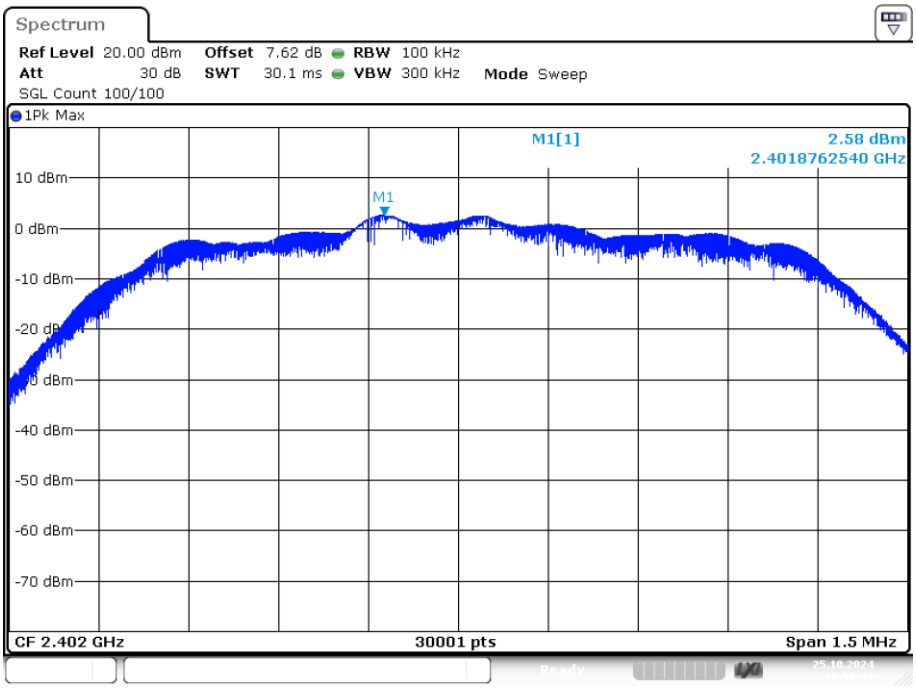
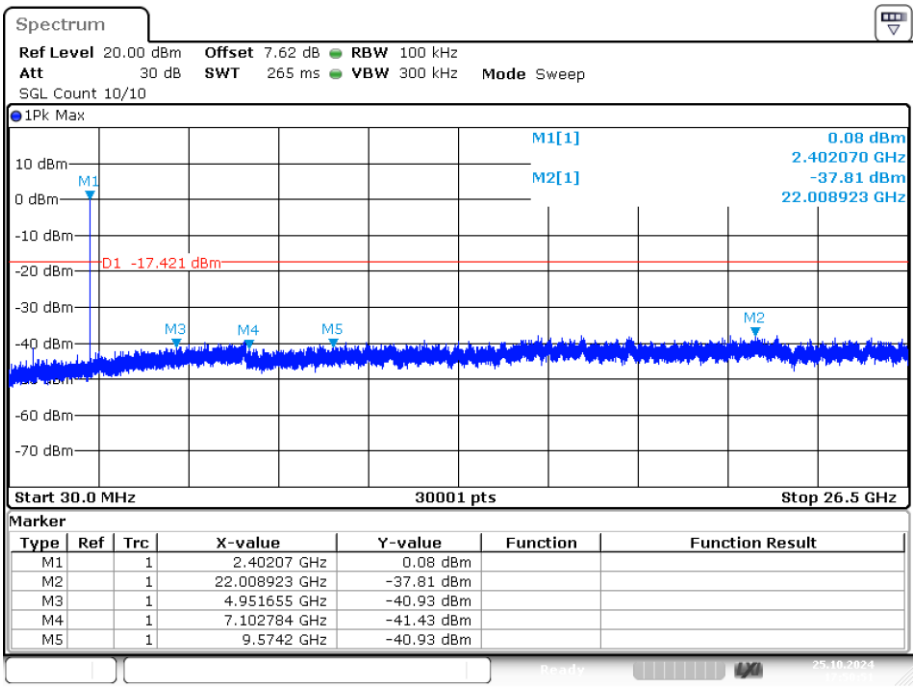
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref




Date: 25.OCT.2024 17:50:36

Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Emission

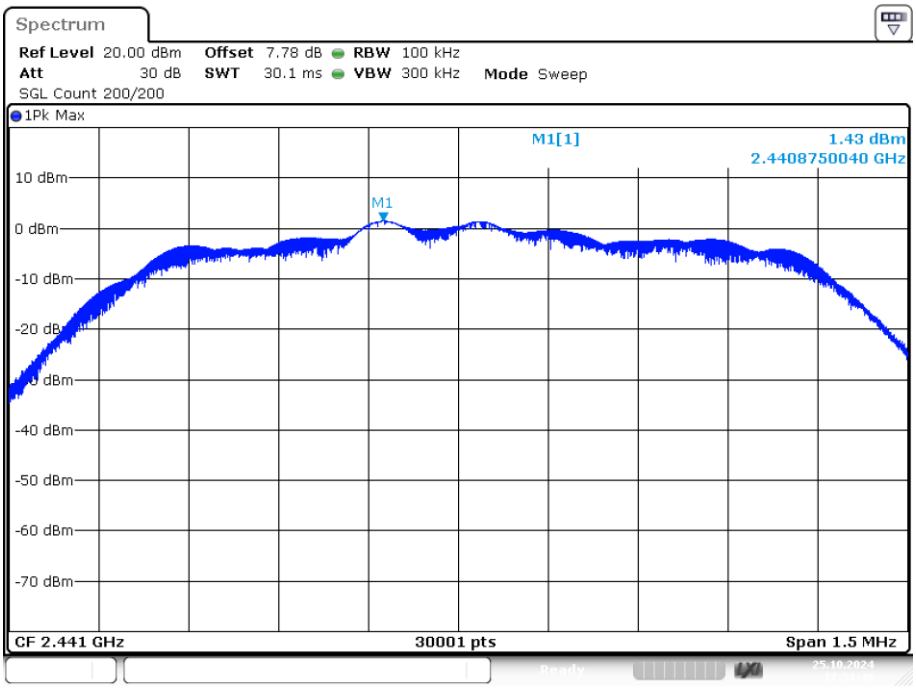



Marker

| Type | Ref | Trc | X-value | Y-value | Function | Function Result |
|---|---|---|---|---|---|---|
| M1 | | 1 | 2.40207 GHz | 0.08 dBm | | |
| M2 | | 1 | 22.008923 GHz | -37.81 dBm | | |
| M3 | | 1 | 4.951655 GHz | -40.93 dBm | | |
| M4 | | 1 | 7.102784 GHz | -41.43 dBm | | |
| M5 | | 1 | 9.5742 GHz | -40.93 dBm | | |

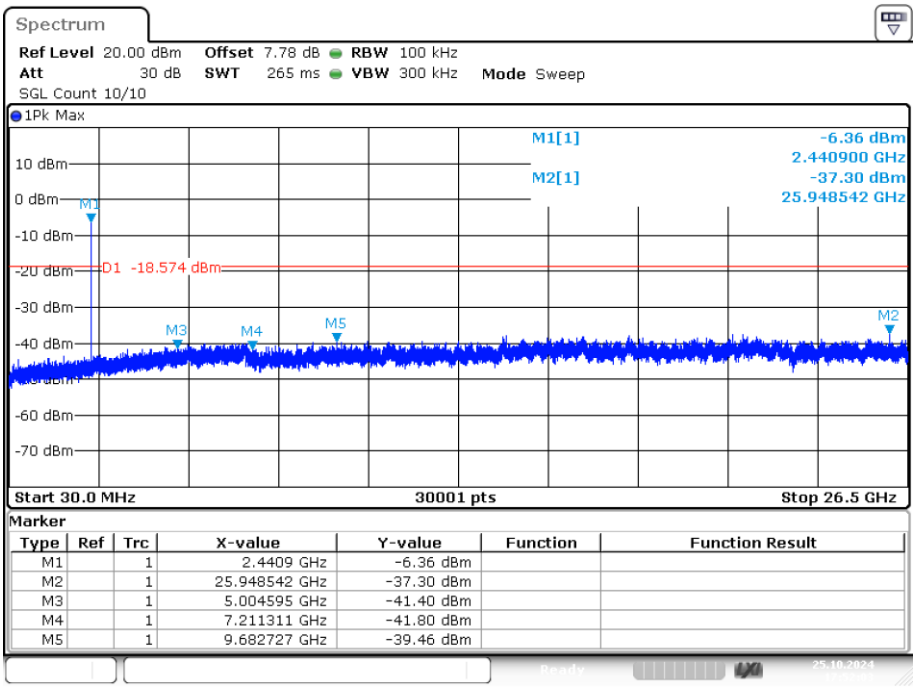
Date: 25.OCT.2024 17:50:50

Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref




Date: 25.OCT.2024 17:51:49

Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission

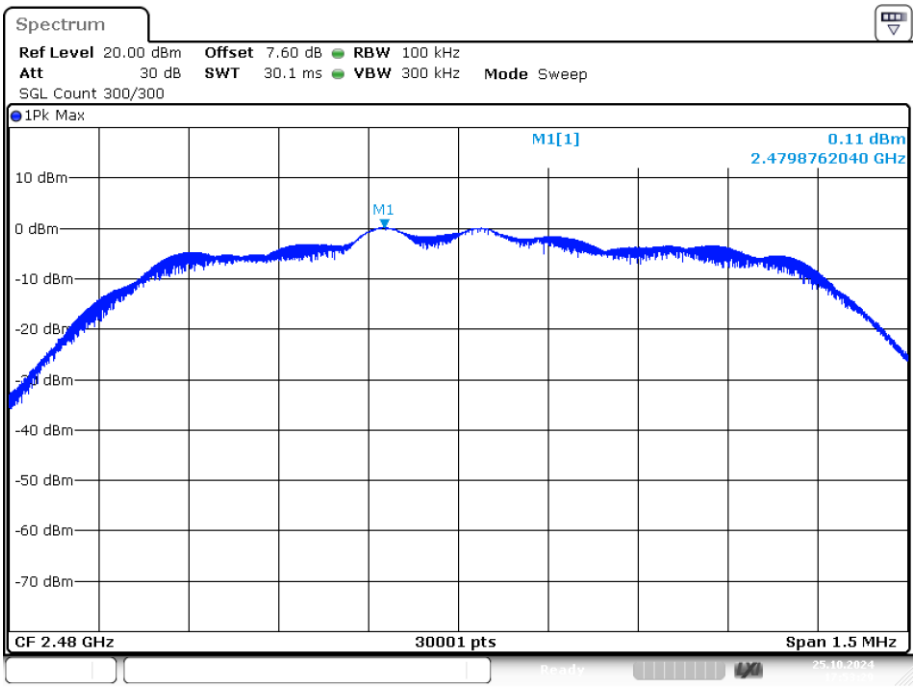



Marker

| Type | Ref | Trc | X-value | Y-value | Function | Function Result |
|---|---|---|---|---|---|---|
| M1 | | 1 | 2.4409 GHz | -6.36 dBm | | |
| M2 | | 1 | 25.948542 GHz | -37.30 dBm | | |
| M3 | | 1 | 5.004595 GHz | -41.40 dBm | | |
| M4 | | 1 | 7.211311 GHz | -41.80 dBm | | |
| M5 | | 1 | 9.682727 GHz | -39.46 dBm | | |

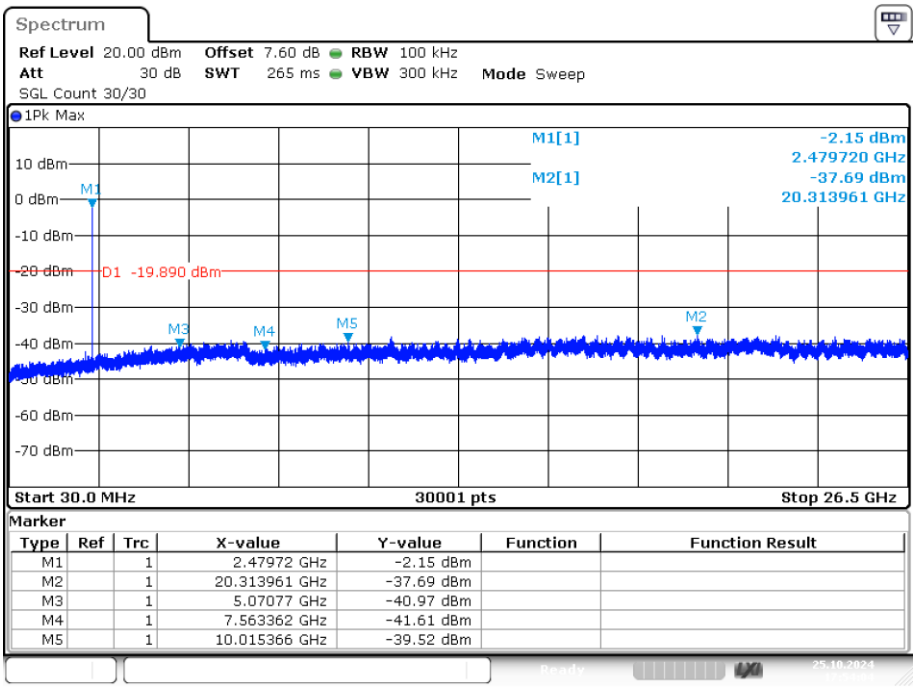
Date: 25.OCT.2024 17:52:03

Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref




Date: 25.OCT.2024 17:53:29

Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission



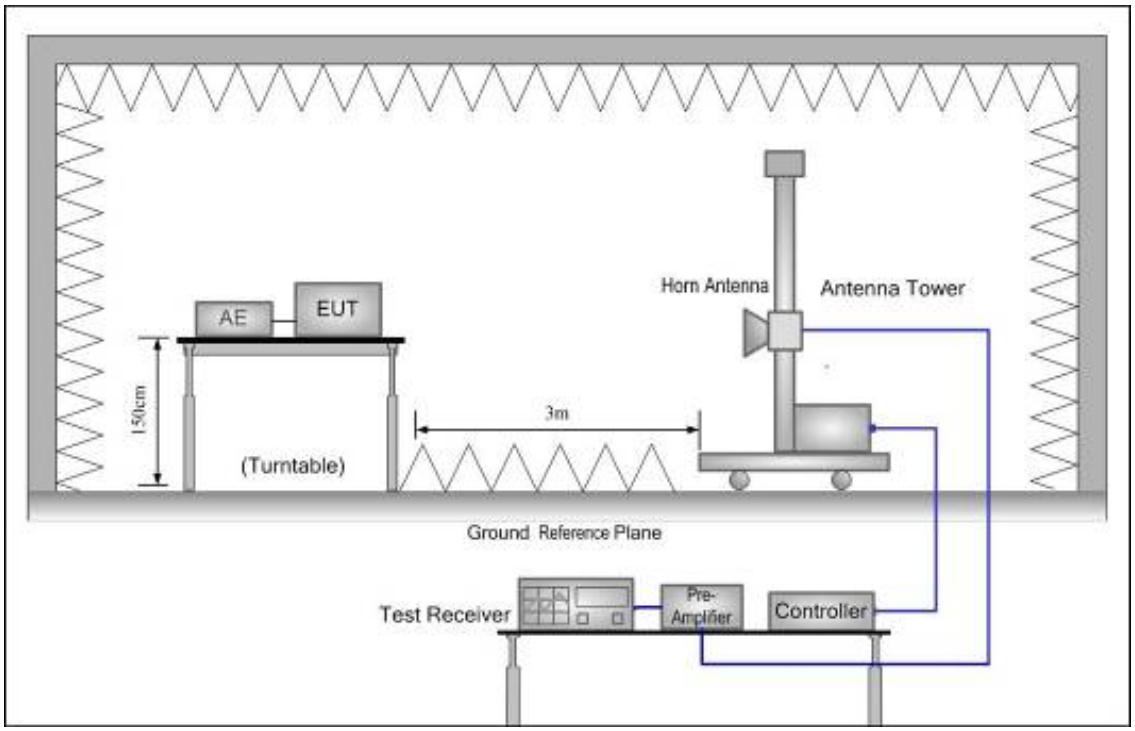

Marker

| Type | Ref | Trc | X-value | Y-value | Function | Function Result |
|---|---|---|---|---|---|---|
| M1 | | 1 | 2.47972 GHz | -2.15 dBm | | |
| M2 | | 1 | 20.313961 GHz | -37.69 dBm | | |
| M3 | | 1 | 5.07077 GHz | -40.97 dBm | | |
| M4 | | 1 | 7.563362 GHz | -41.61 dBm | | |
| M5 | | 1 | 10.015366 GHz | -39.52 dBm | | |

Date: 25.OCT.2024 17:54:04

# 9. BAND EDGE COMPLIANCE

## 9.1. Block Diagram of Test Setup




## 9.2. Limit

All the lower and upper band-edges emissions appearing within restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions outside operation shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

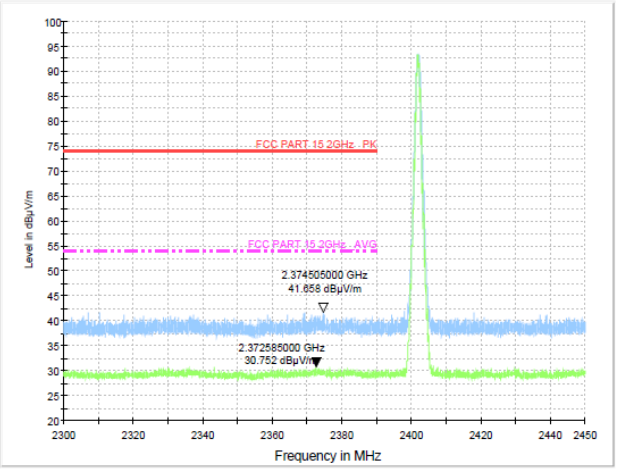
## 9.3. Test Procedure

All restriction band and non- restriction band have been tested ， only worse case is reported.

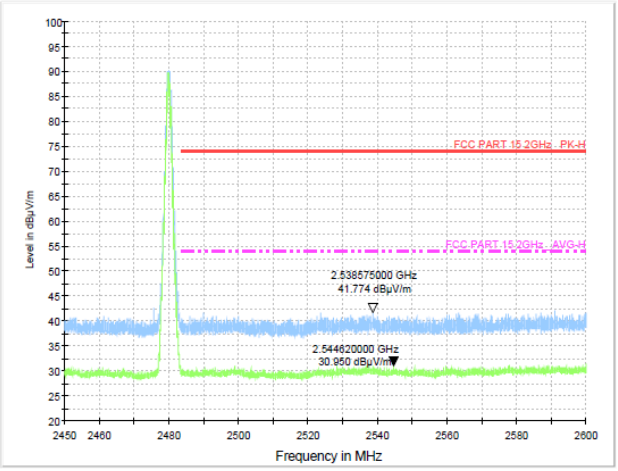
## 9.4. Test Result

PASS. (See below detailed test data)

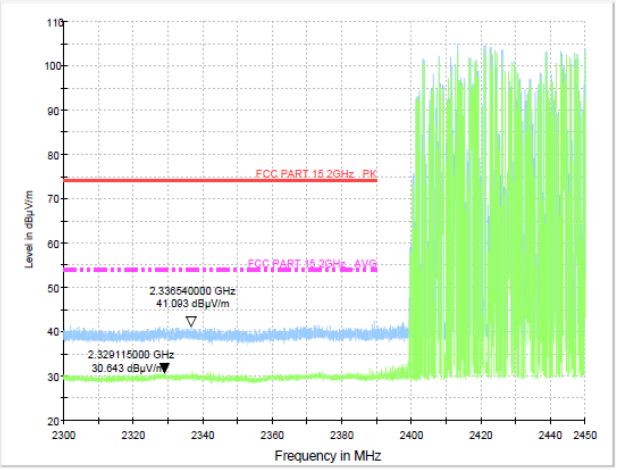
Test Mode: GFSK-Low Hopping-off



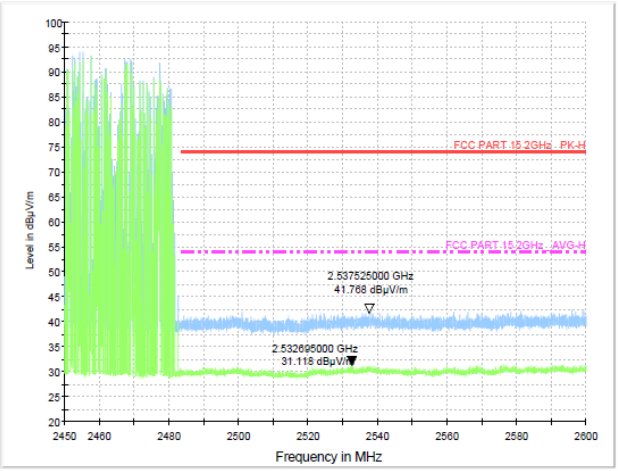

Test Mode: GFSK-High Hopping-off




Test Mode: GFSK-Low Hopping-on



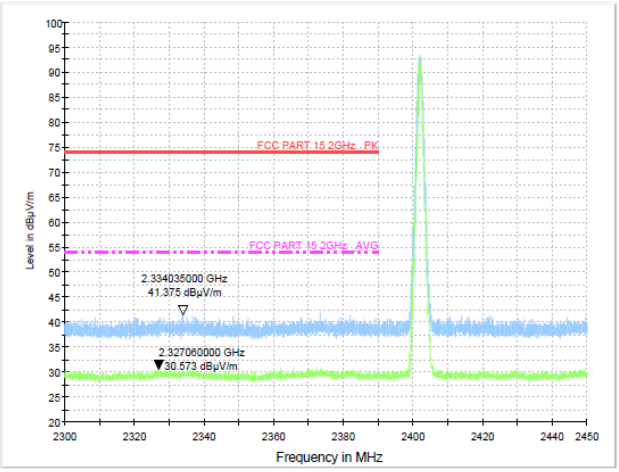

Test Mode: GFSK-High Hopping-on



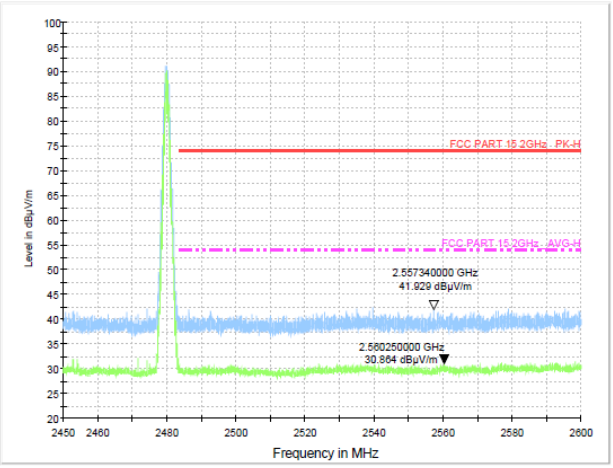

Note: 1. *:Maximum data; x:Over limit; !:over margin.

2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

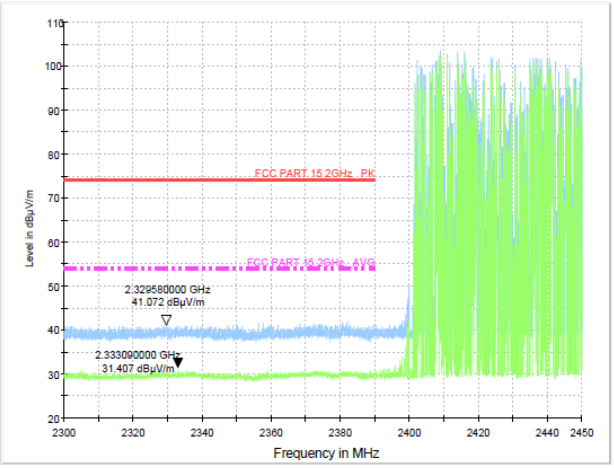
Test Mode: π/4 DQPSK-Low Hopping-off



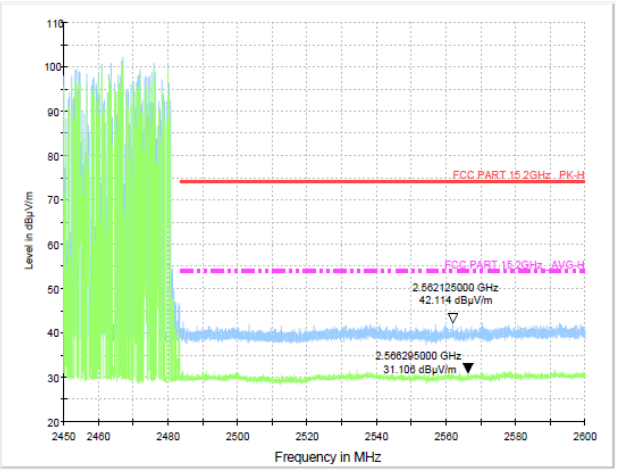

Test Mode: π/4 DQPSK-High Hopping-off




Test Mode: π/4 DQPSK-Low Hopping-on



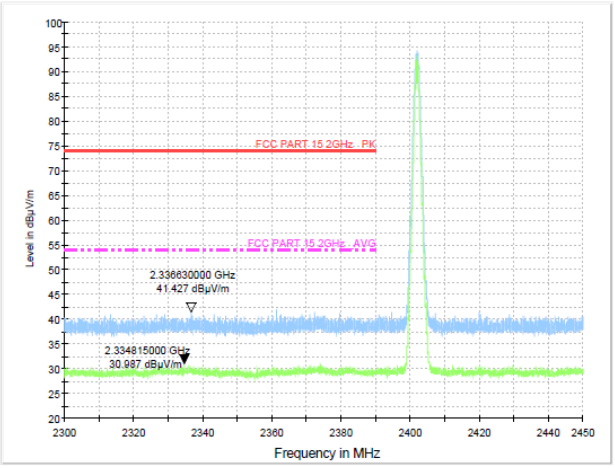

Test Mode: π/4 DQPSK-High Hopping-on



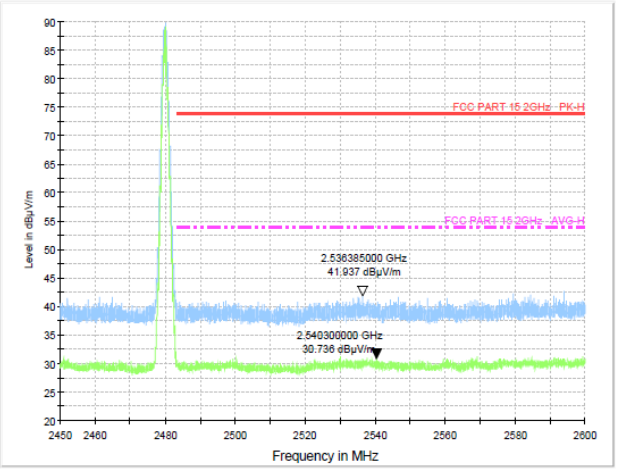

Note: 1. *:Maximum data; x:Over limit; !:over margin.

2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

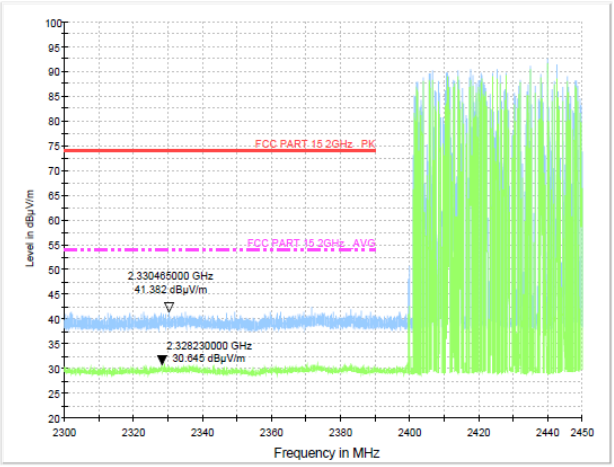
Test Mode: 8DPSK-Low Hopping-off



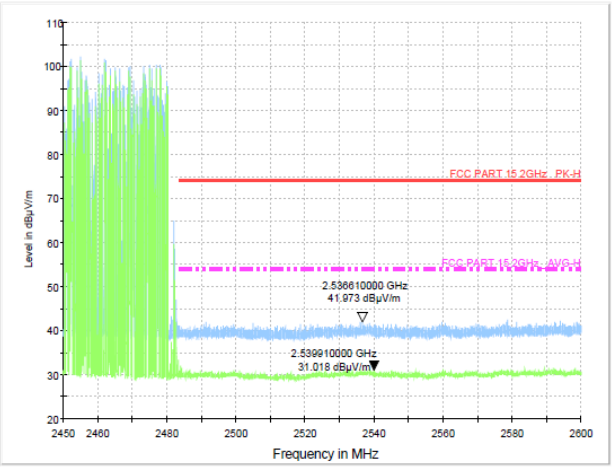

Test Mode: 8DPSK-High Hopping-off




Test Mode: 8DPSK-Low Hopping-on




Test Mode: 8DPSK-High Hopping-on

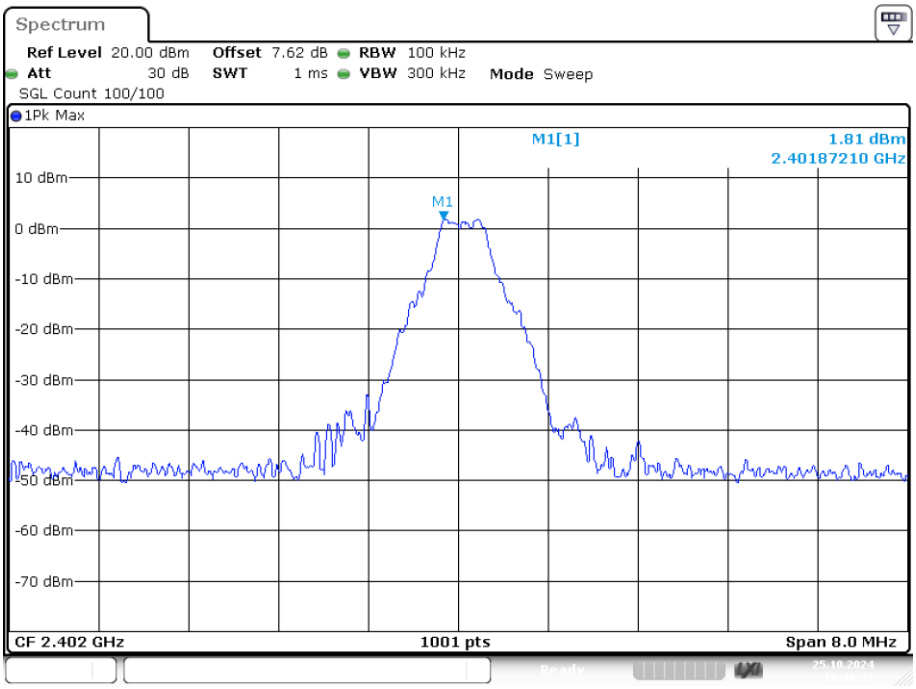



Note: 1. *:Maximum data; x:Over limit; !:over margin.

2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

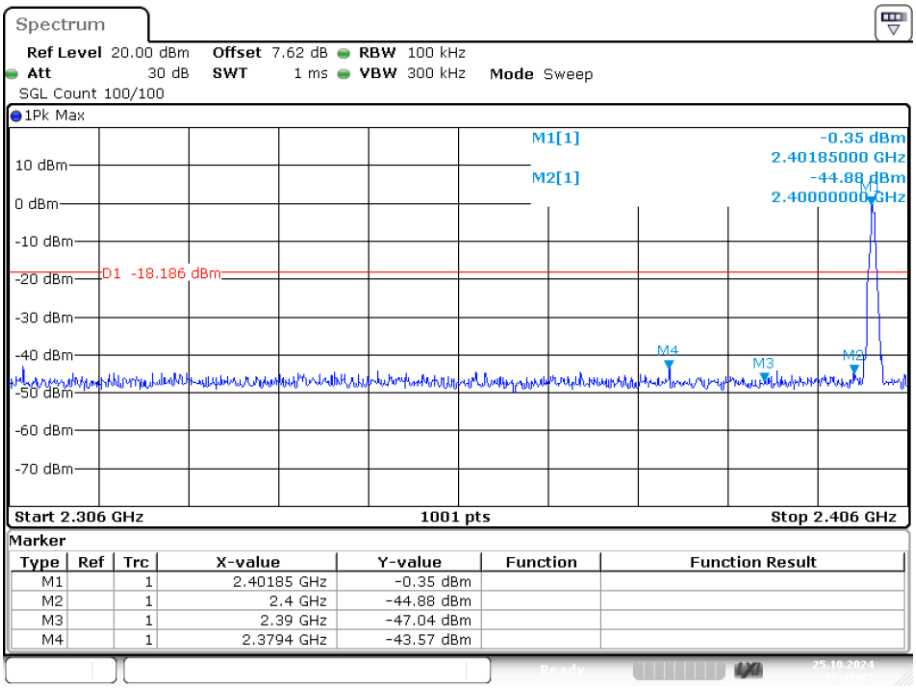
**Conducted Method**

Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref




Date: 25.OCT.2024 16:40:37

Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission

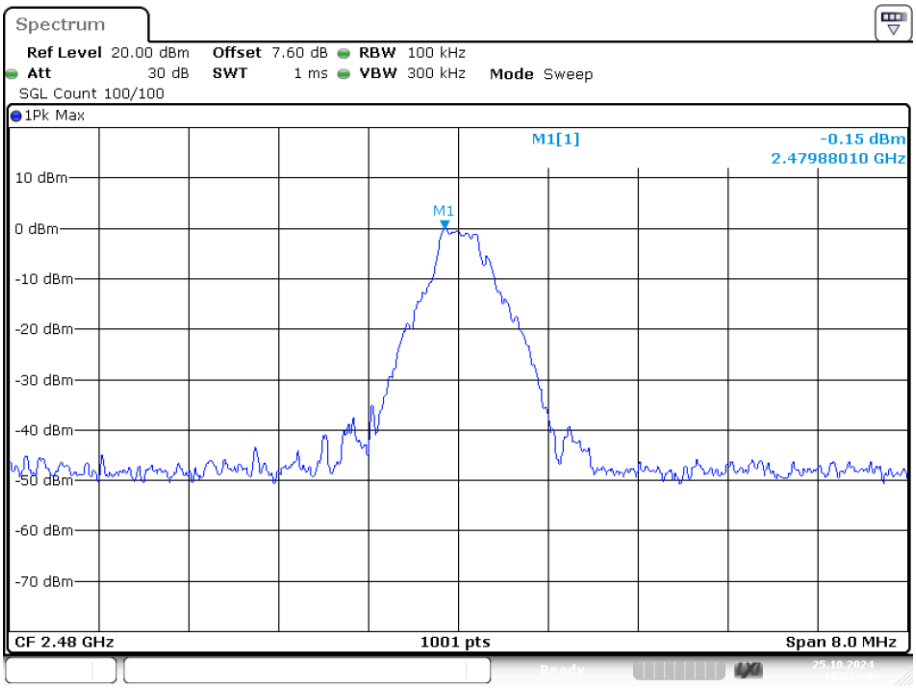



Marker

| Type | Ref | Trc | X-value | Y-value | Function | Function Result |
|---|---|---|---|---|---|---|
| M1 | | 1 | 2.40185 GHz | -0.35 dBm | | |
| M2 | | 1 | 2.4 GHz | -44.88 dBm | | |
| M3 | | 1 | 2.39 GHz | -47.04 dBm | | |
| M4 | | 1 | 2.3794 GHz | -43.57 dBm | | |

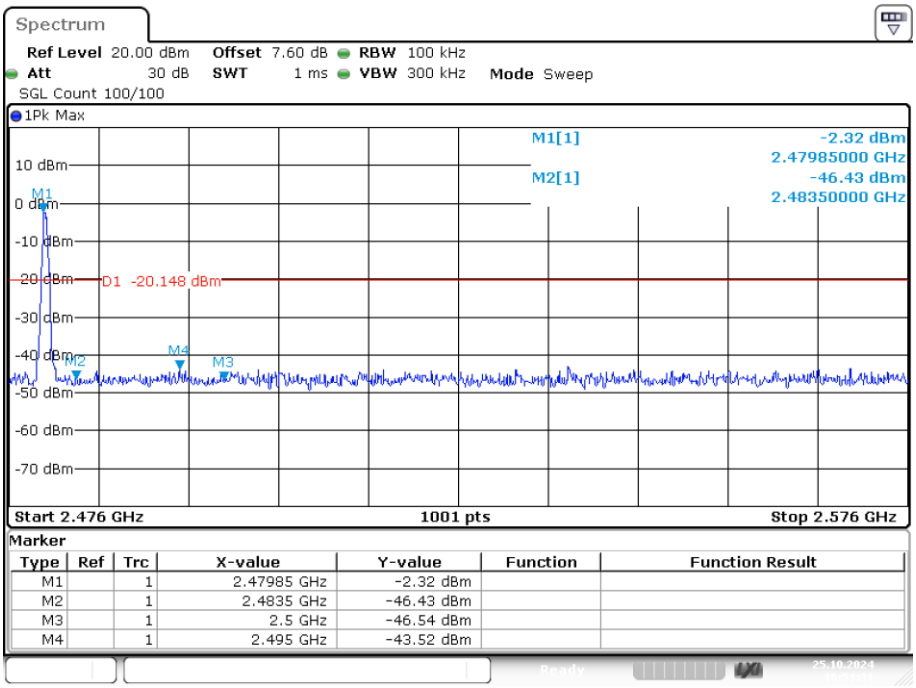
Date: 25.OCT.2024 16:40:41

Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Ref



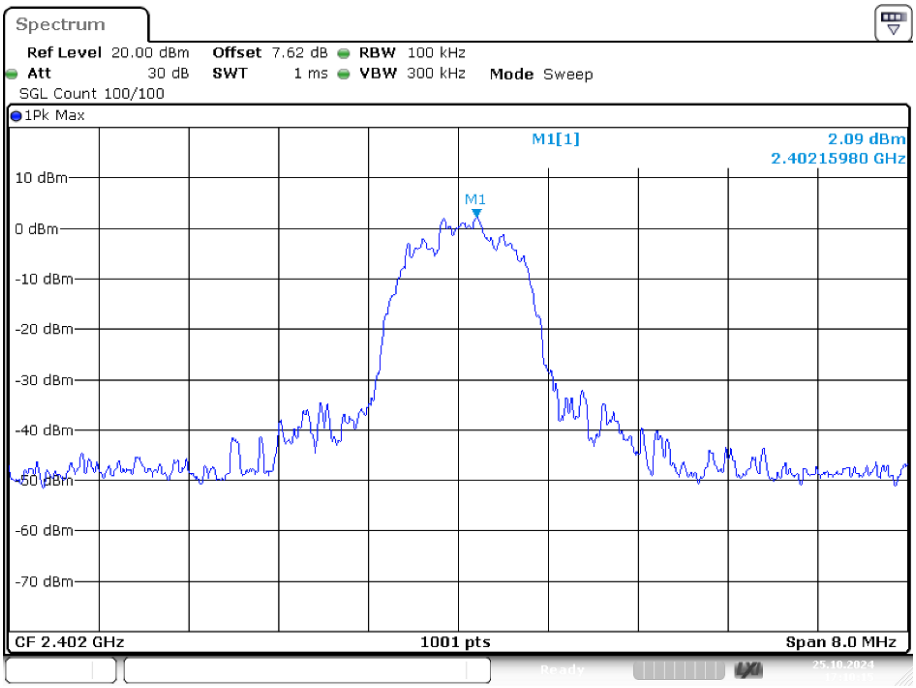

Date: 25.OCT.2024 16:51:27

Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Emission



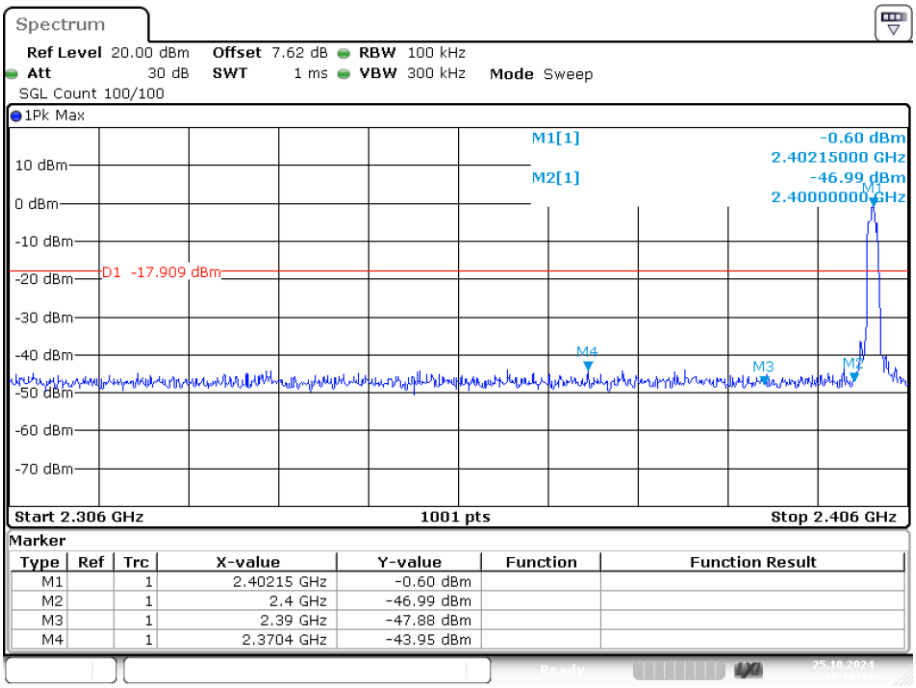

Date: 25.OCT.2024 16:51:31

Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Ref



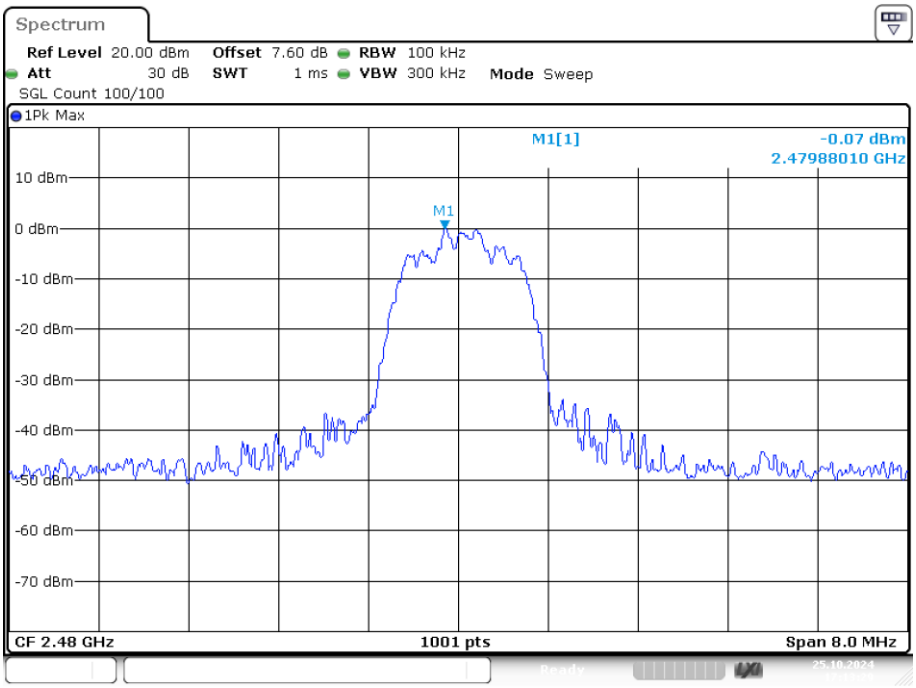

Date: 25.OCT.2024 17:10:14

Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Emission



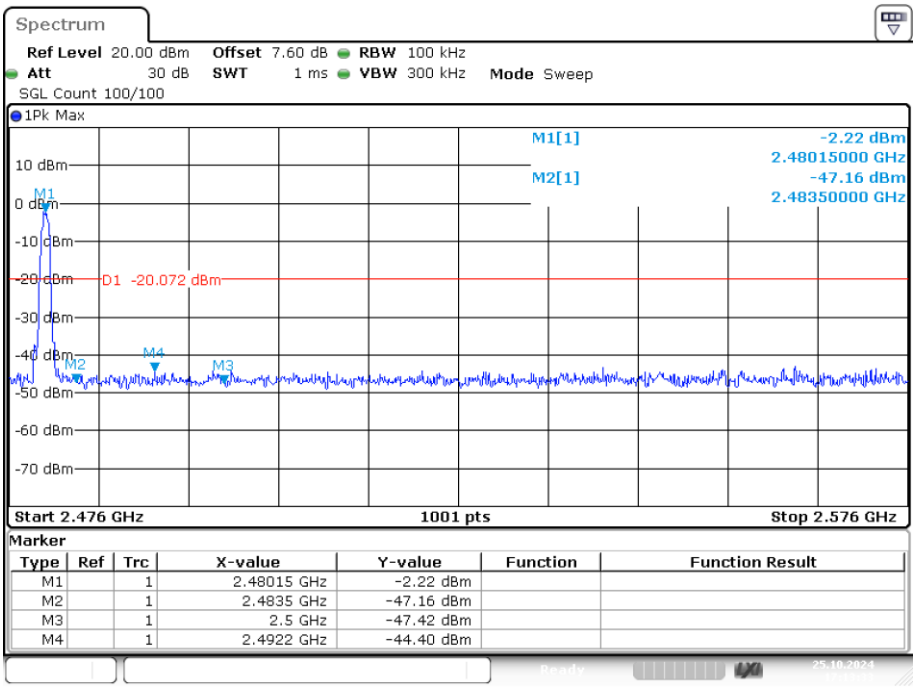

Date: 25.OCT.2024 17:10:18

Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Ref




Date: 25.OCT.2024 17:13:29

Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Emission

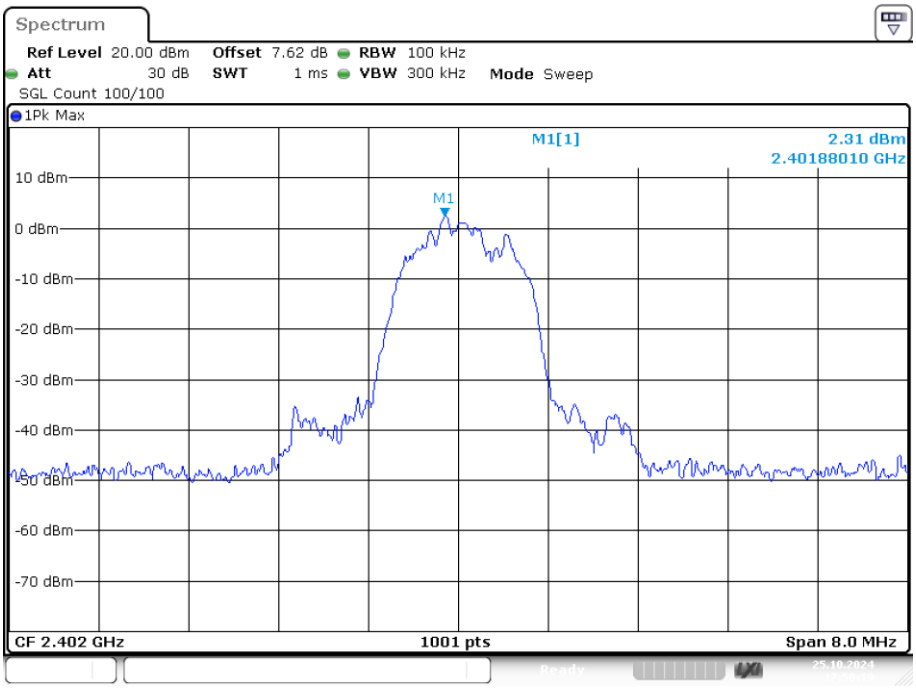



Marker

| Type | Ref | Trc | X-value | Y-value | Function | Function Result |
|---|---|---|---|---|---|---|
| M1 | | 1 | 2.48015 GHz | -2.22 dBm | | |
| M2 | | 1 | 2.4835 GHz | -47.16 dBm | | |
| M3 | | 1 | 2.5 GHz | -47.42 dBm | | |
| M4 | | 1 | 2.4922 GHz | -44.40 dBm | | |

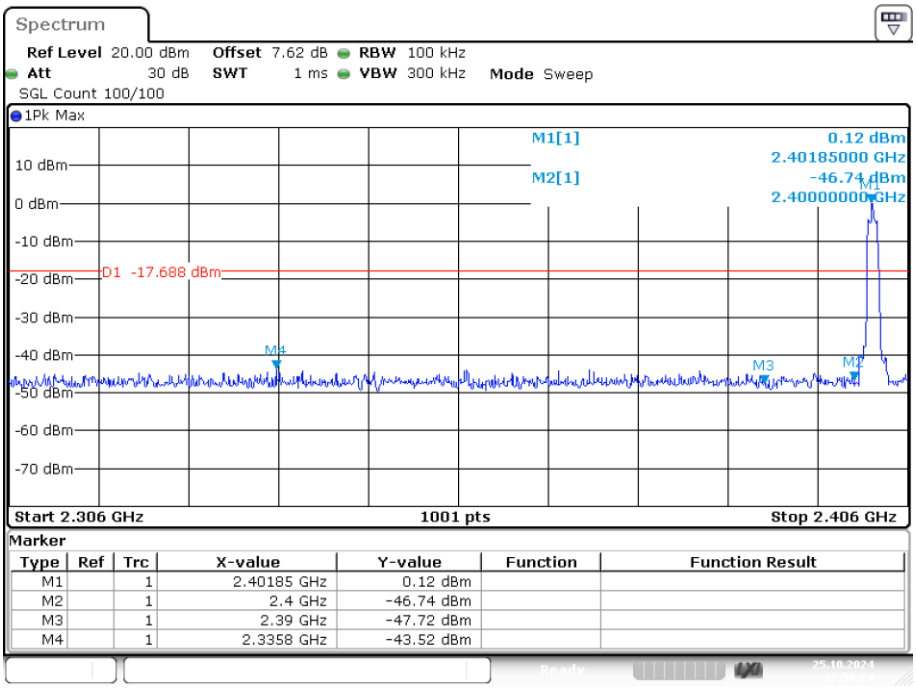
Date: 25.OCT.2024 17:13:33

Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Ref




Date: 25.OCT.2024 17:50:19

Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Emission

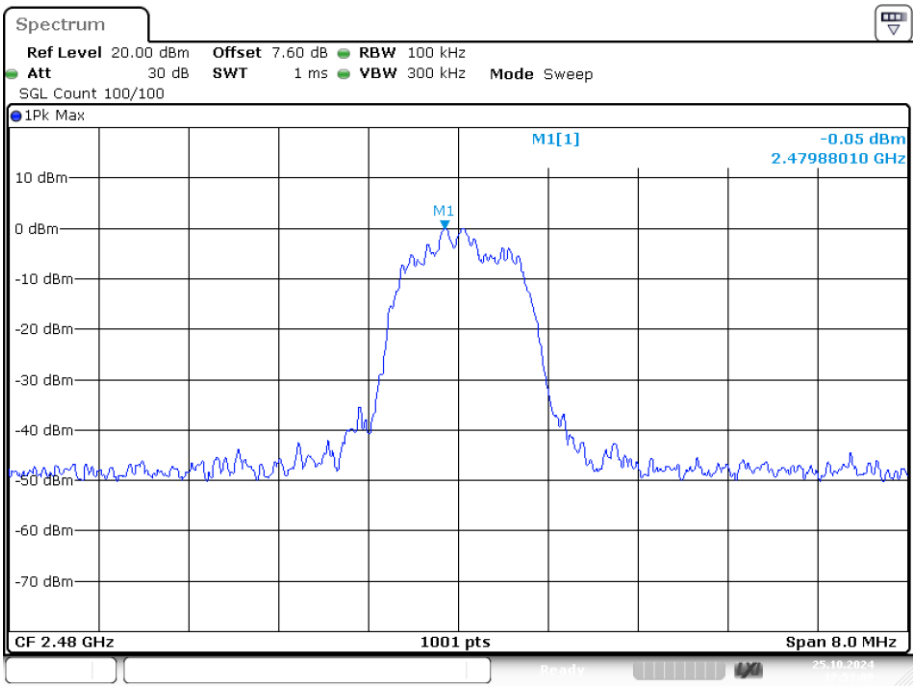



Marker

| Type | Ref | Trc | X-value | Y-value | Function | Function Result |
|---|---|---|---|---|---|---|
| M1 | | 1 | 2.40185 GHz | 0.12 dBm | | |
| M2 | | 1 | 2.4 GHz | -46.74 dBm | | |
| M3 | | 1 | 2.39 GHz | -47.72 dBm | | |
| M4 | | 1 | 2.3358 GHz | -43.52 dBm | | |

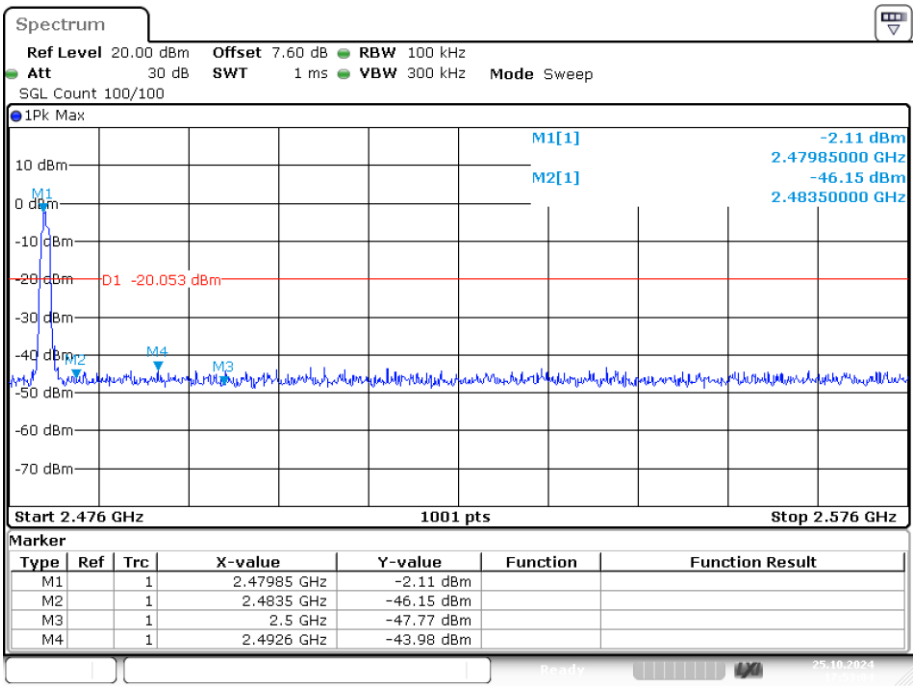
Date: 25.OCT.2024 17:50:23

Band Edge NVNT 3-DH1 2480MHz Ant1 No-Hopping Ref




Date: 25.OCT.2024 17:53:00

Band Edge NVNT 3-DH1 2480MHz Ant1 No-Hopping Emission

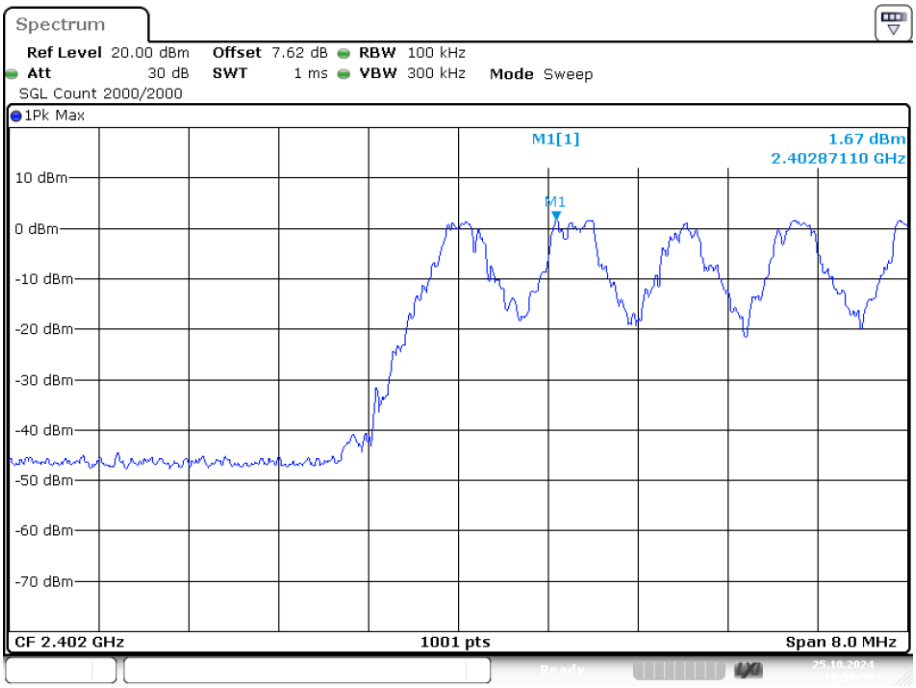



Marker

| Type | Ref | Trc | X-value | Y-value | Function | Function Result |
|---|---|---|---|---|---|---|
| M1 | | 1 | 2.47985 GHz | -2.11 dBm | | |
| M2 | | 1 | 2.4835 GHz | -46.15 dBm | | |
| M3 | | 1 | 2.5 GHz | -47.77 dBm | | |
| M4 | | 1 | 2.4926 GHz | -43.98 dBm | | |

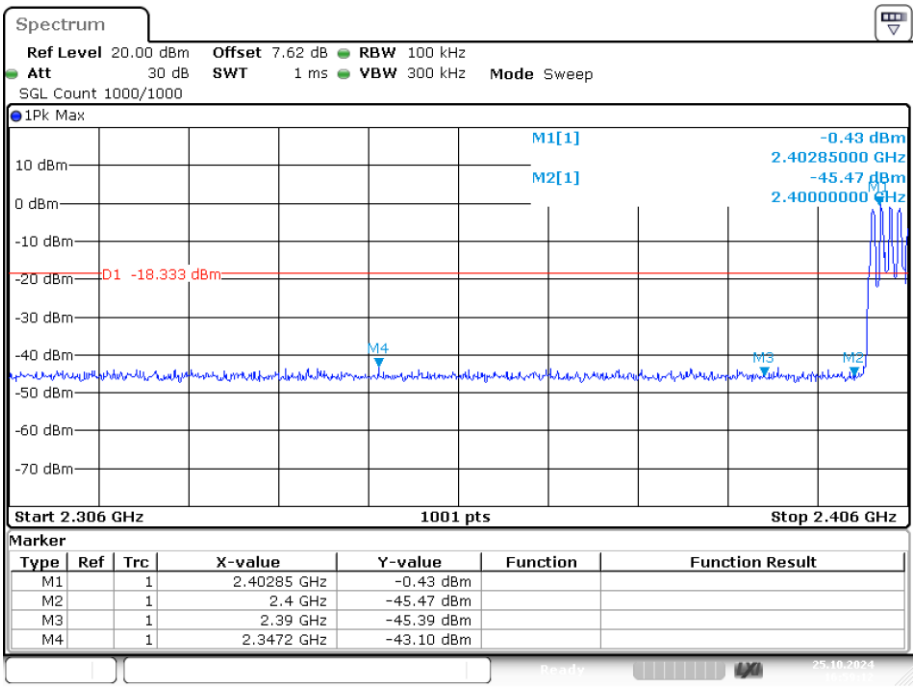
Date: 25.OCT.2024 17:53:03

Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Ref




Date: 25.OCT.2024 16:58:58

Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission

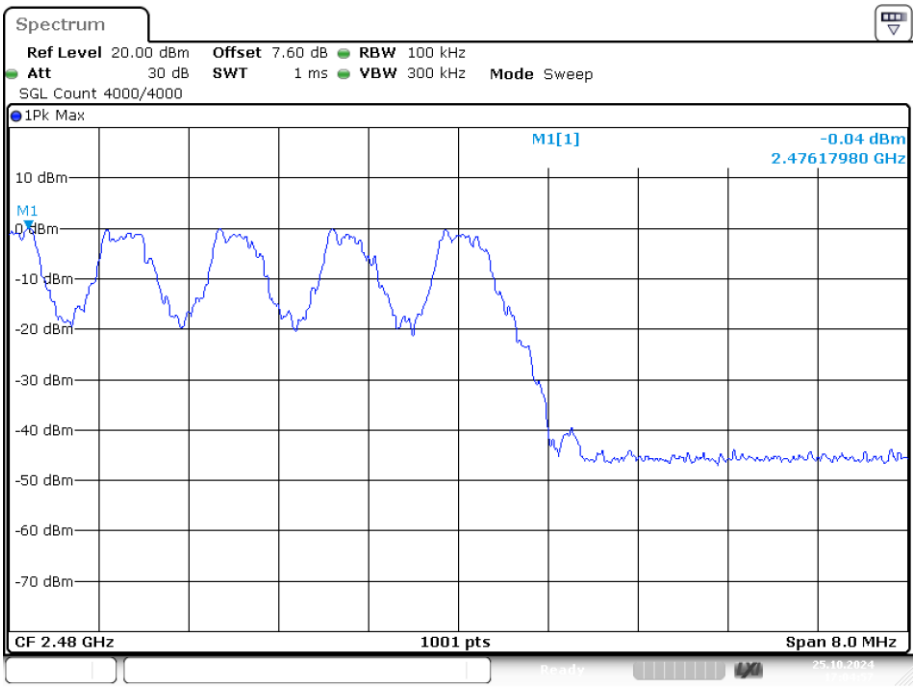



Marker

| Type | Ref | Trc | X-value | Y-value | Function | Function Result |
|---|---|---|---|---|---|---|
| M1 | | 1 | 2.40285 GHz | -0.43 dBm | | |
| M2 | | 1 | 2.4 GHz | -45.47 dBm | | |
| M3 | | 1 | 2.39 GHz | -45.39 dBm | | |
| M4 | | 1 | 2.3472 GHz | -43.10 dBm | | |

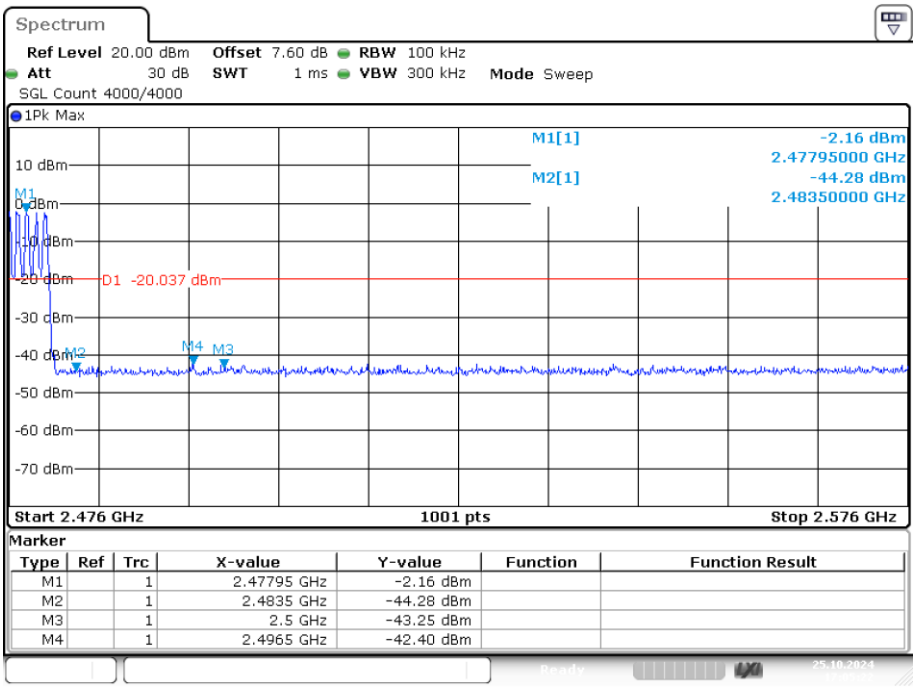
Date: 25.OCT.2024 16:59:12

Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Ref




Date: 25.OCT.2024 17:04:57

Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission

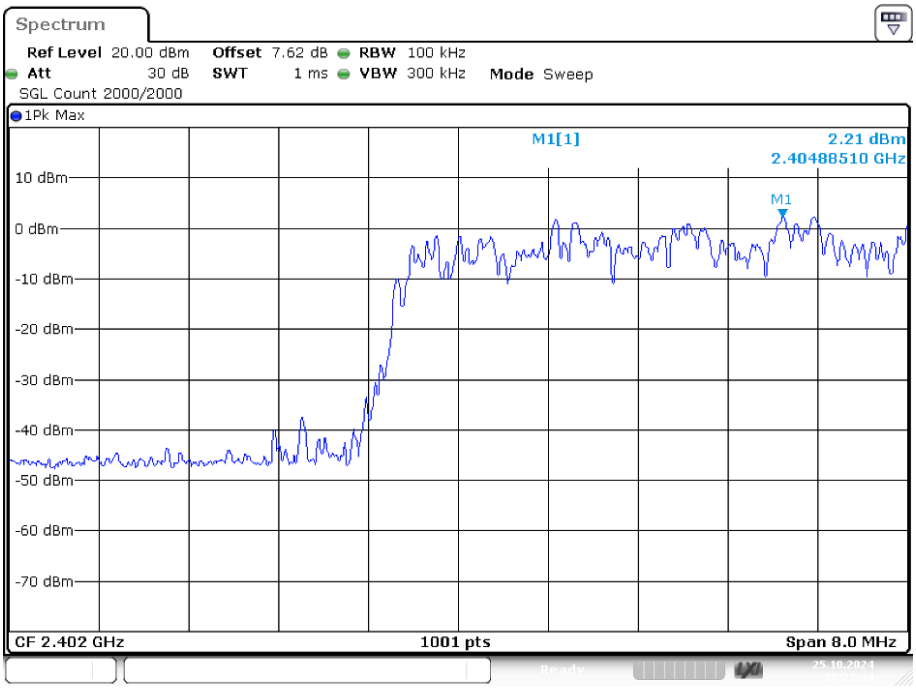



Marker

| Type | Ref | Trc | X-value | Y-value | Function | Function Result |
|---|---|---|---|---|---|---|
| M1 | | 1 | 2.47795 GHz | -2.16 dBm | | |
| M2 | | 1 | 2.4835 GHz | -44.28 dBm | | |
| M3 | | 1 | 2.5 GHz | -43.25 dBm | | |
| M4 | | 1 | 2.4965 GHz | -42.40 dBm | | |

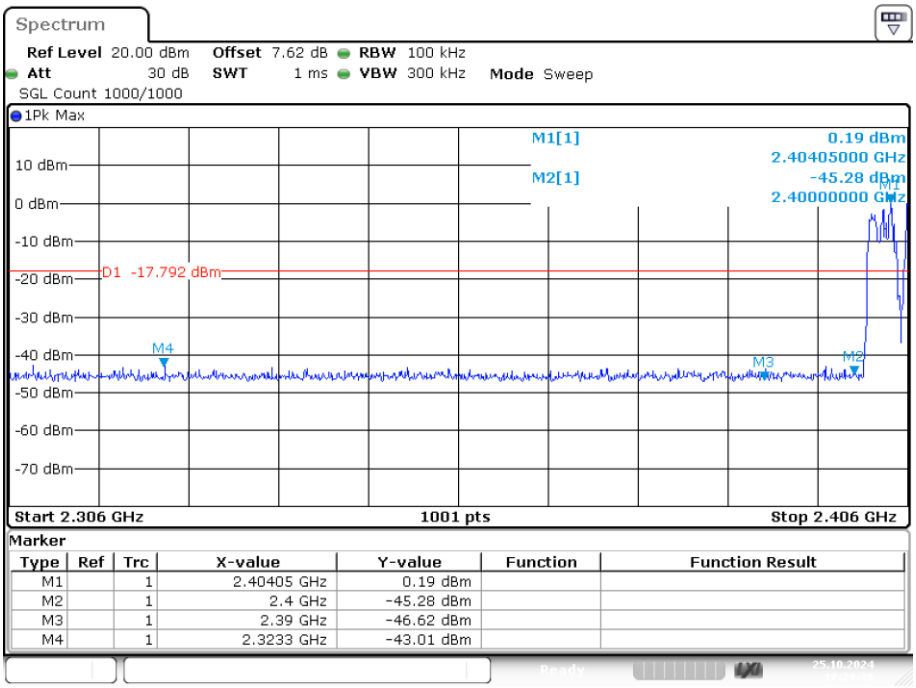
Date: 25.OCT.2024 17:05:22

Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Ref




Date: 25.OCT.2024 17:23:24

Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Emission

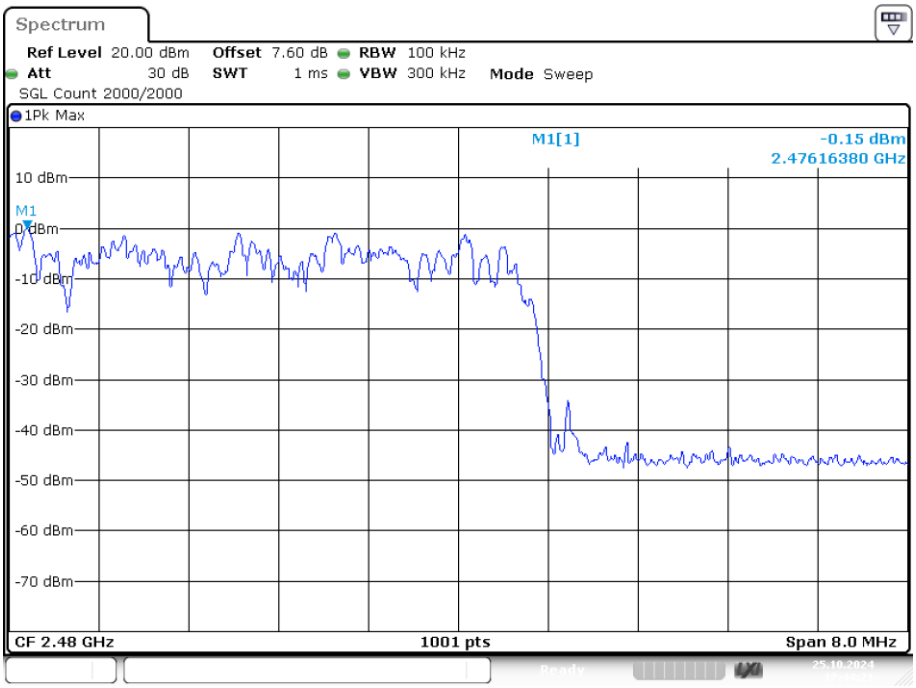



Marker

| Type | Ref | Trc | X-value | Y-value | Function | Function Result |
|---|---|---|---|---|---|---|
| M1 | | 1 | 2.40405 GHz | 0.19 dBm | | |
| M2 | | 1 | 2.4 GHz | -45.28 dBm | | |
| M3 | | 1 | 2.39 GHz | -46.62 dBm | | |
| M4 | | 1 | 2.3233 GHz | -43.01 dBm | | |

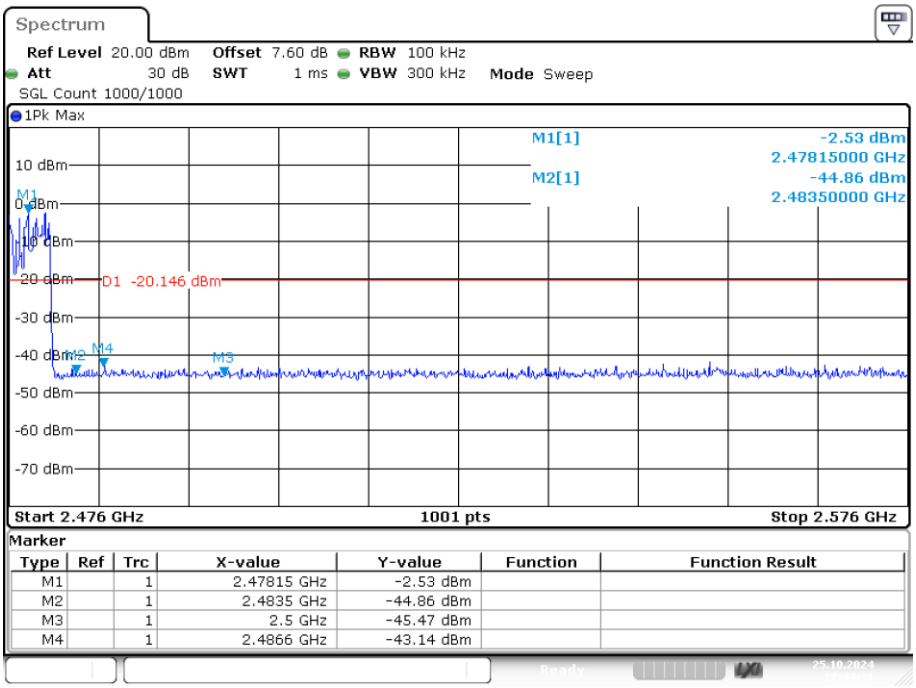
Date: 25.OCT.2024 17:23:37

Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Ref




Date: 25.OCT.2024 17:44:22

Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Emission

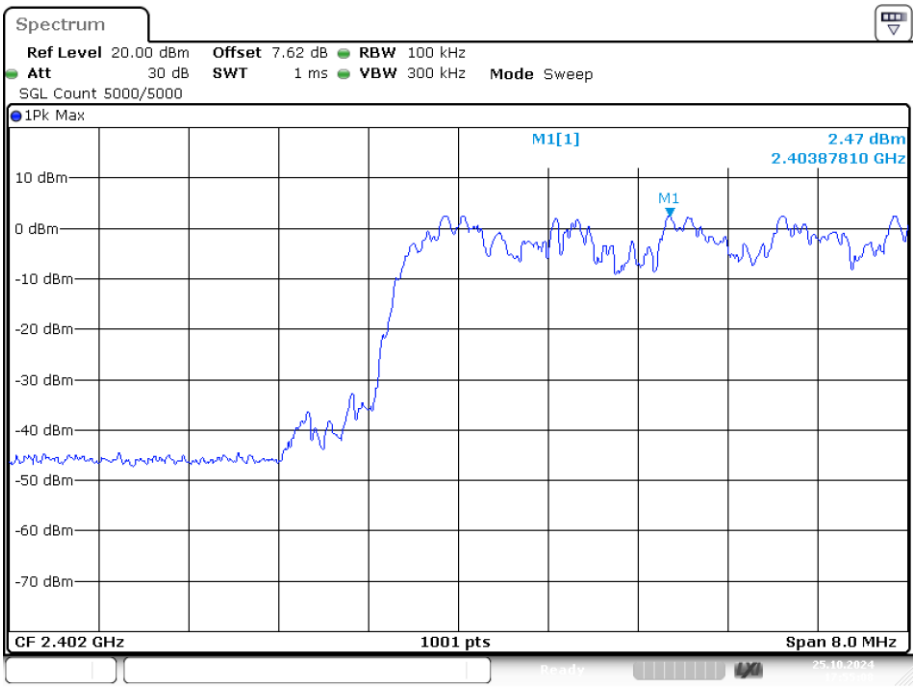



Marker

| Type | Ref | Trc | X-value | Y-value | Function | Function Result |
|---|---|---|---|---|---|---|
| M1 | | 1 | 2.47815 GHz | -2.53 dBm | | |
| M2 | | 1 | 2.4835 GHz | -44.86 dBm | | |
| M3 | | 1 | 2.5 GHz | -45.47 dBm | | |
| M4 | | 1 | 2.4866 GHz | -43.14 dBm | | |

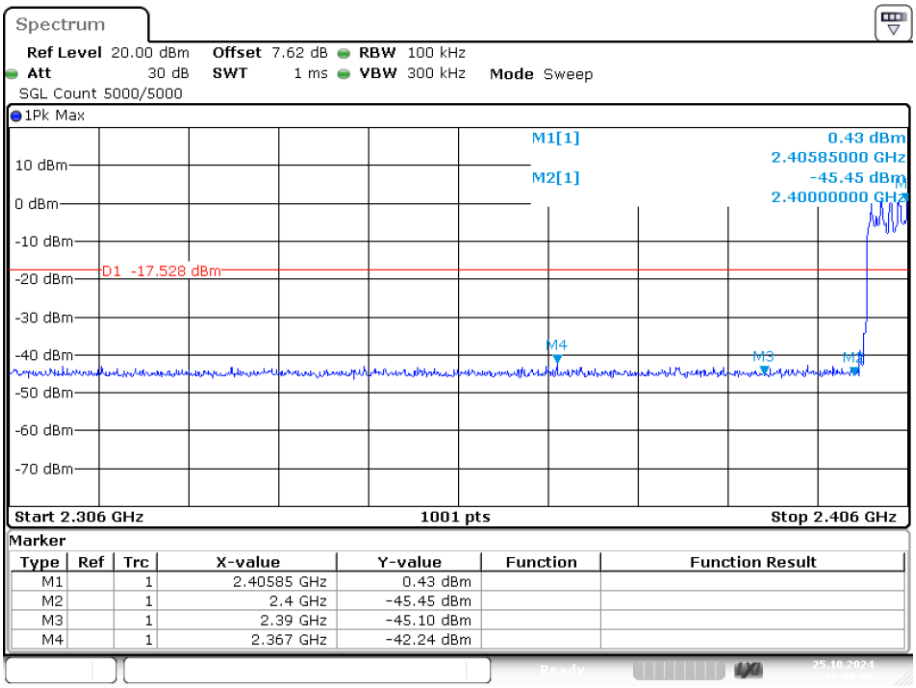
Date: 25.OCT.2024 17:44:30

Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Ref




Date: 25.OCT.2024 17:55:08

Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Emission

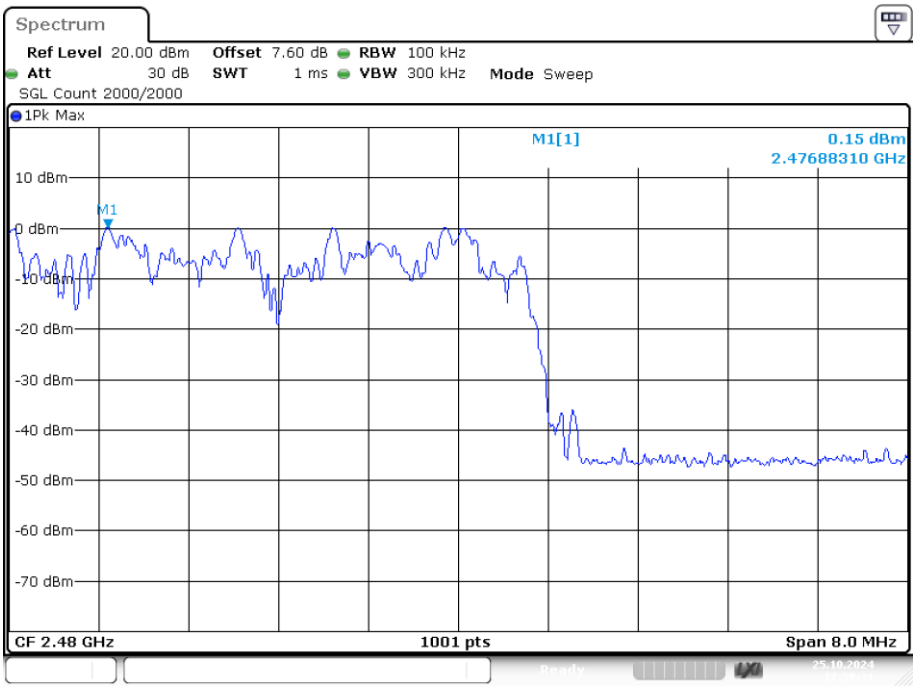



Marker

| Type | Ref | Trc | X-value | Y-value | Function | Function Result |
|---|---|---|---|---|---|---|
| M1 | | 1 | 2.40585 GHz | 0.43 dBm | | |
| M2 | | 1 | 2.4 GHz | -45.45 dBm | | |
| M3 | | 1 | 2.39 GHz | -45.10 dBm | | |
| M4 | | 1 | 2.367 GHz | -42.24 dBm | | |

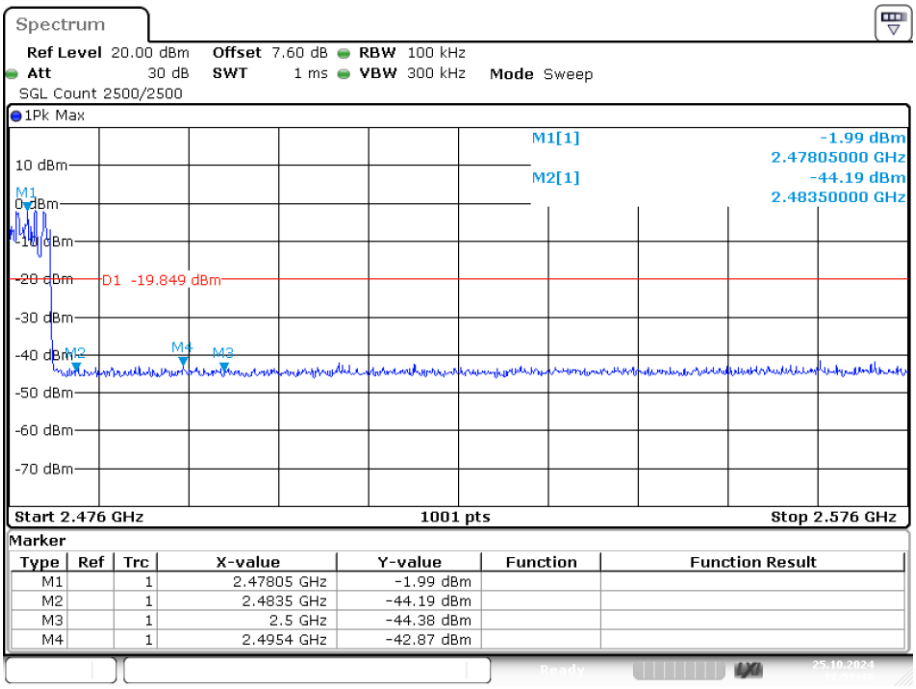
Date: 25.OCT.2024 17:56:06

Band Edge(Hopping) NVNT 3-DH1 2480MHz Ant1 Hopping Ref




Date: 25.OCT.2024 17:59:31

Band Edge(Hopping) NVNT 3-DH1 2480MHz Ant1 Hopping Emission



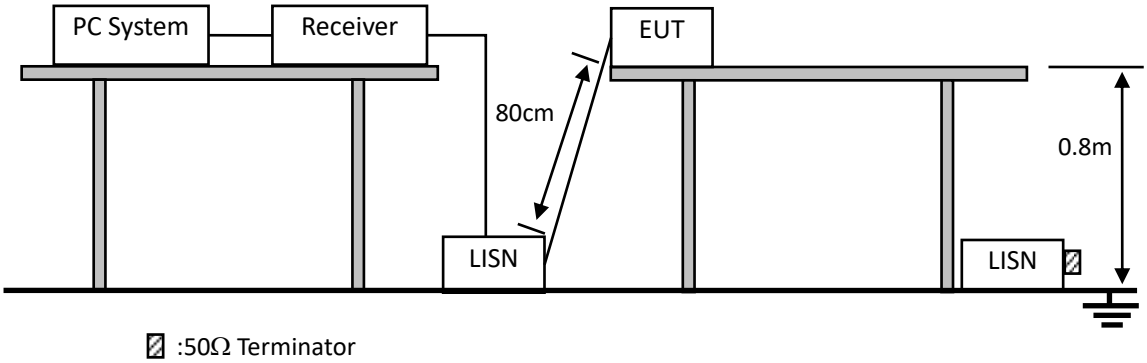

Marker

| Type | Ref | Trc | X-value | Y-value | Function | Function Result |
|---|---|---|---|---|---|---|
| M1 | | 1 | 2.47805 GHz | -1.99 dBm | | |
| M2 | | 1 | 2.4835 GHz | -44.19 dBm | | |
| M3 | | 1 | 2.5 GHz | -44.38 dBm | | |
| M4 | | 1 | 2.4954 GHz | -42.87 dBm | | |

Date: 25.OCT.2024 17:59:48

# 10. POWER LINE CONDUCTED EMISSIONS

## 10.1.Block Diagram of Test Setup




## 10.2.Limit

| Frequency | Maximum RF Line Voltage | |
|---|---|---|
| | Quasi-Peak Level dB(μV) | Average Level dB(μV) |
| 150kHz ~ 500kHz | 66 ~ 56* | 56 ~ 46* |
| 500kHz ~ 5MHz | 56 | 46 |
| 5MHz ~ 30MHz | 60 | 50 |

Notes: 1. * Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

## 10.3.Test Procedure

(1) The EUT was placed on a non-metallic table, 80cm above the ground plane.

(2) Setup the EUT and simulator as shown in 10.1

(3) The EUT Power connected to the power mains through a power adapter and a line impedance stabilization network (L.I.S.N1). The other peripheral devices power cord connected to the power mains through a line impedance stabilization network (L.I.S.N2), this provided a 50-ohm coupling impedance for the EUT (Please refer to the block diagram of the test setup and photographs). Both sides of power line were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.10 :2013on conducted Emission test.

(4) The bandwidth of test receiver is set at 10KHz.

(5) The frequency range from 150 KHz to 30MHz is checked.

## 10.4.Test Result

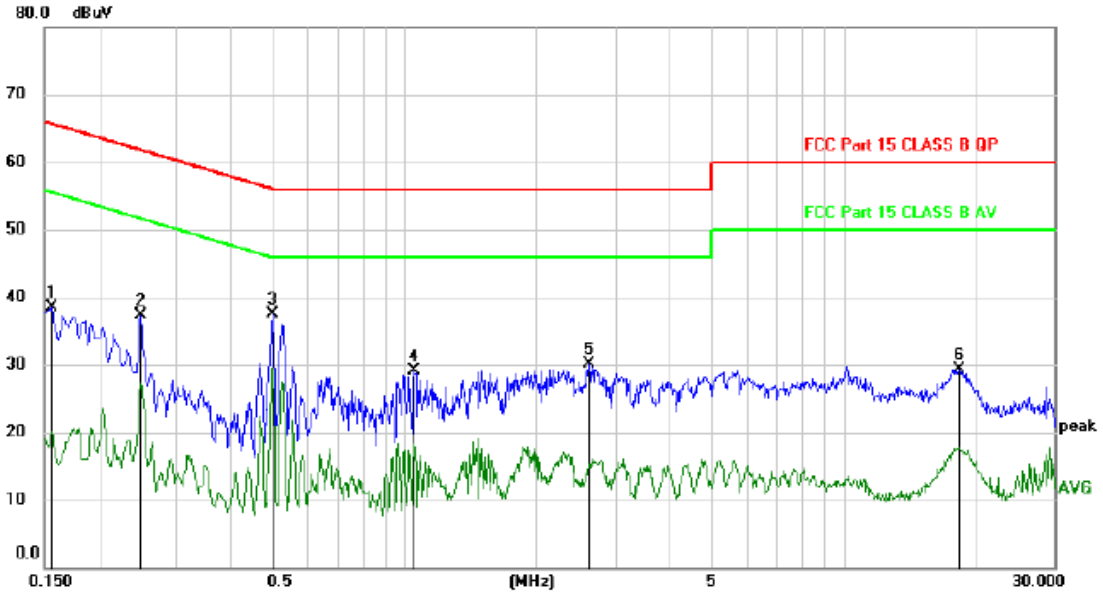
Note: See below original test data.

1. This mode is worst case mode, so this report only reflected the worst mode.

2. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector and quasi-peak detector need not be carried out.

3. If the limits for the measurement with the average detector are met when using a receiver with a quasi-peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.

## Polarization: L

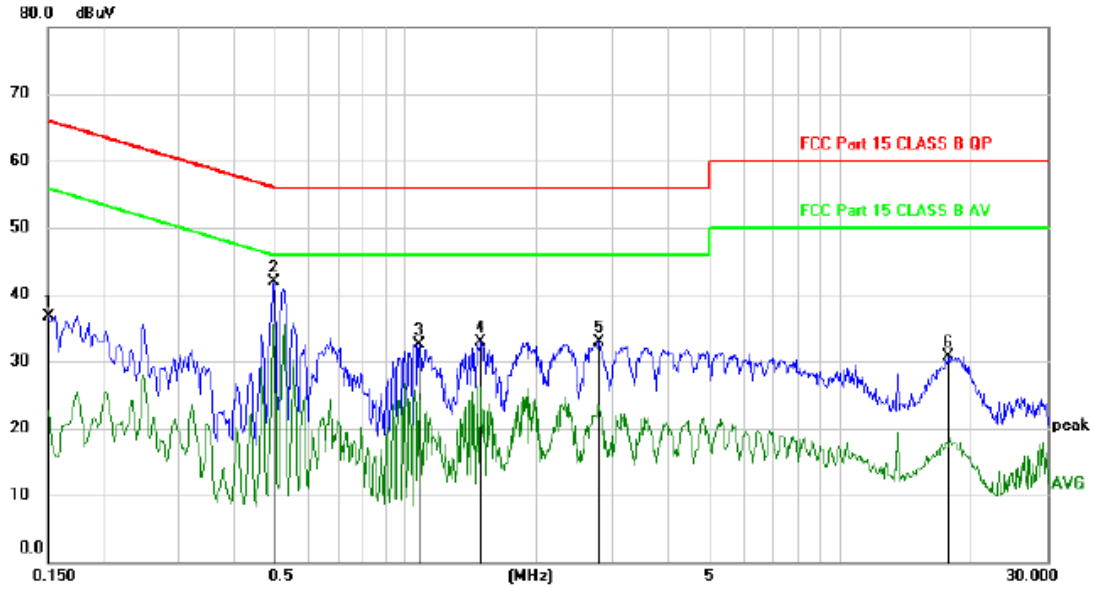



| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Margin | | |
|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBuV | dB | dBuV | dBuV | dB | Detector | Comment |
| 1 | | 0.1560 | 28.48 | 9.94 | 38.42 | 65.67 | -27.25 | peak | |
| 2 | | 0.2490 | 27.36 | 9.97 | 37.33 | 61.79 | -24.46 | peak | |
| 3 | * | 0.4980 | 27.47 | 9.96 | 37.43 | 56.03 | -18.60 | peak | |
| 4 | | 1.0470 | 19.15 | 9.92 | 29.07 | 56.00 | -26.93 | peak | |
| 5 | | 2.6220 | 20.10 | 9.92 | 30.02 | 56.00 | -25.98 | peak | |
| 6 | | 18.2790 | 18.91 | 10.42 | 29.33 | 60.00 | -30.67 | peak | |

*:Maximum data x:Over limit !:over margin 〈Reference Only

Note: Measurement=Reading Level+Correc Factor. Factor=(LISN or ISN or PLC or Current Probe)Factor+Cable

## Polarization: N




| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Margin | | |
|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBuV | dB | dBuV | dBuV | dB | Detector | Comment |
| 1 | | 0.1500 | 26.81 | 9.94 | 36.75 | 66.00 | -29.25 | peak | |
| 2 | * | 0.4980 | 32.03 | 9.96 | 41.99 | 56.03 | -14.04 | peak | |
| 3 | | 1.0740 | 22.66 | 9.91 | 32.57 | 56.00 | -23.43 | peak | |
| 4 | | 1.4880 | 23.04 | 9.90 | 32.94 | 56.00 | -23.06 | peak | |
| 5 | | 2.7810 | 23.01 | 9.94 | 32.95 | 56.00 | -23.05 | peak | |
| 6 | | 17.8290 | 20.29 | 10.41 | 30.70 | 60.00 | -29.30 | peak | |

*:Maximum data x:Over limit !:over margin 〈Reference Only

Note: Measurement=Reading Level+Correc Factor. Factor=(LISN or ISN or PLC or Current Probe)Factor+Cable

# 11. ANTENNA REQUIREMENTS

## 11.1.Limit

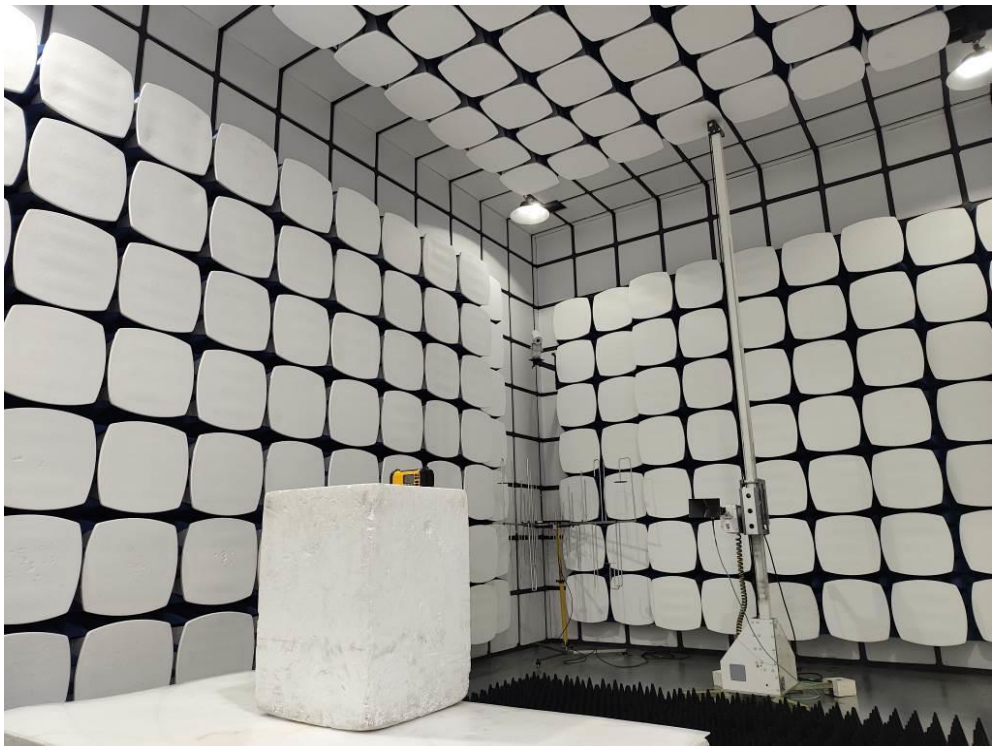
For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

## 11.2.Result

The EUT antenna is Internal Antenna. It complies with the standard requirement.

# 12. TEST SETUP PHOTO

## 12.1.Photo of Radiated Emission test



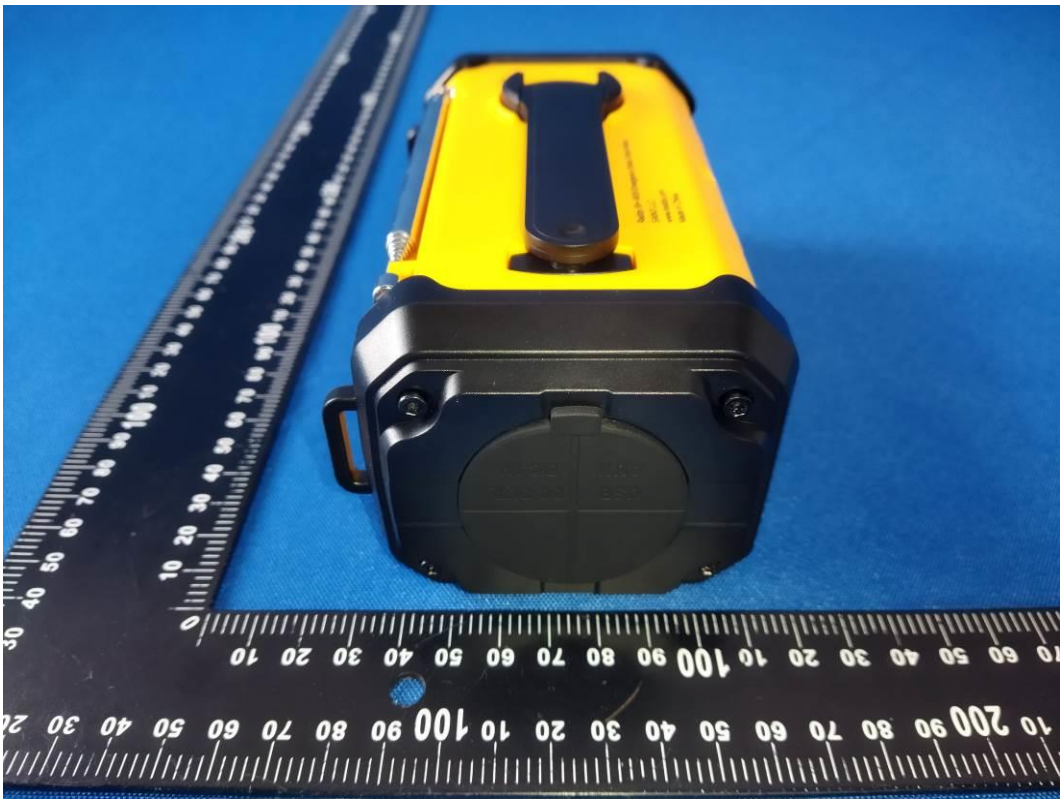
## 12.2.Photo of Conducted Emission test

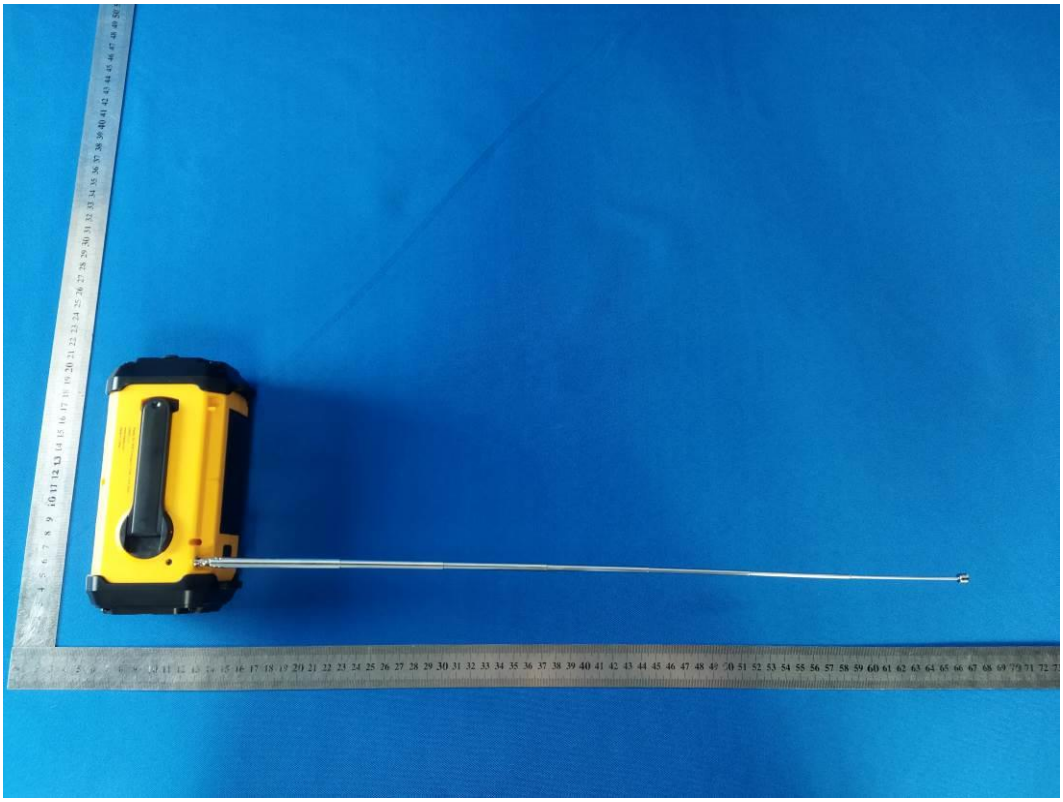
# 13. EUT Photo

SOS
METE
BTMP3
EQ
MEMO.
SCAN
CH-
CH+
SET
TUNING
VOL-
VOL+
TIME
BAND
ALERT

SOS
METE
BTMP3
EQ
MEMO.
SCAN
CH-
CH+
SET
TUNING
VOL-
VOL+
TIME
BAND
ALERT

Raddy SH-906 Emergency Solar Charge Radio
SAINA LLC
www.raddy.com
Made in China

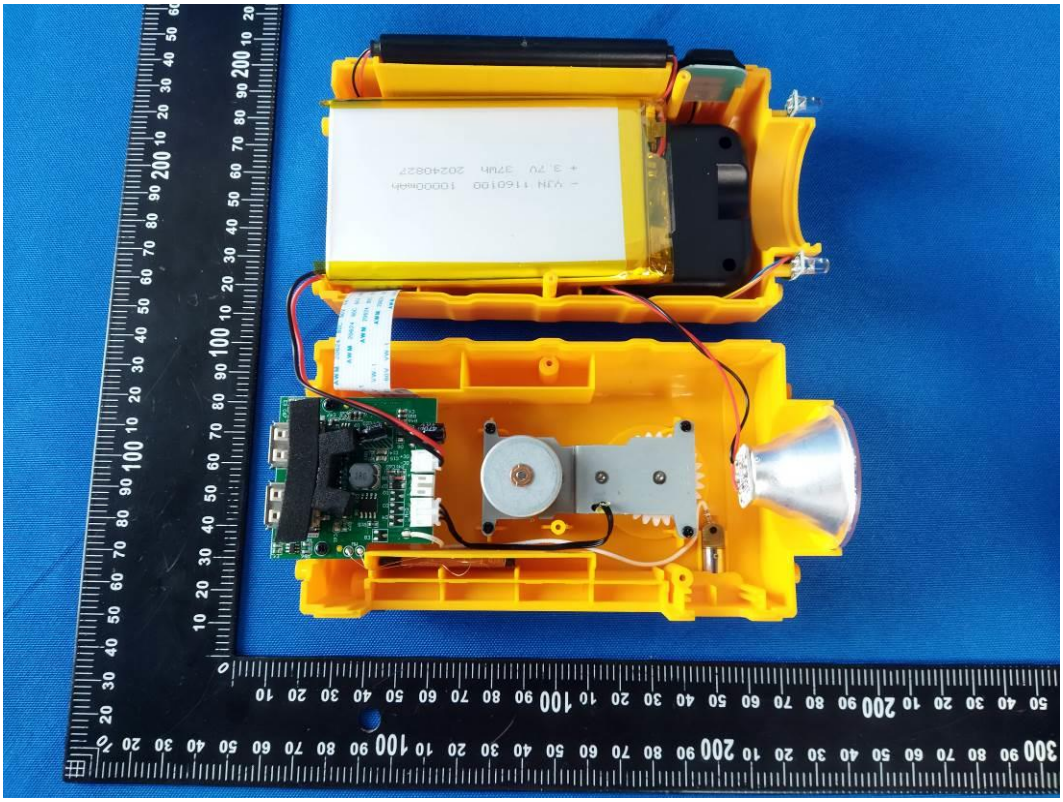


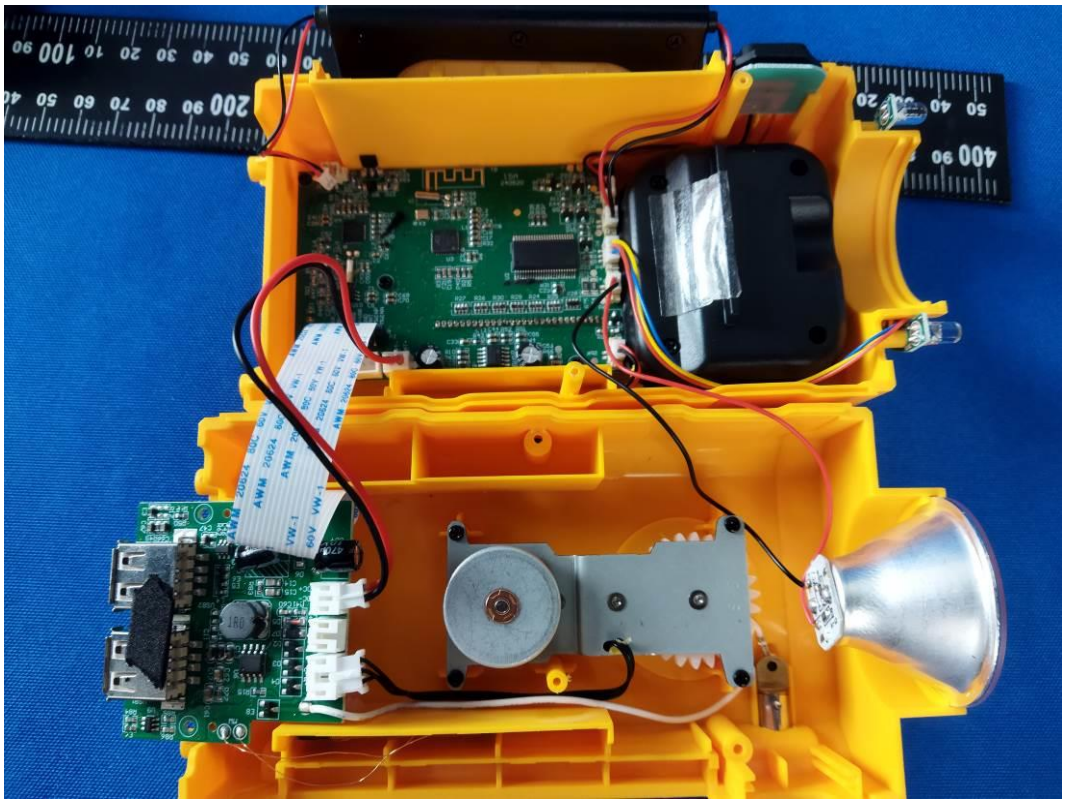


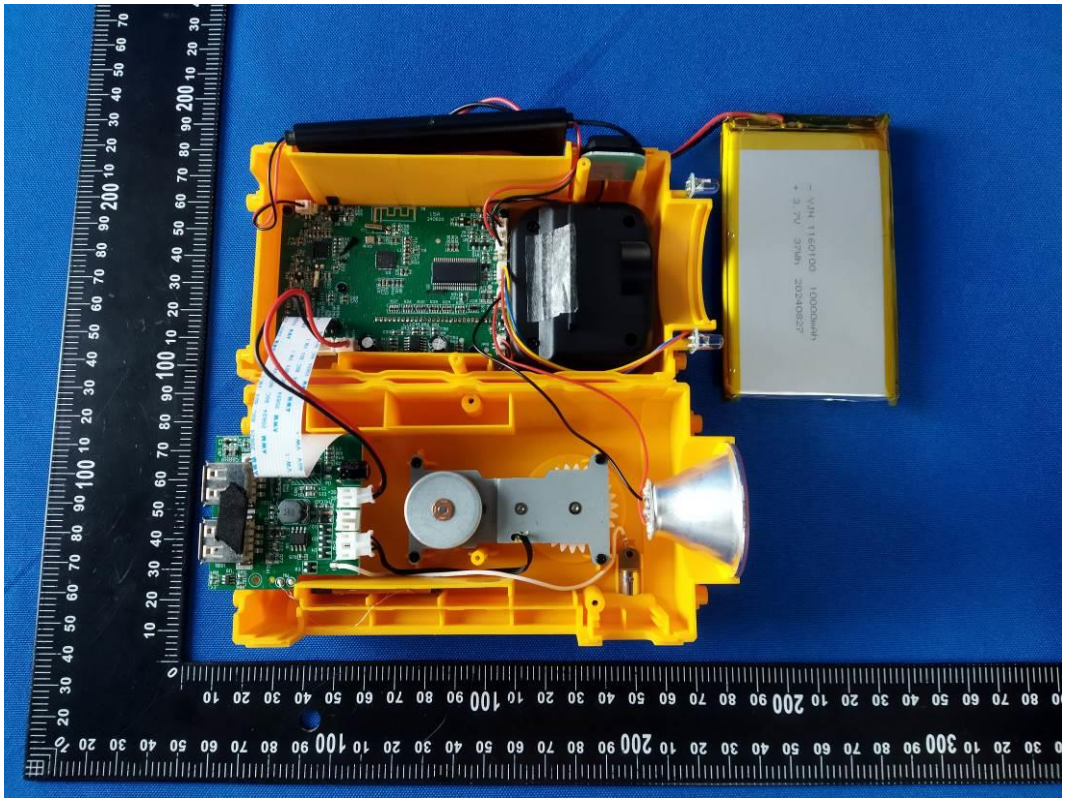
Raddy SH-906 Emergency Solar Crank Radio
SAIN3 LLC
www.iraddy.com
Made in China

USB
DC OUT
AUX
DC IN

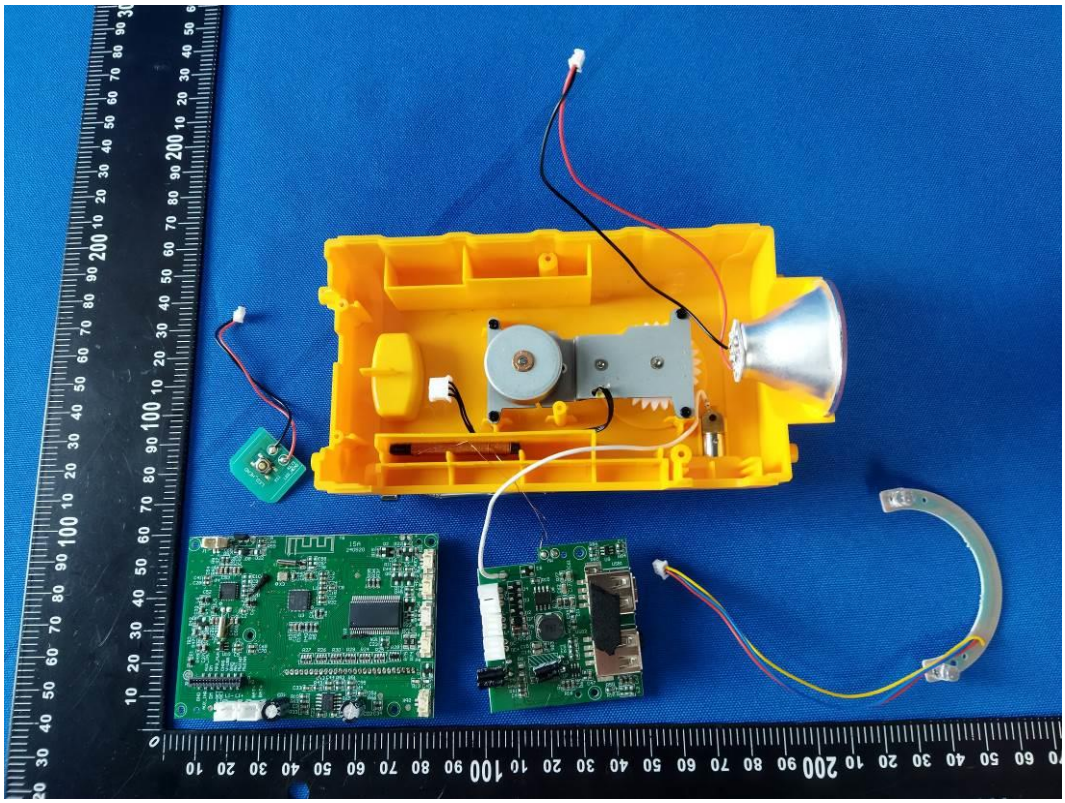
Raddy SH-906 Emergency Solar Crank Radio
SAIN3 LLC
www.iraddy.com
Made in China

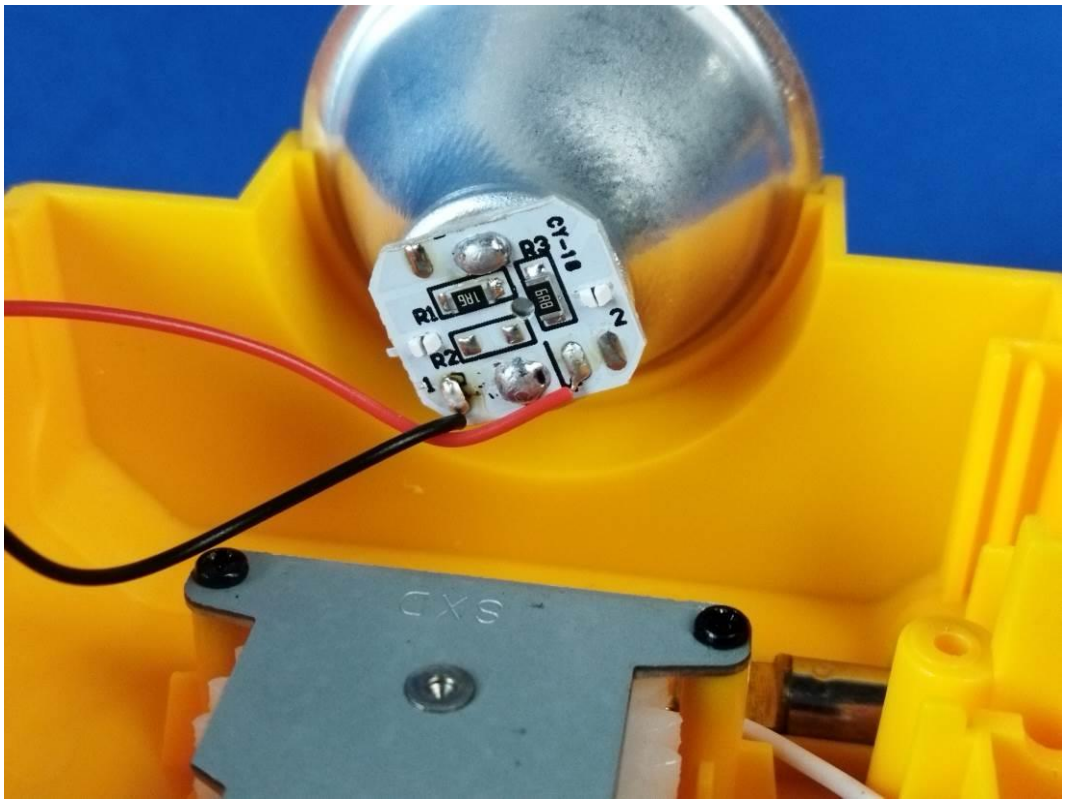






- YJN 1160100 10000mAh
+ 3.7V 37Wh 20240827




R1
R2
R3
1
2