REPORT No.: SZ25060449W05

TEST REPORT

APPLICANT	:	BLU Products, Inc.
PRODUCT NAME	:	Smart Phone
MODEL NAME	:	G75
BRAND NAME	:	BLU
FCC ID	:	YHLBLU75GC
STANDARD(S)	:	47 CFR Part 15 Subpart C
RECEIPT DATE	:	2025-07-07
TEST DATE	:	2025-07-09 to 2025-08-01
ISSUE DATE	:	2025-08-19

Edited by: Peng Mi (Rapporteur)

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DIRECTORY

Change History		
Version	**Date**	**Reason for change**
1.0	2025-08-19	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	Jul. 29, 2025	Zhu Peihong	PASS	/
3	15.247(b)	Maximum Peak Conducted Output Power	Jul. 29, 2025	Zhu Peihong	PASS	/
4	15.247(b)	Maximum Average Conducted Output Power	Jul. 29, 2025	Zhu Peihong	PASS	/
5	15.247(a)	Bandwidth	Jul. 29, 2025	Zhu Peihong	PASS	/
6	15.247(d)	Conducted Spurious Emission and Band Edge	Jul. 29, 2025	Zhu Peihong	PASS	/
7	15.247(e)	Power Spectral Density	Jul. 29, 2025	Zhu Peihong	PASS	/
8	15.207	Conducted Emission	Jul. 25, 2025	Wang Yapeng	PASS	/
9	15.247(d)	Restricted Frequency Bands	Jul. 16, 2025	Tian Xin	PASS	/
10	15.209, 15.247(d)	Radiated Emission	Jul. 17, 2025	Yuan Zihong	PASS	/

Note 1: The tests were performed according to the method of measurements prescribed in ANSI C63.10-2020 and KDB 558074 D01 v05r02.

Note 2: Any additions, deviation, or exclusions from the method shall be noted in the “Remark”.

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	2025.01.15	2026.01.14
Attenuator	MTJ6004-20	VAT-10+	MTJ Cooperation	N/A	N/A
RF Cable (30MHz-26GHz)	CB01	RF01	Morlab	N/A	N/A
SMA Connector	CN01	RF03	HUBER-SUHNER	N/A	N/A

1.2.2 Conducted Emission Test Equipment

Equipment	Serial No.	Type	Manufacturer	Cal. Date	Due Date
Receiver	101052	ESPI	R&S	2025.05.15	2026.05.14
LISN	103131	ENV 216	R&S	2025.03.20	2026.03.19
RF Coaxial Cable (DC-100MHz)	EMC-CE-00514	N/A	N/A	2025.05.06	2026.05.05

1.2.3 List of Software Used

Description	Manufacturer	Software Version
Test System	MaiWei	2.0.0.0
JS32-RE	Tonscend	5.0.0
TS+ -[JS32-CE]	Tonscend	2.5.0.0

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	01267	VULB 9163	Schwarzbeck	2024.07.26	2025.07.25
Test Antenna - Loop	1519-022	FMZB1519	Schwarzbeck	2025.05.16	2026.05.15
Test Antenna – Horn	02634	BBHA 9120D	Schwarzbeck	2025.06.29	2026.06.28
Test Antenna – Horn	BBHA9170 #773	BBHA9170	Schwarzbeck	2025.06.20	2026.06.19
Preamplifier (10MHz-6GHz)	46732	S10M100L3802	LUCIX CORP.	2025.05.13	2026.05.12
Preamplifier (2GHz-18GHz)	61171/61172	S020180L3203	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	2024.09.11	2025.09.10
RF Coaxial Cable (DC-40GHz)	22290046	QA360-40-KKF-2	Qualwave	2024.09.11	2025.09.10
RF Coaxial Cable (DC-18GHz)	22120181	QA500-18-NN-5	Qualwave	2024.09.11	2025.09.10
Anechoic Chamber	N/A	9m*6m*6m	CRT	2025.04.19	2028.04.18
Anechoic Chamber	N/A	9m*6m*6m	CRT	2022.11.30	2025.11.29

1.3. Measurement Uncertainty

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

1.4. Testing Laboratory

Laboratory Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Laboratory Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China
Telephone:	+86 755 36698555
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FCC Designation Number:	CN1192
FCC Test Firm Registration Number:	226174

2. General Description

2.1. Information of Applicant and Manufacturer

Applicant:	BLU Products, Inc.
Applicant Address:	8600 NW 36th Street, Suite #300 | Miami, FL 33166 USA
Manufacturer:	BLU Products, Inc.
Manufacturer Address:	8600 NW 36th Street, Suite #300 | Miami, FL 33166 USA

2.2. Information of EUT

Product Name:	Smart Phone	
Sample No.:	1#, 2#, 7#	
Hardware Version:	KE34NM_01	
Software Version:	BLU_G1170_V15.0.03.01_GENERIC_20250730_2255	
Modulation Technology:	DSSS, OFDM	
Modulation Type:	Refer to section 2.4.1	
Wireless Technology:	802.11b, 802.11g, 802.11n (HT20)	
Operating Frequency Range:	2412MHz–2472MHz	
Antenna Type:	PIFA Antenna	
Antenna Gain:	1.89dBi	
Accessory Information:	Battery 1	
	Brand Name:	BLU
	Model No.:	C1016605600P
	Serial No.:	N/A
	Capacity:	5900mAh
	Rated Voltage:	3.89V
	Charge Limit:	4.48V
	Manufacturer:	Shenzhenshi jiuliyuan electronic technology co., LTD

Accessory Information:	AC Adapter	
	Brand Name:	BLU
	Model No.:	US-BJ-1825Q
	Serial No.:	N/A
	Rated Output:	5.0V⎓3000mA
	Rated Input:	100-240V～50/60Hz, 0.5A
	Manufacturer:	ShenZhen BaiJunDa Electronics Co., Ltd

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.

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**		

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
802.11b	20	DSSS	**DBPSK**	**1**/2/5.5/11Mbps
			DQPSK	
			CCK	
802.11g	20	OFDM	**BPSK**	**6**/9/12/18/24/36/48/54Mbps
			QPSK	
			16QAM	
			64QAM	
802.11n	20 (HT20)	OFDM	**BPSK**	**MCS0**~MCS7
			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.

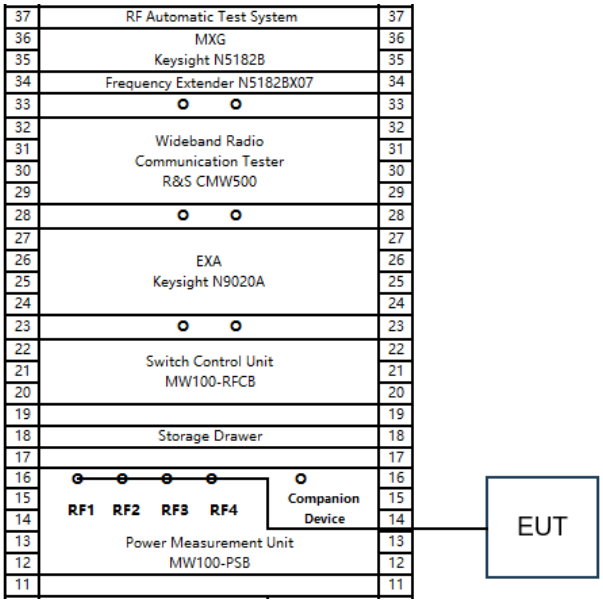
Note2: The RF signal transmission of EUT is controlled by the build-in engineering mode which is provided by the manufacturer. The recorded power setting value is the maximum that the engineering mode has configuration during testing.

2.5. Test Conditions

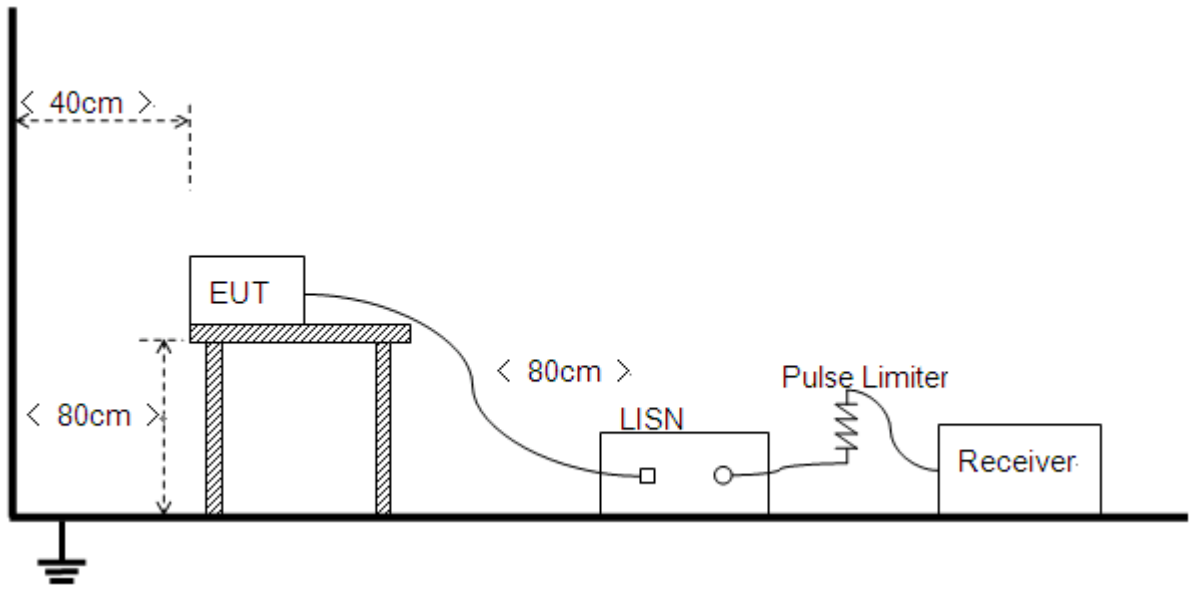
Temperature (°C):	15-35
Relative Humidity (%):	30-60
Atmospheric Pressure (kPa):	86-106

2.6. Test Setup Layout Diagram

2.6.1.Conducted Measurement

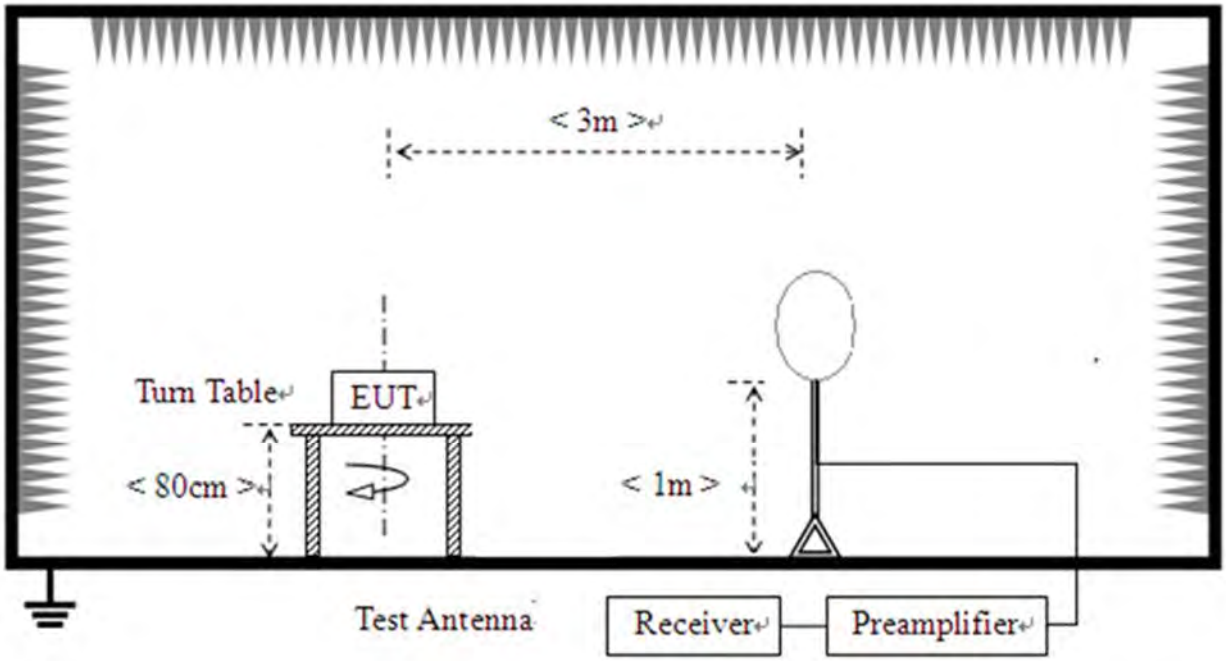


2.6.2.Conducted Emission Measurement

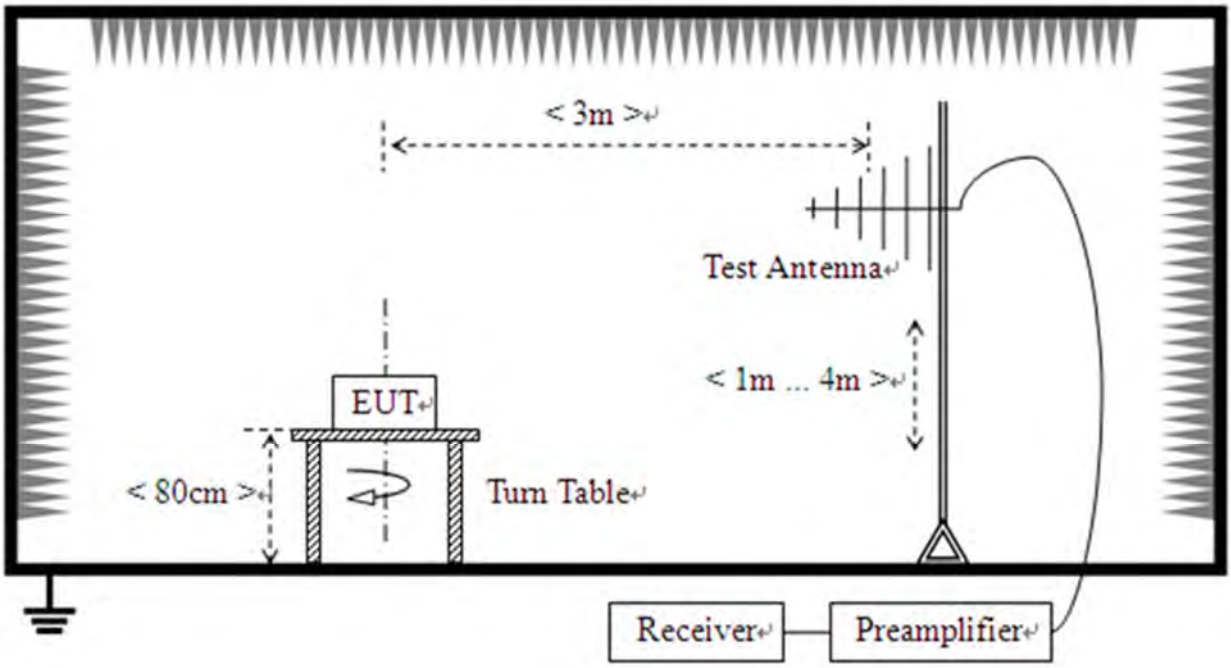


2.6.3.Radiation Measurement

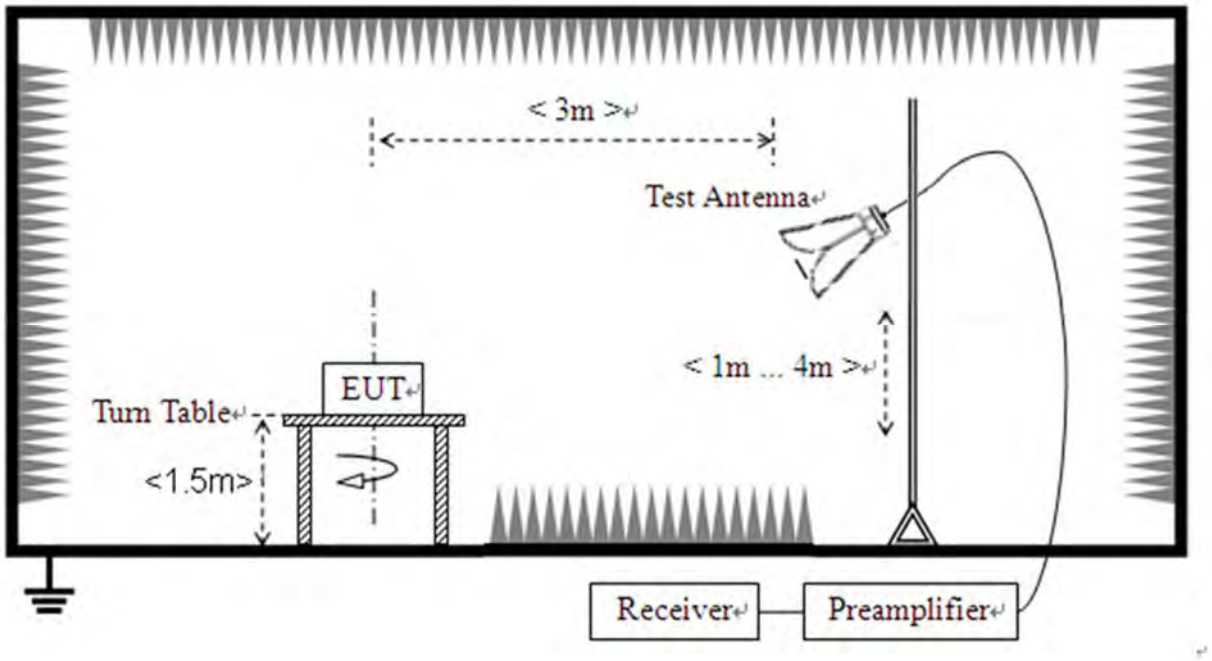
1) For radiated emissions from 9kHz to 30MHz



2) For radiated emissions from 30MHz to1GHz



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

Antenna location	Antenna Type	Coupling Method
☒Internal ☐External	☐FPC Antenna ☐Spring Antenna ☐Ceramic Antenna ☐Integrated Antenna ☐Dipole Antenna ☐PCB Antenna ☒PIFA Antenna ☐On-board Antenna	☐I-PEX Connector ☐SMA Connector ☐RP-SMA Connector ☒Metal Shrapnel ☐Layout

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 ±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.

3.3.2.Test Procedures

The EUT (Equipment under the test) which is coupled to the spectrum analyzer; 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 to1.5 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 50μH/50Ω line impedance stabilization network (LISN).

Frequency Range (MHz)	Conducted Limit (dBμV)	
	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.

3.7.3.Test Setup Layout

Refer to chapter 2.6.2 in this report.

3.7.4.Test Result

Refer to Annex A.8 in this report.

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 ≥ 1GHz, 100 kHz for f < 1GHz
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.9 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 (μV/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

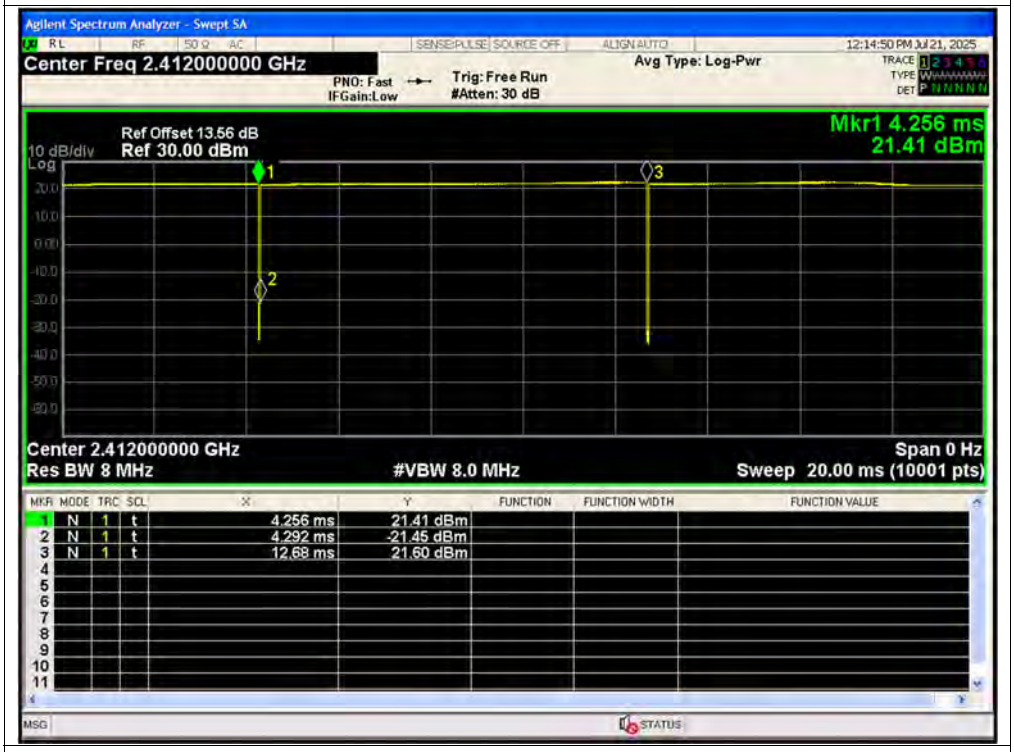
Refer to Annex A.10 in this report.

Annex A Test Data and Result

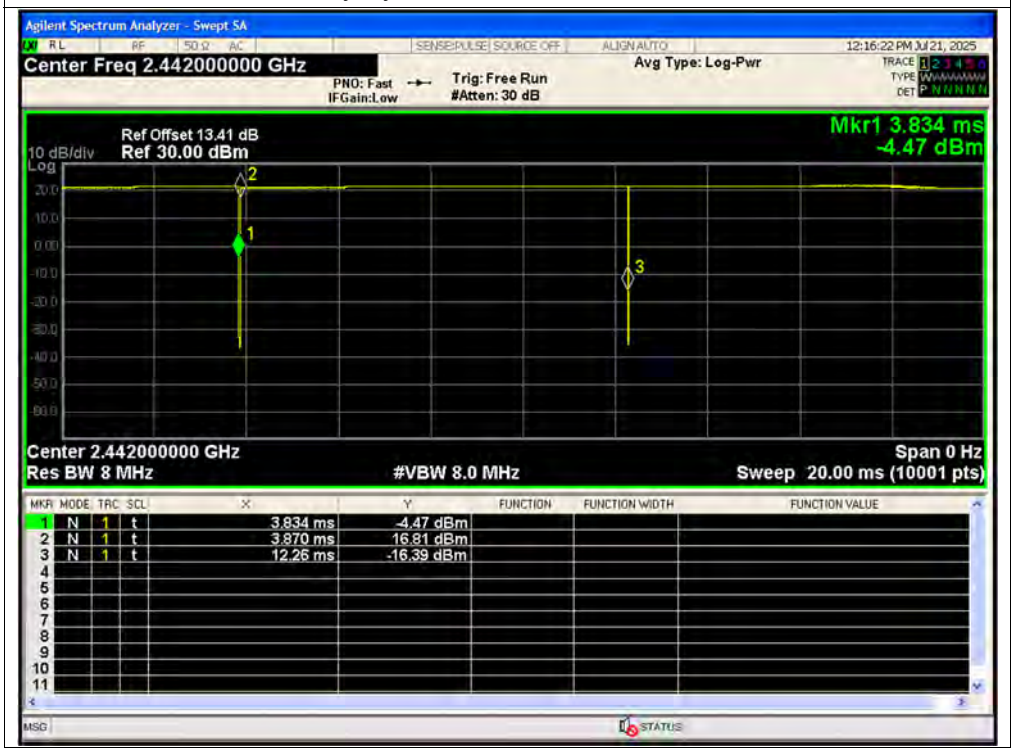
A.1. Duty Cycle of Test Signal

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	b	2412	Ant1	99.57	0.02	0.12
NVNT	b	2442	Ant1	99.57	0.02	0.12
NVNT	b	2472	Ant1	99.55	0.02	0.12
NVNT	g	2412	Ant1	97.08	0.13	0.72
NVNT	g	2442	Ant1	96.94	0.13	0.72
NVNT	g	2472	Ant1	97.08	0.13	0.72
NVNT	n20	2412	Ant1	96.73	0.14	0.77
NVNT	n20	2442	Ant1	96.73	0.14	0.77
NVNT	n20	2472	Ant1	96.88	0.14	0.77

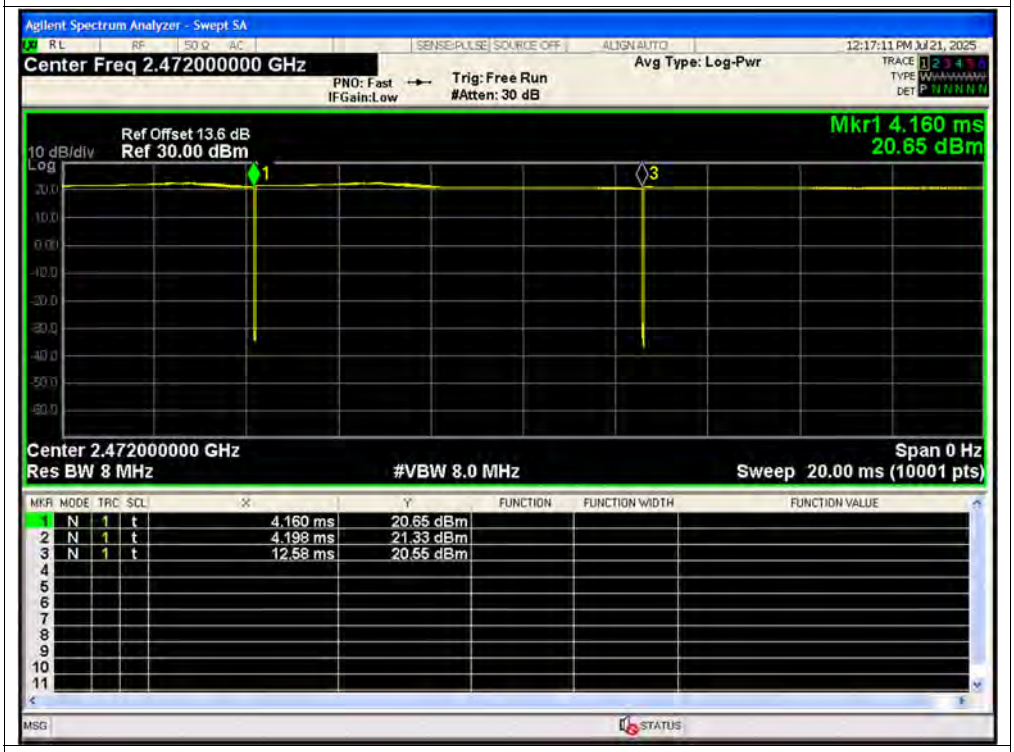
Test Graphs
Duty Cycle NVNT b 2412MHz Ant1



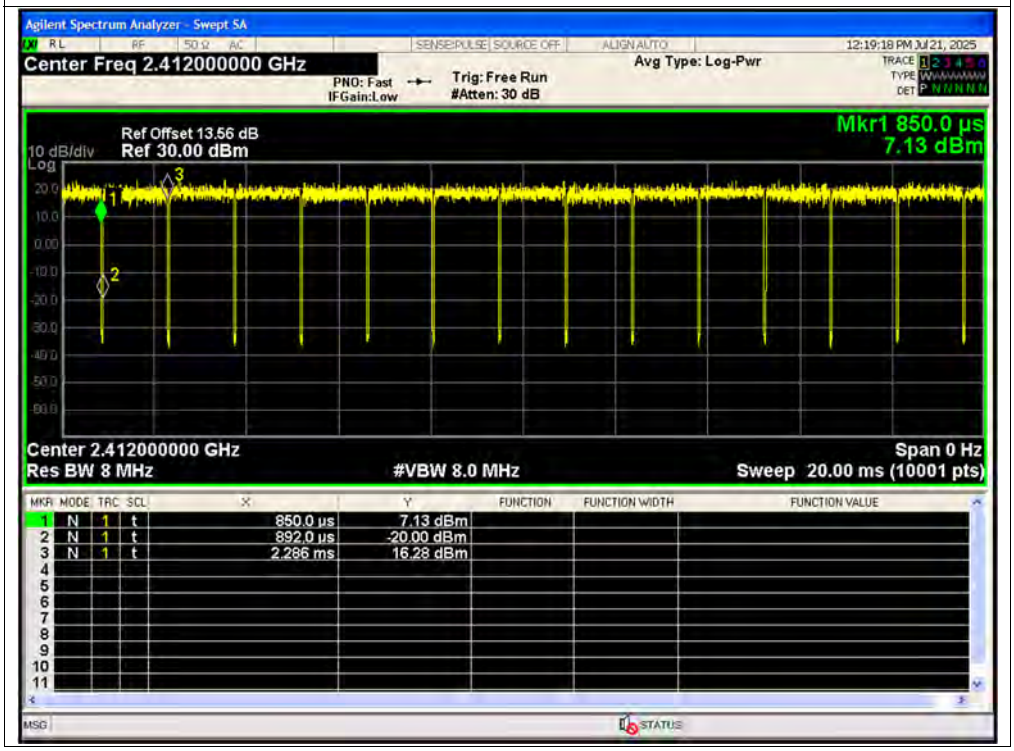
Duty Cycle NVNT b 2442MHz Ant1



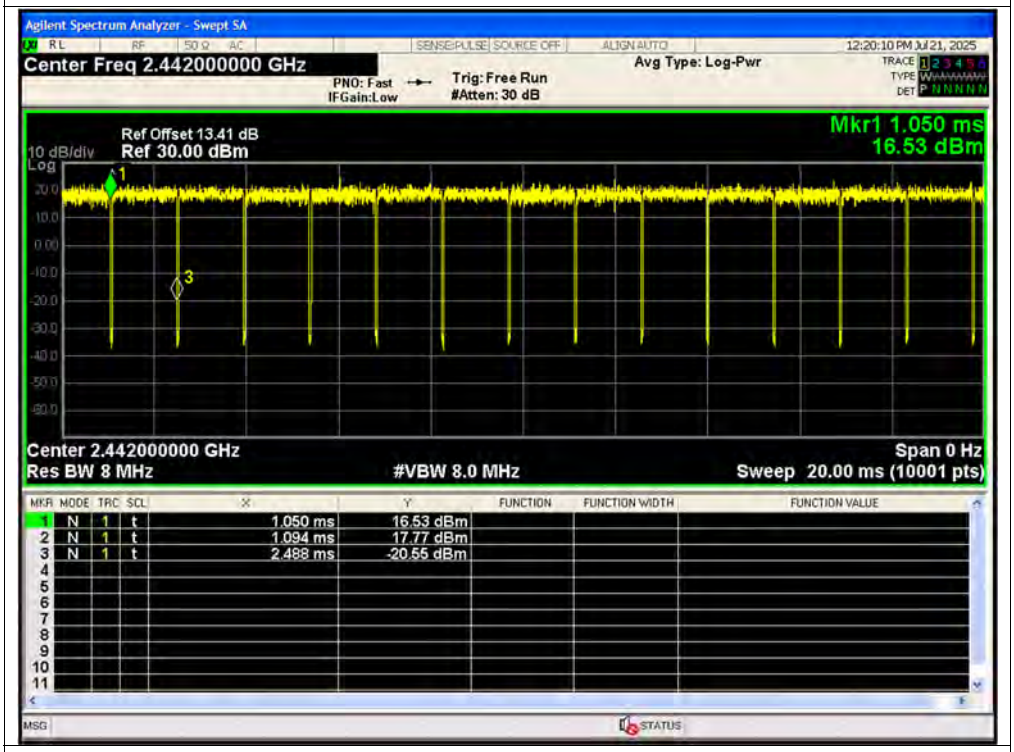
Duty Cycle NVNT b 2472MHz Ant1



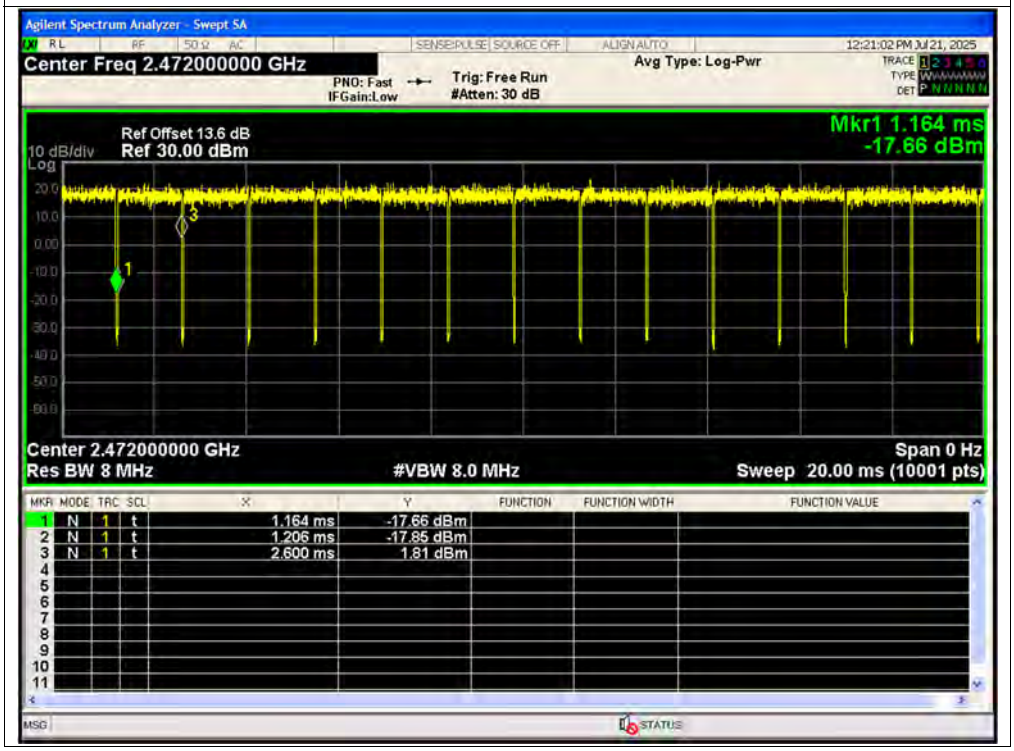
Duty Cycle NVNT g 2412MHz Ant1



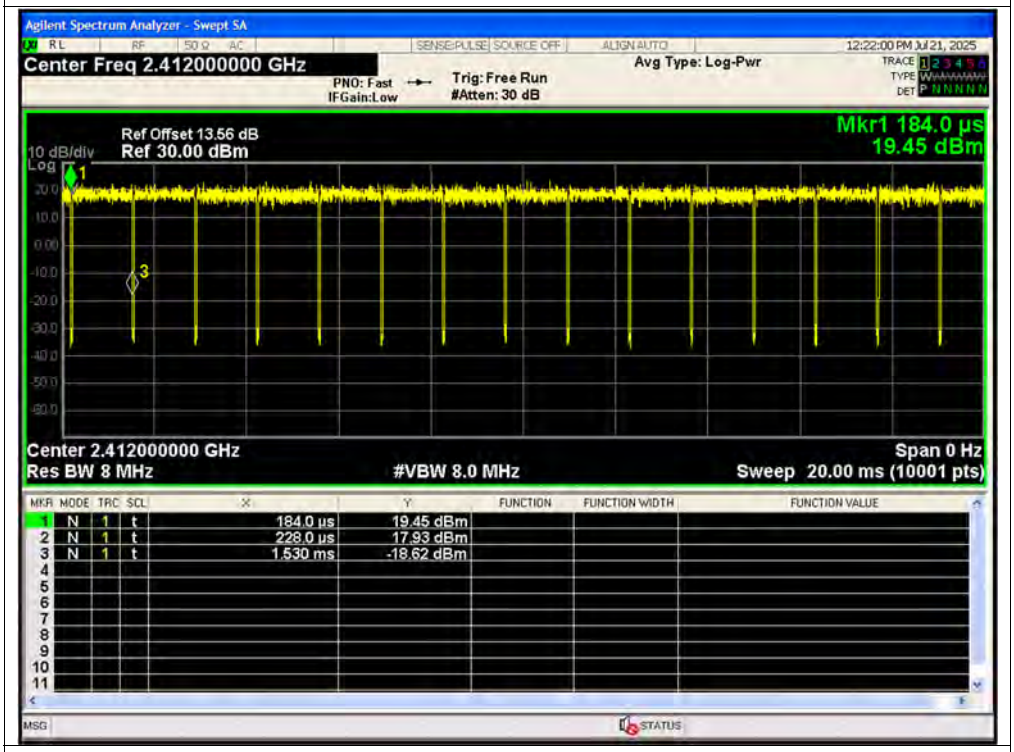
Duty Cycle NVNT g 2442MHz Ant1



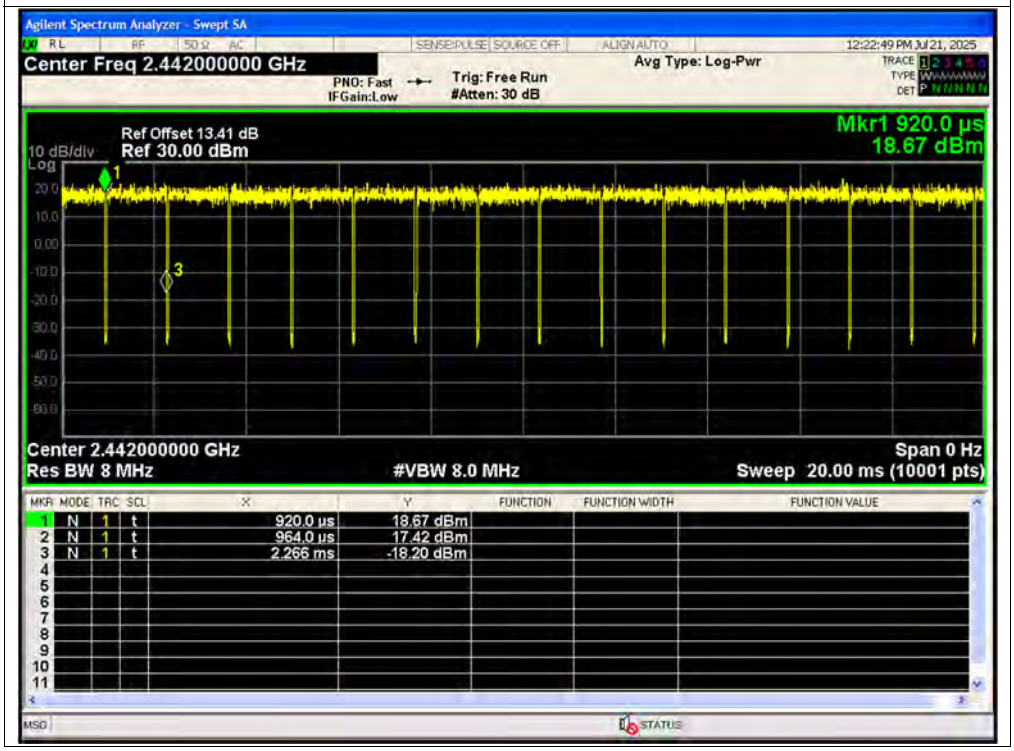
Duty Cycle NVNT g 2472MHz Ant1

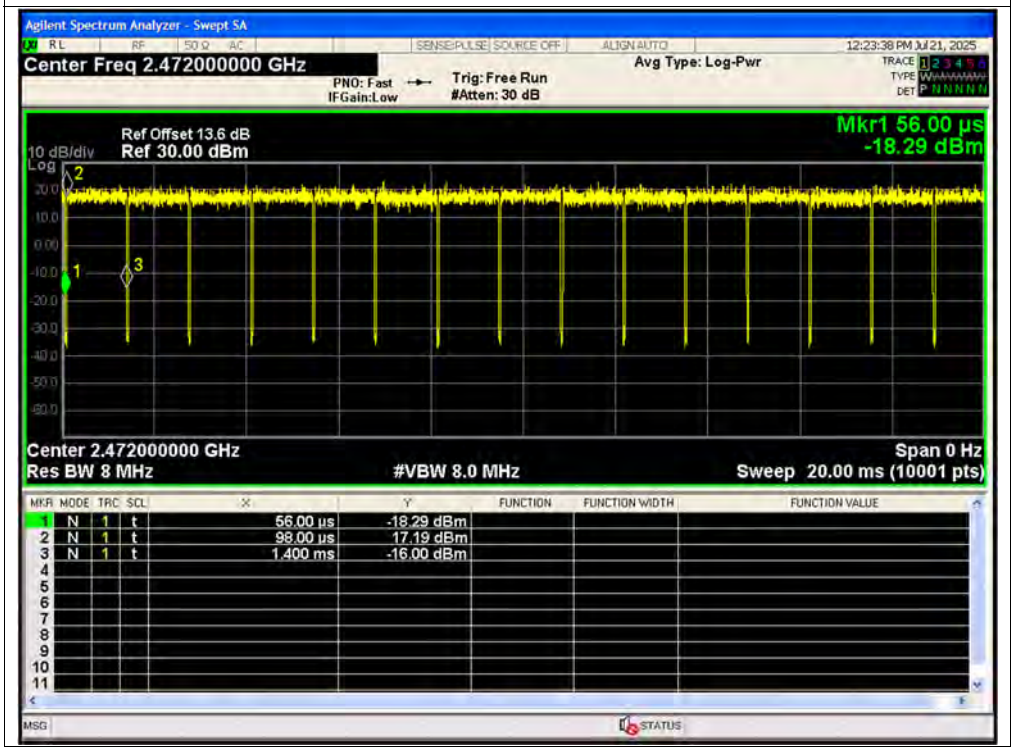


Duty Cycle NVNT n20 2412MHz Ant1



Duty Cycle NVNT n20 2442MHz Ant1

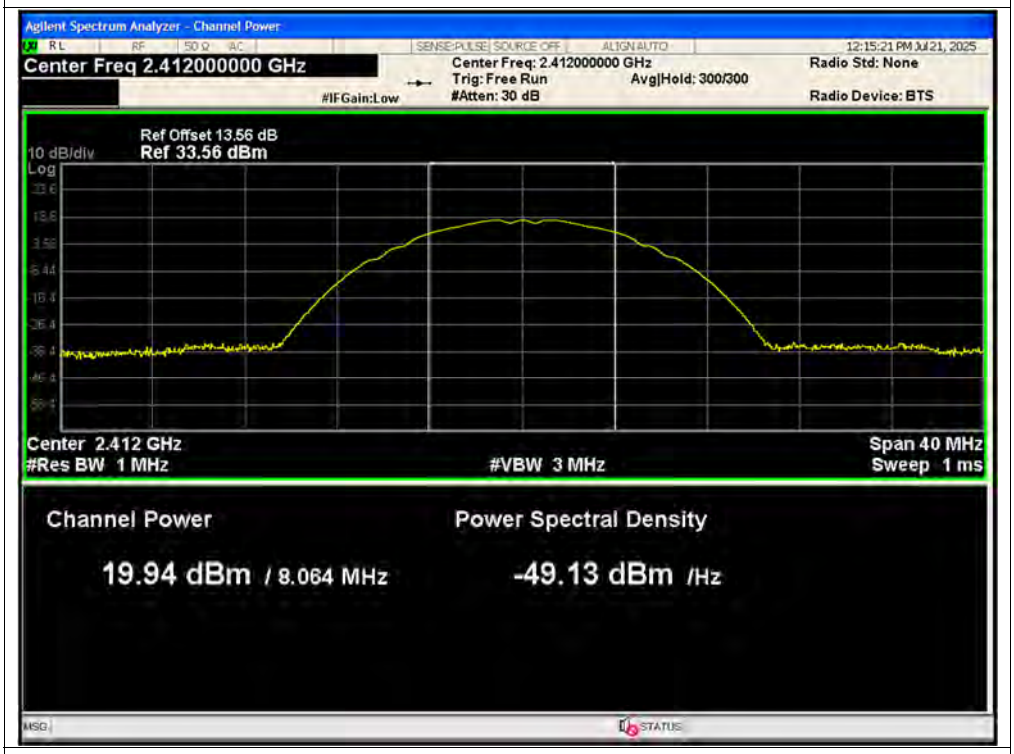


Duty Cycle NVNT n20 2472MHz Ant1


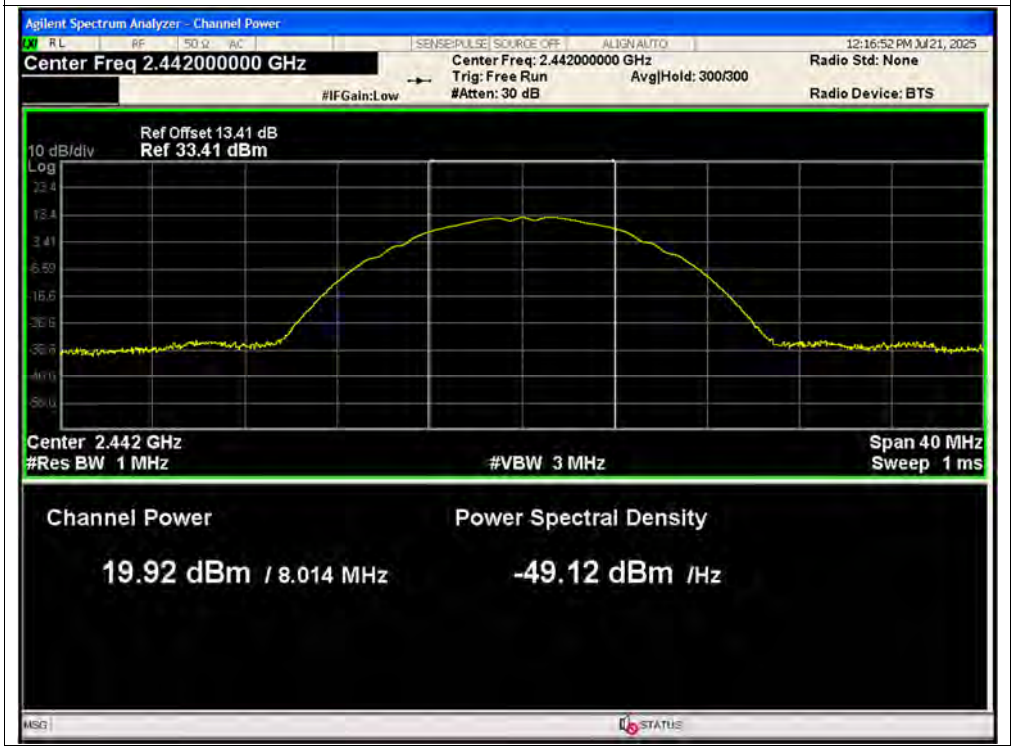
A.2. Maximum Peak Conducted Output Power

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	Ant1	19.94	0	19.94	0.09863	30	Pass
NVNT	b	2442	Ant1	19.92	0	19.92	0.09817	30	Pass
NVNT	b	2472	Ant1	19.71	0	19.71	0.09354	30	Pass
NVNT	g	2412	Ant1	22.9	0	22.9	0.19498	30	Pass
NVNT	g	2442	Ant1	22.69	0	22.69	0.18578	30	Pass
NVNT	g	2472	Ant1	22.47	0	22.47	0.1766	30	Pass
NVNT	n20	2412	Ant1	22.54	0	22.54	0.17947	30	Pass
NVNT	n20	2442	Ant1	22.38	0	22.38	0.17298	30	Pass
NVNT	n20	2472	Ant1	22.4	0	22.4	0.17378	30	Pass

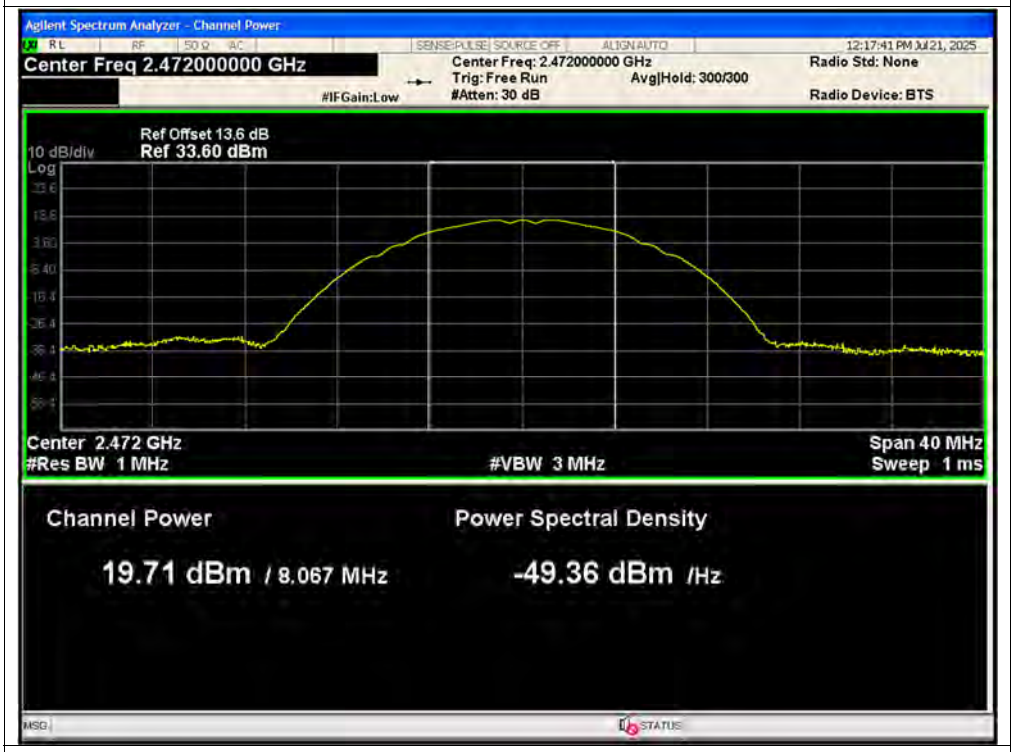
Test Graphs
Peak Power NVNT b 2412MHz Ant1



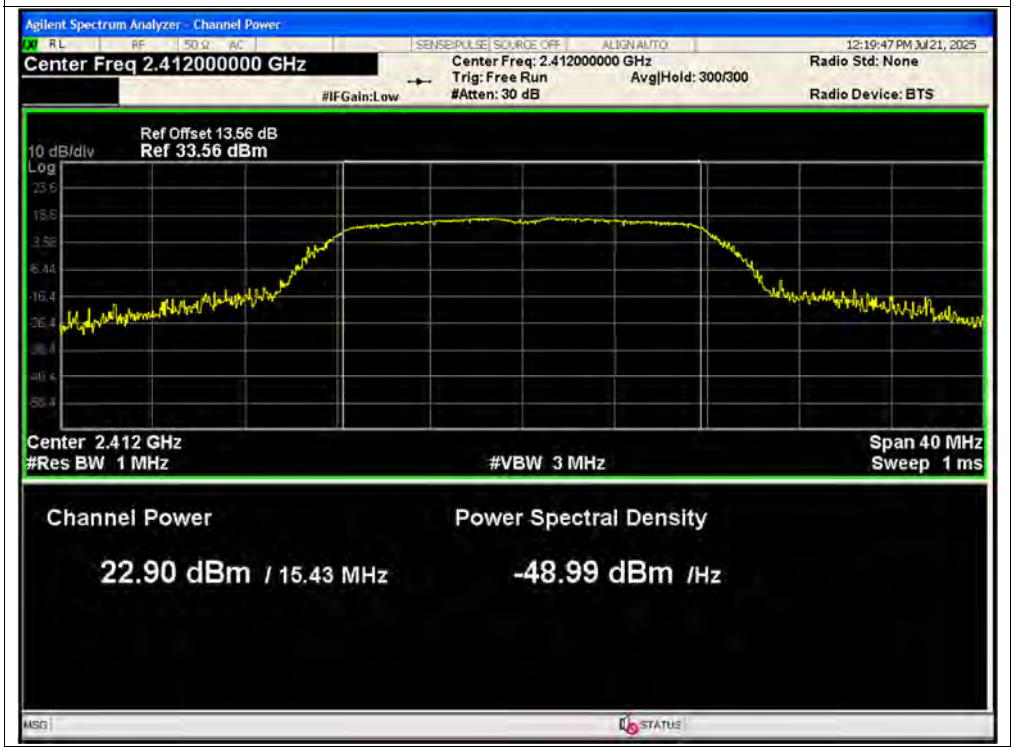
Peak Power NVNT b 2442MHz Ant1



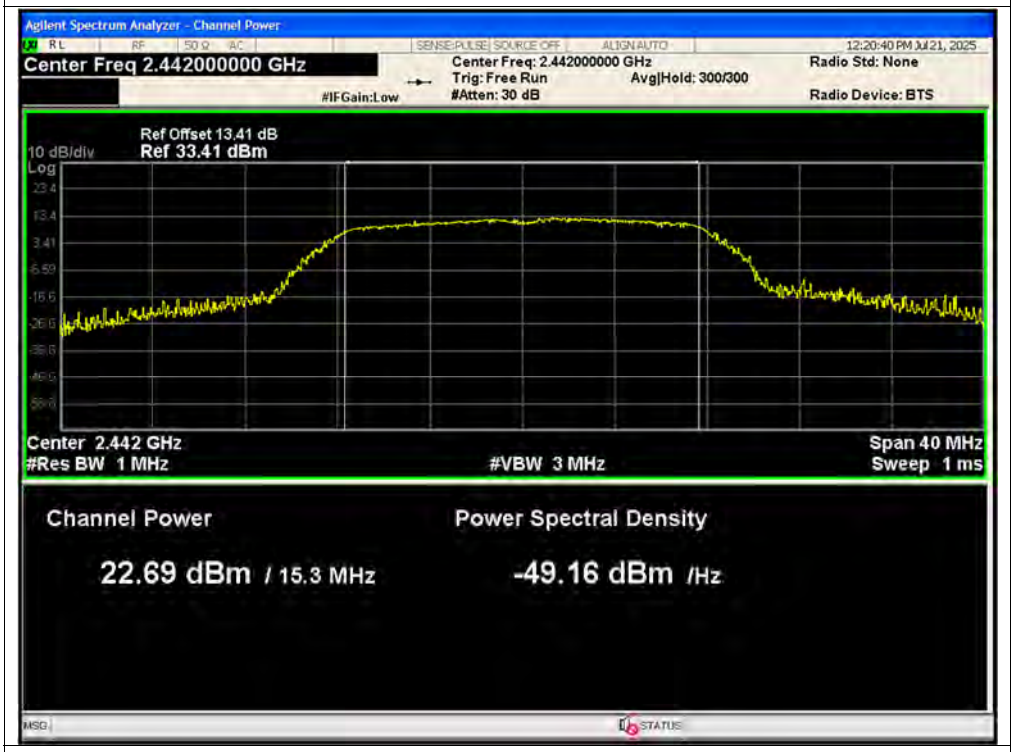
Peak Power NVNT b 2472MHz Ant1



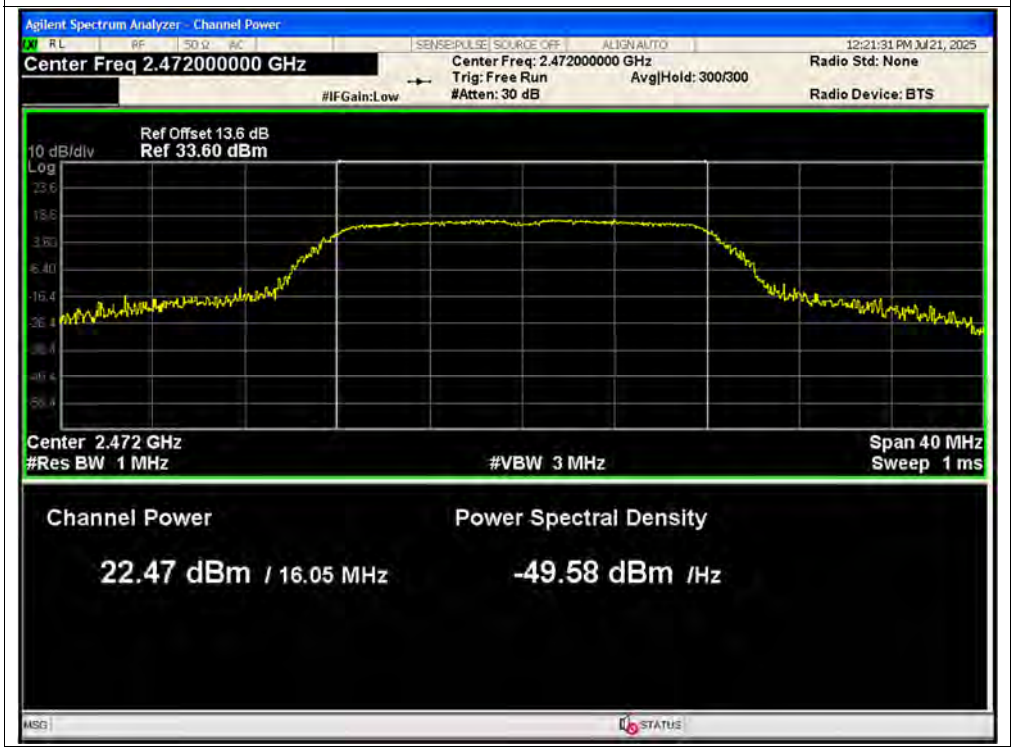
Peak Power NVNT g 2412MHz Ant1



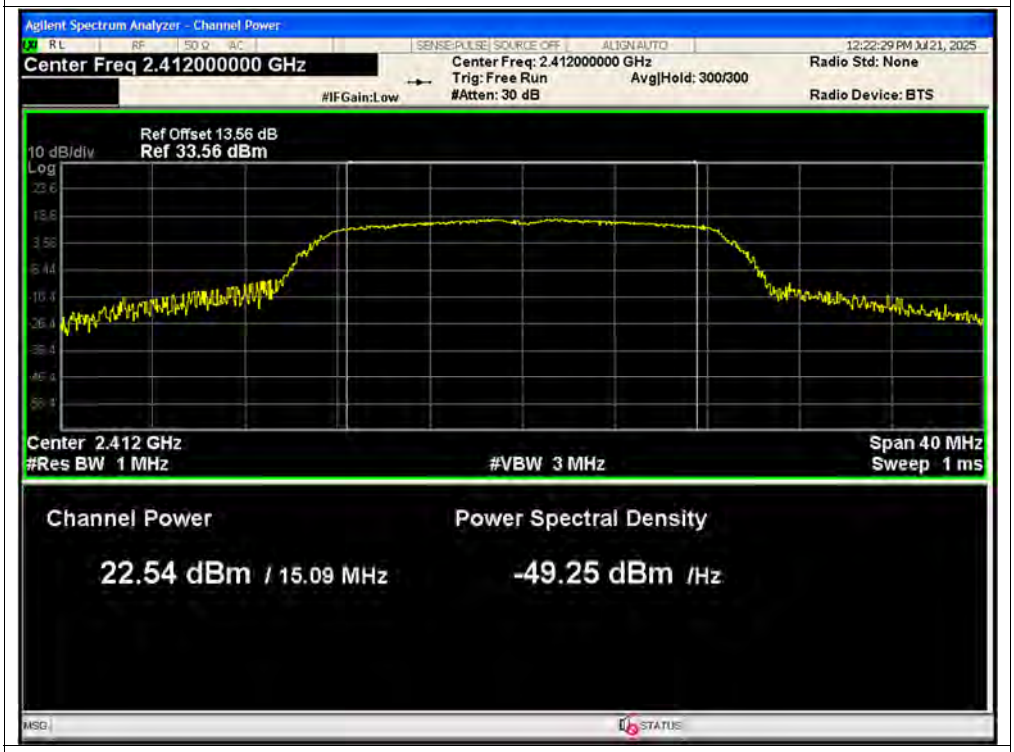
Peak Power NVNT g 2442MHz Ant1



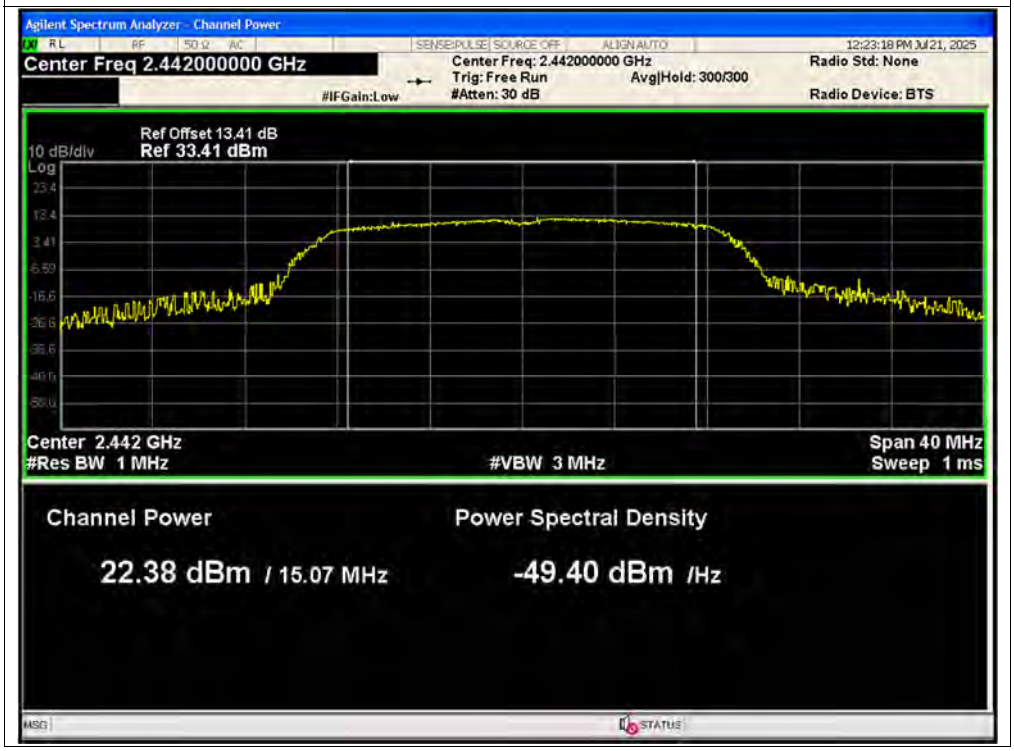
Peak Power NVNT g 2472MHz Ant1

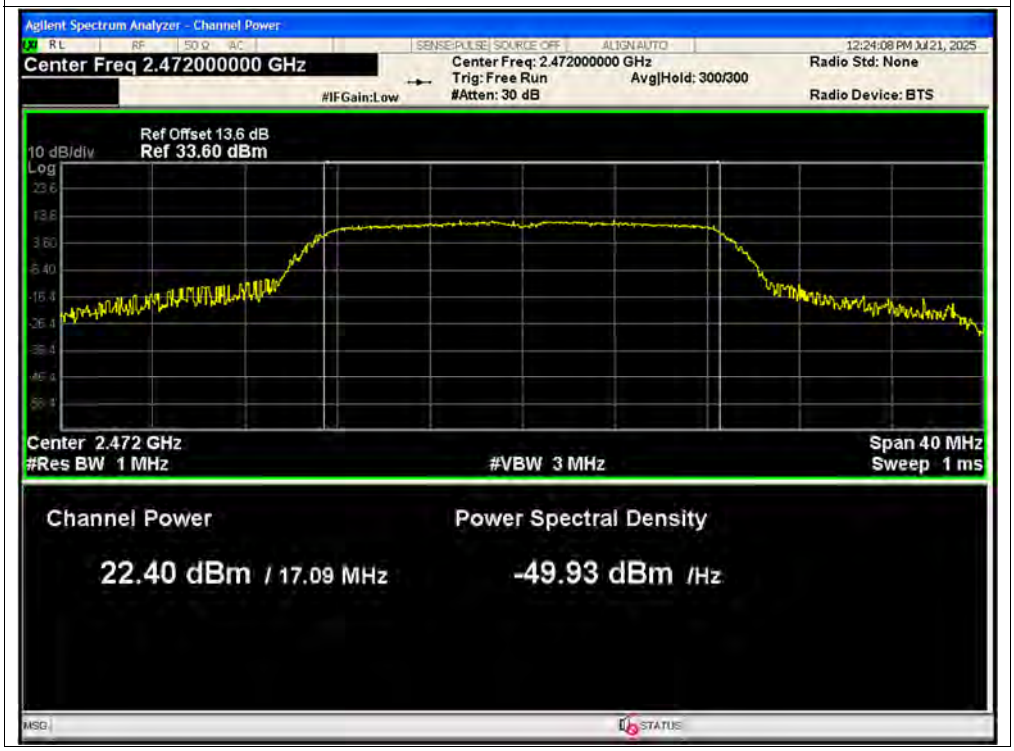


Peak Power NVNT n20 2412MHz Ant1



Peak Power NVNT n20 2442MHz Ant1

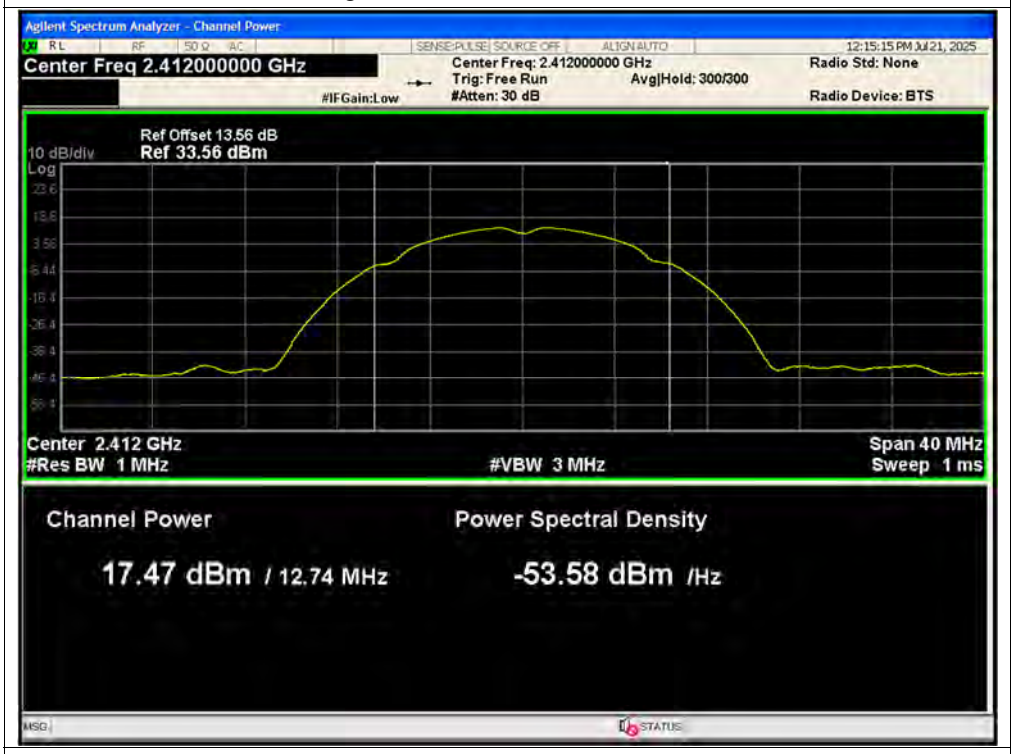


Peak Power NVNT n20 2472MHz Ant1


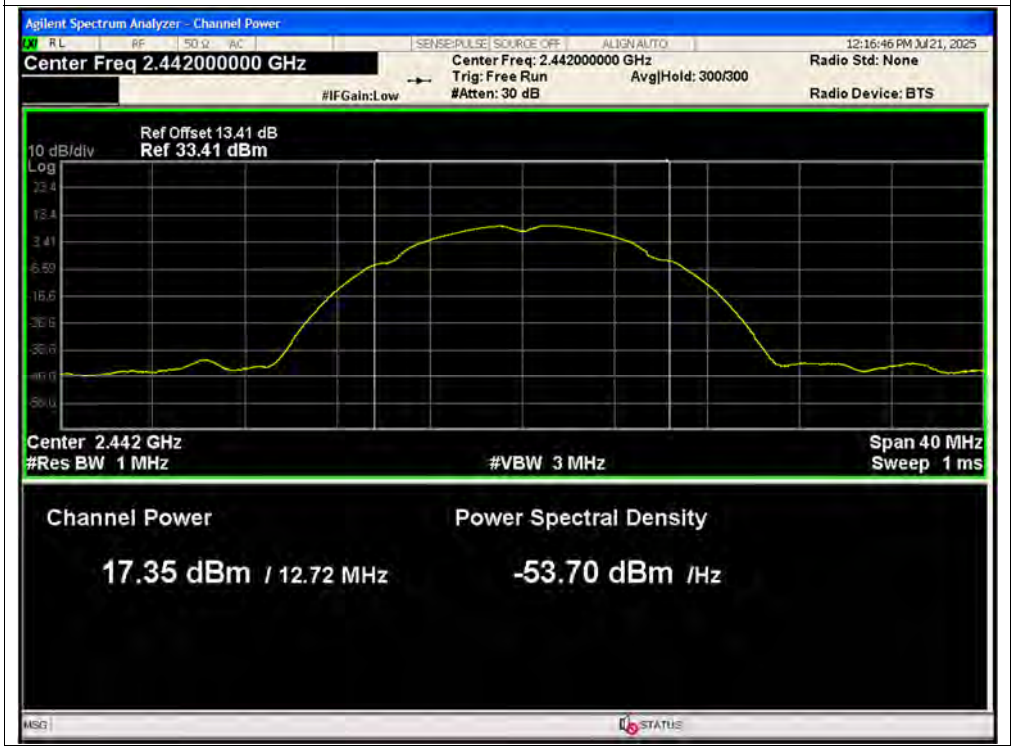
A.3. Maximum Average Conducted Output Power

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	Ant1	17.47	0.02	17.49	0.0561	30	Pass
NVNT	b	2442	Ant1	17.35	0.02	17.37	0.05458	30	Pass
NVNT	b	2472	Ant1	17.26	0.02	17.28	0.05346	30	Pass
NVNT	g	2412	Ant1	15.3	0.13	15.43	0.03491	30	Pass
NVNT	g	2442	Ant1	15.1	0.13	15.23	0.03334	30	Pass
NVNT	g	2472	Ant1	14.81	0.13	14.94	0.03119	30	Pass
NVNT	n20	2412	Ant1	15.11	0.14	15.25	0.0335	30	Pass
NVNT	n20	2442	Ant1	14.98	0.14	15.12	0.03251	30	Pass
NVNT	n20	2472	Ant1	14.72	0.14	14.86	0.03062	30	Pass

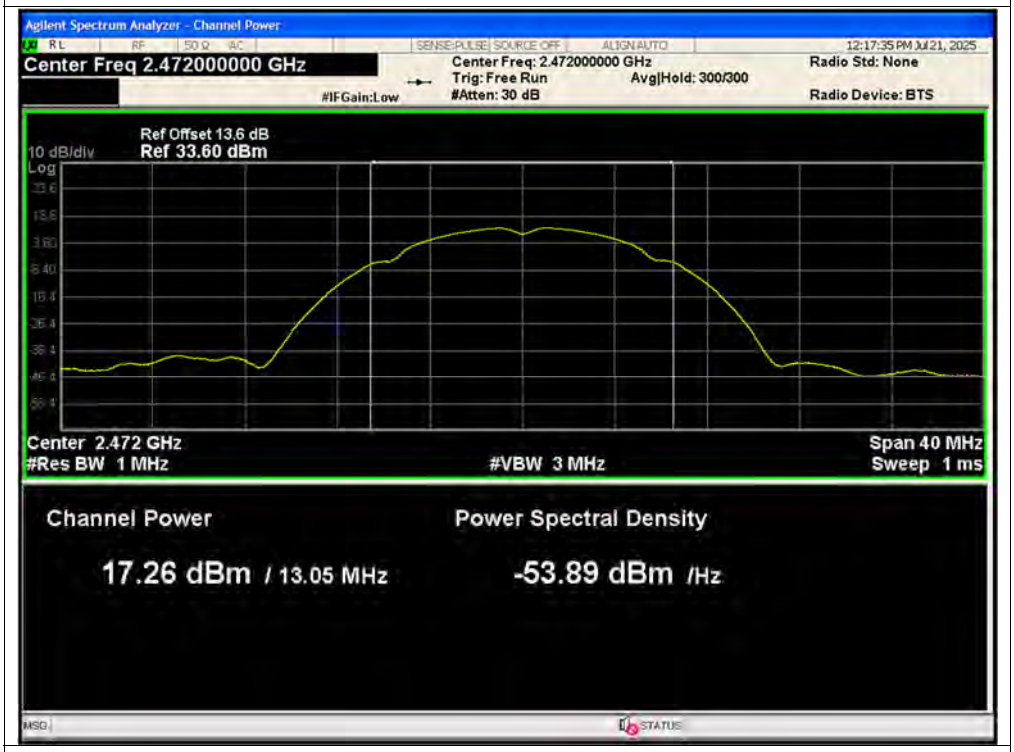
Test Graphs
Average Power NVNT b 2412MHz Ant1



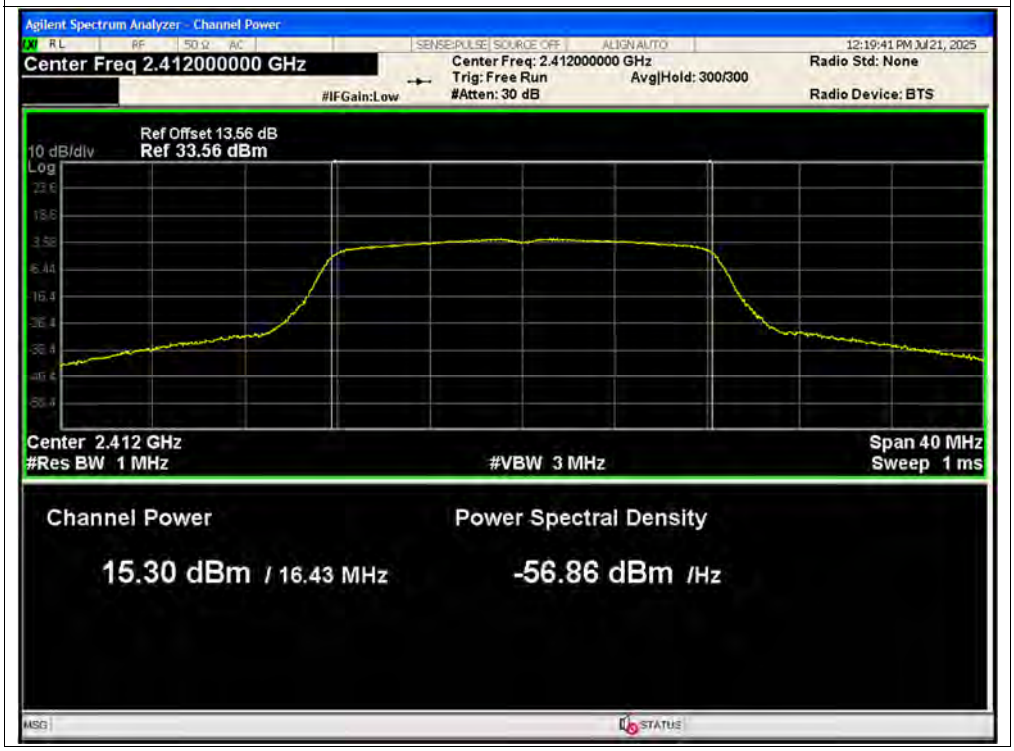
Average Power NVNT b 2442MHz Ant1



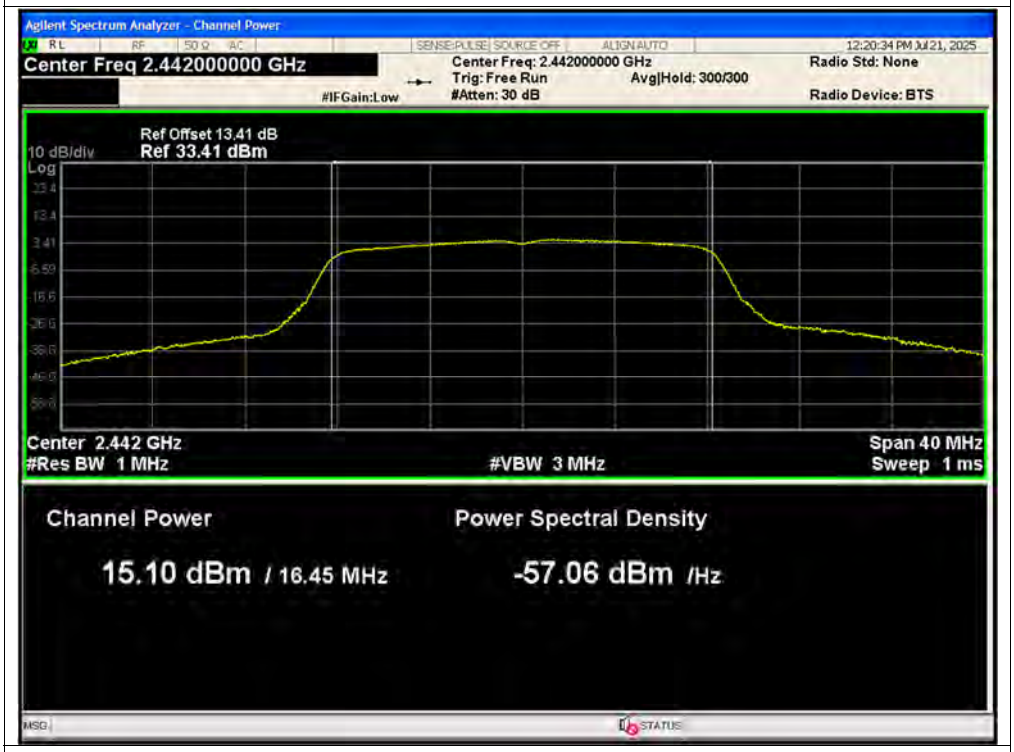
Average Power NVNT b 2472MHz Ant1



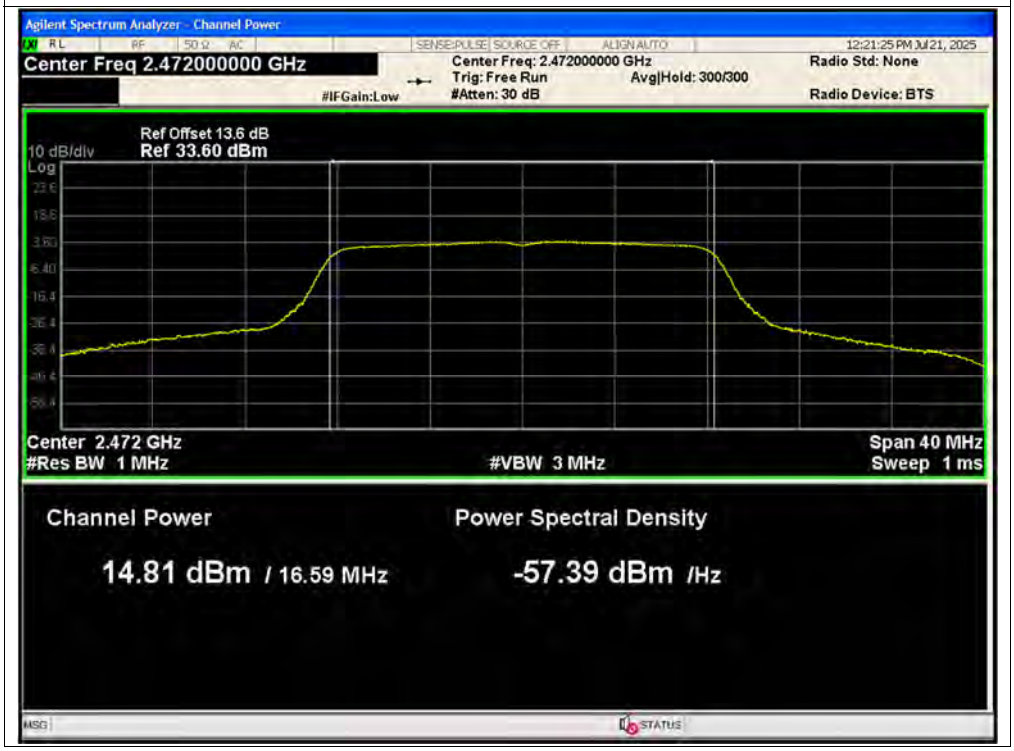
Average Power NVNT g 2412MHz Ant1



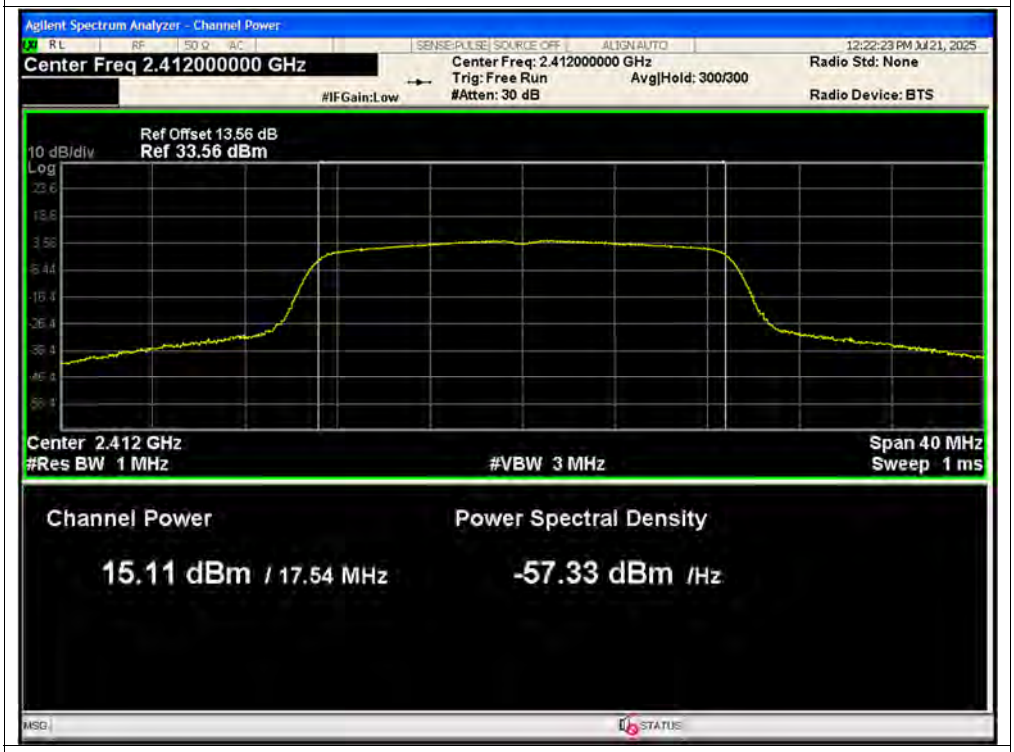
Average Power NVNT g 2442MHz Ant1



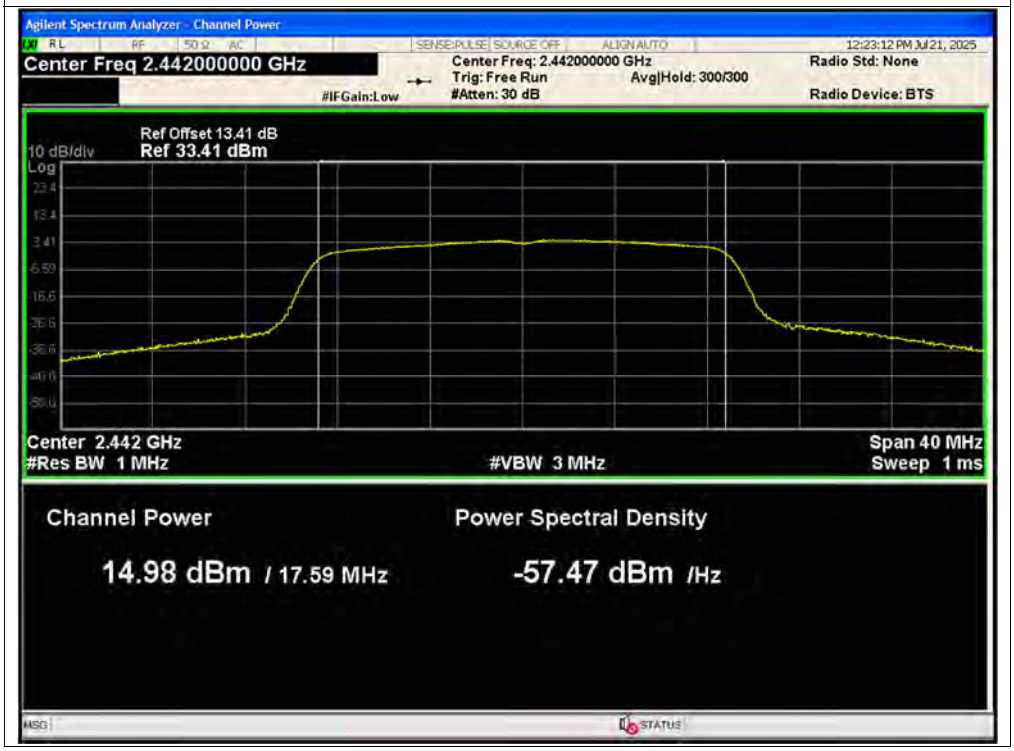
Average Power NVNT g 2472MHz Ant1

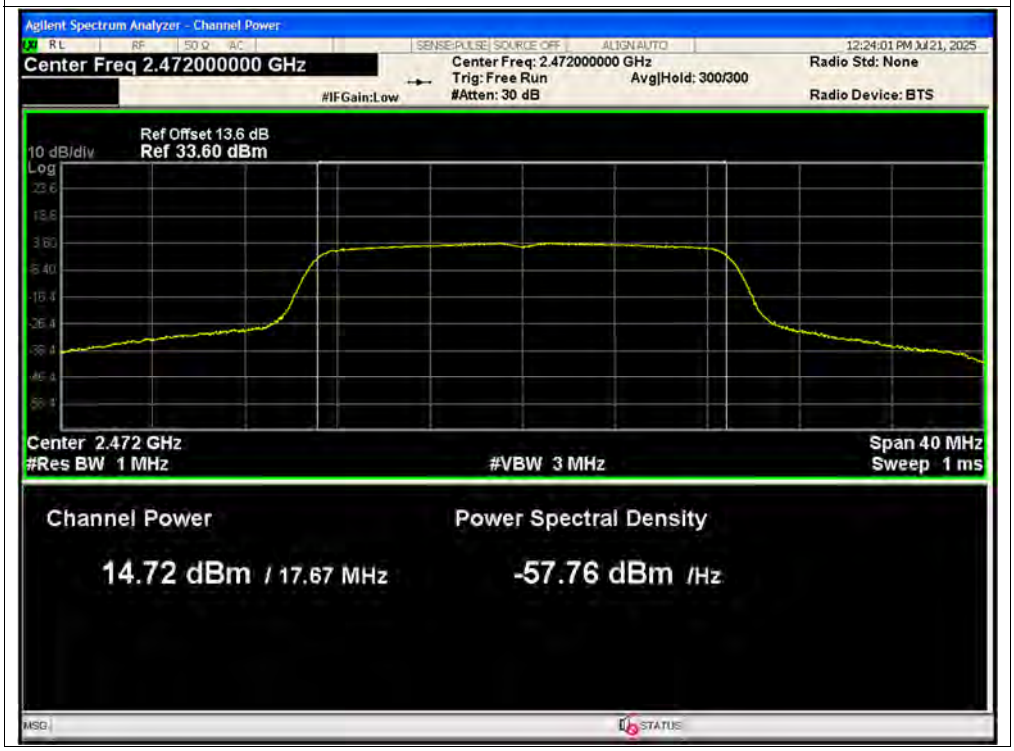


Average Power NVNT n20 2412MHz Ant1



Average Power NVNT n20 2442MHz Ant1



Average Power NVNT n20 2472MHz Ant1


A.4. 6 dB Bandwidth

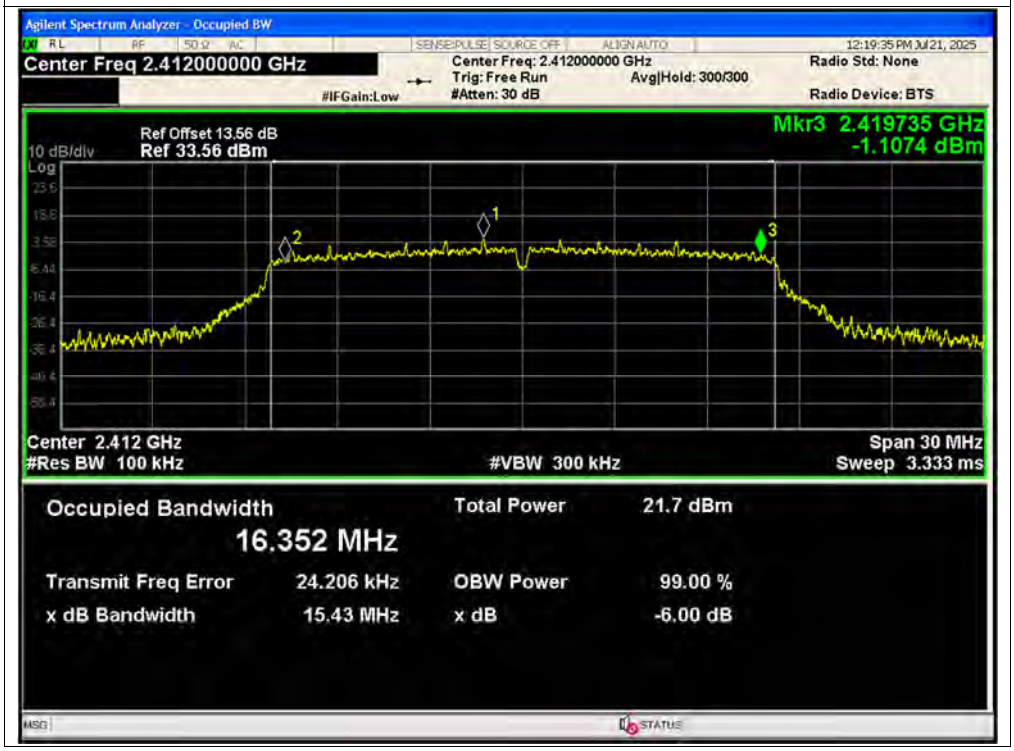
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	8.064	0.5	Pass
NVNT	b	2442	Ant1	8.014	0.5	Pass
NVNT	b	2472	Ant1	8.067	0.5	Pass
NVNT	g	2412	Ant1	15.43	0.5	Pass
NVNT	g	2442	Ant1	15.3	0.5	Pass
NVNT	g	2472	Ant1	16.05	0.5	Pass
NVNT	n20	2412	Ant1	15.09	0.5	Pass
NVNT	n20	2442	Ant1	15.07	0.5	Pass
NVNT	n20	2472	Ant1	17.09	0.5	Pass

Test Graphs
-6dB Bandwidth NVNT b 2412MHz Ant1

-6dB Bandwidth NVNT b 2442MHz Ant1

-6dB Bandwidth NVNT b 2472MHz Ant1

-6dB Bandwidth NVNT g 2412MHz Ant1



-6dB Bandwidth NVNT g 2442MHz Ant1

-6dB Bandwidth NVNT g 2472MHz Ant1

-6dB Bandwidth NVNT n20 2412MHz Ant1

-6dB Bandwidth NVNT n20 2442MHz Ant1

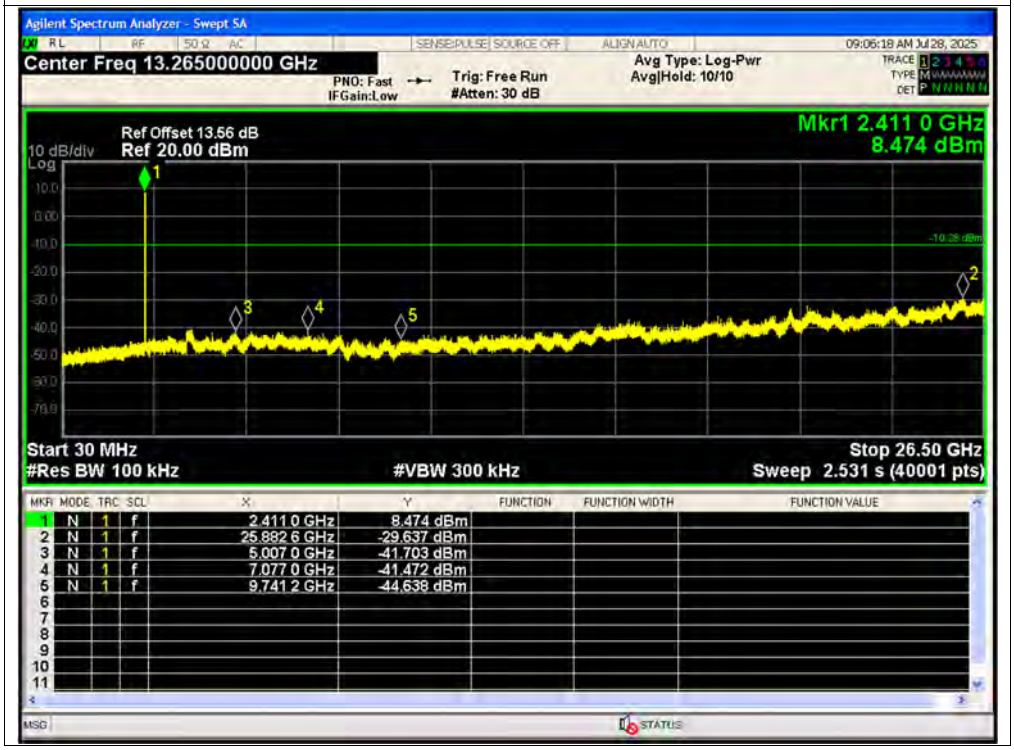
-6dB Bandwidth NVNT n20 2472MHz Ant1

A.5. Conducted Spurious Emissions

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-39.35	-20	Pass
NVNT	b	2442	Ant1	-37.55	-20	Pass
NVNT	b	2472	Ant1	-37.6	-20	Pass
NVNT	g	2412	Ant1	-34.25	-20	Pass
NVNT	g	2442	Ant1	-33.64	-20	Pass
NVNT	g	2472	Ant1	-33.27	-20	Pass
NVNT	n20	2412	Ant1	-34.16	-20	Pass
NVNT	n20	2442	Ant1	-34.57	-20	Pass
NVNT	n20	2472	Ant1	-32.15	-20	Pass

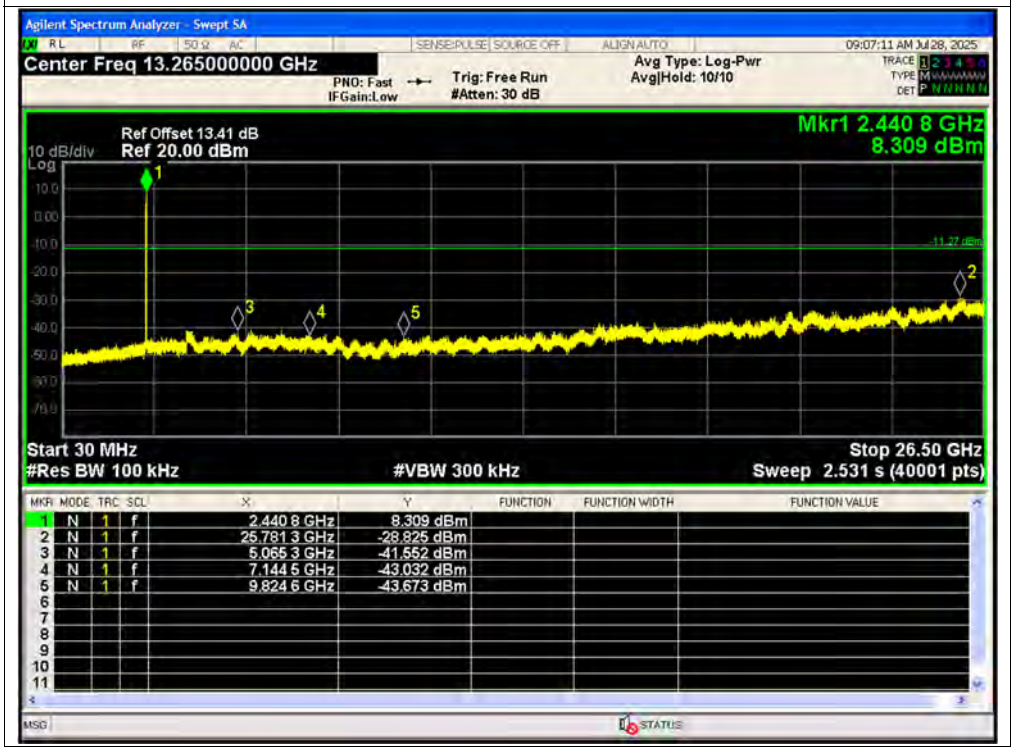
Test Graphs
Tx. Spurious NVNT b 2412MHz Ant1 Ref

Tx. Spurious NVNT b 2412MHz Ant1 Emission



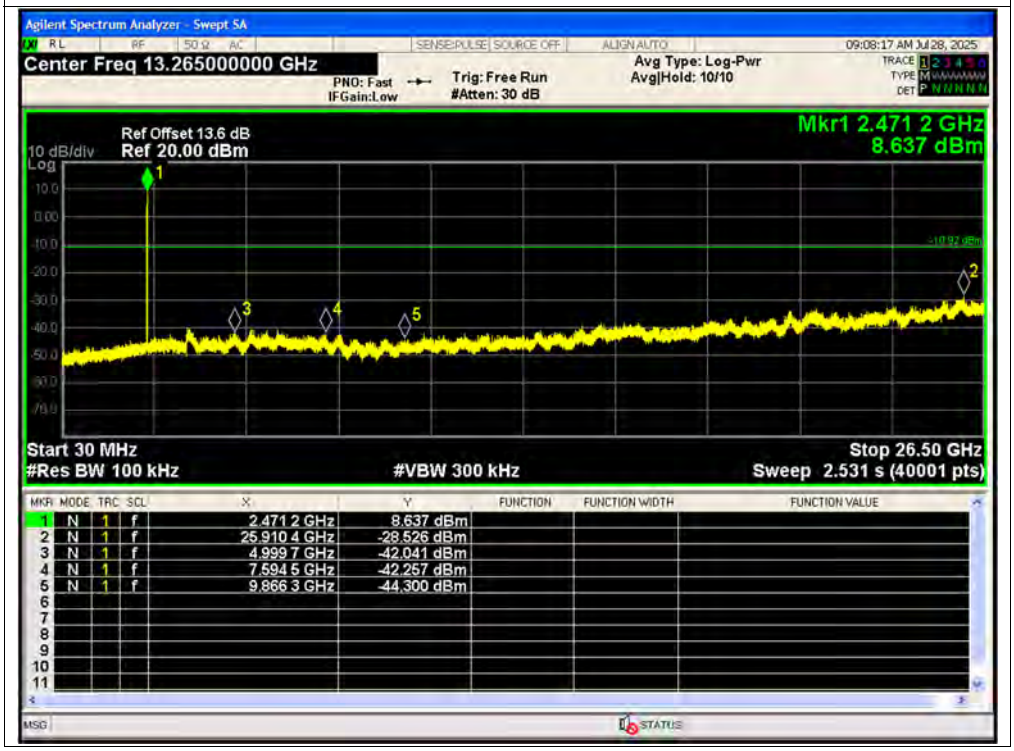
Tx. Spurious NVNT b 2442MHz Ant1 Ref

Tx. Spurious NVNT b 2442MHz Ant1 Emission



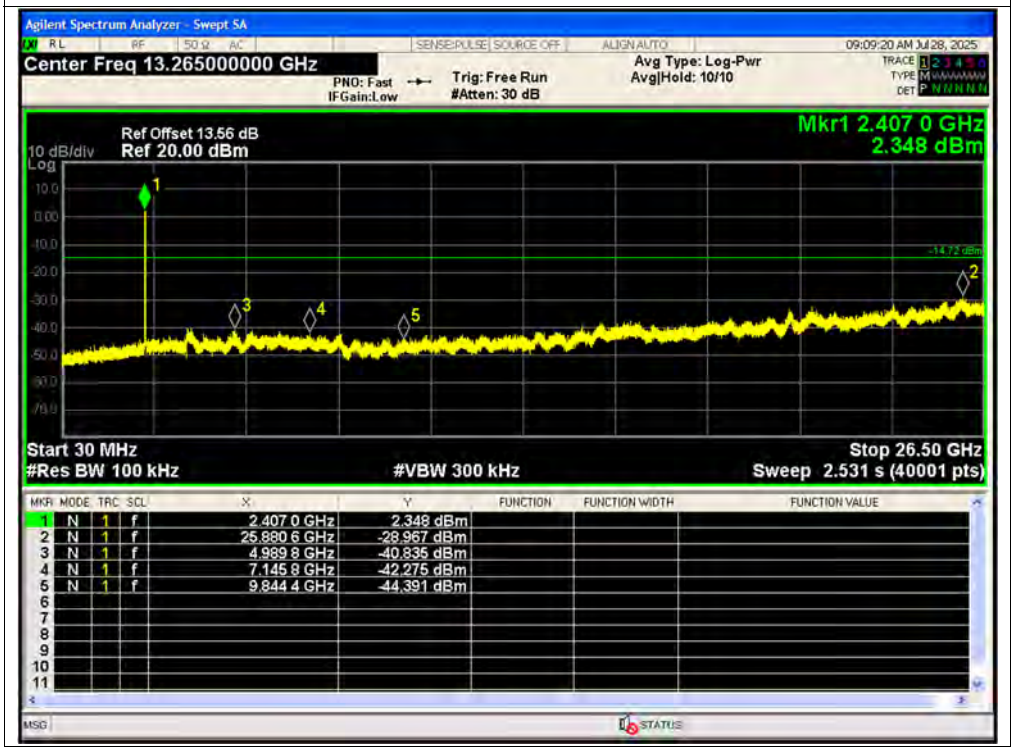
Tx. Spurious NVNT b 2472MHz Ant1 Ref

Tx. Spurious NVNT b 2472MHz Ant1 Emission



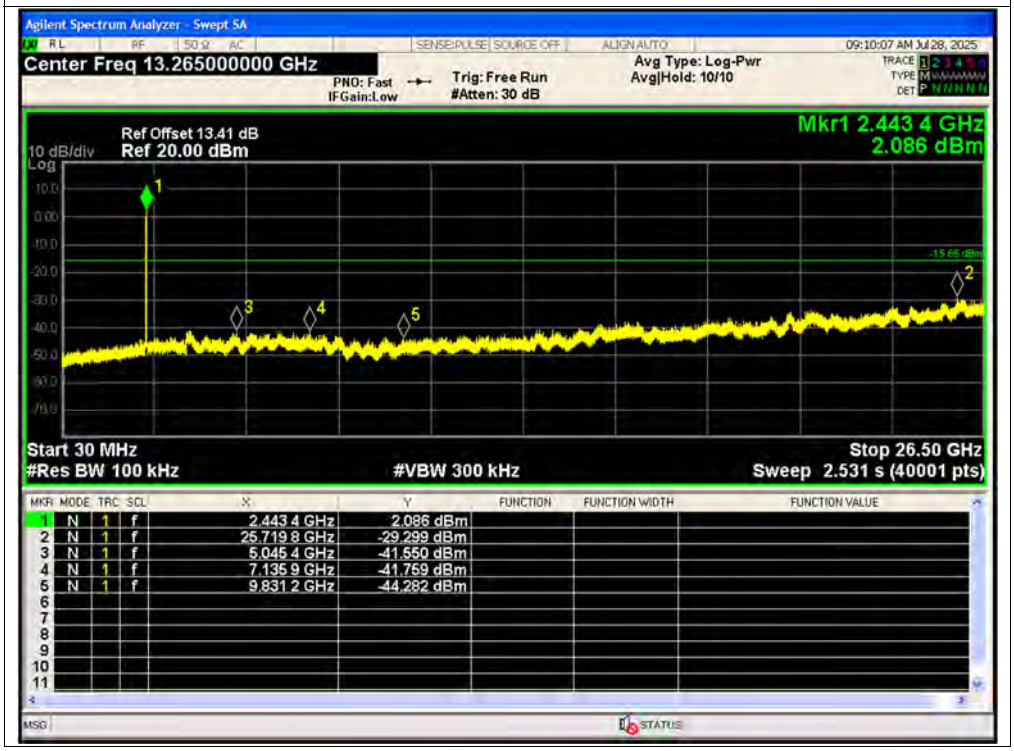
Tx. Spurious NVNT g 2412MHz Ant1 Ref

Tx. Spurious NVNT g 2412MHz Ant1 Emission



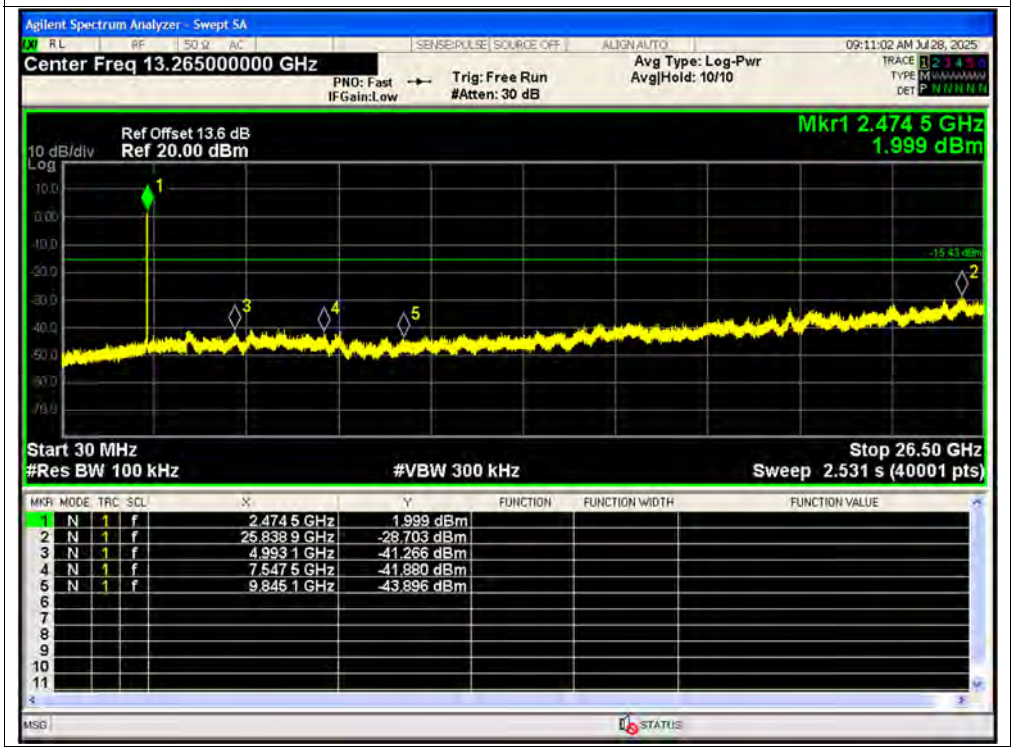
Tx. Spurious NVNT g 2442MHz Ant1 Ref

Tx. Spurious NVNT g 2442MHz Ant1 Emission



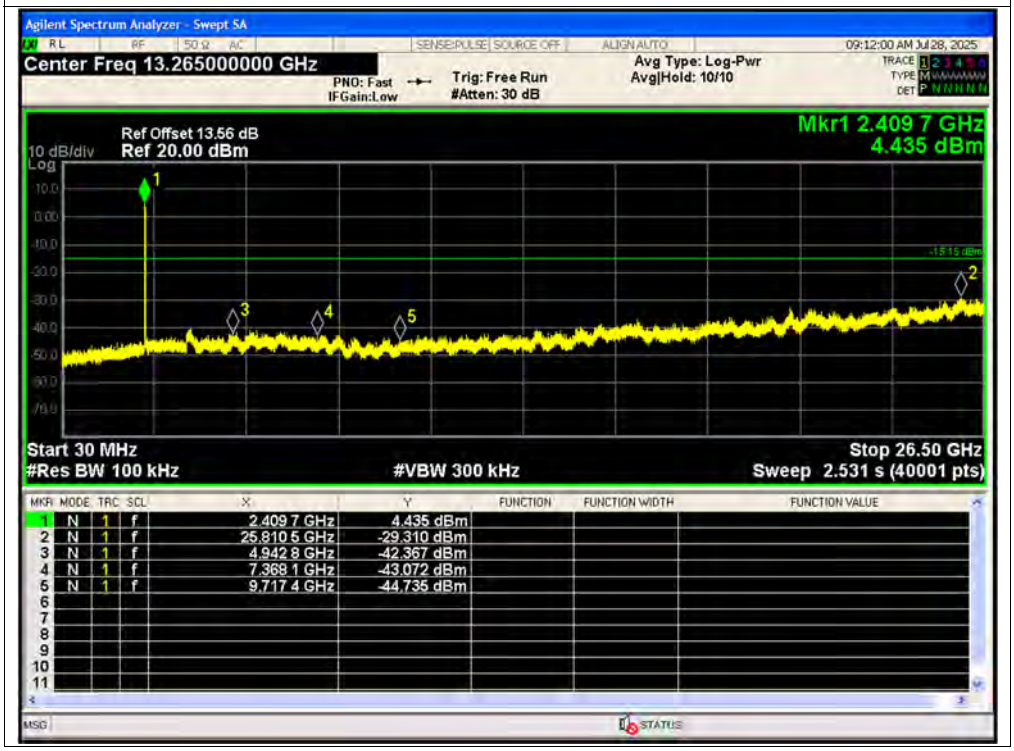
Tx. Spurious NVNT g 2472MHz Ant1 Ref

Tx. Spurious NVNT g 2472MHz Ant1 Emission



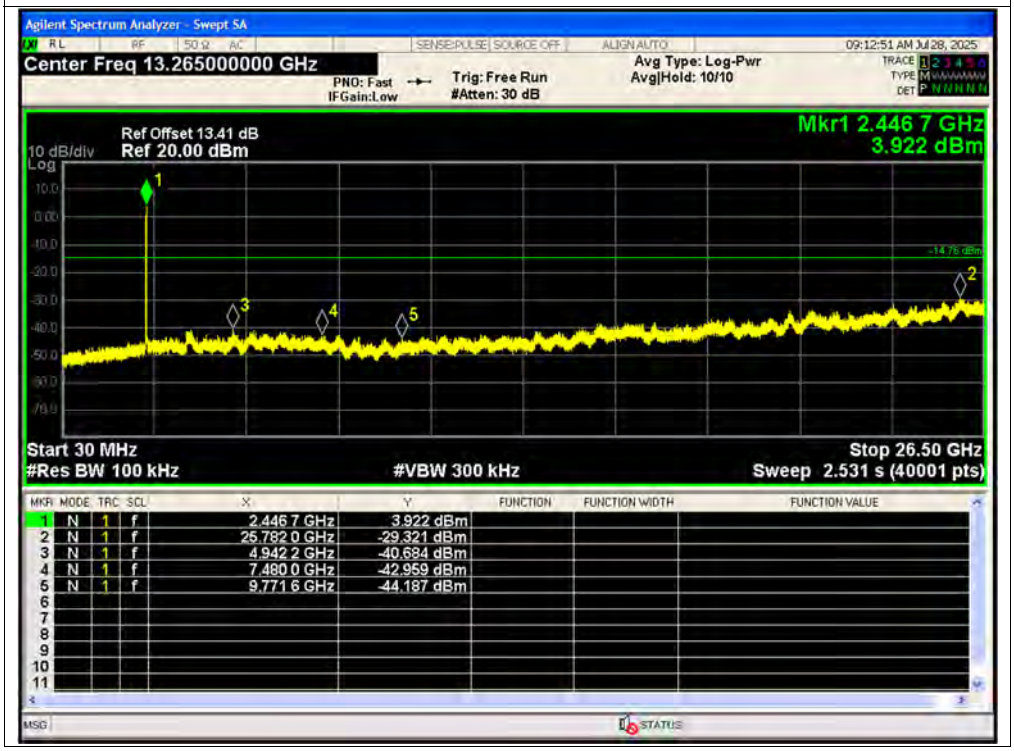
Tx. Spurious NVNT n20 2412MHz Ant1 Ref

Tx. Spurious NVNT n20 2412MHz Ant1 Emission



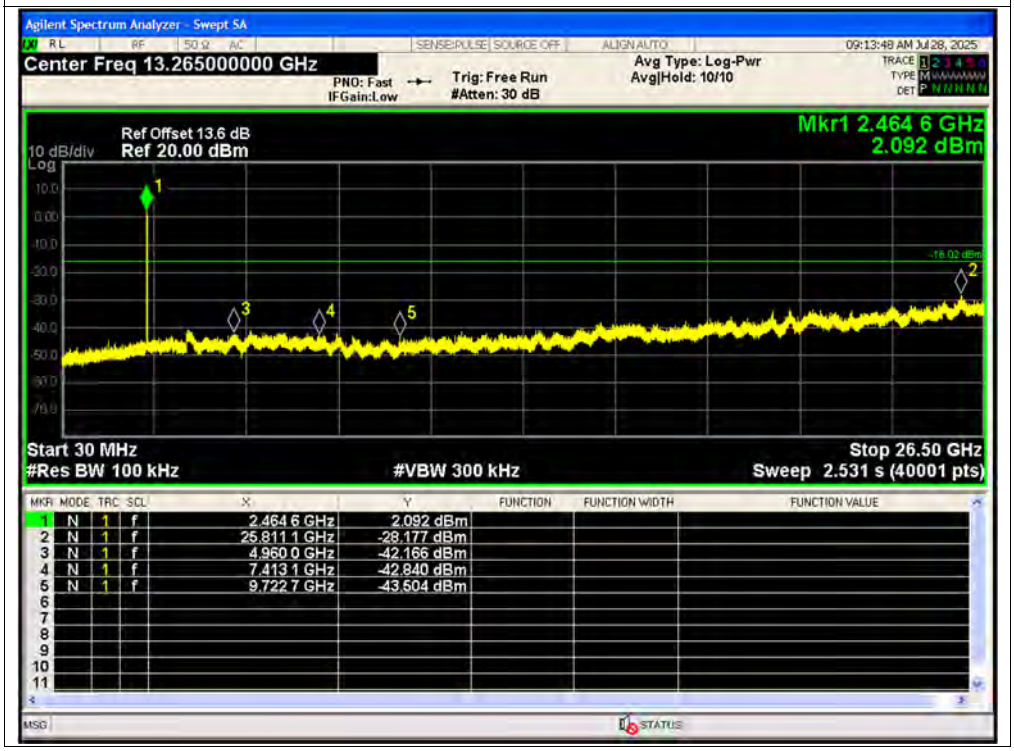
Tx. Spurious NVNT n20 2442MHz Ant1 Ref

Tx. Spurious NVNT n20 2442MHz Ant1 Emission



Tx. Spurious NVNT n20 2472MHz Ant1 Ref

Tx. Spurious NVNT n20 2472MHz Ant1 Emission

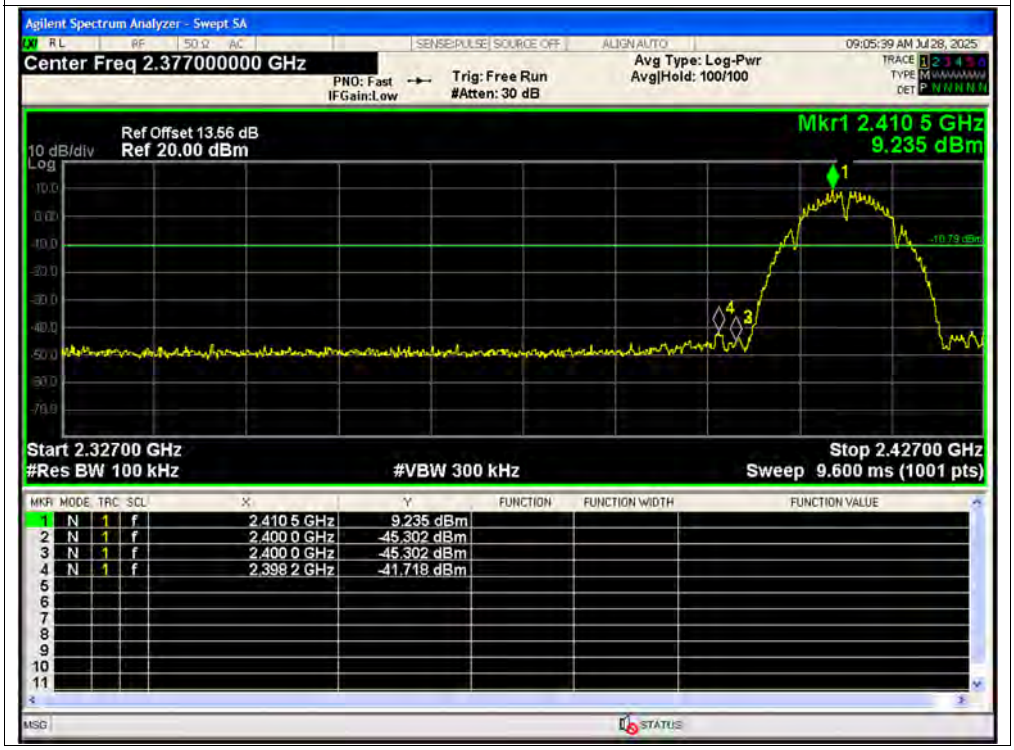


A.6. Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-50.92	-20	Pass
NVNT	b	2472	Ant1	-50.68	-20	Pass
NVNT	g	2412	Ant1	-34.17	-20	Pass
NVNT	g	2472	Ant1	-30.87	-20	Pass
NVNT	n20	2412	Ant1	-34.44	-20	Pass
NVNT	n20	2472	Ant1	-31.8	-20	Pass

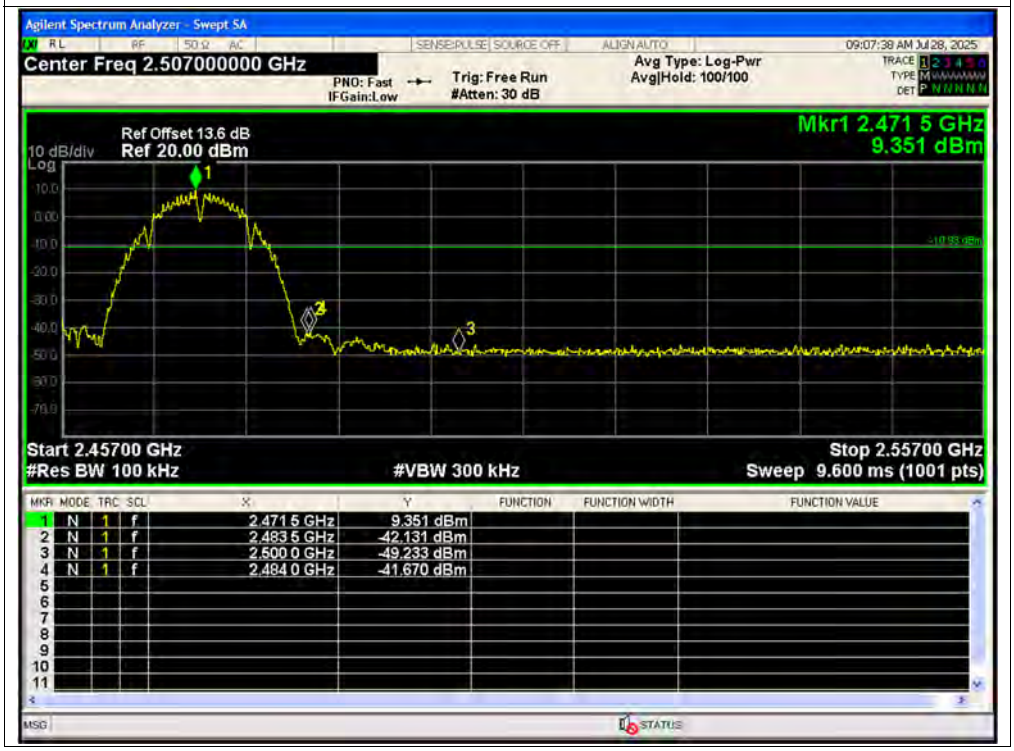
Test Graphs
Band Edge NVNT b 2412MHz Ant1 Ref

Band Edge NVNT b 2412MHz Ant1 Emission



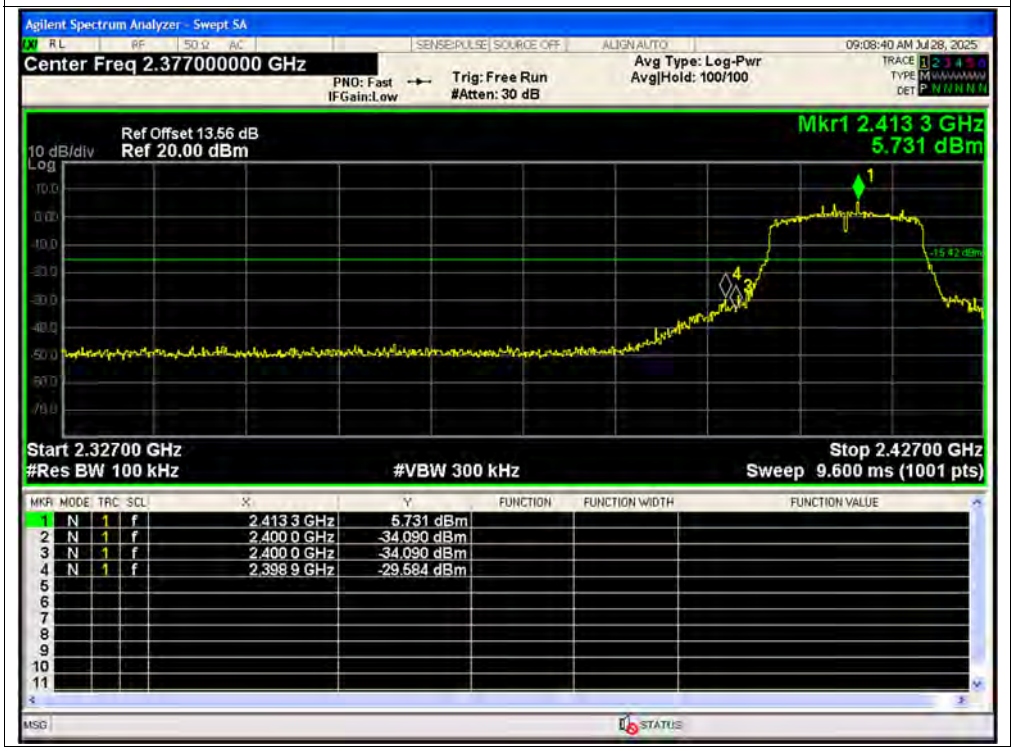
Band Edge NVNT b 2472MHz Ant1 Ref

Band Edge NVNT b 2472MHz Ant1 Emission



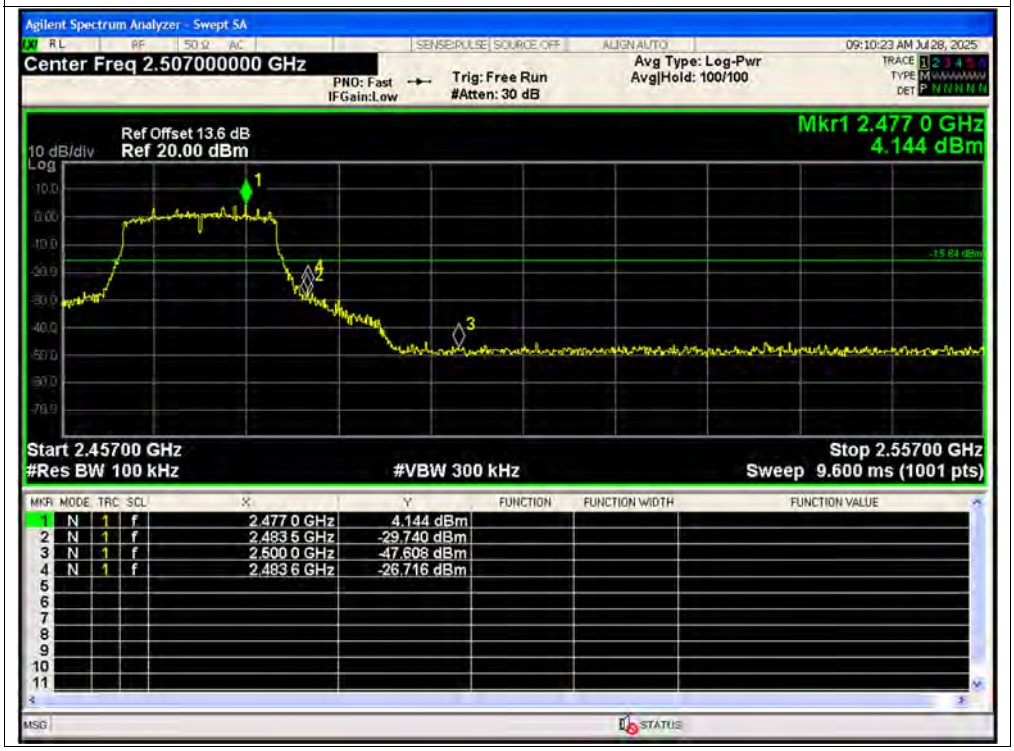
Band Edge NVNT g 2412MHz Ant1 Ref

Band Edge NVNT g 2412MHz Ant1 Emission



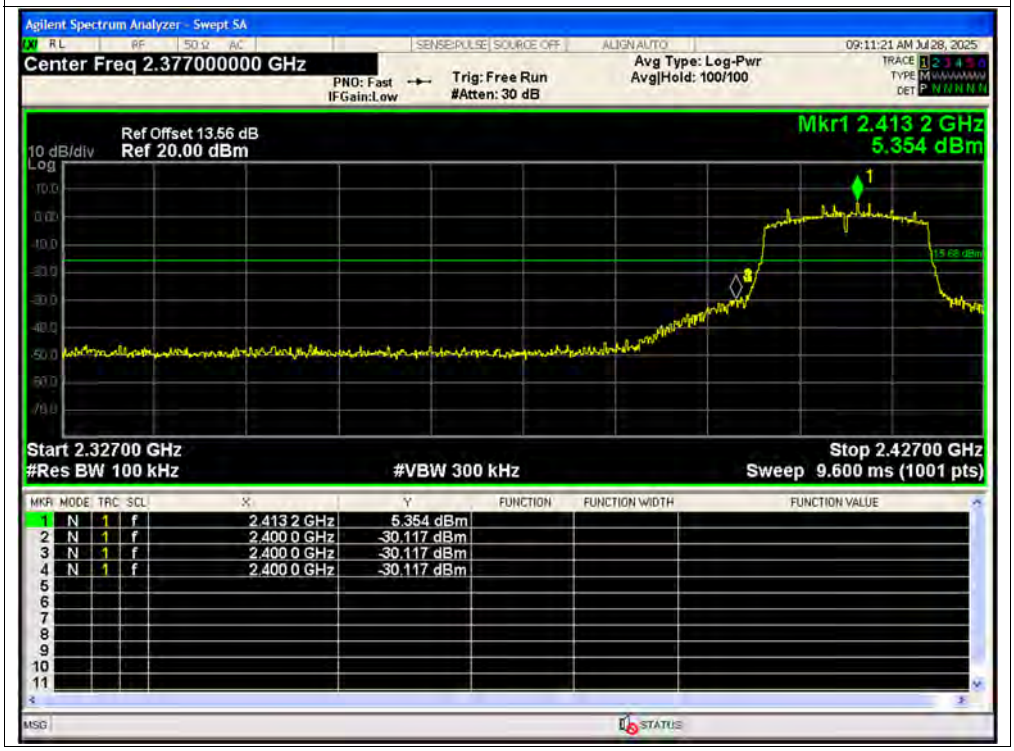
Band Edge NVNT g 2472MHz Ant1 Ref

Band Edge NVNT g 2472MHz Ant1 Emission



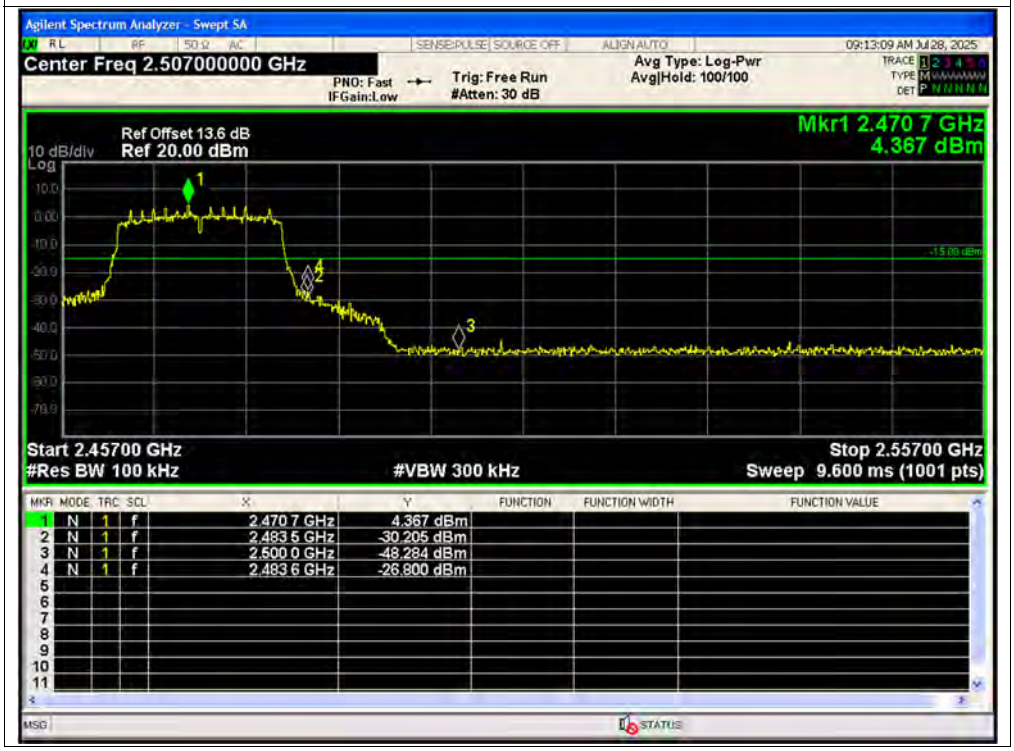
Band Edge NVNT n20 2412MHz Ant1 Ref

Band Edge NVNT n20 2412MHz Ant1 Emission



Band Edge NVNT n20 2472MHz Ant1 Ref

Band Edge NVNT n20 2472MHz Ant1 Emission



A.7. Power Spectral Density

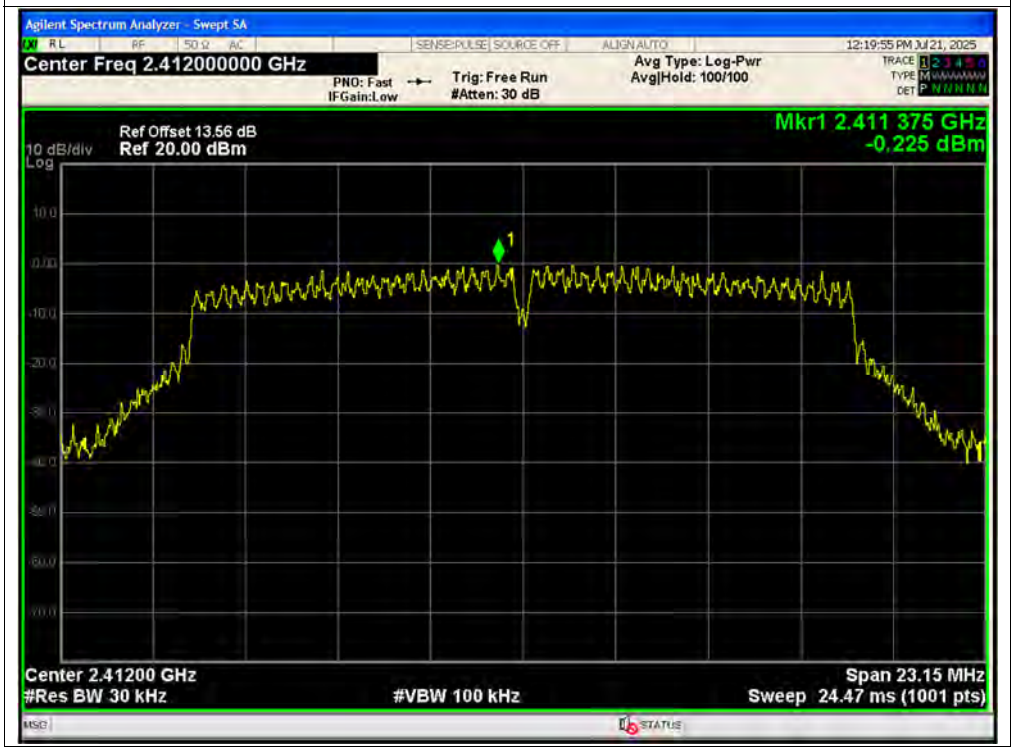
Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Duty Factor (dB)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	b	2412	Ant1	-4.64	0	-4.64	8	Pass
NVNT	b	2442	Ant1	-4.96	0	-4.96	8	Pass
NVNT	b	2472	Ant1	-5.2	0	-5.2	8	Pass
NVNT	g	2412	Ant1	-10.23	0	-10.23	8	Pass
NVNT	g	2442	Ant1	-9.5	0	-9.5	8	Pass
NVNT	g	2472	Ant1	-10.49	0	-10.49	8	Pass
NVNT	n20	2412	Ant1	-9.79	0	-9.79	8	Pass
NVNT	n20	2442	Ant1	-9.7	0	-9.7	8	Pass
NVNT	n20	2472	Ant1	-10.01	0	-10.01	8	Pass

Test Graphs
PSD NVNT b 2412MHz Ant1

PSD NVNT b 2442MHz Ant1

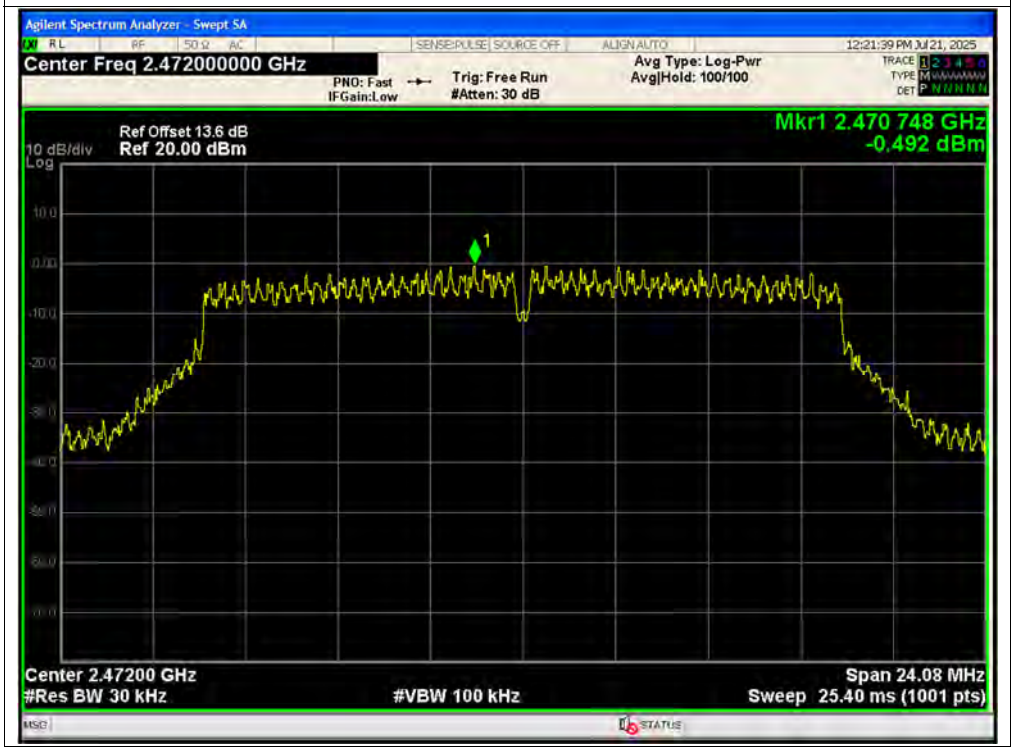
PSD NVNT b 2472MHz Ant1

PSD NVNT g 2412MHz Ant1

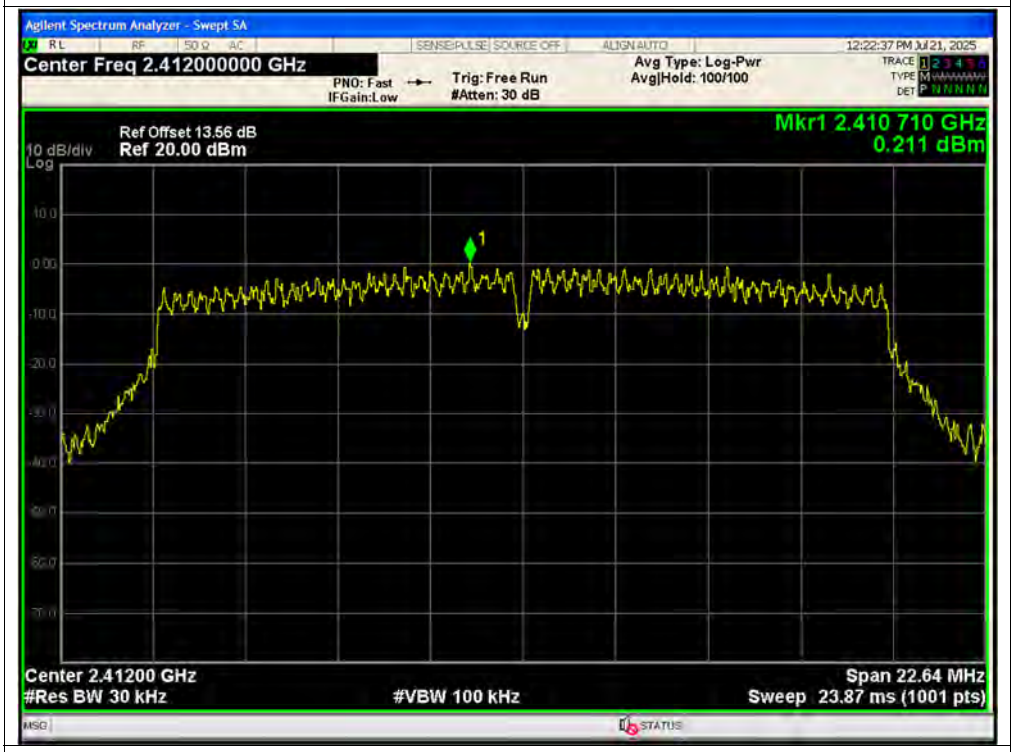


PSD NVNT g 2442MHz Ant1

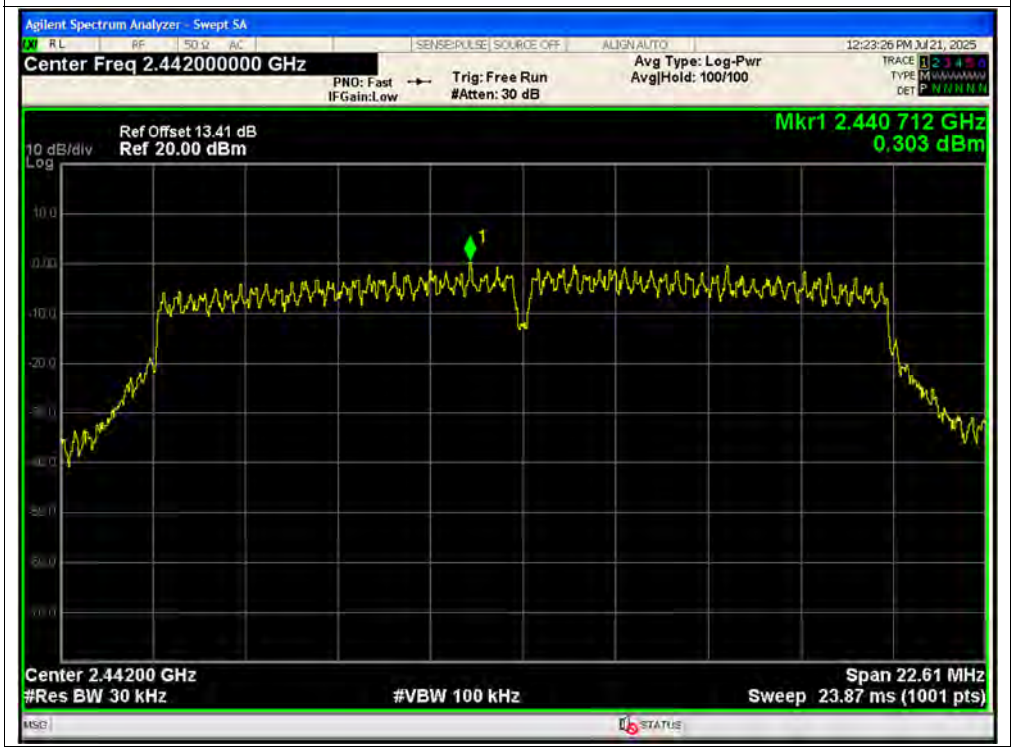
PSD NVNT g 2472MHz Ant1

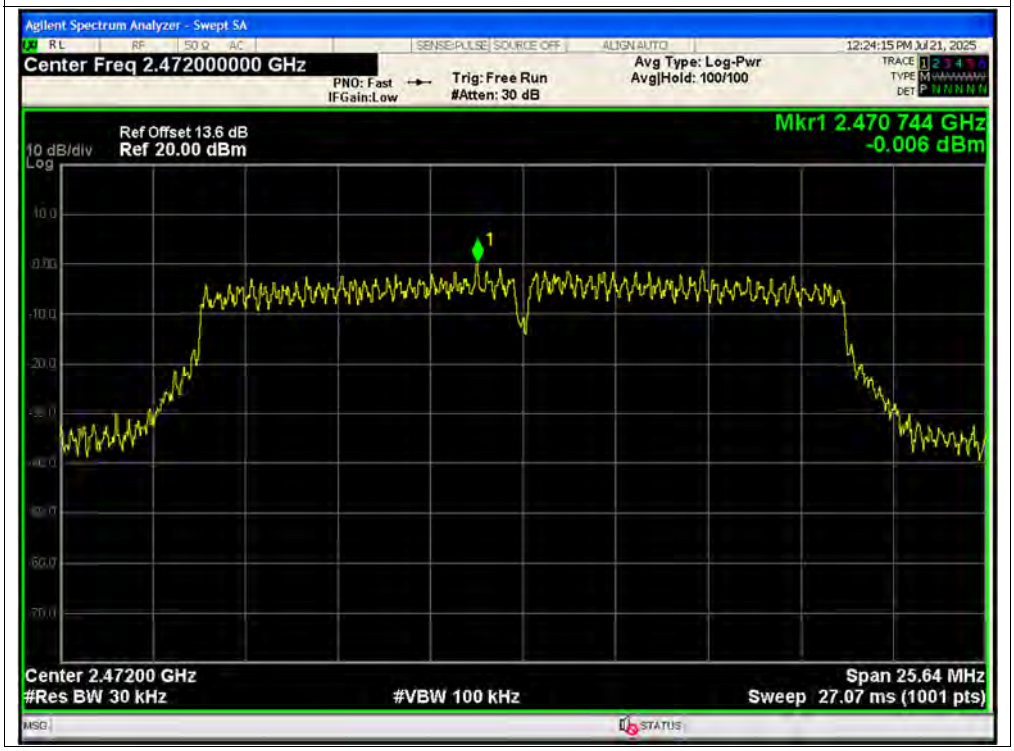


PSD NVNT n20 2412MHz Ant1



PSD NVNT n20 2442MHz Ant1



PSD NVNT n20 2472MHz Ant1


A.8. Conducted Emission

The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Set RBW=9kHz, VBW=30kHz. Refer to recorded points and plots below.

Note: Both of the test voltage AC 120V/60Hz and AC 230V/50Hz were considered and tested respectively, only the results of the worst case AC 120V/60Hz were recorded in this report.

A. Test Setup:

Test Mode: EUT+Adapetr+Data cable +WIFI TX

Test voltage: AC 120V/60Hz

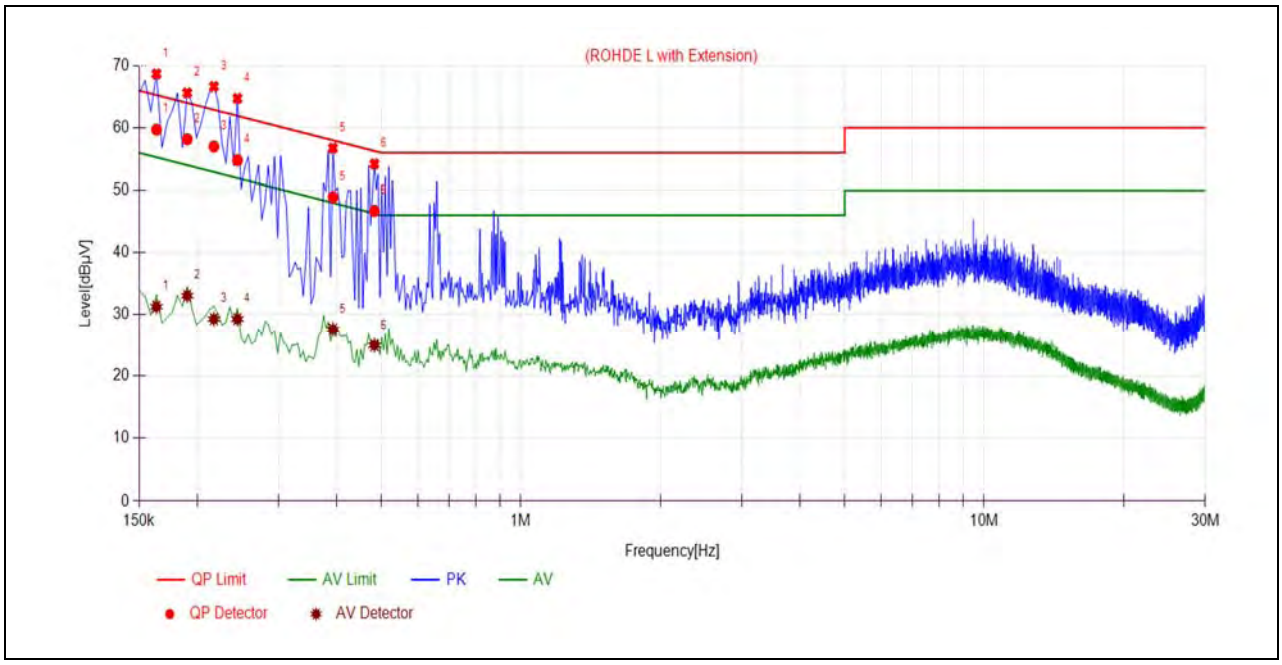
The measurement results are obtained as below:

$E\ [dB\mu V] = U_R + L_{Cable\ loss}\ [dB] + A_{Factor}$

U_R: Receiver Reading

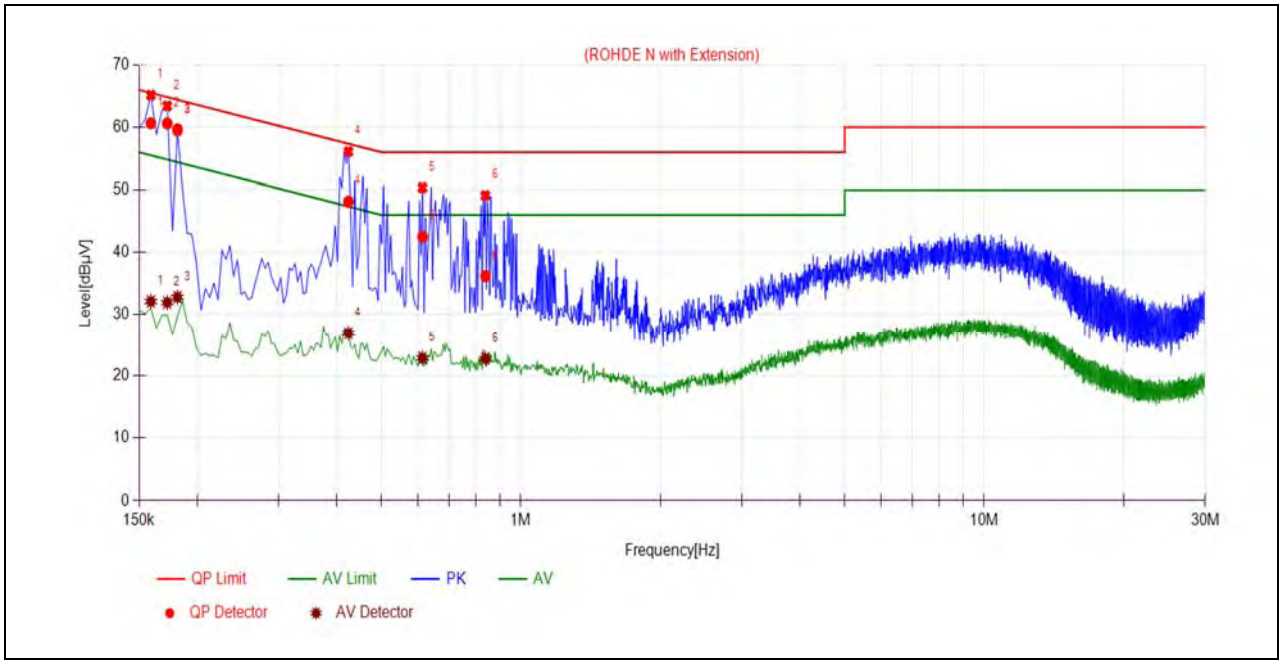
A_{Factor}: Voltage division factor of LISN

B. Test Plot:



(L Phase)

No.	Fre. (MHz)	Emission Level (dBµV)		Limit (dBµV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.1635	59.72	31.29	65.28	55.28	Line	PASS
2	0.1905	58.17	33.07	64.02	54.02		PASS
3	0.2175	57.00	29.30	62.91	52.91		PASS
4	0.2445	54.81	29.30	61.94	51.94		PASS
5	0.3930	48.90	27.60	58.00	48.00		PASS
6	0.4830	46.72	24.97	56.29	46.29		PASS



(N Phase)

No.	Fre. (MHz)	Emission Level (dBµV)		Limit (dBµV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.1590	60.64	32.13	65.52	55.52	Neutral	PASS
2	0.1725	60.61	31.94	64.84	54.84		PASS
3	0.1815	59.66	32.83	64.42	54.42		PASS
4	0.4245	48.15	26.97	57.36	47.36		PASS
5	0.6135	42.53	22.91	56.00	46.00		PASS
6	0.8386	36.21	22.80	56.00	46.00		PASS

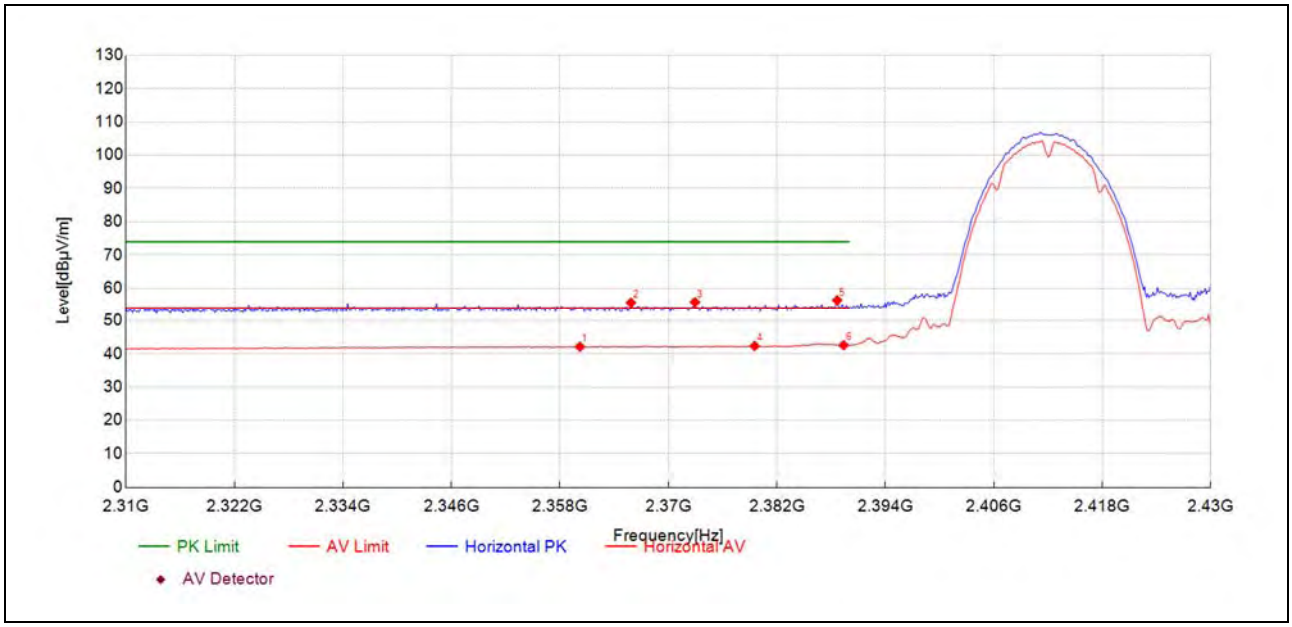
A.9. Restricted Frequency Bands

Note 1: Restricted Frequency Bands were performed when antenna was at vertical and horizontal polarity, and only the worse test condition (Horizontal) 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.

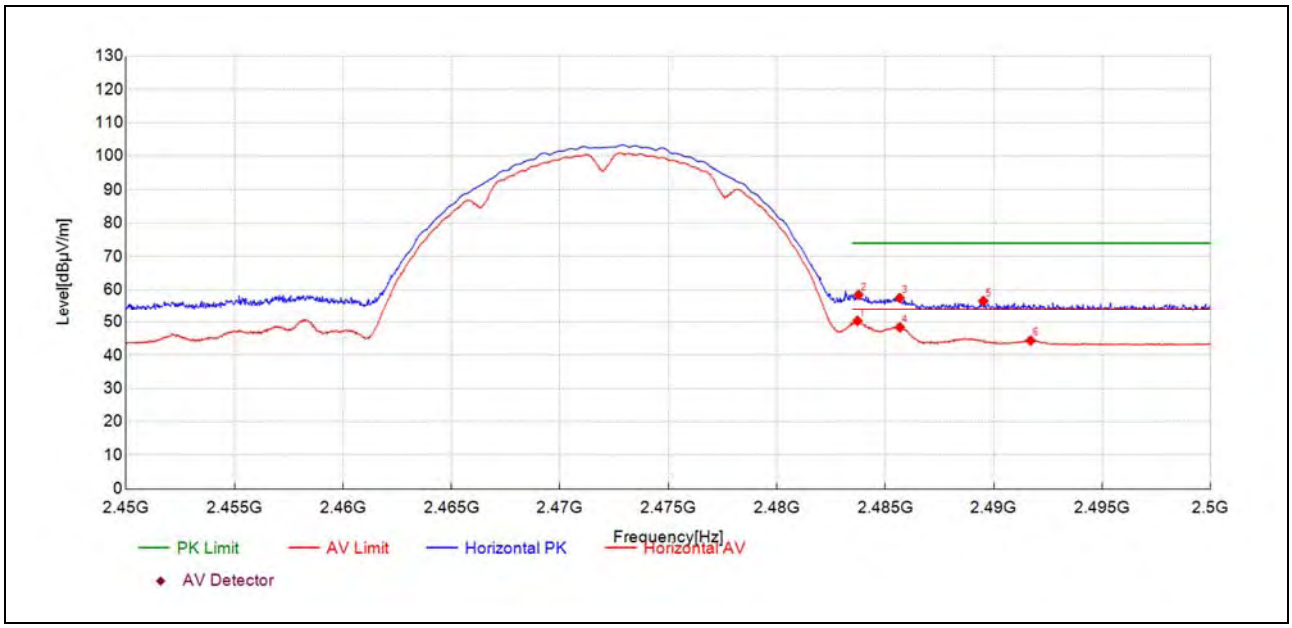
802.11b Mode

Plot for Channel 1



Fre. (MHz)	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2360.21	9.7	42.13	32.440	54.00	11.87	150	10	AV	PASS
2365.86	23.2	55.63	32.460	74.00	18.37	150	309	PK	PASS
2372.94	23.3	55.78	32.490	74.00	18.22	150	360	PK	PASS
2379.55	9.8	42.31	32.510	54.00	11.69	150	76	AV	PASS
2388.68	23.8	56.35	32.540	74.00	17.65	150	317	PK	PASS
2389.40	10.1	42.59	32.540	54.00	11.41	150	127	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
2483.72	17.3	50.30	33.030	54.00	3.70	150	273	AV	PASS
2483.77	25.4	58.44	33.030	74.00	15.56	150	273	PK	PASS
2485.67	24.5	57.49	33.030	74.00	16.51	150	273	PK	PASS
2485.67	15.4	48.38	33.030	54.00	5.62	150	273	AV	PASS
2489.52	23.6	56.60	33.020	74.00	17.40	150	273	PK	PASS
2491.70	11.4	44.39	33.020	54.00	9.61	150	281	AV	PASS

A.10. 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:

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

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.

Note 1: 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.

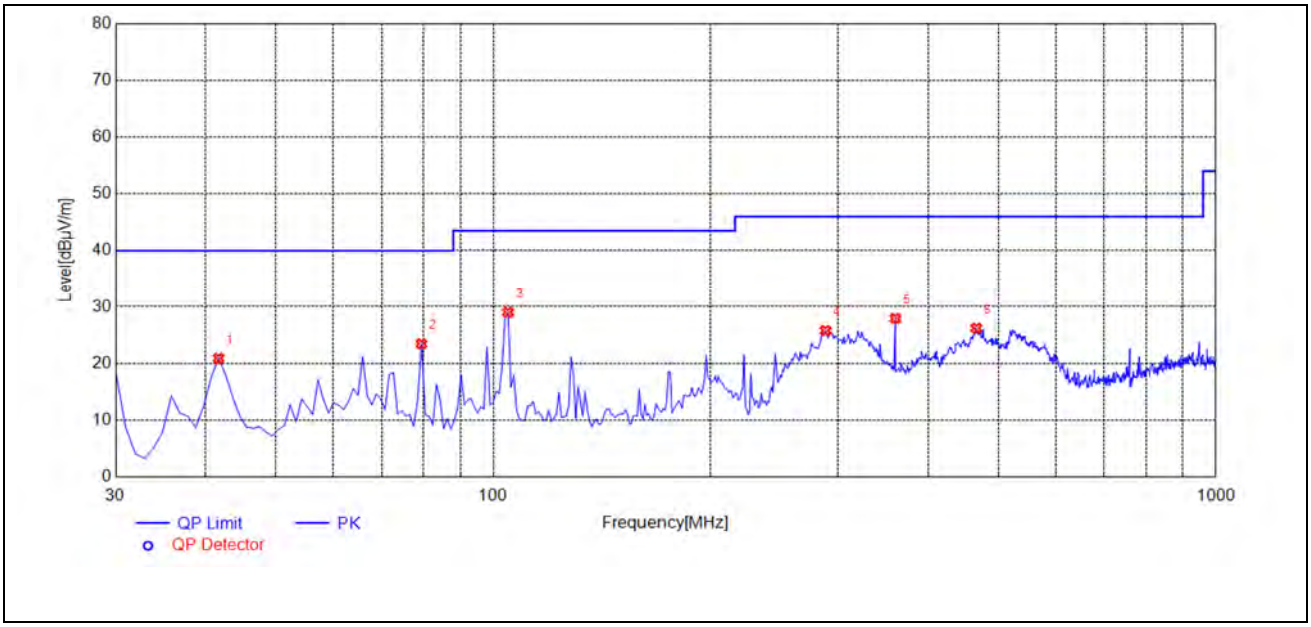
Note 2: All test modes and bandwidth were considered and evaluated respectively by performing full test, only the worst data were recorded for each bandwidth.

Note 3: 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.

Note 4: For the frequency, which started from 18GHz to 10th harmonic of the highest frequency, was pre-scanned and the result which was 20dB lower than the limit was not recorded.

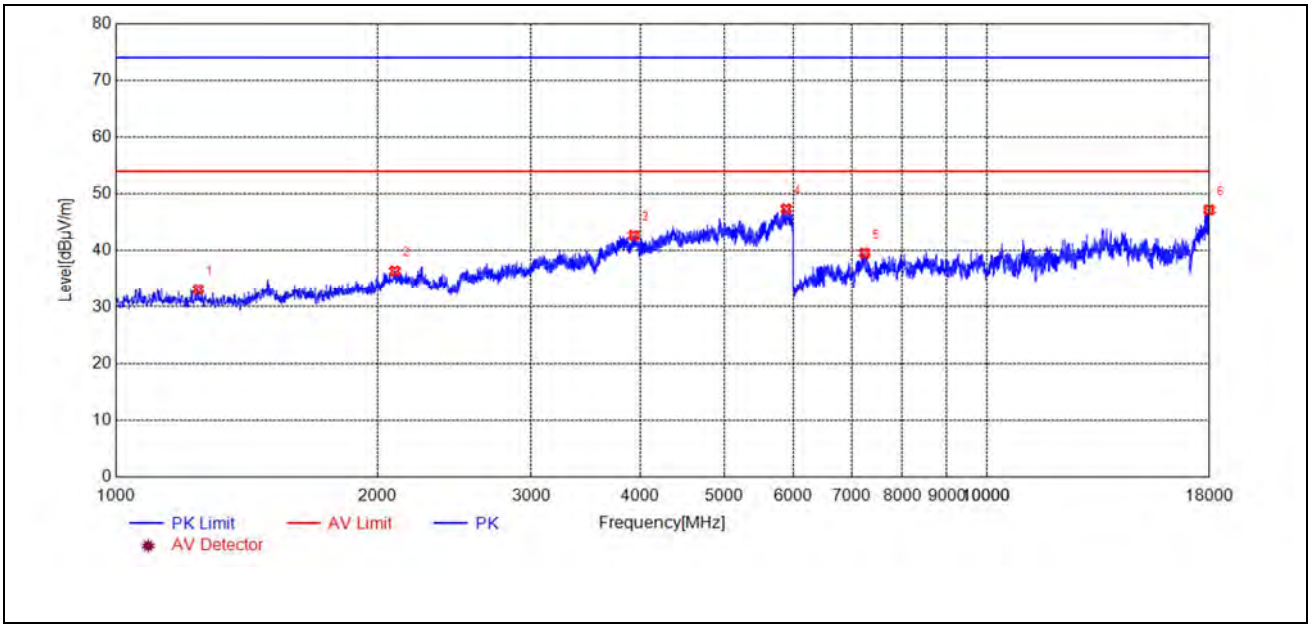
802.11b Mode

Plot for Channel 1



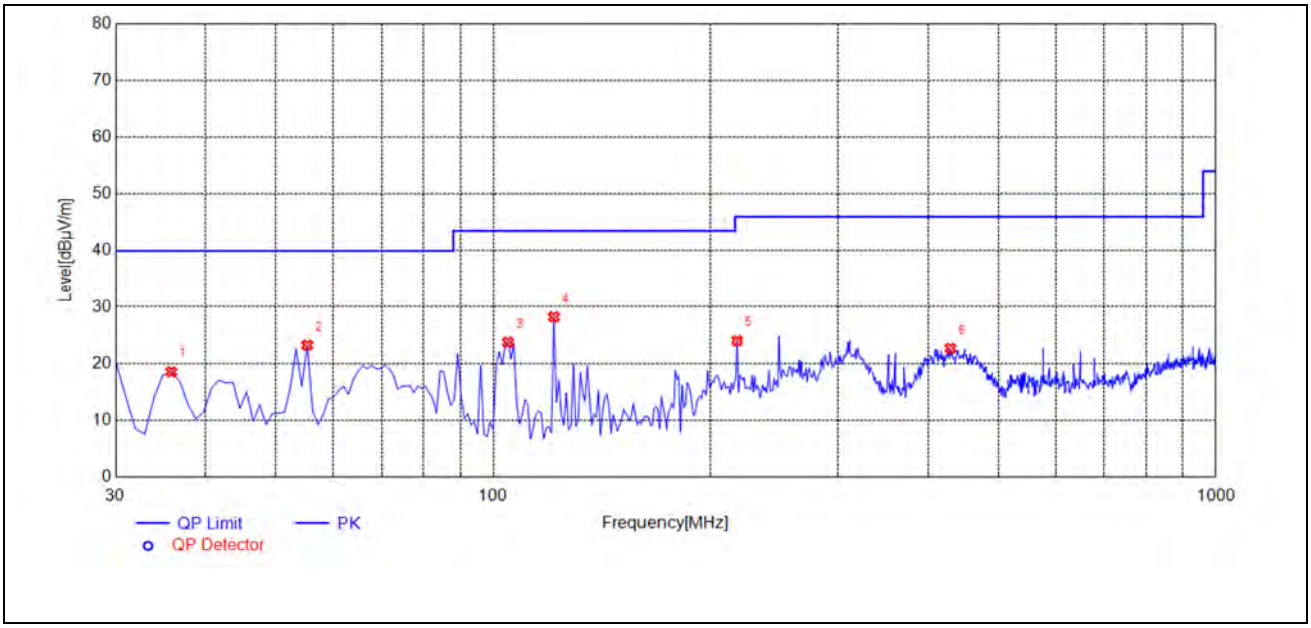
(Antenna Horizontal, 30MHz to 1GHz)

Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
41.6517	20.87	-29.90	40.00	19.13	150	80	Horizontal	PASS
79.5195	23.45	-34.06	40.00	16.55	150	276	Horizontal	PASS
104.7648	28.99	-30.84	43.50	14.51	150	208	Horizontal	PASS
288.2783	25.77	-29.42	46.00	20.23	150	302	Horizontal	PASS
360.1301	27.91	-26.34	46.00	18.09	150	131	Horizontal	PASS
465.9660	26.19	-23.84	46.00	19.81	150	123	Horizontal	PASS



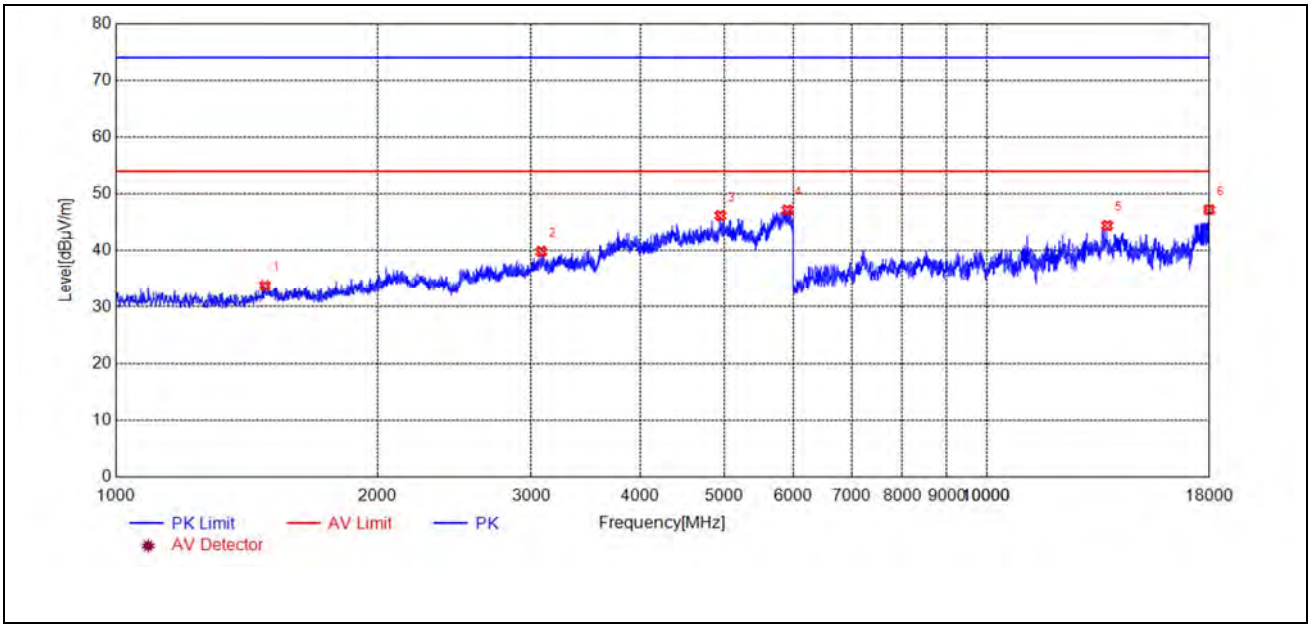
(Antenna Horizontal, 1GHz to 18GHz)

Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1244.0488	33.11	-24.56	74.00	40.89	150	0	Horizontal	PASS
2092.2184	36.43	-20.24	74.00	37.57	150	88	Horizontal	PASS
3934.5869	42.73	-14.10	74.00	31.27	150	289	Horizontal	PASS
5884.9770	47.37	-6.99	74.00	26.63	150	330	Horizontal	PASS
7241.0482	39.61	-2.66	74.00	34.39	150	209	Horizontal	PASS
18000.0000	47.19	13.41	74.00	26.81	150	149	Horizontal	PASS



(Antenna Vertical, 30MHz to 1GHz)

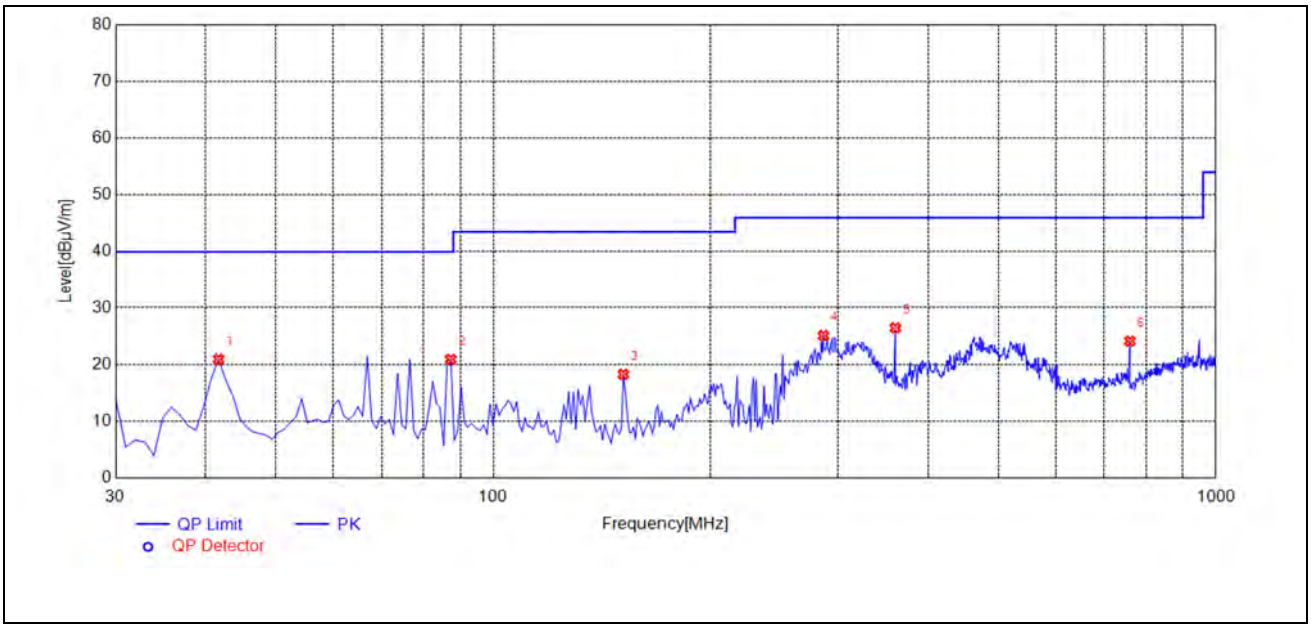
Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
35.8258	18.54	-36.91	40.00	21.46	150	126	Vertical	PASS
55.2452	23.23	-28.97	40.00	16.77	150	187	Vertical	PASS
104.7648	23.74	-30.84	43.50	19.76	150	32	Vertical	PASS
121.2713	28.22	-32.61	43.50	15.28	150	143	Vertical	PASS
217.3974	23.99	-31.66	46.00	22.01	150	220	Vertical	PASS
429.0691	22.66	-25.25	46.00	23.34	150	83	Vertical	PASS



(Antenna Vertical, 1GHz to 18GHz)

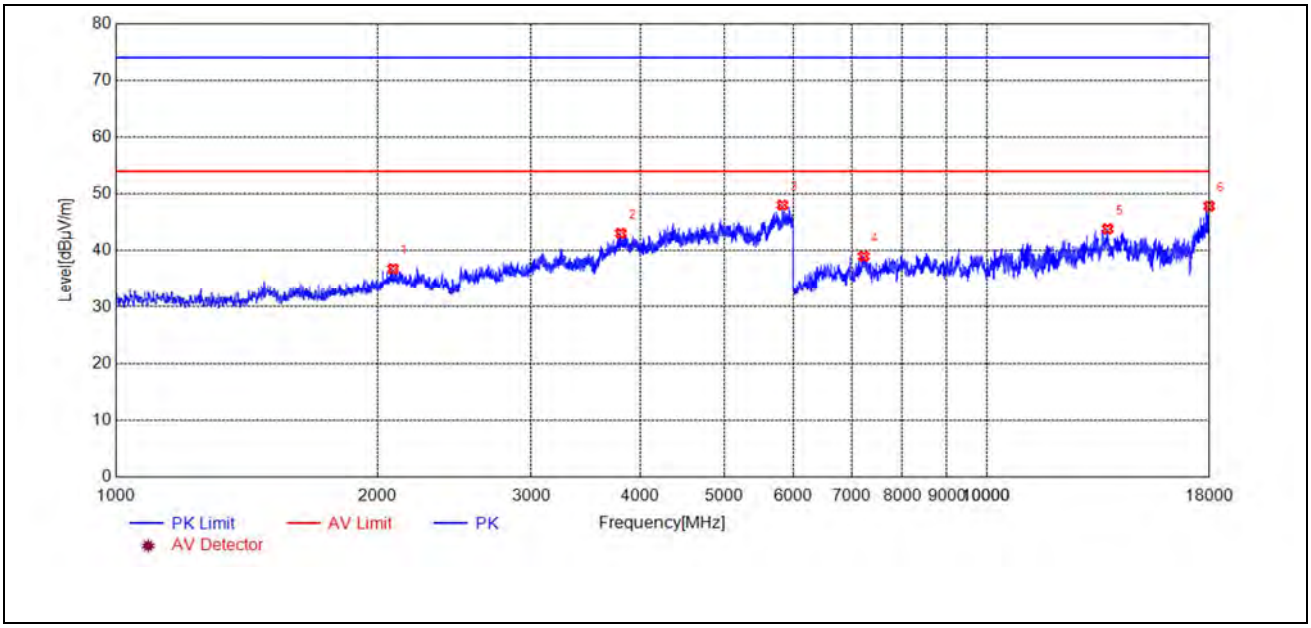
Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1484.0968	33.78	-23.23	74.00	40.22	150	201	Vertical	PASS
3080.4161	39.86	-17.07	74.00	34.14	150	81	Vertical	PASS
4945.7892	46.19	-9.66	74.00	27.81	150	312	Vertical	PASS
5903.9808	47.16	-6.96	74.00	26.84	150	1	Vertical	PASS
13746.3493	44.44	7.08	74.00	29.56	150	58	Vertical	PASS
18000.0000	47.24	13.41	74.00	26.76	150	229	Vertical	PASS

Plot for Channel 7



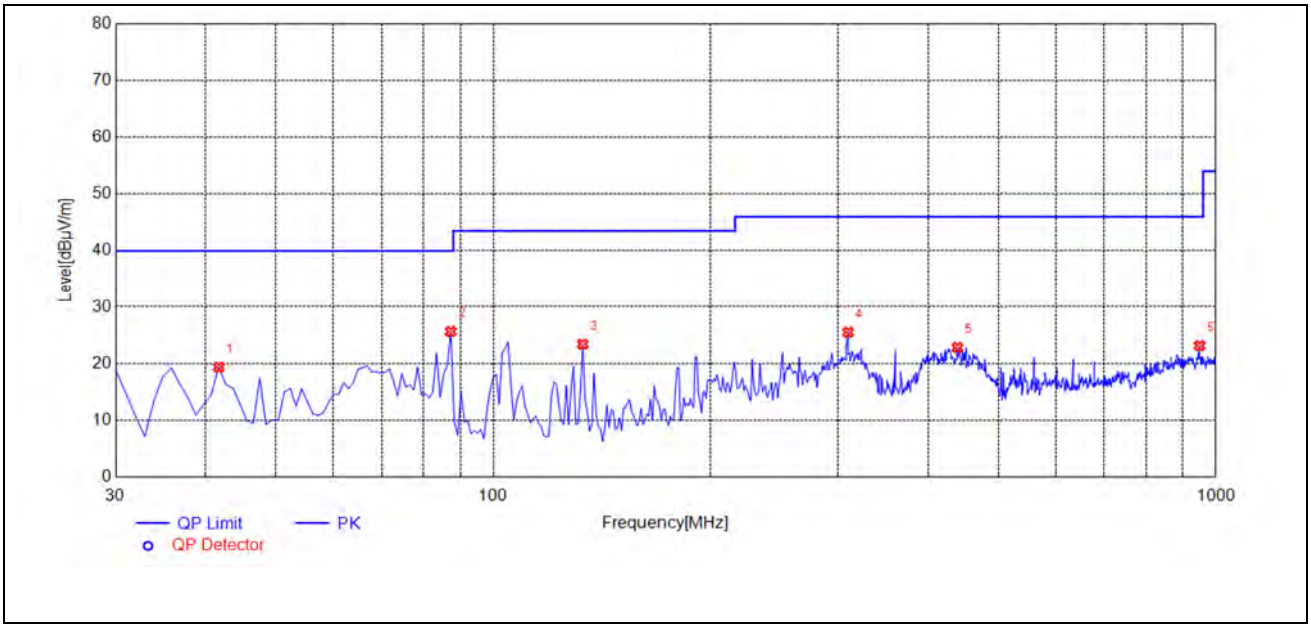
(Antenna Horizontal, 30MHz to 1GHz)

Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
41.6517	20.89	-29.90	40.00	19.11	150	212	Horizontal	PASS
87.2873	20.88	-33.84	40.00	19.12	150	272	Horizontal	PASS
151.3714	18.27	-34.36	43.50	25.23	150	263	Horizontal	PASS
286.3363	25.08	-29.51	46.00	20.92	150	297	Horizontal	PASS
360.1301	26.43	-26.34	46.00	19.57	150	195	Horizontal	PASS
760.1702	24.09	-22.02	46.00	21.91	150	118	Horizontal	PASS



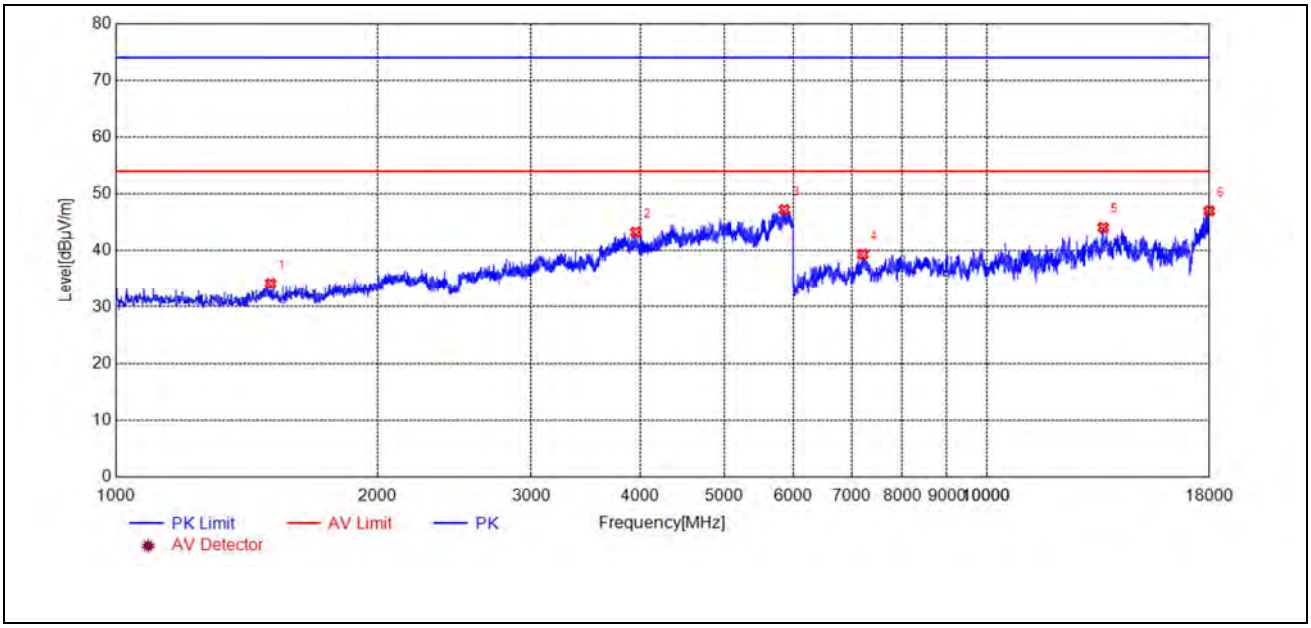
(Antenna Horizontal, 1GHz to 18GHz)

Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
2081.2162	36.83	-20.36	74.00	37.17	150	343	Horizontal	PASS
3801.5603	43.08	-14.41	74.00	30.92	150	242	Horizontal	PASS
5824.9650	48.05	-7.63	74.00	25.95	150	121	Horizontal	PASS
7224.2448	39.03	-2.80	74.00	34.97	150	18	Horizontal	PASS
13765.5531	43.86	6.91	74.00	30.14	150	248	Horizontal	PASS
18000.0000	47.87	13.41	74.00	26.13	150	158	Horizontal	PASS



(Antenna Vertical, 30MHz to 1GHz)

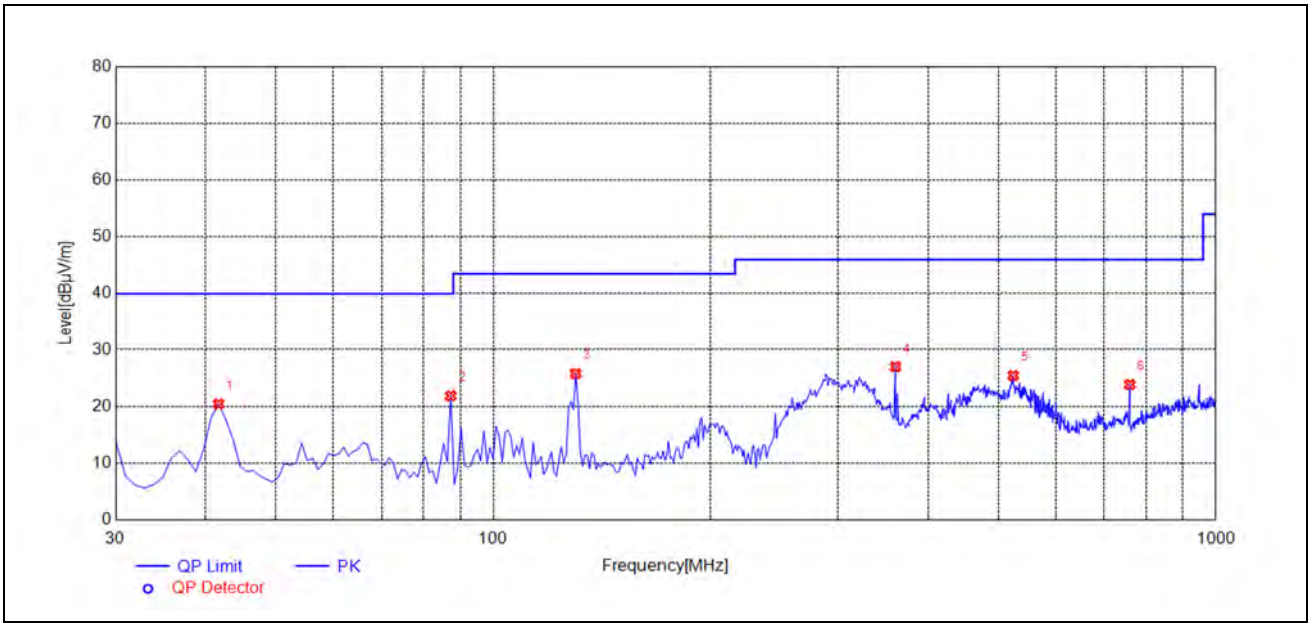
Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
41.6517	19.33	-29.90	40.00	20.67	150	20	Vertical	PASS
87.2873	25.61	-33.84	40.00	14.39	150	174	Vertical	PASS
132.9229	23.39	-32.93	43.50	20.11	150	88	Vertical	PASS
309.6396	25.49	-28.80	46.00	20.51	150	233	Vertical	PASS
438.7788	22.82	-24.95	46.00	23.18	150	302	Vertical	PASS
949.5095	23.13	-17.59	46.00	22.87	150	225	Vertical	PASS



(Antenna Vertical, 1GHz to 18GHz)

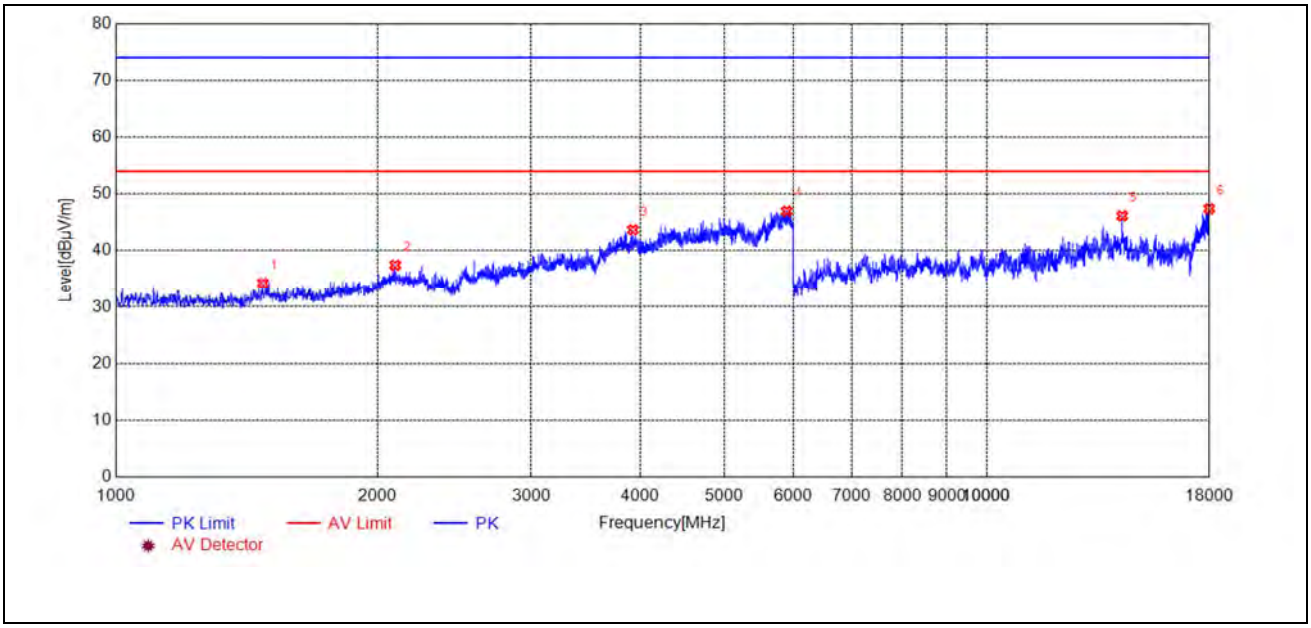
Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1506.1012	34.21	-23.11	74.00	39.79	150	80	Vertical	PASS
3956.5913	43.27	-13.82	74.00	30.73	150	80	Vertical	PASS
5855.9712	47.25	-6.93	74.00	26.75	150	312	Vertical	PASS
7207.4415	39.39	-2.94	74.00	34.61	150	289	Vertical	PASS
13604.7209	44.10	7.40	74.00	29.90	150	279	Vertical	PASS
18000.0000	47.03	13.41	74.00	26.97	150	38	Vertical	PASS

Plot for Channel 13



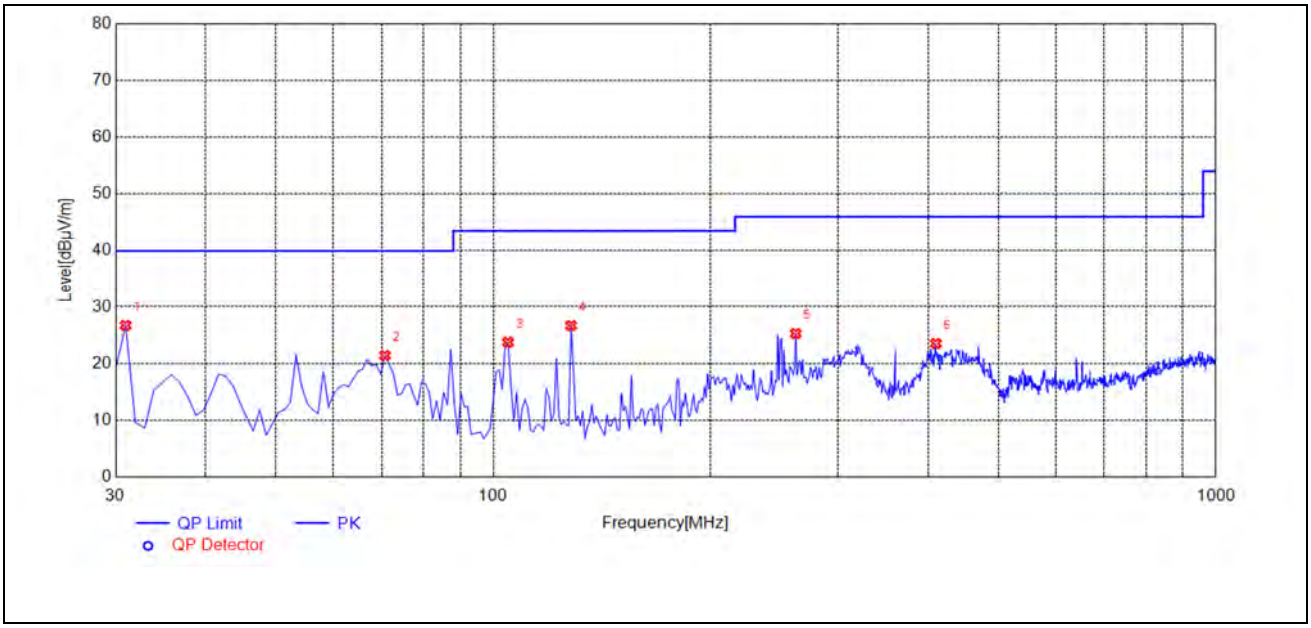
(Antenna Horizontal, 30MHz to 1GHz)

Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
41.6517	20.41	-29.90	40.00	19.59	150	97	Horizontal	PASS
87.2873	21.85	-33.84	40.00	18.15	150	343	Horizontal	PASS
130.0100	25.76	-33.03	43.50	17.74	150	88	Horizontal	PASS
360.1301	26.97	-26.34	46.00	19.03	150	80	Horizontal	PASS
524.2242	25.40	-23.87	46.00	20.60	150	140	Horizontal	PASS
760.1702	23.83	-22.02	46.00	22.17	150	182	Horizontal	PASS



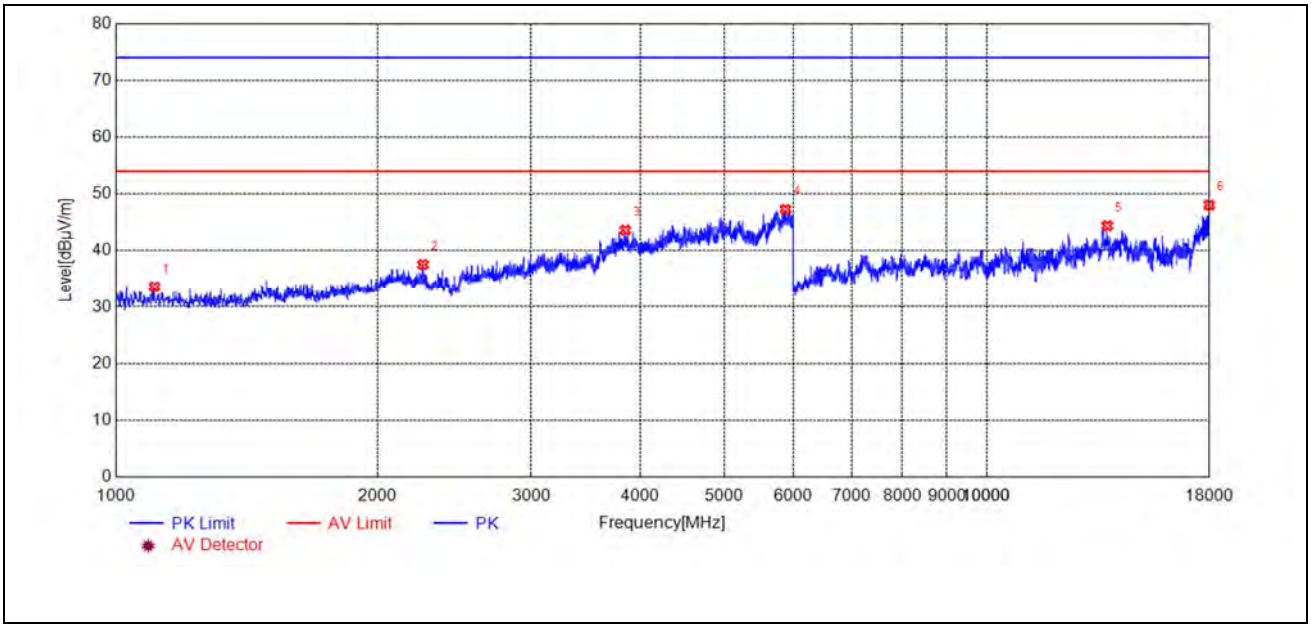
(Antenna Horizontal, 1GHz to 18GHz)

Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1476.0952	34.24	-23.37	74.00	39.76	150	313	Horizontal	PASS
2094.2188	37.43	-20.22	74.00	36.57	150	292	Horizontal	PASS
3924.5849	43.70	-14.36	74.00	30.30	150	332	Horizontal	PASS
5890.9782	46.98	-7.00	74.00	27.02	150	80	Horizontal	PASS
14300.8602	46.15	7.79	74.00	27.85	150	199	Horizontal	PASS
18000.0000	47.40	13.41	74.00	26.60	150	149	Horizontal	PASS



(Antenna Vertical, 30MHz to 1GHz)

Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
30.9710	26.71	-36.43	40.00	13.29	150	228	Vertical	PASS
70.7808	21.39	-32.25	40.00	18.61	150	220	Vertical	PASS
104.7648	23.73	-30.84	43.50	19.77	150	100	Vertical	PASS
128.0681	26.68	-32.12	43.50	16.82	150	92	Vertical	PASS
262.0621	25.27	-30.21	46.00	20.73	150	160	Vertical	PASS
409.6497	23.51	-25.10	46.00	22.49	150	41	Vertical	PASS



(Antenna Vertical, 1GHz to 18GHz)

Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1108.0216	33.57	-24.48	74.00	40.43	150	96	Vertical	PASS
2253.2507	37.58	-20.09	74.00	36.42	150	267	Vertical	PASS
3846.5693	43.63	-14.42	74.00	30.37	150	318	Vertical	PASS
5873.9748	47.29	-6.97	74.00	26.71	150	136	Vertical	PASS
13751.1502	44.42	7.23	74.00	29.58	150	310	Vertical	PASS
18000.0000	48.05	13.41	74.00	25.95	150	88	Vertical	PASS

END OF REPORT