



REPORT No.: SZ26020032W02

TEST REPORT

APPLICANT : Zhejiang Lierda Internet of Things
Technology Co., Ltd.

PRODUCT NAME : YB86 Series IoT Wi-Fi Module

MODEL NAME : L-WFIYB86-G5PP4, L-WFIYB86-G5PN4,
L-WFIYB86-G5PI4

BRAND NAME : N/A

FCC ID : 2AOFD-YB86

STANDARD(S) : 47 CFR Part 15 Subpart C

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REPORT No.: SZ26020032W02

Change History		
Version	Date	Reason for change
1.0	2026-05-26	First edition



1. Summary of Test Result

No.	Section	Description	Test Date	Test Engineer	Result	Remark
1	15.203	Antenna Requirement	N/A	N/A	PASS	/
2	N/A	Duty Cycle of Test Signal	Mar. 31, 2026	Li Xinpeng	PASS	/
3	15.247(b)	Maximum Peak Conducted Output Power	Mar. 31, 2026	Li Xinpeng	PASS	/
4	15.247(b)	Maximum Average Conducted Output Power	Mar. 31, 2026	Li Xinpeng	PASS	/
5	15.247(a)	Bandwidth	Mar. 31, 2026	Li Xinpeng	PASS	/
6	15.247(d)	Conducted Spurious Emission and Band Edge	Mar. 31, 2026	Li Xinpeng	PASS	/
7	15.247(e)	Power Spectral Density	Mar. 31, 2026	Li Xinpeng	PASS	/
8	15.207	Conducted Emission	N/A	N/A ^{Note4}	N/A	/
9	15.247(d)	Restricted Frequency Bands	Mar. 14, 2026	Xiong Xianhong	PASS	/
10	15.209, 15.247(d)	Radiated Emission	Mar. 14, 2026	Xiong Xianhong	PASS	/

Note 1: All test items are tested and evaluated in the worse mode with reference to output power results.

Note 2: The tests were performed according to the method of measurements prescribed in ANSI C63.10-2020 and KDB 558074 D01 v05r02.

Note 3: Any additions, deviation, or exclusions from the method shall be noted in the "Remark".

Note 4: Measurements to demonstrate compliance with the conducted limits are not required for devices which only employ battery power for operation and which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines.



1.1. Testing Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- 47 CFR Part 15 Subpart C Radio Frequency Devices



1.2. Test Equipment List

1.2.1 Conducted Test Equipment

Equipment	Serial No.	Type	Manufacturer	Cal. Date	Due Date
EXA Signal Analyzer	MY53470836	N9010A	Agilent	2025.12.23	2026.12.22
RF Cable (30MHz-26GHz)	CB01	RF01	Morlab	N/A	N/A
SMA Connector	CN01	RF03	HUBER-SUHNER	N/A	N/A

1.2.3 List of Software Used

Description	Manufacturer	Software Version
Test System	MaiWei	2.0.0.0
JS32-RE	Tonscend	5.0.0

**1.2.4 Radiated Test Equipment**

Equipment	Serial No.	Type	Manufacturer	Cal. Date	Due Date
Signal Analyzer	MY56060145	N9020A	Agilent	2025.05.13	2026.05.12
Test Antenna - Bi-Log	9163-274	VULB 9163	Schwarzbeck	2025.06.28	2026.06.27
Test Antenna - Loop	1519-022	FMZB1519	Schwarzbeck	2025.05.16	2026.05.15
Test Antenna – Horn	9120D-963	BBHA 9120D	Schwarzbeck	2025.05.16	2026.05.15
Test Antenna – Horn	BBHA9170 #773	BBHA9170	Schwarzbeck	2025.06.20	2026.06.19
Preamplifier (10MHz-6GHz)	46732	S10M100L38 02	LUCIX CORP.	2025.05.13	2026.05.12
Preamplifier (2GHz-18GHz)	61171/61172	S020180L32 03	LUCIX CORP.	2025.05.13	2026.05.12
Preamplifier (18GHz-40GHz)	DS77209	DCLNA0118-40C-S	Decentest	2025.05.13	2026.05.12
RF Coaxial Cable (DC-18GHz)	MRE001	PE330	Pasternack	2025.05.13	2026.05.12
RF Coaxial Cable (DC-18GHz)	MRE002	CLU18	Pasternack	2025.05.13	2026.05.12
RF Coaxial Cable (DC-18GHz)	MRE003	CLU18	Pasternack	2025.05.13	2026.05.12
RF Coaxial Cable (DC-40GHz)	22290045	QA360-40-KK-0.5	Qualwave	2025.09.03	2026.09.02
RF Coaxial Cable (DC-40GHz)	22290046	QA360-40-KKF-2	Qualwave	2025.09.03	2026.09.02
RF Coaxial Cable (DC-18GHz)	22120181	QA500-18-NN-5	Qualwave	2025.09.03	2026.09.02
Notch Filter	N/A	WRCG-2400-2483.5-60SS	Wainwright	N/A	N/A
Anechoic Chamber	N/A	9m*6m*6m	CRT	2025.06.21	2028.06.20
Anechoic Chamber	N/A	9m*6m*6m	CRT	2025.04.19	2026.04.18



1.3. Measurement Uncertainty

Test Items	Uncertainty	Remark
Peak Output Power	$\pm 2.22\text{dB}$	Confidence levels of 95%
Power Spectral Density	$\pm 2.22\text{dB}$	Confidence levels of 95%
Bandwidth	$\pm 5\%$	Confidence levels of 95%
Conducted Spurious Emission	$\pm 2.77\text{dB}$	Confidence levels of 95%
Restricted Frequency Bands	$\pm 5\%$	Confidence levels of 95%
Radiated Emission	$\pm 2.95\text{dB}$	Confidence levels of 95%
Conducted Emission	$\pm 2.44\text{dB}$	Confidence levels of 95%

1.4. Testing Laboratory

Laboratory Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Laboratory Address:	FL.1-3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China
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Facsimile:	+86 755 36698525
FCC Designation Number:	CN1192
FCC Test Firm Registration Number:	226174

2. General Description

2.1. Information of Applicant and Manufacturer

Applicant:	Zhejiang Lierda Internet of Things Technology Co., Ltd.
Applicant Address:	Room 1402, Building 1, No.1326, Wenyi West Road, Cangqian street, Yuhang District, Hangzhou, Zhejiang Prov. China
Manufacturer:	Zhejiang Lierda Internet of Things Technology Co., Ltd.
Manufacturer Address:	Room 1402, Building 1, No.1326, Wenyi West Road, Cangqian street, Yuhang District, Hangzhou, Zhejiang Prov. China

2.2. Information of EUT

Product Name:	YB86 Series IoT Wi-Fi Module
Sample No.:	7#, 10#
Hardware Version:	V01
Software Version:	V01
Modulation Technology:	DSSS, OFDM, OFDMA
Modulation Type:	Refer to section 2.4
Wireless Technology:	802.11b, 802.11g, 802.11n (HT20), 802.11n (HT40), 802.11ax (HEW20)
Operating Frequency Range:	2412MHz–2472MHz
Antenna Type:	ANT1: PCB Antenna ANT2: Rod-shaped Antenna
Antenna Gain:	ANT1: 2.81dBi ANT2: 1.96dBi

Note 1: The EUT description presented in the report are provided by applicant and/or manufacturer, and the test laboratory is not responsible for the accuracy of the information. For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.

Note 2: According to the certificate holder, they declared that the models L-WFIYB86-G5PP4, L-WFIYB86-G5PN4, L-WFIYB86-G5PI4 have the same hardware and software, only differ in the following content:

L-WFIYB86-G5PP4 without IPEX antenna terminal, module's pin1 is invalid;

L-WFIYB86-G5PI4 with IPEX antenna terminal, module's pin1 is invalid;

L-WFIYB86-G5PN4 without IPEX antenna terminal, module's pin1 is valid.

The main measuring model is L-WFIYB86-G5PP4, only the results for L-WFIYB86-G5PP4 were recorded in this report.



Note 3: The EUT can be used with two kinds of antenna and it operates in single antenna. Both of the two antennas were evaluated separately, only the worst test result(ANT2) were recorded in the test report.

2.3.Channel List of EUT

Nominal Channel Bandwidth	Channel	Frequency (MHz)	Channel	Frequency (MHz)
20MHz	1	2412	8	2447
	2	2417	9	2452
	3	2422	10	2457
	4	2427	11	2462
	5	2432	12	2467
	6	2437	13	2472
	7	2442		
Nominal Channel Bandwidth	Channel	Frequency (MHz)	Channel	Frequency (MHz)
40MHz	3	2422	8	2447
	4	2427	9	2452
	5	2432	10	2457
	6	2437	11	2462
	7	2442		

Note 1: The black bold channels were selected for test.

2.4. Test Configuration of EUT

2.4.1. Modulation Type and Data Rate of EUT

Mode	Bandwidth (MHz)	Modulation Technology	Modulation Type	Data Rate	RU Size
802.11b	20	DSSS	DBPSK	1/2/5.5/11Mbps	N/A
			DQPSK		
			CCK		
802.11g	20	OFDM	BPSK	6/9/12/18/24/36/48/54 Mbps	N/A
			QPSK		
			16QAM		
			64QAM		
802.11n	20 (HT20/40)	OFDM	BPSK	MCS0~MCS7	N/A
			QPSK		
			16QAM		
			64QAM		
802.11ax	20 (HEW20)	OFDM/ OFDMA	BPSK	MCS0~MCS7	26/52/106
			QPSK		
			16QAM		
			64QAM		

Note1: The worst-case mode (bold face) in all data rates has been determined during the pre-scan, only the test data of the worst-case were recorded in this report.

Note2: The RF signal transmission of EUT is controlled by the build-in engineering mode which is provided by the manufacturer. The recorded power setting value is the maximum that the engineering mode has configuration during testing.

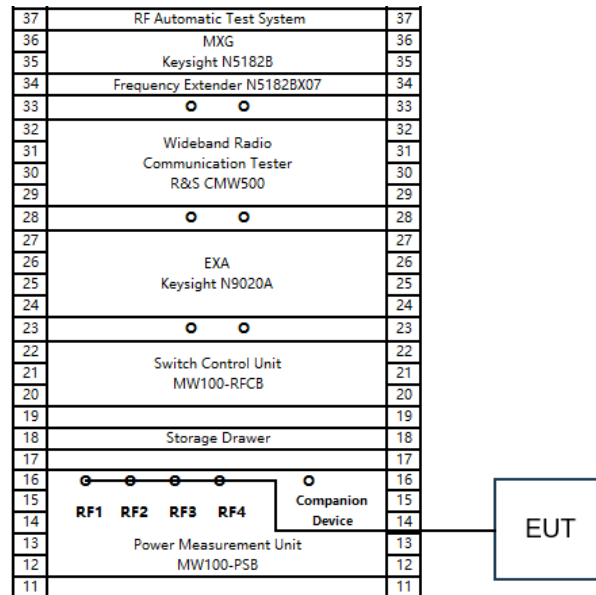
Note3: The RU allocation of 802.11ax mode, only full ru is supported.

2.5. Test Conditions

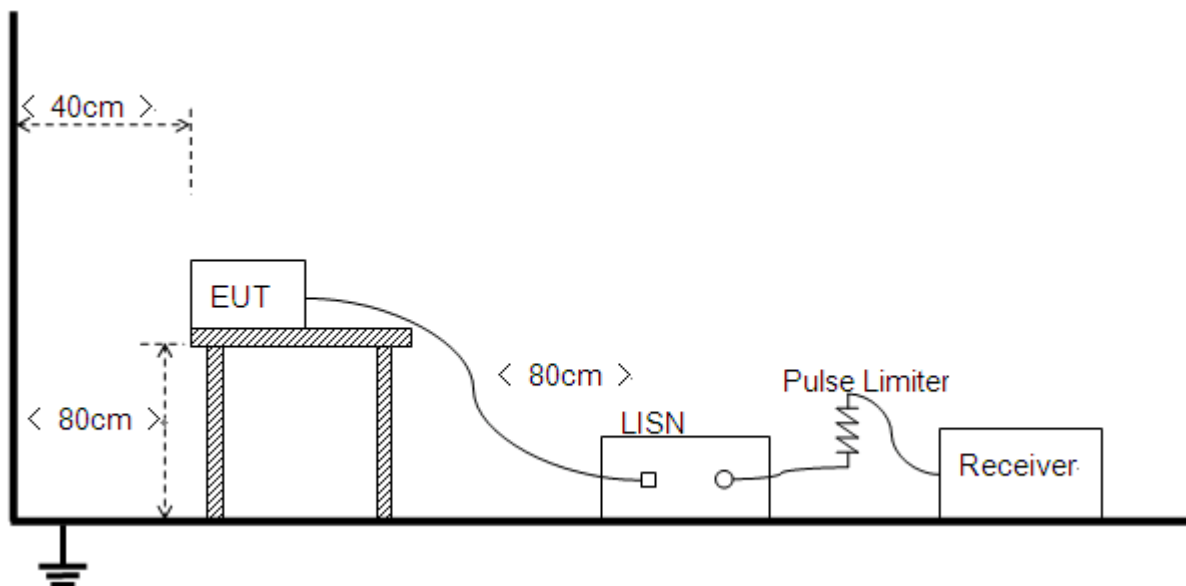
Temperature (°C):	15–35
Relative Humidity (%):	30–60
Atmospheric Pressure (kPa):	86–106

2.6. Test Setup Layout Diagram

2.6.1. Conducted Measurement

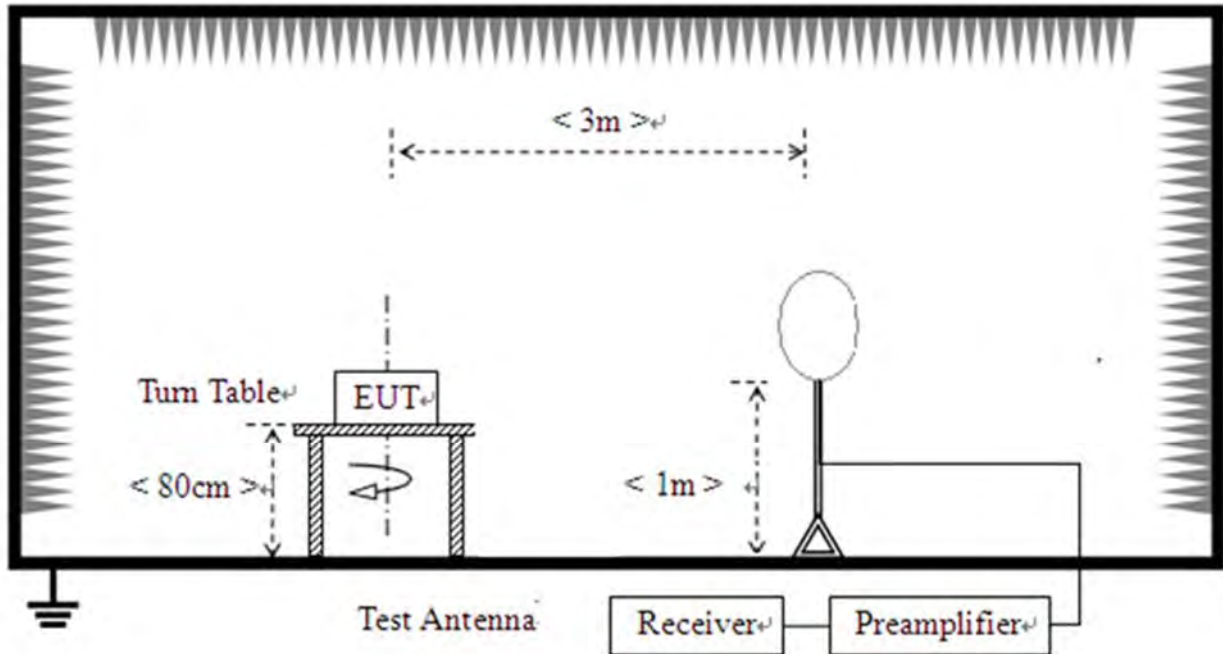


2.6.2. Conducted Emission Measurement

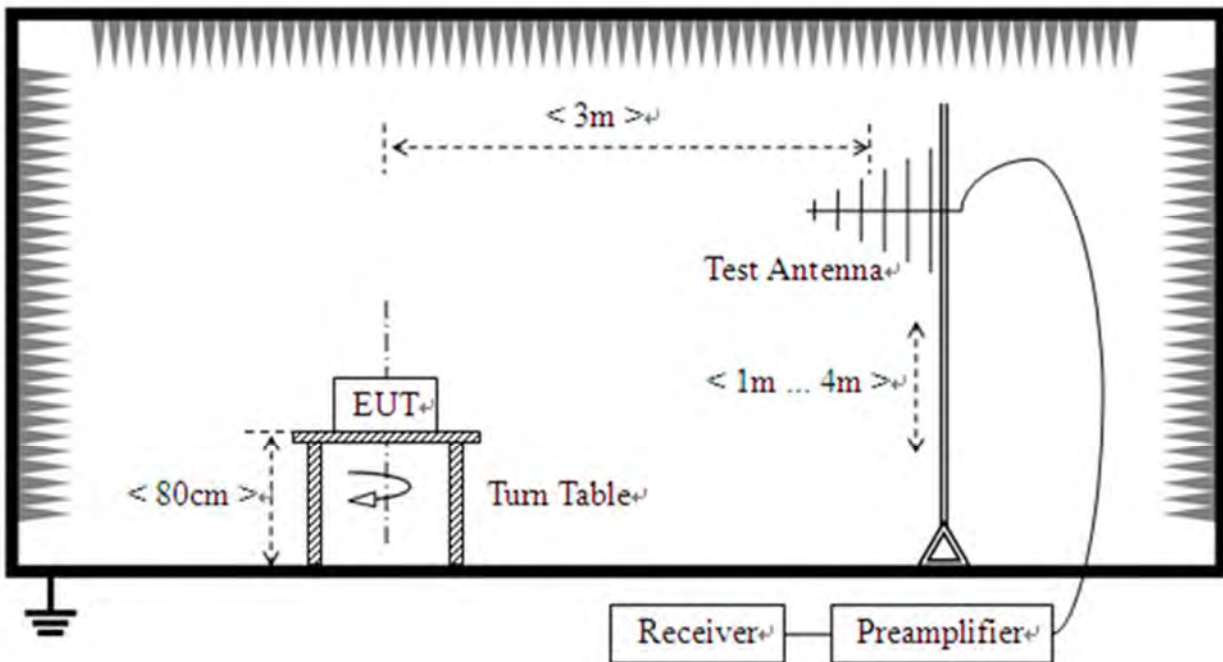


2.6.3.Radiation Measurement

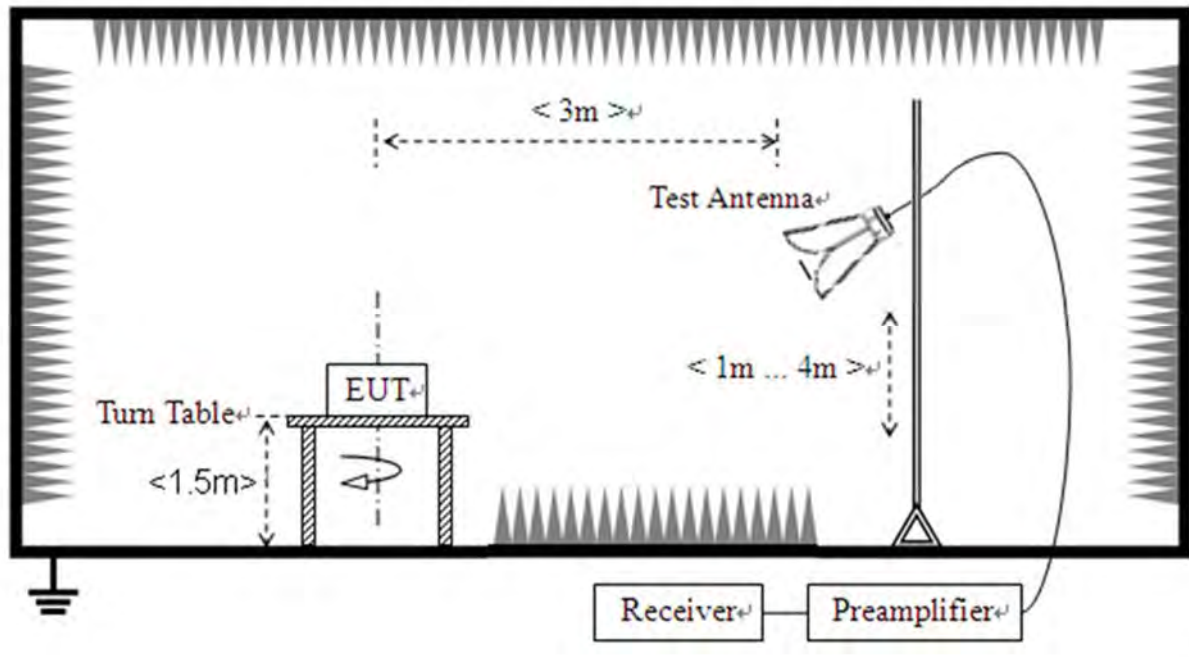
1) For radiated emissions from 9kHz to 30MHz



2) For radiated emissions from 30MHz to 1GHz



3) For radiated emissions above 1GHz





3. Test Results

3.1. Antenna Requirement

3.1.1. Requirement

According to FCC 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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

3.1.2. Test Result

Model Name	Antenna location	Antenna Type	Coupling Method
L-WFIYB86-G5PP4	External	PCB Antenna	Layout
L-WFIYB86-G5PN4	External	PCB Antenna	I-PEX Connector
L-WFIYB86-G5PI4	External	Rod-shaped Antenna	RP-SMA Connector

3.2. Duty Cycle of Test Signal

3.2.1. Requirement

Preferably, all measurements of maximum conducted (average) output power will be performed with the EUT transmitting continuously (i.e., with a duty cycle of greater than or equal to 98%). When continuous operation cannot be realized, then the use of sweep triggering/signal gating techniques can be used to ensure that measurements are made only during transmissions at the maximum power control level. Such sweep triggering/signal gating techniques will require knowledge of the minimum transmission duration (T) over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation. Sweep triggering/signal gating techniques can then be used if the measurement/sweep time of the analyzer can be set such that it does not exceed T at any time that data are being acquired (i.e., no transmitter OFF-time is to be considered).

When continuous transmission cannot be achieved and sweep triggering/signal gating cannot be implemented, alternative procedures are provided that can be used to measure the average power; however, they will require an additional measurement of the transmitter duty cycle (D). Within this sub clause, the duty cycle refers to the fraction of time over which the transmitter is ON and is transmitting at its maximum power control level. The duty cycle is considered to be constant if variations are less than $\pm 2\%$; otherwise, the duty cycle is considered to be non constant.

3.2.2. Test Result

Refer to Annex A.1 in this report.



3.3. Maximum Peak and Average Conducted Output Power

3.3.1. Requirement

According to FCC section 15.247(b)(3), For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: The maximum conducted output power of the intentional radiator shall not exceed 1 Watt. 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 above of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.3.2. Test Procedures

The EUT (Equipment under the test) which is coupled to the USB Wideband Power Sensor; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.

3.3.3. Test Setup Layout

Refer to chapter 2.6.1 in this report.

3.3.4. Test Result

Refer to Annex A.2 and A.3 in this report.



3.4.6 dB Bandwidth

3.4.1.Requirement

According to FCC section 15.247(a) (2), systems using digital modulation techniques may operate in the 902 - 928 MHz, 2400 - 2483.5 MHz, and 5725 - 5850 MHz bands. The minimum 6dB bandwidth shall be at least 500 kHz.

3.4.1.Test Procedures

KDB 558074 Section 8.2 was used in order to prove compliance.

3.4.2.Test Setup Layout

Refer to chapter 2.6.1 in this report.

3.4.3.Test Result

Refer to Annex A.4 in this report.



3.5. Conducted Spurious Emissions and Band Edge

3.5.1. Requirement

According to FCC section 15.247(d), in any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

3.5.2. Test Procedures

KDB 558074 Section 8.5 and 8.7 was used in order to prove compliance.

3.5.3. Test Setup Layout

Refer to chapter 2.6.1 in this report.

3.5.4. Test Result

Refer to Annex A.5 and A.6 in this report.



3.6. Power Spectral Density

3.6.1. Requirement

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

3.6.2. Test Procedures

The measured power spectral density was calculated by the reading of the spectrum analyzer and calibration. Following is the test procedure for PSD test:

- a) Set analyzer center frequency to channel center frequency
- b) Set span to 1.5 times DTS
- c) Set RBW to 30kHz
- d) Set VBW to 100kHz
- e) Detector = peak
- f) Sweep time = auto couple
- g) Trace mode = max hold
- h) Allow trace to fully stabilize
- i) Use the peak marker function to determine the maximum amplitude level and recorded as PD
- j) Use below formula to calculate the Conducted PSD value that at specified RBW:

Conducted PSD = PD - 10lg(30k/3k)

3.6.3. Test Setup Layout

Refer to chapter 2.6.1 in this report.

3.6.4. Test Result

Refer to Annex A.7 in this report.

3.7. Conducted Emission

3.7.1. Requirement

According to FCC section 15.207, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150kHz to 30MHz shall not exceed the limits in the following table, as measured using a 50 μ H/50 Ω line impedance stabilization network (LISN).

Frequency Range (MHz)	Conducted Limit (dB μ V)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
5 - 30	60	50

Note:

- (a) The lower limit shall apply at the band edges.
- (b) The limit decreases linearly with the logarithm of the frequency in the range 0.15 - 0.50MHz.

3.7.2. Test Procedures

The Table-top EUT was placed upon a non-metallic table 0.8m above the horizontal metal reference ground plane. EUT was connected to LISN and LISN was connected to reference Ground Plane. EUT was 80cm from LISN. The set-up and test methods were according to ANSI C63.10: 2013.

3.7.3. Test Setup Layout

Refer to chapter 2.6.2 in this report.

3.7.4. Test Result

This test case does not apply this kind of EUT.

3.8. Restricted Frequency Bands

3.8.1. Requirement

According to FCC section 15.247(d), in any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power. In addition, radiated emissions which fall in the restricted bands, as defined in 15.205(a), must also comply with the radiated emission limits specified in 15.209(a).

3.8.2. Test Procedures

The EUT is located in a 3m Semi-Anechoic Chamber; the antenna factors, cable loss and so on of the site as factors are calculated to correct the reading.

For the Test Antenna:

Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength.

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz for $f \geq 1\text{GHz}$, 100 kHz for $f < 1\text{GHz}$

VBW = 3 MHz

Sweep = auto

Detector function = peak/average

Trace = max hold

Allow the trace to stabilize

3.8.3. Test Setup Layout

Refer to chapter 2.6.3 in this report.

3.8.4. Test Result

Refer to Annex A.8 in this report.



3.9. Radiated Emission

3.9.1. Requirement

According to FCC section 15.247(d), radiated emission outside the frequency band attenuation below the general limits specified in FCC section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in FCC section 15.205(a), must also comply with the radiated emission limits specified in FCC section 15.209(a).

According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength ($\mu\text{V/m}$)	Measurement Distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

Note1: For above 1000MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit.

Note2: For above 1000MHz, limit field strength of harmonics: 54dBuV/m@3m (AV) and 74dBuV/m@3m (PK). In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), also should comply with the radiated emission limits specified in Section 15.209(a)(above table).



3.9.2.Test Procedures

The EUT is placed on a non-conducting table 80 cm above the ground plane for measurement below 1GHz; 1.5 m above the ground plane for measurement above 1GHz. The antenna to EUT distance is 3meters. The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.

For measurements below 30MHz, the emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9kHz-90 kHz, 110kHz-490 kHz. Radiated emission limits in these two bands are based on measurements employing an average detector.

For measurements below 1GHz the resolution bandwidth is set to 100kHz for peak detection measurements or 120kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1GHz the resolution bandwidth is set to 1MHz, the video band width is set to 3MHz for peak measurements and as applicable for average measurements.

The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions. For measurements above 1 GHz, keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response.

3.9.3.Test Setup Layout

Refer to chapter 2.6.3 in this report.

3.9.4.Test Result

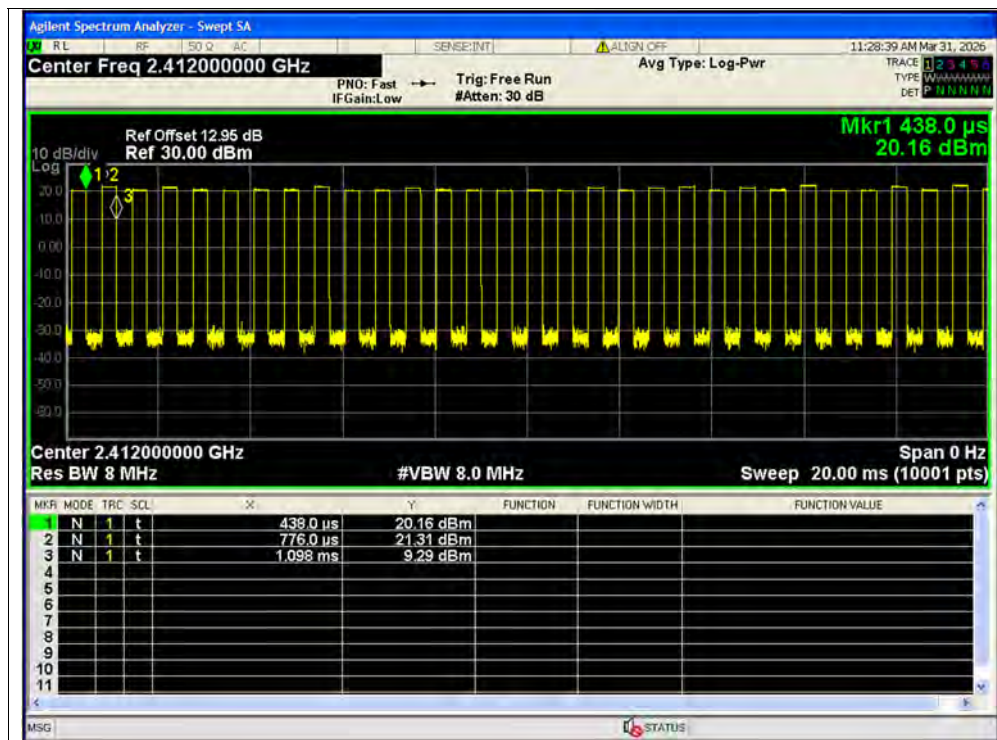
Refer to Annex A.9 in this report.



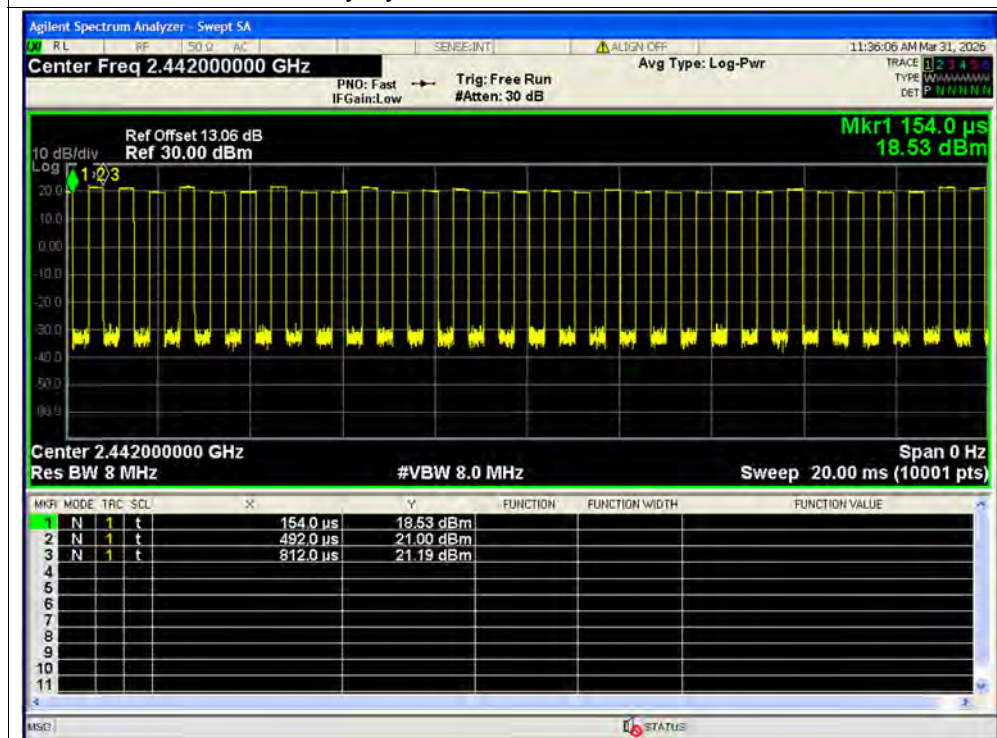
Annex A Test Data and Result

A.1. Duty Cycle of Test Signal

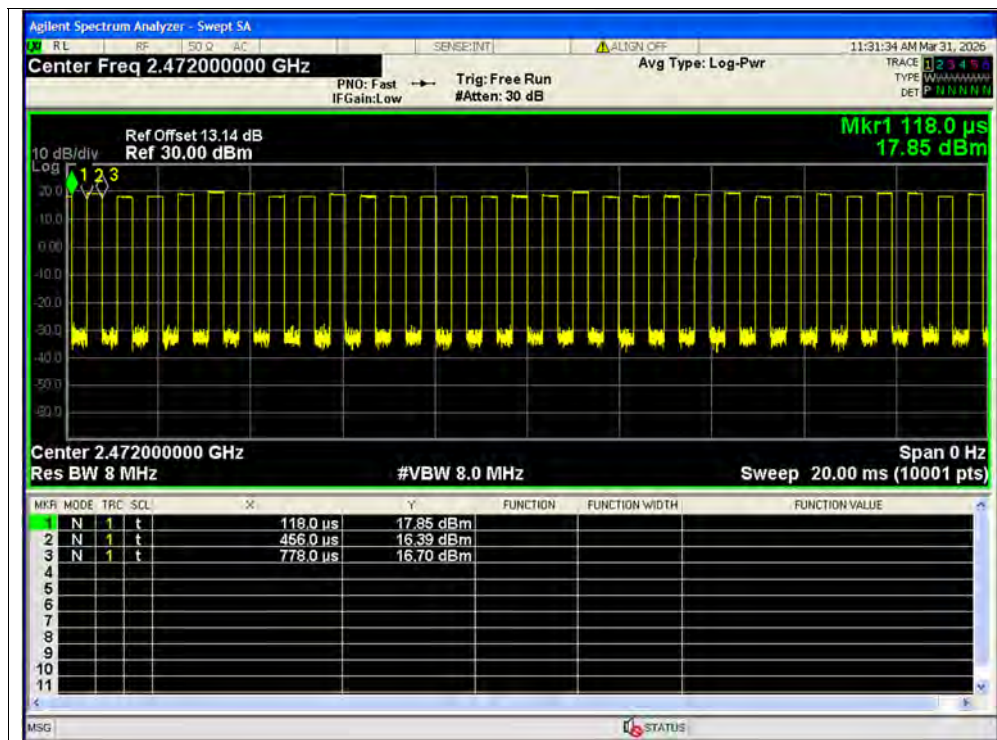
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	b	2412	Ant2	48.79	3.12	3.11
NVNT	b	2442	Ant2	48.63	3.13	3.13
NVNT	b	2472	Ant2	48.79	3.12	3.11
NVNT	g	2412	Ant2	50.18	2.99	0.73
NVNT	g	2442	Ant2	50.11	3	0.74
NVNT	g	2472	Ant2	50.18	2.99	0.73
NVNT	n20	2412	Ant2	49.02	3.1	0.77
NVNT	n20	2442	Ant2	48.98	3.1	0.77
NVNT	n20	2472	Ant2	48.98	3.1	0.77
NVNT	n40	2422	Ant2	32.37	4.9	1.54
NVNT	n40	2442	Ant2	32.37	4.9	1.54
NVNT	n40	2462	Ant2	32.44	4.89	1.54
NVNT	ax20	2412	Ant2	49.71	3.04	0.98
NVNT	ax20	2442	Ant2	49.71	3.04	0.98
NVNT	ax20	2472	Ant2	49.71	3.04	0.98



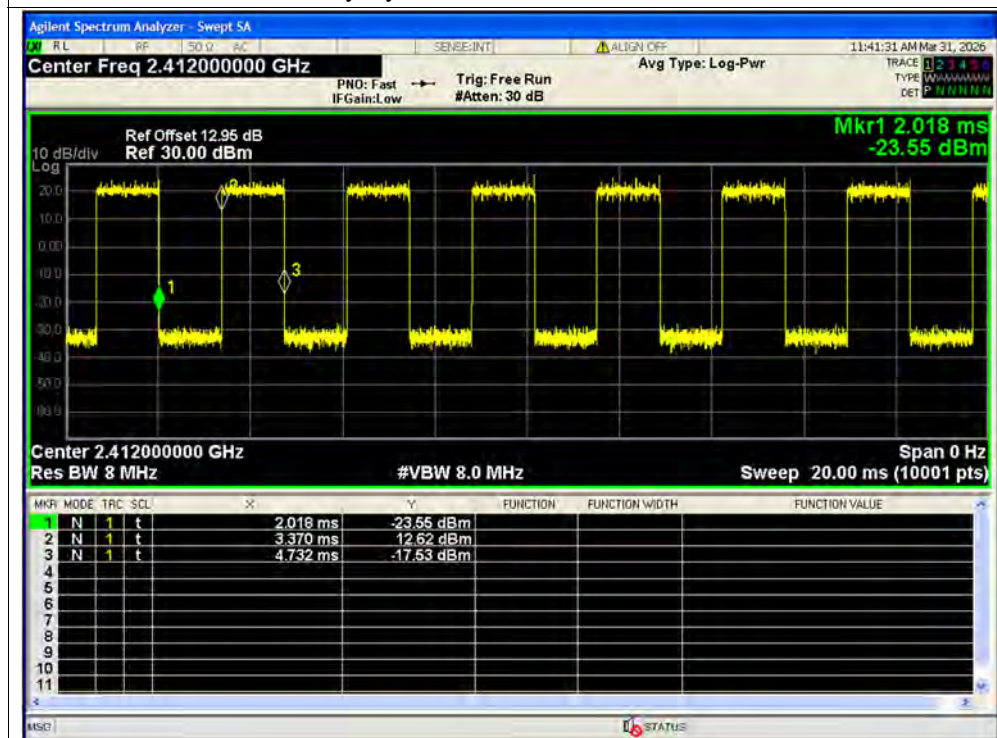
Duty Cycle NVNT b 2412MHz Ant2



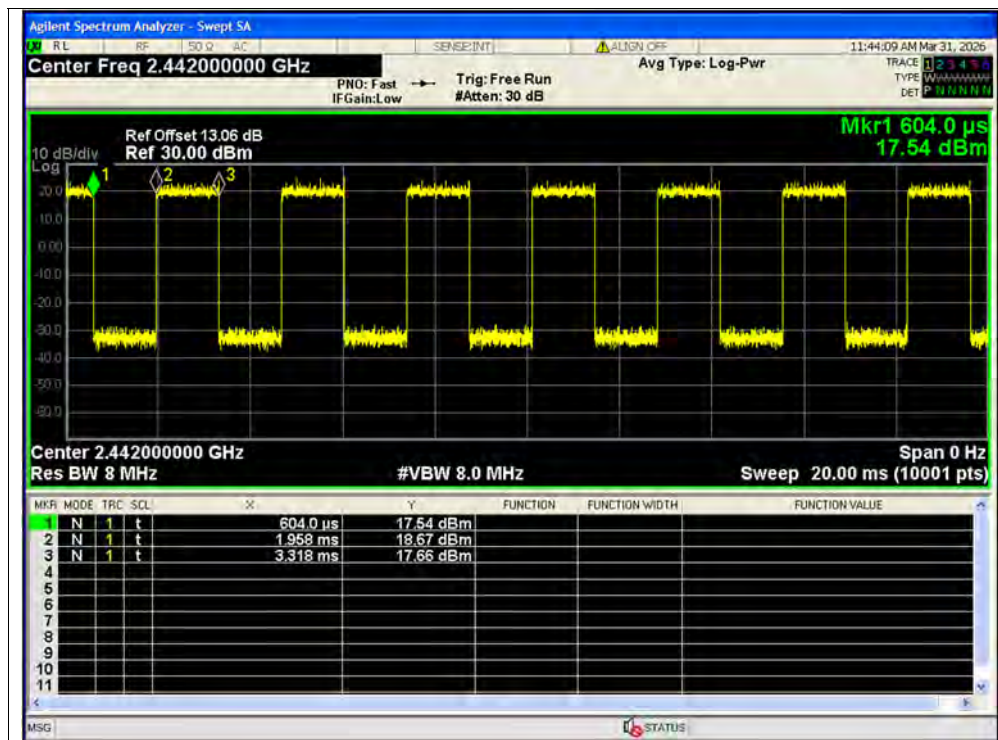
Duty Cycle NVNT b 2442MHz Ant2



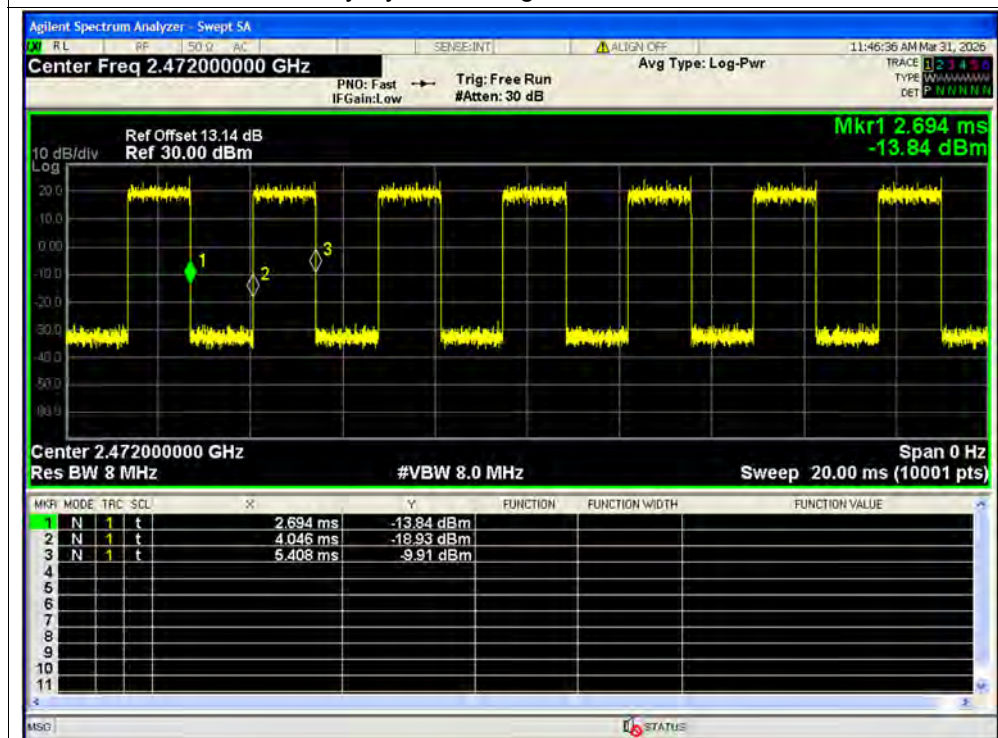
Duty Cycle NVNT b 2472MHz Ant2



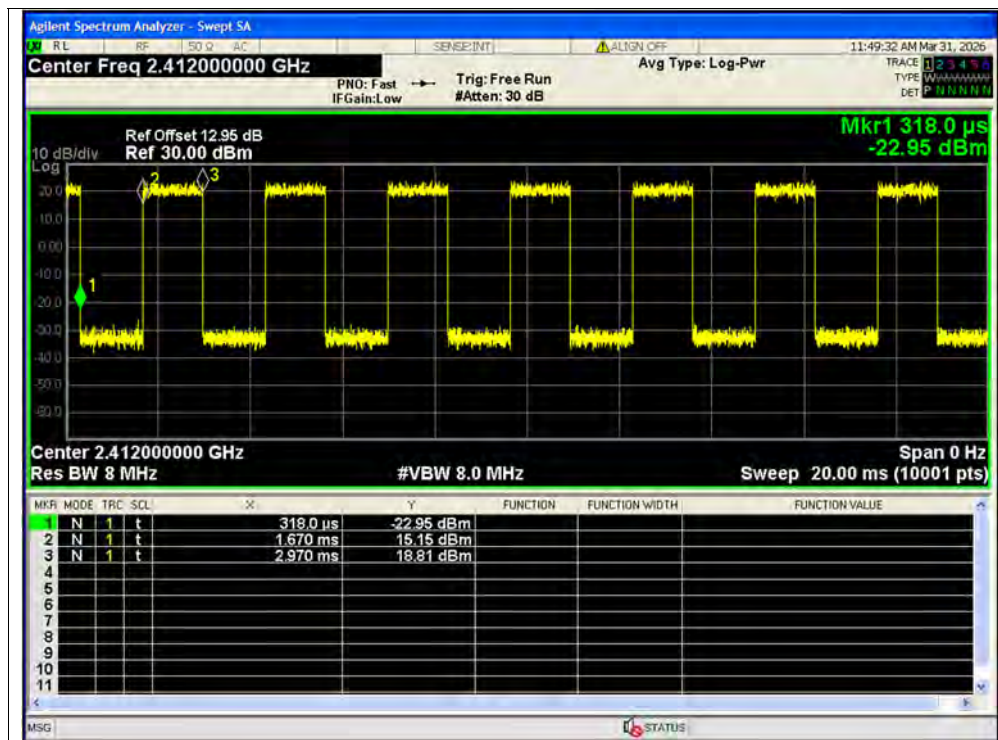
Duty Cycle NVNT g 2412MHz Ant2



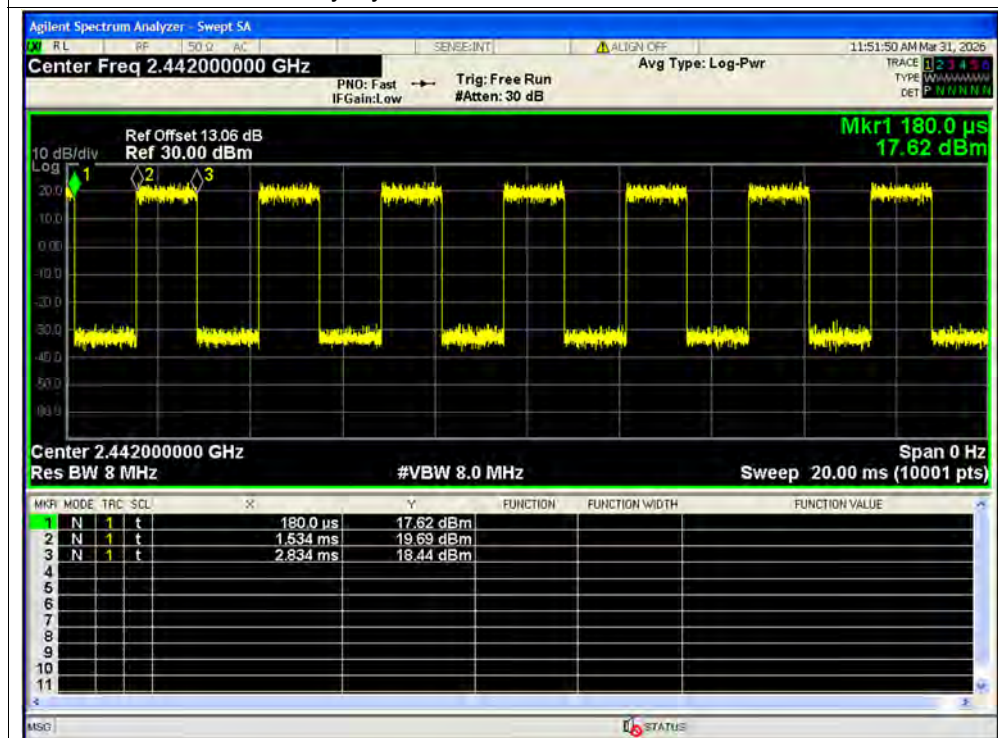
Duty Cycle NVNT g 2442MHz Ant2



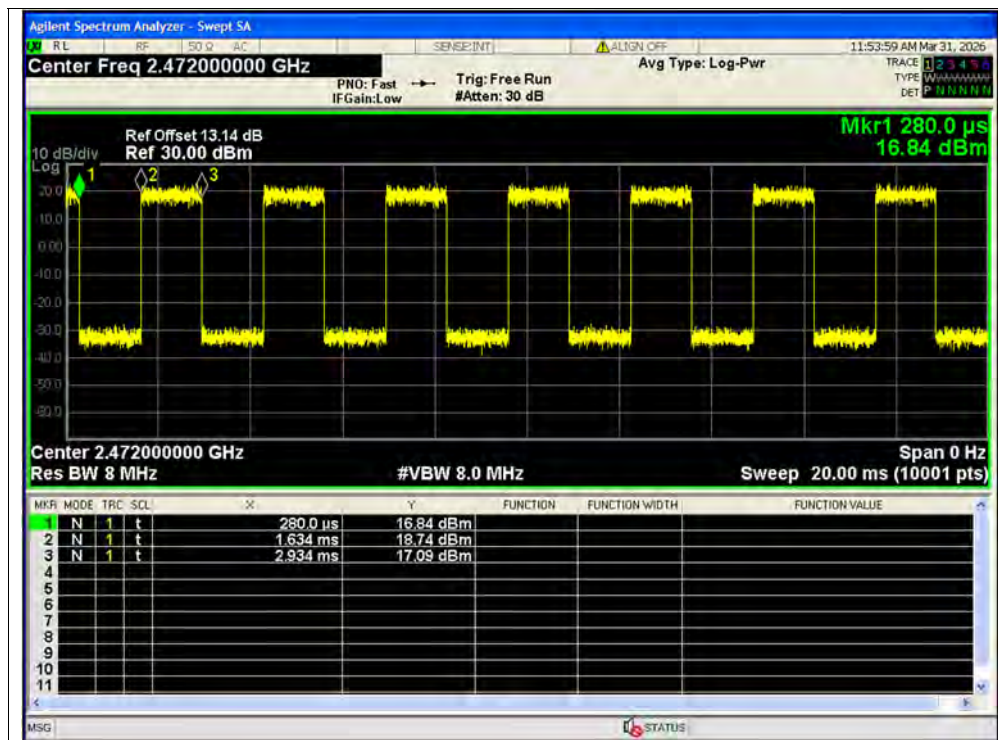
Duty Cycle NVNT g 2472MHz Ant2



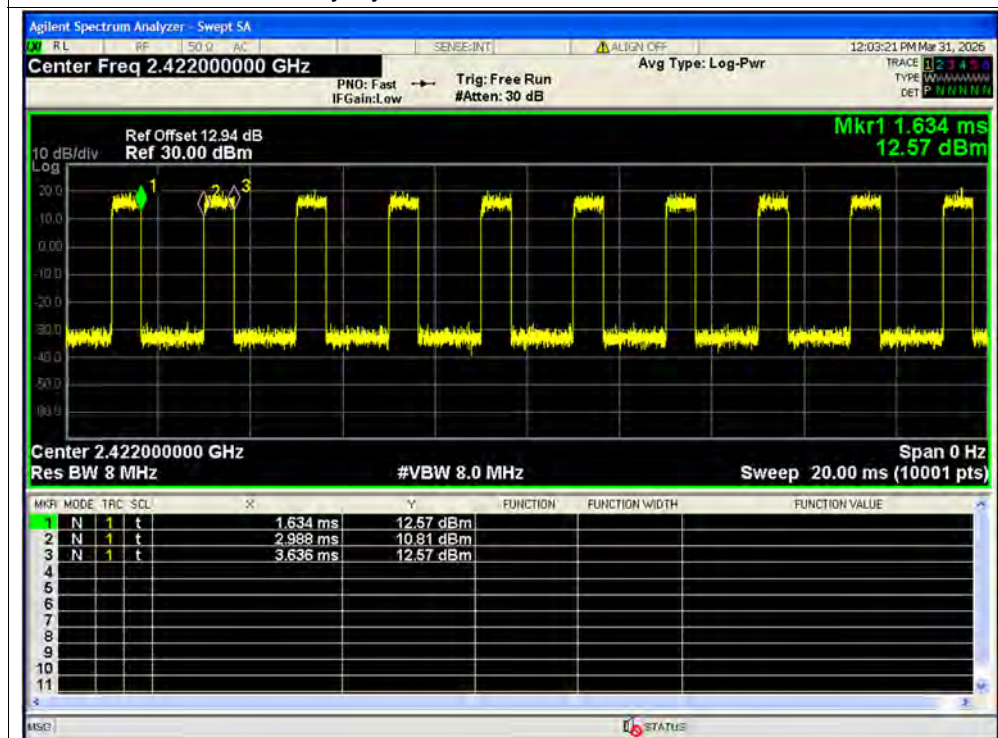
Duty Cycle NVNT n20 2412MHz Ant2



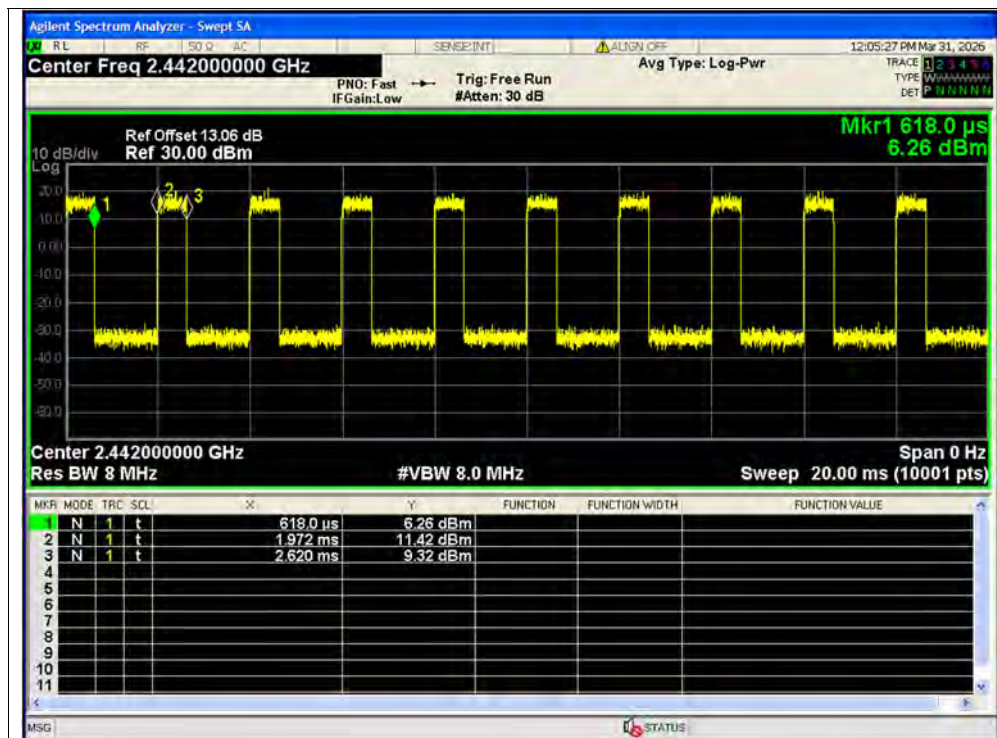
Duty Cycle NVNT n20 2442MHz Ant2



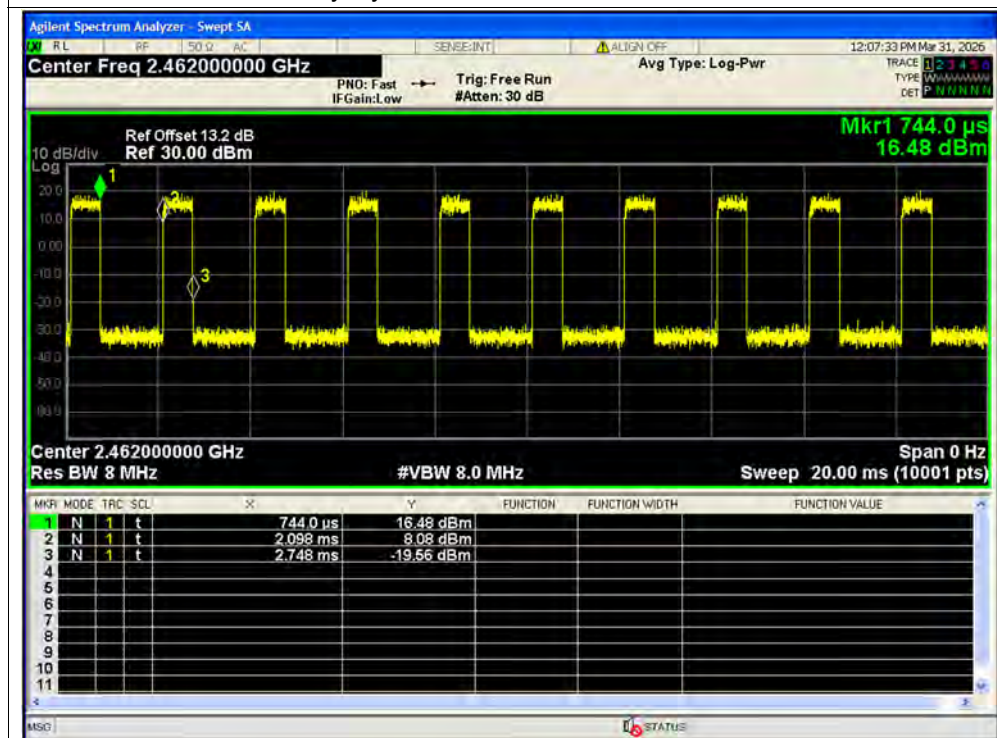
Duty Cycle NVNT n20 2472MHz Ant2



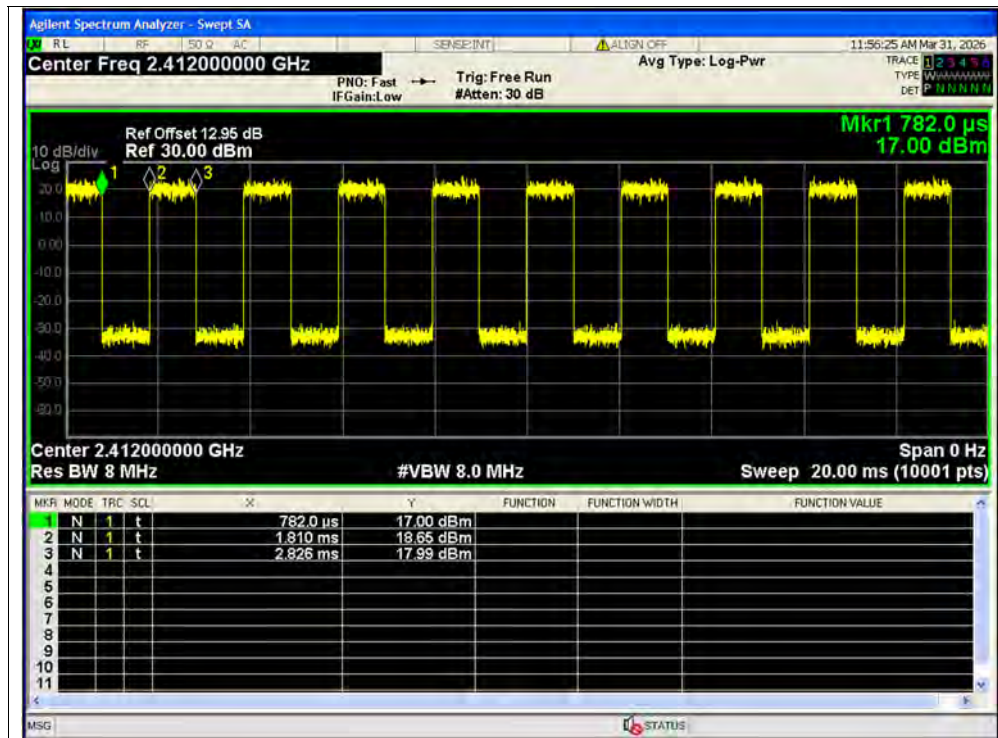
Duty Cycle NVNT n40 2422MHz Ant2



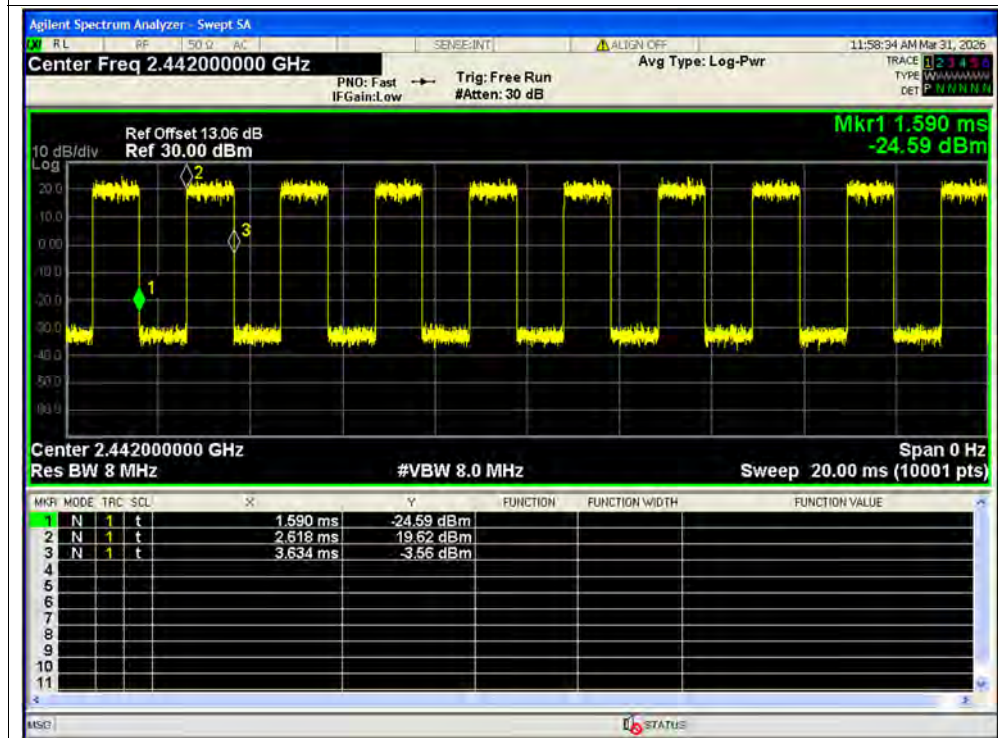
Duty Cycle NVNT n40 2442MHz Ant2



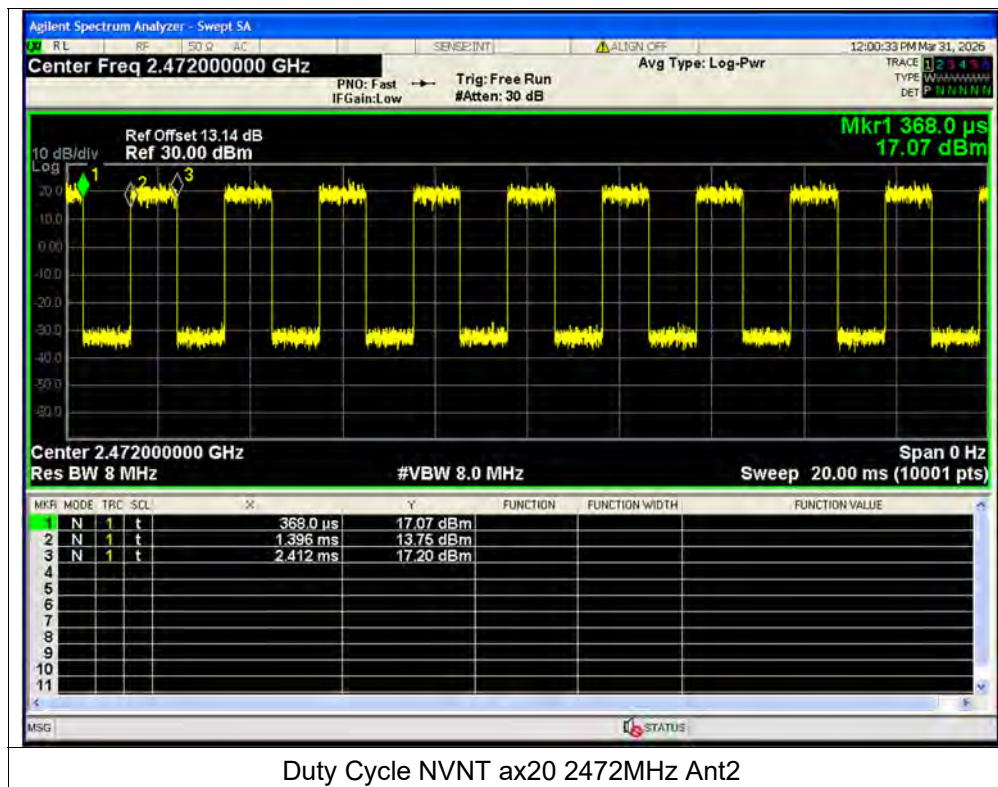
Duty Cycle NVNT n40 2462MHz Ant2



Duty Cycle NVNT ax20 2412MHz Ant2

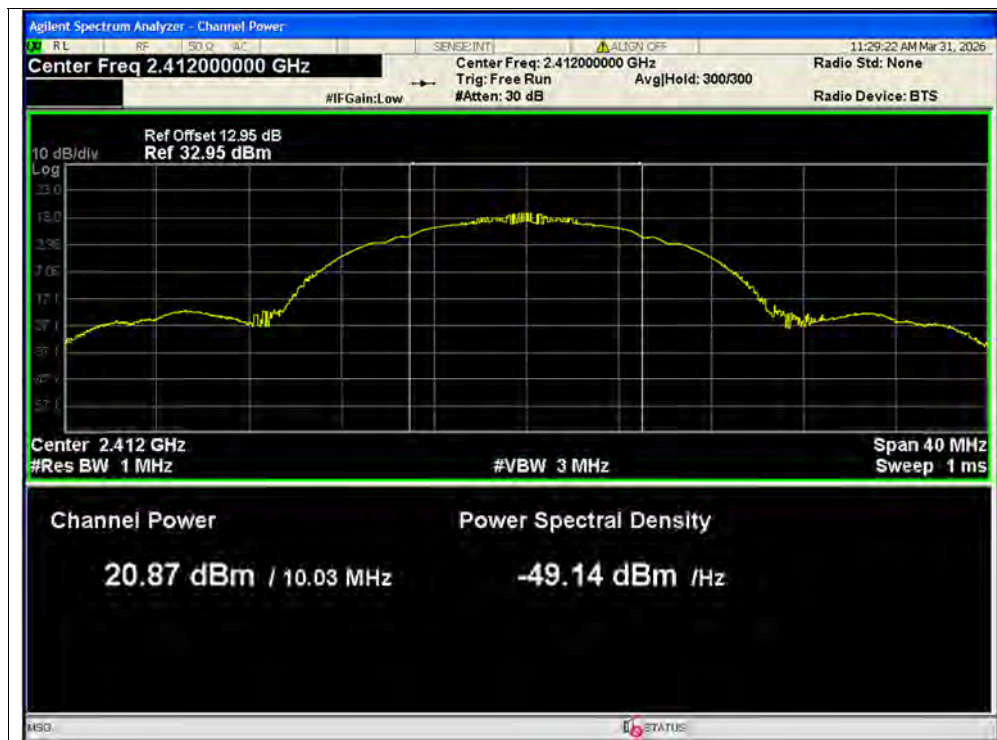


Duty Cycle NVNT ax20 2442MHz Ant2

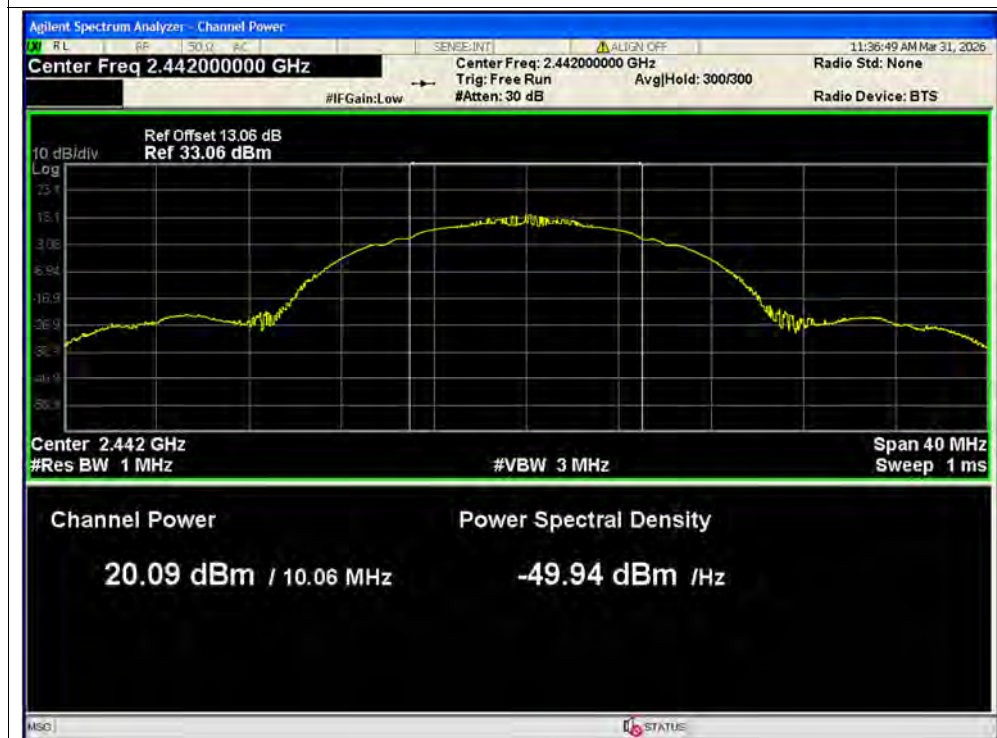


**A.2. Maximum Peak Conducted Output Power**

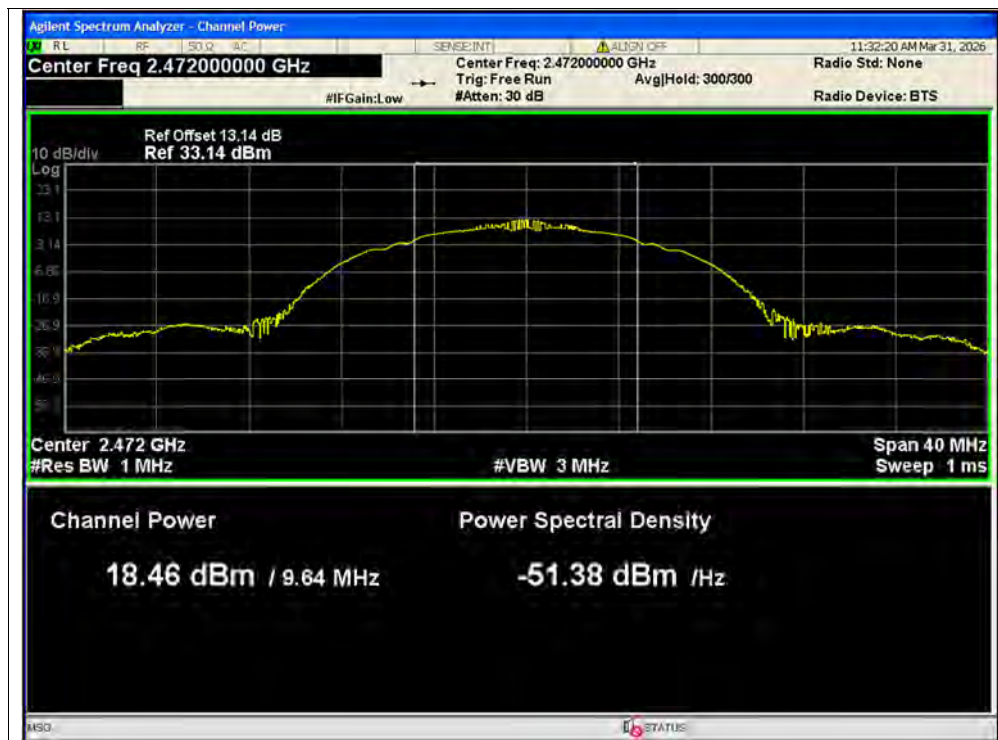
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Conducted Power (dBm)	Total Conducted Power (W)	Limit Conducted (dBm)	Verdict
NVNT	b	2412	Ant2	20.87	0	20.87	0.12218	30	Pass
NVNT	b	2442	Ant2	20.09	0	20.09	0.10209	30	Pass
NVNT	b	2472	Ant2	18.46	0	18.46	0.07015	30	Pass
NVNT	g	2412	Ant2	24.8	0	24.8	0.302	30	Pass
NVNT	g	2442	Ant2	24.49	0	24.49	0.28119	30	Pass
NVNT	g	2472	Ant2	23.86	0	23.86	0.24322	30	Pass
NVNT	n20	2412	Ant2	24.93	0	24.93	0.31117	30	Pass
NVNT	n20	2442	Ant2	24.44	0	24.44	0.27797	30	Pass
NVNT	n20	2472	Ant2	23.78	0	23.78	0.23878	30	Pass
NVNT	n40	2422	Ant2	22.81	0	22.81	0.19099	30	Pass
NVNT	n40	2442	Ant2	22.37	0	22.37	0.17258	30	Pass
NVNT	n40	2462	Ant2	22.12	0	22.12	0.16293	30	Pass
NVNT	ax20	2412	Ant2	26.22	0	26.22	0.41879	30	Pass
NVNT	ax20	2442	Ant2	25.87	0	25.87	0.38637	30	Pass
NVNT	ax20	2472	Ant2	25.21	0	25.21	0.33189	30	Pass



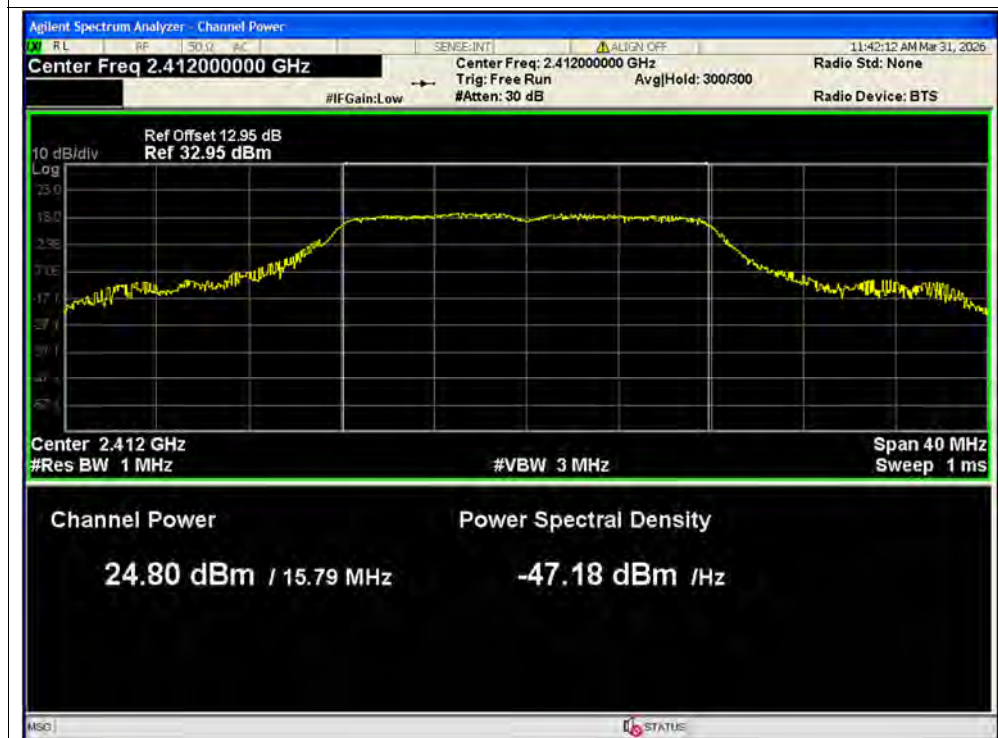
Peak Power NVNT b 2412MHz Ant2



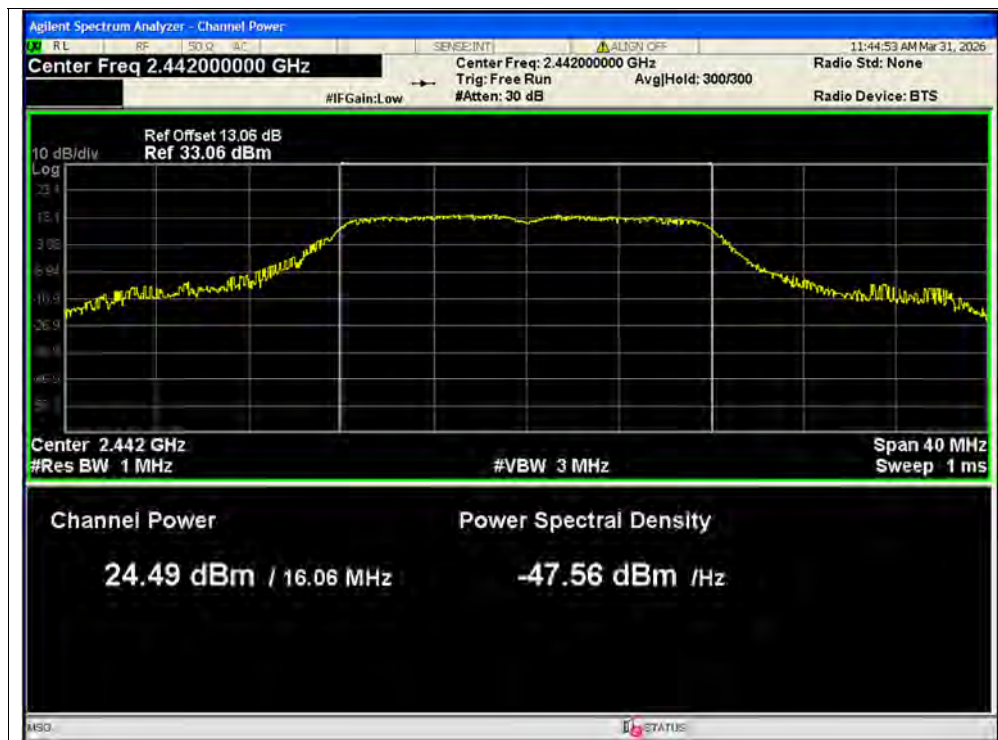
Peak Power NVNT b 2442MHz Ant2



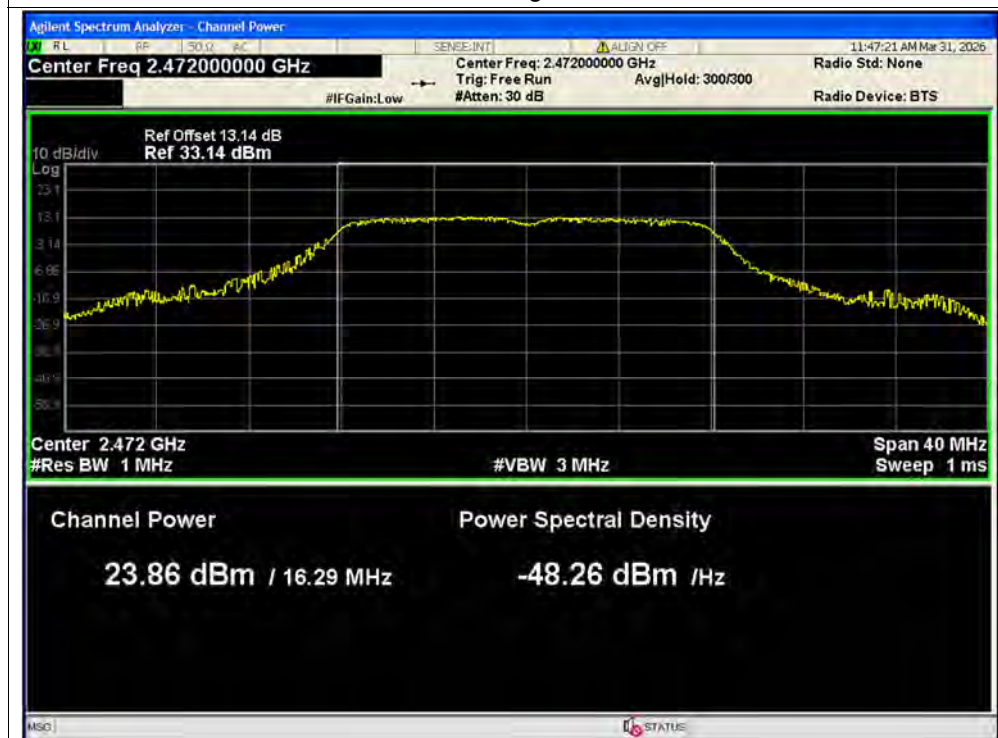
Peak Power NVNT b 2472MHz Ant2



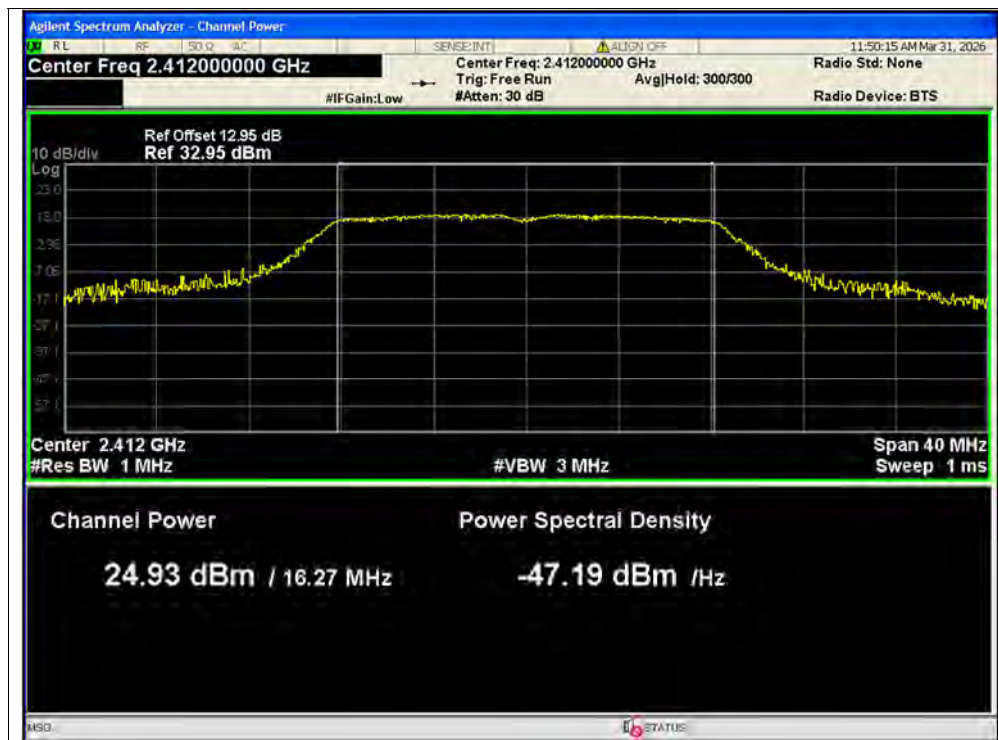
Peak Power NVNT g 2412MHz Ant2



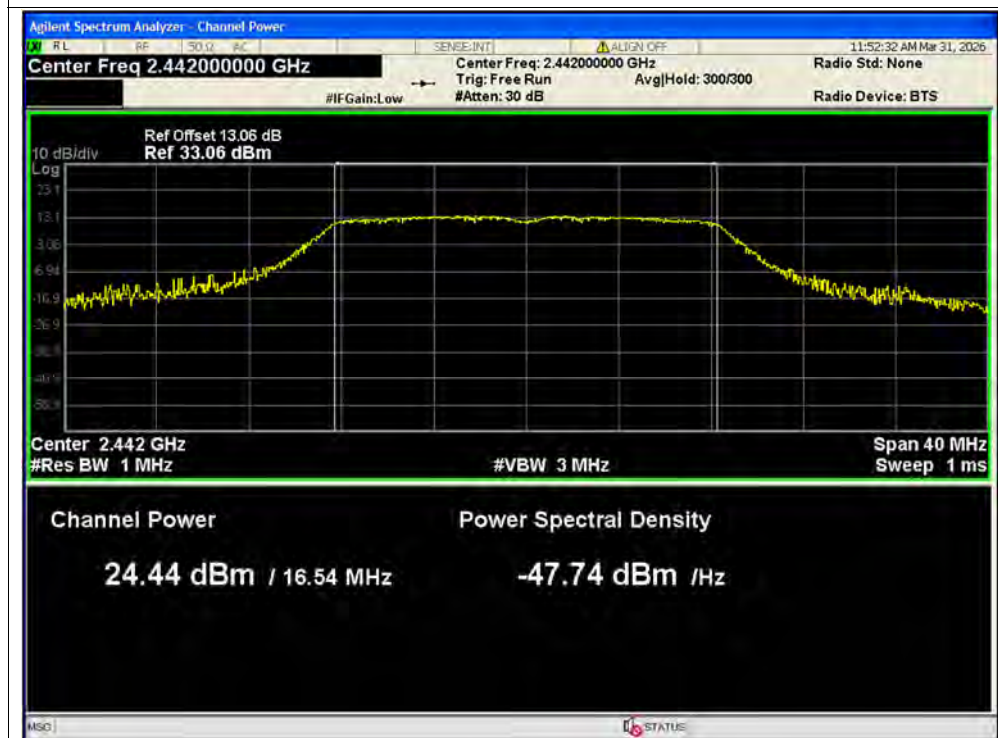
Peak Power NVNT g 2442MHz Ant2



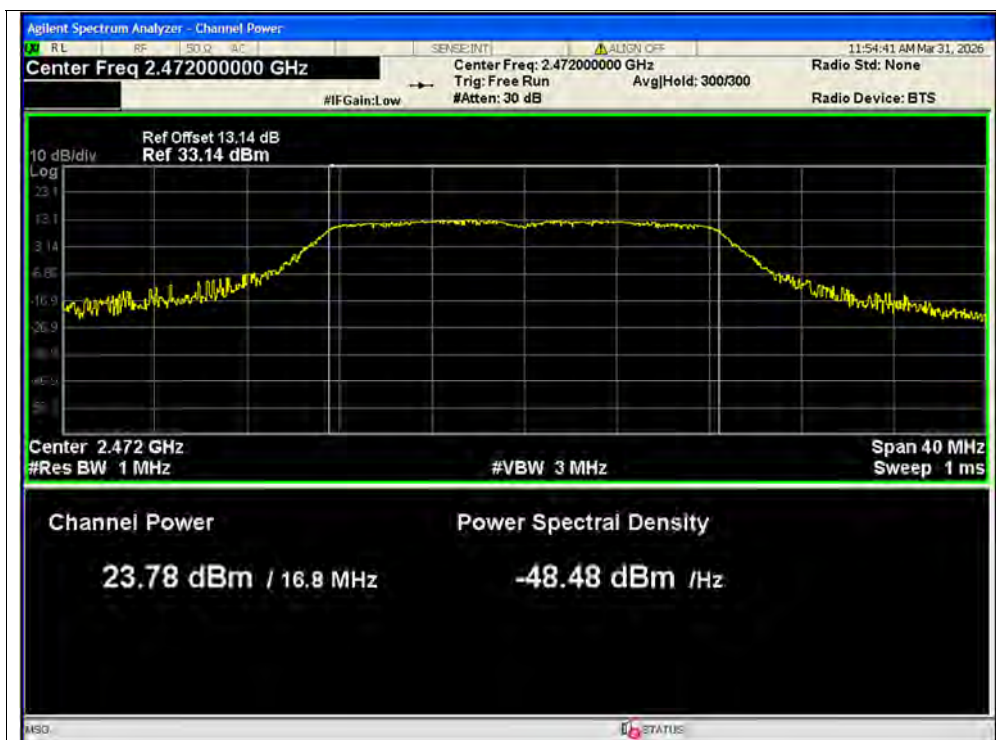
Peak Power NVNT g 2472MHz Ant2



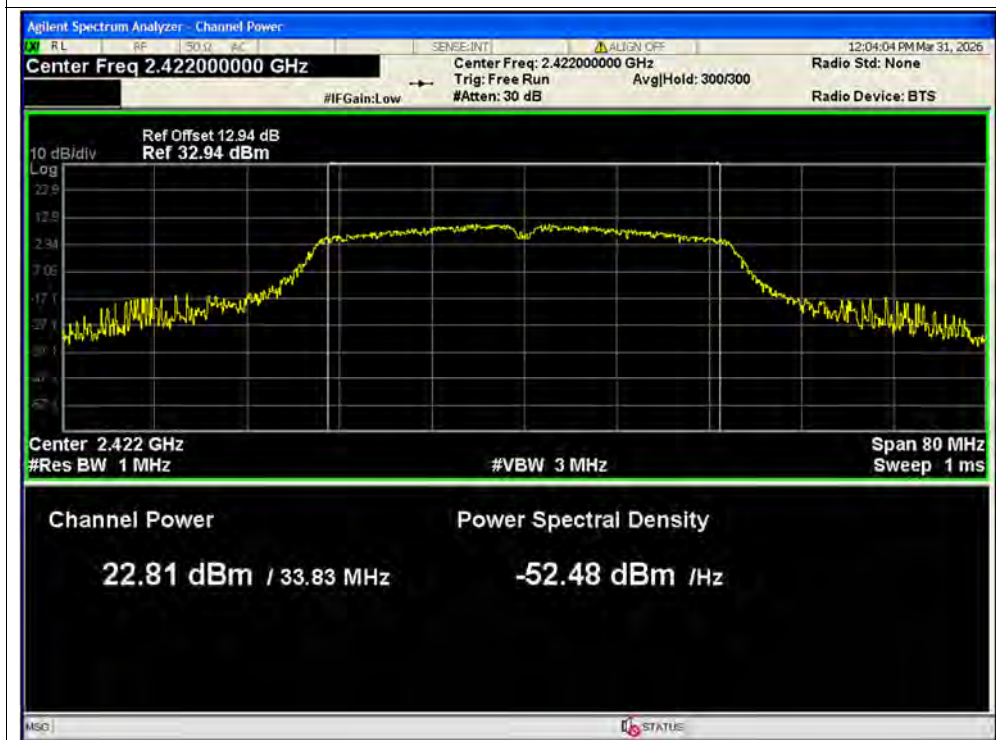
Peak Power NVNT n20 2412MHz Ant2



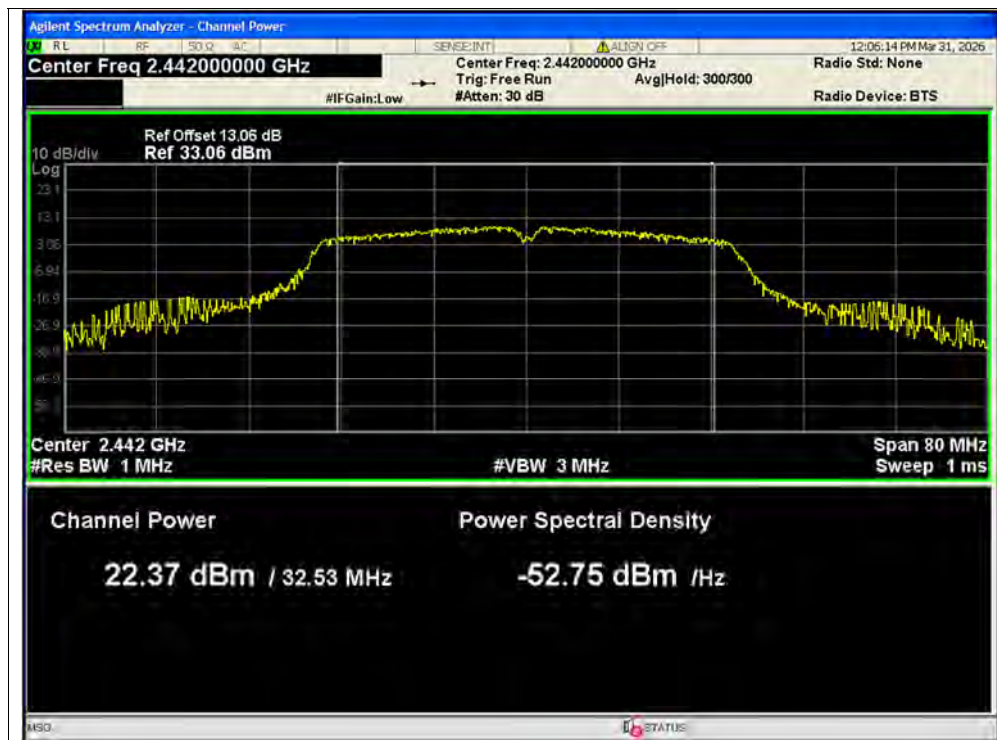
Peak Power NVNT n20 2442MHz Ant2



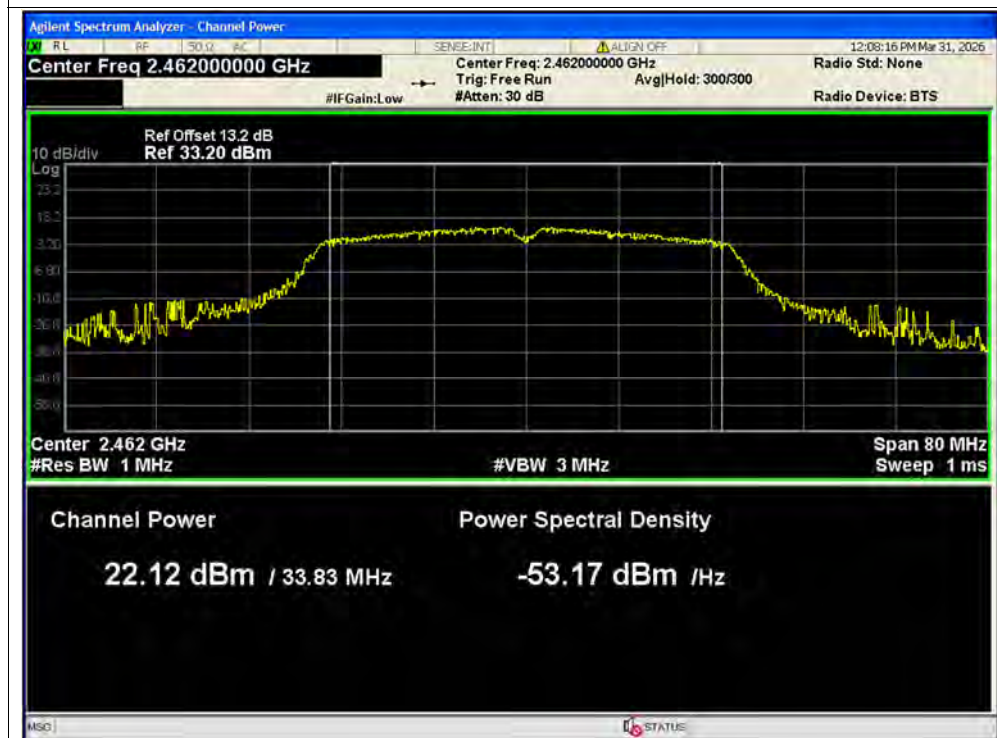
Peak Power NVNT n20 2472MHz Ant2



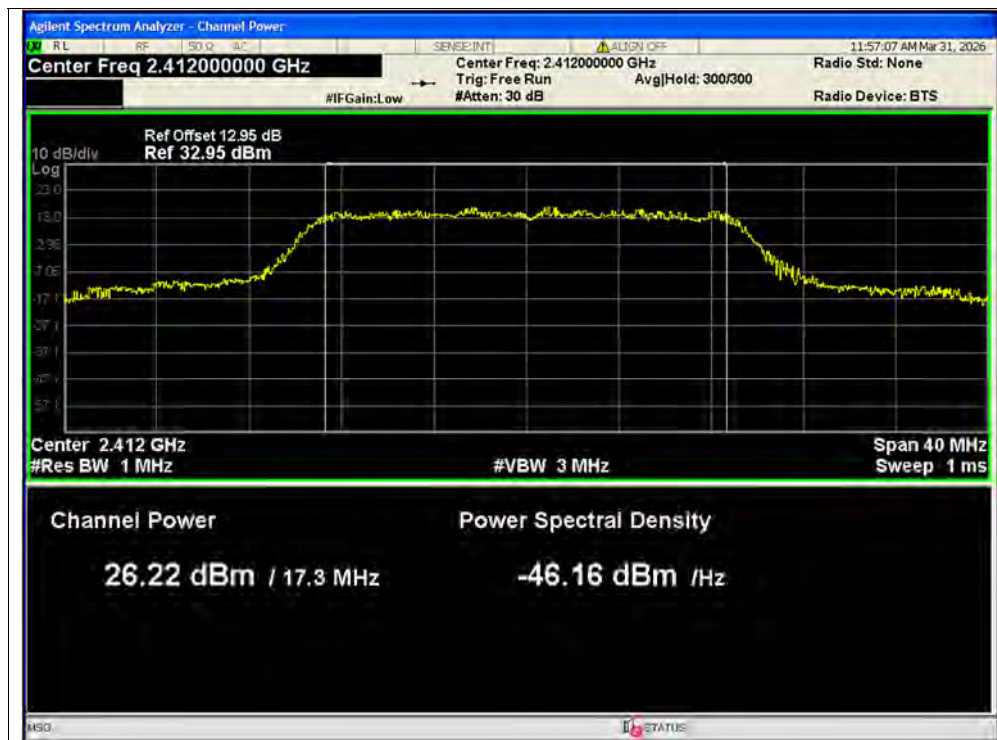
Peak Power NVNT n40 2422MHz Ant2



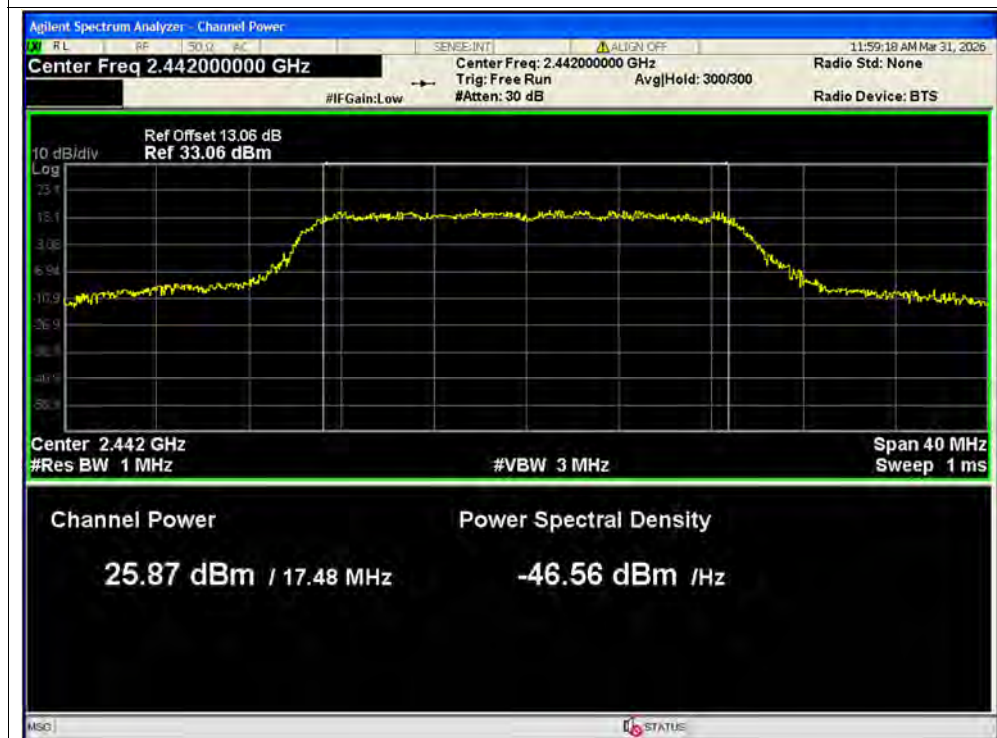
Peak Power NVNT n40 2442MHz Ant2



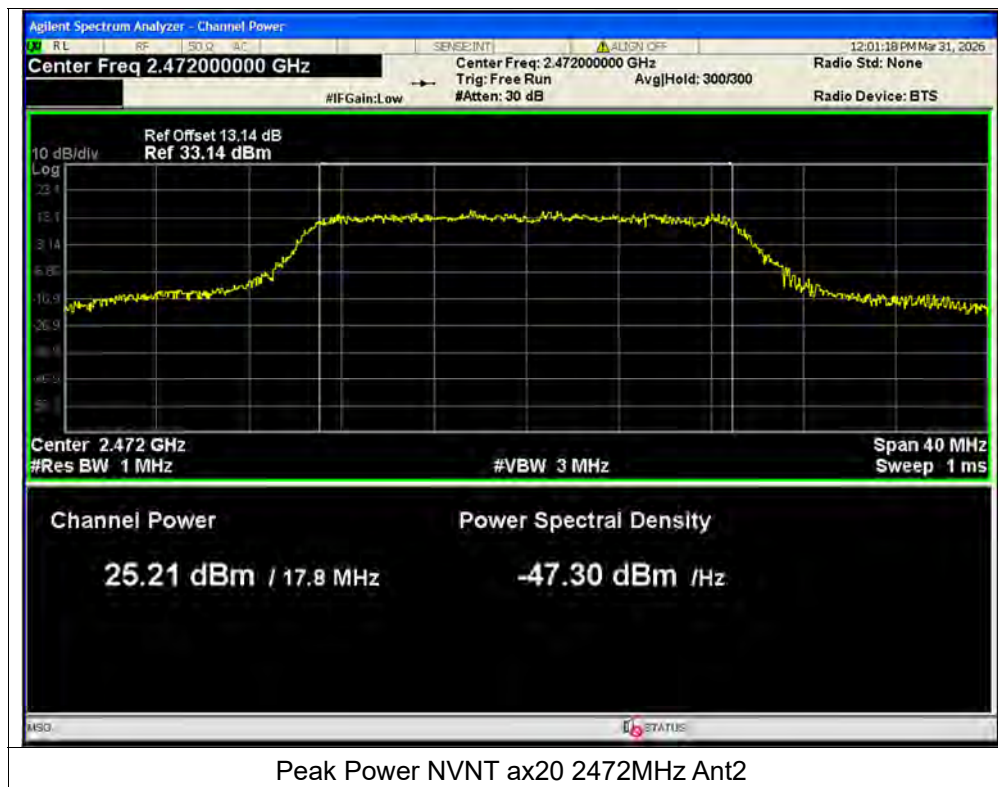
Peak Power NVNT n40 2462MHz Ant2



Peak Power NVNT ax20 2412MHz Ant2



Peak Power NVNT ax20 2442MHz Ant2

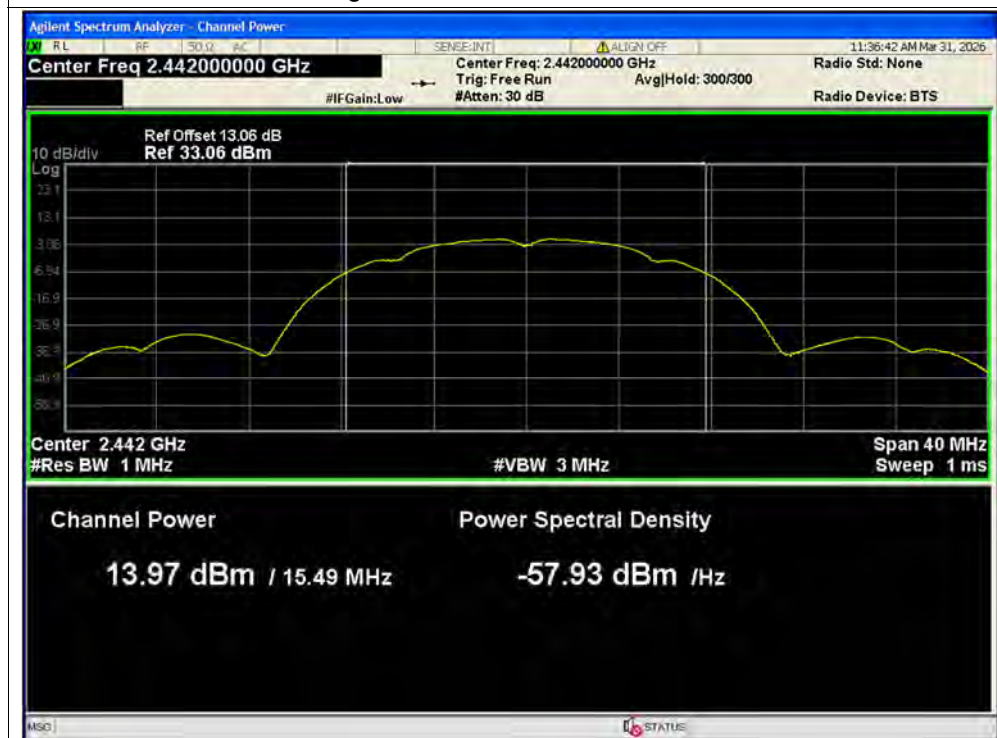


**A.3. Maximum Average Conducted Output Power**

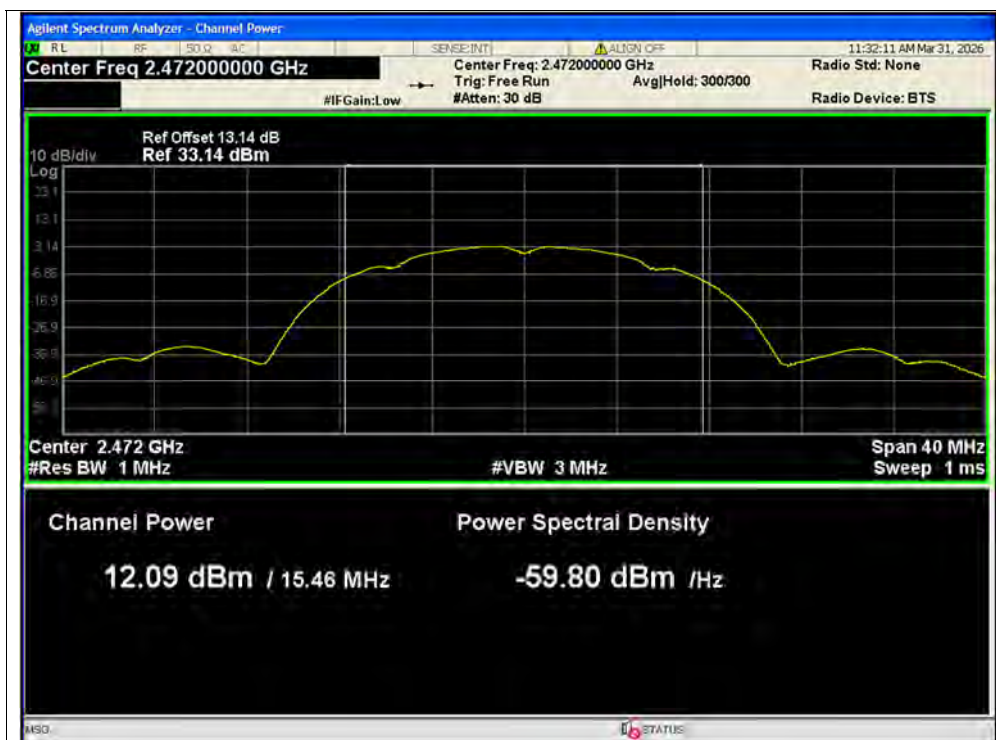
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Conducted Power (dBm)	Total Conducted Power (W)	Limit Conducted (dBm)	Verdict
NVNT	b	2412	Ant2	14.5	3.12	17.62	0.05781	30	Pass
NVNT	b	2442	Ant2	13.97	3.13	17.1	0.05129	30	Pass
NVNT	b	2472	Ant2	12.09	3.12	15.21	0.03319	30	Pass
NVNT	g	2412	Ant2	14.65	2.99	17.64	0.05808	30	Pass
NVNT	g	2442	Ant2	14.19	3	17.19	0.05236	30	Pass
NVNT	g	2472	Ant2	13.47	2.99	16.46	0.04426	30	Pass
NVNT	n20	2412	Ant2	14.53	3.1	17.63	0.05794	30	Pass
NVNT	n20	2442	Ant2	14.08	3.1	17.18	0.05224	30	Pass
NVNT	n20	2472	Ant2	13.08	3.1	16.18	0.0415	30	Pass
NVNT	n40	2422	Ant2	10.89	4.9	15.79	0.03793	30	Pass
NVNT	n40	2442	Ant2	10.4	4.9	15.3	0.03388	30	Pass
NVNT	n40	2462	Ant2	10.55	4.89	15.44	0.03499	30	Pass
NVNT	ax20	2412	Ant2	14.27	3.04	17.31	0.05383	30	Pass
NVNT	ax20	2442	Ant2	14.23	3.04	17.27	0.05333	30	Pass
NVNT	ax20	2472	Ant2	13.3	3.04	16.34	0.04305	30	Pass



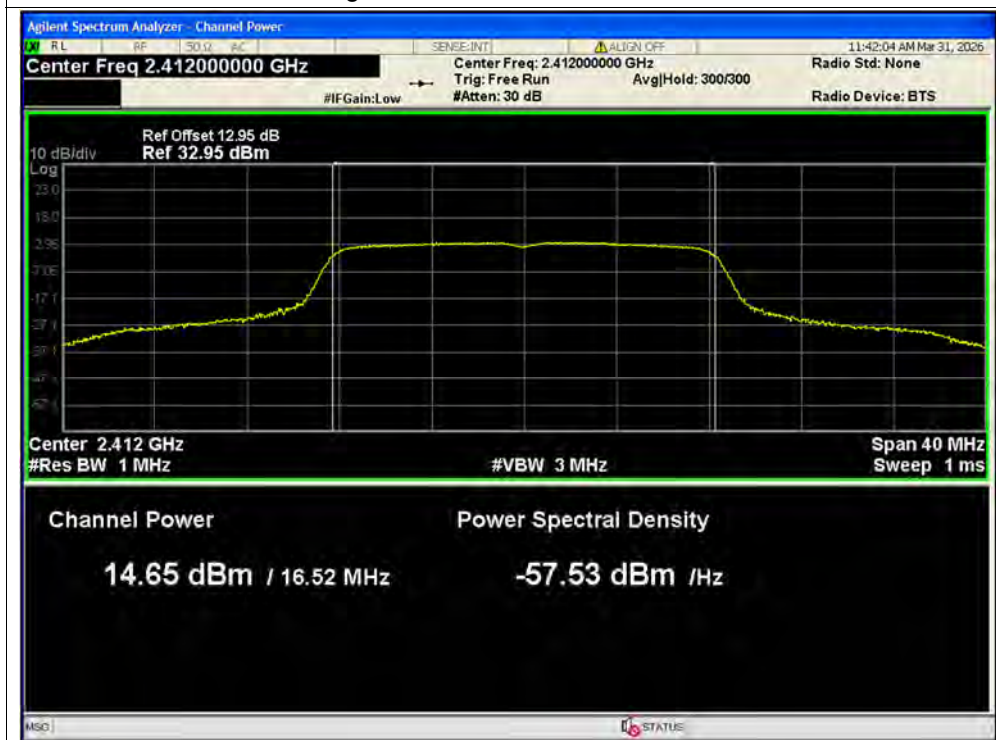
Average Power NVNT b 2412MHz Ant2



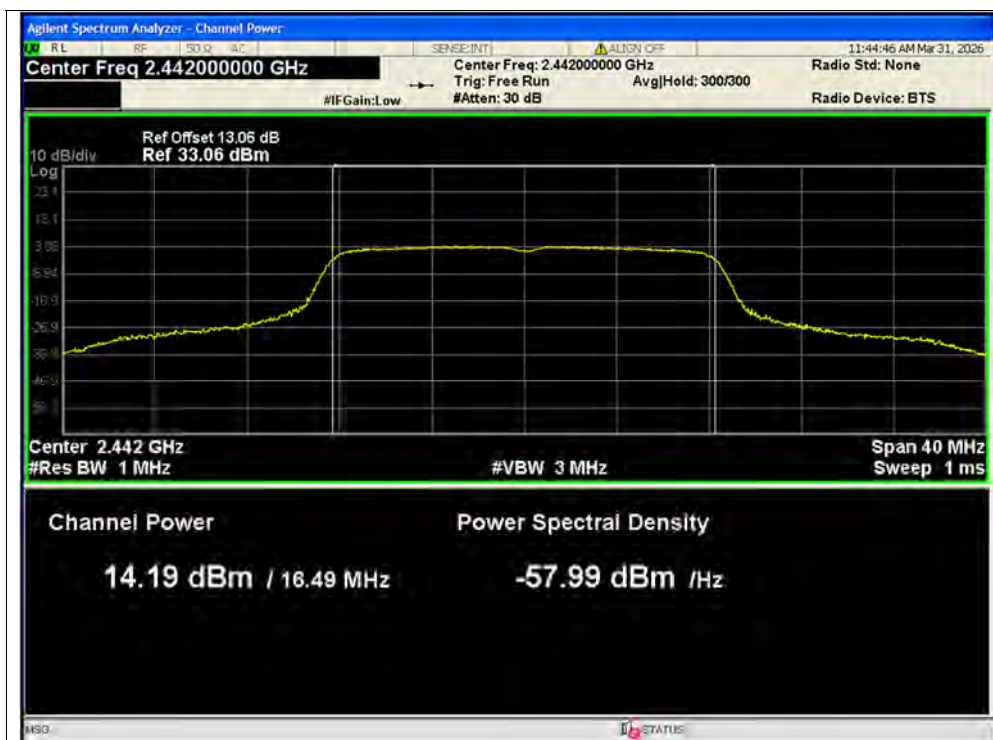
Average Power NVNT b 2442MHz Ant2



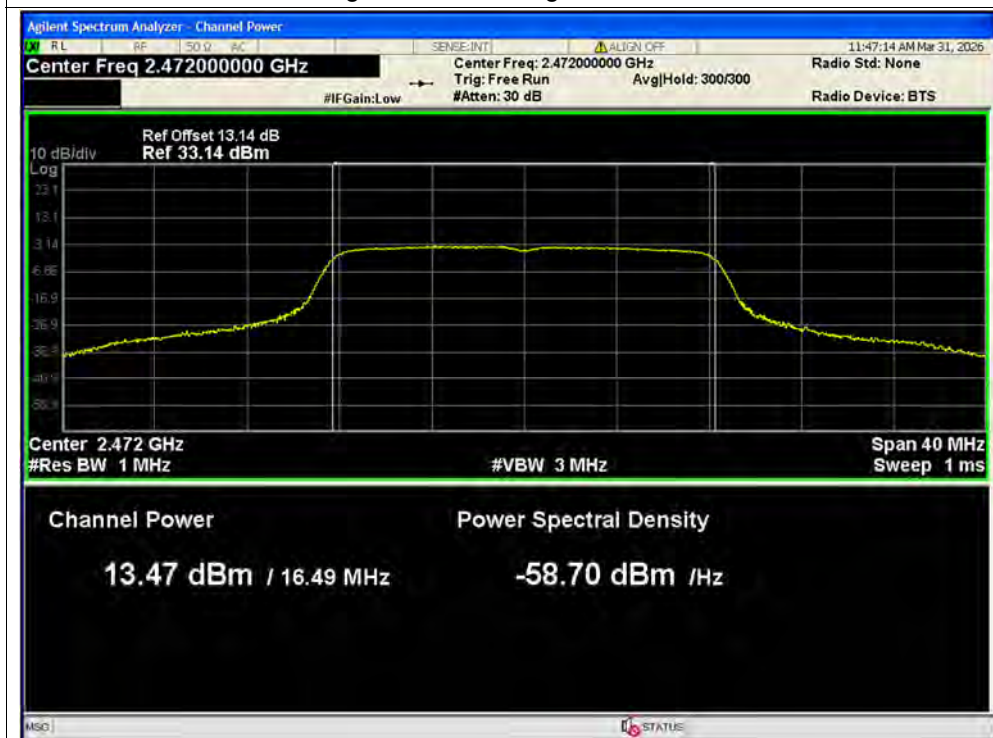
Average Power NVNT b 2472MHz Ant2



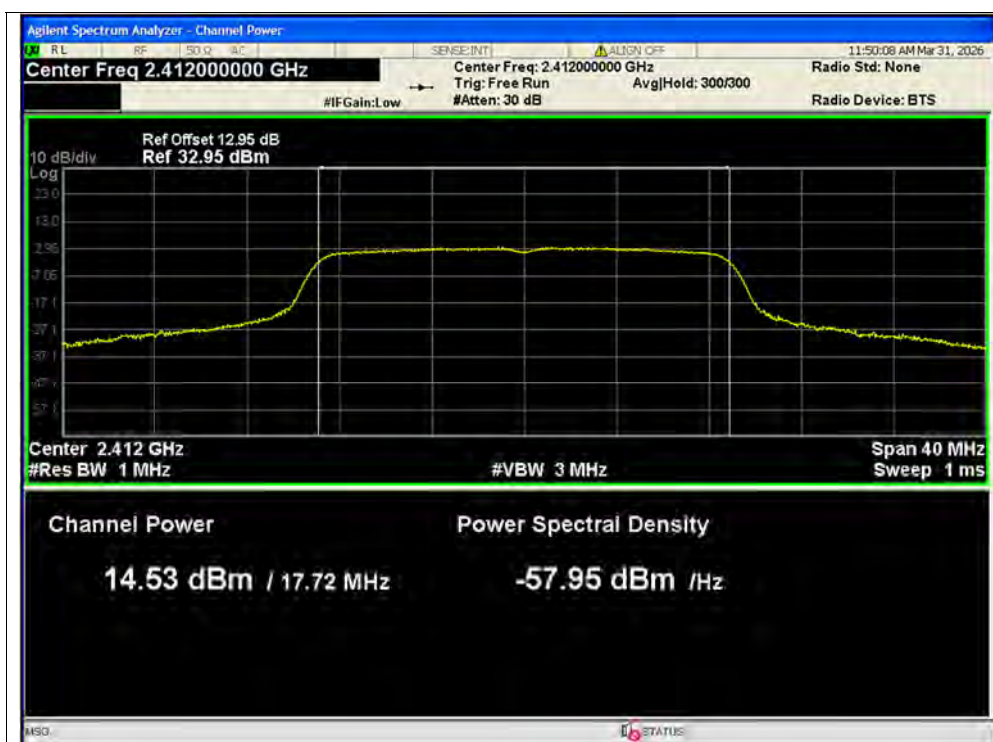
Average Power NVNT g 2412MHz Ant2



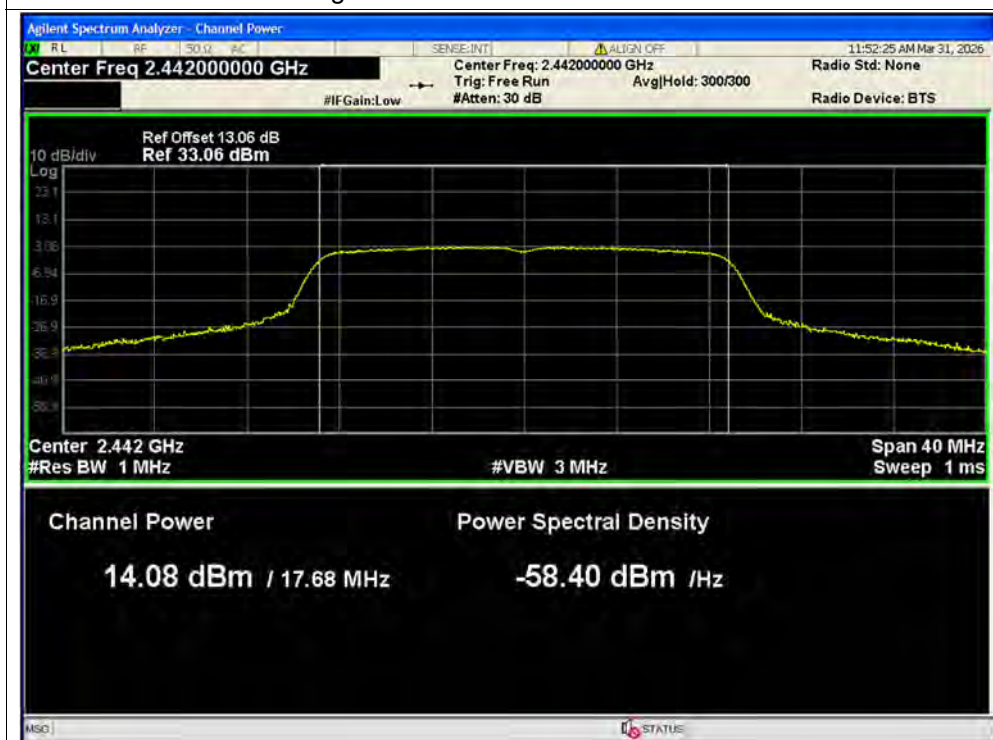
Average Power NVNT g 2442MHz Ant2



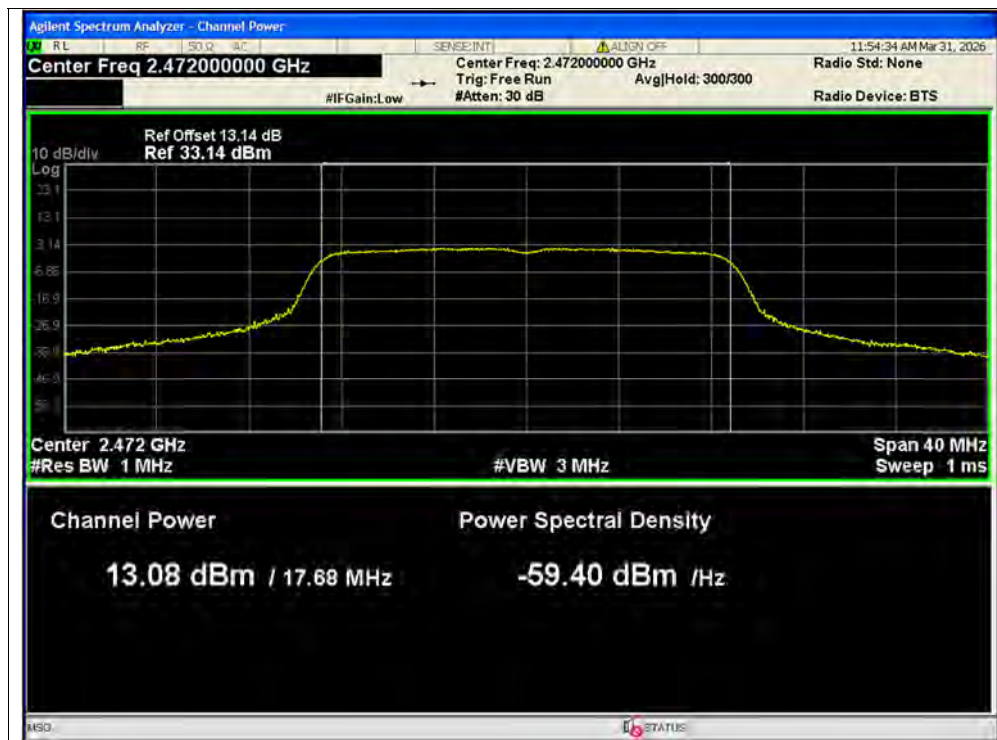
Average Power NVNT g 2472MHz Ant2



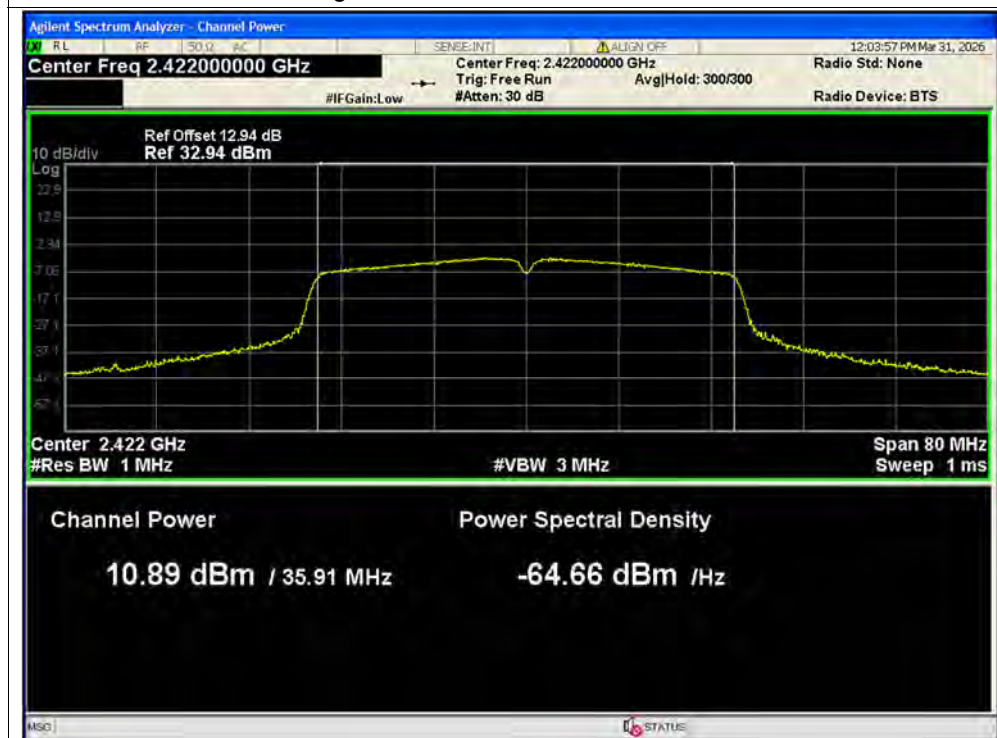
Average Power NVNT n20 2412MHz Ant2



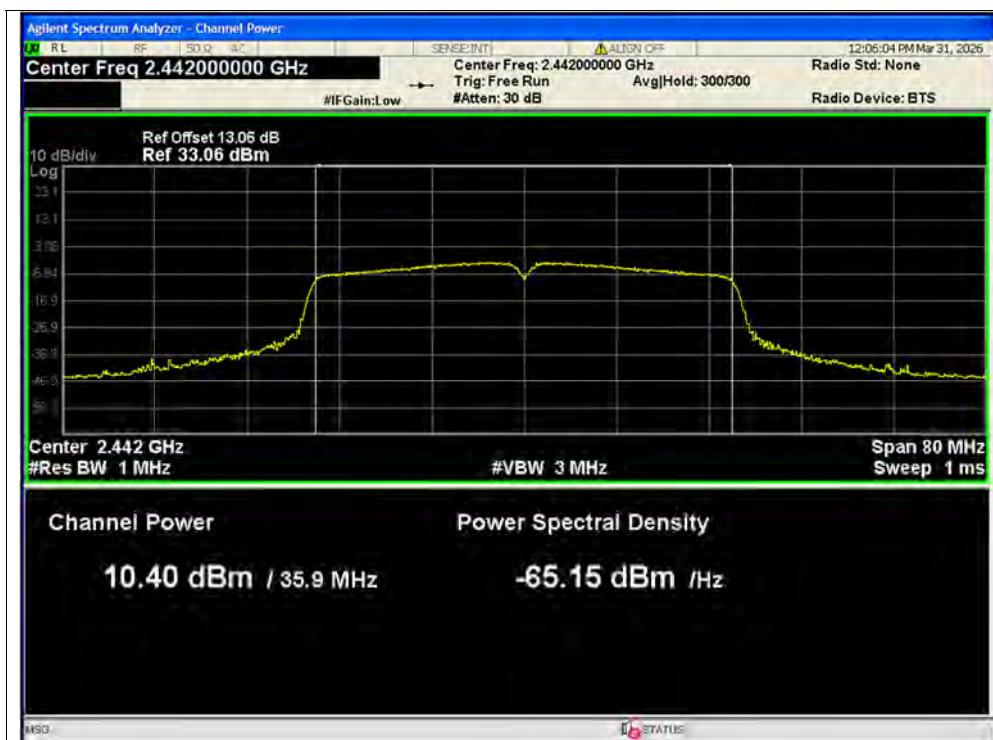
Average Power NVNT n20 2442MHz Ant2



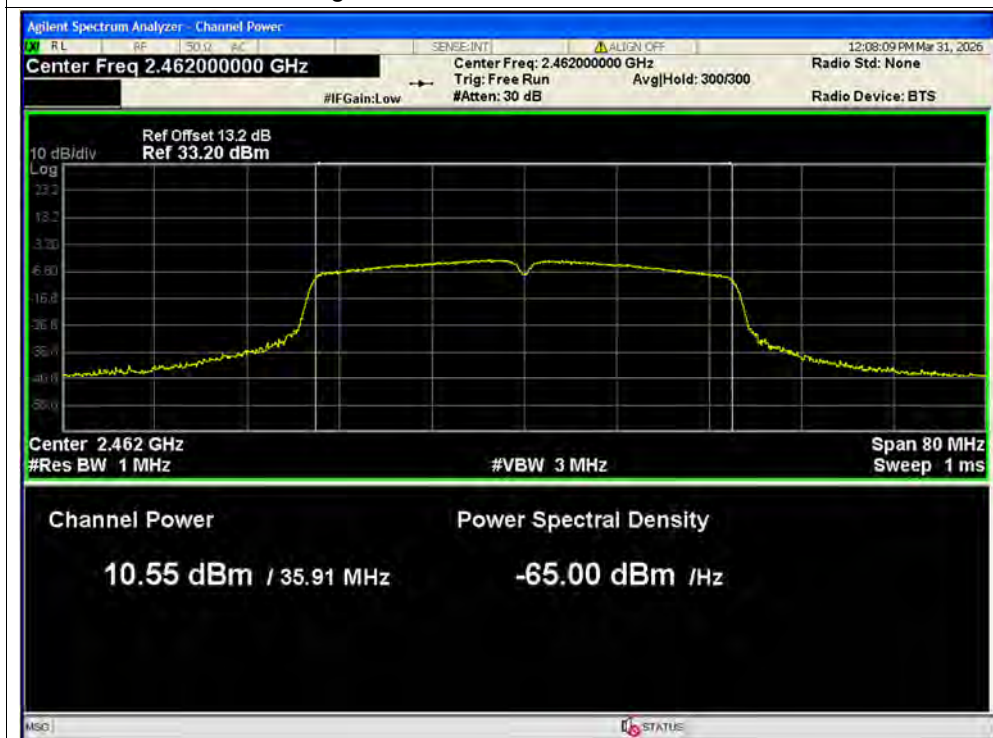
Average Power NVNT n20 2472MHz Ant2



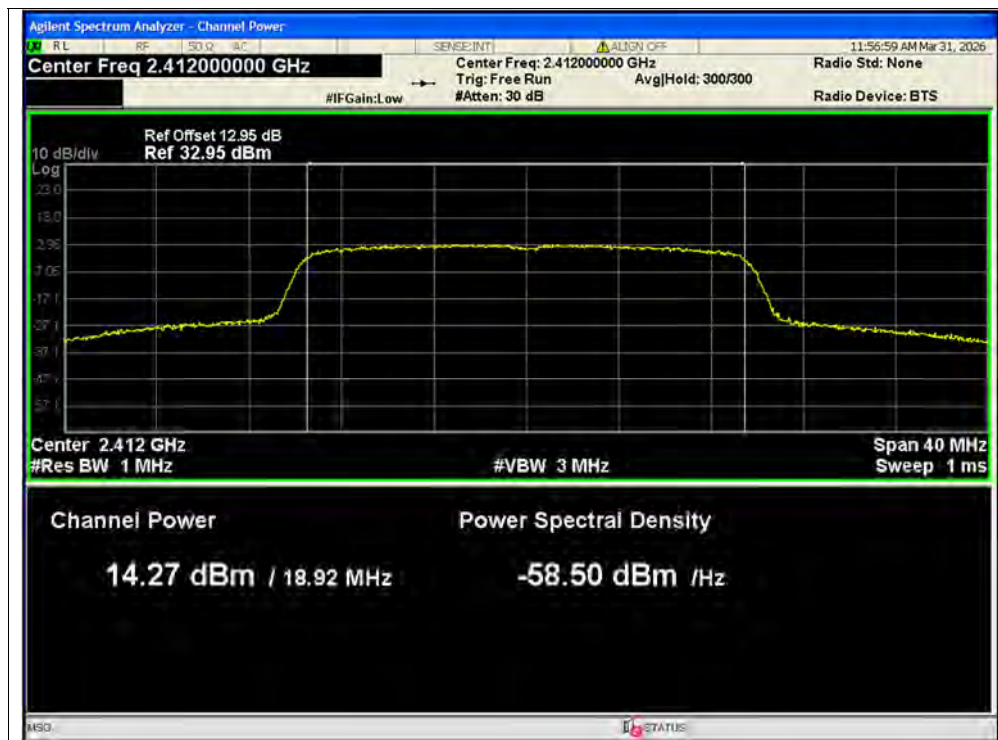
Average Power NVNT n40 2422MHz Ant2



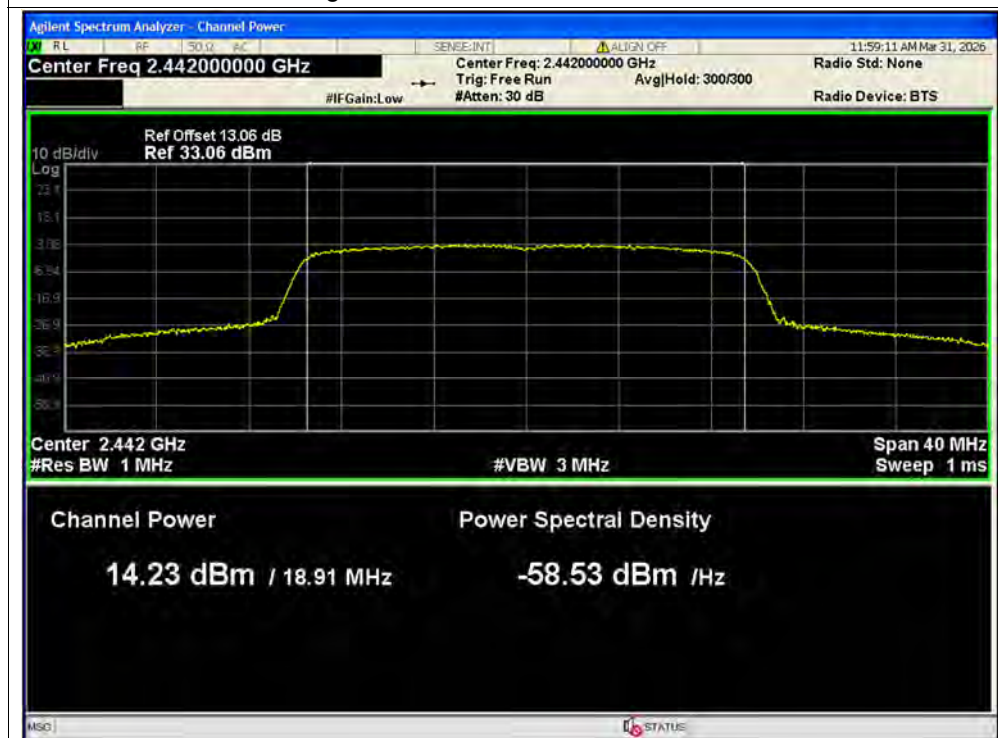
Average Power NVNT n40 2442MHz Ant2



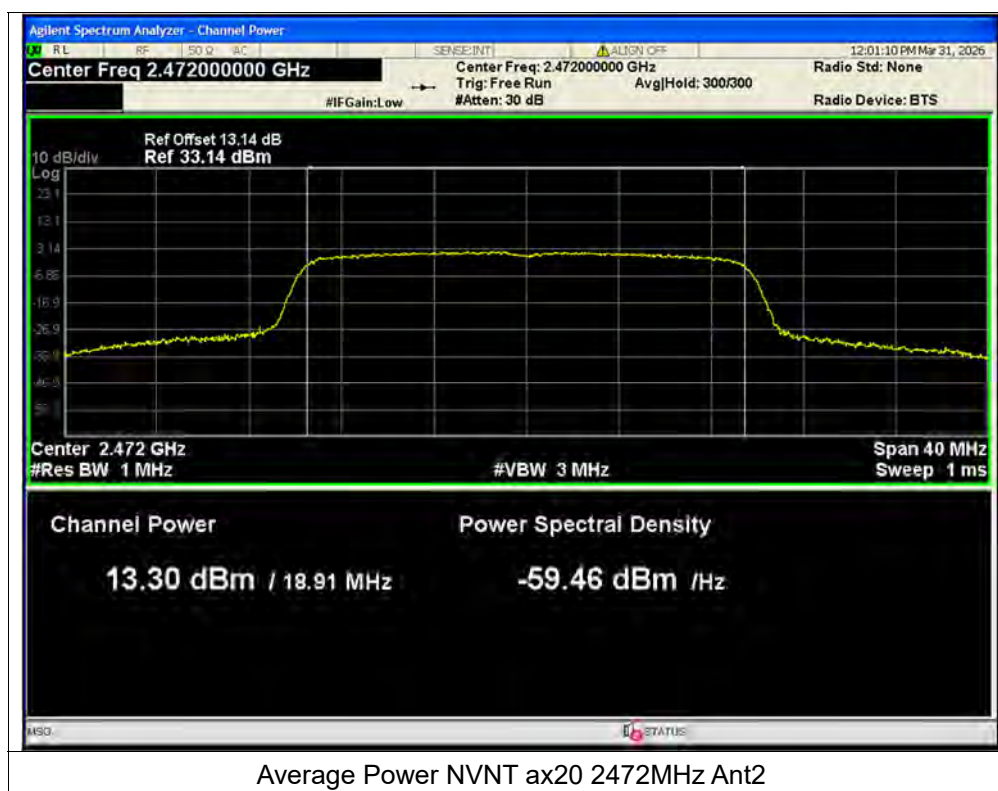
Average Power NVNT n40 2462MHz Ant2



Average Power NVNT ax20 2412MHz Ant2



Average Power NVNT ax20 2442MHz Ant2



**A.4. 6 dB Bandwidth**

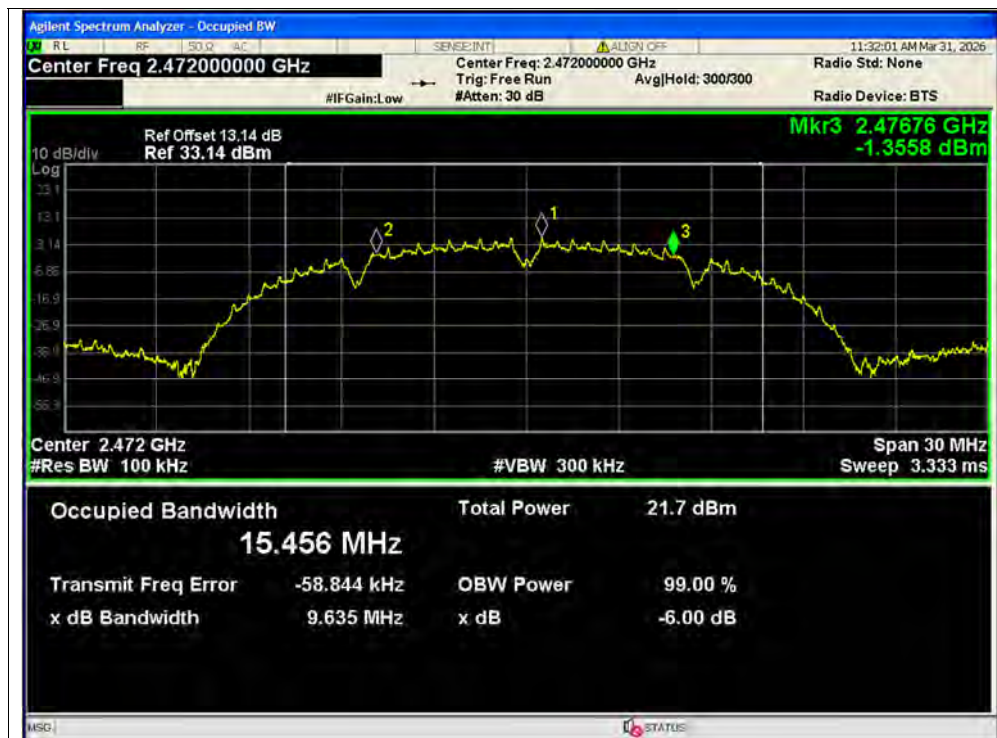
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant2	10.03	0.5	Pass
NVNT	b	2442	Ant2	10.06	0.5	Pass
NVNT	b	2472	Ant2	9.64	0.5	Pass
NVNT	g	2412	Ant2	15.79	0.5	Pass
NVNT	g	2442	Ant2	16.06	0.5	Pass
NVNT	g	2472	Ant2	16.29	0.5	Pass
NVNT	n20	2412	Ant2	16.27	0.5	Pass
NVNT	n20	2442	Ant2	16.54	0.5	Pass
NVNT	n20	2472	Ant2	16.8	0.5	Pass
NVNT	n40	2422	Ant2	33.83	0.5	Pass
NVNT	n40	2442	Ant2	32.53	0.5	Pass
NVNT	n40	2462	Ant2	33.83	0.5	Pass
NVNT	ax20	2412	Ant2	17.3	0.5	Pass
NVNT	ax20	2442	Ant2	17.48	0.5	Pass
NVNT	ax20	2472	Ant2	17.8	0.5	Pass



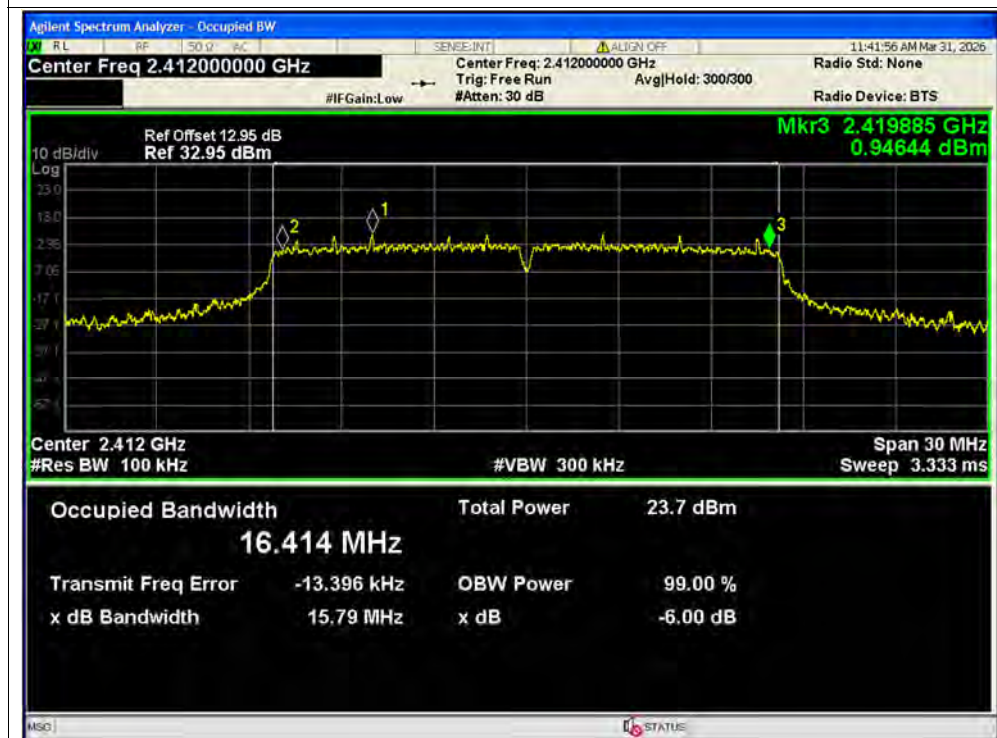
-6dB Bandwidth NVNT b 2412MHz Ant2



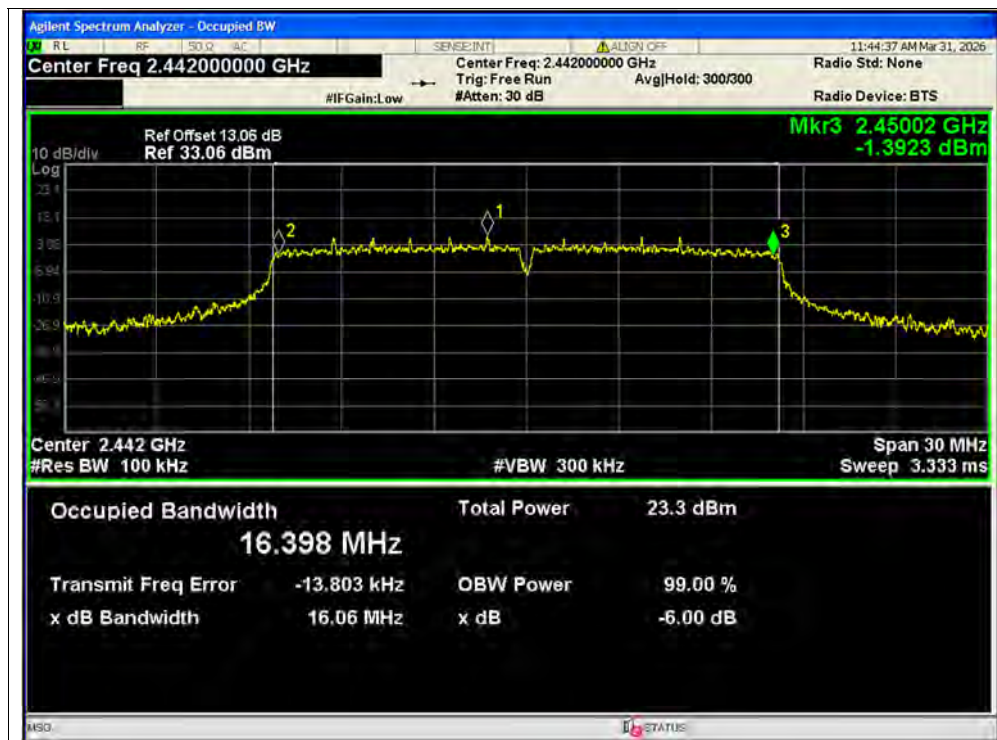
-6dB Bandwidth NVNT b 2442MHz Ant2



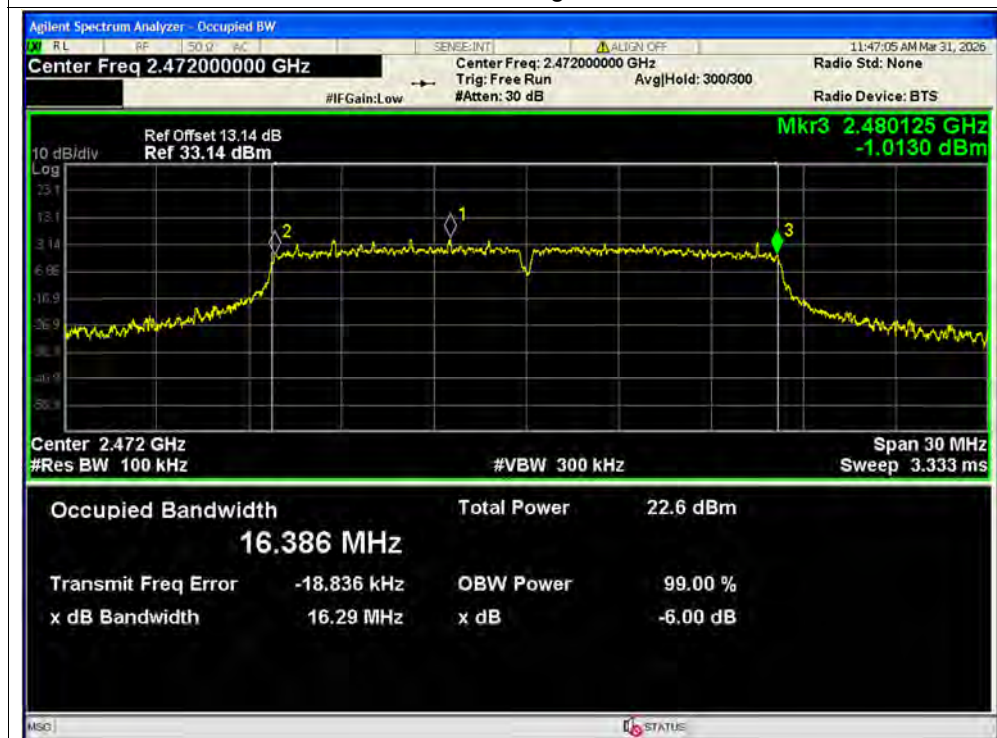
-6dB Bandwidth NVNT b 2472MHz Ant2



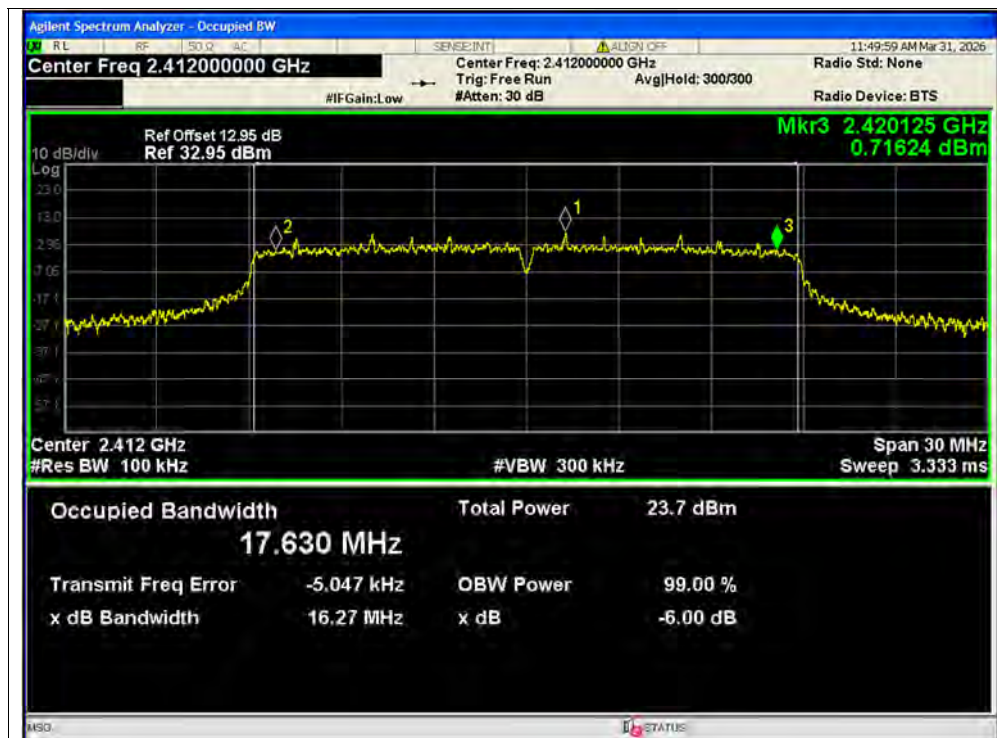
-6dB Bandwidth NVNT g 2412MHz Ant2



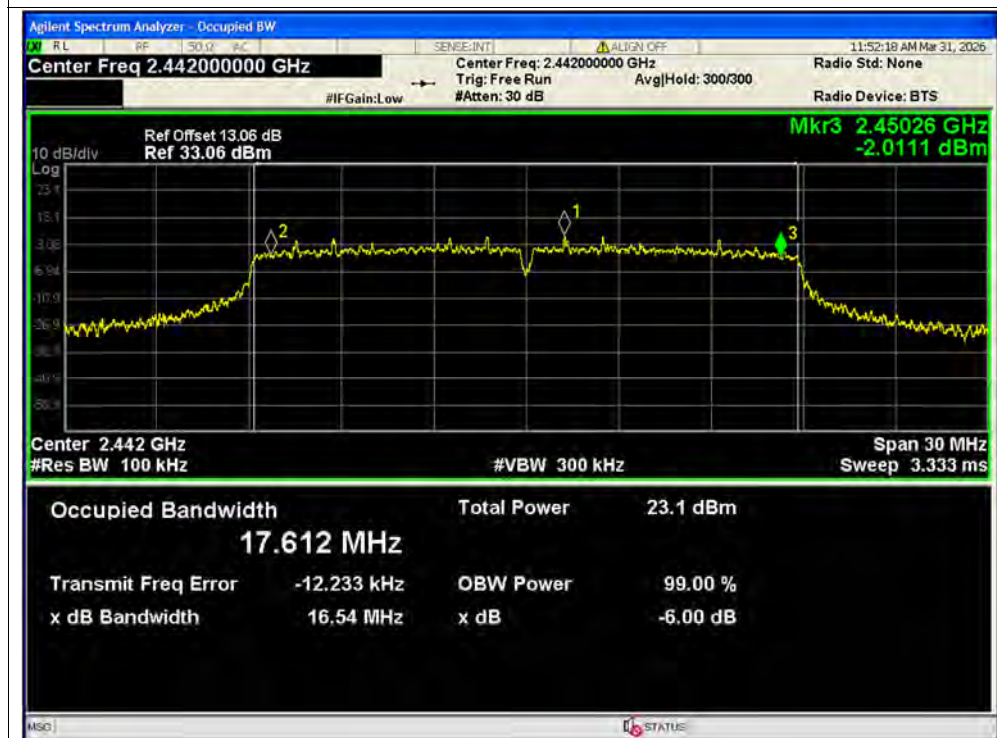
-6dB Bandwidth NVNT g 2442MHz Ant2



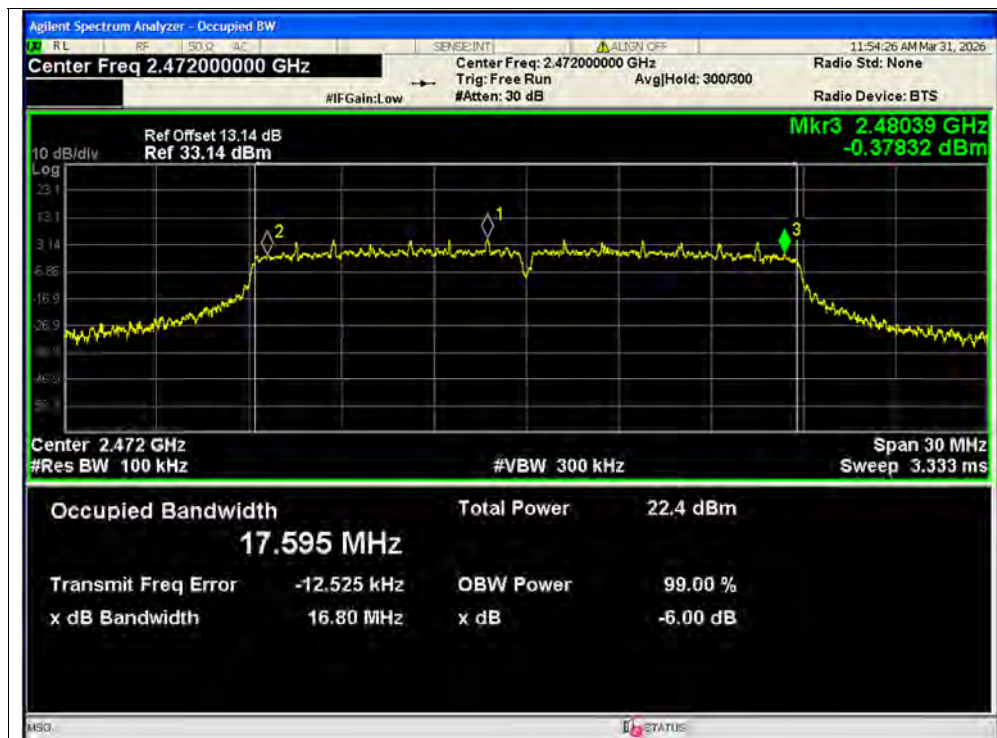
-6dB Bandwidth NVNT g 2472MHz Ant2



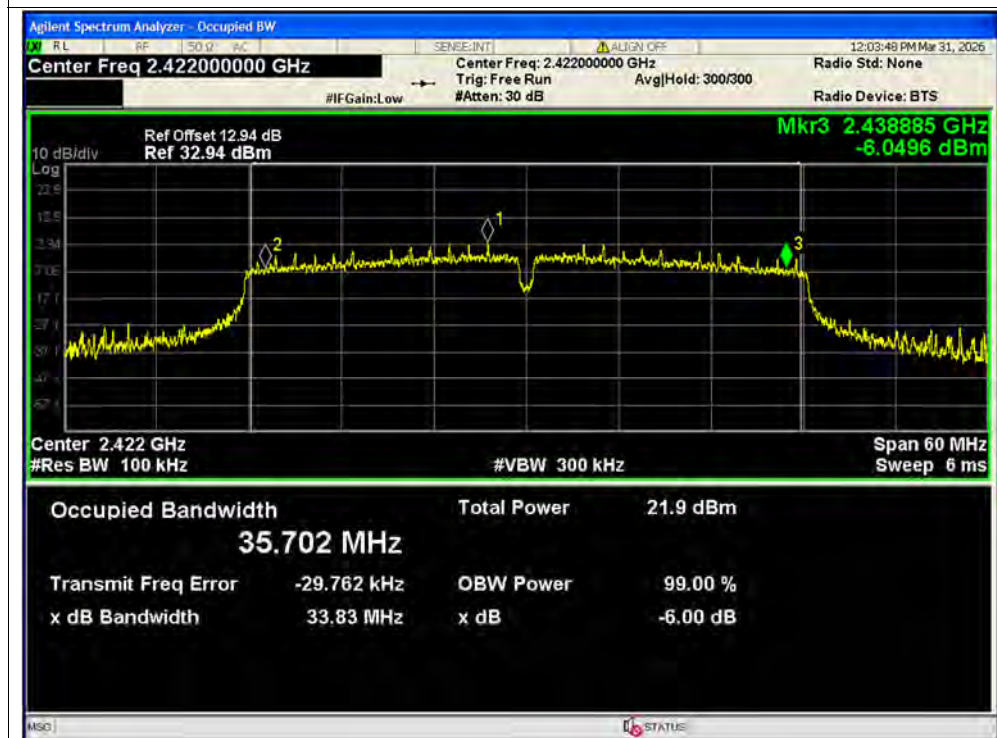
-6dB Bandwidth NVNT n20 2412MHz Ant2



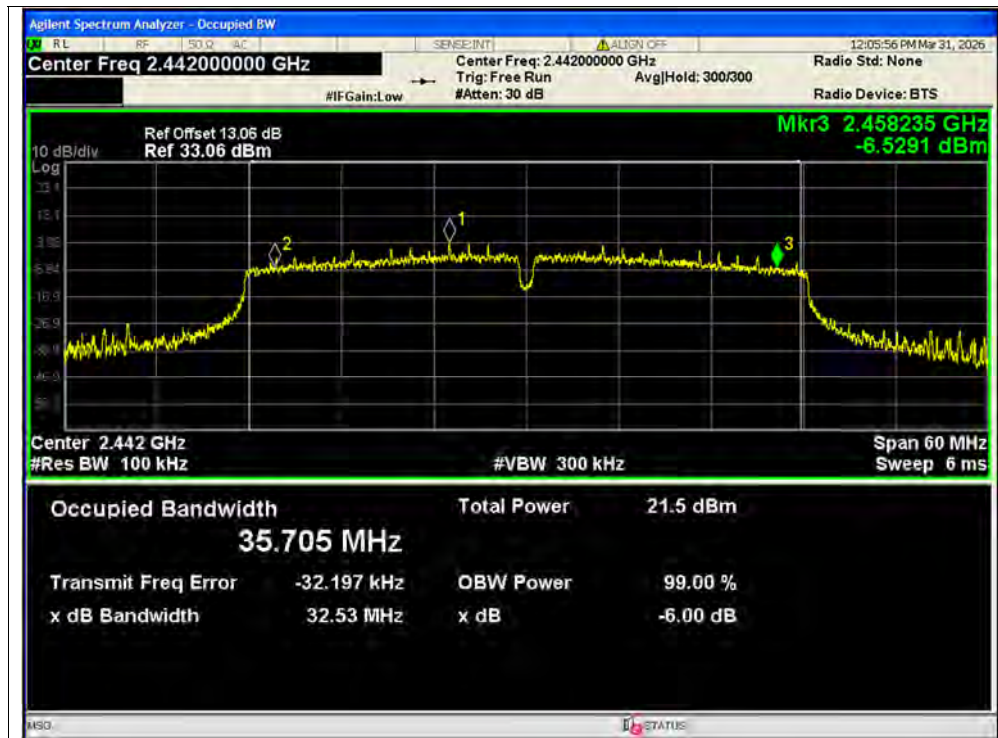
-6dB Bandwidth NVNT n20 2442MHz Ant2



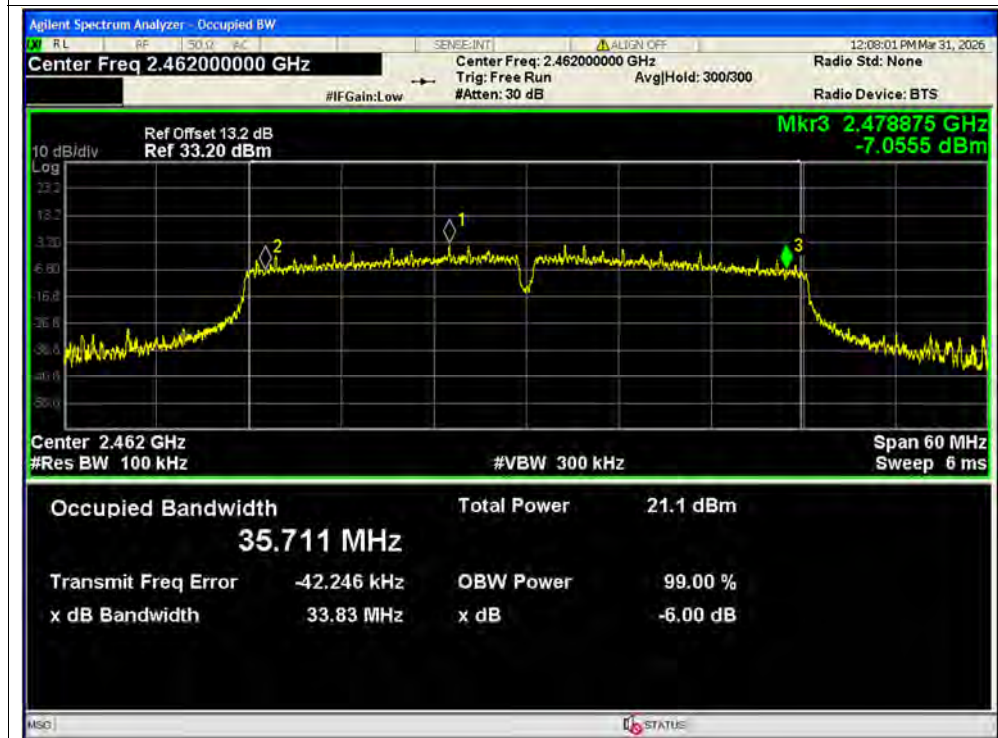
-6dB Bandwidth NVNT n20 2472MHz Ant2



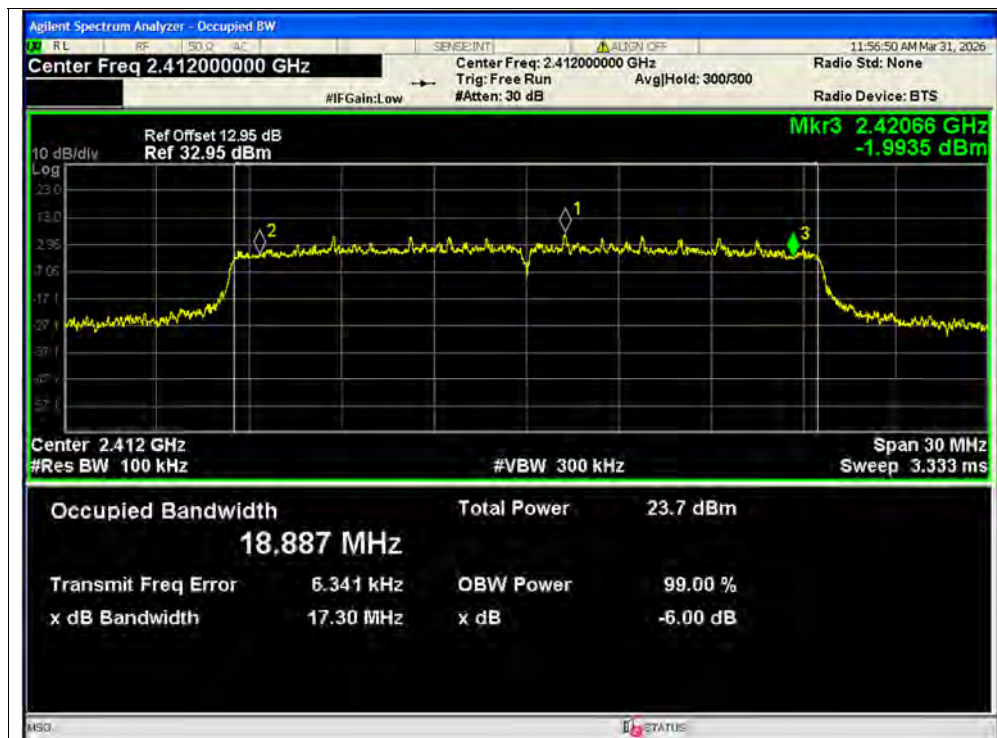
-6dB Bandwidth NVNT n40 2422MHz Ant2



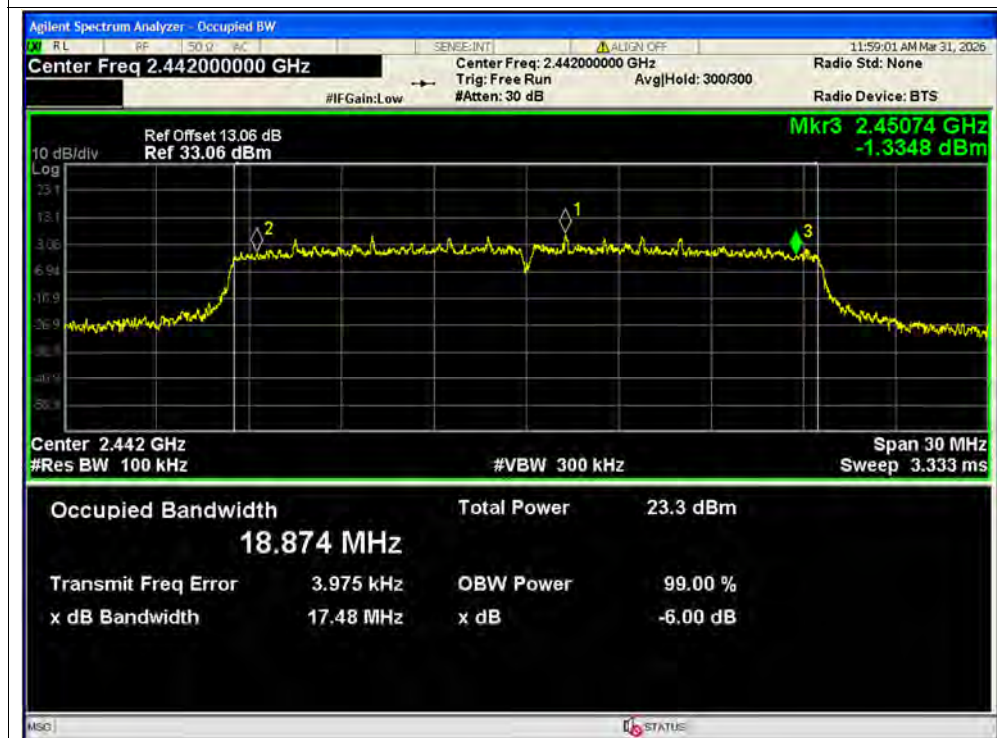
-6dB Bandwidth NVNT n40 2442MHz Ant2



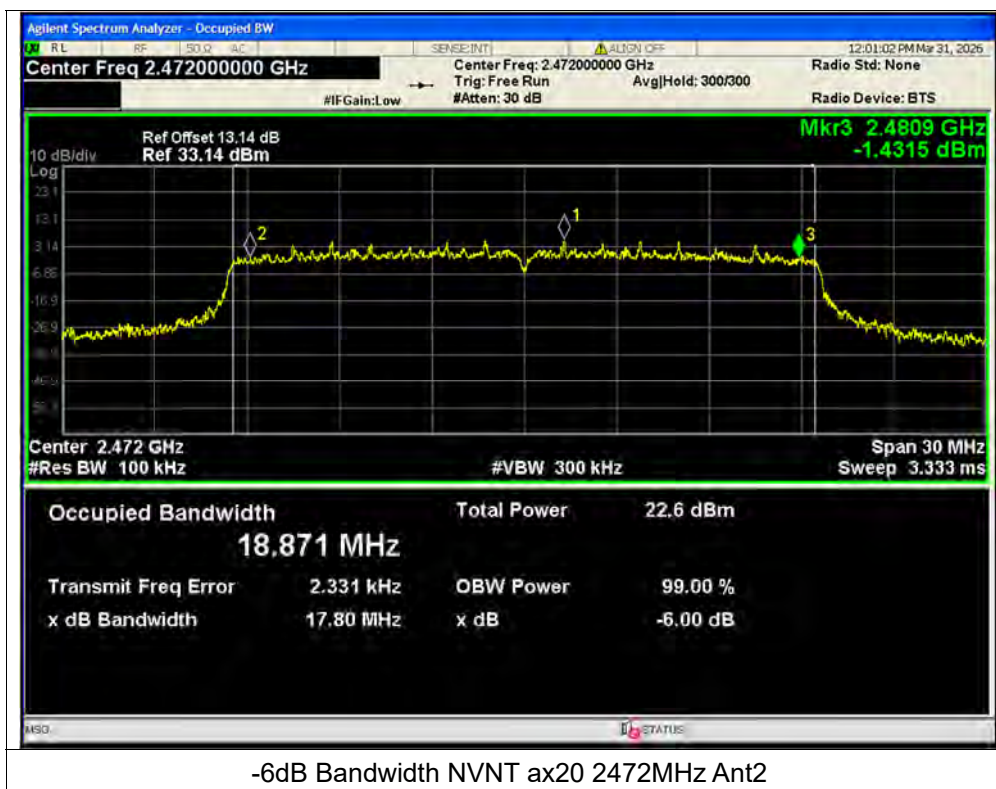
-6dB Bandwidth NVNT n40 2462MHz Ant2



-6dB Bandwidth NVNT ax20 2412MHz Ant2



-6dB Bandwidth NVNT ax20 2442MHz Ant2

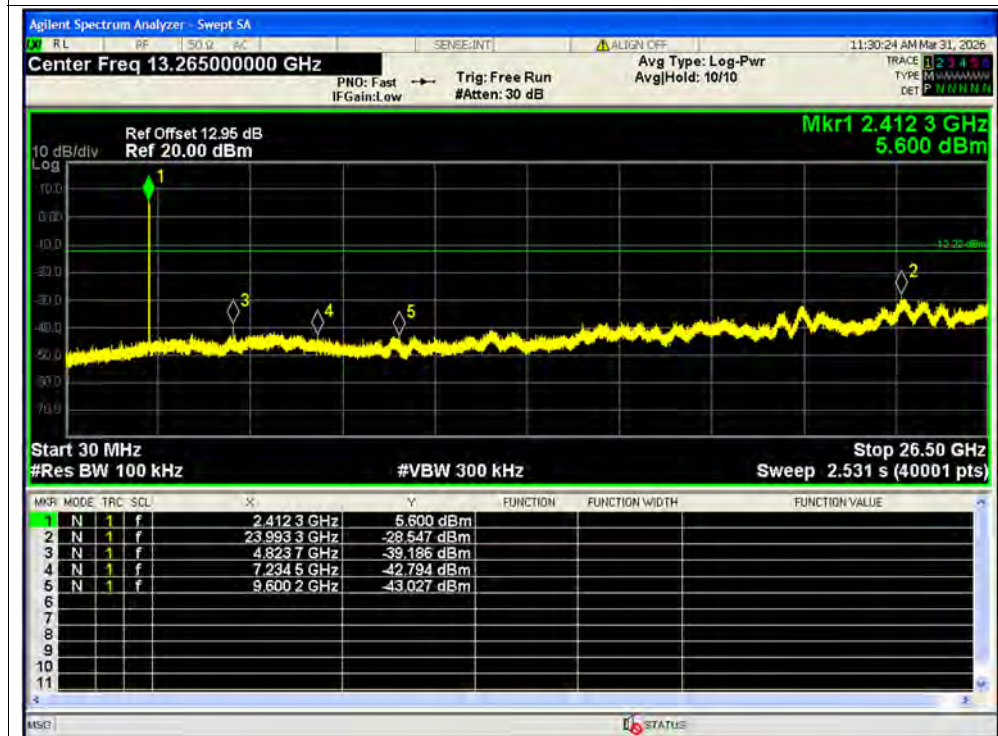


**A.5. Conducted Spurious Emissions**

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant2	-36.32	-20	Pass
NVNT	b	2442	Ant2	-36.12	-20	Pass
NVNT	b	2472	Ant2	-34.35	-20	Pass
NVNT	g	2412	Ant2	-35.44	-20	Pass
NVNT	g	2442	Ant2	-35.1	-20	Pass
NVNT	g	2472	Ant2	-33.85	-20	Pass
NVNT	n20	2412	Ant2	-35.54	-20	Pass
NVNT	n20	2442	Ant2	-34.74	-20	Pass
NVNT	n20	2472	Ant2	-34.25	-20	Pass
NVNT	n40	2422	Ant2	-31.46	-20	Pass
NVNT	n40	2442	Ant2	-29.83	-20	Pass
NVNT	n40	2462	Ant2	-30.48	-20	Pass
NVNT	ax20	2412	Ant2	-35.82	-20	Pass
NVNT	ax20	2442	Ant2	-34.66	-20	Pass
NVNT	ax20	2472	Ant2	-32.65	-20	Pass



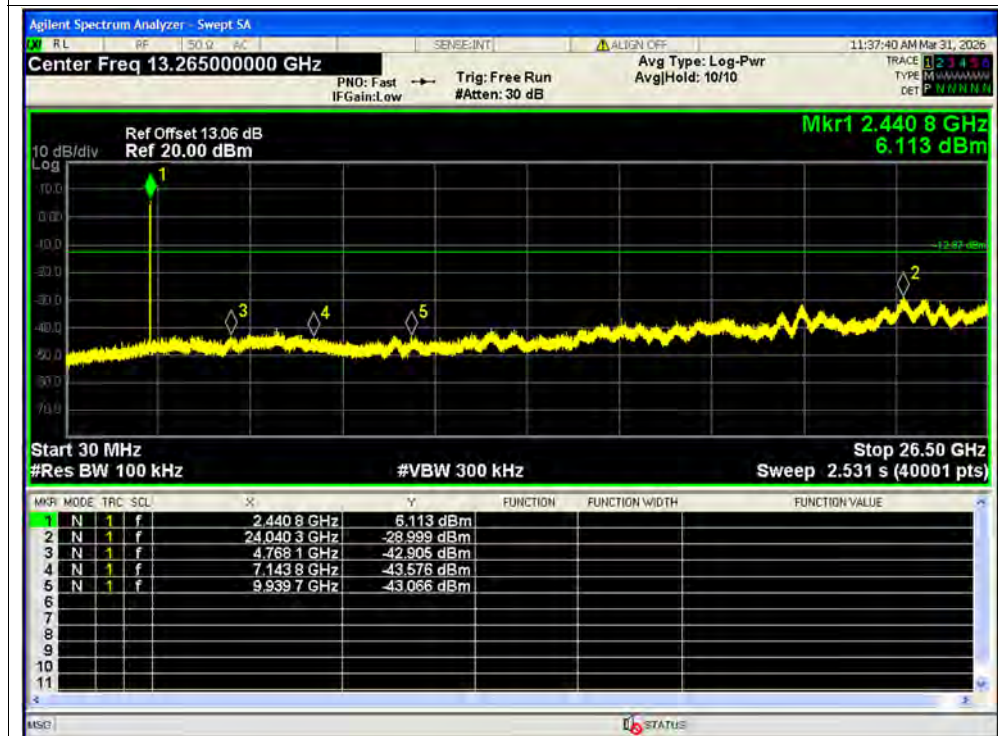
Tx. Spurious NVNT b 2412MHz Ant2 Ref



Tx. Spurious NVNT b 2412MHz Ant2 Emission



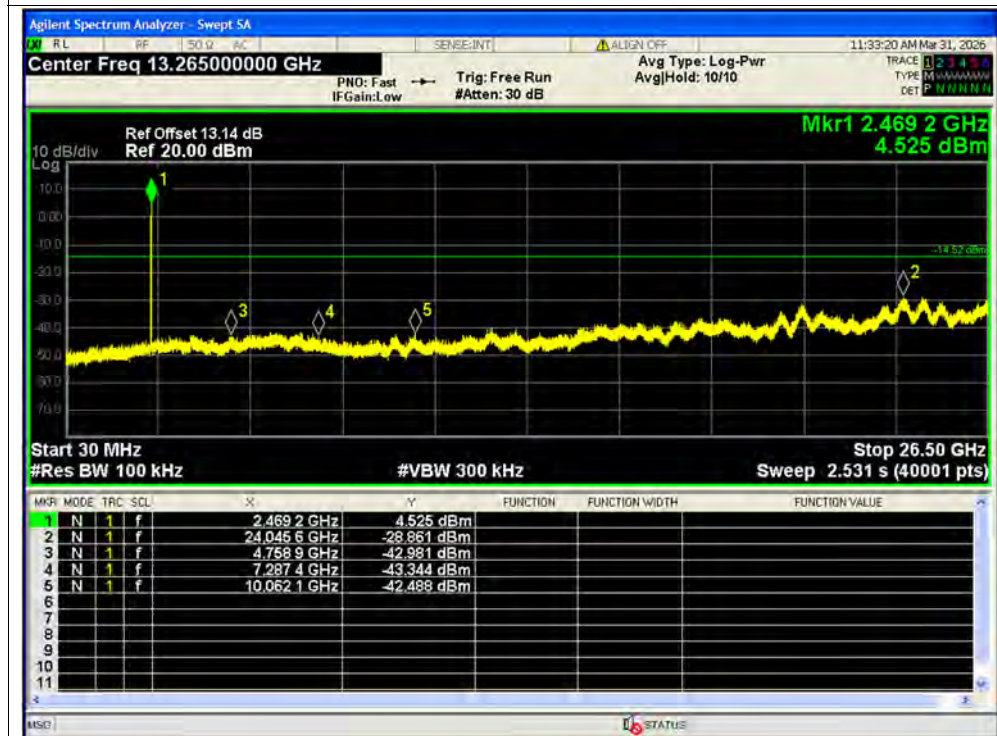
Tx. Spurious NVNT b 2442MHz Ant2 Ref



Tx. Spurious NVNT b 2442MHz Ant2 Emission



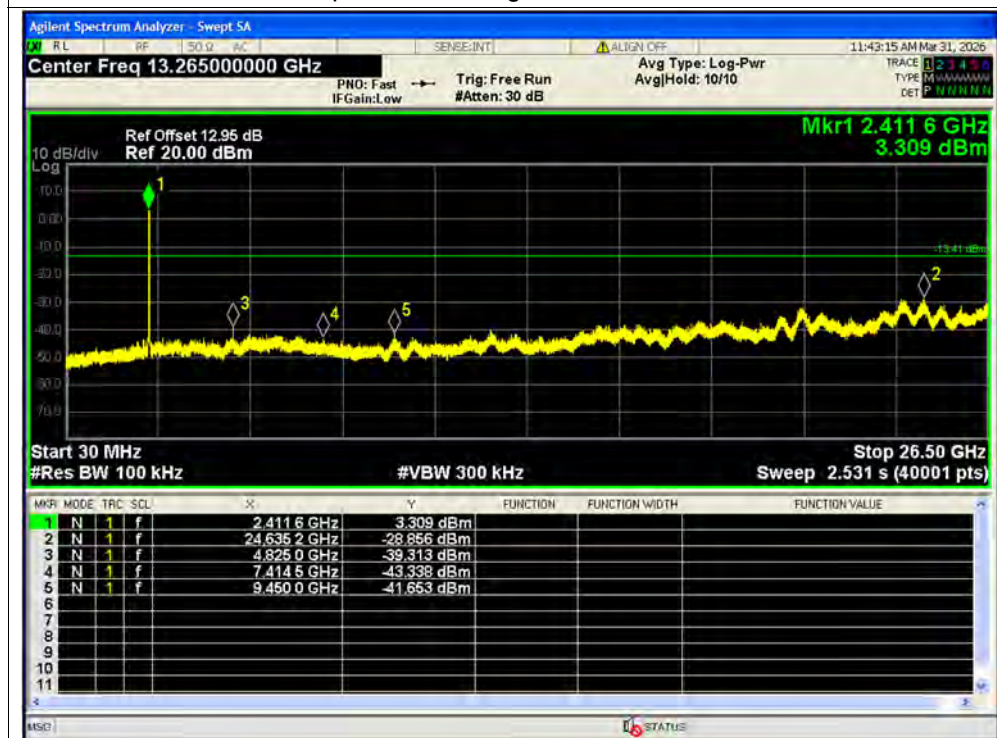
Tx. Spurious NVNT b 2472MHz Ant2 Ref



Tx. Spurious NVNT b 2472MHz Ant2 Emission



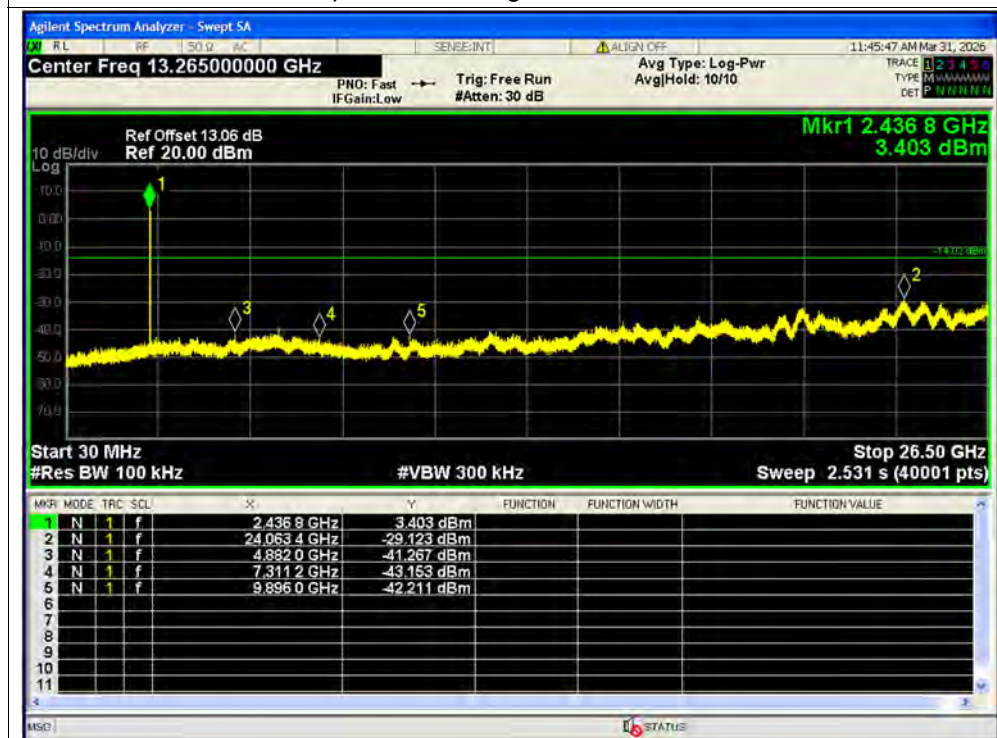
Tx. Spurious NVNT g 2412MHz Ant2 Ref



Tx. Spurious NVNT g 2412MHz Ant2 Emission



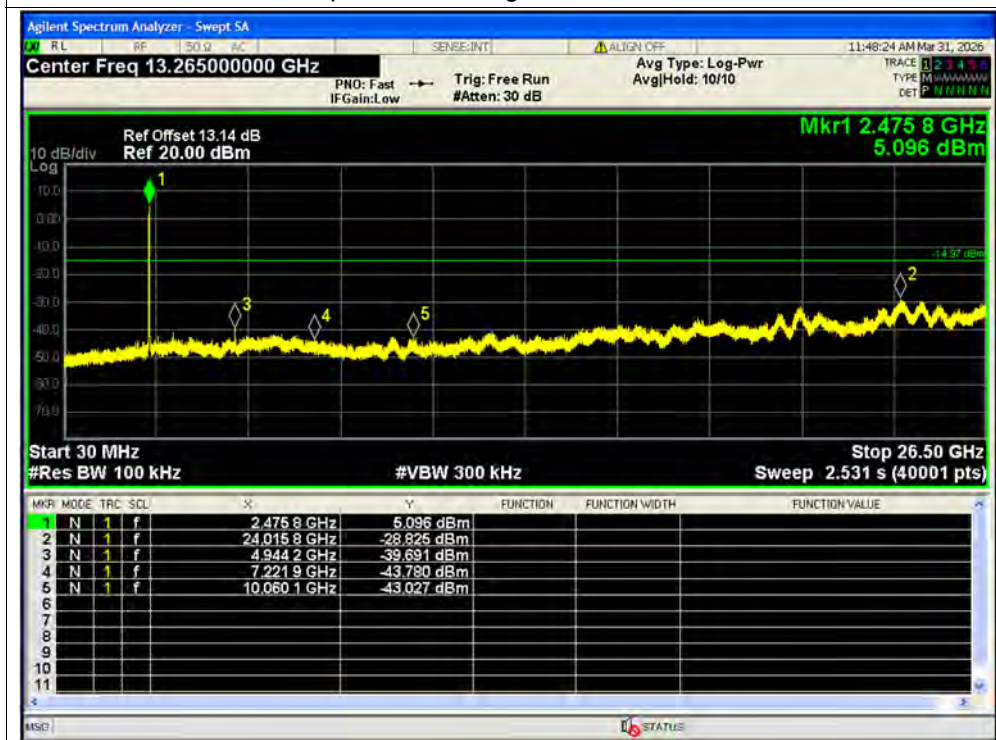
Tx. Spurious NVNT g 2442MHz Ant2 Ref



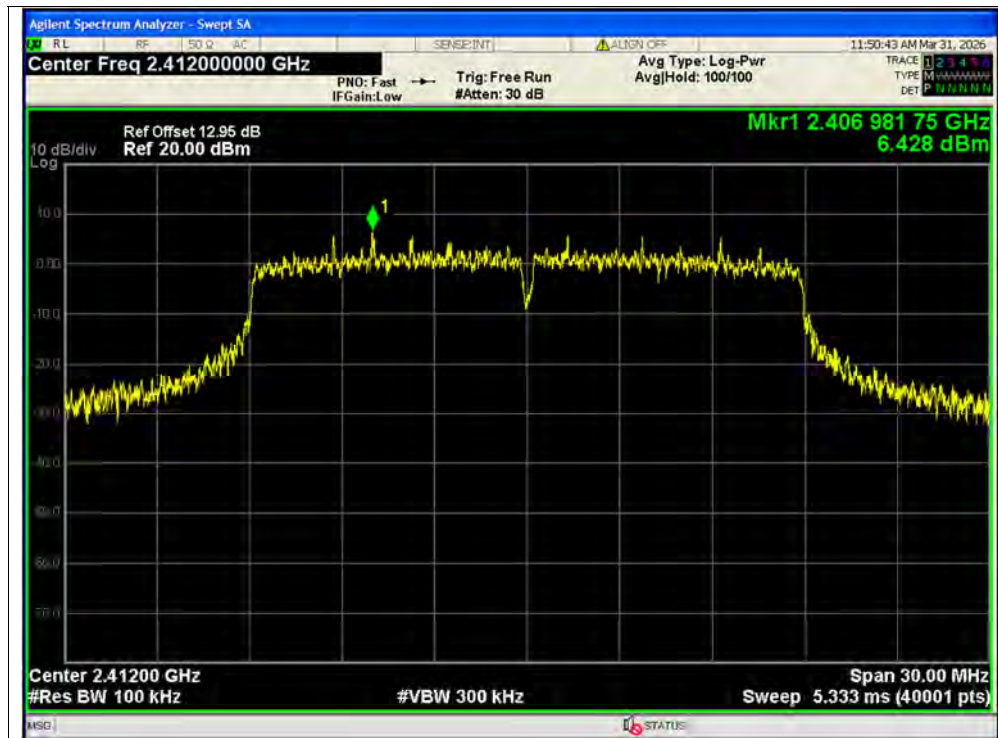
Tx. Spurious NVNT g 2442MHz Ant2 Emission



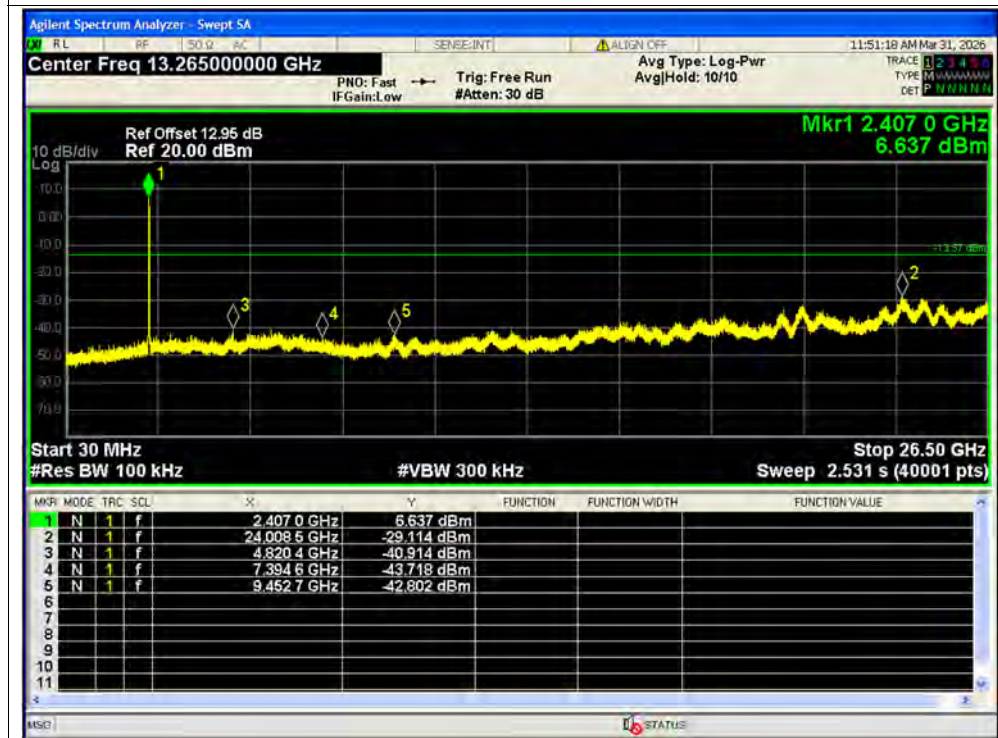
Tx. Spurious NVNT g 2472MHz Ant2 Ref



Tx. Spurious NVNT g 2472MHz Ant2 Emission



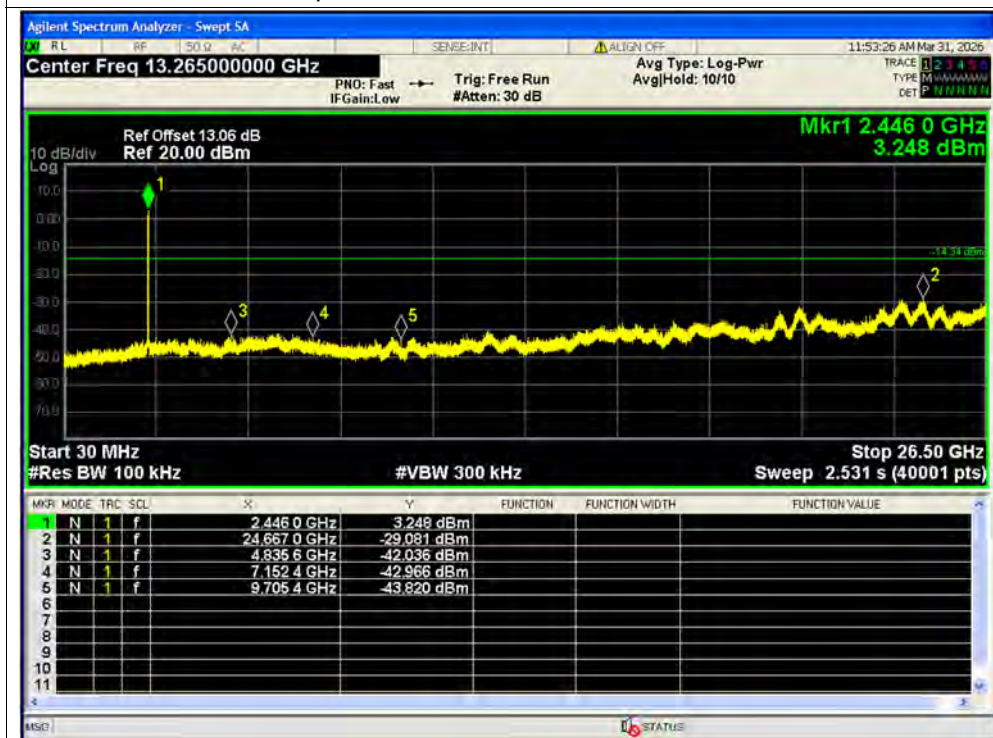
Tx. Spurious NVNT n20 2412MHz Ant2 Ref



Tx. Spurious NVNT n20 2412MHz Ant2 Emission



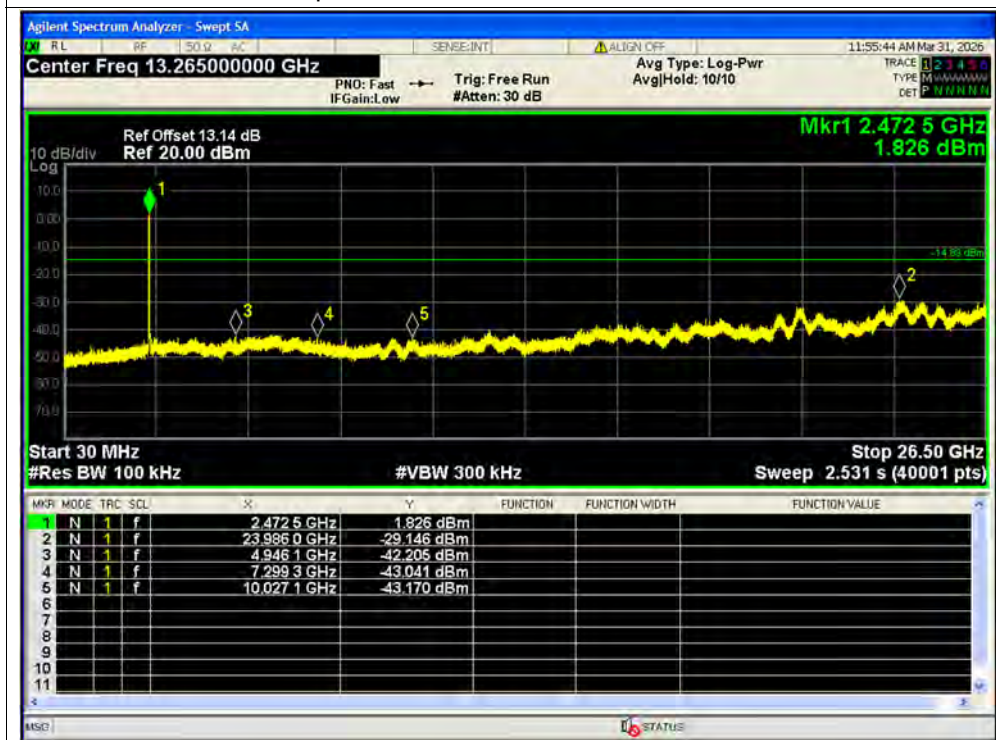
Tx. Spurious NVNT n20 2442MHz Ant2 Ref



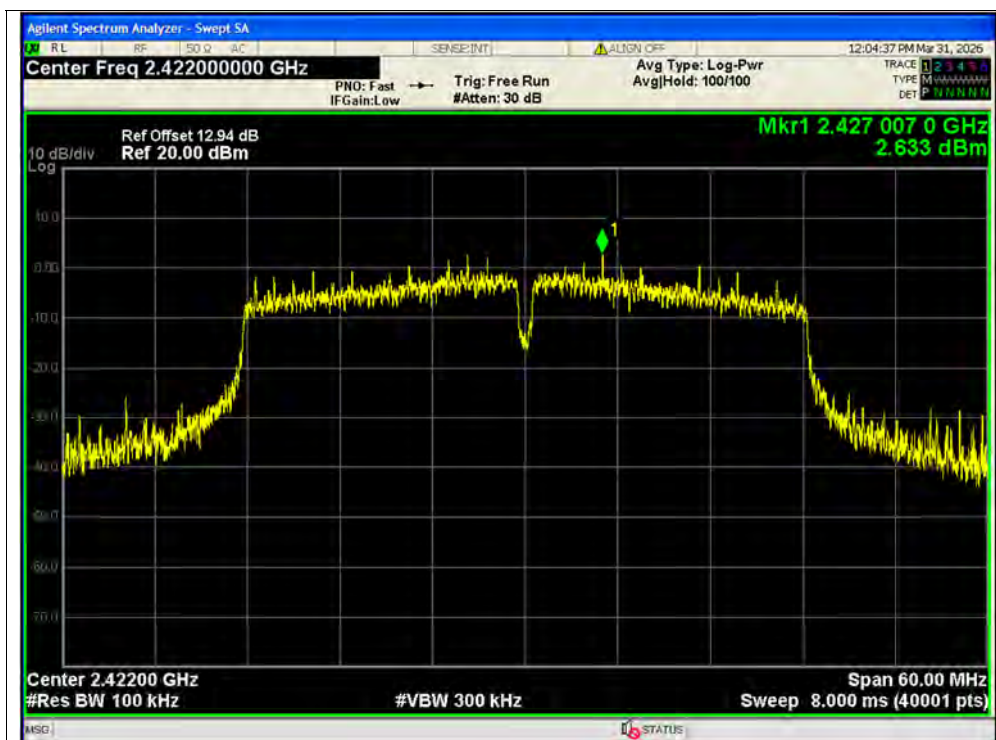
Tx. Spurious NVNT n20 2442MHz Ant2 Emission



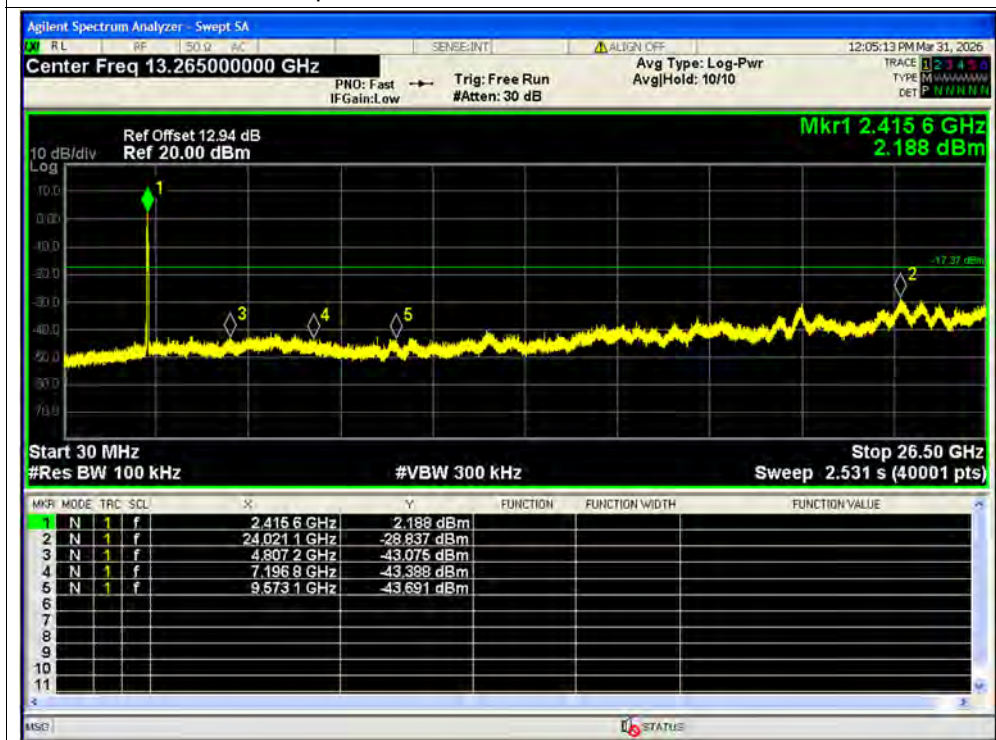
Tx. Spurious NVNT n20 2472MHz Ant2 Ref



Tx. Spurious NVNT n20 2472MHz Ant2 Emission



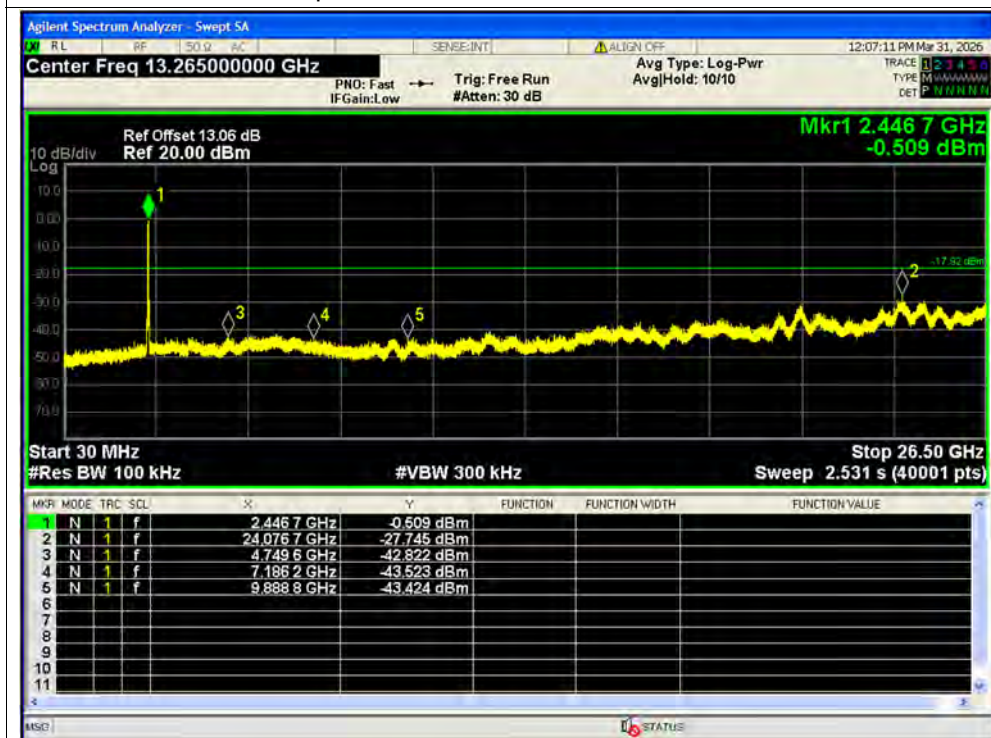
Tx. Spurious NVNT n40 2422MHz Ant2 Ref



Tx. Spurious NVNT n40 2422MHz Ant2 Emission



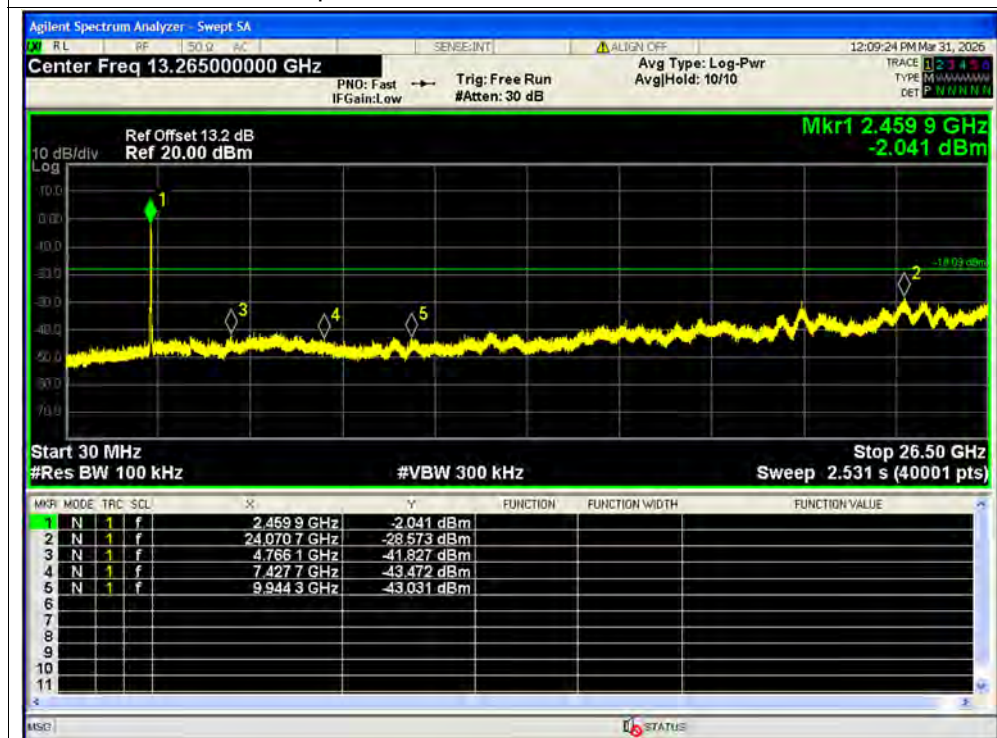
Tx. Spurious NVNT n40 2442MHz Ant2 Ref



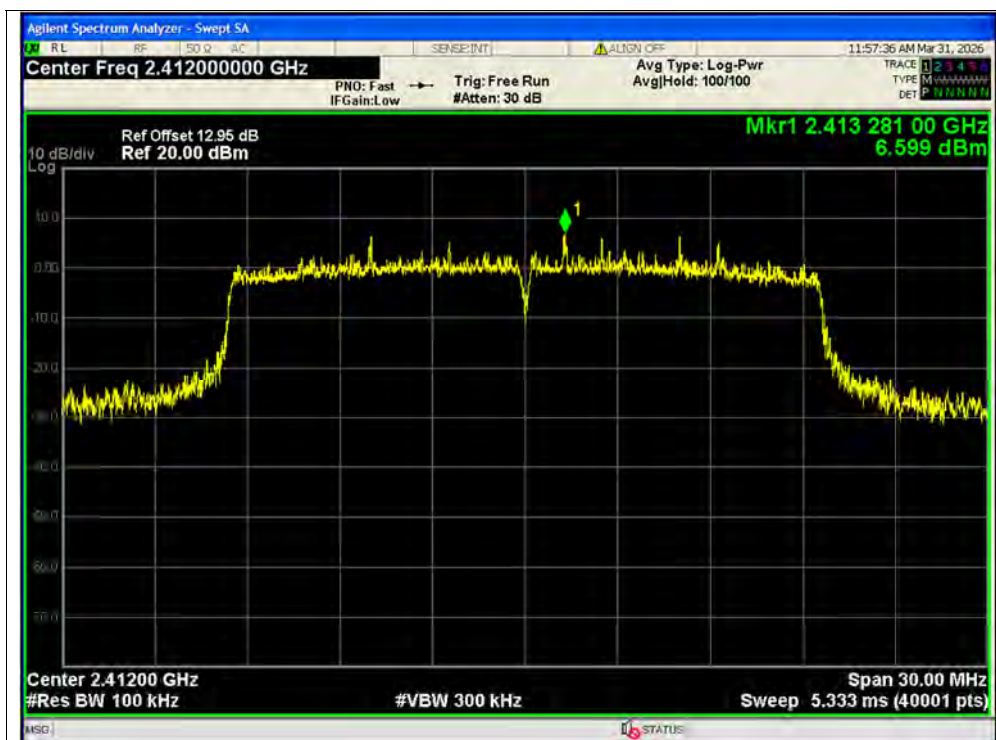
Tx. Spurious NVNT n40 2442MHz Ant2 Emission



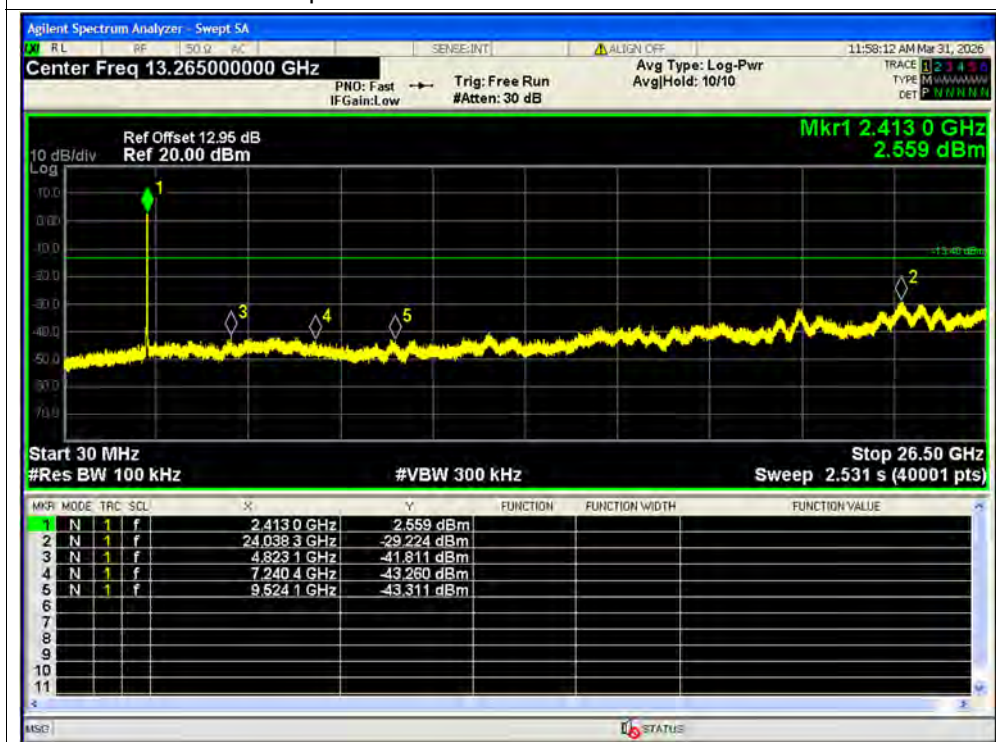
Tx. Spurious NVNT n40 2462MHz Ant2 Ref



Tx. Spurious NVNT n40 2462MHz Ant2 Emission



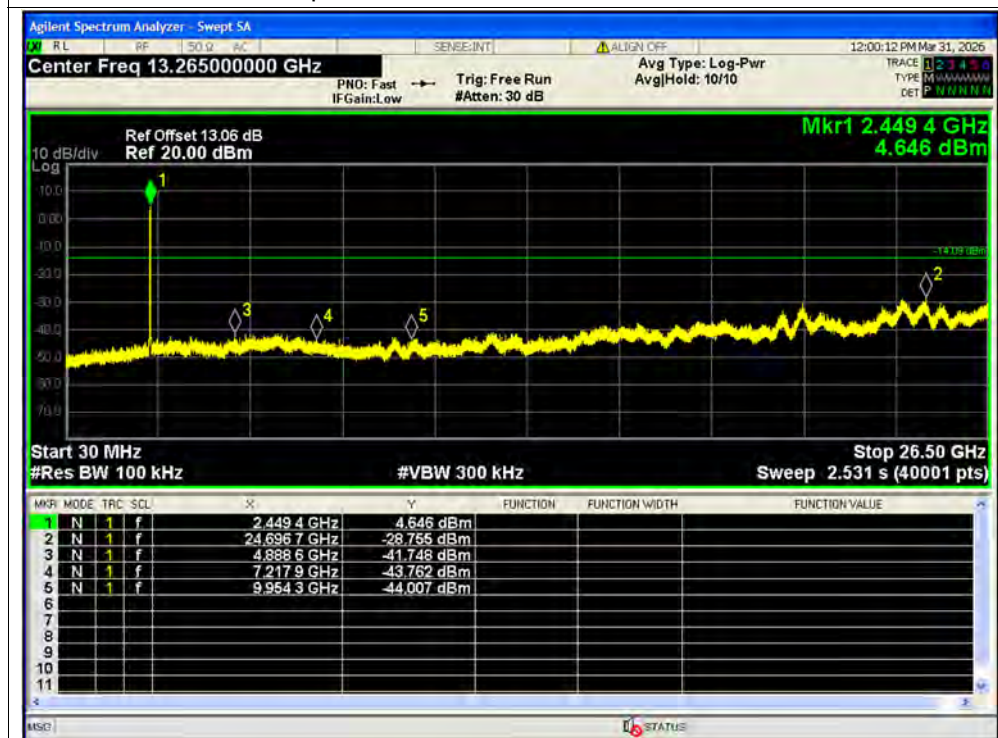
Tx. Spurious NVNT ax20 2412MHz Ant2 Ref



Tx. Spurious NVNT ax20 2412MHz Ant2 Emission



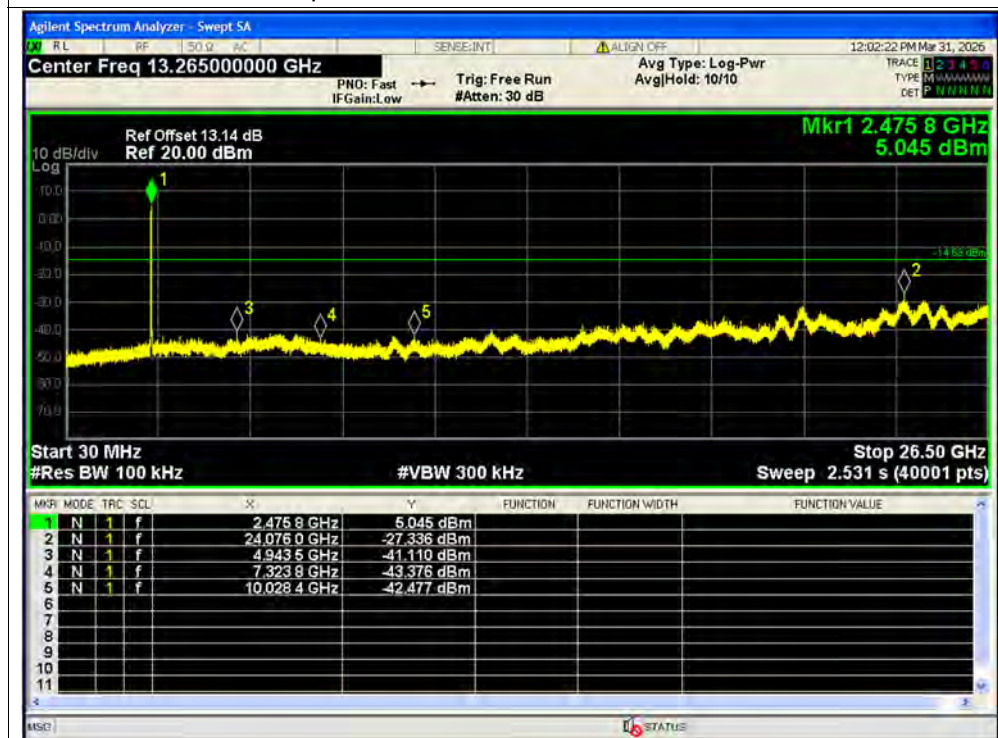
Tx. Spurious NVNT ax20 2442MHz Ant2 Ref



Tx. Spurious NVNT ax20 2442MHz Ant2 Emission



Tx. Spurious NVNT ax20 2472MHz Ant2 Ref



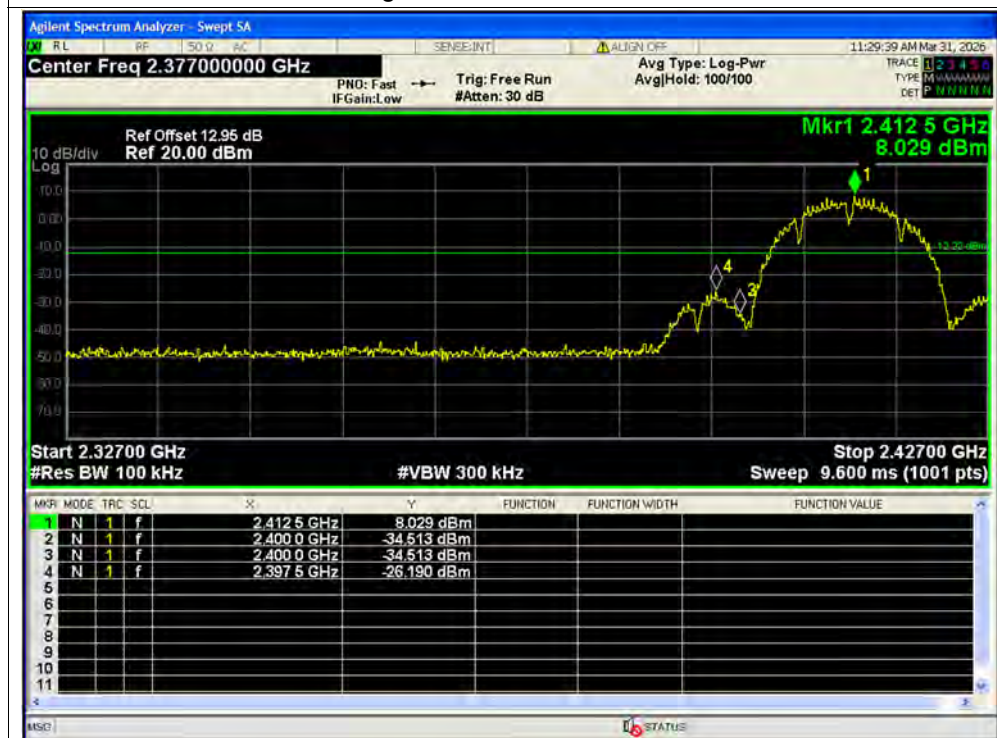
Tx. Spurious NVNT ax20 2472MHz Ant2 Emission

**A.6. Band Edge**

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant2	-33.96	-20	Pass
NVNT	b	2472	Ant2	-38.94	-20	Pass
NVNT	g	2412	Ant2	-27.79	-20	Pass
NVNT	g	2472	Ant2	-30.47	-20	Pass
NVNT	n20	2412	Ant2	-29.32	-20	Pass
NVNT	n20	2472	Ant2	-30.3	-20	Pass
NVNT	n40	2422	Ant2	-31.37	-20	Pass
NVNT	n40	2462	Ant2	-32.05	-20	Pass
NVNT	ax20	2412	Ant2	-29.58	-20	Pass
NVNT	ax20	2472	Ant2	-31.02	-20	Pass



Band Edge NVNT b 2412MHz Ant2 Ref



Band Edge NVNT b 2412MHz Ant2 Emission



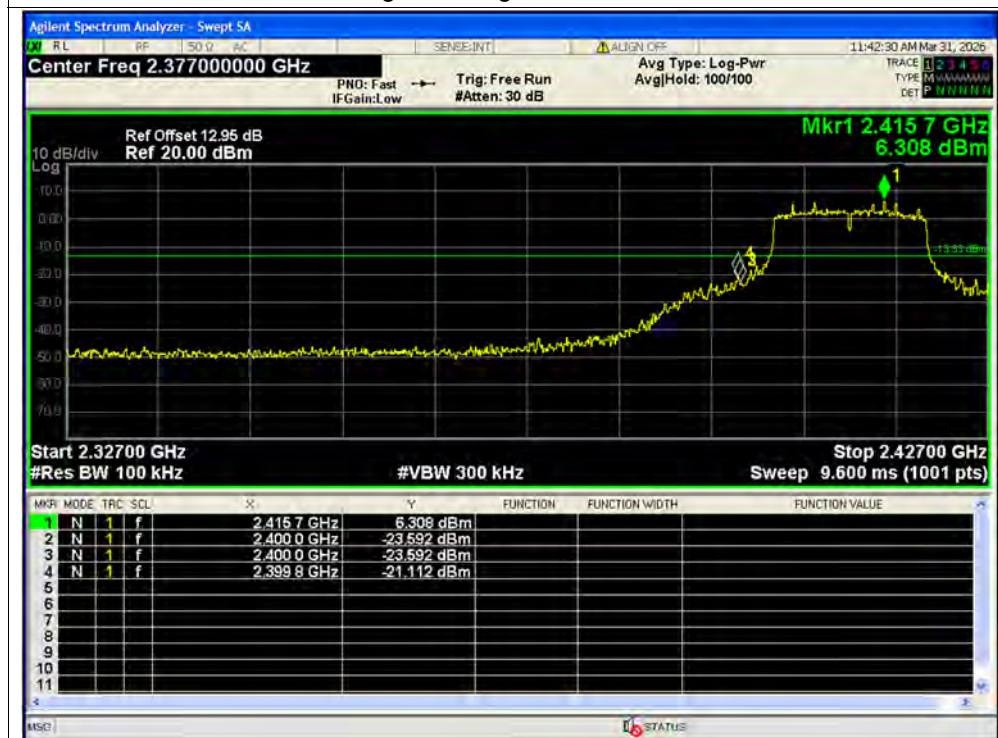
Band Edge NVNT b 2472MHz Ant2 Ref



Band Edge NVNT b 2472MHz Ant2 Emission



Band Edge NVNT g 2412MHz Ant2 Ref



Band Edge NVNT g 2412MHz Ant2 Emission



Band Edge NVNT g 2472MHz Ant2 Ref



Band Edge NVNT g 2472MHz Ant2 Emission



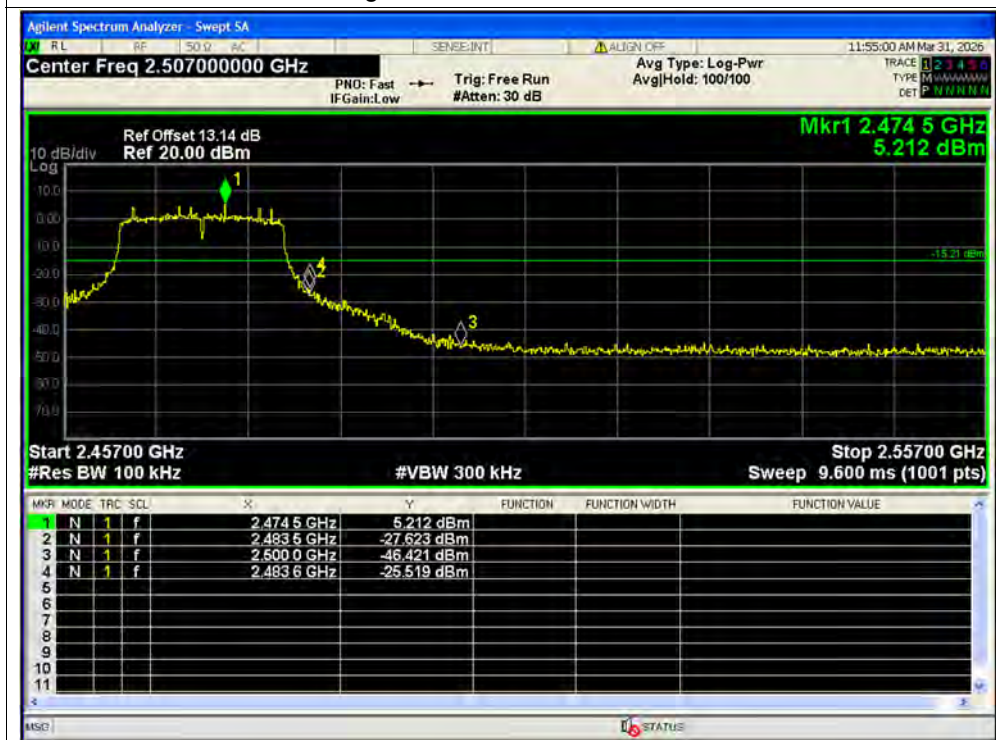
Band Edge NVNT n20 2412MHz Ant2 Ref



Band Edge NVNT n20 2412MHz Ant2 Emission



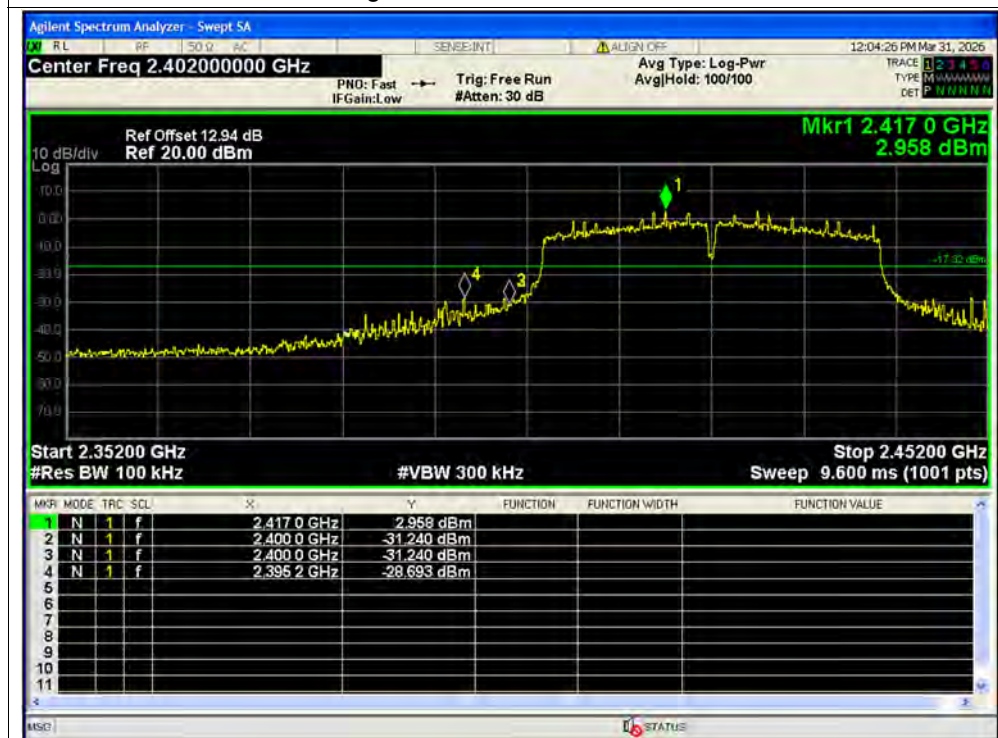
Band Edge NVNT n20 2472MHz Ant2 Ref



Band Edge NVNT n20 2472MHz Ant2 Emission



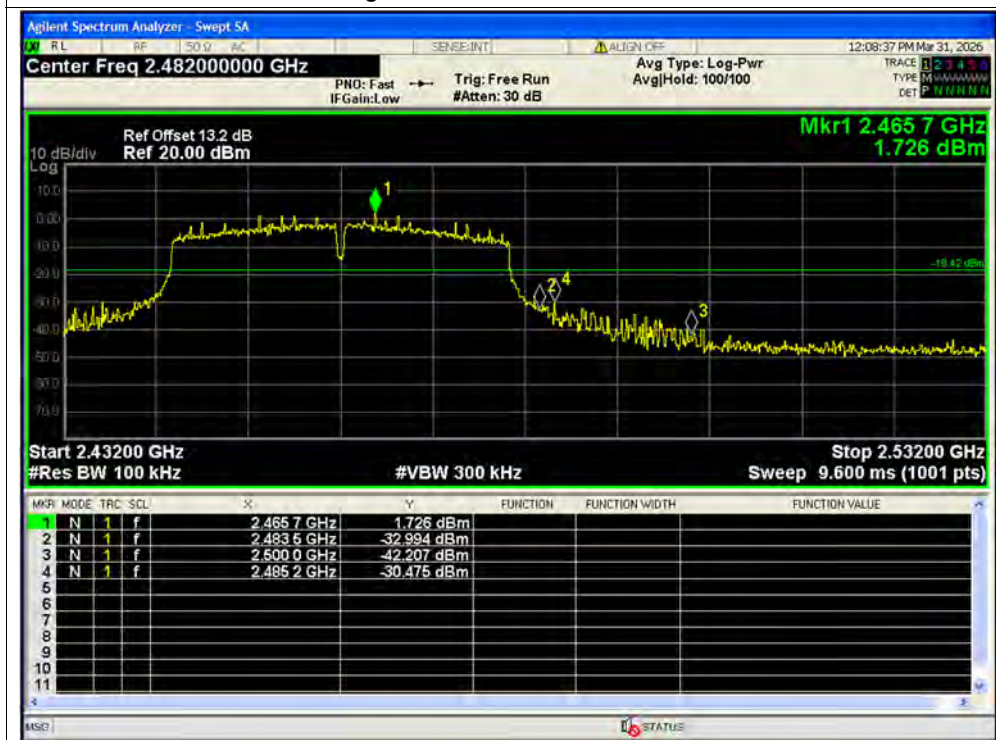
Band Edge NVNT n40 2422MHz Ant2 Ref



Band Edge NVNT n40 2422MHz Ant2 Emission



Band Edge NVNT n40 2462MHz Ant2 Ref



Band Edge NVNT n40 2462MHz Ant2 Emission



Band Edge NVNT ax20 2412MHz Ant2 Ref



Band Edge NVNT ax20 2412MHz Ant2 Emission



Band Edge NVNT ax20 2472MHz Ant2 Ref



Band Edge NVNT ax20 2472MHz Ant2 Emission

**A.7. Power Spectral Density**

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Duty Factor (dB)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	b	2412	Ant2	-7.77	0	-7.77	8	Pass
NVNT	b	2442	Ant2	-8.51	0	-8.51	8	Pass
NVNT	b	2472	Ant2	-10.23	0	-10.23	8	Pass
NVNT	g	2412	Ant2	-8.5	0	-8.5	8	Pass
NVNT	g	2442	Ant2	-8.86	0	-8.86	8	Pass
NVNT	g	2472	Ant2	-9.71	0	-9.71	8	Pass
NVNT	n20	2412	Ant2	-7.32	0	-7.32	8	Pass
NVNT	n20	2442	Ant2	-9.02	0	-9.02	8	Pass
NVNT	n20	2472	Ant2	-9.54	0	-9.54	8	Pass
NVNT	n40	2422	Ant2	-10.98	0	-10.98	8	Pass
NVNT	n40	2442	Ant2	-11.64	0	-11.64	8	Pass
NVNT	n40	2462	Ant2	-11.72	0	-11.72	8	Pass
NVNT	ax20	2412	Ant2	-8.01	0	-8.01	8	Pass
NVNT	ax20	2442	Ant2	-8.09	0	-8.09	8	Pass
NVNT	ax20	2472	Ant2	-9.85	0	-9.85	8	Pass



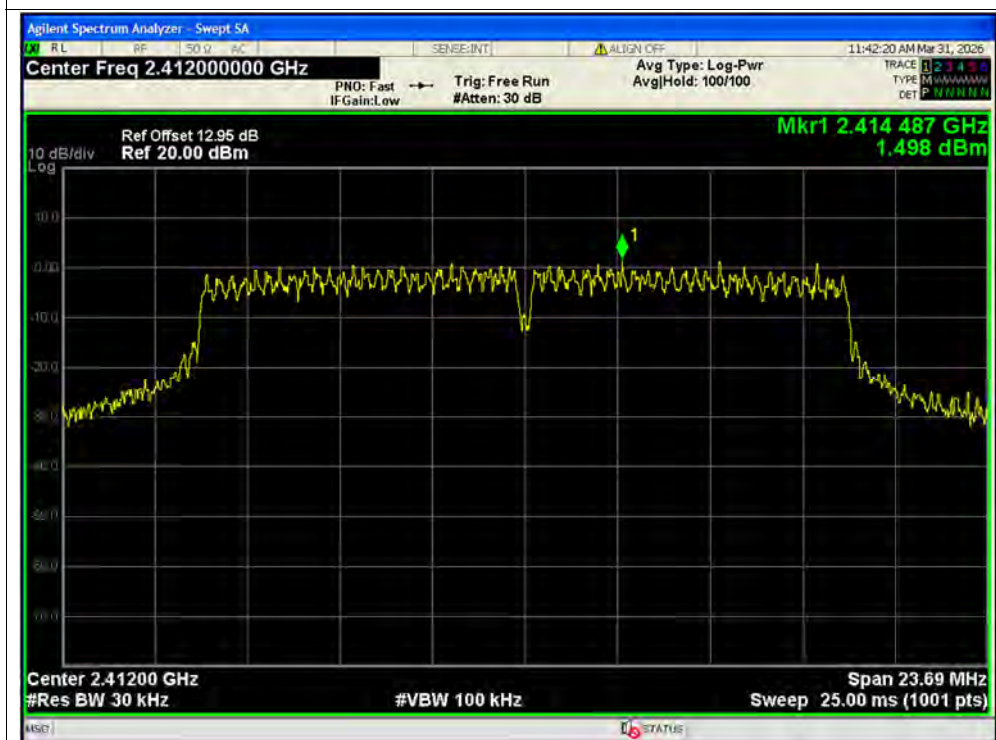
PSD NVNT b 2412MHz Ant2



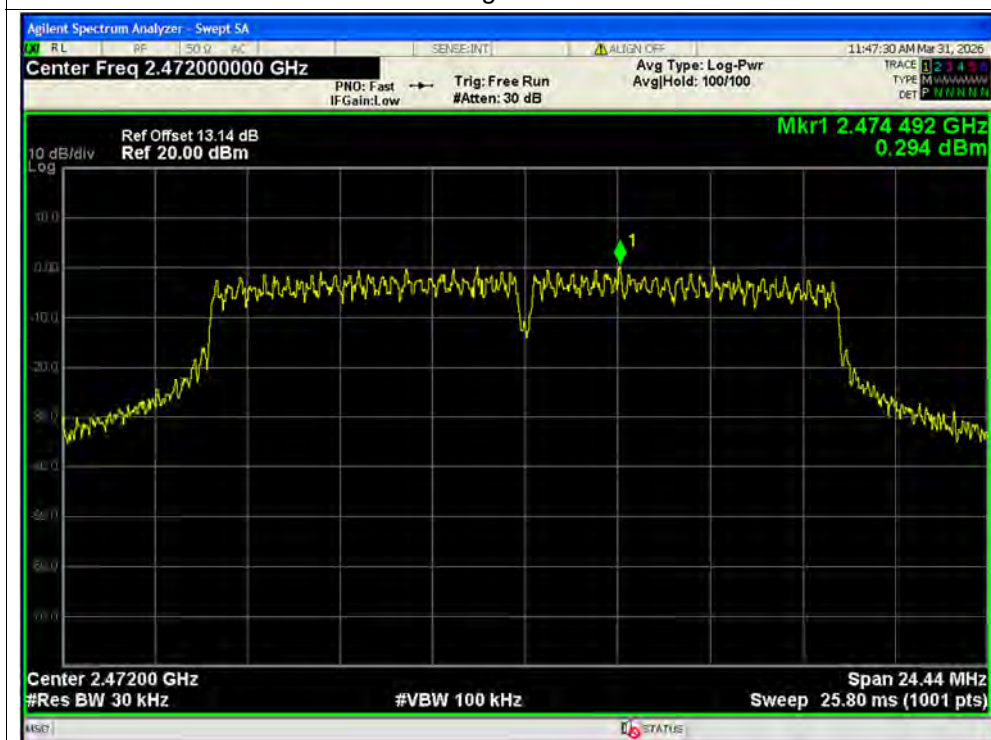
PSD NVNT b 2442MHz Ant2

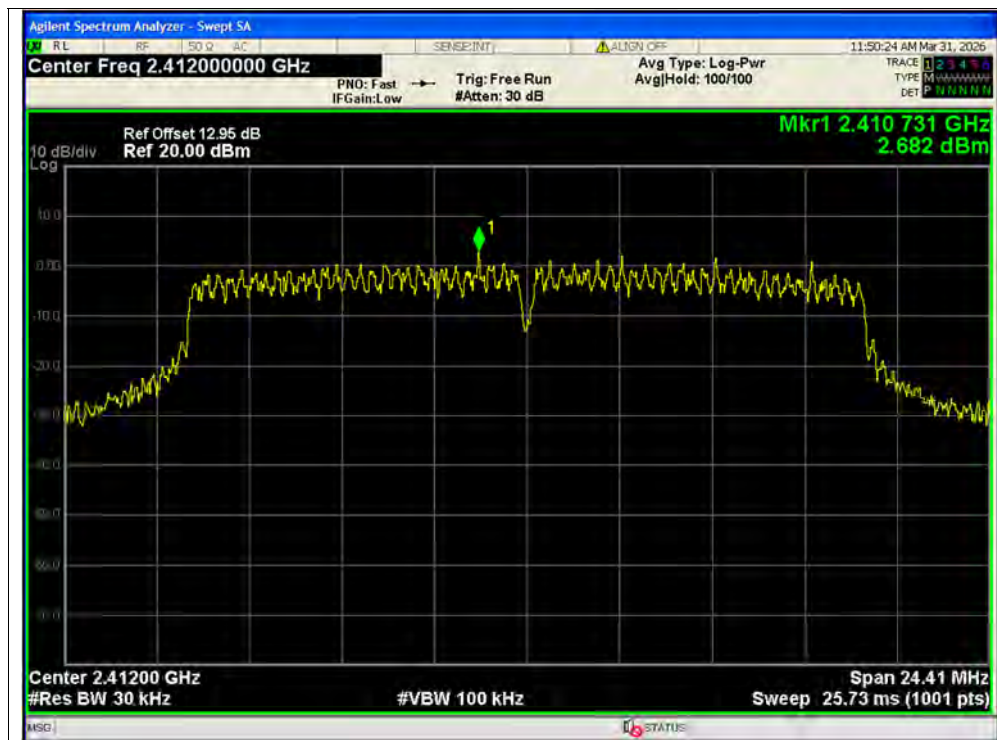


PSD NVNT b 2472MHz Ant2

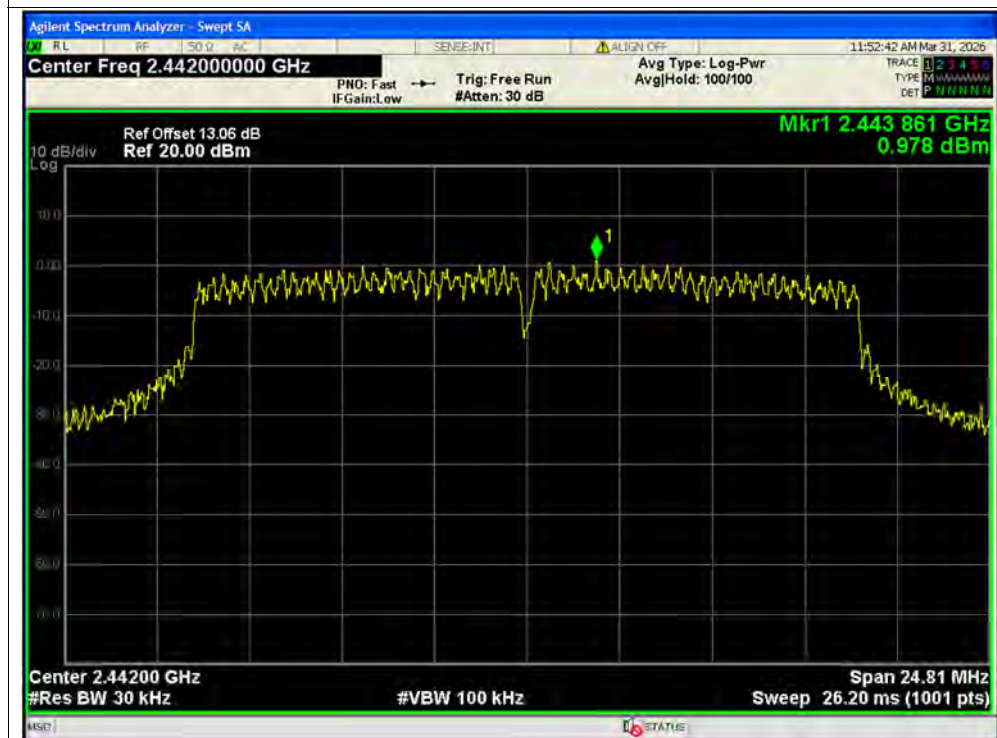


PSD NVNT g 2412MHz Ant2





PSD NVNT n20 2412MHz Ant2



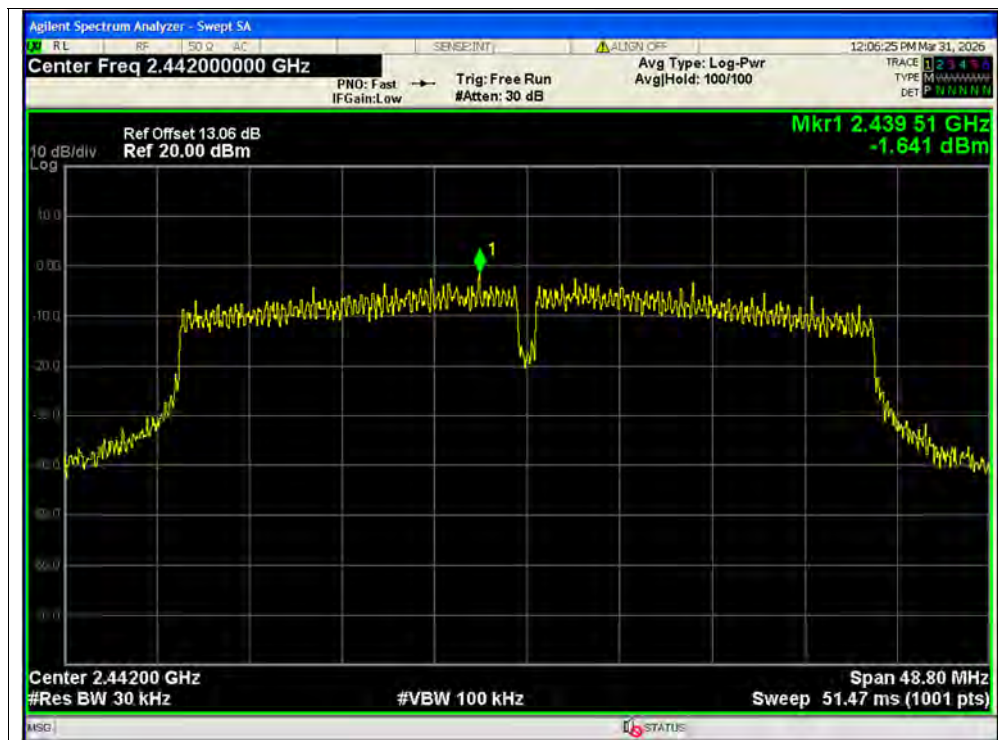
PSD NVNT n20 2442MHz Ant2



PSD NVNT n20 2472MHz Ant2



PSD NVNT n40 2422MHz Ant2



PSD NVNT n40 2442MHz Ant2



PSD NVNT n40 2462MHz Ant2



PSD NVNT ax20 2412MHz Ant2



PSD NVNT ax20 2442MHz Ant2



A.8. Restricted Frequency Bands

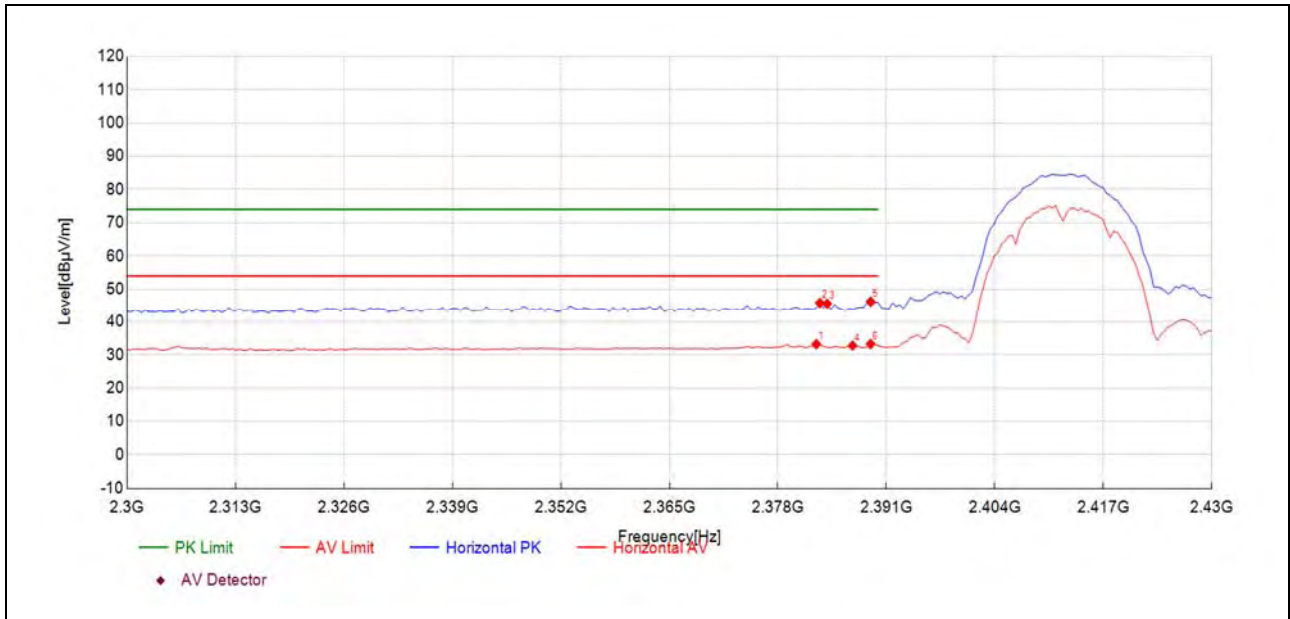
Note 1: Restricted Frequency Bands were performed when antenna was at vertical and horizontal polarity, and only the worse test condition was recorded in this test report.

Note 2 All test modes and bandwidth were considered and evaluated respectively by performing full test, only the worst data were recorded for each bandwidth.

ANT1

802.11b Mode

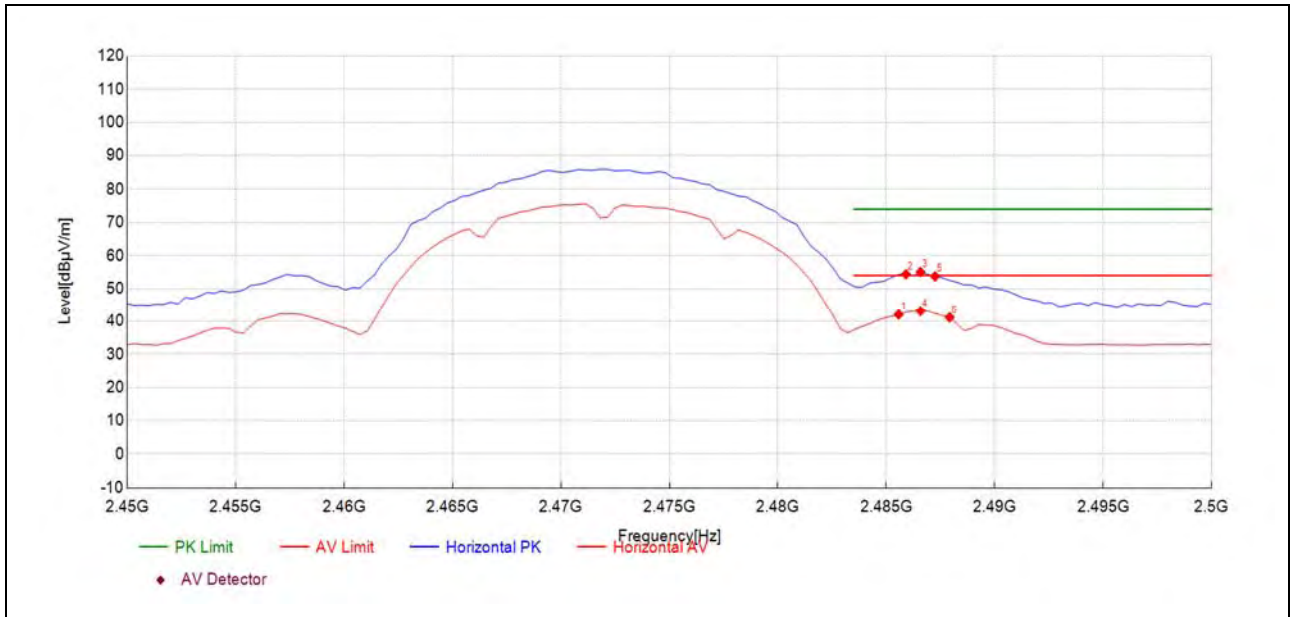
Plot for Channel 1



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2382.61	0.7	33.20	32.520	54.00	20.80	165	24	AV	PASS
2383.04	13.3	45.85	32.520	74.00	28.15	165	24	PK	PASS
2383.91	13.1	45.62	32.520	74.00	28.38	165	219	PK	PASS
2386.96	0.3	32.78	32.530	54.00	21.22	165	24	AV	PASS
2389.13	13.7	46.21	32.540	74.00	27.79	165	6	PK	PASS
2389.13	0.7	33.23	32.540	54.00	20.77	165	6	AV	PASS



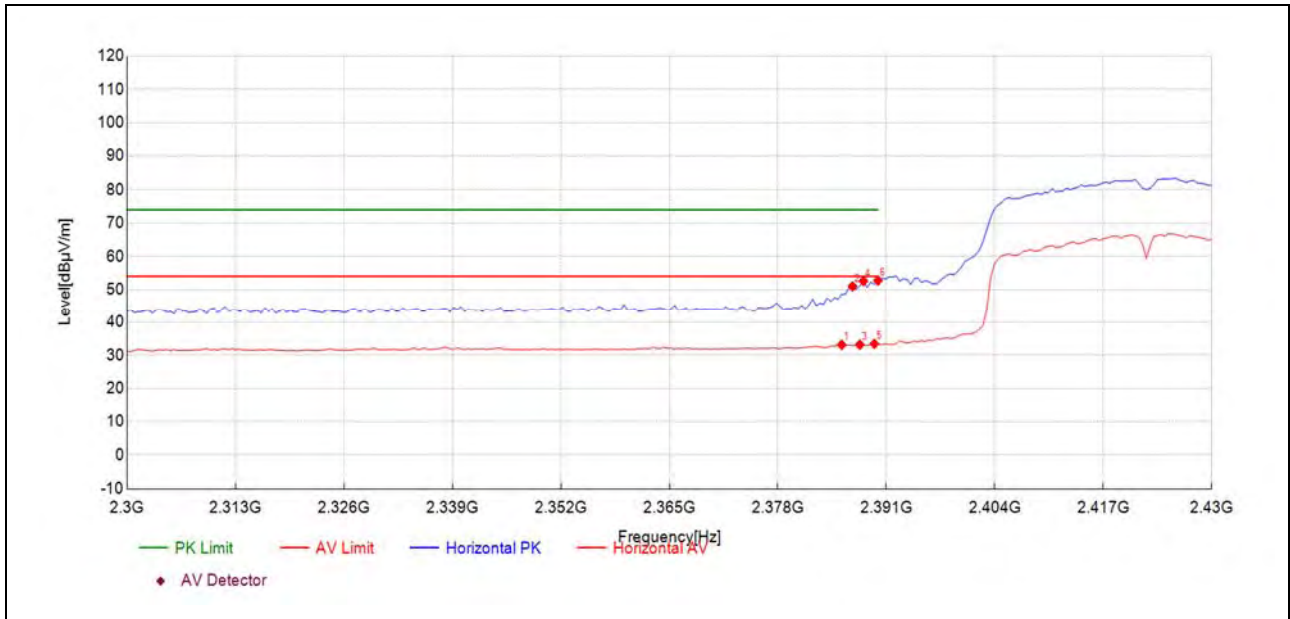
Plot for Channel 13



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2485.57	9.0	42.00	33.030	54.00	12.00	165	48	AV	PASS
2485.91	21.4	54.39	33.030	74.00	19.61	165	38	PK	PASS
2486.58	22.0	55.05	33.030	74.00	18.95	165	48	PK	PASS
2486.58	10.1	43.11	33.030	54.00	10.89	165	48	AV	PASS
2487.25	20.7	53.75	33.030	74.00	20.25	165	48	PK	PASS
2487.92	8.1	41.15	33.020	54.00	12.85	165	38	AV	PASS

**802.11n (HT40) Mode**

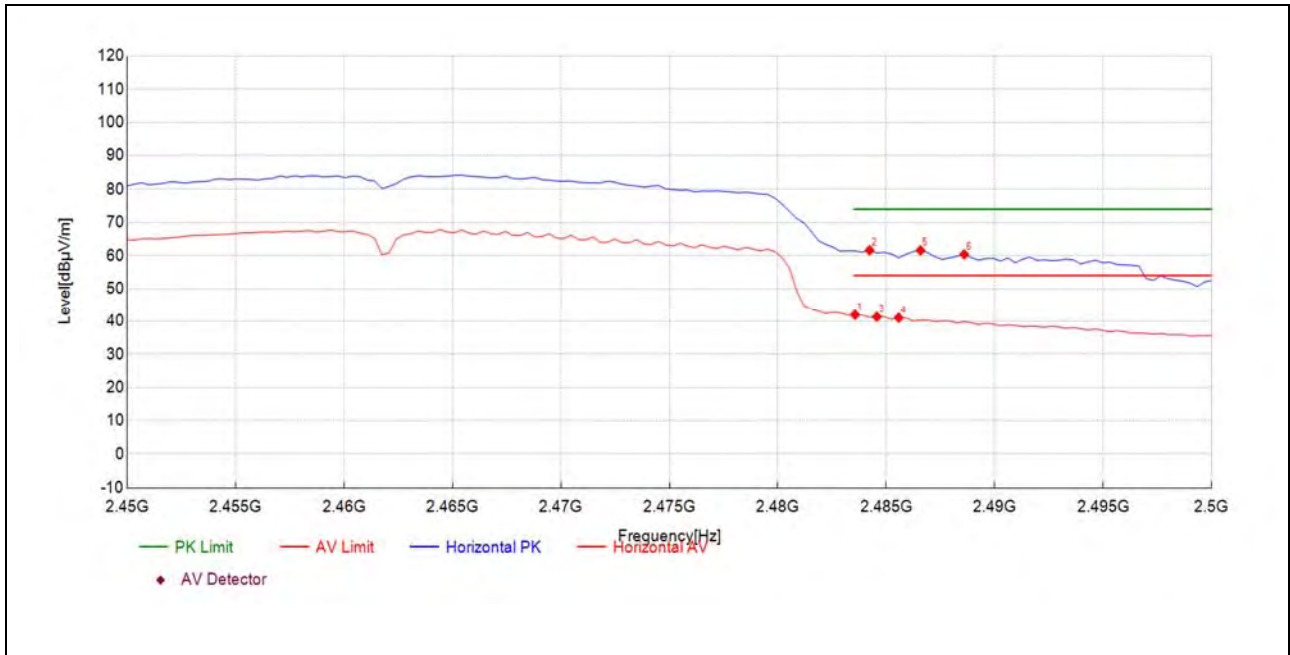
Plot for Channel 3



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2385.65	0.6	33.12	32.530	54.00	20.88	165	35	AV	PASS
2386.96	18.4	50.97	32.530	74.00	23.03	165	25	PK	PASS
2387.83	0.6	33.15	32.540	54.00	20.85	165	25	AV	PASS
2388.26	20.0	52.57	32.540	74.00	21.43	165	25	PK	PASS
2389.57	0.9	33.41	32.540	54.00	20.59	165	64	AV	PASS
2390.00	20.2	52.71	32.540	74.00	21.29	165	44	PK	PASS



Plot for Channel 11



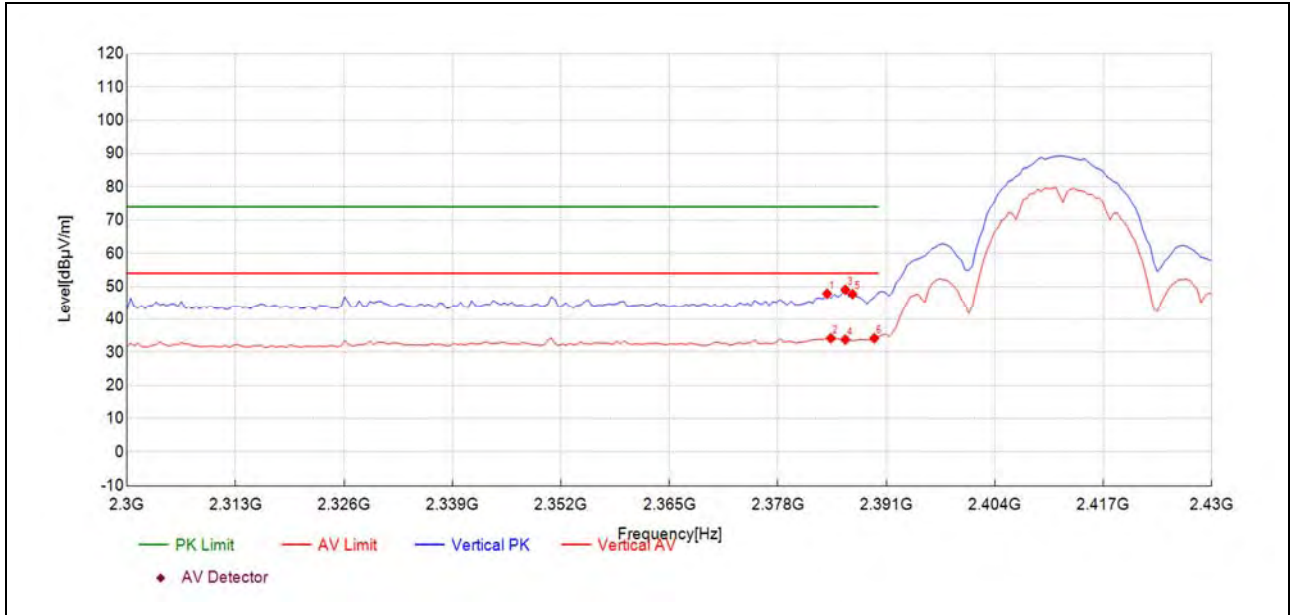
Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2483.56	8.9	41.92	33.030	54.00	12.08	165	47	AV	PASS
2484.23	28.6	61.61	33.030	74.00	12.39	165	38	PK	PASS
2484.56	8.3	41.31	33.030	54.00	12.69	165	47	AV	PASS
2485.57	8.0	41.01	33.030	54.00	12.99	165	38	AV	PASS
2486.58	28.5	61.57	33.030	74.00	12.43	165	38	PK	PASS
2488.59	27.4	60.39	33.020	74.00	13.61	165	47	PK	PASS



ANT2

802.11b Mode

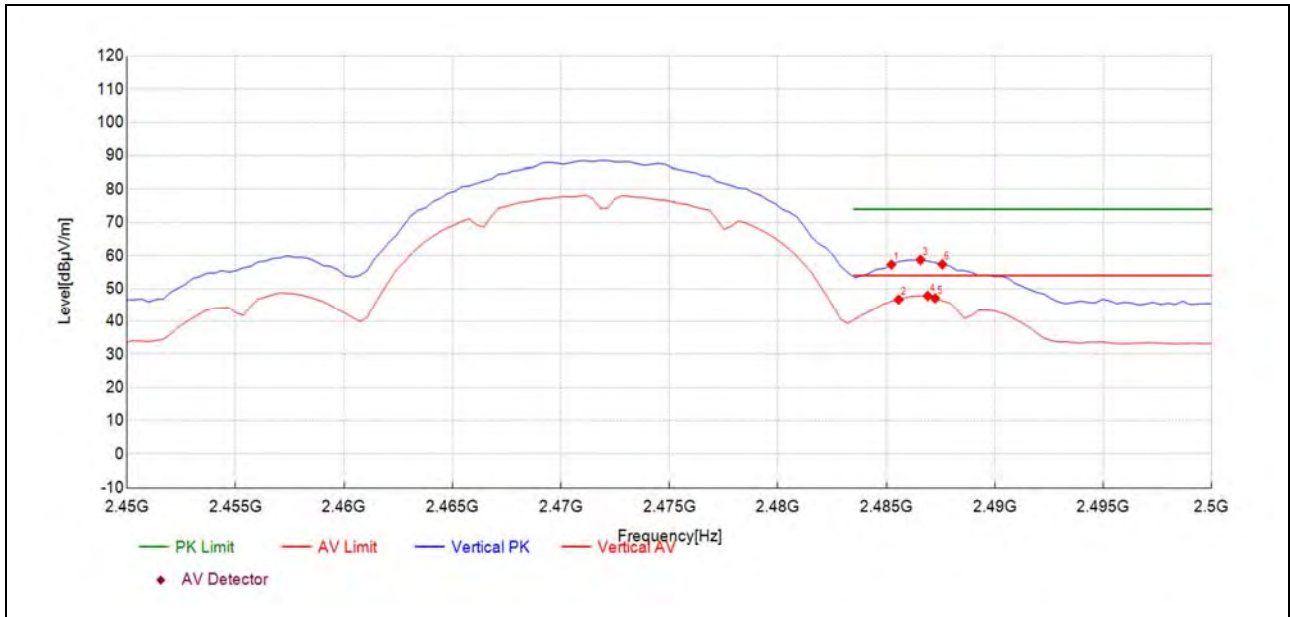
Plot for Channel 1



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2383.91	15.3	47.82	32.520	74.00	26.18	165	75	PK	PASS
2384.35	1.7	34.18	32.520	54.00	19.82	165	104	AV	PASS
2386.09	16.5	49.02	32.530	74.00	24.98	165	10	PK	PASS
2386.09	1.2	33.76	32.530	54.00	20.24	165	85	AV	PASS
2386.96	15.2	47.72	32.530	74.00	26.28	165	10	PK	PASS
2389.57	1.6	34.17	32.540	54.00	19.83	165	85	AV	PASS



Plot for Channel 13

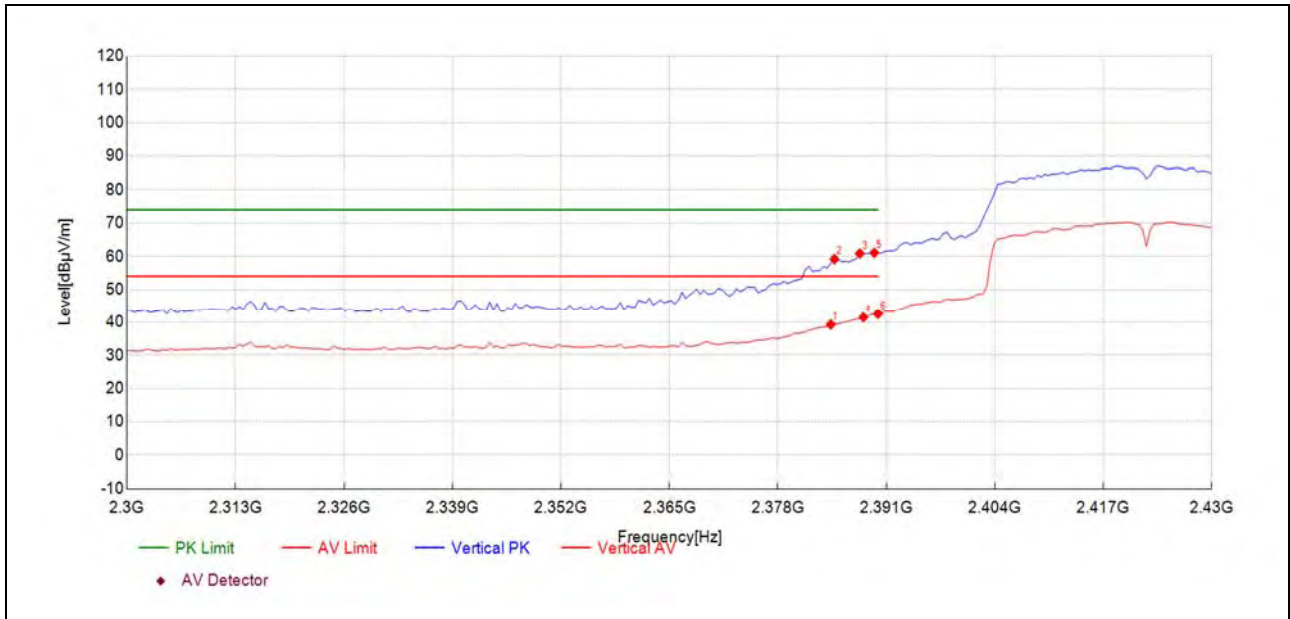


Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2485.23	24.3	57.30	33.030	74.00	16.70	165	0	PK	PASS
2485.57	13.7	46.70	33.030	54.00	7.30	165	65	AV	PASS
2486.58	25.7	58.72	33.030	74.00	15.28	165	65	PK	PASS
2486.91	14.8	47.80	33.030	54.00	6.20	165	65	AV	PASS
2487.25	14.1	47.09	33.030	54.00	6.91	165	65	AV	PASS
2487.58	24.4	57.40	33.020	74.00	16.60	165	65	PK	PASS



802.11n (HT40) Mode

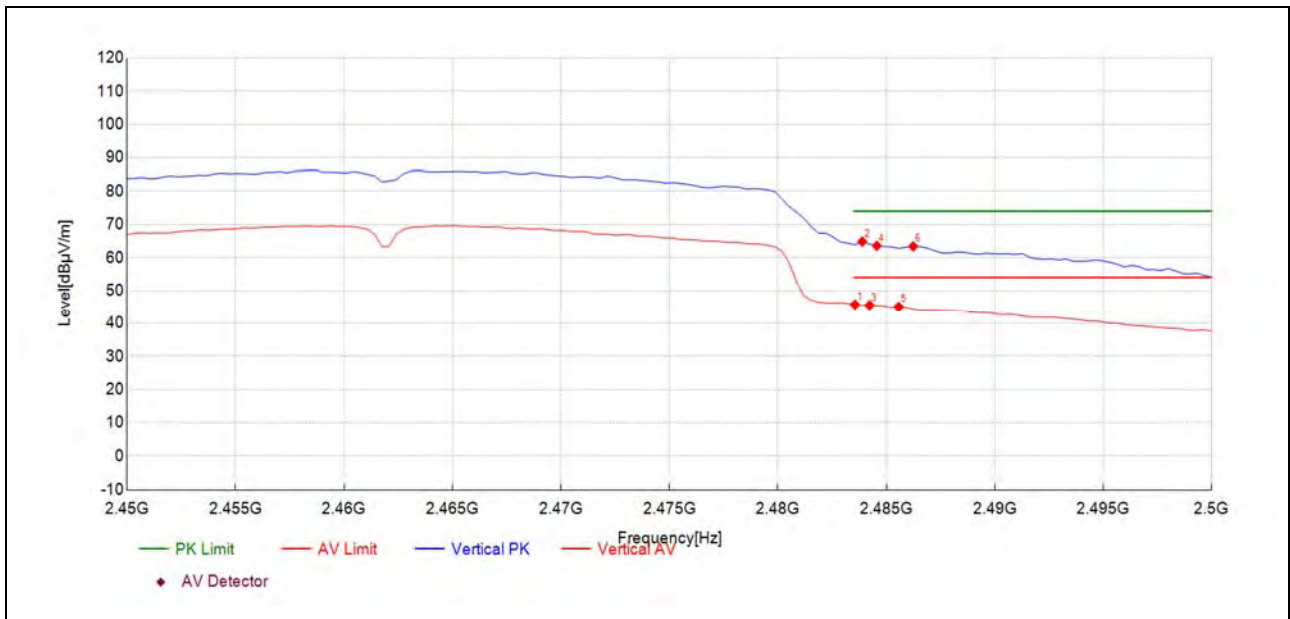
Plot for Channel 3



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2384.35	6.7	39.26	32.520	54.00	14.74	165	360	AV	PASS
2384.78	26.6	59.16	32.530	74.00	14.84	165	141	PK	PASS
2387.83	28.3	60.85	32.540	74.00	13.15	165	360	PK	PASS
2388.26	8.9	41.47	32.540	54.00	12.53	165	357	AV	PASS
2389.57	28.5	61.08	32.540	74.00	12.92	165	360	PK	PASS
2390.00	10.0	42.50	32.540	54.00	11.50	165	357	AV	PASS



Plot for Channel 11



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2483.56	12.7	45.74	33.030	54.00	8.26	165	66	AV	PASS
2483.89	31.8	64.83	33.030	74.00	9.17	165	2	PK	PASS
2484.23	12.5	45.54	33.030	54.00	8.46	165	75	AV	PASS
2484.56	30.5	63.57	33.030	74.00	10.43	165	1	PK	PASS
2485.57	12.1	45.10	33.030	54.00	8.90	165	56	AV	PASS
2486.24	30.4	63.39	33.030	74.00	10.61	165	56	PK	PASS



A.9. Radiated Emission

According to ANSI C63.10, because of peak detection will yield amplitudes equal to or greater than amplitudes measured with the quasi-peak (or average) detector, the measurement data from a spectrum analyzer peak detector will represent the worst-case results, if the peak measured value complies with the quasi-peak (or average) limit, it is unnecessary to perform an quasi-peak measurement (or average).

The measurement results are obtained as below:

$$E [\text{dB}\mu\text{V/m}] = U_R + A_T + A_{\text{Factor}} [\text{dB}]; A_T = L_{\text{Cable loss}} [\text{dB}] - G_{\text{preamp}} [\text{dB}]$$

A_T : Total correction Factor except Antenna

U_R : Receiver Reading

G_{preamp} : Preamplifier Gain

A_{Factor} : Antenna Factor at 3m

During the test, the total correction Factor A_T and A_{Factor} were built in test software.

Note1: All radiated emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

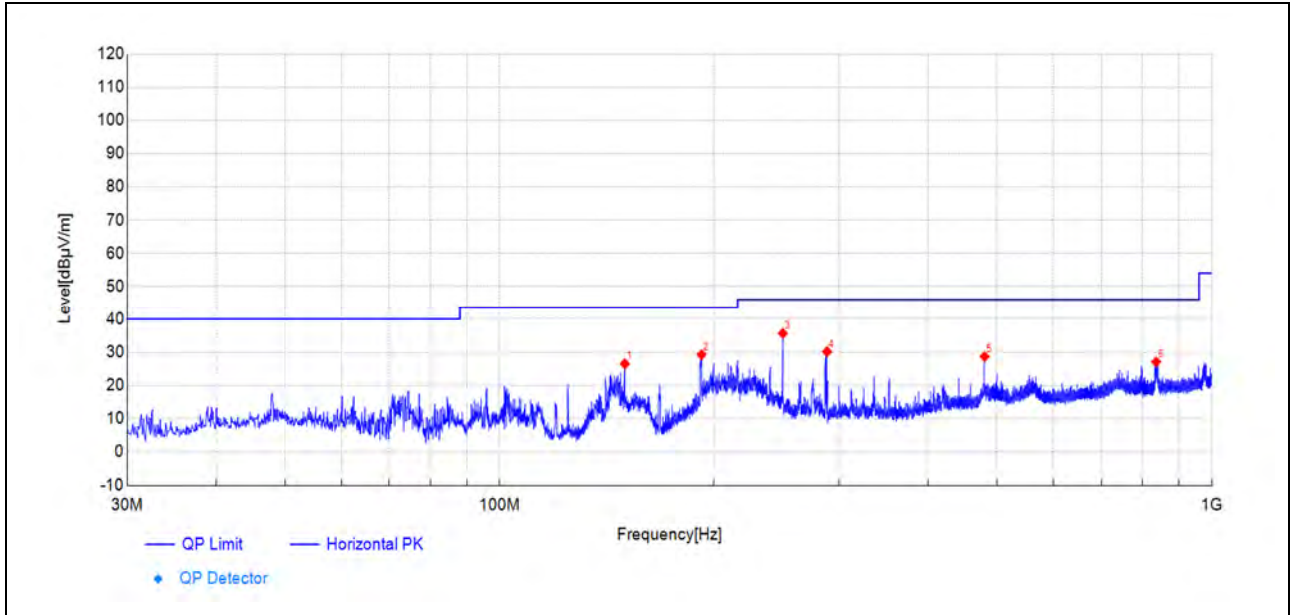
Note2: For the frequency, which started from 9kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit was not recorded.

Note3: For the frequency, which started from 18GHz to 40GHz harmonic of the highest frequency, was pre-scanned and the result which was 20dB lower than the limit was not recorded.

Note 4: All test modes and bandwidth were considered and evaluated respectively by performing full test, only the worst data were recorded for each bandwidth.

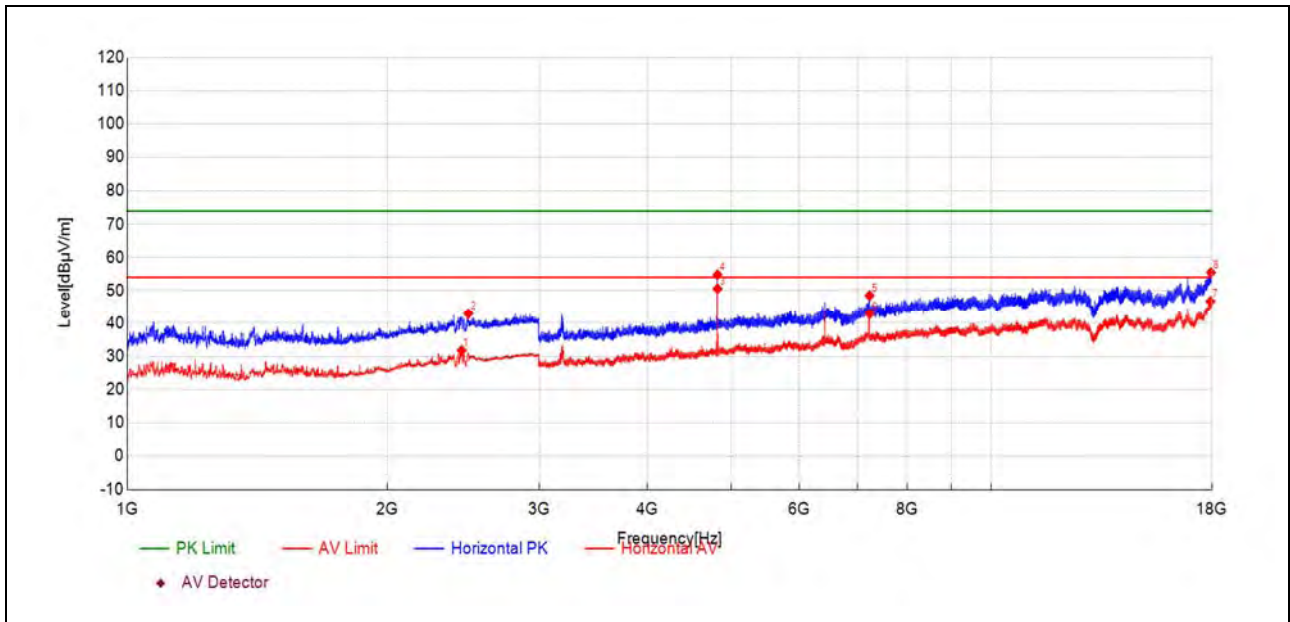
**ANT1****802.11b Mode**

Plot for Channel 1



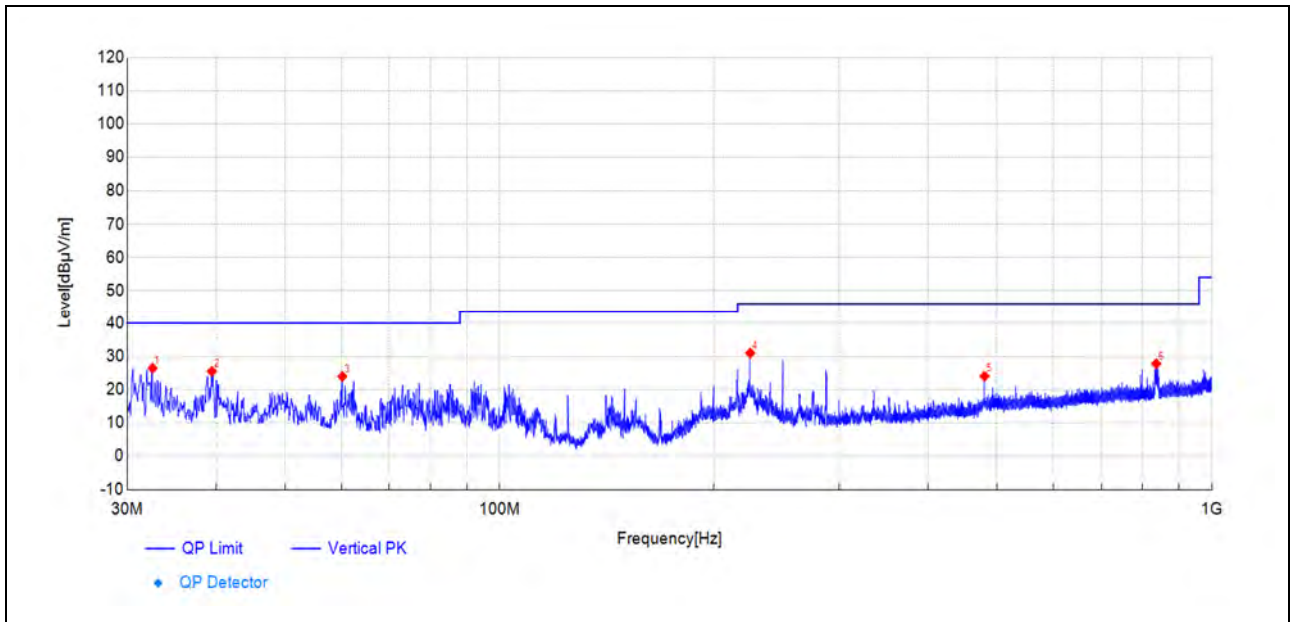
(Antenna Horizontal, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
149.99	16.7	26.51	9.830	43.50	16.99	165	56	PK	PASS
192.21	15.8	29.26	13.490	43.50	14.24	165	158	PK	PASS
250.00	21.0	35.67	14.700	46.00	10.33	165	272	PK	PASS
288.39	14.6	30.17	15.540	46.00	15.83	165	21	PK	PASS
479.99	8.8	28.67	19.900	46.00	17.33	165	145	PK	PASS
835.74	2.0	27.08	25.060	46.00	18.92	165	145	PK	PASS



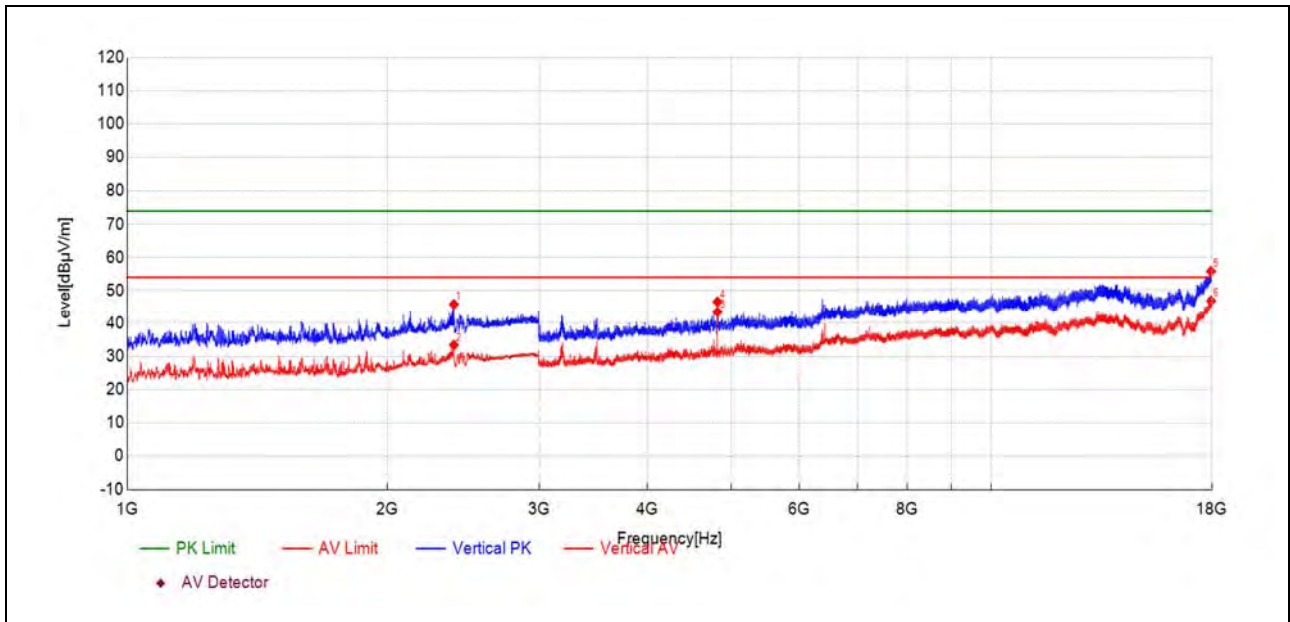
(Antenna Horizontal, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2439.32	30.8	31.75	1.000	54.00	22.25	165	172	AV	PASS
2483.27	42.1	42.97	0.900	74.00	31.03	165	230	PK	PASS
4823.72	61.1	50.57	-10.550	54.00	3.43	165	289	AV	PASS
4823.72	65.4	54.82	-10.550	74.00	19.18	165	335	PK	PASS
7233.10	52.4	48.51	-3.910	74.00	25.49	165	56	PK	PASS
7233.59	46.8	42.86	-3.910	54.00	11.14	165	35	AV	PASS
17940.69	35.1	46.77	11.710	54.00	7.23	165	313	AV	PASS
17969.10	43.5	55.49	12.030	74.00	18.51	165	360	PK	PASS



(Antenna Vertical, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
32.59	14.9	26.42	11.520	40.00	13.58	165	87	PK	PASS
39.47	11.1	25.48	14.420	40.00	14.52	165	222	PK	PASS
60.16	11.3	23.96	12.670	40.00	16.04	165	325	PK	PASS
224.95	16.9	30.95	14.050	46.00	15.05	165	150	PK	PASS
479.99	4.1	24.01	19.900	46.00	21.99	165	325	PK	PASS
836.03	2.7	27.77	25.060	46.00	18.23	165	111	PK	PASS

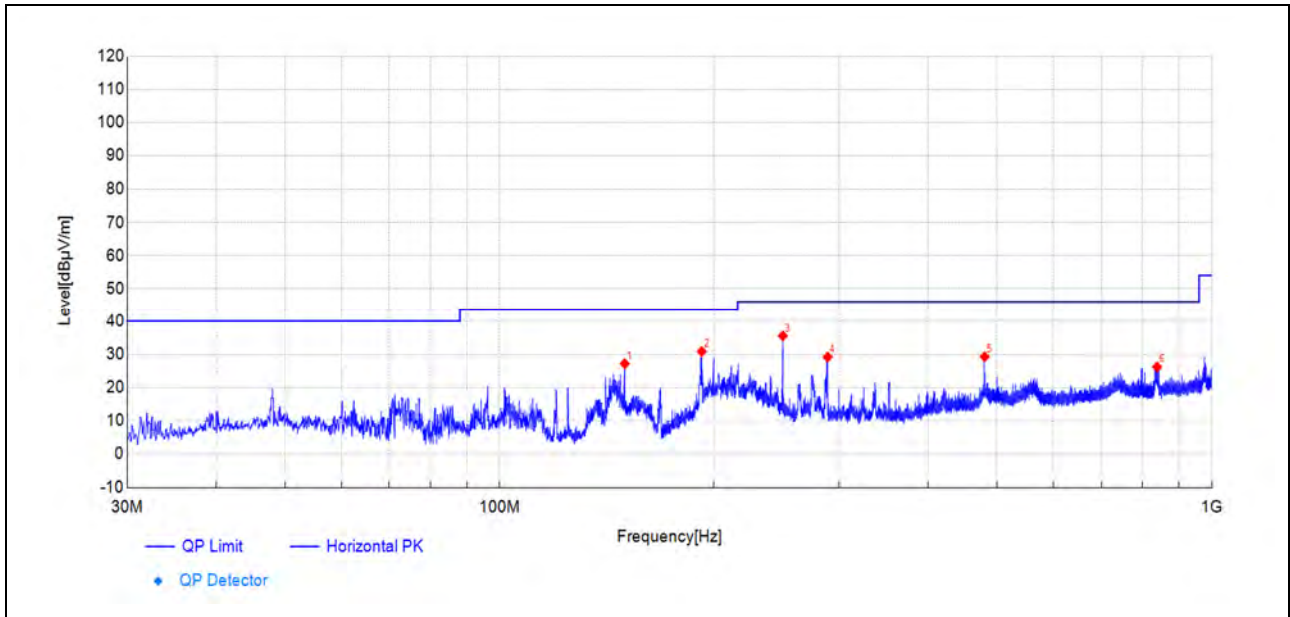


(Antenna Vertical, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2389.50	45.1	45.88	0.740	74.00	28.12	165	84	PK	PASS
2389.99	32.7	33.40	0.750	54.00	20.60	165	84	AV	PASS
4823.72	54.0	43.48	-10.550	54.00	10.52	165	267	AV	PASS
4823.72	57.2	46.63	-10.550	74.00	27.37	165	288	PK	PASS
17969.60	43.8	55.87	12.040	74.00	18.13	165	36	PK	PASS
17973.09	34.9	46.93	12.080	54.00	7.07	165	358	AV	PASS

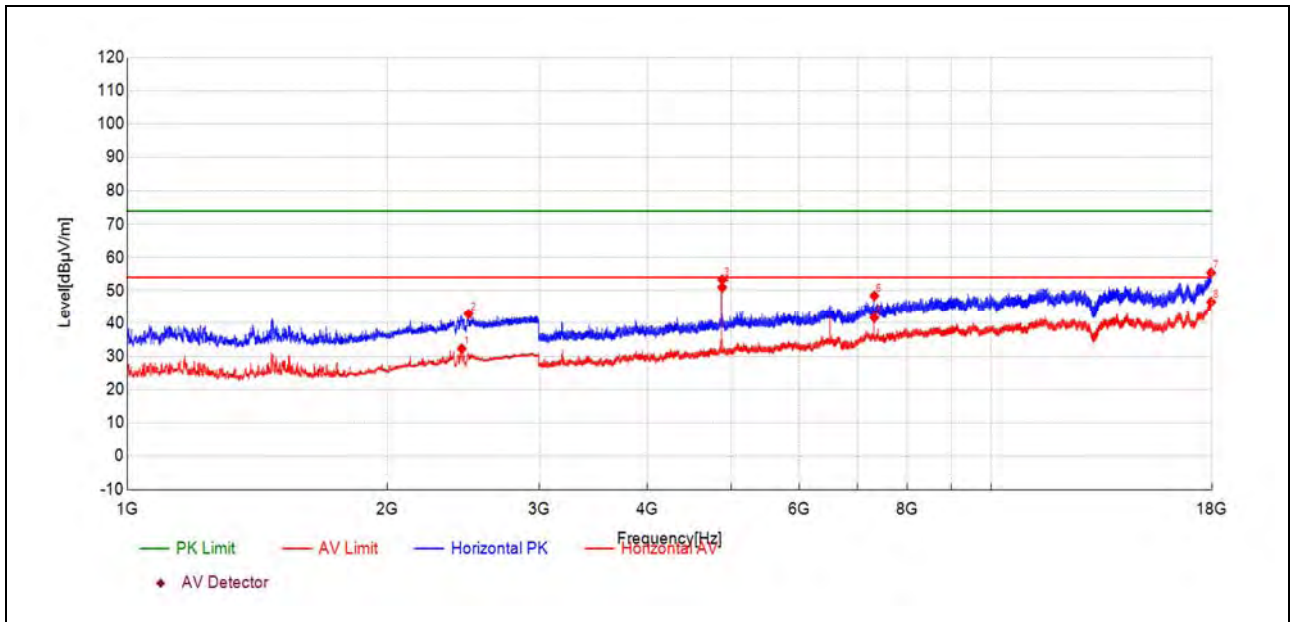


Plot for Channel 7



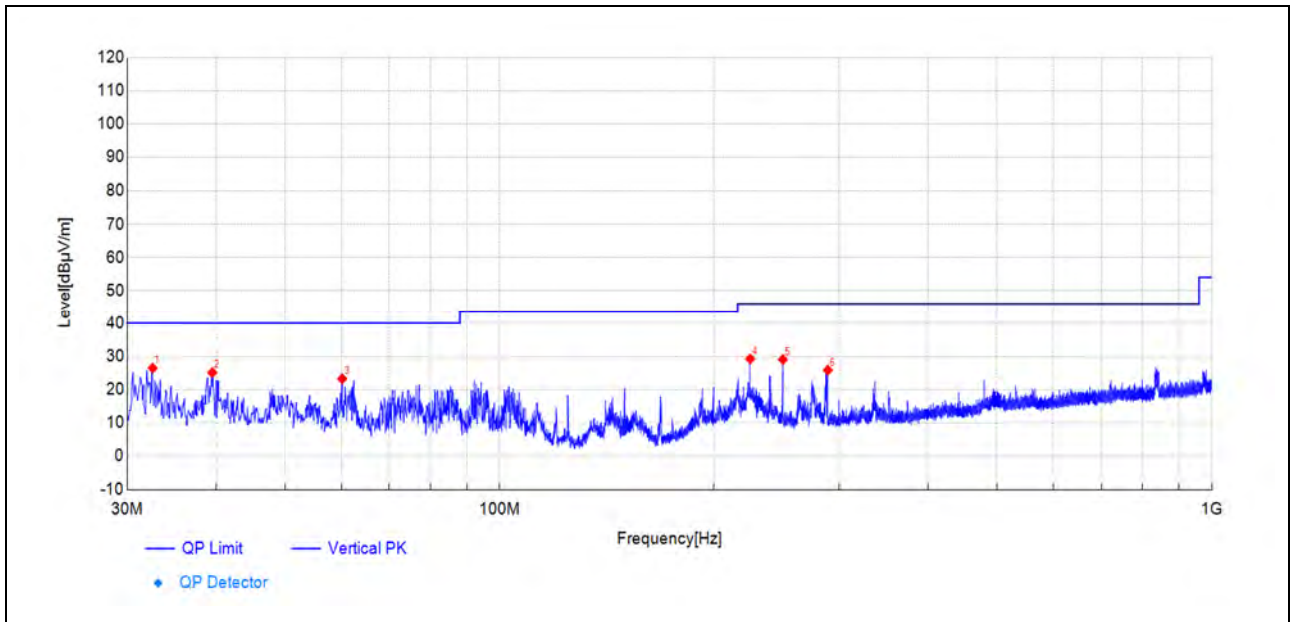
(Antenna Horizontal, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
149.93	17.3	27.15	9.830	43.50	16.35	165	49	PK	PASS
192.32	17.3	30.81	13.490	43.50	12.69	165	0	PK	PASS
250.00	20.8	35.53	14.700	46.00	10.47	165	261	PK	PASS
288.98	13.6	29.15	15.550	46.00	16.85	165	0	PK	PASS
479.99	9.4	29.26	19.900	46.00	16.74	165	135	PK	PASS
838.26	1.1	26.18	25.080	46.00	19.82	165	160	PK	PASS



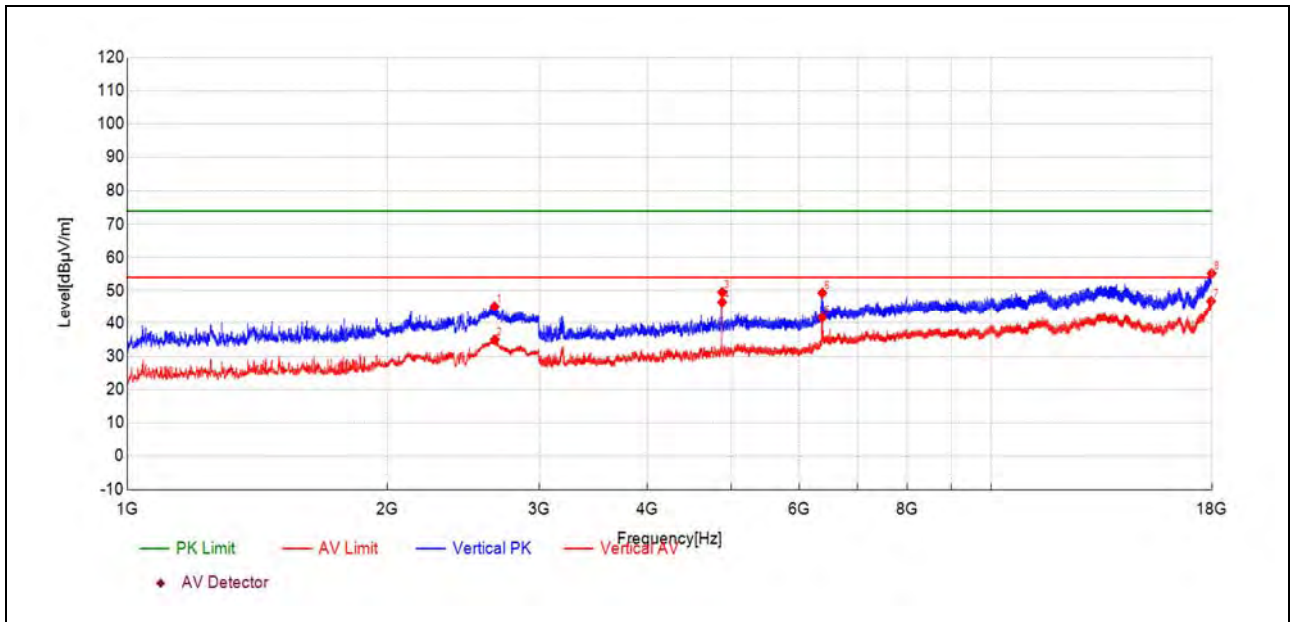
(Antenna Horizontal, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2439.80	31.3	32.27	1.010	-	-	165	37	AV	NA
2484.74	42.0	42.86	0.890	74.00	31.14	165	237	PK	PASS
4883.54	63.3	53.30	-9.970	74.00	20.70	165	339	PK	PASS
4883.54	61.0	50.99	-9.970	54.00	3.01	165	339	AV	PASS
7324.80	45.4	41.70	-3.700	54.00	12.30	165	57	AV	PASS
7325.80	52.2	48.46	-3.700	74.00	25.54	165	36	PK	PASS
17971.09	43.3	55.38	12.050	74.00	18.62	165	354	PK	PASS
17972.09	34.5	46.57	12.070	54.00	7.43	165	180	AV	PASS



(Antenna Vertical, 30MHz to 1GHz)

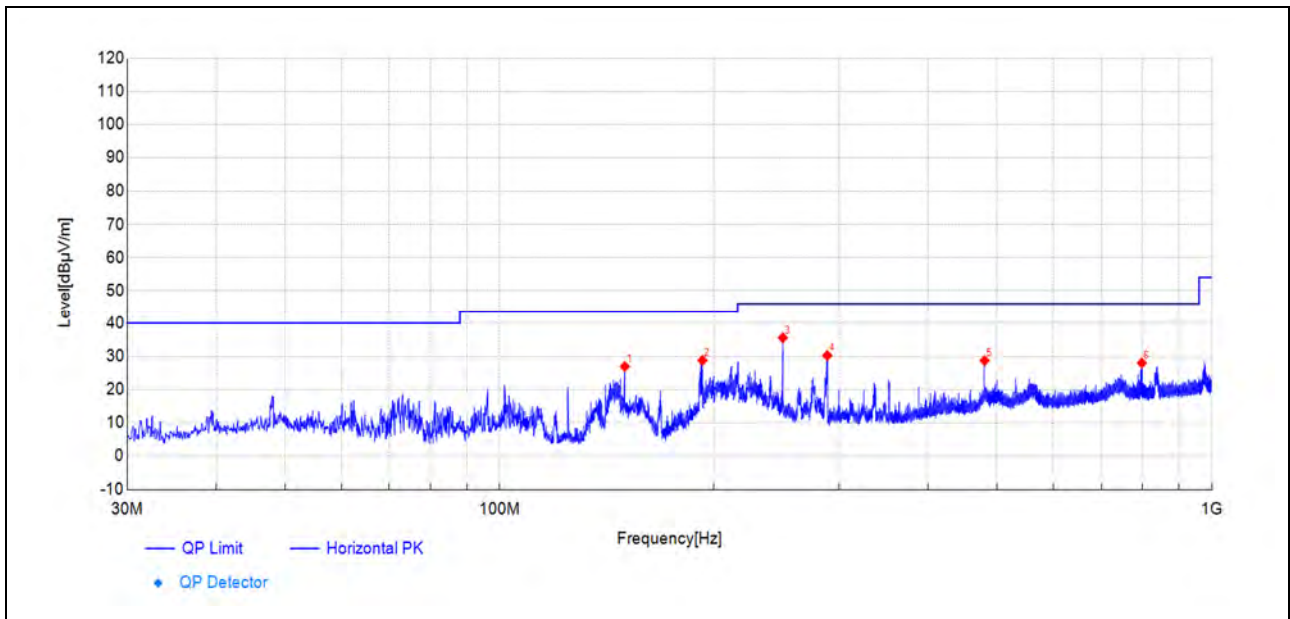
Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
32.59	15.0	26.47	11.520	40.00	13.53	165	212	PK	PASS
39.52	10.7	25.10	14.440	40.00	14.90	165	354	PK	PASS
60.16	10.6	23.26	12.670	40.00	16.74	165	325	PK	PASS
224.95	15.2	29.24	14.050	46.00	16.76	165	150	PK	PASS
250.00	14.3	29.04	14.700	46.00	16.96	165	24	PK	PASS
289.09	10.3	25.84	15.550	46.00	20.16	165	61	PK	PASS



(Antenna Vertical, 1GHz to 18GHz)

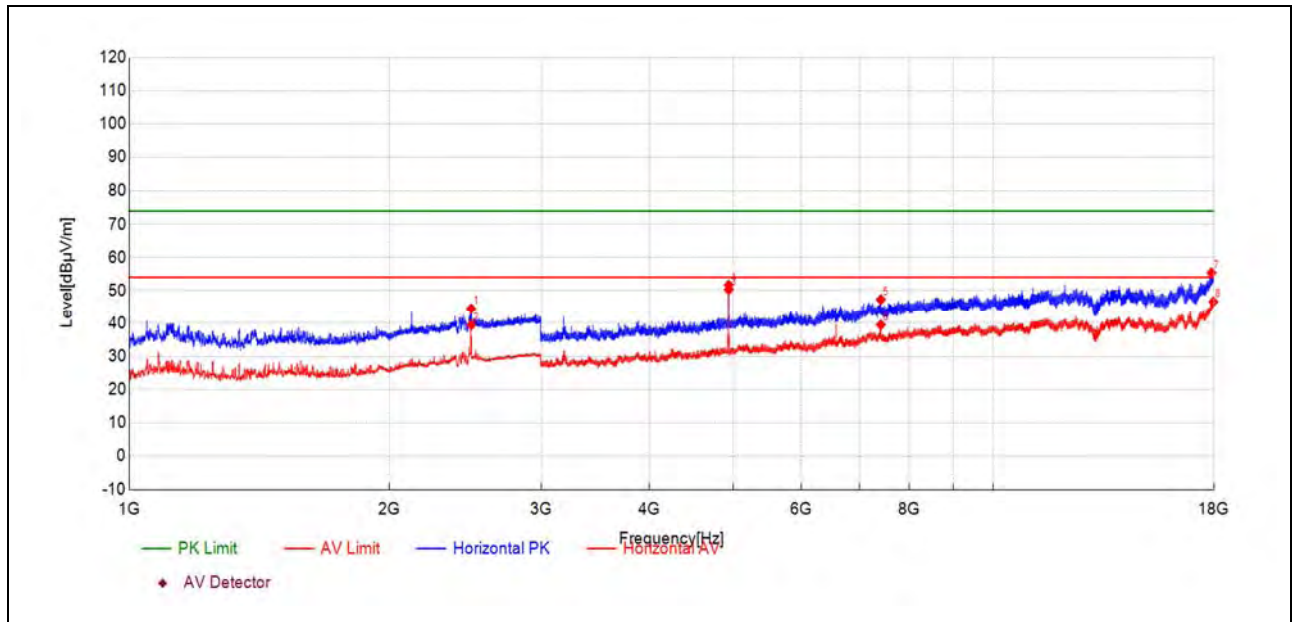
Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2662.52	44.5	45.20	0.730	74.00	28.80	165	6	PK	PASS
2664.96	34.3	35.01	0.730	54.00	18.99	165	6	AV	PASS
4884.03	59.5	49.50	-9.970	74.00	24.50	165	311	PK	PASS
4884.03	56.5	46.53	-9.970	54.00	7.47	165	287	AV	PASS
6374.31	47.1	41.67	-5.460	54.00	12.33	165	358	AV	PASS
6378.30	54.7	49.30	-5.410	74.00	24.70	165	360	PK	PASS
17973.58	34.8	46.83	12.080	54.00	7.17	165	35	AV	PASS
17999.00	42.8	55.21	12.370	74.00	18.79	165	360	PK	PASS

Plot for Channel 13



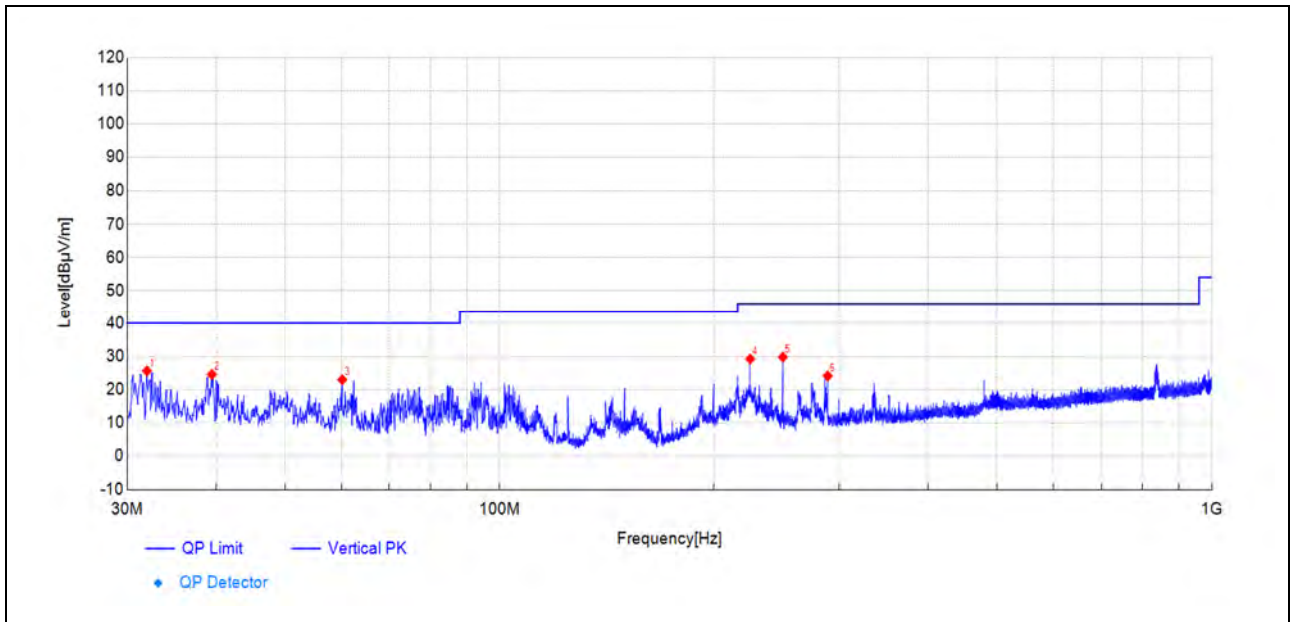
(Antenna Horizontal, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
149.99	17.1	26.91	9.830	43.50	16.59	165	59	PK	PASS
192.73	15.3	28.77	13.490	43.50	14.73	165	12	PK	PASS
250.00	20.9	35.58	14.700	46.00	10.42	165	273	PK	PASS
288.51	14.7	30.23	15.540	46.00	15.77	165	20	PK	PASS
479.99	8.8	28.69	19.900	46.00	17.31	165	145	PK	PASS
797.93	3.4	27.98	24.630	46.00	18.02	165	20	PK	PASS



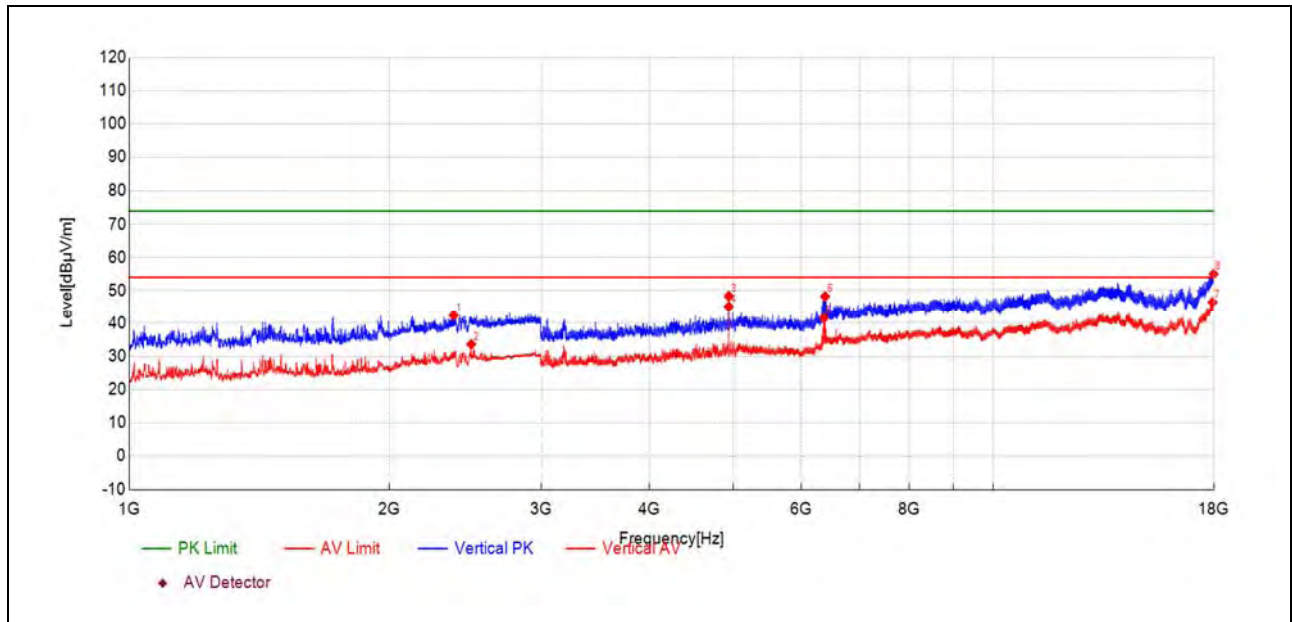
(Antenna Horizontal, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2488.64	43.6	44.50	0.870	74.00	29.50	165	56	PK	PASS
2489.62	38.6	39.46	0.870	54.00	14.54	165	23	AV	PASS
4943.84	60.4	50.30	-10.110	54.00	3.70	165	350	AV	PASS
4943.84	61.8	51.72	-10.110	74.00	22.28	165	350	PK	PASS
7414.02	51.3	47.29	-4.040	74.00	26.71	165	56	PK	PASS
7415.02	43.5	39.49	-4.050	54.00	14.51	165	35	AV	PASS
17900.32	44.2	55.40	11.250	74.00	18.60	165	264	PK	PASS
17984.05	34.4	46.64	12.200	54.00	7.36	165	11	AV	PASS



(Antenna Vertical, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
32.00	14.4	25.60	11.230	40.00	14.40	165	84	PK	PASS
39.47	10.1	24.55	14.420	40.00	15.45	165	286	PK	PASS
60.16	10.3	22.96	12.670	40.00	17.04	165	352	PK	PASS
224.95	15.2	29.22	14.050	46.00	16.78	165	147	PK	PASS
250.00	15.1	29.77	14.700	46.00	16.23	165	23	PK	PASS
288.98	8.6	24.12	15.550	46.00	21.88	165	212	PK	PASS

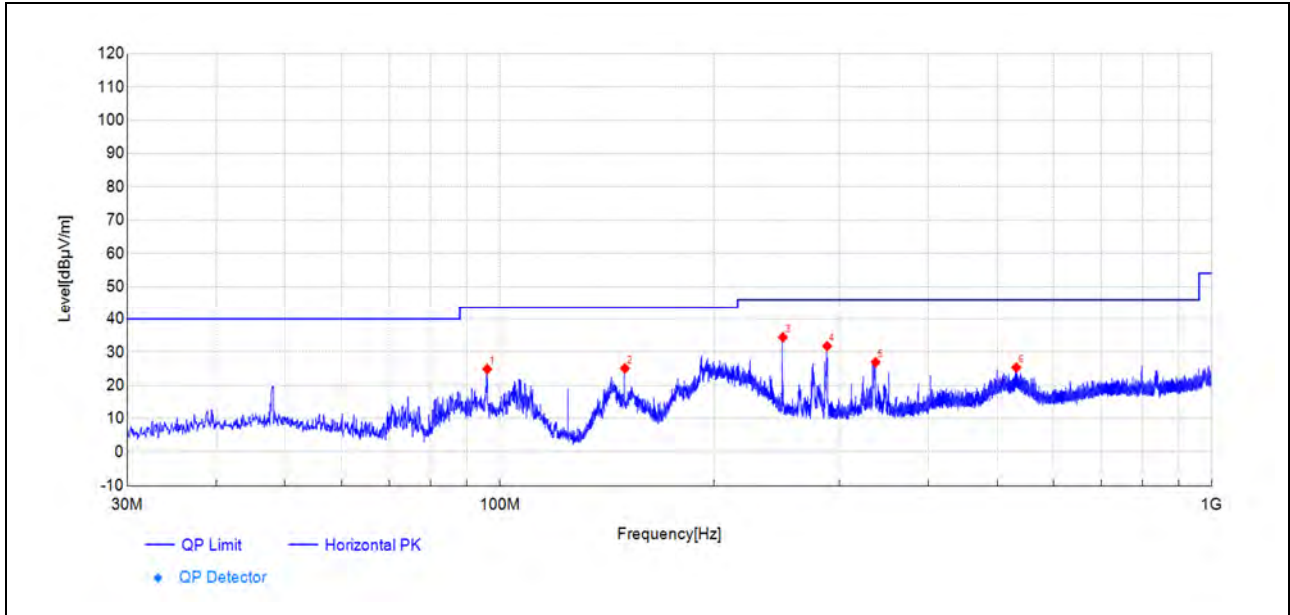


(Antenna Vertical, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2375.82	41.8	42.37	0.530	74.00	31.63	165	139	PK	PASS
2489.13	32.7	33.61	0.870	54.00	20.39	165	38	AV	PASS
4943.84	58.5	48.37	-10.110	74.00	25.63	165	284	PK	PASS
4943.84	55.3	45.16	-10.110	54.00	8.84	165	80	AV	PASS
6370.83	47.1	41.56	-5.490	54.00	12.44	165	148	AV	PASS
6391.26	53.5	48.26	-5.280	74.00	25.74	165	148	PK	PASS
17943.18	34.7	46.47	11.740	54.00	7.53	165	103	AV	PASS
17993.02	42.7	55.01	12.300	74.00	18.99	165	11	PK	PASS

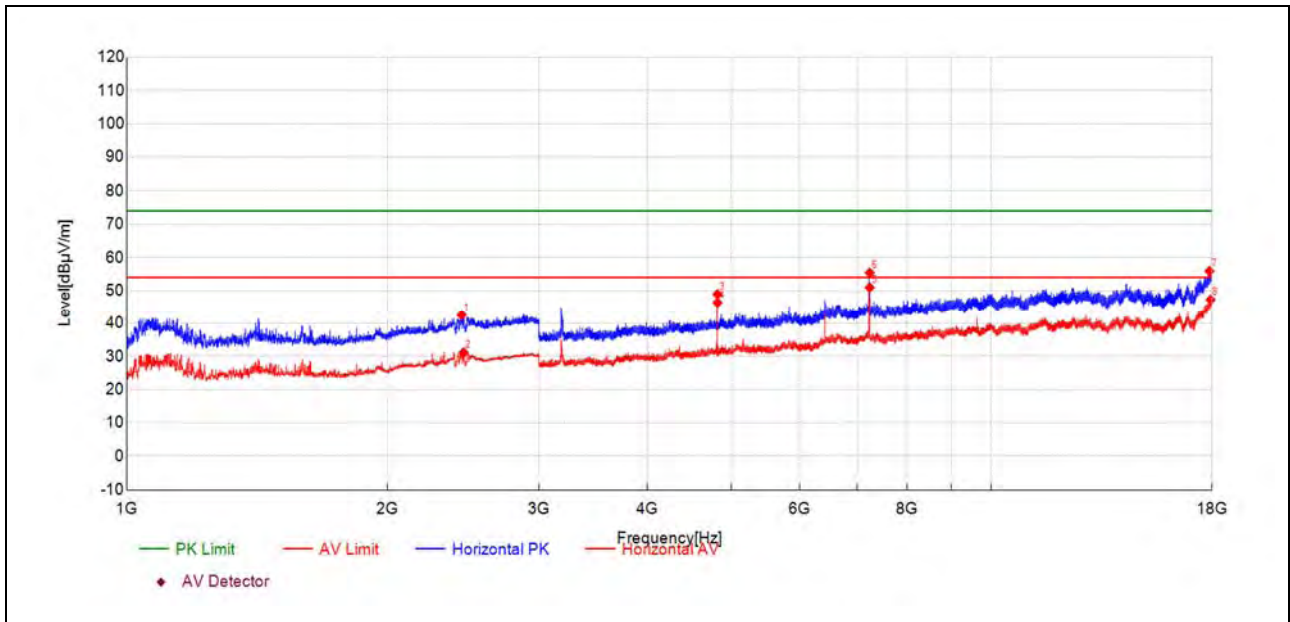
**ANT2****802.11b Mode**

Plot for Channel 1



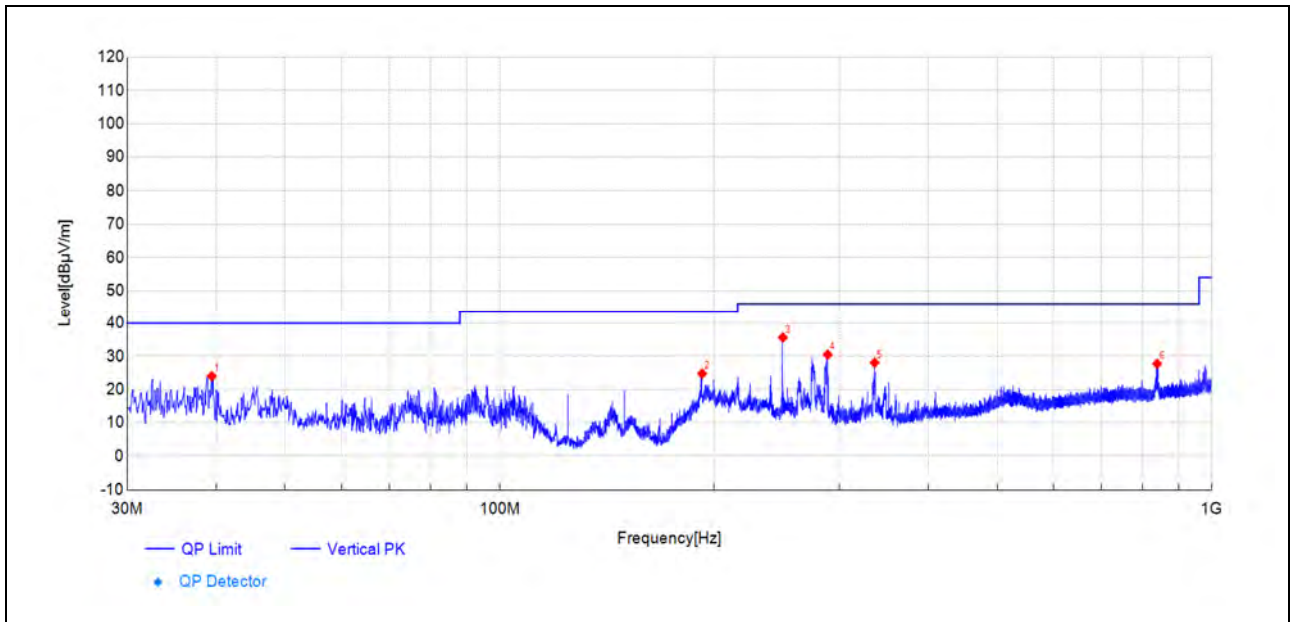
(Antenna Horizontal, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
96.14	12.0	24.92	12.900	43.50	18.58	165	311	PK	PASS
149.99	15.3	25.12	9.830	43.50	18.38	165	56	PK	PASS
250.00	19.8	34.47	14.700	46.00	11.53	165	285	PK	PASS
288.45	16.3	31.81	15.540	46.00	14.19	165	82	PK	PASS
337.36	9.5	26.96	17.480	46.00	19.04	165	82	PK	PASS
531.73	4.7	25.38	20.730	46.00	20.62	165	107	PK	PASS



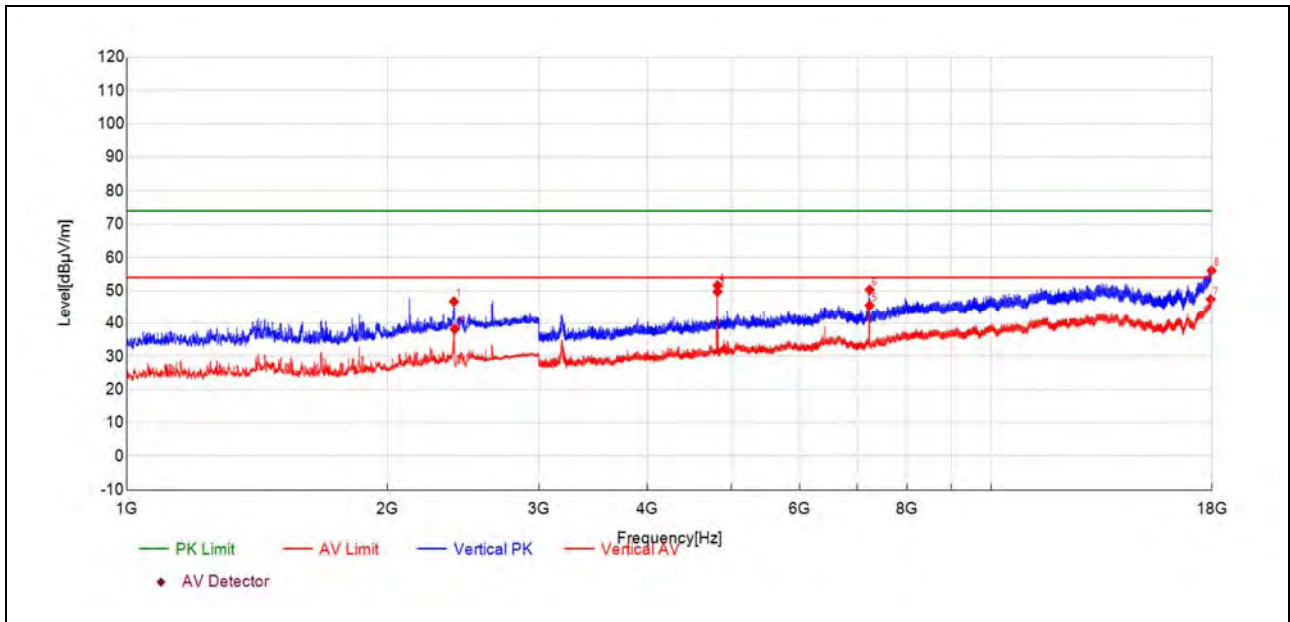
(Antenna Horizontal, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2439.32	41.5	42.46	1.000	74.00	31.54	165	358	PK	PASS
2452.50	30.1	31.14	1.060	54.00	22.86	165	146	AV	PASS
4823.72	59.4	48.89	-10.550	74.00	25.11	165	350	PK	PASS
4823.72	56.9	46.36	-10.550	54.00	7.64	165	93	AV	PASS
7234.59	54.9	50.93	-3.920	54.00	3.07	165	188	AV	PASS
7234.59	59.3	55.40	-3.920	74.00	18.60	165	166	PK	PASS
17894.83	44.7	55.89	11.180	74.00	18.11	165	188	PK	PASS
17947.67	35.5	47.24	11.790	54.00	6.76	165	26	AV	PASS



(Antenna Vertical, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
39.47	9.6	24.04	14.420	40.00	15.96	165	360	PK	PASS
192.62	11.3	24.80	13.490	43.50	18.70	165	360	PK	PASS
250.00	21.0	35.67	14.700	46.00	10.33	165	123	PK	PASS
288.98	15.0	30.50	15.550	46.00	15.50	165	238	PK	PASS
336.42	10.6	28.09	17.450	46.00	17.91	165	263	PK	PASS
838.15	2.7	27.77	25.070	46.00	18.23	165	87	PK	PASS

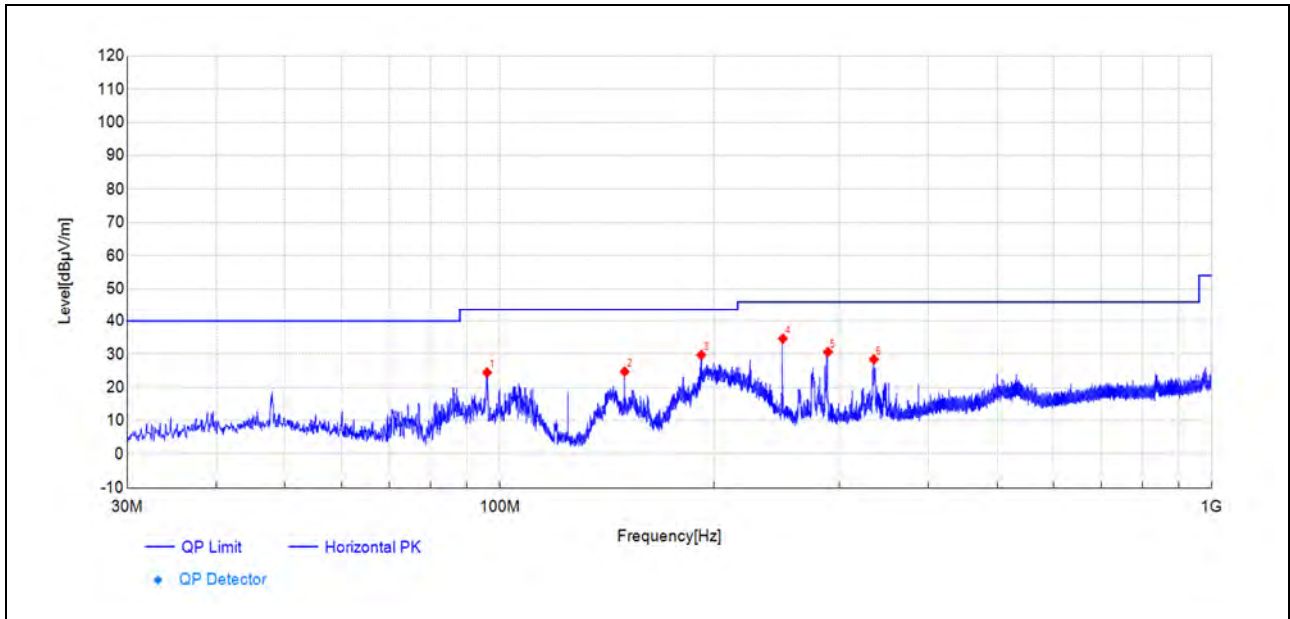


(Antenna Vertical, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2389.99	46.0	46.74	0.750	74.00	27.26	165	100	PK	PASS
2393.89	37.4	38.17	0.750	54.00	15.83	165	350	AV	PASS
4823.72	60.2	49.69	-10.550	54.00	4.31	165	350	AV	PASS
4823.72	62.1	51.58	-10.550	74.00	22.42	165	26	PK	PASS
7235.09	49.5	45.54	-3.920	54.00	8.46	165	325	AV	PASS
7235.59	54.2	50.25	-3.930	74.00	23.75	165	325	PK	PASS
17953.15	35.6	47.41	11.850	54.00	6.59	165	280	AV	PASS
17997.51	43.7	56.06	12.350	74.00	17.94	165	350	PK	PASS

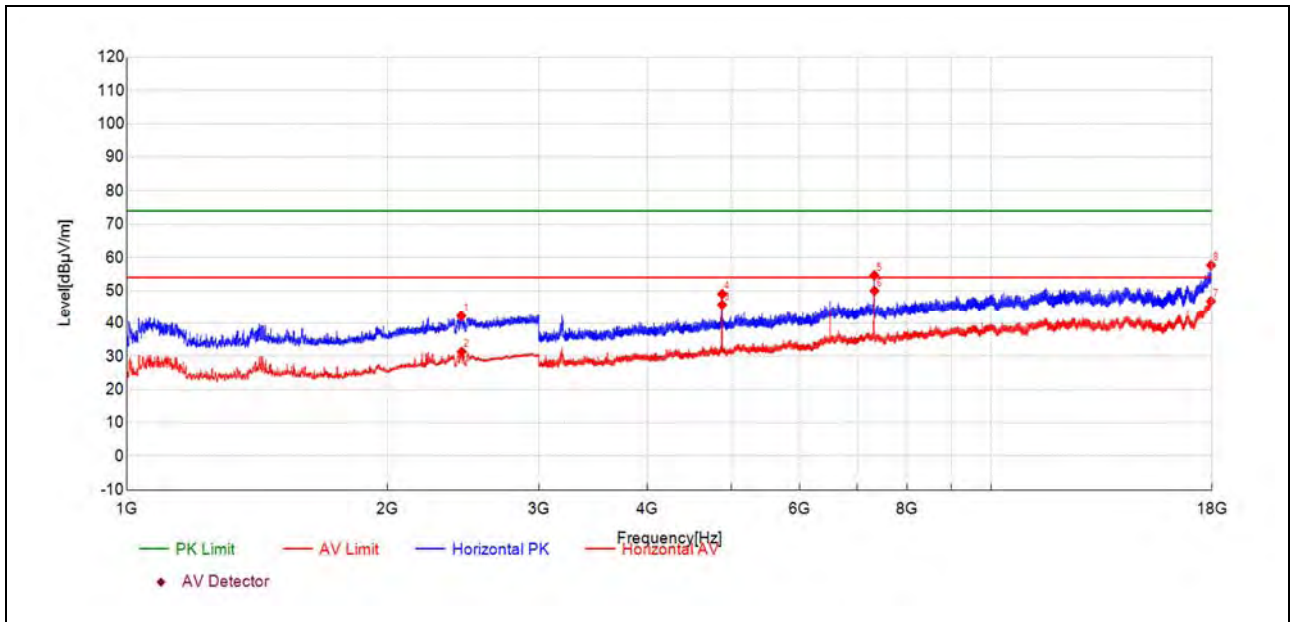


Plot for Channel 7



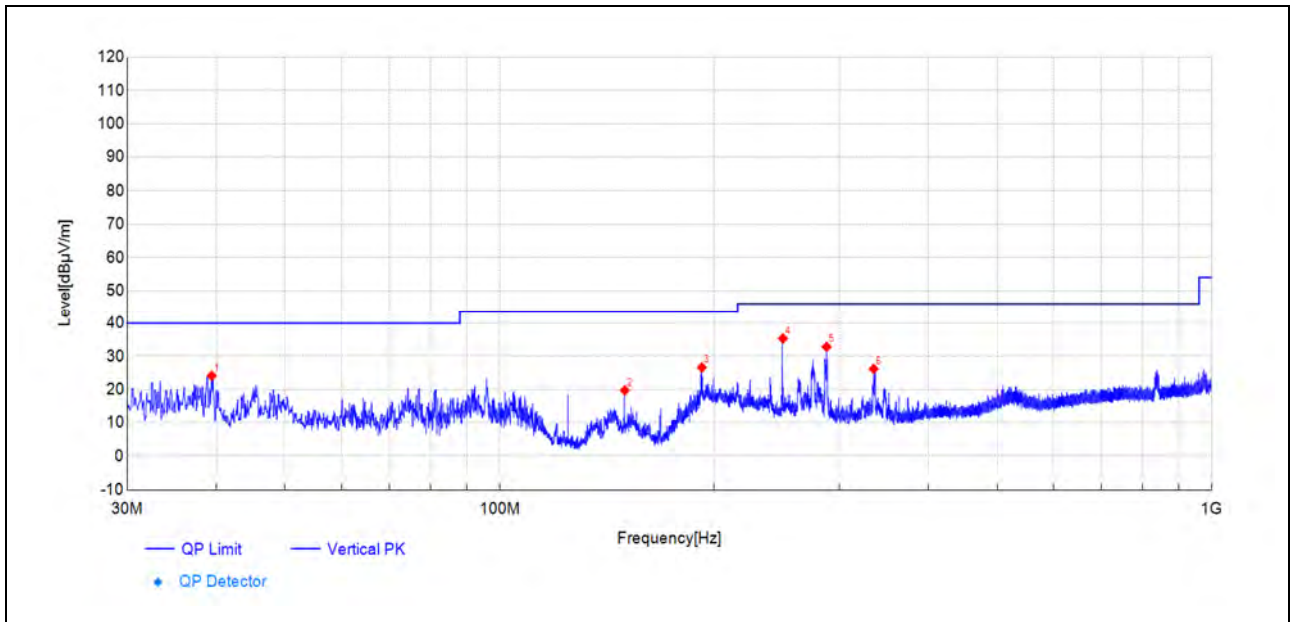
(Antenna Horizontal, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
96.08	11.6	24.51	12.900	43.50	18.99	165	282	PK	PASS
149.93	15.0	24.78	9.830	43.50	18.72	165	67	PK	PASS
192.03	16.3	29.76	13.480	43.50	13.74	165	93	PK	PASS
250.00	20.0	34.69	14.700	46.00	11.31	165	282	PK	PASS
289.21	15.2	30.71	15.550	46.00	15.29	165	79	PK	PASS
335.54	11.0	28.45	17.410	46.00	17.55	165	93	PK	PASS



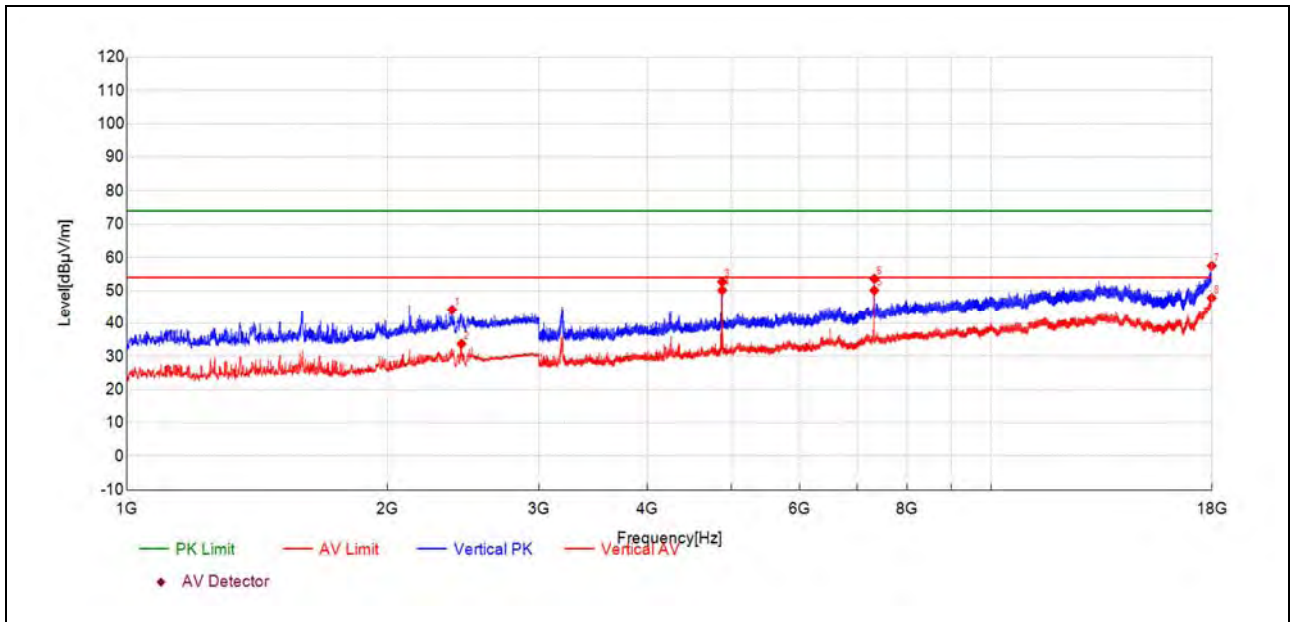
(Antenna Horizontal, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2437.36	41.2	42.21	0.990	-	-	165	167	PK	NA
2439.32	30.3	31.34	1.000	-	-	165	245	AV	PASS
4883.54	55.7	45.74	-9.970	54.00	8.26	165	350	AV	PASS
4884.03	59.0	48.99	-9.970	74.00	25.01	165	350	PK	PASS
7326.30	58.3	54.63	-3.710	74.00	19.37	165	141	PK	PASS
7326.80	53.7	49.97	-3.710	54.00	4.03	165	141	AV	PASS
17962.12	34.9	46.81	11.960	54.00	7.19	165	350	AV	PASS
17970.59	45.6	57.67	12.050	74.00	16.33	165	232	PK	PASS



(Antenna Vertical, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
39.47	9.8	24.17	14.420	40.00	15.83	165	74	PK	PASS
149.99	9.9	19.76	9.830	43.50	23.74	165	11	PK	PASS
192.38	13.1	26.62	13.490	43.50	16.88	165	124	PK	PASS
250.00	20.7	35.36	14.700	46.00	10.64	165	124	PK	PASS
287.98	17.4	32.87	15.520	46.00	13.13	165	74	PK	PASS
335.30	8.8	26.20	17.390	46.00	19.80	165	276	PK	PASS

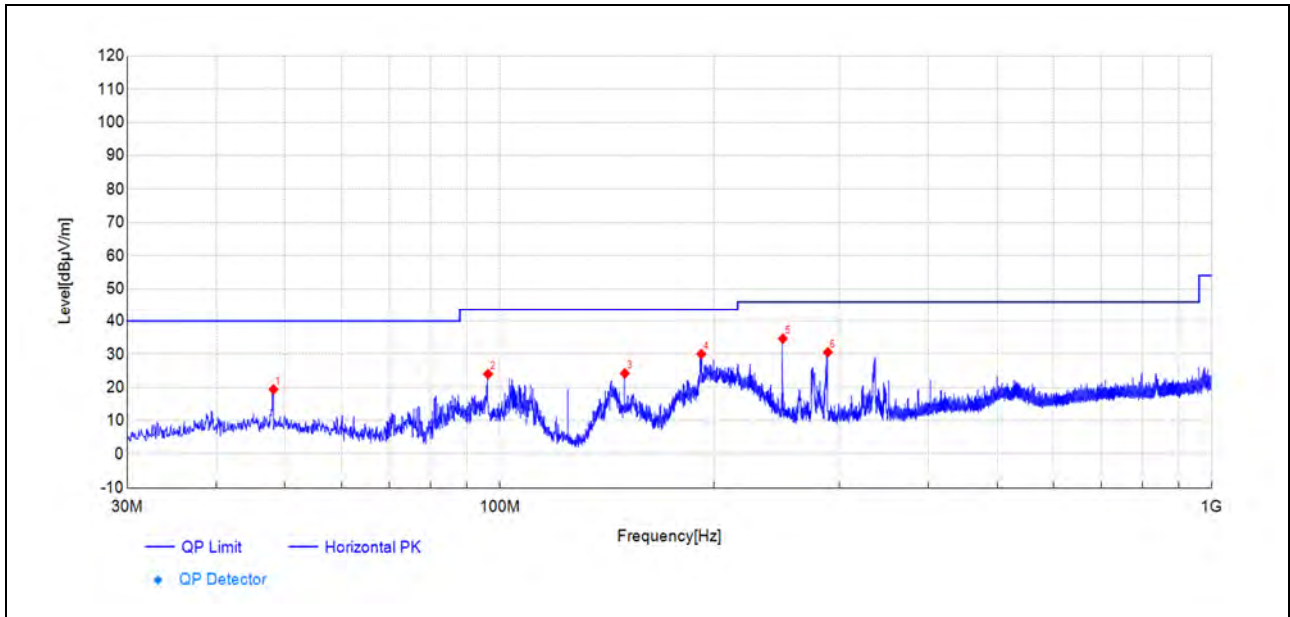


(Antenna Vertical, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2378.27	43.6	44.13	0.580	74.00	29.87	165	132	PK	PASS
2438.34	32.8	33.74	0.990	-	-	165	42	AV	NA
4883.54	62.6	52.65	-9.970	74.00	21.35	165	0	PK	PASS
4884.03	60.1	50.09	-9.970	54.00	3.91	165	9	AV	PASS
7324.31	53.8	50.08	-3.700	54.00	3.92	165	120	AV	PASS
7325.30	57.3	53.58	-3.700	74.00	20.42	165	93	PK	PASS
17997.51	45.1	57.48	12.350	74.00	16.52	165	9	PK	PASS
17999.50	35.4	47.78	12.380	54.00	6.22	165	305	AV	PASS

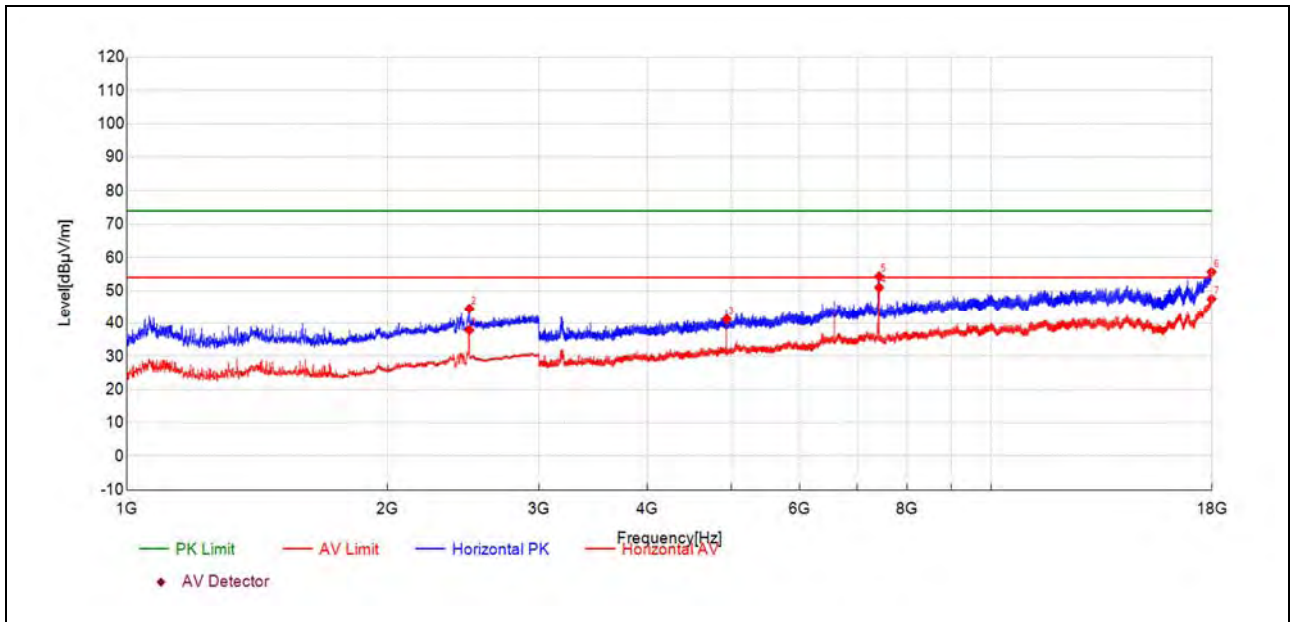


Plot for Channel 13



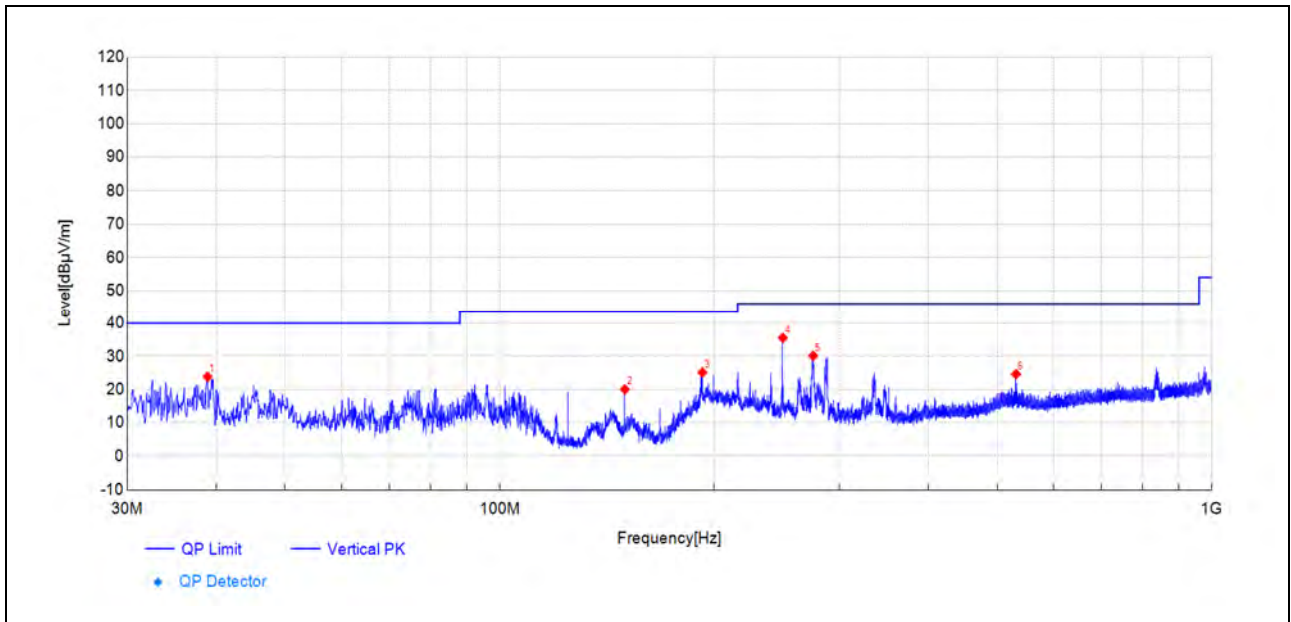
(Antenna Horizontal, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
48.17	4.1	19.44	15.320	40.00	20.56	165	1	PK	PASS
96.38	11.1	24.04	12.930	43.50	19.46	165	105	PK	PASS
149.99	14.4	24.26	9.830	43.50	19.24	165	67	PK	PASS
192.09	16.6	30.09	13.490	43.50	13.41	165	93	PK	PASS
250.00	20.0	34.70	14.700	46.00	11.30	165	298	PK	PASS
289.09	15.1	30.60	15.550	46.00	15.40	165	260	PK	PASS



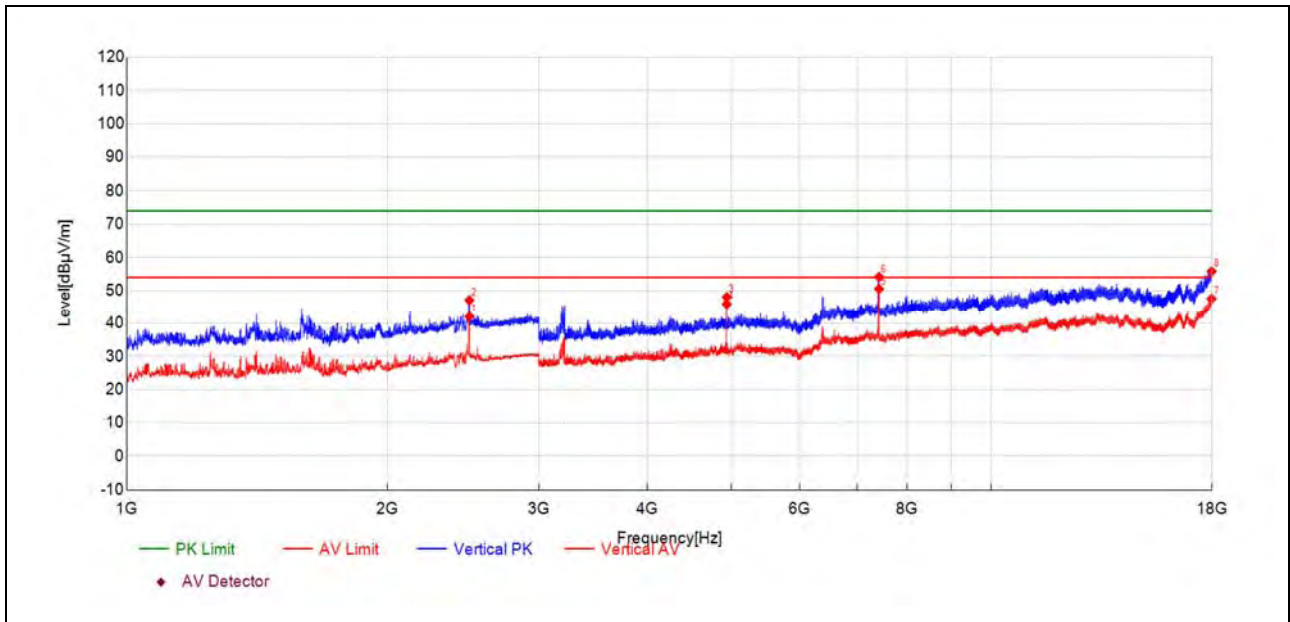
(Antenna Horizontal, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2490.11	37.0	37.89	0.860	54.00	16.11	165	129	AV	PASS
2490.11	43.6	44.48	0.860	74.00	29.52	165	129	PK	PASS
4943.84	51.4	41.30	-10.110	54.00	12.70	165	350	AV	PASS
7419.50	55.1	50.93	-4.120	54.00	3.07	165	188	AV	PASS
7419.50	58.4	54.29	-4.120	74.00	19.71	165	166	PK	PASS
17995.51	43.3	55.62	12.330	74.00	18.38	165	166	PK	PASS
17997.01	35.2	47.51	12.350	54.00	6.49	165	25	AV	PASS



(Antenna Vertical, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
38.94	9.6	23.87	14.250	40.00	16.13	165	360	PK	PASS
149.99	10.2	20.07	9.830	43.50	23.43	165	24	PK	PASS
192.79	11.6	25.13	13.490	43.50	18.37	165	225	PK	PASS
250.00	20.9	35.55	14.700	46.00	10.45	165	123	PK	PASS
275.69	15.0	30.13	15.090	46.00	15.87	165	73	PK	PASS
531.14	3.9	24.64	20.730	46.00	21.36	165	187	PK	PASS



(Antenna Vertical, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2490.11	41.2	42.01	0.860	54.00	11.99	165	66	AV	PASS
2490.11	46.2	47.09	0.860	74.00	26.91	165	66	PK	PASS
4943.84	58.1	48.03	-10.110	74.00	25.97	165	2	PK	PASS
4943.84	56.0	45.93	-10.110	54.00	8.07	165	8	AV	PASS
7417.01	54.6	50.52	-4.080	54.00	3.48	165	93	AV	PASS
7418.51	58.3	54.15	-4.110	74.00	19.85	165	117	PK	PASS
17995.02	35.2	47.57	12.330	54.00	6.43	165	349	AV	PASS
17999.50	43.4	55.81	12.380	74.00	18.19	165	209	PK	PASS



Notes

1. The report shall have report stamp or our company stamp.
2. The report shall be invalid without all the signatures of the editor and approver.
3. The report shall not be changed.
4. Any objections must be raised to Morlab within 15 days since the date when the report is received. It will not be taken into consideration beyond this limit.
5. Conformity declaration:
 - ☒ Morlab issues a statement of conformity based on the corresponding standards (default)
 - ☐ Morlab issues a statement of conformity based on the applicant requirement
6. Use of uncertainty of measurement for decisions on conformity (decision rule):

No decision rule is specified by the testing standard, when comparing the measurement result with the applicable limit according to the specification in that standard. The decisions on conformity are made without applying the measurement uncertainty ("simple acceptance" decision rule).

————— END OF REPORT —————