TEST REPORT

Report No.:	BCTC2608492233-1E
Applicant:	NOVO (GUANGDONG) HIGH-TECH CO.LTD
Product Name:	Curtain Motor
Test Model:	MN30050
Tested Date:	2026-08-31 to 2026-09-10
Issued Date:	2026-09-10

Shenzhen BCTC Technology Co., Ltd.

FCC ID: 2AZMH-MN30050

Product Name:	Curtain Motor
Trademark:	N/A
Model/Type Reference:	MN30050 N30146, AG146, AT146, FD146, ACP30146, N30116
Prepared For:	NOVO (GUANGDONG) HIGH-TECH CO.LTD
Address:	No.7-1, Jiye Road, Leping Town, Sanshui District, Foshan City
Manufacturer:	NOVO (GUANGDONG) HIGH-TECH CO.LTD
Address:	No.7-1, Jiye Road, Leping Town, Sanshui District, Foshan City
Prepared By:	Shenzhen BCTC Technology Co., Ltd.
Address:	Room 101M, Unit 1, Building1, Pengyuan, No.18, Lilang Road, Shanglilang, Nanwan Subdistrict, Longgang District, Shenzhen, Guangdong, China.
Sample Received Date:	2026-08-31
Sample Tested Date:	2026-08-31 to 2026-09-10
Report No.:	BCTC2608492233-1E
Test Standards:	FCC 47 CFR Part 15 Subpart C (clause 15.247) ANSI C63.10-2020 + Cor.1-2023+C63.10a-2024 + Errata to C63.10a-2024
Test Results:	PASS
Remark:	This is WIFI-2.4GHz band radio test report.

Prepared by :	Reviewer by :	Approved by:
Louis.zeng	Mike zheng	Sewen Guo
Louis Zeng	Mike Zheng	Sewen Guo

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1. Version

Report No.	Issue Date	Description	Approved
BCTC2608492233-1E	2026-09-10	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)(3)	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: N/A (Not Applicable)
NOTE2: 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.
Note 3: "*" indicates that the test results are determined base on FCC 47 CFR Part 15 Subpart C (clause 15.247). And the test results are took into account measurement uncertainty(see section 3 for measurement uncertainty information)

3. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2:2011/AMD2:2018. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

No.	Item	Uncertainty
1	3m chamber Radiated spurious emission(9kHz-30MHz)	U=3.7dB
2	3m chamber Radiated spurious emission(30MHz-1GHz)	U=4.8dB
3	3m chamber Radiated spurious emission(1GHz-18GHz)	U=5.5dB
4	3m chamber Radiated spurious emission(18GHz-40GHz)	U=5.0dB
5	Conducted Emission(150kHz-30MHz)	U=3.0dB
6	Power Spectral Density	U=3.46dB
7	Peak Power	U=0.31dB
8	Occupied Bandwidth/Frequency Range	U=3.46%
9	Conducted output power uncertainty	U=0.55dB
10	Frequency Error	U= 53.50 Hz
11	Frequency Drift	U=0.64 KHz
12	Temperature	U= 0.59 ℃
13	Humidity	U= 5.3 %

4. Product Information and Test Setup

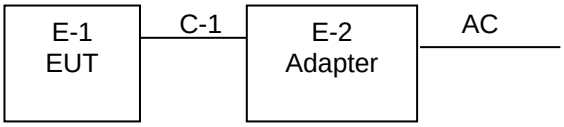
4.1 Product Information

Model/Type reference:	MN30050 N30146, AG146, AT146, FD146, ACP30146, N30116
Model differences:	All the model are the same circuit and RF module, except model names, the test model is MN30050.
Hardware Version:	N/A
Software Version:	N/A
IEEE 802.11 WLAN Mode Supported	802.11b 802.11g 802.11n(20MHz channel bandwidth)
Operation Frequency:	802.11b/g/n 20MHz:2412~2462 MHz
Type of Modulation:	DSSS with DBPSK/DQPSK/CCK for 802.11b; OFDM with BPSK/QPSK/16QAM/64QAM for 802.11g/n;
Number Of Channel:	11 channels for 802.11b/g/n (HT20)
Antenna installation:	Internal antenna
Antenna Gain:	2.54 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 laboratory assumes no responsibility for its authenticity. ☐ The antenna gain of the product is provided by the customer, and the test data is affected by the customer information. The laboratory assumes no responsibility for its authenticity.
Ratings:	AC100-240V 50/60Hz

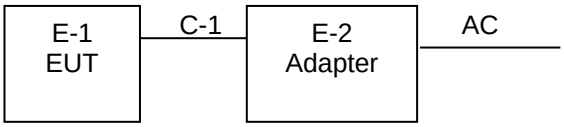
4.2 Test Setup Configuration

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	Curtain Motor	N/A	MN30050	N/A	EUT
E-2	Adapter	N/A	N/A	N/A	Auxiliary

Item	Shielded Type	Ferrite Core	Length	Note
C-1	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

Channel List for 802.11b/g/n (20)					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	02	2417	03	2422
04	2427	05	2432	06	2437
07	2442	08	2447	09	2452
10	2457	11	2462		

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.

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	802.11n20
Mode 8	CH 06	
Mode 9	CH 11	
Mode 10	Transmit (Conducted Emission, 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 for 802.11 n 40
4. The battery is fully-charged during the radiated and RF conducted test.
5. The 802.11ax mode is investigated among different tones(26/52/106/242-tone RU channel), full resource units (RU), partial resource units. The partial RU has no higher power than full RU's, thus the full RU is chosen as main test configuration.

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

RF Function	Mode Or Modulation type	Power Class	Software For Testing
WIFI 2.4G	802.11b	10	bt_tool_v1.1.0
	802.11g	10	
	802.11n20	10	

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 Technology Co., Ltd.
Address: Room 101M, Unit 1, Building1, Pengyuan, No.18, Lilang Road, Shanglilang, Nanwan Subdistrict, Longgang District, Shenzhen, Guangdong, China.
The site and apparatus are constructed in conformance with the requirements of ANSI C63.4a-2017 and CISPR 16-1-1:2019 other equivalent standards.
FCC Test Firm Registration Number: 754702
ANAB certificate registration number is: CN3479

5.2 Test Instrument Used

Conducted emissions Test					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
Receiver	R&S	ESCI	101421	2026.08.24	2027.08.23
AMN	SCHWHRZBECK	NSLK8128	05152	2026.01.22	2027.01.21
AMN	SCHWHRZBECK	NSLK8127	8127739	2026.08.24	2027.08.23
Pulse Limiter	SCHWHRZBECK	VTSD 9561-F-N	00547	2026.08.24	2027.08.23
Temperature & Humidity	Wetest	HTC-1	/	2026.08.24	2027.08.23
Software	EZ-EMC	Ver.EMC-CON 3A1	/	/	/

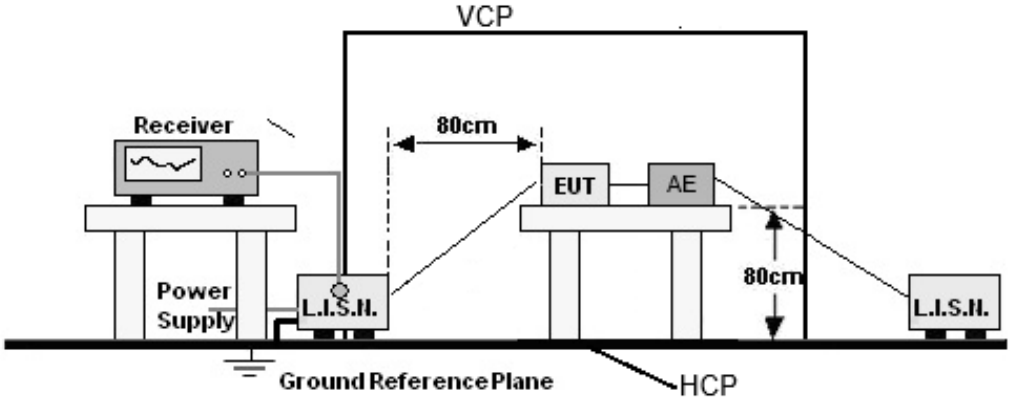
Radiated Emissions Test (966 Chamber)					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
966 chamber	ChengYu	966 Room	966	2023.09.25	2026.09.24
Loop Antenna	Schwarzbeck	FMZB1519B	00014	2026.01.05	2027.01.04
Broadband antenna	SCHWHRZBECK	VULB9168	01620	2026.08.22	2027.08.21
Horn antenna (1 GHz -18GHz)	SCHWARZBECK	BBHA 9120 D	2792	2026.08.22	2027.08.21
Horn antenna (18 GHz -40GHz)	SCHWARZBECK	BBHA9170	00822	2025.12.29	2026.12.28
Receiver	R&S	ESR	1316	2026.08.24	2027.08.23
Spectrum Analyzer	R&S	FSV40	101328	2026.01.22	2027.01.21
Amplifier	SCHWHRZBECK	BBV9744	568	2026.08.24	2027.08.23
Amplifier	EMC INSTRUMENTS	EMC0518A45SEE	EMT-SZ2233	2026.08.24	2027.08.23

	CORPORATION				
Amplifier (18GHz-40GHz)	MITEQ	TTA1840-35-HG	2034381	2026.05.09	2027.05.08
Band 2.4G-2.5G Filter	COM-MW	ZBSF6-C5150-5350-1117	2220980	2026.08.24	2027.08.23
RF cable 3# (9kHz-6GHz)	Yunyi	10M	/	2026.08.24	2027.08.23
RF cable 9# (9kHz-1GHz)	Yunyi	2M	/	2025.10.28	2026.10.27
RF cable 5# (1GHz -18GHz)	SKET	9M	18038626	2026.08.24	2027.08.23
RF cable 6# (1GHz -18GHz)	SKET	5M	#10	2026.08.24	2027.08.23
RF cable 10# (18GHz-40GHz)	/	2M	2M	2026.05.09	2027.05.08
RF cable 11# (18GHz-40GHz)	/	2.5M	2.5M	2026.05.09	2027.05.08
Temperature & Humidity	Wetest	HTC-1	/	2025.09.05	2026.09.04
Communication test set	R&S	CMW500	157483	2026.08.24	2027.08.23
Software	EZ-EMC	Ver.FA-03A2	/	/	/

RF Conducted Test					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
Spectrum Analyzer	Keysight	N9020A	MY51287403	2026.08.24	2027.08.23
Signal Generator	Keysight	N5182A	MY50144088	2026.08.24	2027.08.23
Power Sensor	Keysight	U2001	MY51250006	2025.10.28	2026.10.27
Temperature & Humidity	Wetest	HTC-1	/	2026.08.25	2027.08.24
Communication test set	R&S	CMW500	157483	2026.08.24	2027.08.23
Radio frequency control box	MWRFtest	MW100-RFCB	\	\	\
Software	MWRFtest	MTS 8310	V 3.0.0.0	\	\
Software	MWRFtest	MTS 8200	V 2.0.0.0	\	\
D.C. Power Supply	Elektro-Automatik GmbH & Co.KG	D-41747 Viersen	6230316	2026.08.24	2027.08.23
Temperature and humidity test chamber	Auchno	OJN-9606-408L	19120183	2026.07.07	2027.07.06

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

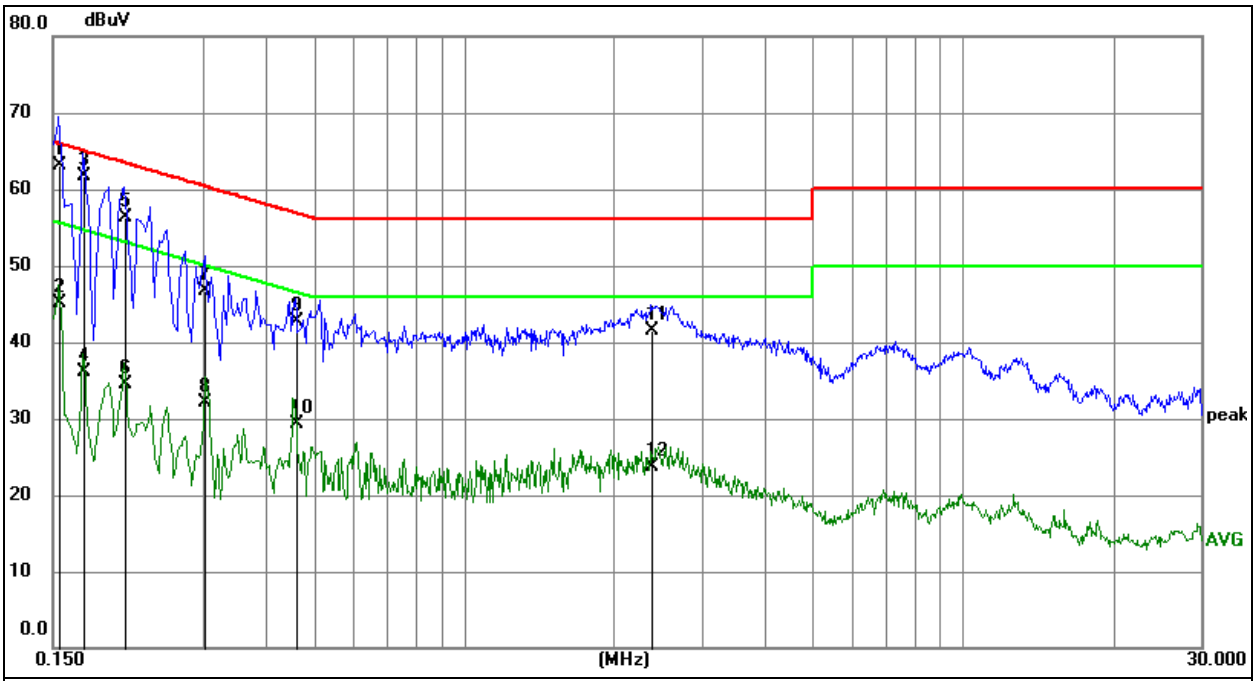
a. The Product was placed on a nonconductive table 0.8 m above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).
b. The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak 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:	23.8 ℃	Relative Humidity:	62%RH
Pressure:	101KPa	Phase :	L
Test Mode:	Mode 10	Test Voltage :	AC120V/60Hz

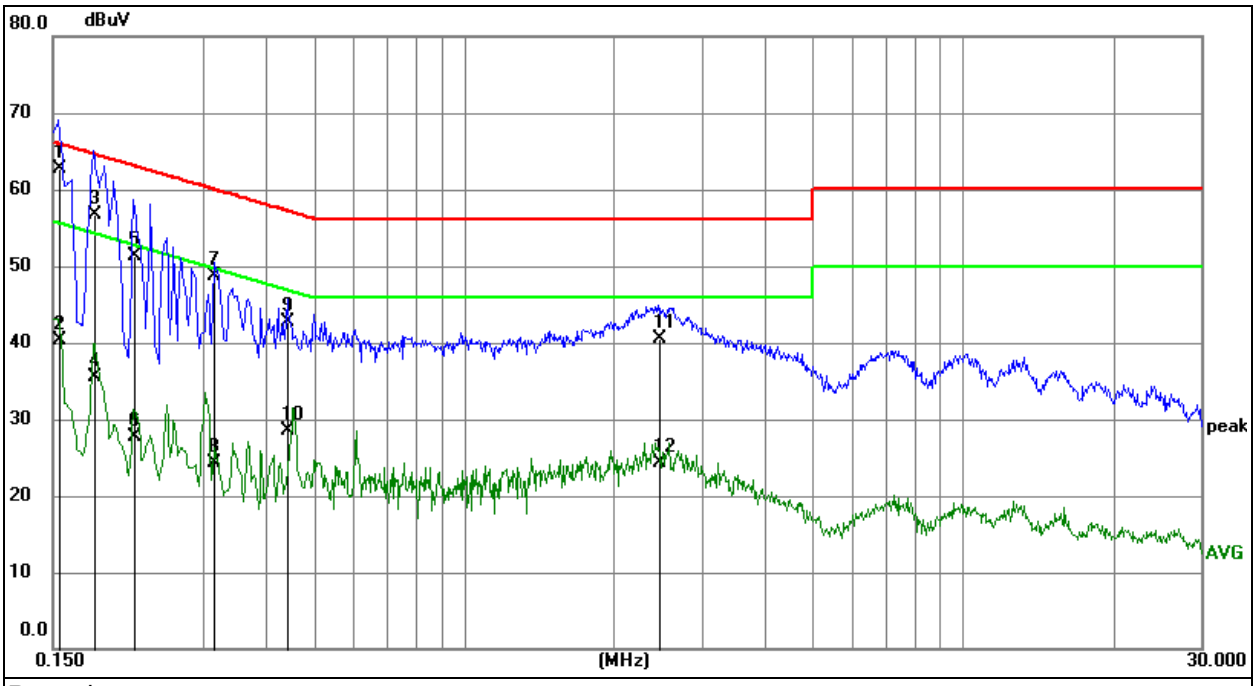


Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = LISN factor + Cable Loss+ Limiter (10dB).
3. Margin = (Reading+ Factor)–Limit

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1 *	0.1545	52.69	10.51	63.20	65.75	-2.55	QP
2	0.1545	34.69	10.51	45.20	55.75	-10.55	AVG
3	0.1725	51.29	10.51	61.80	64.84	-3.04	QP
4	0.1725	25.59	10.51	36.10	54.84	-18.74	AVG
5	0.2085	45.79	10.51	56.30	63.26	-6.96	QP
6	0.2085	24.09	10.51	34.60	53.26	-18.66	AVG
7	0.3030	36.29	10.51	46.80	60.16	-13.36	QP
8	0.3030	21.69	10.51	32.20	50.16	-17.96	AVG
9	0.4605	32.28	10.52	42.80	56.68	-13.88	QP
10	0.4605	18.88	10.52	29.40	46.68	-17.28	AVG
11	2.3820	30.95	10.55	41.50	56.00	-14.50	QP
12	2.3820	13.25	10.55	23.80	46.00	-22.20	AVG

* Indicates the worst data.

Temperature:	23.8 ℃	Relative Humidity:	62%RH
Pressure:	101KPa	Phase :	N
Test Mode:	Mode 10	Test Voltage :	AC120V/60Hz



Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = LISN factor + Cable Loss+ Limiter (10dB).
3. Margin = (Reading+ Factor)–Limit

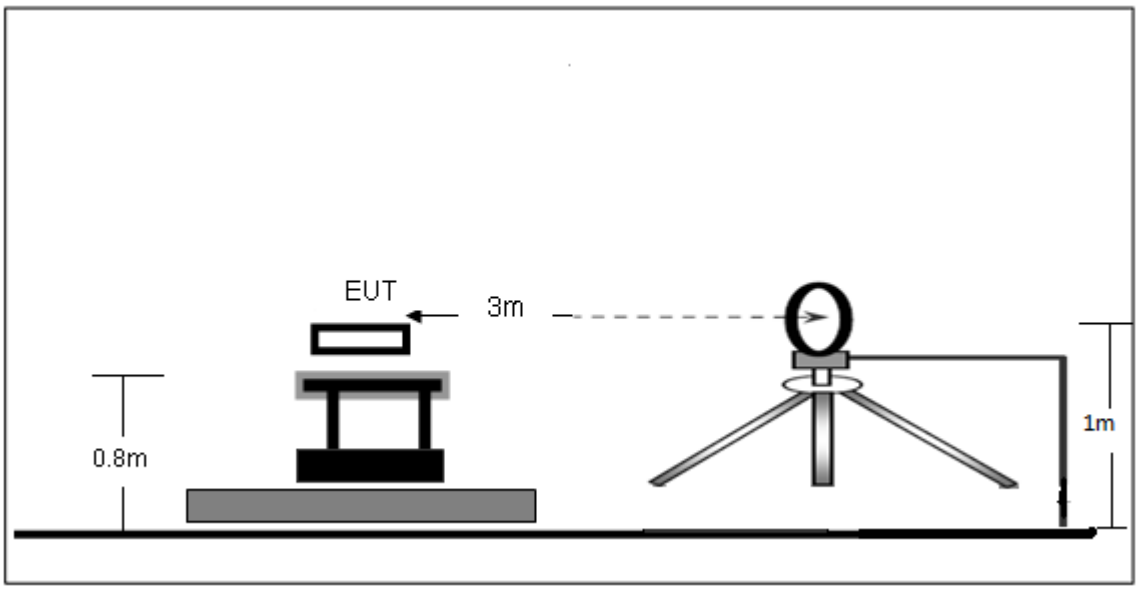
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1 *	0.1545	52.20	10.60	62.80	65.75	-2.95	QP
2	0.1545	29.80	10.60	40.40	55.75	-15.35	AVG
3	0.1815	46.16	10.54	56.70	64.42	-7.72	QP
4	0.1815	25.06	10.54	35.60	54.42	-18.82	AVG
5	0.2175	40.89	10.51	51.40	62.91	-11.51	QP
6	0.2175	17.19	10.51	27.70	52.91	-25.21	AVG
7	0.3165	38.19	10.51	48.70	59.80	-11.10	QP
8	0.3165	13.79	10.51	24.30	49.80	-25.50	AVG
9	0.4425	32.28	10.52	42.80	57.01	-14.21	QP
10	0.4425	18.08	10.52	28.60	47.01	-18.41	AVG
11	2.4495	29.95	10.55	40.50	56.00	-15.50	QP
12	2.4495	13.75	10.55	24.30	46.00	-21.70	AVG

* Indicates the worst data.

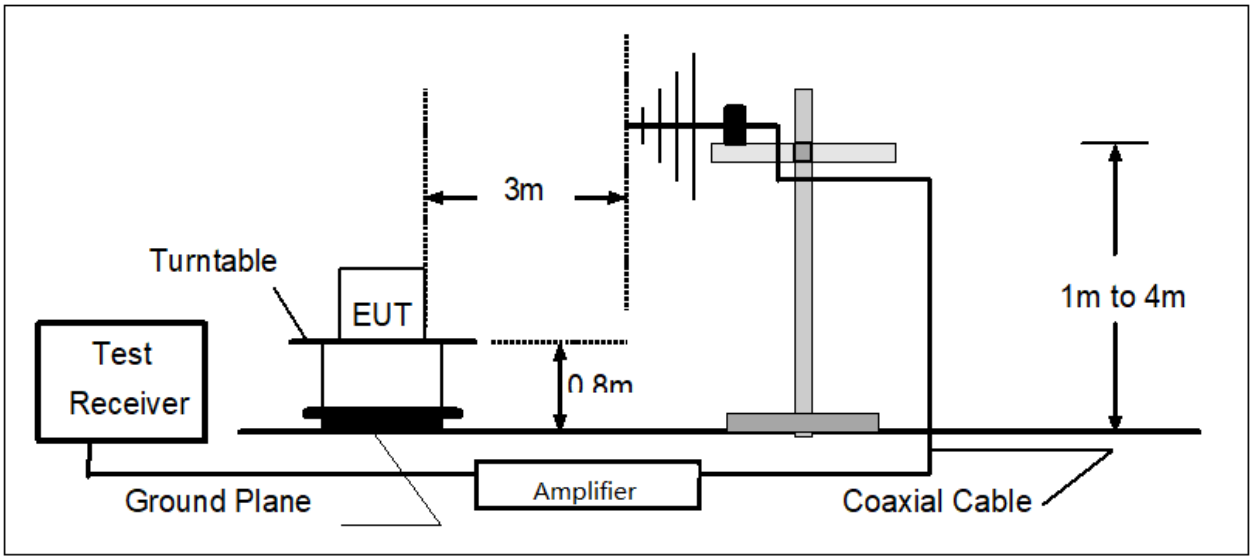
7. Radiated Emissions

7.1 Block Diagram Of Test Setup

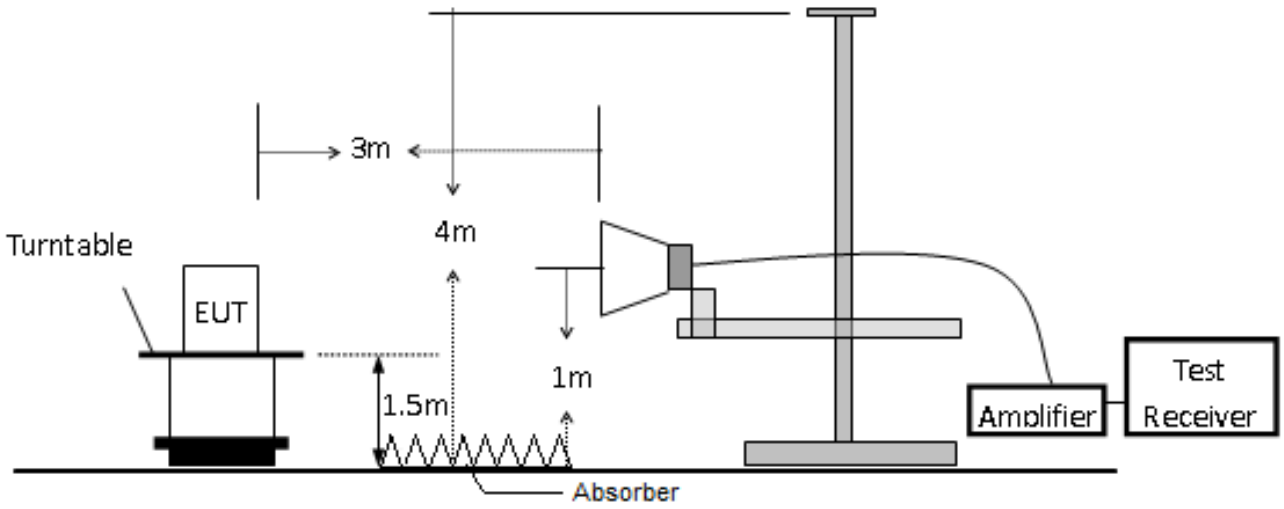
（A）Radiated Emission Test-Up Frequency Below 30MHz



（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).

Frequency Range Of Radiated Measurement

(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

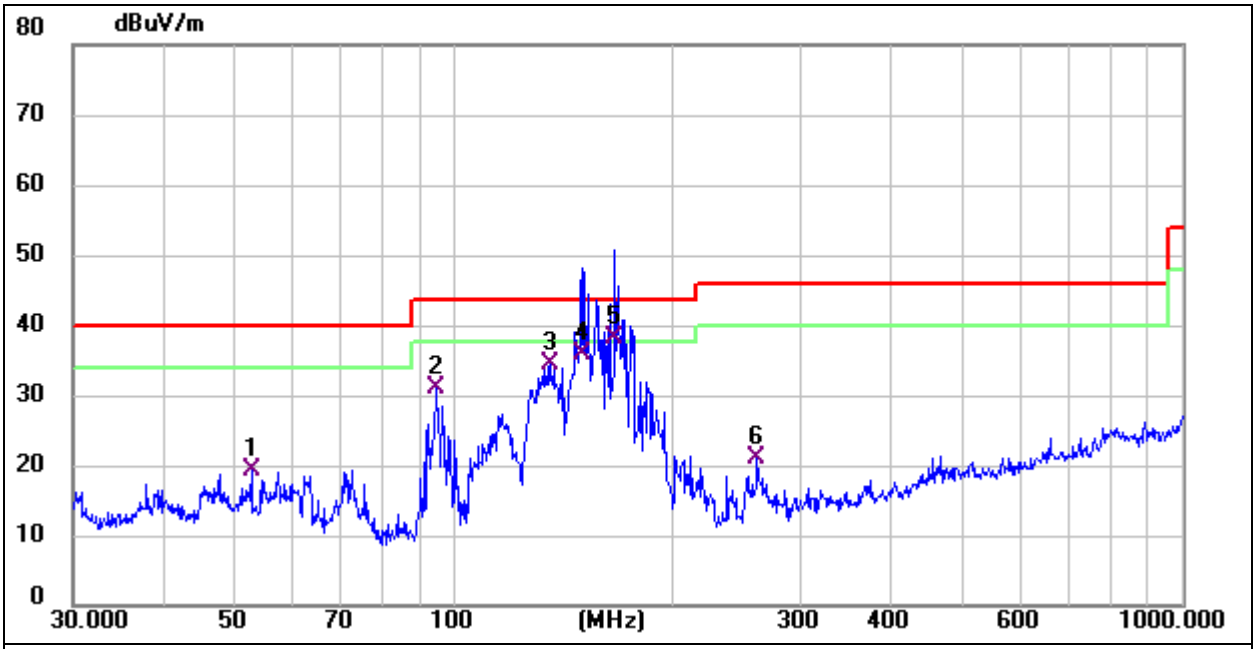
Temperature:	26 ℃	Relative Humidity:	54%RH
Pressure:	101KPa	Test Voltage :	AC120V/60Hz
Test Mode:	Mode 10	Polarization:	---

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:	27.2 ℃	Relative Humidity:	56%RH
Pressure:	101KPa	Phase :	Horizontal
Test Voltage :	AC 120V/60Hz	Test Mode:	Mode 10



Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
Margin = (Reading + Factor)–Limit

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	52.7045	30.00	-10.79	19.21	40.00	-20.79	QP
2	94.4615	45.30	-14.31	30.99	43.50	-12.51	QP
3	135.0792	44.94	-10.61	34.33	43.50	-9.17	QP
4	149.9582	46.14	-10.14	36.00	43.50	-7.50	QP
5 *	166.0680	48.09	-9.89	38.20	43.50	-5.30	QP
6	260.9667	33.13	-12.13	21.00	46.00	-25.00	QP

* Indicates the worst data.

Temperature:	27.2 ℃	Relative Humidity:	56%RH
Pressure:	101KPa	Phase :	Vertical
Test Voltage :	AC 120V/60Hz	Test Mode:	Mode 10

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
Margin = (Reading + Factor)–Limit

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	30.3385	39.26	-11.55	27.71	40.00	-12.29	QP
2	45.7589	41.36	-11.06	30.30	40.00	-9.70	QP
3 *	72.7190	44.99	-13.79	31.20	40.00	-8.80	QP
4	96.4700	47.03	-14.53	32.50	43.50	-11.00	QP
5	154.8747	43.17	-9.77	33.40	43.50	-10.10	QP
6	212.6420	43.27	-13.13	30.14	43.50	-13.36	QP

* Indicates the worst data.

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	60.60	-9.32	51.28	74.00	-22.72	PK
V	4824.00	52.27	-9.32	42.95	54.00	-11.05	AV
V	7236.00	51.54	-3.49	48.05	74.00	-25.95	PK
V	7236.00	42.40	-3.49	38.91	54.00	-15.09	AV
H	4824.00	57.01	-9.32	47.69	74.00	-26.31	PK
H	4824.00	46.07	-9.32	36.75	54.00	-17.25	AV
H	7236.00	49.25	-3.49	45.76	74.00	-28.24	PK
H	7236.00	40.45	-3.49	36.96	54.00	-17.04	AV
Middle channel:2437MHz							
V	4874.00	57.19	-8.86	48.33	74.00	-25.67	PK
V	4874.00	48.38	-8.86	39.52	54.00	-14.48	AV
V	7311.00	48.52	-3.27	45.25	74.00	-28.75	PK
V	7311.00	39.78	-3.27	36.51	54.00	-17.49	AV
H	4874.00	55.03	-8.86	46.17	74.00	-27.83	PK
H	4874.00	45.01	-8.86	36.15	54.00	-17.85	AV
H	7311.00	46.86	-3.27	43.59	74.00	-30.41	PK
H	7311.00	38.86	-3.27	35.59	54.00	-18.41	AV
High channel:2462MHz							
V	4924.00	59.04	-8.72	50.32	74.00	-23.68	PK
V	4924.00	49.98	-8.72	41.26	54.00	-12.74	AV
V	7386.00	51.50	-3.74	47.76	74.00	-26.24	PK
V	7386.00	40.55	-3.74	36.81	54.00	-17.19	AV
H	4924.00	57.01	-8.72	48.29	74.00	-25.71	PK
H	4924.00	47.14	-8.72	38.42	54.00	-15.58	AV
H	7386.00	49.80	-3.74	46.06	74.00	-27.94	PK
H	7386.00	42.16	-3.74	38.42	54.00	-15.58	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.

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	60.18	-9.32	50.86	74.00	-23.14	PK
V	4824.00	51.34	-9.32	42.02	54.00	-11.98	AV
V	7236.00	49.67	-3.49	46.18	74.00	-27.82	PK
V	7236.00	39.08	-3.49	35.59	54.00	-18.41	AV
H	4824.00	57.22	-9.32	47.90	74.00	-26.10	PK
H	4824.00	47.08	-9.32	37.76	54.00	-16.24	AV
H	7236.00	47.80	-3.49	44.31	74.00	-29.69	PK
H	7236.00	40.55	-3.49	37.06	54.00	-16.94	AV
Middle channel:2437MHz							
V	4874.00	56.74	-8.86	47.88	74.00	-26.12	PK
V	4874.00	49.83	-8.86	40.97	54.00	-13.03	AV
V	7311.00	49.25	-3.27	45.98	74.00	-28.02	PK
V	7311.00	40.38	-3.27	37.11	54.00	-16.89	AV
H	4874.00	53.44	-8.86	44.58	74.00	-29.42	PK
H	4874.00	43.32	-8.86	34.46	54.00	-19.54	AV
H	7311.00	46.56	-3.27	43.29	74.00	-30.71	PK
H	7311.00	37.69	-3.27	34.42	54.00	-19.58	AV
High channel:2462MHz							
V	4924.00	59.18	-8.72	50.46	74.00	-23.54	PK
V	4924.00	51.04	-8.72	42.32	54.00	-11.68	AV
V	7386.00	53.18	-3.74	49.44	74.00	-24.56	PK
V	7386.00	43.38	-3.74	39.64	54.00	-14.36	AV
H	4924.00	57.51	-8.72	48.79	74.00	-25.21	PK
H	4924.00	47.28	-8.72	38.56	54.00	-15.44	AV
H	7386.00	51.45	-3.74	47.71	74.00	-26.29	PK
H	7386.00	43.93	-3.74	40.19	54.00	-13.81	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.

802.11n20

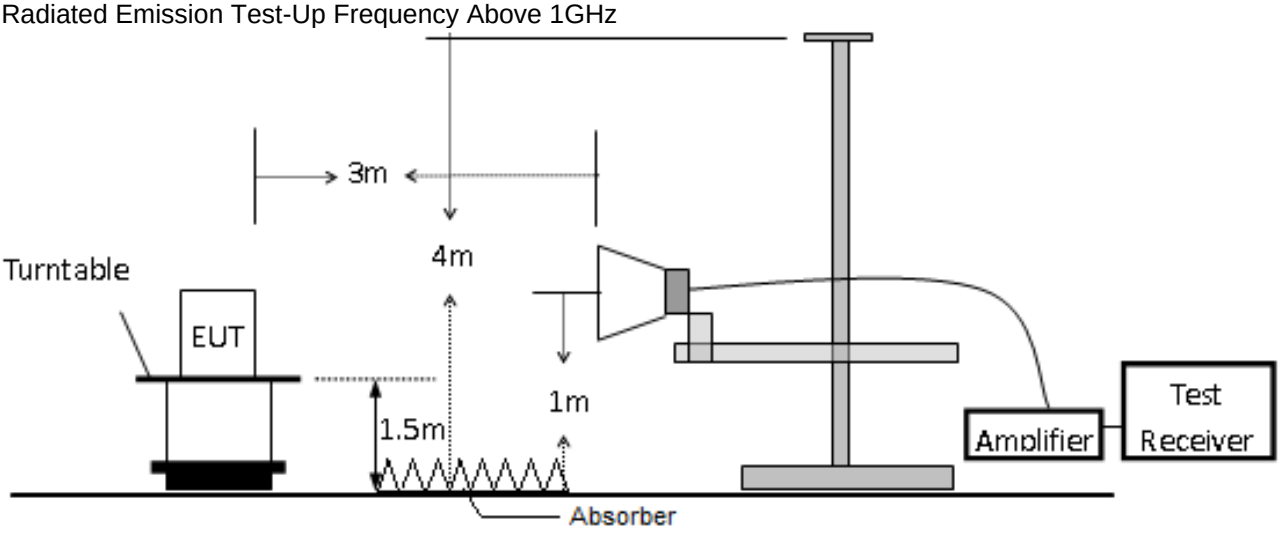
Polar (H/V)	Frequency (MHz)	Reading Level (dBuV/m)	Correct Factor (dB)	Measure-ment (dBuV/m)	Limits (dBuV/m)	Over (dB)	Detector Type
Low channel:2412MHz							
V	4824.00	60.02	-9.32	50.70	74.00	-23.30	PK
V	4824.00	53.62	-9.32	44.30	54.00	-9.70	AV
V	7236.00	50.40	-3.49	46.91	74.00	-27.09	PK
V	7236.00	40.51	-3.49	37.02	54.00	-16.98	AV
H	4824.00	55.15	-9.32	45.83	74.00	-28.17	PK
H	4824.00	46.00	-9.32	36.68	54.00	-17.32	AV
H	7236.00	47.50	-3.49	44.01	74.00	-29.99	PK
H	7236.00	39.14	-3.49	35.65	54.00	-18.35	AV
Middle channel:2437MHz							
V	4874.00	58.67	-8.86	49.81	74.00	-24.19	PK
V	4874.00	51.04	-8.86	42.18	54.00	-11.82	AV
V	7311.00	50.92	-3.27	47.65	74.00	-26.35	PK
V	7311.00	42.84	-3.27	39.57	54.00	-14.43	AV
H	4874.00	56.28	-8.86	47.42	74.00	-26.58	PK
H	4874.00	46.54	-8.86	37.68	54.00	-16.32	AV
H	7311.00	49.48	-3.27	46.21	74.00	-27.79	PK
H	7311.00	41.50	-3.27	38.23	54.00	-15.77	AV
High channel:2462MHz							
V	4924.00	60.64	-8.72	51.92	74.00	-22.08	PK
V	4924.00	50.76	-8.72	42.04	54.00	-11.96	AV
V	7386.00	52.19	-3.74	48.45	74.00	-25.55	PK
V	7386.00	42.76	-3.74	39.02	54.00	-14.98	AV
H	4924.00	57.95	-8.72	49.23	74.00	-24.77	PK
H	4924.00	48.56	-8.72	39.84	54.00	-14.16	AV
H	7386.00	49.83	-3.74	46.09	74.00	-27.91	PK
H	7386.00	41.91	-3.74	38.17	54.00	-15.83	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.

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)	Over (dB)	Detector Type
802.11b	Low Channel 2412MHz							
	H	2390.00	71.96	-17.27	54.69	74.00	-19.31	PK
	H	2390.00	63.28	-17.27	46.01	54.00	-7.99	AV
	H	2400.00	75.91	-17.23	58.68	74.00	-15.32	PK
	H	2400.00	66.19	-17.23	48.96	54.00	-5.04	AV
	V	2390.00	70.45	-17.27	53.18	74.00	-20.82	PK
	V	2390.00	60.67	-17.27	43.40	54.00	-10.60	AV
	V	2400.00	72.58	-17.23	55.35	74.00	-18.65	PK
	V	2400.00	63.53	-17.23	46.30	54.00	-7.70	AV
	High Channel 2462MHz							
	H	2483.50	72.40	-16.91	55.49	74.00	-18.51	PK
	H	2483.50	61.42	-16.91	44.51	54.00	-9.49	AV
	H	2500.00	74.13	-16.71	57.42	74.00	-16.58	PK
	H	2500.00	63.34	-16.71	46.63	54.00	-7.37	AV
	V	2483.50	72.27	-16.91	55.36	74.00	-18.64	PK
	V	2483.50	62.45	-16.91	45.54	54.00	-8.46	AV
	V	2500.00	73.99	-16.71	57.28	74.00	-16.72	PK
	V	2500.00	63.72	-16.71	47.01	54.00	-6.99	AV
802.11g	Low Channel 2412MHz							
	H	2390.00	72.53	-17.27	55.26	74.00	-18.74	PK
	H	2390.00	62.33	-17.27	45.06	54.00	-8.94	AV
	H	2400.00	74.81	-17.23	57.58	74.00	-16.42	PK
	H	2400.00	63.88	-17.23	46.65	54.00	-7.35	AV
	V	2390.00	70.83	-17.27	53.56	74.00	-20.44	PK
	V	2390.00	61.48	-17.27	44.21	54.00	-9.79	AV
	V	2400.00	73.60	-17.23	56.37	74.00	-17.63	PK
	V	2400.00	65.34	-17.23	48.11	54.00	-5.89	AV
	High Channel 2462MHz							
	H	2483.50	72.11	-16.91	55.20	74.00	-18.80	PK
	H	2483.50	63.42	-16.91	46.51	54.00	-7.49	AV
	H	2500.00	75.05	-16.71	58.34	74.00	-15.66	PK
	H	2500.00	65.91	-16.71	49.20	54.00	-4.80	AV
	V	2483.50	71.21	-16.91	54.30	74.00	-19.70	PK
	V	2483.50	63.14	-16.91	46.23	54.00	-7.77	AV
	V	2500.00	73.03	-16.71	56.32	74.00	-17.68	PK
	V	2500.00	62.99	-16.71	46.28	54.00	-7.72	AV

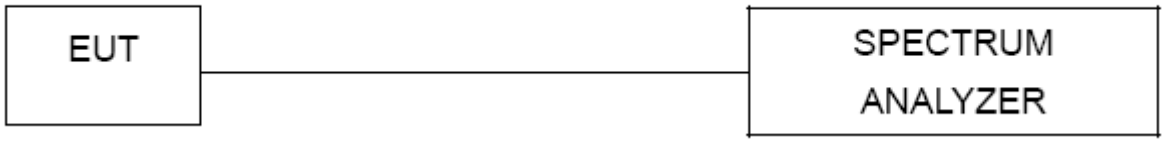
Remark:
1. Emission Level = Meter Reading + Factor, Factor = Antenna Factor + Cable Loss – Pre-amplifier. Over= Emission Level – Limit
2. If the PK measured levels comply with average limit, then the average level were deemed to comply with average limit.
3 In restricted bands of operation, The spurious 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.

Test mode	Polar (H/V)	Frequency (MHz)	Reading Level (dBuV/m)	Correct Factor (dB)	Measure-ment (dBuV/m)	Limits (dBuV/m)	Over (dB)	Detector Type
802.11n20	Low Channel 2412MHz							
	H	2390.00	70.46	-17.27	53.19	74.00	-20.81	PK
	H	2390.00	61.32	-17.27	44.05	54.00	-9.95	AV
	H	2400.00	74.20	-17.23	56.97	74.00	-17.03	PK
	H	2400.00	65.10	-17.23	47.87	54.00	-6.13	AV
	V	2390.00	70.91	-17.27	53.64	74.00	-20.36	PK
	V	2390.00	60.76	-17.27	43.49	54.00	-10.51	AV
	V	2400.00	73.27	-17.23	56.04	74.00	-17.96	PK
	V	2400.00	65.06	-17.23	47.83	54.00	-6.17	AV
	High Channel 2462MHz							
	H	2483.50	72.16	-16.91	55.25	74.00	-18.75	PK
	H	2483.50	63.18	-16.91	46.27	54.00	-7.73	AV
	H	2500.00	73.74	-16.71	57.03	74.00	-16.97	PK
	H	2500.00	64.92	-16.71	48.21	54.00	-5.79	AV
	V	2483.50	71.03	-16.91	54.12	74.00	-19.88	PK
	V	2483.50	61.39	-16.91	44.48	54.00	-9.52	AV
	V	2500.00	73.46	-16.71	56.75	74.00	-17.25	PK
	V	2500.00	65.17	-16.71	48.46	54.00	-5.54	AV

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.

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

Limits Of Radiated Emission Measurement (Above 1000MHz)

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:	24℃	Relative Humidity:	50%RH
Pressure:	101KPa	Test Voltage:	AC 120V/60Hz

Test Mode	Frequency	Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)	Result
TX b Mode	2412 MHz	-8.24	8	PASS
	2437 MHz	-8.03	8	PASS
	2462 MHz	-8.11	8	PASS
TX g Mode	2412 MHz	-15.18	8	PASS
	2437 MHz	-15.49	8	PASS
	2462 MHz	-14.98	8	PASS
TX n Mode(20M)	2412 MHz	-15.27	8	PASS
	2437 MHz	-14.38	8	PASS
	2462 MHz	-14.40	8	PASS

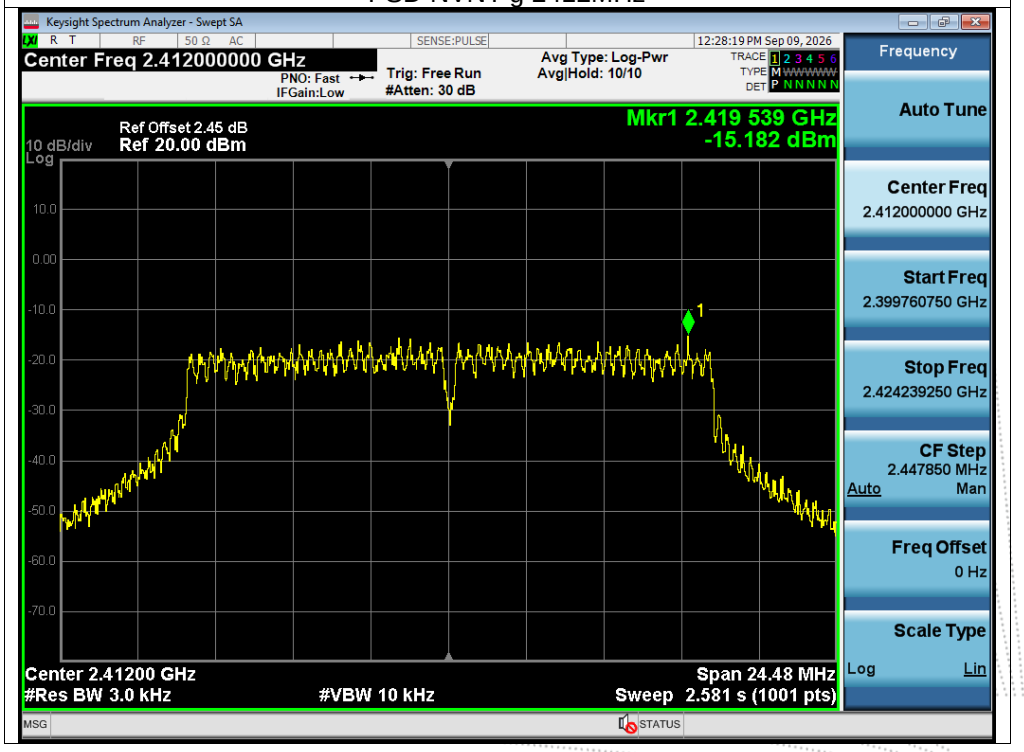
Test Graphs

PSD NVNT b 2412MHz

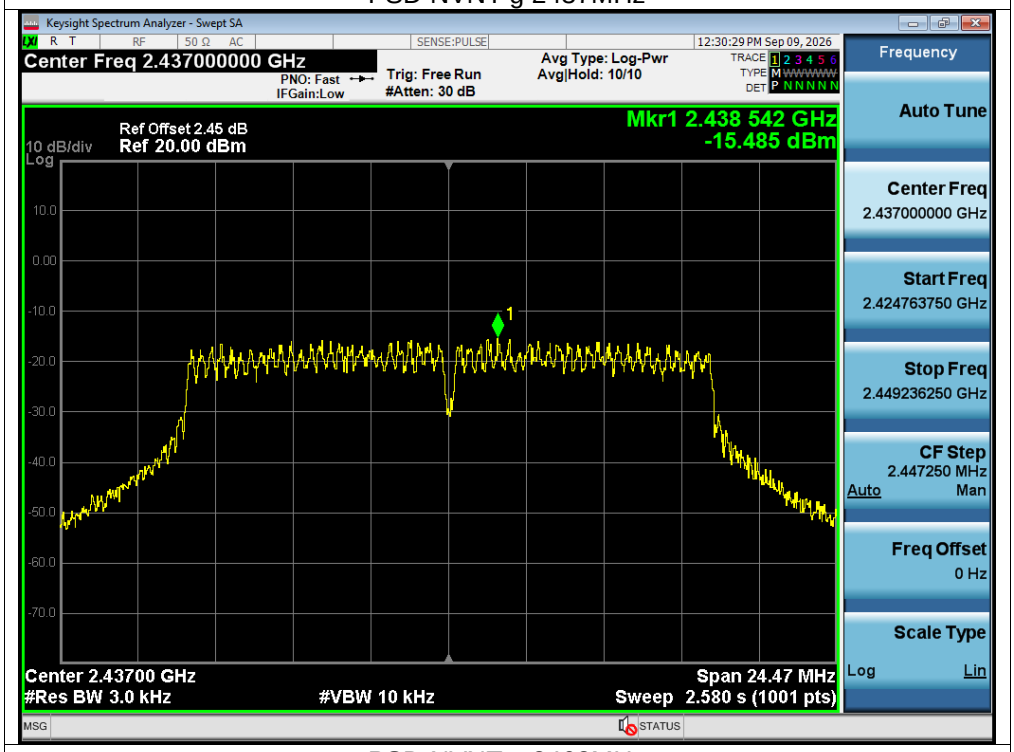
PSD NVNT b 2437MHz

PSD NVNT b 2462MHz

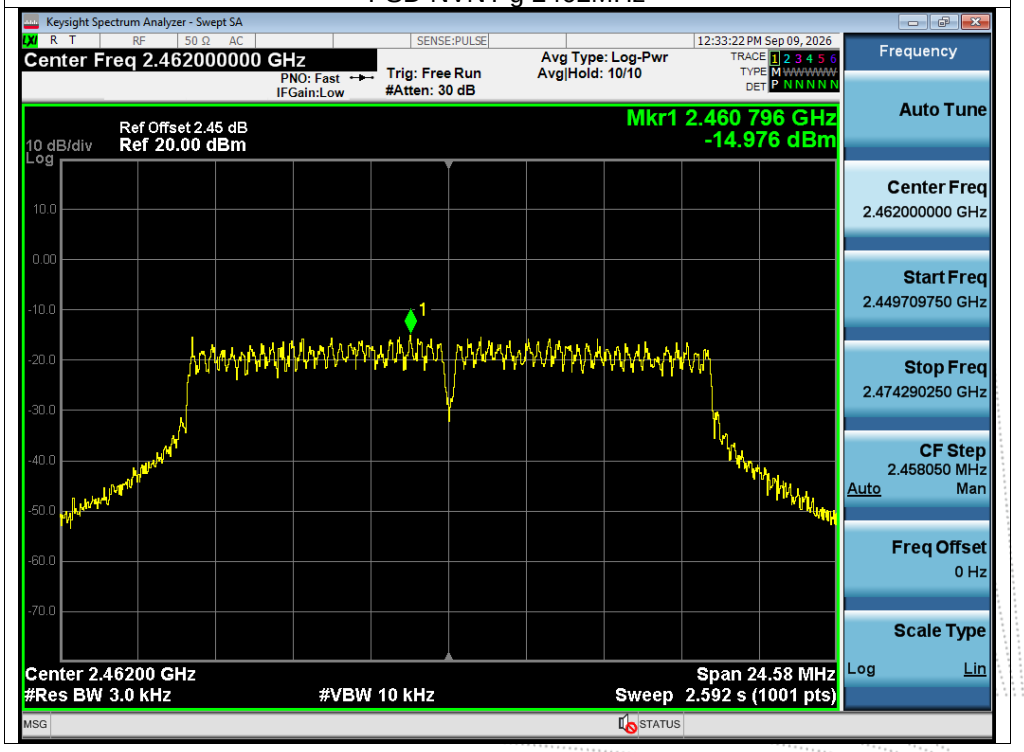
PSD NVNT g 2412MHz



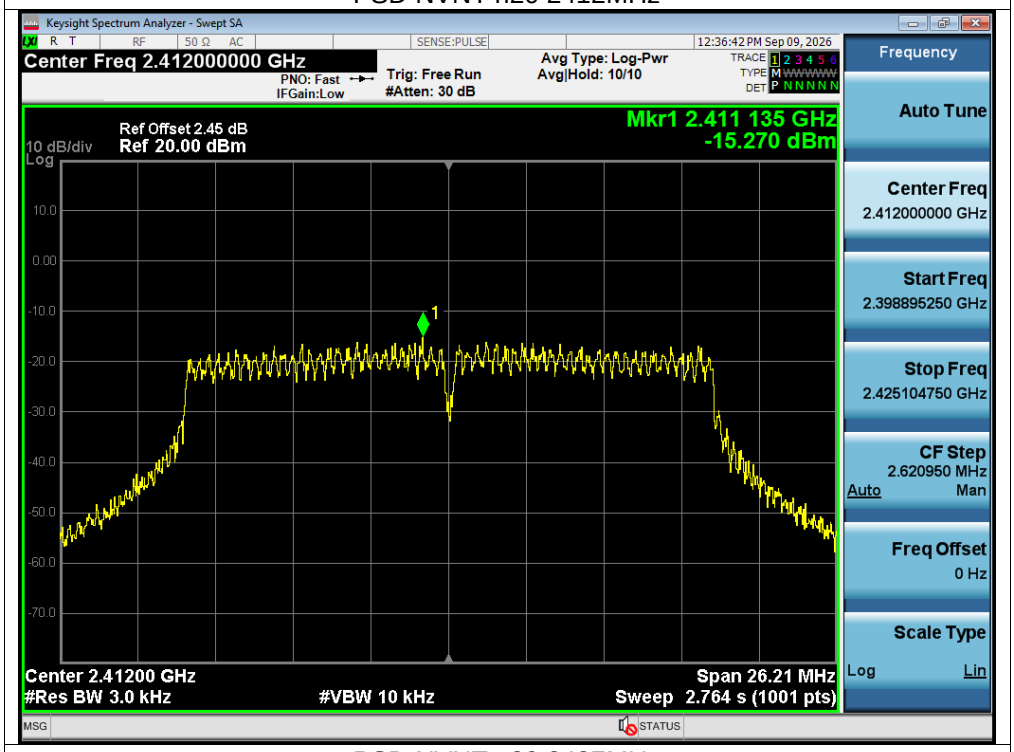
PSD NVNT g 2437MHz



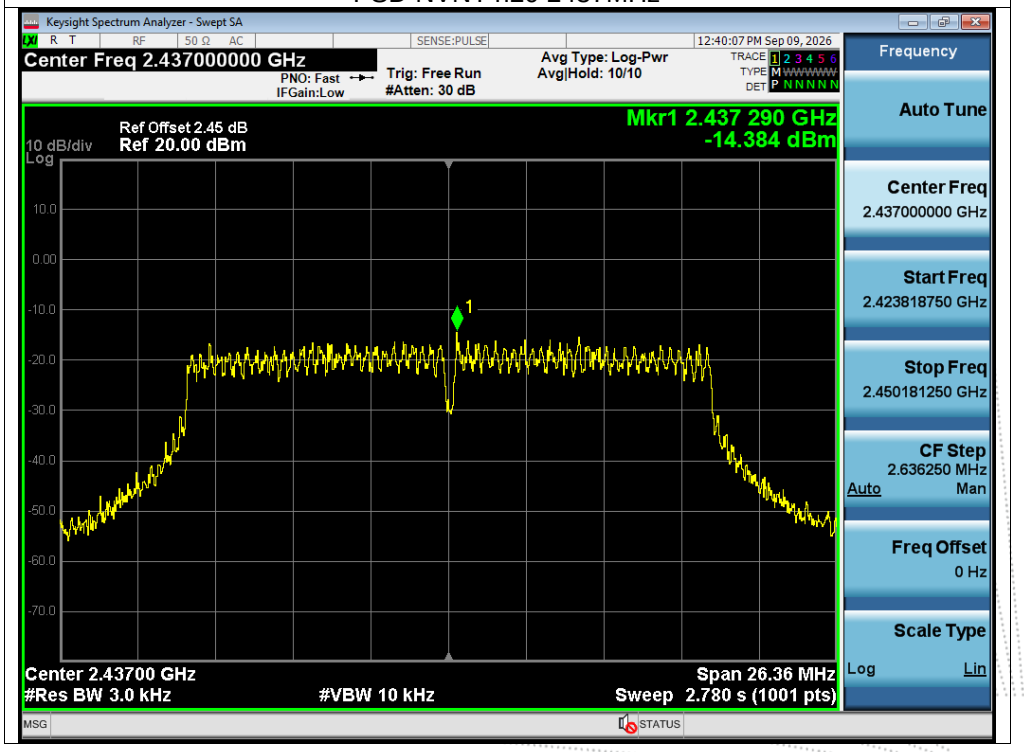
PSD NVNT g 2462MHz



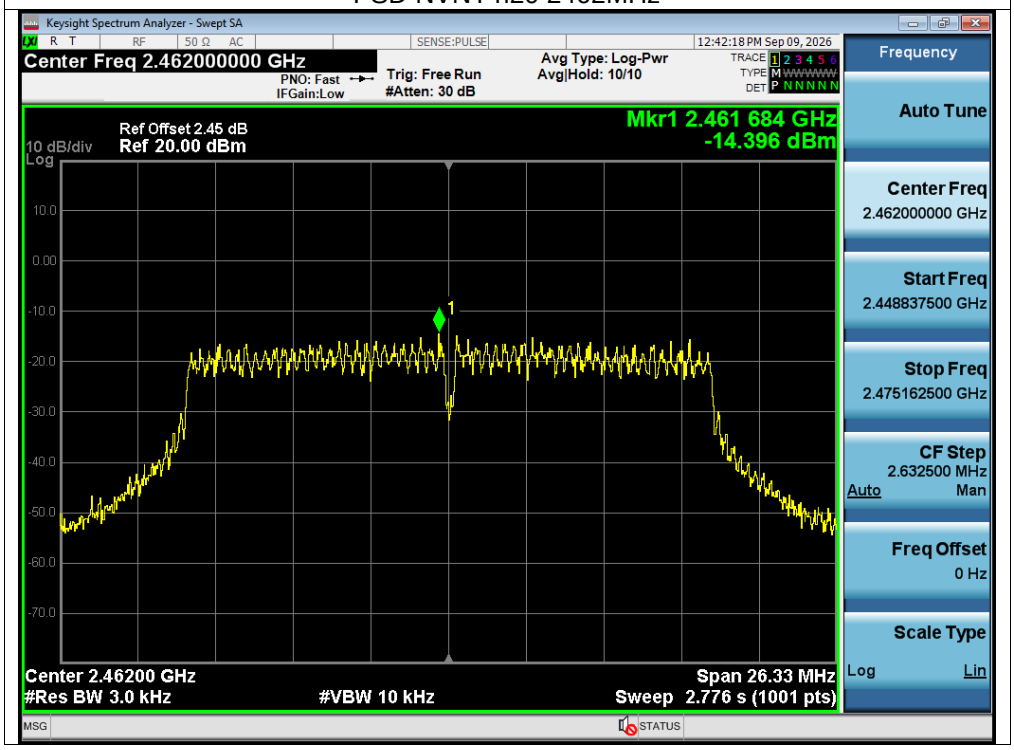
PSD NVNT n20 2412MHz



PSD NVNT n20 2437MHz

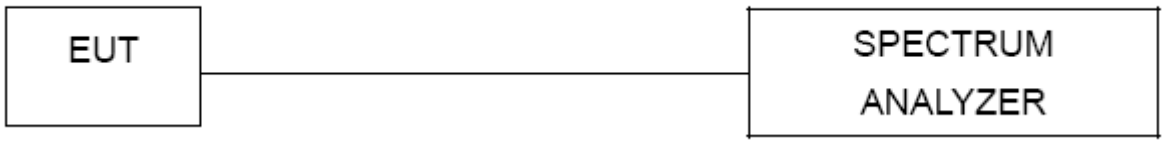


PSD NVNT n20 2462MHz



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

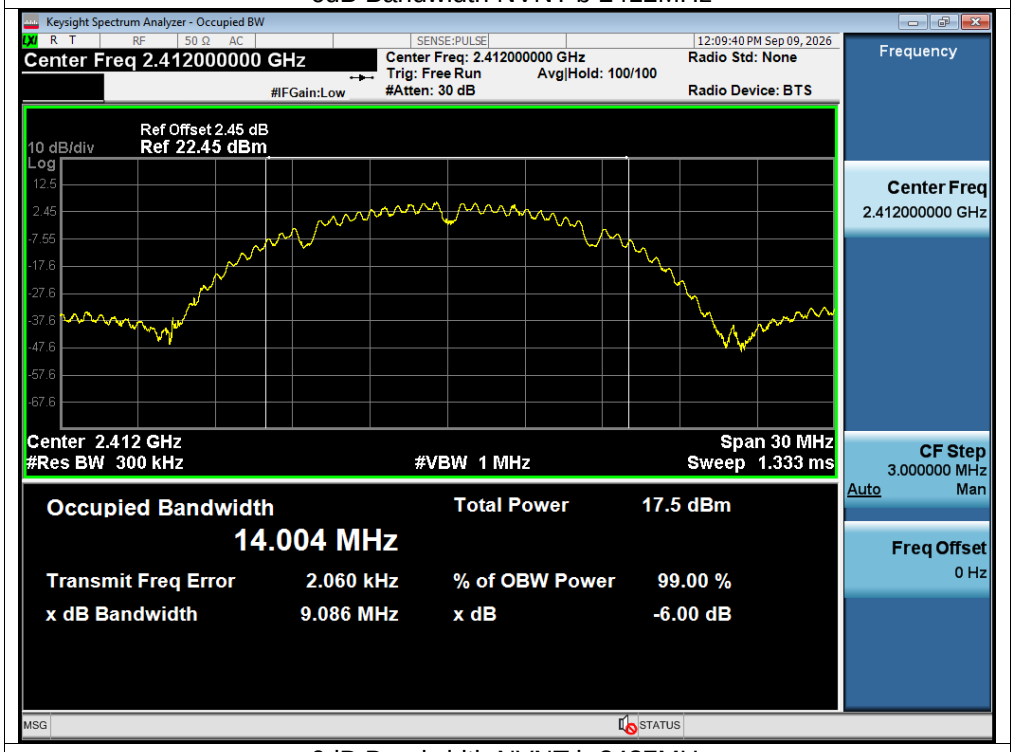
10.5 Test Result

Temperature:	24℃	Relative Humidity:	50%RH
Pressure:	101KPa	Test Voltage:	AC 120V/60Hz

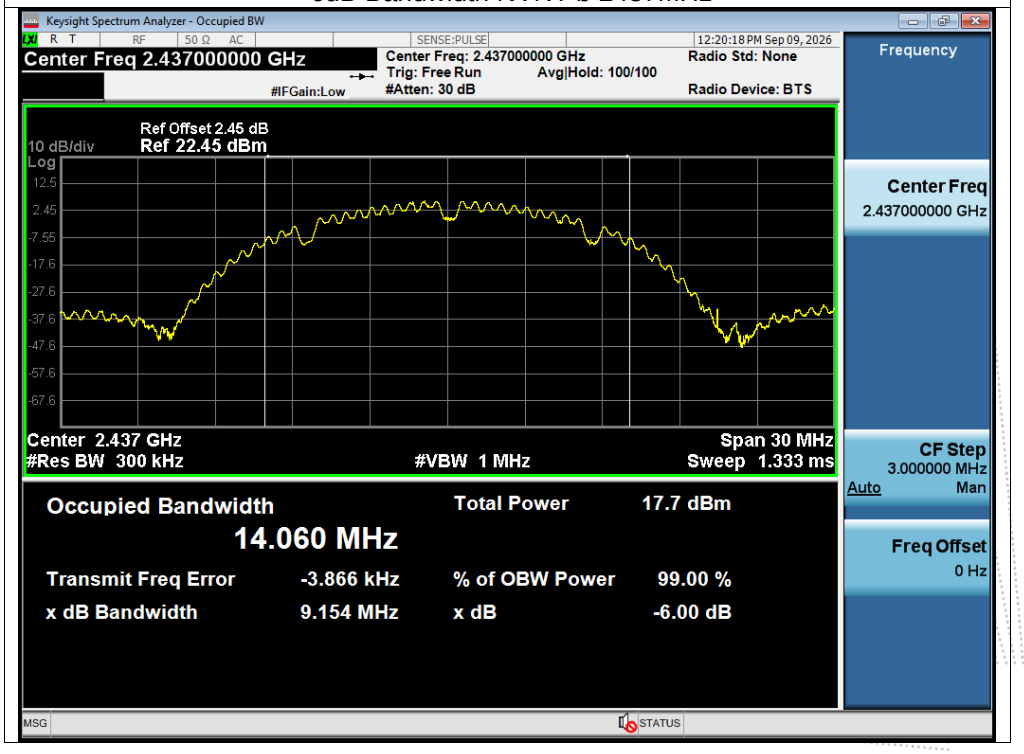
Test Mode	Frequency (MHz)	-6dB bandwidth (MHz)	Limit (kHz)	Result
TX b Mode	2412	9.086	500	Pass
	2437	9.154	500	Pass
	2462	9.168	500	Pass
TX g Mode	2412	16.319	500	Pass
	2437	16.315	500	Pass
	2462	16.387	500	Pass
TX n Mode(20M)	2412	17.473	500	Pass
	2437	17.575	500	Pass
	2462	17.550	500	Pass

Test Graphs

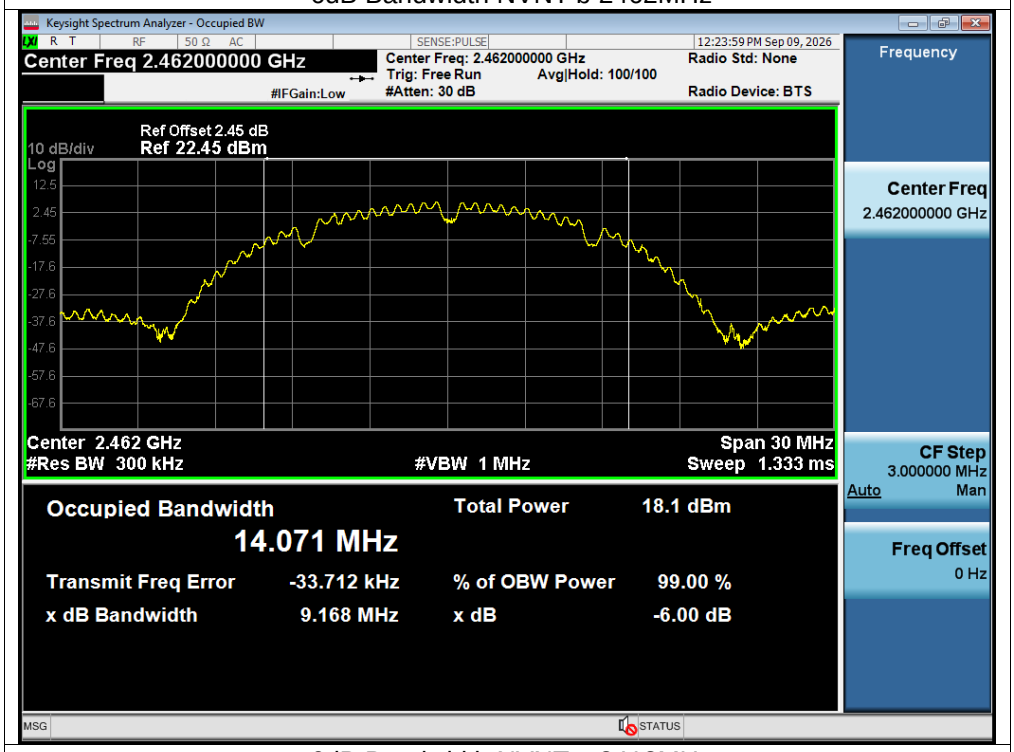
-6dB Bandwidth NVNT b 2412MHz



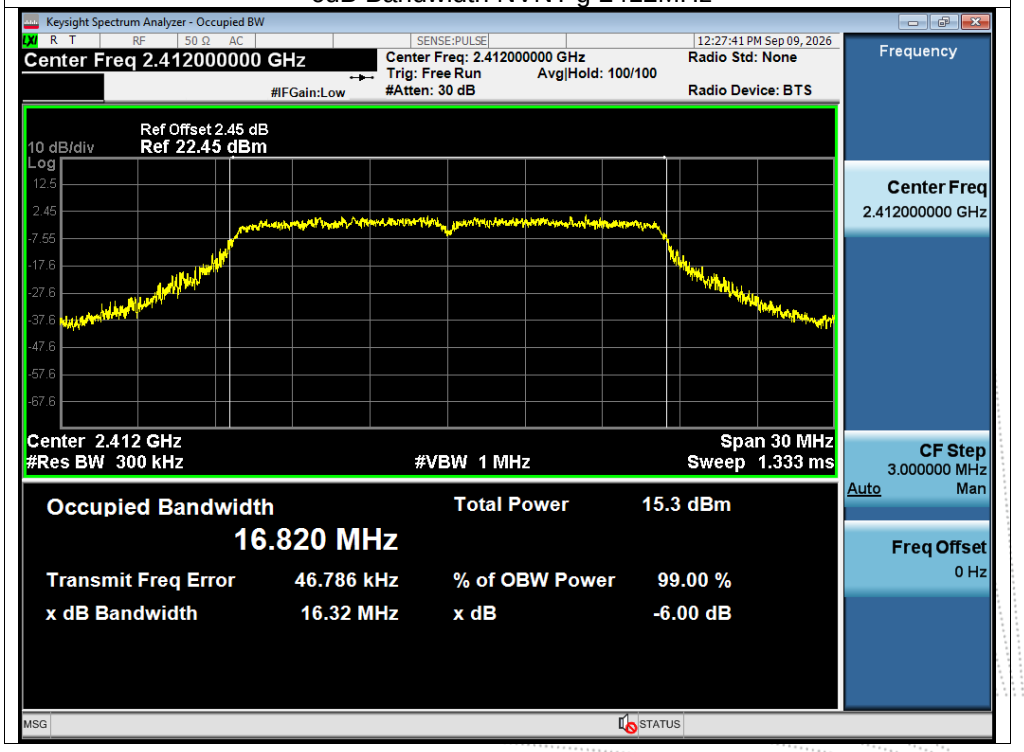
-6dB Bandwidth NVNT b 2437MHz



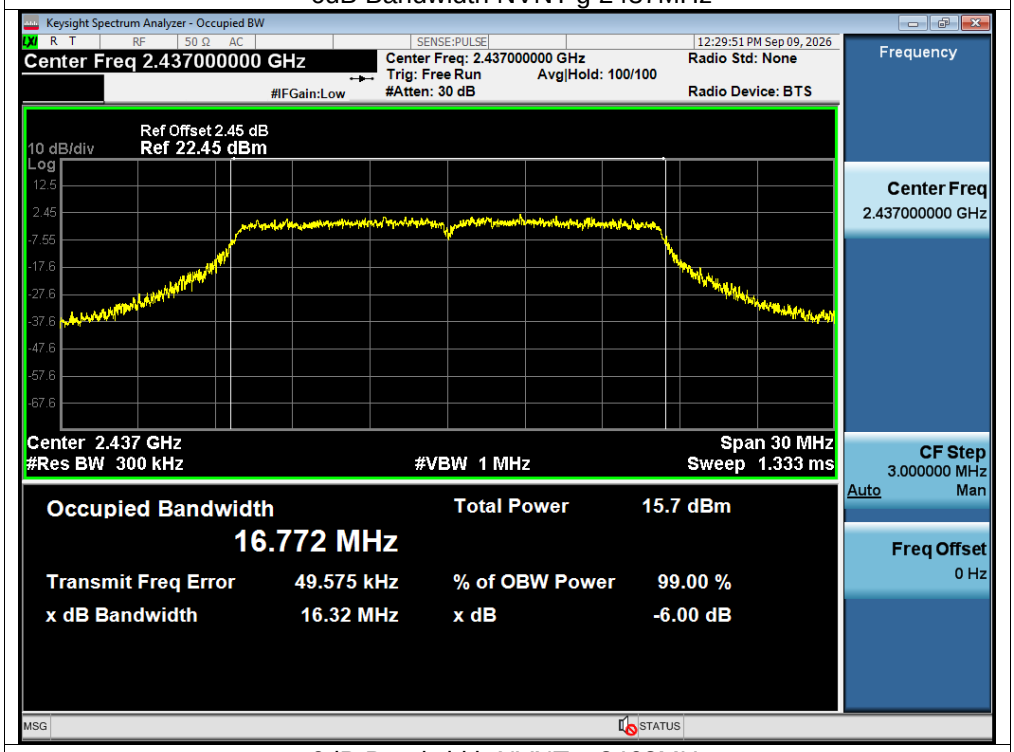
-6dB Bandwidth NVNT b 2462MHz



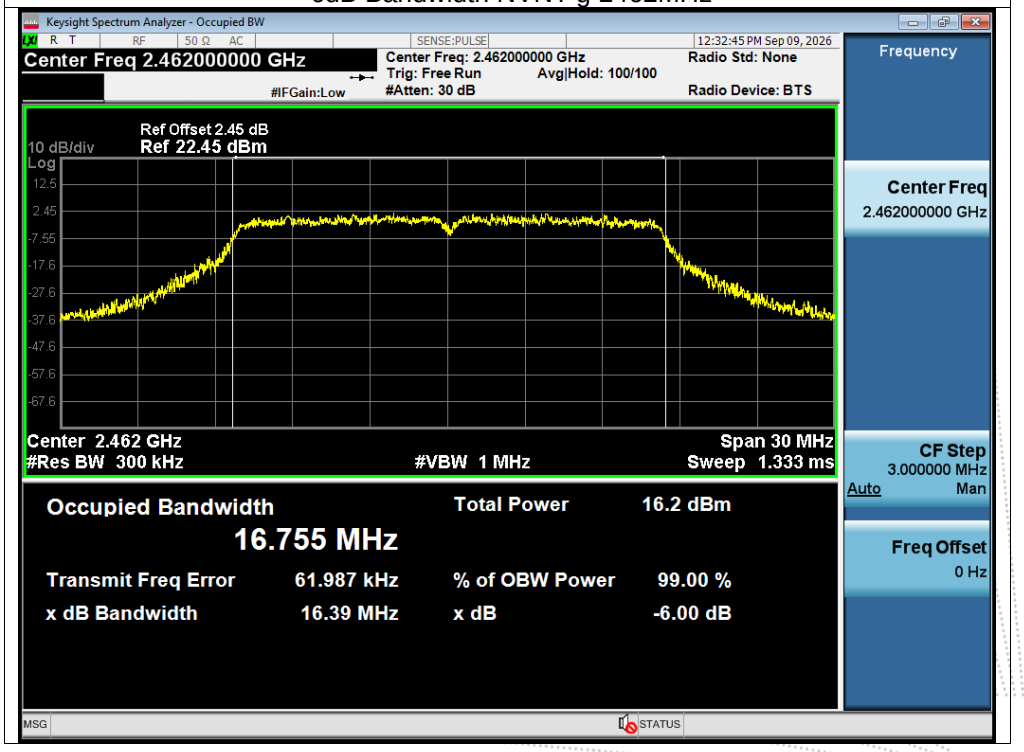
-6dB Bandwidth NVNT g 2412MHz



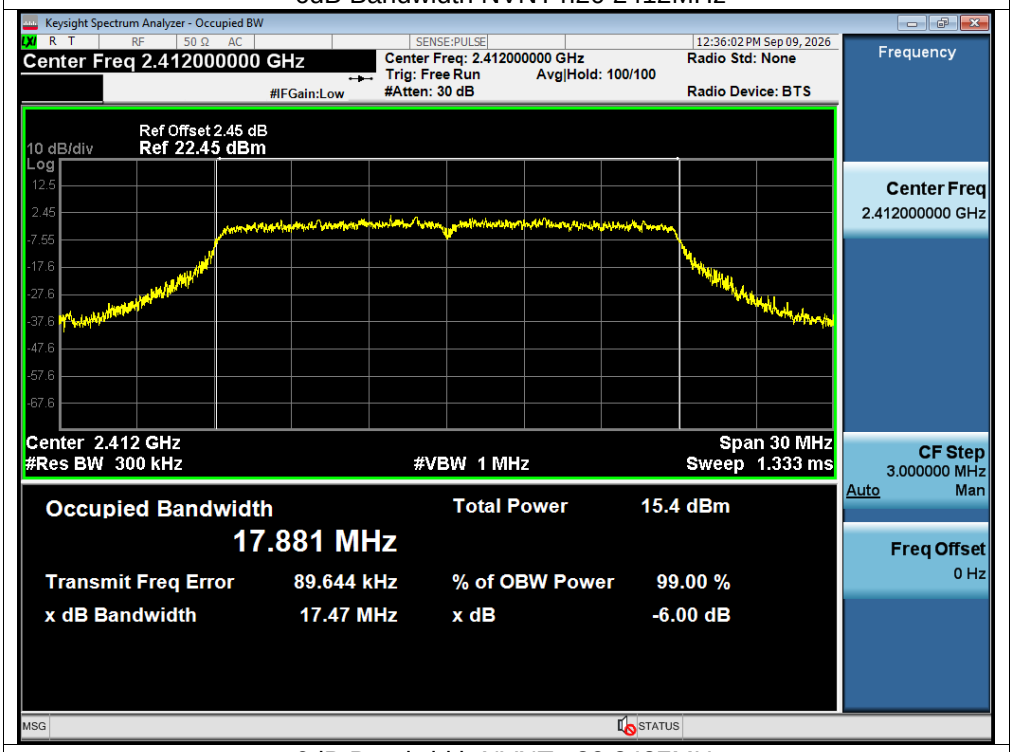
-6dB Bandwidth NVNT g 2437MHz



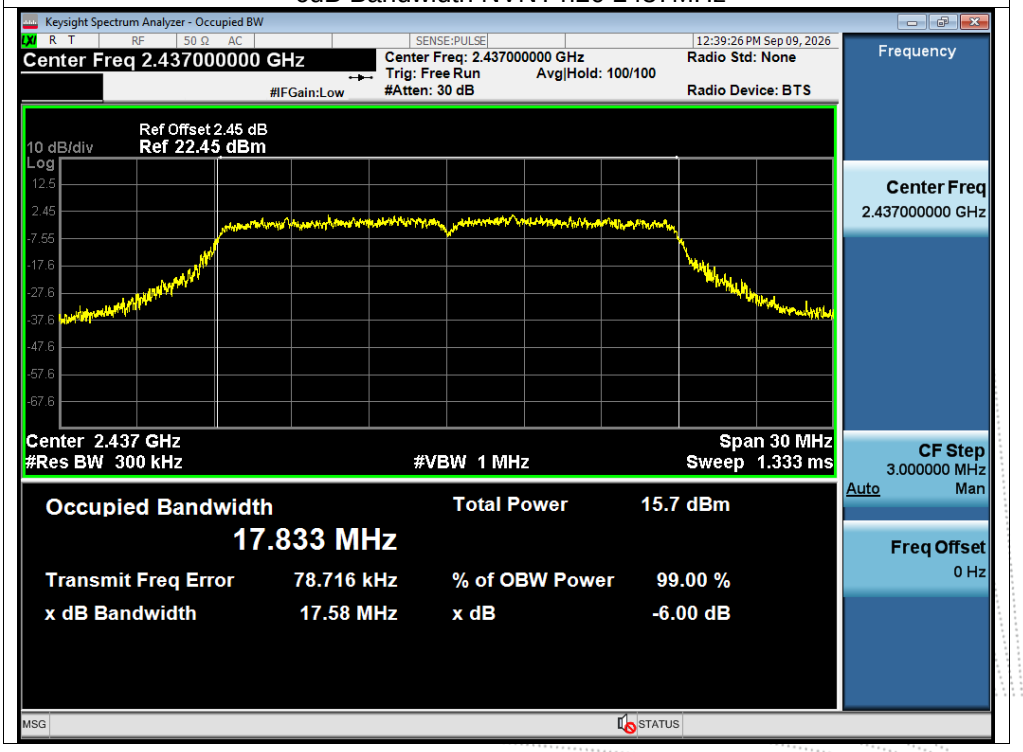
-6dB Bandwidth NVNT g 2462MHz



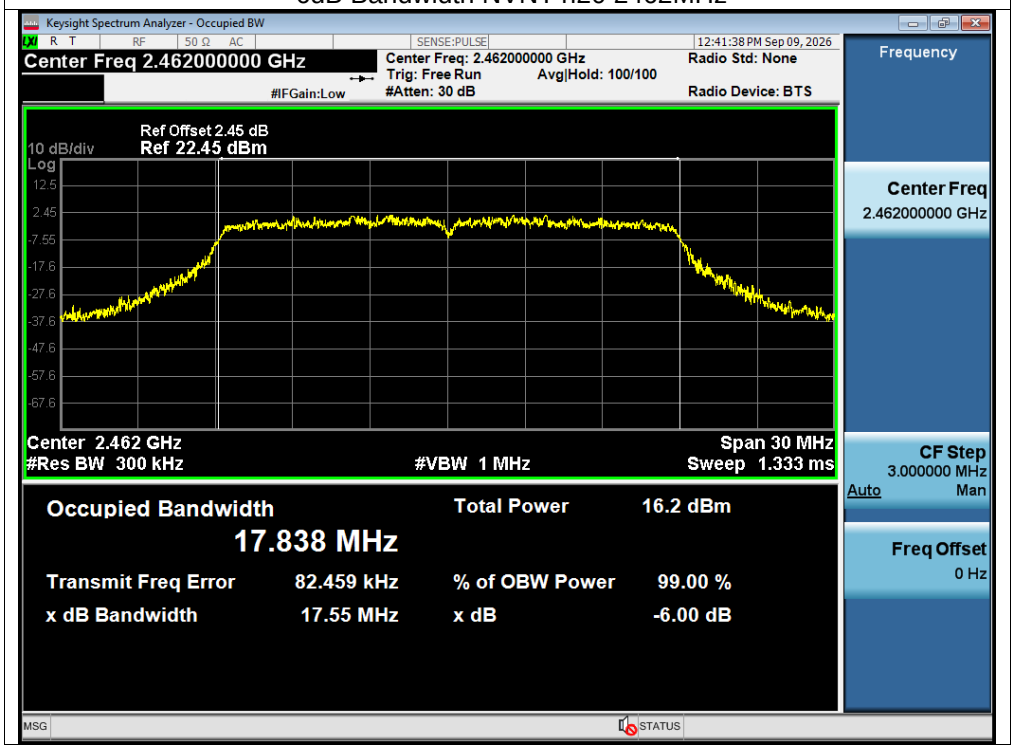
-6dB Bandwidth NVNT n20 2412MHz



-6dB Bandwidth NVNT n20 2437MHz

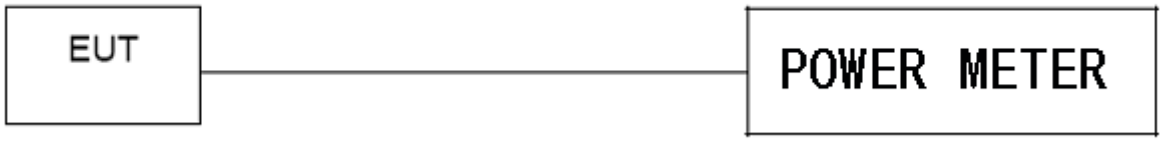


-6dB Bandwidth NVNT n20 2462MHz



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

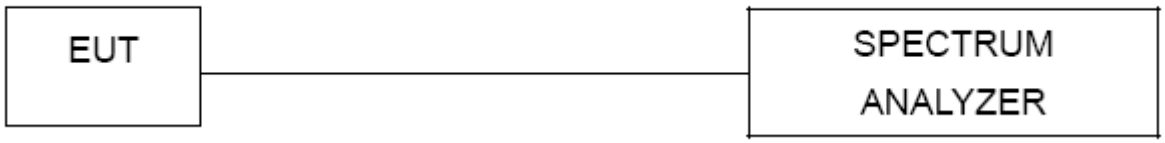
11.5 Test Result

Temperature:	24℃	Relative Humidity:	50%RH
Pressure:	101KPa	Test Voltage:	AC 120V/60Hz

Test Mode	Frequency(MHz)	Maximum Conducted Output Power(PK) (dBm)	Limit (dBm)
802.11b	2412	14.73	30
	2437	15.17	30
	2462	15.54	30
802.11g	2412	14.18	30
	2437	14.59	30
	2462	14.96	30
802.11n20	2412	14.19	30
	2437	14.52	30
	2462	14.94	30

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..

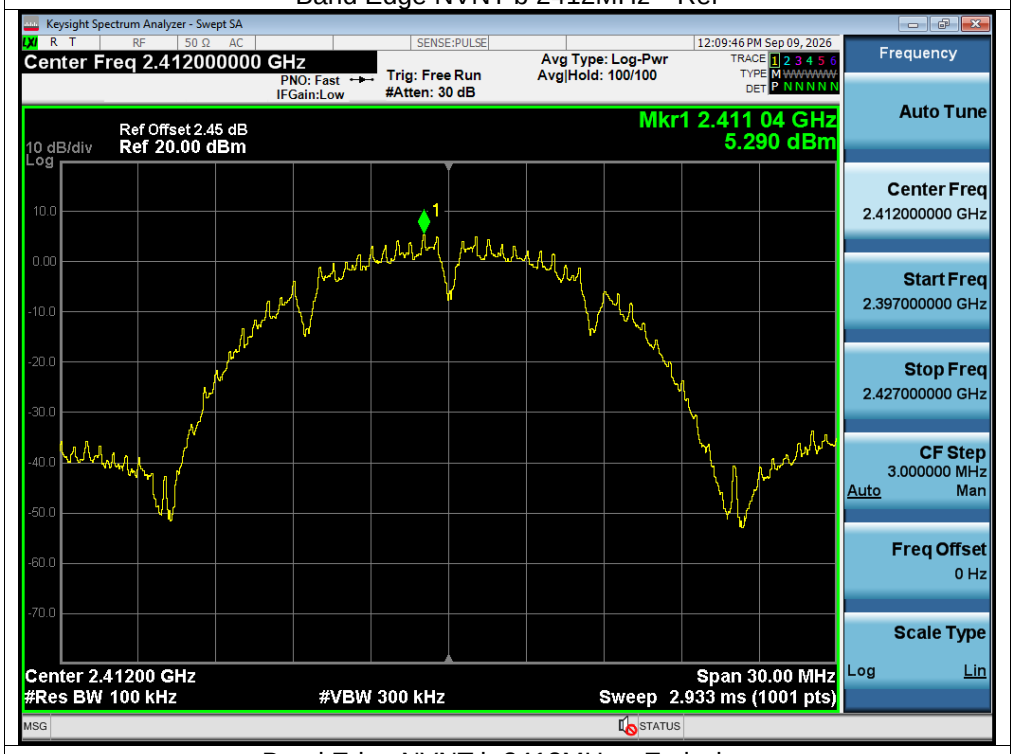
12.4 EUT Operating Conditions

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

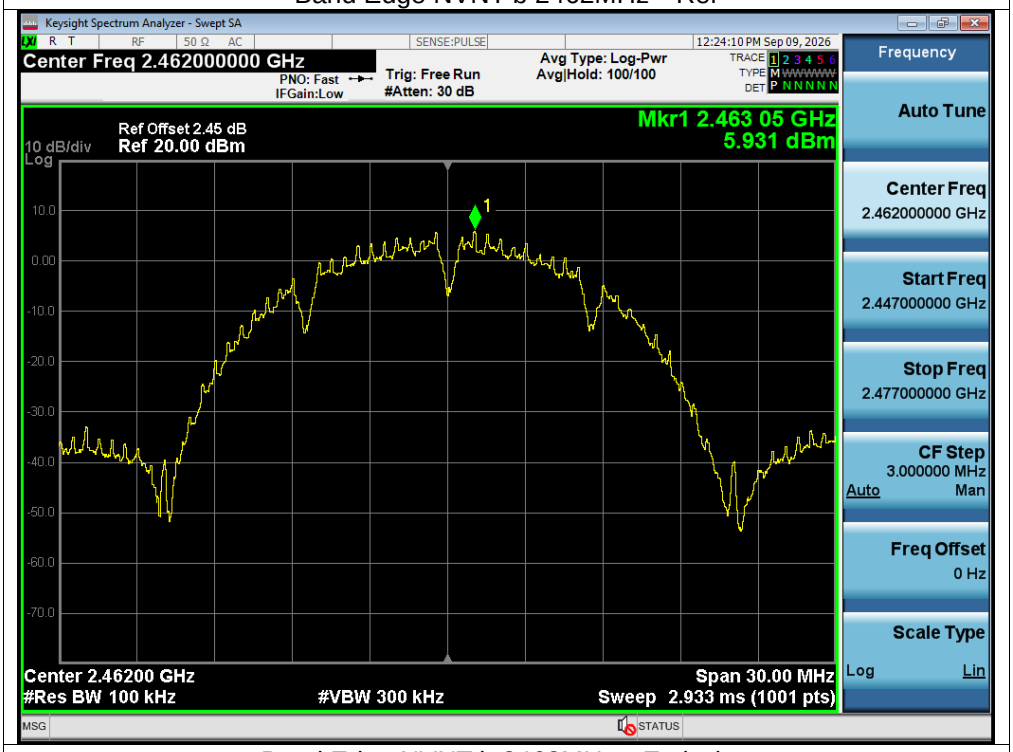
Test Graphs

Band Edge NVNT b 2412MHz Ref



Band Edge NVNT b 2412MHz Emission

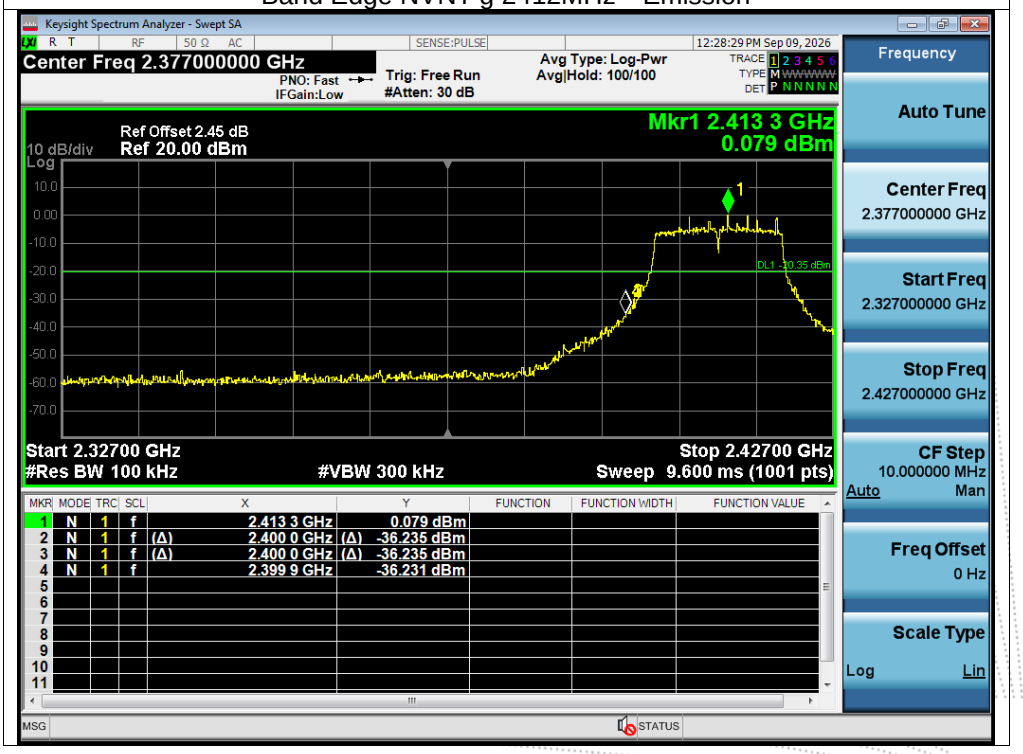
Band Edge NVNT b 2462MHz Ref



Band Edge NVNT b 2462MHz Emission

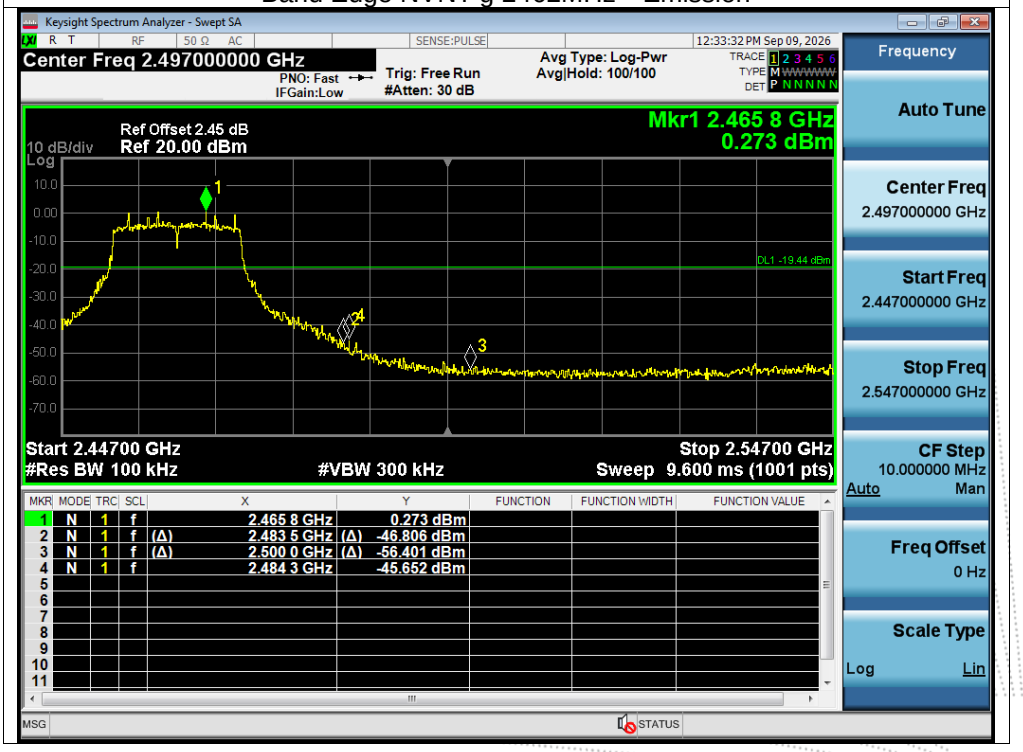
Band Edge NVNT g 2412MHz Ref

Band Edge NVNT g 2412MHz Emission

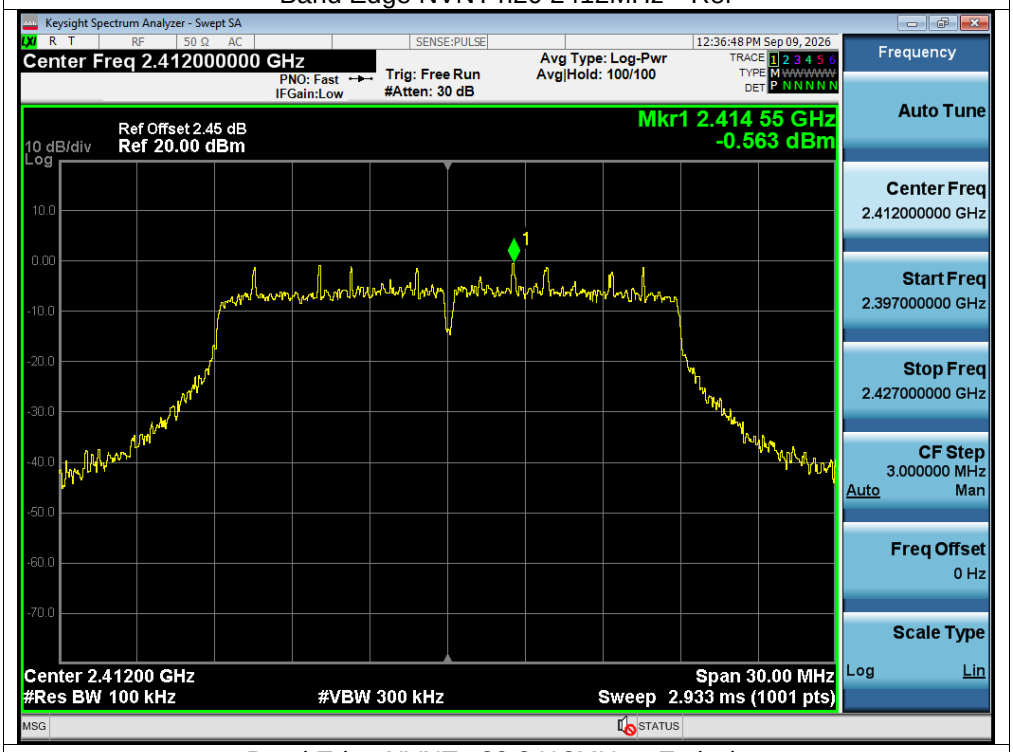


Band Edge NVNT g 2462MHz Ref

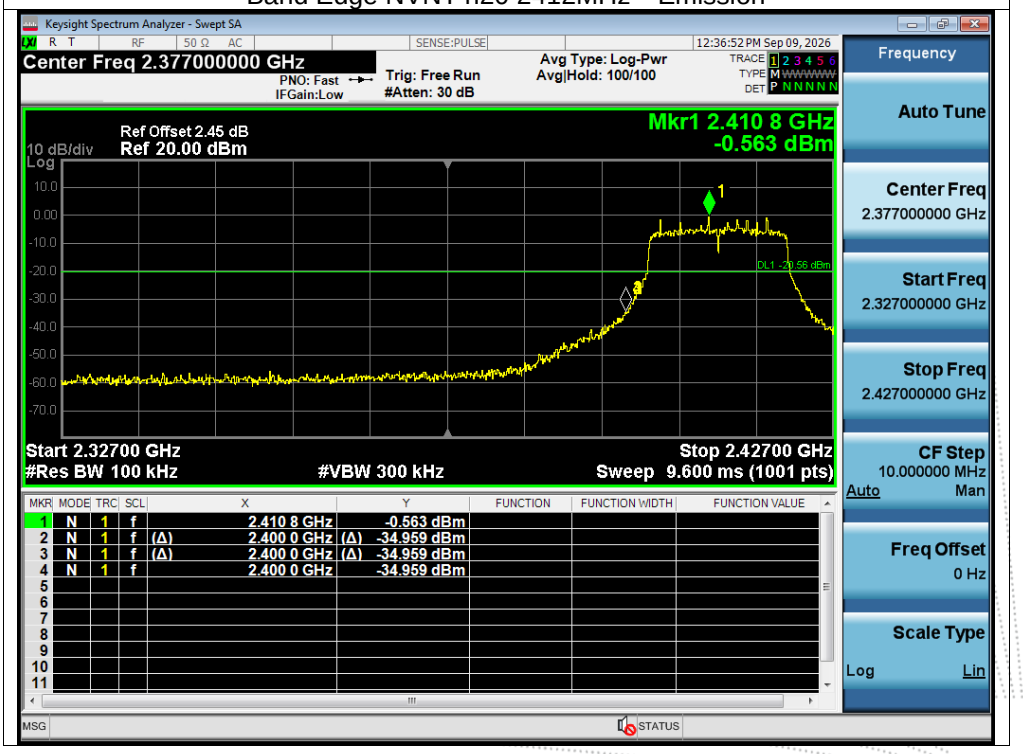
Band Edge NVNT g 2462MHz Emission



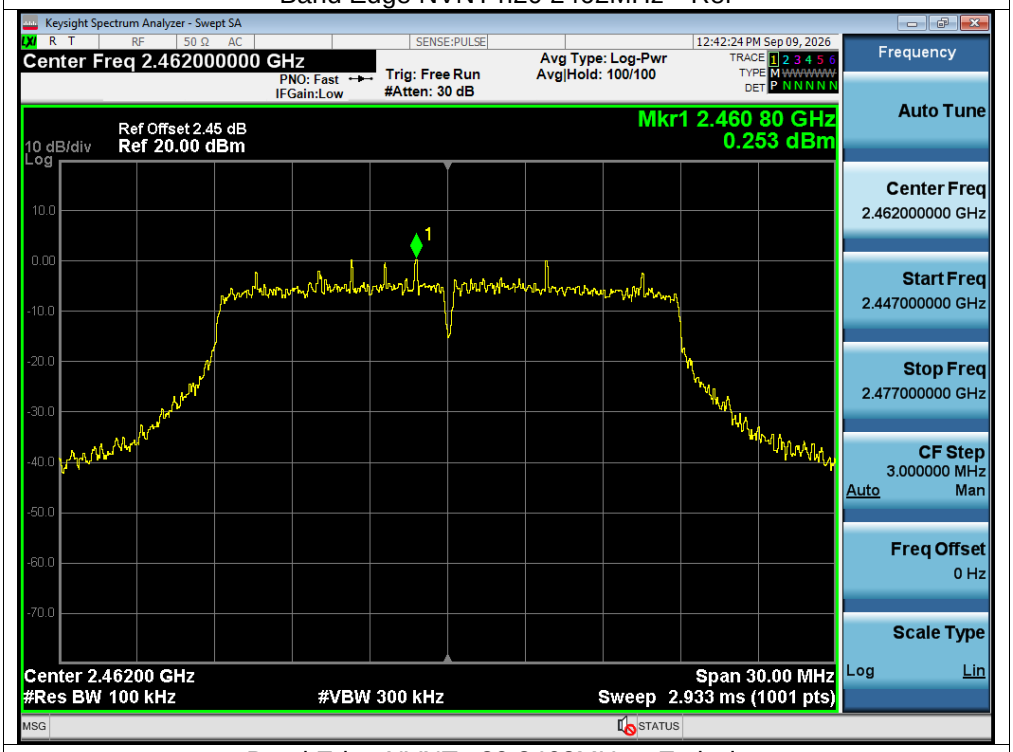
Band Edge NVNT n20 2412MHz Ref



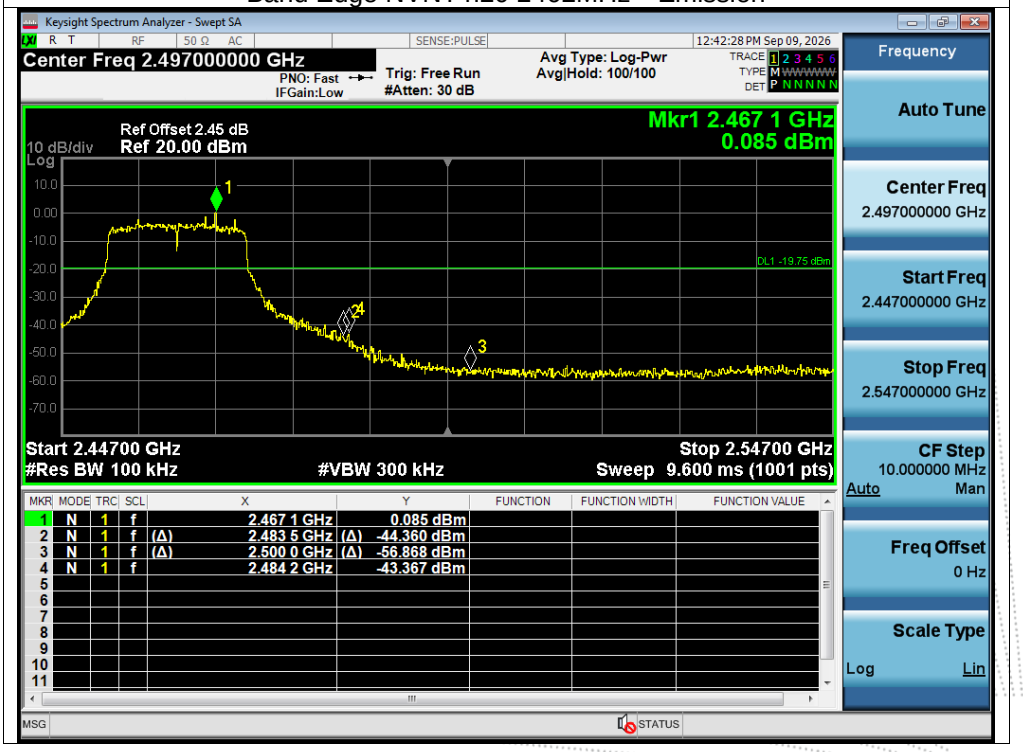
Band Edge NVNT n20 2412MHz Emission



Band Edge NVNT n20 2462MHz Ref



Band Edge NVNT n20 2462MHz Emission

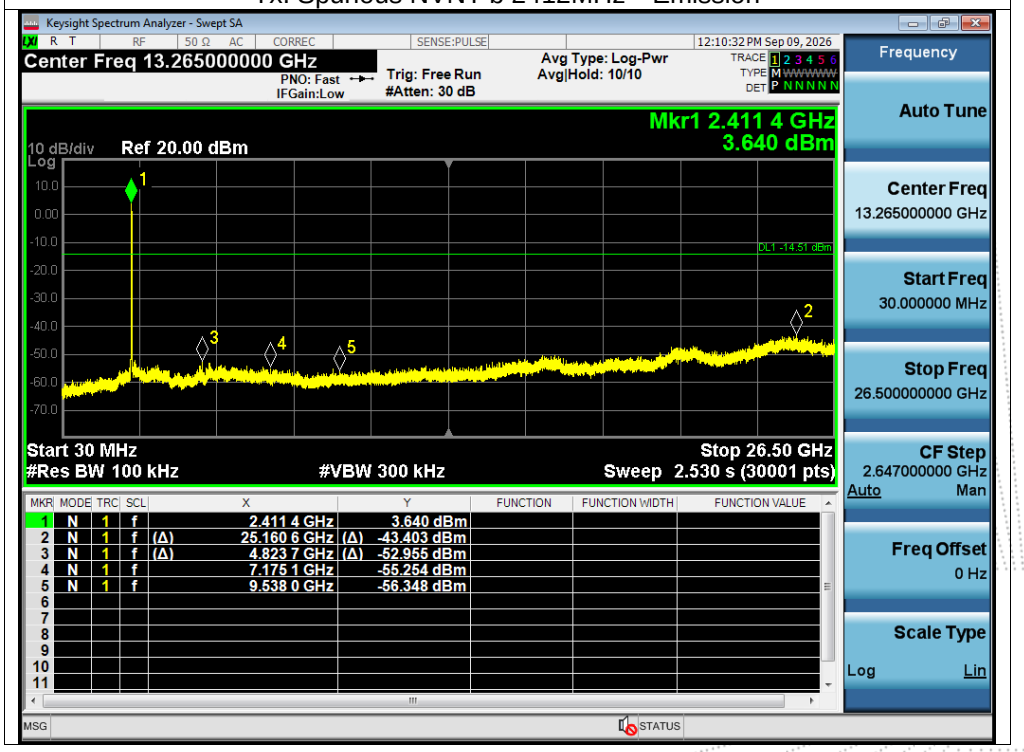


Conducted RF Spurious Emission

Test Graphs

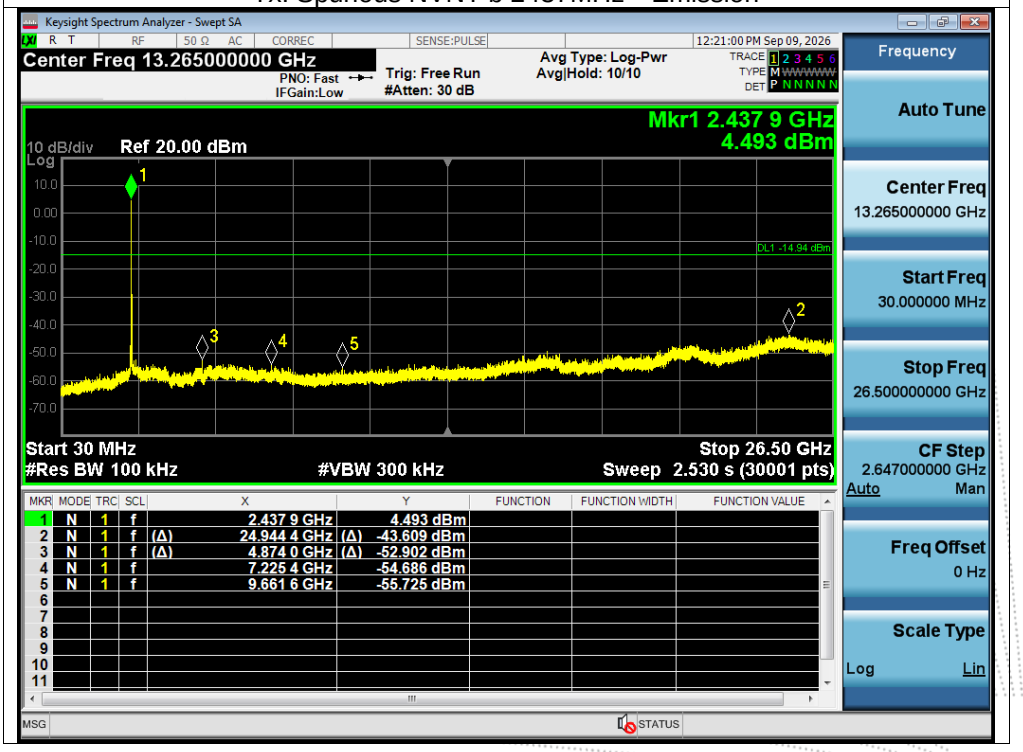
Tx. Spurious NVNT b 2412MHz Ref

Tx. Spurious NVNT b 2412MHz Emission



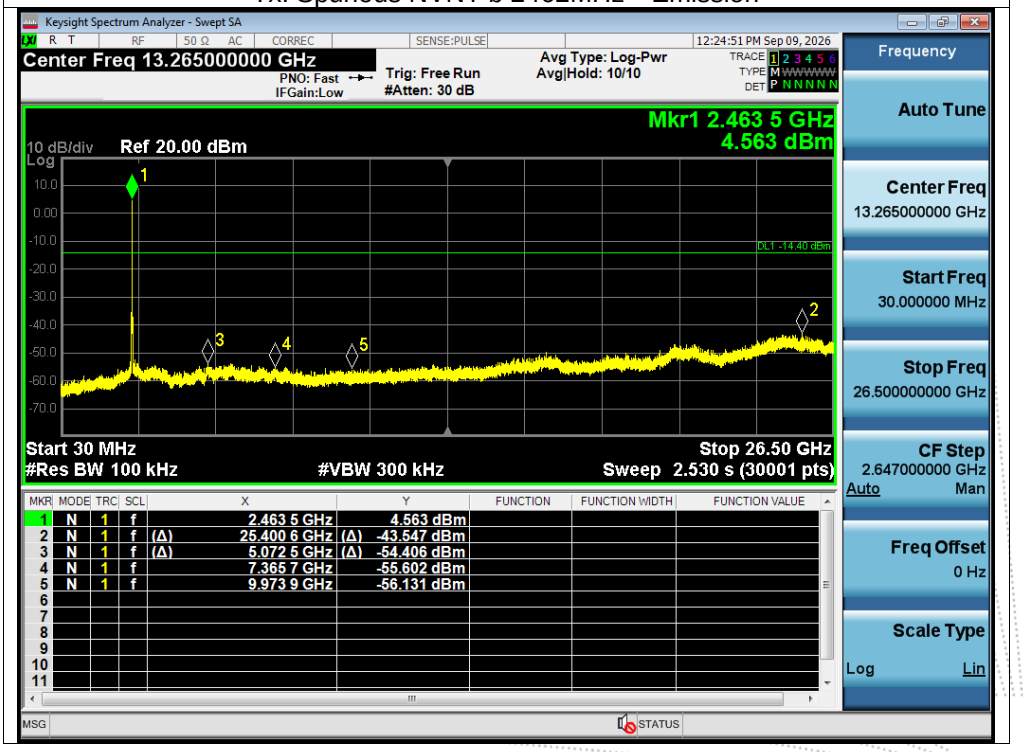
Tx. Spurious NVNT b 2437MHz Ref

Tx. Spurious NVNT b 2437MHz Emission

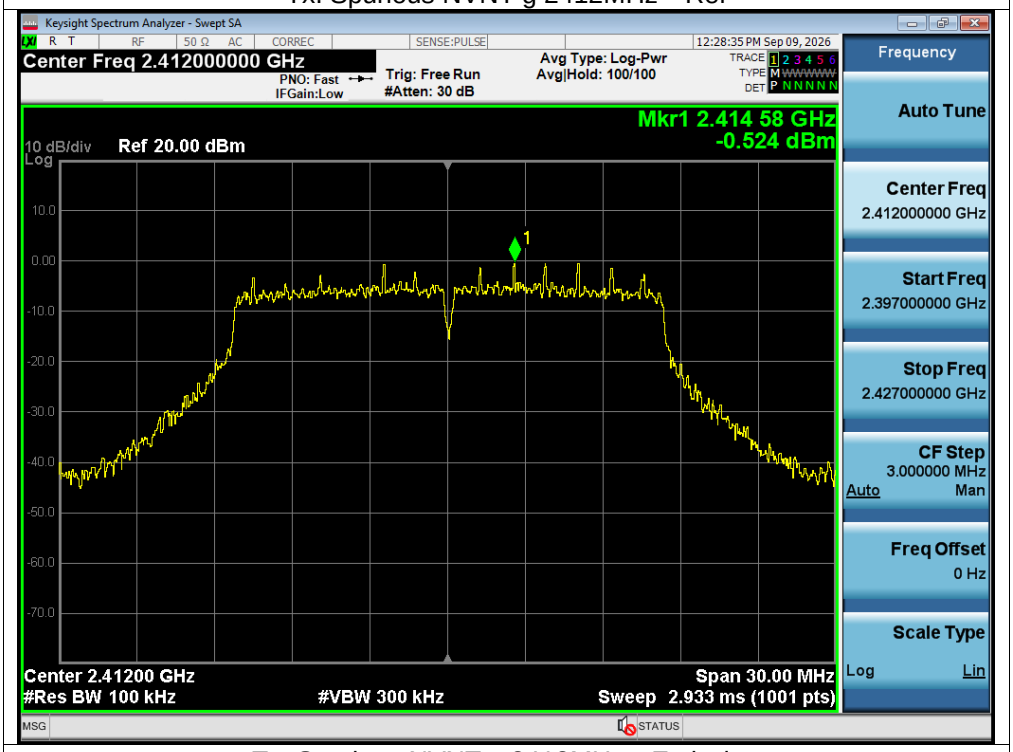


Tx. Spurious NVNT b 2462MHz Ref

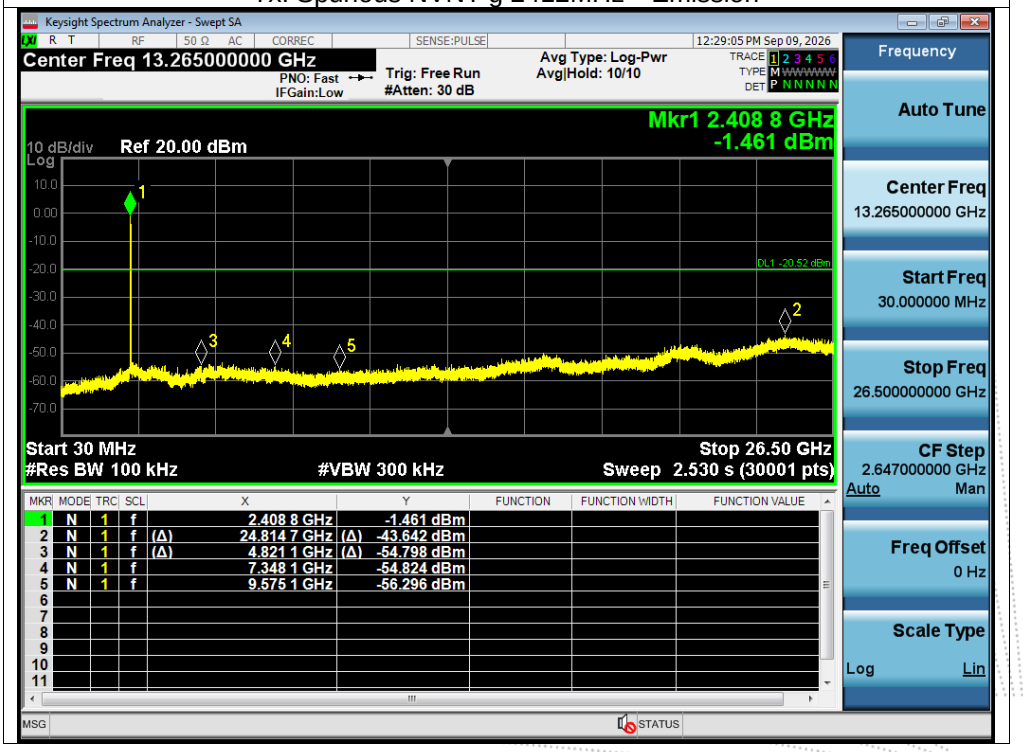
Tx. Spurious NVNT b 2462MHz Emission



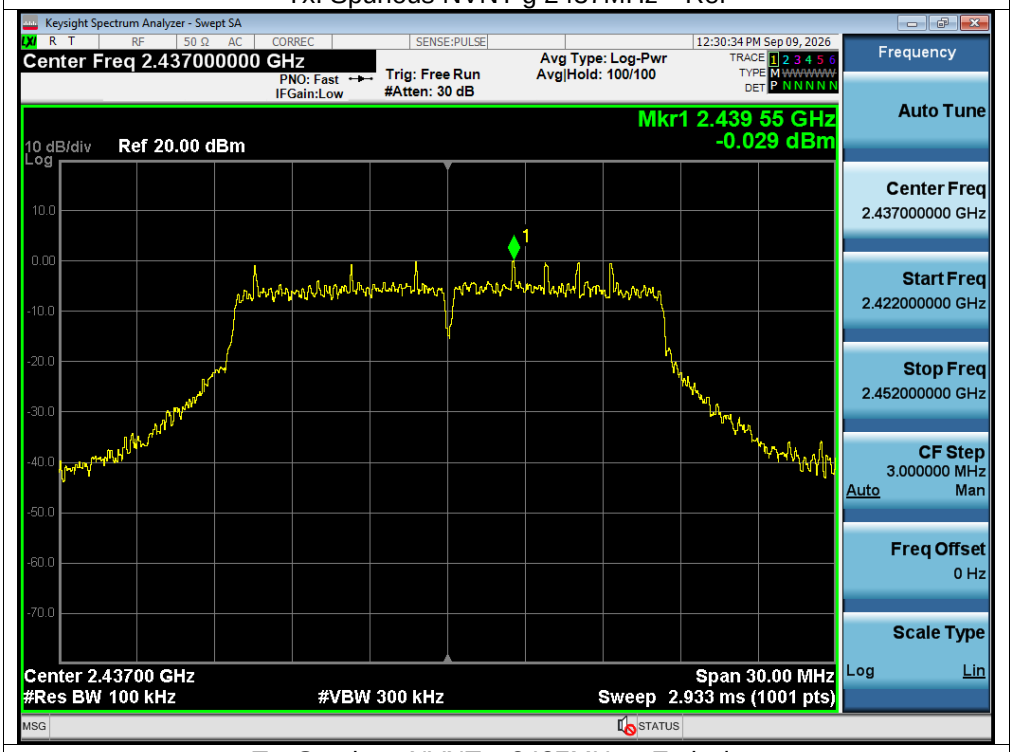
Tx. Spurious NVNT g 2412MHz Ref



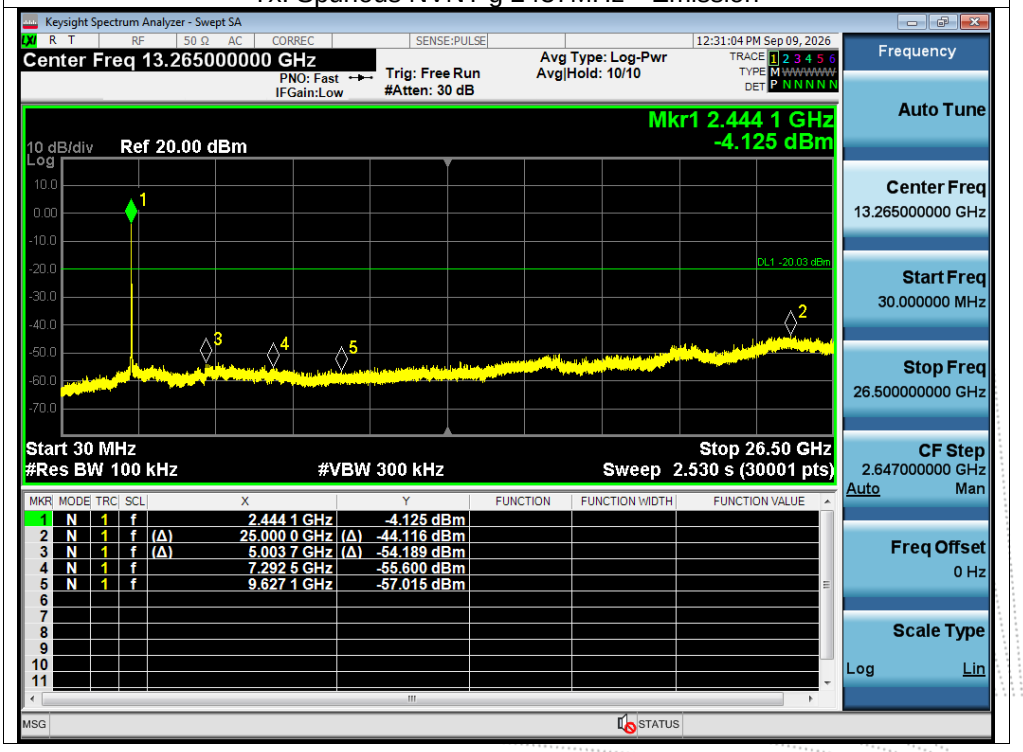
Tx. Spurious NVNT g 2412MHz Emission



Tx. Spurious NVNT g 2437MHz Ref

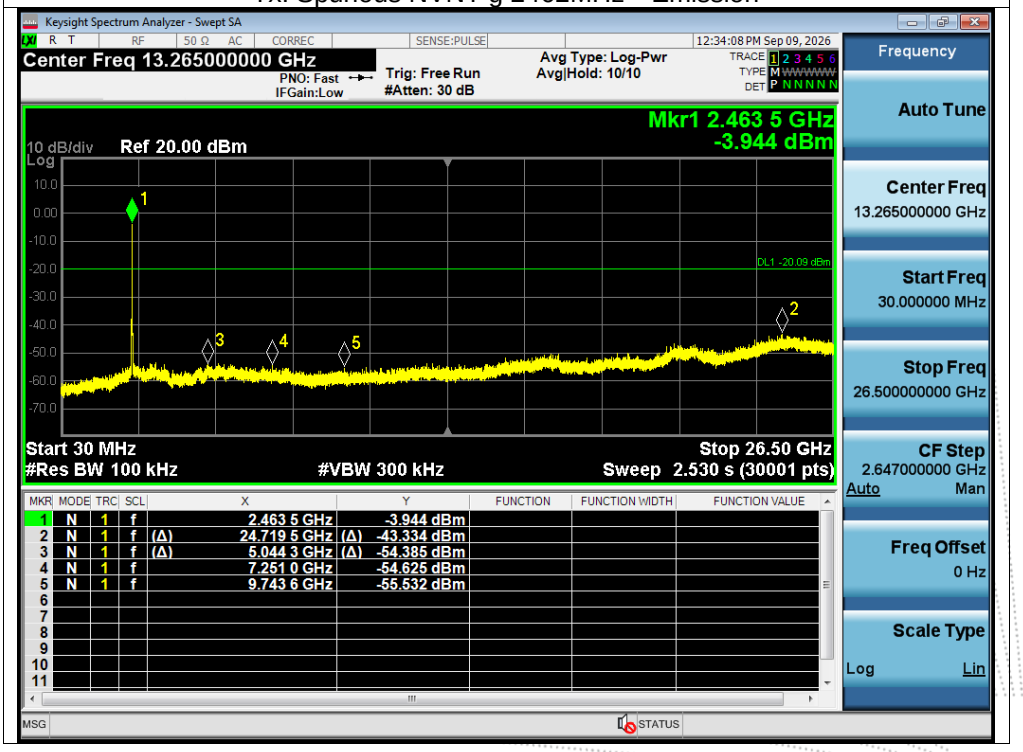


Tx. Spurious NVNT g 2437MHz Emission



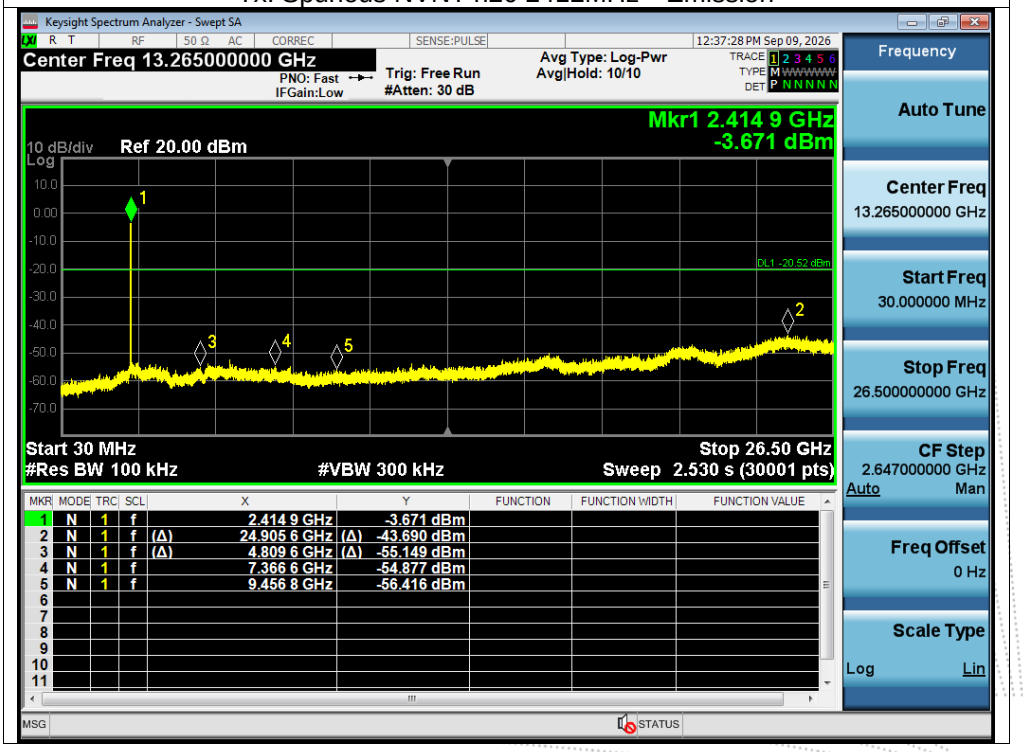
Tx. Spurious NVNT g 2462MHz Ref

Tx. Spurious NVNT g 2462MHz Emission



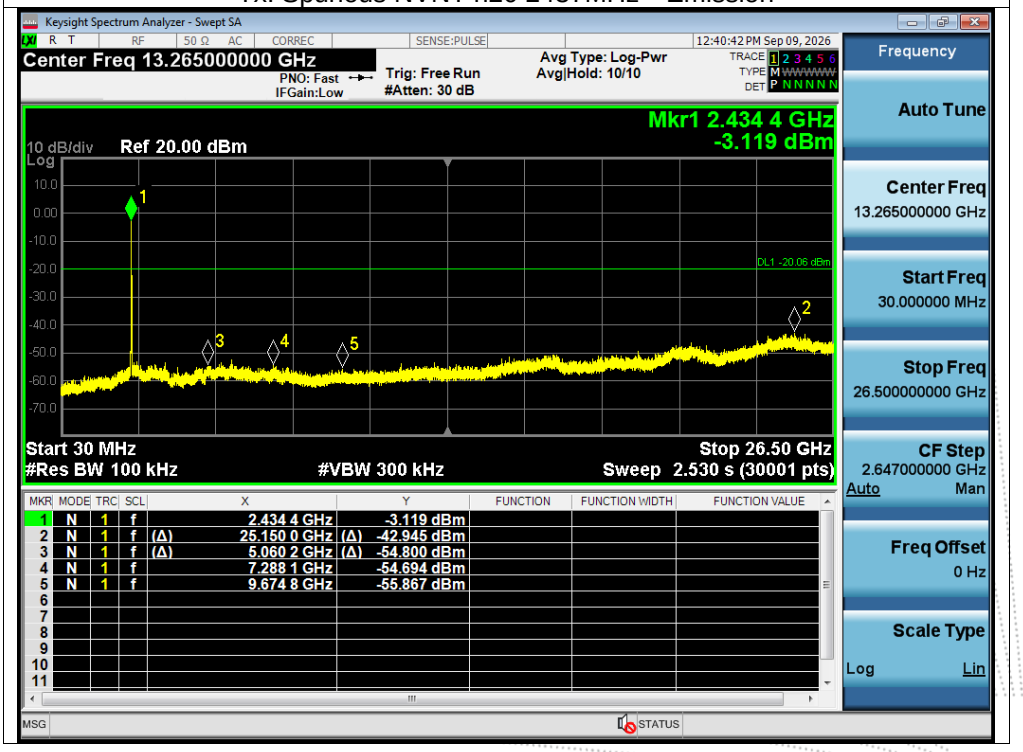
Tx. Spurious NVNT n20 2412MHz Ref

Tx. Spurious NVNT n20 2412MHz Emission

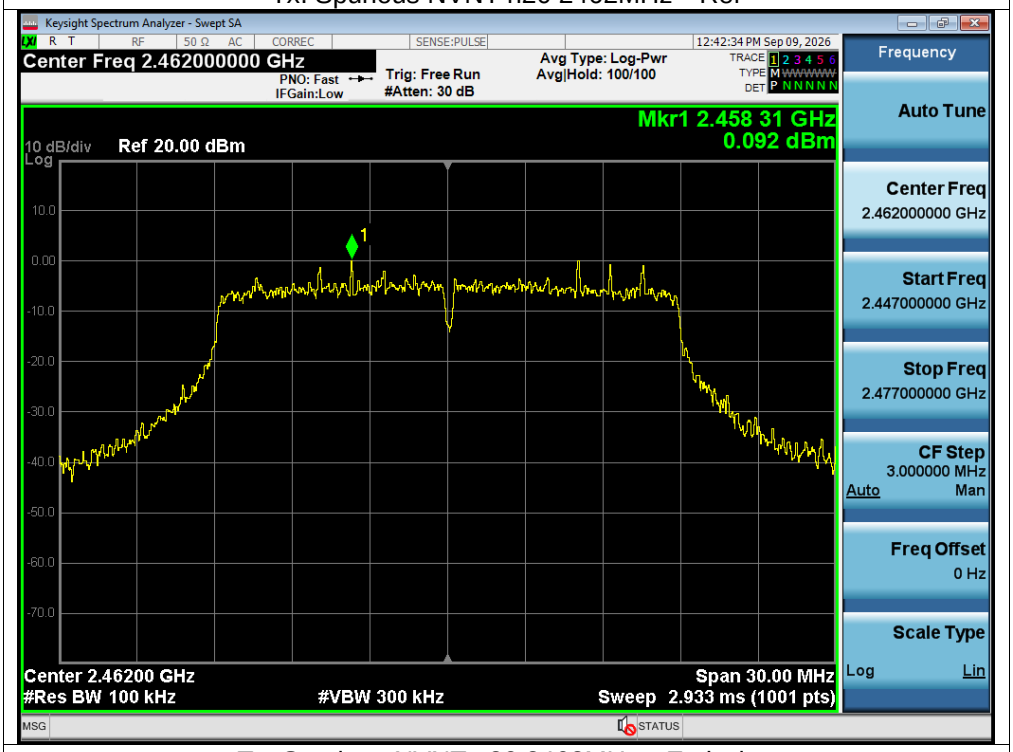


Tx. Spurious NVNT n20 2437MHz Ref

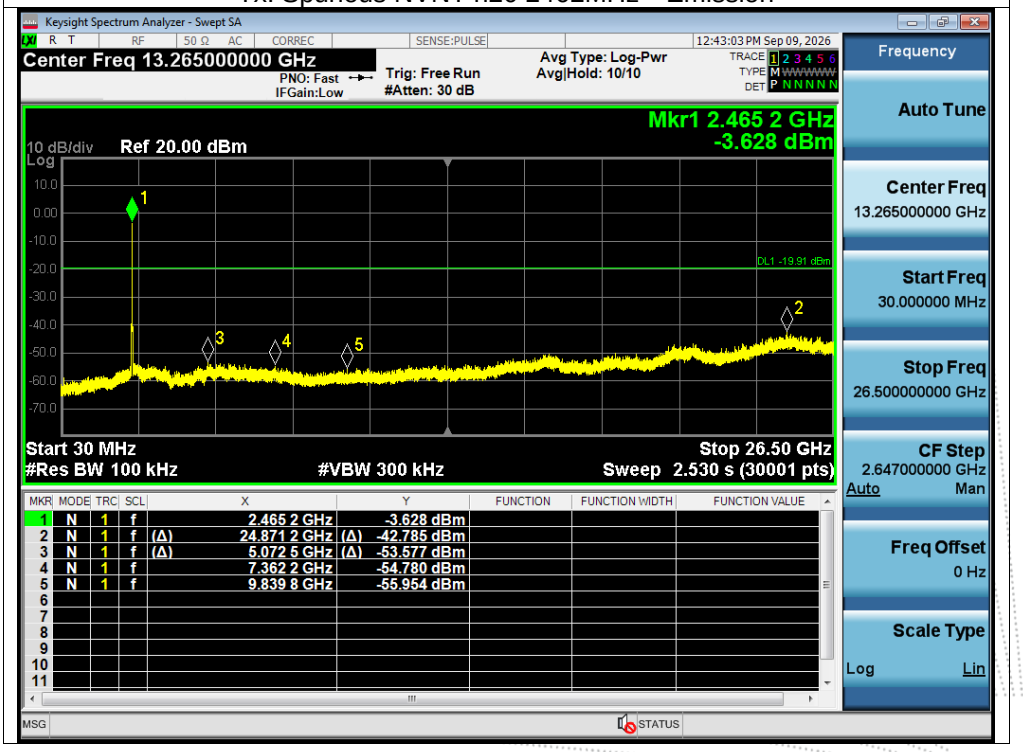
Tx. Spurious NVNT n20 2437MHz Emission



Tx. Spurious NVNT n20 2462MHz Ref



Tx. Spurious NVNT n20 2462MHz Emission



13. Duty Cycle Of Test Signal

13.1 Standard Requirement

Pre-analysis Check: While conducting average power measurement, duty cycle of each mode shall be checked to ensure its duty cycle in order to compensate for the loss due to insufficient ratio of duty cycle.

All duty cycle is pre-scanned, and result as obtained below shows only the most representative ones where duty cycle is conducted as the given transmission with given virtual operation that expresses the percentage.

13.2 Formula

Duty Cycle = Ton / (Ton+Toff)

13.3 Test Procedure

1.Set span = Zero

2. RBW = 8MHz

3. VBW = 8MHz,

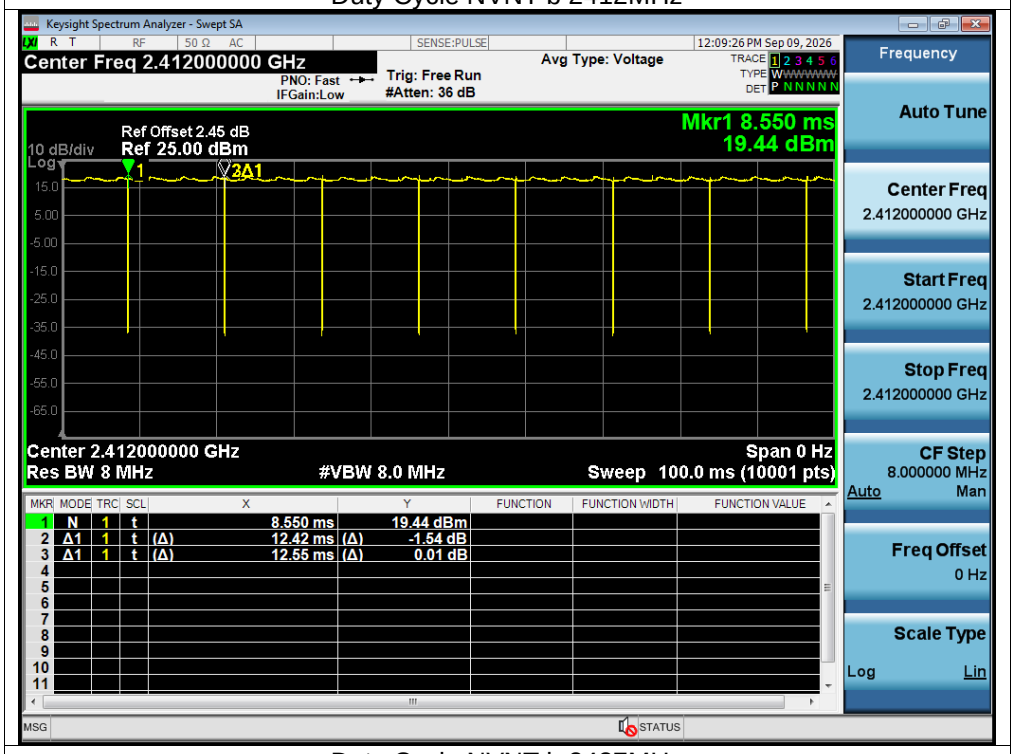
4. Detector = Peak

13.4 Test Result

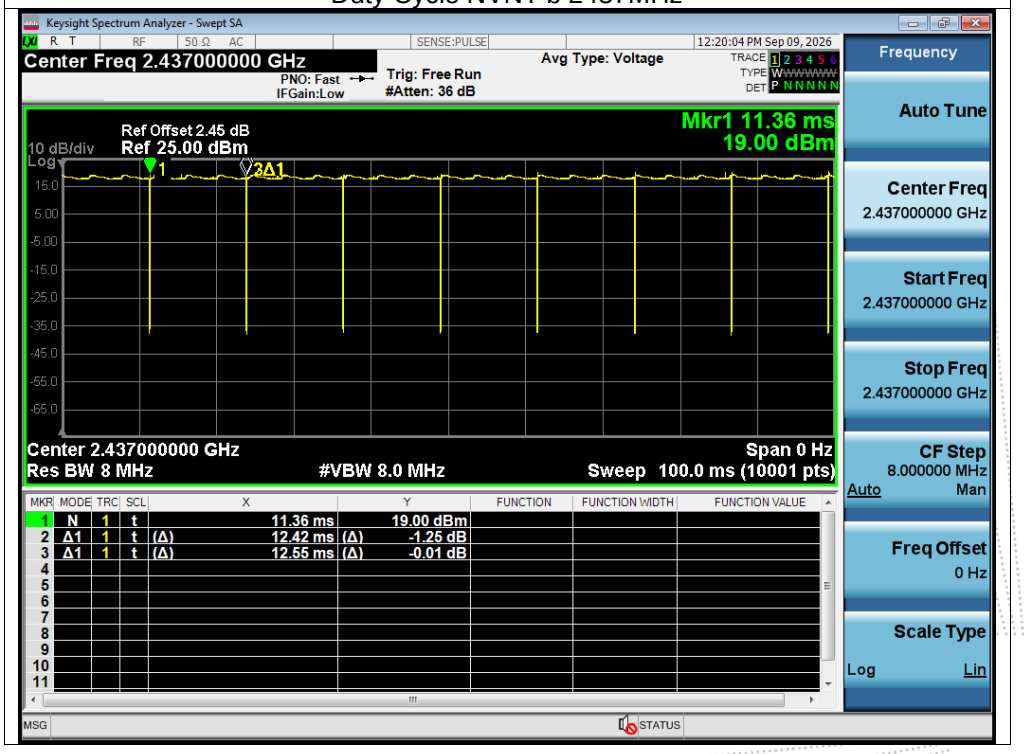
Condition	Mode	Frequency (MHz)	Duty Cycle (%RH)	Correction Factor (dB)	1/T (kHz)
NVNT	b	2412	98.96	0.05	0.08
NVNT	b	2437	98.96	0.05	0.08
NVNT	b	2462	98.96	0.05	0.08
NVNT	g	2412	94.06	0.27	0.49
NVNT	g	2437	94.09	0.26	0.48
NVNT	g	2462	94.09	0.26	0.48
NVNT	n20	2412	93.66	0.28	0.52
NVNT	n20	2437	93.66	0.28	0.52
NVNT	n20	2462	93.66	0.28	0.52

Test Graphs

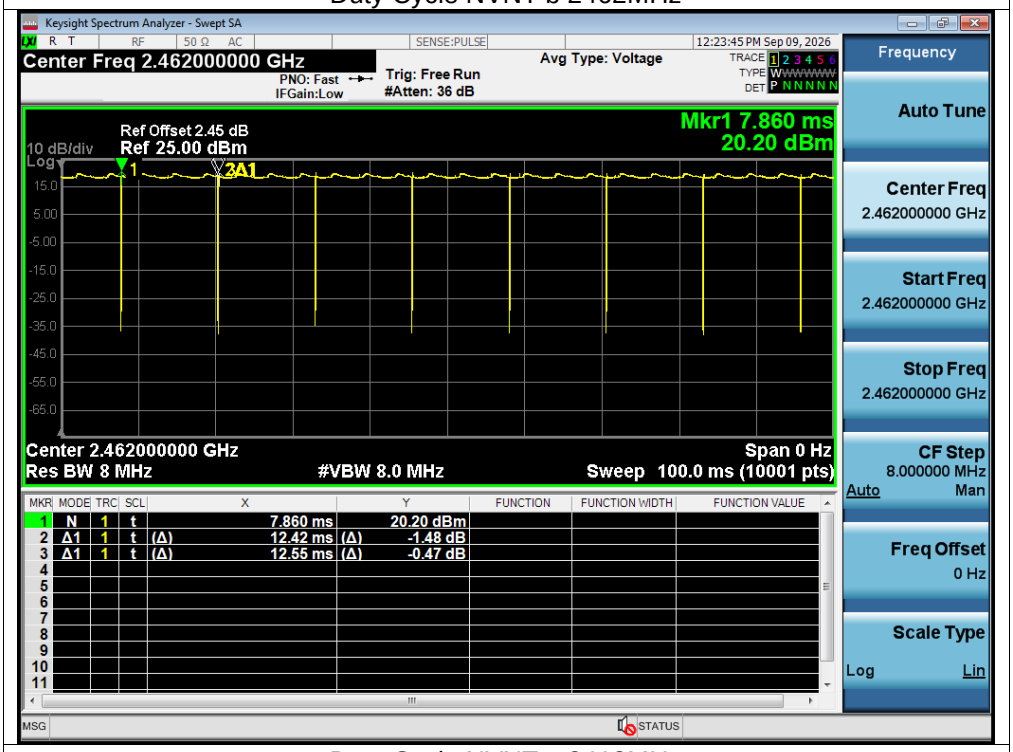
Duty Cycle NVNT b 2412MHz



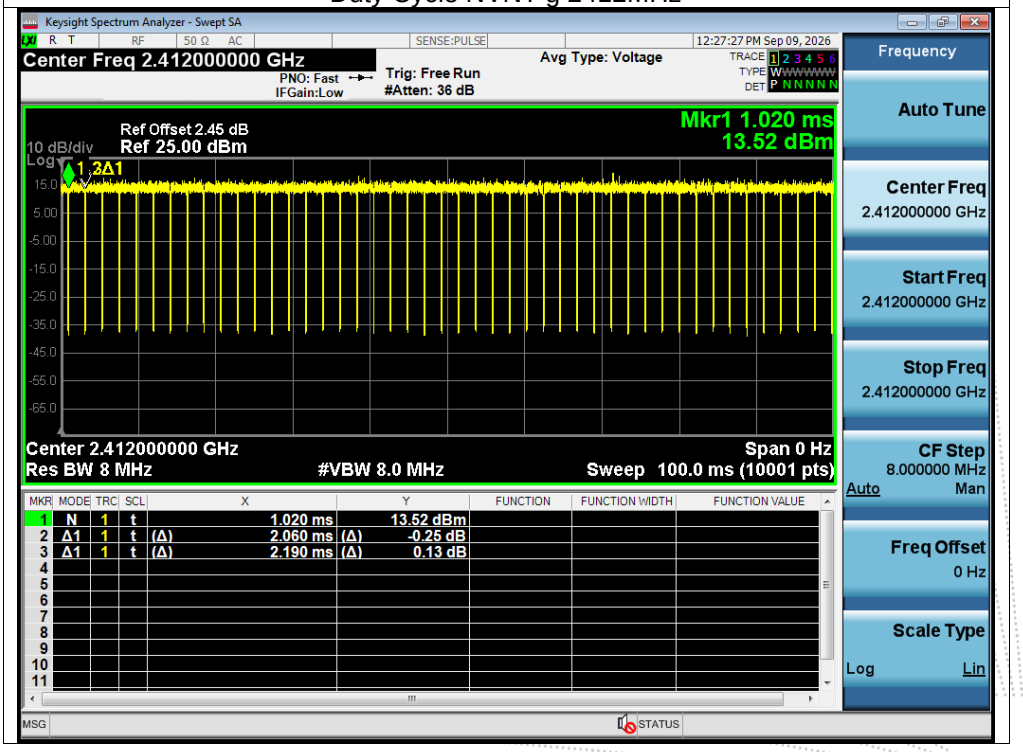
Duty Cycle NVNT b 2437MHz



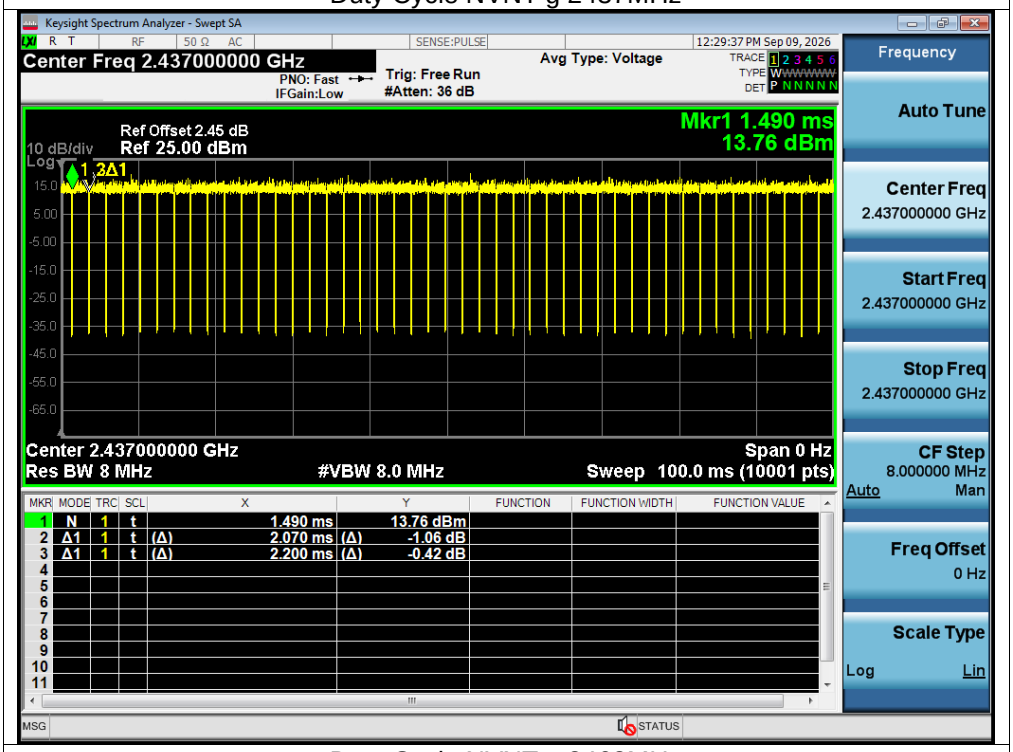
Duty Cycle NVNT b 2462MHz



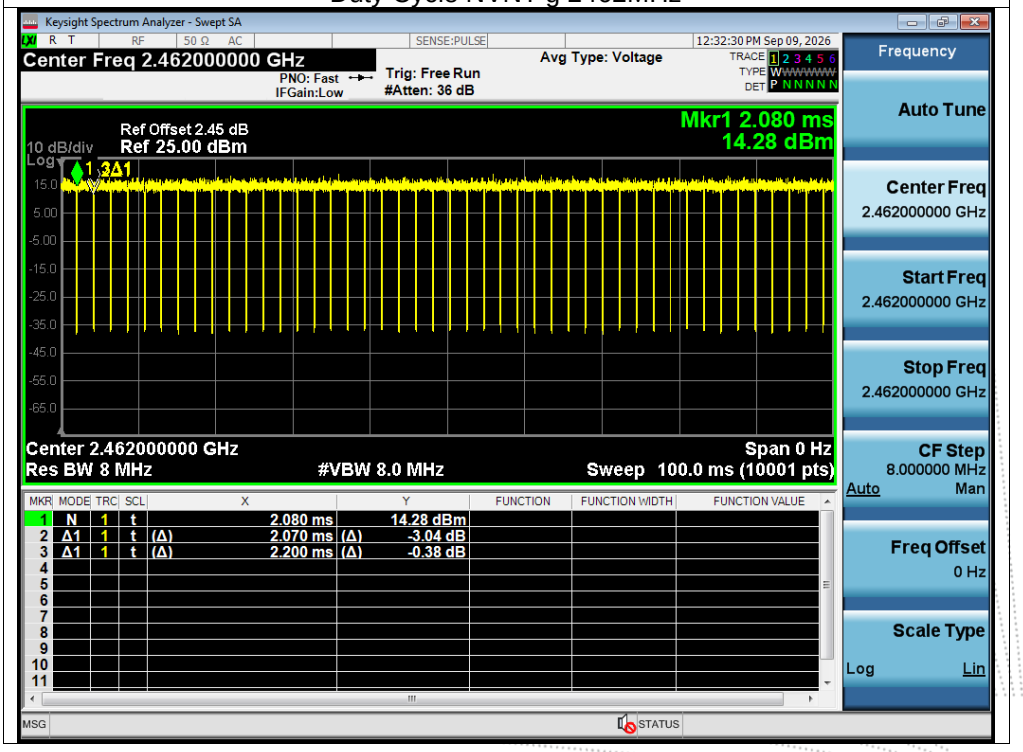
Duty Cycle NVNT g 2412MHz



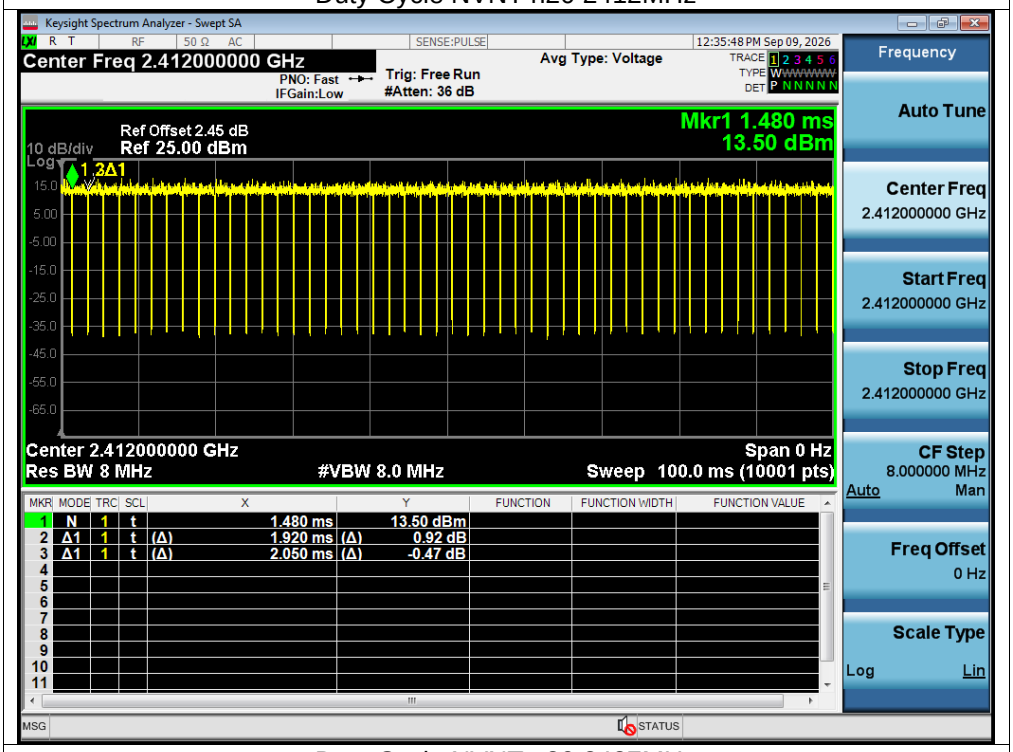
Duty Cycle NVNT g 2437MHz



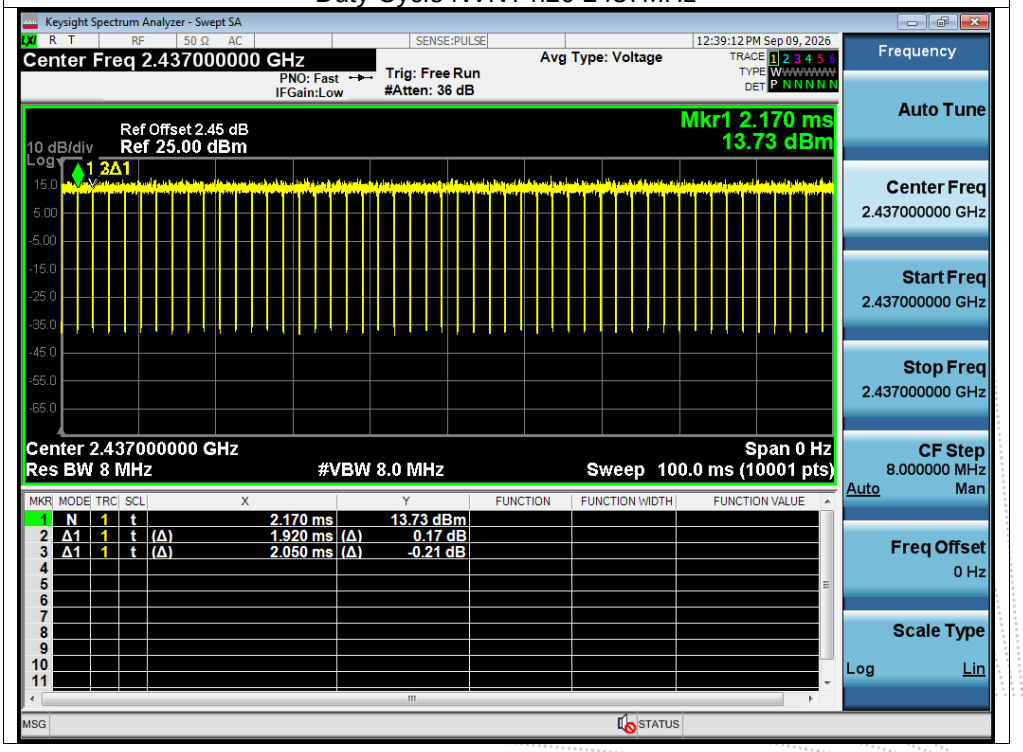
Duty Cycle NVNT g 2462MHz



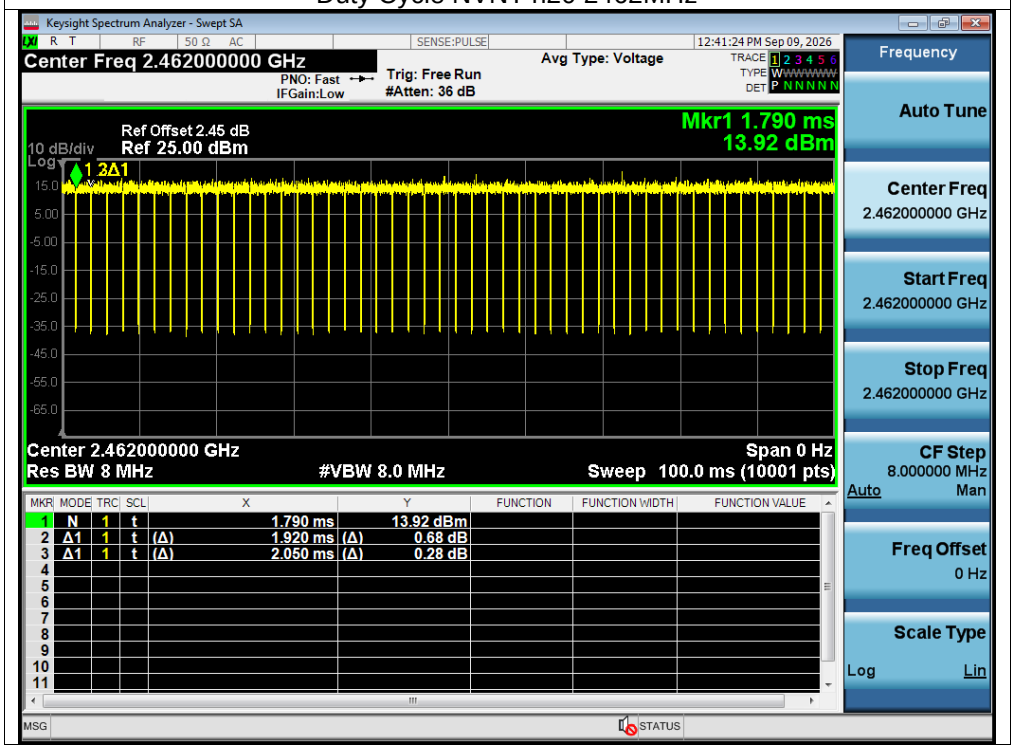
Duty Cycle NVNT n20 2412MHz



Duty Cycle NVNT n20 2437MHz



Duty Cycle NVNT n20 2462MHz



14. Antenna Requirement

14.1 Limit

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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §§ 15.211, 15.213, 15.217, 15.219, 15.221, or § 15.236. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

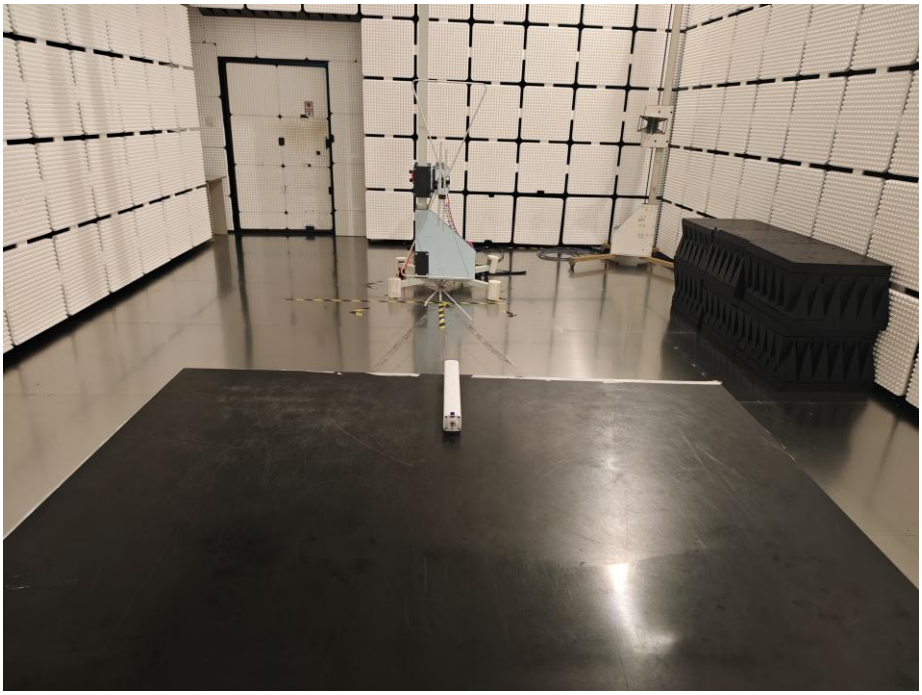
14.2 Test Result

The EUT antenna is Internal antenna, fulfill the requirement of this section.

15. EUT Test Setup Photographs

Conducted Emission Measurement Photos

Radiated Emission Measurement Photos



STATEMENT

1. The equipment lists are traceable to the International System of Units (SI)

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/IEC 17025:2017.

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.

Address:
Room 101M, Unit 1, Building1, Pengyuan, No.18, Lilang Road, Shanglilang, Nanwan Subdistrict, Longgang District, Shenzhen, Guangdong, China

TEL:400-788-9558

P.C.: 518116

FAX:0755-33229357

Website: http://www.chnbctc.com

Consultation E-mail: bctc@bctc-lab.com.cn

Complaint/Advice E-mail: advice@bctc-lab.com.cn

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