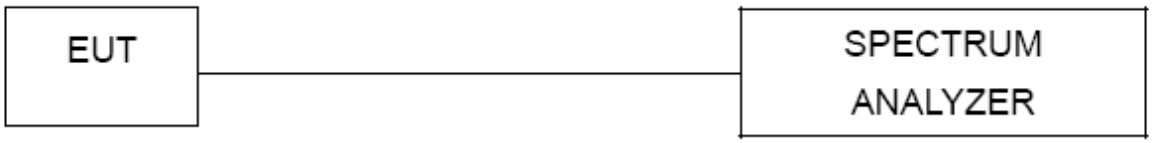
	Polar (H/V)	Frequency (MHz)	Reading Level (dBuV/m)	Correct Factor (dB)	Measure-ment (dBuV/m)	Limits (dBuV/m)		Result
					PK	PK	AV	
802.11 n20	Low Channel 2412MHz							
	H	2390.00	53.19	-6.70	46.49	74.00	54.00	PASS
	H	2400.00	58.04	-6.71	51.33	74.00	54.00	PASS
	V	2390.00	53.31	-6.70	46.61	74.00	54.00	PASS
	V	2400.00	57.08	-6.71	50.37	74.00	54.00	PASS
	High Channel 2462MHz							
	H	2483.50	55.92	-6.79	49.13	74.00	54.00	PASS
	H	2500.00	50.57	-6.81	43.76	74.00	54.00	PASS
	V	2483.50	57.13	-6.79	50.34	74.00	54.00	PASS
	V	2500.00	54.29	-6.81	47.48	74.00	54.00	PASS
802.11 n40	Low Channel 2422MHz							
	H	2390.00	53.93	-6.70	47.23	74.00	54.00	PASS
	H	2400.00	57.17	-6.71	50.46	74.00	54.00	PASS
	V	2390.00	54.49	-6.70	47.79	74.00	54.00	PASS
	V	2400.00	58.14	-6.71	51.43	74.00	54.00	PASS
	High Channel 2452MHz							
	H	2483.50	56.06	-6.79	49.27	74.00	54.00	PASS
	H	2500.00	53.12	-6.81	46.31	74.00	54.00	PASS
	V	2483.50	57.43	-6.79	50.64	74.00	54.00	PASS
	V	2500.00	54.48	-6.81	47.67	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.

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

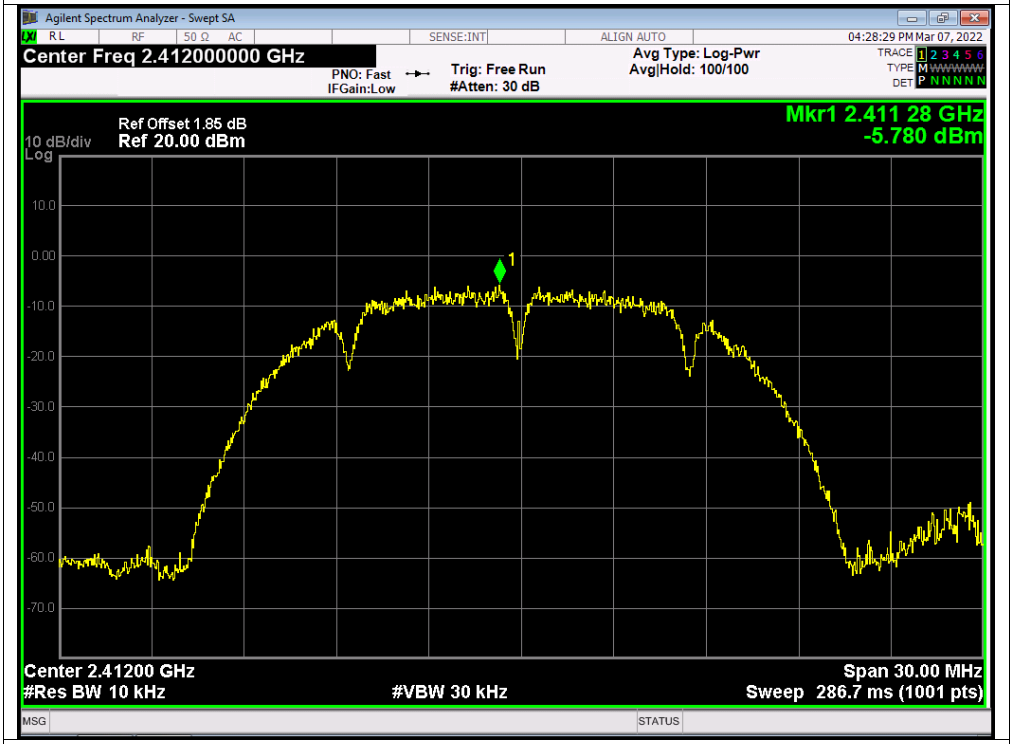
9.5 Test Result

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

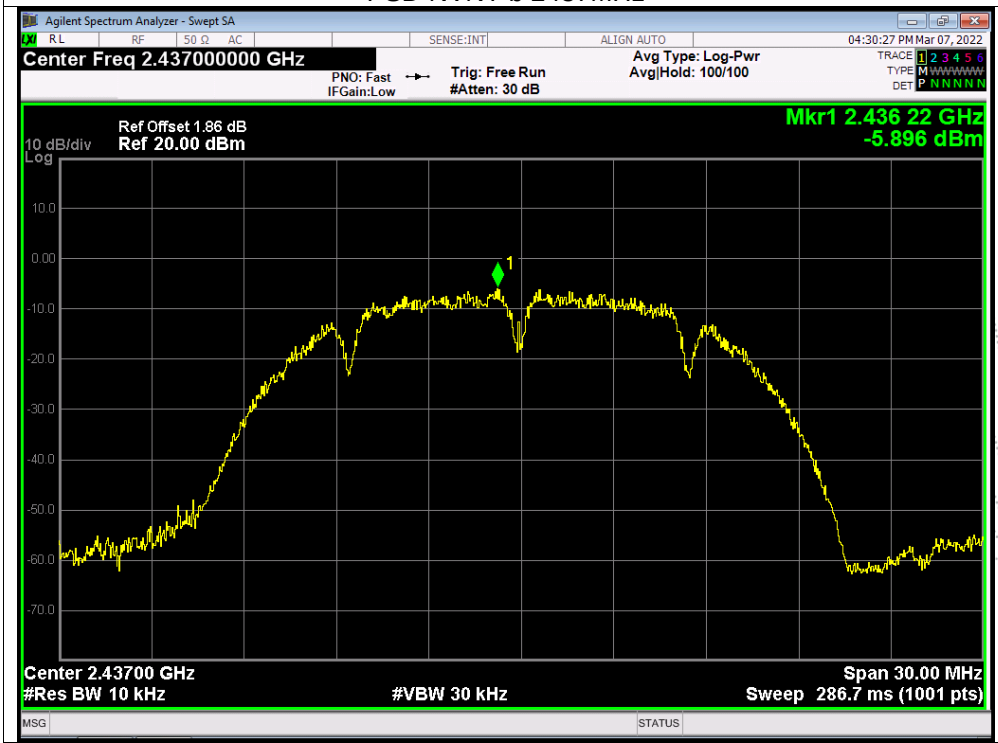
Mode	Frequency (MHz)	Conducted PSD (dBm)	Duty Factor (dB)	Total PSD (dBm)	Limit (dBm)	Verdict
b	2412	-5.78	0.04	-5.74	8	Pass
b	2437	-5.9	0.04	-5.86	8	Pass
b	2462	-6	0.04	-5.96	8	Pass
g	2412	-13.89	0.01	-13.88	8	Pass
g	2437	-13.95	0.01	-13.94	8	Pass
g	2462	-14.02	0.02	-14	8	Pass
n20	2412	-12.47	0.02	-12.45	8	Pass
n20	2437	-12.37	0.01	-12.36	8	Pass
n20	2462	-12.35	0.01	-12.34	8	Pass
n40	2422	-14.74	0	-14.74	8	Pass
n40	2437	-14.68	0	-14.68	8	Pass
n40	2452	-14.7	0	-14.7	8	Pass

Test Mode	Frequency	Power Spectral Density (dBm/10kHz)	Power Spectral Density (dBm/3kHz	Limit (dBm/3kHz)	Result
TX b Mode	2412 MHz	-5.74	-10.97	8	PASS
	2437 MHz	-5.86	-11.09	8	PASS
	2462 MHz	-5.96	-11.19	8	PASS
TX g Mode	2412 MHz	-13.88	-19.11	8	PASS
	2437 MHz	-13.94	-19.17	8	PASS
	2462 MHz	-14	-19.23	8	PASS
TX n Mode(20M)	2412 MHz	-12.45	-17.68	8	PASS
	2437 MHz	-12.36	-17.59	8	PASS
	2462 MHz	-12.34	-17.57	8	PASS
TX n Mode(40M)	2422 MHz	-14.74	-19.97	8	PASS
	2437 MHz	-14.68	-19.91	8	PASS
	2452 MHz	-14.7	-19.93	8	PASS
Note: Correction Factor = 10log(3KHz/RBW in measurement) =-5.23					

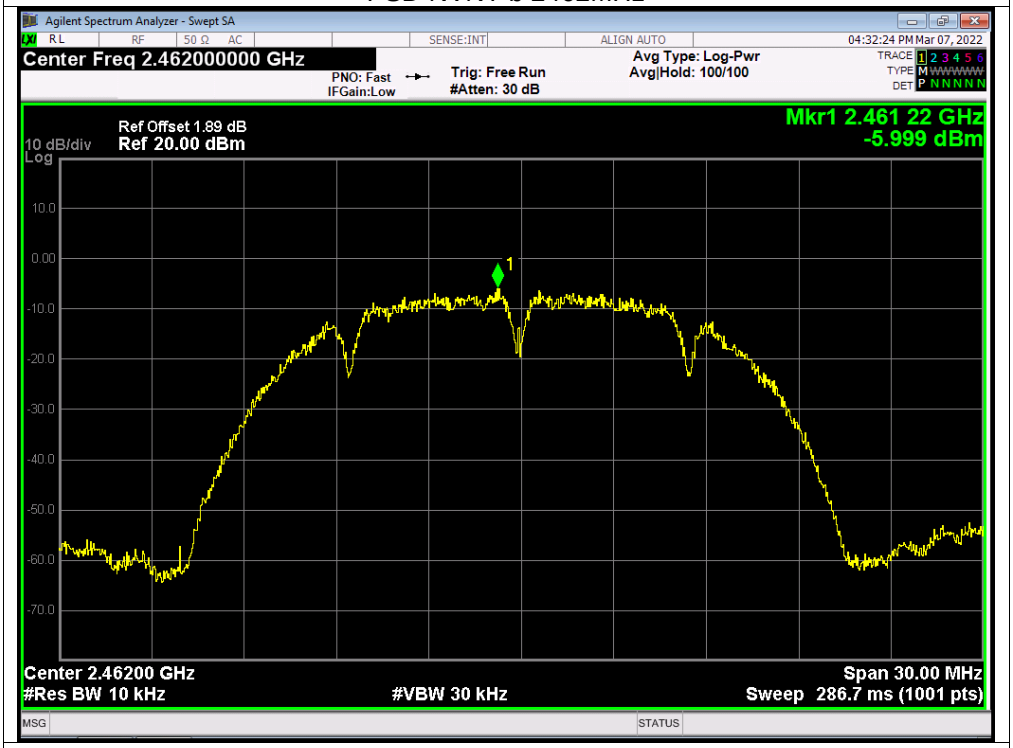
Test Graphs
PSD NVNT b 2412MHz



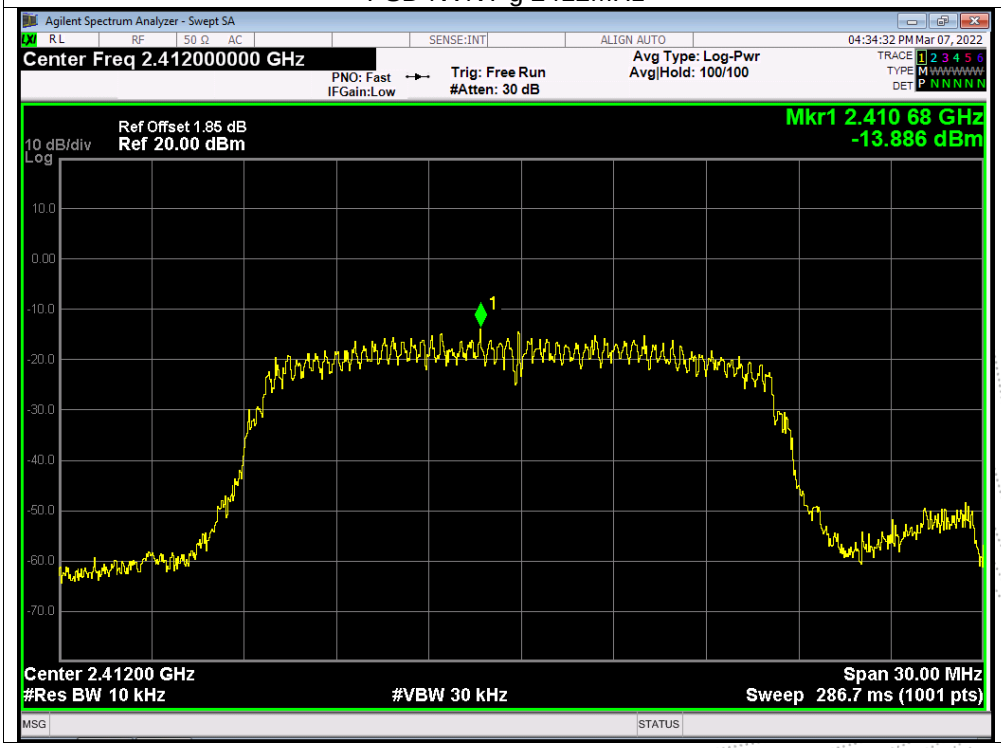
PSD NVNT b 2437MHz



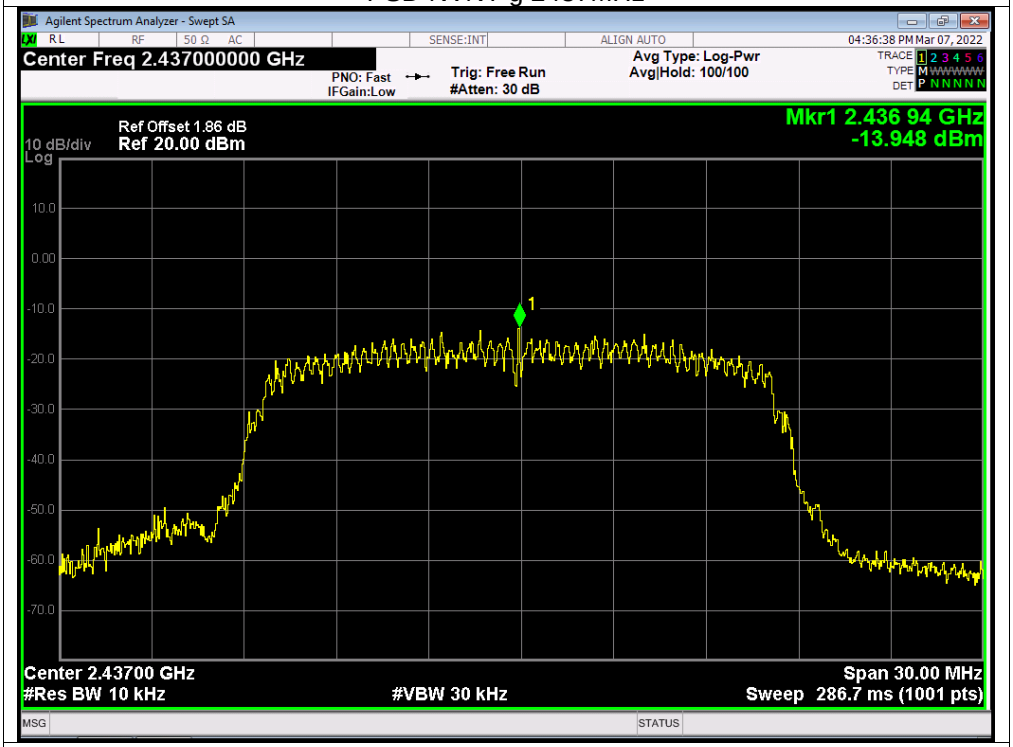
PSD NVNT b 2462MHz



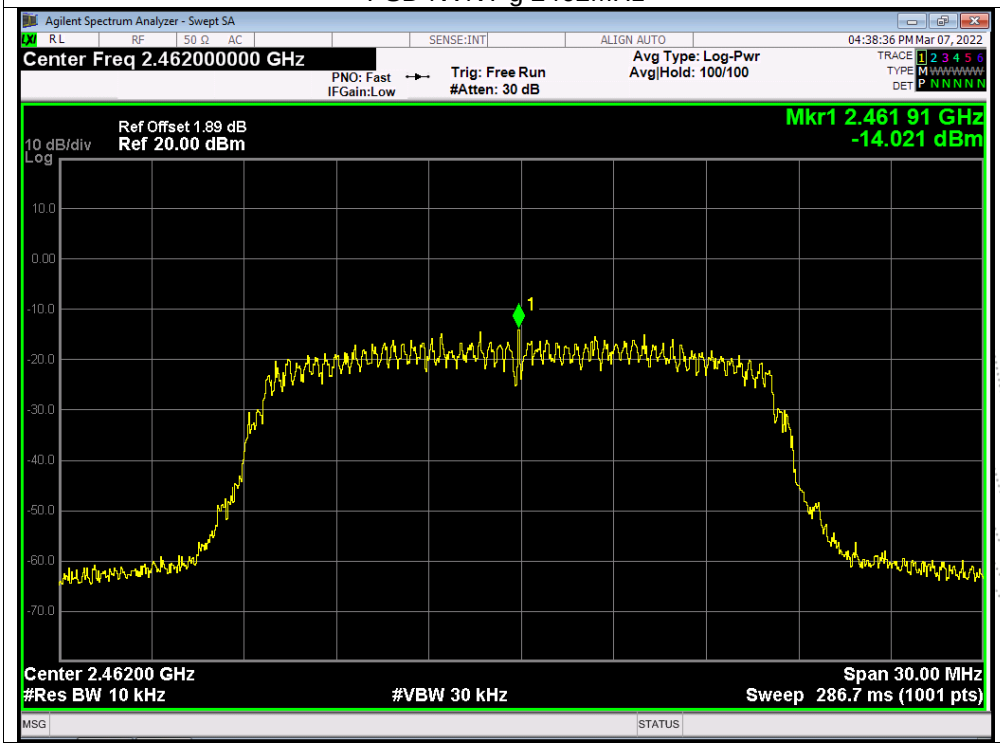
PSD NVNT g 2412MHz



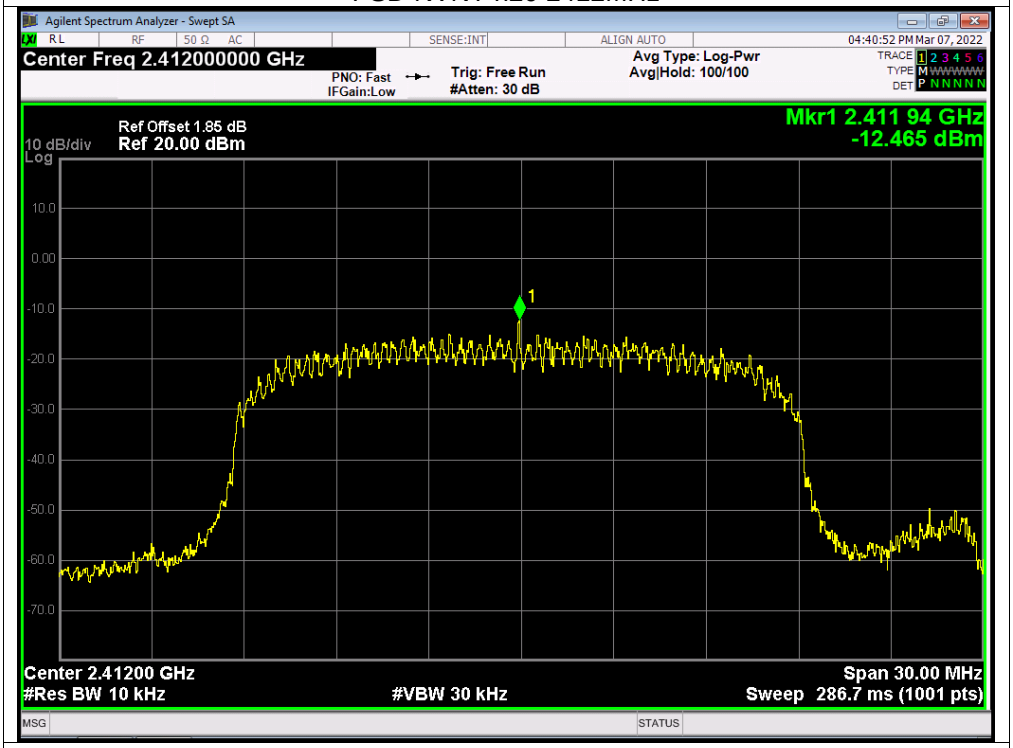
PSD NVNT g 2437MHz



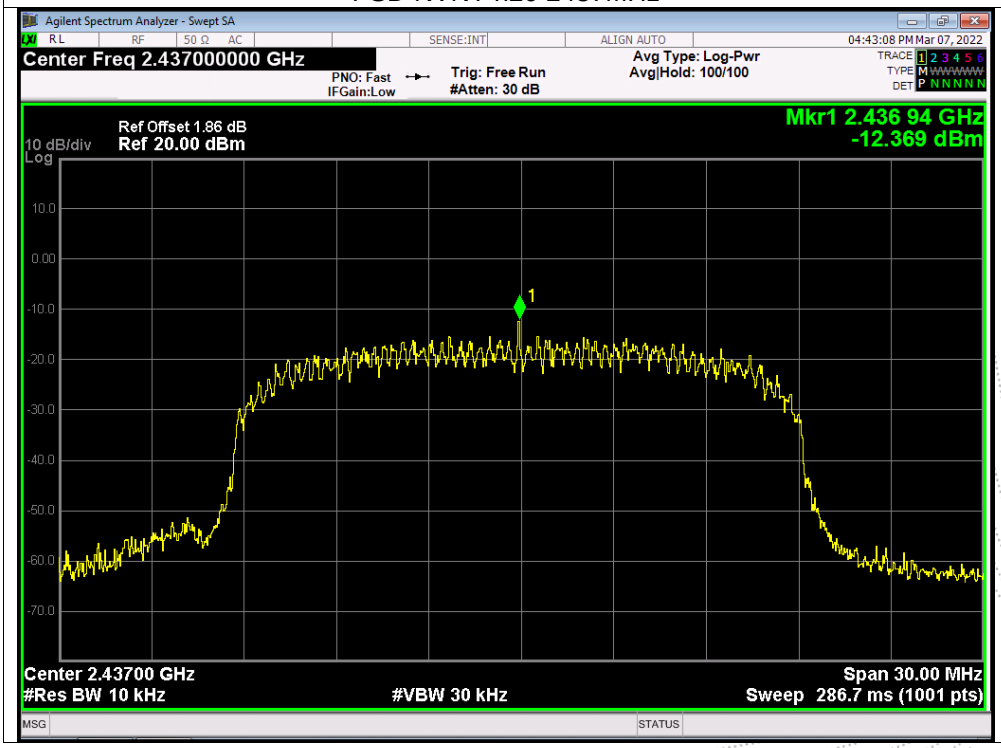
PSD NVNT g 2462MHz



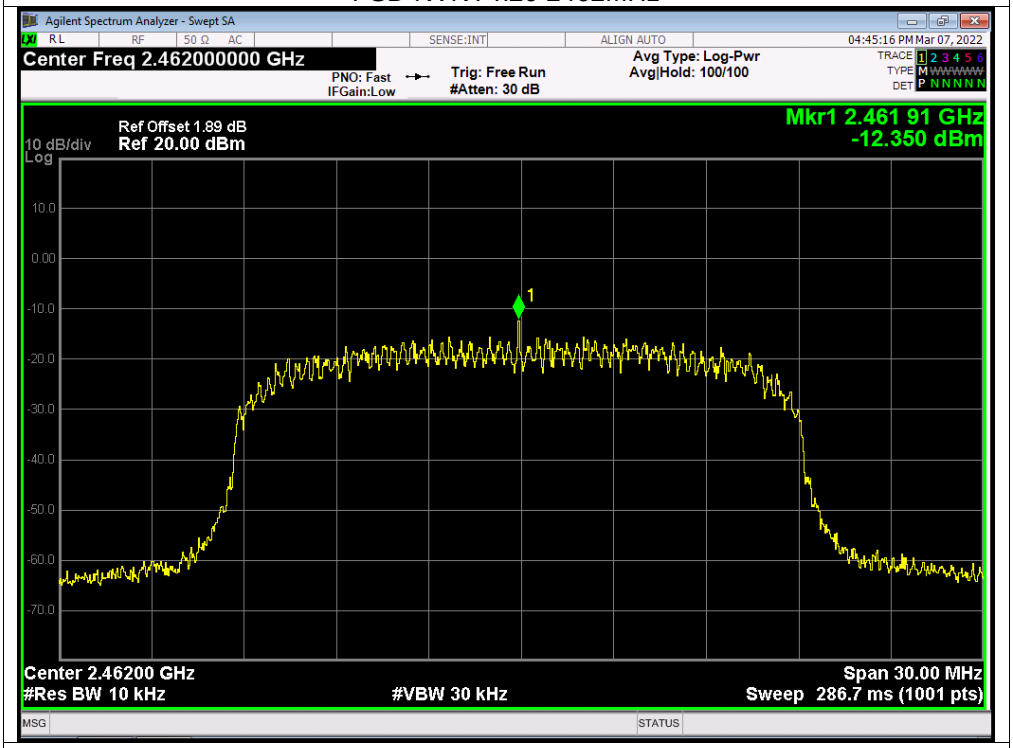
PSD NVNT n20 2412MHz



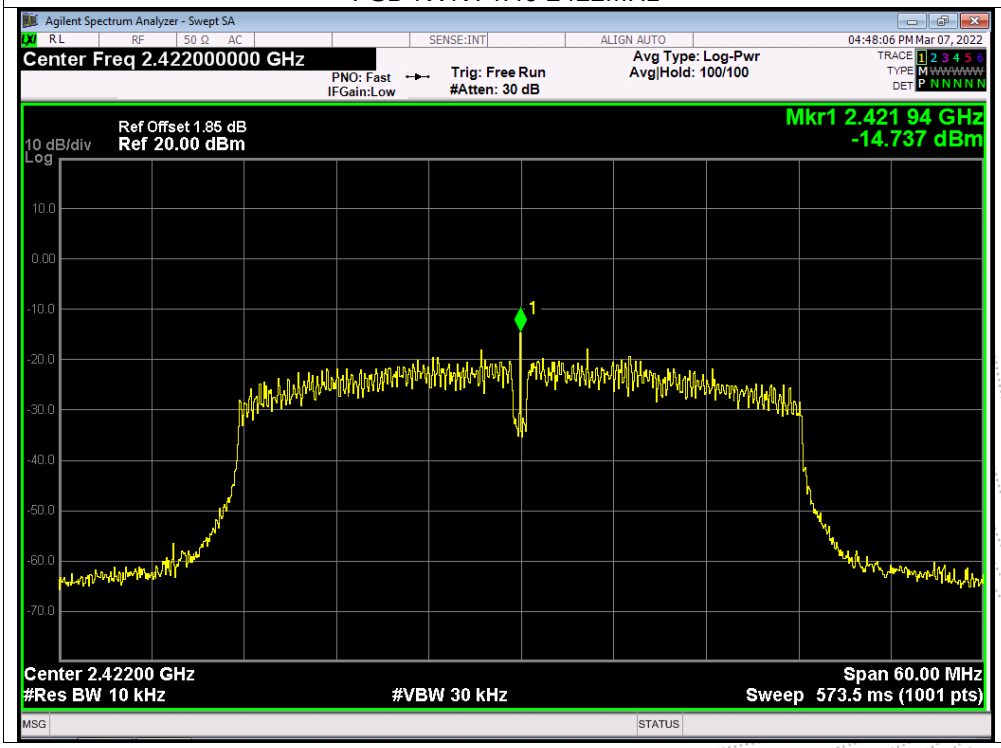
PSD NVNT n20 2437MHz



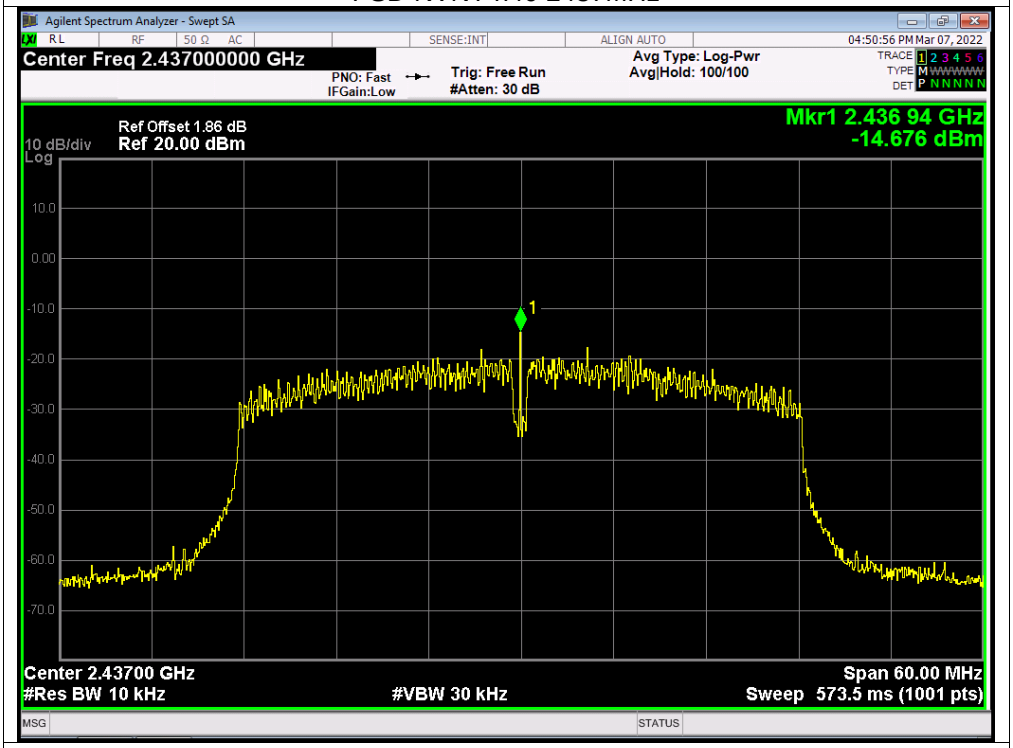
PSD NVNT n20 2462MHz



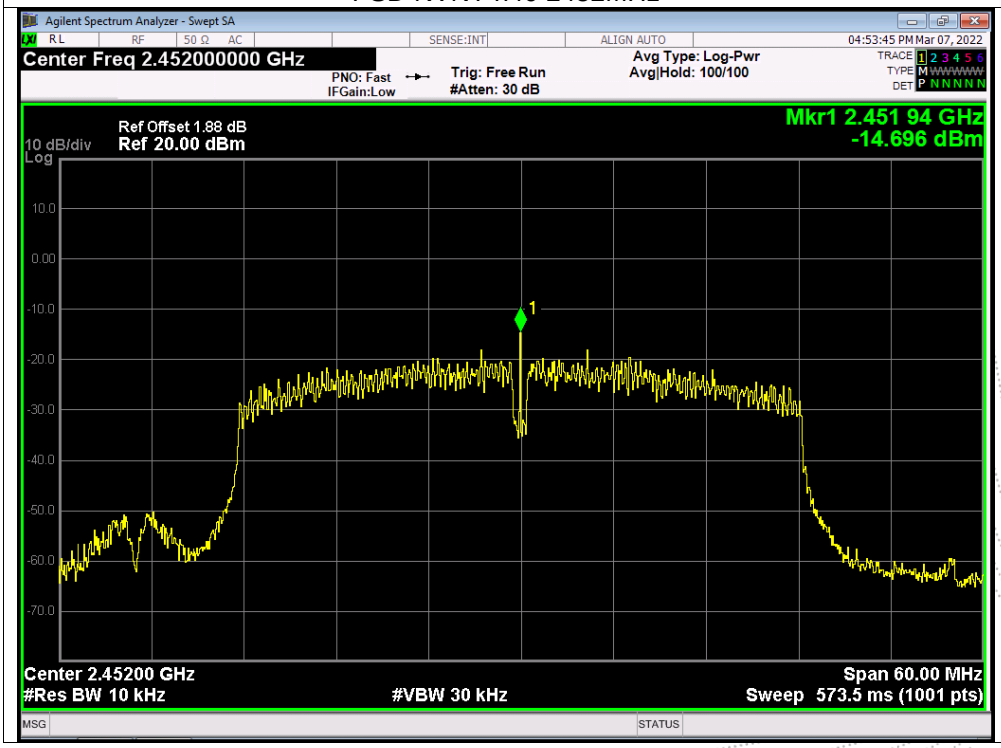
PSD NVNT n40 2422MHz



PSD NVNT n40 2437MHz

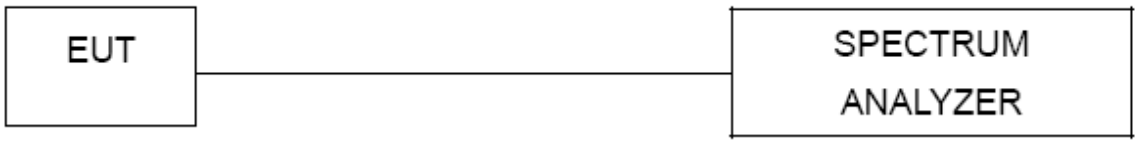


PSD NVNT n40 2452MHz



10. 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

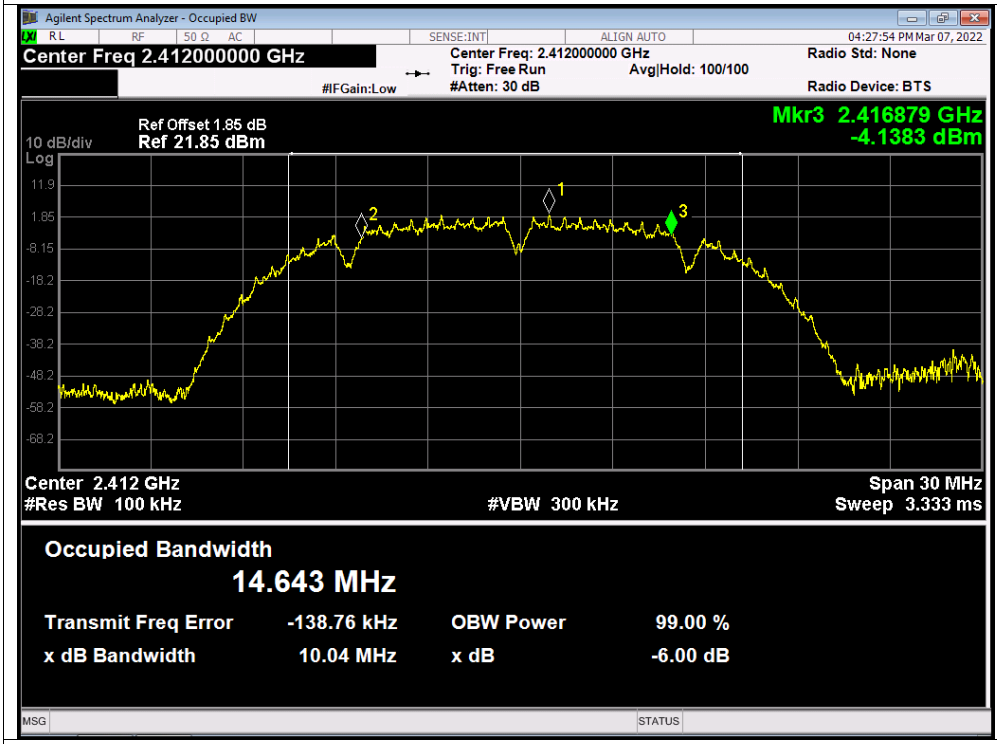
10.5 Test Result

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

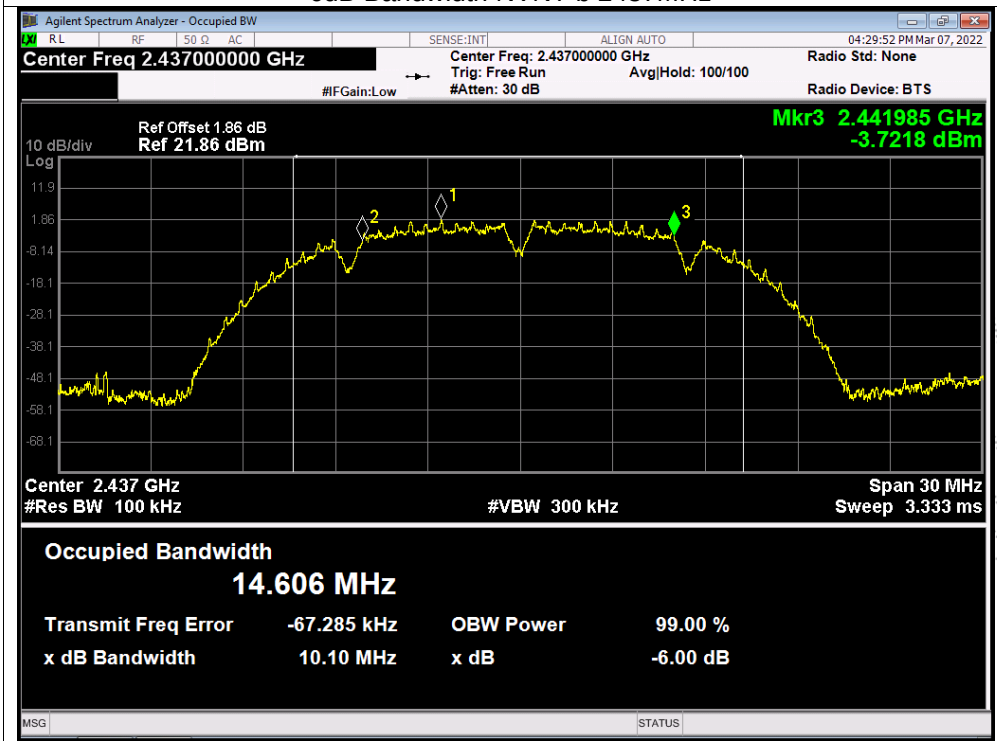
Mode	Frequency (MHz)	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
b	2412	10.036	0.5	Pass
b	2437	10.104	0.5	Pass
b	2462	11.069	0.5	Pass
g	2412	12.807	0.5	Pass
g	2437	13.55	0.5	Pass
g	2462	15.072	0.5	Pass
n20	2412	10.105	0.5	Pass
n20	2437	7.841	0.5	Pass
n20	2462	9.996	0.5	Pass
n40	2422	32.594	0.5	Pass
n40	2437	30.061	0.5	Pass
n40	2452	32.578	0.5	Pass

Test Graphs

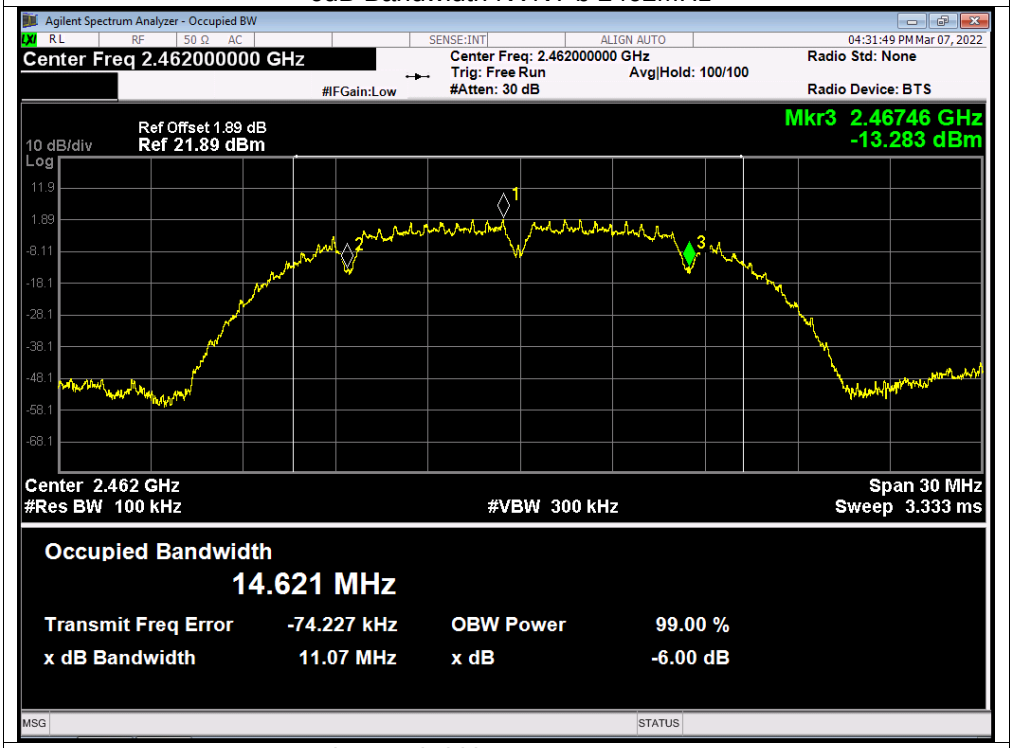
-6dB Bandwidth NVNT b 2412MHz



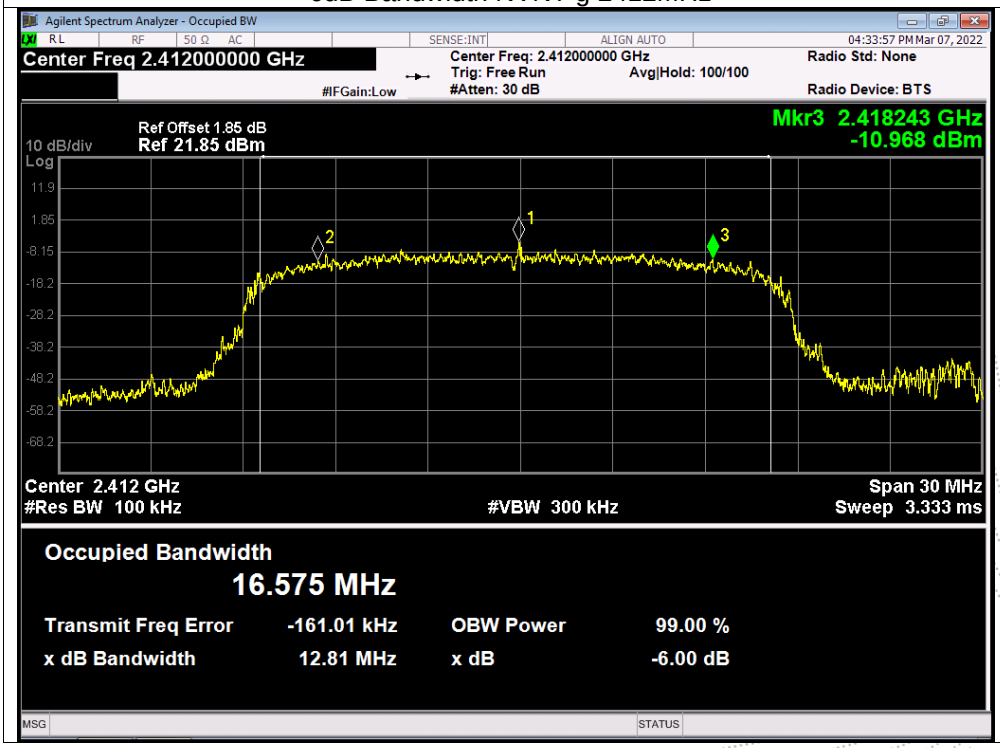
-6dB Bandwidth NVNT b 2437MHz



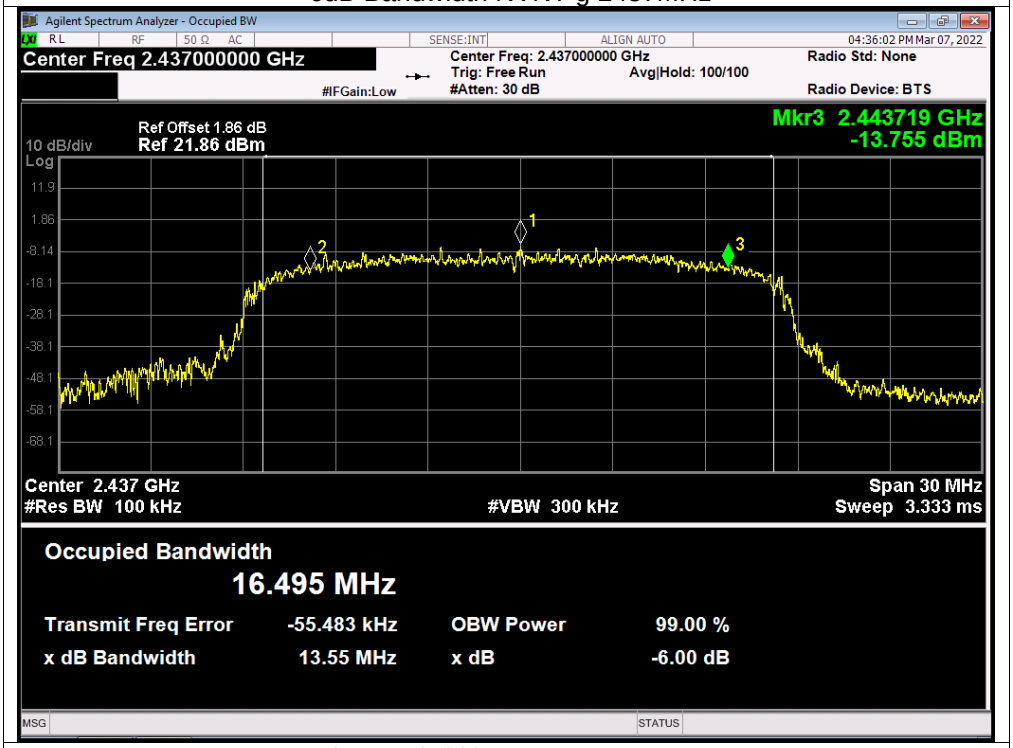
-6dB Bandwidth NVNT b 2462MHz



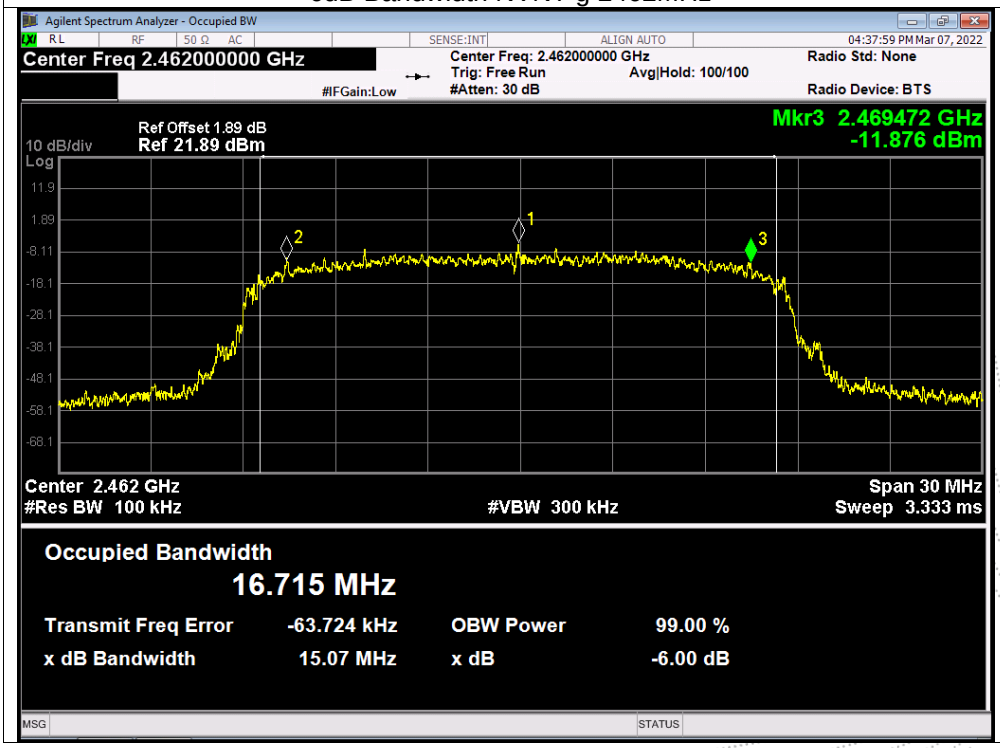
-6dB Bandwidth NVNT g 2412MHz



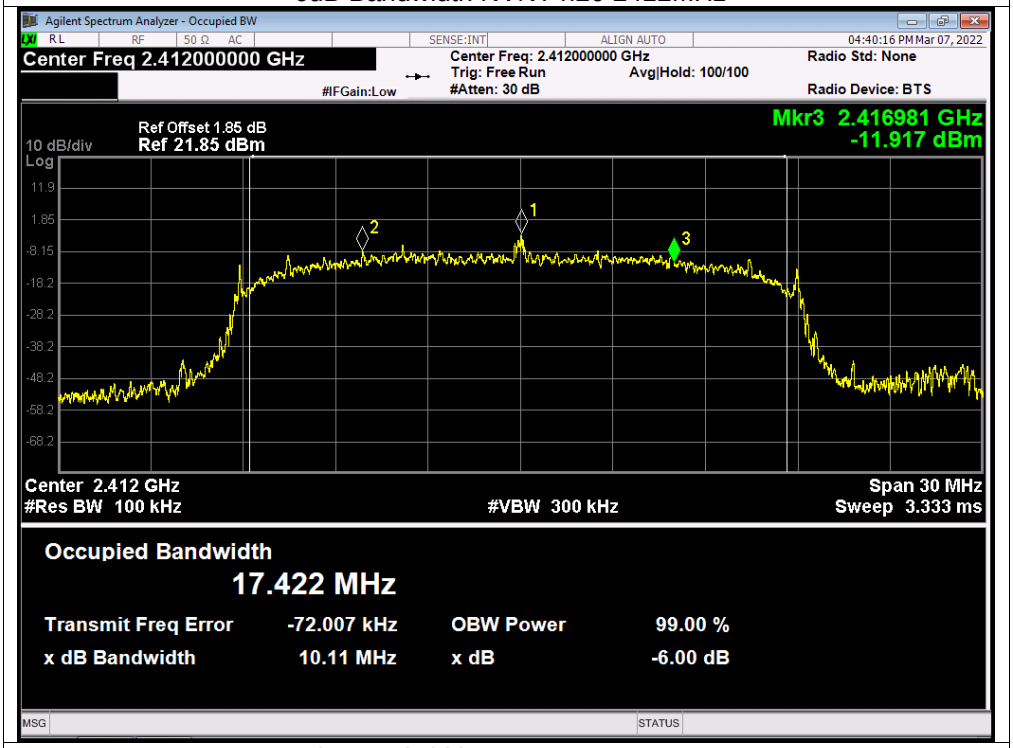
-6dB Bandwidth NVNT g 2437MHz



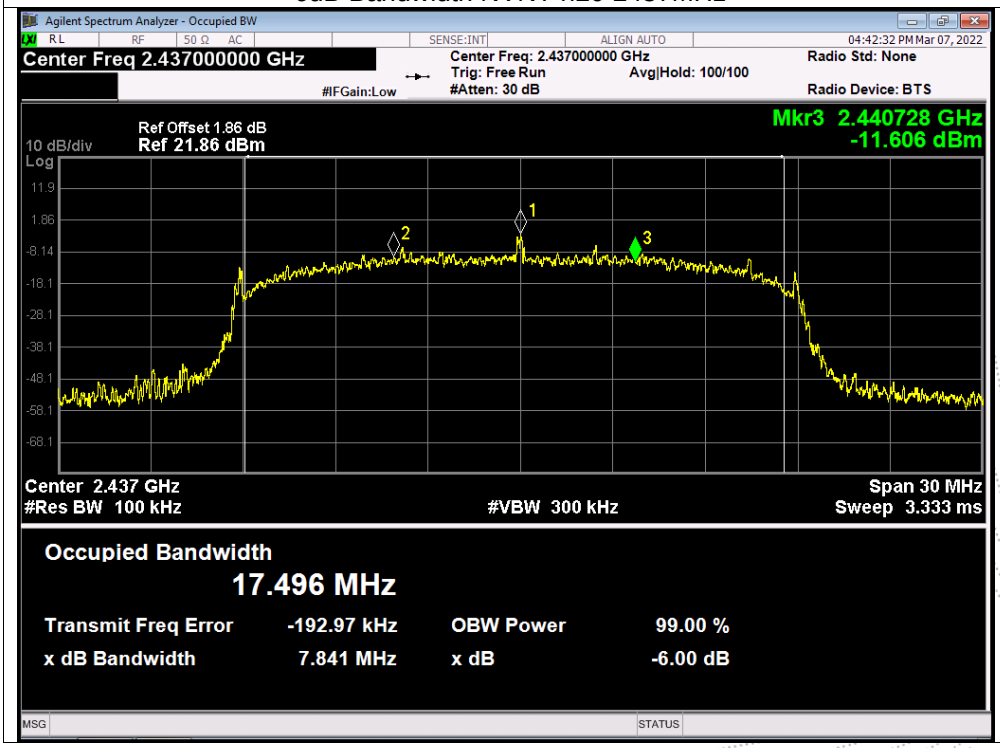
-6dB Bandwidth NVNT g 2462MHz



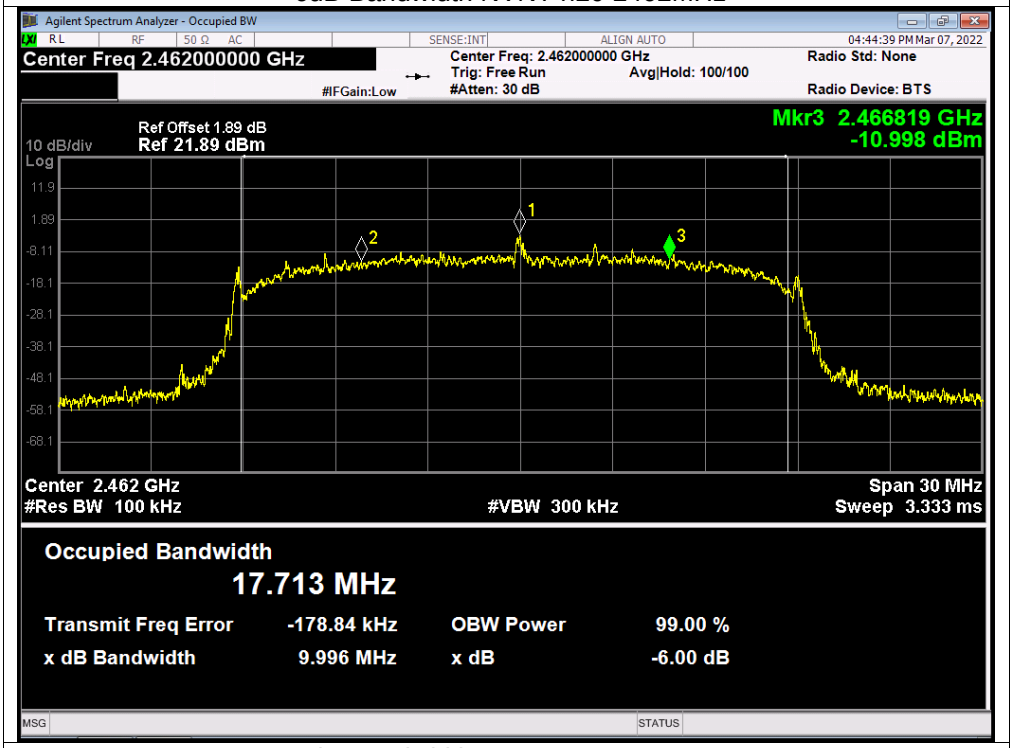
-6dB Bandwidth NVNT n20 2412MHz



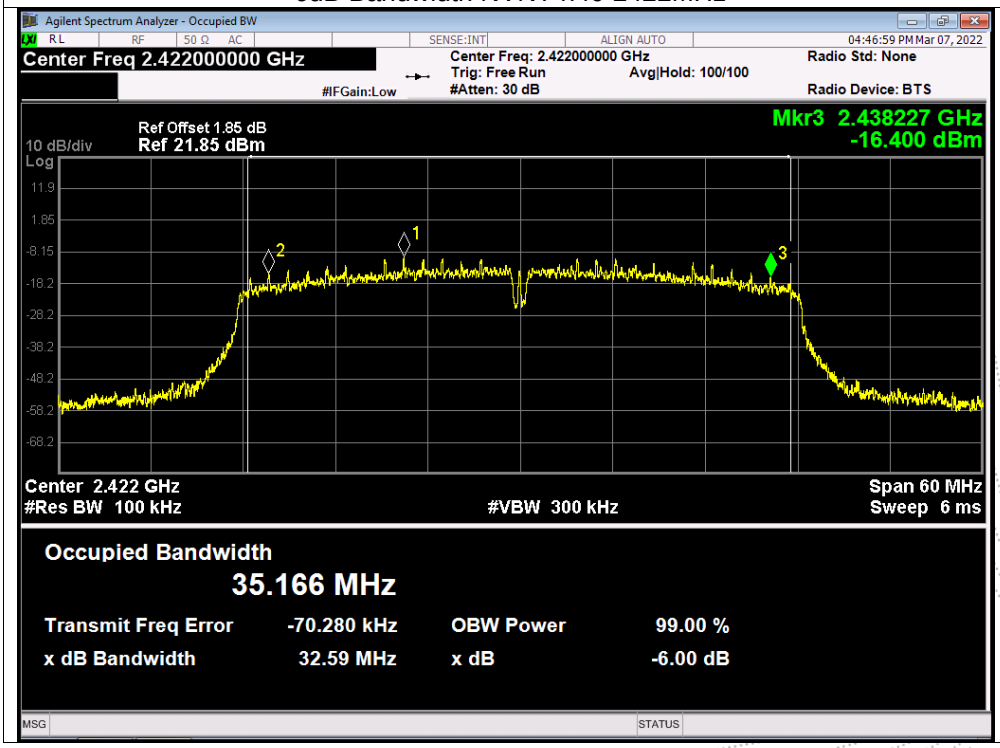
-6dB Bandwidth NVNT n20 2437MHz



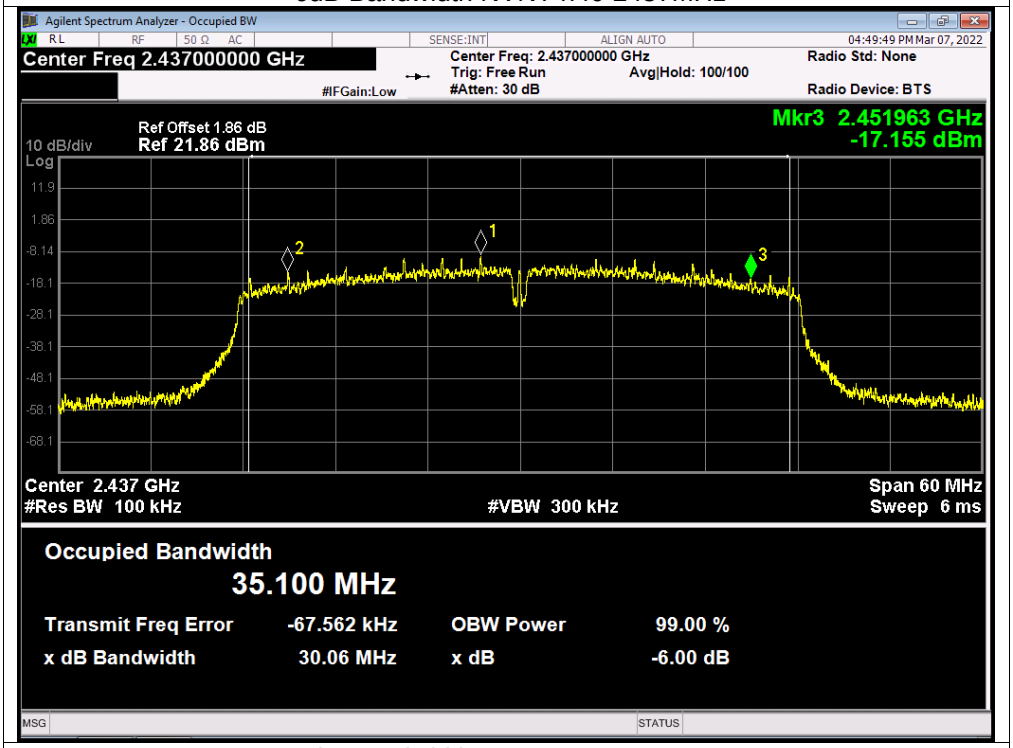
-6dB Bandwidth NVNT n20 2462MHz



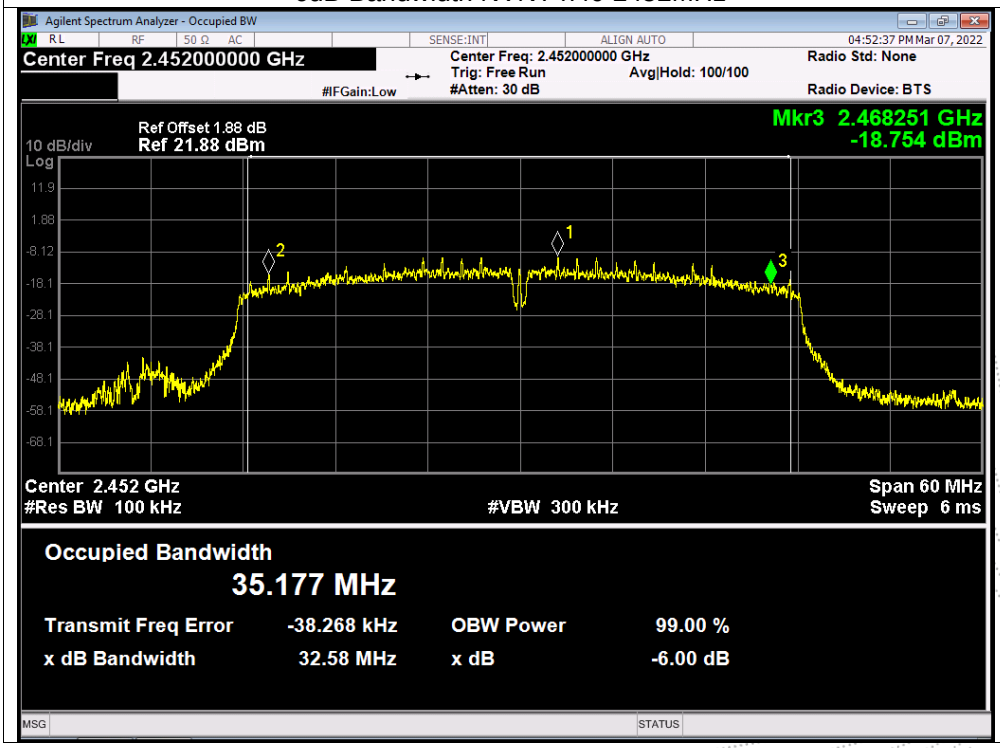
-6dB Bandwidth NVNT n40 2422MHz



-6dB Bandwidth NVNT n40 2437MHz

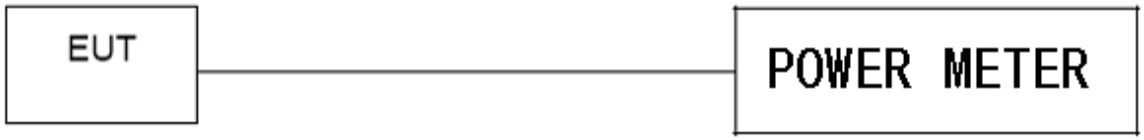


-6dB Bandwidth NVNT n40 2452MHz



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

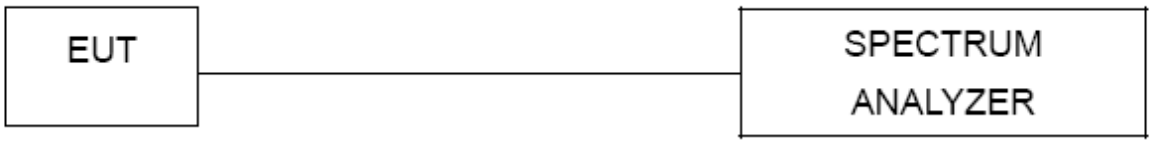
11.5 Test Result

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

Mode	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Verdict
b	2412	13.93	30	Pass
b	2437	13.6	30	Pass
b	2462	13.57	30	Pass
g	2412	9.65	30	Pass
g	2437	9.36	30	Pass
g	2462	9.43	30	Pass
n20	2412	9.75	30	Pass
n20	2437	9.4	30	Pass
n20	2462	9.24	30	Pass
n40	2422	8.04	30	Pass
n40	2437	7.76	30	Pass
n40	2452	7.79	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

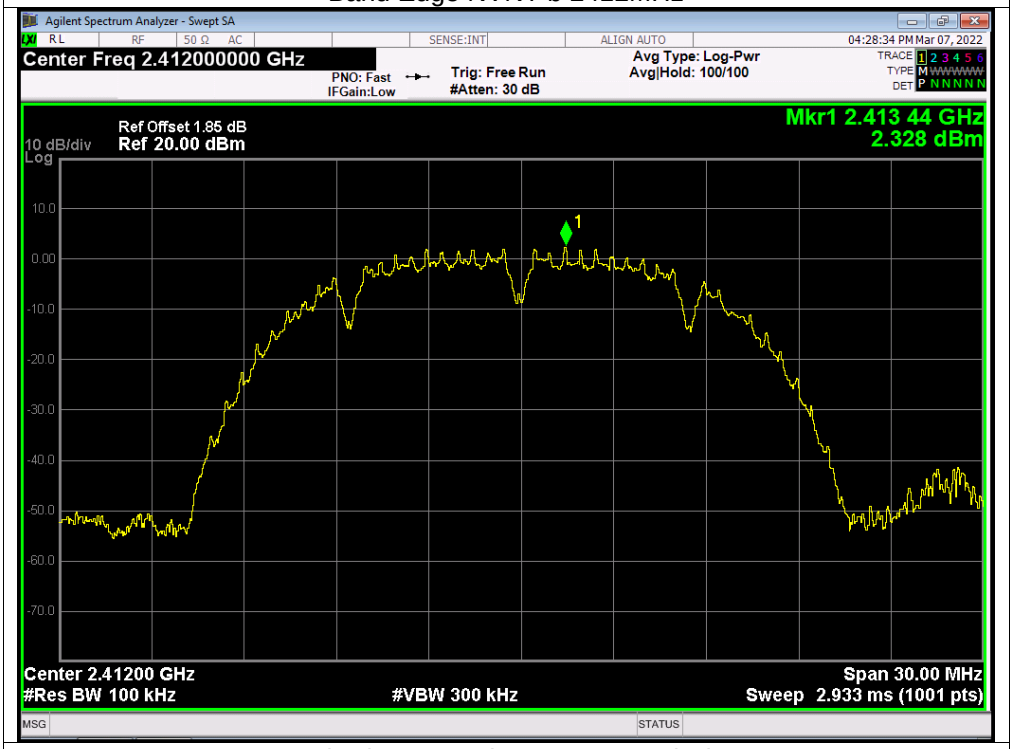
Using the following spectrum analyzer setting:
a) Set the RBW = 100KHz.
b) Set the VBW = 300KHz.
c) Sweep time = auto couple.
d) Detector function = peak.
e) Trace mode = max hold.
f) Allow trace to fully stabilize..

12.4 EUT Operating Conditions

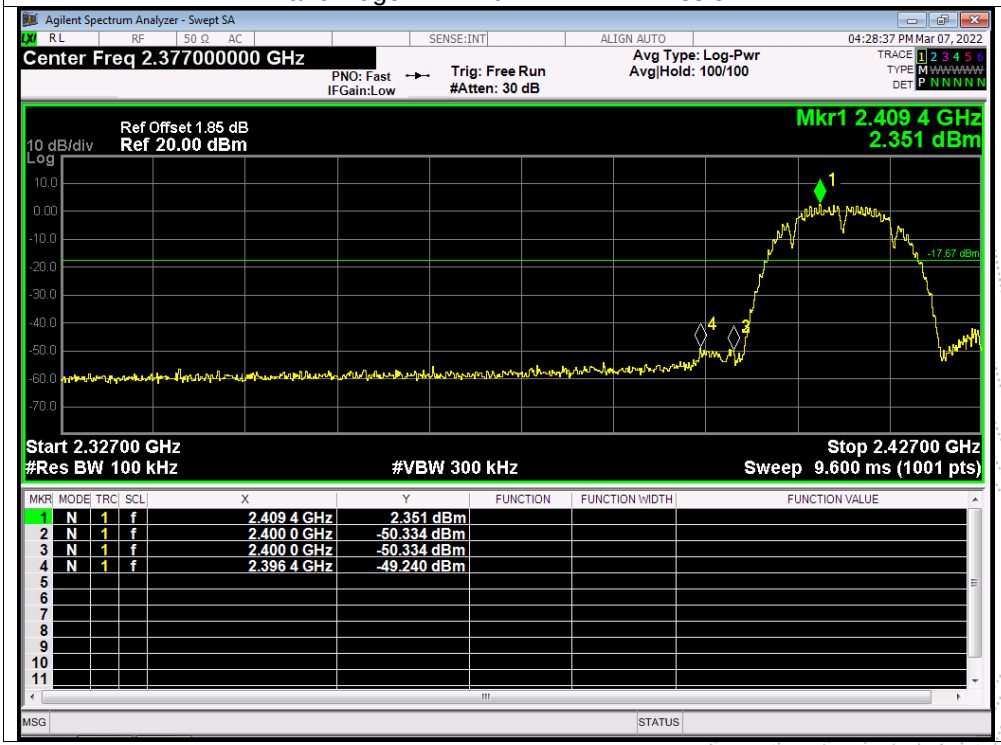
The EUT tested system was configured as the statements of 4.6 Unless otherwise a special operating condition is specified in the follows during the testing.
Note: Power Spectral Density(dBm)=Reading+Cable Loss

12.5 Test Result

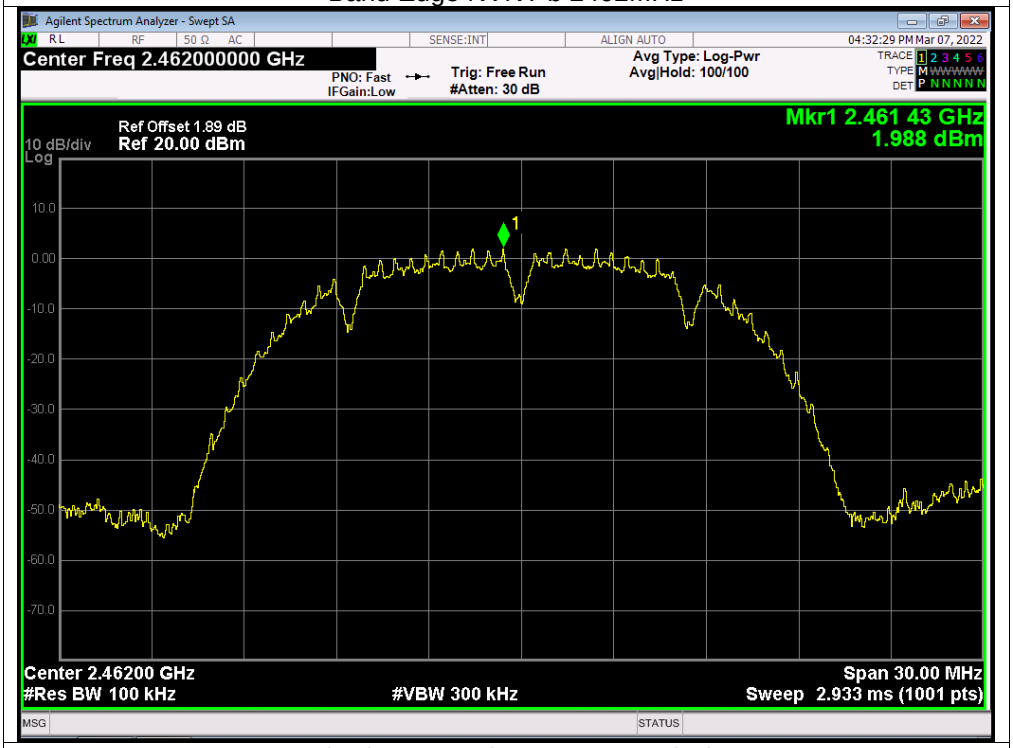
Test Graphs
Band Edge NVNT b 2412MHz



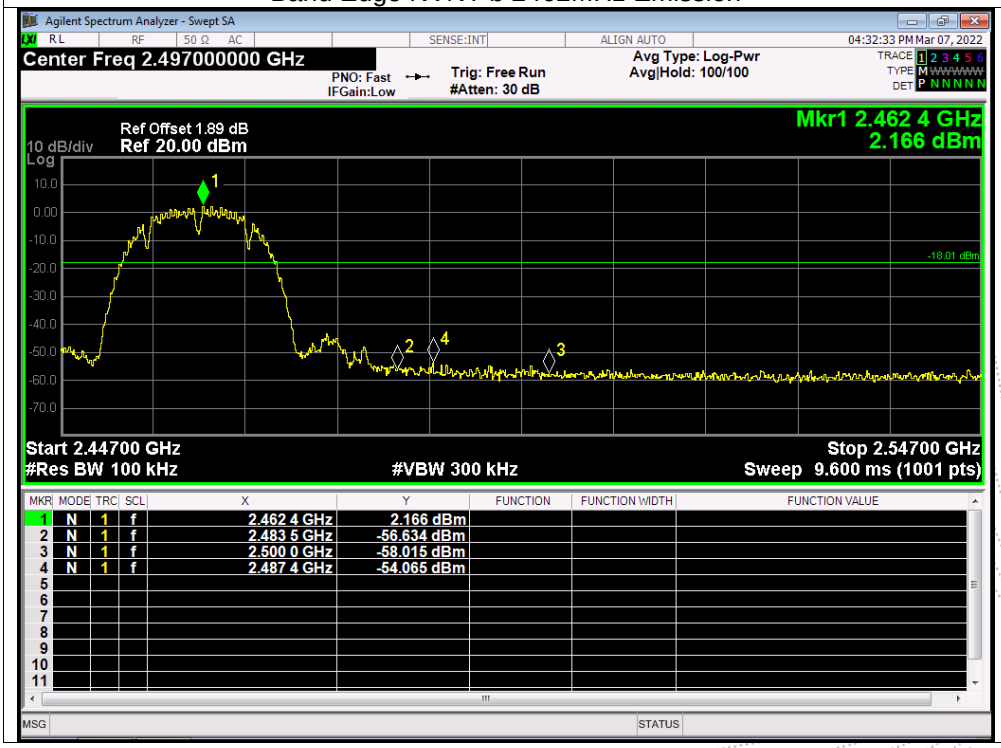
Band Edge NVNT b 2412MHz Emission



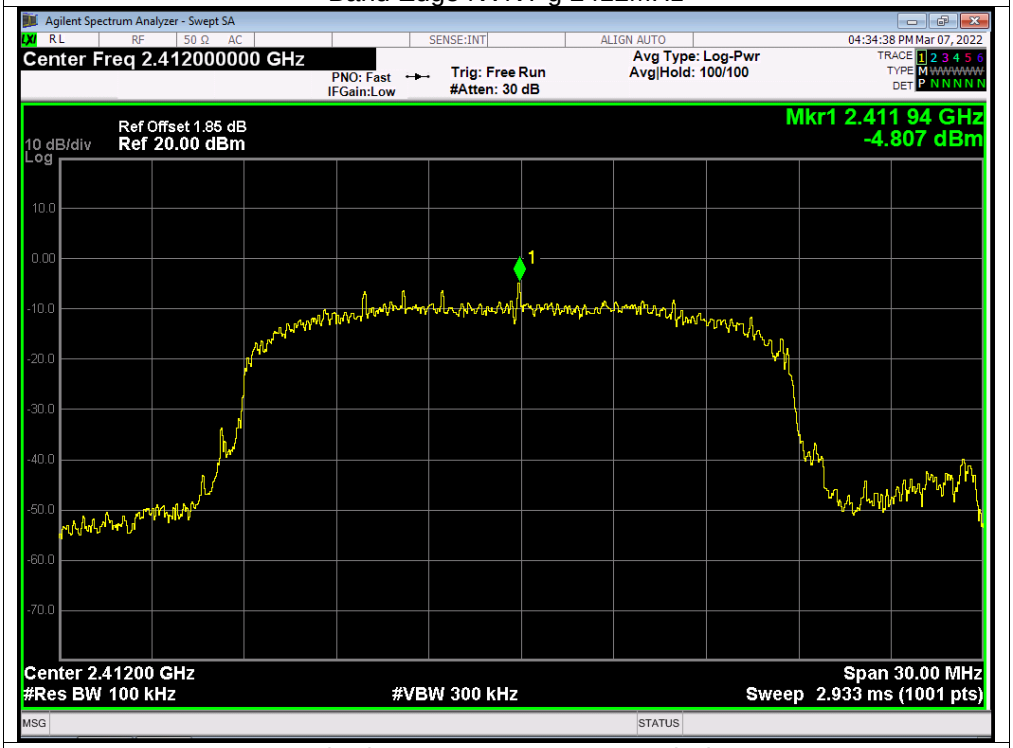
Band Edge NVNT b 2462MHz



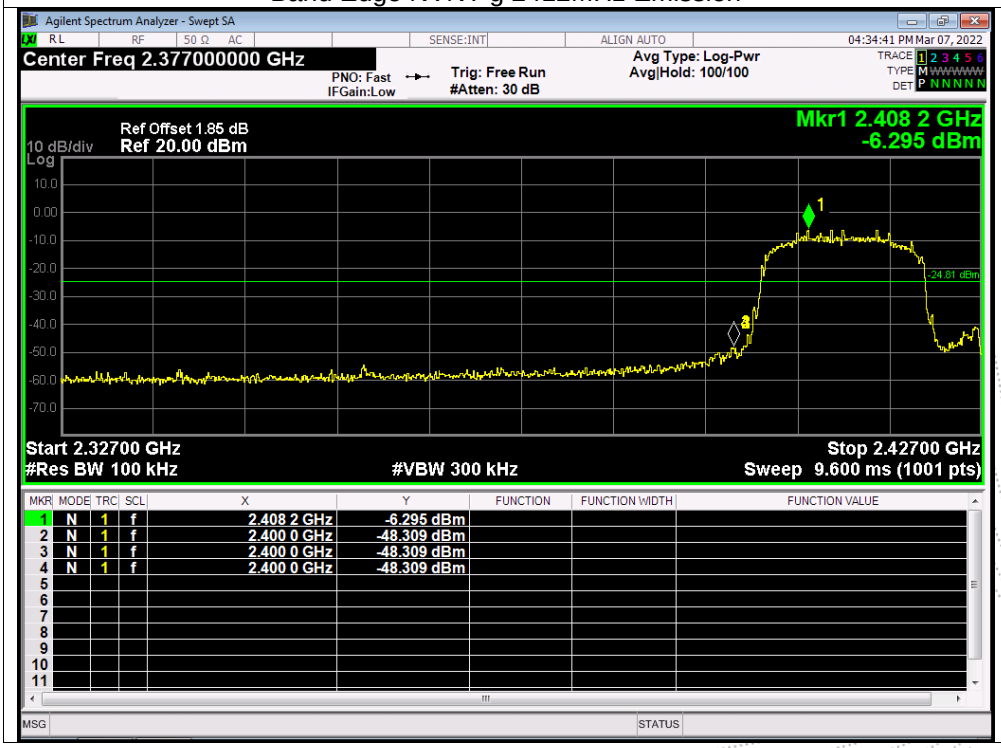
Band Edge NVNT b 2462MHz Emission



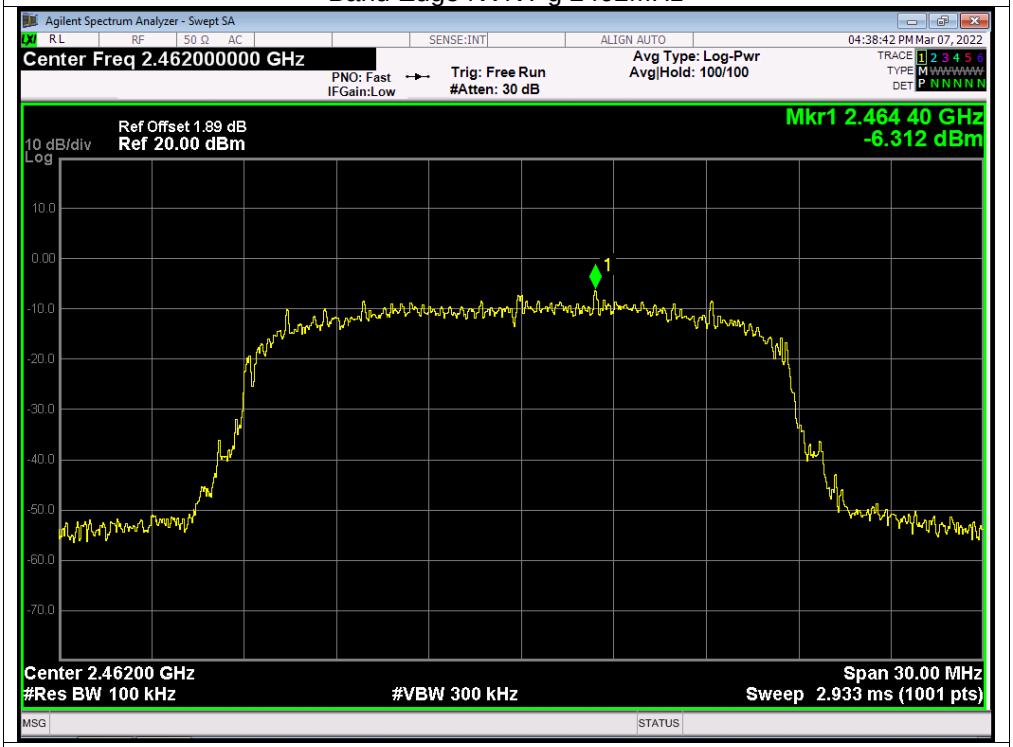
Band Edge NVNT g 2412MHz



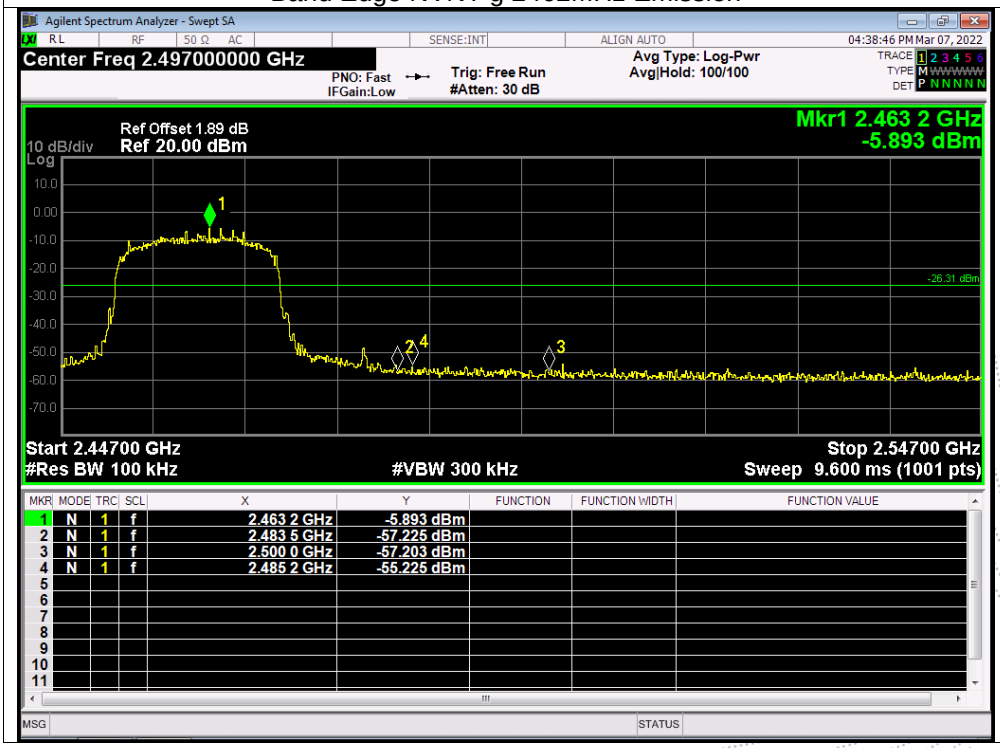
Band Edge NVNT g 2412MHz Emission



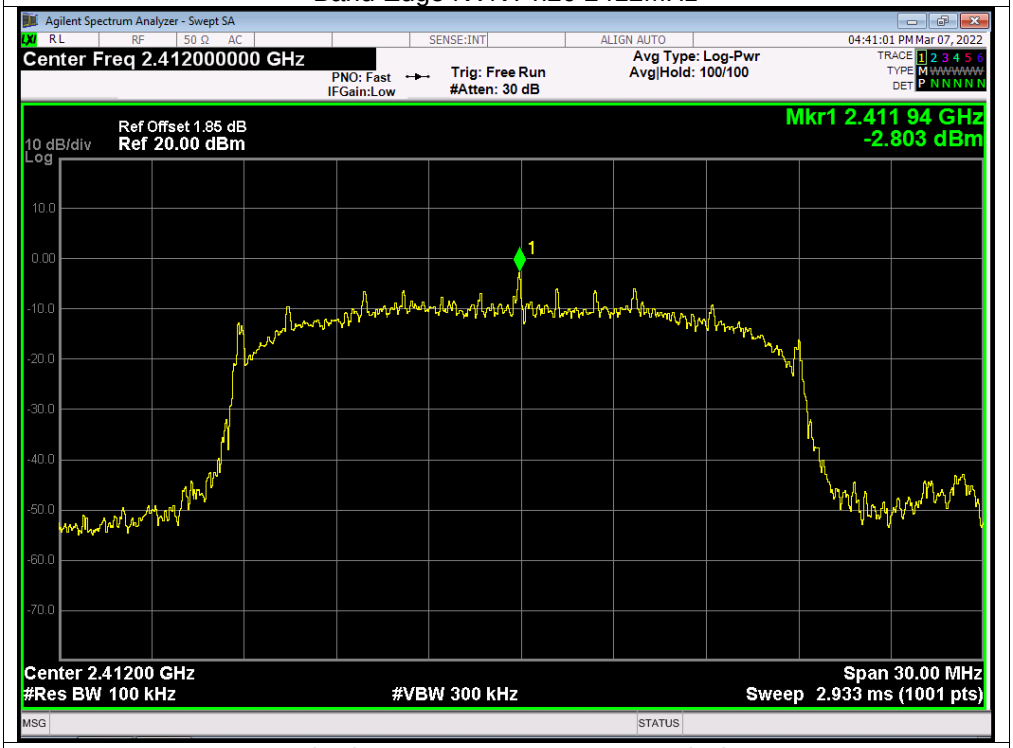
Band Edge NVNT g 2462MHz



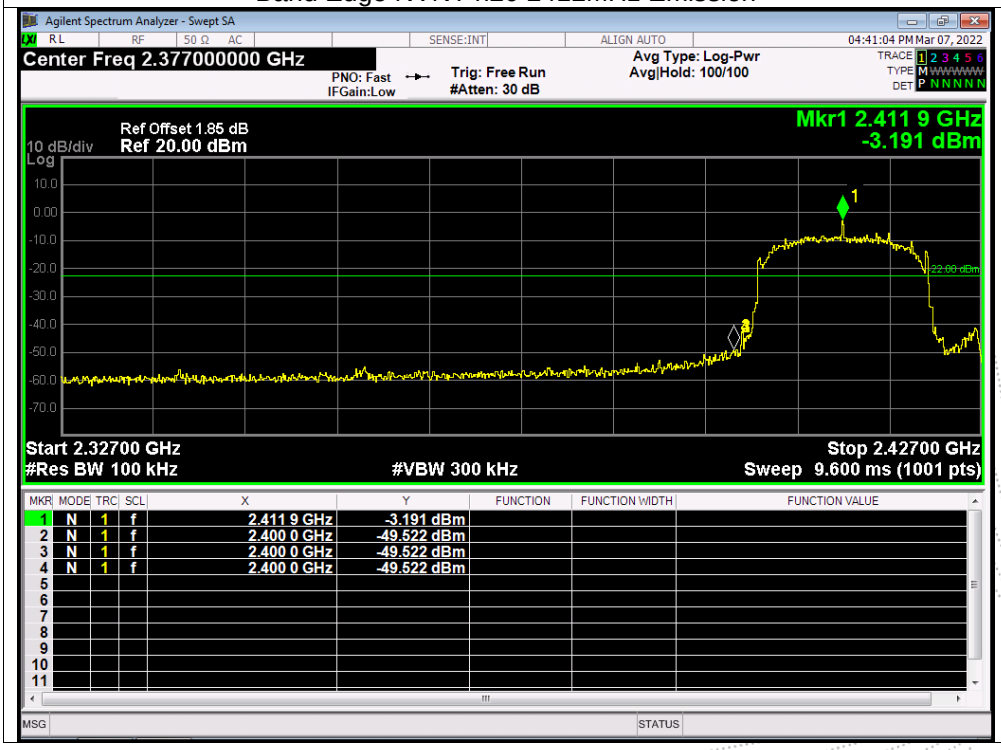
Band Edge NVNT g 2462MHz Emission



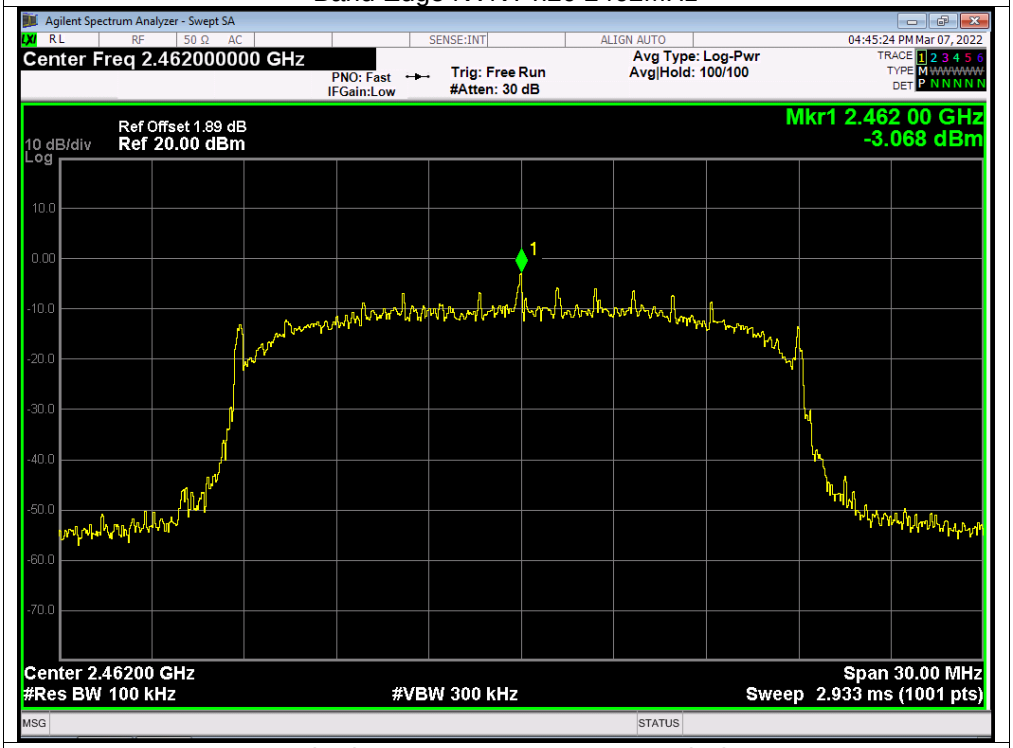
Band Edge NVNT n20 2412MHz



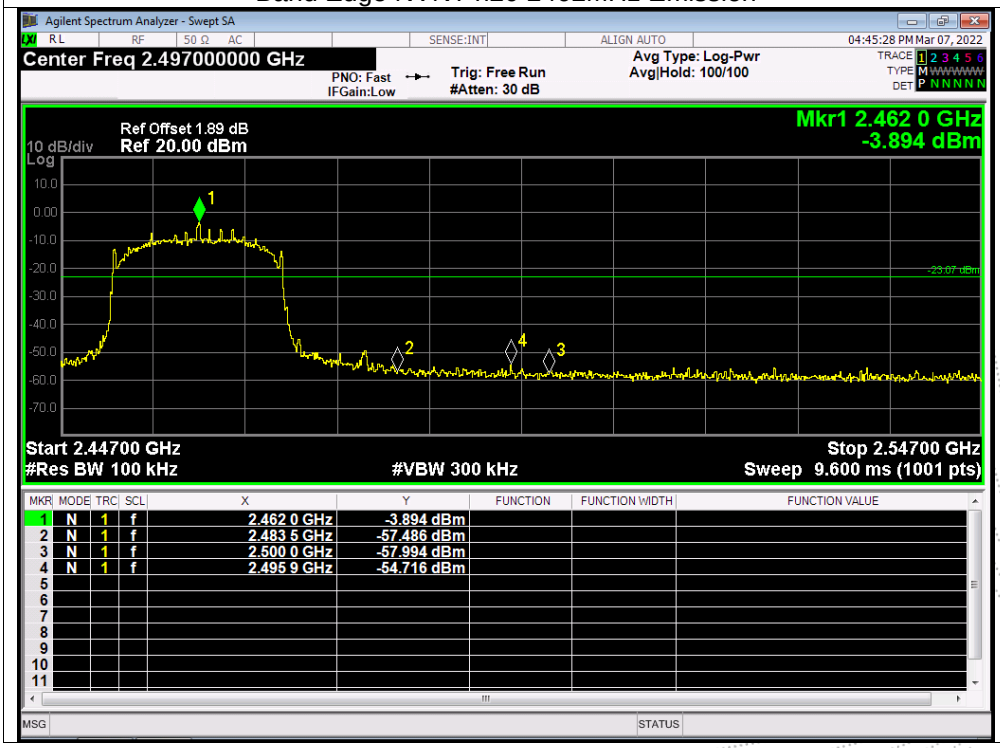
Band Edge NVNT n20 2412MHz Emission



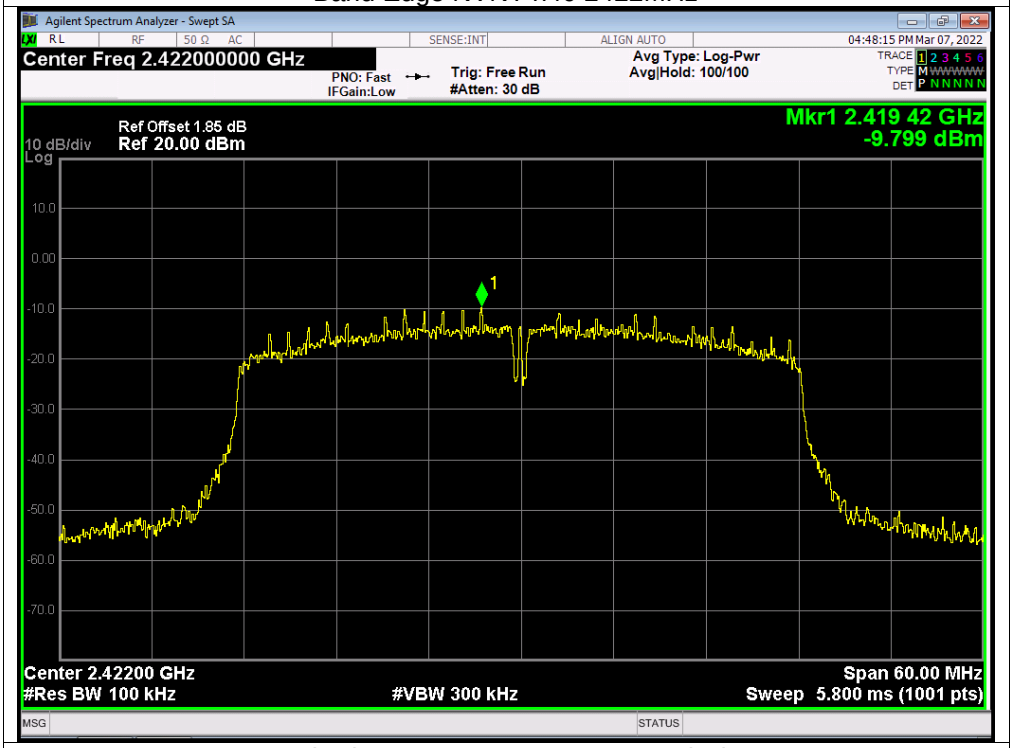
Band Edge NVNT n20 2462MHz



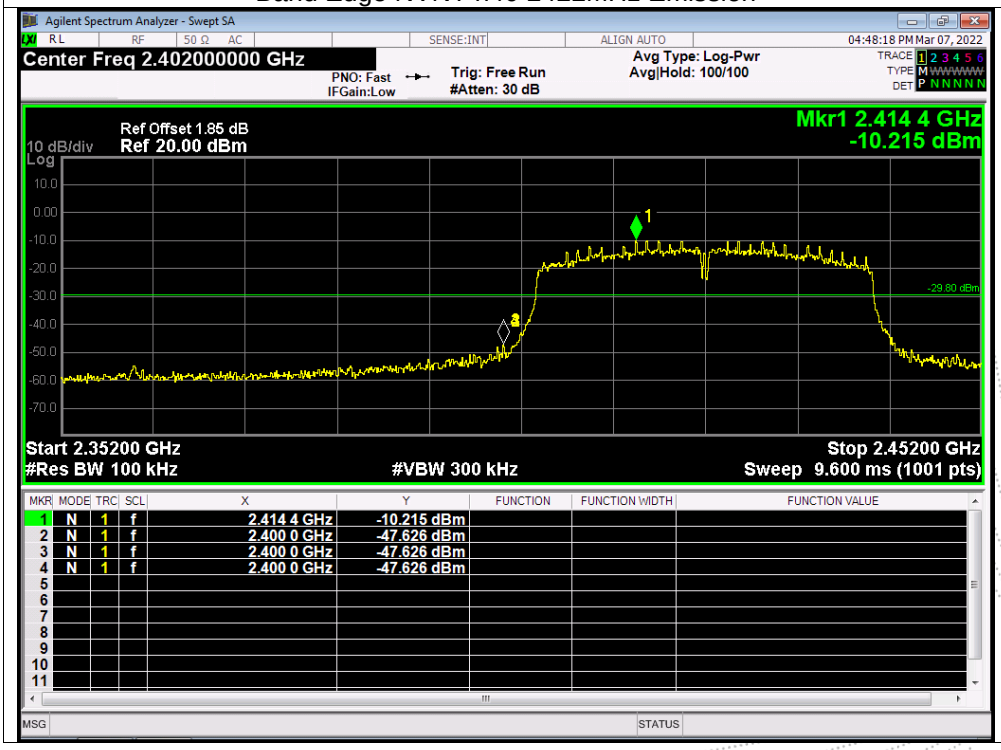
Band Edge NVNT n20 2462MHz Emission



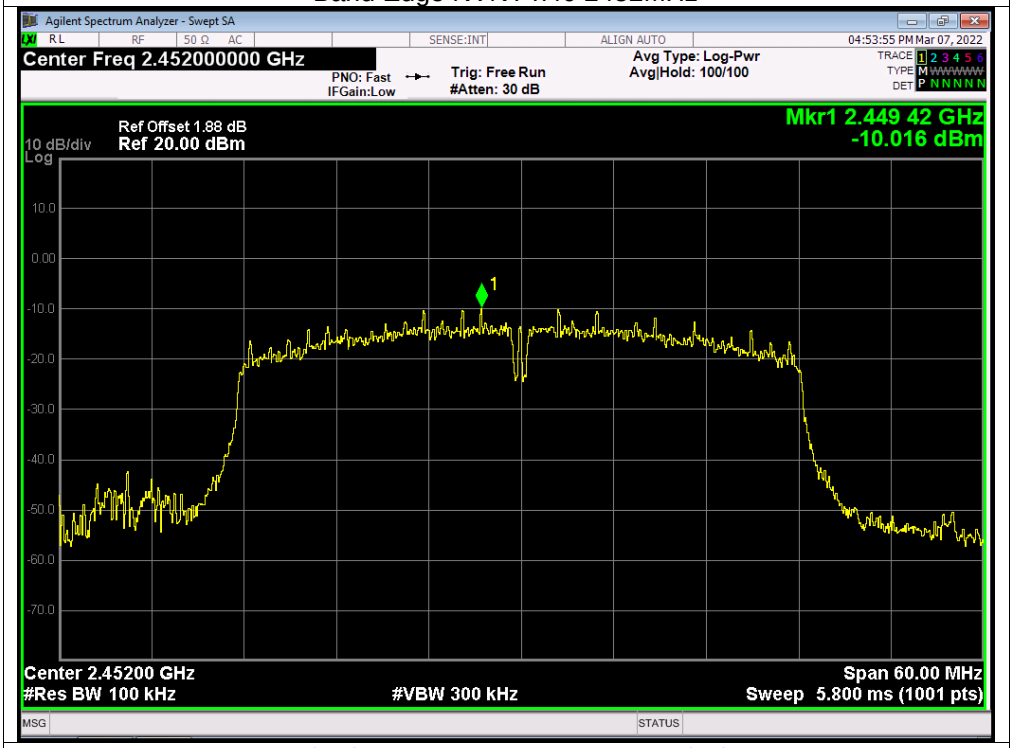
Band Edge NVNT n40 2422MHz



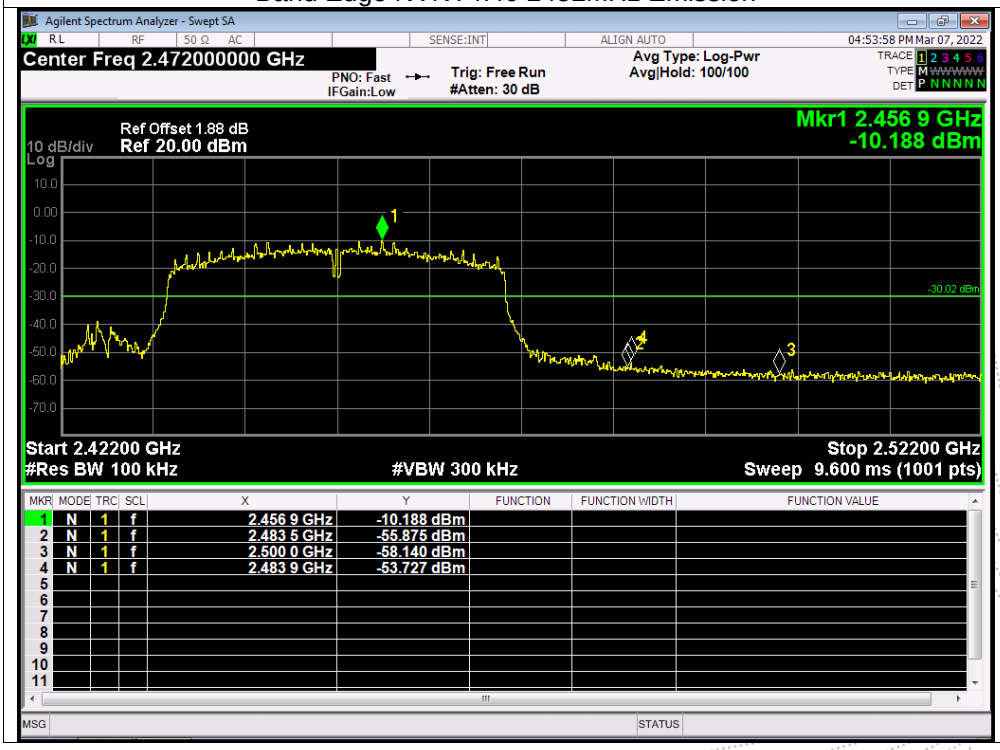
Band Edge NVNT n40 2422MHz Emission



Band Edge NVNT n40 2452MHz

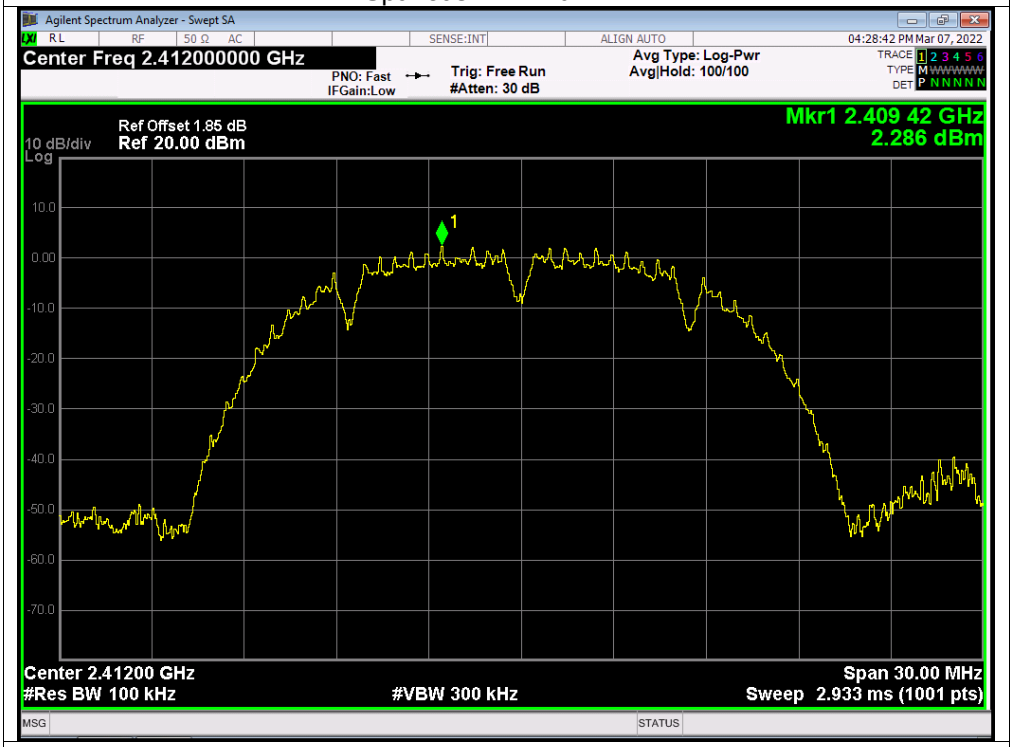


Band Edge NVNT n40 2452MHz Emission

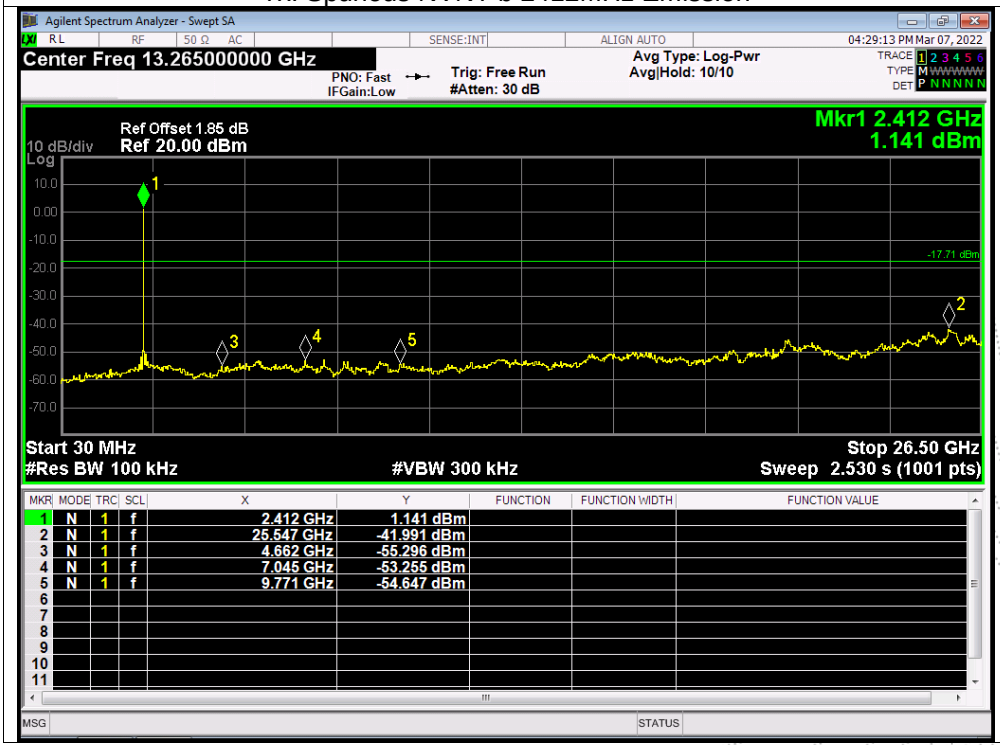


Test Graphs

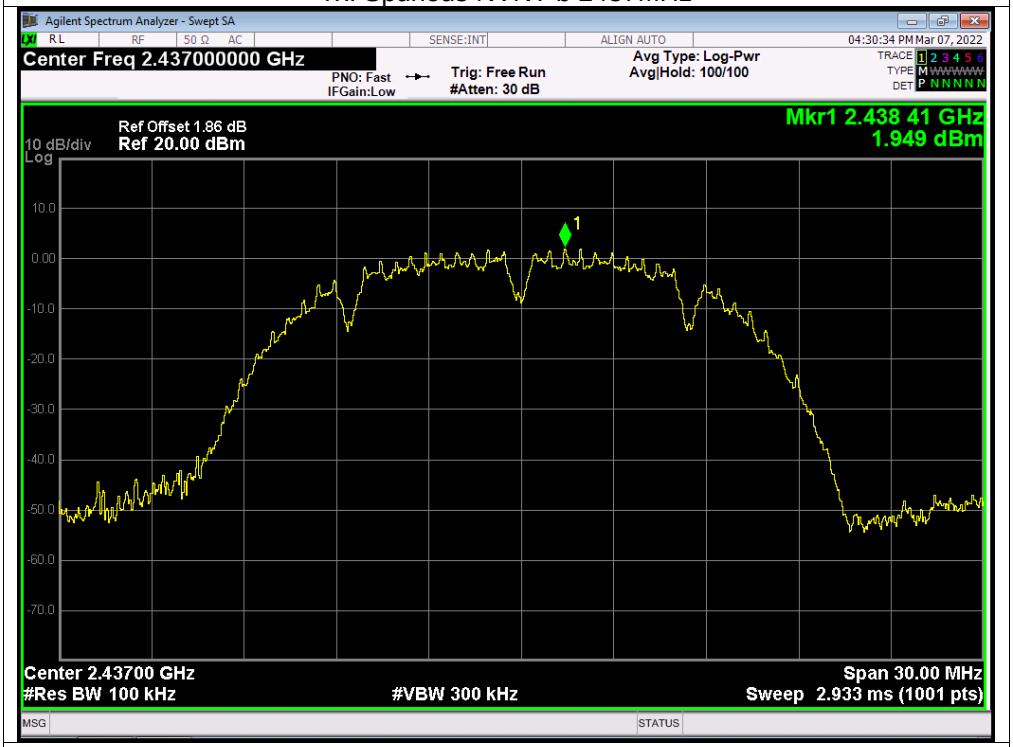
Tx. Spurious NVNT b 2412MHz



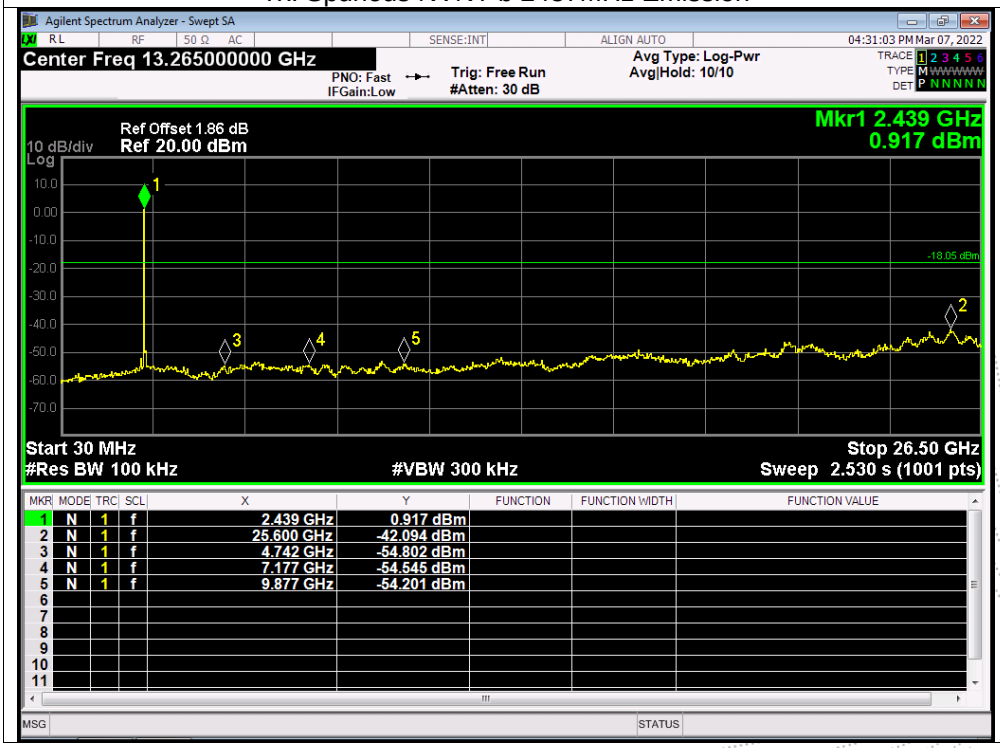
Tx. Spurious NVNT b 2412MHz Emission



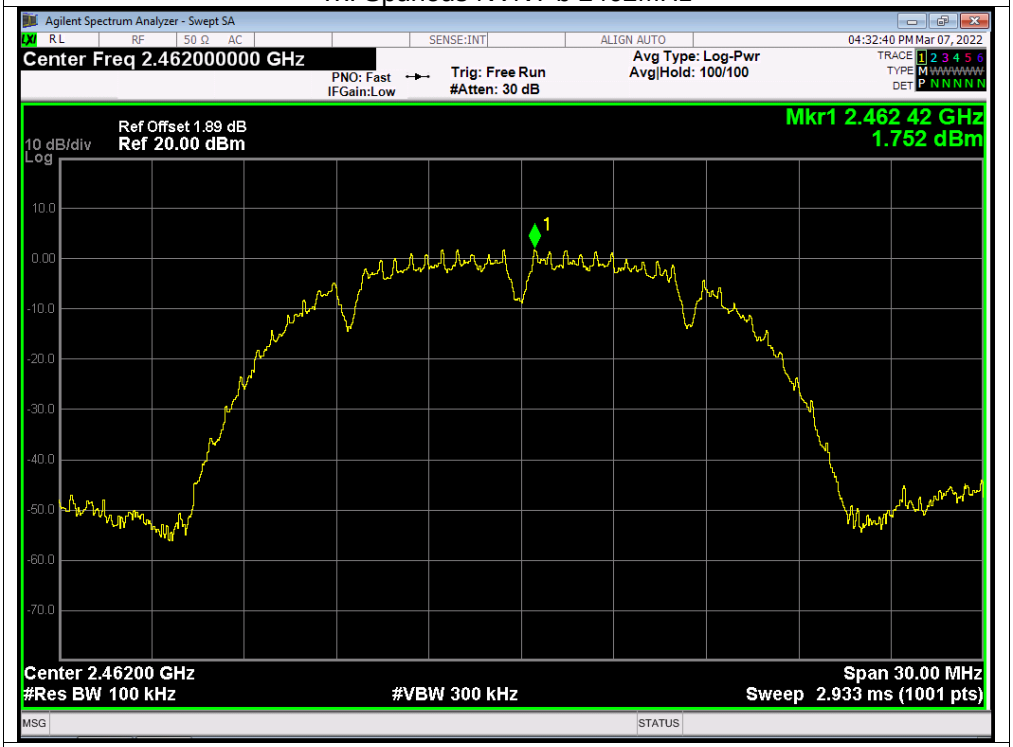
Tx. Spurious NVNT b 2437MHz



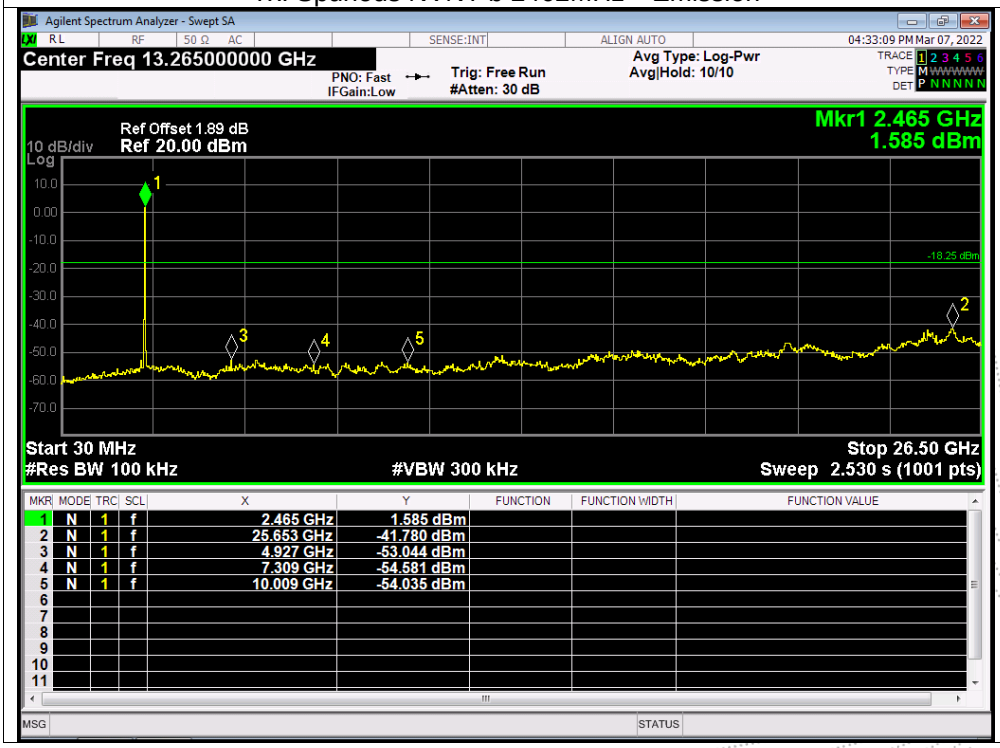
Tx. Spurious NVNT b 2437MHz Emission



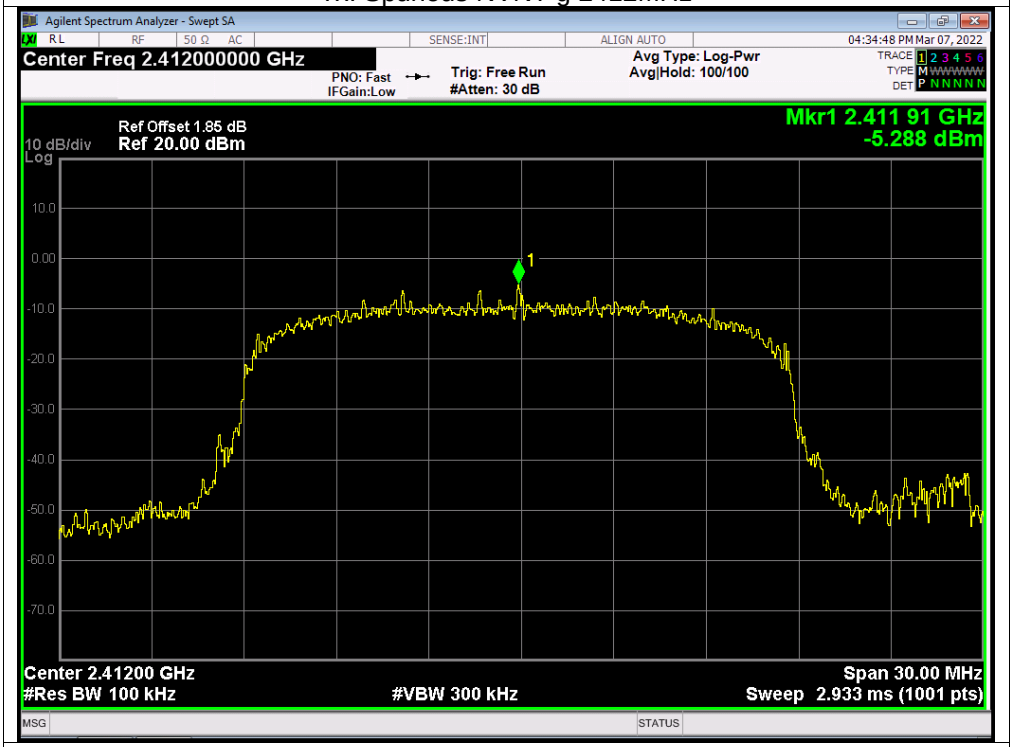
Tx. Spurious NVNT b 2462MHz



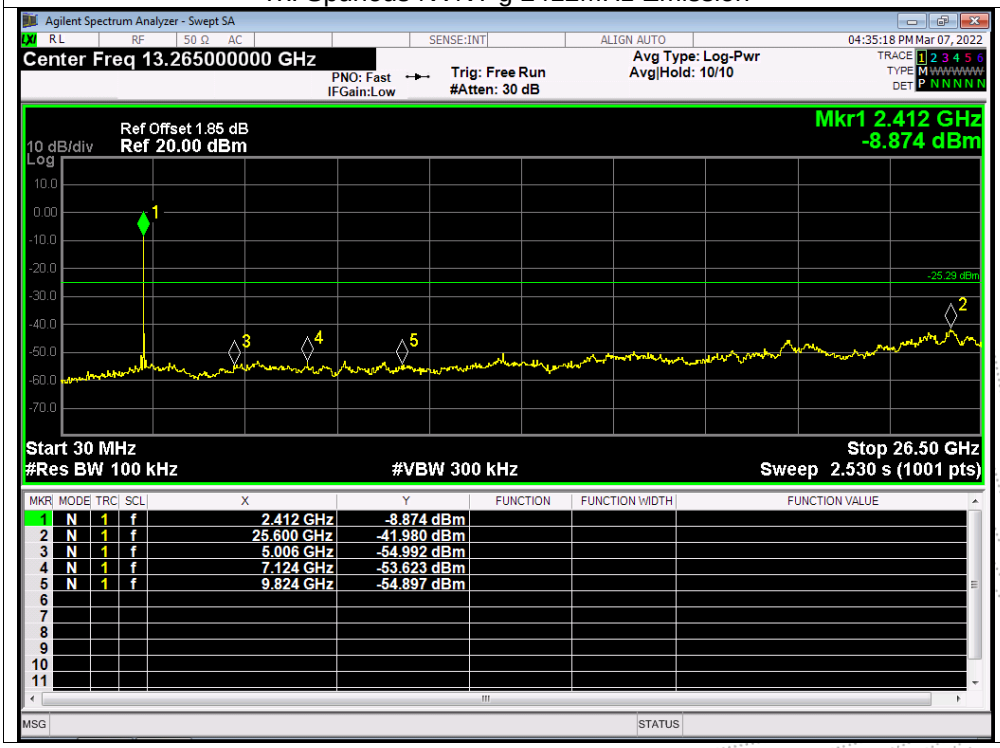
Tx. Spurious NVNT b 2462MHz Emission



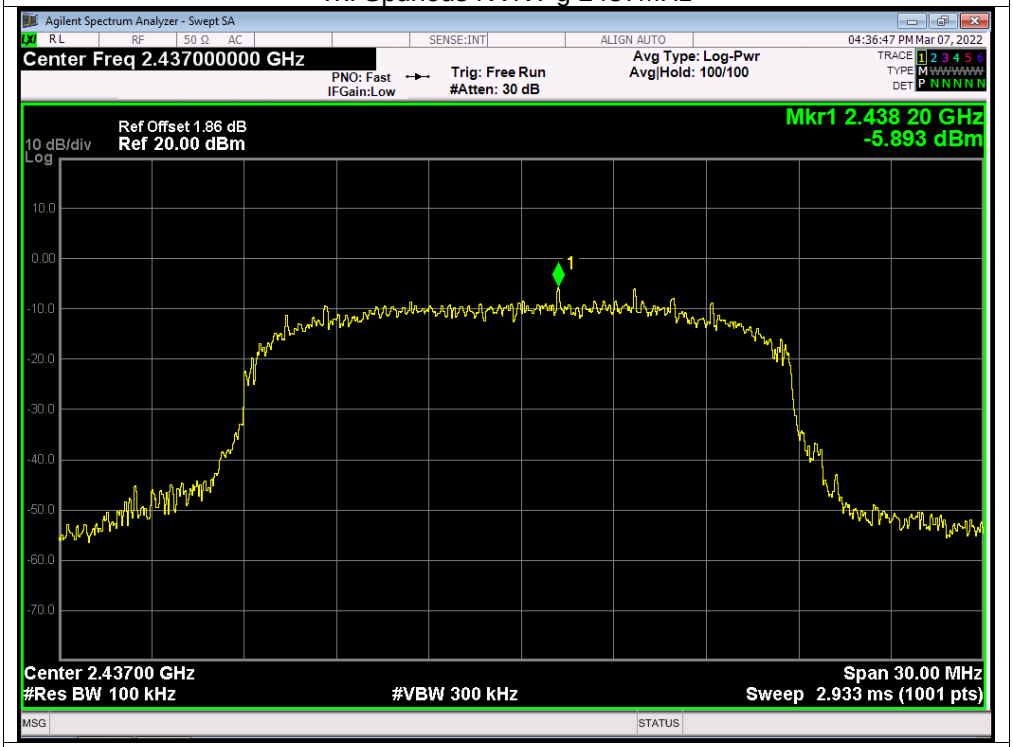
Tx. Spurious NVNT g 2412MHz



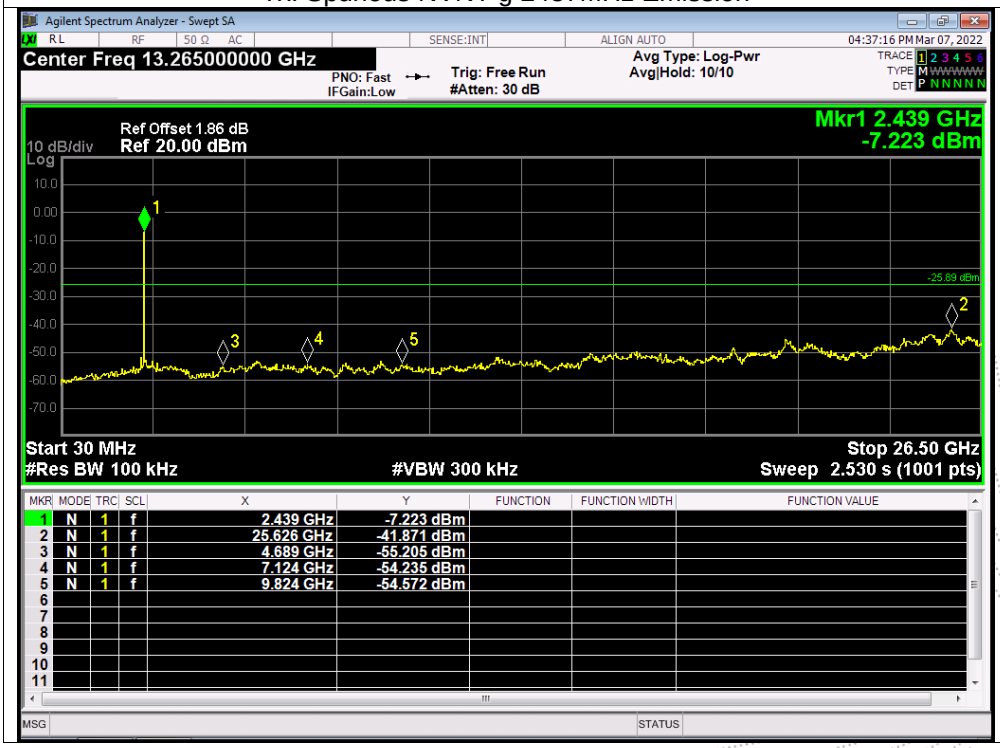
Tx. Spurious NVNT g 2412MHz Emission



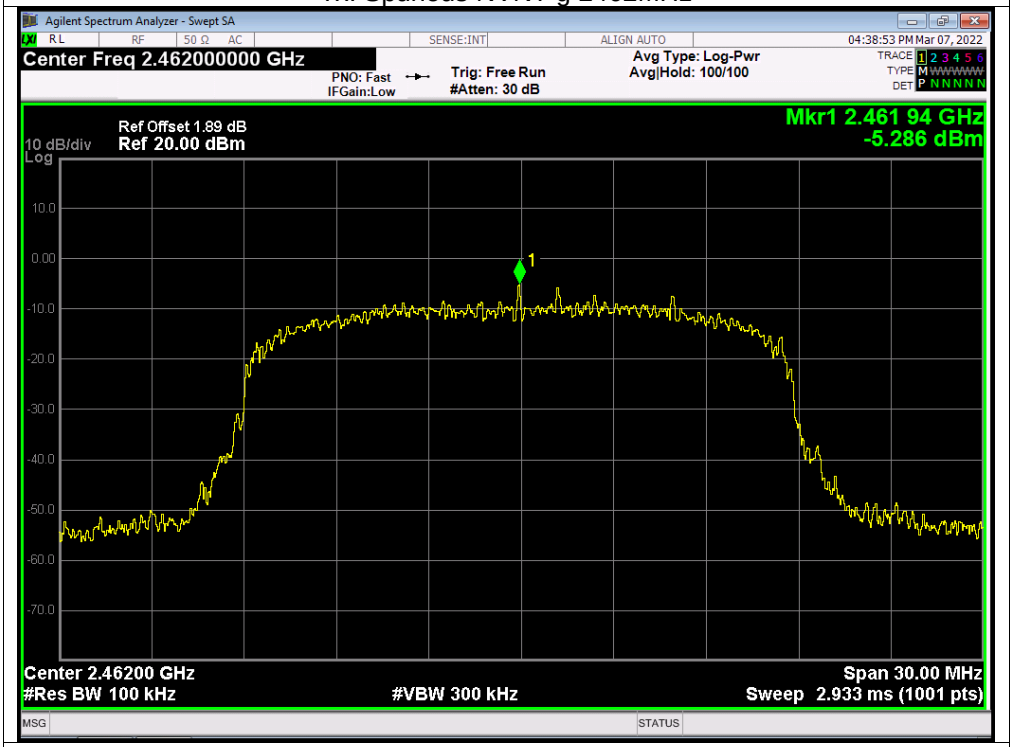
Tx. Spurious NVNT g 2437MHz



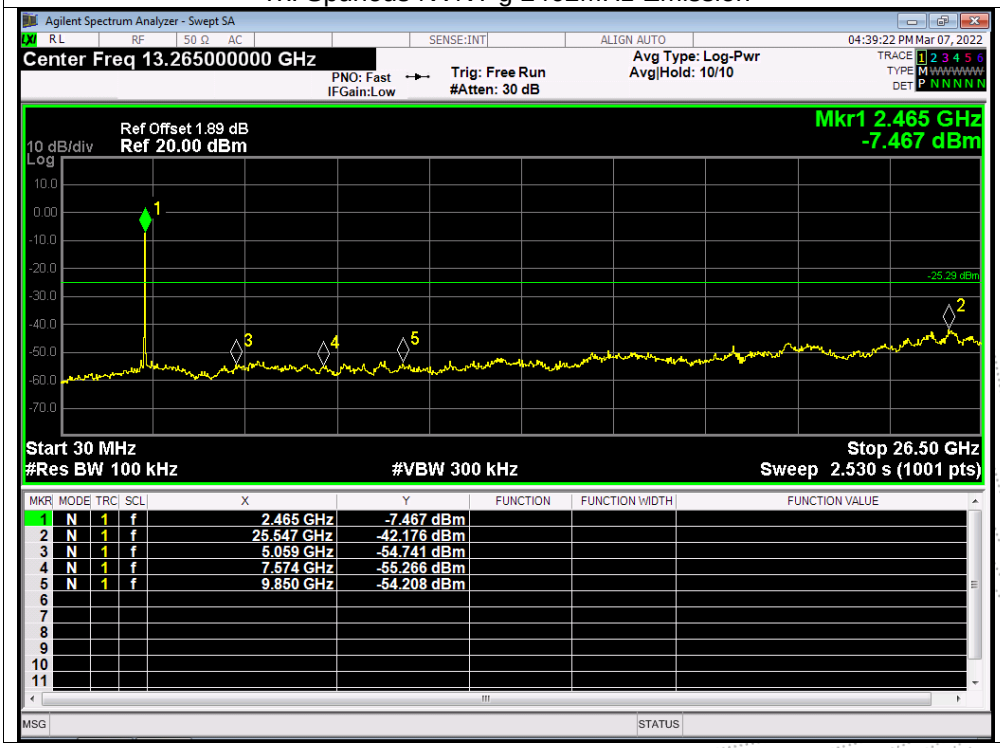
Tx. Spurious NVNT g 2437MHz Emission



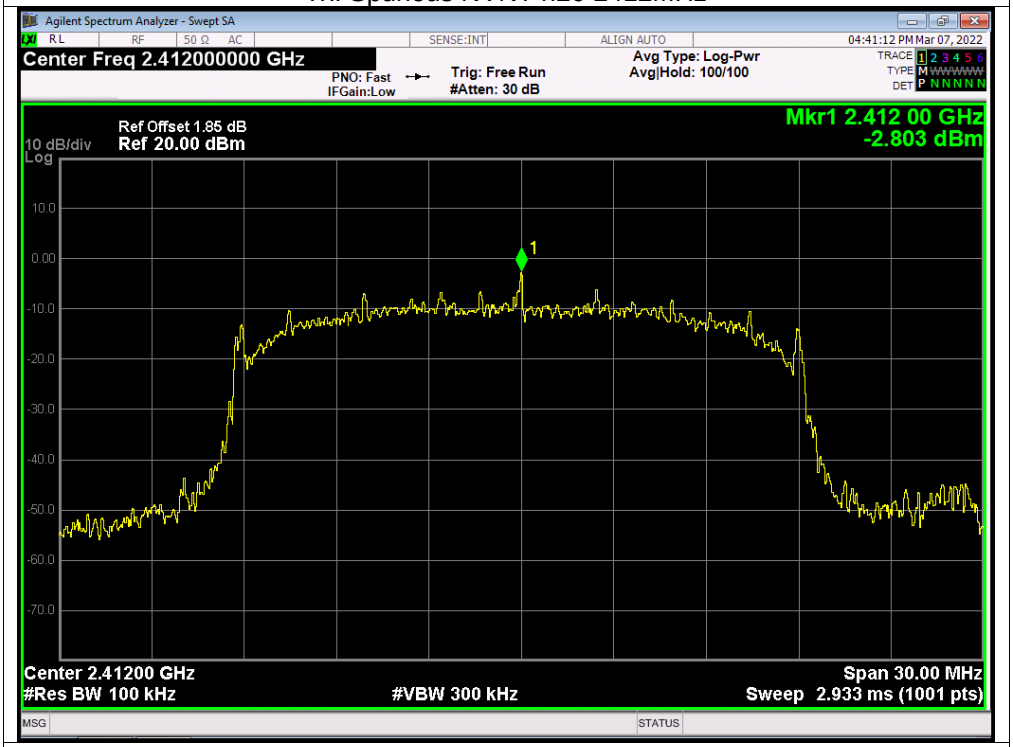
Tx. Spurious NVNT g 2462MHz



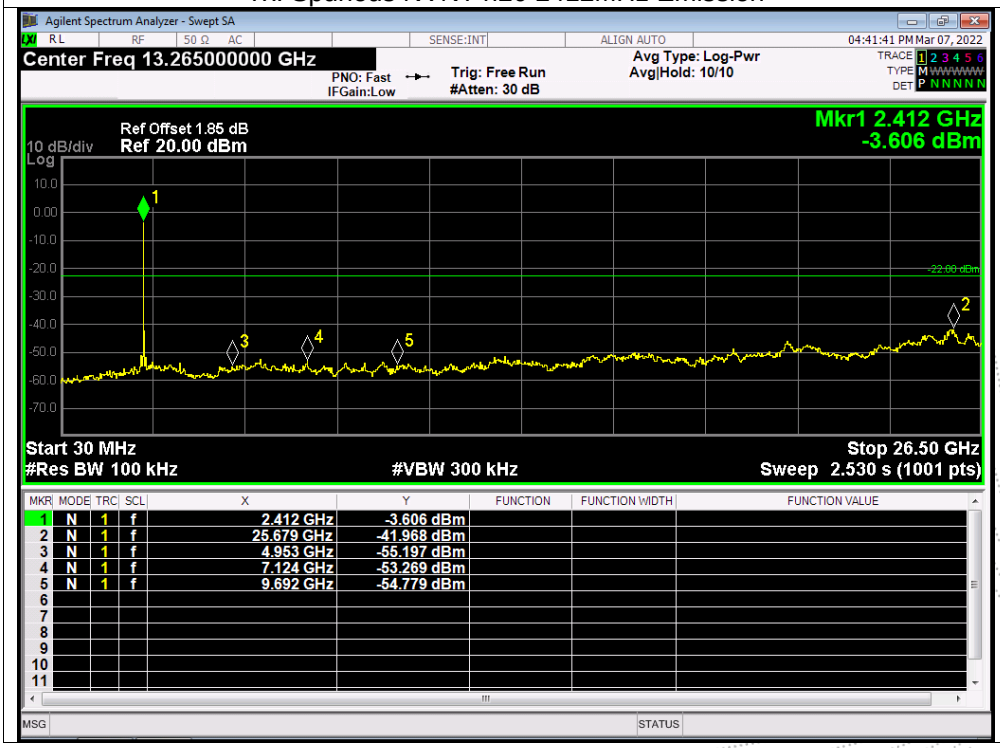
Tx. Spurious NVNT g 2462MHz Emission



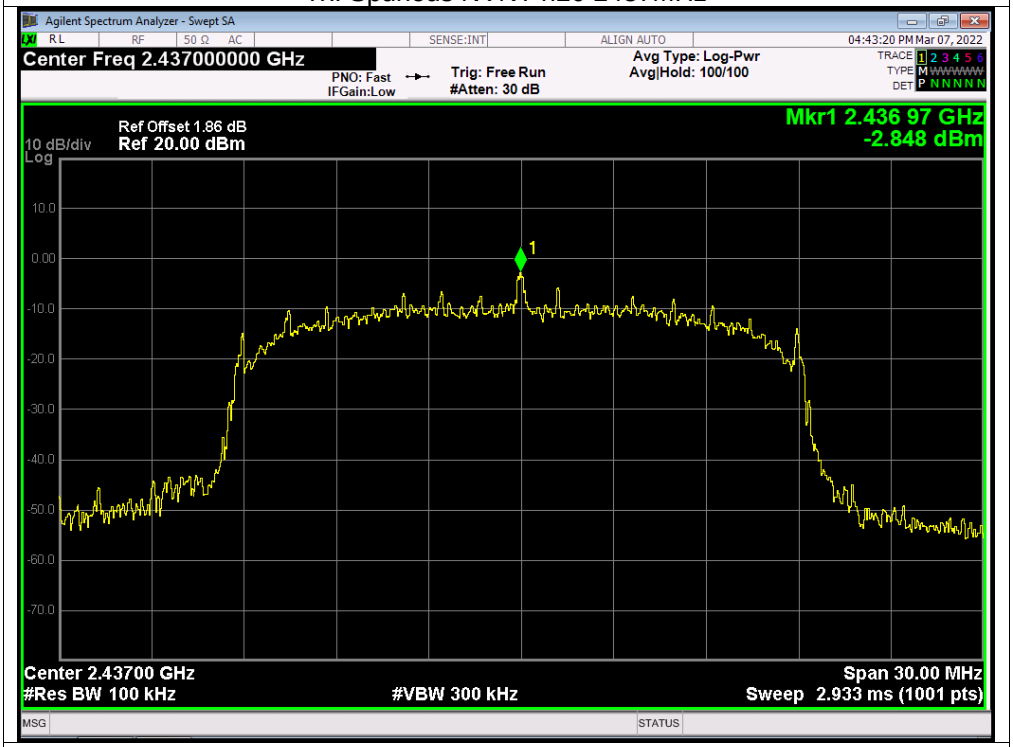
Tx. Spurious NVNT n20 2412MHz



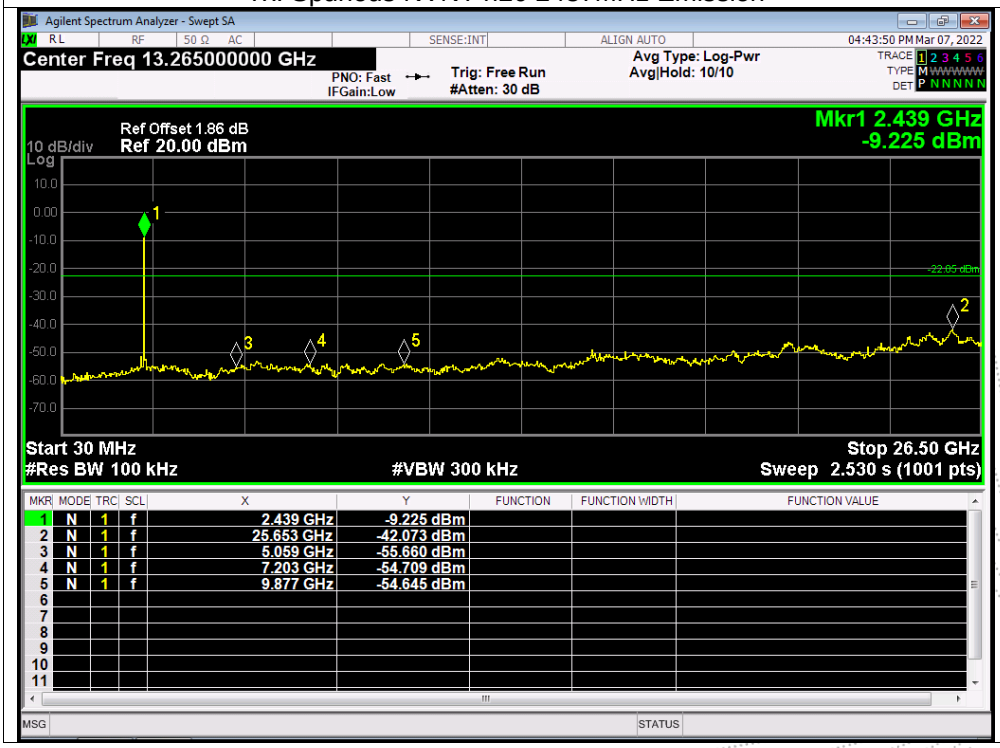
Tx. Spurious NVNT n20 2412MHz Emission



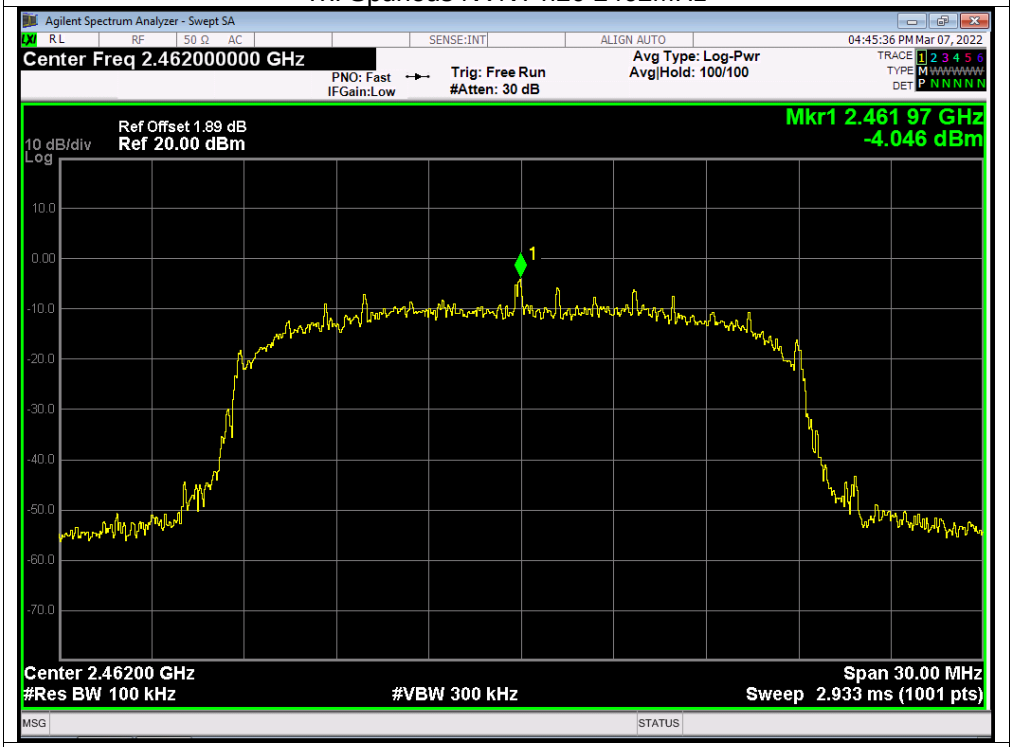
Tx. Spurious NVNT n20 2437MHz



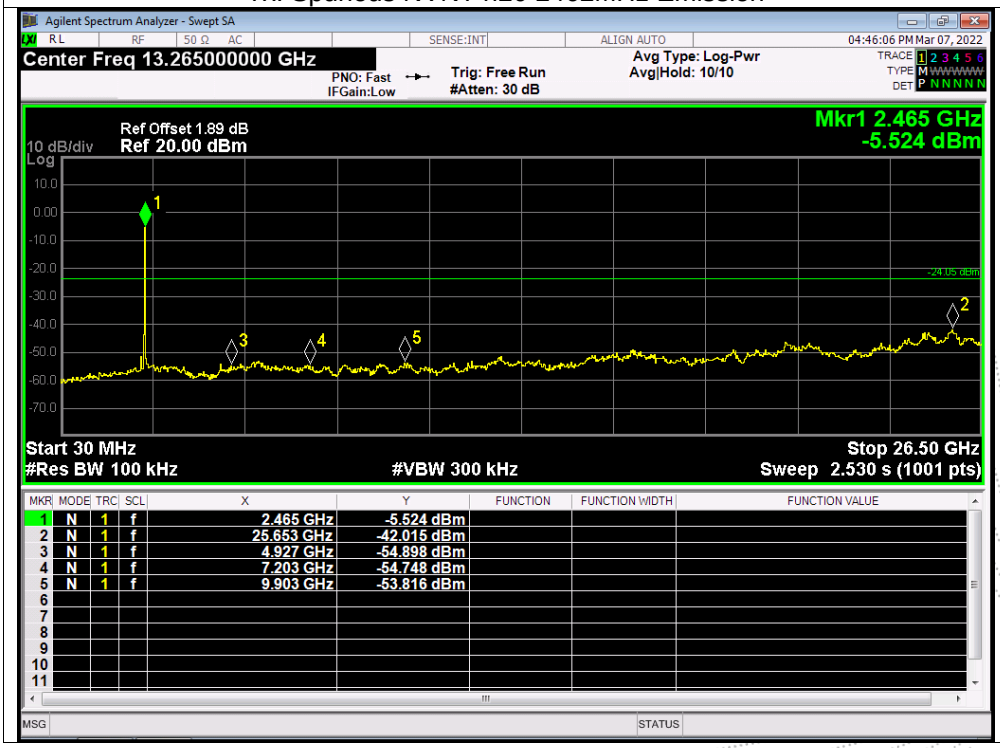
Tx. Spurious NVNT n20 2437MHz Emission



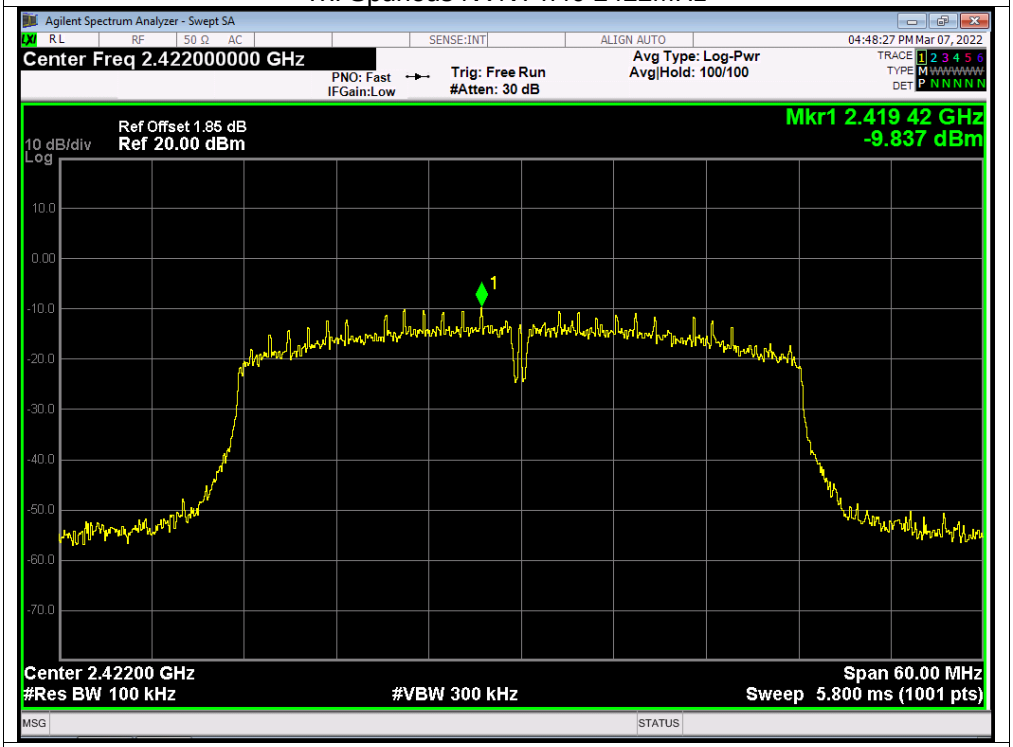
Tx. Spurious NVNT n20 2462MHz



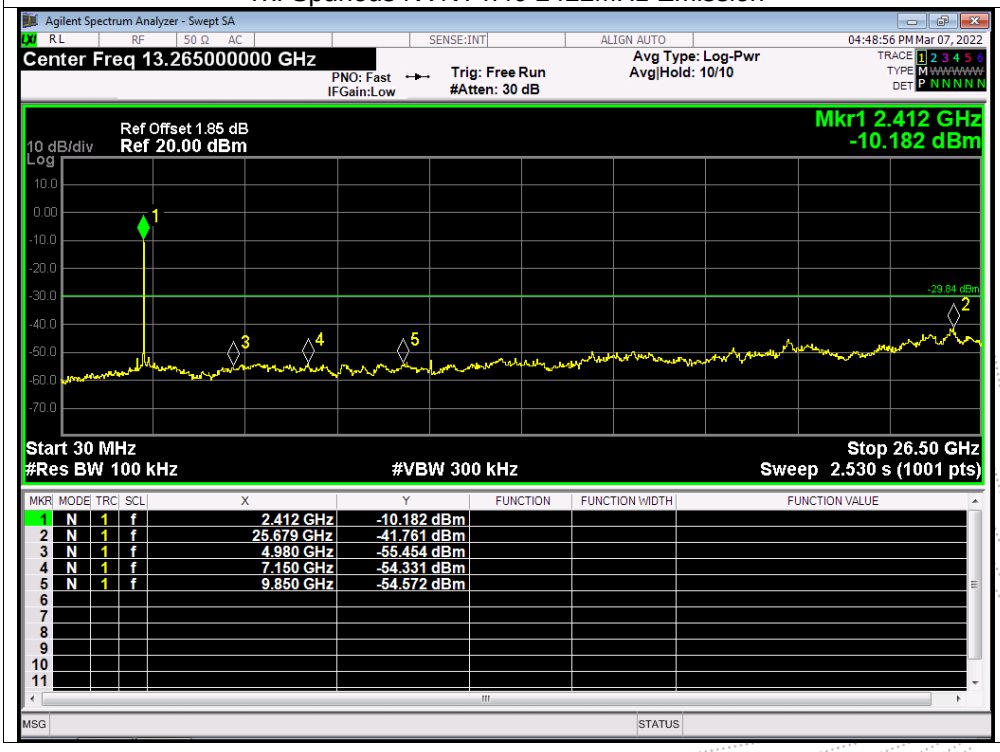
Tx. Spurious NVNT n20 2462MHz Emission



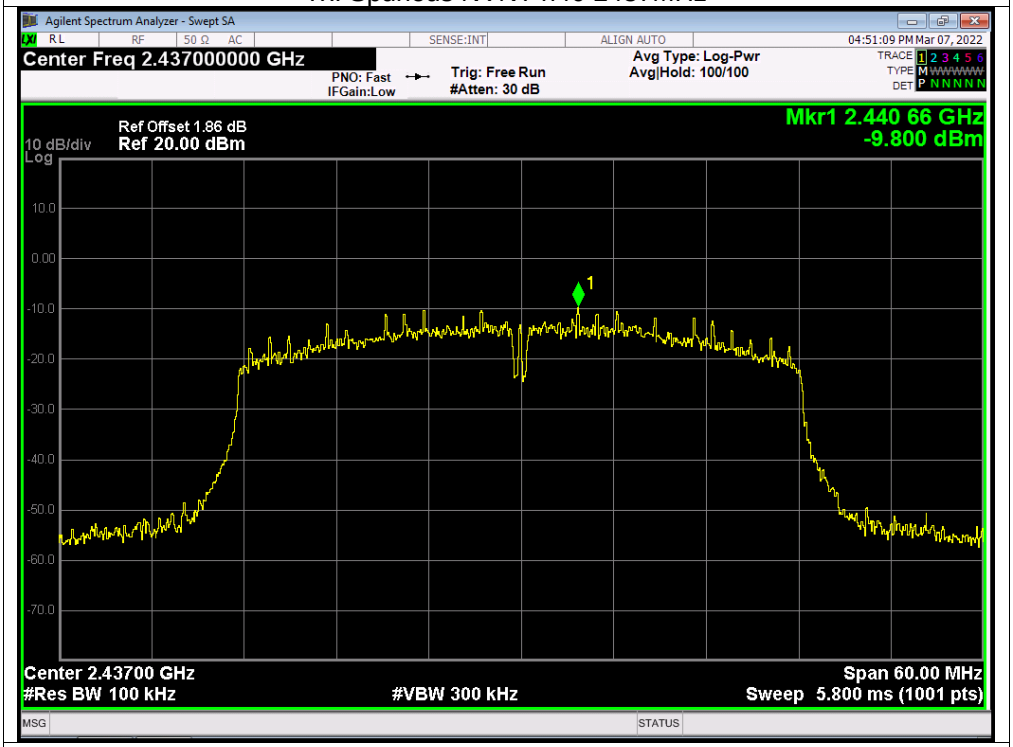
Tx. Spurious NVNT n40 2422MHz



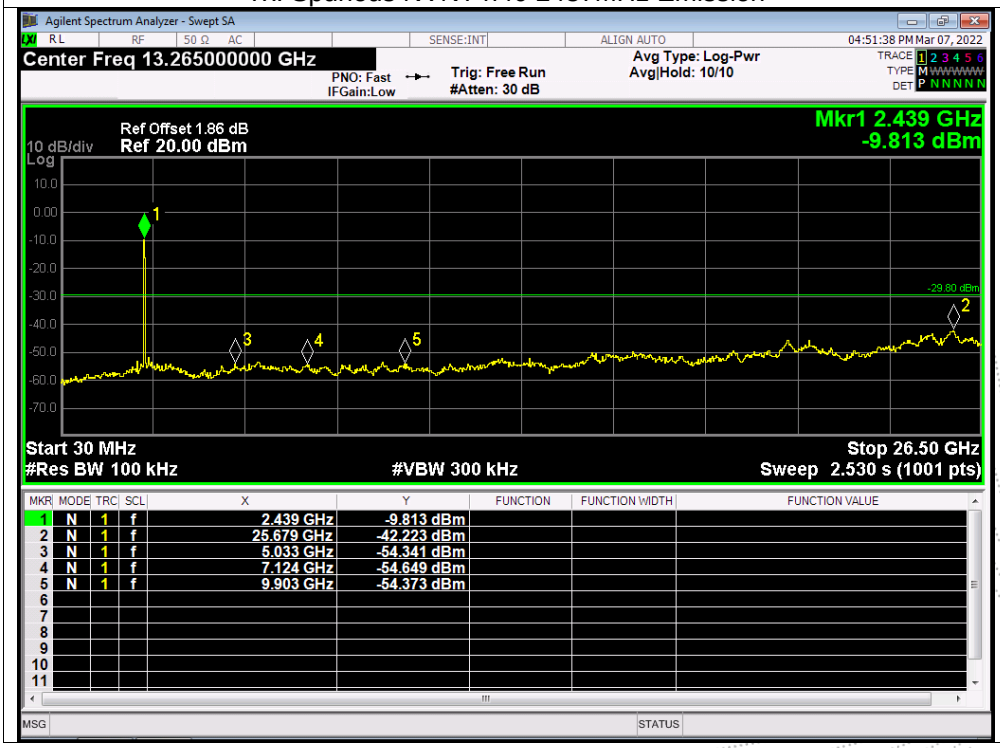
Tx. Spurious NVNT n40 2422MHz Emission



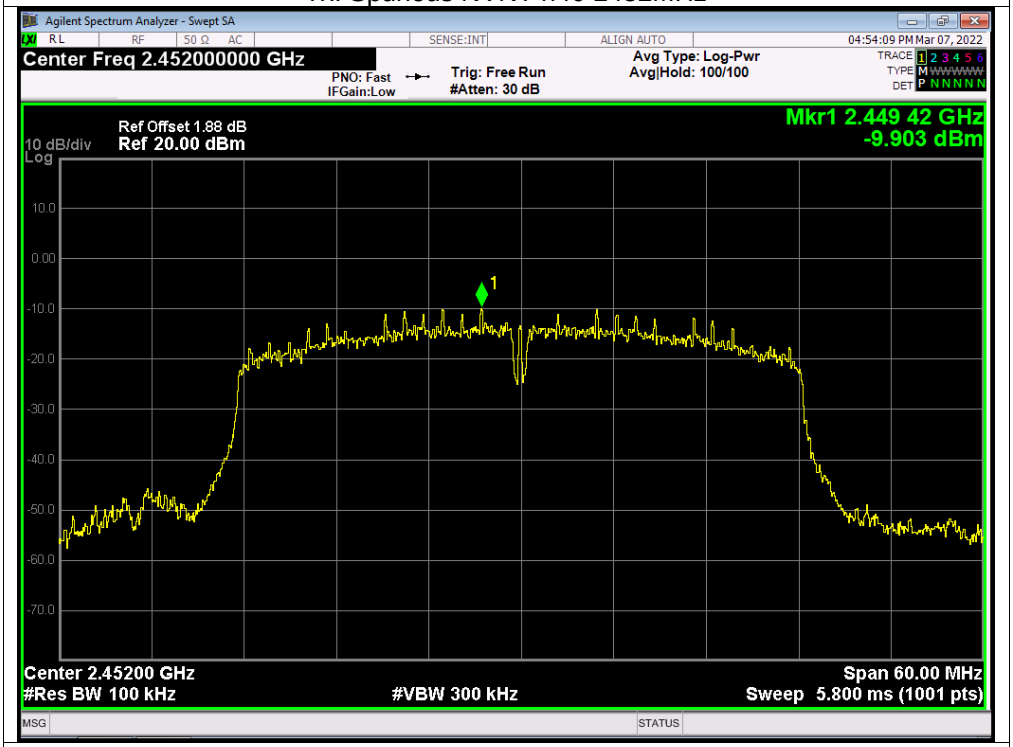
Tx. Spurious NVNT n40 2437MHz



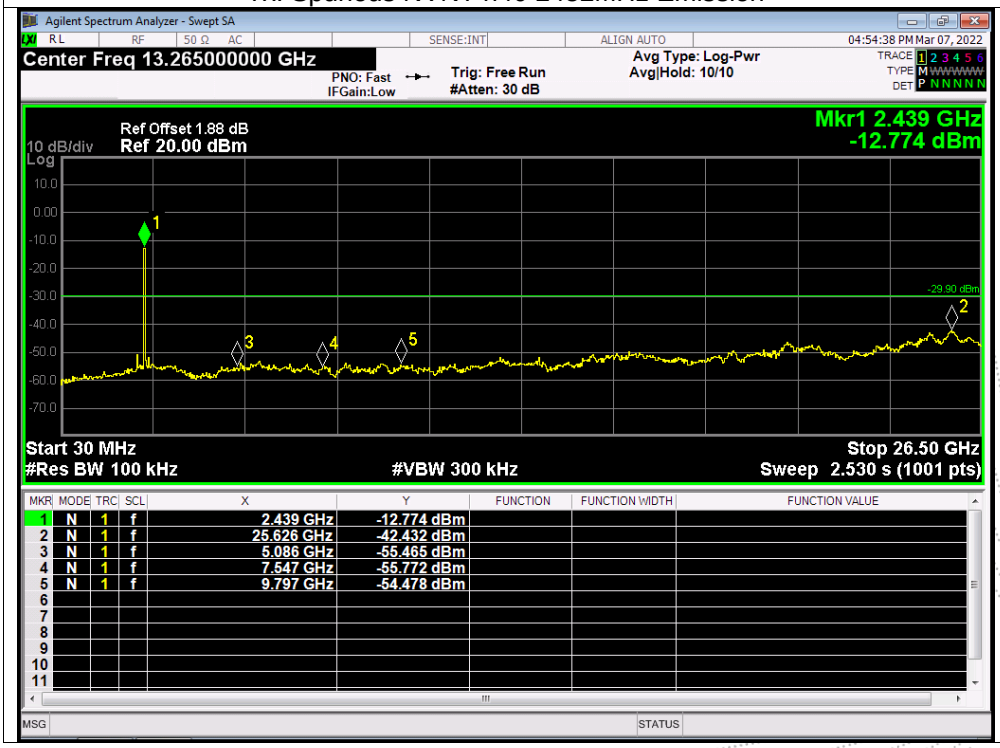
Tx. Spurious NVNT n40 2437MHz Emission



Tx. Spurious NVNT n40 2452MHz



Tx. Spurious NVNT n40 2452MHz 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

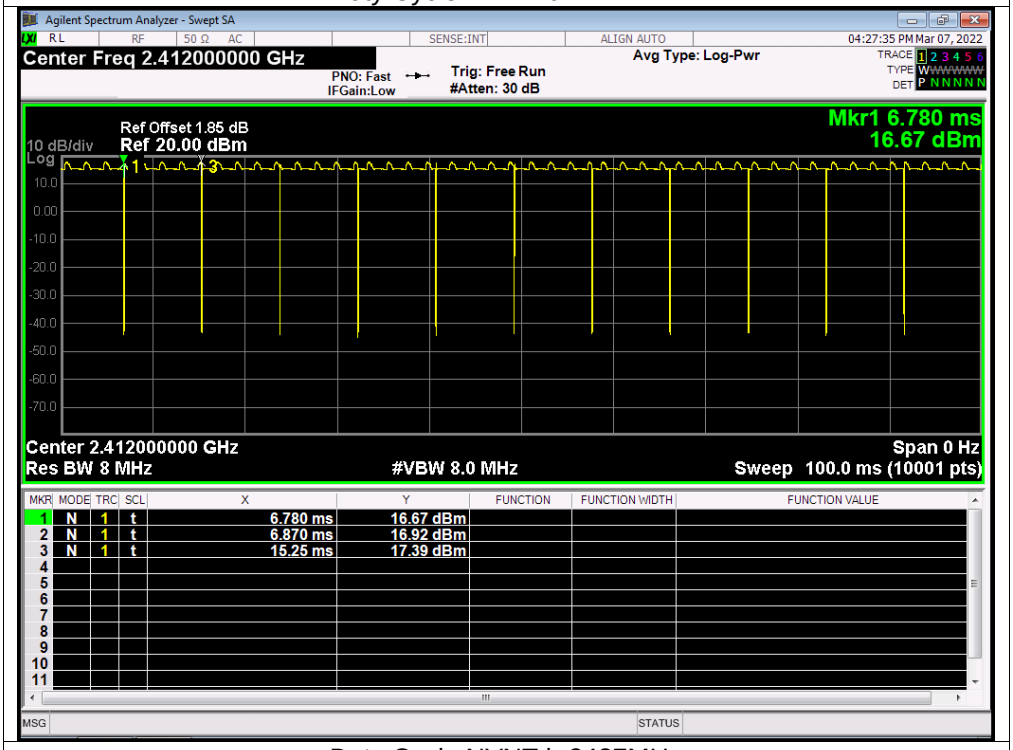
1.Set span = Zero
2. RBW = 8MHz
3. VBW = 8MHz,
4. Detector = Peak

13.4 Test Result

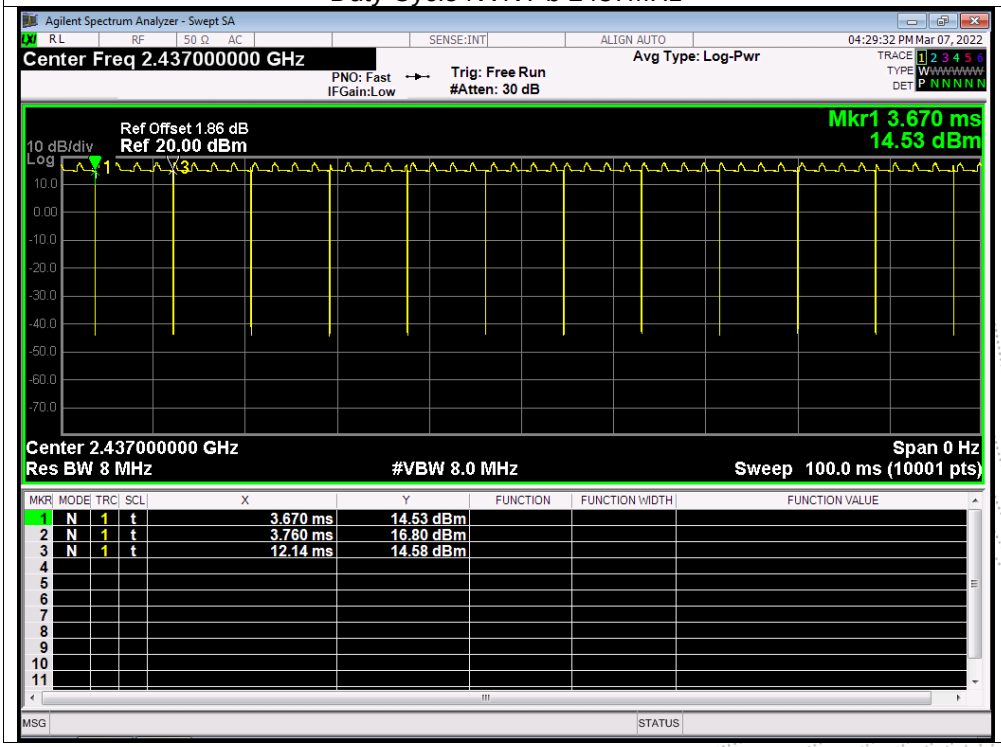
Mode	Frequency (MHz)	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
b	2412	99.14	0.04	0.12
b	2437	99.08	0.04	0.12
b	2462	99.08	0.04	0.12
g	2412	99.67	0.01	0.72
g	2437	99.67	0.01	0.72
g	2462	99.6	0.02	0.72
n20	2412	99.65	0.02	0.38
n20	2437	99.68	0.01	0.25
n20	2462	99.67	0.01	0.25
n40	2422	100	0	0
n40	2437	100	0	0
n40	2452	100	0	0

Test Graphs

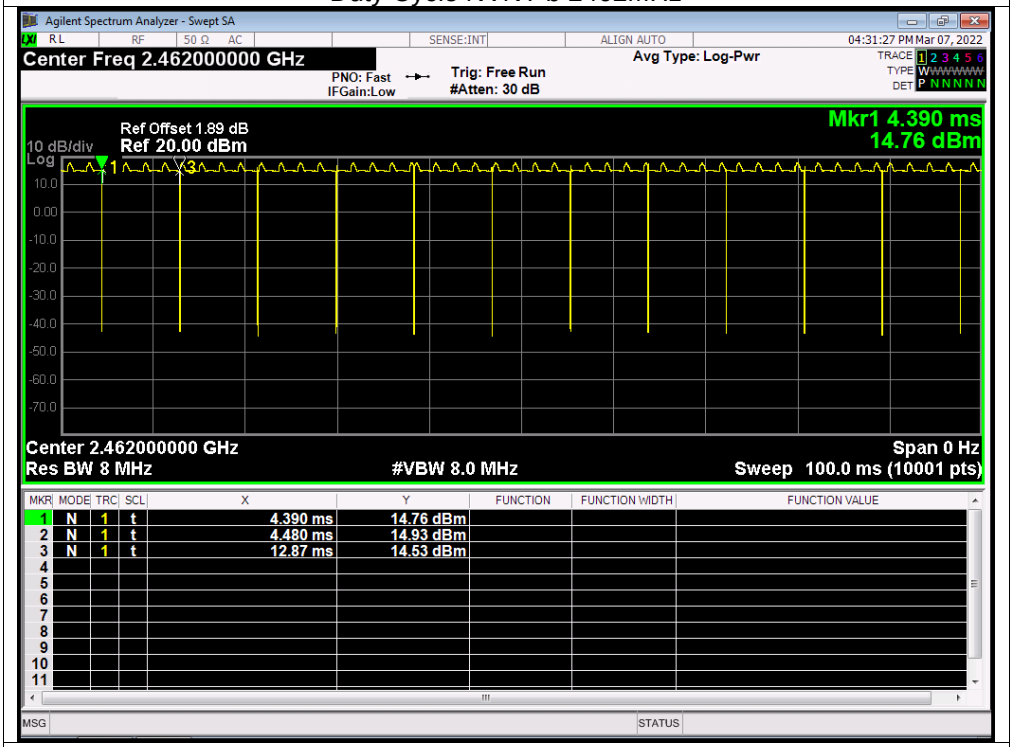
Duty Cycle NVNT b 2412MHz



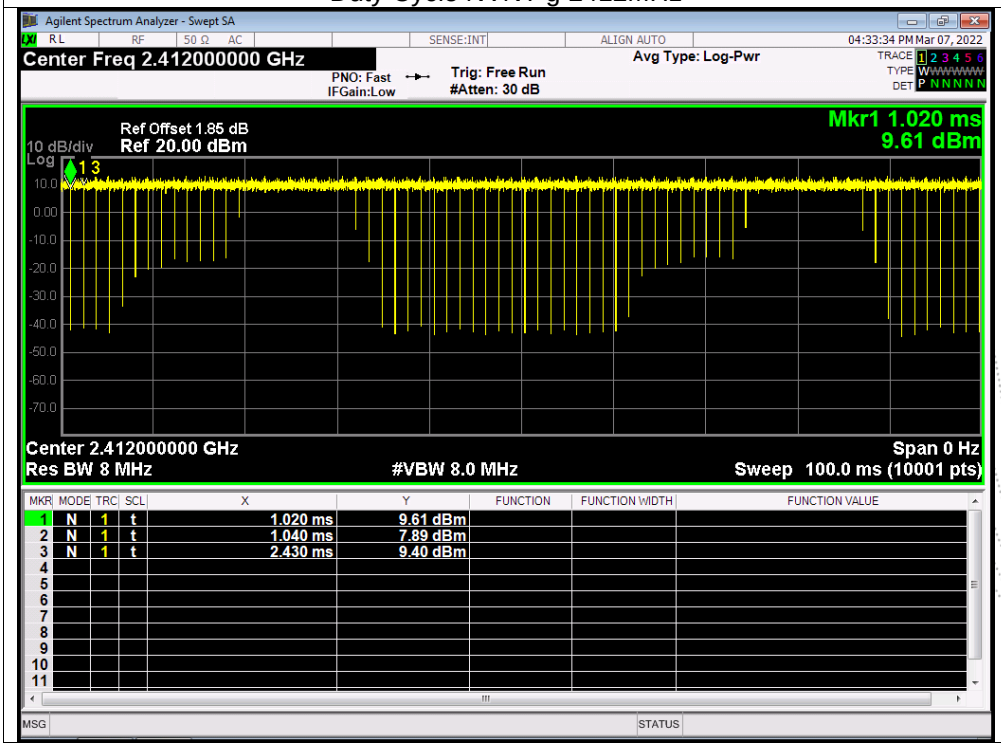
Duty Cycle NVNT b 2437MHz



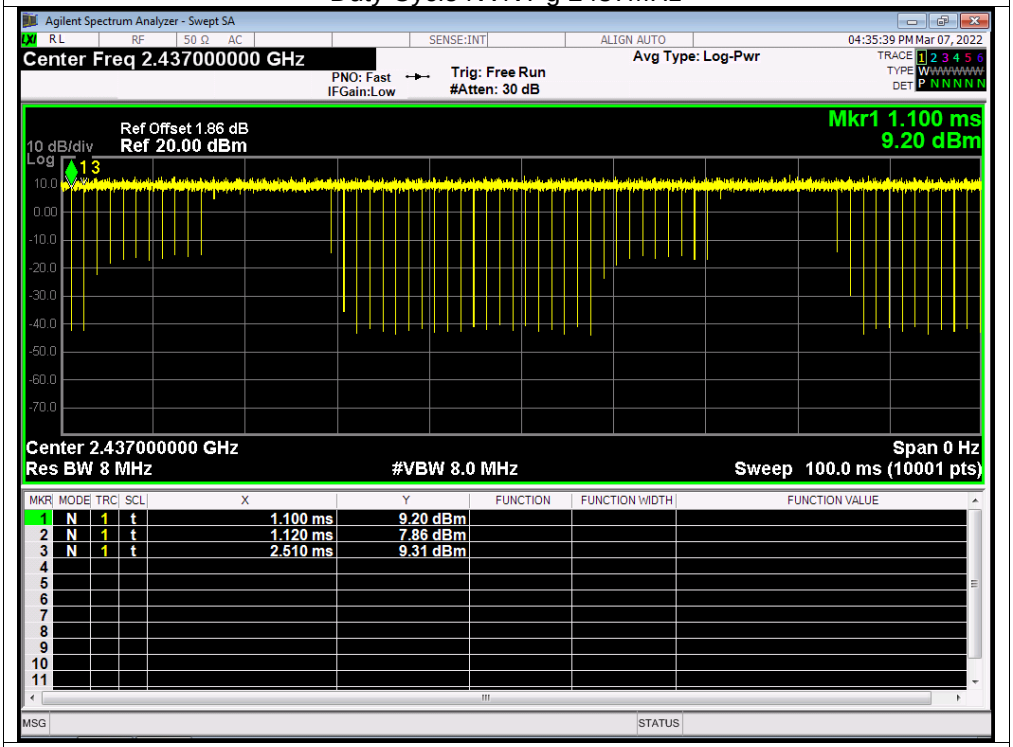
Duty Cycle NVNT b 2462MHz



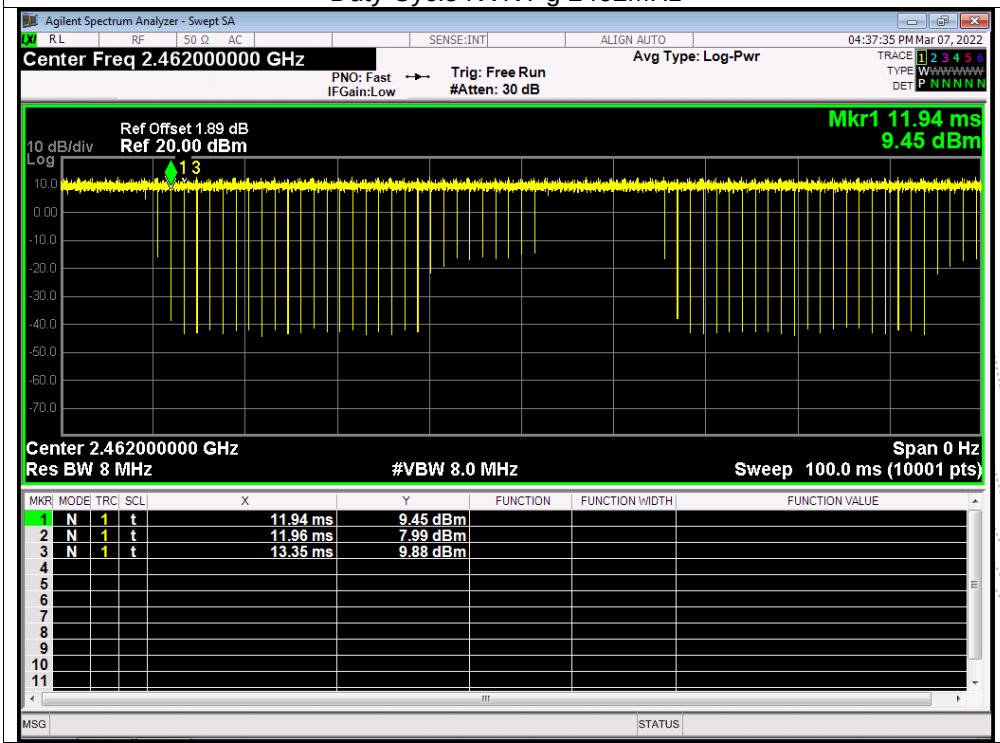
Duty Cycle NVNT g 2412MHz



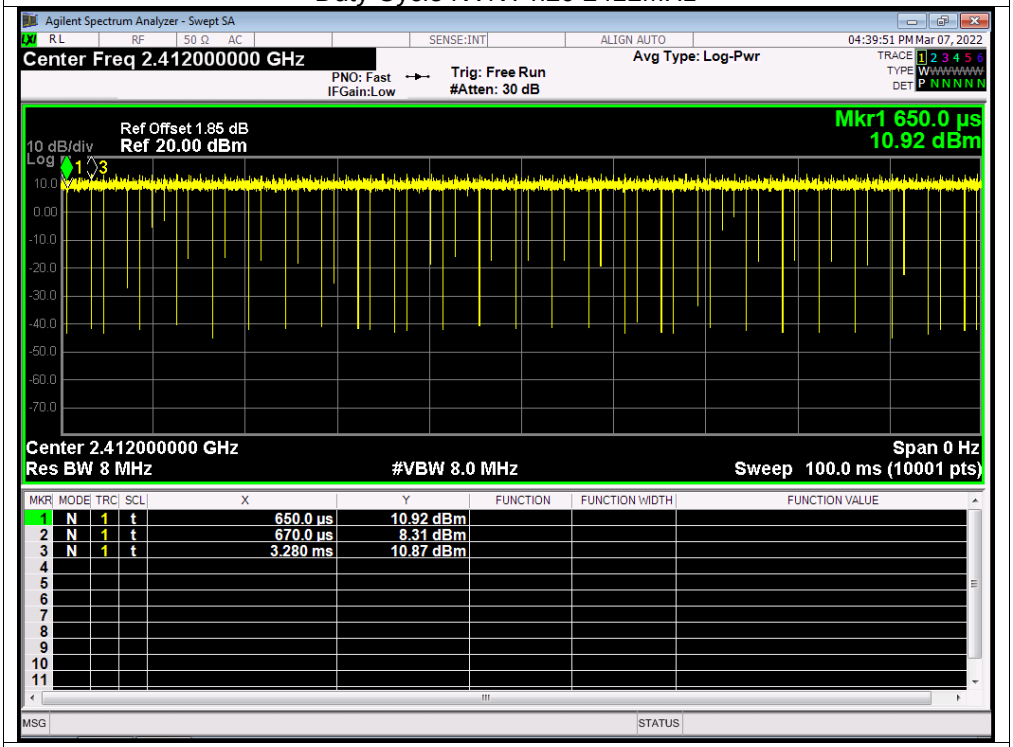
Duty Cycle NVNT g 2437MHz



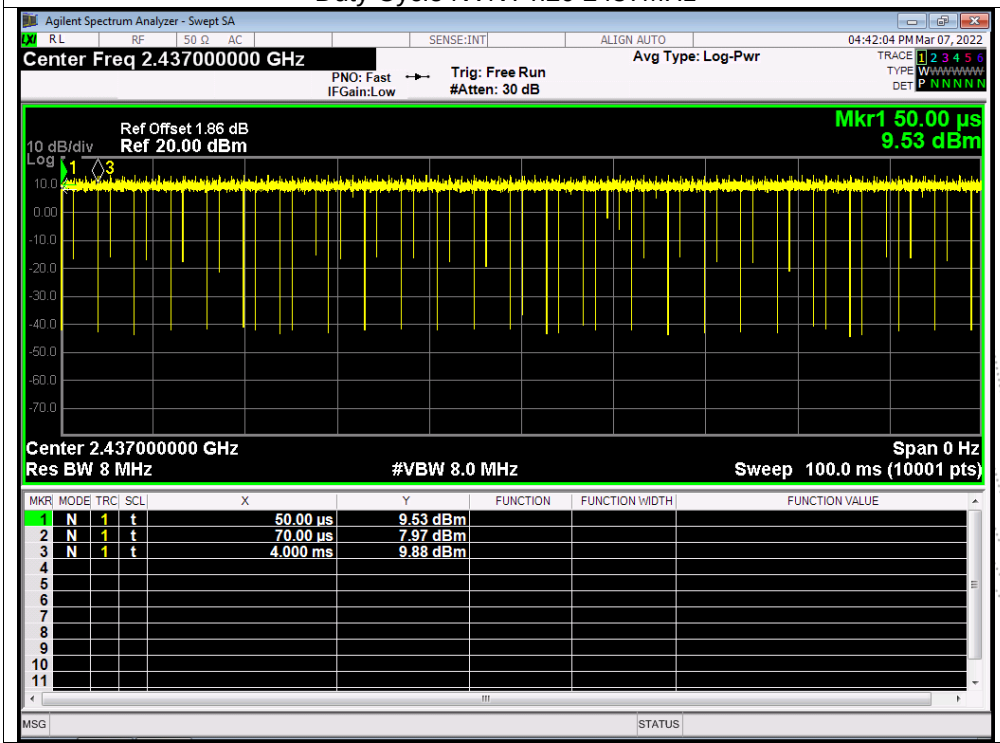
Duty Cycle NVNT g 2462MHz



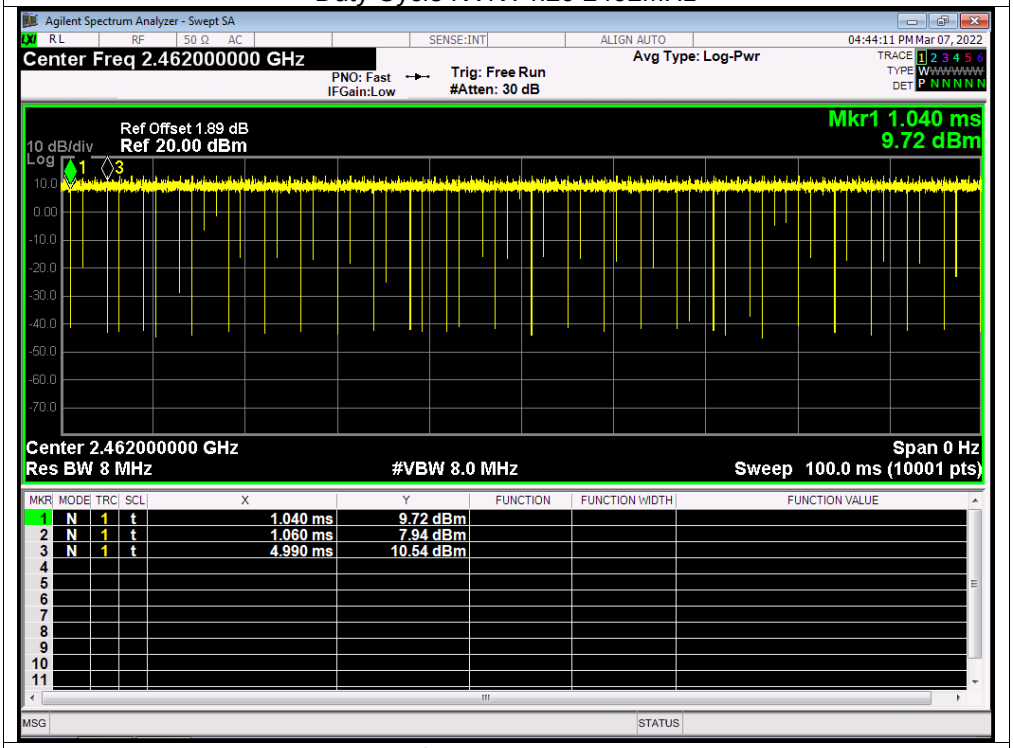
Duty Cycle NVNT n20 2412MHz



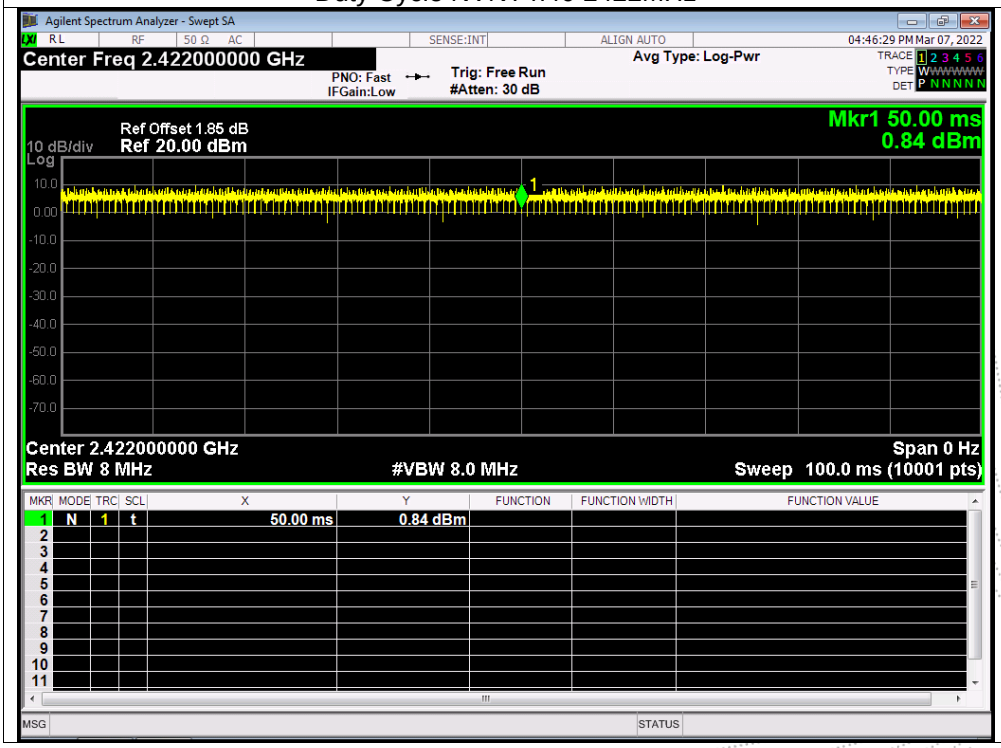
Duty Cycle NVNT n20 2437MHz



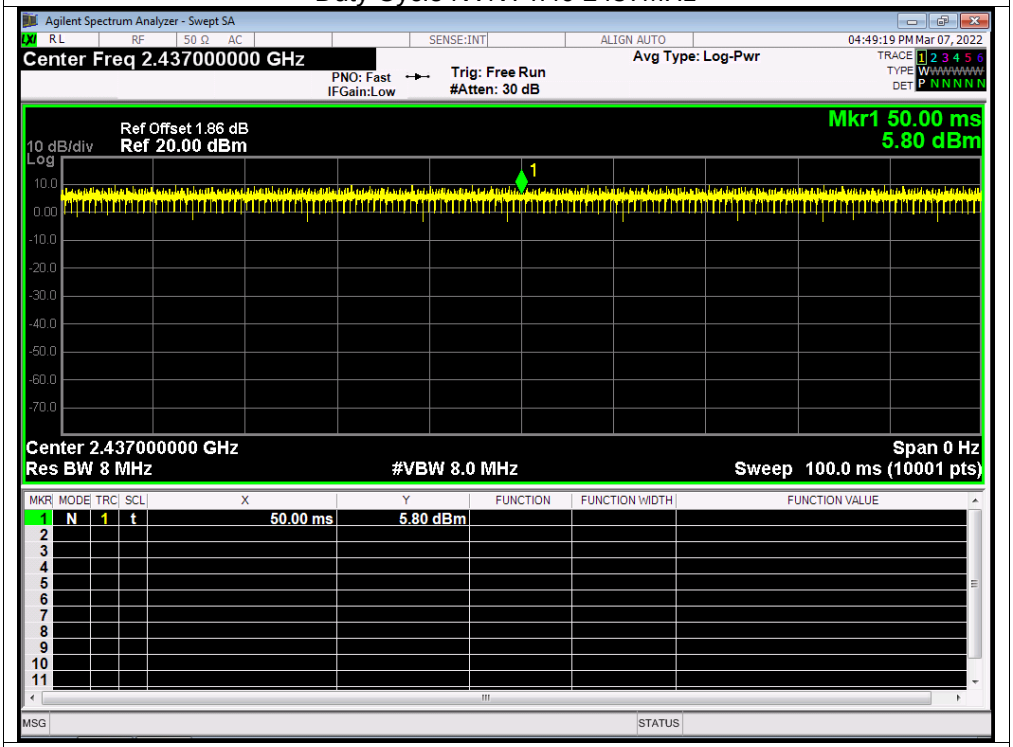
Duty Cycle NVNT n20 2462MHz



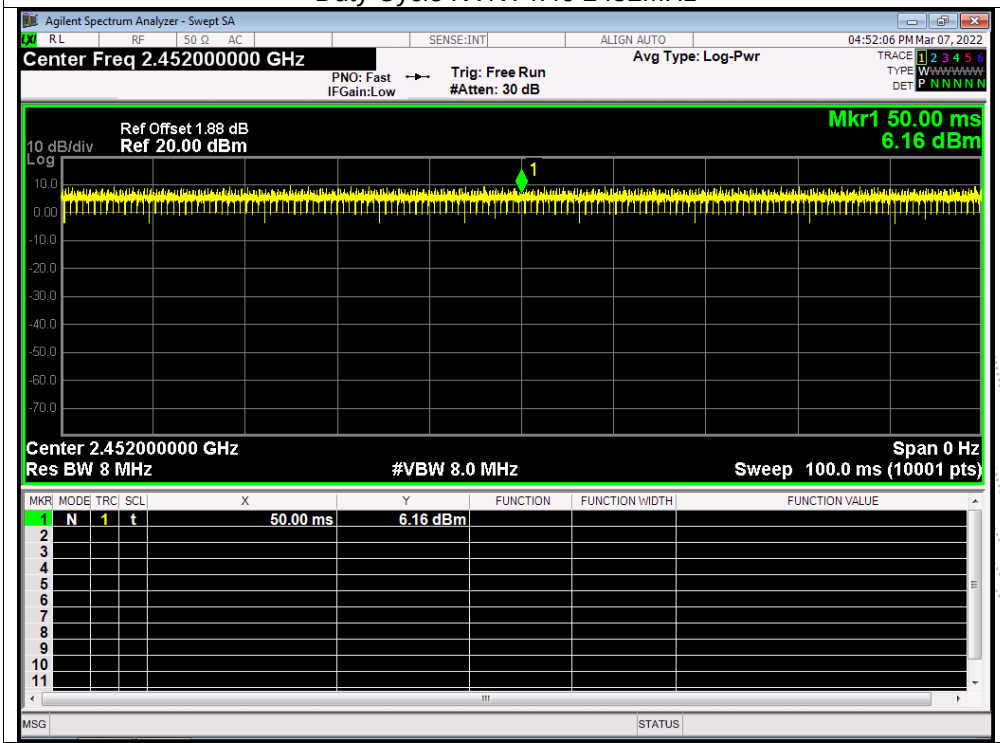
Duty Cycle NVNT n40 2422MHz



Duty Cycle NVNT n40 2437MHz



Duty Cycle NVNT n40 2452MHz



14. Antenna Requirement

14.1 Limit

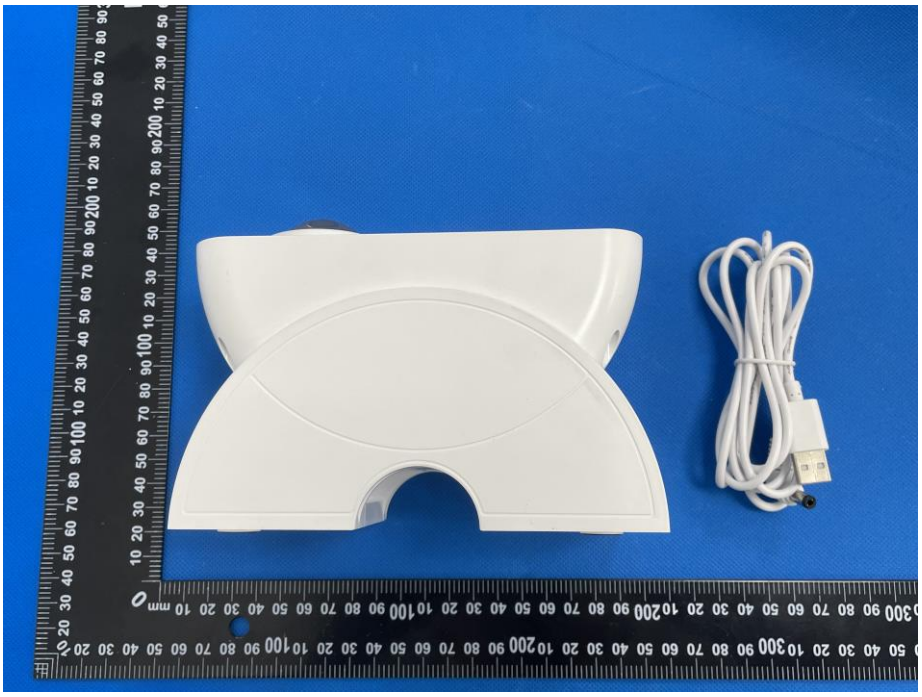
15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

14.2 Test Result

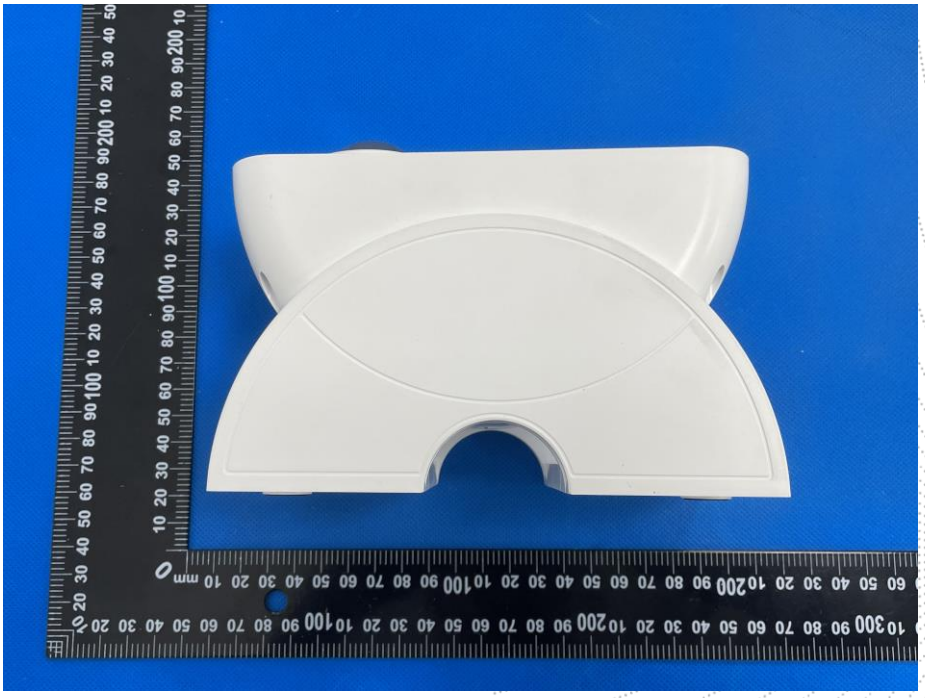
The EUT antenna is PCB antenna, fulfill the requirement of this section.

15. EUT Photographs

EUT Photo 1

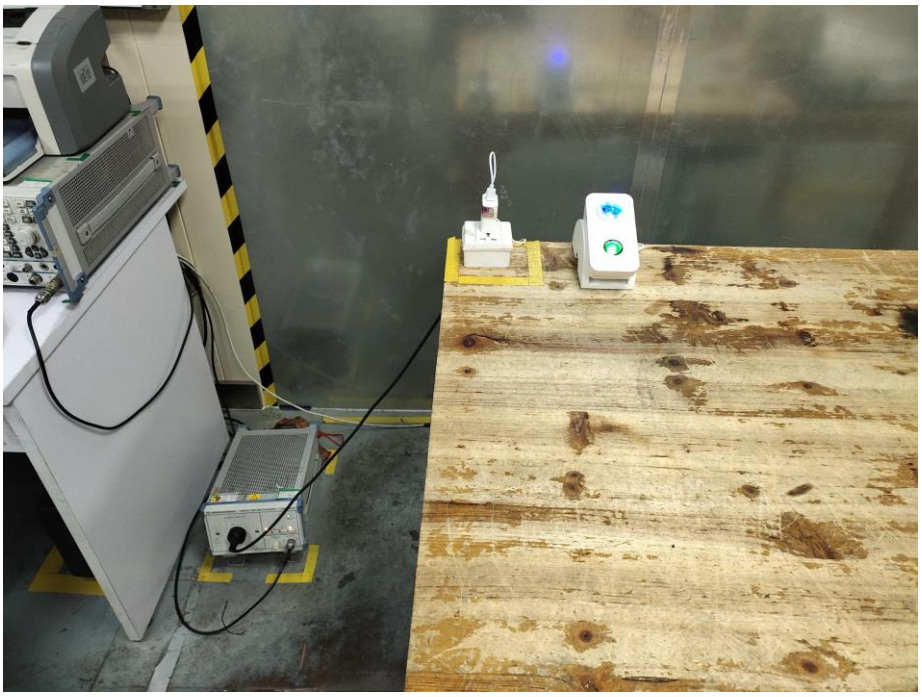


EUT Photo 2

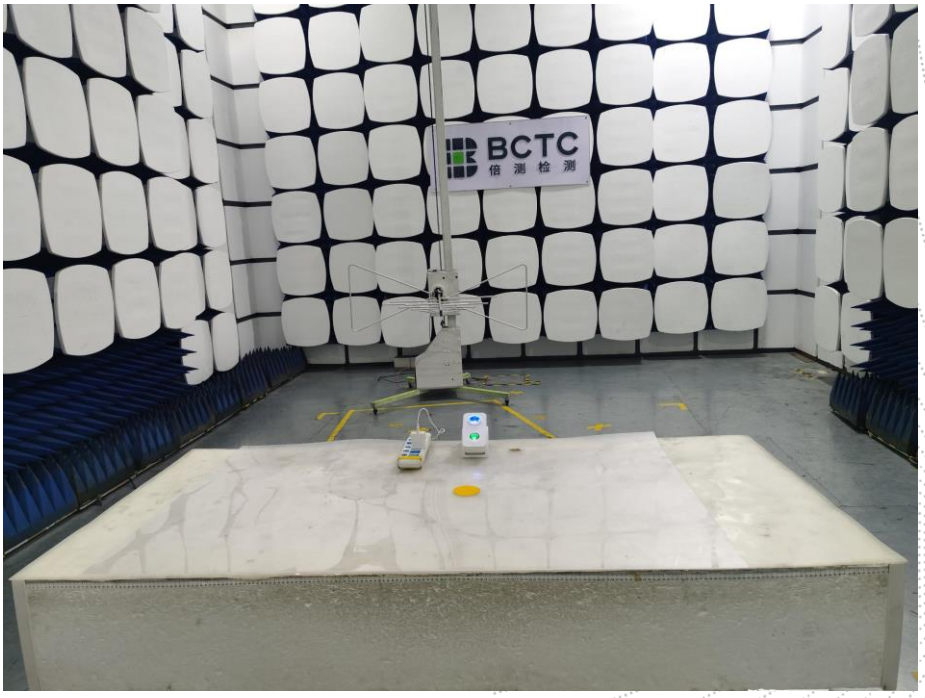


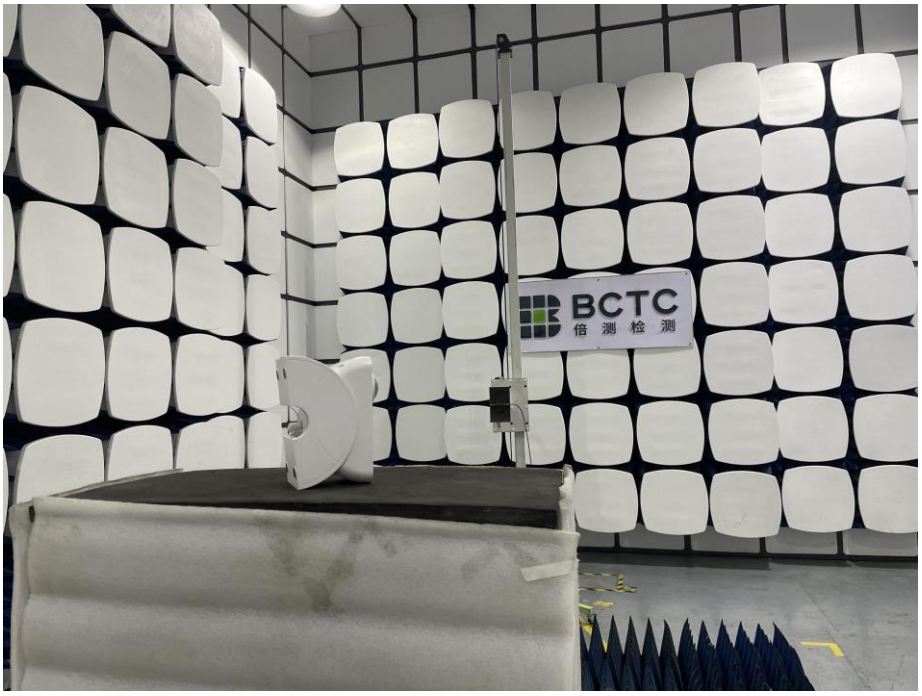
16. EUT Test Setup Photographs

Conducted emissions Photos



Radiated Measurement Photos

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STATEMENT

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

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

3.The test report is invalid without stamp of laboratory.

4.The test report is invalid without signature of person(s) testing and authorizing.

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

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

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

Address:
1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Tangwei, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China

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P.C.: 518103

FAX：0755-33229357

Website：http://www.chnbctc.com

E-Mail：bctc@bctc-lab.com.cn

※※※※※ **END** ※※※※※