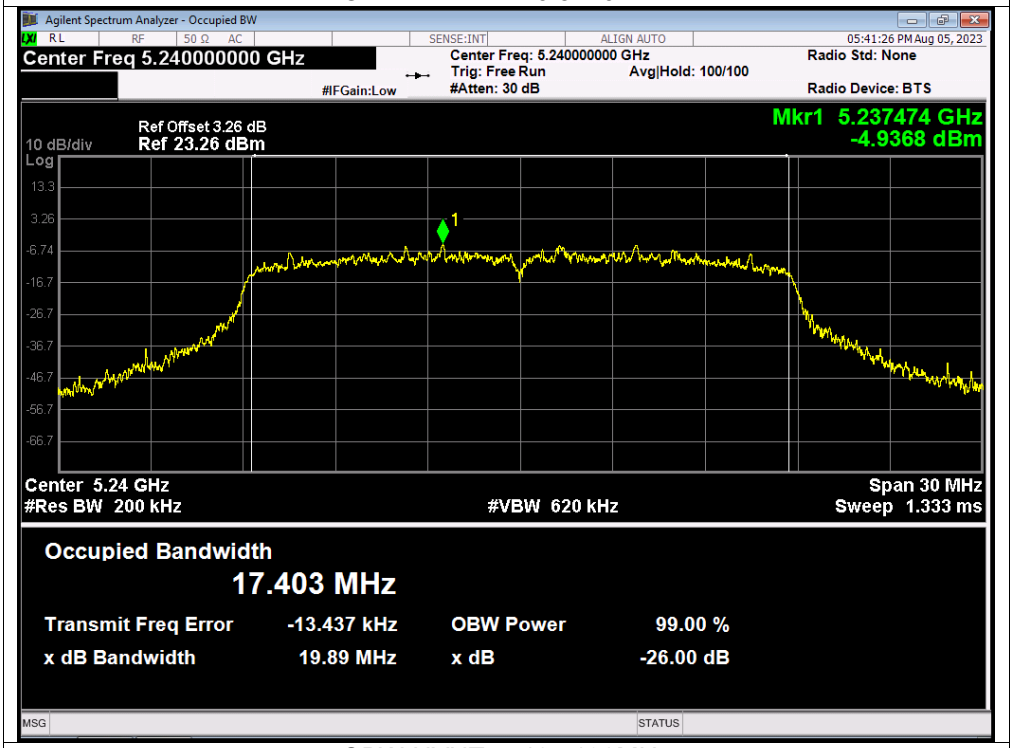
OBW NVNT ac20 5180MHz



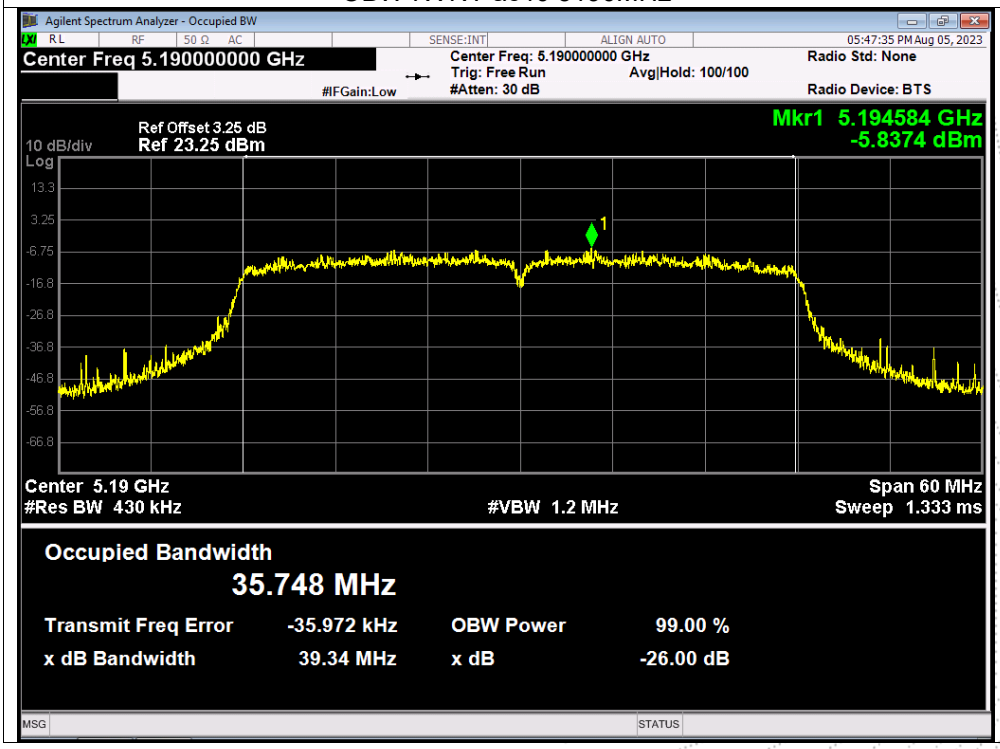
OBW NVNT ac20 5200MHz



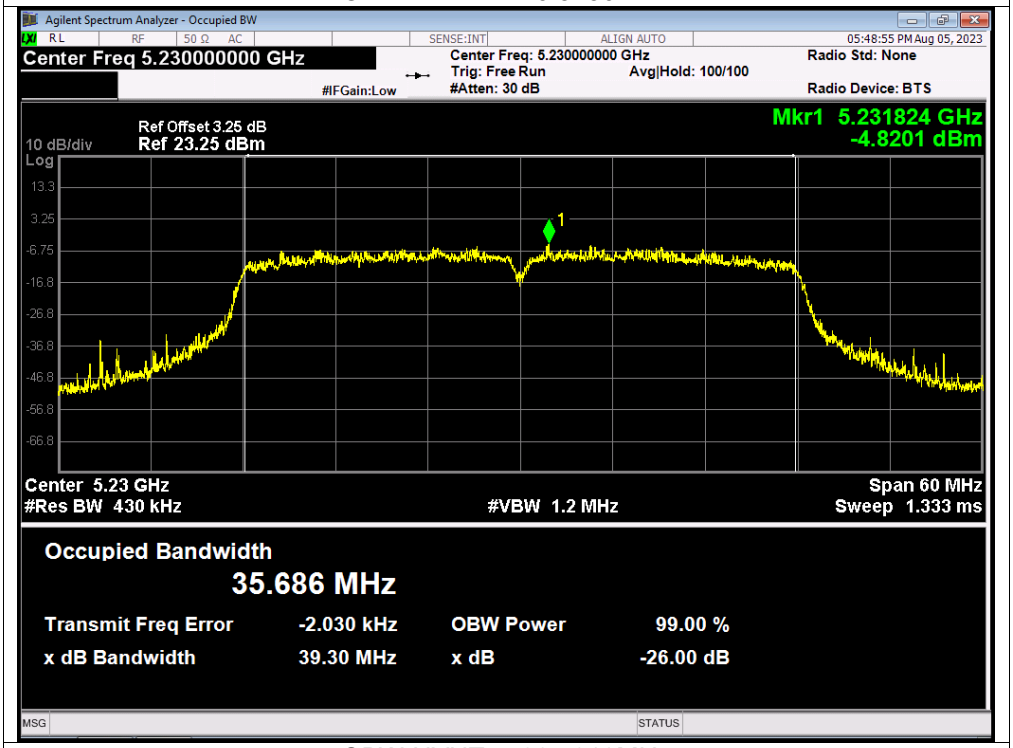
OBW NVNT ac20 5240MHz



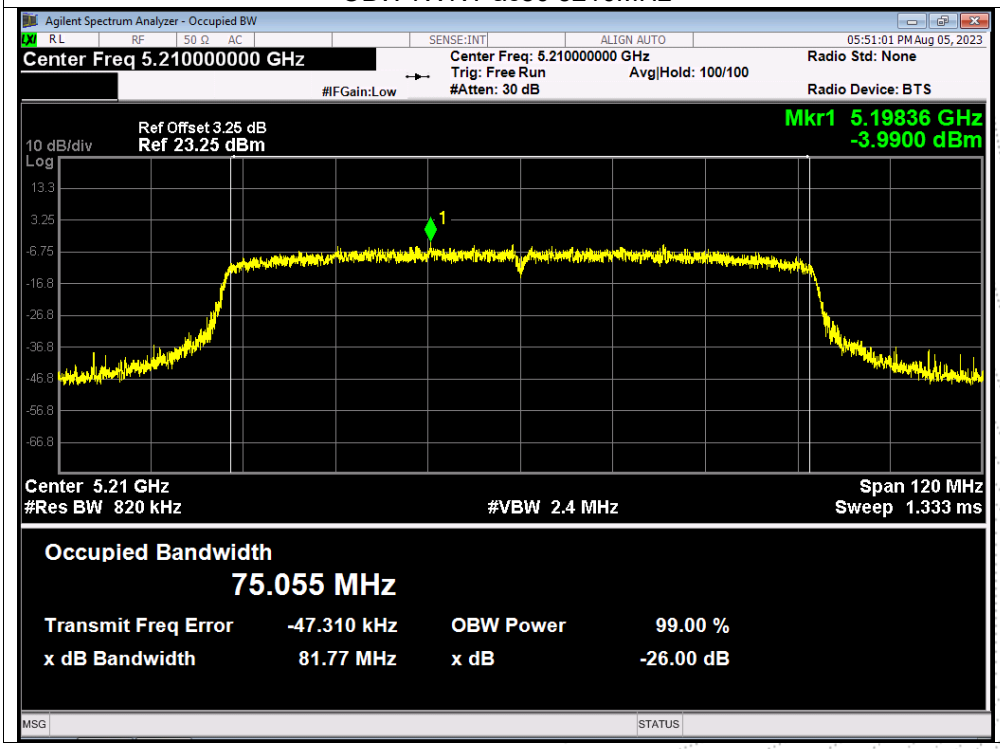
OBW NVNT ac40 5190MHz



OBW NVNT ac40 5230MHz



OBW NVNT ac80 5210MHz

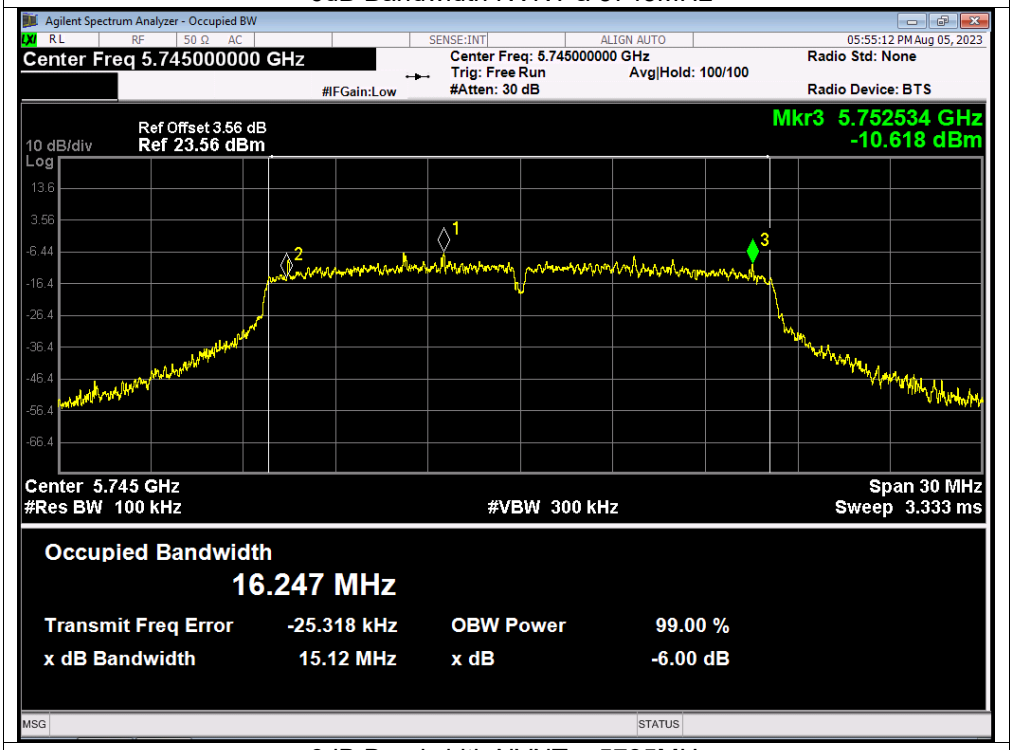


Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	101kPa	Test Voltage ：	DC 12V
Test Mode ：	TX Frequency U-NII-3(5745-5825MHz)		

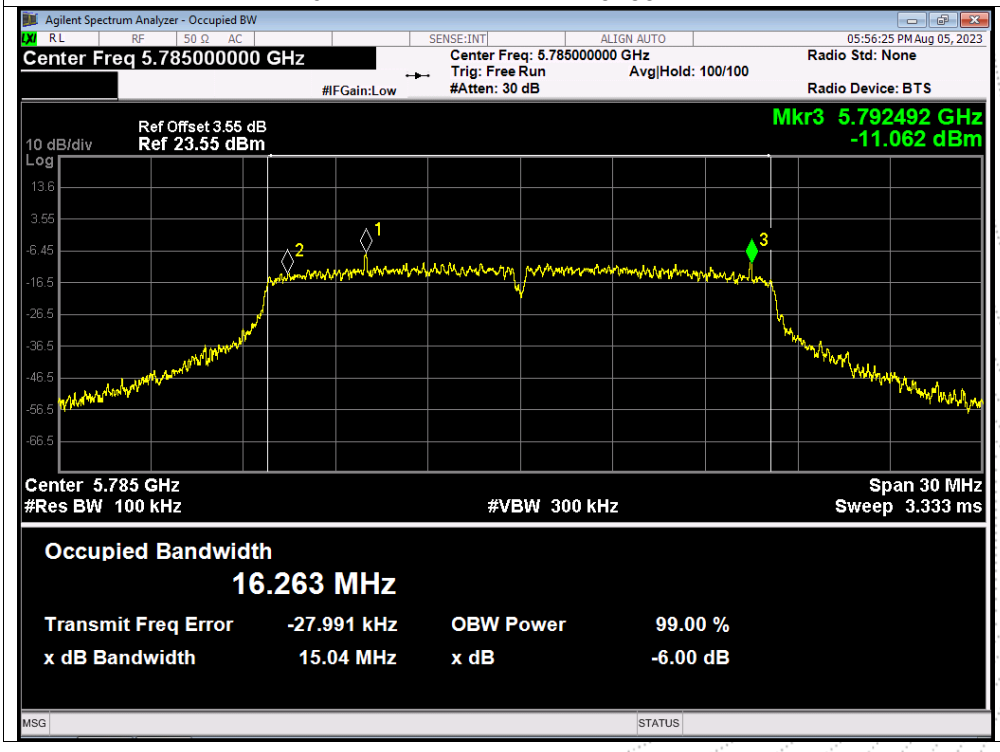
Condition	Mode	Frequency (MHz)	99% bandwidth(MHz)	-6dB bandwidth (MHz)	Limit -6dB bandwidth MHz	Result
NVNT	a	5745	16.252	15.119	≥500	Pass
NVNT	a	5785	16.253	15.041	≥500	Pass
NVNT	a	5825	16.237	15.11	≥500	Pass
NVNT	n20	5745	17.377	14.664	≥500	Pass
NVNT	n20	5785	17.391	14.633	≥500	Pass
NVNT	n20	5825	17.408	14.648	≥500	Pass
NVNT	n40	5755	35.746	33.812	≥500	Pass
NVNT	n40	5795	35.703	35.063	≥500	Pass
NVNT	ac20	5745	17.38	15.111	≥500	Pass
NVNT	ac20	5785	17.422	14.639	≥500	Pass
NVNT	ac20	5825	17.415	15.151	≥500	Pass
NVNT	ac40	5755	35.735	32.636	≥500	Pass
NVNT	ac40	5795	35.716	35.069	≥500	Pass
NVNT	ac80	5775	74.921	73.839	≥500	Pass

Test Graphs

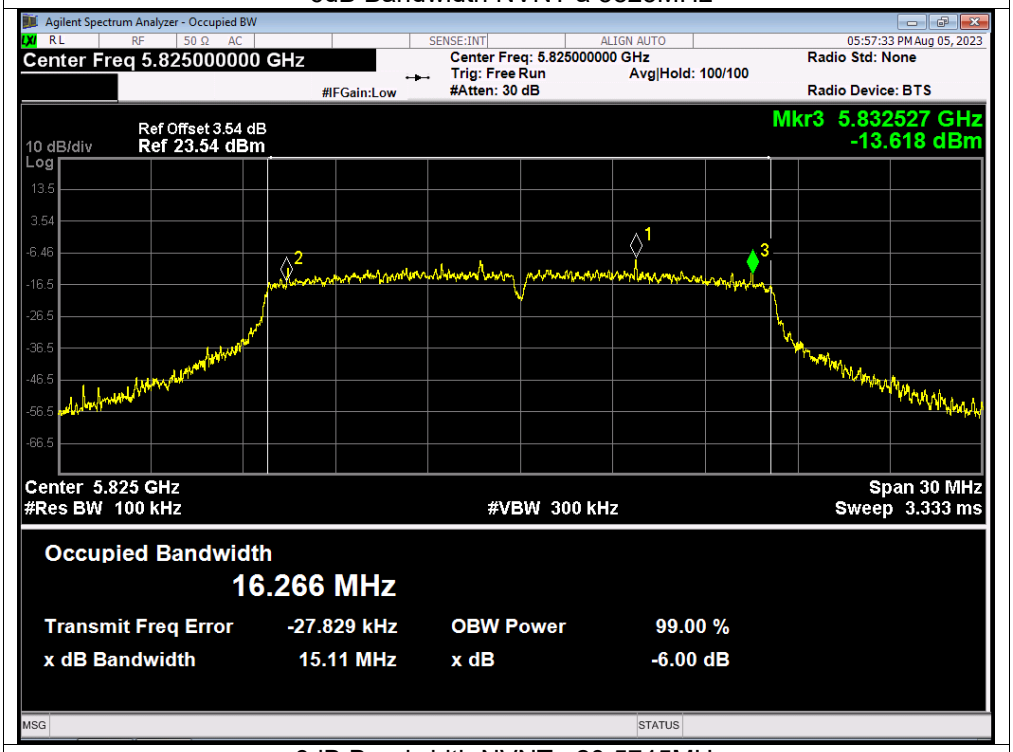
-6dB Bandwidth NVNT a 5745MHz



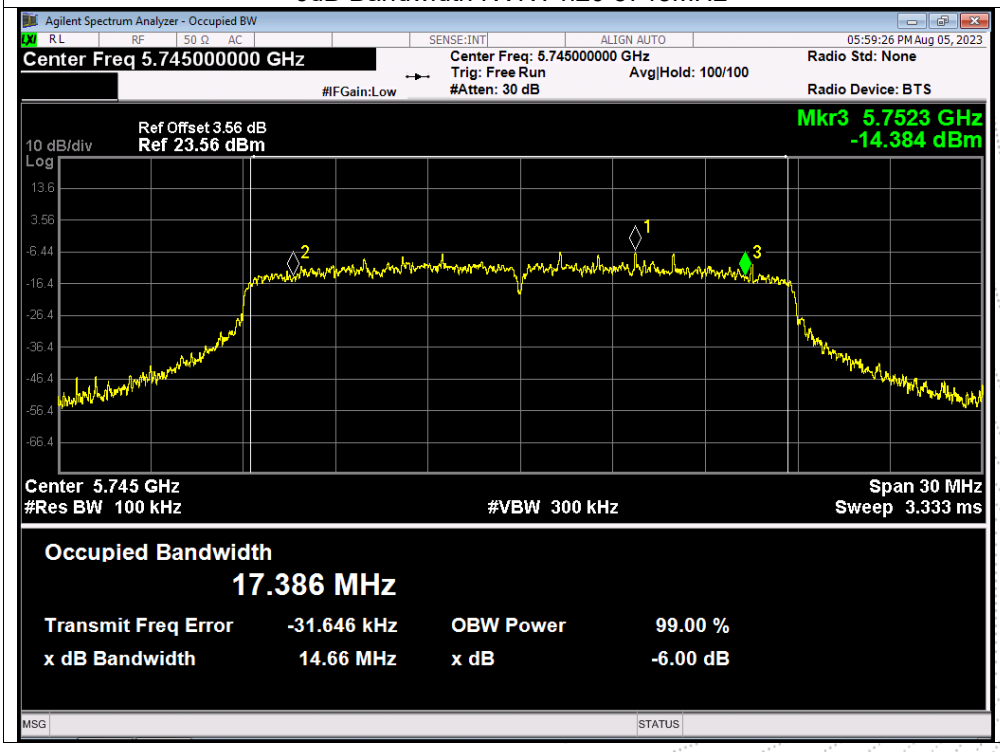
-6dB Bandwidth NVNT a 5785MHz



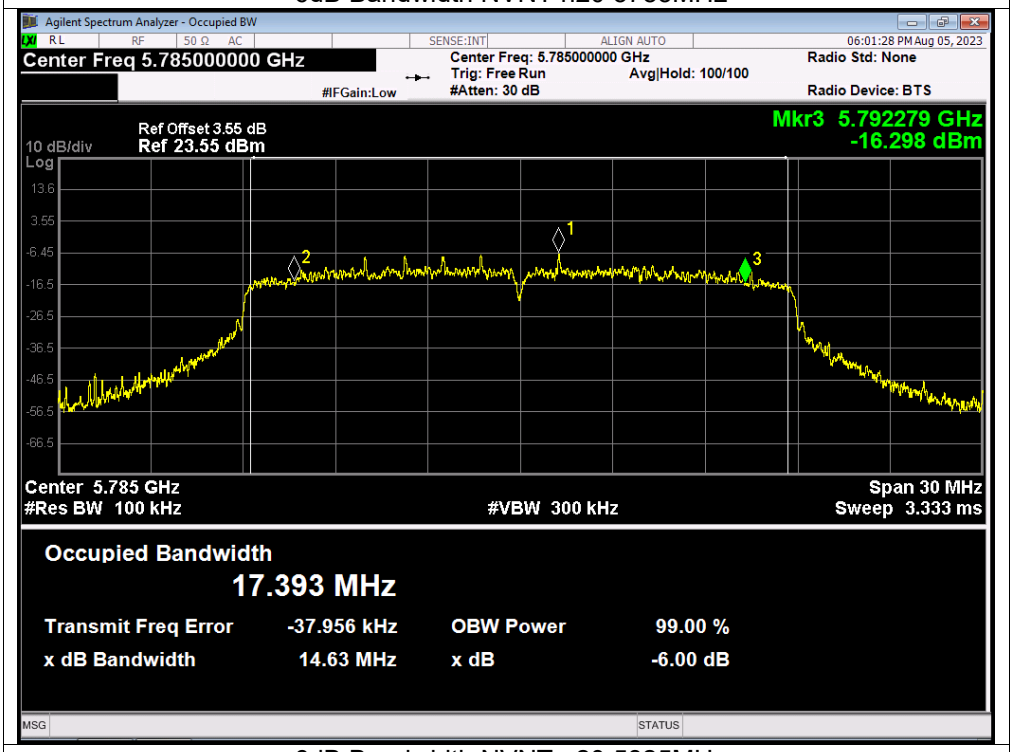
-6dB Bandwidth NVNT a 5825MHz



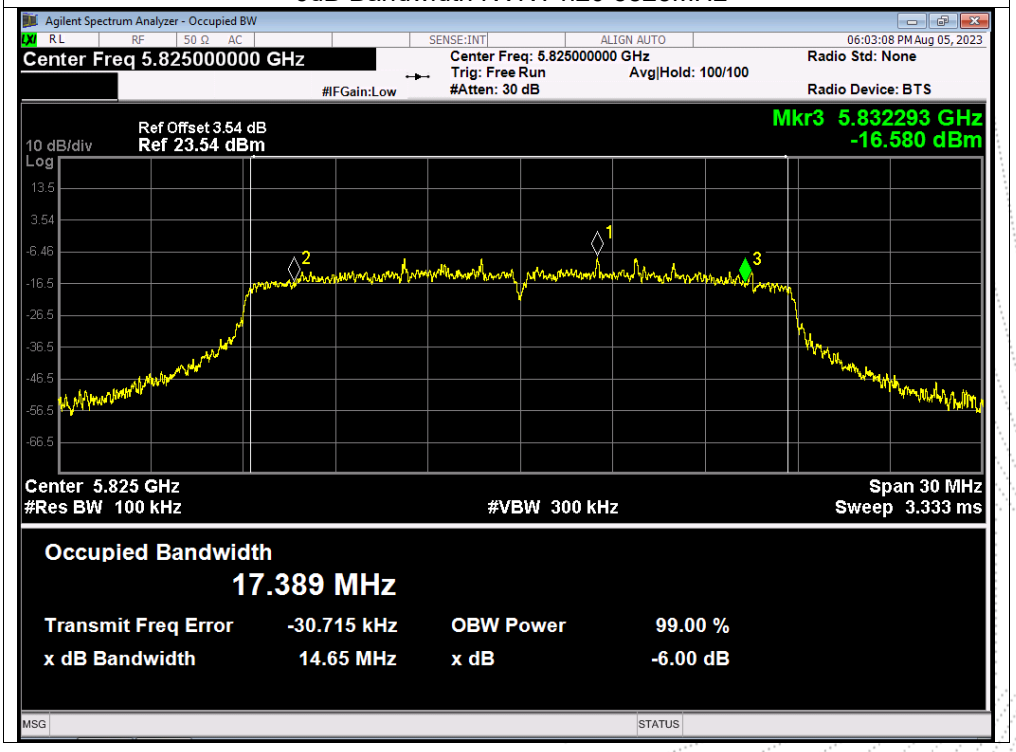
-6dB Bandwidth NVNT n20 5745MHz



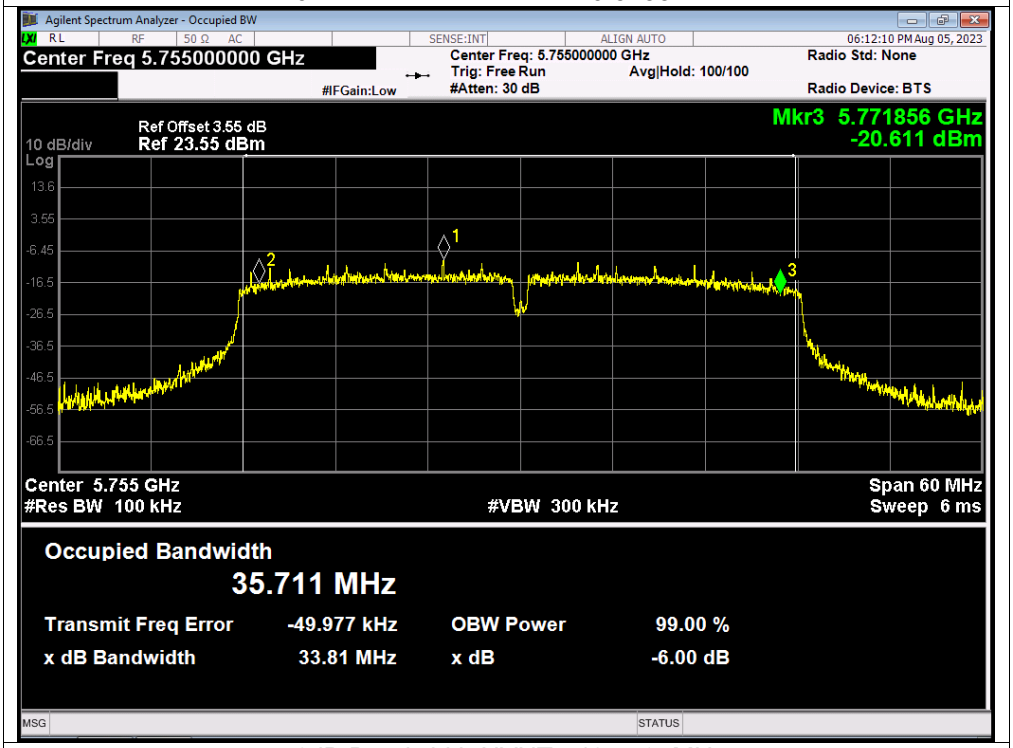
-6dB Bandwidth NVNT n20 5785MHz



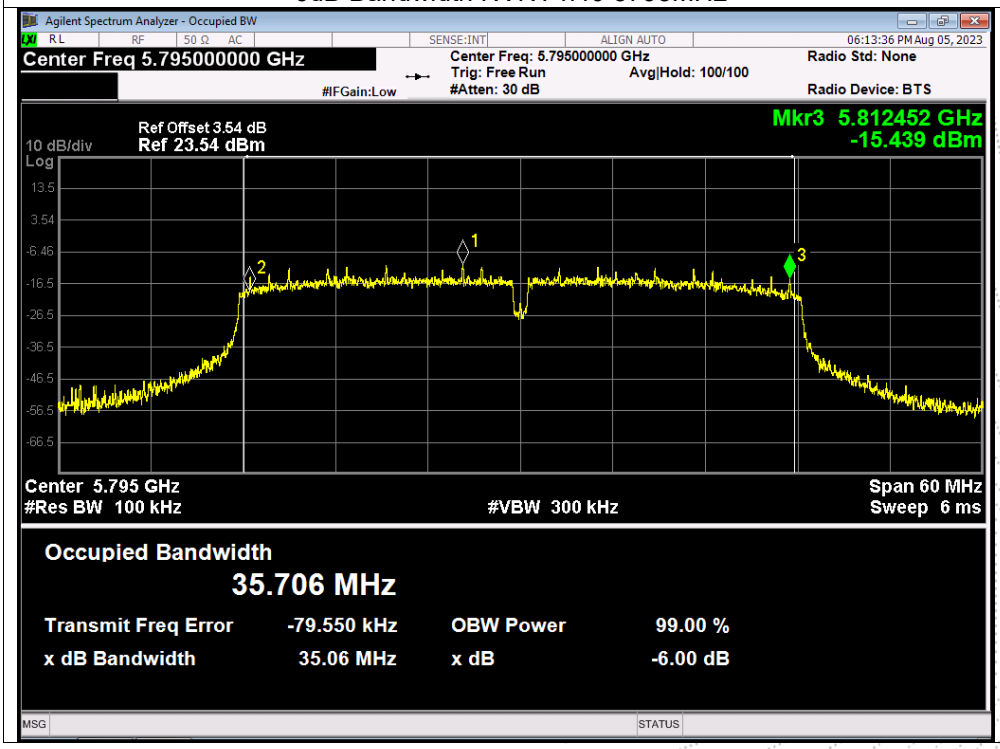
-6dB Bandwidth NVNT n20 5825MHz



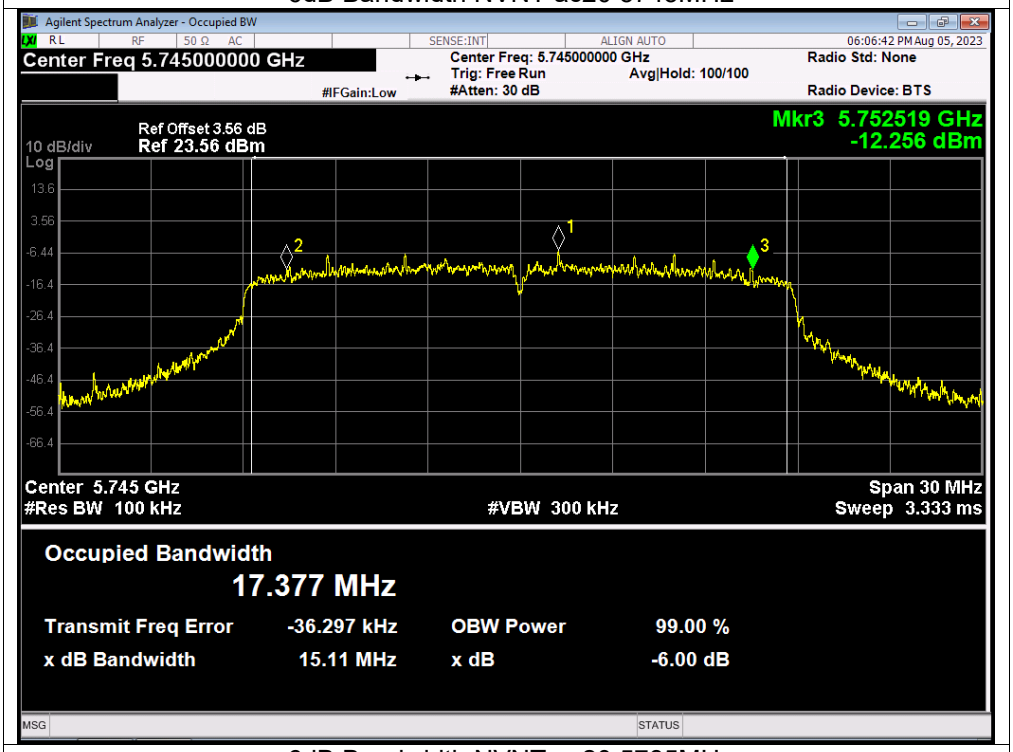
-6dB Bandwidth NVNT n40 5755MHz



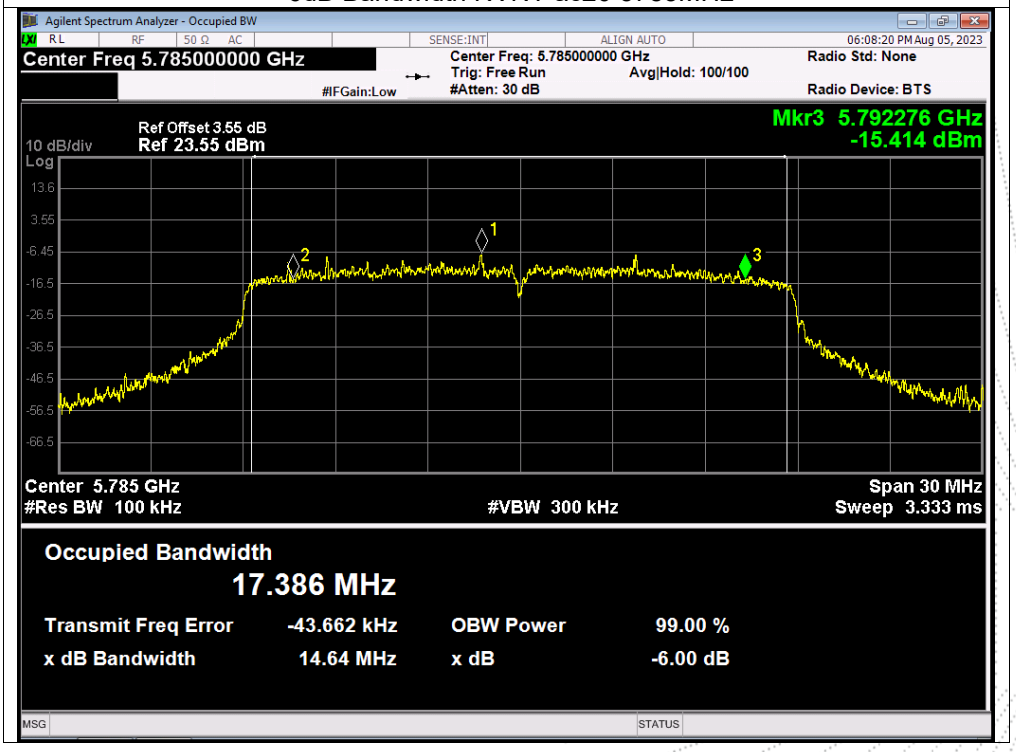
-6dB Bandwidth NVNT n40 5795MHz



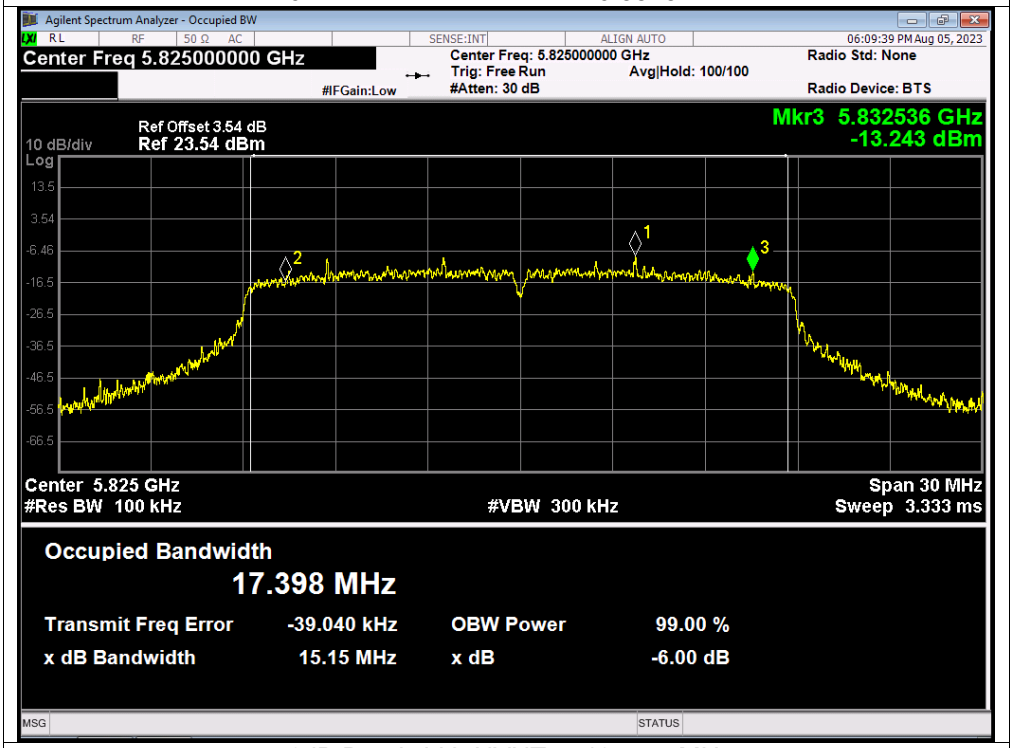
-6dB Bandwidth NVNT ac20 5745MHz



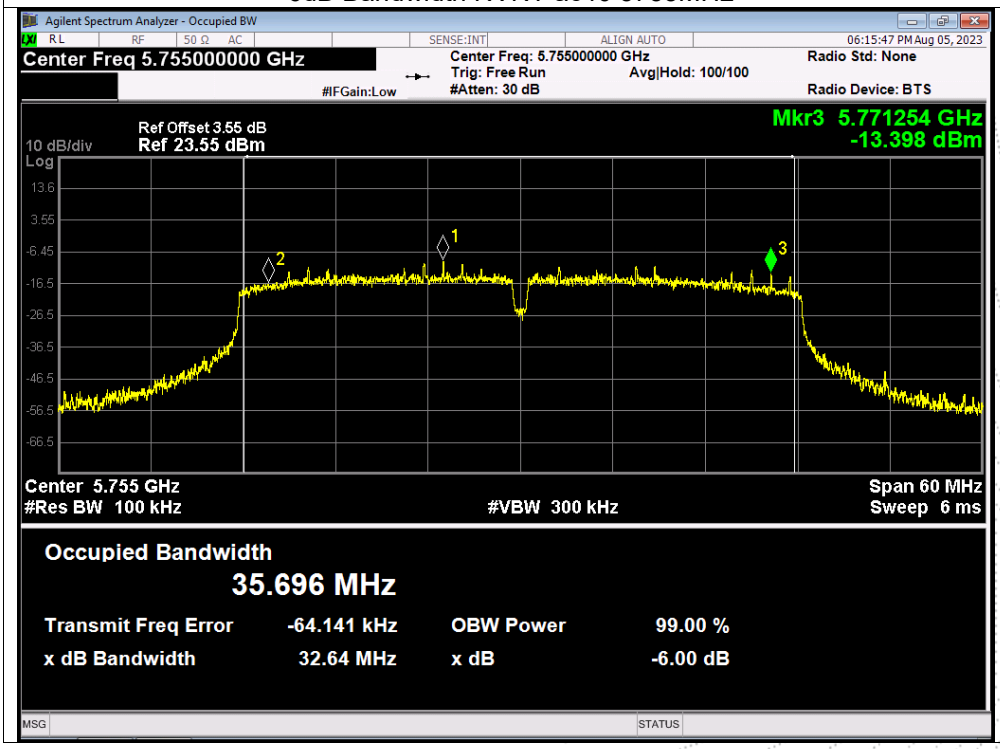
-6dB Bandwidth NVNT ac20 5785MHz



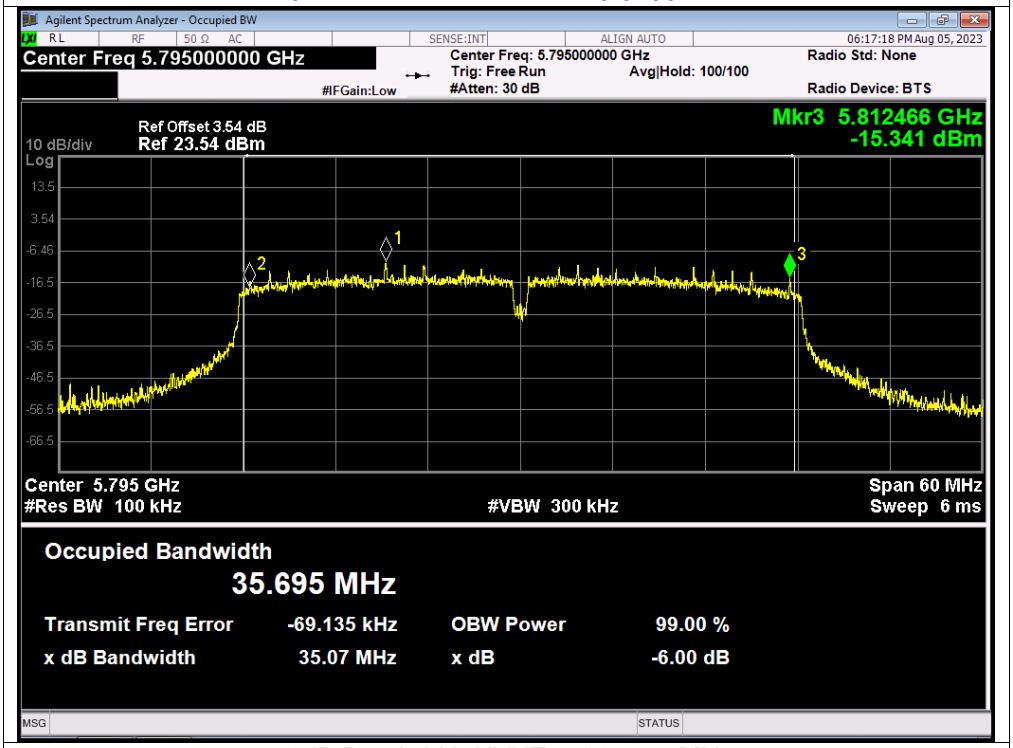
-6dB Bandwidth NVNT ac20 5825MHz



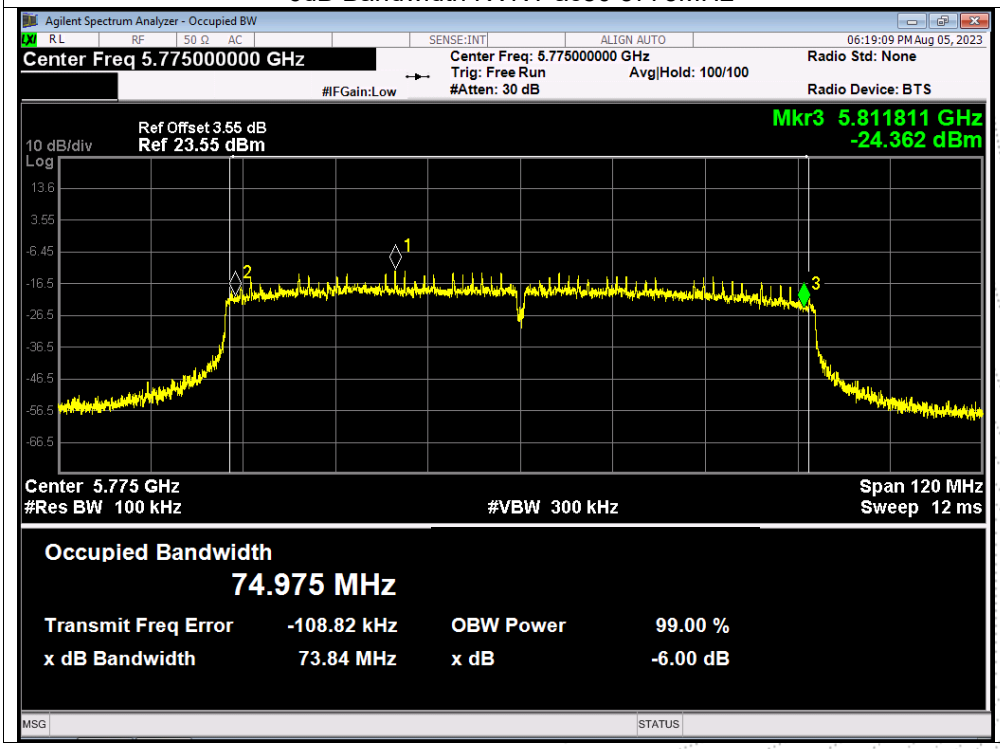
-6dB Bandwidth NVNT ac40 5755MHz



-6dB Bandwidth NVNT ac40 5795MHz

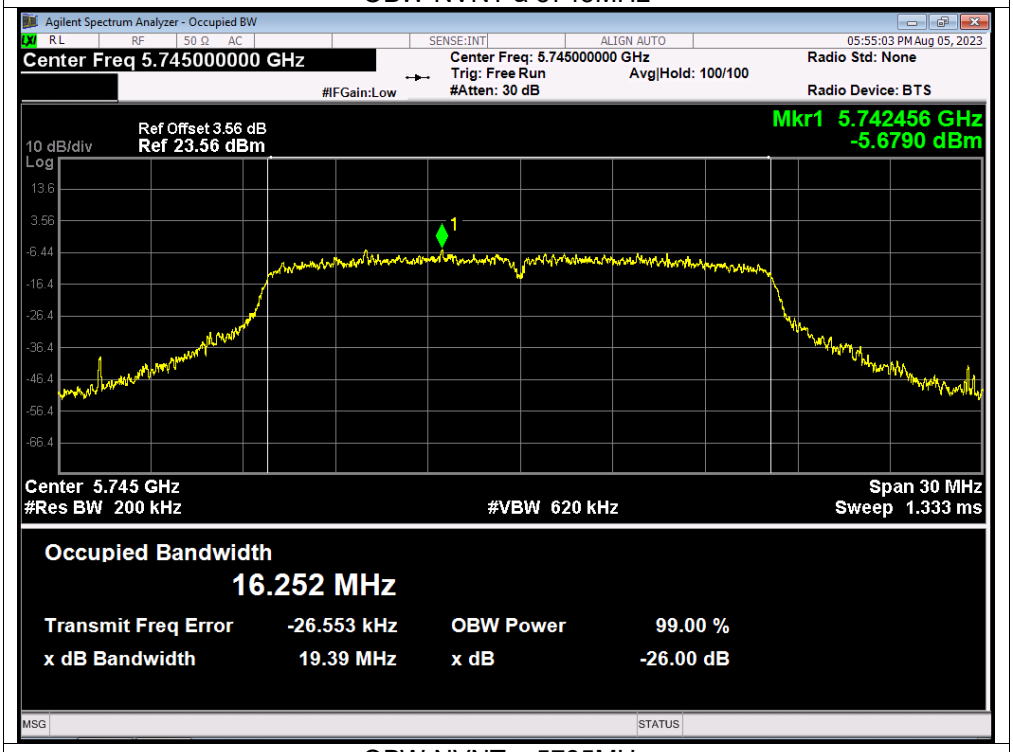


-6dB Bandwidth NVNT ac80 5775MHz

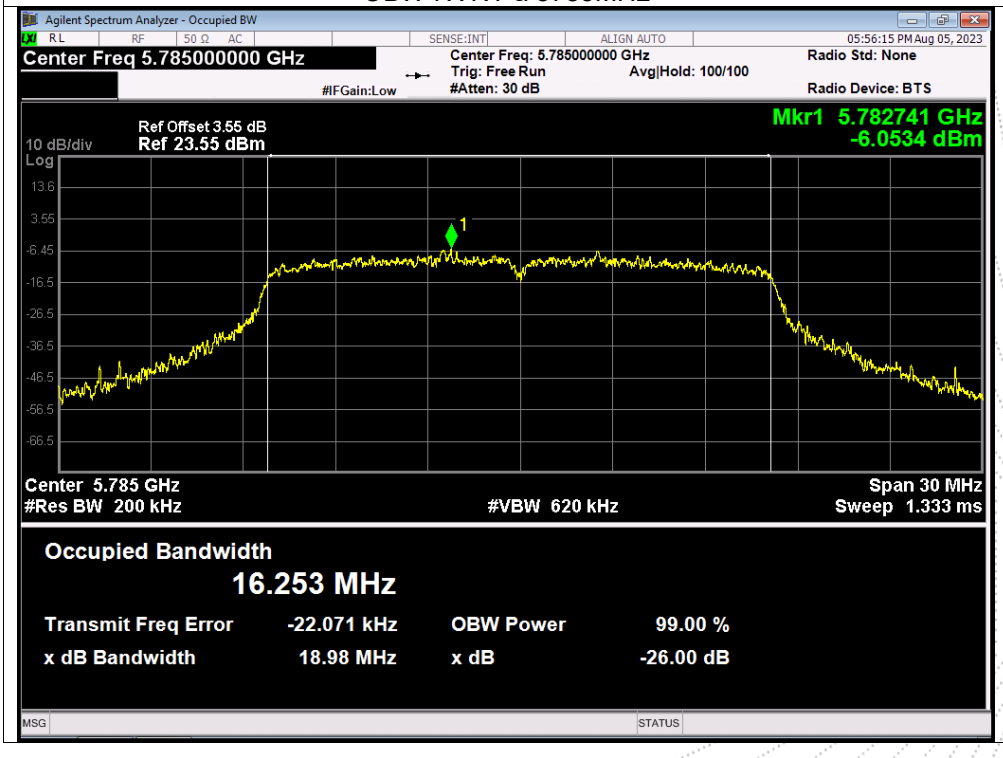


Test Graphs

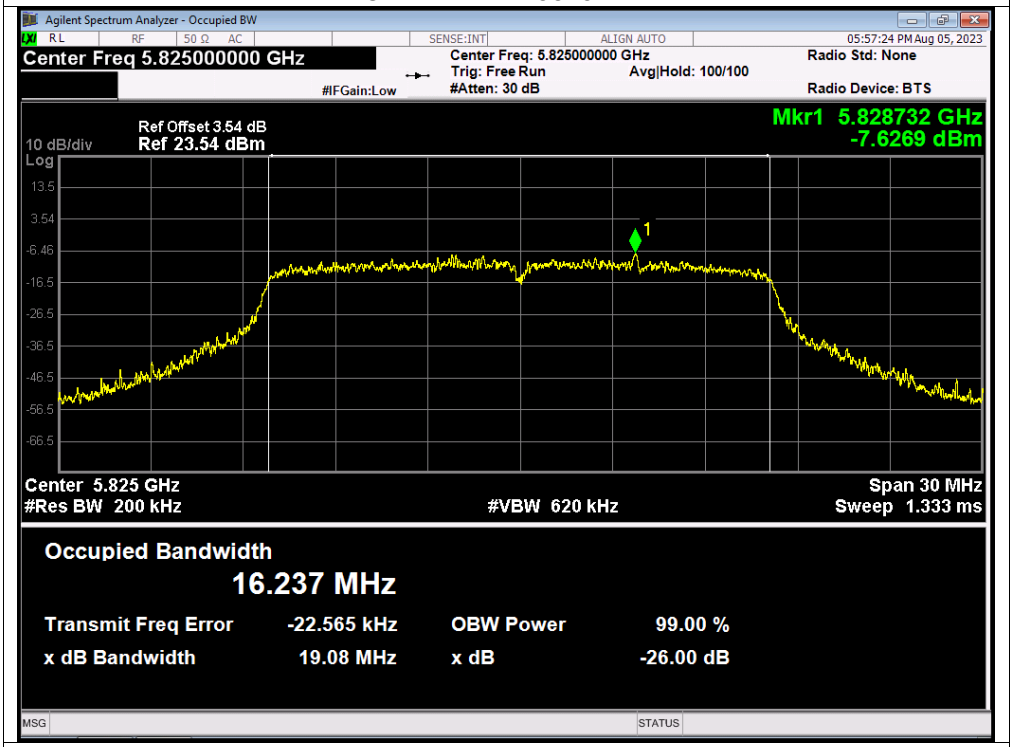
OBW NVNT a 5745MHz



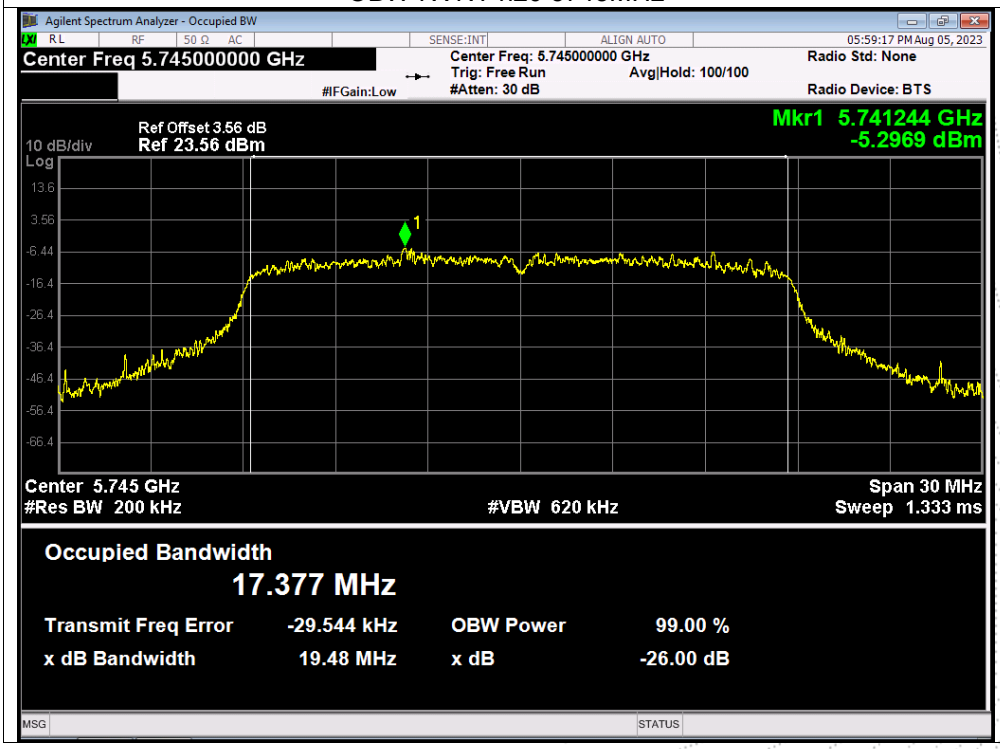
OBW NVNT a 5785MHz



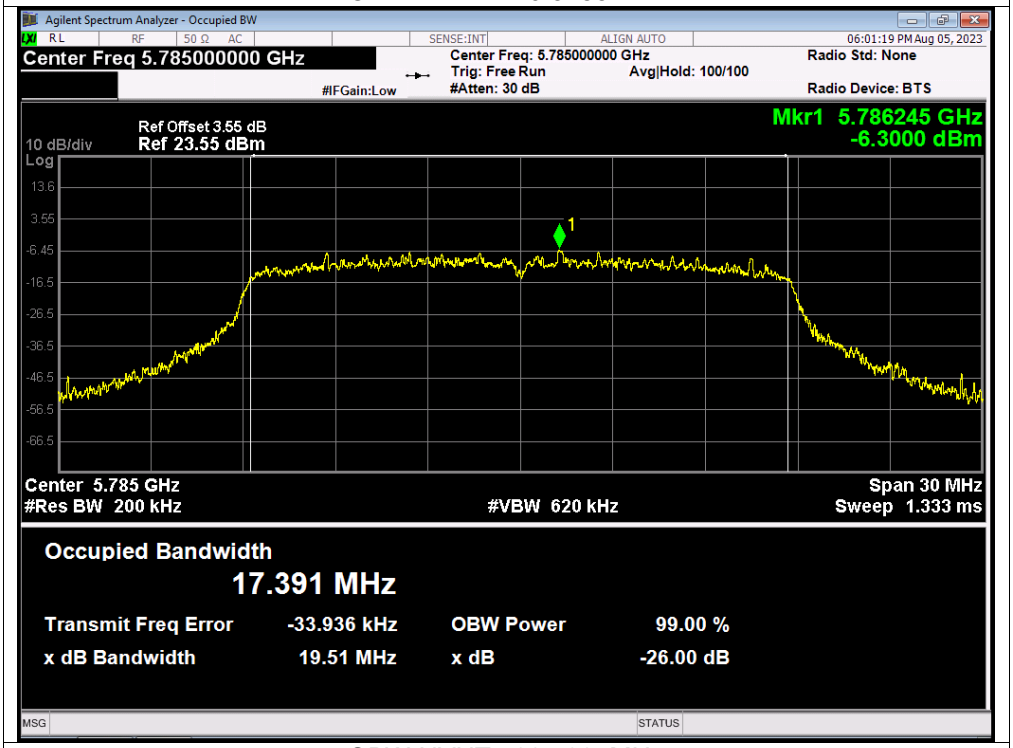
OBW NVNT a 5825MHz



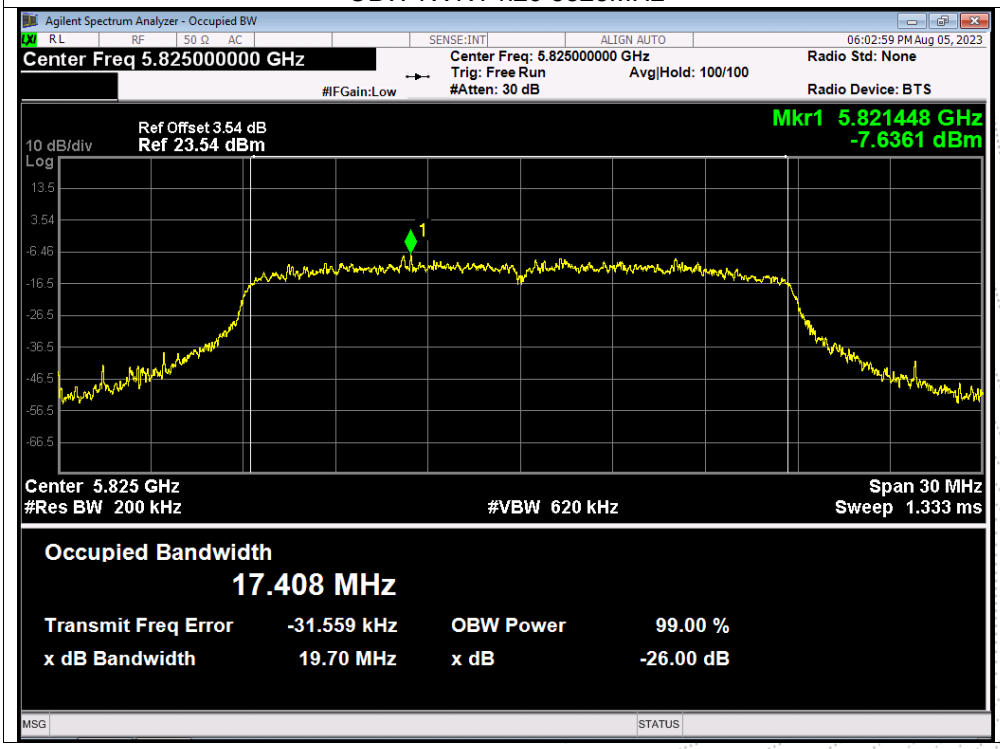
OBW NVNT n20 5745MHz



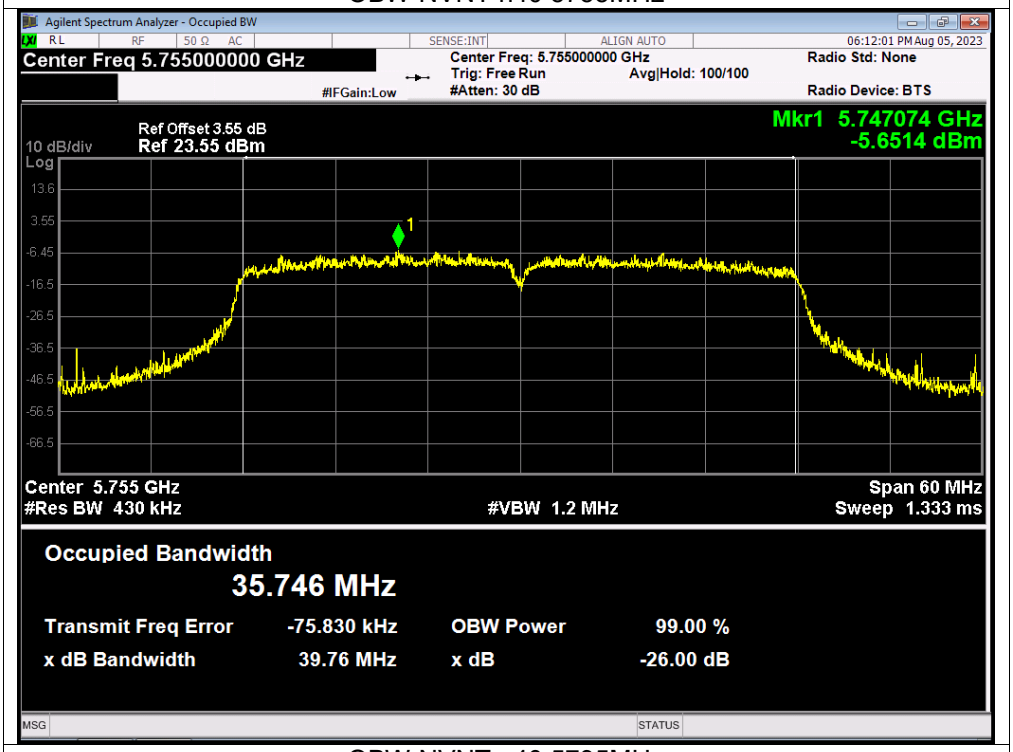
OBW NVNT n20 5785MHz



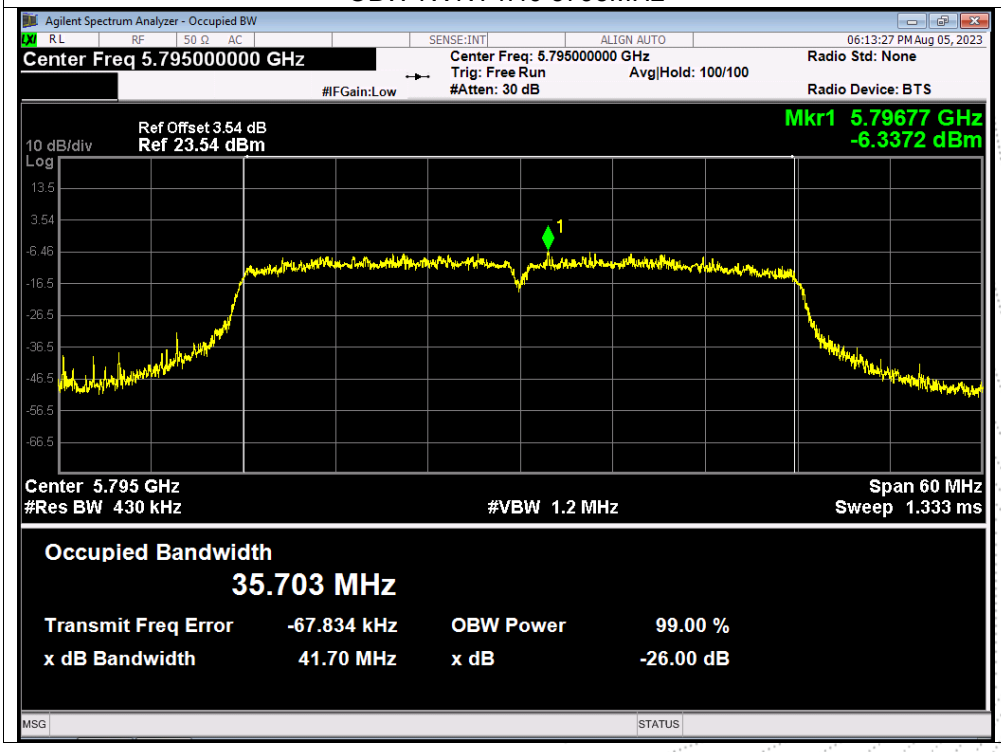
OBW NVNT n20 5825MHz



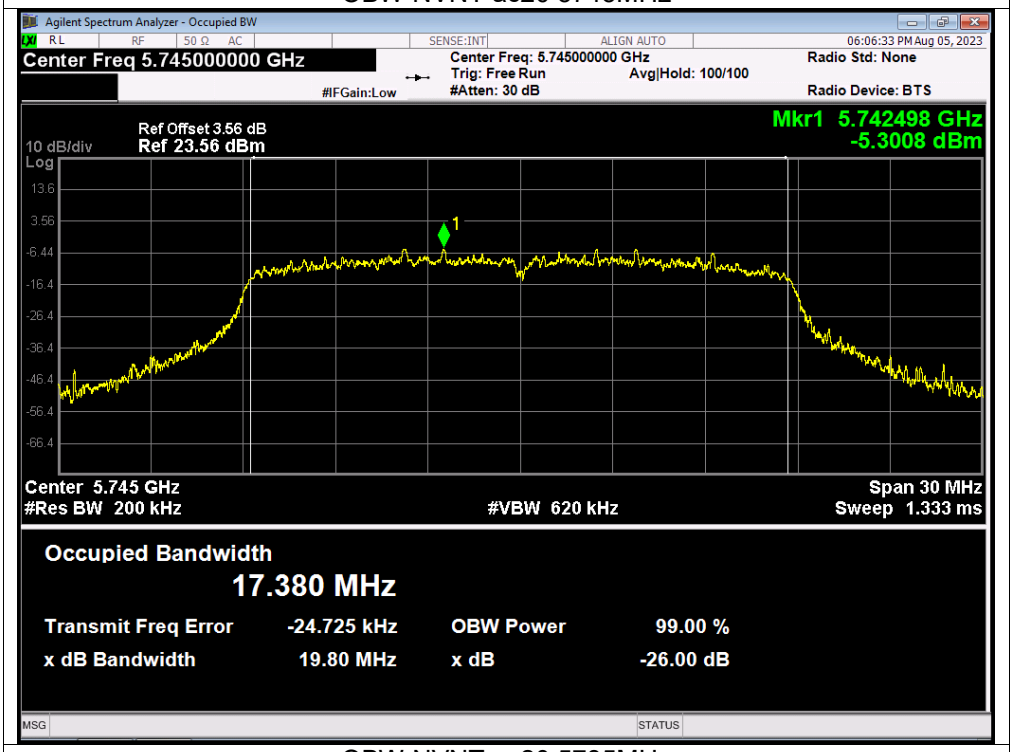
OBW NVNT n40 5755MHz



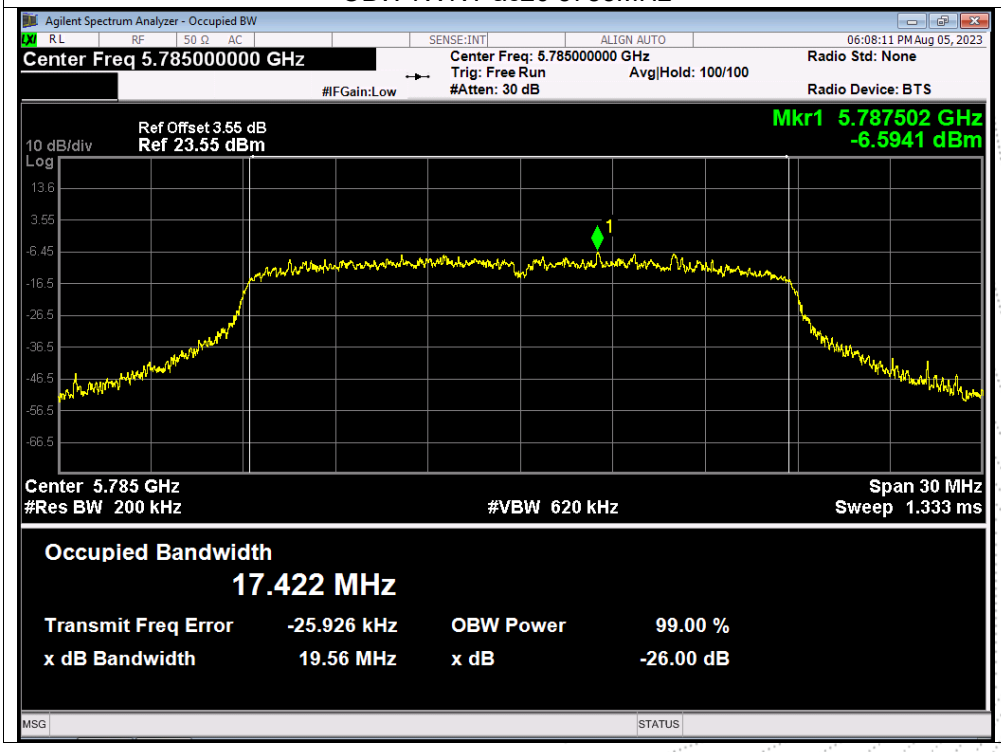
OBW NVNT n40 5795MHz



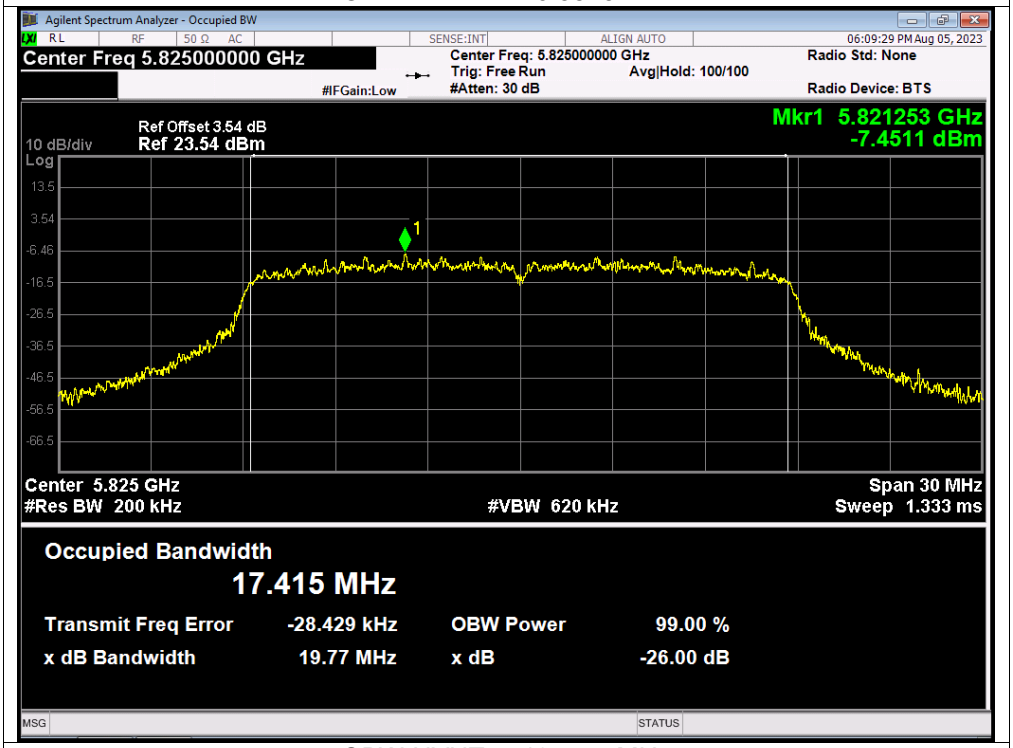
OBW NVNT ac20 5745MHz



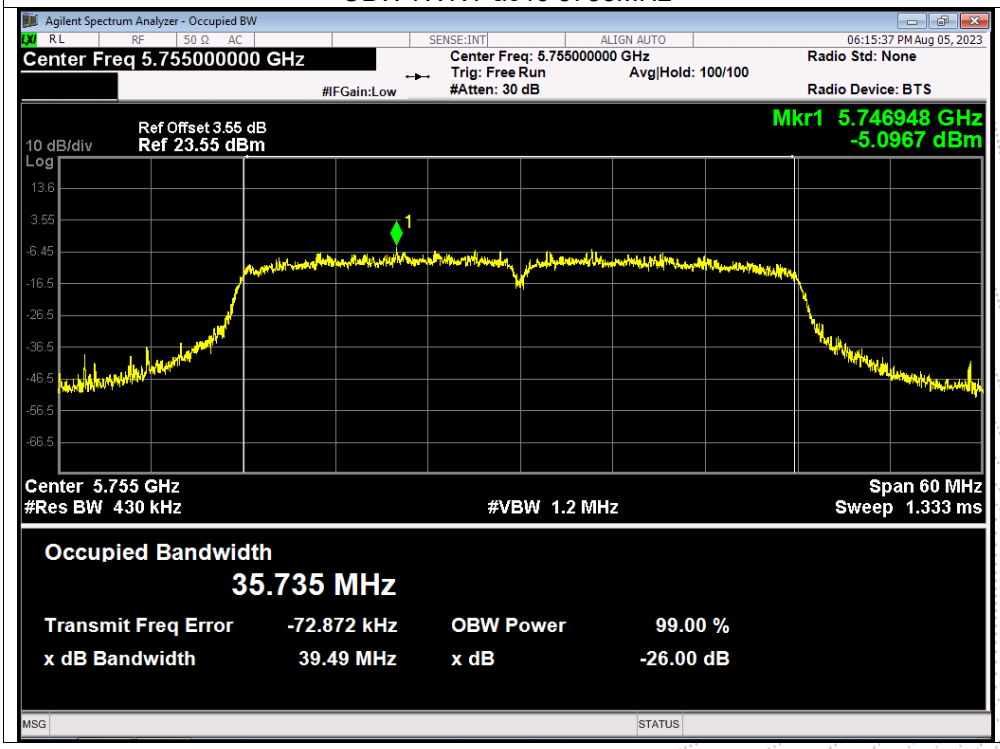
OBW NVNT ac20 5785MHz



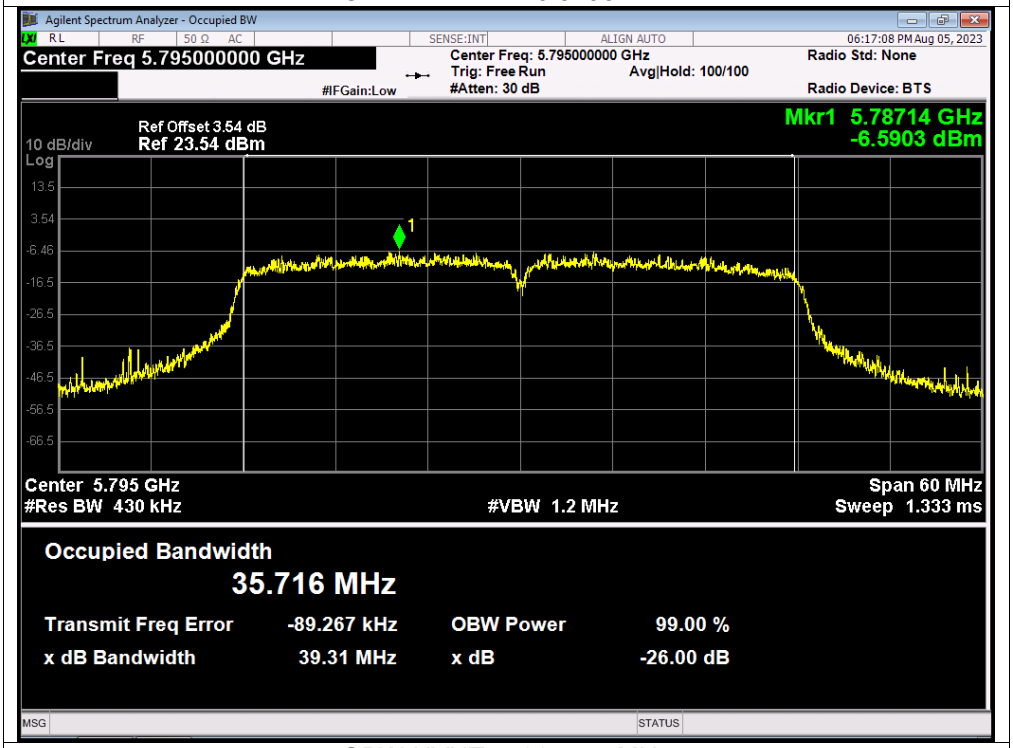
OBW NVNT ac20 5825MHz



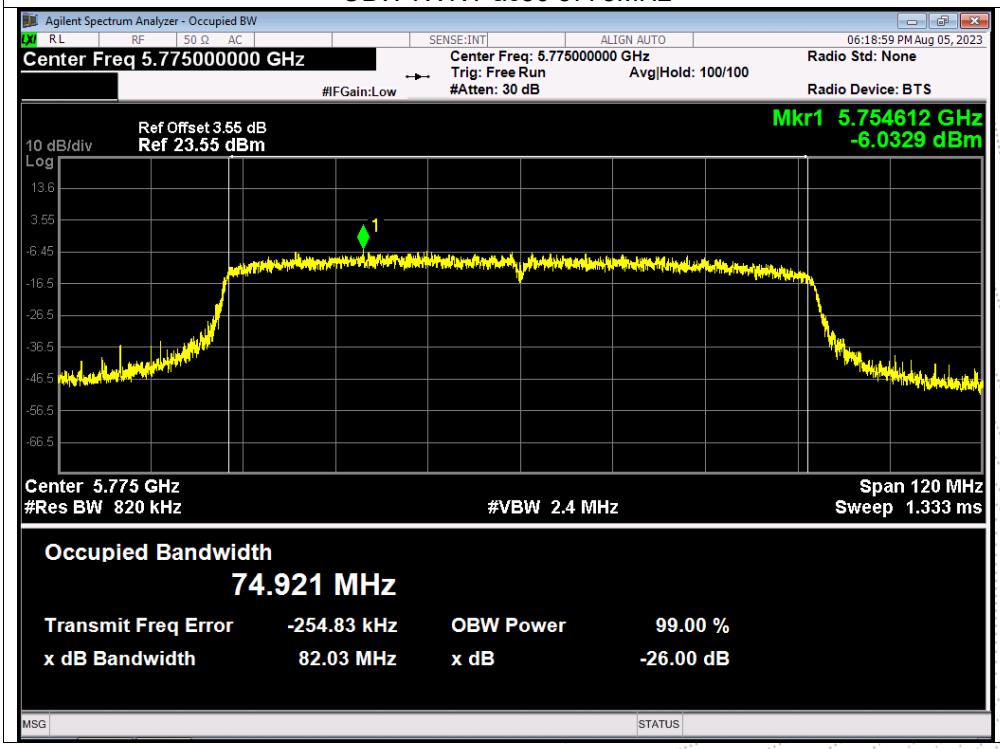
OBW NVNT ac40 5755MHz



OBW NVNT ac40 5795MHz

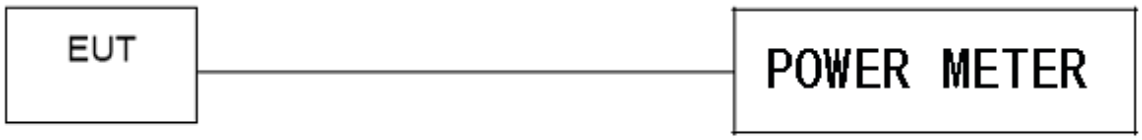


OBW NVNT ac80 5775MHz



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 ：	DC 12V
Test Mode ：	TX (5.1G) Mode Frequency U-NII-1 (5180-5240MHz)		

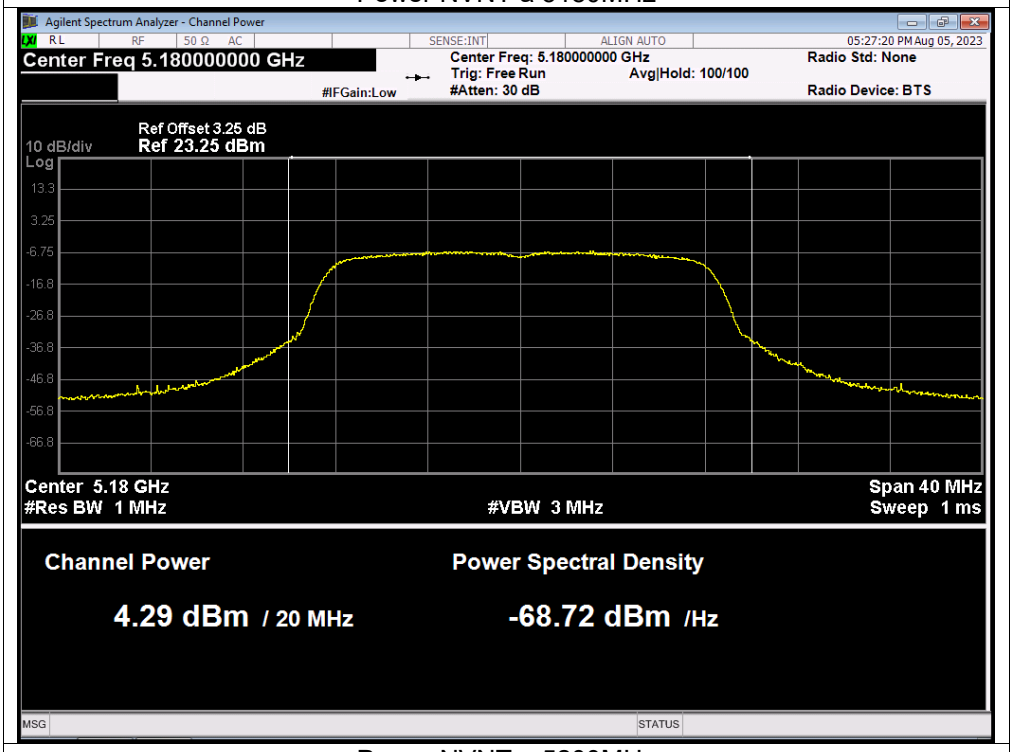
Condition	Mode	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	a	5180	4.29	24	Pass
NVNT	a	5200	4.02	24	Pass
NVNT	a	5240	5.03	24	Pass
NVNT	n20	5180	3.78	24	Pass
NVNT	n20	5200	3.67	24	Pass
NVNT	n20	5240	4.48	24	Pass
NVNT	n40	5190	2.6	24	Pass
NVNT	n40	5230	3.41	24	Pass
NVNT	ac20	5180	4.05	24	Pass
NVNT	ac20	5200	3.67	24	Pass
NVNT	ac20	5240	4.58	24	Pass
NVNT	ac40	5190	2.31	24	Pass
NVNT	ac40	5230	3.34	24	Pass
NVNT	ac80	5210	3.22	24	Pass

Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	101kPa	Test Voltage ：	DC 12V
Test Mode ：	TX (5.8G) Mode Frequency U-NII-3 (5745-5825MHz)		

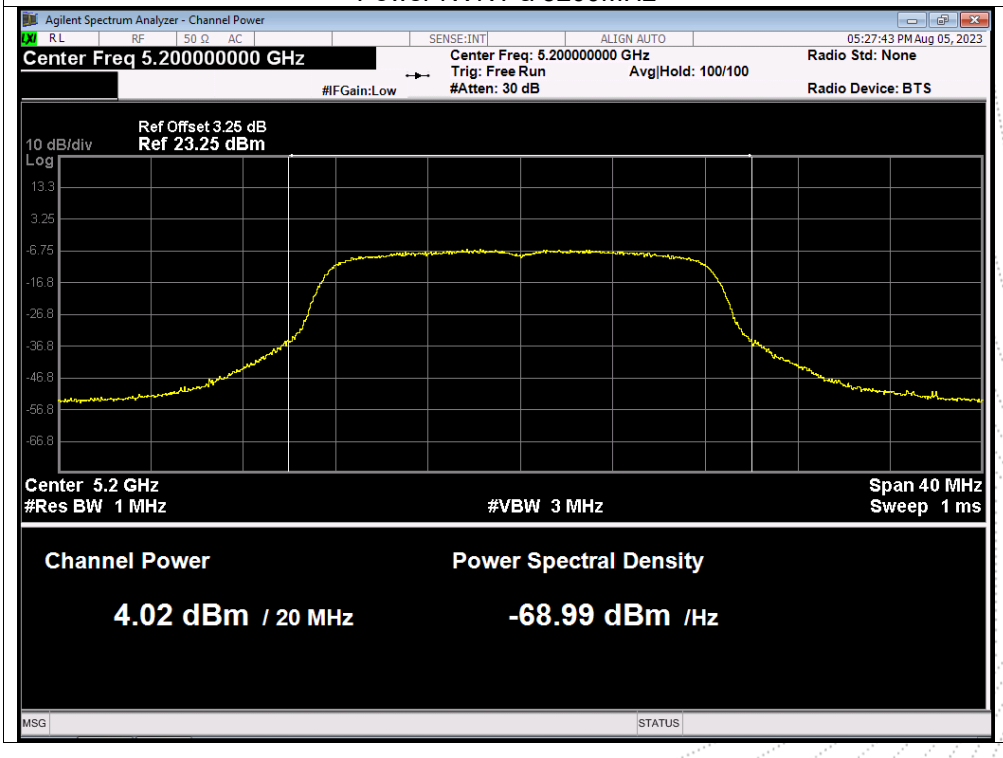
Condition	Mode	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	a	5745	3.81	30	Pass
NVNT	a	5785	2.84	30	Pass
NVNT	a	5825	1.7	30	Pass
NVNT	n20	5745	3.4	30	Pass
NVNT	n20	5785	2.41	30	Pass
NVNT	n20	5825	1.45	30	Pass
NVNT	n40	5755	2.48	30	Pass
NVNT	n40	5795	1.66	30	Pass
NVNT	ac20	5745	3.4	30	Pass
NVNT	ac20	5785	2.26	30	Pass
NVNT	ac20	5825	1.26	30	Pass
NVNT	ac40	5755	2.47	30	Pass
NVNT	ac40	5795	1.64	30	Pass
NVNT	ac80	5775	1.47	30	Pass

Test Graphs

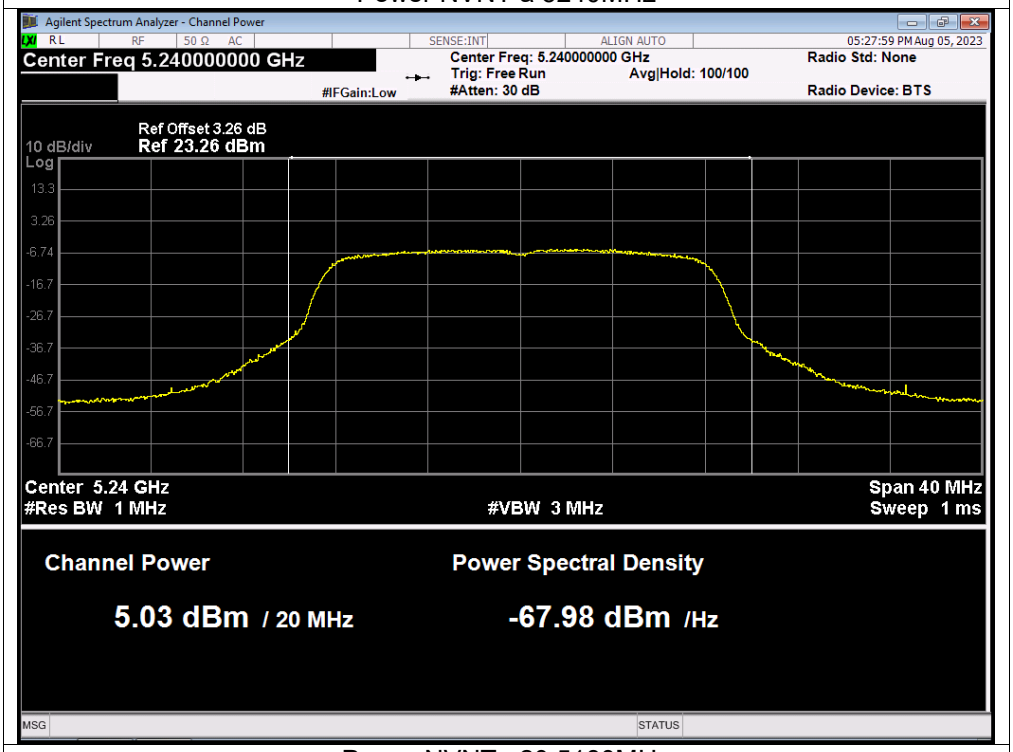
Power NVNT a 5180MHz



Power NVNT a 5200MHz



Power NVNT a 5240MHz



Power NVNT n20 5180MHz