# RF TEST REPORT

Product Name: Multifunctional Tablet

Model Name: P100S

FCC ID: 2AC6AP100S

Issued For : Shenzhen Chainway Information Technology Co., Ltd

9F Building 2, Daqian Industrial Park, District 67, XingDong Community, Xin'an Street, Bao'an District, Shenzhen, Guangdong, China

Issued By : Shenzhen LGT Test Service Co., Ltd.

Room 205, Building 13, Zone B, Zhenxiong Industrial Park, No.177, Renmin West Road, Jinsha, Kengzi Street, Pingshan District, Shenzhen, Guangdong, China

| | |
|---|---|
| Report Number: | LGT24F082RF12 |
| Sample Received Date: | Aug. 23, 2024 |
| Date of Test: | Aug. 23, 2024 ~ Dec. 06, 2024 |
| Date of Issue: | Dec. 06, 2024 |

The test report is effective only with both signature and specialized stamp. This report shall not be reproduced except in full without the written approval of the Laboratory. The results in this report only apply to the tested sample.

# TEST REPORT CERTIFICATION

| | |
|---|---|
| **Applicant:** | Shenzhen Chainway Information Technology Co., Ltd |
| Address: | 9F Building 2, Daqian Industrial Park, District 67, XingDong Community, Xin'an Street, Bao'an District, Shenzhen, Guangdong, China |
| **Manufacturer:** | Shenzhen Chainway Information Technology Co., Ltd |
| Address: | 9F Building 2, Daqian Industrial Park, District 67, XingDong Community, Xin'an Street, Bao'an District, Shenzhen, Guangdong, China |
| Product Name: | Multifunctional Tablet |
| Trademark: | CHAINWAY |
| Model Name: | P100S |
| Sample Status: | Normal |

| APPLICABLE STANDARDS | |
|---|---|
| STANDARD | TEST RESULTS |
| FCC Part 15.247, Subpart C<br>ANSI C63.10-2013 | PASS |

Prepared by:

Zane Shan

Zane Shan
Engineer

Approved by:

Vita Li
Technical Director

**Table of Contents** **Page**


**1. SUMMARY OF TEST RESULTS** **6**

1.1 TEST FACTORY 7

1.2 MEASUREMENT UNCERTAINTY 7

**2. GENERAL INFORMATION** **8**

2.1 GENERAL DESCRIPTION OF THE EUT 8

2.2 DESCRIPTION OF THE TEST MODES 10

2.3 TEST SOFTWARE AND POWER LEVEL 10

2.4 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS 11

2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS 12

**3. EMC EMISSION TEST** **13**

3.1 CONDUCTED EMISSION MEASUREMENT 13

3.2 RADIATED EMISSION MEASUREMENT 17

**4. CONDUCTED SPURIOUS & BAND EDGE EMISSION** **27**

4.1 LIMIT 27

4.2 TEST PROCEDURE 27

4.3 DEVIATION FROM STANDARD 27

4.4 TEST SETUP 27

4.5 EUT OPERATION CONDITIONS 27

4.6 TEST RESULTS 27

**5. POWER SPECTRAL DENSITY TEST** **28**

5.1 LIMIT 28

5.2 TEST PROCEDURE 28

5.3 DEVIATION FROM STANDARD 28

5.4 TEST SETUP 28

5.5 EUT OPERATION CONDITIONS 28

5.6 TEST RESULTS 28

**6. BANDWIDTH TEST** **29**

6.1 LIMIT 29

6.2 TEST PROCEDURE 29

6.3 DEVIATION FROM STANDARD 29

6.4 TEST SETUP 29

6.5 EUT OPERATION CONDITIONS 29

6.6 TEST RESULTS 29

**7. PEAK OUTPUT POWER TEST** **30**
7.1 LIMIT 30
7.2 TEST PROCEDURE 30
7.3 DEVIATION FROM STANDARD 30
7.4 TEST SETUP 30
7.5 EUT OPERATION CONDITIONS 30
7.6 TEST RESULTS 30
**8. ANTENNA REQUIREMENT** **31**
8.1 STANDARD REQUIREMENT 31
8.2 EUT ANTENNA 31
**APPENDIX I - TEST RESULTS** **32**
DUTY CYCLE 32
MAXIMUM PEAK CONDUCTED OUTPUT POWER 37
-6DB BANDWIDTH 38
OCCUPIED CHANNEL BANDWIDTH 43
MAXIMUM POWER SPECTRAL DENSITY LEVEL 48
BAND EDGE 53
CONDUCTED RF SPURIOUS EMISSION 60
**APPENDIX II - MEASUREMENT PHOTOS** **69**

## Revision History

| Rev. | Issue Date | Revisions |
|---|---|---|
| 00 | Dec. 06, 2024 | Initial Issue |
| | | |

## 1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:
KDB 558074 D01 15.247 Meas Guidance v05r02.

| FCC Part 15.247,Subpart C | | | |
|---|---|---|---|
| Standard Section | Test Item | Judgment | Remark |
| 15.207 | Conducted Emission | PASS | -- |
| 15.247 (a)(2) | 6dB Bandwidth | PASS | -- |
| 15.247 (b)(3) | Output Power | PASS | -- |
| 15.209 | Radiated Spurious Emission | PASS | -- |
| 15.247 (d) | Conducted Spurious & Band Edge Emission | PASS | -- |
| 15.247 (e) | Power Spectral Density | PASS | -- |
| 15.205 | Restricted Band Edge Emission | PASS | -- |
| Part 15.247(d)/ Part 15.209(a) | Band Edge Emission | PASS | -- |
| 15.203 | Antenna Requirement | PASS | -- |

NOTE:

(1) 'N/A' denotes test is not applicable in this Test Report.

(2) All tests are according to ANSI C63.10-2013.

## 1.1 TEST FACTORY

| | |
|---|---|
| Company Name: | Shenzhen LGT Test Service Co., Ltd. |
| Address: | Room 205, Building 13, Zone B, Zhenxiong Industrial Park, No.177, Renmin West Road, Jinsha, Kengzi Street, Pingshan District, Shenzhen, Guangdong, China |
| Accreditation Certificate | A2LA Certificate No.: 6727.01 |
| | FCC Registration No.: 746540 |
| | CAB ID: CN0136 |

## 1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y** ± **U**, where expended uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2**, providing a level of confidence of approximately **95** %.

| No. | Item | Uncertainty |
|---|---|---|
| 1 | RF Output Power, Conducted | ±0.71dB |
| 2 | Power Spectral Density, Conducted | ±1.57 dB |
| 3 | Unwanted Emission, Conducted | ±0.63dB |
| 4 | Conducted emission | ±2.80dB |
| 5 | All Emissions, Radiated (0.009-30MHz) | ±2.16dB |
| 6 | All Emissions, Radiated (30MHz-1GHz) | ±4.40dB |
| 7 | All Emissions, Radiated (1GHz-18GHz) | ±5.49dB |

Note: The measurement uncertainty is not included in the test result.

## 2. GENERAL INFORMATION

### 2.1 GENERAL DESCRIPTION OF THE EUT

<table>
<tr><td>Product Name:</td><td>Multifunctional Tablet</td></tr>
<tr><td>Trademark:</td><td>CHAINWAY</td></tr>
<tr><td>Model Name:</td><td>P100S</td></tr>
<tr><td>Series Model:</td><td>N/A</td></tr>
<tr><td>Model Difference:</td><td>N/A</td></tr>
<tr><td>Product Description:</td><td>
<table>
<tr><td>Operation Frequency:</td><td>802.11b/g/n(20MHz): 2412~2462MHz<br>802.11n(40MHz):2422~2452MHz</td></tr>
<tr><td>Modulation Type:</td><td>802.11b(DSSS):CCK,DQPSK,DBPSK<br>802.11g(OFDM):BPSK,QPSK,16-QAM,64-QAM<br>802.11n(OFDM):BPSK,QPSK,16-QAM,64-QAM</td></tr>
<tr><td>Number of Channel:</td><td>802.11b/g/n: 11CH<br>802.11n: 7CH</td></tr>
<tr><td>Antenna Designation:</td><td>FPC</td></tr>
<tr><td>Antenna Gain(dBi):</td><td>2.9</td></tr>
</table>
</td></tr>
<tr><td>Channel List:</td><td>Please refer to the Note 3.</td></tr>
<tr><td>Adapter:</td><td>Input: 100-240V 50/60Hz 0.8A<br>Output: (PD)5V 3A 15W or 9V 3A 27W<br>or 12V 2.5A 30W or 15V 2A 30W or 20V 1.5A 30W<br>(PPS)3.3V-11V 3A(33W MAX)</td></tr>
<tr><td>Battery:</td><td>Battery1:<br>Capacity: 10000mAh<br>Rated Voltage: 3.85V<br><br>Battery2:<br>Capacity: 78mAh<br>Rated Voltage: 3.8V</td></tr>
<tr><td>Hardware Version:</td><td>P100S_Hardware_version</td></tr>
<tr><td>Software Version:</td><td>P100S_Software_version</td></tr>
<tr><td>Connecting I/O Port(s):</td><td>Please refer to the Note 1.</td></tr>
</table>

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User Manual.
2. The antenna information refers to the manufacturer provide report, applicable only to the tested sample identified in the report. Due to the incorrect antenna information, a series of problems such as the accuracy of the test results will be borne by the customer.

3.

| Operation Frequency of channel | | | |
|---|---|---|---|
| 802.11b/g/n(20MHz) | | Channel List for 802.11n(40MHz) | |
| Channel | Frequency | Channel | Frequency |
| 01 | 2412 | 03 | 2422 |
| 02 | 2417 | 04 | 2427 |
| 03 | 2422 | 05 | 2432 |
| 04 | 2427 | 06 | 2437 |
| 05 | 2432 | 07 | 2442 |
| 06 | 2437 | 08 | 2447 |
| 07 | 2442 | 09 | 2452 |
| 08 | 2447 | | |
| 09 | 2452 | | |
| 10 | 2457 | | |
| 11 | 2462 | | |

Note:
In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, themiddle frequency, and the highest frequency of channel were selected to perform the test, and the selectedchannel see below:
Carrier Frequency Channel

2.4GHz Test Frequency:

| For 802.11b/g/n(HT20) | | For 802.11n(HT40) | |
|---|---|---|---|
| Channel | Freq.(MHz) | Channel | Freq.(MHz) |
| 01 | 2412 | 03 | 2422 |
| 06 | 2437 | 06 | 2437 |
| 11 | 2462 | 09 | 2452 |

## 2.2 DESCRIPTION OF THE TEST MODES

Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

| Test Mode | Description | Data Rate |
|---|---|---|
| Mode 1 | TX IEEE 802.11b CH1 | 1 Mbps |
| Mode 2 | TX IEEE 802.11b CH6 | 1 Mbps |
| Mode 3 | TX IEEE 802.11 b CH11 | 1 Mbps |
| Mode 4 | TX IEEE 802.11g CH1 | 6 Mbps |
| Mode 5 | TX IEEE 802.11g CH6 | 6 Mbps |
| Mode 6 | TX IEEE 802.11g CH11 | 6 Mbps |
| Mode 7 | TX IEEE 802.11n HT20 CH1 | MCS 0 |
| Mode 8 | TX IEEE 802.11n HT20 CH6 | MCS 0 |
| Mode 9 | TX IEEE 802.11n HT20 CH11 | MCS 0 |
| Mode 10 | TX IEEE 802.11n HT40 CH3 | MCS 0 |
| Mode 11 | TX IEEE 802.11n HT40 CH6 | MCS 0 |
| Mode 12 | TX IEEE 802.11n HT40 CH9 | MCS 0 |

Note:

(1) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported.

AC Conducted Emission

| Test Case | |
|---|---|
| AC Conducted Emission | Mode 13: Keeping TX + WLAN Link |

## 2.3 TEST SOFTWARE AND POWER LEVEL

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level.

| Test software Version | Test program: 2.4G WIFI | |
|---|---|---|
| Engineering Mode | Mode Or Modulation type | Power setting |
| | b | 15 |
| | g | 10 |
| | n20 | 9 |
| | n40 | 9 |

## 2.4 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level.

Accessories Equipment

| Description | Manufacturer | Model | S/N | Rating |
|---|---|---|---|---|
| Adapter | Shen Zhen Huajin Electronics Co.,Ltd | HJ-C6-33-EU | N/A | Input: 100-240V 50/60Hz 0.8A Output: (PD)5V 3A 15W or 9V 3A 27W or 12V 2.5A 30W or 15V 2A 30W or 20V 1.5A 30W (PPS)3.3V-11V 3A(33W MAX) |
| USB-A to USB-C Cable | N/A | N/A | N/A | 0.8m |
| | | | | |

Auxiliary Equipment

| Description | Manufacturer | Model | S/N | Rating |
|---|---|---|---|---|
| Laptop | Lenovo | HKF-16 | N/A | N/A |
| | | | | |
| | | | | |

Note:

(1) For detachable type I/O cable should be specified the length in cm in『Length』column.

## 2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

| Conducted Emission | | | | | |
|---|---|---|---|---|---|
| **Equipment** | **Manufacturer** | **Model No.** | **Serial No.** | **Cal. Date** | **Cal. Until** |
| EMI Test Receiver | R&S | ESU8 | 100372 | 2024.03.09 | 2025.03.08 |
| LISN | COM-POWER | LI-115 | 02032 | 2024.03.09 | 2025.03.08 |
| LISN | SCHWARZBECK | NNLK 8122 | 00160 | 2024.03.09 | 2025.03.08 |
| Transient Limiter | CYBERTEK | EM5010A | E2250100049 | 2024.03.09 | 2025.03.08 |
| Temperature & Humidity | KTJ | TA218B | N.A | 2024.03.09 | 2025.03.08 |
| Testing Software | EMC-I_V1.4.0.3_SKET | | | | |

| Radiated Test equipment | | | | | |
|---|---|---|---|---|---|
| **Equipment** | **Manufacturer** | **Model No.** | **Serial No.** | **Cal. Date** | **Cal. Until** |
| EMI Test Receiver | R&S | ESU8 | 100372 | 2024.03.09 | 2025.03.08 |
| Active loop Antenna | ETS | 6502 | 00049544 | 2023.10.13 | 2025.10.12 |
| Spectrum Analyzer | Keysight | N9010B | MY60242508 | 2024.08.05 | 2025.08.04 |
| Bilog Antenna(30M-1G) | SCHWARZBECK | VULB 9168 | 2705 | 2022.12.12 | 2025.12.11 |
| Horn Antenna(1-18G) | SCHWARZBECK | 3115 | 10SL0060 | 2022.06.02 | 2025.06.01 |
| Horn Antenna(18-40G) | A-INFO | LB-180400-KF | J211060273 | 2022.06.08 | 2025.06.07 |
| Pre-amplifier(30M-1G) | EMtrace | RP01A | 02019 | 2024.03.09 | 2025.03.08 |
| Pre-amplifier(1-26.5G) | Agilent | 8449B | 3008A4722 | 2024.03.09 | 2025.03.08 |
| Pre-amplifier(18-40G) | com-mw | LNPA_18-40-01 | 18050003 | 2024.03.09 | 2025.03.08 |
| Wireless Communications Test Set | R&S | CMW 500 | 137737 | 2024.03.09 | 2025.03.08 |
| Antenna Tower | SAEMC | BK-4AT-BS-D | SK2021093008 | N.A | N.A |
| Temperature & Humidity | JINGCHUANG | BT-3 | N.A | 2024.03.11 | 2025.03.10 |
| Testing Software | EMC-I_V1.4.0.3_SKET | | | | |

| RF Conducted Test equipment | | | | | |
|---|---|---|---|---|---|
| **Equipment** | **Manufacturer** | **Model No.** | **Serial No.** | **Cal. Date** | **Cal. Until** |
| Signal Analyzer | Keysight | N9010B | MY60242508 | 2024.08.05 | 2025.08.04 |
| Signal Analyzer | Keysight | N9020A | MY50530994 | 2024.03.09 | 2025.03.08 |
| RF Automatic Test system | MW | MW100-RFCB | MW220322LG-033 | 2024.03.09 | 2025.03.08 |
| MXG Vector Signal Generator | Keysight | N5182B | MY59100717 | 2024.03.09 | 2025.03.08 |
| Temperature& Humidity test chamber | AISRY | LX-1000L | 171200018 | 2024.03.09 | 2025.03.08 |
| Attenuator | eastsheep | 90db | N.A | 2024.03.09 | 2025.03.08 |
| Temperature & Humidity | JINGCHUANG | BT-3 | N.A | 2024.03.11 | 2025.03.10 |
| Digital multimeter | MASTECH | MS8261 | MBGBC83053 | 2024.03.09 | 2025.03.08 |
| Testing Software | MTS8310_V2.0.0.0_MW | | | | |

# 3. EMC EMISSION TEST

## 3.1 CONDUCTED EMISSION MEASUREMENT

### 3.1.1 POWER LINE CONDUCTED EMISSION LIMITS

The radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table.

| FREQUENCY (MHz) | Conducted Emissionlimit (dBuV) | |
|---|---|---|
| | Quasi-peak | Average |
| 0.15 -0.5 | 66 - 56 * | 56 - 46 * |
| 0.50 -5.0 | 56.00 | 46.00 |
| 5.0 -30.0 | 60.00 | 50.00 |

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

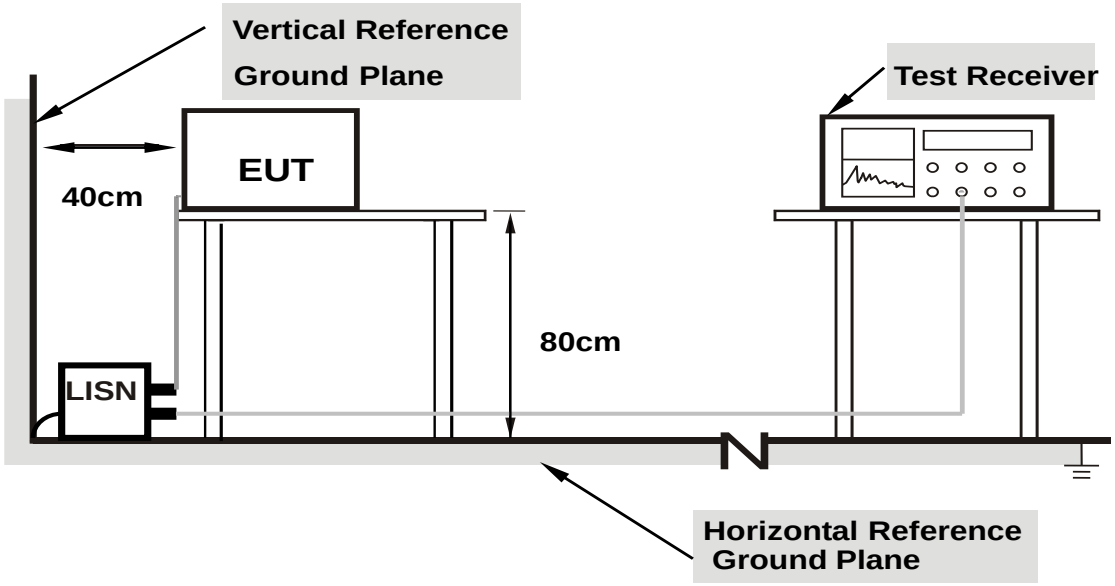
The following table is the setting of the receiver

| **Receiver Parameters** | **Setting** |
|---|---|
| Attenuation | 10 dB |
| Start Frequency | 0.15 MHz |
| Stop Frequency | 30 MHz |
| IF Bandwidth | 9 kHz |

3.1.2 TEST PROCEDURE

a. The EUT is 0.8 m from the horizontal ground plane and 0.4 m from the vertical ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments are powered from additional LISN(s). The LISN provides 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
d. LISN is at least 80 cm from the nearest part of EUT chassis.
e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.1.3 TEST SETUP




**Note: 1. Support units were connected to second LISN.**

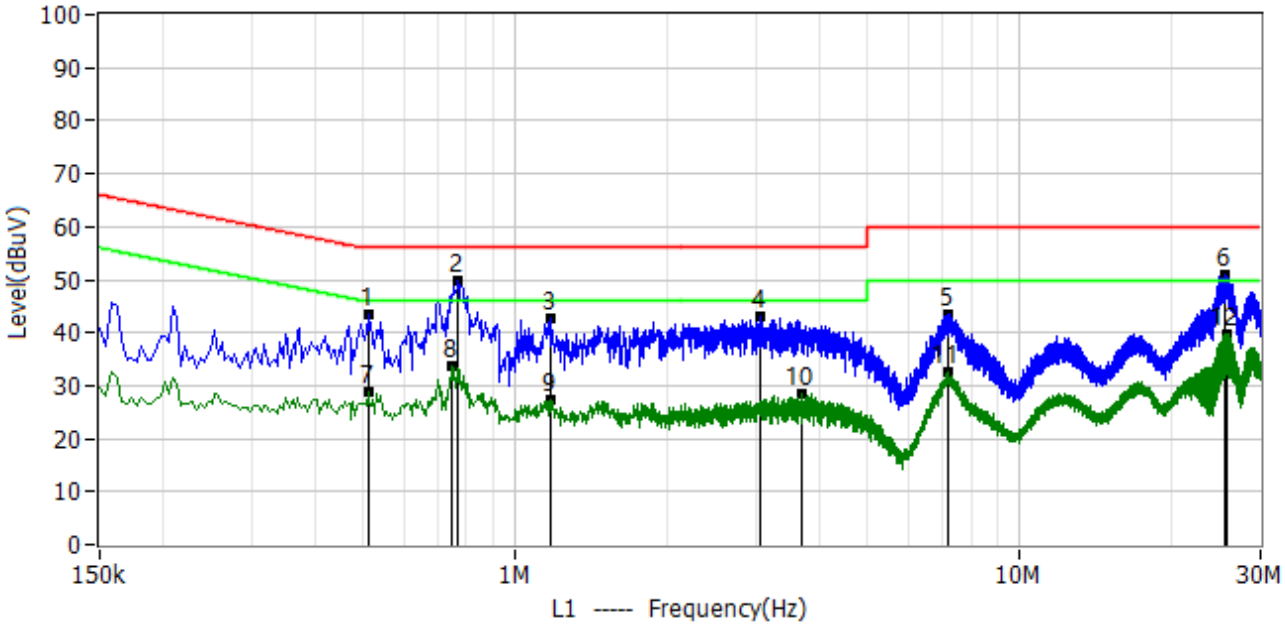
**2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes support units.**

3.1.4 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

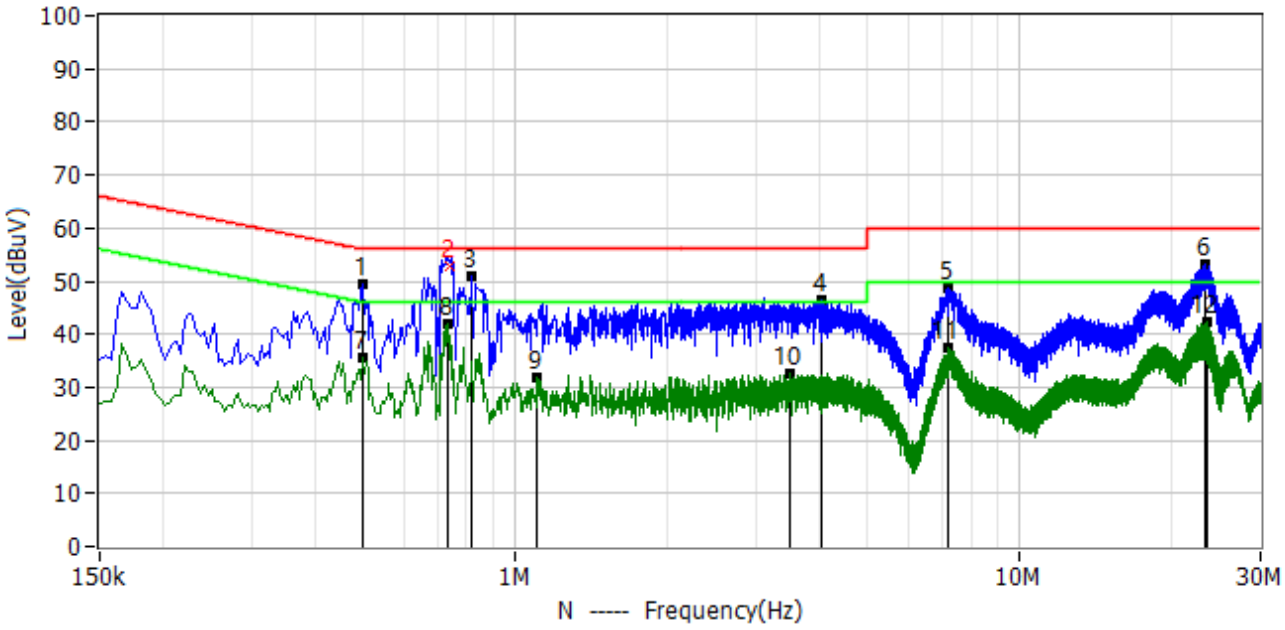
3.1.5 TEST RESULT

| | |
|---|---|
| Project: LGT24F082 | Test Engineer: LiuH |
| EUT: Multifunctional Tablet | Temperature: 28.2℃ |
| M/N: P100S | Humidity: 55%RH |
| Test Voltage: AC 120V/60Hz | Test Data: 2024-10-12 |
| Test Mode: TX 802.11b 2412 | |
| Note: | |




| No. | Frequency MHz | Reading dBuV | Factor dB | Level dBuV | Limit dBuV | Margin dB | Detector | Polar |
|---|---|---|---|---|---|---|---|---|
| 1* | 0.510 | 32.91 | 10.57 | 43.48 | 56.00 | -12.52 | QP | L1 |
| 2* | 0.770 | 39.40 | 10.59 | 49.99 | 56.00 | -6.01 | QP | L1 |
| 3* | 1.170 | 32.07 | 10.74 | 42.81 | 56.00 | -13.19 | QP | L1 |
| 4* | 3.058 | 31.93 | 11.19 | 43.12 | 56.00 | -12.88 | QP | L1 |
| 5* | 7.194 | 32.57 | 10.99 | 43.56 | 60.00 | -16.44 | QP | L1 |
| 6* | 25.474 | 39.04 | 11.85 | 50.89 | 60.00 | -9.11 | QP | L1 |
| 7* | 0.510 | 18.42 | 10.57 | 28.99 | 46.00 | -17.01 | AV | L1 |
| 8* | 0.746 | 23.12 | 10.58 | 33.70 | 46.00 | -12.30 | AV | L1 |
| 9* | 1.170 | 16.56 | 10.74 | 27.30 | 46.00 | -18.70 | AV | L1 |
| 10* | 3.682 | 17.24 | 11.15 | 28.39 | 46.00 | -17.61 | AV | L1 |
| 11* | 7.194 | 21.56 | 10.99 | 32.55 | 50.00 | -17.45 | AV | L1 |
| 12* | 25.774 | 27.88 | 11.86 | 39.74 | 50.00 | -10.26 | AV | L1 |

| | |
|---|---|
| Project: LGT24F082 | Test Engineer: LiuH |
| EUT: Multifunctional Tablet | Temperature: 28.2℃ |
| M/N: P100S | Humidity: 55%RH |
| Test Voltage: AC 120V/60Hz | Test Data: 2024-10-12 |
| Test Mode: TX 802.11b 2412 | |
| Note: | |




| No. | Frequency MHz | Reading dBuV | Factor dB | Level dBuV | Limit dBuV | Margin dB | Detector | Polar |
|---|---|---|---|---|---|---|---|---|
| 1* | 0.498 | 39.02 | 10.54 | 49.56 | 56.03 | -6.48 | QP | N |
| 2 | 0.738 | 42.05 | 10.60 | 52.65 | 56.00 | -3.35 | QP | N |
| 3* | 0.822 | 40.26 | 10.56 | 50.82 | 56.00 | -5.18 | QP | N |
| 4* | 4.042 | 35.67 | 10.81 | 46.48 | 56.00 | -9.52 | QP | N |
| 5* | 7.214 | 37.82 | 10.82 | 48.64 | 60.00 | -11.36 | QP | N |
| 6* | 23.246 | 41.42 | 11.76 | 53.18 | 60.00 | -6.82 | QP | N |
| 7* | 0.498 | 25.20 | 10.54 | 35.74 | 46.03 | -10.29 | AV | N |
| 8* | 0.734 | 31.26 | 10.56 | 41.82 | 46.00 | -4.18 | AV | N |
| 9* | 1.106 | 21.15 | 10.56 | 31.71 | 46.00 | -14.29 | AV | N |
| 10* | 3.506 | 21.78 | 10.80 | 32.58 | 46.00 | -13.42 | AV | N |
| 11* | 7.226 | 26.47 | 10.82 | 37.29 | 50.00 | -12.71 | AV | N |
| 12* | 23.430 | 30.51 | 11.76 | 42.27 | 50.00 | -7.73 | AV | N |

## 3.2 RADIATED EMISSION MEASUREMENT

### 3.2.1 RADIATED EMISSION LIMITS

In any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the Restricted band specified on Part15.205(a)&209(a) limit in the table and according to ANSI C63.10-2013 below has to be followed.

LIMITS OF RADIATED EMISSION MEASUREMENT (0.009MHz - 1000MHz)

| Frequencies (MHz) | Field Strength (micorvolts/meter) | Measurement Distance (meters) |
|---|---|---|
| 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 |

LIMITS OF RADIATED EMISSION MEASUREMENT (1000MHz-25GHz)

| FREQUENCY (MHz) | (dBuV/m) (at 3M) | |
|---|---|---|
| | PEAK | AVERAGE |
| Above 1000 | 74 | 54 |

Notes:

(1) The limit for radiated test was performed according to FCC PART 15C.

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

LIMITS OF RESTRICTED FREQUENCY BANDS

| FREQUENCY (MHz) | FREQUENCY (MHz) | FREQUENCY (MHz) | FREQUENCY (GHz) |
|---|---|---|---|
| 0.090-0.110 | 16.42-16.423 | 399.9-410 | 4.5-5.15 |
| 0.495-0.505 | 16.69475-16.69525 | 608-614 | 5.35-5.46 |
| 2.1735-2.1905 | 16.80425-16.80475 | 960-1240 | 7.25-7.75 |
| 4.125-4.128 | 25.5-25.67 | 1300-1427 | 8.025-8.5 |
| 4.17725-4.17775 | 37.5-38.25 | 1435-1626.5 | 9.0-9.2 |
| 4.20725-4.20775 | 73-74.6 | 1645.5-1646.5 | 9.3-9.5 |
| 6.215-6.218 | 74.8-75.2 | 1660-1710 | 10.6-12.7 |
| 6.26775-6.26825 | 108-121.94 | 1718.8-1722.2 | 13.25-13.4 |
| 6.31175-6.31225 | 123-138 | 2200-2300 | 14.47-14.5 |
| 8.291-8.294 | 149.9-150.05 | 2310-2390 | 15.35-16.2 |
| 8.362-8.366 | 156.52475-156.52525 | 2483.5-2500 | 17.7-21.4 |
| 8.37625-8.38675 | 156.7-156.9 | 2690-2900 | 22.01-23.12 |
| 8.41425-8.41475 | 162.0125-167.17 | 3260-3267 | 23.6-24.0 |
| 12.29-12.293 | 167.72-173.2 | 3332-3339 | 31.2-31.8 |
| 12.51975-12.52025 | 240-285 | 3345.8-3358 | 36.43-36.5 |
| 12.57675-12.57725 | 322-335.4 | 3600-4400 | Above 38.6 |
| 13.36-13.41 | | | |

For Radiated Emission

| Spectrum Parameter | Setting |
|---|---|
| Attenuation | Auto |
| Detector | Peak/QP/AV |
| Start Frequency | 9 KHz/150KHz(Peak/QP/AV) |
| Stop Frequency | 150KHz/30MHz(Peak/QP/AV) |
| RB / VB (emission in restricted band) | 200Hz (From 9kHz to 0.15MHz)/<br>9KHz (From 0.15MHz to 30MHz);<br>200Hz (From 9kHz to 0.15MHz)/<br>9KHz (From 0.15MHz to 30MHz) |

| Spectrum Parameter | Setting |
|---|---|
| Attenuation | Auto |
| Detector | Peak/QP |
| Start Frequency | 30 MHz(Peak/QP) |
| Stop Frequency | 1000 MHz (Peak/QP) |
| RB / VB (emission in restricted band) | 120 KHz / 300 KHz |

| Spectrum Parameter | Setting |
|---|---|
| Attenuation | Auto |
| Detector | Peak |
| Start Frequency | 1000 MHz(Peak/AV) |
| Stop Frequency | 10th carrier hamonic(Peak/AV) |
| RB / VB (emission in restricted band) | 1 MHz / 3 MHz(Peak)<br>1 MHz/1/T MHz(AVG) |

For Restricted band

| Spectrum Parameter | Setting |
|---|---|
| Detector | Peak |
| Start/Stop Frequency | Lower Band Edge: 2310 to 2430 MHz<br>Upper Band Edge: 2445 to 2500 MHz |
| RB / VB | 1 MHz / 3 MHz(Peak)<br>1 MHz/1/T MHz(AVG) |

| **Receiver Parameter** | **Setting** |
|---|---|
| Start ~ Stop Frequency | 9kHz~90kHz / RB 200Hz for PK & AV |
| Start ~ Stop Frequency | 90kHz~110kHz / RB 200Hz for QP |
| Start ~ Stop Frequency | 110kHz~490kHz / RB 200Hz for PK & AV |
| Start ~ Stop Frequency | 490kHz~30MHz / RB 9kHz for QP |
| Start ~ Stop Frequency | 30MHz~1000MHz / RB 120kHz for QP |

3.2.2 TEST PROCEDURE

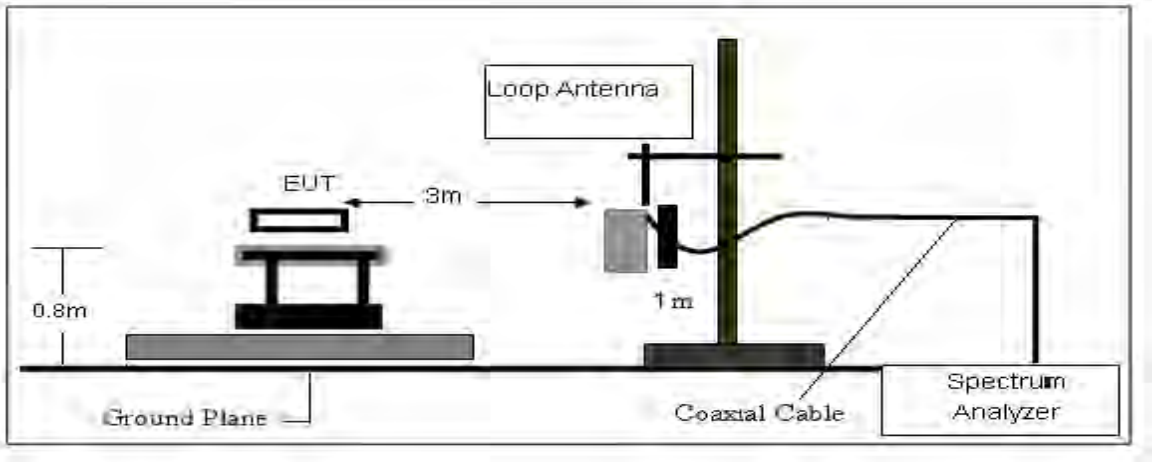
a. The measuring distance at 3 m shall be used for measurements at frequency 0.009MHz up to 1GHz, and above 1GHz.
b. The EUT was placed on the top of a rotating table 0.8 m (above 1GHz is 1.5 m) above the ground at a 3 m anechoic chamber test site. The table was rotated 360 degree to determine the position of the highest radiation.
c. The height of the equipment shall be 0.8 m (above 1GHz is 1.5 m); the height of the test antenna shall vary between 1 m to 4 m. Horizontal and vertical polarization of the antenna are set to make the measurement.
d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and QuasiPeak detector mode will be re-measured.
e. If the Peak Mode measured value is compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and no additional QP Mode measurement was performed.
f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

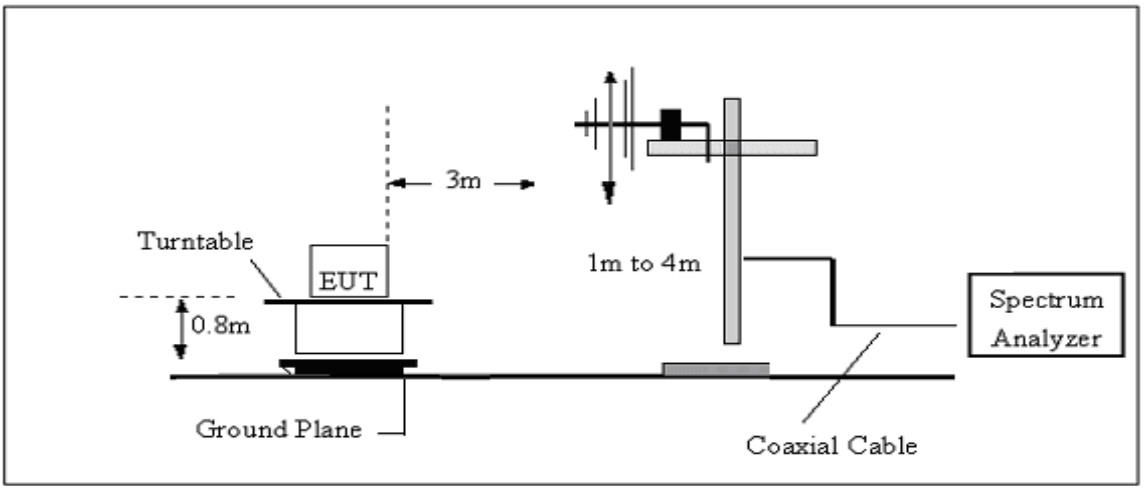
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

3.2.3 TEST SETUP

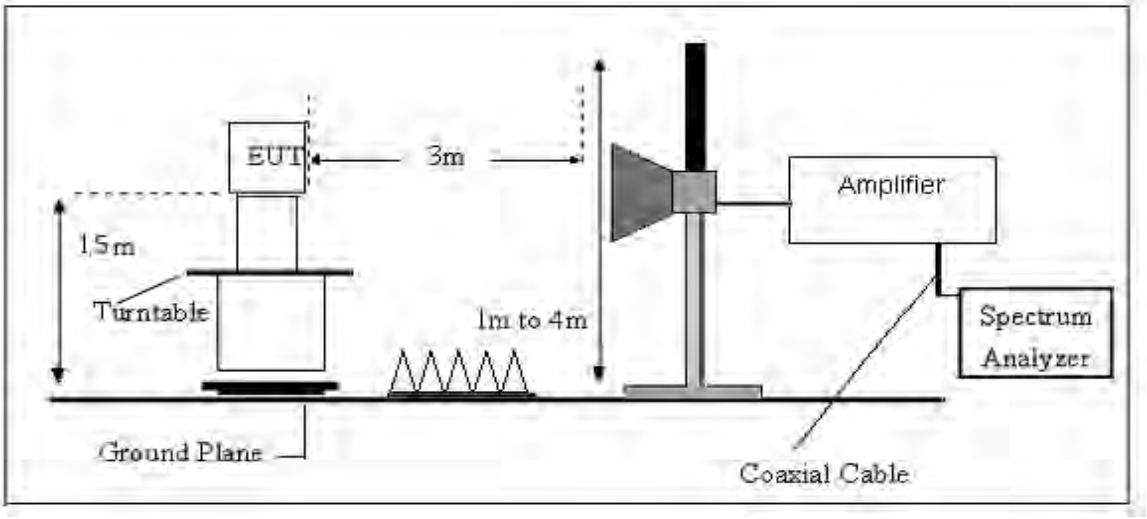
(A) Radiated Emission Test-Up Frequency Below 30MHz




(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(C) Radiated Emission Test-Up Frequency Above 1GHz




3.2.4 EUT OPERATING CONDITIONS

Please refer to section 3.1.4 of this report.

3.2.5 FIELD STRENGTH CALCULATION

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting theAmplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:
FS = RA + AF + CL - AG
Where
FS = Field Strength
CL = Cable Attenuation Factor (Cable Loss)
RA = Reading Amplitude
AG = Amplifier Gain
AF = Antenna Factor
For example

| Frequency | FS | RA | AF | CL | AG | Factor |
|---|---|---|---|---|---|---|
| (MHz) | (dBμV/m) | (dBμV/m) | (dB) | (dB) | (dB) | (dB) |
| 300 | 40 | 58.1 | 12.2 | 1.6 | 31.9 | -18.1 |

Factor=AF+CL-AG

3.2.6 TEST RESULT

Results of Radiated Emissions (9 KHz~30MHz)

| No. | Frequency | Reading dBuV | Factor dB/m | Level dBuV/m | Limit dBuV/m | Margin dB | Detector | Remark |
|---|---|---|---|---|---|---|---|---|
| 1* | - | - | - | - | - | - | - | See Note |

Note:

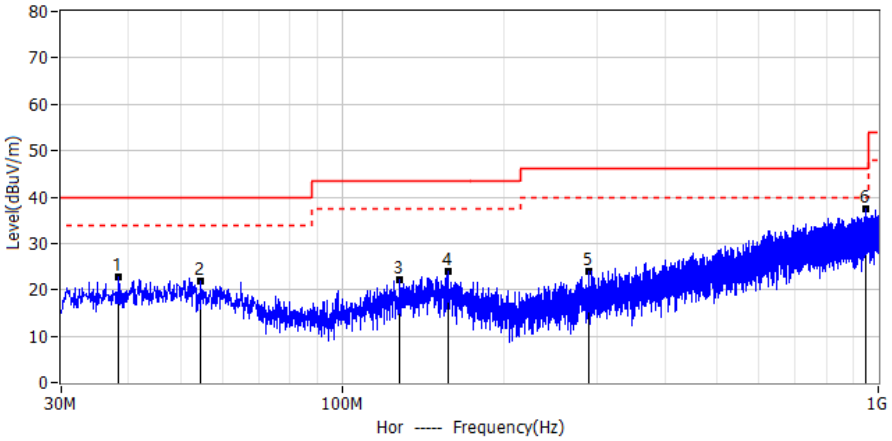
The emission from 9 kHz to 30MHz was pre-tested and found the result was 20dB lower than the limit, and the permissible value has no need to be reported.

Distance extrapolation factor = 40 log (specific distance / test distance) (dB);

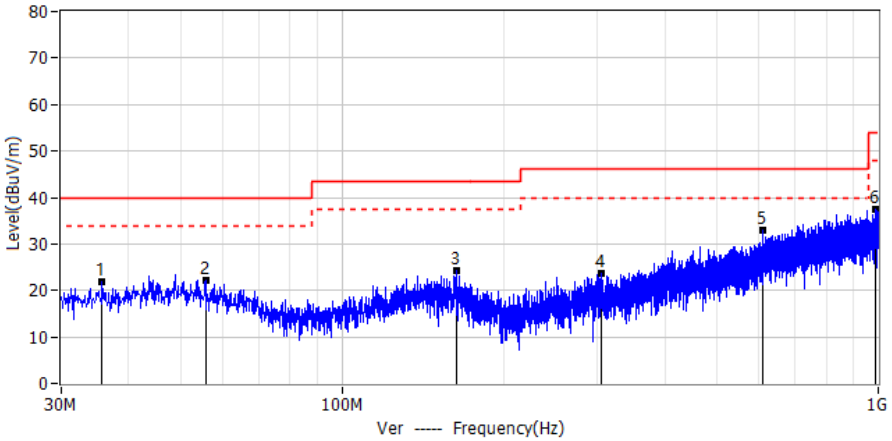
Limit line = specific limits (dBuV) + distance extrapolation factor.

## Results of Radiated Emissions (30MHz~1000MHz)

| | |
|---|---|
| Project: LGT24F082 | Test Engineer: LiuH |
| EUT: Multifunctional Tablet | Temperature: 25.7℃ |
| M/N: P100S | Humidity: 54%RH |
| Test Voltage: Battery | Test Data: 2024-10-12 |
| Test Mode: TX 802.11b 2412 | |
| Note: | |




| No. | Frequency MHz | Reading dBuV | Factor dB/m | Level dBuV/m | Limit dBuV/m | Margin dB | Detector | Polar |
|---|---|---|---|---|---|---|---|---|
| 1* | 38.366 | 3.12 | 19.80 | 22.92 | 40.00 | -17.08 | QP | Hor |
| 2* | 54.614 | 1.83 | 20.17 | 22.00 | 40.00 | -18.00 | QP | Hor |
| 3* | 127.970 | 2.00 | 20.08 | 22.08 | 43.50 | -21.42 | QP | Hor |
| 4* | 157.798 | 2.22 | 21.69 | 23.91 | 43.50 | -19.59 | QP | Hor |
| 5* | 288.384 | 2.92 | 21.14 | 24.06 | 46.00 | -21.94 | QP | Hor |
| 6* | 947.741 | 3.89 | 33.65 | 37.54 | 46.00 | -8.46 | QP | Hor |




| No. | Frequency MHz | Reading dBuV | Factor dB/m | Level dBuV/m | Limit dBuV/m | Margin dB | Detector | Polar |
|---|---|---|---|---|---|---|---|---|
| 1* | 35.699 | 2.15 | 19.76 | 21.91 | 40.00 | -18.09 | QP | Ver |
| 2* | 55.705 | 2.29 | 19.75 | 22.04 | 40.00 | -17.96 | QP | Ver |
| 3* | 163.739 | 2.98 | 21.16 | 24.14 | 43.50 | -19.36 | QP | Ver |
| 4* | 303.904 | 2.05 | 21.50 | 23.55 | 46.00 | -22.45 | QP | Ver |
| 5* | 608.363 | 4.17 | 28.91 | 33.08 | 46.00 | -12.92 | QP | Ver |
| 6* | 989.815 | 3.71 | 33.78 | 37.49 | 54.00 | -16.51 | QP | Ver |

**Results of Radiated Emissions (Above 1000MHz)**

| Frequency (MHz) | Reading (dBμV) | Orrected Factor（dB） | Reslut (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector | Polarity |
|---|---|---|---|---|---|---|---|
| Low Channel (2412 MHz) | | | | | | | |
| 3264.86 | 55.70 | -8.45 | 47.25 | 74.00 | -26.75 | PK | Vertical |
| 3264.86 | 46.82 | -8.45 | 38.37 | 54.00 | -15.63 | AV | Vertical |
| 3264.68 | 55.10 | -8.45 | 46.65 | 74.00 | -27.35 | PK | Horizontal |
| 3264.68 | 46.12 | -8.45 | 37.67 | 54.00 | -16.33 | AV | Horizontal |
| 4824.39 | 54.88 | -6.09 | 48.79 | 74.00 | -25.21 | PK | Vertical |
| 4824.39 | 44.67 | -6.09 | 38.58 | 54.00 | -15.42 | AV | Vertical |
| 4824.32 | 54.07 | -6.09 | 47.98 | 74.00 | -26.02 | PK | Horizontal |
| 4824.32 | 45.61 | -6.09 | 39.52 | 54.00 | -14.48 | AV | Horizontal |
| 5359.61 | 57.99 | -6.68 | 51.31 | 74.00 | -22.69 | PK | Vertical |
| 5359.61 | 47.32 | -6.68 | 40.64 | 54.00 | -13.36 | AV | Vertical |
| 5359.66 | 57.00 | -6.68 | 50.32 | 74.00 | -23.68 | PK | Horizontal |
| 5359.66 | 47.69 | -6.68 | 41.01 | 54.00 | -12.99 | AV | Horizontal |
| 7235.95 | 59.71 | -8.13 | 51.58 | 74.00 | -22.42 | PK | Vertical |
| 7235.95 | 49.97 | -8.13 | 41.84 | 54.00 | -12.16 | AV | Vertical |
| 7235.85 | 59.58 | -8.13 | 51.45 | 74.00 | -22.55 | PK | Horizontal |
| 7235.76 | 50.07 | -8.13 | 41.94 | 54.00 | -12.06 | AV | Vertical |
| Middle Channel (2437 MHz) | | | | | | | |
| 3264.88 | 55.79 | -8.45 | 47.34 | 74.00 | -26.66 | PK | Vertical |
| 3264.88 | 46.81 | -8.45 | 38.36 | 54.00 | -15.64 | AV | Vertical |
| 3264.66 | 55.43 | -8.45 | 46.98 | 74.00 | -27.02 | PK | Horizontal |
| 3264.66 | 46.73 | -8.45 | 38.28 | 54.00 | -15.72 | AV | Horizontal |
| 4874.50 | 54.89 | -6.09 | 48.80 | 74.00 | -25.20 | PK | Vertical |
| 4874.50 | 44.96 | -6.09 | 38.87 | 54.00 | -15.13 | AV | Vertical |
| 4874.44 | 54.82 | -6.09 | 48.73 | 74.00 | -25.27 | PK | Horizontal |
| 4874.44 | 44.27 | -6.09 | 38.18 | 54.00 | -15.82 | AV | Horizontal |
| 5359.75 | 57.52 | -6.68 | 50.84 | 74.00 | -23.16 | PK | Vertical |
| 5359.75 | 47.11 | -6.68 | 40.43 | 54.00 | -13.57 | AV | Vertical |
| 5359.81 | 58.01 | -6.68 | 51.33 | 74.00 | -22.67 | PK | Horizontal |
| 5359.81 | 47.97 | -6.68 | 41.29 | 54.00 | -12.71 | AV | Horizontal |
| 7310.90 | 60.52 | -8.13 | 52.39 | 74.00 | -21.61 | PK | Vertical |
| 7310.90 | 50.96 | -8.13 | 42.83 | 54.00 | -11.17 | AV | Vertical |
| 7310.79 | 59.84 | -8.13 | 51.71 | 74.00 | -22.29 | PK | Horizontal |
| 7310.79 | 50.37 | -8.13 | 42.24 | 54.00 | -11.76 | AV | Horizontal |
| High Channel (2462 MHz) | | | | | | | |
| 3264.62 | 55.73 | -8.45 | 47.28 | 74.00 | -26.72 | PK | Vertical |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3264.62 | 45.46 | -8.45 | 37.01 | 54.00 | -16.99 | AV | Vertical |
| 3264.78 | 56.30 | -8.45 | 47.85 | 74.00 | -26.15 | PK | Horizontal |
| 3264.78 | 45.76 | -8.45 | 37.31 | 54.00 | -16.69 | AV | Horizontal |
| 4924.52 | 55.09 | -6.09 | 49.00 | 74.00 | -25.00 | PK | Vertical |
| 4924.52 | 45.14 | -6.09 | 39.05 | 54.00 | -14.95 | AV | Vertical |
| 4924.38 | 55.41 | -6.09 | 49.32 | 74.00 | -24.68 | PK | Horizontal |
| 4924.38 | 44.60 | -6.09 | 38.51 | 54.00 | -15.49 | AV | Horizontal |
| 5359.69 | 56.67 | -6.68 | 49.99 | 74.00 | -24.01 | PK | Vertical |
| 5359.69 | 47.33 | -6.68 | 40.65 | 54.00 | -13.35 | AV | Vertical |
| 5359.79 | 57.35 | -6.68 | 50.67 | 74.00 | -23.33 | PK | Horizontal |
| 5359.79 | 47.00 | -6.68 | 40.32 | 54.00 | -13.68 | AV | Horizontal |
| 7385.86 | 60.98 | -8.13 | 52.85 | 74.00 | -21.15 | PK | Vertical |
| 7385.86 | 50.93 | -8.13 | 42.80 | 54.00 | -11.20 | AV | Vertical |
| 7385.79 | 59.91 | -8.13 | 51.78 | 74.00 | -22.22 | PK | Horizontal |
| 7385.79 | 49.73 | -8.13 | 41.60 | 54.00 | -12.40 | AV | Horizontal |

Remark:
In frequency ranges 18~25GHz no any other harmonic emissions detected which are tested to compliance with the limit. No recording in the test report. No any other emissions level which are attenuated less than 20dB below the limit. No recording in the test report.

3.2.7 TEST RESULTS(Band edge Requirements)

| Frequency (MHz) | Reading (dBμV) | Orrected Factor（dB） | Reslut (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector | Polarity |
|---|---|---|---|---|---|---|---|
| 802.11b | | | | | | | |
| 2390.00 | 12.94 | 34.10 | 47.04 | 74.00 | -26.96 | PK | Vertical |
| 2390.00 | 1.87 | 34.10 | 35.97 | 54.00 | -18.03 | AV | Vertical |
| 2390.00 | 13.27 | 34.10 | 47.37 | 74.00 | -26.63 | PK | Horizontal |
| 2390.00 | 1.17 | 34.10 | 35.27 | 54.00 | -18.73 | AV | Horizontal |
| 2483.50 | 15.42 | 34.44 | 49.86 | 74.00 | -24.14 | PK | Vertical |
| 2483.50 | 2.55 | 34.44 | 36.99 | 54.00 | -17.01 | AV | Vertical |
| 2483.50 | 14.39 | 34.44 | 48.83 | 74.00 | -25.17 | PK | Horizontal |
| 2483.50 | 1.94 | 34.44 | 36.38 | 54.00 | -17.62 | AV | Horizontal |
| 802.11g | | | | | | | |
| 2390.00 | 13.01 | 34.10 | 47.11 | 74.00 | -26.89 | PK | Vertical |
| 2390.00 | 1.07 | 34.10 | 35.17 | 54.00 | -18.83 | AV | Vertical |
| 2390.00 | 13.27 | 34.10 | 47.37 | 74.00 | -26.63 | PK | Horizontal |
| 2390.00 | 1.14 | 34.10 | 35.24 | 54.00 | -18.76 | AV | Horizontal |
| 2483.50 | 14.03 | 34.44 | 48.47 | 74.00 | -25.53 | PK | Vertical |
| 2483.50 | 2.87 | 34.44 | 37.31 | 54.00 | -16.69 | AV | Vertical |
| 2483.50 | 15.32 | 34.44 | 49.76 | 74.00 | -24.24 | PK | Horizontal |
| 2483.50 | 1.98 | 34.44 | 36.42 | 54.00 | -17.58 | AV | Horizontal |
| 802.11n20 | | | | | | | |
| 2390.00 | 12.61 | 34.10 | 46.71 | 74.00 | -27.29 | PK | Vertical |
| 2390.00 | 0.64 | 34.10 | 34.74 | 54.00 | -19.26 | AV | Vertical |
| 2390.00 | 13.51 | 34.10 | 47.61 | 74.00 | -26.39 | PK | Horizontal |
| 2390.00 | 1.01 | 34.10 | 35.11 | 54.00 | -18.89 | AV | Horizontal |
| 2483.50 | 14.95 | 34.44 | 49.39 | 74.00 | -24.61 | PK | Vertical |
| 2483.50 | 2.20 | 34.44 | 36.64 | 54.00 | -17.36 | AV | Vertical |
| 2483.50 | 13.90 | 34.44 | 48.34 | 74.00 | -25.66 | PK | Horizontal |
| 2483.50 | 3.23 | 34.44 | 37.67 | 54.00 | -16.33 | AV | Horizontal |
| 802.11n40 | | | | | | | |
| 2390.00 | 12.75 | 34.10 | 46.85 | 74.00 | -27.15 | PK | Vertical |
| 2390.00 | 0.74 | 34.10 | 34.84 | 54.00 | -19.16 | AV | Vertical |
| 2390.00 | 12.28 | 34.10 | 46.38 | 74.00 | -27.62 | PK | Horizontal |
| 2390.00 | 1.59 | 34.10 | 35.69 | 54.00 | -18.31 | AV | Horizontal |
| 2483.50 | 15.33 | 34.44 | 49.77 | 74.00 | -24.23 | PK | Vertical |
| 2483.50 | 2.25 | 34.44 | 36.69 | 54.00 | -17.31 | AV | Vertical |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2483.50 | 14.44 | 34.44 | 48.88 | 74.00 | -25.12 | PK | Horizontal |
| 2483.50 | 1.94 | 34.44 | 36.38 | 54.00 | -17.62 | AV | Horizontal |
| Low measurement frequencies is range from 2310 to 2422 MHz, high measurement frequencies is range from 2452 to 2500 MHz. | | | | | | | |

# 4. CONDUCTED SPURIOUS & BAND EDGE EMISSION

## 4.1 LIMIT

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.

## 4.2 TEST PROCEDURE

| Spectrum Parameter | Setting |
|---|---|
| Detector | Peak |
| Start/Stop Frequency | 30 MHz to 10th carrier harmonic |
| RB / VB (emission in restricted band) | 100 KHz/300 KHz |
| Trace-Mode: | Max hold |

For Band edge

| Spectrum Parameter | Setting |
|---|---|
| Detector | Peak |
| Start/Stop Frequency | Lower Band Edge: 2300 to 2432 MHz<br>Upper Band Edge: 2442 to 2500 MHz |
| RB / VB (emission in restricted band) | 100 KHz/300 KHz |
| Trace-Mode: | Max hold |

## 4.3 DEVIATION FROM STANDARD

No deviation.

## 4.4 TEST SETUP

The EUT is connected to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.
Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. In order to make an accurate measurement, set the span greater than RBW.

## 4.5 EUT OPERATION CONDITIONS

Please refer to section 3.1.4 of this report.

## 4.6 TEST RESULTS

For the measurement records, refer to the appendix I.

Note: Not recorded emission from 9 KHz to 30 MHz as emission level at least 20dBc lower than emission limit.

## 5. POWER SPECTRAL DENSITY TEST

### 5.1 LIMIT

| FCC Part15.247 , Subpart C | | | | |
|---|---|---|---|---|
| Section | Test Item | Limit | Frequency Range (MHz) | Result |
| 15.247(e) | Power Spectral Density | ≤8 dBm (RBW ≥3KHz) | 2400-2483.5 | PASS |

### 5.2 TEST PROCEDURE

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS channel bandwidth.
3. Set the 100 kHz ≥ RBW ≥3 kHz.
4. Set the VBW ≥ 3 x RBW.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

### 5.3 DEVIATION FROM STANDARD

No deviation.

### 5.4 TEST SETUP

### 5.5 EUT OPERATION CONDITIONS

Please refer to section 3.1.4 of this report.

### 5.6 TEST RESULTS

For the measurement records, refer to the appendix I.

# 6. BANDWIDTH TEST

## 6.1 LIMIT

| FCC Part15.247,Subpart C | | | | |
|---|---|---|---|---|
| Section | Test Item | Limit | Frequency Range (MHz) | Result |
| 15.247(a)(2) | Bandwidth | ≥500KHz (6dB bandwidth) | 2400-2483.5 | PASS |

## 6.2 TEST PROCEDURE

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 above (i.e., RBW = 100 kHz, VBW≥3RBW, 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.

## 6.3 DEVIATION FROM STANDARD

No deviation.

## 6.4 TEST SETUP

## 6.5 EUT OPERATION CONDITIONS

Please refer to section 3.1.4 of this report.

## 6.6 TEST RESULTS

For the measurement records, refer to the appendix I.

# 7. PEAK OUTPUT POWER TEST

## 7.1 LIMIT

| FCC Part15.247,Subpart C | | | | |
|---|---|---|---|---|
| Section | Test Item | Limit | Frequency Range (MHz) | Result |
| 15.247(b)(3) | Output Power | 1 watt or 30dBm | 2400-2483.5 | PASS |

## 7.2 TEST PROCEDURE

One of the following procedures may be used to determine the maximum peak conducted output power of a DTS EUT.

RBW ≥ DTS bandwidth

The following procedure shall be used when an instrument with a resolution bandwidth that is greater than the DTS bandwidth is available to perform the measurement:

a) Set the RBW ≥ DTS bandwidth.
b) Set VBW ≥ [3 × RBW].
c) Set span ≥ [3 × RBW].
d) Sweep time = auto couple.
e) Detector = peak.
f) Trace mode = max hold.
g) Allow trace to fully stabilize.
h) Use peak marker function to determine the peak amplitude level.

Integrated band power method:

The following procedure can be used when the maximum available RBW of the instrument is less than the
DTS bandwidth:

a) Set the RBW = 1 MHz.
b) Set the VBW ≥ [3 × RBW].
c) Set the span ≥ [1.5 × DTS bandwidth].
d) Detector = peak.
e) Sweep time = auto couple.
f) Trace mode = max hold.
g) Allow trace to fully stabilize.
h) Use the instrument's band/channel power measurement function with the band limits set equal to the DTS bandwidth edges (for some instruments, this may require a manual override to select the peak detector). If the instrument does not have a band power function, then sum the spectrum levels (in linear power units) at intervals equal to the RBW extending across the DTS channel bandwidth.

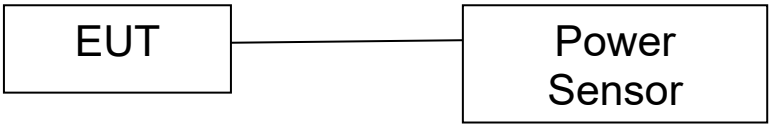
PKPM1 Peak power meter method:

The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall use a fast-responding diode detector.

## 7.3 DEVIATION FROM STANDARD

No deviation.

## 7.4 TEST SETUP




## 7.5 EUT OPERATION CONDITIONS

Please refer to section 3.1.4 of this report.

## 7.6 TEST RESULTS

For the measurement records, refer to the appendix I.

# 8. ANTENNA REQUIREMENT

## 8.1 STANDARD REQUIREMENT

15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible partyshall be used with the device.

## 8.2 EUT ANTENNA

The EUT antenna is FPC Antenna. It comply with the standard requirement.

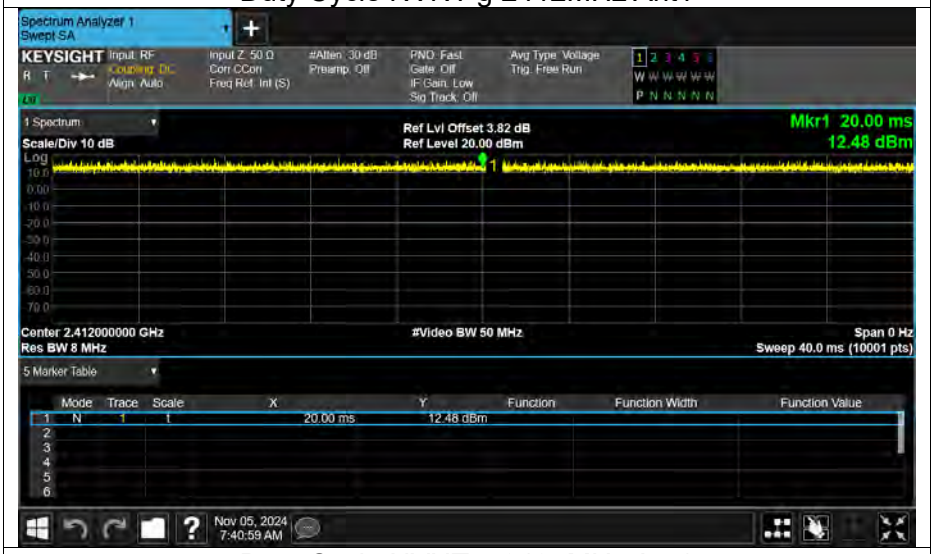
# APPENDIX I - TEST RESULTS

Duty Cycle

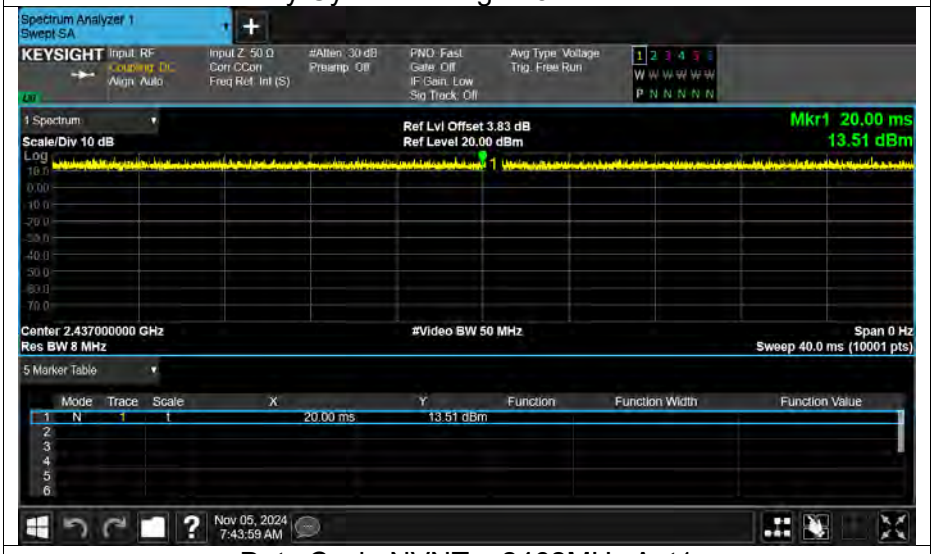
| Condition | Mode | Frequency (MHz) | Antenna | Duty Cycle (%) | Correction Factor (dB) | 1/T (kHz) |
|---|---|---|---|---|---|---|
| NVNT | b | 2412 | Ant1 | 100 | 0 | 0 |
| NVNT | b | 2437 | Ant1 | 100 | 0 | 0 |
| NVNT | b | 2462 | Ant1 | 100 | 0 | 0 |
| NVNT | g | 2412 | Ant1 | 100 | 0 | 0 |
| NVNT | g | 2437 | Ant1 | 100 | 0 | 0 |
| NVNT | g | 2462 | Ant1 | 100 | 0 | 0 |
| NVNT | n20 | 2412 | Ant1 | 100 | 0 | 0 |
| NVNT | n20 | 2437 | Ant1 | 100 | 0 | 0 |
| NVNT | n20 | 2462 | Ant1 | 100 | 0 | 0 |
| NVNT | n40 | 2422 | Ant1 | 100 | 0 | 0 |
| NVNT | n40 | 2437 | Ant1 | 100 | 0 | 0 |
| NVNT | n40 | 2452 | Ant1 | 100 | 0 | 0 |

| Test Graphs |
| --- |
| Duty Cycle NVNT b 2412MHz Ant1 |
| |
| Duty Cycle NVNT b 2437MHz Ant1 |
| |
| Duty Cycle NVNT b 2462MHz Ant1 |
| |

Duty Cycle NVNT g 2412MHz Ant1

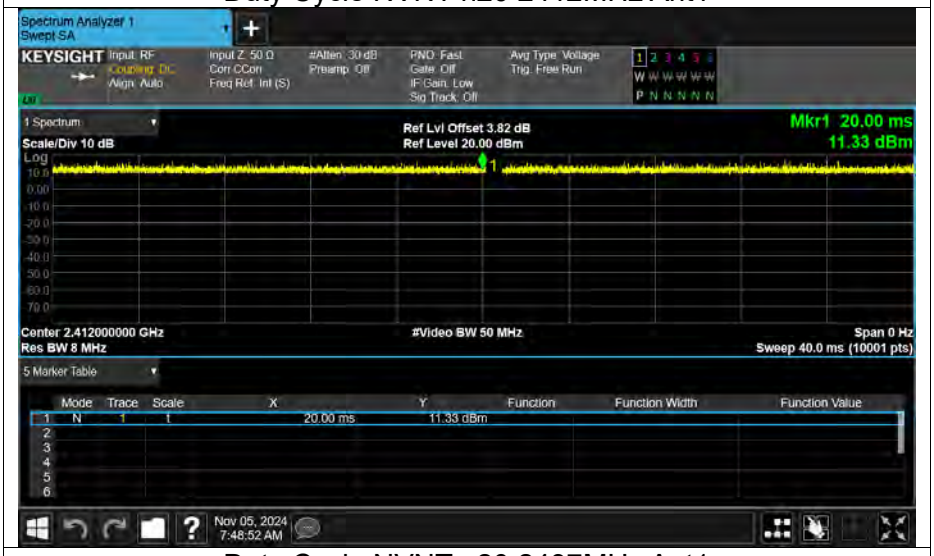



Duty Cycle NVNT g 2437MHz Ant1

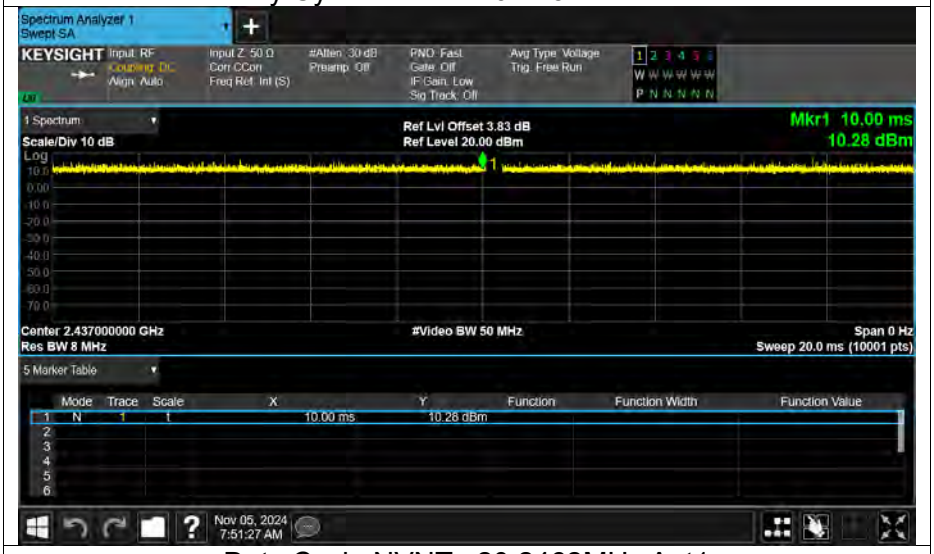



Duty Cycle NVNT g 2462MHz Ant1

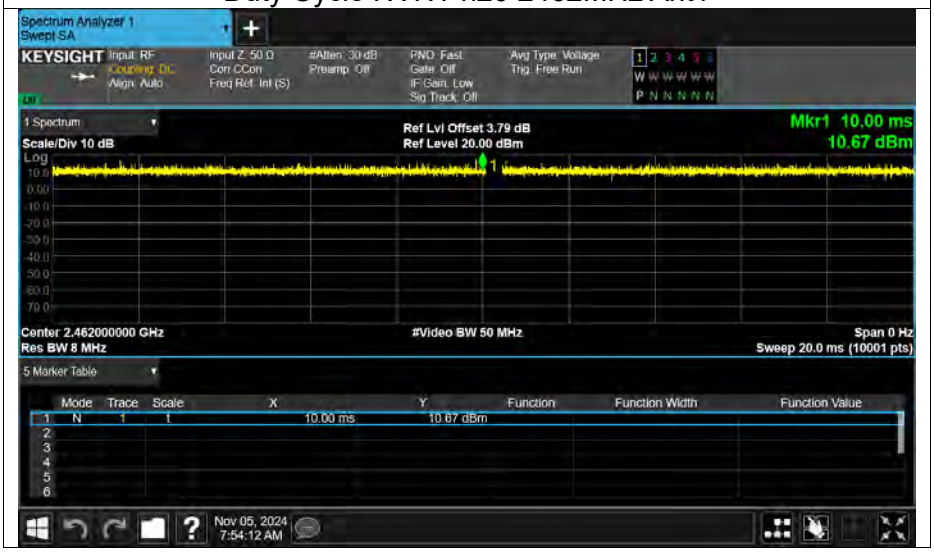
Duty Cycle NVNT n20 2412MHz Ant1



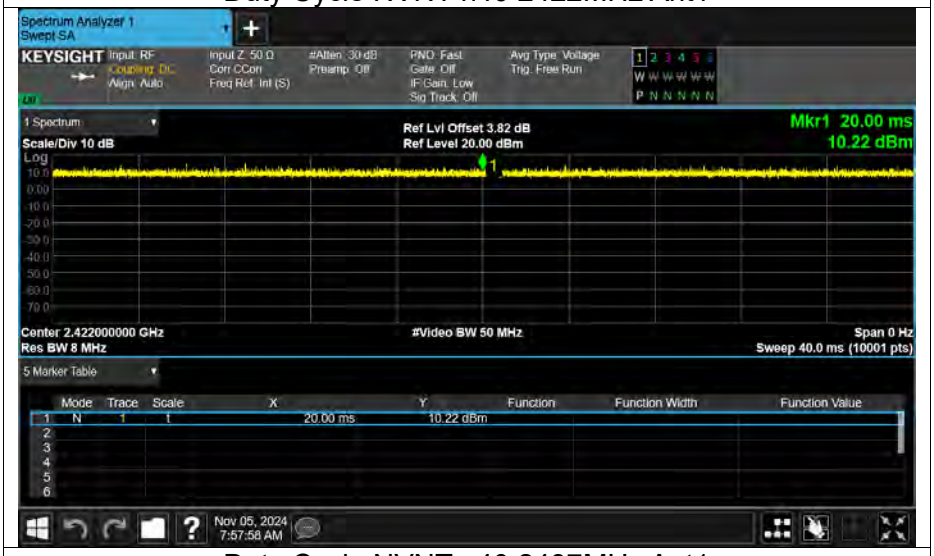

Duty Cycle NVNT n20 2437MHz Ant1



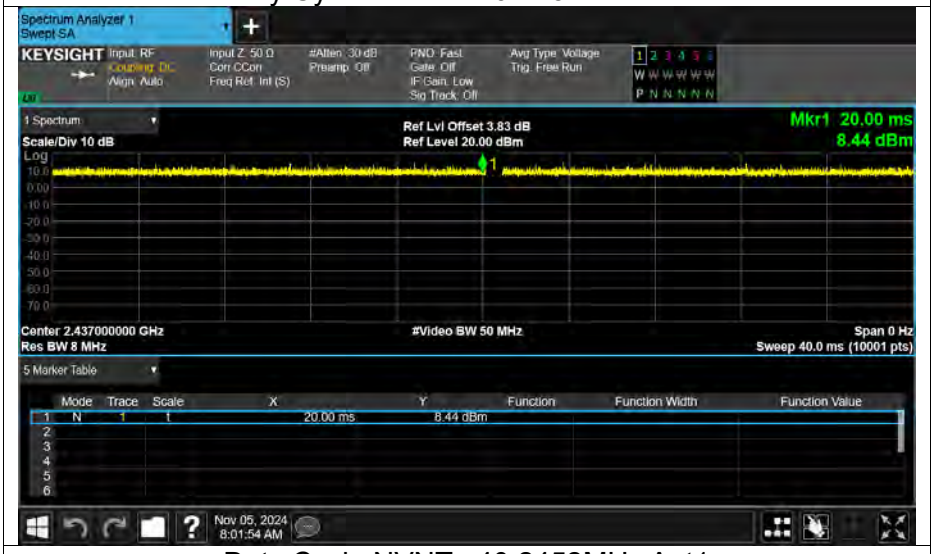

Duty Cycle NVNT n20 2462MHz Ant1



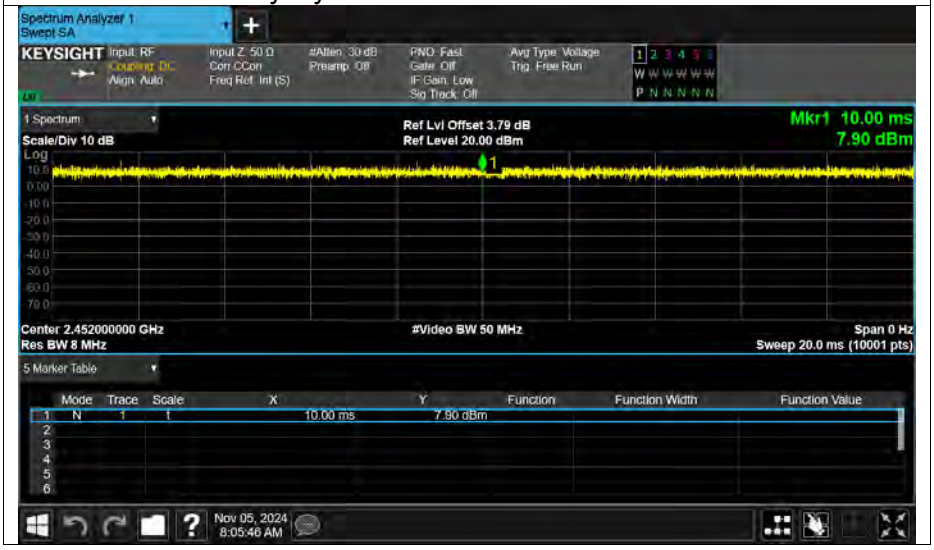
Duty Cycle NVNT n40 2422MHz Ant1




Duty Cycle NVNT n40 2437MHz Ant1




Duty Cycle NVNT n40 2452MHz Ant1



Maximum Peak Conducted Output Power

| Condition | Mode | Frequency (MHz) | Antenna | Conducted Power (dBm) | Limit (dBm) | Verdict |
|---|---|---|---|---|---|---|
| NVNT | b | 2412 | Ant1 | 14.98 | 30 | Pass |
| NVNT | b | 2437 | Ant1 | 15.22 | 30 | Pass |
| NVNT | b | 2462 | Ant1 | 15.11 | 30 | Pass |
| NVNT | g | 2412 | Ant1 | 13.24 | 30 | Pass |
| NVNT | g | 2437 | Ant1 | 13.43 | 30 | Pass |
| NVNT | g | 2462 | Ant1 | 13.31 | 30 | Pass |
| NVNT | n20 | 2412 | Ant1 | 12.25 | 30 | Pass |
| NVNT | n20 | 2437 | Ant1 | 12.1 | 30 | Pass |
| NVNT | n20 | 2462 | Ant1 | 12.19 | 30 | Pass |
| NVNT | n40 | 2422 | Ant1 | 12.52 | 30 | Pass |
| NVNT | n40 | 2437 | Ant1 | 12.52 | 30 | Pass |
| NVNT | n40 | 2452 | Ant1 | 12.54 | 30 | Pass |

-6dB Bandwidth

| Condition | Mode | Frequency (MHz) | Antenna | -6 dB Bandwidth (MHz) | Limit -6 dB Bandwidth (MHz) | Verdict |
|---|---|---|---|---|---|---|
| NVNT | b | 2412 | Ant1 | 7.982 | 0.5 | Pass |
| NVNT | b | 2437 | Ant1 | 7.582 | 0.5 | Pass |
| NVNT | b | 2462 | Ant1 | 8.044 | 0.5 | Pass |
| NVNT | g | 2412 | Ant1 | 16.333 | 0.5 | Pass |
| NVNT | g | 2437 | Ant1 | 16.367 | 0.5 | Pass |
| NVNT | g | 2462 | Ant1 | 16.345 | 0.5 | Pass |
| NVNT | n20 | 2412 | Ant1 | 17.579 | 0.5 | Pass |
| NVNT | n20 | 2437 | Ant1 | 17.596 | 0.5 | Pass |
| NVNT | n20 | 2462 | Ant1 | 17.6 | 0.5 | Pass |
| NVNT | n40 | 2422 | Ant1 | 35.987 | 0.5 | Pass |
| NVNT | n40 | 2437 | Ant1 | 36.051 | 0.5 | Pass |
| NVNT | n40 | 2452 | Ant1 | 36.332 | 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

-6dB Bandwidth NVNT n40 2422MHz Ant1

-6dB Bandwidth NVNT n40 2437MHz Ant1

-6dB Bandwidth NVNT n40 2452MHz Ant1

Occupied Channel Bandwidth

| Condition | Mode | Frequency (MHz) | Antenna | 99% OBW (MHz) |
|---|---|---|---|---|
| NVNT | b | 2412 | Ant1 | 12.749 |
| NVNT | b | 2437 | Ant1 | 12.796 |
| NVNT | b | 2462 | Ant1 | 12.84 |
| NVNT | g | 2412 | Ant1 | 16.428 |
| NVNT | g | 2437 | Ant1 | 16.44 |
| NVNT | g | 2462 | Ant1 | 16.444 |
| NVNT | n20 | 2412 | Ant1 | 17.579 |
| NVNT | n20 | 2437 | Ant1 | 17.594 |
| NVNT | n20 | 2462 | Ant1 | 17.582 |
| NVNT | n40 | 2422 | Ant1 | 35.893 |
| NVNT | n40 | 2437 | Ant1 | 35.945 |
| NVNT | n40 | 2452 | Ant1 | 36.005 |

| Test Graphs |
| --- |
| OBW NVNT b 2412MHz Ant1 |
| |
| OBW NVNT b 2437MHz Ant1 |
| |
| OBW NVNT b 2462MHz Ant1 |
| |

OBW NVNT g 2412MHz Ant1

OBW NVNT g 2437MHz Ant1

OBW NVNT g 2462MHz Ant1

OBW NVNT n20 2412MHz Ant1

OBW NVNT n20 2437MHz Ant1

OBW NVNT n20 2462MHz Ant1

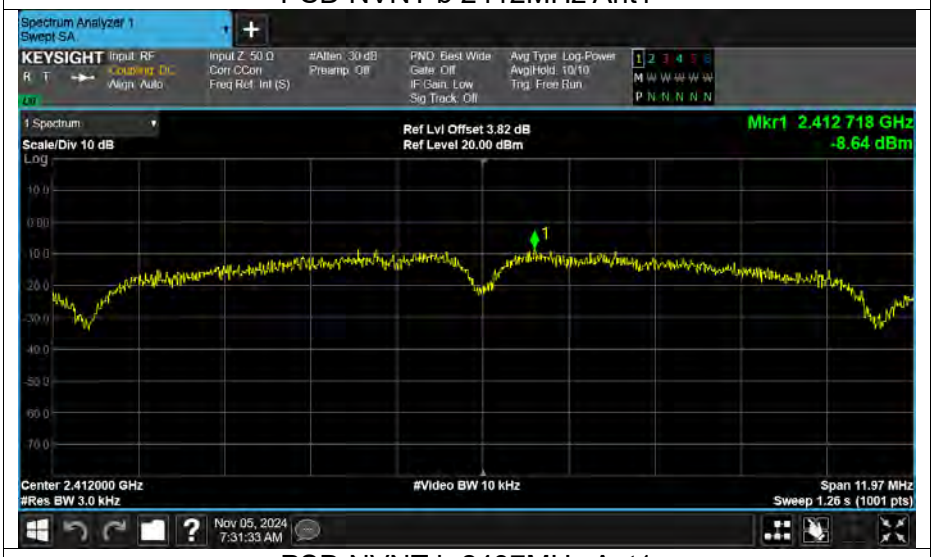
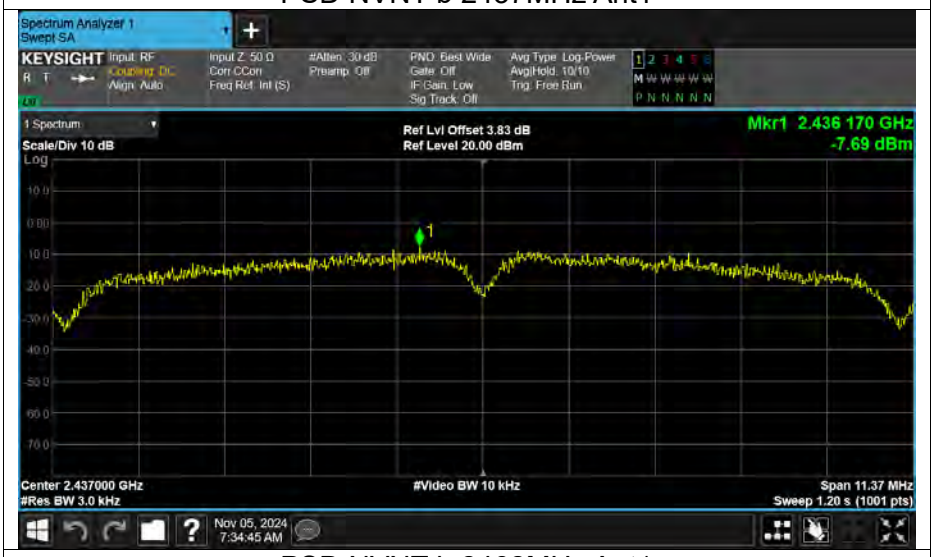
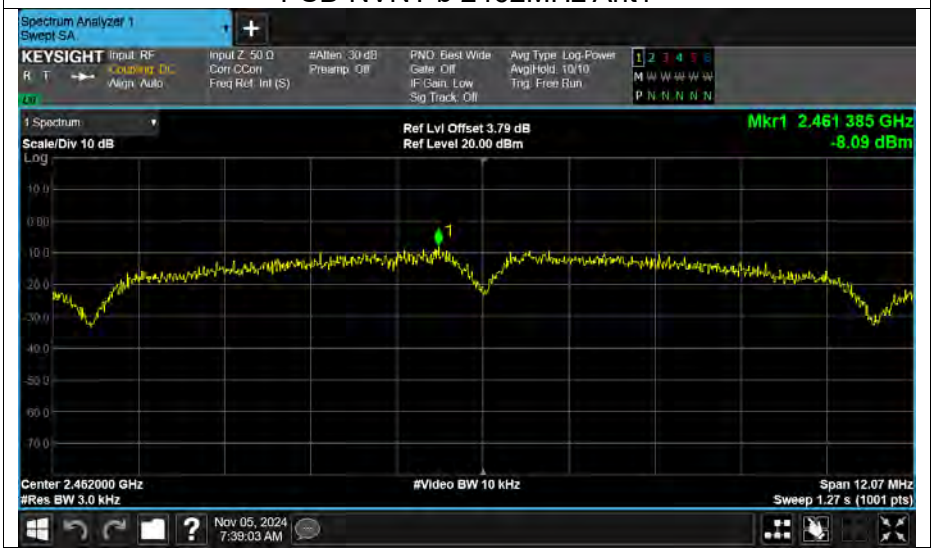
OBW NVNT n40 2422MHz Ant1

OBW NVNT n40 2437MHz Ant1

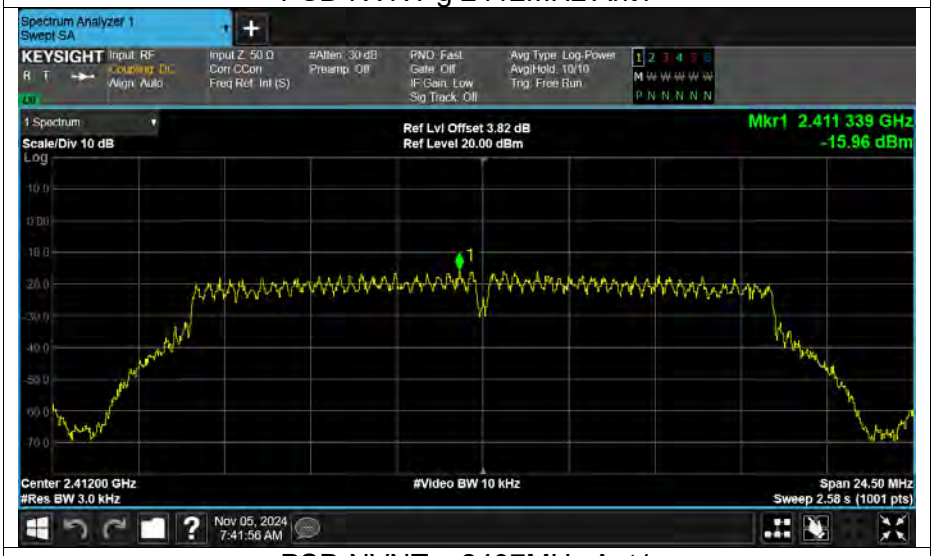
OBW NVNT n40 2452MHz Ant1

Maximum Power Spectral Density Level

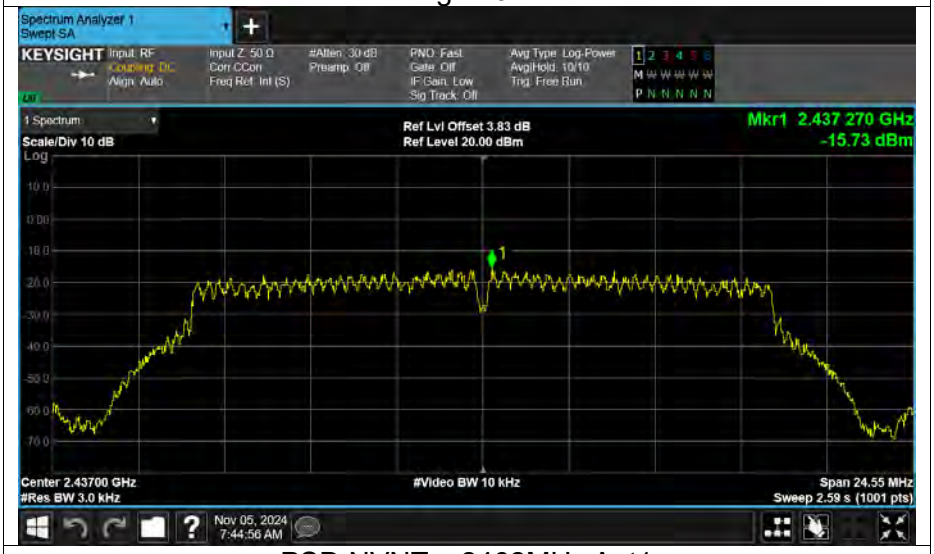
| Condition | Mode | Frequency (MHz) | Antenna | Conducted PSD (dBm/3kHz) | Limit (dBm/3kHz) | Verdict |
|---|---|---|---|---|---|---|
| NVNT | b | 2412 | Ant1 | -8.64 | 8 | Pass |
| NVNT | b | 2437 | Ant1 | -7.69 | 8 | Pass |
| NVNT | b | 2462 | Ant1 | -8.09 | 8 | Pass |
| NVNT | g | 2412 | Ant1 | -15.96 | 8 | Pass |
| NVNT | g | 2437 | Ant1 | -15.74 | 8 | Pass |
| NVNT | g | 2462 | Ant1 | -16.56 | 8 | Pass |
| NVNT | n20 | 2412 | Ant1 | -17 | 8 | Pass |
| NVNT | n20 | 2437 | Ant1 | -17.1 | 8 | Pass |
| NVNT | n20 | 2462 | Ant1 | -16.35 | 8 | Pass |
| NVNT | n40 | 2422 | Ant1 | -19.5 | 8 | Pass |
| NVNT | n40 | 2437 | Ant1 | -19.29 | 8 | Pass |
| NVNT | n40 | 2452 | Ant1 | -17.56 | 8 | Pass |

| Test Graphs |
| --- |
| PSD NVNT b 2412MHz Ant1 |
|  |
| PSD NVNT b 2437MHz Ant1 |
|  |
| PSD NVNT b 2462MHz Ant1 |
|  |

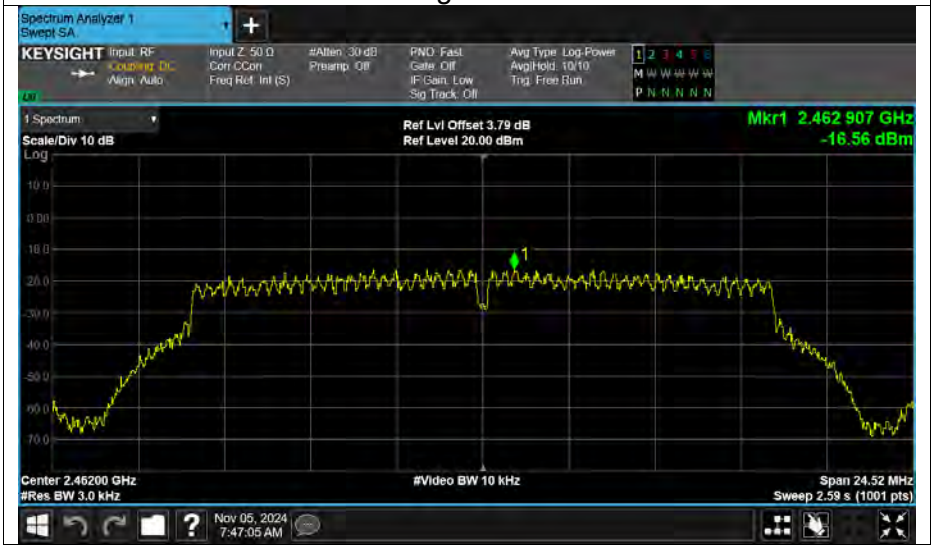
PSD NVNT g 2412MHz Ant1



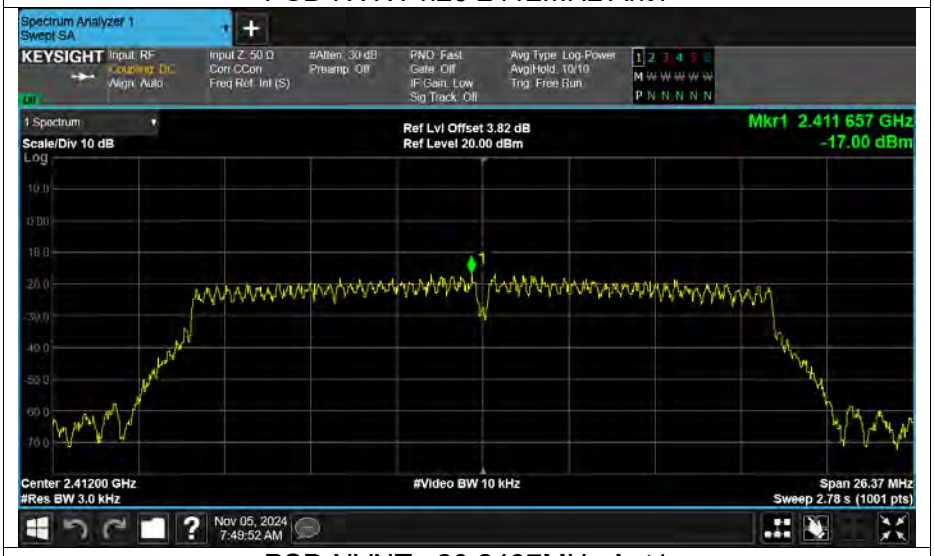

PSD NVNT g 2437MHz Ant1



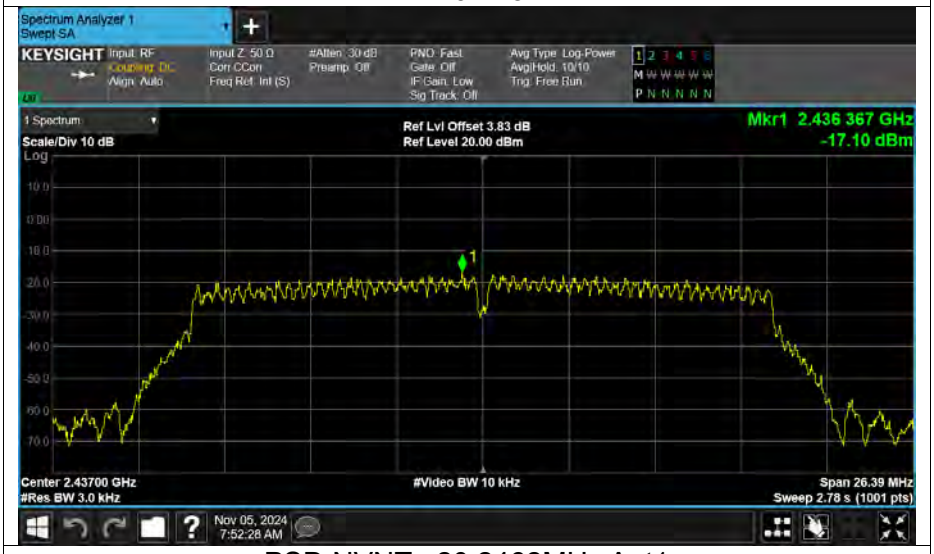

PSD NVNT g 2462MHz Ant1



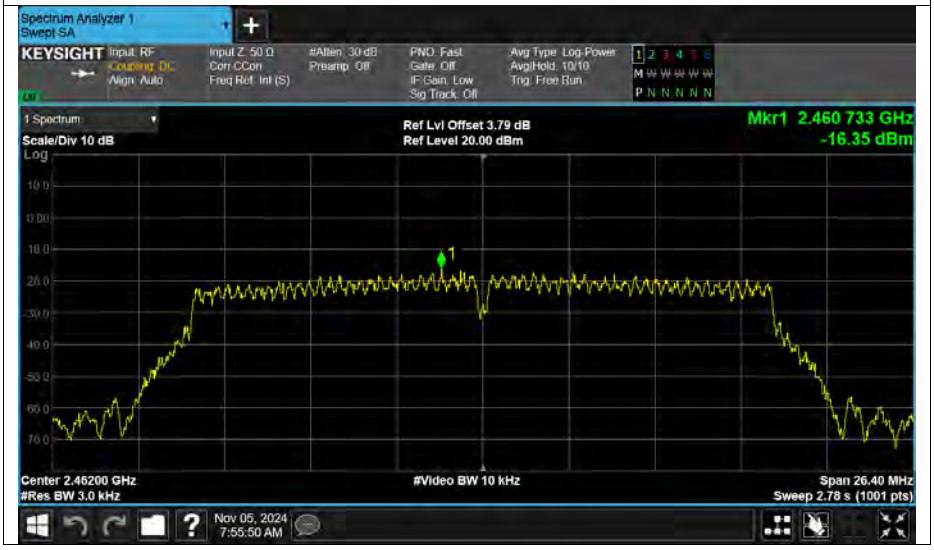
PSD NVNT n20 2412MHz Ant1



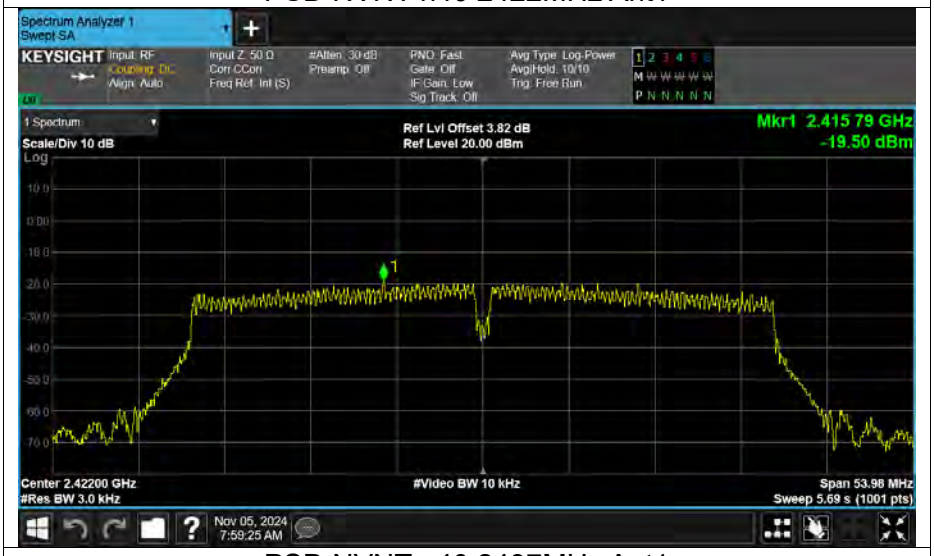

PSD NVNT n20 2437MHz Ant1



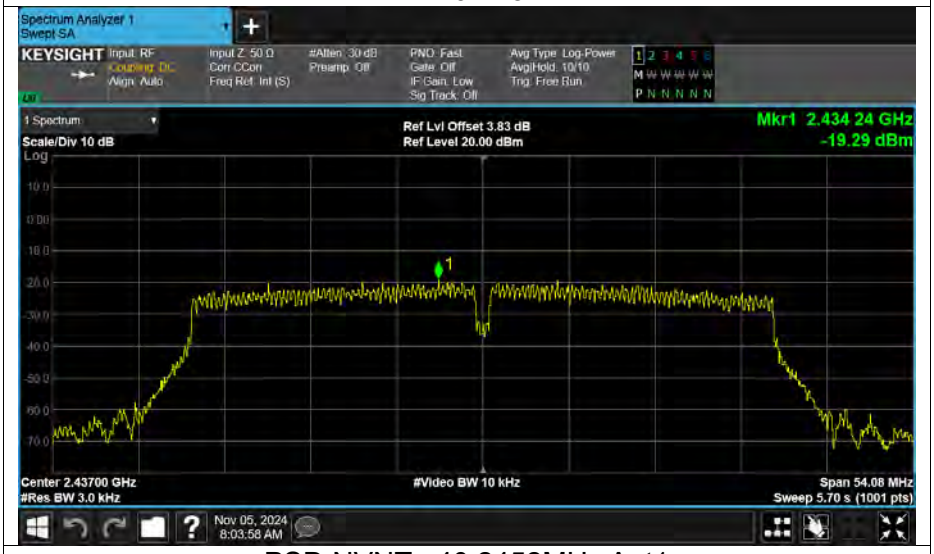

PSD NVNT n20 2462MHz Ant1



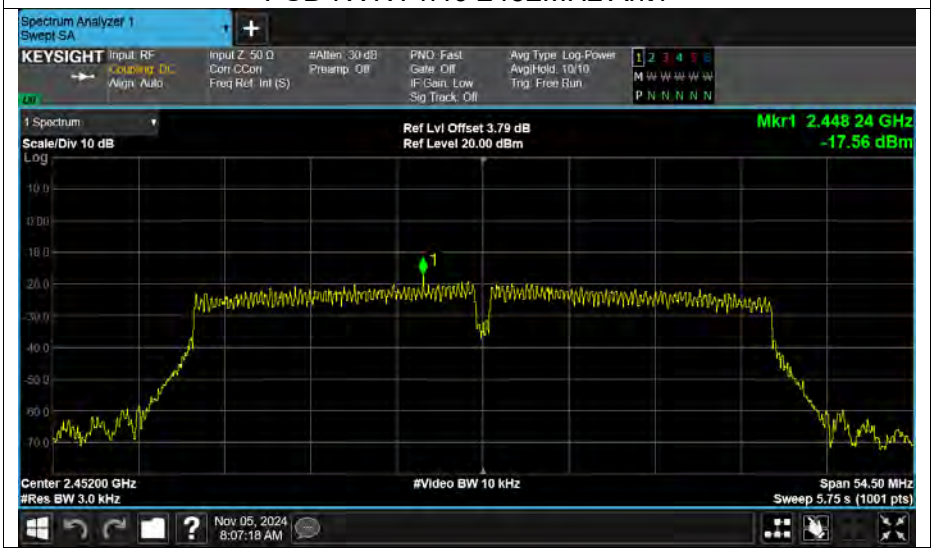
PSD NVNT n40 2422MHz Ant1




PSD NVNT n40 2437MHz Ant1

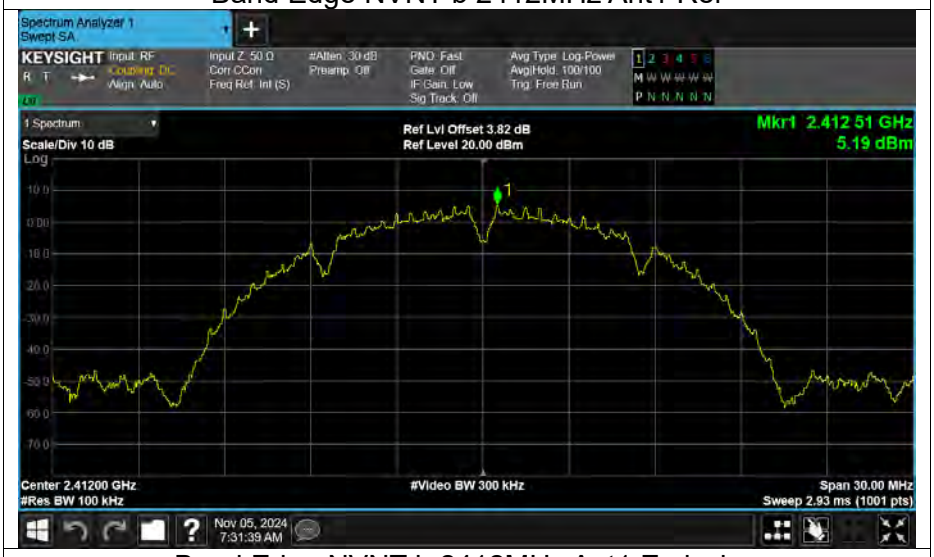



PSD NVNT n40 2452MHz Ant1



Band Edge

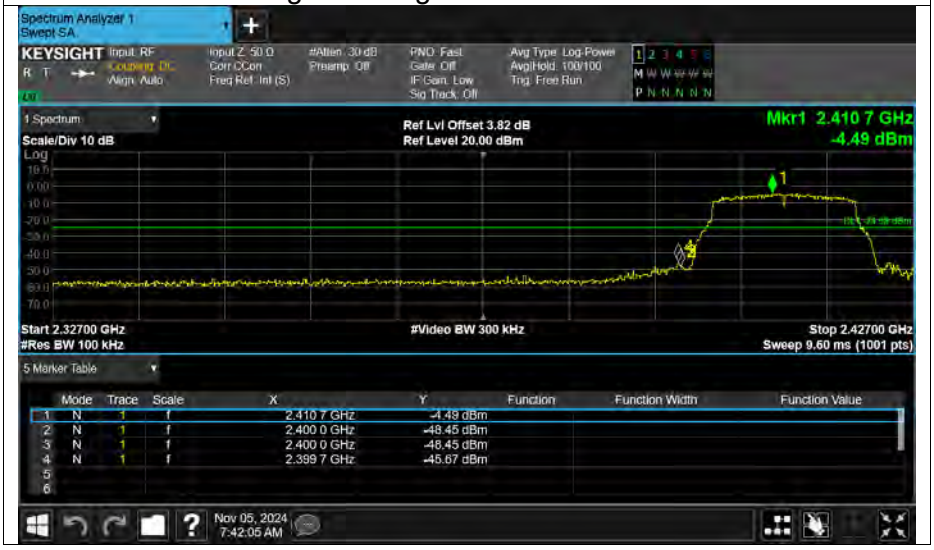
| Condition | Mode | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|---|---|---|---|---|---|---|
| NVNT | b | 2412 | Ant1 | -52.49 | -20 | Pass |
| NVNT | b | 2462 | Ant1 | -59.65 | -20 | Pass |
| NVNT | g | 2412 | Ant1 | -41.08 | -20 | Pass |
| NVNT | g | 2462 | Ant1 | -50.75 | -20 | Pass |
| NVNT | n20 | 2412 | Ant1 | -41.78 | -20 | Pass |
| NVNT | n20 | 2462 | Ant1 | -49.7 | -20 | Pass |
| NVNT | n40 | 2422 | Ant1 | -39.68 | -20 | Pass |
| NVNT | n40 | 2452 | Ant1 | -46.34 | -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 |
| |

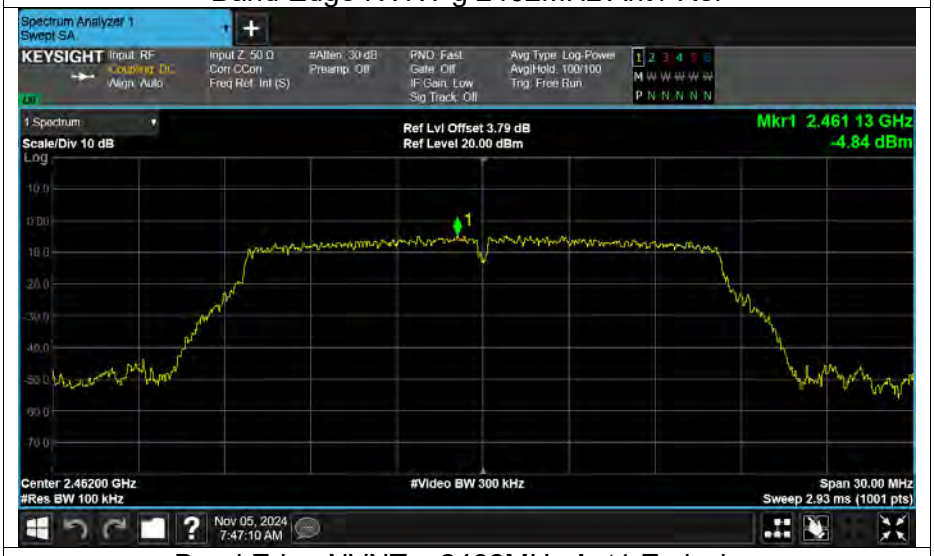
Band Edge NVNT b 2462MHz Ant1 Emission

Band Edge NVNT g 2412MHz Ant1 Ref

Band Edge NVNT g 2412MHz Ant1 Emission

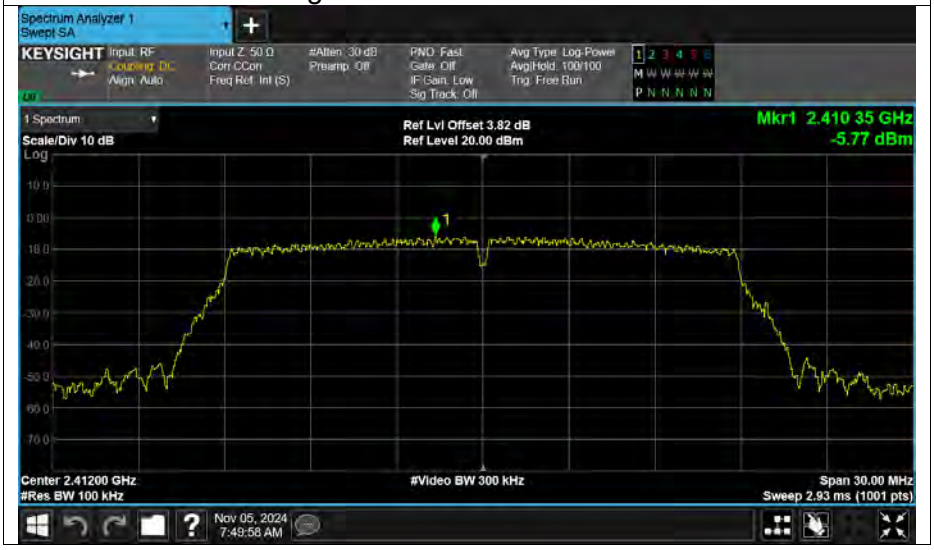


Band Edge NVNT g 2462MHz Ant1 Ref

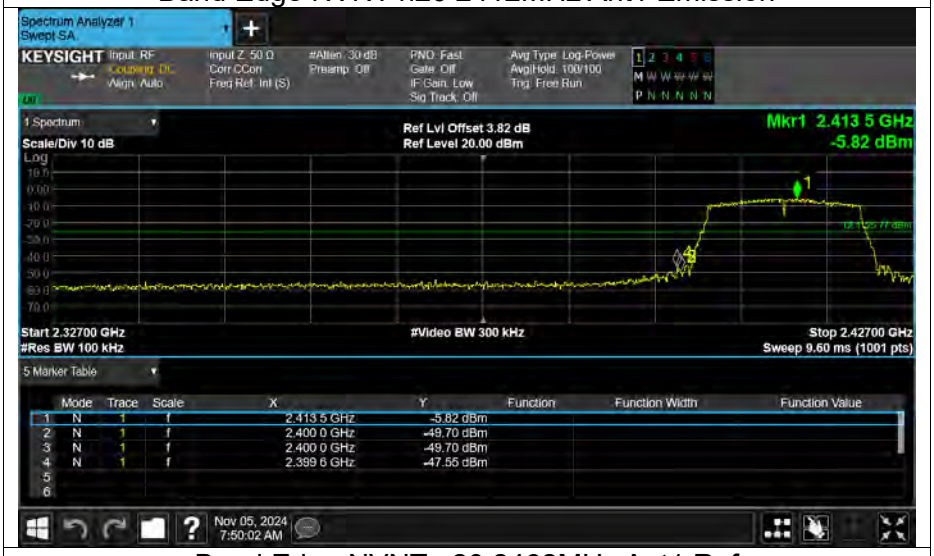



Band Edge NVNT g 2462MHz Ant1 Emission

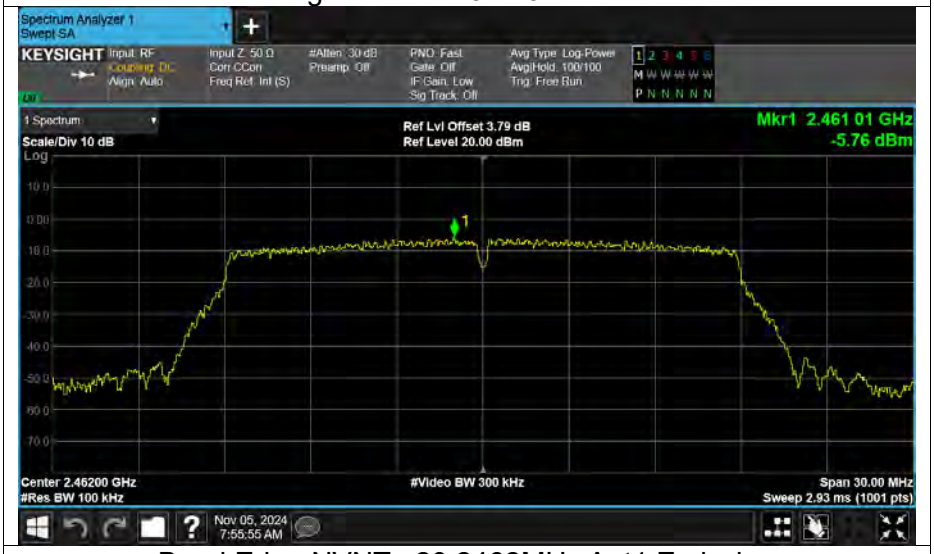
Band Edge NVNT n20 2412MHz Ant1 Ref



Band Edge NVNT n20 2412MHz Ant1 Emission

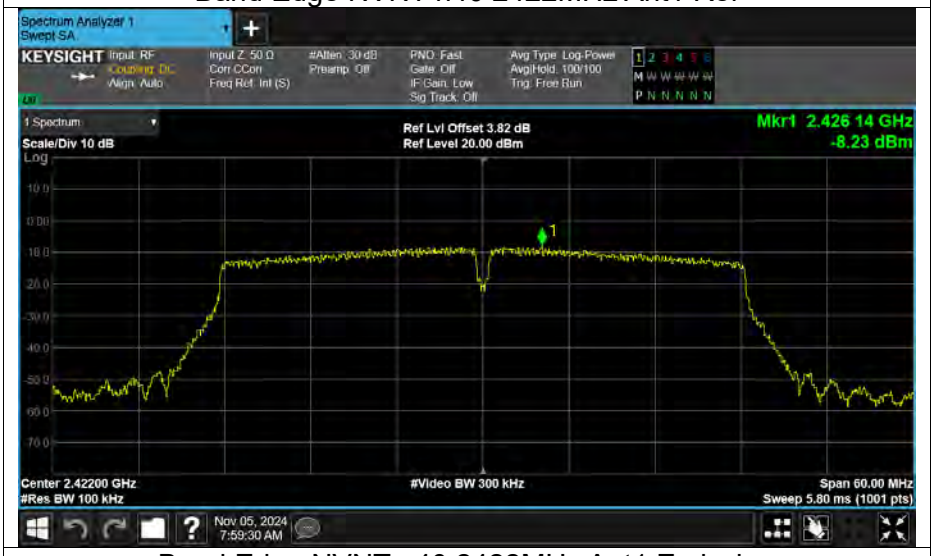



Band Edge NVNT n20 2462MHz Ant1 Ref



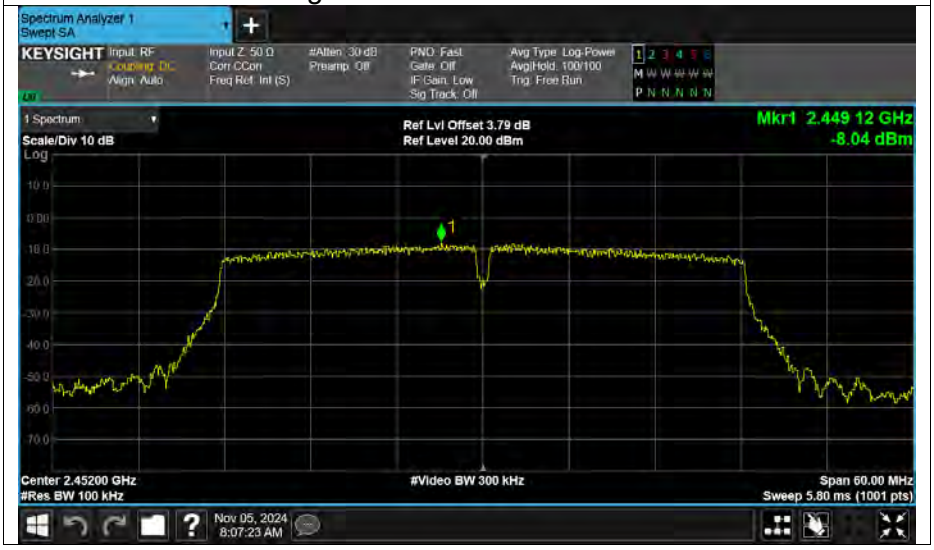

Band Edge NVNT n20 2462MHz Ant1 Emission

Band Edge NVNT n40 2422MHz Ant1 Ref




Band Edge NVNT n40 2422MHz Ant1 Emission

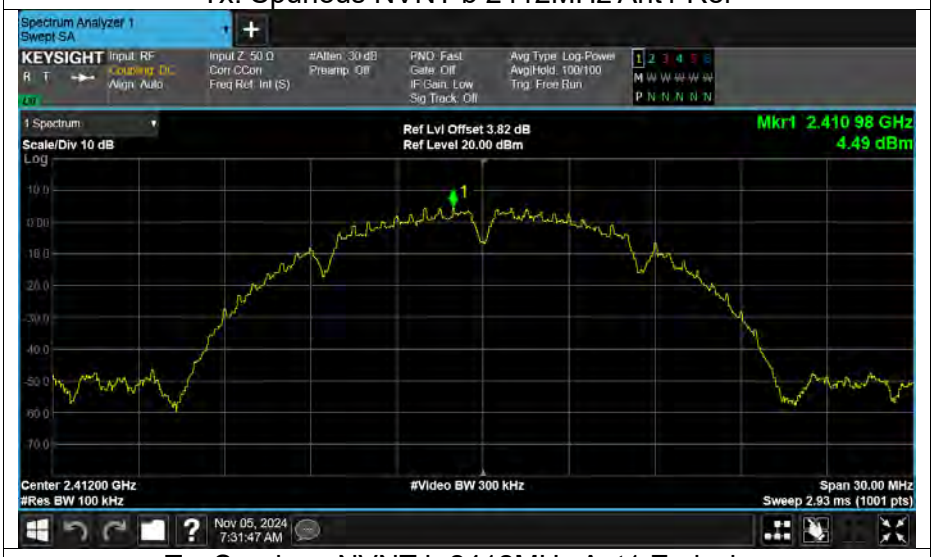
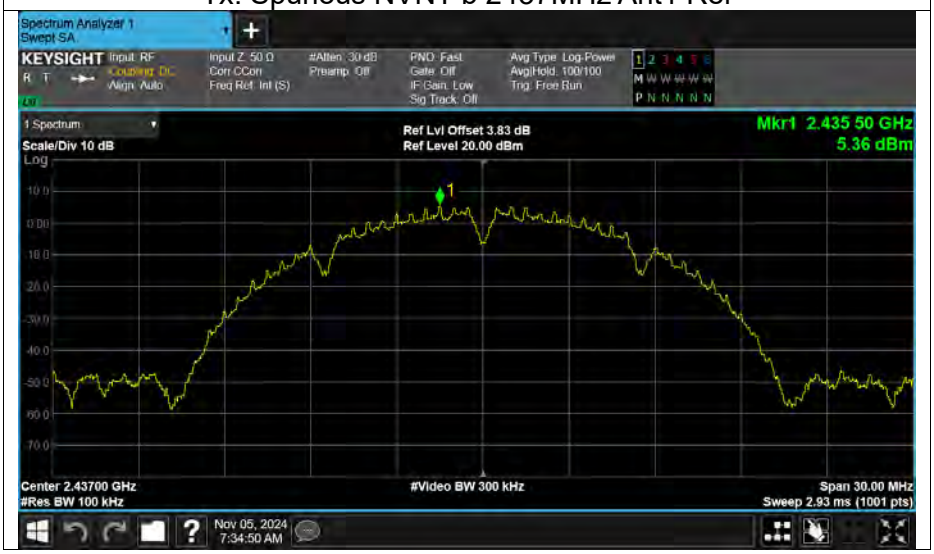
Band Edge NVNT n40 2452MHz Ant1 Ref



| Band Edge NVNT n40 2452MHz Ant1 Emission |
| --- |
| |

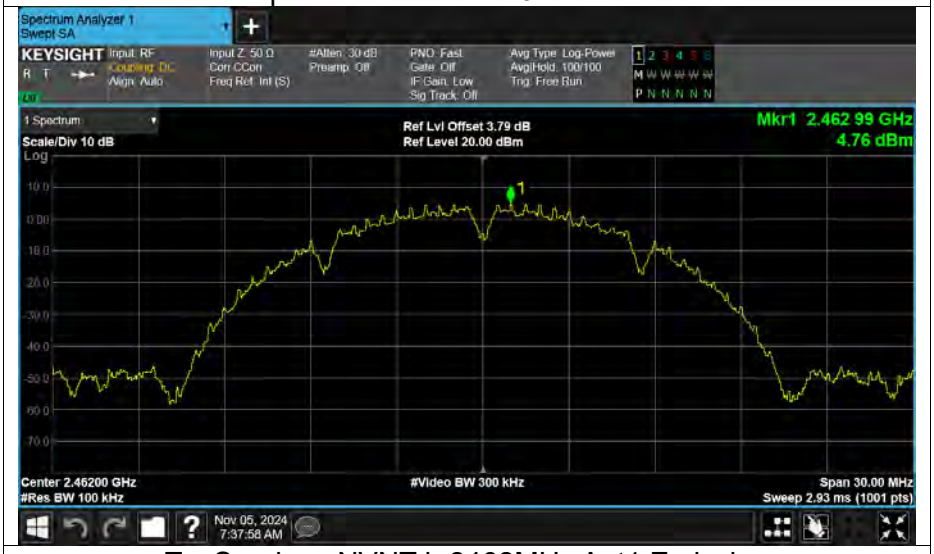
Conducted RF Spurious Emission

| Condition | Mode | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|---|---|---|---|---|---|---|
| NVNT | b | 2412 | Ant1 | -51.93 | -20 | Pass |
| NVNT | b | 2437 | Ant1 | -53.36 | -20 | Pass |
| NVNT | b | 2462 | Ant1 | -52.55 | -20 | Pass |
| NVNT | g | 2412 | Ant1 | -43.1 | -20 | Pass |
| NVNT | g | 2437 | Ant1 | -43.74 | -20 | Pass |
| NVNT | g | 2462 | Ant1 | -43.21 | -20 | Pass |
| NVNT | n20 | 2412 | Ant1 | -41.91 | -20 | Pass |
| NVNT | n20 | 2437 | Ant1 | -41.82 | -20 | Pass |
| NVNT | n20 | 2462 | Ant1 | -41.5 | -20 | Pass |
| NVNT | n40 | 2422 | Ant1 | -40.16 | -20 | Pass |
| NVNT | n40 | 2437 | Ant1 | -39.55 | -20 | Pass |
| NVNT | n40 | 2452 | Ant1 | -39.72 | -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 |
|  |

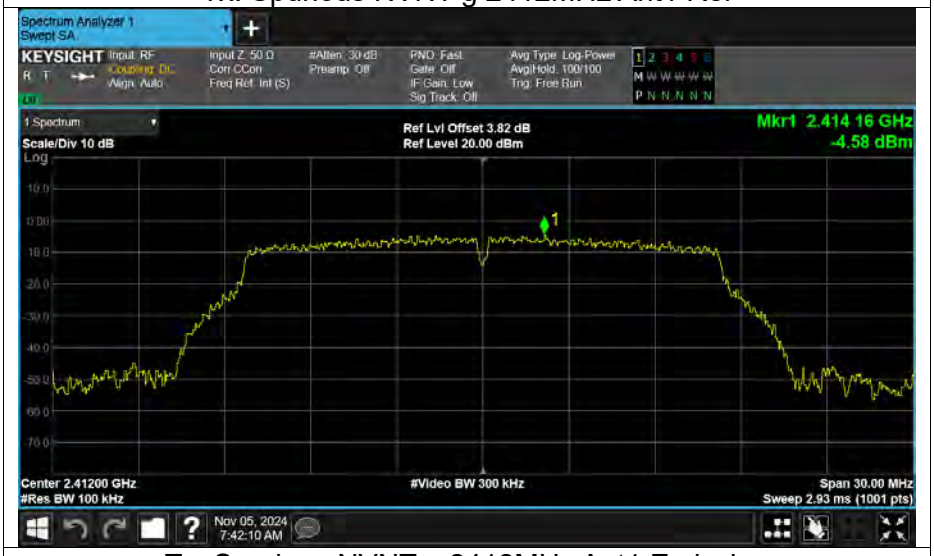
Tx. Spurious NVNT b 2437MHz Ant1 Emission

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

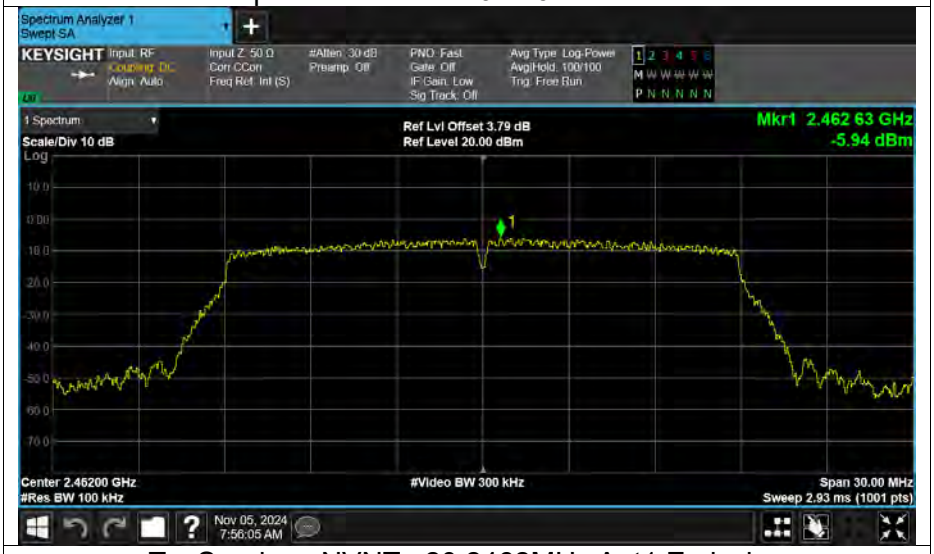
Tx. Spurious NVNT n20 2412MHz Ant1 Ref

Tx. Spurious NVNT n20 2412MHz Ant1 Emission

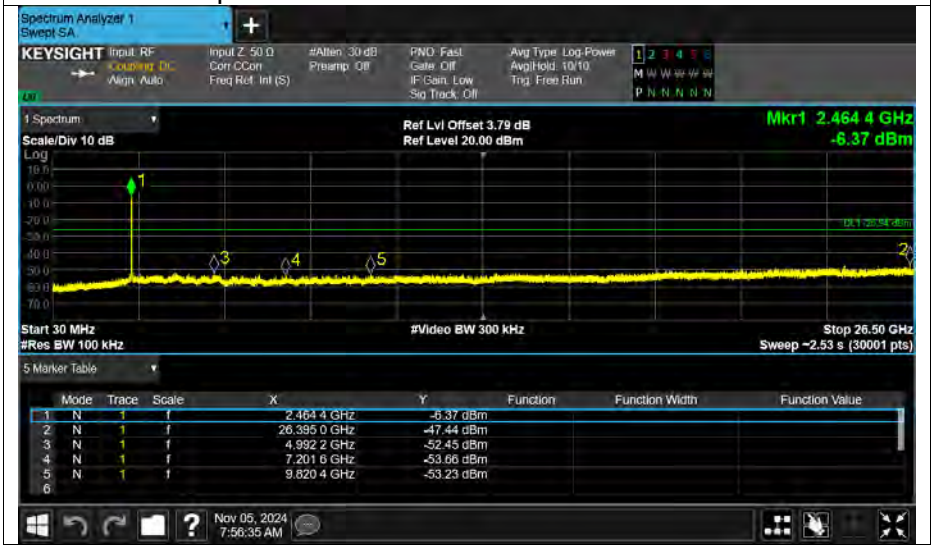
Tx. Spurious NVNT n20 2437MHz Ant1 Ref

Tx. Spurious NVNT n20 2437MHz Ant1 Emission

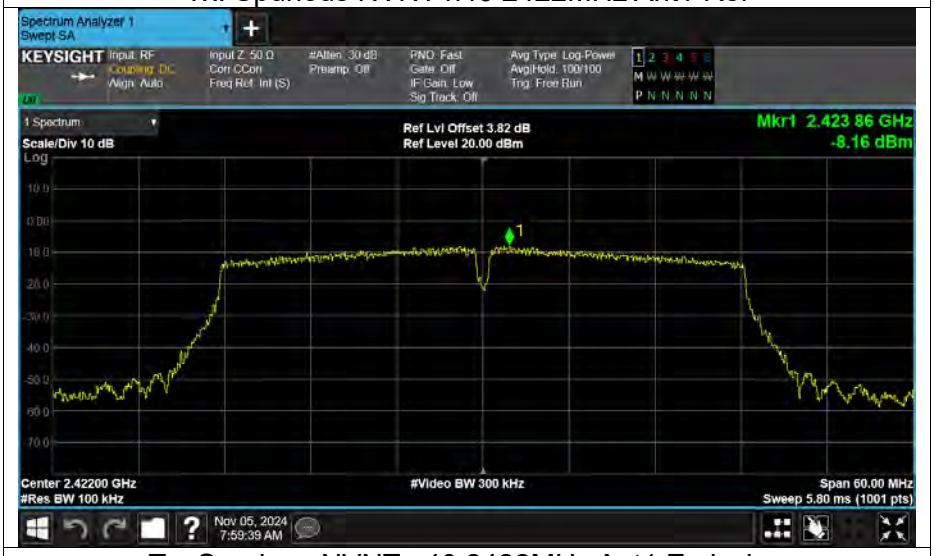
Tx. Spurious NVNT n20 2462MHz Ant1 Ref




Tx. Spurious NVNT n20 2462MHz Ant1 Emission

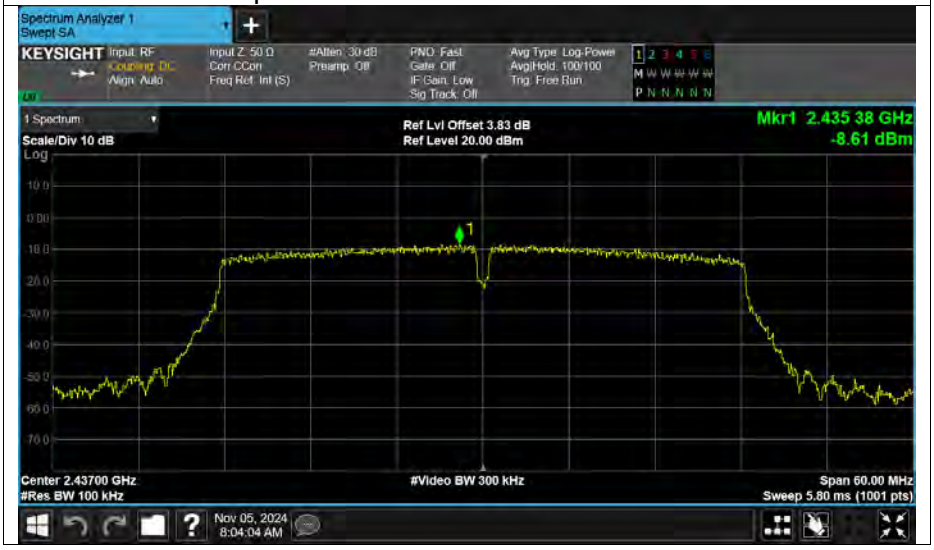


Tx. Spurious NVNT n40 2422MHz Ant1 Ref



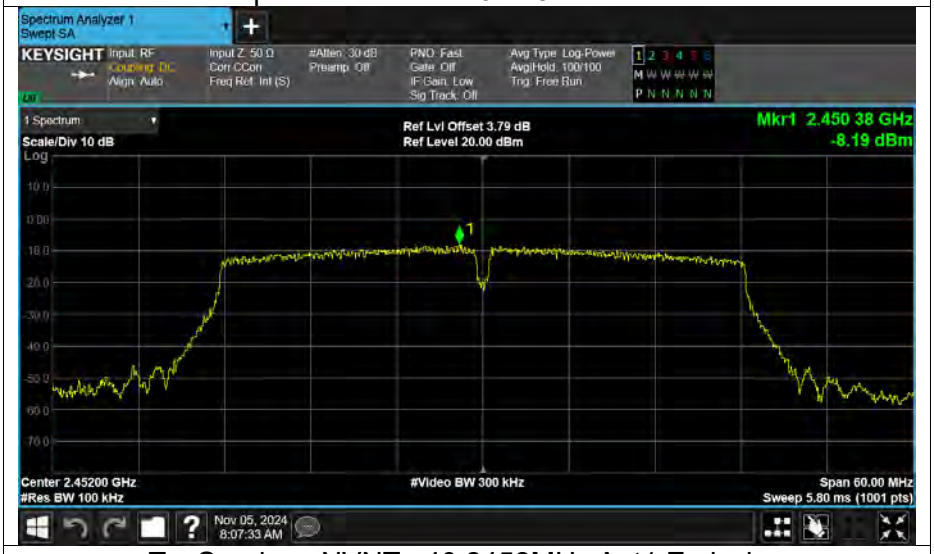

Tx. Spurious NVNT n40 2422MHz Ant1 Emission

Tx. Spurious NVNT n40 2437MHz Ant1 Ref



Tx. Spurious NVNT n40 2437MHz Ant1 Emission

Tx. Spurious NVNT n40 2452MHz Ant1 Ref




Tx. Spurious NVNT n40 2452MHz Ant1 Emission

# APPENDIX II - MEASUREMENT PHOTOS

Note: Please see the attached RF_Test Setup photos for FCC Part 15C.

※※※※※END OF THE REPORT※※※※※