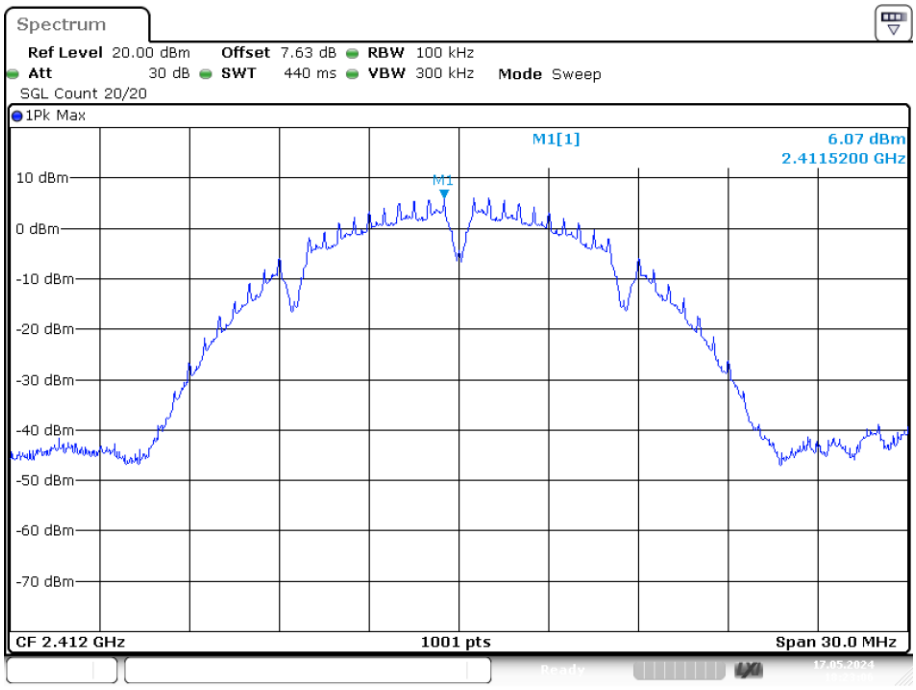
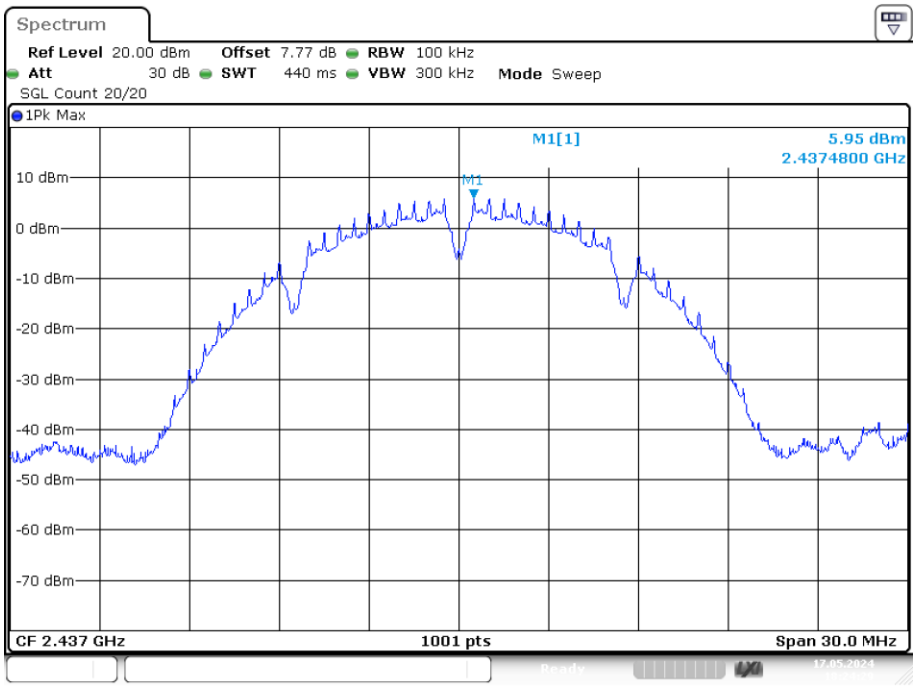
PSD NVNT b 2412MHz Ant2



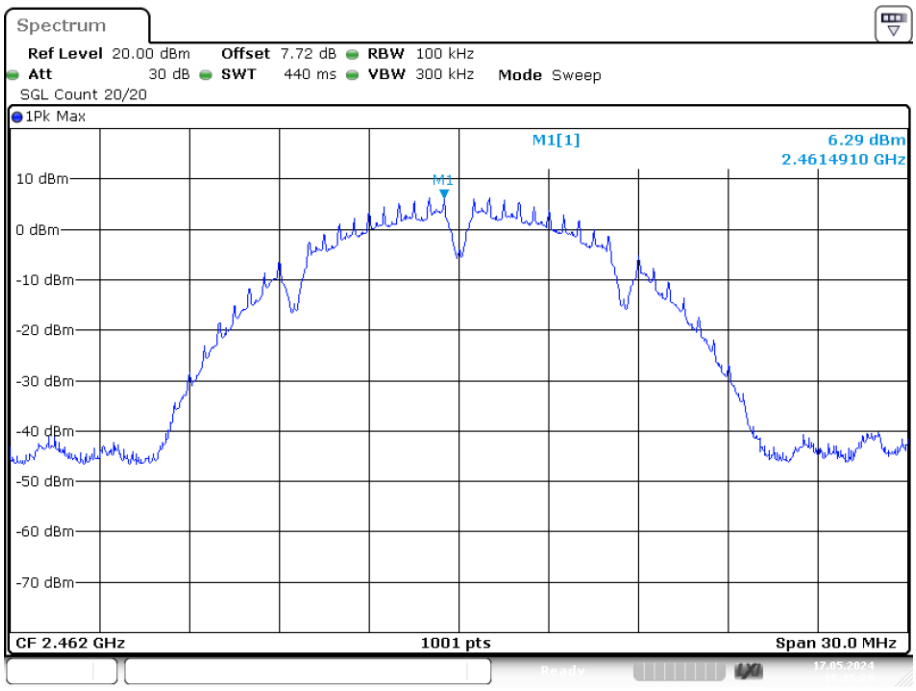

Date: 17.MAY.2024 18:23:06

PSD NVNT b 2437MHz Ant2



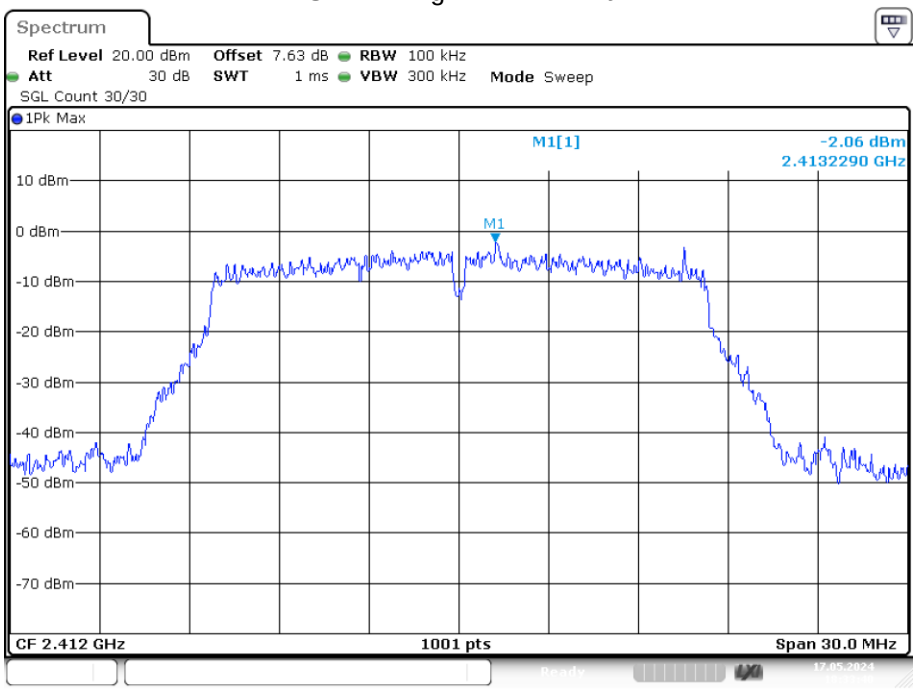

Date: 17.MAY.2024 18:24:28

PSD NVNT b 2462MHz Ant2



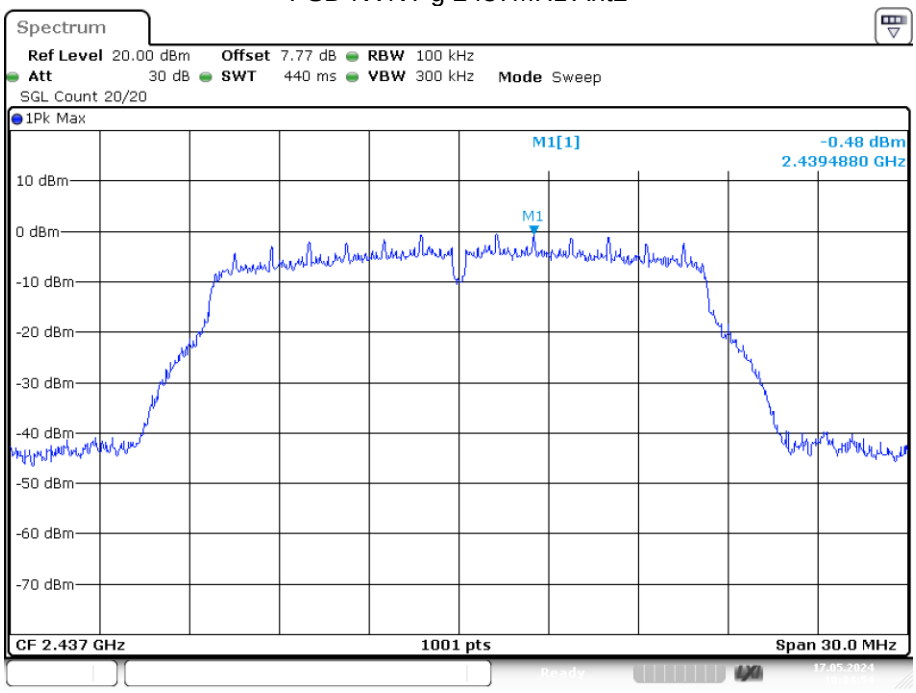

Date: 17.MAY.2024 18:25:29

PSD NVNT g 2412MHz Ant2



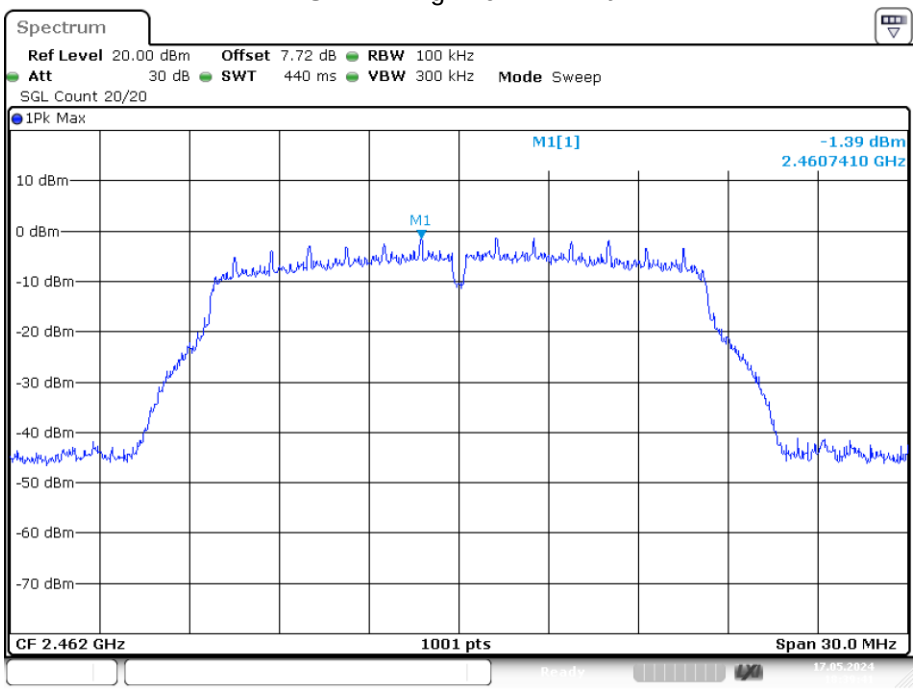

Date: 17.MAY.2024 18:33:40

PSD NVNT g 2437MHz Ant2



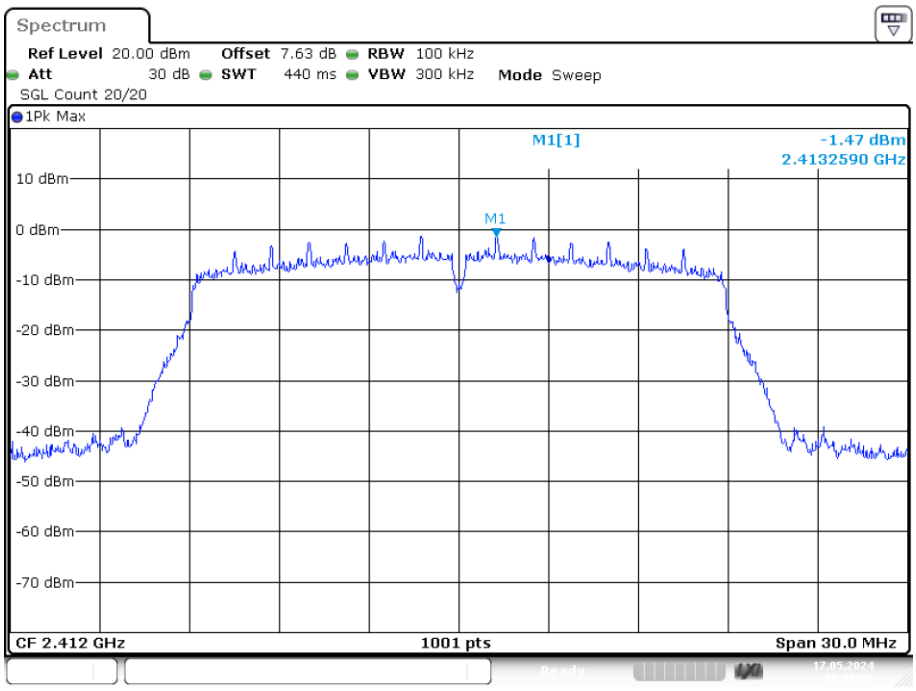

Date: 17.MAY.2024 18:34:54

PSD NVNT g 2462MHz Ant2



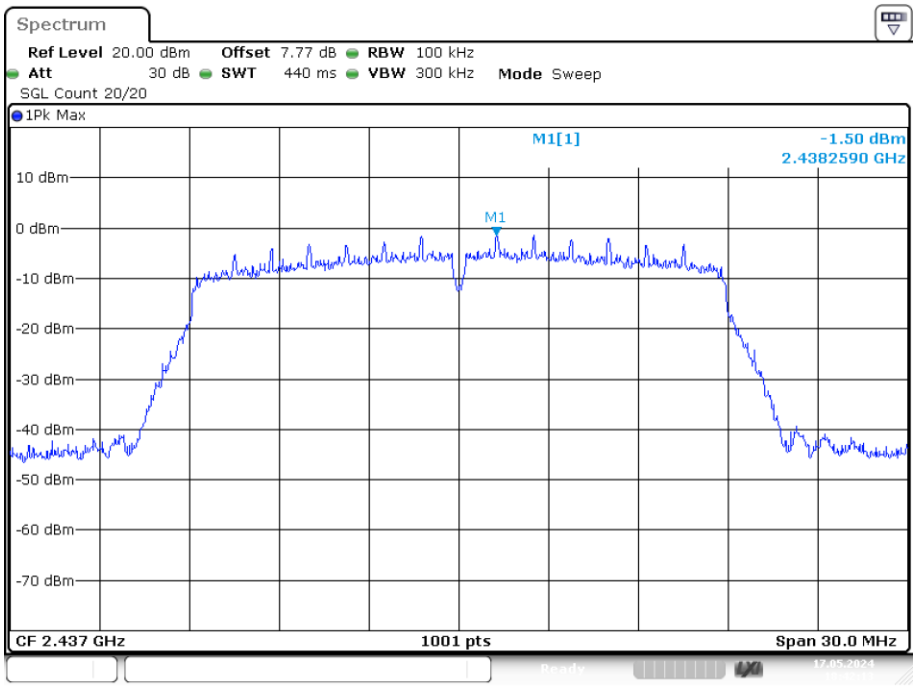

Date: 17.MAY.2024 18:39:41

PSD NVNT n20 2412MHz Ant2



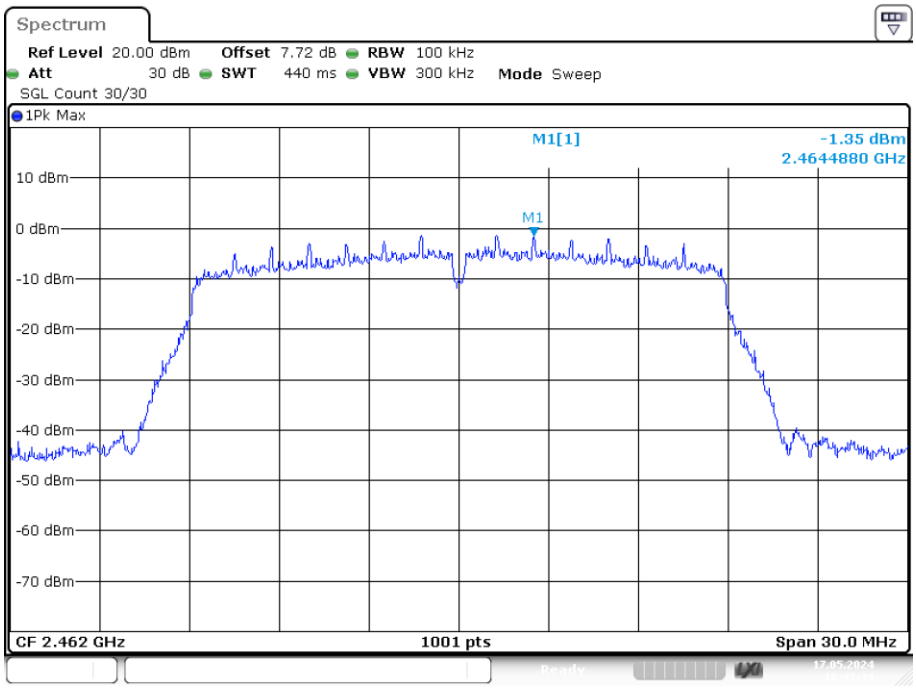

Date: 17.MAY.2024 18:40:39

PSD NVNT n20 2437MHz Ant2



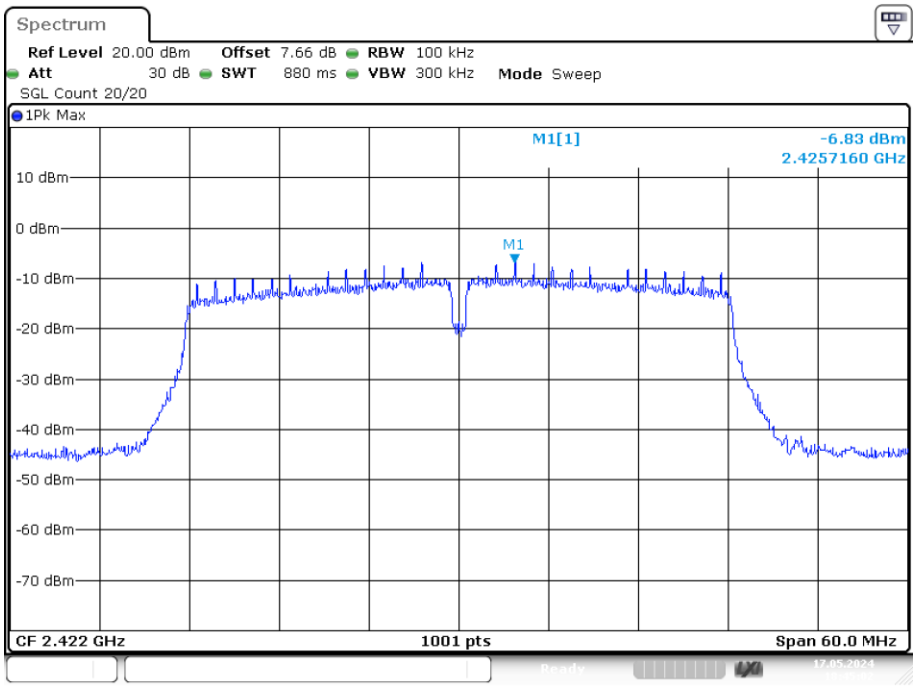

Date: 17.MAY.2024 18:42:14

PSD NVNT n20 2462MHz Ant2



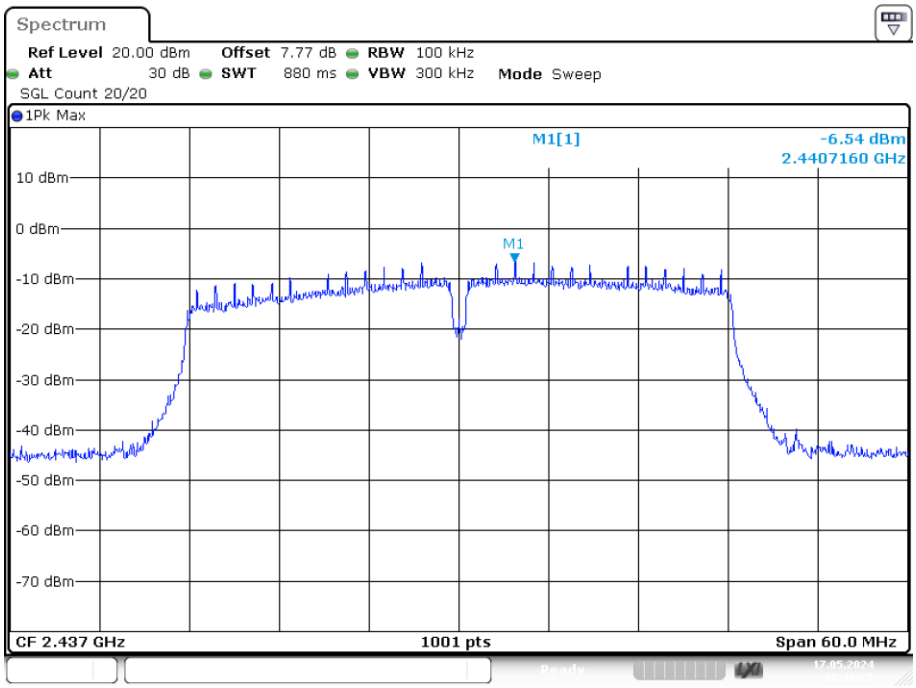

Date: 17.MAY.2024 18:43:34

PSD NVNT n40 2422MHz Ant2



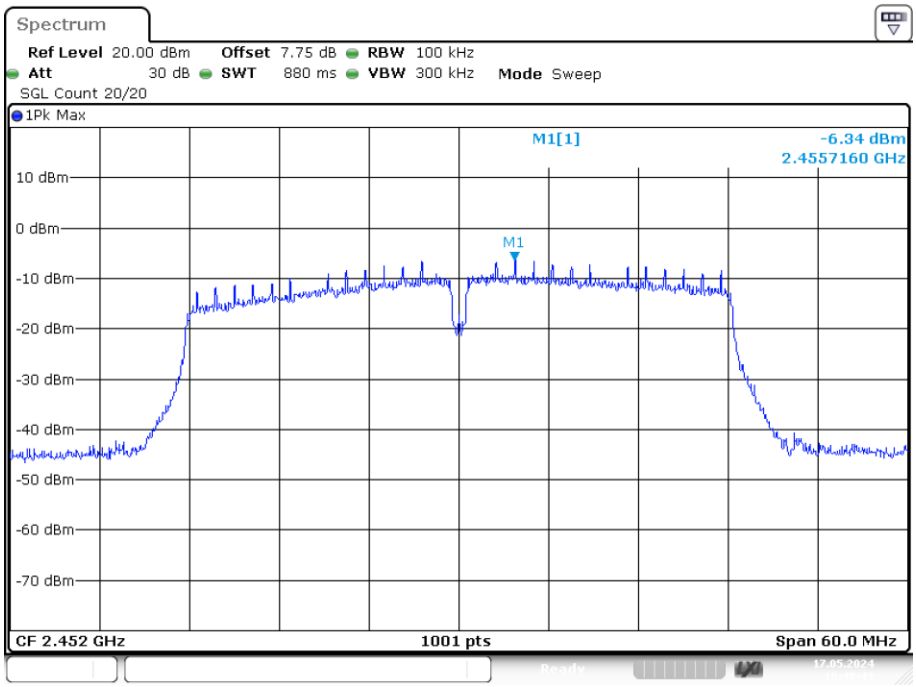

Date: 17.MAY.2024 18:45:01

PSD NVNT n40 2437MHz Ant2




Date: 17.MAY.2024 18:46:28

PSD NVNT n40 2452MHz Ant2




Date: 17.MAY.2024 18:48:43

# 7. BANDWIDTH

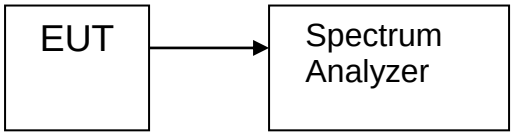
## 7.1. Test limits

Please refer FCC PART 15: 15.247
For direct sequence systems, the minimum 6dB bandwidth shall be at least 500 kHz.

## 7.2. Test Procedure

Details see the KDB558074 D01 Meas Guidance v05r02
a) The bandwidth is measured at an amplitude level reduced 6dB from the reference level. The reference level is the level of the highest amplitude signal observed from the transmitter at the fundamental frequency. Once the reference level is established, the equipment is conditioned with typical modulating signal to produce the worst-case (i.e. the widest) bandwidth.
b) The test receiver set RBW =1-5%BW, VBW≥3*RBW, Sweep time set auto, detail see the test plot for 99% Bandwidth.
c) The test receiver set RBW = 100kHz, VBW≥3*RBW =300kHz, Sweep time set auto, detail see the test plot for 6dB Bandwidth.

## 7.3. Test Setup

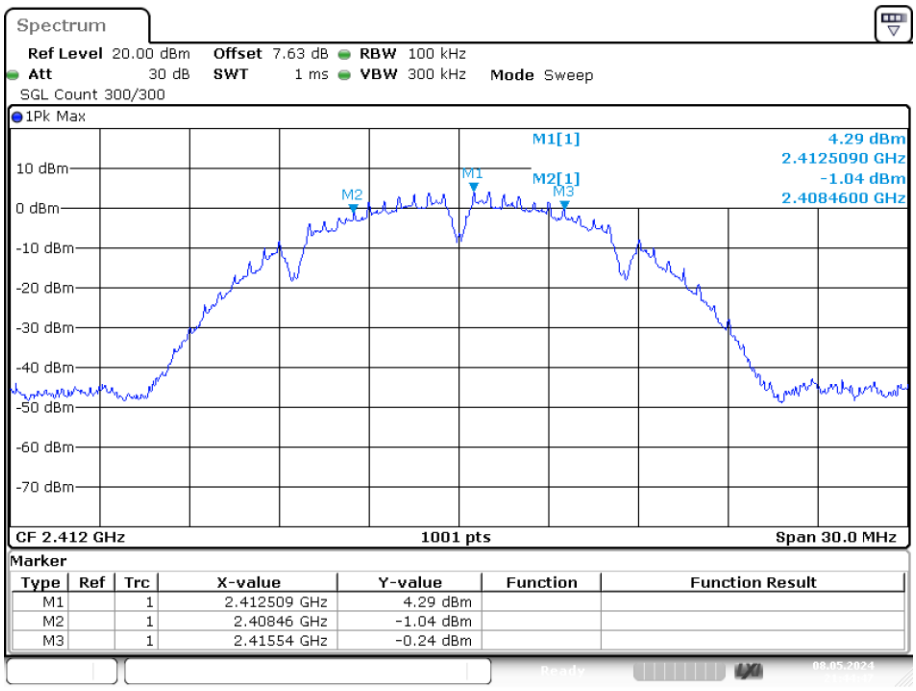



## 7.4. Test Results

**-6dB Bandwidth**

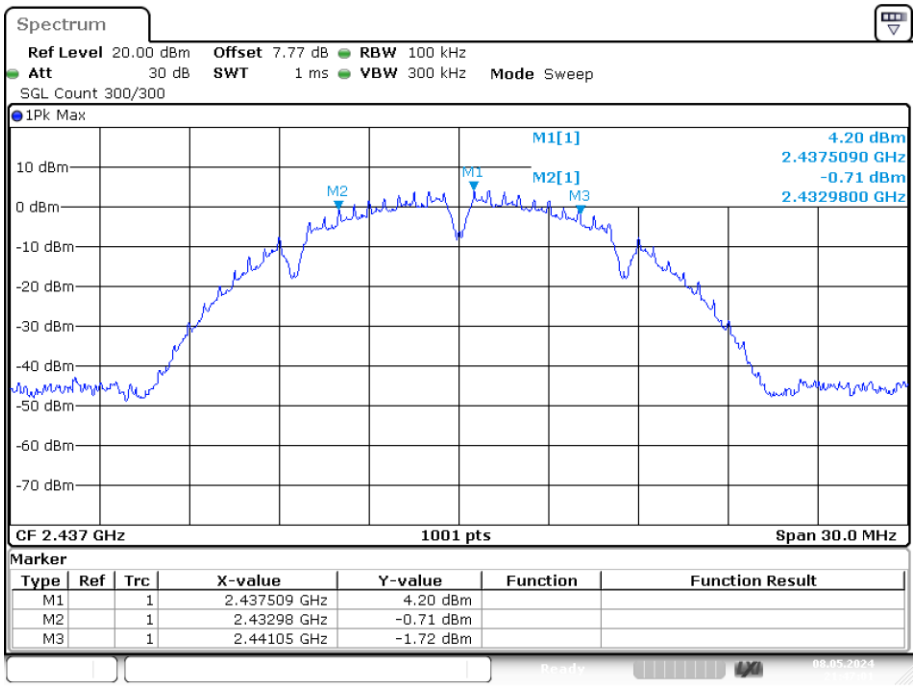
| Condition | Mode | Frequency (MHz) | Antenna | -6 dB Bandwidth (MHz) | Limit -6 dB Bandwidth (MHz) | Verdict |
|---|---|---|---|---|---|---|
| NVNT | b | 2412 | Ant1 | 7.08 | 0.5 | Pass |
| NVNT | b | 2437 | Ant1 | 8.07 | 0.5 | Pass |
| NVNT | b | 2462 | Ant1 | 8.04 | 0.5 | Pass |
| NVNT | g | 2412 | Ant1 | 14.22 | 0.5 | Pass |
| NVNT | g | 2437 | Ant1 | 14.46 | 0.5 | Pass |
| NVNT | g | 2462 | Ant1 | 15.66 | 0.5 | Pass |
| NVNT | n20 | 2412 | Ant1 | 15.09 | 0.5 | Pass |
| NVNT | n20 | 2437 | Ant1 | 13.41 | 0.5 | Pass |
| NVNT | n20 | 2462 | Ant1 | 15.69 | 0.5 | Pass |
| NVNT | n40 | 2422 | Ant1 | 31.38 | 0.5 | Pass |
| NVNT | n40 | 2437 | Ant1 | 33.9 | 0.5 | Pass |
| NVNT | n40 | 2452 | Ant1 | 34.98 | 0.5 | Pass |

-6dB Bandwidth NVNT b 2412MHz Ant1



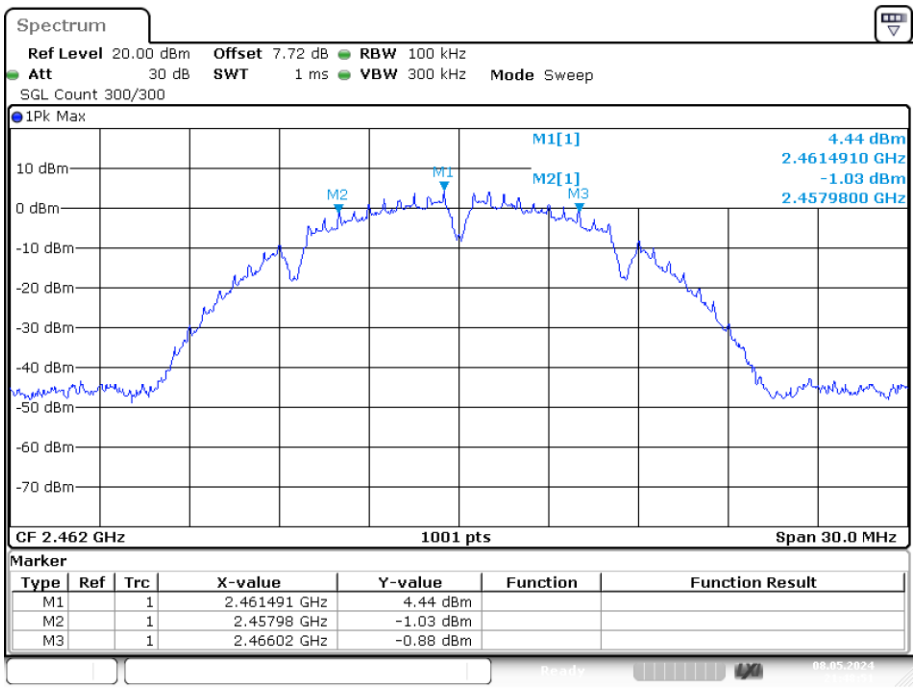

Date: 8.MAY.2024 21:44:47

-6dB Bandwidth NVNT b 2437MHz Ant1



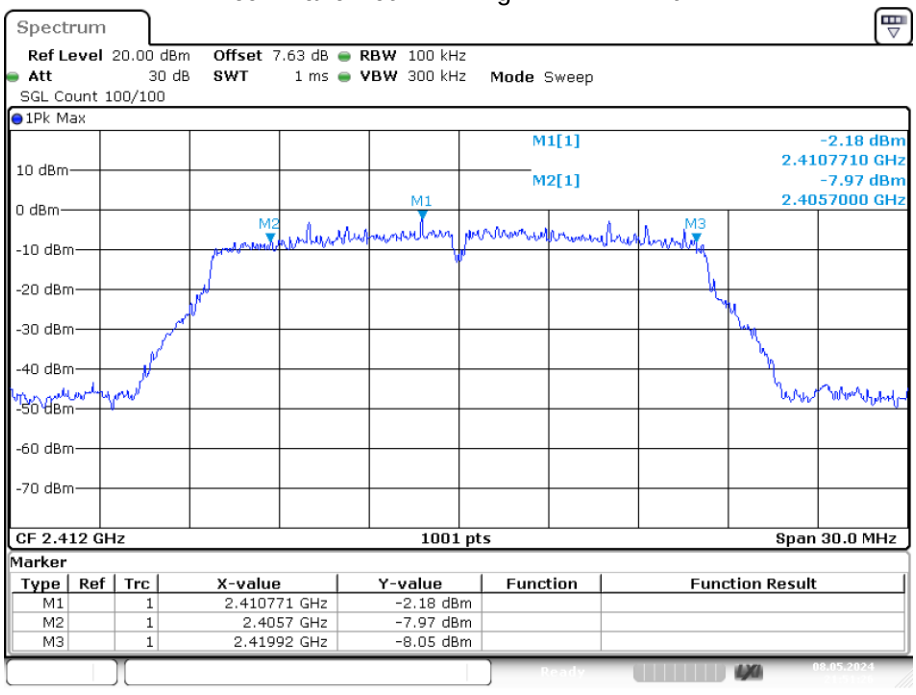

Date: 8.MAY.2024 21:47:01

-6dB Bandwidth NVNT b 2462MHz Ant1



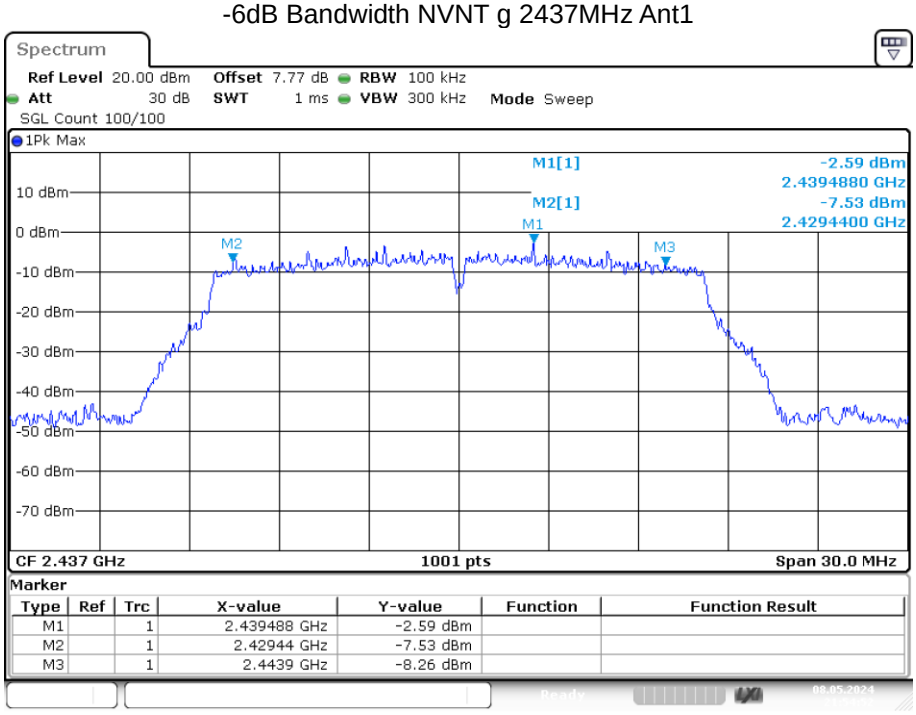

Date: 8.MAY.2024 21:48:51

-6dB Bandwidth NVNT g 2412MHz Ant1



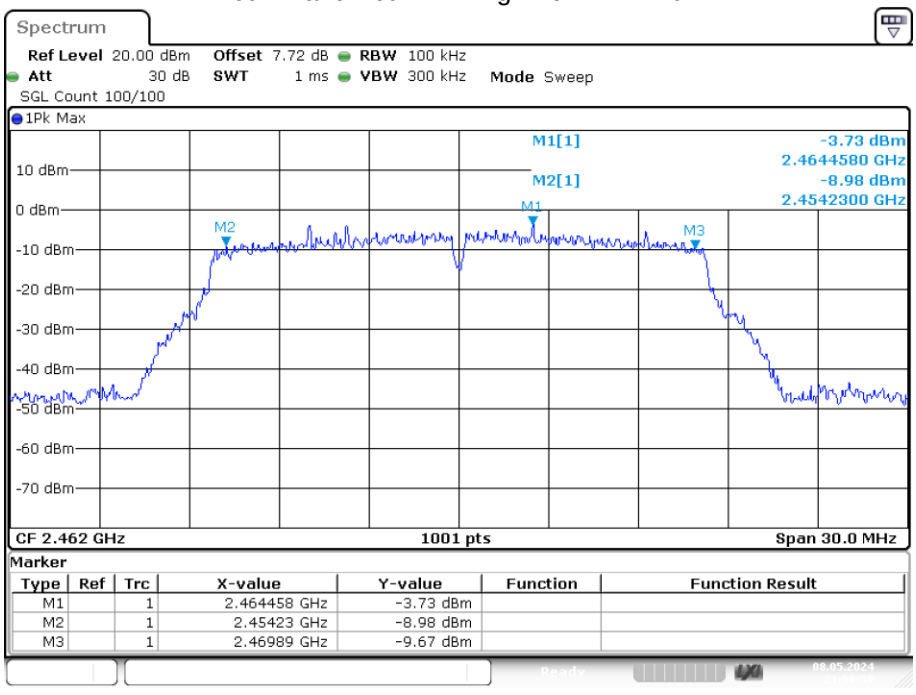

Date: 8.MAY.2024 21:51:26

-6dB Bandwidth NVNT g 2437MHz Ant1



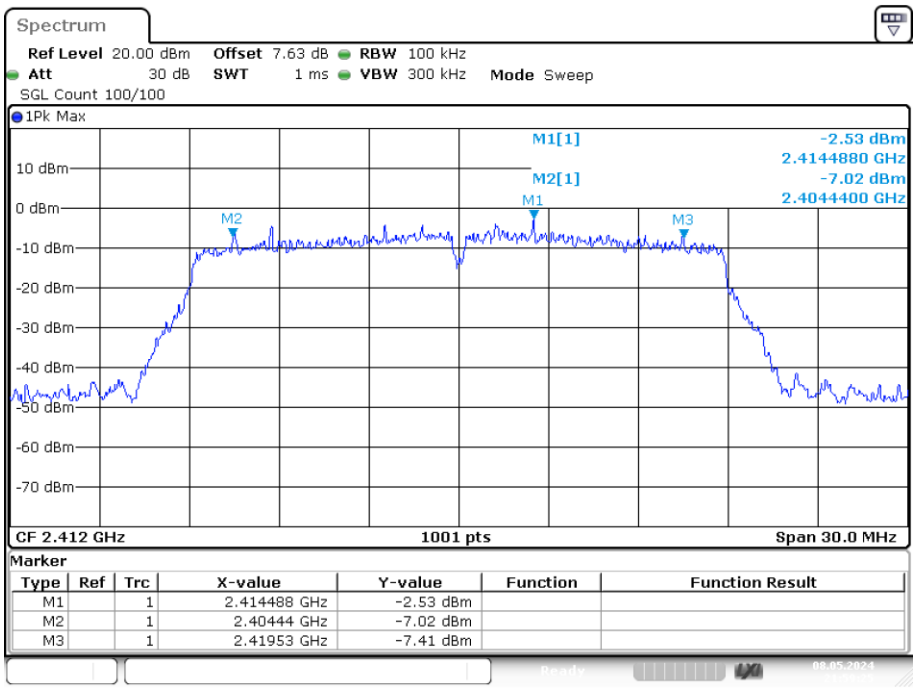

Date: 8.MAY.2024 21:54:52

-6dB Bandwidth NVNT g 2462MHz Ant1



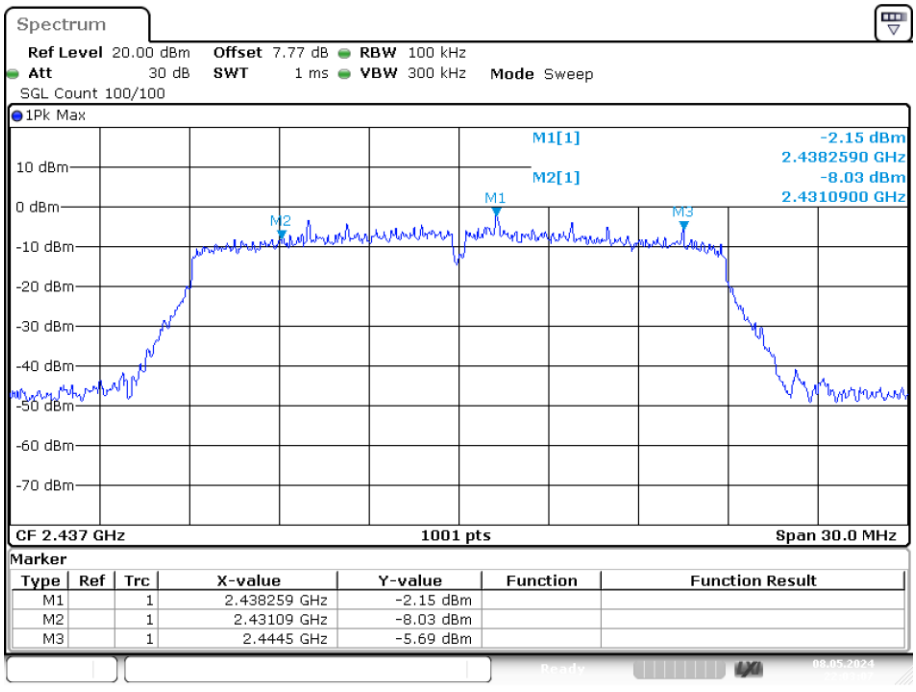

Date: 8.MAY.2024 21:56:59

-6dB Bandwidth NVNT n20 2412MHz Ant1



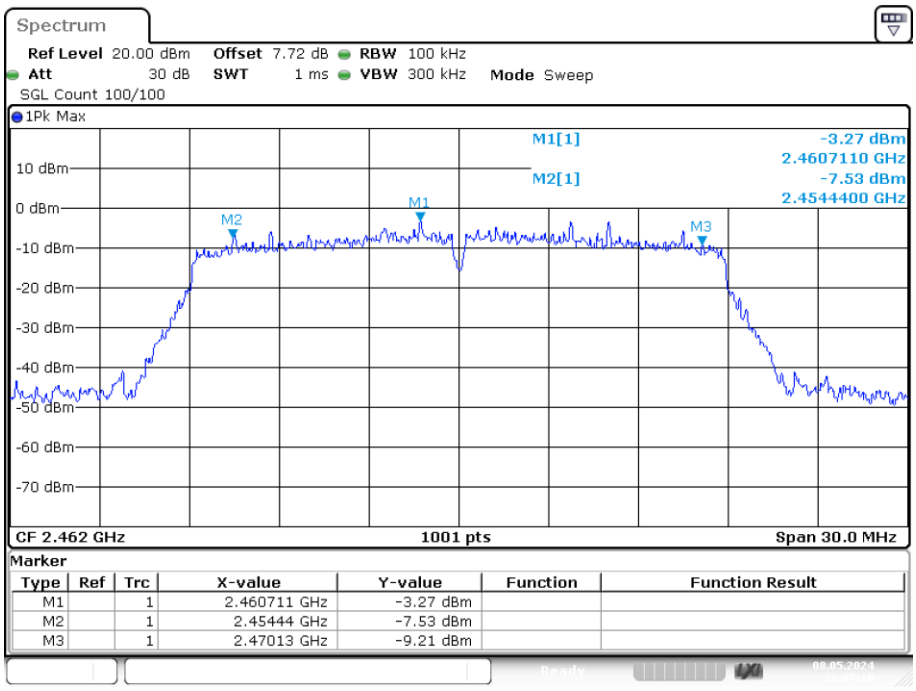

Date: 8.MAY.2024 21:59:25

-6dB Bandwidth NVNT n20 2437MHz Ant1



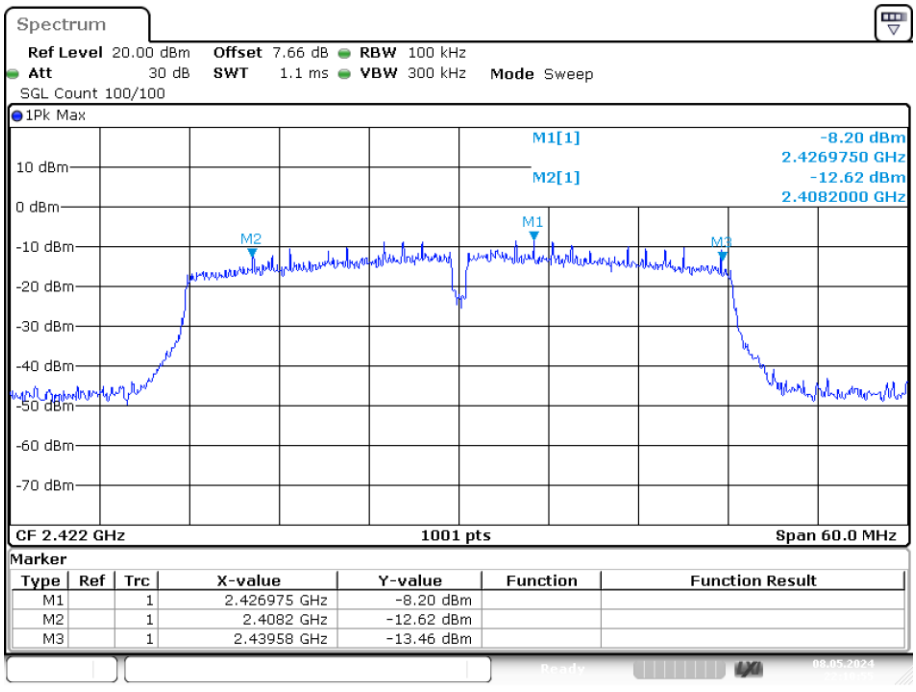

Date: 8.MAY.2024 22:03:06

-6dB Bandwidth NVNT n20 2462MHz Ant1



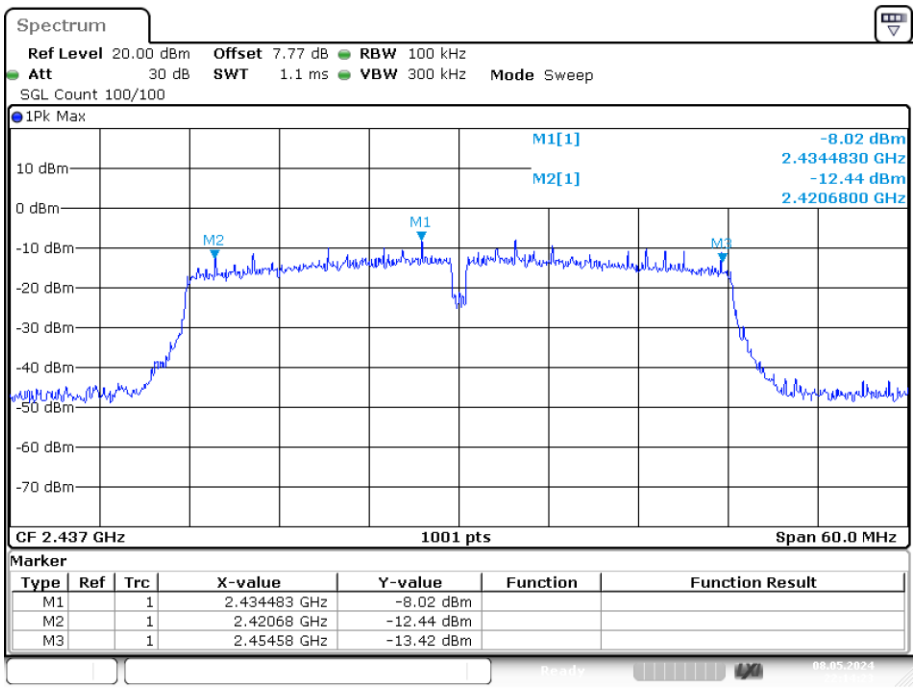

Date: 8.MAY.2024 22:07:10

-6dB Bandwidth NVNT n40 2422MHz Ant1



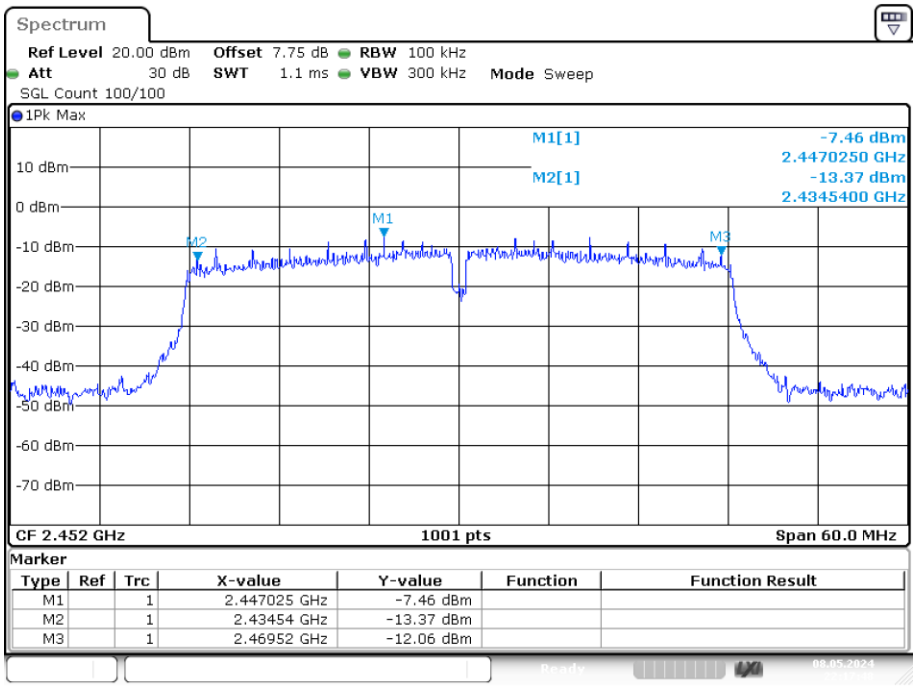

Date: 8.MAY.2024 22:10:55

-6dB Bandwidth NVNT n40 2437MHz Ant1




Date: 8.MAY.2024 22:14:22

-6dB Bandwidth NVNT n40 2452MHz Ant1

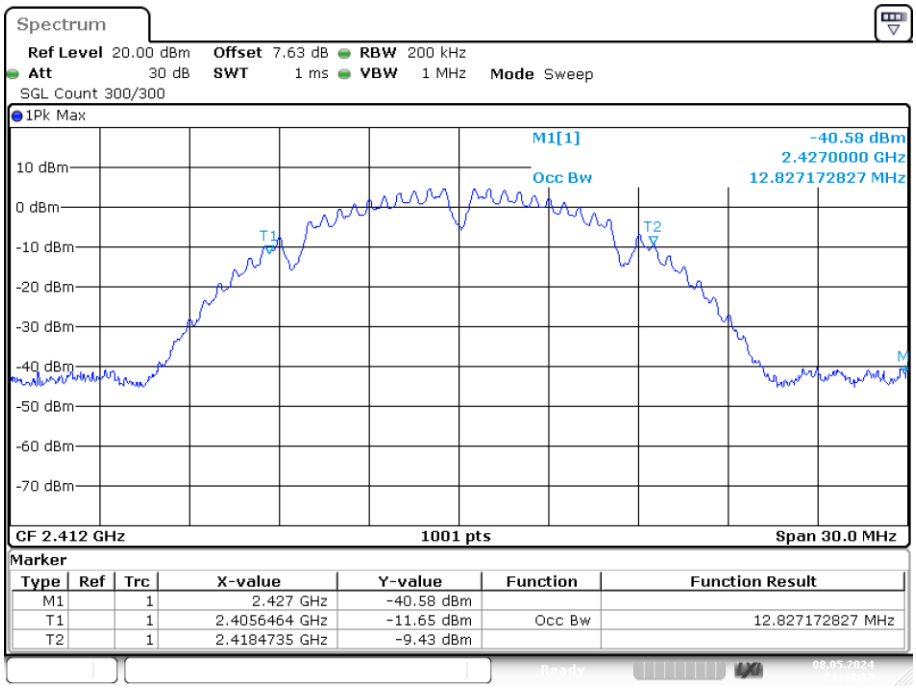



Date: 8.MAY.2024 22:17:48

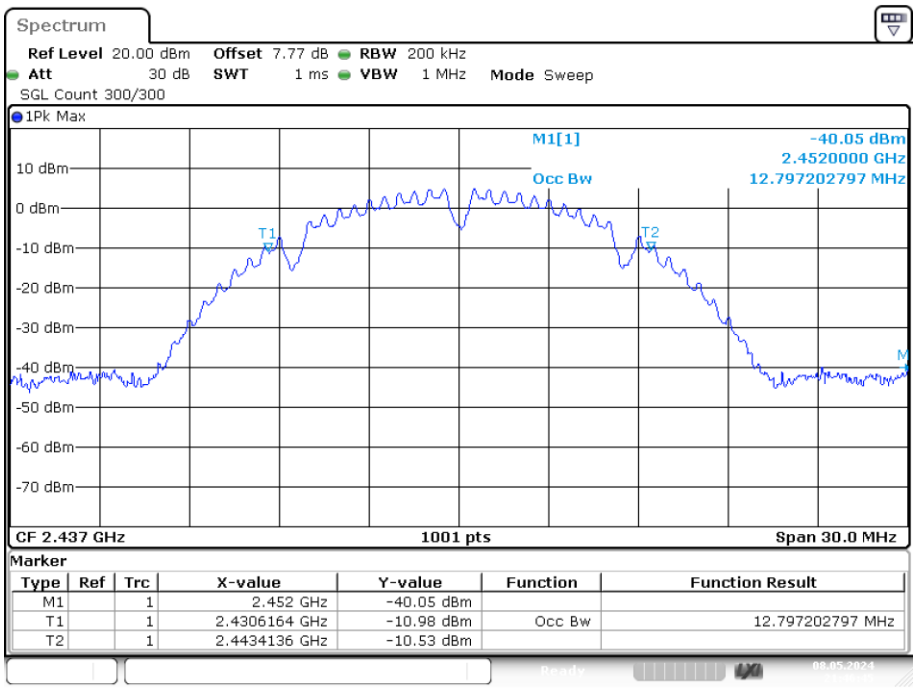
**Occupied Channel Bandwidth**

| Condition | Mode | Frequency (MHz) | Antenna | 99% OBW (MHz) |
|---|---|---|---|---|
| NVNT | b | 2412 | Ant1 | 12.827 |
| NVNT | b | 2437 | Ant1 | 12.797 |
| NVNT | b | 2462 | Ant1 | 12.767 |
| NVNT | g | 2412 | Ant1 | 16.454 |
| NVNT | g | 2437 | Ant1 | 16.424 |
| NVNT | g | 2462 | Ant1 | 16.424 |
| NVNT | n20 | 2412 | Ant1 | 17.592 |
| NVNT | n20 | 2437 | Ant1 | 17.532 |
| NVNT | n20 | 2462 | Ant1 | 17.562 |
| NVNT | n40 | 2422 | Ant1 | 36.024 |
| NVNT | n40 | 2437 | Ant1 | 36.144 |
| NVNT | n40 | 2452 | Ant1 | 36.084 |

OBW NVNT b 2412MHz Ant1

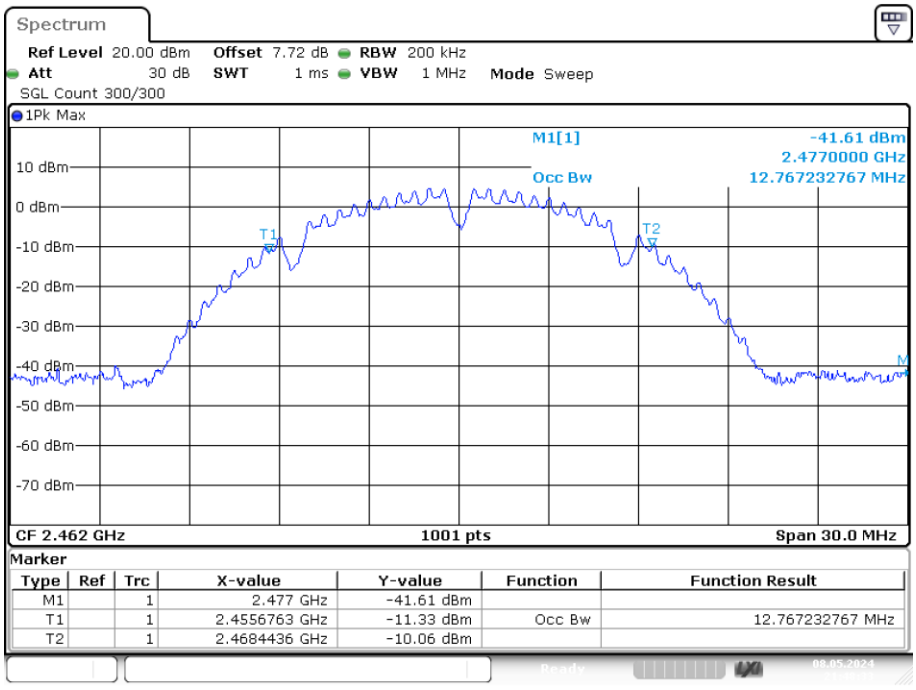


OBW NVNT b 2437MHz Ant1



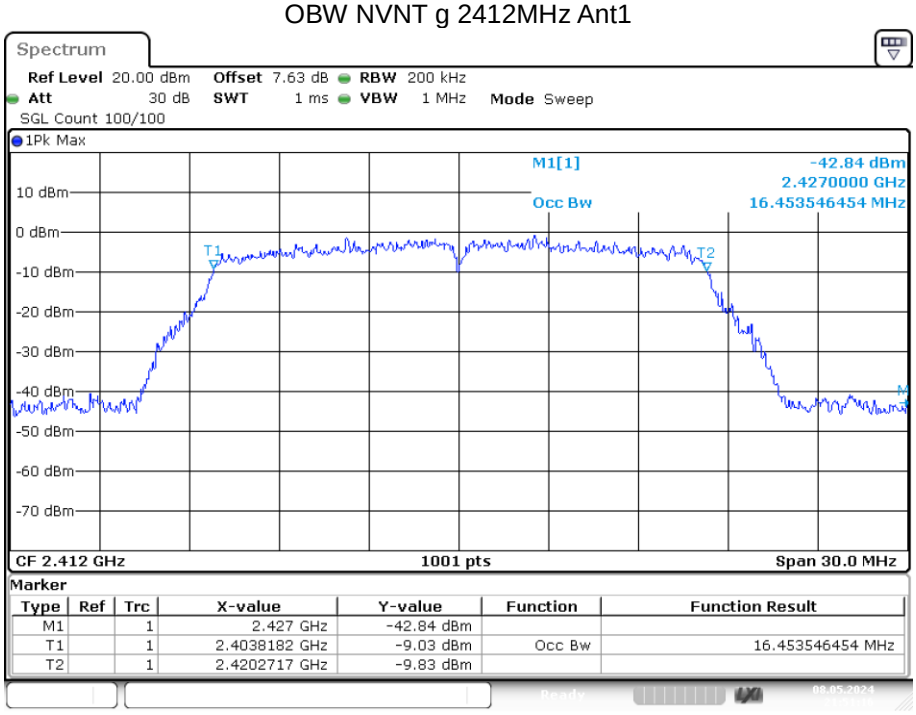

Date: 8.MAY.2024 21:46:45

OBW NVNT b 2462MHz Ant1



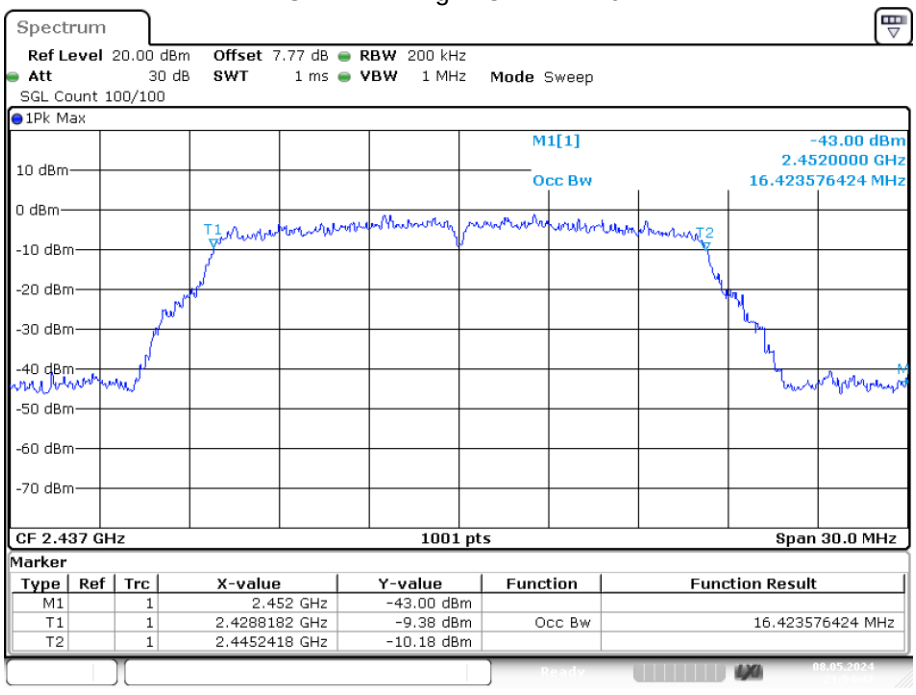

Date: 8.MAY.2024 21:48:33

OBW NVNT g 2412MHz Ant1



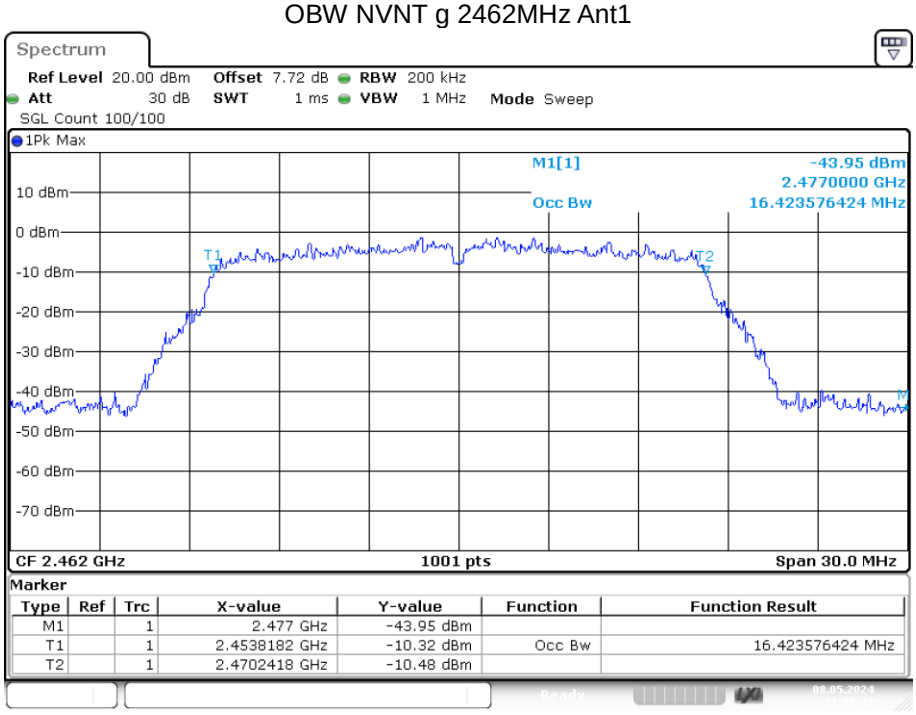

Date: 8.MAY.2024 21:51:15

OBW NVNT g 2437MHz Ant1



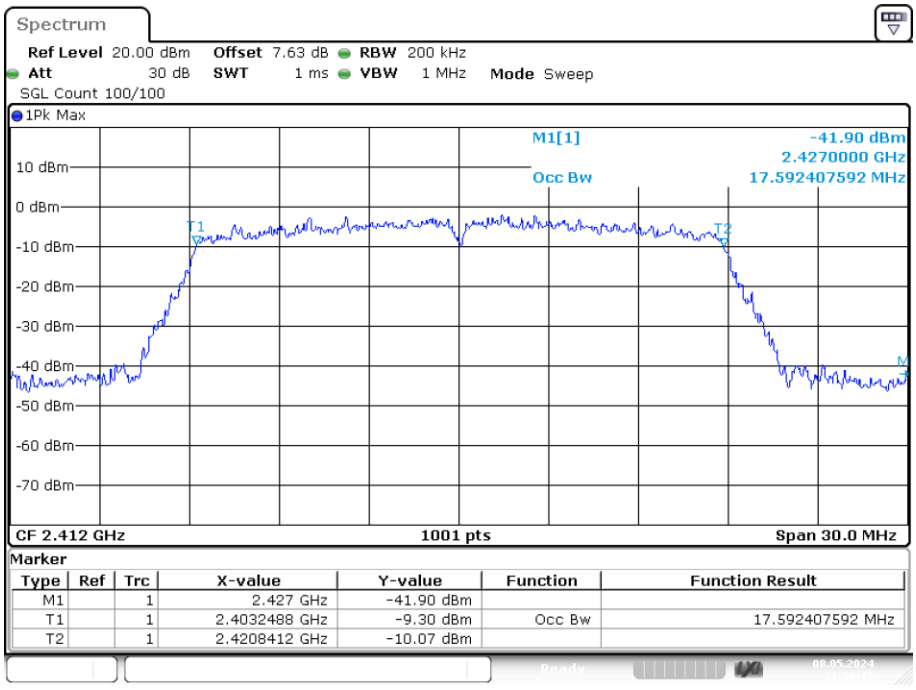

Date: 8.MAY.2024 21:54:42

OBW NVNT g 2462MHz Ant1



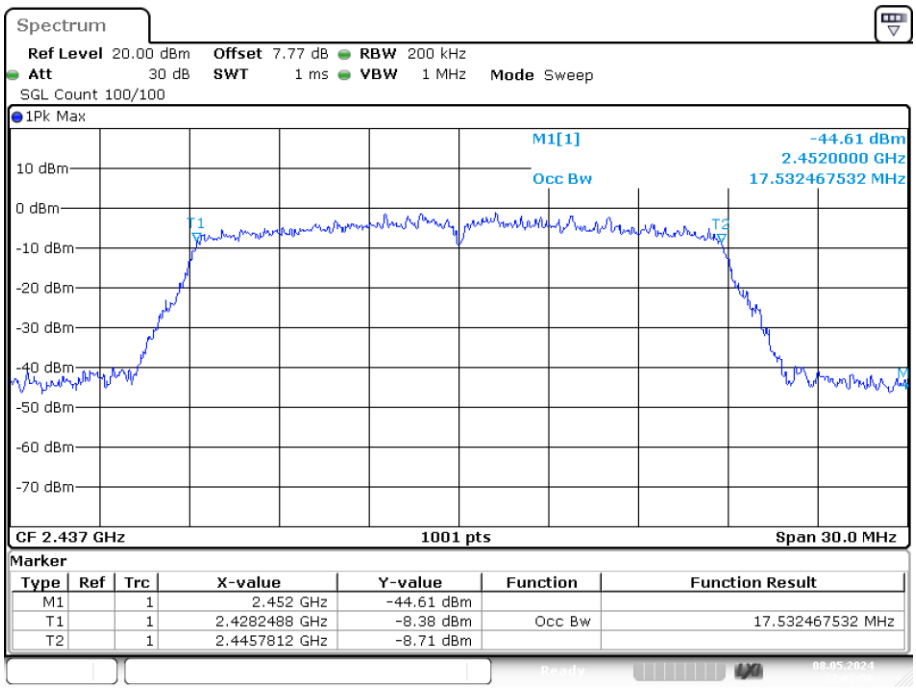

Date: 8.MAY.2024 21:56:47

OBW NVNT n20 2412MHz Ant1



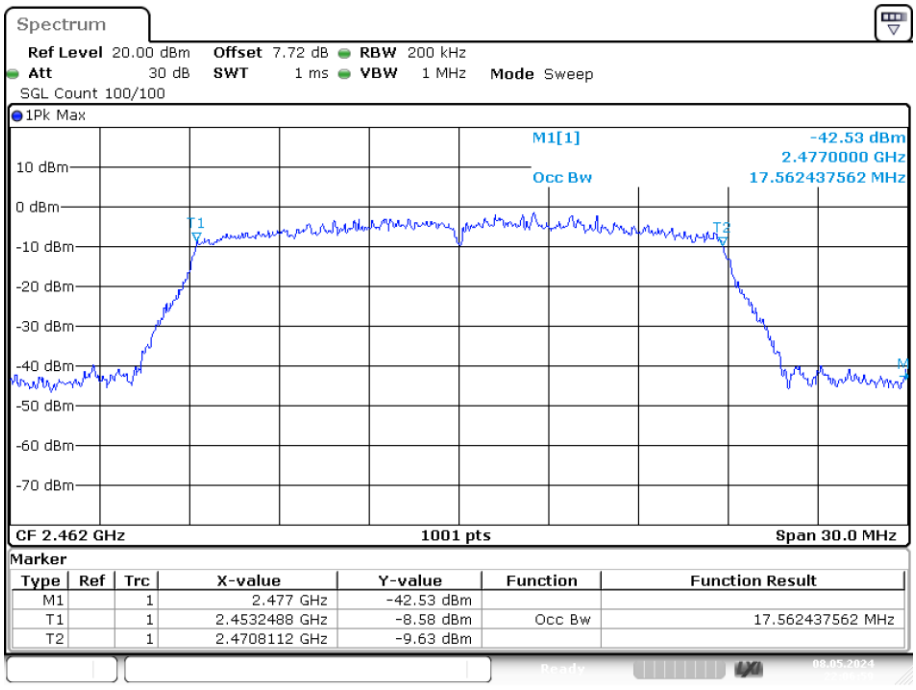

Date: 8.MAY.2024 21:59:15

OBW NVNT n20 2437MHz Ant1



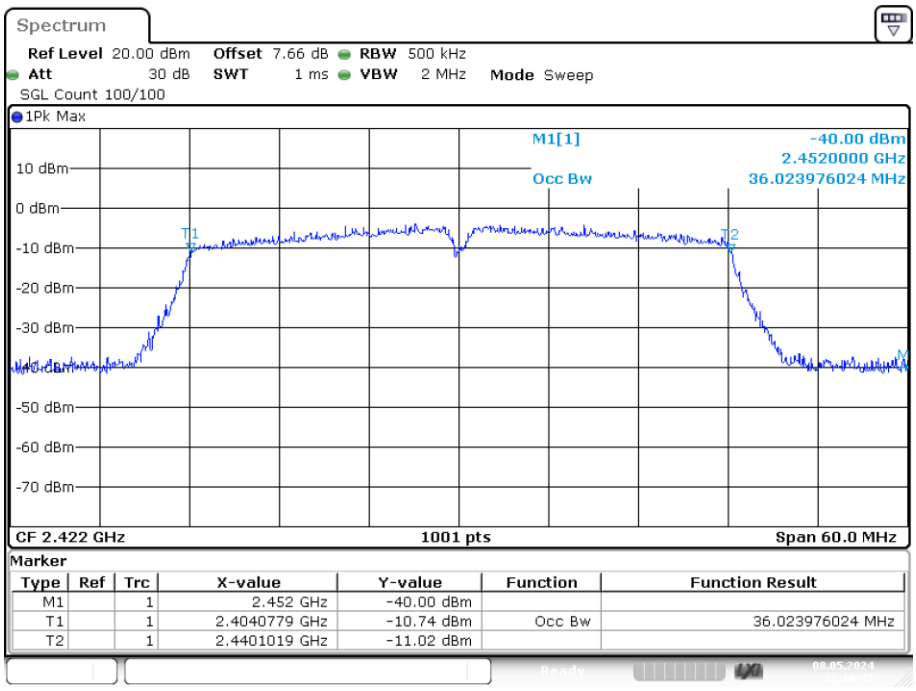

Date: 8.MAY.2024 22:02:56

OBW NVNT n20 2462MHz Ant1



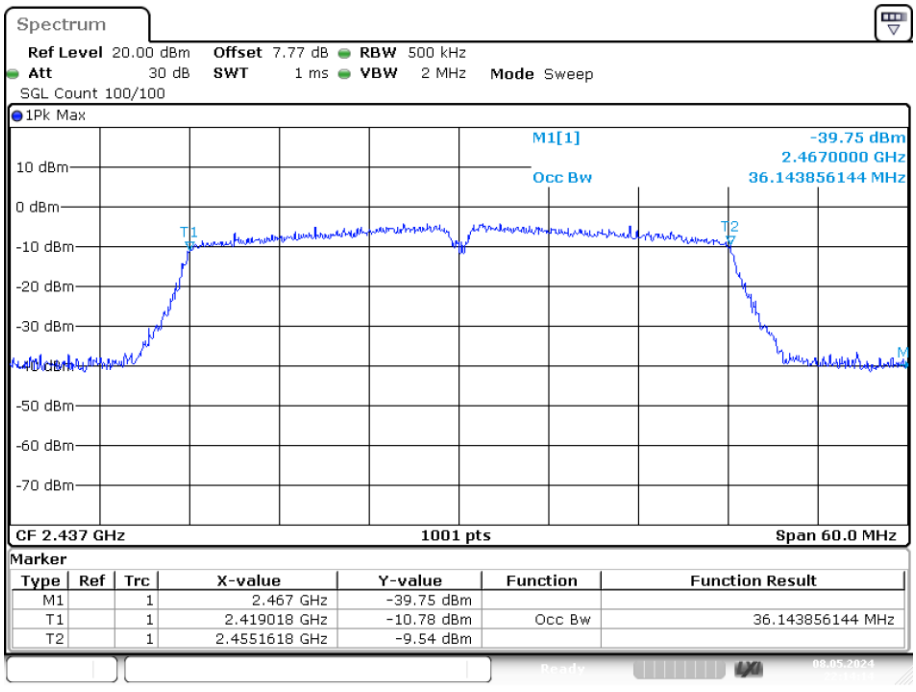

Date: 8.MAY.2024 22:06:58

OBW NVNT n40 2422MHz Ant1



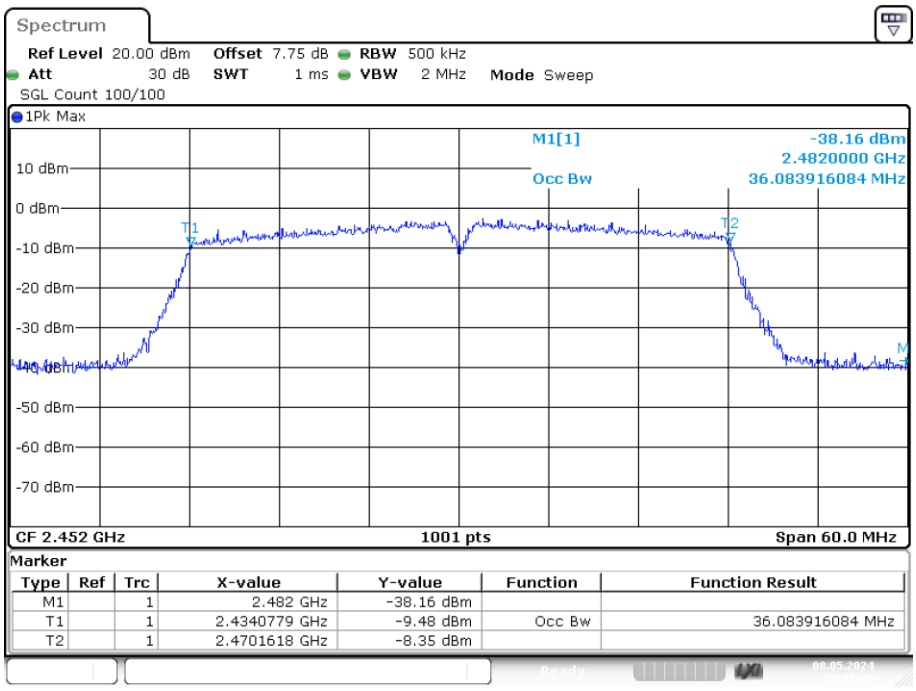

Date: 8.MAY.2024 22:10:47

OBW NVNT n40 2437MHz Ant1




Date: 8.MAY.2024 22:14:14

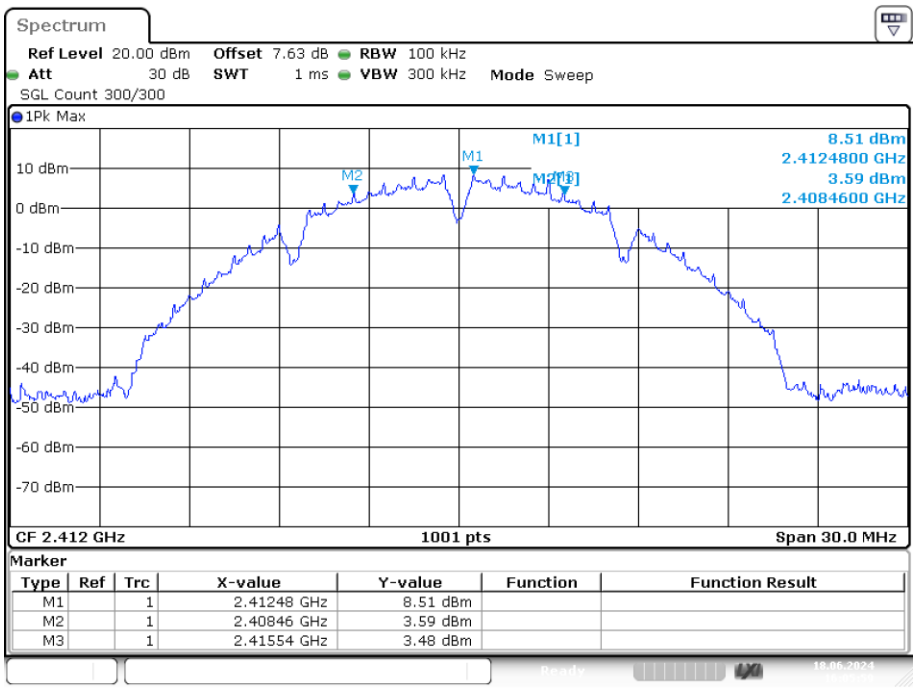
OBW NVNT n40 2452MHz Ant1




**-6dB Bandwidth**

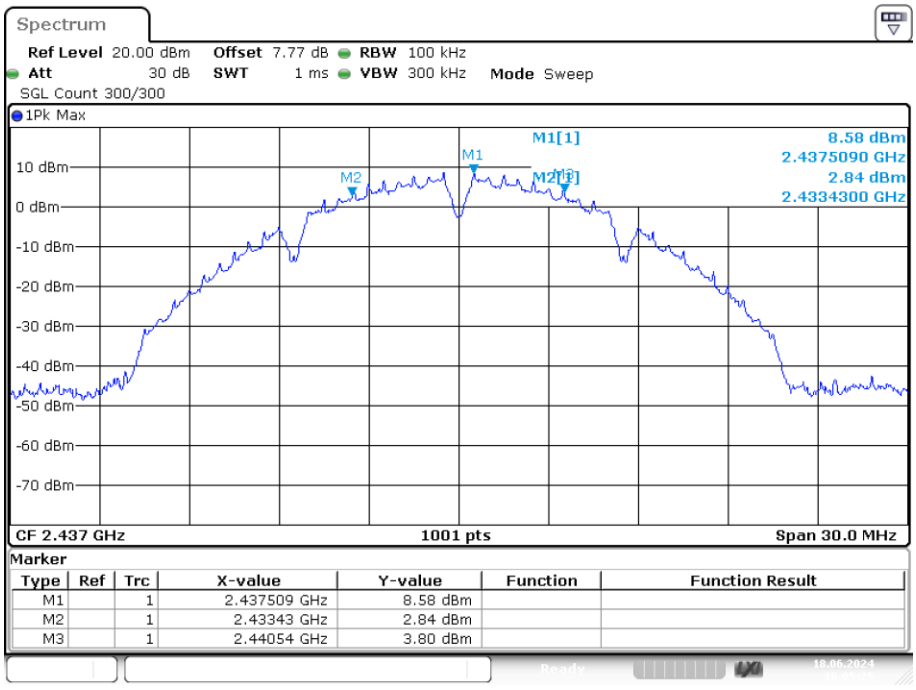
| Condition | Mode | Frequency (MHz) | Antenna | -6 dB Bandwidth (MHz) | Limit -6 dB Bandwidth (MHz) | Verdict |
|---|---|---|---|---|---|---|
| NVNT | b | 2412 | Ant2 | 7.08 | 0.5 | Pass |
| NVNT | b | 2437 | Ant2 | 7.11 | 0.5 | Pass |
| NVNT | b | 2462 | Ant2 | 7.32 | 0.5 | Pass |
| NVNT | g | 2412 | Ant2 | 16.08 | 0.5 | Pass |
| NVNT | g | 2437 | Ant2 | 16.29 | 0.5 | Pass |
| NVNT | g | 2462 | Ant2 | 16.32 | 0.5 | Pass |
| NVNT | n20 | 2412 | Ant2 | 16.86 | 0.5 | Pass |
| NVNT | n20 | 2437 | Ant2 | 17.61 | 0.5 | Pass |
| NVNT | n20 | 2462 | Ant2 | 17.64 | 0.5 | Pass |
| NVNT | n40 | 2422 | Ant2 | 35.88 | 0.5 | Pass |
| NVNT | n40 | 2437 | Ant2 | 35.52 | 0.5 | Pass |
| NVNT | n40 | 2452 | Ant2 | 36.36 | 0.5 | Pass |

-6dB Bandwidth NVNT b 2412MHz Ant2



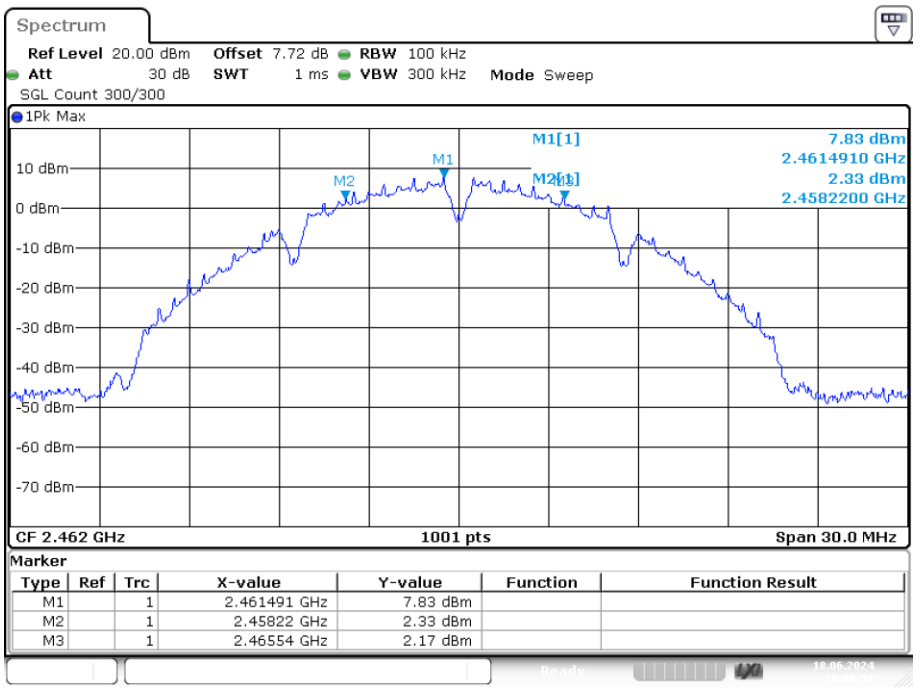

Date: 18.JUN.2024 16:05:58

-6dB Bandwidth NVNT b 2437MHz Ant2



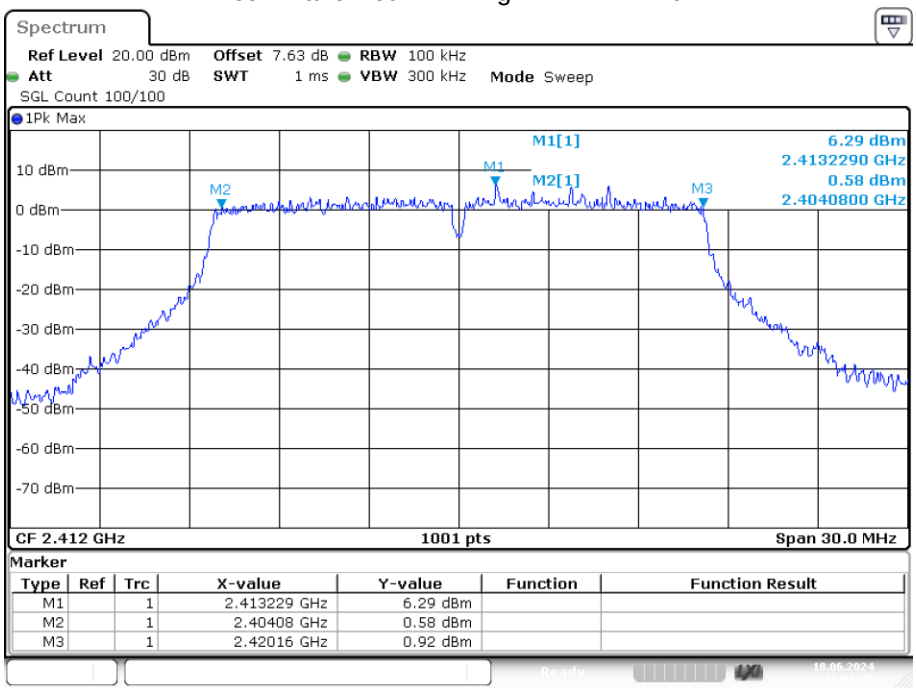

Date: 18.JUN.2024 16:05:25

-6dB Bandwidth NVNT b 2462MHz Ant2



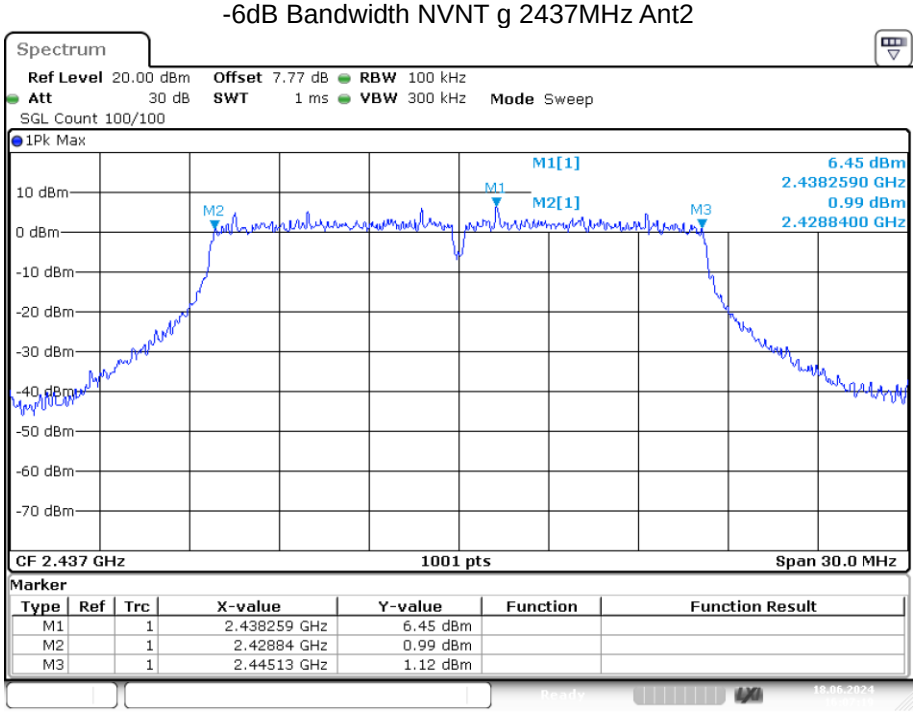

Date: 18.JUN.2024 16:00:51

-6dB Bandwidth NVNT g 2412MHz Ant2



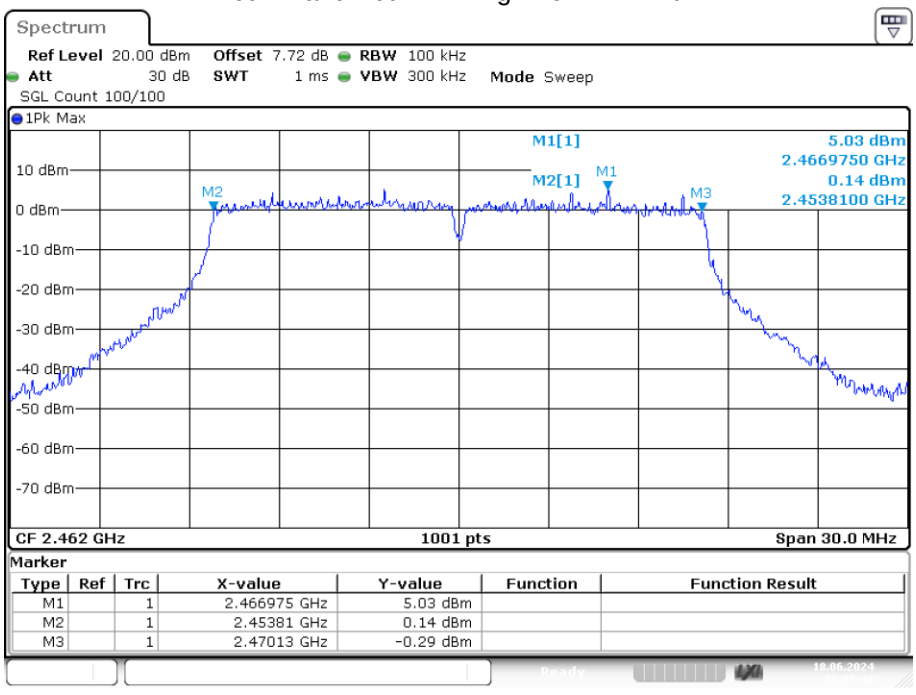

Date: 18.JUN.2024 16:06:44

-6dB Bandwidth NVNT g 2437MHz Ant2



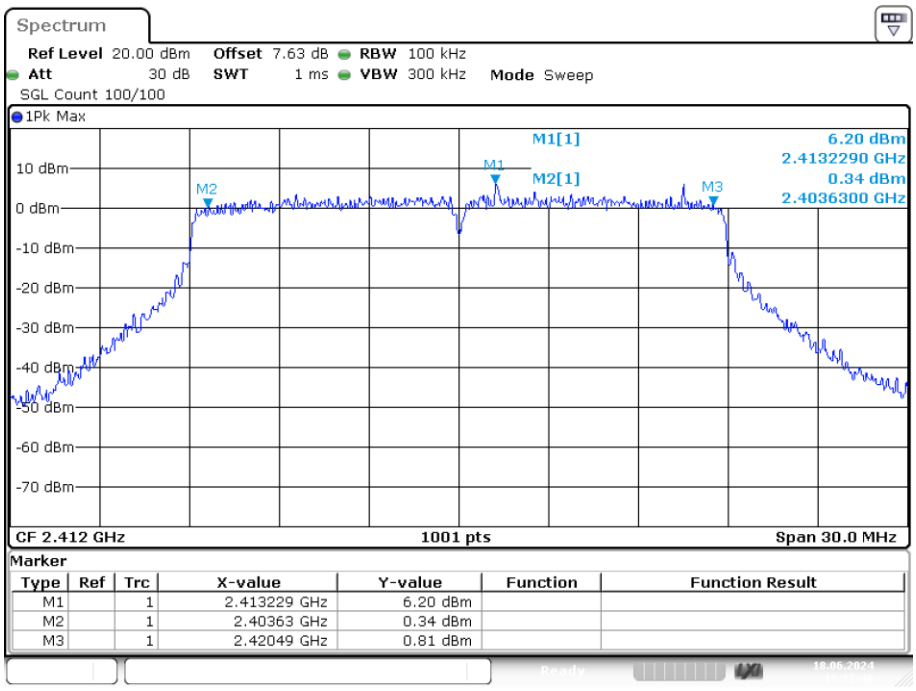

Date: 18.JUN.2024 16:07:19

-6dB Bandwidth NVNT g 2462MHz Ant2



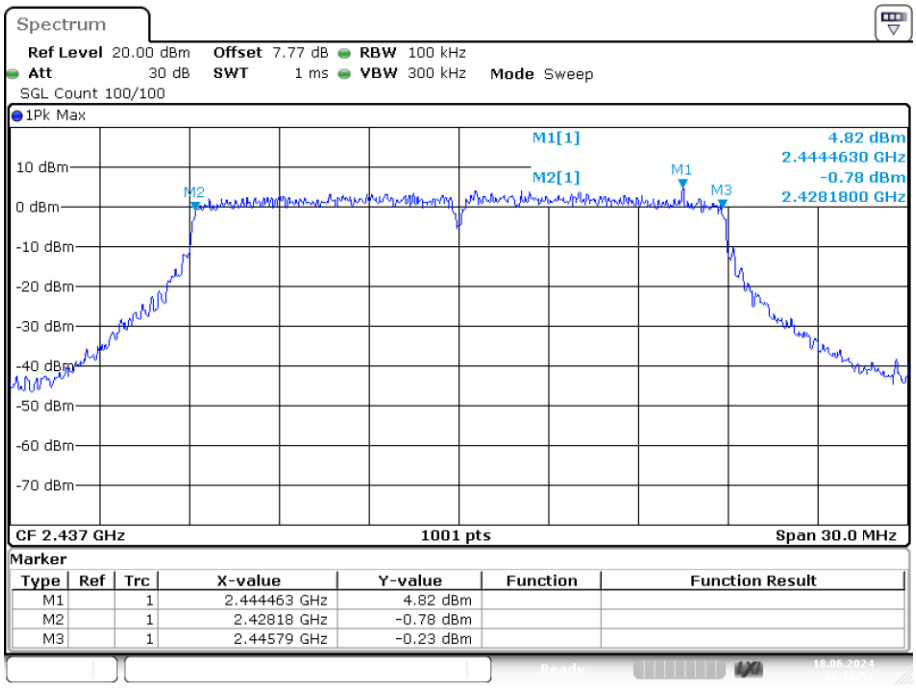

Date: 18.JUN.2024 16:07:47

-6dB Bandwidth NVNT n20 2412MHz Ant2



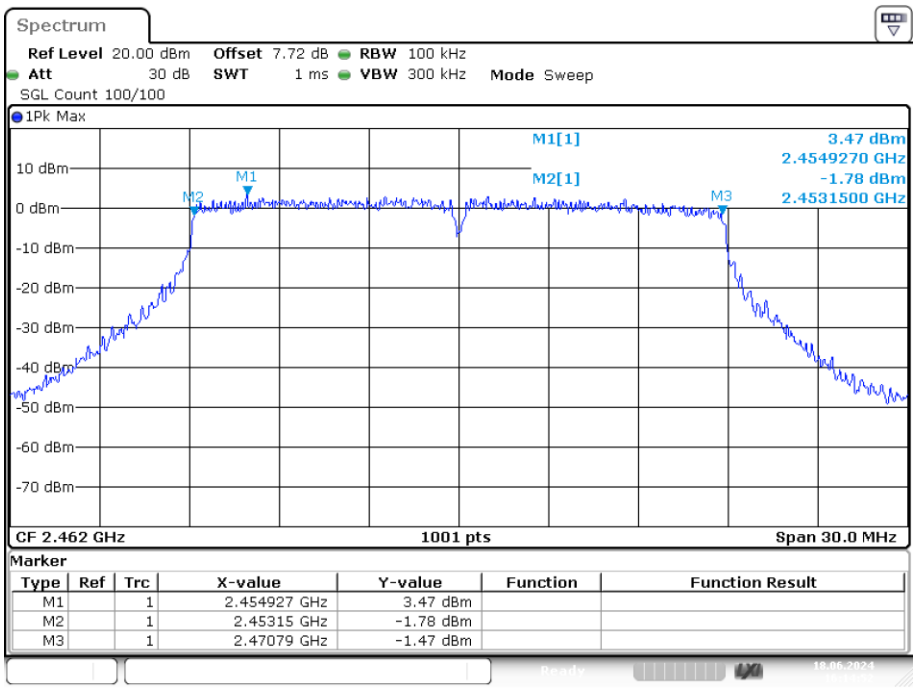

Date: 18.JUN.2024 16:12:46

-6dB Bandwidth NVNT n20 2437MHz Ant2



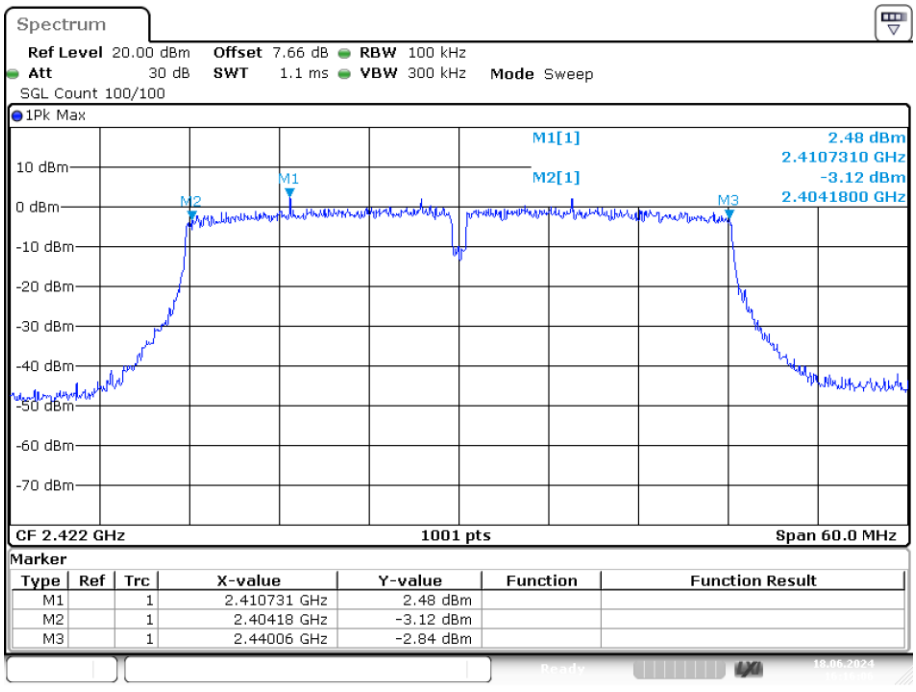

Date: 18.JUN.2024 16:13:51

-6dB Bandwidth NVNT n20 2462MHz Ant2



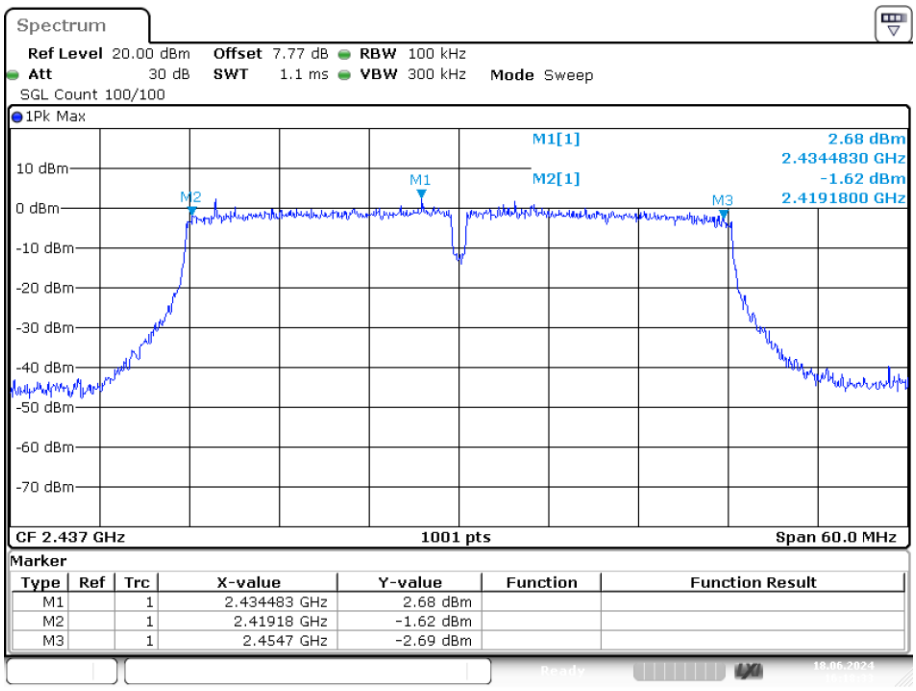

Date: 18.JUN.2024 16:14:52

-6dB Bandwidth NVNT n40 2422MHz Ant2



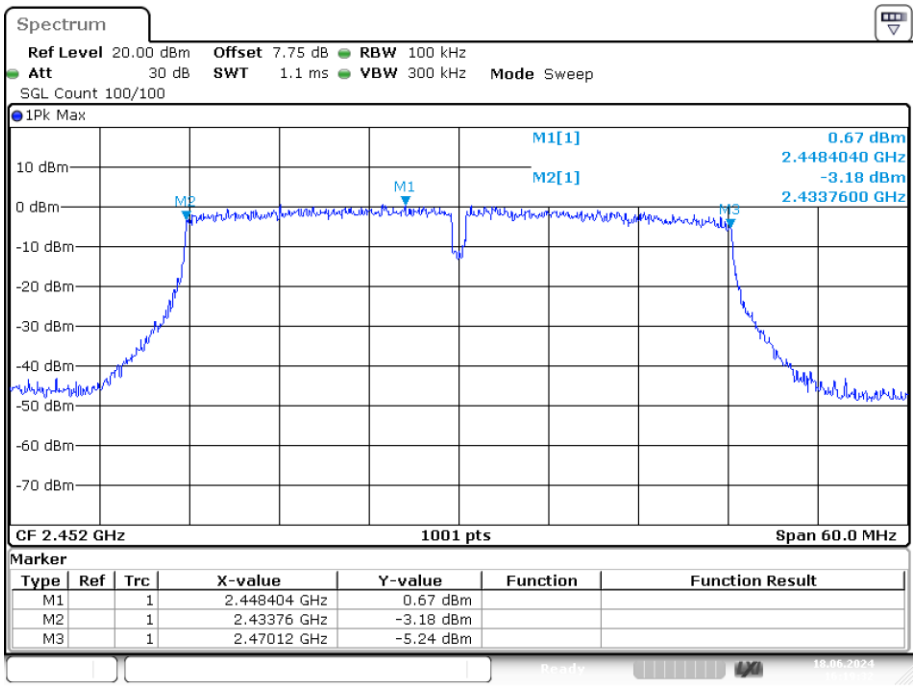

Date: 18.JUN.2024 16:16:06

-6dB Bandwidth NVNT n40 2437MHz Ant2




Date: 18.JUN.2024 16:18:33

-6dB Bandwidth NVNT n40 2452MHz Ant2

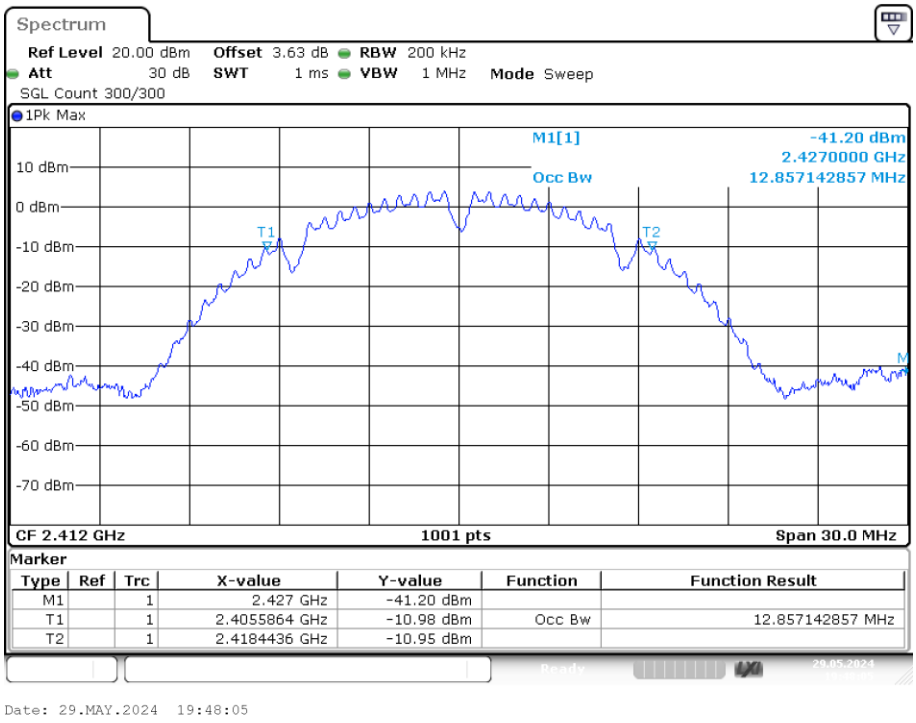



Date: 18.JUN.2024 16:19:32

**Occupied Channel Bandwidth**

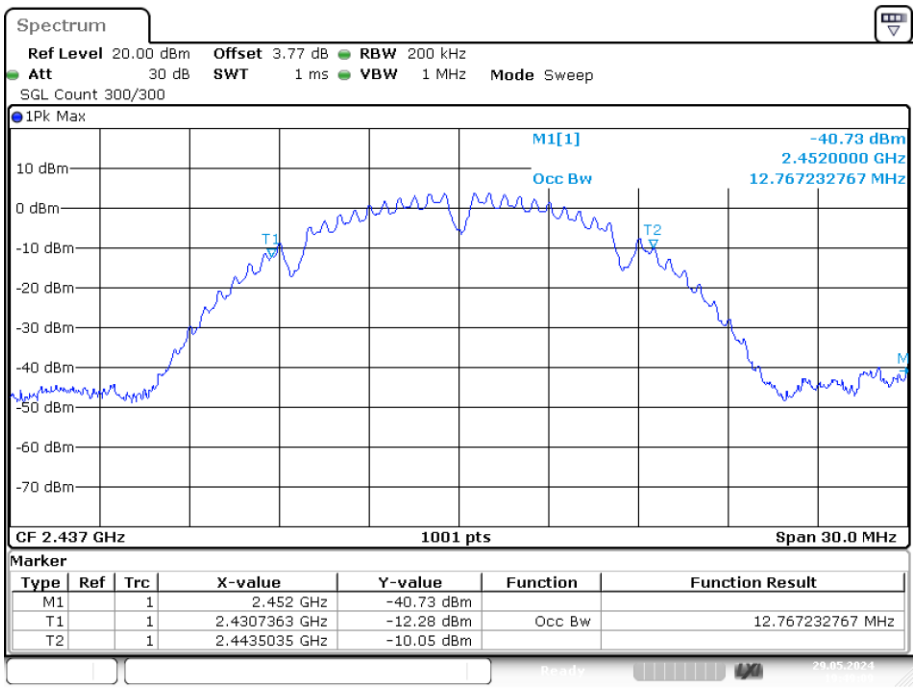
| Condition | Mode | Frequency (MHz) | Antenna | 99% OBW (MHz) |
|---|---|---|---|---|
| NVNT | b | 2412 | Ant2 | 12.857 |
| NVNT | b | 2437 | Ant2 | 12.767 |
| NVNT | b | 2462 | Ant2 | 12.707 |
| NVNT | g | 2412 | Ant2 | 16.513 |
| NVNT | g | 2437 | Ant2 | 16.454 |
| NVNT | g | 2462 | Ant2 | 16.454 |
| NVNT | n20 | 2412 | Ant2 | 17.592 |
| NVNT | n20 | 2437 | Ant2 | 17.562 |
| NVNT | n20 | 2462 | Ant2 | 17.622 |
| NVNT | n40 | 2422 | Ant2 | 36.204 |
| NVNT | n40 | 2437 | Ant2 | 36.204 |
| NVNT | n40 | 2452 | Ant2 | 36.024 |

OBW NVNT b 2412MHz Ant2



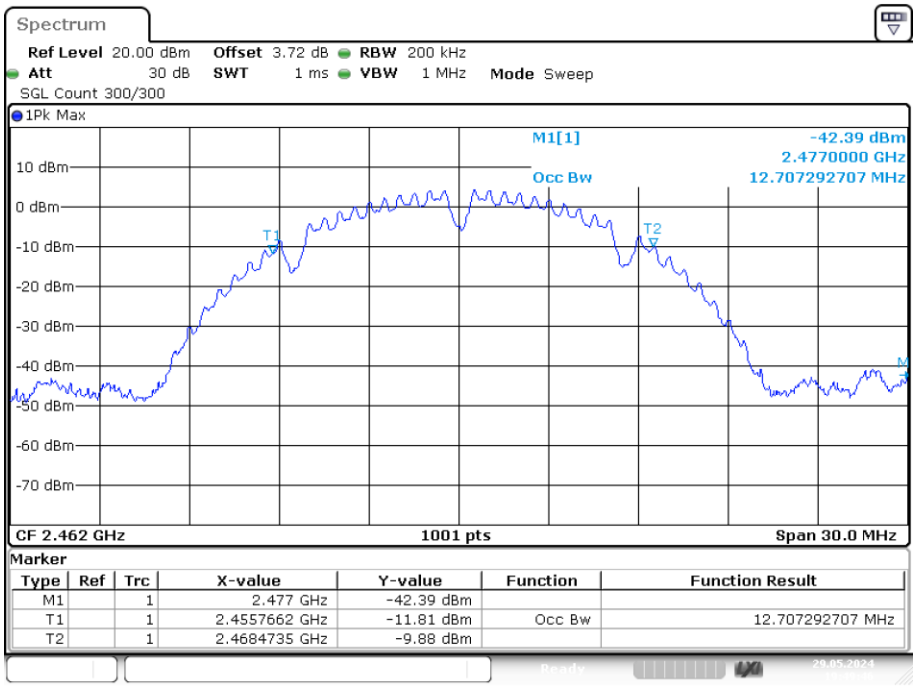

Date: 29.MAY.2024 19:48:05

OBW NVNT b 2437MHz Ant2



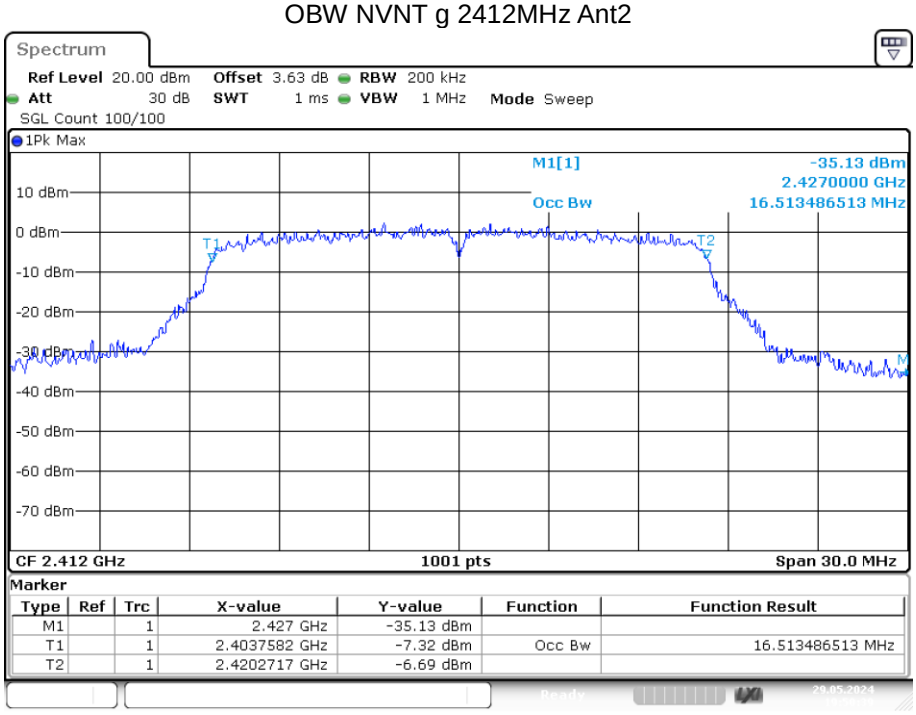

Date: 29.MAY.2024 19:49:09

OBW NVNT b 2462MHz Ant2



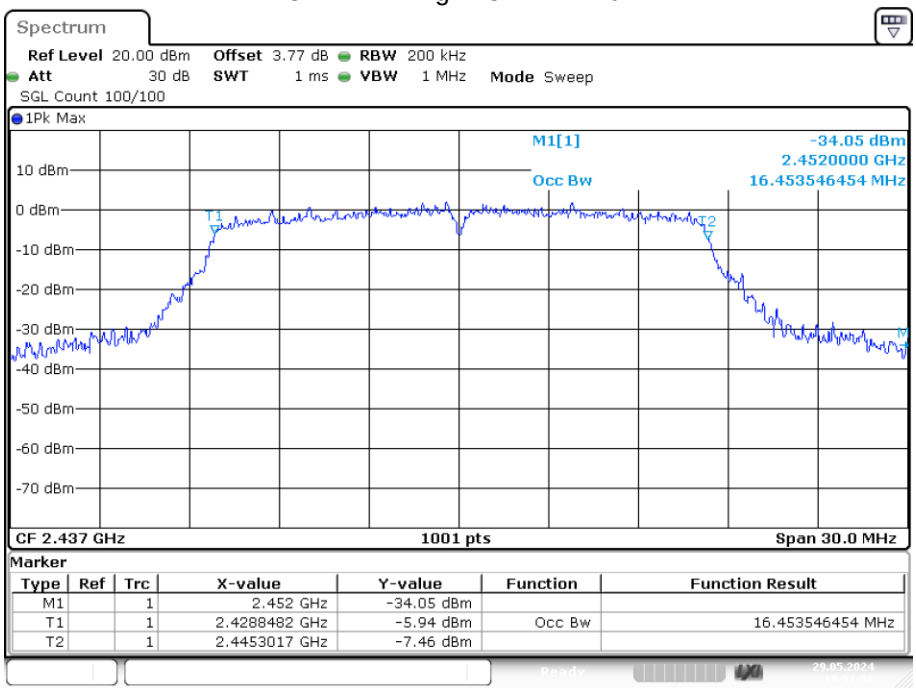

Date: 29.MAY.2024 19:49:47

OBW NVNT g 2412MHz Ant2



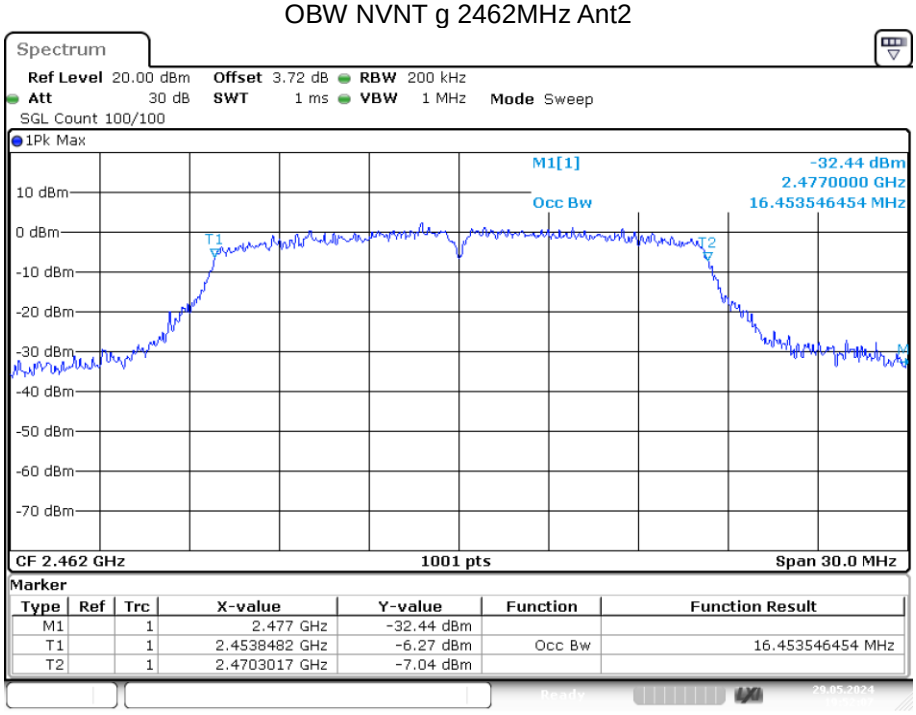

Date: 29.MAY.2024 19:50:39

OBW NVNT g 2437MHz Ant2



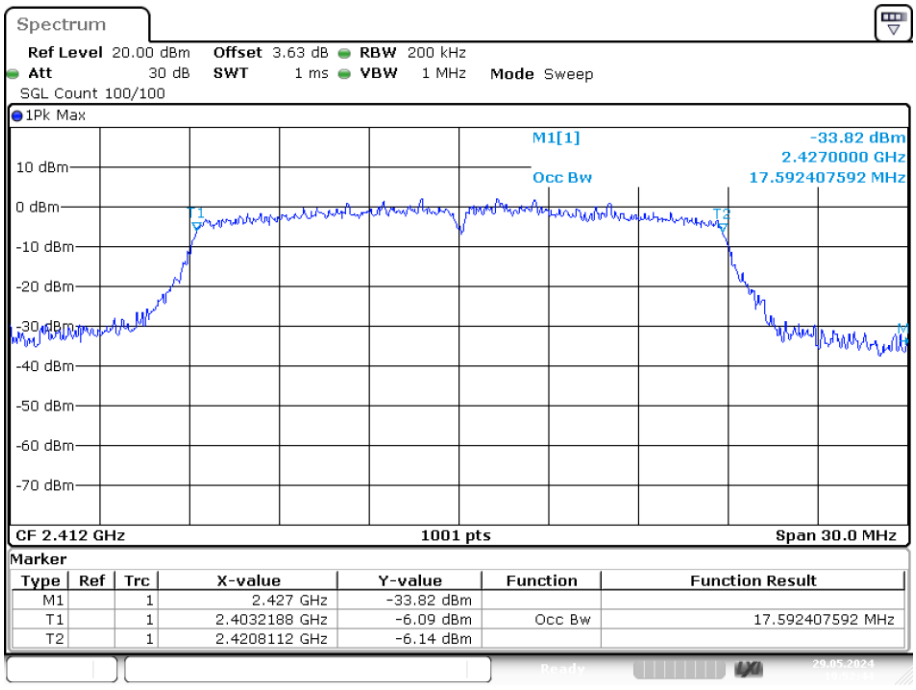

Date: 29.MAY.2024 19:51:06

OBW NVNT g 2462MHz Ant2



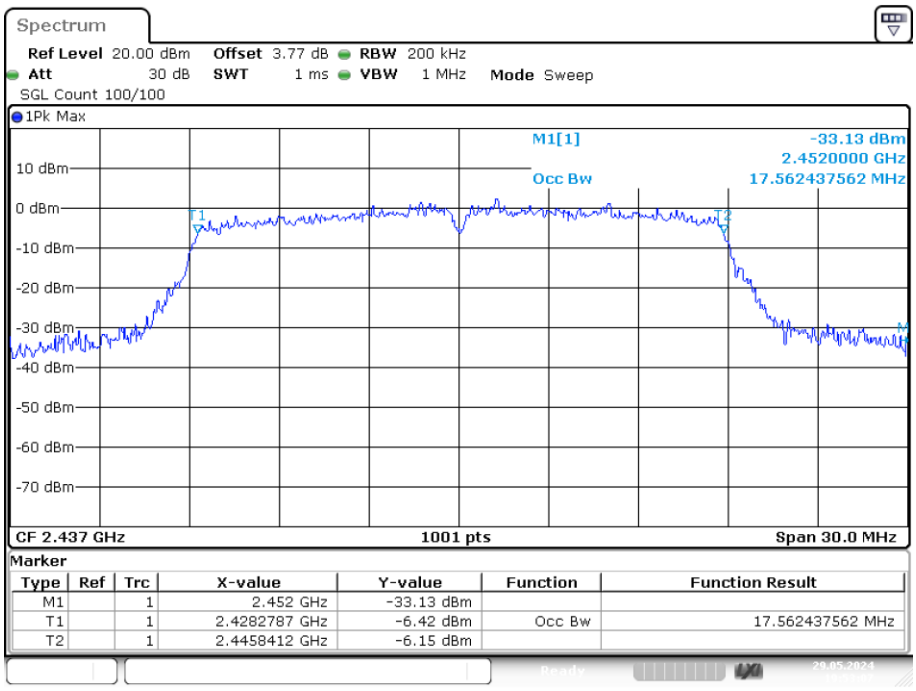

Date: 29.MAY.2024 19:52:07

OBW NVNT n20 2412MHz Ant2



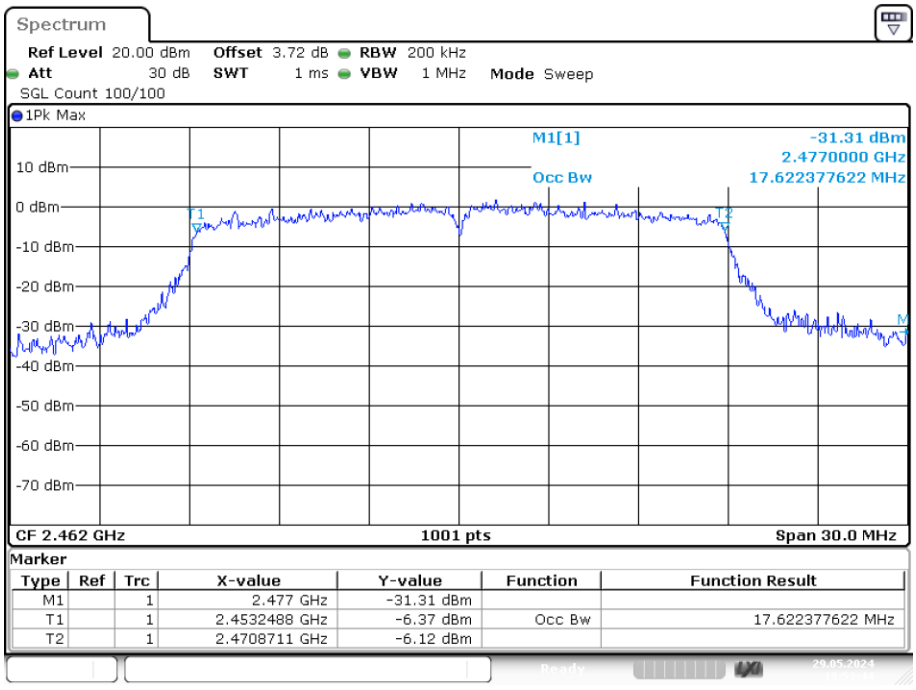

Date: 29.MAY.2024 19:52:44

OBW NVNT n20 2437MHz Ant2



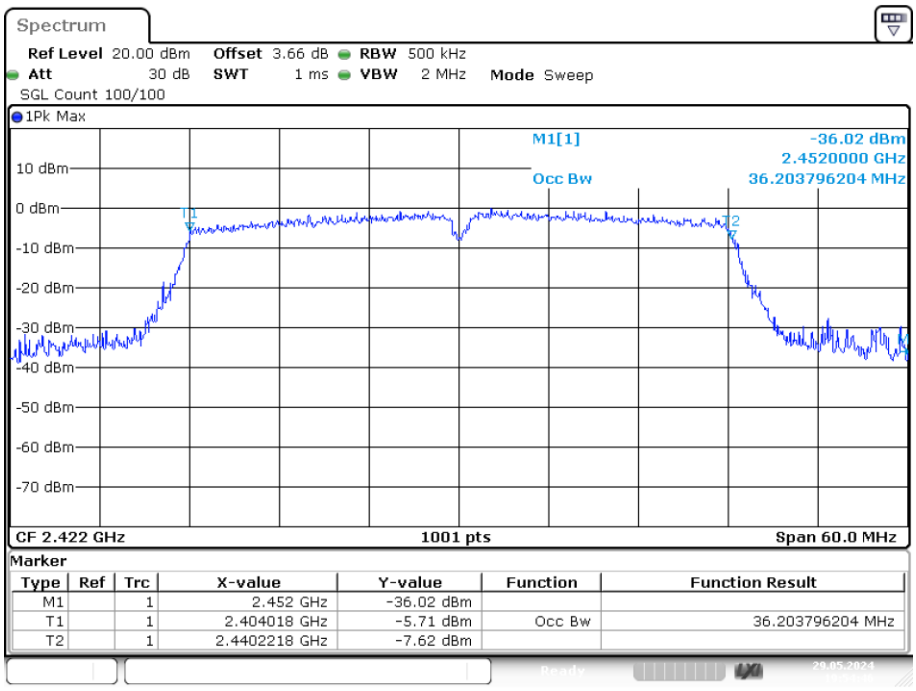

Date: 29.MAY.2024 19:53:07

OBW NVNT n20 2462MHz Ant2



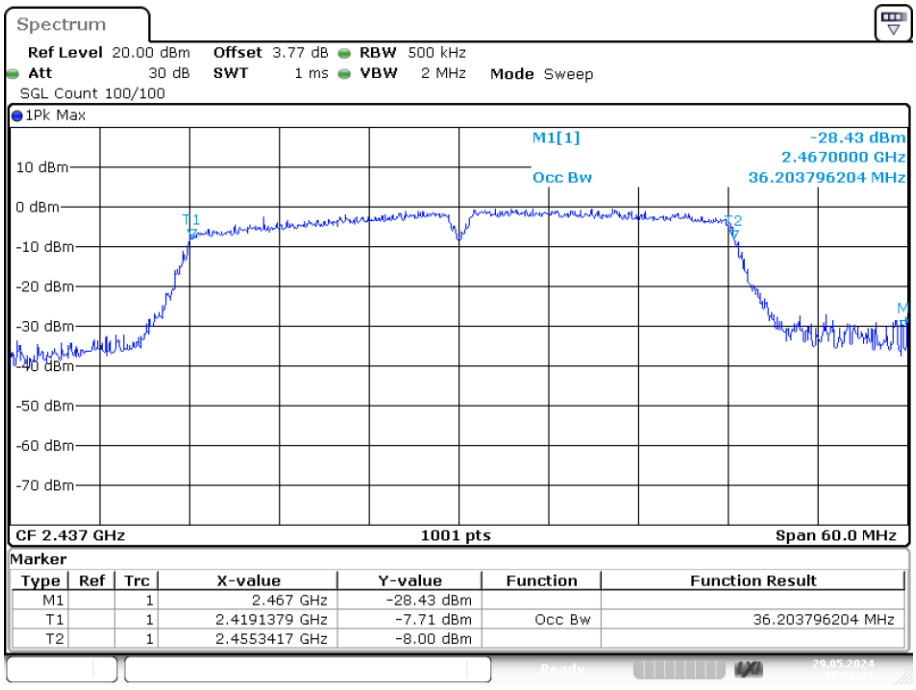

Date: 29.MAY.2024 19:53:44

OBW NVNT n40 2422MHz Ant2



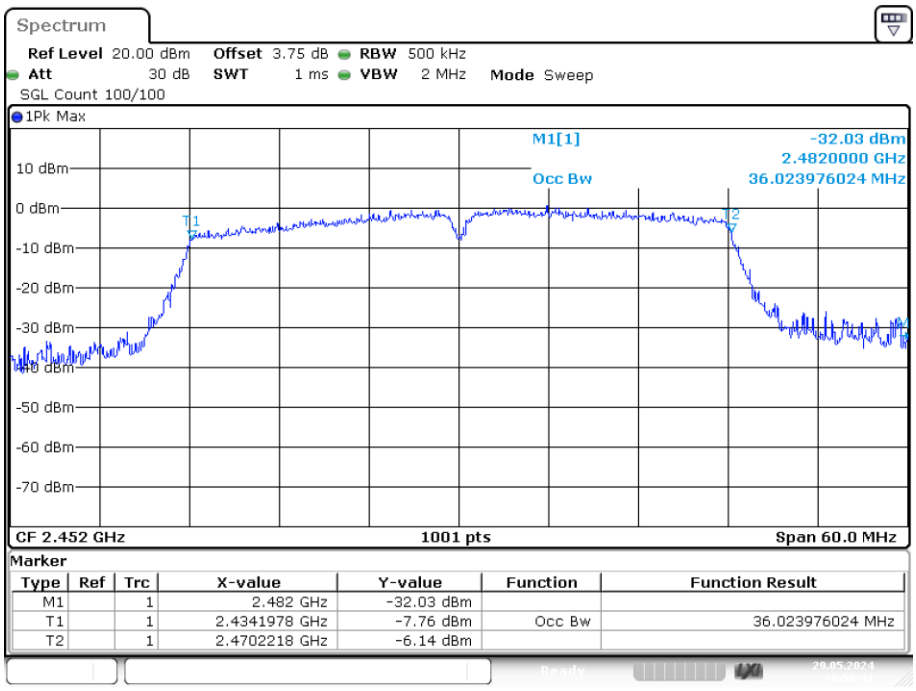

Date: 29.MAY.2024 19:54:46

OBW NVNT n40 2437MHz Ant2




Date: 29.MAY.2024 19:56:21

OBW NVNT n40 2452MHz Ant2




Date: 29.MAY.2024 19:56:40

# 8. BAND EDGE CHECK

## 8.1. Test limits

Please refer FCC PART 15: 15.247

All the lower and upper band-edges emissions appearing within 2310MHz to 2390MHz and 2483.5MHz to 2500MHz restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions outside operation frequency band 2400MHz to 2483.5MHz shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

## 8.2. Test Procedure

Details see the KDB558074 D01 Meas Guidance v05r02

8.2.1 Put the EUT on a 1.5m high table, power on the EUT. Emissions were scanned and measured rotating the EUT to 360 degrees, Find the maximum Emission

8.2.2 Check the spurious emissions out of band.

8.2.3 RBW 1MHz, VBW 3MHz, peak detector for peak value, RBW 1MHz, VBW 10Hz, RMS detector for AV value.

## 8.3. Test Setup

Same as 5.2.2.

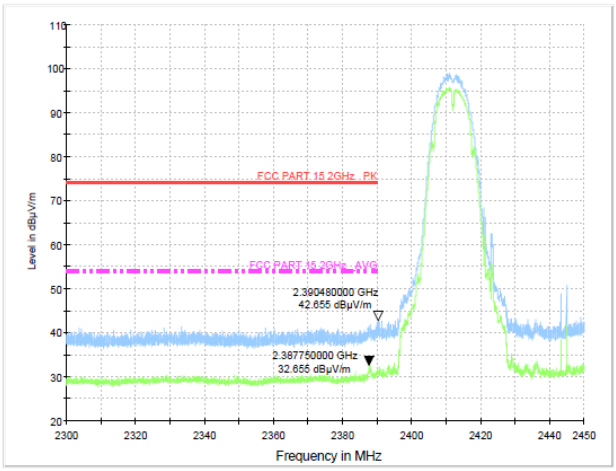
## 8.4. Test Results

PASS.

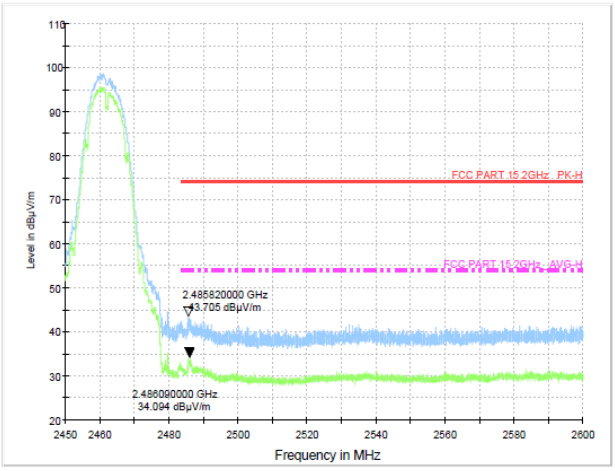
Detailed information please see the following page.

Radiation testing

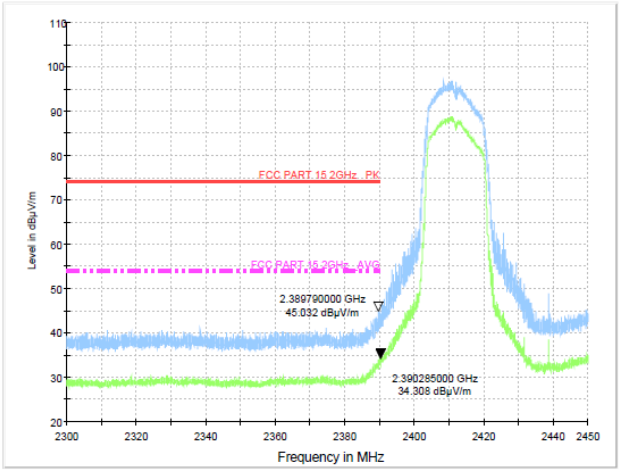
Test Mode: IEEE 802.11b-Low



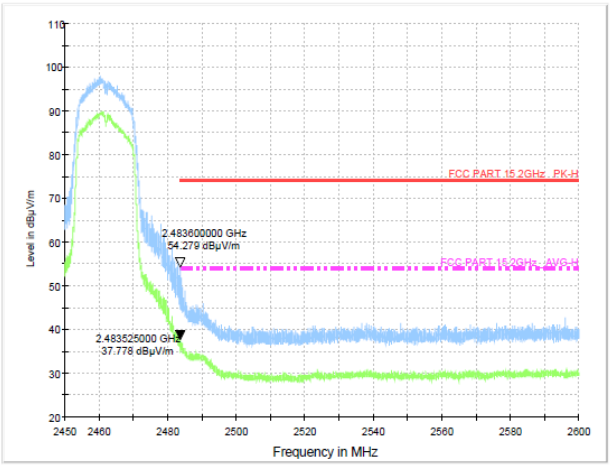

Test Mode: IEEE 802.11b-High



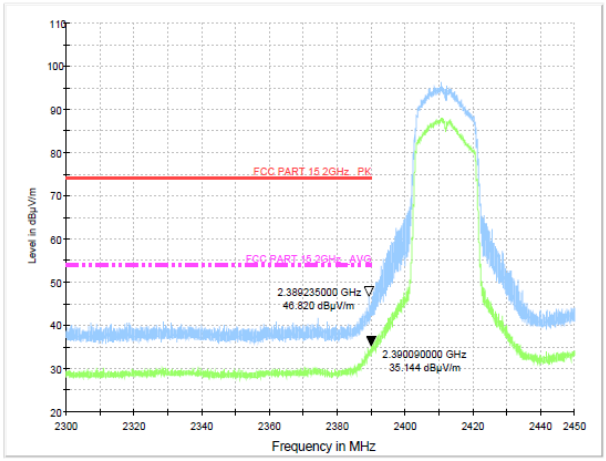

Test Mode: IEEE 802.11g-Low



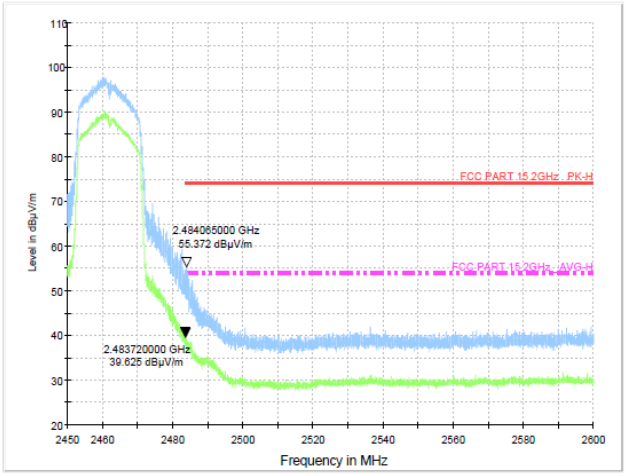

Test Mode: IEEE 802.11g-High



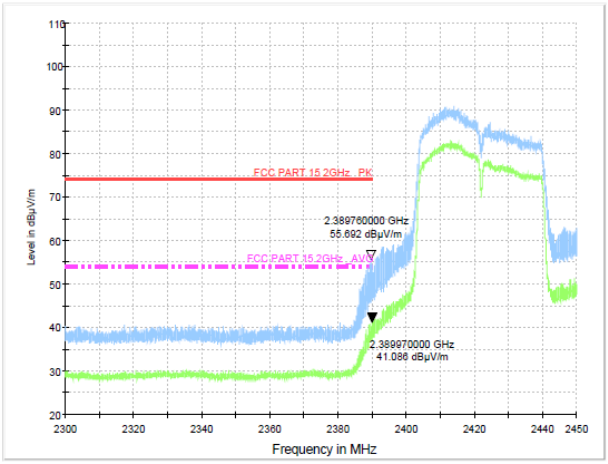
Test Mode: IEEE 802.11n20-Low



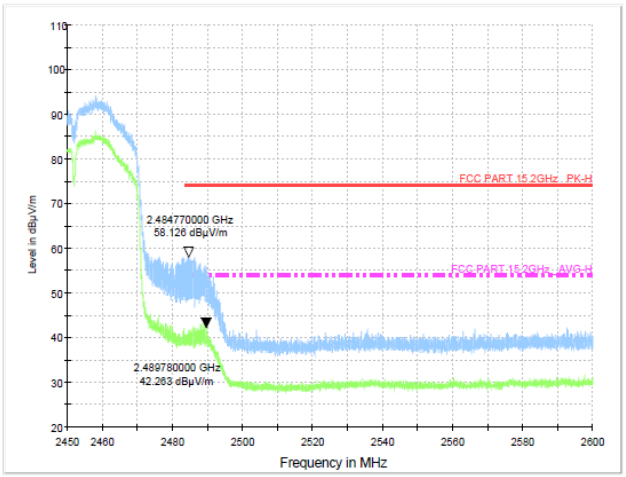

Test Mode: IEEE 802.11n20-High




Test Mode: IEEE 802.11n40-Low

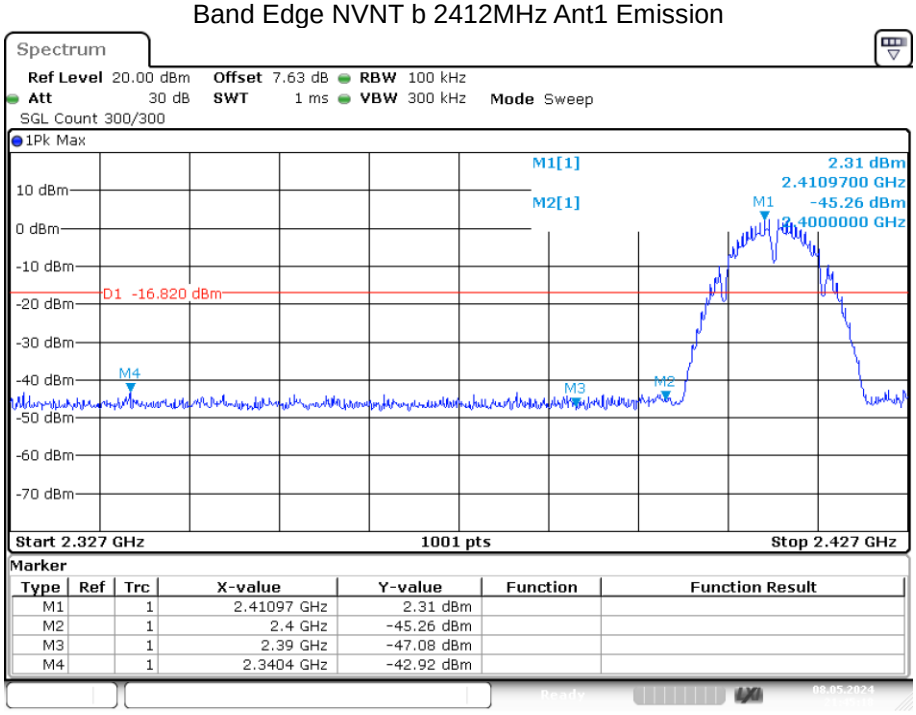



Test Mode: IEEE 802.11n40-High



Conduction method testing

Band Edge NVNT b 2412MHz Ant1 Emission

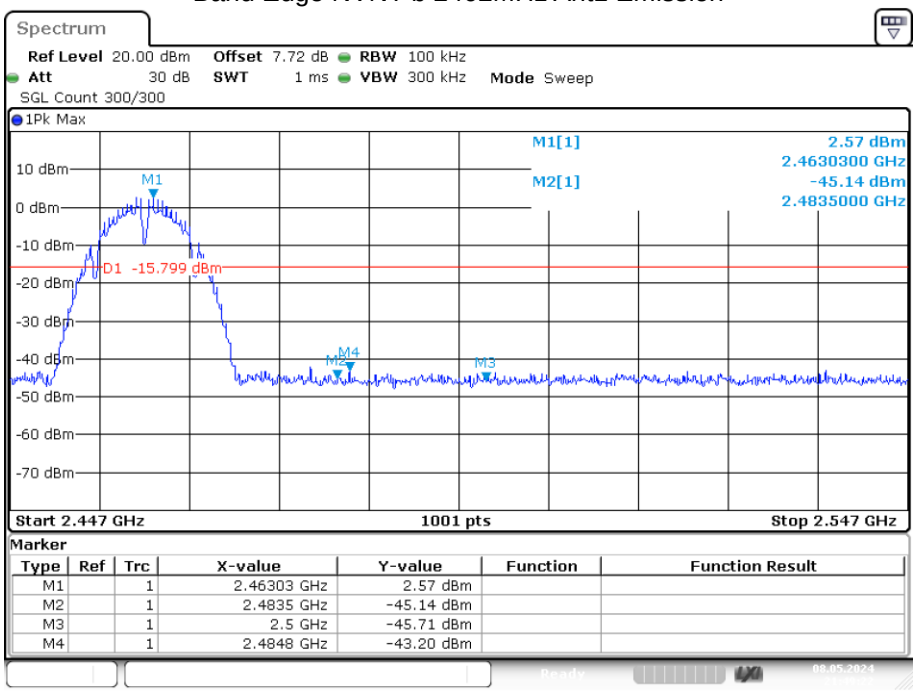



Marker

| Type | Ref | Trc | X-value | Y-value | Function | Function Result |
|---|---|---|---|---|---|---|
| M1 | | 1 | 2.41097 GHz | 2.31 dBm | | |
| M2 | | 1 | 2.4 GHz | -45.26 dBm | | |
| M3 | | 1 | 2.39 GHz | -47.08 dBm | | |
| M4 | | 1 | 2.3404 GHz | -42.92 dBm | | |

Date: 8.MAY.2024 21:45:18

Band Edge NVNT b 2462MHz Ant1 Emission




Marker

| Type | Ref | Trc | X-value | Y-value | Function | Function Result |
|---|---|---|---|---|---|---|
| M1 | | 1 | 2.46303 GHz | 2.57 dBm | | |
| M2 | | 1 | 2.4835 GHz | -45.14 dBm | | |
| M3 | | 1 | 2.5 GHz | -45.71 dBm | | |
| M4 | | 1 | 2.4848 GHz | -43.20 dBm | | |

Date: 8.MAY.2024 21:49:22