

TEST REPORT

FCC ID..... :	2AG87ACM-DB-2M-R3	
Test Report No..... :	TCT251017E009	
Date of issue..... :	Dec. 01, 2025	
Testing laboratory	SHENZHEN TONGCE TESTING LAB	
Testing location/ address:	2101 & 2201, Zhenchang Factory, Renshan Industrial Zone, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, 518103, People's Republic of China	
Applicant's name..... :	Doodle Labs (SG) Pte Ltd	
Address..... :	601 MacPherson Road, Grantral Complex, Suite 07-15, Singapore 368242, Singapore	
Manufacturer's name ... :	Doodle Labs (SG) Pte Ltd	
Address..... :	601 MacPherson Road, Grantral Complex, Suite 07-15, Singapore 368242, Singapore	
Standard(s)	FCC CFR Title 47 Part 15 Subpart C Section 15.247 FCC KDB 558074 D01 15.247 Meas Guidance v05r02 ANSI C63.10:2020	
Product Name..... :	Wi-Fi® Radio Transceiver	
Trade Mark	N/A	
Model/Type reference..... :	ACM-DB-2M-R3, ACM-DB-2M-BD-R3	
Rating(s)..... :	DC 3.3V	
Date of receipt of test item	Oct. 17, 2025	
Date (s) of performance of test..... :	Oct. 17, 2025 ~ Dec. 01, 2025	
Tested by (+signature) ... :	Rleo LIU	
Check by (+signature).... :	Beryl ZHAO	
Approved by (+signature):	Tomsin	



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1. General Product Information

1.1. EUT description

Product Name.....:	Wi-Fi® Radio Transceiver
Model/Type reference.....:	ACM-DB-2M-R3
Sample Number.....:	TCT251017E009-0101
Operation Frequency	2412MHz~2462MHz (802.11b/802.11g/802.11n(HT20)) 2422MHz~2452MHz (802.11n(HT40))
Channel Separation.....:	5MHz
Number of Channel	11 for 802.11b/802.11g/802.11n(HT20) 7 for 802.11n(HT40)
Modulation Technology	802.11b: Direct Sequence Spread Spectrum (DSSS) 802.11g/802.11n: Orthogonal Frequency Division Multiplexing (OFDM)
Antenna Type.....:	External Antenna
Antenna Gain.....:	Antenna 0: 7dBi Antenna 1: 7dBi
Rating(s).....:	DC 3.3V

Note: 1. The antenna gain listed in this report is provided by applicant, and the test laboratory is not responsible for this parameter.
2. The customer has a spare antenna with a gain of 6dBi.

1.2. Model(s) list

No.	Model No.	Tested with
1	ACM-DB-2M-R3	☒
Other models	ACM-DB-2M-BD-R3	☐

Note: ACM-DB-2M-R3 is tested model, other models are derivative models. The models are identical in circuit and PCB layout, only different on the model names. So the test data of ACM-DB-2M-R3 can represent the remaining models.

1.3. Operation Frequency

For 802.11b/g/n(HT20)

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2412MHz	4	2427MHz	7	2442MHz	10	2457MHz
2	2417MHz	5	2432MHz	8	2447MHz	11	2462MHz
3	2422MHz	6	2437MHz	9	2452MHz	--	--

For 802.11n(HT40)

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
--	--	4	2427MHz	7	2442MHz	--	--
--	--	5	2432MHz	8	2447MHz	--	--
3	2422MHz	6	2437MHz	9	2452MHz		

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

802.11b/802.11g/802.11n(HT20)

Channel	Frequency
The lowest channel	2412MHz
The middle channel	2437MHz
The Highest channel	2462MHz

802.11n(HT40)

Channel	Frequency
The lowest channel	2422MHz
The middle channel	2437MHz
The Highest channel	2452MHz

2. Test Result Summary

Requirement	CFR 47 Section	Result
Antenna requirement	§15.203/§15.247 (b)(4)	PASS
AC Power Line Conducted Emission	§15.207	PASS
Conducted Output Power	§15.247 (b)(3)	PASS
6dB Emission Bandwidth	§15.247 (a)(2)	PASS
Power Spectral Density	§15.247 (e)	PASS
Band Edge	§15.247(d)	PASS
Spurious Emission	§15.205/§15.209	PASS

Note:

1. PASS: Test item meets the requirement.
2. Fail: Test item does not meet the requirement.
3. N/A: Test case does not apply to the test object.
4. The test result judgment is decided by the limit of test standard.
5. Test result = Output + Cable loss
6. RF conducted direct connection test is conducted on the main model, and the test results have been corrected to match the maximum line loss of the type: 0.4dB for 2.4 GHz WIFI (test connection cable is provided by the applicant)

3. General Information

3.1. Test environment and mode

Operating Environment:		
Condition	Conducted Emission	Radiated Emission
Temperature:	23.8 °C	24.3 °C
Humidity:	50 % RH	53 % RH
Atmospheric Pressure:	1010 mbar	1010 mbar
Test Software:		
Software Information:	Atheros Radio Test2(ART2-GUI)	
Power Level:	ANT 0: 802.11b: L/M/H: 21.5/26/22.5 802.11g: L/M/H: 17.5/23.5/18 802.11n(HT20): L/M/H: 17.5/23.5/18 802.11n(HT40): L/M/H: 17/24/16.5 ANT 1: 802.11b: L/M/H: 21.5/26/22.5 802.11g: L/M/H: 18/23.5/18 802.11n(HT20): L/M/H: 18/23.5/18 802.11n(HT40): L/M/H: 17.5/24/17	
Test Mode:		
Engineering mode:	Keep the EUT in continuous transmitting by select channel and modulations with max. duty cycle.	
The sample was placed 0.8m & 1.5m for the measurement below & above 1GHz above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case (Z axis) are shown in Test Results of the following pages.		

We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:

Per-scan all kind of data rate in lowest channel, and found the follow list which it was worst case.

Mode	Data rate
802.11b	1Mbps
802.11g	6Mbps
802.11n(HT20)	6.5Mbps
802.11n(HT40)	13.5Mbps

3.2. Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Equipment	Model No.	Serial No.	FCC ID	Trade Name
PC Adapter	HKA12019063-0D6	/	/	Huntkey
PC	NAB7	/	2A49R-MINIPC	Doodle
LCD TV	19PFL3120/T3	AU2A1241000762	/	PHILIPS

Note:

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.
3. For conducted measurements (Output Power, 6dB Emission Bandwidth, Power Spectral Density, Spurious Emissions), the antenna of EUT is connected to the test equipment via temporary antenna connector, the antenna connector is soldered on the antenna port of EUT, and the temporary antenna connector is listed in the Test Instruments.

4. Facilities and Accreditations

4.1. Facilities

The test facility is recognized, certified, or accredited by the following organizations:

- FCC - Registration No.: 645098

SHENZHEN TONGCE TESTING LAB

Designation Number: CN1205

The testing lab has been registered and fully described in a report with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

- A2LA-No.: 4320.01

SHENZHEN TONGCE TESTING LAB

The testing lab has been accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories.

4.2. Location

SHENZHEN TONGCE TESTING LAB

Address: 2101 & 2201, Zhenchang Factory, Renshan Industrial Zone, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, 518103, People's Republic of China

TEL: +86-755-27673339

5. Measurement Uncertainty

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

No.	Item	MU
1	Conducted Emission	± 3.10 dB
2	RF power, conducted	± 0.12 dB
3	Spurious emissions, conducted	± 0.11 dB
4	All emissions, radiated(<1 GHz)	± 4.56 dB
5	All emissions, radiated(1 GHz - 18 GHz)	± 4.22 dB
6	All emissions, radiated(18 GHz- 40 GHz)	± 4.36 dB

6. Test Results and Measurement Data

6.1. Antenna requirement

Standard requirement:

FCC Part15 C Section 15.203 /247(b)(4)

15.203 requirement:

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, 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.

15.247(b)(4) requirement:

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

E.U.T Antenna:

The EUT has two external antennas, and the best case gains of each antenna is 7dBi.

6.2. Conducted Emission

6.2.1. Test Specification

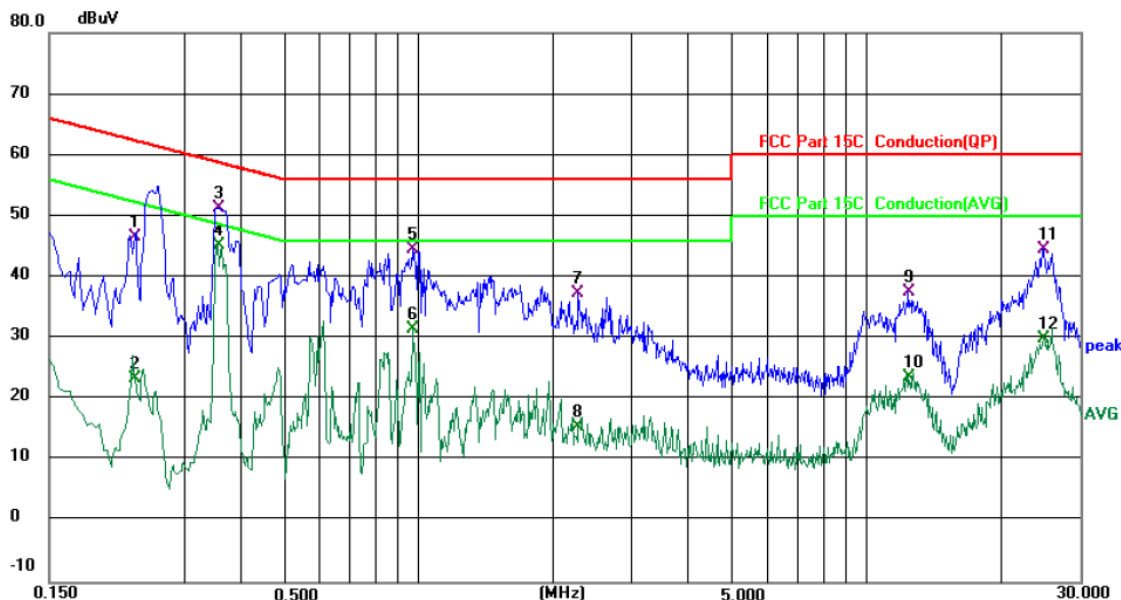
Test Requirement:	FCC Part15 C Section 15.207														
Test Method:	ANSI C63.10:2020														
Frequency Range:	150 kHz to 30 MHz														
Receiver setup:	RBW=9 kHz, VBW=30 kHz, Sweep time=auto														
Limits:	<table><tr><th rowspan="2">Frequency range (MHz)</th><th colspan="2">Limit (dBuV)</th></tr><tr><th>Quasi-peak</th><th>Average</th></tr><tr><td>0.15-0.5</td><td>66 to 56*</td><td>56 to 46*</td></tr><tr><td>0.5-5</td><td>56</td><td>46</td></tr><tr><td>5-30</td><td>60</td><td>50</td></tr></table>	Frequency range (MHz)	Limit (dBuV)		Quasi-peak	Average	0.15-0.5	66 to 56*	56 to 46*	0.5-5	56	46	5-30	60	50
Frequency range (MHz)	Limit (dBuV)														
	Quasi-peak	Average													
0.15-0.5	66 to 56*	56 to 46*													
0.5-5	56	46													
5-30	60	50													
Test Setup:	Reference Plane 40cm E.U.T. AC power 80cm LISN Filter AC power Test table/Insulation plane EMI Receiver Remark E.U.T: Equipment Under Test LISN: Line Impedance Stabilization Network Test table height=0.8m														
Test Mode:	Transmitting Mode														
Test Procedure:	1. The E.U.T is connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). 3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10:2020 on conducted measurement.														
Test Result:	PASS														

6.2.2. Test Instruments

Conducted Emission Shielding Room Test Site (843)					
Equipment	Manufacturer	Model	Serial Number	Date of Cal.	Due Date
EMI Test Receiver	R&S	ESCI3	100898	Jun. 26, 2025	Jun. 25, 2026
LISN	Schwarzbeck	NSLK 8126	8126453	Jan. 21, 2025	Jan. 20, 2026
Attenuator	N/A	10dB	164080	Jun. 26, 2025	Jun. 25, 2026
Line-5	TCT	CE-05	/	Jun. 26, 2025	Jun. 25, 2026
EMI Test Software	EZ_EMG	EMEC-3A1	1.1.4.2	/	/

6.2.3. Test data

Please refer to following diagram for individual
Conducted Emission on Line Terminal of the power line (150 kHz to 30MHz)



Site 844 Shielding Room

Phase: L1

Temperature: 23.8 (°C)

Humidity: 50 %

Limit: FCC Part 15C Conduction(QP)

Power: DC 3.3 V From PC

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV	dBuV	dB		
1		0.2328	38.01	8.52	46.53	62.35	-15.82	QP	
2		0.2328	14.95	8.52	23.47	52.35	-28.88	AVG	
3		0.3539	42.77	8.53	51.30	58.87	-7.57	QP	
4	*	0.3539	36.71	8.53	45.24	48.87	-3.63	AVG	
5		0.9700	36.05	8.53	44.58	56.00	-11.42	QP	
6		0.9700	23.07	8.53	31.60	46.00	-14.40	AVG	
7		2.2740	28.68	8.62	37.30	56.00	-18.70	QP	
8		2.2740	6.91	8.62	15.53	46.00	-30.47	AVG	
9		12.3979	28.63	8.91	37.54	60.00	-22.46	QP	
10		12.3979	14.64	8.91	23.55	50.00	-26.45	AVG	
11		24.9059	35.28	9.35	44.63	60.00	-15.37	QP	
12		24.9059	20.64	9.35	29.99	50.00	-20.01	AVG	

Note:

Freq. = Emission frequency in MHz

Reading level (dBuV) = Receiver reading

Corr. Factor (dB) = LISN factor + Cable loss

Measurement (dBuV) = Reading level (dBuV) + Corr. Factor (dB)

Limit (dBuV) = Limit stated in standard

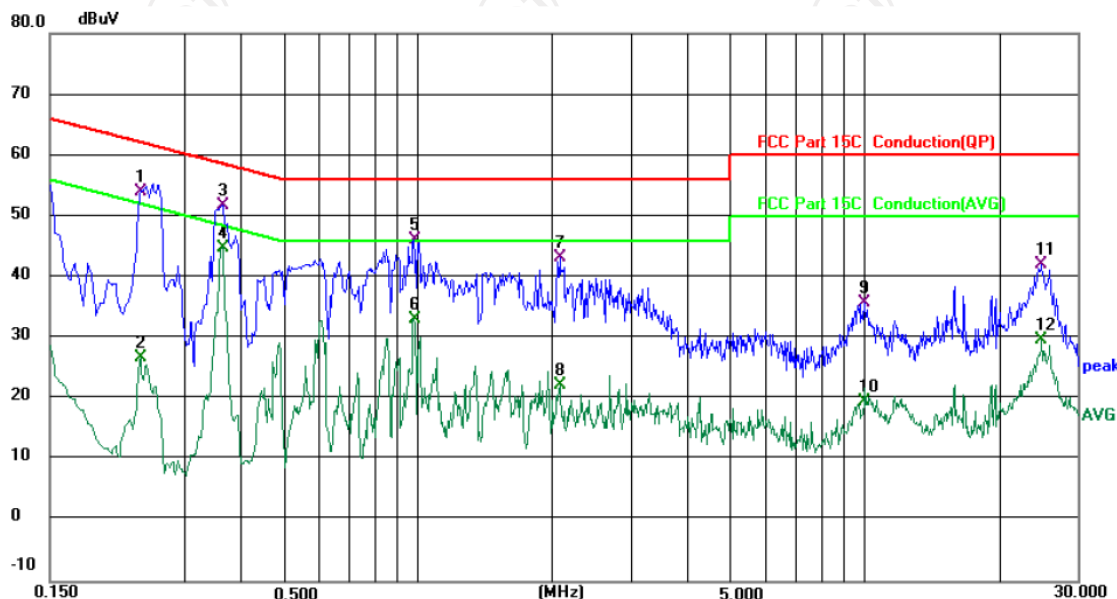
Margin (dB) = Measurement (dBuV) – Limits (dBuV)

Q.P. =Quasi-Peak

AVG =average

* is meaning the worst frequency has been tested in the frequency range 150 kHz to 30MHz.

Conducted Emission on Neutral Terminal of the power line (150 kHz to 30MHz)



Site 844 Shielding Room

Phase: *N*

Temperature: 23.8 (°C)

Humidity: 50 %

Limit: FCC Part 15C Conduction(QP)

Power: DC 3.3 V From PC

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.2379	45.46	8.52	53.98	62.17	-8.19	QP	
2		0.2379	18.36	8.52	26.88	52.17	-25.29	AVG	
3		0.3619	43.13	8.54	51.67	58.68	-7.01	QP	
4	*	0.3619	36.21	8.54	44.75	48.68	-3.93	AVG	
5		0.9819	37.66	8.56	46.22	56.00	-9.78	QP	
6		0.9819	24.48	8.56	33.04	46.00	-12.96	AVG	
7		2.0859	34.65	8.62	43.27	56.00	-12.73	QP	
8		2.0859	13.56	8.62	22.18	46.00	-23.82	AVG	
9		10.0139	26.82	8.91	35.73	60.00	-24.27	QP	
10		10.0139	10.61	8.91	19.52	50.00	-30.48	AVG	
11		25.0380	32.60	9.50	42.10	60.00	-17.90	QP	
12		25.0380	20.11	9.50	29.61	50.00	-20.39	AVG	

Note: 1. Freq. = Emission frequency in MHz

Reading level (dBμV) = Receiver reading

Corr. Factor (dB) = LISN factor + Cable loss

Measurement (dBμV) = Reading level (dBμV) + Corr. Factor (dB)

Limit (dBμV) = Limit stated in standard

Margin (dB) = Measurement (dBμV) – Limits (dBμV)

Q.P. =Quasi-Peak

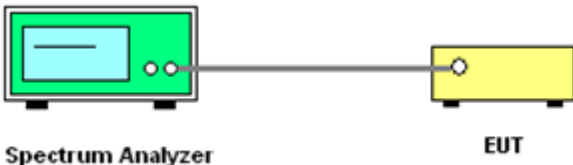
AVG =average

* is meaning the worst frequency has been tested in the frequency range 150 kHz to 30MHz.

2. Measurements were conducted in all two channels (high, middle, low) and all modulation(802.11b, 802.11g, 802.11n(HT20), 802.11n(HT40)), and the worst case Mode (Middle channel and 802.1b) transmit with antenna 0) was submitted only.

6.3. Maximum Conducted (Average) Output Power

6.3.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.247 (b)(3)
Test Method:	KDB 558074 D01 v05r02, KDB662911 D01 Multiple Transmitter Output v02r01
Limit:	30dBm
Test Setup:	 Spectrum Analyzer EUT
Test Mode:	Transmitting mode with modulation
Test Procedure:	1. The RF output of EUT was connected to the spectrum analyzer by RF cable. The path loss was compensated to the results for each measurement. 2. Set to the maximum power setting and enable the EUT transmit continuously. 3. Measure the conducted output power and record the results in the test report.
Test Result:	PASS

6.3.2. Test Instruments

Equipment	Manufacturer	Model No.	Serial Number	Date of Cal.	Due Date
Spectrum Analyzer	Agilent	N9020A	MY49100619	Jun. 26, 2025	Jun. 25, 2026
Power detector box	MWRFTest	MW100-RFCB	MW210531TCT	Jan. 21, 2025	Jan. 20, 2026

6.3.3. Test Data

Configuration IEEE 802.11b/ Antenna 0+Antenna 1				
Test channel	Maximum Conducted (AVG) Output Power (dBm)		Limit (dBm)	Result
	Antenna 0	Antenna 1		
Lowest	21.47	21.36	29	PASS
Middle	23.58	23.46	29	PASS
Highest	21.81	21.79	29	PASS

Configuration IEEE 802.11g/ Antenna 0+Antenna 1				
Test channel	Maximum Conducted (AVG) Output Power (dBm)		Limit (dBm)	Result
	Antenna 0	Antenna 1		
Lowest	17.31	17.67	29	PASS
Middle	22.32	22.31	29	PASS
Highest	17.86	17.85	29	PASS

Configuration IEEE 802.11n(HT20)/ Antenna 0+Antenna 1					
Test channel	Maximum Conducted (AVG) Output Power (dBm)			Limit (dBm)	Result
	Antenna 0	Antenna 1	Total		
Lowest	17.34	17.53	20.45	29	PASS
Middle	22.26	22.23	25.26	29	PASS
Highest	17.78	17.71	20.76	29	PASS

Configuration IEEE 802.11n(HT40)/ Antenna 0+Antenna 1					
Test channel	Maximum Conducted (AVG) Output Power (dBm)			Limit (dBm)	Result
	Antenna 0	Antenna 1	Total		
Lowest	16.61	16.71	19.67	29	PASS
Middle	22.31	22.15	25.24	29	PASS
Highest	16.12	16.34	19.24	29	PASS

Note:

Refer to KDB 662911 D01 Multiple Transmitter Output v02r01:

For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;

Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT} ;

Array Gain = $5 \log(N_{ANT}/N_{SS})$ dB or 3 dB, whichever is less, for 20-MHz channel widths with $N_{ANT} \geq 5$.

Because $N_{ANT}=2$, so Array Gain = 0, Directional gain = $G_{ANT} + \text{Array Gain} = 7\text{dBi} > 6\text{dBi}$, power limit = $30 - (7 - 6) \text{ dBm} = 29$.

6.4. Emission Bandwidth

6.4.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.247 (a)(2)
Test Method:	FCC KDB 558074 D01 15.247 Meas Guidance v05r02
Limit:	>500kHz
Test Setup:	 Spectrum Analyzer EUT
Test Mode:	Transmitting mode with modulation
Test Procedure:	According to ANSI C63.10:2020 clause 11.8.1 1. Set to the maximum power setting and enable the EUT transmit continuously. 2. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) shall be in the range of 1% to 5% of the OBW but not less than 100 kHz. Set the Video bandwidth (VBW) $\geq [3 \times \text{RBW}]$. In order to make an accurate measurement. The 6dB bandwidth must be greater than 500 kHz. 3. Measure and record the results in the test report.
Test Result:	PASS

6.4.2. Test Instruments

Equipment	Manufacturer	Model No.	Serial Number	Date of Cal.	Due Date
Spectrum Analyzer	Agilent	N9020A	MY49100619	Jun. 26, 2025	Jun. 25, 2026
Power detector box	MWRFTest	MW100-RFCB	MW210531TCT	Jan. 21, 2025	Jan. 20, 2026

6.5. Power Spectral Density

6.5.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.247 (e)
Test Method:	FCC KDB 558074 D01 15.247 Meas Guidance v05r02
Limit:	The peak power spectral density shall not be greater than 8dBm in any 3kHz band at any time interval of continuous transmission.
Test Setup:	 Spectrum Analyzer EUT
Test Mode:	Transmitting mode with modulation
Test Procedure:	1. The RF output of EUT was connected to the spectrum analyzer by RF cable. The path loss was compensated to the results for each measurement. 2. Set to the maximum power setting and enable the EUT transmit continuously. 3. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW): $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$. Video bandwidth VBW $\geq 3 \times \text{RBW}$. Set the span to at least 1.5 times the OBW. 4. Detector = RMS, Sweep time = auto couple. 5. Employ trace averaging (RMS) mode over a minimum of 100 traces. Use the peak marker function to determine the maximum power level. 6. Measure and record the results in the test report.
Test Result:	PASS

6.5.2. Test Instruments

Equipment	Manufacturer	Model No.	Serial Number	Date of Cal.	Due Date
Spectrum Analyzer	Agilent	N9020A	MY49100619	Jun. 26, 2025	Jun. 25, 2026
Power detector box	MWRFTest	MW100-RFCB	MW210531TCT	Jan. 21, 2025	Jan. 20, 2026

6.5.3. Test data

Configuration IEEE 802.11b/ Antenna 0, Antenna 1				
Test channel	AVG Power Spectral Density (dBm/3kHz)		Limit (dBm/3kHz)	Result
	Antenna 0	Antenna 1		
Lowest	-7.63	-7.79	7	PASS
Middle	-6.19	-6.31	7	PASS
Highest	-7.72	-7.79	7	PASS

Configuration IEEE 802.11g/ Antenna 0, Antenna 1				
Test channel	AVG Power Spectral Density (dBm/3kHz)		Limit (dBm/3kHz)	Result
	Antenna 0	Antenna 1		
Lowest	-15.68	-14.86	7	PASS
Middle	-10.46	-10.71	7	PASS
Highest	-15.18	-12.70	7	PASS

Configuration IEEE 802.11n(HT20)/ Antenna 0, Antenna 1					
Test channel	AVG Power Spectral Density (dBm/3kHz)			Limit (dBm/3kHz)	Result
	Antenna 0	Antenna 1	Total		
Lowest	-16.12	-15.70	-12.89	3.99	PASS
Middle	-10.80	-11.39	-8.07	3.99	PASS
Highest	-15.35	-15.53	-12.43	3.99	PASS

Configuration IEEE 802.11n(HT40)/ Antenna 0, Antenna 1					
Test channel	AVG Power Spectral Density (dBm/3kHz)			Limit (dBm/3kHz)	Result
	Antenna 0	Antenna 1	Total		
Lowest	-20.43	-20.01	-17.20	3.99	PASS
Middle	-14.75	-15.56	-12.13	3.99	PASS
Highest	-20.74	-19.41	-17.01	3.99	PASS

Note:

$G_{ANT} = 7\text{dBi}$, Array Gain= $10\log(N_{ANT}) = 3.01\text{dBi}$

Directional Gain= $G_{ANT} + \text{Array Gain} = 10.01\text{dBi} > 6\text{dBi}$, So limit= $8 - (10.01 - 6) = 3.99\text{dBm/3kHz}$

Refer to Appendix A: Test Result of Conducted Test

6.6. Conducted Band Edge and Spurious Emission Measurement

6.6.1. Test Specification

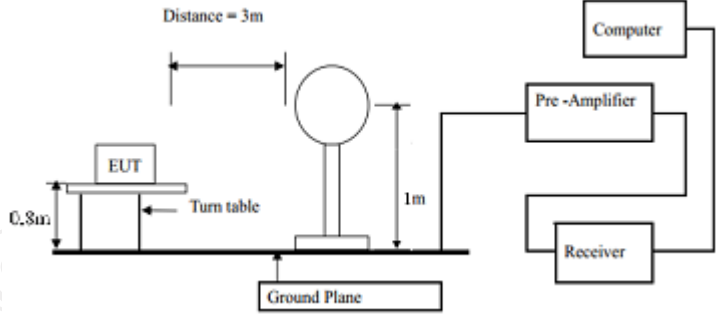
Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	FCC KDB 558074 D01 15.247 Meas Guidance v05r02
Limit:	In any 100 kHz bandwidth outside of the authorized frequency band, the emissions which fall in the non-restricted bands shall be attenuated at least 20 dB / 30dB relative to the maximum PSD level in 100 kHz by RF conducted measurement and radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).
Test Setup:	 The diagram illustrates the test setup. On the left is a green rectangular box representing the 'Spectrum Analyzer'. A black line, representing an RF cable, connects the right side of the Spectrum Analyzer to the left side of a yellow rectangular box on the right, which is labeled 'EUT' (Equipment Under Test).
Test Mode:	Transmitting mode with modulation
Test Procedure:	1. The RF output of EUT was connected to the spectrum analyzer by RF cable. The path loss was compensated to the results for each measurement. 2. Set to the maximum power setting and enable the EUT transmit continuously. 3. Set RBW = 100 kHz, VBW=300 kHz, Peak Detector. Unwanted Emissions measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when maximum peak conducted output power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB per 15.247(d). 4. Measure and record the results in the test report. 5. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
Test Result:	PASS

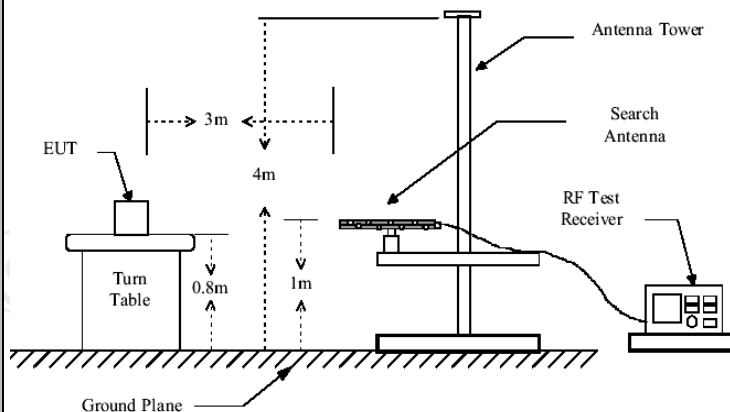
6.6.2. Test Instruments

Equipment	Manufacturer	Model No.	Serial Number	Date of Cal.	Due Date
Spectrum Analyzer	Agilent	N9020A	MY49100619	Jun. 26, 2025	Jun. 25, 2026
Power detector box	MWRFTest	MW100-RFCB	MW210531TCT	Jan. 21, 2025	Jan. 20, 2026

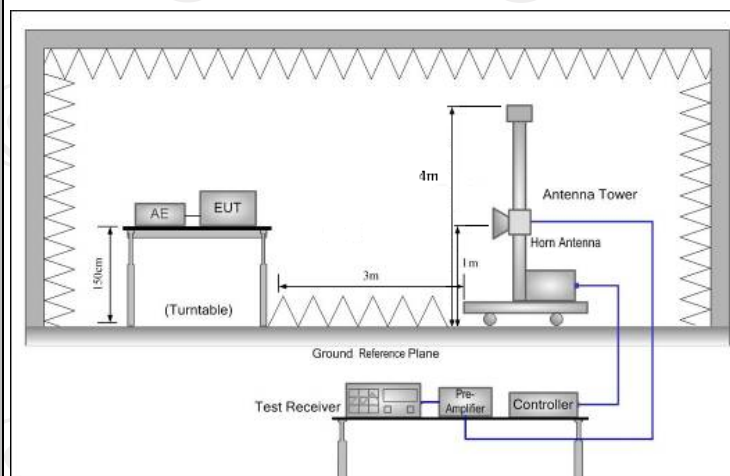
6.7. Radiated Spurious Emission Measurement

6.7.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.209			
Test Method:	ANSI C63.10:2020			
Frequency Range:	9 kHz to 25 GHz			
Measurement Distance:	3 m			
Antenna Polarization:	Horizontal & Vertical			
Operation mode:	Transmitting mode with modulation			
Receiver Setup:	Frequency	Detector	RBW	VBW
	9kHz- 150kHz	Quasi-peak	200Hz	1kHz
	150kHz- 30MHz	Quasi-peak	9kHz	30kHz
	30MHz-1GHz	Quasi-peak	120KHz	300KHz
	Above 1GHz	Peak	1MHz	3MHz
Limit:		Peak	1MHz	10Hz
				Average Value
	Frequency	Field Strength (microvolts/meter)	Measurement Distance (meters)	
	0.009-0.490	2400/F(KHz)	300	
	0.490-1.705	24000/F(KHz)	30	
Test setup:	1.705-30	30	30	
	30-88	100	3	
	88-216	150	3	
	216-960	200	3	
	Above 960	500	3	
	Frequency	Field Strength (microvolts/meter)	Measurement Distance (meters)	Detector
	Above 1GHz	500	3	Average
		5000	3	Peak
	For radiated emissions below 30MHz			
				
	30MHz to 1GHz			



Above 1GHz



Test Procedure:

1. For the radiated emission test below 1GHz:
The EUT was placed on a turntable with 0.8 meter above ground. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high PASS filter are used for the test in order to get better signal level.
For the radiated emission test above 1GHz:
Place the measurement antenna on a turntable with 1.5 meter above ground, which is away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which

	maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane. 3. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level 4. For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported. 5. Use the following spectrum analyzer settings: (1) Span shall wide enough to fully capture the emission being measured; (2) Set RBW=120 kHz for $f < 1$ GHz; VBW $\geq$ RBW; Sweep = auto; Detector function = peak; Trace = max hold; (3) Set RBW = 1 MHz, VBW= 3MHz for $f > 1$ GHz for peak measurement. For average measurement: VBW = 10 Hz, when duty cycle is no less than 98 percent. VBW $\geq 1/T$, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
Test results:	PASS

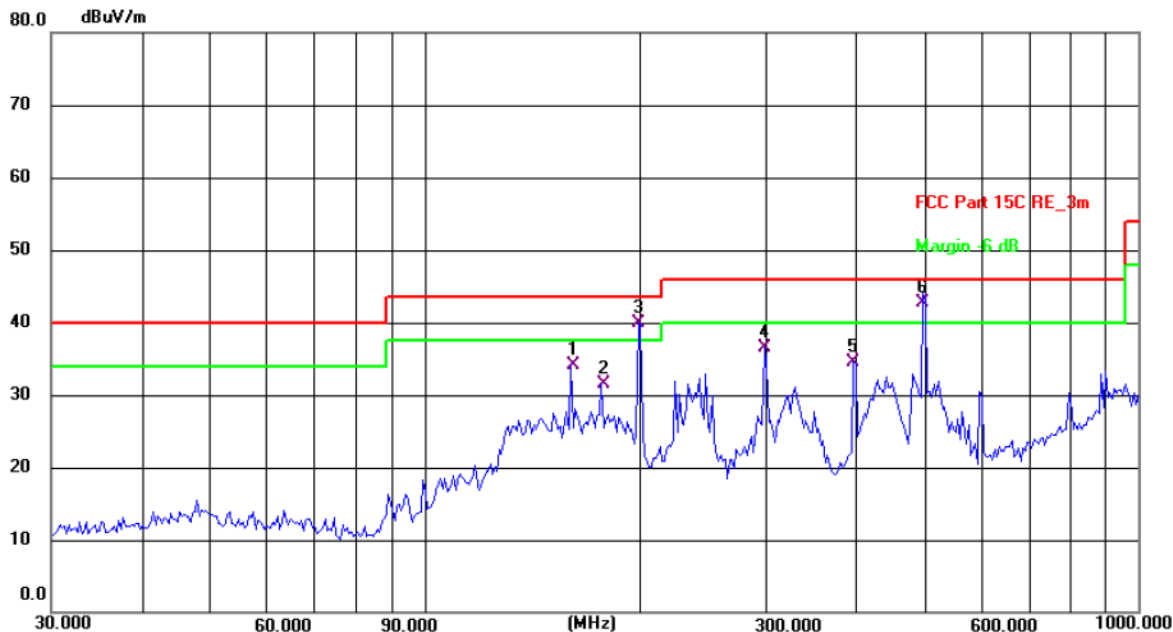
6.7.2. Test Instruments

Radiated Emission Test Site (966)					
Equipment	Manufacturer	Model	Serial Number	Date of Cal.	Due Date
EMI Test Receiver	R&S	ESCI7	100529	Jan. 21, 2025	Jan. 20, 2026
Spectrum Analyzer	R&S	FSQ40	200061	Jun. 26, 2025	Jun. 25, 2026
Pre-amplifier	SKET	LNPA_0118G-45	SK2021012102	Jan. 21, 2025	Jan. 20, 2026
Pre-amplifier	SKET	LNPA_1840G-50	SK202109203500	Apr. 11, 2025	Apr. 10, 2026
Pre-amplifier	HP	8447D	2727A05017	Jun. 26, 2025	Jun. 25, 2026
Loop antenna	Schwarzbeck	FMZB1519B	00191	Jun. 30, 2025	Jun. 29, 2026
Broadband Antenna	Schwarzbeck	VULB9163	340	Jun. 29, 2025	Jun. 28, 2026
Horn Antenna	Schwarzbeck	BBHA 9120D	631	Jun. 29, 2025	Jun. 28, 2026
Horn Antenna	Schwarzbeck	BBHA 9170	00956	Jan. 24, 2025	Jan. 23, 2026
Coaxial cable	SKET	RE-03-D	/	Jun. 27, 2025	Jun. 26, 2026
Coaxial cable	SKET	RE-03-M	/	Jun. 27, 2025	Jun. 26, 2026
Coaxial cable	SKET	RE-03-L	/	Jun. 27, 2025	Jun. 26, 2026
Coaxial cable	SKET	RE-04-D	/	Jun. 27, 2025	Jun. 26, 2026
Coaxial cable	SKET	RE-04-M	/	Jun. 27, 2025	Jun. 26, 2026
Coaxial cable	SKET	RE-04-L	/	Jun. 27, 2025	Jun. 26, 2026
Antenna Mast	Keleto	RE-AM	/	/	/
EMI Test Software	EZ EMC	FA-03A2 RE+	1.1.4.2	/	/

6.7.3. Test Data

Please refer to following diagram for individual
Below 1GHz

Horizontal:



Site: 3m Anechoic Chamber1

Polarization: **Horizontal**

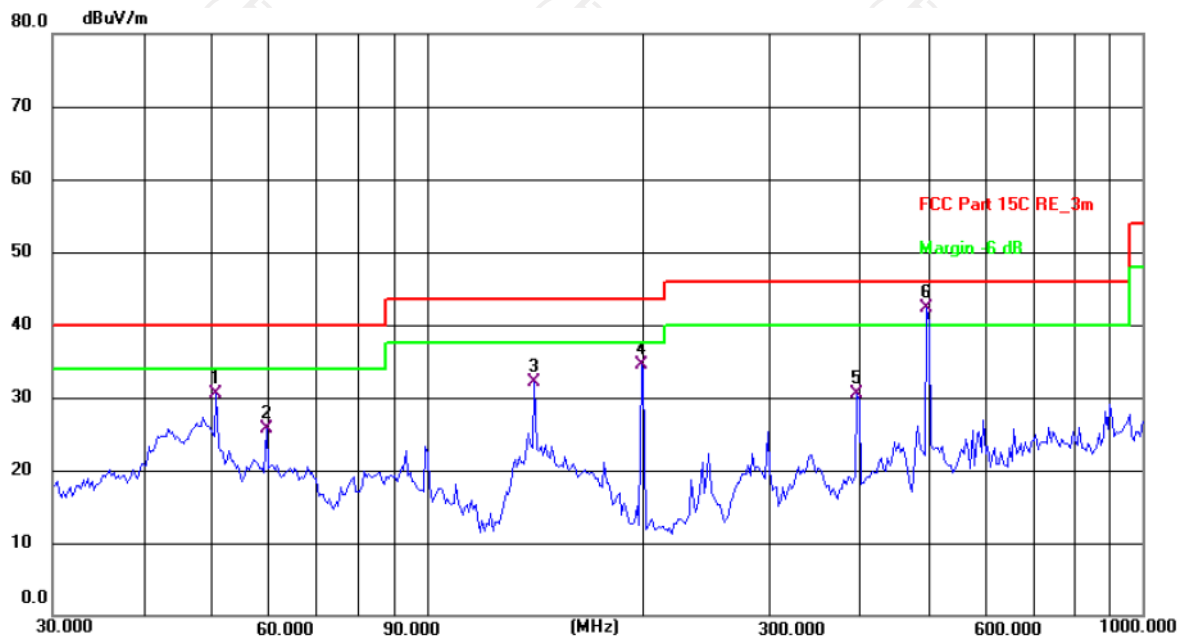
Temperature: 24.3(C) Humidity: 53 %

Limit: FCC Part 15C RE_3m

Power: DC 3.3 V From PC

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	160.3455	45.52	-11.37	34.15	43.50	-9.35	QP	P	
2	176.8877	44.25	-12.75	31.50	43.50	-12.00	QP	P	
3 !	199.2855	54.89	-14.90	39.99	43.50	-3.51	QP	P	
4	299.3158	47.42	-10.98	36.44	46.00	-9.56	QP	P	
5	399.0300	43.66	-9.23	34.43	46.00	-11.57	QP	P	
6 *	499.4245	50.54	-7.83	42.71	46.00	-3.29	QP	P	

Vertical:



Site: 3m Anechoic Chamber1

Polarization: **Vertical**

Temperature: 24.3(C)

Humidity: 53 %

Limit: FCC Part 15C RE_3m

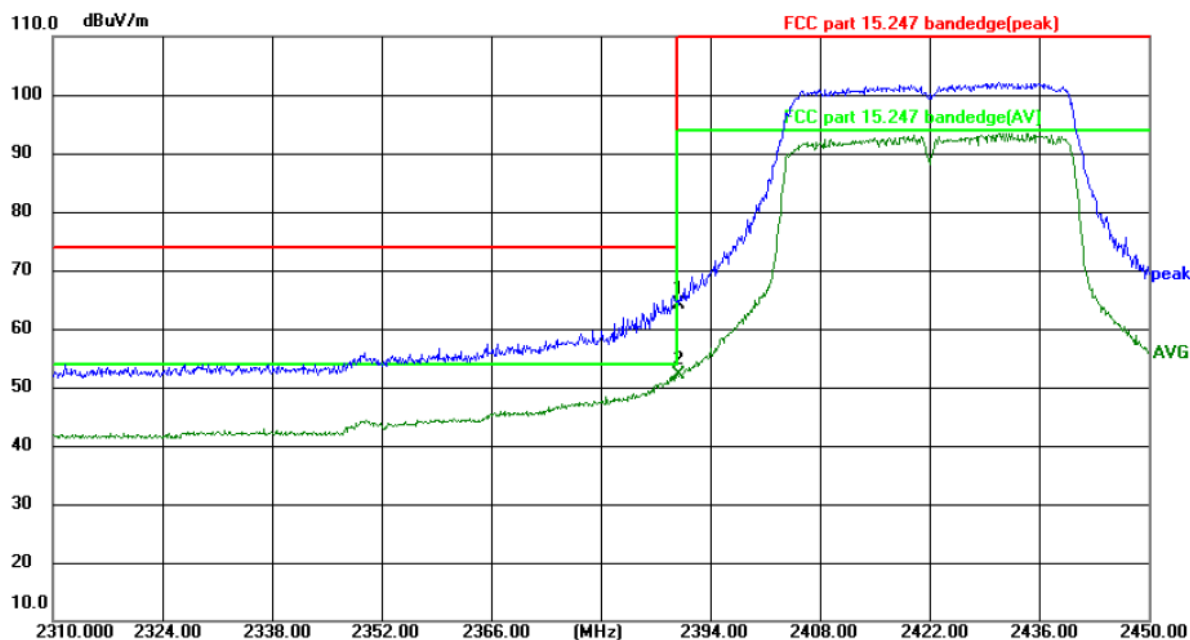
Power: DC 3.3 V From PC

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	50.7635	42.94	-12.45	30.49	40.00	-9.51	QP	P	
2	59.6492	38.64	-12.90	25.74	40.00	-14.26	QP	P	
3	141.3296	43.97	-11.94	32.03	43.50	-11.47	QP	P	
4	199.2855	49.32	-14.90	34.42	43.50	-9.08	QP	P	
5	399.0300	39.64	-9.23	30.41	46.00	-15.59	QP	P	
6 *	499.4245	50.07	-7.83	42.24	46.00	-3.76	QP	P	

Test Result of Radiated Spurious at Band edges

Lowest channel 2422:

Horizontal:



Site: 3m Anechoic Chamber

Polarization: **Horizontal**

Temperature: 22.9(°C)

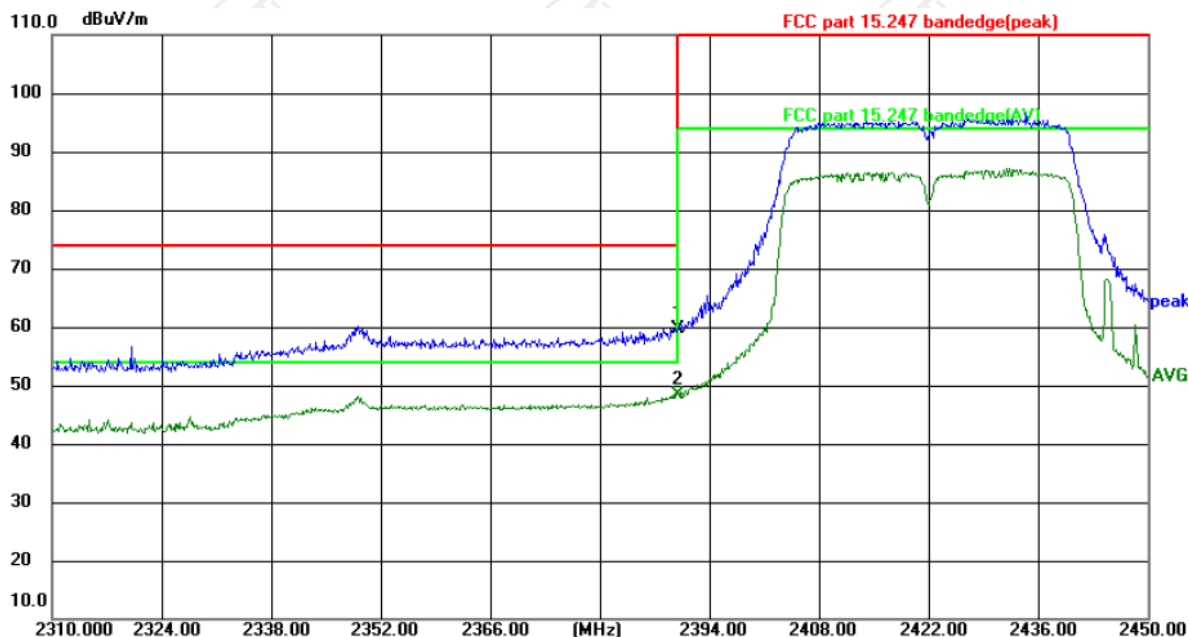
Humidity: 43 %

Limit: FCC part 15.247 bandedge(peak)

Power: DC 3.3 V From PC

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	2390.000	58.08	5.98	64.06	74.00	-9.94	peak	P	
2 *	2390.000	46.05	5.98	52.03	54.00	-1.97	AVG	P	

Vertical:



Site: 3m Anechoic Chamber Polarization: **Vertical** Temperature: 22.9(°C) Humidity: 43 %

Limit: FCC part 15.247 bandedge(peak)

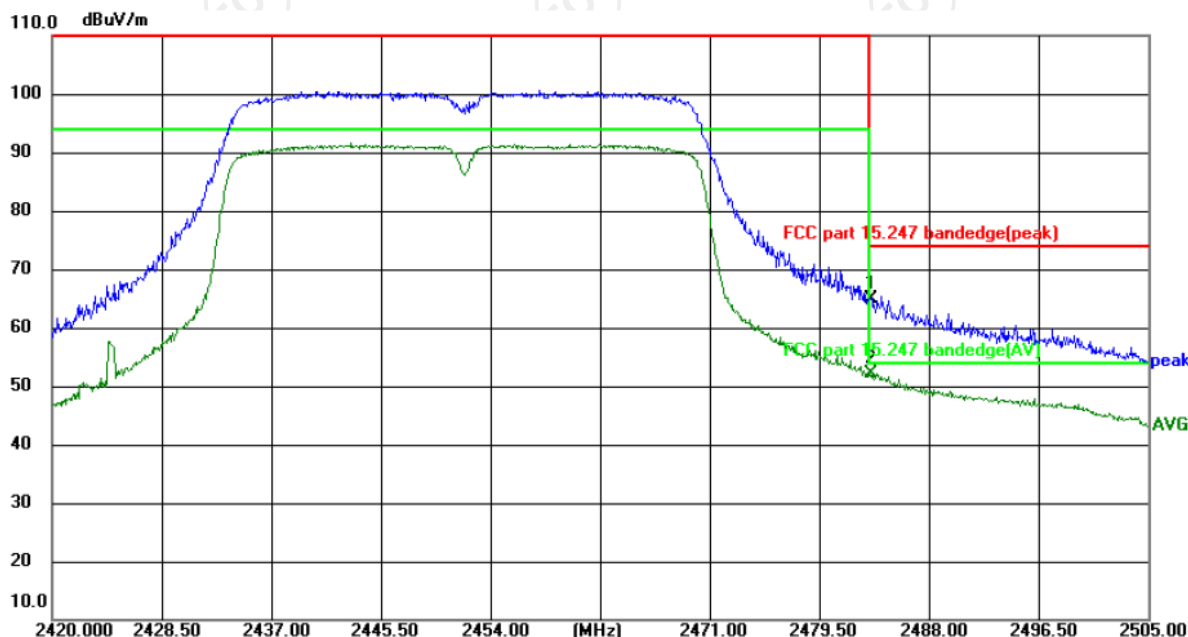
Power: DC 3.3 V From PC

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	2390.000	53.54	5.98	59.52	74.00	-14.48	peak	P	
2 *	2390.000	42.49	5.98	48.47	54.00	-5.53	AVG	P	

Note: Measurements were conducted in all two channels (high, low) and all modulation (802.11b, 802.11g, 802.11n(HT20), 802.11n(HT40)), and the worst case Mode 802.11n(HT40) was submitted only.

Highest channel 2452:

Horizontal:



Site: 3m Anechoic Chamber

Polarization: **Horizontal**

Temperature: 22.9(°C)

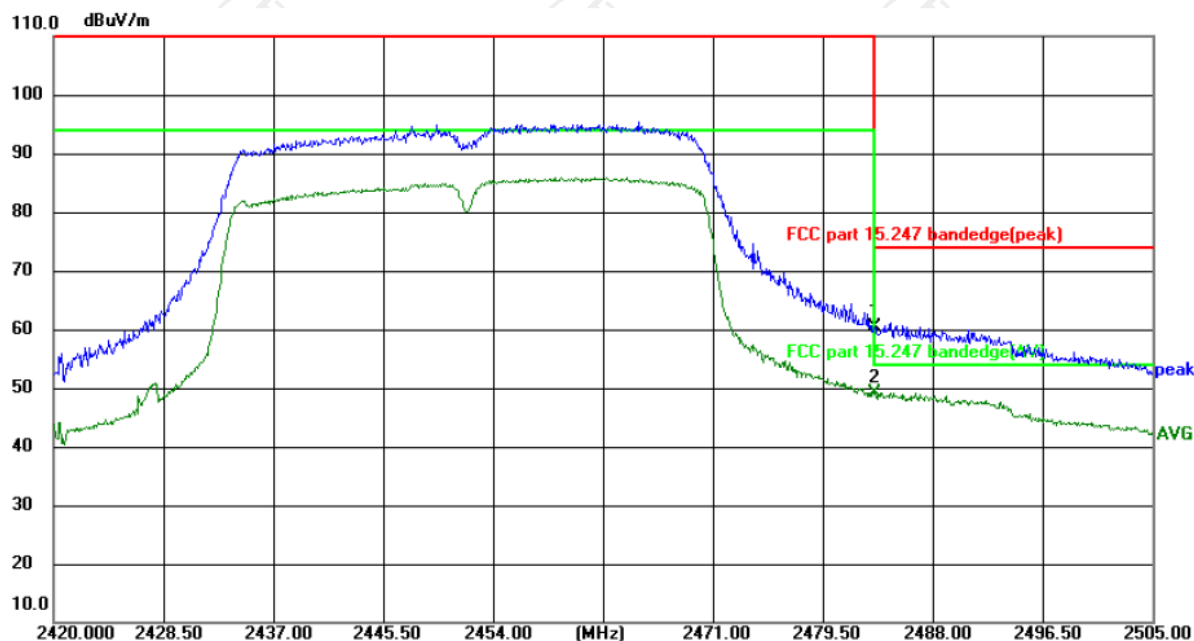
Humidity: 43 %

Limit: FCC part 15.247 bandedge(peak)

Power:DC 3.3 V From PC

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	2483.500	58.68	6.21	64.89	74.00	-9.11	peak	P	
2 *	2483.500	45.81	6.21	52.02	54.00	-1.98	AVG	P	

Vertical:



Site: 3m Anechoic Chamber

Polarization: **Vertical**

Temperature: 22.9(°C)

Humidity: 43 %

Limit: FCC part 15.247 bandedge(peak)

Power: DC 3.3 V From PC

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	2483.500	54.28	6.21	60.49	74.00	-13.51	peak	P	
2 *	2483.500	42.82	6.21	49.03	54.00	-4.97	AVG	P	

Note:

1. Peak Final Emission Level=Peak Reading + Correction Factor;
2. Correction Factor= Antenna Factor + Cable loss – Pre-amplifier
3. Measurements were conducted in all two channels (high, low) and all modulation (802.11b, 802.11g, 802.11n(HT20), 802.11n(HT40)), and the worst case Mode 802.11n(HT40)) was submitted only.

Above 1GHz
Modulation Type: 802.11b

Low channel: 2412 MHz

Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
4824	H	66.01	---	-9.48	56.53	---	74	---	-17.47
4824	H	---	57.41	-9.48	---	47.93	---	54	-6.07
7236	H	56.15	---	-1.34	54.81	---	74	---	-19.19
7236	H	---	49.05	-1.34	---	47.71	---	54	-6.29
---	H	---	---	---	---	---	---	---	---
4824	V	65.49	---	-9.48	56.01	---	74	---	-17.99
4824	V	---	57.38	-9.48	---	47.90	---	54	-6.10
7236	V	56.36	---	-1.34	55.02	---	74	---	-18.98
7236	V	---	48.03	-1.34	---	46.69	---	54	-7.31
---	V	---	---	---	---	---	---	---	---

Middle channel: 2437MHz

Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
4874	H	66.28	---	-9.37	56.91	---	74	---	-17.09
4874	H	---	58.29	-9.37	---	48.92	---	54	-5.08
7311	H	56.84	---	-1.17	55.67	---	74	---	-18.33
7311	H	---	48.87	-1.17	---	47.70	---	54	-6.30
---	H	---	---	---	---	---	---	---	---
4874	V	65.70	---	-9.37	56.33	---	74	---	-17.67
4874	V	---	57.92	-9.37	---	48.55	---	54	-5.45
7311	V	56.62	---	-1.17	55.45	---	74	---	-18.55
7311	V	---	48.65	-1.17	---	47.48	---	54	-6.52
---	V	---	---	---	---	---	---	---	---

High channel: 2462 MHz

Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
4924	H	65.26	---	-9.26	56.00	---	74	---	-18.00
4924	H	---	57.11	-9.26	---	47.85	---	54	-6.15
7386	H	55.43	---	-1.01	54.42	---	74	---	-19.58
7386	H	---	47.70	-1.01	---	46.69	---	54	-7.31
---	H	---	---	---	---	---	---	---	---
4924	V	66.99	---	-9.26	57.73	---	74	---	-16.27
4924	V	---	57.98	-9.26	---	48.72	---	54	-5.28
7386	V	55.78	---	-1.01	54.77	---	74	---	-19.23
7386	V	---	46.88	-1.01	---	45.87	---	54	-8.13
---	V	---	---	---	---	---	---	---	---

Note:

1. Emission Level=Peak Reading + Correction Factor; Correction Factor= Antenna Factor + Cable loss – Pre-amplifier
2. Margin (dB) = Emission Level (dBμV/m) - limit (dBμV/m)
3. The emission levels of other frequencies are very lower than the limit and not show in test report.
4. Measurements were conducted from 1 GHz to the 10th harmonic of highest fundamental frequency. The highest test frequency is 25GHz.
5. Data of measurement shown "----" in the above table mean that the reading of emissions is attenuated more than 20 dB below the limits or the field strength is too small to be measured.
6. 802.11b is SISO mode and the worst case Antenna (ANT0) was submitted only.

Modulation Type: 802.11g

Low channel: 2412 MHz

Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
4824	H	66.69	---	-9.48	57.21	---	74	---	-16.79
4824	H	---	57.53	-9.48	---	48.05	---	54	-5.95
7236	H	56.14	---	-1.34	54.80	---	74	---	-19.20
7236	H	---	47.15	-1.34	---	45.81	---	54	-8.19
---	H	---	---	---	---	---	---	---	---
4824	V	66.45	---	-9.48	56.97	---	74	---	-17.03
4824	V	---	57.06	-9.48	---	47.58	---	54	-6.42
7236	V	56.84	---	-1.34	55.50	---	74	---	-18.50
7236	V	---	48.17	-1.34	---	46.83	---	54	-7.17
---	V	---	---	---	---	---	---	---	---

Middle channel: 2437MHz

Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
4874	H	65.75	---	-9.37	56.38	---	74	---	-17.62
4874	H	---	56.68	-9.37	---	47.31	---	54	-6.69
7311	H	56.91	---	-1.17	55.74	---	74	---	-18.26
7311	H	---	47.62	-1.17	---	46.45	---	54	-7.55
---	H	---	---	---	---	---	---	---	---
4874	V	66.60	---	-9.37	57.23	---	74	---	-16.77
4874	V	---	57.34	-9.37	---	47.97	---	54	-6.03
7311	V	56.95	---	-1.17	55.78	---	74	---	-18.22
7311	V	---	47.56	-1.17	---	46.39	---	54	-7.61
---	V	---	---	---	---	---	---	---	---

High channel: 2462 MHz

Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
4924	H	65.17	---	-9.26	55.91	---	74	---	-18.09
4924	H	---	55.33	-9.26	---	46.07	---	54	-7.93
7386	H	55.30	---	-1.01	54.29	---	74	---	-19.71
7386	H	---	46.59	-1.01	---	45.58	---	54	-8.42
---	H	---	---	---	---	---	---	---	---
4924	V	65.44	---	-9.26	56.18	---	74	---	-17.82
4924	V	---	56.48	-9.26	---	47.22	---	54	-6.78
7386	V	55.92	---	-1.01	54.91	---	74	---	-19.09
7386	V	---	46.68	-1.01	---	45.67	---	54	-8.33
---	V	---	---	---	---	---	---	---	---

Note:

- Emission Level=Peak Reading + Correction Factor; Correction Factor= Antenna Factor + Cable loss – Pre-amplifier
- Margin (dB) = Emission Level (dBμV/m) - limit (dBμV/m)
- The emission levels of other frequencies are very lower than the limit and not show in test report.
- Measurements were conducted from 1 GHz to the 10th harmonic of highest fundamental frequency. The highest test frequency is 25GHz.
- Data of measurement shown "—" in the above table mean that the reading of emissions is attenuated more than 20 dB below the limits or the field strength is too small to be measured.
- 802.11g is SISO mode and the worst case Antenna (ANT0) was submitted only.

Modulation Type: 802.11n(HT20)

Low channel: 2412 MHz

Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
4824	H	66.08	---	-9.48	56.60	---	74	---	-17.40
4824	H	---	57.01	-9.48	---	47.53	---	54	-6.47
7236	H	55.33	---	-1.34	53.99	---	74	---	-20.01
7236	H	---	47.04	-1.34	---	45.7	---	54	-8.3
---	H	---	---	---	---	---	---	---	---
4824	V	65.52	---	-9.48	56.04	---	74	---	-17.96
4824	V	---	56.78	-9.48	---	47.30	---	54	-6.70
7236	V	55.73	---	-1.34	54.39	---	74	---	-19.61
7236	V	---	47.09	-1.34	---	45.75	---	54	-8.25
---	V	---	---	---	---	---	---	---	---

Middle channel: 2437MHz

Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
4874	H	65.37	---	-9.37	56.00	---	74	---	-18.00
4874	H	---	56.65	-9.37	---	47.28	---	54	-6.72
7311	H	56.02	---	-1.17	54.85	---	74	---	-19.15
7311	H	---	46.74	-1.17	---	45.57	---	54	-8.43
---	H	---	---	---	---	---	---	---	---
4874	V	65.34	---	-9.37	55.97	---	74	---	-18.03
4874	V	---	55.90	-9.37	---	46.53	---	54	-7.47
7311	V	55.21	---	-1.17	54.04	---	74	---	-19.96
7311	V	---	46.52	-1.17	---	45.35	---	54	-8.65
---	V	---	---	---	---	---	---	---	---

High channel: 2462 MHz

Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
4924	H	65.39	---	-9.26	56.13	---	74	---	-17.87
4924	H	---	56.34	-9.26	---	47.08	---	54	-6.92
7386	H	56.46	---	-1.01	55.45	---	74	---	-18.55
7386	H	---	47.77	-1.01	---	46.76	---	54	-7.24
---	H	---	---	---	---	---	---	---	---
4924	V	65.22	---	-9.26	55.96	---	74	---	-18.04
4924	V	---	55.34	-9.26	---	46.08	---	54	-7.92
7386	V	56.46	---	-1.01	55.45	---	74	---	-18.55
7386	V	---	47.53	-1.01	---	46.52	---	54	-7.48
---	V	---	---	---	---	---	---	---	---

Note:

- Emission Level=Peak Reading + Correction Factor; Correction Factor= Antenna Factor + Cable loss – Pre-amplifier
- Margin (dB) = Emission Level (dBμV/m) - limit (dBμV/m)
- The emission levels of other frequencies are very lower than the limit and not show in test report.
- Measurements were conducted from 1 GHz to the 10th harmonic of highest fundamental frequency. The highest test frequency is 25GHz.
- Data of measurement shown “---“in the above table mean that the reading of emissions is attenuated more than 20 dB below the limits or the field strength is too small to be measured.
- 802.11n(HT20) is MIMO mode.

Modulation Type: 802.11n(HT40)

Low channel: 2422 MHz

Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
4844	H	65.31	---	-9.43	55.88	---	74	---	-18.12
4844	H	---	55.85	-9.43	---	46.42	---	54	-7.58
7266	H	55.74	---	-1.28	54.46	---	74	---	-19.54
7266	H	---	46.57	-1.28	---	45.29	---	54	-8.71
---	H	---	---	---	---	---	---	---	---
4844	V	66.03	---	-9.43	56.60	---	74	---	-17.40
4844	V	---	56.55	-9.43	---	47.12	---	54	-6.88
7266	V	56.96	---	-1.28	55.68	---	74	---	-18.32
7266	V	---	48.11	-1.28	---	46.83	---	54	-7.17
---	V	---	---	---	---	---	---	---	---

Middle channel: 2437MHz

Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
4874	H	65.70	---	-9.37	56.33	---	74	---	-17.67
4874	H	---	56.37	-9.37	---	47.00	---	54	-7.00
7311	H	56.18	---	-1.17	55.01	---	74	---	-18.99
7311	H	---	46.98	-1.17	---	45.81	---	54	-8.19
---	H	---	---	---	---	---	---	---	---
4874	V	64.96	---	-9.37	55.59	---	74	---	-18.41
4874	V	---	55.54	-9.37	---	46.17	---	54	-7.83
7311	V	55.53	---	-1.17	54.36	---	74	---	-19.64
7311	V	---	46.70	-1.17	---	45.53	---	54	-8.47
---	V	---	---	---	---	---	---	---	---

High channel: 2452 MHz

Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
4904	H	65.45	---	-9.30	56.15	---	74	---	-17.85
4904	H	---	56.36	-9.30	---	47.06	---	54	-6.94
7356	H	55.82	---	-1.08	54.74	---	74	---	-19.26
7356	H	---	46.34	-1.08	---	45.26	---	54	-8.74
---	H	---	---	---	---	---	---	---	---
4904	V	66.09	---	-9.30	56.79	---	74	---	-17.21
4904	V	---	56.95	-9.30	---	47.65	---	54	-6.35
7356	V	56.76	---	-1.08	55.68	---	74	---	-18.32
7356	V	---	48.05	-1.08	---	46.97	---	54	-7.03
---	V	---	---	---	---	---	---	---	---

Note:

- Emission Level=Peak Reading + Correction Factor; Correction Factor= Antenna Factor + Cable loss – Pre-amplifier
- Margin (dB) = Emission Level (dBμV/m) - limit (dBμV/m)
- The emission levels of other frequencies are very lower than the limit and not show in test report.
- Measurements were conducted from 1 GHz to the 10th harmonic of highest fundamental frequency. The highest test frequency is 25GHz.
- Data of measurement shown “---“in the above table mean that the reading of emissions is attenuated more than 20 dB below the limits or the field strength is too small to be measured.
- 802.11n(HT40) is MIMO mode.

Appendix A: Test Result of Conducted Test

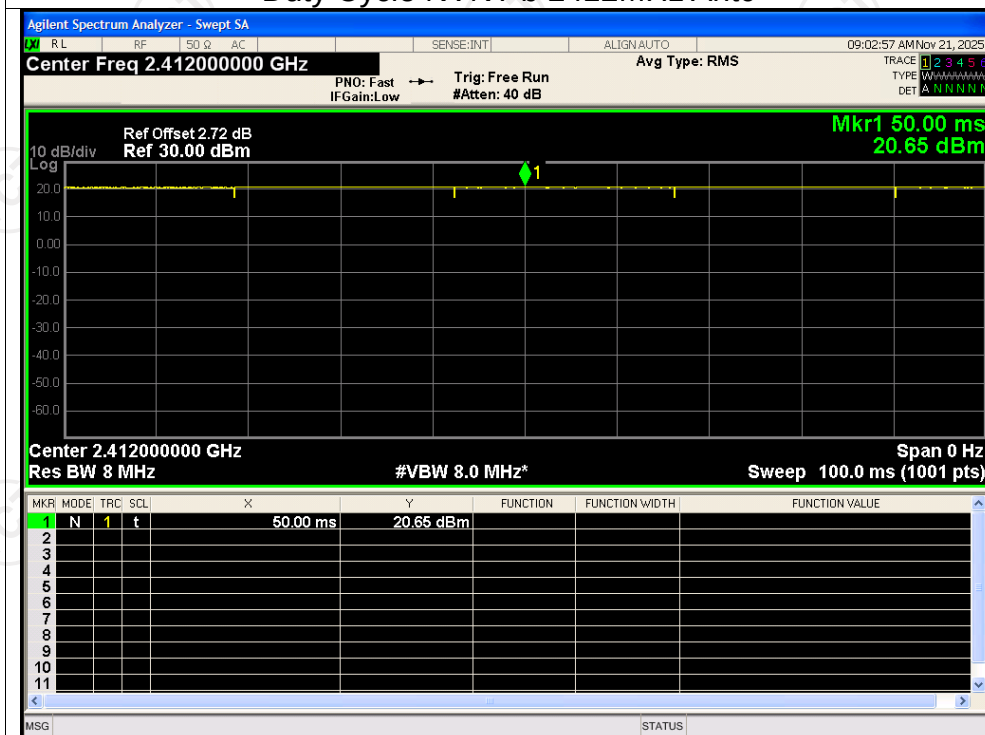
Antenna 0

Duty Cycle

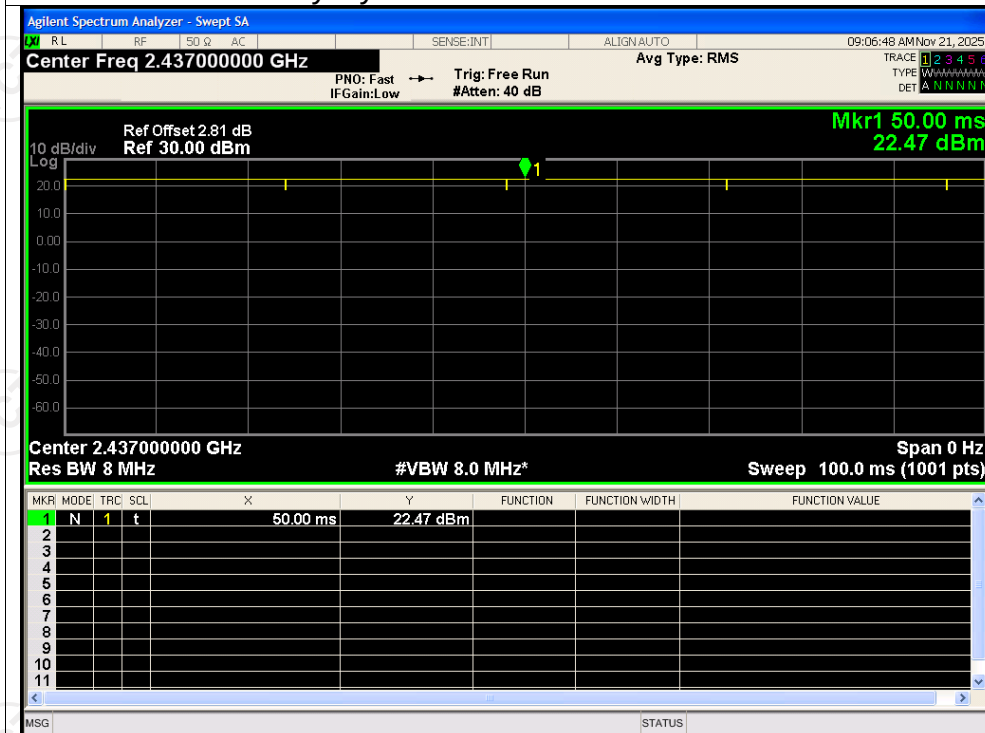
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)
NVNT	b	2412	Ant0	100	0
NVNT	b	2437	Ant0	100	0
NVNT	b	2462	Ant0	100	0
NVNT	g	2412	Ant0	100	0
NVNT	g	2437	Ant0	100	0
NVNT	g	2462	Ant0	100	0
NVNT	n20	2412	Ant0	100	0
NVNT	n20	2437	Ant0	100	0
NVNT	n20	2462	Ant0	99.9	0
NVNT	n40	2422	Ant0	100	0
NVNT	n40	2437	Ant0	100	0
NVNT	n40	2452	Ant0	100	0

Test Graphs

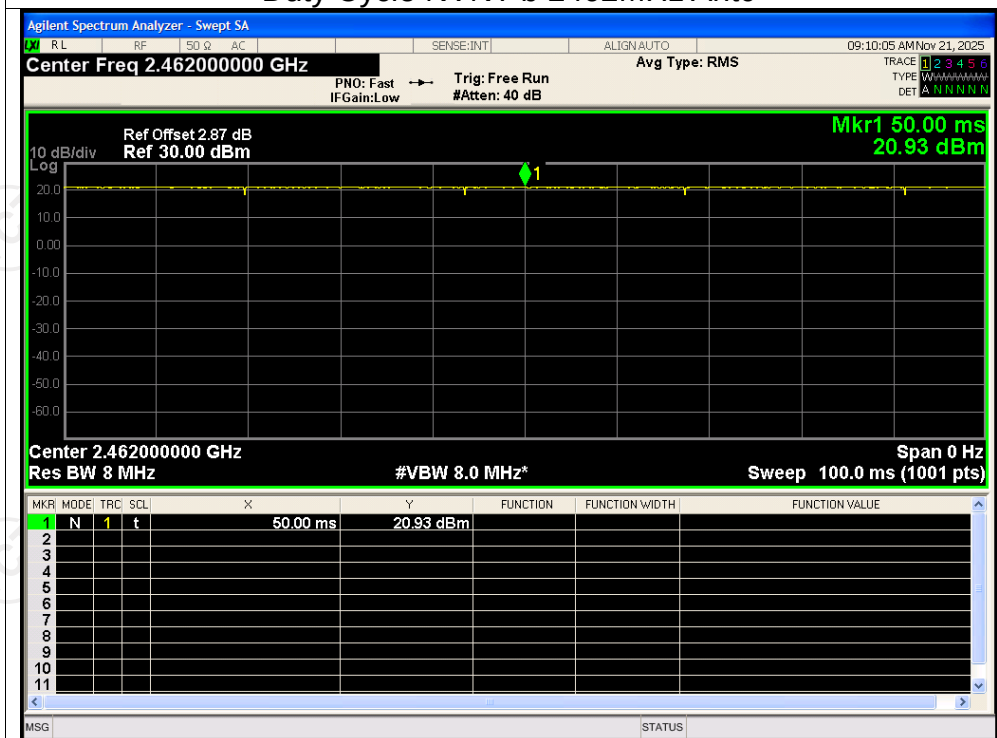
Duty Cycle NVNT b 2412MHz Ant0



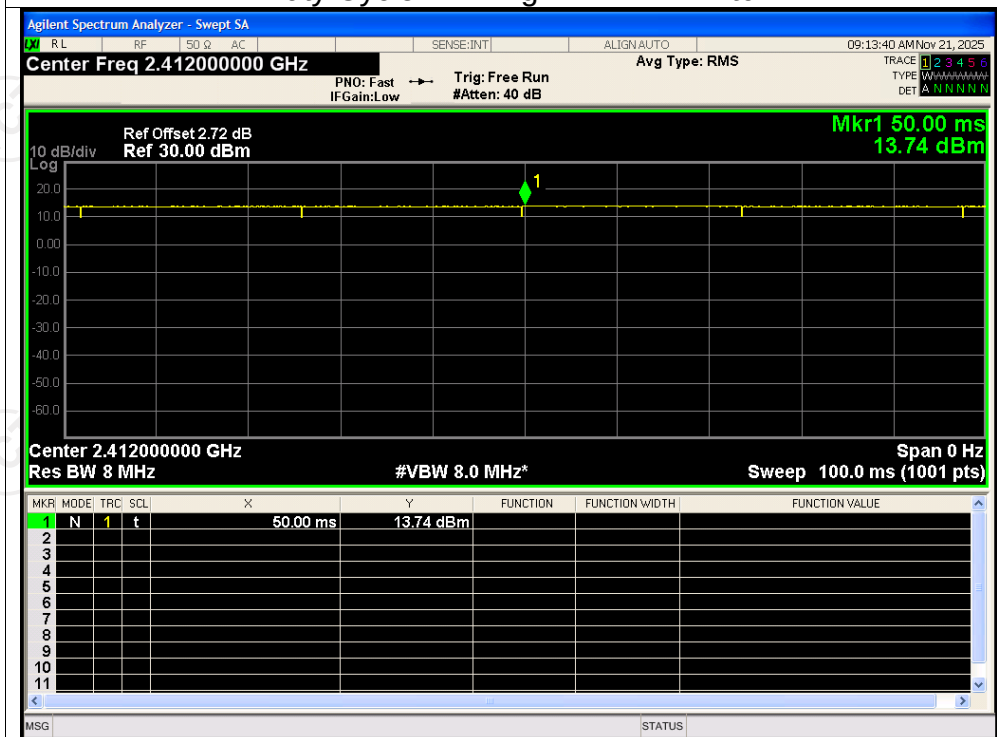
Duty Cycle NVNT b 2437MHz Ant0



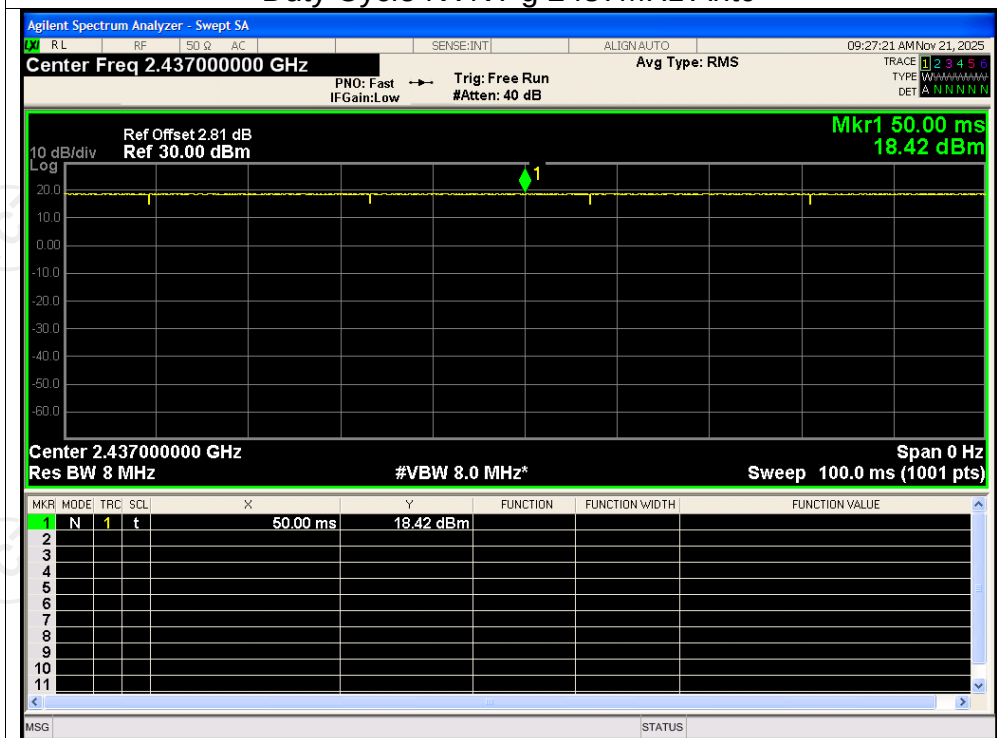
Duty Cycle NVNT b 2462MHz Ant0



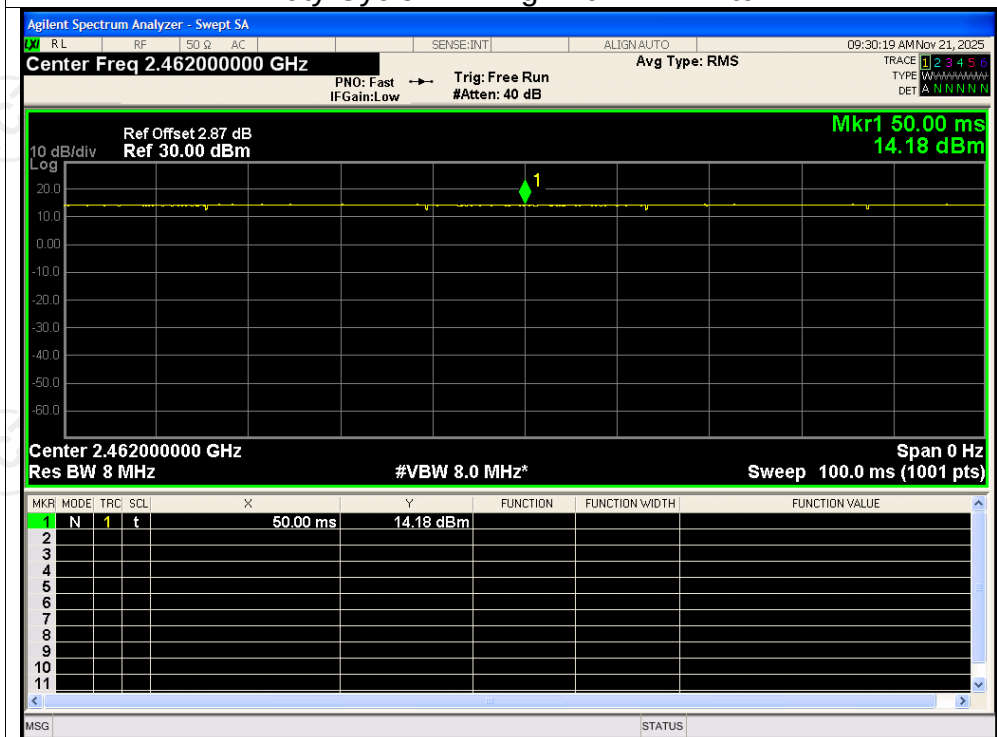
Duty Cycle NVNT g 2412MHz Ant0



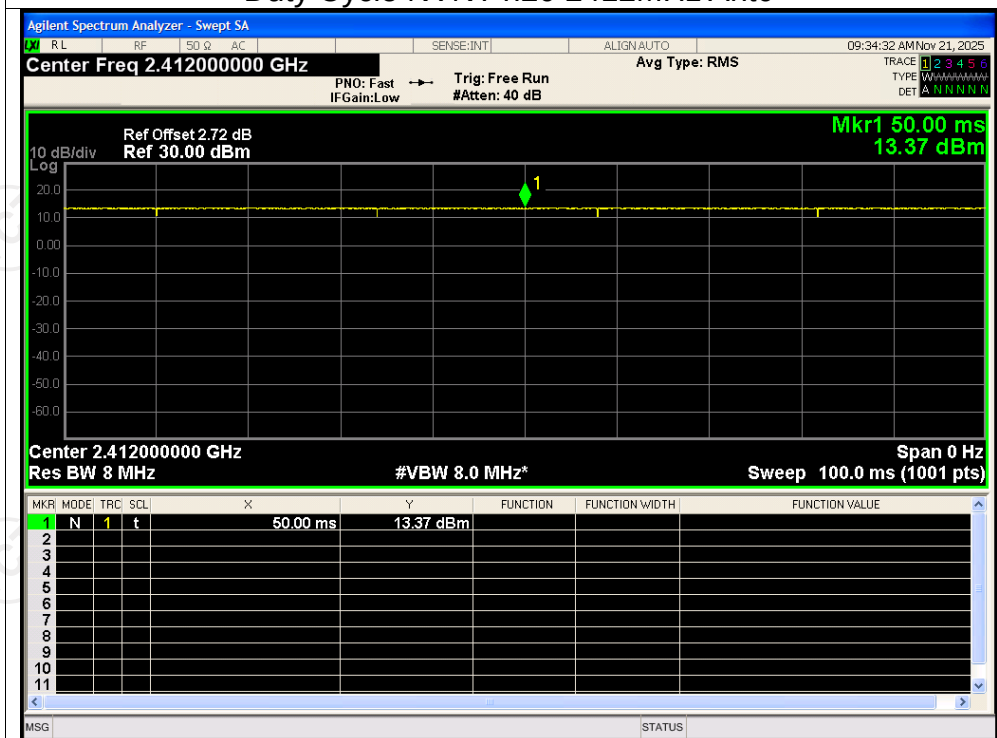
Duty Cycle NVNT g 2437MHz Ant0



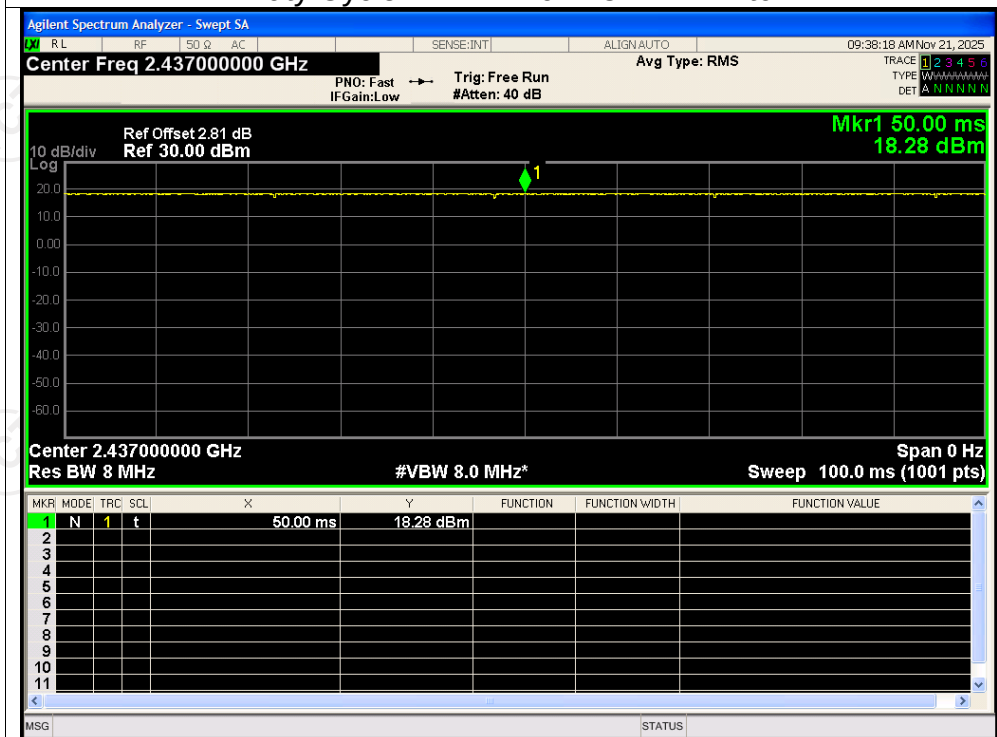
Duty Cycle NVNT g 2462MHz Ant0



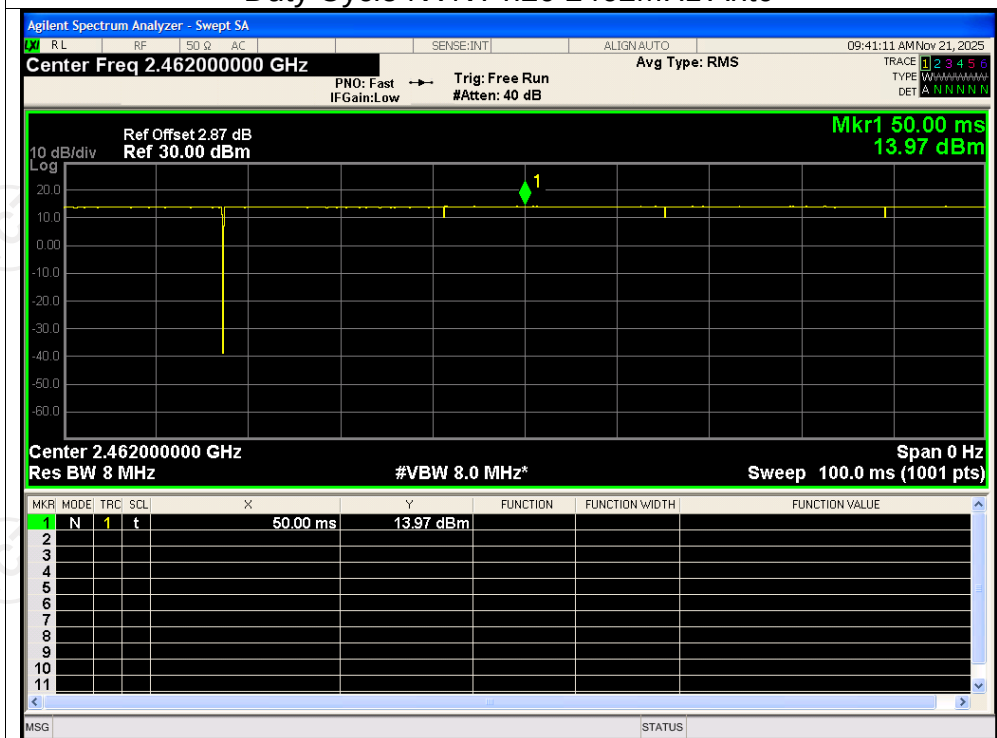
Duty Cycle NVNT n20 2412MHz Ant0



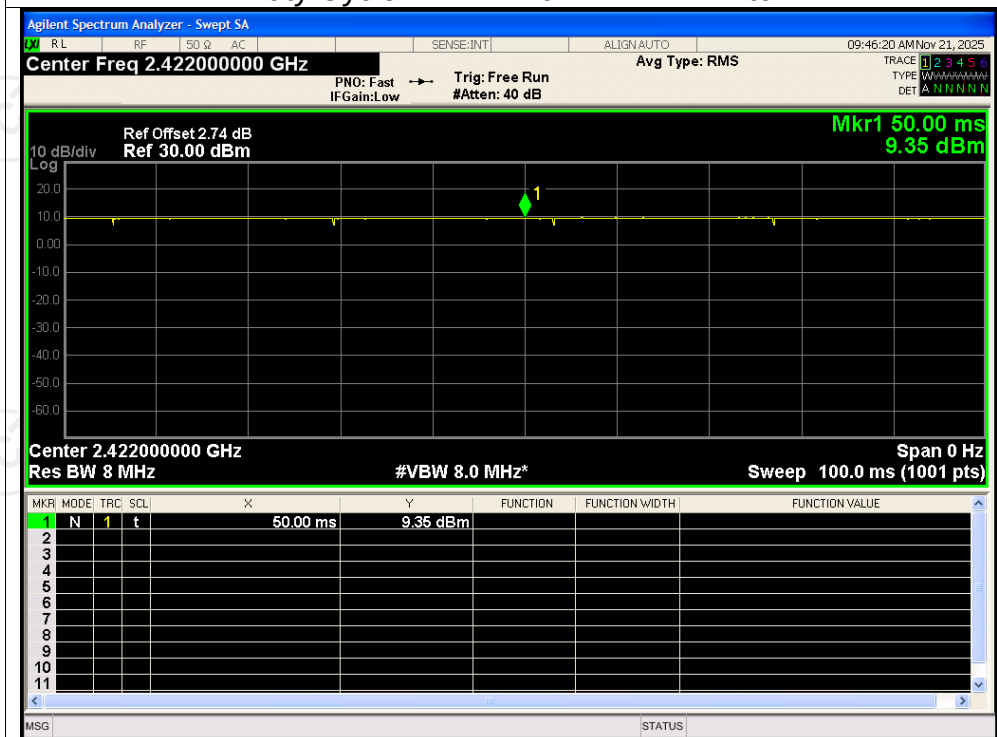
Duty Cycle NVNT n20 2437MHz Ant0



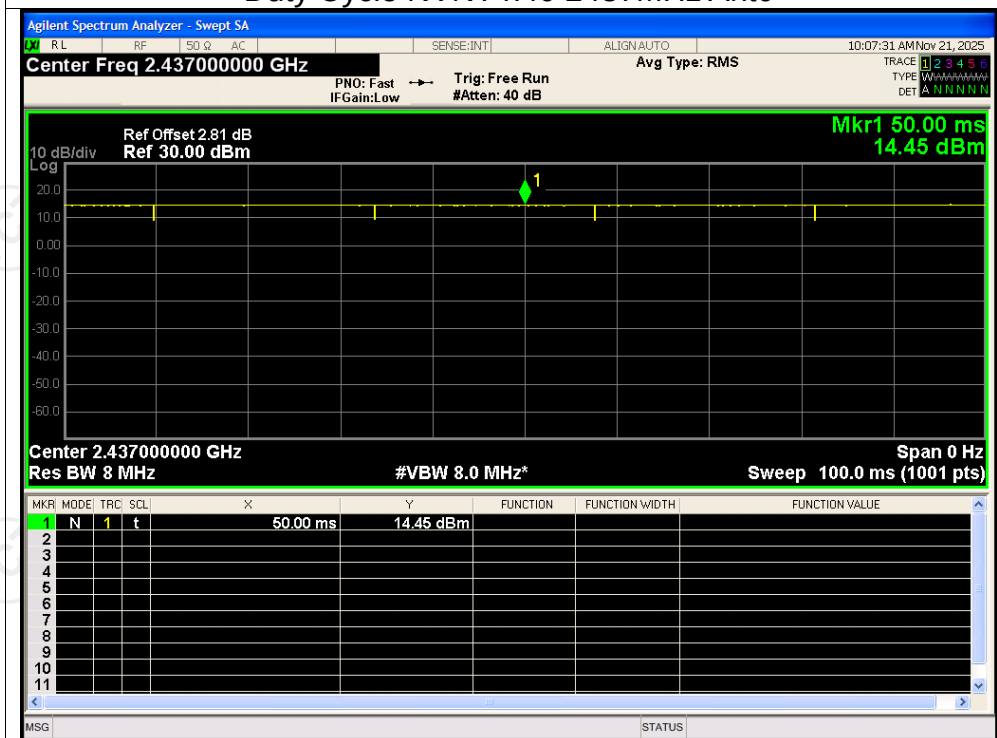
Duty Cycle NVNT n20 2462MHz Ant0



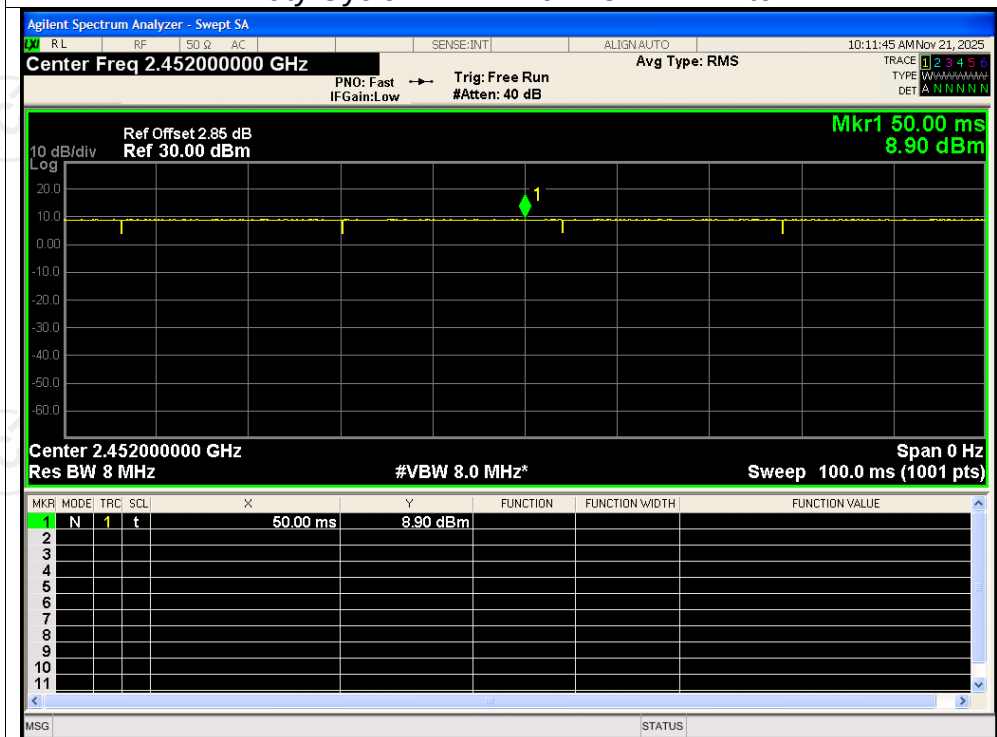
Duty Cycle NVNT n40 2422MHz Ant0



Duty Cycle NVNT n40 2437MHz Ant0



Duty Cycle NVNT n40 2452MHz Ant0

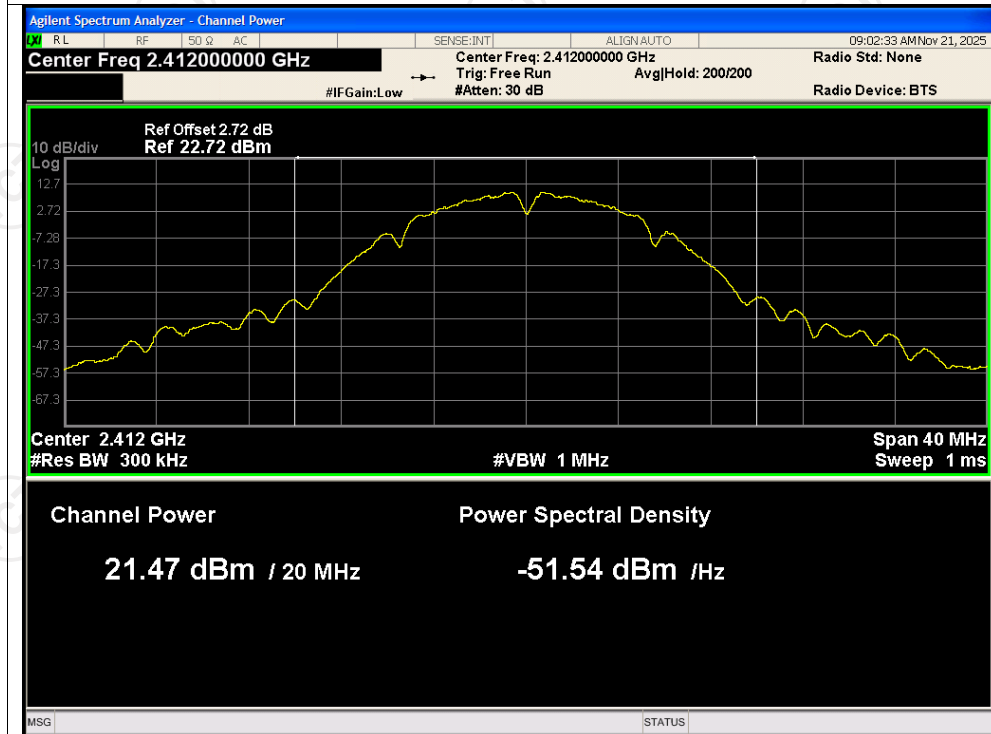


Maximum Conducted Output Power

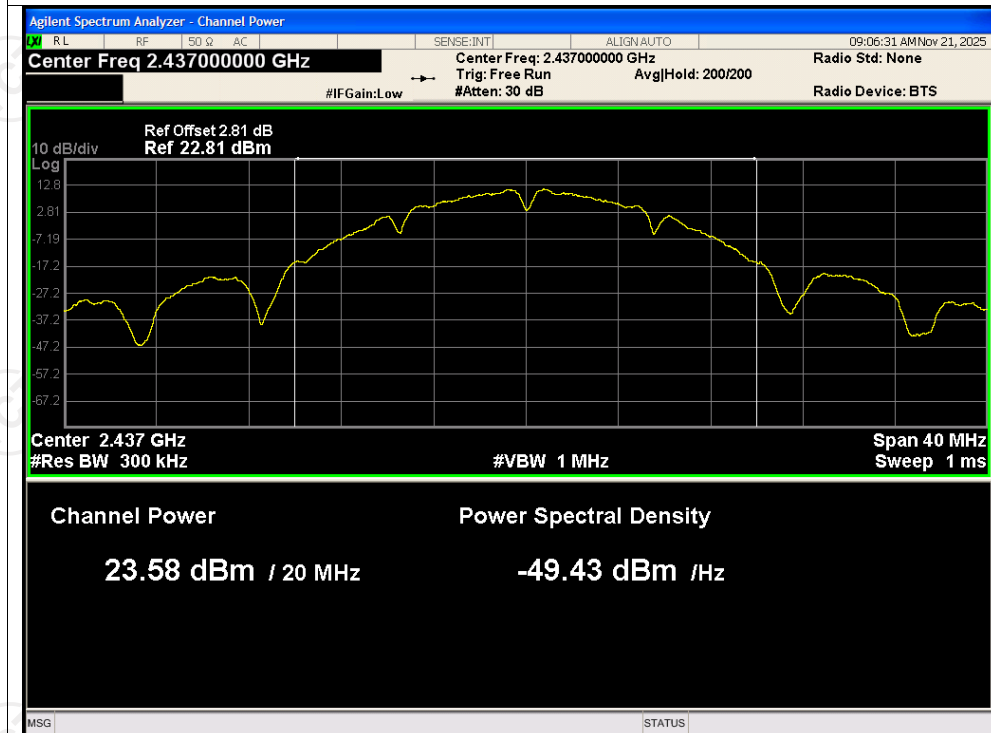
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant0	21.47	29	Pass
NVNT	b	2437	Ant0	23.58	29	Pass
NVNT	b	2462	Ant0	21.81	29	Pass
NVNT	g	2412	Ant0	17.31	29	Pass
NVNT	g	2437	Ant0	22.32	29	Pass
NVNT	g	2462	Ant0	17.86	29	Pass
NVNT	n20	2412	Ant0	17.34	29	Pass
NVNT	n20	2437	Ant0	22.26	29	Pass
NVNT	n20	2462	Ant0	17.78	29	Pass
NVNT	n40	2422	Ant0	16.61	29	Pass
NVNT	n40	2437	Ant0	22.31	29	Pass
NVNT	n40	2452	Ant0	16.12	29	Pass

Test Graphs

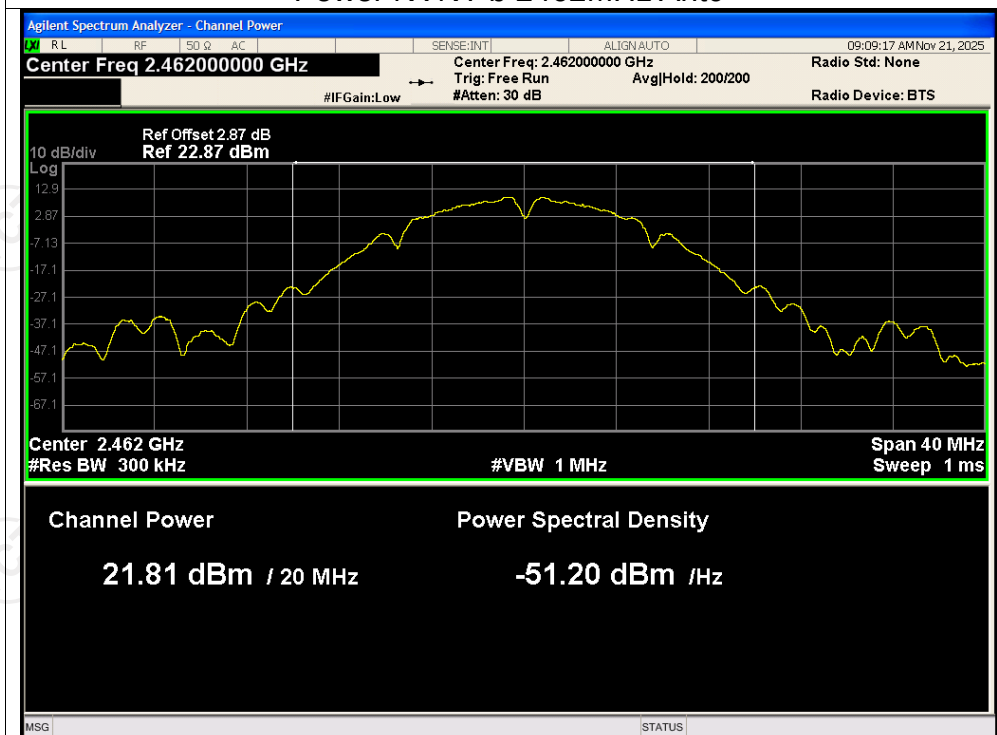
Power NVNT b 2412MHz Ant0



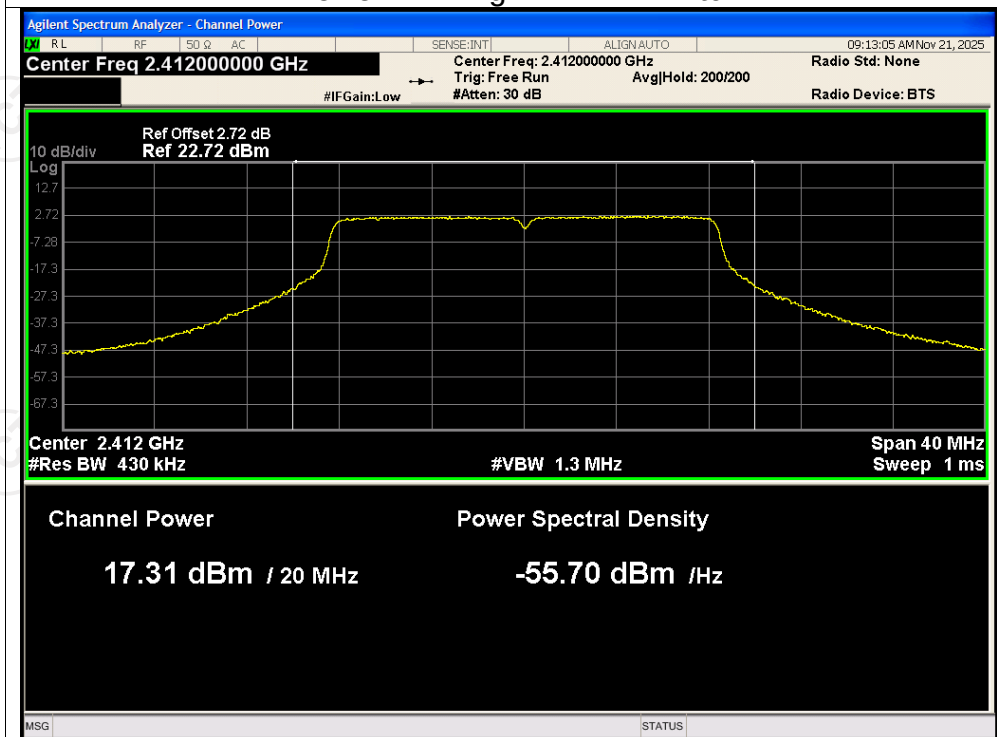
Power NVNT b 2437MHz Ant0



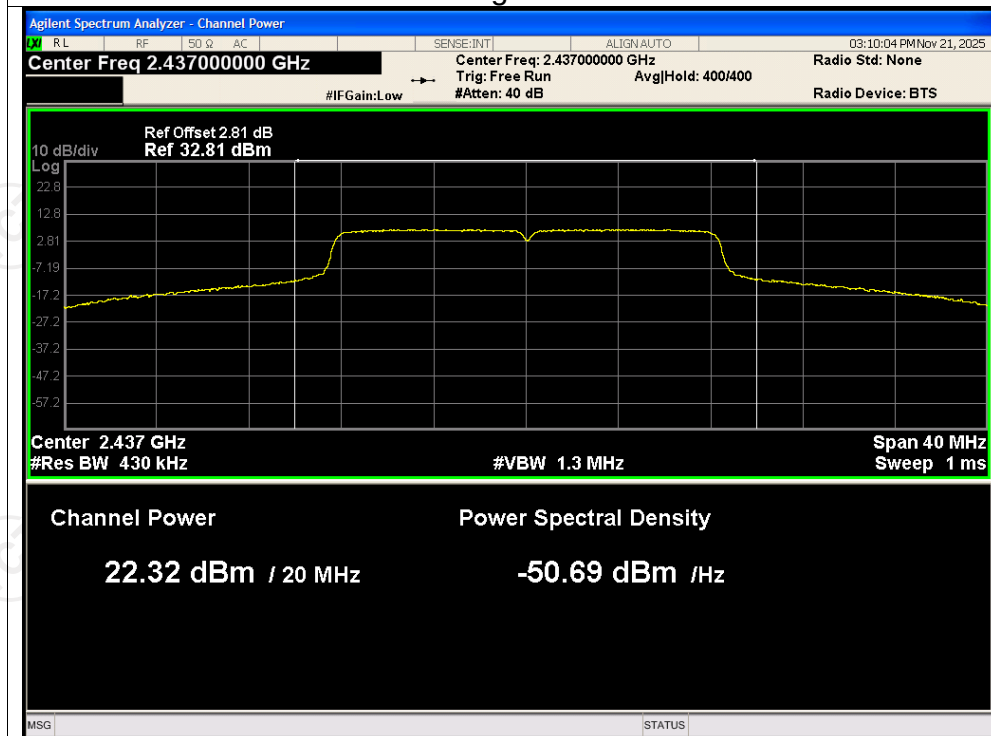
Power NVNT b 2462MHz Ant0



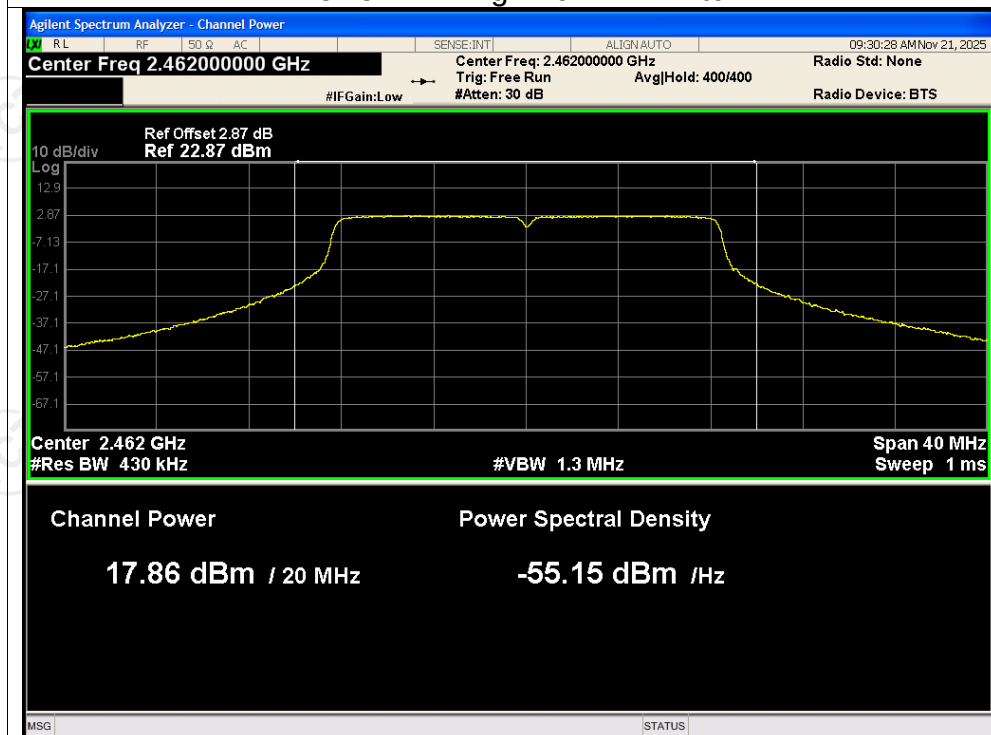
Power NVNT g 2412MHz Ant0



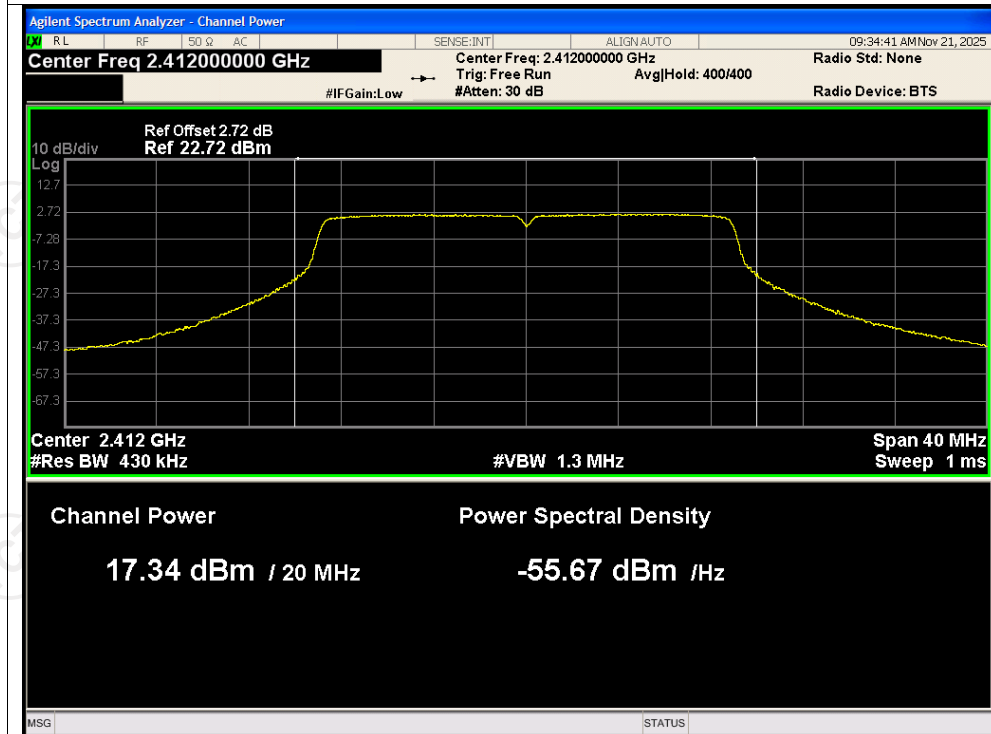
Power NVNT g 2437MHz Ant0



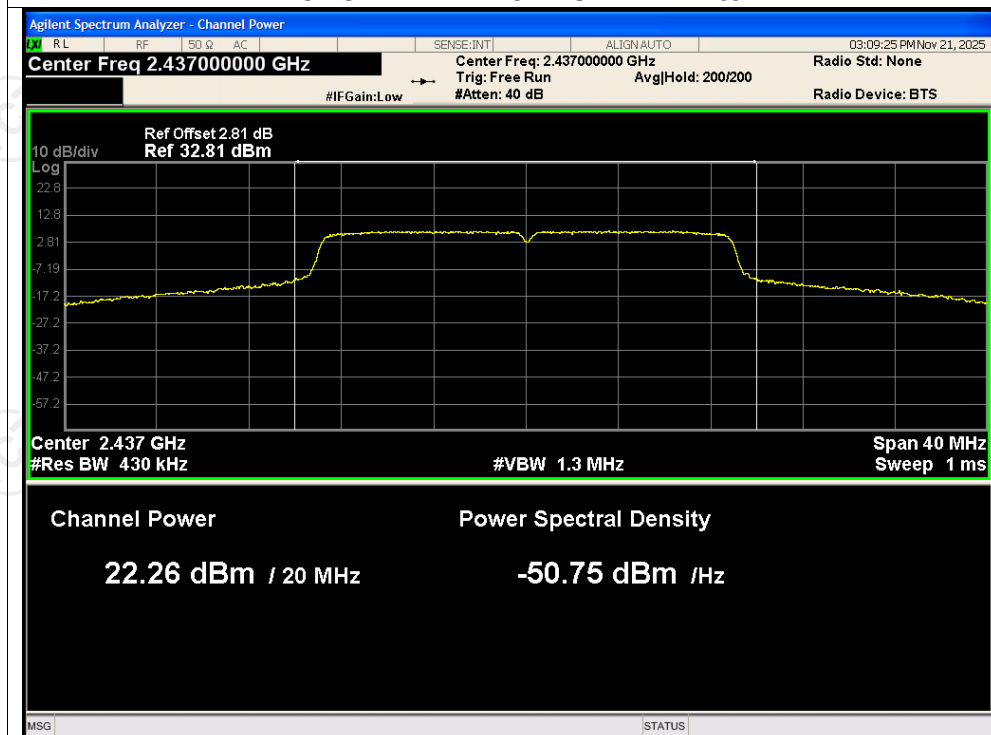
Power NVNT g 2462MHz Ant0



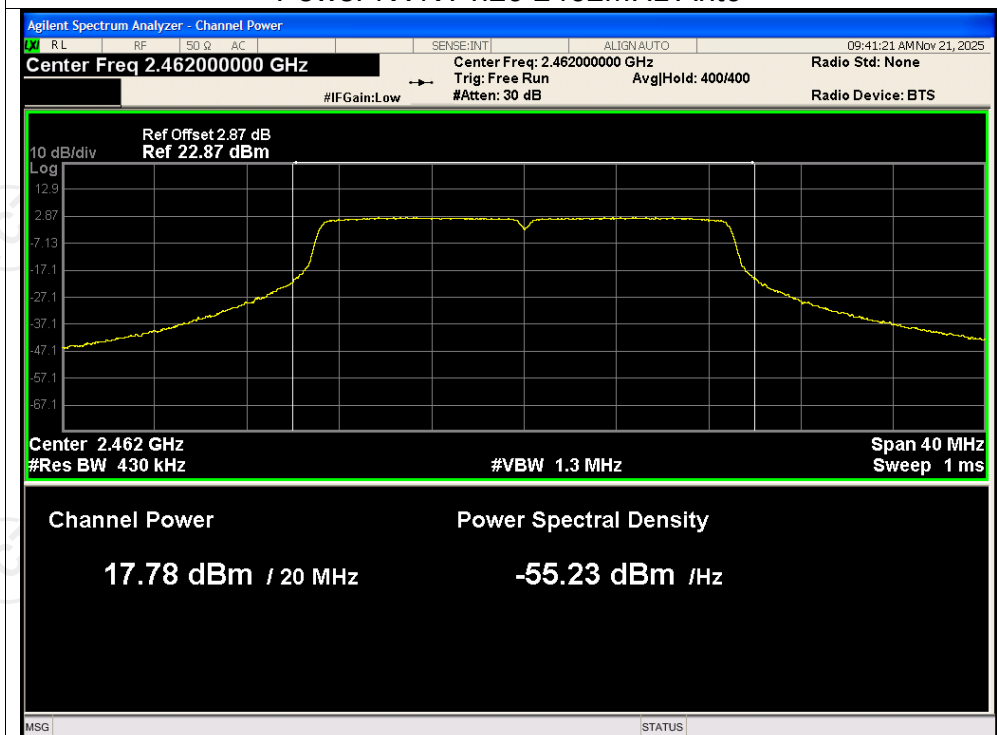
Power NVNT n20 2412MHz Ant0



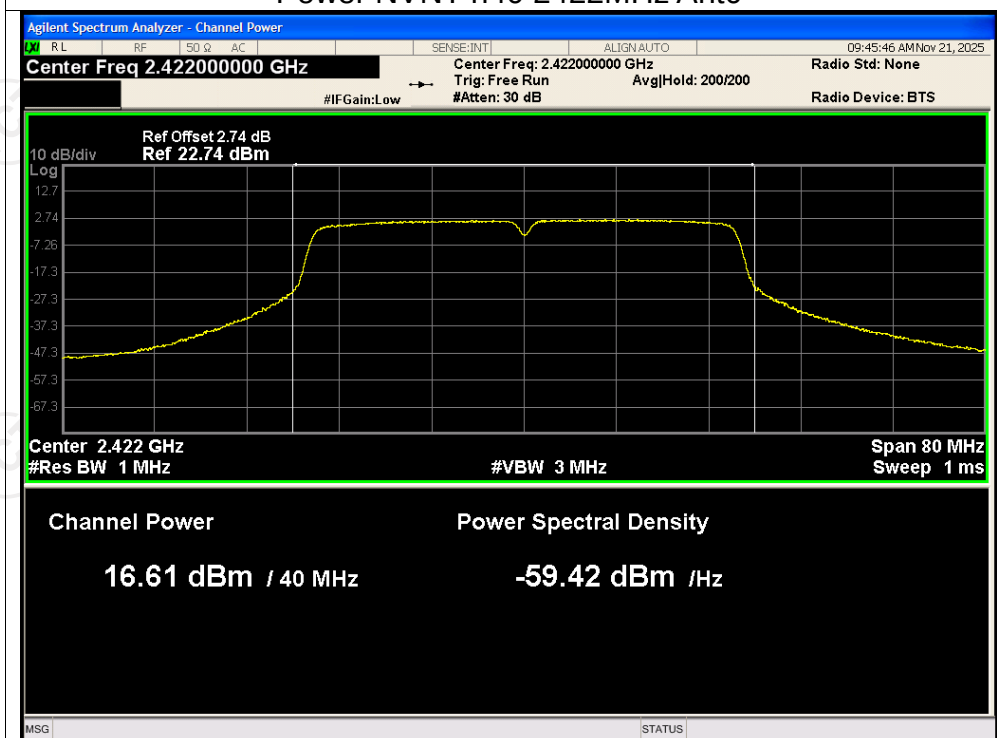
Power NVNT n20 2437MHz Ant0



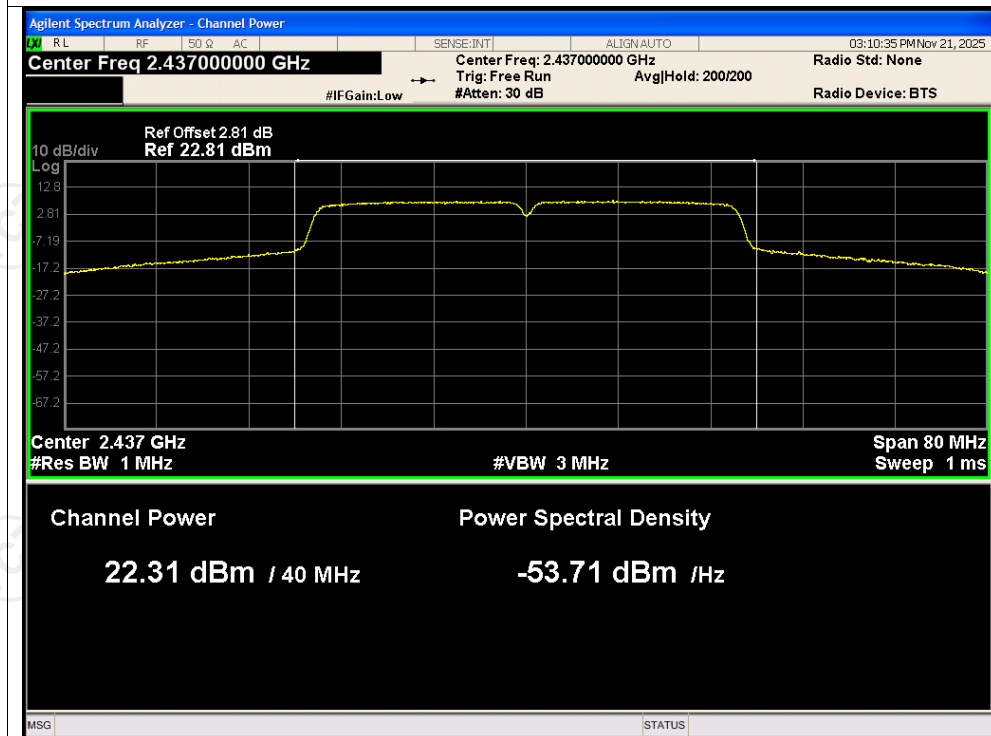
Power NVNT n20 2462MHz Ant0



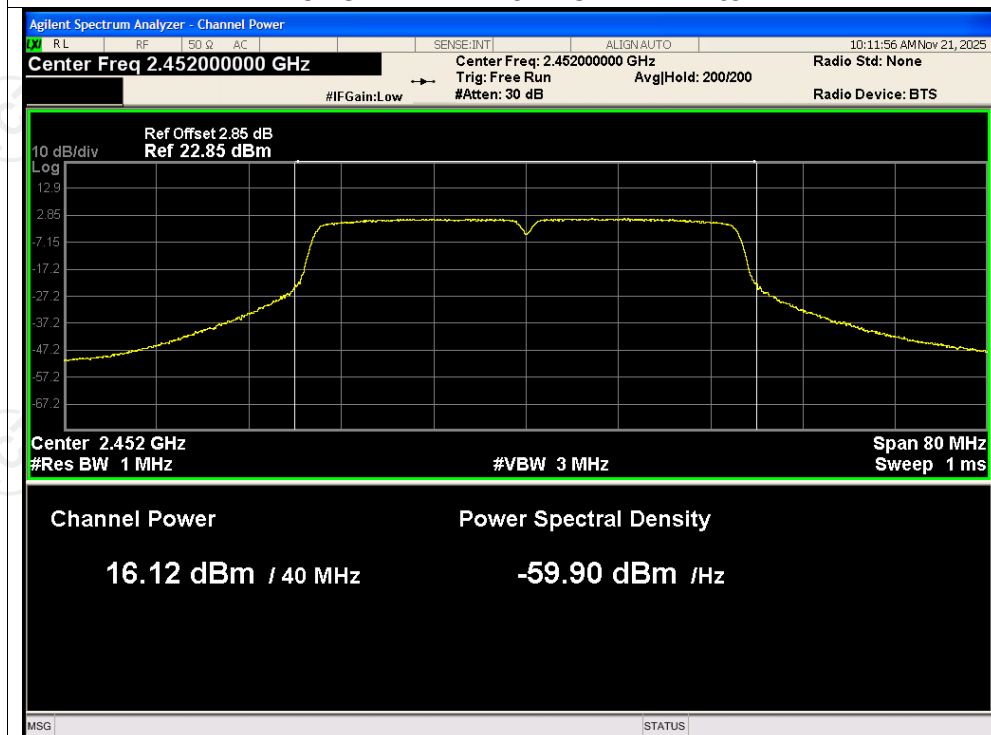
Power NVNT n40 2422MHz Ant0



Power NVNT n40 2437MHz Ant0



Power NVNT n40 2452MHz Ant0



-6dB Bandwidth

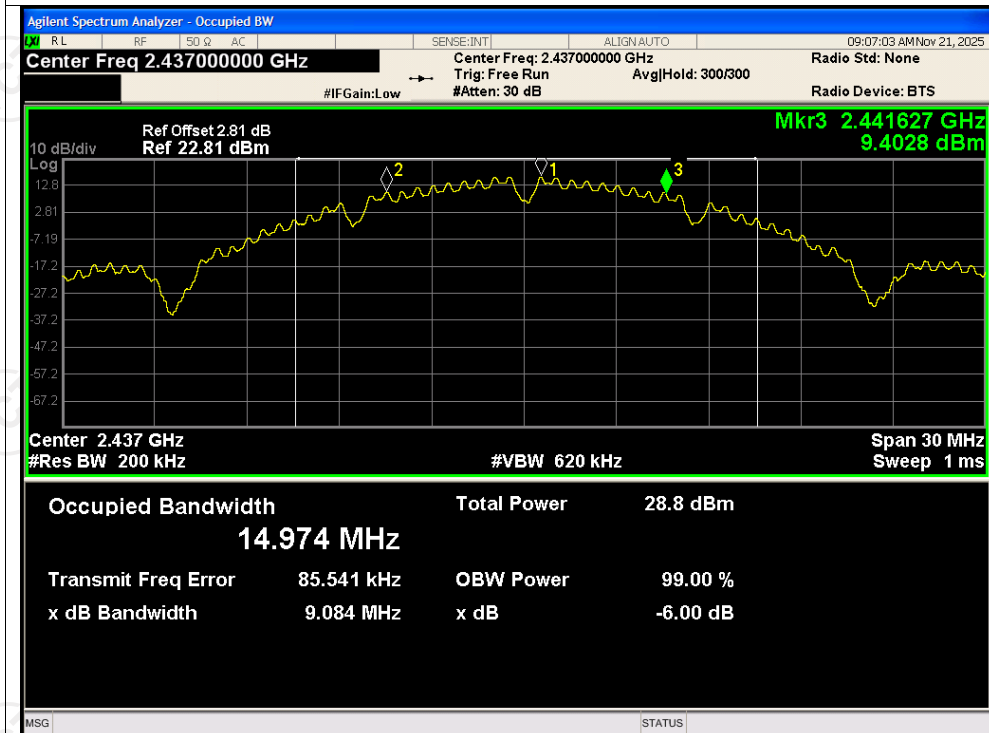
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant0	7.167	0.5	Pass
NVNT	b	2437	Ant0	9.084	0.5	Pass
NVNT	b	2462	Ant0	7.186	0.5	Pass
NVNT	g	2412	Ant0	16.44	0.5	Pass
NVNT	g	2437	Ant0	16.43	0.5	Pass
NVNT	g	2462	Ant0	16.38	0.5	Pass
NVNT	n20	2412	Ant0	17.66	0.5	Pass
NVNT	n20	2437	Ant0	17.64	0.5	Pass
NVNT	n20	2462	Ant0	17.67	0.5	Pass
NVNT	n40	2422	Ant0	36.23	0.5	Pass
NVNT	n40	2437	Ant0	36.32	0.5	Pass
NVNT	n40	2452	Ant0	36.39	0.5	Pass

Test Graphs

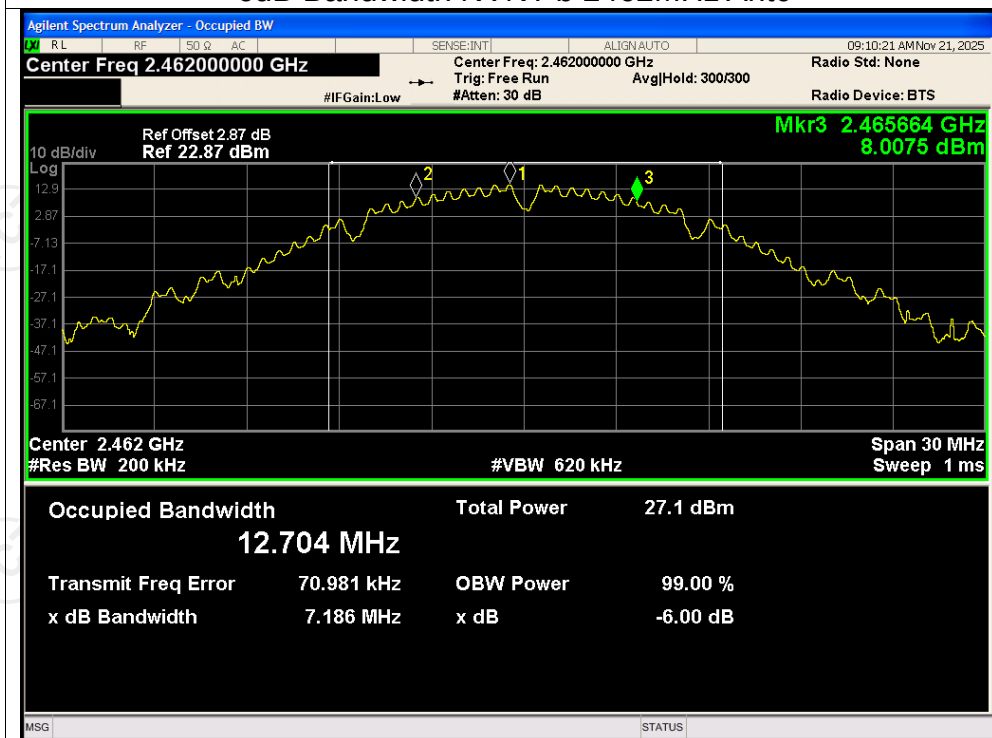
-6dB Bandwidth NVNT b 2412MHz Ant0



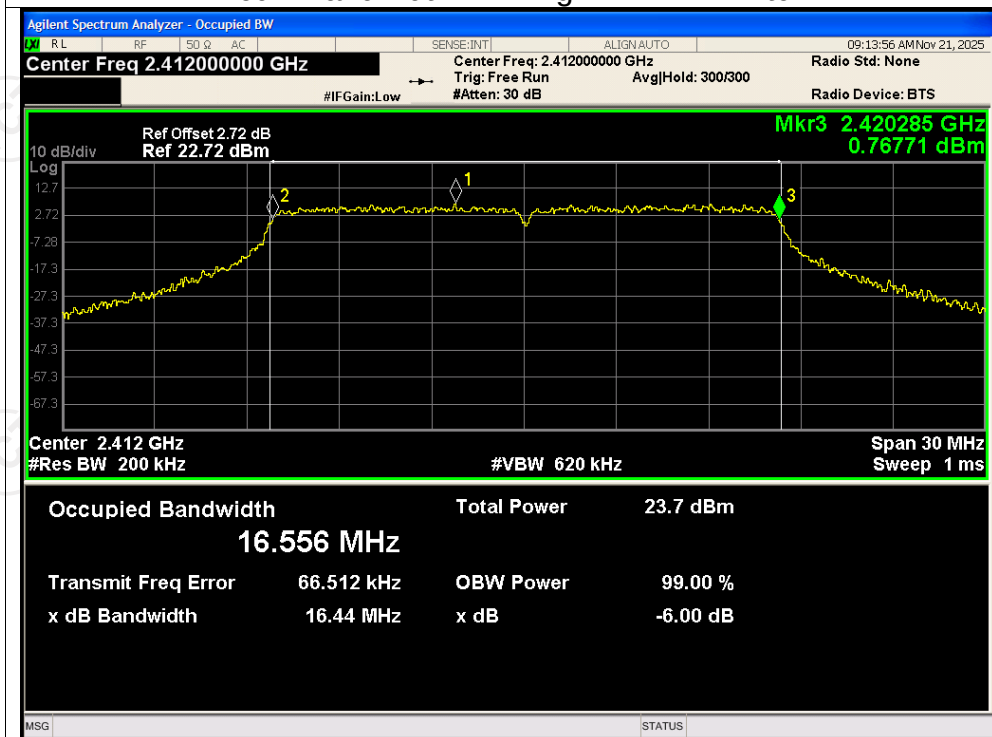
-6dB Bandwidth NVNT b 2437MHz Ant0



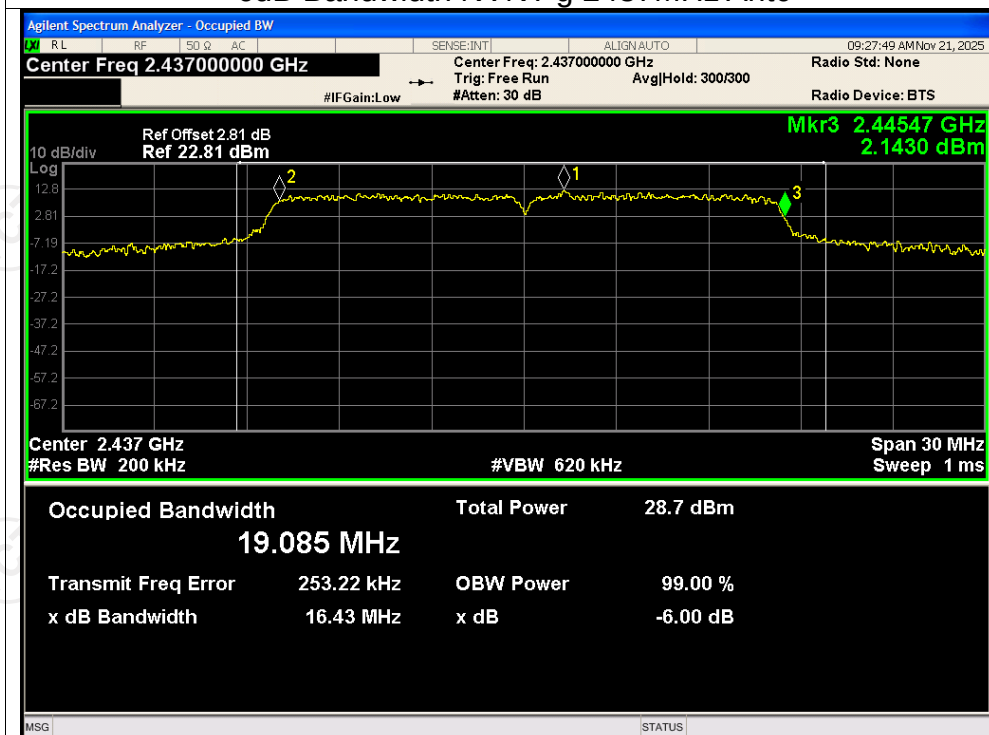
-6dB Bandwidth NVNT b 2462MHz Ant0



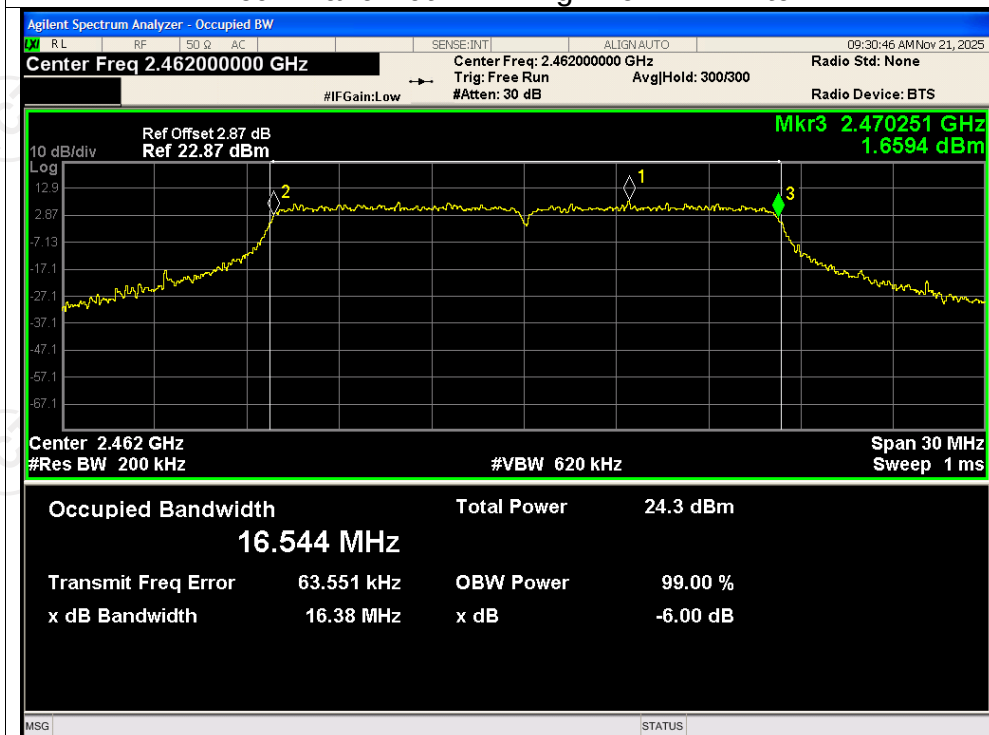
-6dB Bandwidth NVNT g 2412MHz Ant0



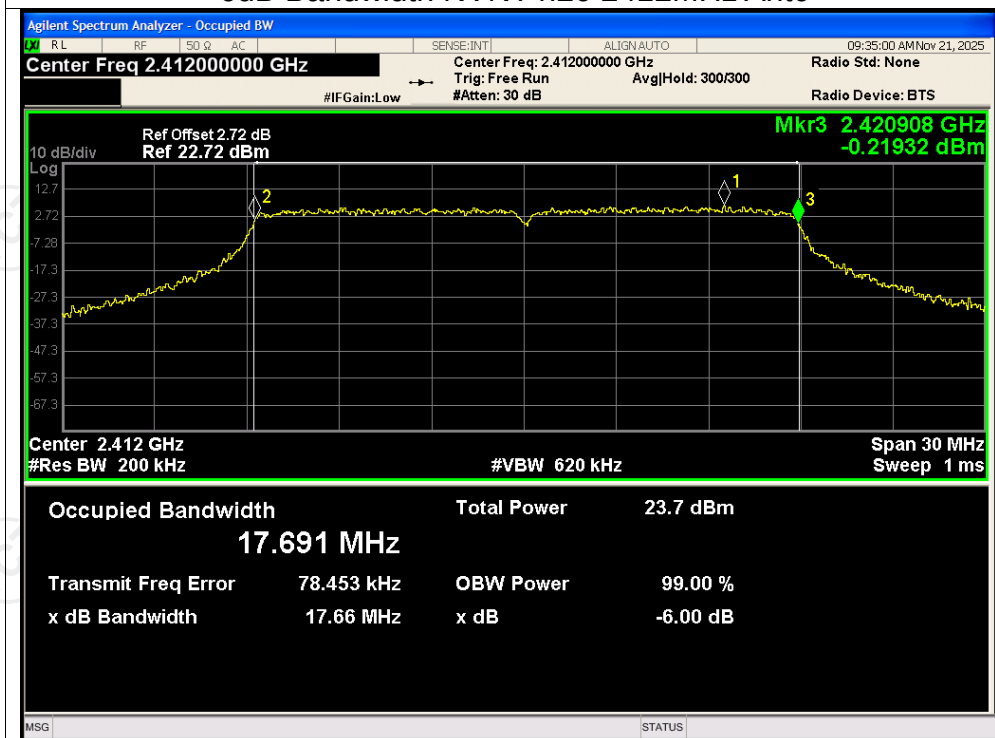
-6dB Bandwidth NVNT g 2437MHz Ant0



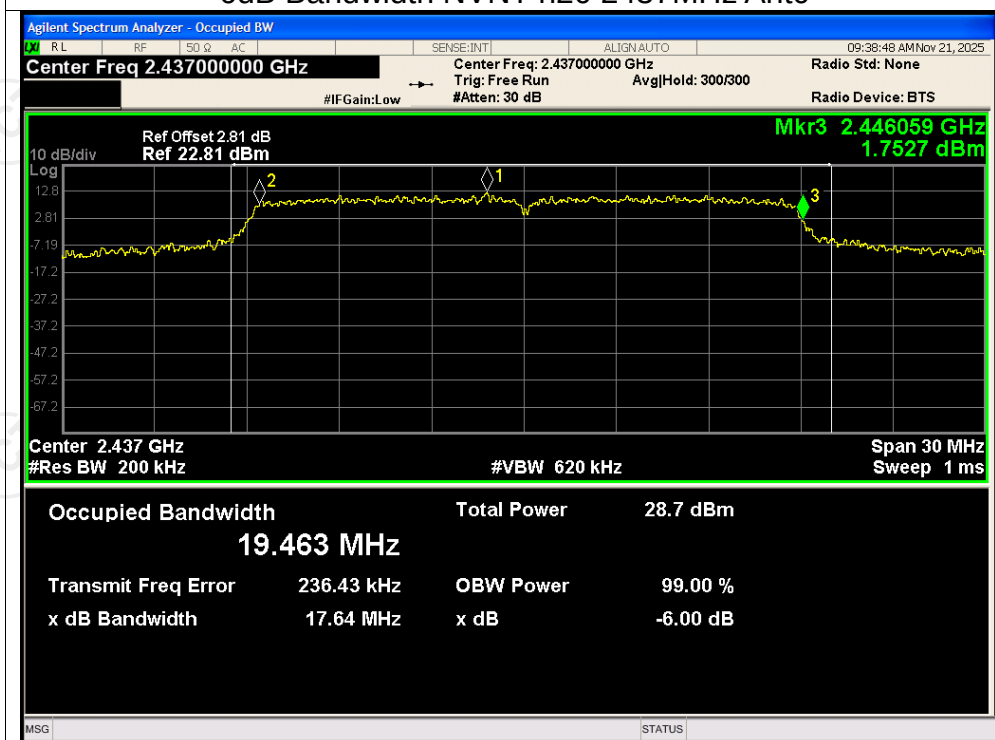
-6dB Bandwidth NVNT g 2462MHz Ant0



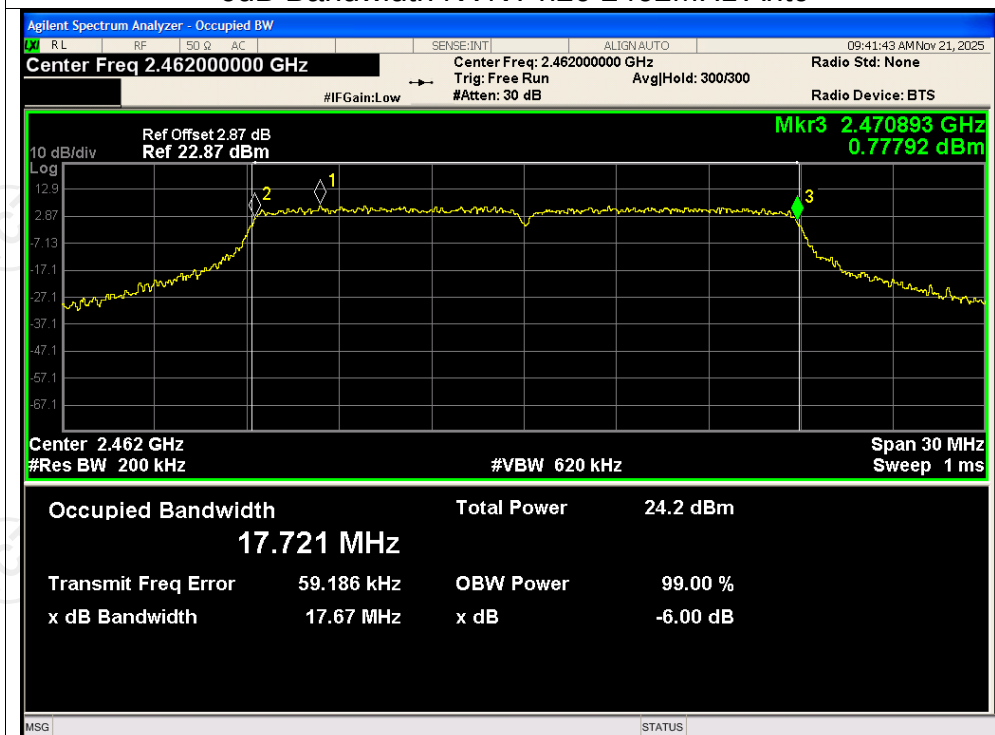
-6dB Bandwidth NVNT n20 2412MHz Ant0



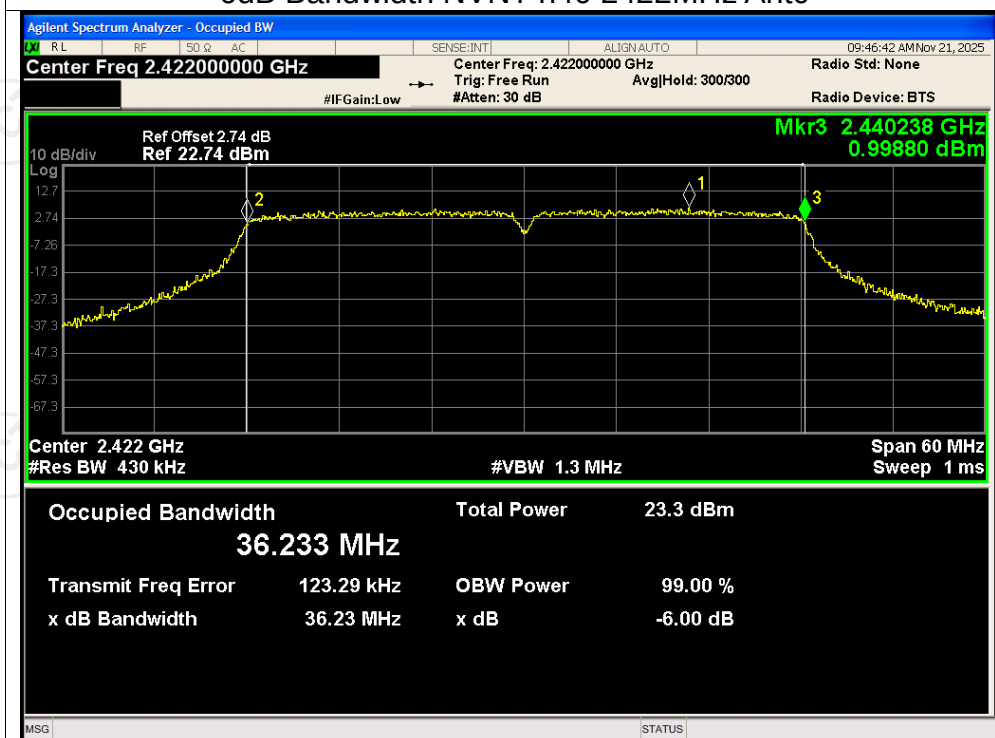
-6dB Bandwidth NVNT n20 2437MHz Ant0



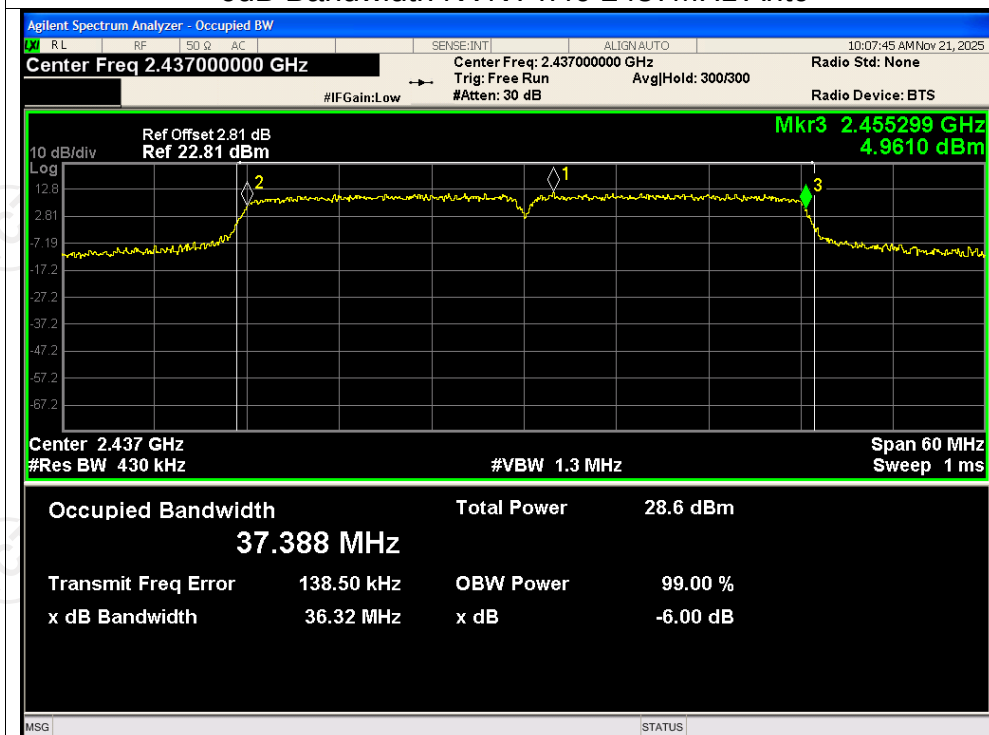
-6dB Bandwidth NVNT n20 2462MHz Ant0



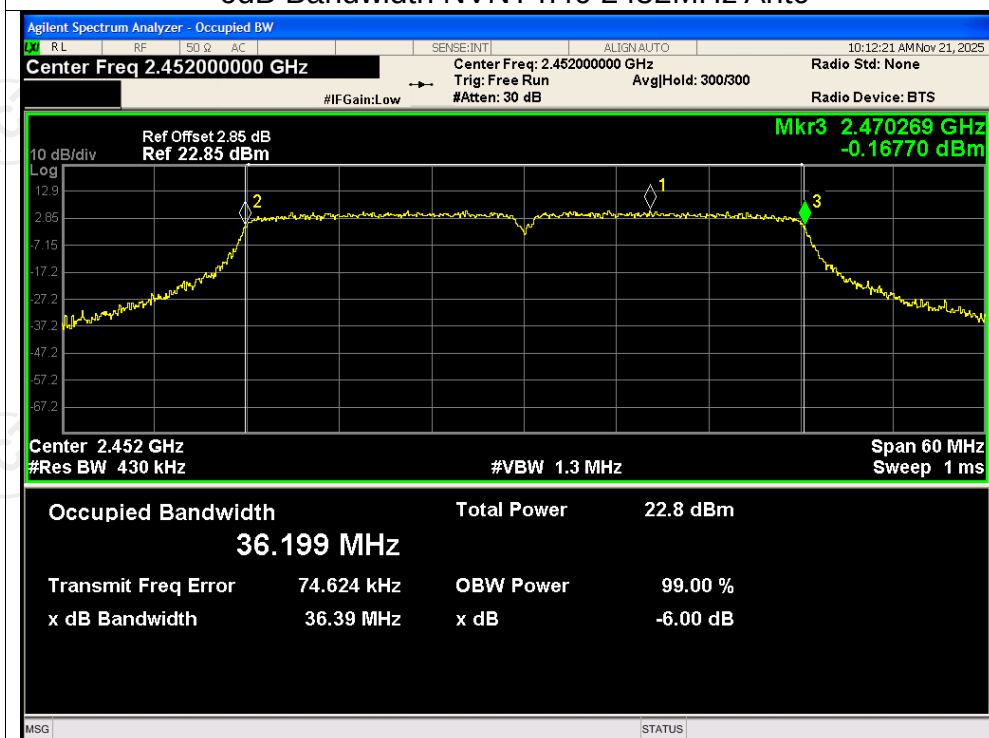
-6dB Bandwidth NVNT n40 2422MHz Ant0



-6dB Bandwidth NVNT n40 2437MHz Ant0



-6dB Bandwidth NVNT n40 2452MHz Ant0

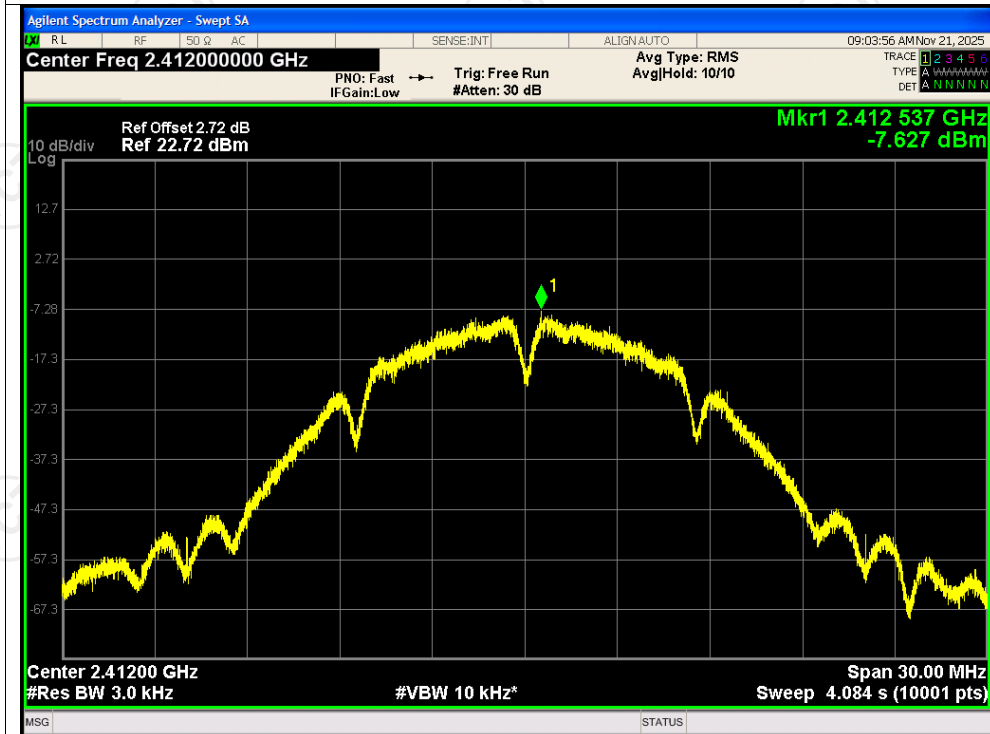


Maximum Power Spectral Density Level

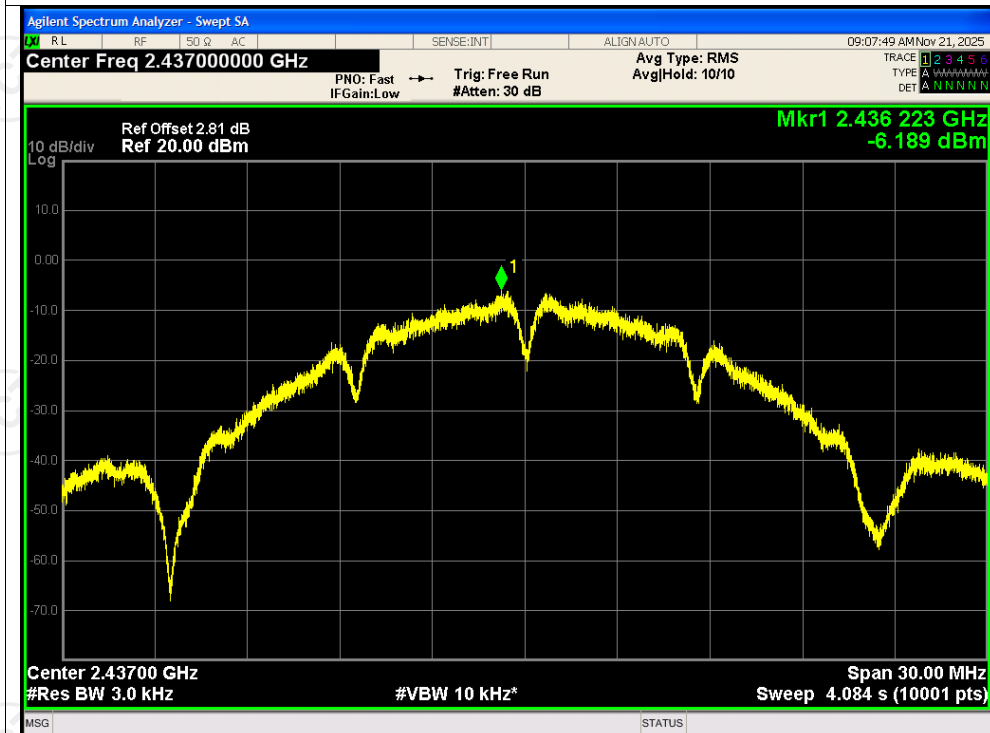
Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	b	2412	Ant0	-7.63	7	Pass
NVNT	b	2437	Ant0	-6.19	7	Pass
NVNT	b	2462	Ant0	-7.72	7	Pass
NVNT	g	2412	Ant0	-15.68	7	Pass
NVNT	g	2437	Ant0	-10.46	7	Pass
NVNT	g	2462	Ant0	-15.18	7	Pass
NVNT	n20	2412	Ant0	-16.12	3.99	Pass
NVNT	n20	2437	Ant0	-10.80	3.99	Pass
NVNT	n20	2462	Ant0	-15.35	3.99	Pass
NVNT	n40	2422	Ant0	-20.43	3.99	Pass
NVNT	n40	2437	Ant0	-14.75	3.99	Pass
NVNT	n40	2452	Ant0	-20.74	3.99	Pass

Test Graphs

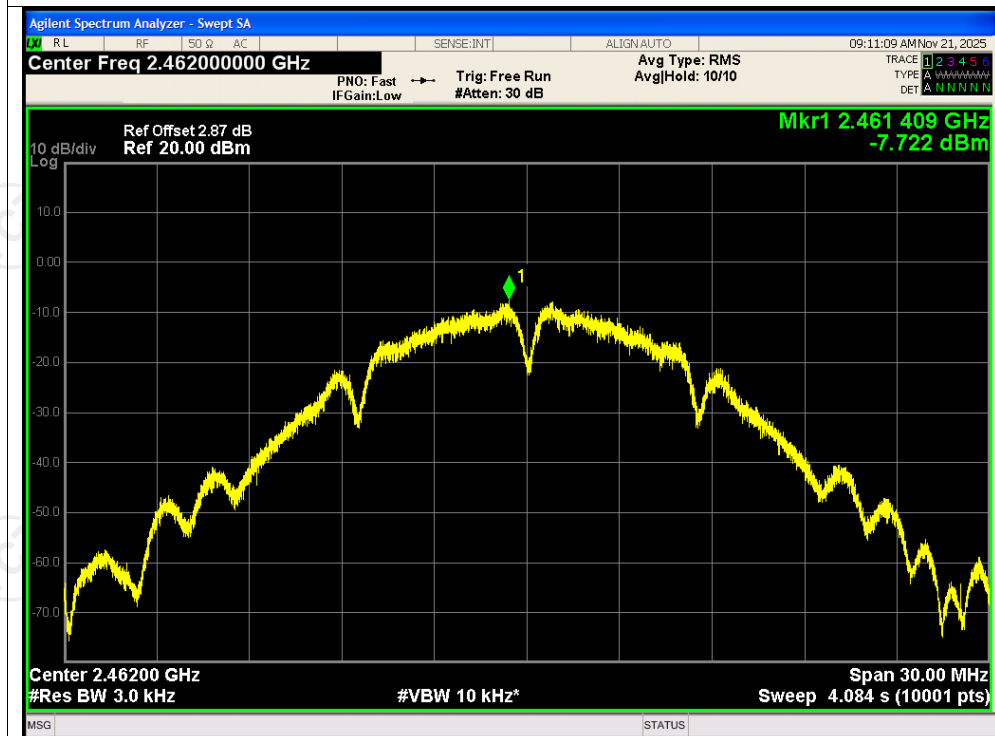
PSD NVNT b 2412MHz Ant0



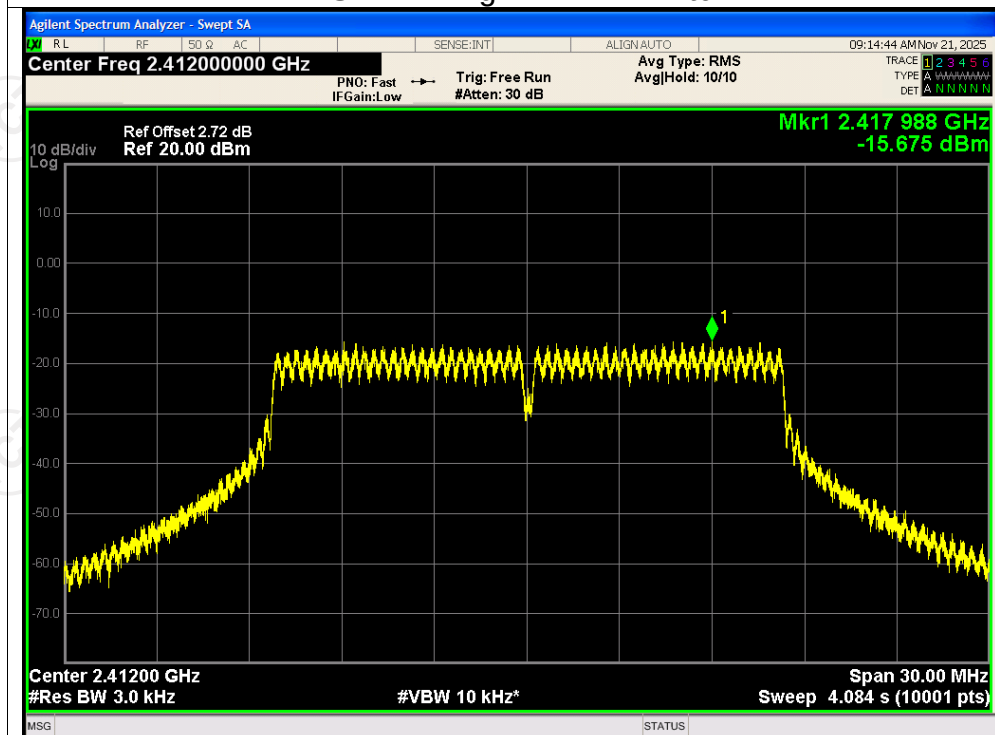
PSD NVNT b 2437MHz Ant0



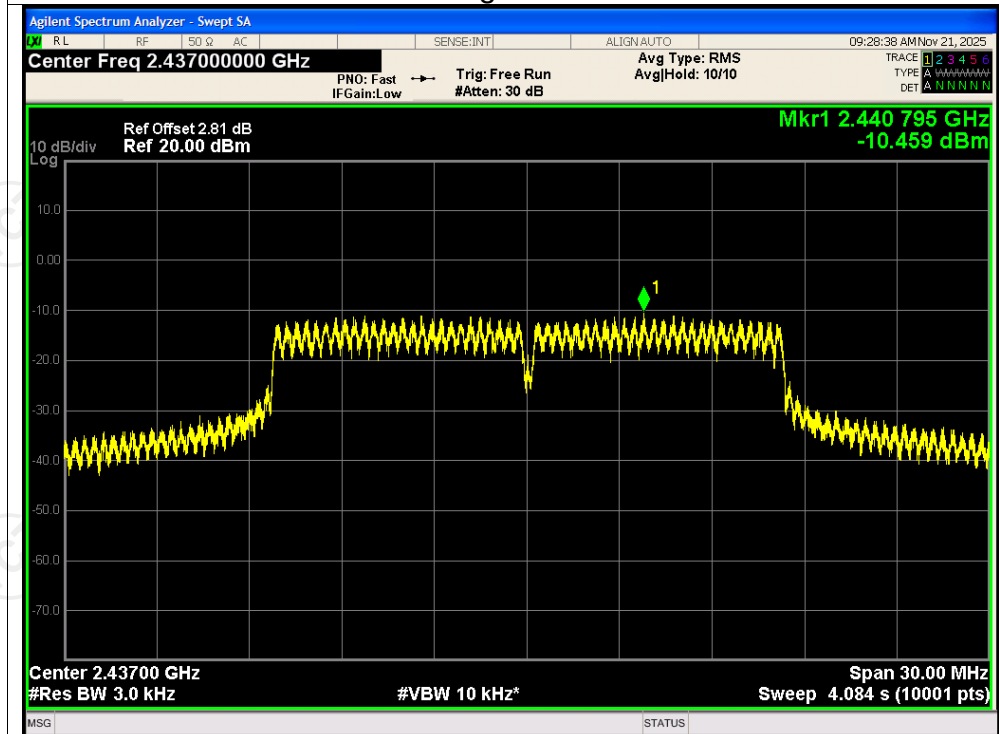
PSD NVNT b 2462MHz Ant0



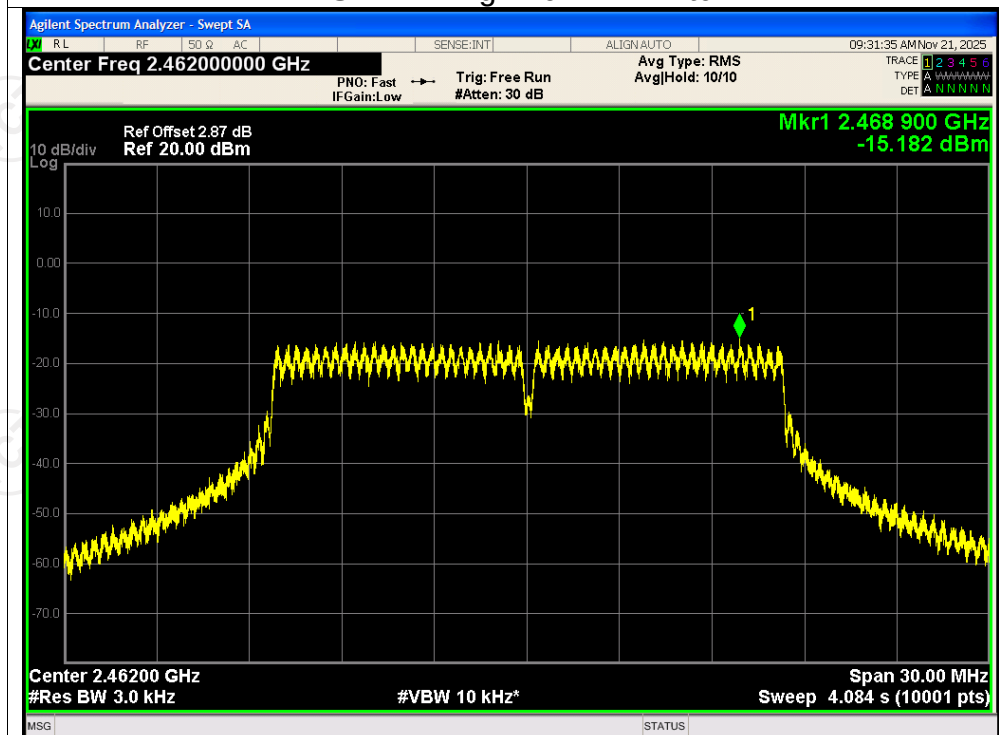
PSD NVNT g 2412MHz Ant0



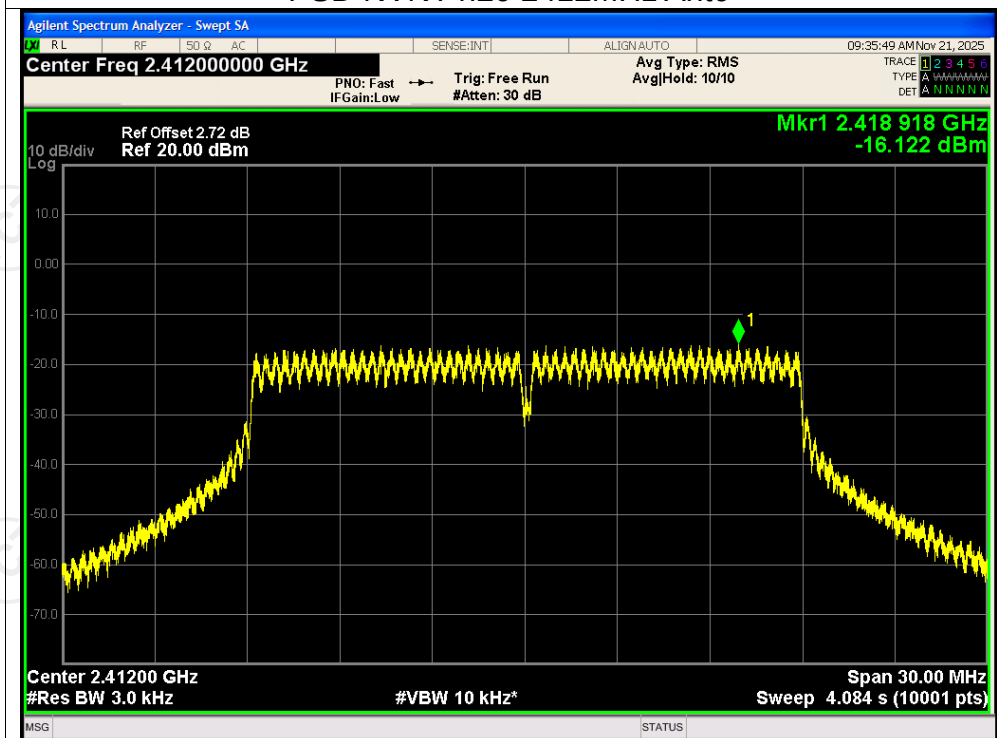
PSD NVNT g 2437MHz Ant0



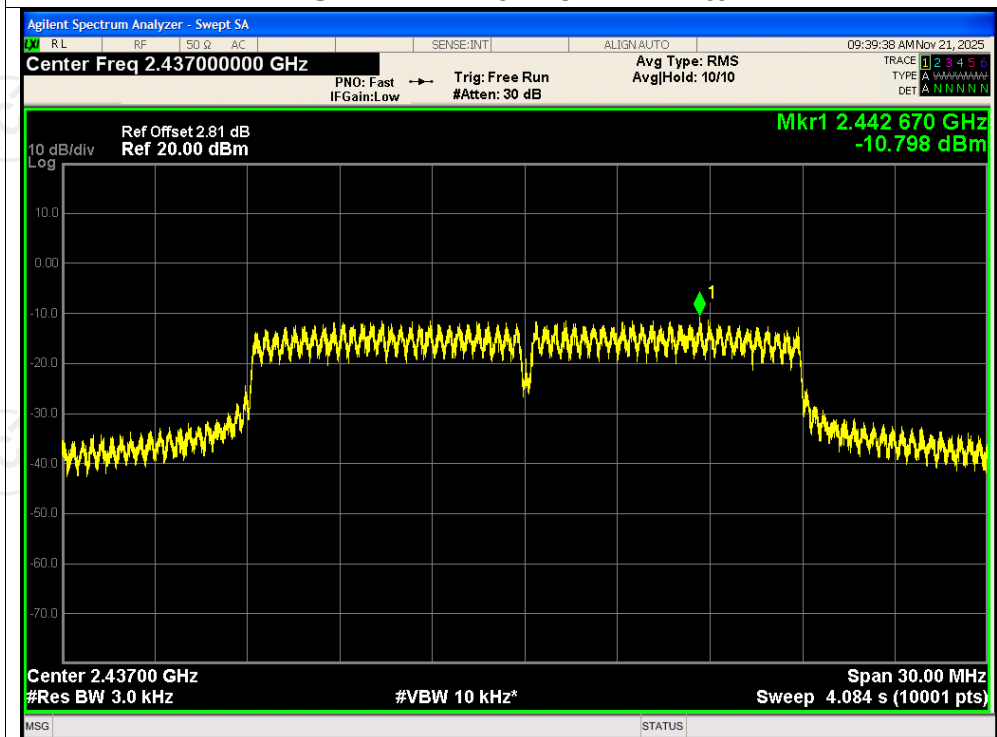
PSD NVNT g 2462MHz Ant0



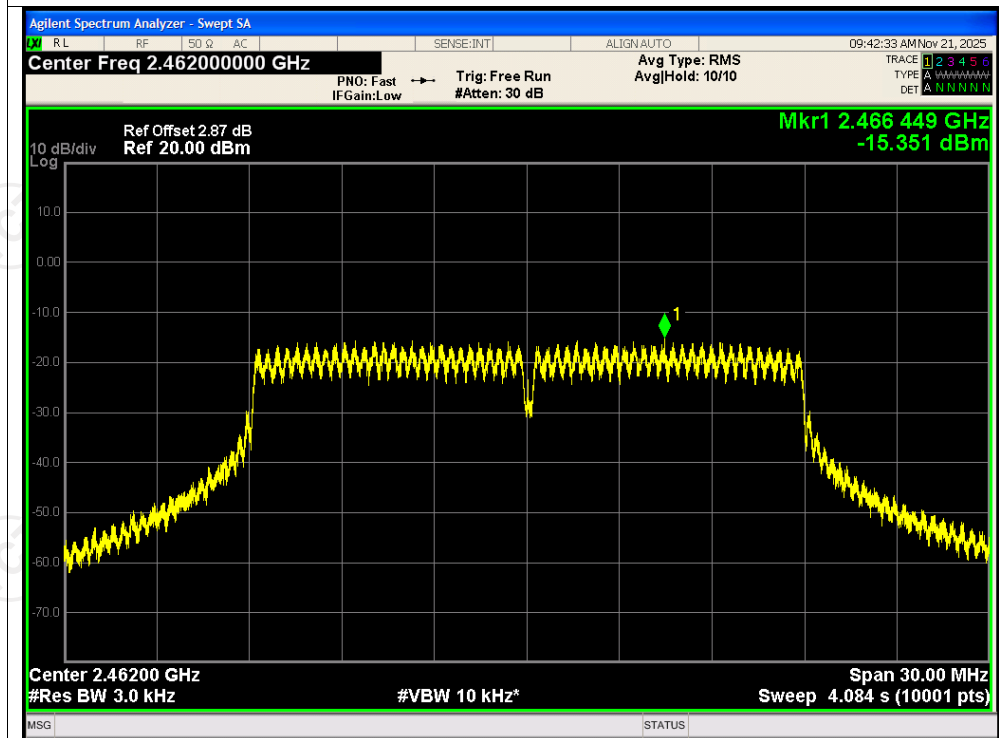
PSD NVNT n20 2412MHz Ant0



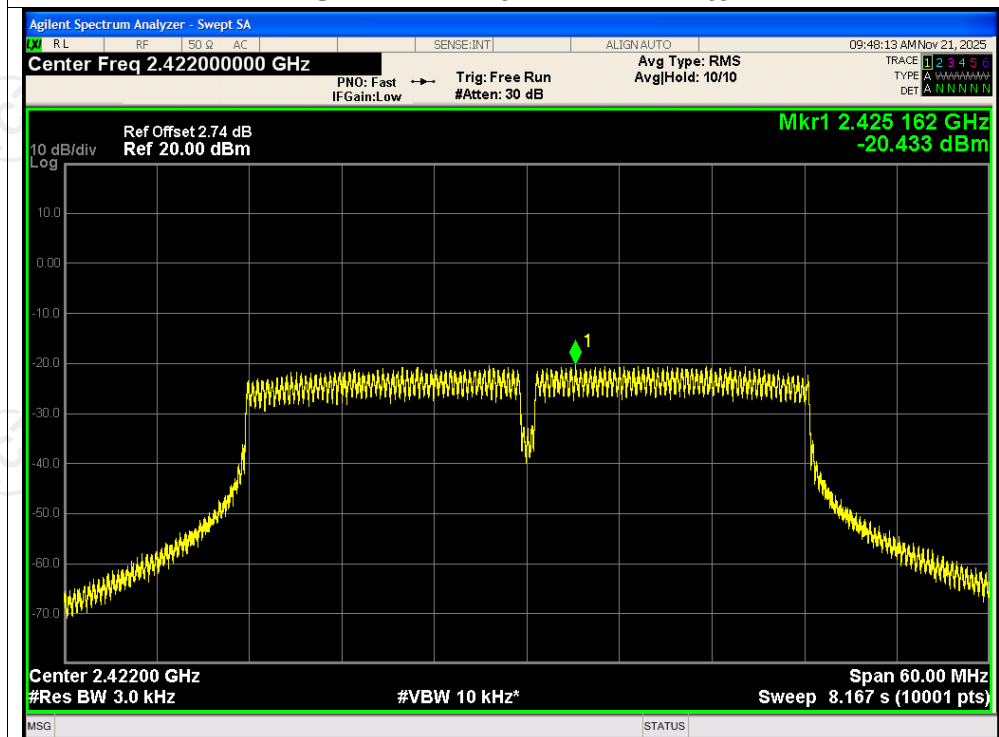
PSD NVNT n20 2437MHz Ant0



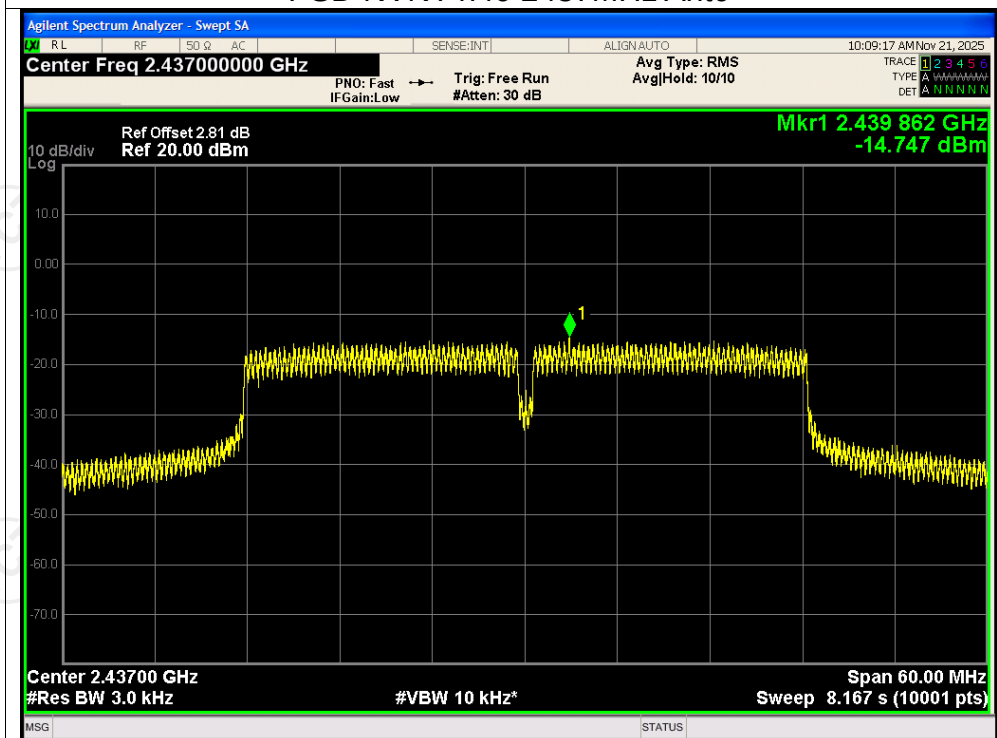
PSD NVNT n20 2462MHz Ant0



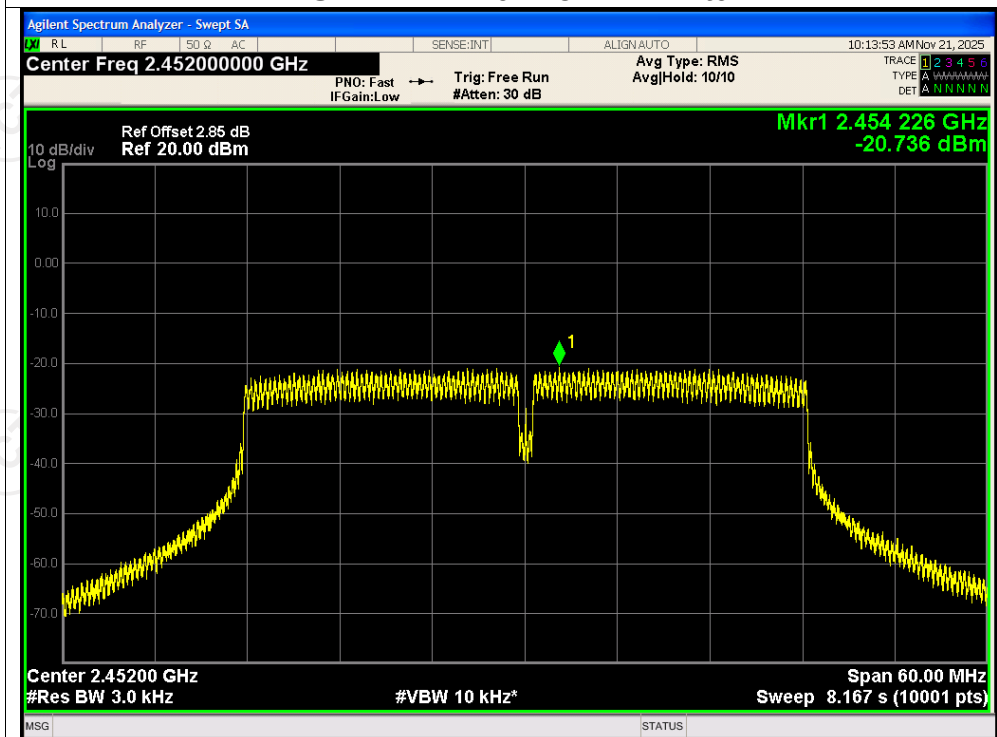
PSD NVNT n40 2422MHz Ant0



PSD NVNT n40 2437MHz Ant0



PSD NVNT n40 2452MHz Ant0

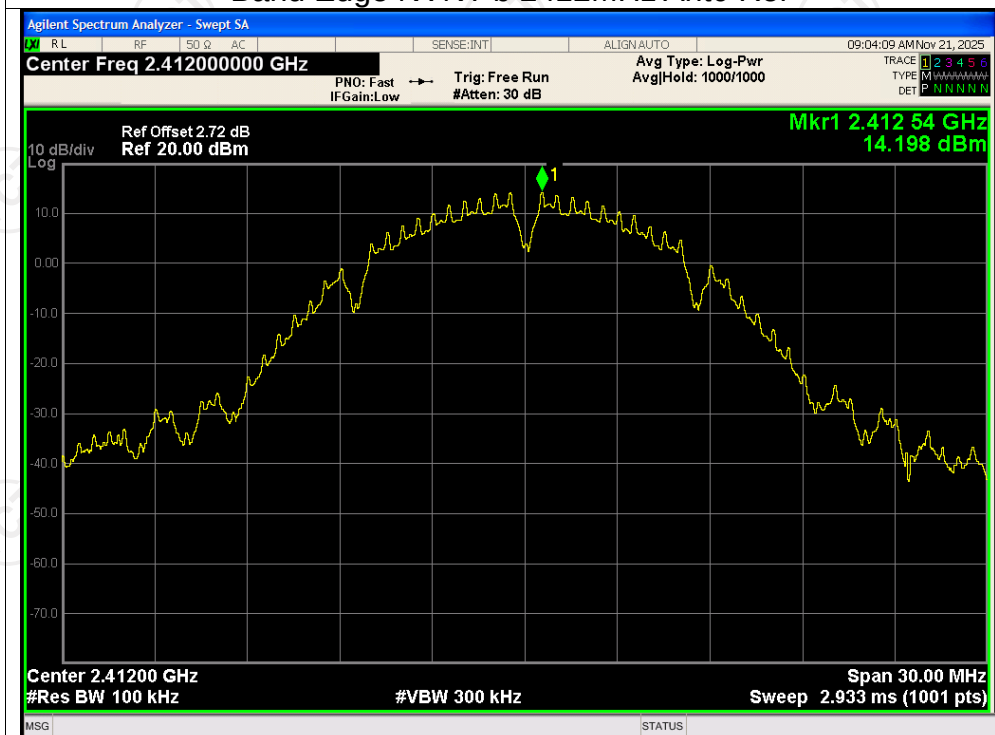


Band Edge

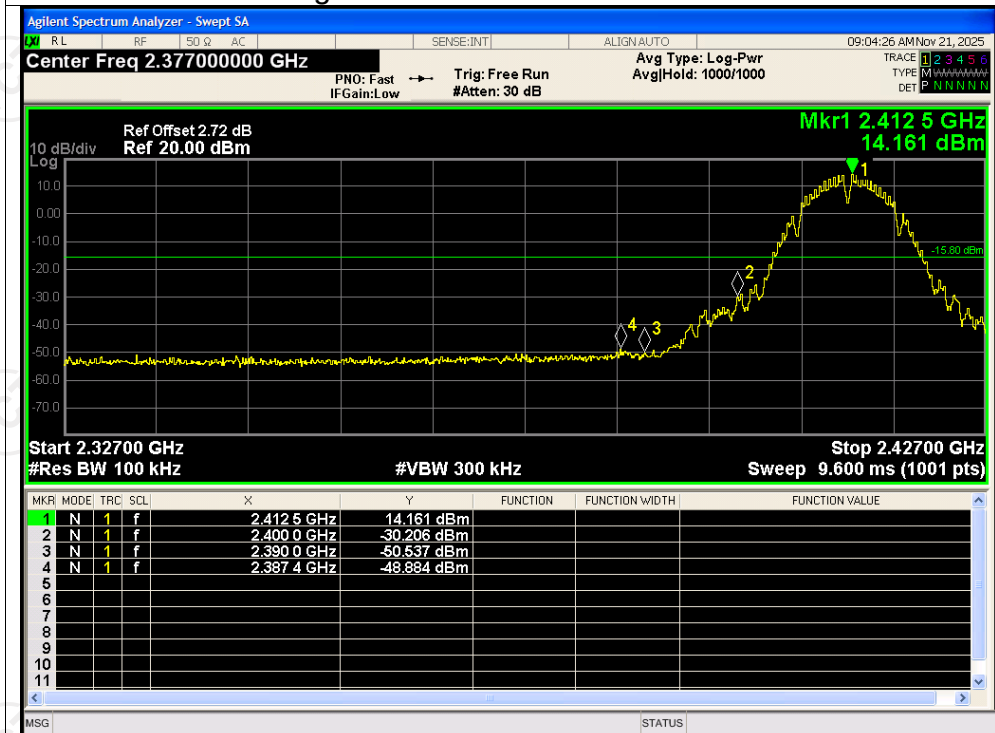
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant0	-63.08	-30	Pass
NVNT	b	2462	Ant0	-52.12	-30	Pass
NVNT	g	2412	Ant0	-50.33	-30	Pass
NVNT	g	2462	Ant0	-47.35	-30	Pass
NVNT	n20	2412	Ant0	-48.85	-30	Pass
NVNT	n20	2462	Ant0	-46.71	-30	Pass
NVNT	n40	2422	Ant0	-45.70	-30	Pass
NVNT	n40	2452	Ant0	-41.58	-30	Pass

Test Graphs

Band Edge NVNT b 2412MHz Ant0 Ref



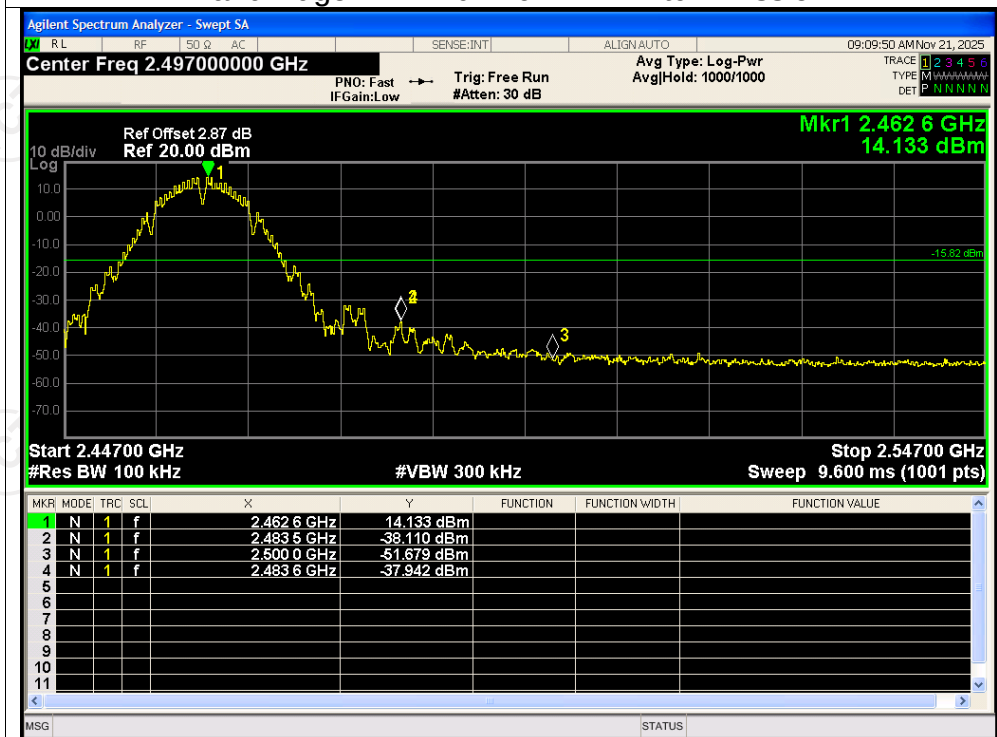
Band Edge NVNT b 2412MHz Ant0 Emission



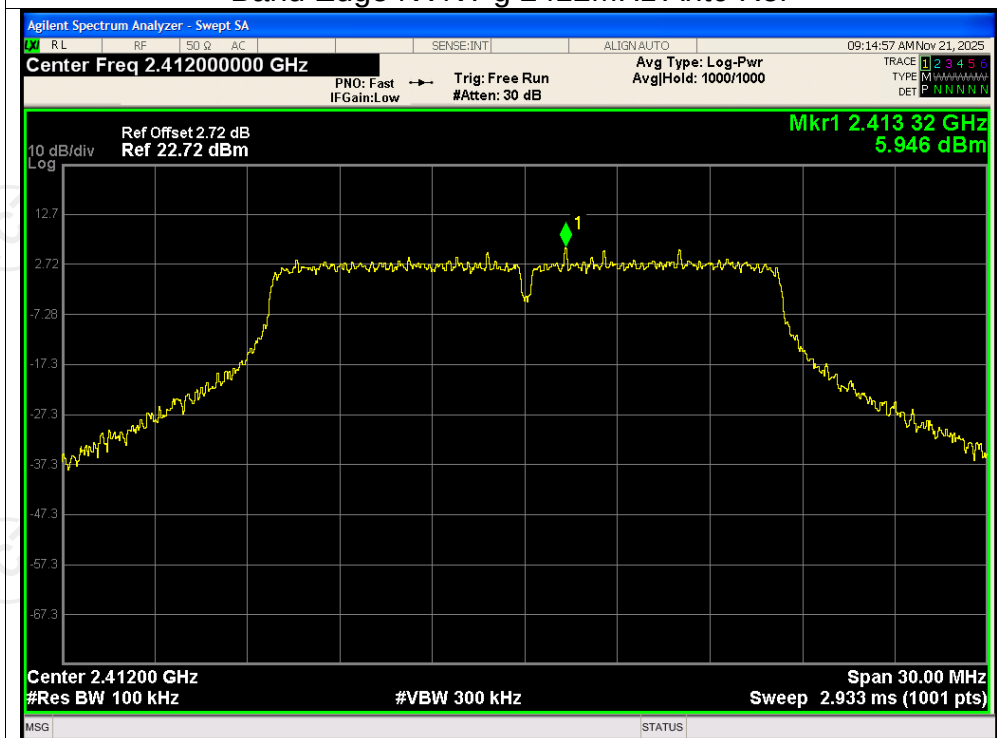
Band Edge NVNT b 2462MHz Ant0 Ref



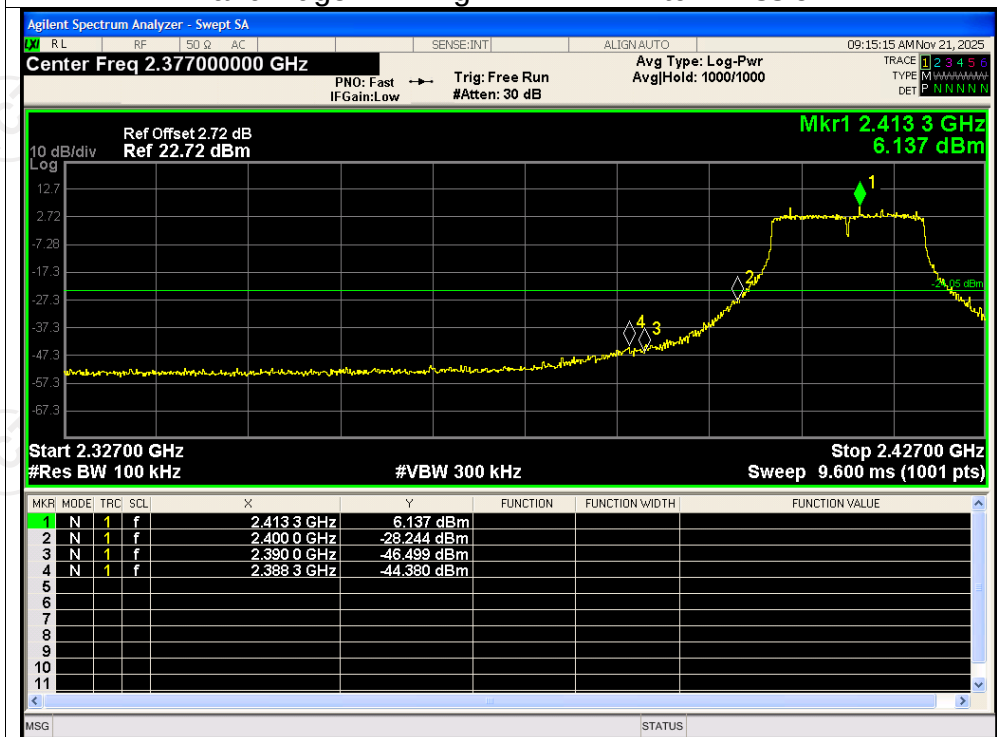
Band Edge NVNT b 2462MHz Ant0 Emission



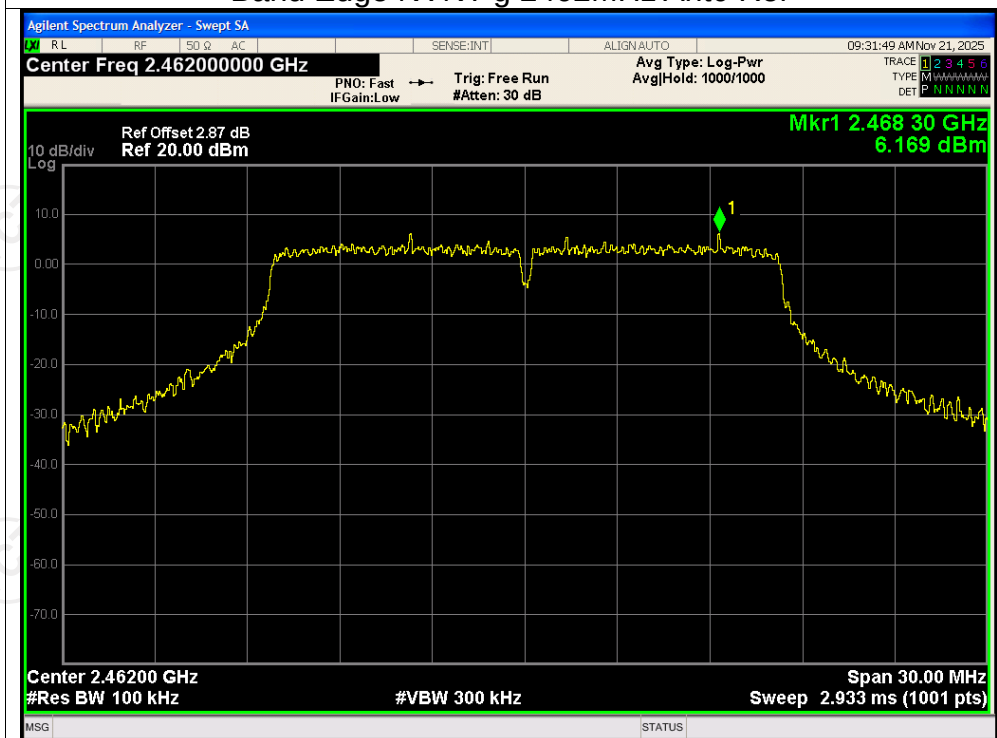
Band Edge NVNT g 2412MHz Ant0 Ref



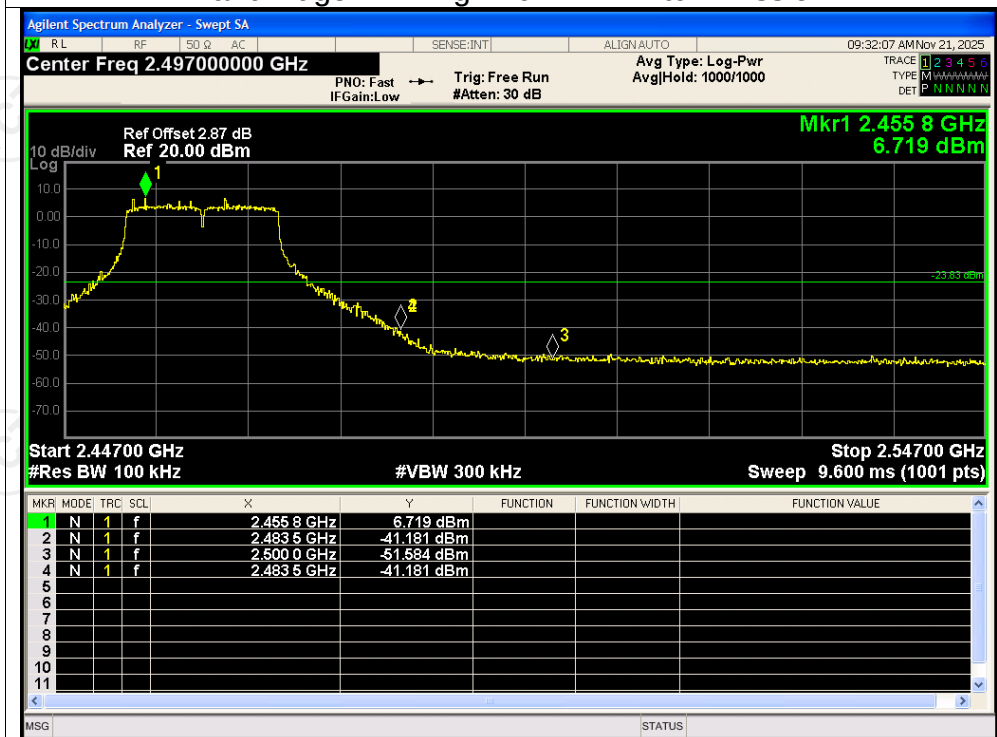
Band Edge NVNT g 2412MHz Ant0 Emission



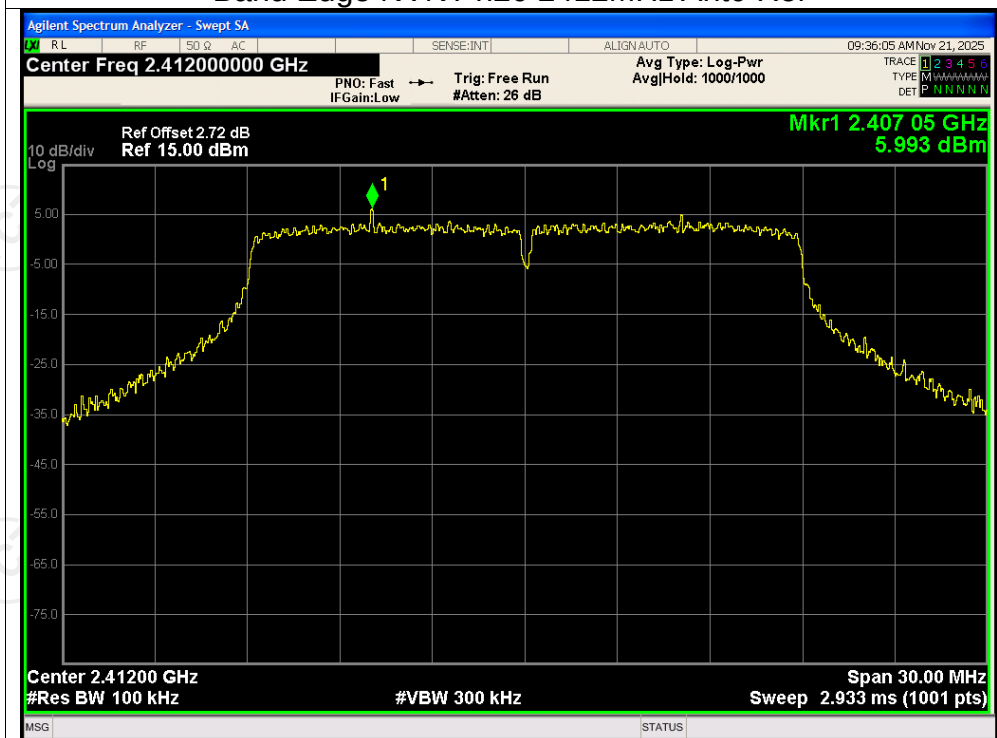
Band Edge NVNT g 2462MHz Ant0 Ref



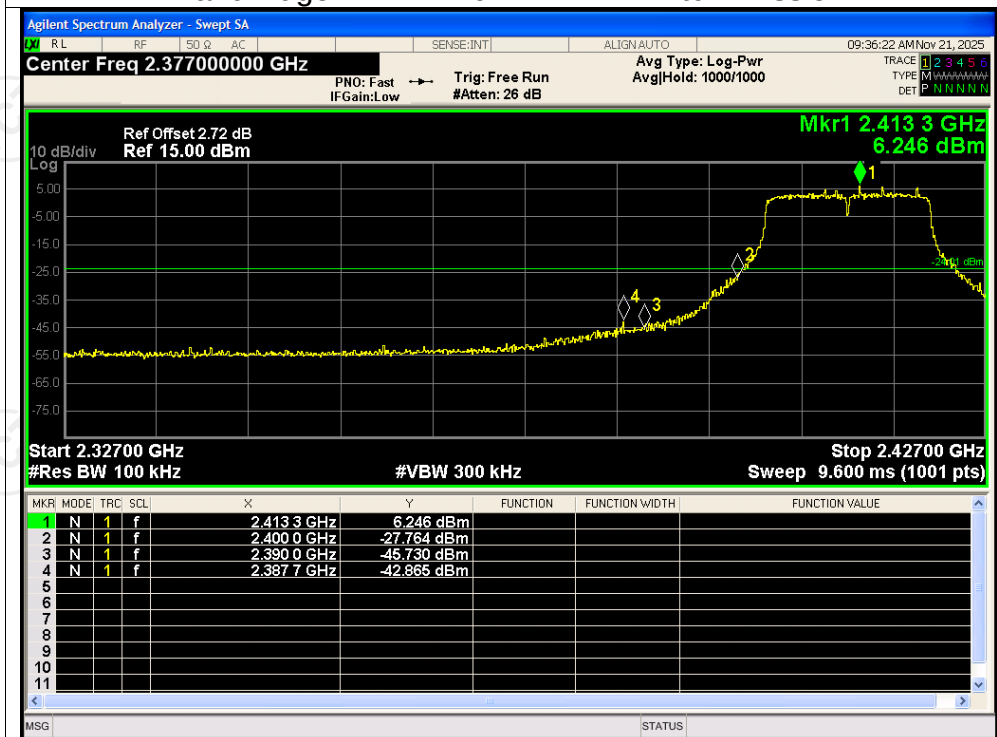
Band Edge NVNT g 2462MHz Ant0 Emission



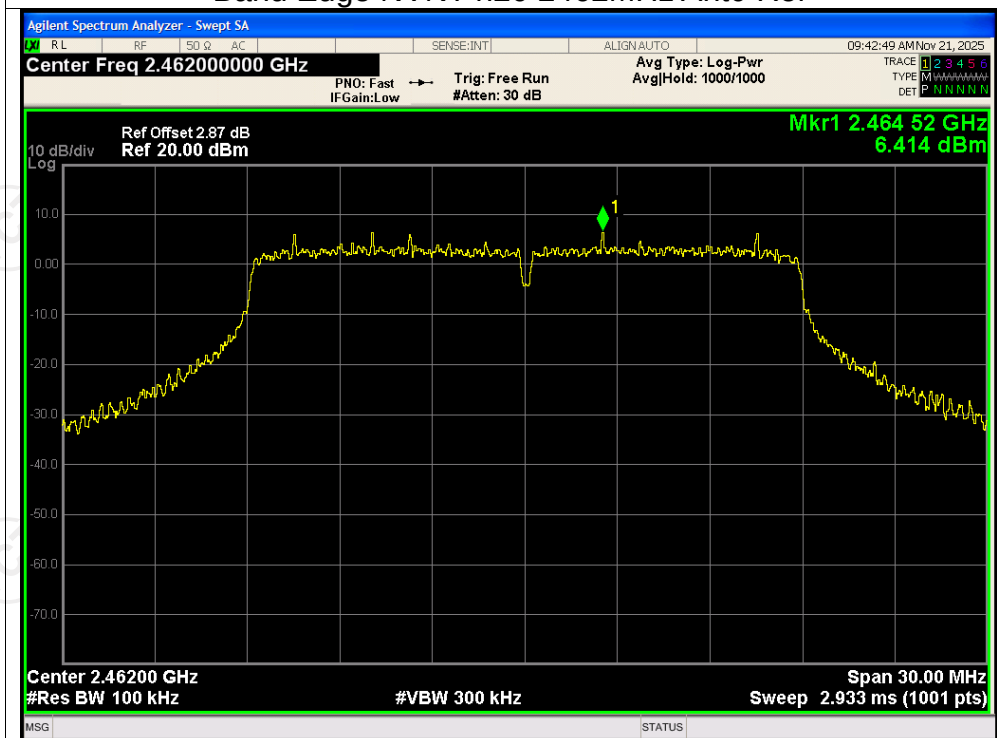
Band Edge NVNT n20 2412MHz Ant0 Ref



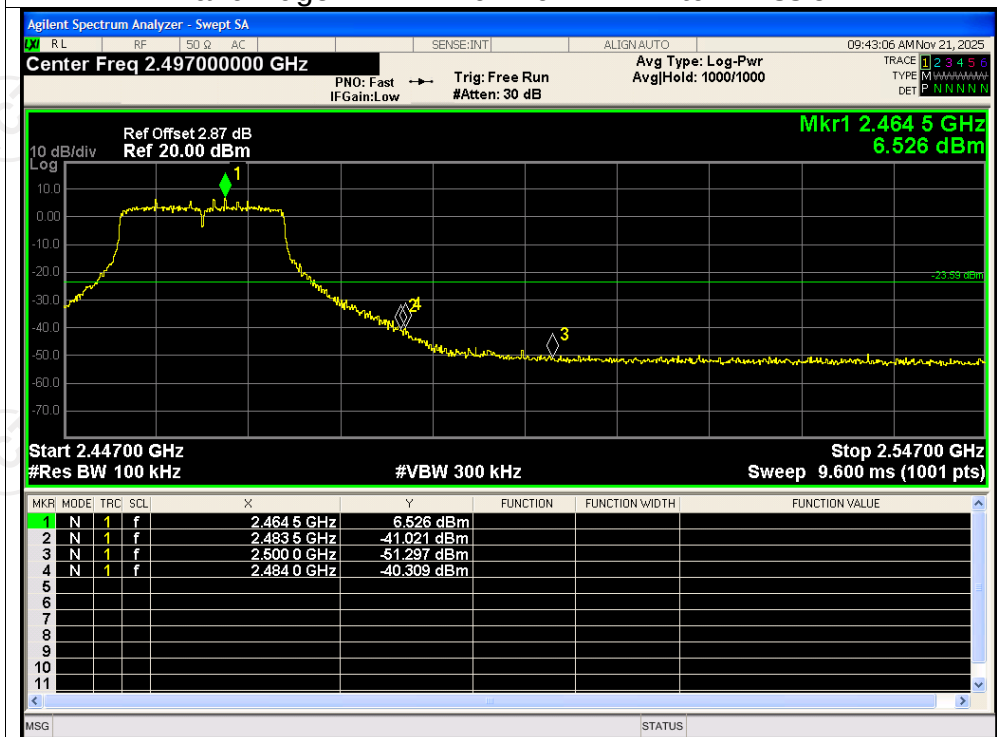
Band Edge NVNT n20 2412MHz Ant0 Emission



Band Edge NVNT n20 2462MHz Ant0 Ref



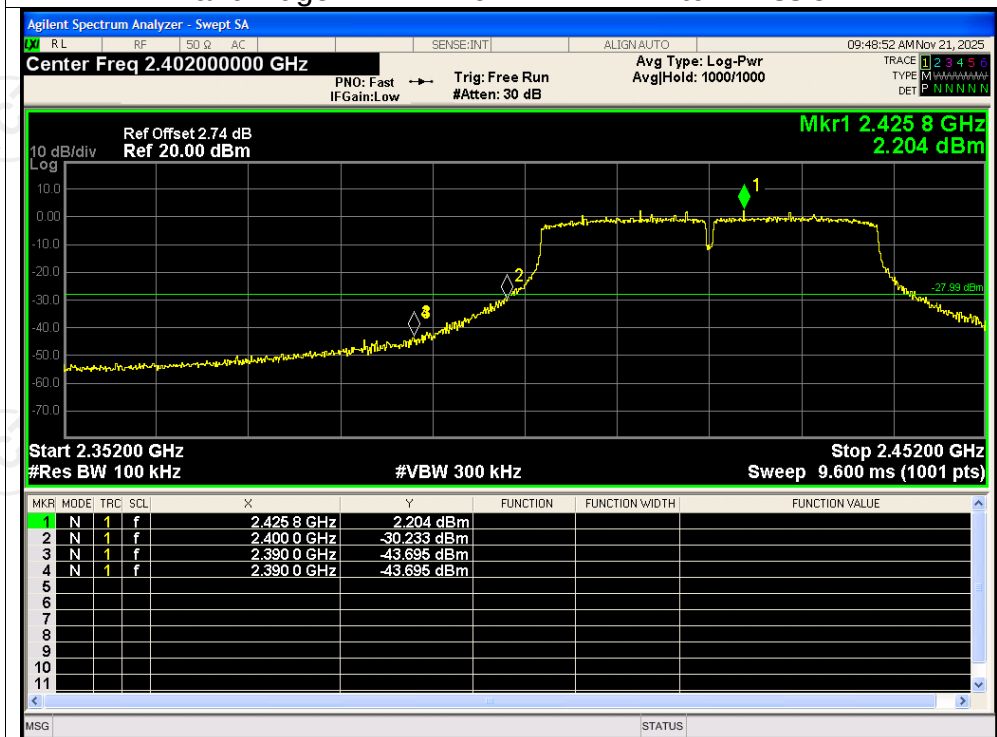
Band Edge NVNT n20 2462MHz Ant0 Emission



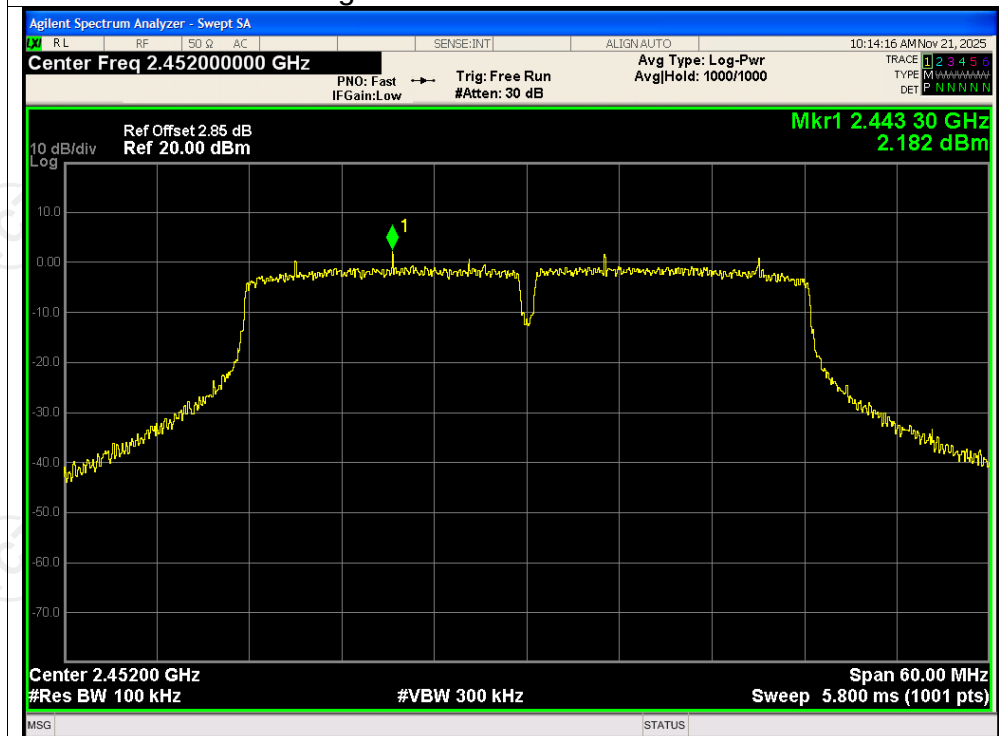
Band Edge NVNT n40 2422MHz Ant0 Ref



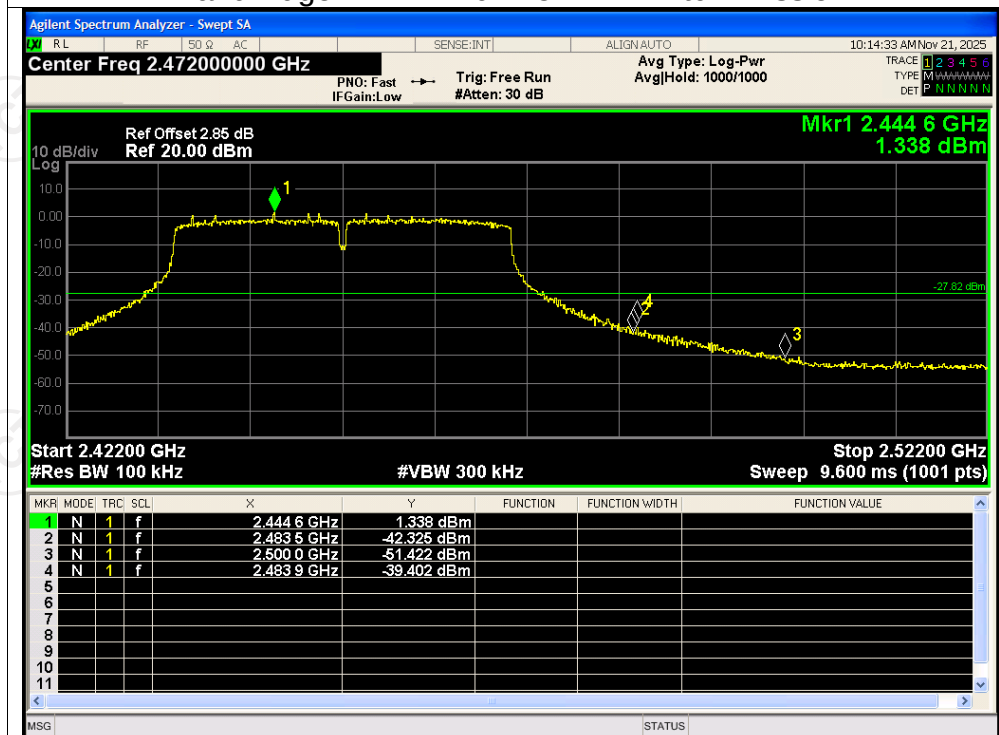
Band Edge NVNT n40 2422MHz Ant0 Emission



Band Edge NVNT n40 2452MHz Ant0 Ref



Band Edge NVNT n40 2452MHz Ant0 Emission

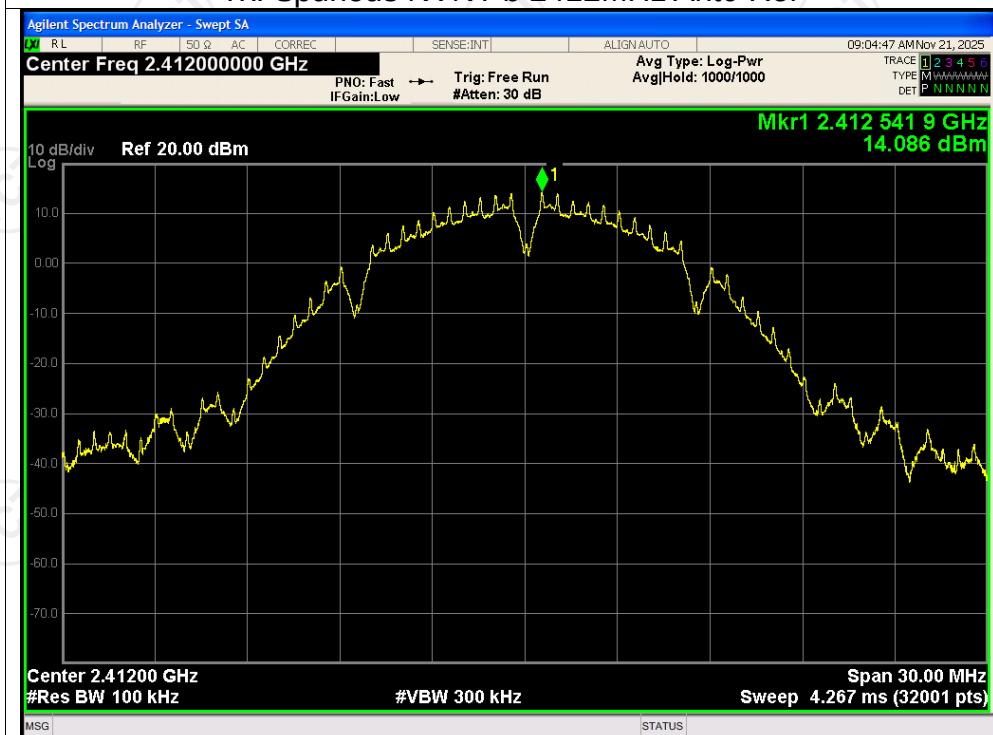


Conducted RF Spurious Emission

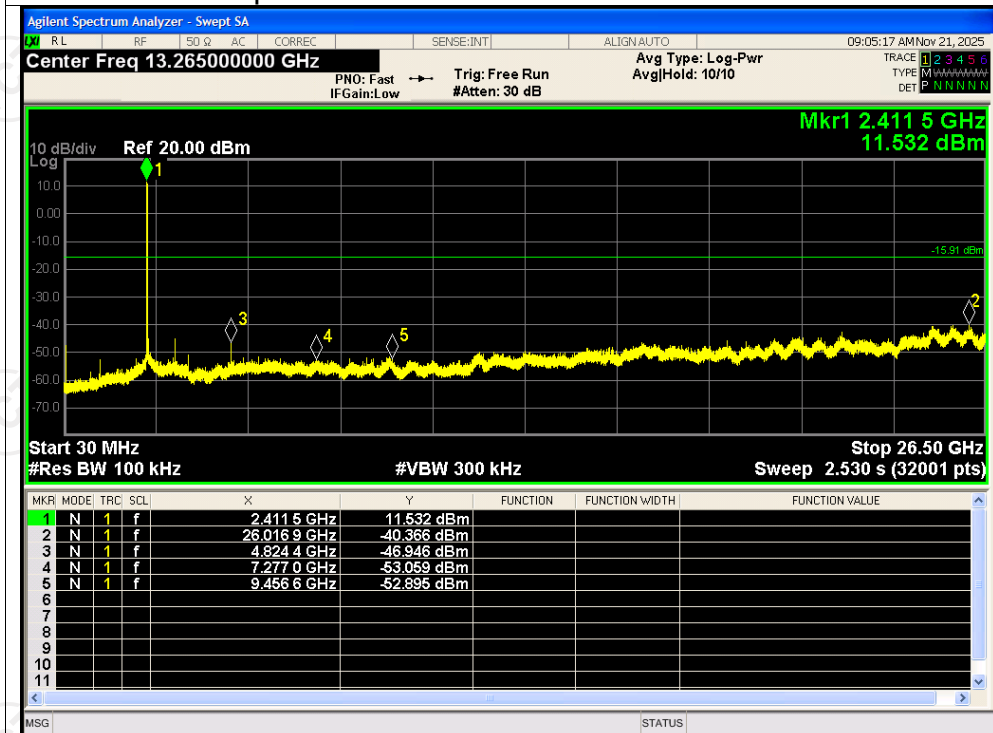
Condition	Mode	Frequency(MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant0	-54.45	-30	Pass
NVNT	b	2437	Ant0	-56.11	-30	Pass
NVNT	b	2462	Ant0	-53.38	-30	Pass
NVNT	g	2412	Ant0	-45.14	-30	Pass
NVNT	g	2437	Ant0	-51.42	-30	Pass
NVNT	g	2462	Ant0	-45.87	-30	Pass
NVNT	n20	2412	Ant0	-44.24	-30	Pass
NVNT	n20	2437	Ant0	-51.52	-30	Pass
NVNT	n20	2462	Ant0	-46.91	-30	Pass
NVNT	n40	2422	Ant0	-49.44	-30	Pass
NVNT	n40	2437	Ant0	-45.04	-30	Pass
NVNT	n40	2452	Ant0	-41.68	-30	Pass

Test Graphs

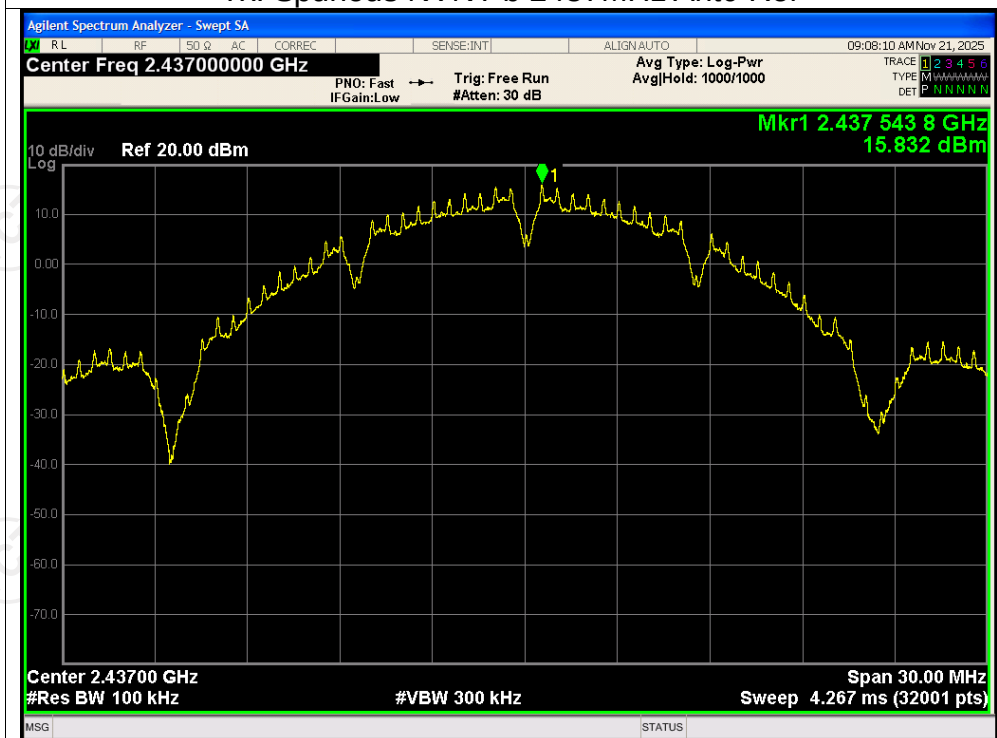
Tx. Spurious NVNT b 2412MHz Ant0 Ref



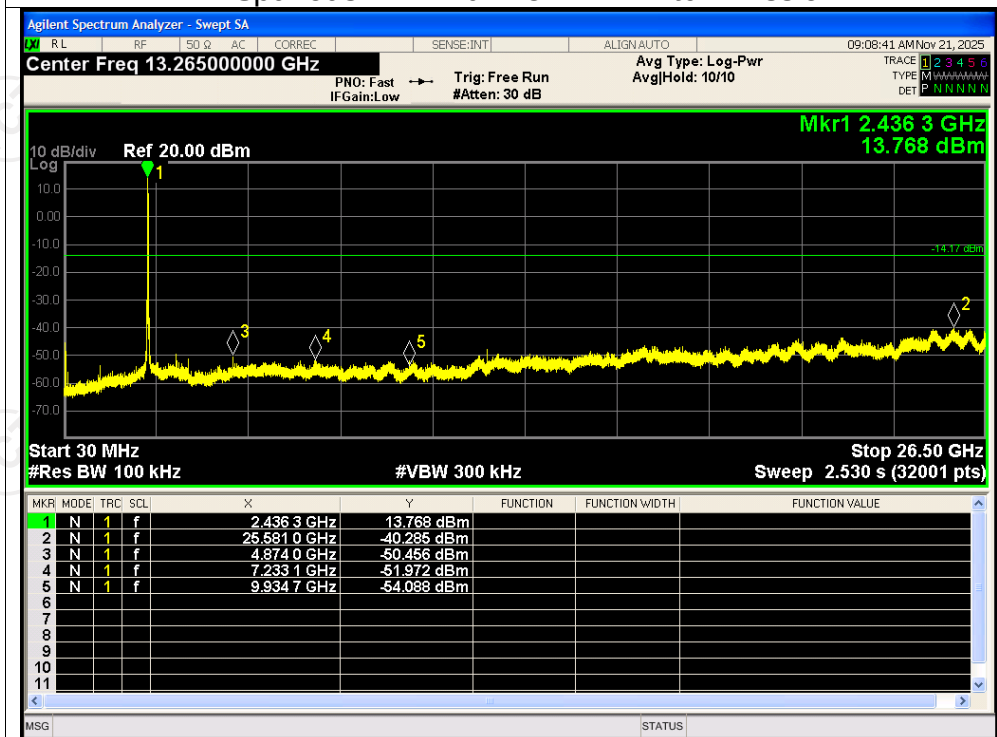
Tx. Spurious NVNT b 2412MHz Ant0 Emission



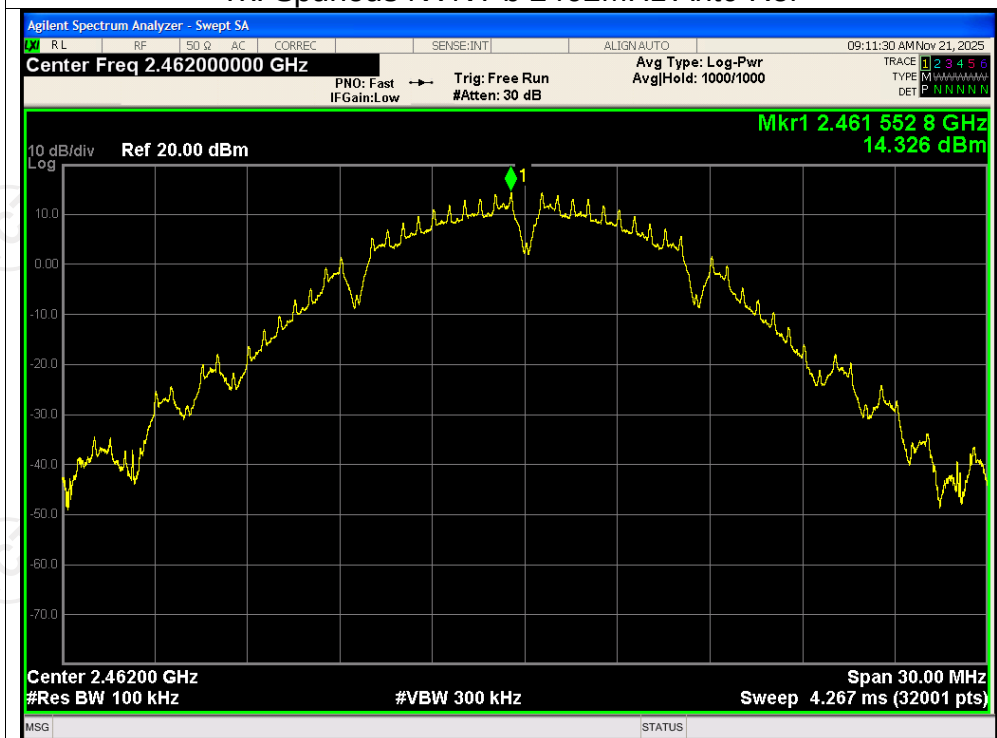
Tx. Spurious NVNT b 2437MHz Ant0 Ref



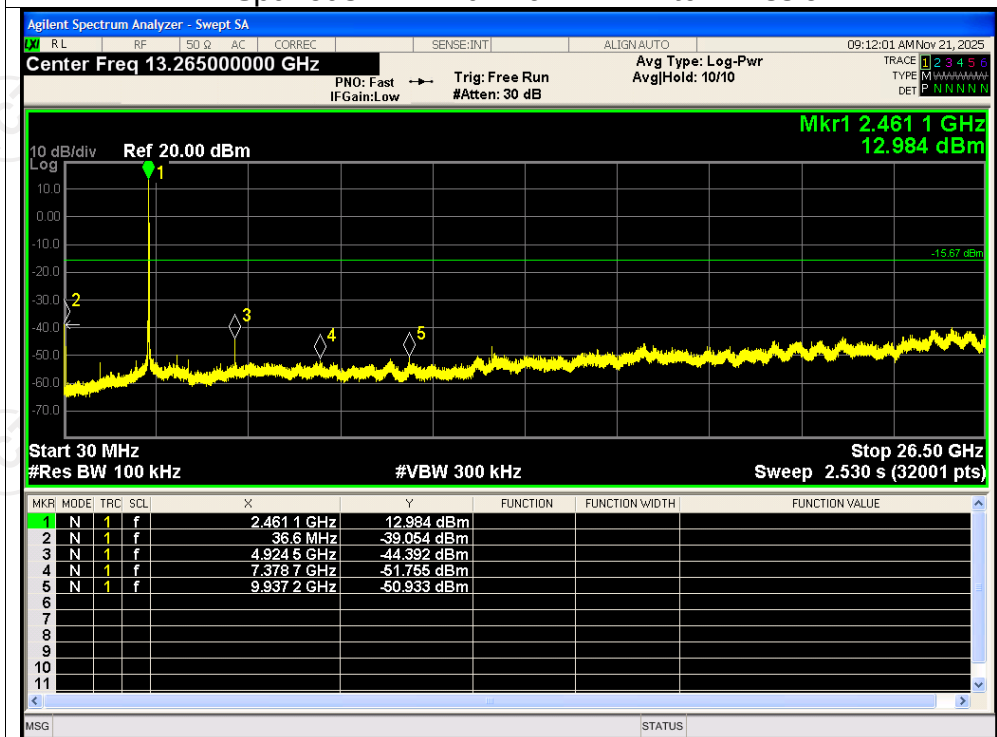
Tx. Spurious NVNT b 2437MHz Ant0 Emission



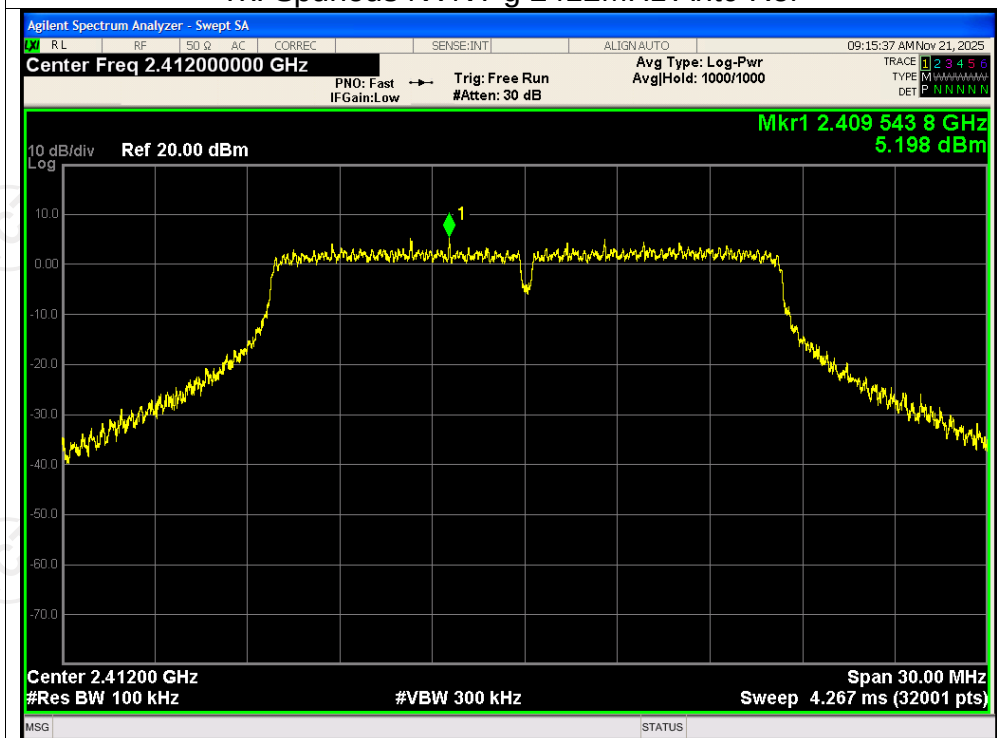
Tx. Spurious NVNT b 2462MHz Ant0 Ref



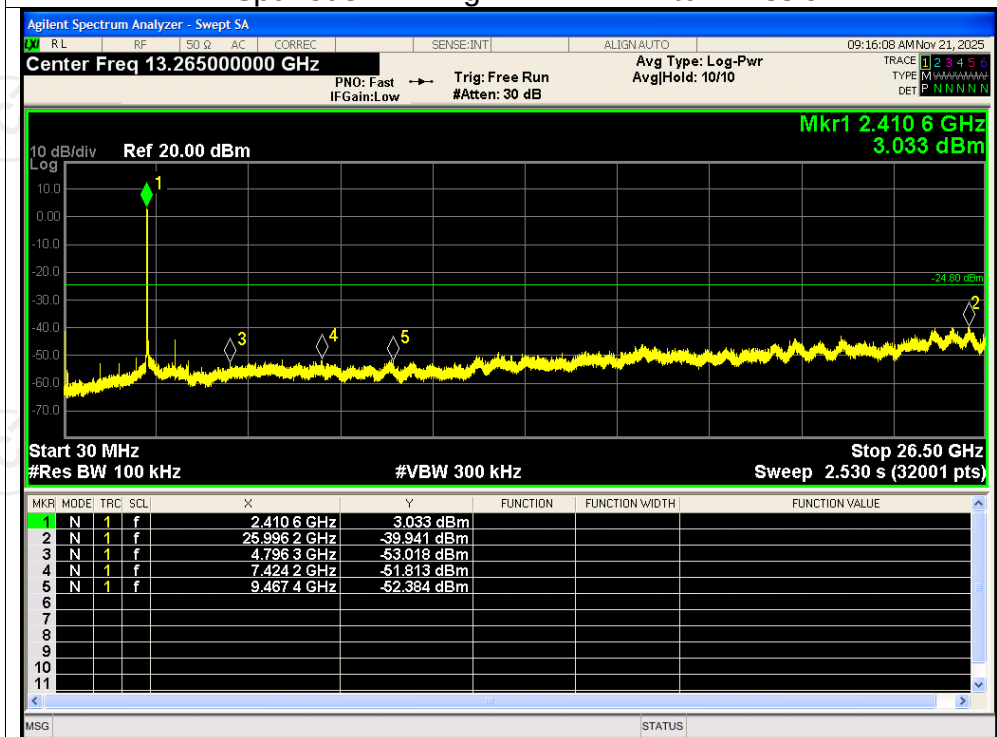
Tx. Spurious NVNT b 2462MHz Ant0 Emission



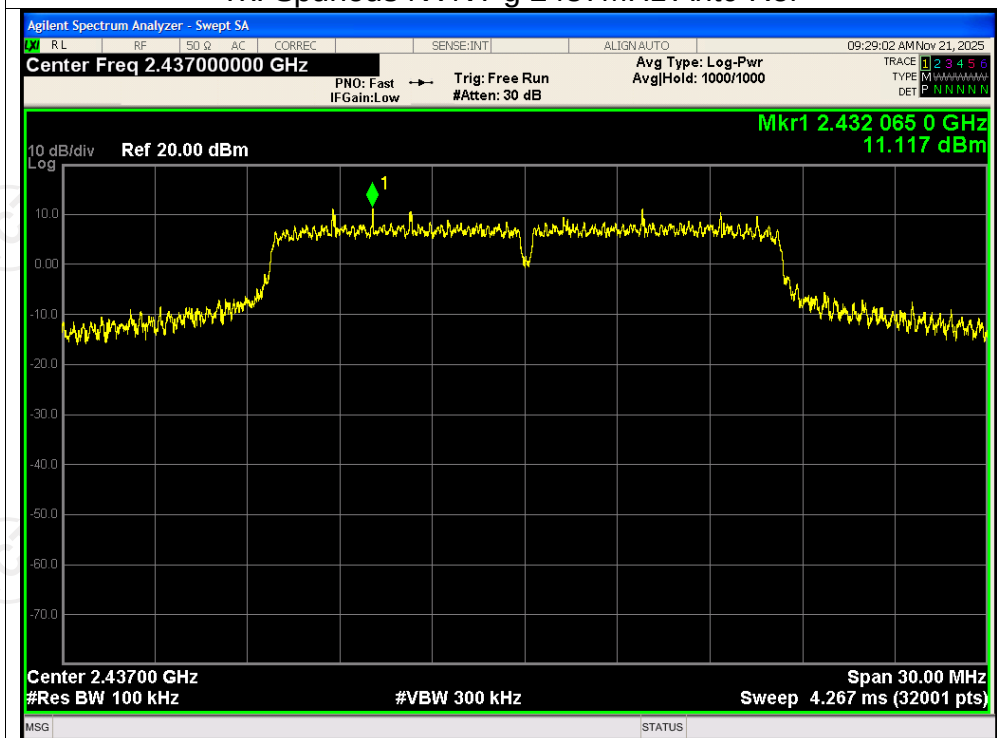
Tx. Spurious NVNT g 2412MHz Ant0 Ref



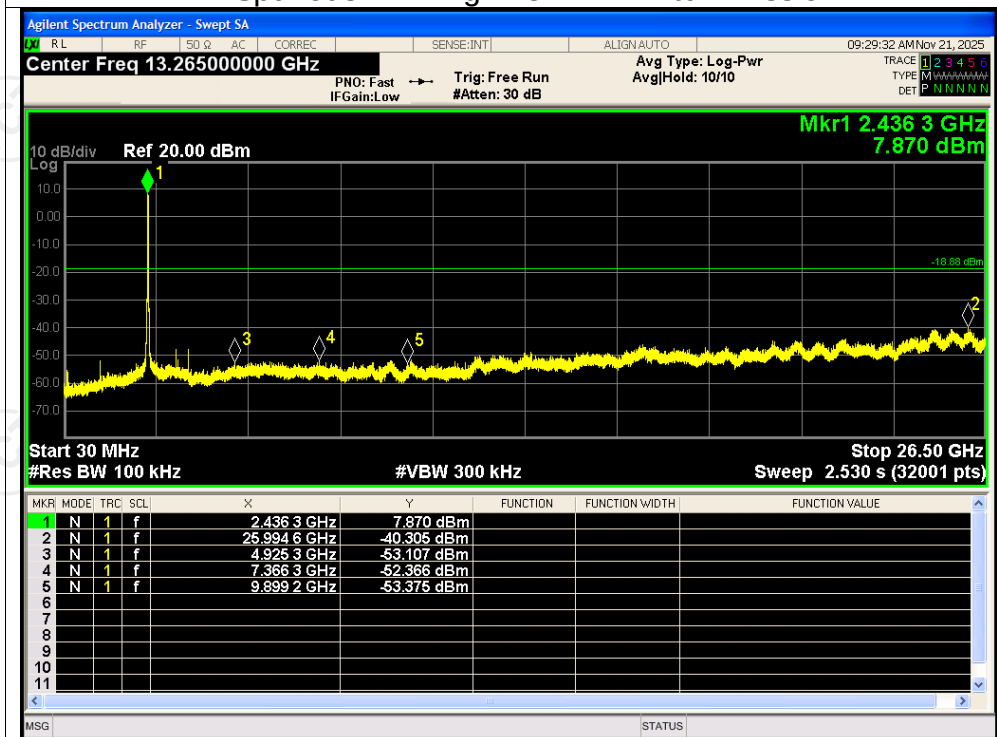
Tx. Spurious NVNT g 2412MHz Ant0 Emission



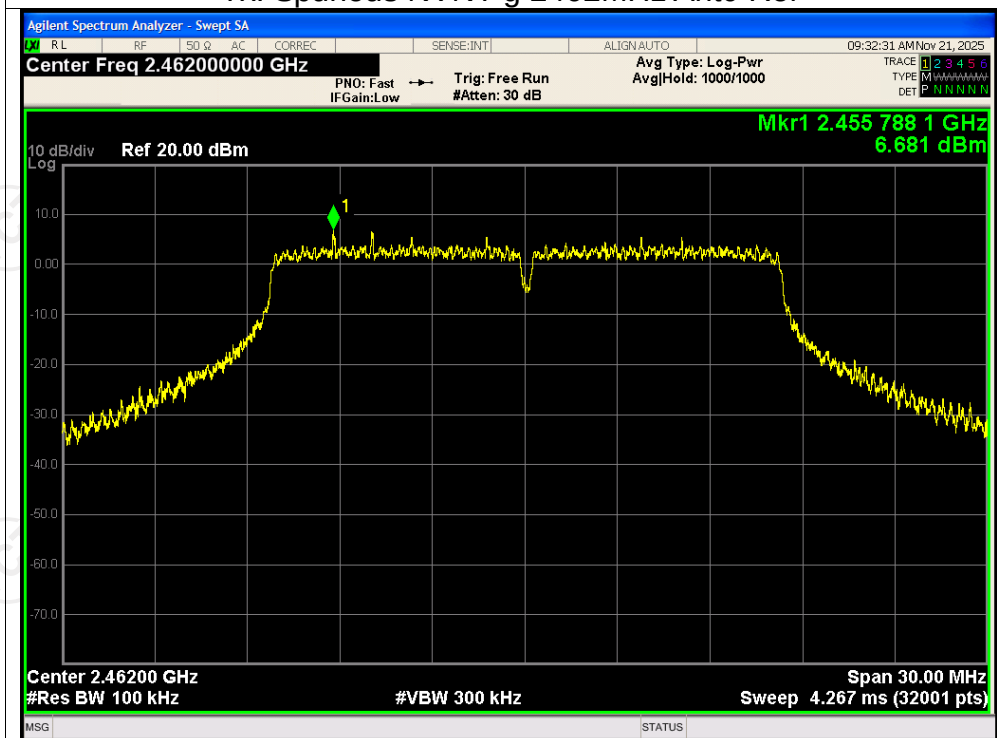
Tx. Spurious NVNT g 2437MHz Ant0 Ref



Tx. Spurious NVNT g 2437MHz Ant0 Emission



Tx. Spurious NVNT g 2462MHz Ant0 Ref



Tx. Spurious NVNT g 2462MHz Ant0 Emission

