TEST REPORT

Report No.:	BCTC2504049467-3E
Applicant:	Luna Home LLC
Product Name:	Smart Home Camera
Test Model:	Home Cam V3
Tested Date:	2025-04-14 to 2025-05-12
Issued Date:	2025-05-12

Shenzhen BCTC Testing Co., Ltd.

FCC ID:2BOVXJS-R03V3

Product Name:	Smart Home Camera
Trademark:	LUNA
Model/Type Reference:	Home Cam V3,Home Cam V1,Home Cam V2,Home Cam V4,Home Cam V5,Home Cam V6,Flex Cam,JS-P200,JS-R03 V3,JS-R04,JS-R07,JS-R08,JS-R09,JS-R10, JS-R11,JS-R12, JS-P160,JS-P166, JS-K259, JS-P09,JS-K500,JS-K5XX,JS-R0X, JS-R03 VXX,JS-P1XX,JS-P2XX,JS-K2XX,JS-GXX,JS-LXX(XX can be 01-99)
Prepared For:	Luna Home LLC
Address:	450 N 1500 W OREM UT 84057 USA
Manufacturer:	Shenzhen Whale Vision Technology Co., Ltd
Address:	4th Floor Block B Building 1 Hongfa Innovation Park Lezhujiao Jiuwei Community Hangcheng Subdistrict 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:	2025-04-14
Sample Tested Date:	2025-04-14 to 2025-05-12
Issue Date:	2025-05-12
Report No.:	BCTC2504049467-3E
Test Standards:	FCC Part15 15.407 ANSI C63.10-2013 KDB 662911 D01 v02r01 KDB 789033 D02 v02r01
Test Results:	PASS
Remark:	This is WIFI-5GHz band radio test report.

Tested by:

Brave Zeng/ Project Handler

Approved by:

Zero Zhou/Reviewer

Table Of Content

(Note: N/A Means Not Applicable)

1. Version

Report No.	Issue Date	Description	Approved
BCTC2504049467-3E	2025-05-12	Original	Valid

2. Test Summary

The Product has been tested according to the following specifications:

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

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

3. Measurement Uncertainty

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

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

4. Product Information And Test Setup

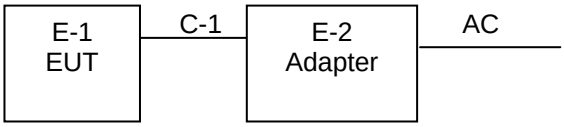
4.1 Product Information

Model/Type Reference:	Home Cam V3,Home Cam V1,Home Cam V2,Home Cam V4,Home Cam V5,Home Cam V6,Flex Cam,JS-P200,JS-R03 V3,JS-R04,JS-R07,JS-R08,JS-R09,JS-R10, JS-R11,JS-R12, JS-P160,JS-P166, JS-K259, JS-P09,JS-K500,JS-K5XX,JS-R0X, JS-R03 VXX,JS-P1XX,JS-P2XX,JS-K2XX,JS-GXX,JS-LXX(XX can be 01-99)
Model Differences:	The following models of units we produce are identical in electrical, mechanical and physical structure; The difference is only in the model name, we finally have Home Cam V3 as test model.
Hardware Version:	N/A
Software Version:	N/A
IEEE 802.11 WLAN Mode Supported:	802.11a/n/(20MHz channel bandwidth) 802.11n (40MHz channel bandwidth)
Operation Frequency:	5180-5240MHz for 802.11a/n(HT20); 5190-5230MHz for 802.11n(HT40); 5745-5825 MHz for 802.11a/n(HT20); 5755-5795 MHz for 802.11a/n(HT40);
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;
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 ; 5 channels for 802.11a/n20 in the 5745-5825MHz band ; 2 channels for 802.11 n40 in the 5755-5795MHz band ;
Antenna installation:	Internal antenna
Antenna Gain:	1.85 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.
power supply:	DC 5V/1A
Adapter:	Input:AC 100-240V,50/60Hz,0.35A Output: DC 5V/2000mA

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 and Radiated Spurious Emission:



4.3 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
E-1	Smart Home Camera	N/A	Home Can V3	N/A	EUT
E-2	Adapter	N/A	N/A	N/A	EUT

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

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

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

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

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

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

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 CH149/ CH157/ CH 165
Mode 2	802.11n/ 40 CH38/ CH 46 802.11n/ 40 CH 151 / CH 159
Mode 3	Transmitting

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

4.6 Table Of Parameters Of Text Software Setting

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

Test software Version	BK7231N-test to		
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

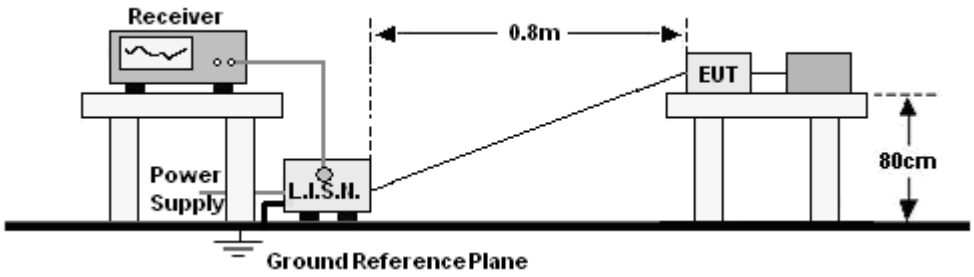
Conducted Emissions Test					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
Receiver	R&S	ESR3	102075	May 16, 2024	May 15, 2025
LISN	R&S	ENV216	101375	May 16, 2024	May 15, 2025
Software	Frad	EZ-EMC	EMC-CON 3A1	\	\
Pulse limiter	Schwarzbeck	VTSD 9561-F	01323	May 16, 2024	May 15, 2025

RF Conducted Test					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
Power Metter	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 16, 2024	May 15, 2025
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 21, 2024	May 20, 2025
Loop Antenna(9KHz-30MHz)	Schwarzbeck	FMZB1519B	00014	May 21, 2024	May 20, 2025
Amplifier	SKET	LAPA_01G18G-45dB	SK2021040901	May 16, 2024	May 15, 2025
Horn Antenna	Schwarzbeck	BBHA9120D	1541	May 21, 2024	May 20, 2025
Amplifier(18GHz-40GHz)	MITEQ	TTA1840-35-HG	2034381	May 16, 2024	May 15, 2025
Horn Antenn(18GHz-40GHz)	Schwarzbeck	BBHA9170	00822	May 21, 2024	May 20, 2025
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

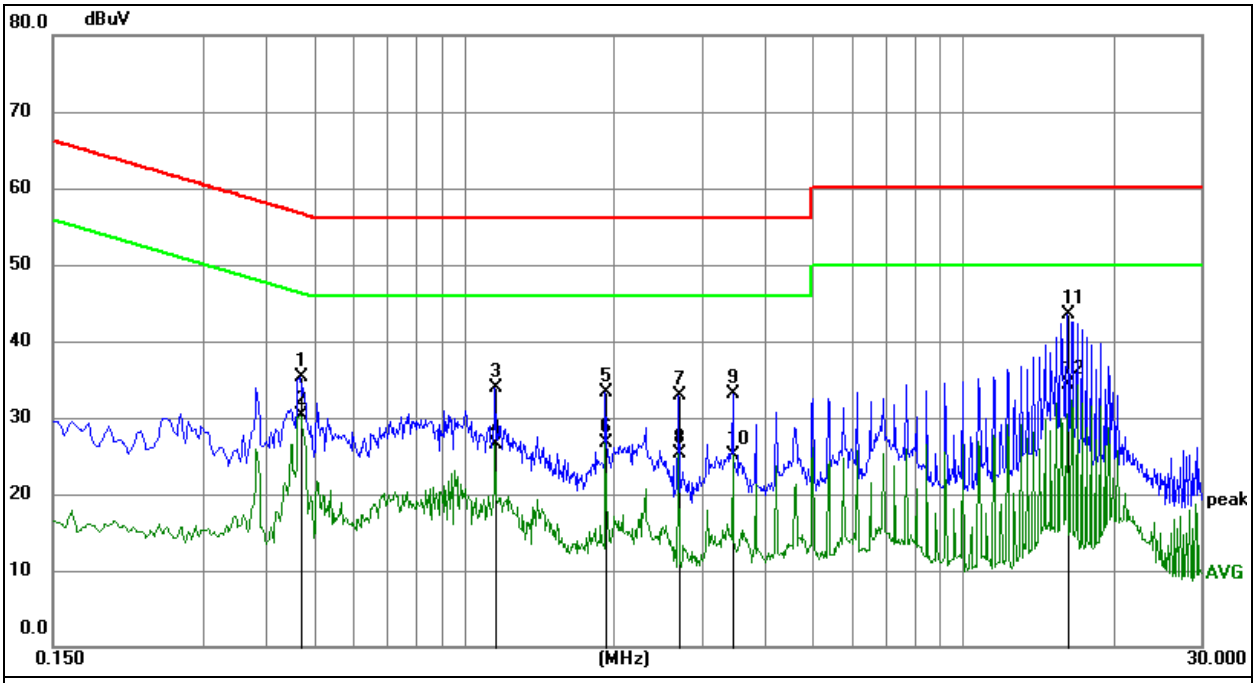
a. The Product was placed on a nonconductive table 0.8 m above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).
b. The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak 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.
We pretest AC 120V and AC 240V, the worst voltage was AC 120V and the data recording in the report.

6.5 Test Result

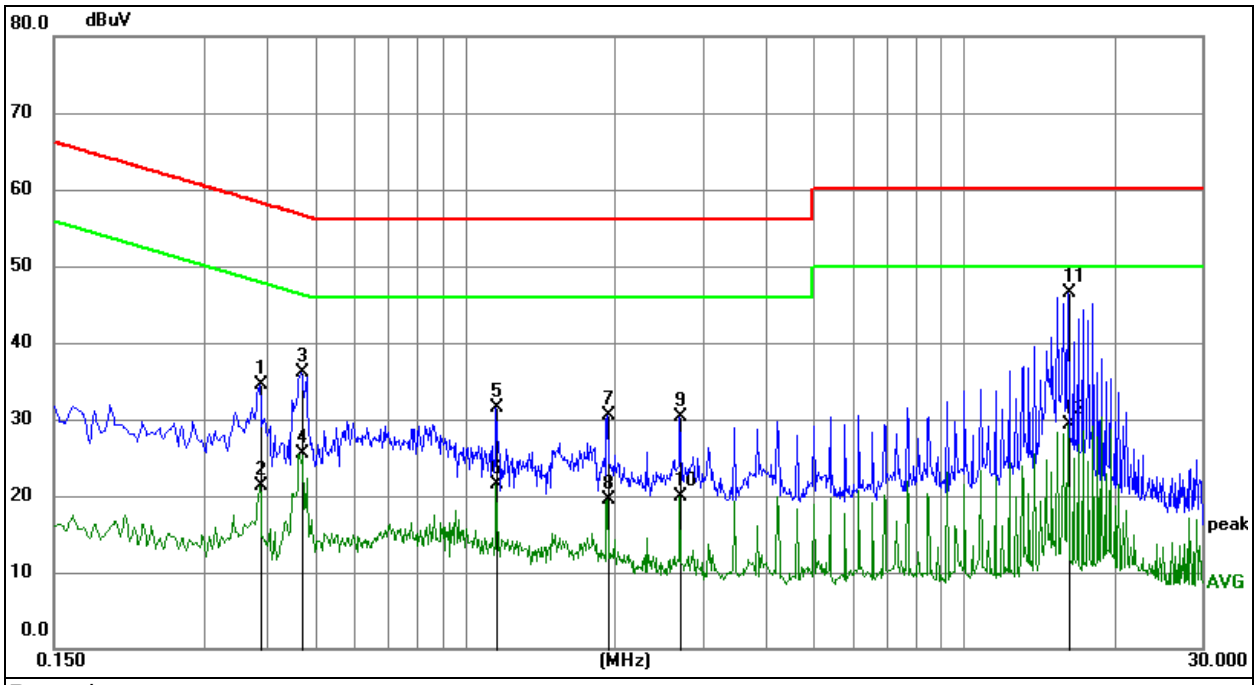
Temperature:	26 ℃	Relative Humidity:	54%RH
Pressure:	101KPa	Test Voltage:	AC 120V/60Hz
Test Mode:	Mode 3	Polarization :	L



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.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.4695	24.72	10.63	35.35	56.52	-21.17	QP
2	0.4695	19.69	10.63	30.32	46.52	-16.20	AVG
3	1.1535	23.21	10.62	33.83	56.00	-22.17	QP
4	1.1535	15.86	10.62	26.48	46.00	-19.52	AVG
5	1.9230	22.45	10.76	33.21	56.00	-22.79	QP
6	1.9230	15.86	10.76	26.62	46.00	-19.38	AVG
7	2.6970	22.06	10.86	32.92	56.00	-23.08	QP
8	2.6970	14.39	10.86	25.25	46.00	-20.75	AVG
9	3.4620	22.15	10.95	33.10	56.00	-22.90	QP
10	3.4620	14.15	10.95	25.10	46.00	-20.90	AVG
11	16.1924	31.25	12.23	43.48	60.00	-16.52	QP
12 *	16.1924	22.04	12.23	34.27	50.00	-15.73	AVG

Temperature:	26 ℃	Relative Humidity:	54%RH
Pressure:	101KPa	Test Voltage:	AC 120V/60Hz
Test Mode:	Mode 3	Polarization:	N



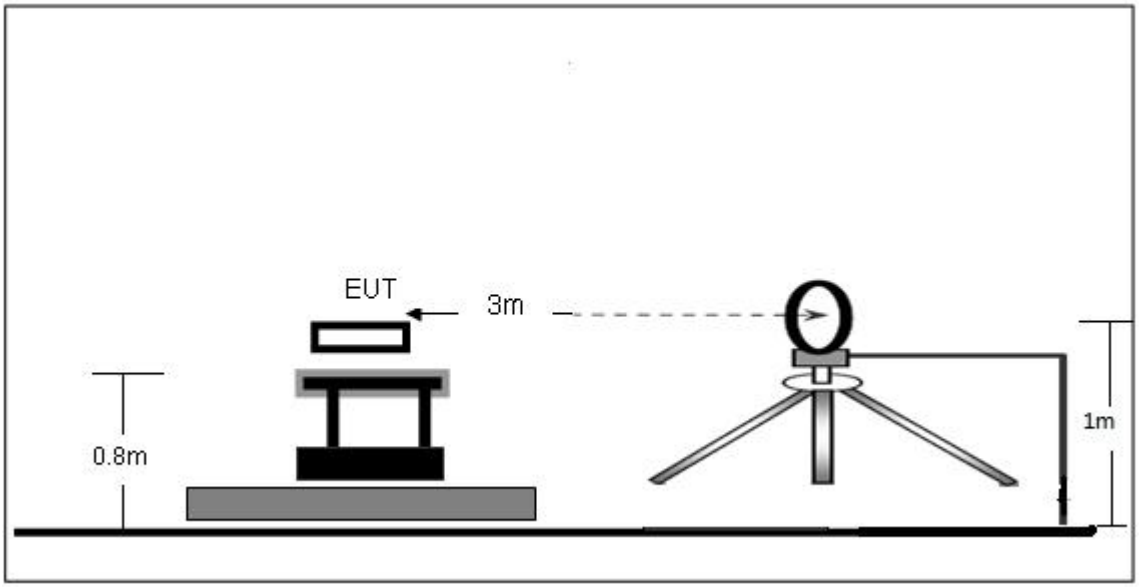
Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement = Reading Level + Correct Factor
4. Over = Measurement - Limit

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.3885	23.97	10.61	34.58	58.10	-23.52	QP
2	0.3885	10.67	10.61	21.28	48.10	-26.82	AVG
3	0.4695	25.41	10.63	36.04	56.52	-20.48	QP
4	0.4695	14.88	10.63	25.51	46.52	-21.01	AVG
5	1.1580	20.93	10.62	31.55	56.00	-24.45	QP
6	1.1580	10.89	10.62	21.51	46.00	-24.49	AVG
7	1.9320	19.66	10.76	30.42	56.00	-25.58	QP
8	1.9320	8.84	10.76	19.60	46.00	-26.40	AVG
9	2.7015	19.35	10.86	30.21	56.00	-25.79	QP
10	2.7015	8.95	10.86	19.81	46.00	-26.19	AVG
11 *	16.2150	34.32	12.23	46.55	60.00	-13.45	QP
12	16.2150	17.06	12.23	29.29	50.00	-20.71	AVG

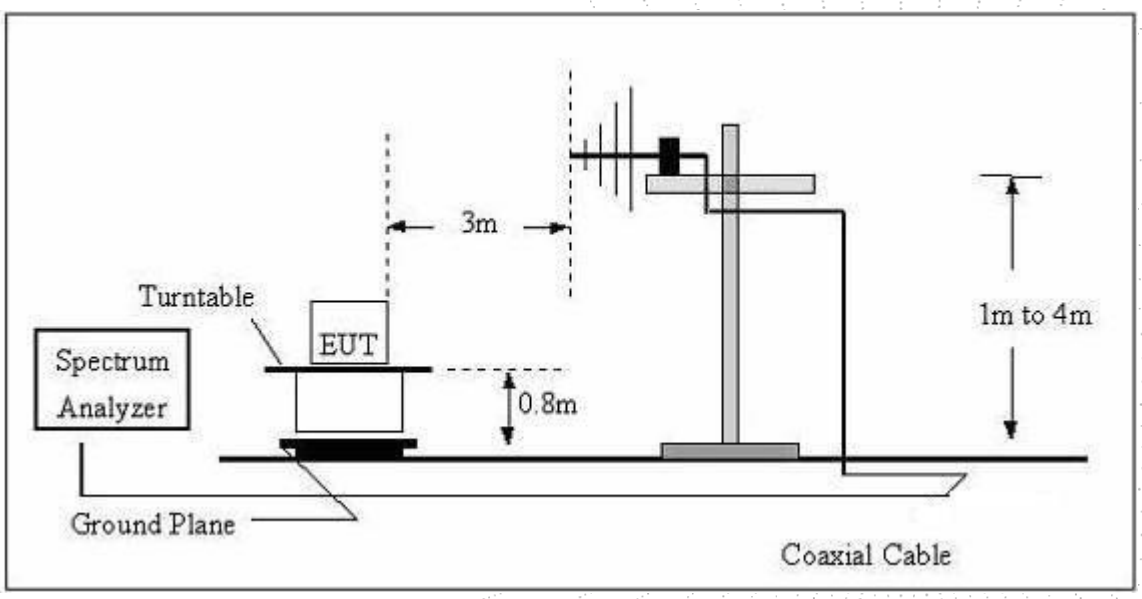
7. Radiated Emissions

7.1 Block Diagram Of Test Setup

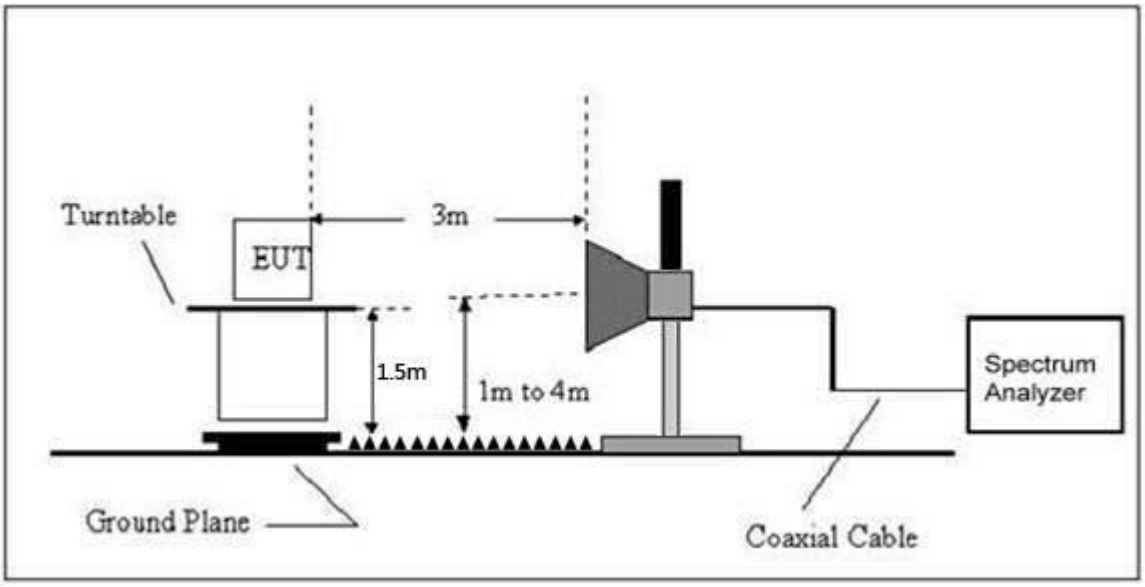
（A）Radiated Emission Test-Up Frequency Below 30MHz



（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

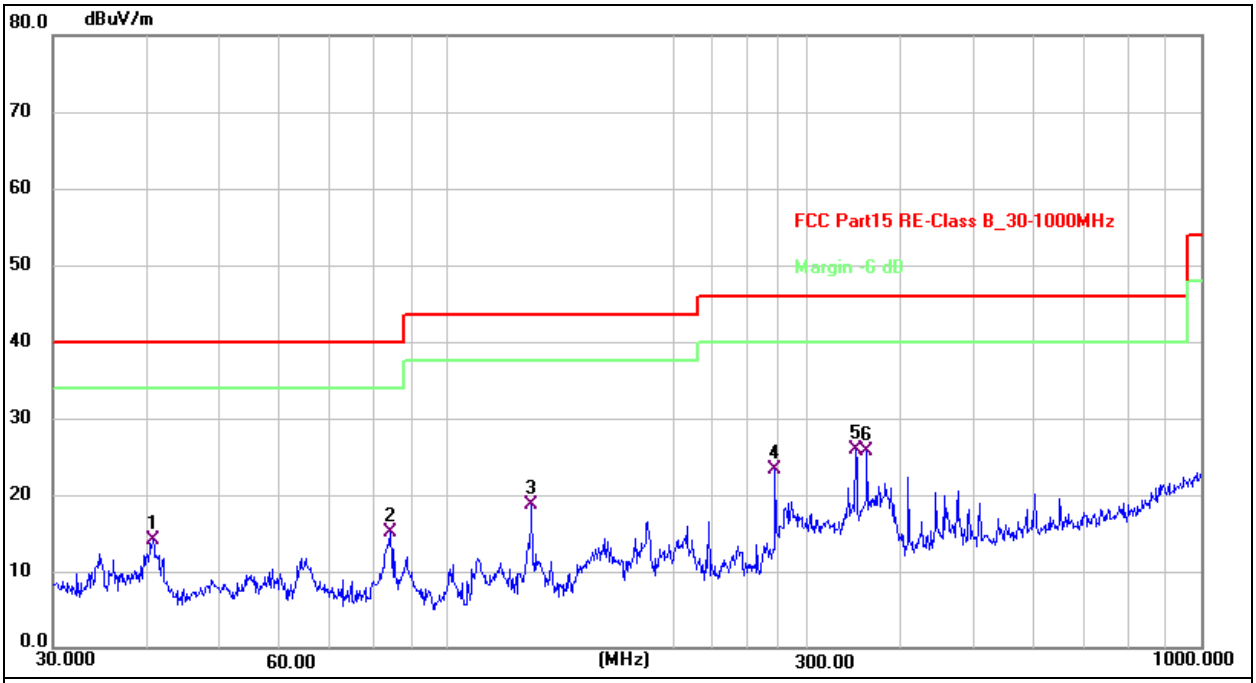
Temperature:	26 ℃	Relative Humidity:	54%RH
Pressure:	101KPa	Test Voltage:	AC 120V/60Hz
Test Mode:	Mode 3		

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

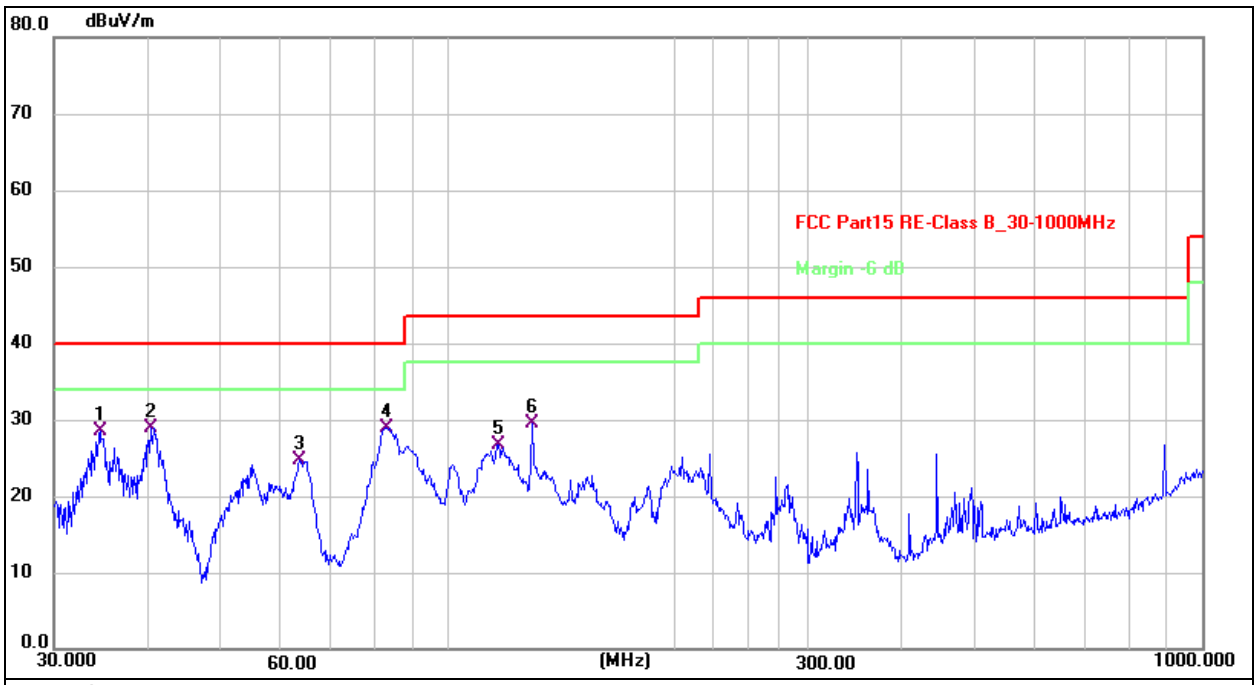
Temperature:	26 ℃	Relative Humidity:	54%RH
Pressure:	101KPa	Test Voltage:	AC 120V/60Hz
Test Mode:	Mode 3	Polarization :	Horizontal



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

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	40.7016	30.70	-16.66	14.04	40.00	-25.96	QP
2	84.1100	34.67	-19.66	15.01	40.00	-24.99	QP
3	129.4677	37.68	-18.94	18.74	43.50	-24.76	QP
4	272.2776	40.51	-17.24	23.27	46.00	-22.73	QP
5 *	348.0274	41.21	-15.31	25.90	46.00	-20.10	QP
6	360.4476	40.82	-15.04	25.78	46.00	-20.22	QP

Temperature:	26 ℃	Relative Humidity:	54%RH
Pressure:	101KPa	Test Voltage:	AC 120V/60Hz
Test Mode:	Mode 3	Polarization:	Vertical



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

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	34.5173	45.31	-16.74	28.57	40.00	-11.43	QP
2 *	40.2757	45.65	-16.66	28.99	40.00	-11.01	QP
3	63.5356	42.26	-17.48	24.78	40.00	-15.22	QP
4	82.9385	48.46	-19.57	28.89	40.00	-11.11	QP
5	116.5401	46.24	-19.57	26.67	43.50	-16.83	QP
6	129.4677	48.44	-18.94	29.50	43.50	-14.00	QP

Between 1GHz – 40GHz

Test Mode:	TX(5.1G) - 802.11a

Polar (H/V)	Frequency (MHz)	Reading Level (dBuV/m)	Correct Factor (dB)	Measurement (dBuV/m)	Limits (dBuV/m)	Over (dB)	Detector Type
Low Channel (5180 MHz)-Above 1G							
V	4434.009	70.74	-20.73	50.01	68.2	-18.19	PK
V	4434.009	59.18	-20.73	38.45	54	-15.55	AV
V	10360.091	60.57	-9.36	51.21	68.2	-16.99	PK
V	10360.091	49.64	-9.36	40.28	54	-13.72	AV
V	15540.103	61.59	-7.84	53.75	74	-20.25	PK
V	15540.103	49.94	-7.84	42.10	54	-11.90	AV
H	4434.146	74.40	-20.73	53.67	68.2	-14.53	PK
H	4434.146	59.00	-20.73	38.27	54	-15.73	AV
H	10360.014	60.14	-9.36	50.78	68.2	-17.42	PK
H	10360.014	49.58	-9.36	40.22	54	-13.78	AV
H	15540.011	64.02	-7.84	56.18	74	-17.82	PK
H	15540.011	49.37	-7.84	41.53	54	-12.47	AV
Middle Channel (5200 MHz)-Above 1G							
V	4592.197	74.45	-20.42	54.04	74	-19.96	PK
V	4592.197	59.98	-20.42	39.57	54	-14.43	AV
V	10400.110	63.32	-9.30	54.02	68.2	-14.18	PK
V	10400.110	49.79	-9.30	40.49	54	-13.51	AV
V	15600.140	60.75	-7.82	52.93	74	-21.07	PK
V	15600.140	49.54	-7.82	41.72	54	-12.28	AV
H	4592.188	73.93	-20.42	53.51	74	-20.49	PK
H	4592.188	59.02	-20.42	38.60	54	-15.40	AV
H	10400.002	61.35	-9.30	52.05	68.2	-16.15	PK
H	10400.002	49.46	-9.30	40.16	54	-13.84	AV
H	15600.116	64.19	-7.82	56.37	74	-17.63	PK
H	15600.116	49.25	-7.82	41.43	54	-12.57	AV
High Channel (5240 MHz)-Above 1G							
V	4739.008	71.58	-20.12	51.46	74	-22.54	PK
V	4739.008	59.11	-20.12	38.99	54	-15.01	AV
V	10480.188	61.86	-9.18	52.68	68.2	-15.52	PK
V	10480.188	49.12	-9.18	39.94	54	-14.06	AV
V	15720.097	63.85	-7.78	56.07	74	-17.93	PK
V	15720.097	49.71	-7.78	41.93	54	-12.07	AV
H	4739.127	71.97	-20.12	51.85	74	-22.15	PK
H	4739.127	59.71	-20.12	39.59	54	-14.41	AV
H	10480.014	64.82	-9.18	55.64	68.2	-12.56	PK
H	10480.014	49.25	-9.18	40.07	54	-13.93	AV
H	15720.140	61.68	-7.78	53.90	74	-20.10	PK
H	15720.140	49.46	-7.78	41.68	54	-12.32	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)	Reading Level (dBuV/m)	Correct Factor (dB)	Measurement (dBuV/m)	Limits (dBuV/m)	Over (dB)	Detector Type
Low Channel (5180 MHz)-Above 1G							
V	4434.090	73.87	-20.73	53.14	68.2	-15.06	PK
V	4434.090	59.67	-20.73	38.93	54	-15.07	AV
V	10360.028	61.46	-9.36	52.10	68.2	-16.10	PK
V	10360.028	49.91	-9.36	40.55	54	-13.45	AV
V	15540.067	62.47	-7.84	54.63	74	-19.37	PK
V	15540.067	49.94	-7.84	42.10	54	-11.90	AV
H	4434.127	73.00	-20.73	52.27	68.2	-15.93	PK
H	4434.127	59.10	-20.73	38.37	54	-15.63	AV
H	10360.086	63.25	-9.36	53.89	68.2	-14.31	PK
H	10360.086	49.33	-9.36	39.97	54	-14.03	AV
H	15540.152	62.60	-7.84	54.76	74	-19.24	PK
H	15540.152	49.42	-7.84	41.58	54	-12.42	AV
Middle Channel (5200 MHz)-Above 1G							
V	4592.087	71.92	-20.42	51.51	74	-22.49	PK
V	4592.087	59.37	-20.42	38.95	54	-15.05	AV
V	10400.027	64.28	-9.30	54.98	68.2	-13.22	PK
V	10400.027	49.25	-9.30	39.95	54	-14.05	AV
V	15600.142	61.08	-7.82	53.26	74	-20.74	PK
V	15600.142	49.20	-7.82	41.38	54	-12.62	AV
H	4592.121	70.77	-20.42	50.36	74	-23.64	PK
H	4592.121	59.22	-20.42	38.81	54	-15.19	AV
H	10400.029	64.85	-9.30	55.55	68.2	-12.65	PK
H	10400.029	49.06	-9.30	39.76	54	-14.24	AV
H	15600.004	61.41	-7.82	53.59	74	-20.41	PK
H	15600.004	49.14	-7.82	41.32	54	-12.68	AV
High Channel (5240 MHz)-Above 1G							
V	4739.148	72.86	-20.12	52.74	74	-21.26	PK
V	4739.148	59.36	-20.12	39.24	54	-14.76	AV
V	10480.166	62.87	-9.18	53.69	68.2	-14.51	PK
V	10480.166	49.34	-9.18	40.16	54	-13.84	AV
V	15720.020	62.65	-7.78	54.87	74	-19.13	PK
V	15720.020	49.43	-7.78	41.65	54	-12.35	AV
H	4739.105	72.58	-20.12	52.45	74	-21.55	PK
H	4739.105	59.81	-20.12	39.69	54	-14.31	AV
H	10480.191	62.75	-9.18	53.57	68.2	-14.63	PK
H	10480.191	49.76	-9.18	40.58	54	-13.42	AV
H	15720.029	63.70	-7.78	55.92	74	-18.08	PK
H	15720.029	49.36	-7.78	41.58	54	-12.42	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)	Reading Level (dBuV/m)	Correct Factor (dB)	Measurement (dBuV/m)	Limits (dBuV/m)	Over (dB)	Detector Type
Low Channel (5190 MHz)-Above 1G							
V	4434.131	70.75	-20.73	50.02	68.2	-18.18	PK
V	4434.131	59.63	-20.73	38.90	54	-15.10	AV
V	10380.074	63.28	-9.33	53.95	68.2	-14.25	PK
V	10380.074	49.35	-9.33	40.02	54	-13.98	AV
V	15570.176	64.47	-7.83	56.64	74	-17.36	PK
V	15570.176	49.08	-7.83	41.25	54	-12.75	AV
H	4434.038	72.88	-20.73	52.15	74	-21.85	PK
H	4434.038	59.12	-20.73	38.39	54	-15.61	AV
H	10380.095	60.59	-9.33	51.26	68.2	-16.94	PK
H	10380.095	49.11	-9.33	39.78	54	-14.22	AV
H	15570.135	62.78	-7.83	54.95	74	-19.05	PK
H	15570.135	49.94	-7.83	42.11	54	-11.89	AV
High Channel (5230 MHz)-Above 1G							
V	4739.146	70.21	-20.12	50.09	68.2	-18.11	PK
V	4739.146	59.50	-20.12	39.37	54	-14.63	AV
V	10460.194	63.24	-9.21	54.03	68.2	-14.17	PK
V	10460.194	49.17	-9.21	39.96	54	-14.04	AV
V	15690.189	61.25	-7.79	53.46	74	-20.54	PK
V	15690.189	49.84	-7.79	42.05	54	-11.95	AV
H	4739.078	70.99	-20.12	50.87	68.2	-17.33	PK
H	4739.078	59.67	-20.12	39.55	54	-14.45	AV
H	10460.080	64.79	-9.21	55.58	68.2	-12.62	PK
H	10460.080	49.32	-9.21	40.11	54	-13.89	AV
H	15690.088	64.54	-7.79	56.75	74	-17.25	PK
H	15690.088	49.97	-7.79	42.18	54	-11.82	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)	Reading Level (dBuV/m)	Correct Factor (dB)	Measurement (dBuV/m)	Limits (dBuV/m)	Over (dB)	Detector Type
Low Channel (5745 MHz)-Above 1G							
V	4679.097	71.13	-20.24	50.89	74	-23.11	PK
V	4679.097	59.22	-20.24	38.98	54	-15.02	AV
V	11490.191	62.34	-8.79	53.55	68.2	-14.65	PK
V	11490.191	49.84	-8.79	41.05	54	-12.95	AV
V	17235.131	59.09	-3.18	55.91	68.2	-12.29	PK
V	17235.131	44.96	-3.18	41.78	54	-12.22	AV
H	4679.189	73.43	-20.73	52.70	74	-21.30	PK
H	4679.189	59.33	-20.73	38.60	54	-15.40	AV
H	11490.023	60.93	-8.79	52.14	68.2	-16.06	PK
H	11490.023	49.34	-8.79	40.55	54	-13.45	AV
H	17235.188	59.09	-3.18	55.91	68.2	-12.29	PK
H	17235.188	44.23	-3.18	41.05	54	-12.95	AV
Middle Channel (5785 MHz)-Above 1G							
V	4592.043	71.78	-20.42	51.36	74	-22.64	PK
V	4592.043	59.72	-20.42	39.31	54	-14.69	AV
V	11570.004	63.18	-8.86	54.32	68.2	-13.88	PK
V	11570.004	49.96	-8.86	41.10	54	-12.90	AV
V	17355.127	59.41	-2.52	56.89	68.2	-11.31	PK
V	17355.127	44.08	-2.52	41.56	54	-12.44	AV
H	4592.131	74.34	-20.42	53.93	74	-20.07	PK
H	4592.131	59.50	-20.42	39.08	54	-14.92	AV
H	11570.081	63.89	-8.86	55.03	68.2	-13.17	PK
H	11570.081	49.02	-8.86	40.16	54	-13.84	AV
H	17355.172	58.01	-2.52	55.49	68.2	-12.71	PK
H	17355.172	44.66	-2.52	42.14	54	-11.86	AV
High Channel (5825 MHz)-Above 1G							
V	6039.017	70.36	-18.93	51.43	68.2	-16.77	PK
V	6039.017	59.81	-18.93	40.87	54	-13.13	AV
V	11650.198	63.93	-8.92	55.01	74	-18.99	PK
V	11650.198	49.46	-8.92	40.54	54	-13.46	AV
V	17475.187	55.84	-1.86	53.98	68.2	-14.22	PK
V	17475.187	44.80	-1.86	42.94	54	-11.06	AV
H	6039.168	71.63	-18.93	52.70	68.2	-15.50	PK
H	6039.168	59.80	-18.93	40.87	54	-13.13	AV
H	11650.107	63.53	-8.92	54.61	74	-19.39	PK
H	11650.107	49.87	-8.92	40.95	54	-13.05	AV
H	17475.037	58.14	-1.86	56.28	68.2	-11.92	PK
H	17475.037	44.48	-1.86	42.62	54	-11.38	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)	Reading Level (dBuV/m)	Correct Factor (dB)	Measurement (dBuV/m)	Limits (dBuV/m)	Over (dB)	Detector Type
Low Channel (5745 MHz)-Above 1G							
V	4679.121	70.09	-20.24	49.84	74	-24.16	PK
V	4679.121	59.22	-20.24	38.98	54	-15.02	AV
V	11490.002	60.08	-8.79	51.29	68.2	-16.91	PK
V	11490.002	49.48	-8.79	40.69	54	-13.31	AV
V	17235.035	58.87	-3.18	55.69	68.2	-12.51	PK
V	17235.035	44.36	-3.18	41.18	54	-12.82	AV
H	4679.024	72.28	-20.24	52.03	74	-21.97	PK
H	4679.024	59.99	-20.24	39.75	54	-14.25	AV
H	11490.081	60.90	-8.79	52.11	68.2	-16.09	PK
H	11490.081	49.65	-8.79	40.86	54	-13.14	AV
H	17235.015	57.58	-3.18	54.40	68.2	-13.80	PK
H	17235.015	44.34	-3.18	41.16	54	-12.84	AV
Middle Channel (5785 MHz)-Above 1G							
V	4592.164	72.77	-20.42	52.35	74	-21.65	PK
V	4592.164	59.83	-20.42	39.42	54	-14.58	AV
V	11570.002	61.82	-8.86	52.96	68.2	-15.24	PK
V	11570.002	49.46	-8.86	40.60	54	-13.40	AV
V	17355.040	57.94	-2.52	55.42	68.2	-12.78	PK
V	17355.040	44.45	-2.52	41.93	54	-12.07	AV
H	4592.054	73.29	-20.42	52.87	74	-21.13	PK
H	4592.054	59.86	-20.42	39.44	54	-14.56	AV
H	11570.067	61.52	-8.86	52.66	68.2	-15.54	PK
H	11570.067	49.05	-8.86	40.19	54	-13.81	AV
H	17355.126	59.84	-2.52	57.32	68.2	-10.88	PK
H	17355.126	44.50	-2.52	41.98	54	-12.02	AV
High Channel (5825 MHz)-Above 1G							
V	6039.015	71.67	-18.93	52.74	68.2	-15.46	PK
V	6039.015	59.45	-18.93	40.52	54	-13.48	AV
V	11650.158	60.57	-8.92	51.65	74	-22.35	PK
V	11650.158	49.63	-8.92	40.71	54	-13.29	AV
V	17475.190	57.08	-1.86	55.22	68.2	-12.98	PK
V	17475.190	44.22	-1.86	42.36	54	-11.64	AV
H	6039.071	72.67	-18.93	53.73	68.2	-14.47	PK
H	6039.071	59.31	-18.93	40.38	54	-13.62	AV
H	11650.035	60.66	-8.92	51.74	74	-22.26	PK
H	11650.035	49.93	-8.92	41.01	54	-12.99	AV
H	17475.067	59.89	-1.86	58.03	68.2	-10.17	PK
H	17475.067	44.82	-1.86	42.96	54	-11.04	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(5.8G) - 802.11n-HT40

Polar (H/V)	Frequency (MHz)	Reading Level (dBuV/m)	Correct Factor (dB)	Measurement (dBuV/m)	Limits (dBuV/m)	Over (dB)	Detector Type
Low Channel (5755 MHz)-Above 1G							
V	4679.121	73.33	-20.24	53.09	74	-20.91	PK
V	4679.121	59.36	-20.24	39.12	54	-14.88	AV
V	11510.112	60.39	-8.81	51.58	74	-22.42	PK
V	11510.112	49.96	-8.81	41.15	54	-12.85	AV
V	17265.022	57.25	-3.01	54.24	68.2	-13.96	PK
V	17265.022	44.82	-3.01	41.81	54	-12.19	AV
H	4679.135	73.85	-20.24	53.61	74	-20.39	PK
H	4679.135	59.30	-20.24	39.06	54	-14.94	AV
H	11510.135	62.57	-8.81	53.76	74	-20.24	PK
H	11510.135	49.28	-8.81	40.47	54	-13.53	AV
H	17265.085	58.54	-3.01	55.53	68.2	-12.67	PK
H	17265.085	44.39	-3.01	41.38	54	-12.62	AV
High Channel (5795 MHz)-Above 1G							
V	6039.086	72.29	-18.93	53.36	68.2	-14.84	PK
V	6039.086	59.67	-18.93	40.74	54	-13.26	AV
V	11590.120	60.16	-8.87	51.29	74	-22.71	PK
V	11590.120	49.33	-8.87	40.46	54	-13.54	AV
V	17385.088	57.63	-2.35	55.28	68.2	-12.92	PK
V	17385.088	44.61	-2.35	42.26	54	-11.74	AV
H	6039.126	74.08	-18.93	55.15	68.2	-13.05	PK
H	6039.126	59.20	-18.93	40.27	54	-13.73	AV
H	11590.164	61.05	-8.87	52.18	74	-21.82	PK
H	11590.164	49.58	-8.87	40.71	54	-13.29	AV
H	17385.041	56.05	-2.35	53.70	68.2	-14.50	PK
H	17385.041	44.51	-2.35	42.16	54	-11.84	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.

- ☒Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
- All the modes 802.11a/n has been tested and the worst result 802.11a20 recorded as below:

Test mode: 802.11a20 Frequency(MHz): 5180

Frequency (MHz)	Polarity	PK(dBuV/m) (VBW=3MHz)	Limit 3m (dBuV/m)	AV(dBuV/m) (VBW=10Hz)	Limit 3m (dBuV/m)
5150.35	H	63.32	74	45.29	54
5150.21	V	63.17	74	43.47	54

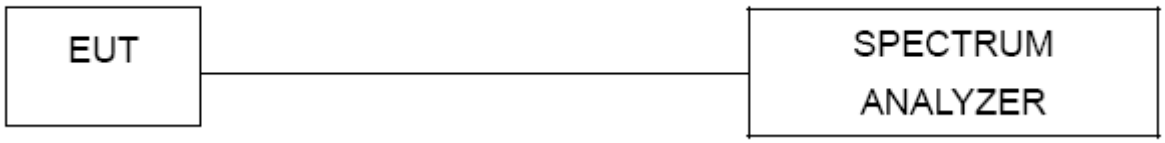
Test mode: 802.11a20 Frequency(MHz): 5240

Frequency (MHz)	Polarity	PK(dBuV/m) (VBW=3MHz)	Limit 3m (dBuV/m)	AV(dBuV/m) (VBW=10Hz)	Limit 3m (dBuV/m)
5360.32	H	45.57	74	28.04	54
5360.22	V	43.27	74	28.54	54

Note: (1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).
(2) Emission Level= Reading Level+Correct Factor.
(3) Correct Factor= Ant_F + Cab_L - Preamp

8. Power Spectral Density Test

8.1 Block Diagram Of Test Setup



8.2 Limit

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

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

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

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

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

8.3 Test procedure

For devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in § 15.407(a)(5). For devices operating in the band 5.725-5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, “provided that the measured power is integrated over the full reference bandwidth” to show the total power over the specified measurement bandwidth (i.e., 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 KHz bandwidth, the following adjustments to the procedures apply:
a) Set RBW ≥ 1/T, where T is defined in section II.B.I.a).
b) Set VBW ≥ 3 RBW.
c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10log(500kHz/RBW) to the measured result, whereas RBW (< 500 KHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.
d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add 10log(1MHz/RBW) to the measured result, whereas RBW (< 1 MHz) is the reduced resolution bandwidth of spectrum analyzer set during measurement.
e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

Note: As a practical matter, it is recommended to use reduced RBW of 100 KHz for the sections 5.c) and 5.d) above, since RBW=100 KHZ is available on nearly all spectrum analyzers.

8.4 EUT operating Conditions

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

8.5 Test Result

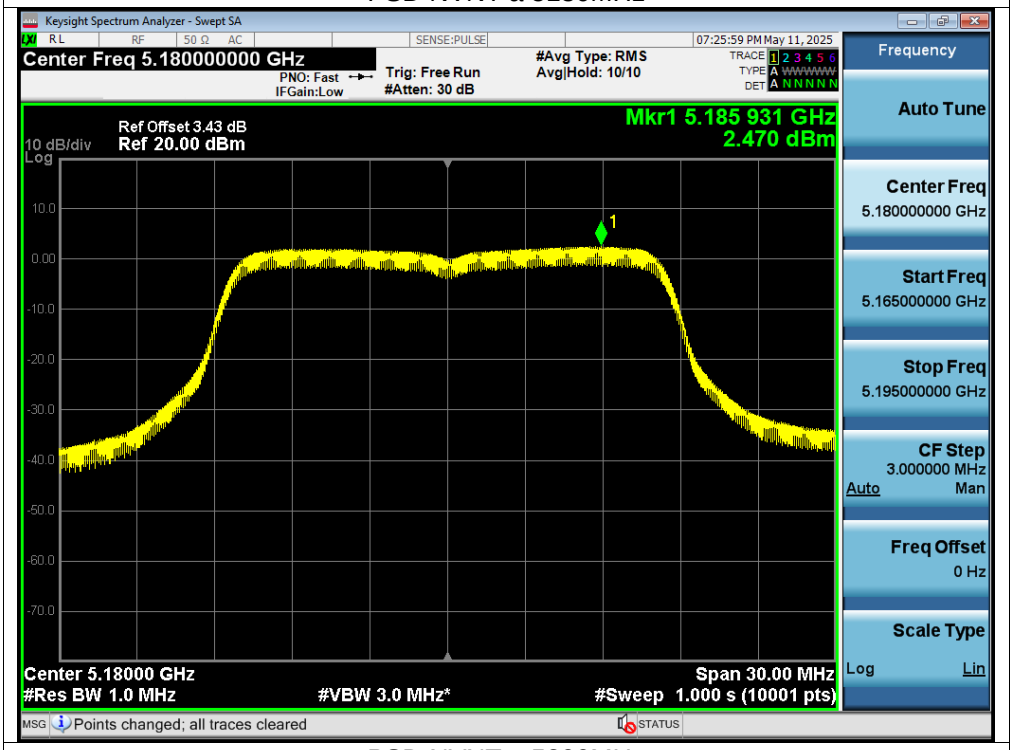
Temperature:	26 ℃	Relative Humidity:	54%RH
Pressure:	101KPa	Test Voltage:	AC120V/60Hz
Test Mode:	(5180-5240MHz); (5745-5825MHz)		

Condition	Mode	Frequency (MHz)	Conducted PSD (dBm)	Limit (dBm)	Verdict
NVNT	a	5180	2.47	11	Pass
NVNT	a	5200	3.2	11	Pass
NVNT	a	5240	1.79	11	Pass
NVNT	n20	5180	1.87	11	Pass
NVNT	n20	5200	1.72	11	Pass
NVNT	n20	5240	0.8	11	Pass
NVNT	n40	5190	-2.88	11	Pass
NVNT	n40	5230	-3	11	Pass

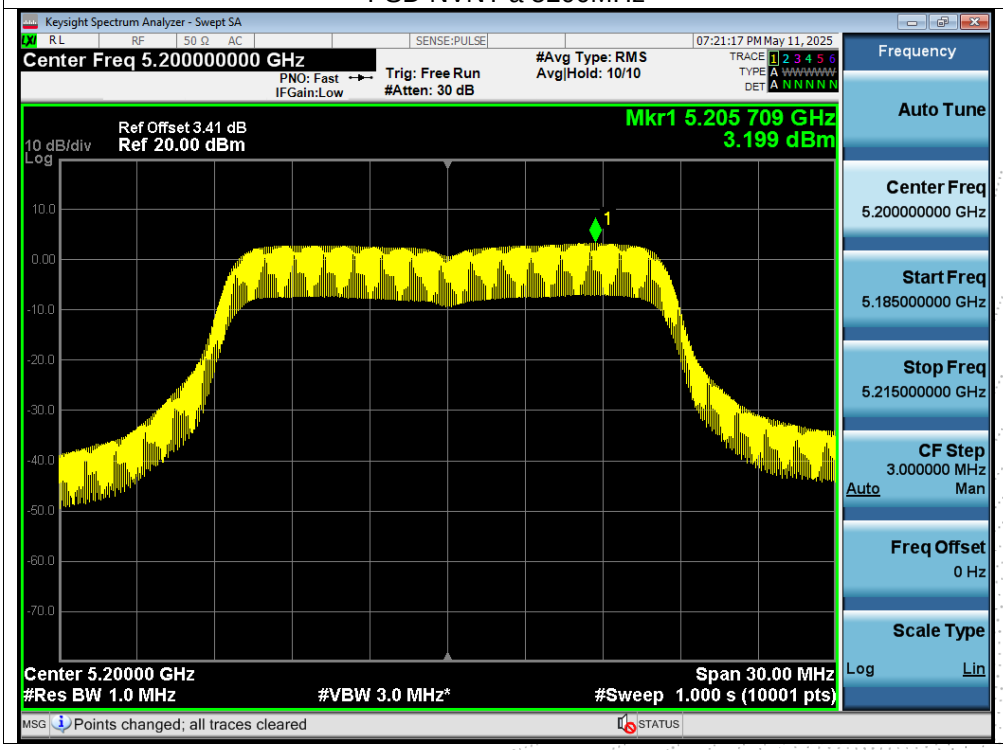
Condition	Mode	Frequency (MHz)	Conducted PSD (dBm)	Limit (dBm)	Verdict
NVNT	a	5745	-1.13	30	Pass
NVNT	a	5785	-1.15	30	Pass
NVNT	a	5825	0.06	30	Pass
NVNT	n20	5745	-1.74	30	Pass
NVNT	n20	5785	-2.44	30	Pass
NVNT	n20	5825	-1.17	30	Pass
NVNT	n40	5755	-6.08	30	Pass
NVNT	n40	5795	-5.39	30	Pass

Test Graphs

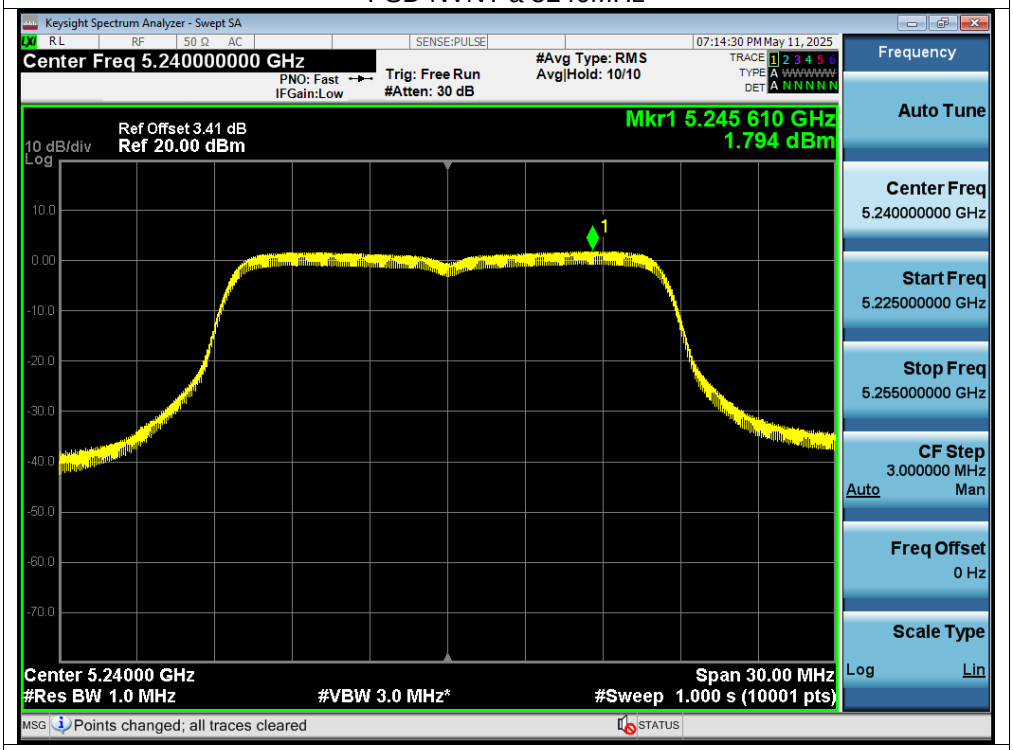
PSD NVNT a 5180MHz



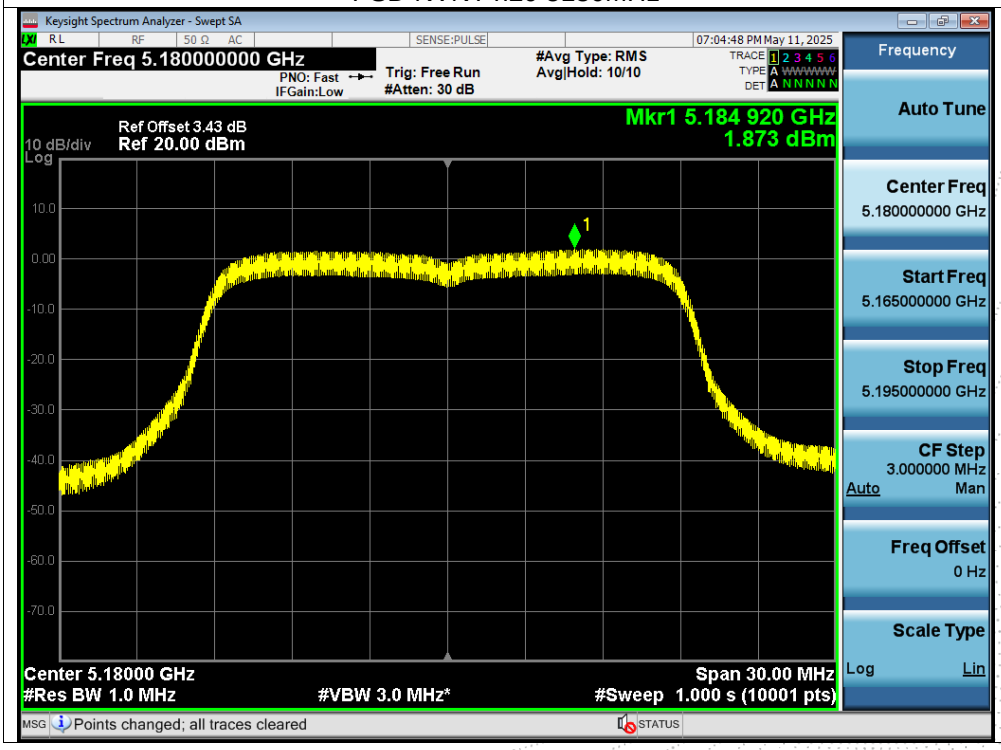
PSD NVNT a 5200MHz



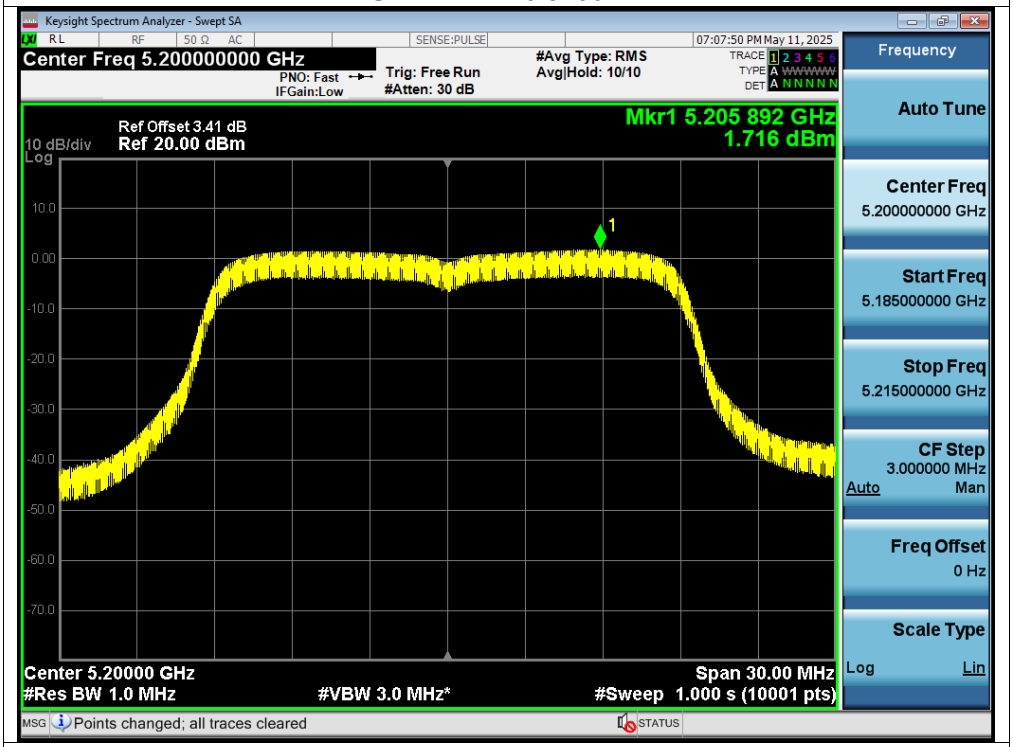
PSD NVNT a 5240MHz



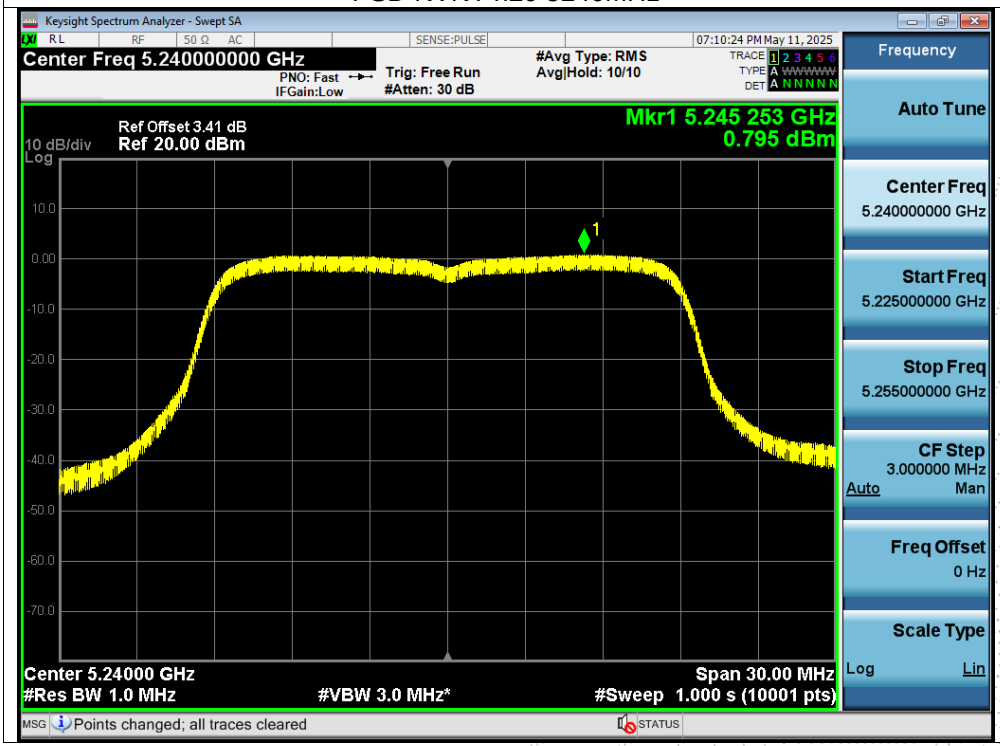
PSD NVNT n20 5180MHz



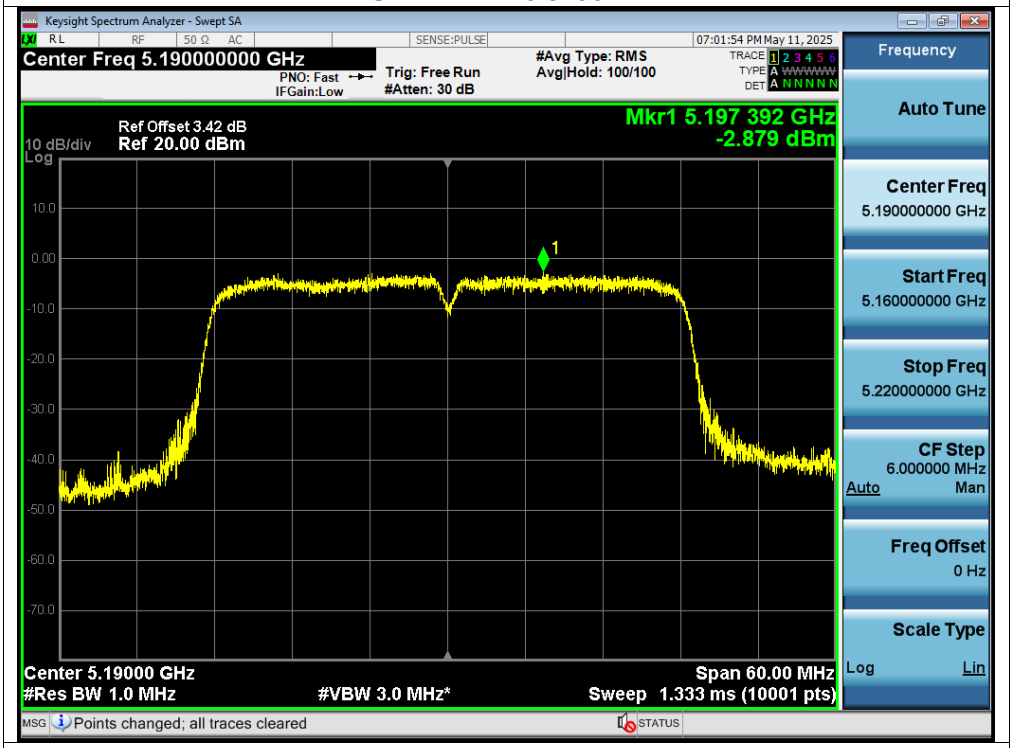
PSD NVNT n20 5200MHz



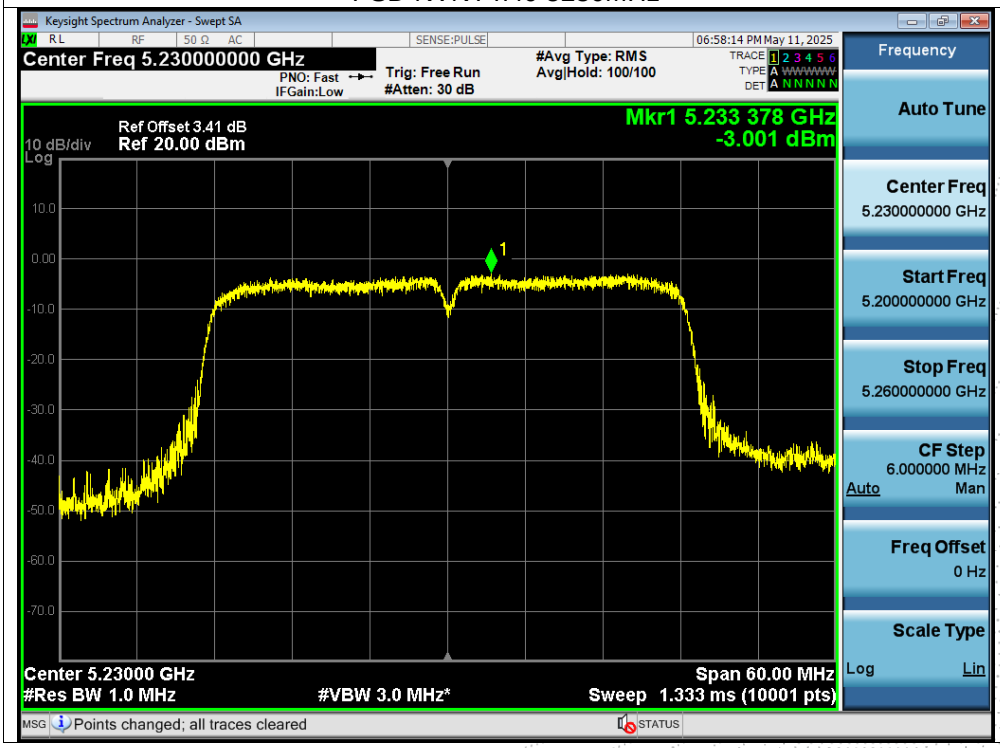
PSD NVNT n20 5240MHz



PSD NVNT n40 5190MHz



PSD NVNT n40 5230MHz



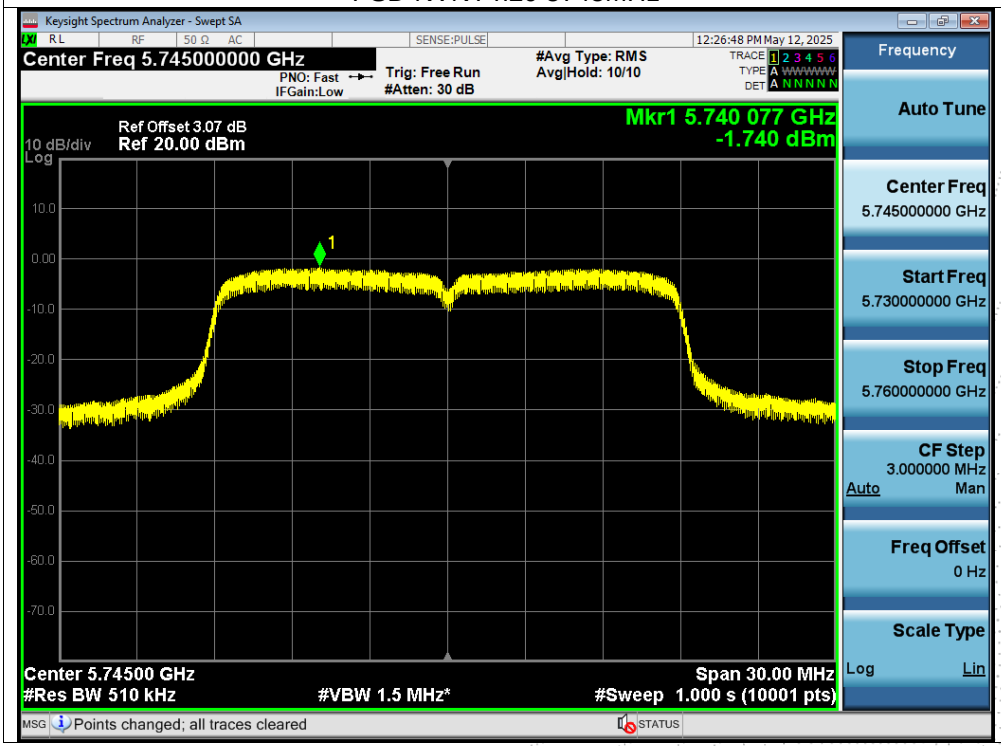
Test Graphs

PSD NVNT a 5745MHz

PSD NVNT a 5785MHz

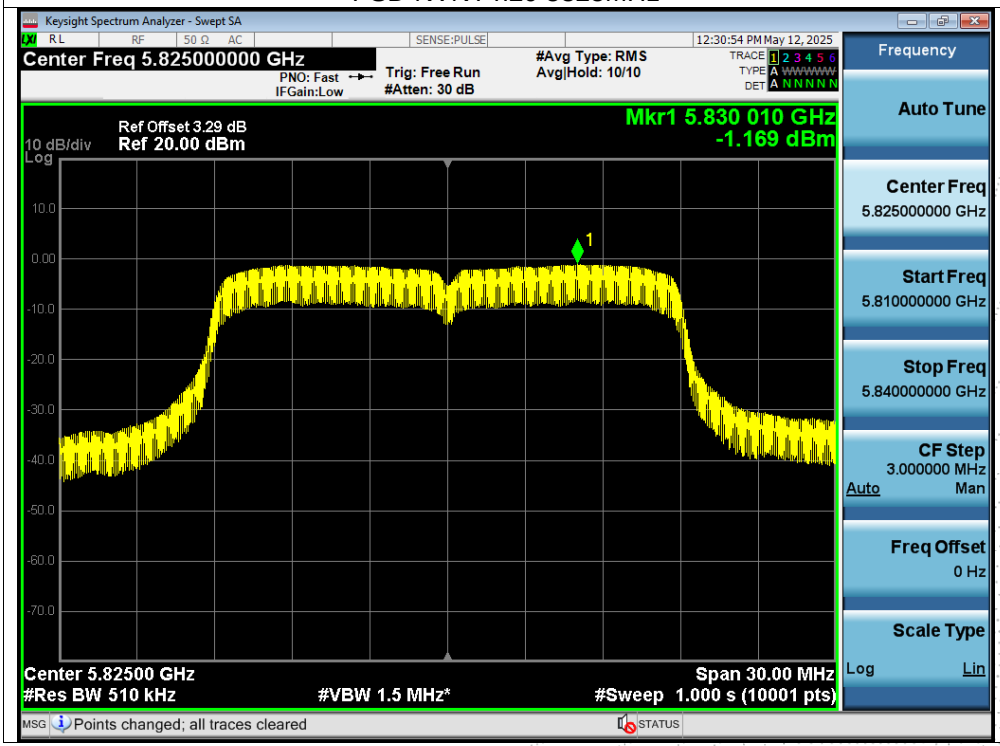
PSD NVNT a 5825MHz

PSD NVNT n20 5745MHz

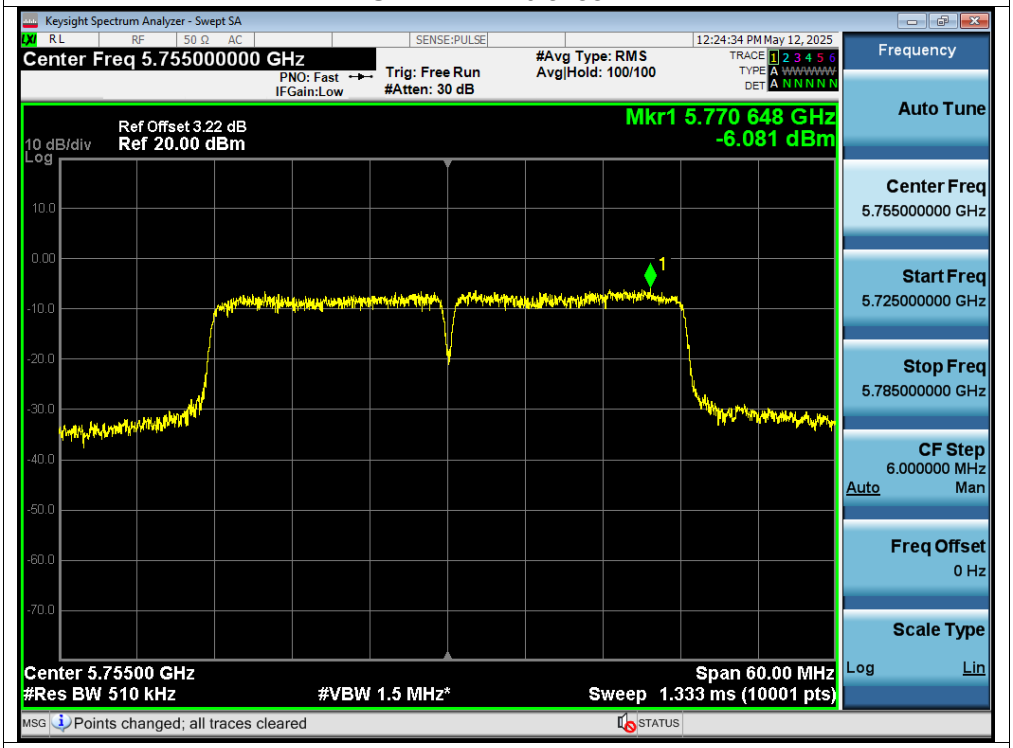


PSD NVNT n20 5785MHz

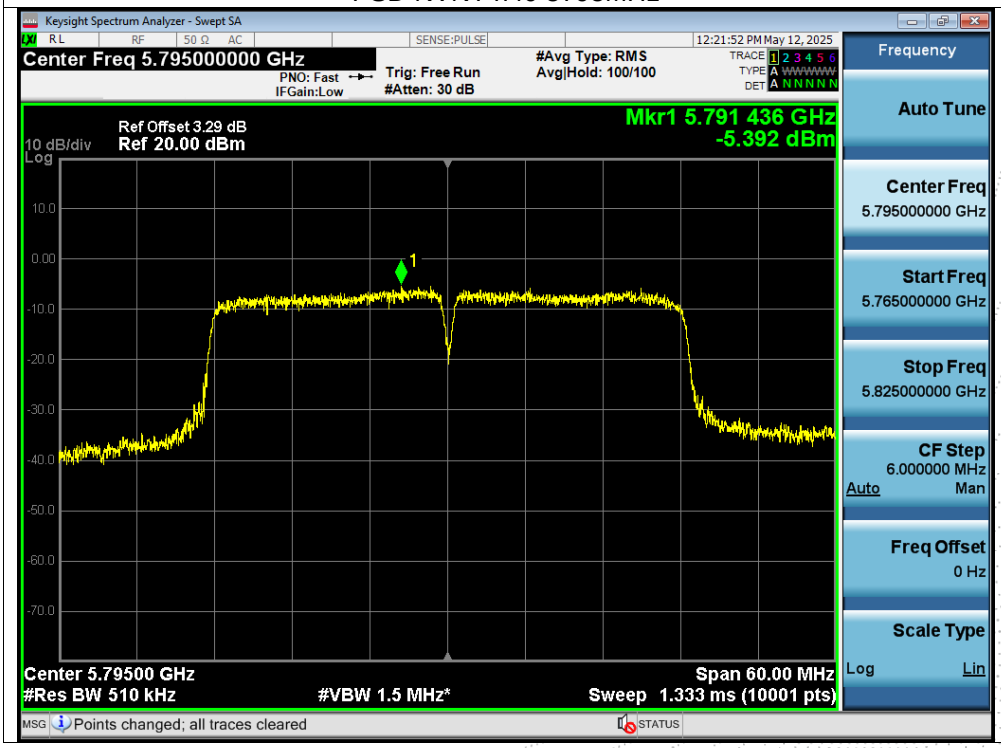
PSD NVNT n20 5825MHz



PSD NVNT n40 5755MHz

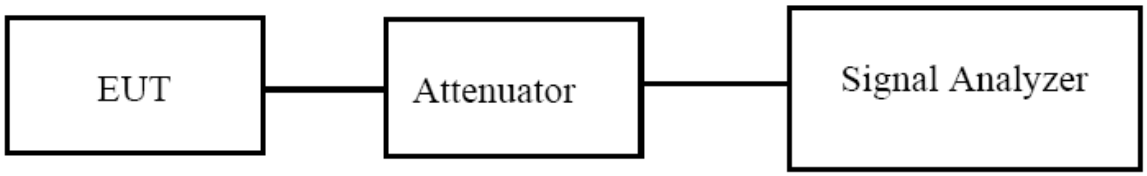


PSD NVNT n40 5795MHz



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

9.1 Block Diagram Of Test Setup



9.2 Limit

The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test. If the device cannot be connected directly, alternative techniques acceptable to the Commission may be used. Measurements in the 5.725-5.85 GHz band are made over a reference bandwidth of 500 kHz or the 26 dB emission bandwidth of the device, whichever is less. Measurements in the 5.15-5.25 GHz, 5.25-5.35 GHz, and the 5.47-5.725 GHz bands are made over a bandwidth of 1 MHz or the 26 dB emission bandwidth of the device, whichever is less. A narrower resolution bandwidth can be used, provided that the measured power
is integrated over the full reference bandwidth.

9.3 Test procedure

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

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

9.4 EUT operating Conditions

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

9.5 Test Result

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

Condition	Mode	Frequency (MHz)	-26 dB Bandwidth (MHz)
NVNT	a	5180	20.537
NVNT	a	5200	20.596
NVNT	a	5240	20.99
NVNT	n20	5180	20.973
NVNT	n20	5200	20.904
NVNT	n20	5240	20.92
NVNT	n40	5190	40.129
NVNT	n40	5230	40.599

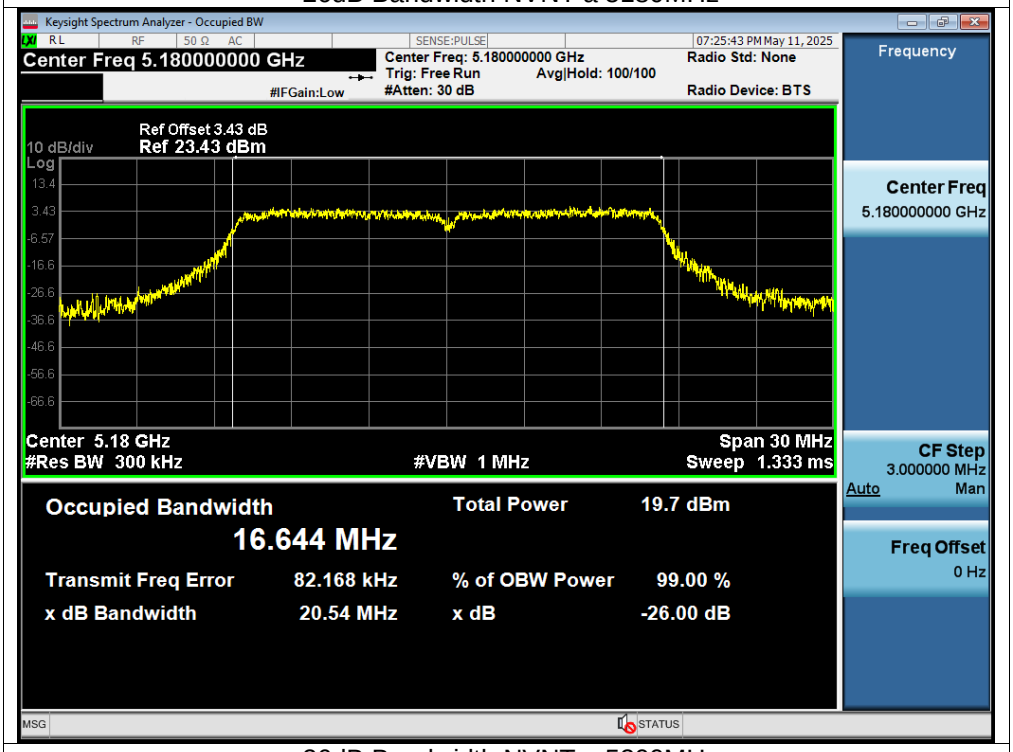
Condition	Mode	Frequency (MHz)	99% OBW (MHz)
NVNT	a	5180	16.465
NVNT	a	5200	16.455
NVNT	a	5240	16.482
NVNT	n20	5180	17.588
NVNT	n20	5200	17.57
NVNT	n20	5240	17.585
NVNT	n40	5190	36.027
NVNT	n40	5230	36.041

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

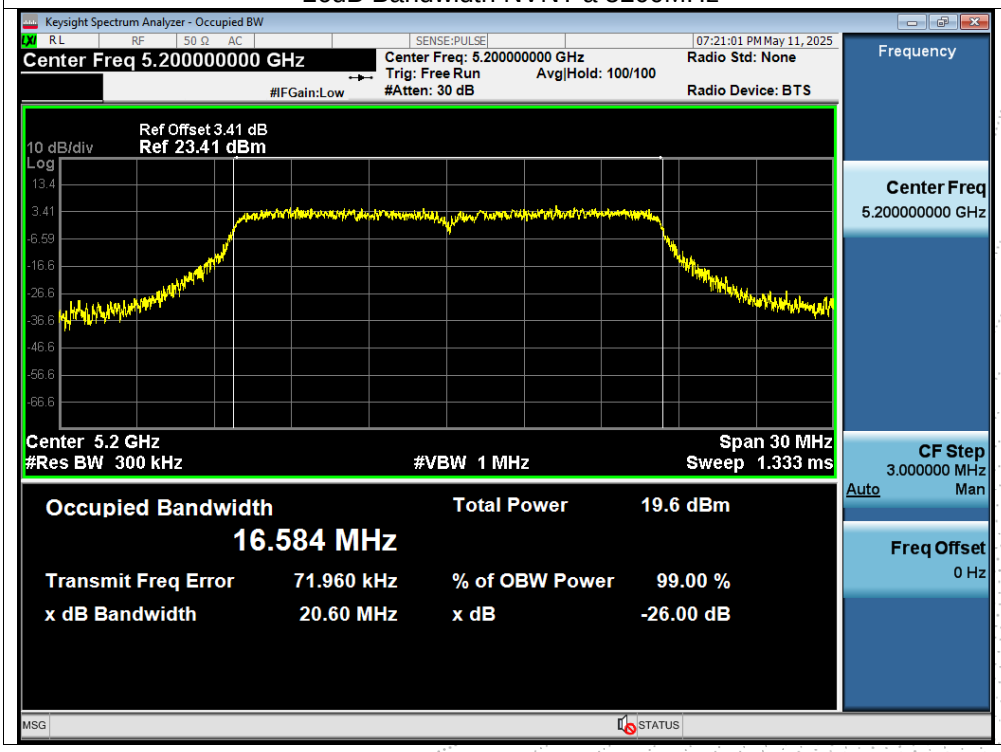
Condition	Mode	Frequency (MHz)	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	a	5745	16.293	0.5	Pass
NVNT	a	5785	16.046	0.5	Pass
NVNT	a	5825	16.31	0.5	Pass
NVNT	n20	5745	16.119	0.5	Pass
NVNT	n20	5785	15.902	0.5	Pass
NVNT	n20	5825	15.954	0.5	Pass
NVNT	n40	5755	34.697	0.5	Pass
NVNT	n40	5795	35.08	0.5	Pass

Condition	Mode	Frequency (MHz)	99% OBW (MHz)
NVNT	a	5745	16.724
NVNT	a	5785	16.635
NVNT	a	5825	16.678
NVNT	n20	5745	17.759
NVNT	n20	5785	17.629
NVNT	n20	5825	17.63
NVNT	n40	5755	36.264
NVNT	n40	5795	36.096

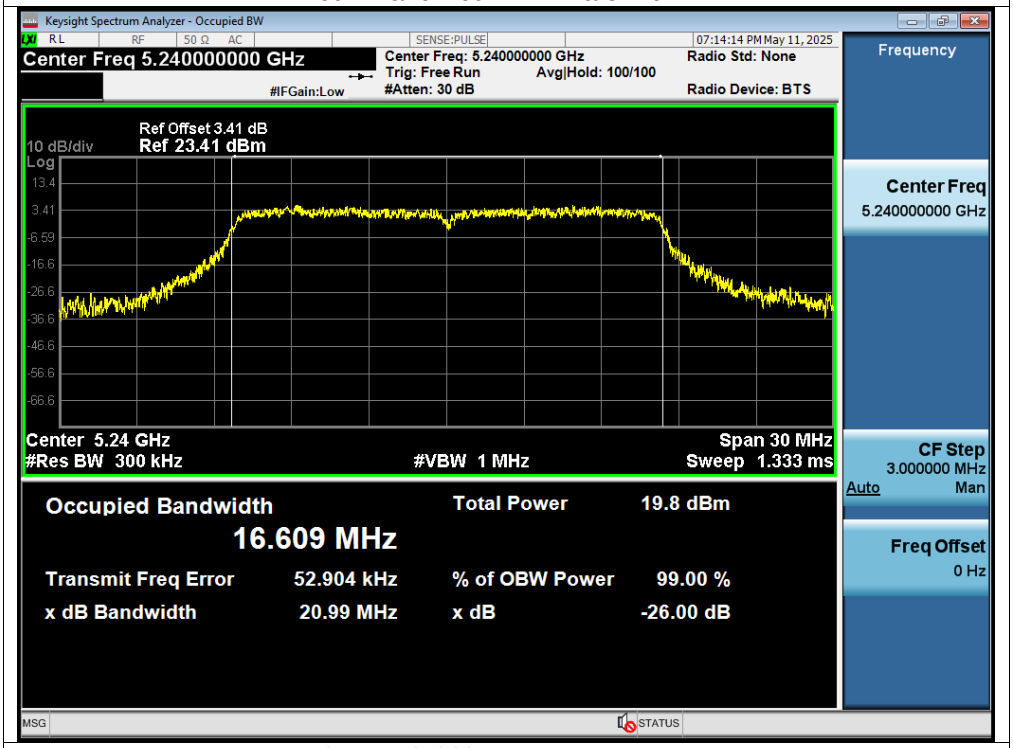
Test Graphs
-26dB Bandwidth NVNT a 5180MHz



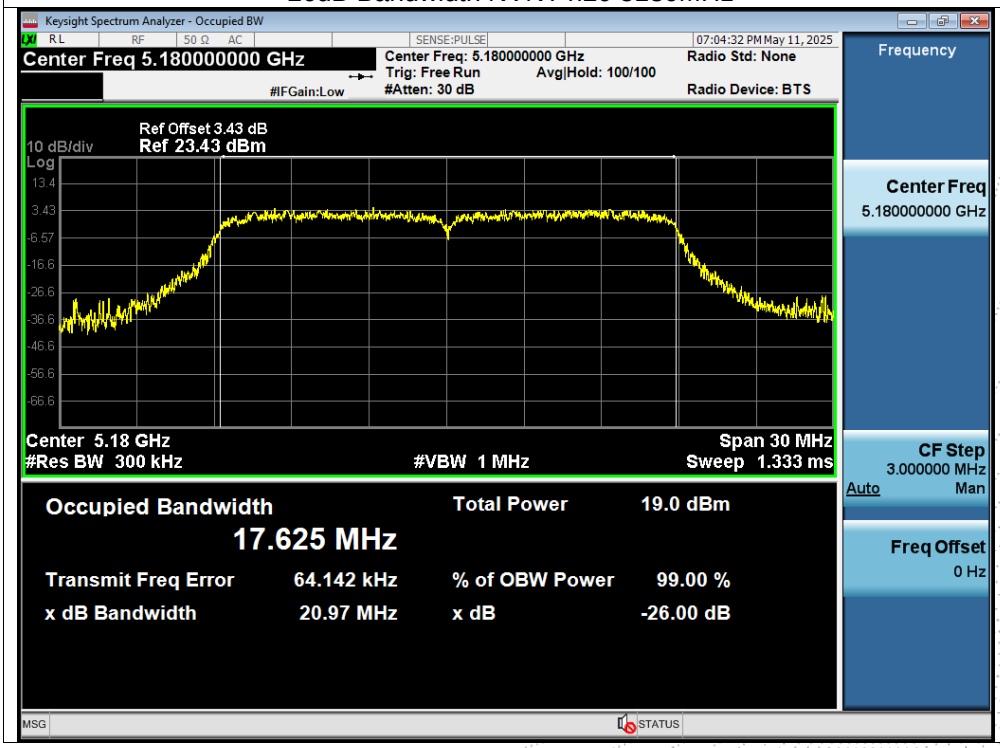
-26dB Bandwidth NVNT a 5200MHz



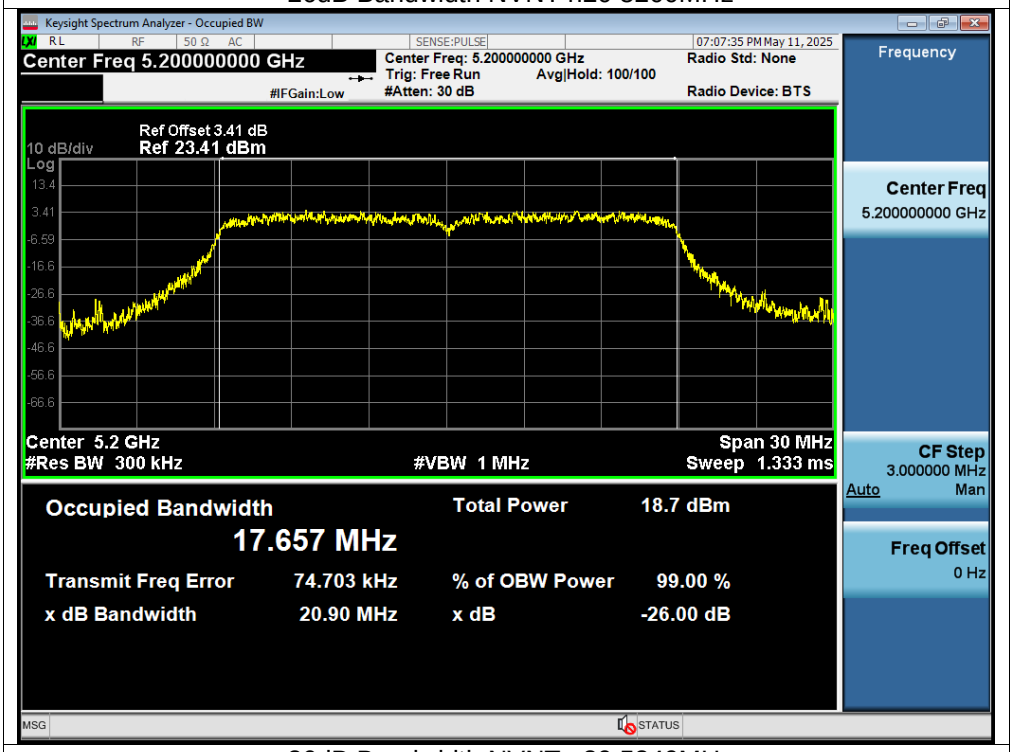
-26dB Bandwidth NVNT a 5240MHz



-26dB Bandwidth NVNT n20 5180MHz

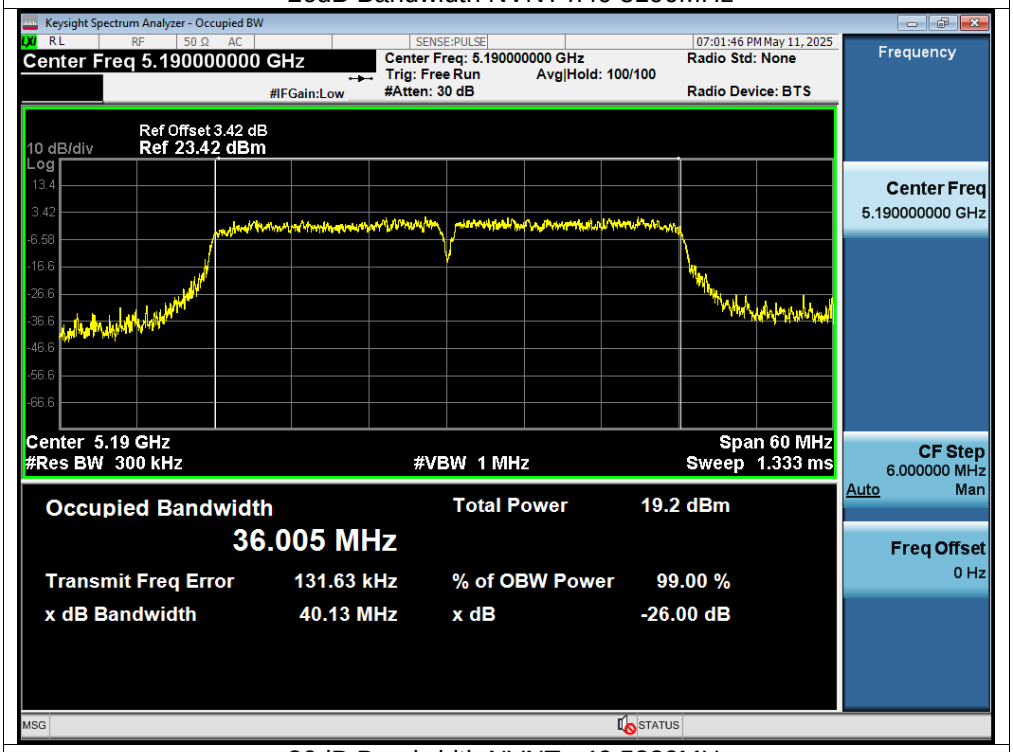


-26dB Bandwidth NVNT n20 5200MHz

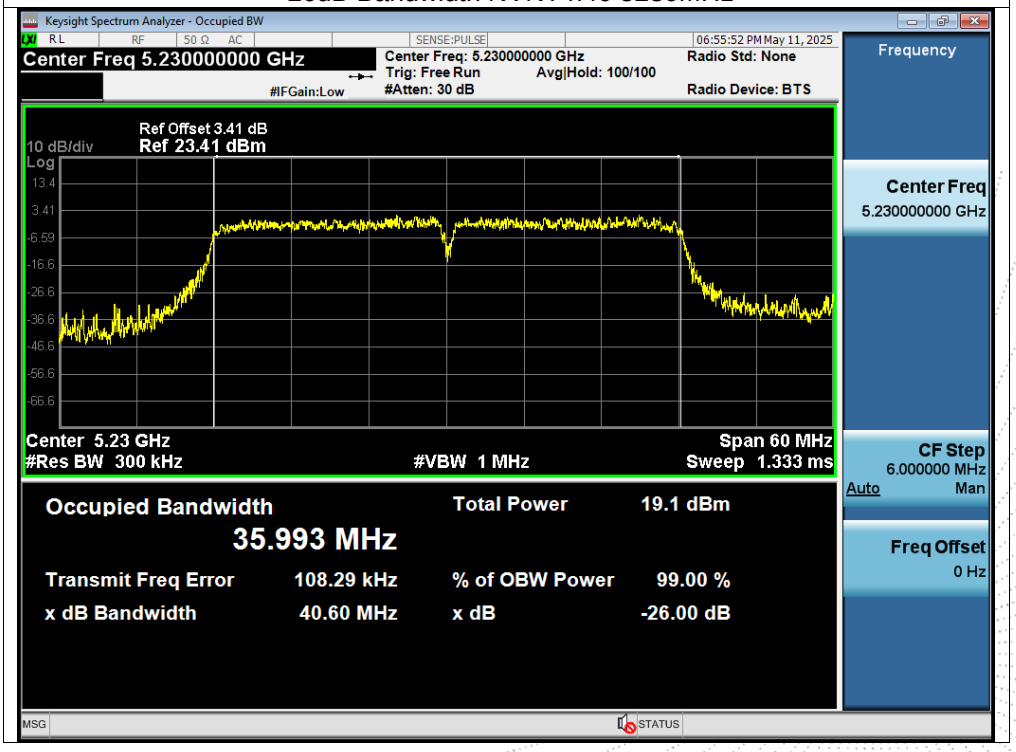


-26dB Bandwidth NVNT n20 5240MHz

-26dB Bandwidth NVNT n40 5190MHz

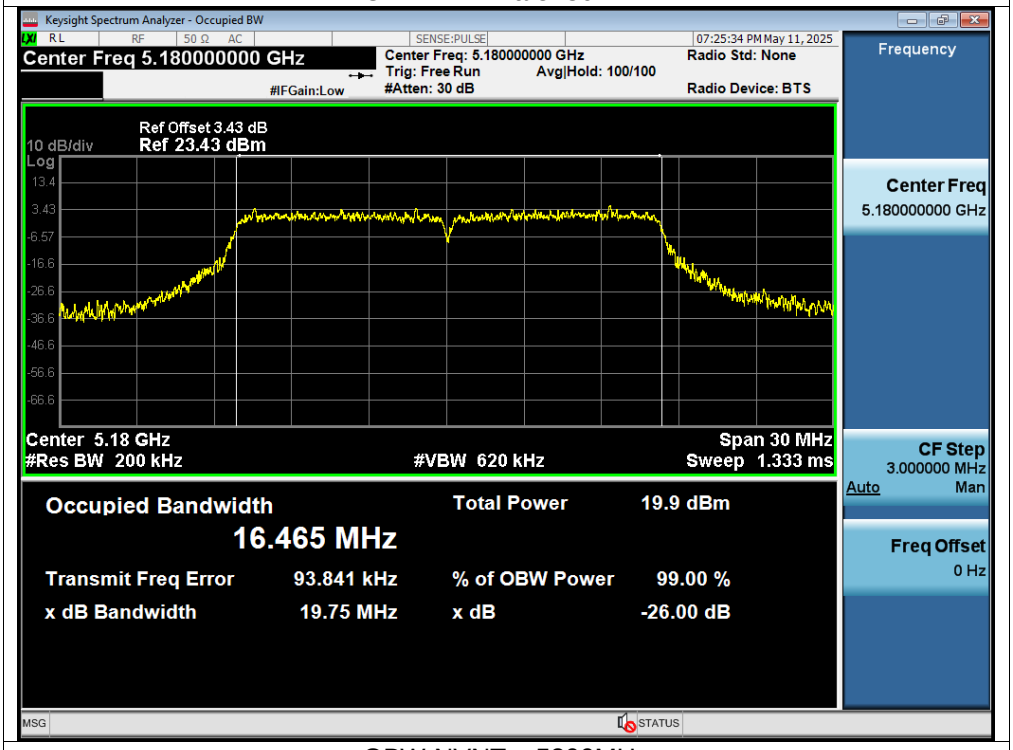


-26dB Bandwidth NVNT n40 5230MHz



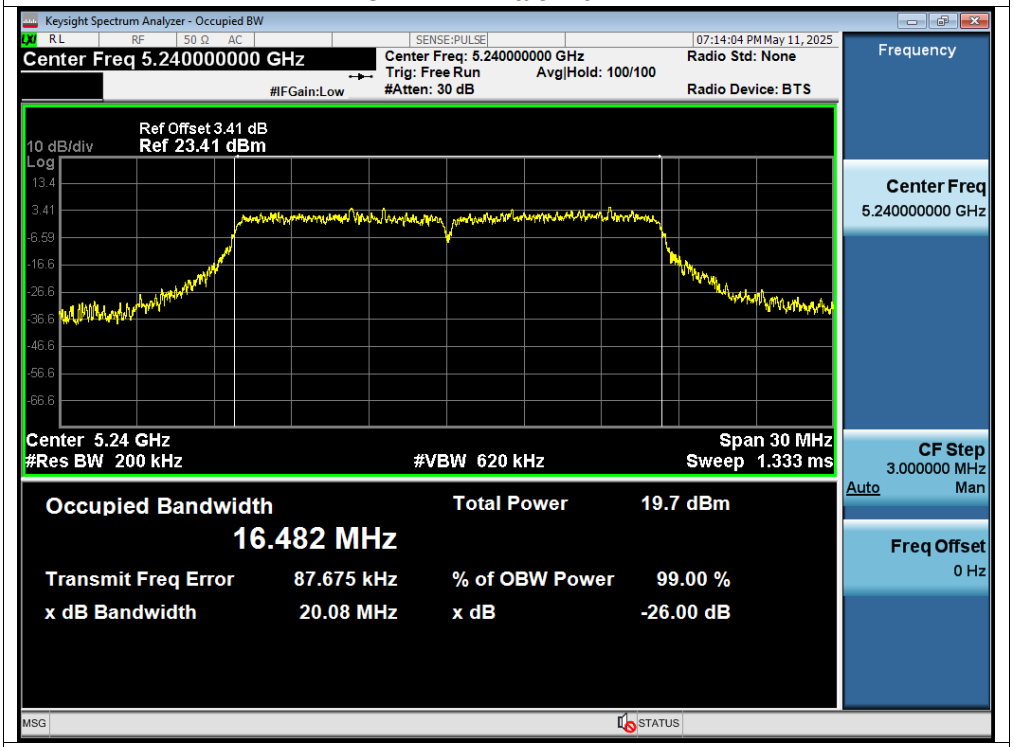
Test Graphs

OBW NVNT a 5180MHz

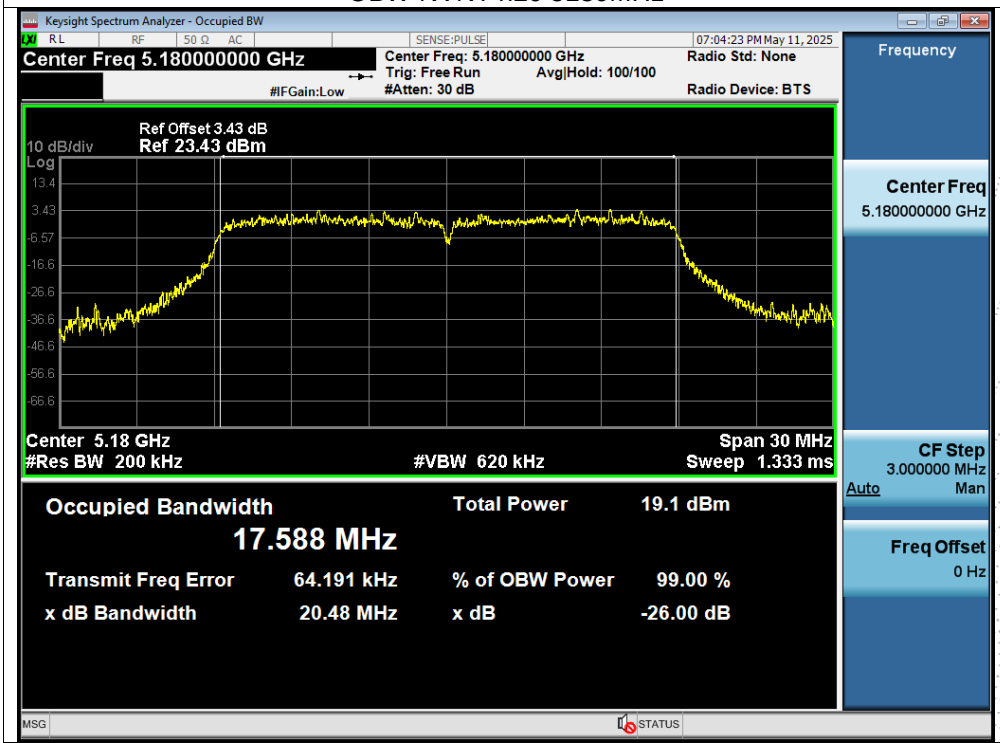


OBW NVNT a 5200MHz

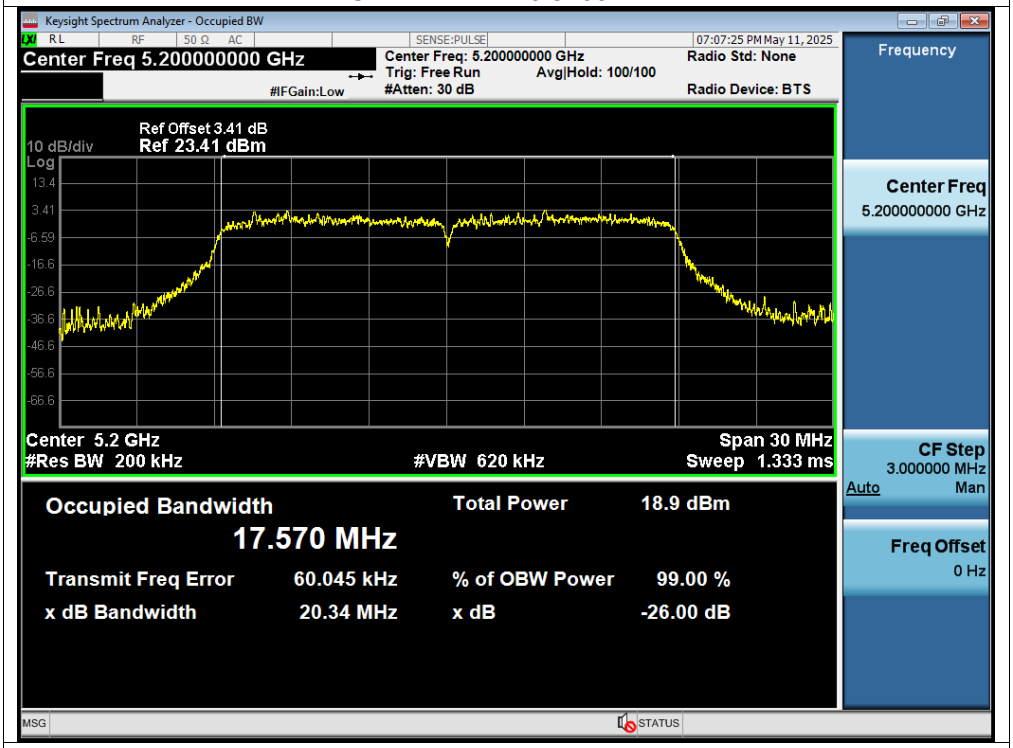
OBW NVNT a 5240MHz



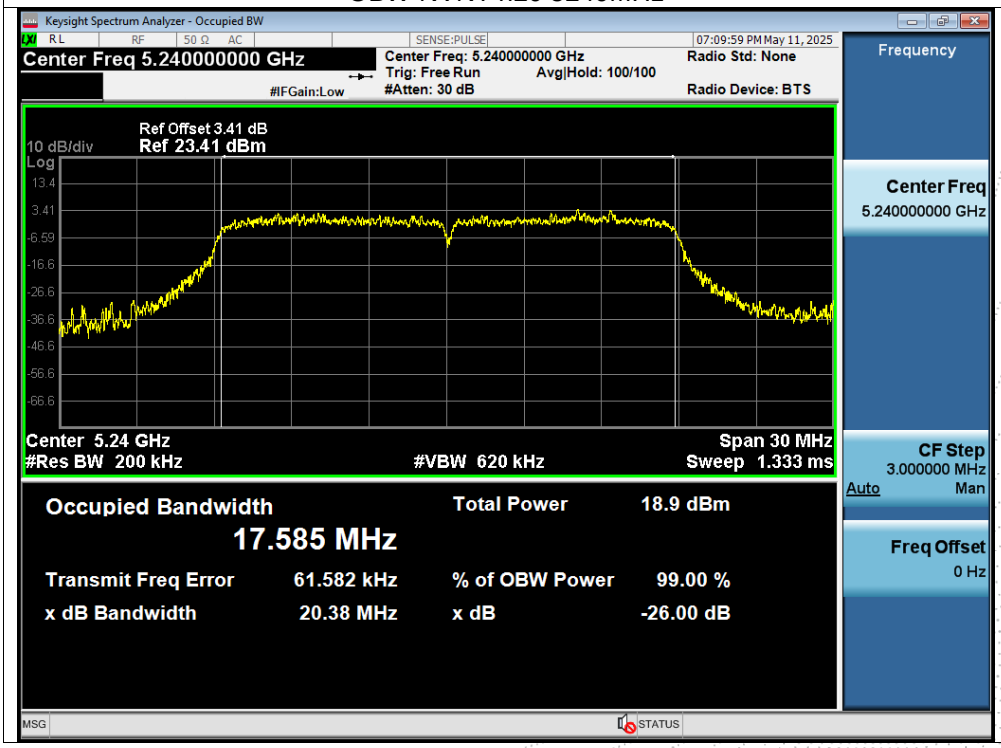
OBW NVNT n20 5180MHz



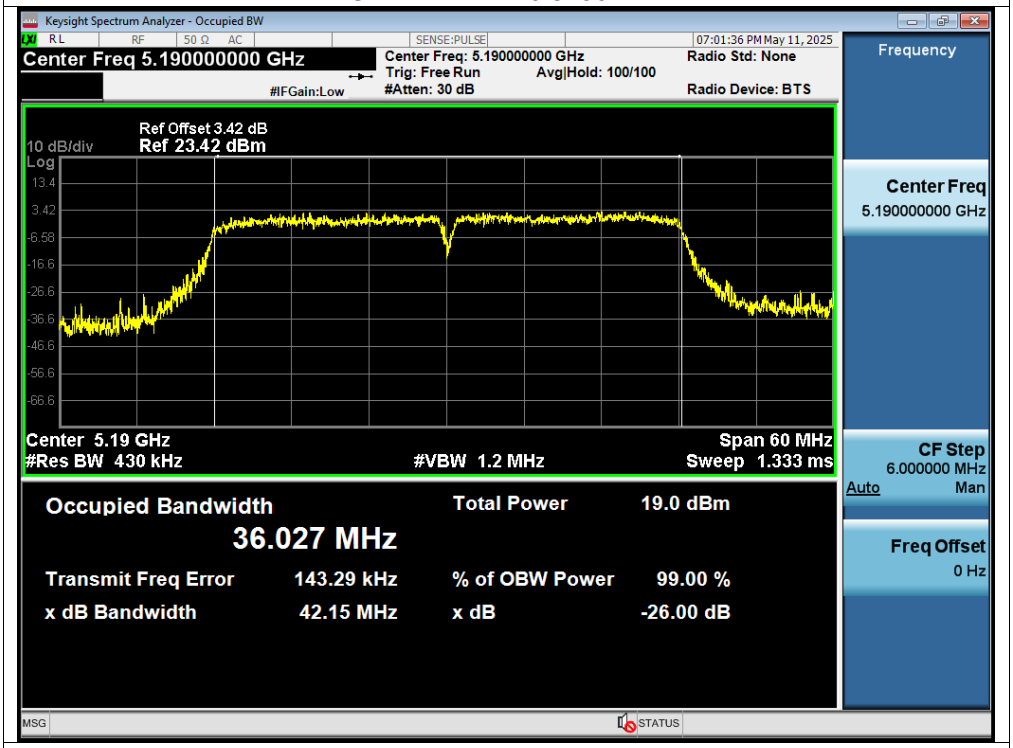
OBW NVNT n20 5200MHz



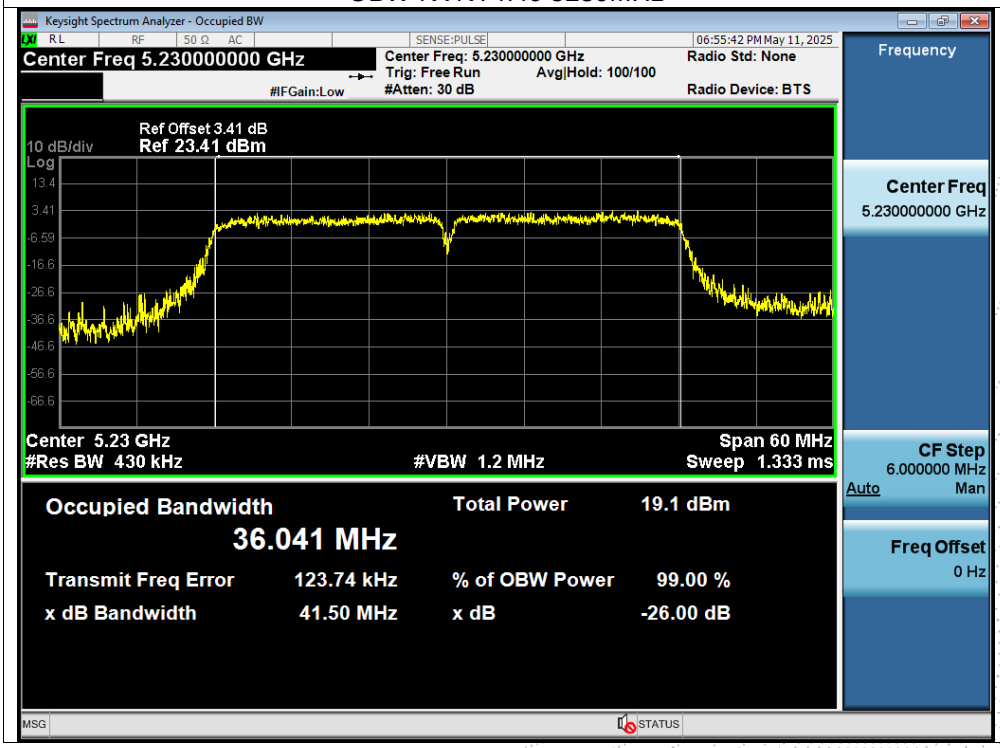
OBW NVNT n20 5240MHz



OBW NVNT n40 5190MHz

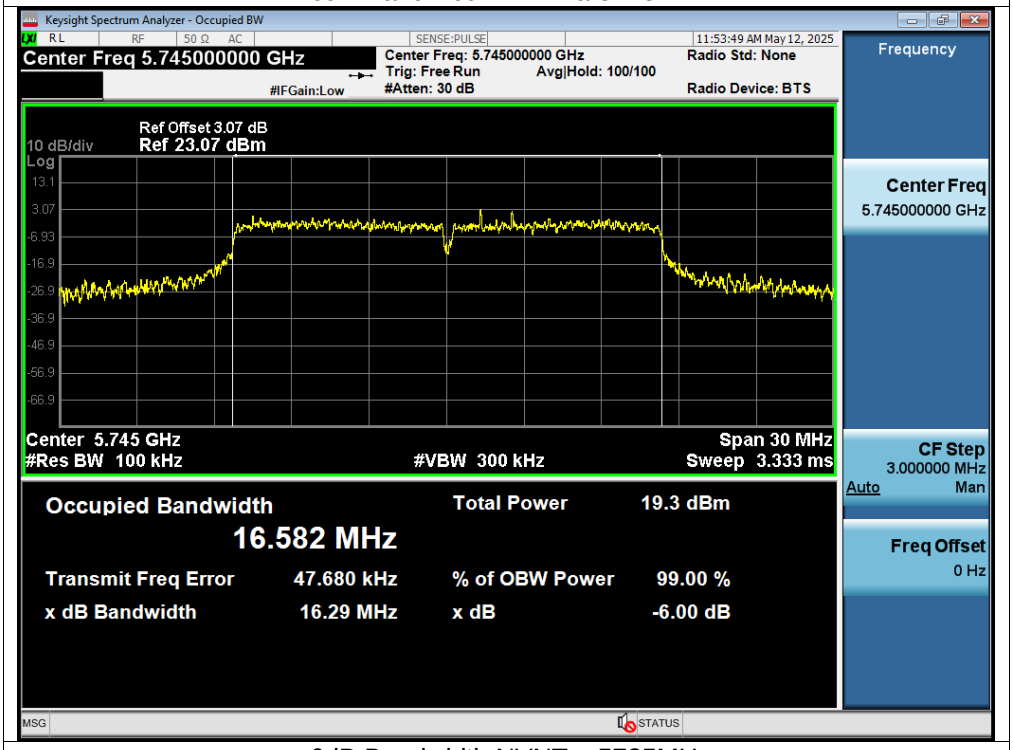


OBW NVNT n40 5230MHz



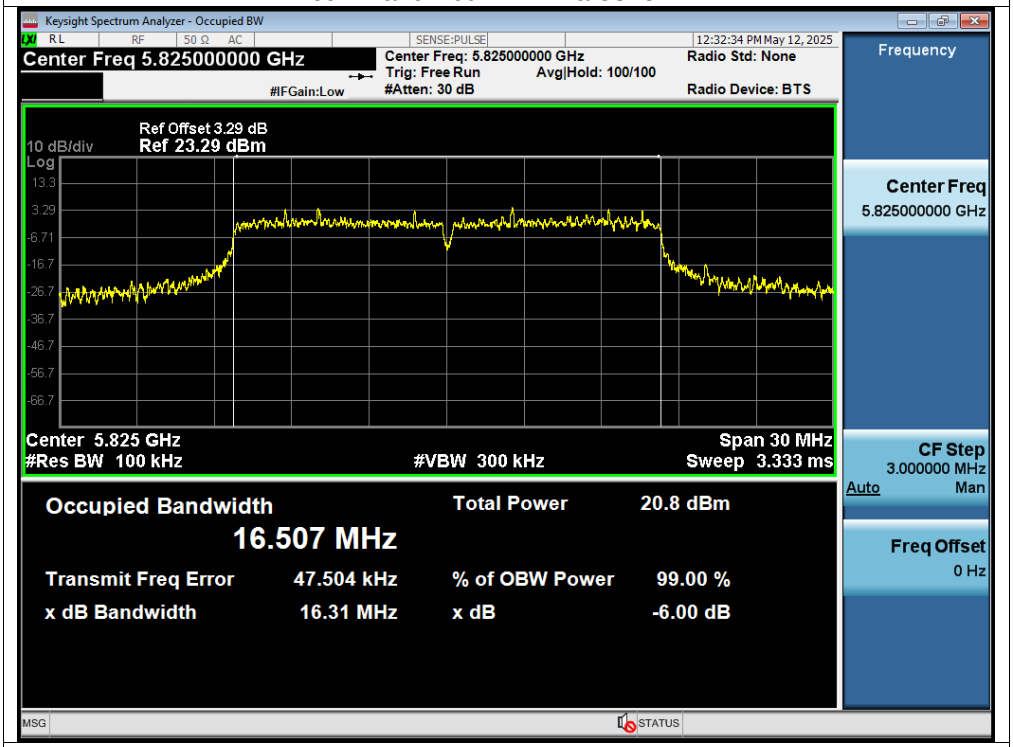
Test Graphs

-6dB Bandwidth NVNT a 5745MHz

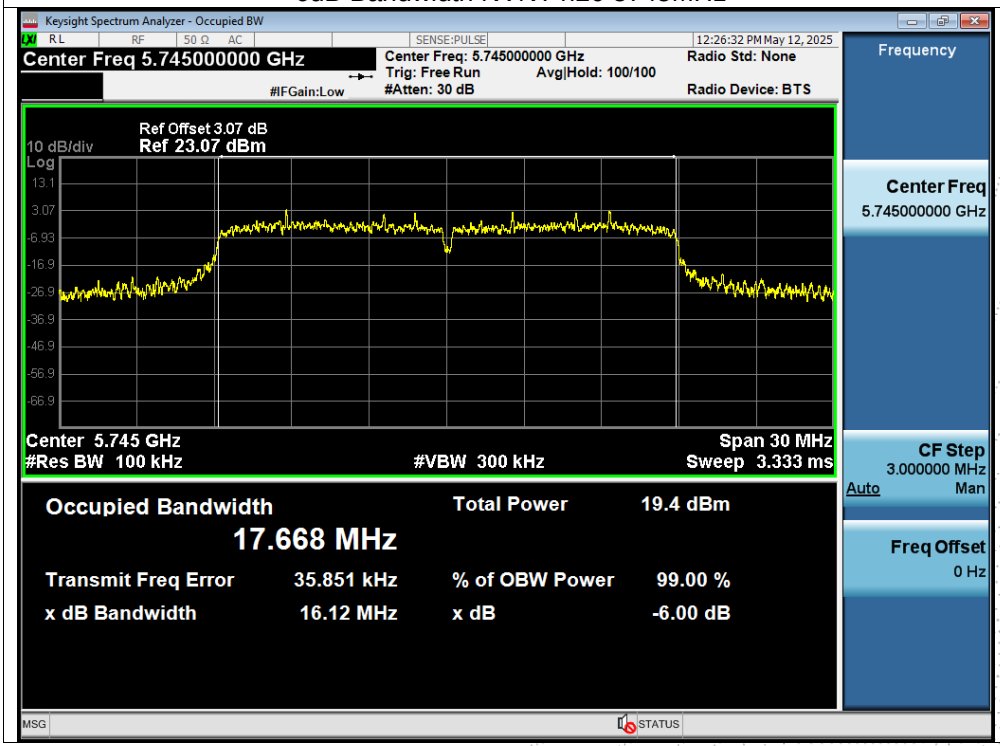


-6dB Bandwidth NVNT a 5785MHz

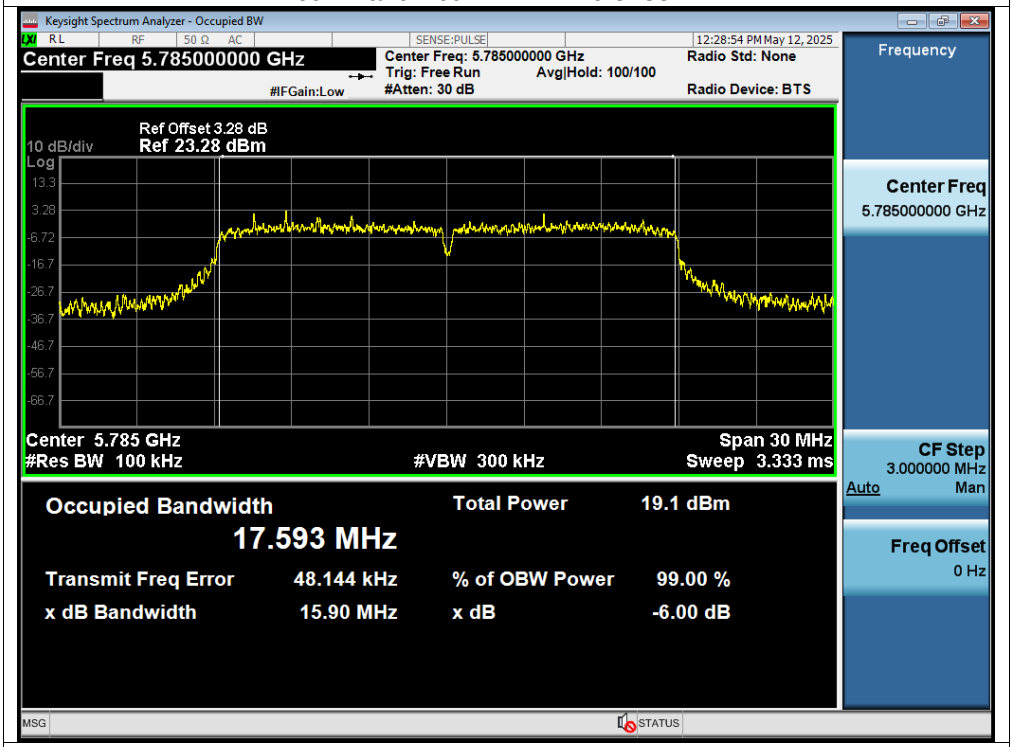
-6dB Bandwidth NVNT a 5825MHz



-6dB Bandwidth NVNT n20 5745MHz

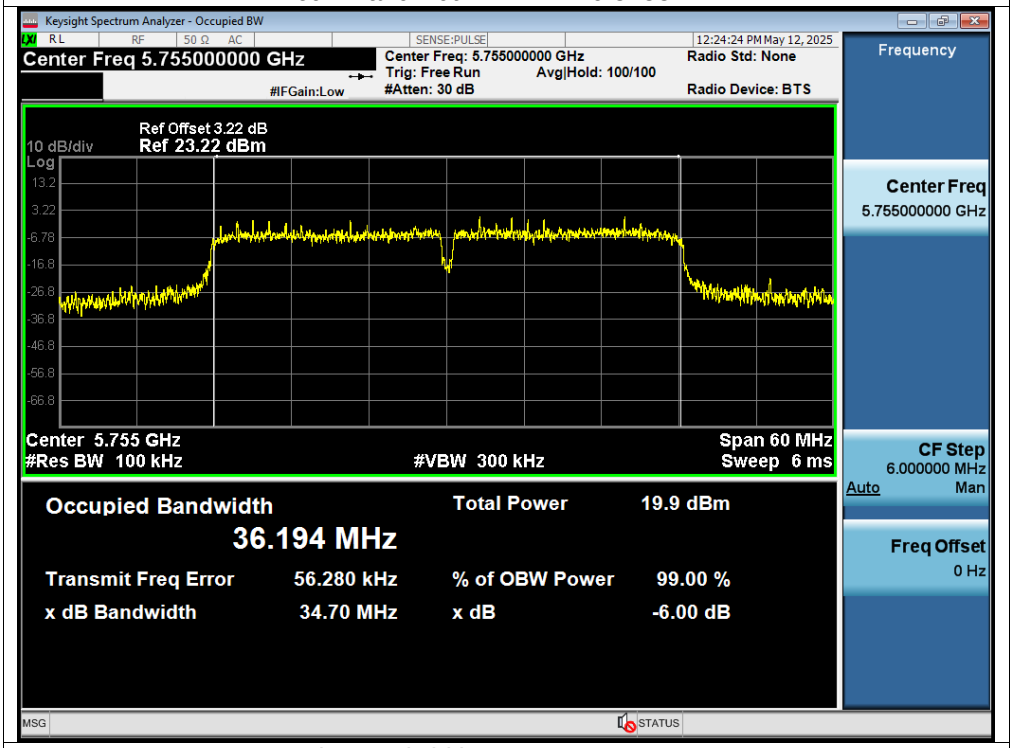


-6dB Bandwidth NVNT n20 5785MHz

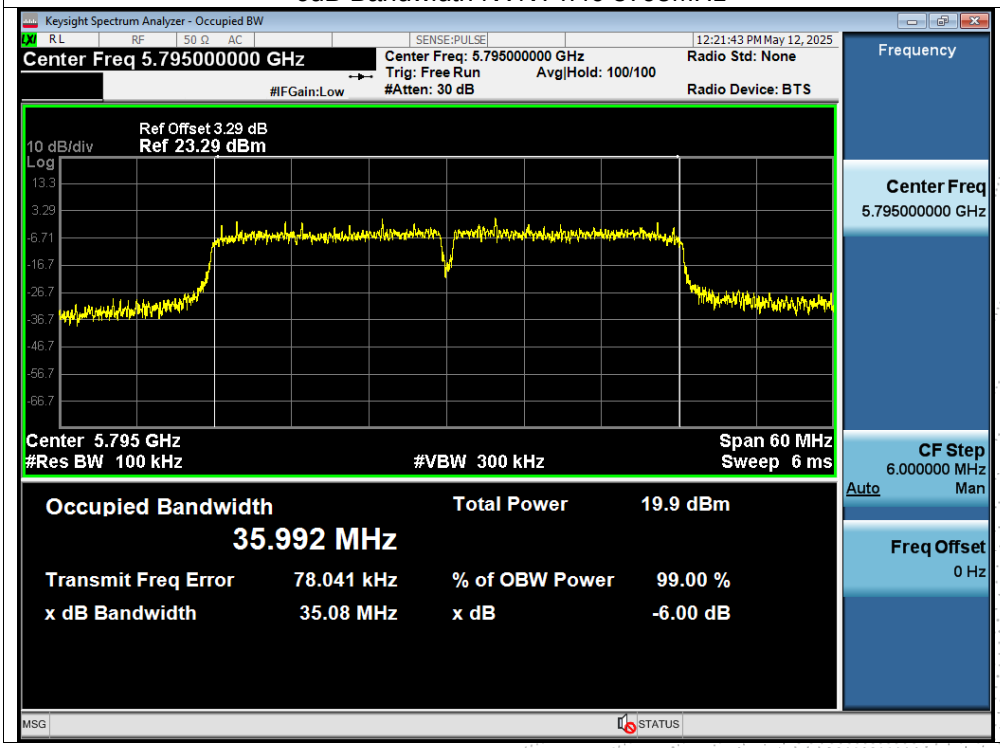


-6dB Bandwidth NVNT n20 5825MHz

-6dB Bandwidth NVNT n40 5755MHz

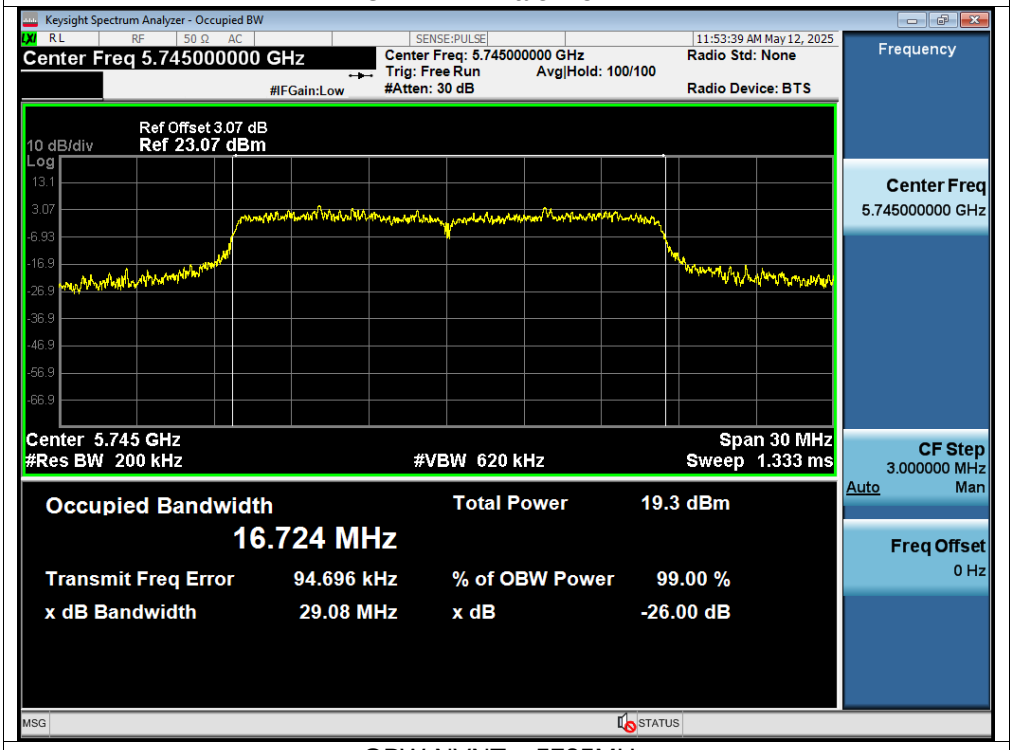


-6dB Bandwidth NVNT n40 5795MHz

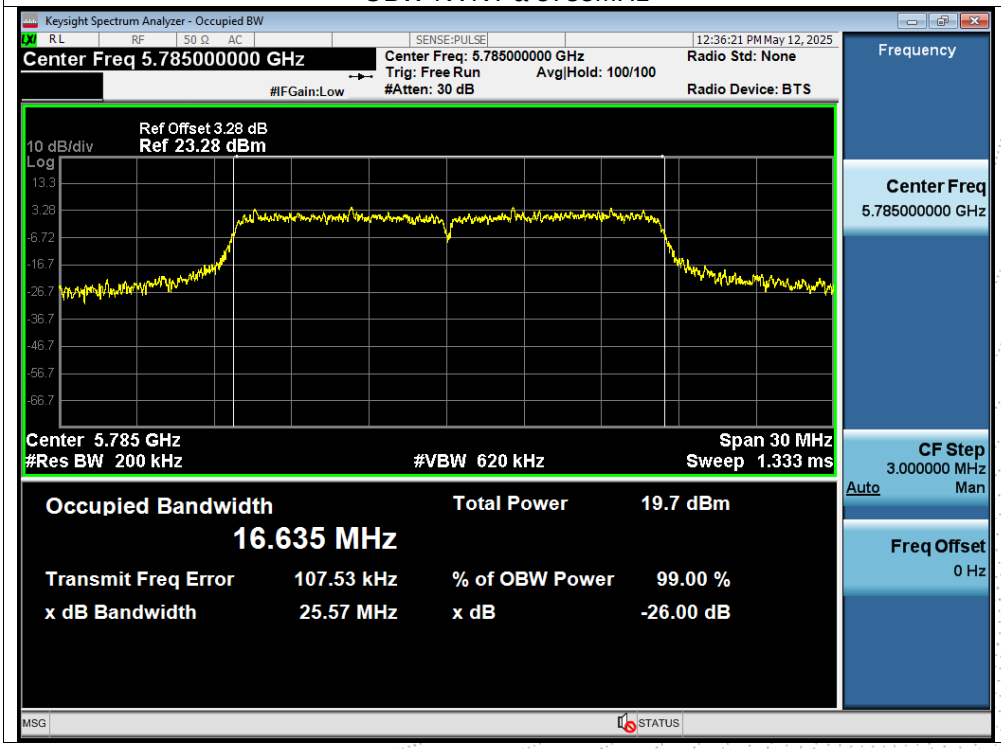


Test Graphs

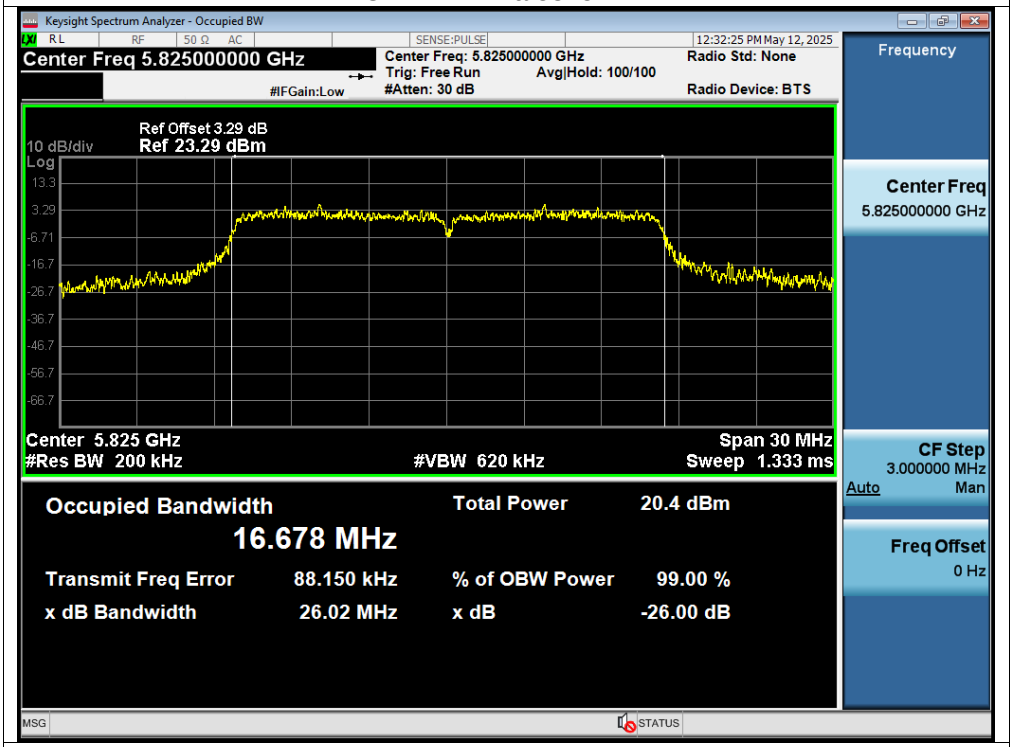
OBW NVNT a 5745MHz



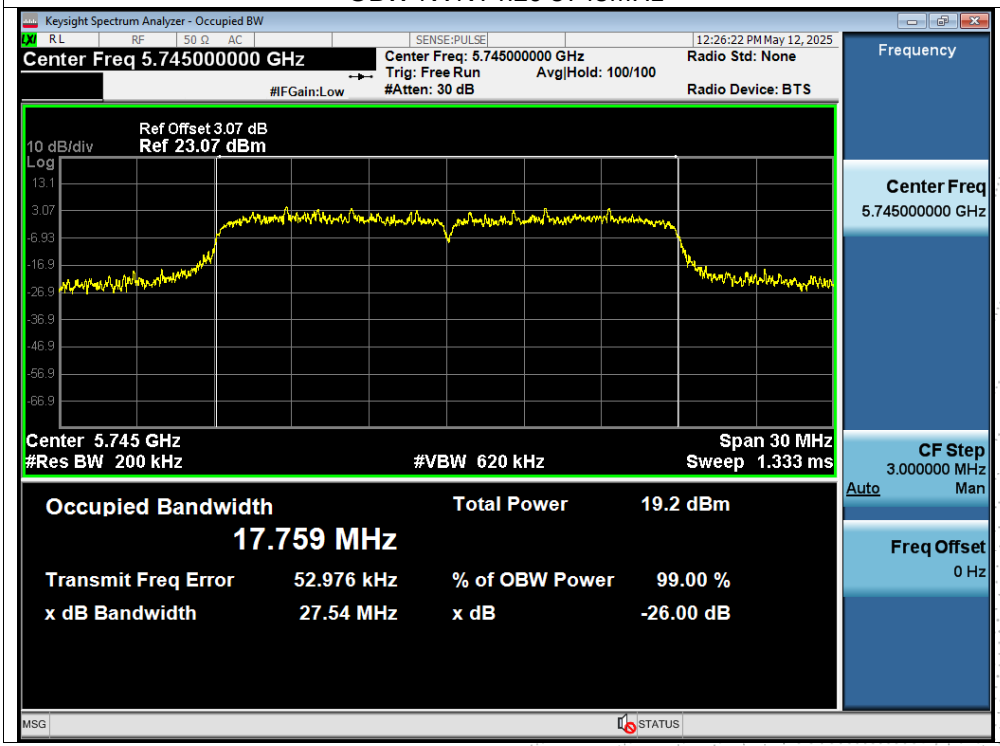
OBW NVNT a 5785MHz



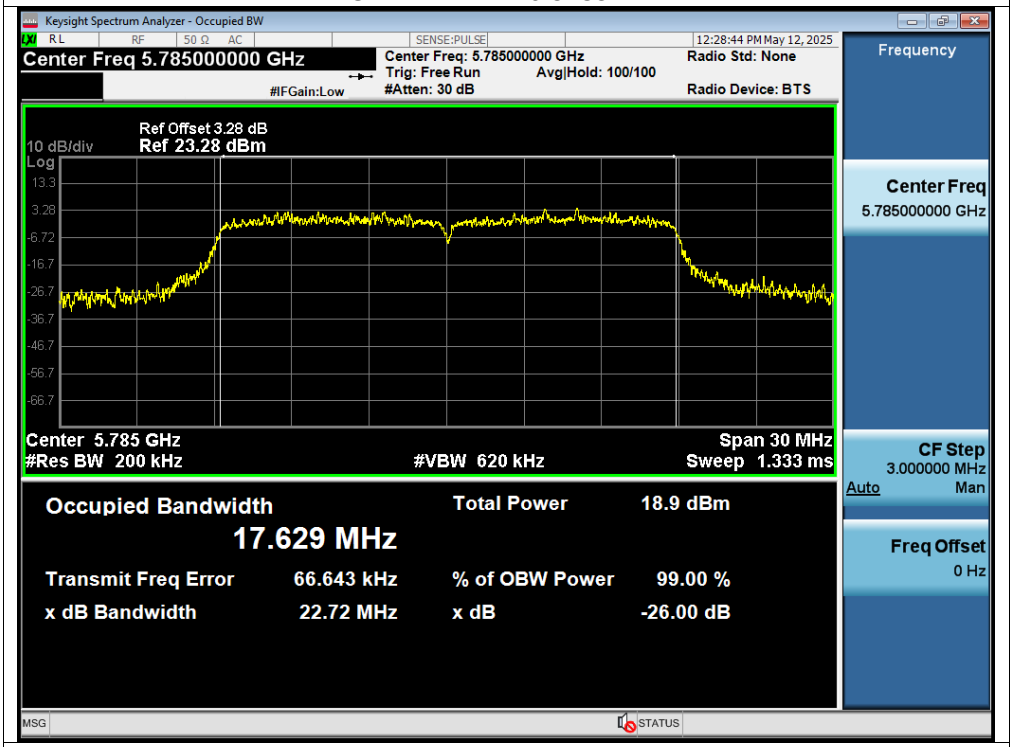
OBW NVNT a 5825MHz



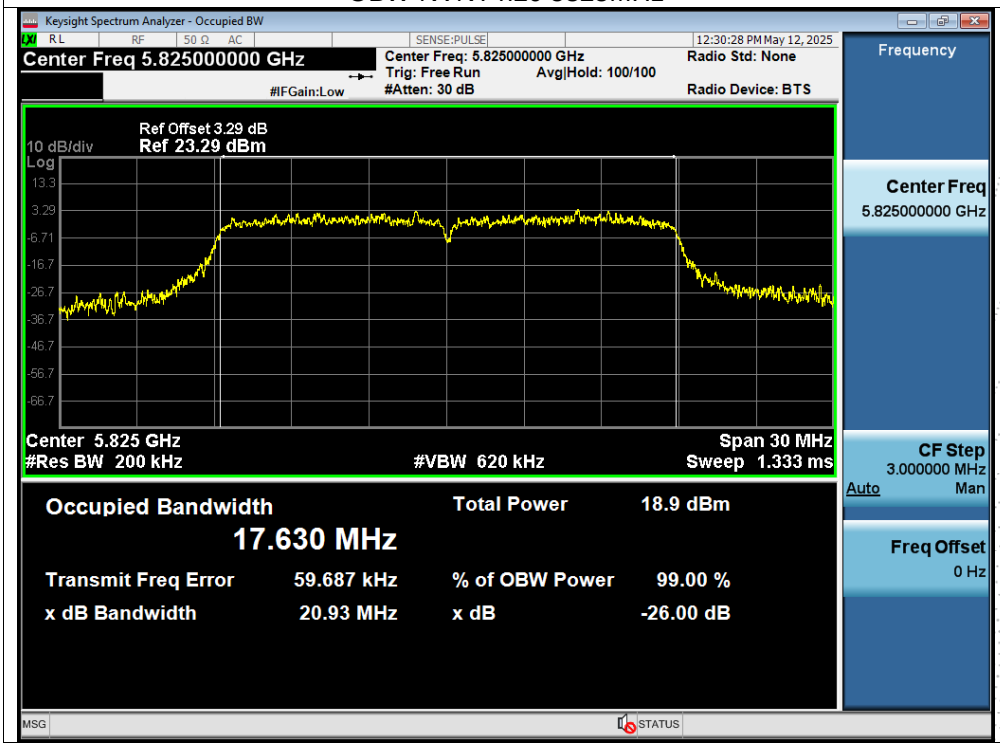
OBW NVNT n20 5745MHz



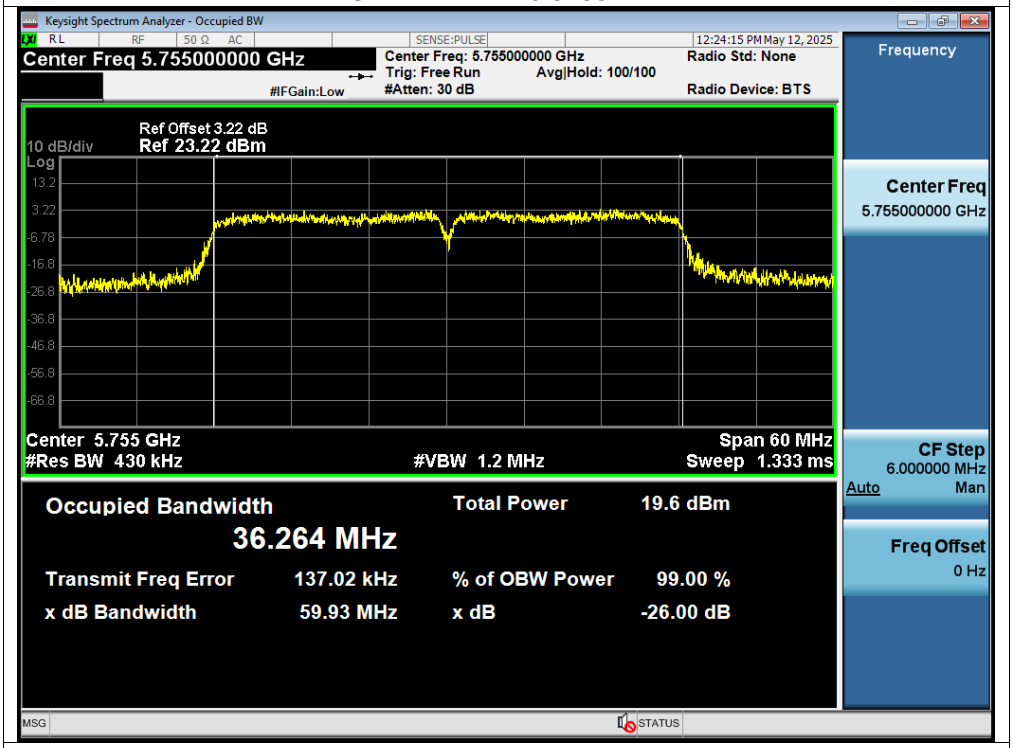
OBW NVNT n20 5785MHz



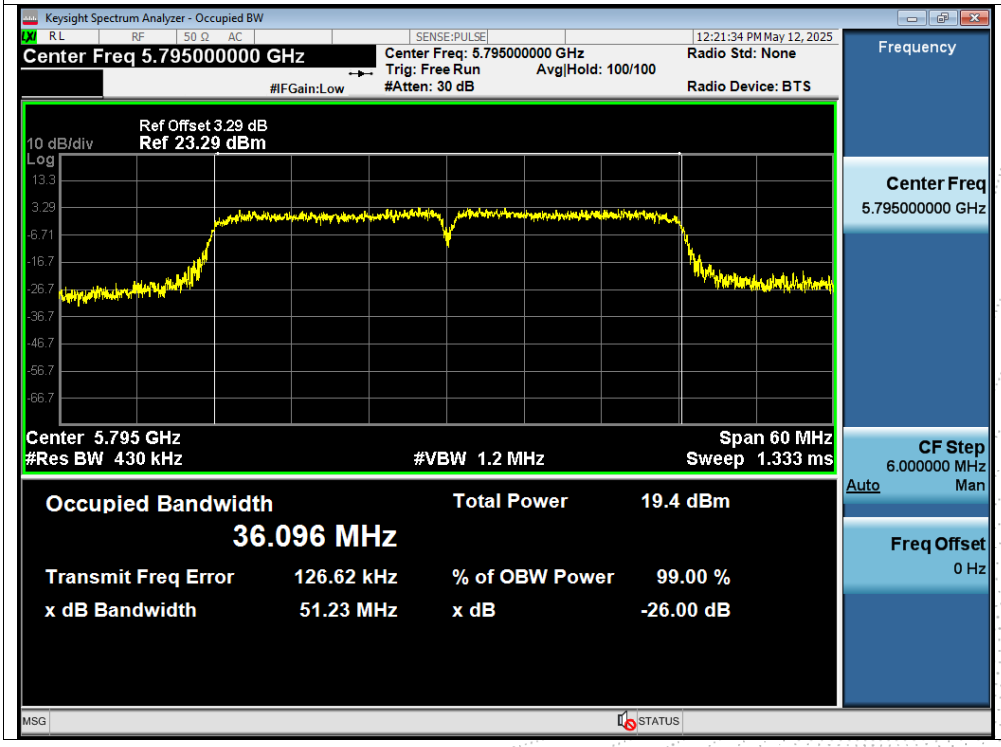
OBW NVNT n20 5825MHz



OBW NVNT n40 5755MHz

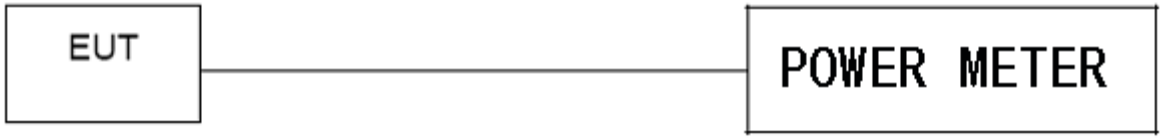


OBW NVNT n40 5795MHz



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

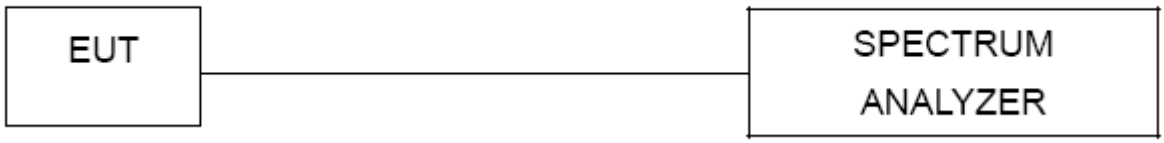
Temperature:	26 ℃	Relative Humidity:	54%RH
Pressure:	101KPa	Test Voltage:	AC120V/60Hz
Test Mode:	(5180-5240MHz); (5745-5825MHz)		

Condition	Mode	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	a	5180	12.54	24	Pass
NVNT	a	5200	12.24	24	Pass
NVNT	a	5240	12.37	24	Pass
NVNT	n20	5180	11.62	24	Pass
NVNT	n20	5200	11.29	24	Pass
NVNT	n20	5240	11.61	24	Pass
NVNT	n40	5190	10.40	24	Pass
NVNT	n40	5230	10.14	24	Pass

Condition	Mode	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	a	5745	12.04	30	Pass
NVNT	a	5785	12.32	30	Pass
NVNT	a	5825	12.25	30	Pass
NVNT	n20	5745	11.55	30	Pass
NVNT	n20	5785	11.50	30	Pass
NVNT	n20	5825	11.30	30	Pass
NVNT	n40	5755	10.33	30	Pass
NVNT	n40	5795	10.16	30	Pass

11. Out Of Band Emissions

11.1 Block Diagram Of Test Setup



11.2 Limit

According to FCC §15.407(b)
Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:
(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
(2) All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

11.3 Test procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Set RBW of spectrum analyzer to 1 MHz with a convenient frequency span.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.

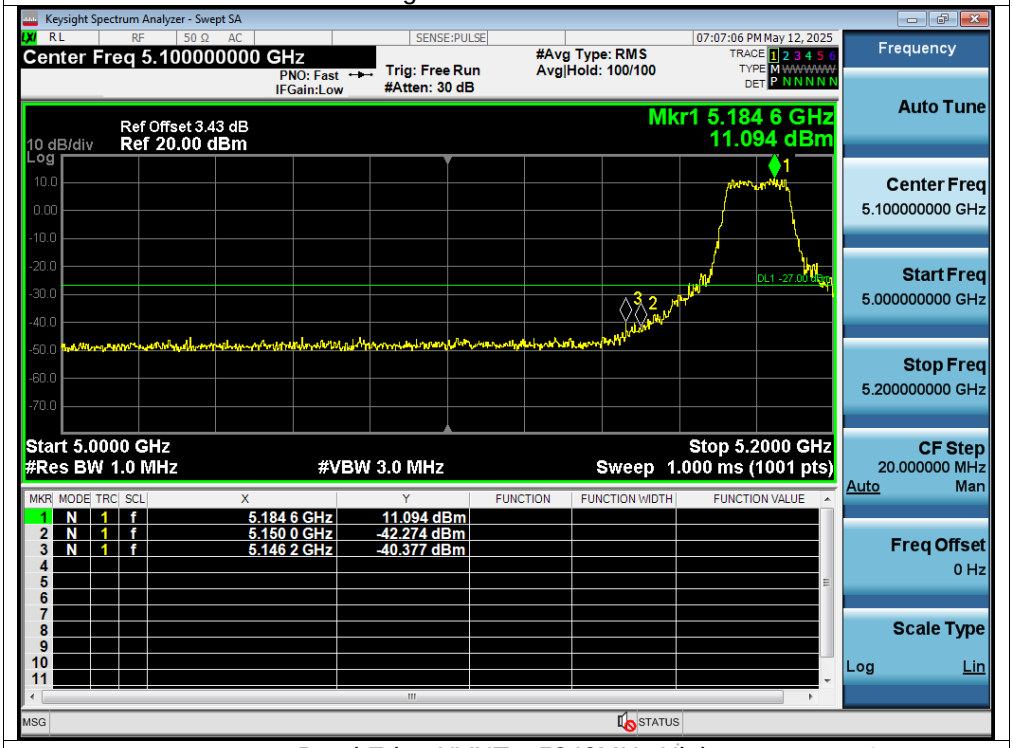
11.4 EUT operating Conditions

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

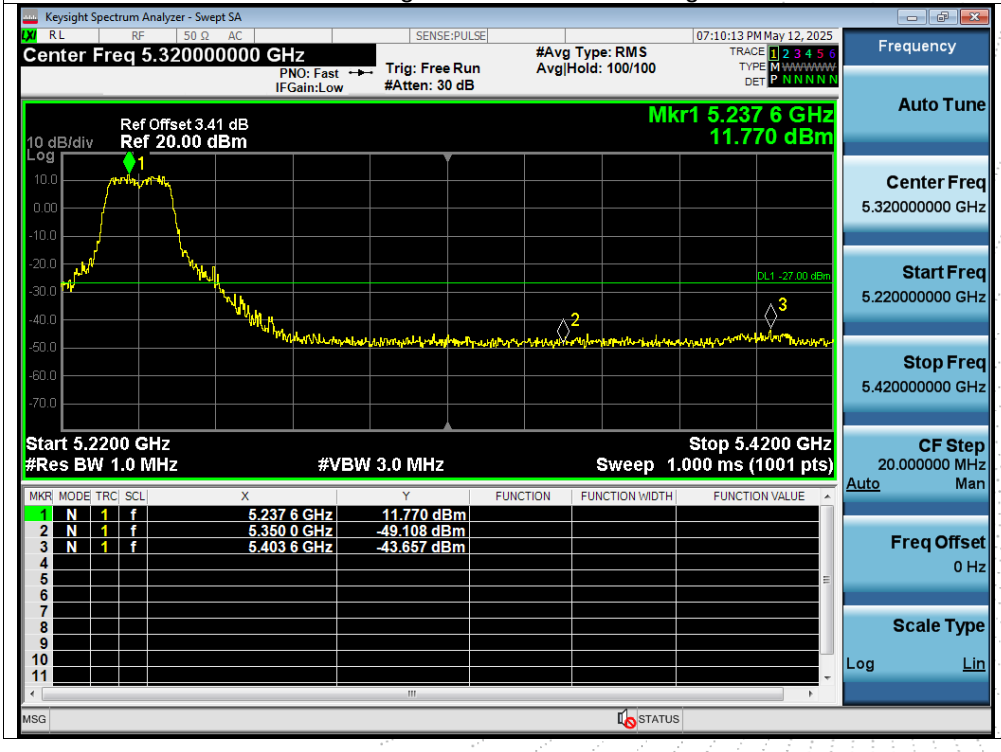
11.5 Test Result

Test Graphs

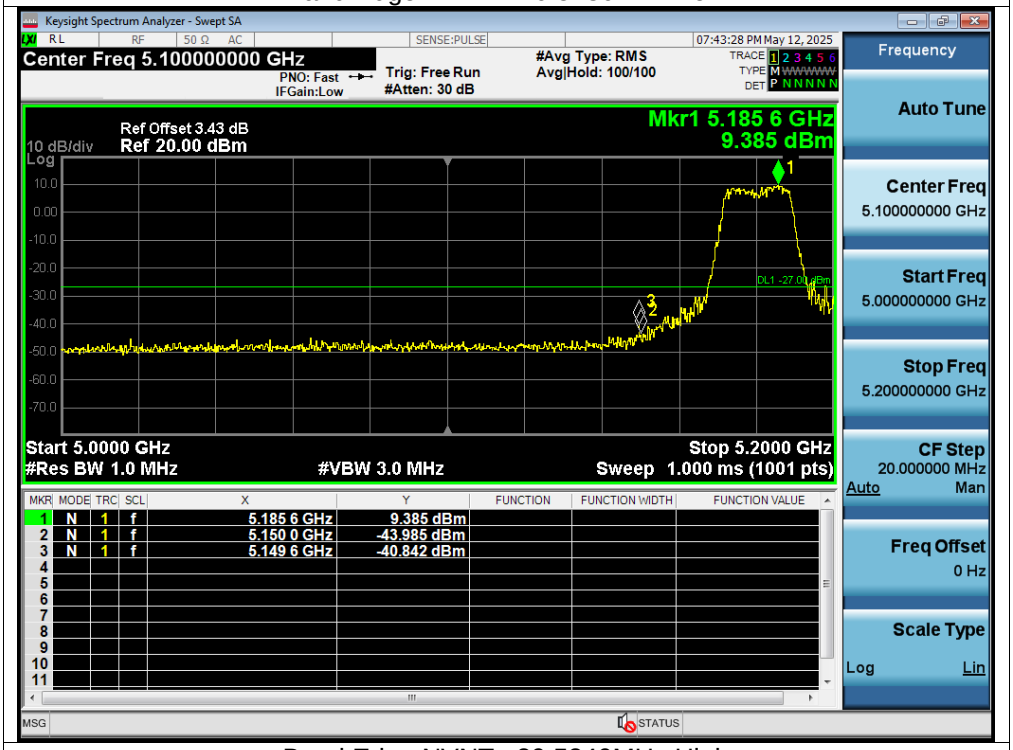
Band Edge NVNT a 5180MHz Low



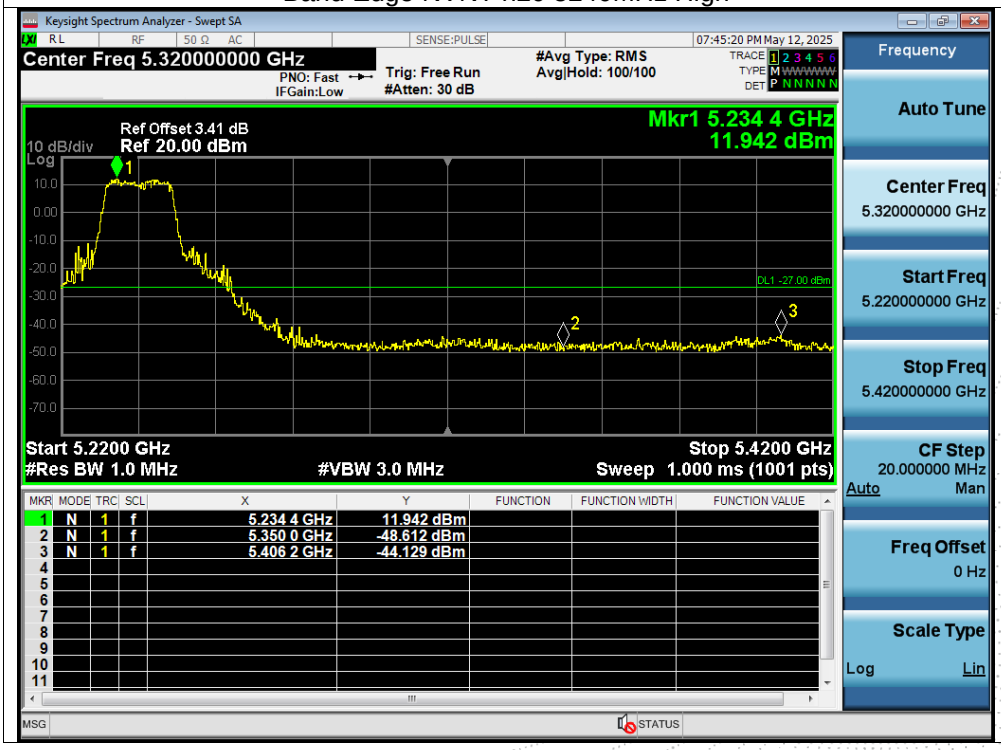
Band Edge NVNT a 5240MHz High



Band Edge NVNT n20 5180MHz Low



Band Edge NVNT n20 5240MHz High



Band Edge NVNT n40 5190MHz Low

Band Edge NVNT n40 5230MHz High

Test Graphs

Band Edge NVNT a 5745MHz Low

Band Edge NVNT a 5825MHz High

Band Edge NVNT n20 5745MHz Low

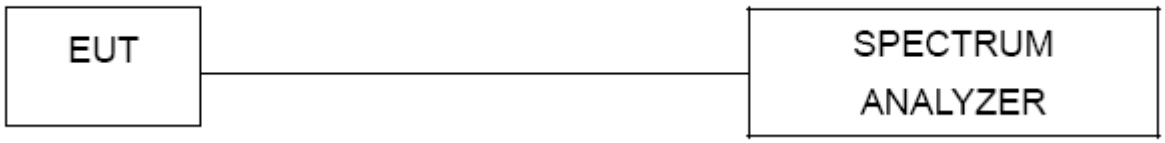
Band Edge NVNT n20 5825MHz High

Band Edge NVNT n40 5755MHz Low

Band Edge NVNT n40 5795MHz High

12. Spurious RF Conducted Emissions

12.1 Block Diagram Of Test Setup



12.2 Limit

Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:
(1)For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
(2)For transmitters operating in the 5.725-5.85 GHz band(i) All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

12.3 Test procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Set RBW of spectrum analyzer to 1 MHz with a convenient frequency span.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.

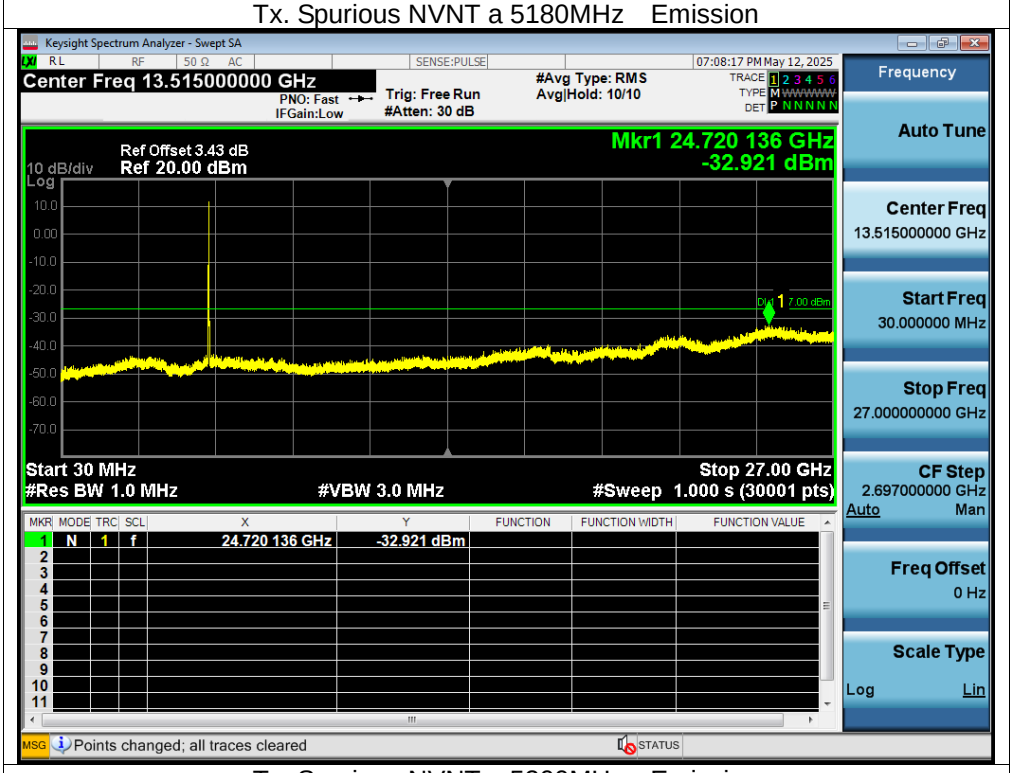
12.4 Test Result

Remark: The measurement frequency range is from 9KHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested to verify the spurious emissions and bandege measurement data.

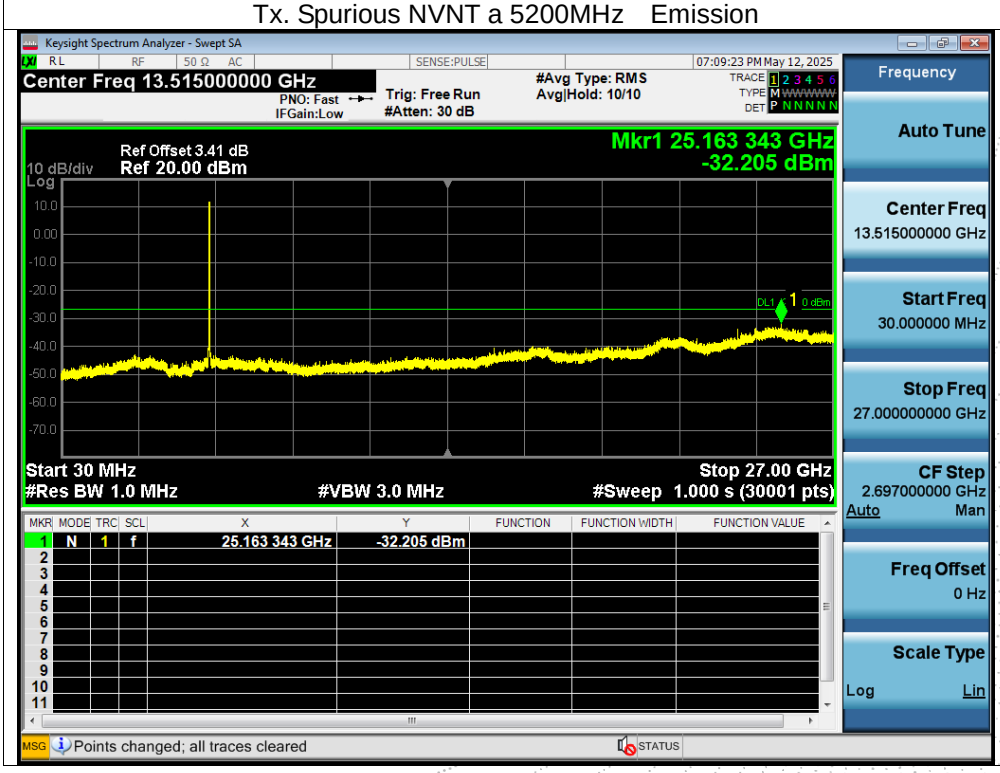
About:26.5GHz-40GHz, The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Test Graphs

Tx. Spurious NVNT a 5180MHz Emission

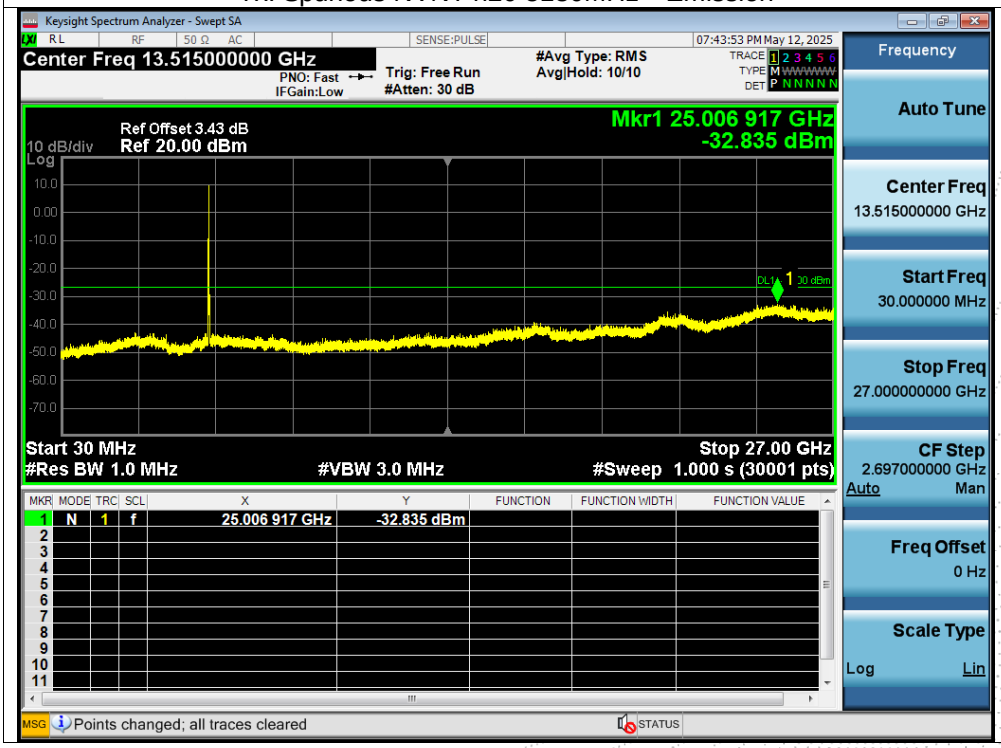


Tx. Spurious NVNT a 5200MHz Emission



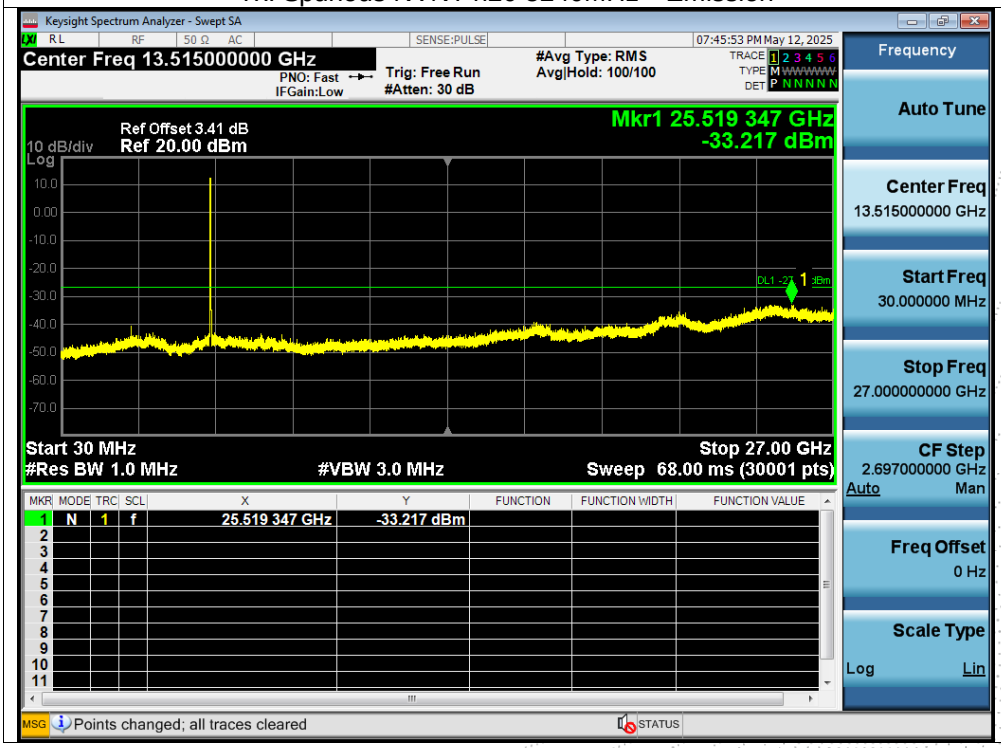
Tx. Spurious NVNT a 5240MHz Emission

Tx. Spurious NVNT n20 5180MHz Emission



Tx. Spurious NVNT n20 5200MHz Emission

Tx. Spurious NVNT n20 5240MHz Emission



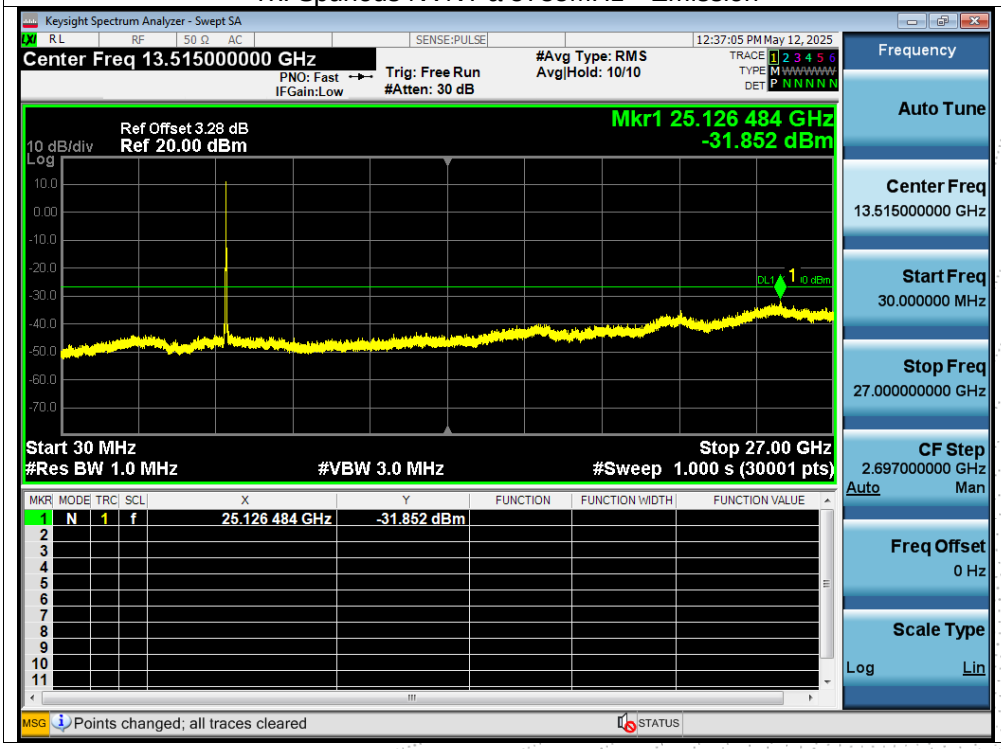
Tx. Spurious NVNT n40 5190MHz Emission

Tx. Spurious NVNT n40 5230MHz Emission

Test Graphs

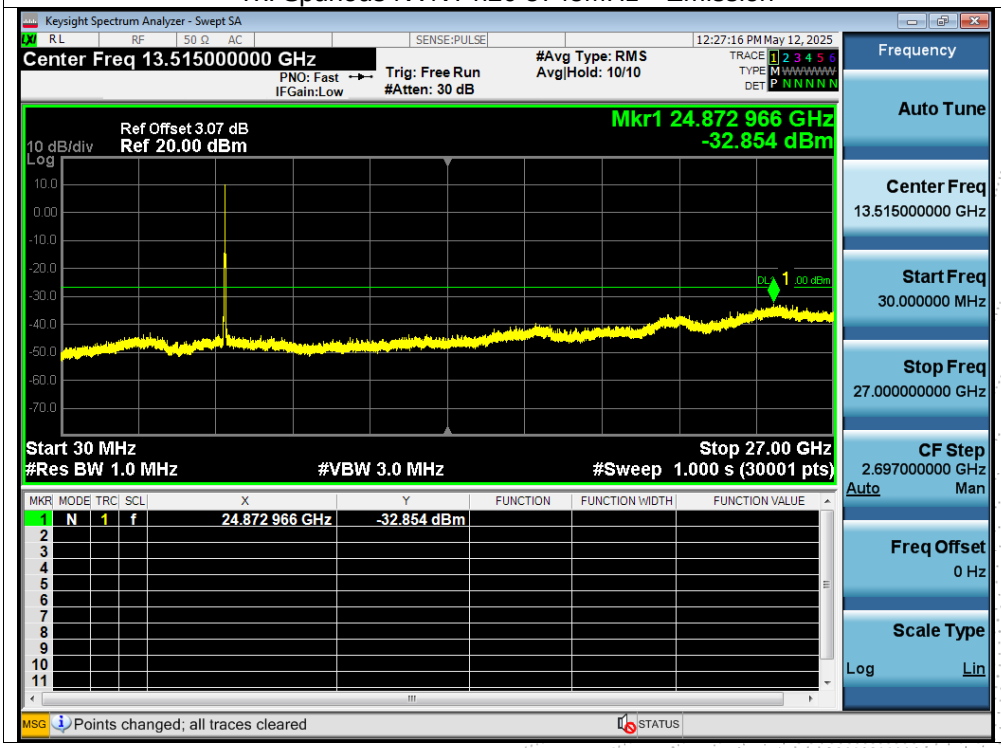
Tx. Spurious NVNT a 5745MHz Emission

Tx. Spurious NVNT a 5785MHz Emission

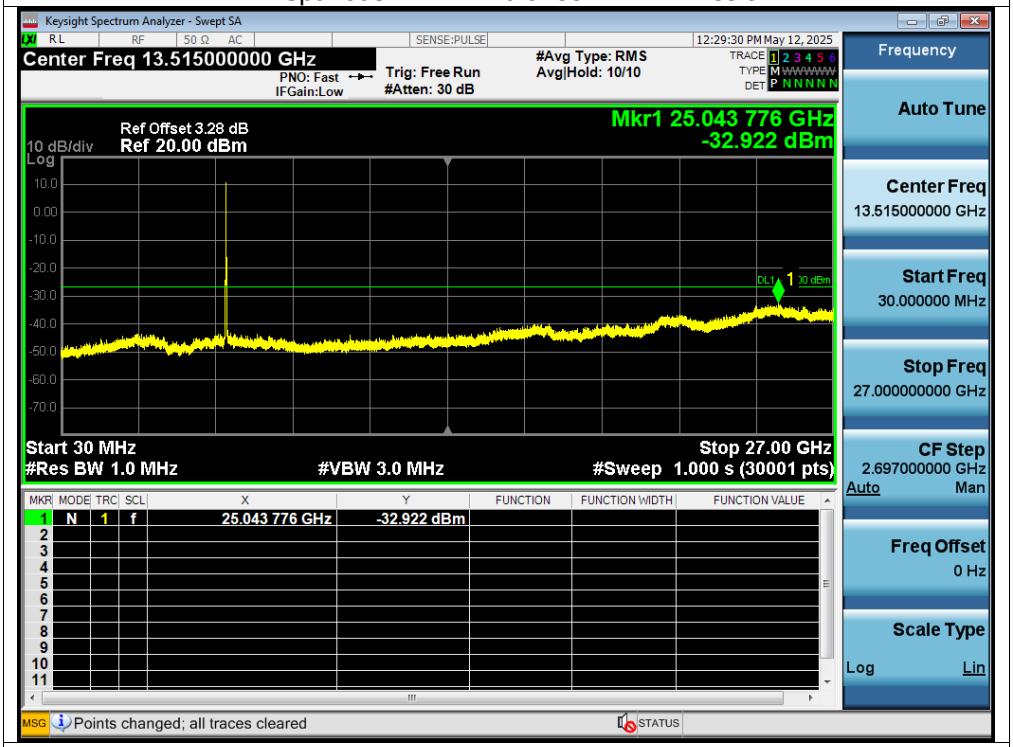


Tx. Spurious NVNT a 5825MHz Emission

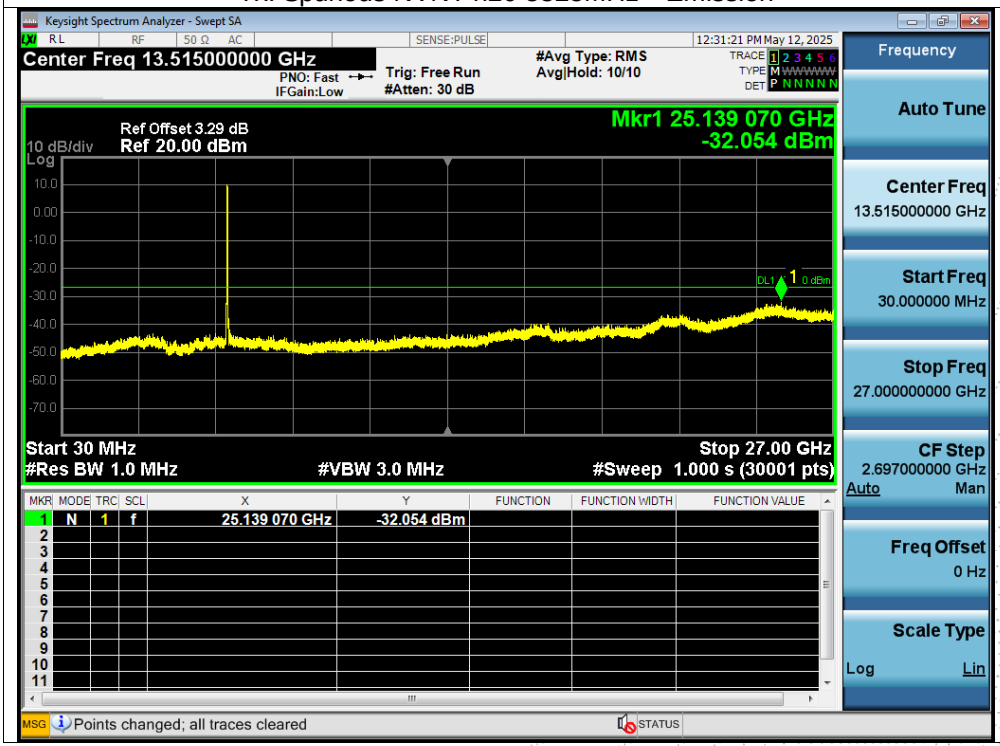
Tx. Spurious NVNT n20 5745MHz Emission



Tx. Spurious NVNT n20 5785MHz Emission

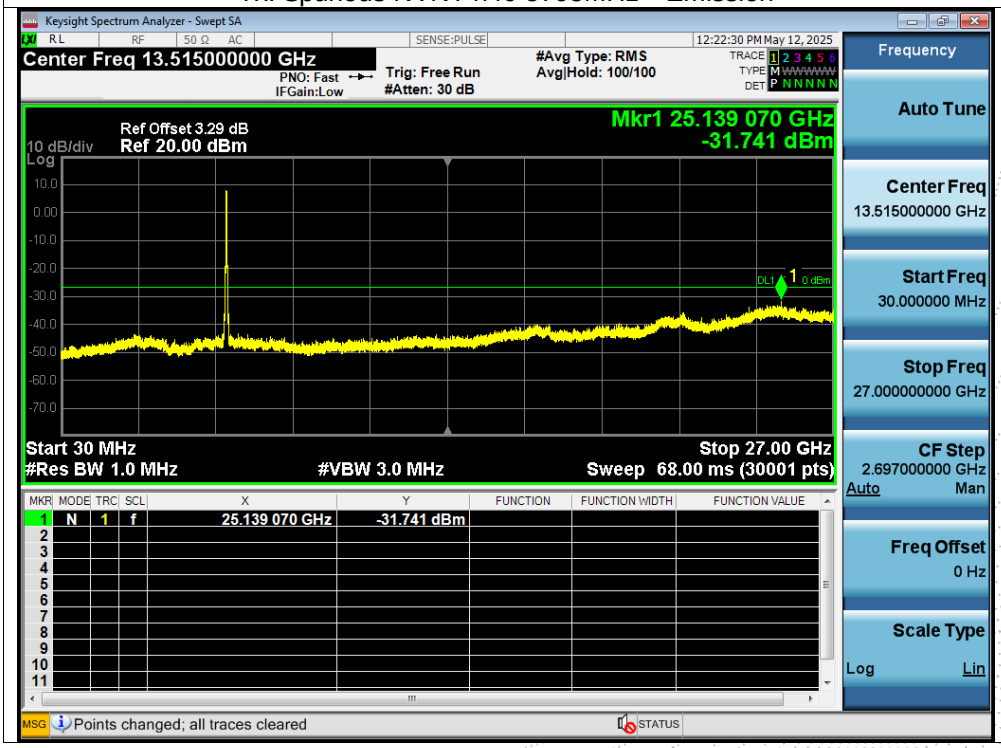


Tx. Spurious NVNT n20 5825MHz Emission



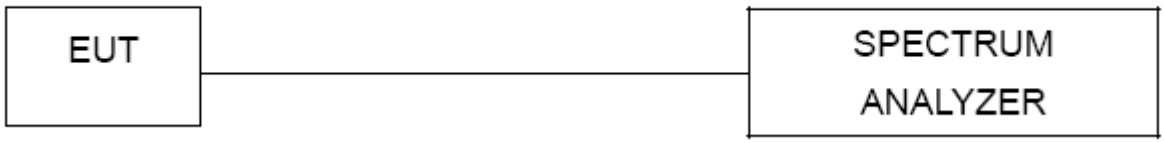
Tx. Spurious NVNT n40 5755MHz Emission

Tx. Spurious NVNT n40 5795MHz Emission



13. Frequency Stability Measurement

13.1 Block Diagram Of Test Setup



13.2 Limit

Manufactures of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.
The transmitter center frequency tolerance shall be ± 20 ppm maximum for the 5 GHz band (IEEE 802.11n specification).

13.3 Test procedure

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
2. EUT have transmitted absence of modulation signal and fixed channelize.
3. Set the spectrum analyzer span to view the entire absence of modulation emissions bandwidth.
4. Set RBW = 10 kHz, VBW = 10 kHz with peak detector and maxhold settings.
5. fc is declaring of channel frequency. Then the frequency error formula is (fc-f)/fc × 106 ppm and he limit is less than ±20ppm (IEEE 802.11nspecification).
6. The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value
7. Extreme temperature is -20°C~70°C.

13.4 Test Result

Temperature:	26 ℃	Relative Humidity:	54%RH
Pressure:	101KPa	Test Voltage:	AC120V/60Hz
Test Mode:	TX (5.1G) Mode Frequency U-NII-1 (5180-5240MHz)		

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5180MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	120.00	5180.0055	5180	0.0055	1.0667
		V max (V)	138.00	5180.0052	5180	0.0052	0.9980
		V min (V)	102.00	5180.0011	5180	0.0011	0.2136
Limits				5150-5250 MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5180MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	120	T (°C)	-20	5180.0016	5180	0.0016	0.3153
		T (°C)	-10	5180.0082	5180	0.0082	1.5752
		T (°C)	0	5180.0063	5180	0.0063	1.2252
		T (°C)	10	5180.0031	5180	0.0031	0.6028
		T (°C)	20	5180.0002	5180	0.0002	0.0304
		T (°C)	30	5180.0051	5180	0.0051	0.9850
		T (°C)	40	5180.0025	5180	0.0025	0.4812
		T (°C)	50	5180.0128	5180	0.0128	2.4782
		T (°C)	60	5180.0123	5180	0.0123	2.3748
		T (°C)	70	5180.0051	5180	0.0051	0.9928
Limits				5150-5250 MHz			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency:5200MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	120.00	5200.0101	5200	0.0101	1.9507
		V max (V)	138.00	5200.0021	5200	0.0021	0.4088
		V min (V)	102.00	5200.0068	5200	0.0068	1.3096
Limits				5725-5850 MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency:5200MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	120	T (°C)	-20	5200.01172	5200	0.01172	2.2544
		T (°C)	-10	5200.01296	5200	0.01296	2.4926
		T (°C)	0	5200.00161	5200	0.00161	0.3092
		T (°C)	10	5200.01081	5200	0.01081	2.0798
		T (°C)	20	5200.00559	5200	0.00559	1.0744
		T (°C)	30	5200.00371	5200	0.00371	0.7130
		T (°C)	40	5200.00505	5200	0.00505	0.9714
		T (°C)	50	5200.00596	5200	0.00596	1.1460
		T (°C)	60	5200.00922	5200	0.00922	1.7725
		T (°C)	70	5200.00051	5200	0.00051	0.0983
Limits				5150-5250 MHz			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency:5240MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	120.00	5240.0060	5240	0.0060	1.1530
		V max (V)	138.00	5240.0130	5240	0.0130	2.4847
		V min (V)	102.00	5240.0033	5240	0.0033	0.6311
Limits				5150-5250 MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency:5240MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	120	T (°C)	-20	5240.0086	5240	0.0086	1.6383
		T (°C)	-10	5240.0074	5240	0.0074	1.4214
		T (°C)	0	5240.0053	5240	0.0053	1.0198
		T (°C)	10	5240.0085	5240	0.0085	1.6157
		T (°C)	20	5240.0058	5240	0.0058	1.0980
		T (°C)	30	5240.0128	5240	0.0128	2.4346
		T (°C)	40	5240.0125	5240	0.0125	2.3851
		T (°C)	50	5240.0129	5240	0.0129	2.4556
		T (°C)	60	5240.0073	5240	0.0073	1.4004
		T (°C)	70	5240.0119	5240	0.0119	2.2620
Limits				5150-5250 MHz			
Result				Complies			

Temperature:	26 ℃	Relative Humidity:	54%RH
Pressure:	101KPa	Test Voltage:	AC120V/60Hz
Test Mode:	TX (5.8G) Mode Frequency U-NII-3 (5745-5825MHz)		

Voltage vs. Frequency Stabilit

TEST CONDITIONS				Reference Frequency:5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	120.00	5745.00142	5745	0.00142	0.2465
		V max (V)	138.00	5745.00563	5745	0.00563	0.9808
		V min (V)	102.00	5745.00685	5745	0.00685	1.1922
Limits				5725-5850 MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency:5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	120	T (°C)	-20	5745.00868	5745	0.00868	1.5111
		T (°C)	-10	5745.01177	5745	0.01177	2.0496
		T (°C)	0	5745.00960	5745	0.00960	1.6702
		T (°C)	10	5745.00561	5745	0.00561	0.9759
		T (°C)	20	5745.00036	5745	0.00036	0.0621
		T (°C)	30	5745.01126	5745	0.01126	1.9607
		T (°C)	40	5745.00723	5745	0.00723	1.2585
		T (°C)	50	5745.00664	5745	0.00664	1.1551
		T (°C)	60	5745.00944	5745	0.00944	1.6436
		T (°C)	70	5745.01340	5745	0.01340	2.3331
Limits				5725-5850 MHz			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency:5785MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	120.00	5785.00988	5785	0.00988	1.7082
		V max (V)	138.00	5785.01270	5785	0.01270	2.1948
		V min (V)	102.00	5785.00675	5785	0.00675	1.1662
Limits				5725-5850 MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency:5785MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	120	T (°C)	-20	5785.00382	5785	0.00382	0.6600
		T (°C)	-10	5785.00353	5785	0.00353	0.6099
		T (°C)	0	5785.00055	5785	0.00055	0.0956
		T (°C)	10	5785.00128	5785	0.00128	0.2213
		T (°C)	20	5785.01221	5785	0.01221	2.1107
		T (°C)	30	5785.01076	5785	0.01076	1.8603
		T (°C)	40	5785.00396	5785	0.00396	0.6848
		T (°C)	50	5785.00048	5785	0.00048	0.0826
		T (°C)	60	5785.00239	5785	0.00239	0.4132
		T (°C)	70	5785.00021	5785	0.00021	0.0361
Limits				5725-5850 MHz			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency:5825MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	120.00	5825.01055	5825	0.01055	1.8113
		V max (V)	138.00	5825.00572	5825	0.00572	0.9825
		V min (V)	102.00	5825.00224	5825	0.00224	0.3847
Limits				5725-5850 MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency:5825MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	120	T (°C)	-20	5825.00792	5825	0.00792	1.3594
		T (°C)	-10	5825.00658	5825	0.00658	1.1293
		T (°C)	0	5825.00736	5825	0.00736	1.2643
		T (°C)	10	5825.00432	5825	0.00432	0.7410
		T (°C)	20	5825.00874	5825	0.00874	1.5007
		T (°C)	30	5825.00392	5825	0.00392	0.6738
		T (°C)	40	5825.01196	5825	0.01196	2.0525
		T (°C)	50	5825.00814	5825	0.00814	1.3972
		T (°C)	60	5825.01283	5825	0.01283	2.2026
		T (°C)	70	5825.00805	5825	0.00805	1.3822
Limits				5725-5850 MHz			
Result				Complies			

14. Antenna Requirement

14.1 Limit

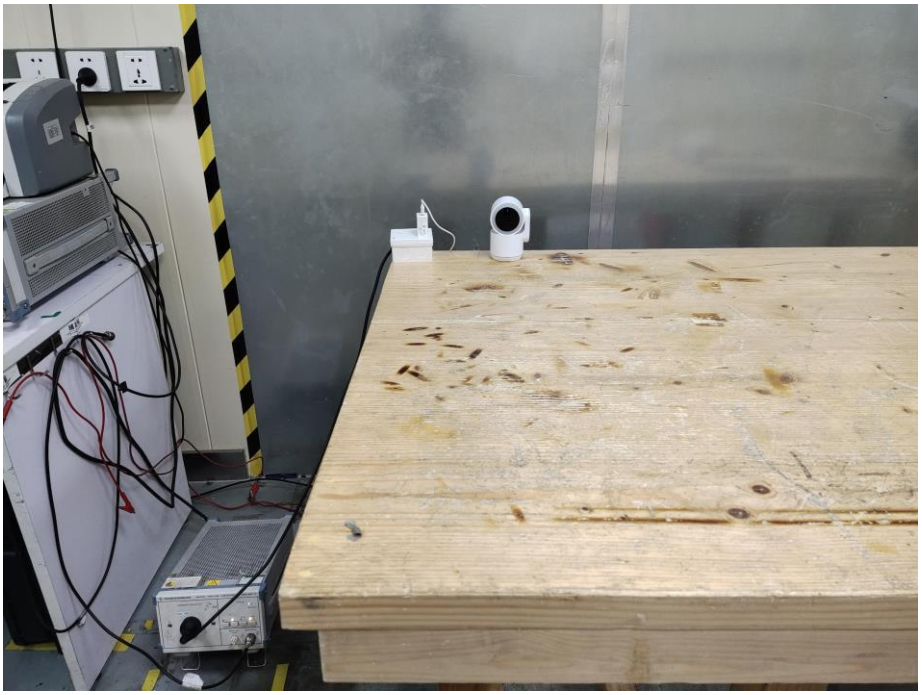
15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

14.2 Test Antenna

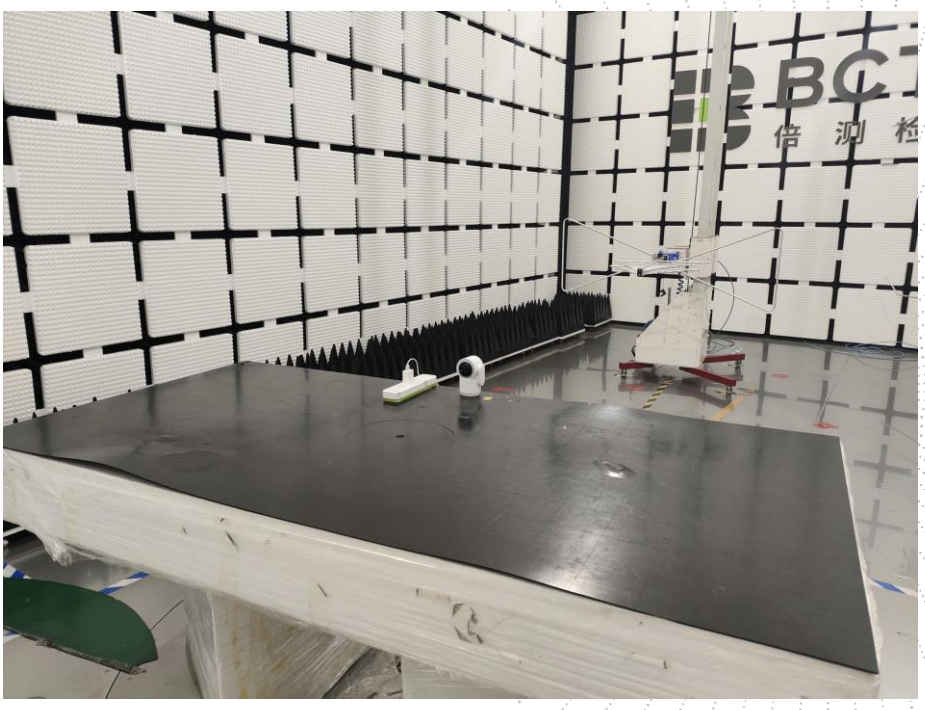
The EUT antenna is Internal antenna, It comply with the standard requirement.

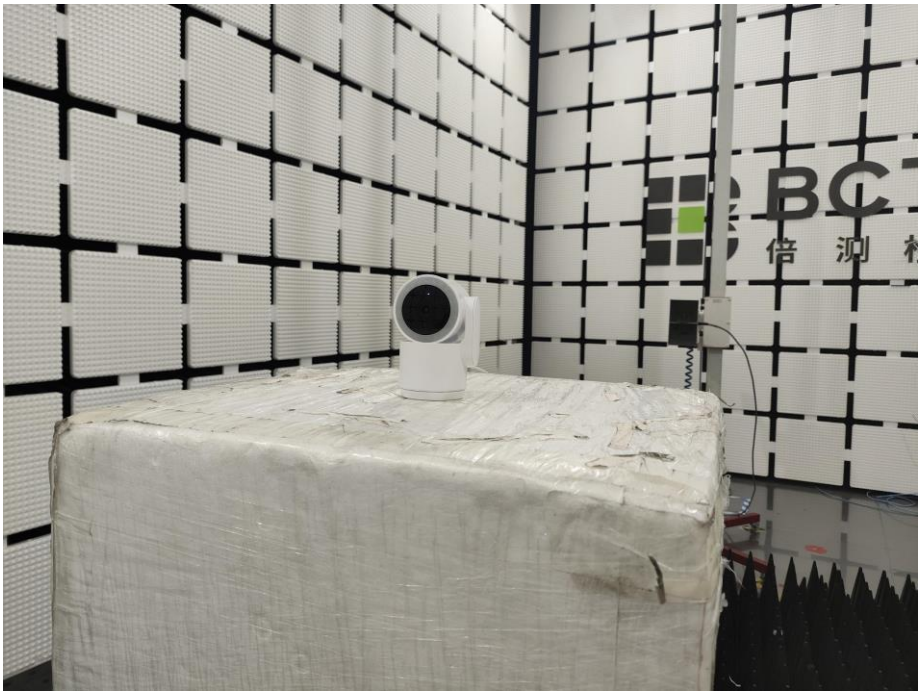
15. EUT Test Setup Photographs

Conducted emissions



Radiated Measurement Photos





STATEMENT

1. The equipment lists are traceable to the national reference standards.

2. The test report can not be partially copied unless prior written approval is issued from our lab.

3. The test report is invalid without the "special seal for inspection and testing".

4. The test report is invalid without the signature of the approver.

5. The test process and test result is only related to the Unit Under Test.

6. Sample information is provided by the client and the laboratory is not responsible for its authenticity.

7. The quality system of our laboratory is in accordance with ISO/IEC17025.

8. If there is any objection to this test report, the client should inform issuing laboratory within 15 days from the date of receiving test report.

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