



Shenzhen BANTEK Testing Co., Ltd.

Report No.: BTEK250918001A01E03-03

# RF Test Report

## For BTEK250918001A01E03

|                      |                        |
|----------------------|------------------------|
| Project No.:         | BTEK250918001A01E03-03 |
| Product Description: | 20.6℃, 59%, 102.4kPa   |
| Test Engineer:       | Zora                   |
| Test Date:           | 2025-10-30~2026-01-07  |



Shenzhen BANTEK Testing Co., Ltd.

Report No.: BTEK250918001A01E03-03

## Test Summary

| Item                                                 | Result |
|------------------------------------------------------|--------|
| Duty Cycle                                           | Pass   |
| Bandwidth                                            | Pass   |
| Maximum Conducted Output Power                       | Pass   |
| Maximum Power Spectral Density                       | Pass   |
| Unwanted Emissions In Non-restricted Frequency Bands | Pass   |



## 1. Duty Cycle

### 1.1 Test Result

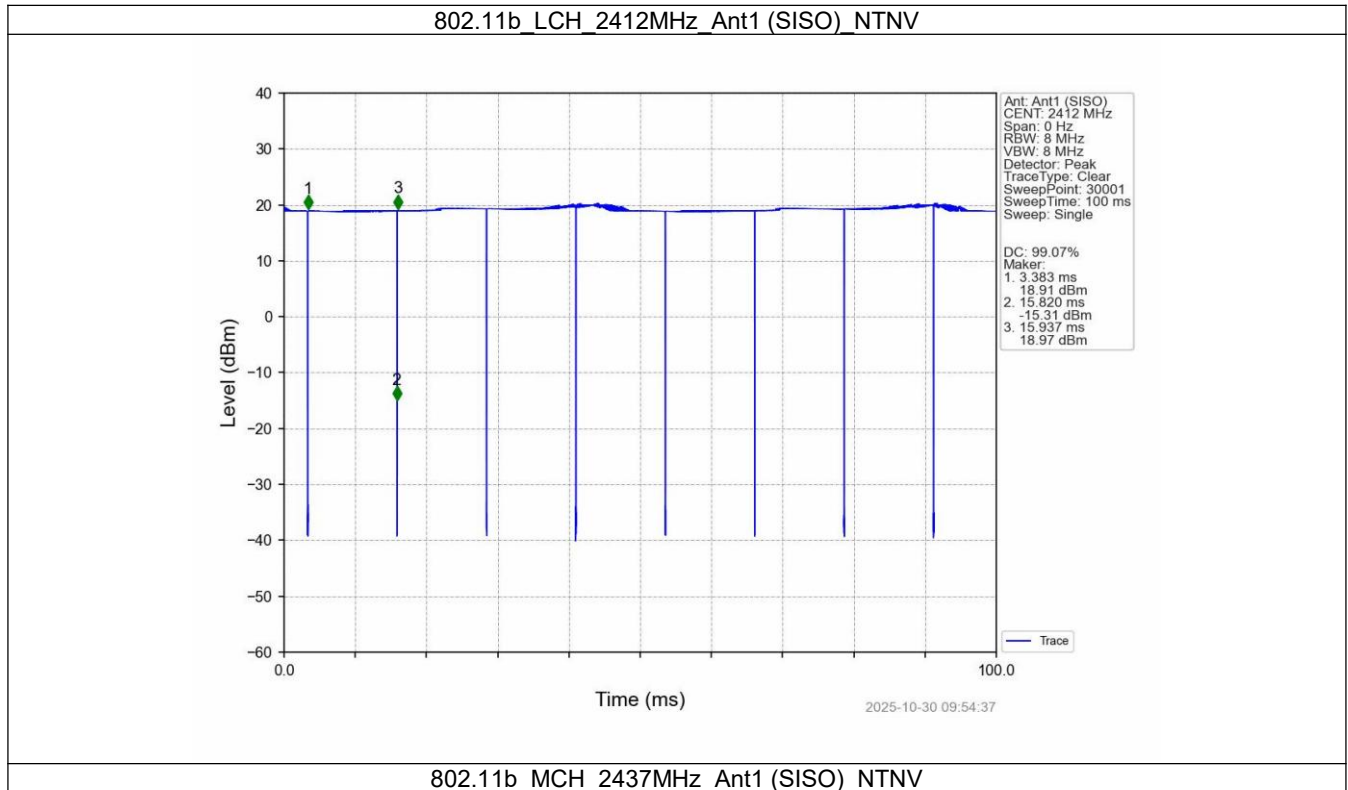
#### 1.1.1 Ant1

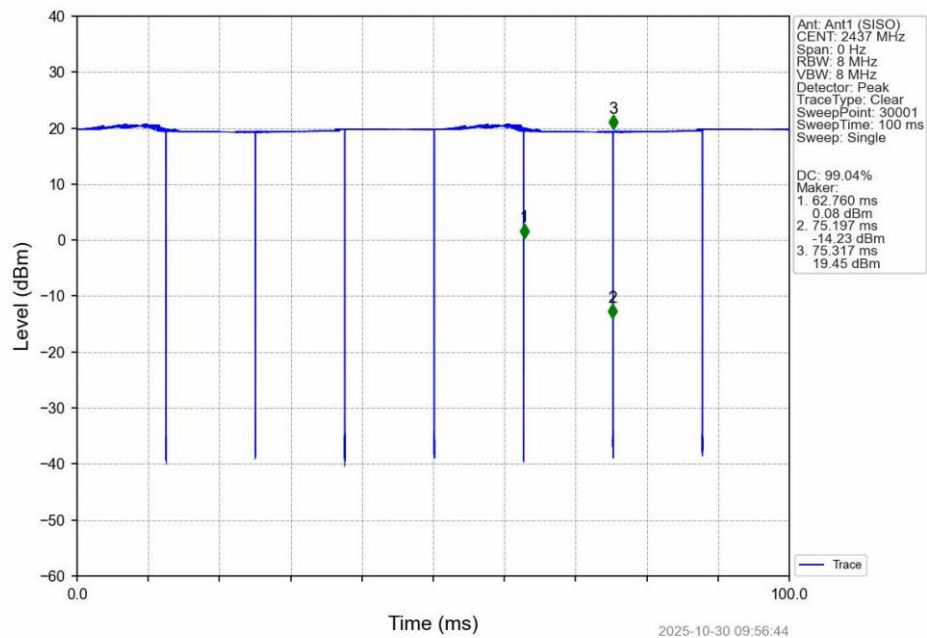
| Ant1           |         |                 |           |             |                |                                   |                       |
|----------------|---------|-----------------|-----------|-------------|----------------|-----------------------------------|-----------------------|
| Mode           | TX Type | Frequency (MHz) | T_on (ms) | Period (ms) | Duty Cycle (%) | Duty Cycle Correction Factor (dB) | Max. DC Variation (%) |
| 802.11b        | SISO    | 2412            | 12.437    | 12.554      | 99.07          | 0.04                              | 0.00                  |
|                |         | 2437            | 12.437    | 12.557      | 99.04          | 0.04                              | 0.03                  |
|                |         | 2462            | 12.436    | 12.556      | 99.04          | 0.04                              | 0.03                  |
| 802.11g        | SISO    | 2412            | 5.485     | 5.609       | 97.79          | 0.10                              | 0.19                  |
|                |         | 2437            | 5.485     | 5.600       | 97.95          | 0.09                              | 0.04                  |
|                |         | 2462            | 5.486     | 5.602       | 97.93          | 0.09                              | 0.03                  |
| 802.11n (HT20) | SISO    | 2412            | 5.374     | 5.488       | 97.92          | 0.09                              | 0.00                  |
|                |         | 2437            | 5.374     | 5.490       | 97.89          | 0.09                              | 0.04                  |
|                |         | 2462            | 5.374     | 5.488       | 97.92          | 0.09                              | 0.00                  |
| 802.11n (HT40) | SISO    | 2422            | 3.023     | 3.137       | 96.37          | 0.16                              | 0.03                  |
|                |         | 2437            | 3.021     | 3.136       | 96.33          | 0.16                              | 0.04                  |
|                |         | 2452            | 3.022     | 3.137       | 96.33          | 0.16                              | 0.03                  |



## 1.2 Test Graph

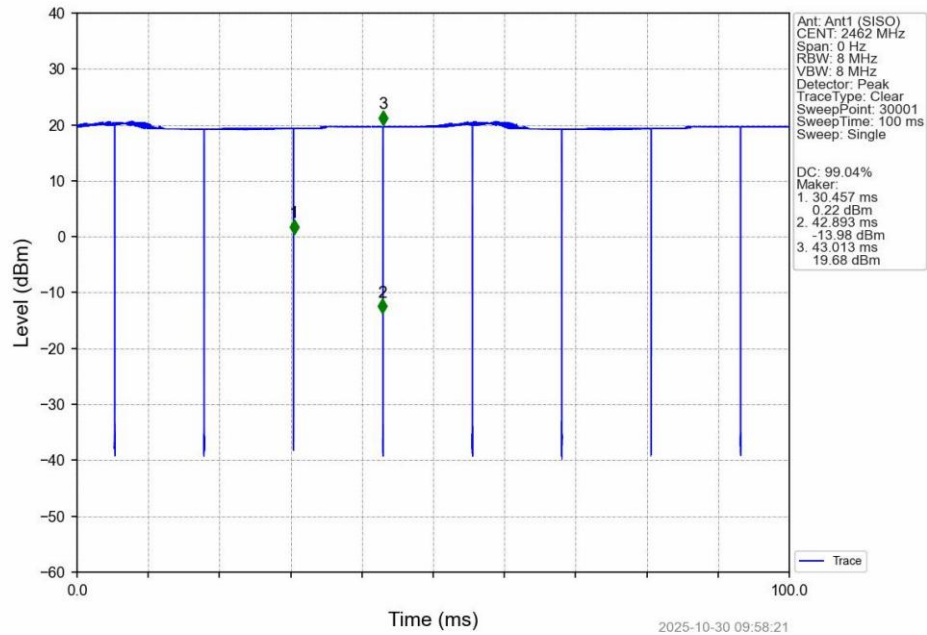
### 1.2.1 Ant1



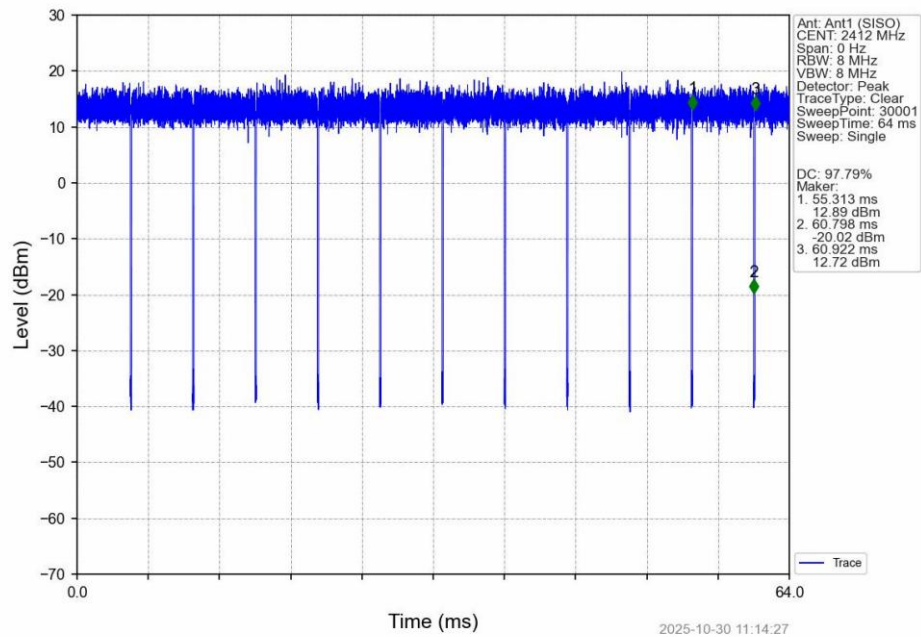




802.11b\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV

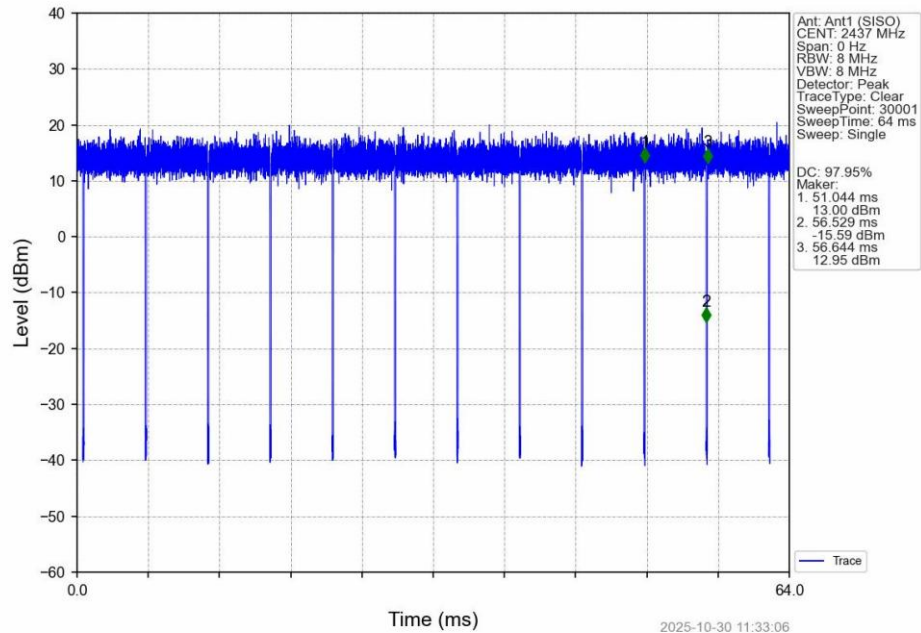


802.11g\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV

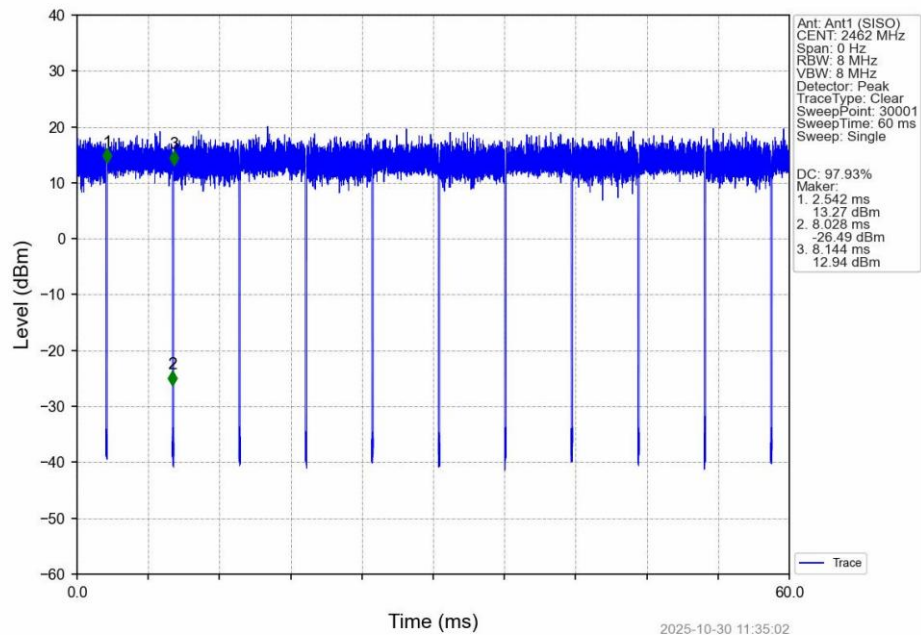




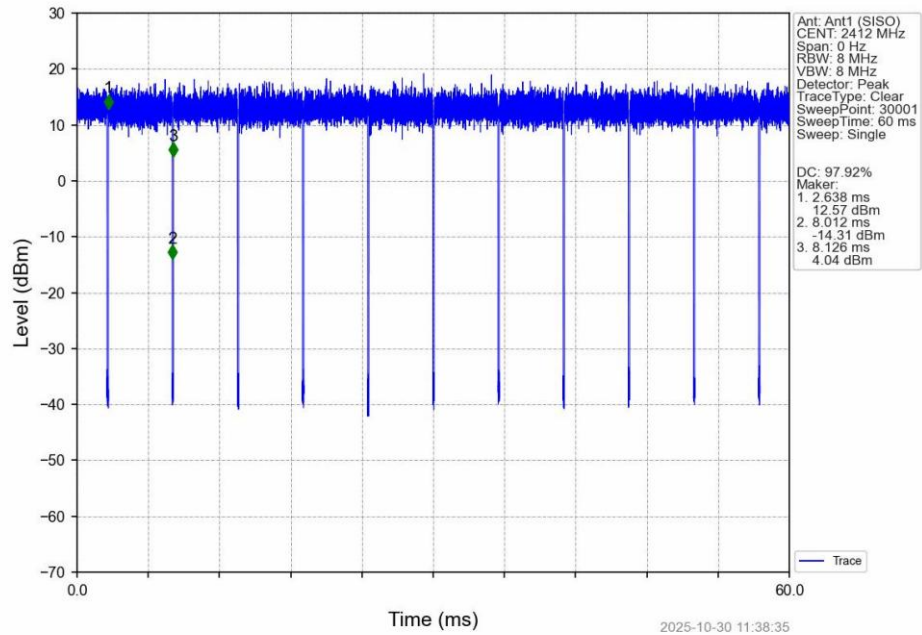
802.11g\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



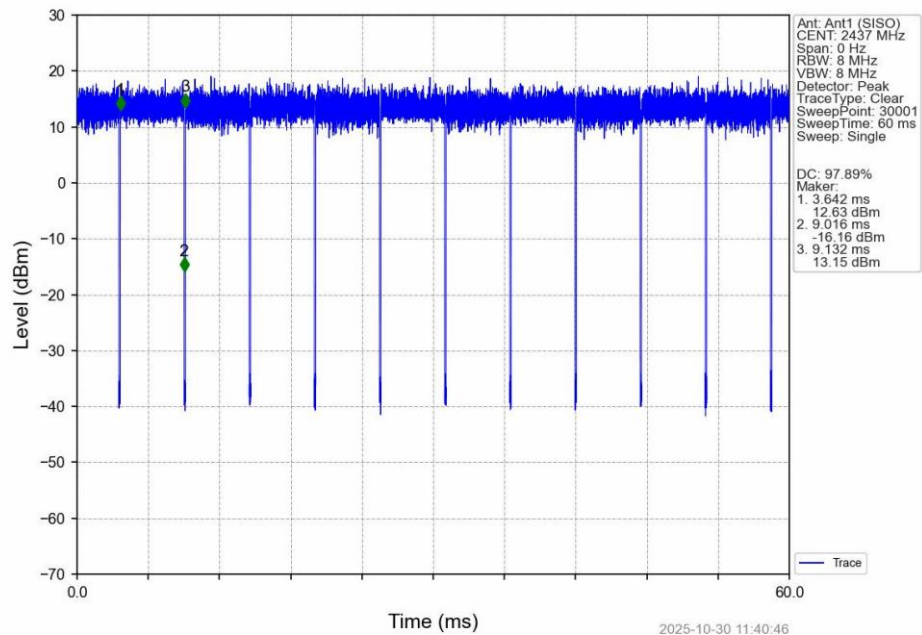
802.11g\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



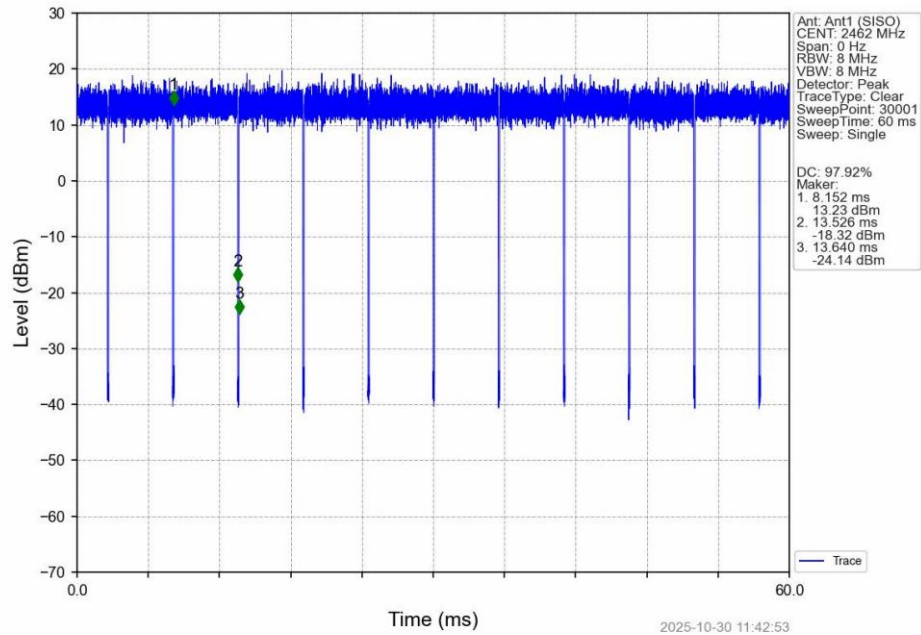
802.11n(HT20)\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



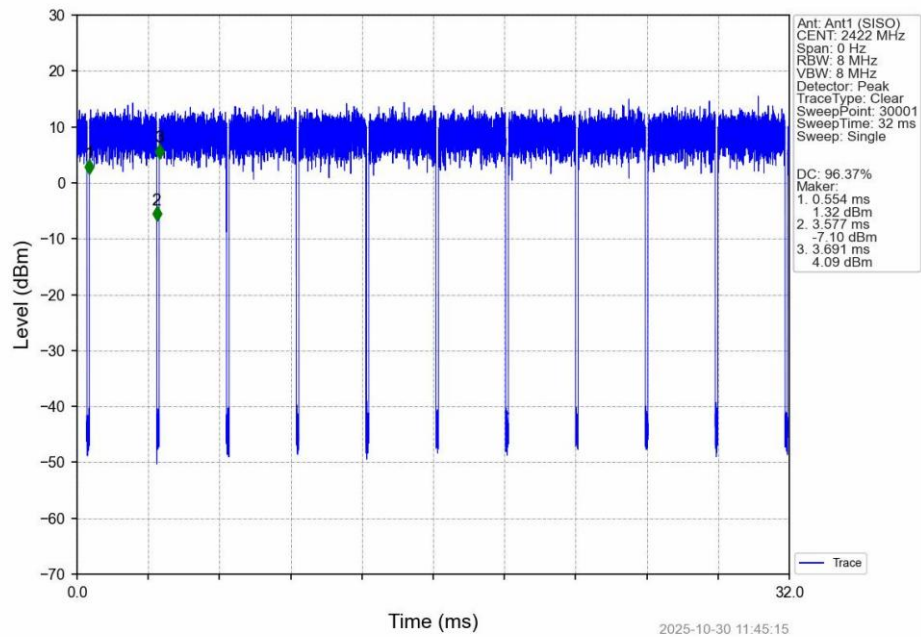
802.11n(HT20)\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



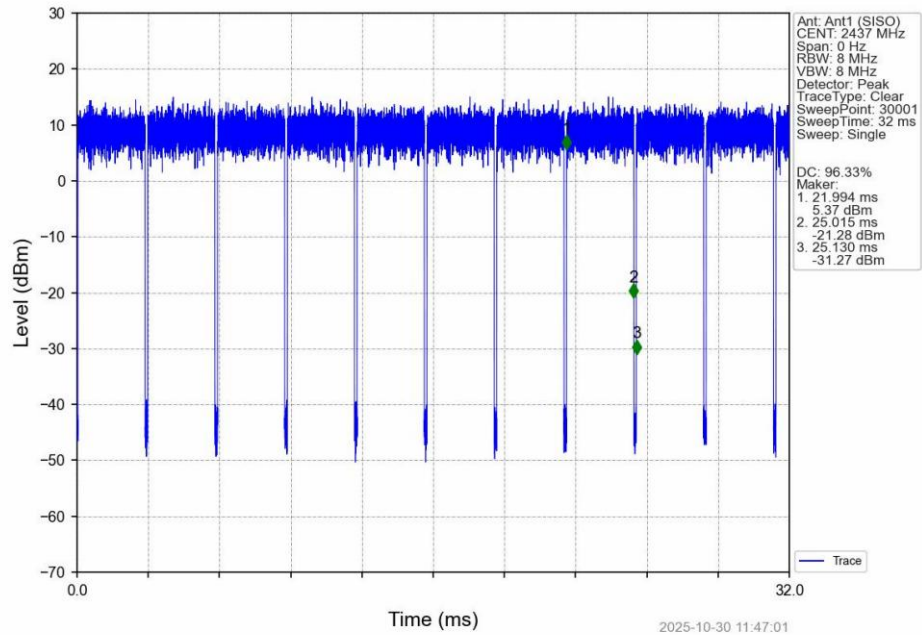
802.11n(HT20)\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



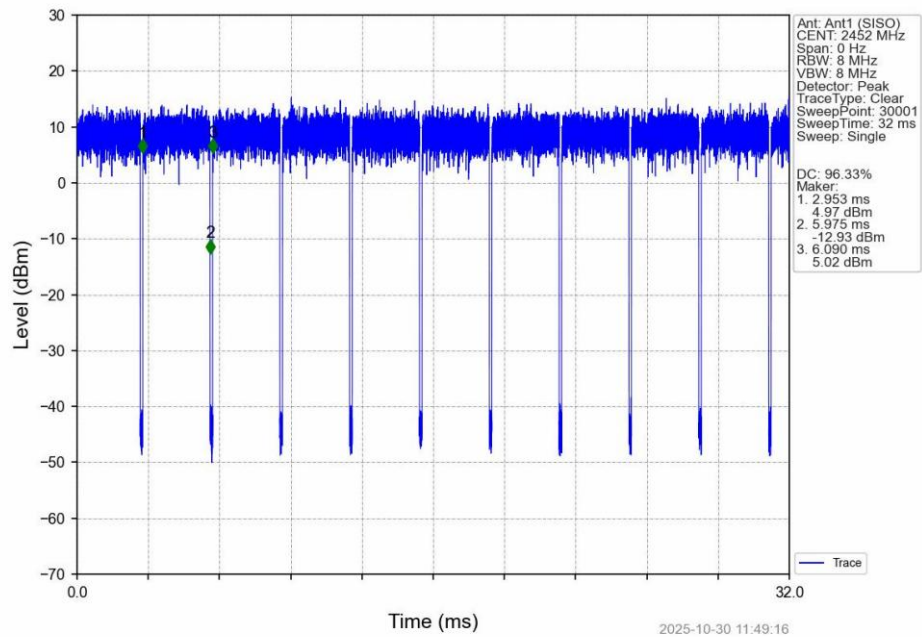
802.11n(HT40)\_LCH\_2422MHz\_Ant1 (SISO)\_NTNV



802.11n(HT40)\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



802.11n(HT40)\_HCH\_2452MHz\_Ant1 (SISO)\_NTNV





## 2. Bandwidth

### 2.1 Test Result

#### 2.1.1 OBW

| Mode           | TX Type | Frequency (MHz) | ANT | 99% Occupied Bandwidth (MHz) |       | Verdict |
|----------------|---------|-----------------|-----|------------------------------|-------|---------|
|                |         |                 |     | Result                       | Limit |         |
| 802.11b        | SISO    | 2412            | 1   | 13.493                       | /     | Pass    |
|                |         | 2437            | 1   | 13.653                       | /     | Pass    |
|                |         | 2462            | 1   | 13.458                       | /     | Pass    |
| 802.11g        | SISO    | 2412            | 1   | 17.736                       | /     | Pass    |
|                |         | 2437            | 1   | 17.660                       | /     | Pass    |
|                |         | 2462            | 1   | 17.854                       | /     | Pass    |
| 802.11n (HT20) | SISO    | 2412            | 1   | 18.524                       | /     | Pass    |
|                |         | 2437            | 1   | 18.591                       | /     | Pass    |
|                |         | 2462            | 1   | 18.779                       | /     | Pass    |
| 802.11n (HT40) | SISO    | 2422            | 1   | 33.871                       | /     | Pass    |
|                |         | 2437            | 1   | 33.681                       | /     | Pass    |
|                |         | 2452            | 1   | 33.974                       | /     | Pass    |

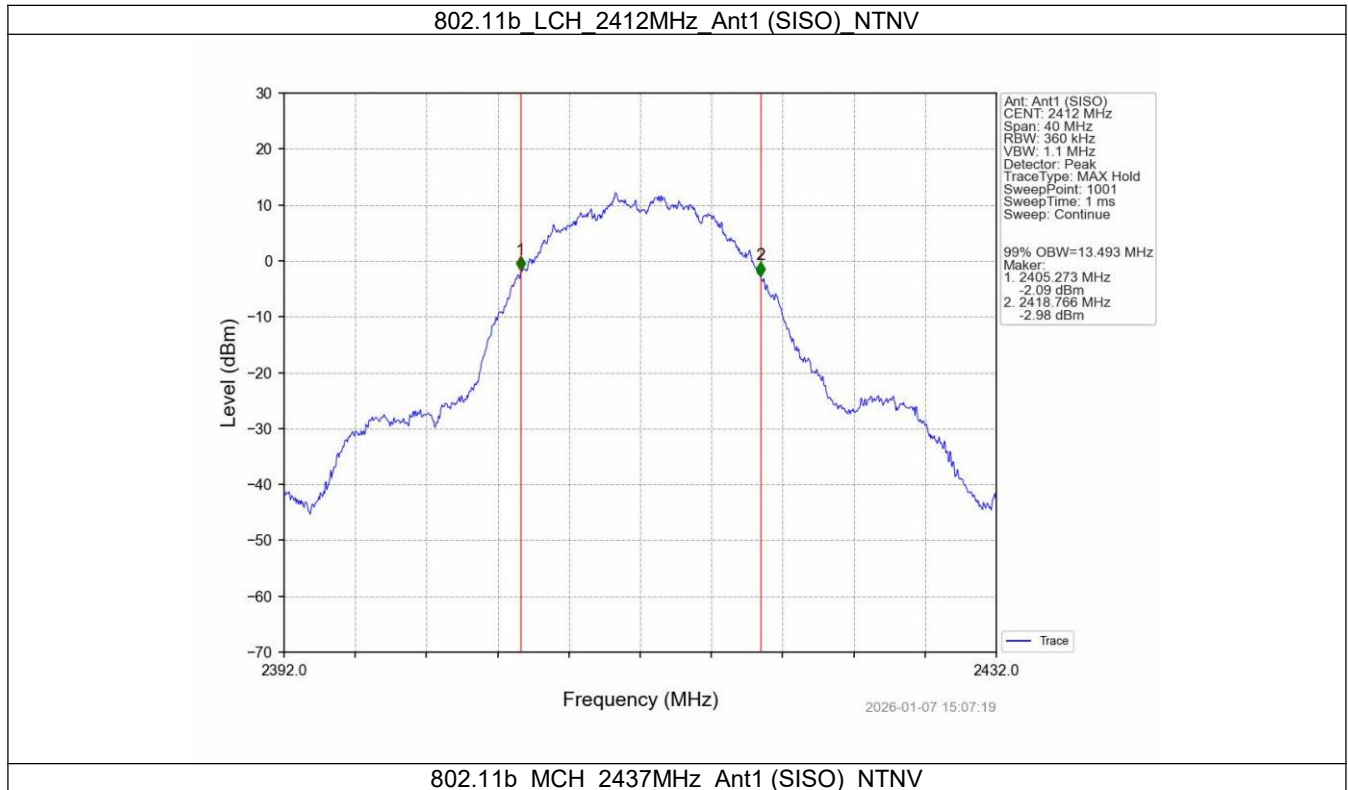
#### 2.1.2 6dB BW

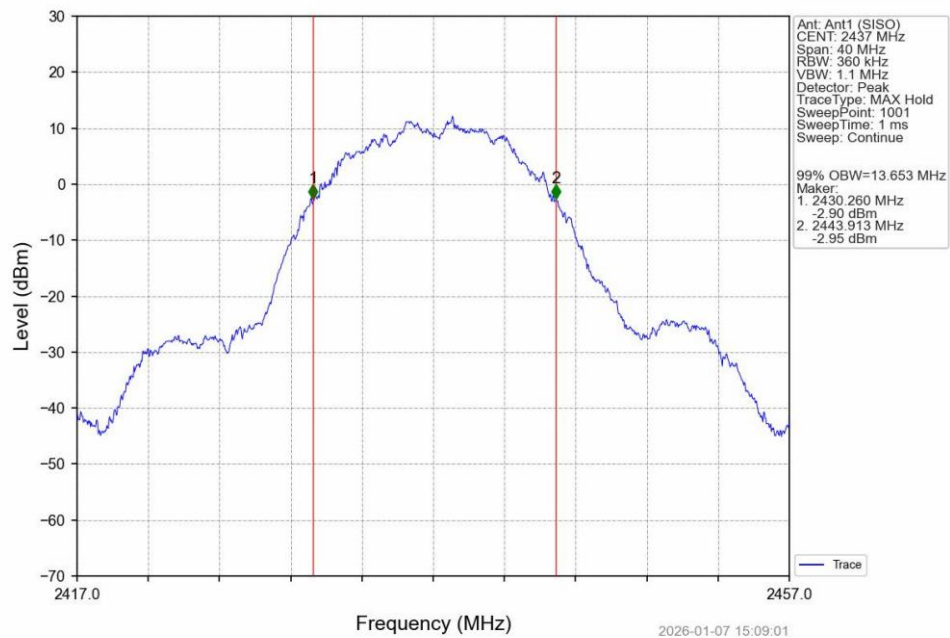
| Mode           | TX Type | Frequency (MHz) | ANT | 6dB Bandwidth (MHz) |            | Verdict |
|----------------|---------|-----------------|-----|---------------------|------------|---------|
|                |         |                 |     | Result              | Limit      |         |
| 802.11b        | SISO    | 2412            | 1   | 8.555               | $\geq 0.5$ | Pass    |
|                |         | 2437            | 1   | 9.415               | $\geq 0.5$ | Pass    |
|                |         | 2462            | 1   | 9.327               | $\geq 0.5$ | Pass    |
| 802.11g        | SISO    | 2412            | 1   | 16.679              | $\geq 0.5$ | Pass    |
|                |         | 2437            | 1   | 17.092              | $\geq 0.5$ | Pass    |
|                |         | 2462            | 1   | 16.734              | $\geq 0.5$ | Pass    |
| 802.11n (HT20) | SISO    | 2412            | 1   | 18.336              | $\geq 0.5$ | Pass    |
|                |         | 2437            | 1   | 17.794              | $\geq 0.5$ | Pass    |
|                |         | 2462            | 1   | 18.024              | $\geq 0.5$ | Pass    |
| 802.11n (HT40) | SISO    | 2422            | 1   | 31.621              | $\geq 0.5$ | Pass    |
|                |         | 2437            | 1   | 31.302              | $\geq 0.5$ | Pass    |
|                |         | 2452            | 1   | 30.883              | $\geq 0.5$ | Pass    |



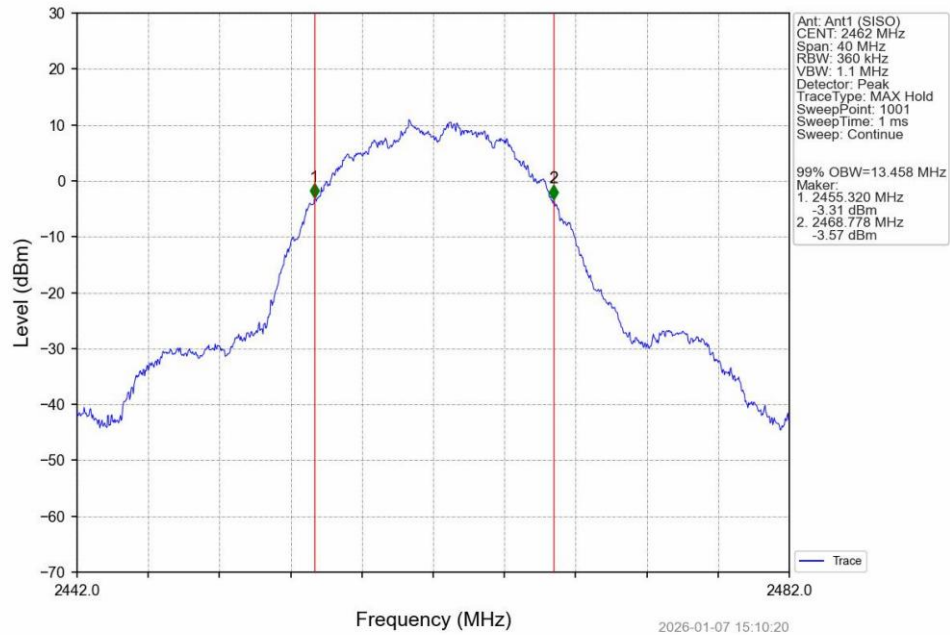
## 2.2 Test Graph

### 2.2.1 OBW

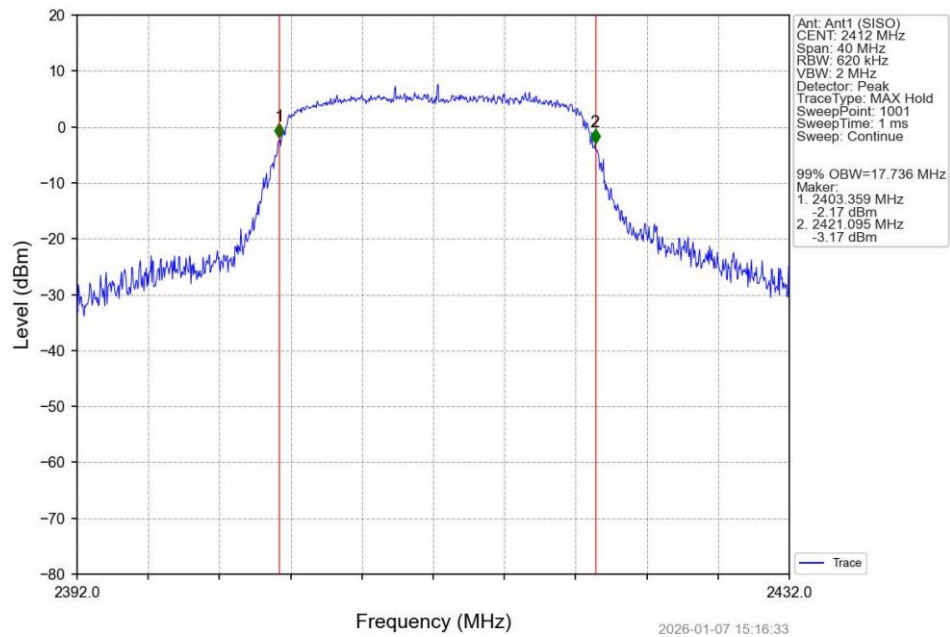




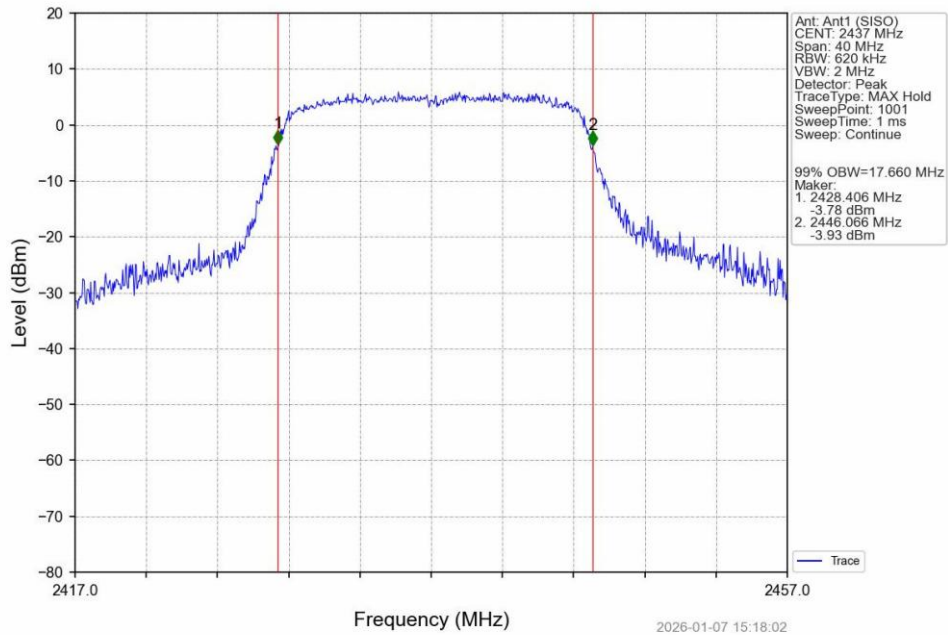
802.11b\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



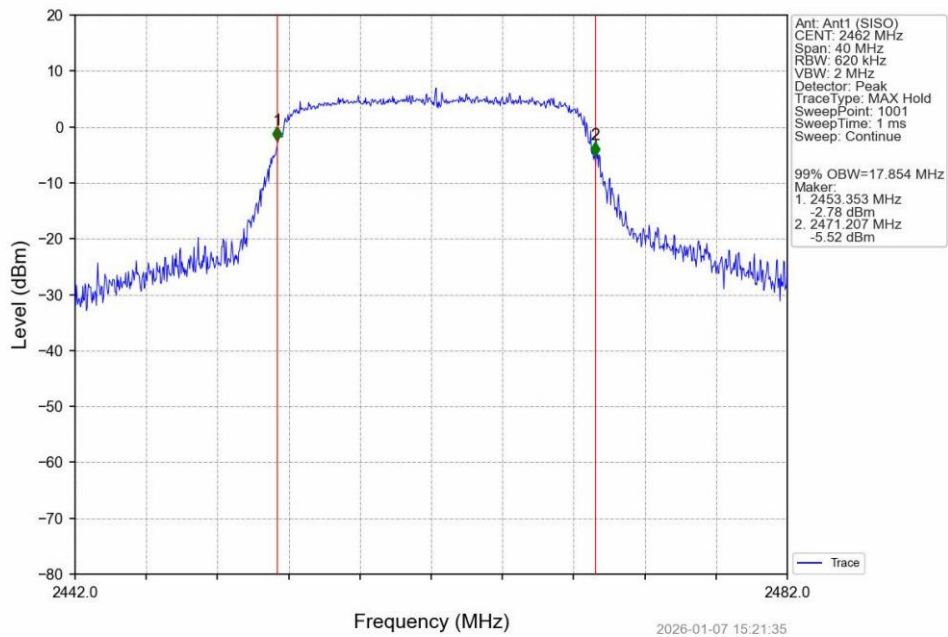
802.11g\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



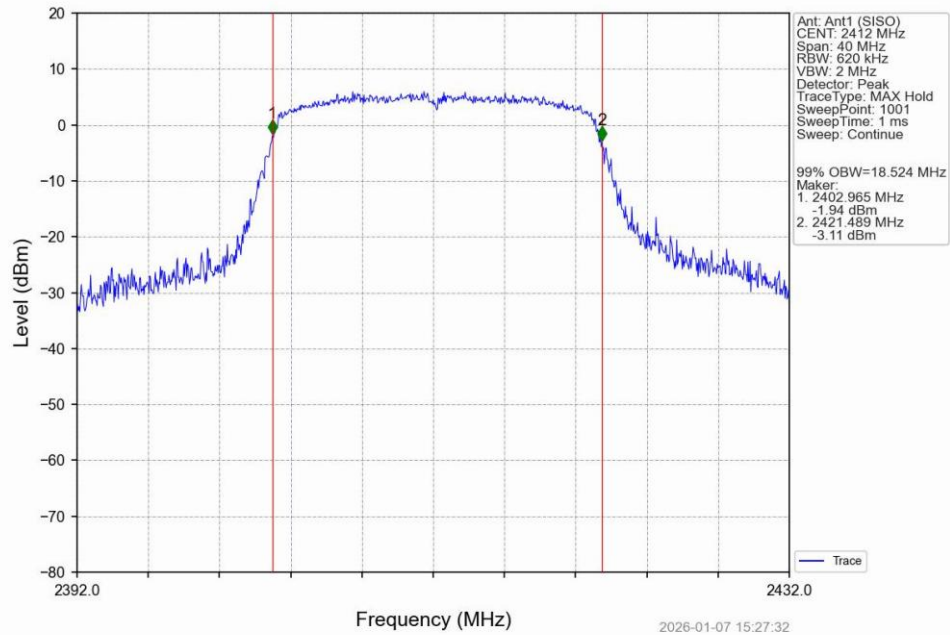
802.11g\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



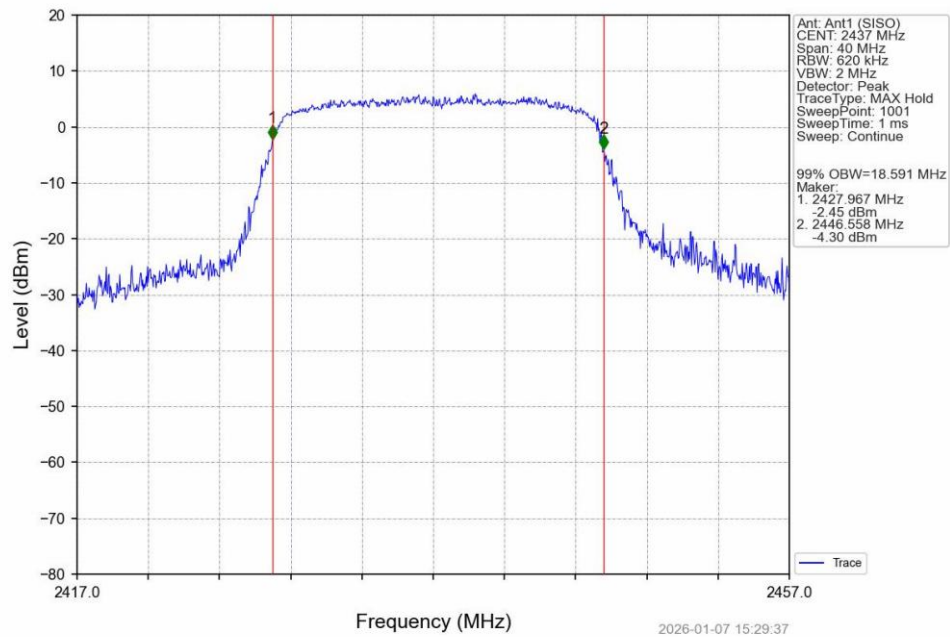
802.11g\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



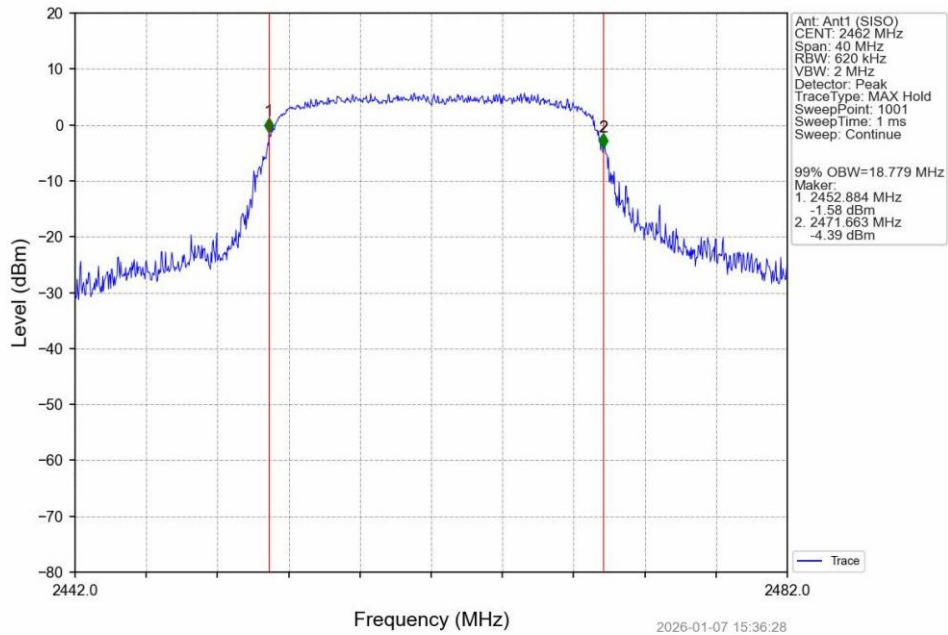
802.11n(HT20)\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



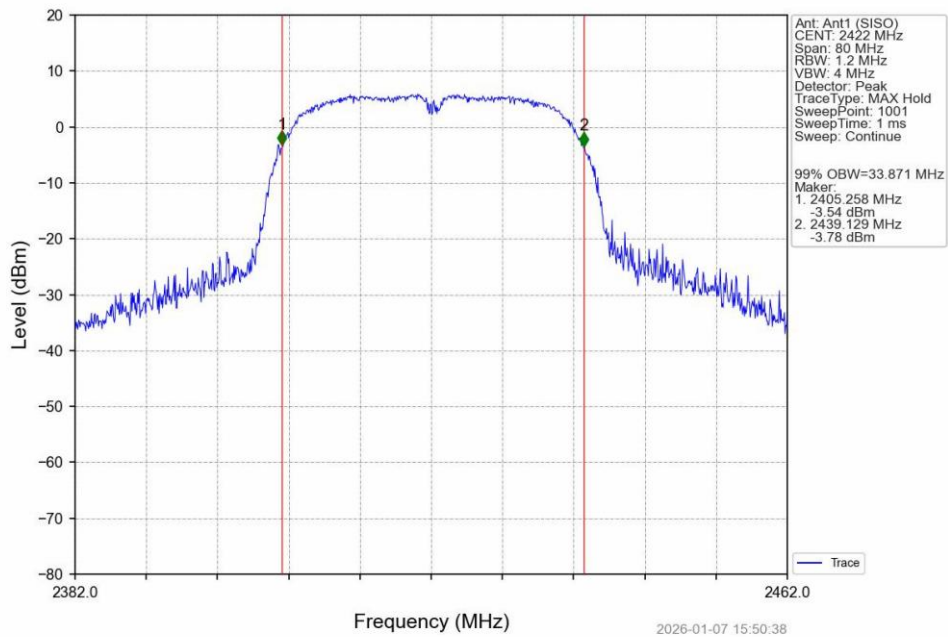
802.11n(HT20)\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



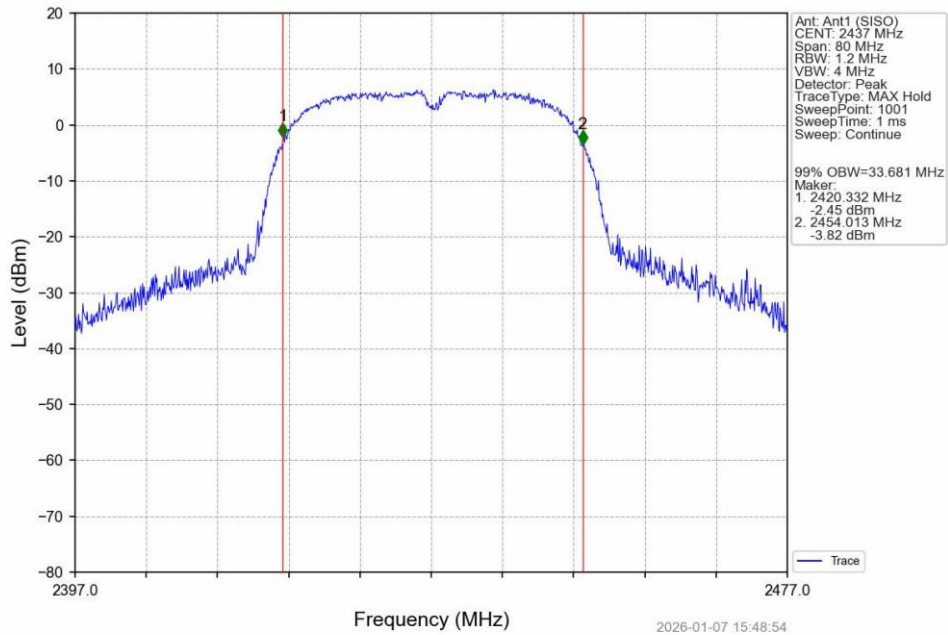
802.11n(HT20)\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



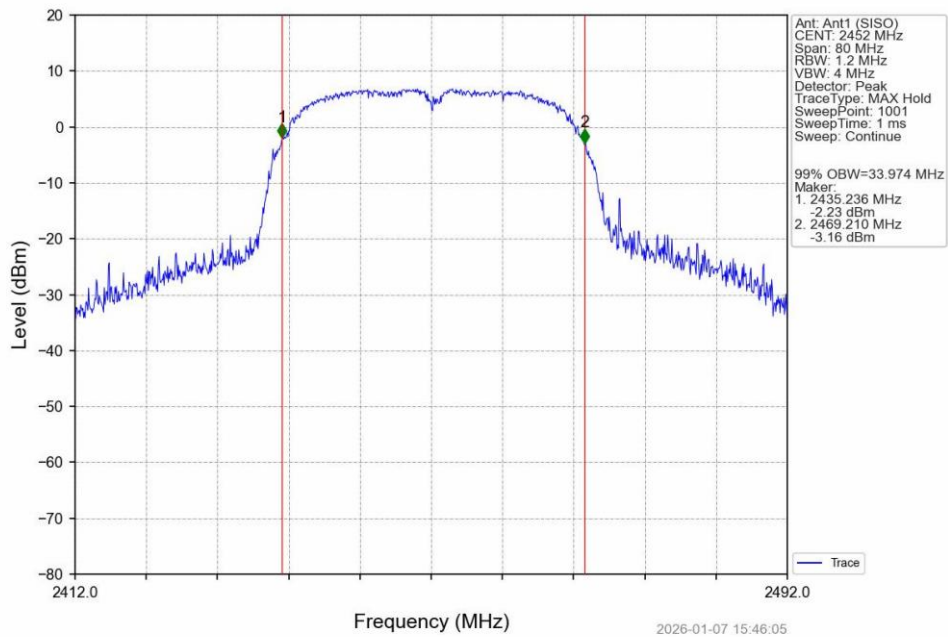
802.11n(HT40)\_LCH\_2422MHz\_Ant1 (SISO)\_NTNV



802.11n(HT40)\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV

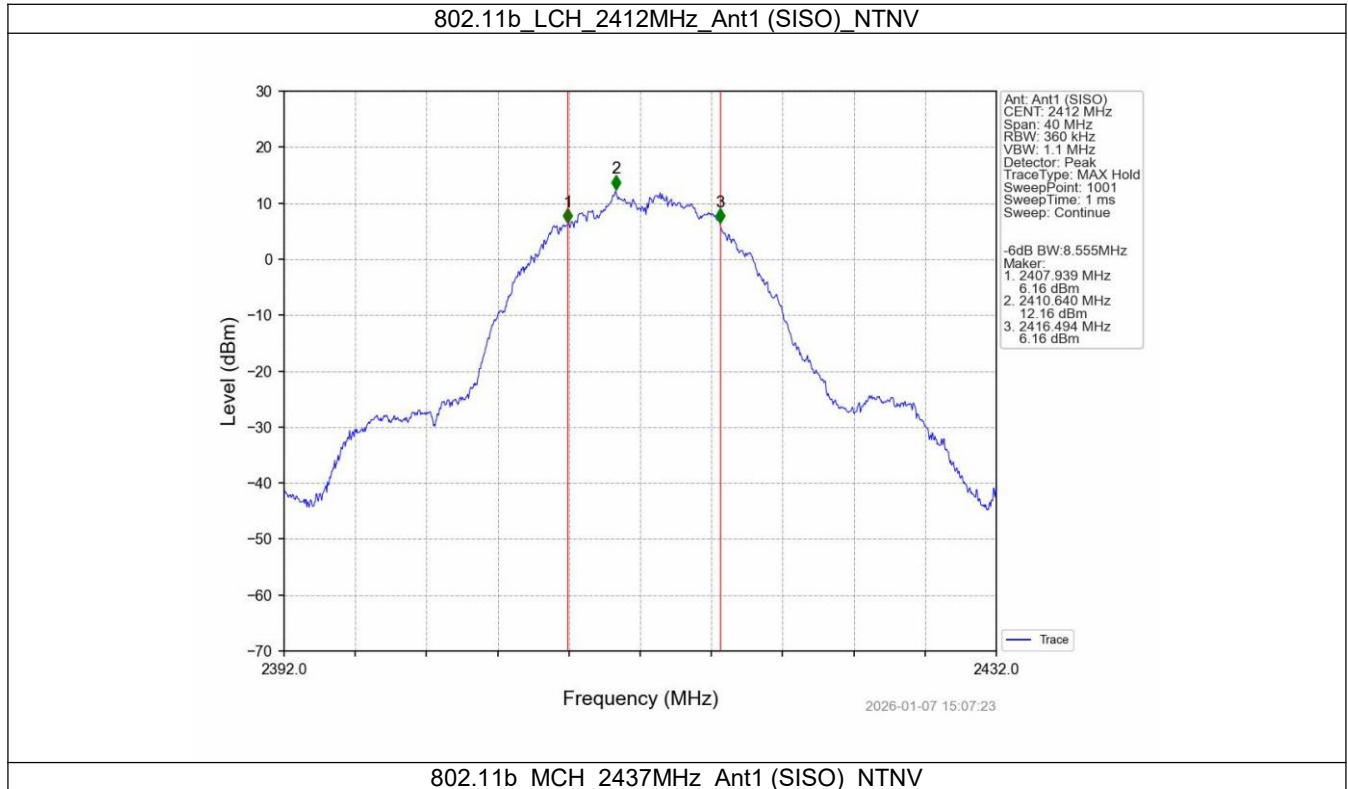


802.11n(HT40)\_HCH\_2452MHz\_Ant1 (SISO)\_NTNV

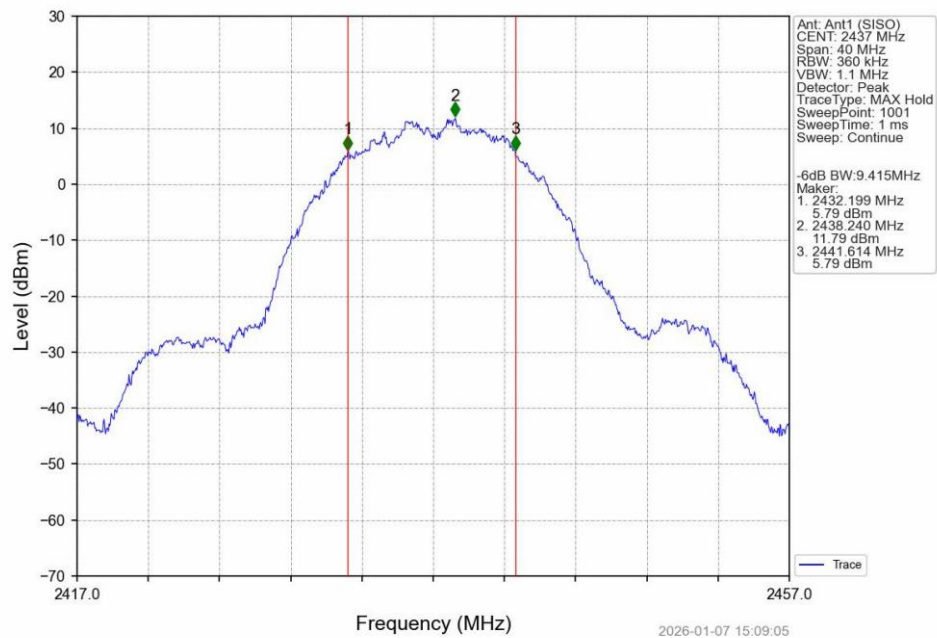




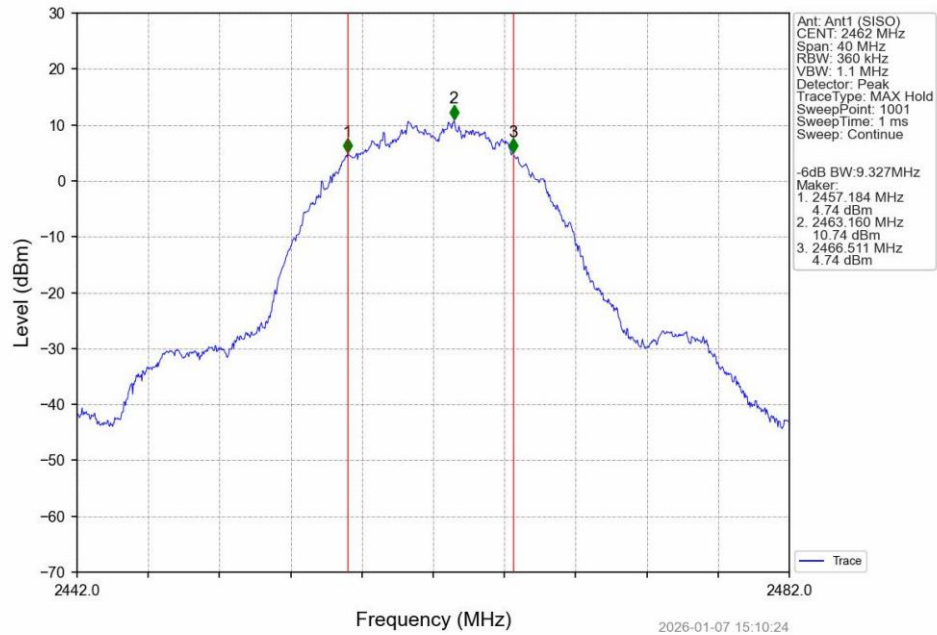
### 2.2.2 6dB BW



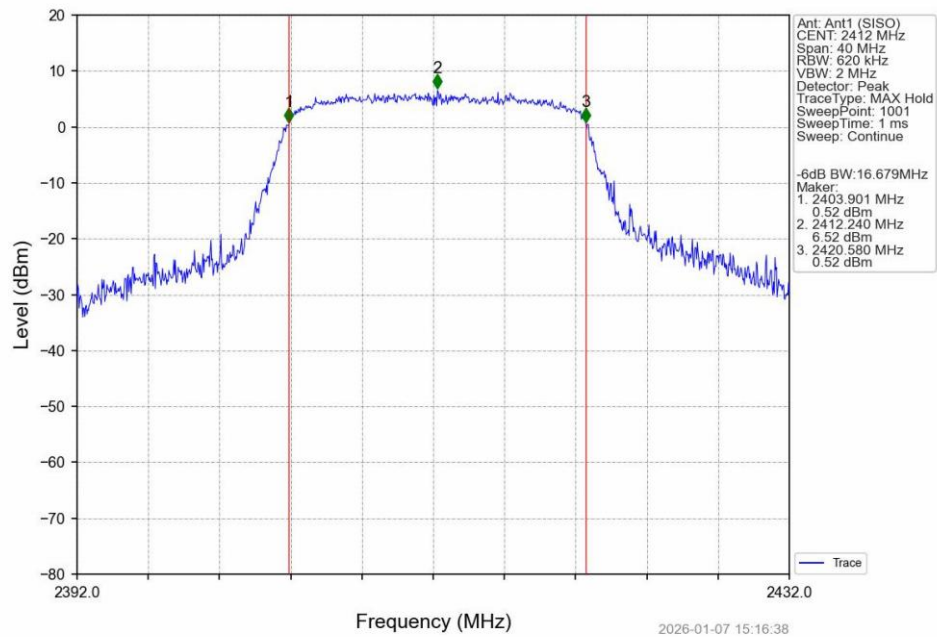
802.11b\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



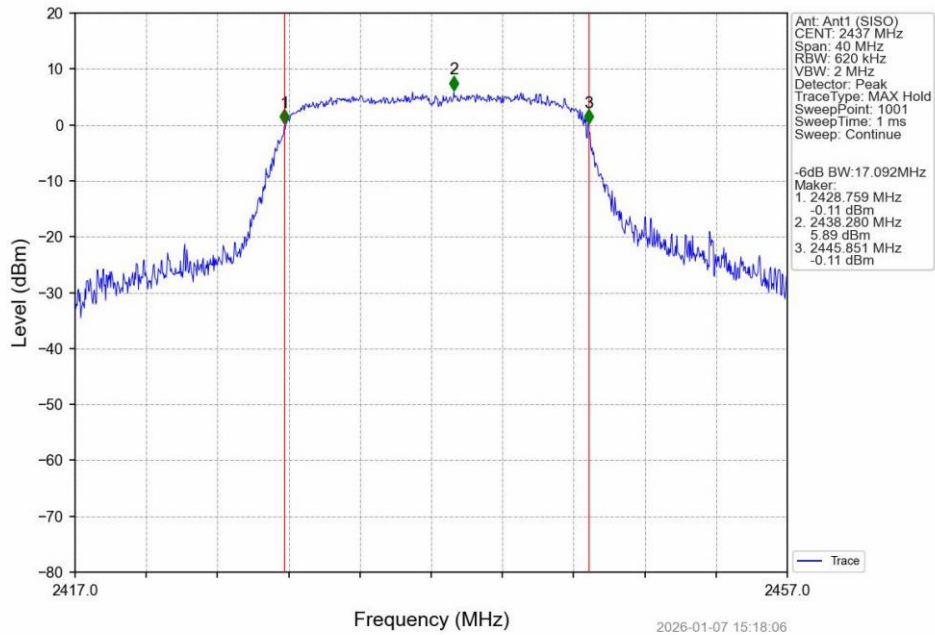
802.11b\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



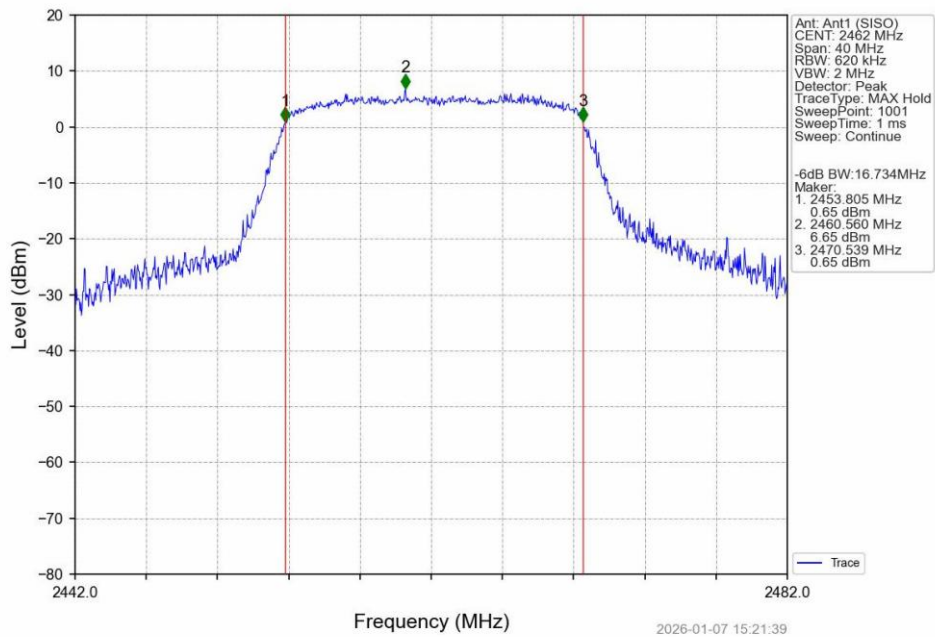
802.11g\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



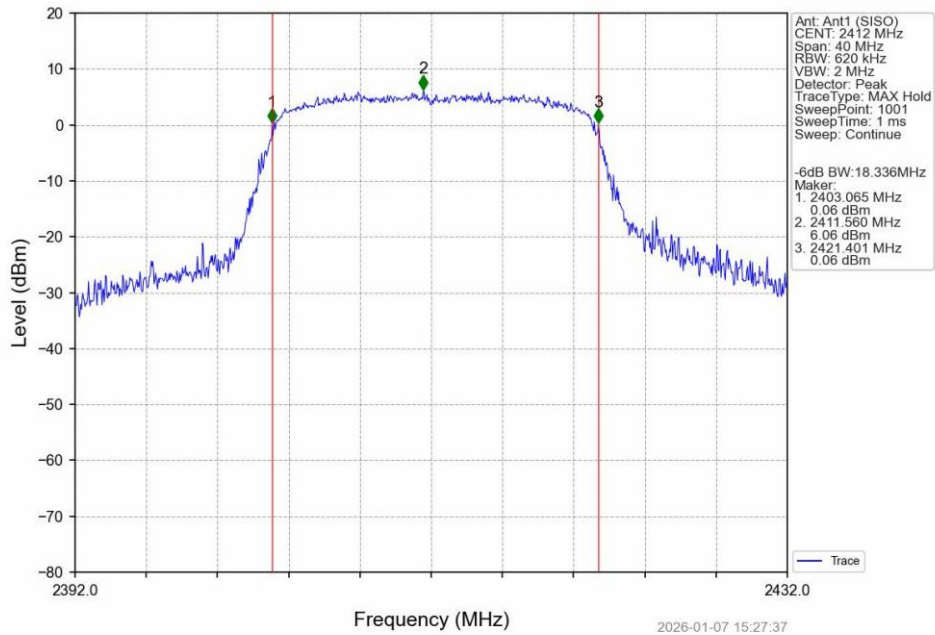
802.11g\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



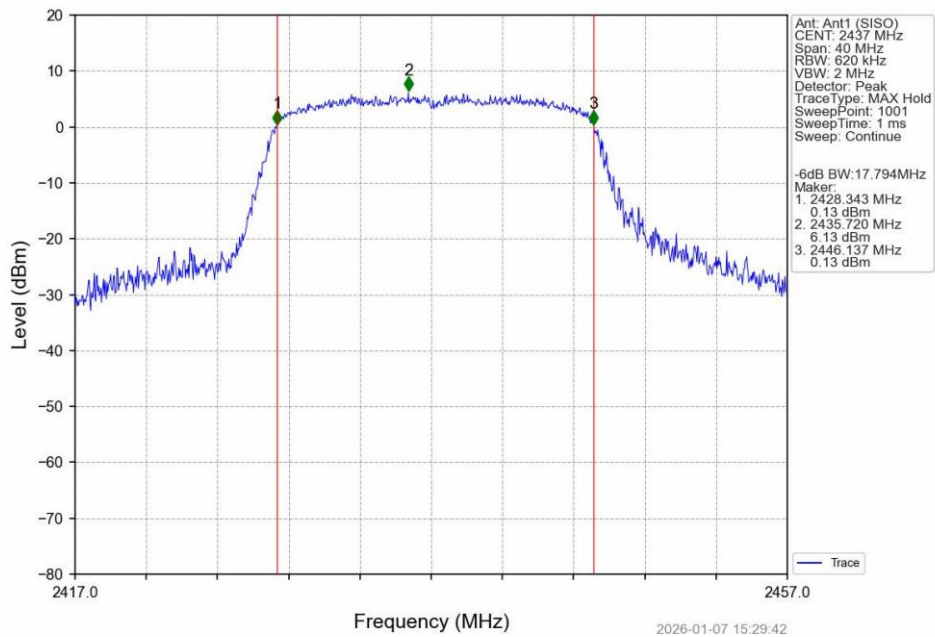
802.11g\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



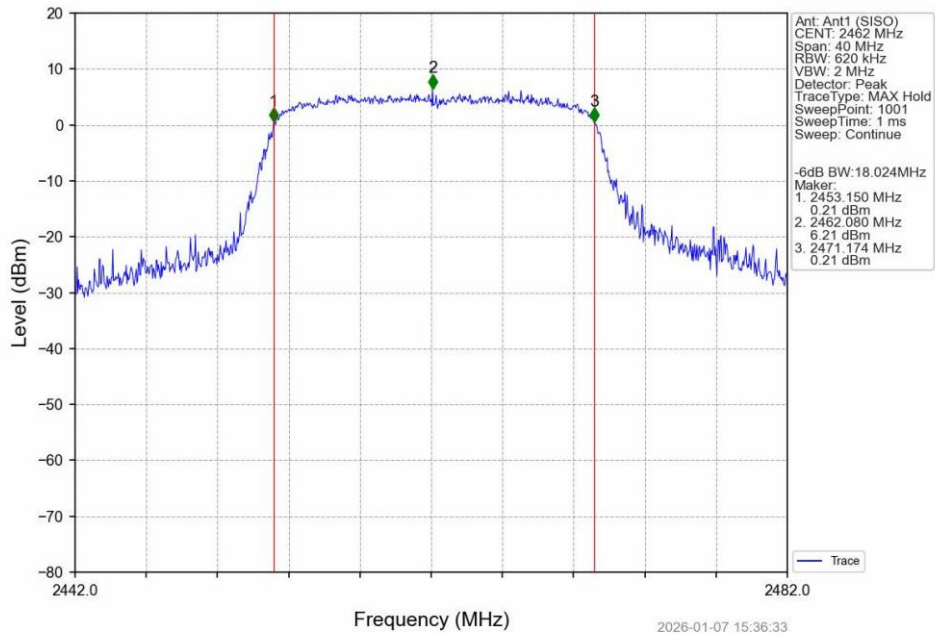
802.11n(HT20)\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



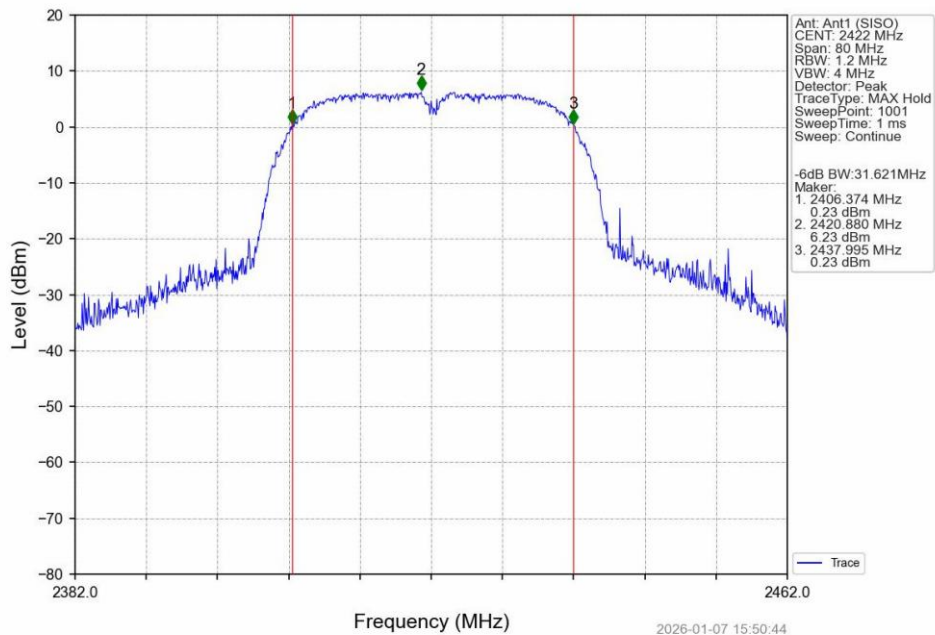
802.11n(HT20)\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



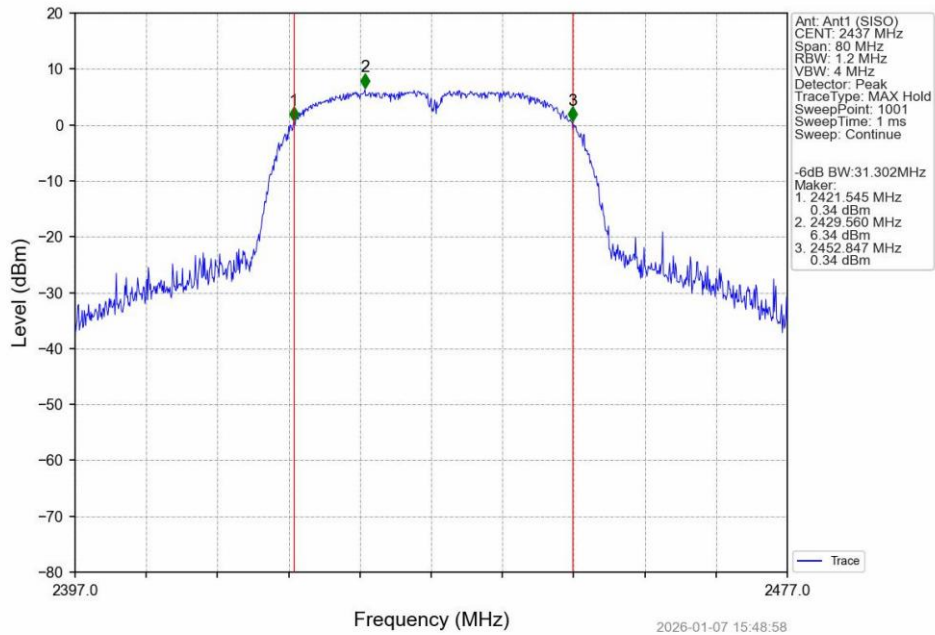
802.11n(HT20)\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



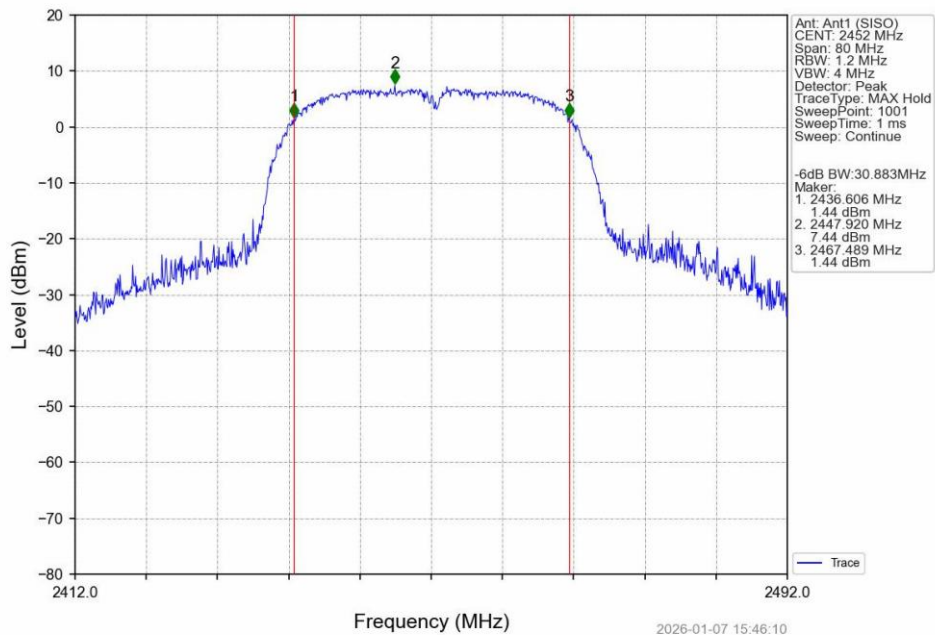
802.11n(HT40)\_LCH\_2422MHz\_Ant1 (SISO)\_NTNV



802.11n(HT40)\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



802.11n(HT40)\_HCH\_2452MHz\_Ant1 (SISO)\_NTNV





### 3. Maximum Conducted Output Power

#### 3.1 Test Result

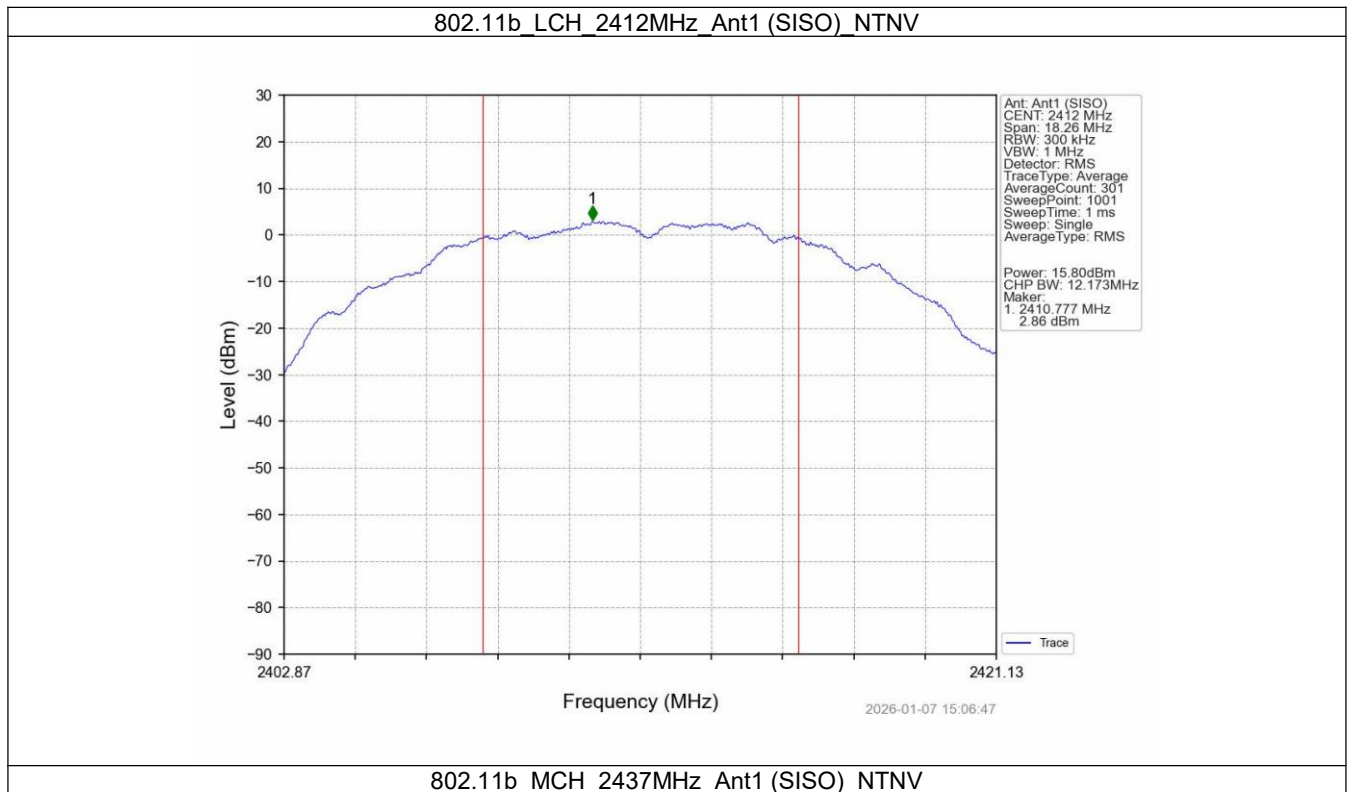
##### 3.1.1 Power

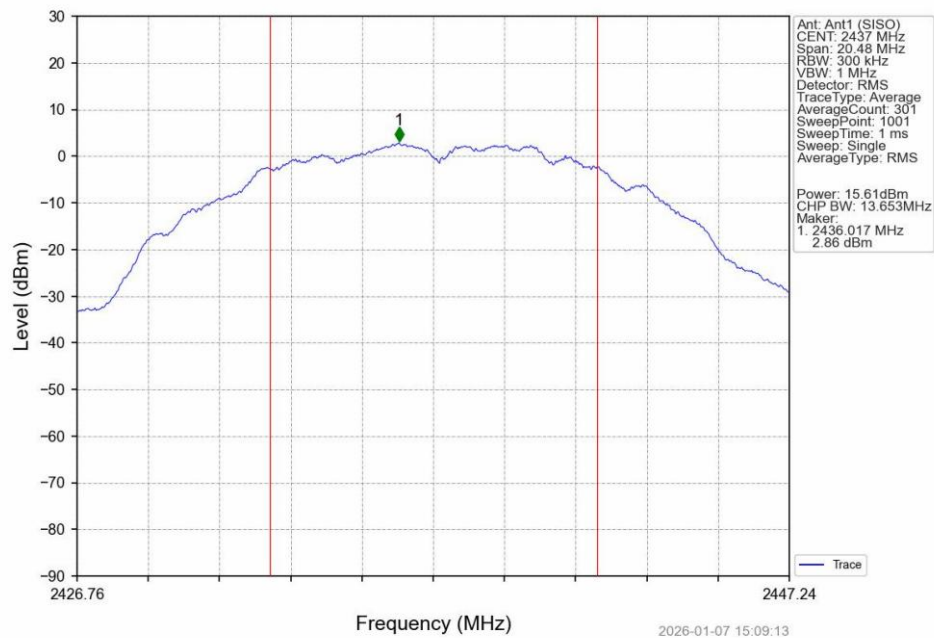
| Mode           | TX Type | Frequency (MHz) | Maximum Average Conducted Output Power (dBm) |       | Verdict |
|----------------|---------|-----------------|----------------------------------------------|-------|---------|
|                |         |                 | ANT1                                         | Limit |         |
| 802.11b        | SISO    | 2412            | 15.80                                        | <=30  | Pass    |
|                |         | 2437            | 15.61                                        | <=30  | Pass    |
|                |         | 2462            | 14.96                                        | <=30  | Pass    |
| 802.11g        | SISO    | 2412            | 11.44                                        | <=30  | Pass    |
|                |         | 2437            | 11.08                                        | <=30  | Pass    |
|                |         | 2462            | 11.15                                        | <=30  | Pass    |
| 802.11n (HT20) | SISO    | 2412            | 11.31                                        | <=30  | Pass    |
|                |         | 2437            | 11.15                                        | <=30  | Pass    |
|                |         | 2462            | 11.25                                        | <=30  | Pass    |
| 802.11n (HT40) | SISO    | 2422            | 11.18                                        | <=30  | Pass    |
|                |         | 2437            | 11.73                                        | <=30  | Pass    |
|                |         | 2452            | 11.50                                        | <=30  | Pass    |

Note1: Antenna Gain: Ant1: 1.02dBi;

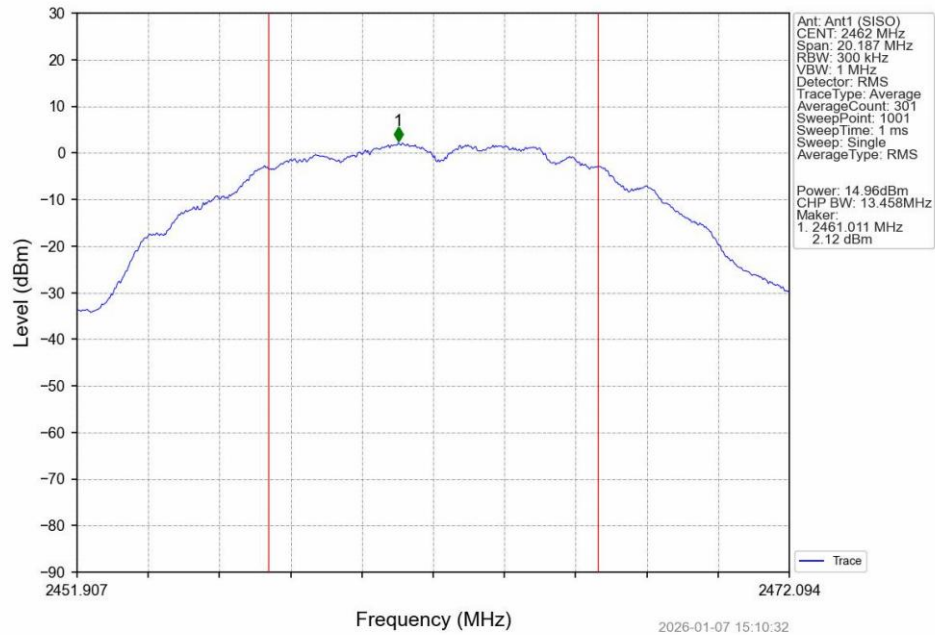
## 3.2 Test Graph

### 3.2.1 Power

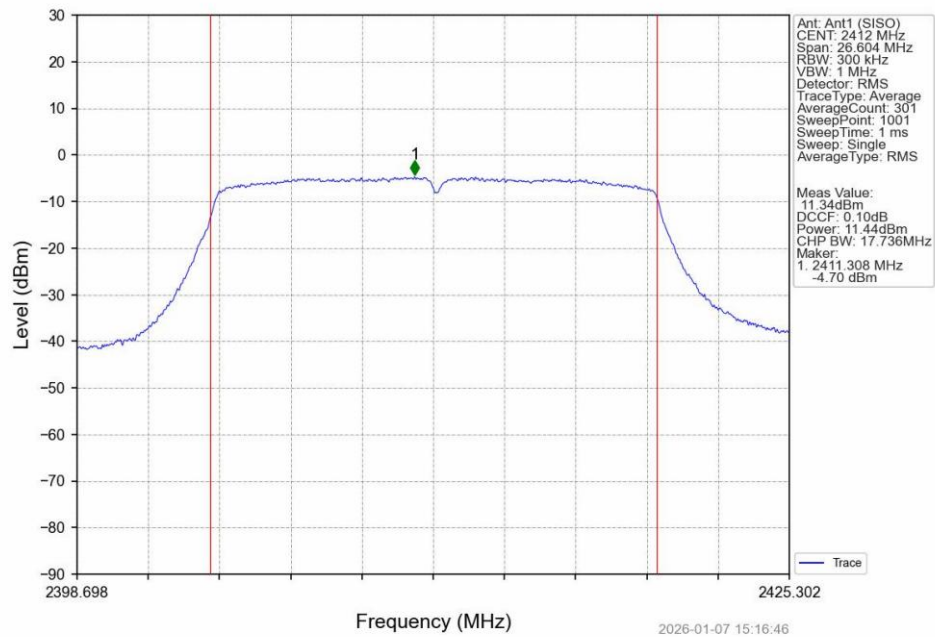




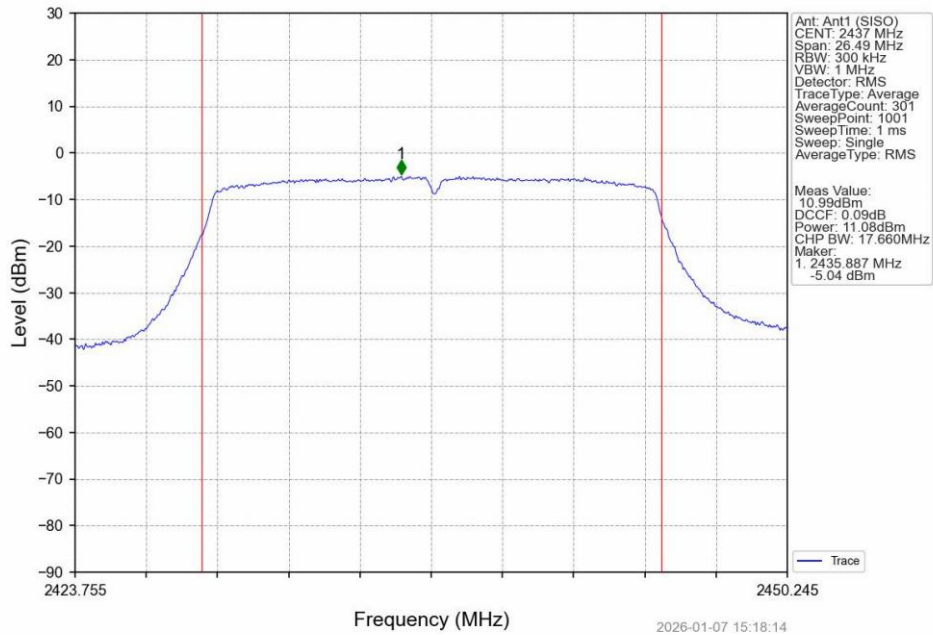
802.11b\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



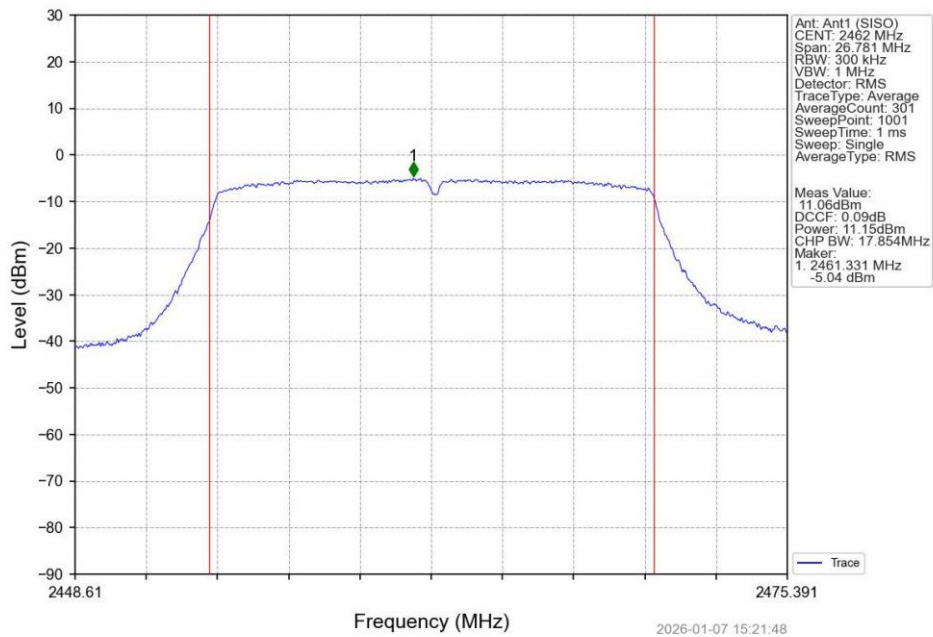
802.11g\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



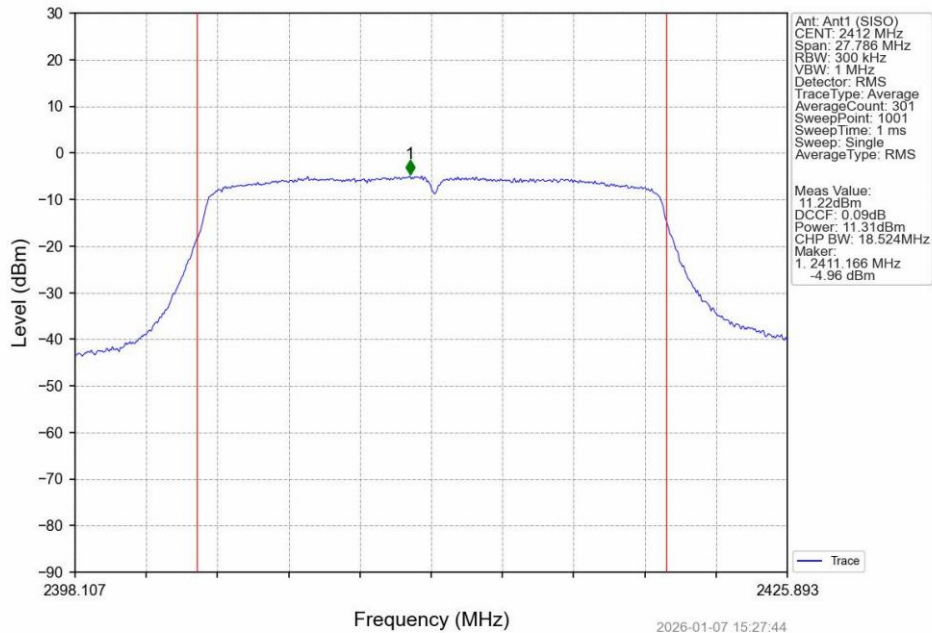
802.11g\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



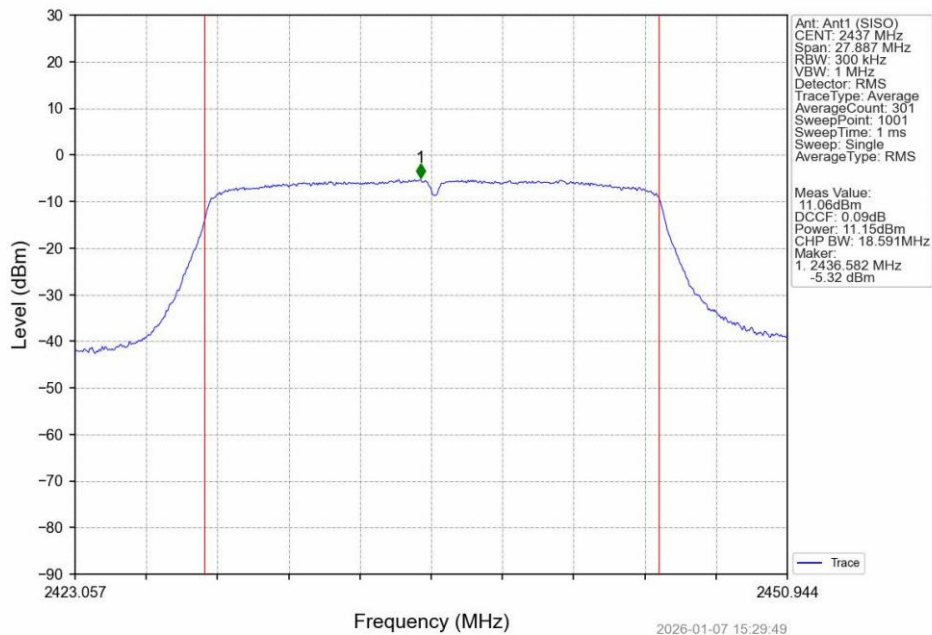
802.11g\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



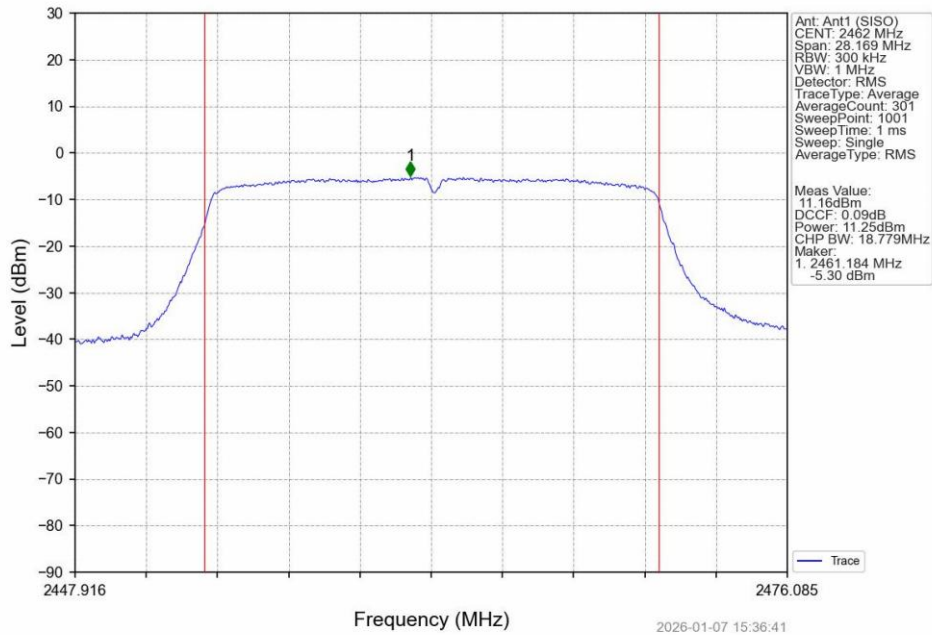
802.11n(HT20)\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



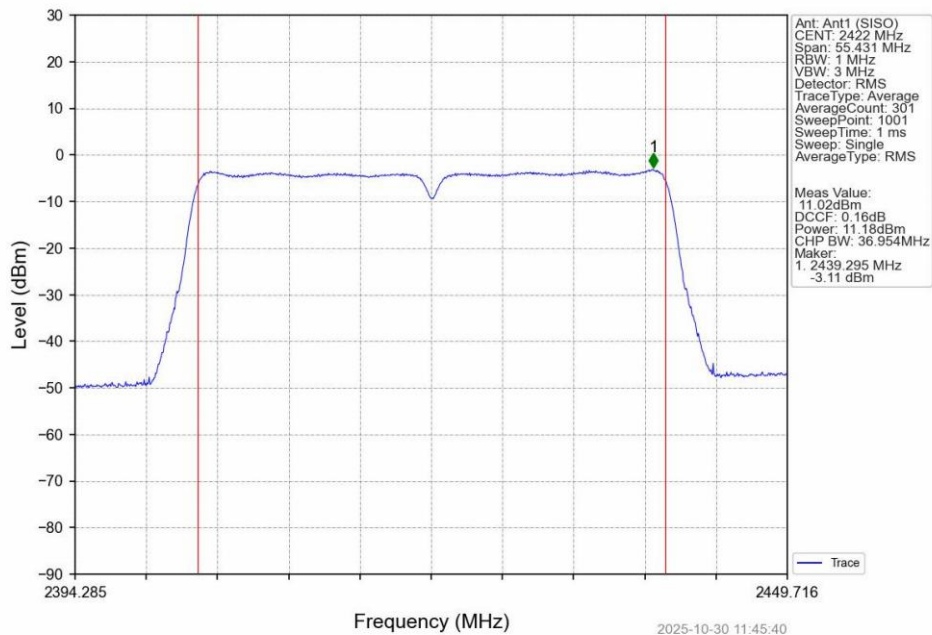
802.11n(HT20)\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



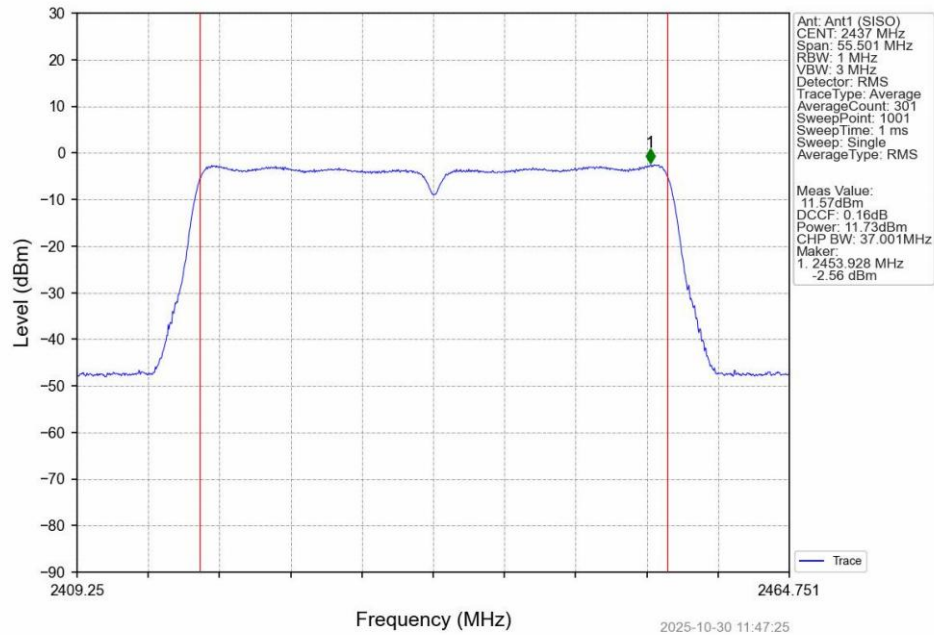
802.11n(HT20)\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



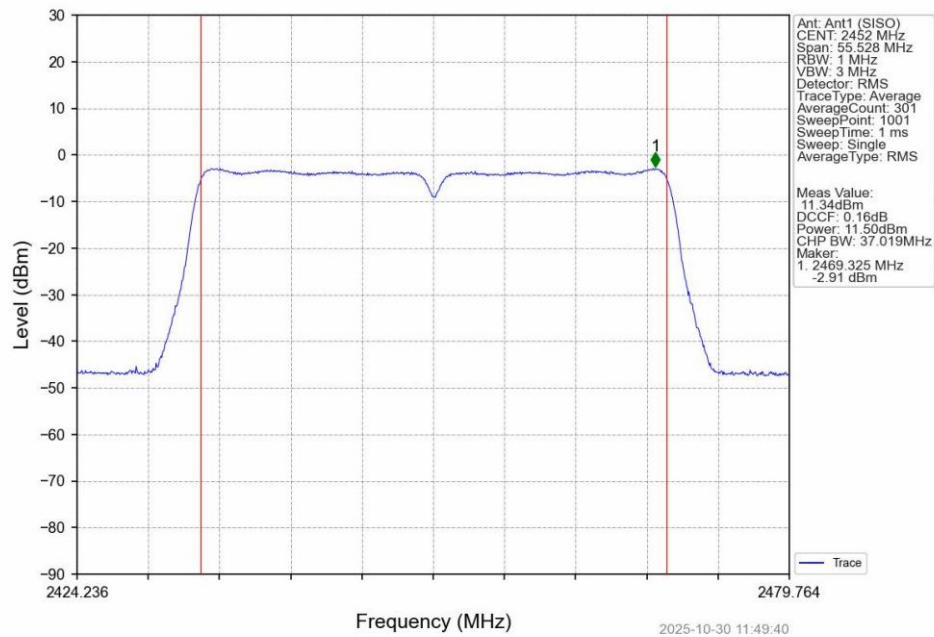
802.11n(HT40)\_LCH\_2422MHz\_Ant1 (SISO)\_NTNV



802.11n(HT40)\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



802.11n(HT40)\_HCH\_2452MHz\_Ant1 (SISO)\_NTNV



## 4. Maximum Power Spectral Density

### 4.1 Test Result

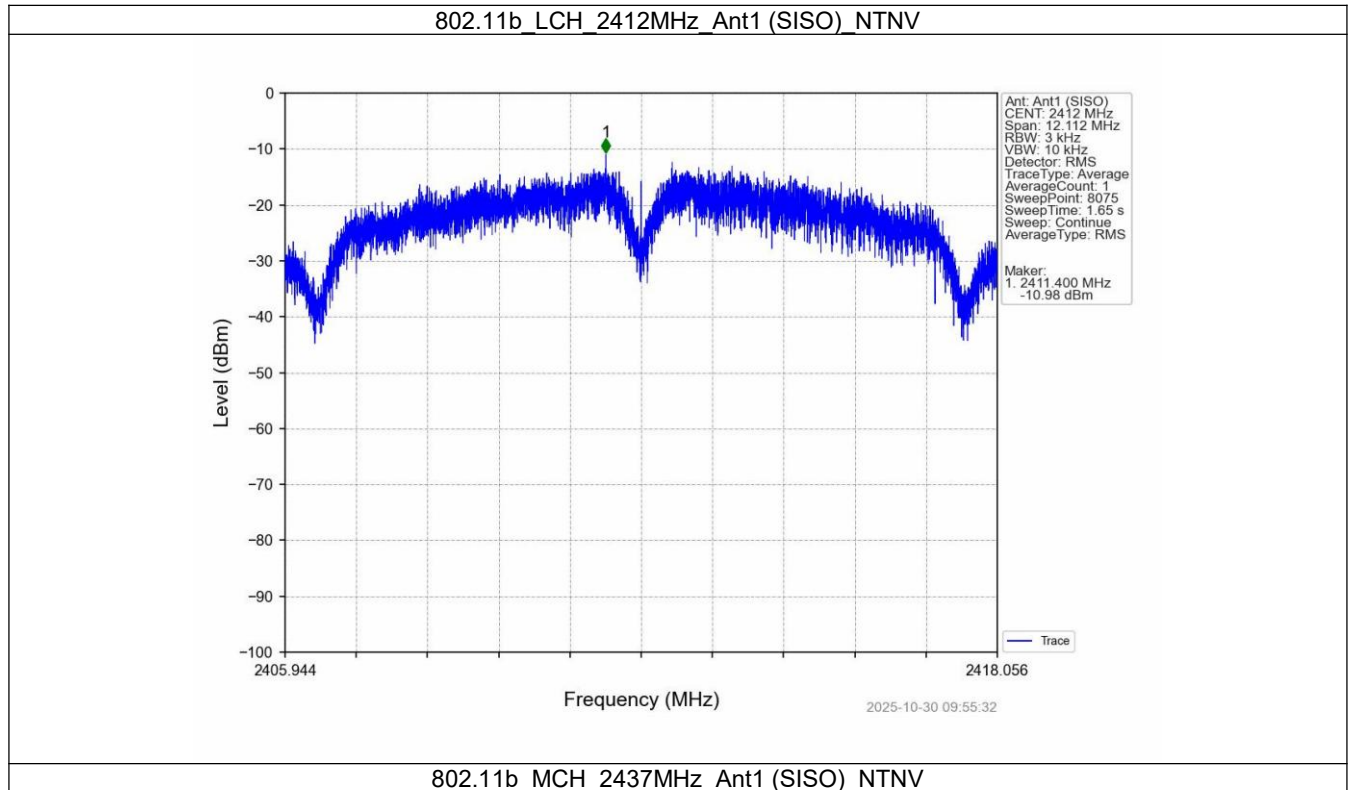
#### 4.1.1 PSD

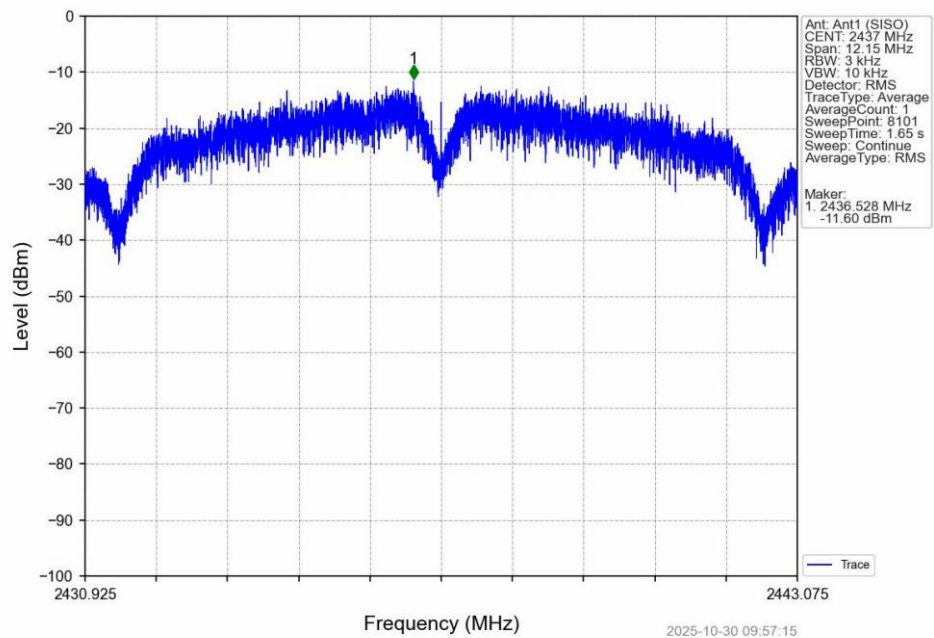
| Mode           | TX Type | Frequency (MHz) | Maximum PSD (dBm) |       | Verdict |
|----------------|---------|-----------------|-------------------|-------|---------|
|                |         |                 | ANT1              | Limit |         |
| 802.11b        | SISO    | 2412            | -10.98            | <=8   | Pass    |
|                |         | 2437            | -11.60            | <=8   | Pass    |
|                |         | 2462            | -10.81            | <=8   | Pass    |
| 802.11g        | SISO    | 2412            | -18.91            | <=8   | Pass    |
|                |         | 2437            | -18.04            | <=8   | Pass    |
|                |         | 2462            | -18.10            | <=8   | Pass    |
| 802.11n (HT20) | SISO    | 2412            | -17.98            | <=8   | Pass    |
|                |         | 2437            | -18.28            | <=8   | Pass    |
|                |         | 2462            | -18.42            | <=8   | Pass    |
| 802.11n (HT40) | SISO    | 2422            | -2.76             | <=8   | Pass    |
|                |         | 2437            | -2.36             | <=8   | Pass    |
|                |         | 2452            | -2.05             | <=8   | Pass    |

Note1: Antenna Gain: Ant1: 1.02dBi;

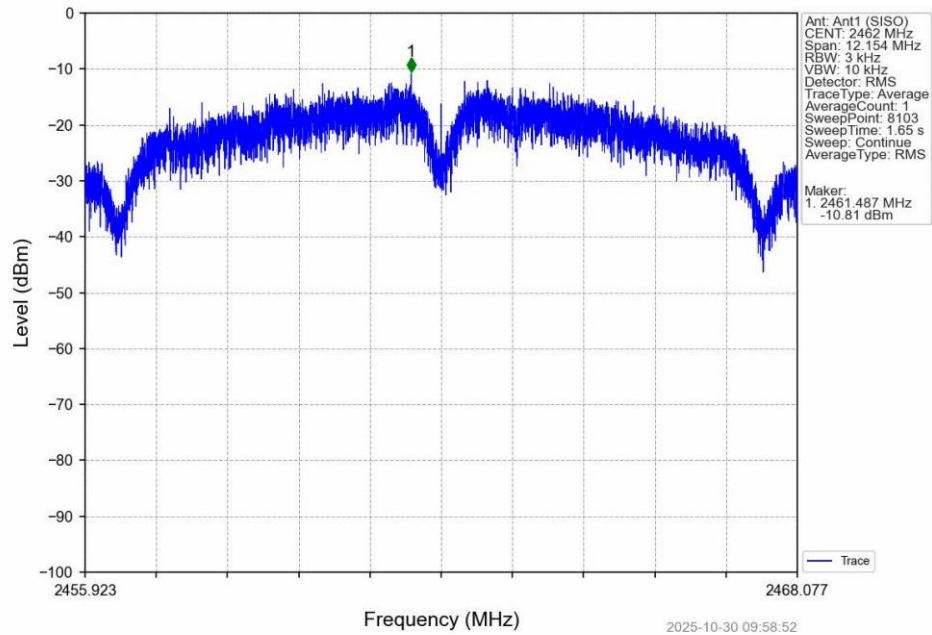
## 4.2 Test Graph

### 4.2.1 PSD

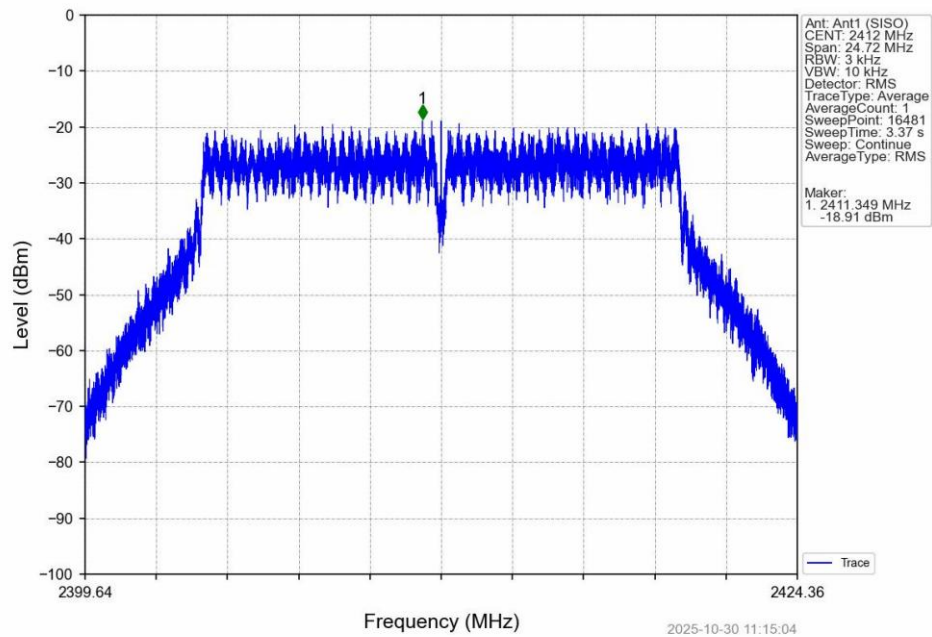




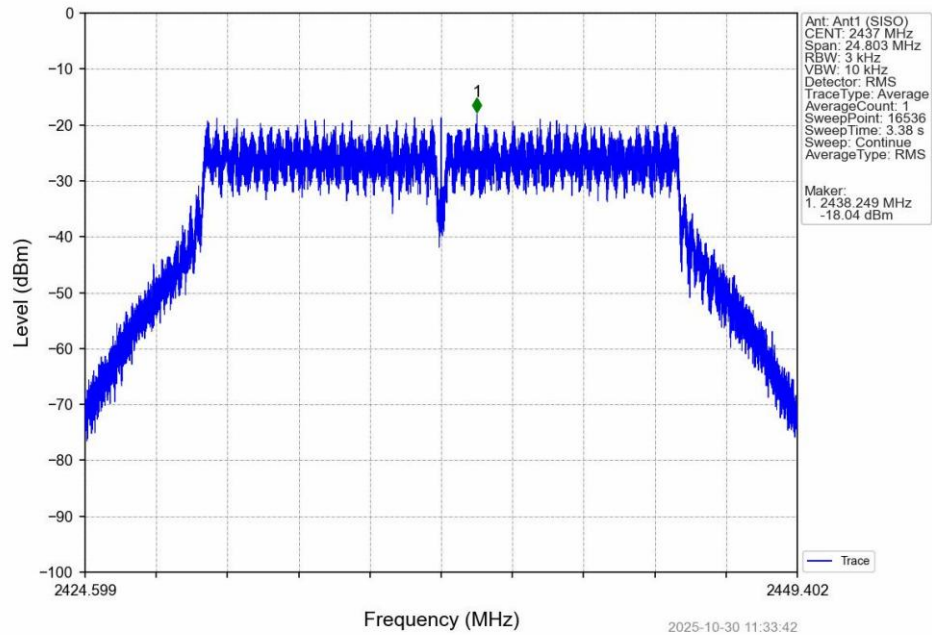
802.11b\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



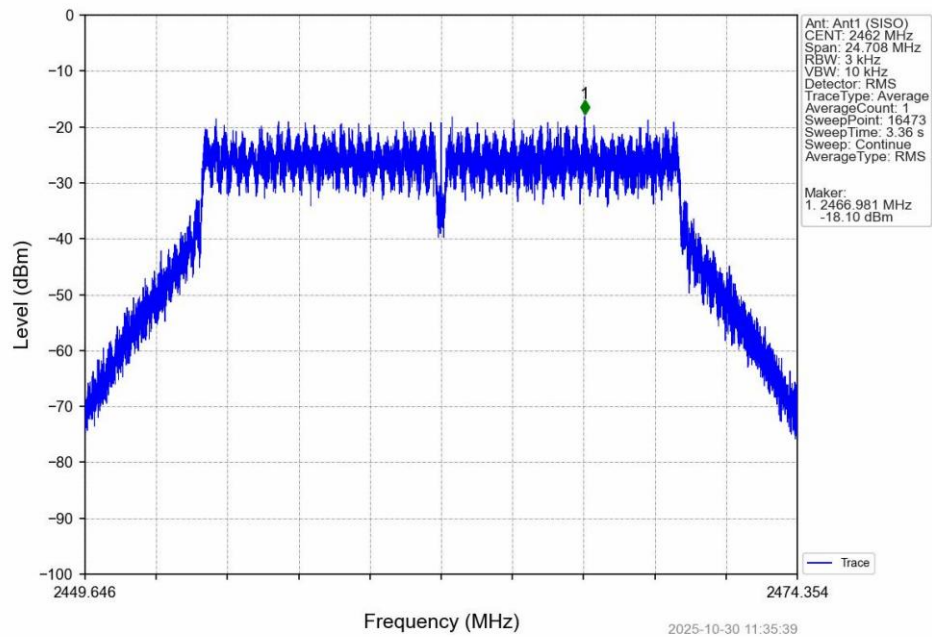
802.11g\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



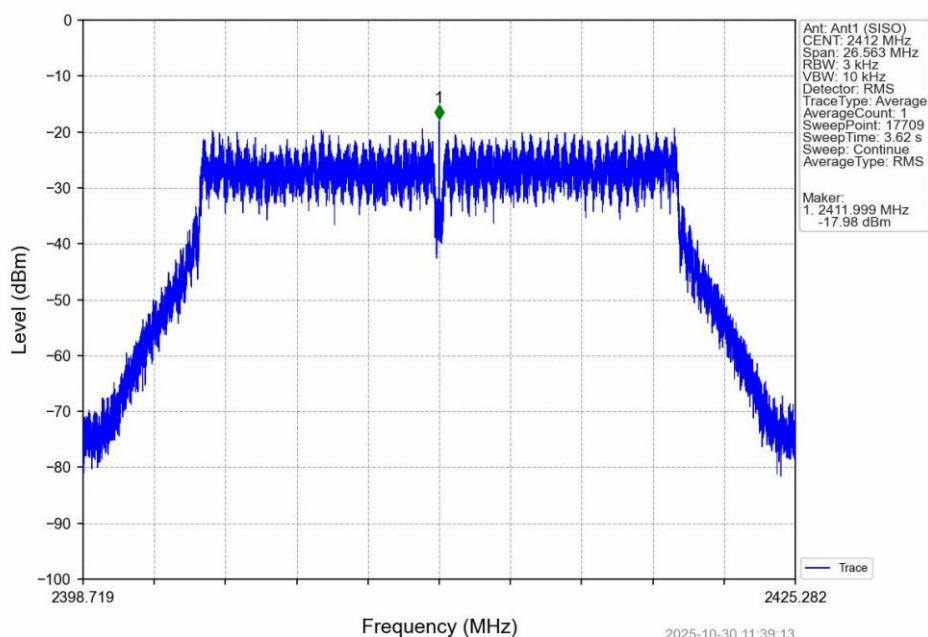
802.11g\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



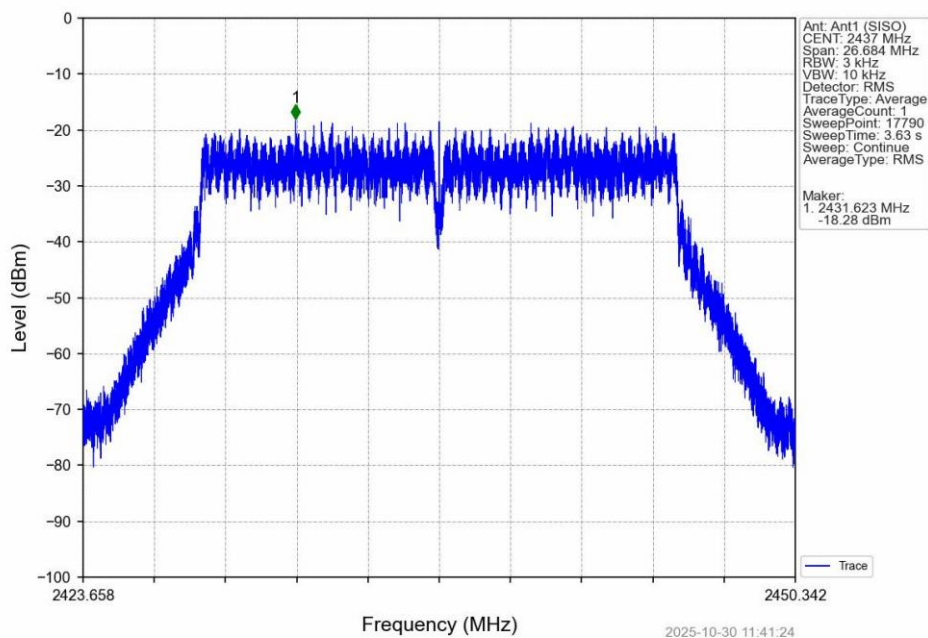
802.11g\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



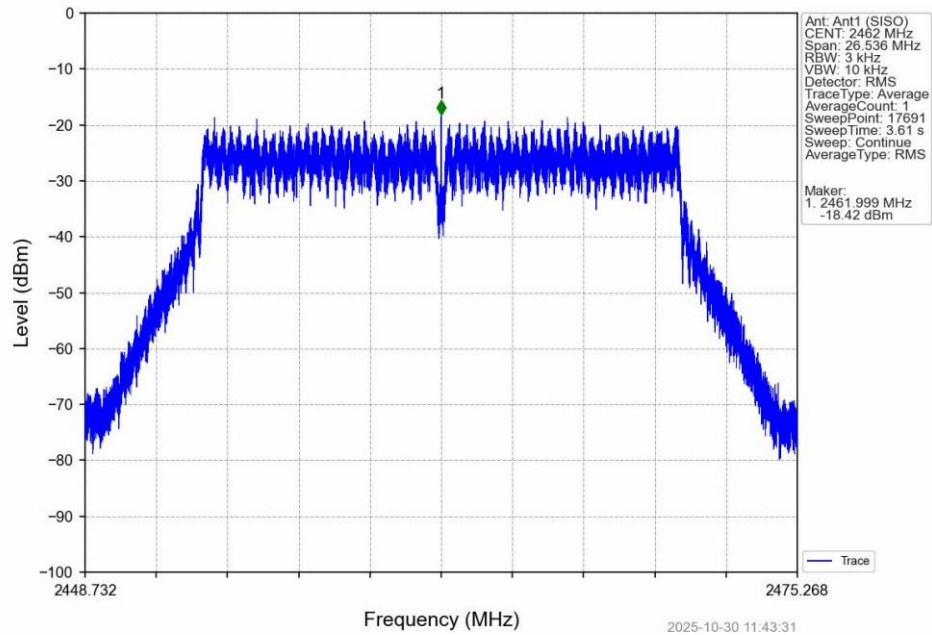
802.11n(HT20)\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



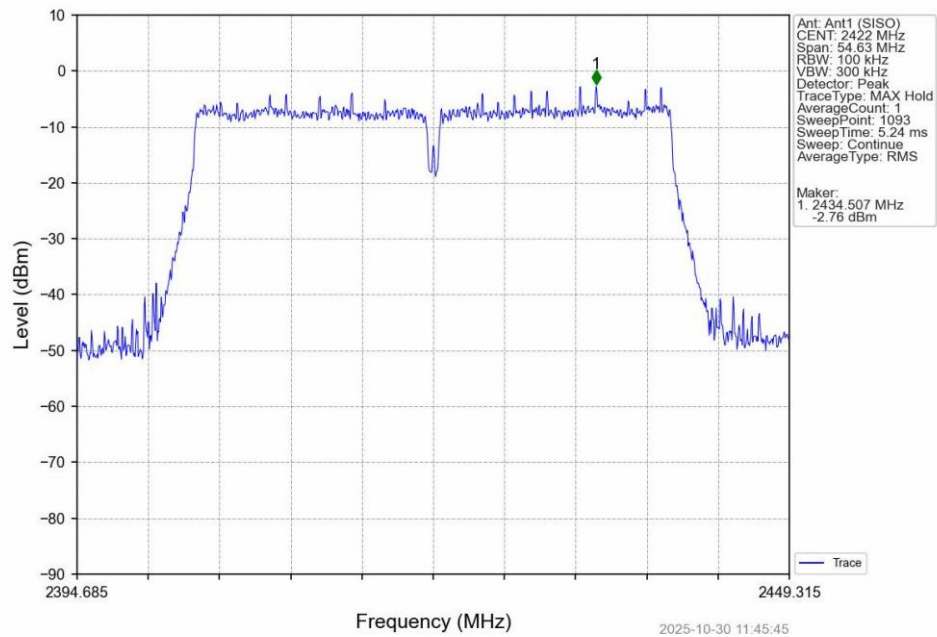
802.11n(HT20)\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



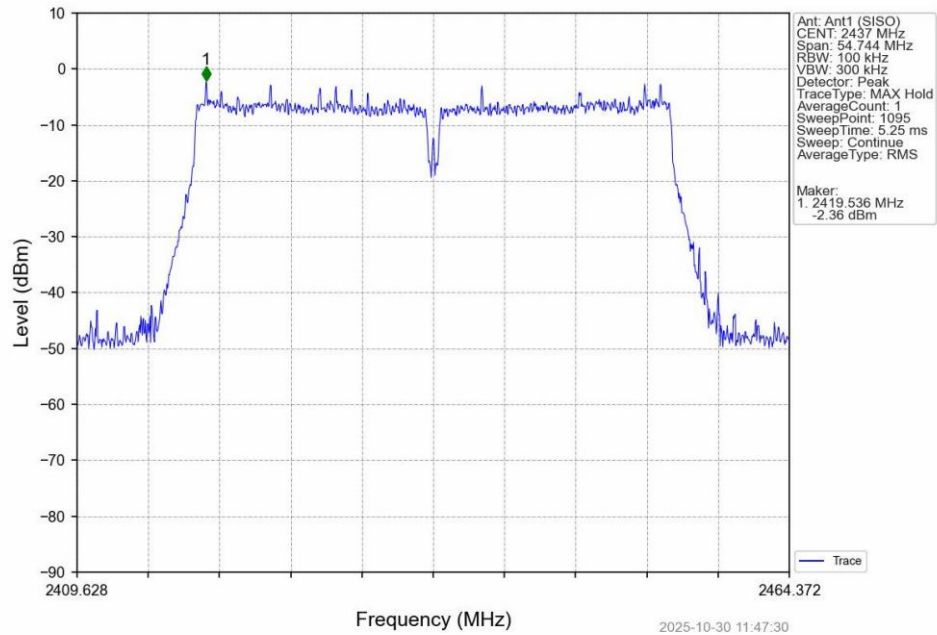
802.11n(HT20)\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



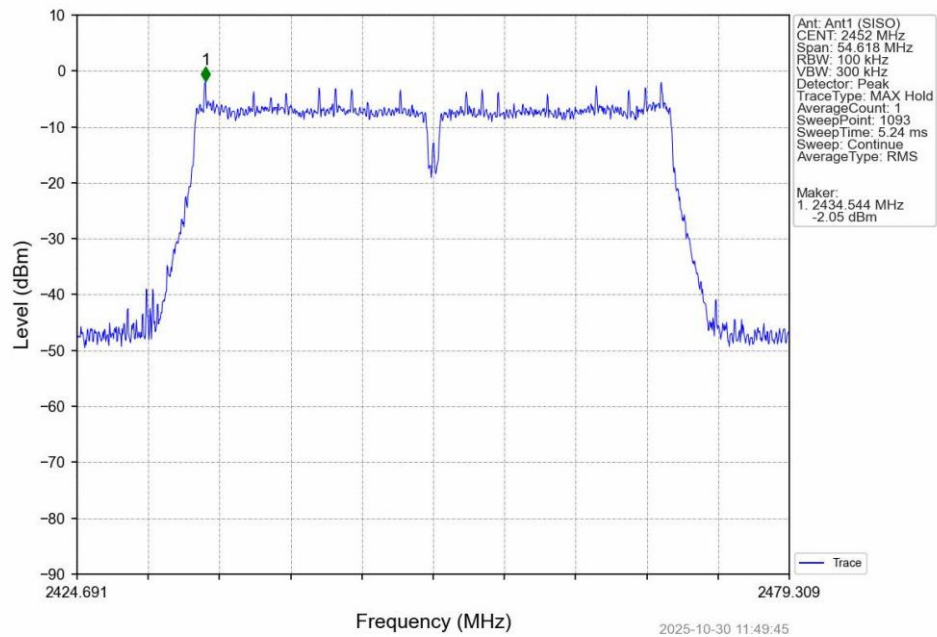
802.11n(HT40)\_LCH\_2422MHz\_Ant1 (SISO)\_NTNV



802.11n(HT40)\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



802.11n(HT40)\_HCH\_2452MHz\_Ant1 (SISO)\_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) |
|----------------|---------|-----------------|-----|--------------------------|
| 802.11b        | SISO    | 2412            | 1   | 7.53                     |
|                |         | 2437            | 1   | 7.81                     |
|                |         | 2462            | 1   | 7.70                     |
| 802.11g        | SISO    | 2412            | 1   | -0.19                    |
|                |         | 2437            | 1   | 0.11                     |
|                |         | 2462            | 1   | 0.22                     |
| 802.11n (HT20) | SISO    | 2412            | 1   | -0.01                    |
|                |         | 2437            | 1   | 0.21                     |
|                |         | 2462            | 1   | 0.34                     |
| 802.11n (HT40) | SISO    | 2422            | 1   | -2.79                    |
|                |         | 2437            | 1   | -1.91                    |
|                |         | 2452            | 1   | -2.53                    |

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

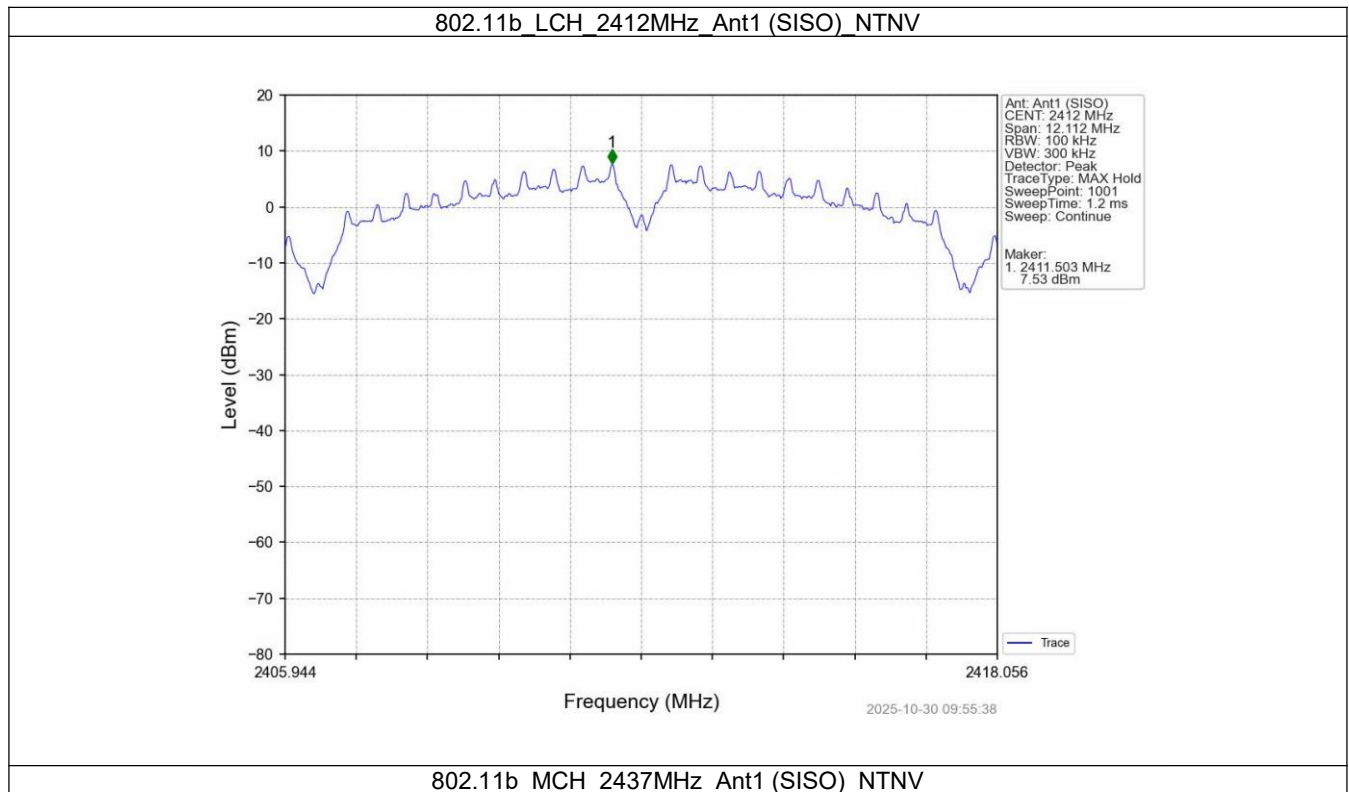
| Mode           | TX Type | Frequency (MHz) | ANT | Level of Reference (dBm) | Limit (dBm) | Verdict |
|----------------|---------|-----------------|-----|--------------------------|-------------|---------|
| 802.11b        | SISO    | 2412            | 1   | 7.81                     | -22.19      | Pass    |
|                |         | 2437            | 1   | 7.81                     | -22.19      | Pass    |
|                |         | 2462            | 1   | 7.81                     | -22.19      | Pass    |
| 802.11g        | SISO    | 2412            | 1   | 0.22                     | -29.78      | Pass    |
|                |         | 2437            | 1   | 0.22                     | -29.78      | Pass    |
|                |         | 2462            | 1   | 0.22                     | -29.78      | Pass    |
| 802.11n (HT20) | SISO    | 2412            | 1   | 0.34                     | -29.66      | Pass    |
|                |         | 2437            | 1   | 0.34                     | -29.66      | Pass    |
|                |         | 2462            | 1   | 0.34                     | -29.66      | Pass    |
| 802.11n (HT40) | SISO    | 2422            | 1   | -1.91                    | -31.91      | Pass    |
|                |         | 2437            | 1   | -1.91                    | -31.91      | Pass    |
|                |         | 2452            | 1   | -1.91                    | -31.91      | Pass    |

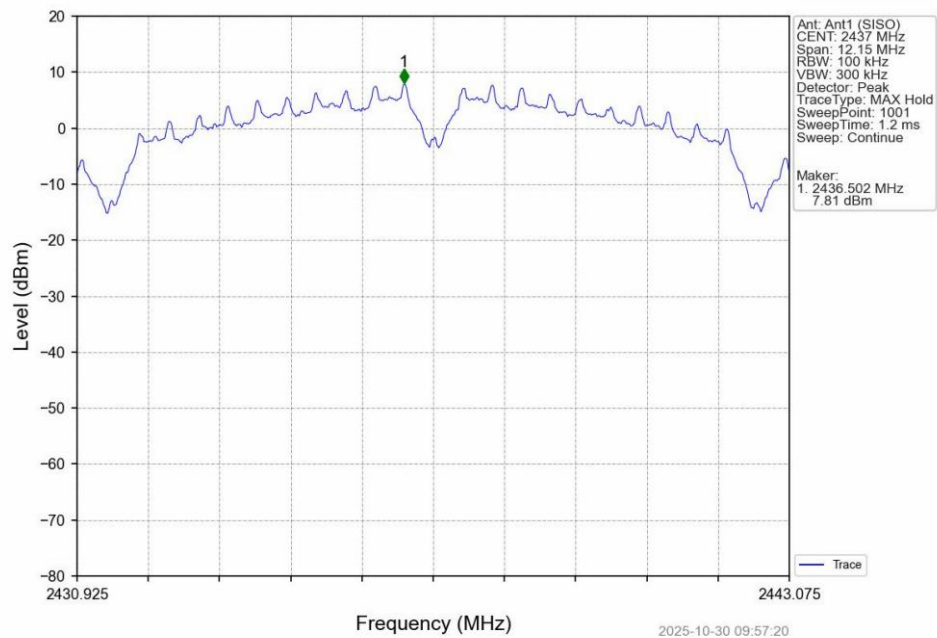
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level.



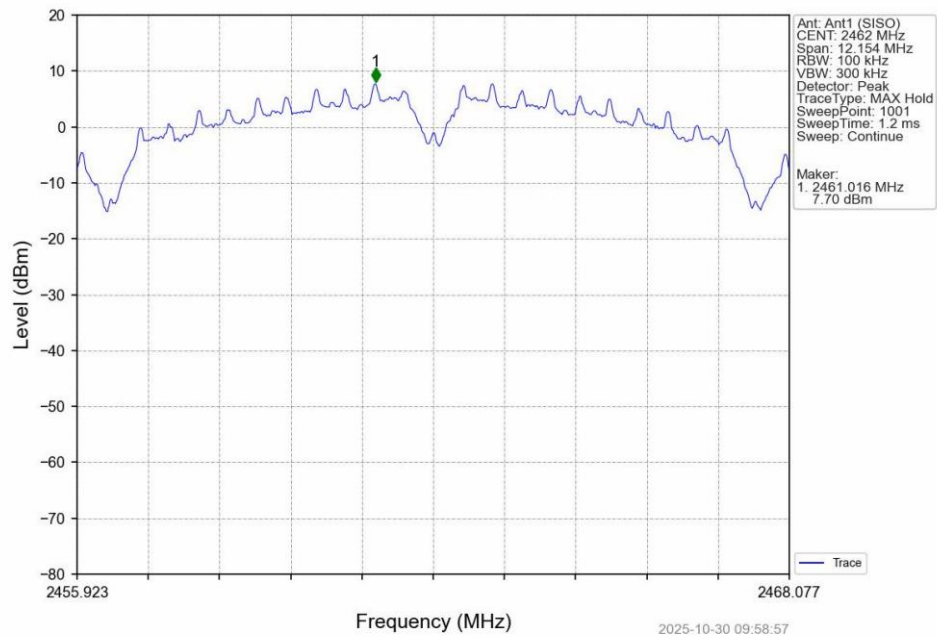
## 5.2 Test Graph

### 5.2.1 Ref

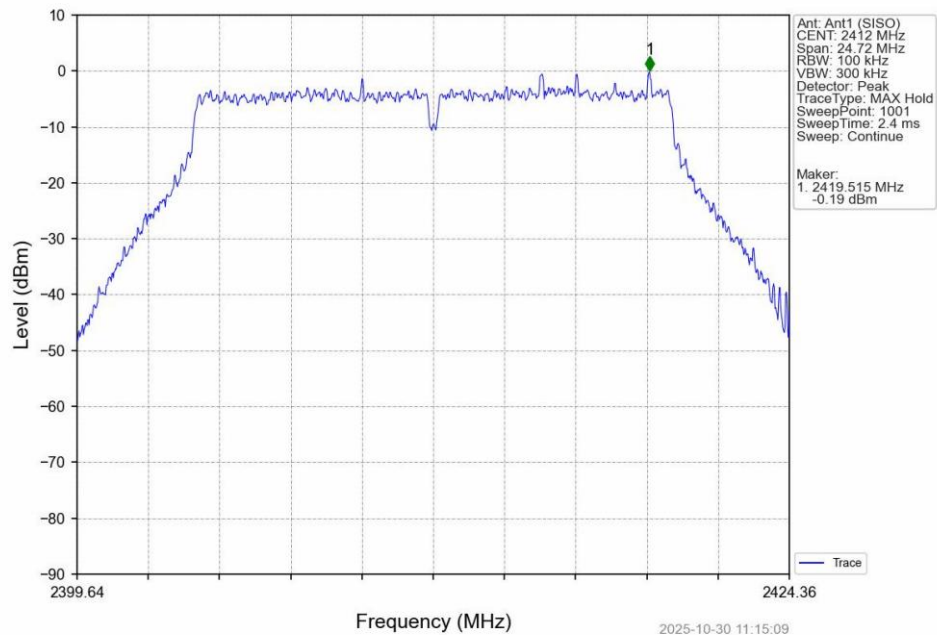




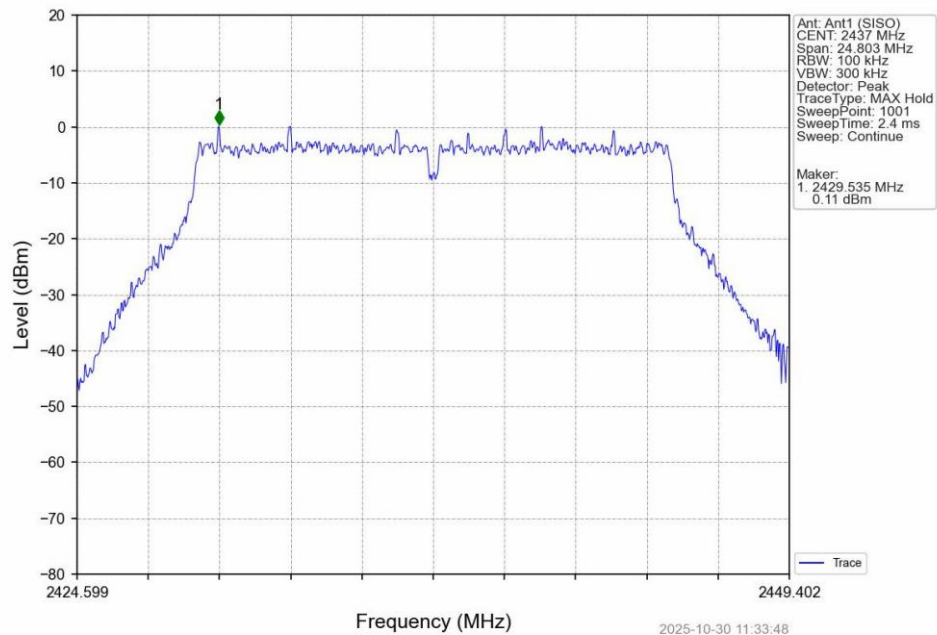
802.11b\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



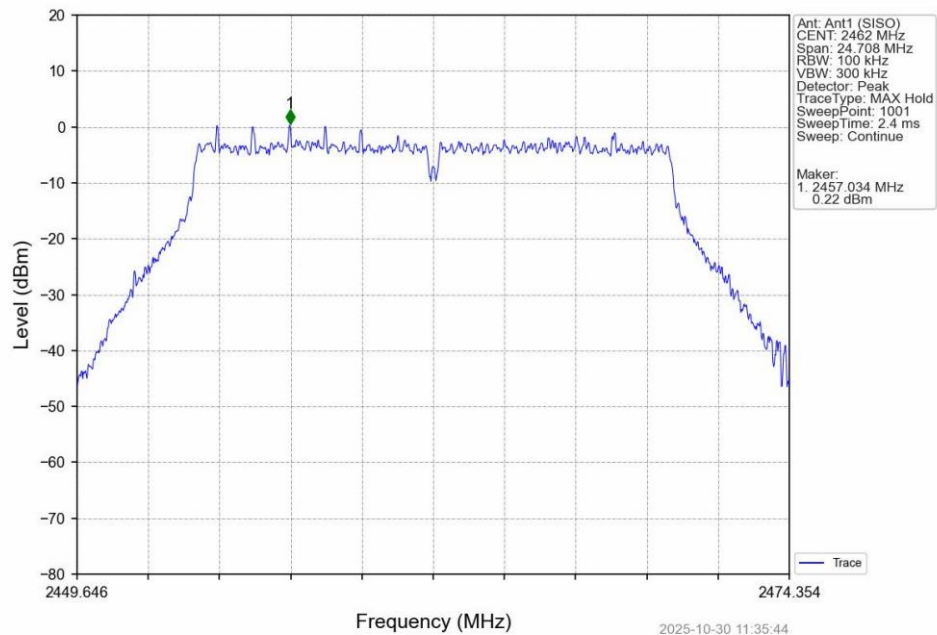
802.11g\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



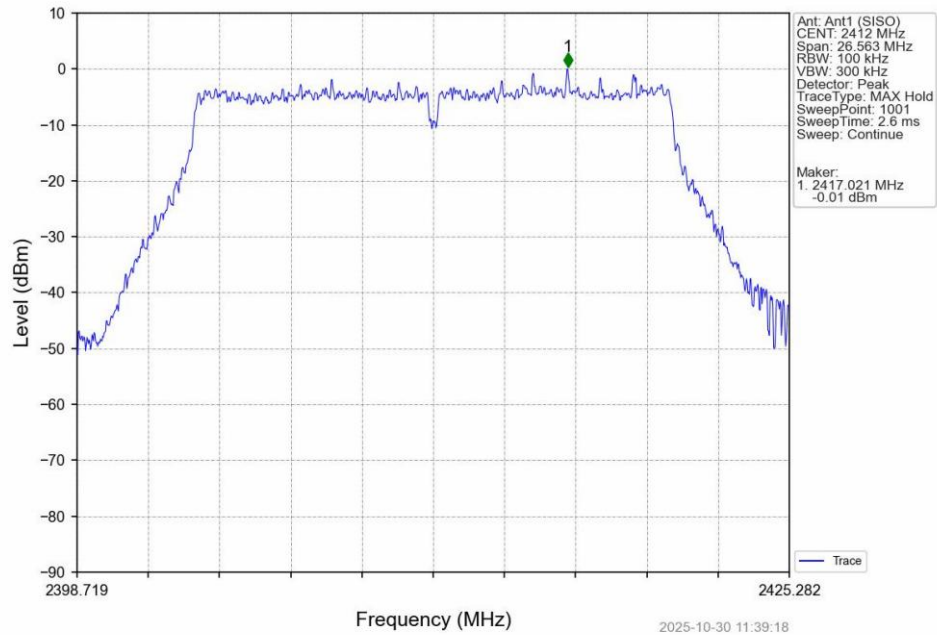
802.11g\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



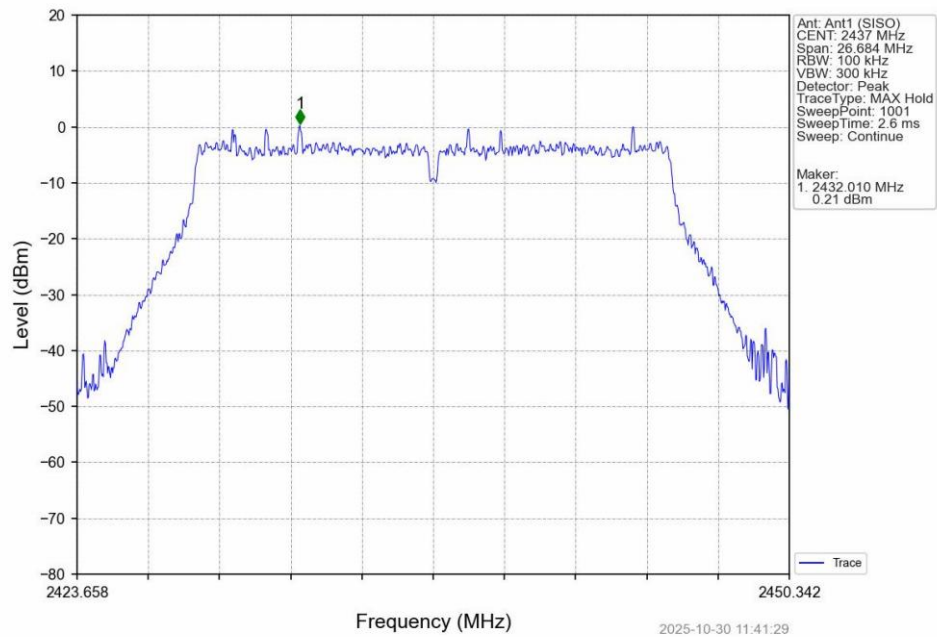
802.11g\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



802.11n(HT20)\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV

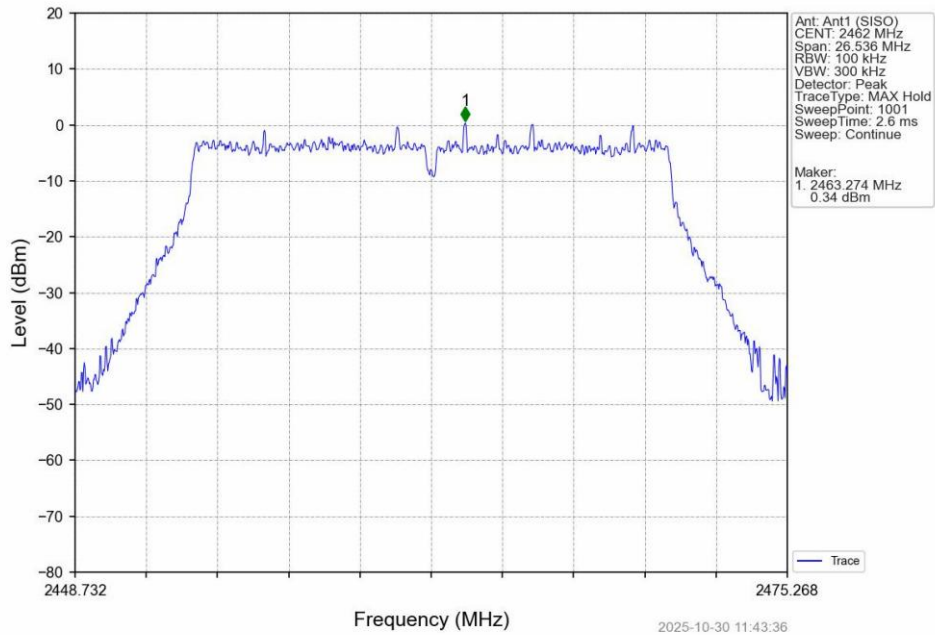


802.11n(HT20)\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV

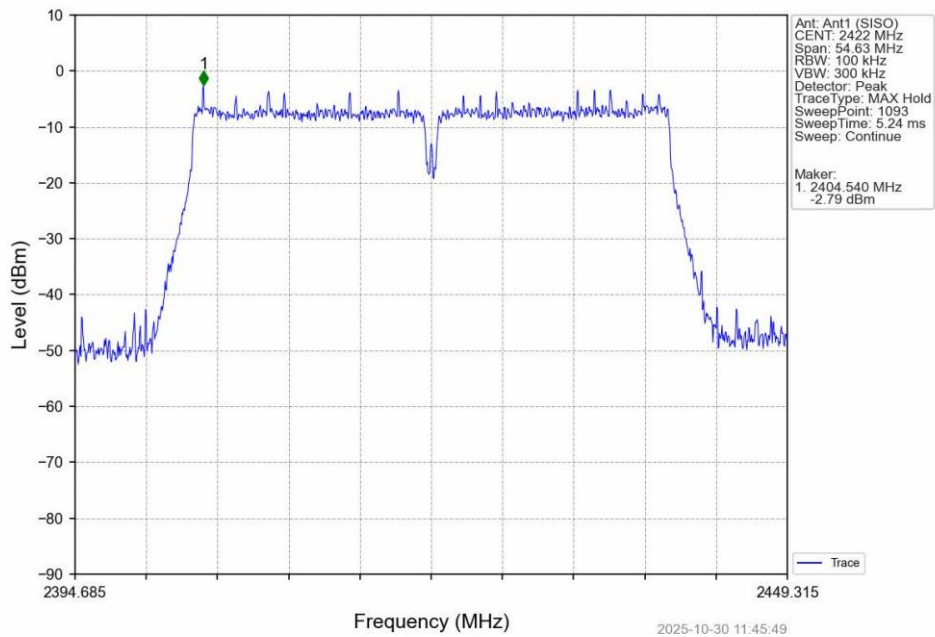




802.11n(HT20)\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV

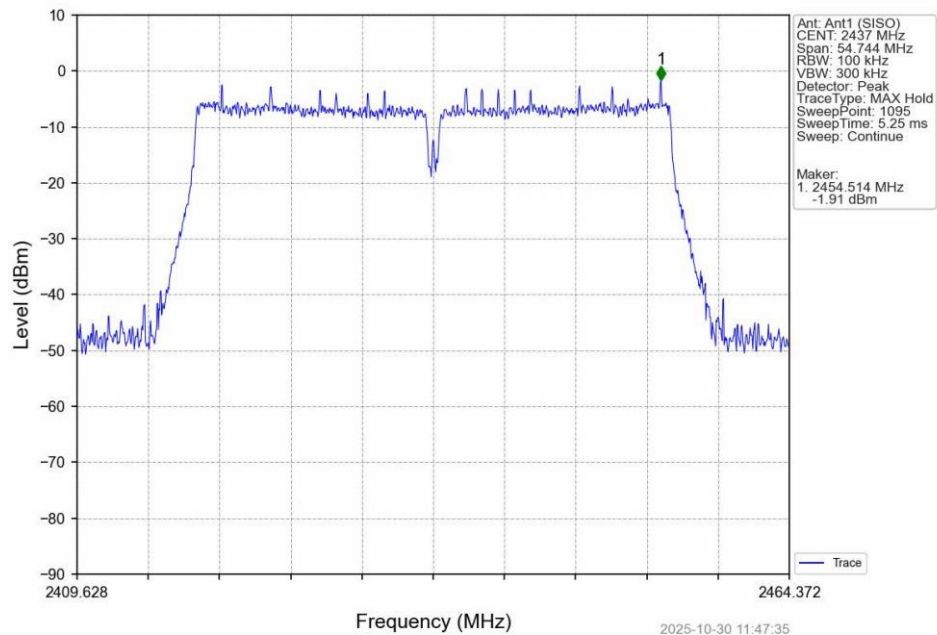


802.11n(HT40)\_LCH\_2422MHz\_Ant1 (SISO)\_NTNV

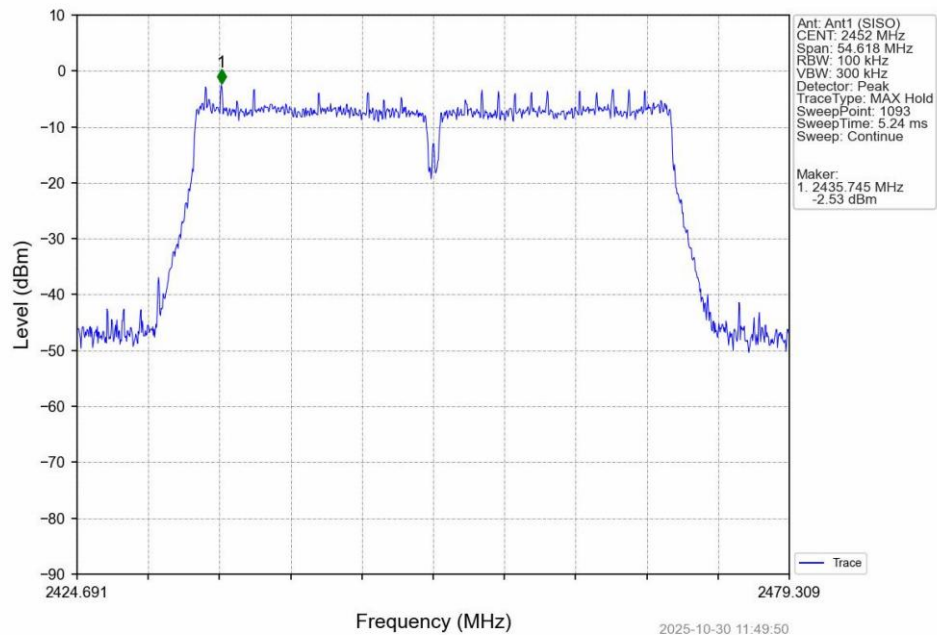




802.11n(HT40)\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV

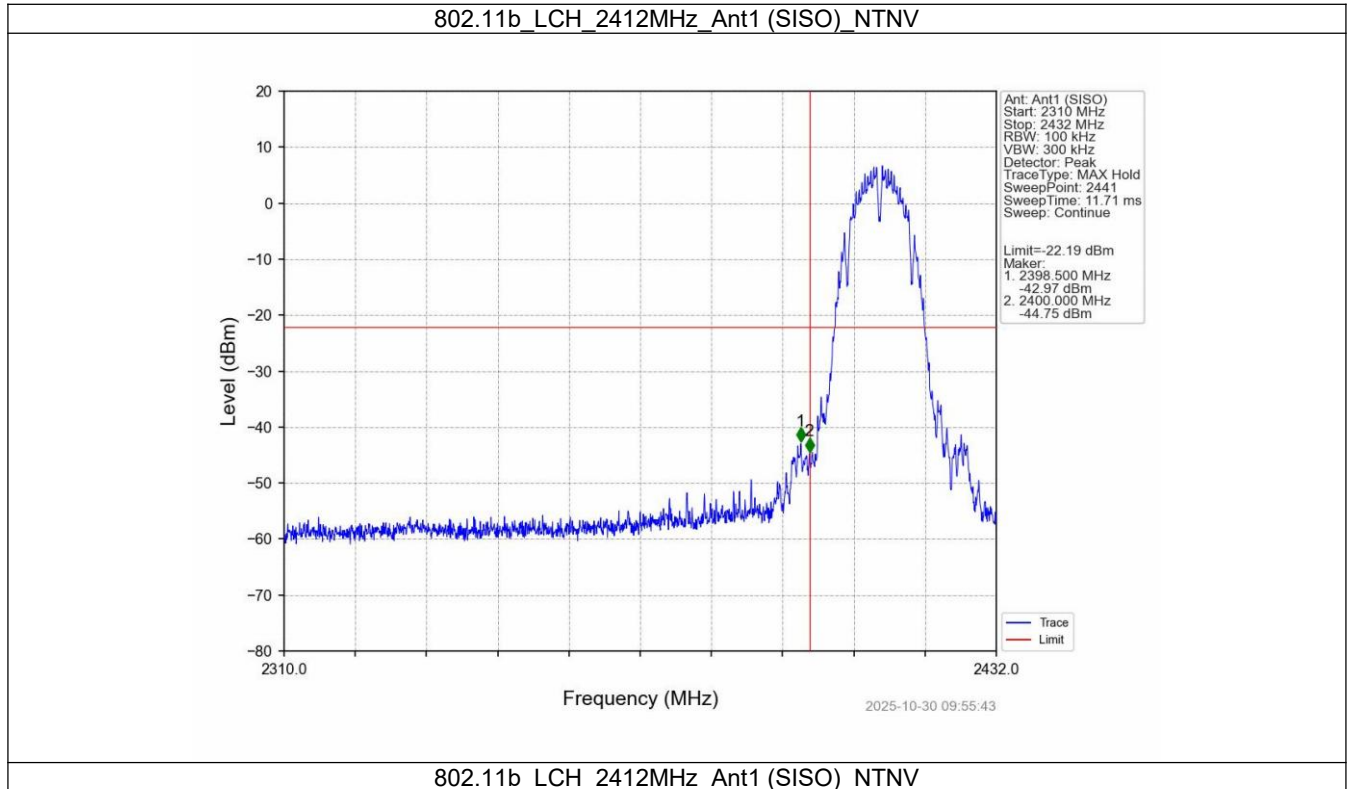


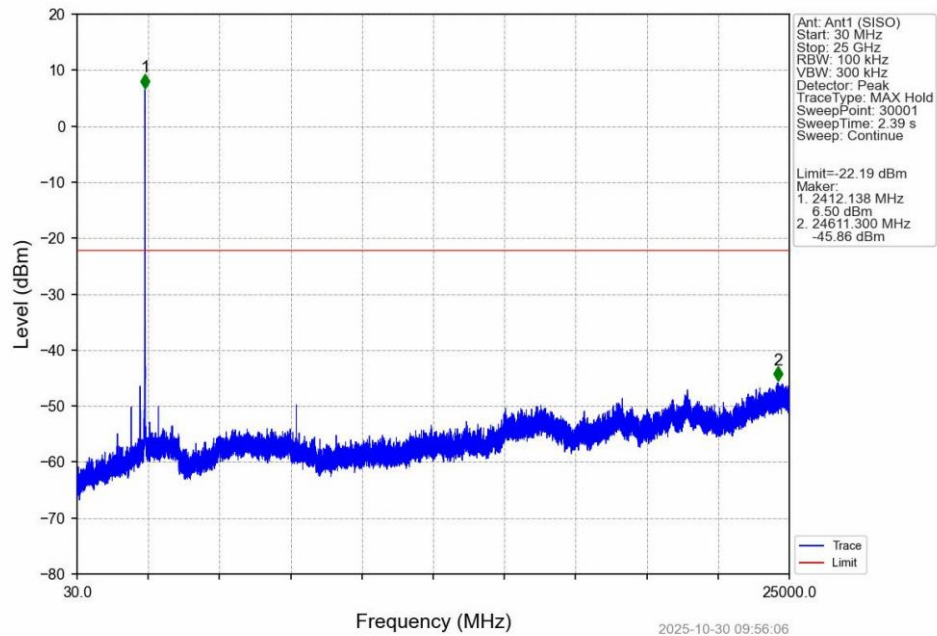
802.11n(HT40)\_HCH\_2452MHz\_Ant1 (SISO)\_NTNV



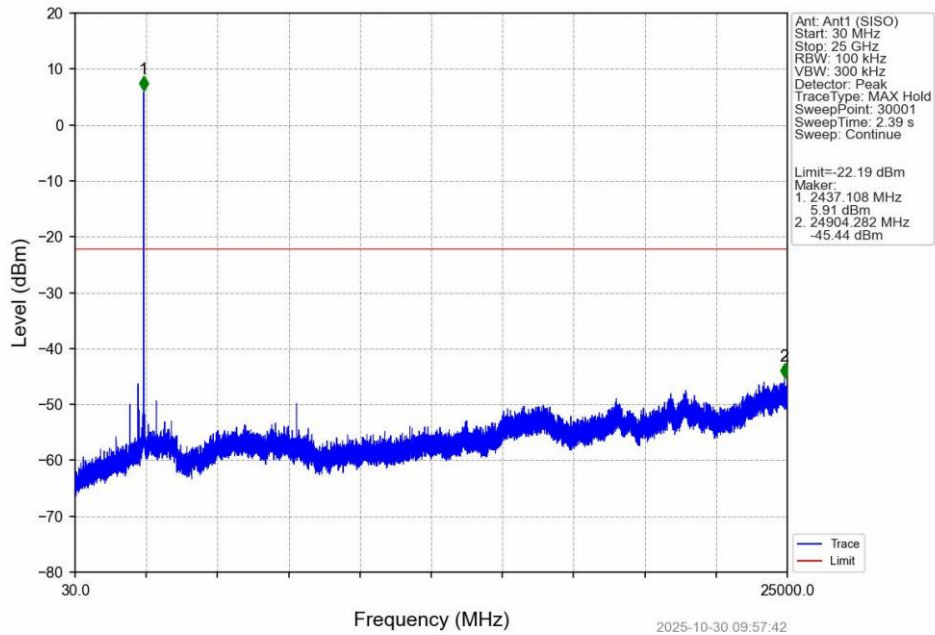


### 5.2.2 CSE

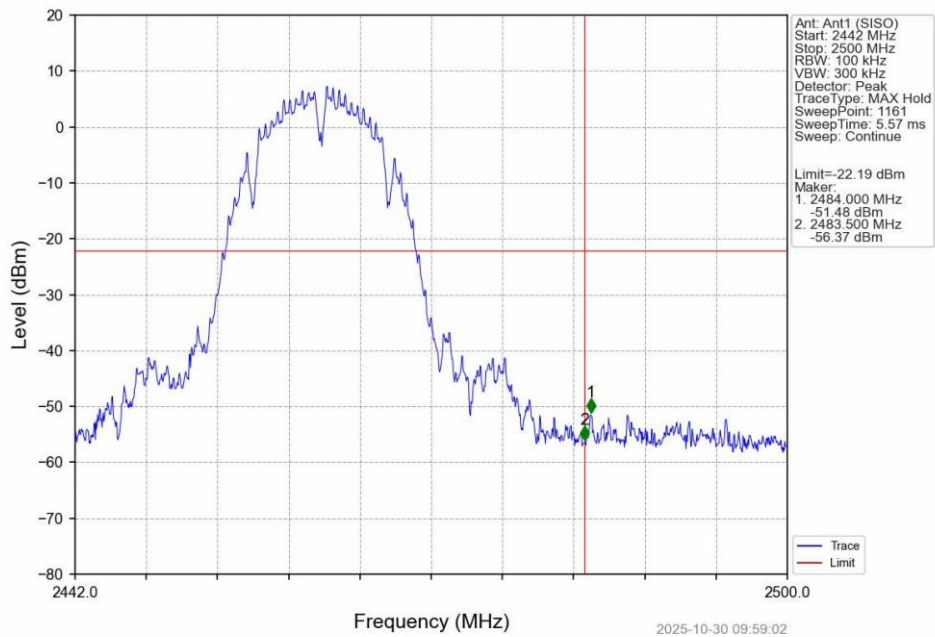




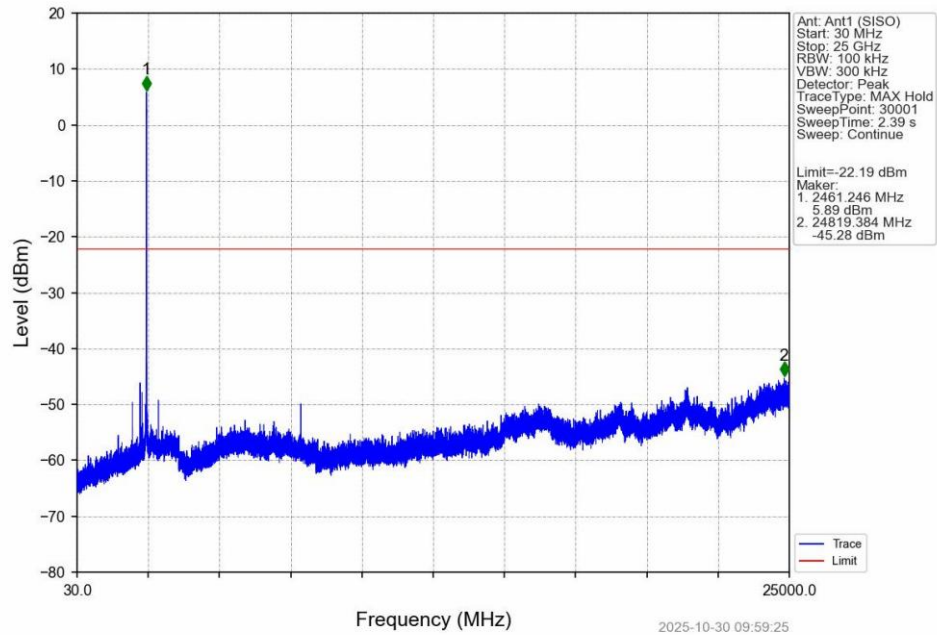
802.11b\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



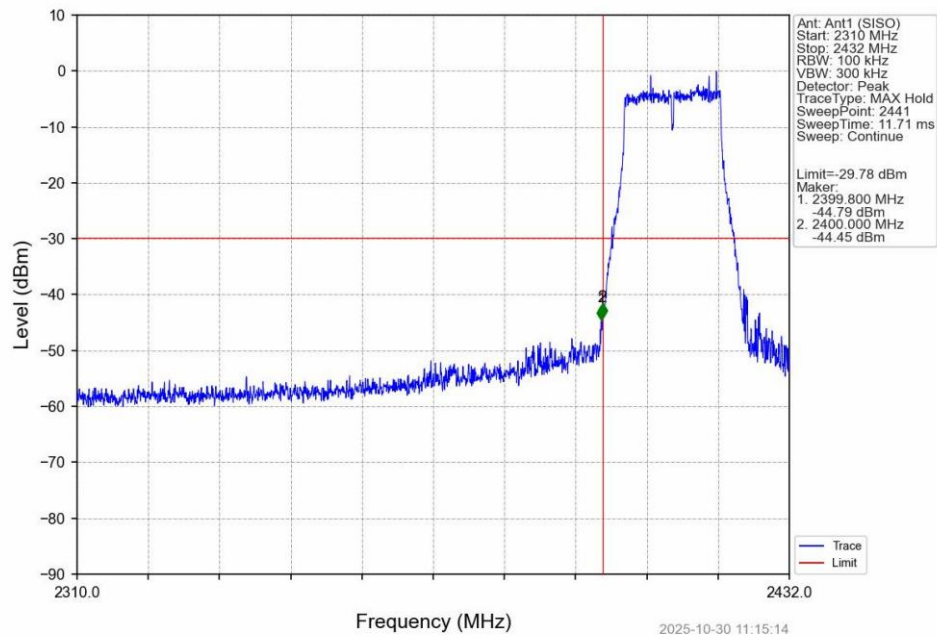
802.11b\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



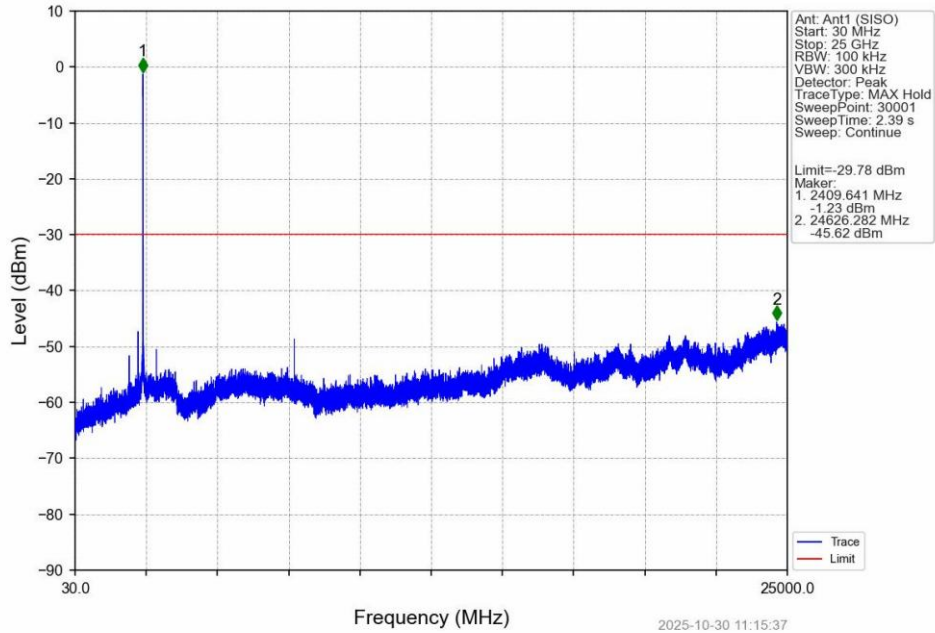
802.11b\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



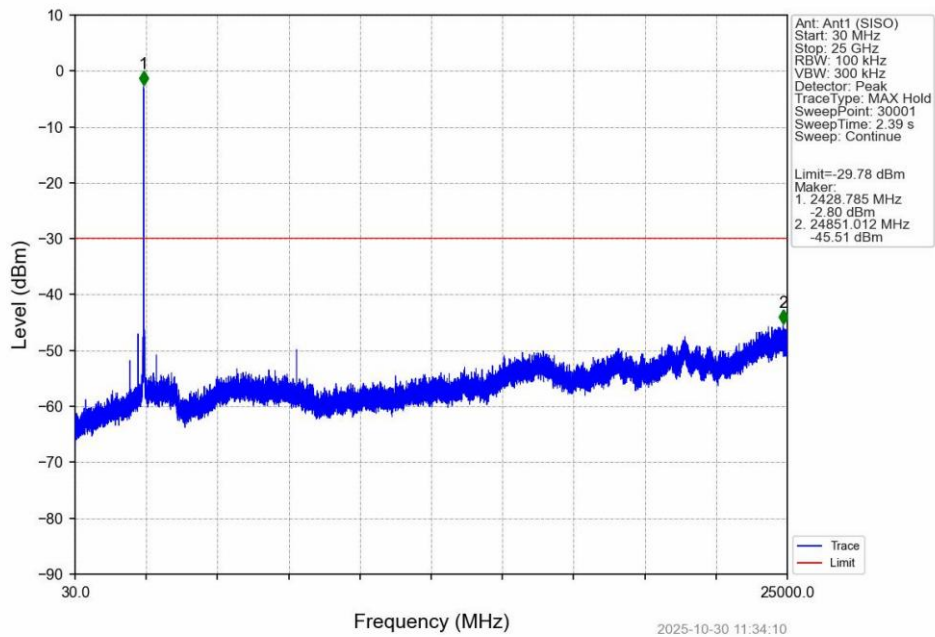
802.11g\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



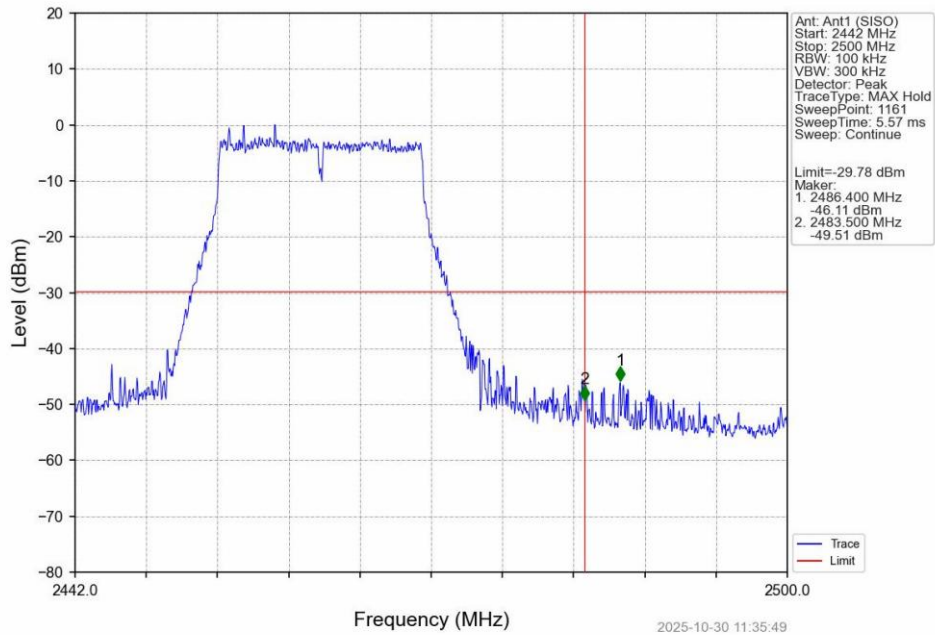
802.11g\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



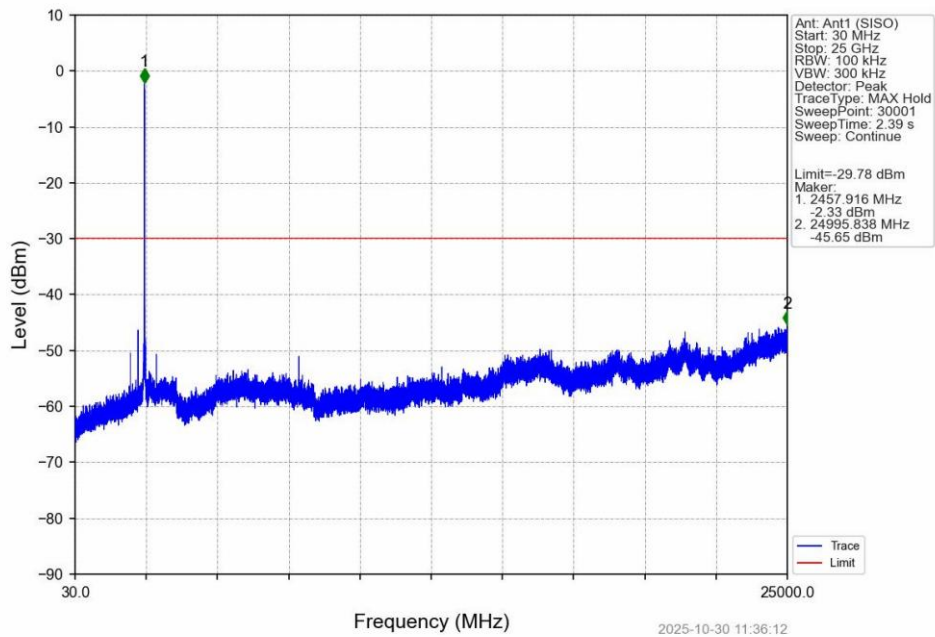
802.11g\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



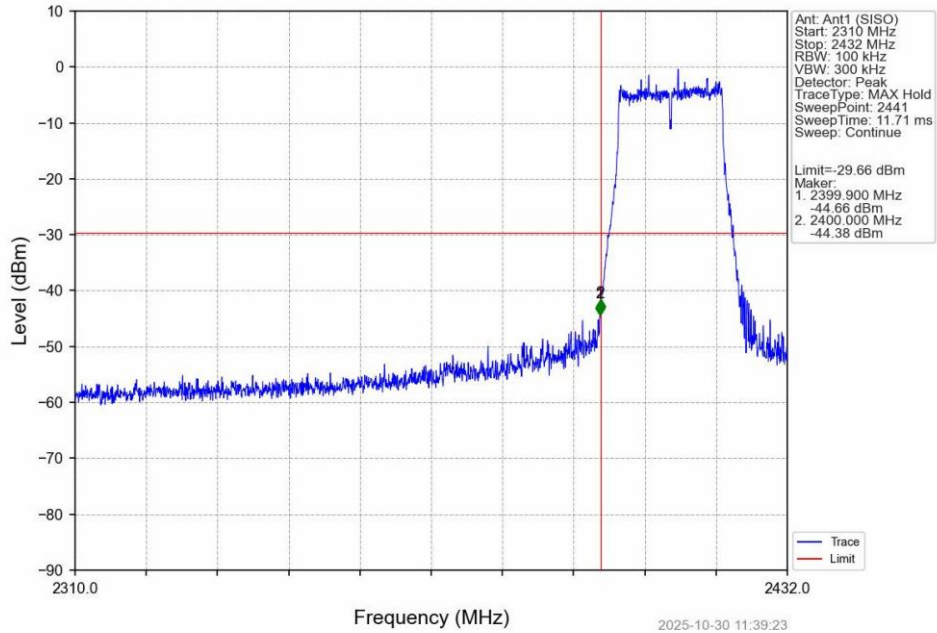
802.11g\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



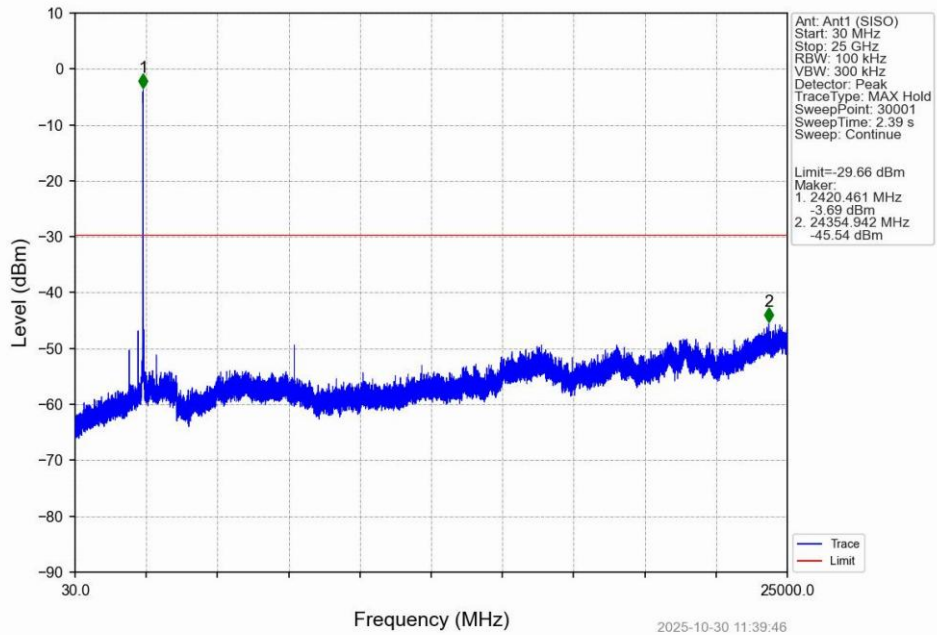
802.11g\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



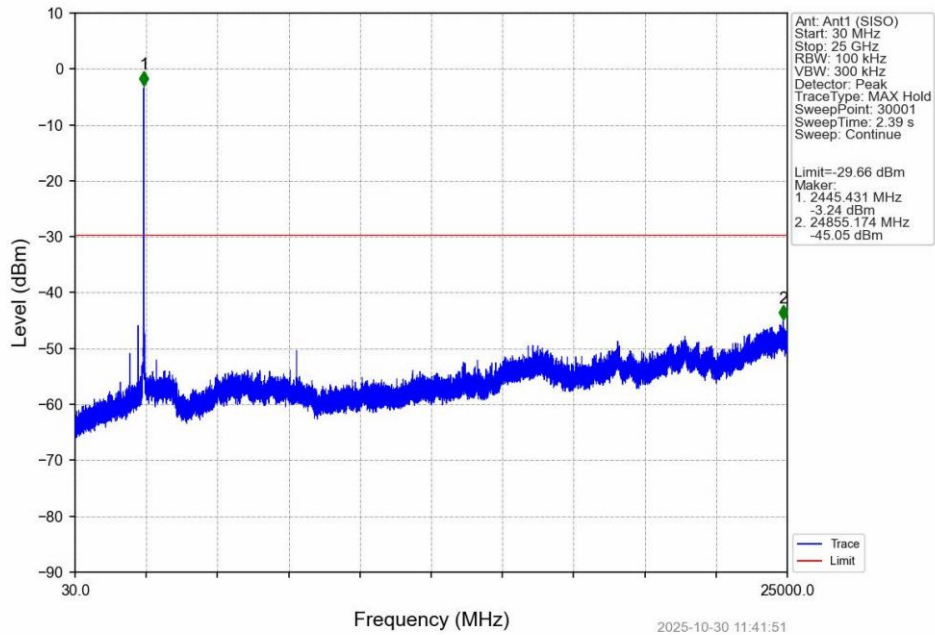
802.11n(HT20)\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



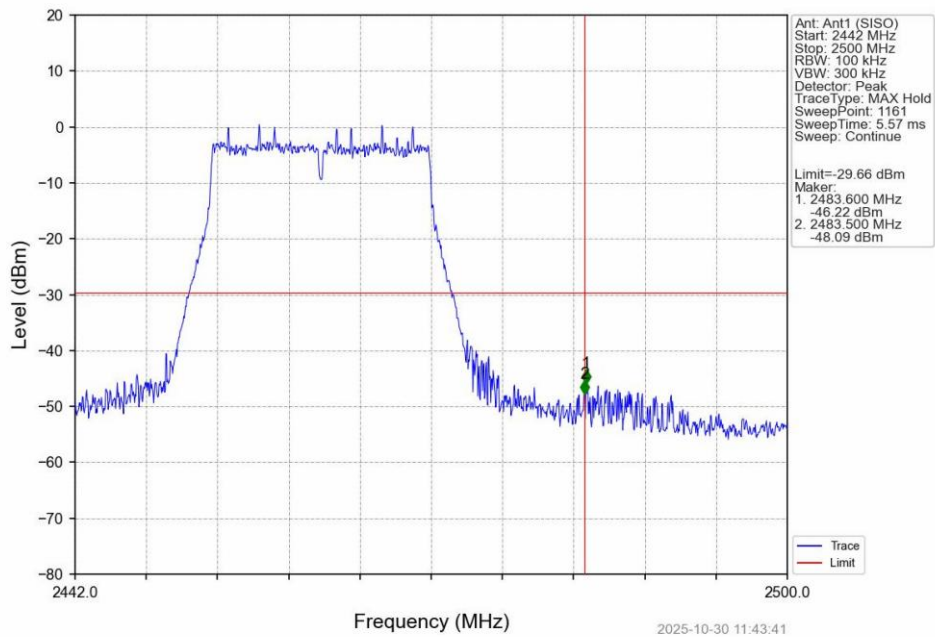
802.11n(HT20)\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



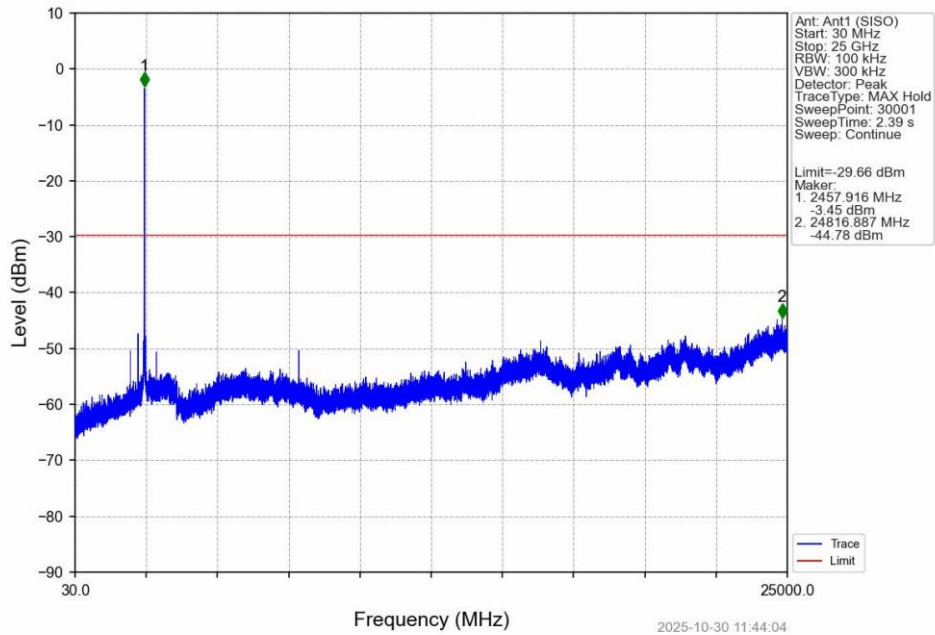
802.11n(HT20)\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



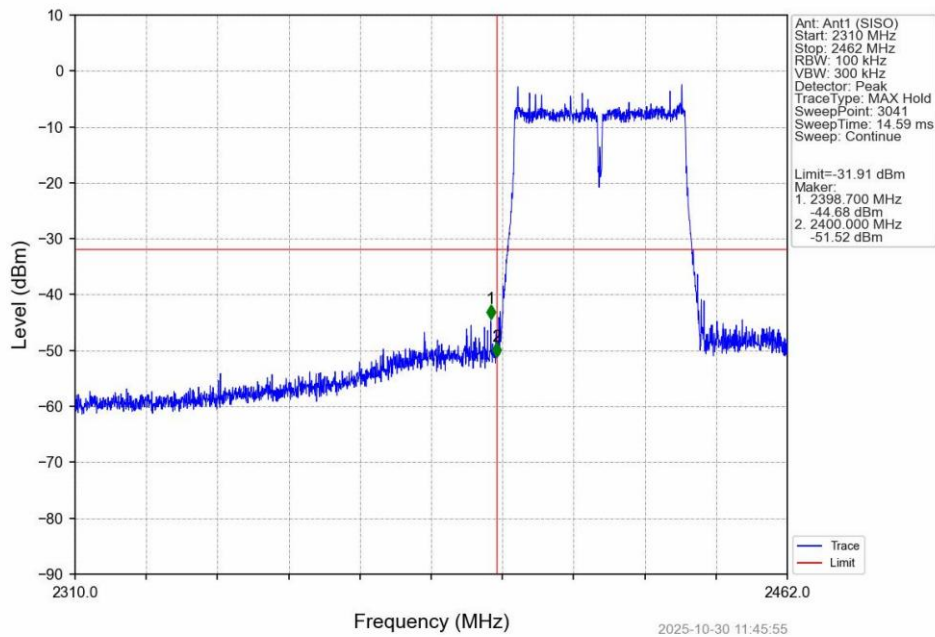
802.11n(HT20)\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



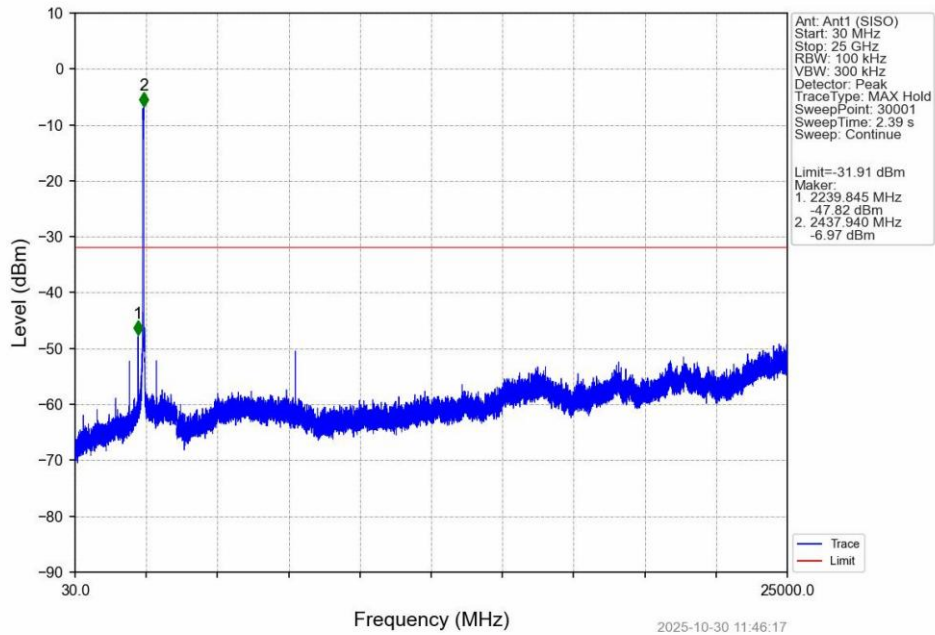
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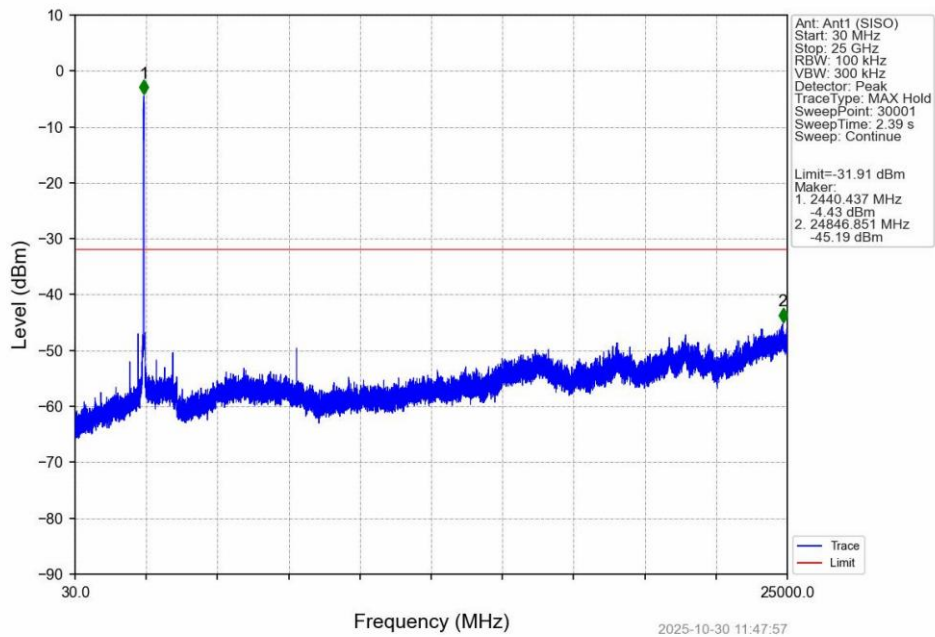
802.11n(HT40)\_LCH\_2422MHz\_Ant1 (SISO)\_NTNV



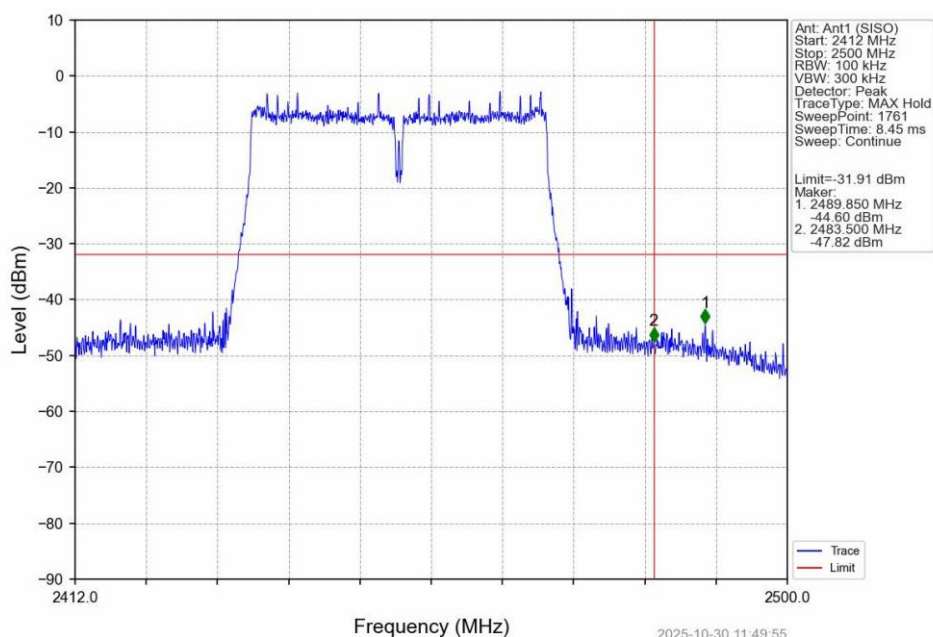
802.11n(HT40)\_LCH\_2422MHz\_Ant1 (SISO)\_NTNV



802.11n(HT40)\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



802.11n(HT40)\_HCH\_2452MHz\_Ant1 (SISO)\_NTNV



802.11n(HT40)\_HCH\_2452MHz\_Ant1 (SISO)\_NTNV

