TEST REPORT

Report No.:	BCTC2405392672-2E
Applicant:	REOLINK INNOVATION LIMITED
Product Name:	Video Doorbell
Test Model:	Reolink Doorbell Battery
Tested Date:	2024-05-17 to 2024-06-04
Issued Date:	2024-06-05

Shenzhen BCTC Testing Co., Ltd.

FCC ID: 2AYHE-2403D

Product Name:	Video Doorbell
Trademark:	reolink
Model/Type reference:	Reolink Doorbell Battery D340B
Prepared For:	REOLINK INNOVATION LIMITED
Address:	FLAT/RM 705 7/F FA YUEN COMMERCIAL BUILDING 75-77 FA YUEN STREET MONG KOK KL HONG KONG
Manufacturer:	REOLINK INNOVATION LIMITED
Address:	FLAT/RM 705 7/F FA YUEN COMMERCIAL BUILDING 75-77 FA YUEN STREET MONG KOK KL HONG KONG
Factory:	Shenzhen Reolink Technology Co., Ltd.
Address:	2-4th Floor, Building 2, YuanLing Industrial Park, ShangWu, Shiyan Street, Bao'an 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:	2024-05-17
Sample tested Date:	2024-05-17 to 2024-06-04
Issue Date:	2024-06-05
Report No.:	BCTC2405392672-2E
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
BCTC2405392672-2E	2024-06-05	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)	PASS
2	Conducted Emission	15.207	PASS
3	26 dB and 99% Emission Bandwidth	15.407 a 15.1049	PASS
4	Minimum 6 dB bandwidth	15.407(e)	PASS
5	Maximum Conducted Output Power	15.407 a	PASS
6	Band Edge	15.407 b	PASS
7	Power Spectral Density	15.407 a	PASS
8	Spurious Emissions at Antenna Terminals	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 reference:	Reolink Doorbell Battery D340B
Model differences:	All models are the same circuit and RF module, but the model name and color are different.
Hardware Version:	V1.0
Software Version:	V1.0
IEEE 802.11 WLAN Mode Supported	802.11a/n (20MHz channel bandwidth)
Operation Frequency:	5180-5240MHz for 802.11a/n(HT20); 5260-5320MHz for 802.11a/n(HT20); 5500-5700MHz for 802.11a/n (HT20); 5745-5825 MHz for 802.11a/n (HT20)
Data Rate	802.11a: 6,9,12,18,24,36,48,54Mbps; 802.11n(HT20/HT40):MCS0-MCS15;
Type of Modulation:	OFDM with BPSK/QPSK/16QAM/64QAM/256QAM for 802.11a/n;
Antenna installation:	Internal antenna
Antenna Gain:	4.57 dBi Remark: ☒ The antenna gain of the product comes from the antenna report provided by the customer, and the test data is affected by the customer information. ☐ The antenna gain of the product is provided by the customer, and the test data is affected by the customer information.
Ratings:	DC 5V from adapter/DC 3.6V from battery

4.2 Test Setup Configuration

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

4.3 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
E-1	Video Doorbell	reolink	Reolink Doorbell Battery	N/A	EUT
E-2	---	---	---	---	---

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

(U-NII-1) 5180MHz-5240MHz				
Bandwidth	**Channel**	**Frequency (MHz)**	**Channel**	**Frequency**
20MHz	36	5180	40	5200
	44	5220	48	5240
(U-NII-2A) 5260MHz-5320MHz				
Bandwidth	**Channel**	**Frequency (MHz)**	**Channel**	**Frequency**
20MHz	52	5260	56	5280
	60	5300	64	5320
(U-NII-2C) 5500MHz-5700MHz				
Bandwidth	**Channel**	**Frequency (MHz)**	**Channel**	**Frequency**
20MHz	100	5500	105	5520
	108	5540	112	5560
	116	5580	132	5660
	136	5680	140	5700
(U-NII-3) 5745MHz-5825MHz				
Bandwidth	**Channel**	**Frequency (MHz)**	**Channel**	**Frequency**
20MHz	149	5745	153	5765
	157	5785	161	5805
	165	5825		

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 20 CH36/ CH40/ CH 48 802.11a /n 20 CH52/ CH56/ CH 64 802.11a /n 20 CH100/ CH116/ CH 140 802.11a /n 20 CH149/ CH157/ CH 165
Mode 2	WIFI Link

Note:

(1) 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
A2LA certificate registration number is: CN1212
ISED Registered No.: 23583
ISED CAB identifier: CN0017

5.2 Test Instrument Used

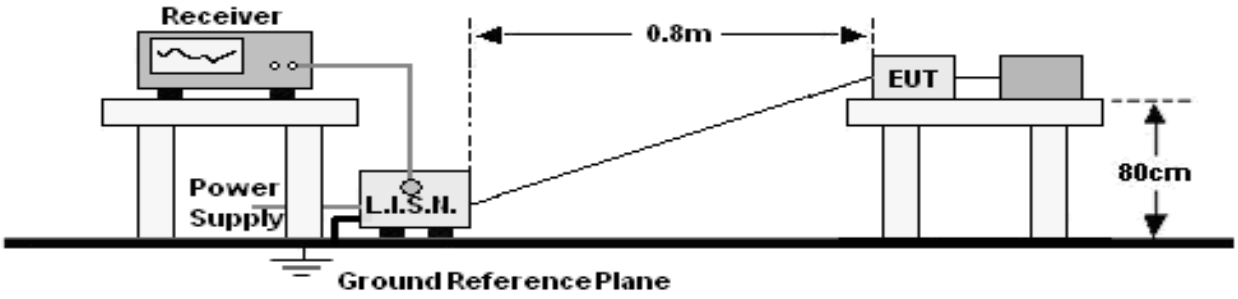
Conducted Emissions Test					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
Receiver	R&S	ESR3	102075	May 16, 2024	May 15, 2025
LISN	R&S	ENV216	101375	May 16, 2024	May 15, 2025
Software	Frad	EZ-EMC	EMC-CON 3A1	\	\
Pulse limiter	Schwarzbeck	VTSD9561-F	01323	May 16, 2024	May 15, 2025

RF Conducted Test					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
Power meter	Keysight	E4419	\	May 16, 2024	May 15, 2025
Power Sensor (AV)	Keysight	E9300A	\	May 16, 2024	May 15, 2025
Signal Analyzer20kHz-26.5GHz	Keysight	N9020A	MY49100060	May 16, 2024	May 15, 2025
Spectrum Analyzer9kHz-40GHz	R&S	FSP40	100363	May 16, 2024	May 15, 2025
Radio frequency control box	MAIWEI	MW100-RFCB	\	\	\
Software	MAIWEI	MTS 8310	\	\	\

Radiated Emissions Test (966 Chamber01)					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
966 chamber	ChengYu	966 Room	966	May 15, 2023	May 14, 2026
Receiver	R&S	ESR3	102075	May 16, 2024	May 15, 2025
Receiver	R&S	ESRP	101154	May 16, 2024	May 15, 2025
Amplifier	Schwarzbeck	BBV9744	9744-0037	May 16, 2024	May 15, 2025
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	942	May 29, 2023	May 28, 2024
Loop Antenna(9KHz -30MHz)	Schwarzbeck	FMZB1519B	00014	May 31, 2023	May 30, 2024
Amplifier	SKET	LAPA_01G18G-45dB	SK2021040901	May 16, 2024	May 15, 2025
Horn Antenna	Schwarzbeck	BBHA9120D	1541	May 31, 2023	May 30, 2024
Amplifier(18GHz-40GHz)	MITEQ	TTA1840-35-HG	2034381	May 16, 2024	May 15, 2025
Horn Antenna(18GHz-40GHz)	Schwarzbeck	BBHA9170	00822	May 31, 2023	May 30, 2024
Spectrum Analyzer9kHz-40GHz	R&S	FSP40	100363	May 16, 2024	May 15, 2025
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

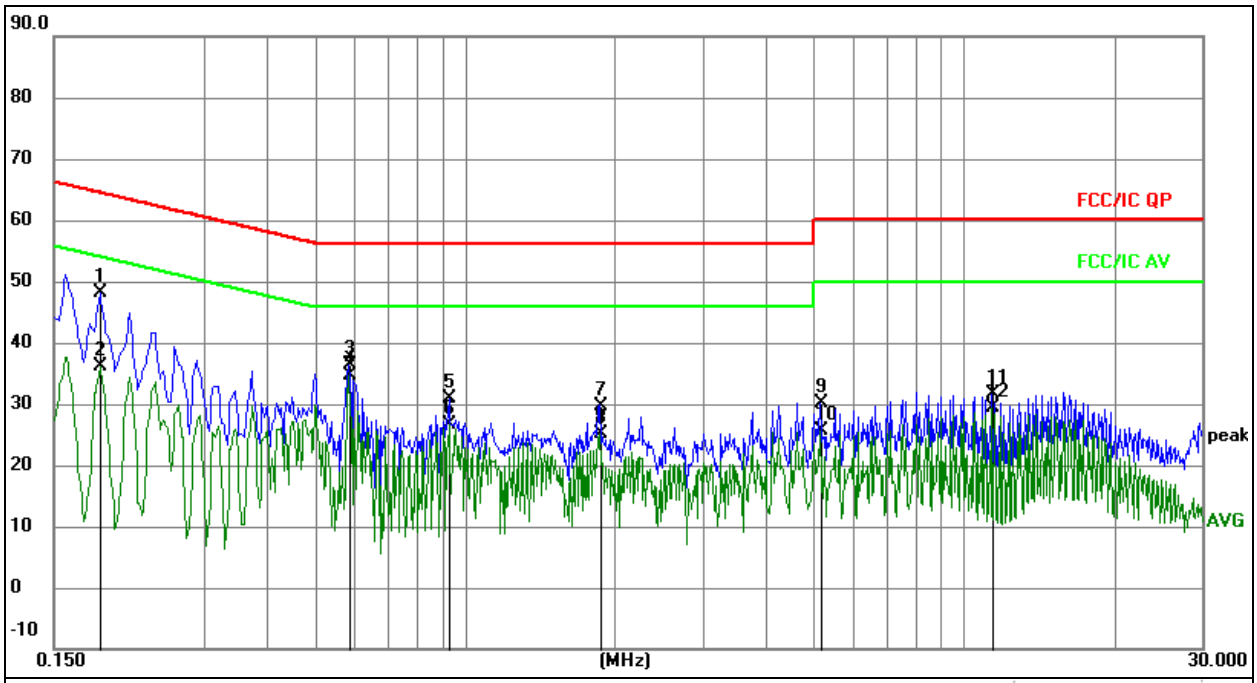
a. The Product was placed on a nonconductive table 0.8 m above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).
b. The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak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

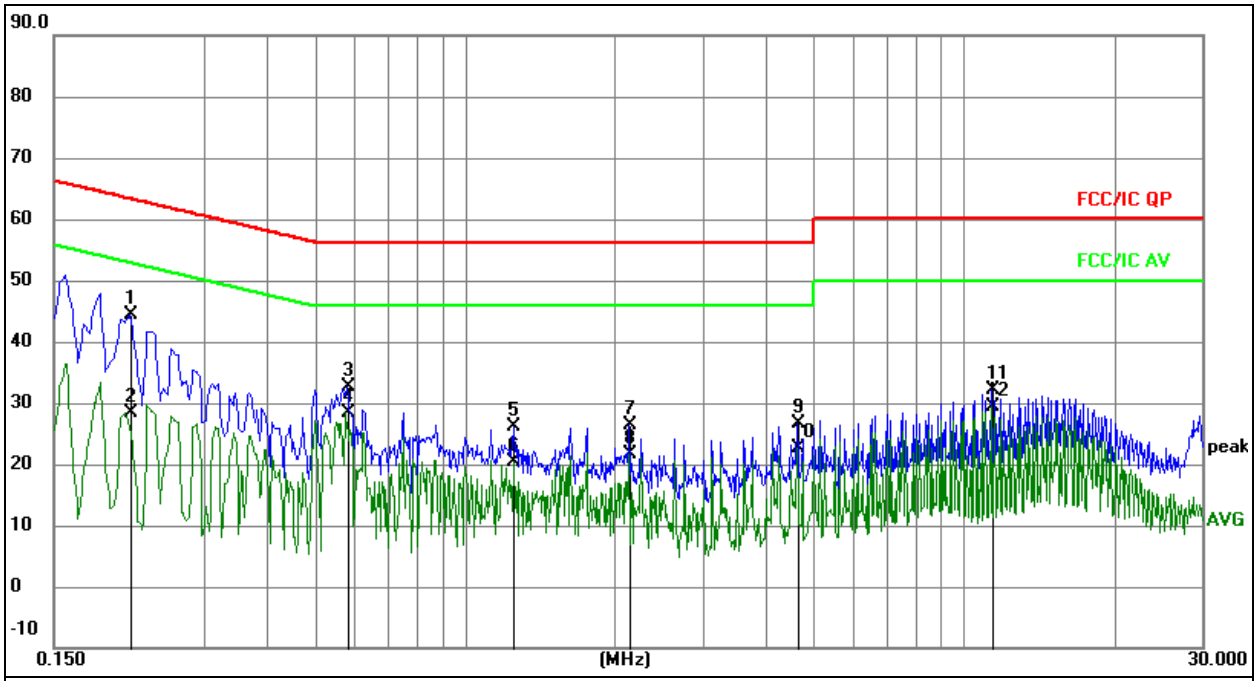
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC120V/60Hz
Test Mode:	Mode 2	Polarization :	L



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		0.1860	28.34	19.80	48.14	64.21	-16.07	QP
2		0.1860	16.27	19.80	36.07	54.21	-18.14	AVG
3		0.5865	16.59	19.84	36.43	56.00	-19.57	QP
4	*	0.5865	14.85	19.84	34.69	46.00	-11.31	AVG
5		0.9285	10.98	19.92	30.90	56.00	-25.10	QP
6		0.9285	6.68	19.92	26.60	46.00	-19.40	AVG
7		1.8600	9.80	19.95	29.75	56.00	-26.25	QP
8		1.8600	5.14	19.95	25.09	46.00	-20.91	AVG
9		5.1450	9.67	20.39	30.06	60.00	-29.94	QP
10		5.1450	5.36	20.39	25.75	50.00	-24.25	AVG
11		11.4180	11.64	19.88	31.52	60.00	-28.48	QP
12		11.4180	9.53	19.88	29.41	50.00	-20.59	AVG

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC120V/60Hz
Test Mode:	Mode 2	Polarization :	N



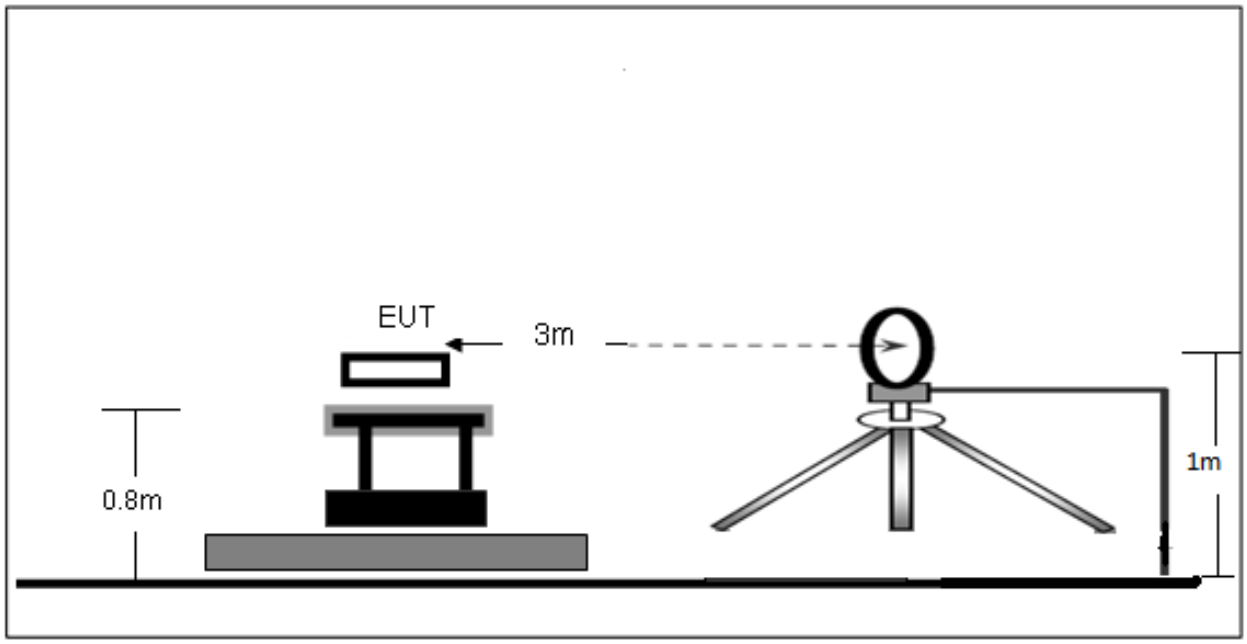
Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement = Reading Level + Correct Factor
4. Over = Measurement - Limit

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz		dB	dBuV	dBuV	dB	Detector
1		0.2130	24.60	19.83	44.43	63.09	-18.66	QP
2		0.2130	8.62	19.83	28.45	53.09	-24.64	AVG
3		0.5820	12.79	19.84	32.63	56.00	-23.37	QP
4	*	0.5820	8.61	19.84	28.45	46.00	-17.55	AVG
5		1.2525	6.26	19.95	26.21	56.00	-29.79	QP
6		1.2525	0.37	19.95	20.32	46.00	-25.68	AVG
7		2.1345	6.41	20.00	26.41	56.00	-29.59	QP
8		2.1345	1.67	20.00	21.67	46.00	-24.33	AVG
9		4.6410	6.14	20.51	26.65	56.00	-29.35	QP
10		4.6410	2.18	20.51	22.69	46.00	-23.31	AVG
11		11.4225	12.24	19.88	32.12	60.00	-27.88	QP
12		11.4225	9.40	19.88	29.28	50.00	-20.72	AVG

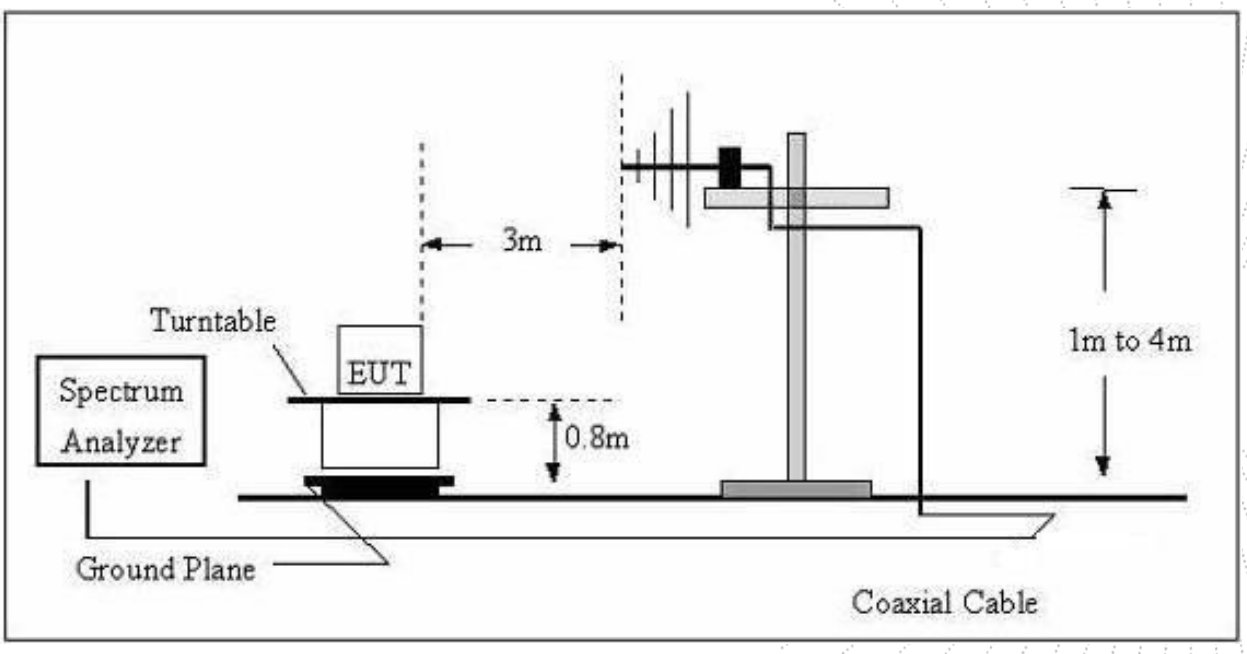
7. Radiated Emissions

7.1 Block Diagram Of Test Setup

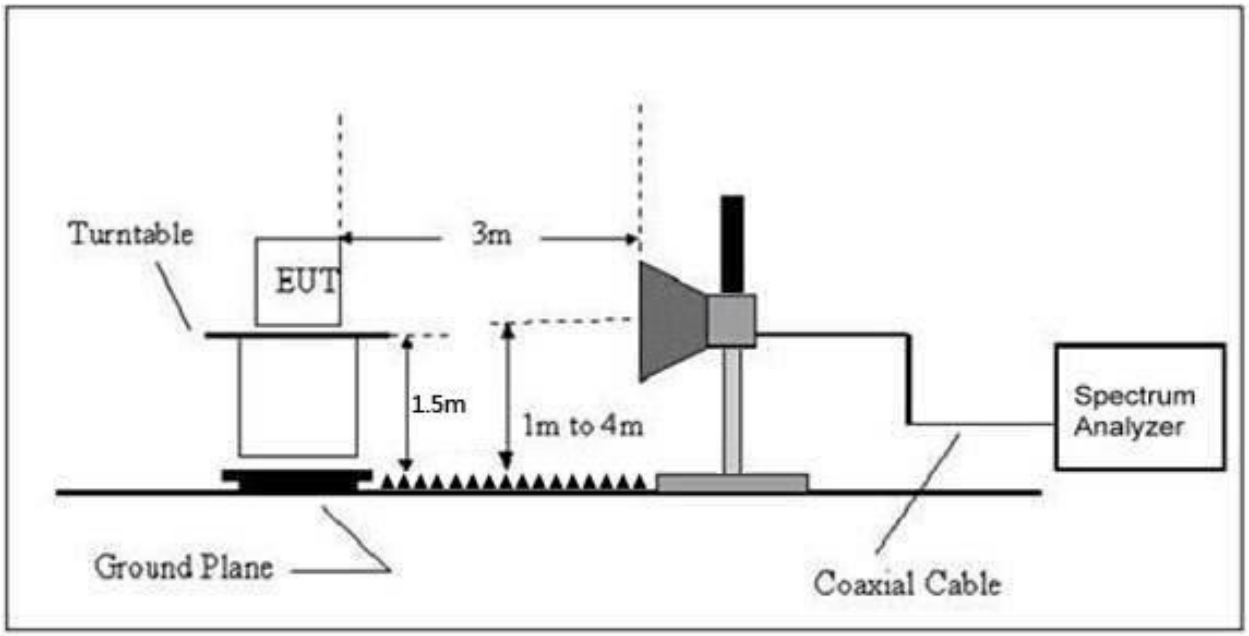
（A）Radiated Emission Test-Up Frequency Below 30MHz



（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

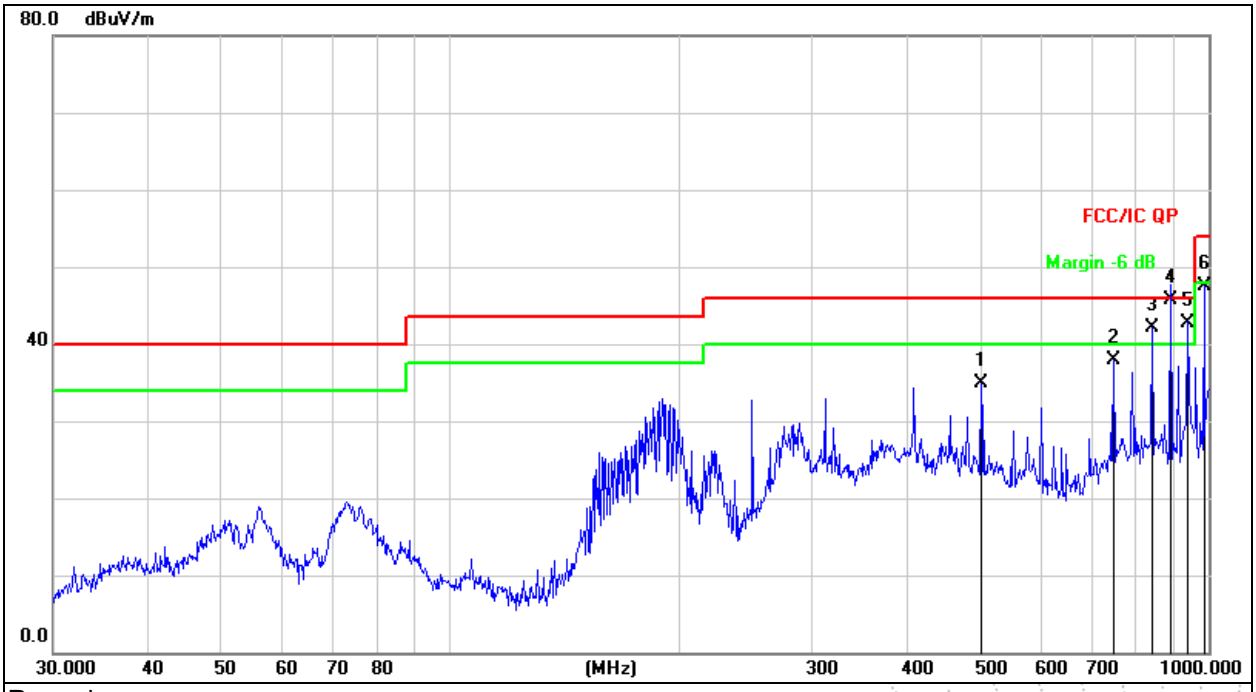
Temperature:	26℃	Relative Humidity:	24%
Pressure:	101 kPa	Test Voltage :	AC 120V/60Hz
Test Mode:	Mode 2	Polarization:	--

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

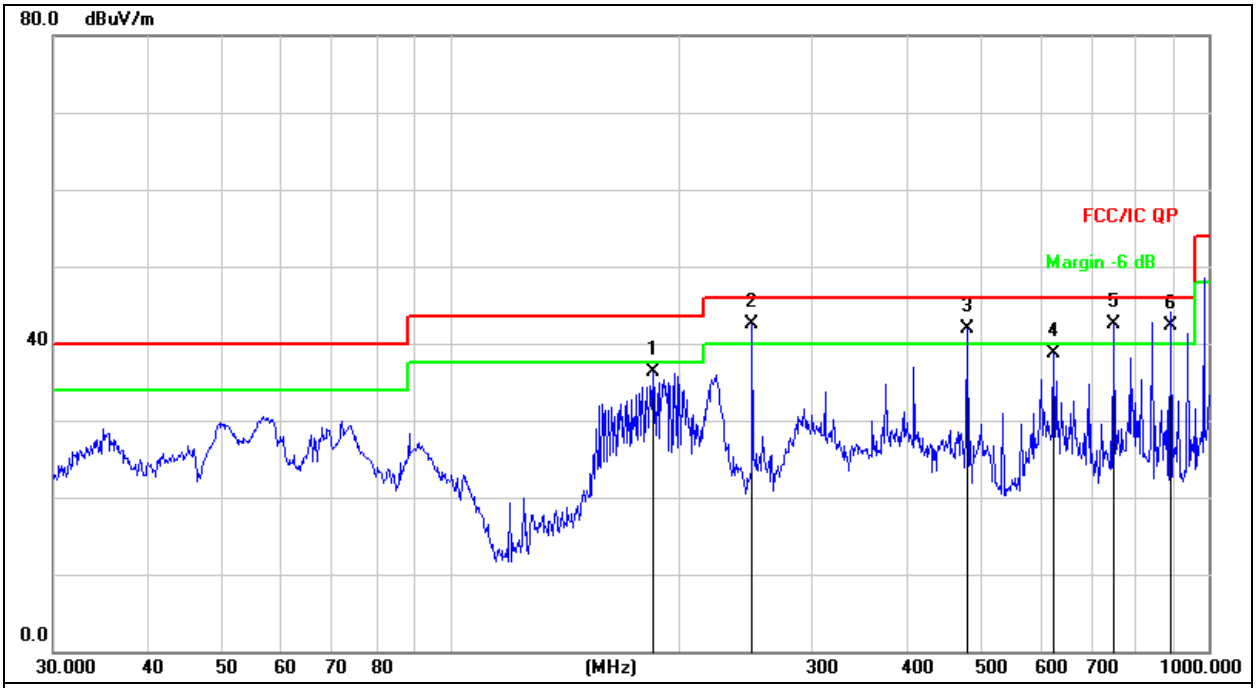
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC120V/60Hz
Test Mode:	Mode 2	Polarization :	Horizontal



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

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		501.1788	43.59	-8.65	34.94	46.00	-11.06	QP
2		750.1082	42.93	-4.99	37.94	46.00	-8.06	QP
3	!	842.1295	46.11	-4.05	42.06	46.00	-3.94	QP
4	*	888.0308	49.00	-3.33	45.67	46.00	-0.33	QP
5	!	938.8324	45.78	-2.98	42.80	46.00	-3.20	QP
6		986.0715	50.09	-2.52	47.57	54.00	-6.43	QP

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC120V/60Hz
Test Mode:	Mode 2	Polarization :	Vertical



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

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		185.1379	53.09	-16.82	36.27	43.50	-7.23	QP
2	*	250.3011	56.80	-14.28	42.52	46.00	-3.48	QP
3	!	480.5276	50.98	-9.10	41.88	46.00	-4.12	QP
4		625.0779	45.22	-6.59	38.63	46.00	-7.37	QP
5	!	750.1082	47.50	-4.99	42.51	46.00	-3.49	QP
6	!	888.0108	45.67	-3.33	42.34	46.00	-3.66	QP

Between 1GHz – 40GHz(The worst case)

Test Mode:	TX(5.1G) - 802.11a

Polar	Fre-quency	Reading Level	Correct Factor	Measure-ment	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5180 MHz)-Above 1G							
Vertical	4434.05	71.51	-20.73	50.78	68.20	-17.42	PK
Vertical	4434.05	59.06	-20.73	38.33	54.00	-15.67	AV
Vertical	10360.09	62.67	-9.36	53.31	68.20	-14.89	PK
Vertical	10360.09	49.88	-9.36	40.52	54.00	-13.48	AV
Vertical	15540.13	62.53	-7.84	54.69	74.00	-19.31	PK
Vertical	15540.13	49.37	-7.84	41.53	54.00	-12.47	AV
Horizontal	4434.09	71.93	-20.73	51.20	68.20	-17.00	PK
Horizontal	4434.09	59.83	-20.73	39.10	54.00	-14.90	AV
Horizontal	10360.05	60.29	-9.36	50.93	68.20	-17.27	PK
Horizontal	10360.05	49.65	-9.36	40.29	54.00	-13.71	AV
Horizontal	15540.19	60.73	-7.84	52.89	74.00	-21.11	PK
Horizontal	15540.19	49.09	-7.84	41.25	54.00	-12.75	AV
middle Channel (5200 MHz)-Above 1G							
Vertical	4592.02	73.15	-20.42	52.74	74.00	-21.26	PK
Vertical	4592.02	59.23	-20.42	38.82	54.00	-15.18	AV
Vertical	10400.19	62.68	-9.30	53.38	68.20	-14.82	PK
Vertical	10400.19	49.80	-9.30	40.50	54.00	-13.50	AV
Vertical	15600.18	62.28	-7.82	54.46	74.00	-19.54	PK
Vertical	15600.18	49.94	-7.82	42.12	54.00	-11.88	AV
Horizontal	4592.06	72.98	-20.42	52.56	74.00	-21.44	PK
Horizontal	4592.06	59.81	-20.42	39.39	54.00	-14.61	AV
Horizontal	10400.10	60.80	-9.30	51.50	68.20	-16.70	PK
Horizontal	10400.10	49.09	-9.30	39.79	54.00	-14.21	AV
Horizontal	15600.17	64.03	-7.82	56.21	74.00	-17.79	PK
Horizontal	15600.17	49.08	-7.82	41.26	54.00	-12.74	AV
High Channel (5240 MHz)-Above 1G							
Vertical	4739.07	70.21	-20.12	50.09	74.00	-23.91	PK
Vertical	4739.07	59.91	-20.12	39.78	54.00	-14.22	AV
Vertical	10480.19	64.42	-9.18	55.24	68.20	-12.96	PK
Vertical	10480.19	49.52	-9.18	40.34	54.00	-13.66	AV
Vertical	15720.16	61.17	-7.78	53.39	74.00	-20.61	PK
Vertical	15720.16	49.93	-7.78	42.15	54.00	-11.85	AV
Horizontal	4739.13	72.37	-20.12	52.25	74.00	-21.75	PK
Horizontal	4739.13	59.68	-20.12	39.56	54.00	-14.44	AV
Horizontal	10480.16	60.14	-9.18	50.96	68.20	-17.24	PK
Horizontal	10480.16	49.49	-9.18	40.31	54.00	-13.69	AV
Horizontal	15720.07	63.76	-7.78	55.98	74.00	-18.02	PK
Horizontal	15720.07	49.99	-7.78	42.21	54.00	-11.79	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	Fre-quency	Reading Level	Correct Factor	Measure-ment	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5180 MHz)-Above 1G							
Vertical	4434.13	74.79	-20.73	54.06	68.20	-14.14	PK
Vertical	4434.13	59.84	-20.73	39.11	54.00	-14.89	AV
Vertical	10360.11	62.09	-9.36	52.73	68.20	-15.47	PK
Vertical	10360.11	49.55	-9.36	40.19	54.00	-13.81	AV
Vertical	15540.09	61.54	-7.84	53.70	74.00	-20.30	PK
Vertical	15540.09	49.79	-7.84	41.95	54.00	-12.05	AV
Horizontal	4434.09	71.19	-20.73	50.45	68.20	-17.75	PK
Horizontal	4434.09	59.71	-20.73	38.97	54.00	-15.03	AV
Horizontal	10360.09	60.46	-9.36	51.10	68.20	-17.10	PK
Horizontal	10360.09	49.71	-9.36	40.35	54.00	-13.65	AV
Horizontal	15540.04	64.95	-7.84	57.11	74.00	-16.89	PK
Horizontal	15540.04	49.33	-7.84	41.49	54.00	-12.51	AV
middle Channel (5200 MHz)-Above 1G							
Vertical	4592.00	74.55	-20.42	54.14	74.00	-19.86	PK
Vertical	4592.00	59.52	-20.42	39.10	54.00	-14.90	AV
Vertical	10400.03	60.52	-9.30	51.22	68.20	-16.98	PK
Vertical	10400.03	49.49	-9.30	40.19	54.00	-13.81	AV
Vertical	15600.13	63.37	-7.82	55.55	74.00	-18.45	PK
Vertical	15600.13	49.39	-7.82	41.57	54.00	-12.43	AV
Horizontal	4592.15	72.53	-20.42	52.11	74.00	-21.89	PK
Horizontal	4592.15	59.48	-20.42	39.06	54.00	-14.94	AV
Horizontal	10400.08	60.16	-9.30	50.86	68.20	-17.34	PK
Horizontal	10400.08	49.54	-9.30	40.24	54.00	-13.76	AV
Horizontal	15600.04	60.64	-7.82	52.82	74.00	-21.18	PK
Horizontal	15600.04	49.06	-7.82	41.24	54.00	-12.76	AV
High Channel (5240 MHz)-Above 1G							
Vertical	4739.09	71.36	-20.12	51.24	74.00	-22.76	PK
Vertical	4739.09	59.35	-20.12	39.23	54.00	-14.77	AV
Vertical	10480.18	61.84	-9.18	52.66	68.20	-15.54	PK
Vertical	10480.18	49.22	-9.18	40.04	54.00	-13.96	AV
Vertical	15720.04	60.54	-7.78	52.76	74.00	-21.24	PK
Vertical	15720.04	49.46	-7.78	41.68	54.00	-12.32	AV
Horizontal	4739.01	74.15	-20.12	54.03	74.00	-19.97	PK
Horizontal	4739.01	59.34	-20.12	39.22	54.00	-14.78	AV
Horizontal	10480.13	64.66	-9.18	55.48	68.20	-12.72	PK
Horizontal	10480.13	49.75	-9.18	40.57	54.00	-13.43	AV
Horizontal	15720.05	60.49	-7.78	52.71	74.00	-21.29	PK
Horizontal	15720.05	49.11	-7.78	41.33	54.00	-12.67	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(5.3G) - 802.11a

Polar	Fre-quency	Reading Level	Correct Factor	Measure-ment	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5260 MHz)-Above 1G							
Vertical	4434.02	71.32	-20.73	50.59	68.20	-17.61	PK
Vertical	4434.02	59.99	-20.73	39.26	54.00	-14.74	AV
Vertical	10520.10	61.19	-9.12	52.07	68.20	-16.13	PK
Vertical	10520.10	49.23	-9.12	40.11	54.00	-13.89	AV
Vertical	15780.17	60.54	-7.77	52.77	74.00	-21.23	PK
Vertical	15780.17	49.85	-7.77	42.08	54.00	-11.92	AV
Horizontal	4434.10	71.07	-20.73	50.34	68.20	-17.86	PK
Horizontal	4434.10	59.20	-20.73	38.47	54.00	-15.53	AV
Horizontal	10520.07	60.78	-9.12	51.66	68.20	-16.54	PK
Horizontal	10520.07	49.25	-9.12	40.13	54.00	-13.87	AV
Horizontal	15780.11	60.60	-7.77	52.83	74.00	-21.17	PK
Horizontal	15780.11	49.91	-7.77	42.14	54.00	-11.86	AV
middle Channel (5280 MHz)-Above 1G							
Vertical	4592.13	72.76	-20.42	52.34	74.00	-21.66	PK
Vertical	4592.13	59.66	-20.42	39.25	54.00	-14.75	AV
Vertical	10560.05	60.57	-9.06	51.51	68.20	-16.69	PK
Vertical	10560.05	49.18	-9.06	40.12	54.00	-13.88	AV
Vertical	15840.12	61.46	-7.75	53.71	74.00	-20.29	PK
Vertical	15840.12	49.48	-7.75	41.73	54.00	-12.27	AV
Horizontal	4592.09	73.32	-20.42	52.90	74.00	-21.10	PK
Horizontal	4592.09	59.68	-20.42	39.26	54.00	-14.74	AV
Horizontal	10560.17	64.05	-9.06	54.99	68.20	-13.21	PK
Horizontal	10560.17	49.23	-9.06	40.17	54.00	-13.83	AV
Horizontal	15840.19	61.69	-7.75	53.94	74.00	-20.06	PK
Horizontal	15840.19	49.76	-7.75	42.01	54.00	-11.99	AV
High Channel (5320 MHz)-Above 1G							
Vertical	4739.19	72.44	-20.12	52.32	74.00	-21.68	PK
Vertical	4739.19	59.68	-20.12	39.56	54.00	-14.44	AV
Vertical	10640.03	61.24	-8.94	52.30	68.20	-15.90	PK
Vertical	10640.03	49.71	-8.94	40.77	54.00	-13.23	AV
Vertical	15960.13	63.71	-7.71	56.00	74.00	-18.00	PK
Vertical	15960.13	49.96	-7.71	42.25	54.00	-11.75	AV
Horizontal	4739.13	72.97	-20.12	52.85	74.00	-21.15	PK
Horizontal	4739.13	59.50	-20.12	39.37	54.00	-14.63	AV
Horizontal	10640.13	60.17	-8.94	51.23	68.20	-16.97	PK
Horizontal	10640.13	49.65	-8.94	40.71	54.00	-13.29	AV
Horizontal	15960.11	60.36	-7.71	52.65	74.00	-21.35	PK
Horizontal	15960.11	49.12	-7.71	41.41	54.00	-12.59	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(5.3G) - 802.11n-HT20

Polar	Fre-quency	Reading Level	Correct Factor	Measure-ment	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5260 MHz)-Above 1G							
Vertical	4434.05	72.64	-20.73	51.90	68.20	-16.30	PK
Vertical	4434.05	59.38	-20.73	38.64	54.00	-15.36	AV
Vertical	10520.10	60.61	-9.12	51.49	68.20	-16.71	PK
Vertical	10520.10	49.92	-9.12	40.80	54.00	-13.20	AV
Vertical	15780.09	62.29	-7.77	54.52	74.00	-19.48	PK
Vertical	15780.09	49.27	-7.77	41.50	54.00	-12.50	AV
Horizontal	4434.07	73.77	-20.73	53.04	68.20	-15.16	PK
Horizontal	4434.07	59.07	-20.73	38.34	54.00	-15.66	AV
Horizontal	10520.15	64.02	-9.12	54.90	68.20	-13.30	PK
Horizontal	10520.15	49.66	-9.12	40.54	54.00	-13.46	AV
Horizontal	15780.14	63.46	-7.77	55.69	74.00	-18.31	PK
Horizontal	15780.14	49.85	-7.77	42.08	54.00	-11.92	AV
middle Channel (5280 MHz)-Above 1G							
Vertical	4592.17	70.27	-20.42	49.85	74.00	-24.15	PK
Vertical	4592.17	59.30	-20.42	38.89	54.00	-15.11	AV
Vertical	10560.14	62.94	-9.06	53.88	68.20	-14.32	PK
Vertical	10560.14	49.32	-9.06	40.26	54.00	-13.74	AV
Vertical	15840.06	62.04	-7.75	54.29	74.00	-19.71	PK
Vertical	15840.06	49.84	-7.75	42.09	54.00	-11.91	AV
Horizontal	4592.04	72.93	-20.42	52.52	74.00	-21.48	PK
Horizontal	4592.04	59.70	-20.42	39.28	54.00	-14.72	AV
Horizontal	10560.14	64.52	-9.06	55.46	68.20	-12.74	PK
Horizontal	10560.14	49.01	-9.06	39.95	54.00	-14.05	AV
Horizontal	15840.10	64.28	-7.75	56.53	74.00	-17.47	PK
Horizontal	15840.10	49.15	-7.75	41.40	54.00	-12.60	AV
High Channel (5320 MHz)-Above 1G							
Vertical	4739.17	71.59	-20.12	51.47	74.00	-22.53	PK
Vertical	4739.17	59.79	-20.12	39.67	54.00	-14.33	AV
Vertical	10640.11	62.98	-8.94	54.04	68.20	-14.16	PK
Vertical	10640.11	49.70	-8.94	40.76	54.00	-13.24	AV
Vertical	15960.16	60.63	-7.71	52.92	74.00	-21.08	PK
Vertical	15960.16	49.75	-7.71	42.04	54.00	-11.96	AV
Horizontal	4739.01	70.86	-20.12	50.73	74.00	-23.27	PK
Horizontal	4739.01	59.27	-20.12	39.15	54.00	-14.85	AV
Horizontal	10640.18	63.86	-8.94	54.92	68.20	-13.28	PK
Horizontal	10640.18	49.02	-8.94	40.08	54.00	-13.92	AV
Horizontal	15960.11	60.25	-7.71	52.54	74.00	-21.46	PK
Horizontal	15960.11	49.84	-7.71	42.13	54.00	-11.87	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(5.6G) - 802.11a

Polar	Fre-quency	Reading Level	Correct Factor	Measure-ment	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5500 MHz)-Above 1G							
Vertical	4434.17	74.10	-20.73	53.37	68.20	-14.83	PK
Vertical	4434.17	59.51	-20.73	38.78	54.00	-15.22	AV
Vertical	11000.11	62.45	-8.40	54.05	68.20	-14.15	PK
Vertical	11000.11	49.83	-8.40	41.43	54.00	-12.57	AV
Vertical	16500.18	62.97	-6.09	56.88	74.00	-17.12	PK
Vertical	16500.18	49.59	-6.09	43.50	54.00	-10.50	AV
Horizontal	4434.05	72.00	-20.73	51.27	68.20	-16.93	PK
Horizontal	4434.05	59.26	-20.73	38.53	54.00	-15.47	AV
Horizontal	11000.18	63.60	-8.40	55.20	68.20	-13.00	PK
Horizontal	11000.18	49.05	-8.40	40.65	54.00	-13.35	AV
Horizontal	16500.06	61.75	-6.09	55.66	74.00	-18.34	PK
Horizontal	16500.06	49.54	-6.09	43.45	54.00	-10.55	AV
middle Channel (5580 MHz)-Above 1G							
Vertical	4592.13	70.06	-20.42	49.64	74.00	-24.36	PK
Vertical	4592.13	59.14	-20.42	38.72	54.00	-15.28	AV
Vertical	11160.16	61.37	-8.53	52.84	68.20	-15.36	PK
Vertical	11160.16	49.45	-8.53	40.92	54.00	-13.08	AV
Vertical	16740.09	61.00	-5.31	55.69	74.00	-18.31	PK
Vertical	16740.09	49.62	-5.31	44.31	54.00	-9.69	AV
Horizontal	4592.01	74.85	-20.42	54.43	74.00	-19.57	PK
Horizontal	4592.01	59.28	-20.42	38.86	54.00	-15.14	AV
Horizontal	11160.08	61.54	-8.53	53.01	68.20	-15.19	PK
Horizontal	11160.08	49.62	-8.53	41.09	54.00	-12.91	AV
Horizontal	16740.17	61.35	-5.31	56.04	74.00	-17.96	PK
Horizontal	16740.17	49.14	-5.31	43.83	54.00	-10.17	AV
High Channel (5700 MHz)-Above 1G							
Vertical	4739.12	70.88	-20.12	50.76	74.00	-23.24	PK
Vertical	4739.12	59.75	-20.12	39.63	54.00	-14.37	AV
Vertical	11400.01	64.73	-8.72	56.01	68.20	-12.19	PK
Vertical	11400.01	49.67	-8.72	40.95	54.00	-13.05	AV
Vertical	17100.19	61.68	-3.92	57.76	74.00	-16.24	PK
Vertical	17100.19	49.01	-3.92	45.09	54.00	-8.91	AV
Horizontal	4739.17	74.41	-20.12	54.29	74.00	-19.71	PK
Horizontal	4739.17	59.89	-20.12	39.77	54.00	-14.23	AV
Horizontal	11400.08	64.58	-8.72	55.86	68.20	-12.34	PK
Horizontal	11400.08	49.98	-8.72	41.26	54.00	-12.74	AV
Horizontal	17100.09	62.28	-3.92	58.36	74.00	-15.64	PK
Horizontal	17100.09	49.42	-3.92	45.50	54.00	-8.50	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(5.6G) - 802.11n-HT20

Polar	Fre-quency	Reading Level	Correct Factor	Measure-ment	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5500 MHz)-Above 1G							
Vertical	4434.12	71.63	-20.73	50.90	68.20	-17.30	PK
Vertical	4434.12	59.17	-20.73	38.44	54.00	-15.56	AV
Vertical	11000.12	63.18	-8.40	54.78	68.20	-13.42	PK
Vertical	11000.12	49.82	-8.40	41.42	54.00	-12.58	AV
Vertical	16500.07	63.41	-6.09	57.32	74.00	-16.68	PK
Vertical	16500.07	49.36	-6.09	43.27	54.00	-10.73	AV
Horizontal	4434.03	73.17	-20.73	52.44	68.20	-15.76	PK
Horizontal	4434.03	59.38	-20.73	38.65	54.00	-15.35	AV
Horizontal	11000.14	61.43	-8.40	53.03	68.20	-15.17	PK
Horizontal	11000.14	49.58	-8.40	41.18	54.00	-12.82	AV
Horizontal	16500.16	63.92	-6.09	57.83	74.00	-16.17	PK
Horizontal	16500.16	49.41	-6.09	43.32	54.00	-10.68	AV
middle Channel (5580 MHz)-Above 1G							
Vertical	4592.17	71.94	-20.42	51.52	74.00	-22.48	PK
Vertical	4592.17	59.77	-20.42	39.36	54.00	-14.64	AV
Vertical	11160.03	64.16	-8.53	55.63	68.20	-12.57	PK
Vertical	11160.03	49.24	-8.53	40.71	54.00	-13.29	AV
Vertical	16740.09	62.30	-5.31	56.99	74.00	-17.01	PK
Vertical	16740.09	49.41	-5.31	44.10	54.00	-9.90	AV
Horizontal	4592.09	74.53	-20.42	54.12	74.00	-19.88	PK
Horizontal	4592.09	59.85	-20.42	39.43	54.00	-14.57	AV
Horizontal	11160.05	61.99	-8.53	53.46	68.20	-14.74	PK
Horizontal	11160.05	49.42	-8.53	40.89	54.00	-13.11	AV
Horizontal	16740.03	63.92	-5.31	58.61	74.00	-15.39	PK
Horizontal	16740.03	49.16	-5.31	43.85	54.00	-10.15	AV
High Channel (5700 MHz)-Above 1G							
Vertical	4739.11	72.78	-20.12	52.66	74.00	-21.34	PK
Vertical	4739.11	59.03	-20.12	38.90	54.00	-15.10	AV
Vertical	11400.11	62.05	-8.72	53.33	68.20	-14.87	PK
Vertical	11400.11	49.74	-8.72	41.02	54.00	-12.98	AV
Vertical	17100.04	62.88	-3.92	58.96	74.00	-15.04	PK
Vertical	17100.04	49.91	-3.92	45.99	54.00	-8.01	AV
Horizontal	4739.10	72.63	-20.12	52.51	74.00	-21.49	PK
Horizontal	4739.10	59.34	-20.12	39.22	54.00	-14.78	AV
Horizontal	11400.06	64.00	-8.72	55.28	68.20	-12.92	PK
Horizontal	11400.06	49.88	-8.72	41.16	54.00	-12.84	AV
Horizontal	17100.13	64.94	-3.92	61.02	74.00	-12.98	PK
Horizontal	17100.13	49.49	-3.92	45.57	54.00	-8.43	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	Fre-quency	Reading Level	Correct Factor	Measure-ment	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5745 MHz)-Above 1G							
Vertical	4679.06	73.25	-20.24	53.01	74.00	-20.99	PK
Vertical	4679.06	59.23	-20.24	38.99	54.00	-15.01	AV
Vertical	11490.15	62.11	-8.79	53.32	68.20	-14.88	PK
Vertical	11490.15	49.55	-8.79	40.76	54.00	-13.24	AV
Vertical	17235.18	56.88	-3.18	53.70	68.20	-14.50	PK
Vertical	17235.18	44.23	-3.18	41.05	54.00	-12.95	AV
Horizontal	4679.09	70.78	-20.73	50.05	74.00	-23.95	PK
Horizontal	4679.09	59.22	-20.73	38.49	54.00	-15.51	AV
Horizontal	11490.02	63.83	-8.79	55.04	68.20	-13.16	PK
Horizontal	11490.02	49.09	-8.79	40.30	54.00	-13.70	AV
Horizontal	17235.08	57.41	-3.18	54.23	68.20	-13.97	PK
Horizontal	17235.08	44.39	-3.18	41.21	54.00	-12.79	AV
middle Channel (5785 MHz)-Above 1G							
Vertical	4592.12	73.44	-20.42	53.02	74.00	-20.98	PK
Vertical	4592.12	59.30	-20.42	38.88	54.00	-15.12	AV
Vertical	11570.00	63.51	-8.86	54.65	68.20	-13.55	PK
Vertical	11570.00	49.10	-8.86	40.24	54.00	-13.76	AV
Vertical	17355.14	59.14	-2.52	56.62	68.20	-11.58	PK
Vertical	17355.14	44.17	-2.52	41.65	54.00	-12.35	AV
Horizontal	4592.17	73.91	-20.42	53.49	74.00	-20.51	PK
Horizontal	4592.17	59.15	-20.42	38.74	54.00	-15.26	AV
Horizontal	11570.13	61.02	-8.86	52.16	68.20	-16.04	PK
Horizontal	11570.13	49.71	-8.86	40.85	54.00	-13.15	AV
Horizontal	17355.00	55.15	-2.52	52.63	68.20	-15.57	PK
Horizontal	17355.00	44.10	-2.52	41.58	54.00	-12.42	AV
High Channel (5825 MHz)-Above 1G							
Vertical	6039.17	73.96	-18.93	55.03	68.20	-13.17	PK
Vertical	6039.17	59.41	-18.93	40.48	54.00	-13.52	AV
Vertical	11650.10	62.01	-8.92	53.09	74.00	-20.91	PK
Vertical	11650.10	49.10	-8.92	40.18	54.00	-13.82	AV
Vertical	17475.04	56.84	-1.86	54.98	68.20	-13.22	PK
Vertical	17475.04	44.06	-1.86	42.20	54.00	-11.80	AV
Horizontal	6039.10	71.30	-18.93	52.37	68.20	-15.83	PK
Horizontal	6039.10	59.21	-18.93	40.27	54.00	-13.73	AV
Horizontal	11650.13	62.23	-8.92	53.31	74.00	-20.69	PK
Horizontal	11650.13	49.64	-8.92	40.72	54.00	-13.28	AV
Horizontal	17475.05	58.91	-1.86	57.05	68.20	-11.15	PK
Horizontal	17475.05	44.85	-1.86	42.99	54.00	-11.01	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.

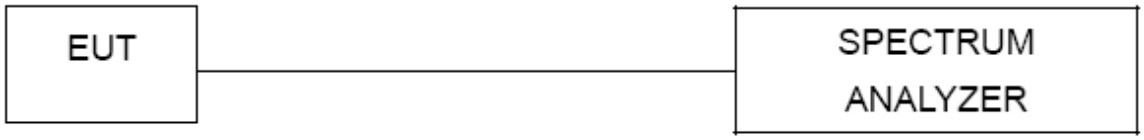
Test Mode:	TX(5.8G) - 802.11n-HT20

Polar	Fre-quency	Reading Level	Correct Factor	Measure-ment	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5745 MHz)-Above 1G							
Vertical	4679.02	72.41	-20.24	52.17	74.00	-21.83	PK
Vertical	4679.02	59.63	-20.24	39.39	54.00	-14.61	AV
Vertical	11490.08	63.84	-8.79	55.05	68.20	-13.15	PK
Vertical	11490.08	49.38	-8.79	40.59	54.00	-13.41	AV
Vertical	17235.01	58.78	-3.18	55.60	68.20	-12.60	PK
Vertical	17235.01	44.22	-3.18	41.04	54.00	-12.96	AV
Horizontal	4679.17	73.17	-20.24	52.93	74.00	-21.07	PK
Horizontal	4679.17	59.81	-20.24	39.56	54.00	-14.44	AV
Horizontal	11490.04	64.75	-8.79	55.96	68.20	-12.24	PK
Horizontal	11490.04	49.25	-8.79	40.46	54.00	-13.54	AV
Horizontal	17235.13	55.78	-3.18	52.60	68.20	-15.60	PK
Horizontal	17235.13	44.56	-3.18	41.38	54.00	-12.62	AV
middle Channel (5785 MHz)-Above 1G							
Vertical	4592.13	72.74	-20.42	52.32	74.00	-21.68	PK
Vertical	4592.13	59.16	-20.42	38.75	54.00	-15.25	AV
Vertical	11570.02	62.22	-8.86	53.36	68.20	-14.84	PK
Vertical	11570.02	49.70	-8.86	40.84	54.00	-13.16	AV
Vertical	17355.08	56.84	-2.52	54.32	68.20	-13.88	PK
Vertical	17355.08	44.69	-2.52	42.17	54.00	-11.83	AV
Horizontal	4592.17	73.90	-20.42	53.49	74.00	-20.51	PK
Horizontal	4592.17	59.31	-20.42	38.89	54.00	-15.11	AV
Horizontal	11570.10	61.27	-8.86	52.41	68.20	-15.79	PK
Horizontal	11570.10	49.50	-8.86	40.64	54.00	-13.36	AV
Horizontal	17355.20	58.14	-2.52	55.62	68.20	-12.58	PK
Horizontal	17355.20	44.76	-2.52	42.24	54.00	-11.76	AV
High Channel (5825 MHz)-Above 1G							
Vertical	6039.16	74.44	-18.93	55.51	68.20	-12.69	PK
Vertical	6039.16	59.14	-18.93	40.21	54.00	-13.79	AV
Vertical	11650.20	60.55	-8.92	51.63	74.00	-22.37	PK
Vertical	11650.20	49.66	-8.92	40.74	54.00	-13.26	AV
Vertical	17475.09	59.69	-1.86	57.83	68.20	-10.37	PK
Vertical	17475.09	44.85	-1.86	42.99	54.00	-11.01	AV
Horizontal	6039.19	73.56	-18.93	54.63	68.20	-13.57	PK
Horizontal	6039.19	59.79	-18.93	40.85	54.00	-13.15	AV
Horizontal	11650.06	62.79	-8.92	53.87	74.00	-20.13	PK
Horizontal	11650.06	49.50	-8.92	40.58	54.00	-13.42	AV
Horizontal	17475.13	55.82	-1.86	53.96	68.20	-14.24	PK
Horizontal	17475.13	44.72	-1.86	42.86	54.00	-11.14	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.

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

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands
(b) (2) The maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, 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.

(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 5V
Test Mode:	(5180-5240MHz)		

Condition	Mode	Frequency (MHz)	Conducted PSD (dBm)	Limit (dBm)	Verdict
NVNT	a	5180	-2.07	11	Pass
NVNT	a	5200	-1.65	11	Pass
NVNT	a	5240	-2.13	11	Pass
NVNT	n20	5180	-1.97	11	Pass
NVNT	n20	5200	-1.29	11	Pass
NVNT	n20	5240	-1.71	11	Pass

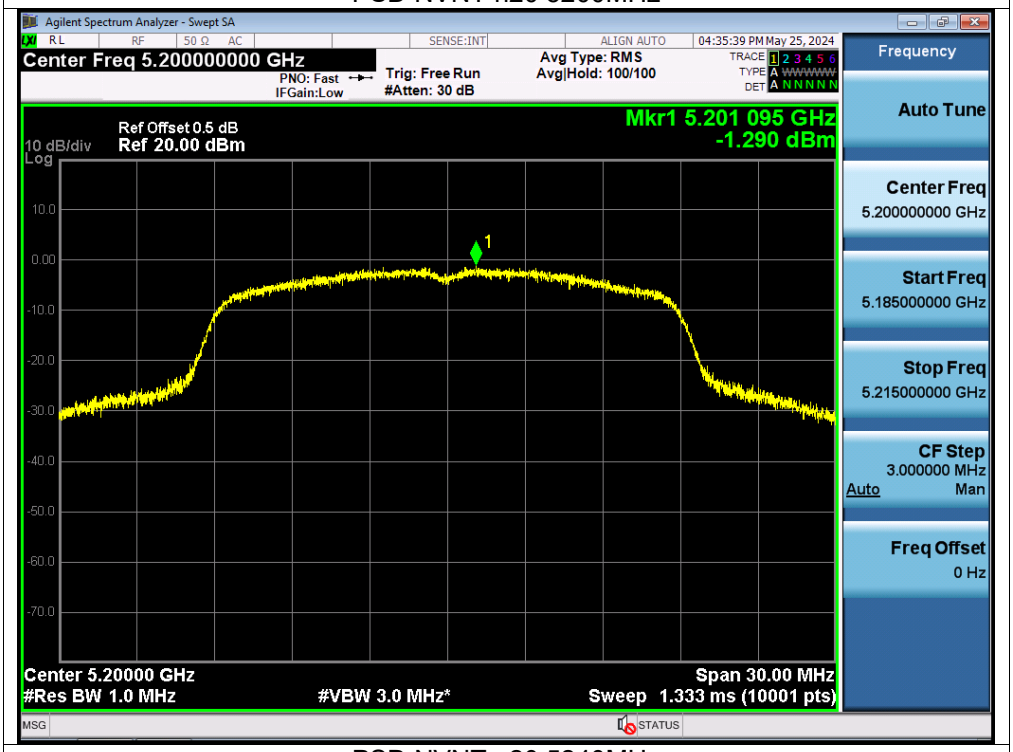
Test Graphs
PSD NVNT a 5180MHz

PSD NVNT a 5200MHz

PSD NVNT a 5240MHz

PSD NVNT n20 5180MHz

PSD NVNT n20 5200MHz



PSD NVNT n20 5240MHz

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	DC 5V
Test Mode:	(5260-5320MHz)		

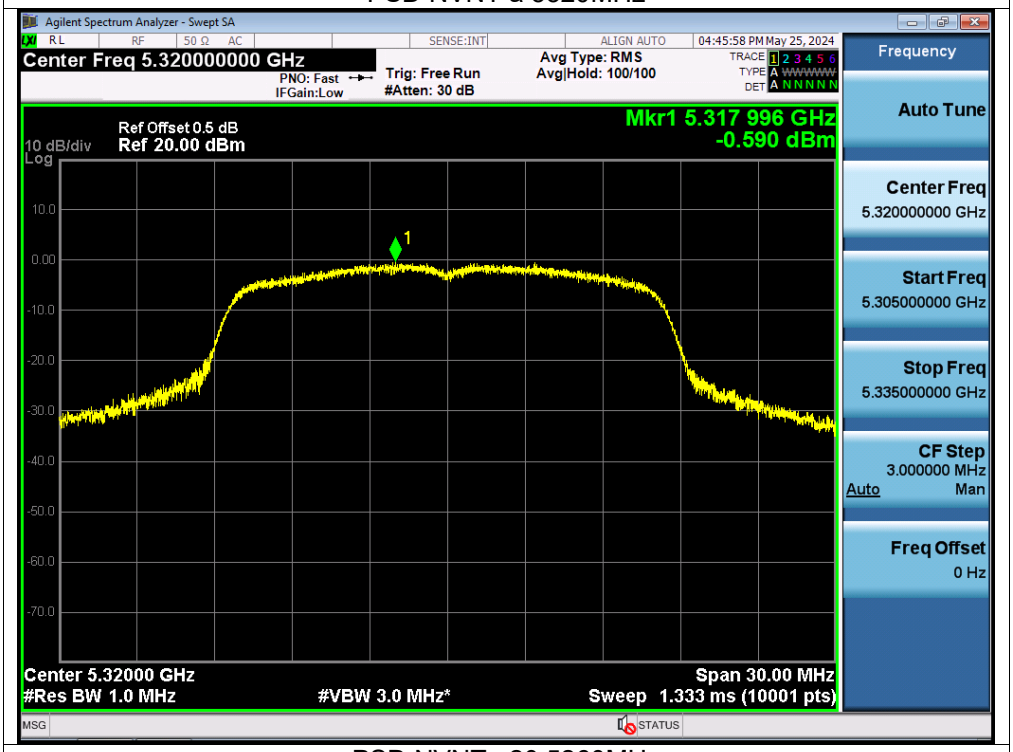
Condition	Mode	Frequency (MHz)	Conducted PSD (dBm)	Limit (dBm)	Verdict
NVNT	a	5260	-1	11	Pass
NVNT	a	5280	-0.68	11	Pass
NVNT	a	5320	-0.59	11	Pass
NVNT	n20	5260	-2.01	11	Pass
NVNT	n20	5280	-1.34	11	Pass
NVNT	n20	5320	-0.62	11	Pass

Test Graphs

PSD NVNT a 5260MHz

PSD NVNT a 5280MHz

PSD NVNT a 5320MHz



PSD NVNT n20 5260MHz

PSD NVNT n20 5280MHz

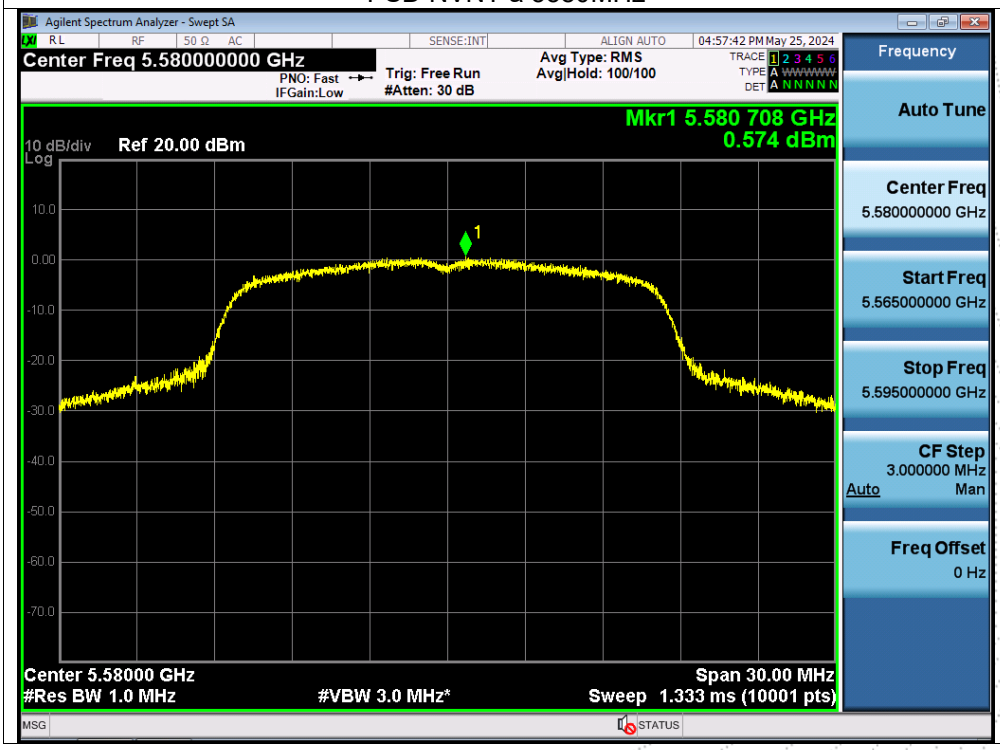
PSD NVNT n20 5320MHz

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	DC 5V
Test Mode:	(5500-5700MHz)		

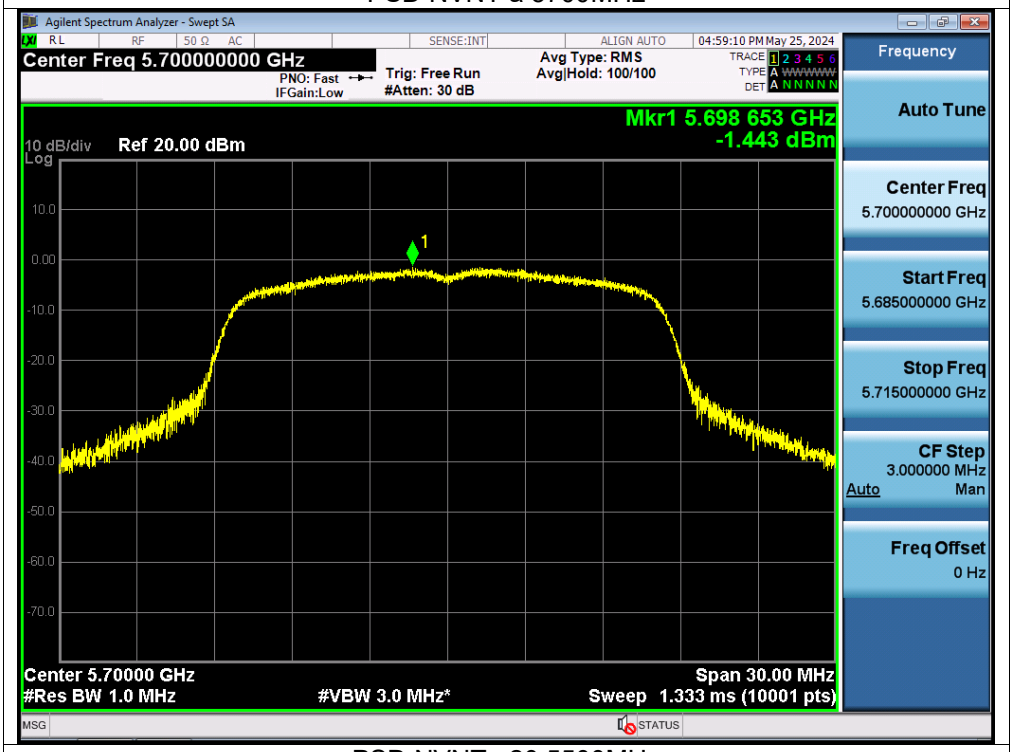
Condition	Mode	Frequency (MHz)	Conducted PSD (dBm)	Limit (dBm)	Verdict
NVNT	a	5500	-0.47	11	Pass
NVNT	a	5580	0.57	11	Pass
NVNT	a	5700	-1.44	11	Pass
NVNT	n20	5500	-0.94	11	Pass
NVNT	n20	5580	0.24	11	Pass
NVNT	n20	5700	-1.3	11	Pass

Test Graphs
PSD NVNT a 5500MHz

PSD NVNT a 5580MHz

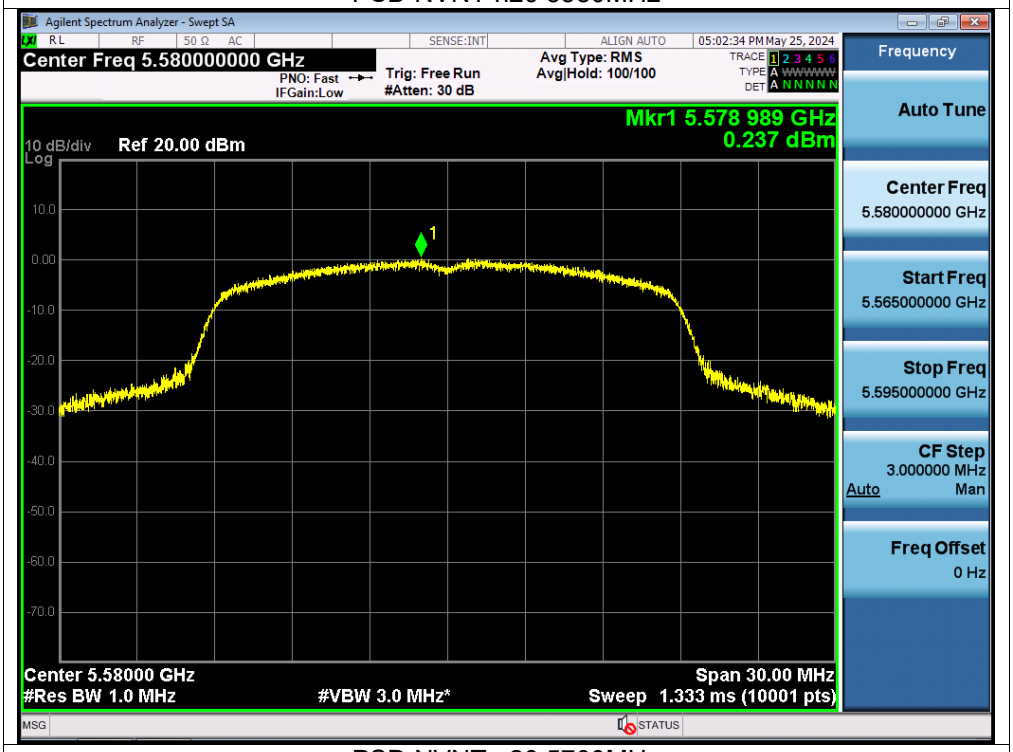


PSD NVNT a 5700MHz

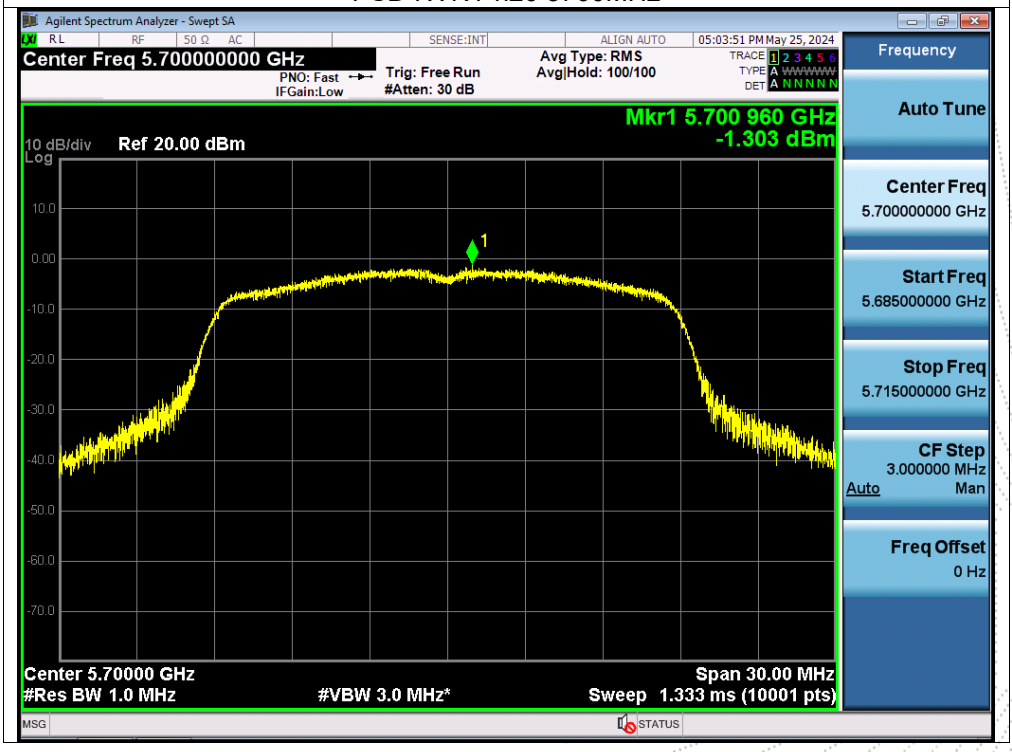


PSD NVNT n20 5500MHz

PSD NVNT n20 5580MHz



PSD NVNT n20 5700MHz



Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	DC 5V
Test Mode:	(5745-5825MHz)		

Condition	Mode	Frequency (MHz)	Conducted PSD (dBm)	Limit (dBm)	Verdict
NVNT	a	5745	-3.12	30	Pass
NVNT	a	5785	-2.95	30	Pass
NVNT	a	5825	-3.39	30	Pass
NVNT	n20	5745	-4.48	30	Pass
NVNT	n20	5785	-3.54	30	Pass
NVNT	n20	5825	-5.51	30	Pass

Test Graphs
PSD NVNT a 5745MHz

PSD NVNT a 5785MHz

PSD NVNT a 5825MHz

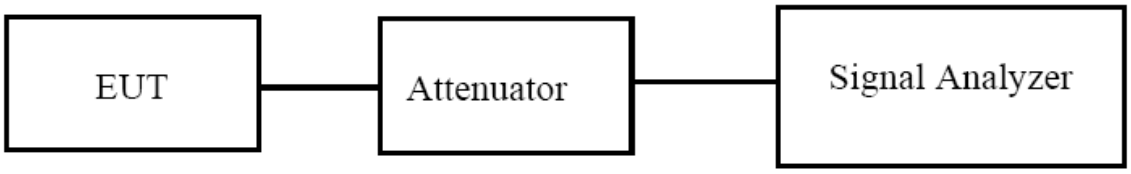
PSD NVNT n20 5745MHz

PSD NVNT n20 5785MHz

PSD NVNT n20 5825MHz

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

9.1 Block Diagram Of Test Setup



9.2 Limit

(1) For the band 5.15-5.25 GHz.
(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, 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.

(2) For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, 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.

(3) For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, 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. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. 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.

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.

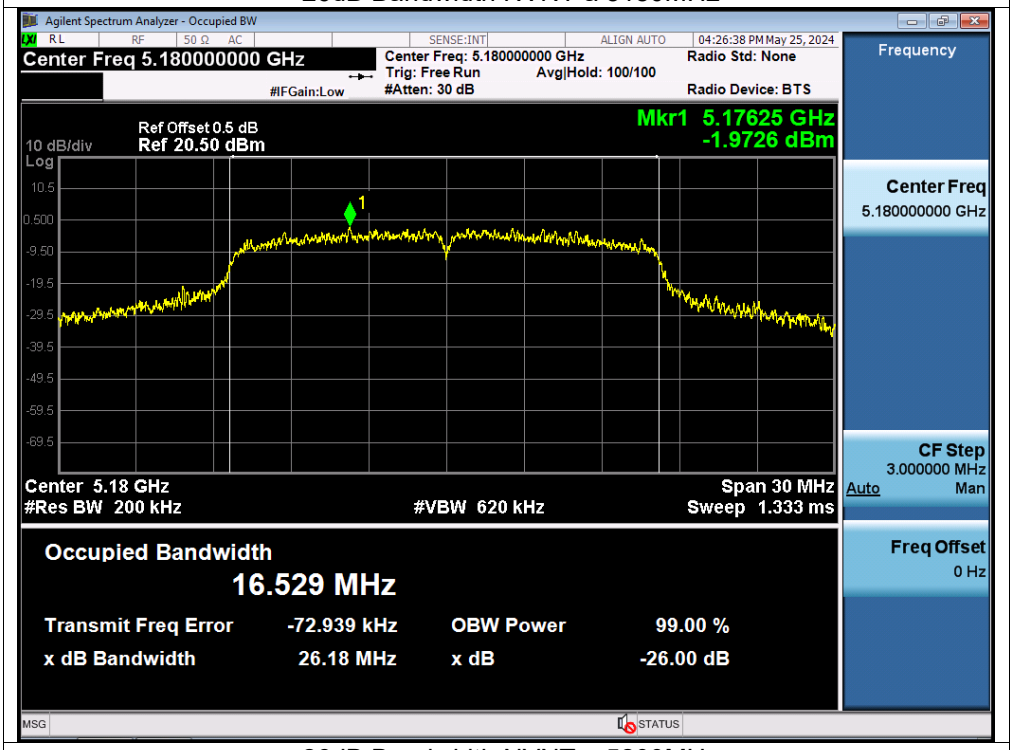
9.5 Test Result

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	DC 5V
Test Mode:	(5180-5240MHz)		

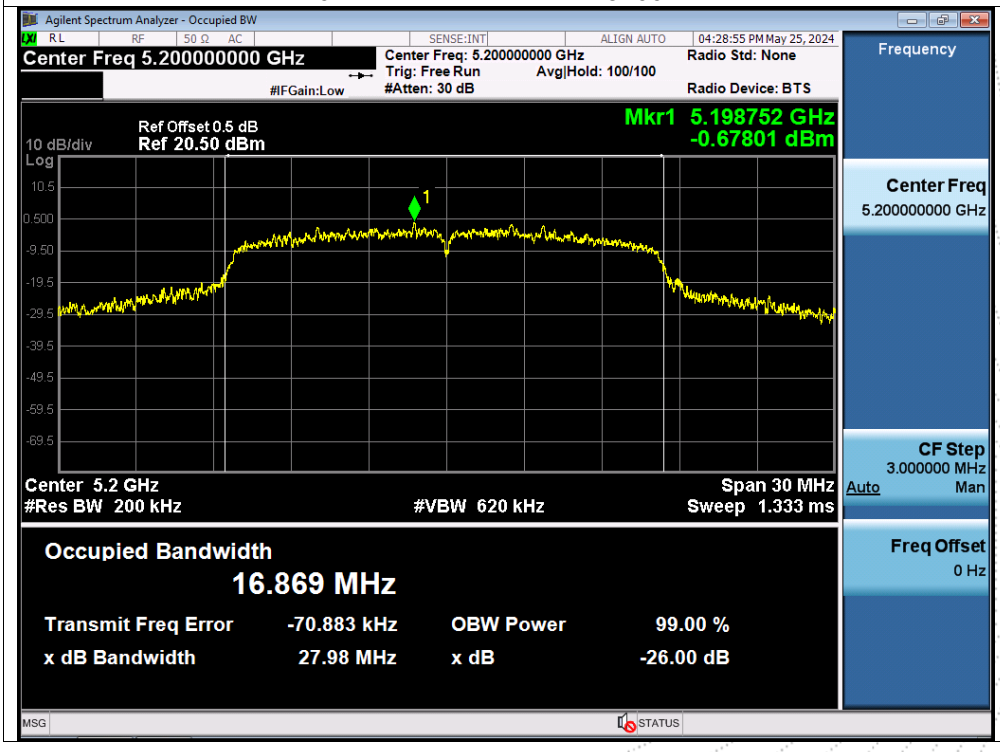
Condition	Mode	Frequency (MHz)	99% bandwidth (MHz)	-26dB bandwidth (MHz)	Result
NVNT	a	5180	16.562	26.18	Pass
NVNT	a	5200	16.867	27.984	Pass
NVNT	a	5240	16.842	29.224	Pass
NVNT	n20	5180	17.646	25.849	Pass
NVNT	n20	5200	17.79	28.825	Pass
NVNT	n20	5240	17.783	29.286	Pass

Test Graphs

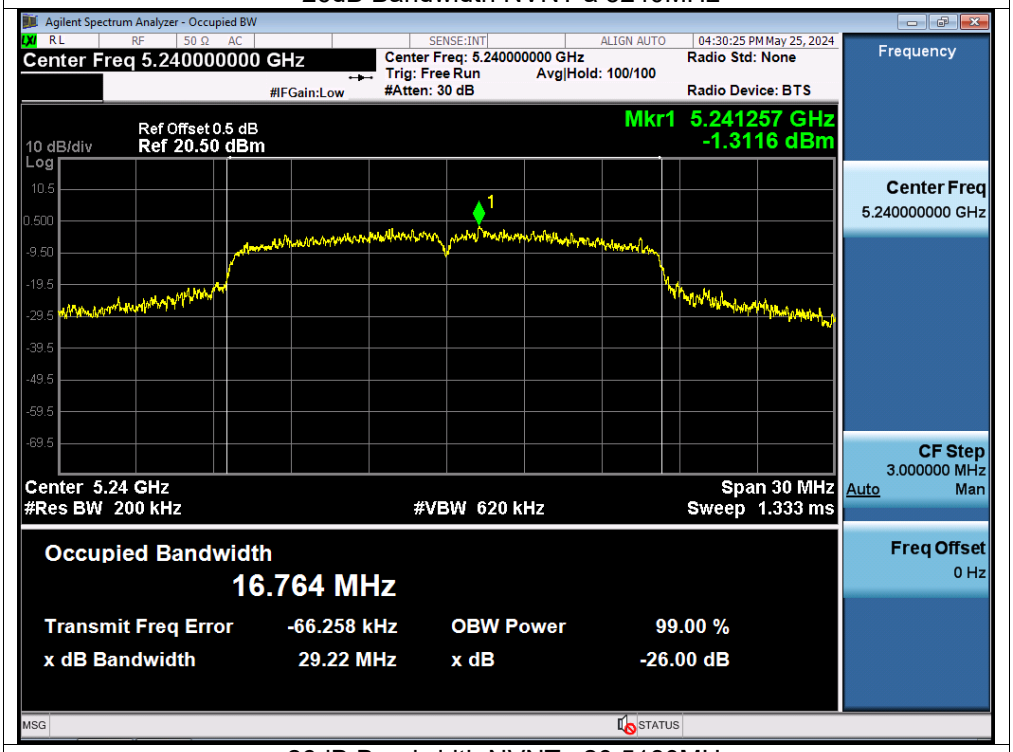
-26dB Bandwidth NVNT a 5180MHz



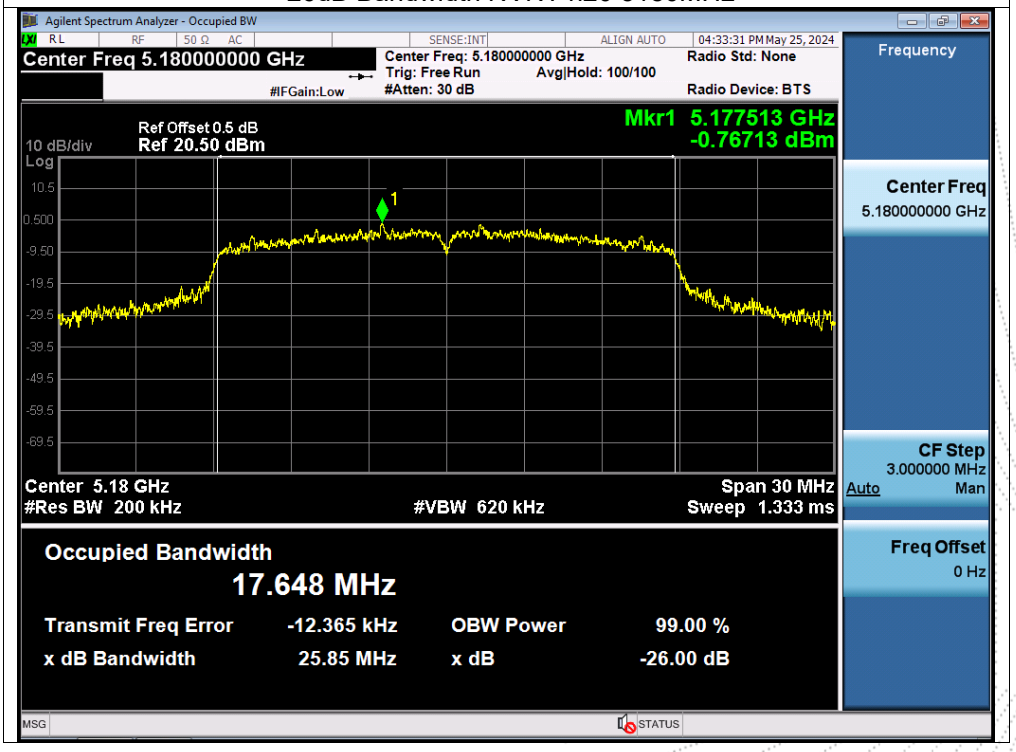
-26dB Bandwidth NVNT a 5200MHz



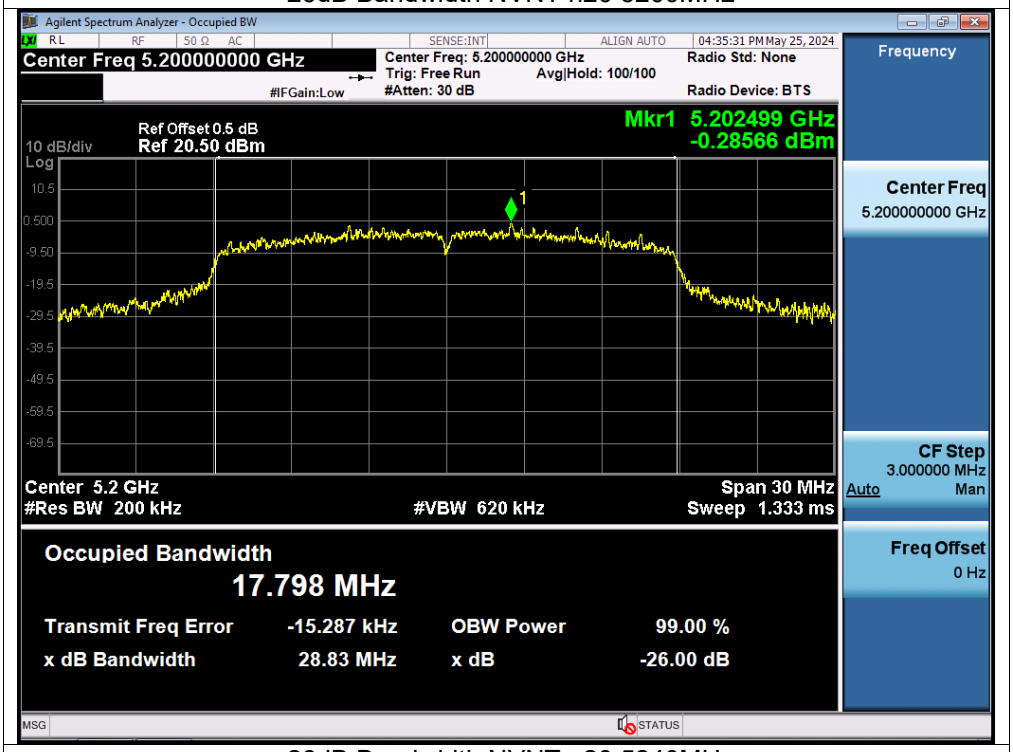
-26dB Bandwidth NVNT a 5240MHz



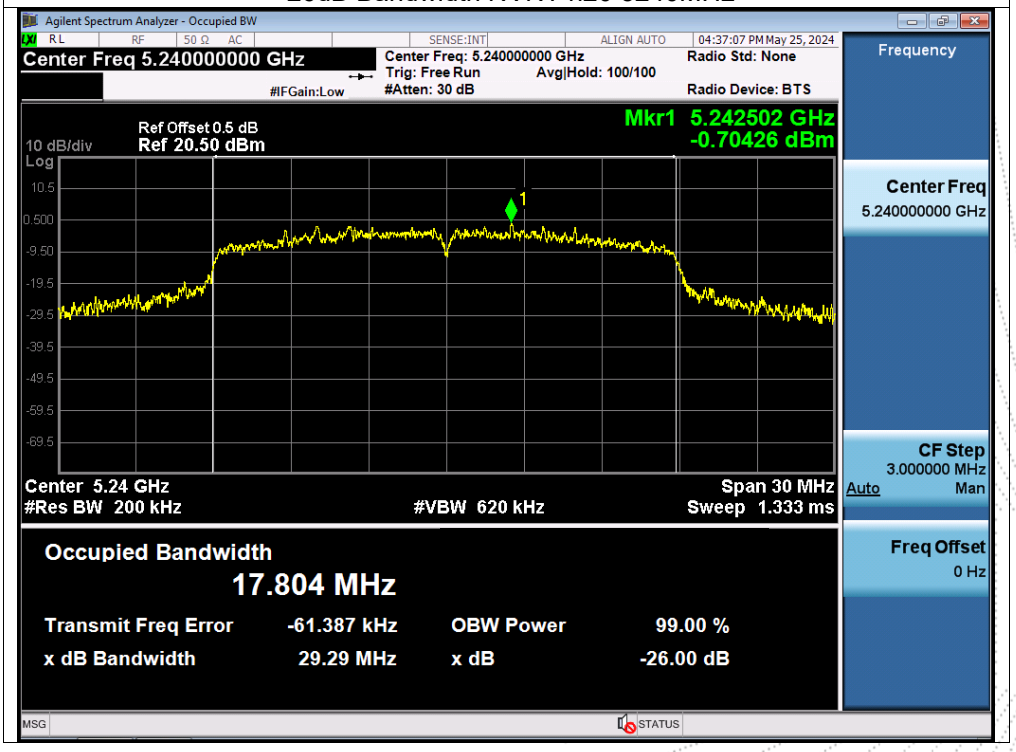
-26dB Bandwidth NVNT n20 5180MHz



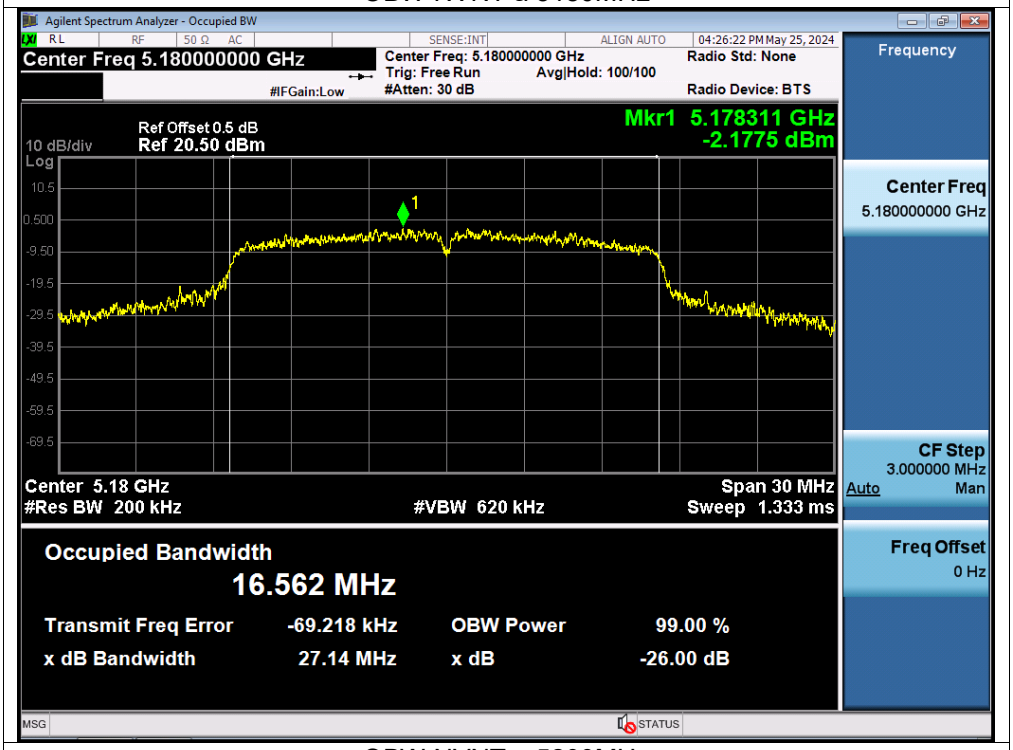
-26dB Bandwidth NVNT n20 5200MHz



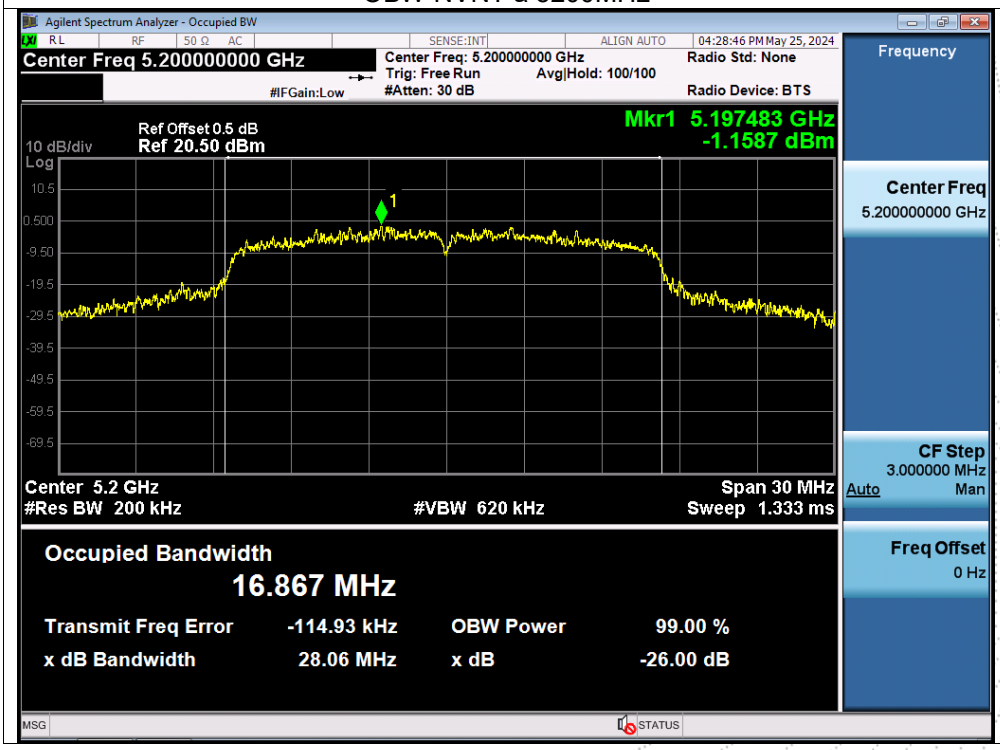
-26dB Bandwidth NVNT n20 5240MHz



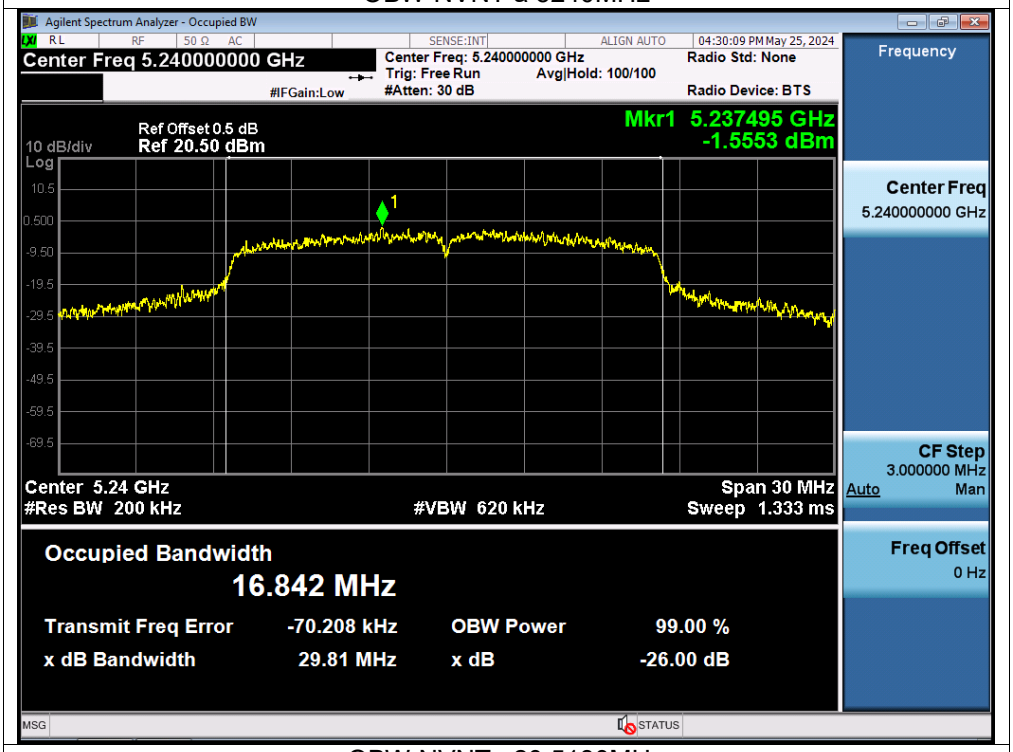
Test Graphs
OBW NVNT a 5180MHz



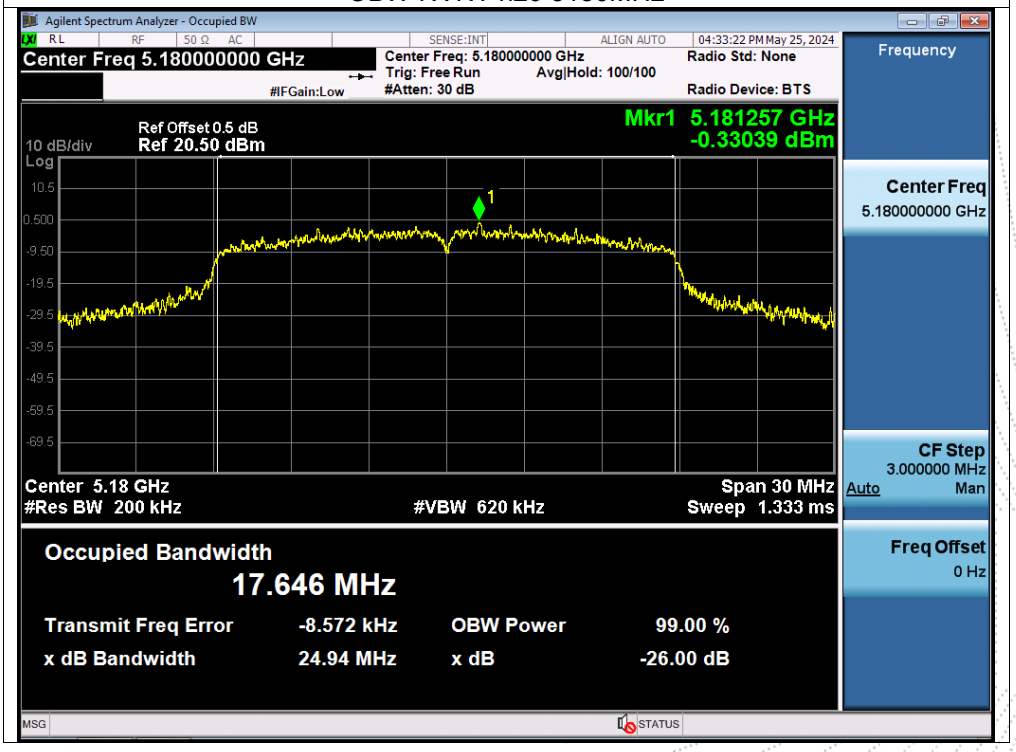
OBW NVNT a 5200MHz



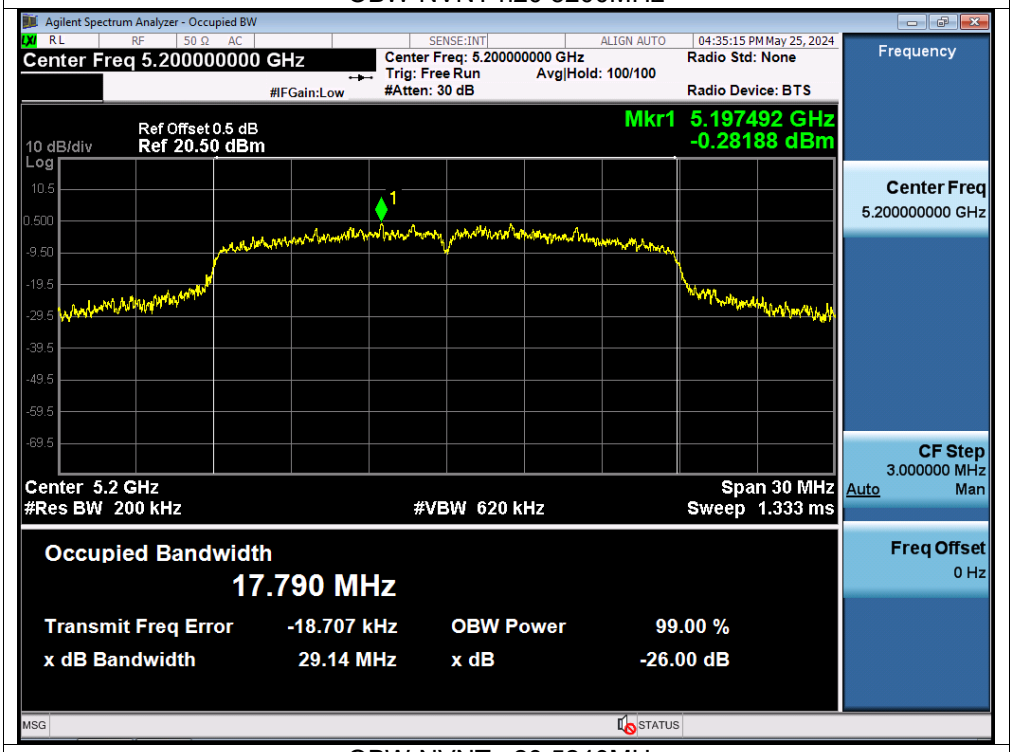
OBW NVNT a 5240MHz



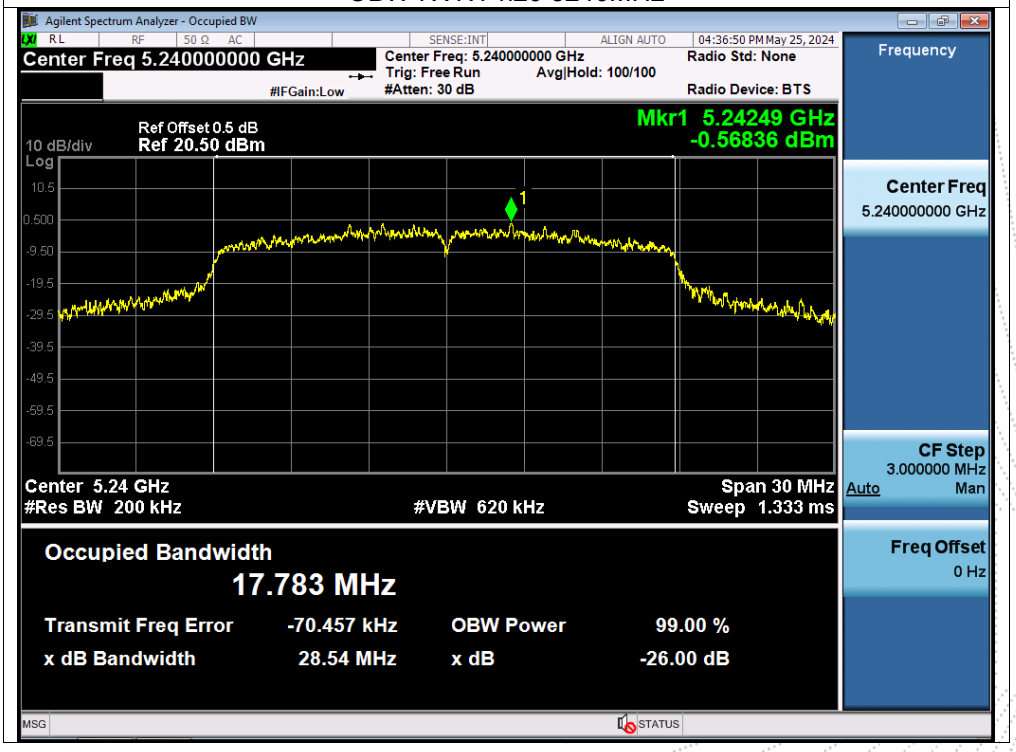
OBW NVNT n20 5180MHz



OBW NVNT n20 5200MHz



OBW NVNT n20 5240MHz

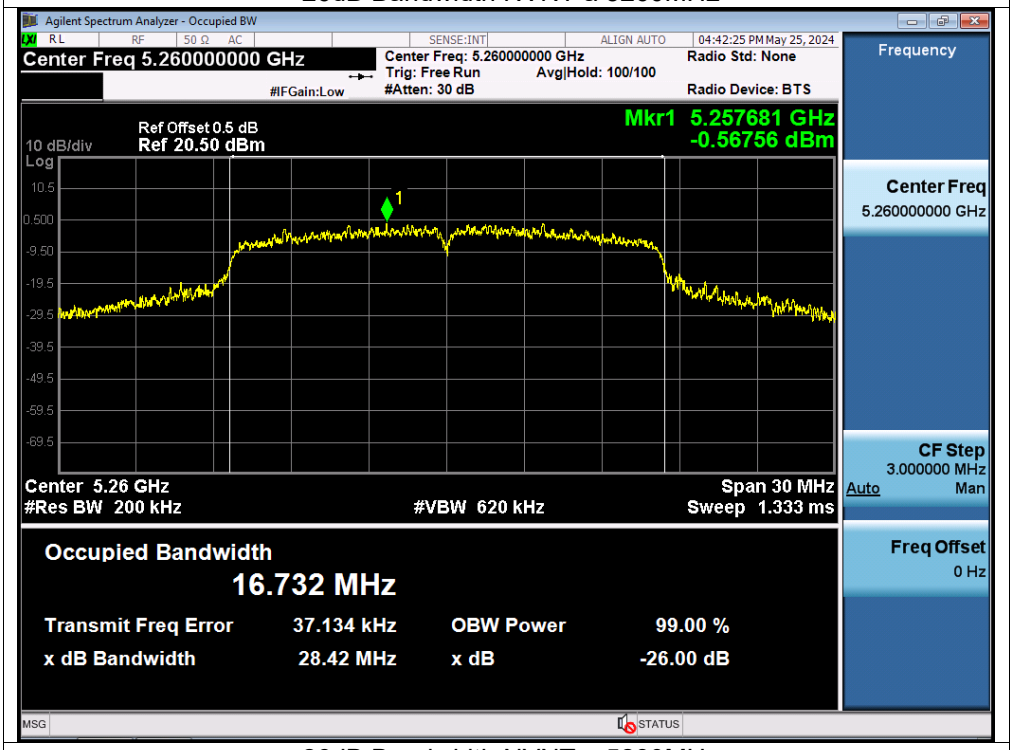


Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	DC 5V
Test Mode:	(5260-5320MHz)		

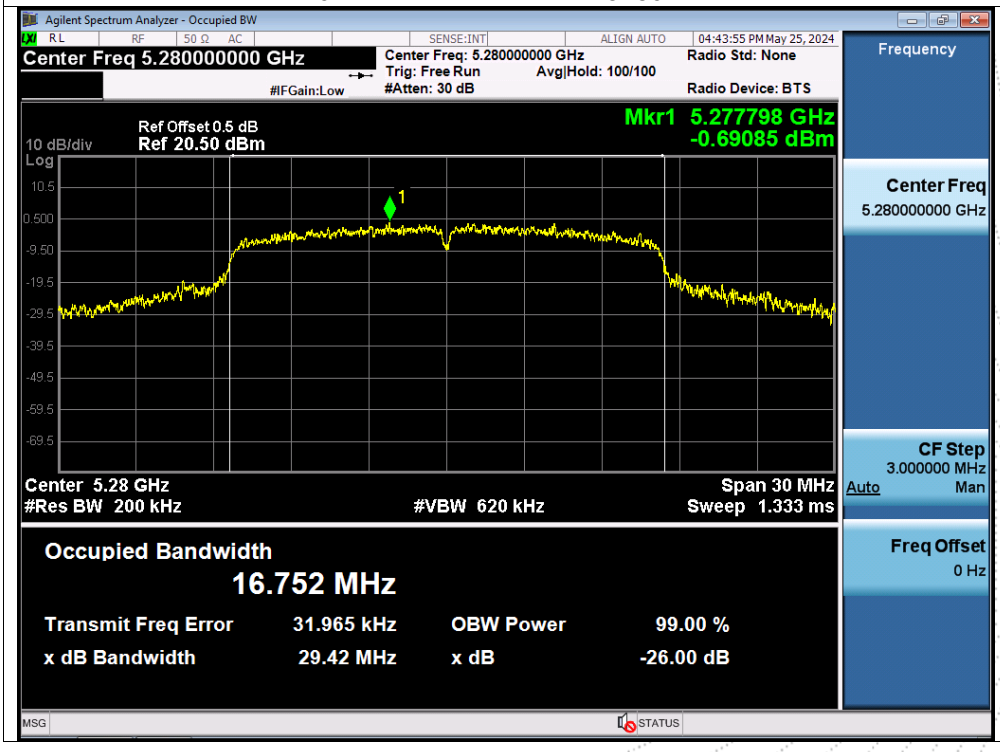
Condition	Mode	Frequency (MHz)	99% bandwidth (MHz)	-26dB bandwidth (MHz)	Result
NVNT	a	5260	16.749	28.425	Pass
NVNT	a	5280	16.684	29.424	Pass
NVNT	a	5320	16.443	24.763	Pass
NVNT	n20	5260	17.781	27.754	Pass
NVNT	n20	5280	17.731	29.414	Pass
NVNT	n20	5320	17.591	24.059	Pass

Test Graphs

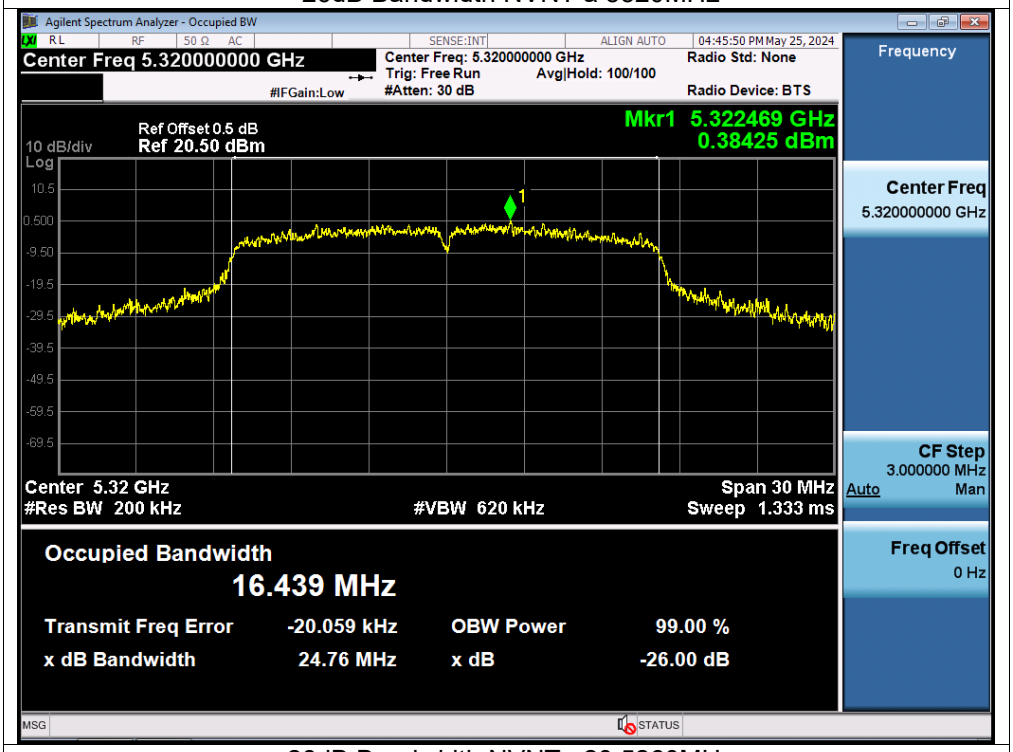
-26dB Bandwidth NVNT a 5260MHz



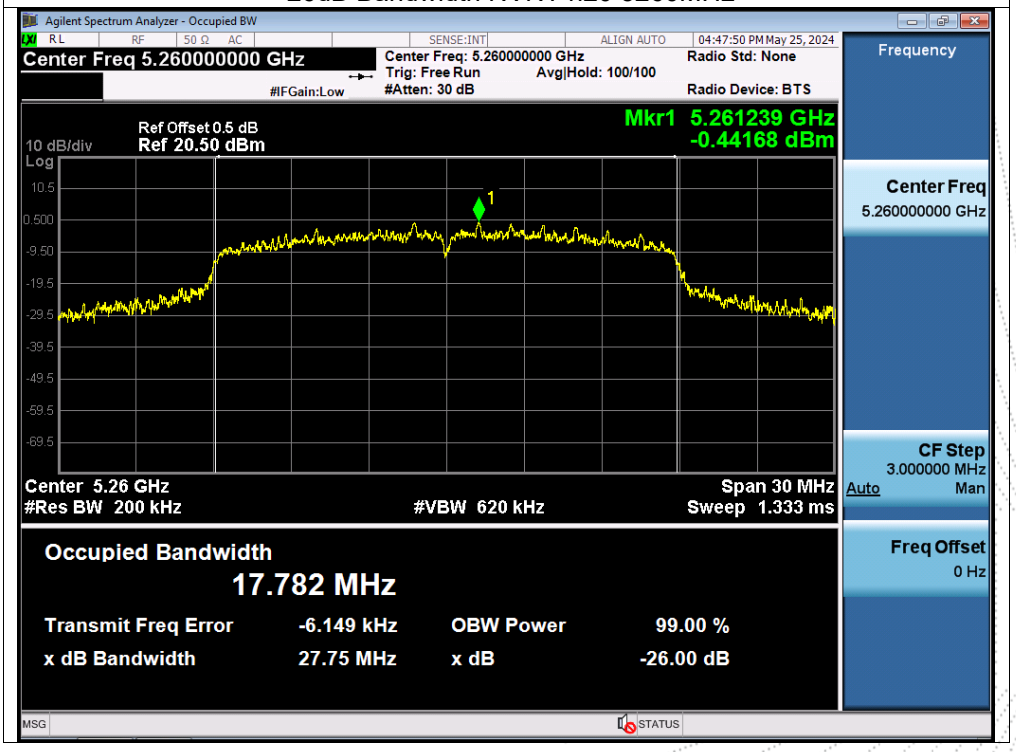
-26dB Bandwidth NVNT a 5280MHz



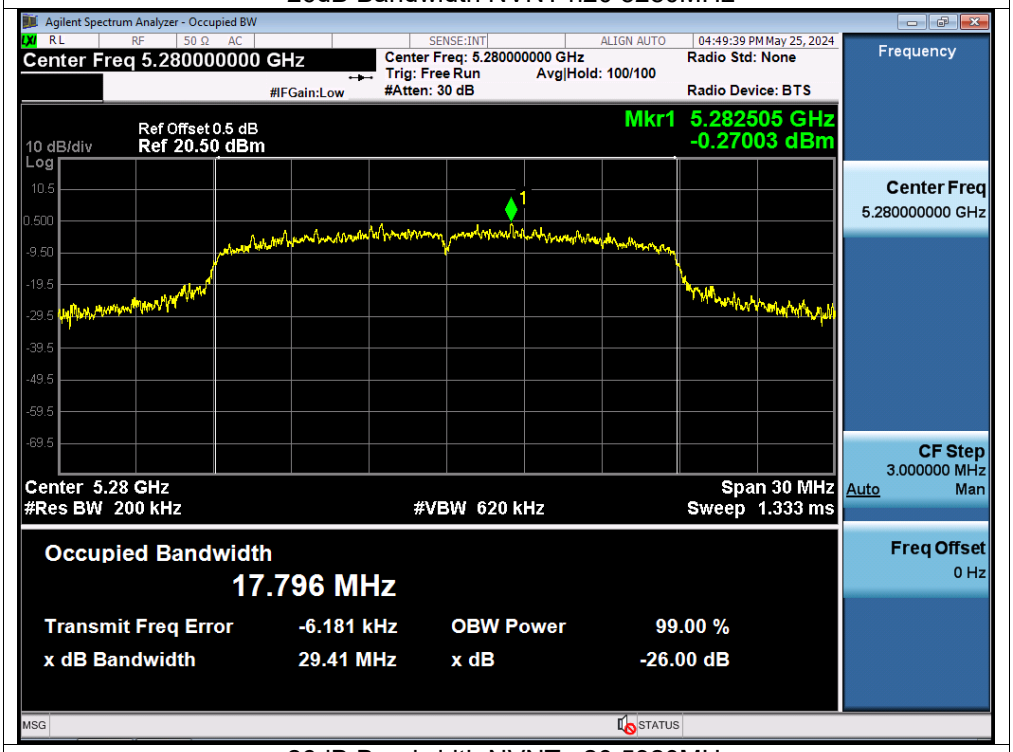
-26dB Bandwidth NVNT a 5320MHz



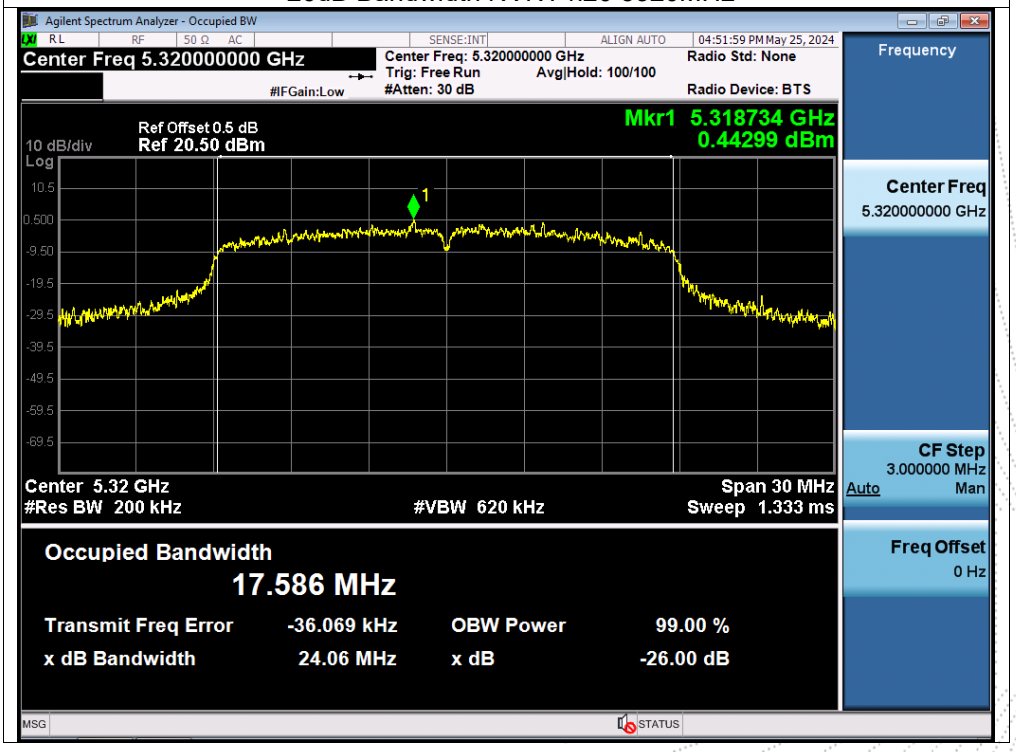
-26dB Bandwidth NVNT n20 5260MHz



-26dB Bandwidth NVNT n20 5280MHz

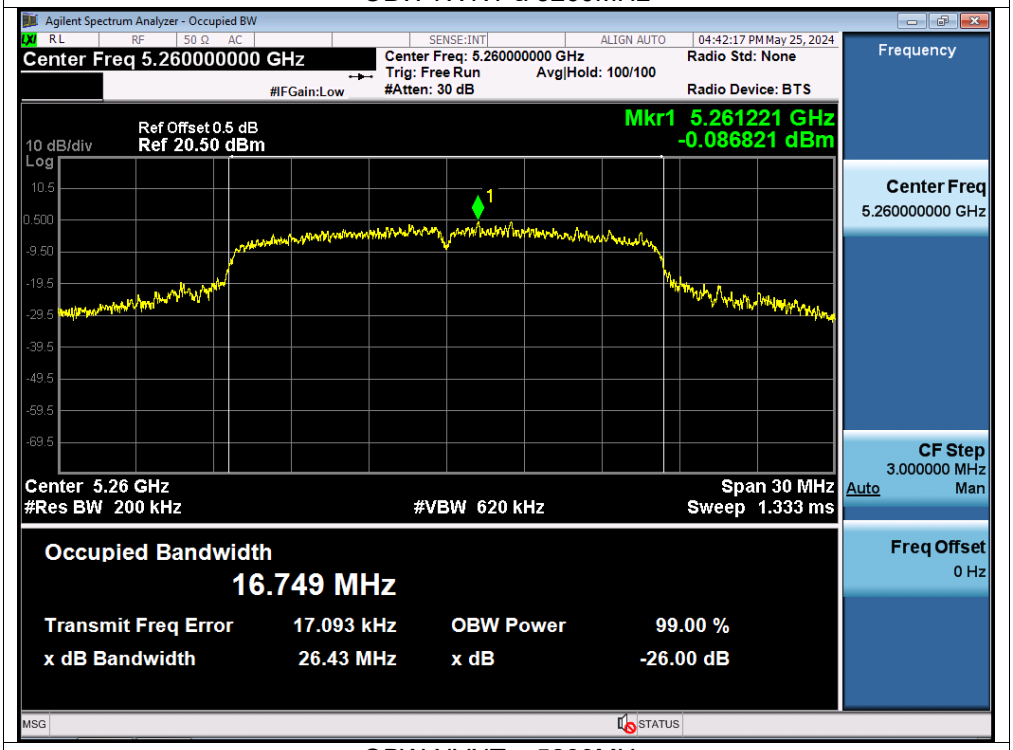


-26dB Bandwidth NVNT n20 5320MHz

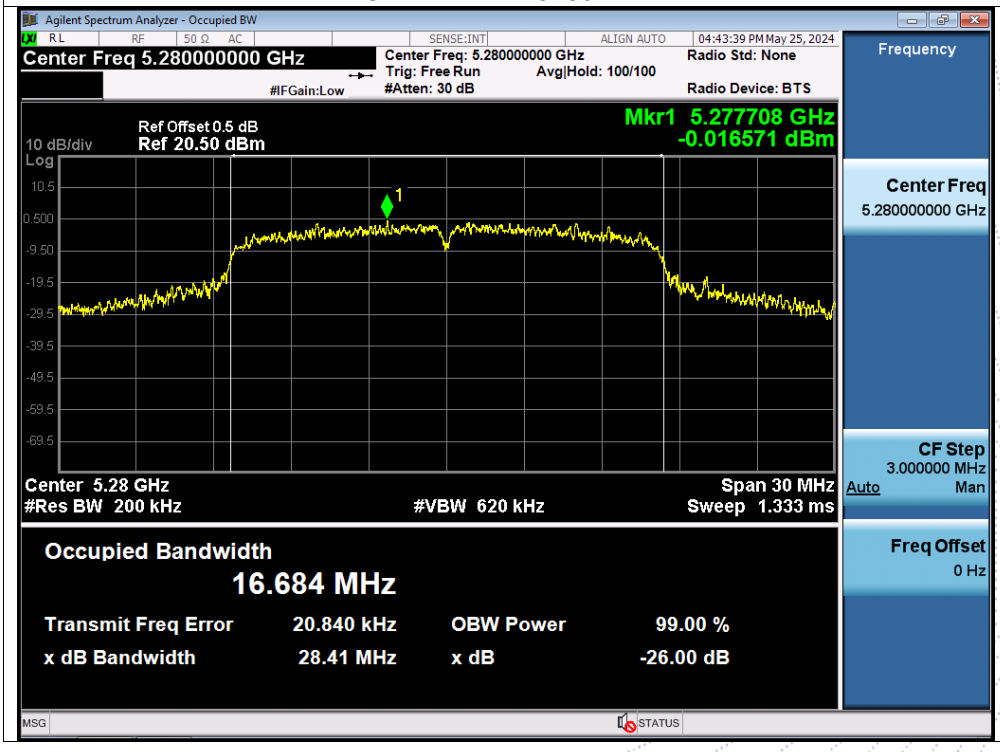


Test Graphs

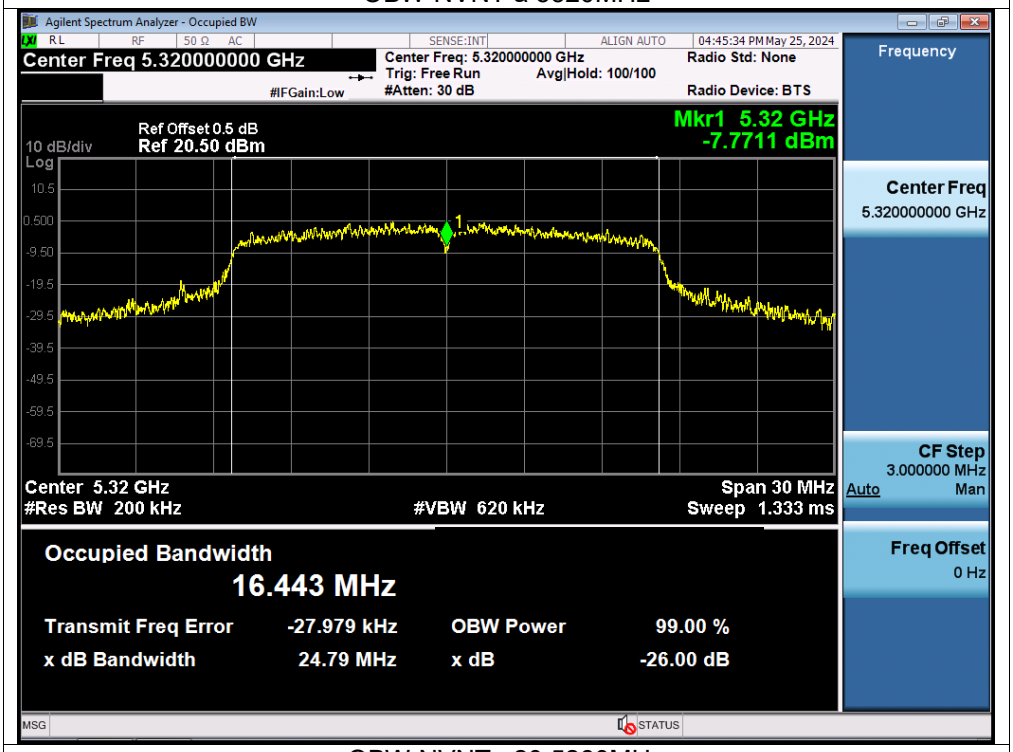
OBW NVNT a 5260MHz



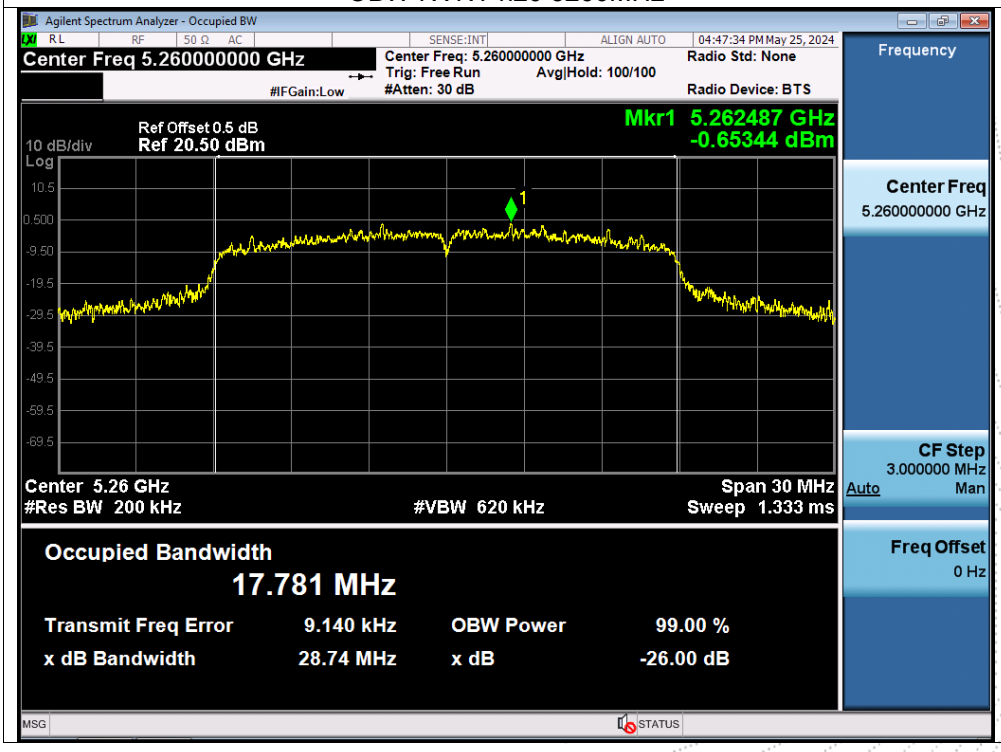
OBW NVNT a 5280MHz



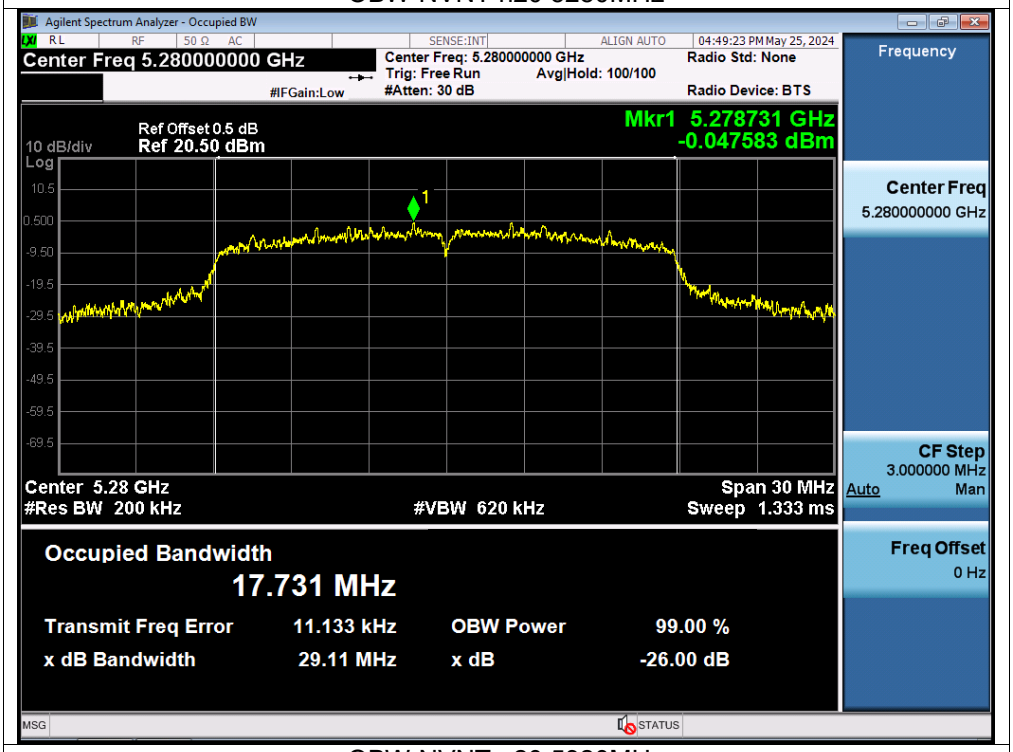
OBW NVNT a 5320MHz



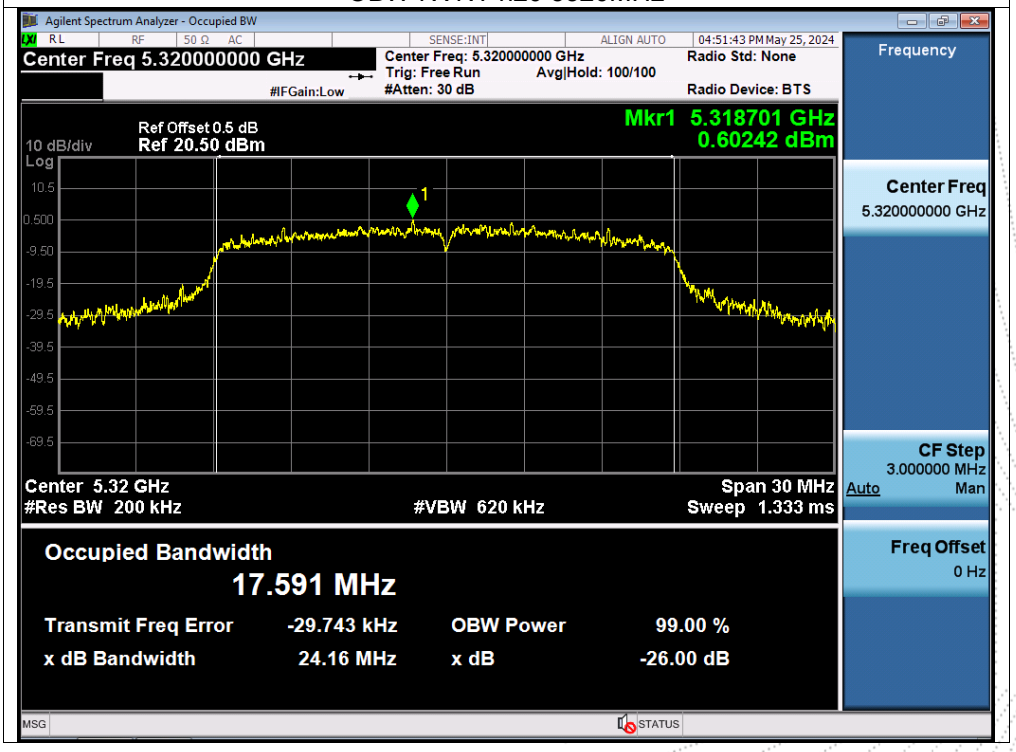
OBW NVNT n20 5260MHz



OBW NVNT n20 5280MHz



OBW NVNT n20 5320MHz

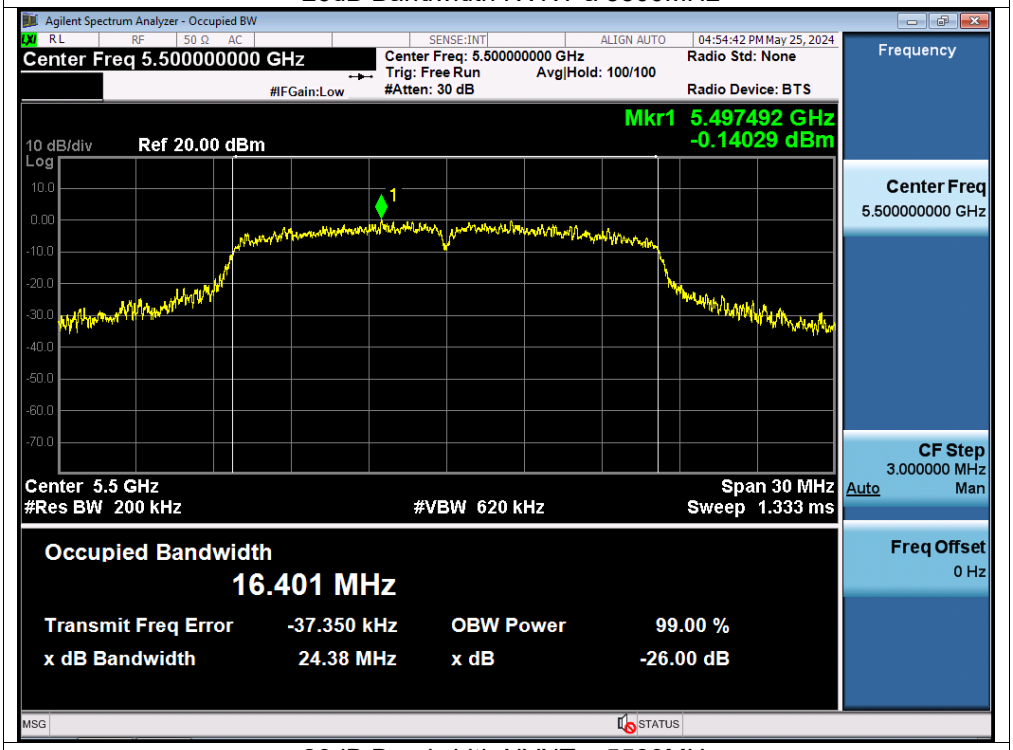


Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	DC 5V
Test Mode:	(5500-5700MHz)		

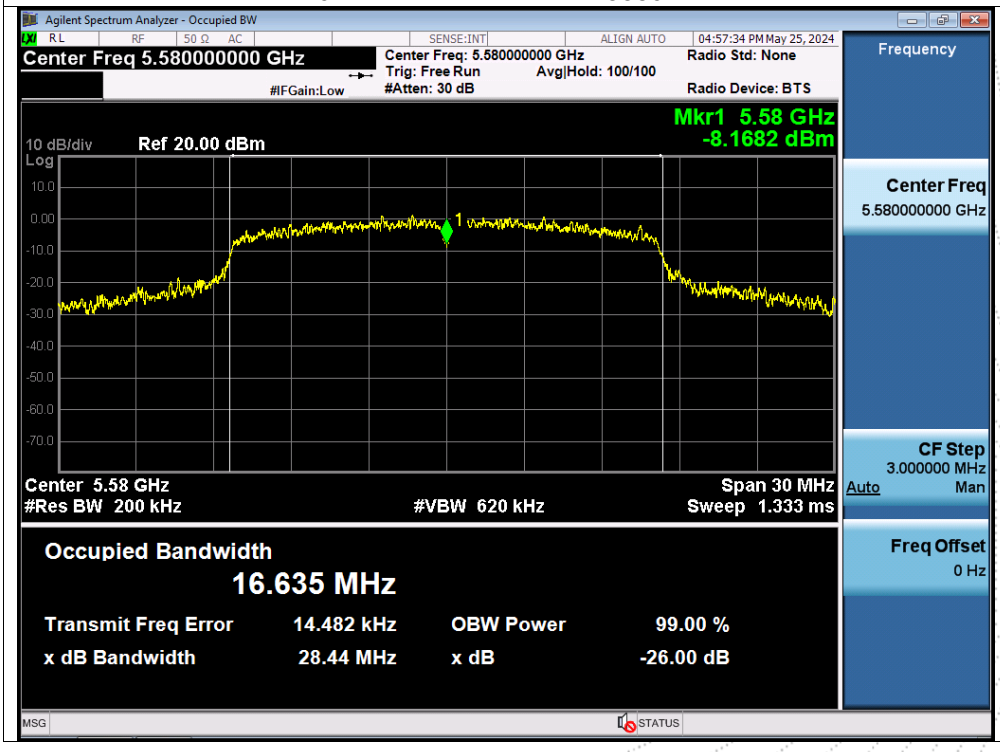
Condition	Mode	Frequency (MHz)	99% bandwidth (MHz)	-26dB bandwidth (MHz)	Result
NVNT	a	5500	16.408	24.384	Pass
NVNT	a	5580	16.679	28.442	Pass
NVNT	a	5700	16.329	21.036	Pass
NVNT	n20	5500	17.528	24.81	Pass
NVNT	n20	5580	17.779	28.268	Pass
NVNT	n20	5700	17.481	23.065	Pass

Test Graphs

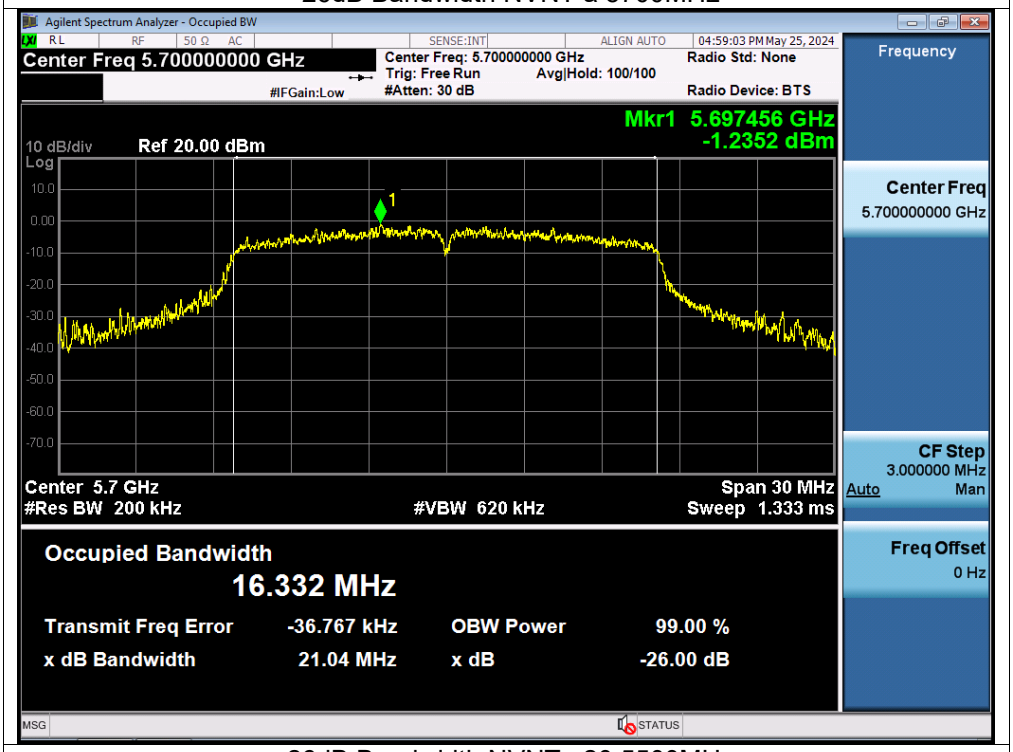
-26dB Bandwidth NVNT a 5500MHz



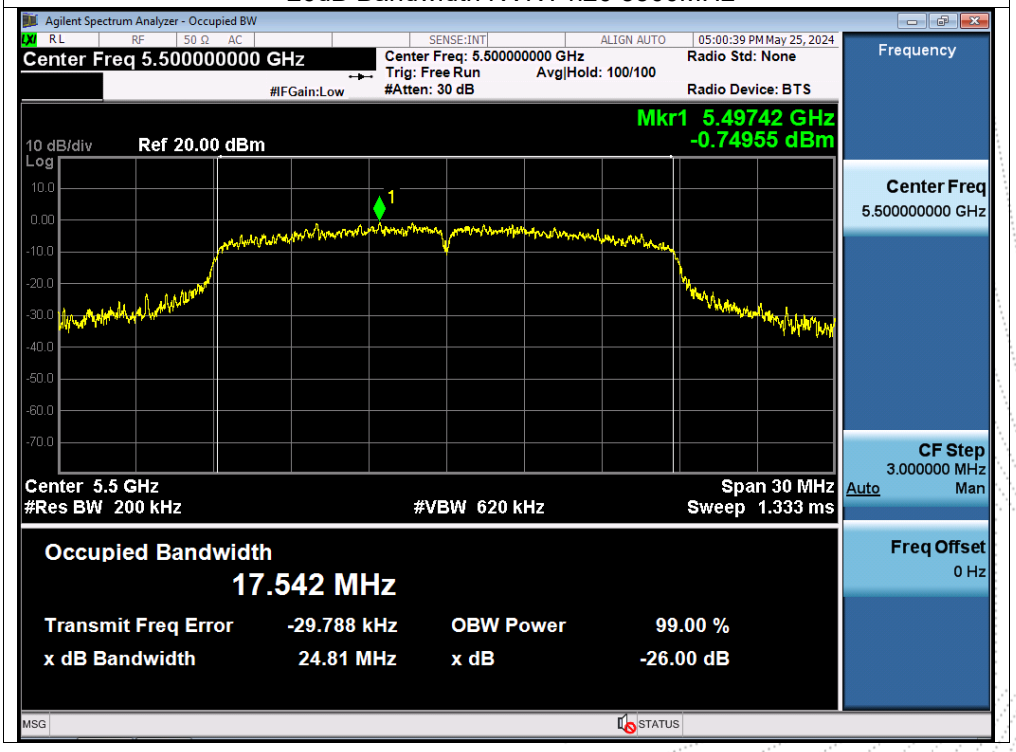
-26dB Bandwidth NVNT a 5580MHz



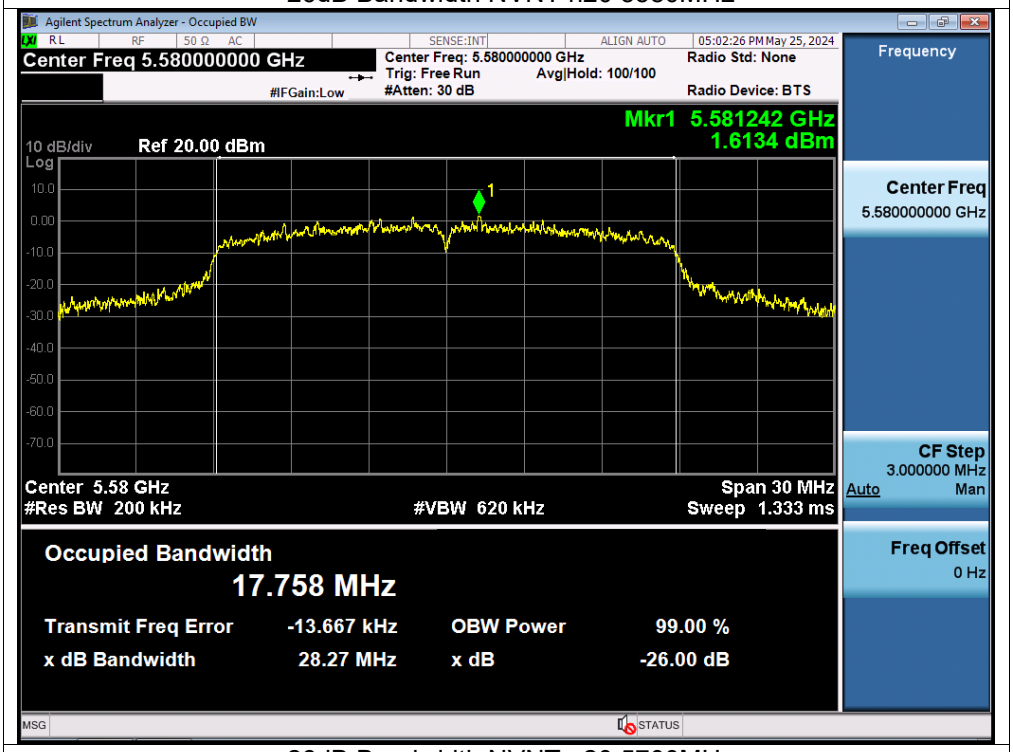
-26dB Bandwidth NVNT a 5700MHz



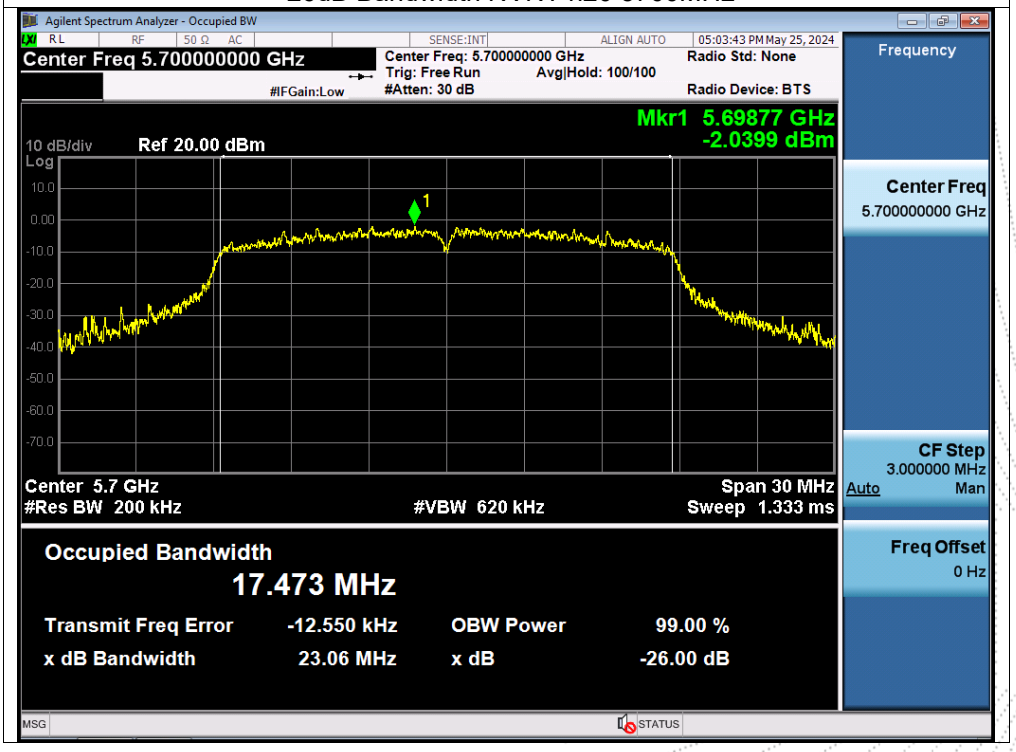
-26dB Bandwidth NVNT n20 5500MHz



-26dB Bandwidth NVNT n20 5580MHz

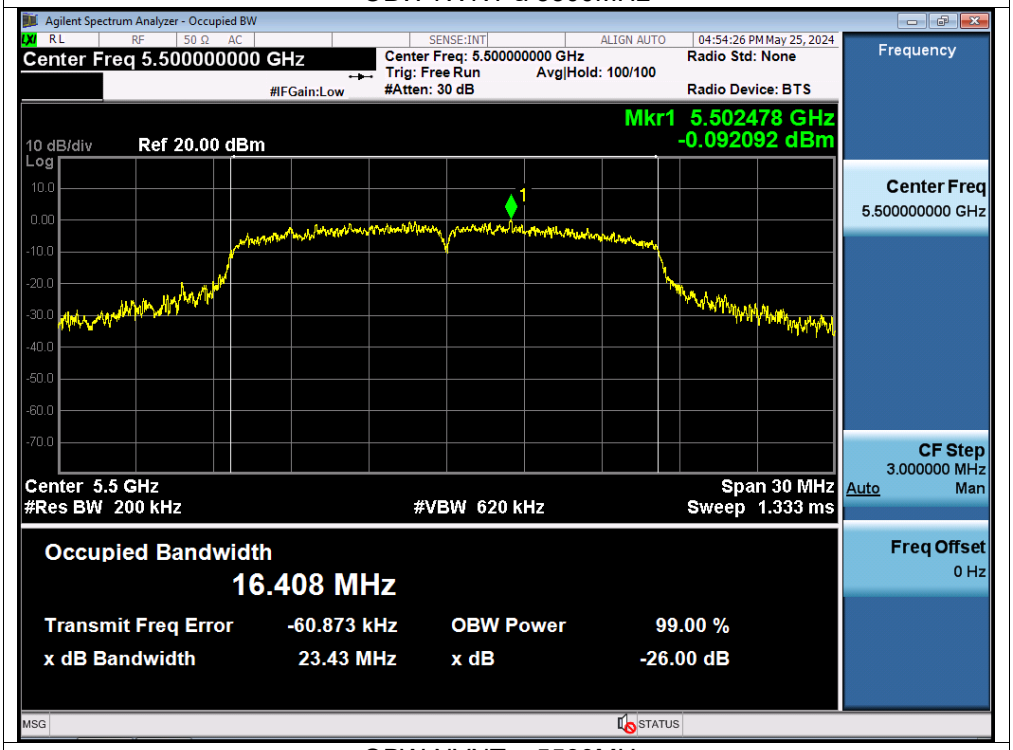


-26dB Bandwidth NVNT n20 5700MHz

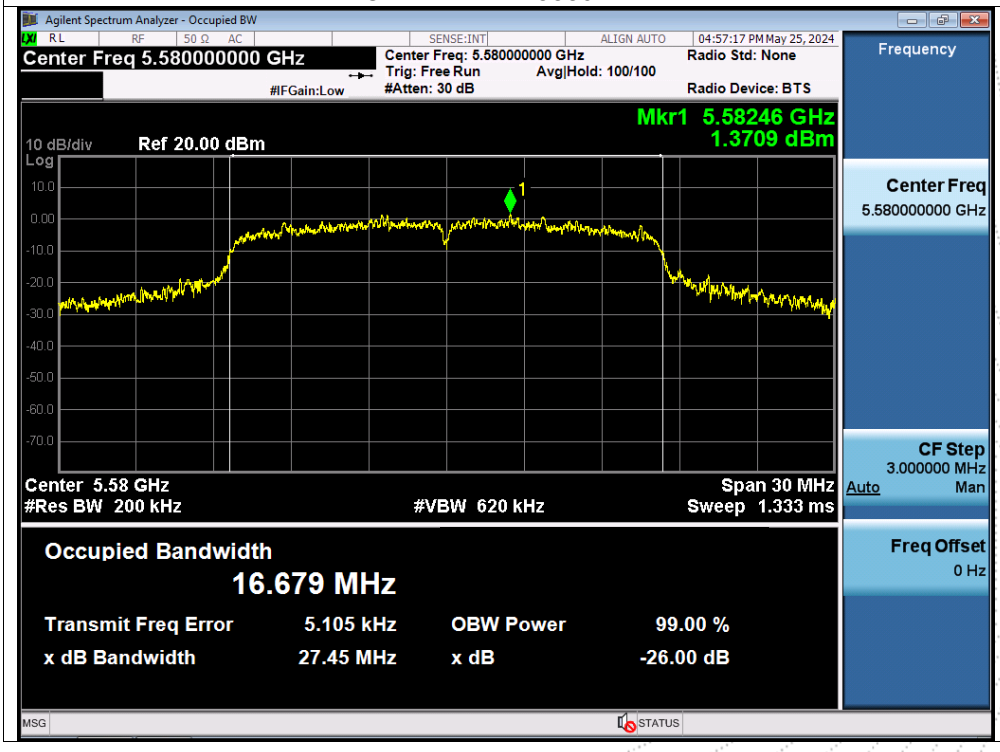


Test Graphs

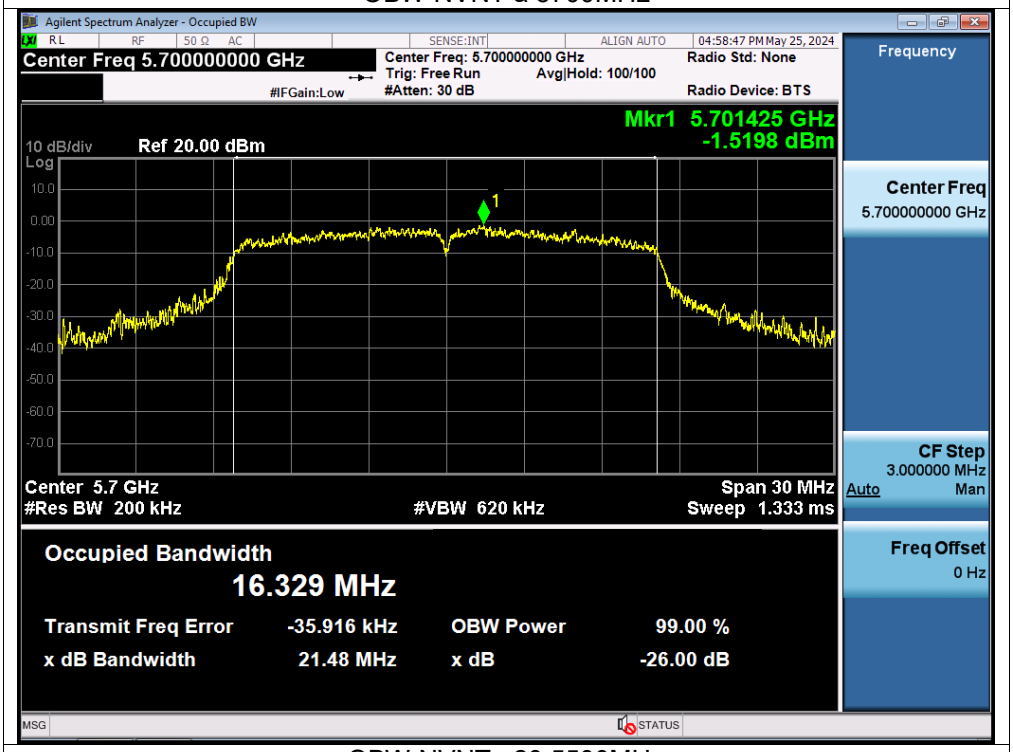
OBW NVNT a 5500MHz



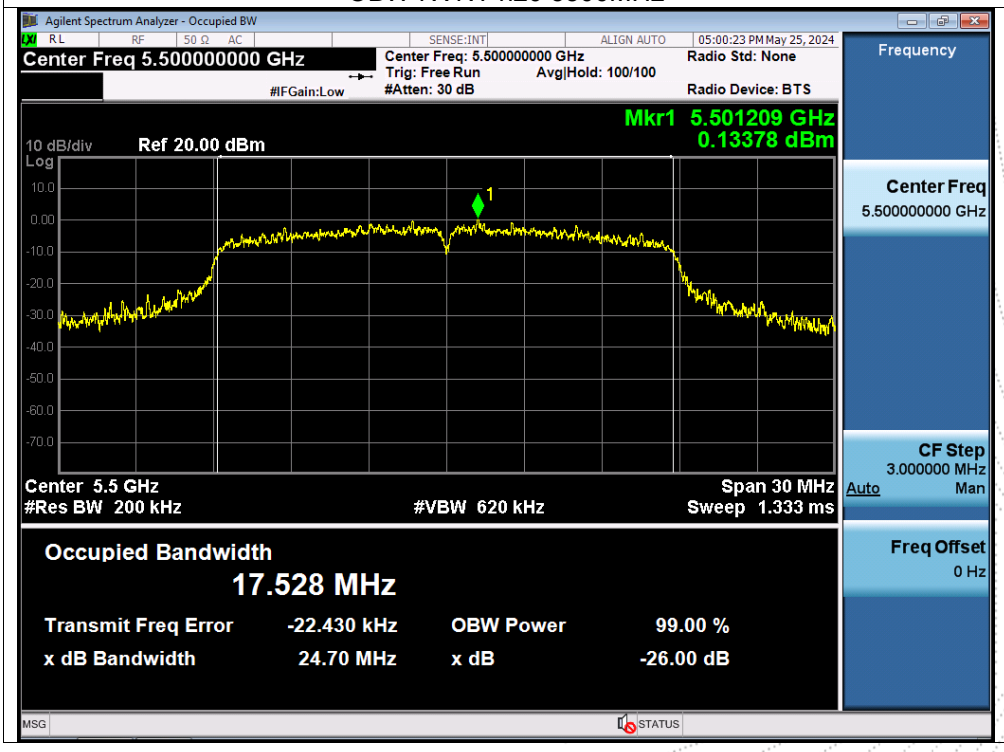
OBW NVNT a 5580MHz



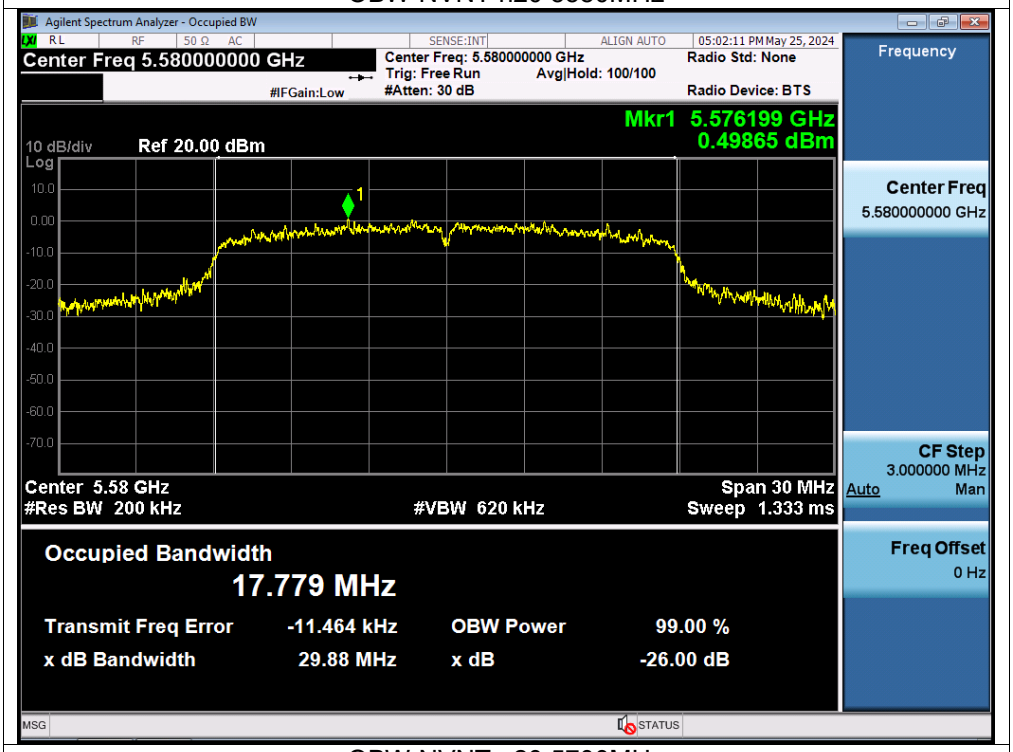
OBW NVNT a 5700MHz



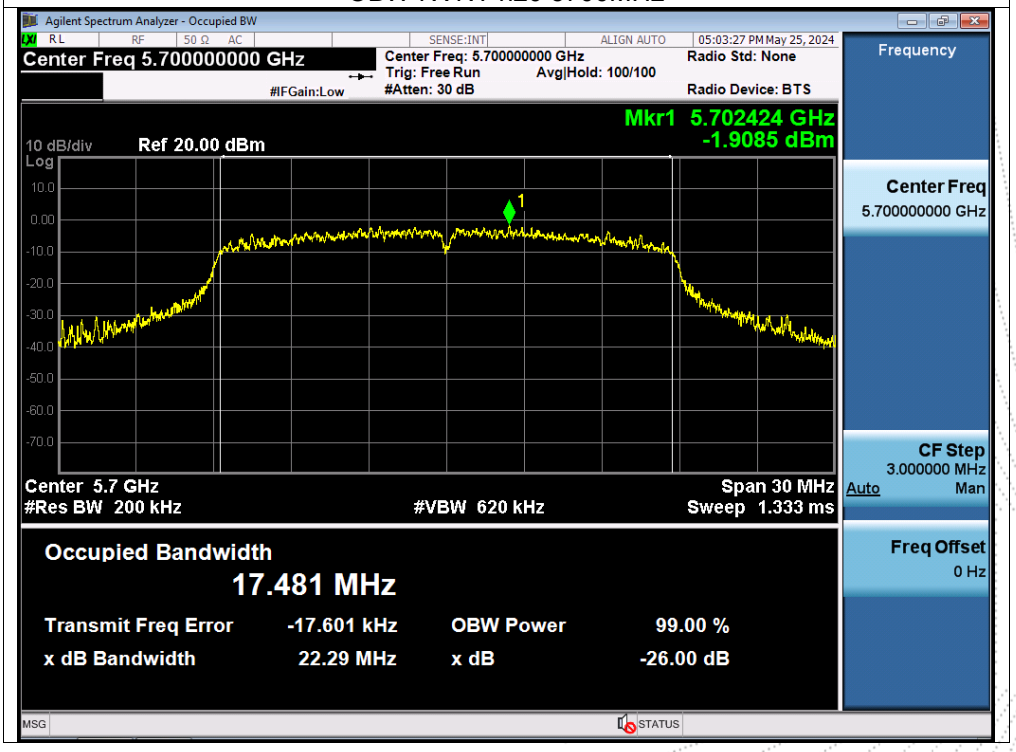
OBW NVNT n20 5500MHz



OBW NVNT n20 5580MHz



OBW NVNT n20 5700MHz

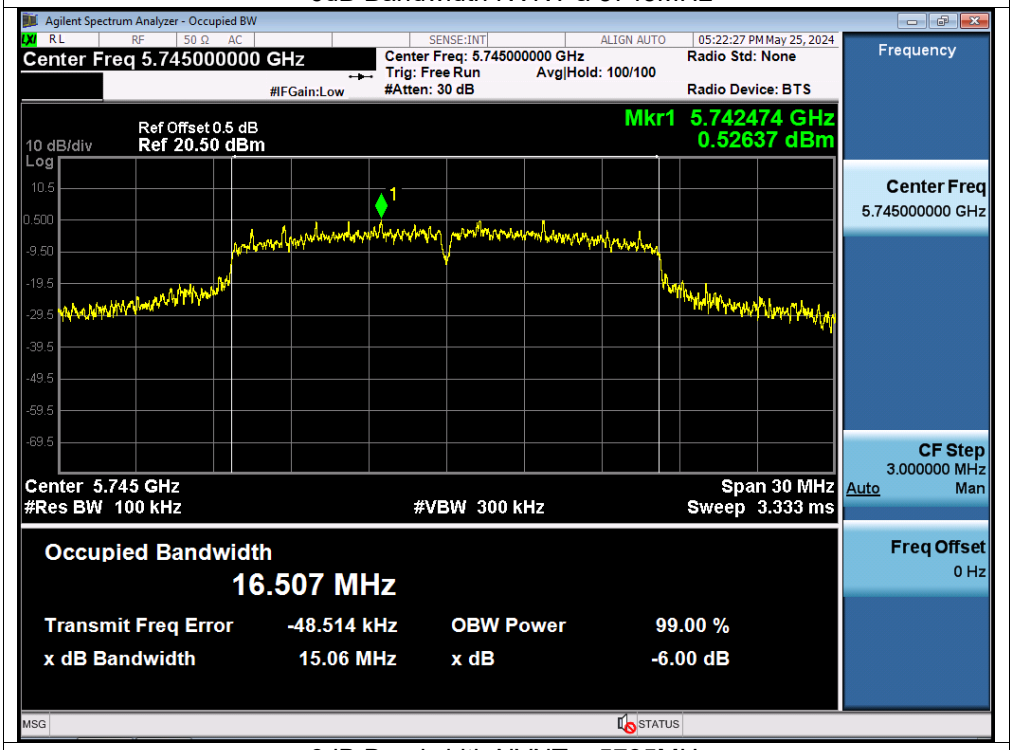


Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	DC 5V
Test Mode:	(5745-5825MHz)		

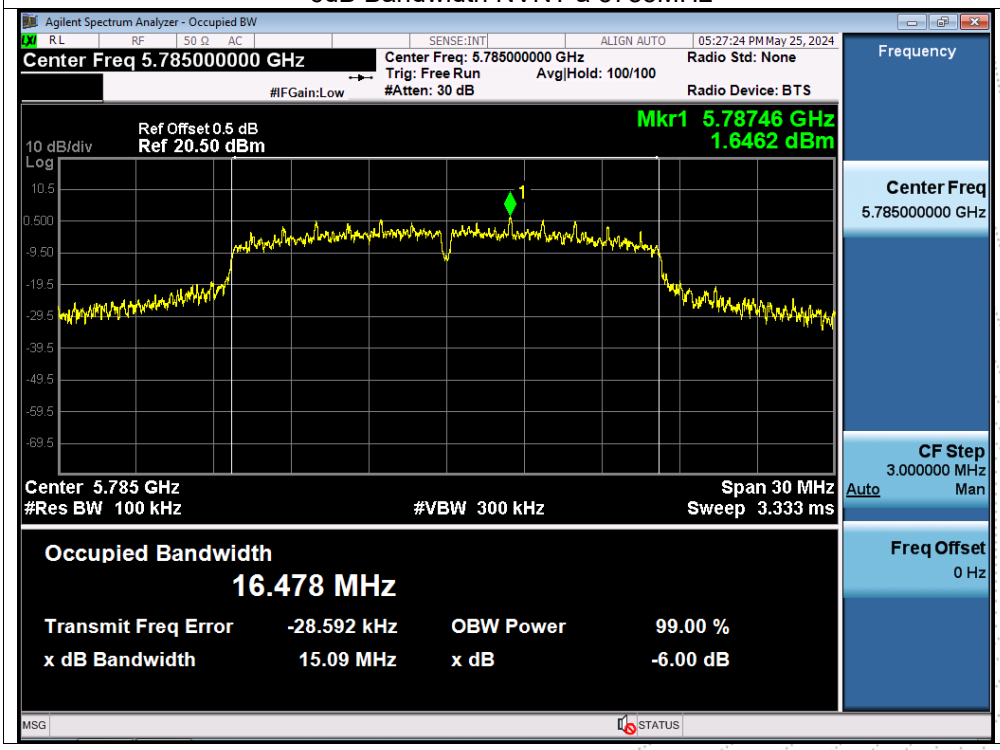
Condition	Mode	Frequency (MHz)	99% bandwidth (MHz)	-6dB bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Result
NVNT	a	5745	16.662	15.065	0.5	Pass
NVNT	a	5785	16.584	15.095	0.5	Pass
NVNT	a	5825	16.434	15.043	0.5	Pass
NVNT	n20	5745	17.696	13.859	0.5	Pass
NVNT	n20	5785	17.622	15.066	0.5	Pass
NVNT	n20	5825	17.507	15.111	0.5	Pass

Test Graphs

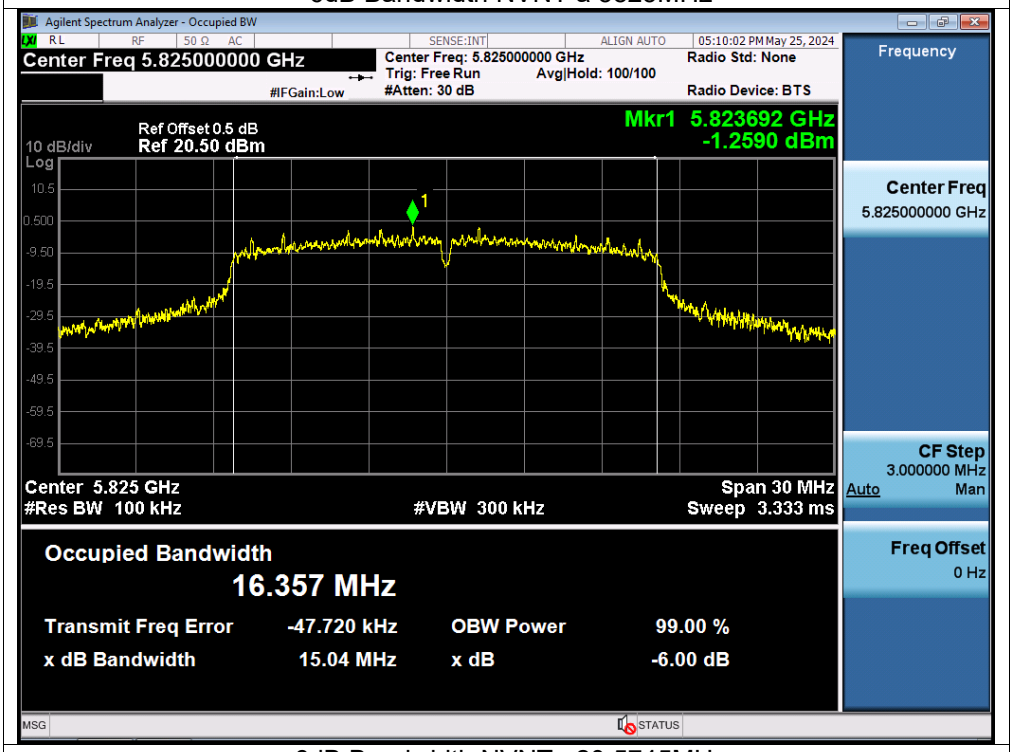
-6dB Bandwidth NVNT a 5745MHz



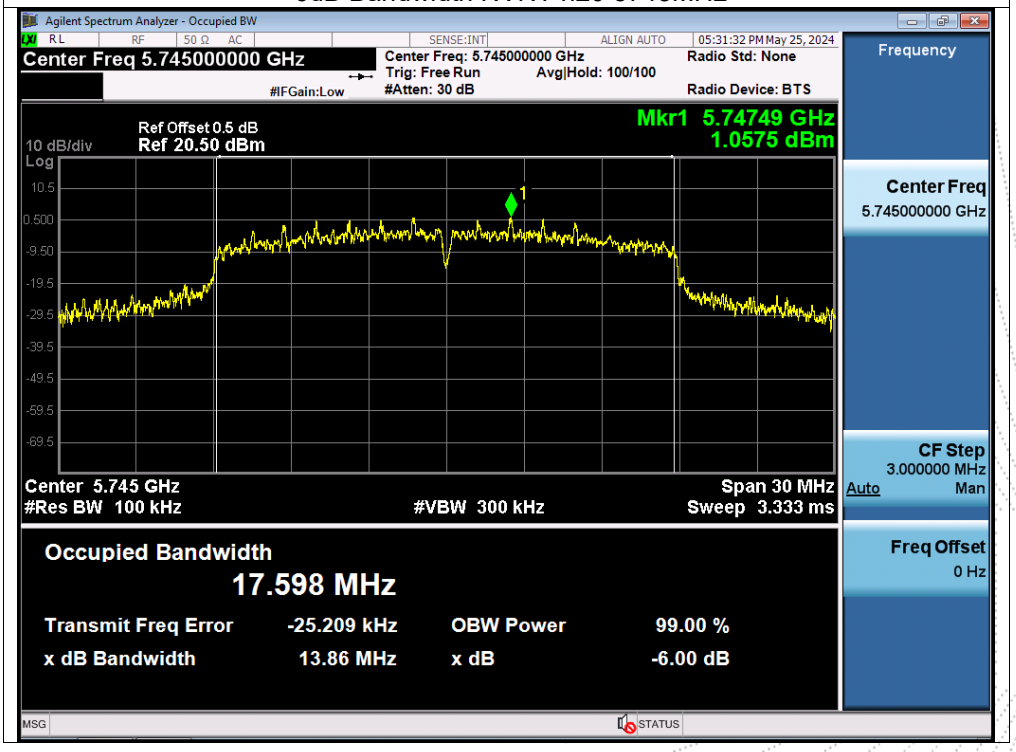
-6dB Bandwidth NVNT a 5785MHz



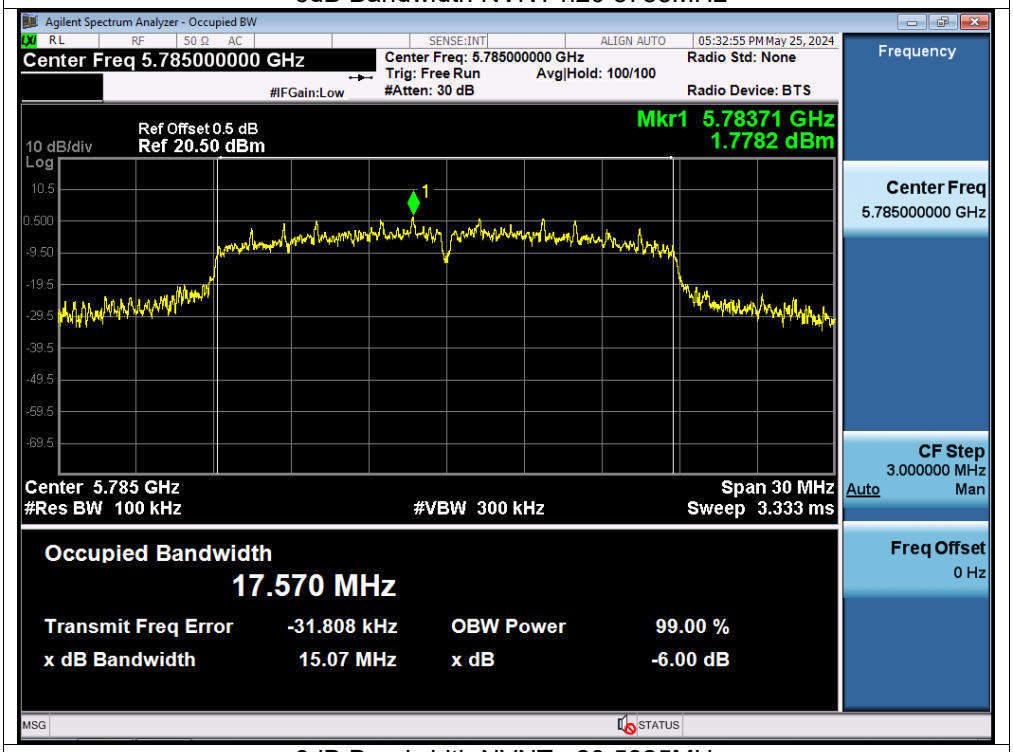
-6dB Bandwidth NVNT a 5825MHz



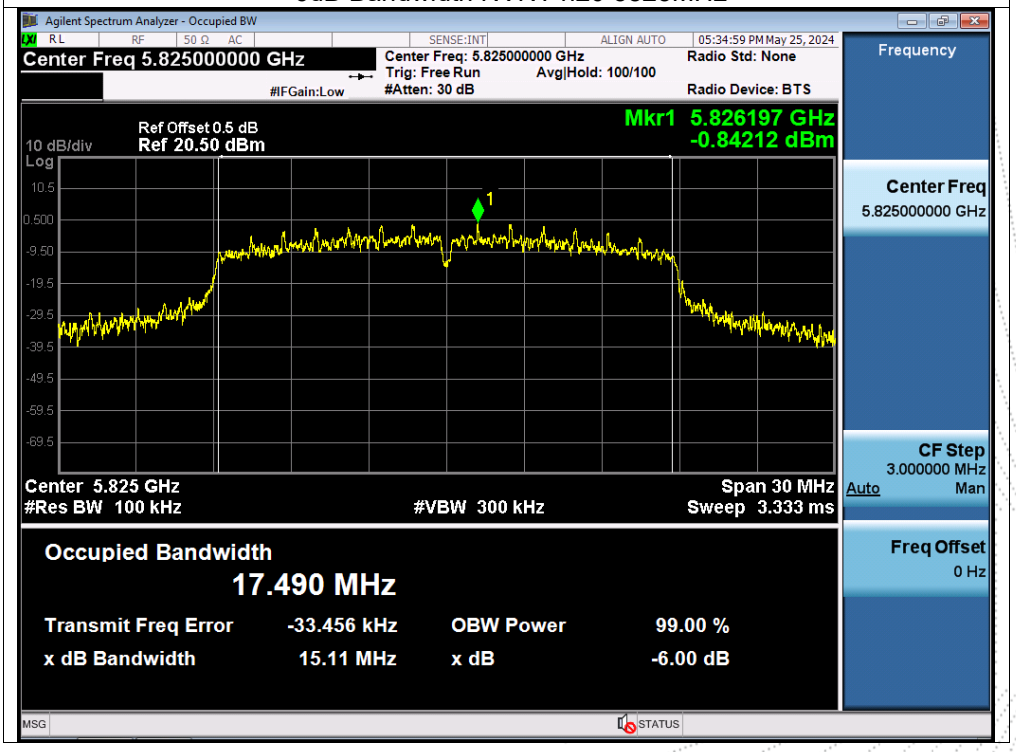
-6dB Bandwidth NVNT n20 5745MHz



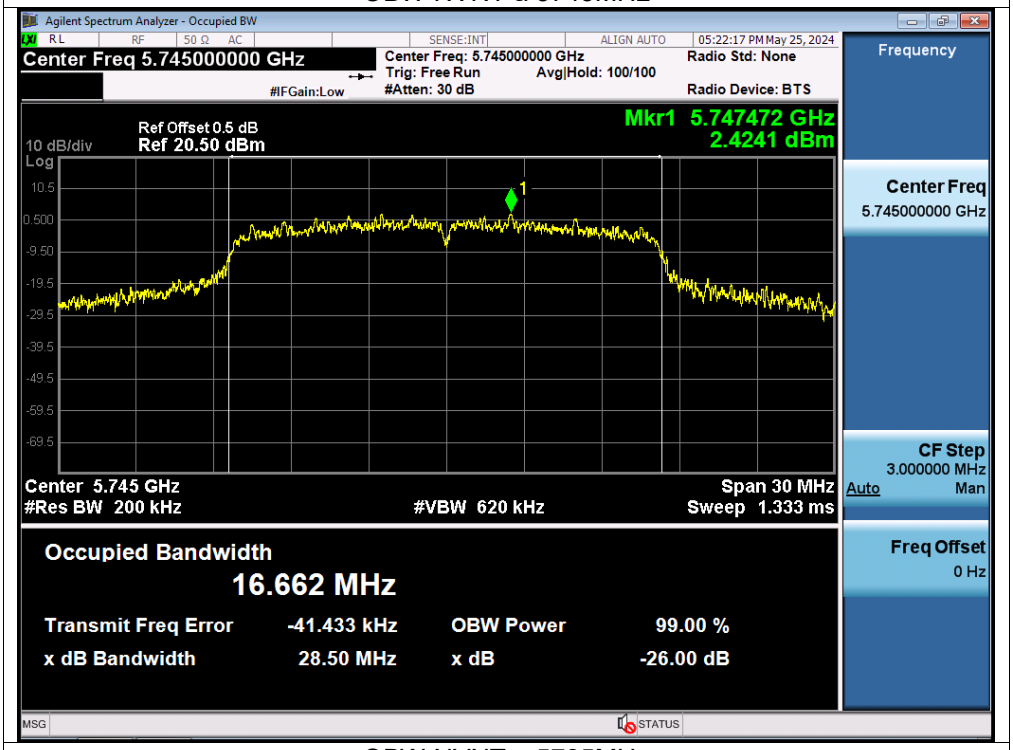
-6dB Bandwidth NVNT n20 5785MHz



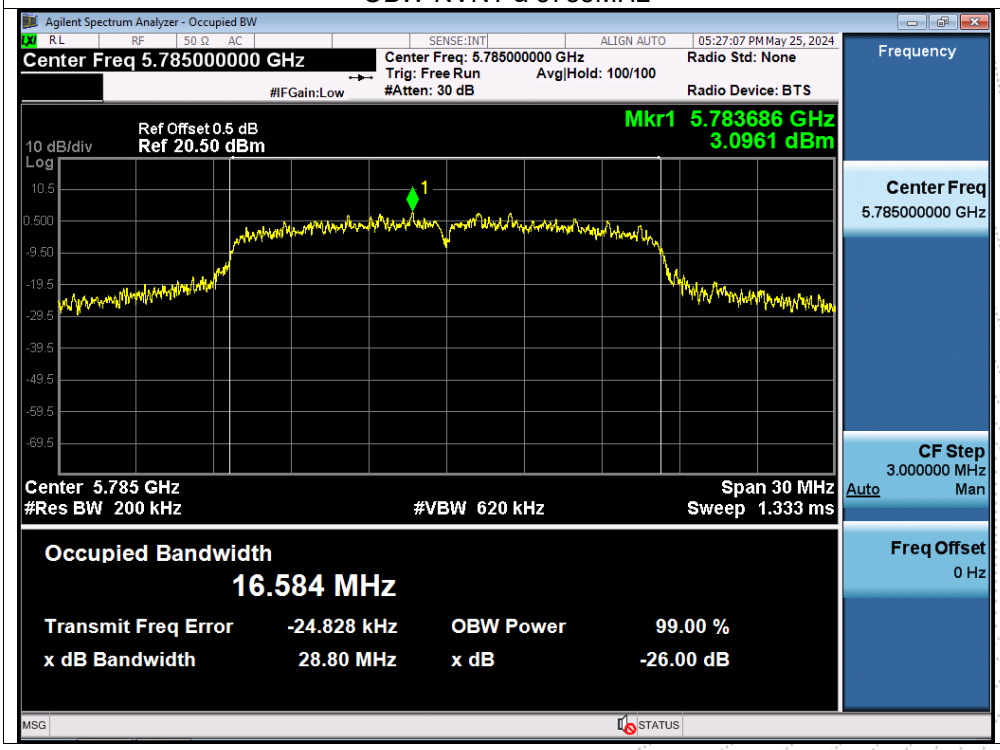
-6dB Bandwidth NVNT n20 5825MHz



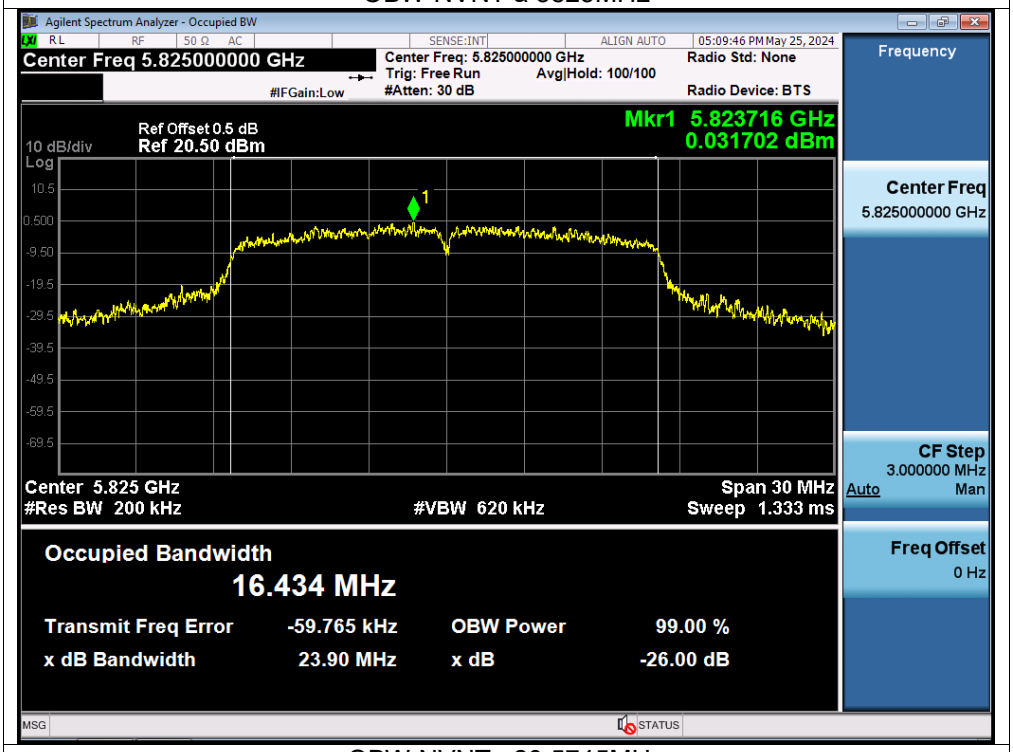
Test Graphs
OBW NVNT a 5745MHz



OBW NVNT a 5785MHz



OBW NVNT a 5825MHz



OBW NVNT n20 5745MHz