TEST REPORT

APPLICANT	:	Cloud Mobile Holdings, LLC
PRODUCT NAME	:	Smart phone
MODEL NAME	:	MC8C654B
BRAND NAME	:	Cloud Mobile
FCC ID	:	2AY6A-C8PL
STANDARD(S)	:	47 CFR Part 15 Subpart C
RECEIPT DATE	:	2025-06-09
TEST DATE	:	2025-06-11 to 2025-06-20
ISSUE DATE	:	2025-07-18

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DIRECTORY

Change History		
Version	**Date**	**Reason for change**
1.0	2025-07-18	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	Jun. 16, 2025	Li Yue	PASS	/
3	15.247(b)	Maximum Peak Conducted Output Power	Jun. 16, 2025	Li Yue	PASS	/
4	15.247(b)	Maximum Average Conducted Output Power	Jun. 16, 2025	Li Yue	PASS	/
5	15.247(a)	Bandwidth	Jun. 16, 2025	Li Yue	PASS	/
6	15.247(d)	Conducted Spurious Emission and Band Edge	Jun. 20, 2025	Li Yue	PASS	/
7	15.247(e)	Power Spectral Density	Jun. 20, 2025	Li Yue	PASS	/
8	15.207	Conducted Emission	Jun. 10, 2025	Fan Shengquan	PASS	/
9	15.247(d)	Restricted Frequency Bands	Jun. 16, 2025	Li Hanbin	PASS	/
10	15.209, 15.247(d)	Radiated Emission	Jun. 16, 2025	Li Hanbin	PASS	/

Note 1: The tests were performed according to the method of measurements prescribed in ANSI C63.10-2013 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 Analzyer	MY53470836	N9010A	Agilent	2025.01.15	2026.01.14
Power Sensor	MY54180008	U2021XA	Agilent	2024.09.11	2025.09.10
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	9163-519	VULB 9163	Schwarzbeck	2024.06.22	2025.06.21
Test Antenna - Loop	1519-022	FMZB1519	Schwarzbeck	2025.05.16	2026.05.15
Test Antenna – Horn	01774	BBHA 9120D	Schwarzbeck	2024.06.22	2025.06.21
Test Antenna – Horn	BBHA9170 #773	BBHA9170	Schwarzbeck	2024.06.22	2025.06.21
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
Notch Filter	N/A	WRCG-2400-2483.5-60SS	Wainwright	N/A	N/A
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
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:	Cloud Mobile Holdings, LLC
Applicant Address:	1149 S HILL ST H400 LOS ANGELES, CA 90015
Manufacturer:	Cloud Mobile Holdings, LLC
Manufacturer Address:	1149 S HILL ST H400 LOS ANGELES, CA 90015

2.2. Information of EUT

Product Name:	Smart phone	
Sample No.:	4#, 13#, 14#	
Hardware Version:	v1.0	
Software Version:	StratusC8PlusV01.03.10	
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–2462MHz	
Antenna Type:	PIFA Antenna	
Antenna Gain:	-0.8dBi	
Accessory Information:	Battery	
	Brand Name:	N/A
	Model No.:	456480
	Serial No.:	N/A
	Capacity:	3900mAh
	Rated Voltage:	3.88V
	Charge Limit:	4.45V
	Manufacturer:	Huizhou Highpower Technology Co.,LTD.
	AC Adapter	
	Brand Name:	N/A
	Model No.:	TN-050200U3
	Serial No.:	N/A
	Rated Output:	5.0V⎓2.0A
	Rated Input:	100-240V~50/60Hz, 0.35A
	Manufacturer:	Dong Guan City GangQi Electronic Co.,

		Ltd.
	USB Cable	
	Model No.:	T365-011B-1
	Manufacturer:	Shenzhen Yihuaxing 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		
	6	**2437**		
	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.

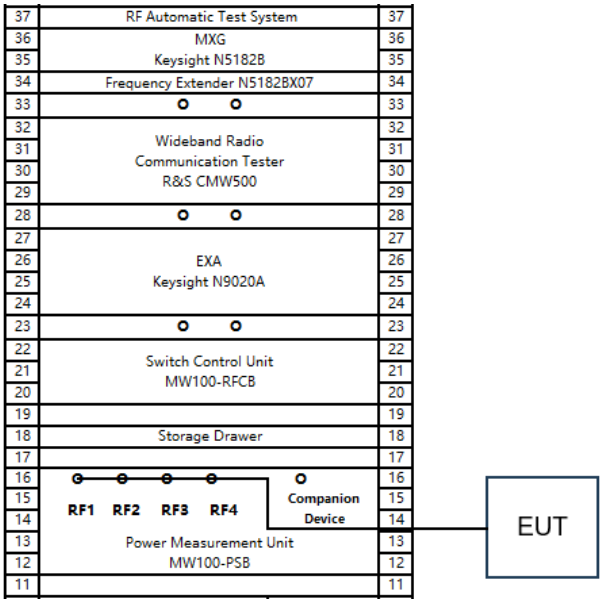
Note2: The RF signal transmission of EUT is controlled by the build-in engineering mode which is provided by the manufacturer. The recorded power setting value is the maximum that the engineering mode has configuration during testing.

2.5. Test Conditions

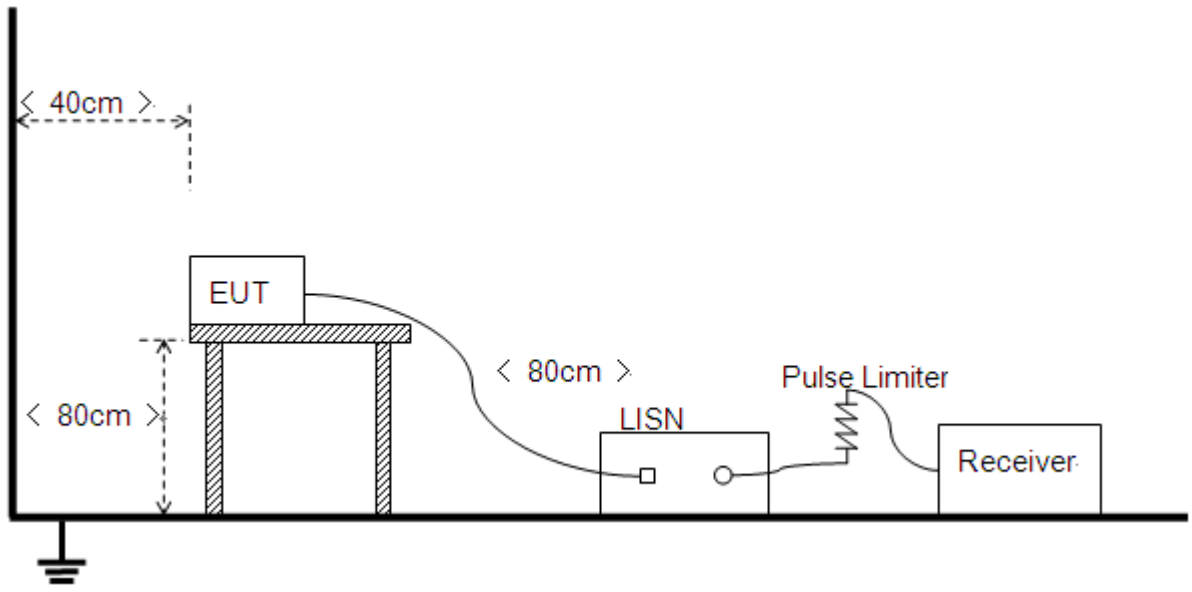
Temperature (°C):	15-35
Relative Humidity (%):	30-60
Atmospheric Pressure (kPa):	86-106

2.6. Test Setup Layout Diagram

2.6.1.Conducted Measurement

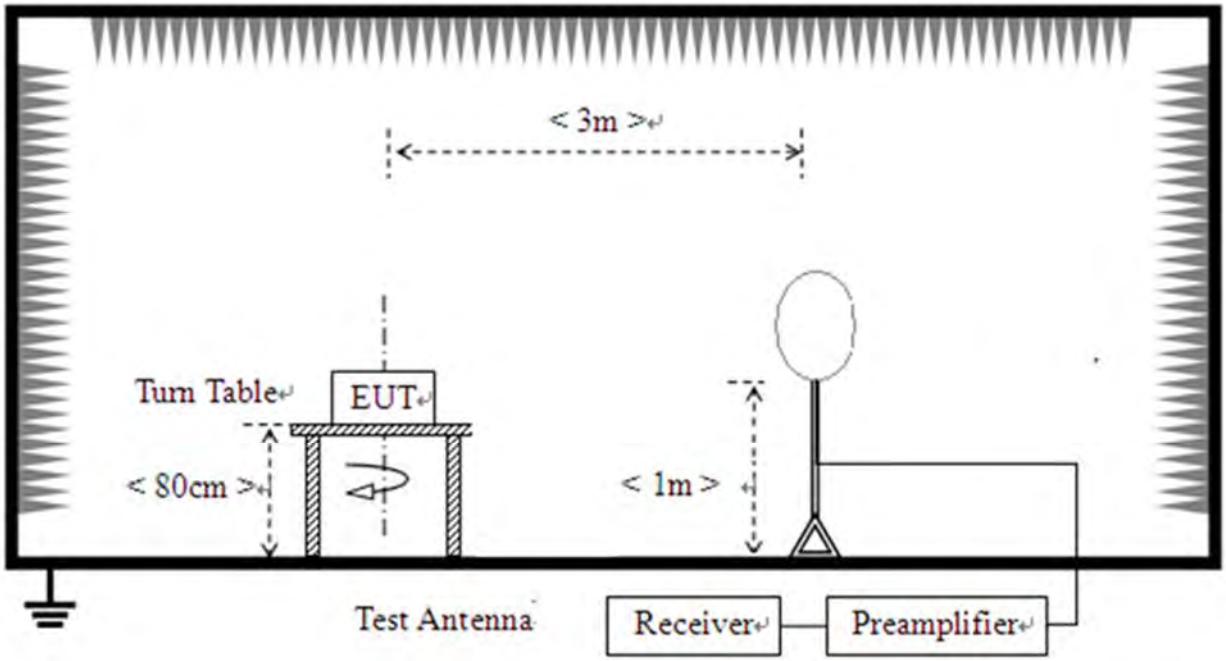


2.6.2.Conducted Emission Measurement

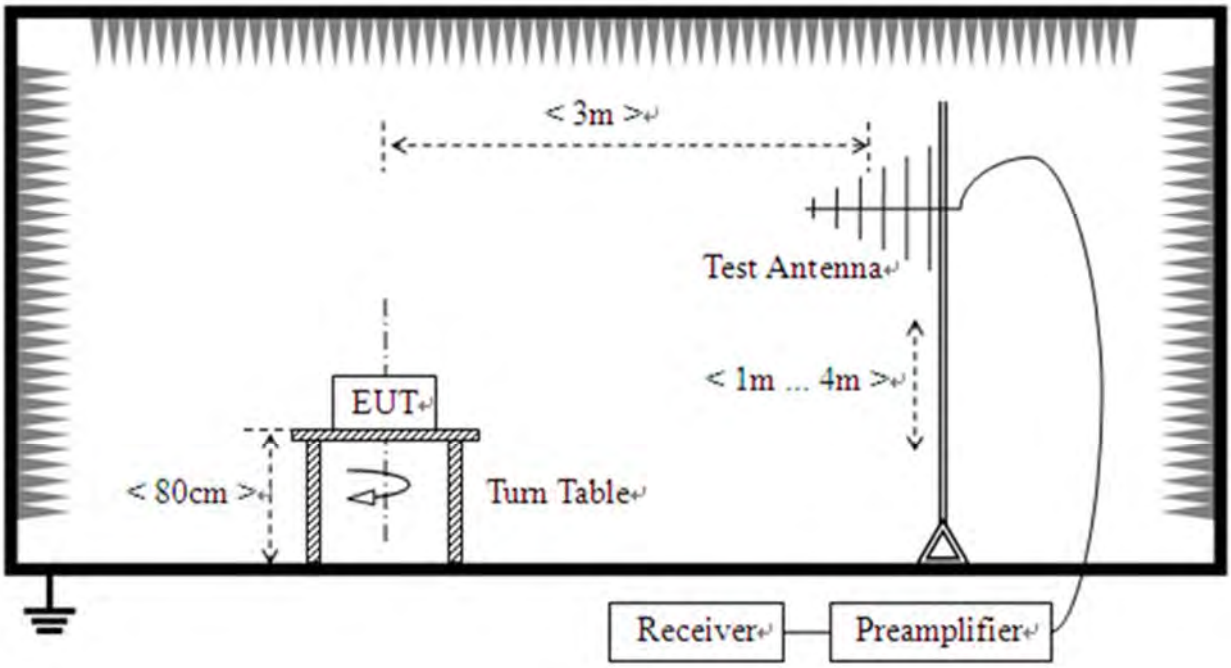


2.6.3.Radiation Measurement

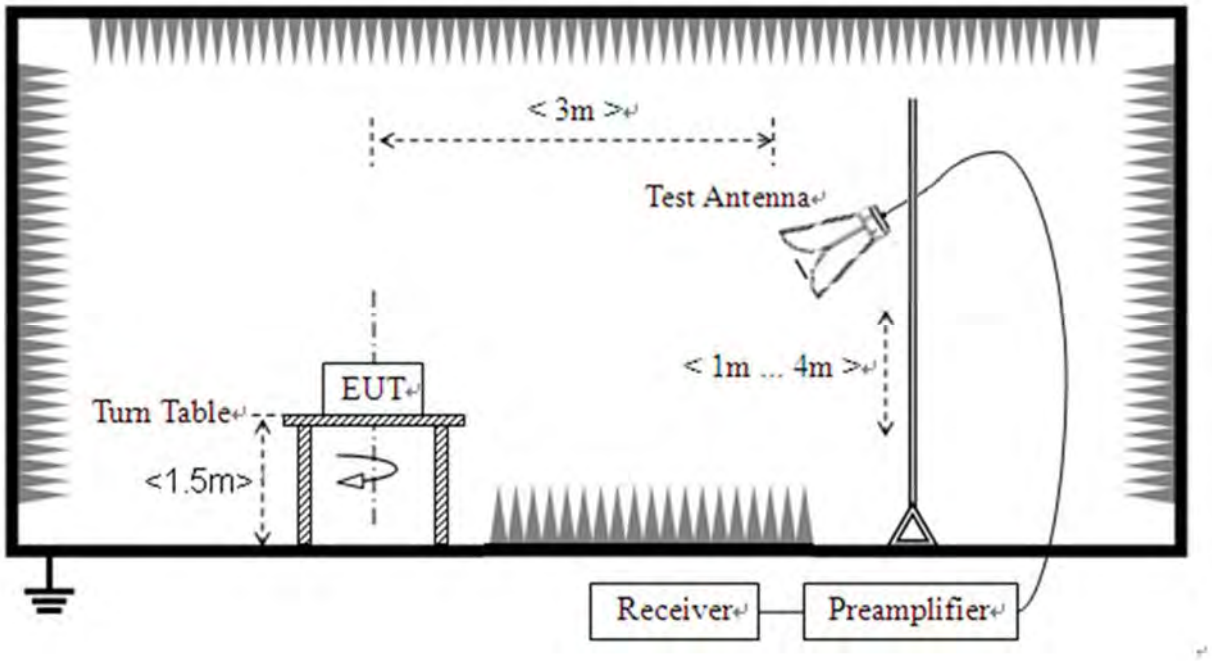
1) For radiated emissions from 9kHz to 30MHz



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 ☐Inverted F 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 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 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: 2013.

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

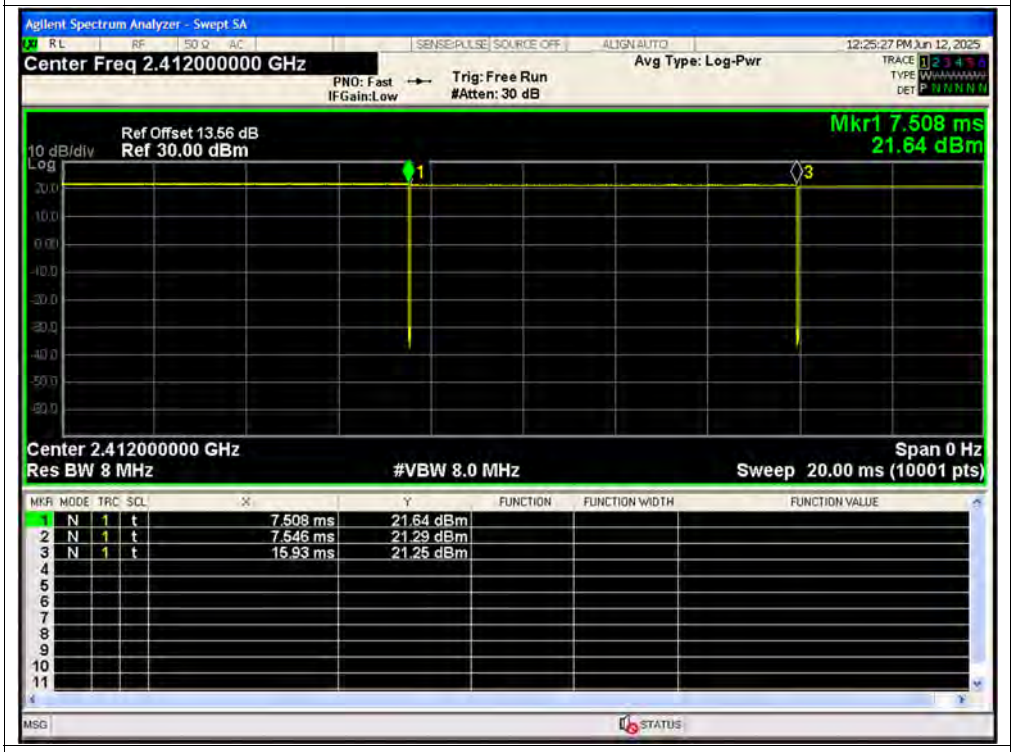
Refer to Annex A.10 in this report.

Annex A Test Data and Result

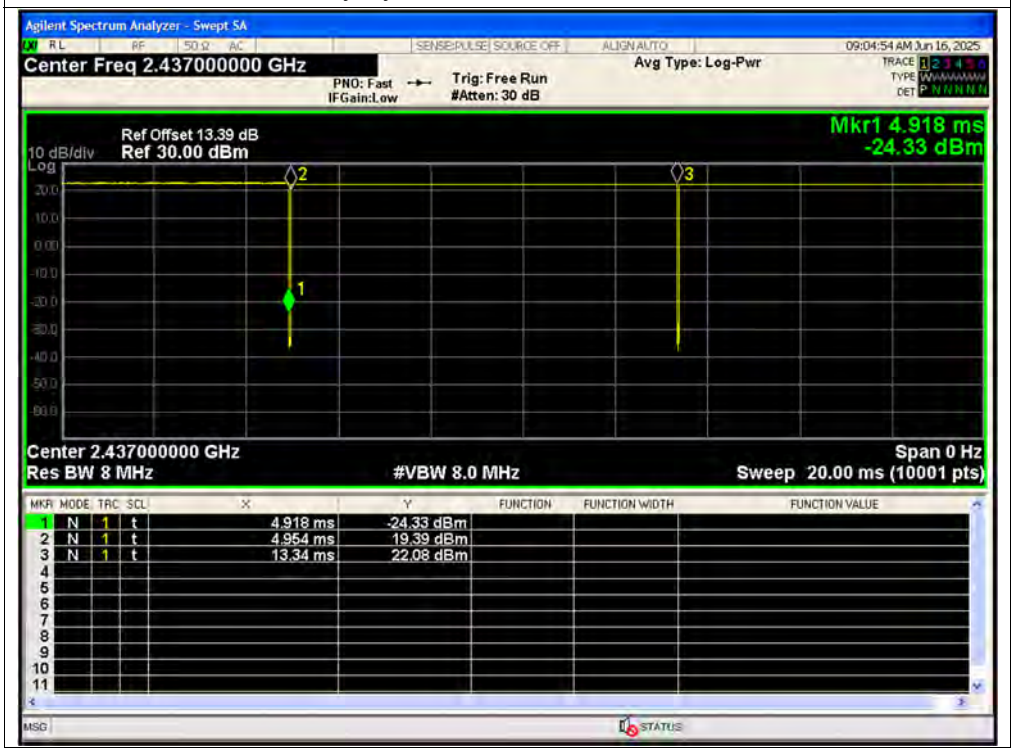
A.1. Duty Cycle of Test Signal

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	b	2412	Ant1	99.55	0.02	0.12
NVNT	b	2437	Ant1	99.57	0.02	0.12
NVNT	b	2462	Ant1	99.57	0.02	0.12
NVNT	g	2412	Ant1	96.94	0.13	0.72
NVNT	g	2437	Ant1	97.08	0.13	0.72
NVNT	g	2462	Ant1	96.94	0.13	0.72
NVNT	n20	2412	Ant1	96.88	0.14	0.77
NVNT	n20	2437	Ant1	96.88	0.14	0.77
NVNT	n20	2462	Ant1	96.73	0.14	0.77

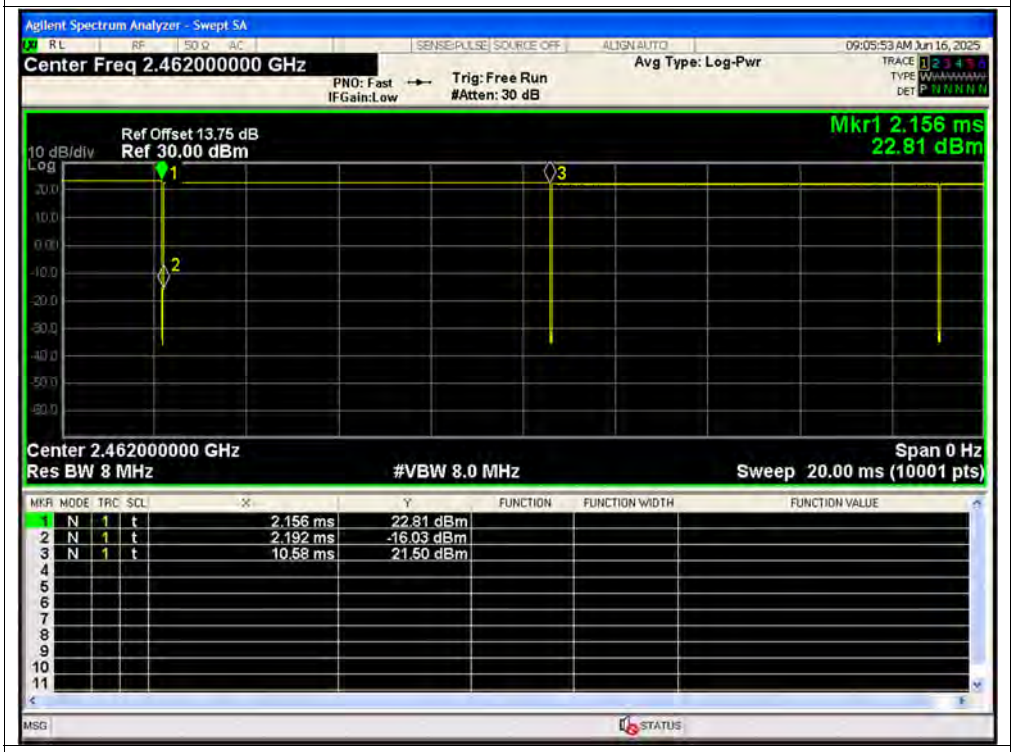
Test Graphs
Duty Cycle NVNT b 2412MHz Ant1



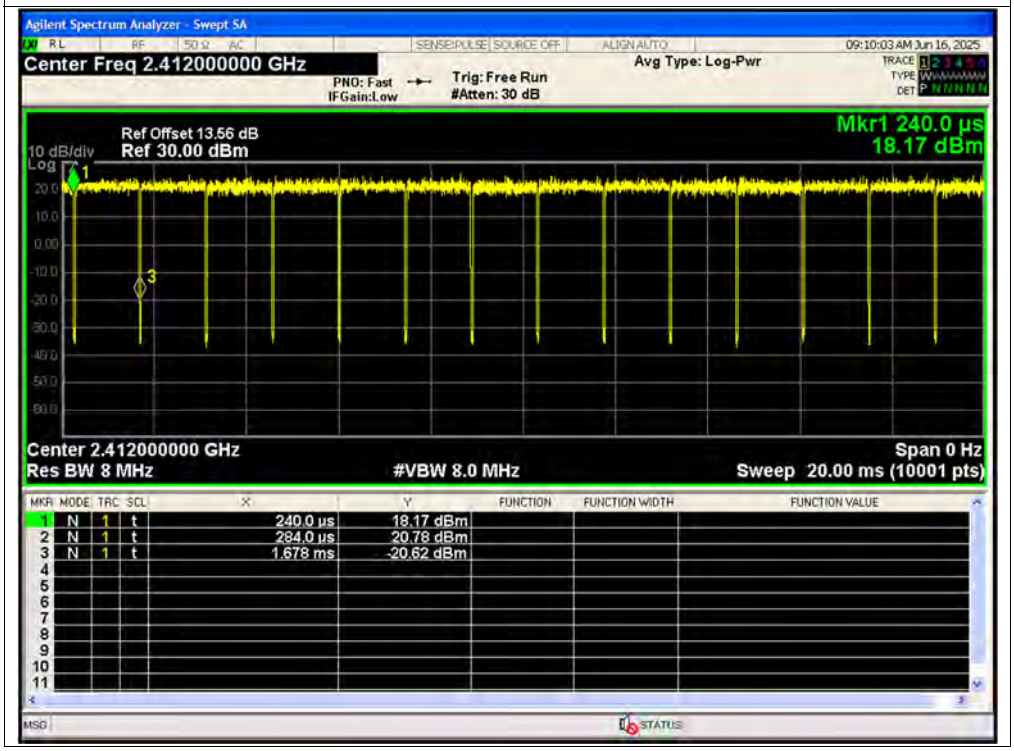
Duty Cycle NVNT b 2437MHz Ant1



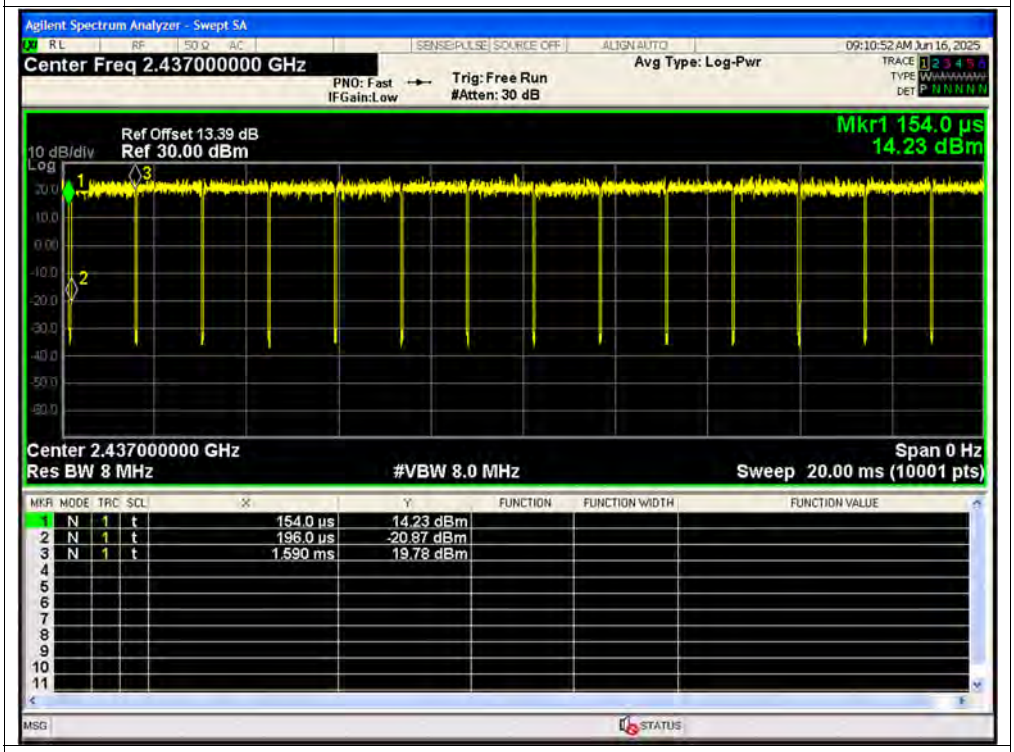
Duty Cycle NVNT b 2462MHz Ant1



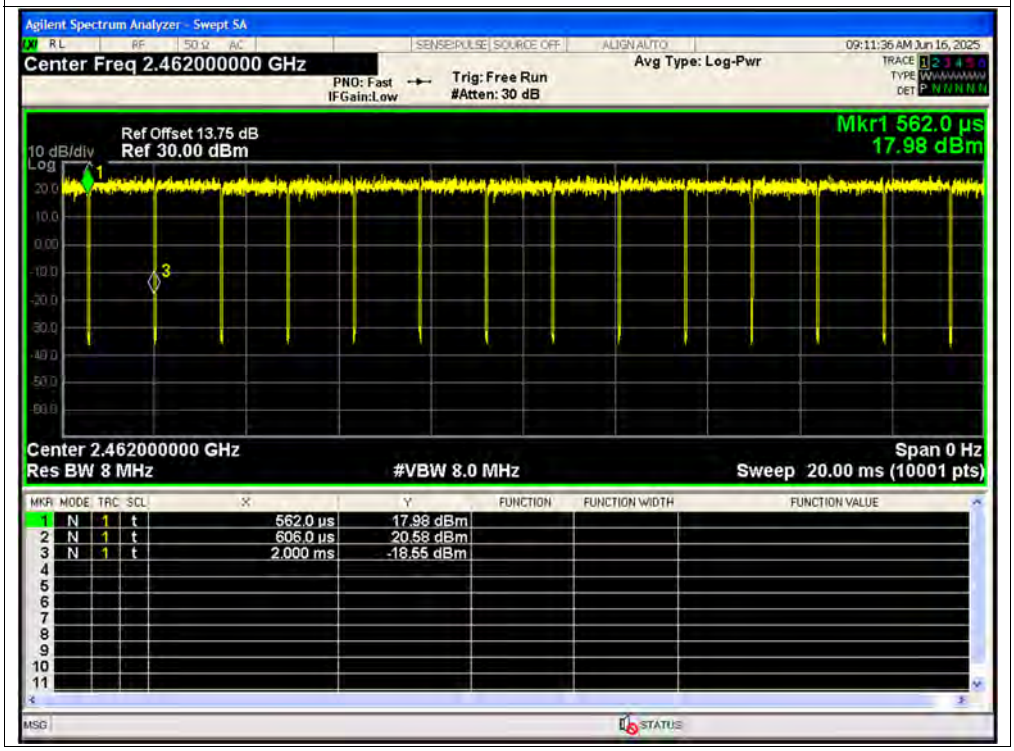
Duty Cycle NVNT g 2412MHz Ant1



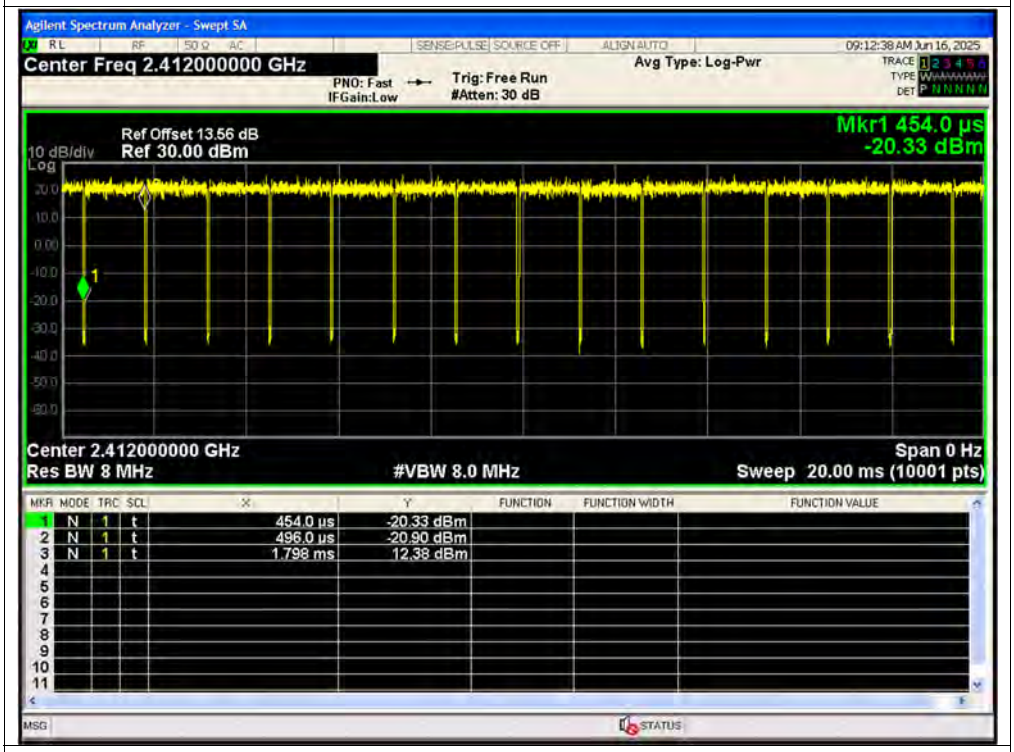
Duty Cycle NVNT g 2437MHz Ant1



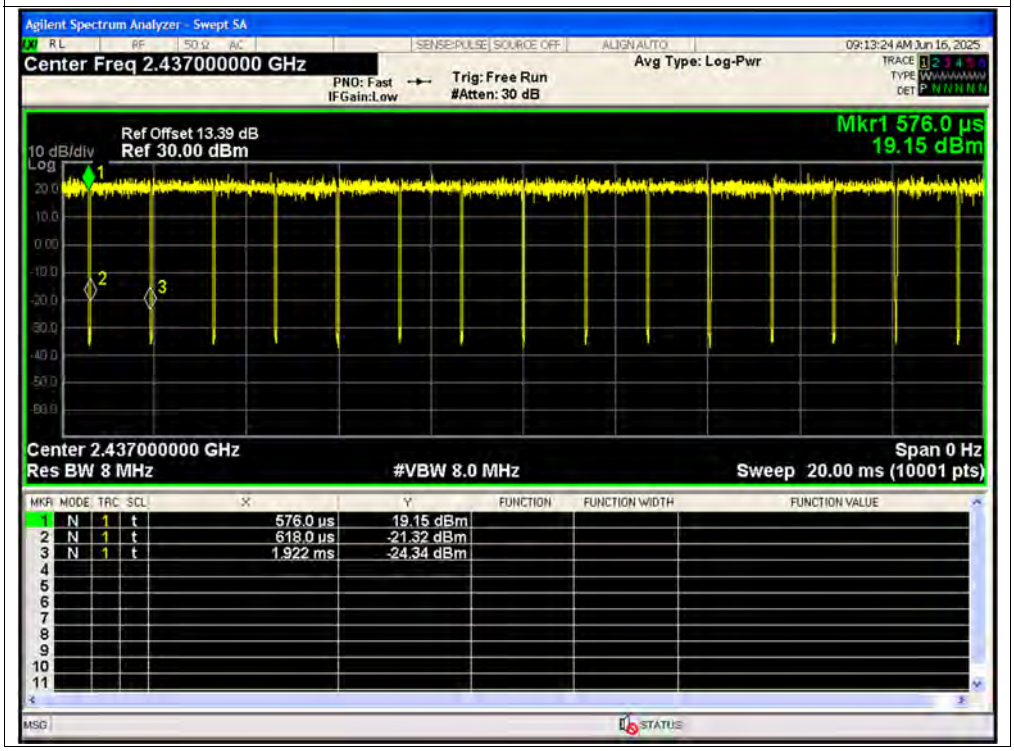
Duty Cycle NVNT g 2462MHz Ant1



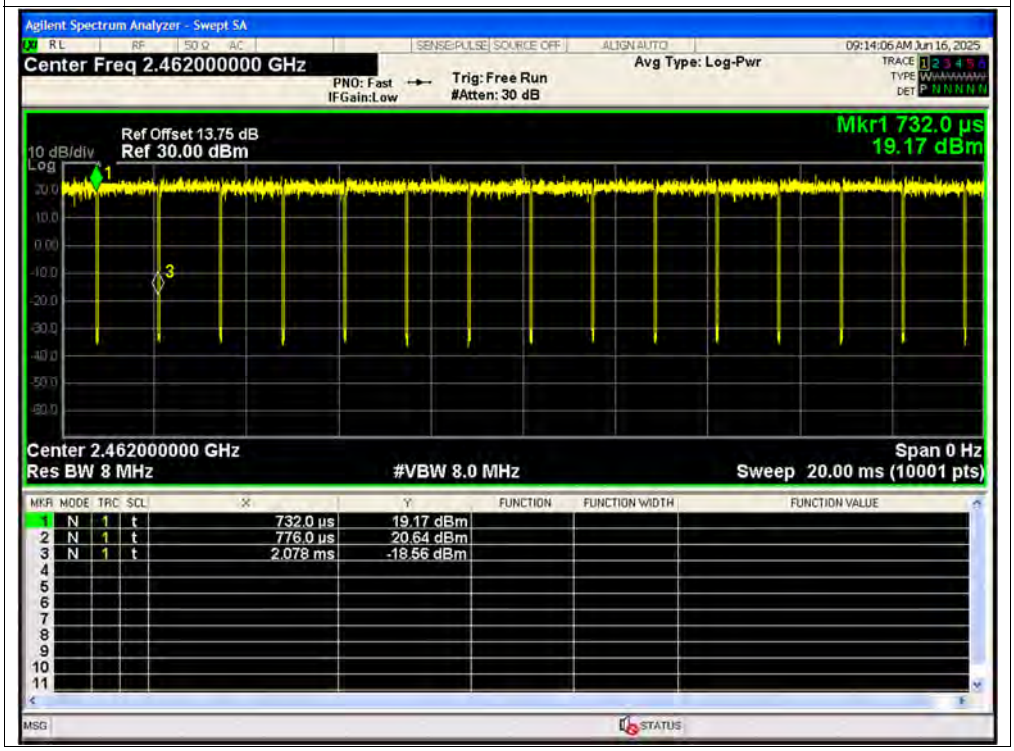
Duty Cycle NVNT n20 2412MHz Ant1



Duty Cycle NVNT n20 2437MHz Ant1



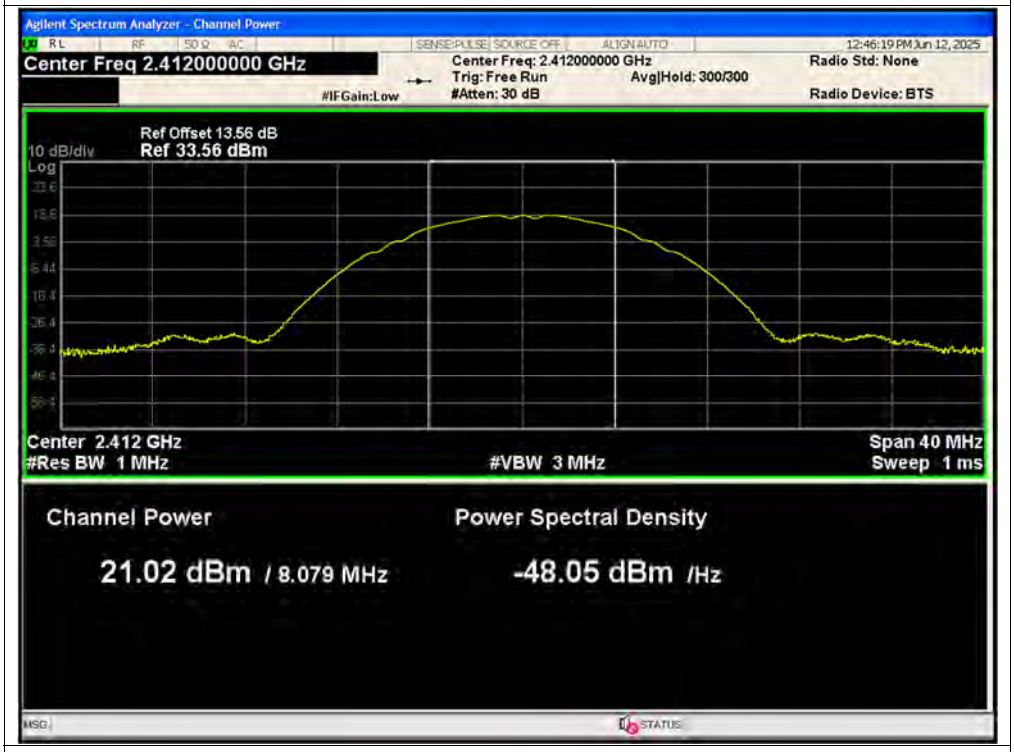
Duty Cycle NVNT n20 2462MHz Ant1



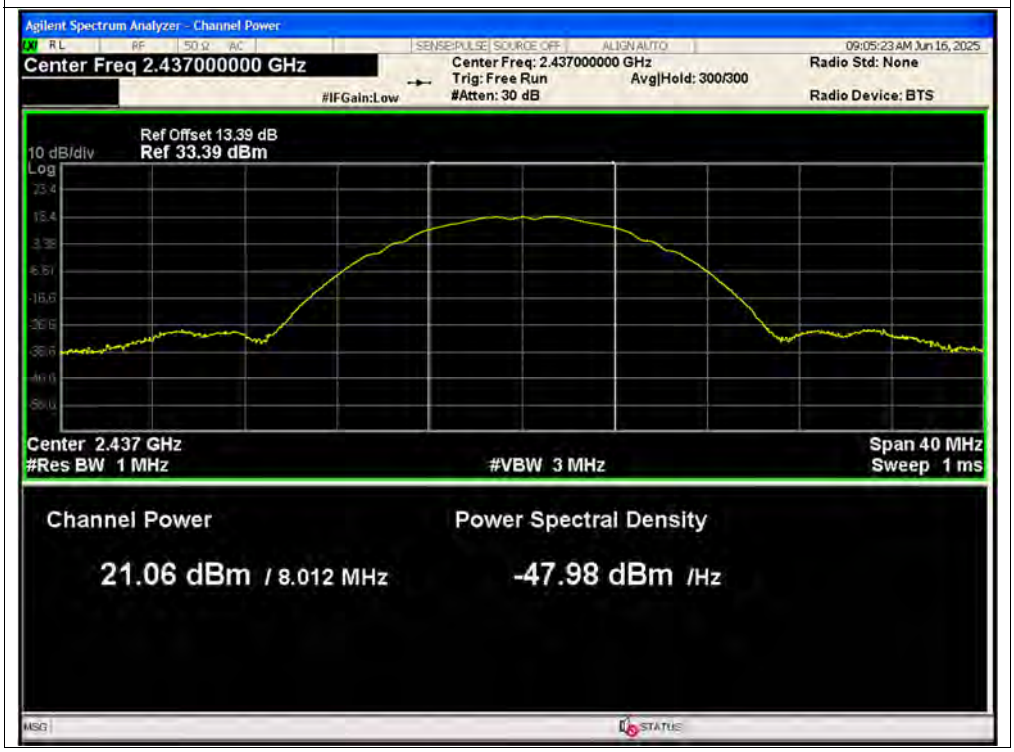
A.2. Maximum Peak Conducted Output Power

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	21.02	0	21.02	0.12647	30	Pass
NVNT	b	2437	Ant1	21.06	0	21.06	0.12764	30	Pass
NVNT	b	2462	Ant1	21.19	0	21.19	0.13152	30	Pass
NVNT	g	2412	Ant1	25.27	0	25.27	0.33651	30	Pass
NVNT	g	2437	Ant1	25.31	0	25.31	0.33963	30	Pass
NVNT	g	2462	Ant1	25.46	0	25.46	0.35156	30	Pass
NVNT	n20	2412	Ant1	25.08	0	25.08	0.32211	30	Pass
NVNT	n20	2437	Ant1	25.15	0	25.15	0.32734	30	Pass
NVNT	n20	2462	Ant1	25.3	0	25.3	0.33884	30	Pass

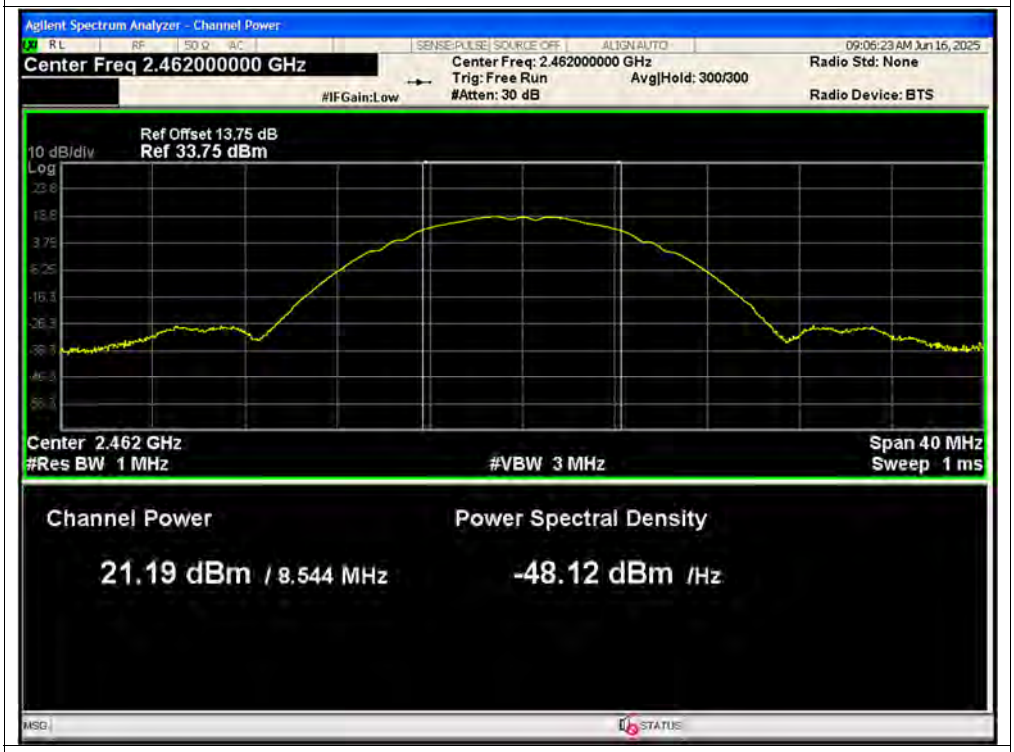
Test Graphs
Peak Power NVNT b 2412MHz Ant1



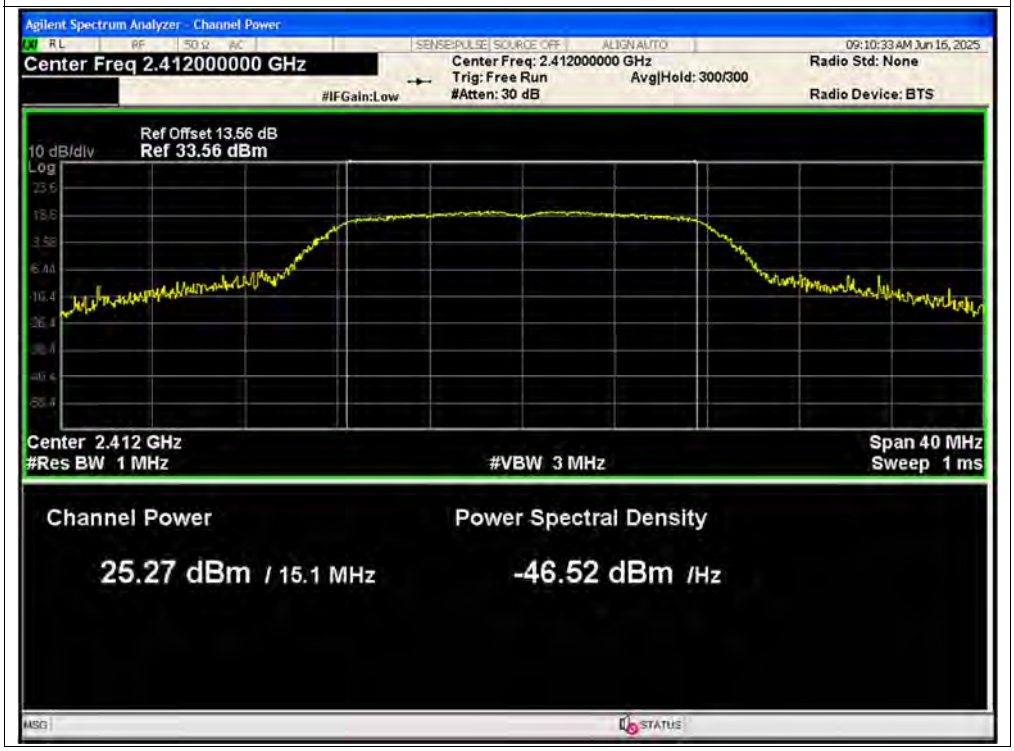
Peak Power NVNT b 2437MHz Ant1



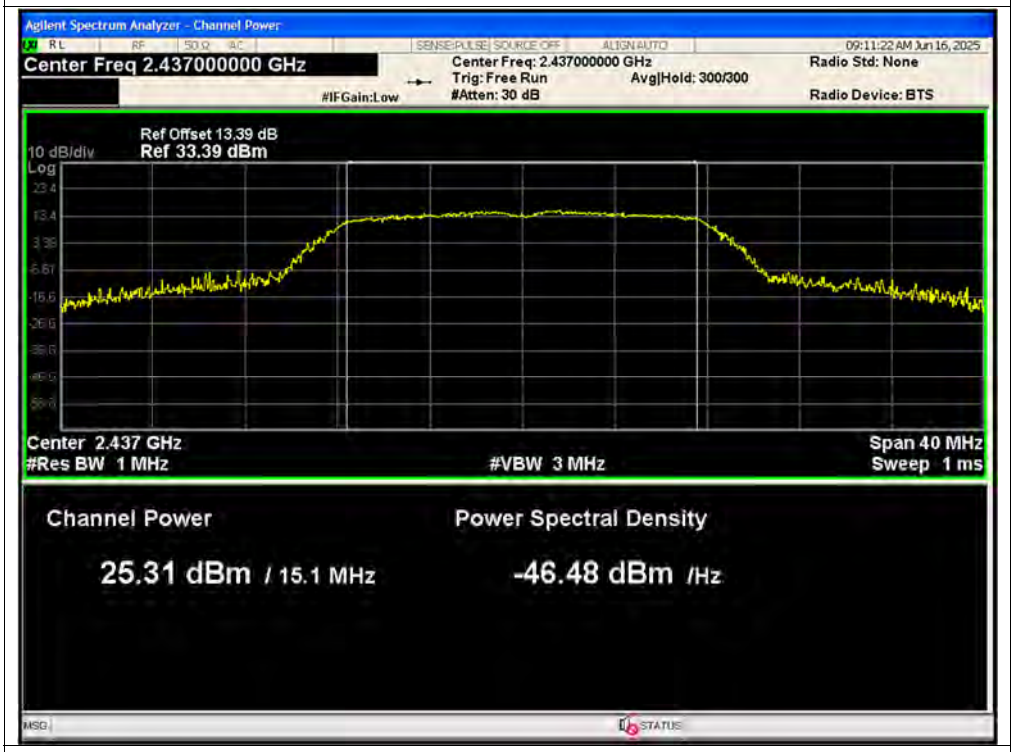
Peak Power NVNT b 2462MHz Ant1



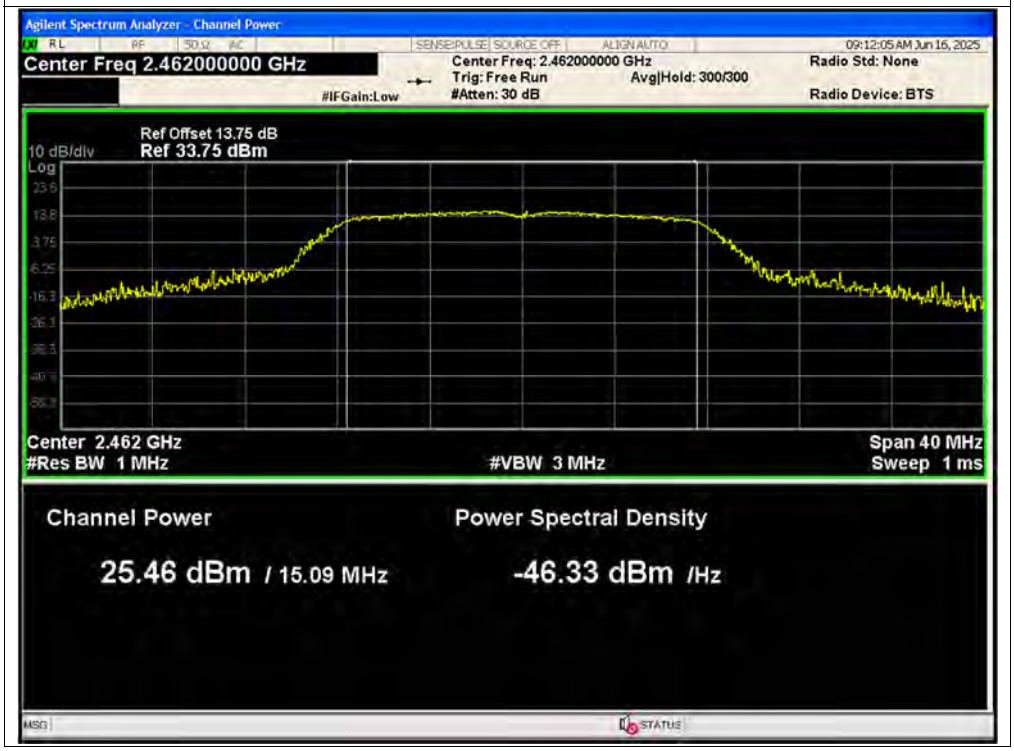
Peak Power NVNT g 2412MHz Ant1



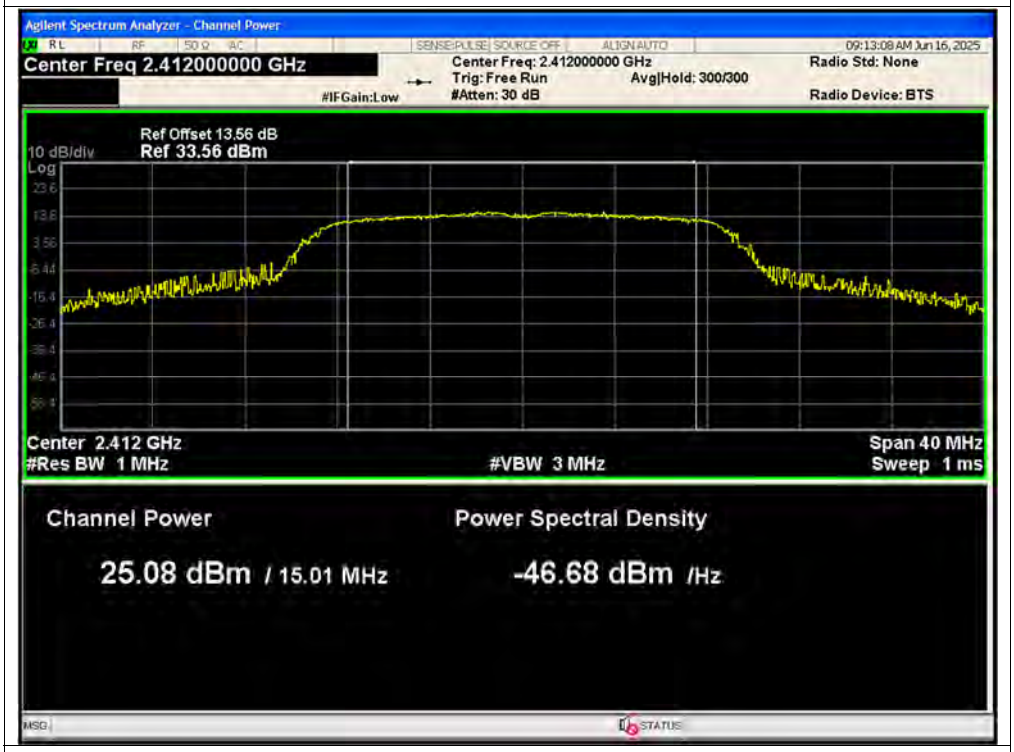
Peak Power NVNT g 2437MHz Ant1



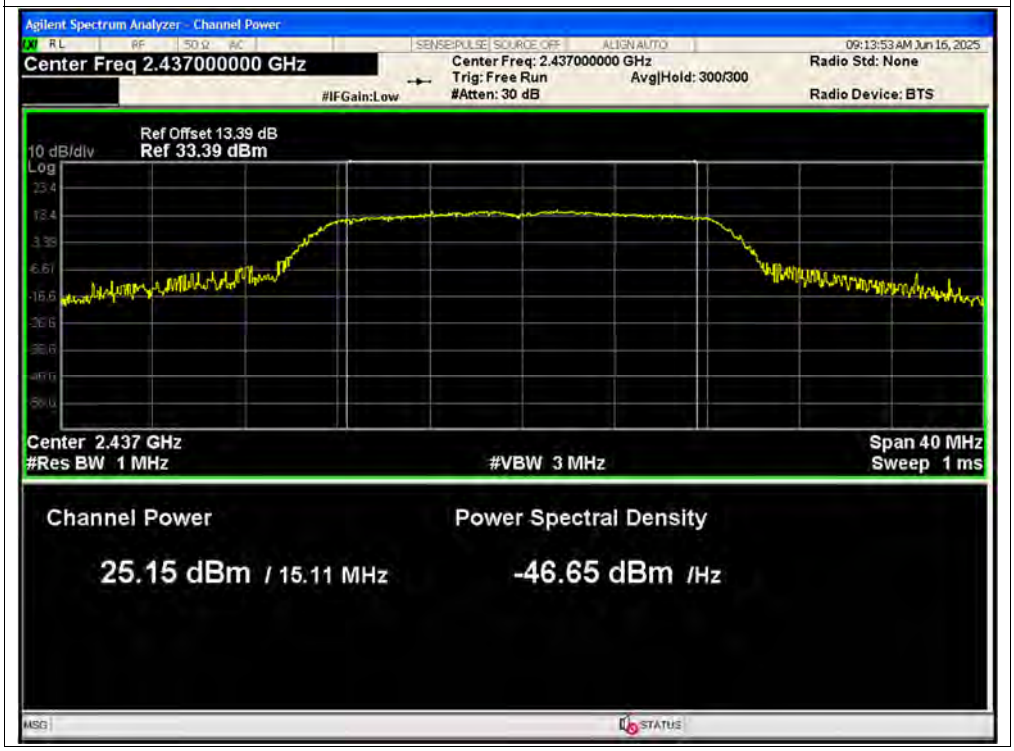
Peak Power NVNT g 2462MHz Ant1

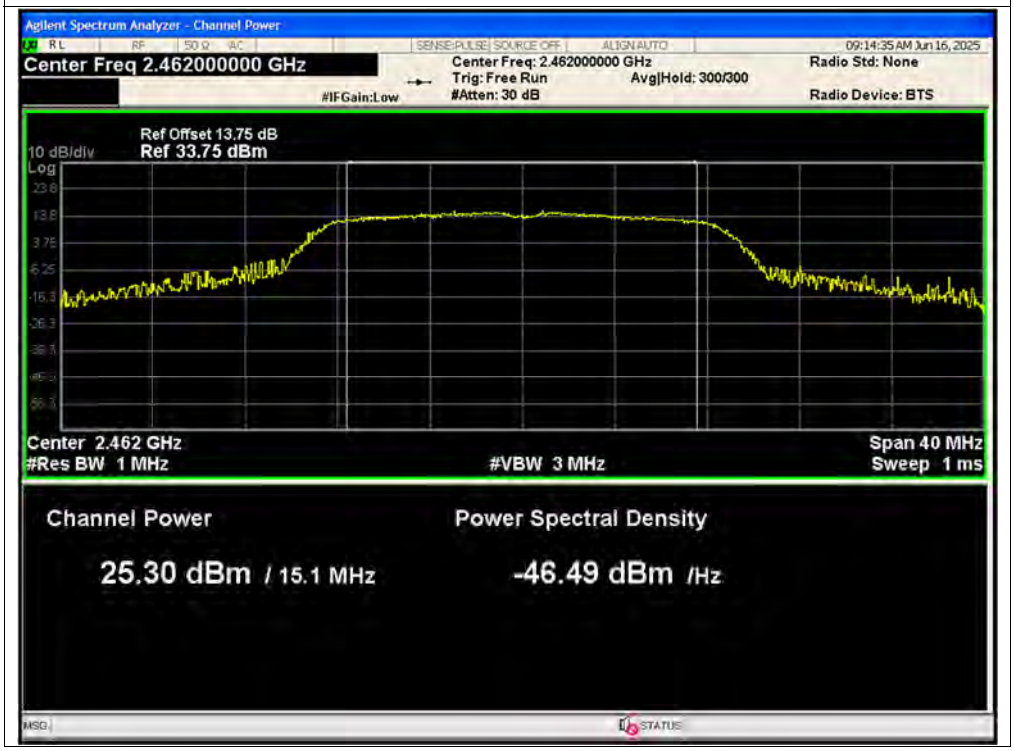


Peak Power NVNT n20 2412MHz Ant1



Peak Power NVNT n20 2437MHz Ant1

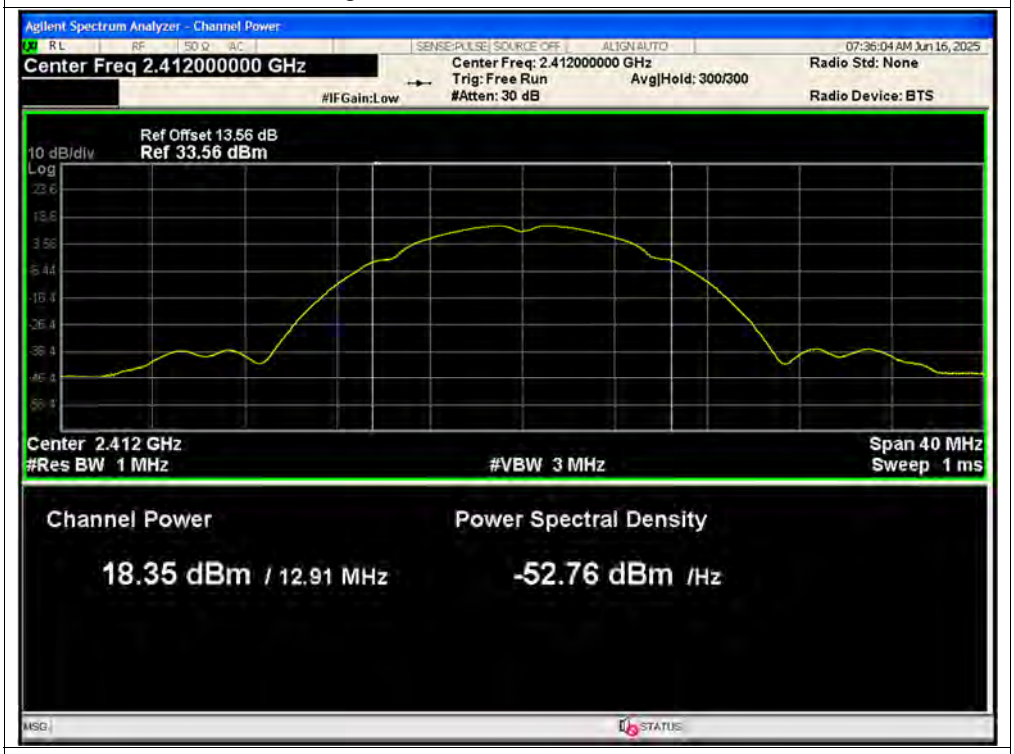


Peak Power NVNT n20 2462MHz Ant1


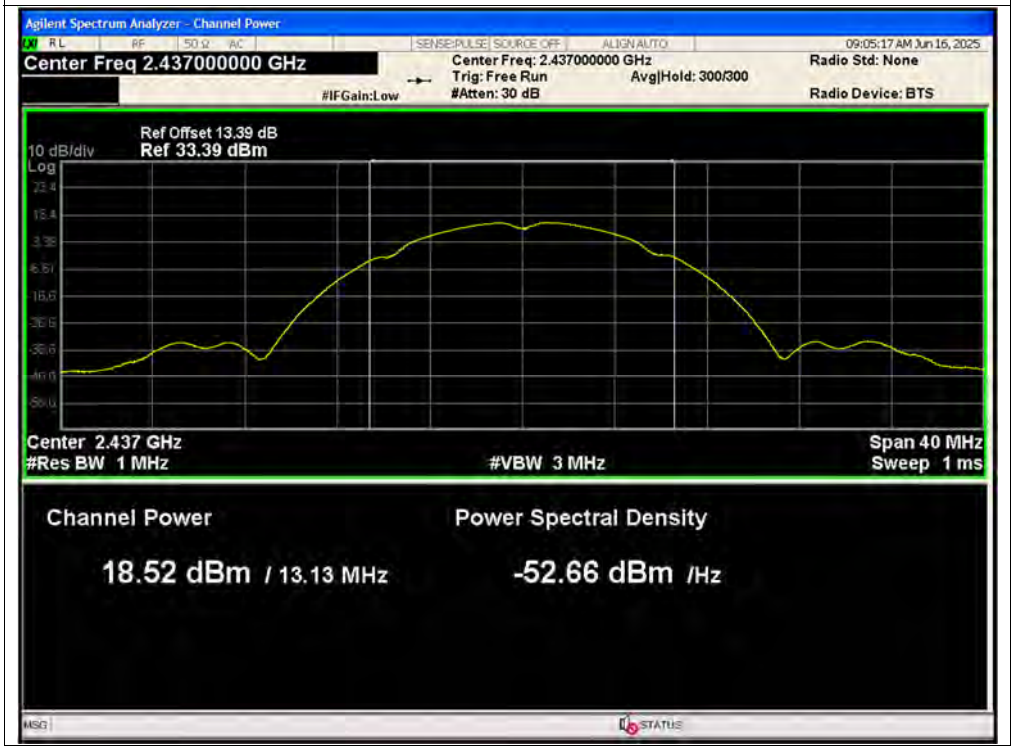
A.3. Maximum Average Conducted Output Power

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	18.35	0.02	18.37	0.06871	30	Pass
NVNT	b	2437	Ant1	18.52	0.02	18.54	0.07145	30	Pass
NVNT	b	2462	Ant1	18.57	0.02	18.59	0.07228	30	Pass
NVNT	g	2412	Ant1	17.74	0.13	17.87	0.06124	30	Pass
NVNT	g	2437	Ant1	17.81	0.13	17.94	0.06223	30	Pass
NVNT	g	2462	Ant1	17.97	0.13	18.1	0.06457	30	Pass
NVNT	n20	2412	Ant1	17.7	0.14	17.84	0.06081	30	Pass
NVNT	n20	2437	Ant1	17.8	0.14	17.94	0.06223	30	Pass
NVNT	n20	2462	Ant1	17.93	0.14	18.07	0.06412	30	Pass

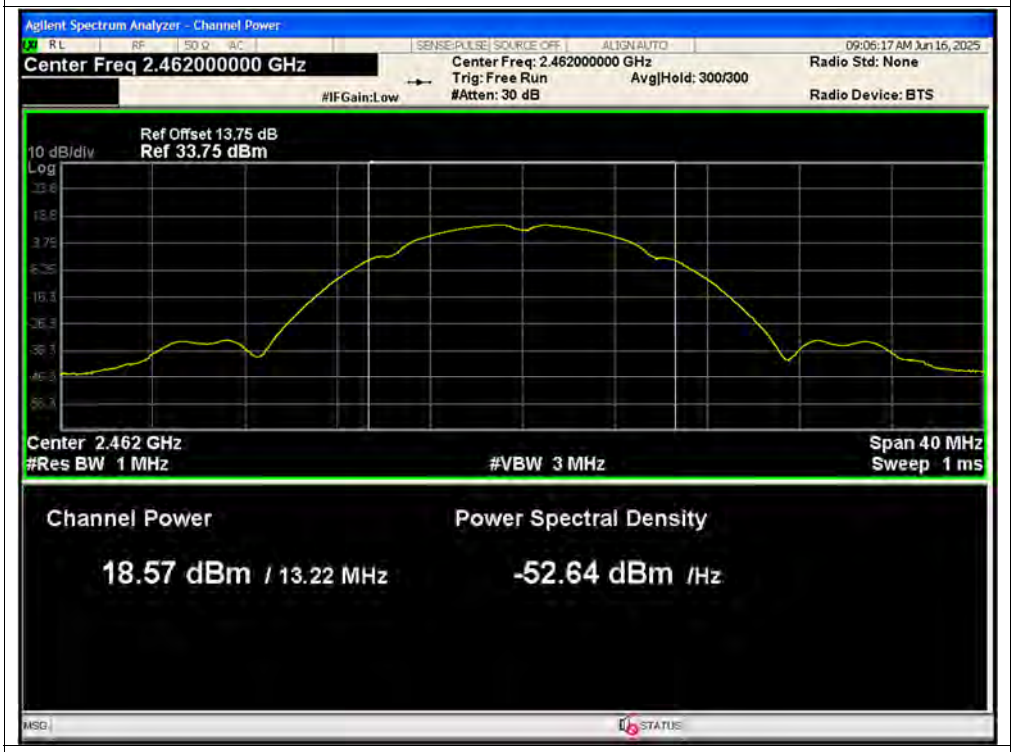
Test Graphs
Average Power NVNT b 2412MHz Ant1



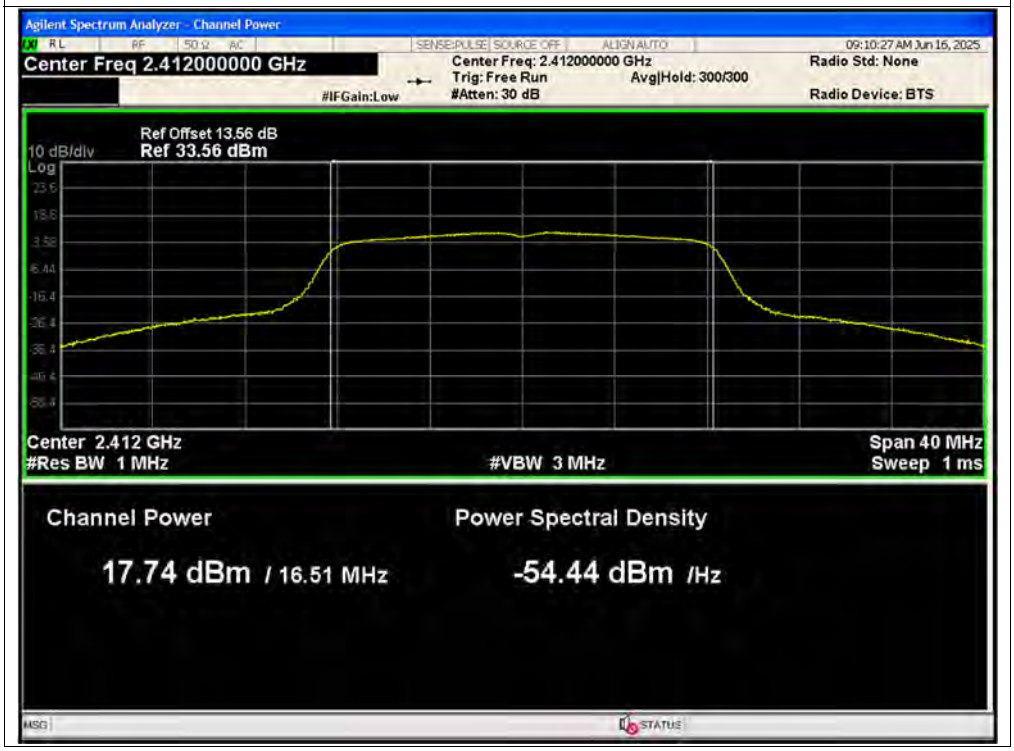
Average Power NVNT b 2437MHz Ant1



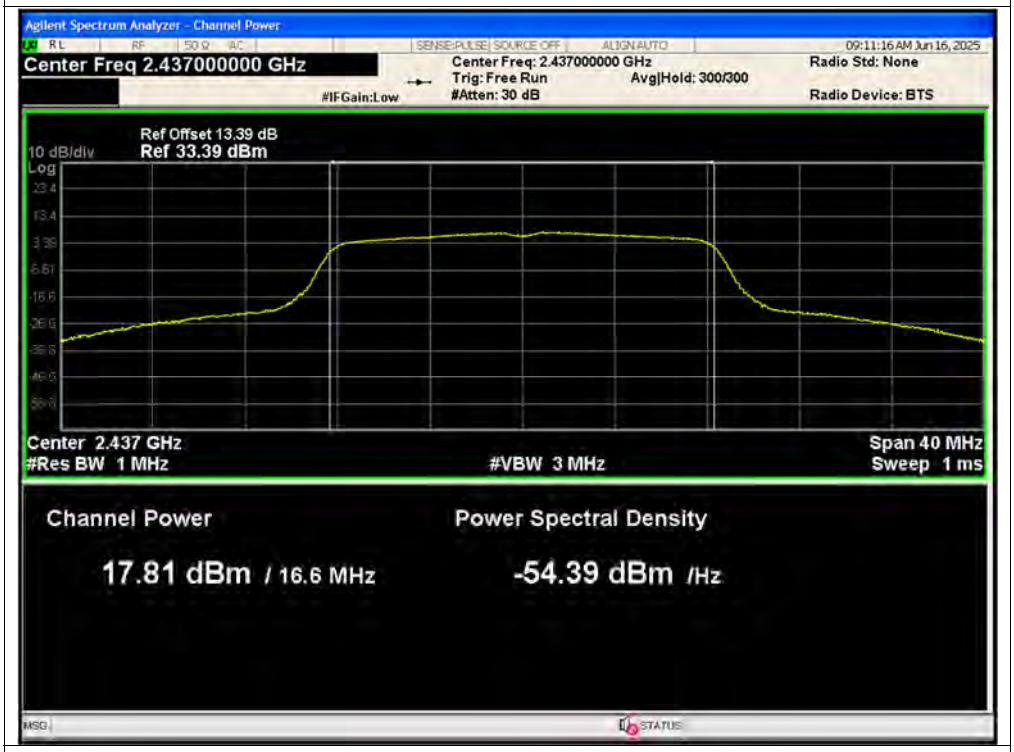
Average Power NVNT b 2462MHz Ant1



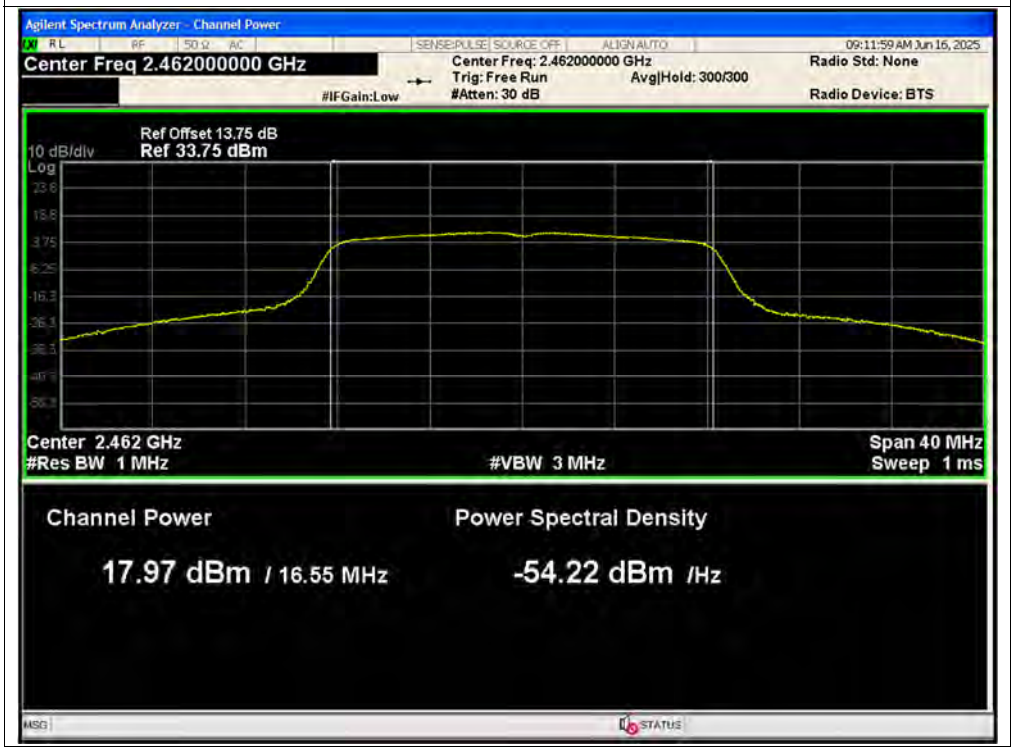
Average Power NVNT g 2412MHz Ant1



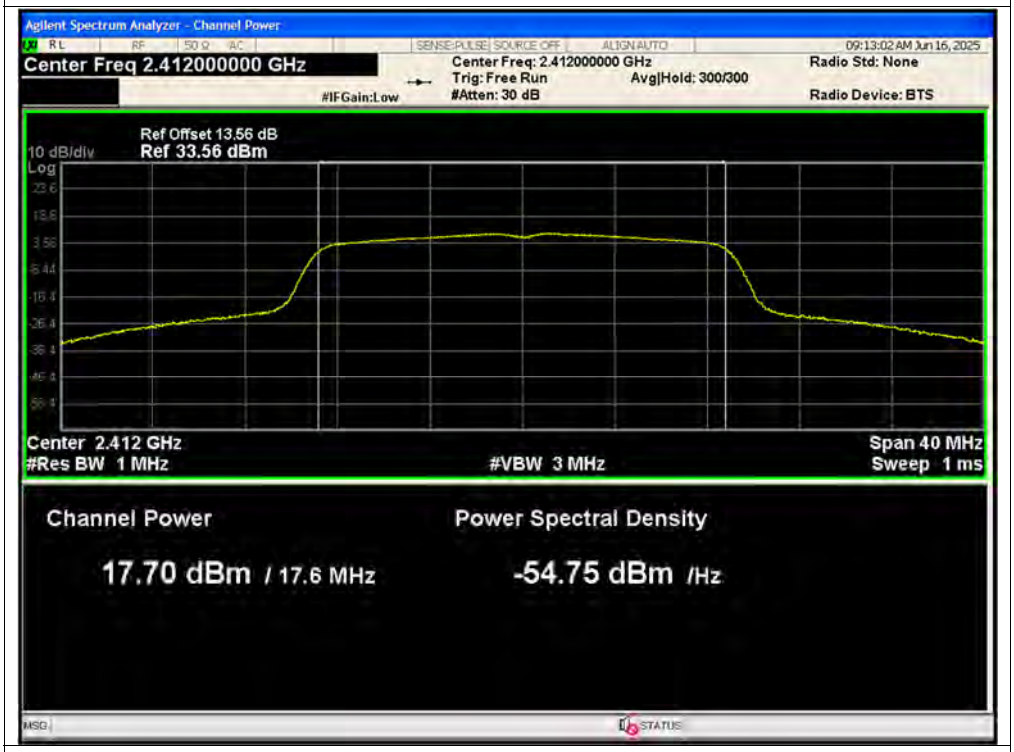
Average Power NVNT g 2437MHz Ant1



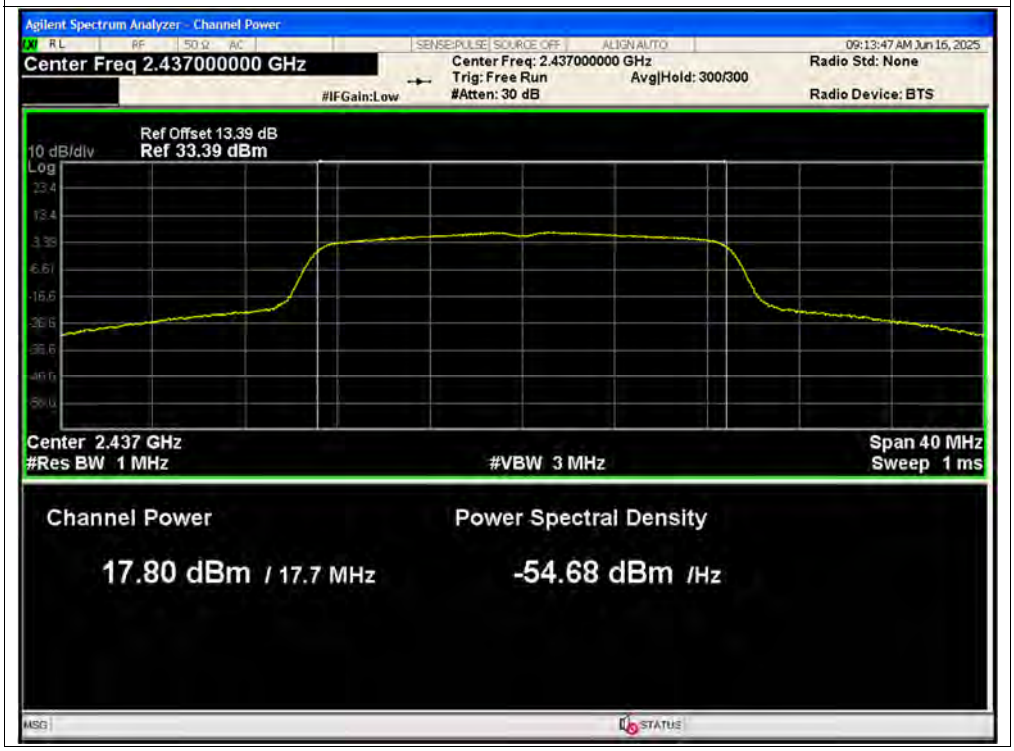
Average Power NVNT g 2462MHz Ant1

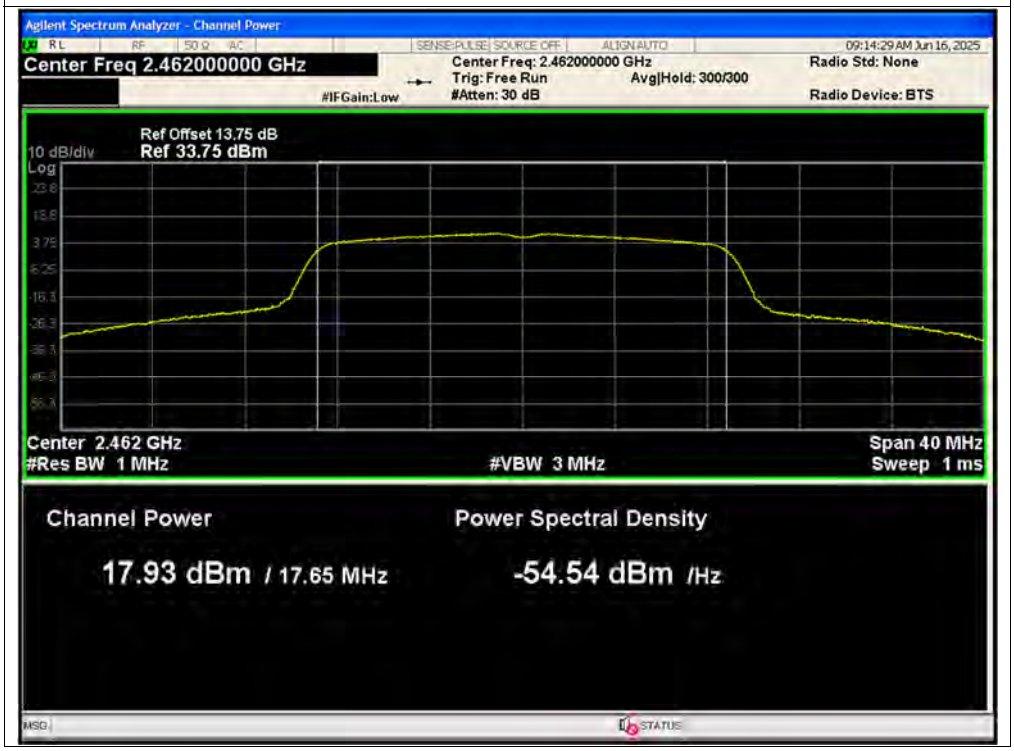


Average Power NVNT n20 2412MHz Ant1



Average Power NVNT n20 2437MHz Ant1



Average Power NVNT n20 2462MHz 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	8.079	0.5	Pass
NVNT	b	2437	Ant1	8.012	0.5	Pass
NVNT	b	2462	Ant1	8.544	0.5	Pass
NVNT	g	2412	Ant1	15.1	0.5	Pass
NVNT	g	2437	Ant1	15.1	0.5	Pass
NVNT	g	2462	Ant1	15.09	0.5	Pass
NVNT	n20	2412	Ant1	15.01	0.5	Pass
NVNT	n20	2437	Ant1	15.11	0.5	Pass
NVNT	n20	2462	Ant1	15.1	0.5	Pass

Test Graphs
-6dB Bandwidth NVNT b 2412MHz Ant1

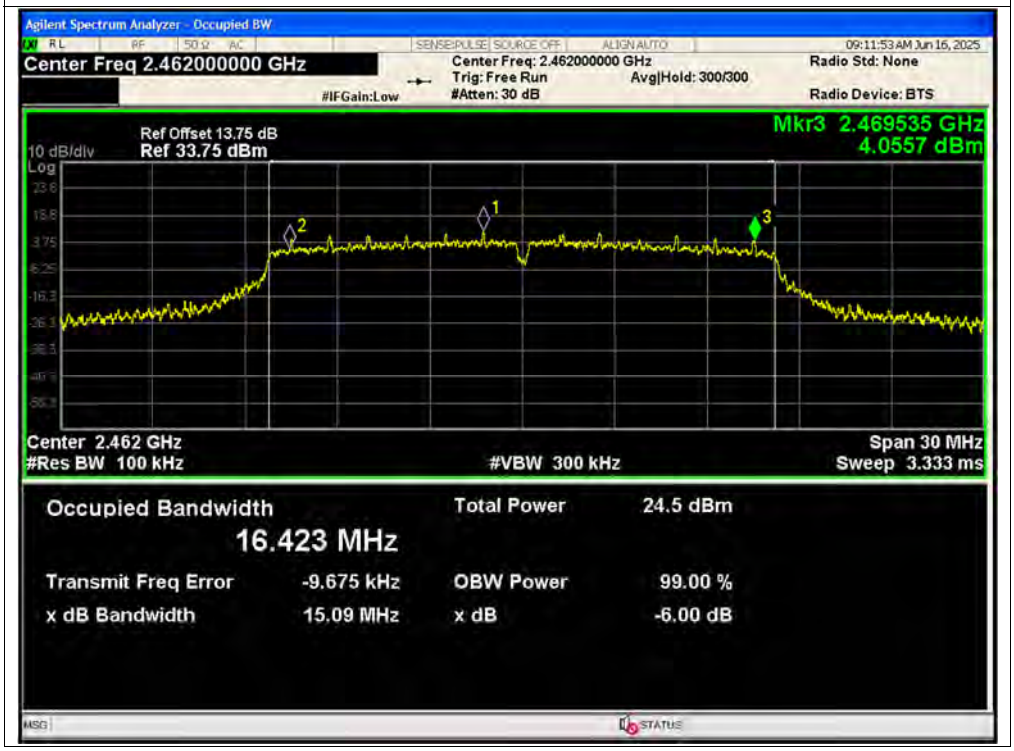
-6dB Bandwidth NVNT b 2437MHz Ant1

-6dB Bandwidth NVNT b 2462MHz Ant1

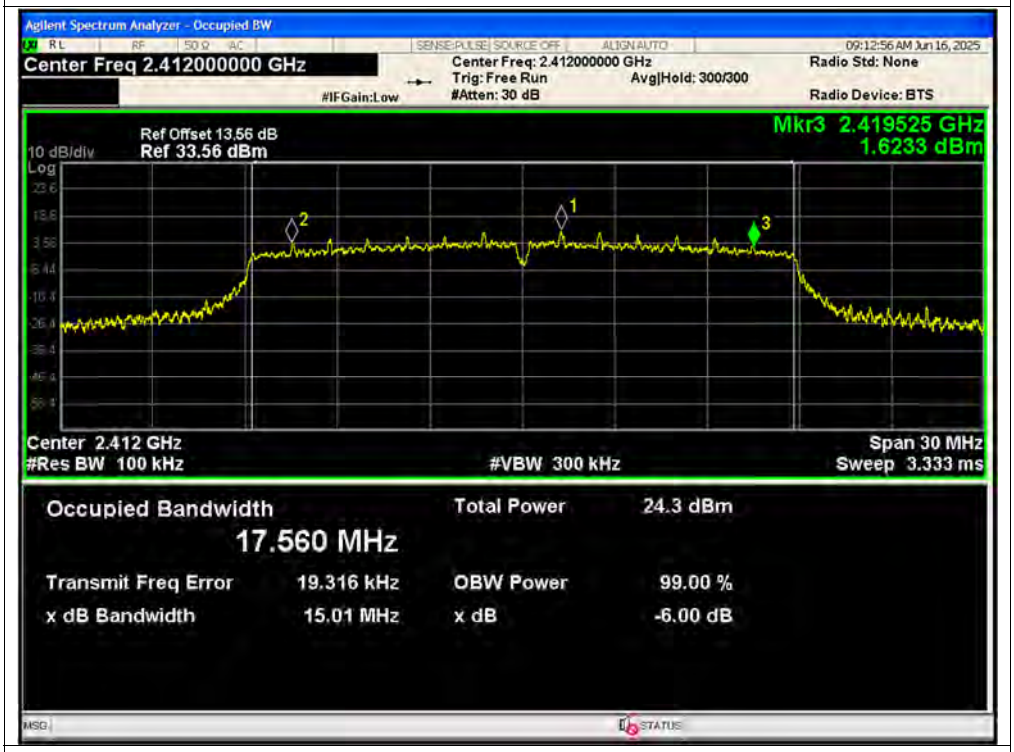
-6dB Bandwidth NVNT g 2412MHz Ant1

-6dB Bandwidth NVNT g 2437MHz Ant1

-6dB Bandwidth NVNT g 2462MHz Ant1



-6dB Bandwidth NVNT n20 2412MHz Ant1



-6dB Bandwidth NVNT n20 2437MHz Ant1

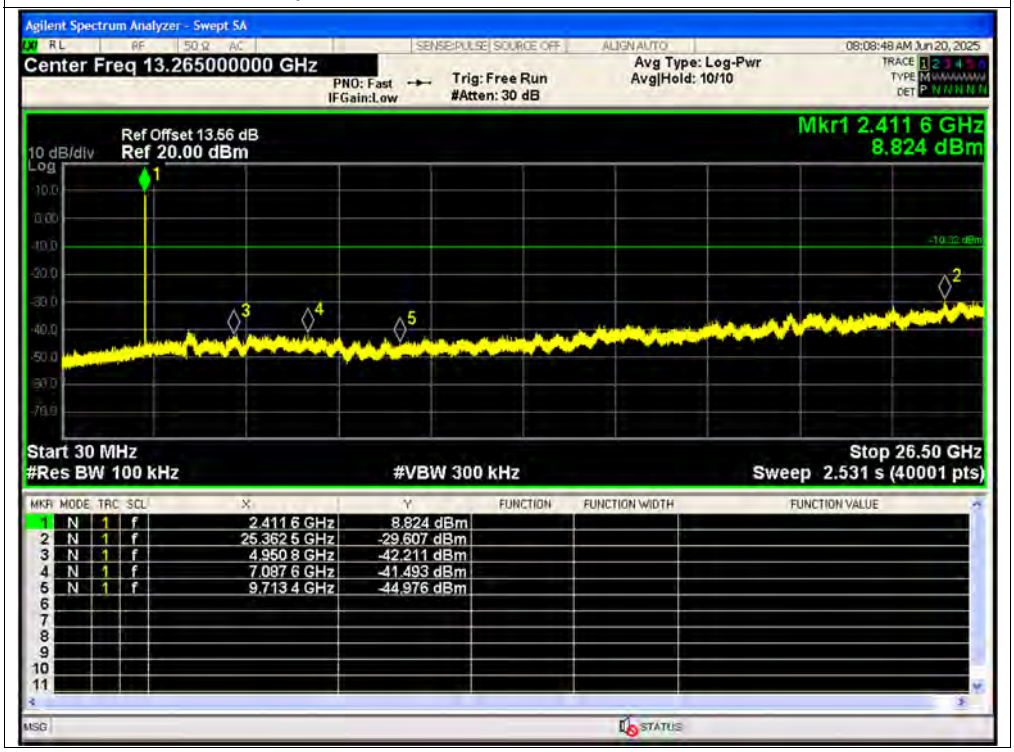
-6dB Bandwidth NVNT n20 2462MHz Ant1


A.5. Conducted Spurious Emissions

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-39.28	-20	Pass
NVNT	b	2437	Ant1	-39.3	-20	Pass
NVNT	b	2462	Ant1	-38.99	-20	Pass
NVNT	g	2412	Ant1	-36.16	-20	Pass
NVNT	g	2437	Ant1	-35.71	-20	Pass
NVNT	g	2462	Ant1	-36.12	-20	Pass
NVNT	n20	2412	Ant1	-36.49	-20	Pass
NVNT	n20	2437	Ant1	-36.6	-20	Pass
NVNT	n20	2462	Ant1	-36.29	-20	Pass

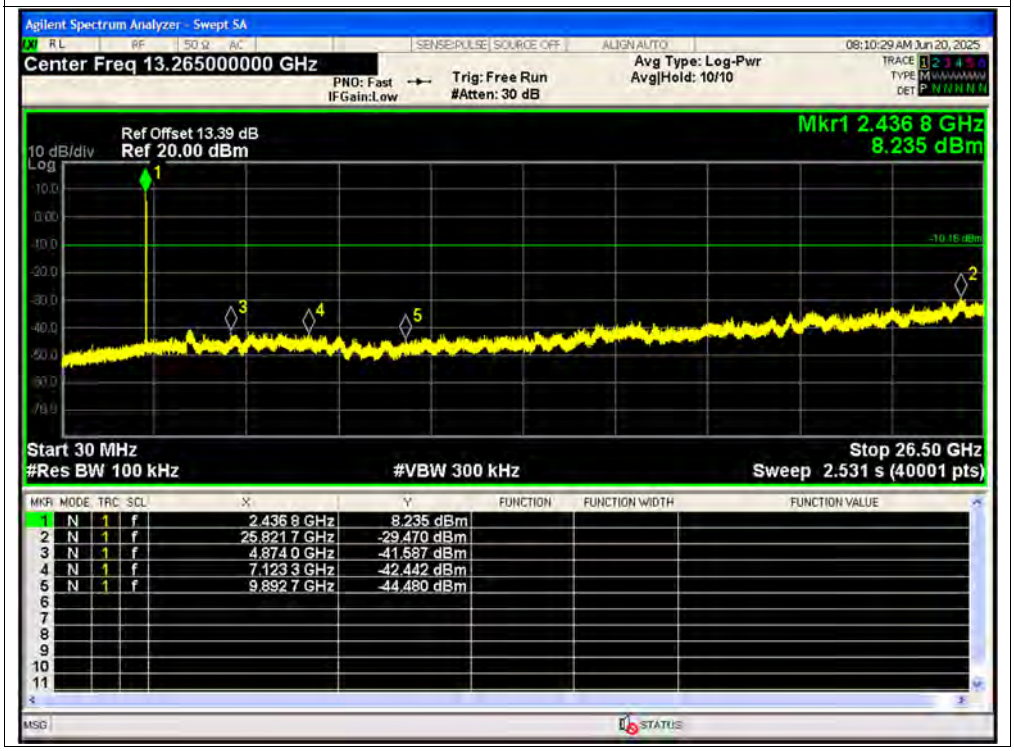
Test Graphs
Tx. Spurious NVNT b 2412MHz Ant1 Ref

Tx. Spurious NVNT b 2412MHz Ant1 Emission



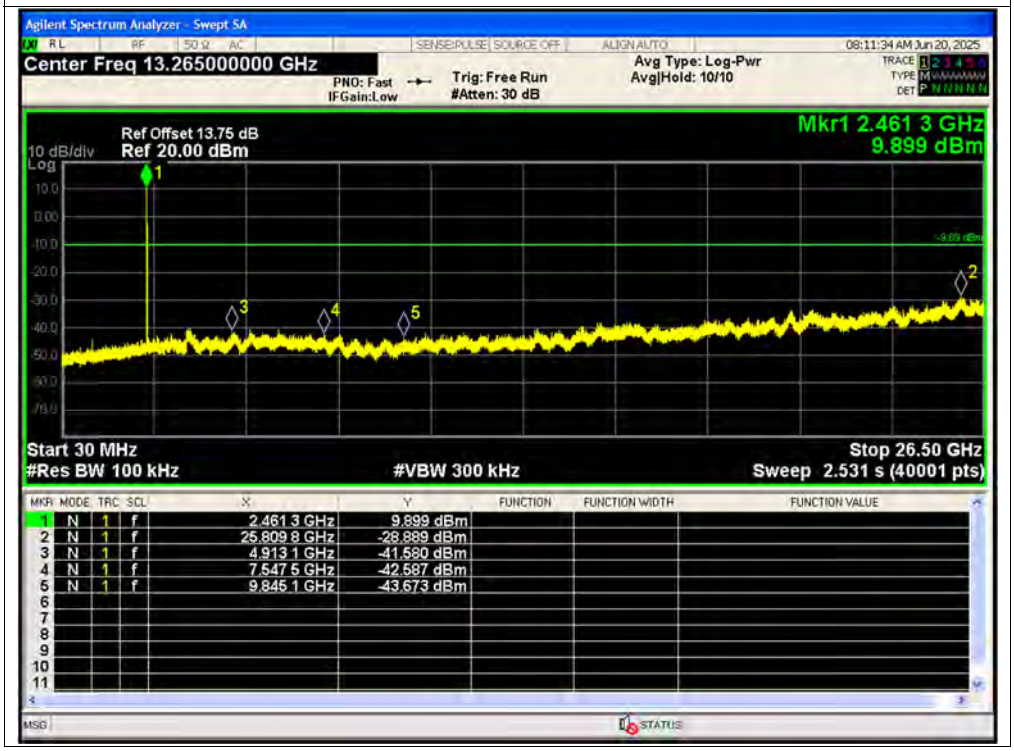
Tx. Spurious NVNT b 2437MHz Ant1 Ref

Tx. Spurious NVNT b 2437MHz Ant1 Emission



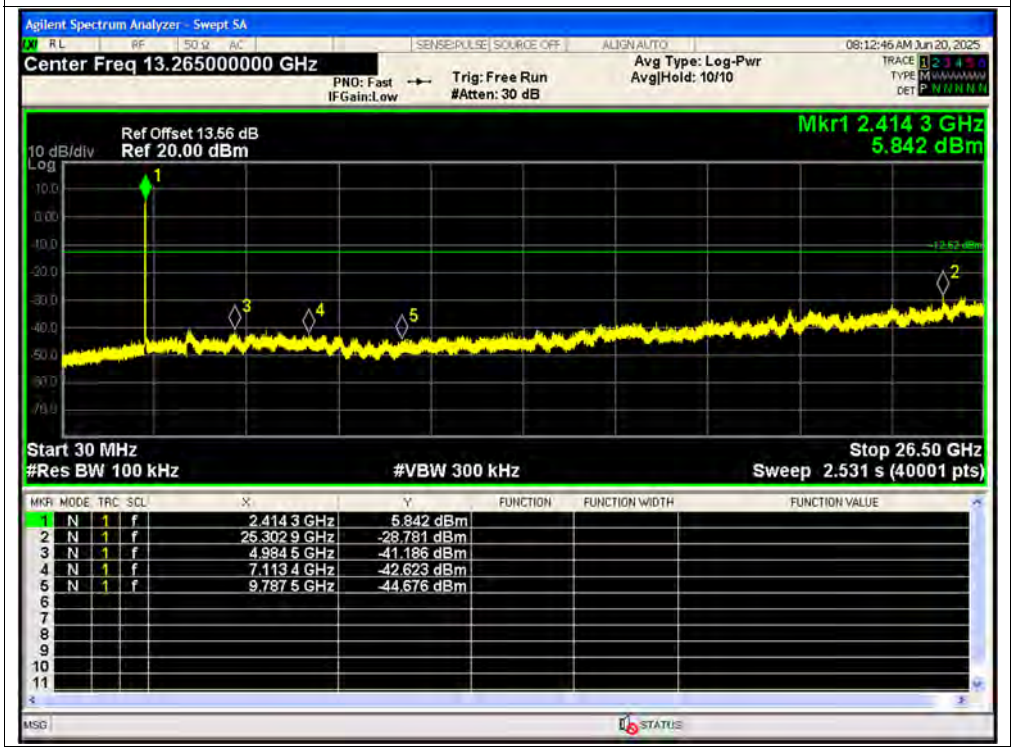
Tx. Spurious NVNT b 2462MHz Ant1 Ref

Tx. Spurious NVNT b 2462MHz Ant1 Emission



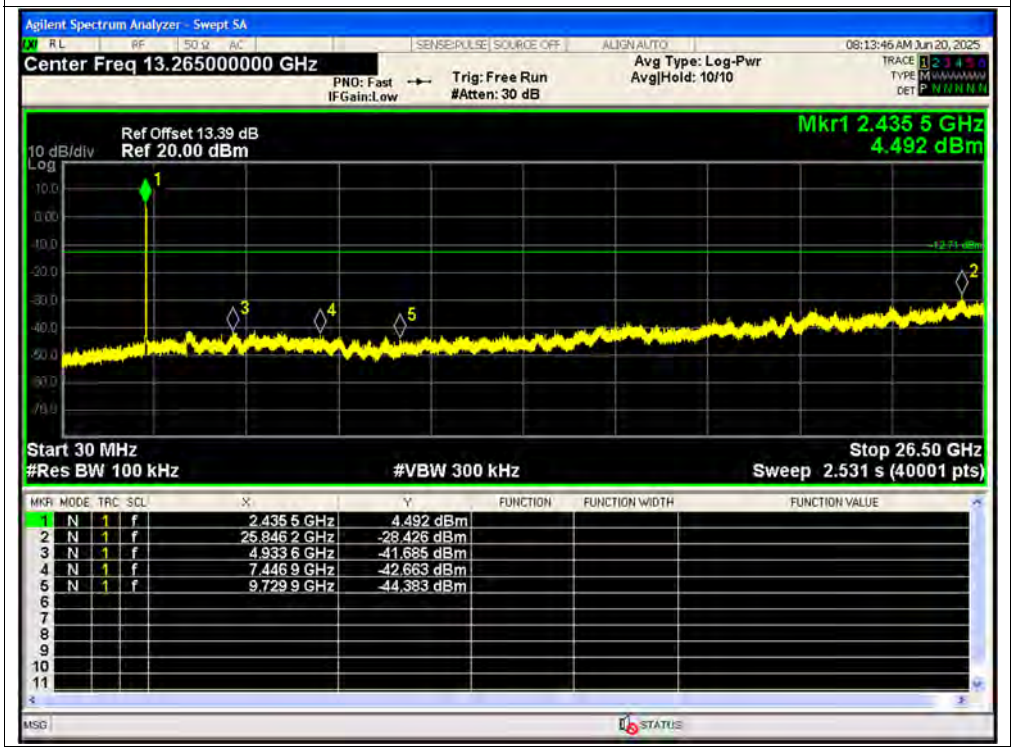
Tx. Spurious NVNT g 2412MHz Ant1 Ref

Tx. Spurious NVNT g 2412MHz Ant1 Emission



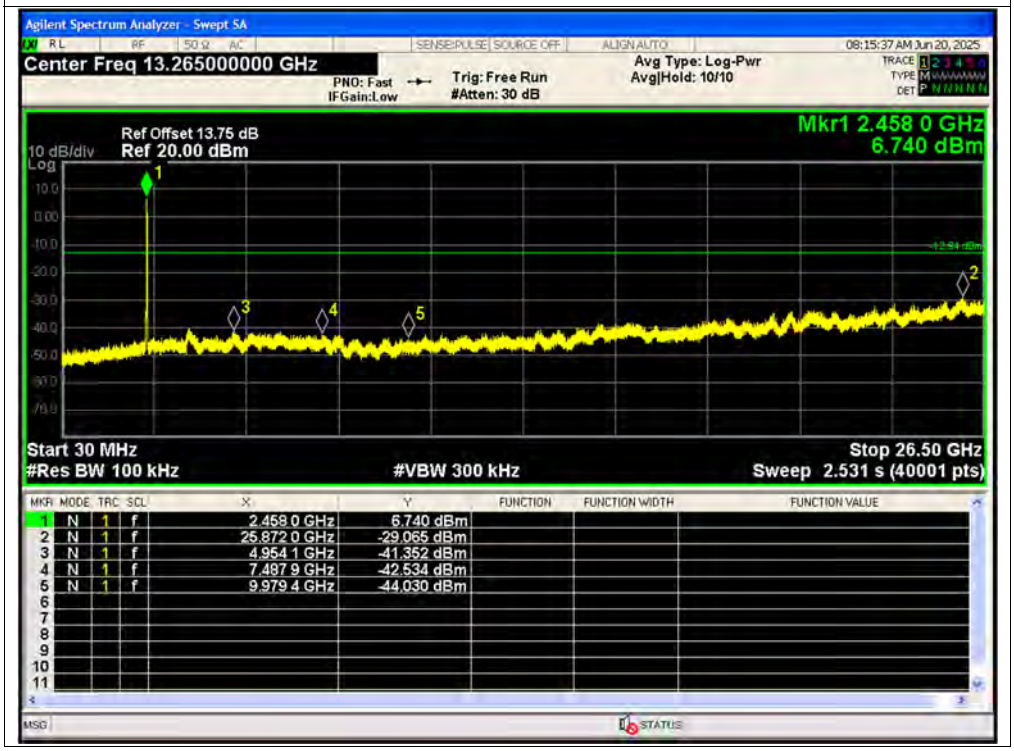
Tx. Spurious NVNT g 2437MHz Ant1 Ref

Tx. Spurious NVNT g 2437MHz Ant1 Emission



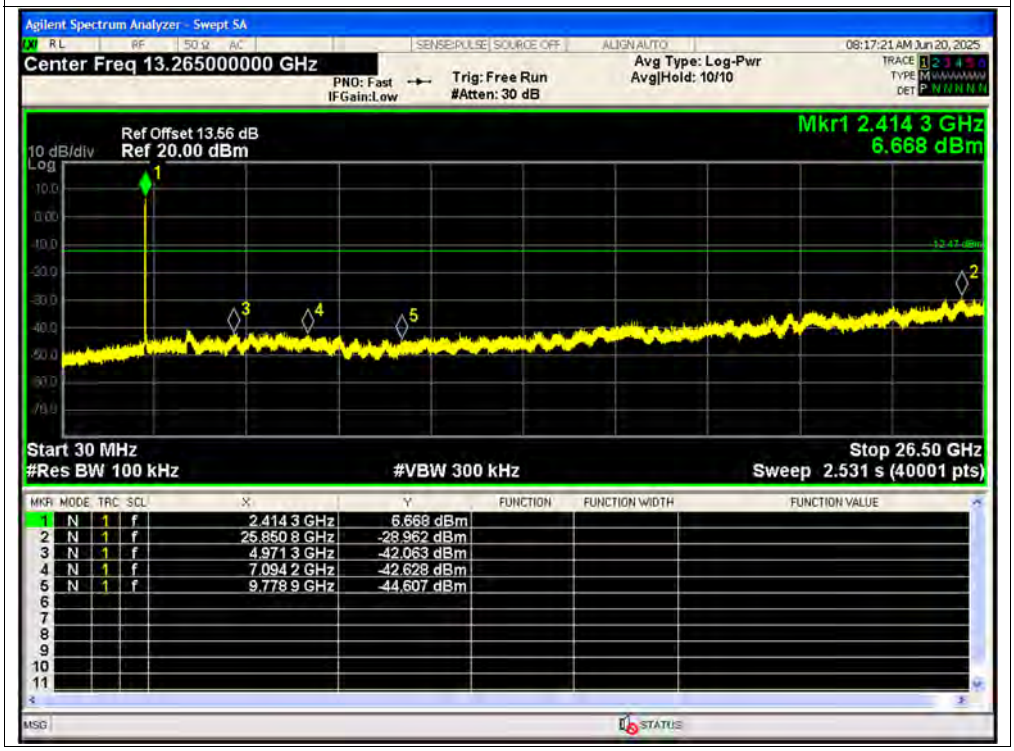
Tx. Spurious NVNT g 2462MHz Ant1 Ref

Tx. Spurious NVNT g 2462MHz Ant1 Emission



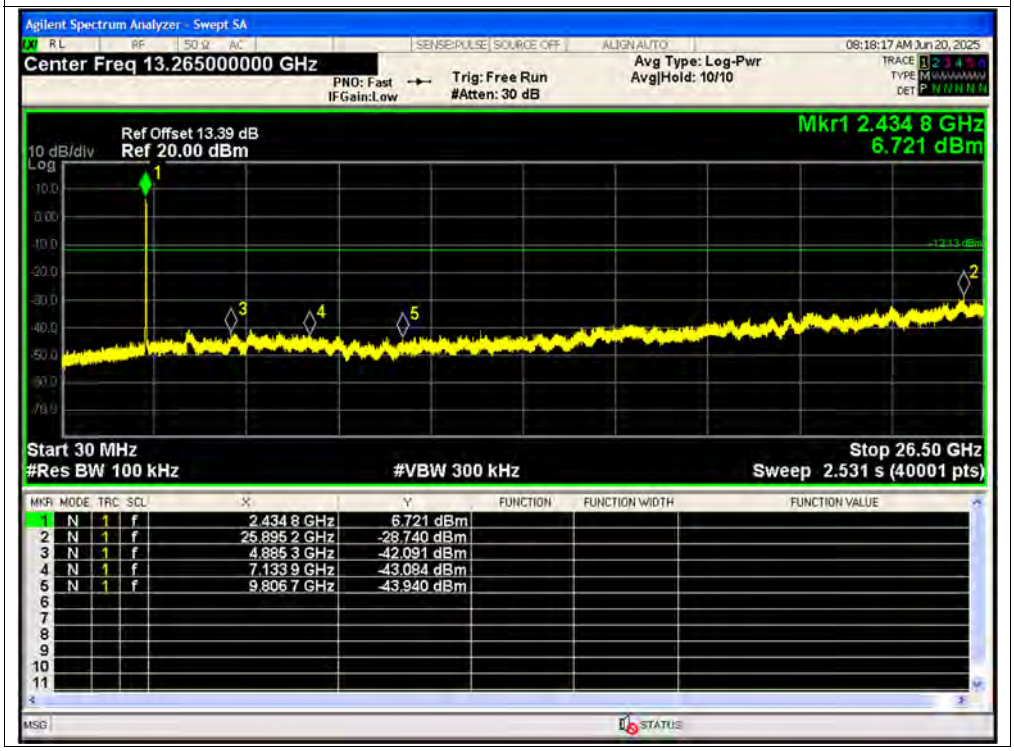
Tx. Spurious NVNT n20 2412MHz Ant1 Ref

Tx. Spurious NVNT n20 2412MHz Ant1 Emission



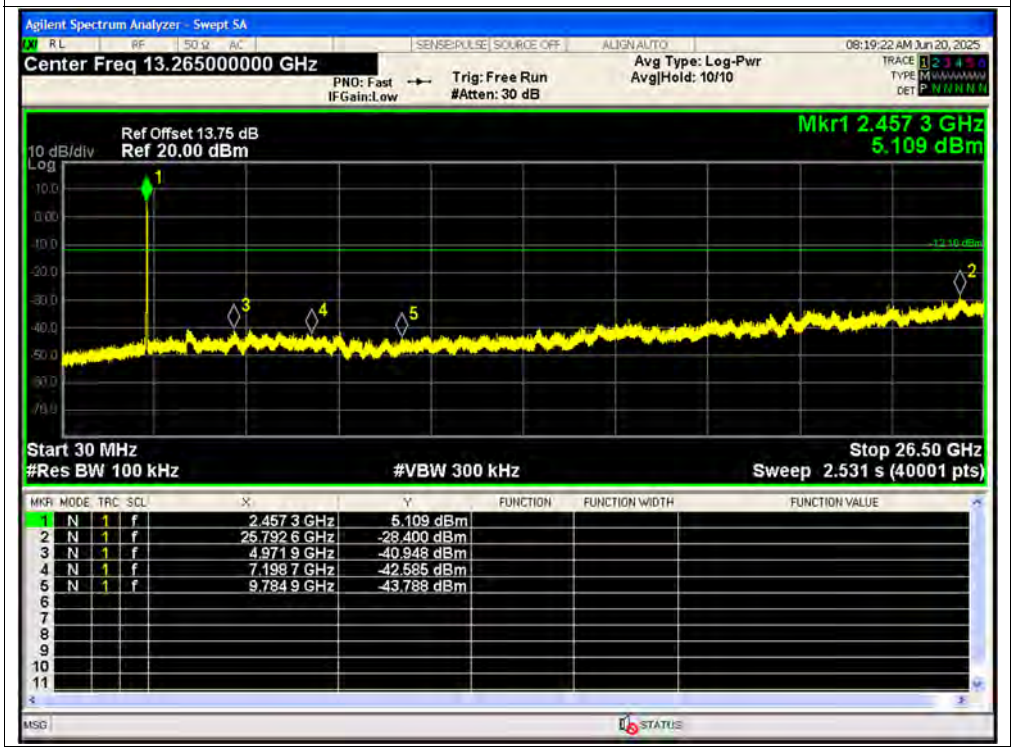
Tx. Spurious NVNT n20 2437MHz Ant1 Ref

Tx. Spurious NVNT n20 2437MHz Ant1 Emission



Tx. Spurious NVNT n20 2462MHz Ant1 Ref

Tx. Spurious NVNT n20 2462MHz Ant1 Emission

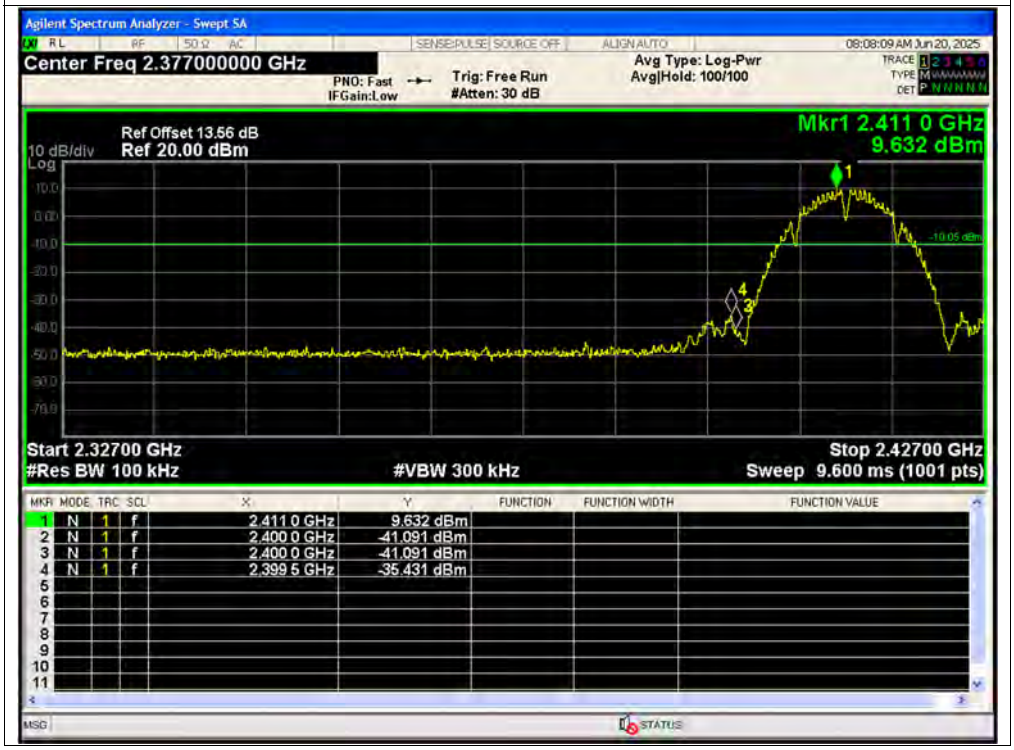


A.6. Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-45.38	-20	Pass
NVNT	b	2462	Ant1	-55.93	-20	Pass
NVNT	g	2412	Ant1	-31.36	-20	Pass
NVNT	g	2462	Ant1	-44.92	-20	Pass
NVNT	n20	2412	Ant1	-30.29	-20	Pass
NVNT	n20	2462	Ant1	-42.63	-20	Pass

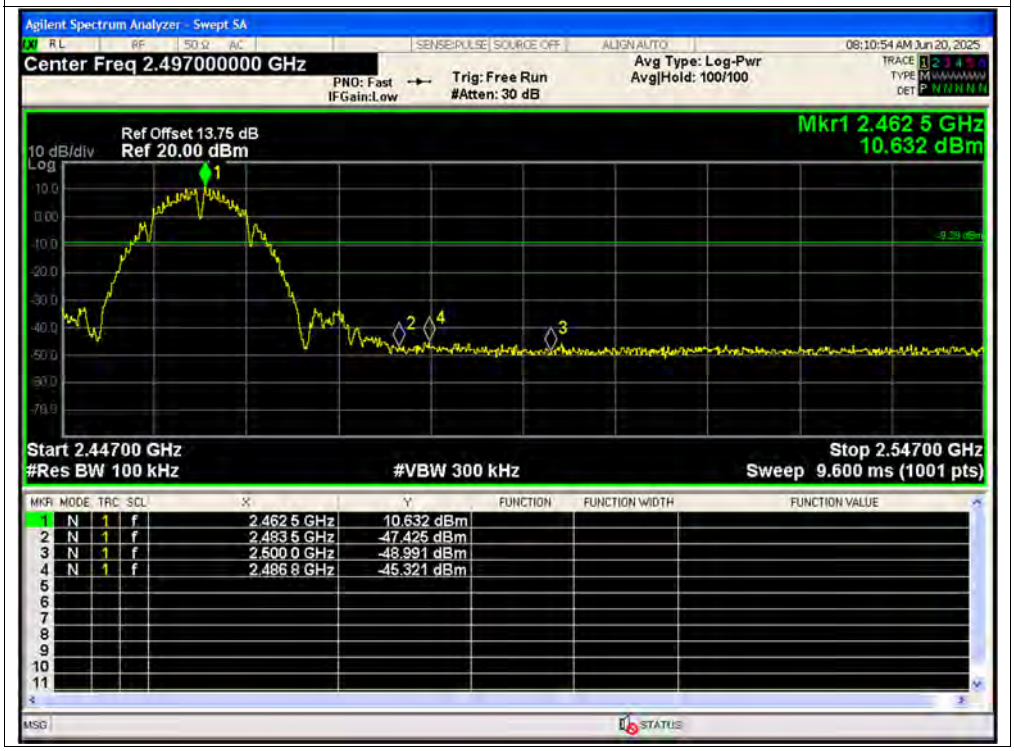
Test Graphs
Band Edge NVNT b 2412MHz Ant1 Ref

Band Edge NVNT b 2412MHz Ant1 Emission



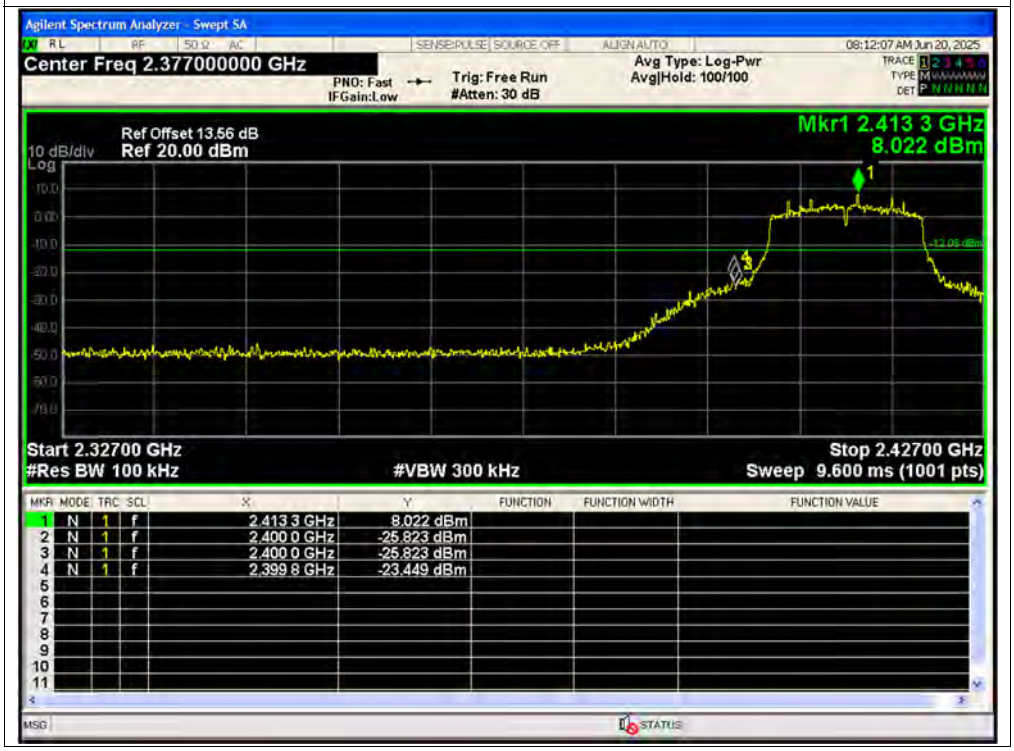
Band Edge NVNT b 2462MHz Ant1 Ref

Band Edge NVNT b 2462MHz Ant1 Emission



Band Edge NVNT g 2412MHz Ant1 Ref

Band Edge NVNT g 2412MHz Ant1 Emission

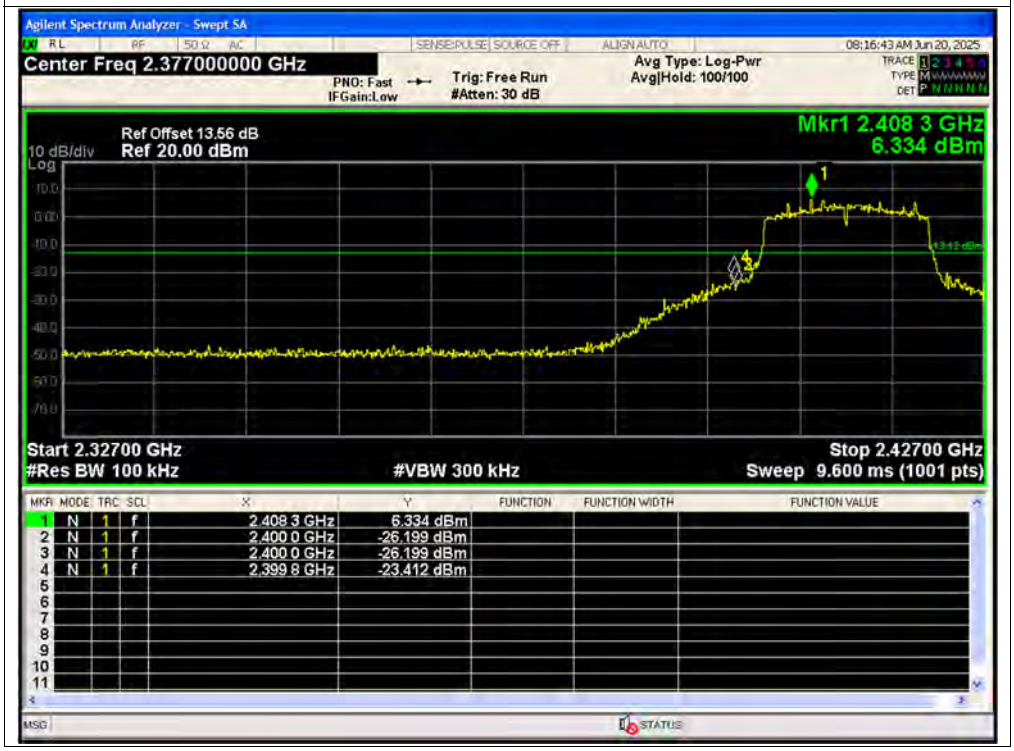


Band Edge NVNT g 2462MHz Ant1 Ref

Band Edge NVNT g 2462MHz Ant1 Emission

Band Edge NVNT n20 2412MHz Ant1 Ref

Band Edge NVNT n20 2412MHz Ant1 Emission



Band Edge NVNT n20 2462MHz Ant1 Ref

Band Edge NVNT n20 2462MHz Ant1 Emission

A.7. Power Spectral Density

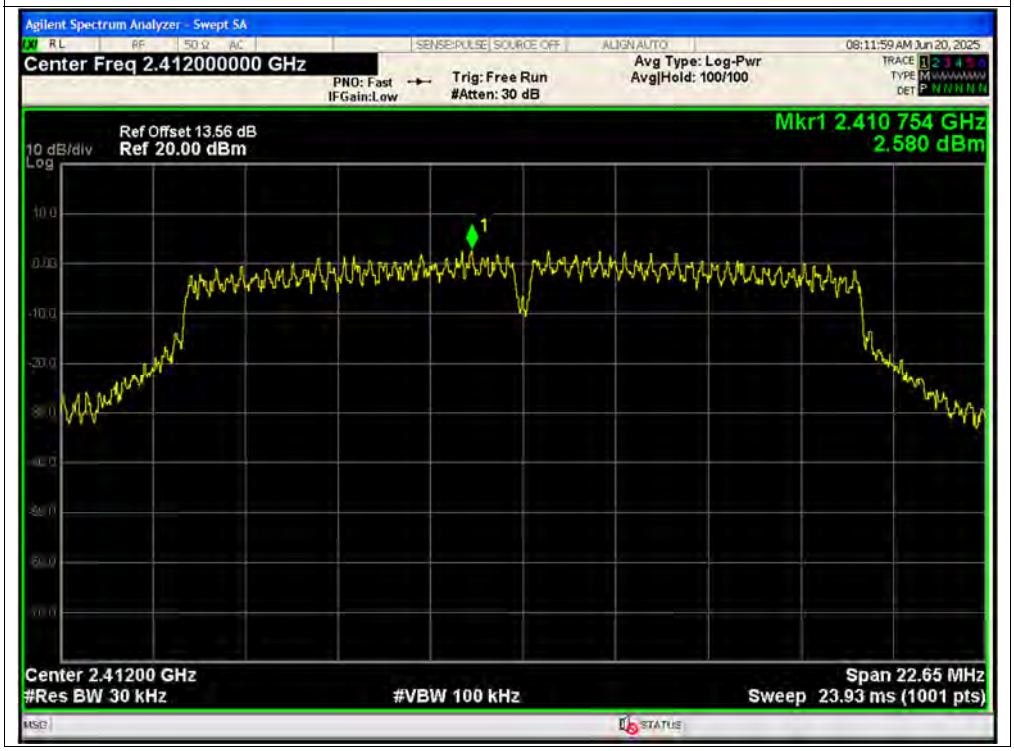
Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Duty Factor (dB)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	b	2412	Ant1	-4.23	0	-4.23	8	Pass
NVNT	b	2437	Ant1	-3.5	0	-3.5	8	Pass
NVNT	b	2462	Ant1	-3.11	0	-3.11	8	Pass
NVNT	g	2412	Ant1	-7.42	0	-7.42	8	Pass
NVNT	g	2437	Ant1	-6.91	0	-6.91	8	Pass
NVNT	g	2462	Ant1	-6.85	0	-6.85	8	Pass
NVNT	n20	2412	Ant1	-6.36	0	-6.36	8	Pass
NVNT	n20	2437	Ant1	-6.5	0	-6.5	8	Pass
NVNT	n20	2462	Ant1	-7.26	0	-7.26	8	Pass

Test Graphs
PSD NVNT b 2412MHz Ant1

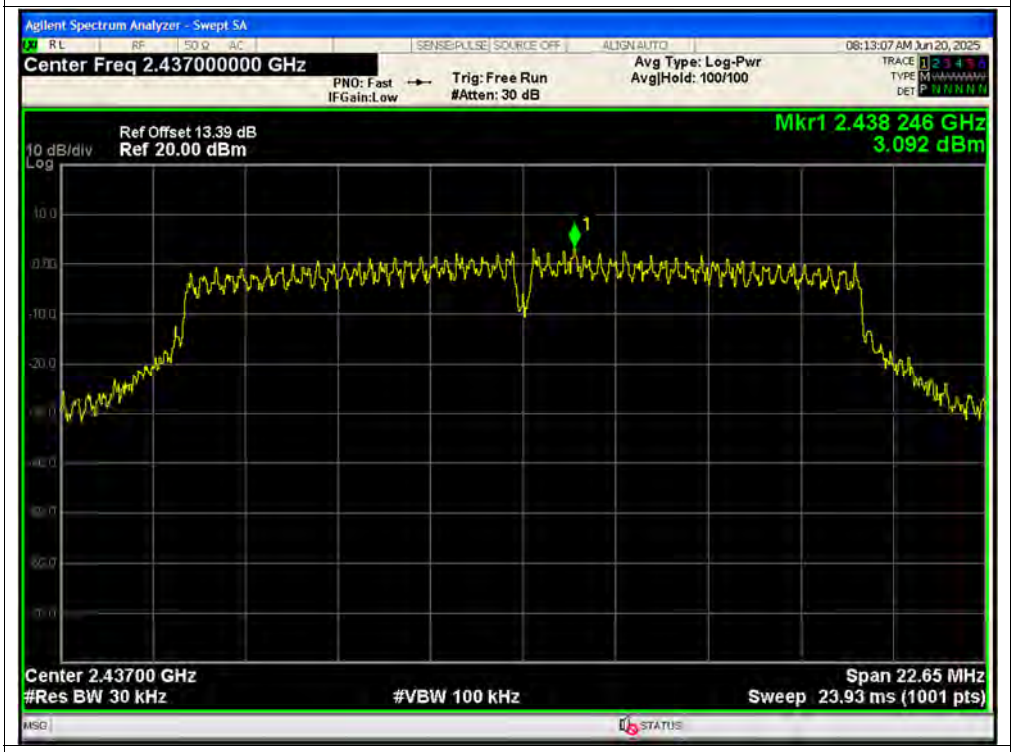
PSD NVNT b 2437MHz Ant1

PSD NVNT b 2462MHz Ant1

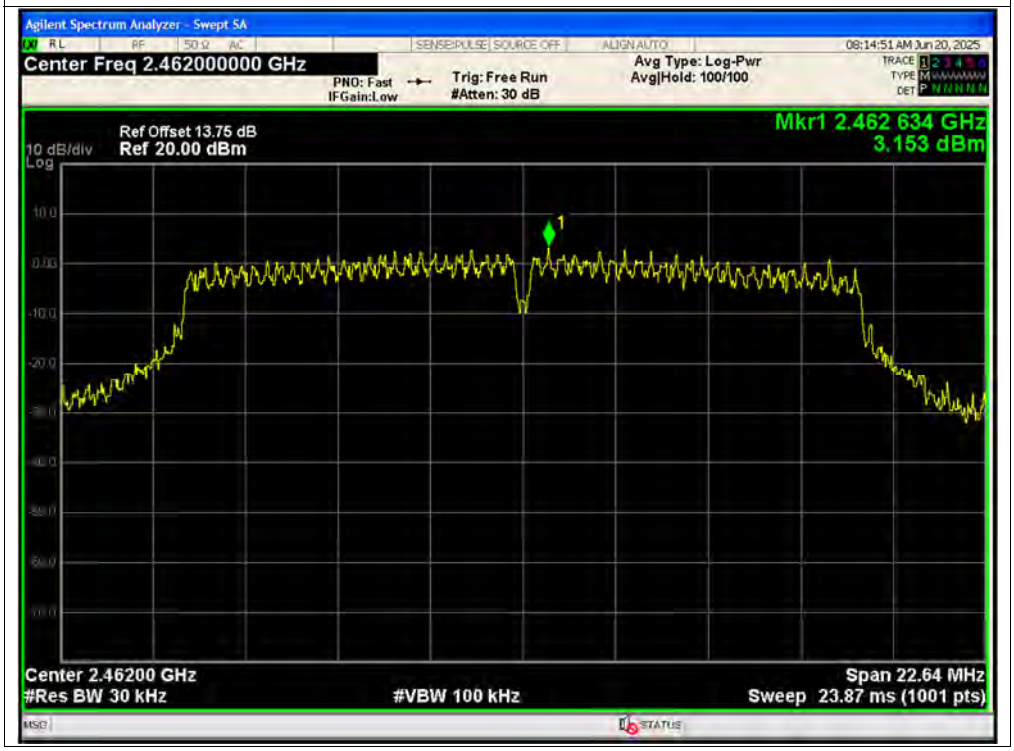
PSD NVNT g 2412MHz Ant1



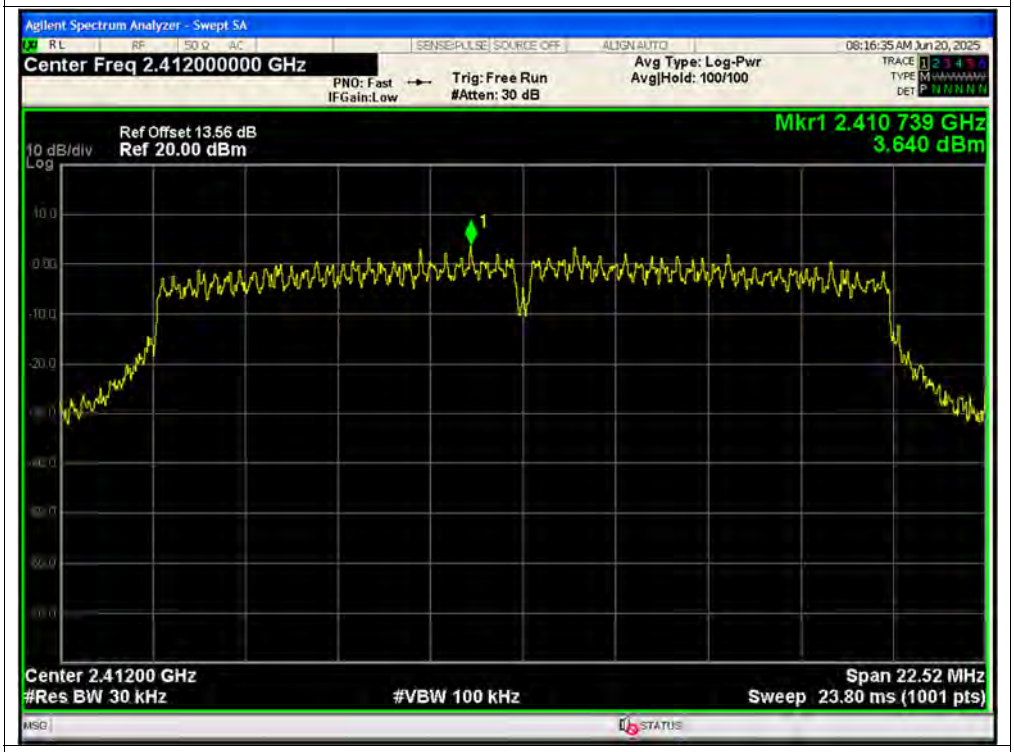
PSD NVNT g 2437MHz Ant1



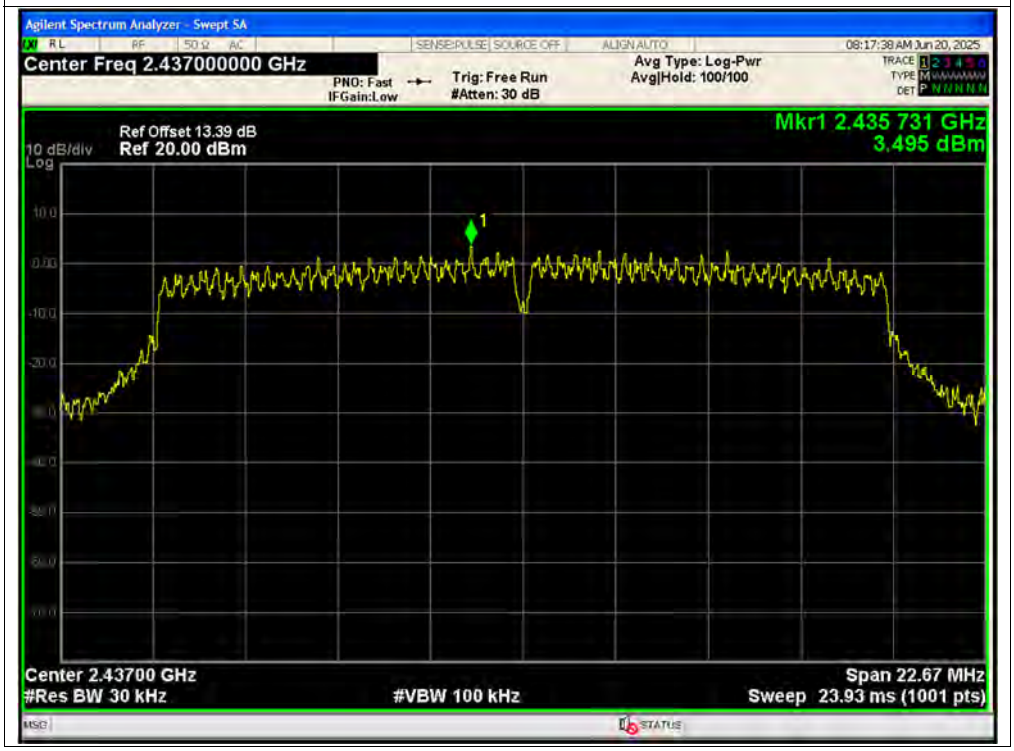
PSD NVNT g 2462MHz Ant1

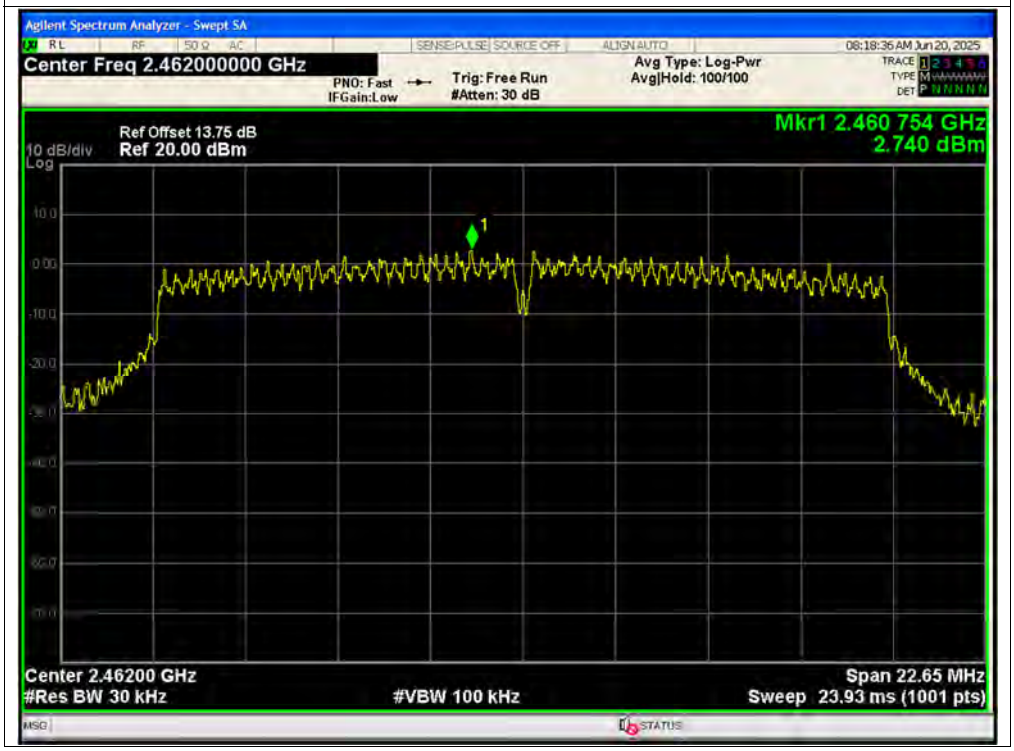


PSD NVNT n20 2412MHz Ant1



PSD NVNT n20 2437MHz Ant1



PSD NVNT n20 2462MHz 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+Adapter+DATA Cable+Earphone++WIFI TX

Test voltage: AC 120V/60Hz

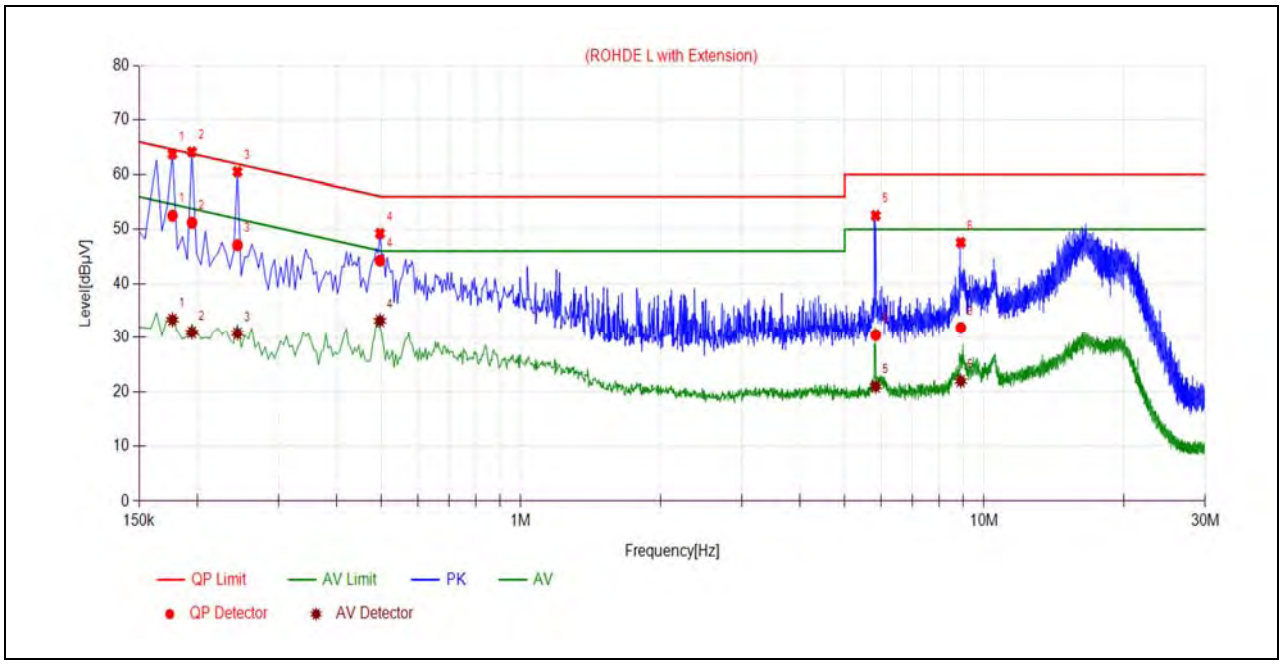
The measurement results are obtained as below:

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

U_R: Receiver Reading

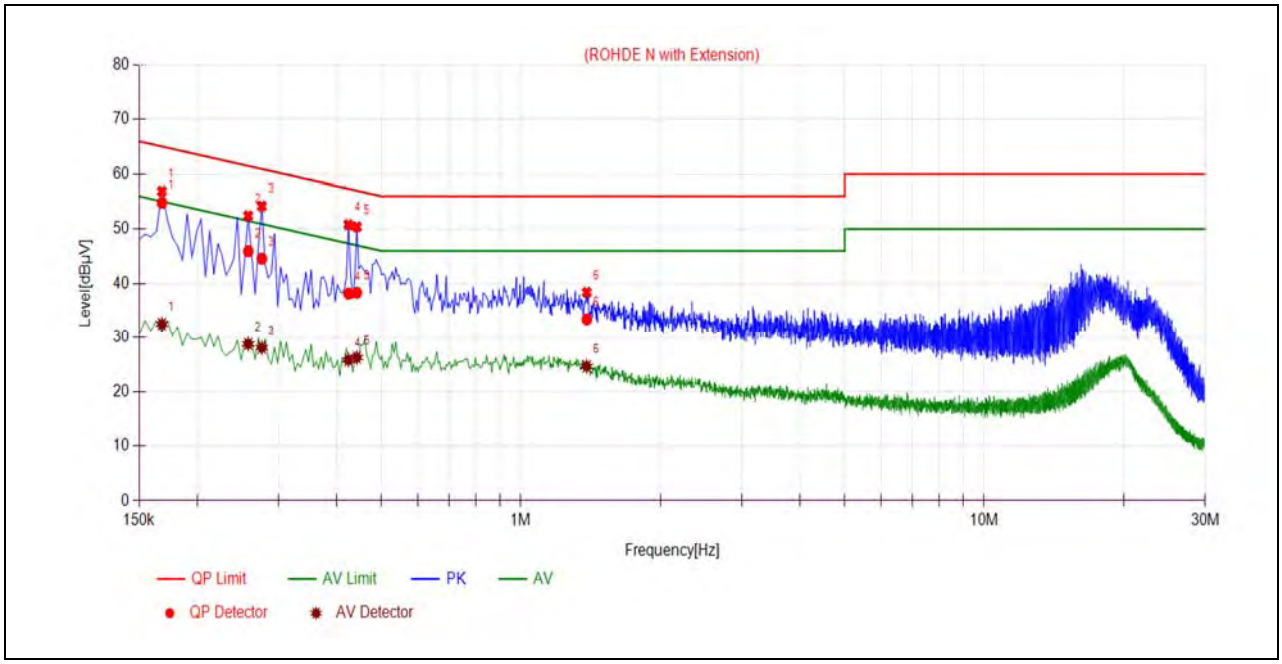
A_{Factor}: Voltage division factor of LISN

B. Test Plot:



(L Phase)

No.	Fre. (MHz)	Emission Level (dBµV)		Limit (dBµV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.1770	52.52	33.36	64.63	54.63	Line	PASS
2	0.1950	51.24	30.95	63.82	53.82		PASS
3	0.2445	47.10	30.76	61.94	51.94		PASS
4	0.4965	44.27	33.16	56.06	46.06		PASS
5	5.8336	30.45	20.94	60.00	50.00		PASS
6	8.9029	31.83	21.94	60.00	50.00		PASS



(N Phase)

No.	Fre. (MHz)	Emission Level (dBµV)		Limit (dBµV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.1680	54.82	32.54	65.06	55.06	Neutral	PASS
2	0.2580	45.94	28.77	61.50	51.50		PASS
3	0.2760	44.59	28.08	60.94	50.94		PASS
4	0.4245	38.17	25.79	57.36	47.36		PASS
5	0.4425	38.32	26.25	57.02	47.02		PASS
6	1.3874	33.42	24.63	56.00	46.00		PASS

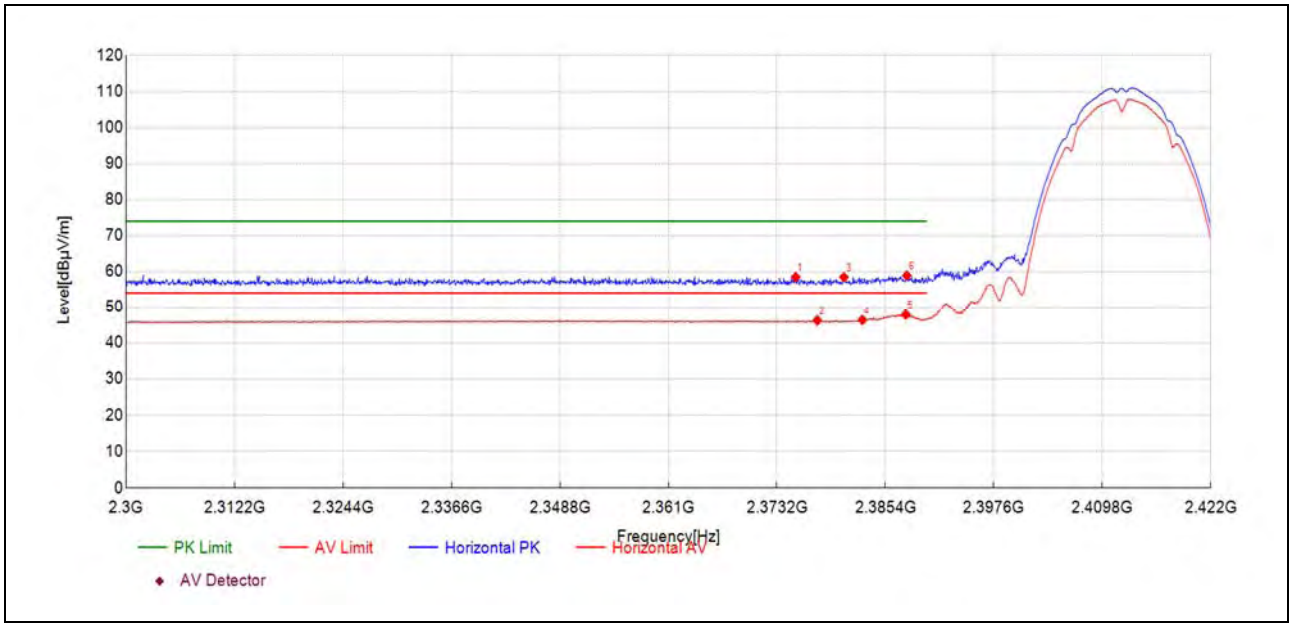
A.9. Restricted Frequency Bands

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.

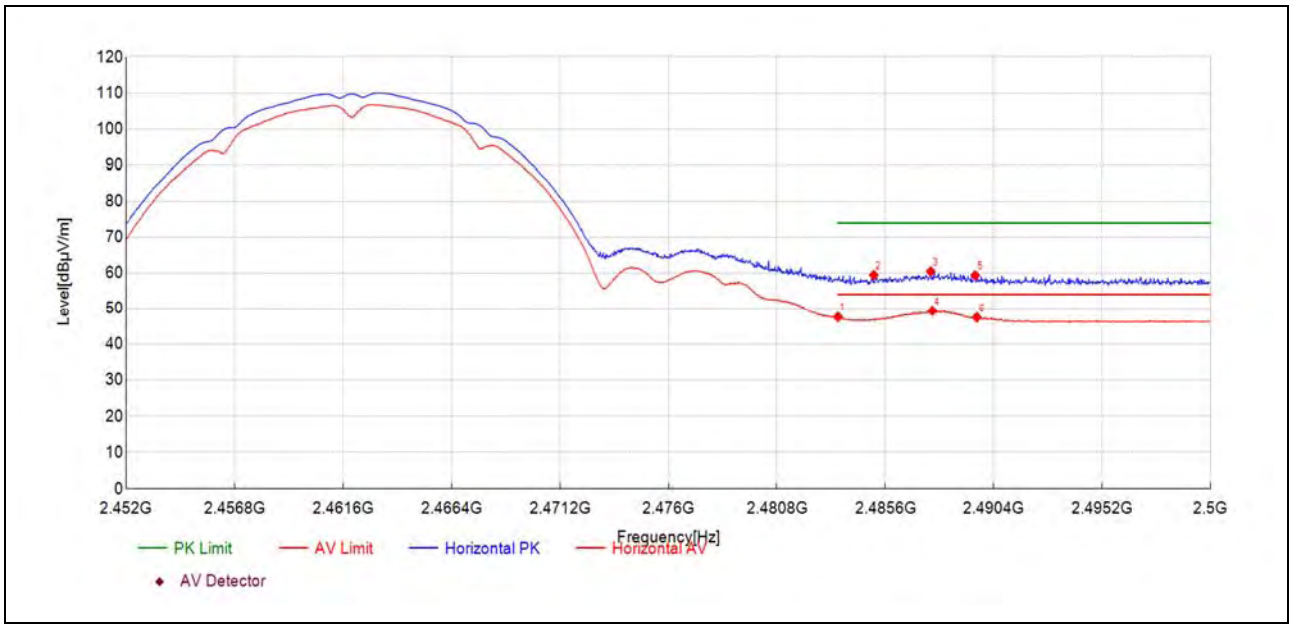
802.11b Mode

Plot for Channel 1



Fre. (MHz)	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2375.31	21.0	58.45	37.480	74.00	15.55	150	327	PK	PASS
2377.75	8.7	46.20	37.480	54.00	7.80	150	85	AV	PASS
2380.74	21.0	58.45	37.480	74.00	15.55	150	71	PK	PASS
2382.82	8.9	46.33	37.480	54.00	7.67	150	28	AV	PASS
2387.70	10.4	47.86	37.490	54.00	6.14	150	24	AV	PASS
2387.82	21.4	58.88	37.490	74.00	15.12	150	19	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
2483.50	9.3	47.62	38.280	54.00	6.38	150	28	AV	PASS
2485.09	21.2	59.47	38.270	74.00	14.53	150	258	PK	PASS
2487.61	22.2	60.49	38.270	74.00	13.51	150	24	PK	PASS
2487.68	11.1	49.40	38.270	54.00	4.60	150	37	AV	PASS
2489.58	21.1	59.37	38.260	74.00	14.63	150	28	PK	PASS
2489.65	9.2	47.49	38.260	54.00	6.51	150	28	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.

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.

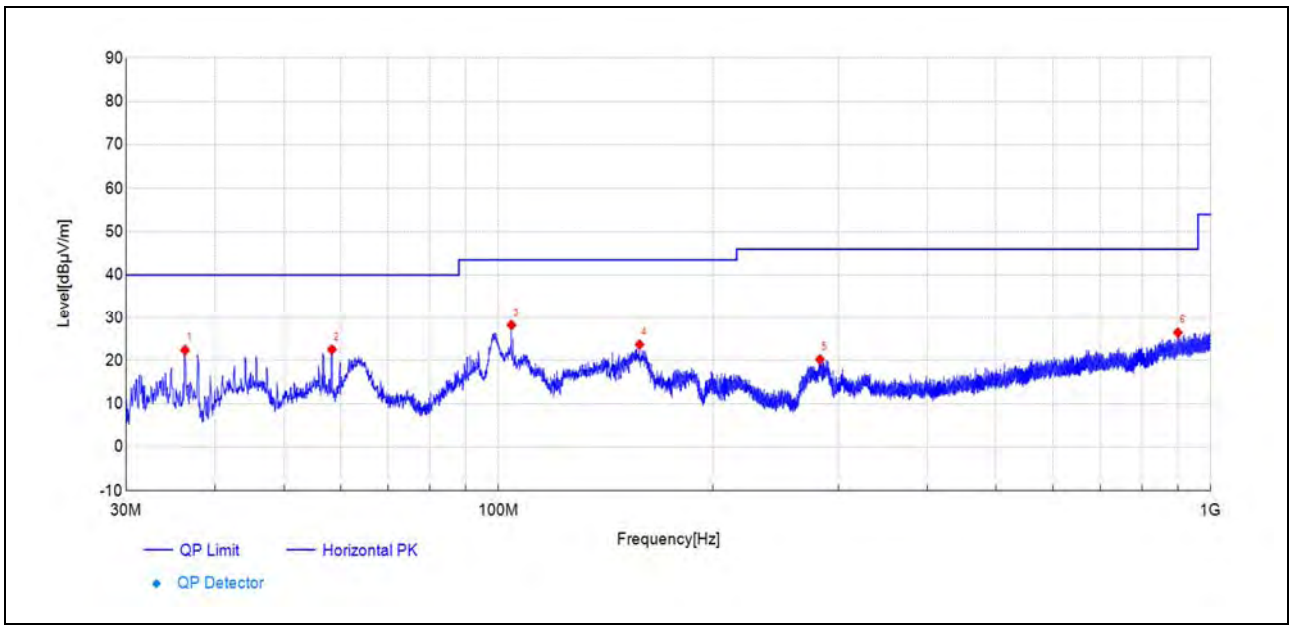
Note 2: All test modes and bandwidth were considered and evaluated respectively by performing full test, only the worst data were recorded for each bandwidth.

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.

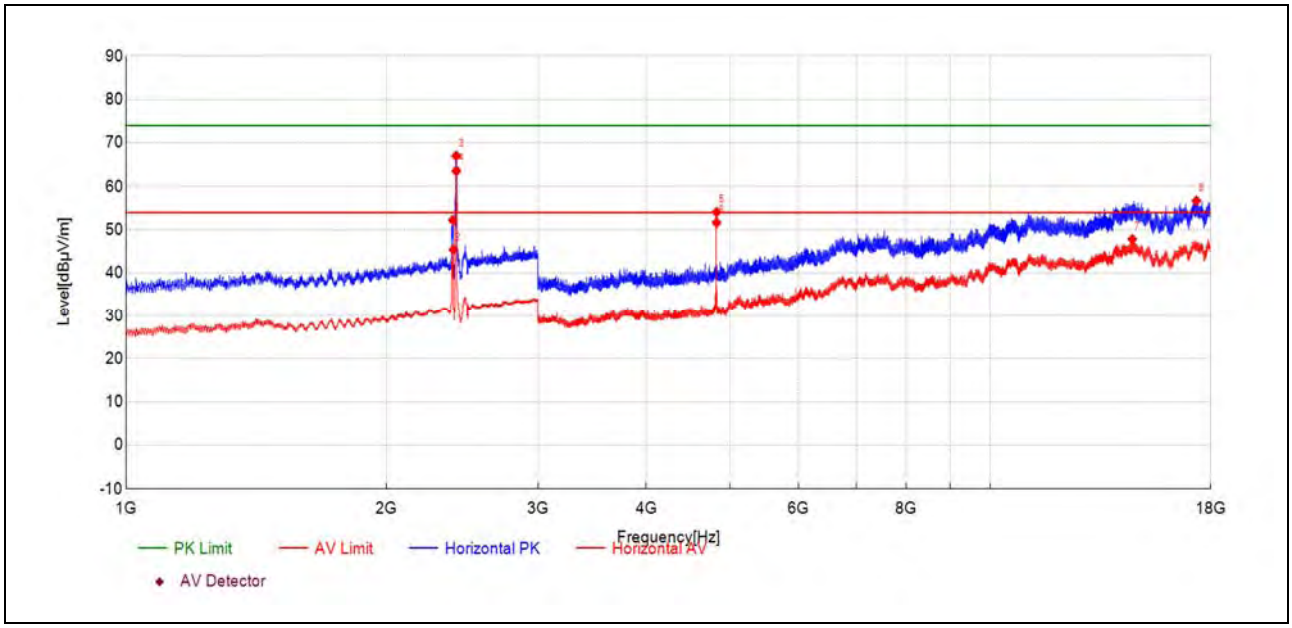
802.11b Mode

Plot for Channel 1



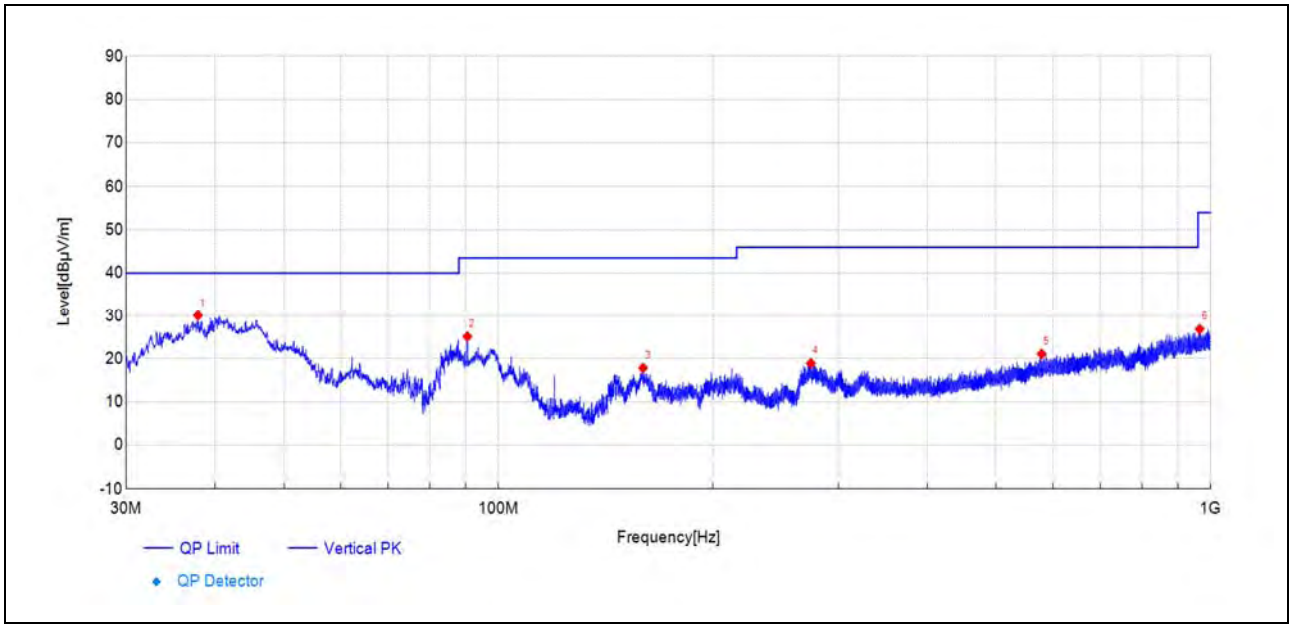
(Antenna Horizontal, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
36.31	51.9	22.39	-29.500	40.00	17.61	150	302	PK	PASS
58.37	50.8	22.52	-28.260	40.00	17.48	150	322	PK	PASS
104.31	57.7	28.22	-29.520	43.50	15.28	150	51	PK	PASS
157.80	55.5	23.66	-31.830	43.50	19.84	150	78	PK	PASS
282.75	46.5	20.22	-26.310	46.00	25.78	150	51	PK	PASS
899.45	38.1	26.47	-11.660	46.00	19.53	150	252	PK	PASS



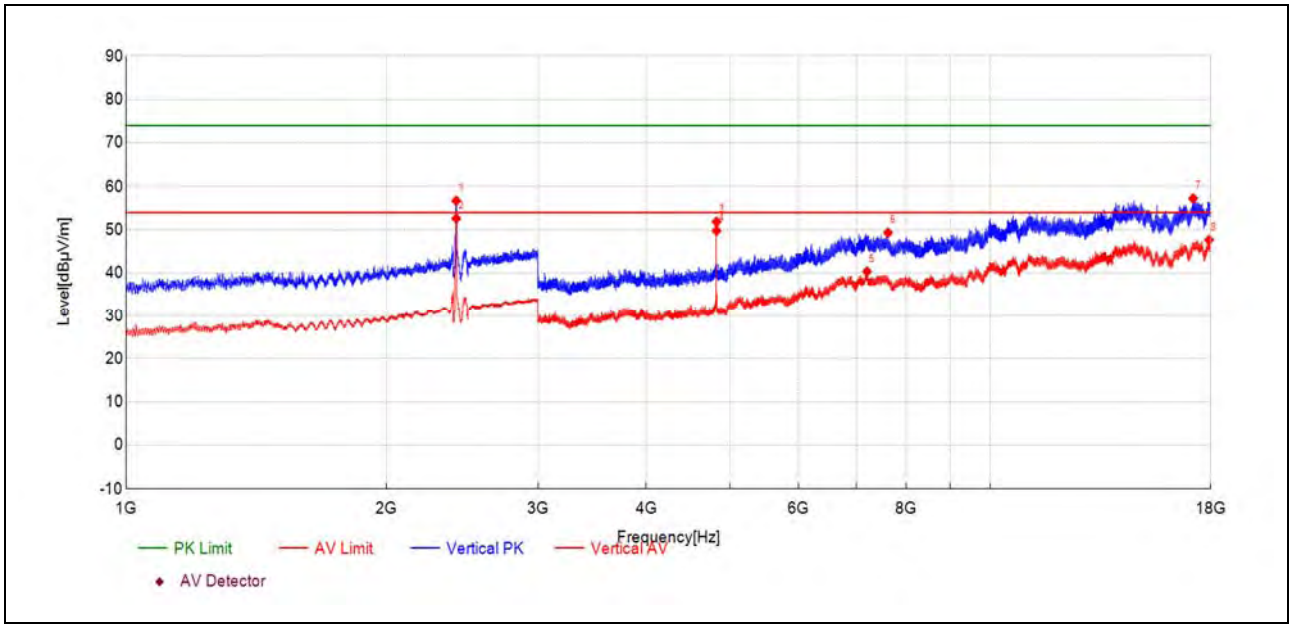
(Antenna Horizontal, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2387.88	47.1	52.26	5.200	74.00	21.74	150	36	PK	PASS
2392.68	40.2	45.40	5.200	54.00	8.60	150	31	AV	PASS
2410.68	61.6	66.96	5.380	-	-	150	31	PK	NA
2411.48	58.2	63.60	5.390	-	-	150	31	AV	NA
4824.05	59.1	54.10	-5.000	74.00	19.90	150	135	PK	PASS
4824.48	56.6	51.65	-4.990	54.00	2.35	150	150	AV	PASS
14606.47	27.5	47.84	20.350	54.00	6.16	150	203	AV	PASS
17323.69	37.6	56.74	19.190	74.00	17.26	150	95	PK	PASS



(Antenna Vertical, 30MHz to 1GHz)

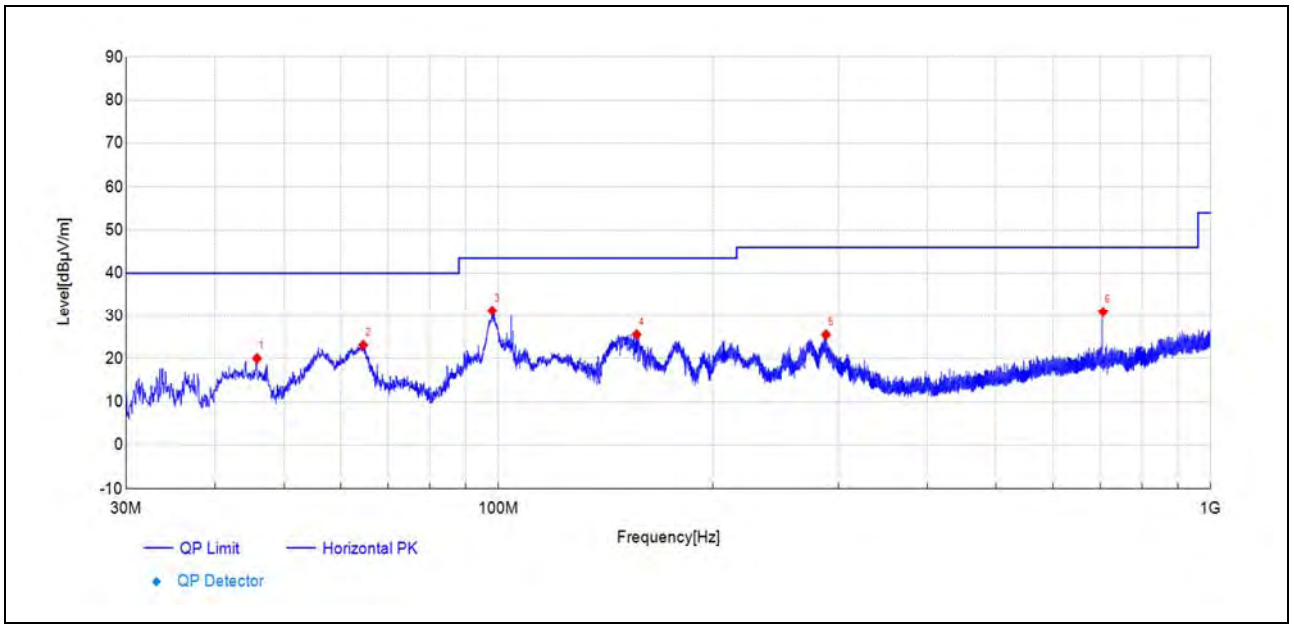
Fre. (MHz)	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
37.86	59.5	30.03	-29.510	40.00	9.97	150	289	PK	PASS
90.43	56.6	25.11	-31.480	43.50	18.39	150	344	PK	PASS
159.60	49.0	17.84	-31.130	43.50	25.66	150	344	PK	PASS
274.65	45.0	18.91	-26.130	46.00	27.09	150	275	PK	PASS
578.85	38.8	21.08	-17.750	46.00	24.92	150	269	PK	PASS
964.88	37.8	26.82	-10.990	54.00	27.18	150	164	PK	PASS



(Antenna Vertical, 1GHz to 18GHz)

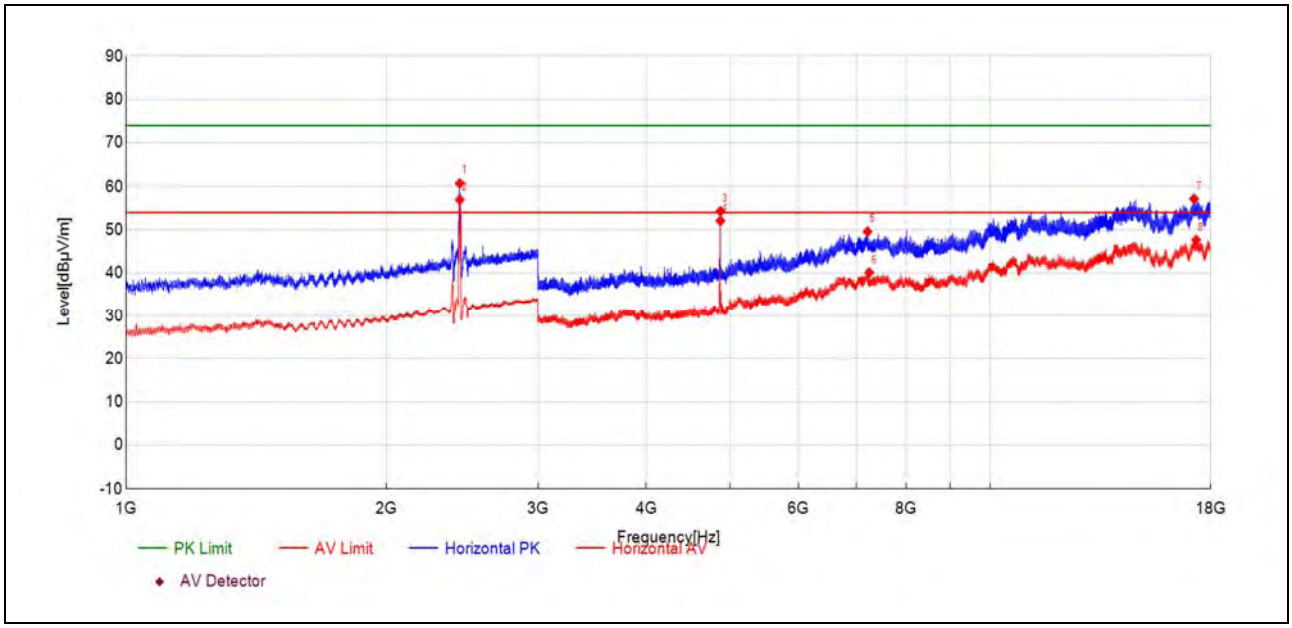
Fre. (MHz)	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2410.68	51.4	56.75	5.380	-	-	150	318	PK	NA
2411.48	47.3	52.65	5.390	-	-	150	318	AV	NA
4824.05	56.9	51.87	-5.000	74.00	22.13	150	55	PK	PASS
4824.48	54.8	49.81	-4.990	54.00	4.19	150	55	AV	PASS
7203.98	35.3	40.38	5.060	54.00	13.62	150	164	AV	PASS
7618.42	44.5	49.33	4.850	74.00	24.67	150	191	PK	PASS
17174.98	37.5	57.29	19.760	74.00	16.71	150	95	PK	PASS
17922.43	28.5	47.67	19.170	54.00	6.33	150	204	AV	PASS

Plot for Channel 6



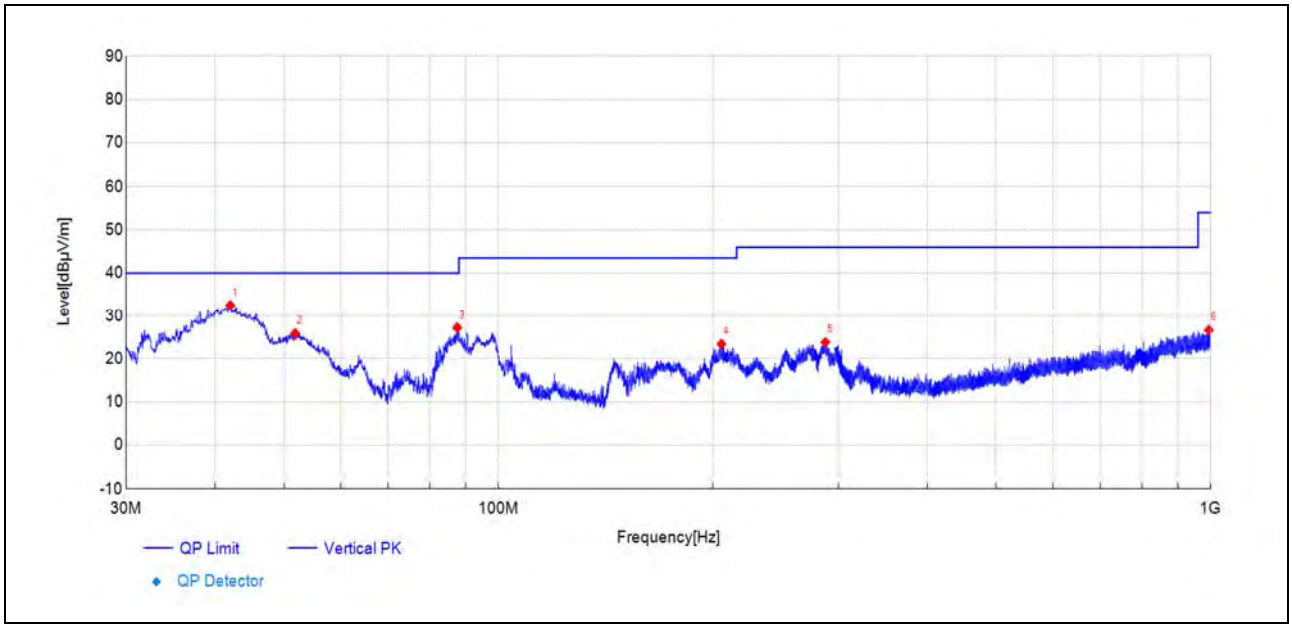
(Antenna Horizontal, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
45.81	48.4	20.03	-28.390	40.00	19.97	150	273	PK	PASS
64.58	52.4	23.13	-29.220	40.00	16.87	150	266	PK	PASS
98.00	60.9	31.18	-29.740	43.50	12.32	150	92	PK	PASS
156.35	57.4	25.55	-31.800	43.50	17.95	150	64	PK	PASS
288.32	51.9	25.52	-26.380	46.00	20.48	150	57	PK	PASS
706.12	46.5	30.88	-15.640	46.00	15.12	150	9	PK	PASS



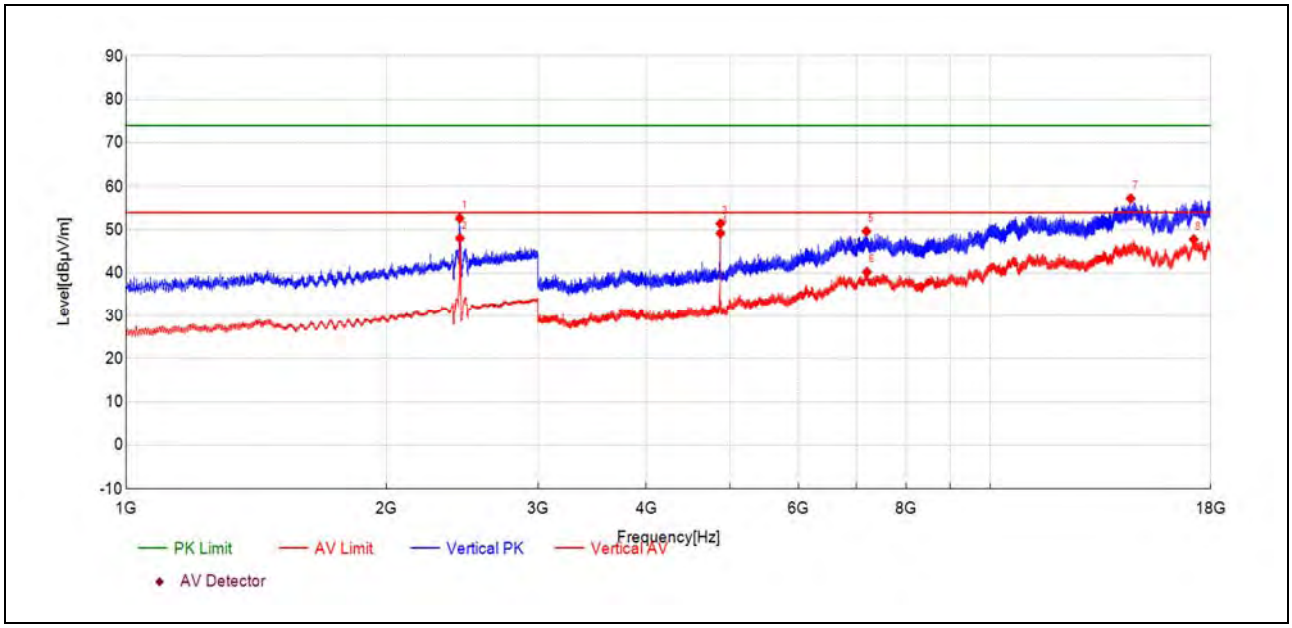
(Antenna Horizontal, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2433.49	55.0	60.75	5.720	-	-	150	31	PK	NA
2433.89	51.2	56.96	5.720	-	-	150	31	AV	NA
4873.77	59.3	54.29	-4.960	74.00	19.71	150	134	PK	PASS
4874.20	57.1	52.10	-4.960	54.00	1.90	150	150	AV	PASS
7212.98	44.7	49.62	4.920	74.00	24.38	150	134	PK	PASS
7245.98	35.7	40.13	4.420	54.00	13.87	150	109	AV	PASS
17221.26	37.5	57.18	19.710	74.00	16.82	150	0	PK	PASS
17318.12	28.5	47.66	19.120	54.00	6.34	150	244	AV	PASS



(Antenna Vertical, 30MHz to 1GHz)

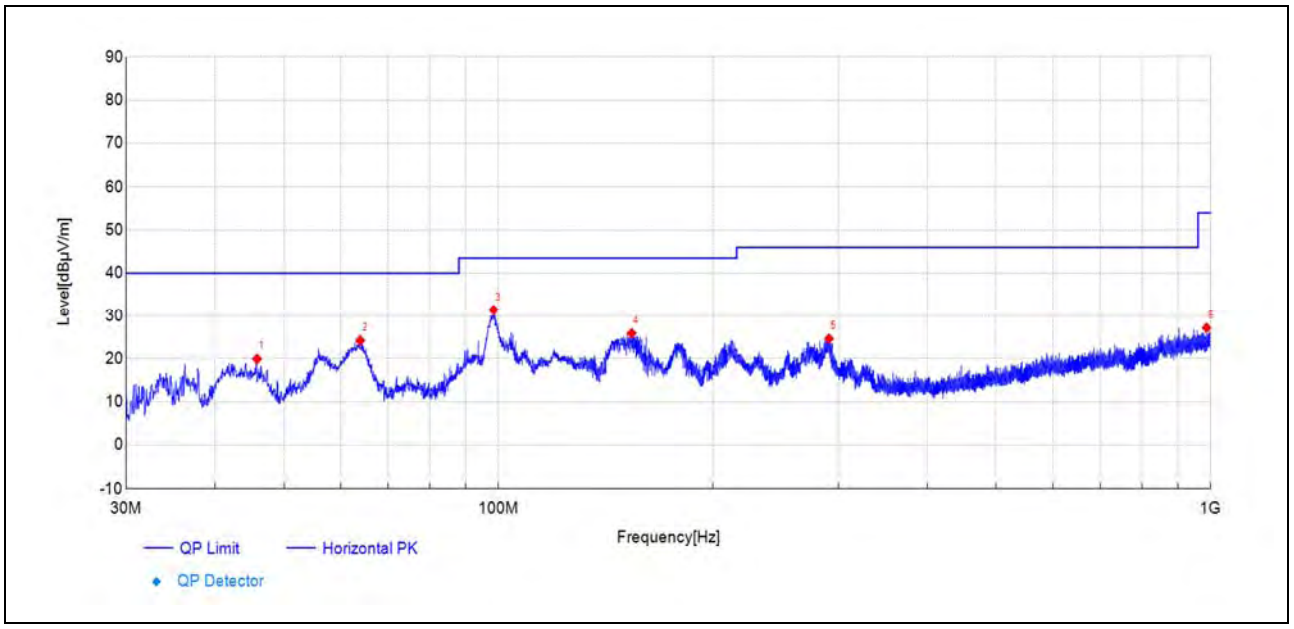
Fre. (MHz)	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
42.03	61.1	32.48	-28.640	40.00	7.52	150	351	PK	PASS
51.83	53.8	25.85	-27.990	40.00	14.15	150	213	PK	PASS
87.52	59.3	27.18	-32.080	40.00	12.82	150	206	PK	PASS
205.63	52.8	23.38	-29.390	43.50	20.12	150	254	PK	PASS
287.69	50.2	23.79	-26.360	46.00	22.21	150	275	PK	PASS
994.23	37.1	26.60	-10.460	54.00	27.40	150	323	PK	PASS



(Antenna Vertical, 1GHz to 18GHz)

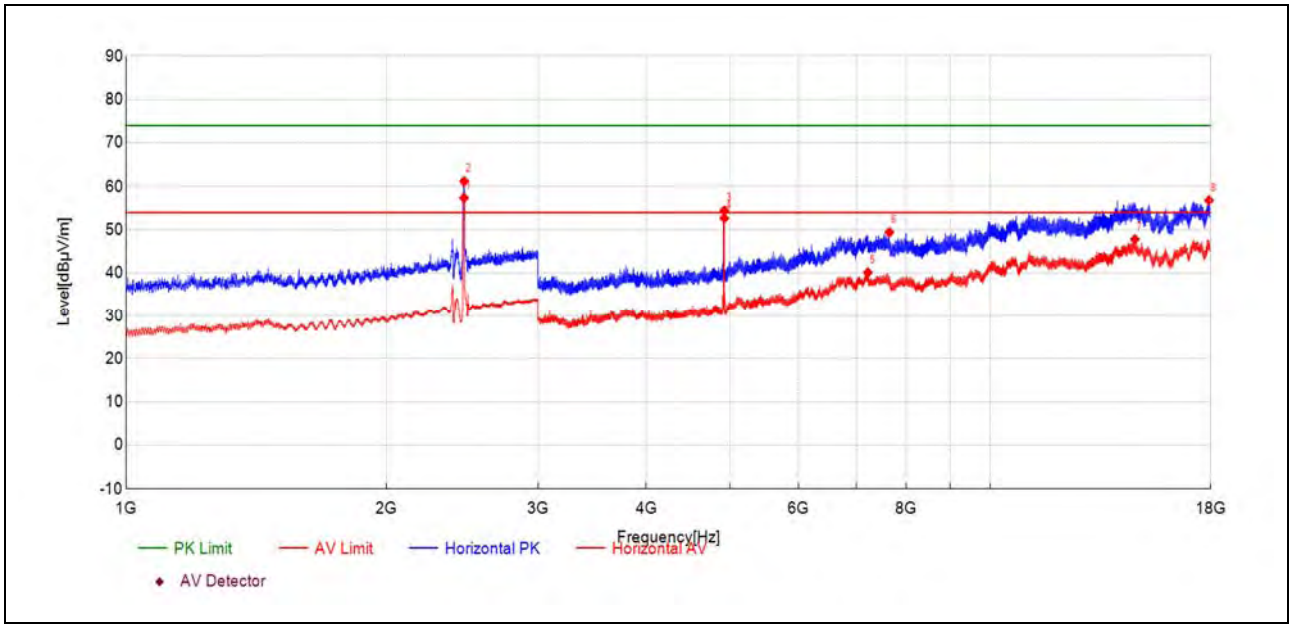
Fre. (MHz)	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2433.49	47.0	52.68	5.720	-	-	150	142	PK	NA
2434.29	42.3	48.06	5.740	-	-	150	136	AV	NA
4873.77	56.4	51.43	-4.960	74.00	22.57	150	94	PK	PASS
4874.62	54.2	49.23	-4.970	54.00	4.77	150	82	AV	PASS
7191.98	44.7	49.70	5.040	74.00	24.30	150	109	PK	PASS
7201.83	35.2	40.25	5.090	54.00	13.75	150	150	AV	PASS
14541.76	37.2	57.27	20.030	74.00	16.73	150	69	PK	PASS
17202.41	27.9	47.80	19.910	54.00	6.20	150	42	AV	PASS

Plot for Channel 11



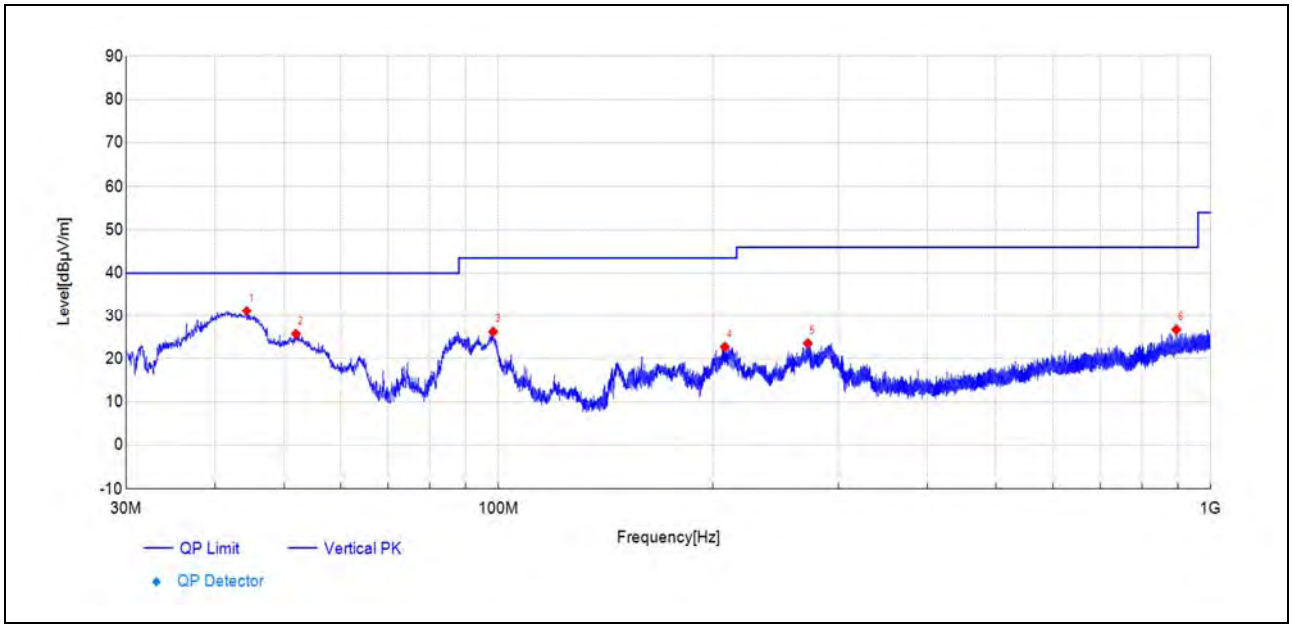
(Antenna Horizontal, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
45.81	48.3	19.91	-28.390	40.00	20.09	150	239	PK	PASS
63.95	53.4	24.18	-29.210	40.00	15.82	150	288	PK	PASS
98.44	61.0	31.34	-29.690	43.50	12.16	150	107	PK	PASS
153.78	57.7	25.87	-31.780	43.50	17.63	150	65	PK	PASS
291.14	50.9	24.60	-26.340	46.00	21.40	150	65	PK	PASS
986.76	38.0	27.13	-10.870	54.00	26.87	150	44	PK	PASS



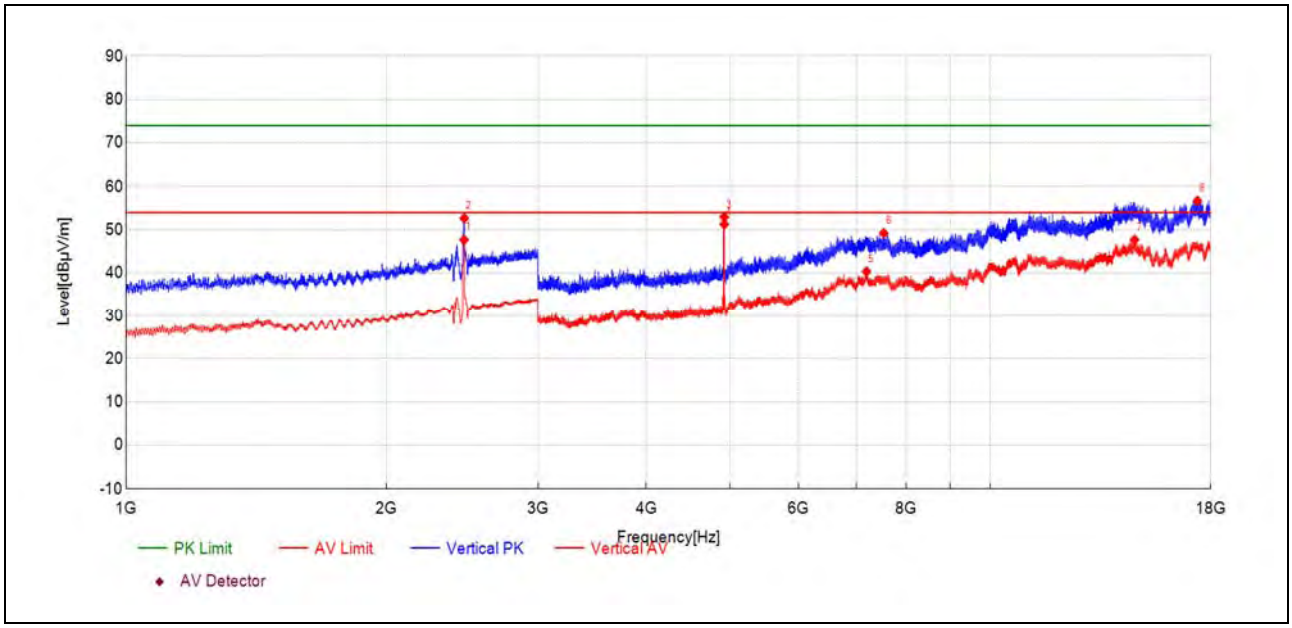
(Antenna Horizontal, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2461.49	51.4	57.38	5.940	-	-	150	31	AV	PASS
2461.89	55.3	61.21	5.940	-	-	150	31	PK	PASS
4923.91	59.4	54.46	-4.980	74.00	19.54	150	134	PK	NA
4924.34	57.7	52.71	-4.980	54.00	1.29	150	148	AV	NA
7219.41	35.3	40.13	4.830	54.00	13.87	150	81	AV	PASS
7644.99	44.7	49.44	4.700	74.00	24.56	150	14	PK	PASS
14707.19	27.3	47.82	20.540	54.00	6.18	150	270	AV	PASS
17922.43	37.7	56.83	19.170	74.00	17.17	150	14	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
44.31	59.0	31.14	-27.900	40.00	8.86	150	12	PK	PASS
51.97	53.7	25.70	-27.970	40.00	14.30	150	184	PK	PASS
98.29	55.9	26.20	-29.700	43.50	17.30	150	47	PK	PASS
207.91	52.2	22.70	-29.470	43.50	20.80	150	240	PK	PASS
271.83	50.2	23.50	-26.680	46.00	22.50	150	275	PK	PASS
894.75	39.0	26.70	-12.320	46.00	19.30	150	32	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
2461.49	41.8	47.71	5.940	-	-	150	97	AV	PASS
2463.09	46.8	52.69	5.940	-	-	150	102	PK	PASS
4923.91	58.0	52.97	-4.980	74.00	21.03	150	96	PK	NA
4924.34	56.3	51.30	-4.980	54.00	2.70	150	110	AV	NA
7193.26	35.3	40.37	5.050	54.00	13.63	150	70	AV	PASS
7531.84	44.6	49.24	4.600	74.00	24.76	150	296	PK	PASS
14693.48	27.1	47.69	20.590	54.00	6.31	150	83	AV	PASS
17374.70	36.9	56.72	19.840	74.00	17.28	150	123	PK	PASS

END OF REPORT