# FCC TEST REPORT
# FCC ID:2BALN-OBM27-AC-3P32

**Report Number. ..... : ZHT-240520015E-1**

Date of Test ..... : May 20, 2024 to Aug 20, 2024

Date of issue ..... : Aug 20, 2024

Test Result ..... : PASS

**Testing Laboratory. ..... : Guangdong Zhonghan Testing Technology Co., Ltd.**

Address ..... : Room 104, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

**Applicant's name ..... : Shenzhen Feyree Technology Co., Ltd**

Address ..... : 2 buildings A seat The second floor 201, Hisense industrial park in, Saxo road no. 2, South bay street, Longgang District, Shenzhen

**Manufacturer's name ..... : Shenzhen Feyree Technology Co., Ltd**

Address ..... : 2 buildings A seat The second floor 201, Hisense industrial park in, Saxo road no. 2, South bay street, Longgang District, Shenzhen

**Test specification:**

Standard ..... : FCC CFR Title 47 Part 15 Subpart C Section 15.247

Test procedure ..... : KDB558074 D01 15.247 Meas Guidance v05r02
ANSI C63.10:2013

Non-standard test method ..... : N/A

This device described above has been tested by ZHT, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

This report shall not be reproduced except in full, without the written approval of ZHT, this document may be altered or revised by ZHT, personal only, and shall be noted in the revision of the document.

**Product name ..... : Portable EV charger**

Trademark ..... : 菲尔雷® feyree®

Model/Type reference ..... : F-OBM27-AC-3P32, JF-OBM27-AC-1P32, F-OBM27-AC-3P16, F-GBM27-AC-1P32, F-GBM27-AC-3P16, F-GBM27-AC-3P32, F-MBM27-AC-1P32, F-MBM27-AC-1P40, F-MBM27-AC-1P50, F-TSM27-AC-1P32, F-TSM27-AC-1P40, F-TSM27-AC-1P50

Model Difference.....: F-OBM27-AC-3P32 is tested model, other models are derivative models .The models are identical in circuit and product material, Only the model name and color differ, So the test data of F-OBM27-AC-3P32 can represent the remaining models.

Ratings ..... : Input: 85 - 240 V~, 50 / 60 Hz, 32A
Output: 85 - 240 V~, 50 / 60 Hz, 16 / 32 A
/ Input: 400 V~, 50 / 60 Hz
Output: 400 V~, 50 / 60 Hz, 16 / 32 A

**Testing procedure and testing location:**

| | |
|---|---|
| **Testing Laboratory.....:** | **Guangdong Zhonghan Testing Technology Co., Ltd.** |
| Address.....: | Room 104, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China |
| Tested by (name + signature).....: | Kevin Yang |
| Reviewer (name + signature).....: | Baret Wu |
| Approved (name + signature).....: | Levi Lee |

## Table of Contents

Page

1. VERSION ..... 5
2. SUMMARY OF TEST RESULTS ..... 6
2.1 TEST FACILITY ..... 7
2.2 MEASUREMENT UNCERTAINTY ..... 7
3. GENERAL INFORMATION ..... 8
3.1 GENERAL DESCRIPTION OF EUT ..... 8
3.2 DESCRIPTION OF TEST MODES ..... 9
3.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED ..... 10
3.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE) ..... 10
3.5EQUIPMENTS LIST FOR ALL TEST ITEMS ..... 11
4. EMC EMISSION TEST ..... 13
4.1 CONDUCTED EMISSION MEASUREMENT ..... 13
4.1.1 POWER LINE CONDUCTED EMISSION Limits ..... 13
4.1.2 TEST PROCEDURE ..... 13
4.1.3 DEVIATION FROM TEST STANDARD ..... 13
4.1.4 TEST SETUP ..... 14
4.1.5 EUT OPERATING CONDITIONS ..... 14
4.2 RADIATED EMISSION MEASUREMENT ..... 17
4.2.1 RADIATED EMISSION LIMITS ..... 17
4.2.2 TEST PROCEDURE ..... 17
4.2.3 DEVIATION FROM TEST STANDARD ..... 18
4.2.4 TEST SETUP ..... 18
4.2.5 EUT OPERATING CONDITIONS ..... 19
4.2.6 TEST RESULTS ..... 19
5. RADIATED BAND EMISSIONMEASUREMENT ..... 24
5.1 TEST REQUIREMENT: ..... 24
5.2 TEST PROCEDURE ..... 24
5.3 DEVIATION FROM TEST STANDARD ..... 24
5.4 TEST SETUP ..... 25
5.5 EUT OPERATING CONDITIONS ..... 25
5.6 TEST RESULT ..... 26
6. POWER SPECTRAL DENSITY TEST ..... 28
6.1 APPLIED PROCEDURES / LIMIT ..... 28
6.2 TEST PROCEDURE ..... 28
6.3 DEVIATION FROM STANDARD ..... 28
6.4 TEST SETUP ..... 28
6.5 EUT OPERATION CONDITIONS ..... 29

6.6 TEST RESULT ....29
7. CHANNEL BANDWIDTH ....30
7.1 APPLIED PROCEDURES / 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 RESULT ....31
8. PEAK OUTPUT POWER TEST ....32
8.1 APPLIED PROCEDURES/LIMIT ....32
8.2 TEST PROCEDURE ....32
8.3 DEVIATION FROM STANDARD ....32
8.4 TEST SETUP ....32
8.5 EUT OPERATION CONDITIONS ....32
8.6 TEST RESULT ....32
9. CONDUCTED BAND EDGE AND SPURIOUS EMISSION ....33
9.1 APPLICABLE STANDARD ....33
9.2 TEST PROCEDURE ....33
9.3 DEVIATION FROM STANDARD ....33
9.4 TEST SETUP ....33
9.5 EUT OPERATION CONDITIONS ....33
9.6 TEST RESULTS ....33
10. ANTENNA REQUIREMENT ....34
11. APPENDIX A ....35
11.1 DUTY CYCLE ....35
11.2 MAXIMUM AVERAGE CONDUCTED OUTPUT POWER ....42
11.3 MAXIMUM PEAK CONDUCTED OUTPUT POWER ....49
11.4 -6DB BANDWIDTH ....50
11.5 OCCUPIED CHANNEL BANDWIDTH ....57
11.6 MAXIMUM POWER SPECTRAL DENSITY LEVEL ....64
11.7 BAND EDGE ....71
11.8 CONDUCTED RF SPURIOUS EMISSION ....80
12. TEST SETUP PHOTO ....93
13. EUT CONSTRUCTIONAL DETAILS ....93

## 1. VERSION

| Report No. | Version | Description | Approved |
|---|---|---|---|
| ZHT-240520015E-1 | Rev.01 | Initial issue of report | May 29, 2024 |
| | | | |

## 2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

| FCC Part15 (15.247) , Subpart C | | | |
|---|---|---|---|
| Standard Section | Test Item | Result | Remark |
| FCC part 15.203/15.247 (b)(4) | Antenna requirement | PASS | |
| FCC part 15.207 | AC Power Line Conducted Emission | PASS | |
| FCC part 15.247 (b)(3) | Conducted Output Power | PASS | |
| FCC part 15.247 (a)(2) | Channel Bandwidth | PASS | |
| FCC part 15.247 (e) | Power Spectral Density | PASS | |
| FCC part 15.247(d) | Band Edge | PASS | |
| FCC part 15.205/15.209 | Spurious Emission | PASS | |

NOTE:

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

## 2.1 TEST FACILITY

Guangdong Zhonghan Testing Technology Co., Ltd.
Add. : Room 104, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

FCC Registration Number:255941
Designation Number: CN0325
IC Registered No.: 29832
CAB identifier: CN0143

## 2.2 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 | Conducted Emission Test | ±1.38dB |
| 2 | RF conducted power | ±0.16dB |
| 3 | Conducted spurious emissions | ±0.21dB |
| 4 | All radiated emissions (9k-30MHz) | ±4.68dB |
| 5 | All radiated emissions (<1G) | ±4.68dB |
| 6 | All radiated emissions (>1G) | ±4.89dB |
| 7 | Temperature | ±0.5°C |
| 8 | Humidity | ±2% |
| 9 | Occupied Bandwidth | ±4.96% |

# 3. GENERAL INFORMATION

## 3.1 GENERAL DESCRIPTION OF EUT

| | |
|---|---|
| Product Name: | Portable EV charger |
| Test Model No.: | F-OBM27-AC-3P32 |
| Hardware Version: | V1.0 |
| Software Version: | V1.0 |
| Sample(s) Status: | Engineer sample |
| Channel numbers: | 802.11b/802.11g /802.11n(HT20):11, /802.11n(HT40):7 |
| Operation Frequency: | 802.11b/802.11g /802.11n(HT20): 2412-2462MHz/802.11n(HT40): 2422-2452MHz |
| Channel separation: | 5MHz |
| Modulation technology: | IEEE 802.11b: DQPSK/DBPSK/DSSS/CCK<br>IEEE 802.11g: QPSK/BPSK/16QAM/64QAM/OFDM<br>IEEE 802.11n: QPSK/BPSK/16QAM/64QAM/OFDM |
| Antenna Type: | PCB antenna |
| Antenna gain: | 2.5dBi |
| Power supply: | Input: 85 - 240 V~, 50 / 60 Hz, 32A<br>Output: 85 - 240 V~, 50 / 60 Hz, 16 / 32 A<br>/ Input: 400 V~, 50 / 60 Hz<br>Output: 400 V~, 50 / 60 Hz, 16 / 32 A |

| Operation Frequency each of channel | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Frequency | Channel | Frequency | Channel | Frequency | Channel | Frequency |
| 1 | 2412MHz | 4 | 2427MHz | 7 | 2442MHz | 10 | 2457MHz |
| 2 | 2417MHz | 5 | 2432MHz | 8 | 2447MHz | 11 | 2462MHz |
| 3 | 2422MHz | 6 | 2437MHz | 9 | 2452MHz | | |

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

| **Test channel** | **Frequency (MHz)** |
|---|---|
| | 802.11b/802.11g/802.11n(HT20) |
| Lowest channel | 2412MHz |
| Middle channel | 2437MHz |
| Highest channel | 2462MHz |

| **Test channel** | **Frequency (MHz)** |
|---|---|
| | 802.11n(HT40) |
| Lowest channel | 2422MHz |
| Middle channel | 2437MHz |
| Highest channel | 2452MHz |

## 3.2 DESCRIPTION OF TEST MODES

| | |
|---|---|
| Transmitting mode | Keep the EUT in continuously transmitting mode |
| Remark: EUT use new battery during the test, the test voltage was tuned from 85% to 115% of the nominal rated supply voltage, and found that the worst case was under the nominal rated supply condition. So the report just shows that condition's data. | |

We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:

Pre-scan all kind of data rate in lowest channel, and found the follow list which it was worst case.

| Mode | 802.11b | 802.11g | 802.11n(HT20) | 802.11n(HT40) |
|---|---|---|---|---|
| Data rate | 1Mbps | 6Mbps | 6.5Mbps | 13.5Mbps |

## 3.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

EUT

## 3.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

| Item | Equipment | Mfr/Brand | Model/Type No. | Series No. | Note |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |

| Item | Shielded Type | Ferrite Core | Length | Note |
|---|---|---|---|---|
| | | | | |
| | | | | |

Note:

(1) The support equipment was authorized by Declaration of Confirmation.
(2) For detachable type I/O cable should be specified the length in cm in『Length』column.

## 3.5EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation Test equipment

| Item | Equipment | Manufacturer | Model | Last Cal. | Next Cal. |
|---|---|---|---|---|---|
| 1 | Receiver | R&S | ESCI | May 10, 2024 | May 09, 2025 |
| 2 | Loop antenna | EMCI | LAP600 | May 10, 2024 | May 09, 2025 |
| 3 | Amplifier | Schwarzbeck | BBV 9743 B | May 10, 2024 | May 09, 2025 |
| 4 | Amplifier | Schwarzbeck | BBV 9718 B | May 10, 2024 | May 09, 2025 |
| 5 | Bilog Antenna | Schwarzbeck | VULB9168 | Aug. 04, 2023 | Aug. 03, 2024 |
| 6 | Horn Antenna | Schwarzbeck | BBHA9120D | May 16, 2024 | May 15, 2025 |
| 7 | Horn Antenna | A.H.SYSTEMS | SAS574 | May 10, 2024 | May 09, 2025 |
| 8 | Amplifier | AEROFLEX | 100KHz-40GHz | May 10, 2024 | May 09, 2025 |
| 9 | Spectrum Analyzer | R&S | FSV40 | May 16, 2024 | May 15, 2025 |
| 10 | CDNE | Schwarzbeck | CDNE M2 + CDNE M3 | May 10, 2024 | May 09, 2025 |
| 11 | 966 Anechoic Chamber | EMToni | 9m6m6m | Nov. 25, 2021 | Nov. 24, 2024 |
| 12 | Spectrum Analyzer | KEYSIGHT | N9020A | May 10, 2024 | May 09, 2025 |
| 13 | WIDBAND RADIO COMMUNICATION TESTER | R&S | CMW500 | May 10, 2024 | May 09, 2025 |
| 14 | Single Generator | Agilent | N5182A | May 10, 2024 | May 09, 2025 |
| 15 | Power Sensor | MWRFtest | MW100-RFCB | May 10, 2024 | May 09, 2025 |
| 16 | Audio analyzer | R&S | UPL | May 10, 2024 | May 09, 2025 |
| 17 | Single Generator | R&S | SMB100A | May 10, 2024 | May 09, 2025 |
| 18 | Power Amplifier Shielding Room | EMToni | 2m3m3m | Nov. 25, 2021 | Nov. 24, 2024 |

Conduction Test equipment

| Equipment | Manufacturer | Model | Last Cal. | Next Cal. |
|---|---|---|---|---|
| Receiver | R&S | ESCI | May 10, 2024 | May 09, 2025 |
| LISN | R&S | ENV216 | May 10, 2024 | May 09, 2025 |
| ISN CAT 6 | Schwarzbeck | NTFM 8158 | May 10, 2024 | May 09, 2025 |
| ISN CAT 5 | Schwarzbeck | CAT5 8158 | May 10, 2024 | May 09, 2025 |
| Capacitive Voltage Probe | Schwarzbeck | CVP 9222 C | May 10, 2024 | May 09, 2025 |
| Current Transformer Clamp | Schwarzbeck | SW 9605 | May 10, 2024 | May 09, 2025 |
| CE Shielding Room | EMToni | 9m4m3m | Nov. 25, 2021 | Nov. 24, 2024 |

## 4. EMC EMISSION TEST

### 4.1 CONDUCTED EMISSION MEASUREMENT

| | |
|---|---|
| Test Requirement: | FCC Part15 C Section 15.207 |
| Test Method: | ANSI C63.10:2013 |
| Test Frequency Range: | 150KHz to 30MHz |
| Receiver setup: | RBW=9KHz, VBW=30KHz, Sweep time=auto |

#### 4.1.1 POWER LINE CONDUCTED EMISSION Limits

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

Note:

(1) *Decreases with the logarithm of the frequency.

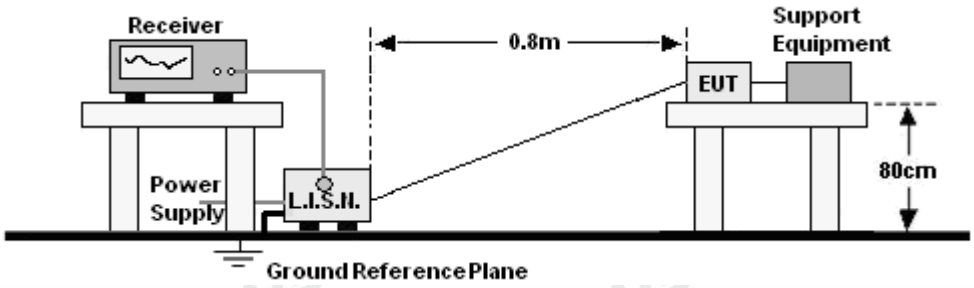
#### 4.1.2 TEST PROCEDURE

a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 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 at least 80 cm from nearest part of EUT chassis.
e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

#### 4.1.3 DEVIATION FROM TEST STANDARD

No deviation

4.1.4 TEST SETUP

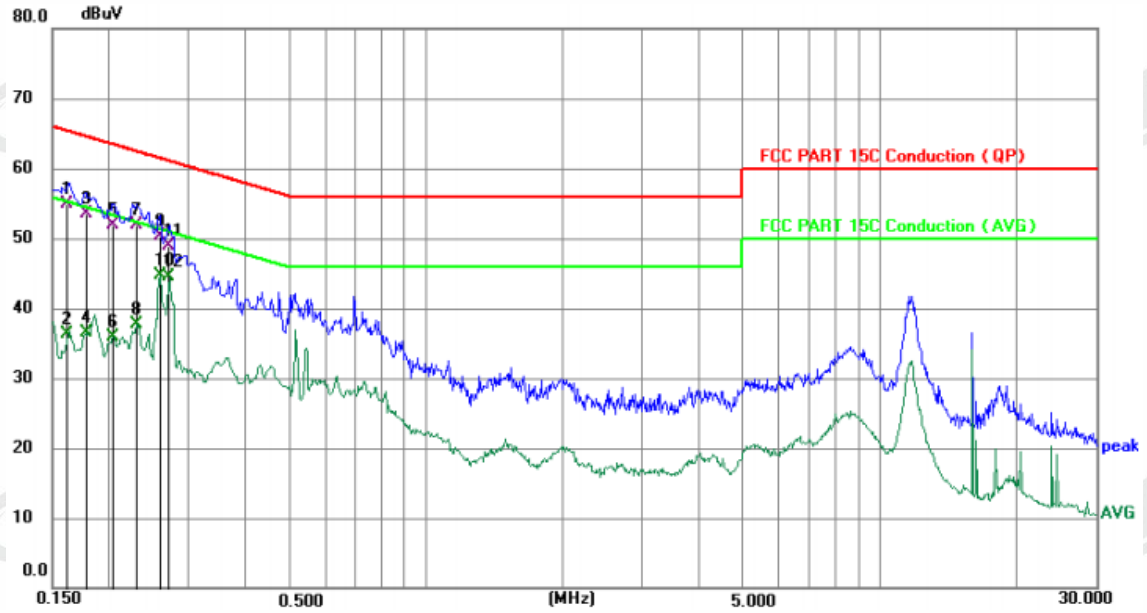



4.1.5 EUT OPERATING CONDITIONS

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.

4.1.6 Test result

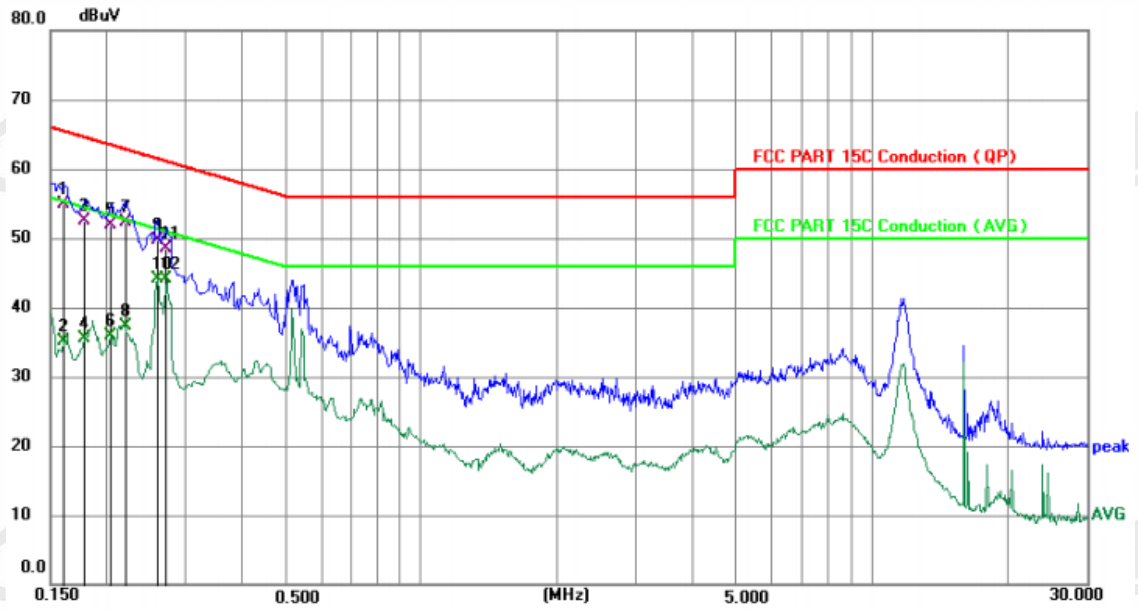
| | | | |
|---|---|---|---|
| Temperature: | 24.3℃ | Relative Humidity : | 50% |
| Pressure: | 101kPa | Phase : | L |
| Test Voltage: | AC 120V/60Hz | | |




| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB) | Level (dBuV) | Limit (dBuV) | Margin (dB) | Detector |
|---|---|---|---|---|---|---|---|
| 1 | 0.1621 | 45.06 | 9.89 | 54.95 | 65.36 | -10.41 | QP |
| 2 | 0.1621 | 26.42 | 9.89 | 36.31 | 55.36 | -19.05 | AVG |
| 3 | 0.1770 | 43.67 | 9.90 | 53.57 | 64.63 | -11.06 | QP |
| 4 | 0.1770 | 26.54 | 9.90 | 36.44 | 54.63 | -18.19 | AVG |
| 5 | 0.2040 | 42.05 | 9.91 | 51.96 | 63.45 | -11.49 | QP |
| 6 | 0.2040 | 25.90 | 9.91 | 35.81 | 53.45 | -17.64 | AVG |
| 7 | 0.2290 | 42.01 | 9.92 | 51.93 | 62.49 | -10.56 | QP |
| 8 | 0.2290 | 27.71 | 9.92 | 37.63 | 52.49 | -14.86 | AVG |
| 9 | 0.2580 | 40.29 | 9.93 | 50.22 | 61.50 | -11.28 | QP |
| 10 | 0.2580 | 34.69 | 9.93 | 44.62 | 51.50 | -6.88 | AVG |
| 11 | 0.2714 | 39.03 | 9.94 | 48.97 | 61.07 | -12.10 | QP |
| 12 * | 0.2714 | 34.64 | 9.94 | 44.58 | 51.07 | -6.49 | AVG |

Notes:
1.An initial pre-scan was performed on the line and neutral lines with peak detector.
2.Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3.Mesurement Level = Reading level + Correct Factor
4.The test data shows only the worst case Low Channel:2402MHz.

| | | | |
|---|---|---|---|
| Temperature: | 24.3℃ | Relative Humidity : | 50% |
| Pressure: | 101kPa | Phase : | N |
| Test Voltage: | AC 120V/60Hz | | |




| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB) | Level (dBuV) | Limit (dBuV) | Margin (dB) | Detector |
|---|---|---|---|---|---|---|---|
| 1 | 0.1597 | 44.93 | 9.89 | 54.82 | 65.48 | -10.66 | QP |
| 2 | 0.1597 | 25.13 | 9.89 | 35.02 | 55.48 | -20.46 | AVG |
| 3 | 0.1770 | 42.67 | 9.90 | 52.57 | 64.63 | -12.06 | QP |
| 4 | 0.1770 | 25.54 | 9.90 | 35.44 | 54.63 | -19.19 | AVG |
| 5 | 0.2040 | 42.05 | 9.91 | 51.96 | 63.45 | -11.49 | QP |
| 6 | 0.2040 | 25.90 | 9.91 | 35.81 | 53.45 | -17.64 | AVG |
| 7 | 0.2195 | 42.32 | 9.92 | 52.24 | 62.84 | -10.60 | QP |
| 8 | 0.2195 | 27.41 | 9.92 | 37.33 | 52.84 | -15.51 | AVG |
| 9 | 0.2580 | 39.79 | 9.93 | 49.72 | 61.50 | -11.78 | QP |
| 10 | 0.2580 | 34.19 | 9.93 | 44.12 | 51.50 | -7.38 | AVG |
| 11 | 0.2714 | 38.53 | 9.94 | 48.47 | 61.07 | -12.60 | QP |
| 12 * | 0.2714 | 34.14 | 9.94 | 44.08 | 51.07 | -6.99 | AVG |

Notes:
1.An initial pre-scan was performed on the line and neutral lines with peak detector.
2.Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3.Mesurement Level = Reading level + Correct Factor
4.The test data shows only the worst case Low Channel:2402MHz.

## 4.2 RADIATED EMISSION MEASUREMENT

| | |
|---|---|
| Test Requirement: | FCC Part15 C Section 15.209 |
| Test Method: | ANSI C63.10:2013 |
| Test Frequency Range: | 9kHz to 25GHz |
| Test site: | Measurement Distance: 3m |
| Receiver setup: | |

| Frequency | Detector | RBW | VBW | Value |
|---|---|---|---|---|
| 9KHz-150KHz | Quasi-peak | 200Hz | 600Hz | Quasi-peak |
| 150KHz-30MHz | Quasi-peak | 9KHz | 30KHz | Quasi-peak |
| 30MHz-1GHz | Quasi-peak | 100KHz | 300KHz | Quasi-peak |
| Above 1GHz | Peak | 1MHz | 3MHz | Peak |
| | Peak | 1MHz | 10Hz | Average |

### 4.2.1 RADIATED EMISSION LIMITS

| 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

| FREQUENCY (MHz) | Limit (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).

### 4.2.2 TEST PROCEDURE

Below 1GHz test procedure as below:

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoiccamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of avariable-height antenna tower.

c. The antenna height is varied from one meter to four meters above the ground to determine the maximum valueof the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned toheights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could bestopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dBmargin would be re-tested one by one using peak, quasi-peak or average method as specified and then reportedin a data sheet.

Above 1GHz test procedure as below:

g. Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber andchange form table 0.8 meter to 1.5 meter( Above 18GHz the distance is 1 meter and table is 1.5 meter).
h. Test the EUT in the lowest channel ,the middle channel ,the Highest channel

Note:

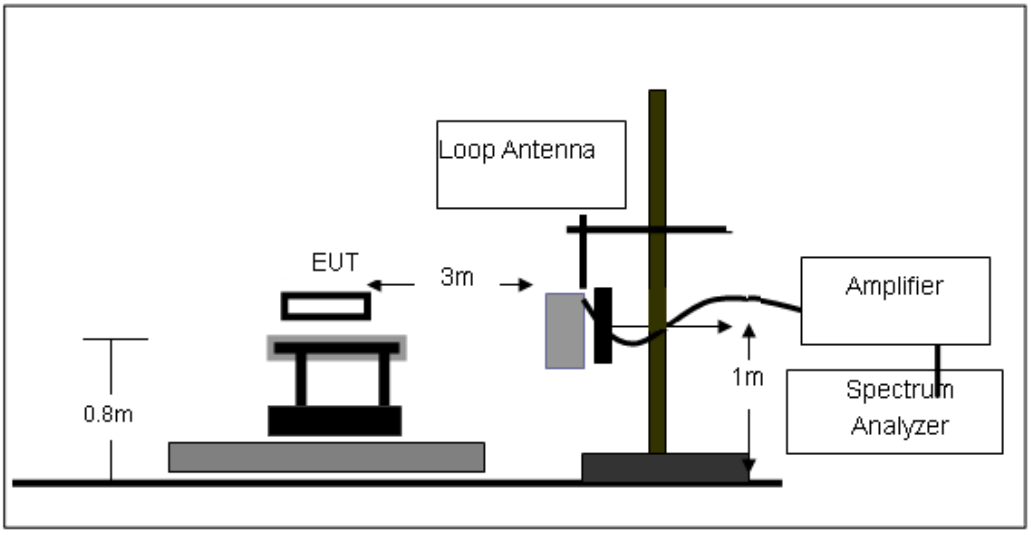
Both horizontal and vertical antenna polarities were tested
and performed pretest to three orthogonal axis. The worst case emissions were reported

4.2.3 DEVIATION FROM TEST STANDARD

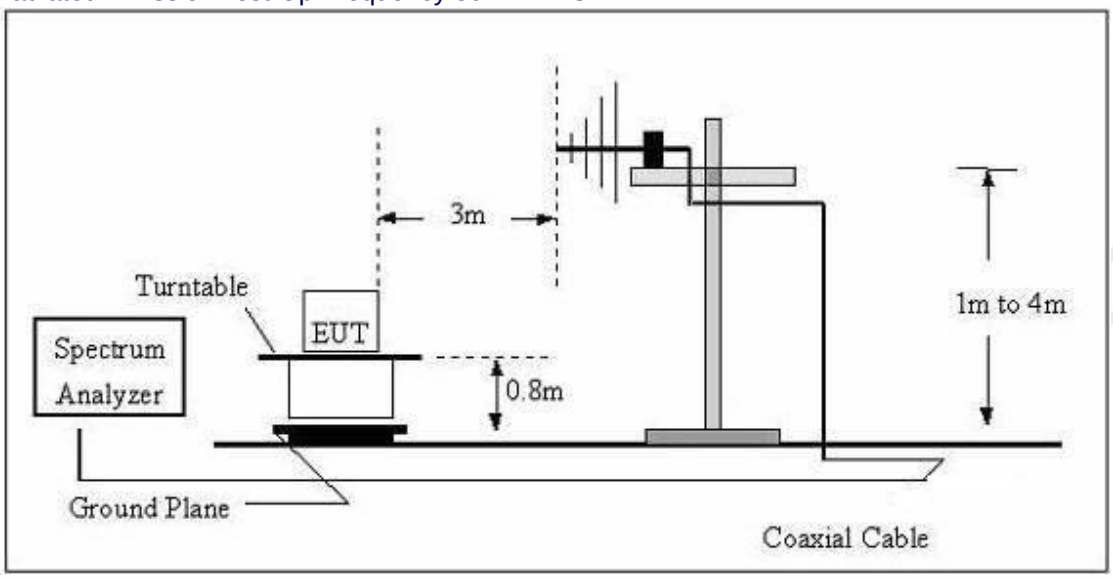
No deviation

4.2.4 TEST SETUP

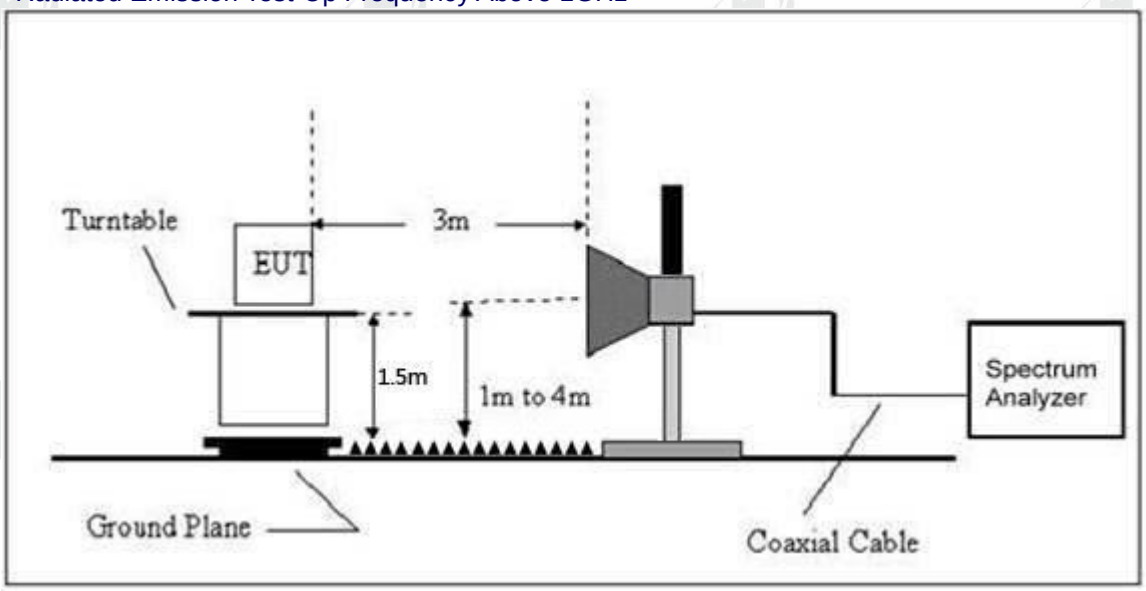
（A）Radiated Emission Test-Up Frequency Below 30MHz



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




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




4.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

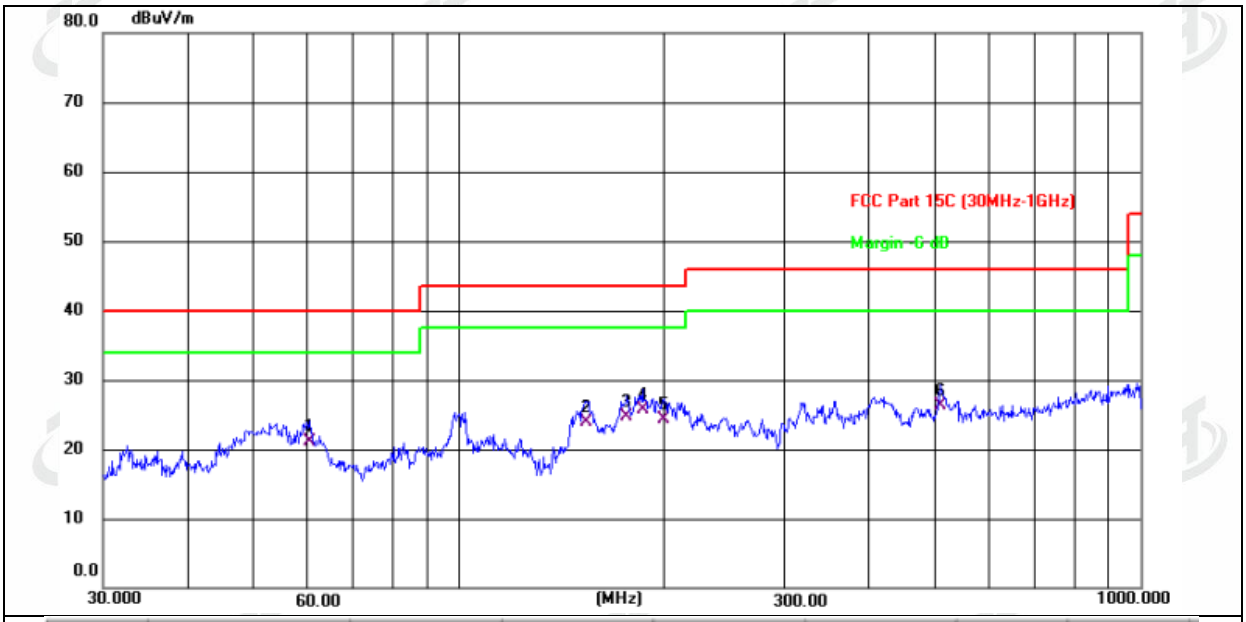
4.2.6 TEST RESULTS

Between 9KHz – 30MHz

The emission from 9 kHz to 30MHz was pre-tested and found the result was 20dB lower than the limit, and according to 15.31(o) & RSS-Gen 6.13, the test result no need to reported.

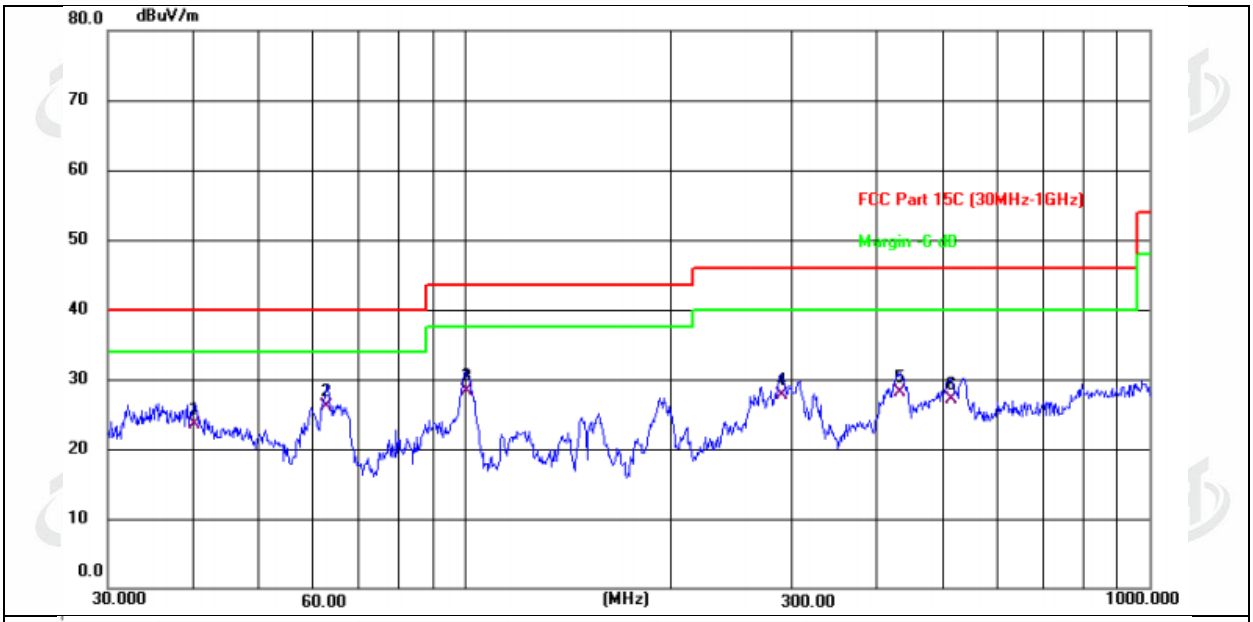
Between 30MHz – 1GHz

| | | | |
|---|---|---|---|
| Temperature : | 25.1℃ | Relative Humidity : | 50% |
| Pressure : | 101kPa | Polarization : | Horizontal |
| Test Voltage : | AC 120 V | | |




| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector |
|---|---|---|---|---|---|---|---|
| 1 | 60.2800 | 31.06 | -9.91 | 21.15 | 40.00 | -18.85 | QP |
| 2 | 153.7384 | 37.63 | -13.70 | 23.93 | 43.50 | -19.57 | QP |
| 3 | 176.2684 | 37.16 | -12.44 | 24.72 | 43.50 | -18.78 | QP |
| 4 * | 185.7880 | 37.55 | -11.81 | 25.74 | 43.50 | -17.76 | QP |
| 5 | 199.9855 | 35.04 | -10.79 | 24.25 | 43.50 | -19.25 | QP |
| 6 | 508.2581 | 30.12 | -3.84 | 26.28 | 46.00 | -19.72 | QP |

| | | | |
|---|---|---|---|
| Temperature : | 25.1℃ | Relative Humidity : | 50% |
| Pressure : | 101kPa | Polarization : | Vertical |
| Test Voltage : | AC 120 V | | |




| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector |
|---|---|---|---|---|---|---|---|
| 1 | 40.1347 | 33.11 | -9.55 | 23.56 | 40.00 | -16.44 | QP |
| 2 * | 62.6505 | 36.85 | -10.66 | 26.19 | 40.00 | -13.81 | QP |
| 3 | 100.2283 | 39.06 | -10.85 | 28.21 | 43.50 | -15.29 | QP |
| 4 | 290.0172 | 35.79 | -8.14 | 27.65 | 46.00 | -18.35 | QP |
| 5 | 431.0314 | 33.15 | -5.14 | 28.01 | 46.00 | -17.99 | QP |
| 6 | 513.6331 | 30.89 | -3.73 | 27.16 | 46.00 | -18.84 | QP |

Remarks:
1.Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2.The emission levels of other frequencies are very lower than the limit and not show in test report.
3.The test data shows only the worst case 802.11b mode ( Low Channel:2412MHz).

1GHz~25GHz

| Polar (H/V) | Frequency (MHz) | Meter Reading (dBuV) | Pre-amplifier (dB) | Cable Loss (dB) | Antenna Factor (dB) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Detector Type |
|---|---|---|---|---|---|---|---|---|---|
| 802.11b | | | | | | | | | |
| Low Channel:2412MHz | | | | | | | | | |
| V | 4824.00 | 59.98 | 30.55 | 5.77 | 24.66 | 59.86 | 74 | -14.14 | PK |
| V | 4824.00 | 42.82 | 30.55 | 5.77 | 24.66 | 42.7 | 54 | -11.3 | AV |
| H | 4824.00 | 59.12 | 30.33 | 6.32 | 24.55 | 59.66 | 74 | -14.34 | PK |
| H | 4824.00 | 44.21 | 30.33 | 6.32 | 24.55 | 44.75 | 54 | -9.25 | AV |
| Middle Channel:2437MHz | | | | | | | | | |
| V | 4874.00 | 59.79 | 30.55 | 5.77 | 24.66 | 59.67 | 74 | -14.33 | PK |
| V | 4874.00 | 43.64 | 30.55 | 5.77 | 24.66 | 43.52 | 54 | -10.48 | AV |
| H | 4874.00 | 57.98 | 30.33 | 6.32 | 24.55 | 58.52 | 74 | -15.48 | PK |
| H | 4874.00 | 43.19 | 30.33 | 6.32 | 24.55 | 43.73 | 54 | -10.27 | AV |
| High Channel:2462MHz | | | | | | | | | |
| V | 4924.00 | 56.15 | 30.55 | 5.77 | 24.66 | 56.03 | 74 | -17.97 | PK |
| V | 4924.00 | 41.09 | 30.55 | 5.77 | 24.66 | 40.97 | 54 | -13.03 | AV |
| H | 4924.00 | 56.16 | 30.33 | 6.32 | 24.55 | 56.7 | 74 | -17.3 | PK |
| H | 4924.00 | 43.42 | 30.33 | 6.32 | 24.55 | 43.96 | 54 | -10.04 | AV |
| 802.11g | | | | | | | | | |
| Low Channel:2412MHz | | | | | | | | | |
| V | 4824.00 | 59.69 | 30.55 | 5.77 | 24.66 | 59.57 | 74 | -14.43 | PK |
| V | 4824.00 | 41.08 | 30.55 | 5.77 | 24.66 | 40.96 | 54 | -13.04 | AV |
| H | 4824.00 | 55.05 | 30.33 | 6.32 | 24.55 | 55.59 | 74 | -18.41 | PK |
| H | 4824.00 | 41.17 | 30.33 | 6.32 | 24.55 | 41.71 | 54 | -12.29 | AV |
| Middle Channel:2437MHz | | | | | | | | | |
| V | 4874.00 | 55.55 | 30.55 | 5.77 | 24.66 | 55.43 | 74 | -18.57 | PK |
| V | 4874.00 | 41.7 | 30.55 | 5.77 | 24.66 | 41.58 | 54 | -12.42 | AV |
| H | 4874.00 | 57.08 | 30.33 | 6.32 | 24.55 | 57.62 | 74 | -16.38 | PK |
| H | 4874.00 | 41.45 | 30.33 | 6.32 | 24.55 | 41.99 | 54 | -12.01 | AV |
| High Channel:2462MHz | | | | | | | | | |
| V | 4924.00 | 59.1 | 30.55 | 5.77 | 24.66 | 58.98 | 74 | -15.02 | PK |
| V | 4924.00 | 43.69 | 30.55 | 5.77 | 24.66 | 43.57 | 54 | -10.43 | AV |
| H | 4924.00 | 58.31 | 30.33 | 6.32 | 24.55 | 58.85 | 74 | -15.15 | PK |
| H | 4924.00 | 41.15 | 30.33 | 6.32 | 24.55 | 41.69 | 54 | -12.31 | AV |
| 802.11n 20 | | | | | | | | | |
| Low Channel:2412MHz | | | | | | | | | |
| V | 4824.00 | 58.16 | 30.55 | 5.77 | 24.66 | 58.04 | 74 | -15.96 | PK |
| V | 4824.00 | 41.89 | 30.55 | 5.77 | 24.66 | 41.77 | 54 | -12.23 | AV |
| H | 4824.00 | 55 | 30.33 | 6.32 | 24.55 | 55.54 | 74 | -18.46 | PK |
| H | 4824.00 | 41.75 | 30.33 | 6.32 | 24.55 | 42.29 | 54 | -11.71 | AV |
| Middle Channel:2437MHz | | | | | | | | | |
| V | 4874.00 | 58.84 | 30.55 | 5.77 | 24.66 | 58.72 | 74 | -15.28 | PK |
| V | 4874.00 | 44.3 | 30.55 | 5.77 | 24.66 | 44.18 | 54 | -9.82 | AV |
| H | 4874.00 | 59.33 | 30.33 | 6.32 | 24.55 | 59.87 | 74 | -14.13 | PK |
| H | 4874.00 | 43.31 | 30.33 | 6.32 | 24.55 | 43.85 | 54 | -10.15 | AV |
| High Channel:2462MHz | | | | | | | | | |
| V | 4924.00 | 57.49 | 30.55 | 5.77 | 24.66 | 57.37 | 74 | -16.63 | PK |
| V | 4924.00 | 41 | 30.55 | 5.77 | 24.66 | 40.88 | 54 | -13.12 | AV |
| H | 4924.00 | 55.86 | 30.33 | 6.32 | 24.55 | 56.4 | 74 | -17.6 | PK |
| H | 4924.00 | 44.58 | 30.33 | 6.32 | 24.55 | 45.12 | 54 | -8.88 | AV |
| 802.11n 40 | | | | | | | | | |
| Low Channel:2422MHz | | | | | | | | | |
| V | 4844.00 | 59.57 | 30.55 | 5.77 | 24.66 | 59.45 | 74 | -14.55 | PK |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| V | 4924.00 | 41.68 | 30.55 | 5.77 | 24.66 | 41.56 | 54 | -12.44 | AV |
| H | 4924.00 | 57.95 | 30.33 | 6.32 | 24.55 | 58.49 | 74 | -15.51 | PK |
| H | 4924.00 | 41.57 | 30.33 | 6.32 | 24.55 | 42.11 | 54 | -11.89 | AV |
| Middle Channel:2437MHz | | | | | | | | | |
| V | 4874.00 | 58.28 | 30.55 | 5.77 | 24.66 | 58.16 | 74 | -15.84 | PK |
| V | 4874.00 | 41.67 | 30.55 | 5.77 | 24.66 | 41.55 | 54 | -12.45 | AV |
| H | 4874.00 | 57.3 | 30.33 | 6.32 | 24.55 | 57.84 | 74 | -16.16 | PK |
| H | 4874.00 | 44.65 | 30.33 | 6.32 | 24.55 | 45.19 | 54 | -8.81 | AV |
| High Channel:2452MHz | | | | | | | | | |
| V | 4904.00 | 55.58 | 30.55 | 5.77 | 24.66 | 55.46 | 74 | -18.54 | PK |
| V | 4904.00 | 43.38 | 30.55 | 5.77 | 24.66 | 43.26 | 54 | -10.74 | AV |
| H | 4904.00 | 55.07 | 30.33 | 6.32 | 24.55 | 55.61 | 74 | -18.39 | PK |
| H | 4904.00 | 44.65 | 30.33 | 6.32 | 24.55 | 45.19 | 54 | -8.81 | AV |

Remark:
1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
4.For above 1GHz, the test result of peak was 20dB below to the limit of peak, which can be compliant to the average limit, so just peak value was recorded.

## 5. RADIATED BAND EMISSIONMEASUREMENT

### 5.1 TEST REQUIREMENT:

| | |
|---|---|
| Test Requirement: | FCC Part15 C Section 15.209 and 15.205 |
| Test Method: | ANSI C63.10: 2013 |
| Test Frequency Range: | All of the restrict bands were tested, only the worst band's (2310MHz to 2500MHz) data was showed. |
| Test site: | Measurement Distance: 3m |
| Receiver setup: | |

| Frequency | Detector | RBW | VBW | Value |
|---|---|---|---|---|
| Above 1GHz | Peak | 1MHz | 3MHz | Peak |
| | Average | 1MHz | 3MHz | Average |

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

| FREQUENCY (MHz) | Class B (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).

### 5.2 TEST PROCEDURE

Above 1GHz test procedure as below:

a. 1. The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dBmargin would be re-tested one by one using peak, quasi-peak or average method as specified and then reportedin a data sheet.

g. Test the EUT in the lowest channel,the Highest channel

Note:

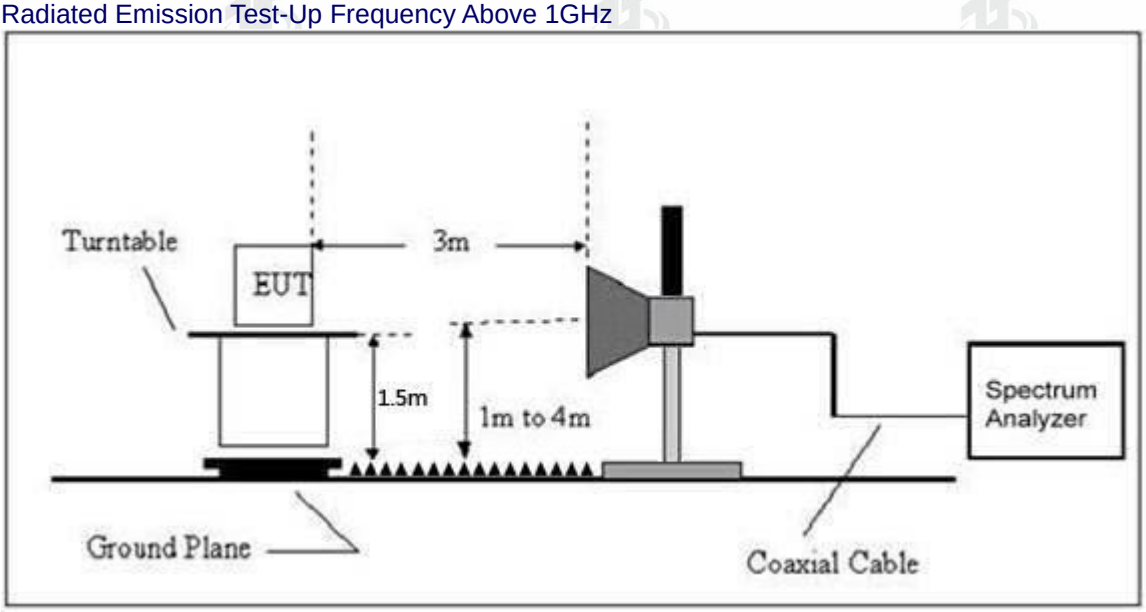
Both horizontal and vertical antenna polarities were tested
and performed pretest to three orthogonal axis. The worst case emissions were reported

### 5.3 DEVIATION FROM TEST STANDARD

No deviation

## 5.4 TEST SETUP

Radiated Emission Test-Up Frequency Above 1GHz




## 5.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

5.6 TEST RESULT

| | Polar (H/V) | Frequency (MHz) | Meter Reading (dBuV) | Pre-amplifier (dB) | Cable Loss (dB) | Antenna Factor (dB/m) | Emission level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector Type | Result |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 802.11b | Low Channel 2412MHz | | | | | | | | | | |
| | H | 2390.00 | 59.38 | 30.22 | 4.85 | 23.98 | 57.99 | 74.00 | -16.01 | PK | PASS |
| | H | 2390.00 | 46.87 | 30.22 | 4.85 | 23.98 | 45.48 | 54.00 | -8.52 | AV | PASS |
| | H | 2400.00 | 62.29 | 30.22 | 4.85 | 23.98 | 60.90 | 74.00 | -13.10 | PK | PASS |
| | H | 2400.00 | 47.03 | 30.22 | 4.85 | 23.98 | 45.64 | 54.00 | -8.36 | AV | PASS |
| | V | 2390.00 | 62.70 | 30.22 | 4.85 | 23.98 | 61.31 | 74.00 | -12.69 | PK | PASS |
| | V | 2390.00 | 46.38 | 30.22 | 4.85 | 23.98 | 44.99 | 54.00 | -9.01 | AV | PASS |
| | V | 2400.00 | 62.76 | 30.22 | 4.85 | 23.98 | 61.37 | 74.00 | -12.63 | PK | PASS |
| | V | 2400.00 | 47.71 | 30.22 | 4.85 | 23.98 | 46.32 | 54.00 | -7.68 | AV | PASS |
| | High Channel 2462MHz | | | | | | | | | | |
| | H | 2483.50 | 61.81 | 30.22 | 4.85 | 23.98 | 60.42 | 74.00 | -13.58 | PK | PASS |
| | H | 2483.50 | 46.01 | 30.22 | 4.85 | 23.98 | 44.62 | 54.00 | -9.38 | AV | PASS |
| | H | 2500.00 | 62.64 | 30.22 | 4.85 | 23.98 | 61.25 | 74.00 | -12.75 | PK | PASS |
| | H | 2500.00 | 48.41 | 30.22 | 4.85 | 23.98 | 47.02 | 54.00 | -6.98 | AV | PASS |
| | V | 2483.50 | 60.39 | 30.22 | 4.85 | 23.98 | 59.00 | 74.00 | -15.00 | PK | PASS |
| | V | 2483.50 | 46.58 | 30.22 | 4.85 | 23.98 | 45.19 | 54.00 | -8.81 | AV | PASS |
| | V | 2500.00 | 60.60 | 30.22 | 4.85 | 23.98 | 59.21 | 74.00 | -14.79 | PK | PASS |
| | V | 2500.00 | 48.01 | 30.22 | 4.85 | 23.98 | 46.62 | 54.00 | -7.38 | AV | PASS |
| 802.11g | Low Channel 2412MHz | | | | | | | | | | |
| | H | 2390.00 | 60.83 | 30.22 | 4.85 | 23.98 | 59.44 | 74.00 | -14.56 | PK | PASS |
| | H | 2390.00 | 48.06 | 30.22 | 4.85 | 23.98 | 46.67 | 54.00 | -7.33 | AV | PASS |
| | H | 2400.00 | 60.02 | 30.22 | 4.85 | 23.98 | 58.63 | 74.00 | -15.37 | PK | PASS |
| | H | 2400.00 | 46.85 | 30.22 | 4.85 | 23.98 | 45.46 | 54.00 | -8.54 | AV | PASS |
| | V | 2390.00 | 62.39 | 30.22 | 4.85 | 23.98 | 61.00 | 74.00 | -13.00 | PK | PASS |
| | V | 2390.00 | 48.58 | 30.22 | 4.85 | 23.98 | 47.19 | 54.00 | -6.81 | AV | PASS |
| | V | 2400.00 | 60.40 | 30.22 | 4.85 | 23.98 | 59.01 | 74.00 | -14.99 | PK | PASS |
| | V | 2400.00 | 47.87 | 30.22 | 4.85 | 23.98 | 46.48 | 54.00 | -7.52 | AV | PASS |
| | High Channel 2462MHz | | | | | | | | | | |
| | H | 2483.50 | 60.85 | 30.22 | 4.85 | 23.98 | 59.46 | 74.00 | -14.54 | PK | PASS |
| | H | 2483.50 | 46.95 | 30.22 | 4.85 | 23.98 | 45.56 | 54.00 | -8.44 | AV | PASS |
| | H | 2500.00 | 60.74 | 30.22 | 4.85 | 23.98 | 59.35 | 74.00 | -14.65 | PK | PASS |
| | H | 2500.00 | 47.82 | 30.22 | 4.85 | 23.98 | 46.43 | 54.00 | -7.57 | AV | PASS |
| | V | 2483.50 | 60.81 | 30.22 | 4.85 | 23.98 | 59.42 | 74.00 | -14.58 | PK | PASS |
| | V | 2483.50 | 48.18 | 30.22 | 4.85 | 23.98 | 46.79 | 54.00 | -7.21 | AV | PASS |
| | V | 2500.00 | 62.28 | 30.22 | 4.85 | 23.98 | 60.89 | 74.00 | -13.11 | PK | PASS |
| | V | 2500.00 | 48.75 | 30.22 | 4.85 | 23.98 | 47.36 | 54.00 | -6.64 | AV | PASS |
| 802.11n20 | Low Channel 2412MHz | | | | | | | | | | |
| | H | 2390.00 | 61.95 | 30.22 | 4.85 | 23.98 | 60.56 | 74.00 | -13.44 | PK | PASS |
| | H | 2390.00 | 46.03 | 30.22 | 4.85 | 23.98 | 44.64 | 54.00 | -9.36 | AV | PASS |
| | H | 2400.00 | 60.15 | 30.22 | 4.85 | 23.98 | 58.76 | 74.00 | -15.24 | PK | PASS |
| | H | 2400.00 | 47.05 | 30.22 | 4.85 | 23.98 | 45.66 | 54.00 | -8.34 | AV | PASS |
| | V | 2390.00 | 61.74 | 30.22 | 4.85 | 23.98 | 60.35 | 74.00 | -13.65 | PK | PASS |
| | V | 2390.00 | 46.70 | 30.22 | 4.85 | 23.98 | 45.31 | 54.00 | -8.69 | AV | PASS |
| | V | 2400.00 | 62.50 | 30.22 | 4.85 | 23.98 | 61.11 | 74.00 | -12.89 | PK | PASS |
| | V | 2400.00 | 48.69 | 30.22 | 4.85 | 23.98 | 47.30 | 54.00 | -6.70 | AV | PASS |
| | High Channel 2462MHz | | | | | | | | | | |
| | H | 2483.50 | 62.15 | 30.22 | 4.85 | 23.98 | 60.76 | 74.00 | -13.24 | PK | PASS |
| | H | 2483.50 | 48.01 | 30.22 | 4.85 | 23.98 | 46.62 | 54.00 | -7.38 | AV | PASS |
| | H | 2500.00 | 61.22 | 30.22 | 4.85 | 23.98 | 59.83 | 74.00 | -14.17 | PK | PASS |
| | H | 2500.00 | 47.15 | 30.22 | 4.85 | 23.98 | 45.76 | 54.00 | -8.24 | AV | PASS |
| | V | 2483.50 | 61.91 | 30.22 | 4.85 | 23.98 | 60.52 | 74.00 | -13.48 | PK | PASS |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | V | 2483.50 | 47.91 | 30.22 | 4.85 | 23.98 | 46.52 | 54.00 | -7.48 | AV | PASS |
| | V | 2500.00 | 61.45 | 30.22 | 4.85 | 23.98 | 60.06 | 74.00 | -13.94 | PK | PASS |
| | V | 2500.00 | 46.82 | 30.22 | 4.85 | 23.98 | 45.43 | 54.00 | -8.57 | AV | PASS |
| 802.11n 40 | Low Channel 2422MHz | | | | | | | | | | |
| | H | 2390.00 | 62.68 | 30.22 | 4.85 | 23.98 | 61.29 | 74.00 | -12.71 | PK | PASS |
| | H | 2390.00 | 47.39 | 30.22 | 4.85 | 23.98 | 46.00 | 54.00 | -8.00 | AV | PASS |
| | H | 2400.00 | 62.88 | 30.22 | 4.85 | 23.98 | 61.49 | 74.00 | -12.51 | PK | PASS |
| | H | 2400.00 | 47.77 | 30.22 | 4.85 | 23.98 | 46.38 | 54.00 | -7.62 | AV | PASS |
| | V | 2390.00 | 60.84 | 30.22 | 4.85 | 23.98 | 59.45 | 74.00 | -14.55 | PK | PASS |
| | V | 2390.00 | 46.79 | 30.22 | 4.85 | 23.98 | 45.40 | 54.00 | -8.60 | AV | PASS |
| | V | 2400.00 | 61.11 | 30.22 | 4.85 | 23.98 | 59.72 | 74.00 | -14.28 | PK | PASS |
| | V | 2400.00 | 46.15 | 30.22 | 4.85 | 23.98 | 44.76 | 54.00 | -9.24 | AV | PASS |
| | High Channel 2452MHz | | | | | | | | | | |
| | H | 2483.50 | 59.19 | 30.22 | 4.85 | 23.98 | 57.80 | 74.00 | -16.20 | PK | PASS |
| | H | 2483.50 | 48.78 | 30.22 | 4.85 | 23.98 | 47.39 | 54.00 | -6.61 | AV | PASS |
| | H | 2500.00 | 61.68 | 30.22 | 4.85 | 23.98 | 60.29 | 74.00 | -13.71 | PK | PASS |
| | H | 2500.00 | 47.68 | 30.22 | 4.85 | 23.98 | 46.29 | 54.00 | -7.71 | AV | PASS |
| | V | 2483.50 | 62.52 | 30.22 | 4.85 | 23.98 | 61.13 | 74.00 | -12.87 | PK | PASS |
| | V | 2483.50 | 46.34 | 30.22 | 4.85 | 23.98 | 44.95 | 54.00 | -9.05 | AV | PASS |
| | V | 2500.00 | 62.21 | 30.22 | 4.85 | 23.98 | 60.82 | 74.00 | -13.18 | PK | PASS |
| | V | 2500.00 | 48.53 | 30.22 | 4.85 | 23.98 | 47.14 | 54.00 | -6.86 | AV | PASS |

**Remark:**

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit

## 6. POWER SPECTRAL DENSITY TEST

| | |
|---|---|
| Test Requirement: | FCC Part15 C Section 15.247 (e) |
| Test Method: | KDB558074 D0115.247 Meas Guidancev05r02 |

### 6.1 APPLIED PROCEDURES / LIMIT

| FCC Part15 (15.247) , Subpart C | | | | |
|---|---|---|---|---|
| Section | Test Item | Limit | Frequency Range (MHz) | Result |
| 15.247 | Power Spectral Density | 8dBm/3kHz | 2400-2483.5 | PASS |

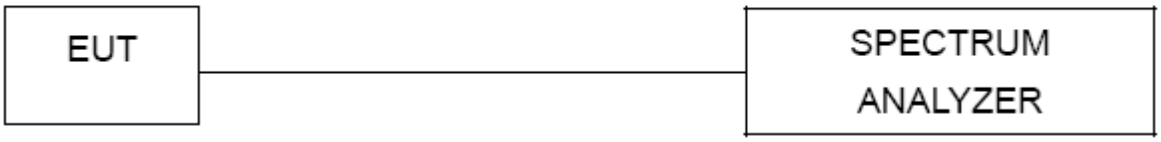
### 6.2 TEST PROCEDURE

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS bandwidth.
3. Set the RBW to: 3 kHz ≤ RBW ≤ 100 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 within the RBW.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

### 6.3 DEVIATION FROM STANDARD

No deviation.

### 6.4 TEST SETUP



## 6.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.1 Unless otherwise a special operating condition is specified in the follows during the testing.

## 6.6 TEST RESULT

| | | | |
|---|---|---|---|
| Temperature： | 25.9℃ | Relative Humidity： | 52% |
| Pressure： | 101kPa | Test Voltage ： | AC 120V |

Please refer to APPENDIX A

## 7. CHANNEL BANDWIDTH

| | |
|---|---|
| Test Requirement: | FCC Part15 C Section 15.247 (a)(2) |
| Test Method: | KDB558074 D0115.247 Meas Guidancev05r02 |

### 7.1 APPLIED PROCEDURES / LIMIT

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

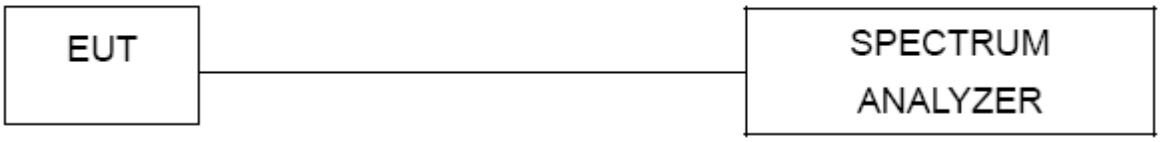
### 7.2 TEST PROCEDURE

1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW) ≥ 3 xRBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. 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 by 6 dB relative to the maximum level measured in the fundamental emission.

### 7.3 DEVIATION FROM STANDARD

No deviation.

### 7.4 TEST SETUP




### 7.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

7.6 TEST RESULT

| | | | |
|---|---|---|---|
| Temperature : | 25.8℃ | Relative Humidity : | 52% |
| Pressure : | 101kPa | Test Voltage : | AC 120V |
| Test Mode : | TX Mode | | |

Please refer to APPENDIX A

## 8. PEAK OUTPUT POWER TEST

| | |
|---|---|
| Test Requirement: | FCC Part15 C Section 15.247 (b)(3) |
| Test Method: | KDB558074 D0115.247 Meas Guidancev05r02 |

### 8.1 APPLIED PROCEDURES/LIMIT

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

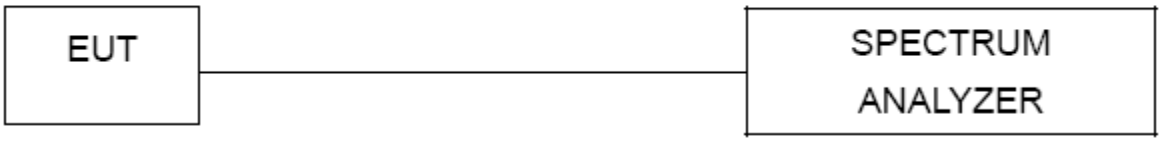
### 8.2 TEST PROCEDURE

a. The EUT was directly connected to the Power Analyzer

### 8.3 DEVIATION FROM STANDARD

No deviation.

### 8.4 TEST SETUP




### 8.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

### 8.6 TEST RESULT

| | | | |
|---|---|---|---|
| Temperature： | 25.3℃ | Relative Humidity： | 55% |
| Pressure： | 101kPa | Test Voltage ： | AC 120V |

Please refer to APPENDIX A

## 9. CONDUCTED BAND EDGE AND SPURIOUS EMISSION

| | |
|---|---|
| Test Requirement: | FCC Part15 C Section 15.247 (d) |
| Test Method: | KDB558074 D0115.247 Meas Guidancev05r02 |

### 9.1 APPLICABLE STANDARD

in any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator in 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 in15.209(a).

### 9.2 TEST PROCEDURE

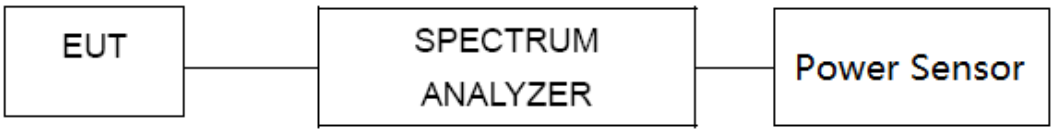
Using the following spectrum analyzer setting:

A) Set the RBW = 100KHz.
B) Set the VBW = 300KHz.
C) Sweep time = auto couple.
D) Detector function = peak.
E) Trace mode = max hold.
F) Allow trace to fully stabilize.

### 9.3 DEVIATION FROM STANDARD

No deviation.

### 9.4 TEST SETUP




### 9.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

### 9.6 TEST RESULTS

Please refer to APPENDIX A

## 10. ANTENNA REQUIREMENT

| Standard requirement: | FCC Part15 C Section 15.203 /247(b)(4) |
|---|---|
| 15.203 requirement:<br>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, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.<br>15.247(b) (4) requirement:<br>(4) The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi. | |
| EUT Antenna: | |
| The antenna is PCB antenna, the best case gain of the antenna is 2.5dBi, reference to the appendix II for details | |

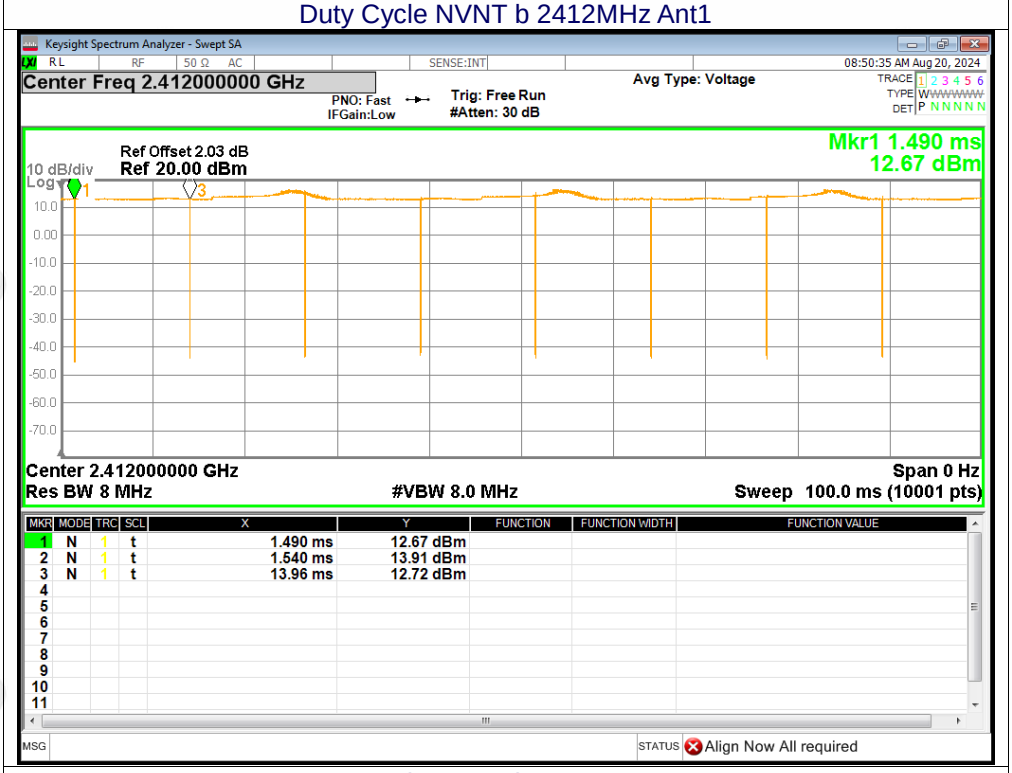
# 11. APPENDIX A

## 11.1 DUTY CYCLE

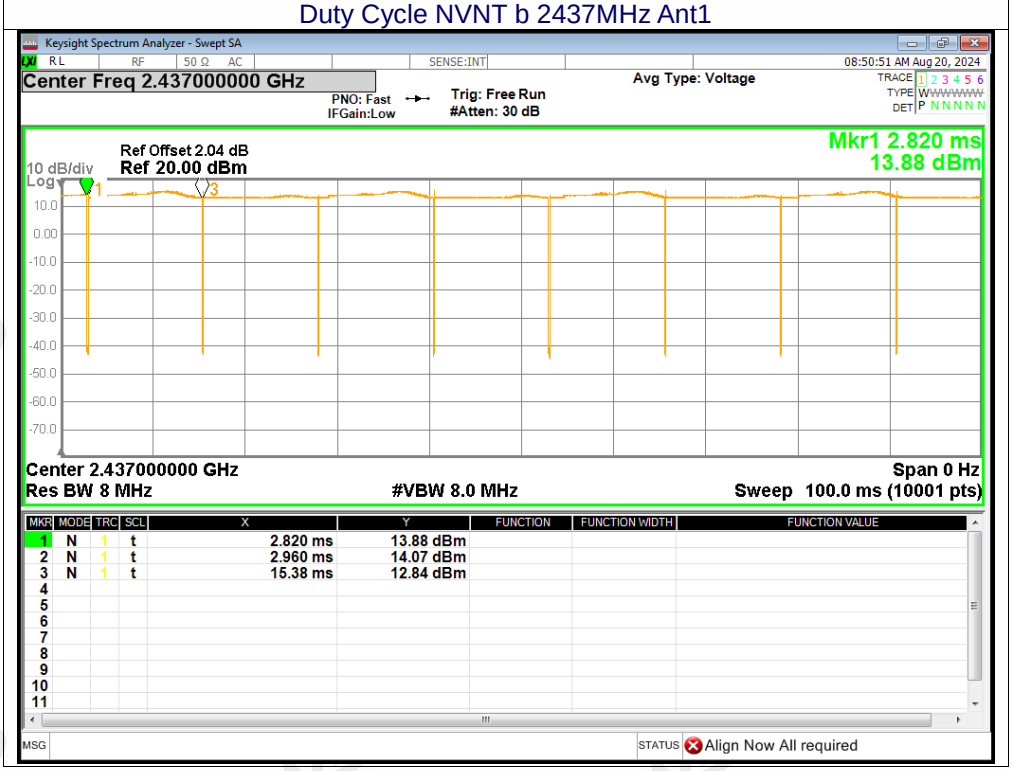
| Mode | Frequency (MHz) | Duty Cycle (%) | Correction Factor (dB) | 1/T (kHz) |
|---|---|---|---|---|
| b | 2412 | 99.6 | 0 | 0.08 |
| b | 2437 | 98.89 | 0 | 0.08 |
| b | 2462 | 98.81 | 0 | 0.08 |
| g | 2412 | 94.95 | 0.23 | 0.48 |
| g | 2437 | 94.09 | 0.26 | 0.48 |
| g | 2462 | 93.21 | 0.31 | 0.49 |
| n20 | 2412 | 94.15 | 0.26 | 0.52 |
| n20 | 2437 | 92.75 | 0.33 | 0.52 |
| n20 | 2462 | 94.58 | 0.24 | 0.52 |
| n40 | 2422 | 93.14 | 0.31 | 1.05 |
| n40 | 2437 | 94.06 | 0.27 | 1.05 |
| n40 | 2452 | 85.45 | 0.68 | 1.06 |

## Test Graphs

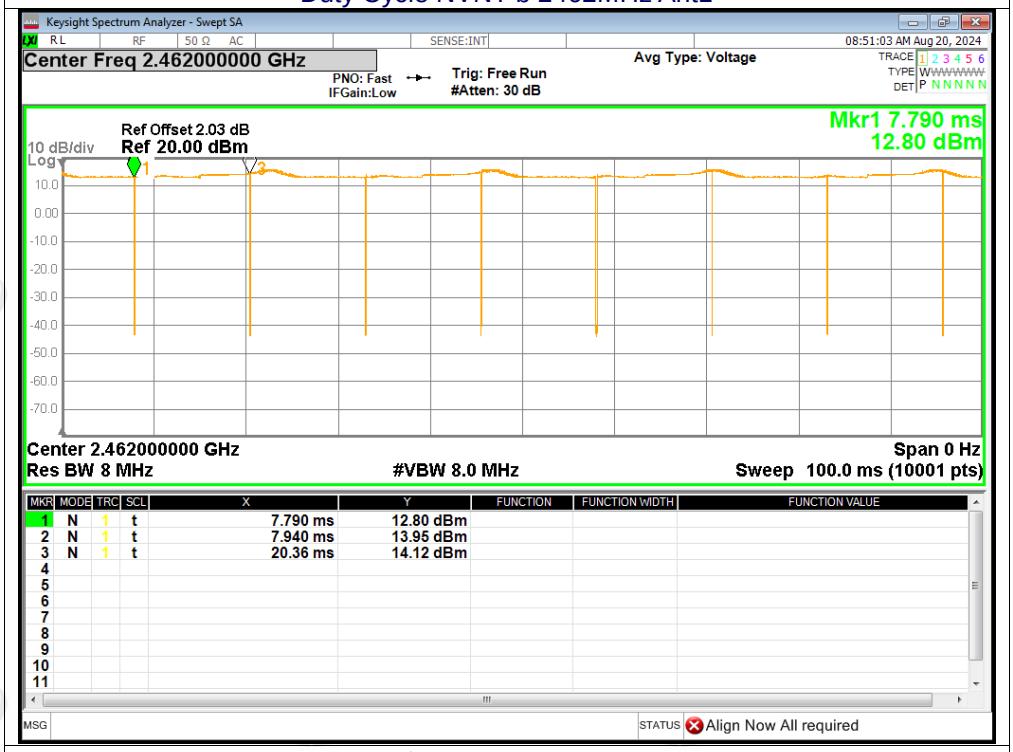
### Duty Cycle NVNT b 2412MHz Ant1



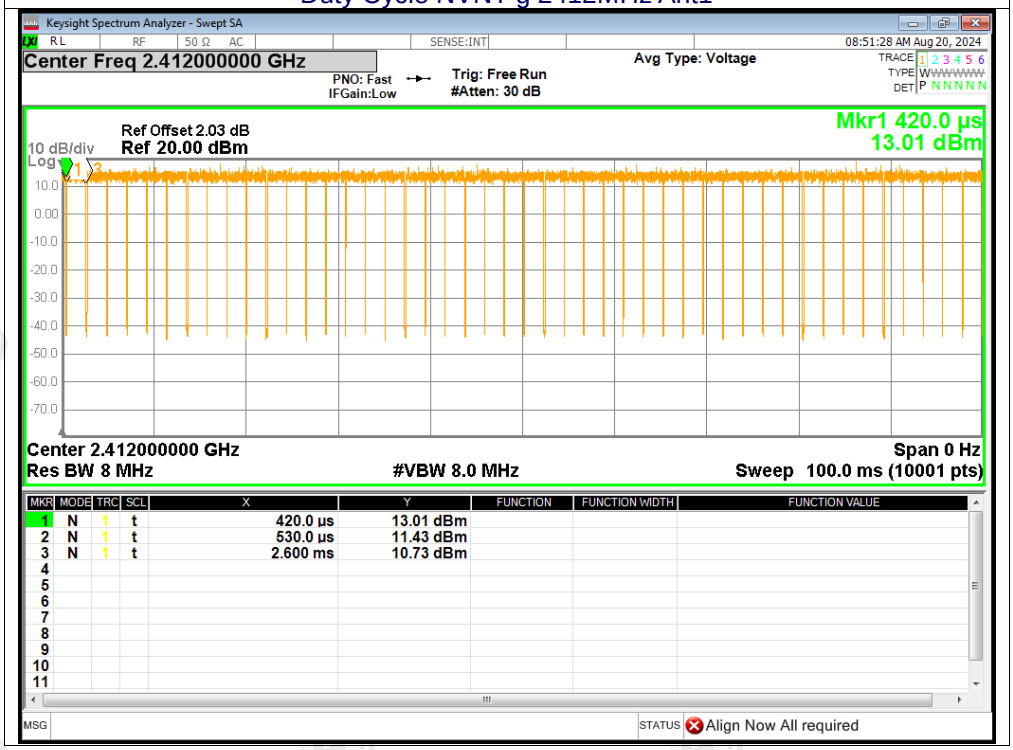

### Duty Cycle NVNT b 2437MHz Ant1



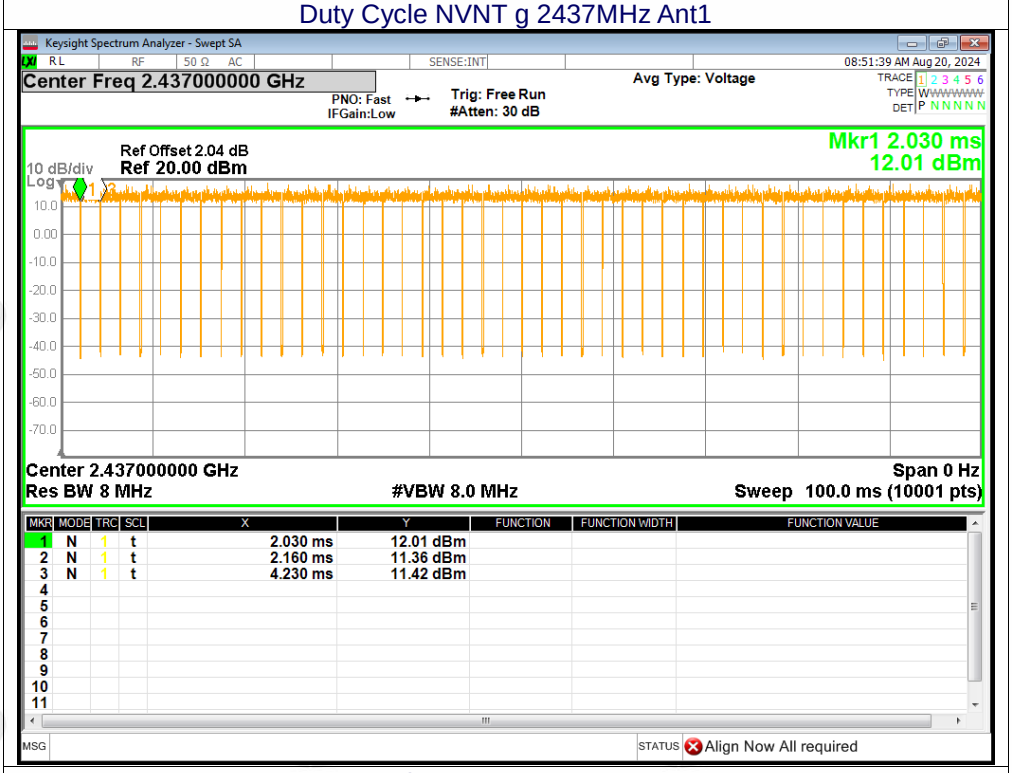
Duty Cycle NVNT b 2462MHz Ant1



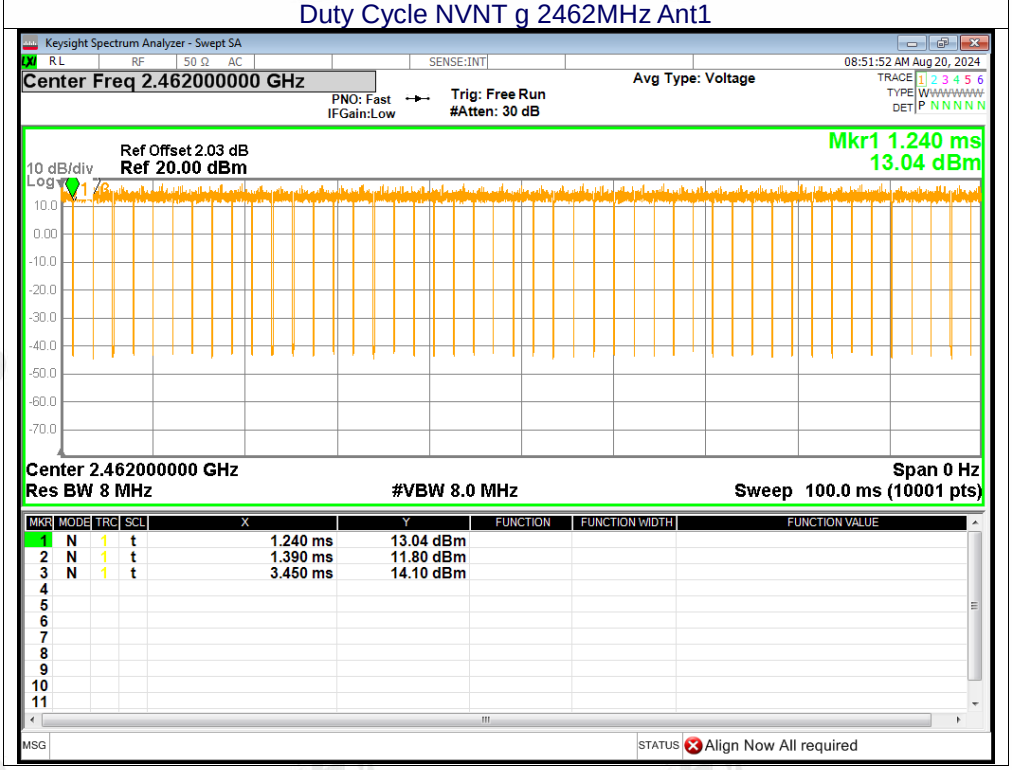

Duty Cycle NVNT g 2412MHz Ant1



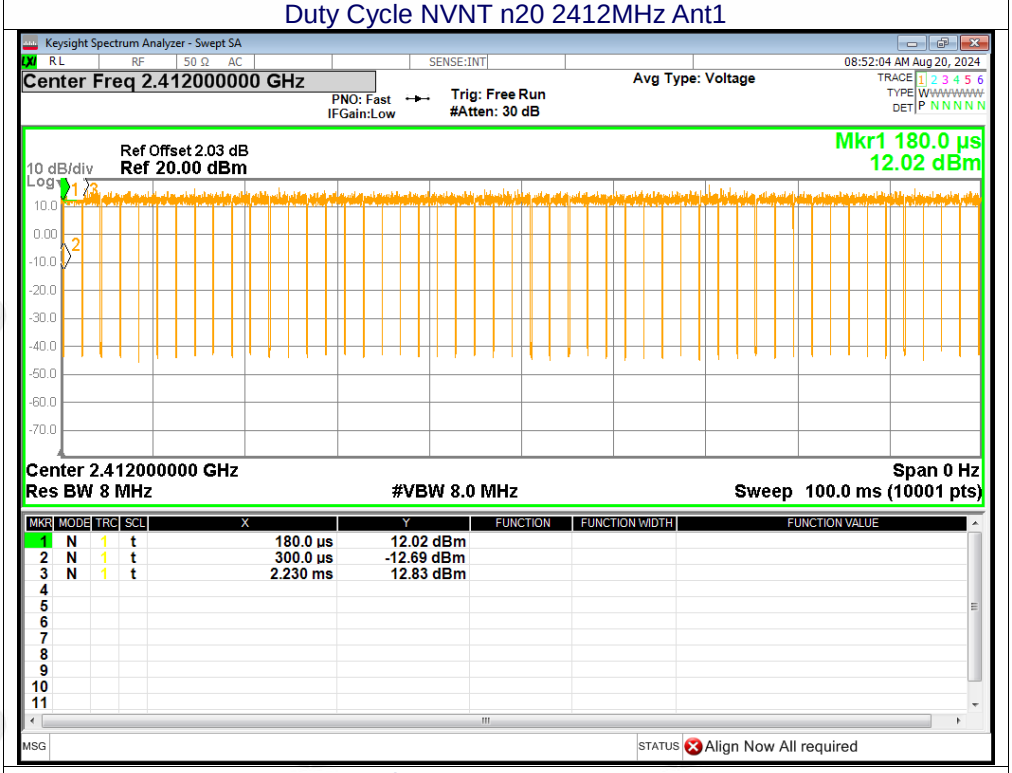
Duty Cycle NVNT g 2437MHz Ant1



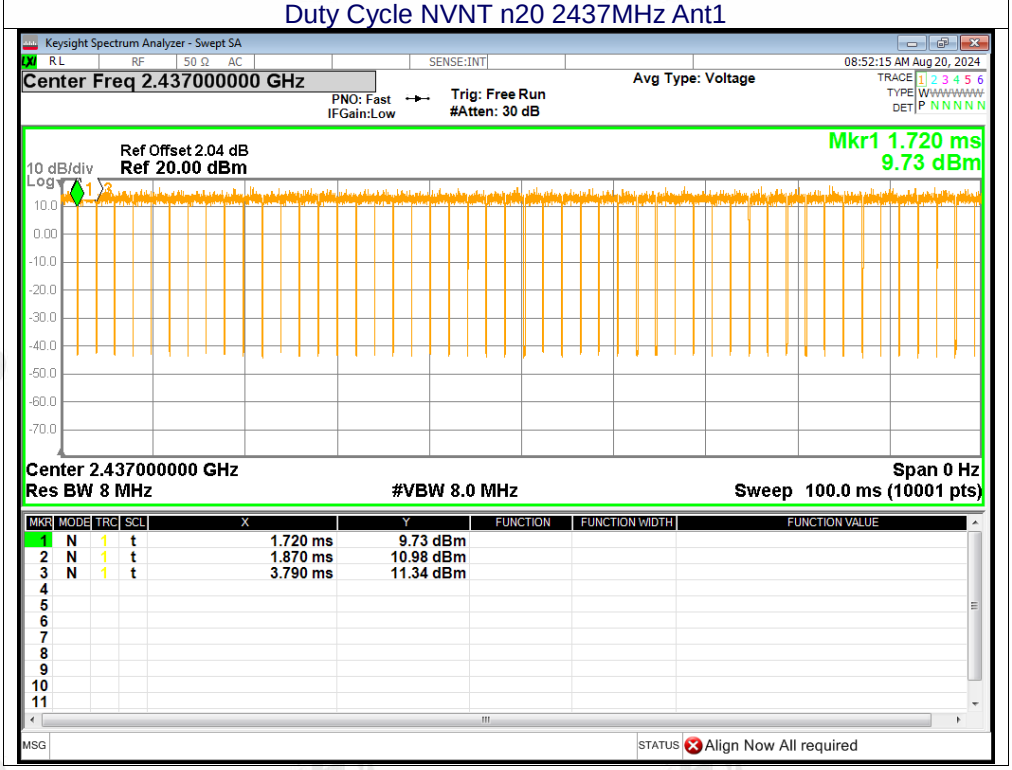

Duty Cycle NVNT g 2462MHz Ant1



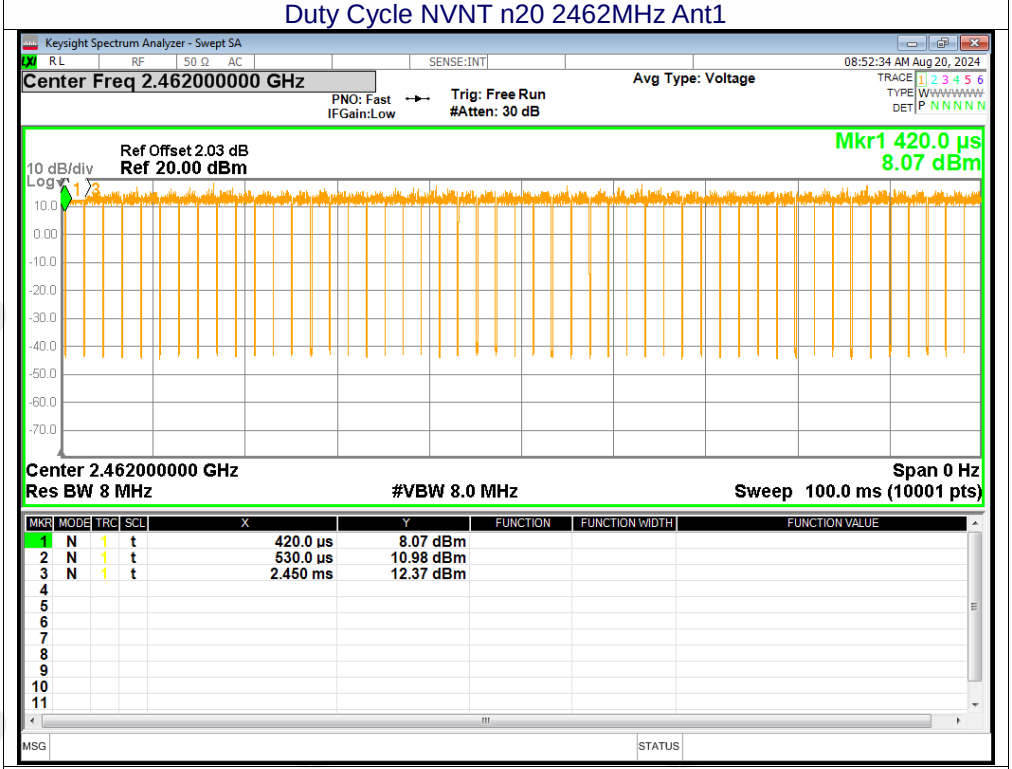
Duty Cycle NVNT n20 2412MHz Ant1



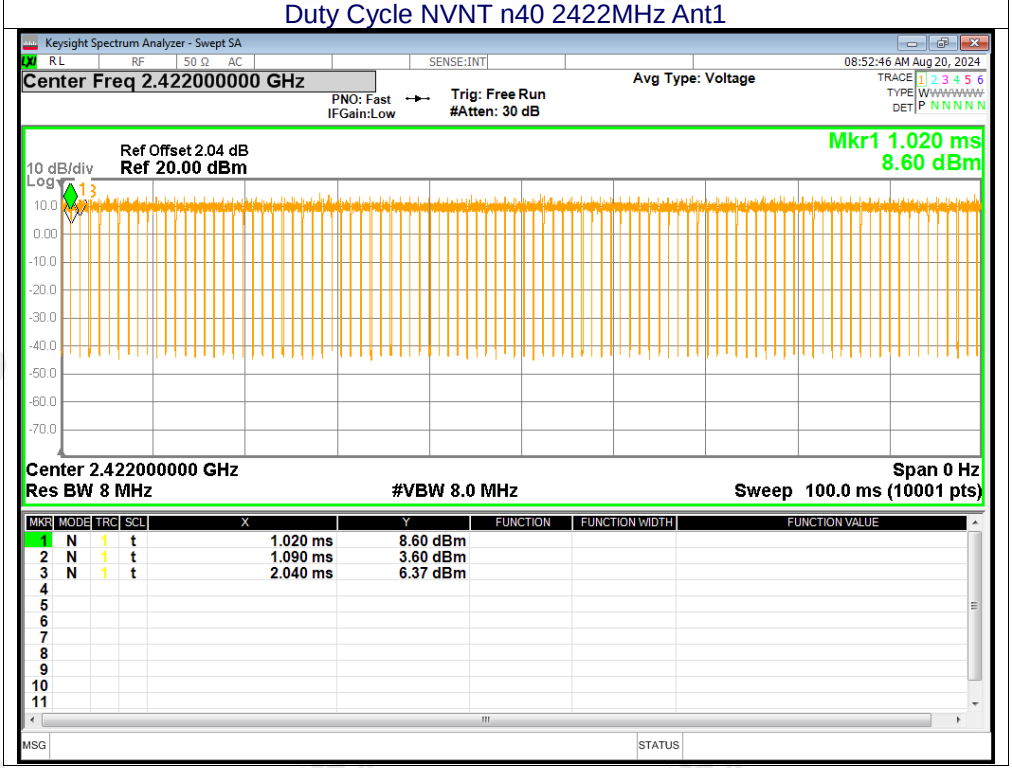

Duty Cycle NVNT n20 2437MHz Ant1



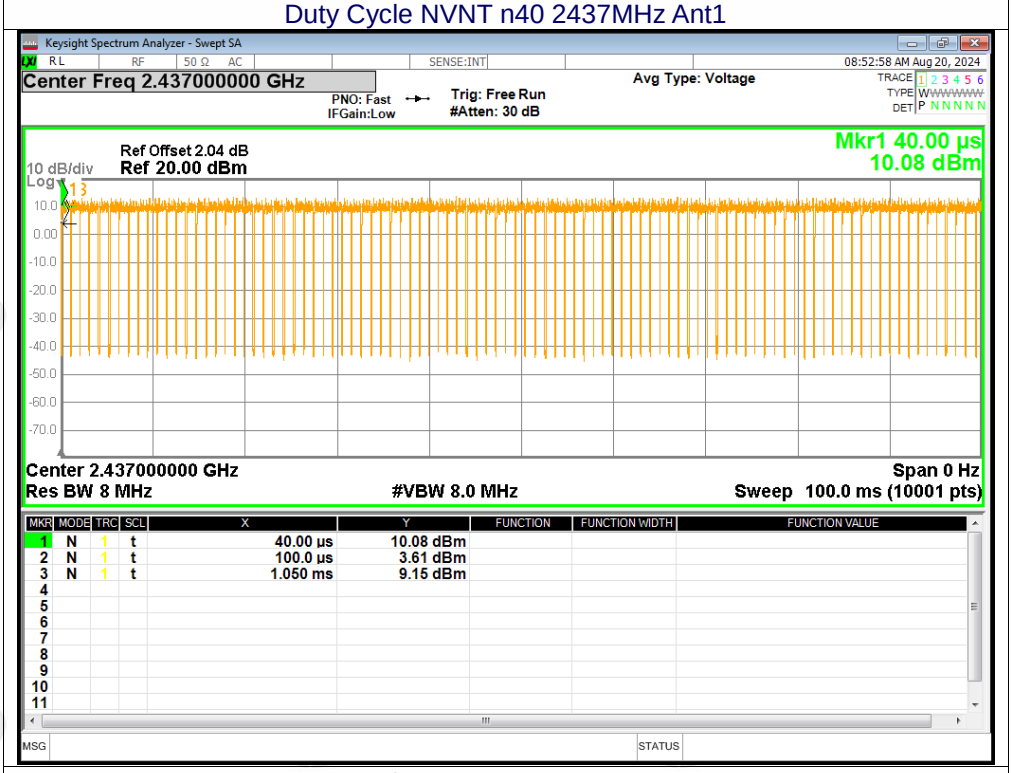
Duty Cycle NVNT n20 2462MHz Ant1



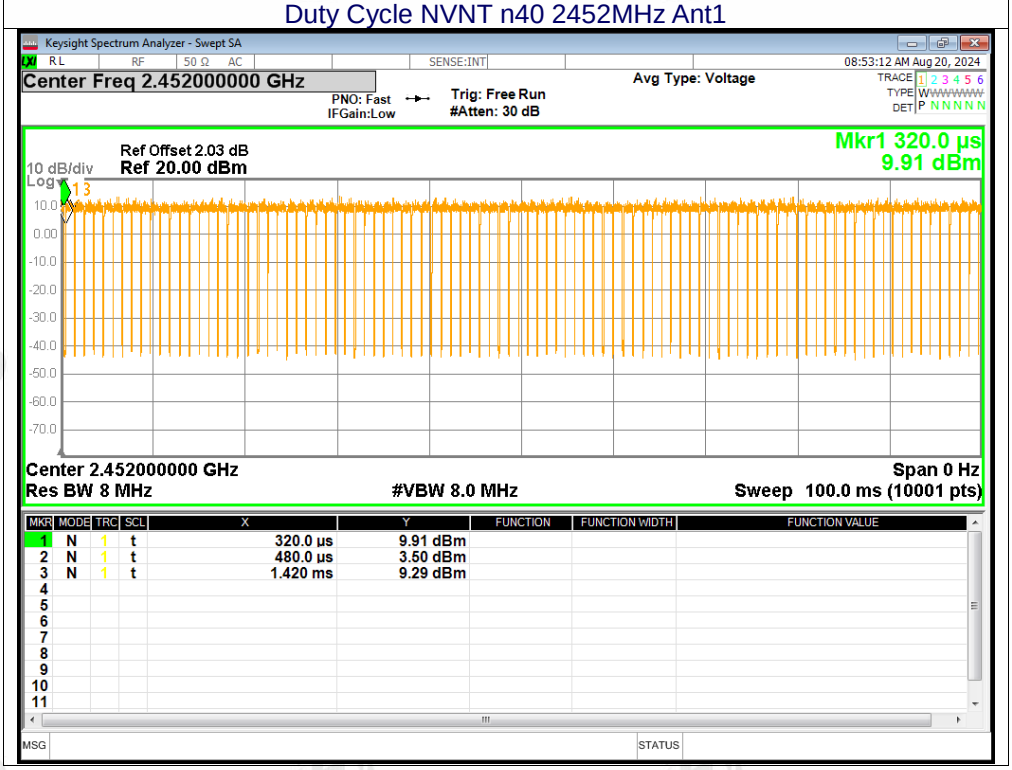

Duty Cycle NVNT n40 2422MHz Ant1



Duty Cycle NVNT n40 2437MHz Ant1




Duty Cycle NVNT n40 2452MHz Ant1

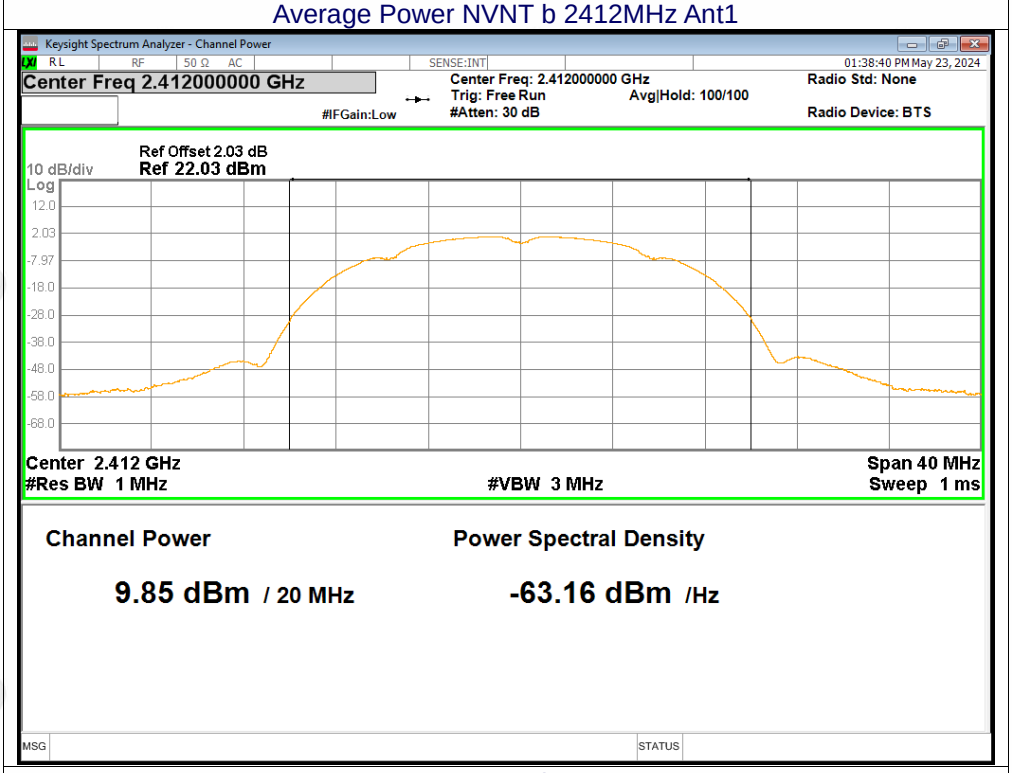


11.2 MAXIMUM AVERAGE CONDUCTED OUTPUT POWER

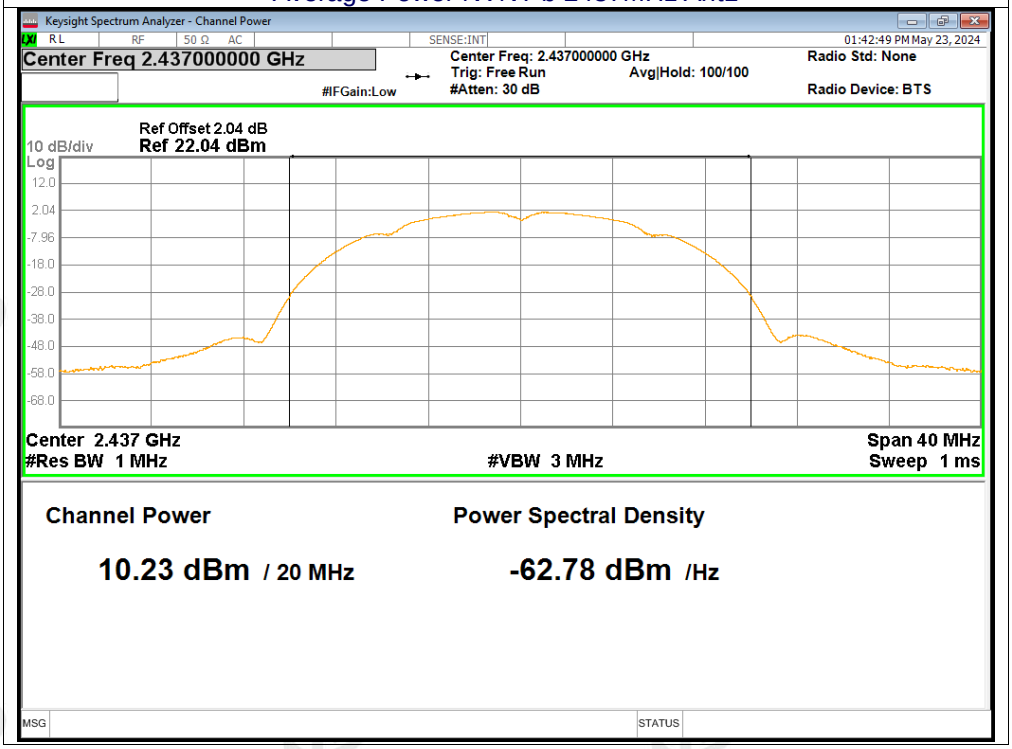
| Mode | Frequency (MHz) | Conducted Power (dBm) | Duty Factor (dB) | Total Power (dBm) | Limit (dBm) | Verdict |
|---|---|---|---|---|---|---|
| b | 2412 | 9.85 | 0 | 9.85 | 30 | Pass |
| b | 2437 | 10.23 | 0 | 10.23 | 30 | Pass |
| b | 2462 | 10.08 | 0 | 10.08 | 30 | Pass |
| g | 2412 | 6.45 | 0.23 | 6.68 | 30 | Pass |
| g | 2437 | 7.12 | 0.26 | 7.38 | 30 | Pass |
| g | 2462 | 6.87 | 0.31 | 7.18 | 30 | Pass |
| n20 | 2412 | 6.6 | 0.26 | 6.86 | 30 | Pass |
| n20 | 2437 | 7.05 | 0.33 | 7.38 | 30 | Pass |
| n20 | 2462 | 6.79 | 0.24 | 7.03 | 30 | Pass |
| n40 | 2422 | 6.88 | 0.31 | 7.19 | 30 | Pass |
| n40 | 2437 | 6.94 | 0.27 | 7.21 | 30 | Pass |
| n40 | 2452 | 7.26 | 0.68 | 7.94 | 30 | Pass |

## Test Graphs

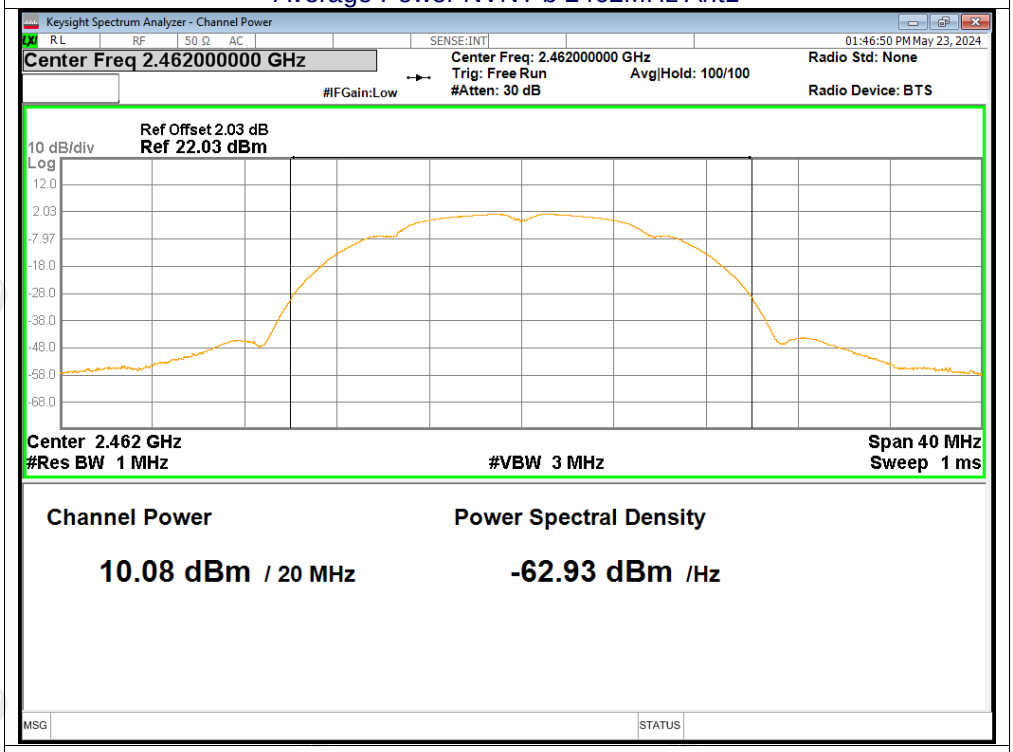
### Average Power NVNT b 2412MHz Ant1



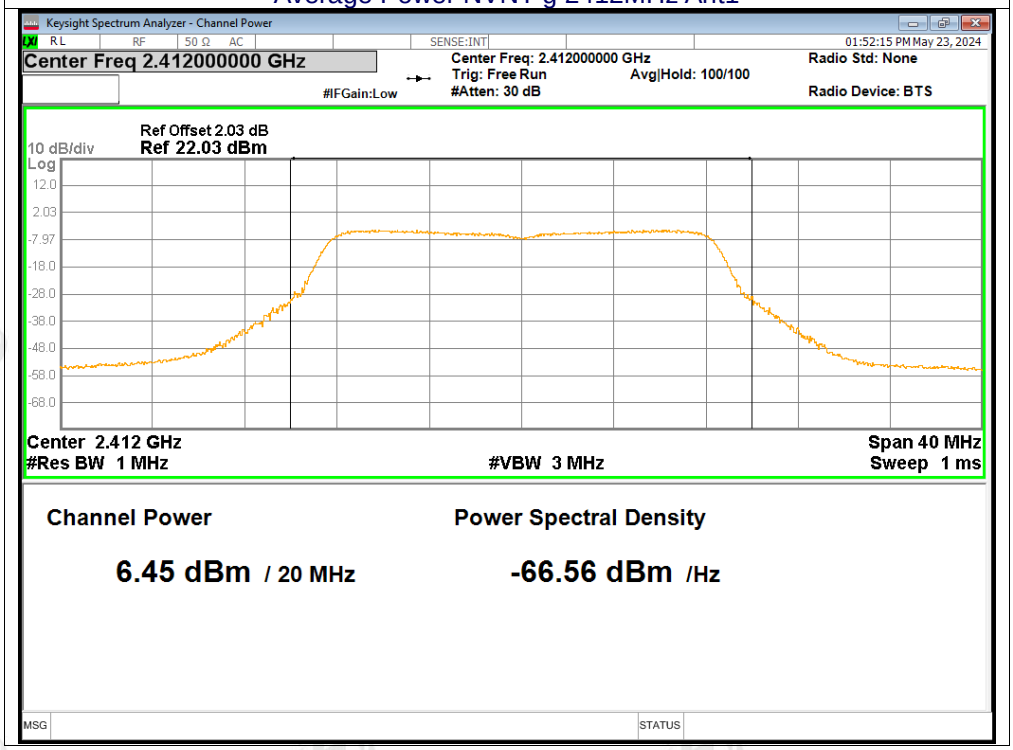

### Average Power NVNT b 2437MHz Ant1



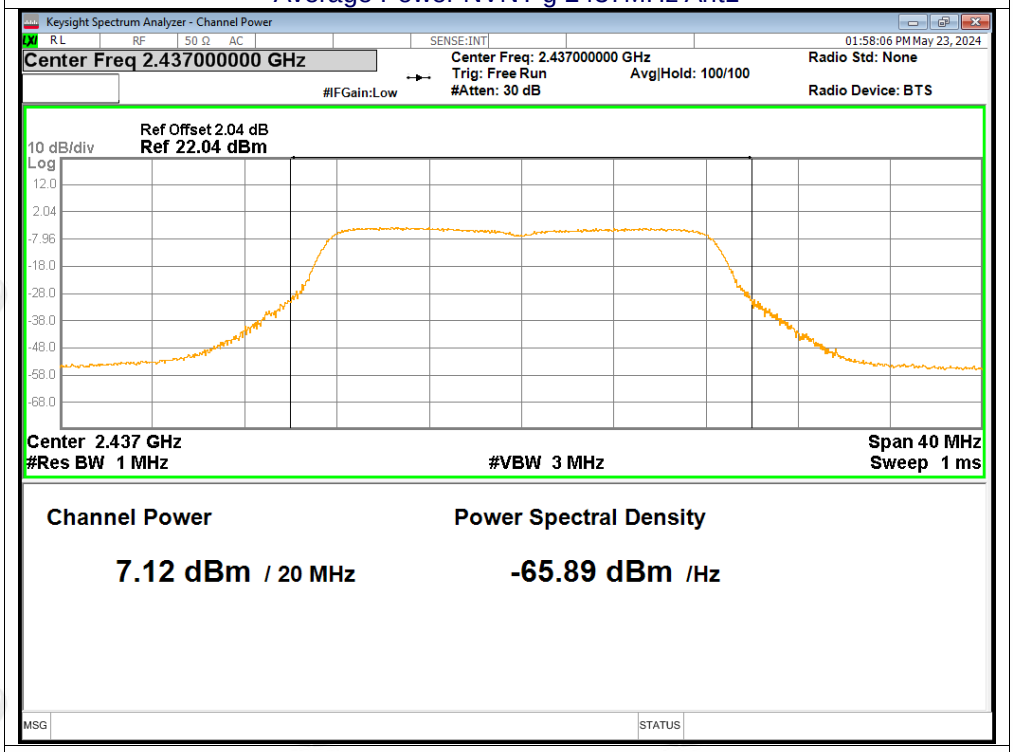
Average Power NVNT b 2462MHz Ant1



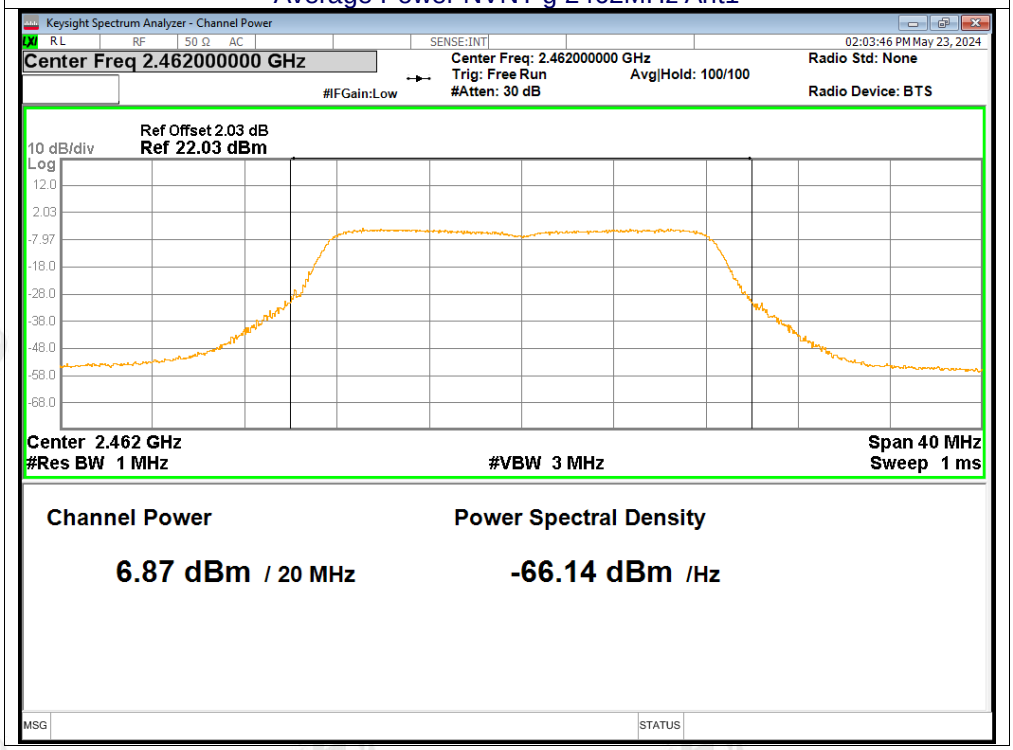

Average Power NVNT g 2412MHz Ant1



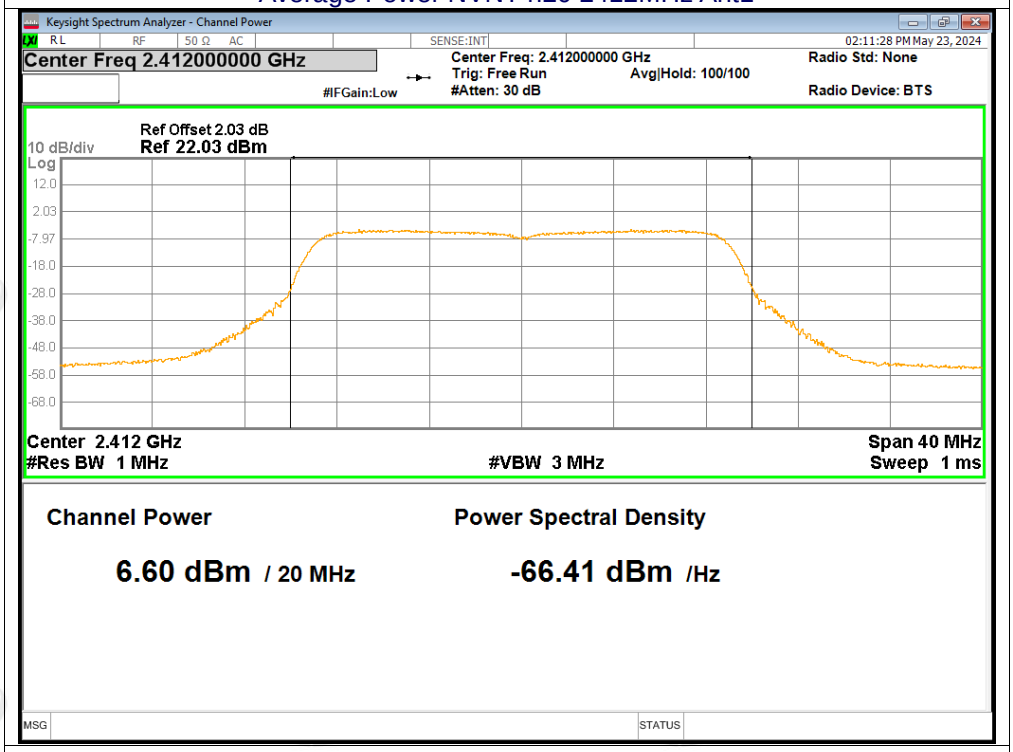
Average Power NVNT g 2437MHz Ant1



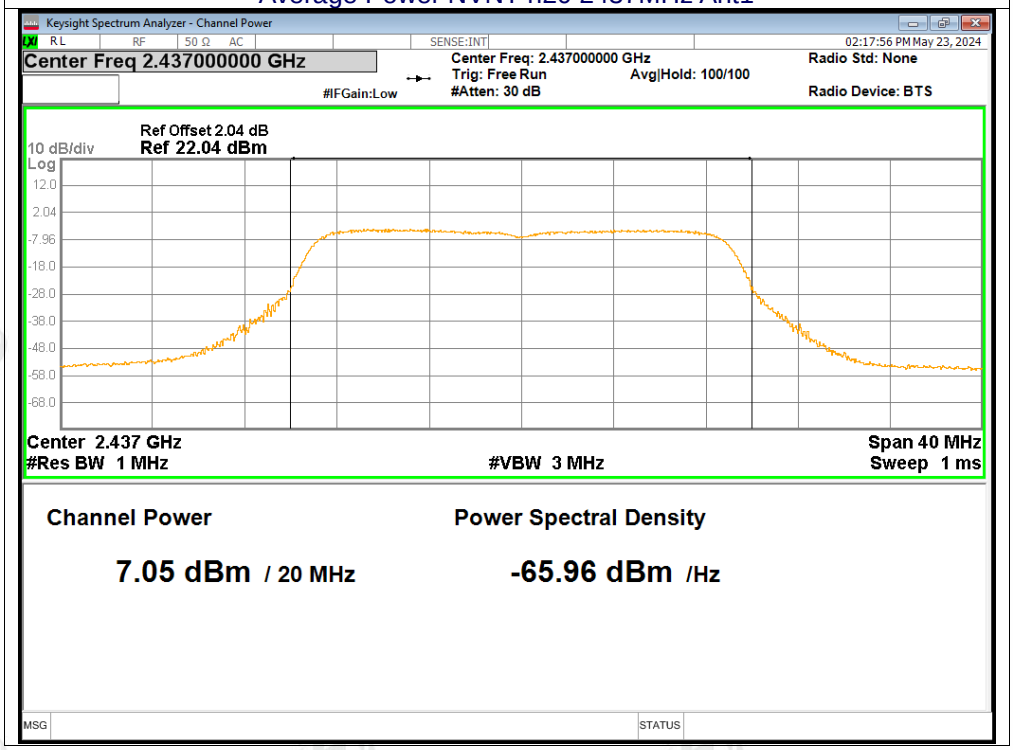

Average Power NVNT g 2462MHz Ant1



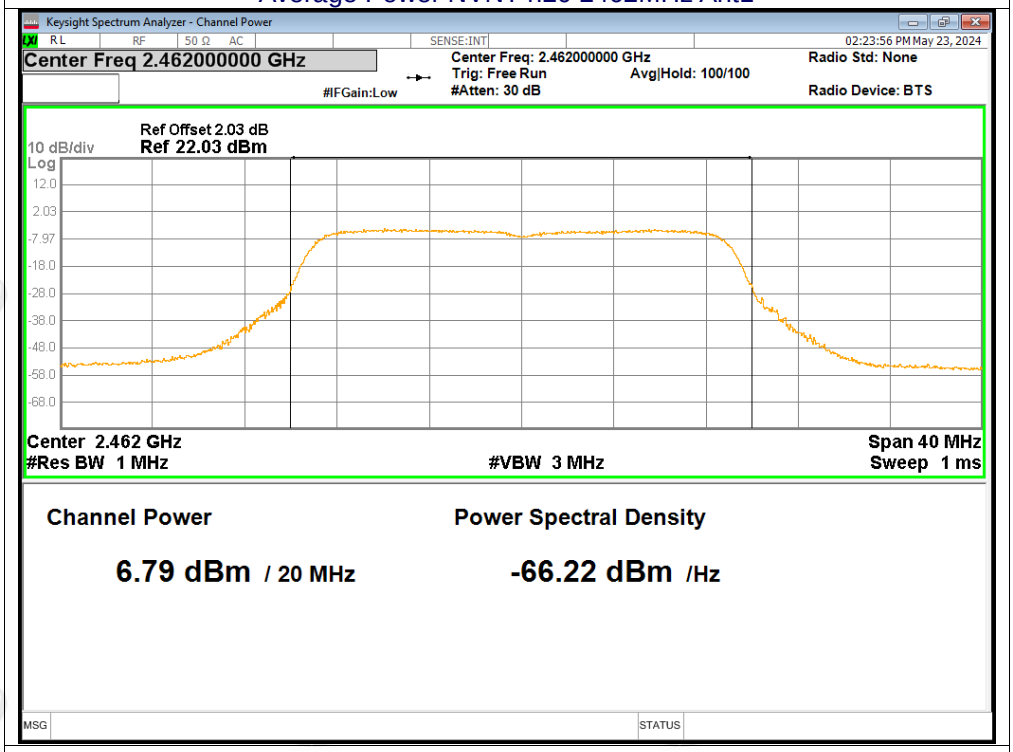
Average Power NVNT n20 2412MHz Ant1



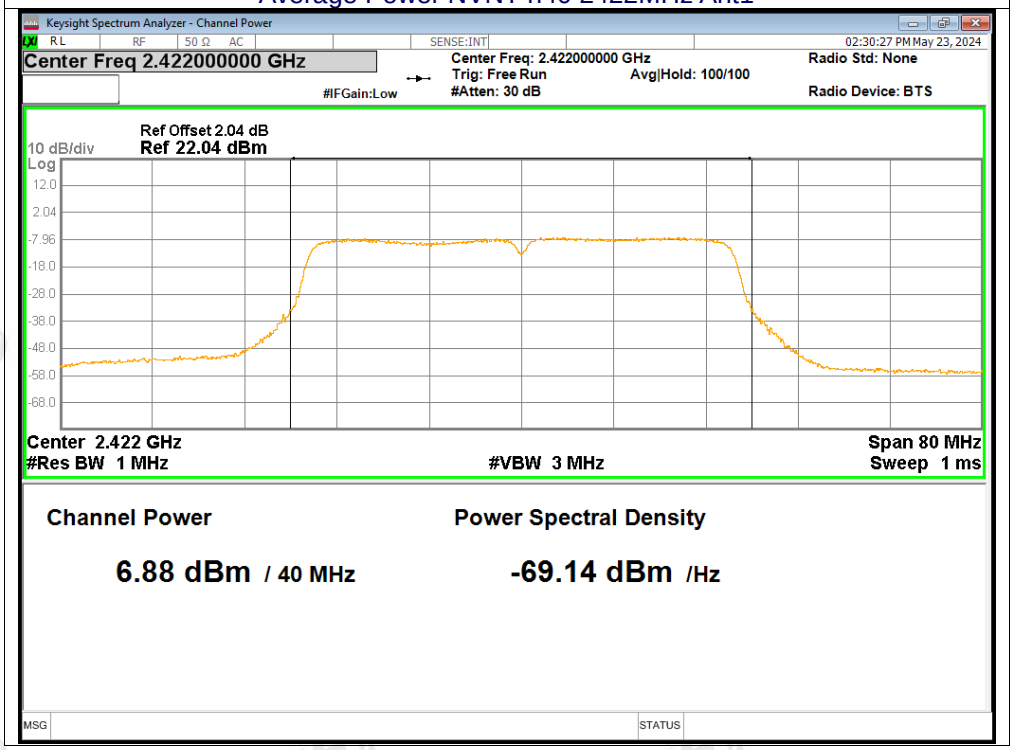

Average Power NVNT n20 2437MHz Ant1



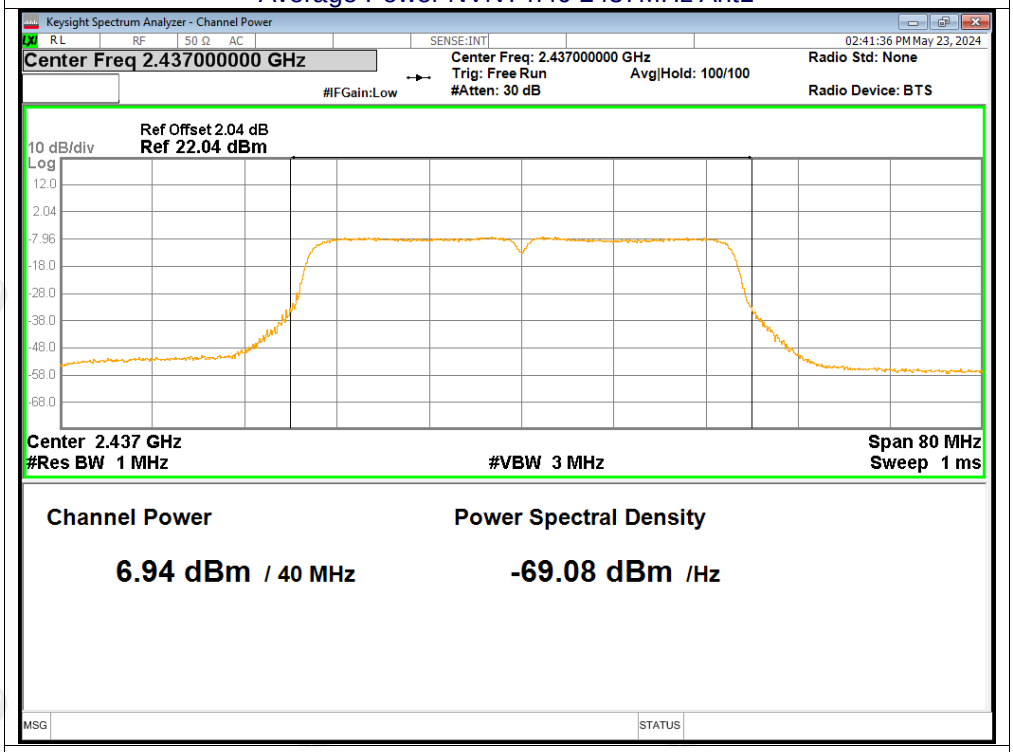
Average Power NVNT n20 2462MHz Ant1



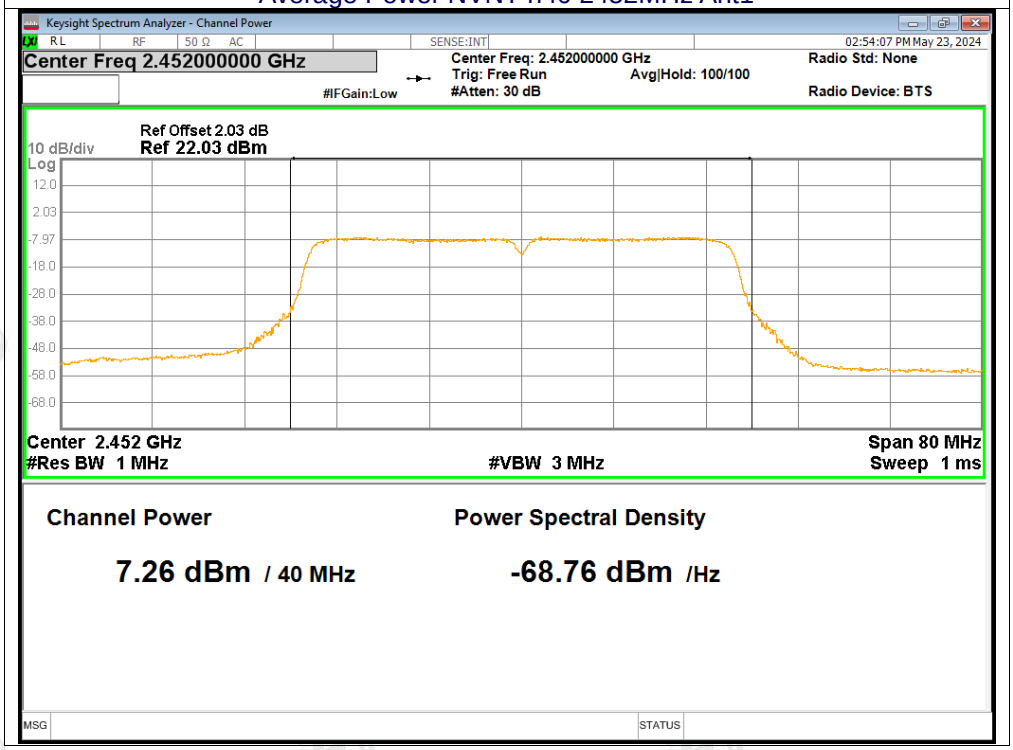

Average Power NVNT n40 2422MHz Ant1



Average Power NVNT n40 2437MHz Ant1




Average Power NVNT n40 2452MHz Ant1



11.3 MAXIMUM PEAK CONDUCTED OUTPUT POWER

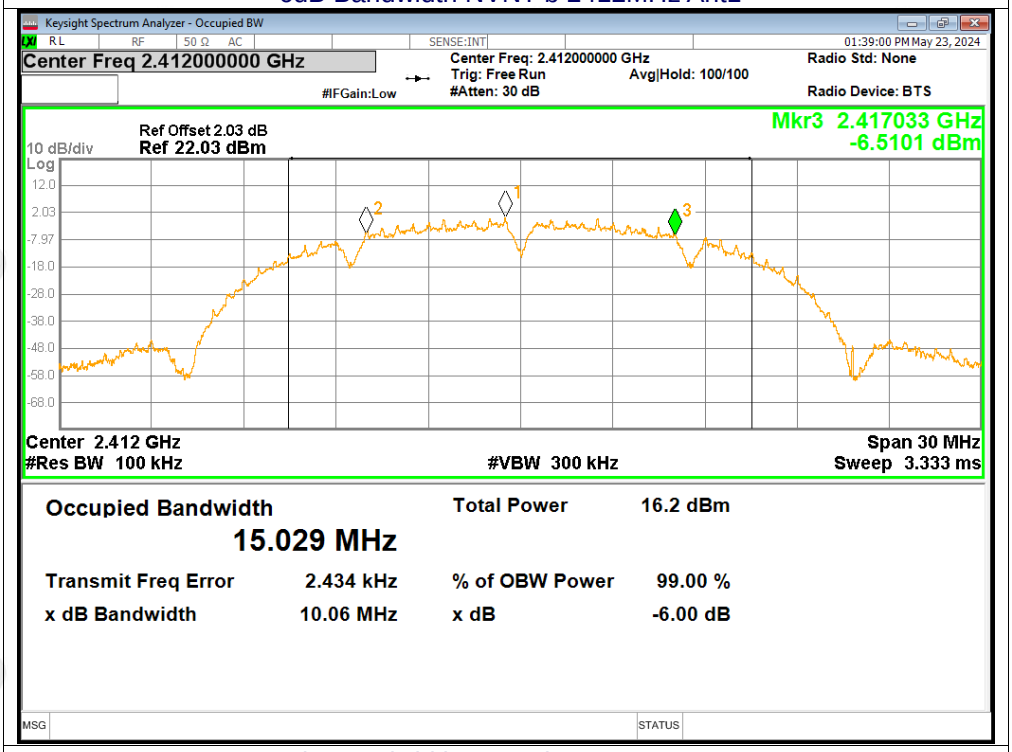
| Mode | Frequency (MHz) | Total Power (dBm) | Limit (dBm) | Verdict |
|---|---|---|---|---|
| b | 2412 | 11.28 | 30 | Pass |
| b | 2437 | 11.63 | 30 | Pass |
| b | 2462 | 11.51 | 30 | Pass |
| g | 2412 | 11.24 | 30 | Pass |
| g | 2437 | 11.86 | 30 | Pass |
| g | 2462 | 11.66 | 30 | Pass |
| n20 | 2412 | 11.29 | 30 | Pass |
| n20 | 2437 | 11.68 | 30 | Pass |
| n20 | 2462 | 11.55 | 30 | Pass |
| n40 | 2422 | 11.75 | 30 | Pass |
| n40 | 2437 | 11.81 | 30 | Pass |
| n40 | 2452 | 12.2 | 30 | Pass |

11.4 -6DB BANDWIDTH

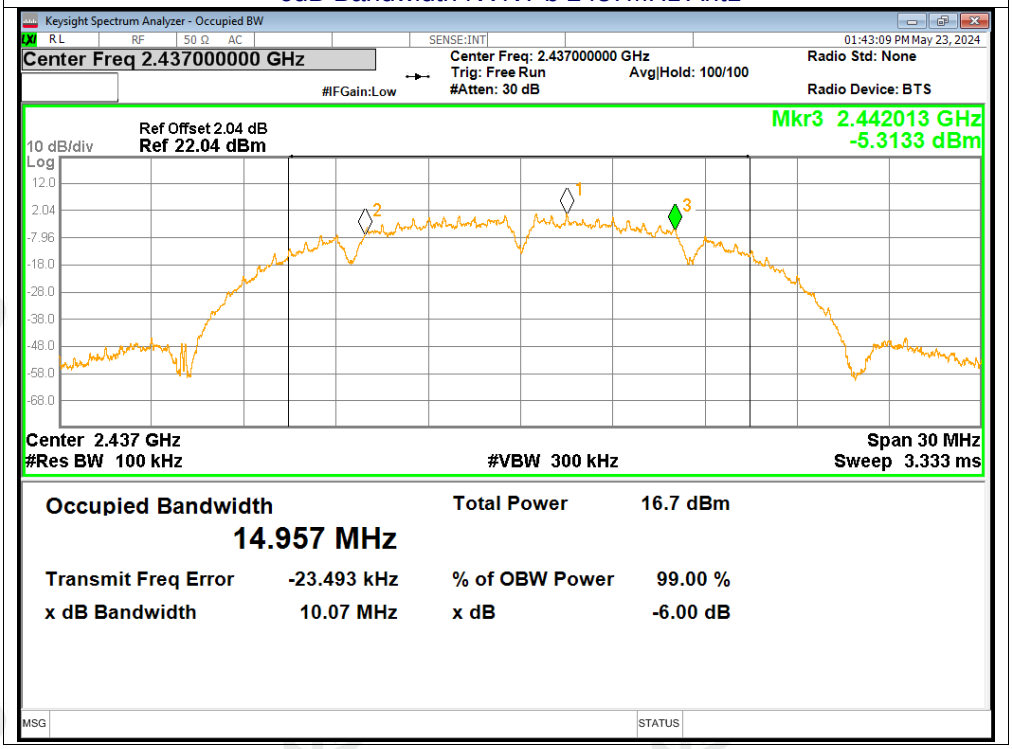
| Mode | Frequency (MHz) | -6 dB Bandwidth (MHz) | Limit -6 dB Bandwidth (MHz) | Verdict |
|---|---|---|---|---|
| b | 2412 | 10.06 | 0.5 | Pass |
| b | 2437 | 10.074 | 0.5 | Pass |
| b | 2462 | 10.053 | 0.5 | Pass |
| g | 2412 | 16.314 | 0.5 | Pass |
| g | 2437 | 16.328 | 0.5 | Pass |
| g | 2462 | 16.305 | 0.5 | Pass |
| n20 | 2412 | 17.549 | 0.5 | Pass |
| n20 | 2437 | 17.536 | 0.5 | Pass |
| n20 | 2462 | 16.93 | 0.5 | Pass |
| n40 | 2422 | 35.541 | 0.5 | Pass |
| n40 | 2437 | 35.284 | 0.5 | Pass |
| n40 | 2452 | 35.447 | 0.5 | Pass |

## Test Graphs

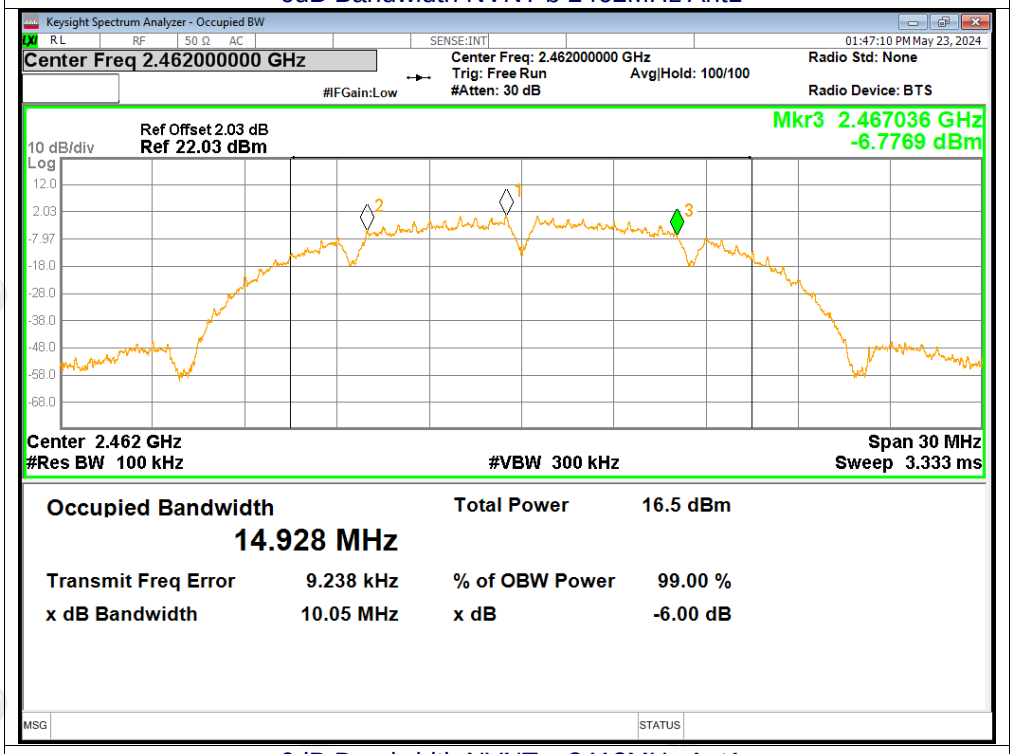
### -6dB Bandwidth NVNT b 2412MHz Ant1



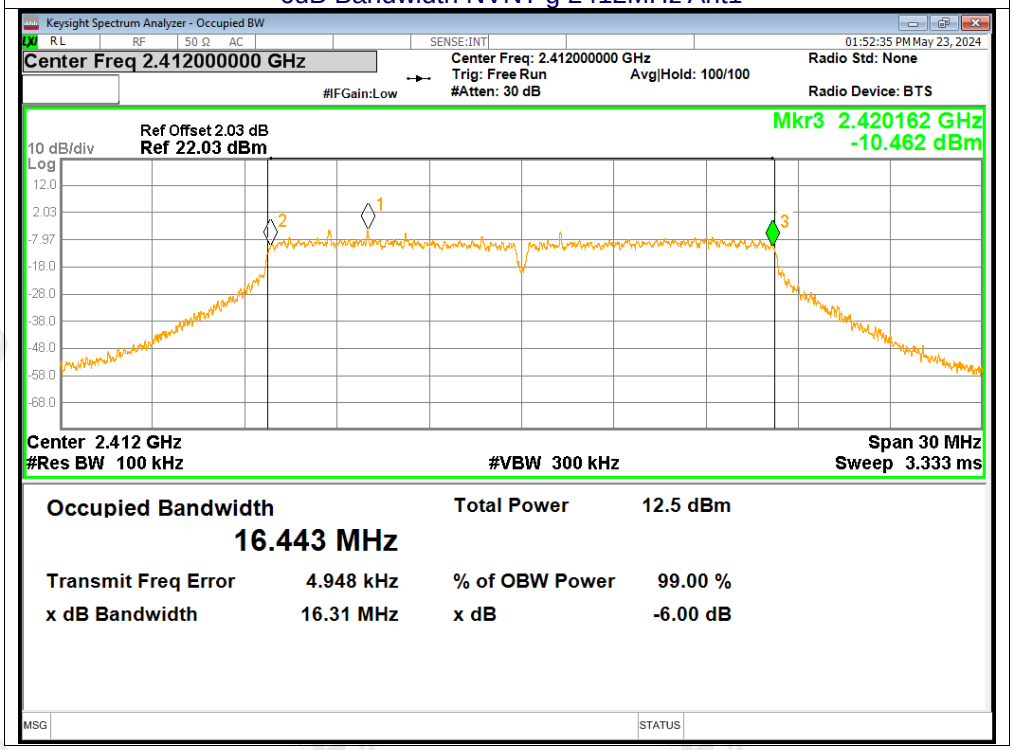

### -6dB Bandwidth NVNT b 2437MHz Ant1



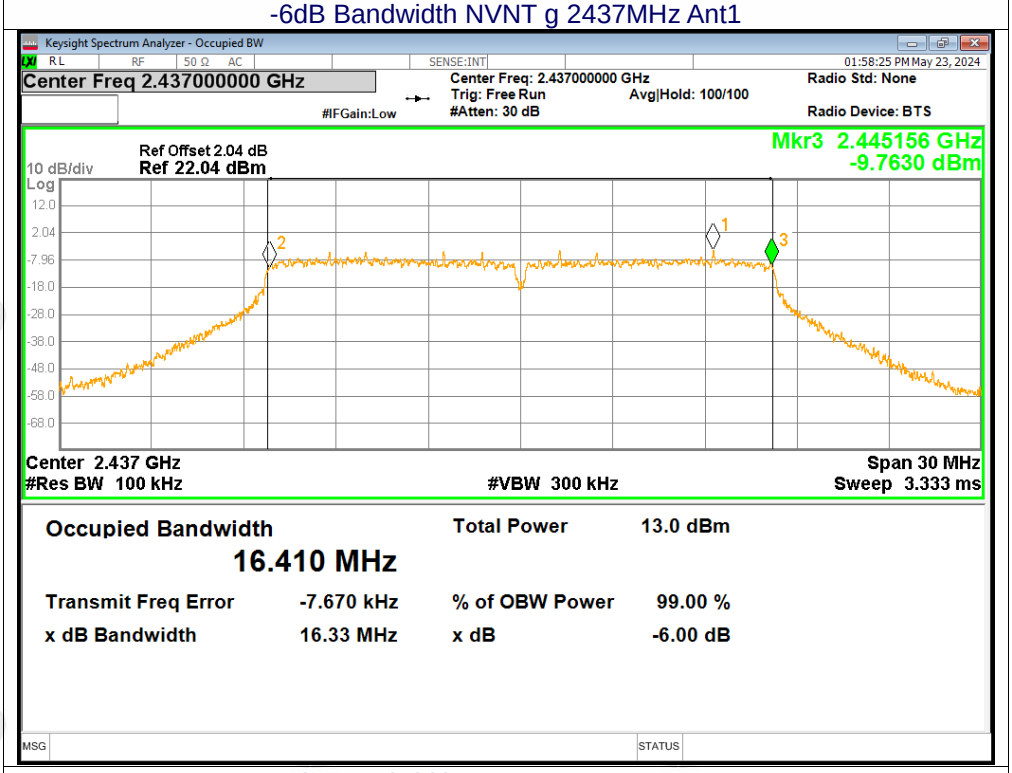
-6dB Bandwidth NVNT b 2462MHz Ant1



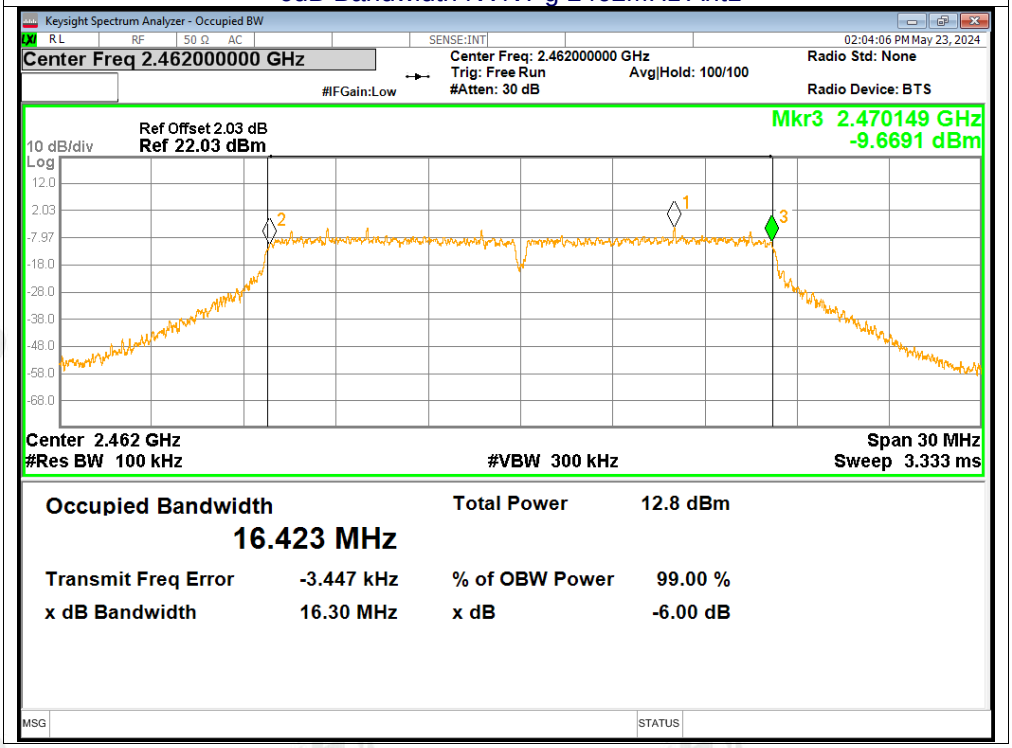

-6dB Bandwidth NVNT g 2412MHz Ant1



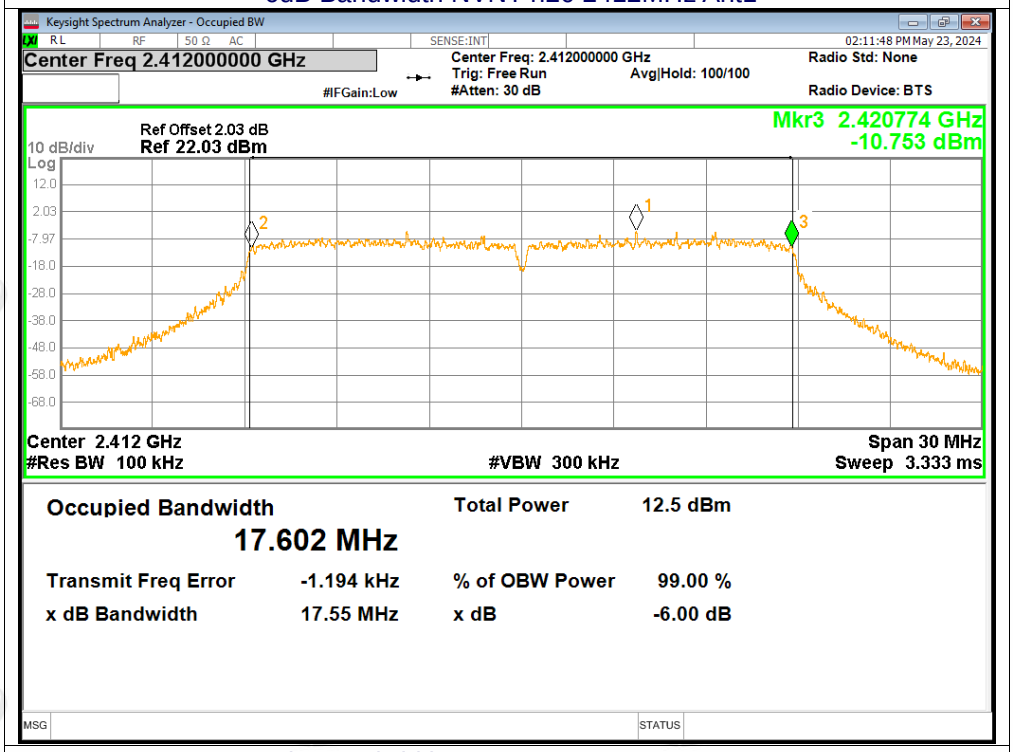
-6dB Bandwidth NVNT g 2437MHz Ant1



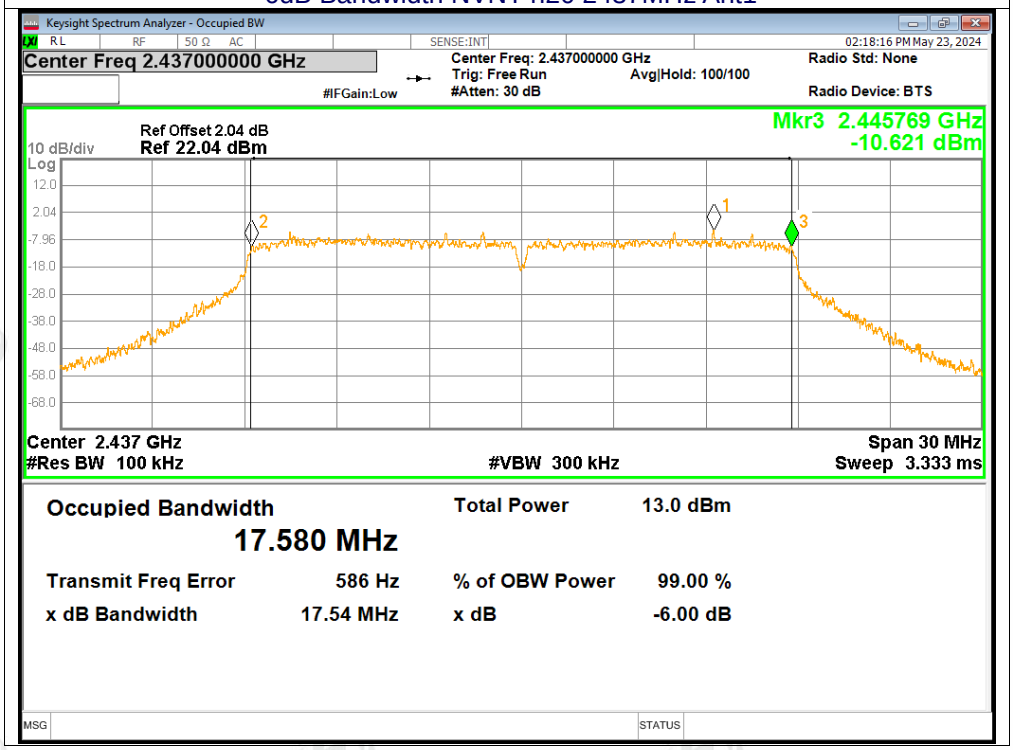

-6dB Bandwidth NVNT g 2462MHz Ant1



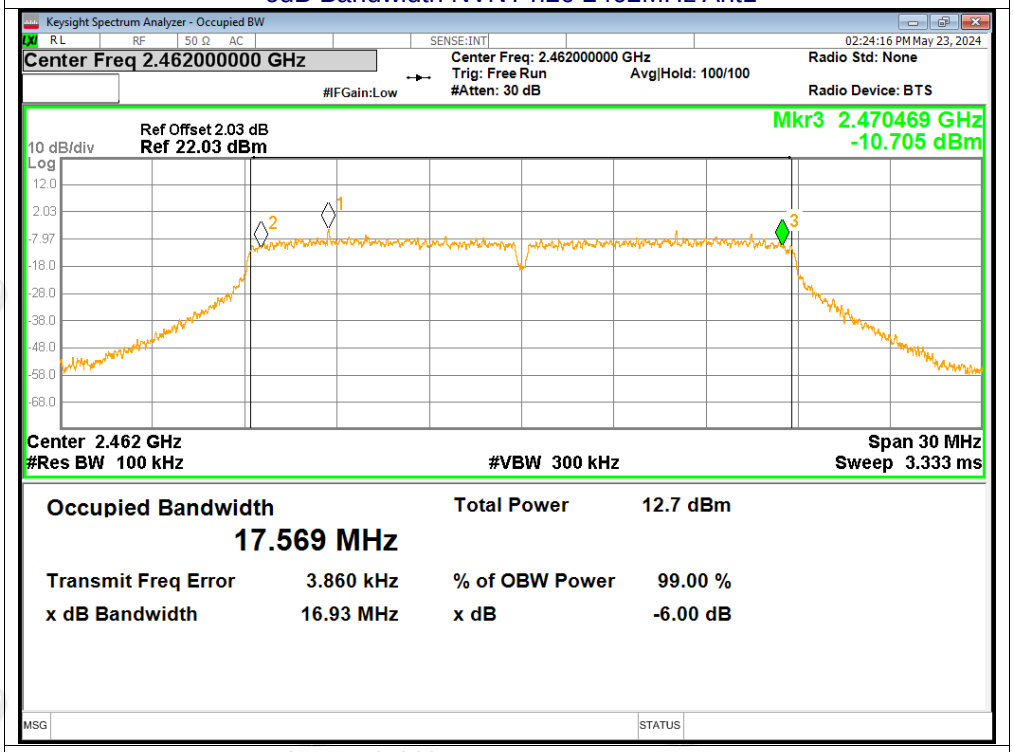
-6dB Bandwidth NVNT n20 2412MHz Ant1



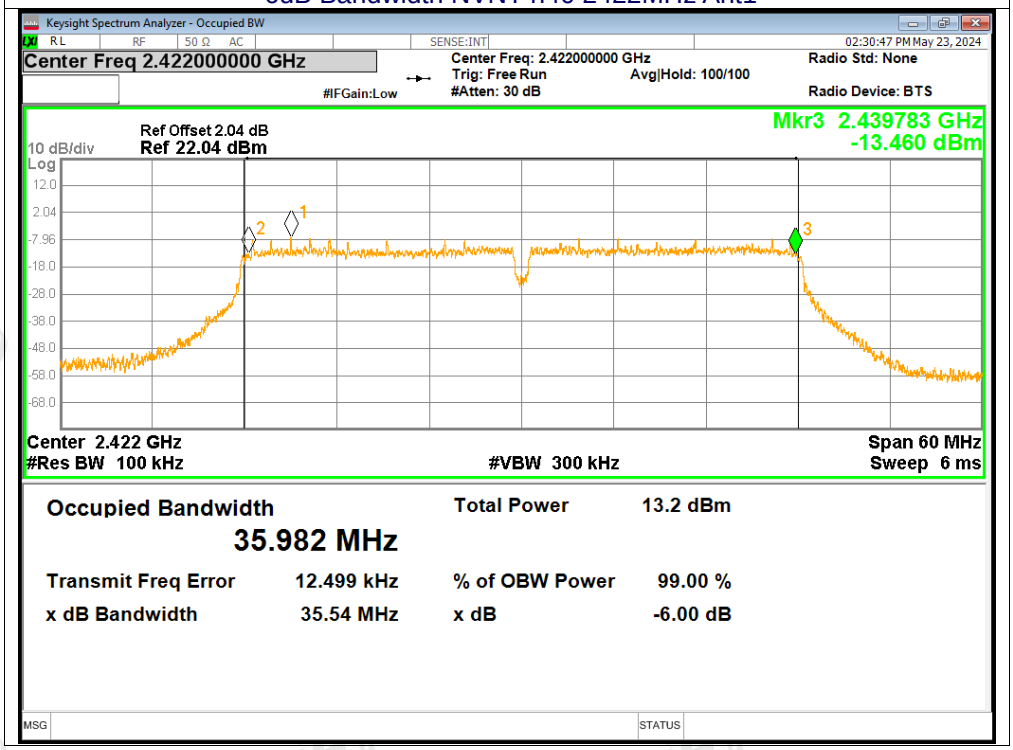

-6dB Bandwidth NVNT n20 2437MHz Ant1



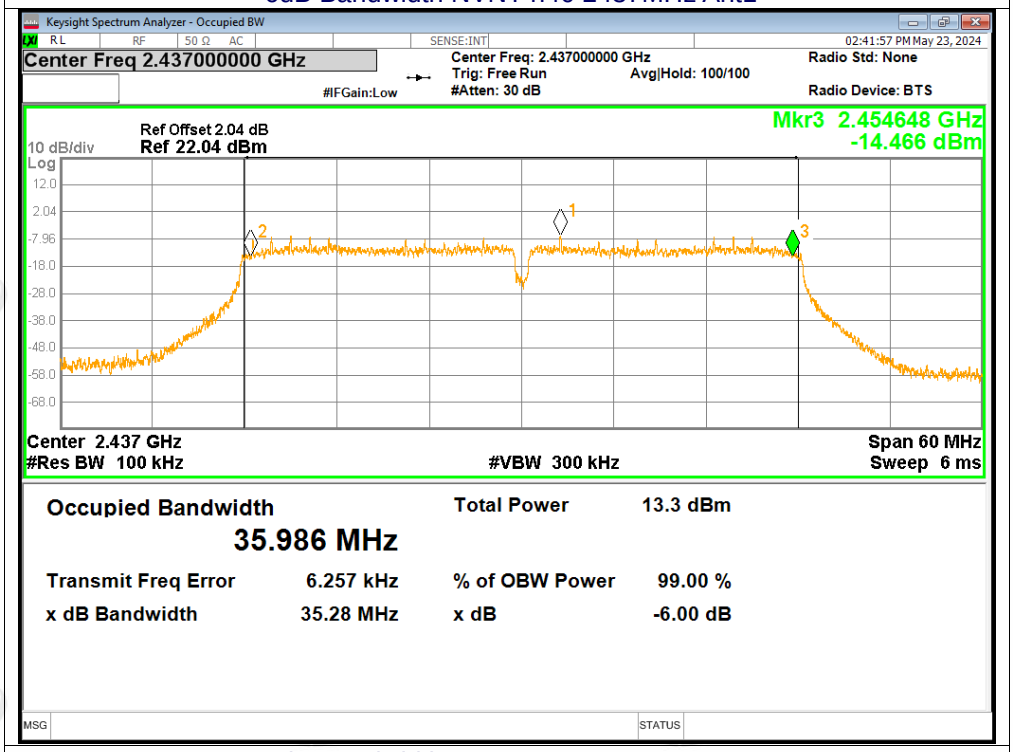
-6dB Bandwidth NVNT n20 2462MHz Ant1



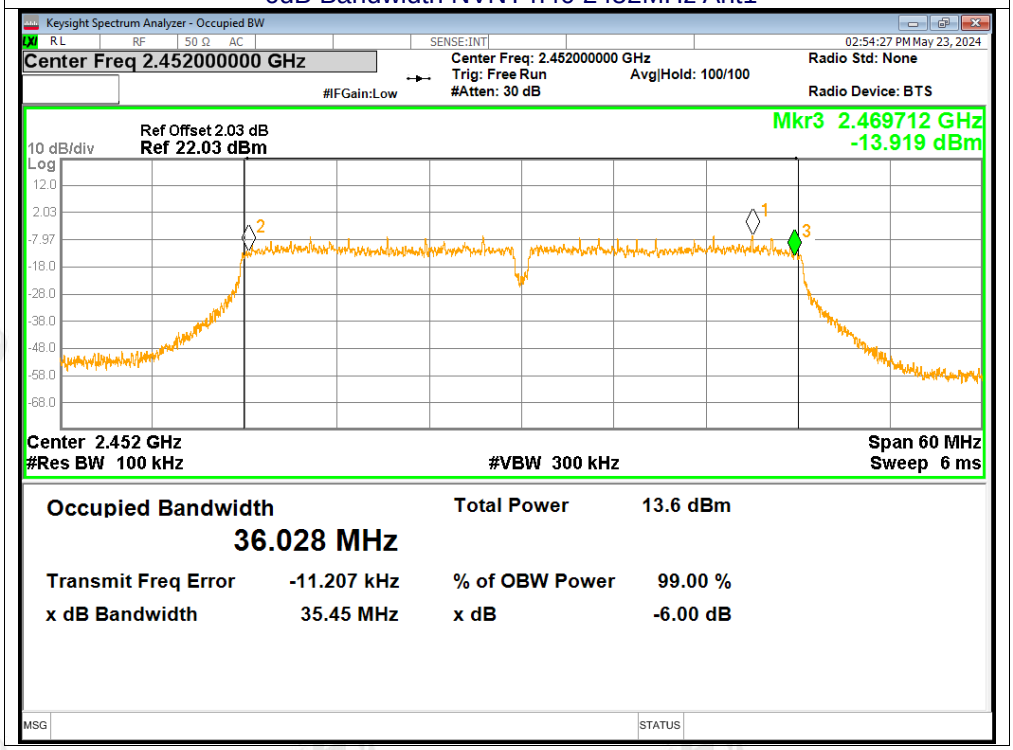

-6dB Bandwidth NVNT n40 2422MHz Ant1



-6dB Bandwidth NVNT n40 2437MHz Ant1




-6dB Bandwidth NVNT n40 2452MHz Ant1

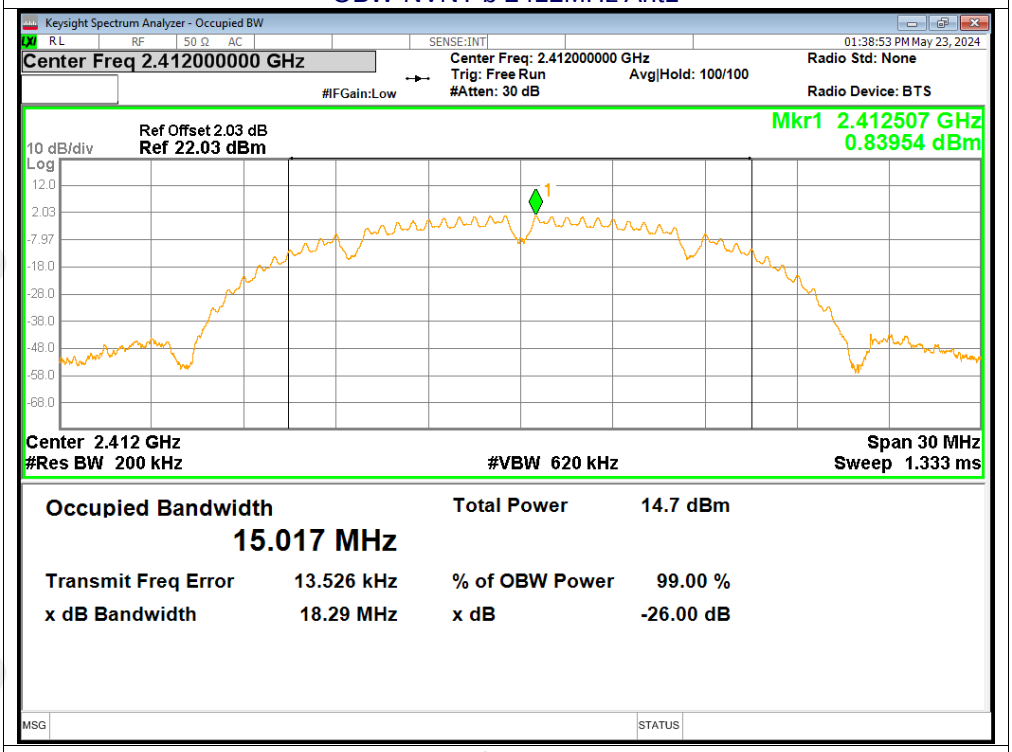


11.5 OCCUPIED CHANNEL BANDWIDTH

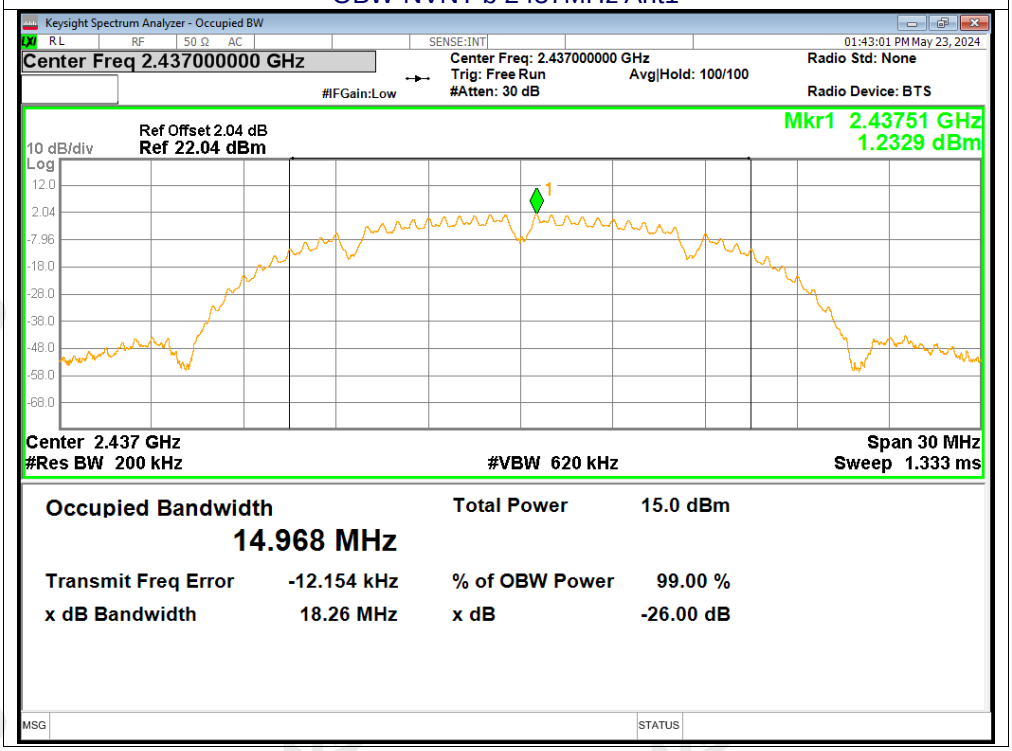
| Mode | Frequency (MHz) | 99% OBW (MHz) |
|---|---|---|
| b | 2412 | 15.017 |
| b | 2437 | 14.968 |
| b | 2462 | 14.949 |
| g | 2412 | 16.539 |
| g | 2437 | 16.514 |
| g | 2462 | 16.556 |
| n20 | 2412 | 17.648 |
| n20 | 2437 | 17.651 |
| n20 | 2462 | 17.585 |
| n40 | 2422 | 36.128 |
| n40 | 2437 | 36.16 |
| n40 | 2452 | 36.178 |

## Test Graphs

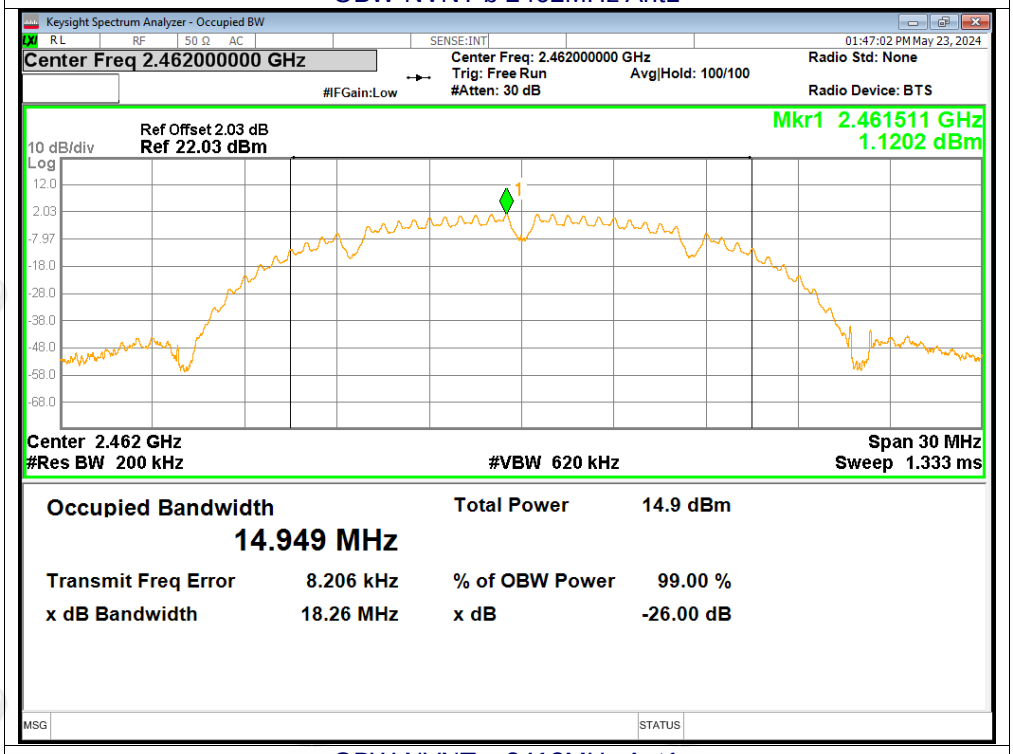
### OBW NVNT b 2412MHz Ant1



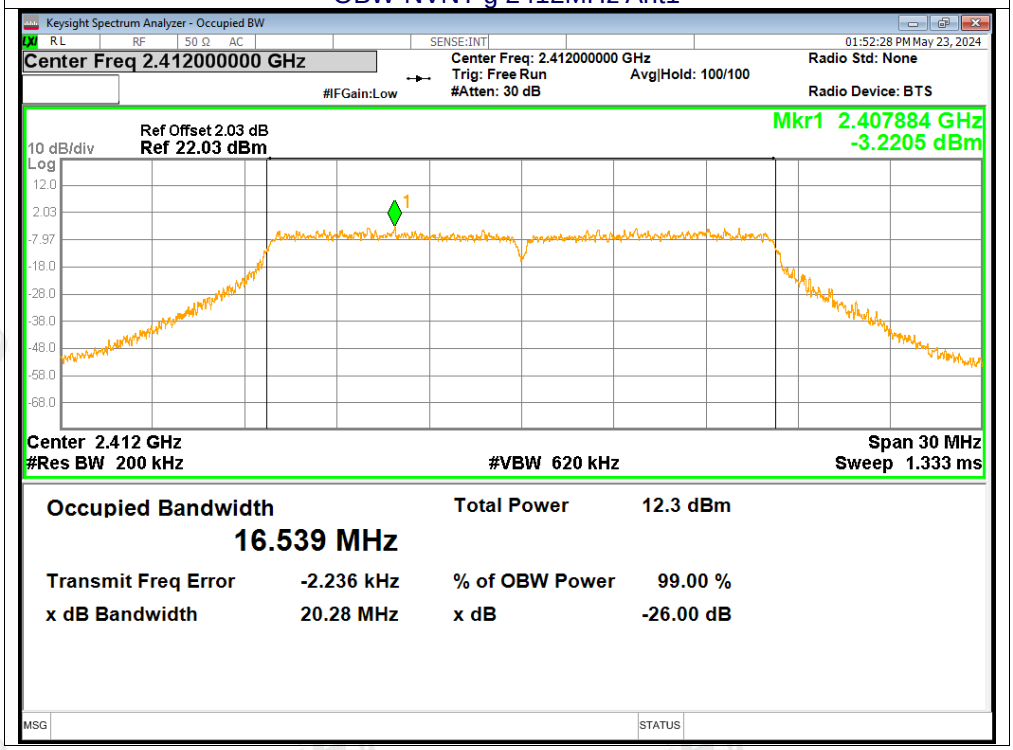

### OBW NVNT b 2437MHz Ant1



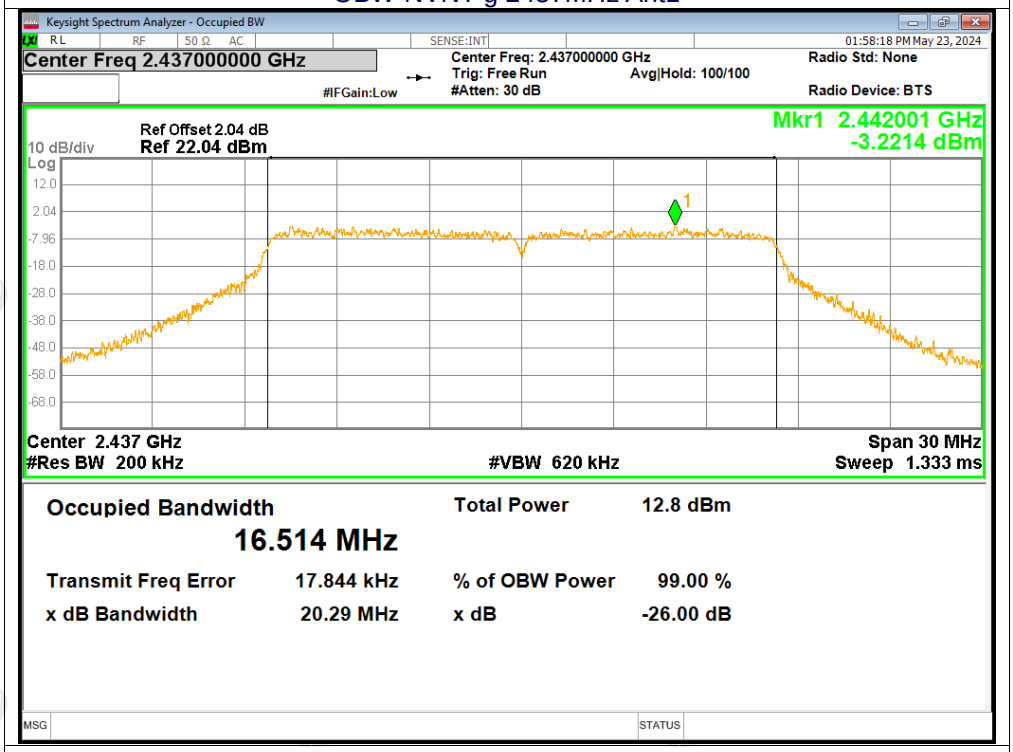
OBW NVNT b 2462MHz Ant1



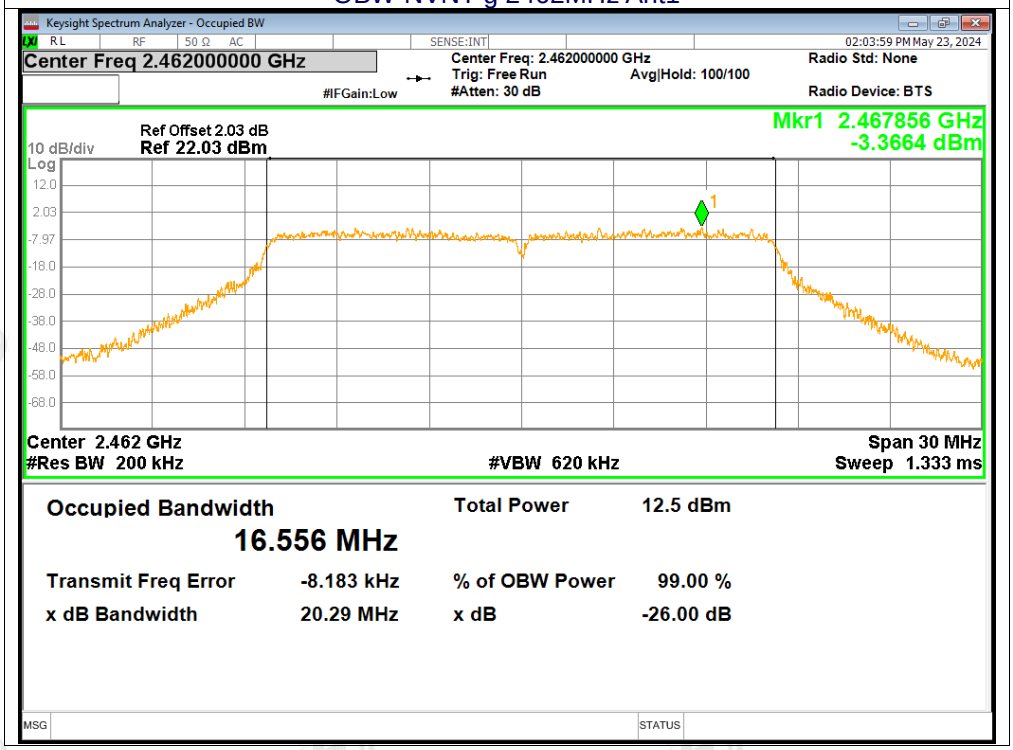

OBW NVNT g 2412MHz Ant1



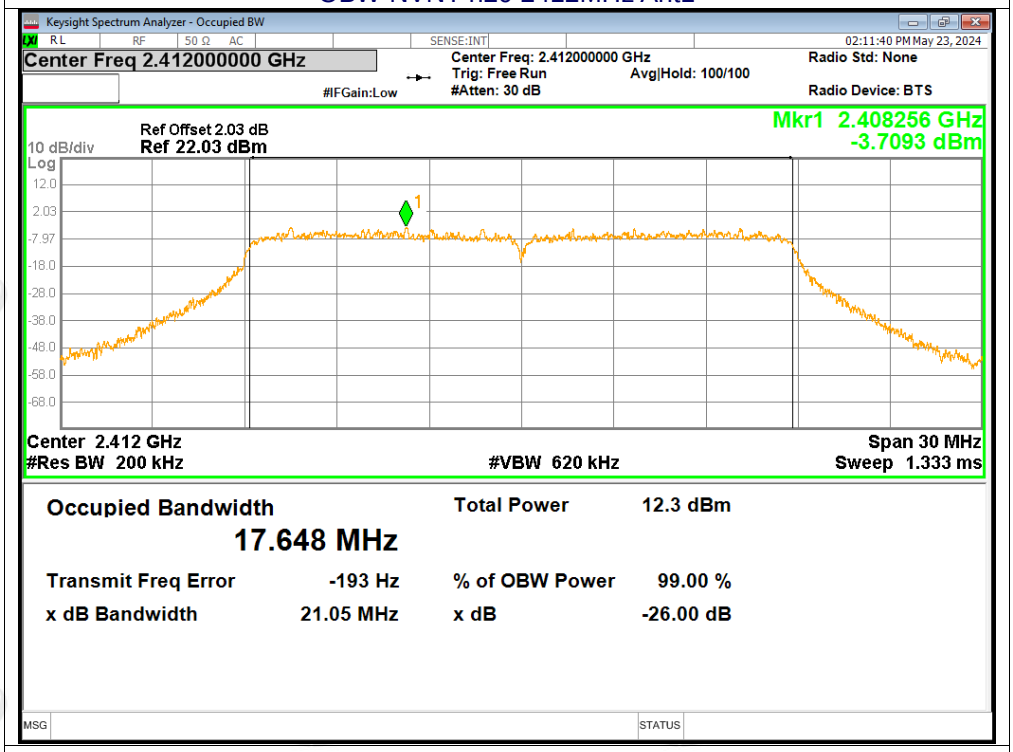
OBW NVNT g 2437MHz Ant1



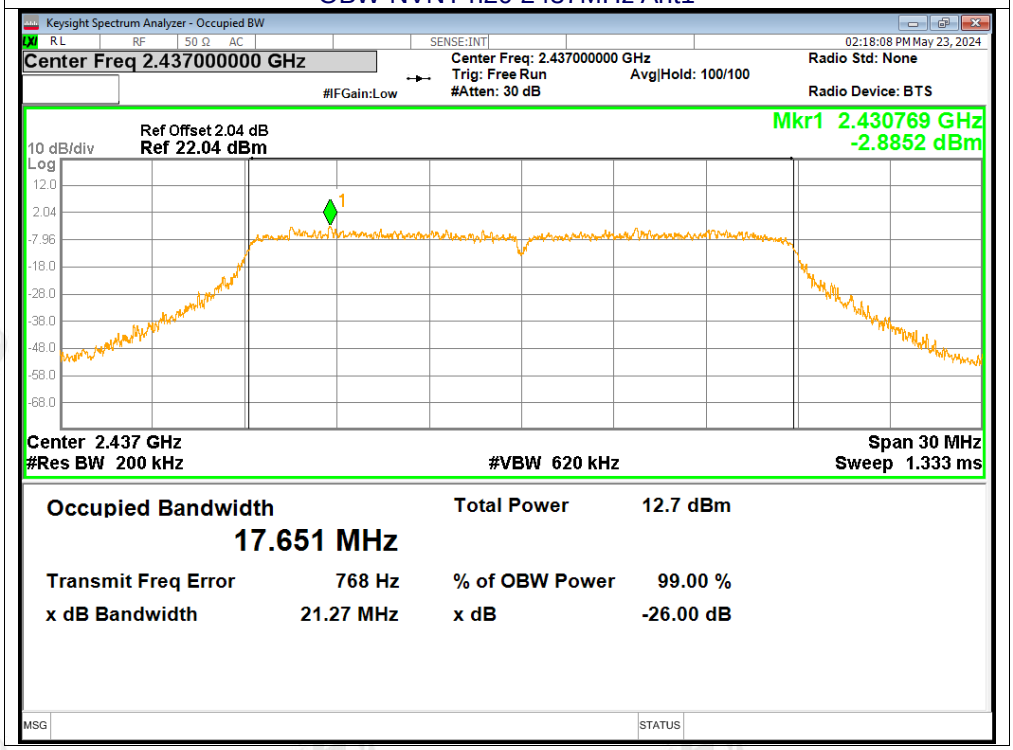

OBW NVNT g 2462MHz Ant1



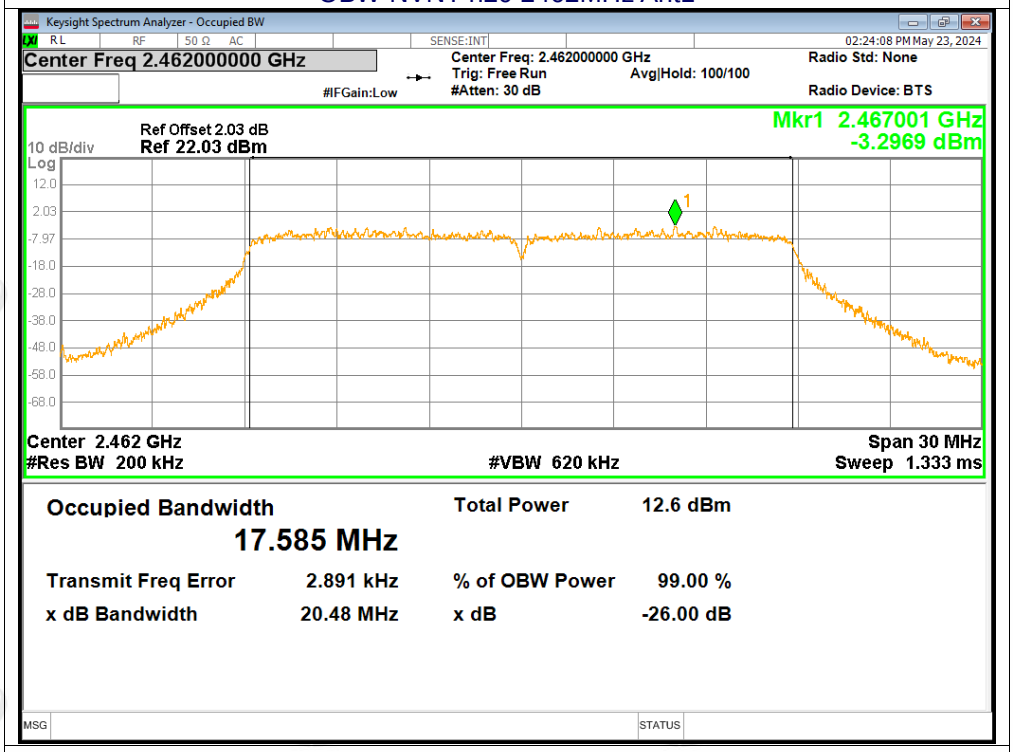
OBW NVNT n20 2412MHz Ant1



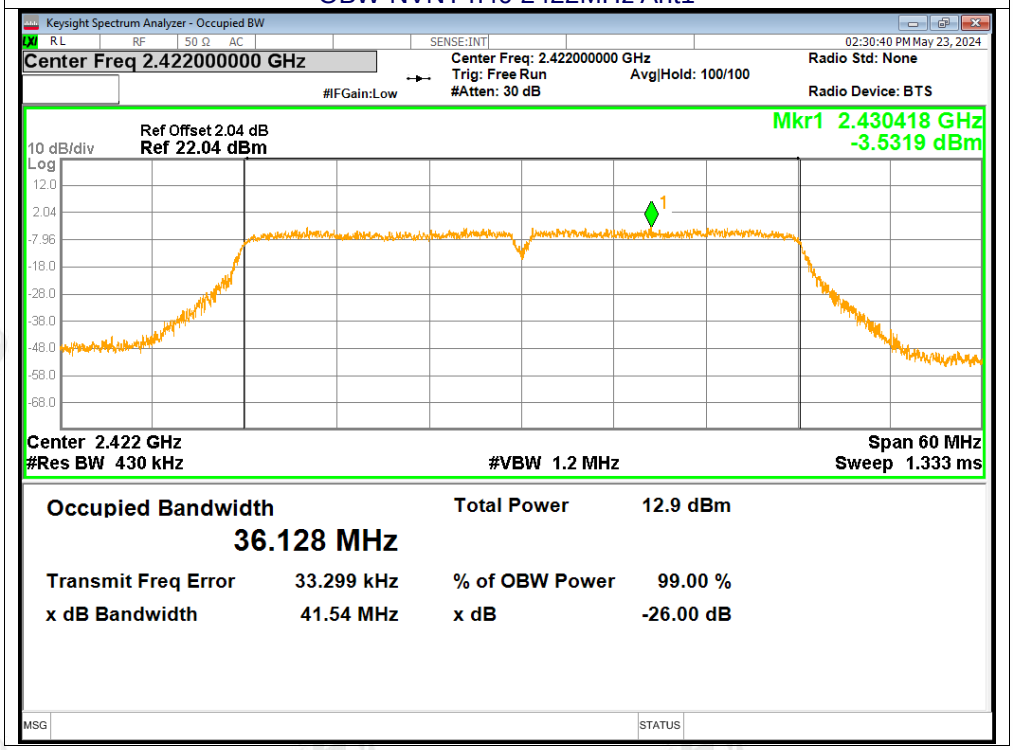

OBW NVNT n20 2437MHz Ant1



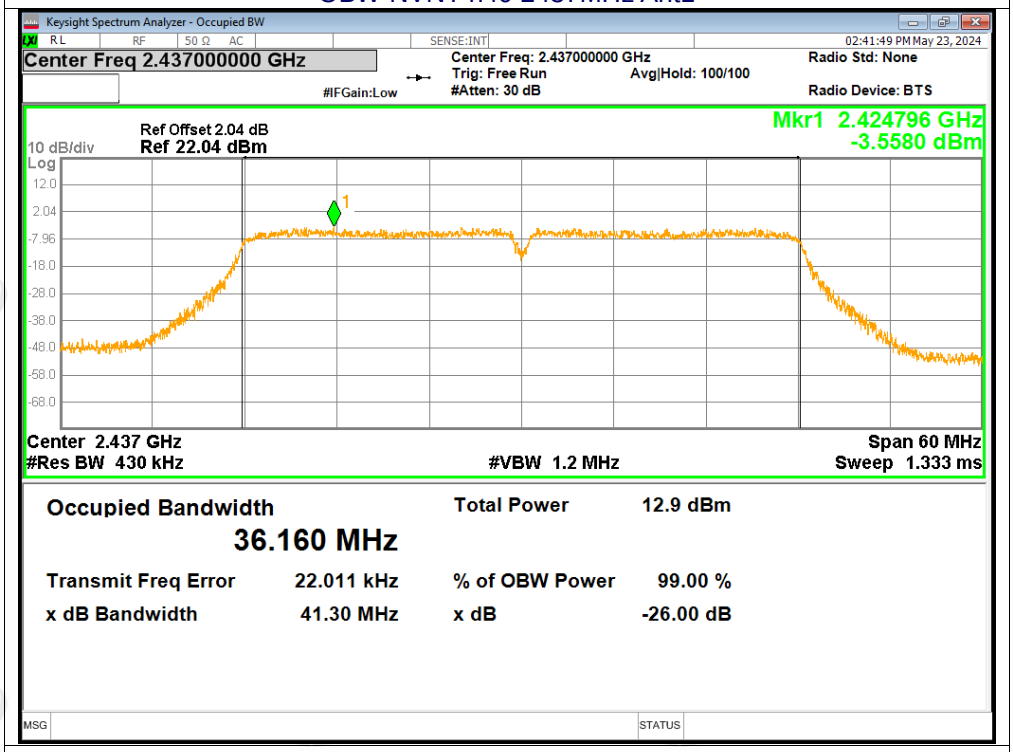
OBW NVNT n20 2462MHz Ant1



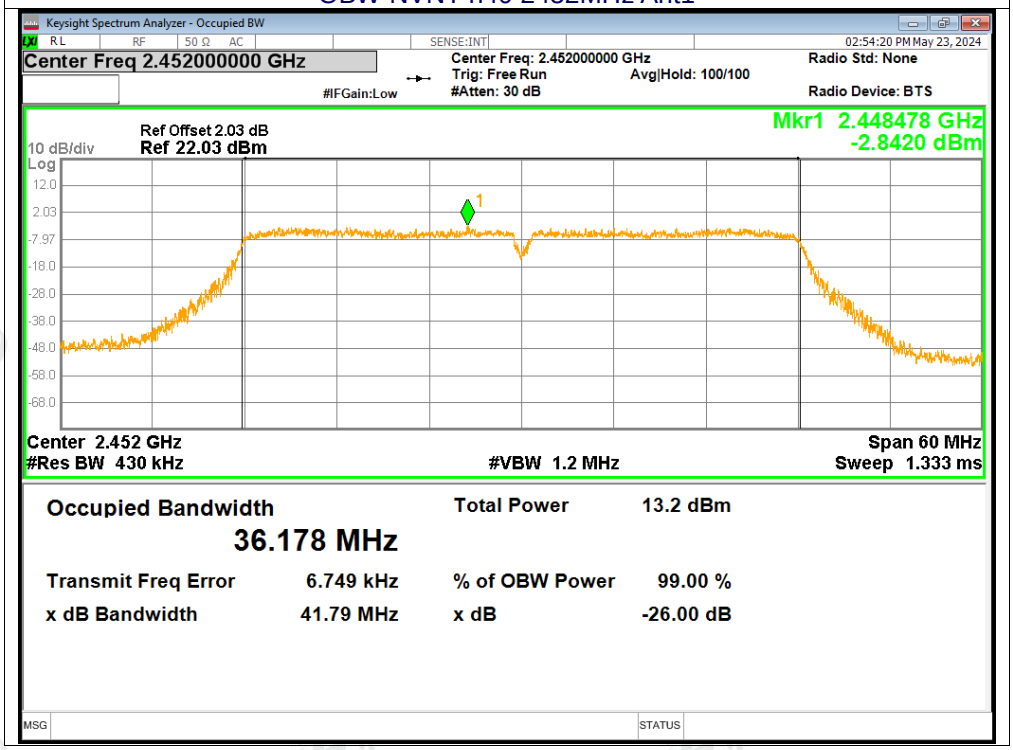

OBW NVNT n40 2422MHz Ant1



OBW NVNT n40 2437MHz Ant1




OBW NVNT n40 2452MHz Ant1

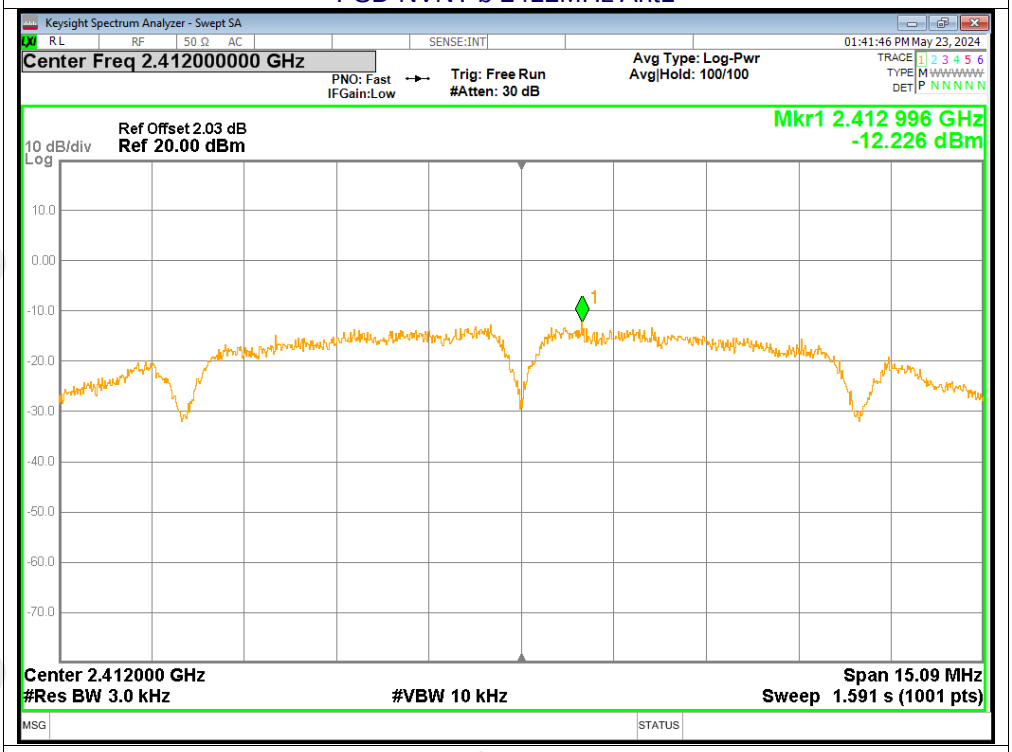


11.6 MAXIMUM POWER SPECTRAL DENSITY LEVEL

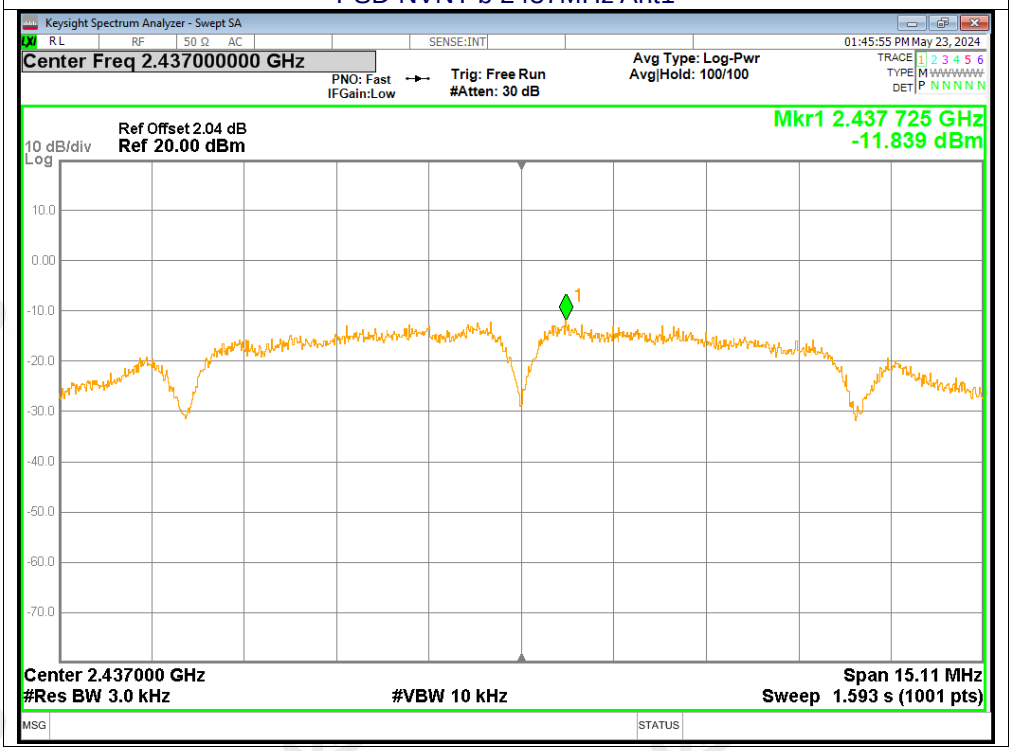
| Mode | Frequency (MHz) | Total PSD (dBm/3kHz) | Limit (dBm/3kHz) | Verdict |
|---|---|---|---|---|
| b | 2412 | -12.23 | 8 | Pass |
| b | 2437 | -11.84 | 8 | Pass |
| b | 2462 | -12.17 | 8 | Pass |
| g | 2412 | -17.69 | 8 | Pass |
| g | 2437 | -17.69 | 8 | Pass |
| g | 2462 | -16.44 | 8 | Pass |
| n20 | 2412 | -17.7 | 8 | Pass |
| n20 | 2437 | -18.29 | 8 | Pass |
| n20 | 2462 | -17.41 | 8 | Pass |
| n40 | 2422 | -20.72 | 8 | Pass |
| n40 | 2437 | -19.54 | 8 | Pass |
| n40 | 2452 | -20.11 | 8 | Pass |

## Test Graphs

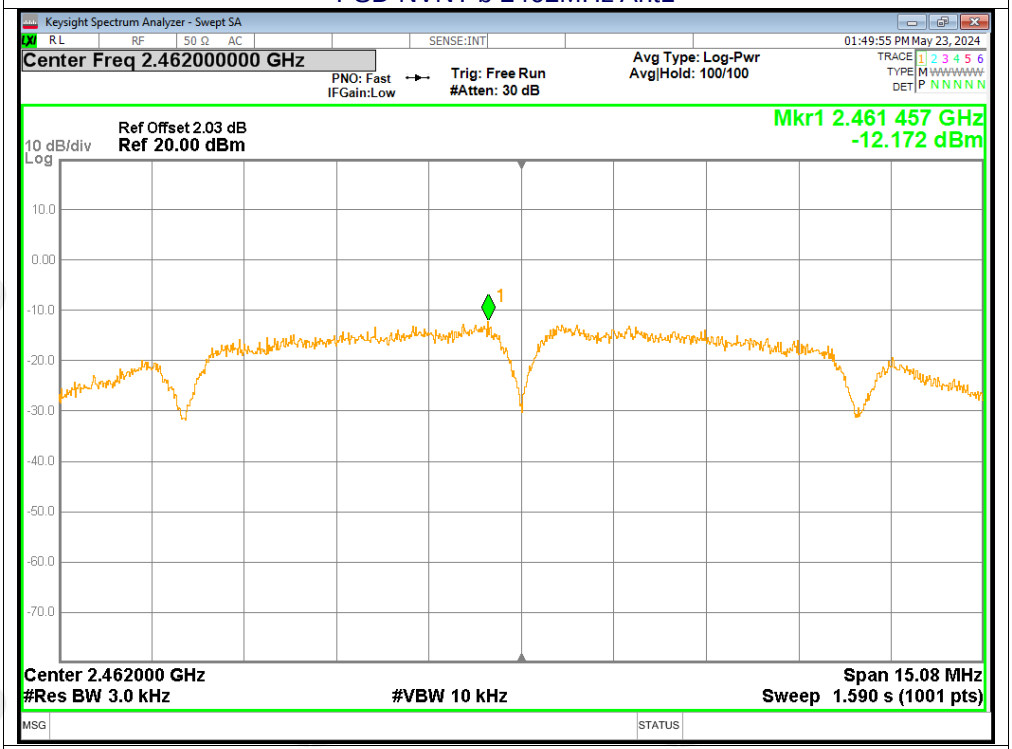
### PSD NVNT b 2412MHz Ant1



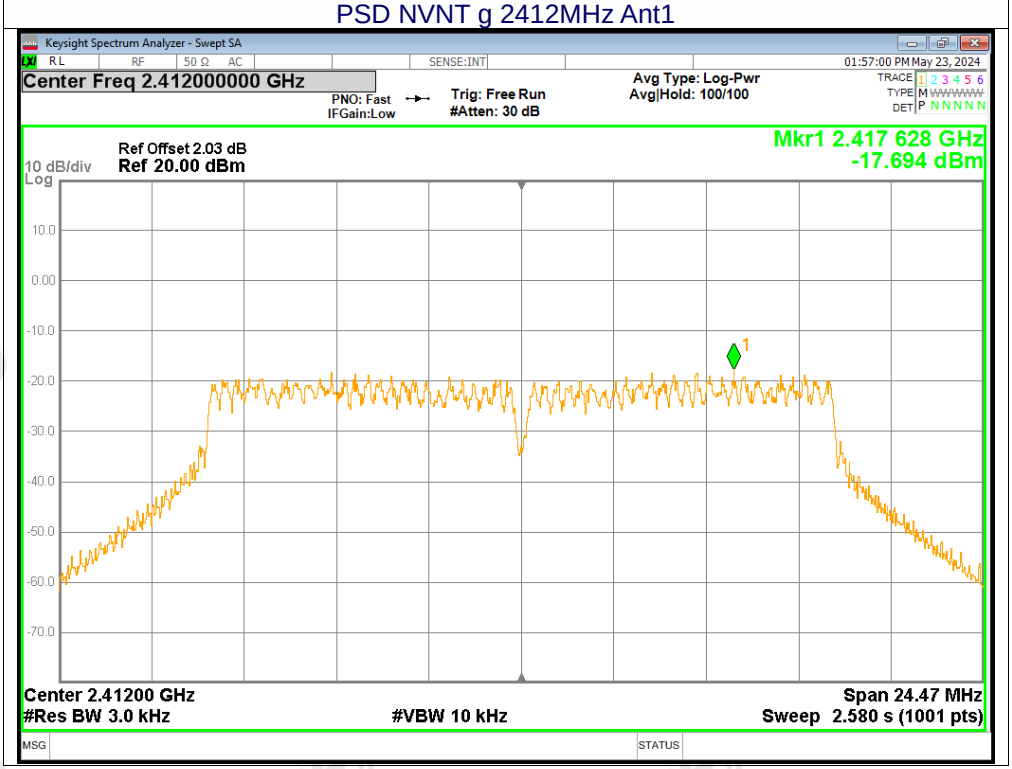

### PSD NVNT b 2437MHz Ant1



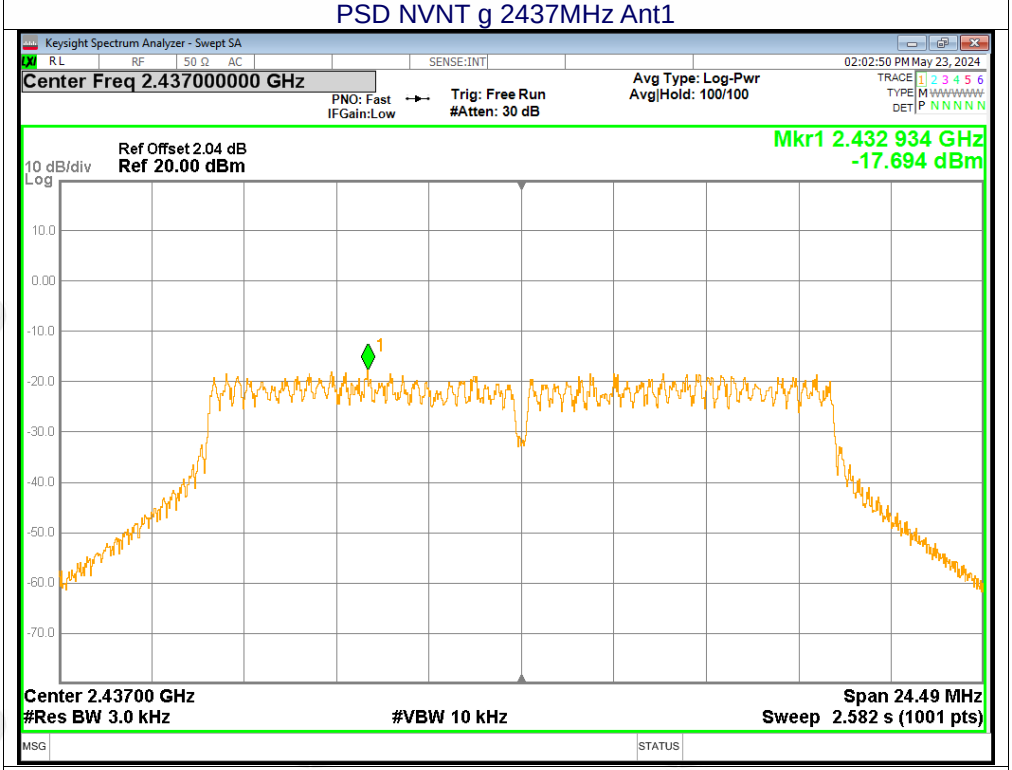
PSD NVNT b 2462MHz Ant1



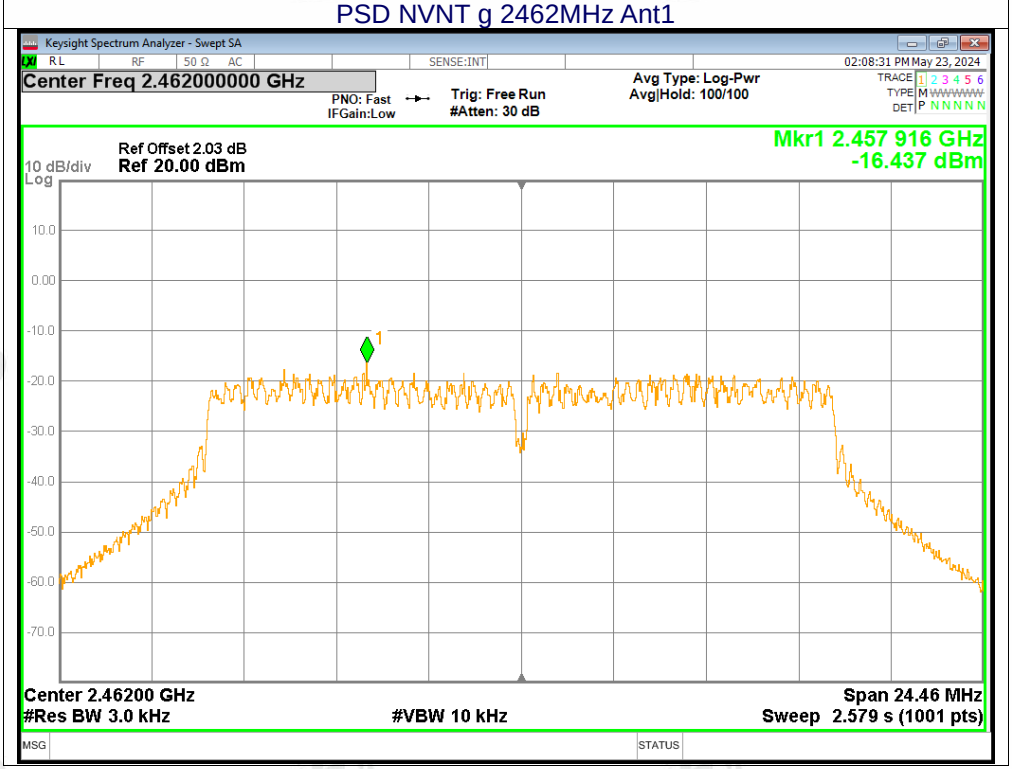

PSD NVNT g 2412MHz Ant1



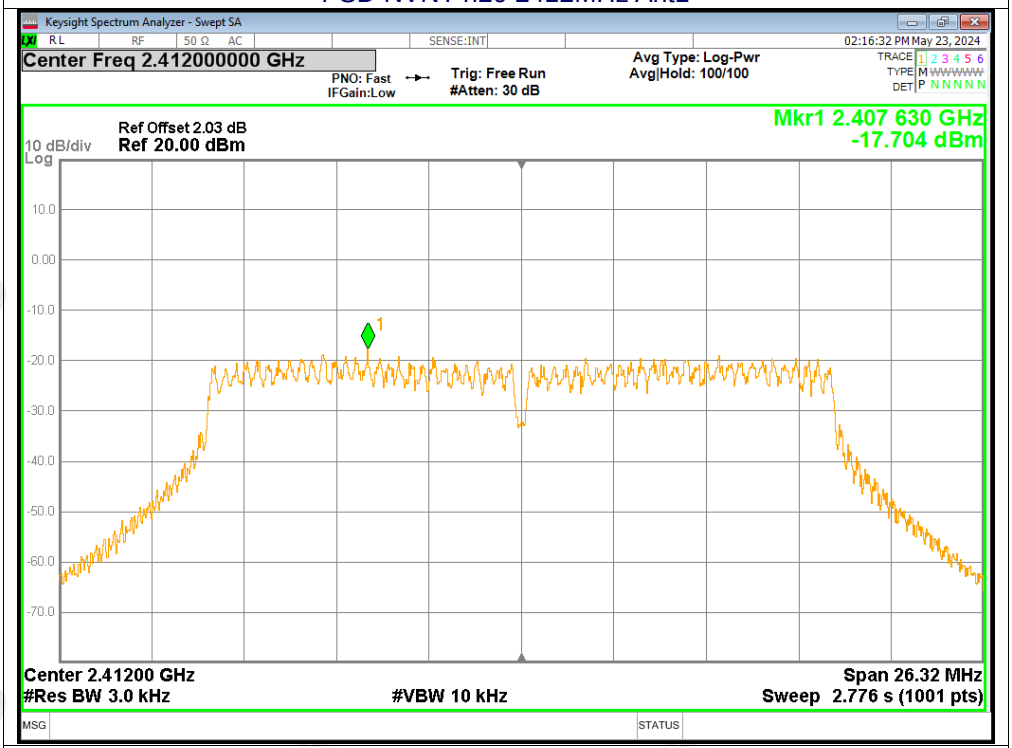
PSD NVNT g 2437MHz Ant1



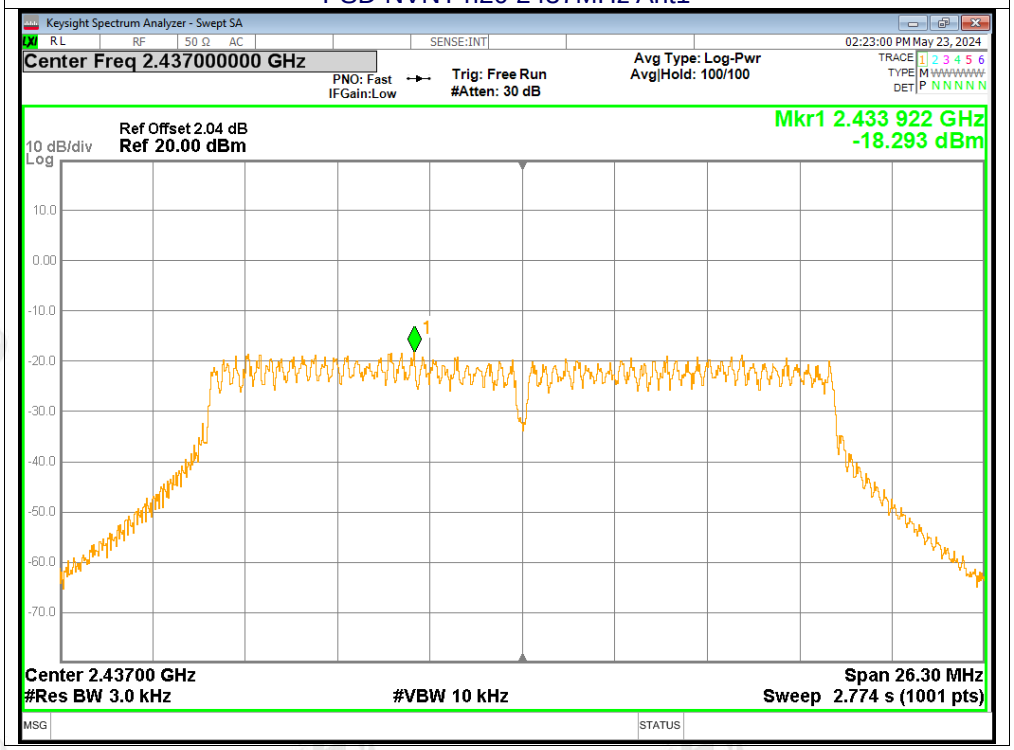

PSD NVNT g 2462MHz Ant1



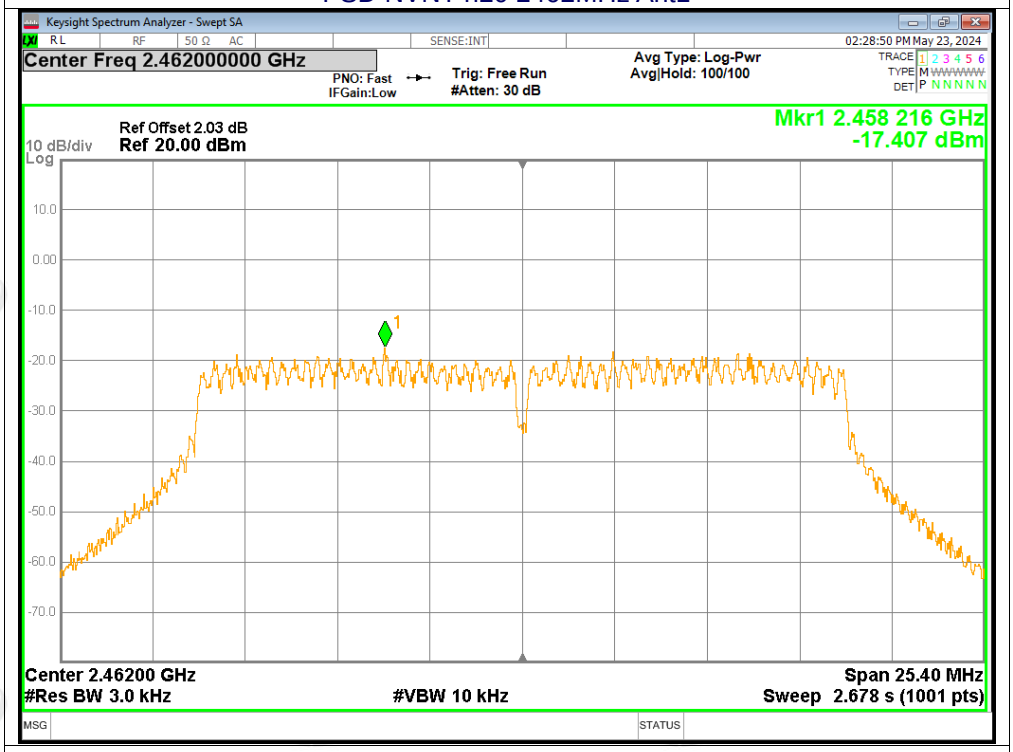
PSD NVNT n20 2412MHz Ant1



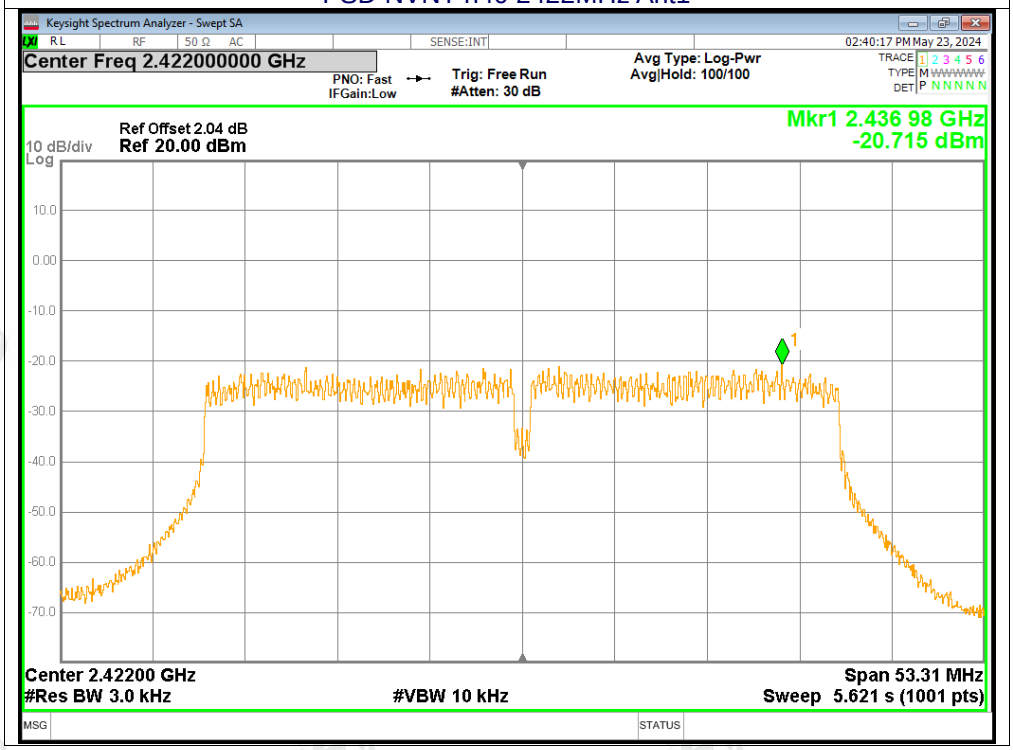

PSD NVNT n20 2437MHz Ant1



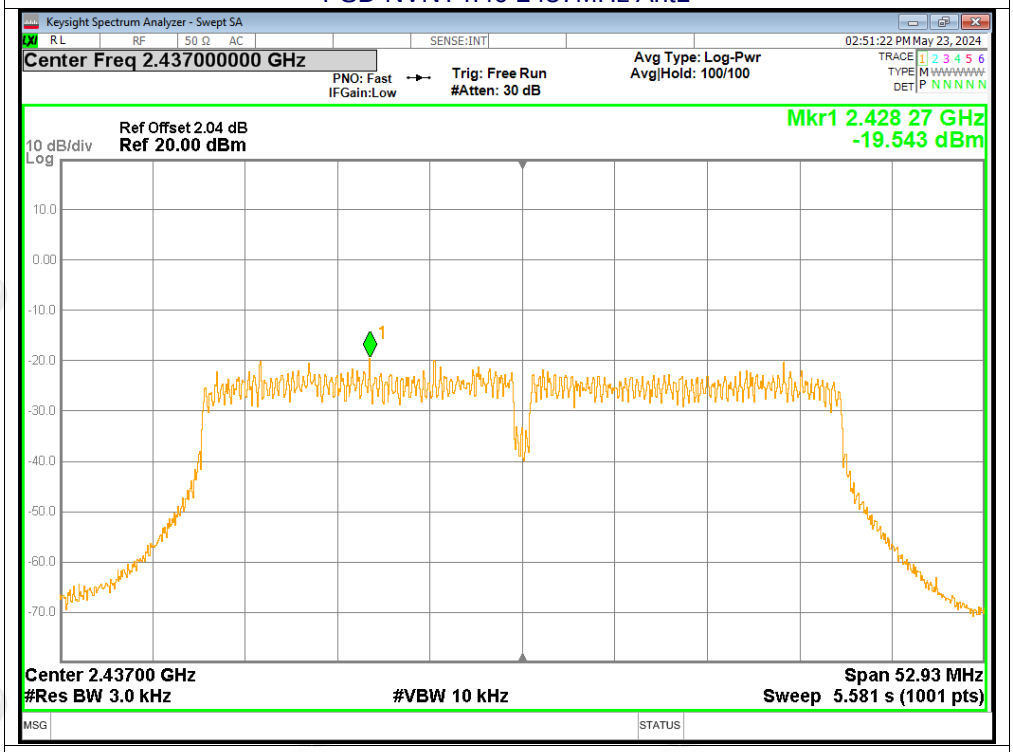
PSD NVNT n20 2462MHz Ant1



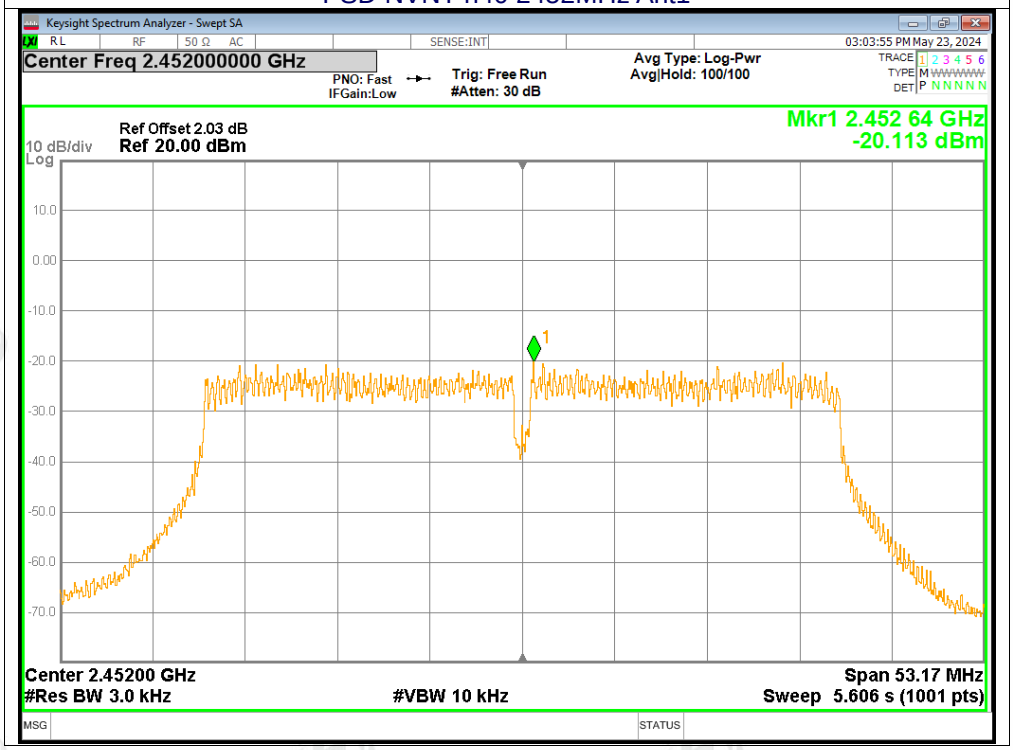

PSD NVNT n40 2422MHz Ant1



PSD NVNT n40 2437MHz Ant1




PSD NVNT n40 2452MHz Ant1

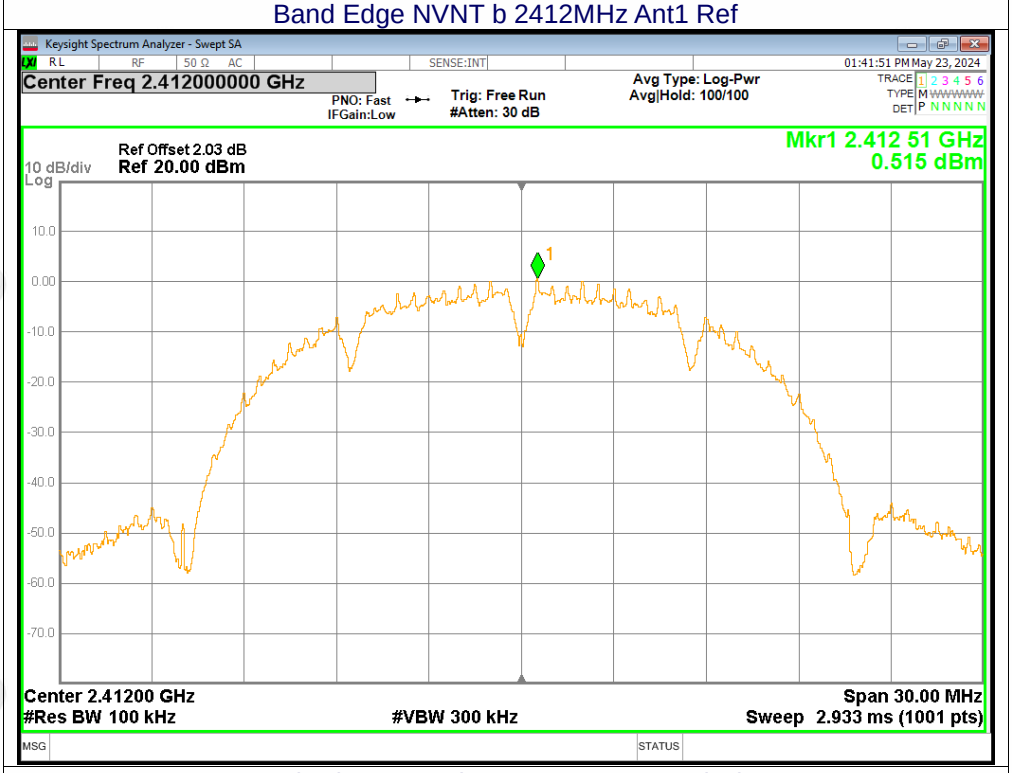


11.7 BAND EDGE

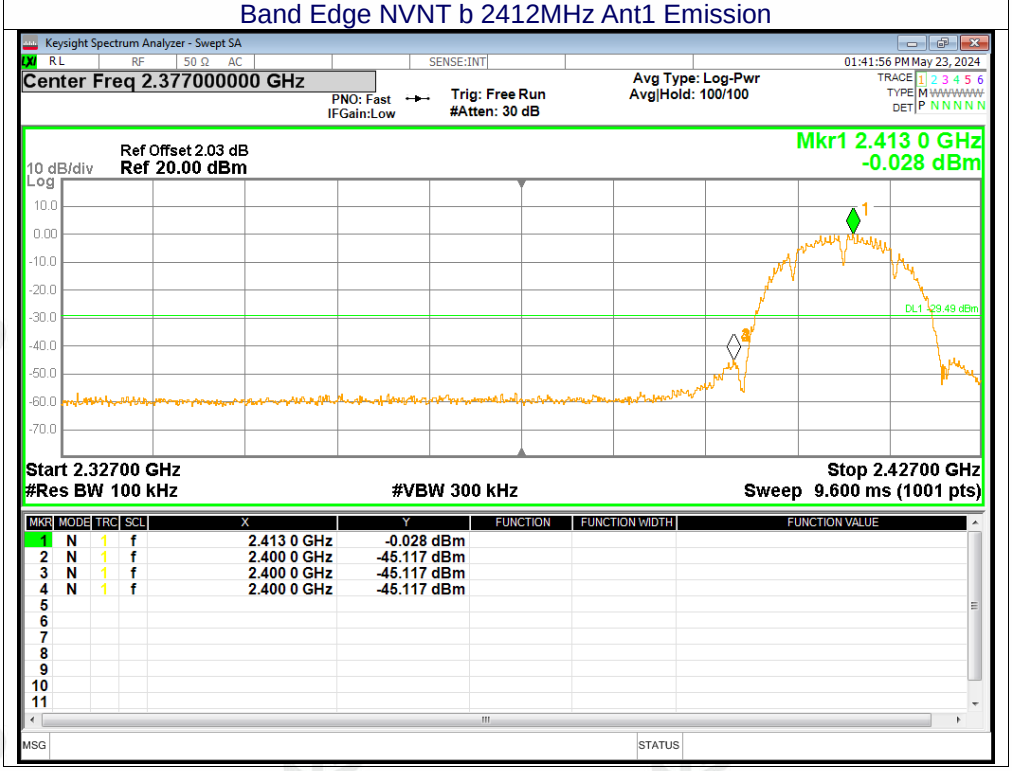
| Mode | Frequency (MHz) | Max Value (dBc) | Limit (dBc) | Verdict |
|---|---|---|---|---|
| b | 2412 | -45.63 | -20 | Pass |
| b | 2462 | -56.88 | -20 | Pass |
| g | 2412 | -38.05 | -20 | Pass |
| g | 2462 | -51.42 | -20 | Pass |
| n20 | 2412 | -38.58 | -20 | Pass |
| n20 | 2462 | -49.82 | -20 | Pass |
| n40 | 2422 | -39.06 | -20 | Pass |
| n40 | 2452 | -48.94 | -20 | Pass |

## Test Graphs

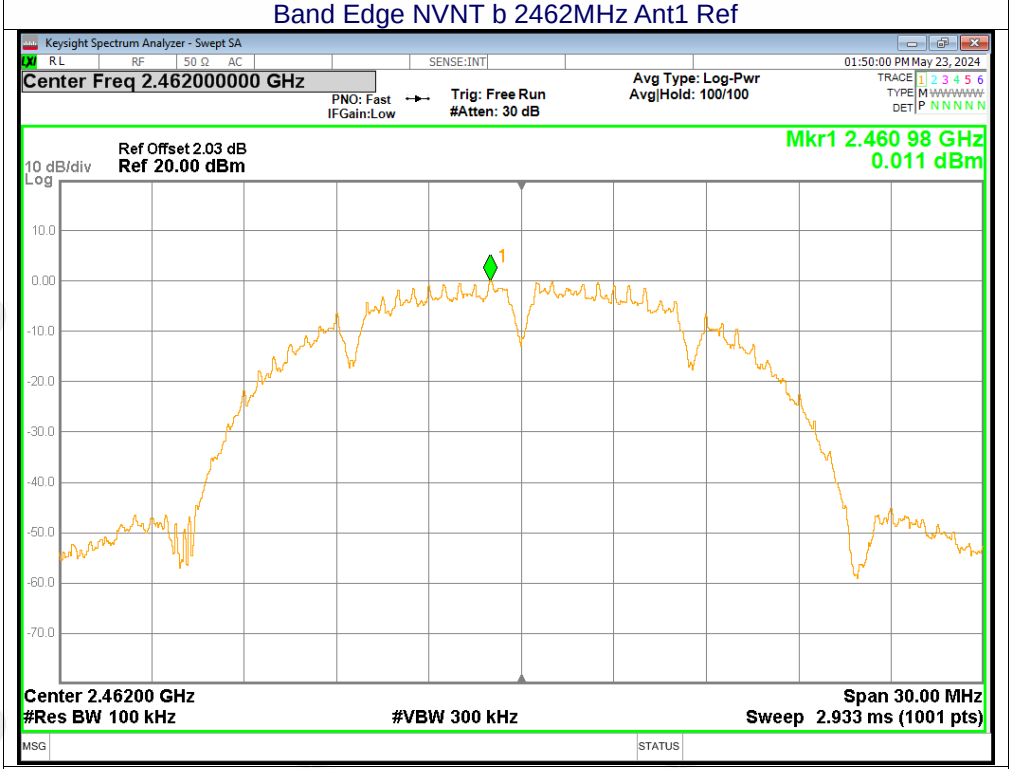
### Band Edge NVNT b 2412MHz Ant1 Ref



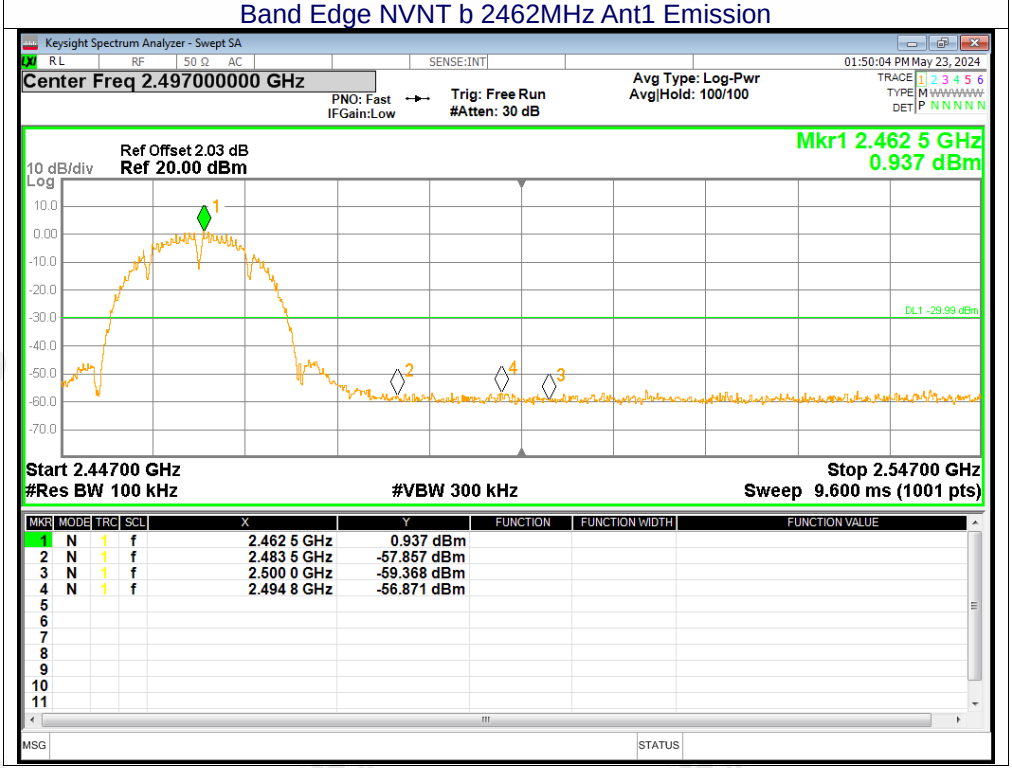

### Band Edge NVNT b 2412MHz Ant1 Emission



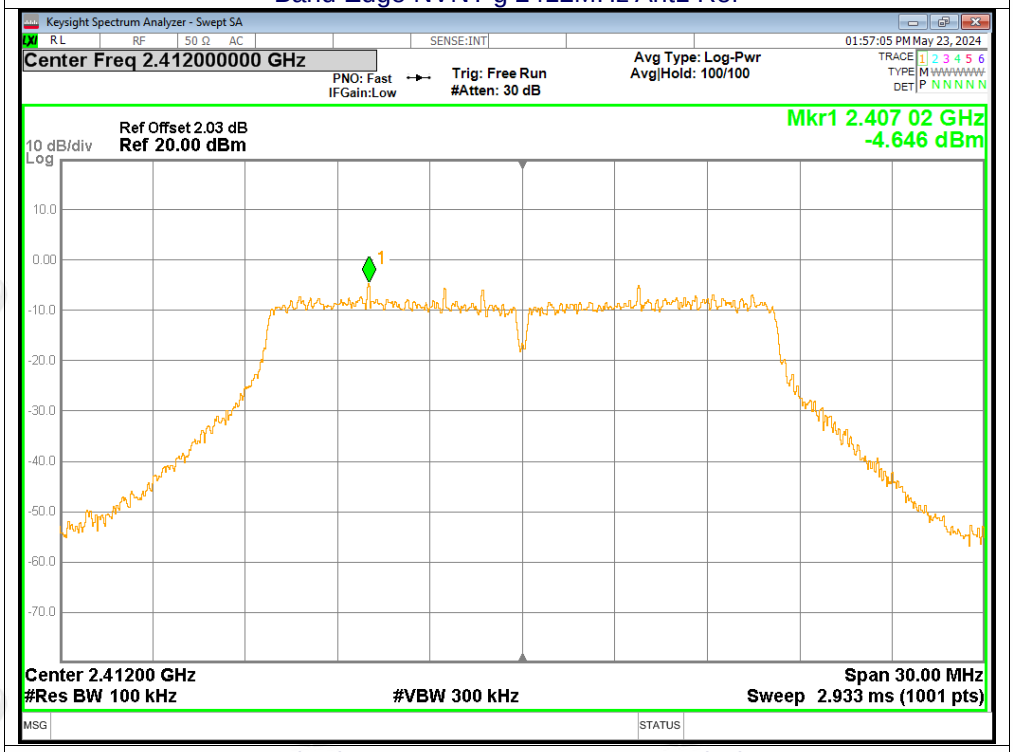
Band Edge NVNT b 2462MHz Ant1 Ref



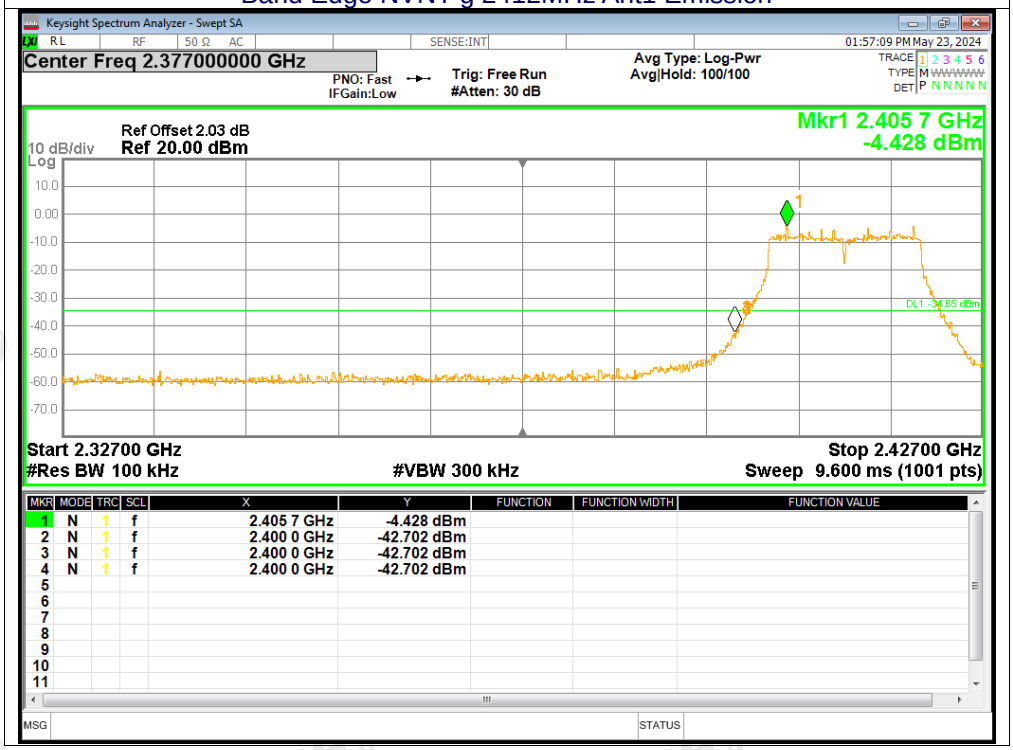

Band Edge NVNT b 2462MHz Ant1 Emission



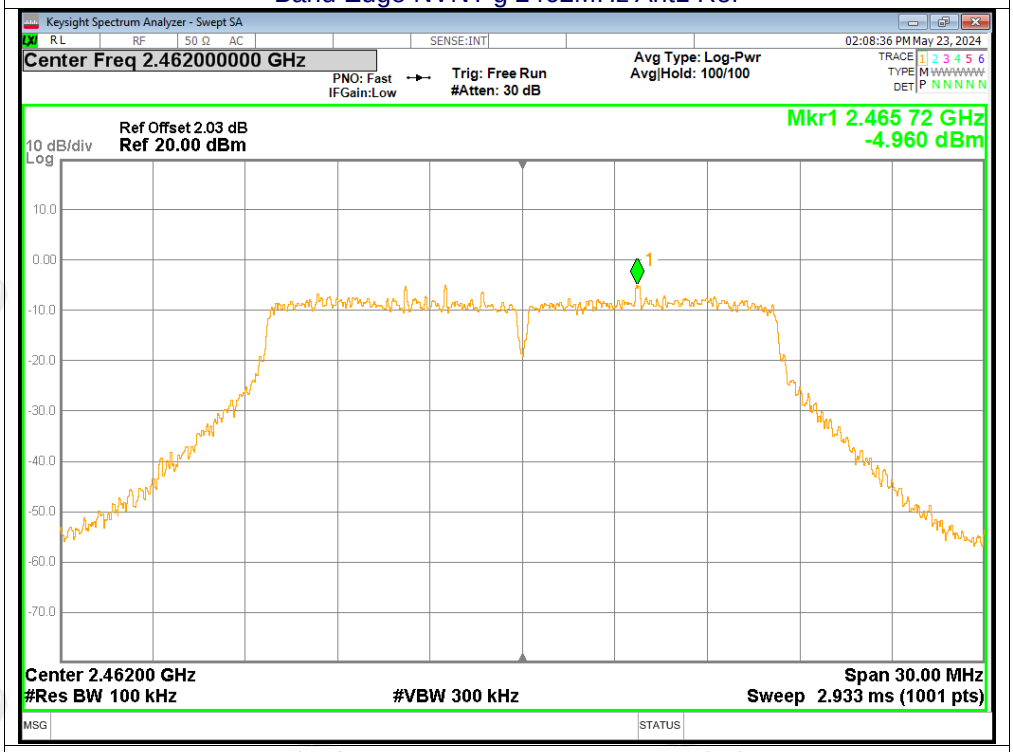
Band Edge NVNT g 2412MHz Ant1 Ref



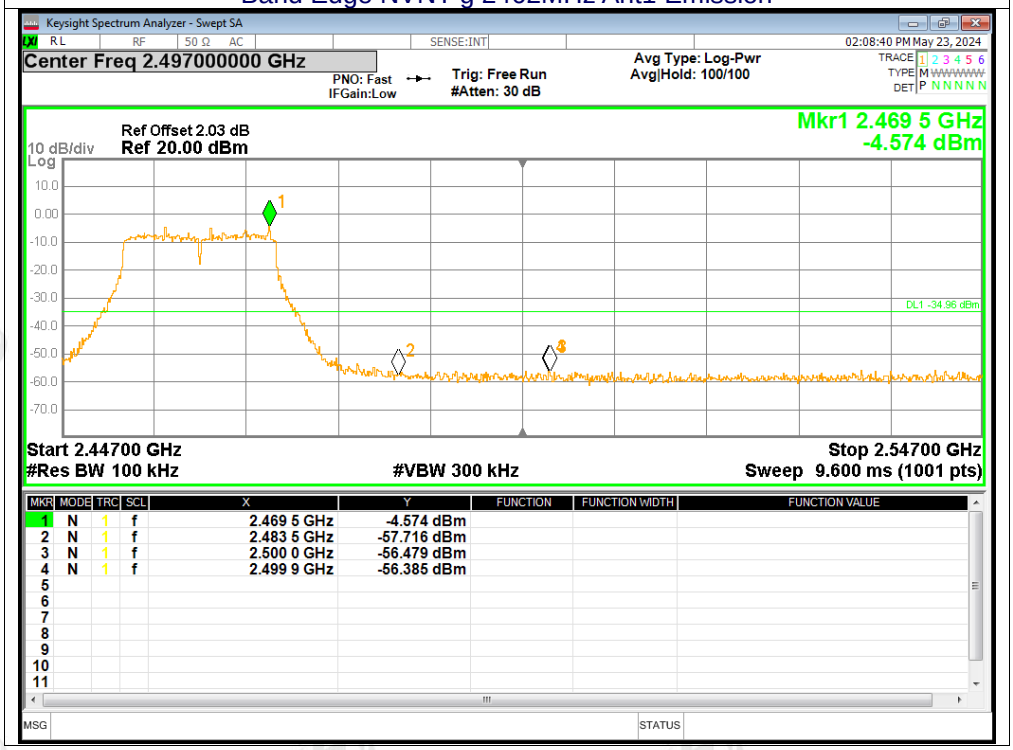

Band Edge NVNT g 2412MHz Ant1 Emission



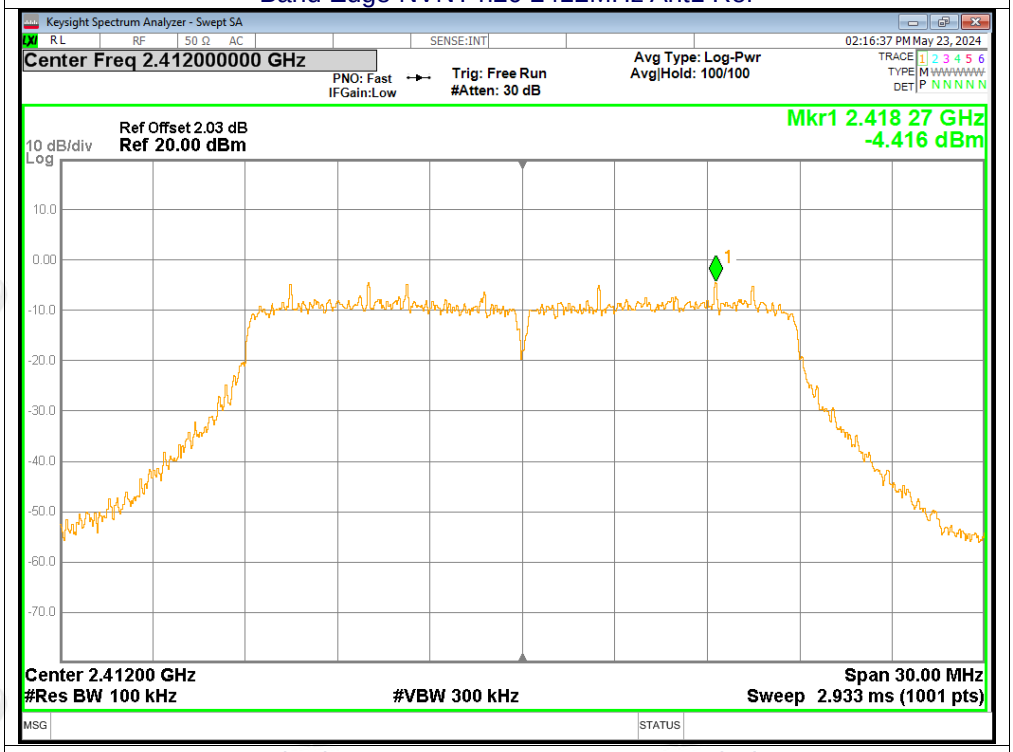
Band Edge NVNT g 2462MHz Ant1 Ref



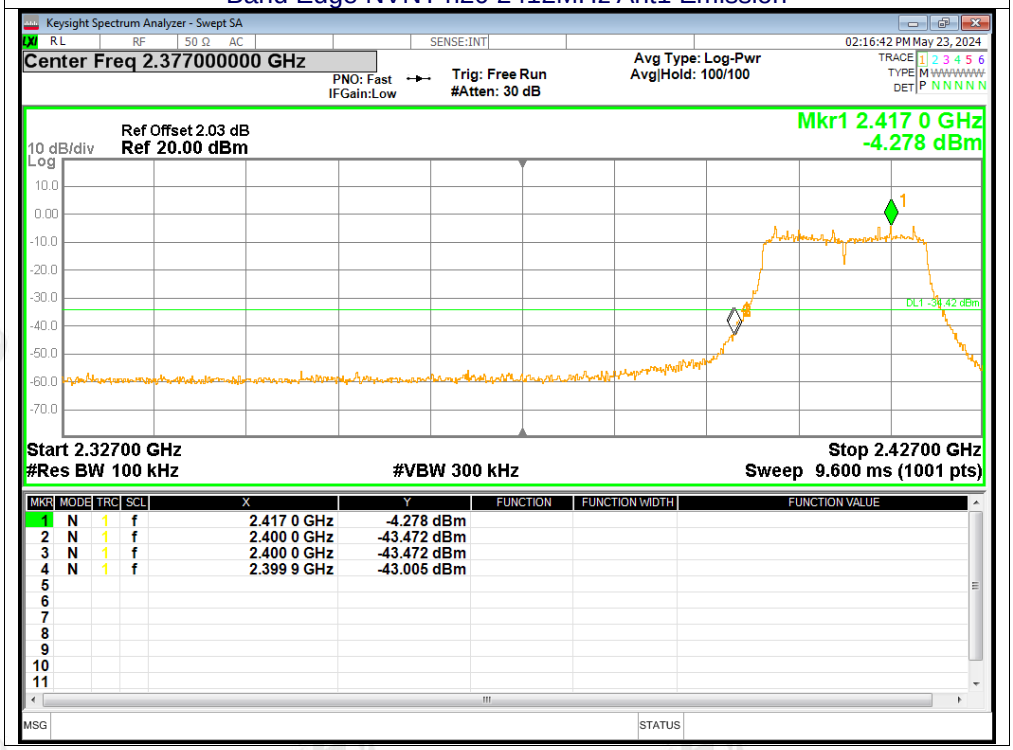

Band Edge NVNT g 2462MHz Ant1 Emission



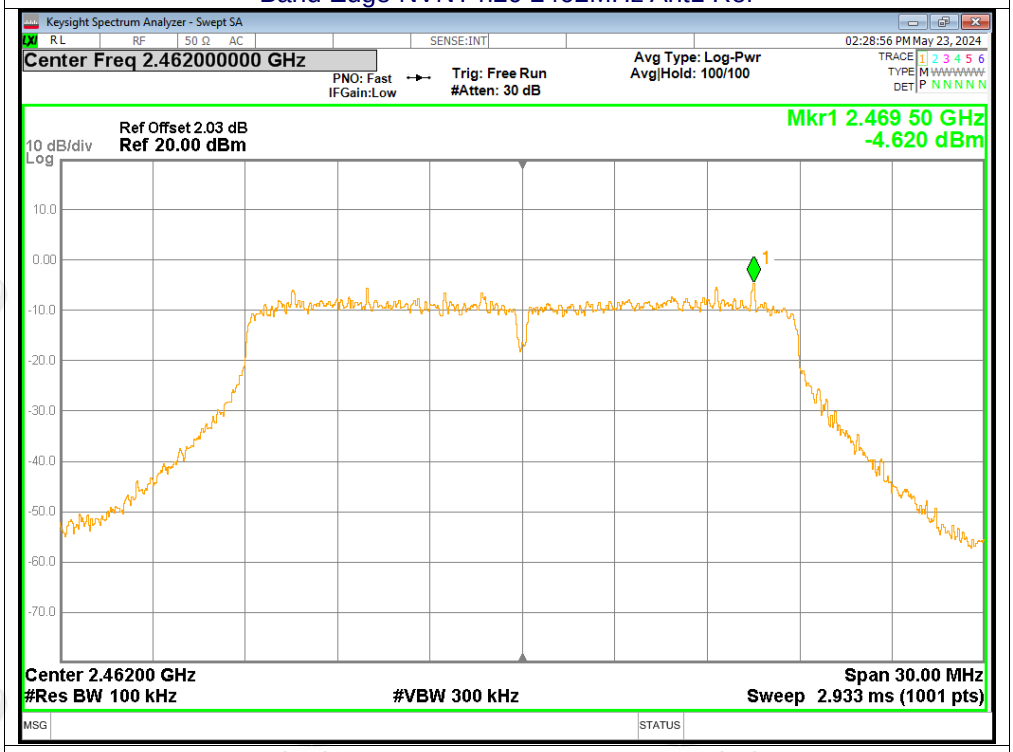
Band Edge NVNT n20 2412MHz Ant1 Ref



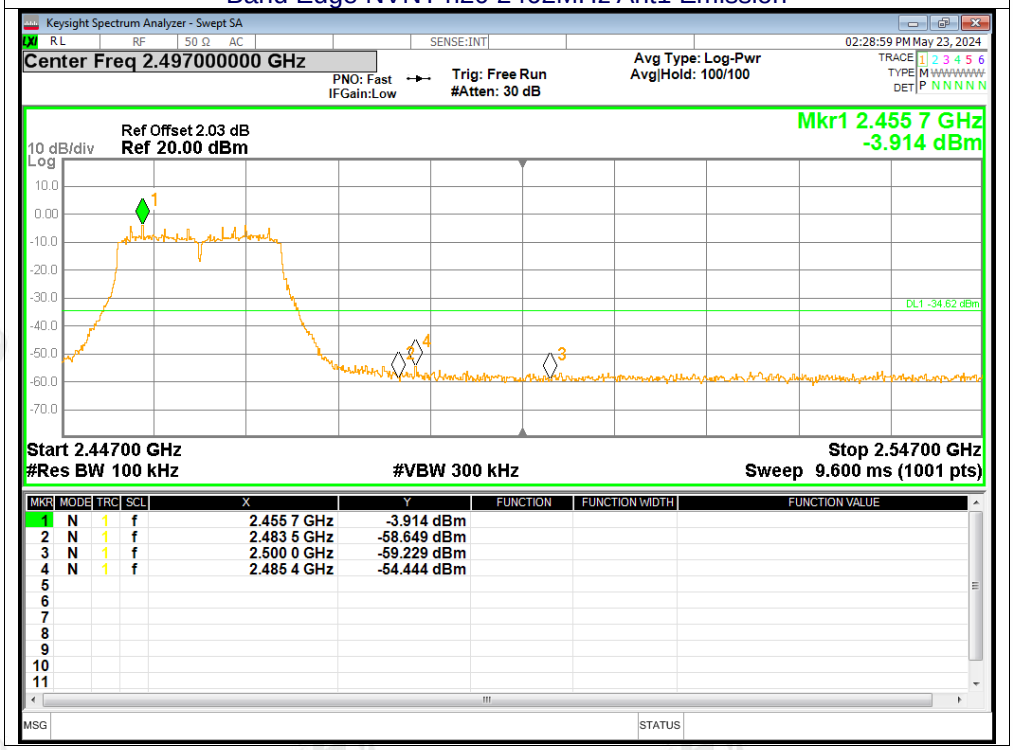

Band Edge NVNT n20 2412MHz Ant1 Emission



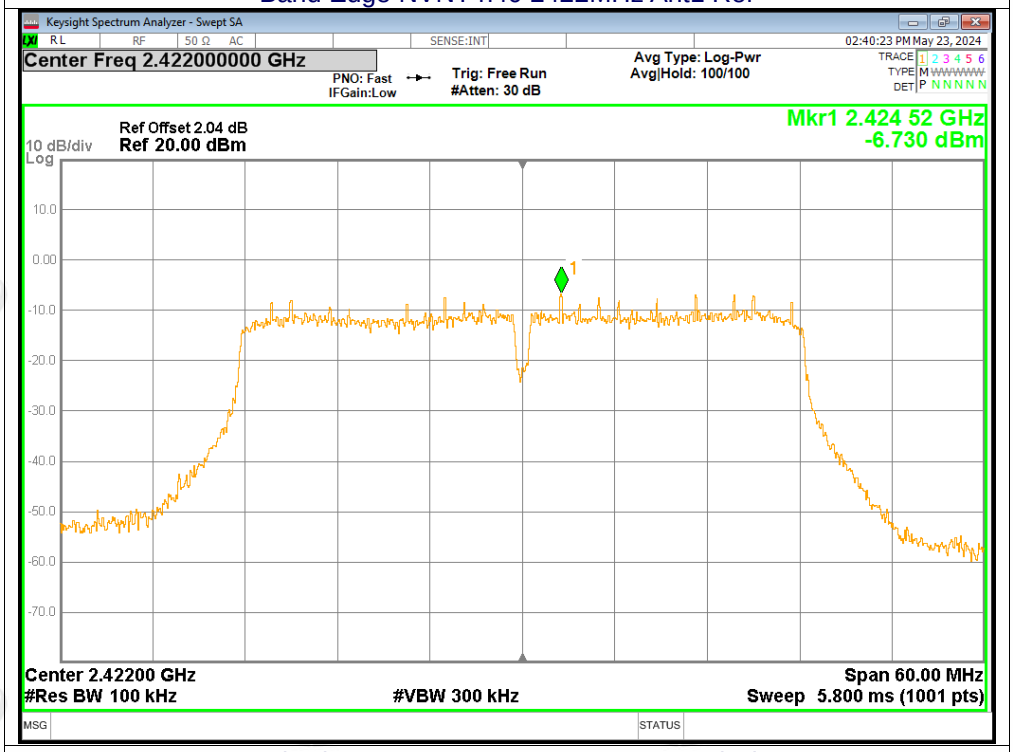
Band Edge NVNT n20 2462MHz Ant1 Ref



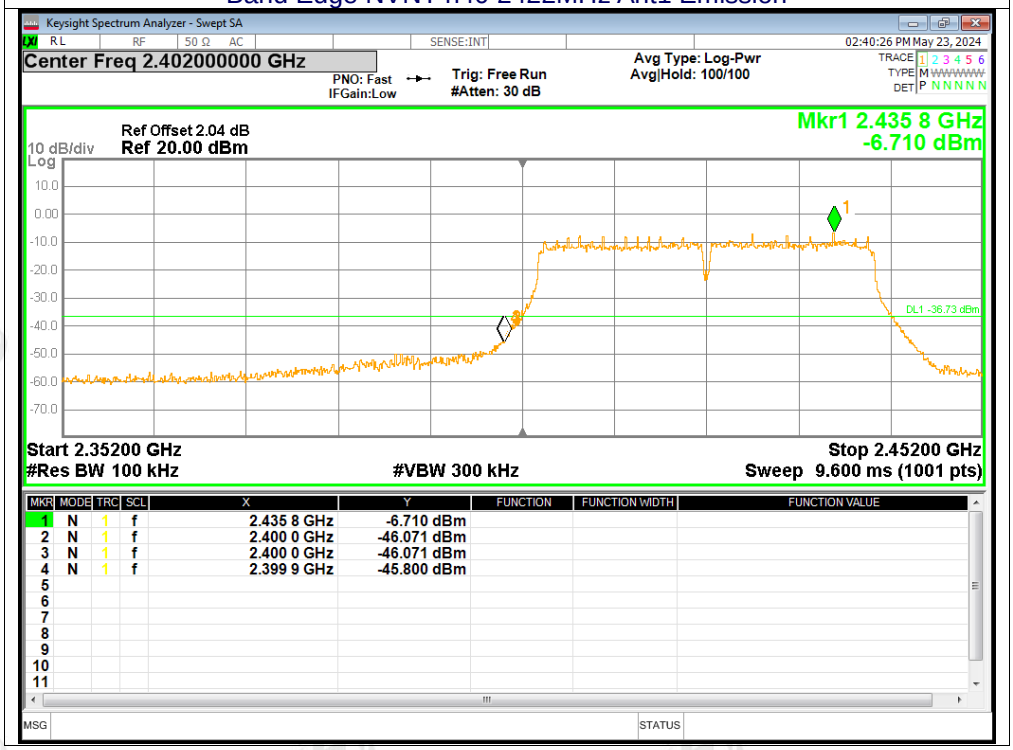

Band Edge NVNT n20 2462MHz Ant1 Emission



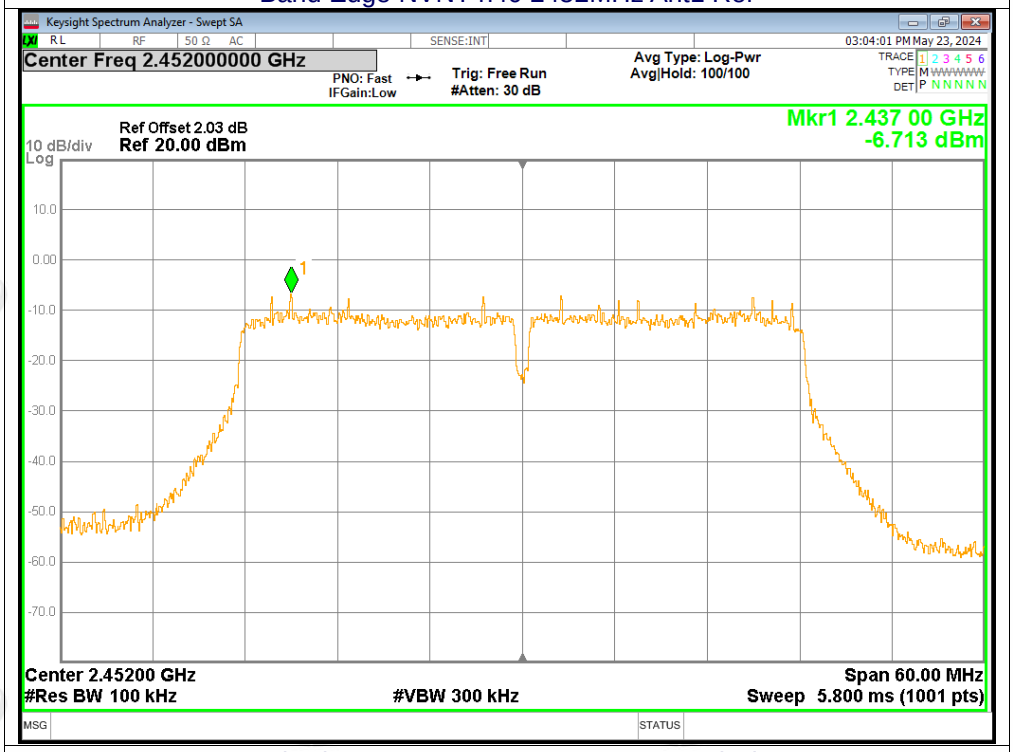
Band Edge NVNT n40 2422MHz Ant1 Ref



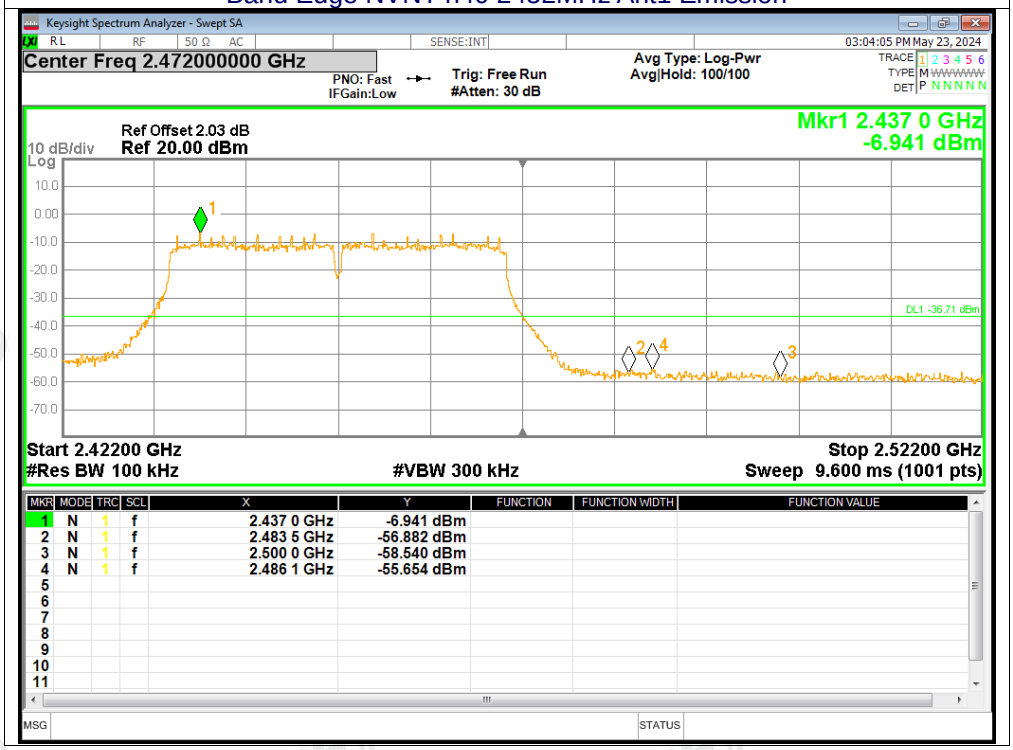

Band Edge NVNT n40 2422MHz Ant1 Emission



Band Edge NVNT n40 2452MHz Ant1 Ref




Band Edge NVNT n40 2452MHz Ant1 Emission

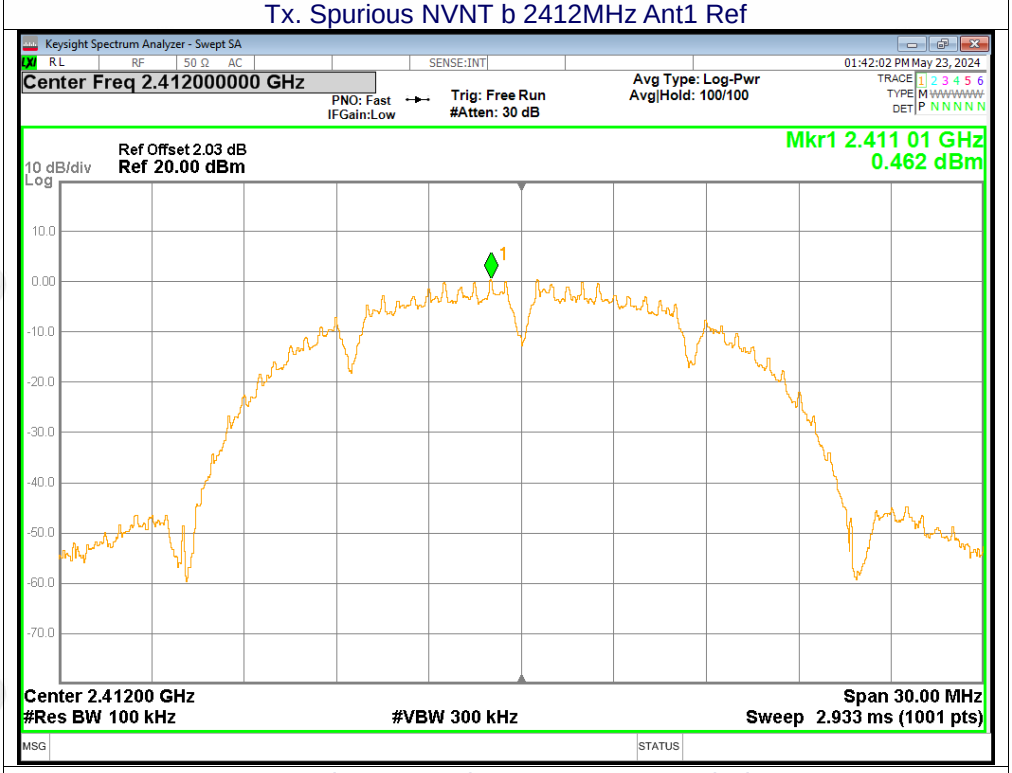


11.8 CONDUCTED RF SPURIOUS EMISSION

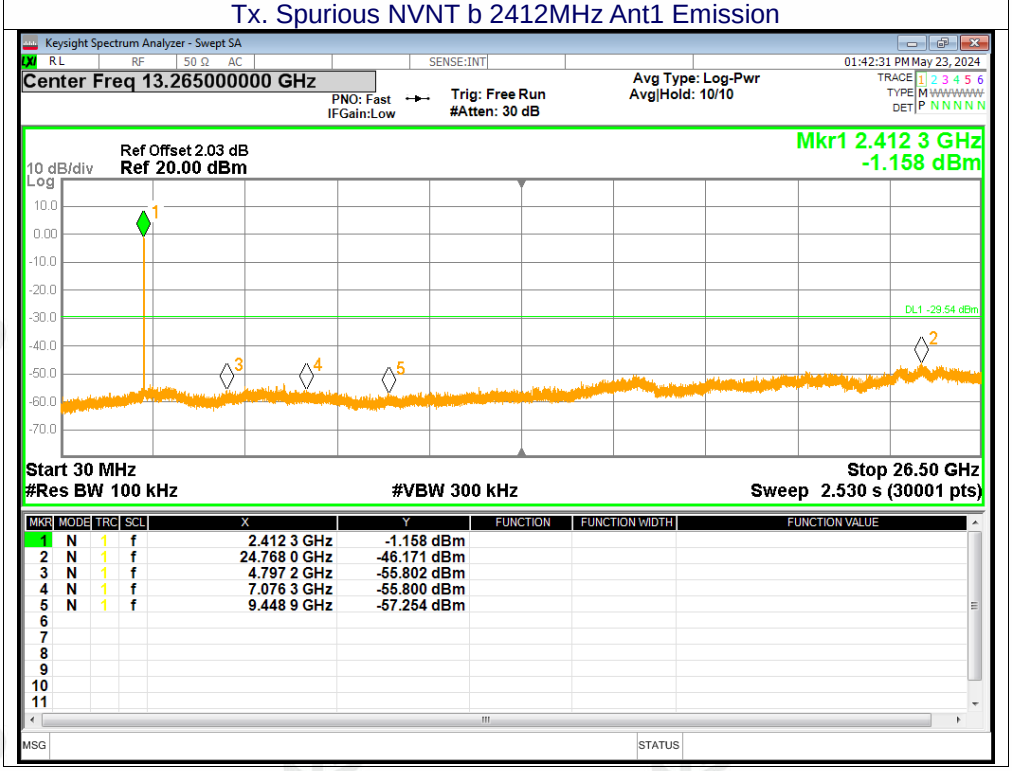
| Mode | Frequency (MHz) | Max Value (dBc) | Limit (dBc) | Verdict |
|---|---|---|---|---|
| b | 2412 | -46.63 | -20 | Pass |
| b | 2437 | -46.81 | -20 | Pass |
| b | 2462 | -46.69 | -20 | Pass |
| g | 2412 | -42.47 | -20 | Pass |
| g | 2437 | -41.56 | -20 | Pass |
| g | 2462 | -42.05 | -20 | Pass |
| n20 | 2412 | -41.22 | -20 | Pass |
| n20 | 2437 | -43.21 | -20 | Pass |
| n20 | 2462 | -41.72 | -20 | Pass |
| n40 | 2422 | -39.5 | -20 | Pass |
| n40 | 2437 | -39.92 | -20 | Pass |
| n40 | 2452 | -39.42 | -20 | Pass |

## Test Graphs

### Tx. Spurious NVNT b 2412MHz Ant1 Ref

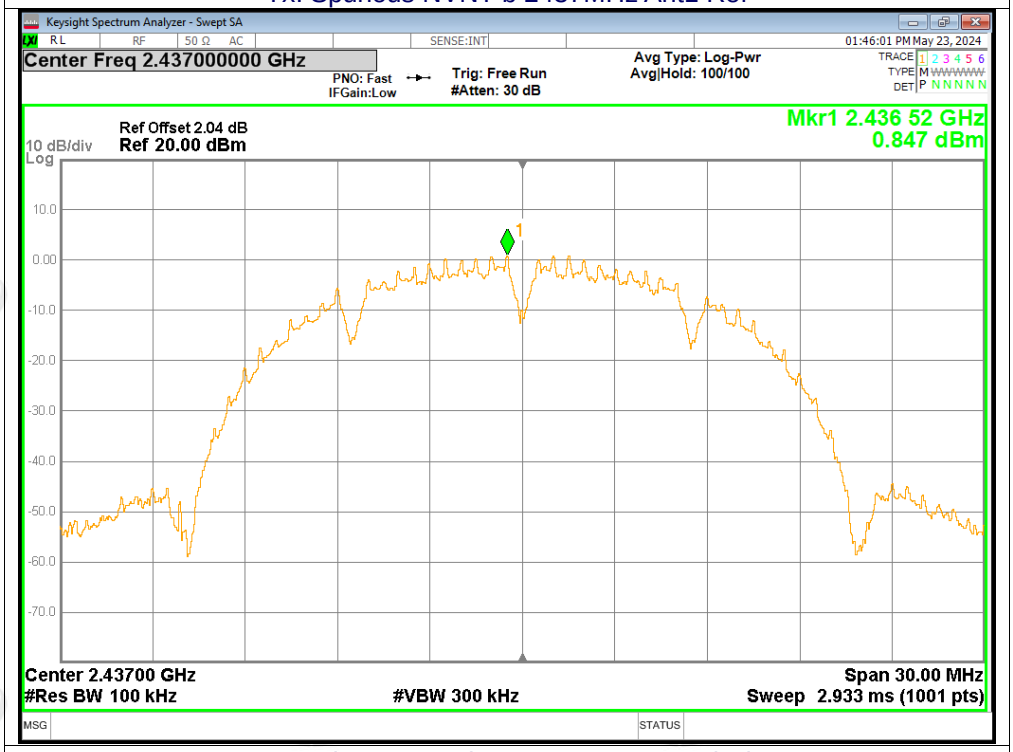



### Tx. Spurious NVNT b 2412MHz Ant1 Emission

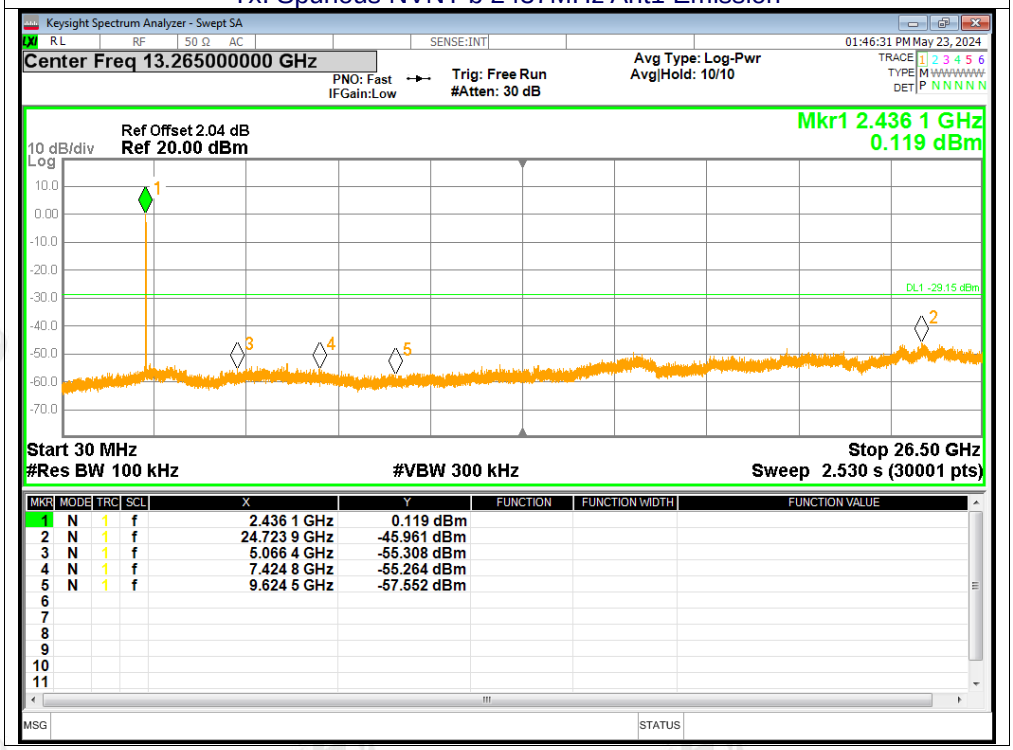



| MKR | MODE | TRC | SCL | X | Y | FUNCTION | FUNCTION WIDTH | FUNCTION VALUE |
|---|---|---|---|---|---|---|---|---|
| 1 | N | 1 | f | 2.412 3 GHz | -1.158 dBm | | | |
| 2 | N | 1 | f | 24.768 0 GHz | -46.171 dBm | | | |
| 3 | N | 1 | f | 4.797 2 GHz | -55.802 dBm | | | |
| 4 | N | 1 | f | 7.076 3 GHz | -55.800 dBm | | | |
| 5 | N | 1 | f | 9.448 9 GHz | -57.254 dBm | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 10 | | | | | | | | |
| 11 | | | | | | | | |

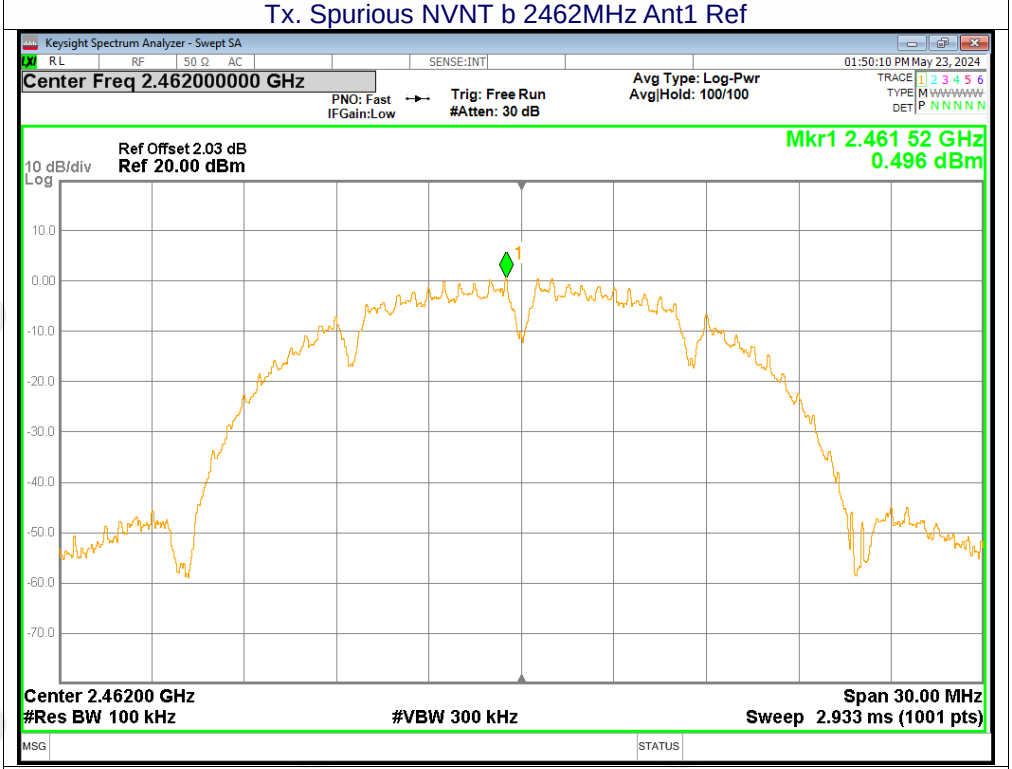
Tx. Spurious NVNT b 2437MHz Ant1 Ref



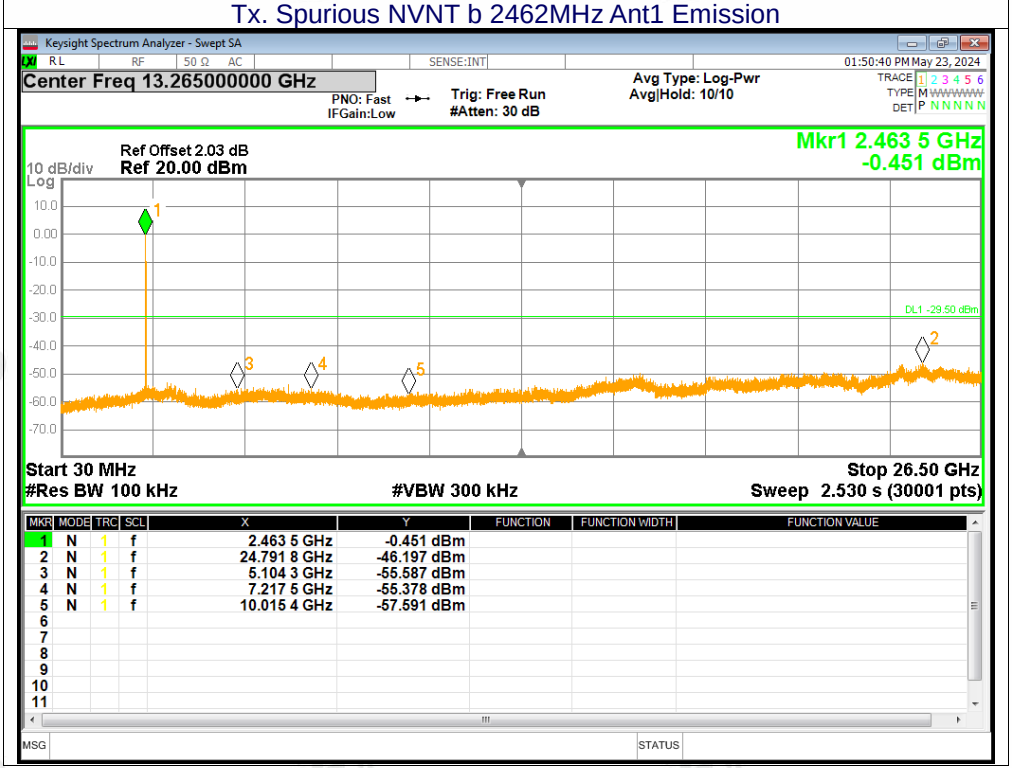

Tx. Spurious NVNT b 2437MHz Ant1 Emission



Tx. Spurious NVNT b 2462MHz Ant1 Ref

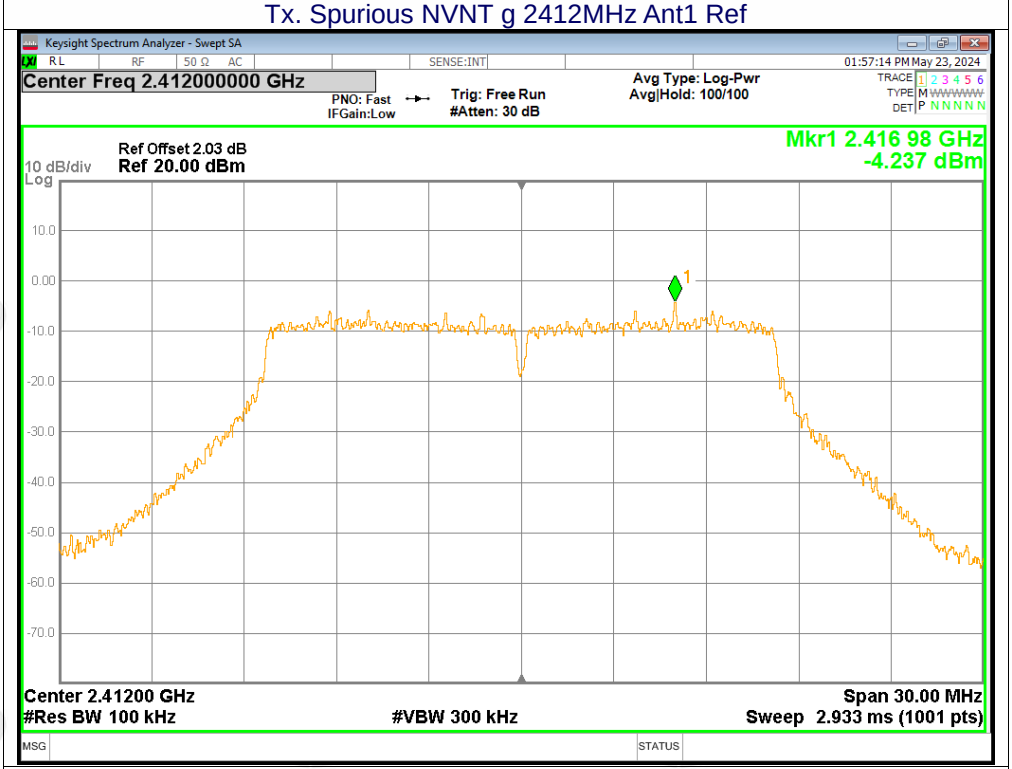



Tx. Spurious NVNT b 2462MHz Ant1 Emission

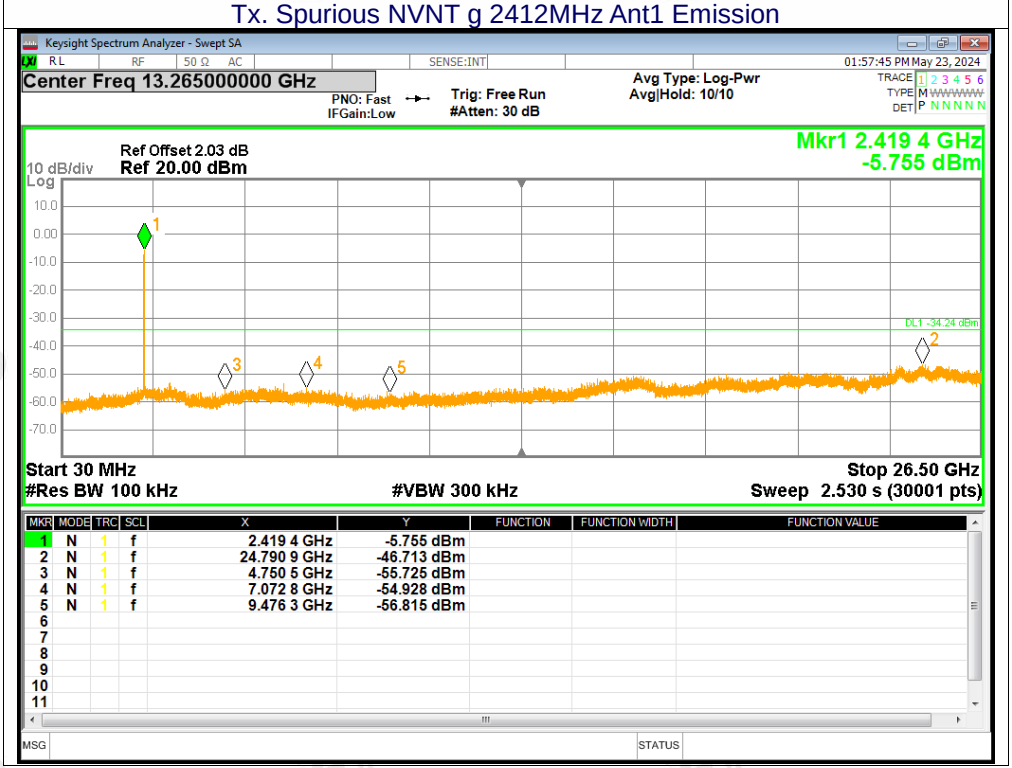



| MKR | MODE | TRC | SCL | X | Y | FUNCTION | FUNCTION WIDTH | FUNCTION VALUE |
|---|---|---|---|---|---|---|---|---|
| 1 | N | 1 | f | 2.463 5 GHz | -0.451 dBm | | | |
| 2 | N | 1 | f | 24.791 8 GHz | -46.197 dBm | | | |
| 3 | N | 1 | f | 5.104 3 GHz | -55.587 dBm | | | |
| 4 | N | 1 | f | 7.217 5 GHz | -55.378 dBm | | | |
| 5 | N | 1 | f | 10.015 4 GHz | -57.591 dBm | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 10 | | | | | | | | |
| 11 | | | | | | | | |

Tx. Spurious NVNT g 2412MHz Ant1 Ref

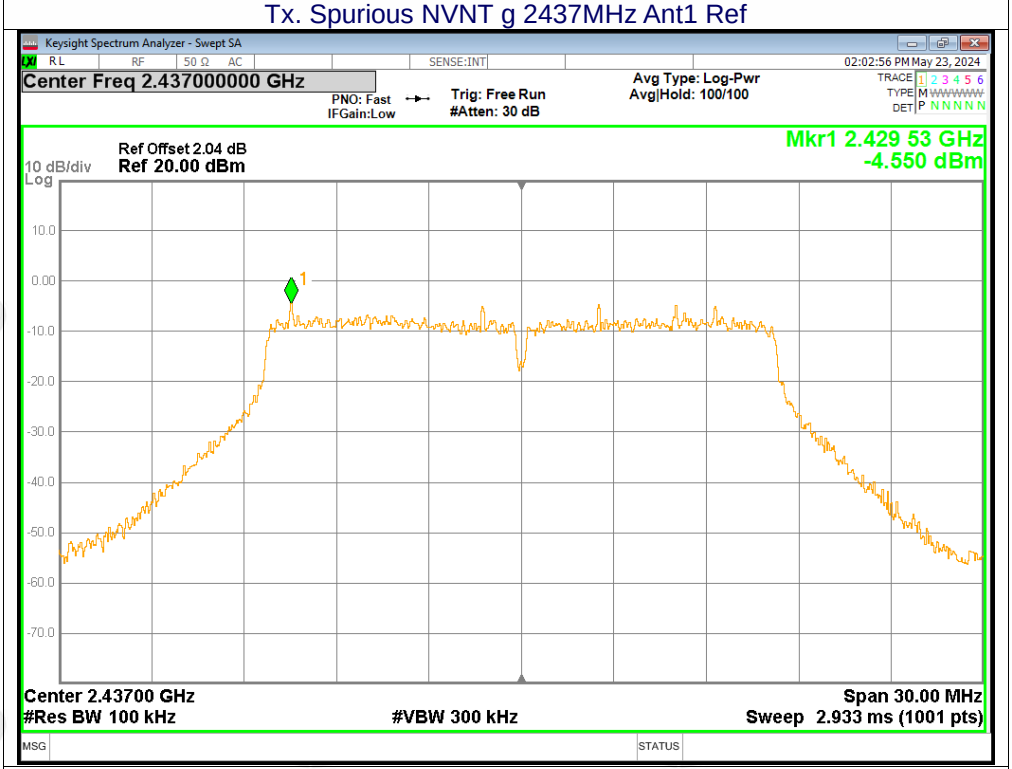



Tx. Spurious NVNT g 2412MHz Ant1 Emission

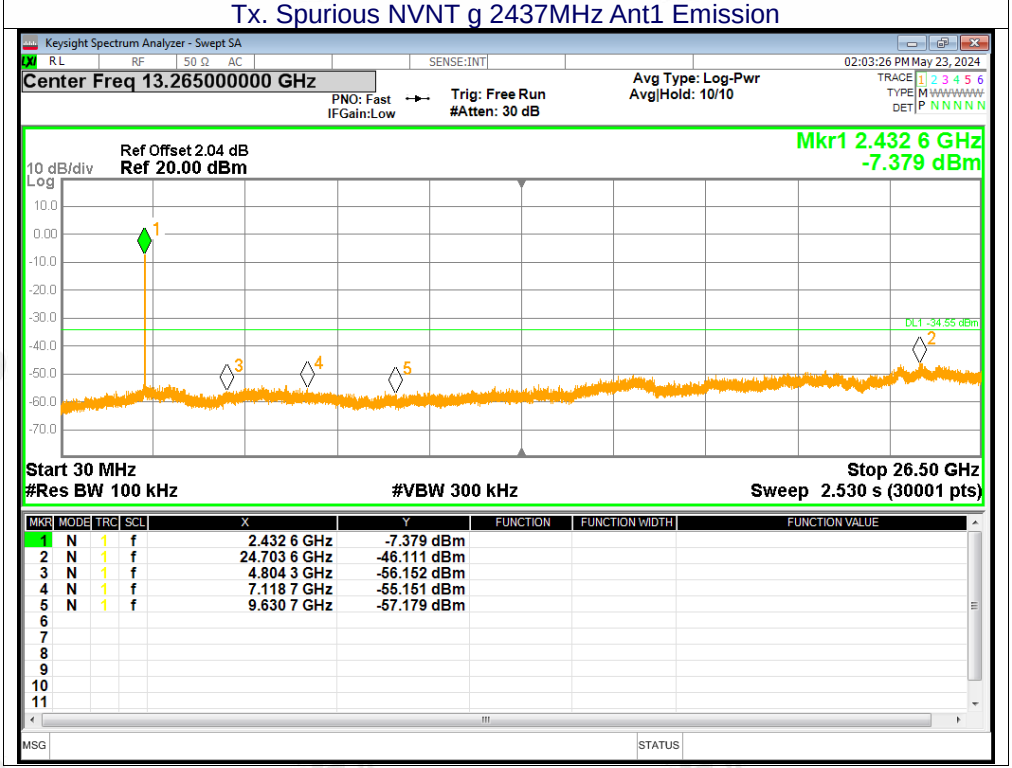



| MKR | MODE | TRC | SCL | X | Y | FUNCTION | FUNCTION WIDTH | FUNCTION VALUE |
|---|---|---|---|---|---|---|---|---|
| 1 | N | 1 | f | 2.419 4 GHz | -5.755 dBm | | | |
| 2 | N | 1 | f | 24.790 9 GHz | -46.713 dBm | | | |
| 3 | N | 1 | f | 4.750 5 GHz | -55.725 dBm | | | |
| 4 | N | 1 | f | 7.072 8 GHz | -54.928 dBm | | | |
| 5 | N | 1 | f | 9.476 3 GHz | -56.815 dBm | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 10 | | | | | | | | |
| 11 | | | | | | | | |

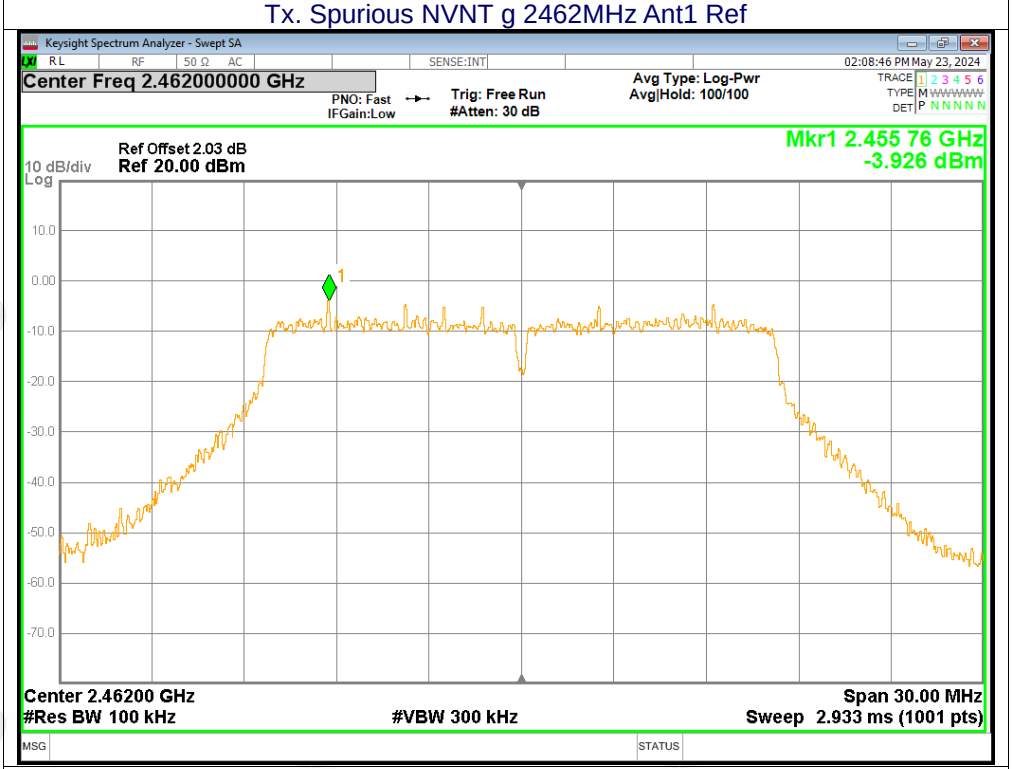
Tx. Spurious NVNT g 2437MHz Ant1 Ref



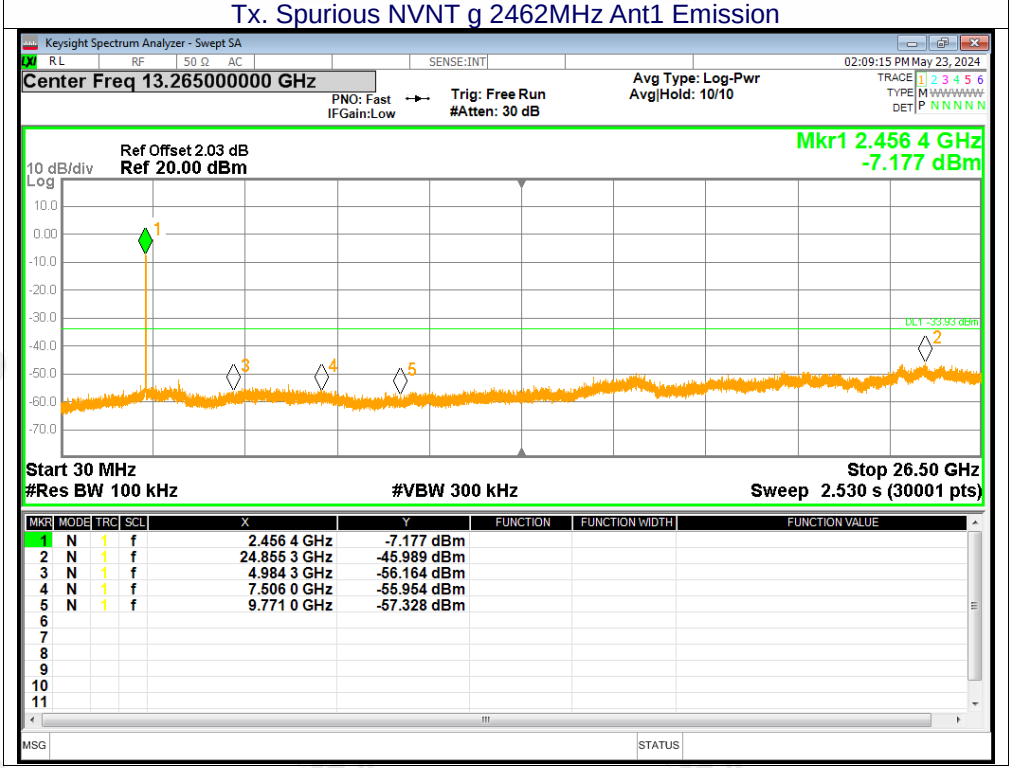

Tx. Spurious NVNT g 2437MHz Ant1 Emission



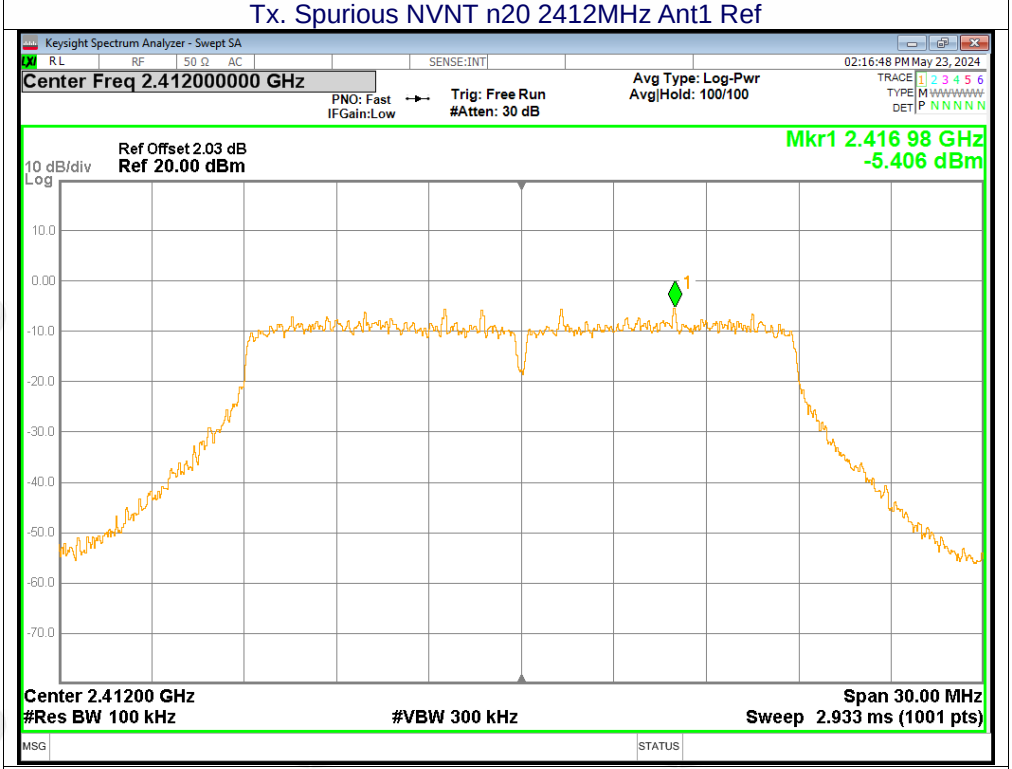
Tx. Spurious NVNT g 2462MHz Ant1 Ref



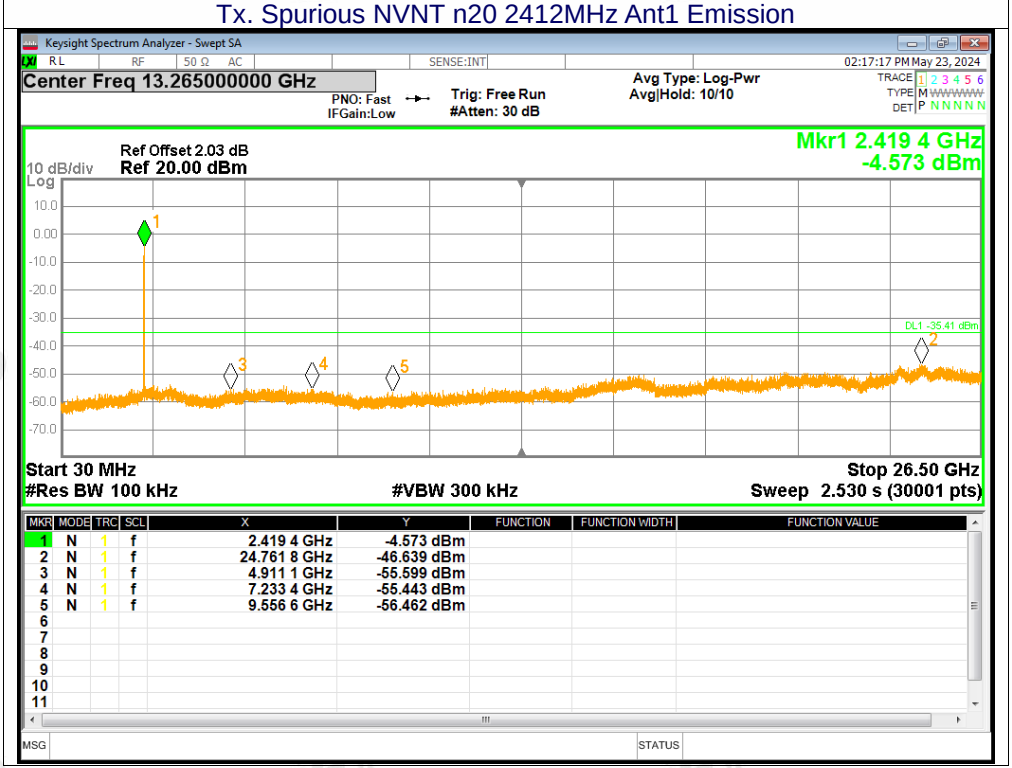

Tx. Spurious NVNT g 2462MHz Ant1 Emission



Tx. Spurious NVNT n20 2412MHz Ant1 Ref

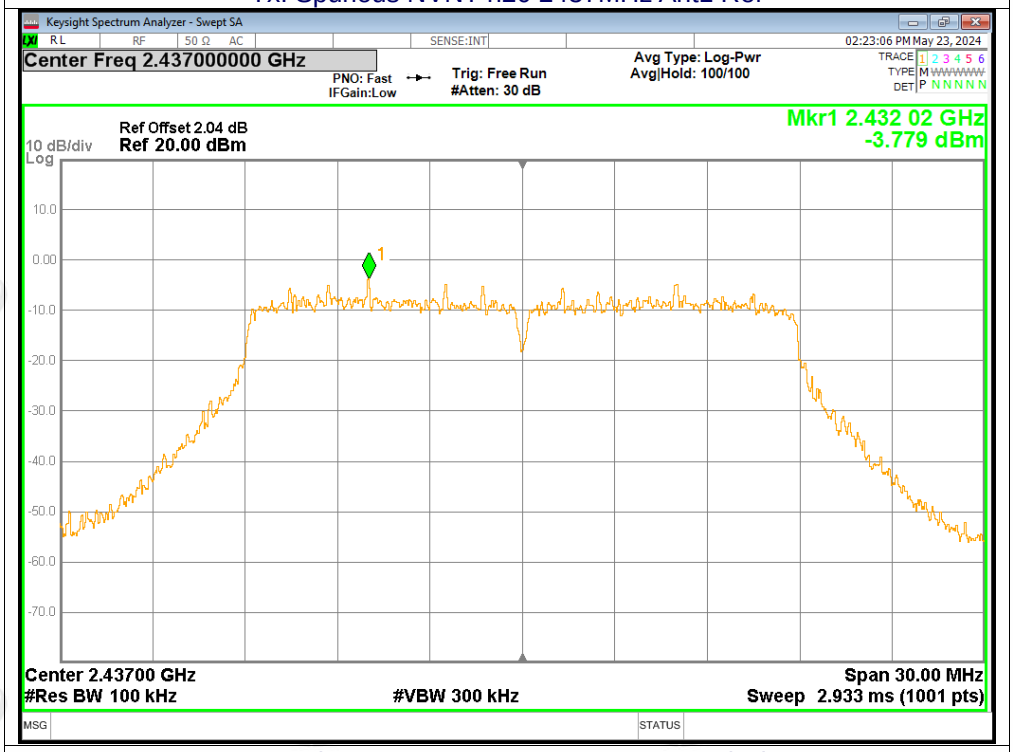



Tx. Spurious NVNT n20 2412MHz Ant1 Emission

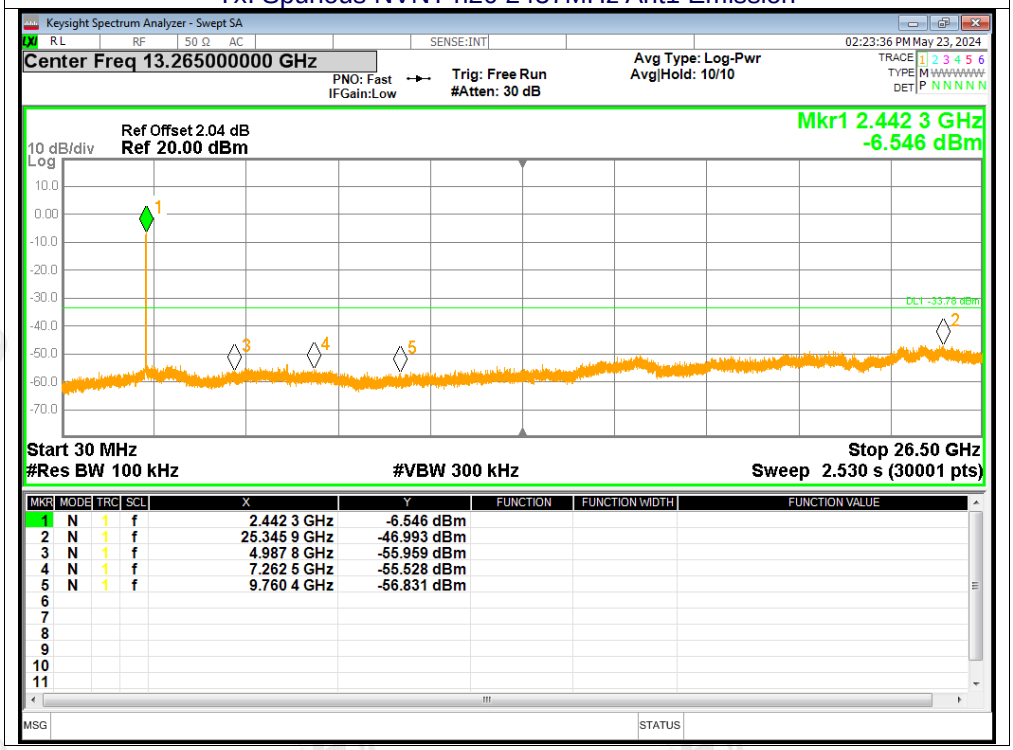



| MKR | MODE | TRC | SCL | X | Y | FUNCTION | FUNCTION WIDTH | FUNCTION VALUE |
|---|---|---|---|---|---|---|---|---|
| 1 | N | 1 | f | 2.419 4 GHz | -4.573 dBm | | | |
| 2 | N | 1 | f | 24.761 8 GHz | -46.639 dBm | | | |
| 3 | N | 1 | f | 4.911 1 GHz | -55.599 dBm | | | |
| 4 | N | 1 | f | 7.233 4 GHz | -55.443 dBm | | | |
| 5 | N | 1 | f | 9.556 6 GHz | -56.462 dBm | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 10 | | | | | | | | |
| 11 | | | | | | | | |

Tx. Spurious NVNT n20 2437MHz Ant1 Ref

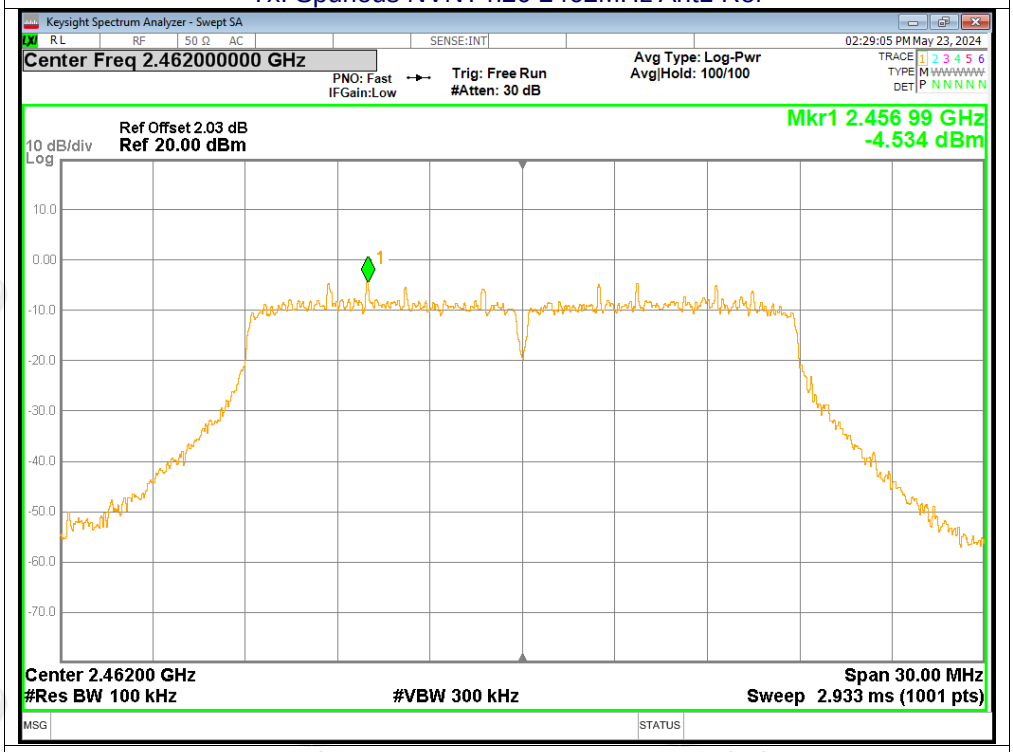



Tx. Spurious NVNT n20 2437MHz Ant1 Emission

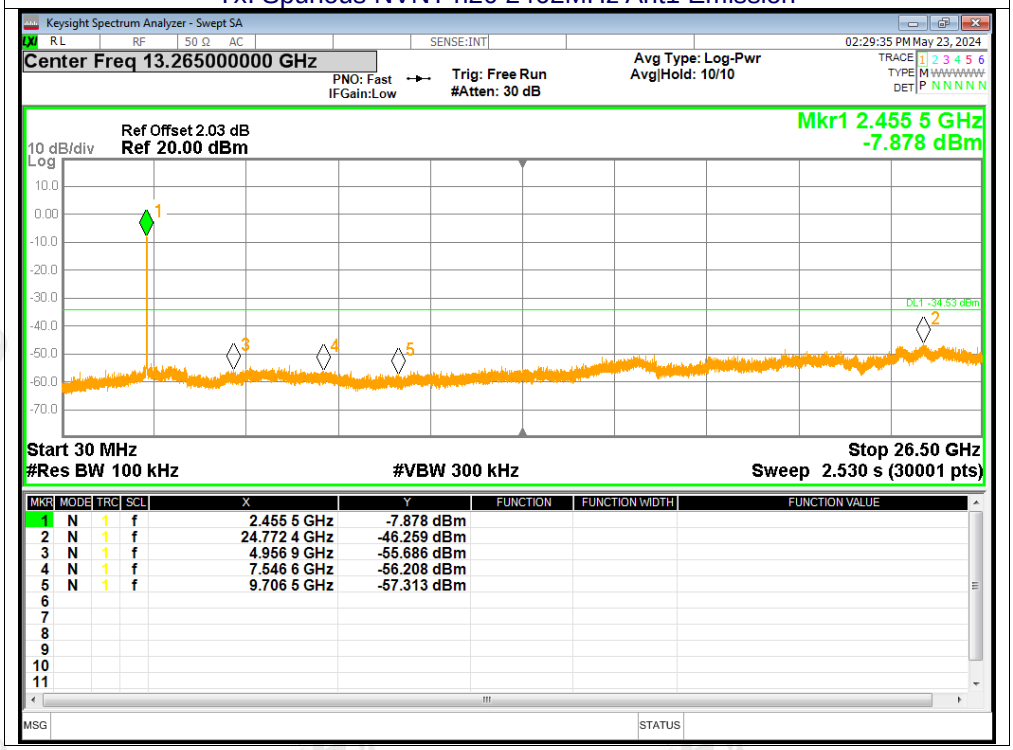



| MKR | MODE | TRC | SCL | X | Y | FUNCTION | FUNCTION WIDTH | FUNCTION VALUE |
|---|---|---|---|---|---|---|---|---|
| 1 | N | 1 | f | 2.442 3 GHz | -6.546 dBm | | | |
| 2 | N | 1 | f | 25.345 9 GHz | -46.993 dBm | | | |
| 3 | N | 1 | f | 4.987 8 GHz | -55.959 dBm | | | |
| 4 | N | 1 | f | 7.262 5 GHz | -55.528 dBm | | | |
| 5 | N | 1 | f | 9.760 4 GHz | -56.831 dBm | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 10 | | | | | | | | |
| 11 | | | | | | | | |

Tx. Spurious NVNT n20 2462MHz Ant1 Ref

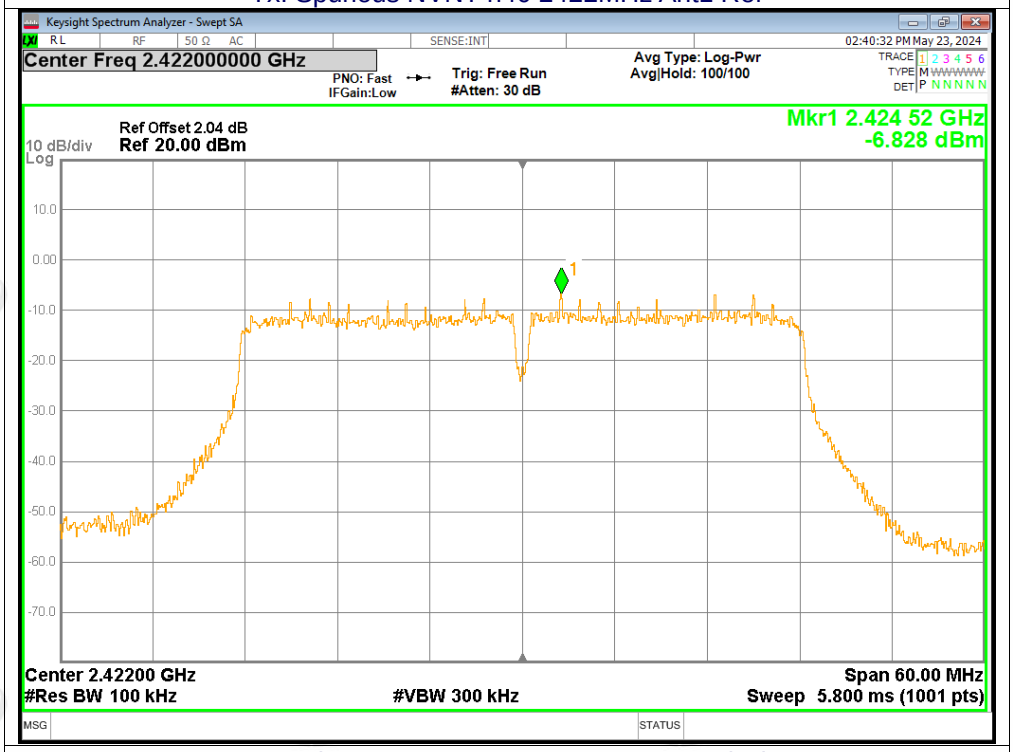



Tx. Spurious NVNT n20 2462MHz Ant1 Emission

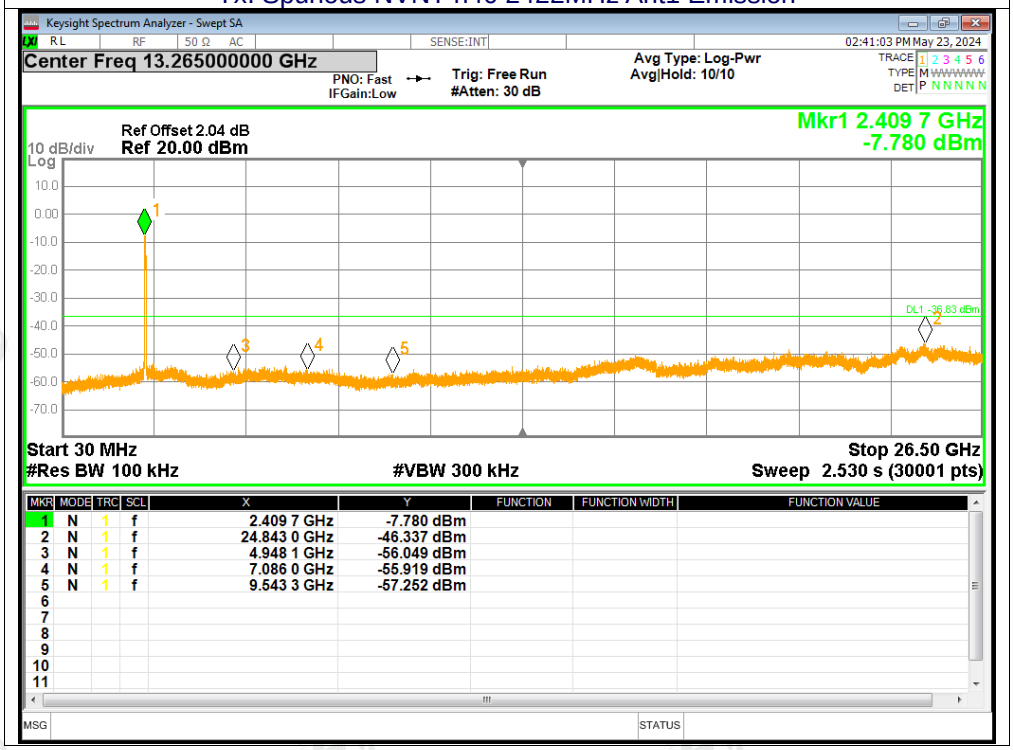



| MKR | MODE | TRC | SCL | X | Y | FUNCTION | FUNCTION WIDTH | FUNCTION VALUE |
|---|---|---|---|---|---|---|---|---|
| 1 | N | 1 | f | 2.455 5 GHz | -7.878 dBm | | | |
| 2 | N | 1 | f | 24.772 4 GHz | -46.259 dBm | | | |
| 3 | N | 1 | f | 4.956 9 GHz | -55.686 dBm | | | |
| 4 | N | 1 | f | 7.546 6 GHz | -56.208 dBm | | | |
| 5 | N | 1 | f | 9.706 5 GHz | -57.313 dBm | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 10 | | | | | | | | |
| 11 | | | | | | | | |

Tx. Spurious NVNT n40 2422MHz Ant1 Ref

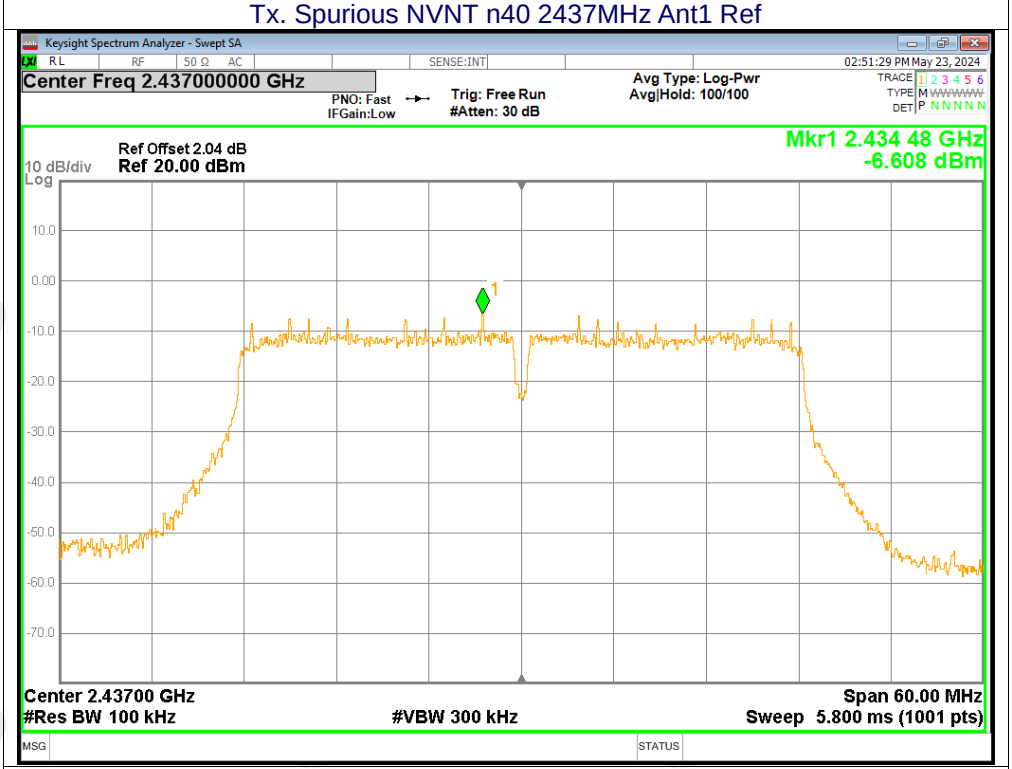



Tx. Spurious NVNT n40 2422MHz Ant1 Emission

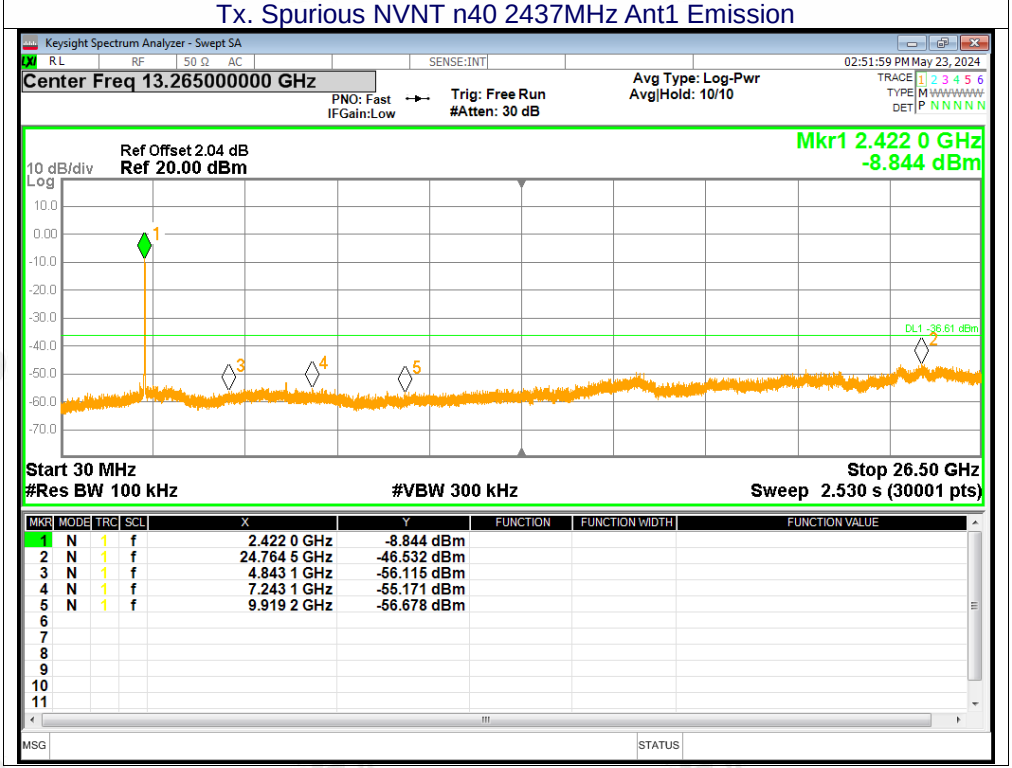



| MKR | MODE | TRC | SCL | X | Y | FUNCTION | FUNCTION WIDTH | FUNCTION VALUE |
|---|---|---|---|---|---|---|---|---|
| 1 | N | 1 | f | 2.409 7 GHz | -7.780 dBm | | | |
| 2 | N | 1 | f | 24.843 0 GHz | -46.337 dBm | | | |
| 3 | N | 1 | f | 4.948 1 GHz | -56.049 dBm | | | |
| 4 | N | 1 | f | 7.086 0 GHz | -55.919 dBm | | | |
| 5 | N | 1 | f | 9.543 3 GHz | -57.252 dBm | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 10 | | | | | | | | |
| 11 | | | | | | | | |

Tx. Spurious NVNT n40 2437MHz Ant1 Ref

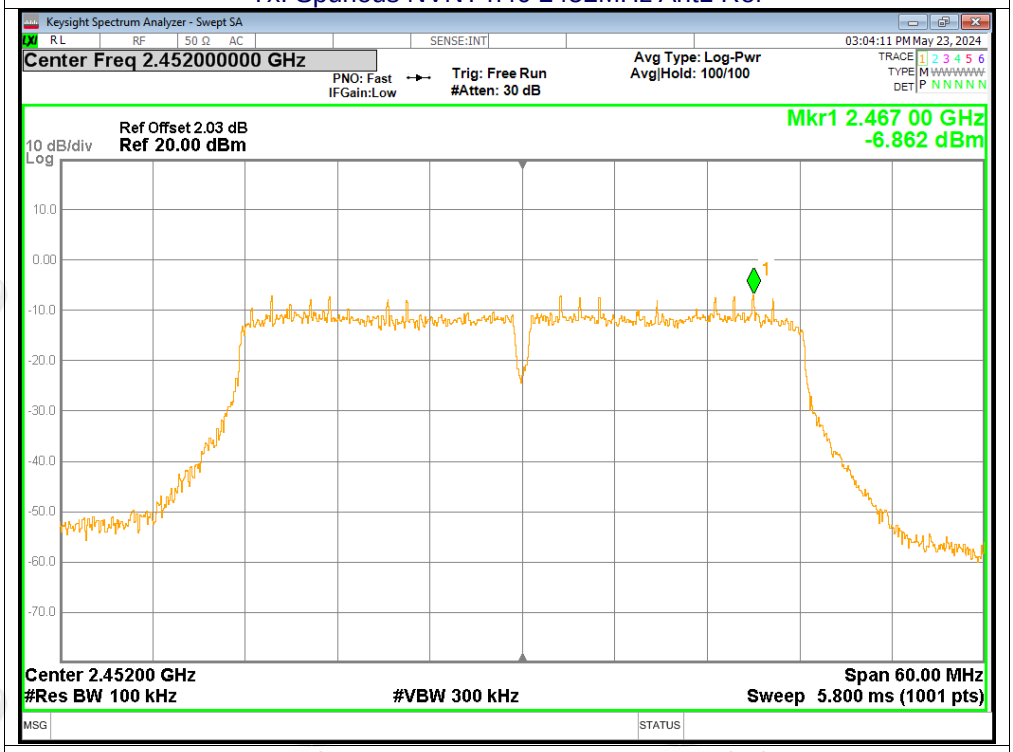



Tx. Spurious NVNT n40 2437MHz Ant1 Emission

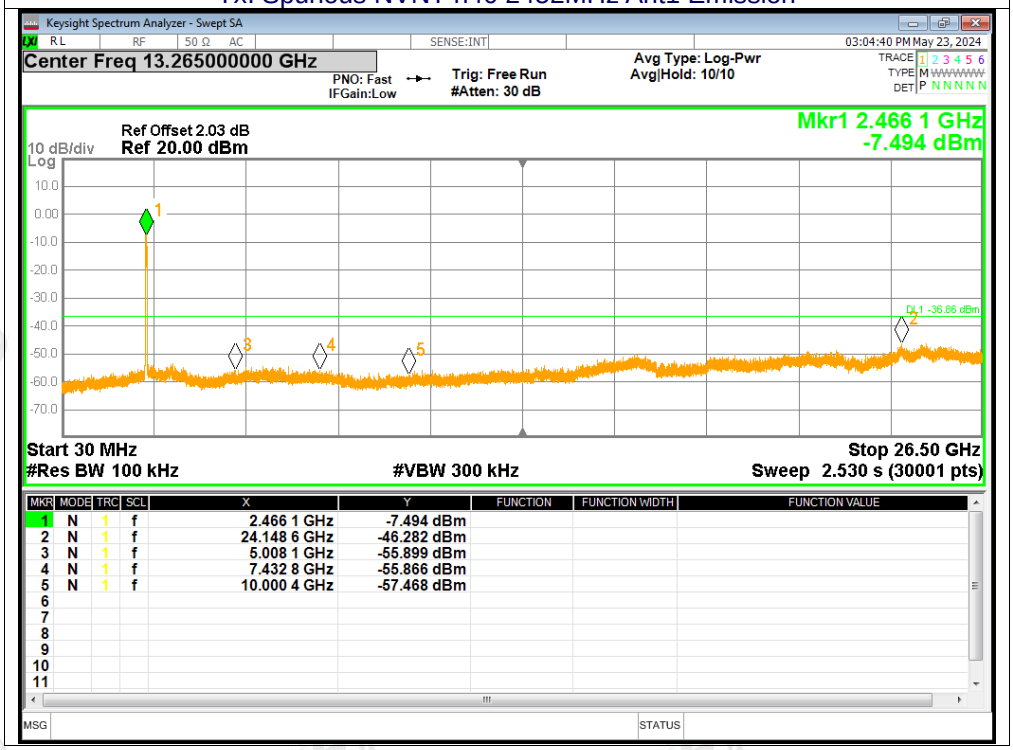



| MKR | MODE | TRC | SCL | X | Y | FUNCTION | FUNCTION WIDTH | FUNCTION VALUE |
|---|---|---|---|---|---|---|---|---|
| 1 | N | 1 | f | 2.422 0 GHz | -8.844 dBm | | | |
| 2 | N | 1 | f | 24.764 5 GHz | -46.532 dBm | | | |
| 3 | N | 1 | f | 4.843 1 GHz | -56.115 dBm | | | |
| 4 | N | 1 | f | 7.243 1 GHz | -55.171 dBm | | | |
| 5 | N | 1 | f | 9.919 2 GHz | -56.678 dBm | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 10 | | | | | | | | |
| 11 | | | | | | | | |

Tx. Spurious NVNT n40 2452MHz Ant1 Ref




Tx. Spurious NVNT n40 2452MHz Ant1 Emission




| MKR | MODE | TRC | SCL | X | Y | FUNCTION | FUNCTION WIDTH | FUNCTION VALUE |
|---|---|---|---|---|---|---|---|---|
| 1 | N | 1 | f | 2.466 1 GHz | -7.494 dBm | | | |
| 2 | N | 1 | f | 24.148 6 GHz | -46.282 dBm | | | |
| 3 | N | 1 | f | 5.008 1 GHz | -55.899 dBm | | | |
| 4 | N | 1 | f | 7.432 8 GHz | -55.866 dBm | | | |
| 5 | N | 1 | f | 10.000 4 GHz | -57.468 dBm | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 10 | | | | | | | | |
| 11 | | | | | | | | |

## 12. TEST SETUP PHOTO

Reference to the appendix I for details.

## 13. EUT CONSTRUCTIONAL DETAILS

Reference to the appendix II for details.

**※※※※※ END OF REPORT ※※※※※**