TEST REPORT

APPLICANT	:	Shenzhen Digitizing Fluid Technology Co., Ltd.
PRODUCT NAME	:	DiFluid Omix
MODEL NAME	:	CB101, CB101 Plus
BRAND NAME	:	DiFluid
FCC ID	:	2A26IDFT-CB101
STANDARD(S)	:	47 CFR Part 15 Subpart C
RECEIPT DATE	:	2024-06-25
TEST DATE	:	2024-07-08 to 2024-08-02
ISSUE DATE	:	2024-08-13

Edited by: Peng Mi (Rapporteur)

Approved by: Shen Junsheng (Supervisor)

DIRECTORY

Change History		
Version	**Date**	**Reason for change**
1.0	2024-08-13	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	Jul. 11, 2024	Li Zikai	PASS	No deviation
3	15.247(b)	Maximum Peak Conducted Output Power	Jul. 11, 2024	Li Zikai	PASS	No deviation
4	15.247(b)	Maximum Average Conducted Output Power	Jul. 11, 2024	Li Zikai	PASS	No deviation
5	15.247(a)	Bandwidth	Jul. 11, 2024	Li Zikai	PASS	No deviation
6	15.247(d)	Conducted Spurious Emission and Band Edge	Jul. 11, 2024	Li Zikai	PASS	No deviation
7	15.247(e)	Power Spectral Density	Jul. 11, 2024	Li Zikai	PASS	No deviation
8	15.207	Conducted Emission	Jul. 16, 2024	Wang Deyong	PASS	No deviation
9	15.247(d)	Restricted Frequency Bands	Aug. 02, 2024	Yang Lian	PASS	No deviation
10	15.209, 15.247(d)	Radiated Emission	Aug. 02, 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
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	Shenzhen Digitizing Fluid Technology Co., Ltd.
Applicant Address	Room 1602, Jinhua building, Taoxia Village, Taoyuan Community, Dalang Street, Longhua District, Shenzhen, 518109, China
Manufacturer	Shenzhen Digitizing Fluid Technology Co., Ltd.
Manufacturer Address	Room 1602, Jinhua building, Taoxia Village, Taoyuan Community, Dalang Street, Longhua District, Shenzhen, 518109, China

2.2. Information of EUT

Product Name:	DiFluid Omix	
Sample No.:	4#	
Hardware Version:	CB101_MB_P002	
Software Version:	V007006	
Equipment Type:	Bluetooth LE	
Bluetooth Version:	5.2	
Modulation Type:	GFSK	
Data Rate:	1Mbps, 2Mbps	
Operating Frequency Range:	2402MHz-2480MHz	
Antenna Type:	FPC Antenna	
Antenna Gain:	3.16dBi	
Accessory Information:	Battery 1	
	Brand Name:	DPT
	Model No.:	DTP104065
	Serial No.:	N/A
	Capacity:	3000mAh
	Rated Voltage:	3.7V
	Charge Limit:	4.2V
	Manufacturer:	Dongguan Data Power Co., Ltd.

Accessory Information:	Battery 2	
	Brand Name:	YLY
	Model No.:	102050
	Serial No.:	N/A
	Capacity:	1000mAh
	Rated Voltage:	3.7V
	Charge Limit:	4.2V
	Manufacturer:	SHENZHEN YOULONGYUAN TECHNOLOGY CO., LTD.
	Battery 3	
	Brand Name:	OMNIERGY
	Model No.:	CR2032
	Serial No.:	N/A
	Capacity:	245mAh
	Rated Voltage:	3V
	Charge Limit:	N/A
	Manufacturer:	Yichang Power Glory Technology Co., LTD

Note 1: According to the certificate holder, they declared that the models CB101 and CB101 Plus only the model numbers are different, everything else is the same. The main measuring model is CB101, only the results for CB101 were recorded in this report.

Note 2: We use the dedicated software to control the EUT continuous transmission.

Note 3: 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

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	**2402**	10	2422	20	2442	30	2462
1	2404	11	2424	21	2444	31	2464
2	2406	12	2426	22	2446	32	2466
3	2408	13	2428	23	2448	33	2468
4	2410	14	2430	24	2450	34	2470
5	2412	15	2432	25	2452	35	2472
6	2414	16	2434	26	2454	36	2474
7	2416	17	2436	27	2456	37	2476
8	2418	18	2438	28	2458	38	2478
9	2420	**19**	**2440**	29	2460	**39**	**2480**

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

2.4. Test Configuration of EUT

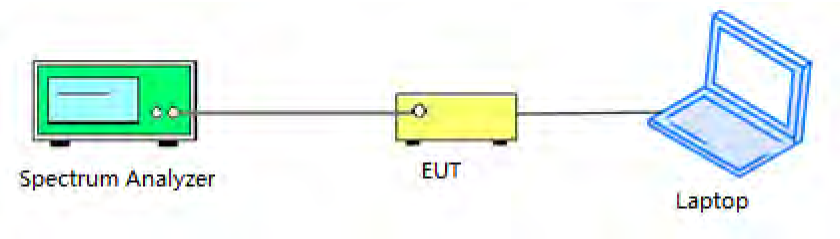
Test mode is used to control the EUT under the maximum power level during test.

2.5. Test Conditions

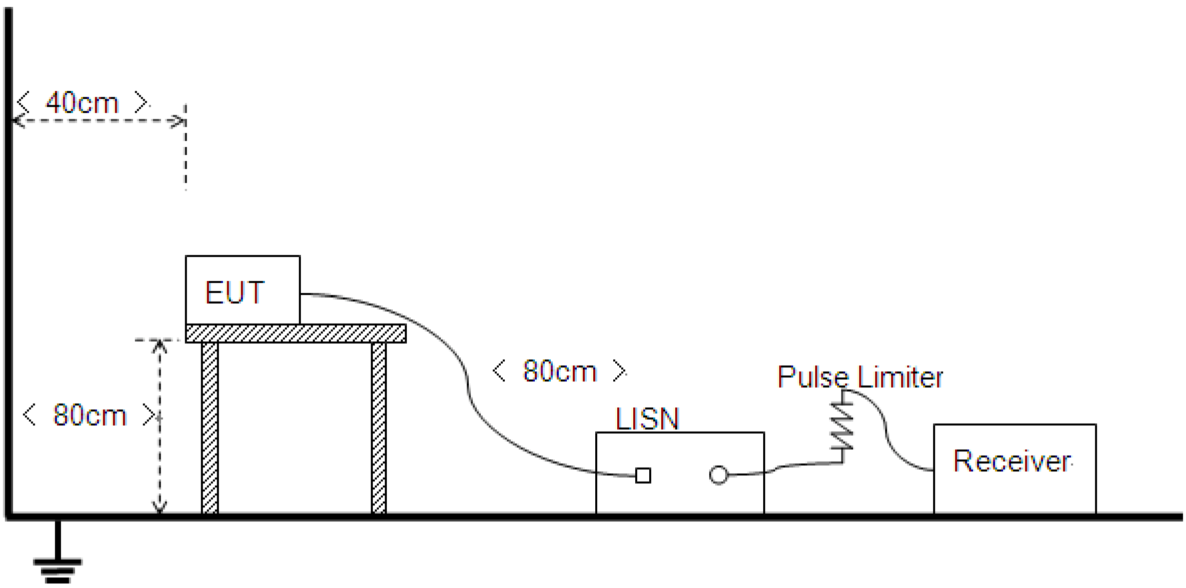
Temperature (°C)	15-35
Relative Humidity (%)	30-60
Atmospheric Pressure (kPa)	86-106

2.6. Test Setup Layout Diagram

2.6.1. Conducted Measurement

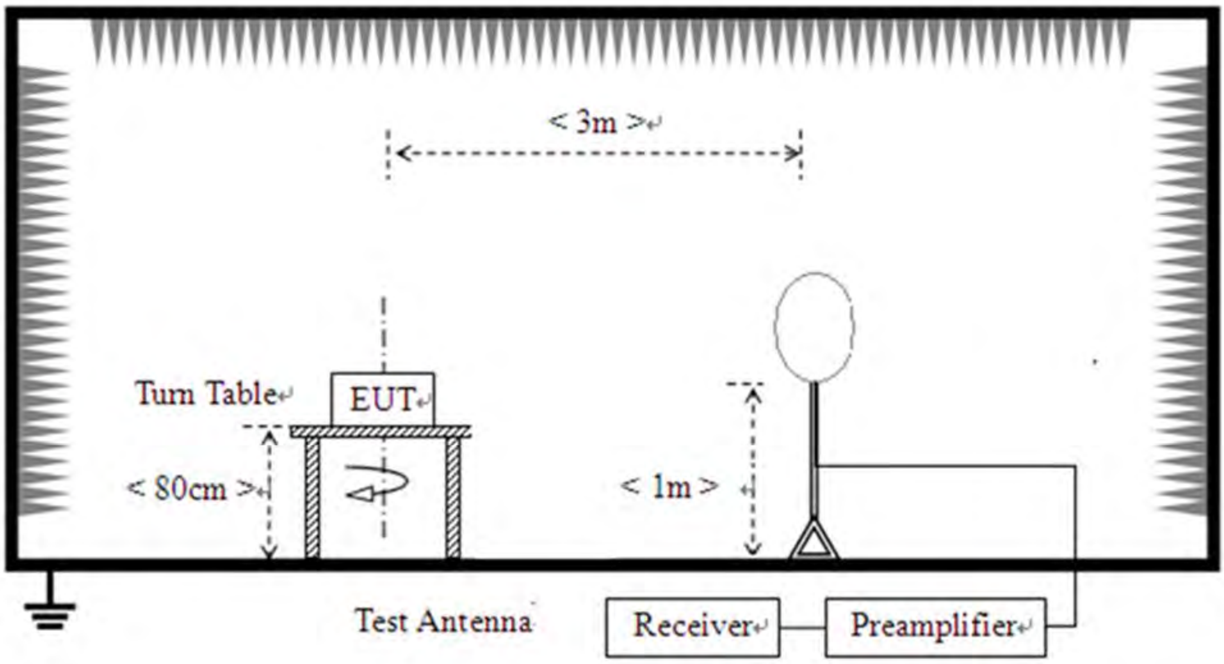


2.6.2. Conducted Emission Measurement

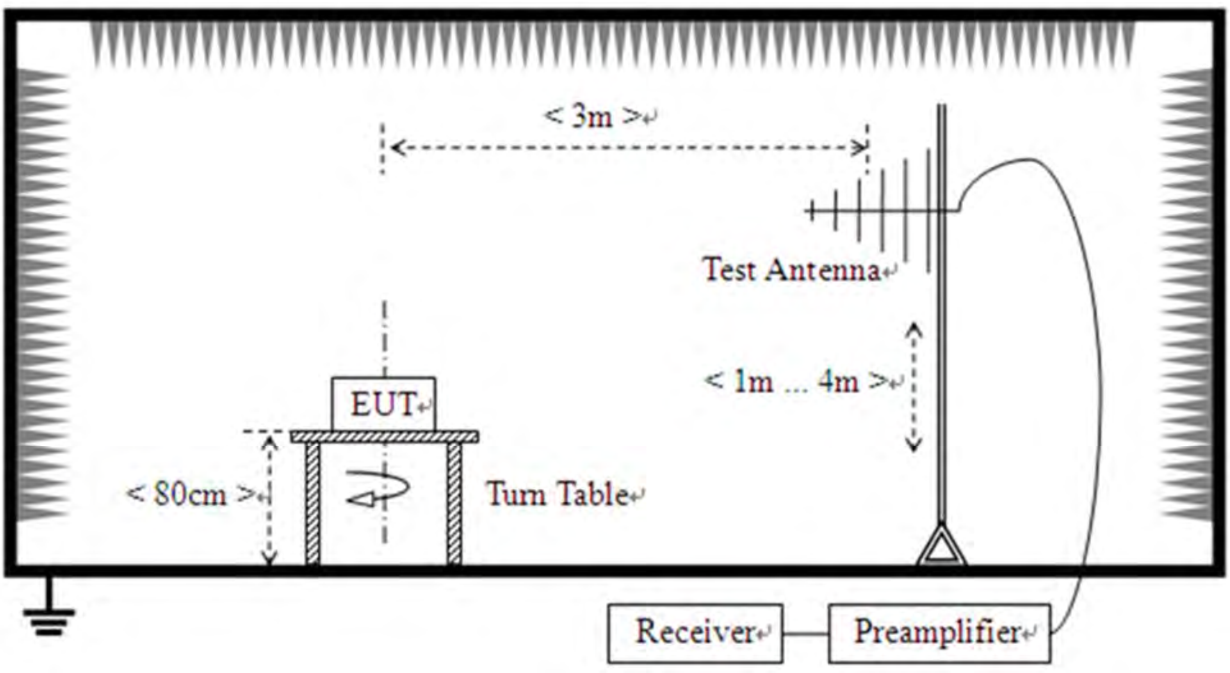


2.6.3.Radiation Measurement

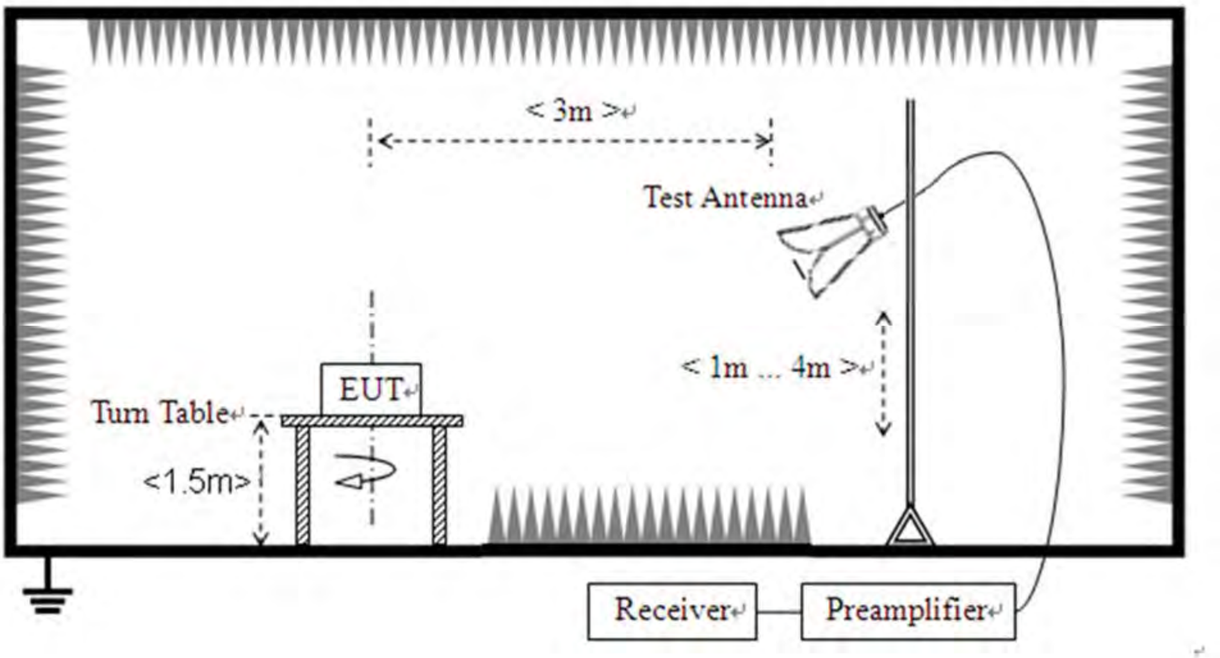
1) For radiated emissions from 9kHz to 30MHz



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	☒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 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 peak conducted output power of the intentional radiator shall not exceed 1 Watt.

3.3.2. Test Procedures

KDB 558074 Section 8.3.1 was used in order to prove compliance.

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 in this report.

3.4. Maximum Average Conducted Output Power

3.4.1. 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 average conducted output power of the intentional radiator shall not exceed 1 Watt.

3.4.2. Test Procedures

KDB 558074 Section 8.3.2 was used in order to prove compliance.

3.4.3. Test Setup Layout

Refer to chapter 2.6.1 in this report.

3.4.4. Test Result

Refer to Annex A.3 in this report.

3.5. 6 dB Bandwidth

3.5.1.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.

3.5.1.Test Procedures

The steps for the first option are as follows:
a) Set analyzer center frequency to channel center frequency
b) Set RBW to100kHz
c) Set VBW to 300kHz
d) Detector = peak.
e) Trace mode = max hold
f) Sweep time = auto couple
g) Allow the trace to fully stabilize
h) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by6 dB relative to the maximum level measured in the fundamental emission
The automatic bandwidth measurement capability of an instrument may be employed using the X dB bandwidth mode with X set to 6 dB, if the functionality described in 11.8.1 (i.e., RBW = 100 kHz, VBW ≥ 3 ×RBW, and peak detector with maximum hold) is implemented by the instrumentation function. When using this capability, care shall be taken so that the bandwidth measurement is not influenced by any intermediate power nulls in the fundamental emission that might be ≥6 dB.

3.5.2.Test Setup Layout

Refer to chapter 2.6.1 in this report.

3.5.3.Test Result

Refer to Annex A.4 in this report.

3.6. Conducted Spurious Emissions and Band Edge

3.6.1. 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.

3.6.2. Test Procedures

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

3.6.3. Test Setup Layout

Refer to chapter 2.6.1 in this report.

3.6.4. Test Result

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

3.7. Power Spectral Density

3.7.1. 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.

3.7.2. 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 3kHz
d) Set VBW to 10kHz
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 within the RBW

3.7.3. Test Setup Layout

Refer to chapter 2.6.1 in this report.

3.7.4. Test Result

Refer to Annex A.7 in this report.

3.8. Conducted Emission

3.8.1. 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.

3.8.2. 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.

3.8.3. Test Setup Layout

Refer to chapter 2.6.2 in this report.

3.8.4. Test Result

Refer to Annex A.8 in this report.

3.9. Restricted Frequency Bands

3.9.1. 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).

3.9.2. 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

3.9.3. Test Setup Layout

Refer to chapter 2.6.3 in this report.

3.9.4. Test Result

Refer to Annex A.9 in this report.

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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

3.10. Radiated Emission

3.10.1.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).

3.10.2.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.

3.10.3.Test Setup Layout

Refer to chapter 2.6.3 in this report.

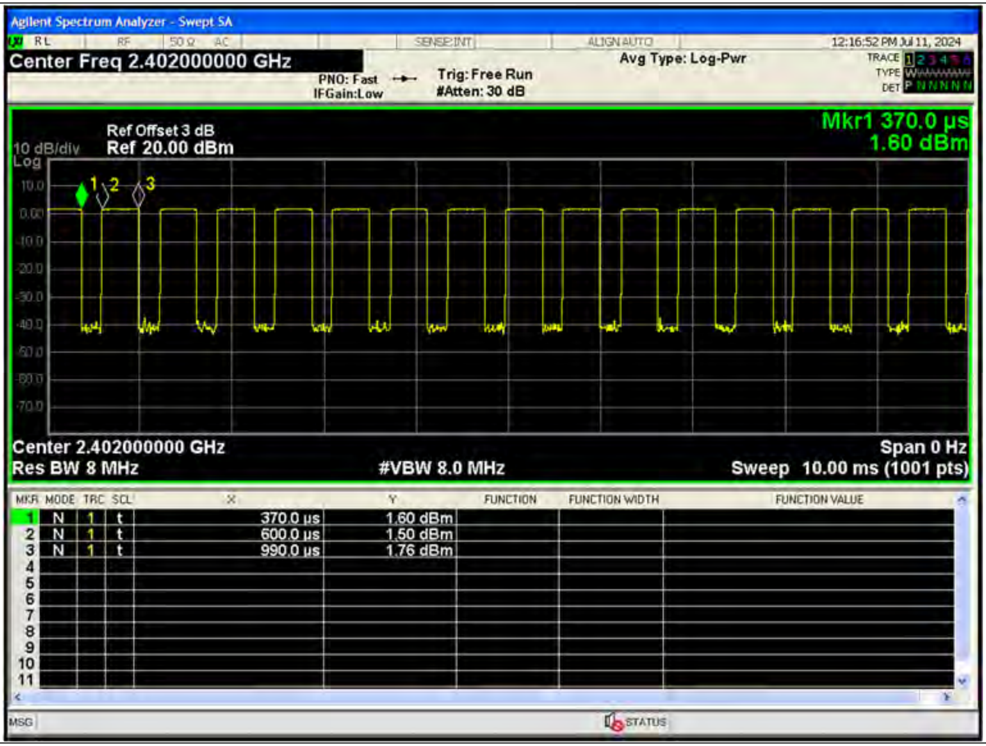
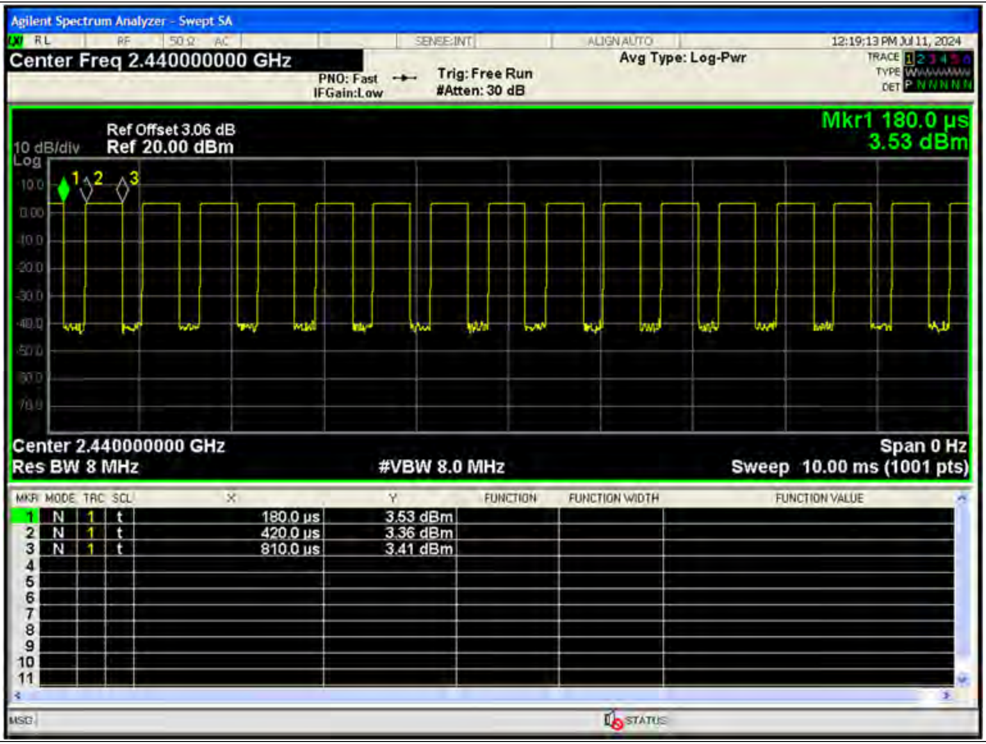
3.10.4.Test Result

Refer to Annex A.10 in this report.

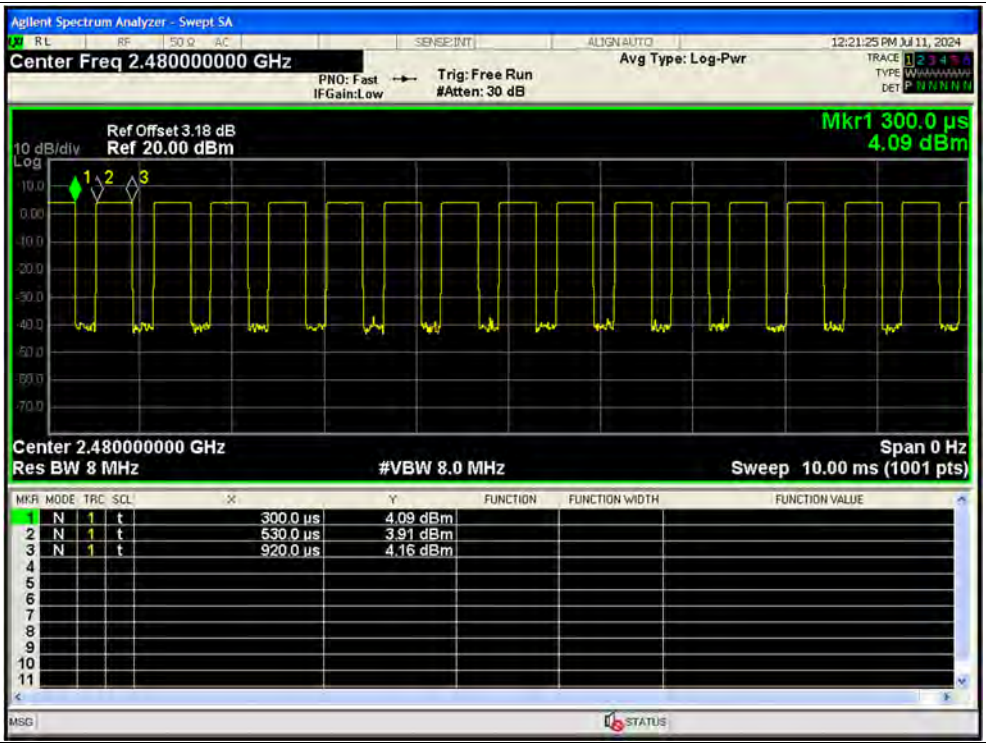
Annex A Test Data and Result

A.1. Duty Cycle of Test Signal

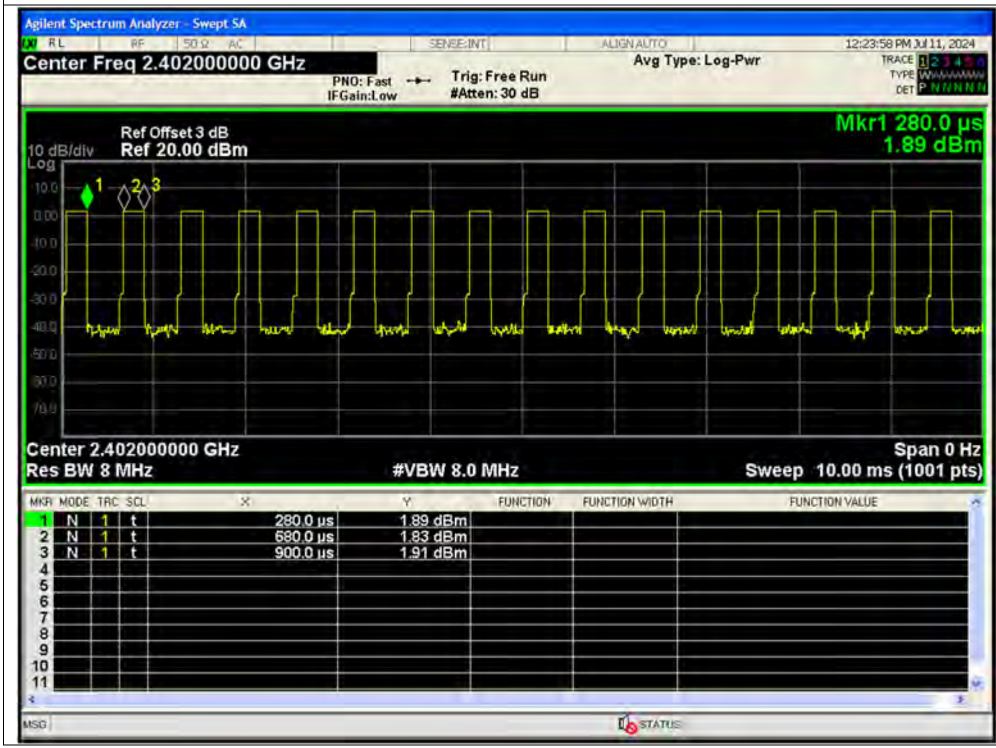
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	BLE 1M	2402	Ant1	62.9	2.01	2.56
NVNT	BLE 1M	2440	Ant1	61.9	2.08	2.56
NVNT	BLE 1M	2480	Ant1	62.9	2.01	2.56
NVNT	BLE 2M	2402	Ant1	35.48	4.5	4.55
NVNT	BLE 2M	2440	Ant1	36.51	4.38	4.35
NVNT	BLE 2M	2480	Ant1	35.48	4.5	4.55

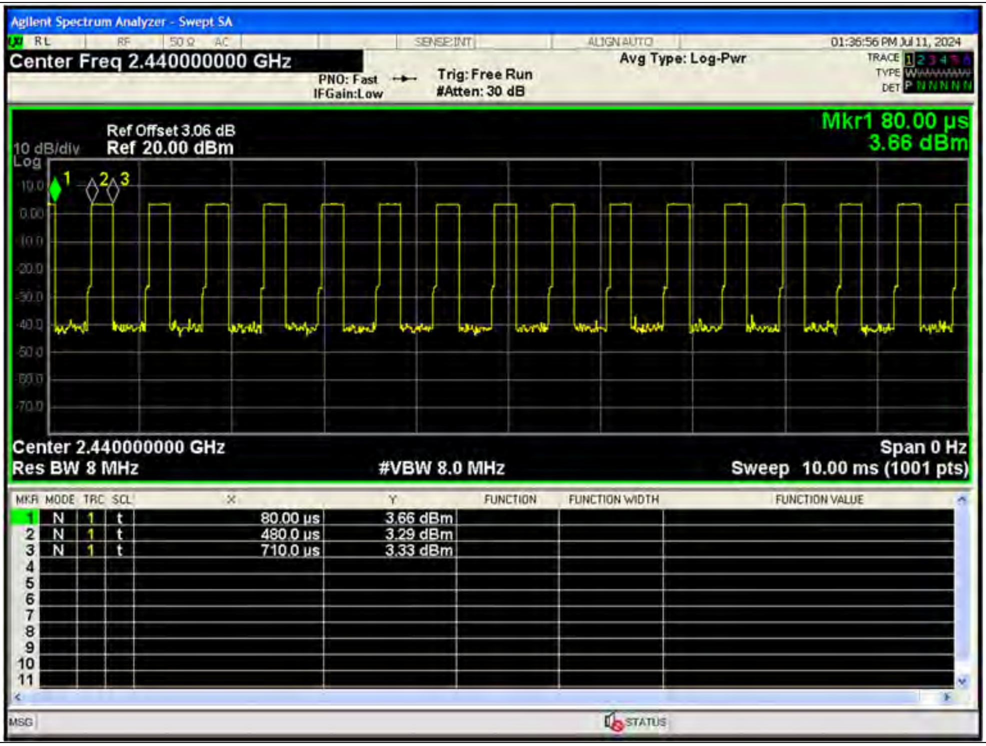
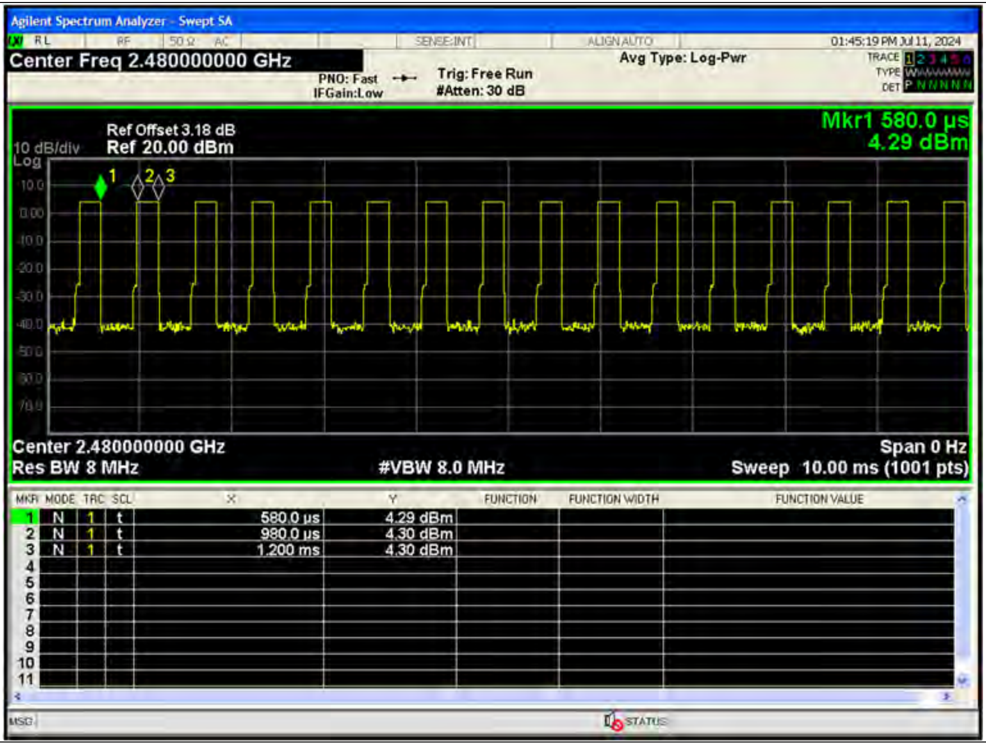
Test Graphs
Duty Cycle NVNT BLE 1M 2402MHz Ant1

Duty Cycle NVNT BLE 1M 2440MHz Ant1


Duty Cycle NVNT BLE 1M 2480MHz Ant1



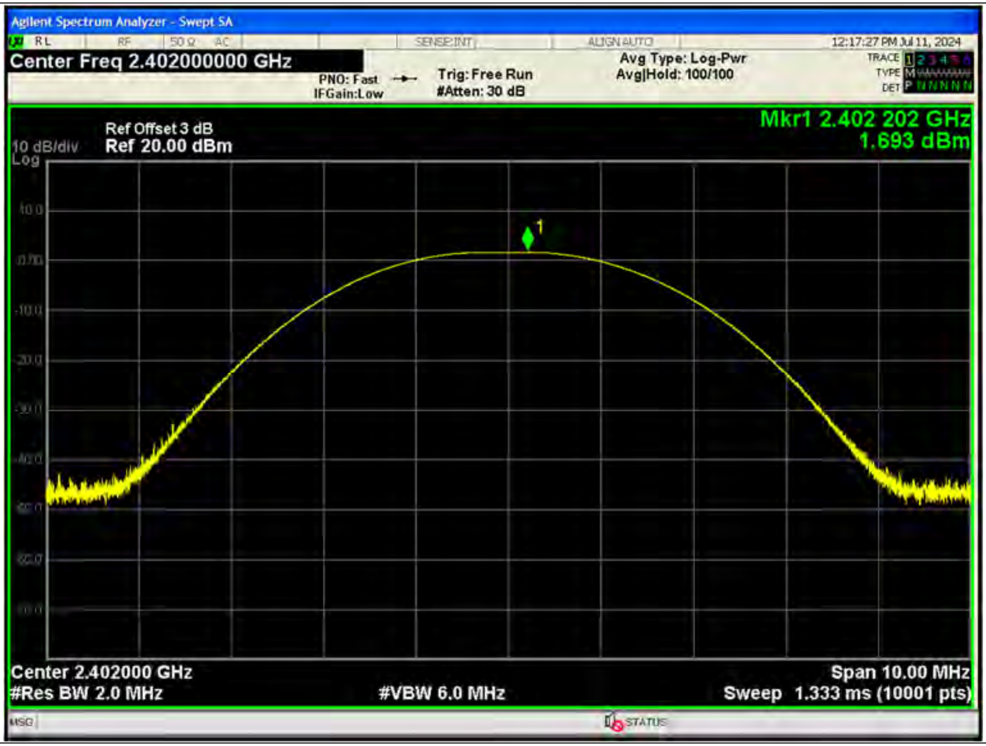
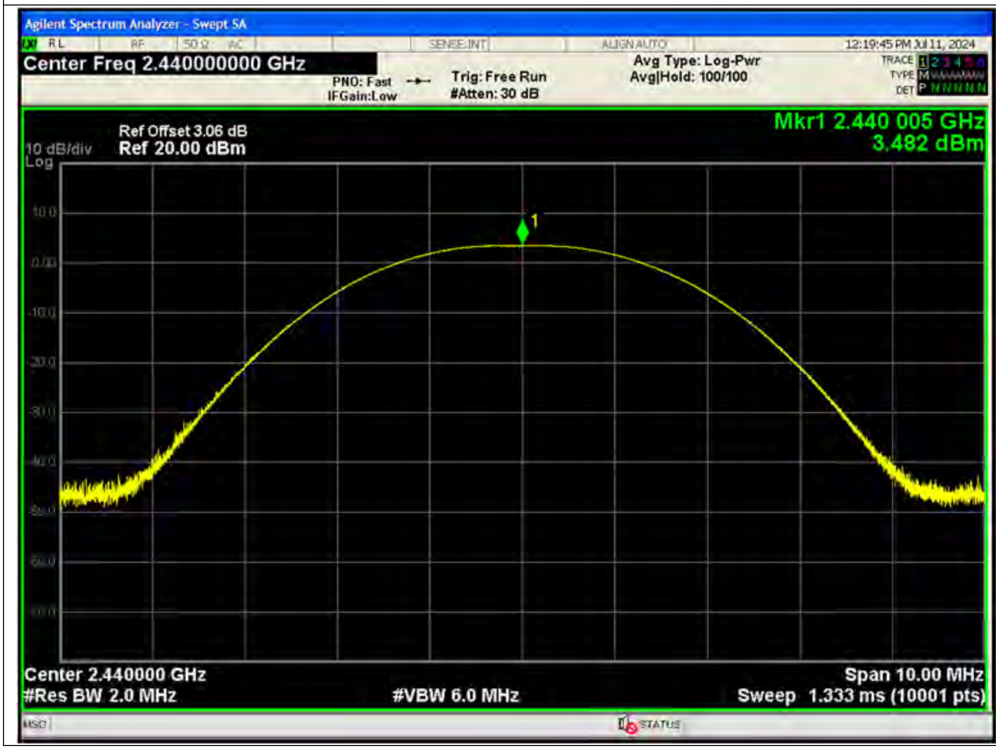
Duty Cycle NVNT BLE 2M 2402MHz Ant1



Duty Cycle NVNT BLE 2M 2440MHz Ant1

Duty Cycle NVNT BLE 2M 2480MHz Ant1


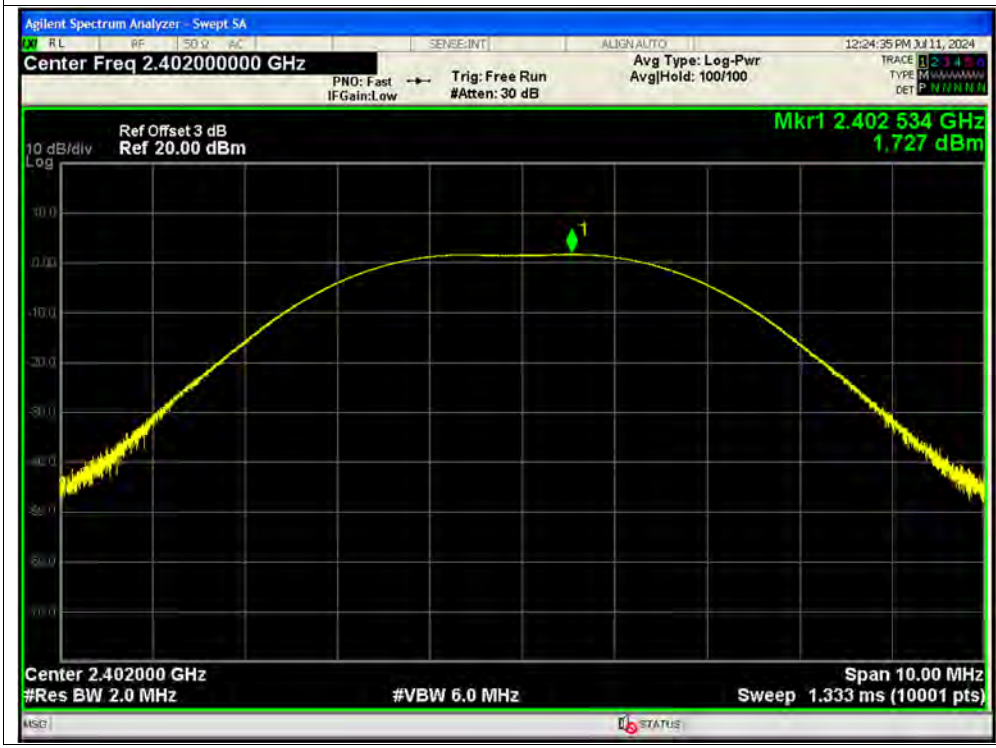
A.2. Maximum Peak Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Conducted Power (dBm)	Total Conducted Power (W)	Limit Conducted (dBm)	Verdict
NVNT	BLE 1M	2402	Ant1	1.69	0	1.69	0.00148	30	Pass
NVNT	BLE 1M	2440	Ant1	3.48	0	3.48	0.00223	30	Pass
NVNT	BLE 1M	2480	Ant1	4.14	0	4.14	0.00259	30	Pass
NVNT	BLE 2M	2402	Ant1	1.73	0	1.73	0.00149	30	Pass
NVNT	BLE 2M	2440	Ant1	3.49	0	3.49	0.00223	30	Pass
NVNT	BLE 2M	2480	Ant1	4.13	0	4.13	0.00259	30	Pass

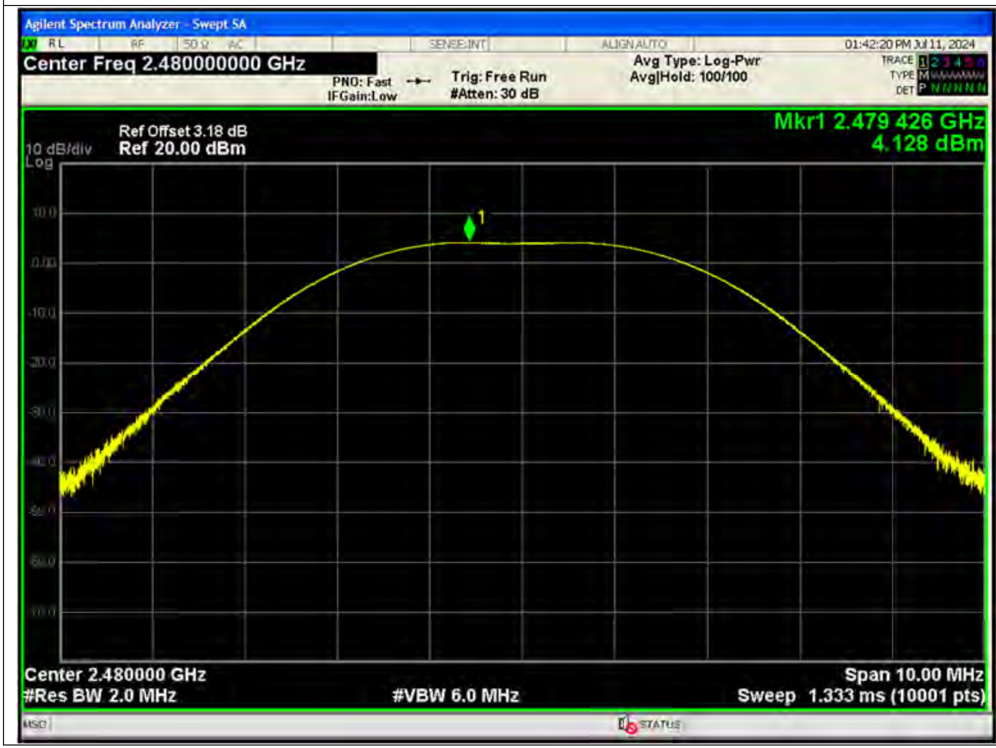
Test Graphs
Peak Power NVNT BLE 1M 2402MHz Ant1

Peak Power NVNT BLE 1M 2440MHz Ant1


Peak Power NVNT BLE 1M 2480MHz Ant1

Peak Power NVNT BLE 2M 2402MHz Ant1



Peak Power NVNT BLE 2M 2440MHz Ant1

Peak Power NVNT BLE 2M 2480MHz Ant1


A.3. Maximum Average Conducted Output Power

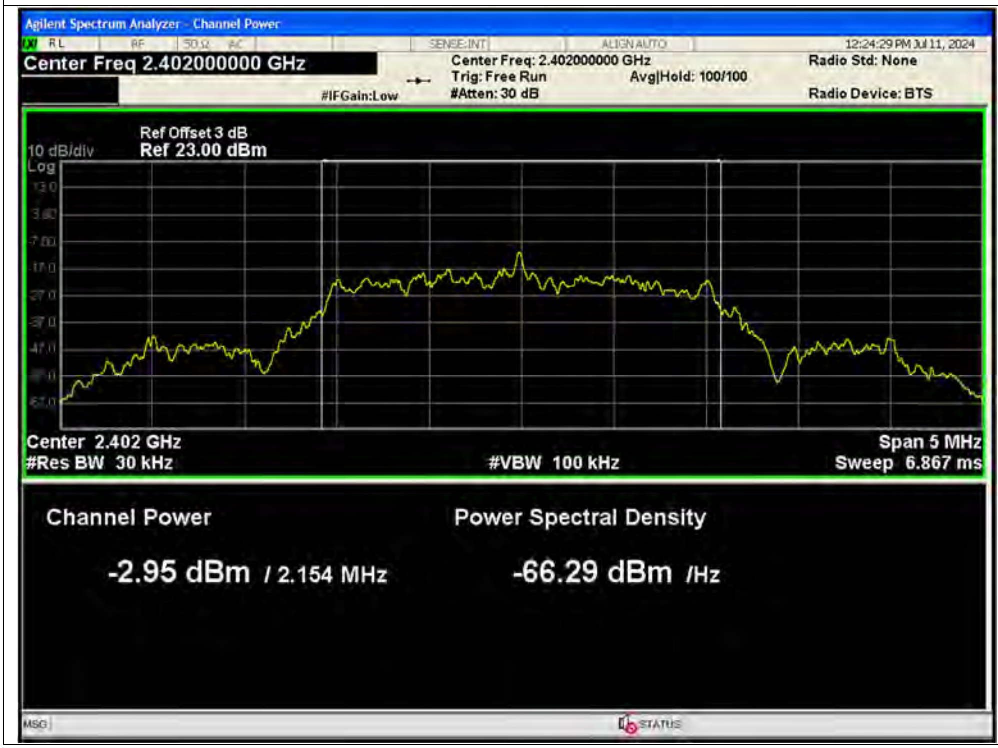
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Conducted Power (dBm)	Total Conducted Power (W)	Limit Conducted (dBm)	Verdict
NVNT	BLE 1M	2402	Ant1	-0.53	2.01	1.48	0.00141	30	Pass
NVNT	BLE 1M	2440	Ant1	1.27	2.08	3.35	0.00216	30	Pass
NVNT	BLE 1M	2480	Ant1	1.81	2.01	3.82	0.00241	30	Pass
NVNT	BLE 2M	2402	Ant1	-2.95	4.5	1.55	0.00143	30	Pass
NVNT	BLE 2M	2440	Ant1	-1.54	4.38	2.84	0.00192	30	Pass
NVNT	BLE 2M	2480	Ant1	-0.66	4.5	3.84	0.00242	30	Pass

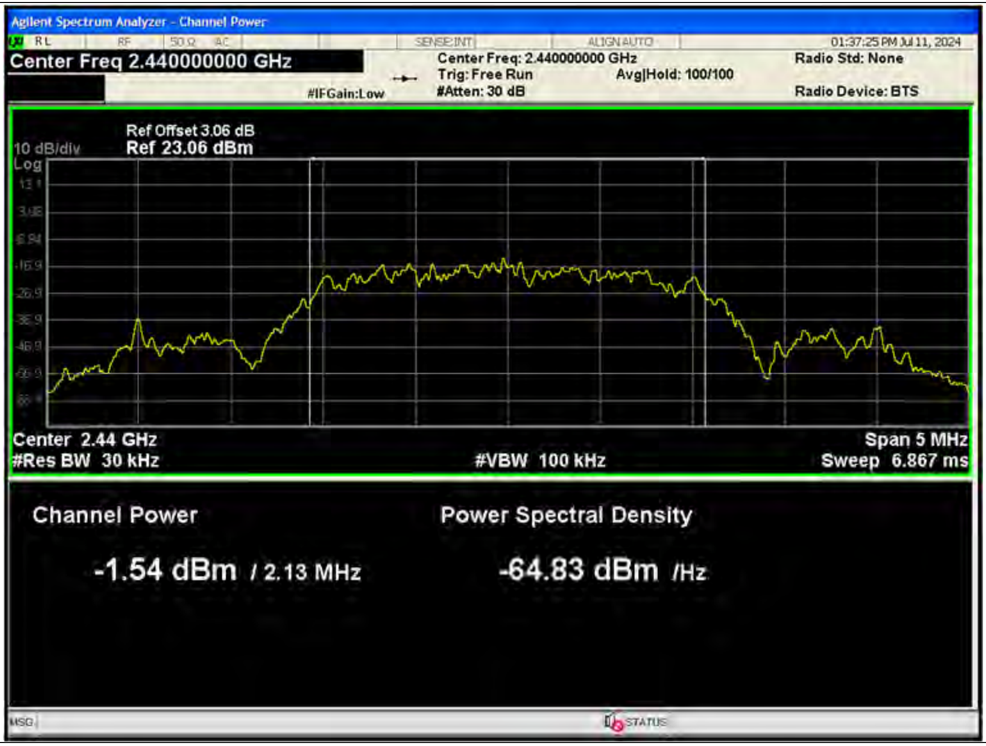
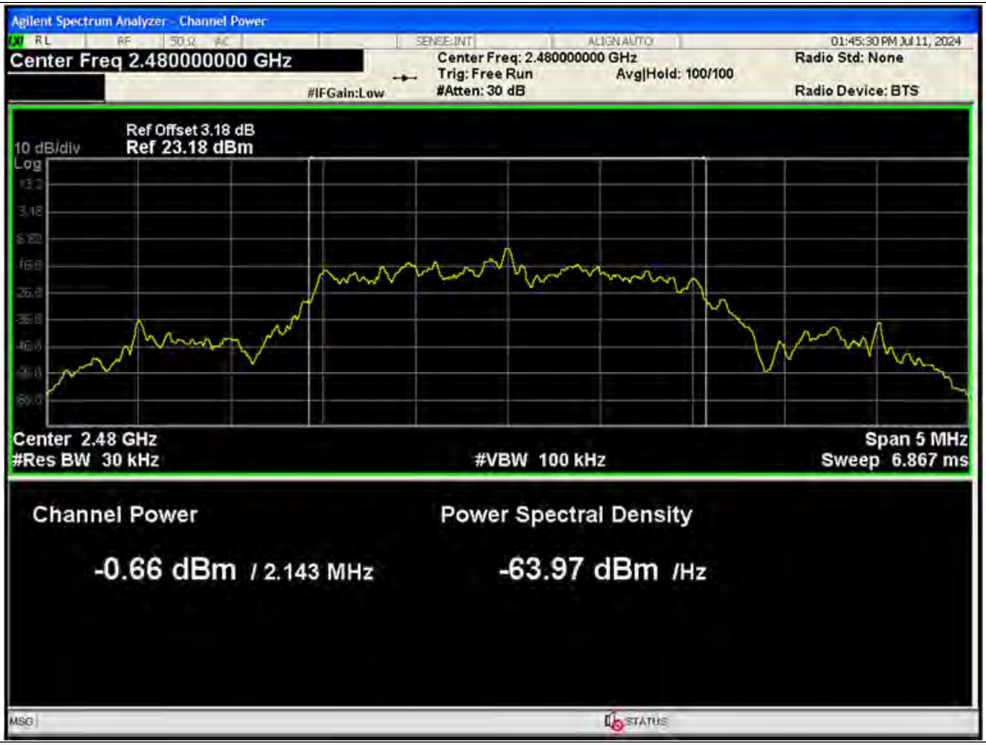
Test Graphs
Average Power NVNT BLE 1M 2402MHz Ant1

Average Power NVNT BLE 1M 2440MHz Ant1

Average Power NVNT BLE 1M 2480MHz Ant1

Average Power NVNT BLE 2M 2402MHz Ant1



Average Power NVNT BLE 2M 2440MHz Ant1

Average Power NVNT BLE 2M 2480MHz Ant1


A.4. 6 dB Bandwidth

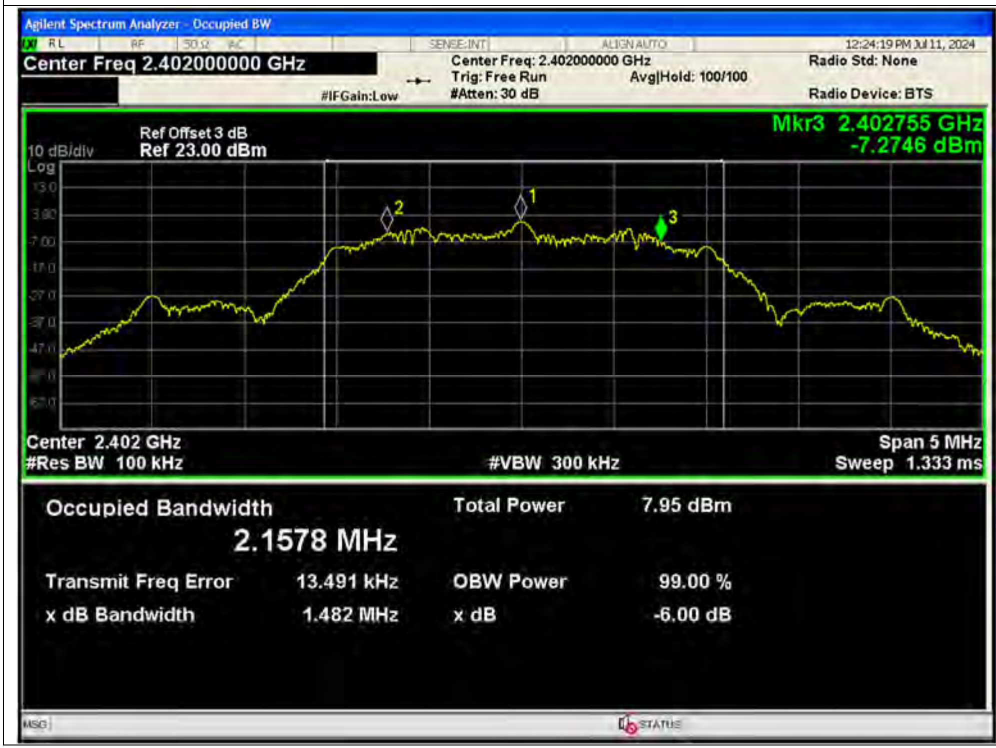
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1M	2402	Ant1	0.709	0.5	Pass
NVNT	BLE 1M	2440	Ant1	0.699	0.5	Pass
NVNT	BLE 1M	2480	Ant1	0.699	0.5	Pass
NVNT	BLE 2M	2402	Ant1	1.482	0.5	Pass
NVNT	BLE 2M	2440	Ant1	1.482	0.5	Pass
NVNT	BLE 2M	2480	Ant1	1.468	0.5	Pass

Test Graphs
-6dB Bandwidth NVNT BLE 1M 2402MHz Ant1

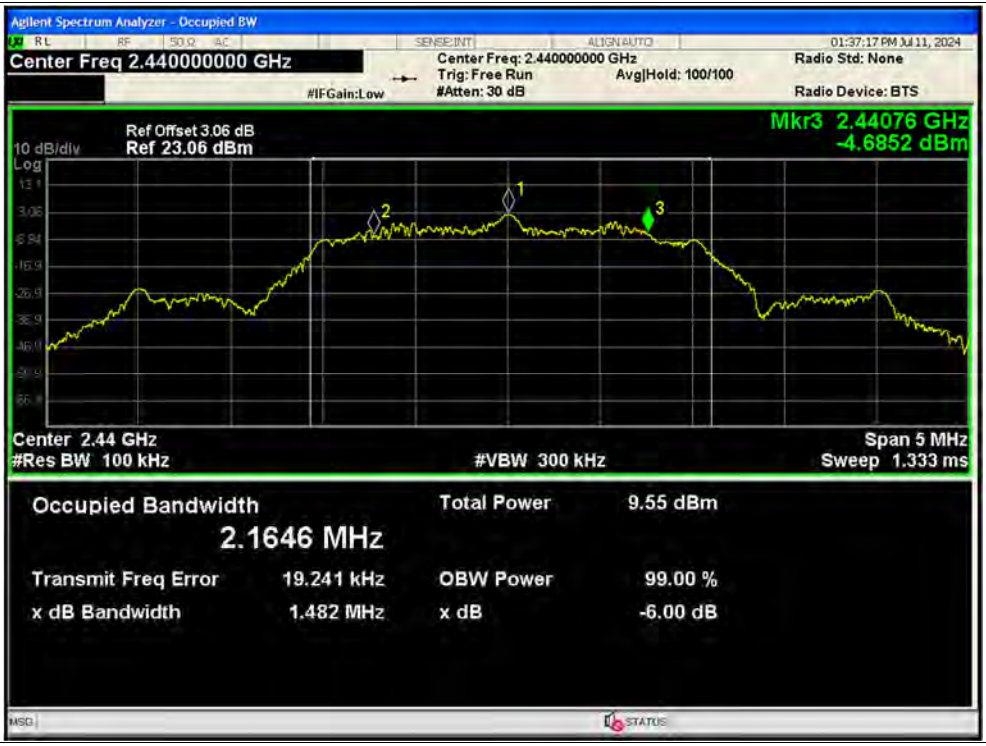
-6dB Bandwidth NVNT BLE 1M 2440MHz Ant1

-6dB Bandwidth NVNT BLE 1M 2480MHz Ant1

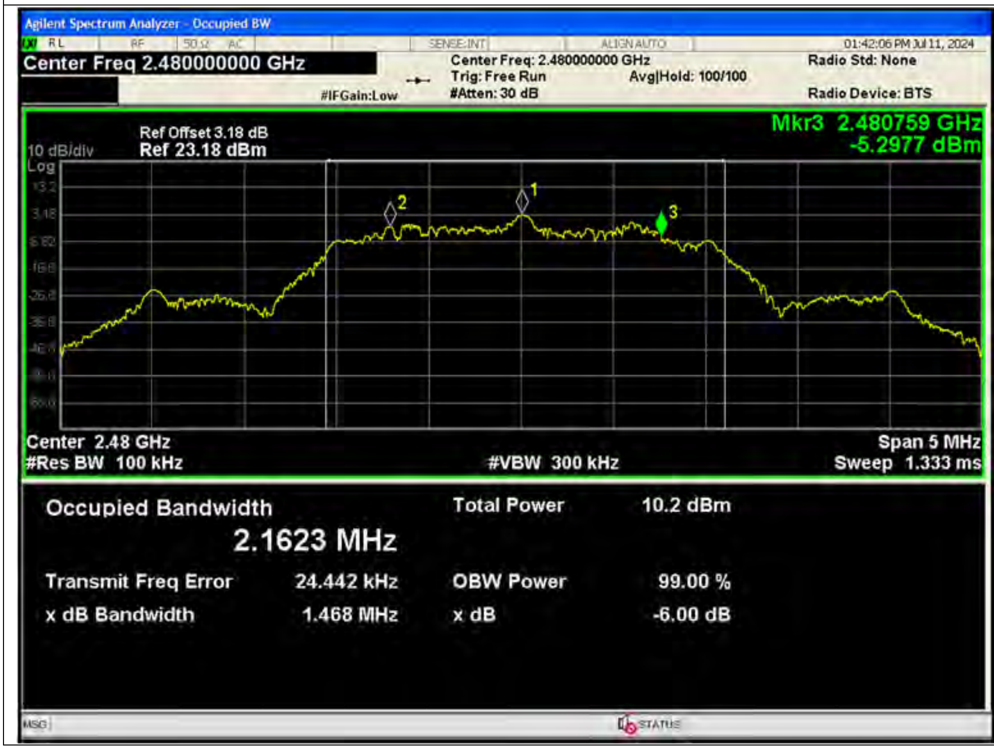
-6dB Bandwidth NVNT BLE 2M 2402MHz Ant1



-6dB Bandwidth NVNT BLE 2M 2440MHz Ant1



-6dB Bandwidth NVNT BLE 2M 2480MHz Ant1

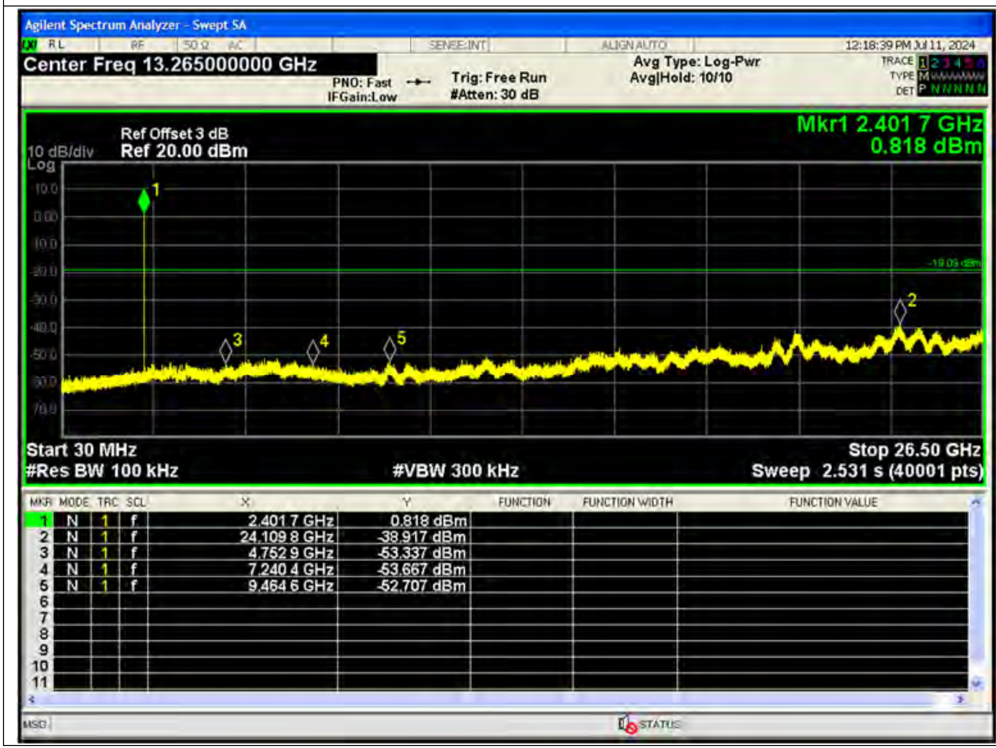


A.5. Conducted Spurious Emissions

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant1	-39.82	-20	Pass
NVNT	BLE 1M	2440	Ant1	-42.31	-20	Pass
NVNT	BLE 1M	2480	Ant1	-42.13	-20	Pass
NVNT	BLE 2M	2402	Ant1	-39.49	-20	Pass
NVNT	BLE 2M	2440	Ant1	-40.68	-20	Pass
NVNT	BLE 2M	2480	Ant1	-41.52	-20	Pass

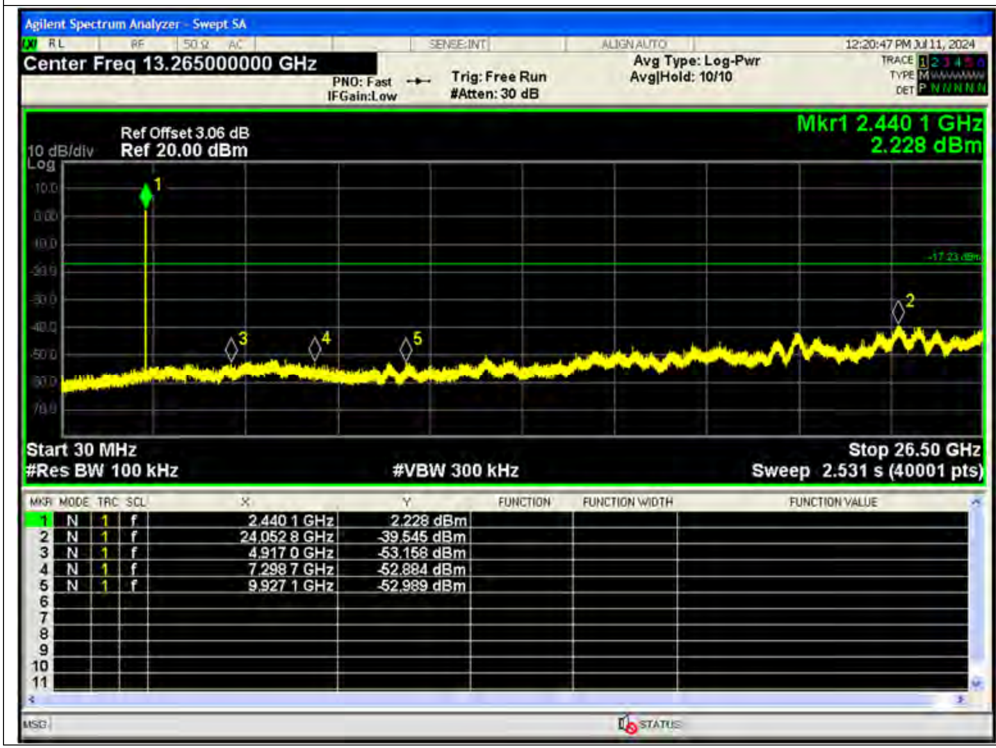
Test Graphs
Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Ref

Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Emission

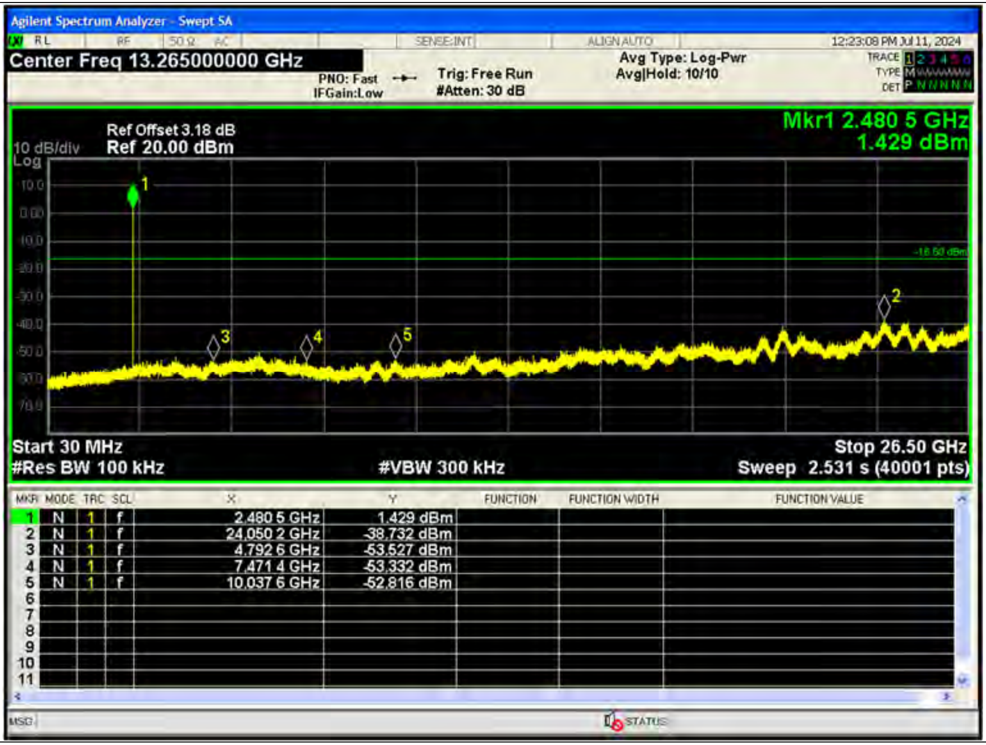


Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Ref

Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Emission



Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Ref

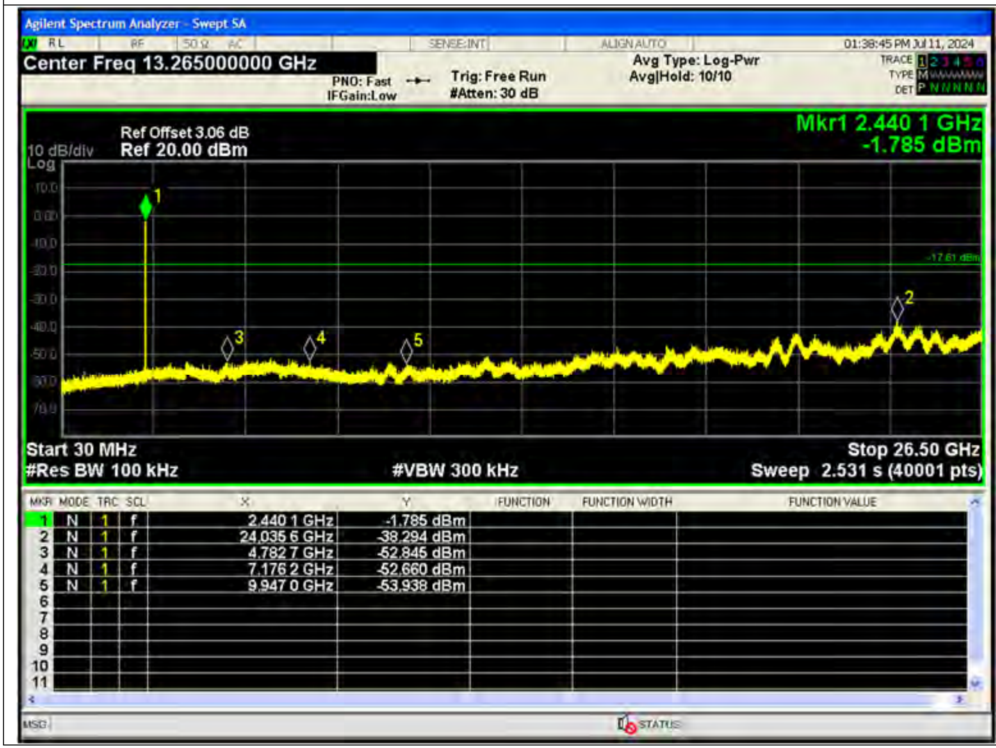
Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Emission


Tx. Spurious NVNT BLE 2M 2402MHz Ant1 Ref

Tx. Spurious NVNT BLE 2M 2402MHz Ant1 Emission


MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.402 4 GHz	-3.547 dBm			
2	N	1	f	24.010 5 GHz	-38.894 dBm			
3	N	1	f	4.773 4 GHz	-52.820 dBm			
4	N	1	f	7.133 2 GHz	-53.557 dBm			
5	N	1	f	9.445 4 GHz	-52.986 dBm			
6								
7								
8								
9								
10								
11								

Tx. Spurious NVNT BLE 2M 2440MHz Ant1 Ref

Tx. Spurious NVNT BLE 2M 2440MHz Ant1 Emission


Tx. Spurious NVNT BLE 2M 2480MHz Ant1 Ref

Tx. Spurious NVNT BLE 2M 2480MHz Ant1 Emission

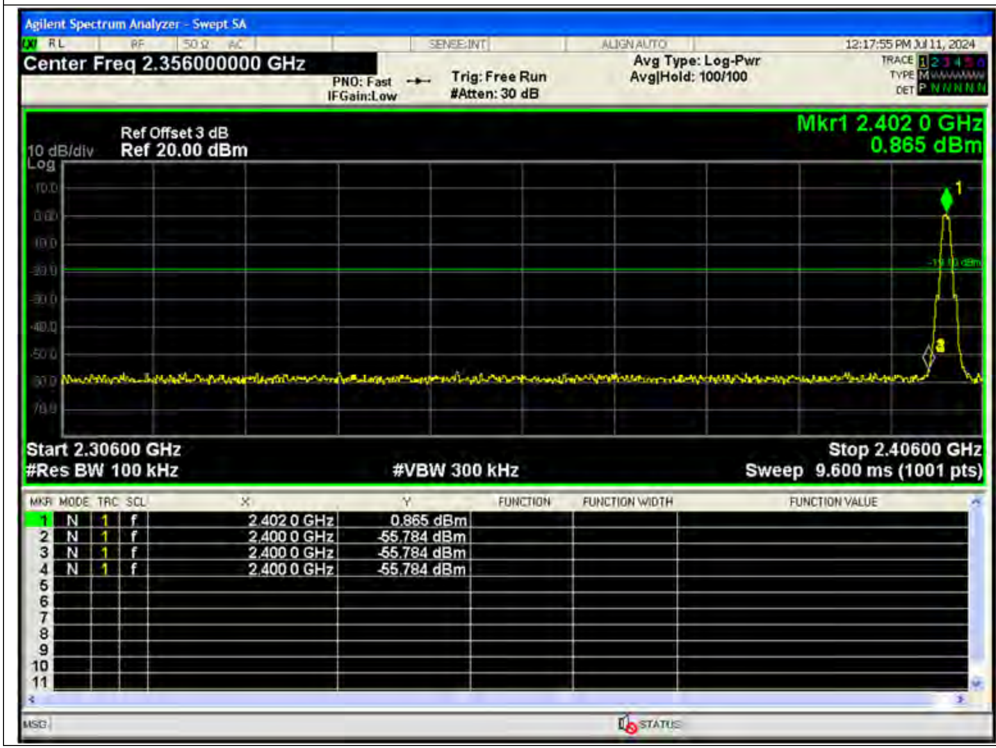
MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.479 8 GHz	-1.077 dBm			
2	N	1	f	24.655 0 GHz	-38.442 dBm			
3	N	1	f	4.901 1 GHz	-52.598 dBm			
4	N	1	f	7.285 4 GHz	-53.763 dBm			
5	N	1	f	9.968 2 GHz	-53.157 dBm			

A.6. Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant1	-56.68	-20	Pass
NVNT	BLE 1M	2480	Ant1	-59.15	-20	Pass
NVNT	BLE 2M	2402	Ant1	-27.41	-20	Pass
NVNT	BLE 2M	2480	Ant1	-57.31	-20	Pass

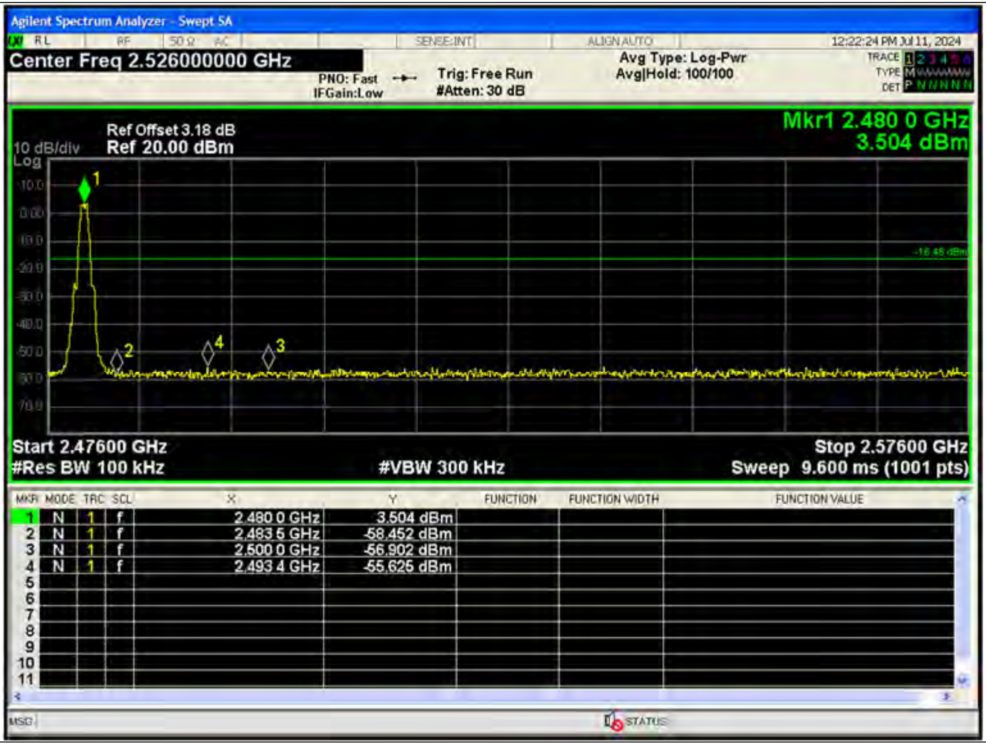
Test Graphs
Band Edge NVNT BLE 1M 2402MHz Ant1 Ref

Band Edge NVNT BLE 1M 2402MHz Ant1 Emission



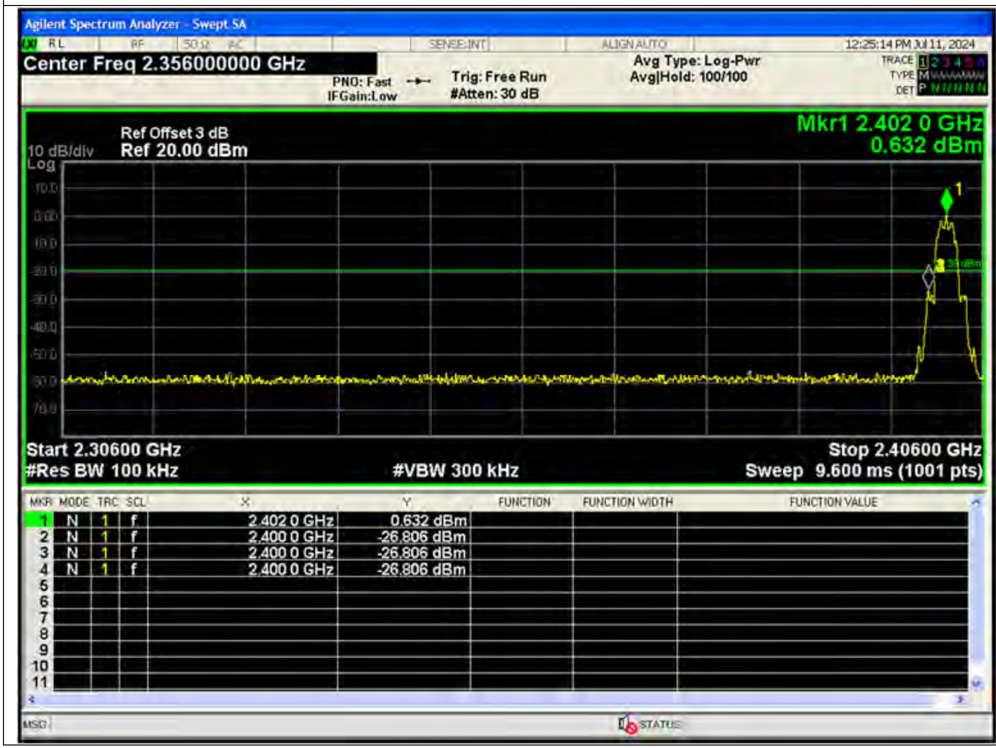
Band Edge NVNT BLE 1M 2480MHz Ant1 Ref

Band Edge NVNT BLE 1M 2480MHz Ant1 Emission



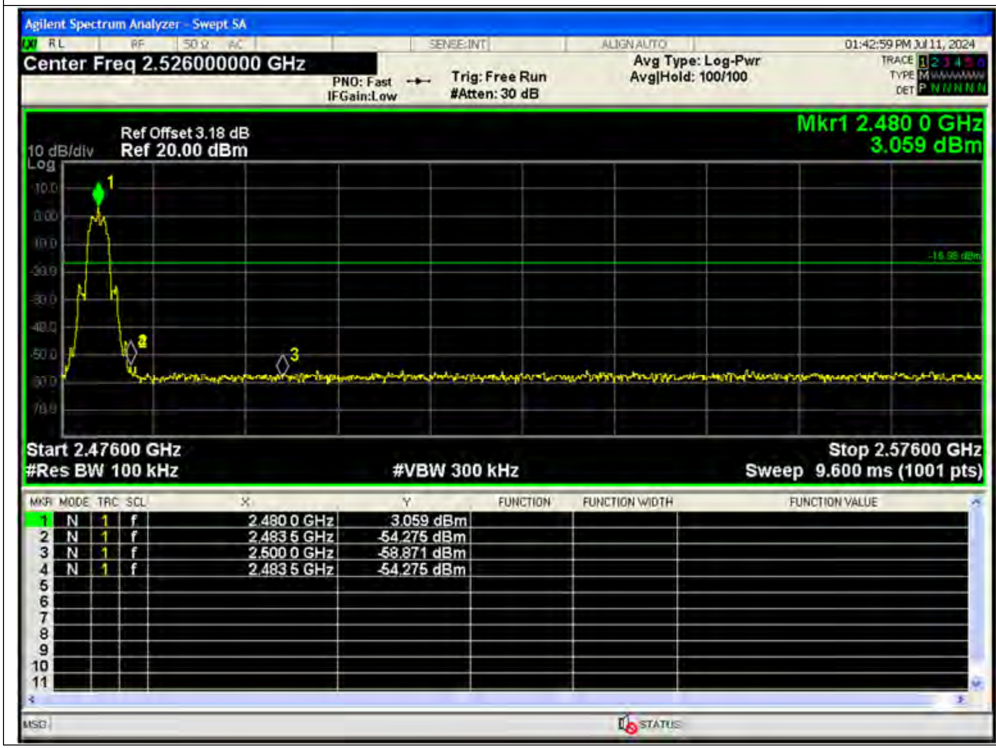
Band Edge NVNT BLE 2M 2402MHz Ant1 Ref

Band Edge NVNT BLE 2M 2402MHz Ant1 Emission



Band Edge NVNT BLE 2M 2480MHz Ant1 Ref

Band Edge NVNT BLE 2M 2480MHz Ant1 Emission



A.7. Power Spectral Density

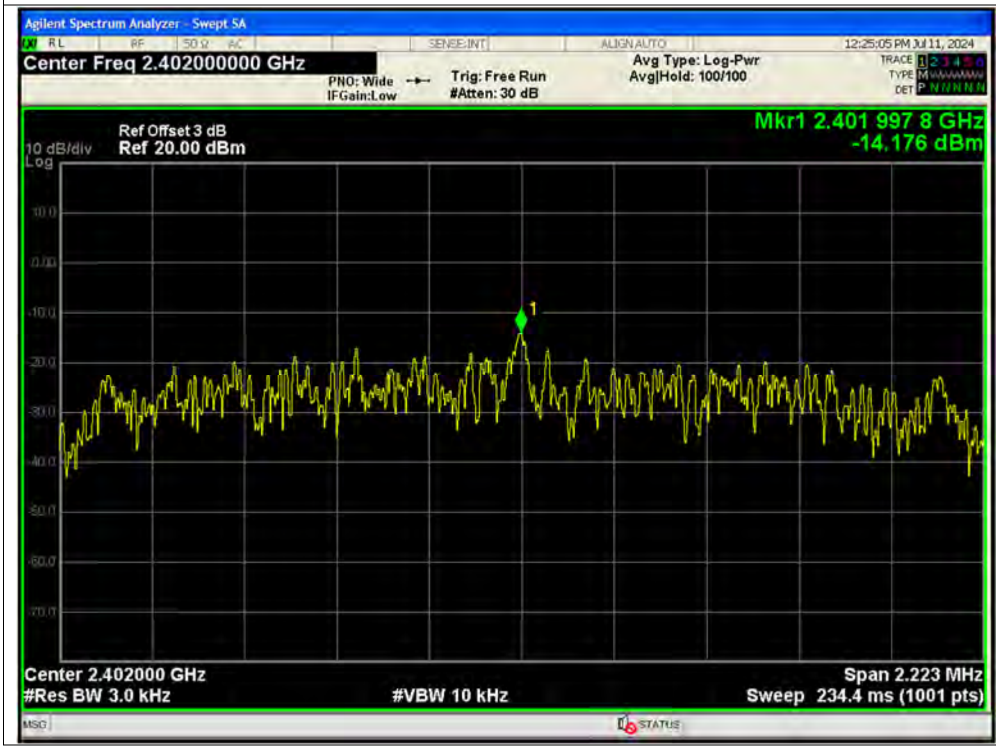
Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Duty Factor (dB)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	BLE 1M	2402	Ant1	-12.56	0	-12.56	8	Pass
NVNT	BLE 1M	2440	Ant1	-10.76	0	-10.76	8	Pass
NVNT	BLE 1M	2480	Ant1	-10.11	0	-10.11	8	Pass
NVNT	BLE 2M	2402	Ant1	-14.18	0	-14.18	8	Pass
NVNT	BLE 2M	2440	Ant1	-12.43	0	-12.43	8	Pass
NVNT	BLE 2M	2480	Ant1	-11.71	0	-11.71	8	Pass

Test Graphs
PSD NVNT BLE 1M 2402MHz Ant1

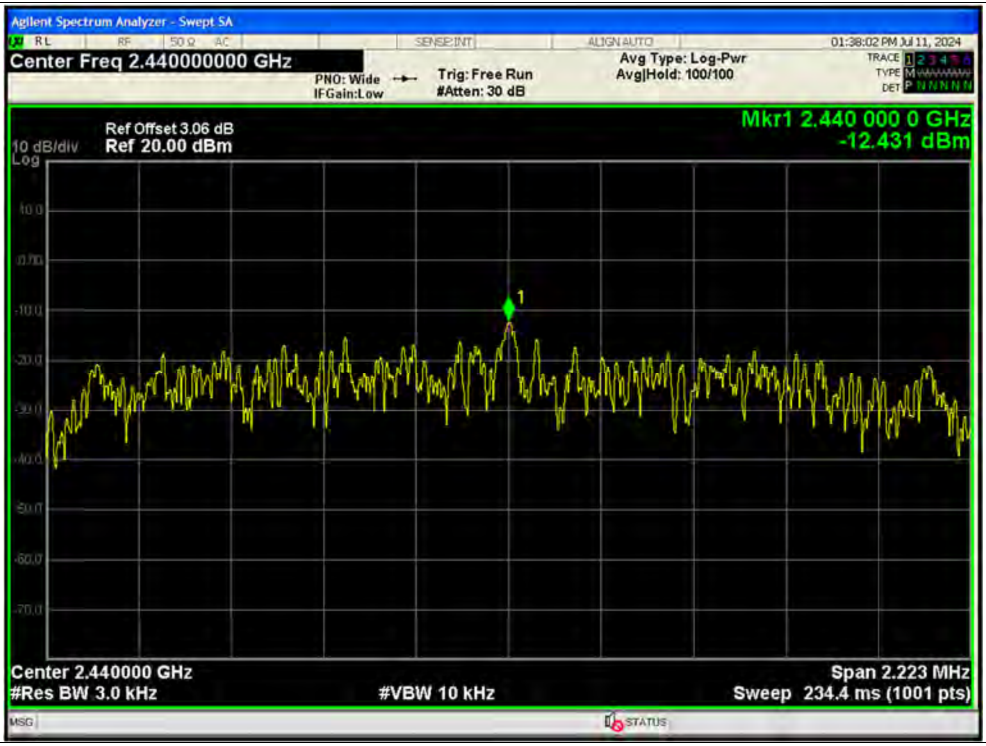
PSD NVNT BLE 1M 2440MHz Ant1


PSD NVNT BLE 1M 2480MHz Ant1

PSD NVNT BLE 2M 2402MHz Ant1



PSD NVNT BLE 2M 2440MHz Ant1



PSD NVNT BLE 2M 2480MHz 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 line + PC + BT TX

Test voltage: AC 120V/60Hz

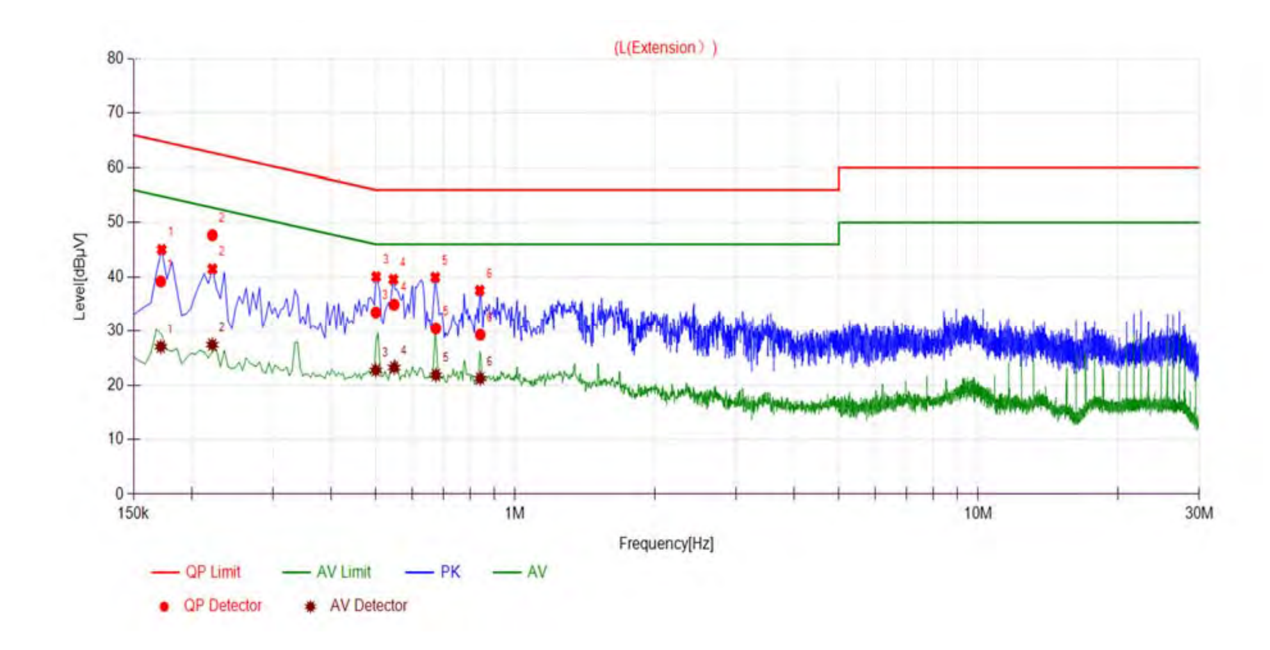
The measurement results are obtained as below:

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

U_R: Receiver Reading

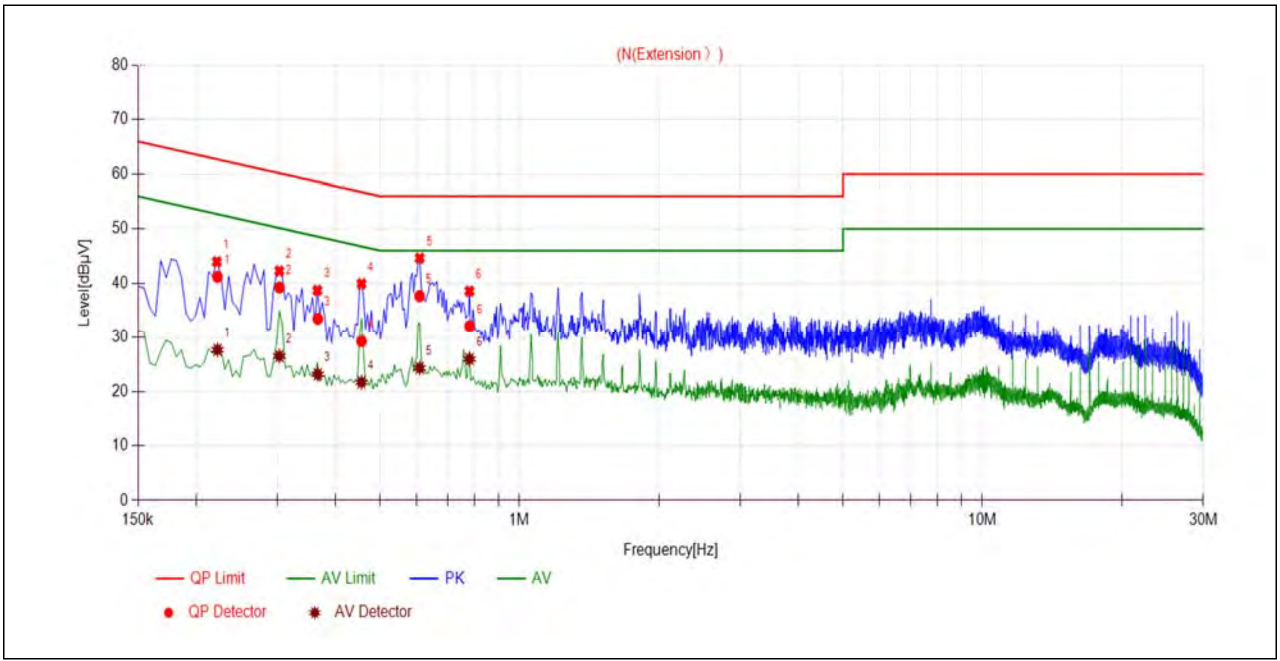
A_{Factor}: Voltage division factor of LISN

B. Test Plot:



(L Phase)

No.	Fre. (MHz)	Emission Level (dBμV)		Limit (dBμV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.1717	39.17	27.07	64.88	54.88	Line	PASS
2	0.2218	47.69	27.45	62.75	52.75		PASS
3	0.5002	33.45	22.74	56.00	46.00		PASS
4	0.5480	34.90	23.24	56.00	46.00		PASS
5	0.6742	30.48	21.85	56.00	46.00		PASS
6	0.8405	29.30	21.21	56.00	46.00		PASS



(N Phase)

No.	Fre. (MHz)	Emission Level (dBμV)		Limit (dBμV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.2227	41.21	27.68	62.72	52.72	Neutral	PASS
2	0.3029	39.22	26.51	60.16	50.16		PASS
3	0.3667	33.43	23.15	58.58	48.58		PASS
4	0.4558	29.29	21.68	56.77	46.77		PASS
5	0.6086	37.64	24.32	56.00	46.00		PASS
6	0.7805	32.08	25.97	56.00	46.00		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 [dBμV/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

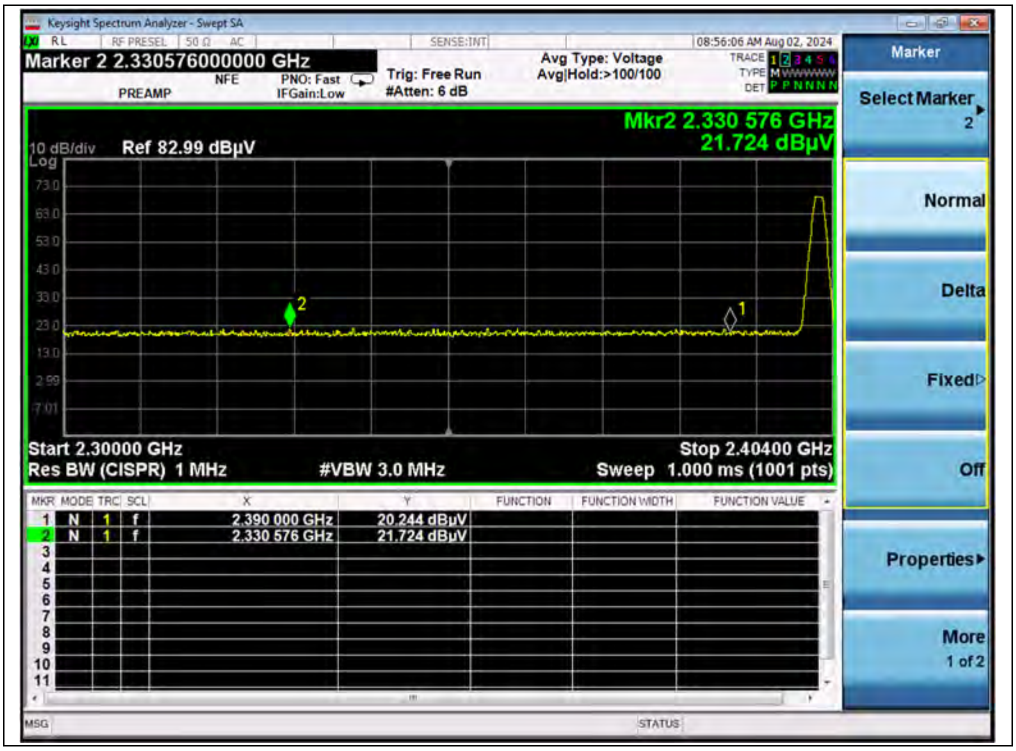
G_{preamp}: Preamplifier Gain

A_{Factor}: Antenna Factor at 3m

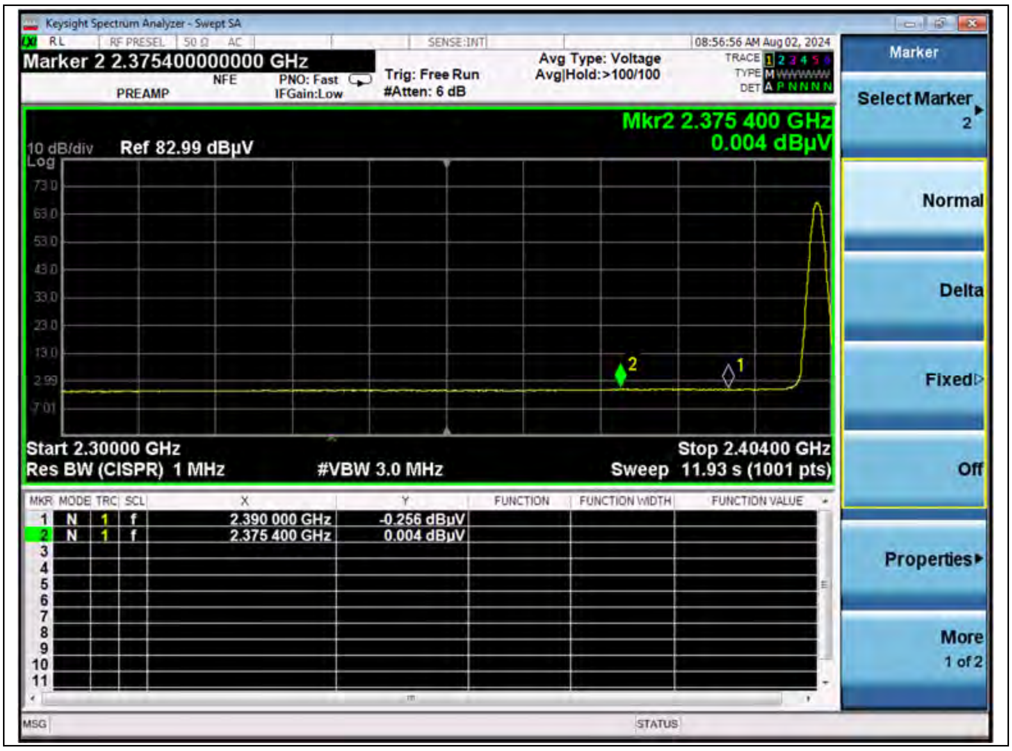
Note: Restricted Frequency Bands were performed when antenna was at vertical and horizontal polarity, and only the worse test condition (vertical) was recorded in this test report.

1Mbps

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
0	2330.58	PK	21.72	6.74	27.20	55.66	74	PASS
0	2375.40	AV	0.00	6.74	27.20	33.94	54	PASS
39	2485.56	PK	22.25	6.74	27.20	56.19	74	PASS
39	2483.50	AV	0.22	6.74	27.20	34.16	54	PASS

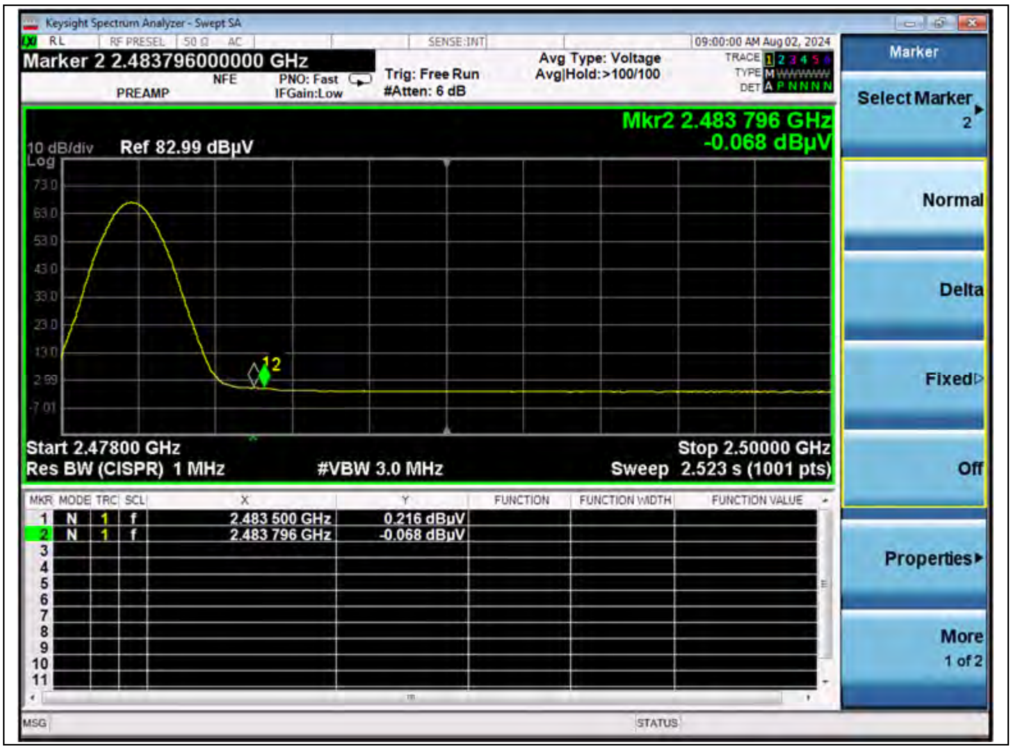


(PEAK, Channel 0)



(AVERAGE, Channel 0)

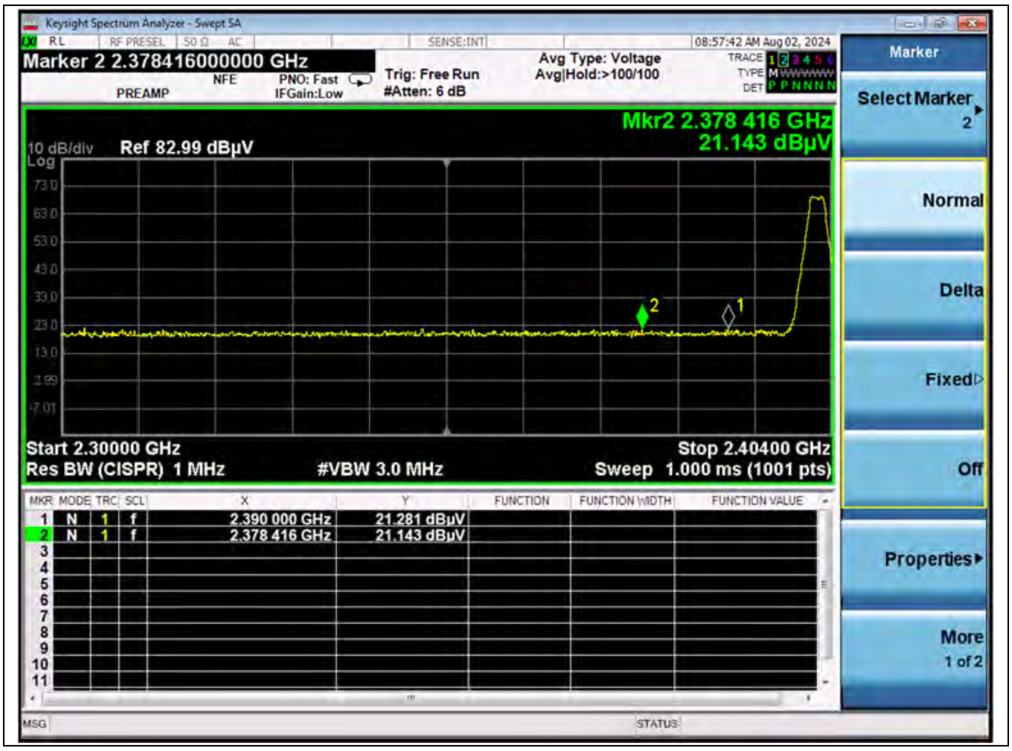
(PEAK, Channel 39)



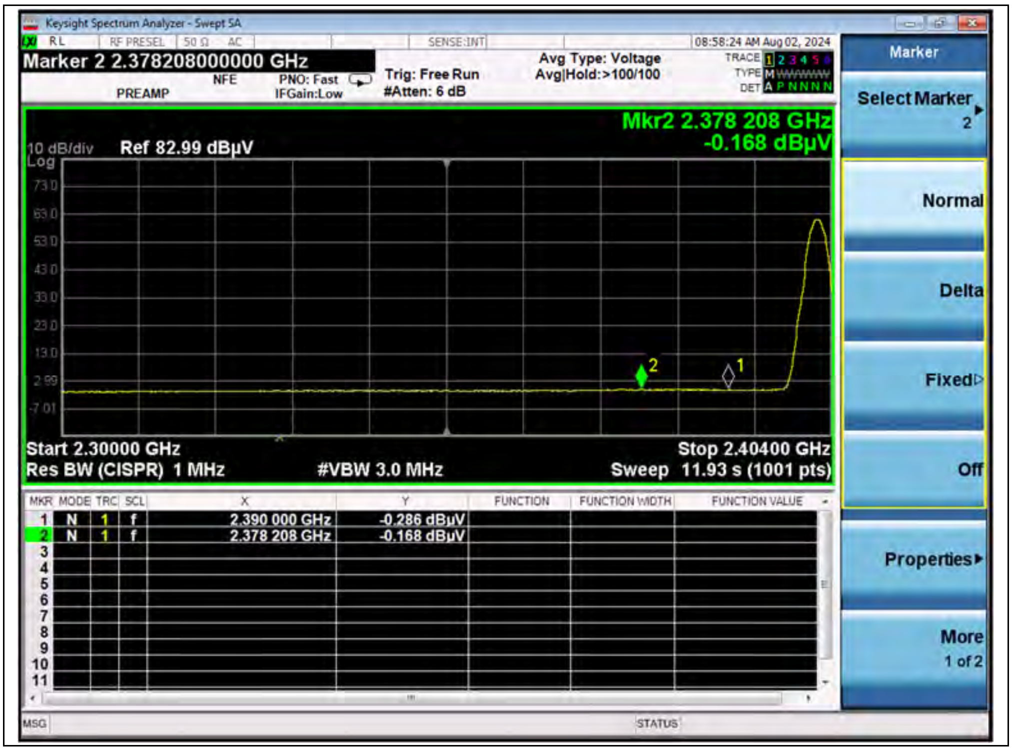
(AVERAGE, Channel 39)

2Mbps

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
0	2390.00	PK	21.28	6.74	27.20	55.22	74	PASS
0	2378.21	AV	-0.17	6.74	27.20	33.77	54	PASS
39	2483.69	PK	23.06	6.74	27.20	57.00	74	PASS
39	2483.50	AV	7.23	6.74	27.20	41.17	54	PASS

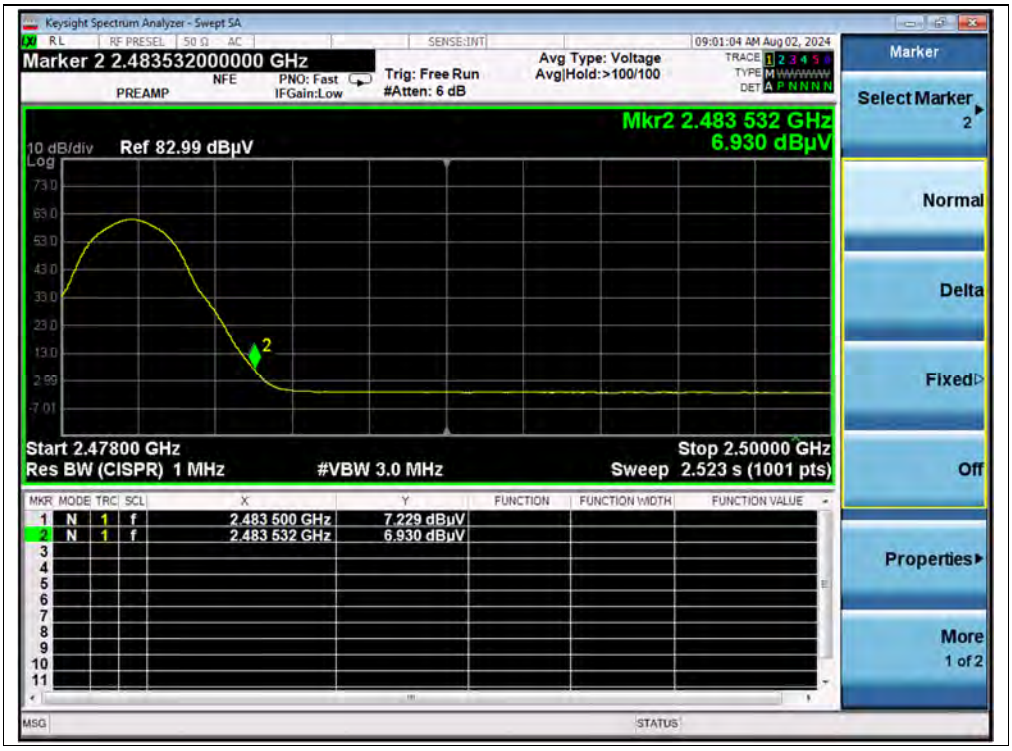


(PEAK, Channel 0)



(AVERAGE, Channel 0)

(PEAK, Channel 39)



(AVERAGE, Channel 39)

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 [dBμV/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.

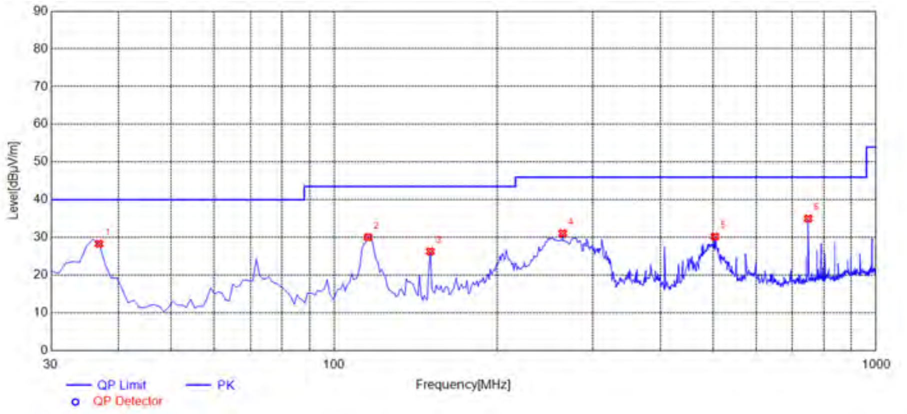
Note1: All radiated emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

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.

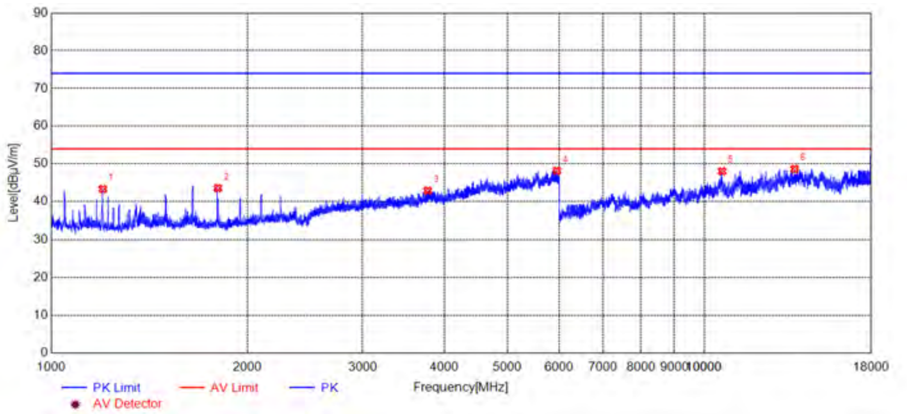
1Mbps

Plot for Channel 0



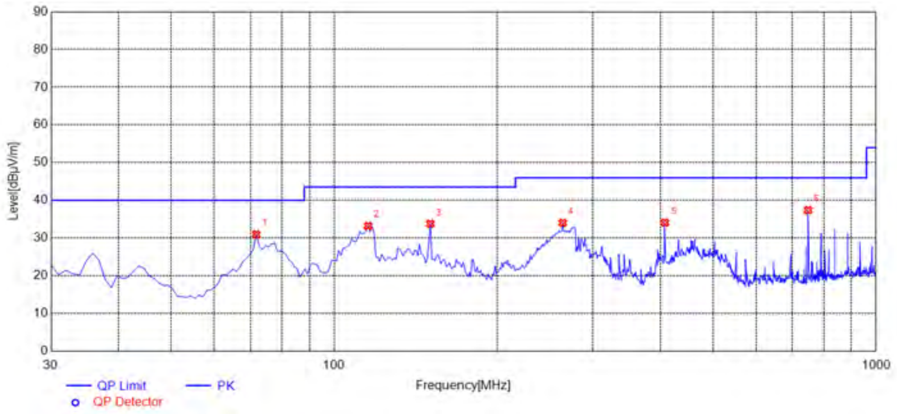
Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
36.7968	28.32	-37.75	40.00	Horizontal	PASS
115.4454	30.05	-32.43	43.50	Horizontal	PASS
150.4004	26.29	-35.18	43.50	Horizontal	PASS
264.0040	31.09	-30.12	46.00	Horizontal	PASS
503.8338	30.24	-24.27	46.00	Horizontal	PASS
749.4895	35.01	-20.71	46.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 1GHz)



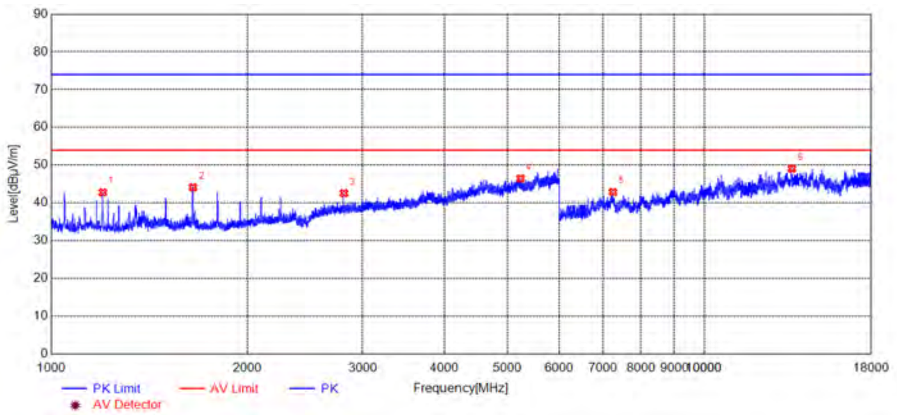
Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
1200.0200	43.35	-24.02	74.00	Horizontal	PASS
1799.5800	43.57	-22.76	74.00	Horizontal	PASS
3771.7772	42.92	-15.41	74.00	Horizontal	PASS
5946.4946	48.20	-8.01	74.00	Horizontal	PASS
10649.2649	48.05	3.01	74.00	Horizontal	PASS
13750.3750	48.67	7.20	74.00	Horizontal	PASS

(Antenna Horizontal, 1GHz to 18GHz)



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
71.7518	31.01	-33.75	40.00	Vertical	PASS
115.4454	33.21	-32.43	43.50	Vertical	PASS
150.4004	33.79	-35.18	43.50	Vertical	PASS
264.0040	34.04	-30.12	46.00	Vertical	PASS
407.7077	34.10	-26.06	46.00	Vertical	PASS
749.4895	37.43	-20.71	46.00	Vertical	PASS

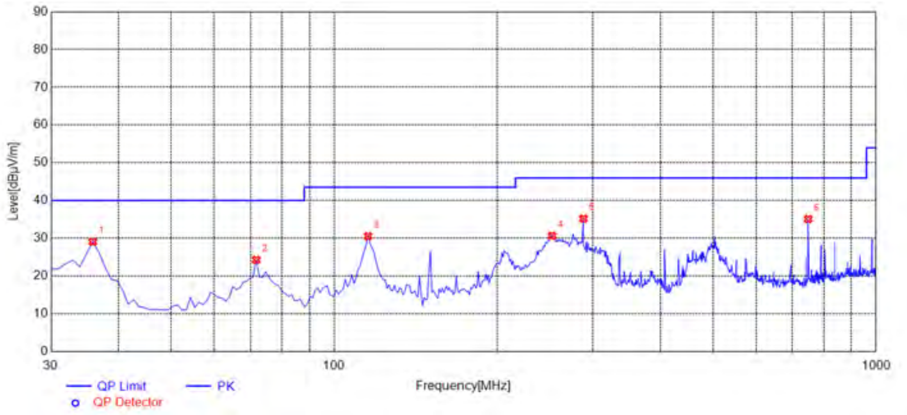
(Antenna Vertical, 30MHz to 1GHz)



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
1200.0200	42.81	-24.02	74.00	Vertical	PASS
1649.5650	44.15	-23.62	74.00	Vertical	PASS
2807.6808	42.59	-18.75	74.00	Vertical	PASS
5231.9232	46.50	-10.11	74.00	Vertical	PASS
7248.1248	42.89	-2.92	74.00	Vertical	PASS
13617.1617	49.08	6.67	74.00	Vertical	PASS

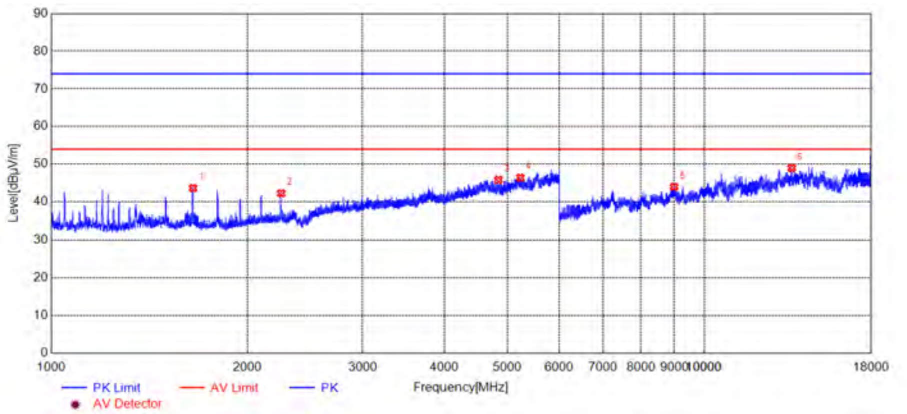
(Antenna Vertical, 1GHz to 18GHz)

Plot for Channel 19



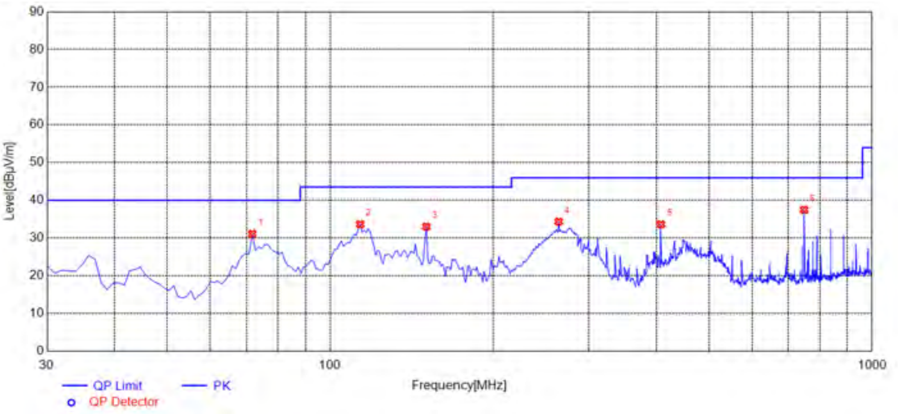
Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
35.8258	29.05	-38.14	40.00	Horizontal	PASS
71.7518	24.30	-33.75	40.00	Horizontal	PASS
115.4454	30.59	-32.43	43.50	Horizontal	PASS
252.3524	30.67	-30.34	46.00	Horizontal	PASS
288.2783	35.22	-29.45	46.00	Horizontal	PASS
749.4895	35.10	-20.71	46.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 1GHz)



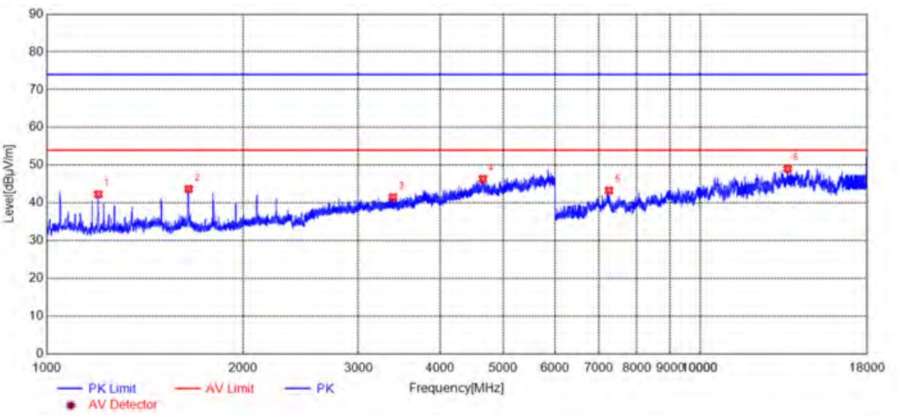
Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
1649.0649	43.68	-23.62	74.00	Horizontal	PASS
2250.6251	42.30	-21.00	74.00	Horizontal	PASS
4838.8839	45.89	-11.13	74.00	Horizontal	PASS
5227.9228	46.44	-10.08	74.00	Horizontal	PASS
8990.6991	44.00	-0.89	74.00	Horizontal	PASS
13605.1605	49.00	7.36	74.00	Horizontal	PASS

(Antenna Horizontal, 1GHz to 18GHz)



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
71.7518	31.12	-33.75	40.00	Vertical	PASS
113.5035	33.66	-31.97	43.50	Vertical	PASS
150.4004	33.04	-35.18	43.50	Vertical	PASS
264.0040	34.37	-30.12	46.00	Vertical	PASS
407.7077	33.65	-26.06	46.00	Vertical	PASS
749.4895	37.50	-20.71	46.00	Vertical	PASS

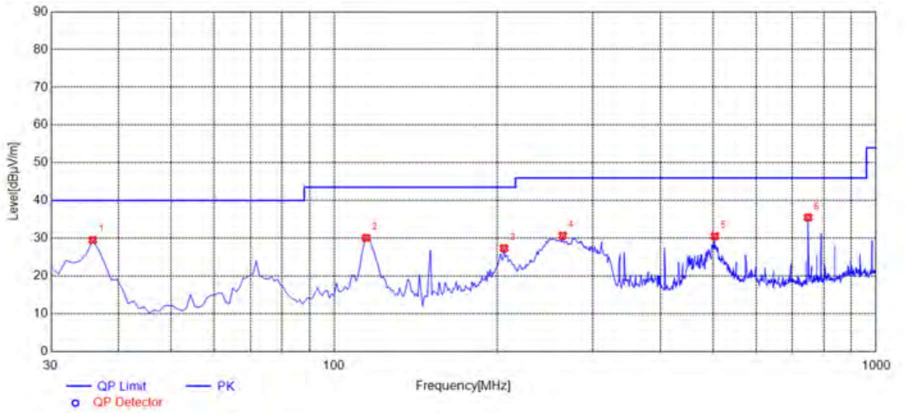
(Antenna Vertical, 30MHz to 1GHz)



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
1200.0200	42.30	-24.02	74.00	Vertical	PASS
1649.5650	43.71	-23.62	74.00	Vertical	PASS
3385.7386	41.52	-16.65	74.00	Vertical	PASS
4649.3649	46.34	-11.18	74.00	Vertical	PASS
7250.5251	43.30	-2.90	74.00	Vertical	PASS
13602.7603	49.07	7.50	74.00	Vertical	PASS

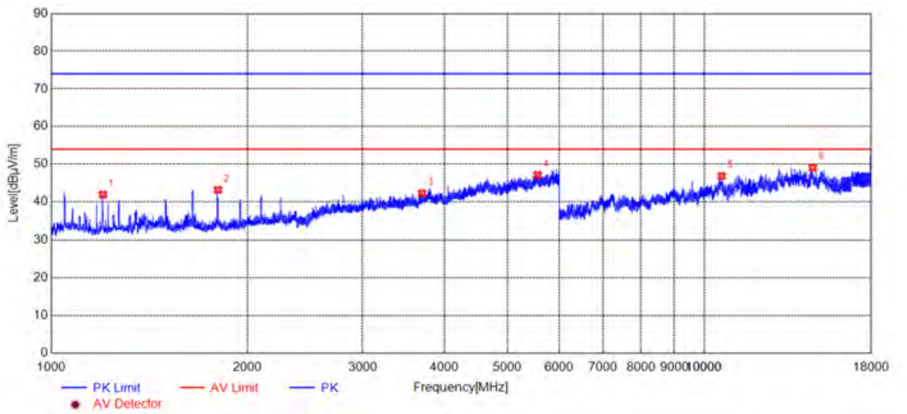
(Antenna Vertical, 1GHz to 18GHz)

Plot for Channel 39



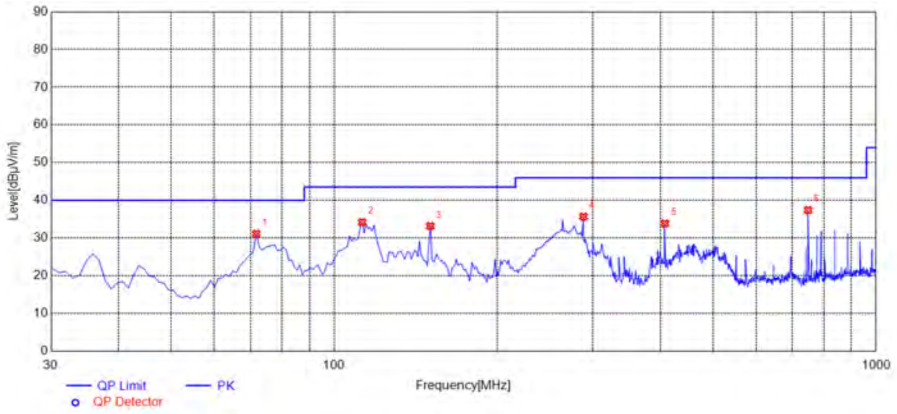
Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
35.8258	29.54	-38.14	40.00	Horizontal	PASS
114.4745	30.12	-32.19	43.50	Horizontal	PASS
205.7457	27.37	-31.77	43.50	Horizontal	PASS
264.0040	30.71	-30.12	46.00	Horizontal	PASS
503.8338	30.59	-24.27	46.00	Horizontal	PASS
749.4895	35.53	-20.71	46.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 1GHz)



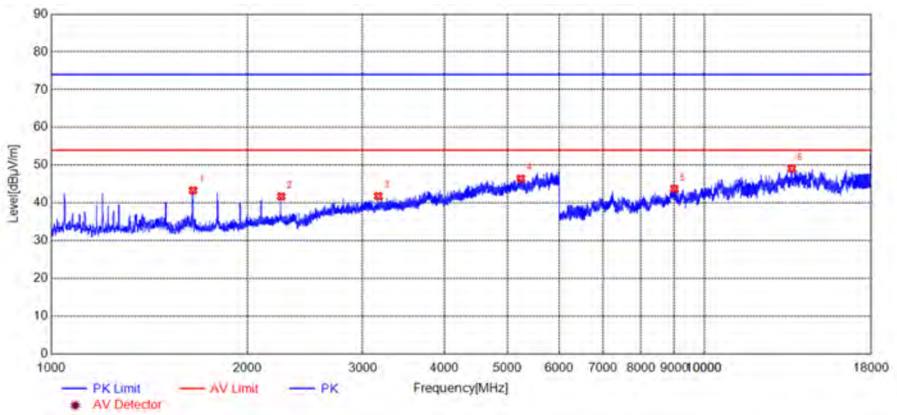
Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
1200.0200	41.99	-24.02	74.00	Horizontal	PASS
1800.0800	43.18	-22.75	74.00	Horizontal	PASS
3698.2698	42.28	-15.84	74.00	Horizontal	PASS
5556.9557	47.18	-8.48	74.00	Horizontal	PASS
10630.0630	46.88	2.48	74.00	Horizontal	PASS
14655.2655	49.11	7.65	74.00	Horizontal	PASS

(Antenna Horizontal, 1GHz to 18GHz)



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
71.7518	31.17	-33.75	40.00	Vertical	PASS
112.5325	34.22	-31.79	43.50	Vertical	PASS
150.4004	33.18	-35.18	43.50	Vertical	PASS
288.2783	35.69	-29.45	46.00	Vertical	PASS
407.7077	33.87	-26.06	46.00	Vertical	PASS
749.4895	37.43	-20.71	46.00	Vertical	PASS

(Antenna Vertical, 30MHz to 1GHz)

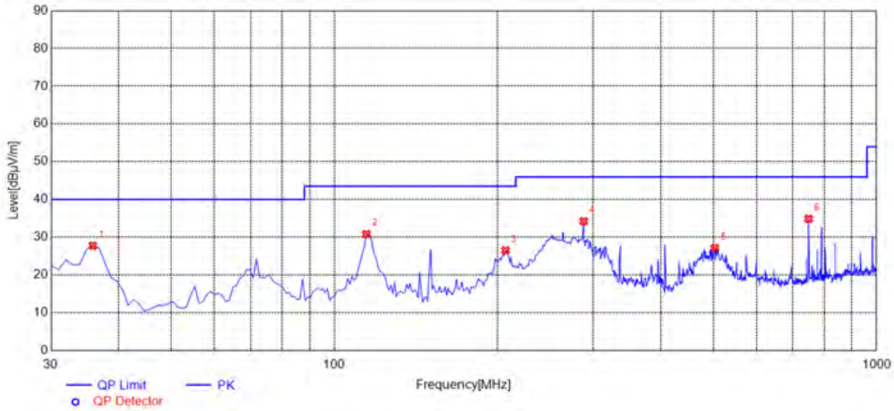


Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
1650.0650	43.35	-23.62	74.00	Vertical	PASS
2250.1250	41.73	-20.99	74.00	Vertical	PASS
3168.7169	41.81	-17.62	74.00	Vertical	PASS
5237.4237	46.46	-10.15	74.00	Vertical	PASS
8996.6997	43.77	-0.83	74.00	Vertical	PASS
13602.7603	49.13	7.50	74.00	Vertical	PASS

(Antenna Vertical, 1GHz to 18GHz)

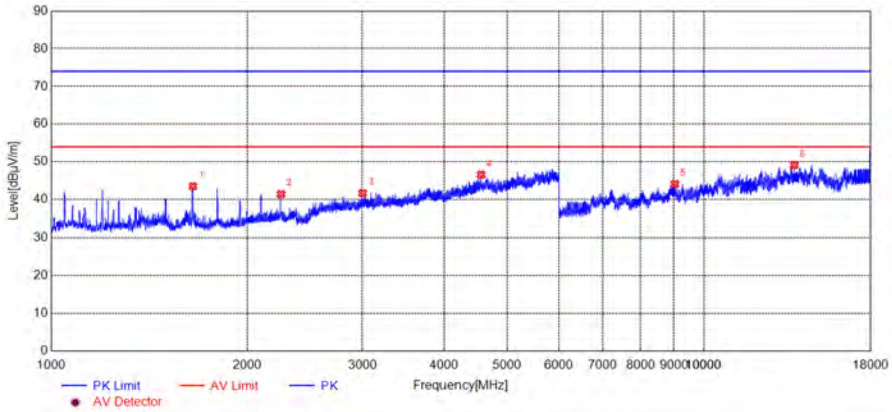
2Mbps

Plot for Channel 0



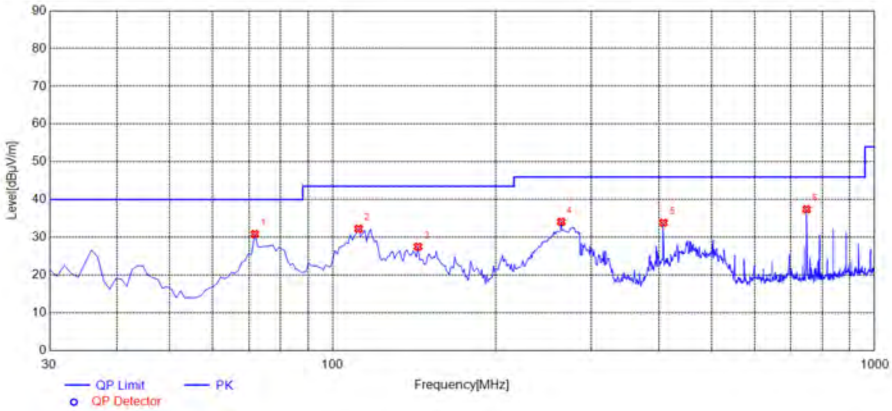
Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
35.8258	27.78	-38.14	40.00	Horizontal	PASS
114.4745	30.82	-32.19	43.50	Horizontal	PASS
206.7167	26.52	-31.84	43.50	Horizontal	PASS
288.2783	34.25	-29.45	46.00	Horizontal	PASS
502.8629	27.19	-24.24	46.00	Horizontal	PASS
749.4895	34.89	-20.71	46.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 1GHz)



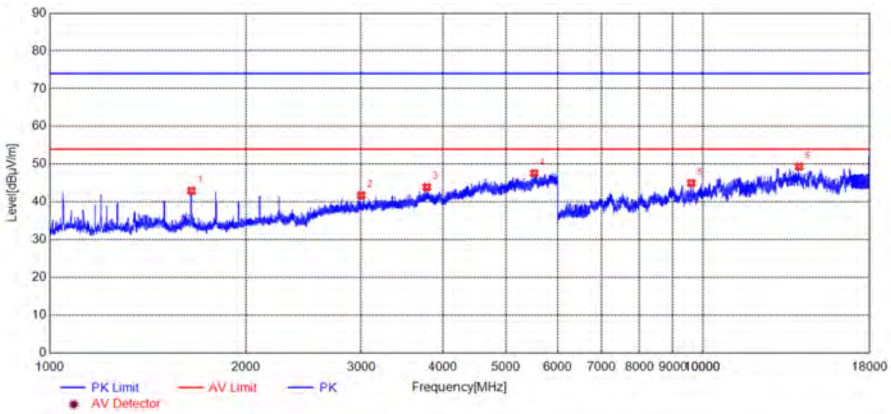
Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
1650.0650	43.53	-23.62	74.00	Horizontal	PASS
2249.6250	41.45	-20.99	74.00	Horizontal	PASS
3000.2000	41.70	-18.24	74.00	Horizontal	PASS
4558.8559	46.61	-11.99	74.00	Horizontal	PASS
9026.7027	44.15	-1.15	74.00	Horizontal	PASS
13755.1755	49.21	7.11	74.00	Horizontal	PASS

(Antenna Horizontal, 1GHz to 18GHz)



Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Antenna	Verdict
71.7518	30.91	-33.75	40.00	Vertical	PASS
111.5616	32.30	-31.67	43.50	Vertical	PASS
143.6036	27.53	-35.27	43.50	Vertical	PASS
264.0040	34.13	-30.12	46.00	Vertical	PASS
407.7077	33.86	-26.06	46.00	Vertical	PASS
749.4895	37.46	-20.71	46.00	Vertical	PASS

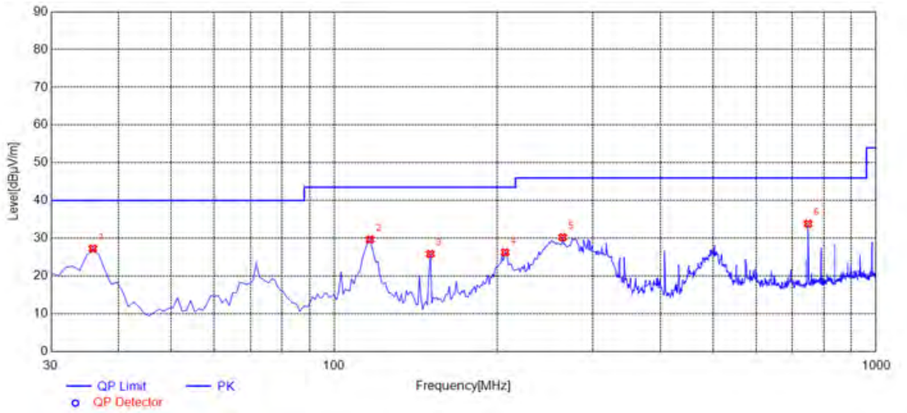
(Antenna Vertical, 30MHz to 1GHz)



Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Antenna	Verdict
1650.0650	42.95	-23.62	74.00	Vertical	PASS
3000.2000	41.73	-18.24	74.00	Vertical	PASS
3778.7779	43.91	-15.29	74.00	Vertical	PASS
5517.9518	47.60	-9.13	74.00	Vertical	PASS
9603.9604	44.96	-0.08	74.00	Vertical	PASS
14042.0042	49.36	6.85	74.00	Vertical	PASS

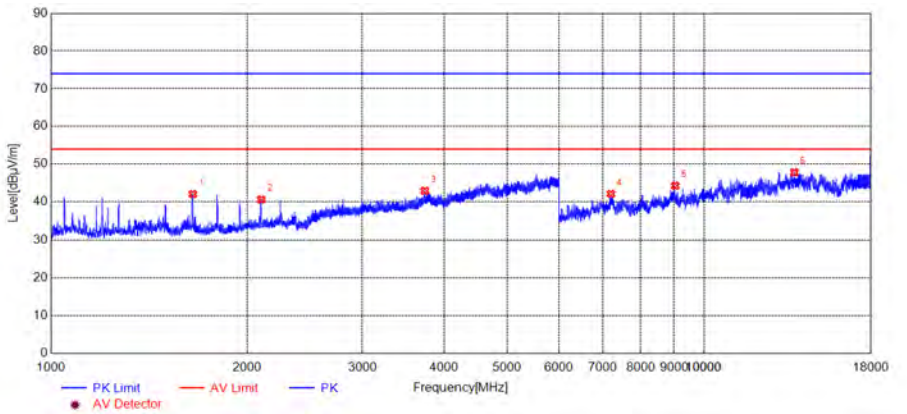
(Antenna Vertical, 1GHz to 18GHz)

Plot for Channel 19



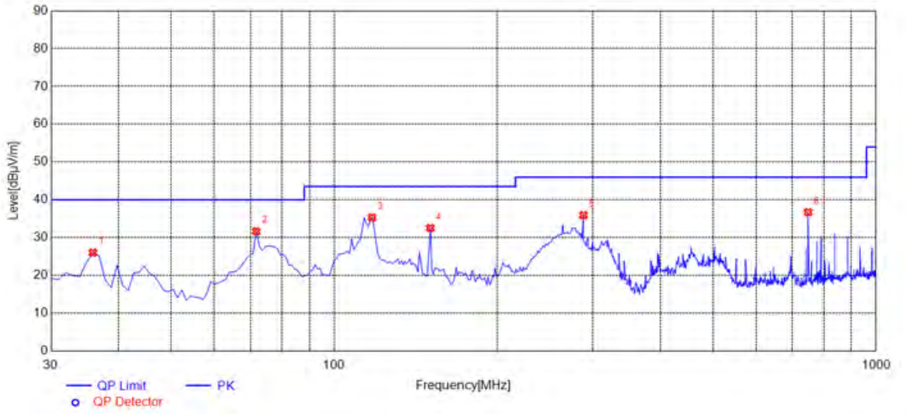
Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Antenna	Verdict
35.8258	27.27	-38.14	40.00	Horizontal	PASS
116.4164	29.69	-32.49	43.50	Horizontal	PASS
150.4004	25.86	-35.18	43.50	Horizontal	PASS
206.7167	26.30	-31.84	43.50	Horizontal	PASS
264.0040	30.28	-30.12	46.00	Horizontal	PASS
749.4895	33.87	-20.71	46.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 1GHz)



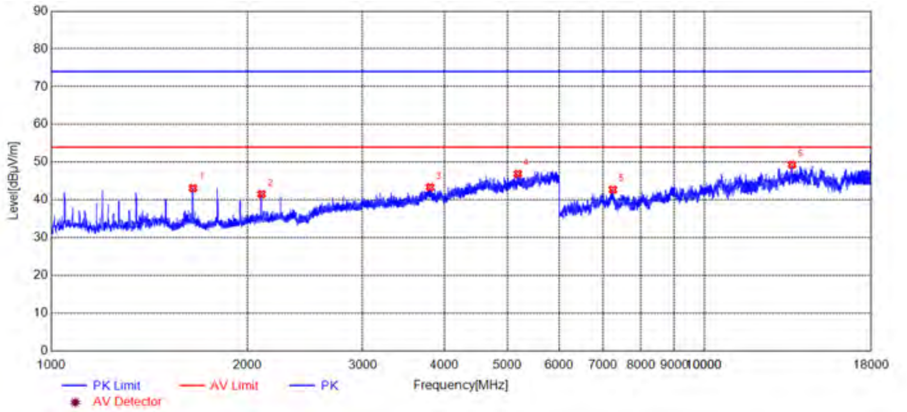
Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Antenna	Verdict
1650.0650	42.08	-23.62	74.00	Horizontal	PASS
2099.6100	40.65	-21.76	74.00	Horizontal	PASS
3738.2738	42.95	-15.81	74.00	Horizontal	PASS
7201.3201	42.14	-3.97	74.00	Horizontal	PASS
9035.1035	44.29	-1.26	74.00	Horizontal	PASS
13749.1749	47.87	7.17	74.00	Horizontal	PASS

(Antenna Horizontal, 1GHz to 18GHz)



Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Antenna	Verdict
35.8258	26.04	-38.14	40.00	Vertical	PASS
71.7518	31.69	-33.75	40.00	Vertical	PASS
117.3874	35.34	-32.46	43.50	Vertical	PASS
150.4004	32.57	-35.18	43.50	Vertical	PASS
288.2783	35.95	-29.45	46.00	Vertical	PASS
749.4895	36.73	-20.71	46.00	Vertical	PASS

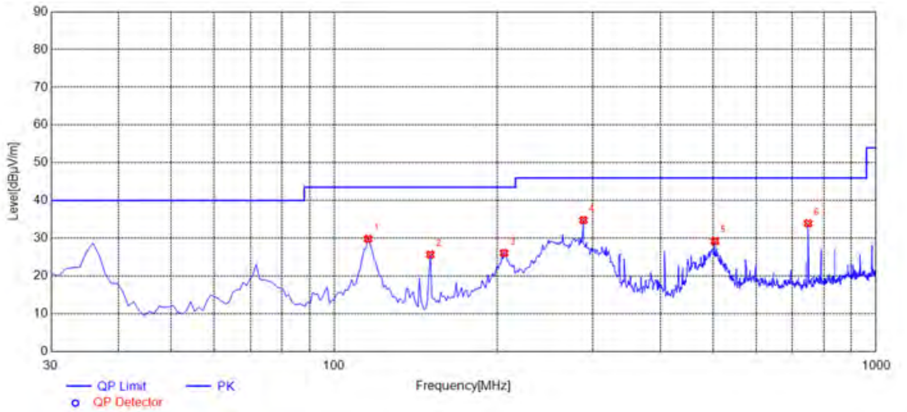
(Antenna Vertical, 30MHz to 1GHz)



Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Antenna	Verdict
1649.5650	43.12	-23.62	74.00	Vertical	PASS
2099.6100	41.53	-21.76	74.00	Vertical	PASS
3804.2804	43.38	-14.95	74.00	Vertical	PASS
5181.4181	46.92	-10.24	74.00	Vertical	PASS
7245.7246	42.71	-2.98	74.00	Vertical	PASS
13620.7621	49.36	6.47	74.00	Vertical	PASS

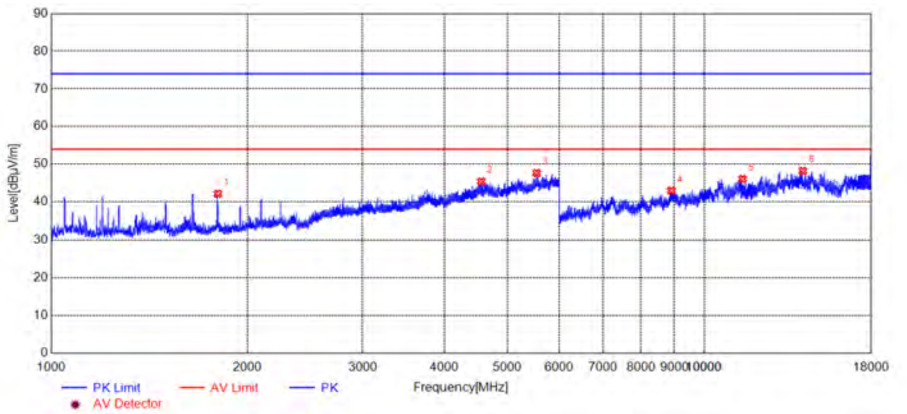
(Antenna Vertical, 1GHz to 18GHz)

Plot for Channel 39



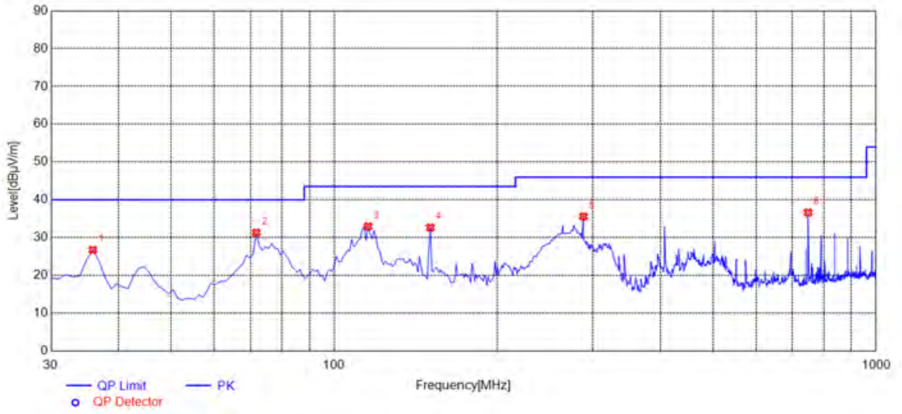
Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Antenna	Verdict
115.4454	29.85	-32.43	43.50	Horizontal	PASS
150.4004	25.68	-35.18	43.50	Horizontal	PASS
205.7457	26.12	-31.77	43.50	Horizontal	PASS
288.2783	34.81	-29.45	46.00	Horizontal	PASS
503.8338	29.26	-24.27	46.00	Horizontal	PASS
749.4895	33.98	-20.71	46.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 1GHz)



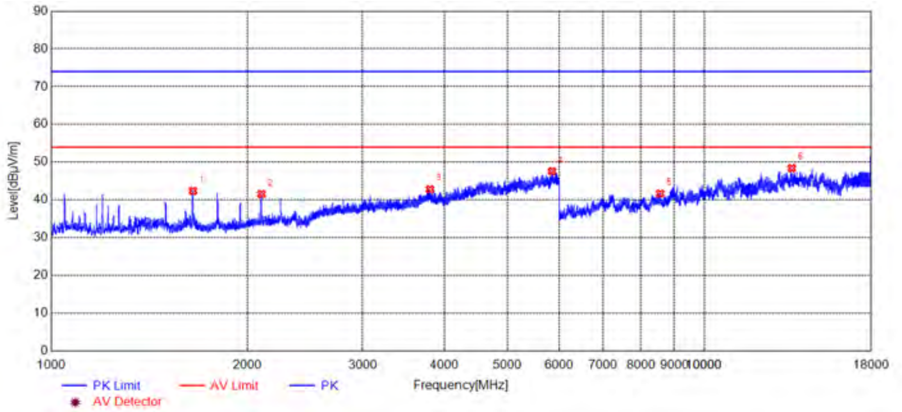
Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Antenna	Verdict
1800.0800	42.16	-22.75	74.00	Horizontal	PASS
4557.8558	45.43	-11.99	74.00	Horizontal	PASS
5537.4537	47.65	-8.57	74.00	Horizontal	PASS
8901.8902	43.01	-0.62	74.00	Horizontal	PASS
11437.7438	46.08	3.25	74.00	Horizontal	PASS
14152.4152	48.23	6.29	74.00	Horizontal	PASS

(Antenna Horizontal, 1GHz to 18GHz)



Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Antenna	Verdict
35.8258	26.75	-38.14	40.00	Vertical	PASS
71.7518	31.32	-33.75	40.00	Vertical	PASS
115.4454	32.98	-32.43	43.50	Vertical	PASS
150.4004	32.68	-35.18	43.50	Vertical	PASS
288.2783	35.60	-29.45	46.00	Vertical	PASS
749.4895	36.64	-20.71	46.00	Vertical	PASS

(Antenna Vertical, 30MHz to 1GHz)



Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Antenna	Verdict
1649.5650	42.40	-23.62	74.00	Vertical	PASS
2099.6100	41.55	-21.76	74.00	Vertical	PASS
3802.7803	42.81	-14.93	74.00	Vertical	PASS
5848.9849	47.60	-7.94	74.00	Vertical	PASS
8559.8560	41.70	-2.57	74.00	Vertical	PASS
13611.1611	48.42	7.02	74.00	Vertical	PASS

(Antenna Vertical, 1GHz to 18GHz)

END OF REPORT