

## **Appendix RF Test Data for BLE**

**Company:** : **Shenzhen Flanger Musical Instruments Co., Limited**

**EUT** : **POCKET Effects Processor**

**FCC ID:** : **2BHAE-P1**

**Model Number** : **P1**

**Report No.** : **HTT2025101135F01**

**Reviewed By** : **Heber He**

## 1. Duty Cycle

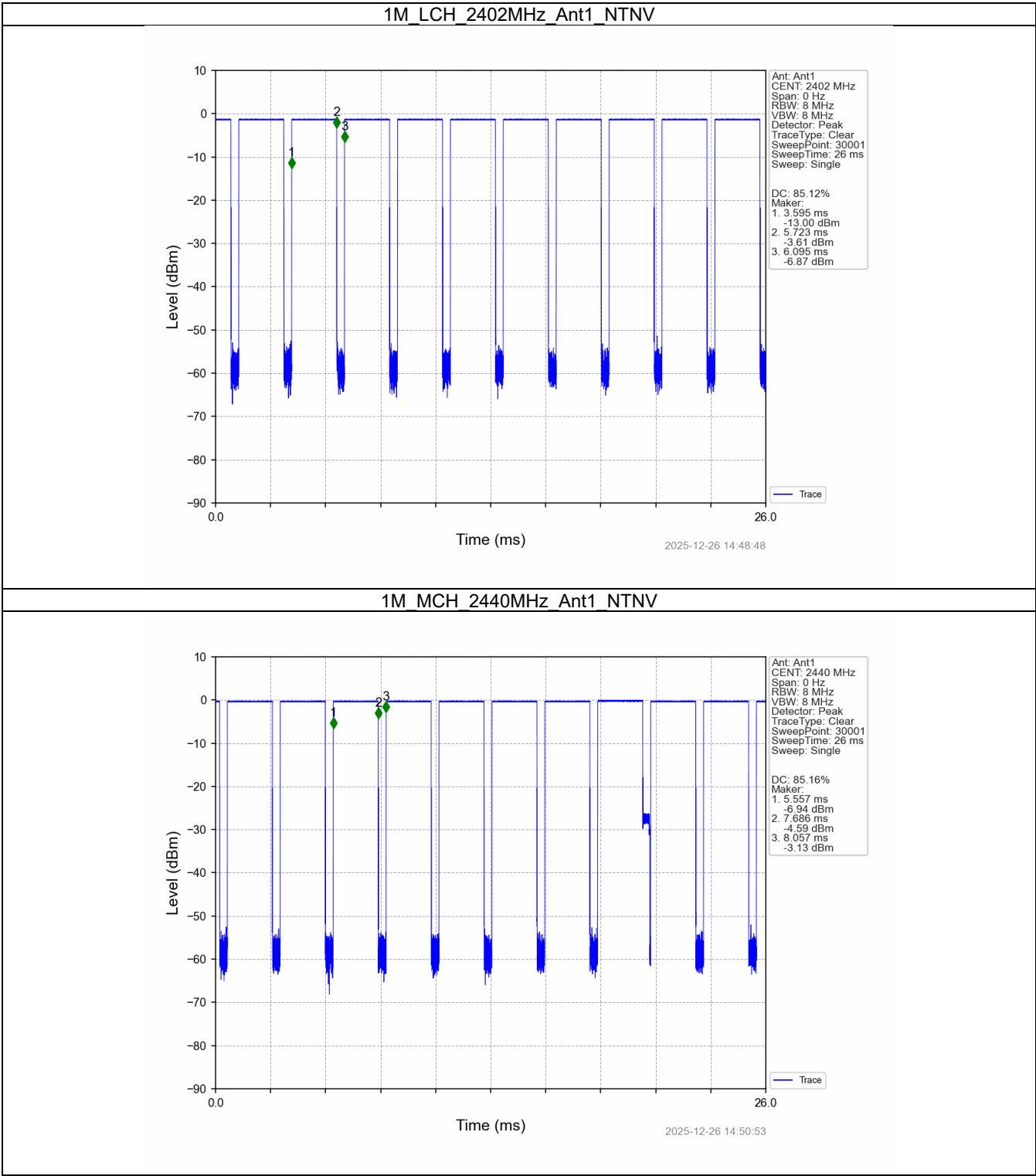
### 1.1 Test Result

#### 1.1.1 Ant1

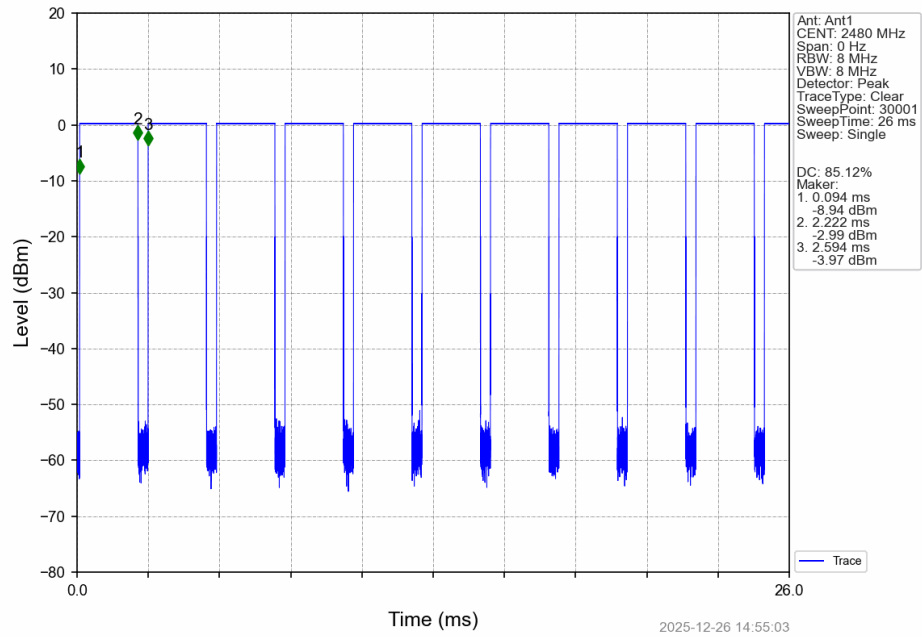
| Ant1 |         |                 |           |             |                |                                   |                       |
|------|---------|-----------------|-----------|-------------|----------------|-----------------------------------|-----------------------|
| Mode | TX Type | Frequency (MHz) | T_on (ms) | Period (ms) | Duty Cycle (%) | Duty Cycle Correction Factor (dB) | Max. DC Variation (%) |
| 1M   | SISO    | 2402            | 2.128     | 2.500       | 85.12          | 0.70                              | 0.03                  |
|      |         | 2440            | 2.129     | 2.500       | 85.16          | 0.70                              | 0.03                  |
|      |         | 2480            | 2.128     | 2.500       | 85.12          | 0.70                              | 0.03                  |
| 2M   | SISO    | 2402            | 1.077     | 2.501       | 43.06          | 3.66                              | 0.03                  |
|      |         | 2440            | 1.076     | 2.500       | 43.04          | 3.66                              | 0.03                  |
|      |         | 2480            | 1.085     | 2.500       | 43.40          | 3.63                              | 0.03                  |

# 1.2 Test Graph

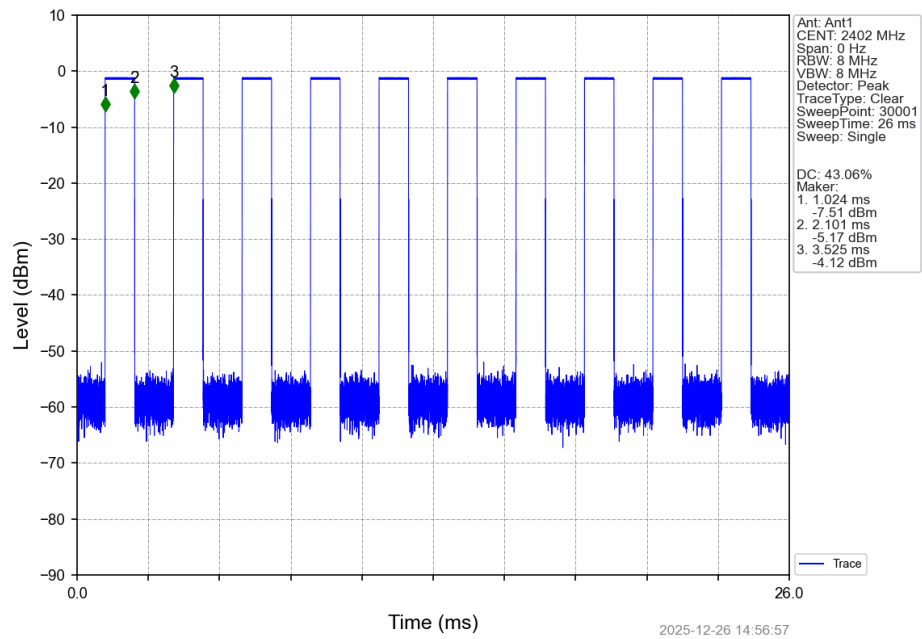
## 1.2.1 Ant1



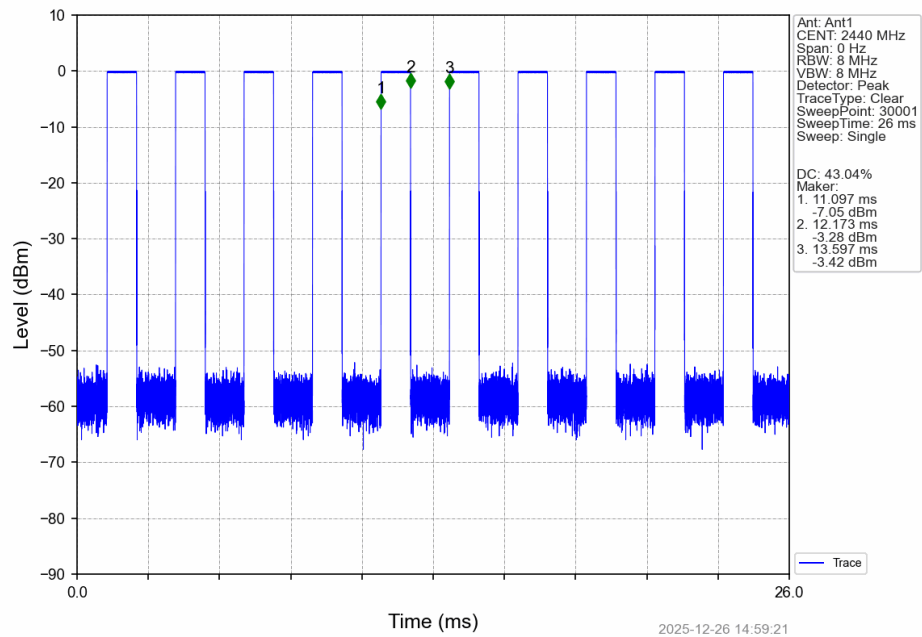
# 1M\_HCH\_2480MHz\_Ant1\_NTNV



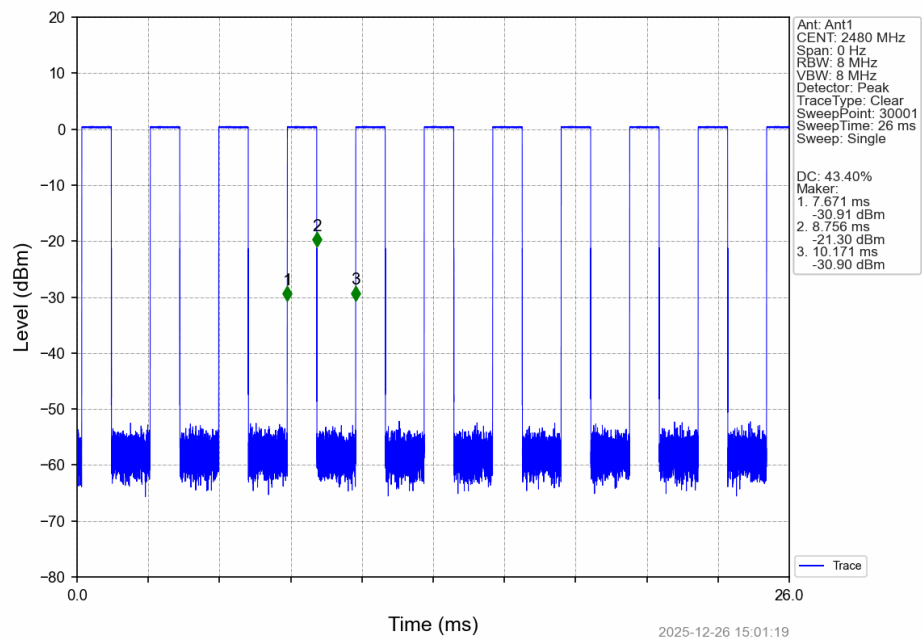
# 2M\_LCH\_2402MHz\_Ant1\_NTNV



### 2M\_MCH\_2440MHz\_Ant1\_NTNV



### 2M\_HCH\_2480MHz\_Ant1\_NTNV



## 2. Bandwidth

### 2.1 Test Result

#### 2.1.1 OBW

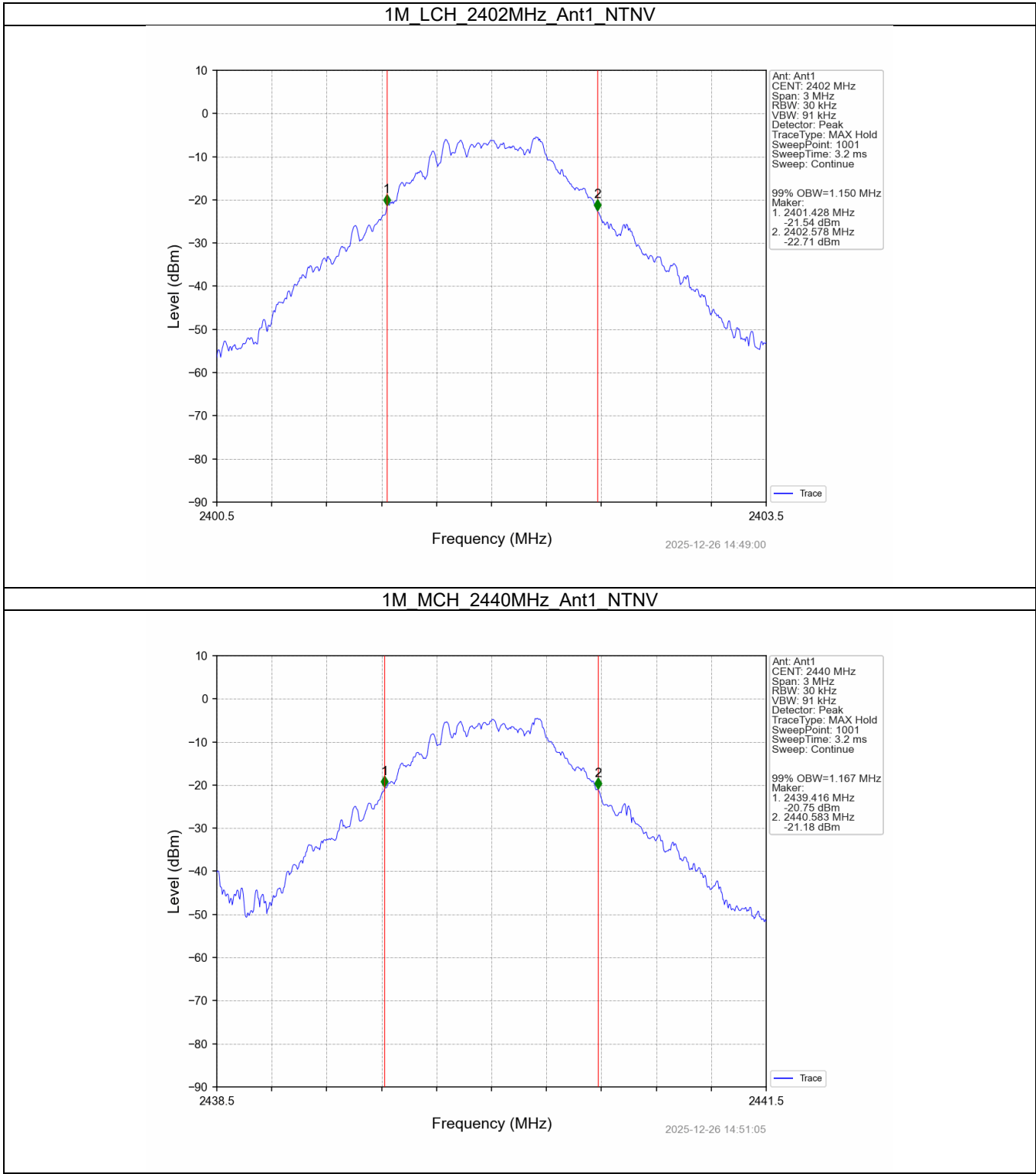
| Mode | TX Type | Frequency (MHz) | ANT | 99% Occupied Bandwidth (MHz) |       | Verdict |
|------|---------|-----------------|-----|------------------------------|-------|---------|
|      |         |                 |     | Result                       | Limit |         |
| 1M   | SISO    | 2402            | 1   | 1.150                        | /     | Pass    |
|      |         | 2440            | 1   | 1.167                        | /     | Pass    |
|      |         | 2480            | 1   | 1.227                        | /     | Pass    |
| 2M   | SISO    | 2402            | 1   | 2.063                        | /     | Pass    |
|      |         | 2440            | 1   | 2.078                        | /     | Pass    |
|      |         | 2480            | 1   | 2.109                        | /     | Pass    |

#### 2.1.2 6dB BW

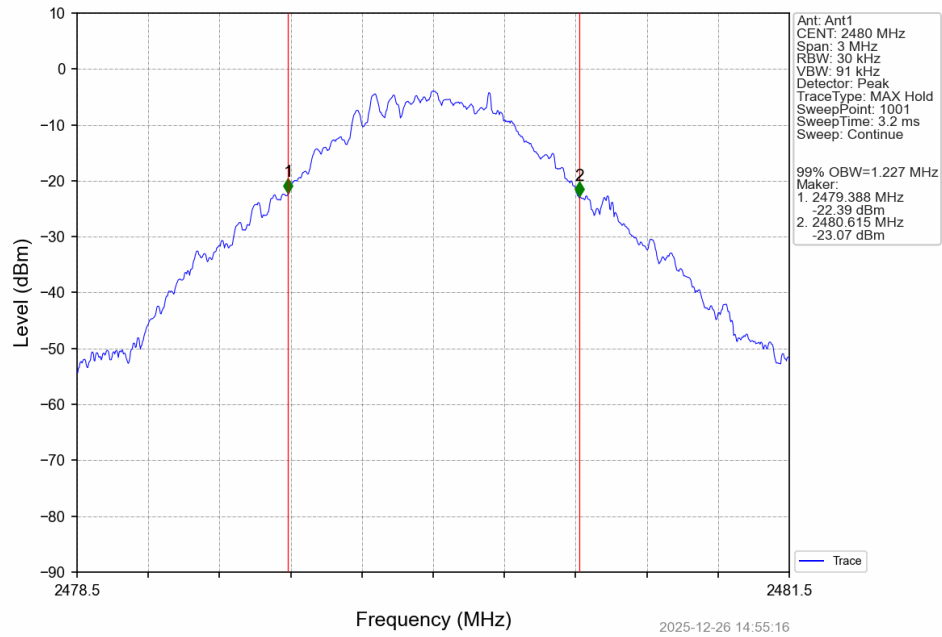
| Mode | TX Type | Frequency (MHz) | ANT | 6dB Bandwidth (MHz) |            | Verdict |
|------|---------|-----------------|-----|---------------------|------------|---------|
|      |         |                 |     | Result              | Limit      |         |
| 1M   | SISO    | 2402            | 1   | 0.772               | $\geq 0.5$ | Pass    |
|      |         | 2440            | 1   | 0.744               | $\geq 0.5$ | Pass    |
|      |         | 2480            | 1   | 0.726               | $\geq 0.5$ | Pass    |
| 2M   | SISO    | 2402            | 1   | 1.252               | $\geq 0.5$ | Pass    |
|      |         | 2440            | 1   | 1.185               | $\geq 0.5$ | Pass    |
|      |         | 2480            | 1   | 1.254               | $\geq 0.5$ | Pass    |

2.2 Test Graph

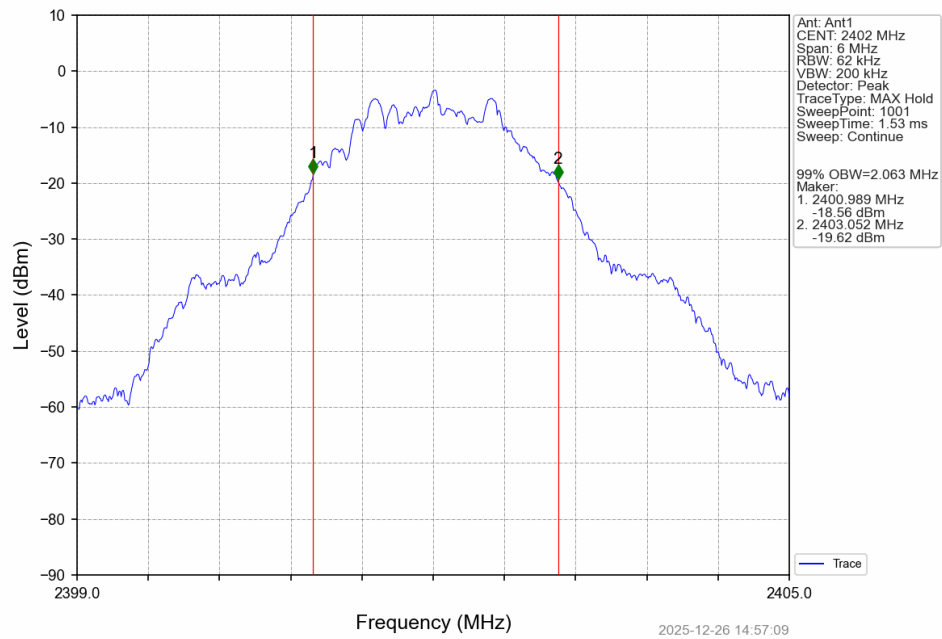
2.2.1 OBW



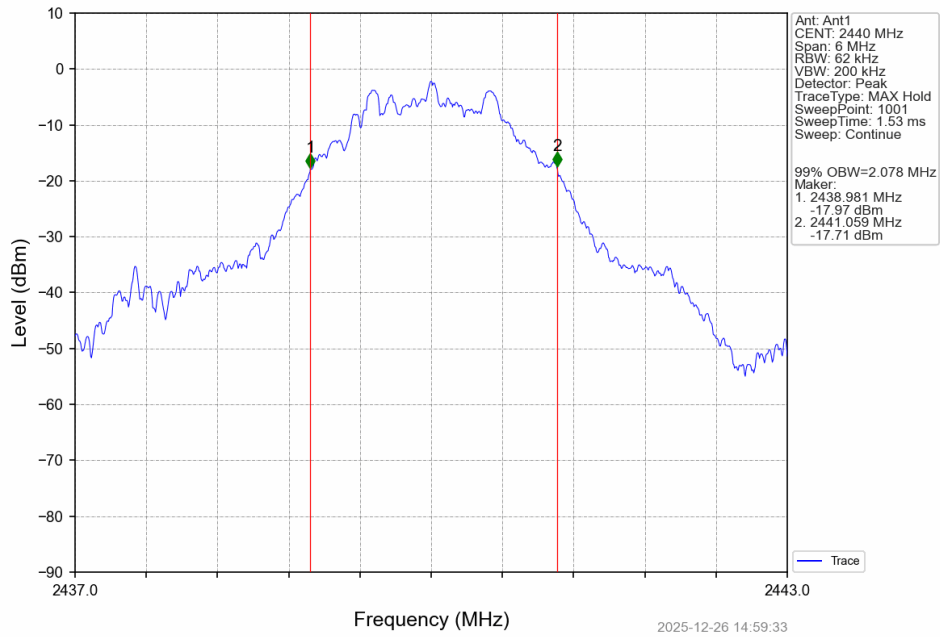
# 1M\_HCH\_2480MHz\_Ant1\_NTNV



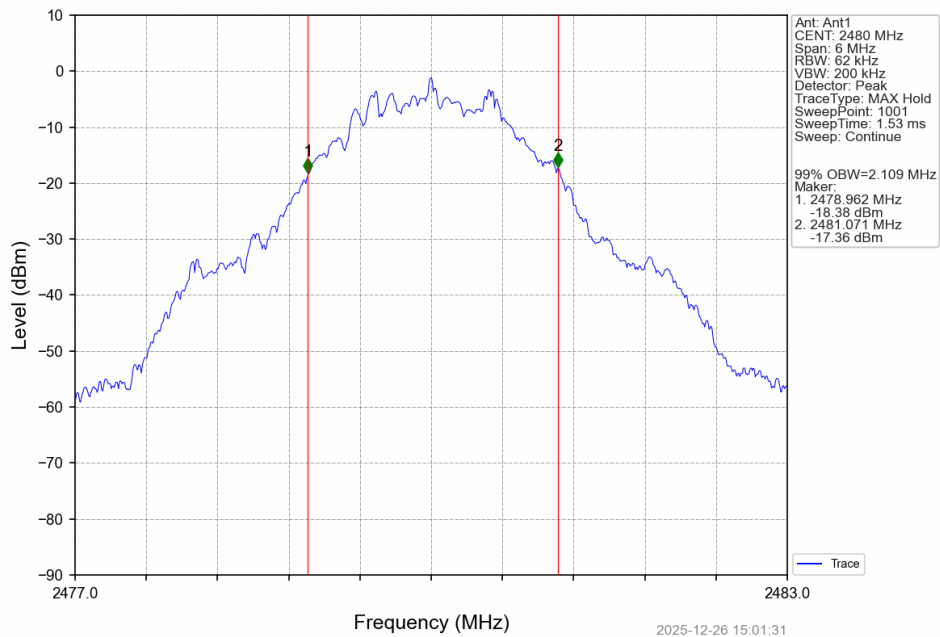
# 2M\_LCH\_2402MHz\_Ant1\_NTNV



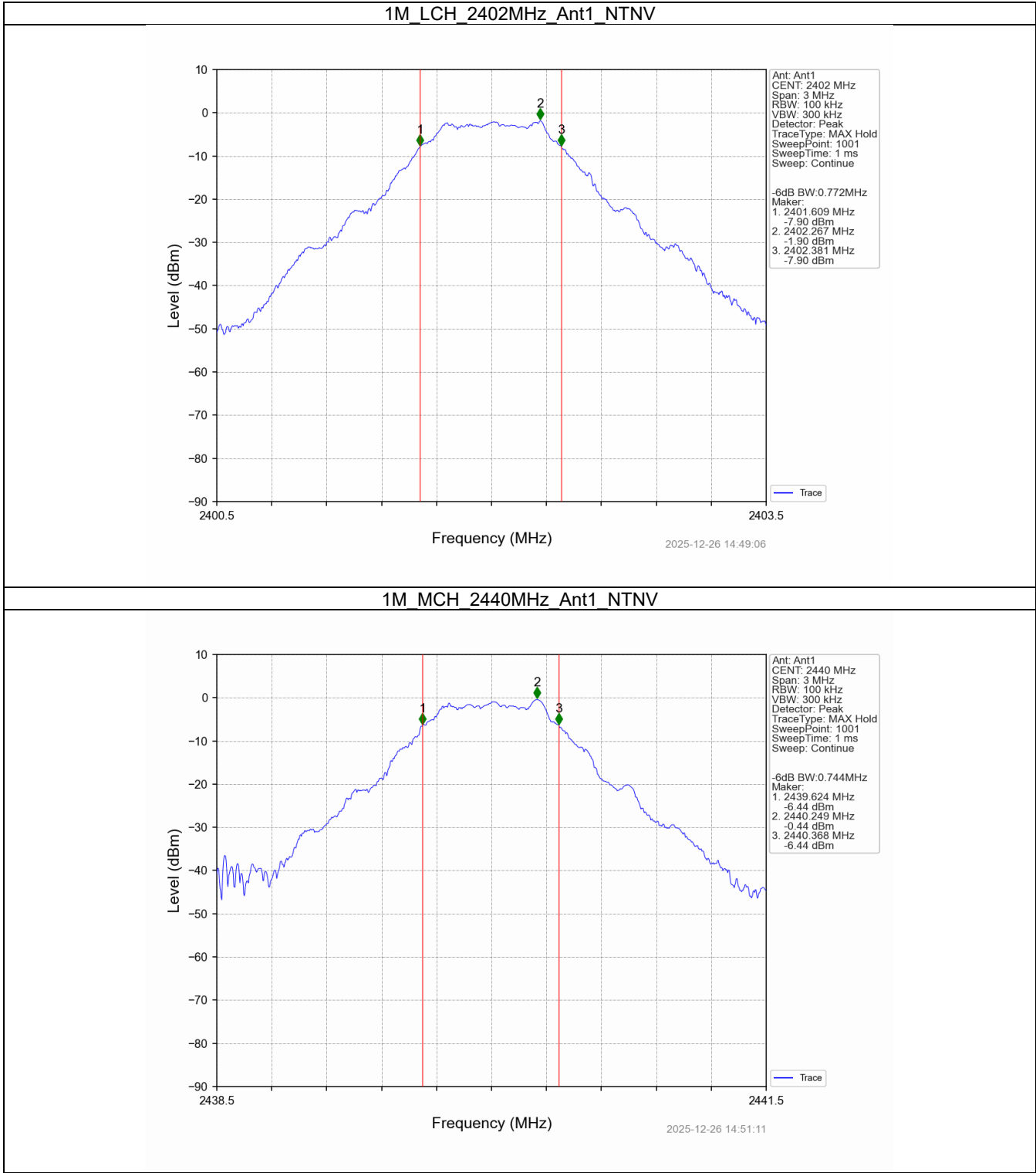
### 2M\_MCH\_2440MHz\_Ant1\_NTNV



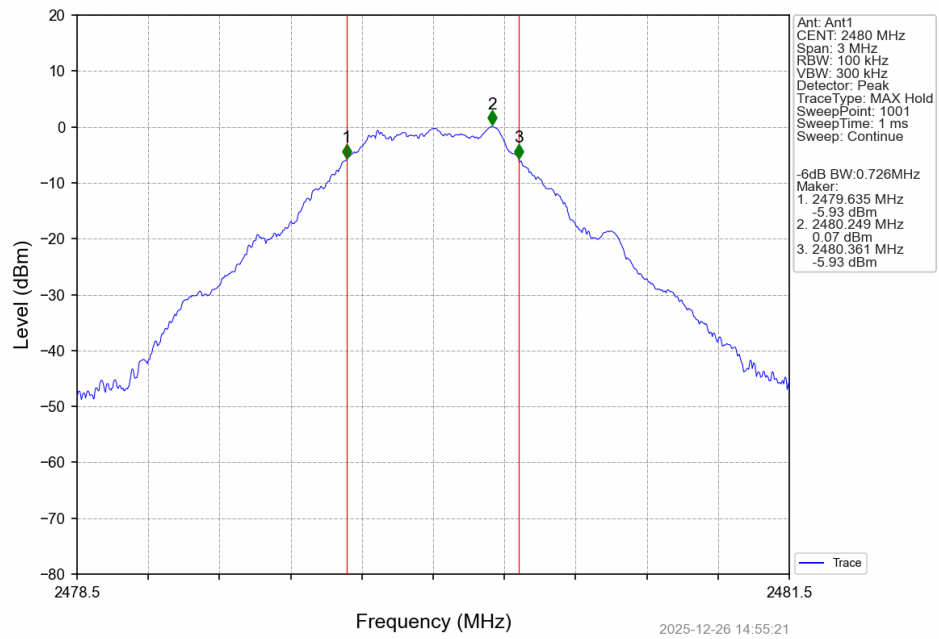
### 2M\_HCH\_2480MHz\_Ant1\_NTNV



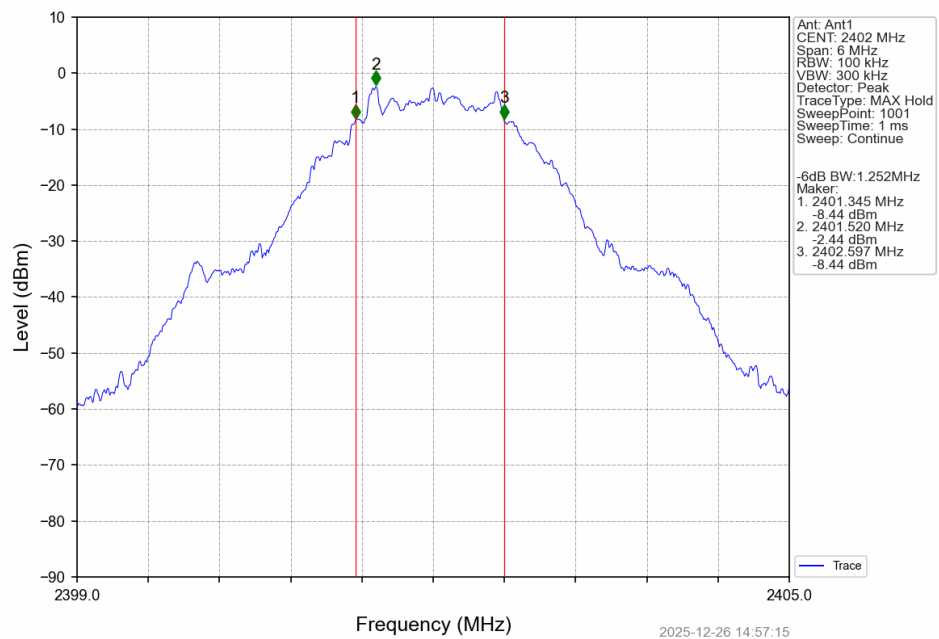
2.2.2 6dB BW



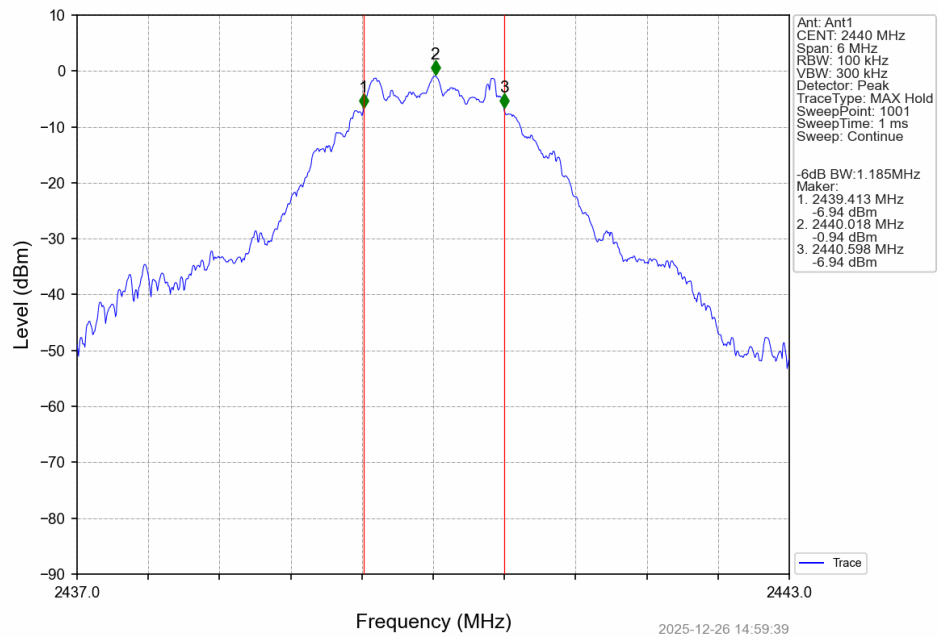
# 1M\_HCH\_2480MHz\_Ant1\_NTNV



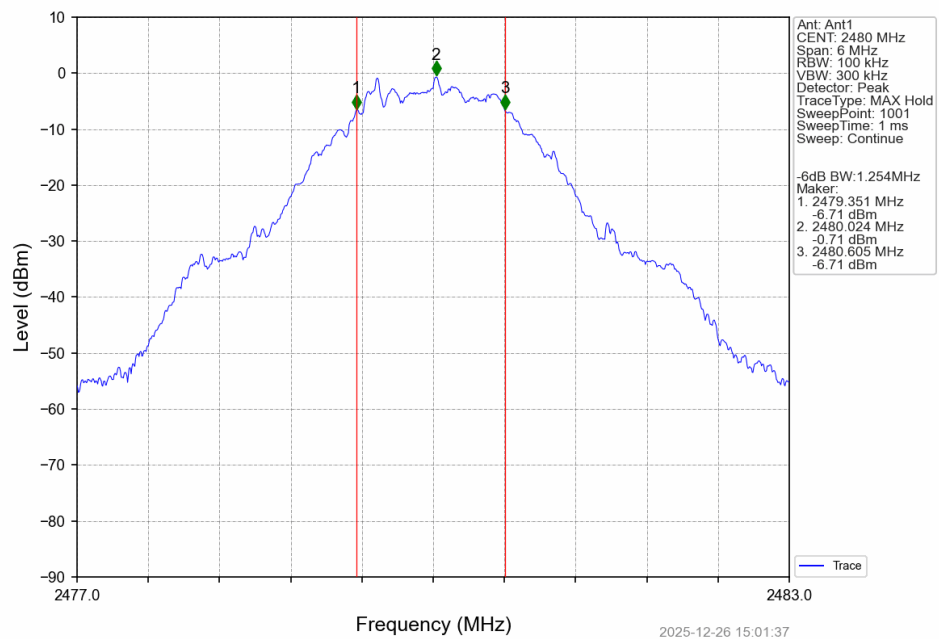
# 2M\_LCH\_2402MHz\_Ant1\_NTNV



### 2M\_MCH\_2440MHz\_Ant1\_NTNV



### 2M\_HCH\_2480MHz\_Ant1\_NTNV



### 3. Maximum Conducted Output Power

#### 3.1 Test Result

##### 3.1.1 Power

| Mode | TX Type | Frequency (MHz) | Maximum Peak Conducted Output Power (dBm) |       | Verdict |
|------|---------|-----------------|-------------------------------------------|-------|---------|
|      |         |                 | ANT1                                      | Limit |         |
| 1M   | SISO    | 2402            | -1.35                                     | <=30  | Pass    |
|      |         | 2440            | -0.24                                     | <=30  | Pass    |
|      |         | 2480            | 0.23                                      | <=30  | Pass    |
| 2M   | SISO    | 2402            | -1.24                                     | <=30  | Pass    |
|      |         | 2440            | -0.10                                     | <=30  | Pass    |
|      |         | 2480            | 0.38                                      | <=30  | Pass    |

## 4. Maximum Power Spectral Density

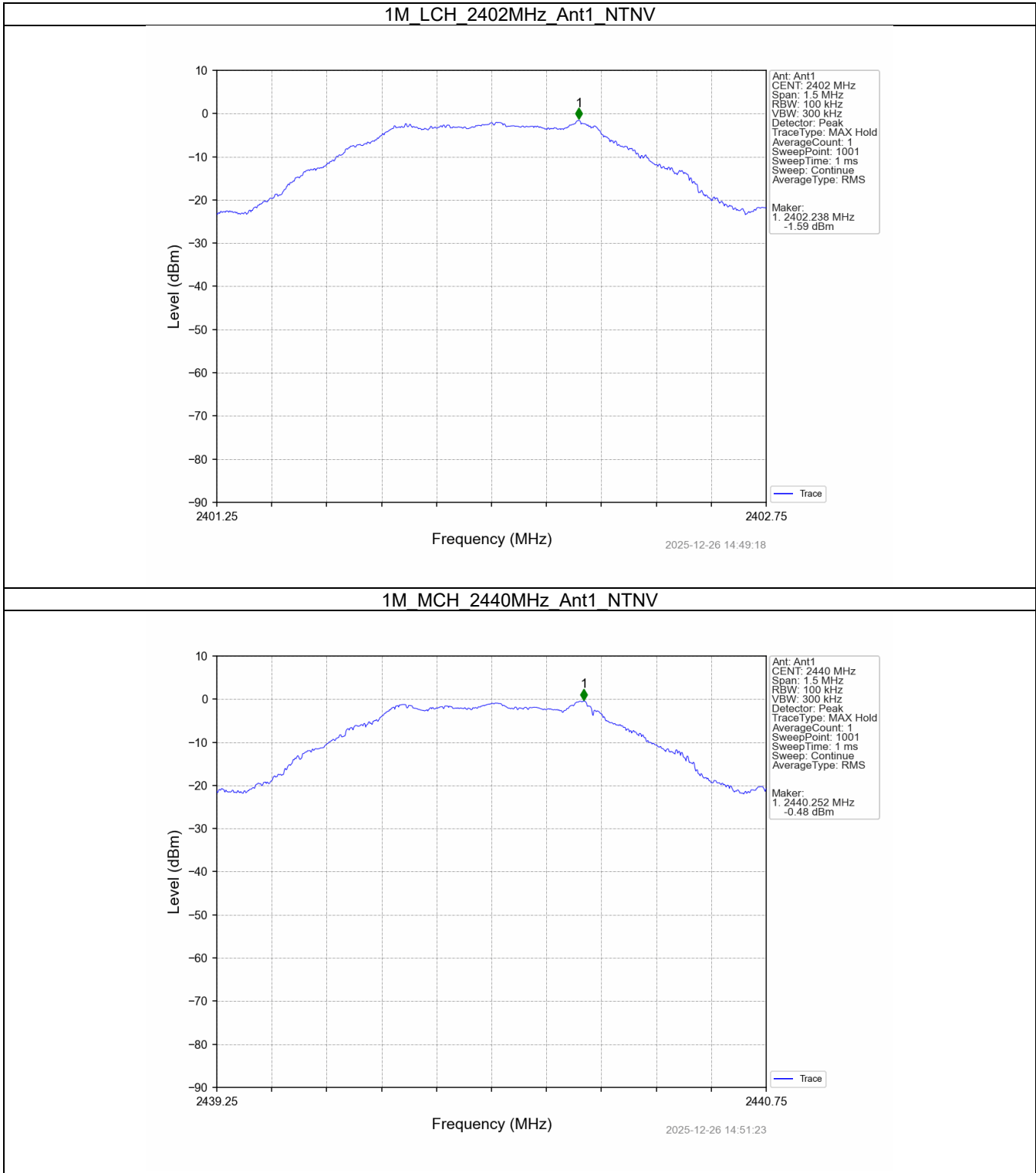
### 4.1 Test Result

#### 4.1.1 PSD

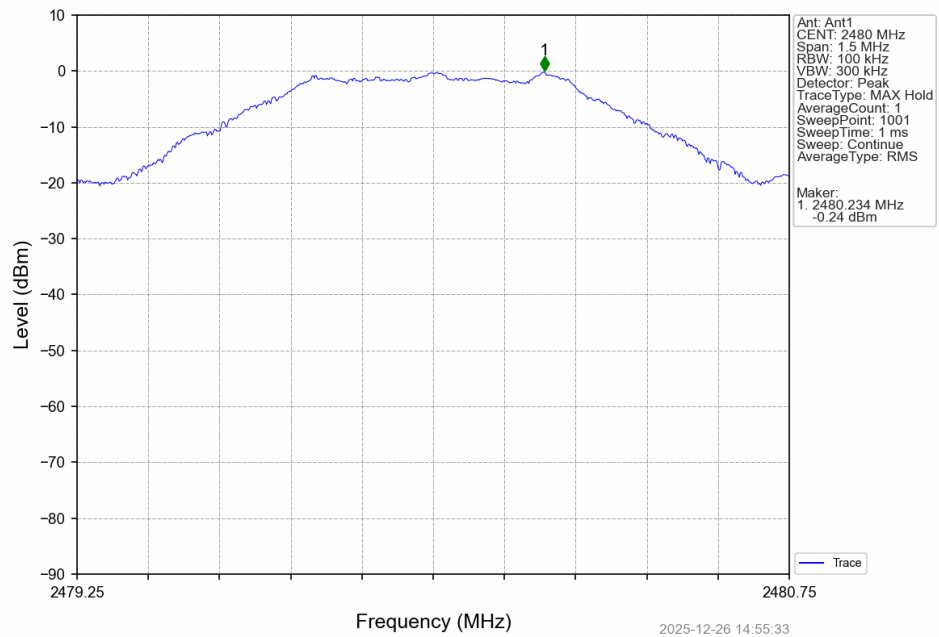
| Mode | TX Type | Frequency (MHz) | Maximum PSD (dBm) |       | Verdict |
|------|---------|-----------------|-------------------|-------|---------|
|      |         |                 | ANT1              | Limit |         |
| 1M   | SISO    | 2402            | -1.59             | <=8   | Pass    |
|      |         | 2440            | -0.48             | <=8   | Pass    |
|      |         | 2480            | -0.24             | <=8   | Pass    |
| 2M   | SISO    | 2402            | -2.48             | <=8   | Pass    |
|      |         | 2440            | -1.01             | <=8   | Pass    |
|      |         | 2480            | -0.28             | <=8   | Pass    |

4.2 Test Graph

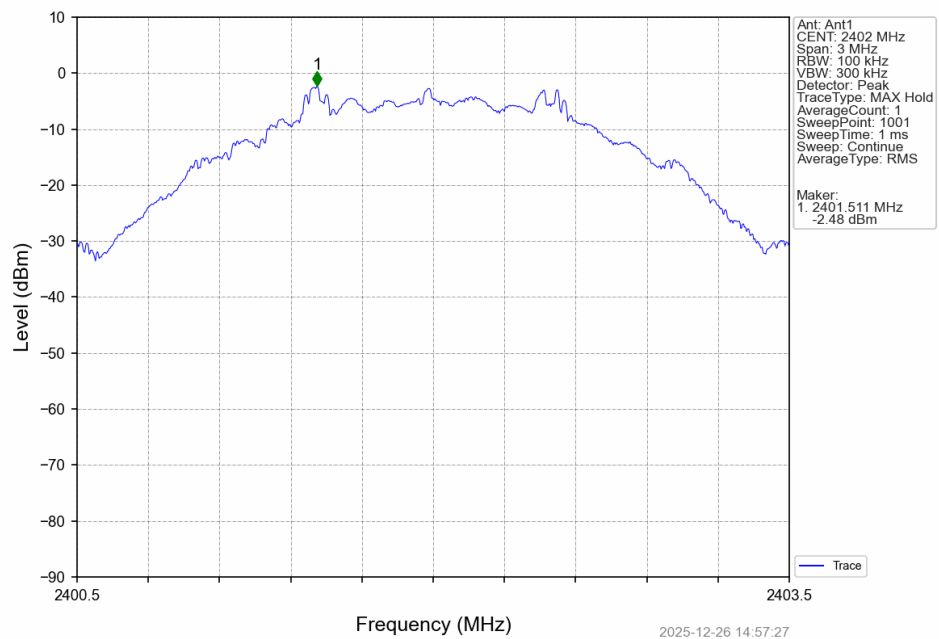
4.2.1 PSD



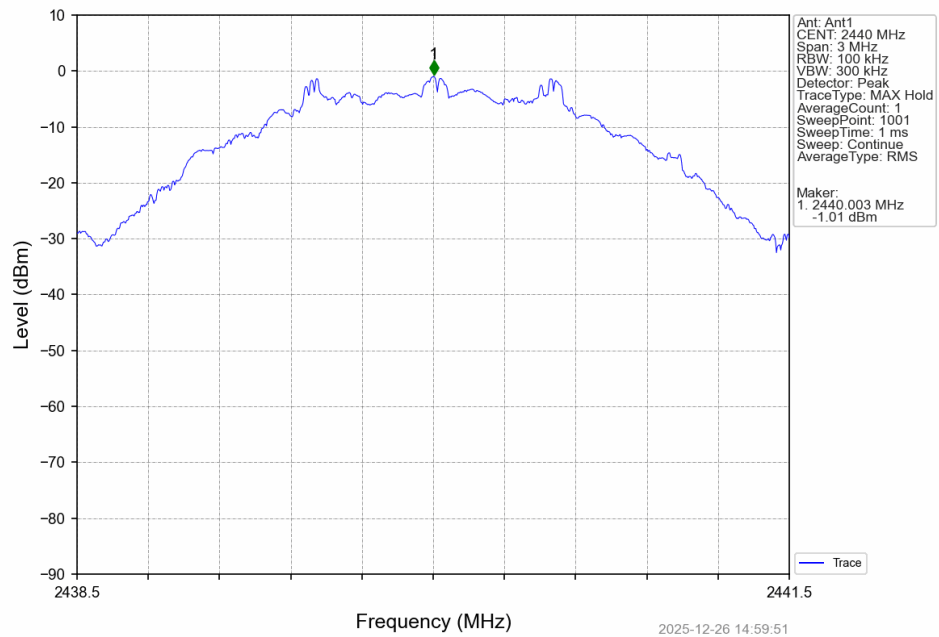
# 1M\_HCH\_2480MHz\_Ant1\_NTNV



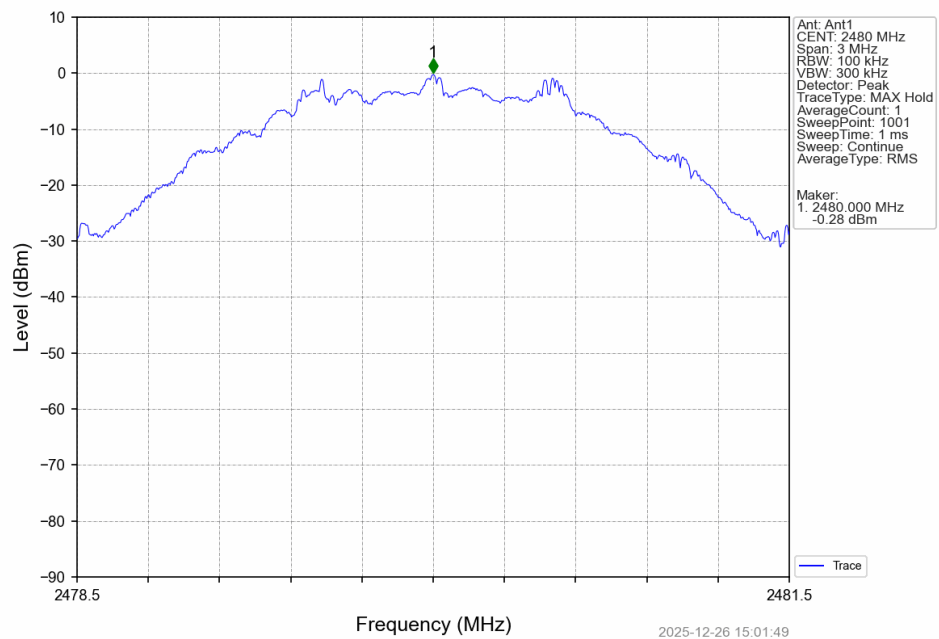
# 2M\_LCH\_2402MHz\_Ant1\_NTNV



### 2M\_MCH\_2440MHz\_Ant1\_NTNV



### 2M\_HCH\_2480MHz\_Ant1\_NTNV



## 5. Unwanted Emissions In Non-restricted Frequency Bands

### 5.1 Test Result

#### 5.1.1 Ref

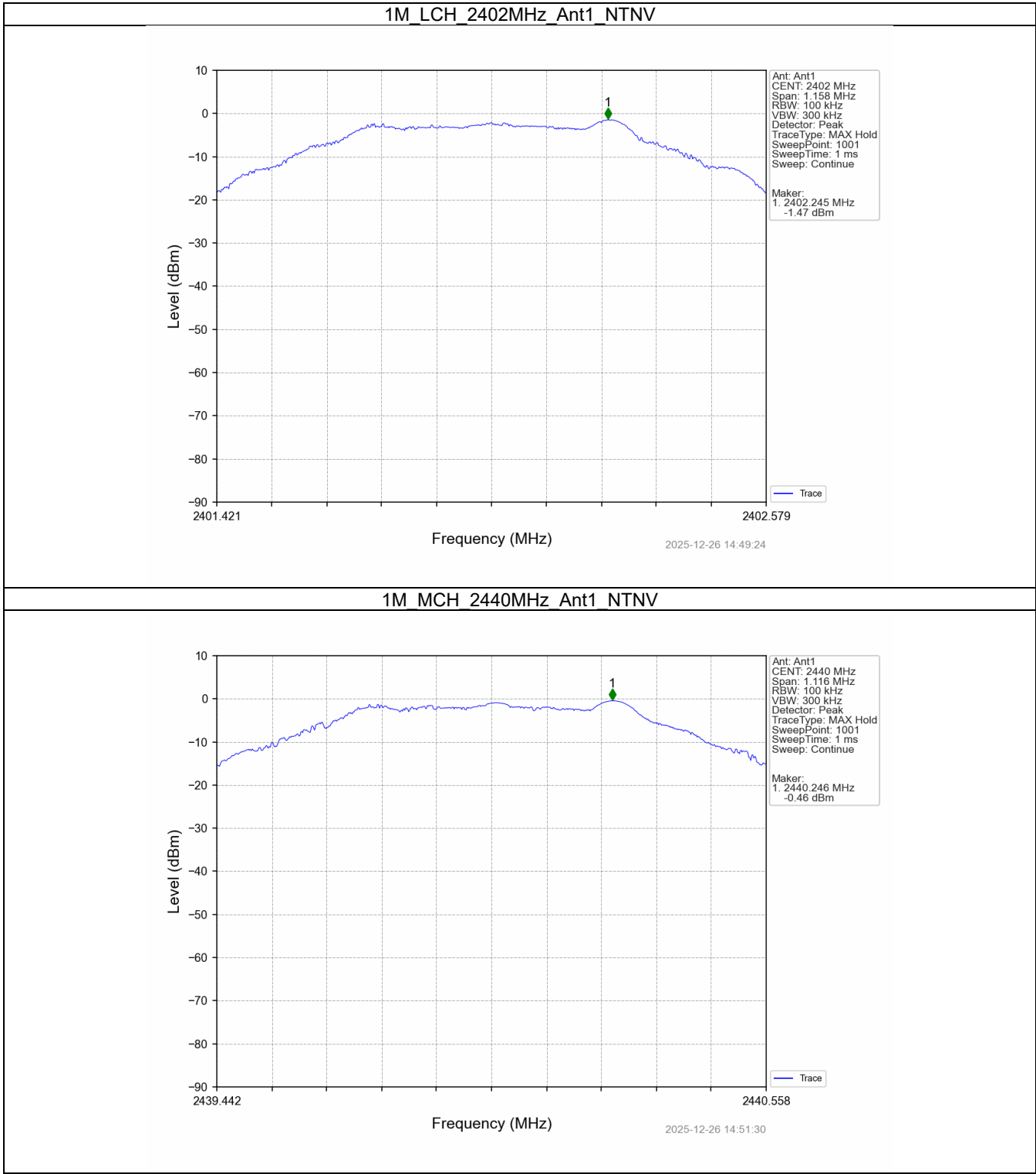
| Mode                                                                                                                                            | TX Type | Frequency (MHz) | ANT | Level of Reference (dBm) |
|-------------------------------------------------------------------------------------------------------------------------------------------------|---------|-----------------|-----|--------------------------|
| 1M                                                                                                                                              | SISO    | 2402            | 1   | -1.47                    |
|                                                                                                                                                 |         | 2440            | 1   | -0.46                    |
|                                                                                                                                                 |         | 2480            | 1   | 0.07                     |
| 2M                                                                                                                                              | SISO    | 2402            | 1   | -2.15                    |
|                                                                                                                                                 |         | 2440            | 1   | -1.06                    |
|                                                                                                                                                 |         | 2480            | 1   | -0.28                    |
| Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level. |         |                 |     |                          |

#### 5.1.2 CSE

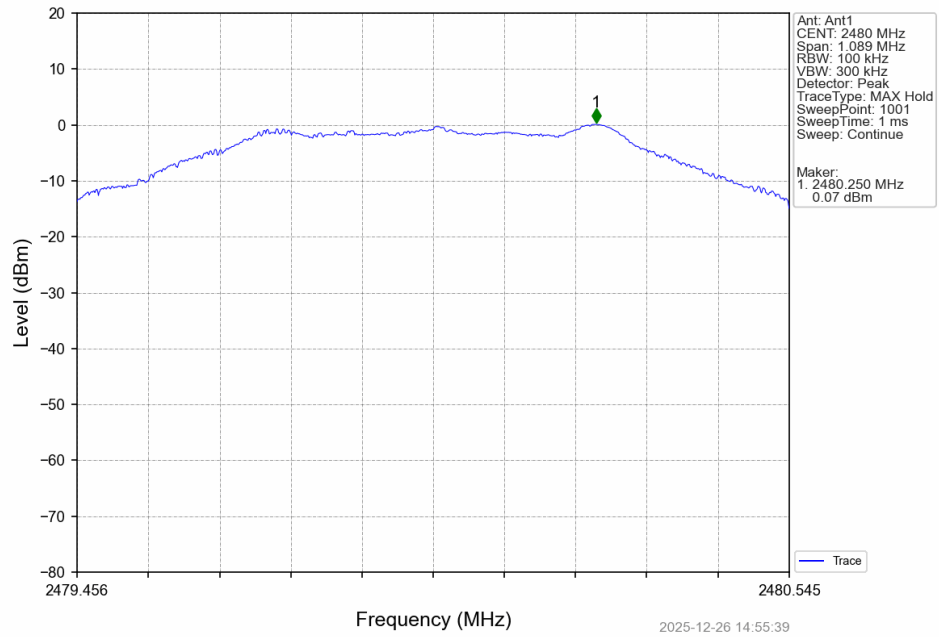
| Mode                                                                                                                                            | TX Type | Frequency (MHz) | ANT | Level of Reference (dBm) | Limit (dBm) | Verdict |
|-------------------------------------------------------------------------------------------------------------------------------------------------|---------|-----------------|-----|--------------------------|-------------|---------|
| 1M                                                                                                                                              | SISO    | 2402            | 1   | -1.47                    | -21.47      | Pass    |
|                                                                                                                                                 |         | 2440            | 1   | -0.46                    | -20.46      | Pass    |
|                                                                                                                                                 |         | 2480            | 1   | 0.07                     | -19.93      | Pass    |
| 2M                                                                                                                                              | SISO    | 2402            | 1   | -2.15                    | -22.15      | Pass    |
|                                                                                                                                                 |         | 2440            | 1   | -1.06                    | -21.06      | Pass    |
|                                                                                                                                                 |         | 2480            | 1   | -0.28                    | -20.28      | Pass    |
| Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level. |         |                 |     |                          |             |         |

5.2 Test Graph

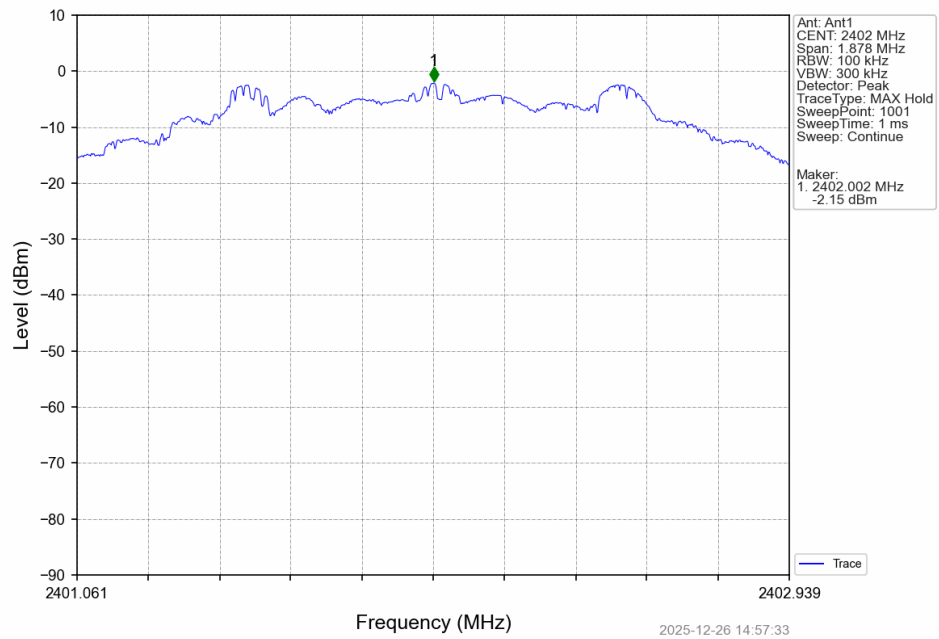
5.2.1 Ref



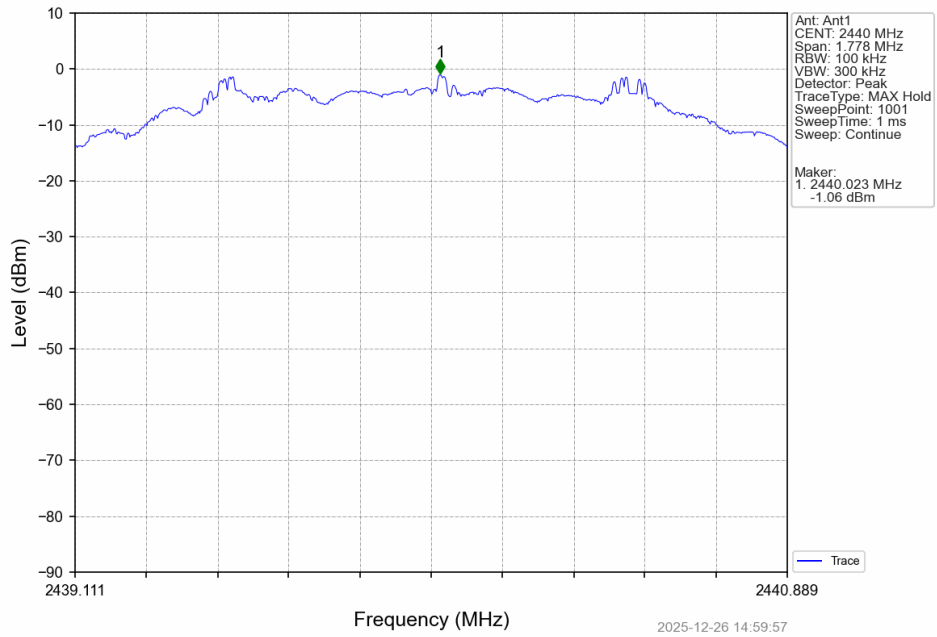
# 1M\_HCH\_2480MHz\_Ant1\_NTNV



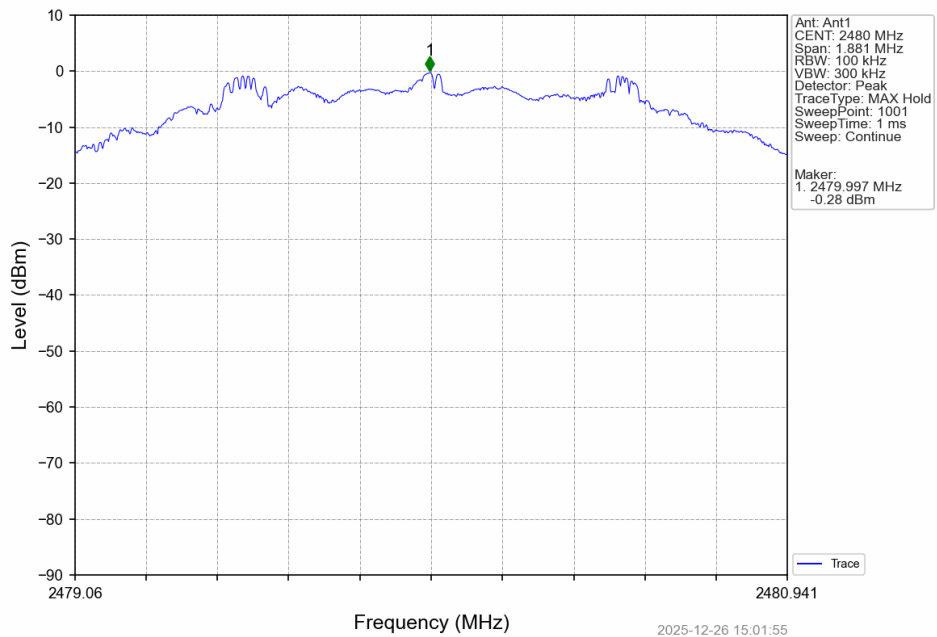
# 2M\_LCH\_2402MHz\_Ant1\_NTNV



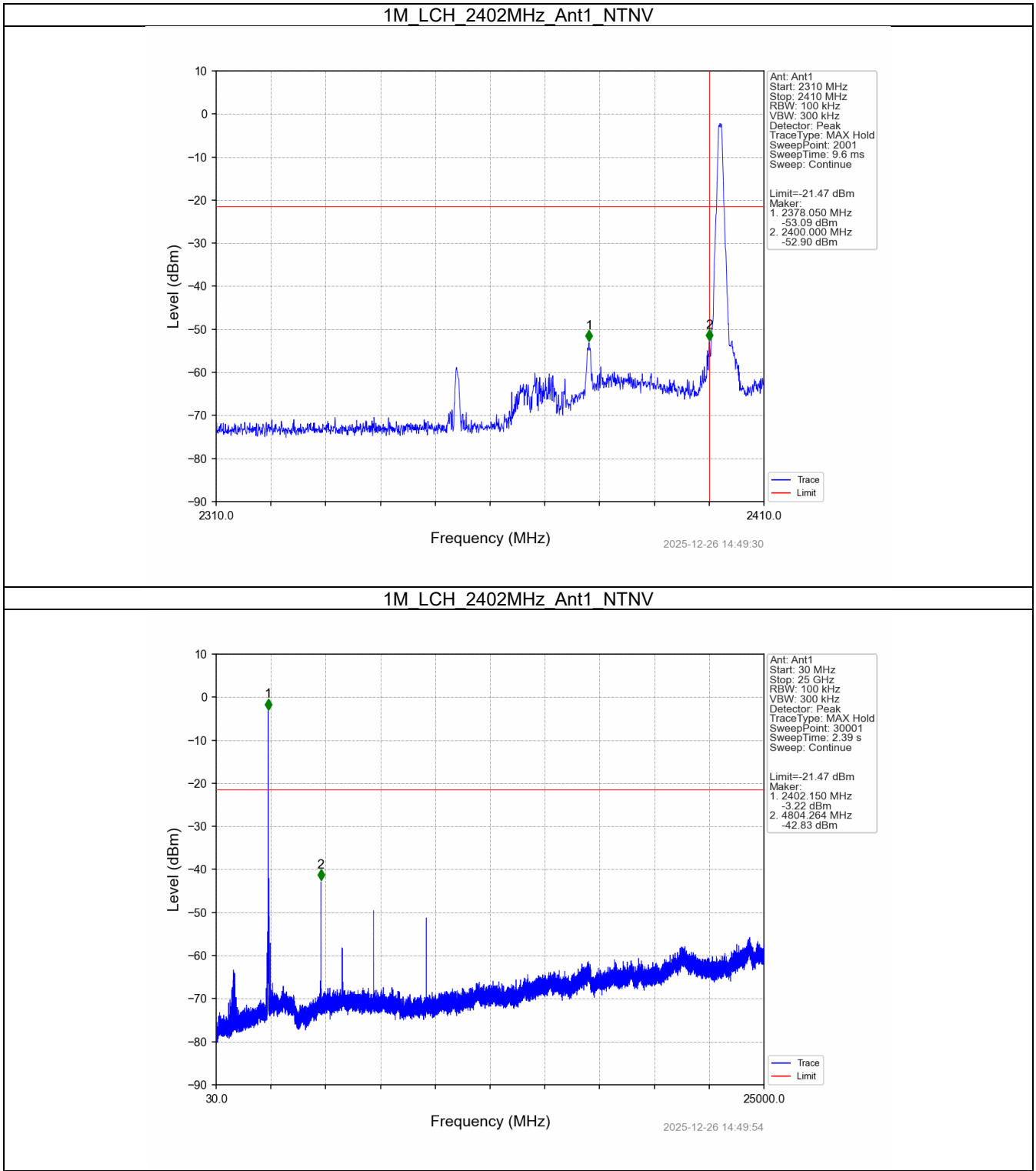
# 2M\_MCH\_2440MHz\_Ant1\_NTNV



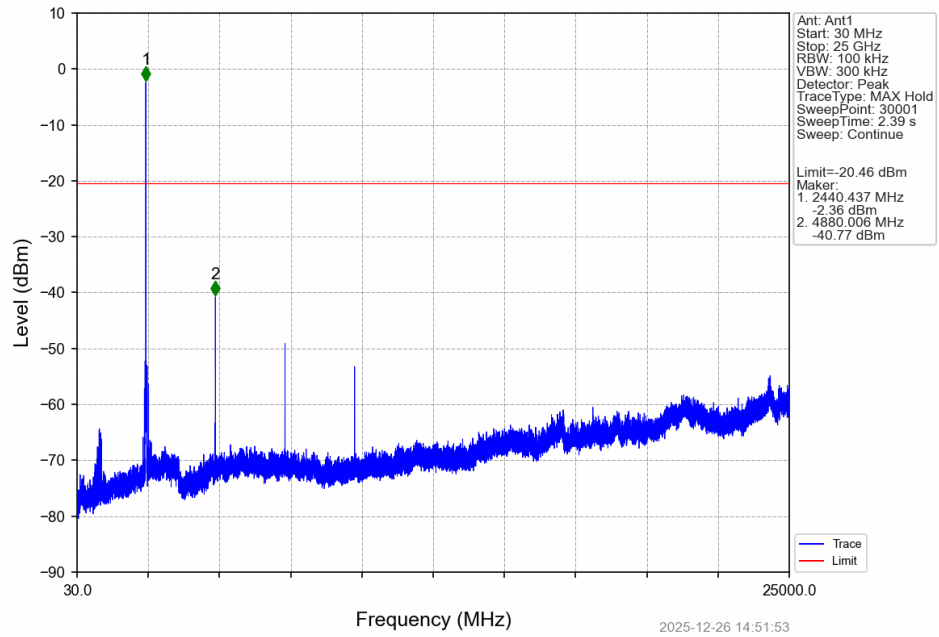
# 2M\_HCH\_2480MHz\_Ant1\_NTNV



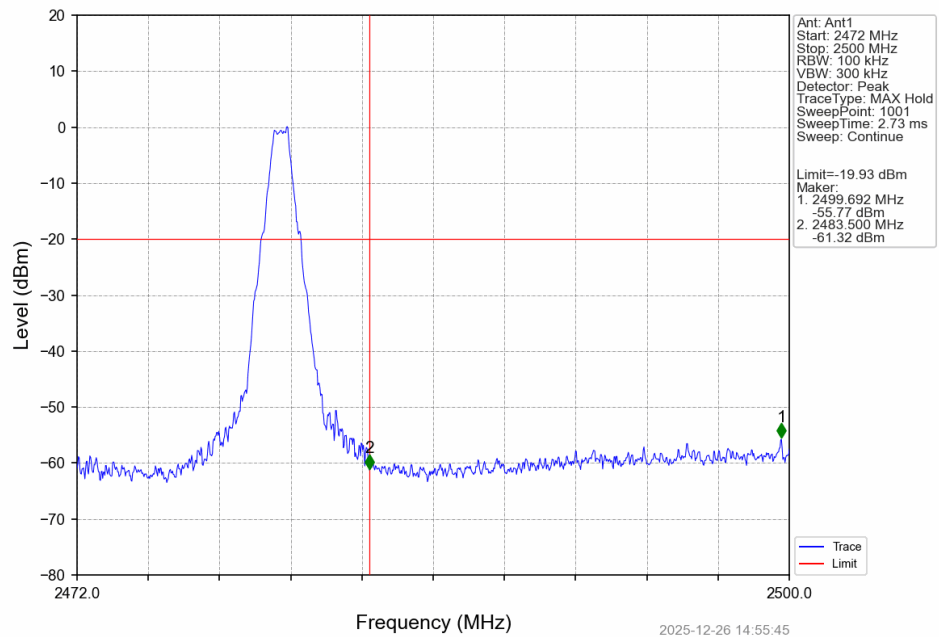
5.2.2 CSE



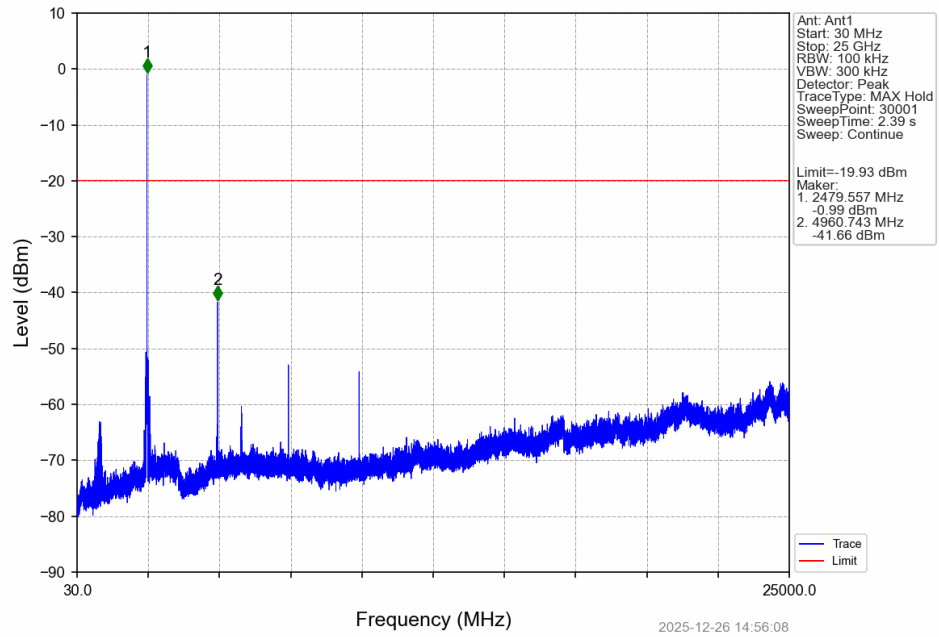
# 1M\_MCH\_2440MHz\_Ant1\_NTNV



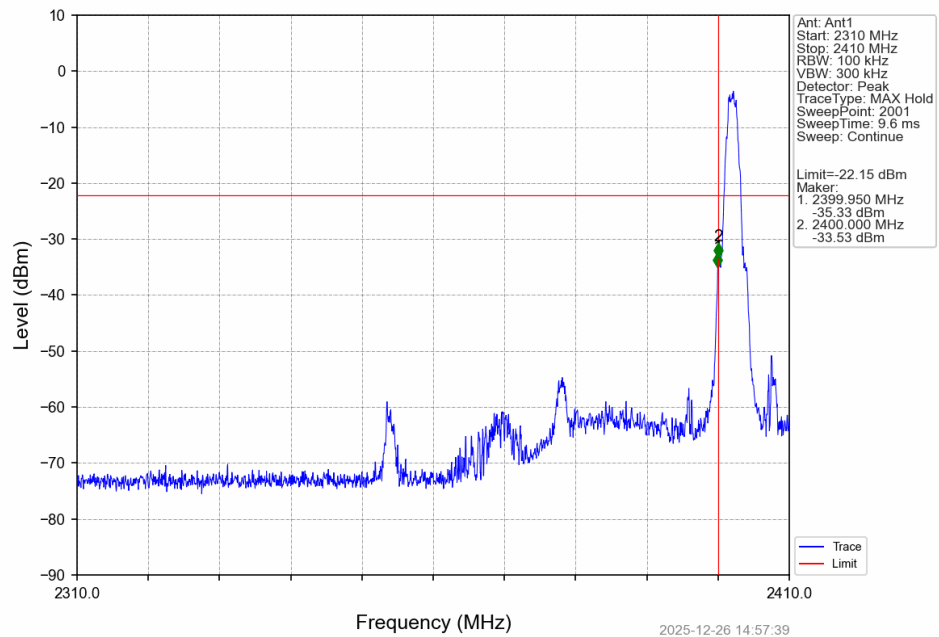
# 1M\_HCH\_2480MHz\_Ant1\_NTNV



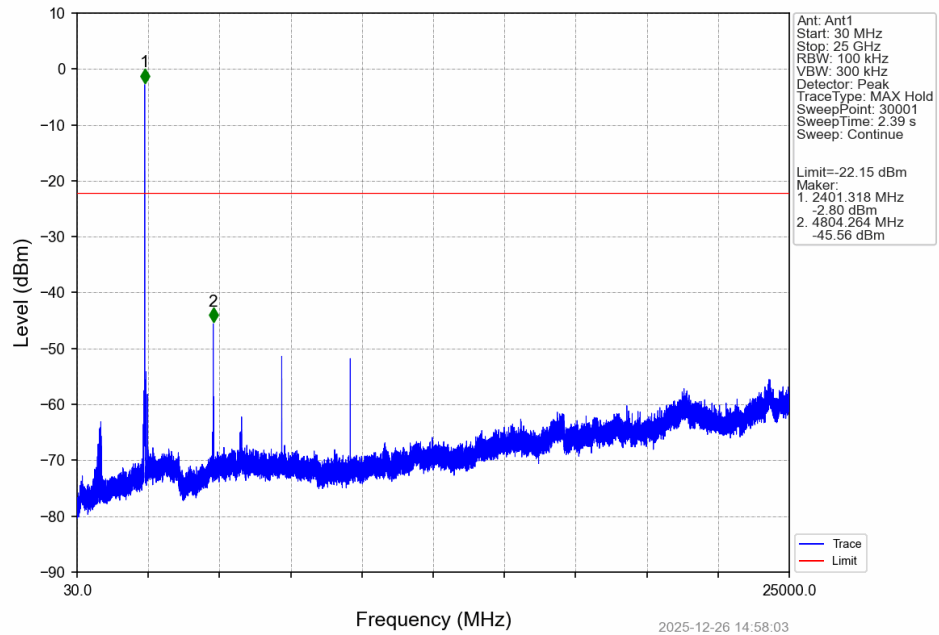
# 1M\_HCH\_2480MHz\_Ant1\_NTNV



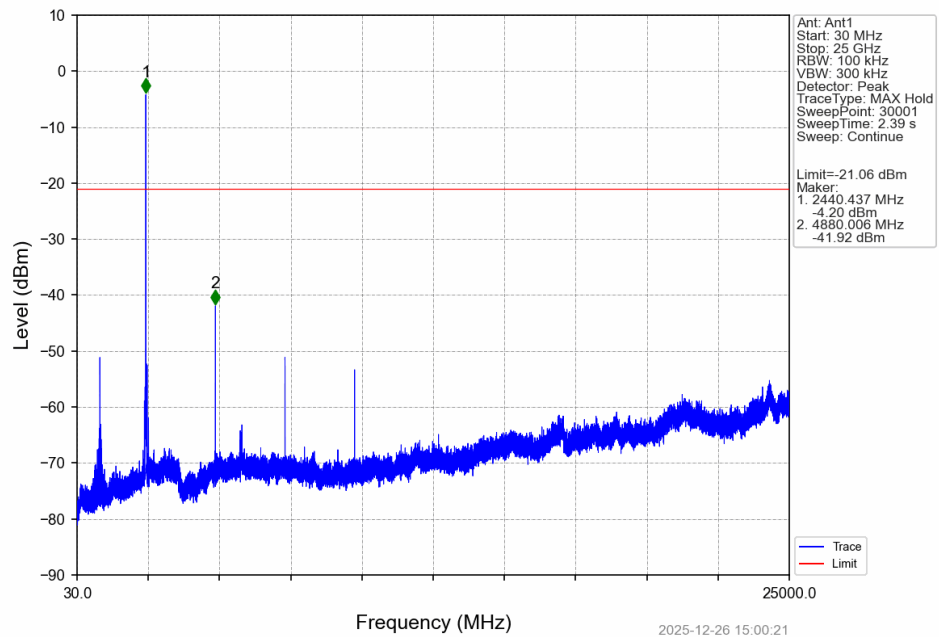
# 2M\_LCH\_2402MHz\_Ant1\_NTNV



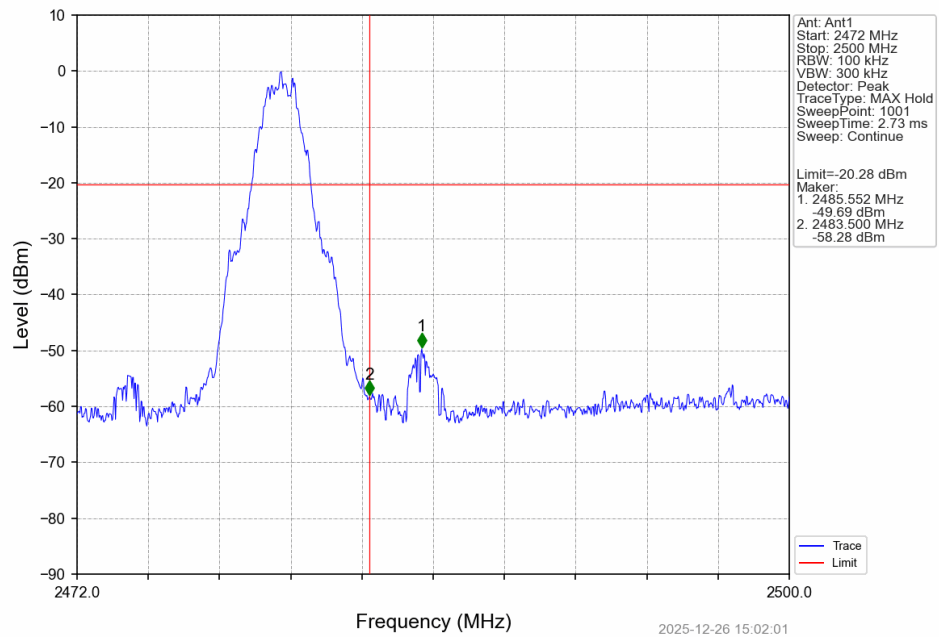
# 2M\_LCH\_2402MHz\_Ant1\_NTNV



# 2M\_MCH\_2440MHz\_Ant1\_NTNV



# 2M\_HCH\_2480MHz\_Ant1\_NTNV



# 2M\_HCH\_2480MHz\_Ant1\_NTNV

