REPORT No.: SZ24060101W02

TEST REPORT

APPLICANT	:	Anker Innovations Limited
PRODUCT NAME	:	eufy Smart Lock E31
MODEL NAME	:	T85F0
BRAND NAME	:	eufy
FCC ID	:	2AOKB-T85F0
STANDARD(S)	:	47 CFR Part 15 Subpart C
RECEIPT DATE	:	2024-06-13
TEST DATE	:	2024-06-25 to 2024-07-17
ISSUE DATE	:	2024-07-29

Edited by: Peng Mi

Peng Mi (Rapporteur)

Approved by: Shen Junsheng

Shen Junsheng (Supervisor)

MORLAB

Shenzhen Morlab Communications Technology Co., Ltd.
FL.1-3, Building A, FeiYang Science Park, No.8 LongChang Road,
Block67, BaoAn District, ShenZhen, GuangDong Province, P. R. China

Tel: 86-755-36698555 Fax: 86-755-36698525
Http://www.morlab.cn E-mail: service@morlab.cn

DIRECTORY

Change History		
Version	**Date**	**Reason for change**
1.0	2024-07-29	First edition

1. Summary of Test Result

No.	Section	Description	Test Date	Test Engineer	Result	Method Determination /Remark
1	15.203	Antenna Requirement	N/A	N/A	PASS	No deviation
2	N/A	Duty Cycle of Test Signal	Jun. 25, 2024	Li Zikai	PASS	No deviation
3	15.247(b)	Maximum Peak Conducted Output Power	Jun. 25, 2024	Li Zikai	PASS	No deviation
4	15.247(b)	Maximum Average Conducted Output Power	Jun. 25, 2024	Li Zikai	PASS	No deviation
5	15.247(a)	Bandwidth	Jun. 25, 2024	Li Zikai	PASS	No deviation
6	15.247(d)	Conducted Spurious Emission and Band Edge	Jun. 25, 2024	Li Zikai	PASS	No deviation
7	15.247(e)	Power Spectral Density	Jun. 25, 2024	Li Zikai	PASS	No deviation
8	15.207	Conducted Emission	Jun. 25 to 27, 2024	Wen Zhe	PASS	No deviation
9	15.247(d)	Restricted Frequency Bands	Jul. 17, 2024	Yang Lian	PASS	No deviation
10	15.209, 15.247(d)	Radiated Emission	Jul. 17, 2024	Yang Lian	PASS	No deviation

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: Additions to, deviation, or exclusions from the method shall be judged in the "method determination" column of add, deviate or exclude from the specific method shall be explained in the "Remark" of the above table.

Note 3: When the test result is a critical value, we will use the measurement uncertainty give the judgment result based on the 95% confidence intervals.

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	2024.02.19	2025.02.18
Power Sensor	MY54180008	U2021XA	Agilent	2023.10.17	2024.10.16
Attenuator	MTJ6004-20	VAT-10+	MTJ Cooperation	N/A	N/A
RF Cable (30MHz-26GHz)	CB01	RF01	Morlab	N/A	N/A
Coaxial Cable	CB02	RF02	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	MY56400093	N9038A	KEYSIGHT	2024.01.25	2025.01.24
LISN	8127449	NSLK 8127	Schwarzbeck	2024.02.02	2025.02.01
Pulse Limiter (10dB)	VTSD 9561 F-B #206	VTSD 9561-F	Schwarzbeck	2024.05.30	2025.05.29
RF Coaxial Cable (DC-100MHz)	BNC	MRE04	Qualwave	N/A	N/A

1.2.3 List of Software Used

Description	Manufacturer	Software Version
Test System	MaiWei	2.0.0.0
TS+ -[JS36-RSE]	Tonscend	V3.0.0.0
TS+ -[JS32-CE]	Tonscend	V2.5.0.0

1.2.4 Radiated Test Equipment

Equipment	Serial No.	Type	Manufacturer	Cal. Date	Due Date
Signal Analyzer	MY56060145	N9020A	Agilent	2024.05.30	2025.05.29
Test Antenna - Bi-Log	9163-519	VULB 9163	Schwarzbeck	2024.06.22	2025.06.21
Test Antenna - Loop	1519-022	FMZB1519	Schwarzbeck	2024.06.03	2025.06.02
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.	2024.05.30	2025.05.29
Preamplifier (2GHz-18GHz)	61171/61172	S020180L3203	LUCIX CORP.	2024.05.30	2025.05.29
Preamplifier (18GHz-40GHz)	DS77209	DCLNA0118-40C-S	Decentest	2024.05.30	2025.05.29
RF Coaxial Cable (DC-18GHz)	MRE001	PE330	Pasternack	2024.05.30	2025.05.29
RF Coaxial Cable (DC-18GHz)	MRE002	CLU18	Pasternack	2024.05.30	2025.05.29
RF Coaxial Cable (DC-18GHz)	MRE003	CLU18	Pasternack	2024.05.30	2025.05.29
RF Coaxial Cable (DC-40GHz)	22290045	QA360-40-KK-0.5	Qualwave	N/A	N/A
RF Coaxial Cable (DC-40GHz)	22290046	QA360-40-KKF-2	Qualwave	N/A	N/A
RF Coaxial Cable (DC-18GHz)	22120181	QA500-18-NN-5	Qualwave	N/A	N/A
Anechoic Chamber	N/A	9m*6m*6m	CRT	2022.05.10	2025.05.09

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	Anker Innovations Limited
Applicant Address	Unit 56, 8th Floor, Tower 2, Admiralty Centre, 18 Harcourt Road, Hong Kong
Manufacturer	Anker Innovations Limited
Manufacturer Address	Unit 56, 8th Floor, Tower 2, Admiralty Centre, 18 Harcourt Road, Hong Kong

2.2. Information of EUT

Product Name:	eufy Smart Lock E31	
Sample No.:	1#	
Hardware Version:	V1	
Software Version:	V1.0.0.6	
Modulation Technology:	DSSS, OFDM	
Modulation Type:	Refer to section 1.3	
Operating Frequency Range:	802.11b/g/n (HT20): 2412MHz–2462MHz	
Antenna Type:	PIFA Antenna	
Antenna Gain:	3.5dBi	
Accessory Information:	Battery	
	Brand Name:	fuji
	Model No.:	T8520S
	Serial No.:	N/A
	Capacity:	10000mAh
	Rated Voltage:	3.6V
	Charge Limit:	4.2V
	Manufacturer:	FUJI ELECTRONICS (SHENZHEN) CO., LTD.

Note 1: We use the dedicated software to control the EUT continuous transmission.

Note 2: 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

Modulation technology	Modulation Type	Data Rate (Mbps) Note1
DSSS (802.11b)	DBPSK	**1**
	DQPSK	2
	CCK	5.5/ 11
OFDM (802.11g)	BPSK	**6** / 9
	QPSK	12 / 18
	16QAM	24 / 36
	64QAM	48 / 54
OFDM (802.11n (HT20))	BPSK	**6.5**
	QPSK	13/19.5
	16QAM	26/39
	64QAM	52/58.5/65

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.

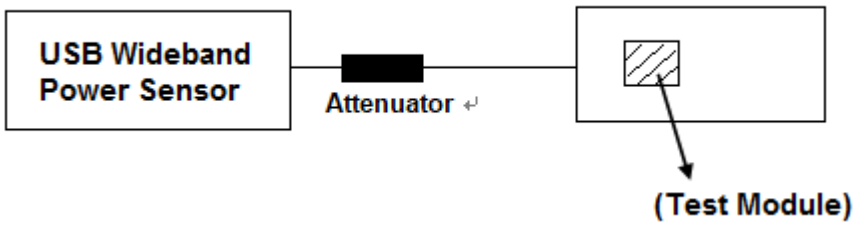
2.5. Test Conditions

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

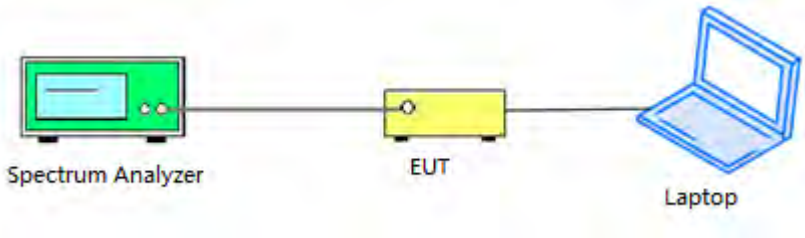
2.6. Test Setup Layout Diagram

2.6.1.Conducted Measurement

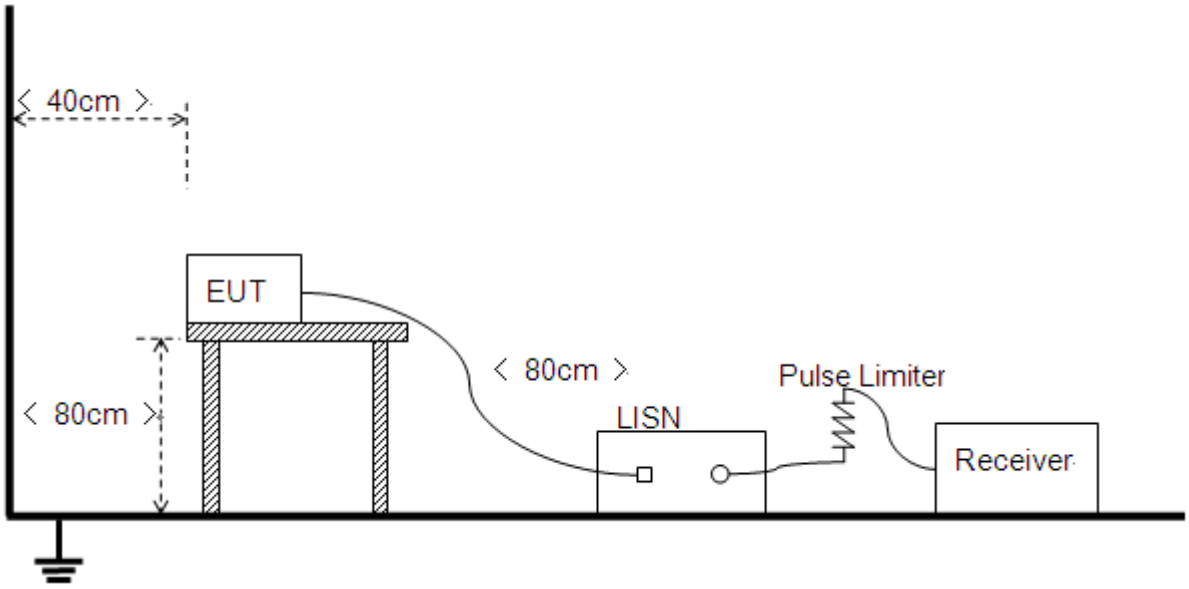
Power item



Other items

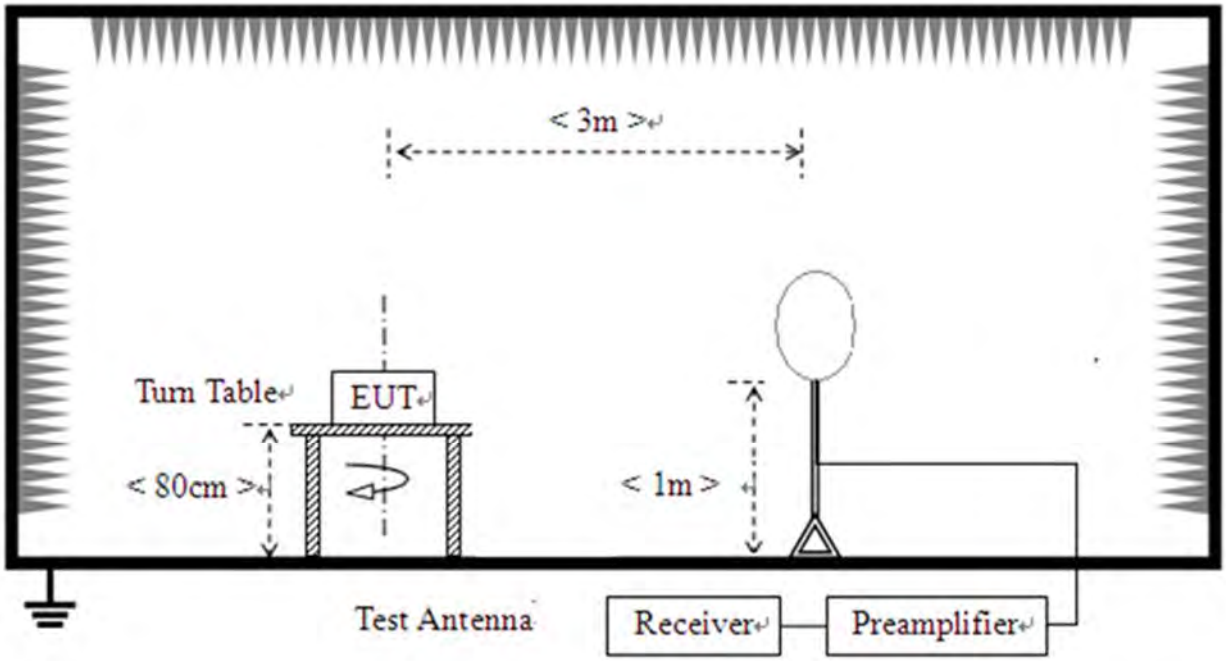


2.6.2.Conducted Emission Measurement

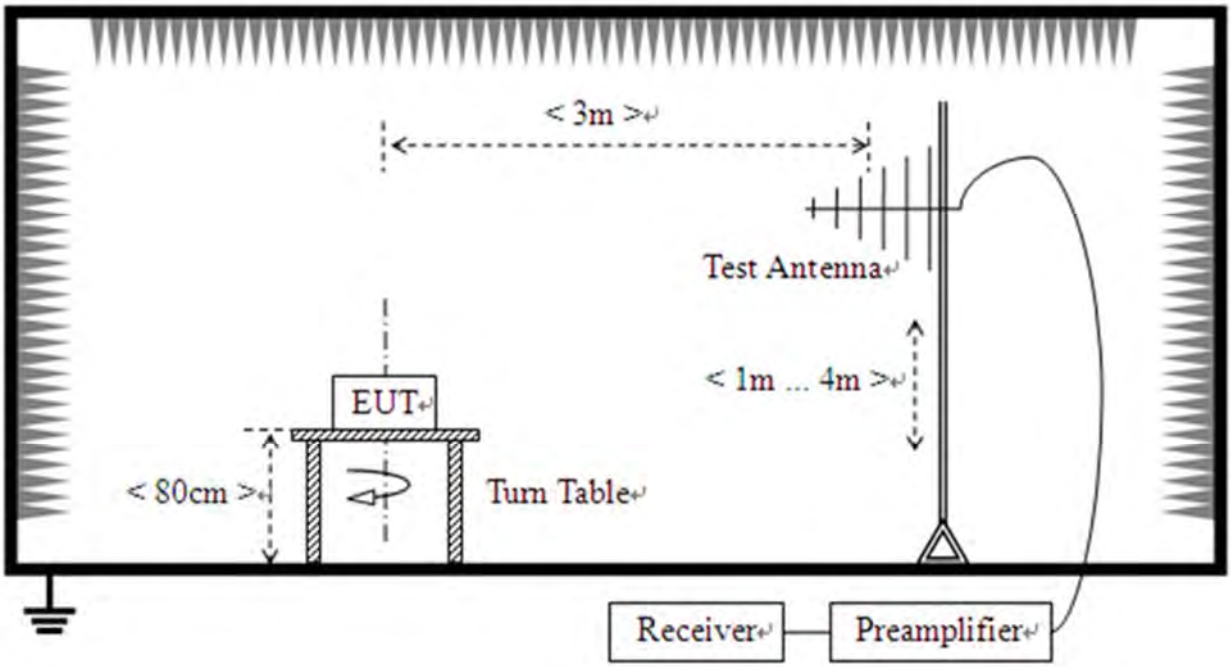


2.6.3.Radiation Measurement

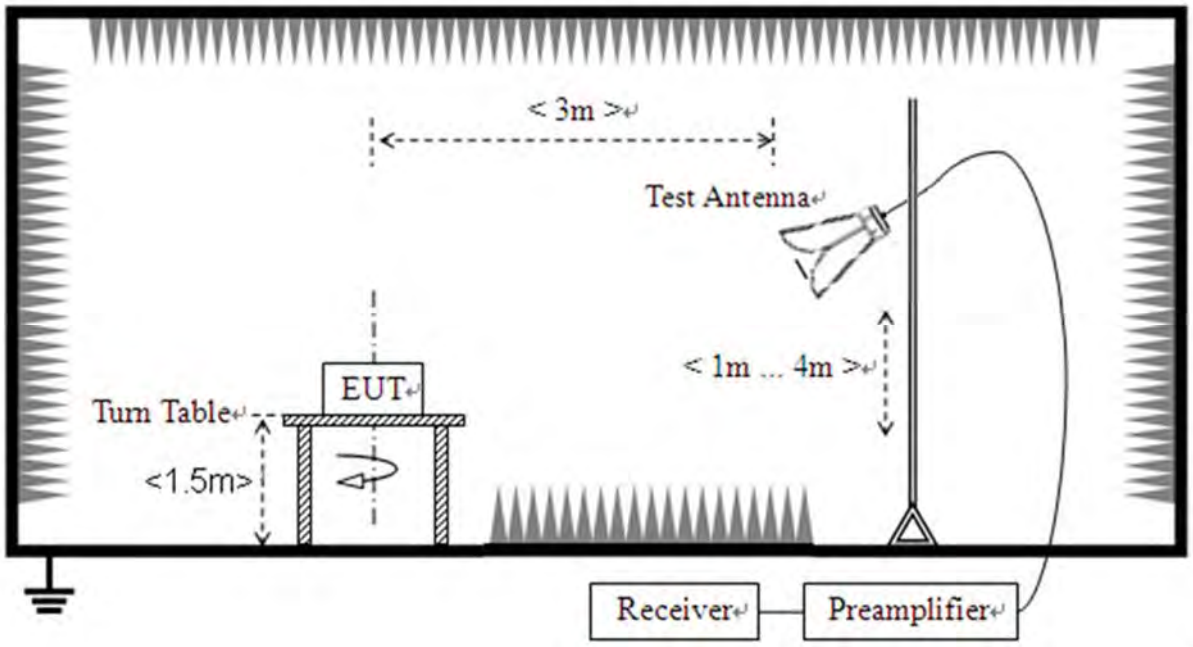
1) For radiated emissions from 9kHz to 30MHz



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	☒I-PEX Connector ☐SMA Connector ☐RP-SMA Connector ☐Metal Shrapnel

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

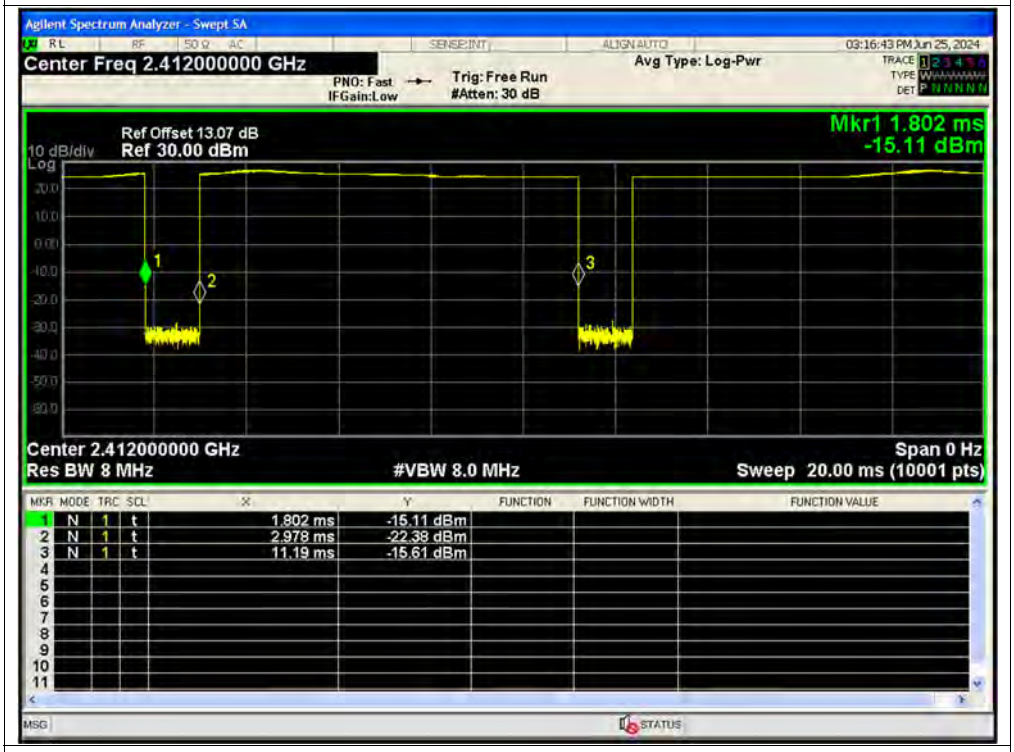
Refer to Annex A.10 in this report.

Annex A Test Data and Result

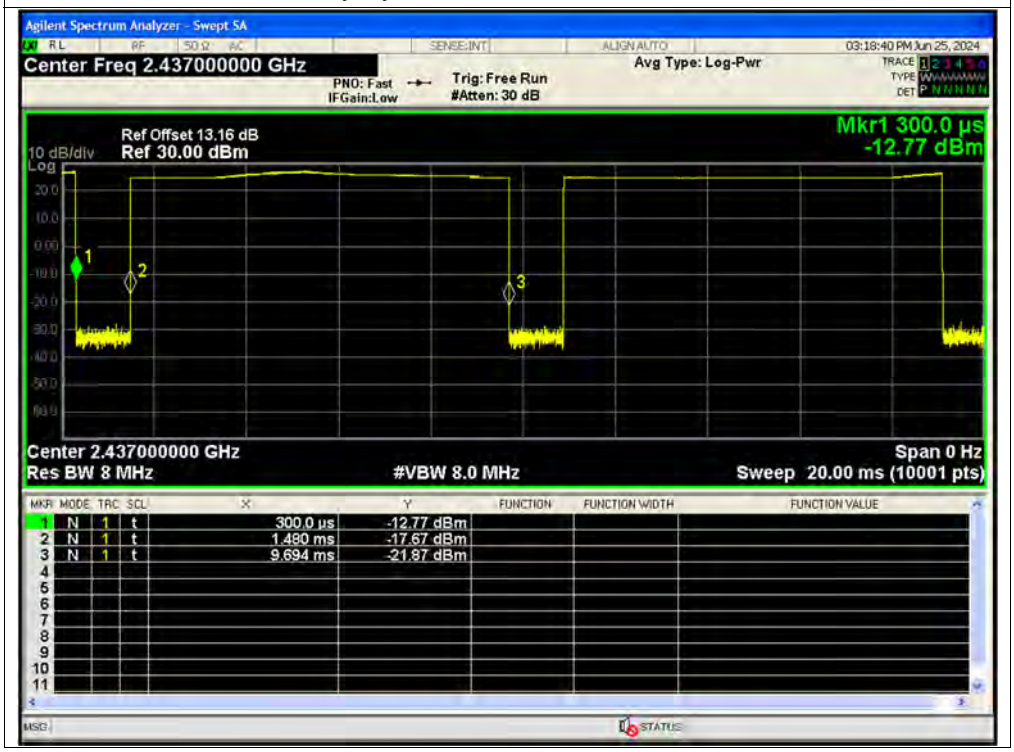
A.1. Duty Cycle of Test Signal

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	b	2412	Ant1	87.48	0.58	0.12
NVNT	b	2437	Ant1	87.44	0.58	0.12
NVNT	b	2462	Ant1	87.44	0.58	0.12
NVNT	g	2412	Ant1	99.95	0	0.08
NVNT	g	2437	Ant1	99.93	0	0.08
NVNT	g	2462	Ant1	99.93	0	0.08
NVNT	n20	2412	Ant1	99.95	0	0.09
NVNT	n20	2437	Ant1	99.97	0	0
NVNT	n20	2462	Ant1	99.93	0	0.09

Test Graphs
Duty Cycle NVNT b 2412MHz Ant1

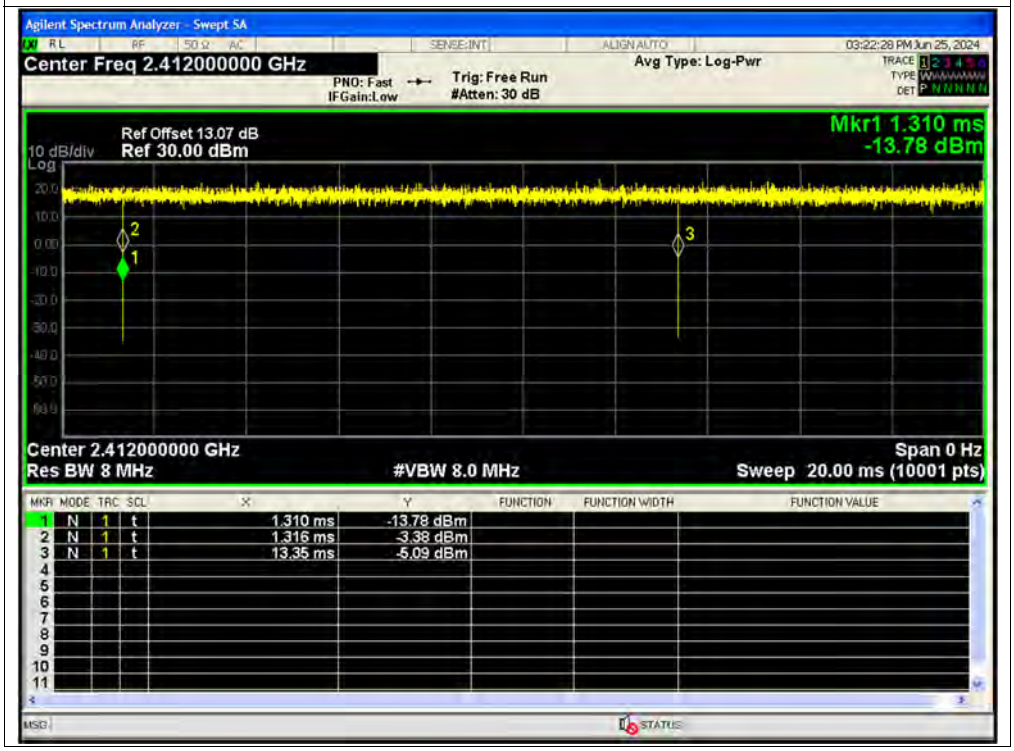


Duty Cycle NVNT b 2437MHz Ant1



Duty Cycle NVNT b 2462MHz Ant1

Duty Cycle NVNT g 2412MHz Ant1



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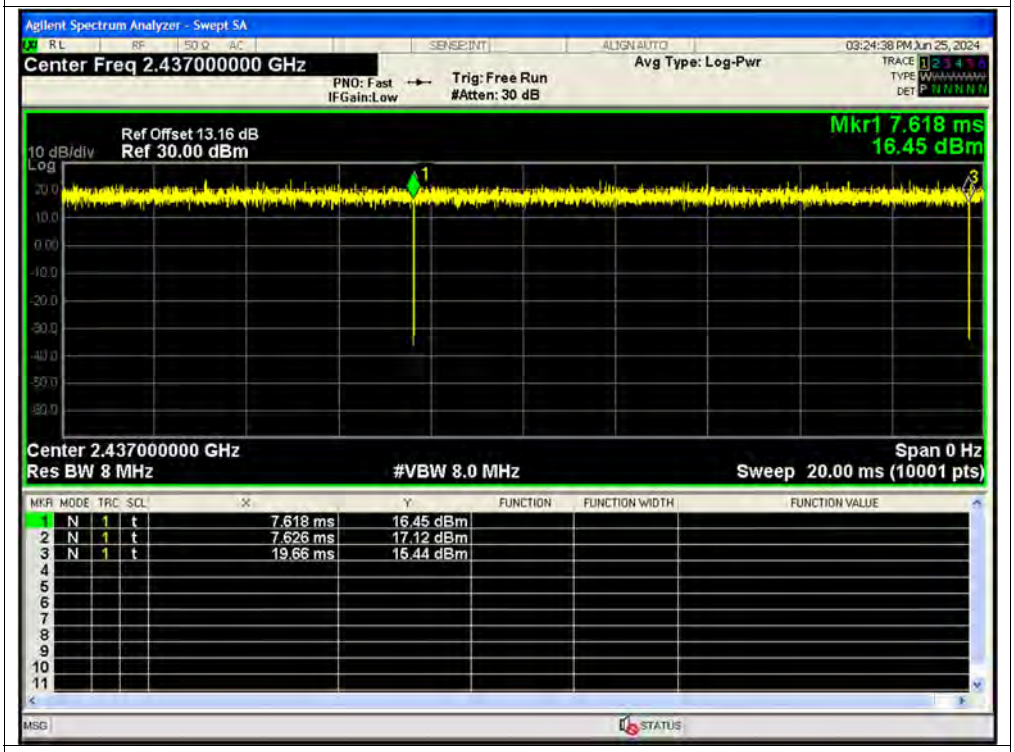
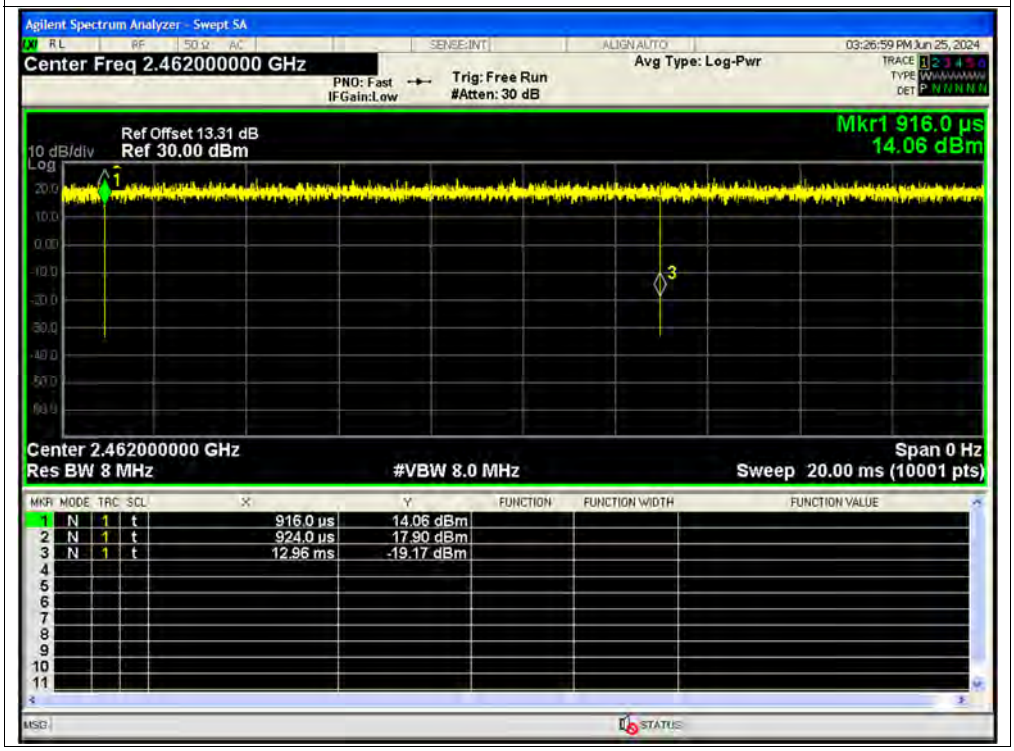
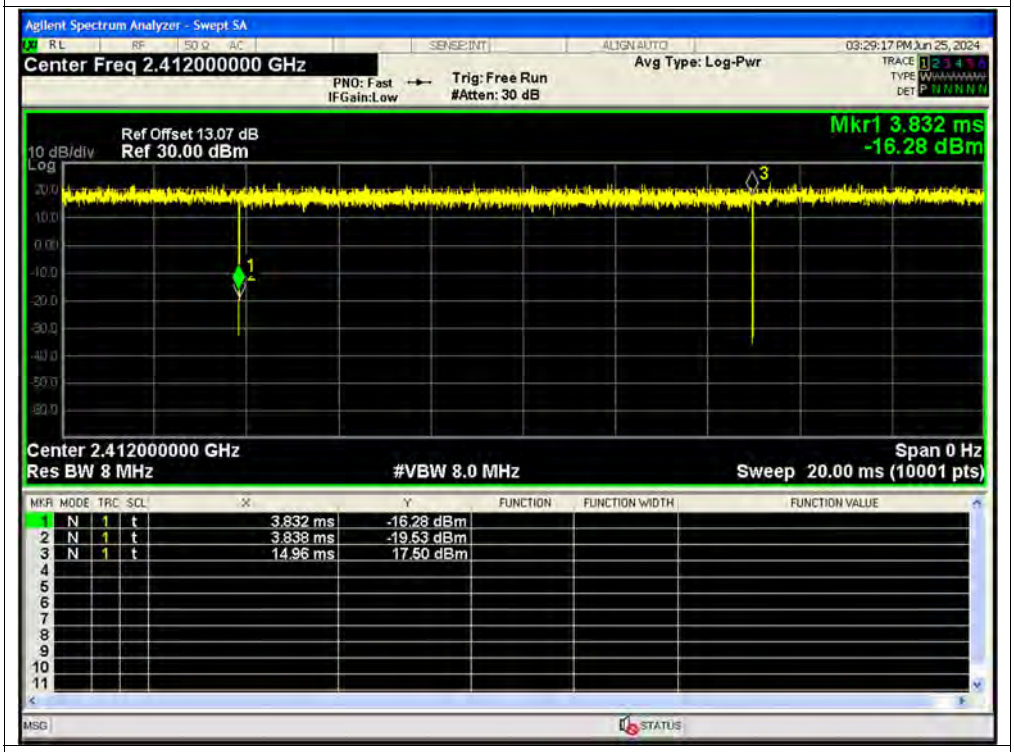


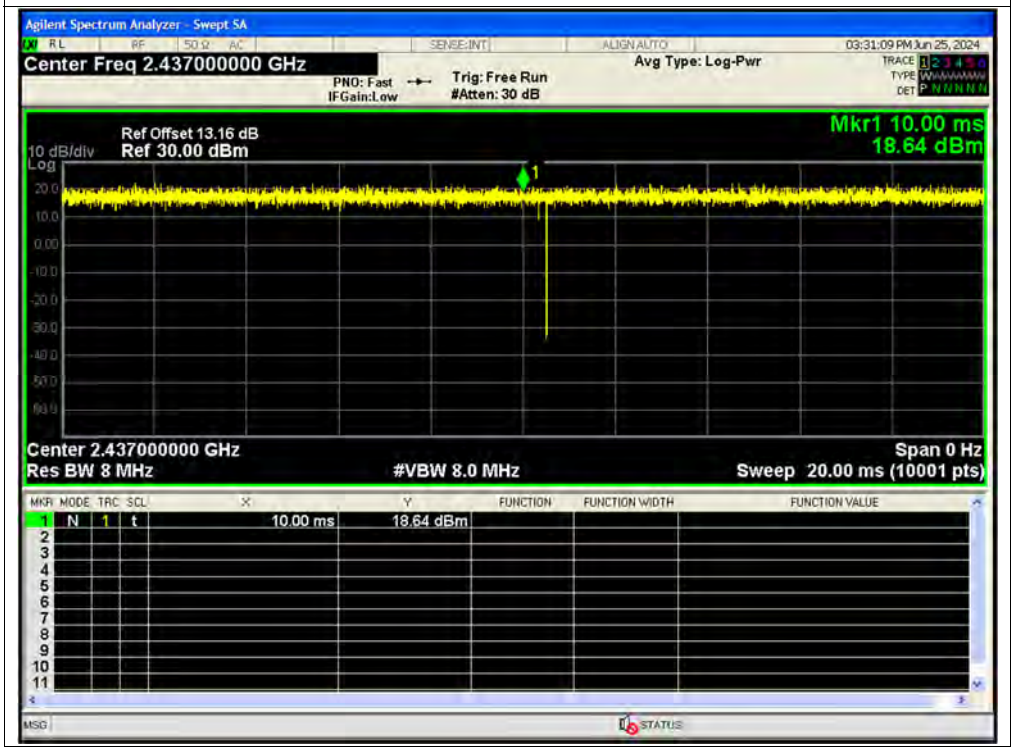
Duty Cycle NVNT g 2462MHz Ant1



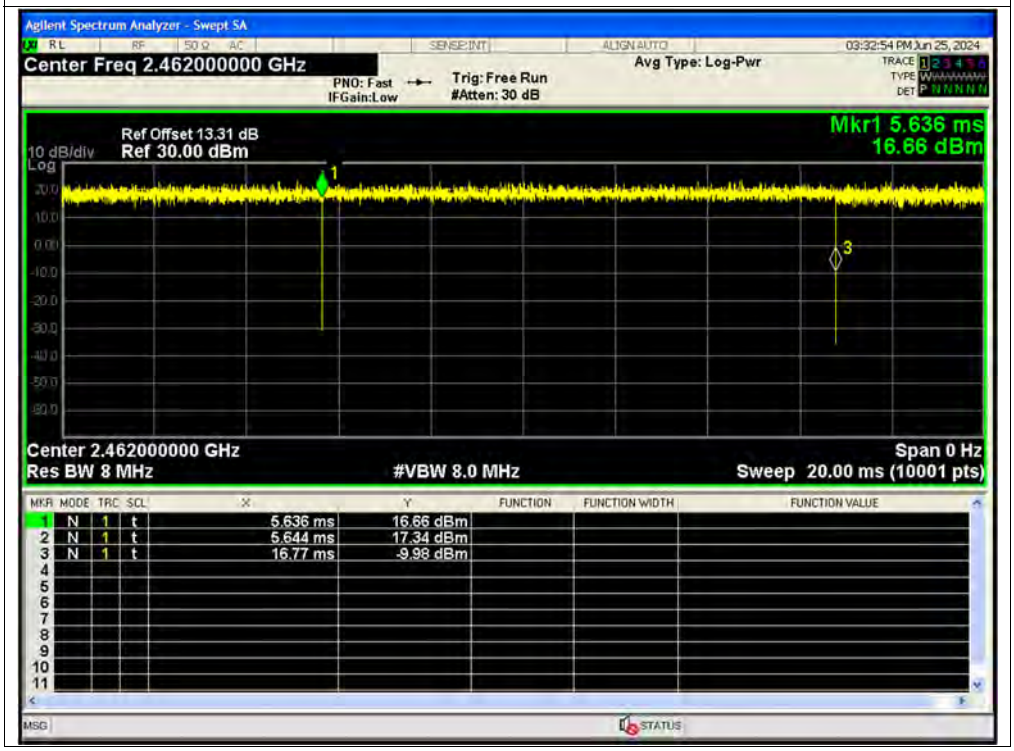
Duty Cycle NVNT n20 2412MHz Ant1



Duty Cycle NVNT n20 2437MHz Ant1



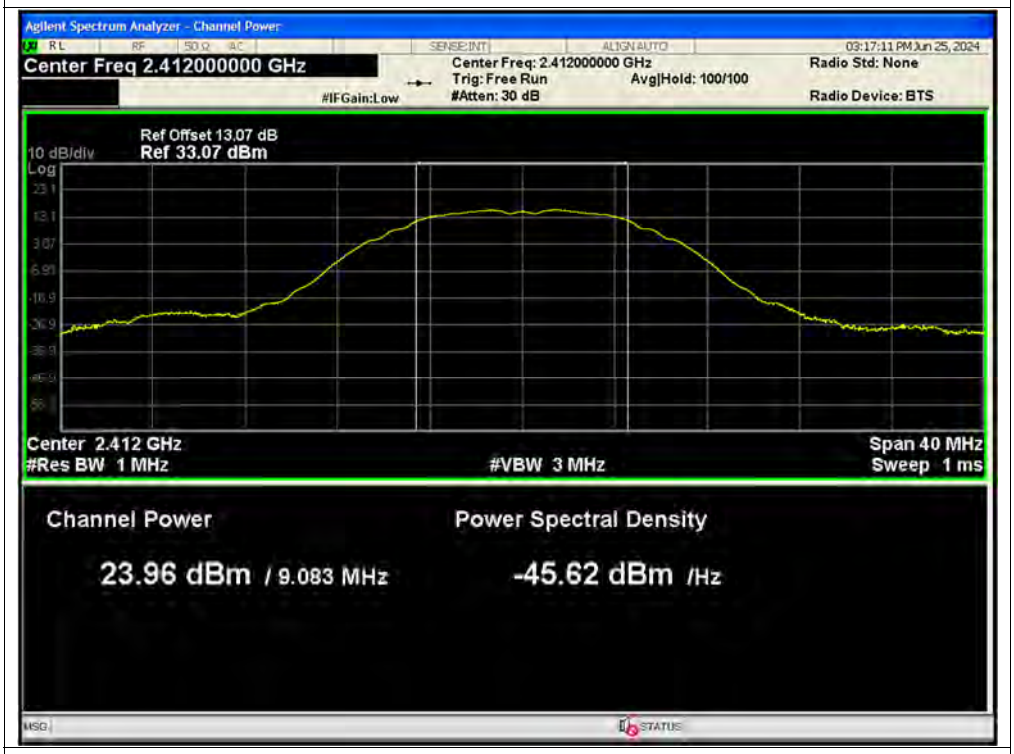
Duty Cycle NVNT n20 2462MHz Ant1



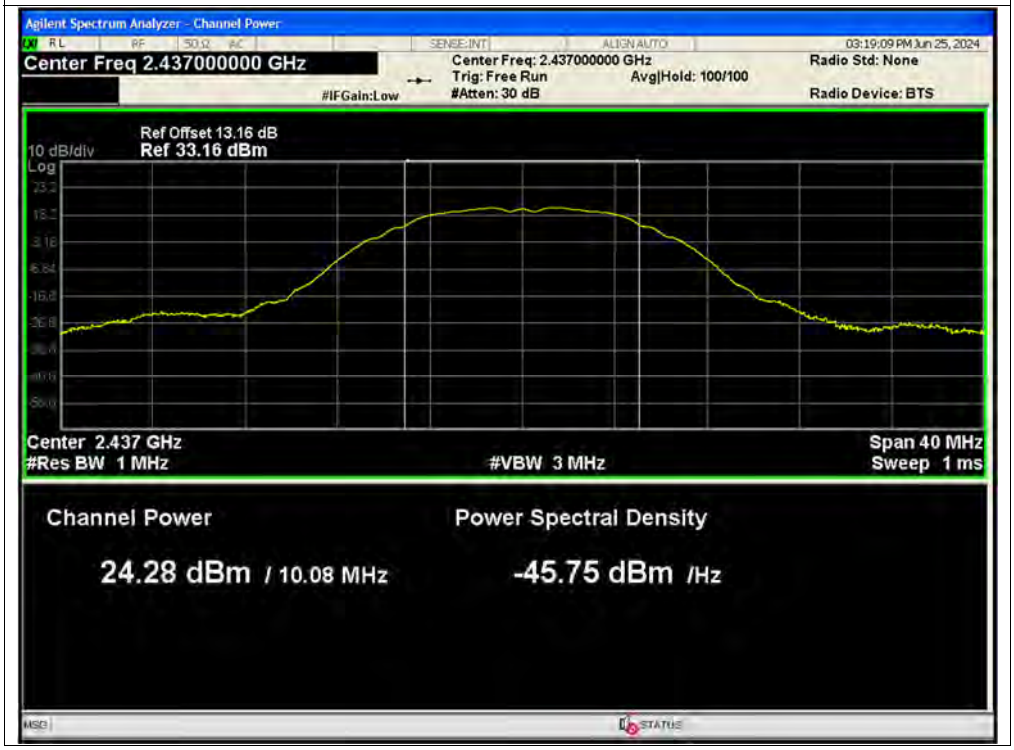
A.2. Maximum Peak Conducted Output Power

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	23.96	0	23.96	0.24889	30	Pass
NVNT	b	2437	Ant1	24.28	0	24.28	0.26792	30	Pass
NVNT	b	2462	Ant1	24.65	0	24.65	0.29174	30	Pass
NVNT	g	2412	Ant1	22.06	0	22.06	0.16069	30	Pass
NVNT	g	2437	Ant1	22.17	0	22.17	0.16482	30	Pass
NVNT	g	2462	Ant1	22.93	0	22.93	0.19634	30	Pass
NVNT	n20	2412	Ant1	21.98	0	21.98	0.15776	30	Pass
NVNT	n20	2437	Ant1	21.98	0	21.98	0.15776	30	Pass
NVNT	n20	2462	Ant1	22.97	0	22.97	0.19815	30	Pass

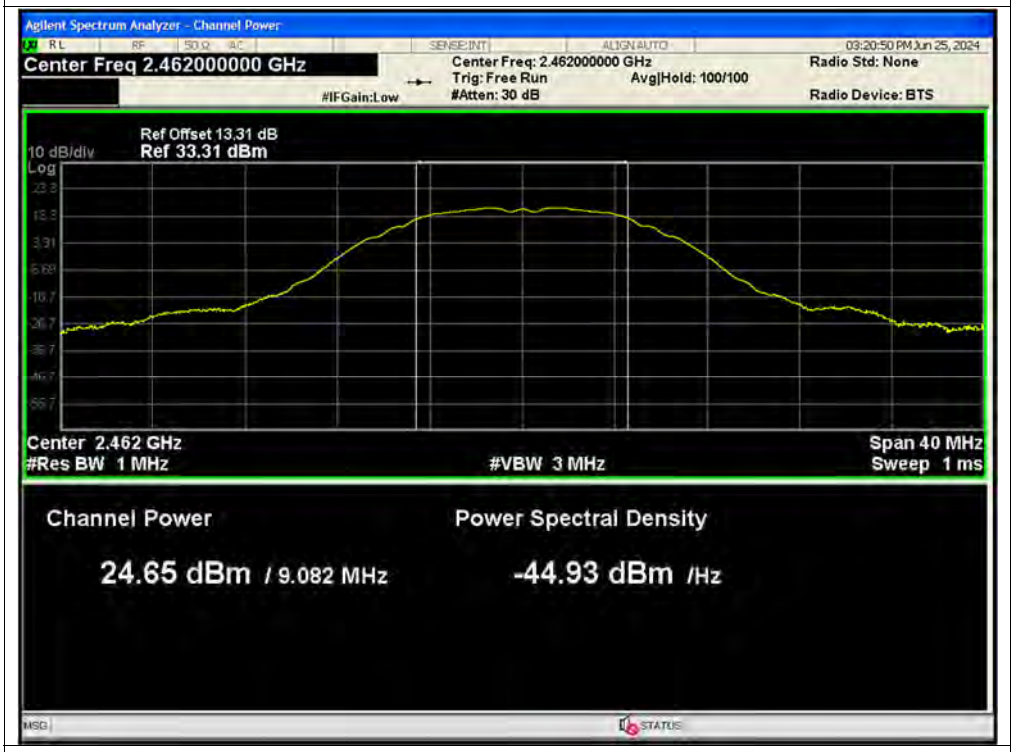
Test Graphs
Peak Power NVNT b 2412MHz Ant1



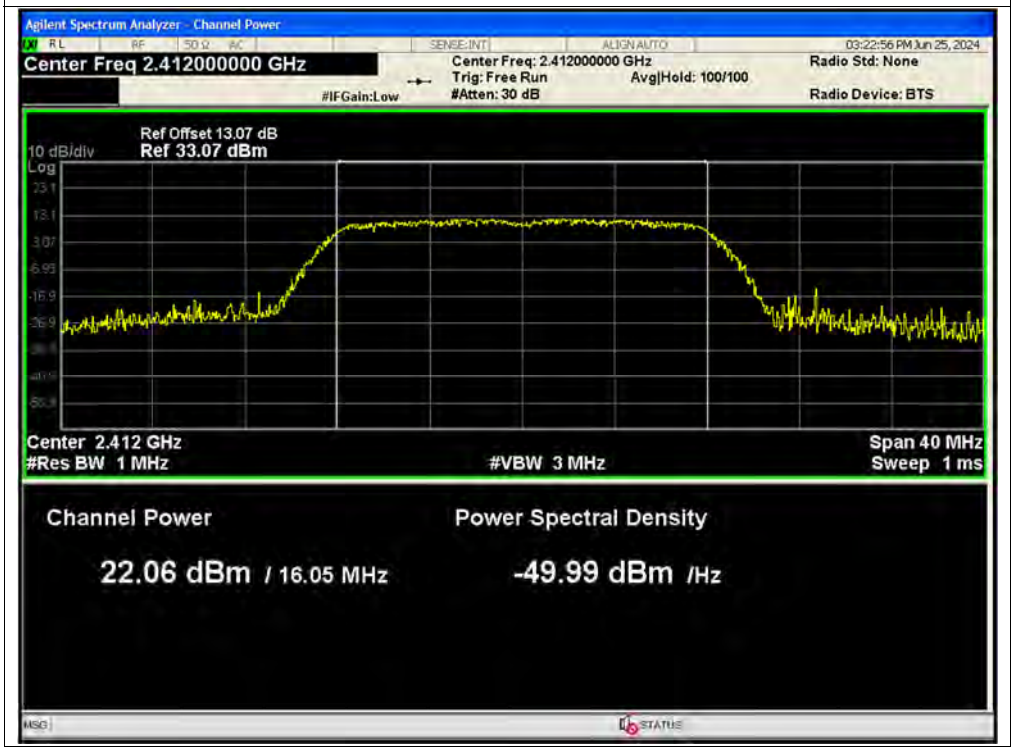
Peak Power NVNT b 2437MHz Ant1



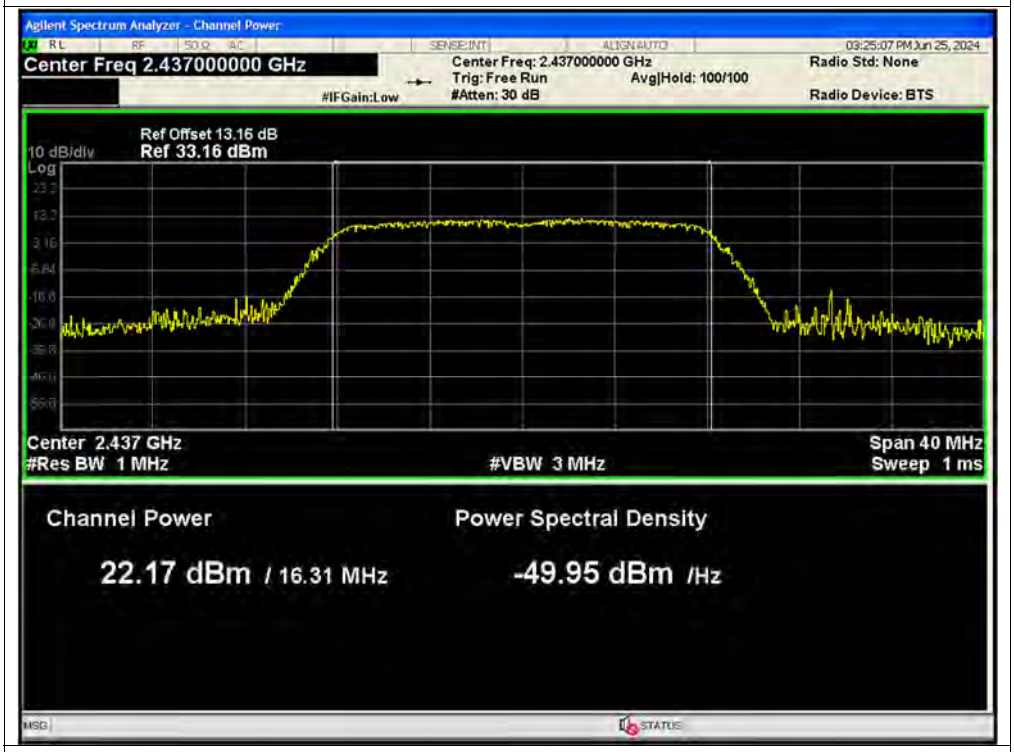
Peak Power NVNT b 2462MHz Ant1



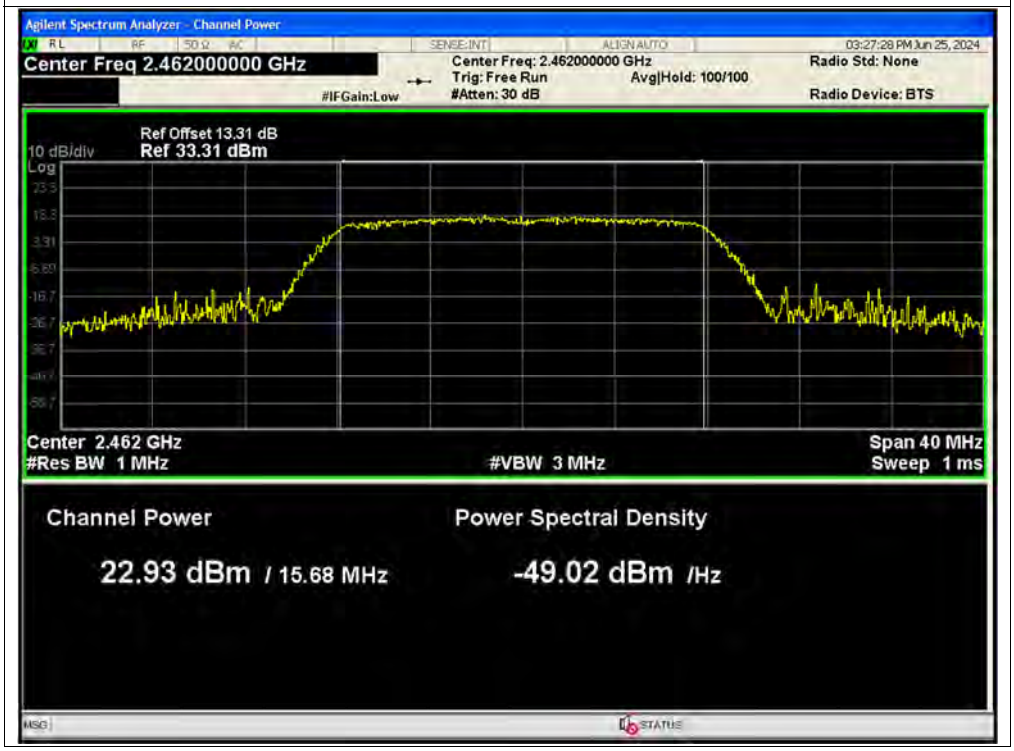
Peak Power NVNT g 2412MHz Ant1



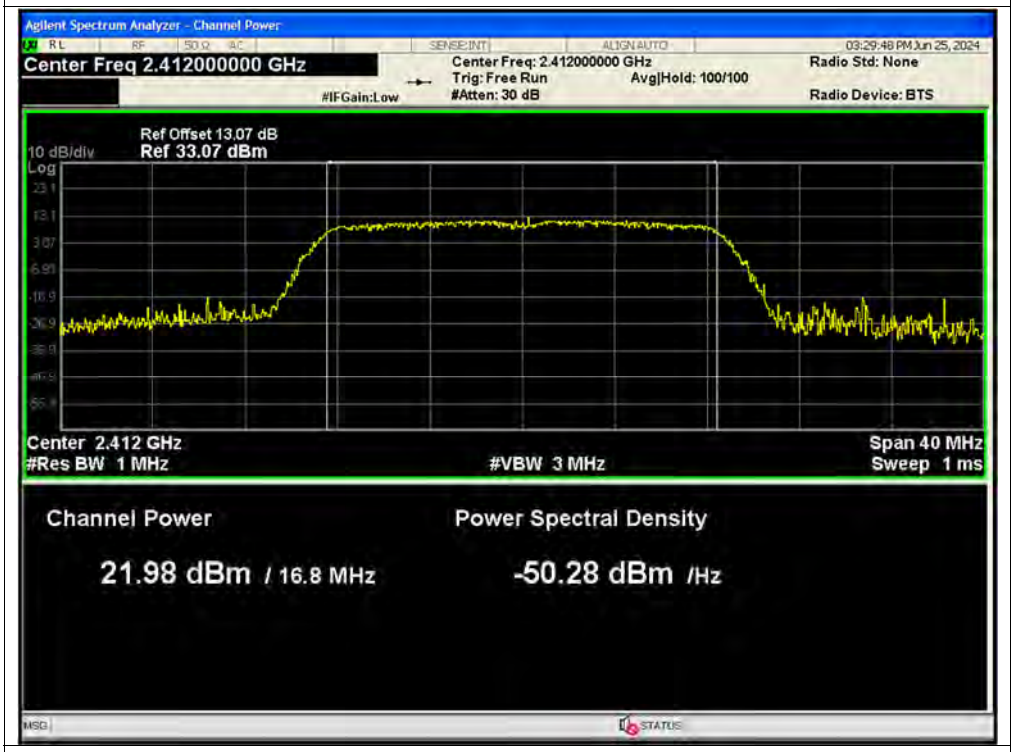
Peak Power NVNT g 2437MHz Ant1



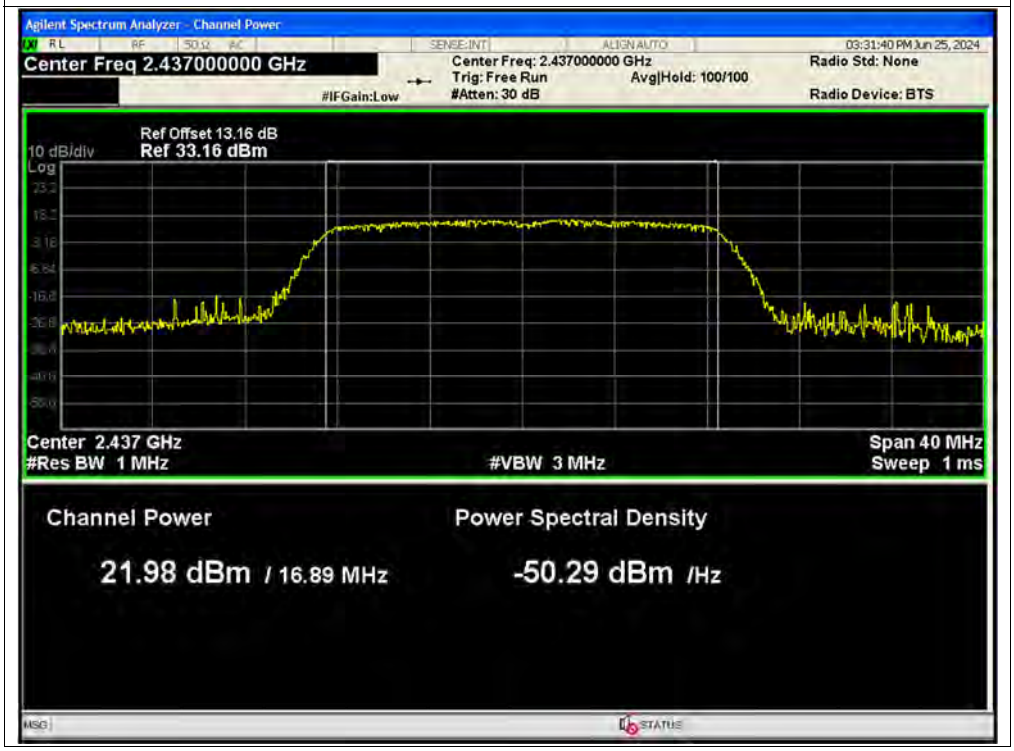
Peak Power NVNT g 2462MHz Ant1

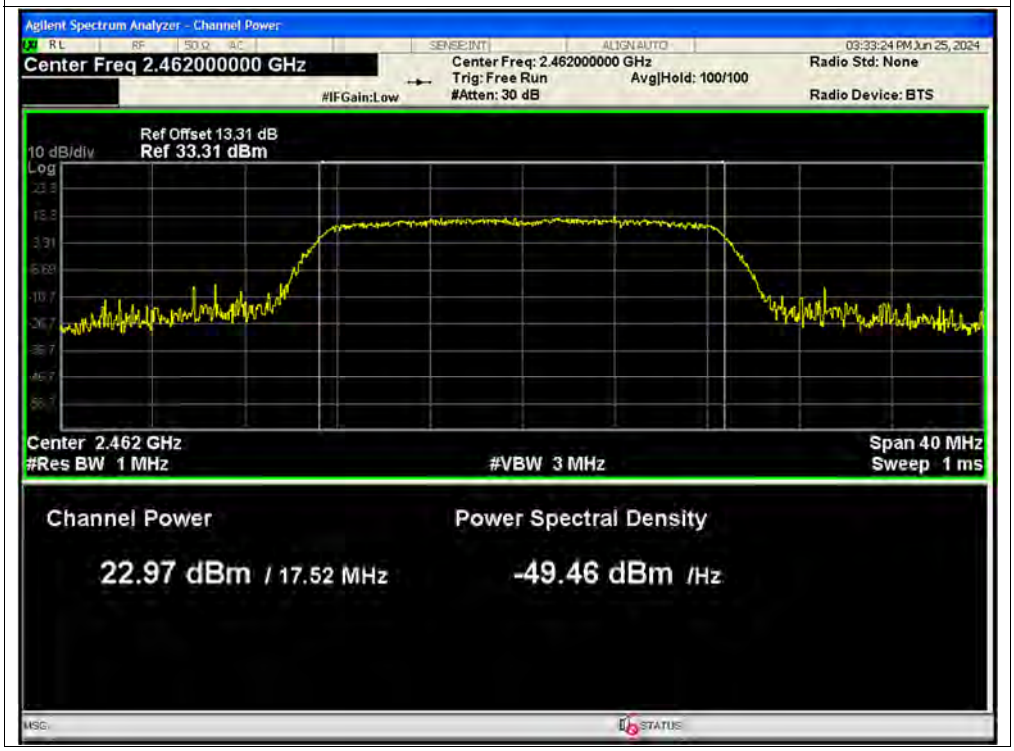


Peak Power NVNT n20 2412MHz Ant1



Peak Power NVNT n20 2437MHz Ant1

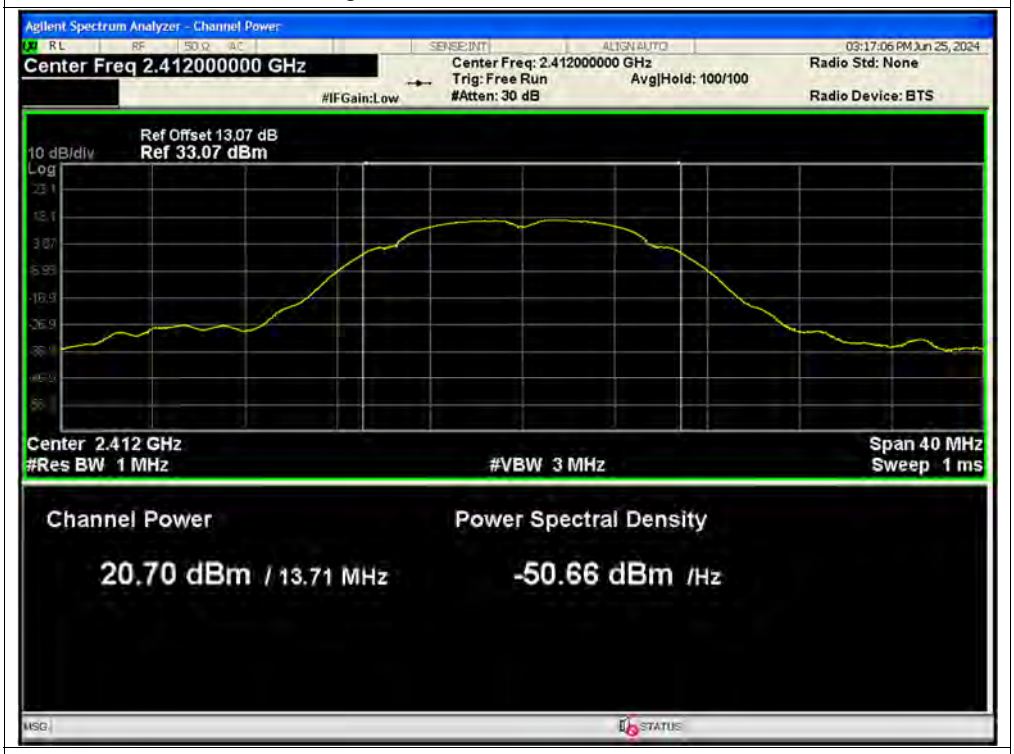


Peak Power NVNT n20 2462MHz Ant1


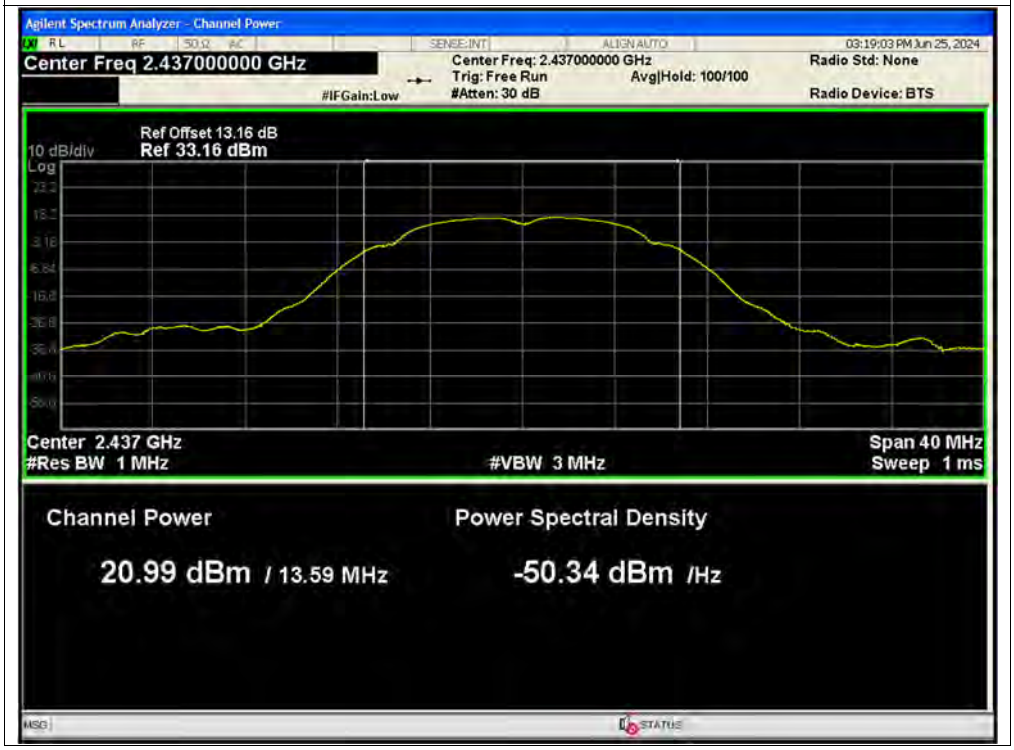
A.3. Maximum Average Conducted Output Power

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	20.7	0.58	21.28	0.13428	30	Pass
NVNT	b	2437	Ant1	20.99	0.58	21.57	0.14355	30	Pass
NVNT	b	2462	Ant1	21.7	0.58	22.28	0.16904	30	Pass
NVNT	g	2412	Ant1	14.88	0	14.88	0.03076	30	Pass
NVNT	g	2437	Ant1	14.91	0	14.91	0.03097	30	Pass
NVNT	g	2462	Ant1	15.77	0	15.77	0.03776	30	Pass
NVNT	n20	2412	Ant1	14.77	0	14.77	0.02999	30	Pass
NVNT	n20	2437	Ant1	14.8	0	14.8	0.0302	30	Pass
NVNT	n20	2462	Ant1	15.68	0	15.68	0.03698	30	Pass

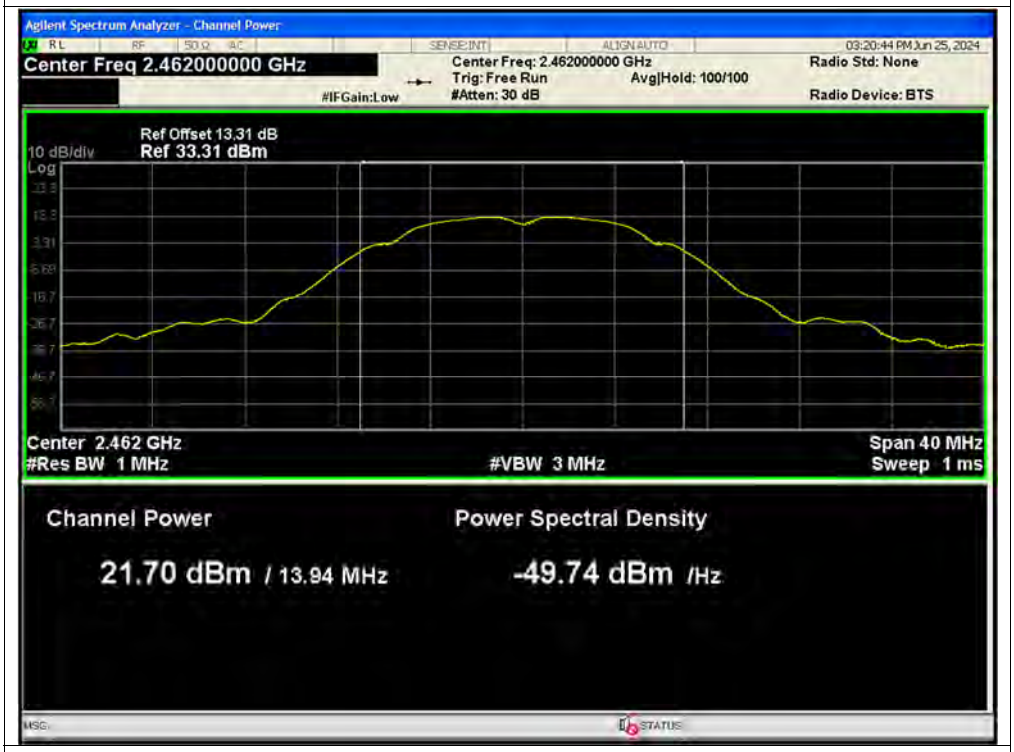
Test Graphs
Average Power NVNT b 2412MHz Ant1



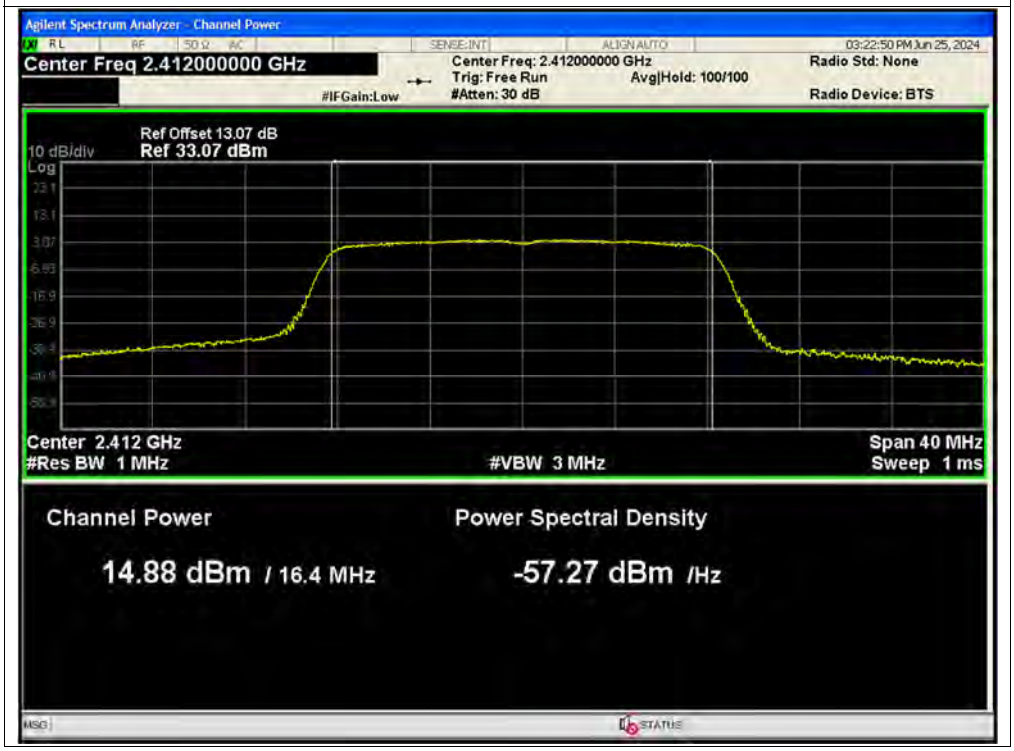
Average Power NVNT b 2437MHz Ant1



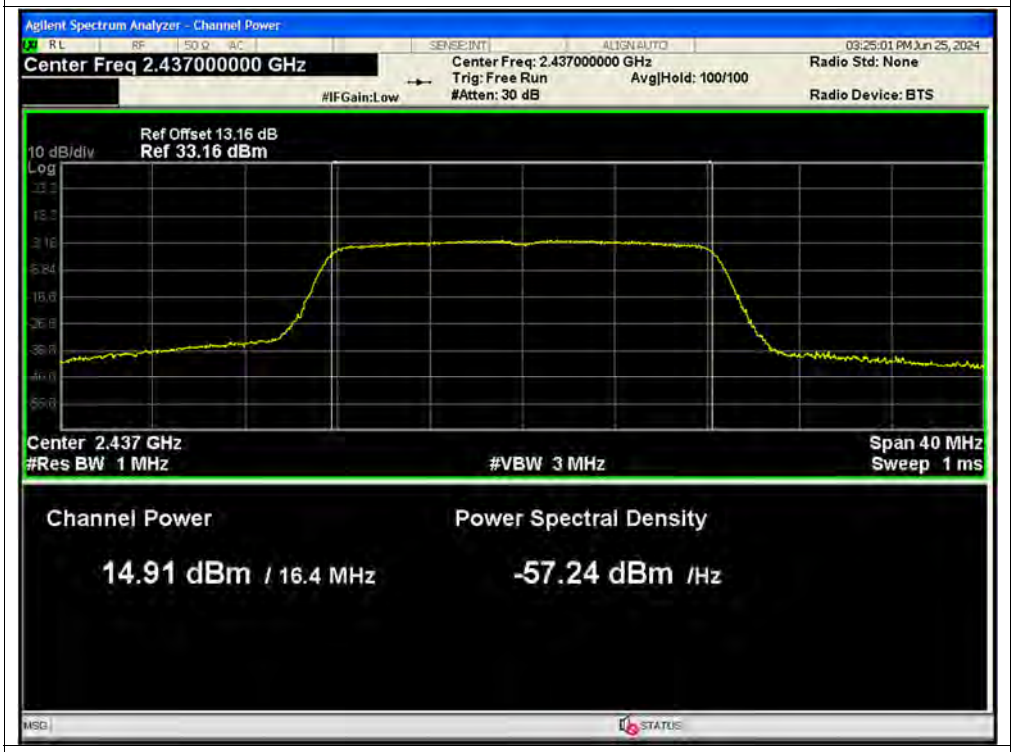
Average Power NVNT b 2462MHz Ant1



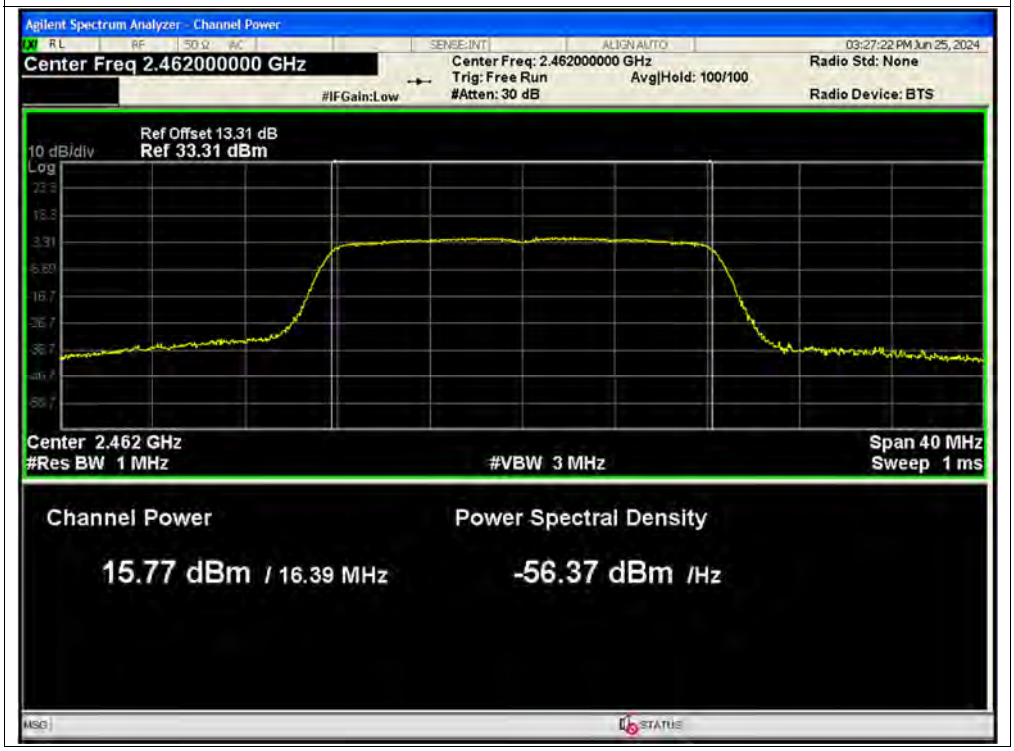
Average Power NVNT g 2412MHz Ant1



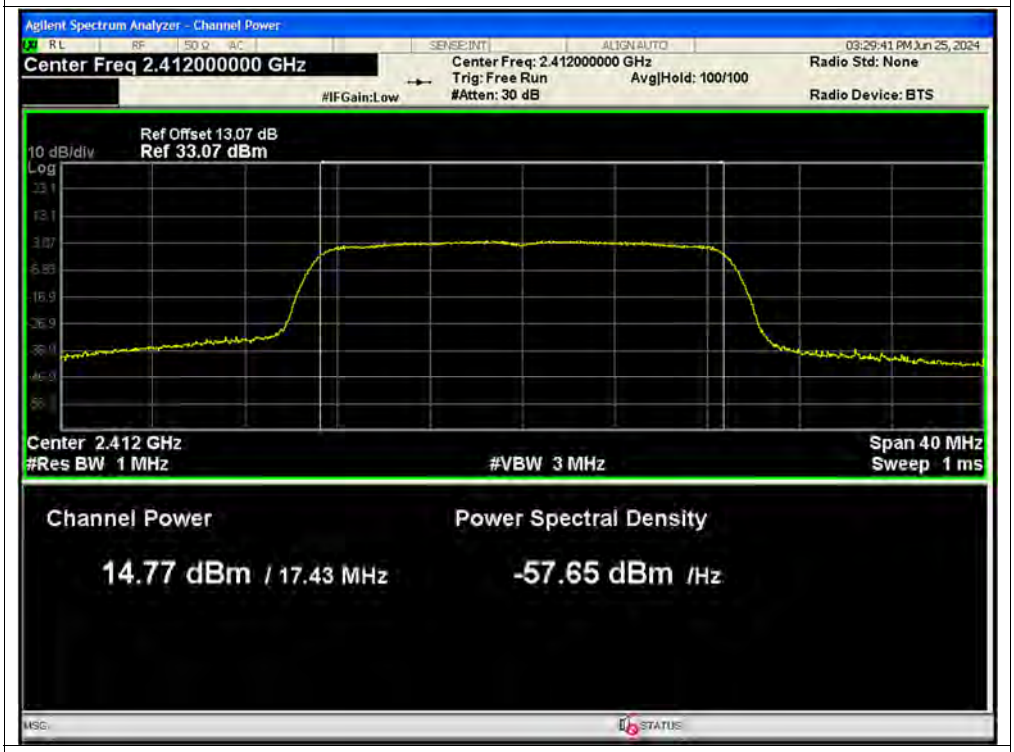
Average Power NVNT g 2437MHz Ant1



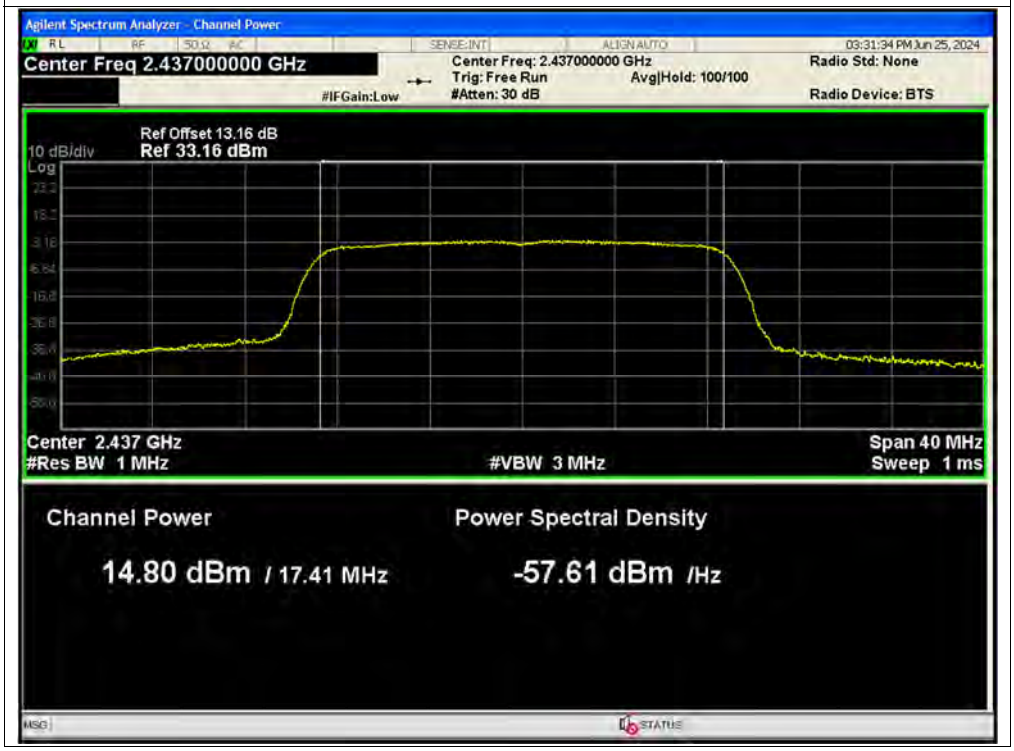
Average Power NVNT g 2462MHz Ant1

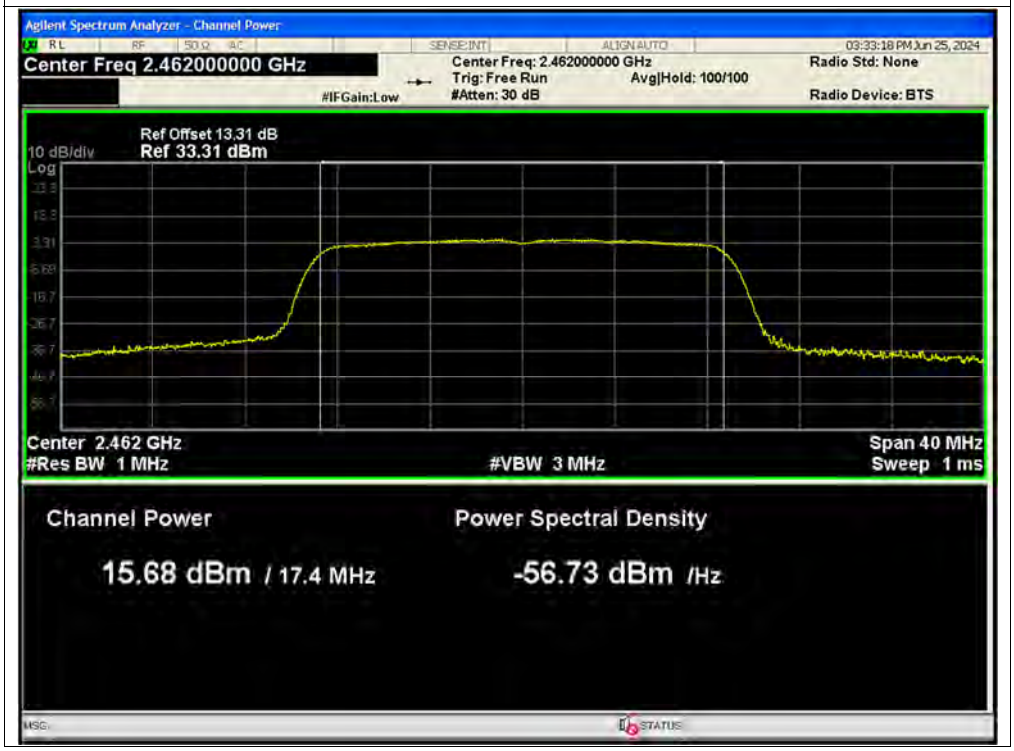


Average Power NVNT n20 2412MHz Ant1



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	9.083	0.5	Pass
NVNT	b	2437	Ant1	10.076	0.5	Pass
NVNT	b	2462	Ant1	9.082	0.5	Pass
NVNT	g	2412	Ant1	16.052	0.5	Pass
NVNT	g	2437	Ant1	16.312	0.5	Pass
NVNT	g	2462	Ant1	15.684	0.5	Pass
NVNT	n20	2412	Ant1	16.798	0.5	Pass
NVNT	n20	2437	Ant1	16.891	0.5	Pass
NVNT	n20	2462	Ant1	17.524	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

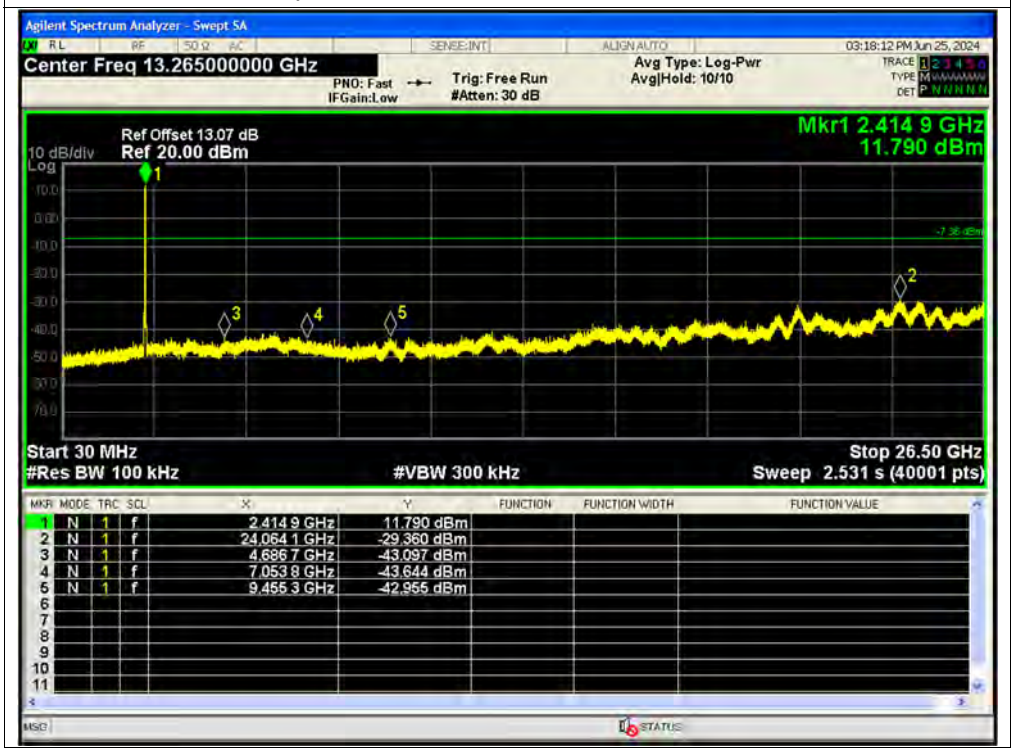
-6dB Bandwidth NVNT n20 2462MHz Ant1

A.5. Conducted Spurious Emissions

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-41.99	-20	Pass
NVNT	b	2437	Ant1	-41.63	-20	Pass
NVNT	b	2462	Ant1	-42.19	-20	Pass
NVNT	g	2412	Ant1	-31.88	-20	Pass
NVNT	g	2437	Ant1	-31.42	-20	Pass
NVNT	g	2462	Ant1	-32.27	-20	Pass
NVNT	n20	2412	Ant1	-31.9	-20	Pass
NVNT	n20	2437	Ant1	-30.84	-20	Pass
NVNT	n20	2462	Ant1	-31.41	-20	Pass

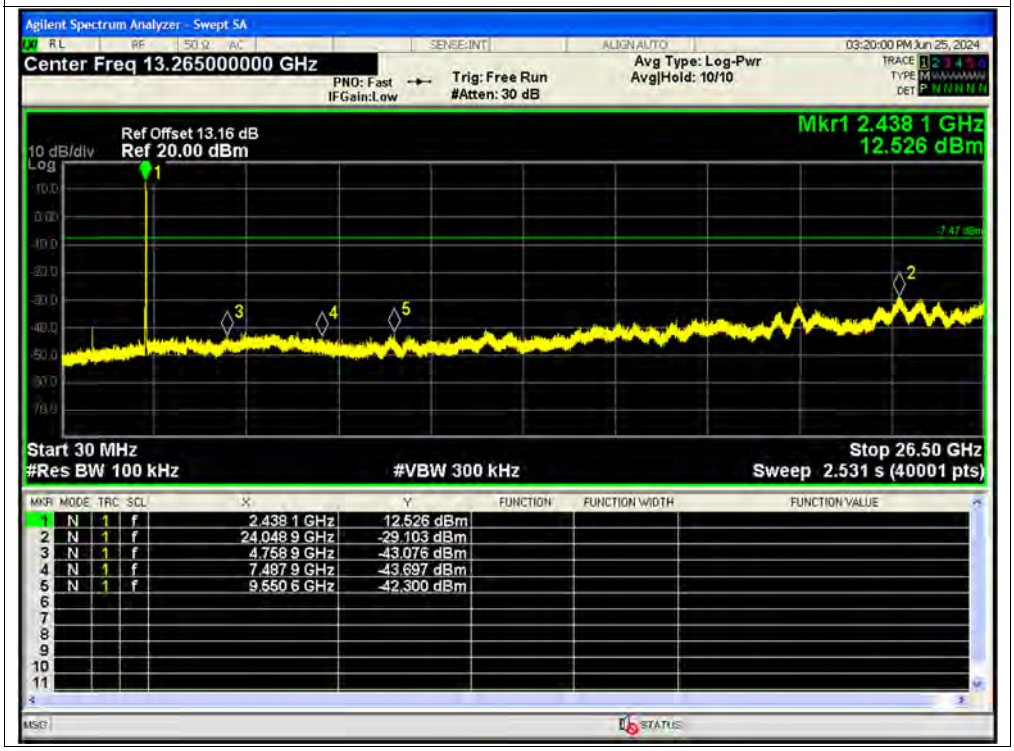
Test Graphs
Tx. Spurious NVNT b 2412MHz Ant1 Ref

Tx. Spurious NVNT b 2412MHz Ant1 Emission



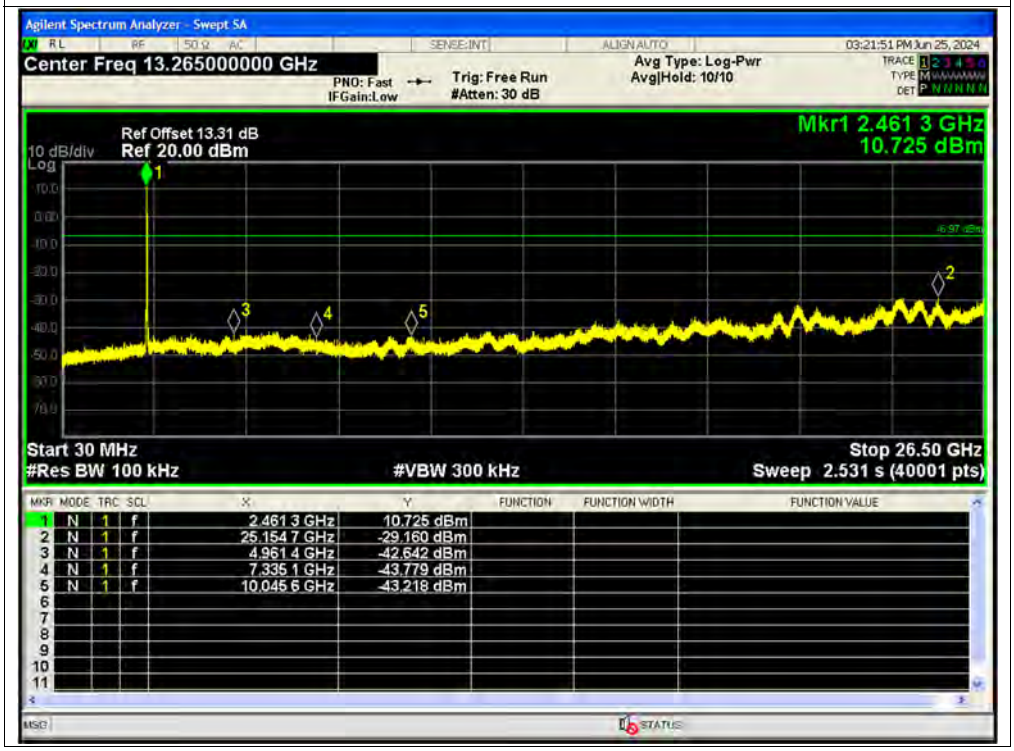
Tx. Spurious NVNT b 2437MHz Ant1 Ref

Tx. Spurious NVNT b 2437MHz Ant1 Emission



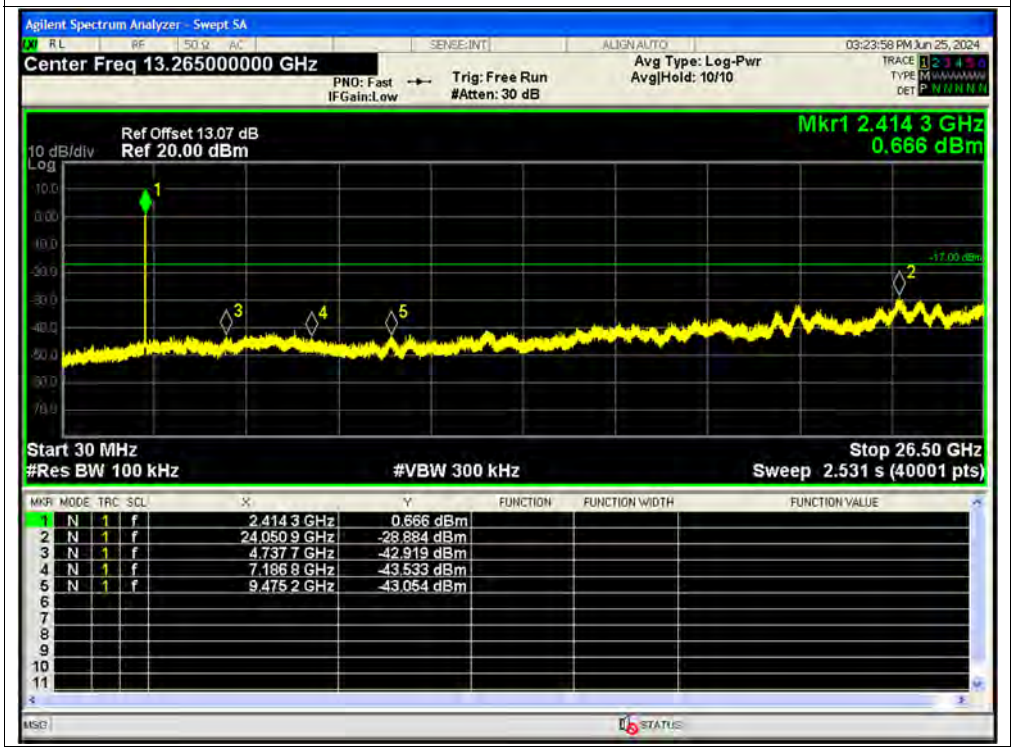
Tx. Spurious NVNT b 2462MHz Ant1 Ref

Tx. Spurious NVNT b 2462MHz Ant1 Emission



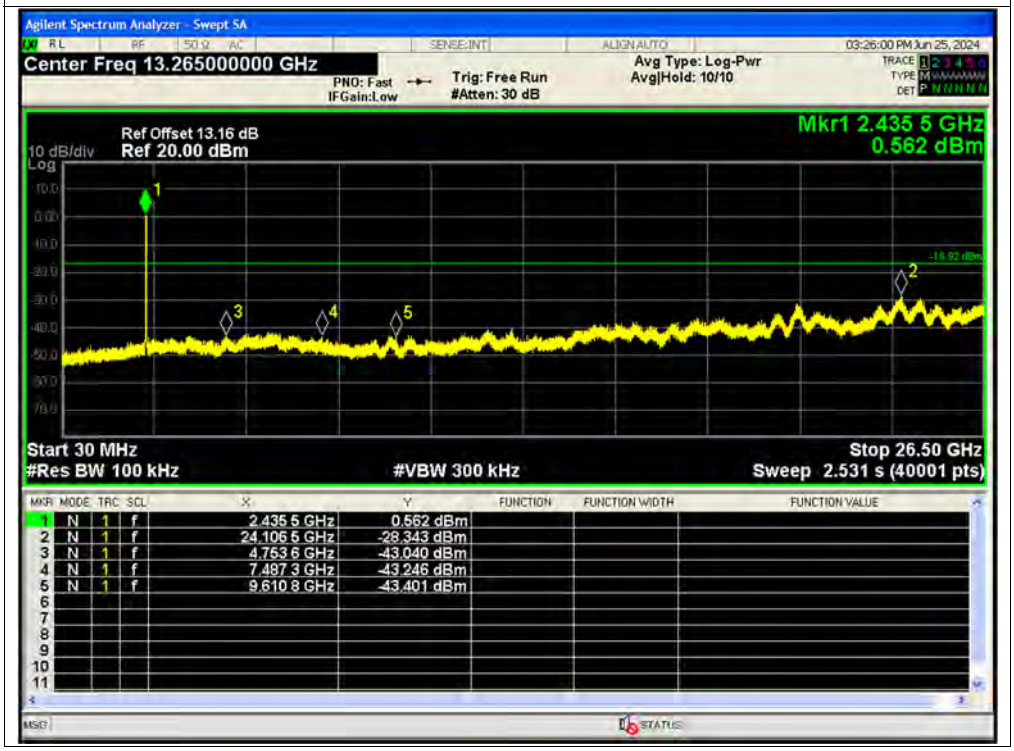
Tx. Spurious NVNT g 2412MHz Ant1 Ref

Tx. Spurious NVNT g 2412MHz Ant1 Emission



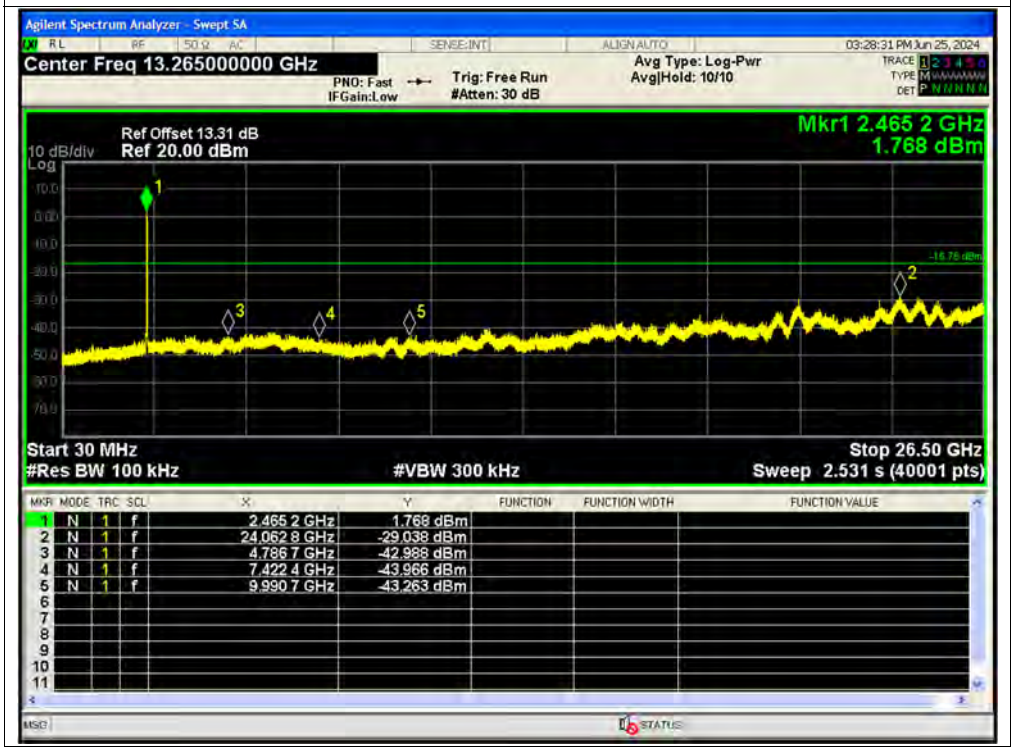
Tx. Spurious NVNT g 2437MHz Ant1 Ref

Tx. Spurious NVNT g 2437MHz Ant1 Emission



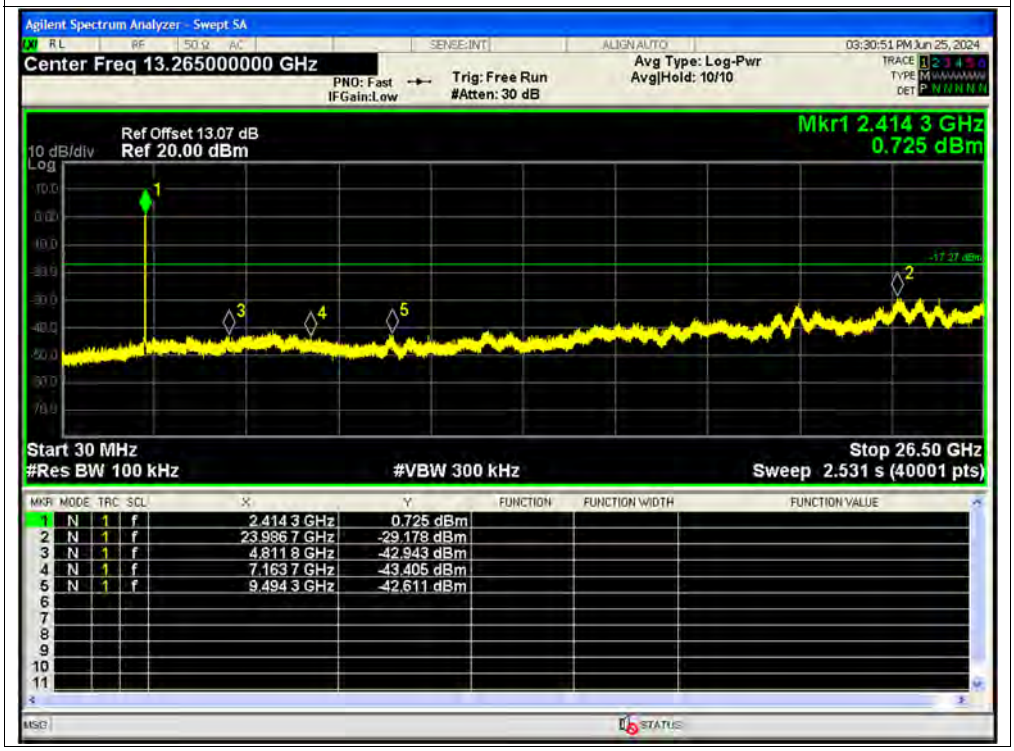
Tx. Spurious NVNT g 2462MHz Ant1 Ref

Tx. Spurious NVNT g 2462MHz Ant1 Emission



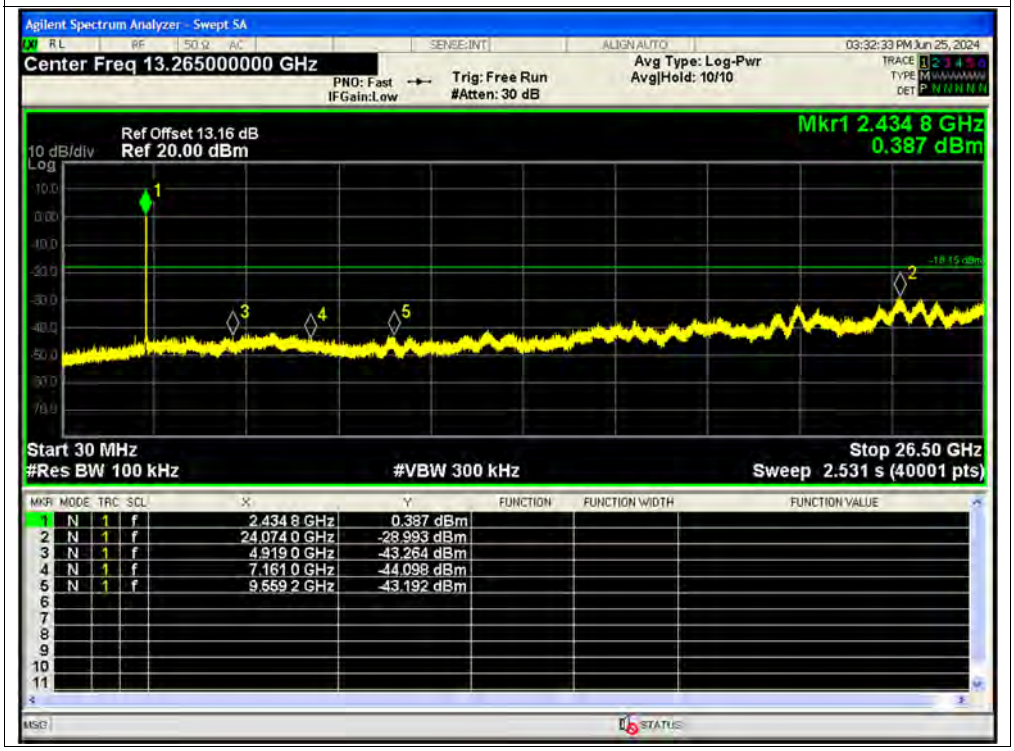
Tx. Spurious NVNT n20 2412MHz Ant1 Ref

Tx. Spurious NVNT n20 2412MHz Ant1 Emission



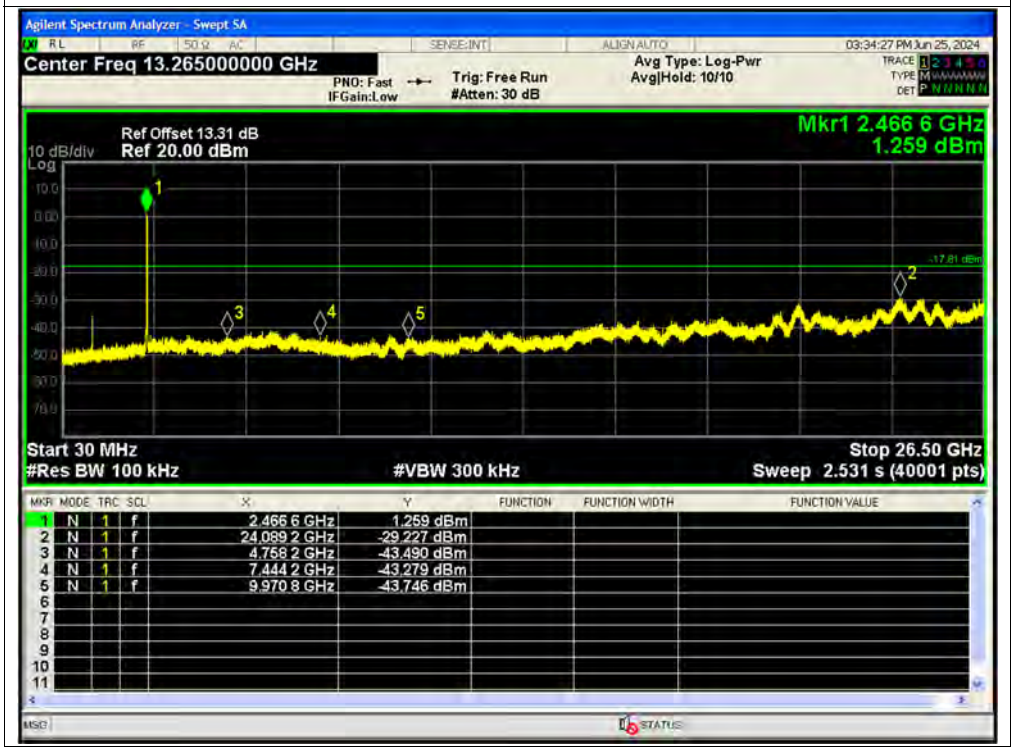
Tx. Spurious NVNT n20 2437MHz Ant1 Ref

Tx. Spurious NVNT n20 2437MHz Ant1 Emission



Tx. Spurious NVNT n20 2462MHz Ant1 Ref

Tx. Spurious NVNT n20 2462MHz Ant1 Emission

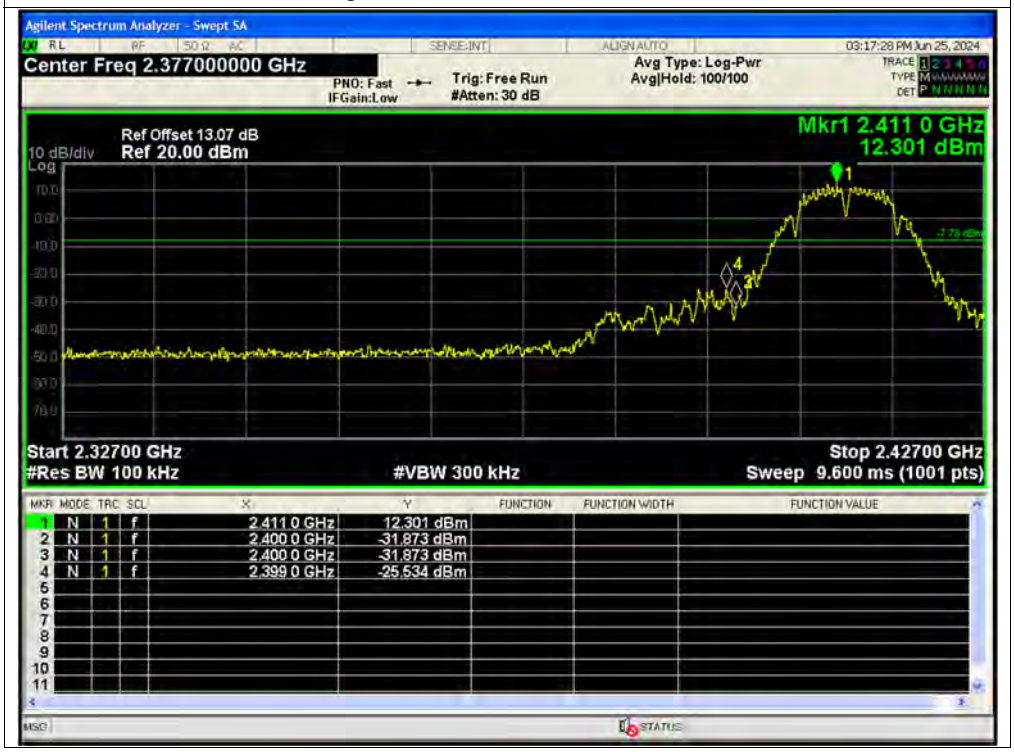


A.6. Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-37.75	-20	Pass
NVNT	b	2462	Ant1	-41.78	-20	Pass
NVNT	g	2412	Ant1	-32.84	-20	Pass
NVNT	g	2462	Ant1	-44.68	-20	Pass
NVNT	n20	2412	Ant1	-36	-20	Pass
NVNT	n20	2462	Ant1	-42.78	-20	Pass

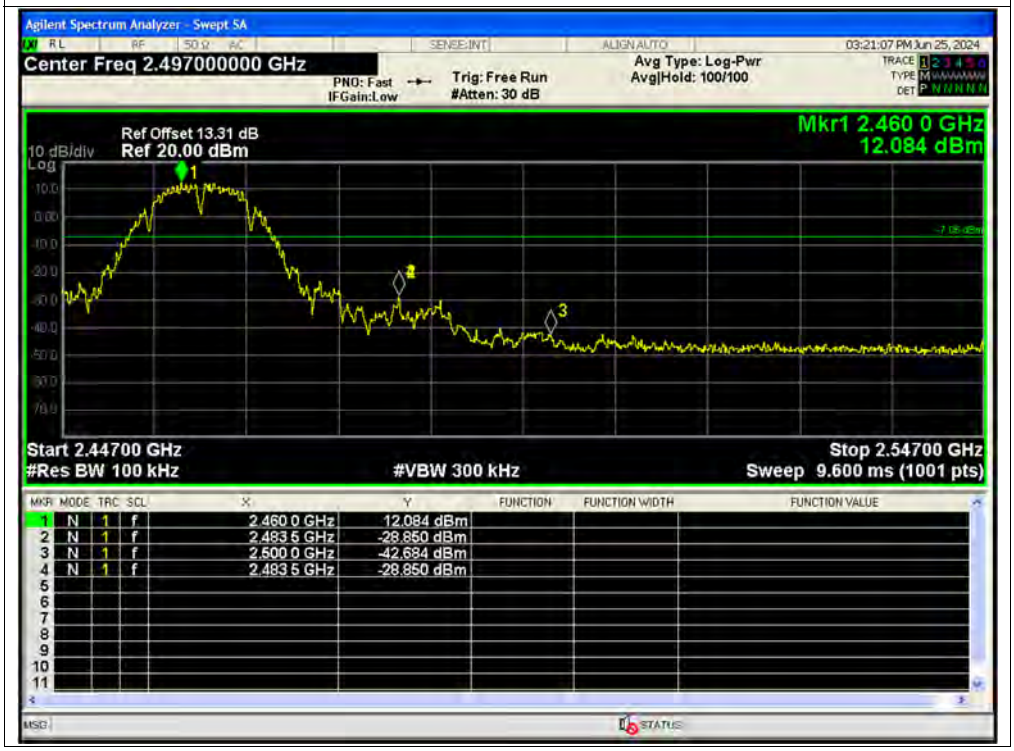
Test Graphs
Band Edge NVNT b 2412MHz Ant1 Ref

Band Edge NVNT b 2412MHz Ant1 Emission



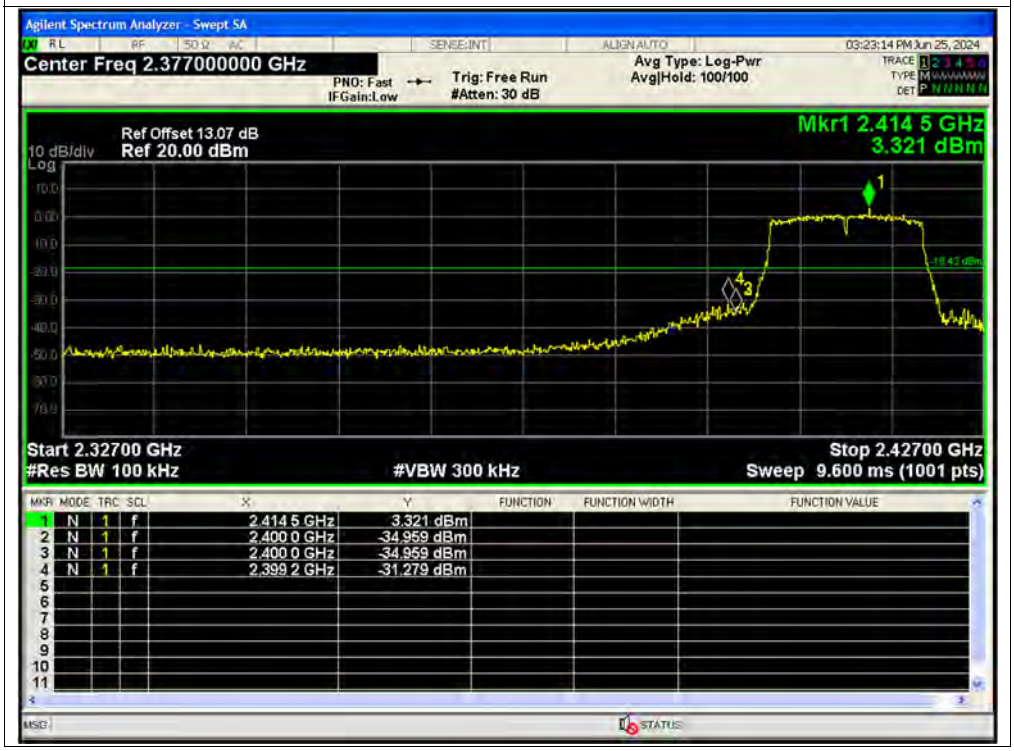
Band Edge NVNT b 2462MHz Ant1 Ref

Band Edge NVNT b 2462MHz Ant1 Emission



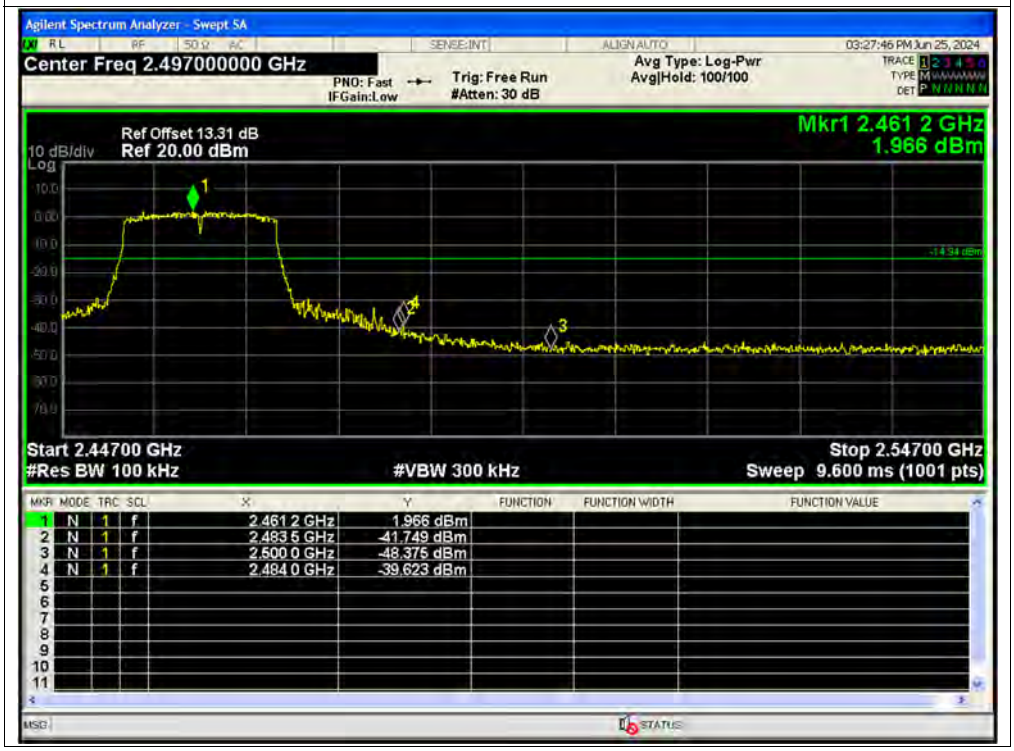
Band Edge NVNT g 2412MHz Ant1 Ref

Band Edge NVNT g 2412MHz Ant1 Emission



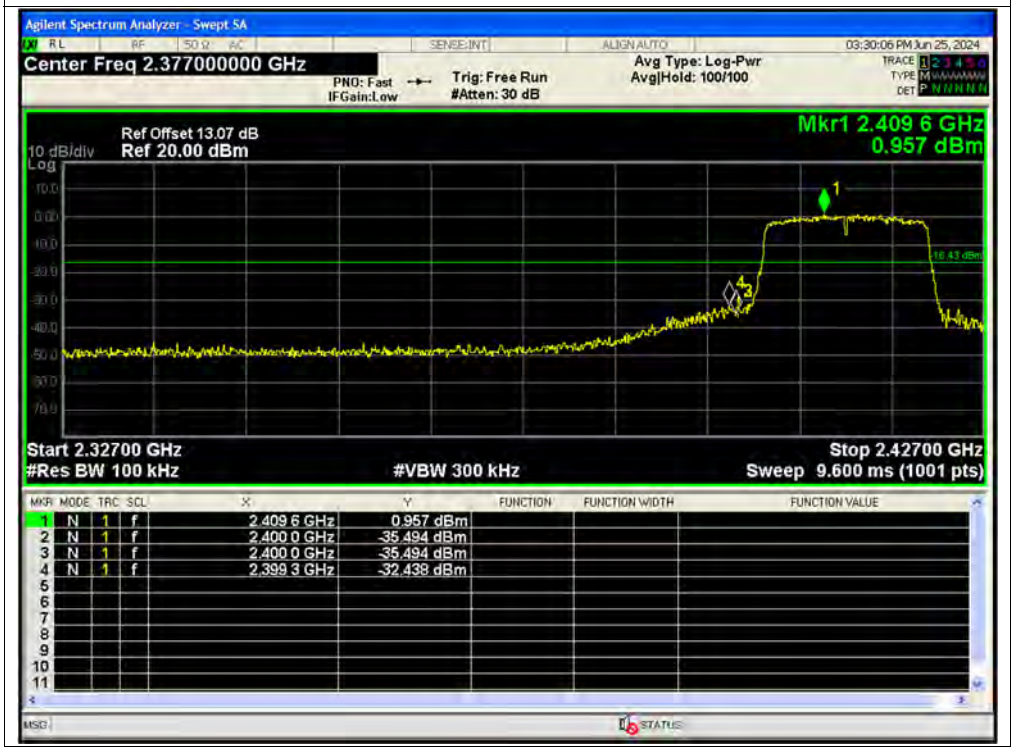
Band Edge NVNT g 2462MHz Ant1 Ref

Band Edge NVNT g 2462MHz Ant1 Emission

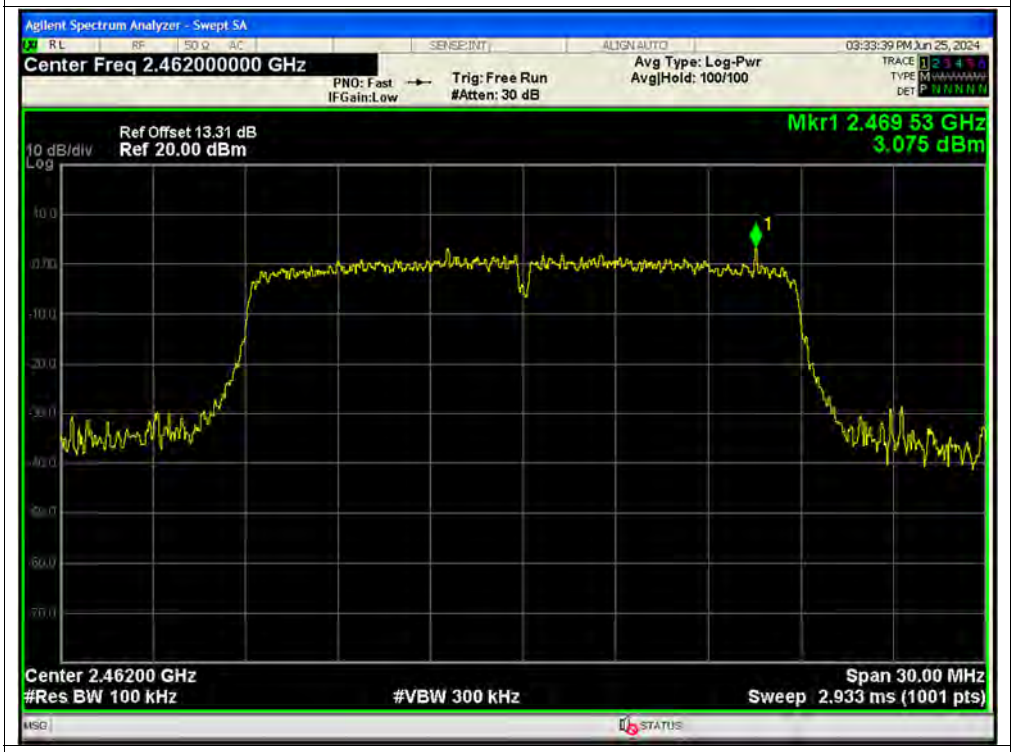


Band Edge NVNT n20 2412MHz Ant1 Ref

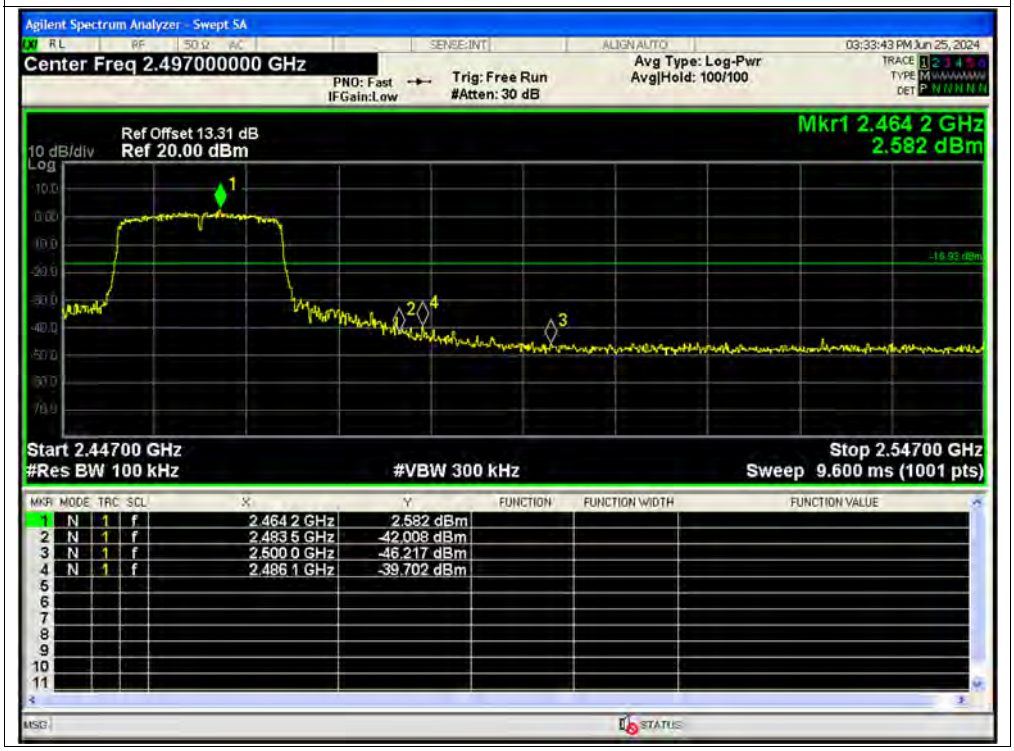
Band Edge NVNT n20 2412MHz Ant1 Emission



Band Edge NVNT n20 2462MHz Ant1 Ref



Band Edge NVNT n20 2462MHz Ant1 Emission



A.7. Power Spectral Density

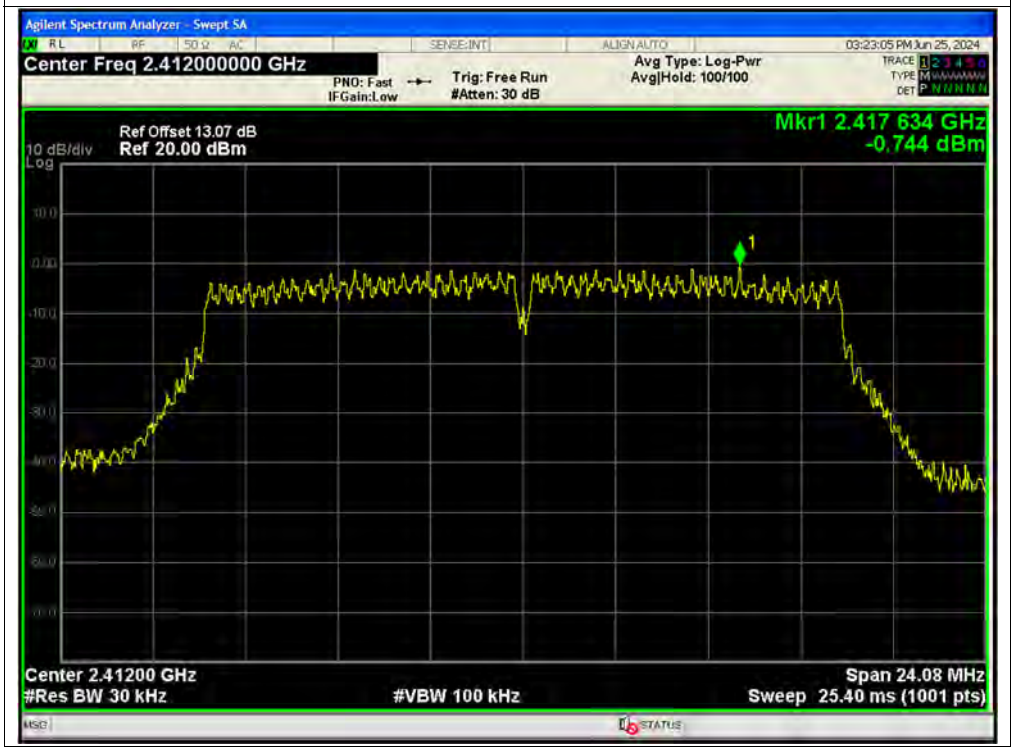
Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Duty Factor (dB)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	b	2412	Ant1	2.41	0	2.41	8	Pass
NVNT	b	2437	Ant1	2.34	0	2.34	8	Pass
NVNT	b	2462	Ant1	2.54	0	2.54	8	Pass
NVNT	g	2412	Ant1	-10.74	0	-10.74	8	Pass
NVNT	g	2437	Ant1	-10.71	0	-10.71	8	Pass
NVNT	g	2462	Ant1	-9.82	0	-9.82	8	Pass
NVNT	n20	2412	Ant1	-10.91	0	-10.91	8	Pass
NVNT	n20	2437	Ant1	-10.86	0	-10.86	8	Pass
NVNT	n20	2462	Ant1	-9.49	0	-9.49	8	Pass

Test Graphs
PSD NVNT b 2412MHz Ant1

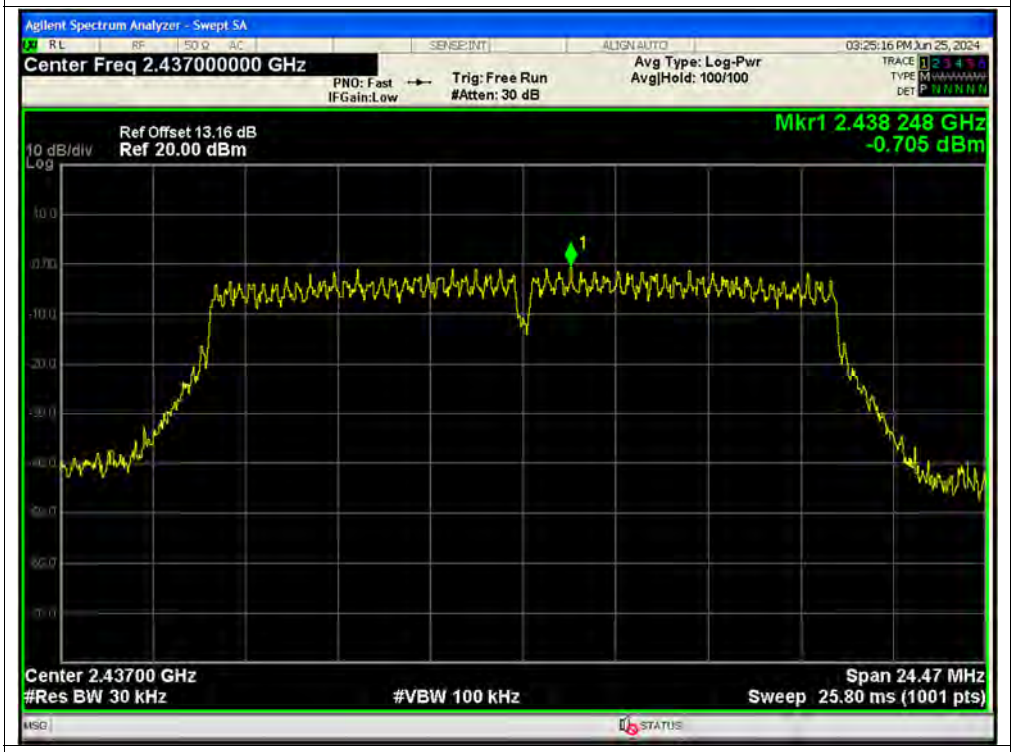
PSD NVNT b 2437MHz Ant1

PSD NVNT b 2462MHz Ant1

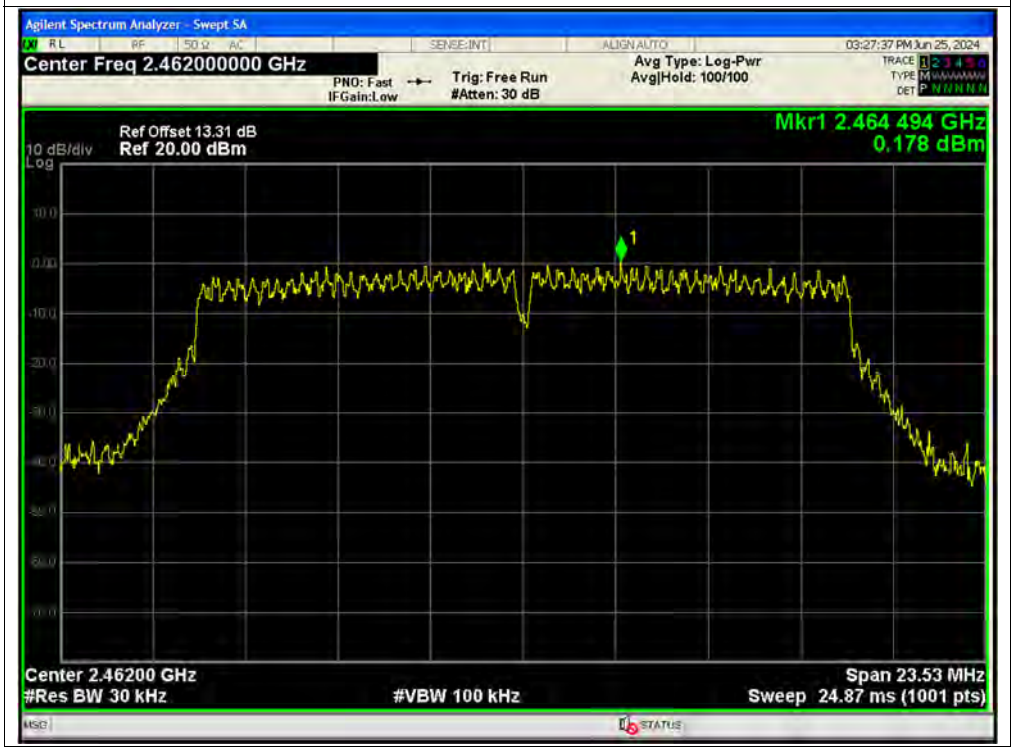
PSD NVNT g 2412MHz Ant1



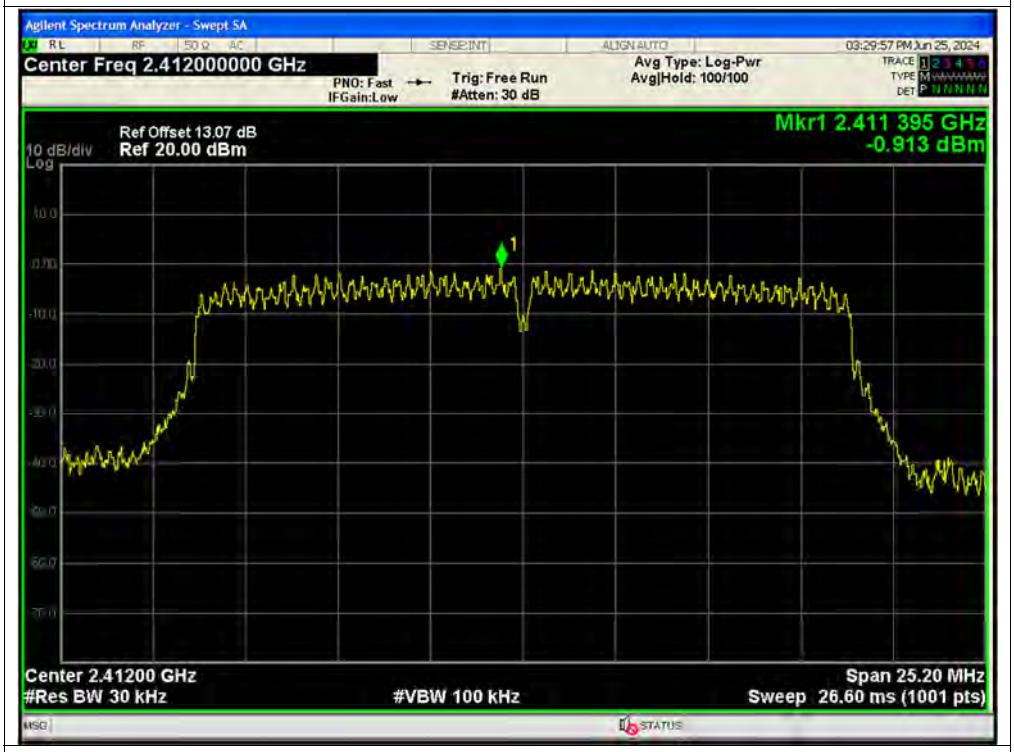
PSD NVNT g 2437MHz Ant1



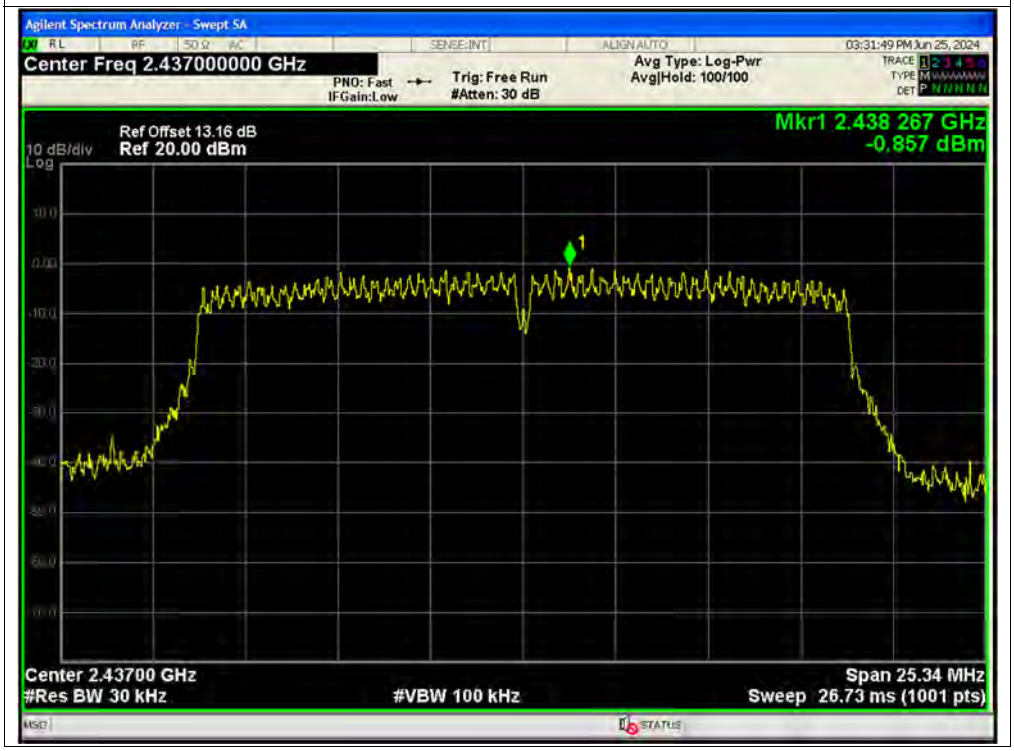
PSD NVNT g 2462MHz Ant1



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 + USB cable + PC + WIFI TX

Test voltage: AC 120V/60Hz

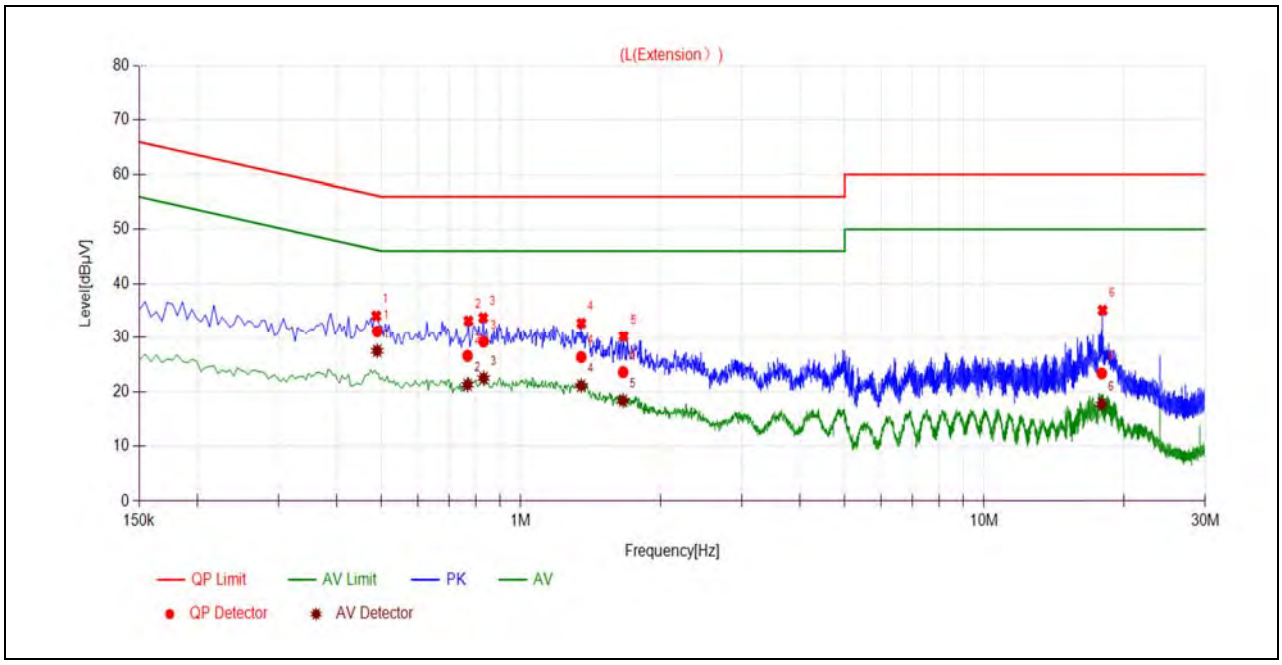
The measurement results are obtained as below:

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

U_R: Receiver Reading

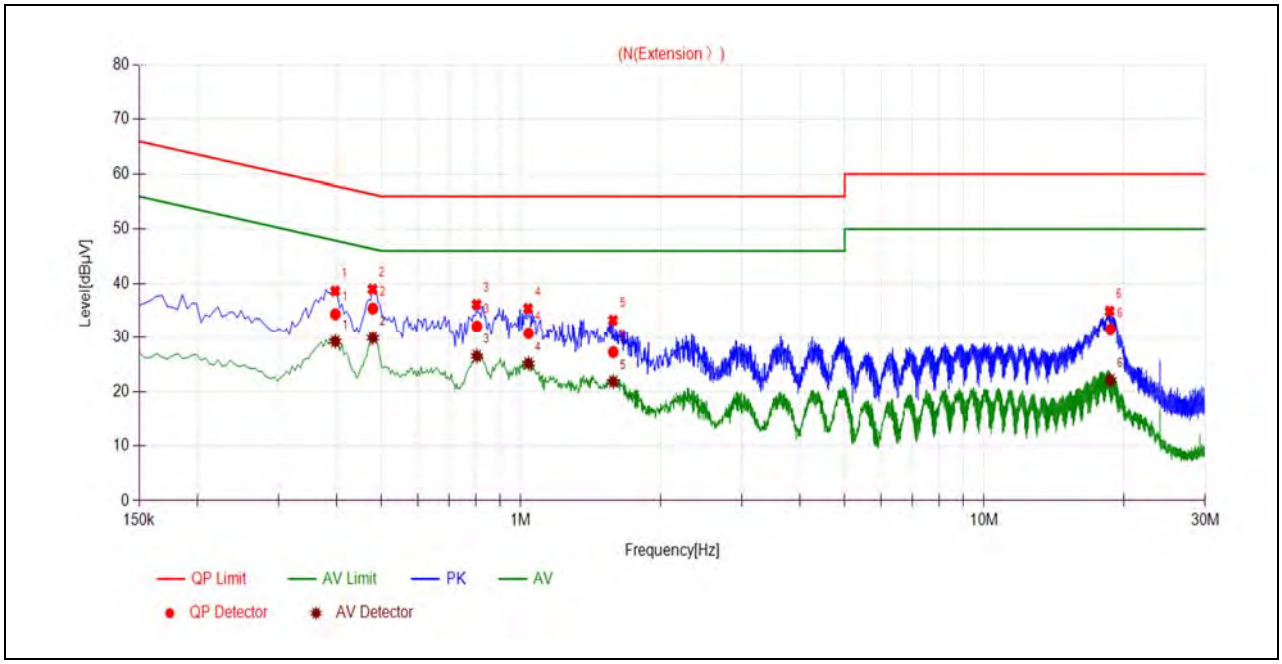
A_{Factor}: Voltage division factor of LISN

B. Test Plot:



(L Phase)

No.	Fre. (MHz)	Emission Level (dBµV)		Limit (dBµV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.4896	31.13	27.50	56.18	46.18	Line	PASS
2	0.7672	26.59	21.24	56.00	46.00		PASS
3	0.8310	29.21	22.48	56.00	46.00		PASS
4	1.3497	26.35	21.10	56.00	46.00		PASS
5	1.6621	23.57	18.34	56.00	46.00		PASS
6	17.9325	23.35	17.69	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	0.3977	34.37	29.23	57.90	47.90	Neutral	PASS
2	0.4792	35.40	29.92	56.35	46.35		PASS
3	0.8036	32.10	26.54	56.00	46.00		PASS
4	1.0389	30.79	25.16	56.00	46.00		PASS
5	1.5831	27.27	21.79	56.00	46.00		PASS
6	18.7208	31.50	22.10	60.00	50.00		PASS

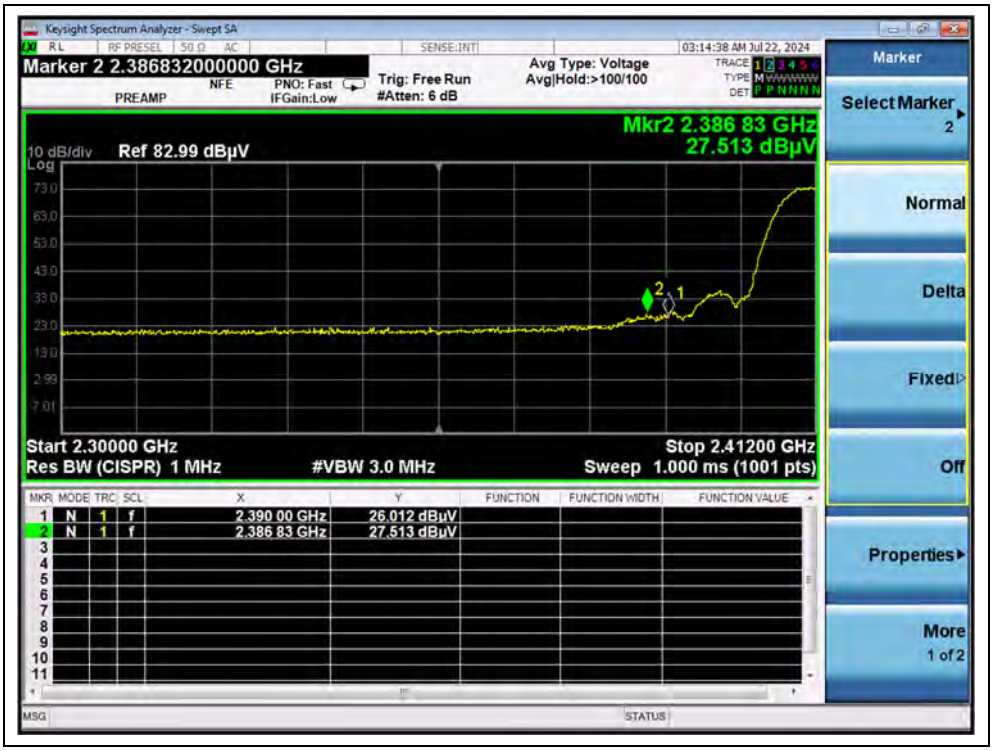
A.9. Restricted Frequency Bands

The lowest and highest channels are tested to verify the Restricted Frequency Bands.
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

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

802.11b Mode

Channel	Frequency (MHz)	Detector	Receiver Reading U_R (dBμV)	A_T (dB)	A_{Factor} (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV						
1	2386.83	PK	27.51	5.78	27.50	60.79	74	PASS
1	2387.28	AV	18.88	5.78	27.50	52.16	54	PASS
11	2487.46	PK	28.33	5.78	27.50	61.61	74	PASS
11	2487.65	AV	19.13	5.78	27.50	52.41	54	PASS



(PEAK, Channel 1, 802.11b)

(AVERAGE, Channel 1, 802.11b)

(PEAK, Channel 11, 802.11b)

(AVERAGE, Channel 11, 802.11b)

802.11g Mode

Channel	Frequency (MHz)	Detector	Receiver Reading U_R (dBμV)	A_T (dB)	A_{Factor} (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV						
1	2390.00	PK	36.51	5.78	27.50	69.79	74	PASS
1	2390.00	AV	19.02	5.78	27.50	52.30	54	PASS
11	2483.62	PK	38.14	5.78	27.50	71.42	74	PASS
11	2484.15	AV	19.02	5.78	27.50	52.30	54	PASS

(PEAK, Channel 1, 802.11g)

(AVERAGE, Channel 1, 802.11g)

(PEAK, Channel 11, 802.11g)

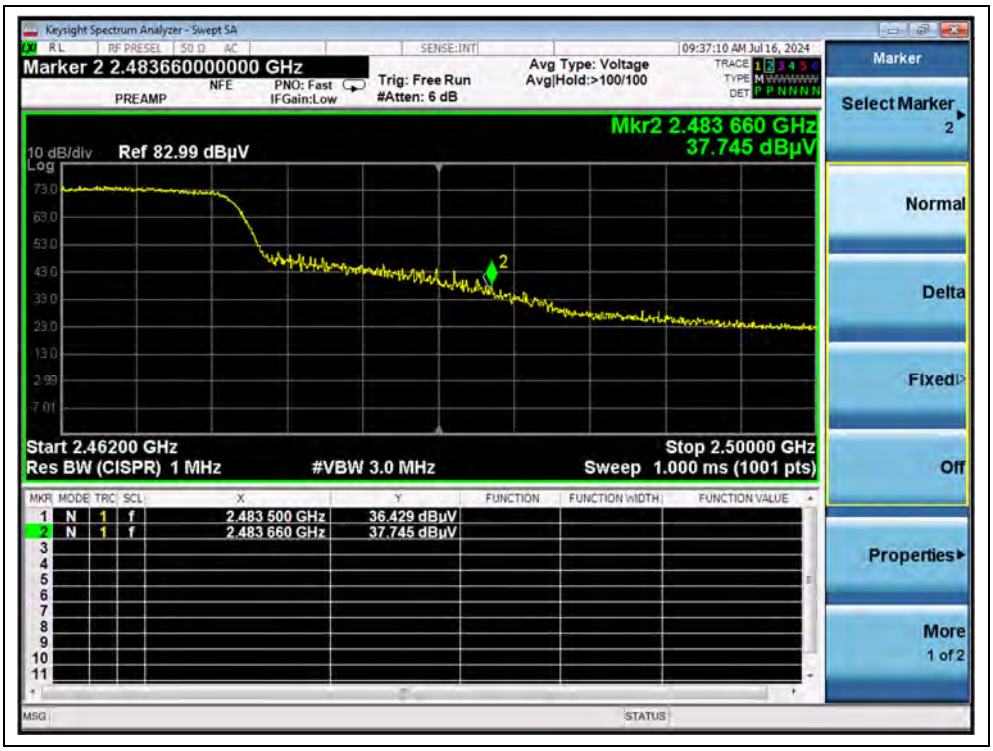
(AVERAGE, Channel 11, 802.11g)

802.11n (HT20) Mode

Channel	Frequency (MHz)	Detector PK/ AV	Receiver Reading U_R (dBμV)	A_T (dB)	A_{Factor} (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
1	2390.00	PK	40.17	5.78	27.50	73.45	74	PASS
1	2390.00	AV	19.97	5.78	27.50	53.25	54	PASS
11	2483.66	PK	37.75	5.78	27.50	71.03	74	PASS
11	2483.50	AV	16.82	5.78	27.50	50.10	54	PASS

(PEAK, Channel 1, 802.11n (HT20))

(AVERAGE, Channel 1, 802.11n (HT20))



(PEAK, Channel 11, 802.11n (HT20))

(AVERAGE, Channel 11, 802.11n (HT20))

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.

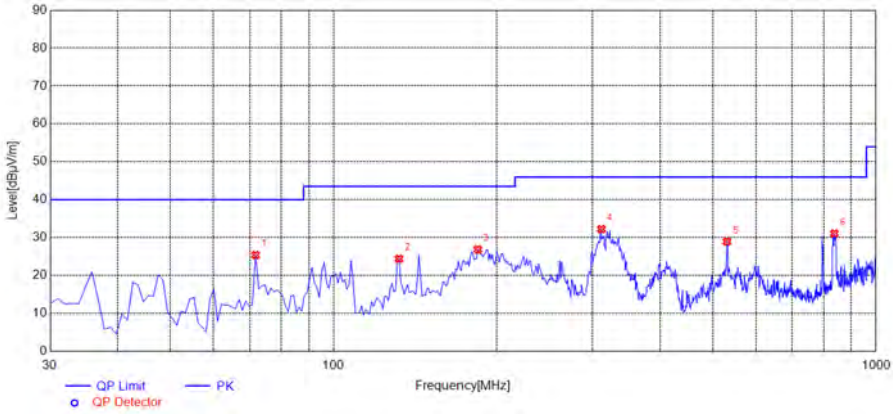
Note1: All radiated emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

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

Note3: For the frequency, which started from 18GHz to 10th harmonic of the highest frequency, was pre-scanned and the result which was 20dB lower than the limit was not recorded.

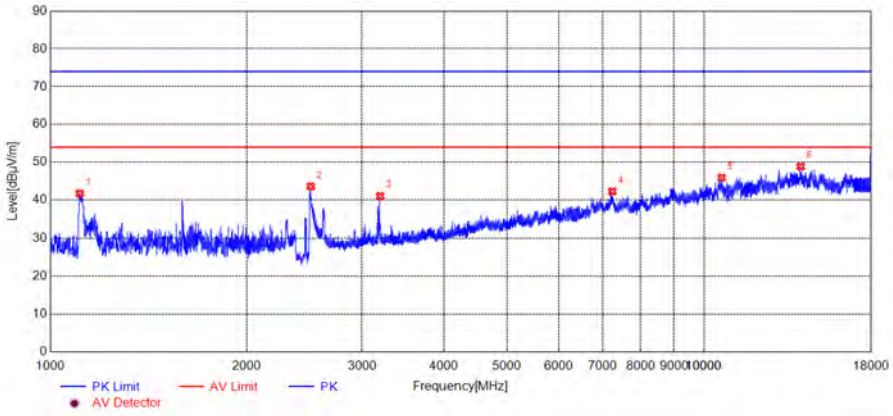
802.11b Mode

Plot for Channel 1



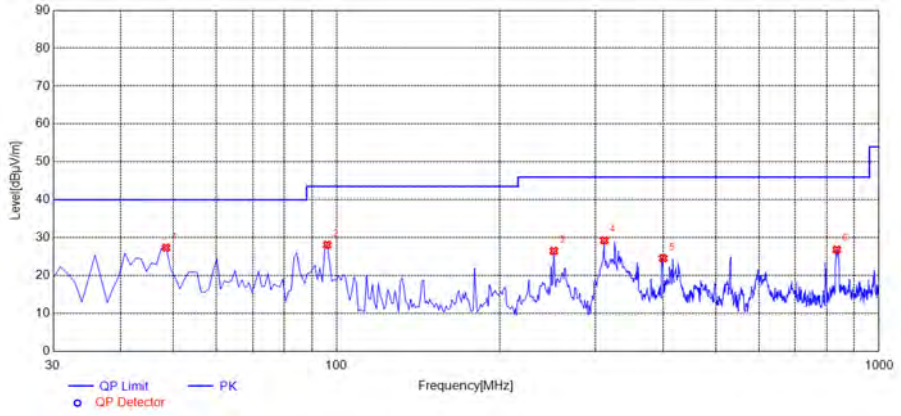
Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
71.7518	25.42	-33.75	40.00	Horizontal	PASS
131.9520	24.42	-34.69	43.50	Horizontal	PASS
184.3844	26.88	-33.28	43.50	Horizontal	PASS
311.5816	32.26	-28.86	46.00	Horizontal	PASS
531.0210	28.95	-23.63	46.00	Horizontal	PASS
837.8478	31.09	-19.89	46.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 1GHz)



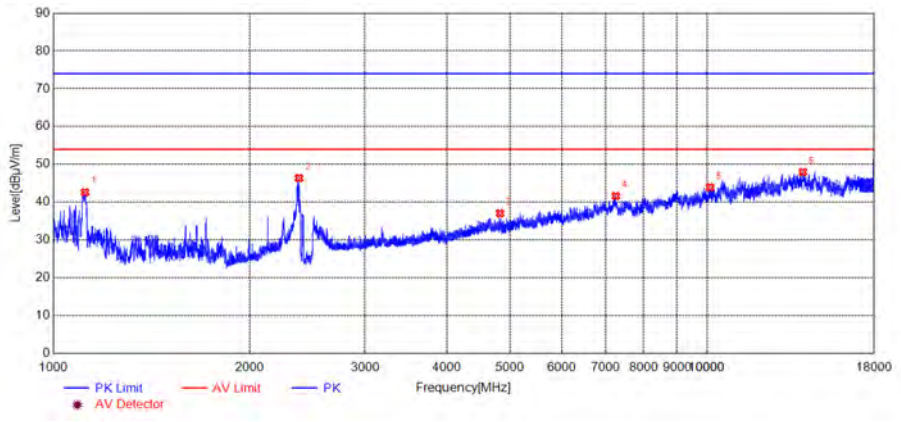
Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
1110.5111	41.76	-24.22	74.00	Horizontal	PASS
2503.1503	43.60	-20.30	74.00	Horizontal	PASS
3196.7197	41.08	-17.32	74.00	Horizontal	PASS
7237.3237	42.30	-3.16	74.00	Horizontal	PASS
10632.4632	45.92	2.55	74.00	Horizontal	PASS
14049.2049	48.87	7.10	74.00	Horizontal	PASS

(Antenna Horizontal, 1GHz to 18GHz)



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
48.4484	27.35	-28.90	40.00	Vertical	PASS
96.0260	28.13	-31.77	43.50	Vertical	PASS
251.3814	26.52	-30.36	46.00	Vertical	PASS
311.5816	29.29	-28.86	46.00	Vertical	PASS
399.9399	24.58	-26.29	46.00	Vertical	PASS
835.9059	26.85	-19.92	46.00	Vertical	PASS

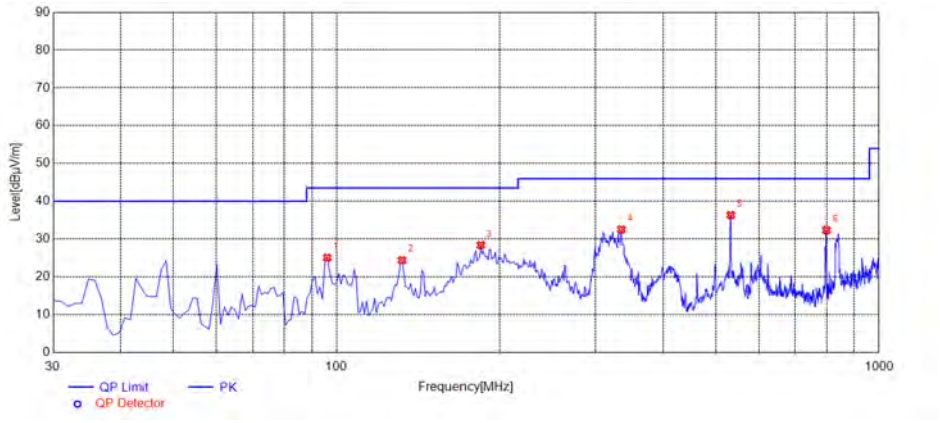
(Antenna Vertical, 30MHz to 1GHz)



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
1119.0119	42.62	-24.08	74.00	Vertical	PASS
2376.1376	46.37	-20.86	74.00	Vertical	PASS
4823.8824	37.07	-11.23	74.00	Vertical	PASS
7254.1254	41.64	-3.02	74.00	Vertical	PASS
10102.0102	43.95	0.36	74.00	Vertical	PASS
14015.6016	47.99	5.93	74.00	Vertical	PASS

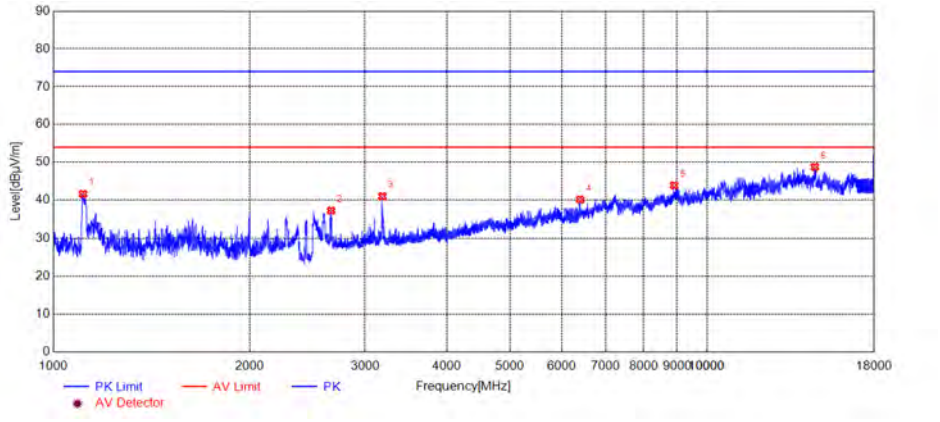
(Antenna Vertical, 1GHz to 18GHz)

Plot for Channel 6



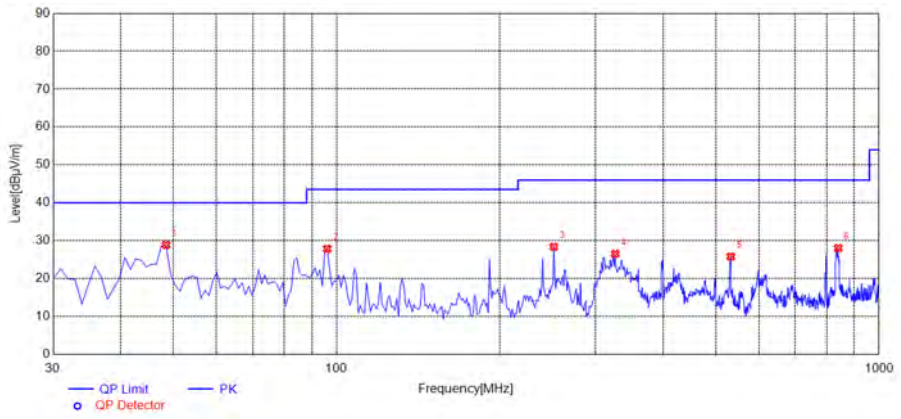
Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
96.0260	25.08	-31.77	43.50	Horizontal	PASS
131.9520	24.42	-34.69	43.50	Horizontal	PASS
184.3844	28.39	-33.28	43.50	Horizontal	PASS
334.8849	32.54	-27.94	46.00	Horizontal	PASS
532.9630	36.35	-23.62	46.00	Horizontal	PASS
799.9800	32.36	-20.28	46.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 1GHz)



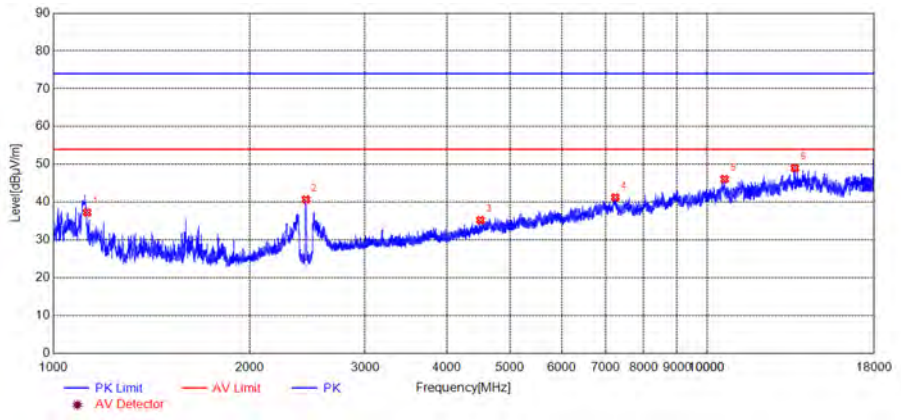
Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
1111.0111	41.64	-24.22	74.00	Horizontal	PASS
2660.6661	37.22	-19.18	74.00	Horizontal	PASS
3186.7187	41.03	-17.42	74.00	Horizontal	PASS
6398.4398	40.15	-6.95	74.00	Horizontal	PASS
8903.0903	43.92	-0.63	74.00	Horizontal	PASS
14610.8611	48.77	6.88	74.00	Horizontal	PASS

(Antenna Horizontal, 1GHz to 18GHz)



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
48.4484	28.88	-28.90	40.00	Vertical	PASS
96.0260	27.90	-31.77	43.50	Vertical	PASS
251.3814	28.40	-30.36	46.00	Vertical	PASS
326.1461	26.55	-28.39	46.00	Vertical	PASS
532.9630	25.81	-23.62	46.00	Vertical	PASS
840.7608	28.03	-19.86	46.00	Vertical	PASS

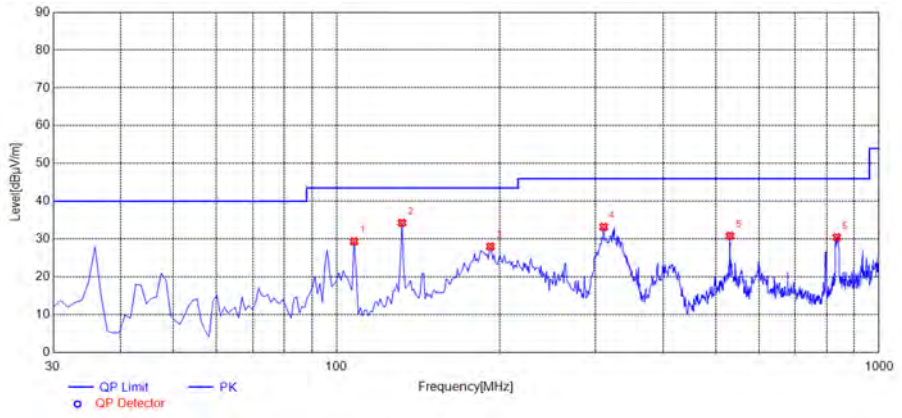
(Antenna Vertical, 30MHz to 1GHz)



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
1127.0127	37.28	-23.95	74.00	Vertical	PASS
2435.6436	40.73	-20.73	74.00	Vertical	PASS
4501.8502	35.27	-12.92	74.00	Vertical	PASS
7234.9235	41.28	-3.22	74.00	Vertical	PASS
10633.6634	46.11	2.58	74.00	Vertical	PASS
13619.5620	49.04	6.54	74.00	Vertical	PASS

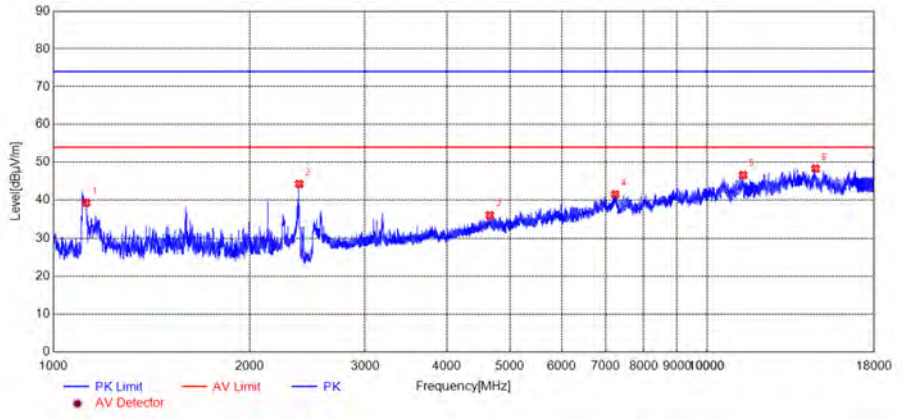
(Antenna Vertical, 1GHz to 18GHz)

Plot for Channel 11



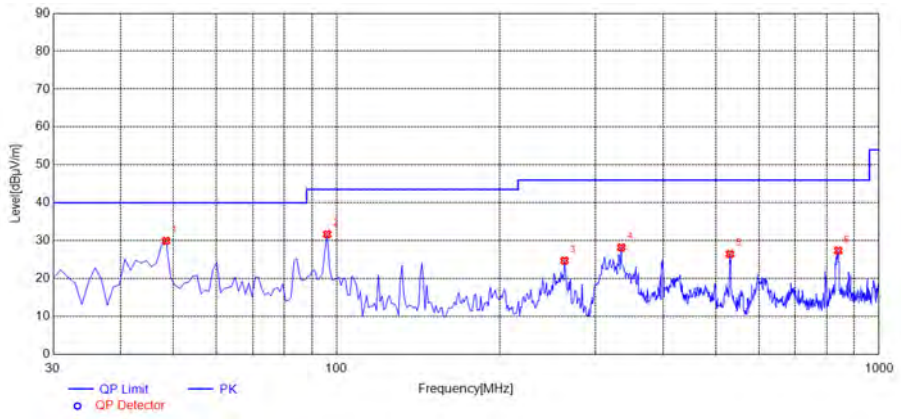
Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
107.6777	29.40	-31.22	43.50	Horizontal	PASS
131.9520	34.32	-34.69	43.50	Horizontal	PASS
192.1522	28.04	-32.23	43.50	Horizontal	PASS
310.6106	33.25	-28.87	46.00	Horizontal	PASS
531.0210	30.86	-23.63	46.00	Horizontal	PASS
835.9059	30.50	-19.92	46.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 1GHz)



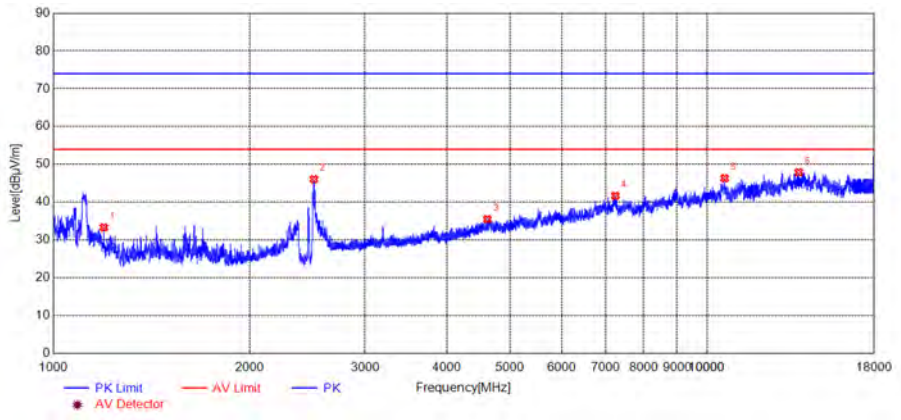
Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
1123.5124	39.29	-24.00	74.00	Horizontal	PASS
2379.1379	44.26	-20.88	74.00	Horizontal	PASS
4652.3652	36.05	-11.21	74.00	Horizontal	PASS
7233.7234	41.53	-3.24	74.00	Horizontal	PASS
11351.3351	46.64	3.98	74.00	Horizontal	PASS
14652.8653	48.38	7.74	74.00	Horizontal	PASS

(Antenna Horizontal, 1GHz to 18GHz)



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
48.4484	29.95	-28.90	40.00	Vertical	PASS
96.0260	31.72	-31.77	43.50	Vertical	PASS
263.0330	24.74	-30.12	46.00	Vertical	PASS
334.8849	28.24	-27.94	46.00	Vertical	PASS
531.0210	26.48	-23.63	46.00	Vertical	PASS
840.7608	27.39	-19.86	46.00	Vertical	PASS

(Antenna Vertical, 30MHz to 1GHz)

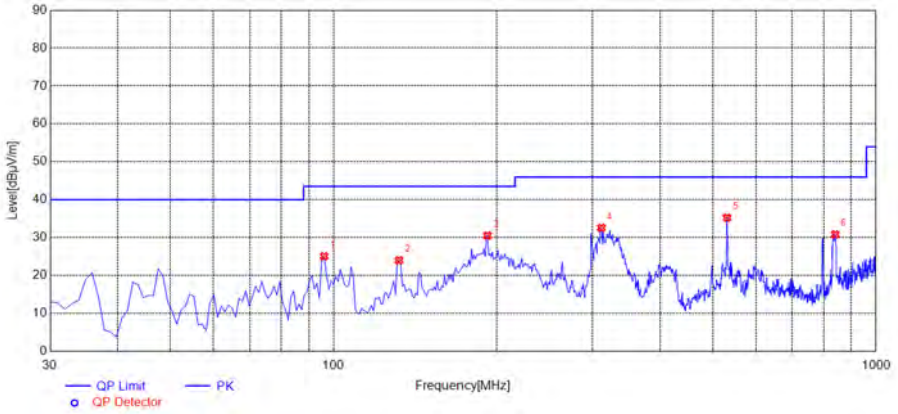


Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
1195.5196	33.33	-23.98	74.00	Vertical	PASS
2505.6506	46.09	-20.30	74.00	Vertical	PASS
4614.8615	35.50	-11.84	74.00	Vertical	PASS
7242.1242	41.70	-3.06	74.00	Vertical	PASS
10636.0636	46.33	2.65	74.00	Vertical	PASS
13809.1809	47.94	6.19	74.00	Vertical	PASS

(Antenna Vertical, 1GHz to 18GHz)

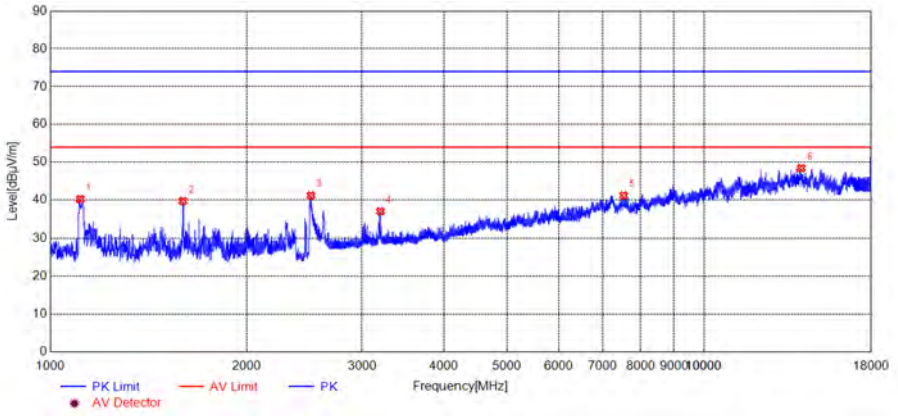
802.11g Mode

Plot for Channel 1



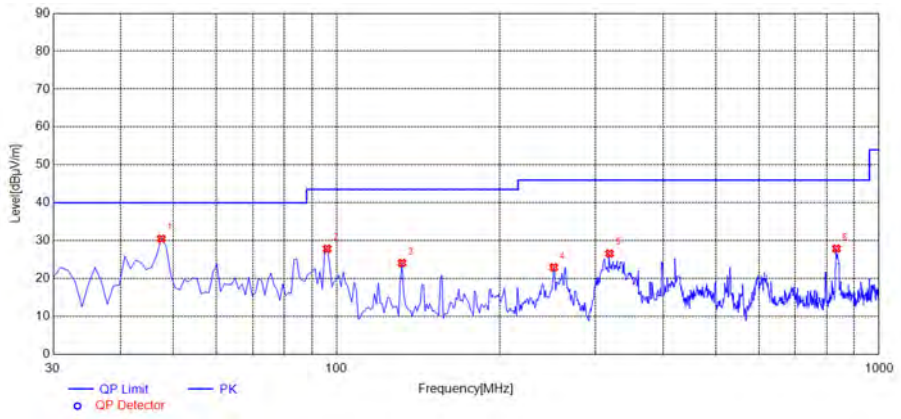
Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
96.0260	25.08	-31.77	43.50	Horizontal	PASS
131.9520	24.01	-34.69	43.50	Horizontal	PASS
192.1522	30.56	-32.23	43.50	Horizontal	PASS
311.5816	32.59	-28.86	46.00	Horizontal	PASS
531.0210	35.26	-23.63	46.00	Horizontal	PASS
840.7608	30.85	-19.86	46.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 1GHz)



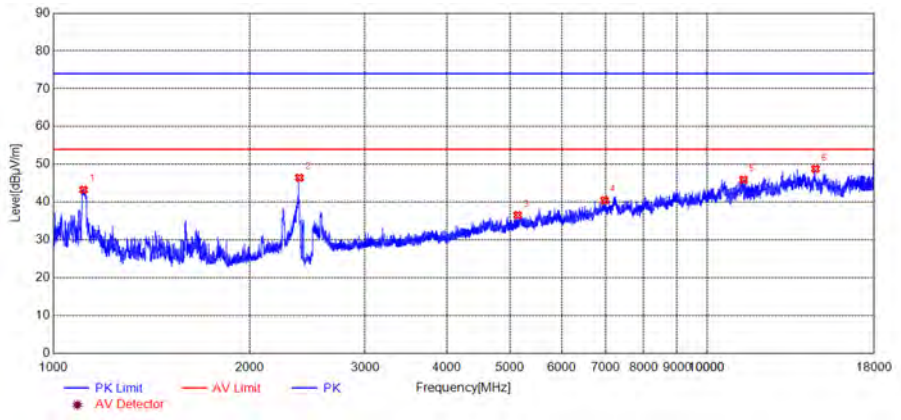
Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
1112.0112	40.25	-24.20	74.00	Horizontal	PASS
1596.5597	39.76	-23.62	74.00	Horizontal	PASS
2505.1505	41.23	-20.30	74.00	Horizontal	PASS
3199.7200	37.02	-17.28	74.00	Horizontal	PASS
7533.7534	41.21	-4.39	74.00	Horizontal	PASS
14080.4080	48.44	6.58	74.00	Horizontal	PASS

(Antenna Horizontal, 1GHz to 18GHz)



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
47.4775	30.55	-29.00	40.00	Vertical	PASS
96.0260	27.91	-31.77	43.50	Vertical	PASS
131.9520	24.13	-34.69	43.50	Vertical	PASS
251.3814	22.97	-30.36	46.00	Vertical	PASS
318.3784	26.62	-28.70	46.00	Vertical	PASS
834.9349	27.94	-19.93	46.00	Vertical	PASS

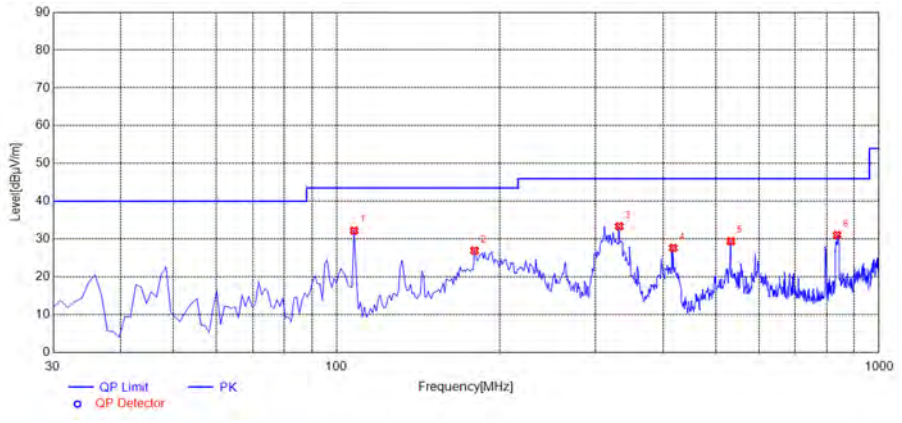
(Antenna Vertical, 30MHz to 1GHz)



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
1113.0113	43.28	-24.18	74.00	Vertical	PASS
2380.1380	46.49	-20.88	74.00	Vertical	PASS
5132.4132	36.58	-10.95	74.00	Vertical	PASS
6968.4969	40.50	-4.60	74.00	Vertical	PASS
11365.7366	45.96	3.50	74.00	Vertical	PASS
14646.8647	48.81	7.76	74.00	Vertical	PASS

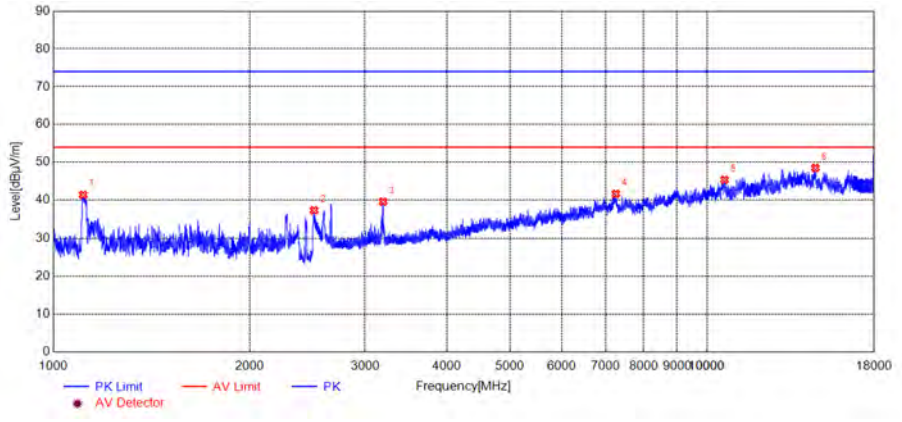
(Antenna Vertical, 1GHz to 18GHz)

Plot for Channel 6



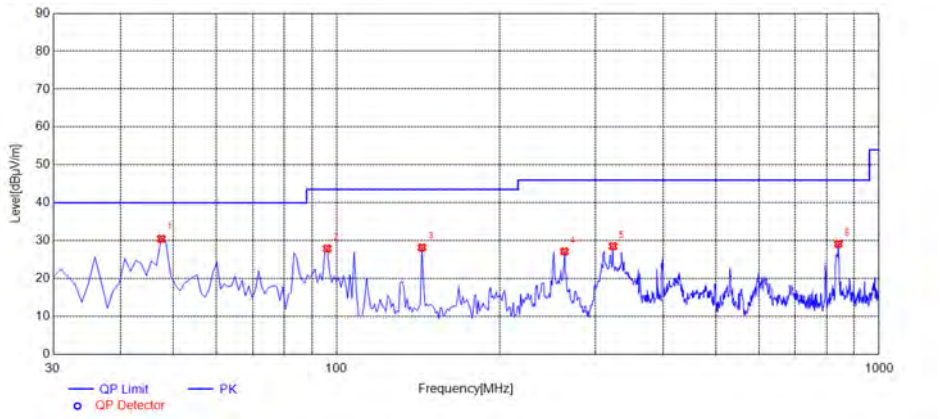
Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
107.6777	32.21	-31.22	43.50	Horizontal	PASS
179.5295	26.95	-33.59	43.50	Horizontal	PASS
331.9720	33.39	-28.06	46.00	Horizontal	PASS
417.4174	27.67	-25.77	46.00	Horizontal	PASS
532.9630	29.43	-23.62	46.00	Horizontal	PASS
836.8769	31.07	-19.90	46.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 1GHz)



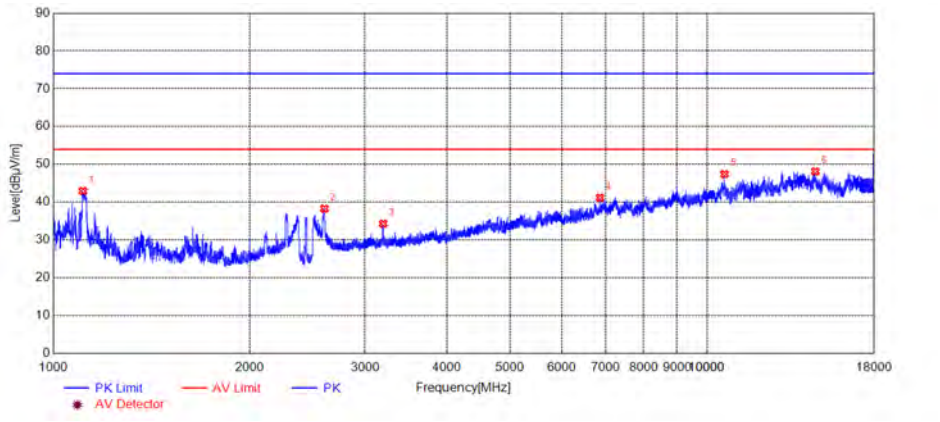
Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
1111.5112	41.42	-24.21	74.00	Horizontal	PASS
2506.6507	37.31	-20.29	74.00	Horizontal	PASS
3195.7196	39.59	-17.33	74.00	Horizontal	PASS
7254.1254	41.67	-3.02	74.00	Horizontal	PASS
10633.6634	45.39	2.58	74.00	Horizontal	PASS
14642.0642	48.54	7.64	74.00	Horizontal	PASS

(Antenna Horizontal, 1GHz to 18GHz)



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
47.4775	30.55	-29.00	40.00	Vertical	PASS
96.0260	27.93	-31.77	43.50	Vertical	PASS
143.6036	28.21	-35.27	43.50	Vertical	PASS
263.0330	27.19	-30.12	46.00	Vertical	PASS
323.2332	28.55	-28.52	46.00	Vertical	PASS
841.7317	29.17	-19.87	46.00	Vertical	PASS

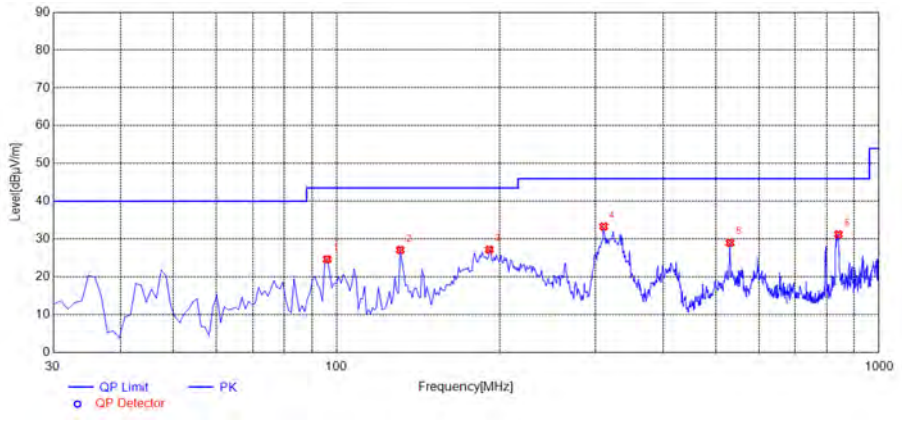
(Antenna Vertical, 30MHz to 1GHz)



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
1110.5111	42.95	-24.22	74.00	Vertical	PASS
2599.1599	38.28	-19.42	74.00	Vertical	PASS
3197.2197	34.34	-17.31	74.00	Vertical	PASS
6858.0858	41.19	-5.49	74.00	Vertical	PASS
10630.0630	47.43	2.48	74.00	Vertical	PASS
14638.4638	48.11	7.56	74.00	Vertical	PASS

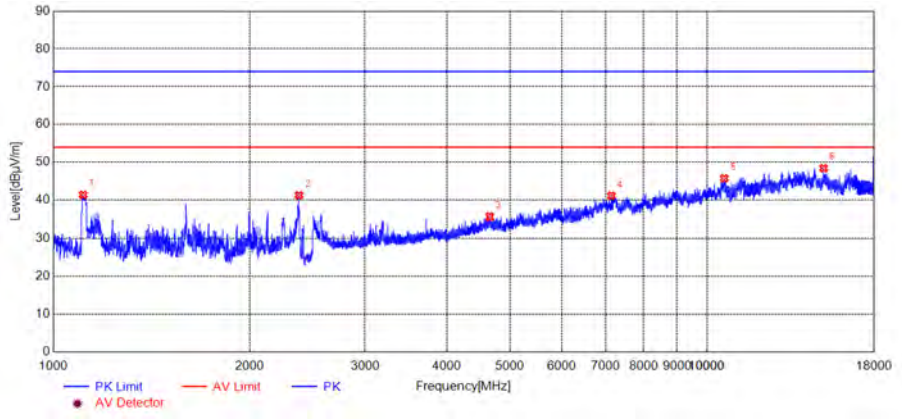
(Antenna Vertical, 1GHz to 18GHz)

Plot for Channel 11



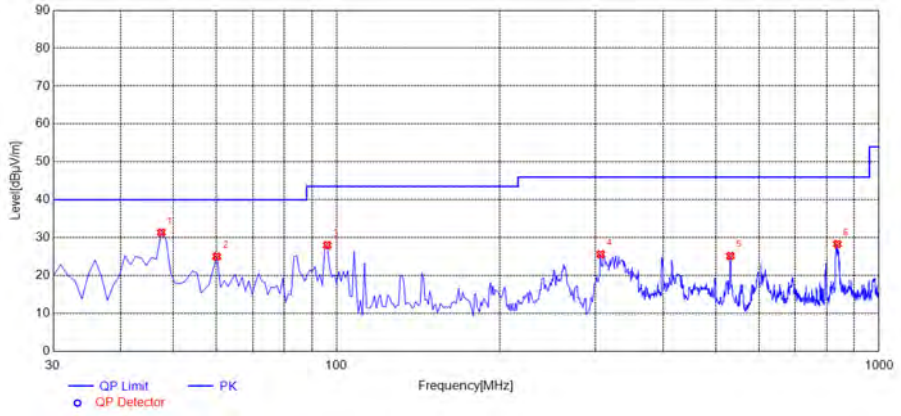
Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
96.0260	24.64	-31.77	43.50	Horizontal	PASS
130.9810	27.15	-34.52	43.50	Horizontal	PASS
191.1812	27.21	-32.32	43.50	Horizontal	PASS
310.6106	33.34	-28.87	46.00	Horizontal	PASS
531.0210	29.03	-23.63	46.00	Horizontal	PASS
841.7317	31.25	-19.87	46.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 1GHz)



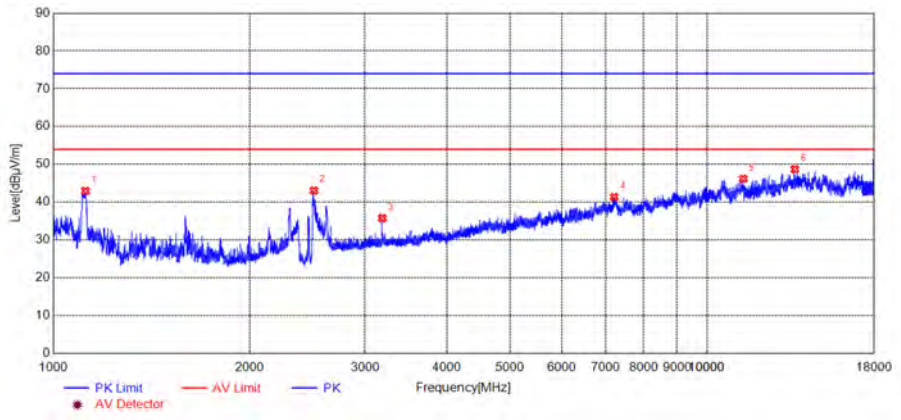
Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
1111.5112	41.41	-24.21	74.00	Horizontal	PASS
2376.1376	41.30	-20.86	74.00	Horizontal	PASS
4650.8651	35.74	-11.18	74.00	Horizontal	PASS
7140.1140	41.20	-4.98	74.00	Horizontal	PASS
10625.2625	45.80	2.35	74.00	Horizontal	PASS
15072.9073	48.44	6.74	74.00	Horizontal	PASS

(Antenna Horizontal, 1GHz to 18GHz)



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
47.4775	31.36	-29.00	40.00	Vertical	PASS
60.1001	25.04	-30.55	40.00	Vertical	PASS
96.0260	28.03	-31.77	43.50	Vertical	PASS
306.7267	25.64	-29.00	46.00	Vertical	PASS
531.9920	25.21	-23.63	46.00	Vertical	PASS
837.8478	28.33	-19.89	46.00	Vertical	PASS

(Antenna Vertical, 30MHz to 1GHz)

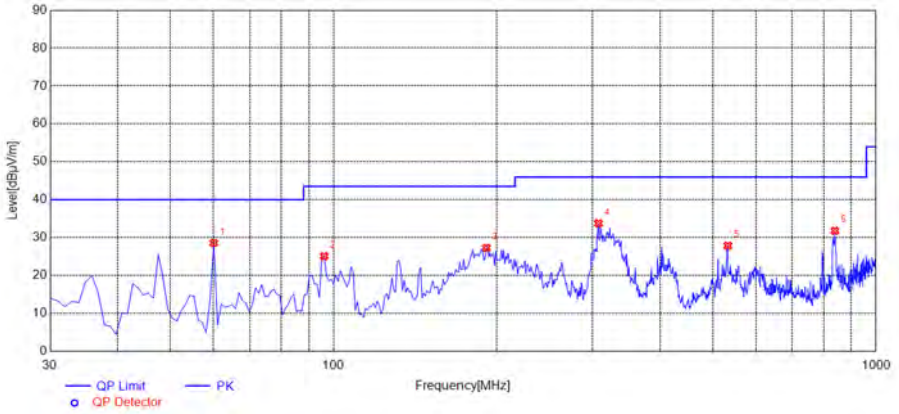


Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
1120.5121	42.97	-24.06	74.00	Vertical	PASS
2505.6506	43.07	-20.30	74.00	Vertical	PASS
3186.7187	35.79	-17.42	74.00	Vertical	PASS
7210.9211	41.37	-3.76	74.00	Vertical	PASS
11354.9355	46.21	3.86	74.00	Vertical	PASS
13617.1617	48.71	6.67	74.00	Vertical	PASS

(Antenna Vertical, 1GHz to 18GHz)

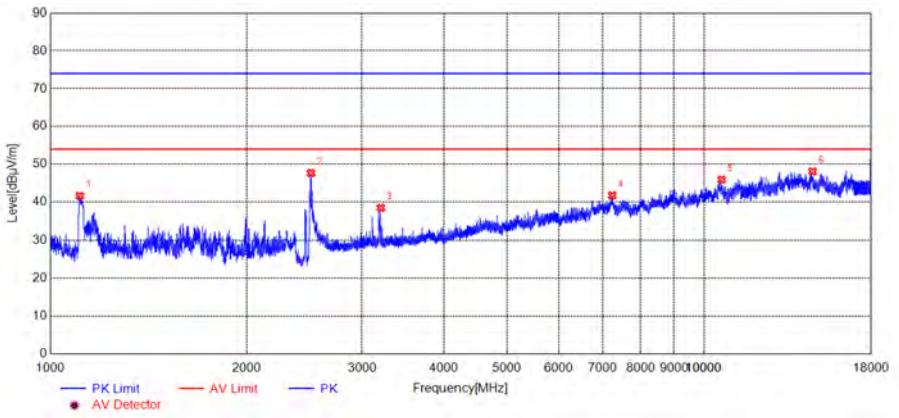
802.11n (HT20) Mode

Plot for Channel 1



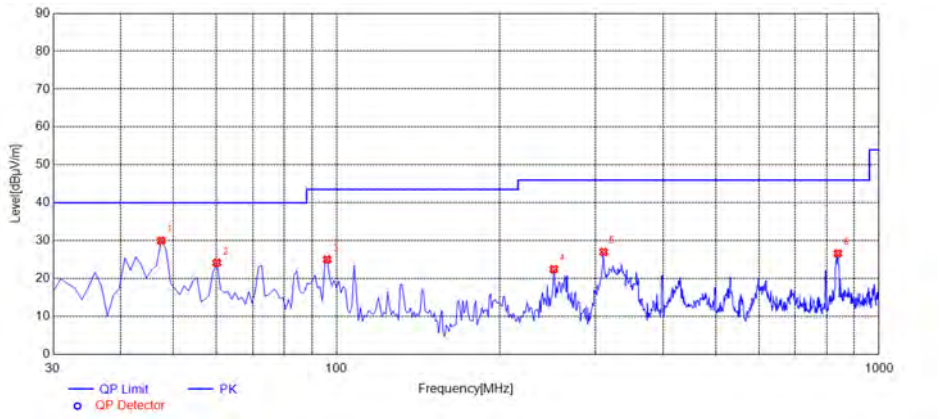
Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
60.1001	28.59	-30.55	40.00	Horizontal	PASS
96.0260	25.12	-31.77	43.50	Horizontal	PASS
191.1812	27.28	-32.32	43.50	Horizontal	PASS
307.6977	33.76	-28.96	46.00	Horizontal	PASS
532.9630	27.89	-23.62	46.00	Horizontal	PASS
839.7898	31.80	-19.86	46.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 1GHz)



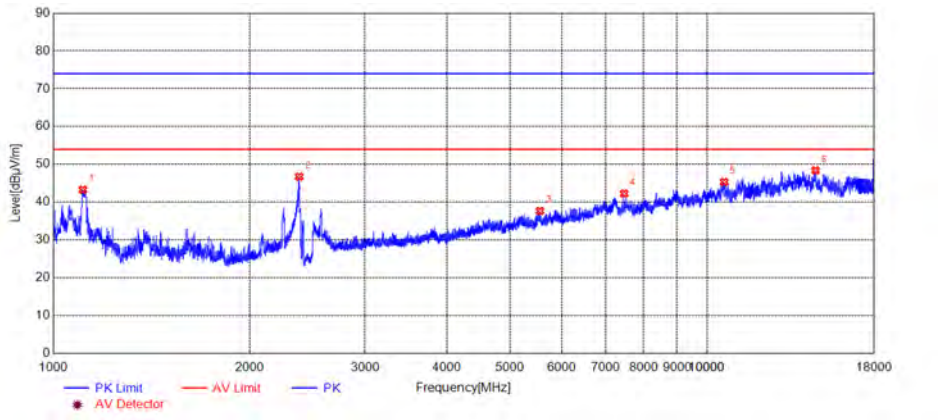
Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
1110.5111	41.62	-24.22	74.00	Horizontal	PASS
2506.1506	47.67	-20.29	74.00	Horizontal	PASS
3205.2205	38.46	-17.27	74.00	Horizontal	PASS
7236.1236	41.76	-3.19	74.00	Horizontal	PASS
10638.4638	45.95	2.71	74.00	Horizontal	PASS
14651.6652	48.09	7.78	74.00	Horizontal	PASS

(Antenna Horizontal, 1GHz to 18GHz)



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
47.4775	30.00	-29.00	40.00	Vertical	PASS
60.1001	24.18	-30.55	40.00	Vertical	PASS
96.0260	25.04	-31.77	43.50	Vertical	PASS
251.3814	22.49	-30.36	46.00	Vertical	PASS
310.6106	27.04	-28.87	46.00	Vertical	PASS
839.7898	26.65	-19.86	46.00	Vertical	PASS

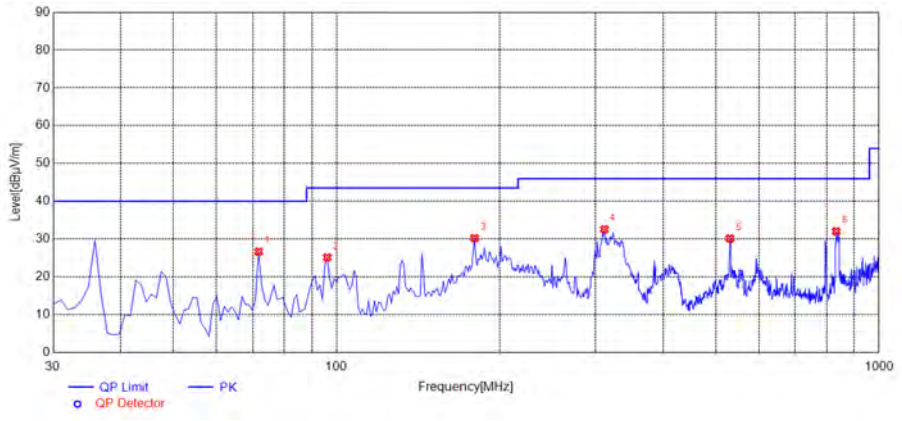
(Antenna Vertical, 30MHz to 1GHz)



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
1110.5111	43.28	-24.22	74.00	Vertical	PASS
2378.6379	46.76	-20.87	74.00	Vertical	PASS
5551.4551	37.67	-8.27	74.00	Vertical	PASS
7468.9469	42.28	-4.61	74.00	Vertical	PASS
10619.2619	45.35	2.18	74.00	Vertical	PASS
14649.2649	48.41	7.82	74.00	Vertical	PASS

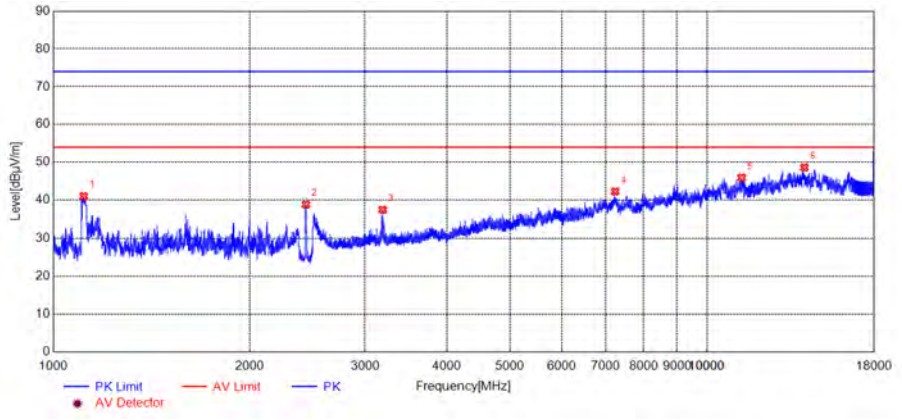
(Antenna Vertical, 1GHz to 18GHz)

Plot for Channel 6



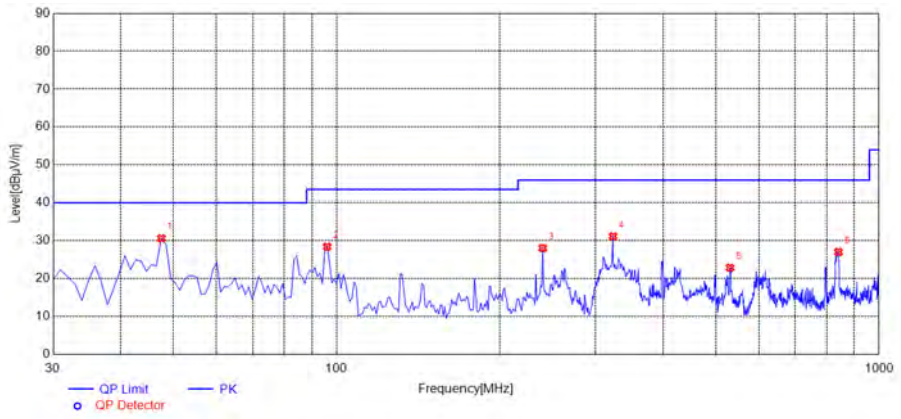
Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
71.7518	26.67	-33.75	40.00	Horizontal	PASS
96.0260	25.17	-31.77	43.50	Horizontal	PASS
179.5295	30.28	-33.59	43.50	Horizontal	PASS
311.5816	32.61	-28.86	46.00	Horizontal	PASS
531.0210	30.17	-23.63	46.00	Horizontal	PASS
833.9640	32.05	-19.94	46.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 1GHz)



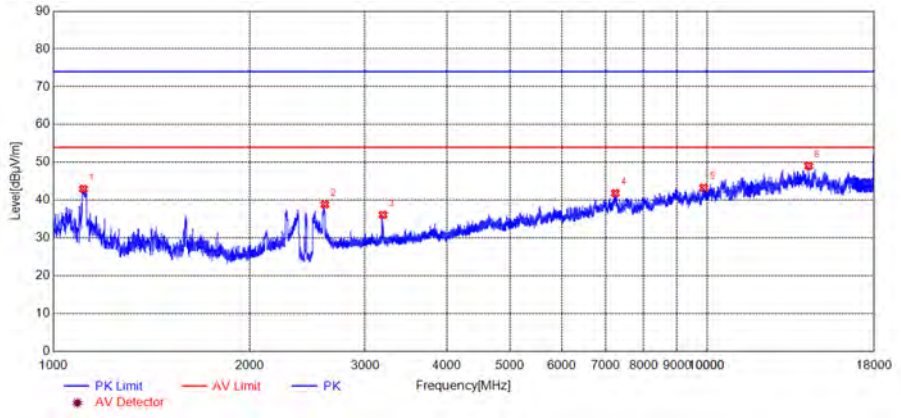
Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
1113.5114	41.07	-24.17	74.00	Horizontal	PASS
2435.6436	38.82	-20.73	74.00	Horizontal	PASS
3191.2191	37.44	-17.37	74.00	Horizontal	PASS
7232.5233	42.28	-3.27	74.00	Horizontal	PASS
11297.3297	45.94	3.01	74.00	Horizontal	PASS
14086.4086	48.62	6.47	74.00	Horizontal	PASS

(Antenna Horizontal, 1GHz to 18GHz)



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
47.4775	30.63	-29.00	40.00	Vertical	PASS
96.0260	28.42	-31.77	43.50	Vertical	PASS
239.7297	28.08	-30.65	46.00	Vertical	PASS
323.2332	31.17	-28.52	46.00	Vertical	PASS
531.0210	22.88	-23.63	46.00	Vertical	PASS
841.7317	27.03	-19.87	46.00	Vertical	PASS

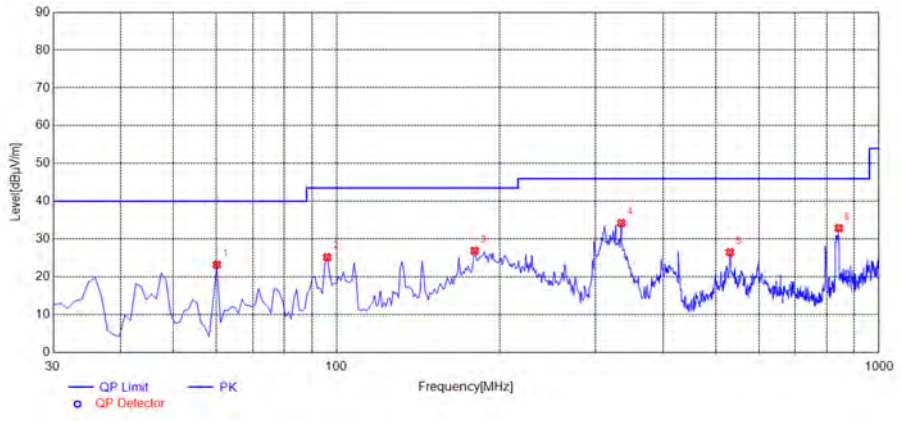
(Antenna Vertical, 30MHz to 1GHz)



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
1112.5113	42.98	-24.19	74.00	Vertical	PASS
2603.1603	38.87	-19.40	74.00	Vertical	PASS
3194.7195	36.14	-17.34	74.00	Vertical	PASS
7238.5239	41.86	-3.14	74.00	Vertical	PASS
9883.5884	43.32	0.44	74.00	Vertical	PASS
14302.4302	49.08	7.27	74.00	Vertical	PASS

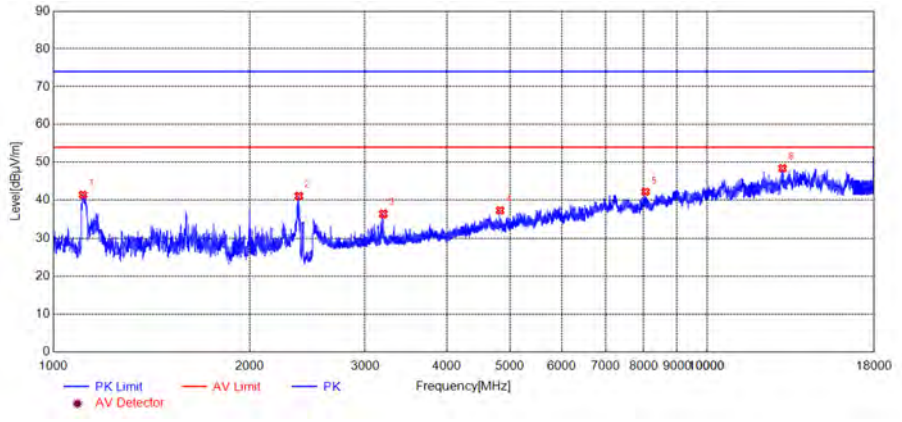
(Antenna Vertical, 1GHz to 18GHz)

Plot for Channel 11



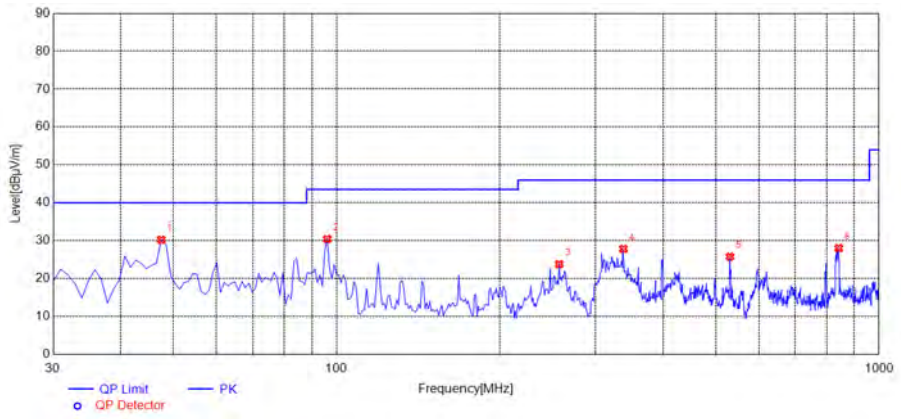
Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
60.1001	23.24	-30.55	40.00	Horizontal	PASS
96.0260	25.21	-31.77	43.50	Horizontal	PASS
179.5295	26.91	-33.59	43.50	Horizontal	PASS
334.8849	34.26	-27.94	46.00	Horizontal	PASS
531.0210	26.51	-23.63	46.00	Horizontal	PASS
842.7027	32.91	-19.87	46.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 1GHz)



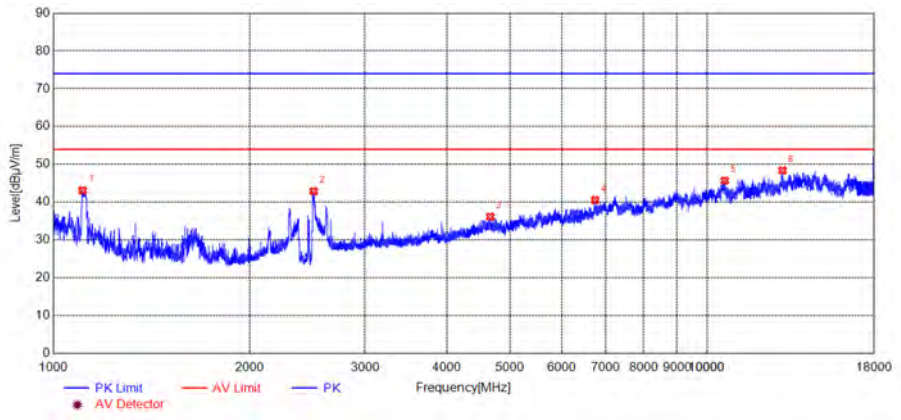
Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
1111.0111	41.42	-24.22	74.00	Horizontal	PASS
2375.6376	41.12	-20.85	74.00	Horizontal	PASS
3198.7199	36.44	-17.29	74.00	Horizontal	PASS
4823.8824	37.28	-11.23	74.00	Horizontal	PASS
8052.2052	42.20	-3.03	74.00	Horizontal	PASS
13045.9046	48.43	6.92	74.00	Horizontal	PASS

(Antenna Horizontal, 1GHz to 18GHz)



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
47.4775	30.30	-29.00	40.00	Vertical	PASS
96.0260	30.45	-31.77	43.50	Vertical	PASS
257.2072	23.83	-30.21	46.00	Vertical	PASS
337.7978	27.85	-27.71	46.00	Vertical	PASS
531.0210	25.80	-23.63	46.00	Vertical	PASS
842.7027	28.06	-19.87	46.00	Vertical	PASS

(Antenna Vertical, 30MHz to 1GHz)



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
1109.5110	43.14	-24.24	74.00	Vertical	PASS
2503.1503	42.89	-20.30	74.00	Vertical	PASS
4662.3662	36.16	-11.38	74.00	Vertical	PASS
6741.6742	40.55	-5.37	74.00	Vertical	PASS
10642.0642	45.72	2.81	74.00	Vertical	PASS
13043.5044	48.40	6.87	74.00	Vertical	PASS

(Antenna Vertical, 1GHz to 18GHz)

END OF REPORT