TEST REPORT

Report No.:	BCTC2504724964-4E
Applicant:	Imagineear Ltd
Product Name:	MPi
Test Model:	Mirage V2
Tested Date:	2025-05-25 to 2025-07-31
Issued Date:	2025-08-12

Shenzhen BCTC Testing Co., Ltd.

FCC ID:2ASPC-MIRAGEV2

Product Name:	MPi
Trademark:	N/A
Model/Type Reference:	Mirage V2
Prepared For:	Imagineear Ltd
Address:	The Blomfield Rooms, Fulham Palace, Bishop's Avenue, London SW6 6EA United Kingdom
Manufacturer:	Chempros Limited
Address:	Unit 2312,Eastern Tower,Coastal Era Building,Nanshan,Shenzhen,CHINA,518051
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:	2025-05-25
Sample Tested Date:	2025-05-25 to 2025-07-31
Report No.:	BCTC2504724964-4E
Test Standards:	FCC Part15.247 ANSI C63.10-2020
Test Results:	PASS
Remark:	This is WIFI-2.4GHz band radio test report.

Tested by:

Brave Zeng/ Project Handler

Approved by:

Zero Zhou/Reviewer

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

Table of Content

1. Version

Report No.	Issue Date	Description	Approved
BCTC2504724964-4E	2025-08-12	Original	Valid

2. Test Summary

The Product has been tested according to the following specifications:

No.	Test Parameter	Clause No.	Results
1	Conducted Emission	15.207	PASS
2	6dB Bandwidth	15.247 (a)(2)	PASS
3	Peak Output Power	15.247 (b)	PASS
4	Radiated Spurious Emission	15.247 (d)	PASS
5	Power Spectral Density	15.247 (e)	PASS
6	Restricted Band of Operation	15.205	PASS
7	Band Edge (Out of Band Emissions)	15.247 (d)	PASS
8	Antenna Requirement	15.203	PASS
NOTE1: According to FCC OET KDB 558074, the report use radiated measurements in the restricted frequency bands. In addition, the radiated test is also performed to ensure the emissions emanating from the device cabinet also comply with the applicable limits.			

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

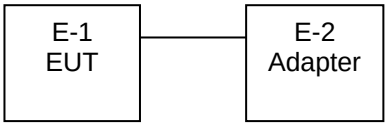
4.1 Product Information

Model/Type Ref.	Mirage V2
Model differences:	N/A
Hardware Version:	N/A
Software Version:	N/A
IEEE 802.11 WLAN Mode Supported	802.11b 802.11g 802.11n(20MHz channel bandwidth) 802.11ax(20MHz channel bandwidth)
Operation Frequency:	2412MHz -2472MHz Band for 802.11b/g/n20/ax20
Type of Modulation:	DSSS with DBPSK/DQPSK/CCK for 802.11b; OFDM with BPSK/QPSK/16QAM/64QAM for 802.11g/n; OFDMA with 1024QAM for 802.11AX HE
Number Of Channel:	11 channels for 802.11b/g/ n20/ax20
Antenna installation:	Internal antenna*2
Antenna Gain:	Antenna A: 0.31dBi Antenna B: 0.39dBi
power supply:	DC 5V,1A
Battery:	DC 3.7 V,3500mAh,12.95Wh

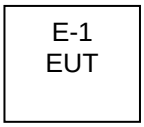
4.2 Test Setup Configuration

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

Conducted Emission:



Radiated Spurious Emission



4.3 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
E-1	MPi	N/A	Mirage V2	N/A	EUT
E-2	Adapter/PC	N/A	N/A	N/A	Auxiliary

Item	Shielded Type	Ferrite Core	Length	Note
N/A	N/A	N/A	N/A	N/A

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 802.11b/g/n (HT20)/ax(HE20):

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2412	5	2432	10	2457
2	2417	6	2437	11	2462
3	2422	7	2442	12	2467
4	2427	8	2447	13	2472
		9	2452		

4.5 Tes 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.

For All Mode	Description	Modulation Type
Mode 1	CH 01	802.11b
Mode 2	CH 06	
Mode 3	CH 11	
Mode 4	CH 01	802.11g
Mode 5	CH 06	
Mode 6	CH 11	
Mode 7	CH 01	802.11n 20
Mode 8	CH 06	
Mode 9	CH 11	
Mode 10	CH 01	802.11ax 20
Mode 11	CH 06	
Mode 12	CH 11	
Mode 13	Link mode (Conducted emission and Radiated emission)	

Notes:

1. The measurements are performed at the highest, middle, lowest available channels.
2. The measurements are performed at all Bit Rate of Transmitter, the worst data was reported
3. According to ANSI C63.10 standards, the test results are both the “worst case” and “worst setup” 1Mbps for 802.11b,6Mbps for 802.11g,13Mbps for 802.11n 20, 54Mbps

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		
Frequency	2412 MHz	2437 MHz	2462 MHz
Parameters	DEF	DEF	DEF

4.7 Antenna

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For power measurements on IEEE 802.11 devices,

Directional gain = GANT + Array Gain, where Array Gain is as follows:

Array Gain = 0 dB (i.e., no array gain) for NANT $\leqslant$ 4.

GANT is set equal to the gain of the antenna having the highest gain.

For PSD measurements, the directional gain calculation follows F)2)f)ii) of KDB 662911 D01 v02r01.

- $$Directional Gain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$$

where

Each antenna is driven by no more than one spatial stream;

N_{SS} = the number of independent spatial streams of data;

N_{ANT} = the total number of antennas

$g_{j,k} = 10^{G_k/20}$ if the *k*th antenna is being fed by spatial stream *j*, or zero if it is not;

G_k is the gain in dBi of the kth antenna.

As minimum NSS=1 is supported by EUT, the formula can be simplified as:

Directional gain = $10*\log[(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2 / N_{ANT}]$ dBi

Where G1, G2….GN denotes single antenna gain.

If a device has two antenna, GANT A= 0.31dBi; GANT B=0.39dBi;

Directional gain of power measurement = max (0.31, 0.39) + 0 = 0.39 dBi

Directional gain of PSD measurement = 10 * log [$(10^{0.31/20} + 10^{0.39/20})^2$ / 2] =3.36dBi

	Antenna A (dBi)	Antenna B (dBi)	Directional gain for Power (dBi)	Directional gain for PSD (dBi)
2412-2462MHz	0.31	0.39	0.39	3.36

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

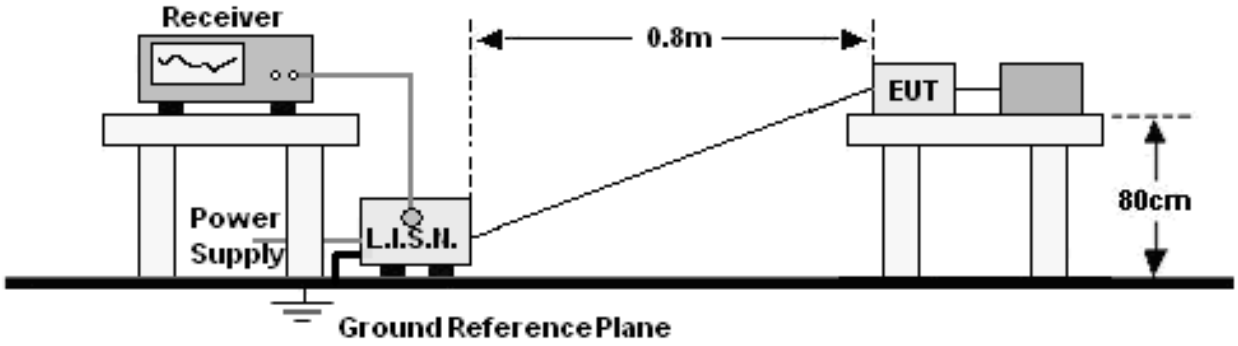
Conducted Emissions Test					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
Receiver	R&S	ESR3	102075	May 08, 2025	May 07, 2026
LISN	R&S	ENV216	101375	May 14, 2025	May 13, 2026
Software	Frad	EZ-EMC	EMC-CON 3A1	\	\
Pulse limiter	Schwarzbeck	VTSD 9561-F	01323	May 14, 2025	May 13, 2026

RF Conducted Test					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
Power meter	Keysight	E4419	\	May 14, 2025	May 13, 2026
Power Sensor (AV)	Keysight	E9300A	\	May 14, 2025	May 13, 2026
Signal Analyzer20kHz-26.5GHz	Keysight	N9020A	MY49100060	May 14, 2025	May 13, 2026
Spectrum Analyzer9kHz-40GHz	R&S	FSP40	100363	May 14, 2025	May 13, 2026

Radiated Emissions Test (966 Chamber)					
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 08, 2025	May 07, 2026
Receiver	R&S	ESRP	101154	May 14, 2025	May 13, 2026
Amplifier	Schwarzbeck	BBV9744	9744-0037	May 14, 2025	May 13, 2026
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	942	May 24, 2025	May 23, 2026
Loop Antenna(9KHz -30MHz)	Schwarzbeck	FMZB1519B	00014	May 24, 2025	May 23, 2026
Amplifier	SKET	LAPA_01G18G-45dB	SK2021040901	May 14, 2025	May 13, 2026
Horn Antenna	Schwarzbeck	BBHA9120D	1541	May 24, 2025	May 23, 2026
Amplifier(18GHz-40GHz)	MITEQ	TTA1840-35-HG	2034381	May 14, 2025	May 13, 2026
Horn Antenn(18GHz-40GHz)	Schwarzbeck	BBHA9170	00822	May 24, 2025	May 23, 2026
Spectrum Analyzer9kHz-40GHz	R&S	FSP40	100363	May 14, 2025	May 13, 2026
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

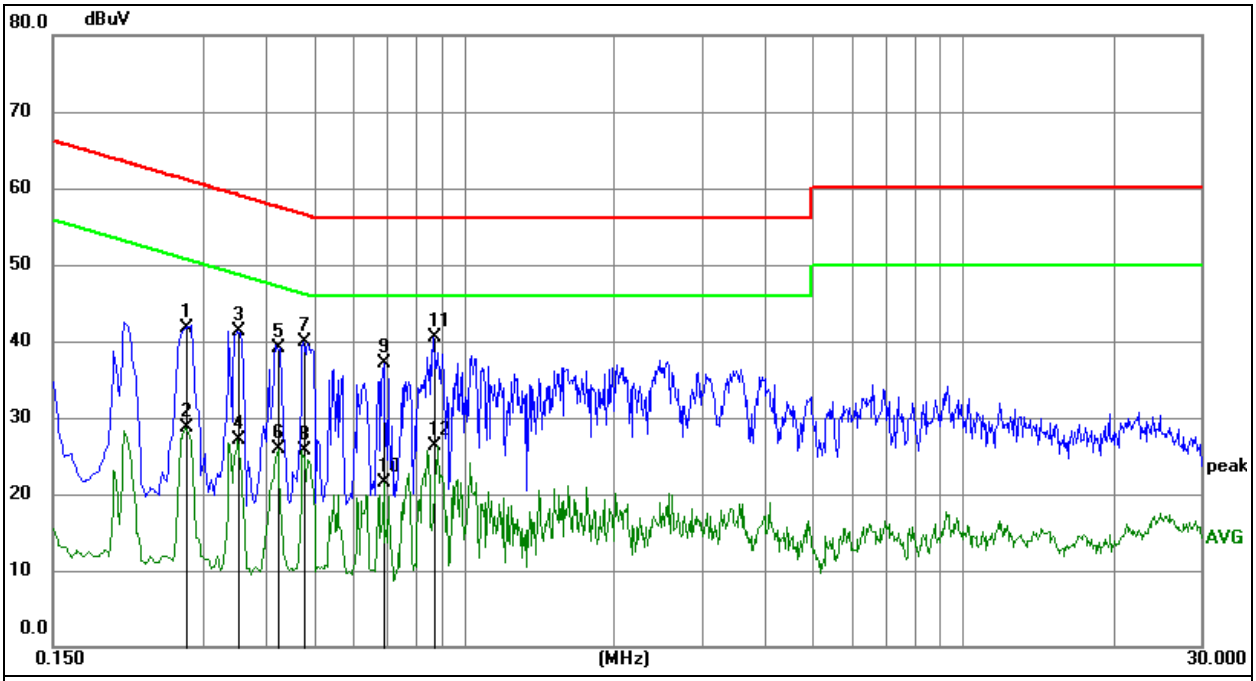
a. The Product was placed on a nonconductive table 0.8 m above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).
b. The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak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

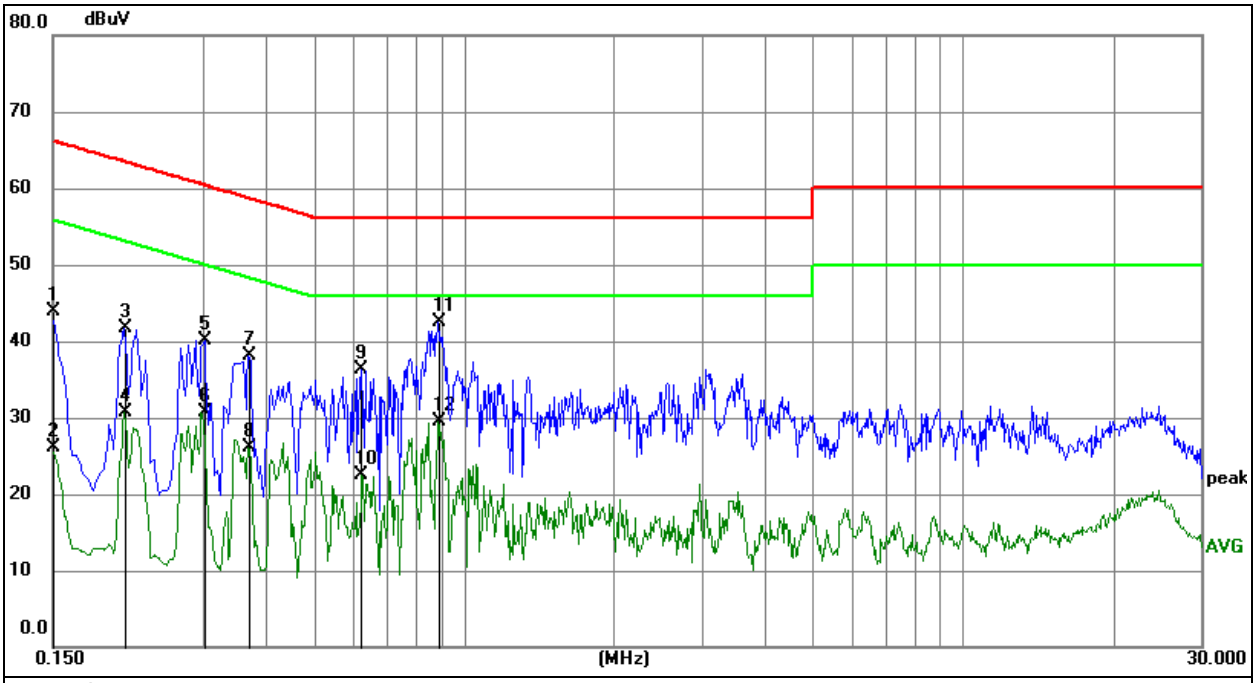
Temperature:	24 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage :	AC 120V/60Hz
Test Mode:	Mode 13	Polarization :	L



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	0.2760	31.03	10.60	41.63	60.94	-19.31	QP
2	0.2760	18.06	10.60	28.66	50.94	-22.28	AVG
3	0.3525	30.62	10.61	41.23	58.90	-17.67	QP
4	0.3525	16.50	10.61	27.11	48.90	-21.79	AVG
5	0.4215	28.56	10.62	39.18	57.42	-18.24	QP
6	0.4215	15.21	10.62	25.83	47.42	-21.59	AVG
7	0.4785	29.35	10.63	39.98	56.37	-16.39	QP
8	0.4785	15.06	10.63	25.69	46.37	-20.68	AVG
9	0.6900	26.42	10.65	37.07	56.00	-18.93	QP
10	0.6900	10.76	10.65	21.41	46.00	-24.59	AVG
11 *	0.8700	29.80	10.62	40.42	56.00	-15.58	QP
12	0.8700	15.68	10.62	26.30	46.00	-19.70	AVG

Temperature:	24 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage :	AC 120V/60Hz
Test Mode:	Mode 13	Polarization :	N



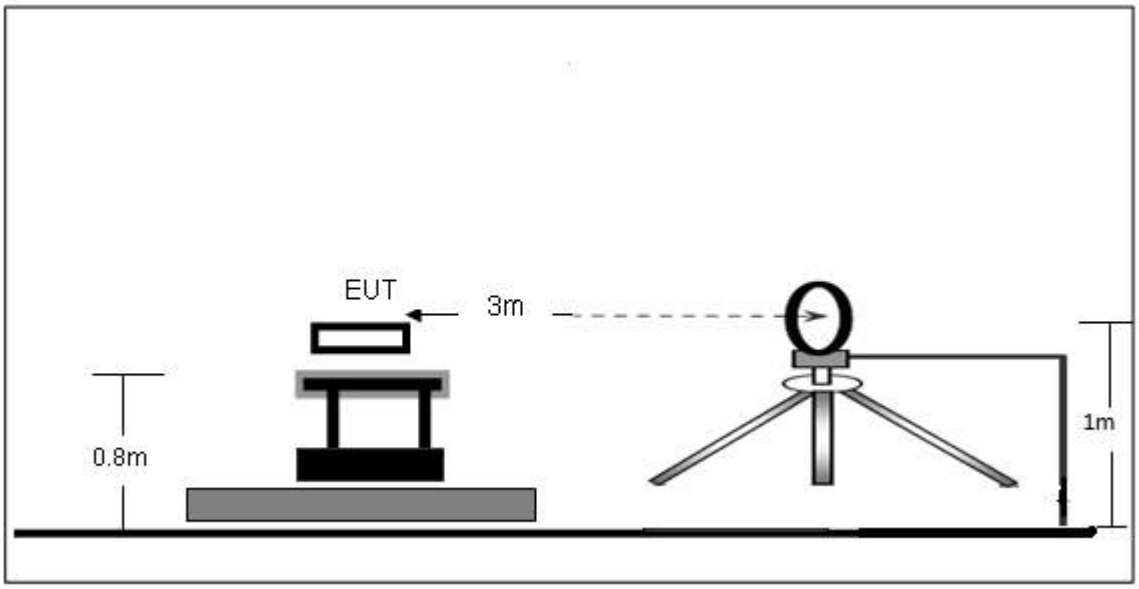
Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement = Reading Level + Correct Factor
4. Over = Measurement - Limit

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1500	33.32	10.57	43.89	66.00	-22.11	QP
2	0.1500	15.57	10.57	26.14	56.00	-29.86	AVG
3	0.2085	31.09	10.59	41.68	63.26	-21.58	QP
4	0.2085	20.15	10.59	30.74	53.26	-22.52	AVG
5	0.3030	29.44	10.60	40.04	60.16	-20.12	QP
6	0.3030	20.06	10.60	30.66	50.16	-19.50	AVG
7	0.3704	27.52	10.61	38.13	58.49	-20.36	QP
8	0.3704	15.48	10.61	26.09	48.49	-22.40	AVG
9	0.6225	25.63	10.66	36.29	56.00	-19.71	QP
10	0.6225	11.76	10.66	22.42	46.00	-23.58	AVG
11 *	0.8880	31.81	10.61	42.42	56.00	-13.58	QP
12	0.8880	18.83	10.61	29.44	46.00	-16.56	AVG

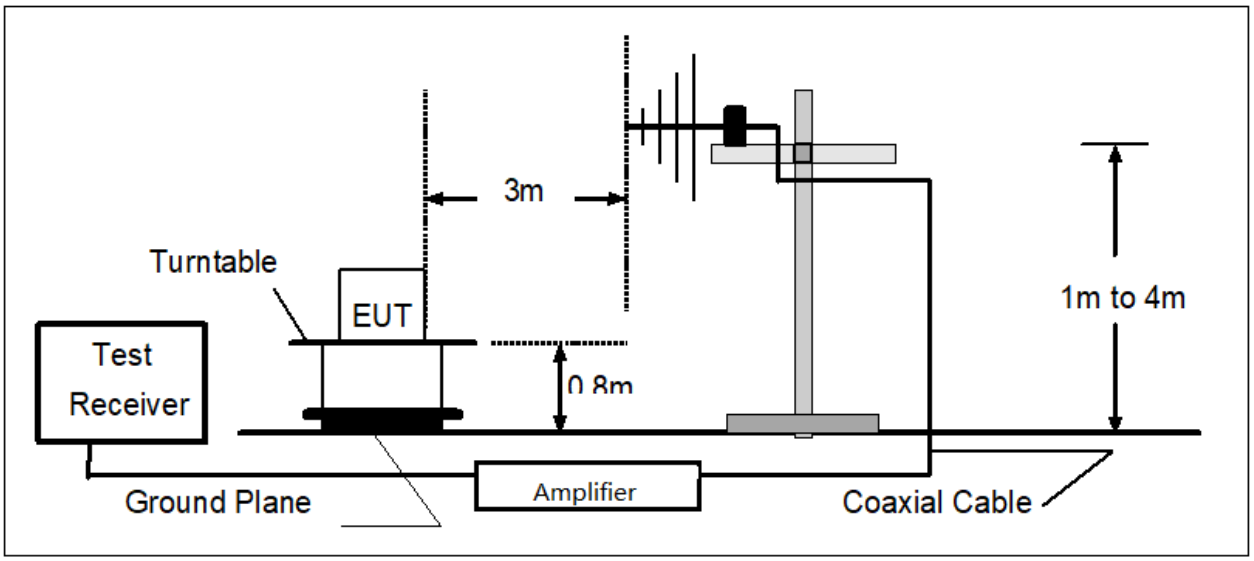
7. Radiated Emissions

7.1 Block Diagram Of Test Setup

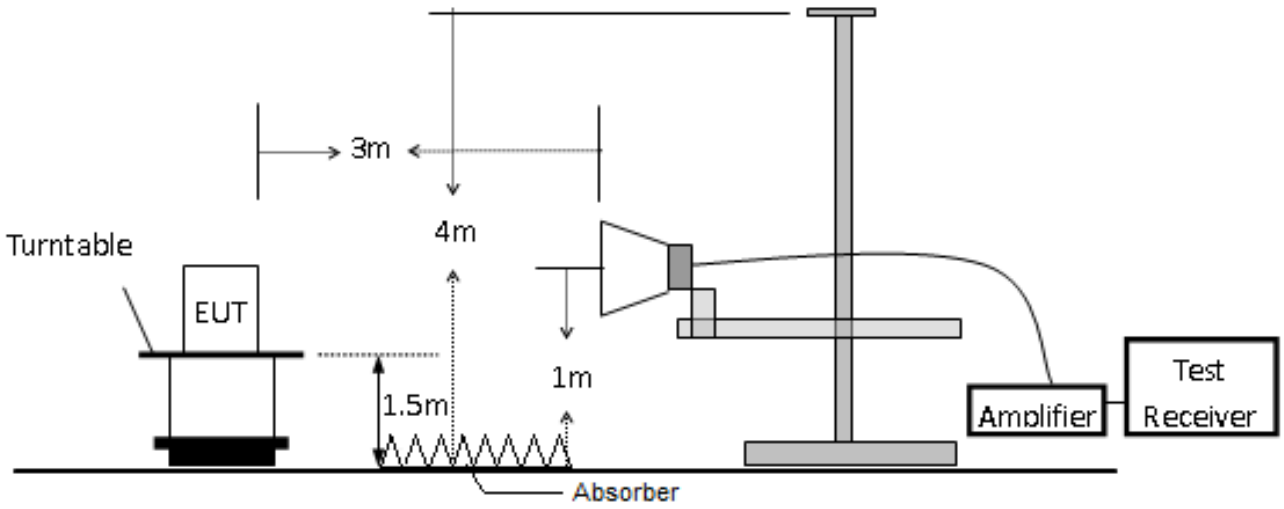
（A）Radiated Emission Test-Up Frequency Below 30MHz



（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).

(a) For an intentional radiator the spectrum shall be investigated from the lowest radio frequency signal generated in the device, without going below 9 kHz, up to at least the frequency shown in this paragraph:

(1) If the intentional radiator operates below 10 GHz: to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.
(2) If the intentional radiator operates at or above 10 GHz and below 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 100 GHz, whichever is lower.
(3) If the intentional radiator operates at or above 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 200 GHz, whichever is lower, unless specified otherwise elsewhere in the rules.
(4) If the intentional radiator operates at or above 95 GHz: To the third harmonic of the highest fundamental frequency or to 750 GHz, whichever is lower, unless specified otherwise elsewhere in the rules.
(5) If the intentional radiator contains a digital device, regardless of whether this digital device controls the functions of the intentional radiator or the digital device is used for additional control or function purposes other than to enable the operation of the intentional radiator, the frequency range shall be investigated up to the range specified in paragraphs (a) (1)through (4) of this section or the range applicable to the digital device, as shown in paragraph (b)(1) of this section, whichever is the higher frequency range of investigation.

7.3 Test procedure

Receiver Parameter	Setting
Attenuation	Auto
9kHz~150kHz	RBW 200Hz for QP
150kHz~30MHz	RBW 9kHz for QP
30MHz~1000MHz	RBW 120kHz for QP

Spectrum Parameter	Setting
1-25GHz	RBW 1 MHz /VBW 1 MHz for Peak, RBW 1 MHz / VBW 10Hz for Average

Below 1GHz test procedure as below:
a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

Above 1GHz test procedure as below:
a. The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
g. Test the EUT in the lowest channel, the middlest channel, the Highest channel.
Note:
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

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

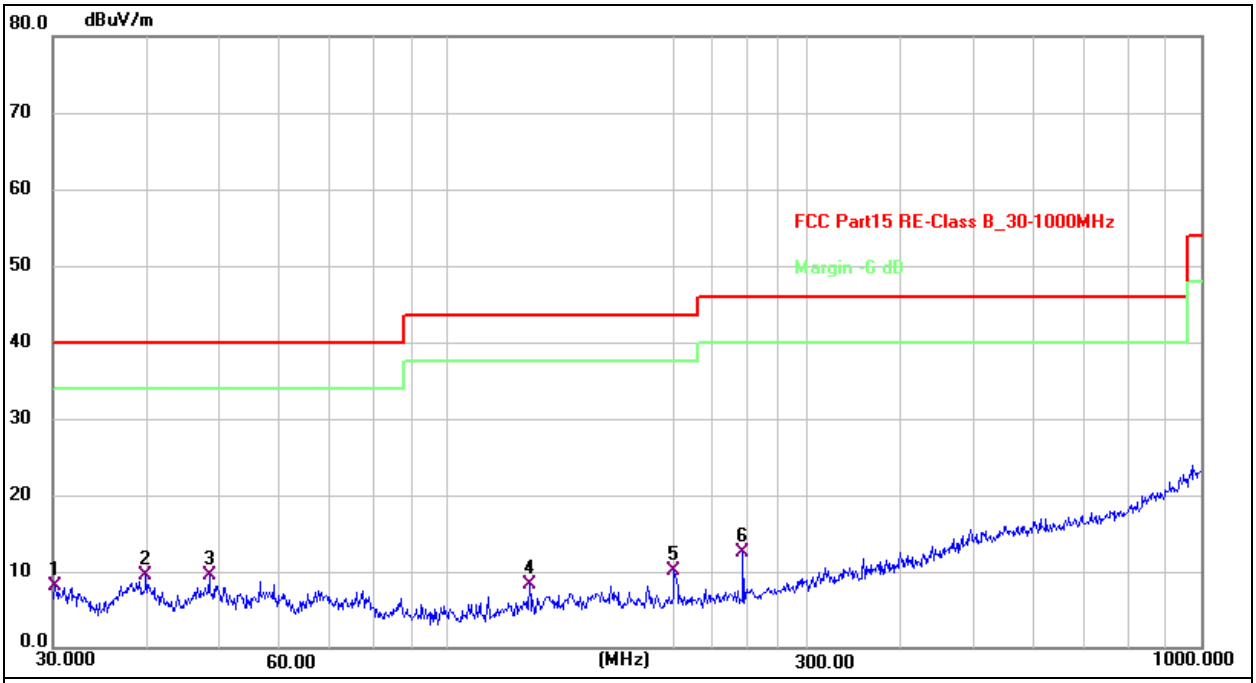
Temperature:	24 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage :	DC 3.7V
Test Mode:	Mode 13	Polarization:	---

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

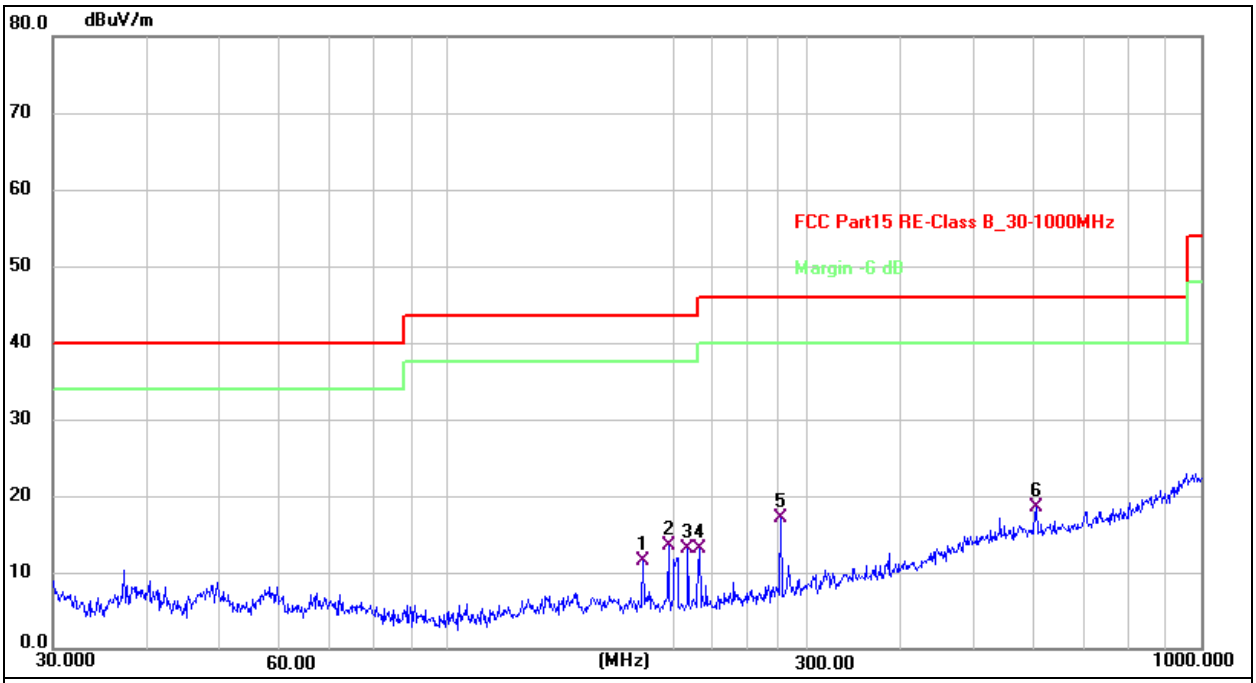
Temperature:	24 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage :	DC 3.7V
Test Mode:	Mode 13	Polarization :	Horizontal



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	30.2111	24.86	-16.83	8.03	40.00	-31.97	QP
2 *	39.8542	26.19	-16.65	9.54	40.00	-30.46	QP
3	48.3318	26.27	-16.75	9.52	40.00	-30.48	QP
4	128.5630	27.38	-18.99	8.39	43.50	-35.11	QP
5	199.9856	28.71	-18.64	10.07	43.50	-33.43	QP
6	246.8149	30.46	-17.99	12.47	46.00	-33.53	QP

Temperature:	24 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage :	DC 3.7V
Test Mode:	Mode 13	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	181.9202	29.93	-18.39	11.54	43.50	-31.96	QP
2	196.5098	32.10	-18.59	13.51	43.50	-29.99	QP
3	208.5803	31.69	-18.52	13.17	43.50	-30.33	QP
4	216.0240	31.61	-18.42	13.19	46.00	-32.81	QP
5	277.0935	34.29	-17.09	17.20	46.00	-28.80	QP
6 *	605.6592	27.71	-9.12	18.59	46.00	-27.41	QP

Between 1GHz – 25GHz

802.11b

Polar (H/V)	Frequency (MHz)	Reading Level (dBuV/m)	Correct Factor (dB)	Measure-ment (dBuV/m)	Limits (dBuV/m)	Over (dB)	Detector Type
Low channel:2412MHz							
V	4824.00	70.17	-19.95	50.22	74.00	-23.78	PK
V	4824.00	62.13	-19.95	42.18	54.00	-11.82	AV
V	7236.00	60.52	-14.14	46.38	74.00	-27.62	PK
V	7236.00	49.90	-14.14	35.76	54.00	-18.24	AV
H	4824.00	67.68	-19.95	47.73	74.00	-26.27	PK
H	4824.00	56.82	-19.95	36.87	54.00	-17.13	AV
H	7236.00	57.78	-14.14	43.64	74.00	-30.36	PK
H	7236.00	50.66	-14.14	36.52	54.00	-17.48	AV
Middle channel:2437MHz							
V	4874.00	66.81	-19.85	46.96	74.00	-27.04	PK
V	4874.00	58.93	-19.85	39.08	54.00	-14.92	AV
V	7311.00	58.47	-13.93	44.54	74.00	-29.46	PK
V	7311.00	49.95	-13.93	36.02	54.00	-17.98	AV
H	4874.00	64.67	-19.85	44.82	74.00	-29.18	PK
H	4874.00	54.97	-19.85	35.12	54.00	-18.88	AV
H	7311.00	56.15	-13.93	42.22	74.00	-31.78	PK
H	7311.00	48.01	-13.93	34.08	54.00	-19.92	AV
High channel:2462MHz							
V	4924.00	68.86	-19.75	49.11	74.00	-24.89	PK
V	4924.00	58.08	-19.75	38.33	54.00	-15.67	AV
V	7386.00	62.61	-13.72	48.89	74.00	-25.11	PK
V	7386.00	52.67	-13.72	38.95	54.00	-15.05	AV
H	4924.00	66.72	-19.75	46.97	74.00	-27.03	PK
H	4924.00	57.45	-19.75	37.70	54.00	-16.30	AV
H	7386.00	60.46	-13.72	46.74	74.00	-27.26	PK
H	7386.00	52.83	-13.72	39.11	54.00	-14.89	AV

Remark:
1.Emission Level = Meter Reading + Factor, Factor = Antenna Factor + Cable Loss – Pre-amplifier. Over= Emission Level - Limit
2. In restricted bands of operation, The spurious emissions below the permissible value more than 20dB
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
4. The worst case is Antenna A.

802.11g

Polar (H/V)	Frequency (MHz)	Reading Level (dBuV/m)	Correct Factor (dB)	Measure-ment (dBuV/m)	Limits (dBuV/m)	Over (dB)	Detector Type
Low channel:2412MHz							
V	4824.00	70.56	-19.95	50.61	74.00	-23.39	PK
V	4824.00	61.71	-19.95	41.76	54.00	-12.24	AV
V	7236.00	60.13	-14.14	45.99	74.00	-28.01	PK
V	7236.00	50.90	-14.14	36.76	54.00	-17.24	AV
H	4824.00	66.90	-19.95	46.95	74.00	-27.05	PK
H	4824.00	57.57	-19.95	37.62	54.00	-16.38	AV
H	7236.00	58.42	-14.14	44.28	74.00	-29.72	PK
H	7236.00	50.13	-14.14	35.99	54.00	-18.01	AV
Middle channel:2437MHz							
V	4874.00	67.75	-19.85	47.90	74.00	-26.10	PK
V	4874.00	59.37	-19.85	39.52	54.00	-14.48	AV
V	7311.00	57.20	-13.93	43.27	74.00	-30.73	PK
V	7311.00	47.80	-13.93	33.87	54.00	-20.13	AV
H	4874.00	63.67	-19.85	43.82	74.00	-30.18	PK
H	4874.00	54.19	-19.85	34.34	54.00	-19.66	AV
H	7311.00	55.16	-13.93	41.23	74.00	-32.77	PK
H	7311.00	48.06	-13.93	34.13	54.00	-19.87	AV
High channel:2462MHz							
V	4924.00	69.78	-19.75	50.03	74.00	-23.97	PK
V	4924.00	59.83	-19.75	40.08	54.00	-13.92	AV
V	7386.00	60.81	-13.72	47.09	74.00	-26.91	PK
V	7386.00	51.33	-13.72	37.61	54.00	-16.39	AV
H	4924.00	67.83	-19.75	48.08	74.00	-25.92	PK
H	4924.00	58.52	-19.75	38.77	54.00	-15.23	AV
H	7386.00	59.21	-13.72	45.49	74.00	-28.51	PK
H	7386.00	50.92	-13.72	37.20	54.00	-16.80	AV

Remark:
1.Emission Level = Meter Reading + Factor,
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
Over= Emission Level - Limit
2. In restricted bands of operation, The spurious emissions below the permissible value more than 20dB
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
4. The worst case is Antenna A.

802.11n20

Polar (H/V)	Frequency (MHz)	Reading Level (dBuV/m)	Correct Factor (dB)	Measure-ment (dBuV/m)	Limits (dBuV/m)	Over (dB)	Detector Type
Low channel:2412MHz							
V	4824.00	70.36	-19.95	50.41	74.00	-23.59	PK
V	4824.00	61.37	-19.95	41.42	54.00	-12.58	AV
V	7236.00	61.29	-14.14	47.15	74.00	-26.85	PK
V	7236.00	52.26	-14.14	38.12	54.00	-15.88	AV
H	4824.00	67.83	-19.95	47.88	74.00	-26.12	PK
H	4824.00	57.26	-19.95	37.31	54.00	-16.69	AV
H	7236.00	59.85	-14.14	45.71	74.00	-28.29	PK
H	7236.00	52.21	-14.14	38.07	54.00	-15.93	AV
Middle channel:2437MHz							
V	4874.00	68.88	-19.85	49.03	74.00	-24.97	PK
V	4874.00	60.44	-19.85	40.59	54.00	-13.41	AV
V	7311.00	60.44	-13.93	46.51	74.00	-27.49	PK
V	7311.00	51.29	-13.93	37.36	54.00	-16.64	AV
H	4874.00	67.47	-19.85	47.62	74.00	-26.38	PK
H	4874.00	57.00	-19.85	37.15	54.00	-16.85	AV
H	7311.00	58.48	-13.93	44.55	74.00	-29.45	PK
H	7311.00	51.28	-13.93	37.35	54.00	-16.65	AV
High channel:2462MHz							
V	4924.00	71.55	-19.75	51.80	74.00	-22.20	PK
V	4924.00	61.27	-19.75	41.52	54.00	-12.48	AV
V	7386.00	63.38	-13.72	49.66	74.00	-24.34	PK
V	7386.00	53.97	-13.72	40.25	54.00	-13.75	AV
H	4924.00	70.07	-19.75	50.32	74.00	-23.68	PK
H	4924.00	60.96	-19.75	41.21	54.00	-12.79	AV
H	7386.00	61.05	-13.72	47.33	74.00	-26.67	PK
H	7386.00	52.52	-13.72	38.80	54.00	-15.20	AV

Remark:
1.Emission Level = Meter Reading + Factor,
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
Over= Emission Level - Limit
2. In restricted bands of operation, The spurious emissions below the permissible value more than 20dB
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
4. The worst case is Antenna A.

802.11ax20

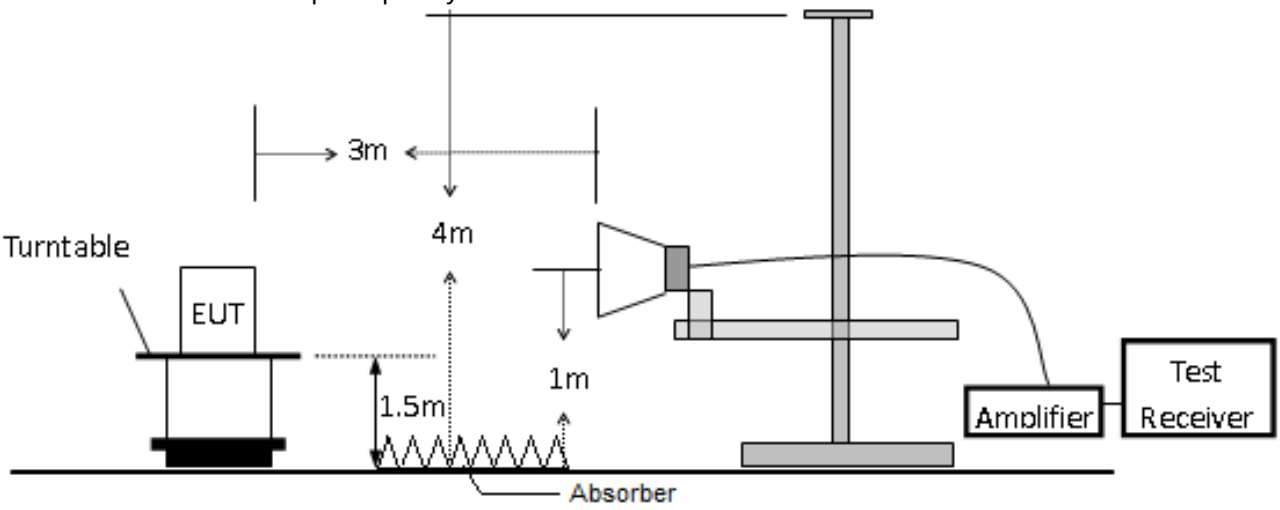
Polar (H/V)	Frequency (MHz)	Reading Level (dBuV/m)	Correct Factor (dB)	Measure-ment (dBuV/m)	Limits (dBuV/m)	Over (dB)	Detector Type
Low channel:2412MHz							
V	4824.00	70.01	-19.95	50.06	74.00	-23.94	PK
V	4824.00	59.36	-19.95	39.41	54.00	-14.59	AV
V	7236.00	59.74	-14.14	45.60	74.00	-28.40	PK
V	7236.00	50.18	-14.14	36.04	54.00	-17.96	AV
H	4824.00	67.14	-19.95	47.19	74.00	-26.81	PK
H	4824.00	56.19	-19.95	36.24	54.00	-17.76	AV
H	7236.00	58.52	-14.14	44.38	74.00	-29.62	PK
H	7236.00	50.87	-14.14	36.73	54.00	-17.27	AV
Middle channel:2437MHz							
V	4824.00	70.01	-19.95	50.06	74.00	-23.94	PK
V	4824.00	59.36	-19.95	39.41	54.00	-14.59	AV
V	7236.00	59.74	-14.14	45.60	74.00	-28.40	PK
V	7236.00	50.18	-14.14	36.04	54.00	-17.96	AV
H	4824.00	67.14	-19.95	47.19	74.00	-26.81	PK
H	4824.00	56.19	-19.95	36.24	54.00	-17.76	AV
H	7236.00	58.52	-14.14	44.38	74.00	-29.62	PK
H	7236.00	50.87	-14.14	36.73	54.00	-17.27	AV
High channel:2462MHz							
V	4924.00	67.70	-19.75	47.95	74.00	-26.05	PK
V	4924.00	59.34	-19.75	39.59	54.00	-14.41	AV
V	7386.00	59.12	-13.72	45.40	74.00	-28.60	PK
V	7386.00	49.33	-13.72	35.61	54.00	-18.39	AV
H	4924.00	65.83	-19.75	46.08	74.00	-27.92	PK
H	4924.00	55.53	-19.75	35.78	54.00	-18.22	AV
H	7386.00	56.61	-13.72	42.89	74.00	-31.11	PK
H	7386.00	48.80	-13.72	35.08	54.00	-18.92	AV

Remark:
1.Emission Level = Meter Reading + Factor,
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
Over= Emission Level - Limit
2. In restricted bands of operation, The spurious emissions below the permissible value more than 20dB
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
4. The worst case is Antenna A.

8. Radiated Band Emission Measurement and Restricted Bands Of Operation

8.1 Block Diagram Of Test Setup

Radiated Emission Test-Up Frequency Above 1GHz



8.2 Limit

FCC Part15 C Section 15.209 and 15.205

(a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
[1]0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	([2])
13.36-13.41			

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).

8.3 Test procedure

Receiver Parameter	Setting
Attenuation	Auto
Start Frequency	2300MHz
Stop Frequency	2520
RB / VB (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average

Above 1GHz test procedure as below:
a.The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.
b.The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c.The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d.For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.
e.The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
g. Test the EUT in the lowest channel, the middlest channel, the Highest channel.
Note:
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

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

Test mode	Polar (H/V)	Frequency (MHz)	Reading Level (dBuV/m)	Correct Factor (dB)	Measure-ment (dBuV/m)	Limits (dBuV/m)		Result
					PK	PK	AV	
802.11b	Low Channel 2412MHz							
	H	2390.00	73.16	-25.43	47.73	74.00	54.00	PASS
	H	2400.00	75.11	-25.40	49.71	74.00	54.00	PASS
	V	2390.00	73.01	-25.43	47.58	74.00	54.00	PASS
	V	2400.00	74.12	-25.40	48.72	74.00	54.00	PASS
	High Channel 2462MHz							
	H	2483.50	73.36	-25.15	48.21	74.00	54.00	PASS
	H	2500.00	69.74	-25.10	44.64	74.00	54.00	PASS
	V	2483.50	71.41	-25.15	46.26	74.00	54.00	PASS
	V	2500.00	68.35	-25.10	43.25	74.00	54.00	PASS
802.11g	Low Channel 2412MHz							
	H	2390.00	72.94	-25.43	47.51	74.00	54.00	PASS
	H	2400.00	74.35	-25.40	48.95	74.00	54.00	PASS
	V	2390.00	71.96	-25.43	46.53	74.00	54.00	PASS
	V	2400.00	71.93	-25.40	46.53	74.00	54.00	PASS
	High Channel 2462MHz							
	H	2390.00	72.94	-25.43	47.51	74.00	54.00	PASS
	H	2400.00	74.35	-25.40	48.95	74.00	54.00	PASS
	V	2390.00	71.96	-25.43	46.53	74.00	54.00	PASS
	V	2400.00	71.93	-25.40	46.53	74.00	54.00	PASS

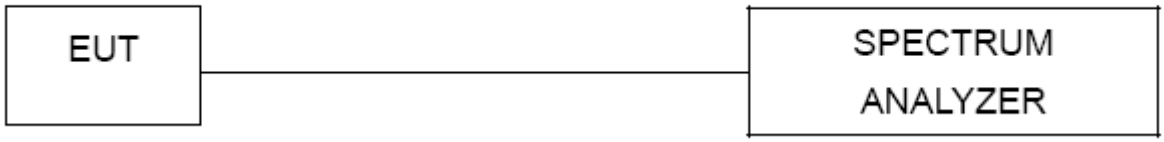
Remark:
1. Emission Level = Meter Reading + Factor, Factor = Antenna Factor + Cable Loss – Pre-amplifier.
Over= Emission Level – Limit
2. If the PK measured levels comply with average limit, then the average level were deemed to comply with average limit.
3 In restricted bands of operation, The spurious emissions below the permissible value more than 20dB
4.The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
5. The worst case is Antenna A.

Test mode	Polar (H/V)	Frequency (MHz)	Reading Level (dBuV/m)	Correct Factor (dB)	Measure-ment (dBuV/m)	Limits (dBuV/m)		Result
					PK	PK	AV	
802.11n20	Low Channel 2412MHz							
	H	2390.00	72.71	-25.43	47.28	74.00	54.00	PASS
	H	2400.00	75.50	-25.40	50.10	74.00	54.00	PASS
	V	2390.00	72.32	-25.43	46.89	74.00	54.00	PASS
	V	2400.00	73.01	-25.40	47.61	74.00	54.00	PASS
	High Channel 2462MHz							
	H	2483.50	72.78	-25.15	47.63	74.00	54.00	PASS
	H	2500.00	68.74	-25.10	43.64	74.00	54.00	PASS
	V	2483.50	71.67	-25.15	46.52	74.00	54.00	PASS
	V	2500.00	68.50	-25.10	43.40	74.00	54.00	PASS
802.11ax20	Low Channel 2412MHz							
	H	2390.00	72.47	-25.43	47.04	74.00	54.00	PASS
	H	2400.00	74.57	-25.40	49.17	74.00	54.00	PASS
	V	2390.00	72.87	-25.43	47.44	74.00	54.00	PASS
	V	2400.00	74.00	-25.40	48.60	74.00	54.00	PASS
	High Channel 2462MHz							
	H	2483.50	72.40	-25.15	47.25	74.00	54.00	PASS
	H	2500.00	68.65	-25.10	43.55	74.00	54.00	PASS
	V	2483.50	71.81	-25.15	46.66	74.00	54.00	PASS
	V	2500.00	68.20	-25.10	43.10	74.00	54.00	PASS

Remark:
1. Emission Level = Meter Reading + Factor, Factor = Antenna Factor + Cable Loss – Pre-amplifier. Over= Emission Level – Limit
2. If the PK measured levels comply with average limit, then the average level were deemed to comply with average limit.
3 In restricted bands of operation, The spurious emissions below the permissible value more than 20dB
4.The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
5. The worst case is Antenna A.

9. Power Spectral Density Test

9.1 Block Diagram Of Test Setup



9.2 Limit

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247	Power Spectral Density	8 dBm (in any 3KHz)	2400-2483.5	PASS

9.3 Test procedure

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS bandwidth.
3. Set the RBW to: 3 kHz
4. Set the VBW ≥ 3 x RBW.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level within the RBW.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

9.4 EUT Operating Conditions

The EUT tested system was configured as the statements of 4.6 Unless otherwise a special operating condition is specified in the follows during the testing.
Note: Power Spectral Density(dBm)=Reading+Cable Loss

9.5 Test Result

Temperature:	26℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	DC 3.7V

Test Mode	Frequency	Ant A Power Spectral Density (dBm/3kHz)	Ant B Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)	Result
TX b Mode	2412 MHz	-8.25	-9.12	8	PASS
	2437 MHz	-9.2	-9.5	8	PASS
	2462 MHz	-7.39	-9.15	8	PASS
TX g Mode	2412 MHz	-14.51	-15.63	8	PASS
	2437 MHz	-14.21	-14.5	8	PASS
	2462 MHz	-14.42	-14.87	8	PASS
TX n Mode(20M)	2412 MHz	-15.41	-16.14	8	PASS
	2437 MHz	-15.61	-15.79	8	PASS
	2462 MHz	-15.98	-14.34	8	PASS
TX ax Mode(20M)	2412 MHz	-16.34	-16.02	8	PASS
	2437 MHz	-16.58	-16.92	8	PASS
	2462 MHz	-17.77	-17.16	8	PASS

For 2T2R

Test Mode	Frequency	Power Spectral Density(dBm/3kHz)	Limit (dBm/3kHz)	Result
TX n Mode(20M)	2412 MHz	-12.75	8	PASS
	2437 MHz	-12.69	8	PASS
	2462 MHz	-12.07	8	PASS
TX ax Mode(20M)	2412 MHz	-13.17	8	PASS
	2437 MHz	-13.74	8	PASS
	2462 MHz	-14.44	8	PASS

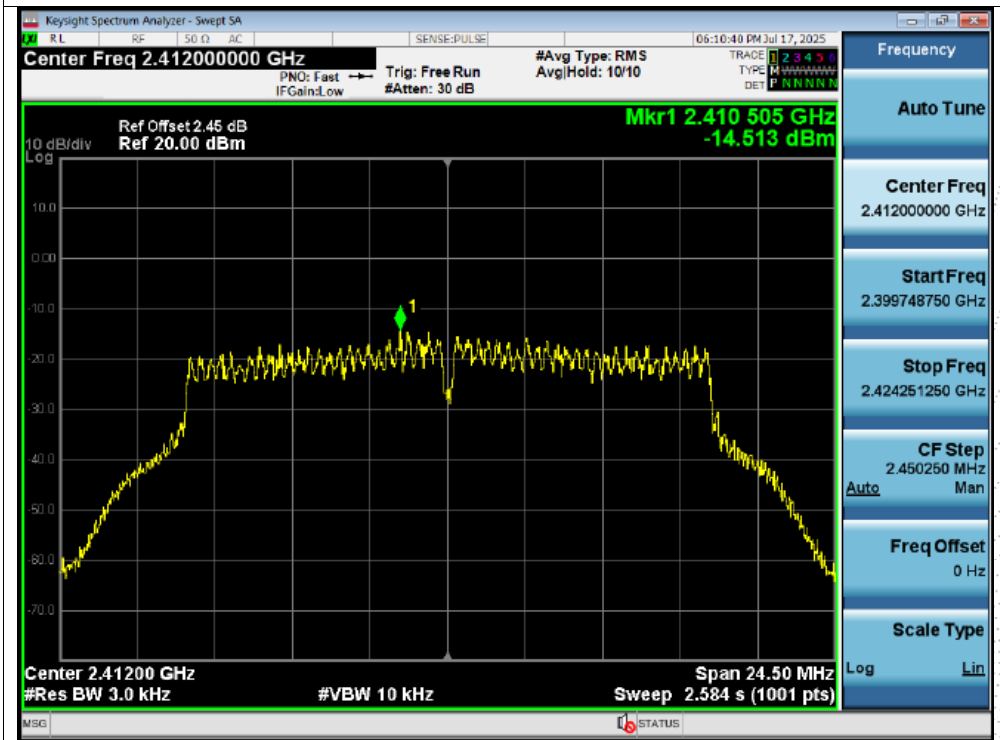
Ant A:

Test Graphs
PSD NVNT b 2412MHz Ant1

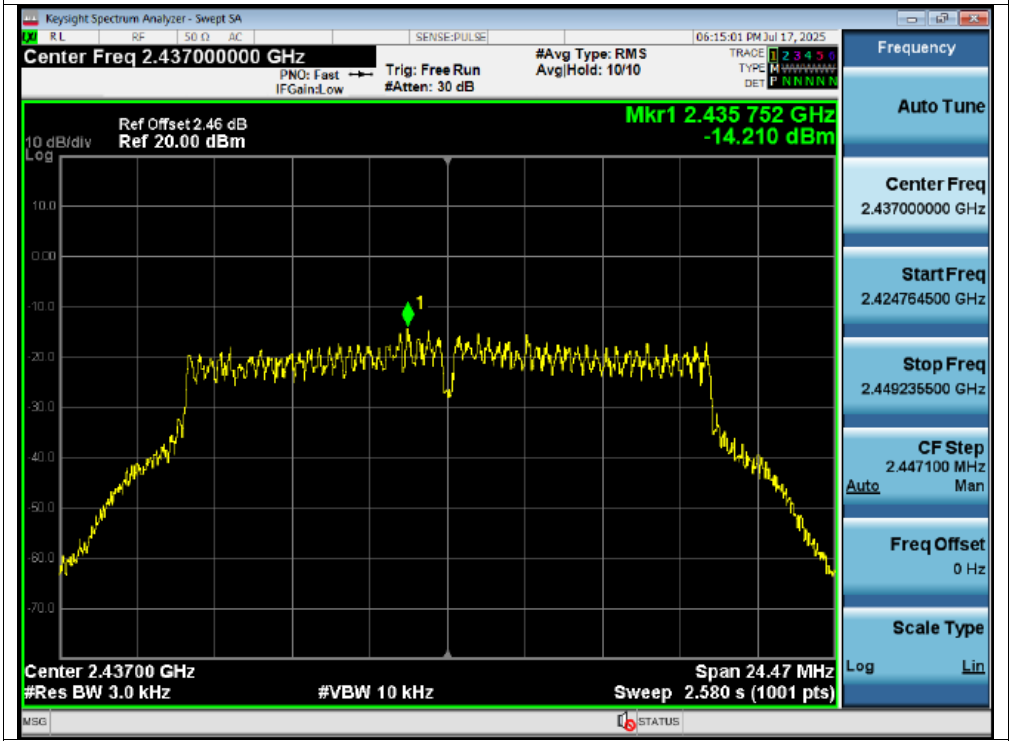
PSD NVNT b 2437MHz Ant1

PSD NVNT b 2462MHz Ant1

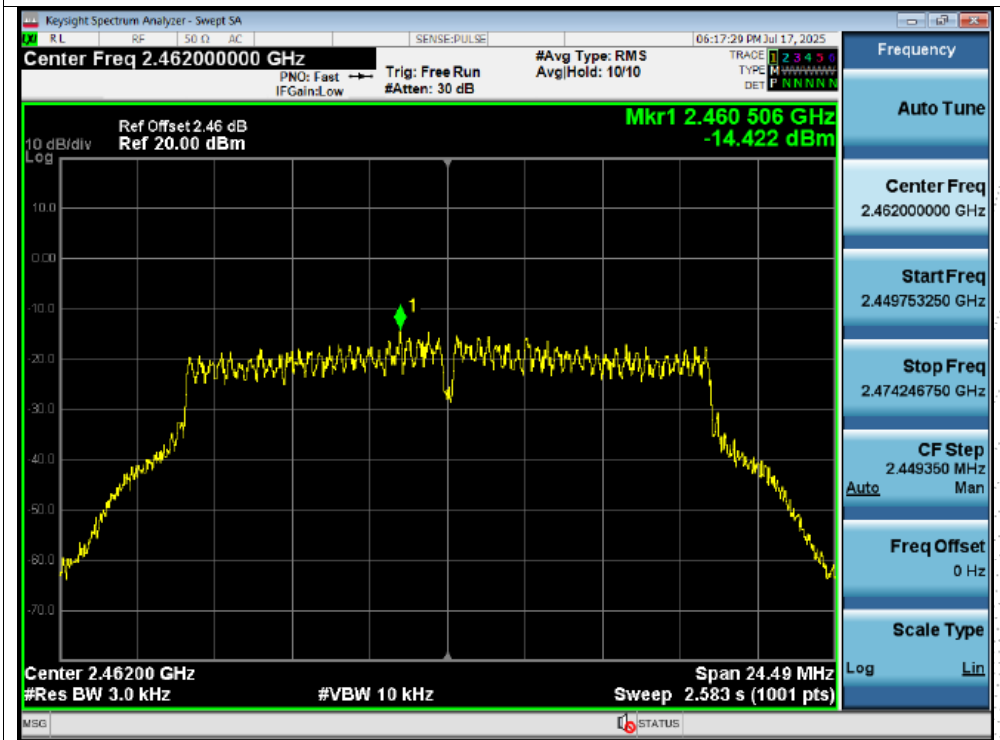
PSD NVNT g 2412MHz Ant1



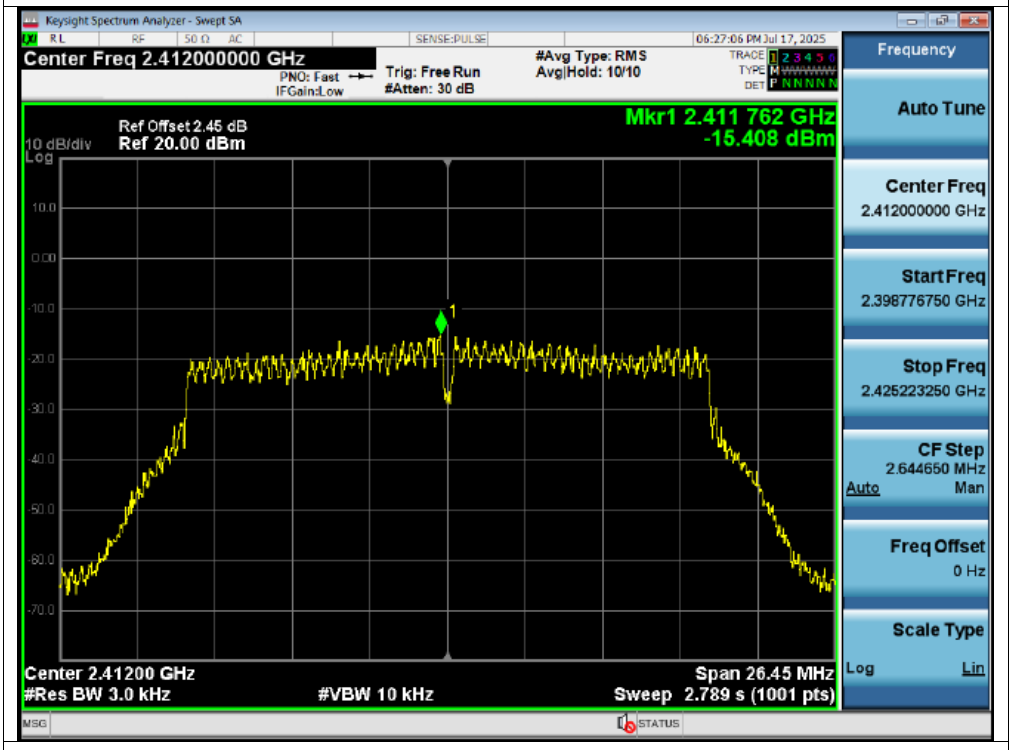
PSD NVNT g 2437MHz Ant1



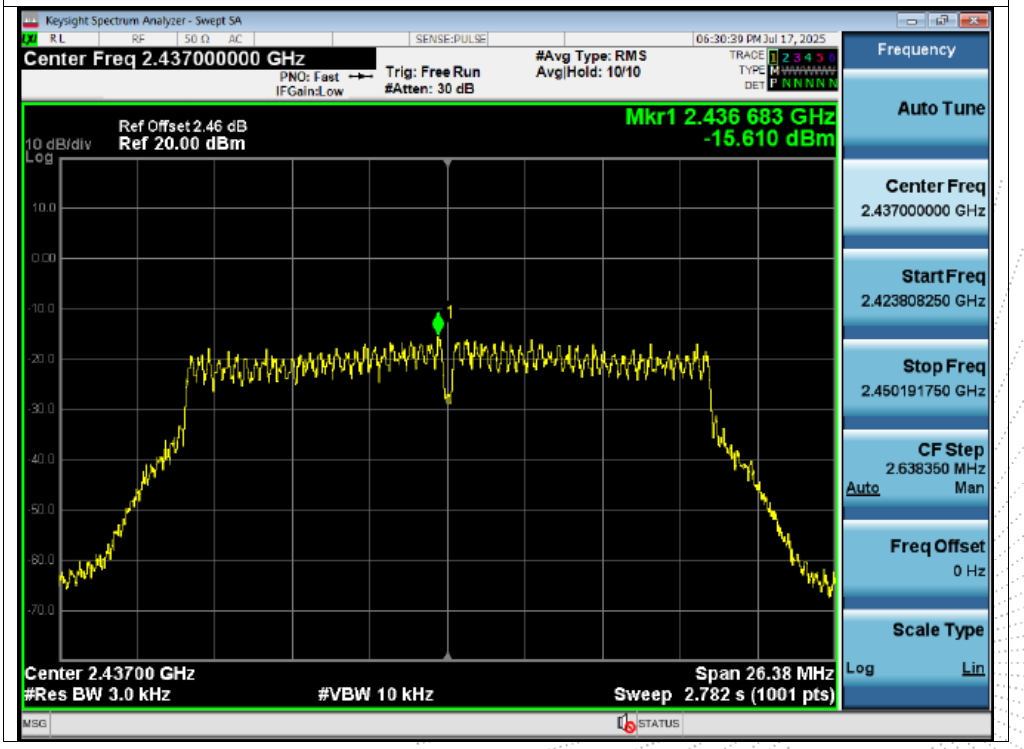
PSD NVNT g 2462MHz Ant1



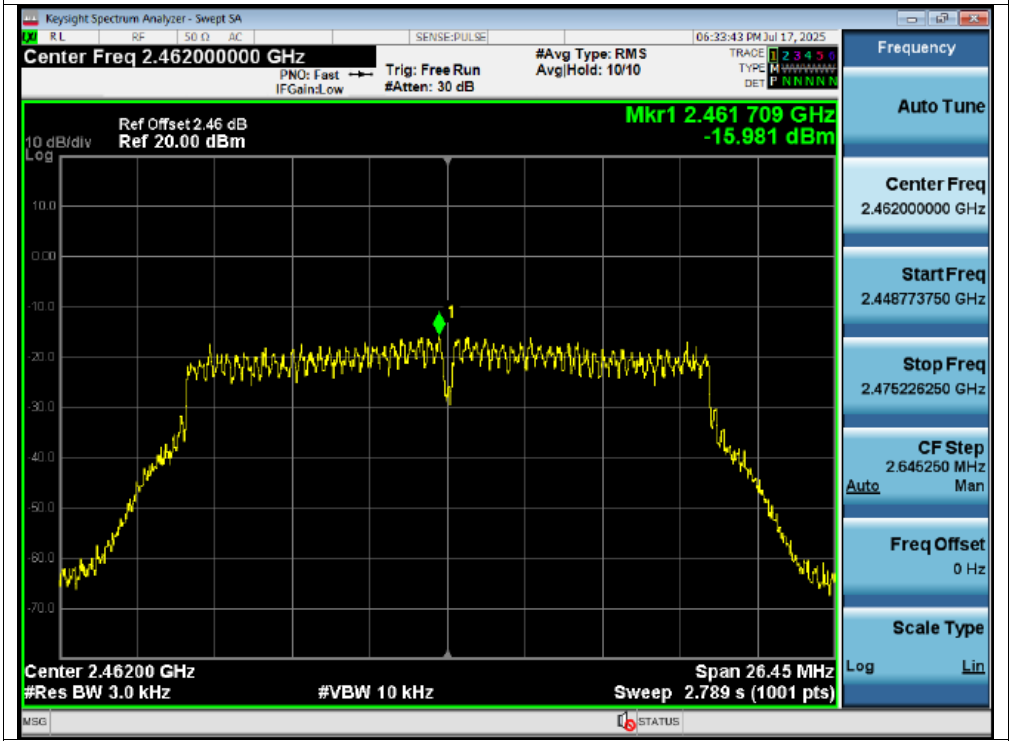
PSD NVNT n20 2412MHz Ant1



PSD NVNT n20 2437MHz Ant1



PSD NVNT n20 2462MHz Ant1



PSD NVNT ax20 2412MHz Ant1

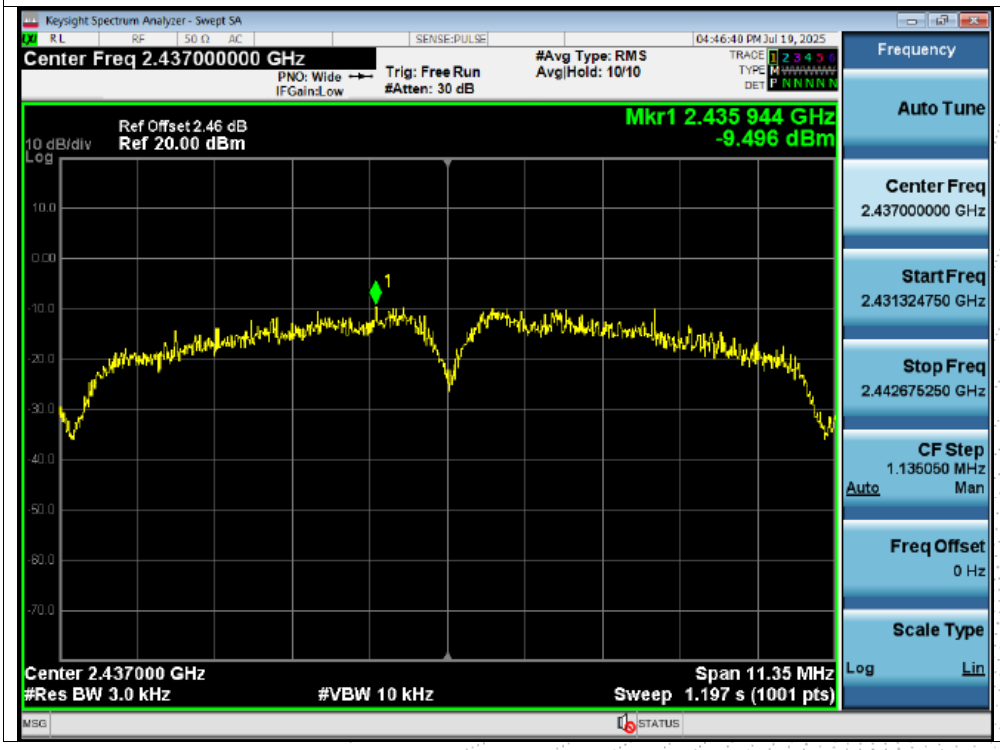
PSD NVNT ax20 2437MHz Ant1

PSD NVNT ax20 2462MHz Ant1

Ant B:

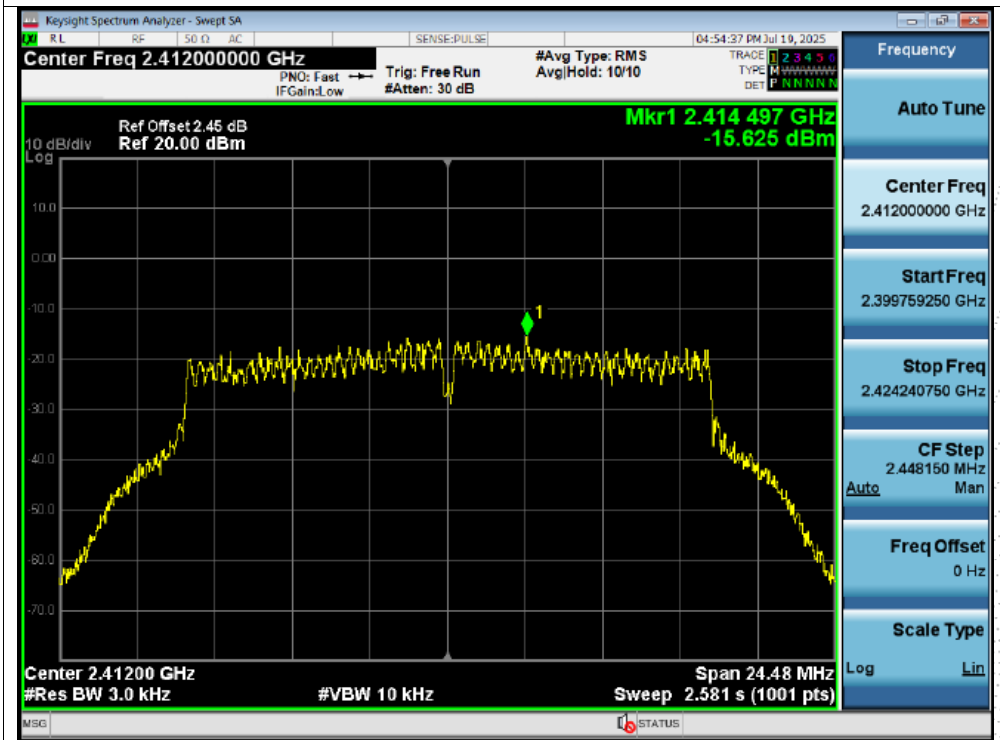
Test Graphs
PSD NVNT b 2412MHz Ant1

PSD NVNT b 2437MHz Ant1

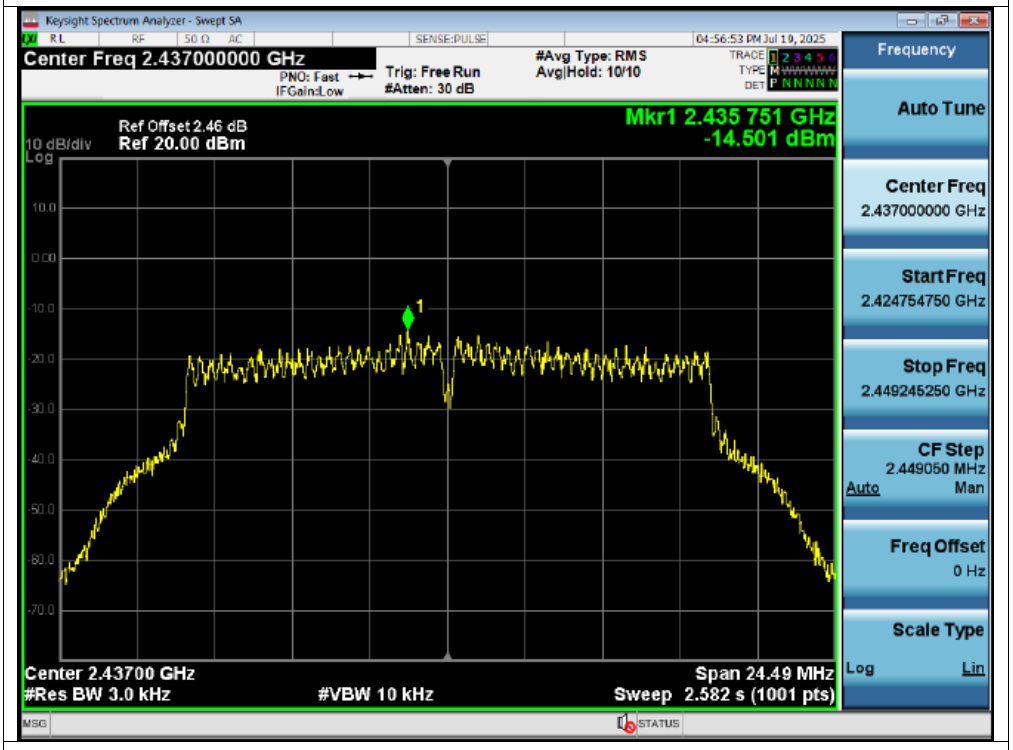


PSD NVNT b 2462MHz Ant1

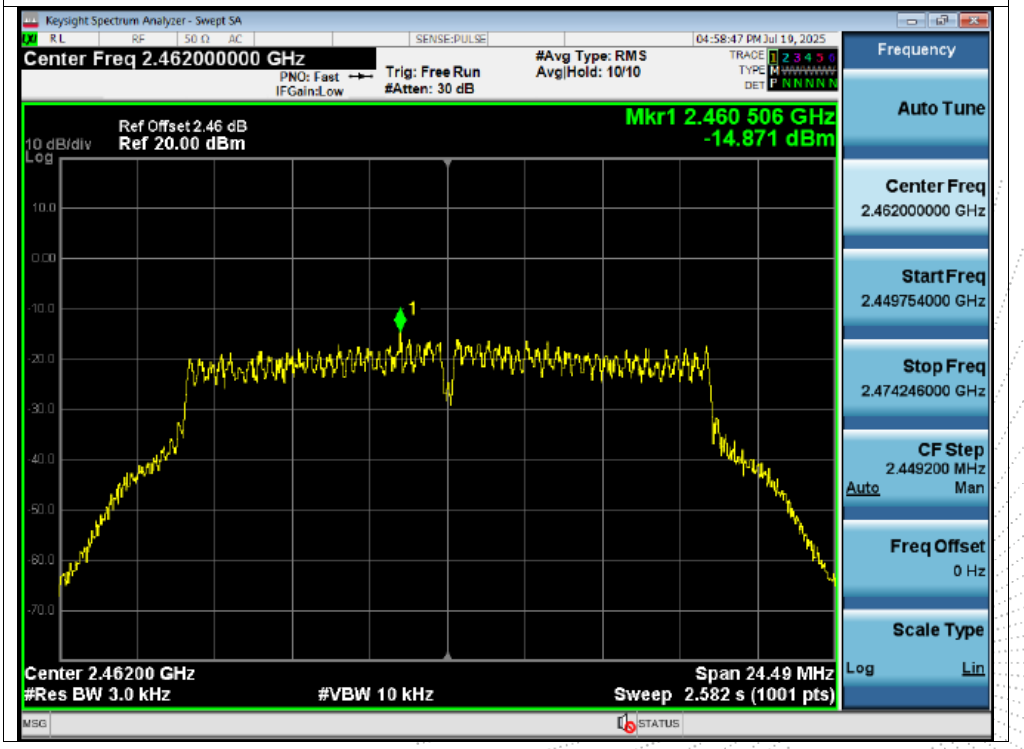
PSD NVNT g 2412MHz Ant1



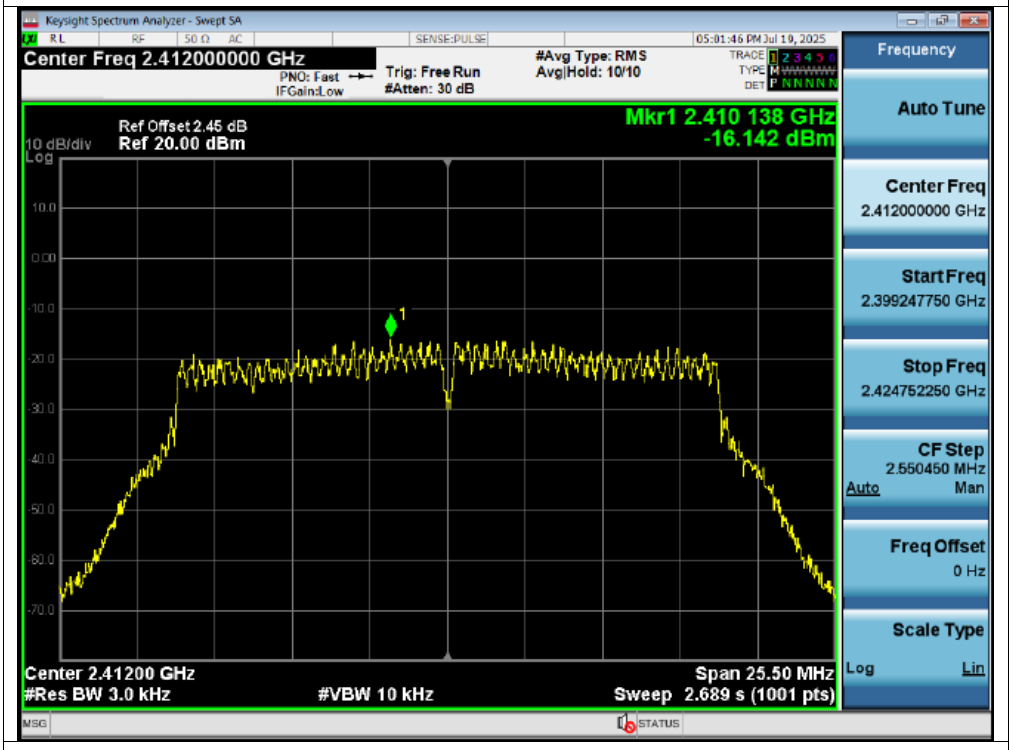
PSD NVNT g 2437MHz Ant1



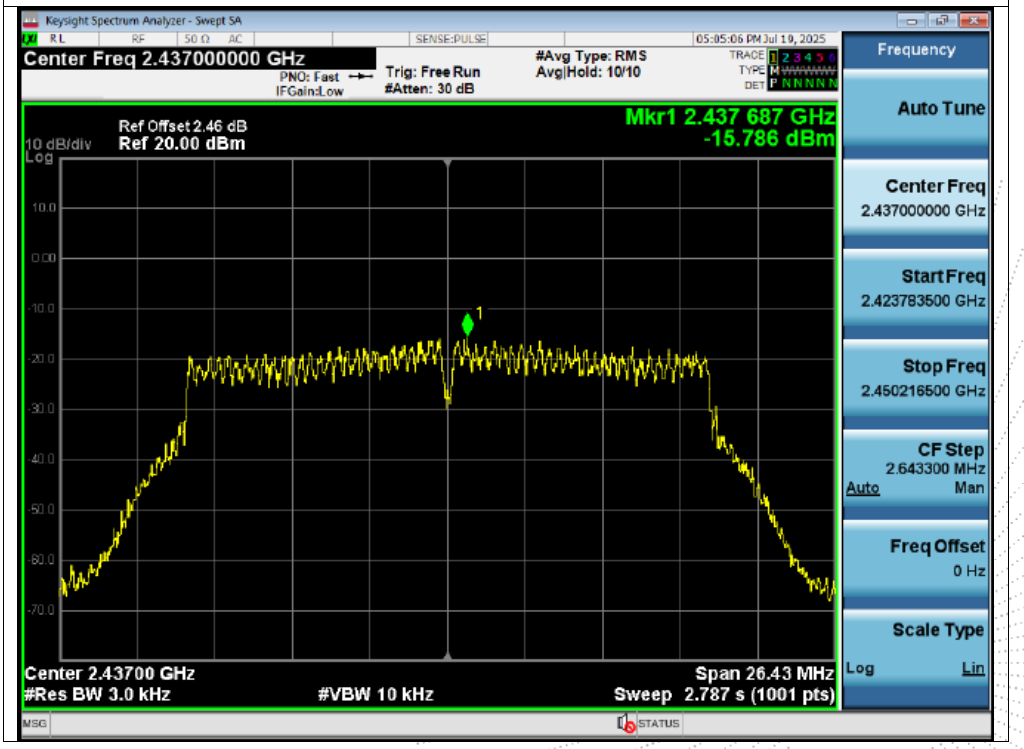
PSD NVNT g 2462MHz Ant1



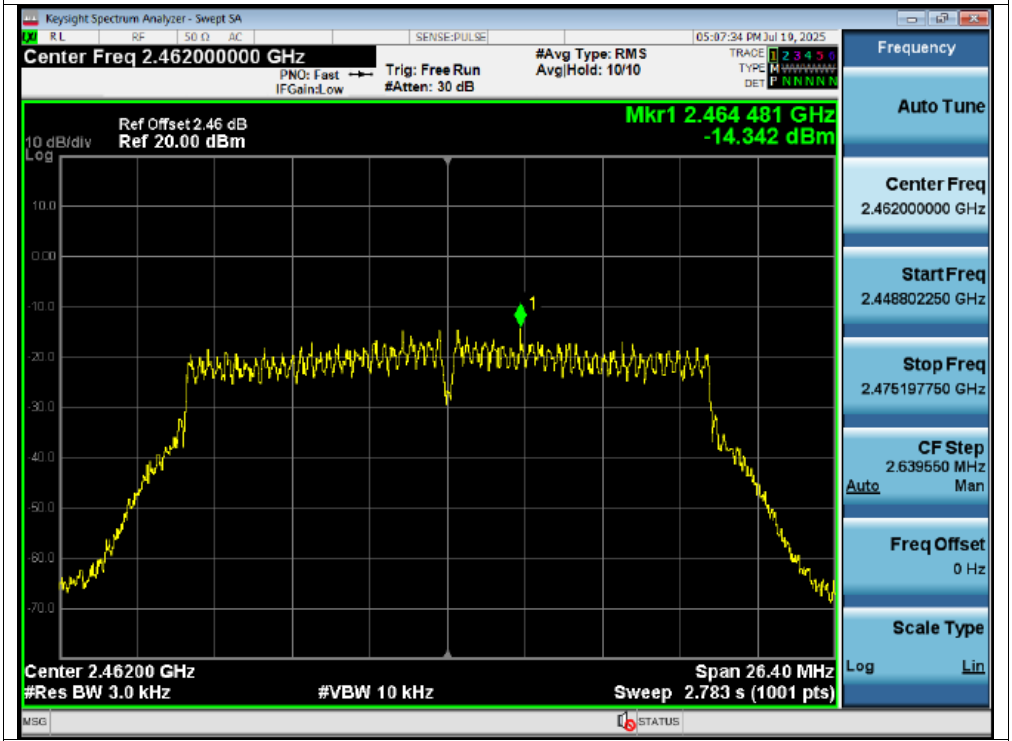
PSD NVNT n20 2412MHz Ant1



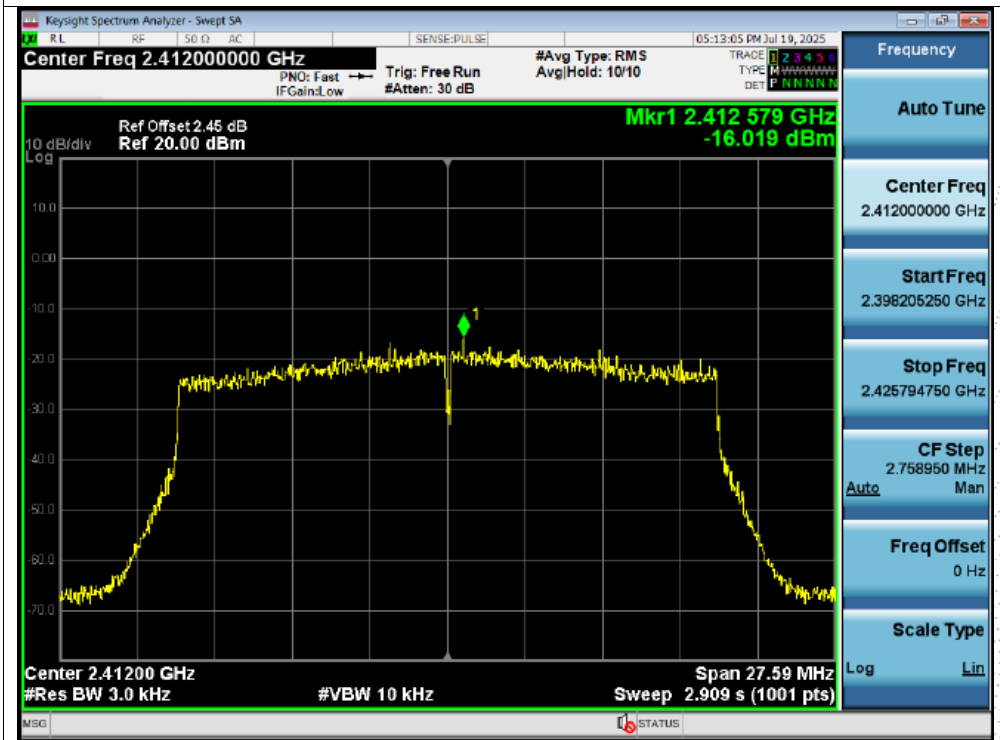
PSD NVNT n20 2437MHz Ant1



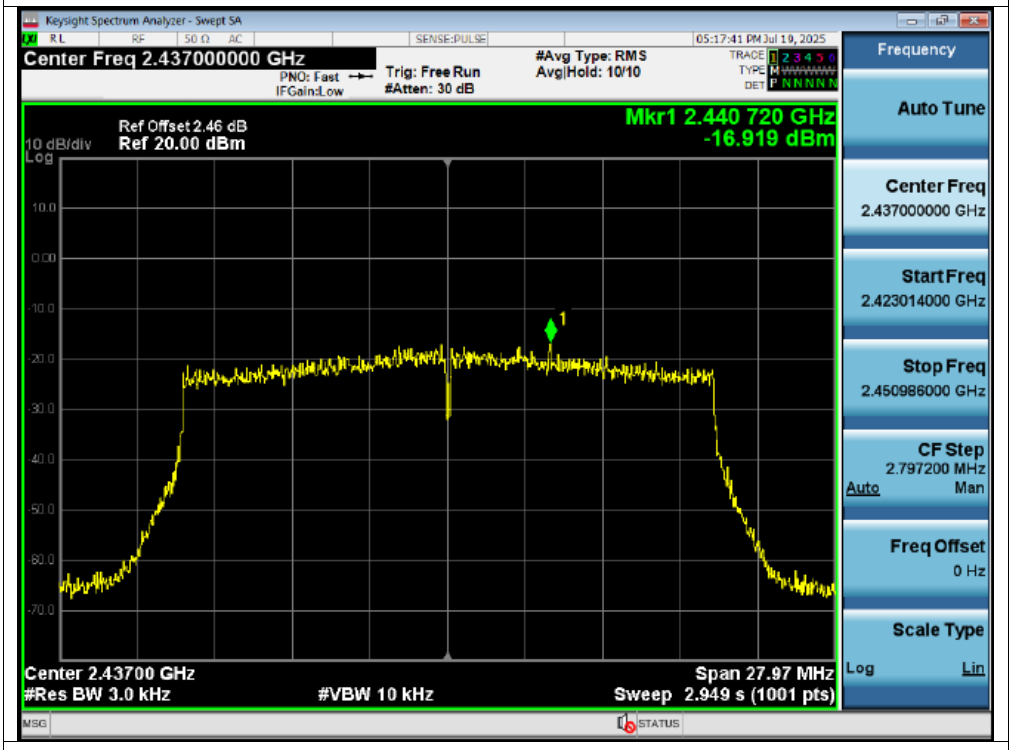
PSD NVNT n20 2462MHz Ant1



PSD NVNT ax20 2412MHz Ant1



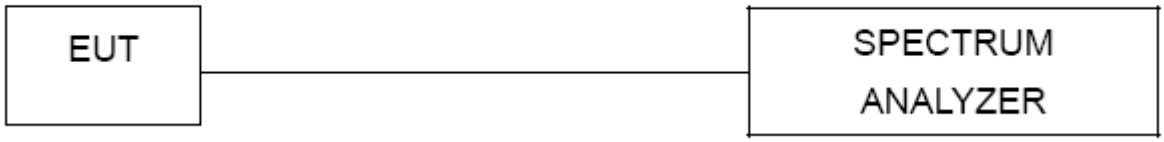
PSD NVNT ax20 2437MHz Ant1



PSD NVNT ax20 2462MHz Ant1

10. -6dB Bandwidth Test

10.1 Block Diagram Of Test Setup



10.2 Limit

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(a)(2)	Bandwidth	>= 500KHz (-6dB bandwidth)	2400-2483.5	PASS

10.3 Test procedure

1. Set RBW = 100 kHz.

2. Set the video bandwidth (VBW) ≥ 3 x RBW.

3. Detector = Peak.

4. Trace mode = max hold.

5. Sweep = auto couple.

6. Allow the trace to stabilize.

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

10.4 EUT Operating Conditions

The EUT tested system was configured as the statements of 4.6 Unless otherwise a special operating condition is specified in the follows during the testing.

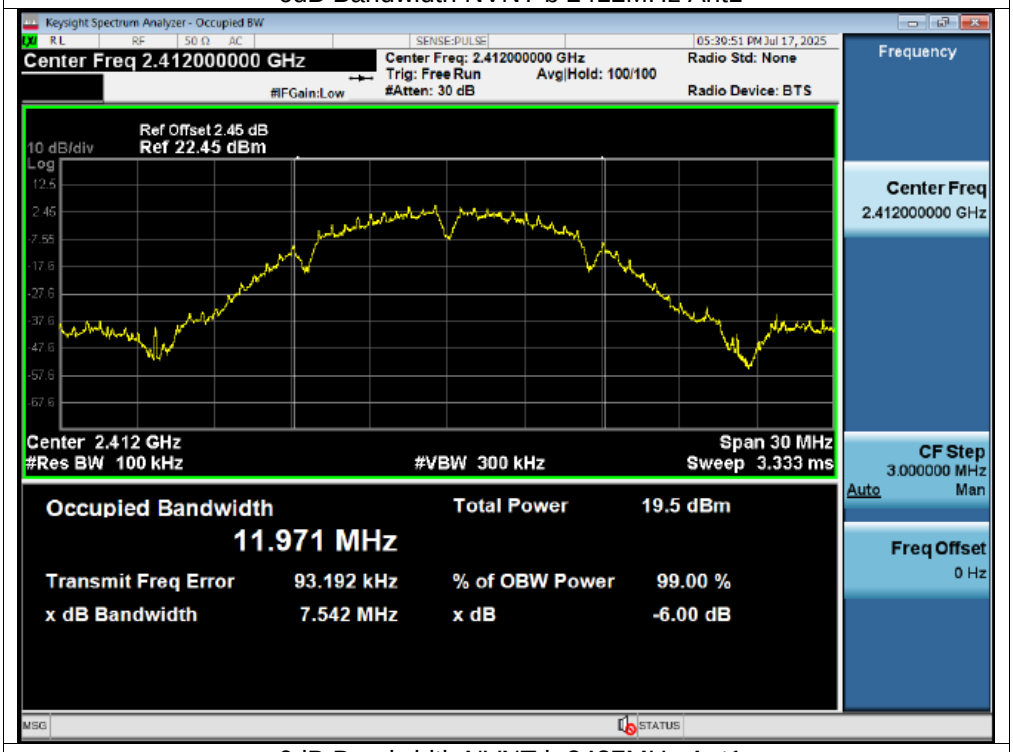
Note: Power Spectral Density(dBm)=Reading+Cable Loss

10.5 Test Result

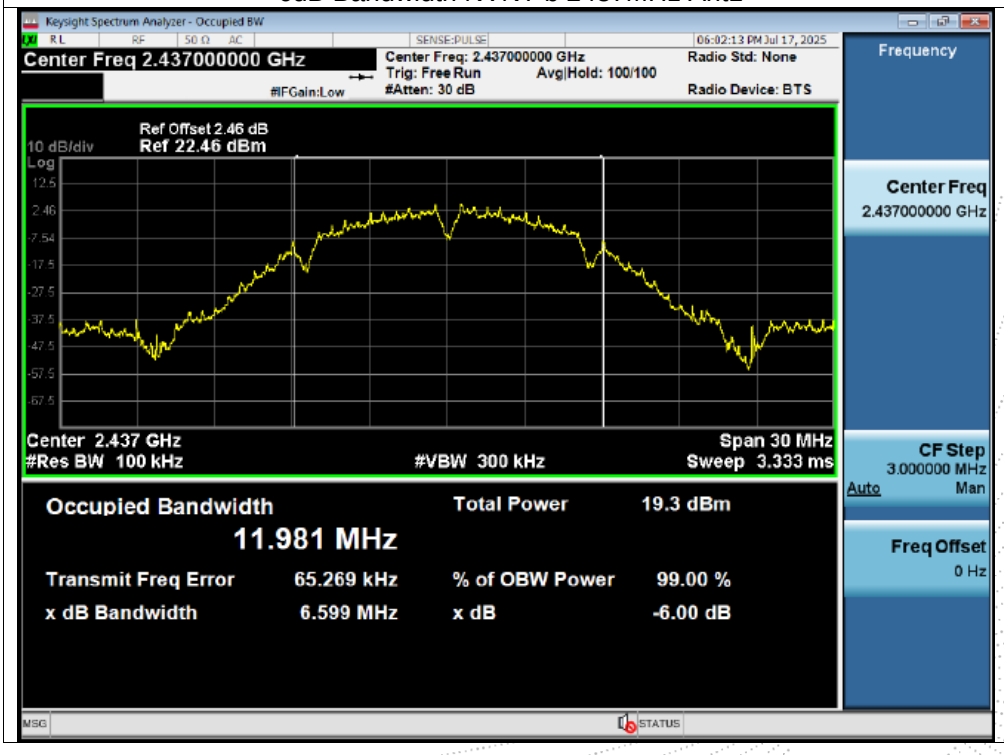
Temperature:	26℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	DC 3.7V

Test Mode	Frequency (MHz)	Ant A -6dB bandwidth (MHz)	Ant B -6dB bandwidth (MHz)	Limit (kHz)	Result
TX b Mode	2412	7.542	7.039	500	Pass
	2437	6.599	7.567	500	Pass
	2462	8.046	7.534	500	Pass
TX g Mode	2412	16.335	16.321	500	Pass
	2437	16.314	16.327	500	Pass
	2462	16.329	16.328	500	Pass
TX n Mode(20M)	2412	17.631	17.003	500	Pass
	2437	17.589	17.622	500	Pass
	2462	17.635	17.597	500	Pass
TX ax Mode(20M)	2412	17.692	18.393	500	Pass
	2437	18.629	18.648	500	Pass
	2462	18.336	18.78	500	Pass

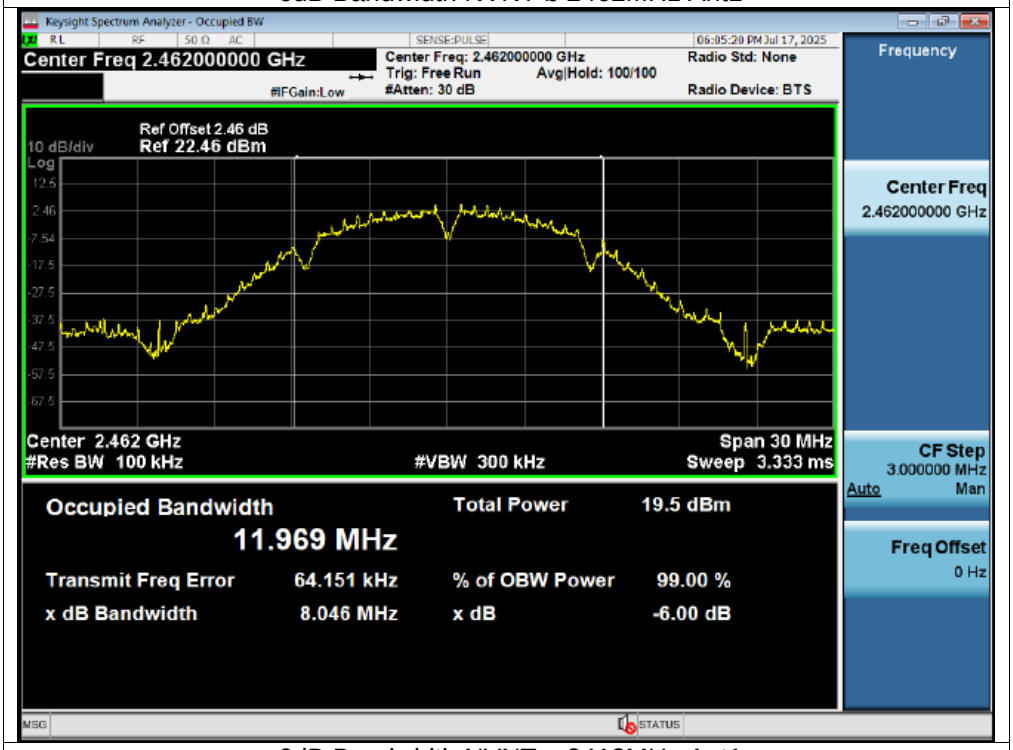
Test Graphs
-6dB Bandwidth NVNT b 2412MHz Ant1



-6dB Bandwidth NVNT b 2437MHz Ant1

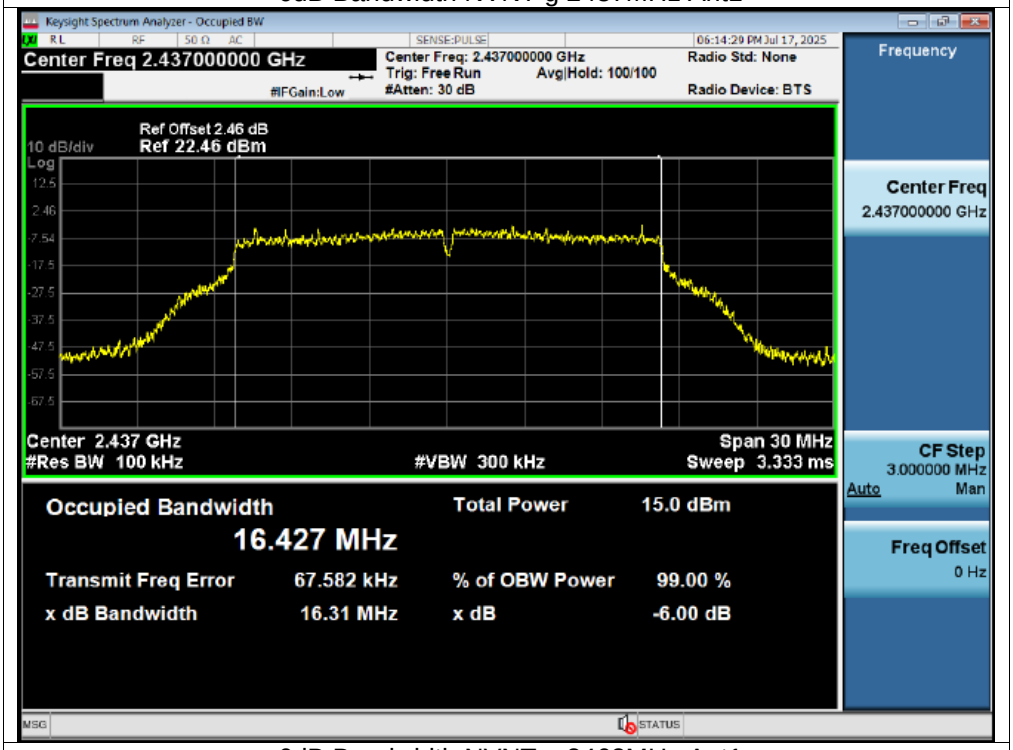


-6dB Bandwidth NVNT b 2462MHz Ant1

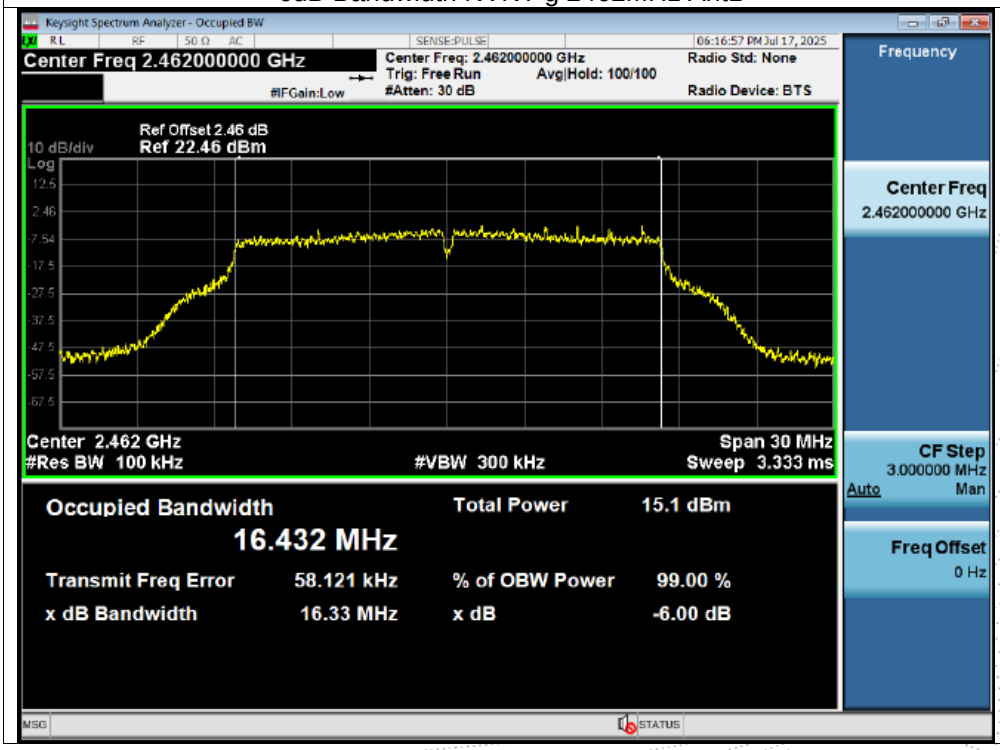


-6dB Bandwidth NVNT g 2412MHz Ant1

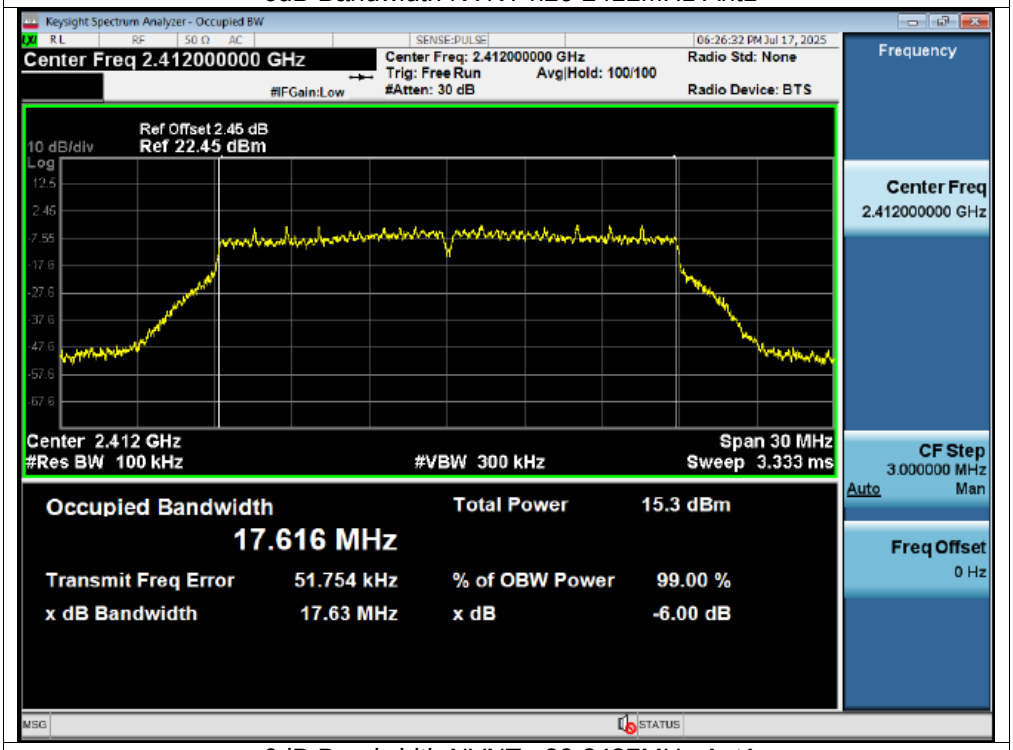
-6dB Bandwidth NVNT g 2437MHz Ant1



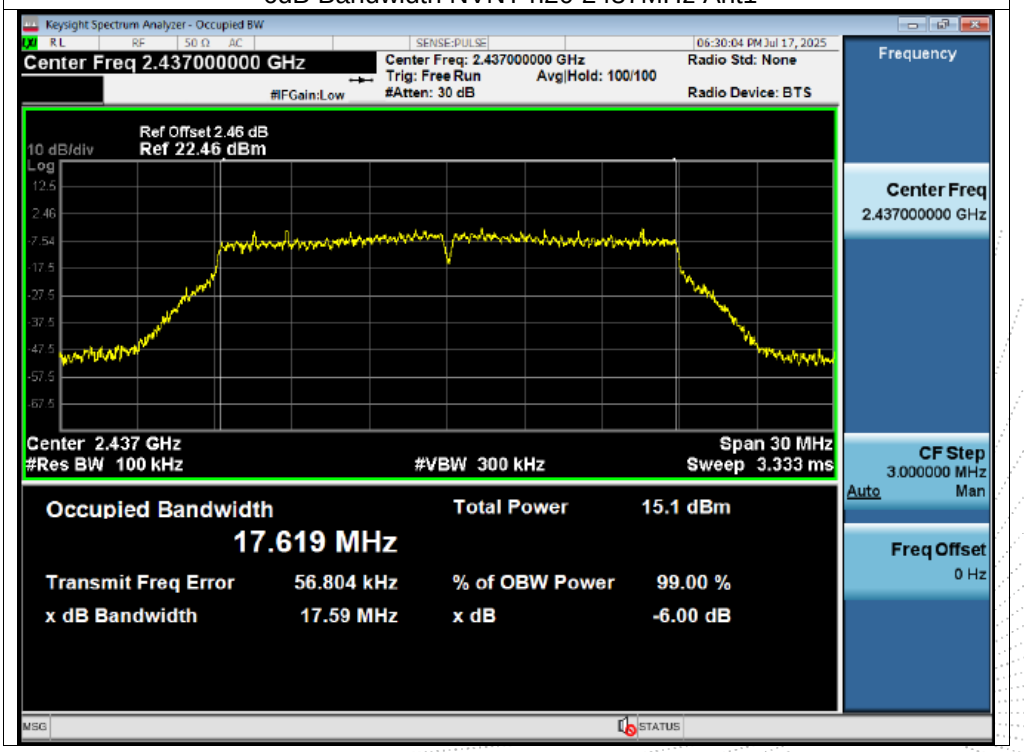
-6dB Bandwidth NVNT g 2462MHz Ant1



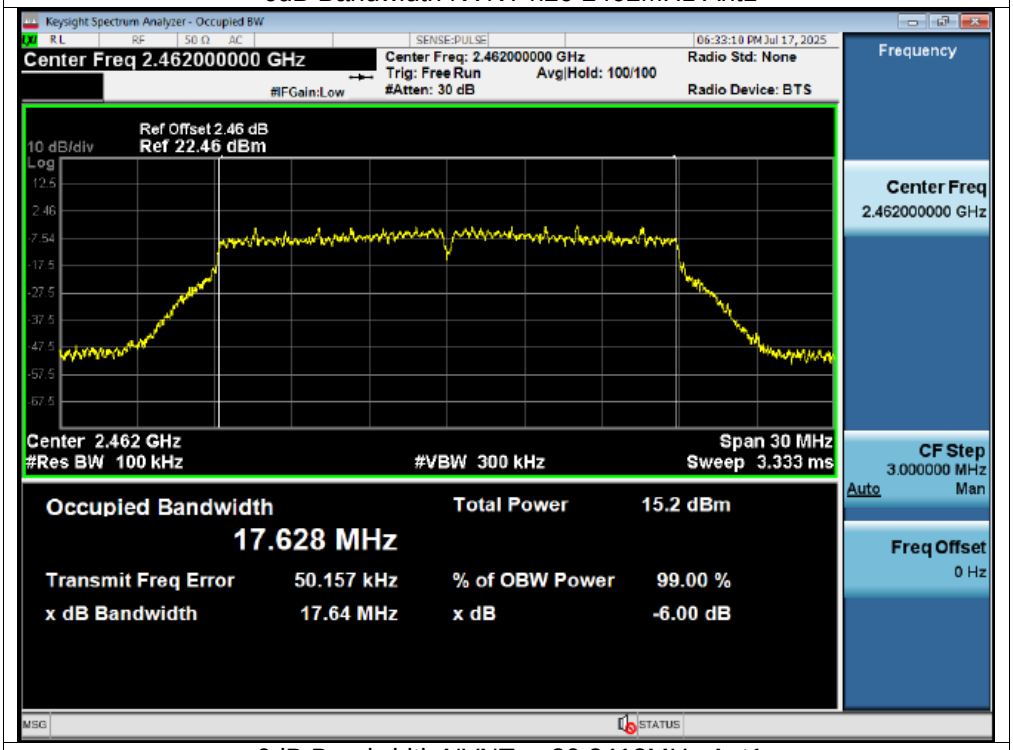
-6dB Bandwidth NVNT n20 2412MHz Ant1



-6dB Bandwidth NVNT n20 2437MHz Ant1

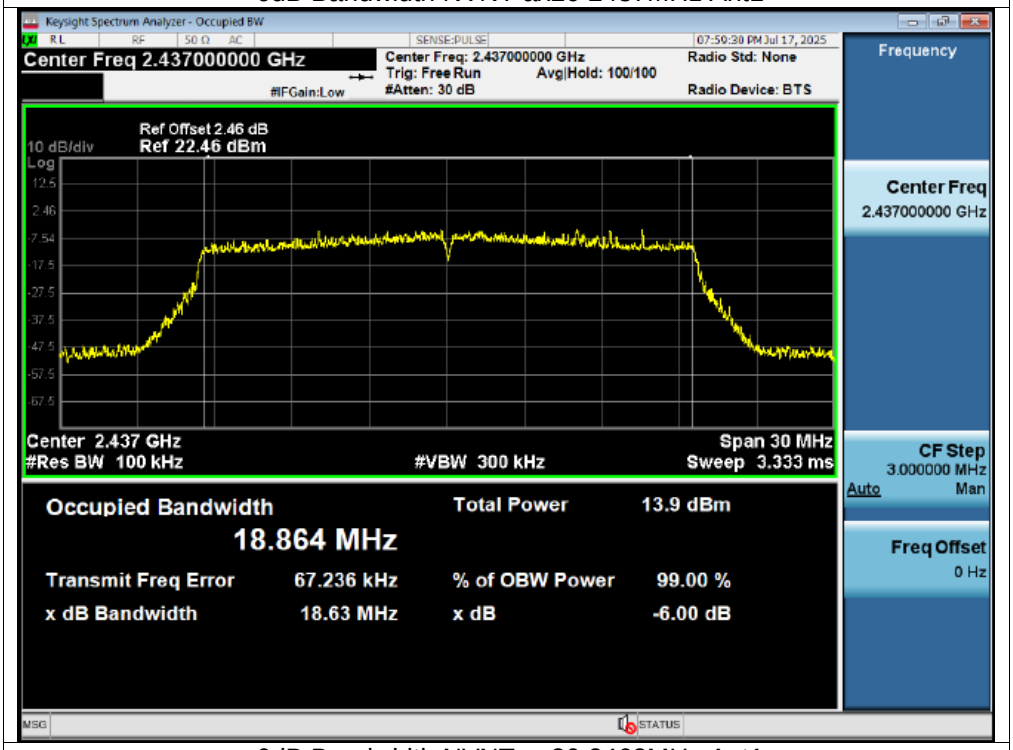


-6dB Bandwidth NVNT n20 2462MHz Ant1

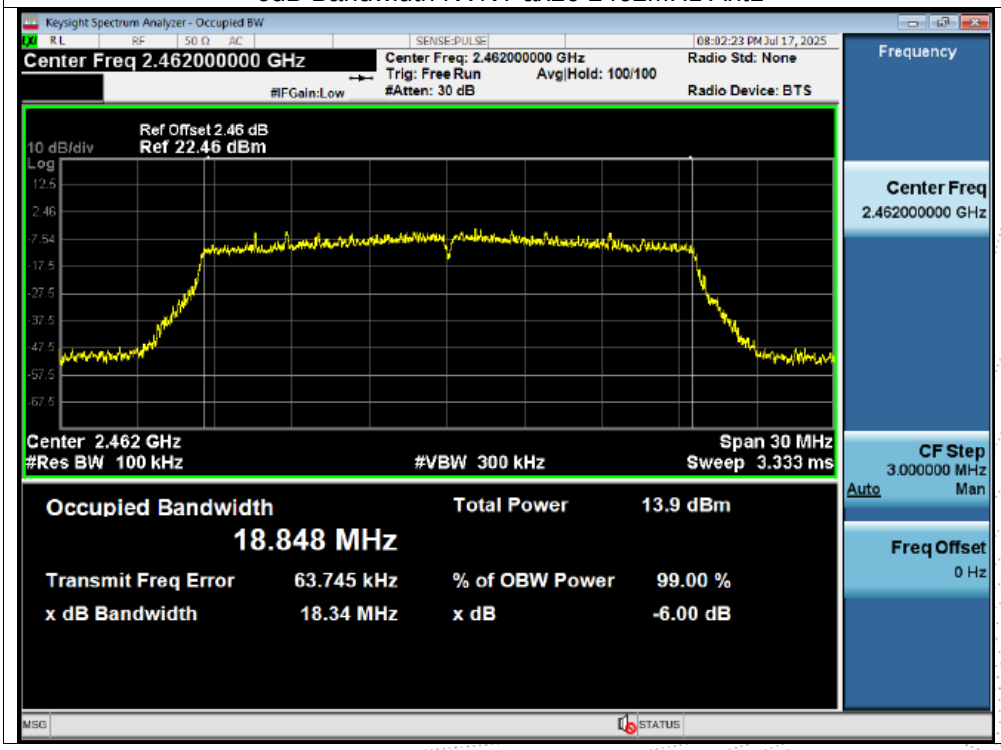


-6dB Bandwidth NVNT ax20 2412MHz Ant1

-6dB Bandwidth NVNT ax20 2437MHz Ant1

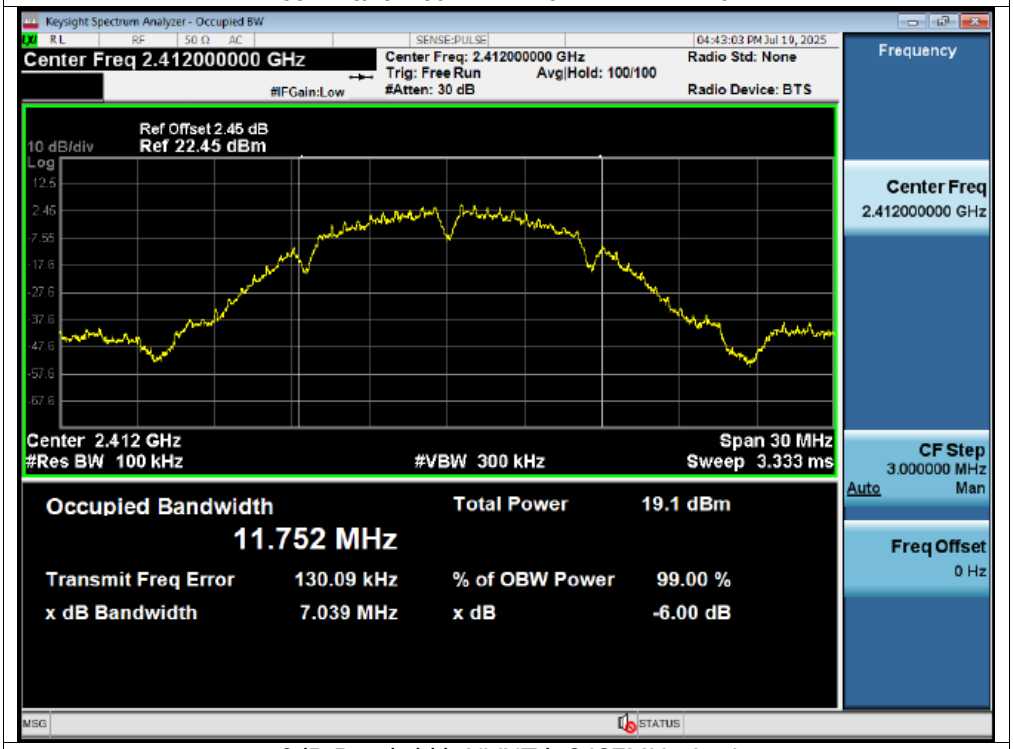


-6dB Bandwidth NVNT ax20 2462MHz Ant1

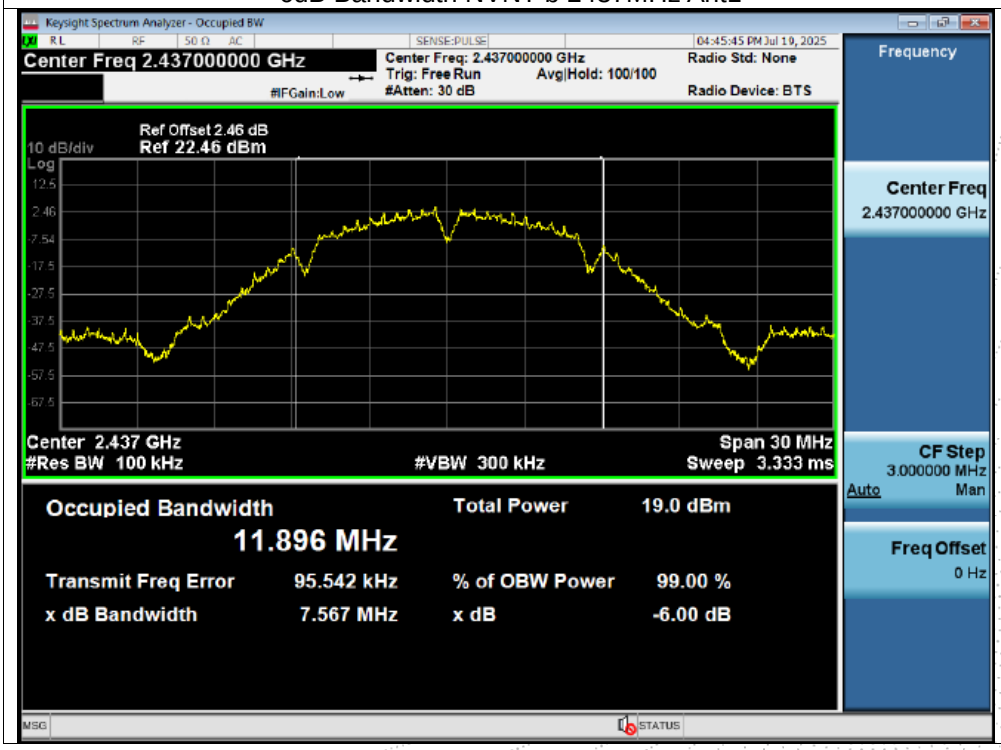


Ant B

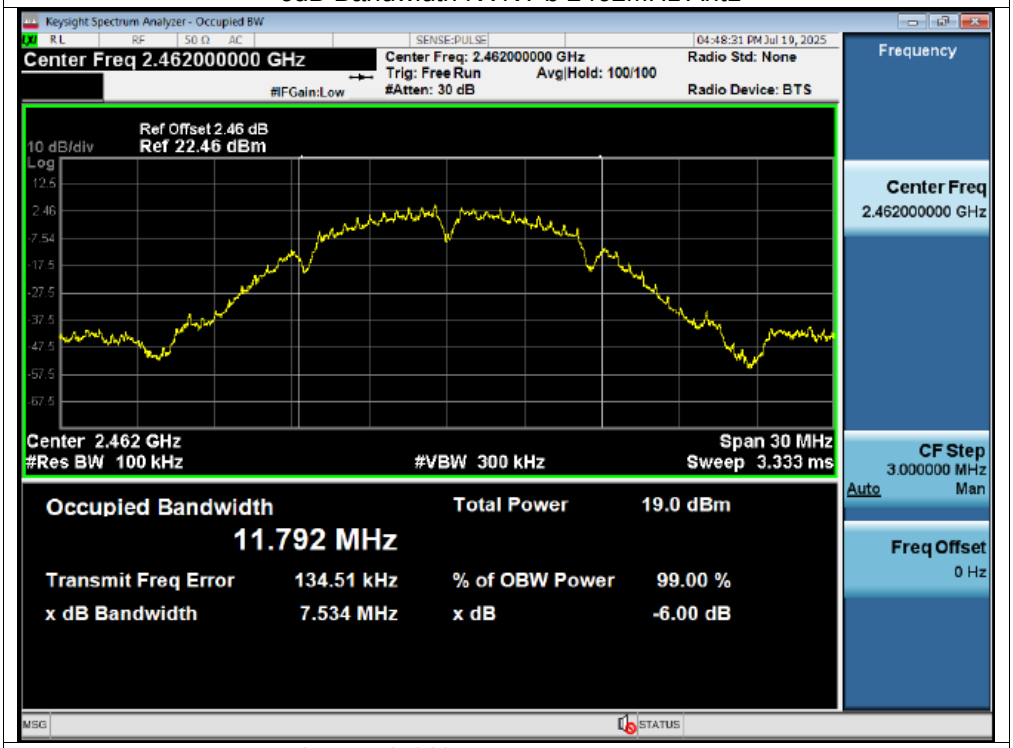
Test Graphs
-6dB Bandwidth NVNT b 2412MHz Ant1



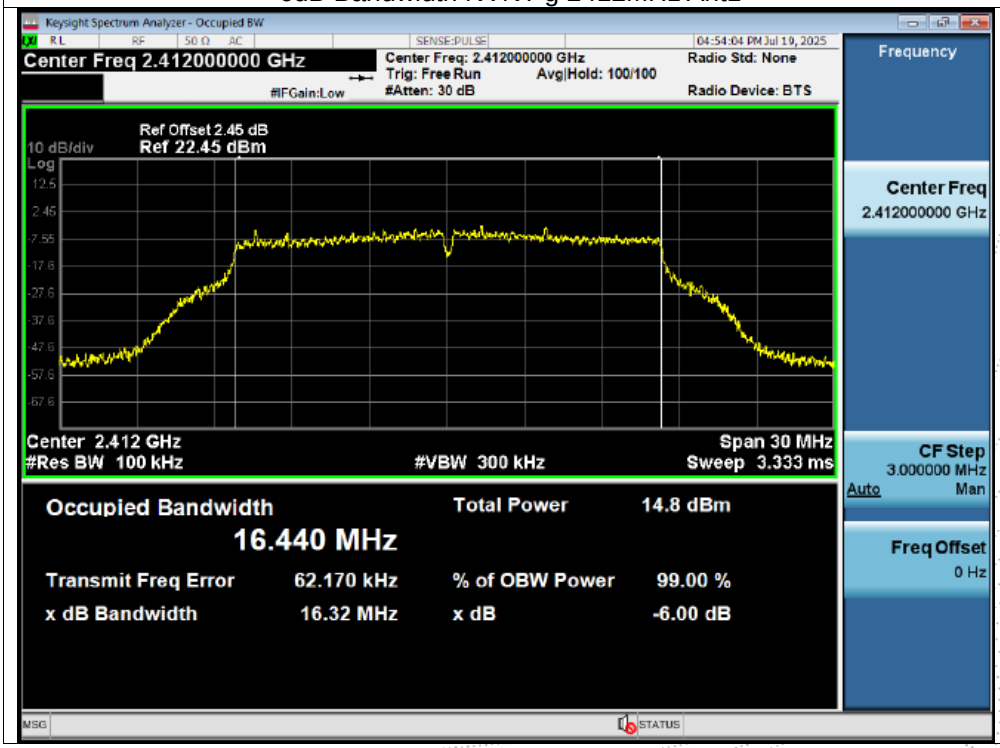
-6dB Bandwidth NVNT b 2437MHz Ant1



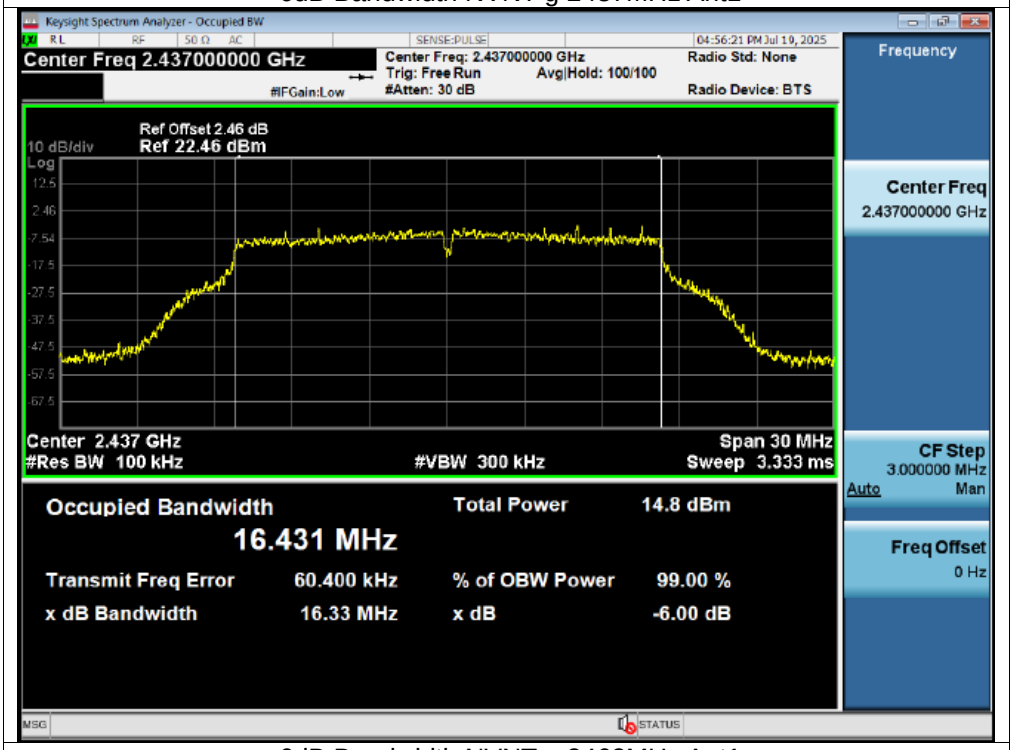
-6dB Bandwidth NVNT b 2462MHz Ant1



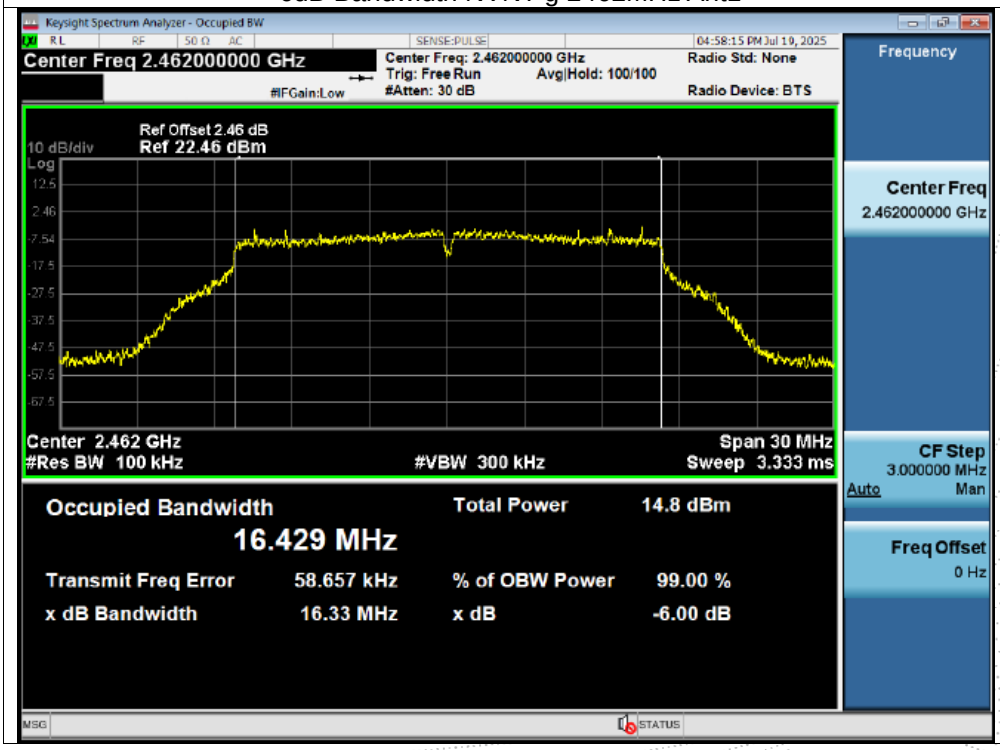
-6dB Bandwidth NVNT g 2412MHz Ant1



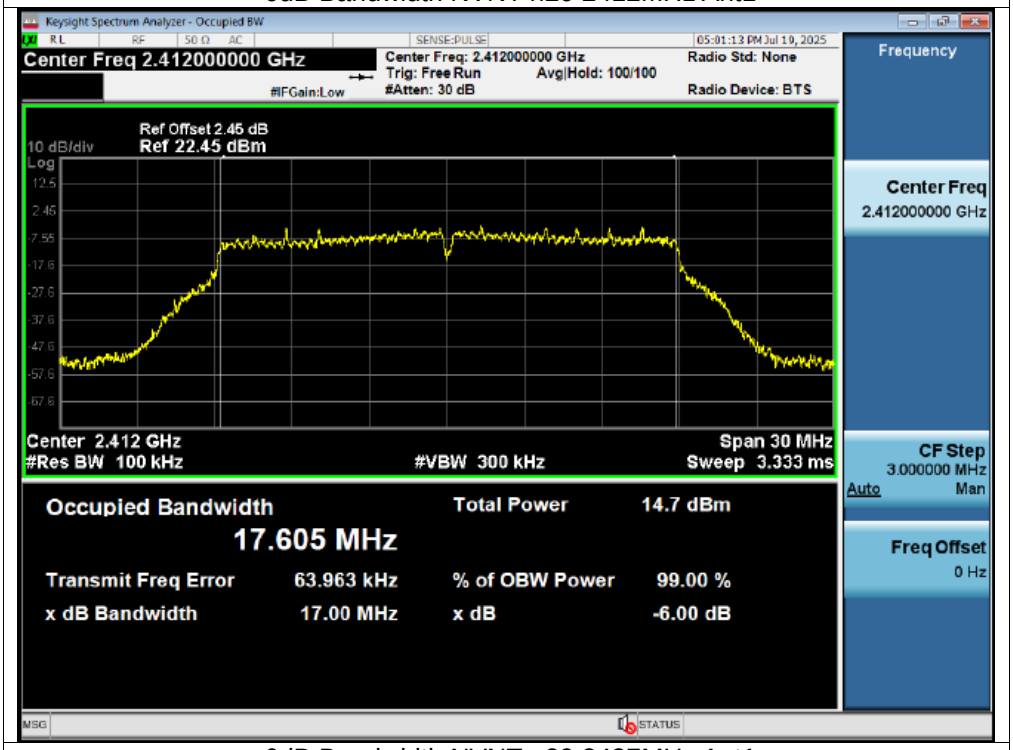
-6dB Bandwidth NVNT g 2437MHz Ant1



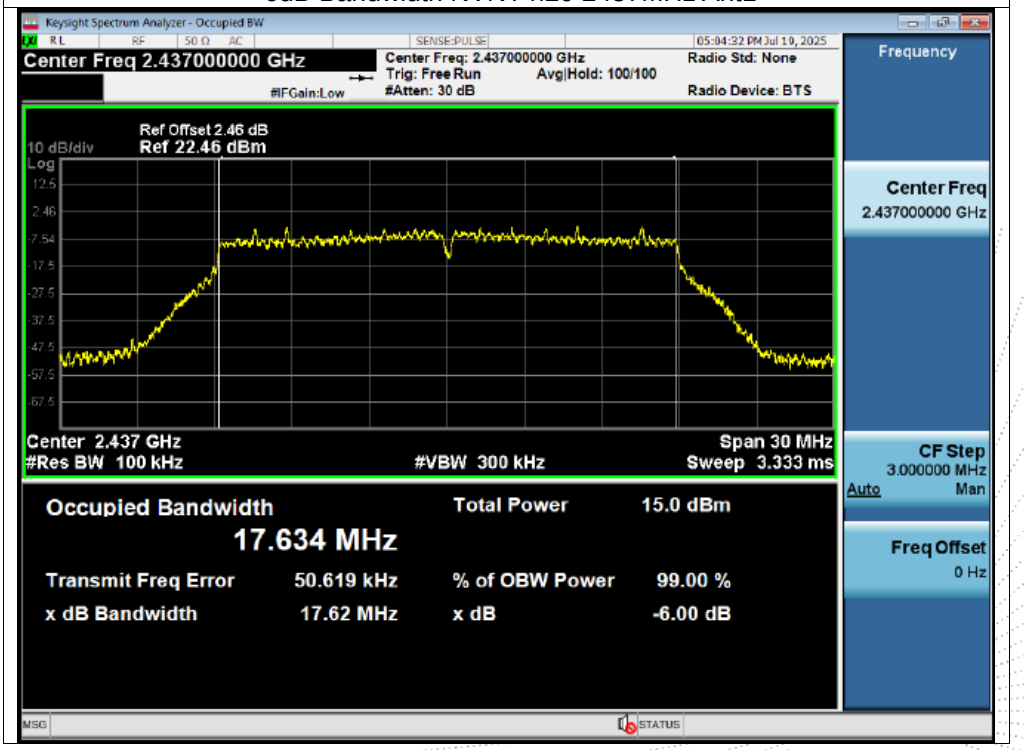
-6dB Bandwidth NVNT g 2462MHz Ant1



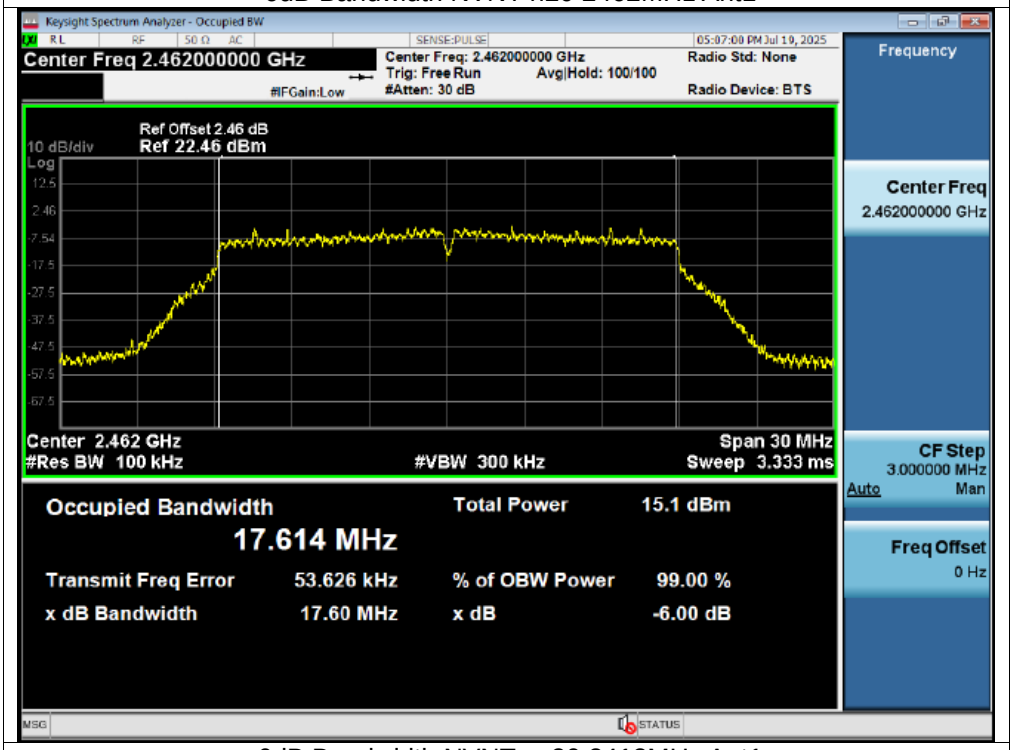
-6dB Bandwidth NVNT n20 2412MHz Ant1



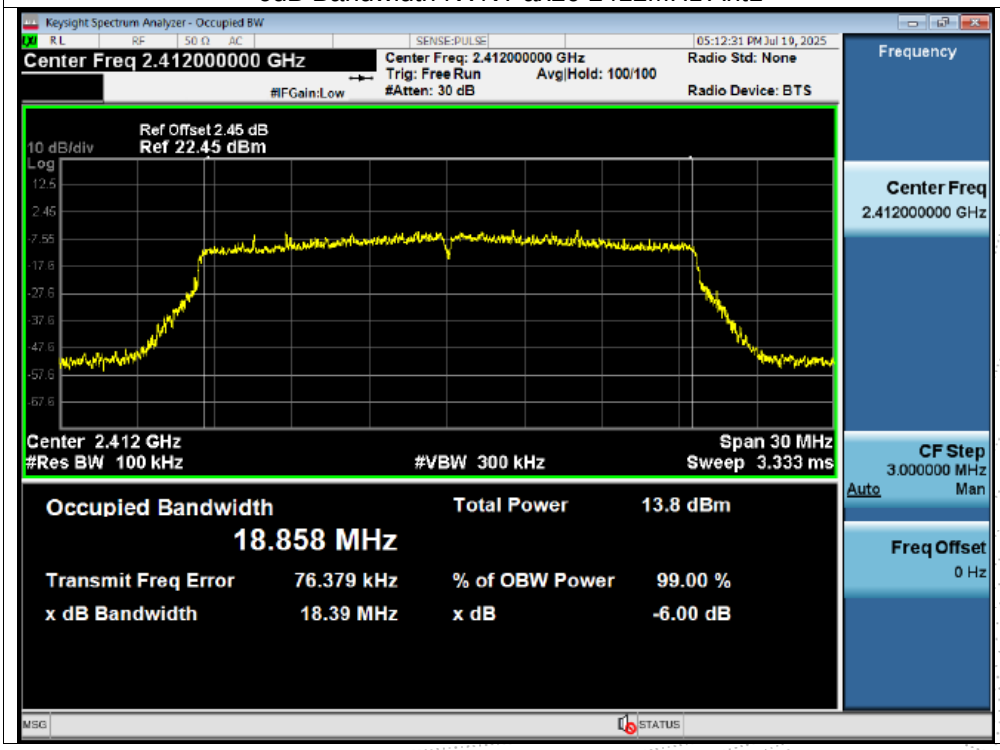
-6dB Bandwidth NVNT n20 2437MHz Ant1



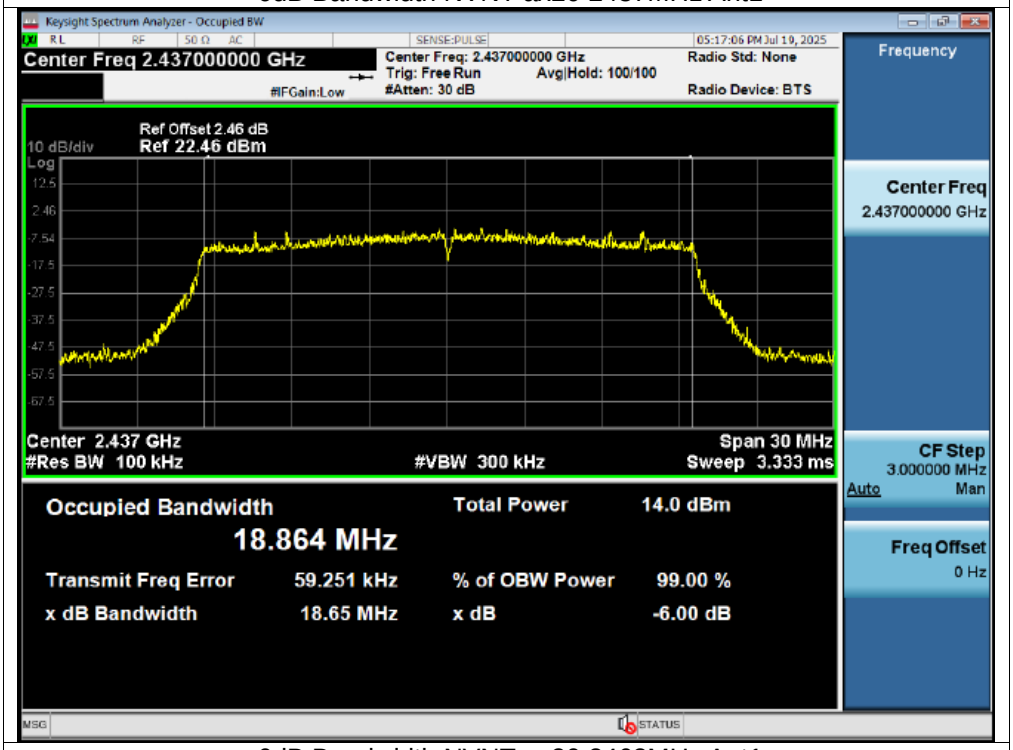
-6dB Bandwidth NVNT n20 2462MHz Ant1



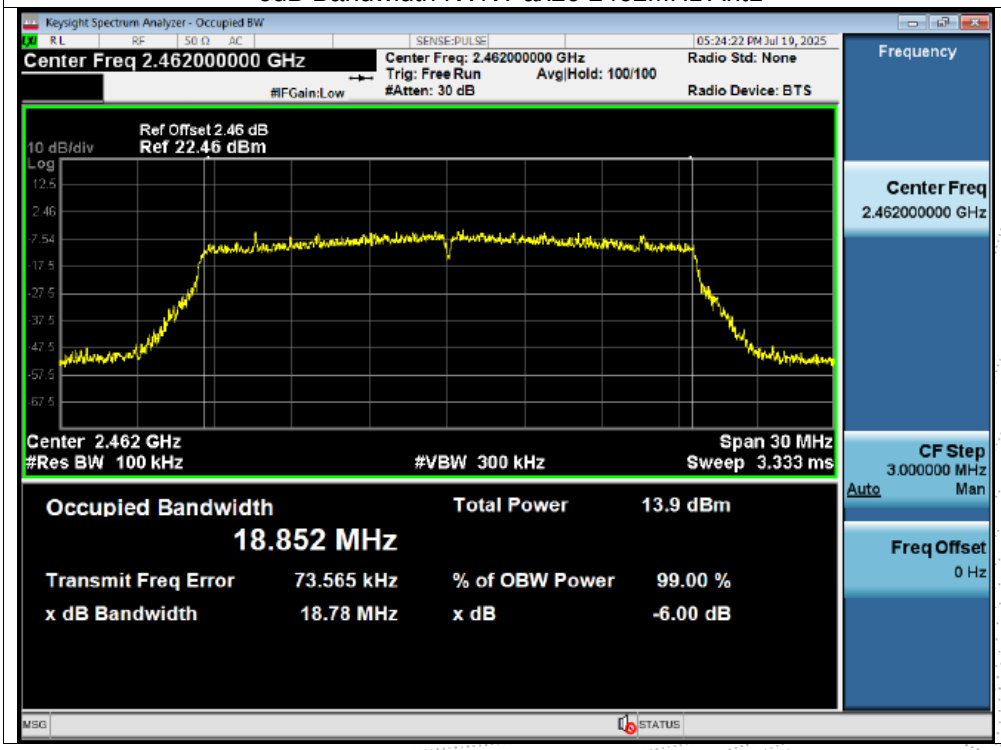
-6dB Bandwidth NVNT ax20 2412MHz Ant1



-6dB Bandwidth NVNT ax20 2437MHz Ant1

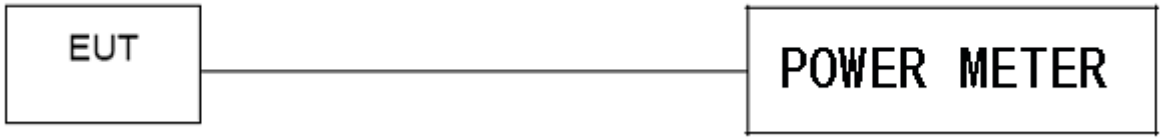


-6dB Bandwidth NVNT ax20 2462MHz Ant1



11. Peak Output Power Test

11.1 Block Diagram Of Test Setup



11.2 Limit

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(3)	Peak Output Power	1 watt or 30dBm	2400-2483.5	PASS

11.3 Test Procedure

a. The EUT was directly connected to the Power meter

11.4 EUT Operating Conditions

The EUT tested system was configured as the statements of 4.6 Unless otherwise a special operating condition is specified in the follows during the testing.
Note: Power Spectral Density(dBm)=Reading+Cable Loss

11.5 Test Result

Temperature:	26℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	DC 3.7V

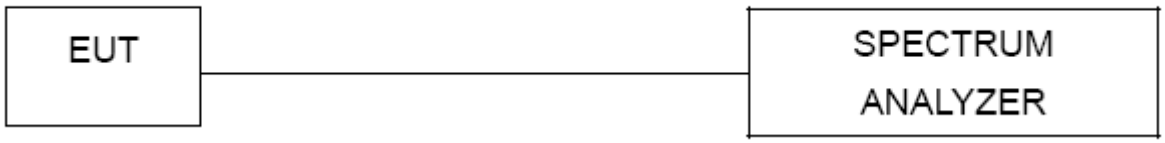
Test Mode	Frequency(MHz)	Ant A Maximum Conducted Output Power(PK) (dBm)	Ant B Maximum Conducted Output Power(PK) (dBm)	Limit (dBm)
802.11b	2412	14.66	14.17	30
	2437	14.43	14.15	30
	2462	14.6	14.14	30
802.11g	2412	14.06	13.7	30
	2437	13.85	13.73	30
	2462	13.98	13.66	30
802.11n20	2412	13.75	13.17	30
	2437	13.61	13.44	30
	2462	13.7	13.51	30
802.11ax20	2412	13.54	13.44	30
	2437	13.35	13.45	30
	2462	13.29	13.45	30

For 2T2R

Test Mode	Frequency	Maximum Conducted Output Power(PK) (dBm)	Limit (dBm)	Result
802.11n20	2412 MHz	16.48	30	PASS
	2437 MHz	16.54	30	PASS
	2462 MHz	16.62	30	PASS
802.11ax20	2412 MHz	16.50	30	PASS
	2437 MHz	16.41	30	PASS
	2462 MHz	16.38	30	PASS

12. 100 kHz Bandwidth Of Frequency Band Edge

12.1 Block Diagram Of Test Setup



12.2 Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

12.3 Test Procedure

Using the following spectrum analyzer setting:
a) Set the RBW = 100KHz.
b) Set the VBW = 300KHz.
c) Sweep time = auto couple.
d) Detector function = peak.
e) Trace mode = max hold.
f) Allow trace to fully stabilize..

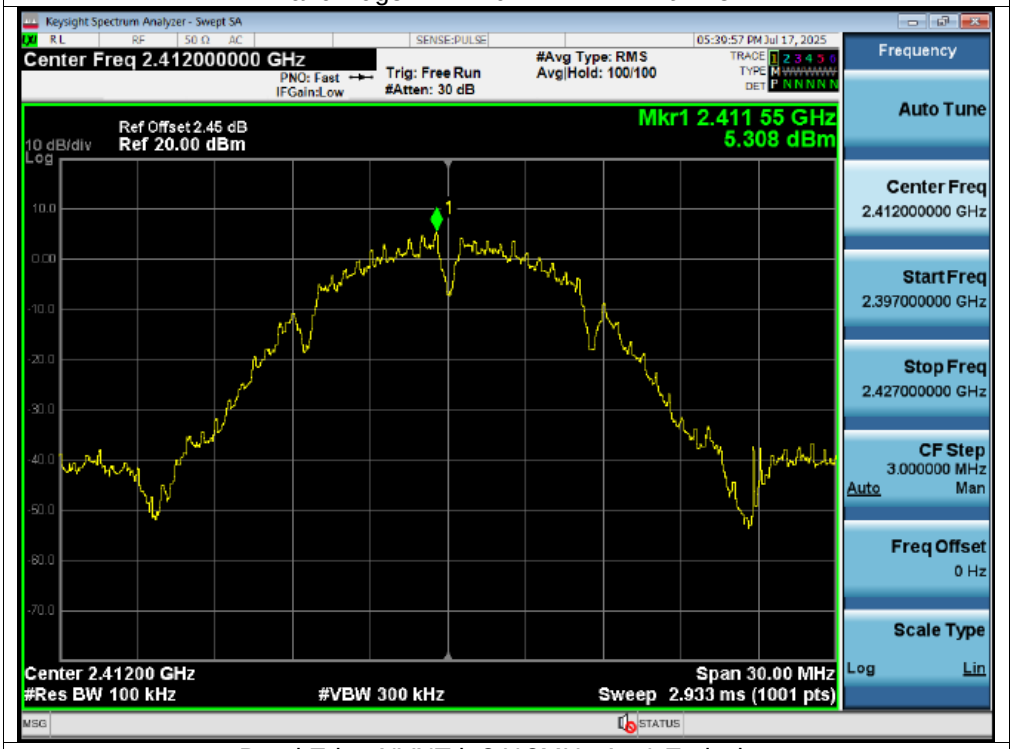
12.4 EUT Operating Conditions

The EUT tested system was configured as the statements of 4.6 Unless otherwise a special operating condition is specified in the follows during the testing.
Note: Power Spectral Density(dBm)=Reading+Cable Loss

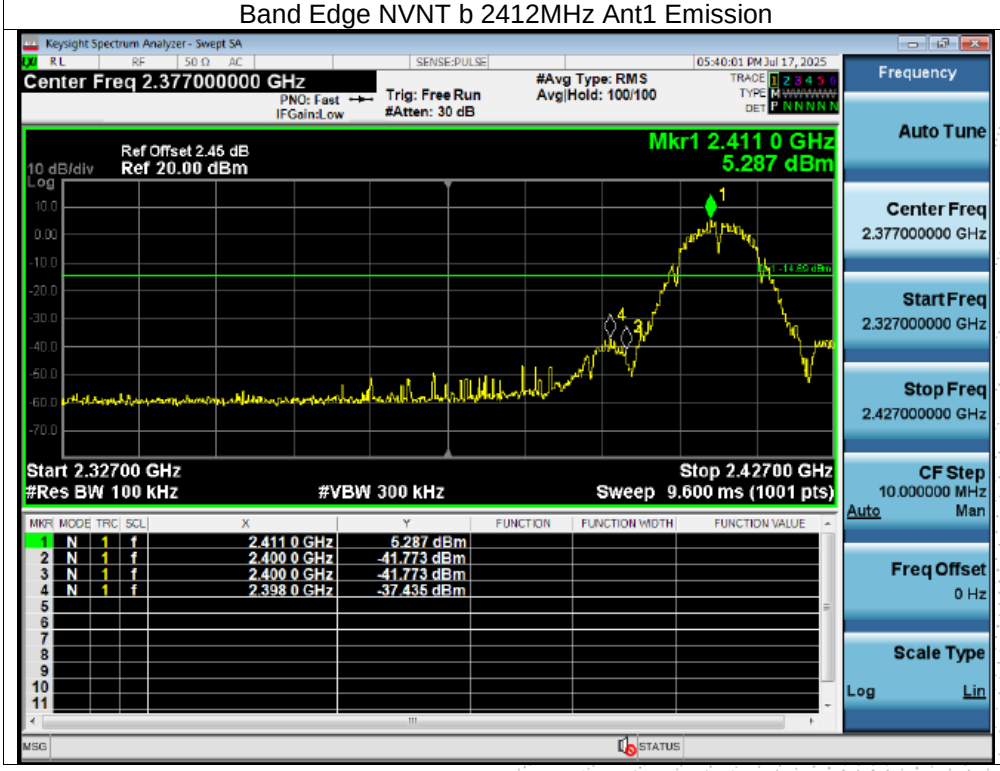
12.5 Test Result

Ant A

Test Graphs
Band Edge NVNT b 2412MHz Ant1 Ref

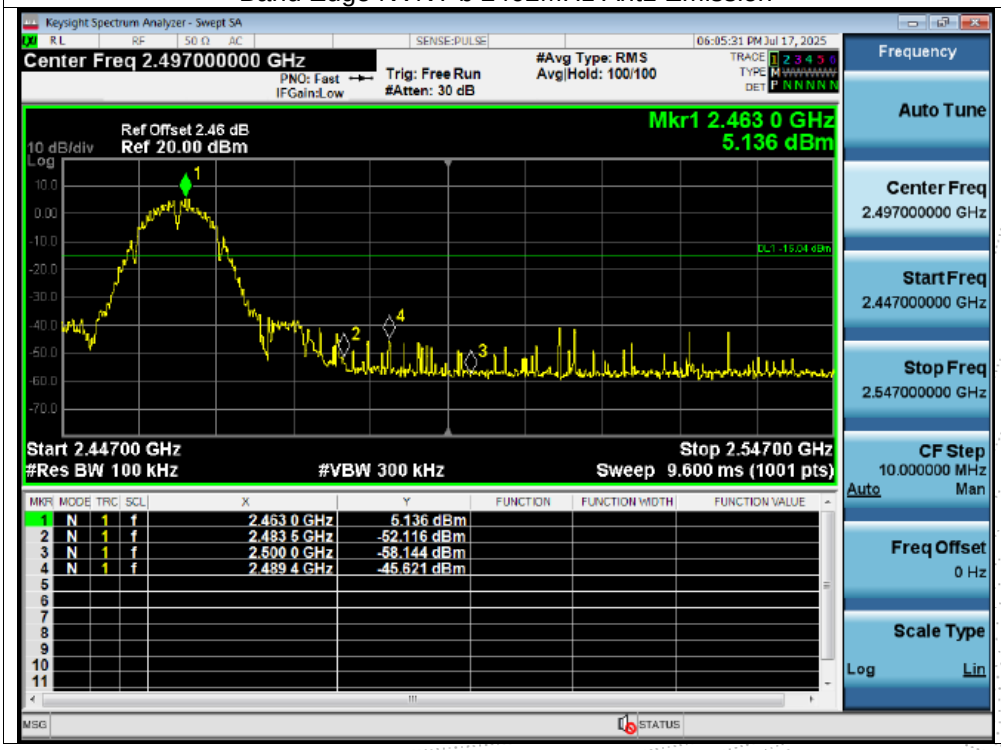


Band Edge NVNT b 2412MHz Ant1 Emission



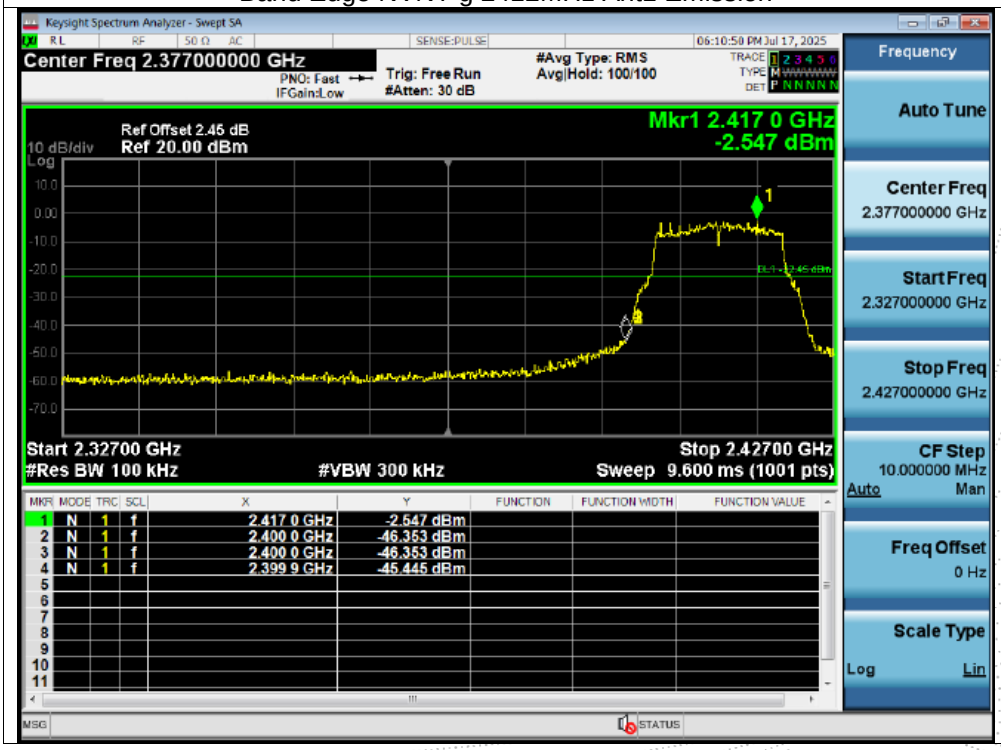
Band Edge NVNT b 2462MHz Ant1 Ref

Band Edge NVNT b 2462MHz Ant1 Emission

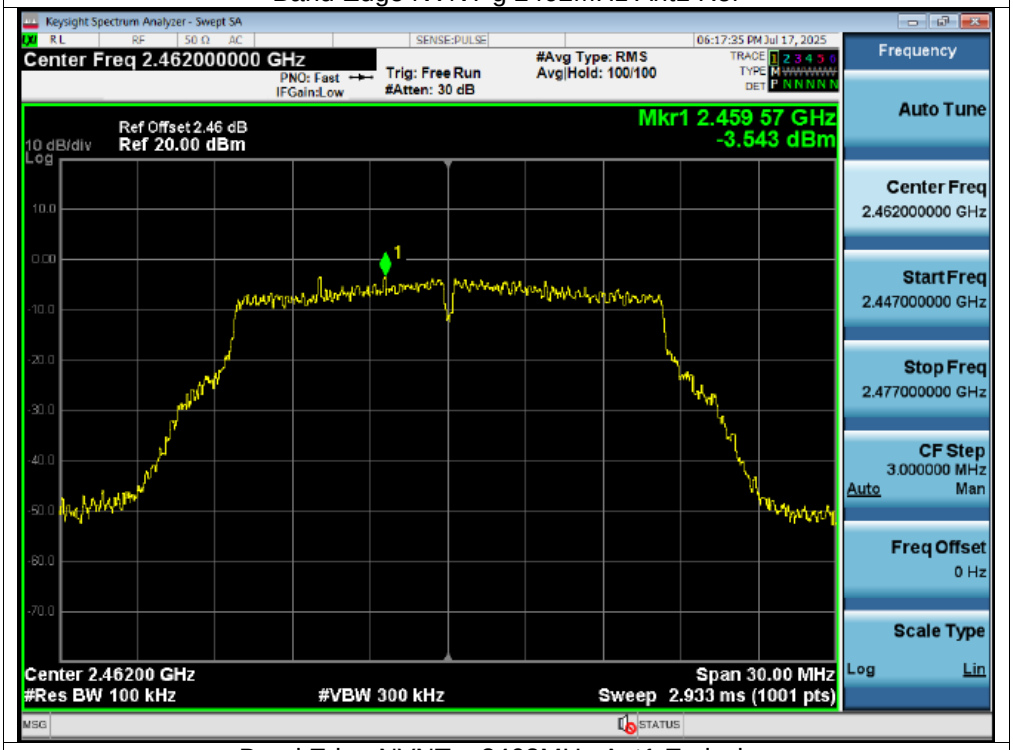


Band Edge NVNT g 2412MHz Ant1 Ref

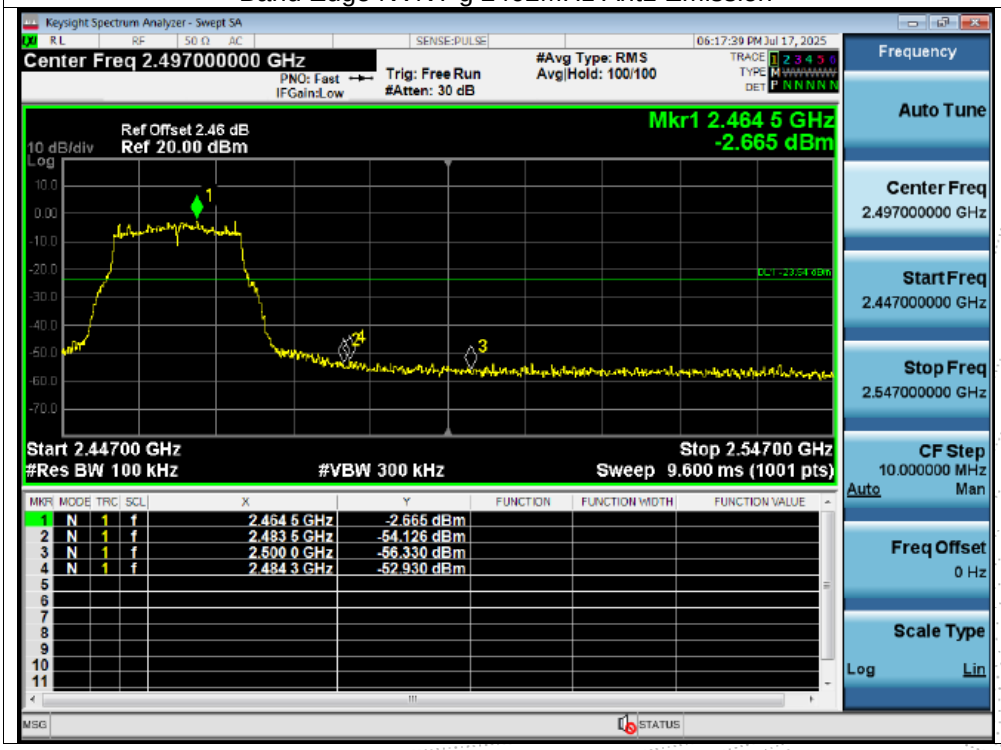
Band Edge NVNT g 2412MHz Ant1 Emission



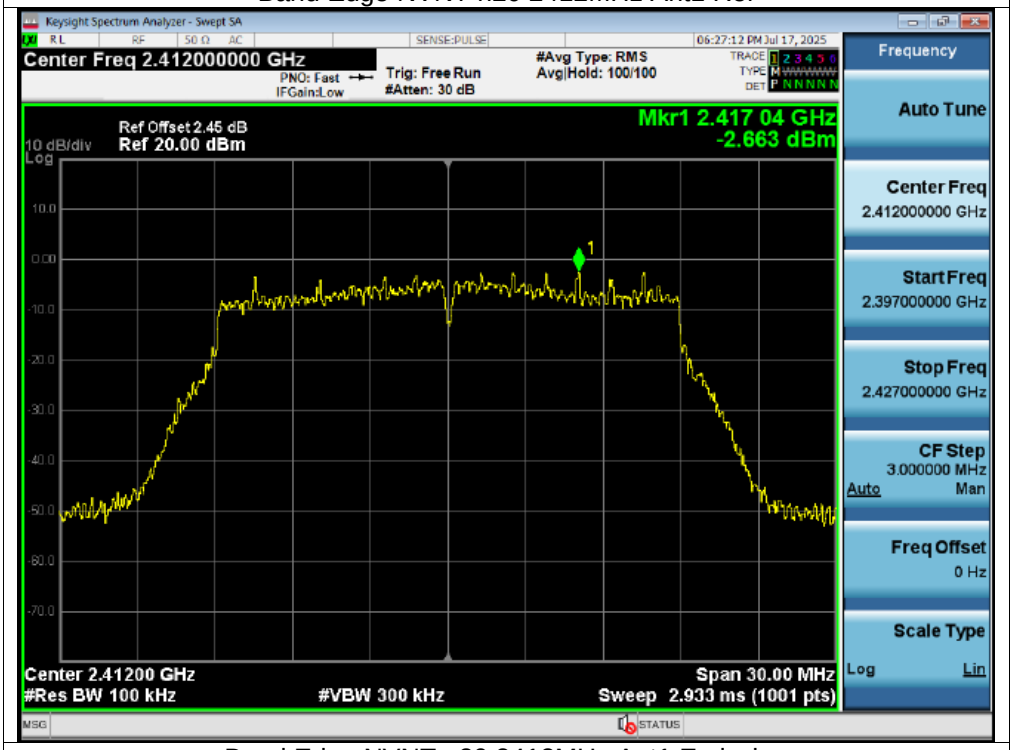
Band Edge NVNT g 2462MHz Ant1 Ref



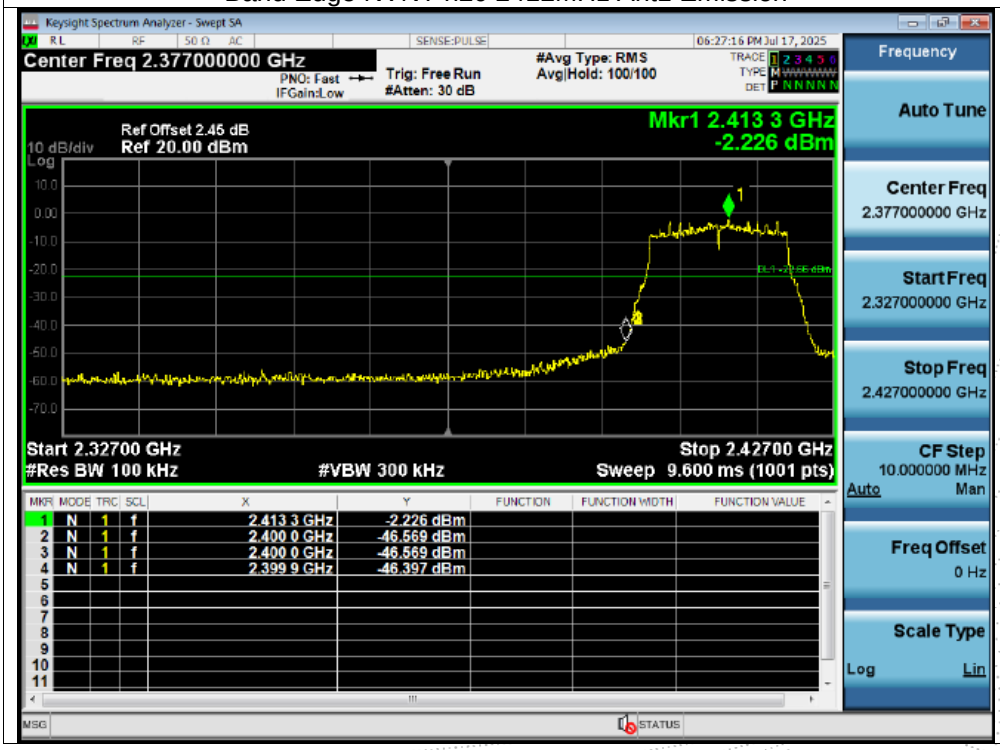
Band Edge NVNT g 2462MHz Ant1 Emission



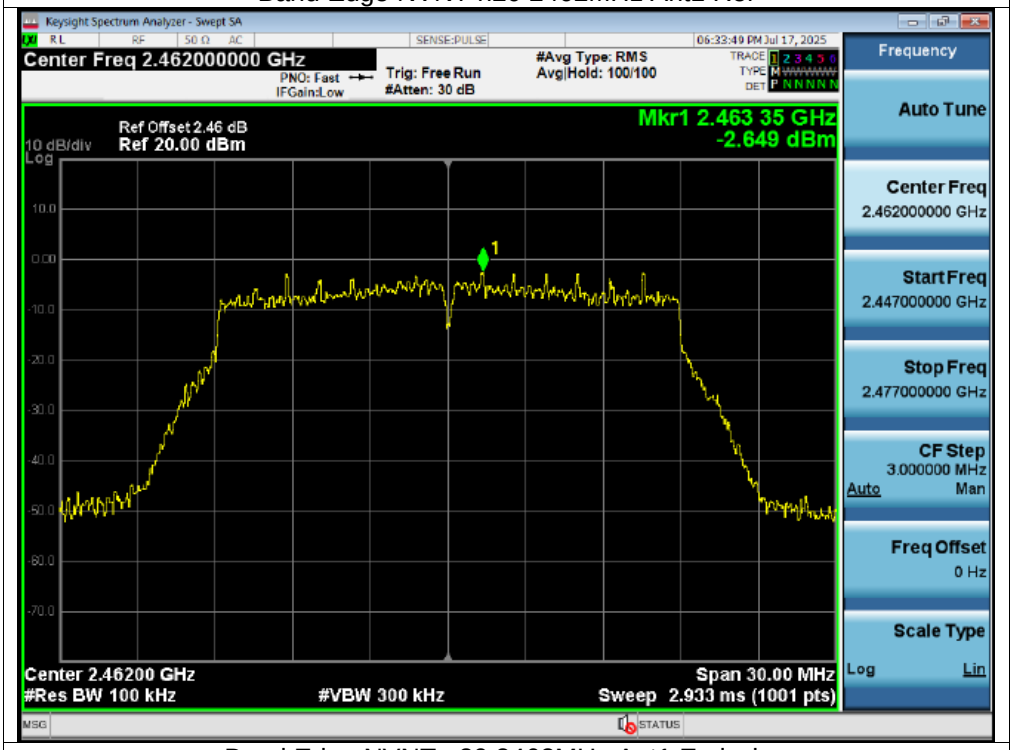
Band Edge NVNT n20 2412MHz Ant1 Ref



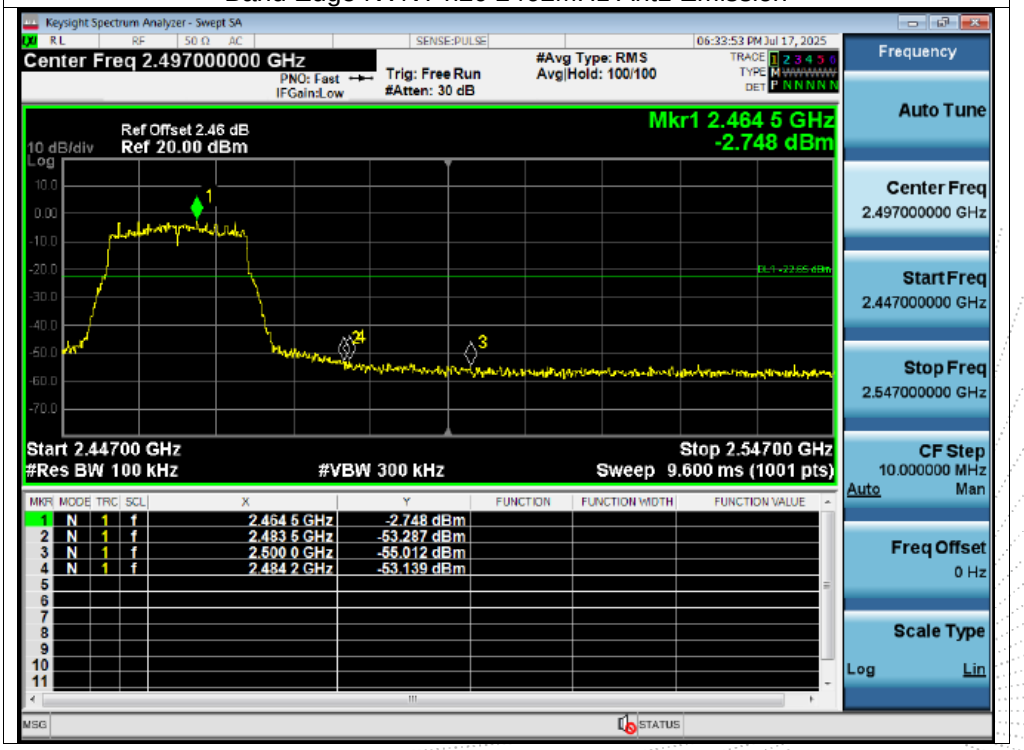
Band Edge NVNT n20 2412MHz Ant1 Emission



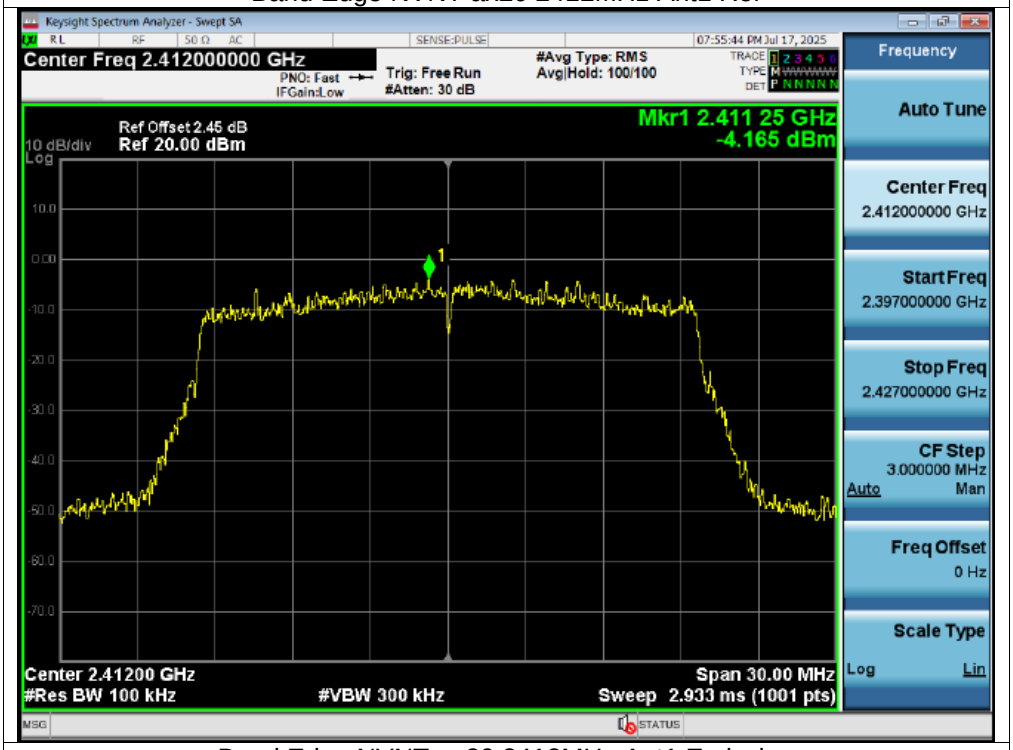
Band Edge NVNT n20 2462MHz Ant1 Ref



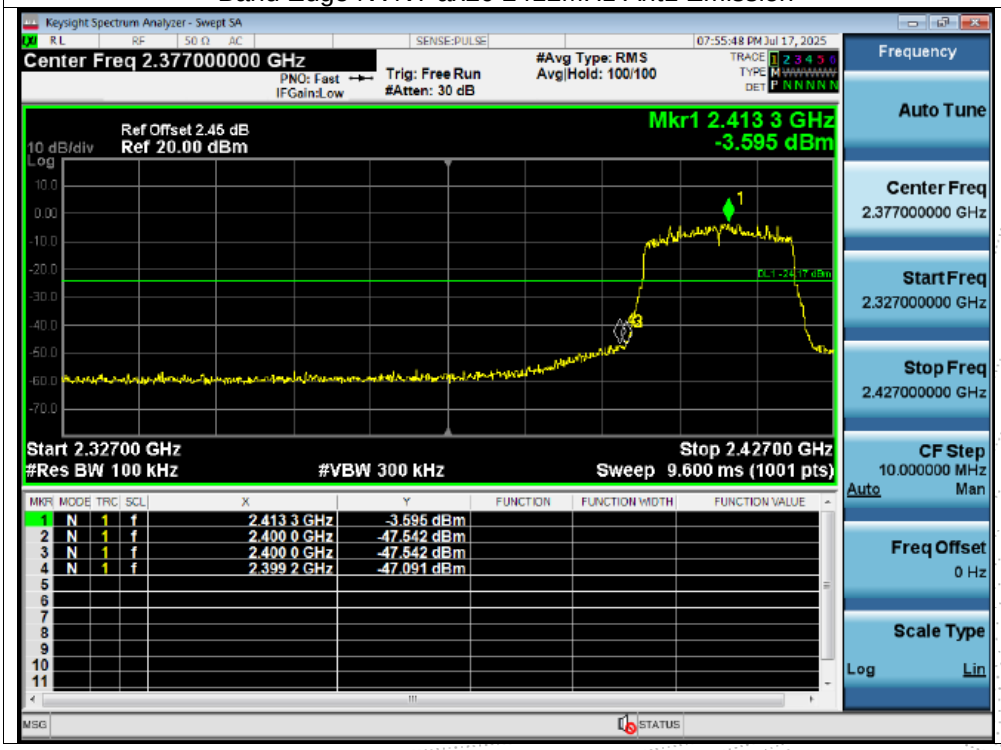
Band Edge NVNT n20 2462MHz Ant1 Emission



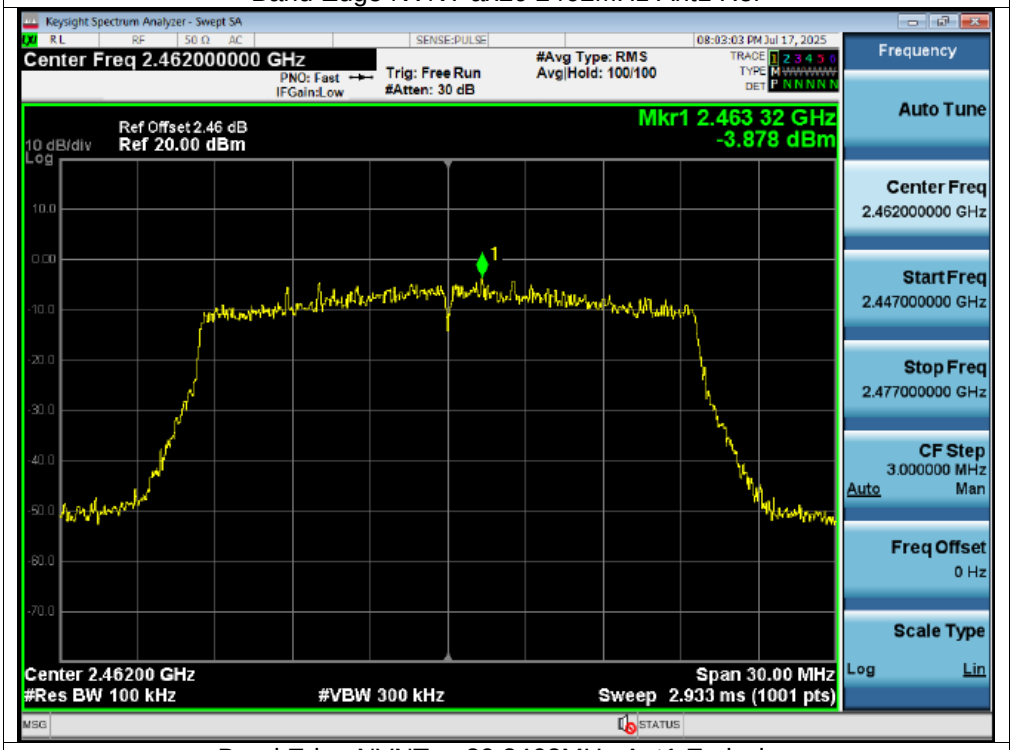
Band Edge NVNT ax20 2412MHz Ant1 Ref



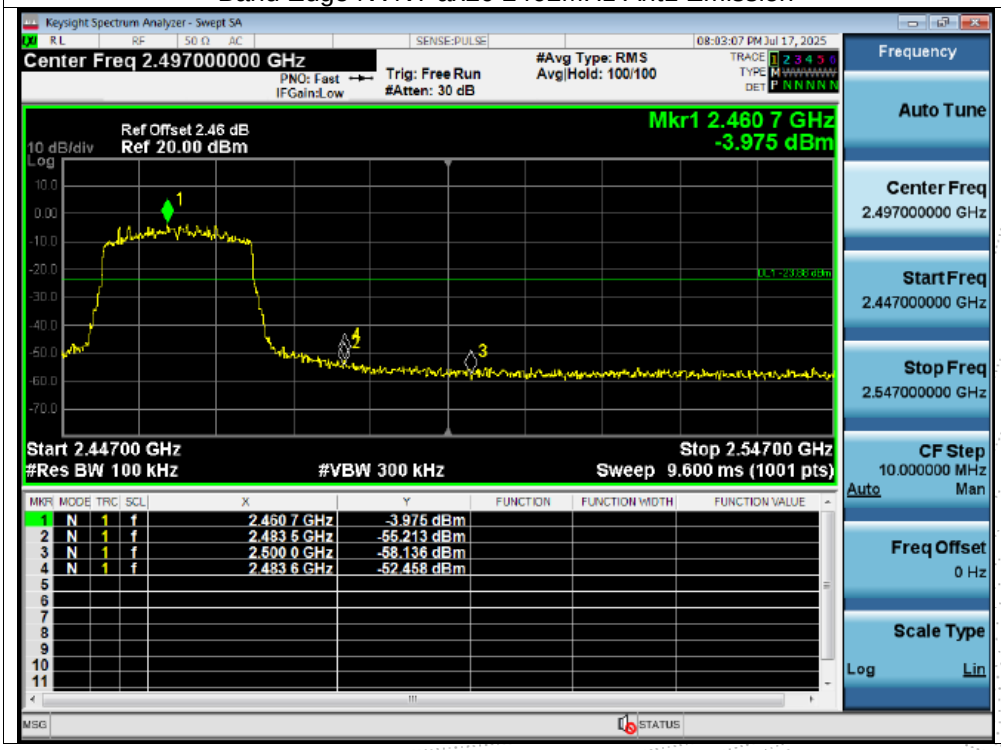
Band Edge NVNT ax20 2412MHz Ant1 Emission



Band Edge NVNT ax20 2462MHz Ant1 Ref



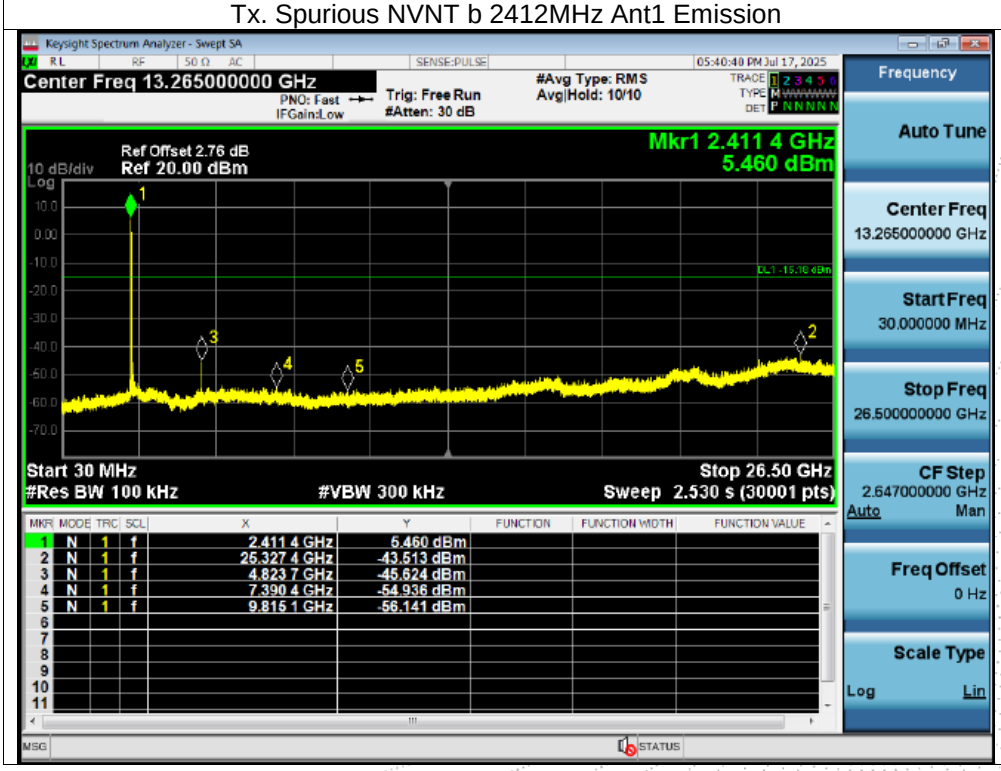
Band Edge NVNT ax20 2462MHz Ant1 Emission



Conducted RF Spurious Emission

Test Graphs
Tx. Spurious NVNT b 2412MHz Ant1 Ref

Tx. Spurious NVNT b 2412MHz Ant1 Emission



Tx. Spurious NVNT b 2437MHz Ant1 Ref

Tx. Spurious NVNT b 2437MHz Ant1 Emission