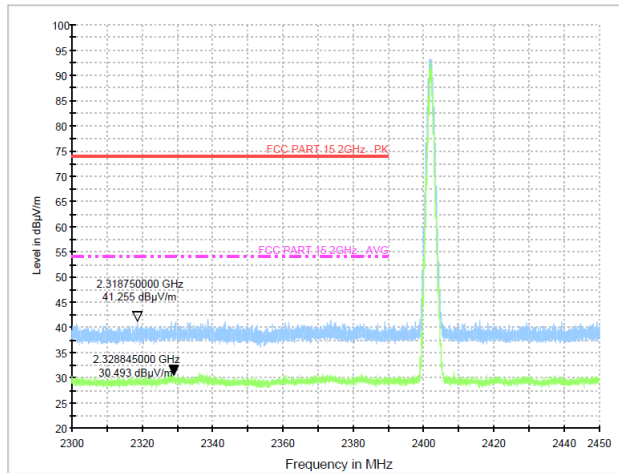
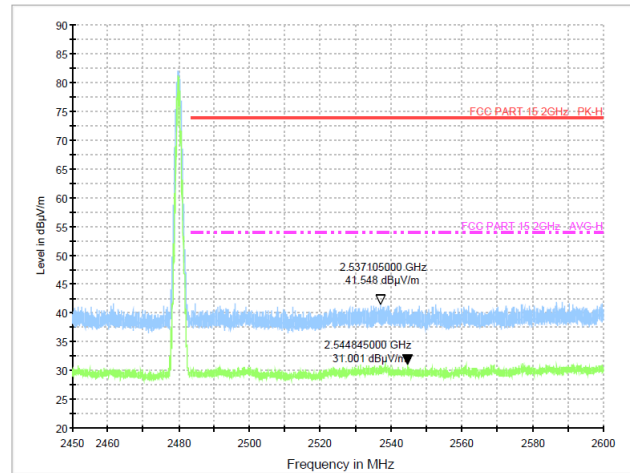
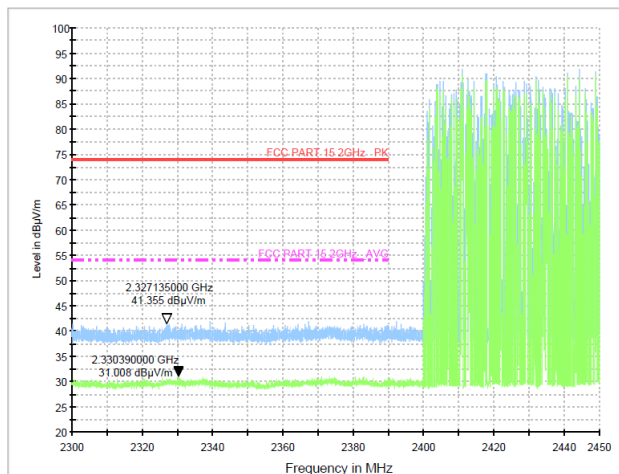
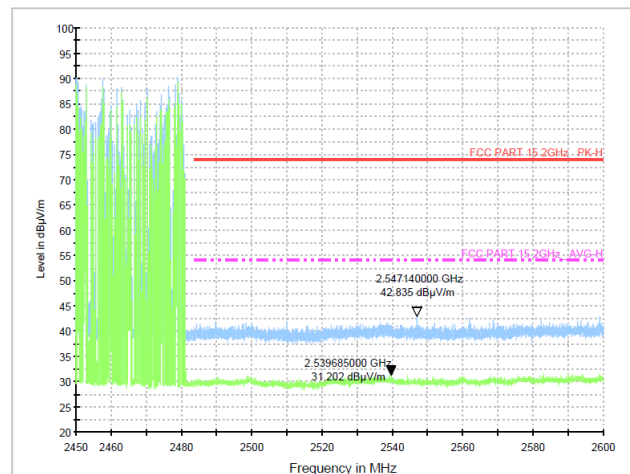
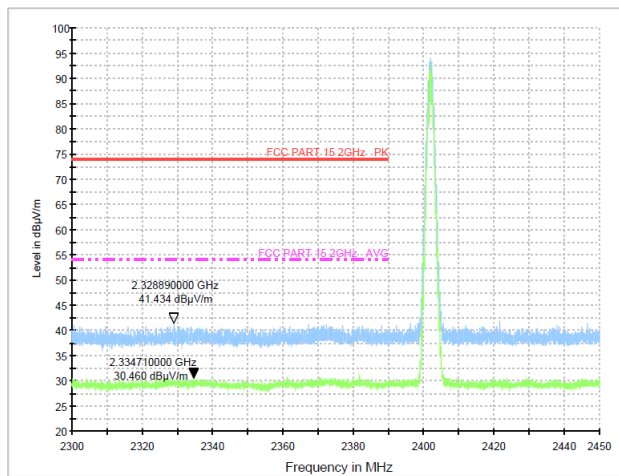


Test Mode:  $\pi/4$  DQPSK-Low Hopping-offTest Mode:  $\pi/4$  DQPSK-High Hopping-offTest Mode:  $\pi/4$  DQPSK-Low Hopping-onTest Mode:  $\pi/4$  DQPSK-High Hopping-on

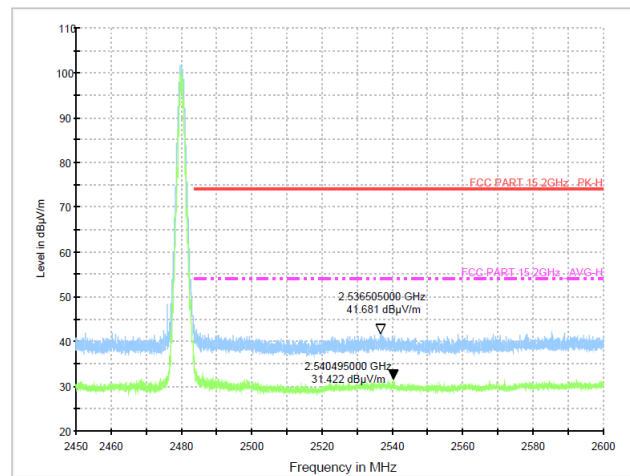
Note: 1. \*:Maximum data; x:Over limit; !:over margin.

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

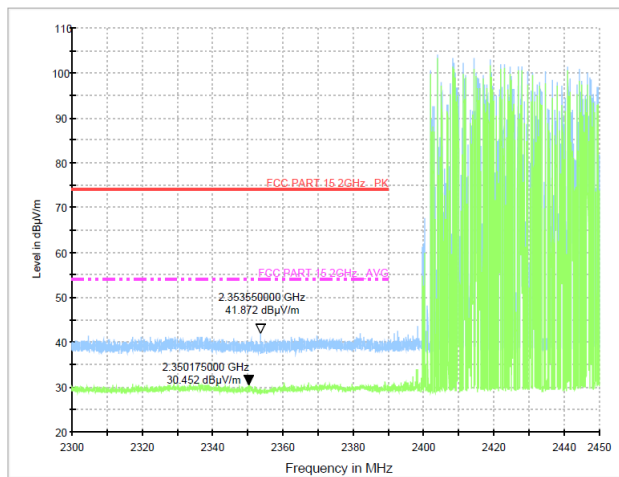
Test Mode: 8DPSK-Low Hopping-off



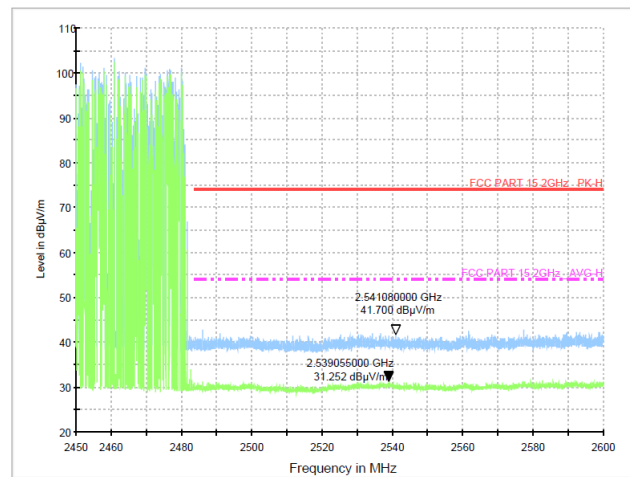
Test Mode: 8DPSK-High Hopping-off



Test Mode: 8DPSK-Low Hopping-on

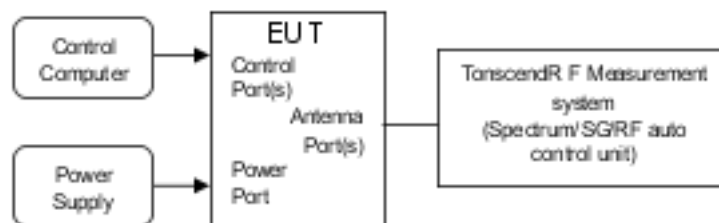


Test Mode: 8DPSK-High Hopping-on



## 11. BAND EDGE (CONDUCTED)

### 11.1. Block Diagram of Test Setup



### 11.2. Test Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

### 11.3. Test Procedure

Details see the KDB 558074 D01 15.247 Meas Guidance v05r02

Place the EUT on the table and set it in transmitting mode.

11.3.1. Place the EUT on the table and set it in transmitting mode.

11.3.2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.

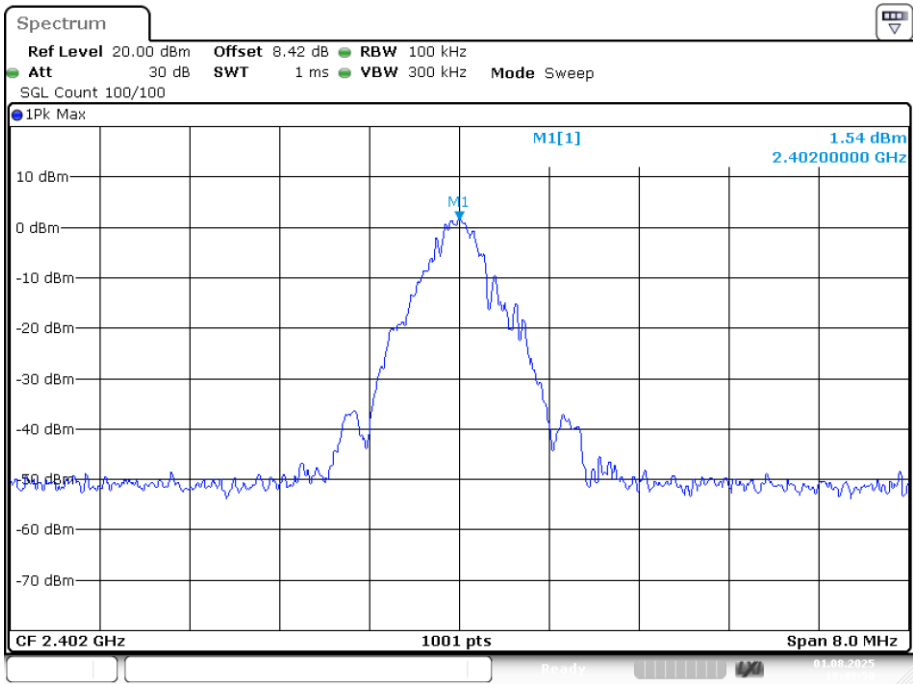
11.3.3. Set the spectrum analyzer as RBW=100KHz, VBW=300KHz, Sweep = auto.

11.3.4. Repeat above procedures until all frequency measured were complete..

11.4. Test Results

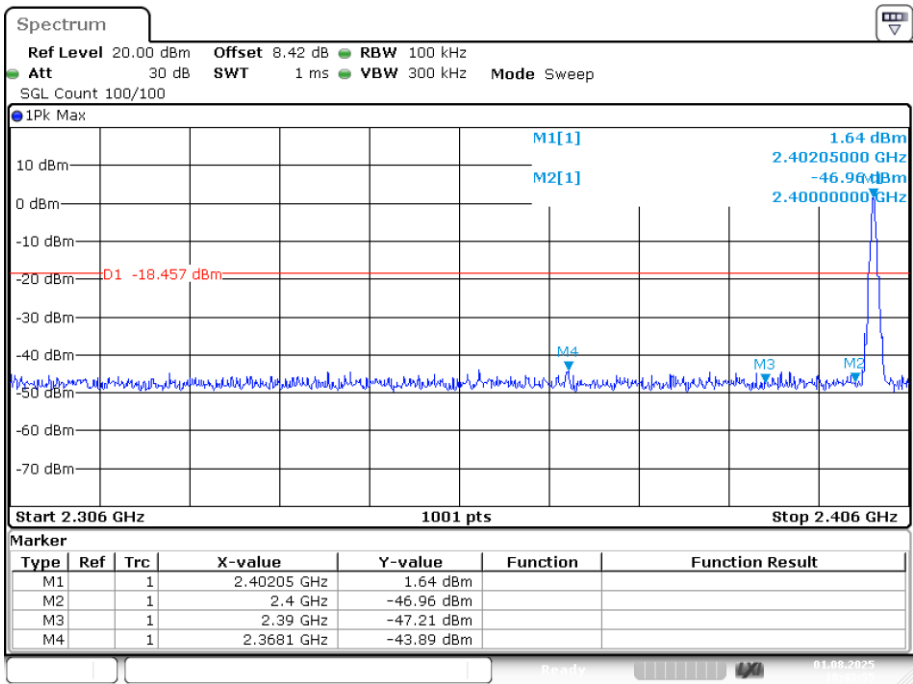
Pass

Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Ref



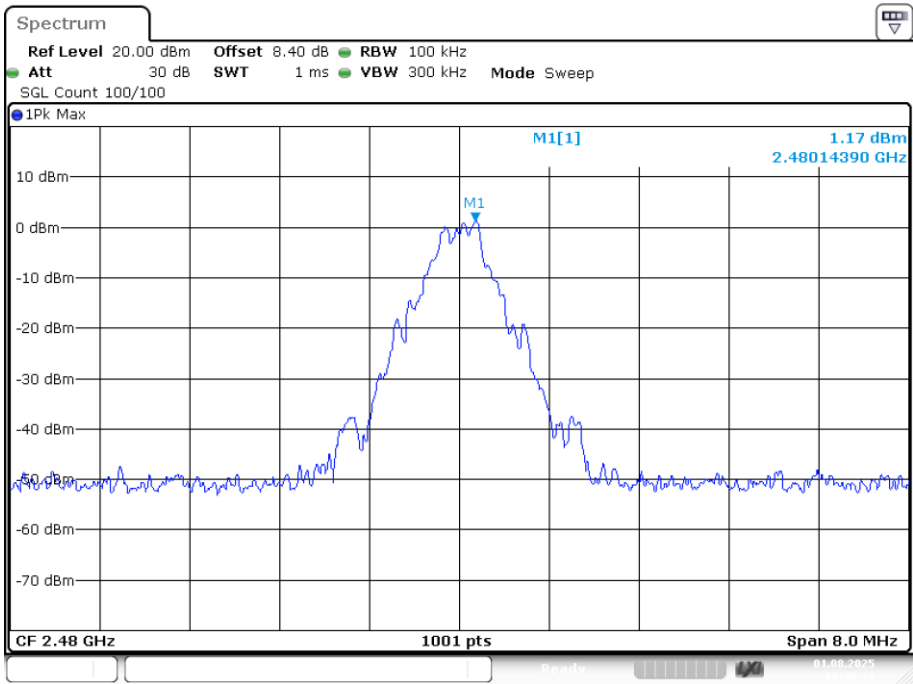
Date: 1.AUG.2025 18:43:50

Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission



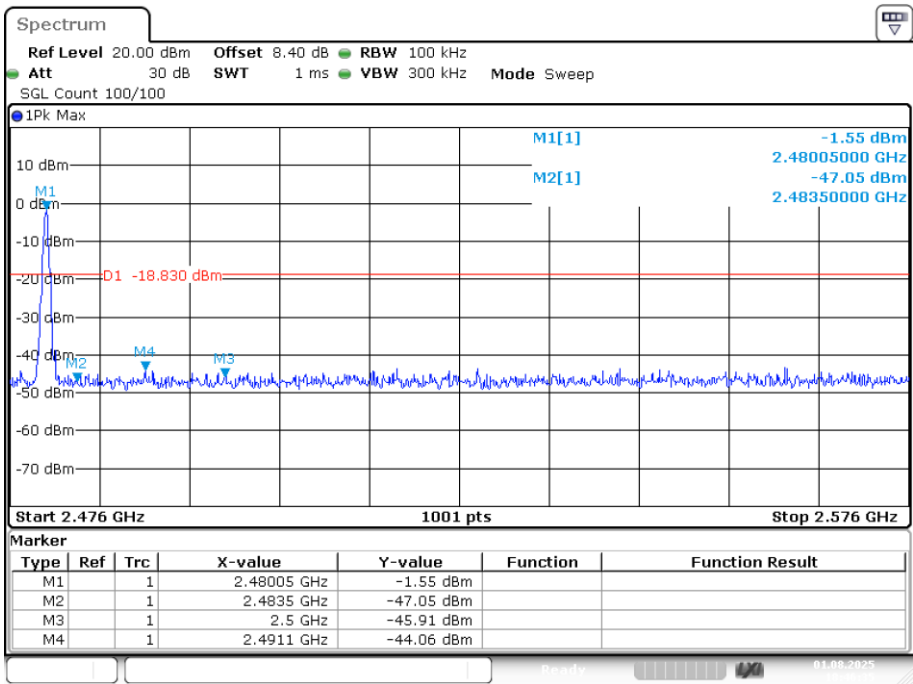
Date: 1.AUG.2025 18:43:54

Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref



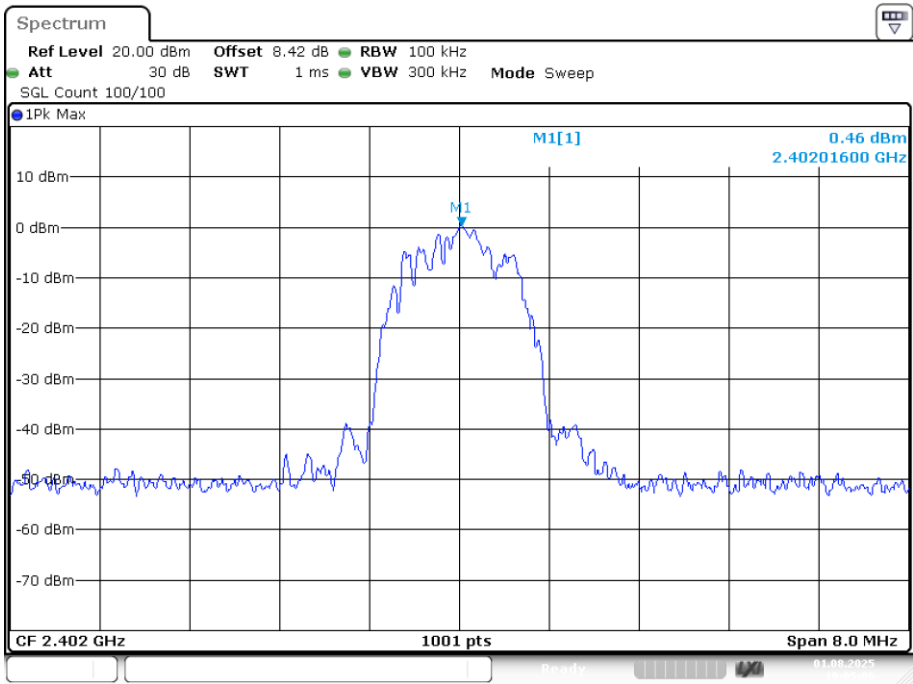
Date: 1.AUG.2025 18:46:31

Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission



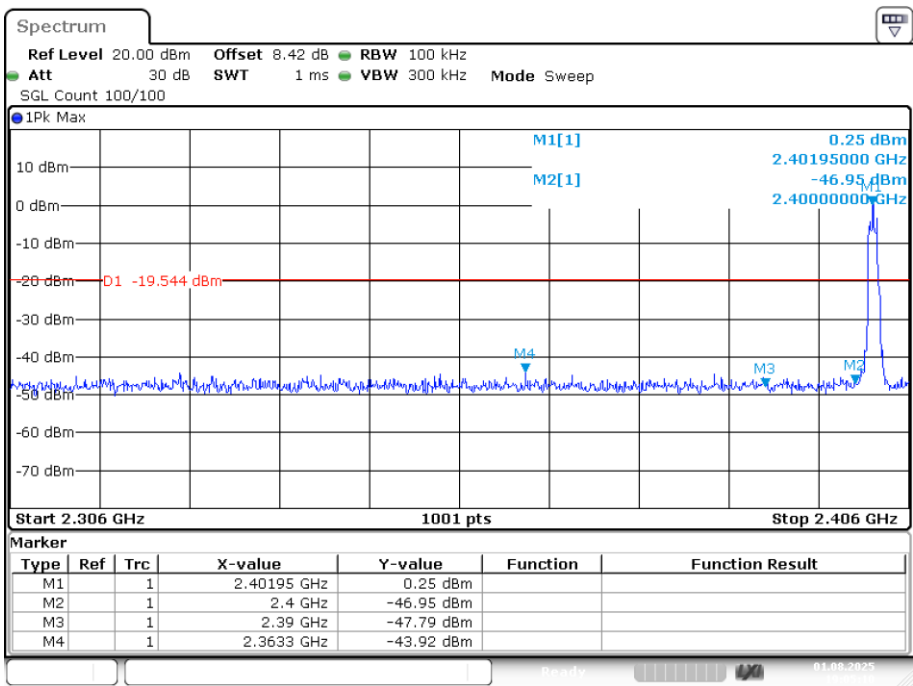
Date: 1.AUG.2025 18:46:34

Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref



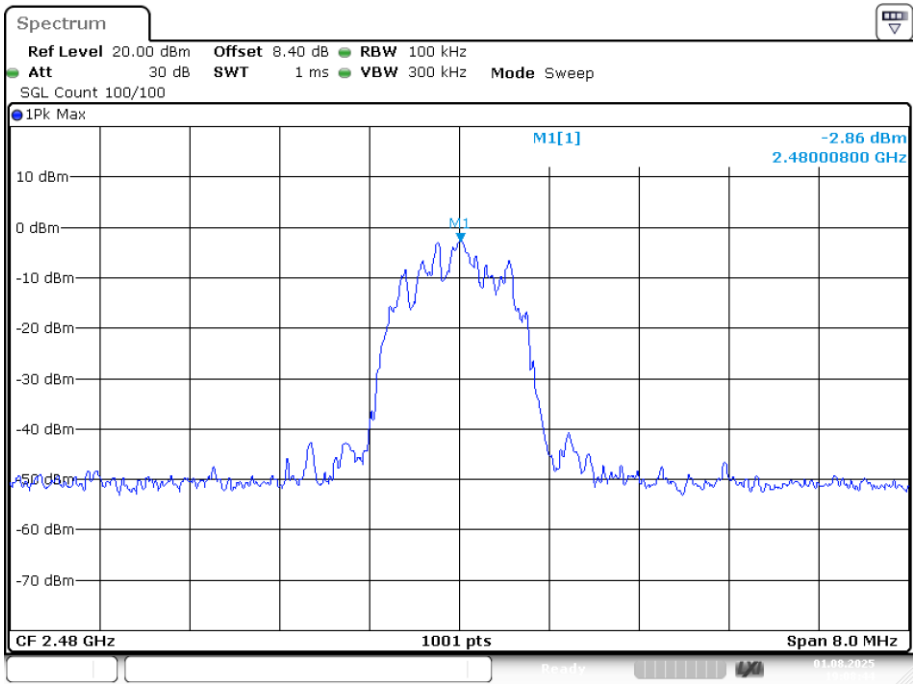
Date: 1.AUG.2025 19:05:06

Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission



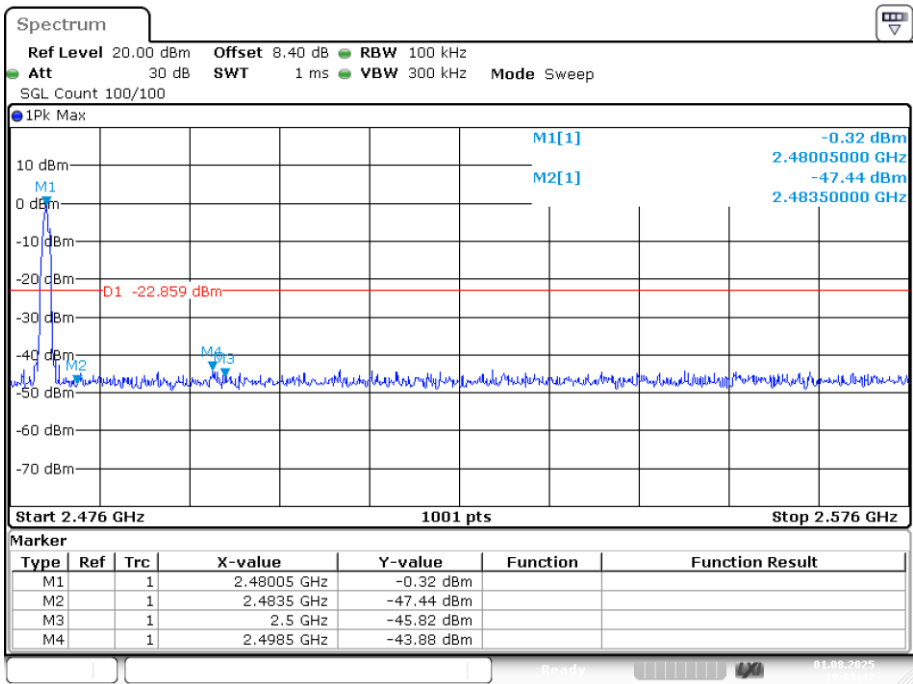
Date: 1.AUG.2025 19:05:10

Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref



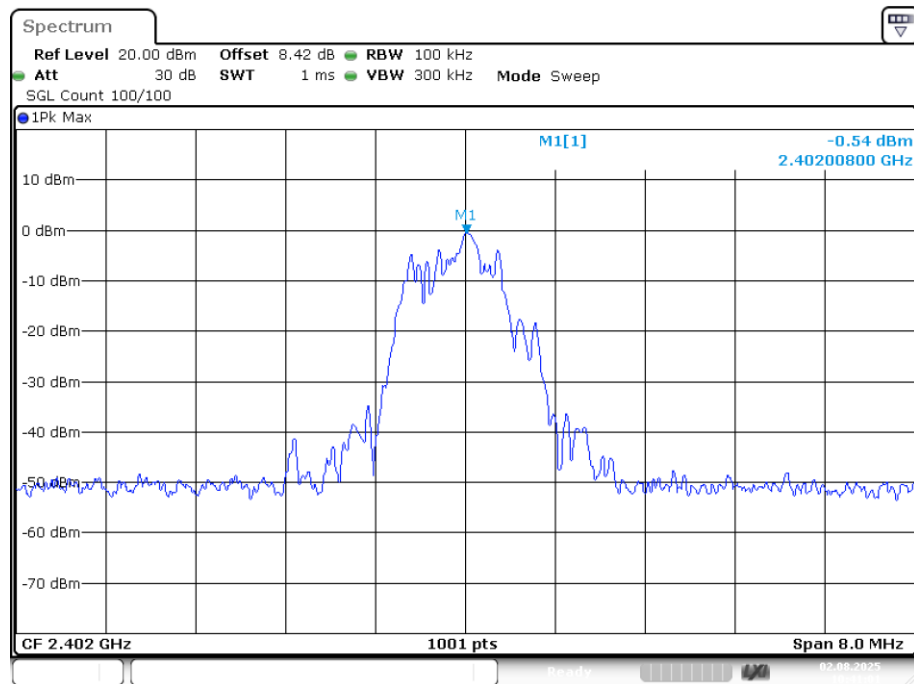
Date: 1.AUG.2025 19:08:44

Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Emission



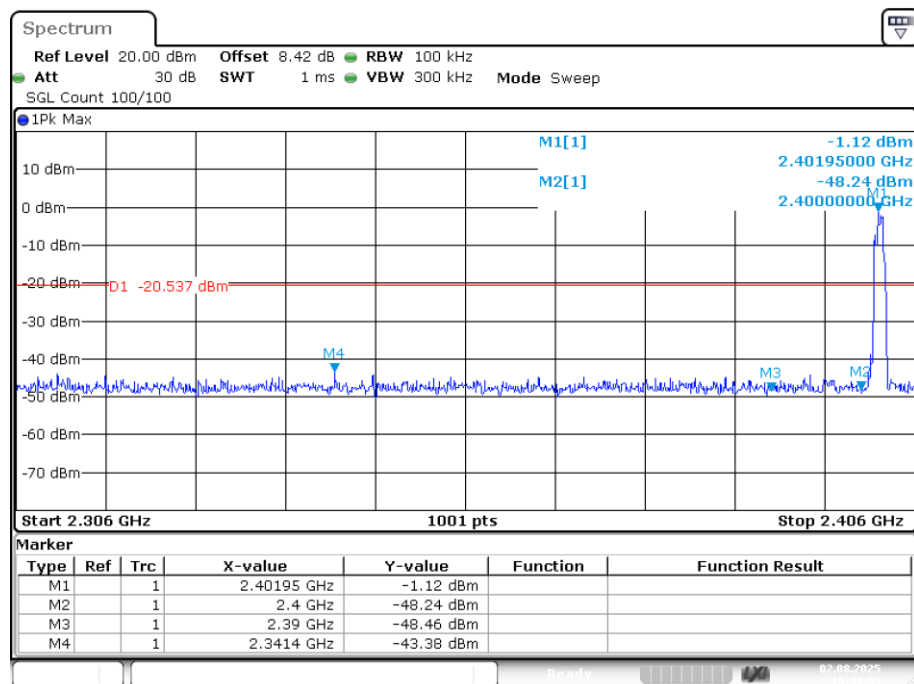
Date: 1.AUG.2025 19:08:47

Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref



Date: 2.AUG.2025 10:41:00

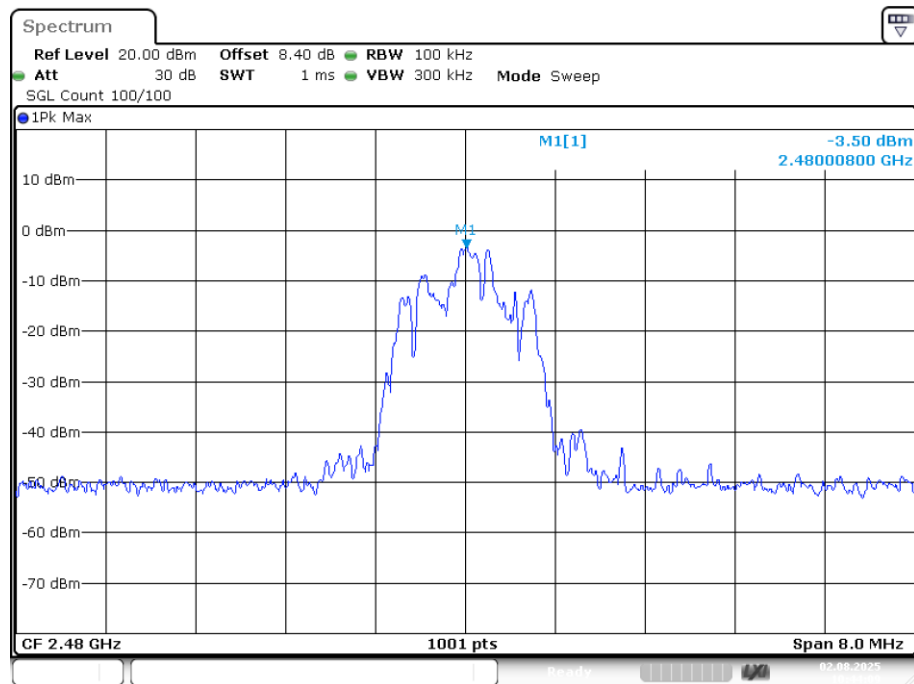
## Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Emission



Date: 2.AUG.2025 10:41:04

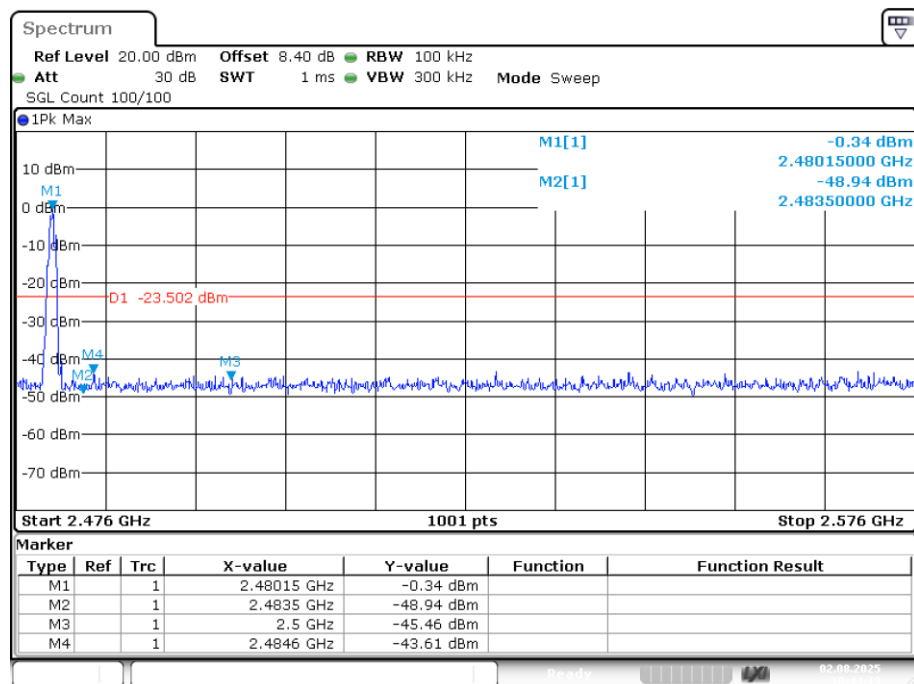
## Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Ref





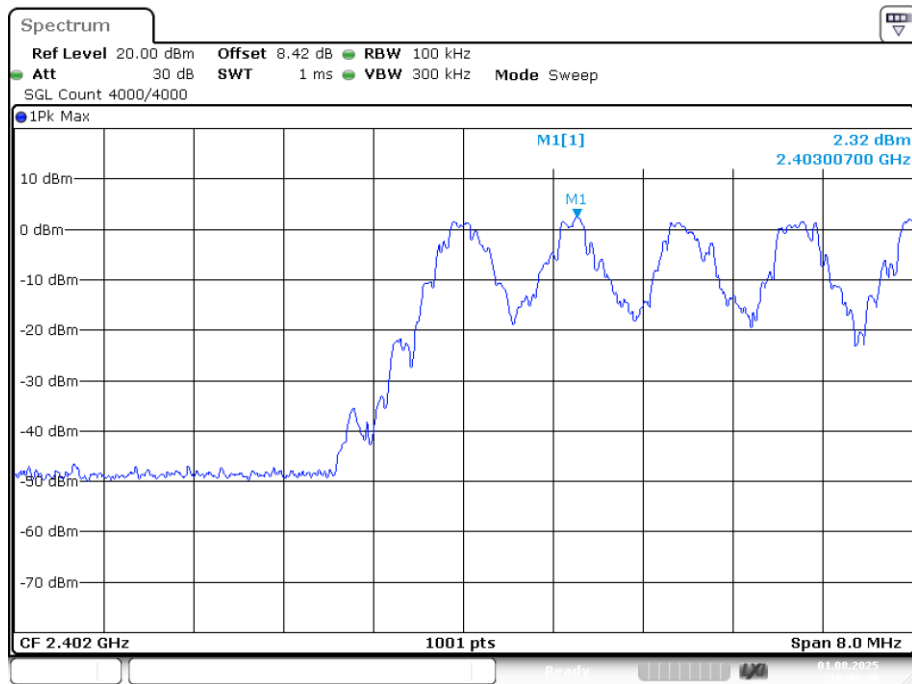
Date: 2.AUG.2025 10:44:08

## Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Emission



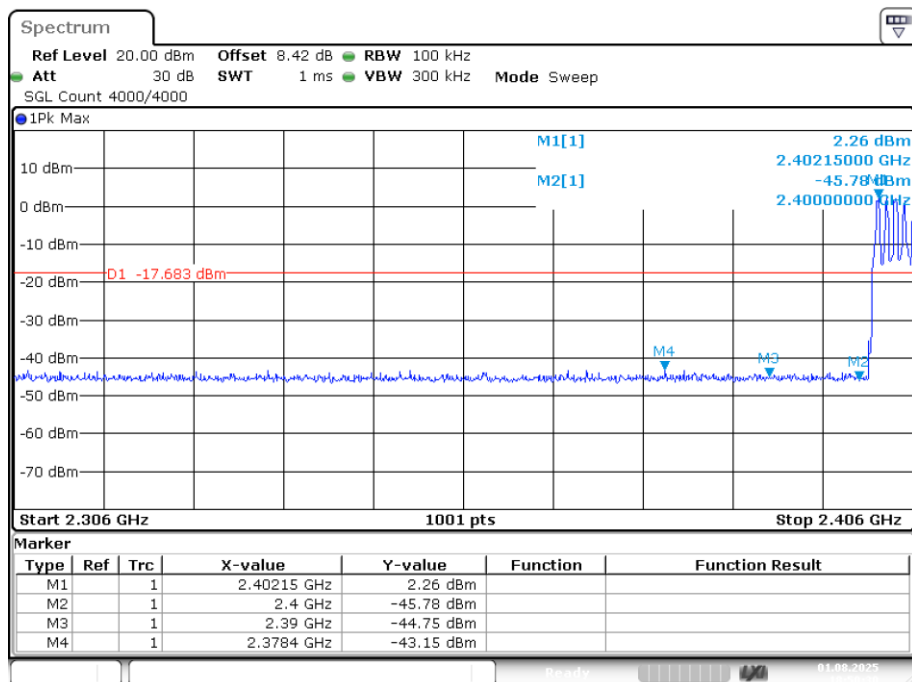
Date: 2.AUG.2025 10:44:12

## Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Ref



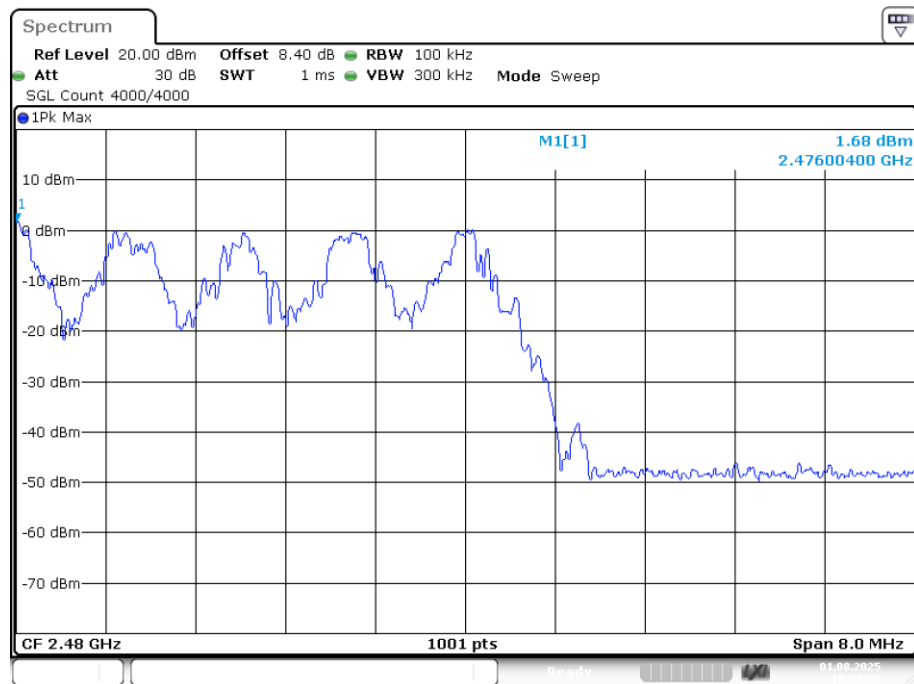
Date: 1.AUG.2025 18:49:45

## Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission



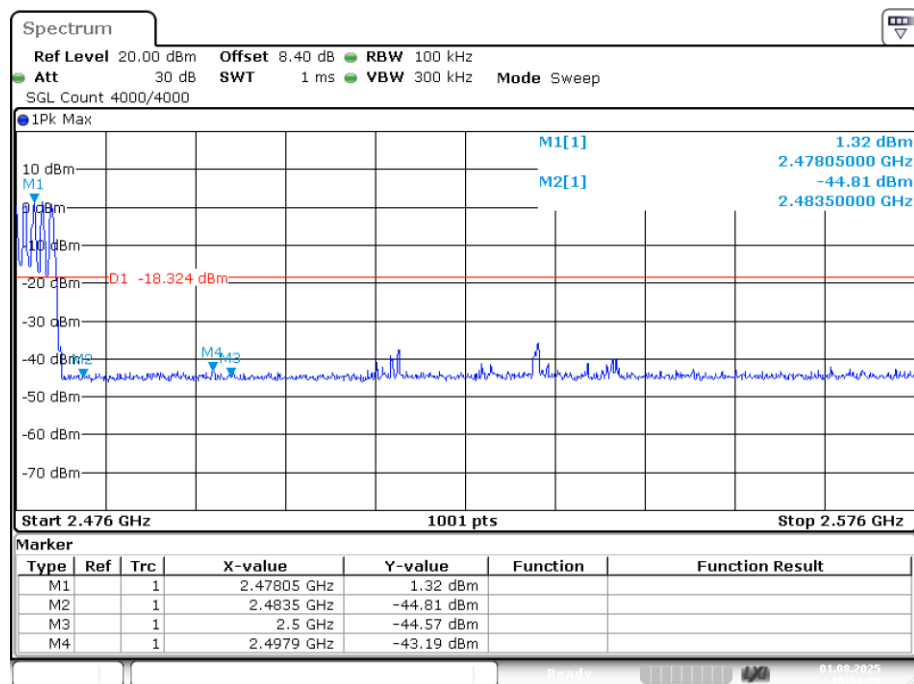
Date: 1.AUG.2025 18:50:30

## Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref



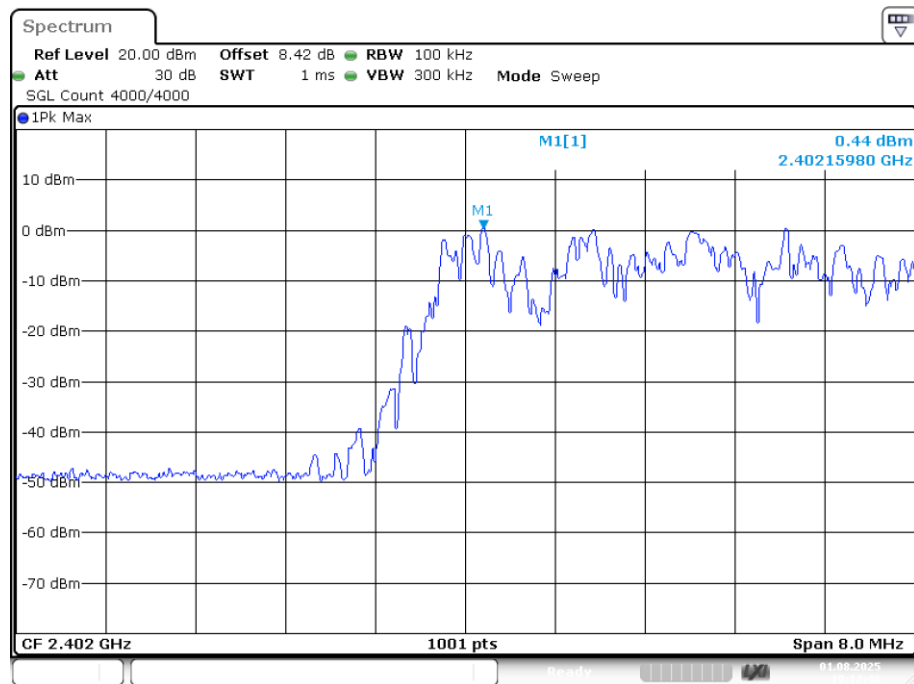
Date: 1.AUG.2025 18:54:01

## Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Emission



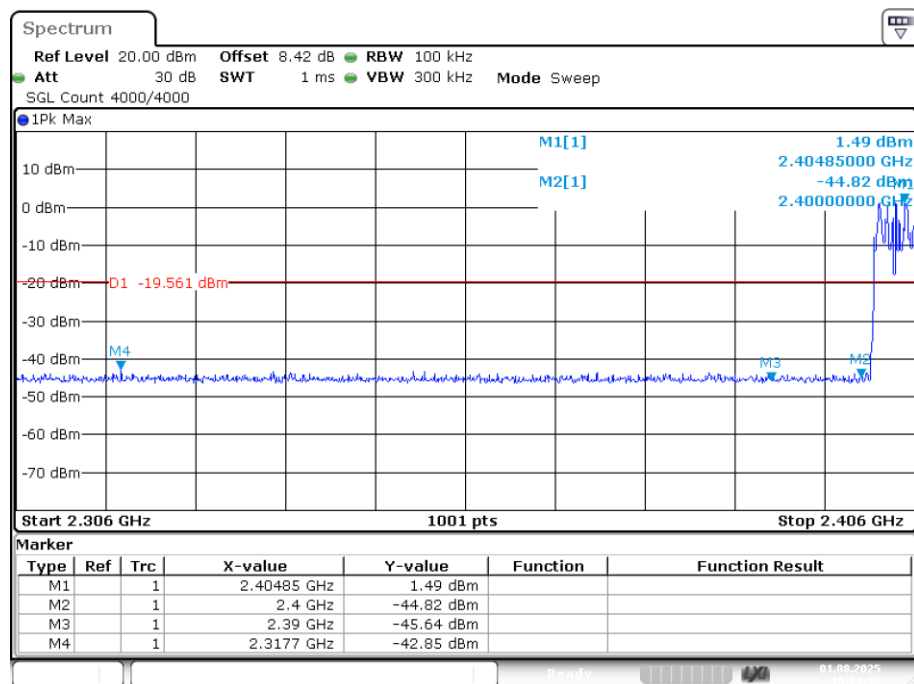
Date: 1.AUG.2025 18:54:27

## Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Ref



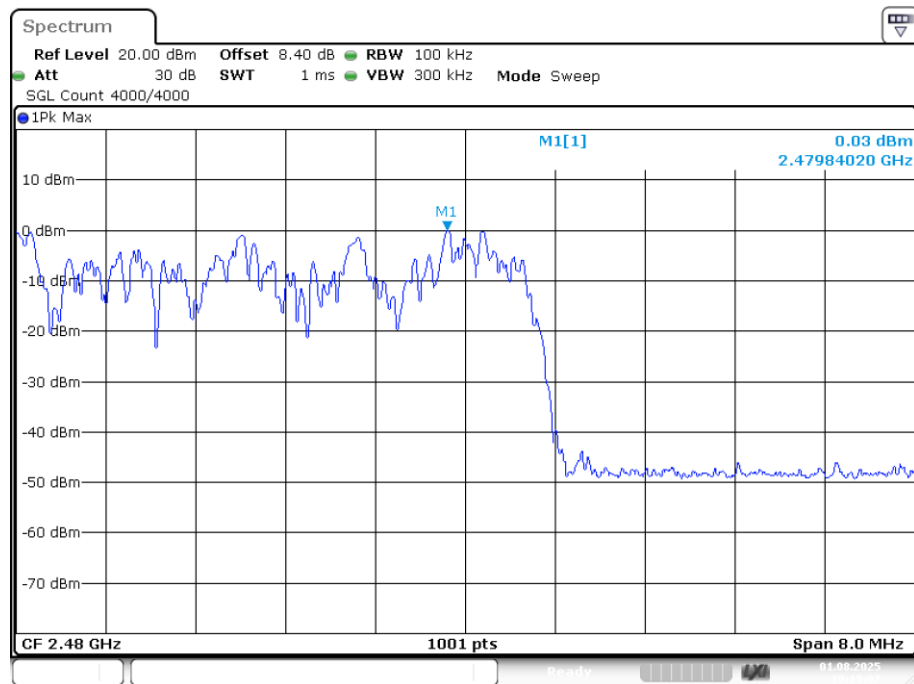
Date: 1.AUG.2025 19:12:47

## Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Emission



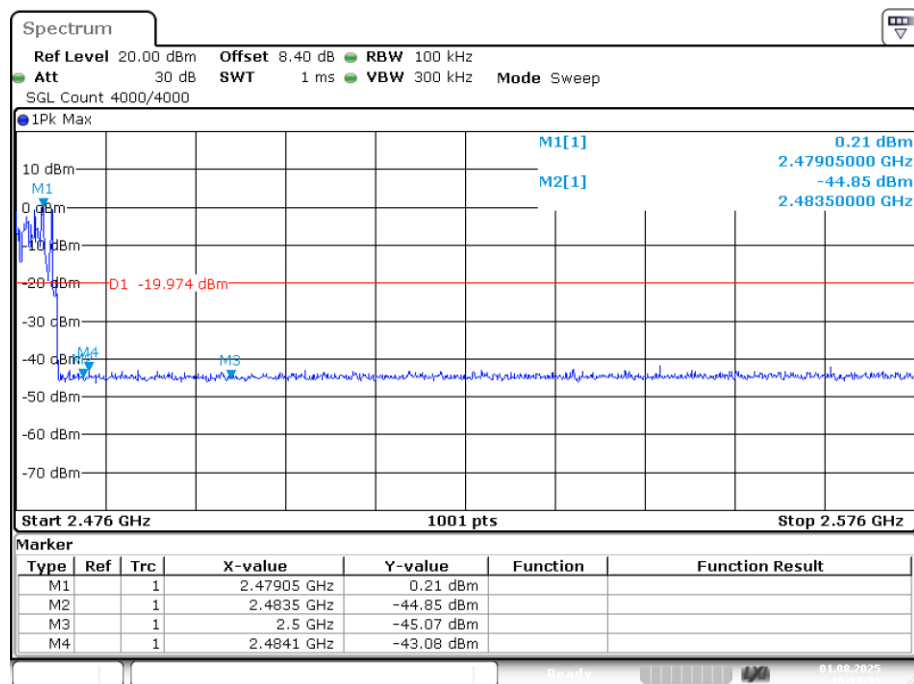
Date: 1.AUG.2025 19:13:32

## Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Ref



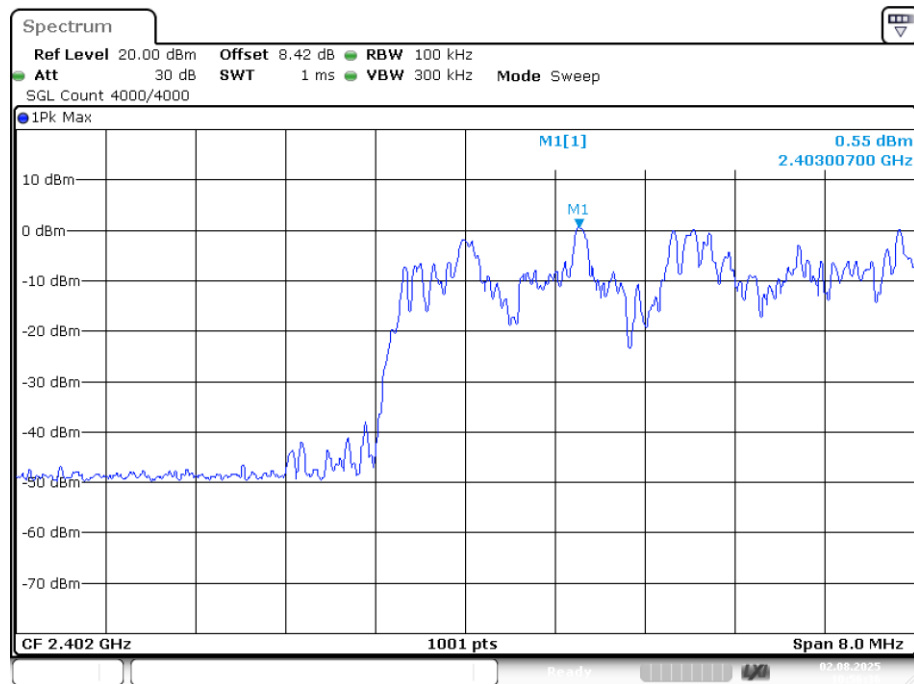
Date: 1.AUG.2025 19:19:07

## Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Emission



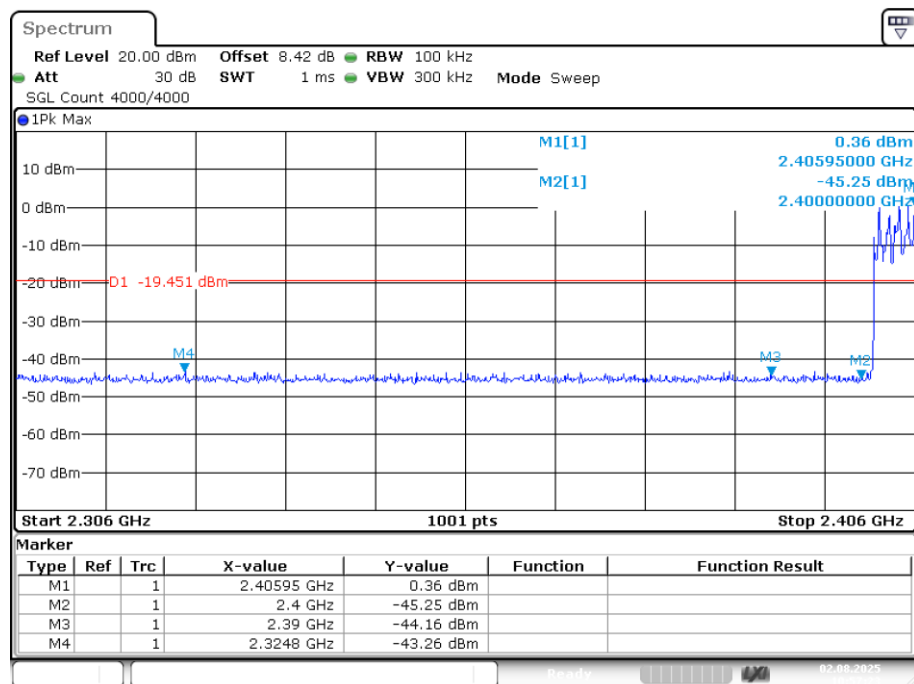
Date: 1.AUG.2025 19:19:32

## Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Ref



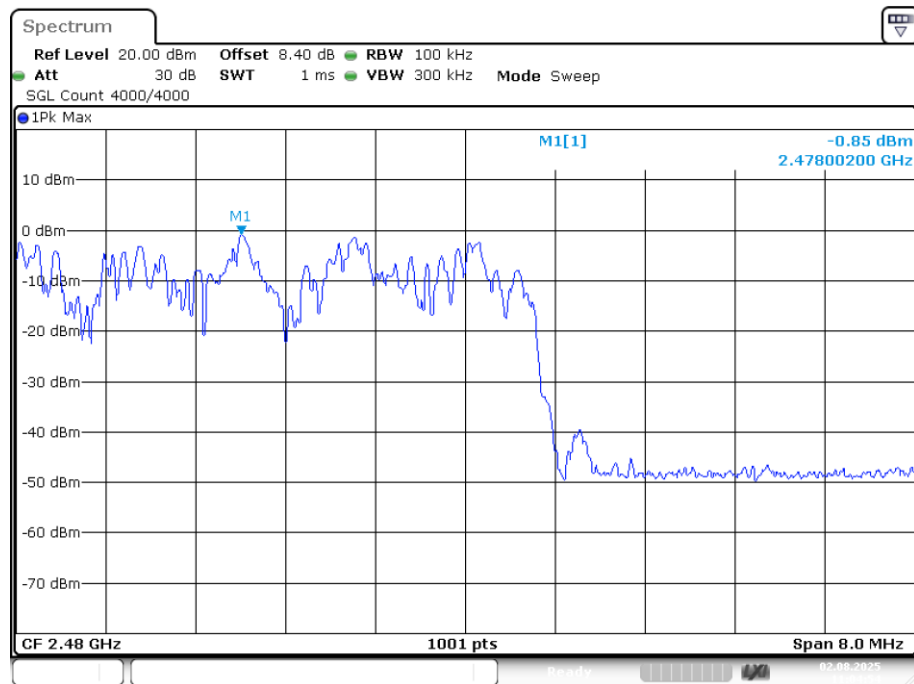
Date: 2.AUG.2025 10:56:36

## Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Emission



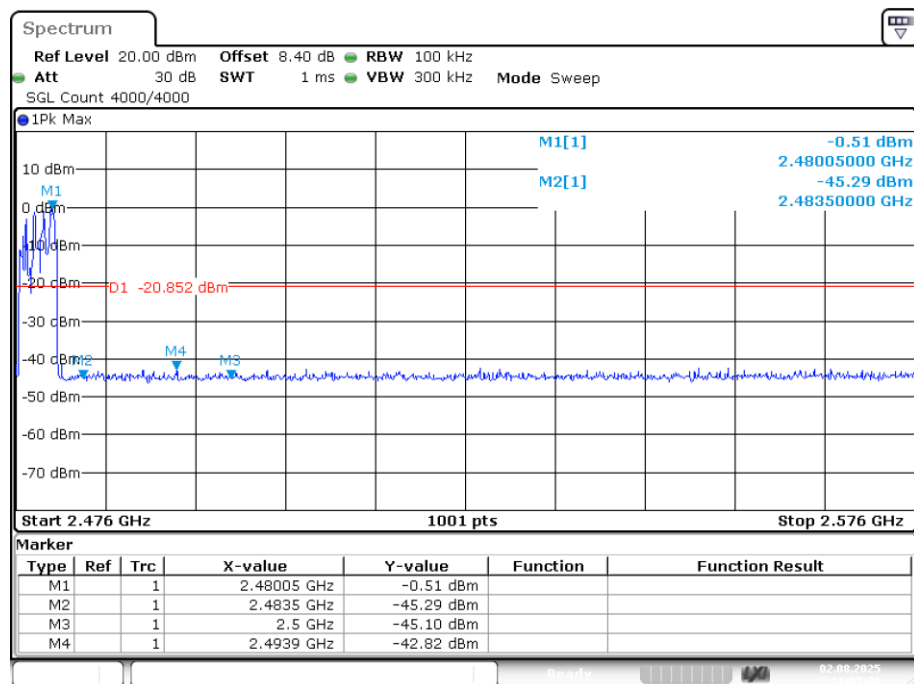
Date: 2.AUG.2025 10:57:22

## Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant1 Hopping Ref



Date: 2.AUG.2025 11:04:54

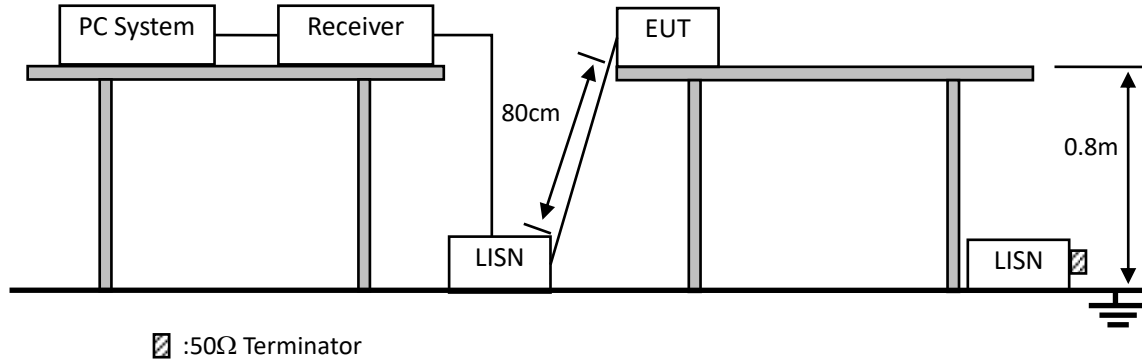
## Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant1 Hopping Emission



Date: 2.AUG.2025 11:05:20

## 12. POWER LINE CONDUCTED EMISSIONS

### 12.1. Block Diagram of Test Setup



### 12.2. Limit

| Frequency       | Maximum RF Line Voltage    |                         |
|-----------------|----------------------------|-------------------------|
|                 | Quasi-Peak Level<br>dB(μV) | Average Level<br>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.

### 12.3. 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.

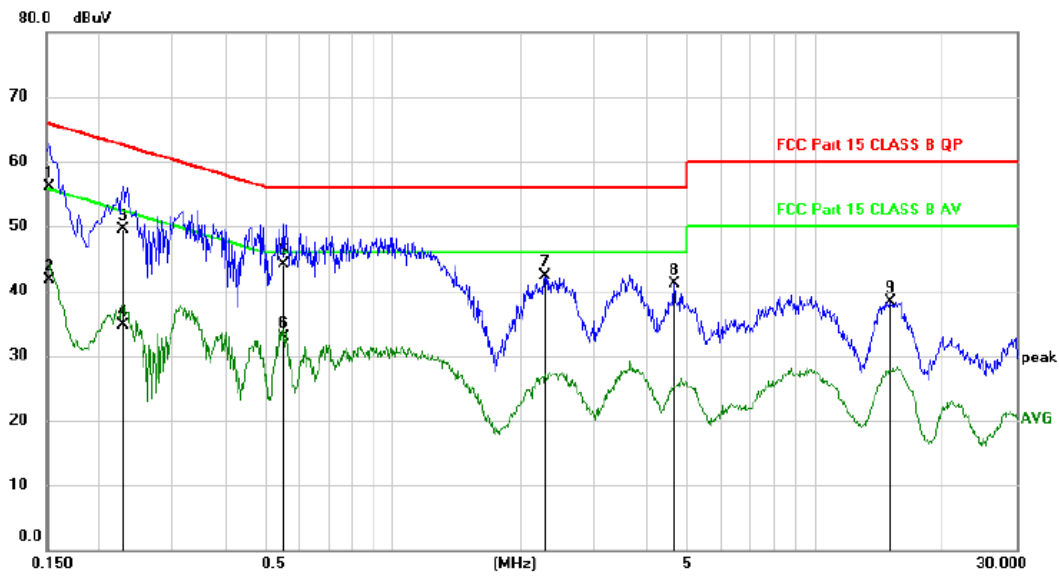
### 12.4. Test Result

PASS. (See below detailed test data)

Note: If peak Result comply with AV limit, QP and AV Result is deemed to comply with AV limit



Line:



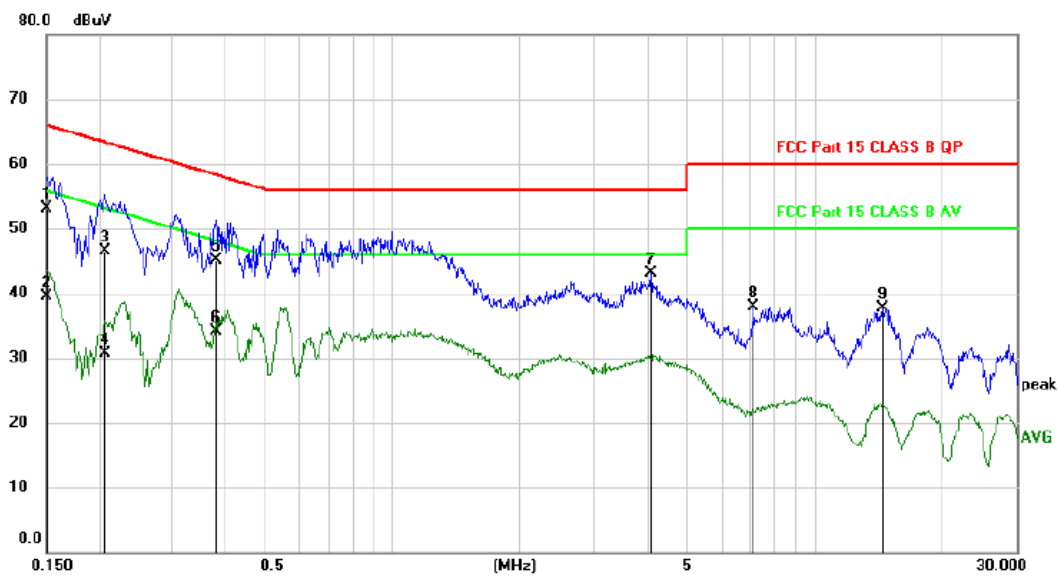
| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV | Limit<br>dBuV | Margin<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|--------------------------|---------------|--------------|----------|---------|
| 1   | *   | 0.1530       | 46.14                    | 9.94                    | 56.08                    | 65.84         | -9.76        | QP       |         |
| 2   |     | 0.1530       | 31.76                    | 9.94                    | 41.70                    | 55.84         | -14.14       | AVG      |         |
| 3   |     | 0.2280       | 39.54                    | 9.95                    | 49.49                    | 62.52         | -13.03       | QP       |         |
| 4   |     | 0.2280       | 24.83                    | 9.95                    | 34.78                    | 52.52         | -17.74       | AVG      |         |
| 5   |     | 0.5520       | 34.22                    | 9.94                    | 44.16                    | 56.00         | -11.84       | QP       |         |
| 6   |     | 0.5520       | 22.98                    | 9.94                    | 32.92                    | 46.00         | -13.08       | AVG      |         |
| 7   |     | 2.2950       | 32.32                    | 9.90                    | 42.22                    | 56.00         | -13.78       | peak     |         |
| 8   |     | 4.6230       | 31.04                    | 10.01                   | 41.05                    | 56.00         | -14.95       | peak     |         |
| 9   |     | 15.0840      | 28.05                    | 10.33                   | 38.38                    | 60.00         | -21.62       | 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

## Neutral:



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV | Limit<br>dBuV | Margin<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|--------------------------|---------------|--------------|----------|---------|
| 1   |     | 0.1500       | 43.12                    | 9.94                    | 53.06                    | 66.00         | -12.94       | QP       |         |
| 2   |     | 0.1500       | 29.58                    | 9.94                    | 39.52                    | 56.00         | -16.48       | AVG      |         |
| 3   |     | 0.2070       | 36.63                    | 9.93                    | 46.56                    | 63.32         | -16.76       | QP       |         |
| 4   |     | 0.2070       | 20.85                    | 9.93                    | 30.78                    | 53.32         | -22.54       | AVG      |         |
| 5   |     | 0.3810       | 35.19                    | 9.94                    | 45.13                    | 58.26         | -13.13       | QP       |         |
| 6   |     | 0.3810       | 24.25                    | 9.94                    | 34.19                    | 48.26         | -14.07       | AVG      |         |
| 7   | *   | 4.0739       | 33.17                    | 9.97                    | 43.14                    | 56.00         | -12.86       | peak     |         |
| 8   |     | 7.1580       | 27.83                    | 10.12                   | 37.95                    | 60.00         | -22.05       | peak     |         |
| 9   |     | 14.4480      | 27.47                    | 10.32                   | 37.79                    | 60.00         | -22.21       | 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

Note: All modes and channels have been tested and only the GFSK 2402MHz mode with the worst data is listed.

## **13. ANTENNA REQUIREMENTS**

### **13.1.Limit**

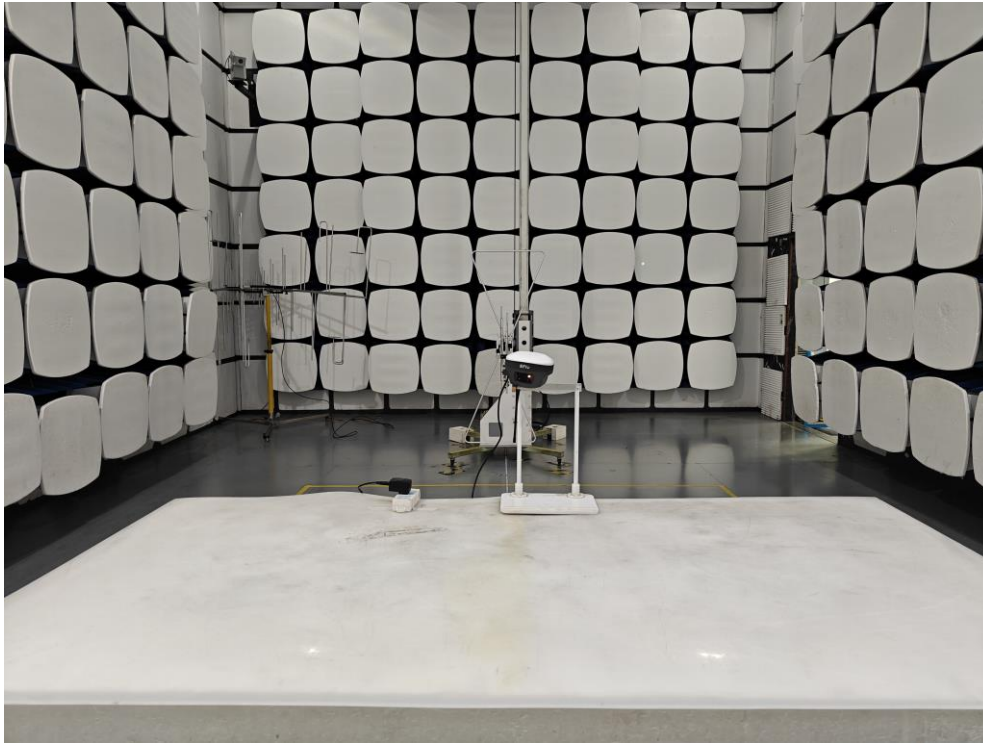
For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional 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.

### **13.2.Result**

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

## 14. TEST SETUP PHOTO

### 14.1. Photo of Radiated Emission Test



#### 14.2.Photo of Conducted Emission Test





## 15. EUT PHOTO



