

## 1. Duty Cycle

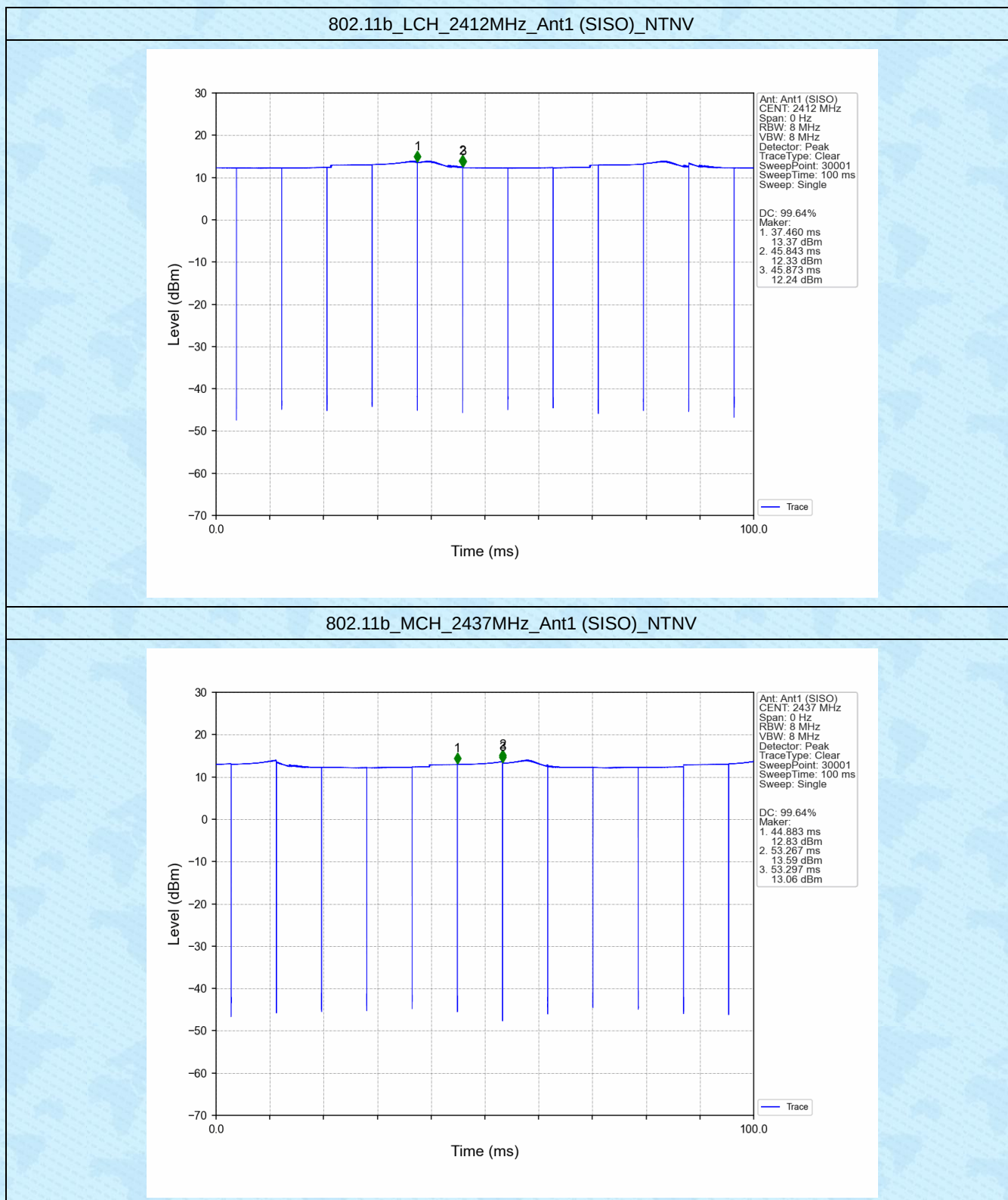
### 1.1 Test Result

#### 1.1.1 Ant1

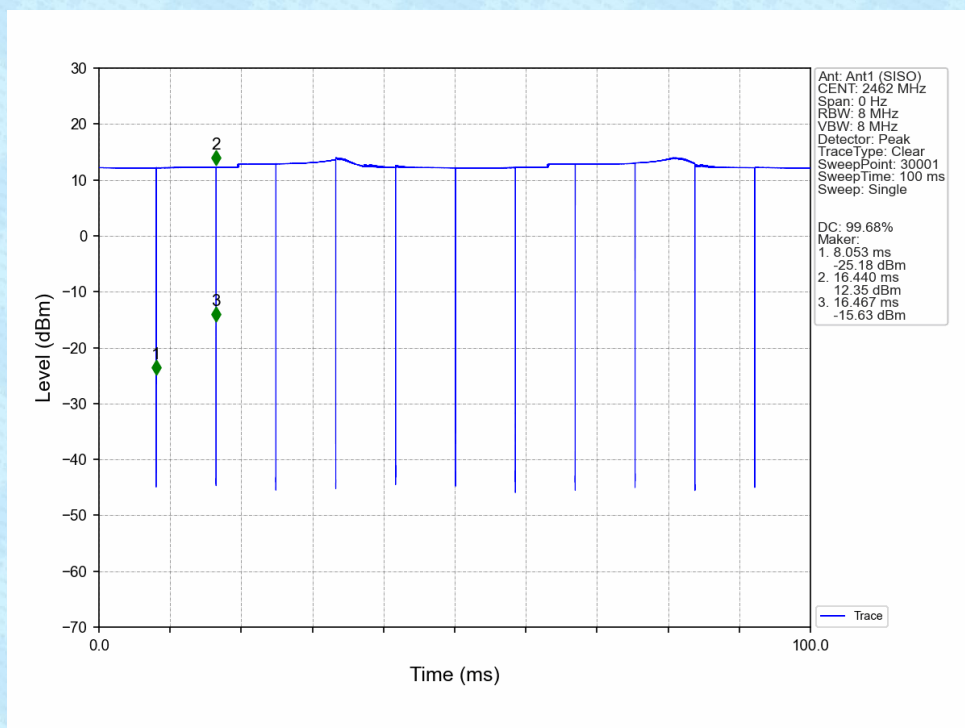
| Ant1           |         |                 |           |             |                |                                   |                       |
|----------------|---------|-----------------|-----------|-------------|----------------|-----------------------------------|-----------------------|
| Mode           | TX Type | Frequency (MHz) | T_on (ms) | Period (ms) | Duty Cycle (%) | Duty Cycle Correction Factor (dB) | Max. DC Variation (%) |
| 802.11b        | SISO    | 2412            | 8.383     | 8.413       | 99.64          | 0.02                              | 0.04                  |
|                |         | 2437            | 8.384     | 8.414       | 99.64          | 0.02                              | 0.04                  |
|                |         | 2462            | 8.387     | 8.414       | 99.68          | 0.01                              | 0.00                  |
| 802.11g        | SISO    | 2412            | 1.393     | 1.428       | 97.55          | 0.11                              | 0.03                  |
|                |         | 2437            | 1.393     | 1.428       | 97.55          | 0.11                              | 0.03                  |
|                |         | 2462            | 1.393     | 1.428       | 97.55          | 0.11                              | 0.03                  |
| 802.11n (HT20) | SISO    | 2412            | 1.301     | 1.336       | 97.38          | 0.12                              | 0.07                  |
|                |         | 2437            | 1.301     | 1.336       | 97.38          | 0.12                              | 0.07                  |
|                |         | 2462            | 1.301     | 1.336       | 97.38          | 0.12                              | 0.07                  |
| 802.11n (HT40) | SISO    | 2422            | 0.649     | 0.683       | 95.02          | 0.22                              | 0.07                  |
|                |         | 2437            | 0.649     | 0.683       | 95.02          | 0.22                              | 0.03                  |
|                |         | 2452            | 0.648     | 0.683       | 94.88          | 0.23                              | 0.07                  |

## 1.2 Test Graph

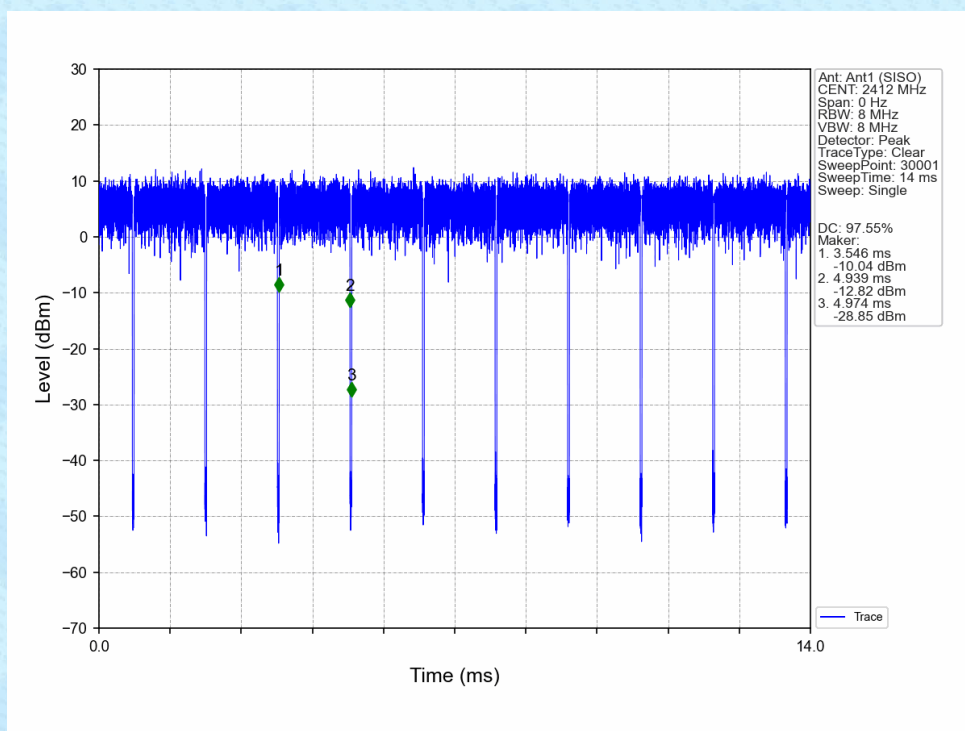
### 1.2.1 Ant1



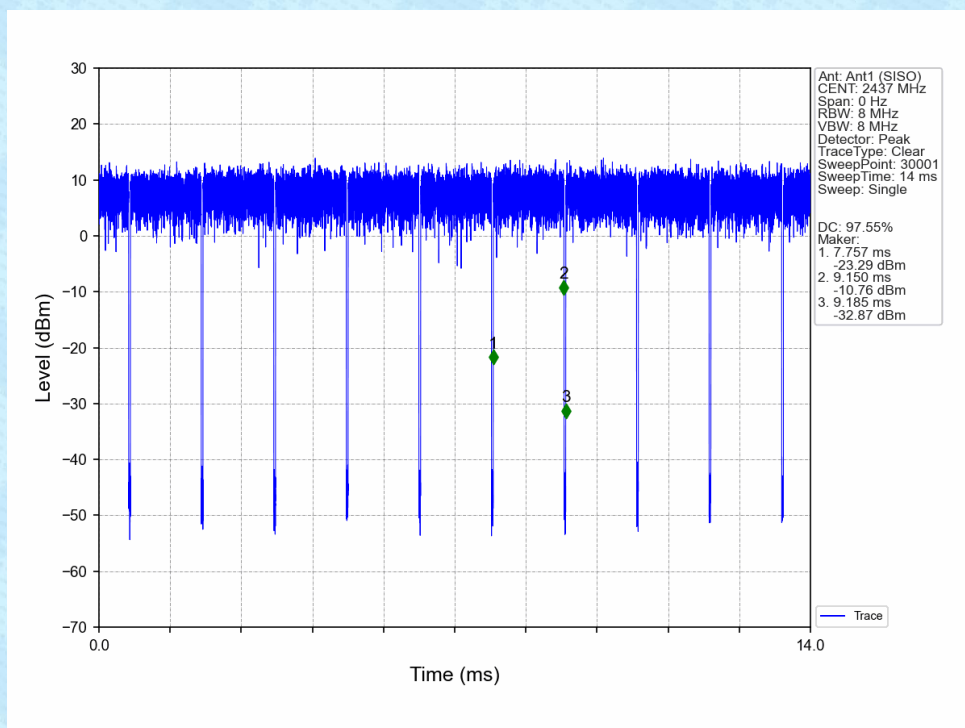
## 802.11b\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



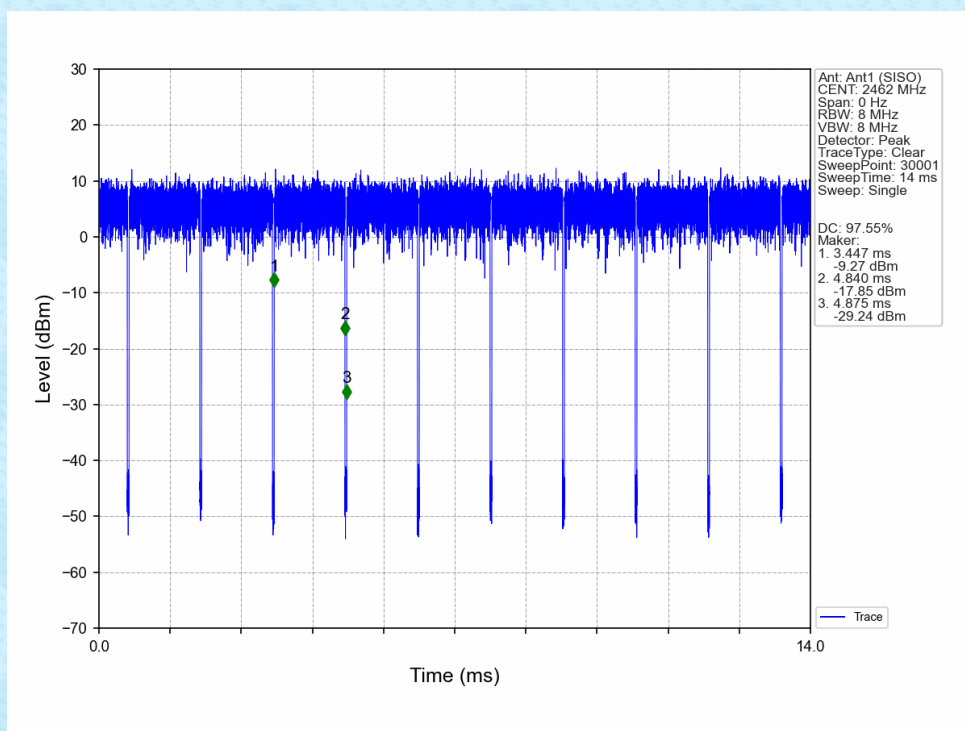
## 802.11g\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



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

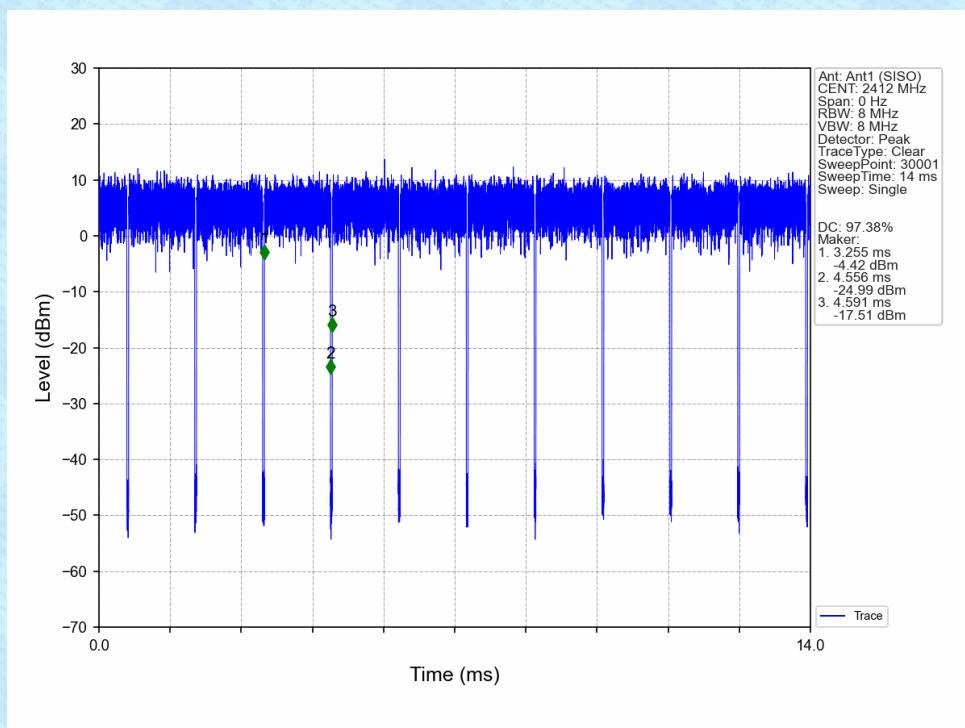


802.11g\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV

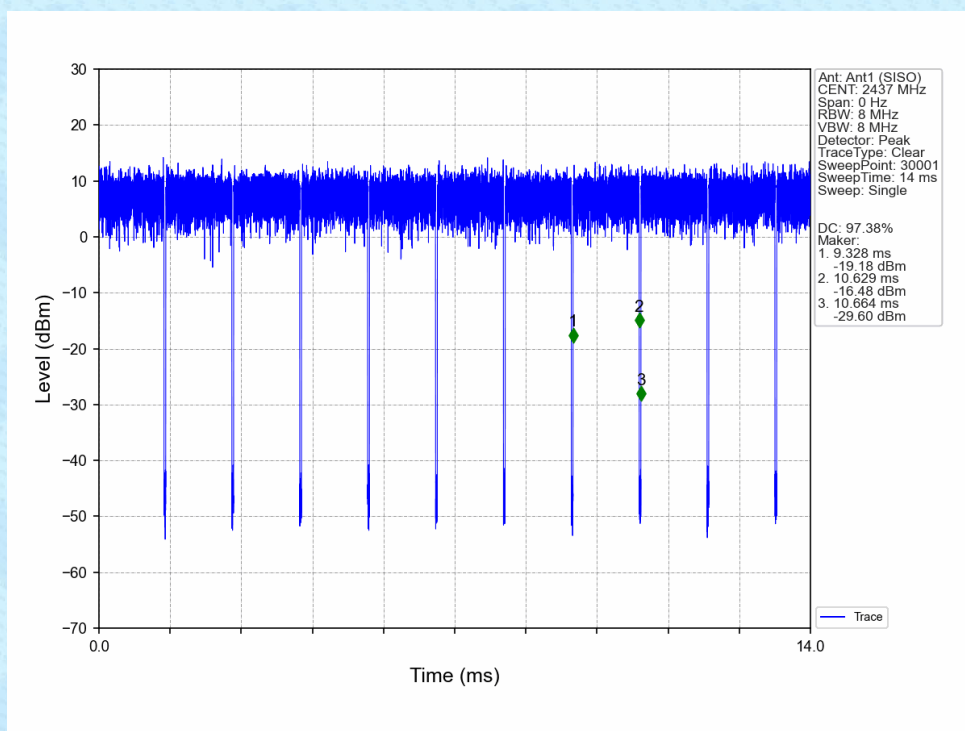




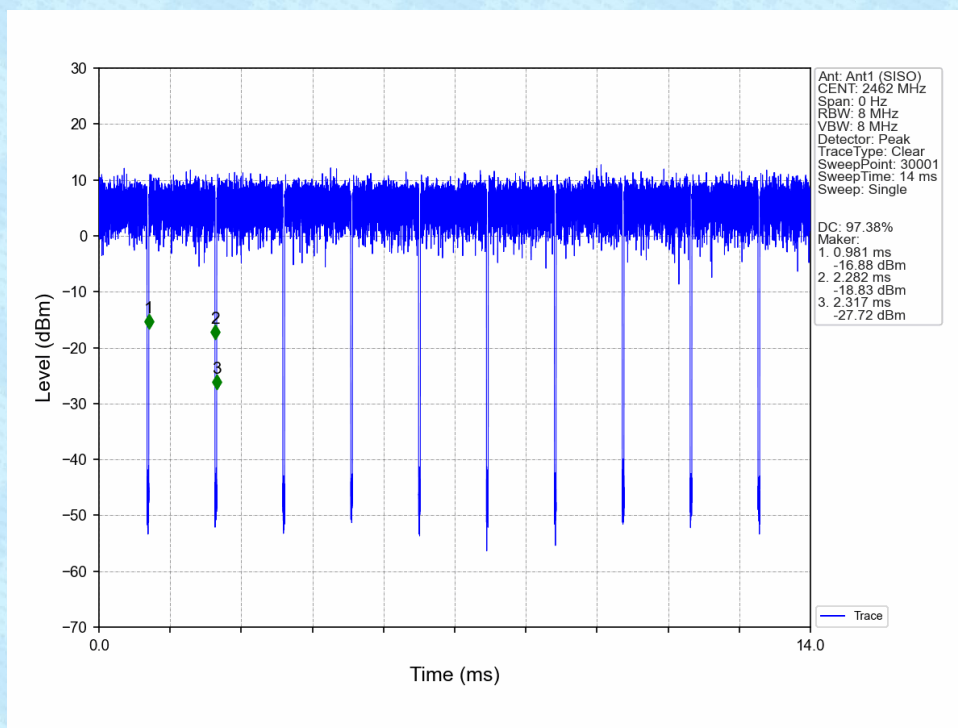
802.11n(HT20)\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



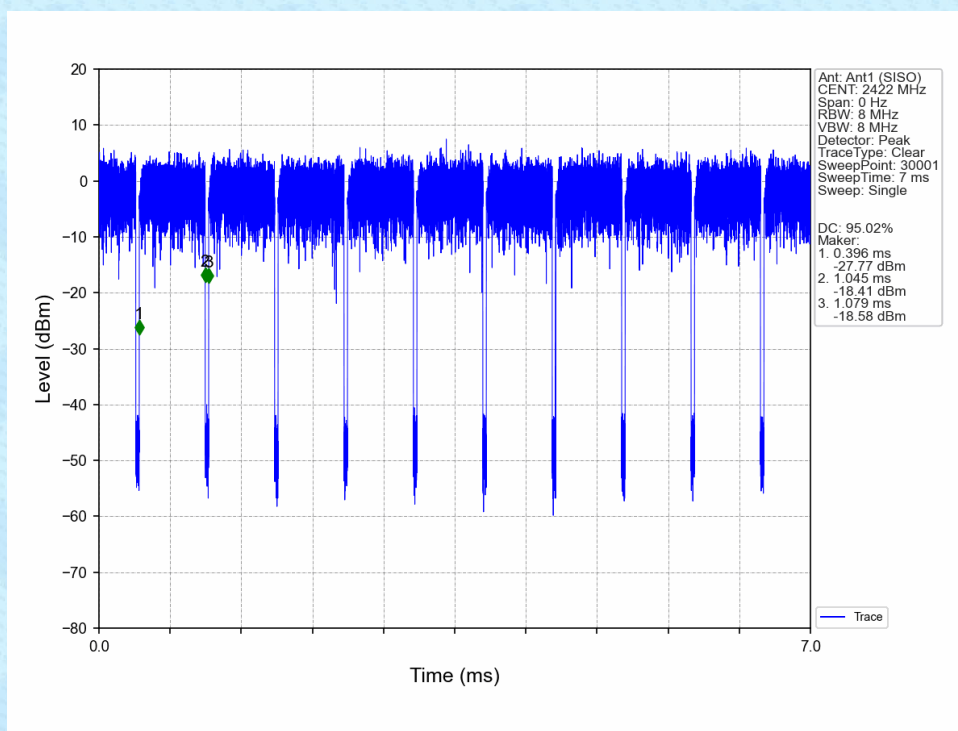
802.11n(HT20)\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



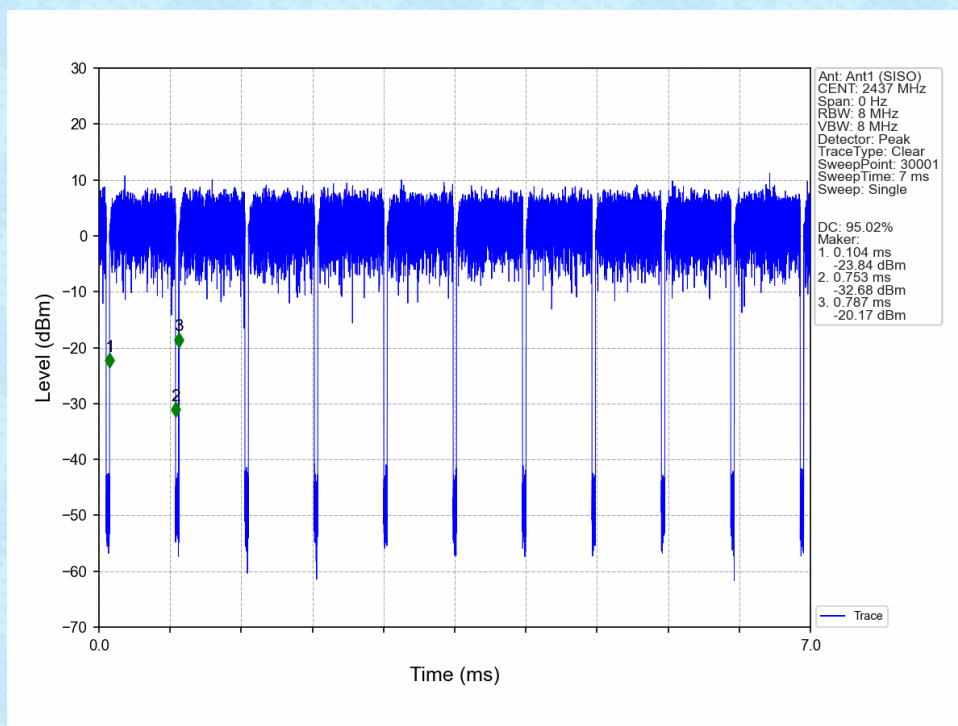
802.11n(HT20)\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



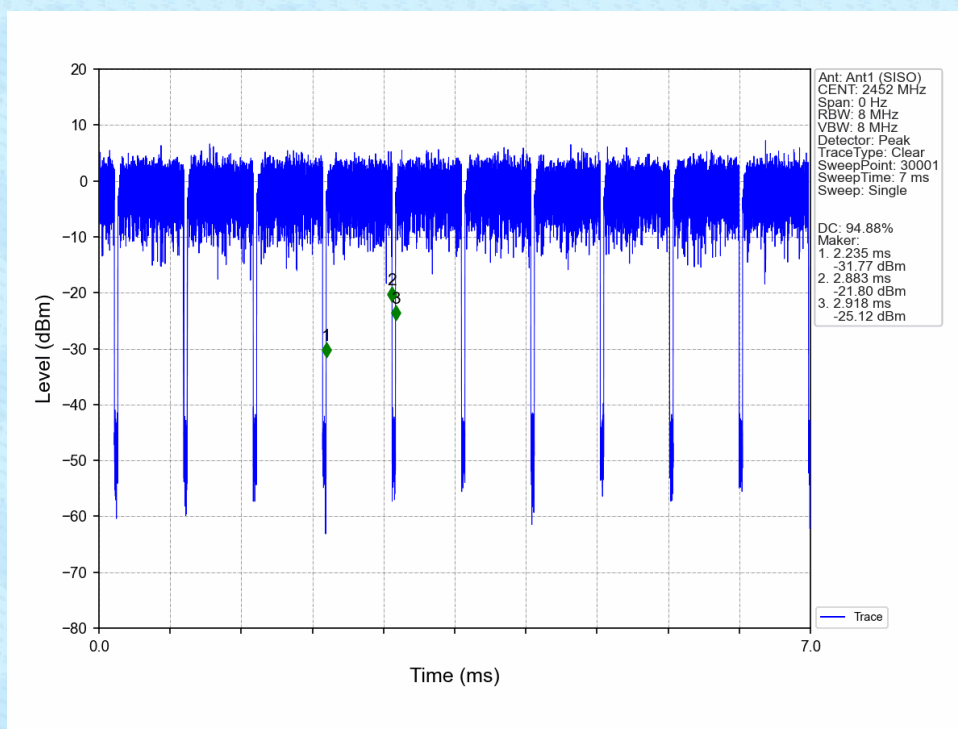
802.11n(HT40)\_LCH\_2422MHz\_Ant1 (SISO)\_NTNV



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   | 12.396                       | /     | Pass    |
|                |         | 2437            | 1   | 12.411                       | /     | Pass    |
|                |         | 2462            | 1   | 12.426                       | /     | Pass    |
| 802.11g        | SISO    | 2412            | 1   | 17.371                       | /     | Pass    |
|                |         | 2437            | 1   | 17.397                       | /     | Pass    |
|                |         | 2462            | 1   | 17.300                       | /     | Pass    |
| 802.11n (HT20) | SISO    | 2412            | 1   | 18.011                       | /     | Pass    |
|                |         | 2437            | 1   | 18.128                       | /     | Pass    |
|                |         | 2462            | 1   | 18.034                       | /     | Pass    |
| 802.11n (HT40) | SISO    | 2422            | 1   | 36.626                       | /     | Pass    |
|                |         | 2437            | 1   | 36.330                       | /     | Pass    |
|                |         | 2452            | 1   | 36.596                       | /     | Pass    |

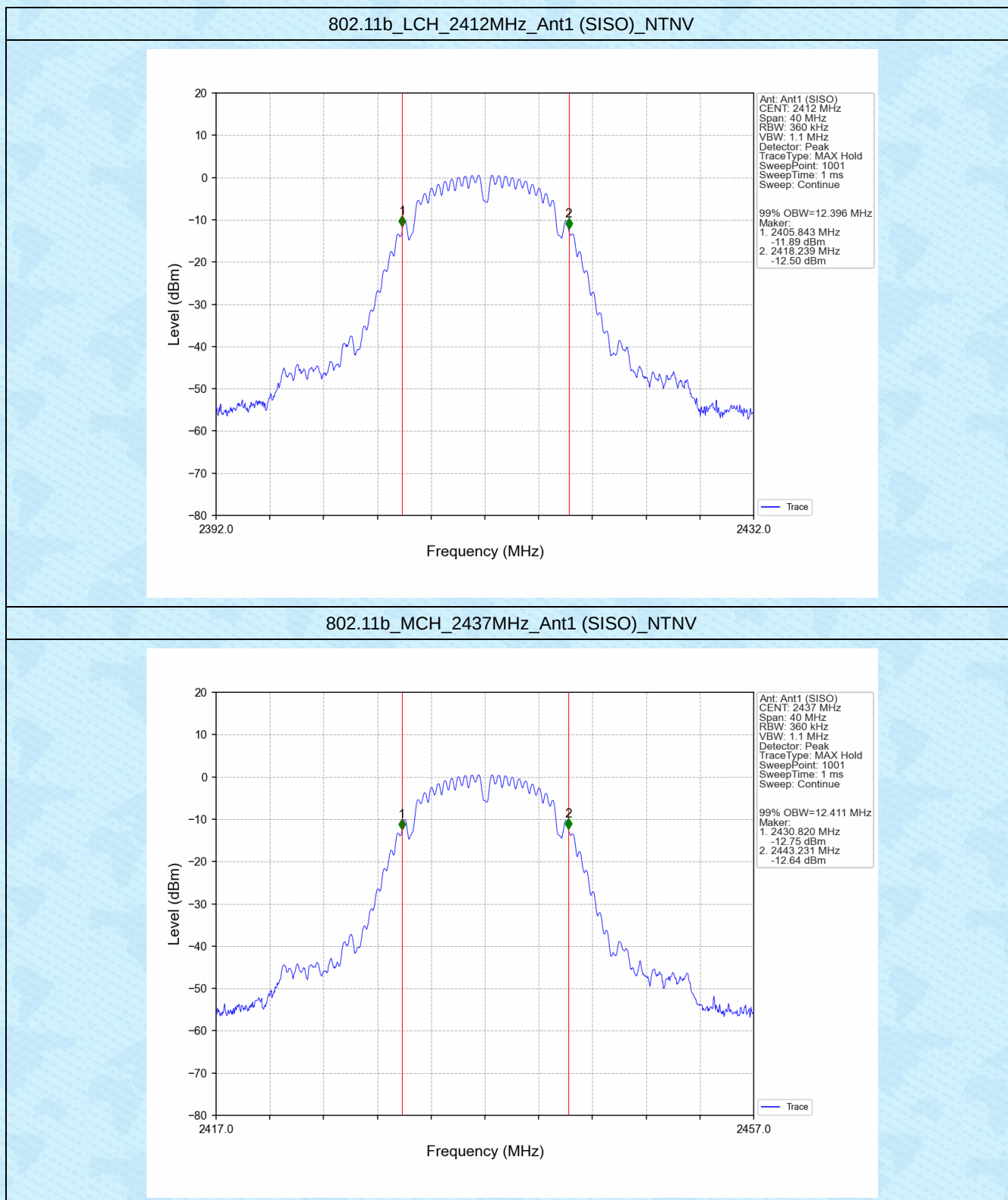
#### 2.1.2 6dB BW

| Mode           | TX Type | Frequency (MHz) | ANT | 6dB Bandwidth (MHz) |            | Verdict |
|----------------|---------|-----------------|-----|---------------------|------------|---------|
|                |         |                 |     | Result              | Limit      |         |
| 802.11b        | SISO    | 2412            | 1   | 10.060              | $\geq 0.5$ | Pass    |
|                |         | 2437            | 1   | 9.127               | $\geq 0.5$ | Pass    |
|                |         | 2462            | 1   | 9.130               | $\geq 0.5$ | Pass    |
| 802.11g        | SISO    | 2412            | 1   | 15.160              | $\geq 0.5$ | Pass    |
|                |         | 2437            | 1   | 15.689              | $\geq 0.5$ | Pass    |
|                |         | 2462            | 1   | 15.382              | $\geq 0.5$ | Pass    |
| 802.11n (HT20) | SISO    | 2412            | 1   | 15.178              | $\geq 0.5$ | Pass    |
|                |         | 2437            | 1   | 15.154              | $\geq 0.5$ | Pass    |
|                |         | 2462            | 1   | 15.104              | $\geq 0.5$ | Pass    |
| 802.11n (HT40) | SISO    | 2422            | 1   | 35.896              | $\geq 0.5$ | Pass    |
|                |         | 2437            | 1   | 35.214              | $\geq 0.5$ | Pass    |
|                |         | 2452            | 1   | 36.000              | $\geq 0.5$ | Pass    |

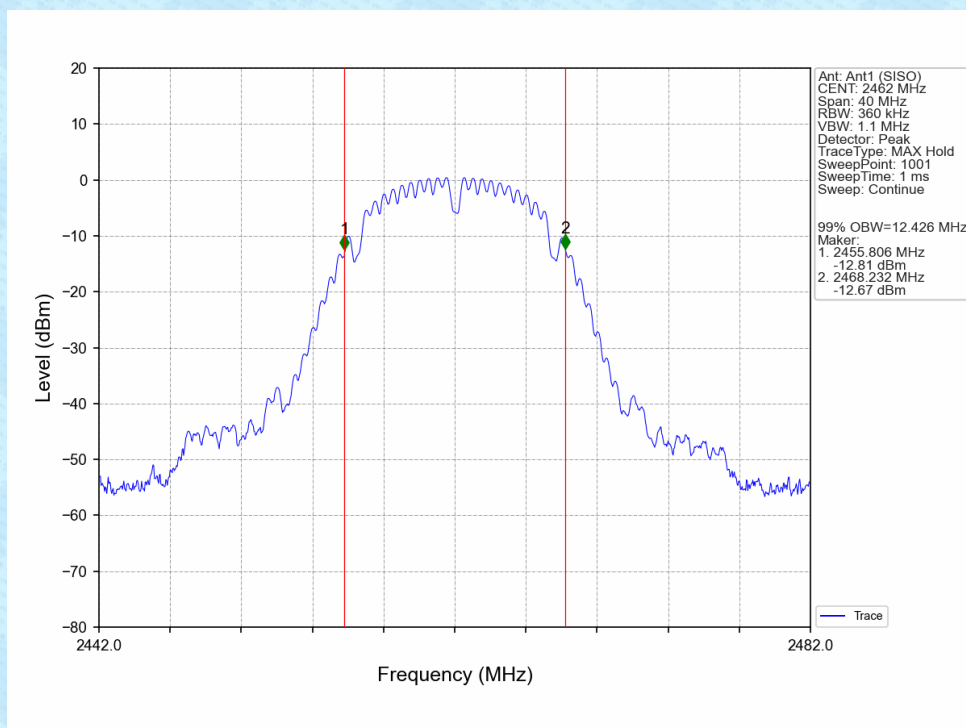


## 2.2 Test Graph

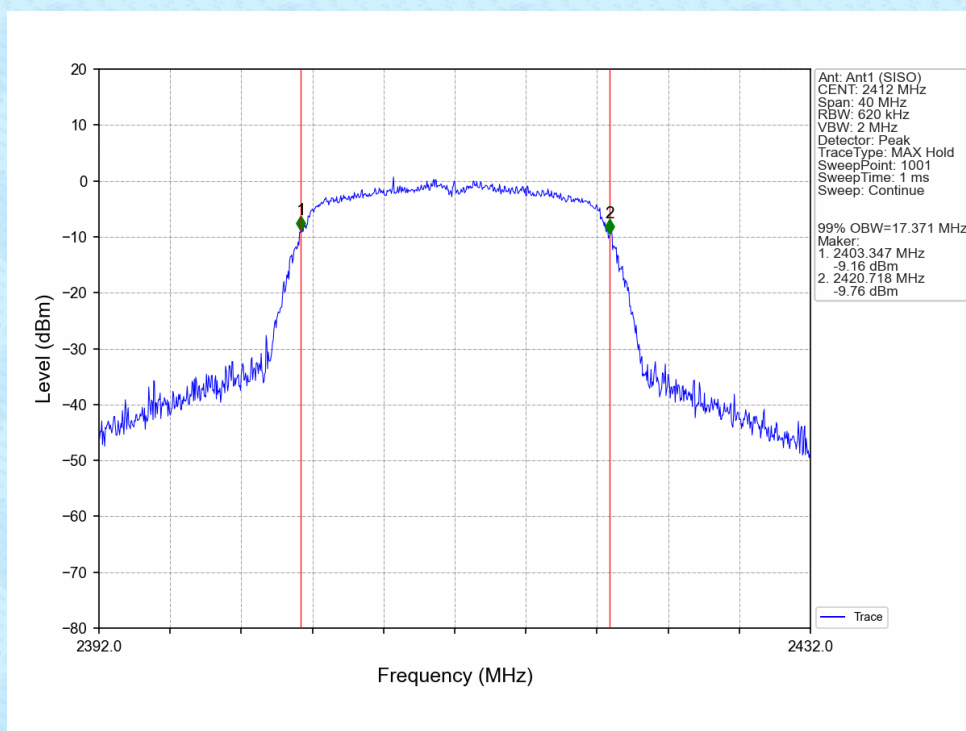
### 2.2.1 OBW



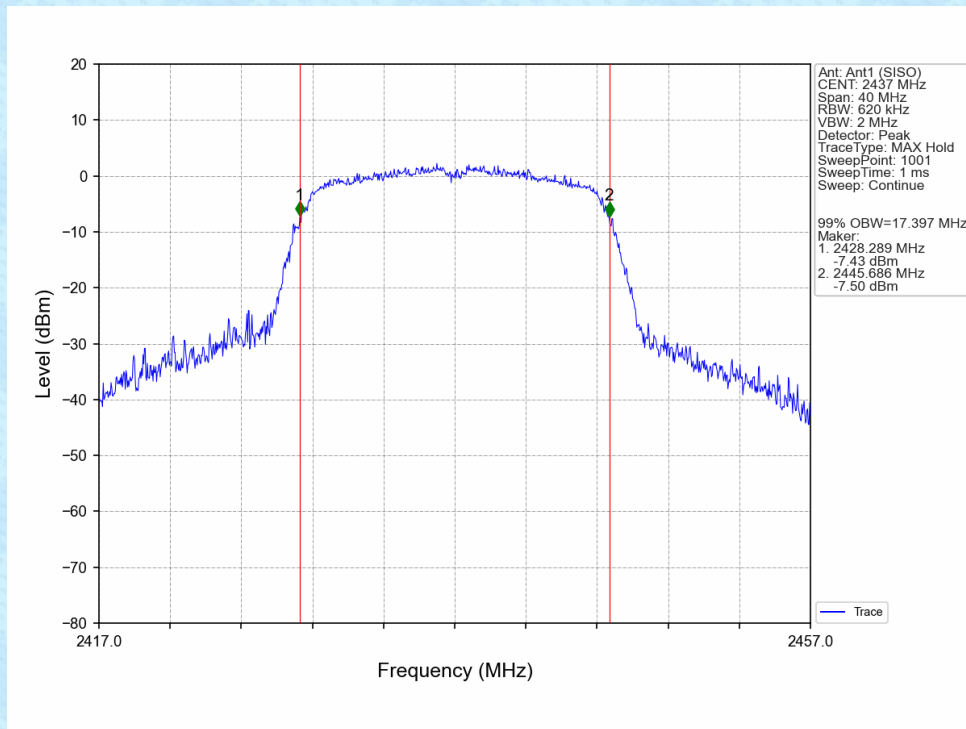
802.11b\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



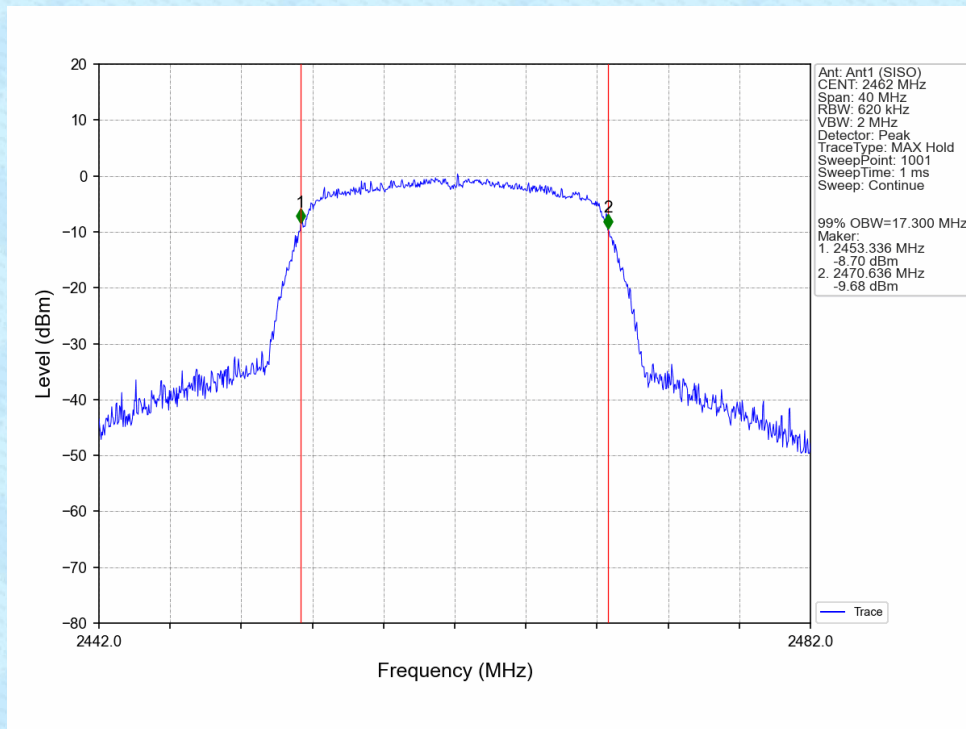
802.11g\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



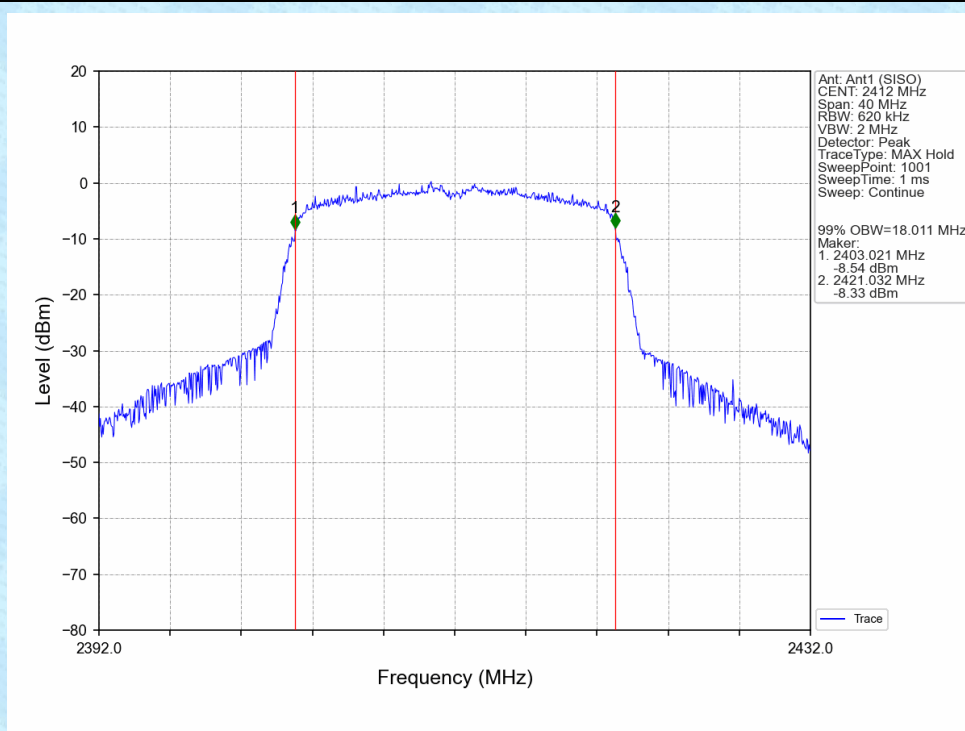
802.11g\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



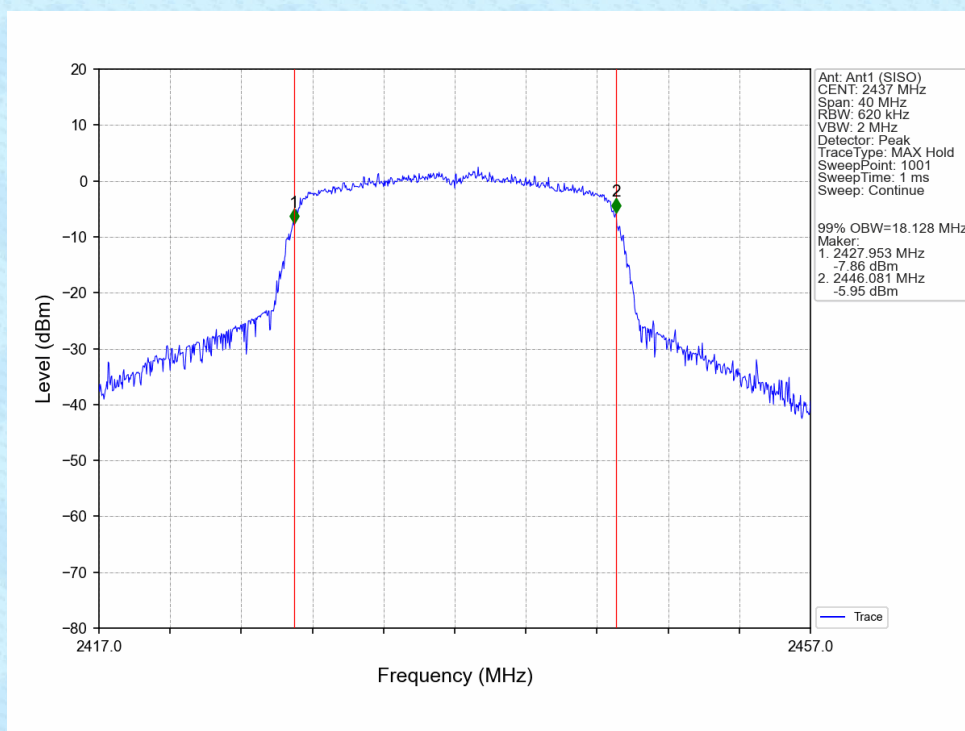
802.11g\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



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

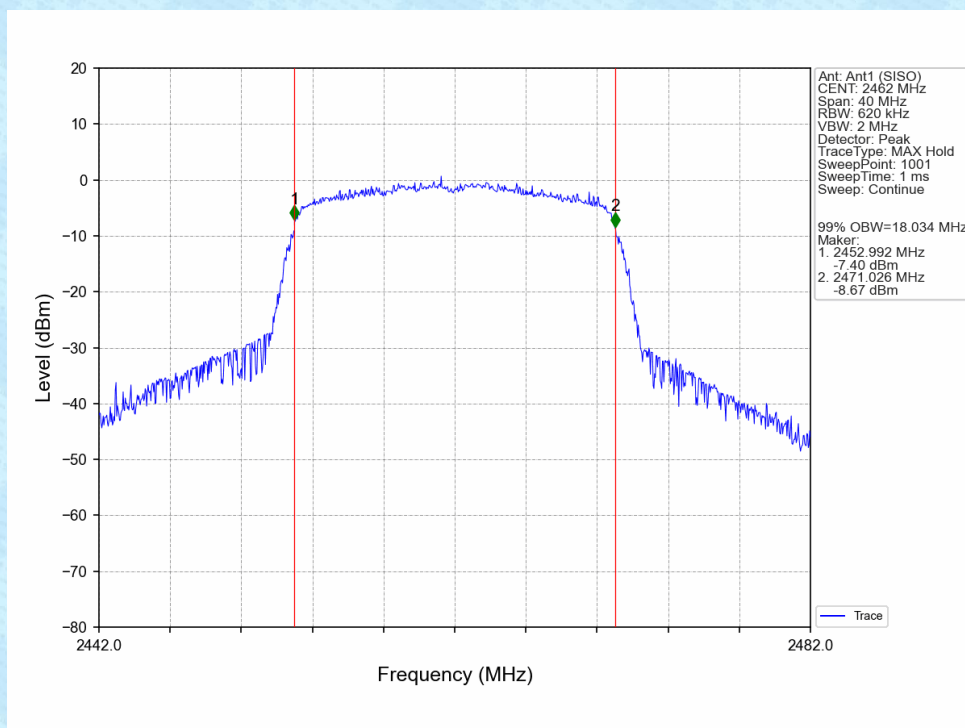


802.11n(HT20)\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV

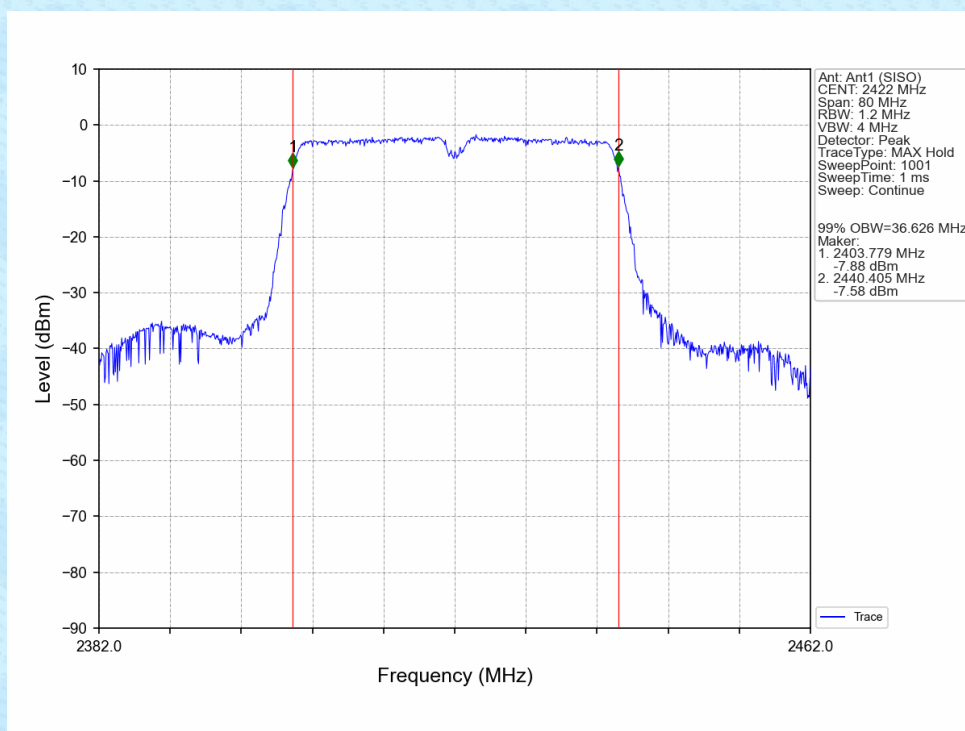




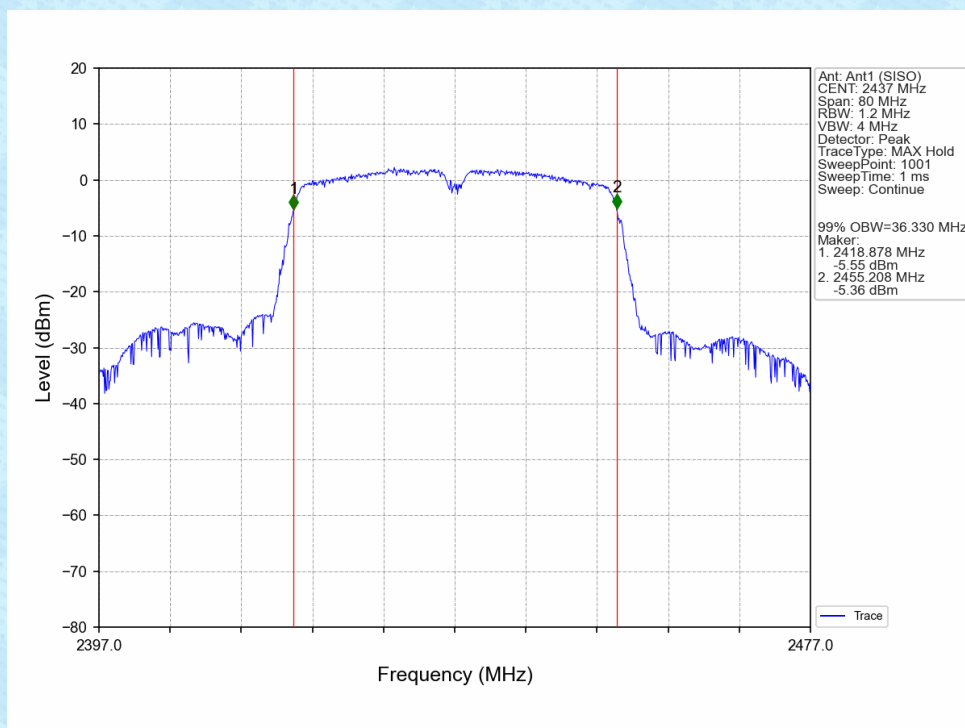
802.11n(HT20)\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



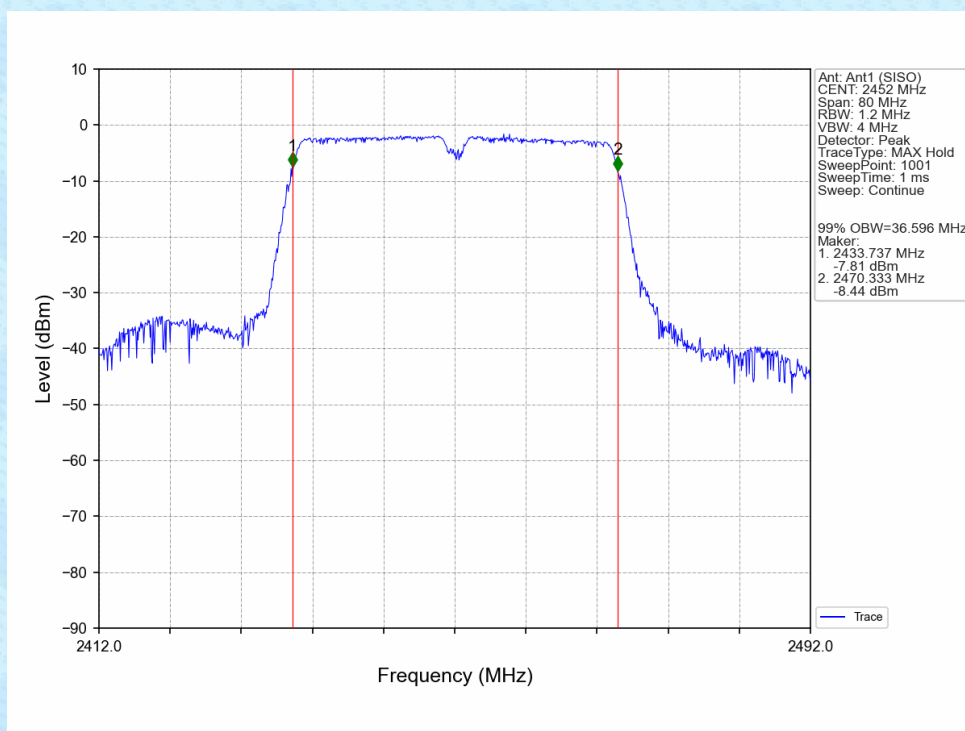
802.11n(HT40)\_LCH\_2422MHz\_Ant1 (SISO)\_NTNV



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

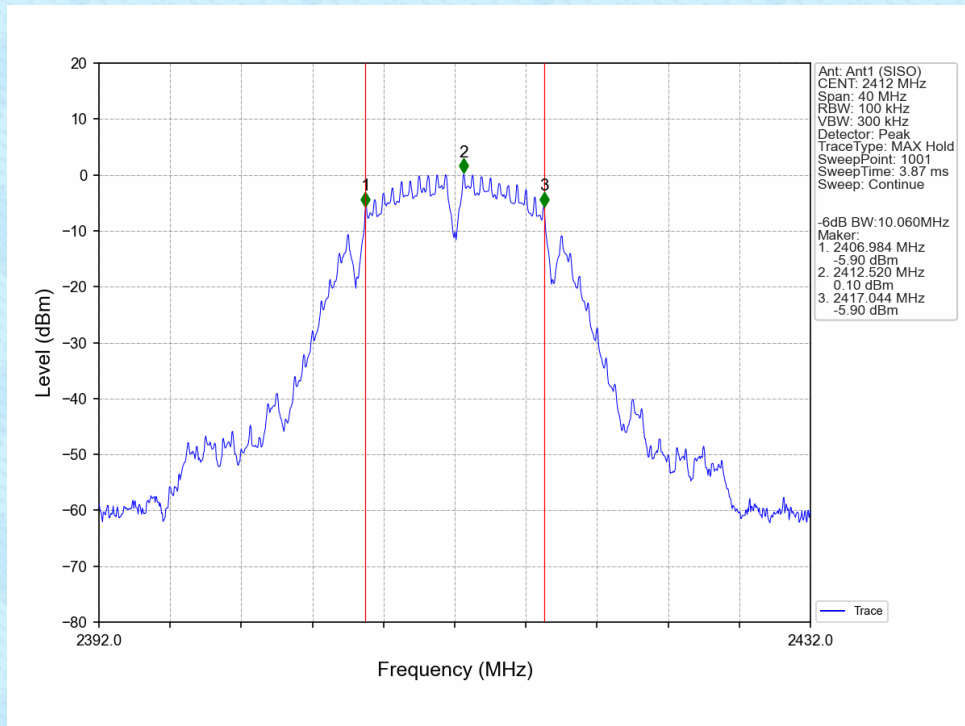


802.11n(HT40)\_HCH\_2452MHz\_Ant1 (SISO)\_NTNV

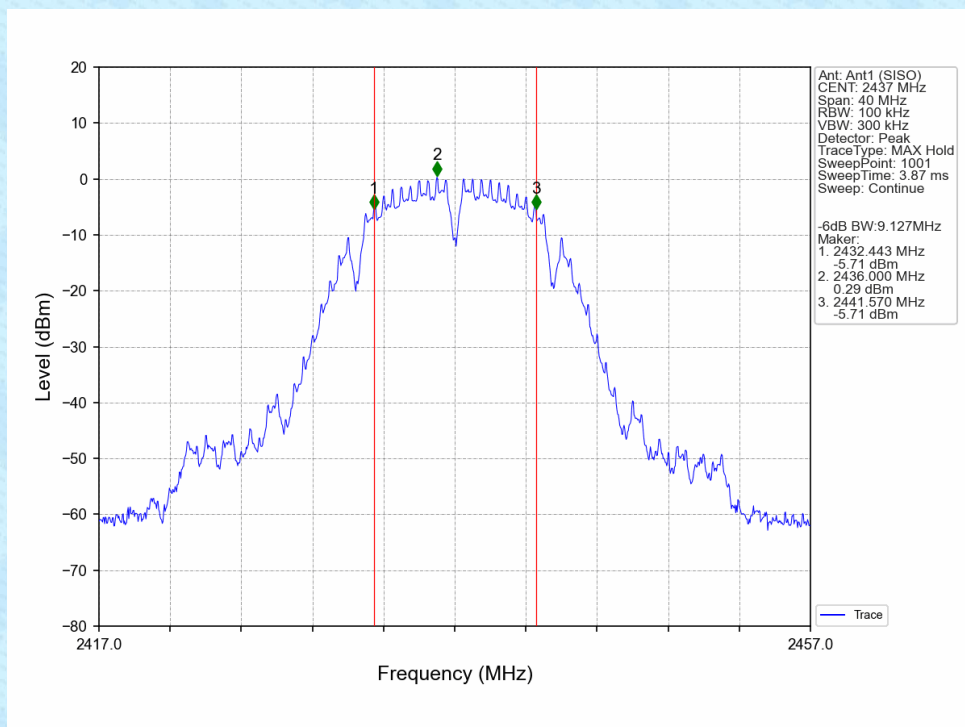


## 2.2.2 6dB BW

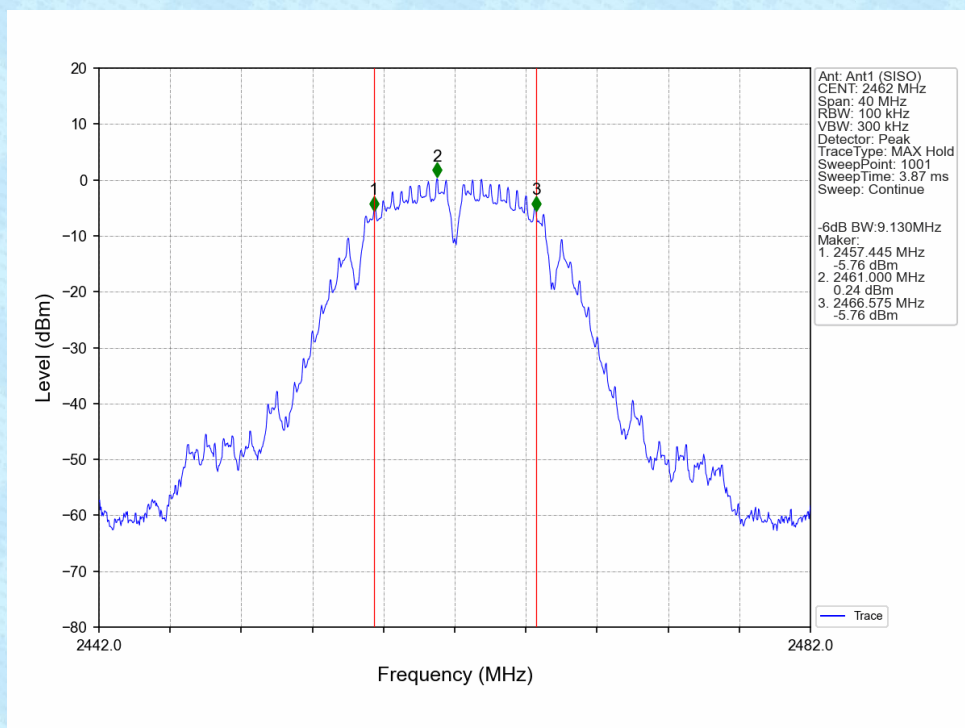
802.11b\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



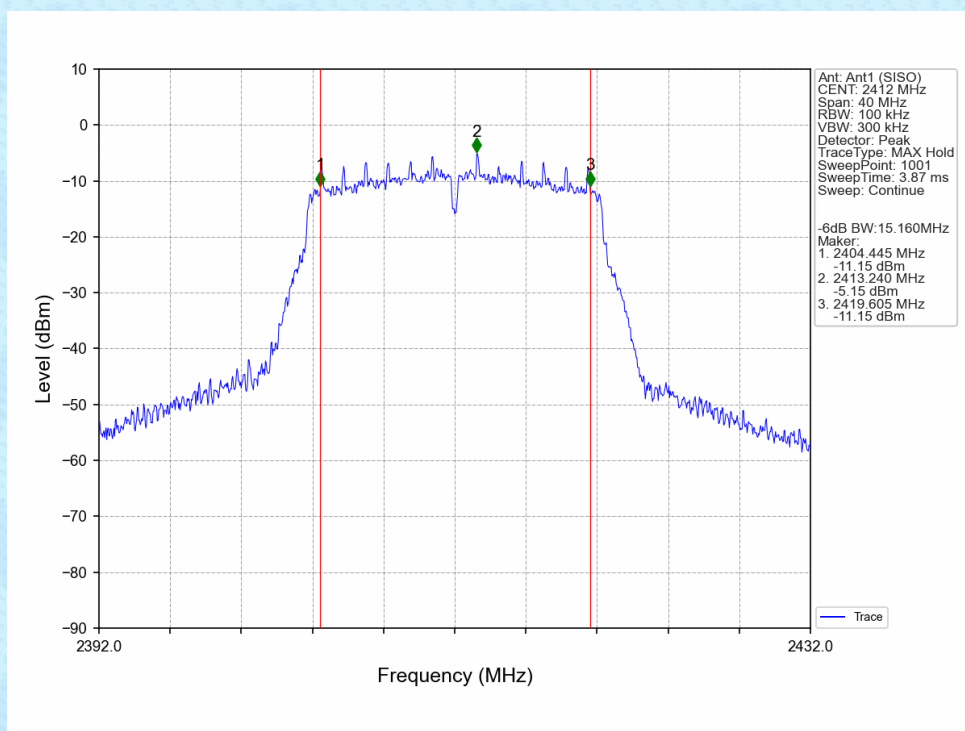
802.11b\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



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

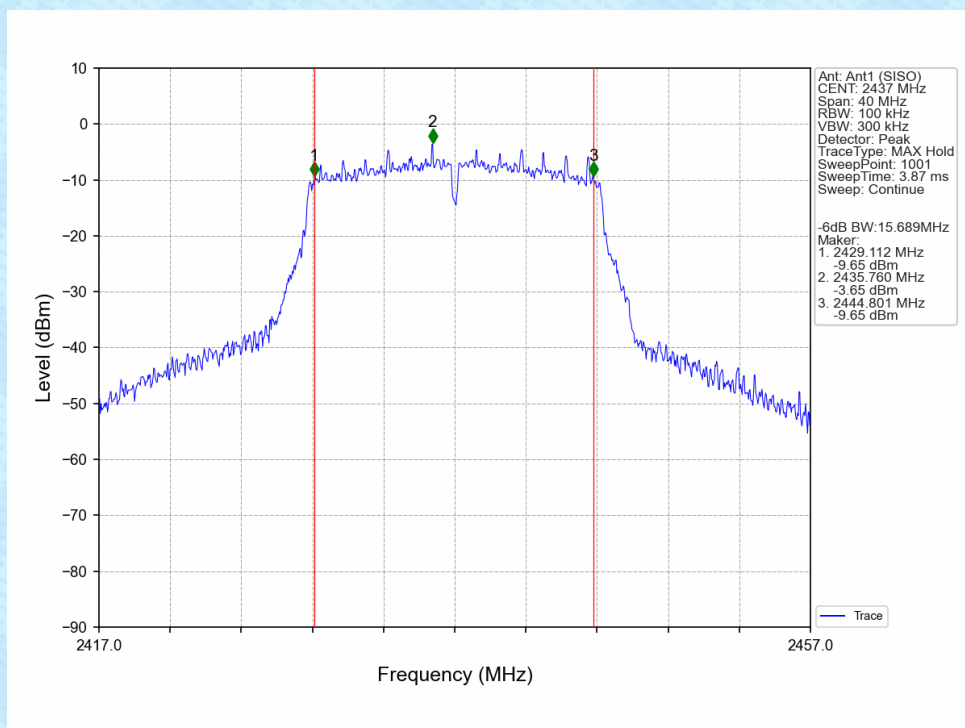


802.11g\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV

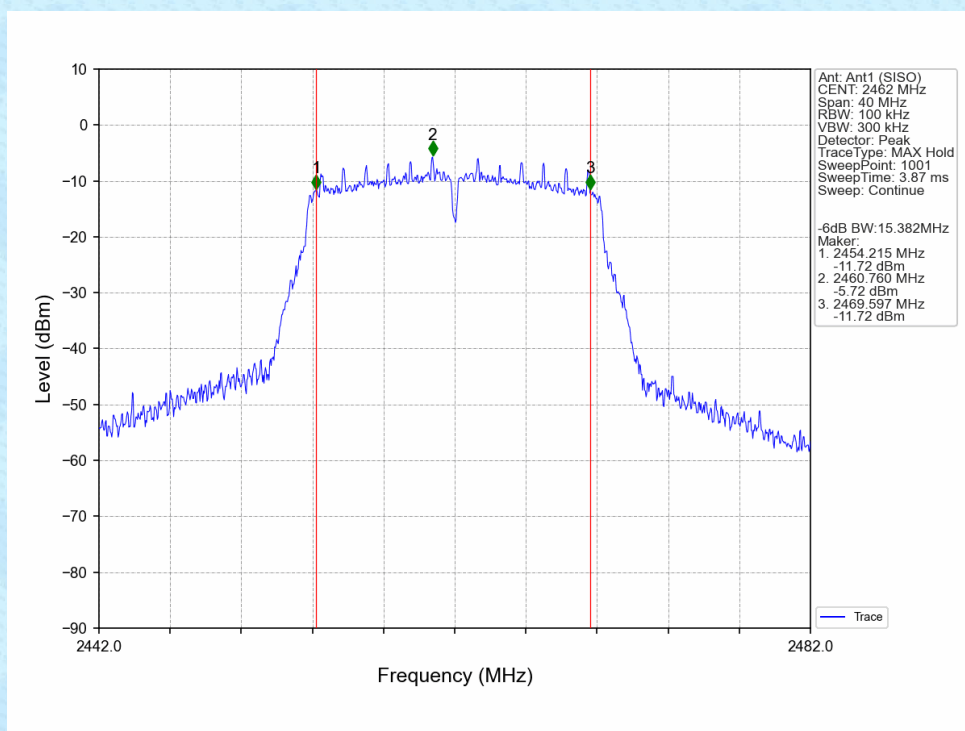




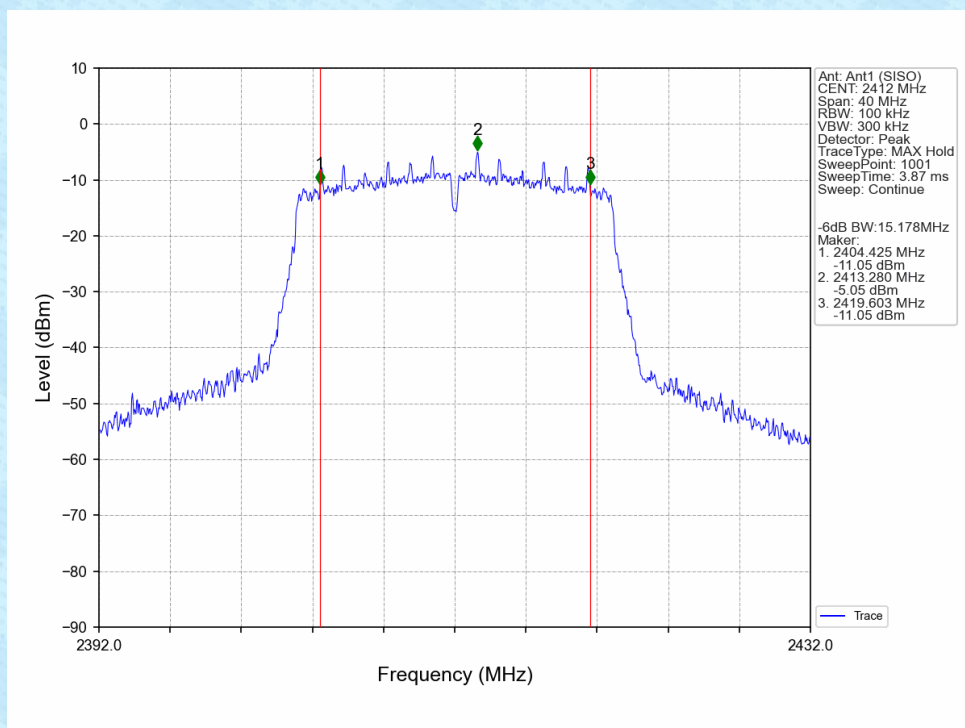
802.11g\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



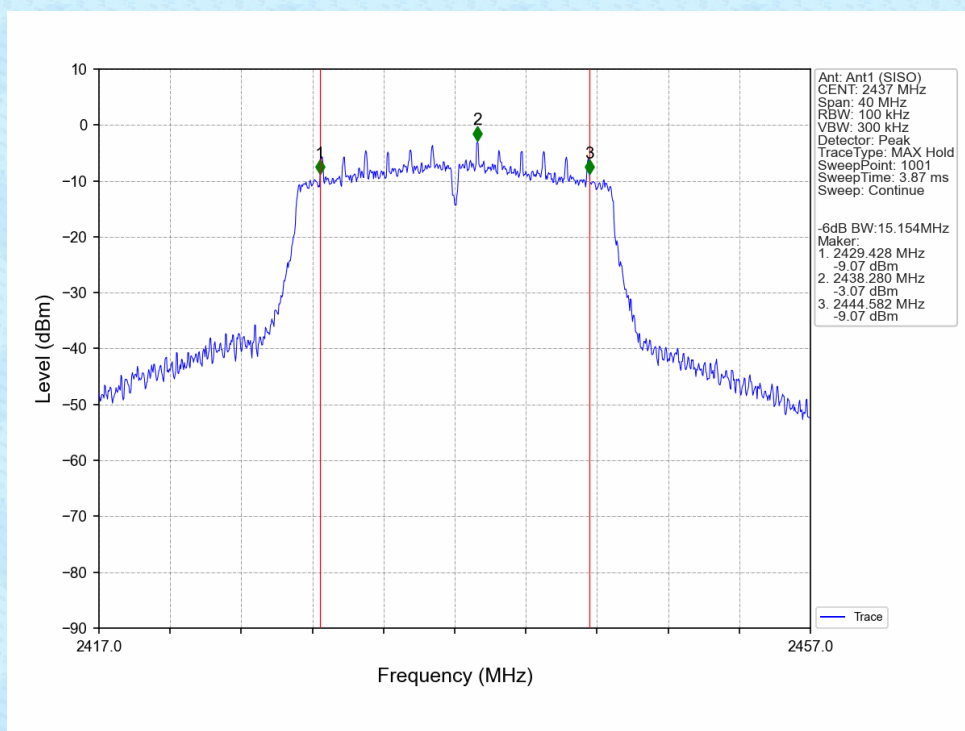
802.11g\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



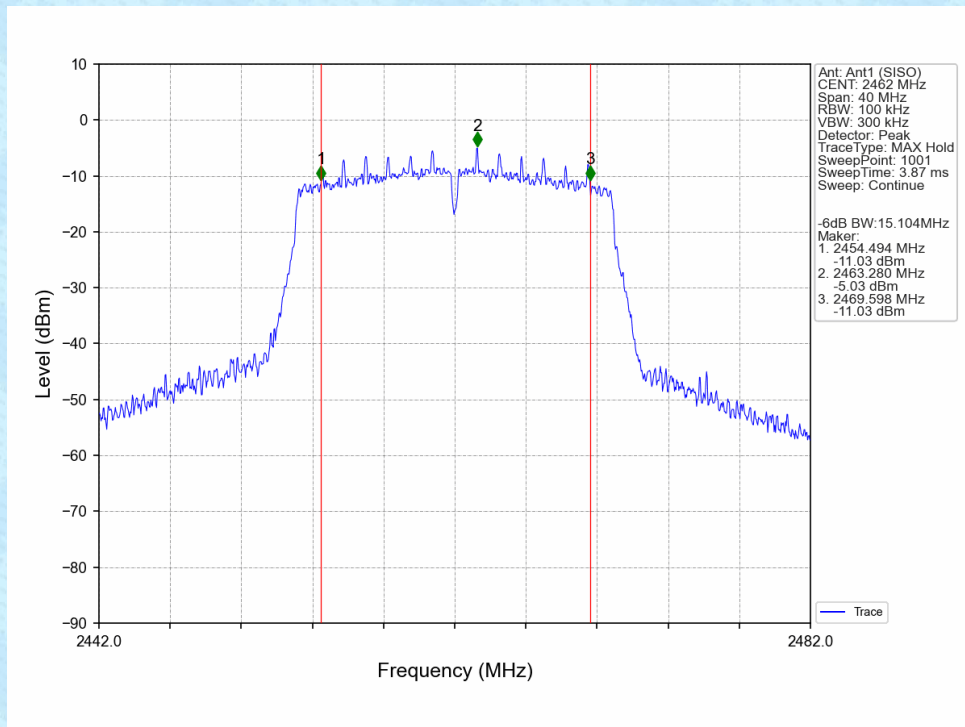
802.11n(HT20)\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



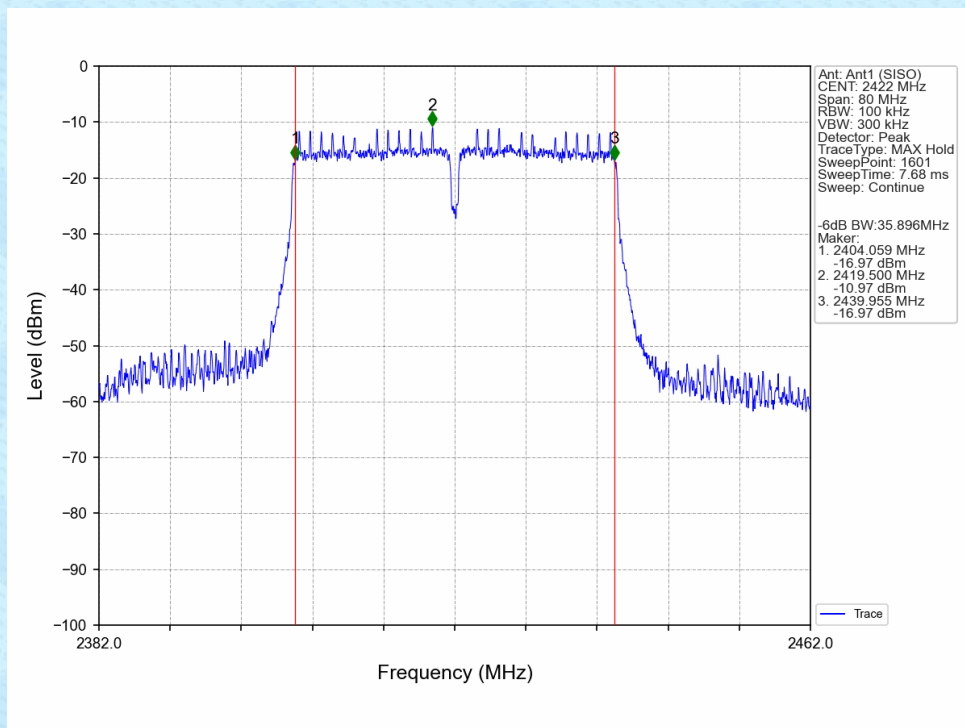
802.11n(HT20)\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



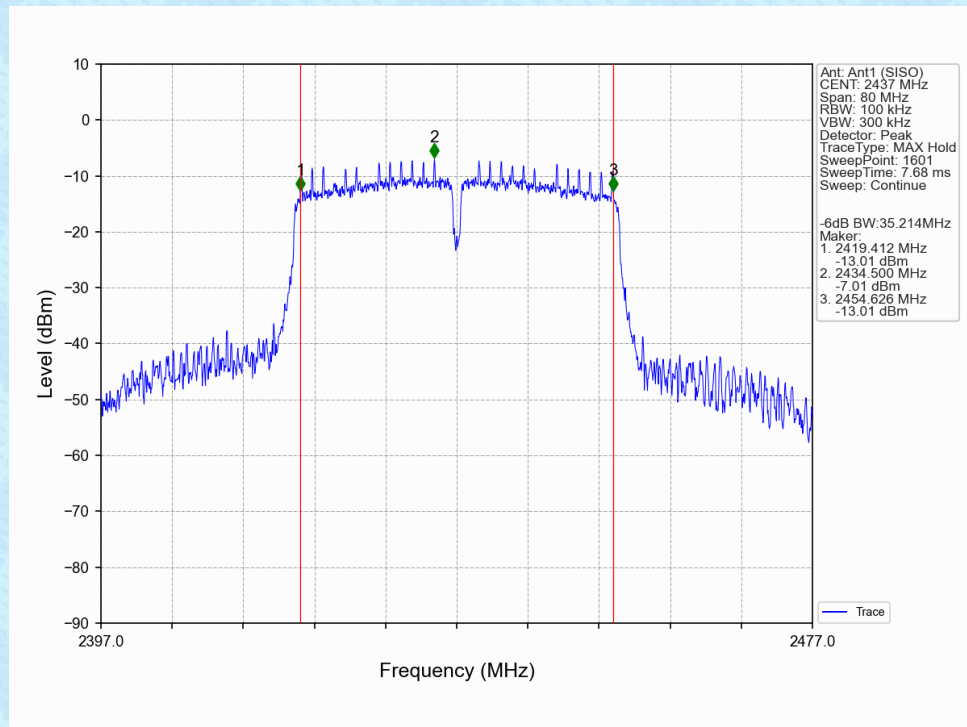
802.11n(HT20)\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



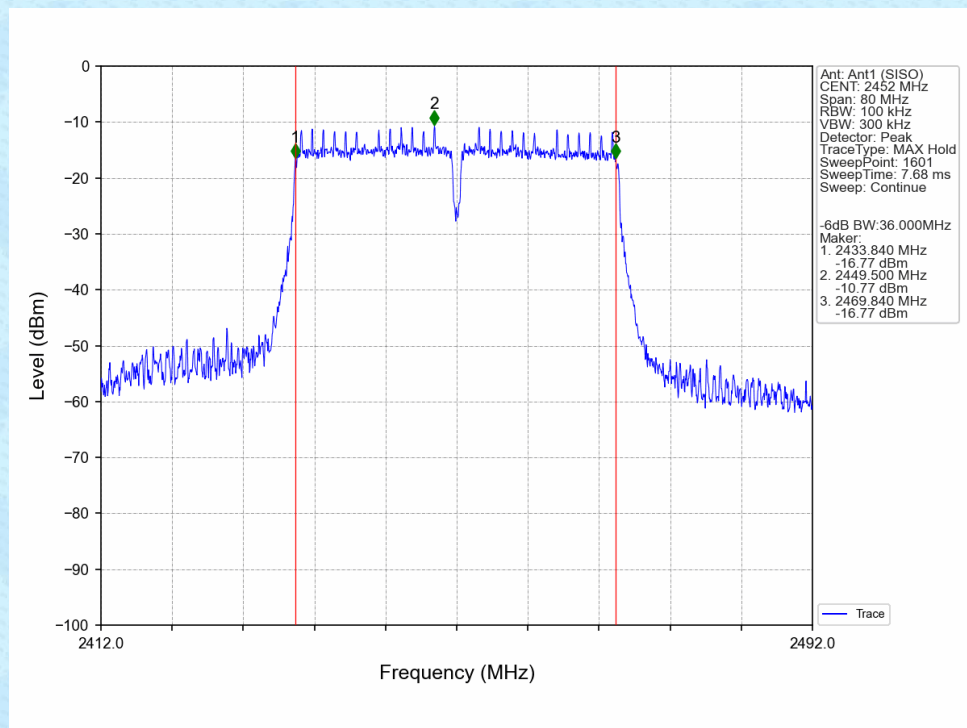
802.11n(HT40)\_LCH\_2422MHz\_Ant1 (SISO)\_NTNV



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 Peak Conducted Output Power (dBm) |       | Verdict |
|--------------------------------------|---------|-----------------|-------------------------------------------|-------|---------|
|                                      |         |                 | ANT1                                      | Limit |         |
| 802.11b                              | SISO    | 2412            | 11.72                                     | <=30  | Pass    |
|                                      |         | 2437            | 11.51                                     | <=30  | Pass    |
|                                      |         | 2462            | 11.42                                     | <=30  | Pass    |
| 802.11g                              | SISO    | 2412            | 12.53                                     | <=30  | Pass    |
|                                      |         | 2437            | 14.57                                     | <=30  | Pass    |
|                                      |         | 2462            | 12.55                                     | <=30  | Pass    |
| 802.11n<br>(HT20)                    | SISO    | 2412            | 12.32                                     | <=30  | Pass    |
|                                      |         | 2437            | 14.27                                     | <=30  | Pass    |
|                                      |         | 2462            | 12.44                                     | <=30  | Pass    |
| 802.11n<br>(HT40)                    | SISO    | 2422            | 10.96                                     | <=30  | Pass    |
|                                      |         | 2437            | 14.44                                     | <=30  | Pass    |
|                                      |         | 2452            | 11.14                                     | <=30  | Pass    |
| Note1: Antenna Gain: Ant1: -3.04dBi; |         |                 |                                           |       |         |

## 4. Maximum Power Spectral Density

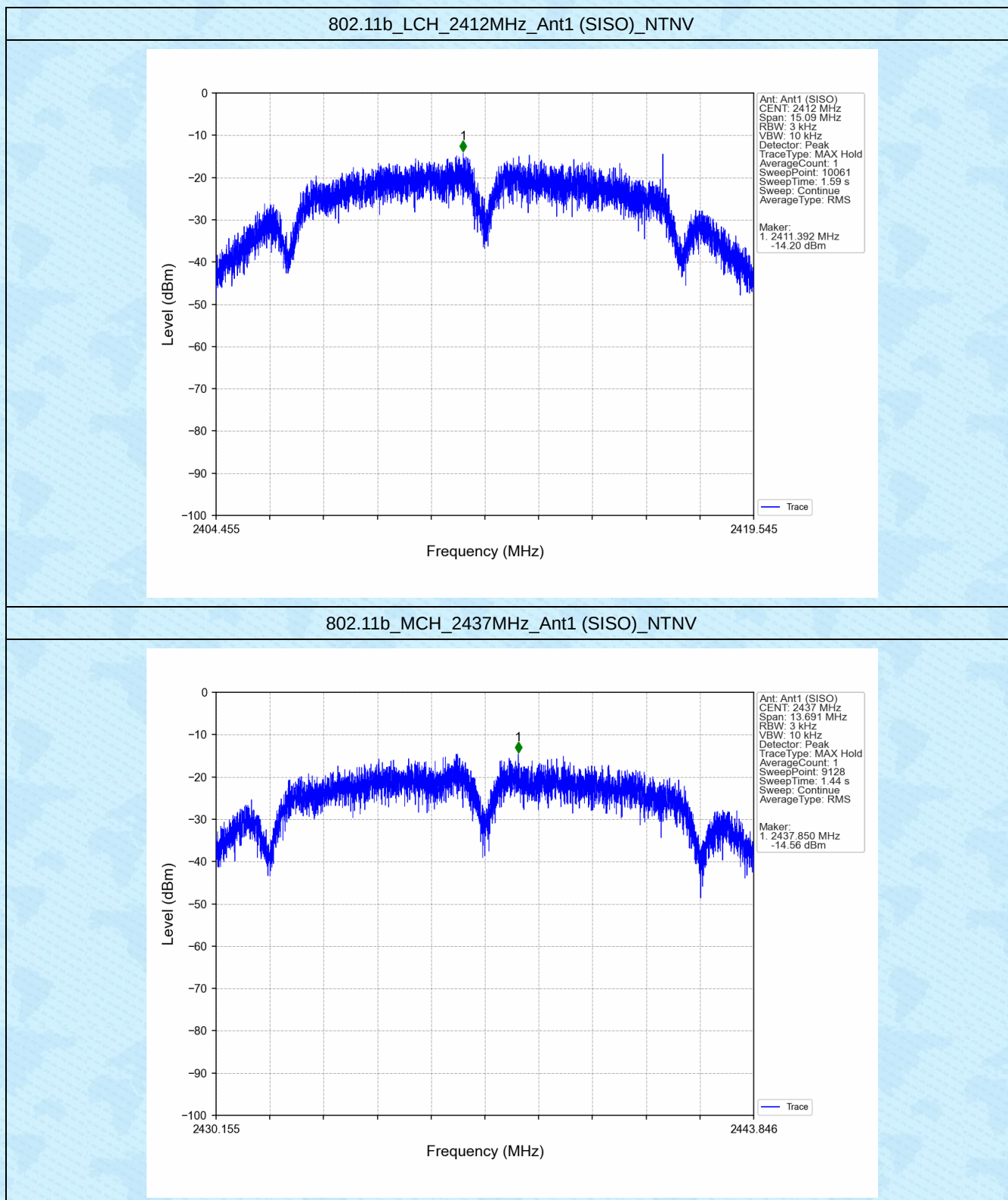
### 4.1 Test Result

#### 4.1.1 PSD

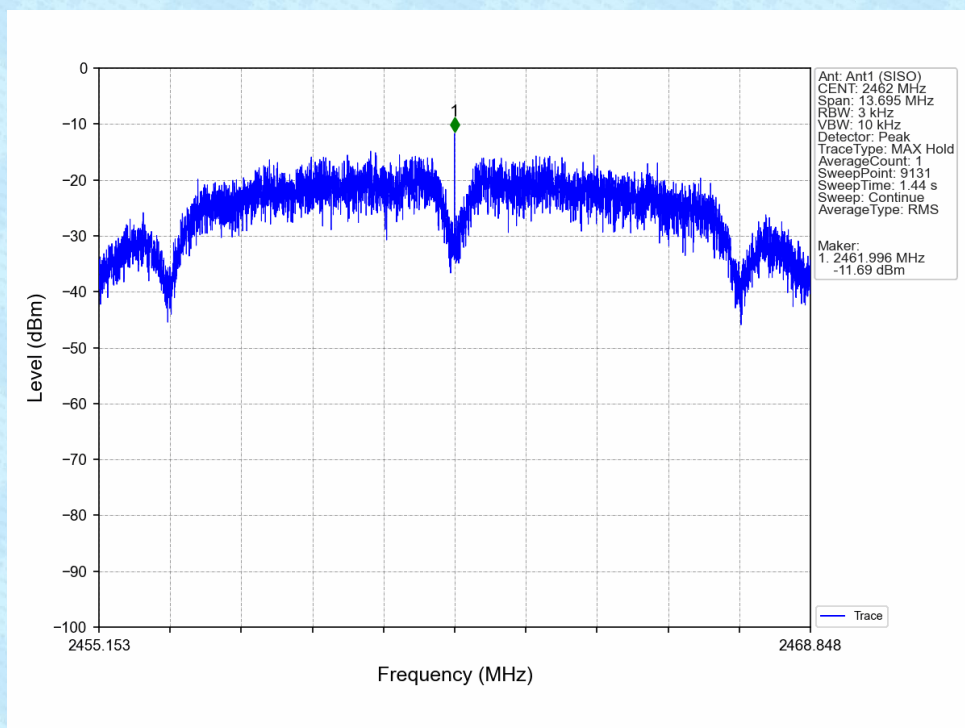
| Mode                                 | TX<br>Type | Frequency<br>(MHz) | Maximum PSD (dBm/3kHz) |       | Verdict |
|--------------------------------------|------------|--------------------|------------------------|-------|---------|
|                                      |            |                    | ANT1                   | Limit |         |
| 802.11b                              | SISO       | 2412               | -14.20                 | <=8   | Pass    |
|                                      |            | 2437               | -14.56                 | <=8   | Pass    |
|                                      |            | 2462               | -11.69                 | <=8   | Pass    |
| 802.11g                              | SISO       | 2412               | -20.53                 | <=8   | Pass    |
|                                      |            | 2437               | -18.66                 | <=8   | Pass    |
|                                      |            | 2462               | -18.81                 | <=8   | Pass    |
| 802.11n<br>(HT20)                    | SISO       | 2412               | -19.90                 | <=8   | Pass    |
|                                      |            | 2437               | -17.62                 | <=8   | Pass    |
|                                      |            | 2462               | -18.35                 | <=8   | Pass    |
| 802.11n<br>(HT40)                    | SISO       | 2422               | -25.65                 | <=8   | Pass    |
|                                      |            | 2437               | -19.91                 | <=8   | Pass    |
|                                      |            | 2452               | -25.57                 | <=8   | Pass    |
| Note1: Antenna Gain: Ant1: -3.04dBi; |            |                    |                        |       |         |

## 4.2 Test Graph

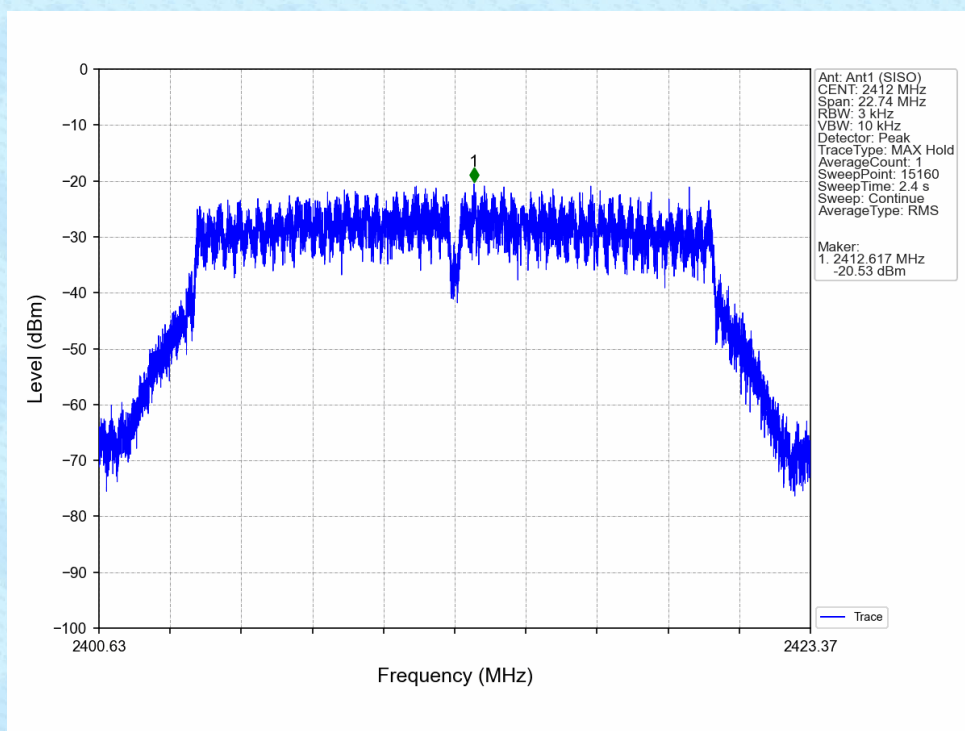
### 4.2.1 PSD



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

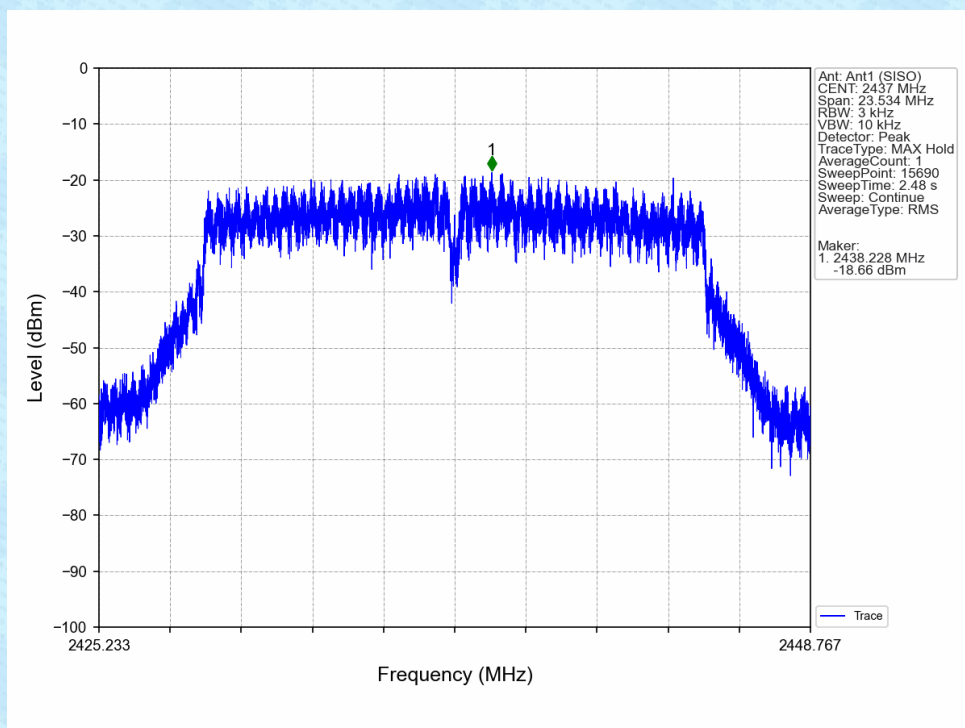


802.11g\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV

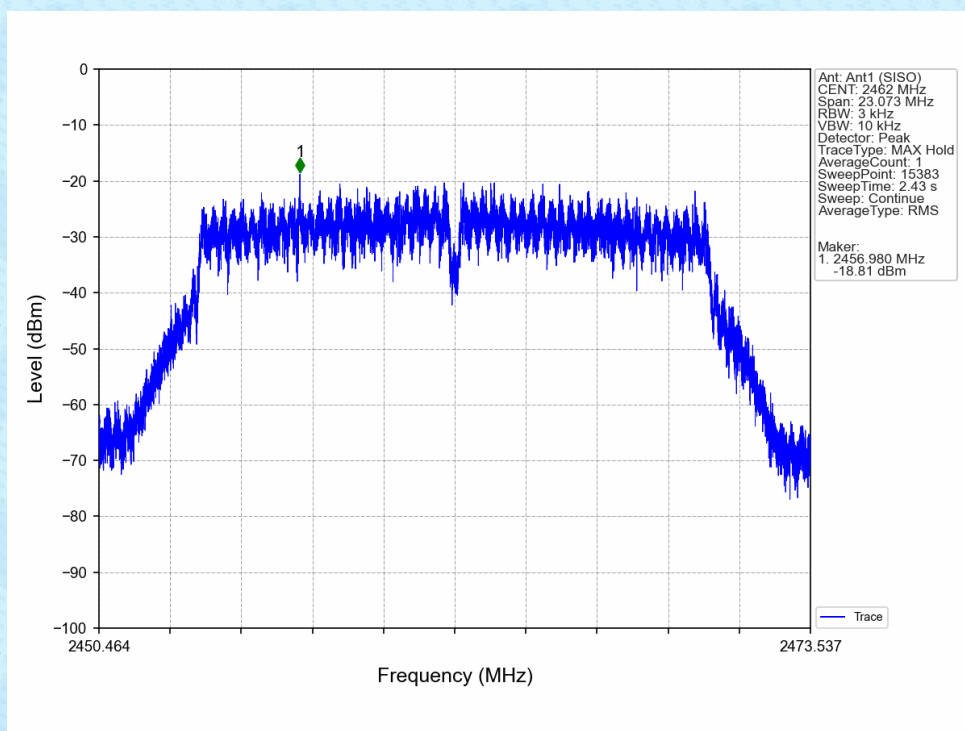




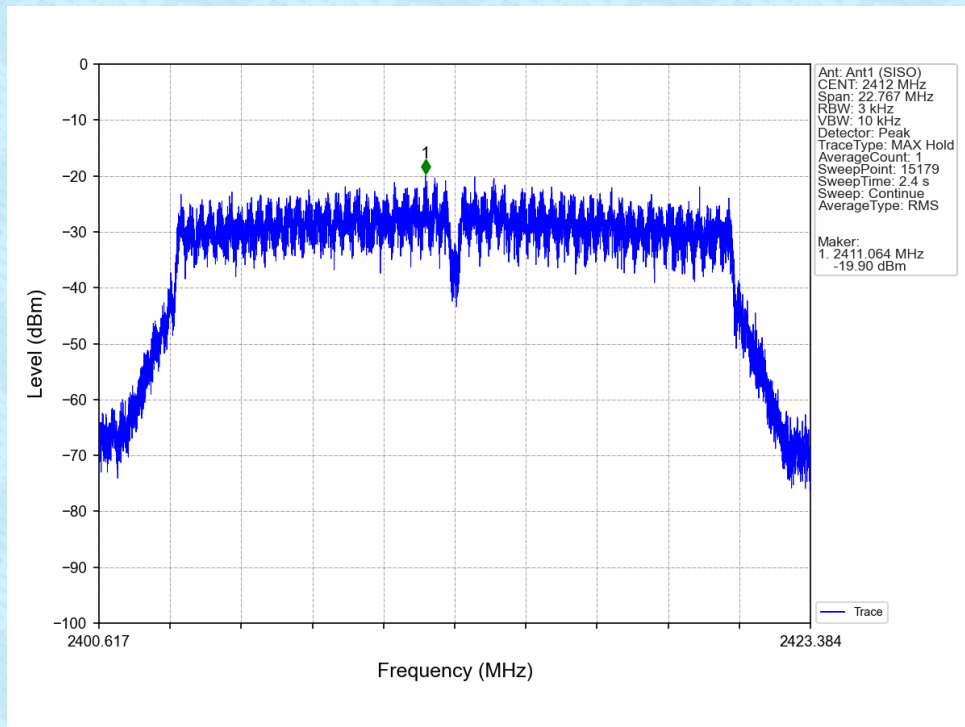
802.11g\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



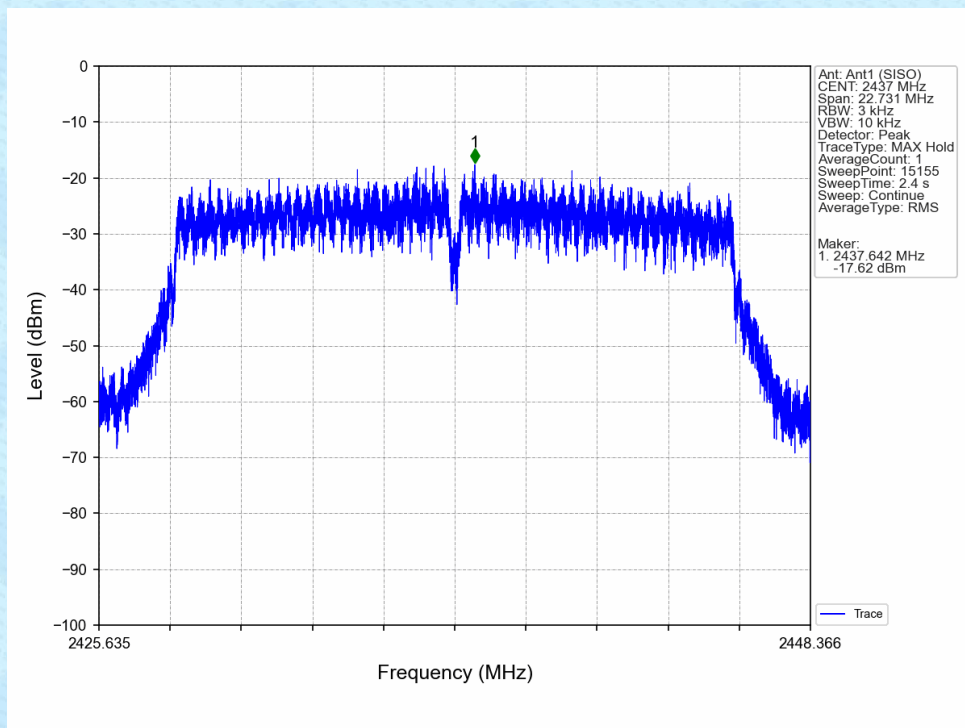
802.11g\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



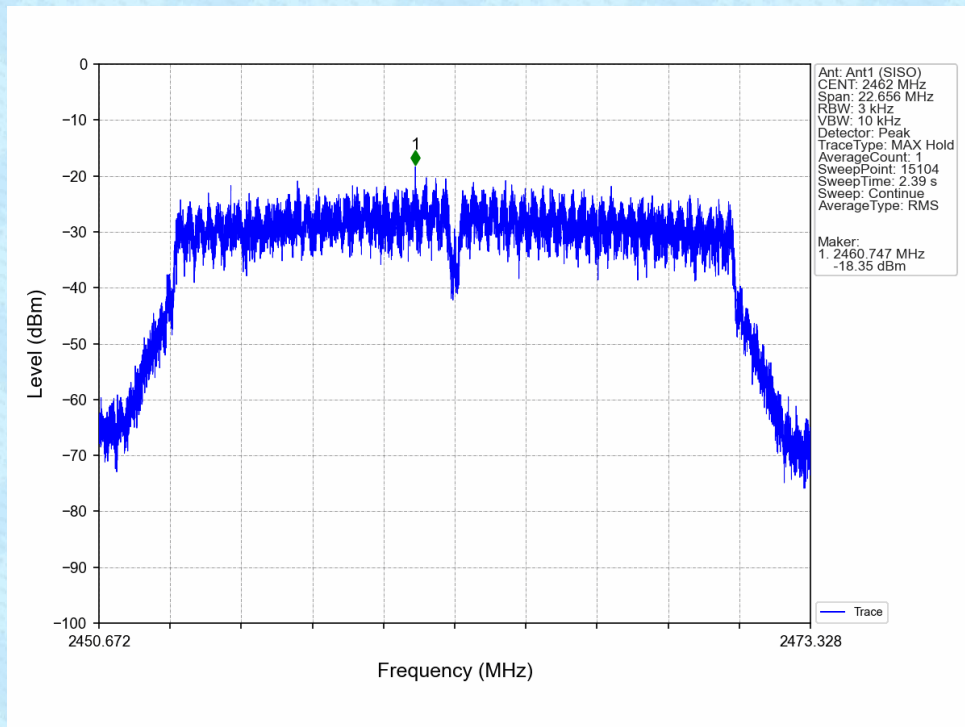
802.11n(HT20)\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



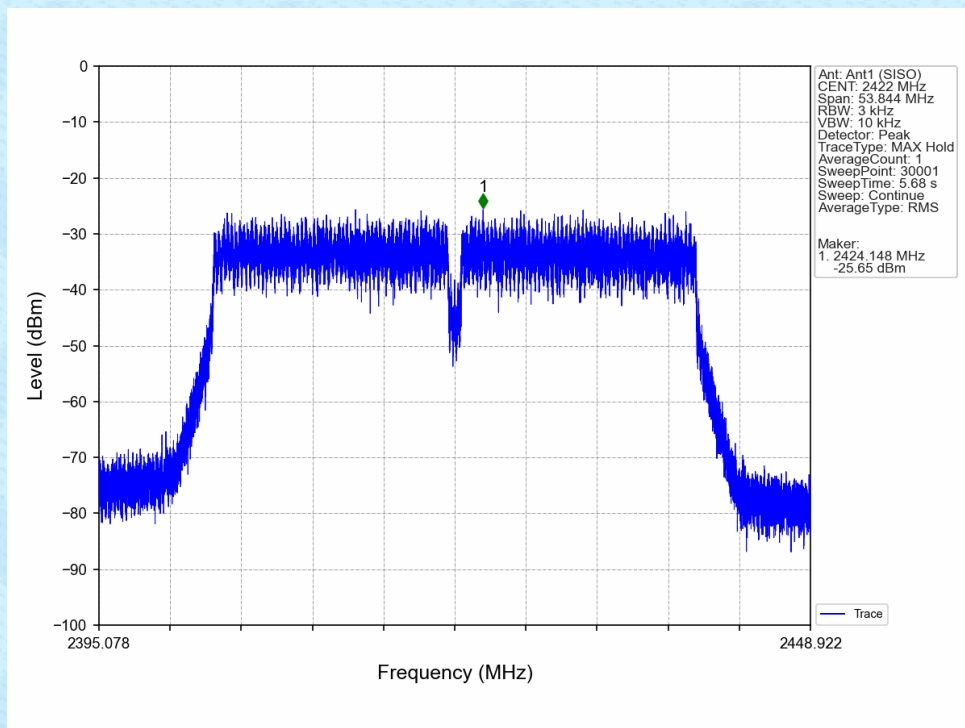
802.11n(HT20)\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



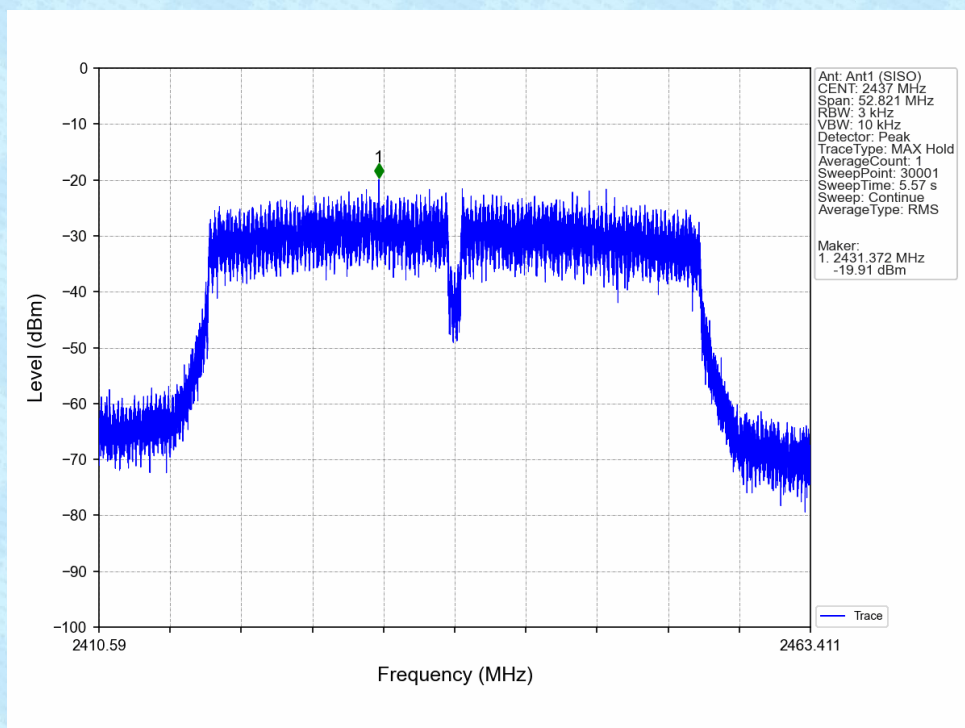
802.11n(HT20)\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



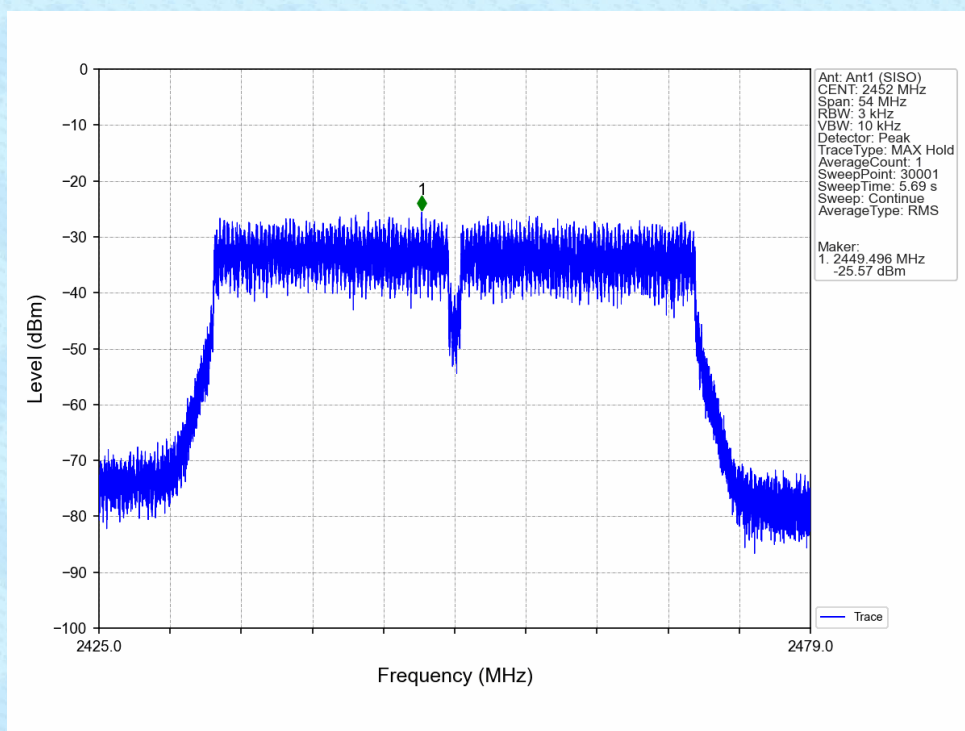
802.11n(HT40)\_LCH\_2422MHz\_Ant1 (SISO)\_NTNV



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   | 0.32                     |
|                |         | 2437            | 1   | 0.27                     |
|                |         | 2462            | 1   | 0.20                     |
| 802.11g        | SISO    | 2412            | 1   | -4.97                    |
|                |         | 2437            | 1   | -3.57                    |
|                |         | 2462            | 1   | -5.03                    |
| 802.11n (HT20) | SISO    | 2412            | 1   | -5.06                    |
|                |         | 2437            | 1   | -3.11                    |
|                |         | 2462            | 1   | -5.67                    |
| 802.11n (HT40) | SISO    | 2422            | 1   | -10.93                   |
|                |         | 2437            | 1   | -6.88                    |
|                |         | 2452            | 1   | -10.75                   |

Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.

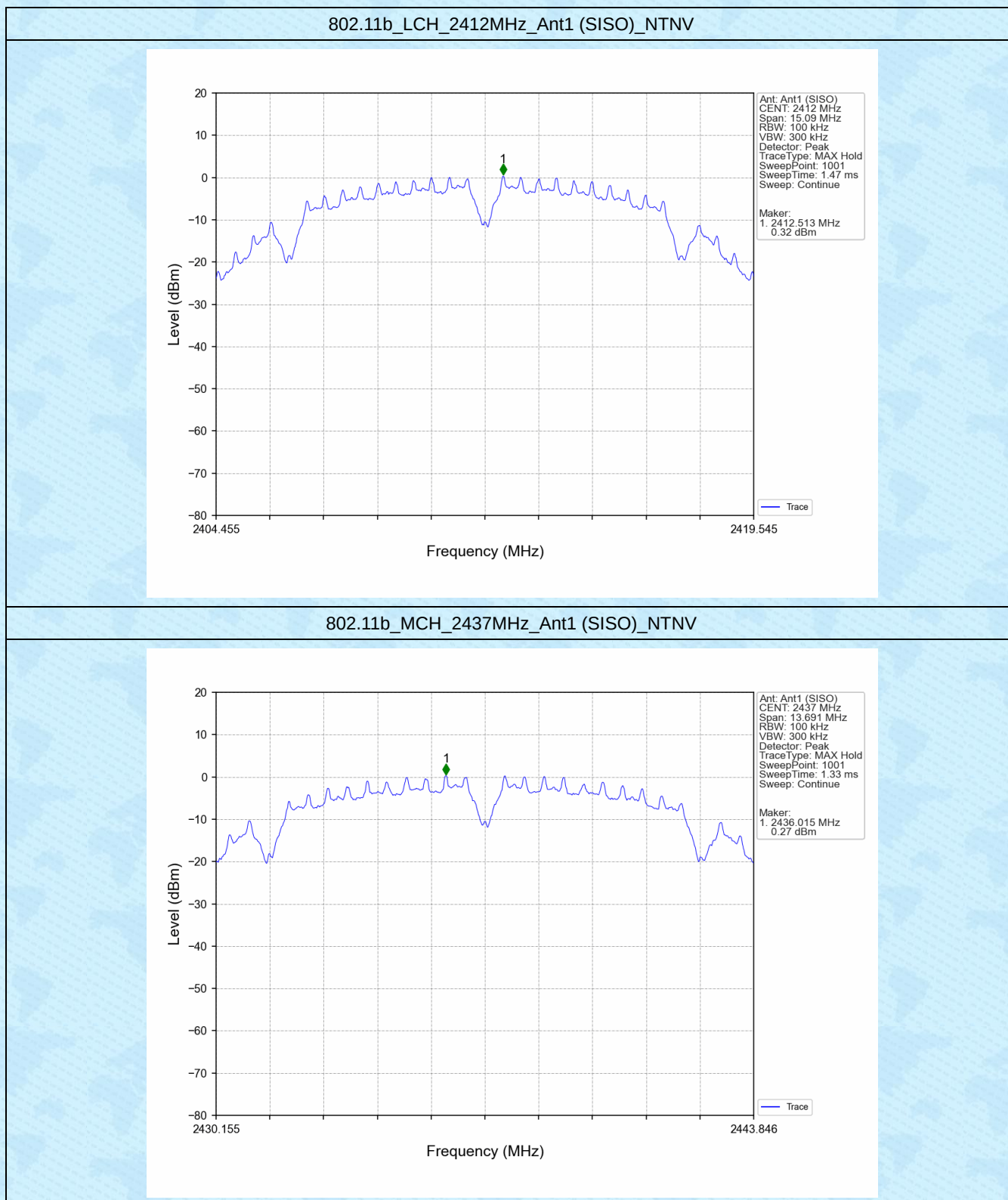
#### 5.1.2 CSE

| Mode           | TX Type | Frequency (MHz) | ANT | Level of Reference (dBm) | Limit (dBm) | Verdict |
|----------------|---------|-----------------|-----|--------------------------|-------------|---------|
| 802.11b        | SISO    | 2412            | 1   | 0.32                     | -19.68      | Pass    |
|                |         | 2437            | 1   | 0.32                     | -19.68      | Pass    |
|                |         | 2462            | 1   | 0.32                     | -19.68      | Pass    |
| 802.11g        | SISO    | 2412            | 1   | -3.57                    | -23.57      | Pass    |
|                |         | 2437            | 1   | -3.57                    | -23.57      | Pass    |
|                |         | 2462            | 1   | -3.57                    | -23.57      | Pass    |
| 802.11n (HT20) | SISO    | 2412            | 1   | -3.11                    | -23.11      | Pass    |
|                |         | 2437            | 1   | -3.11                    | -23.11      | Pass    |
|                |         | 2462            | 1   | -3.11                    | -23.11      | Pass    |
| 802.11n (HT40) | SISO    | 2422            | 1   | -6.88                    | -26.88      | Pass    |
|                |         | 2437            | 1   | -6.88                    | -26.88      | Pass    |
|                |         | 2452            | 1   | -6.88                    | -26.88      | Pass    |

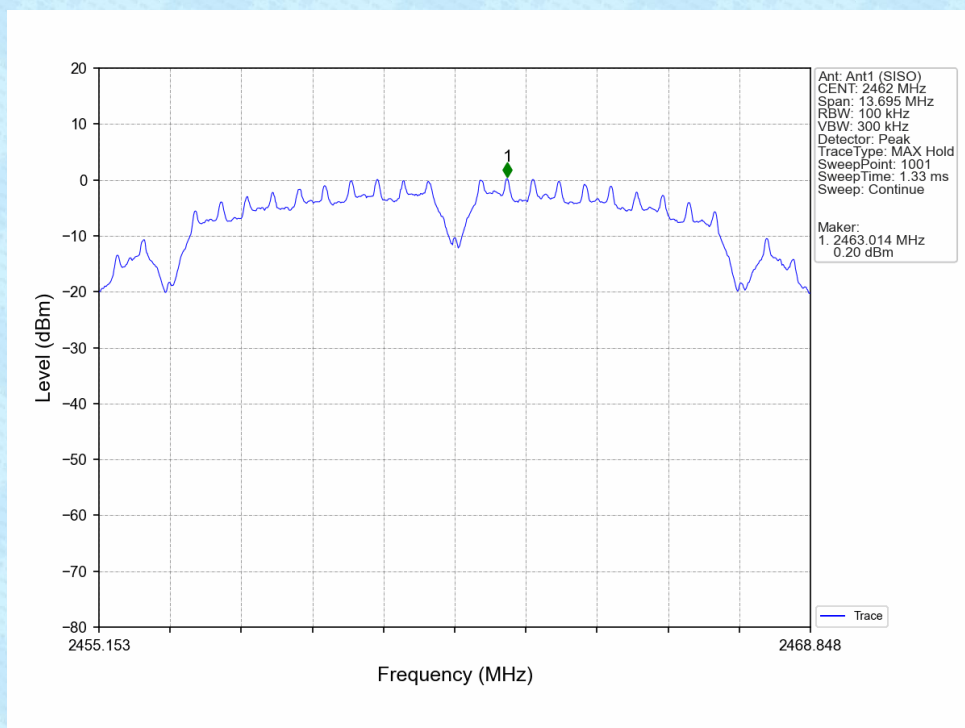
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.

## 5.2 Test Graph

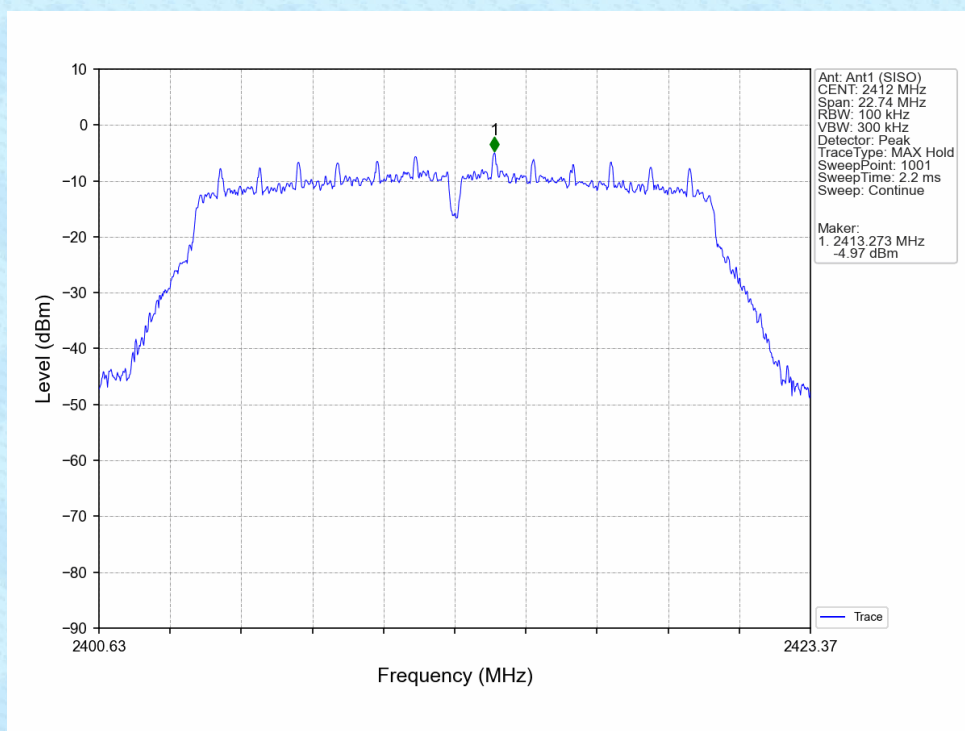
### 5.2.1 Ref



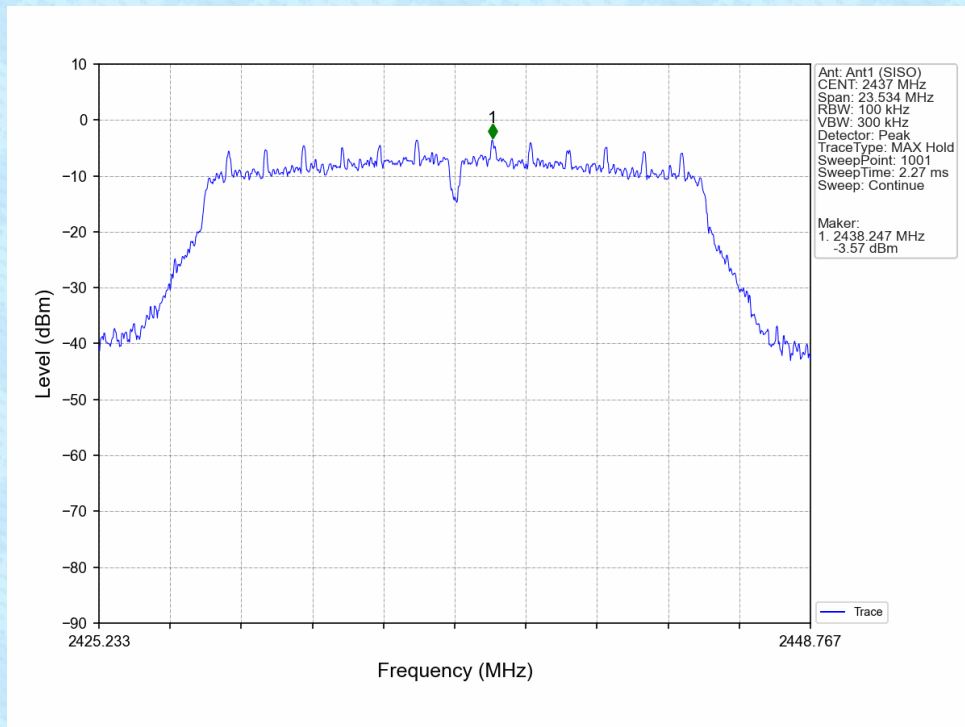
## 802.11b\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



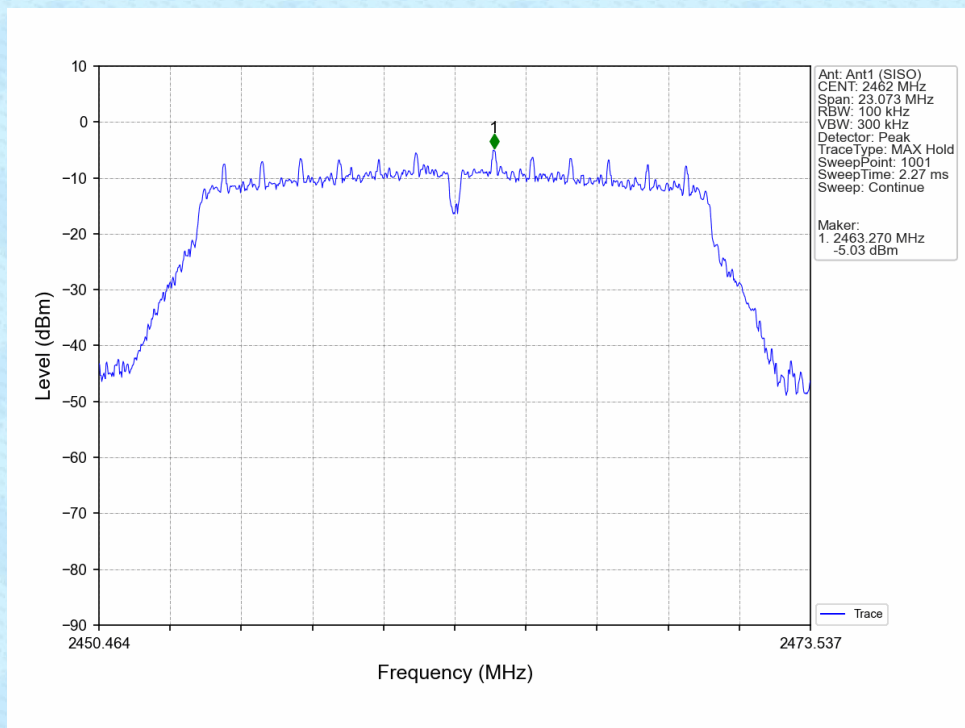
## 802.11g\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



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

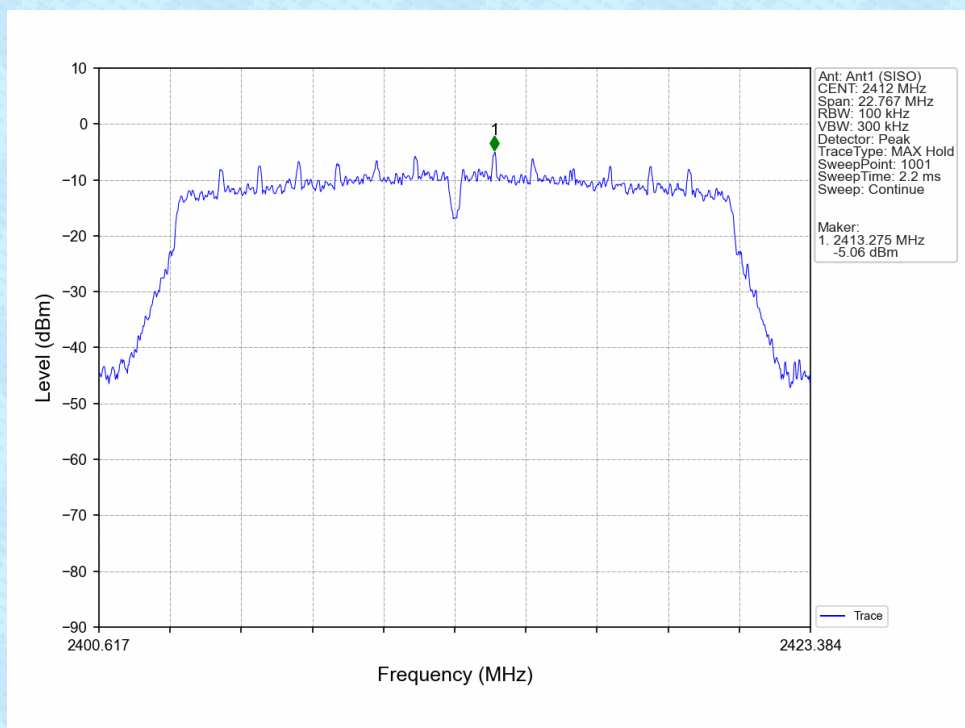


802.11g\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV

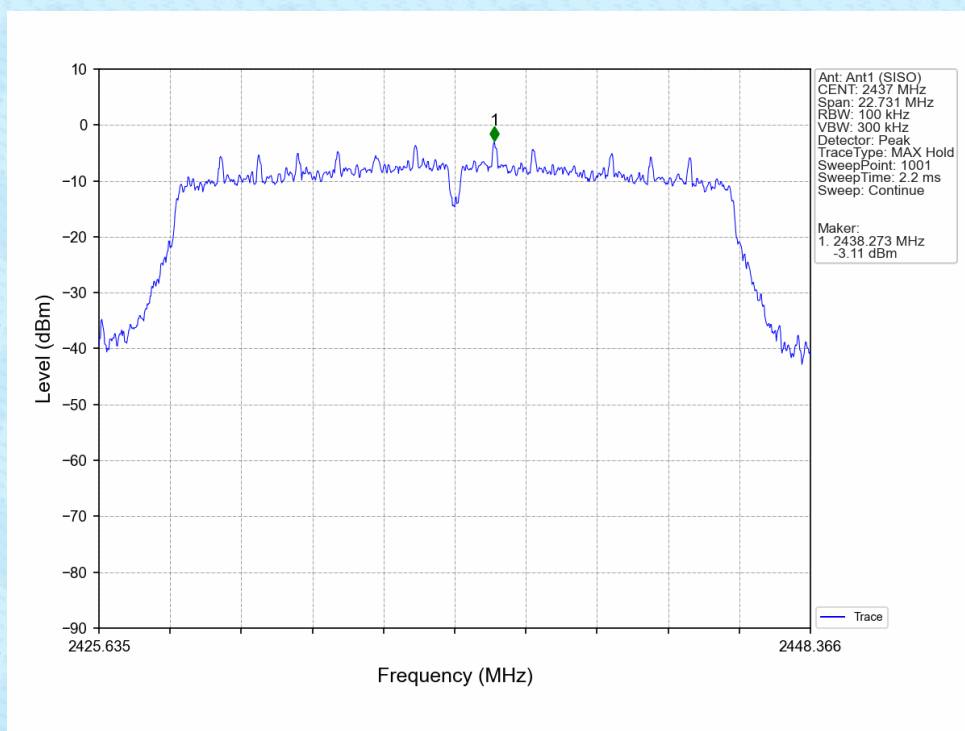




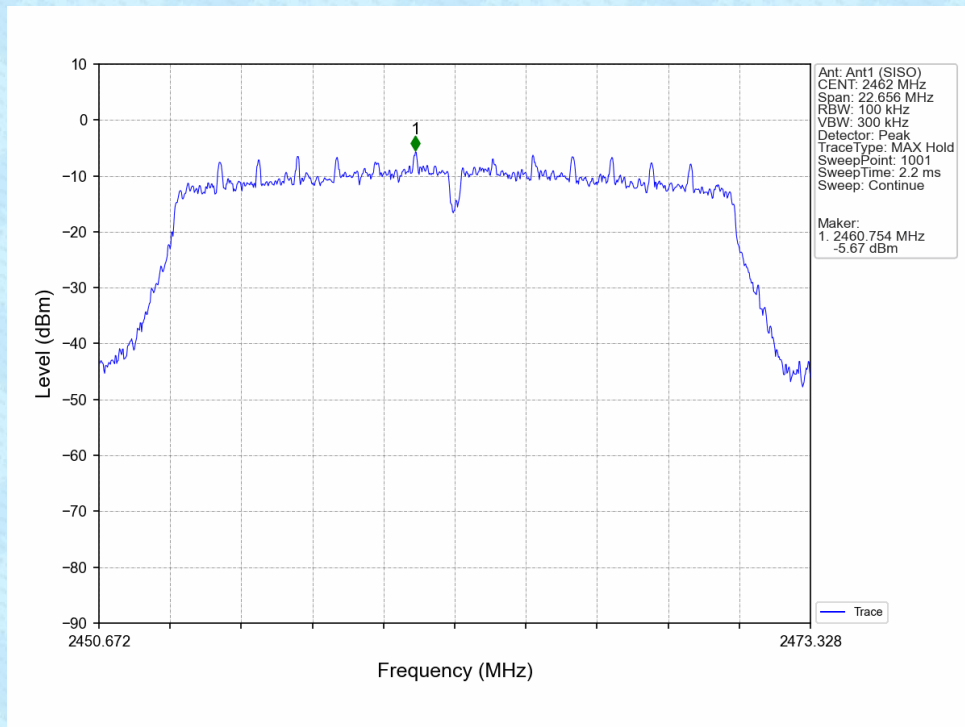
802.11n(HT20)\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



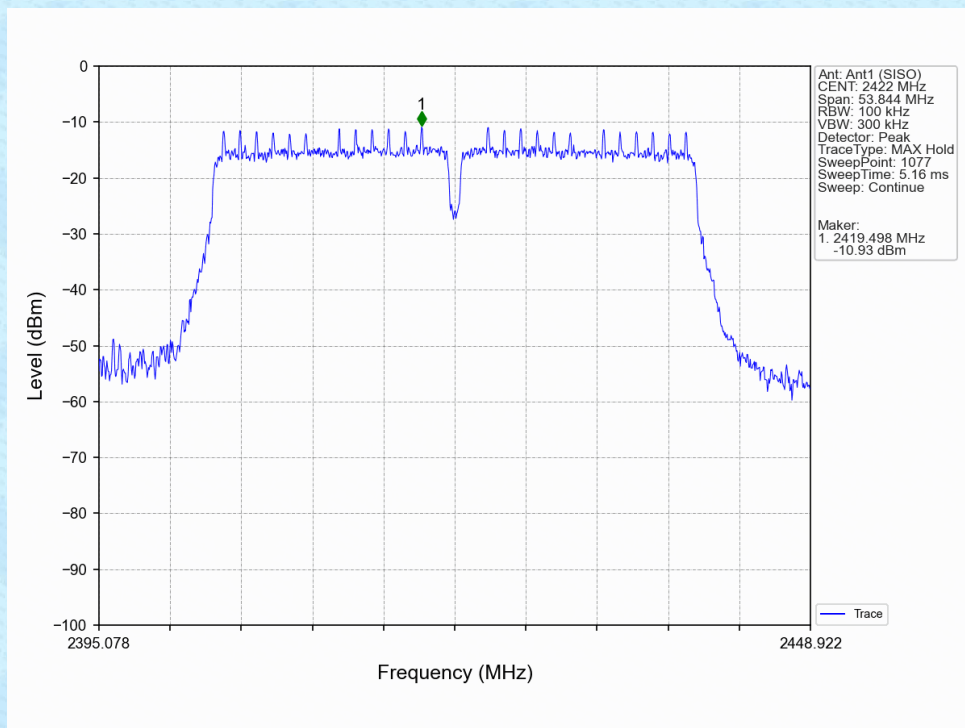
802.11n(HT20)\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



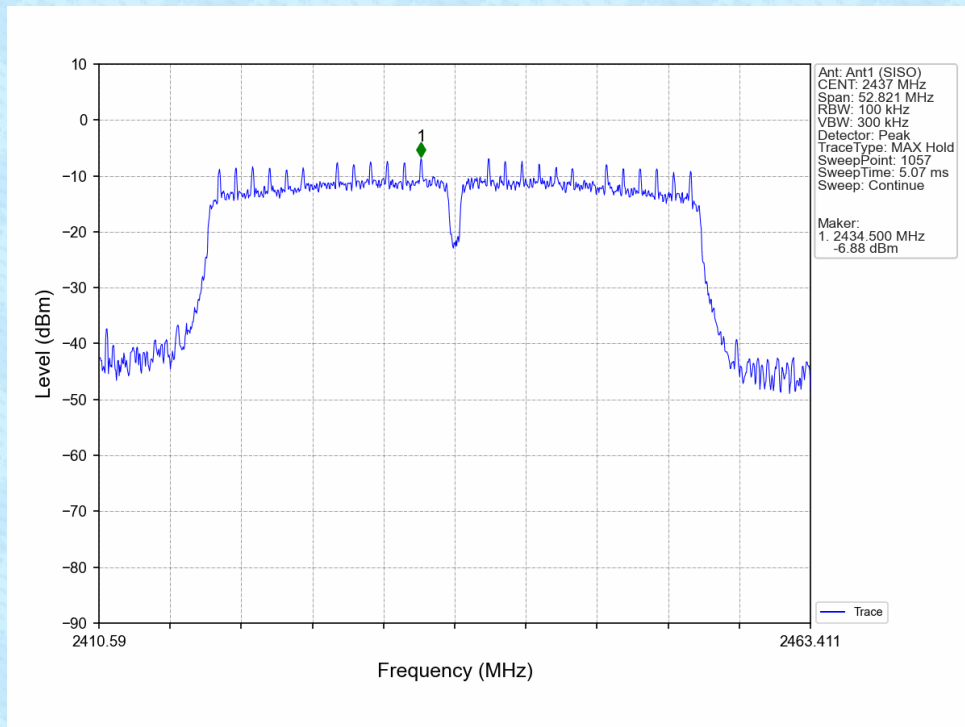
802.11n(HT20)\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



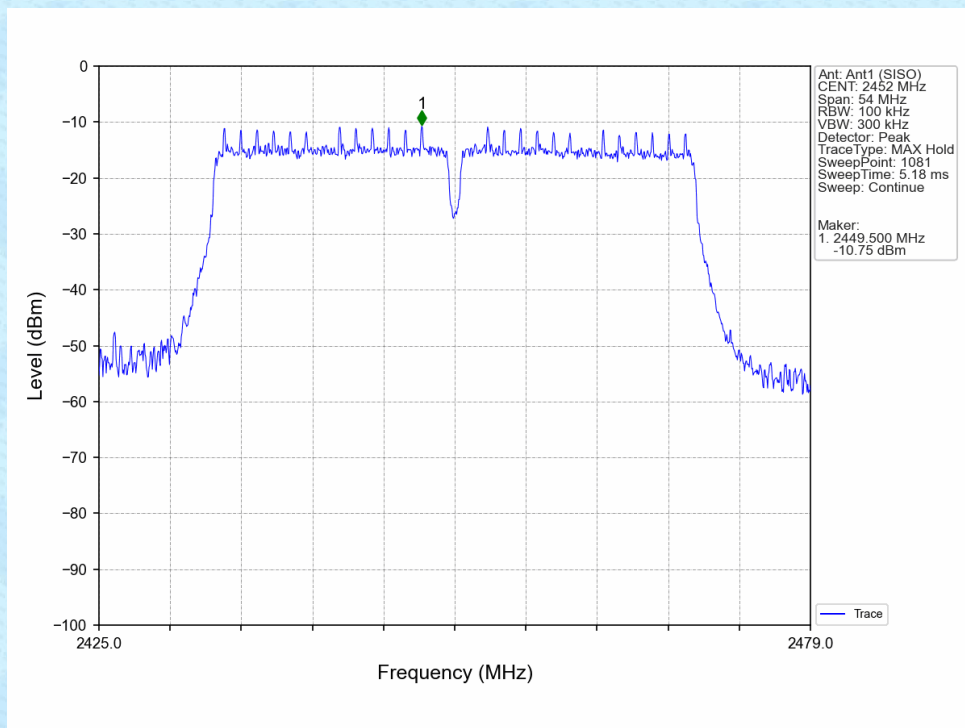
802.11n(HT40)\_LCH\_2422MHz\_Ant1 (SISO)\_NTNV



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

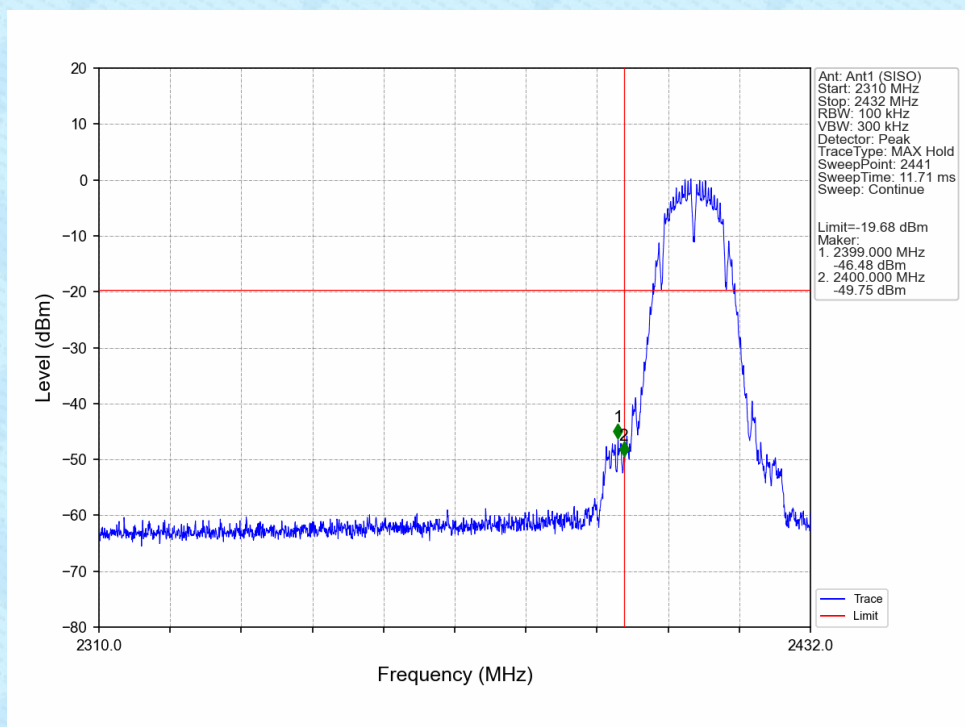


802.11n(HT40)\_HCH\_2452MHz\_Ant1 (SISO)\_NTNV

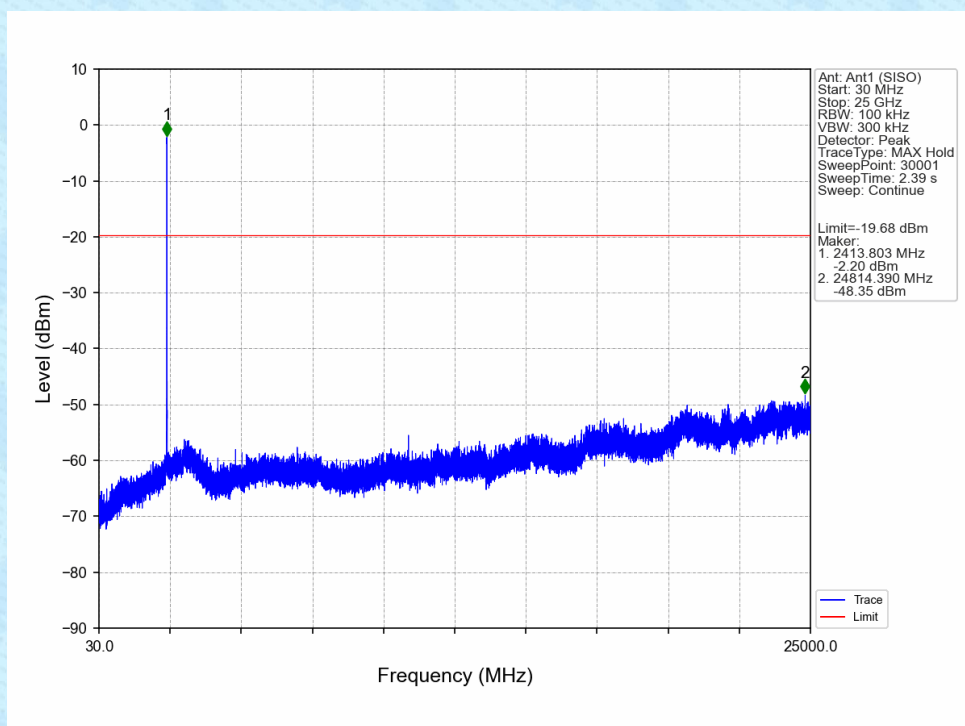


## 5.2.2 CSE

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

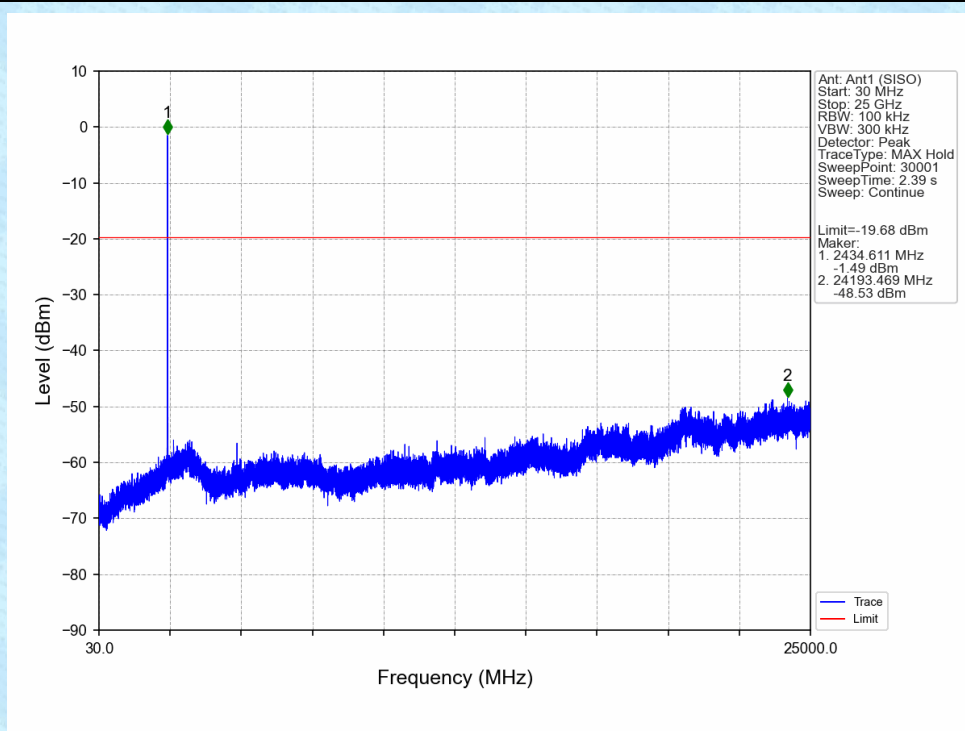


802.11b\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV

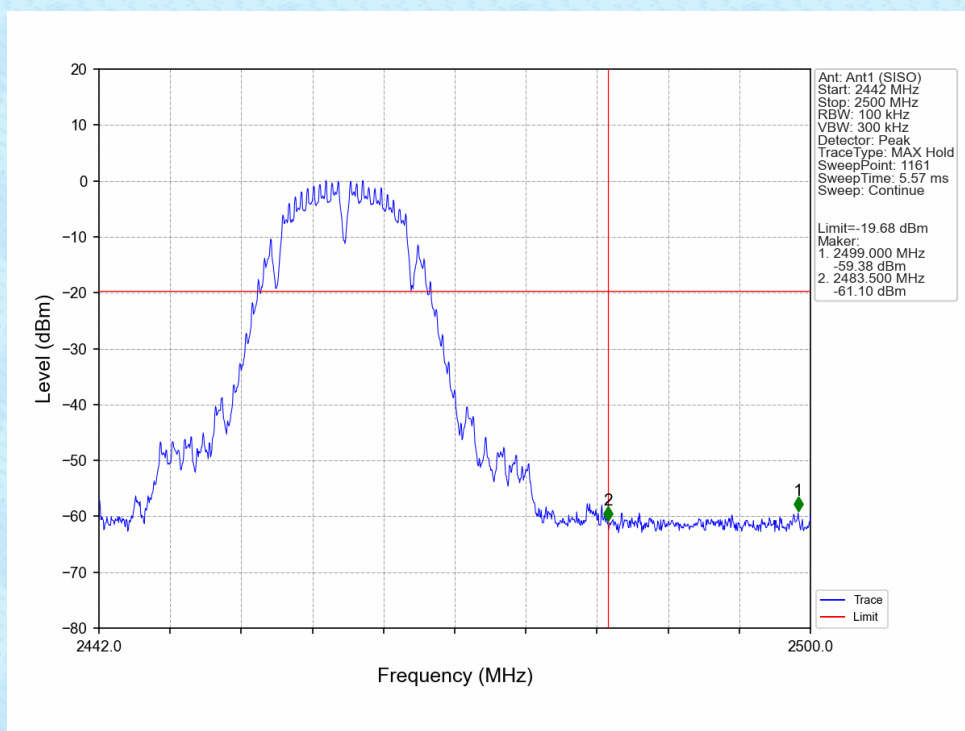




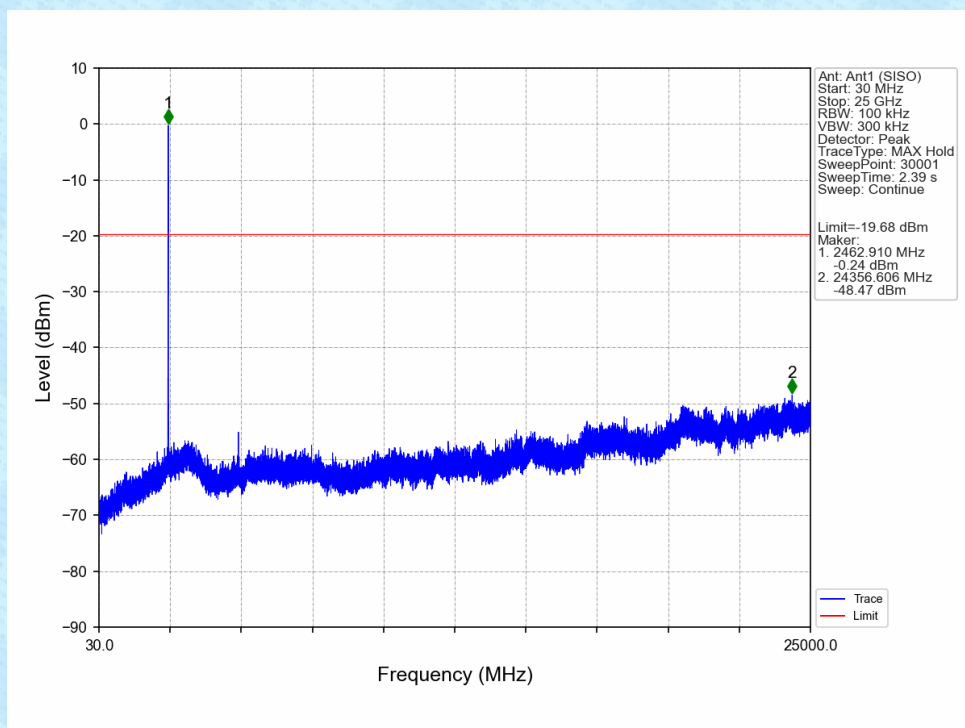
802.11b\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



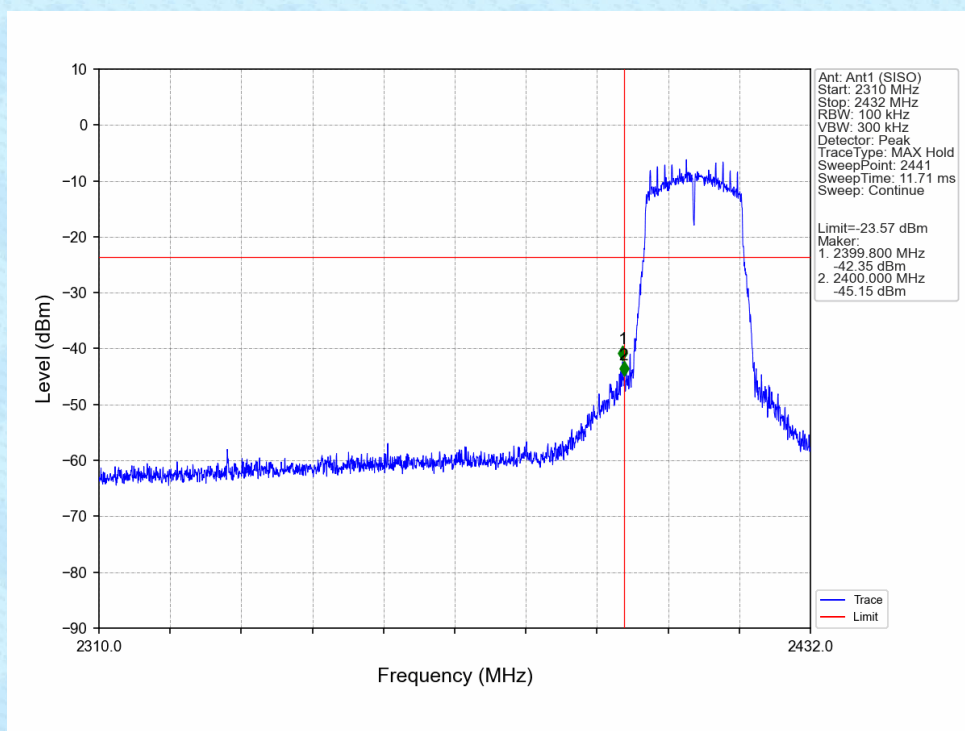
802.11b\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



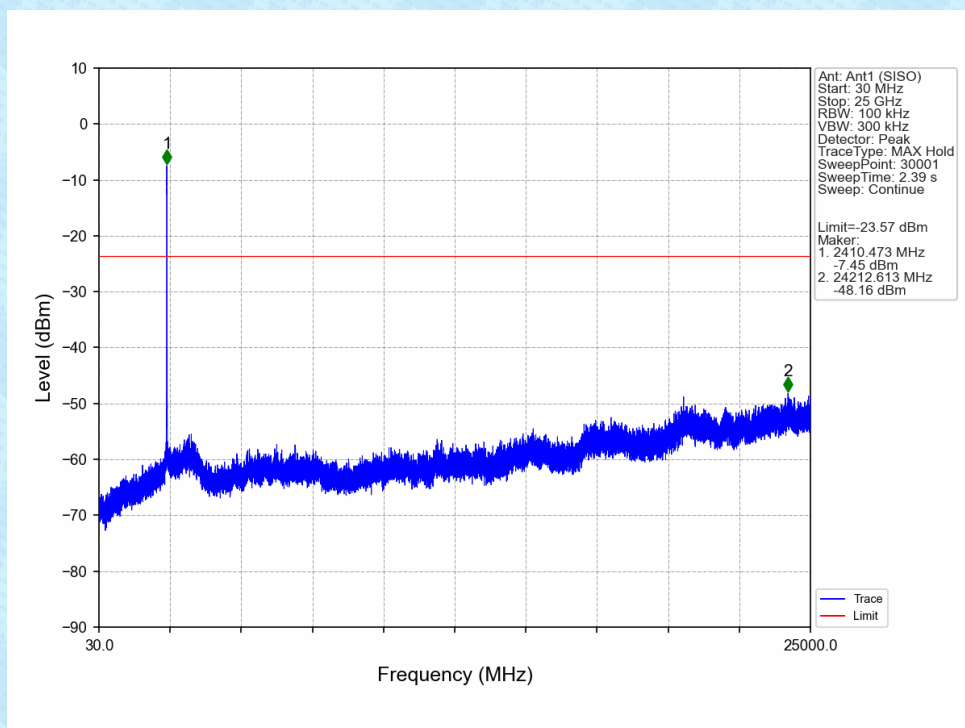
## 802.11b\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



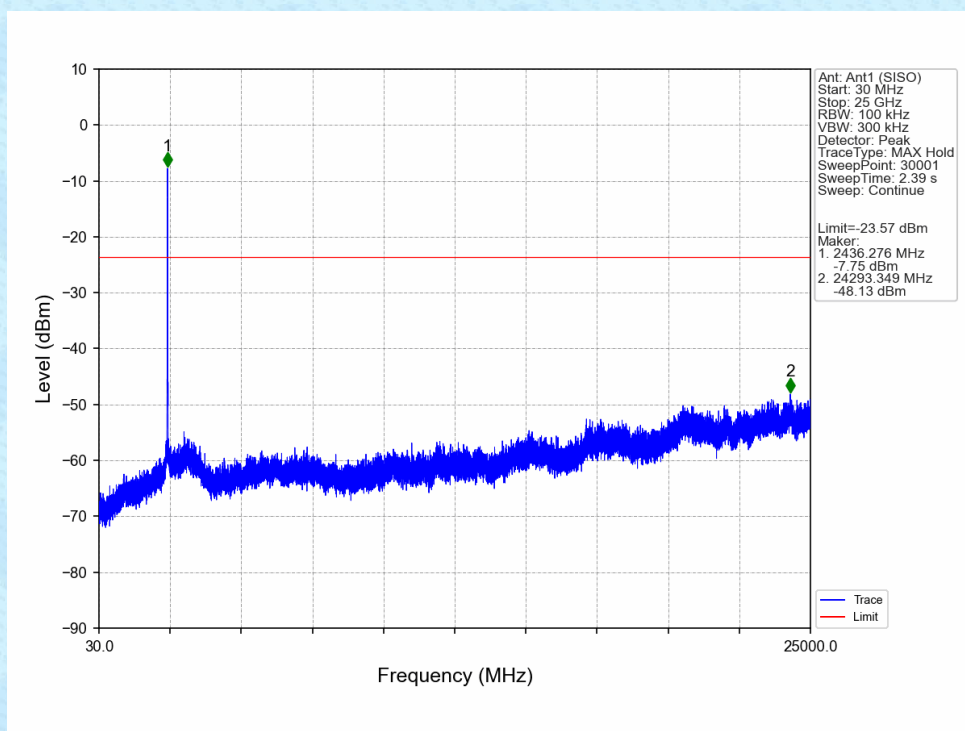
## 802.11g\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



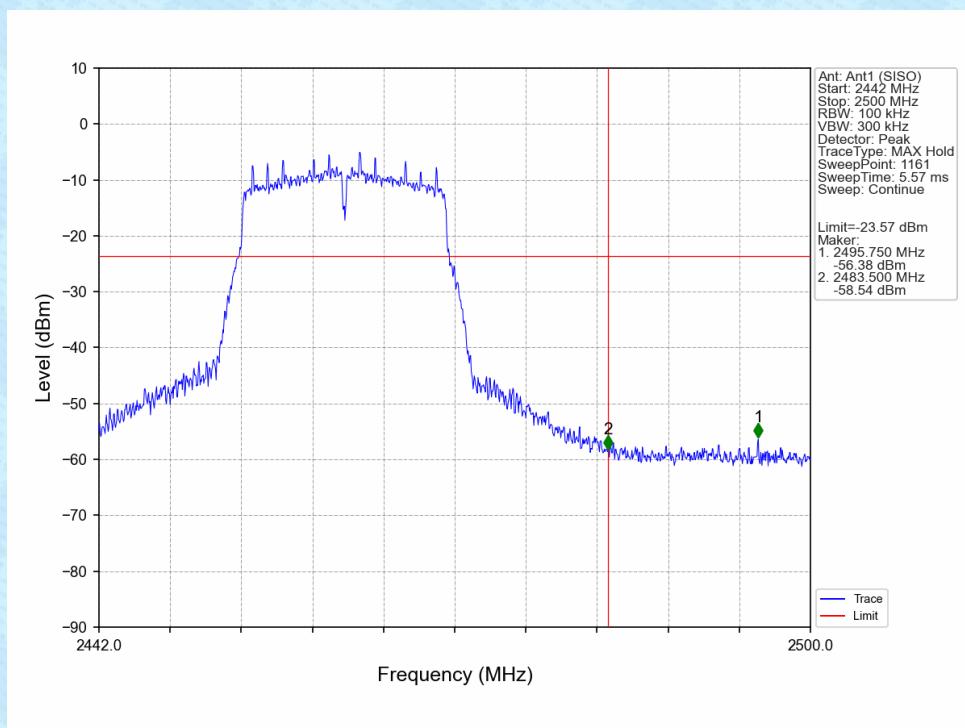
802.11g\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



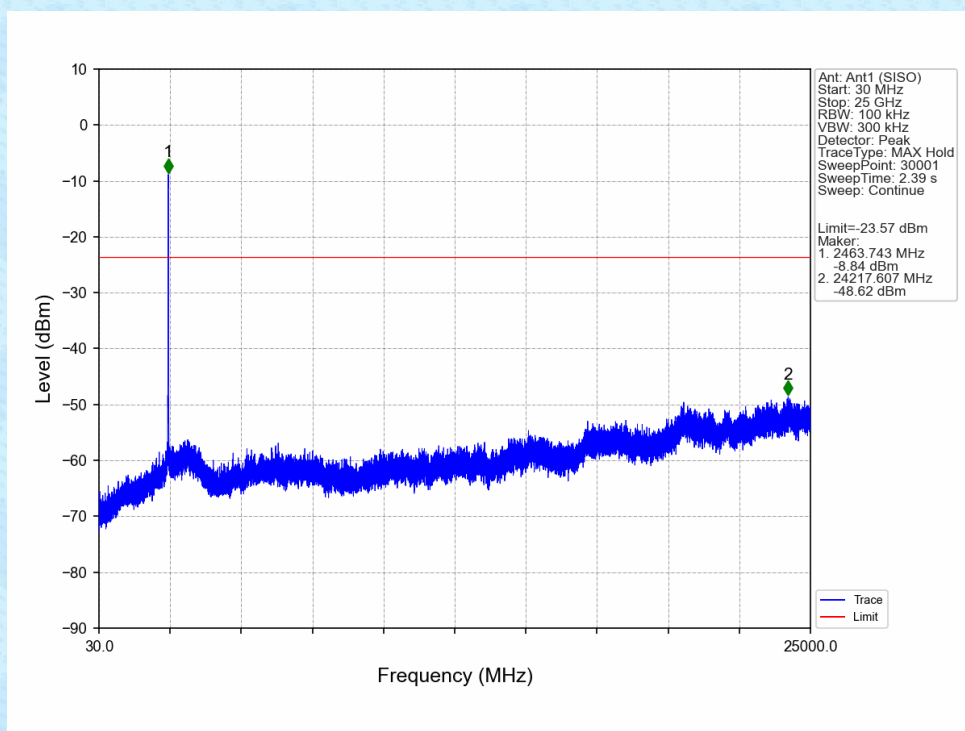
802.11g\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



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

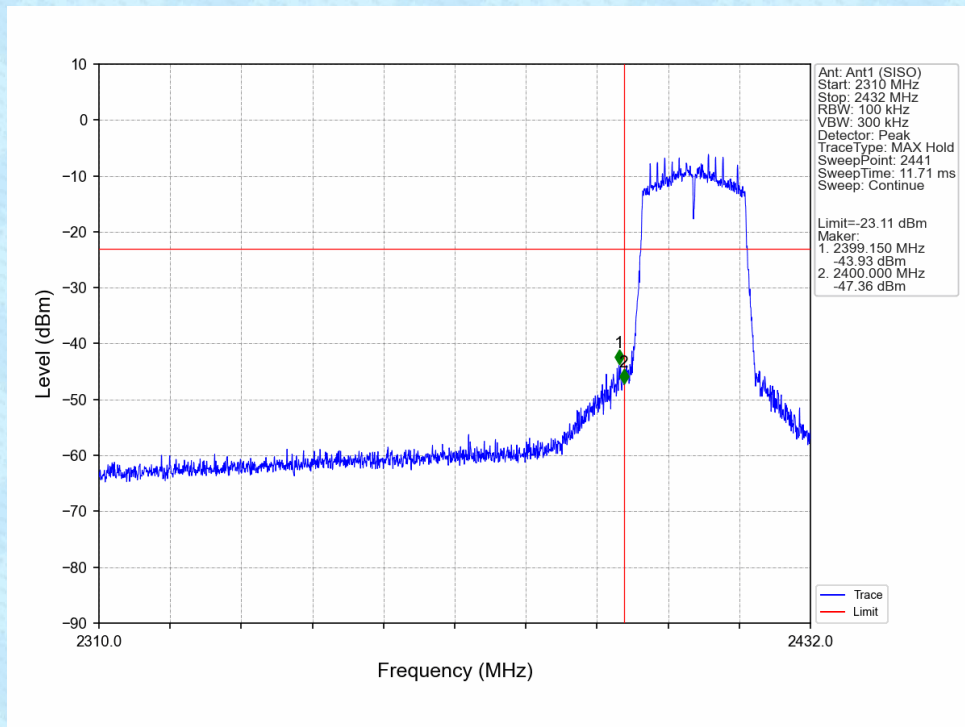


802.11g\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV

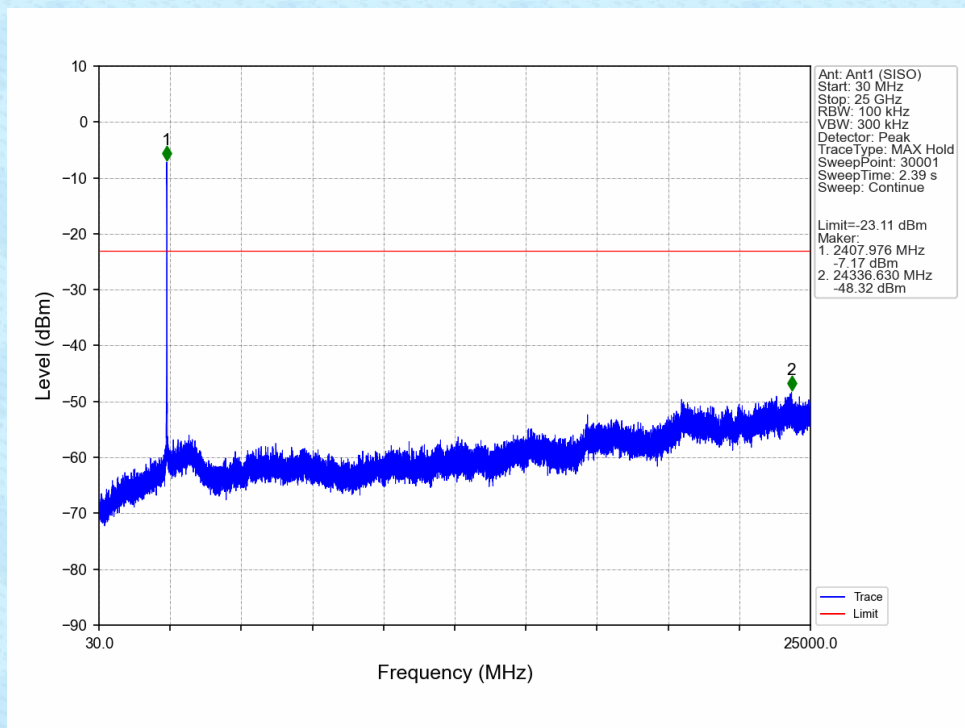




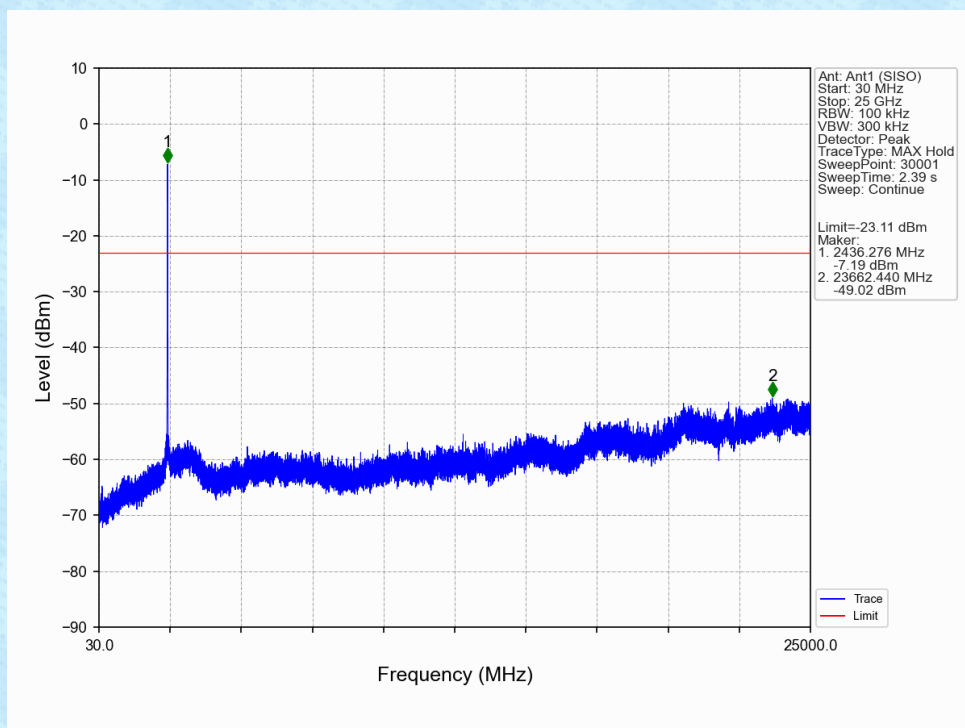
802.11n(HT20)\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



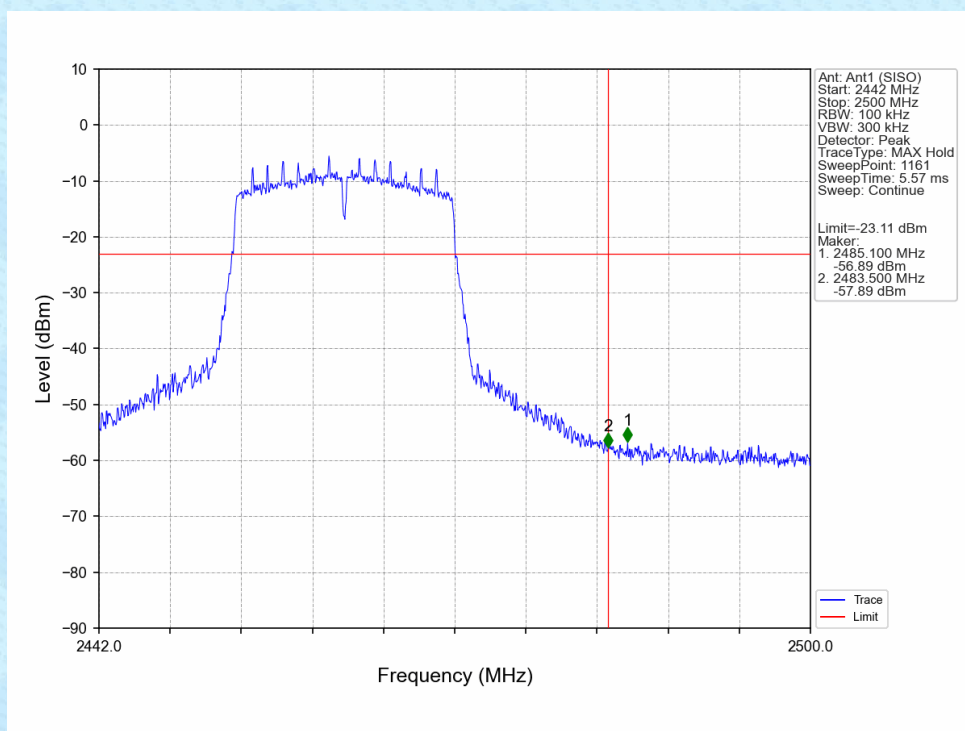
802.11n(HT20)\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



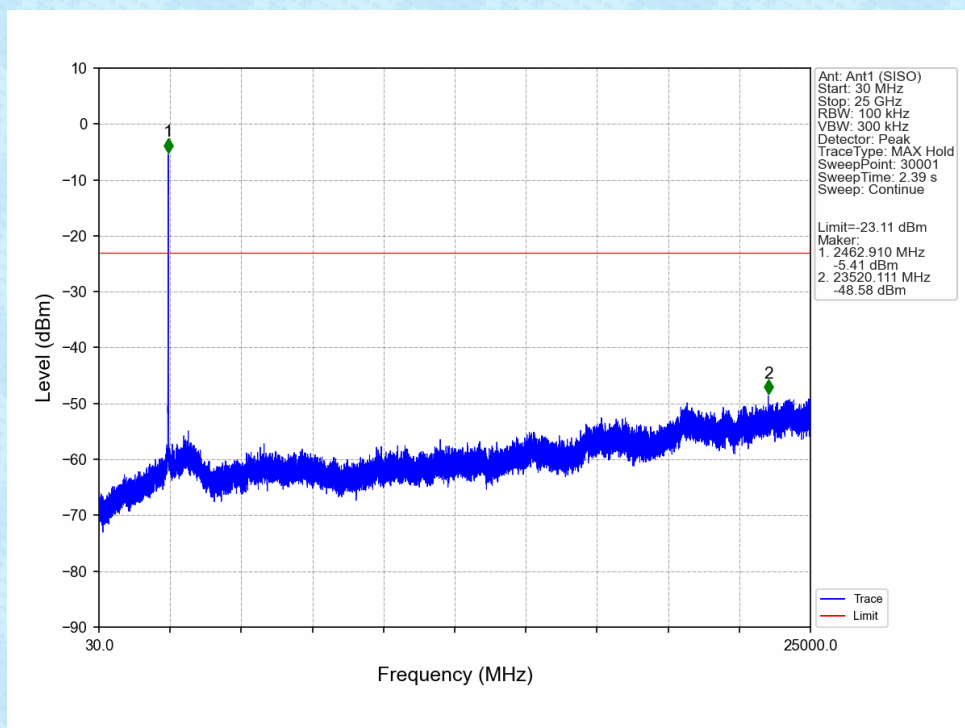
802.11n(HT20)\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



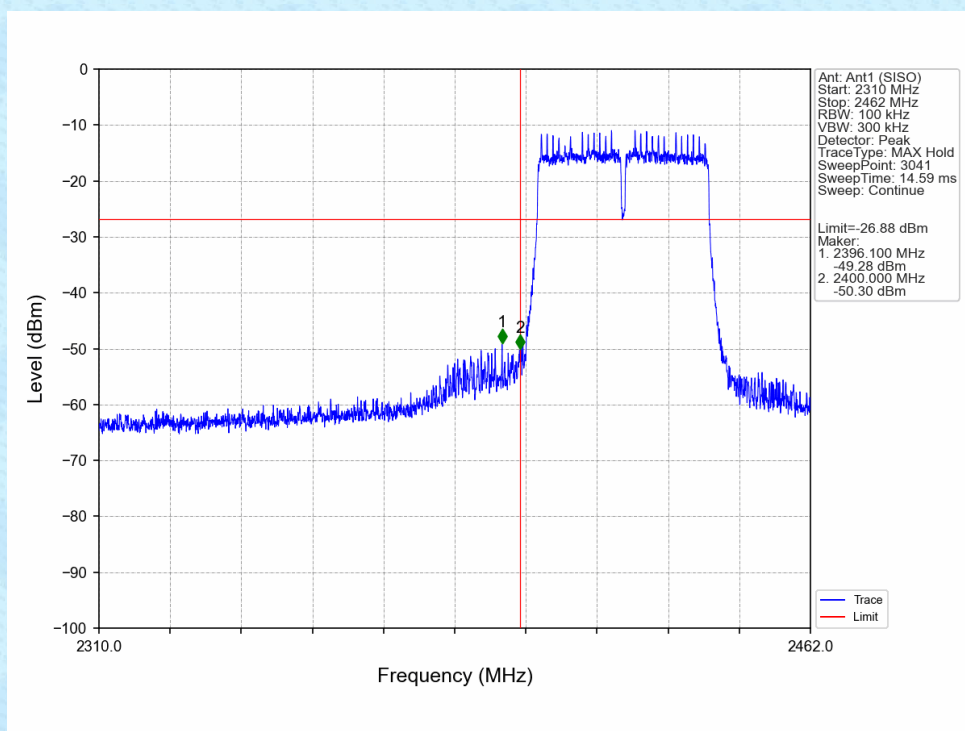
802.11n(HT20)\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



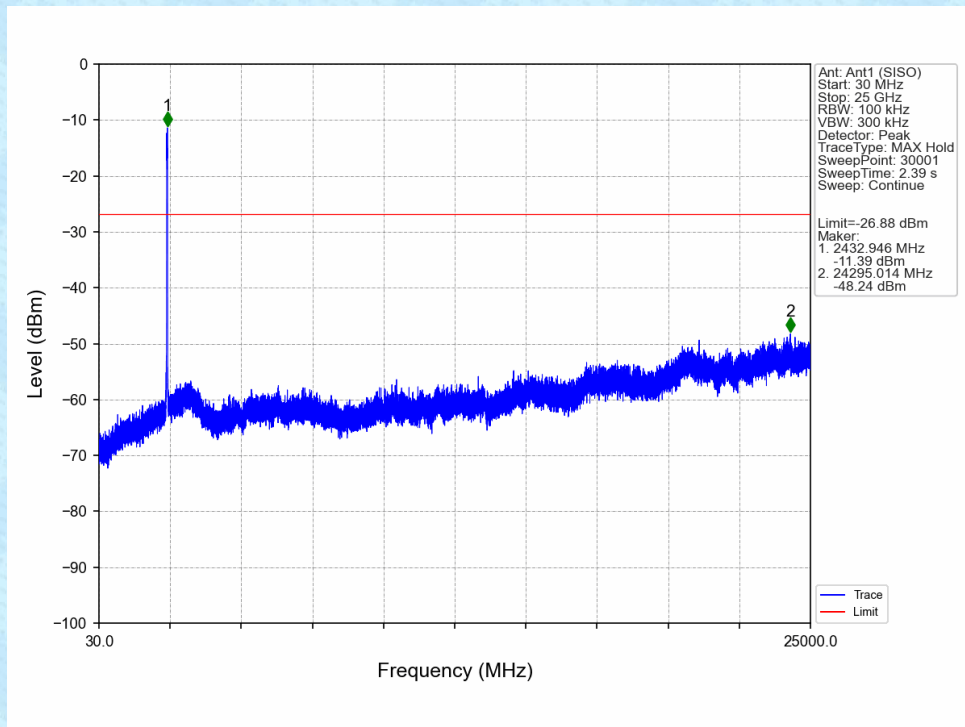
802.11n(HT20)\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



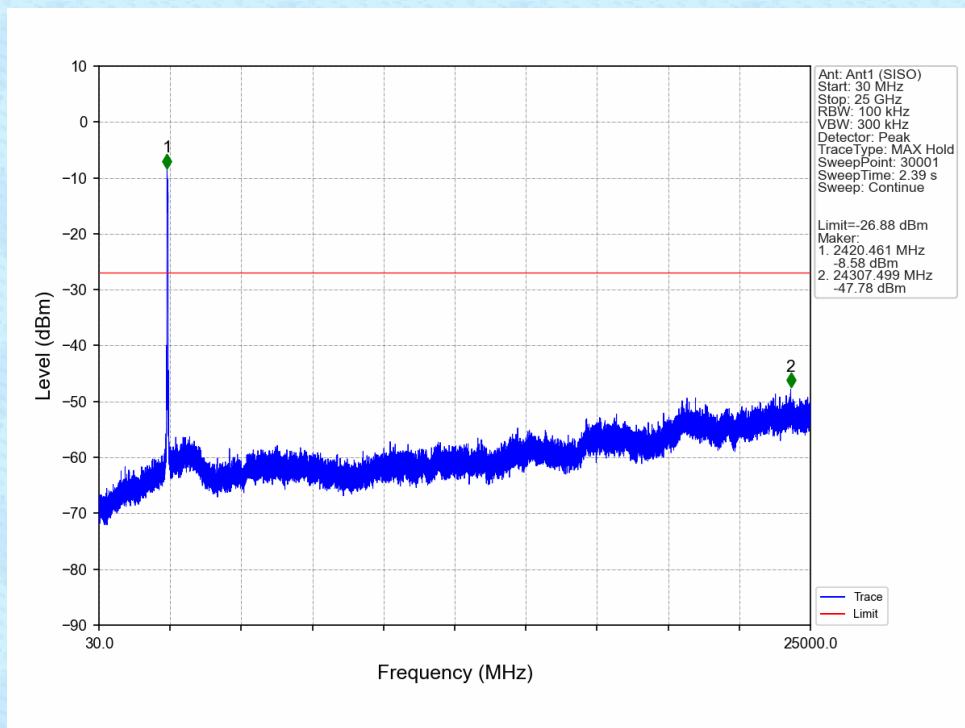
802.11n(HT40)\_LCH\_2422MHz\_Ant1 (SISO)\_NTNV



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

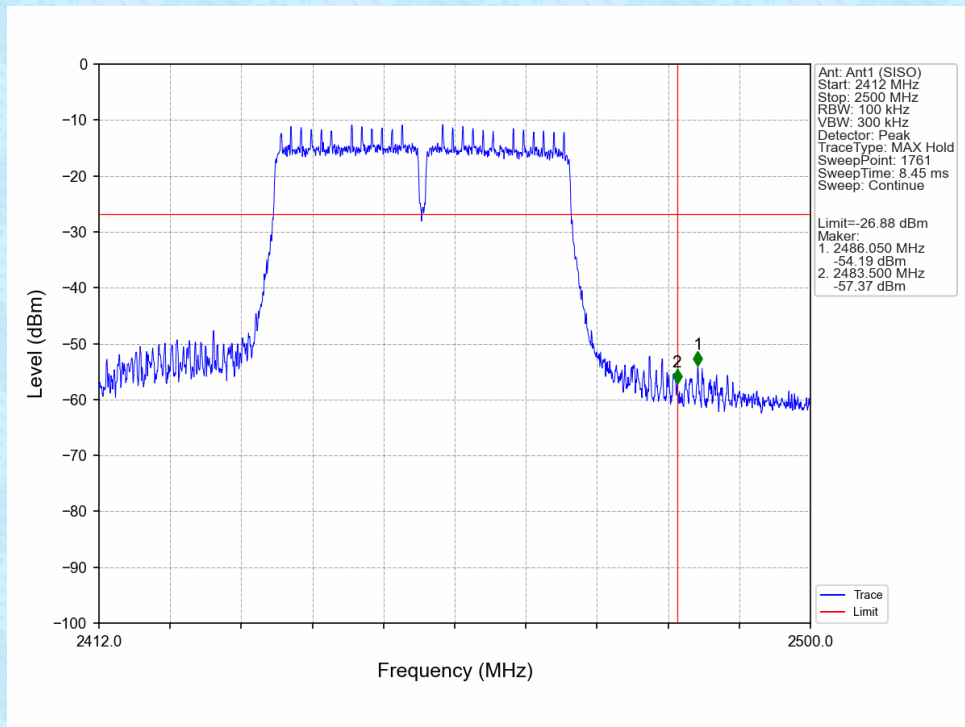


## 802.11n(HT40)\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV

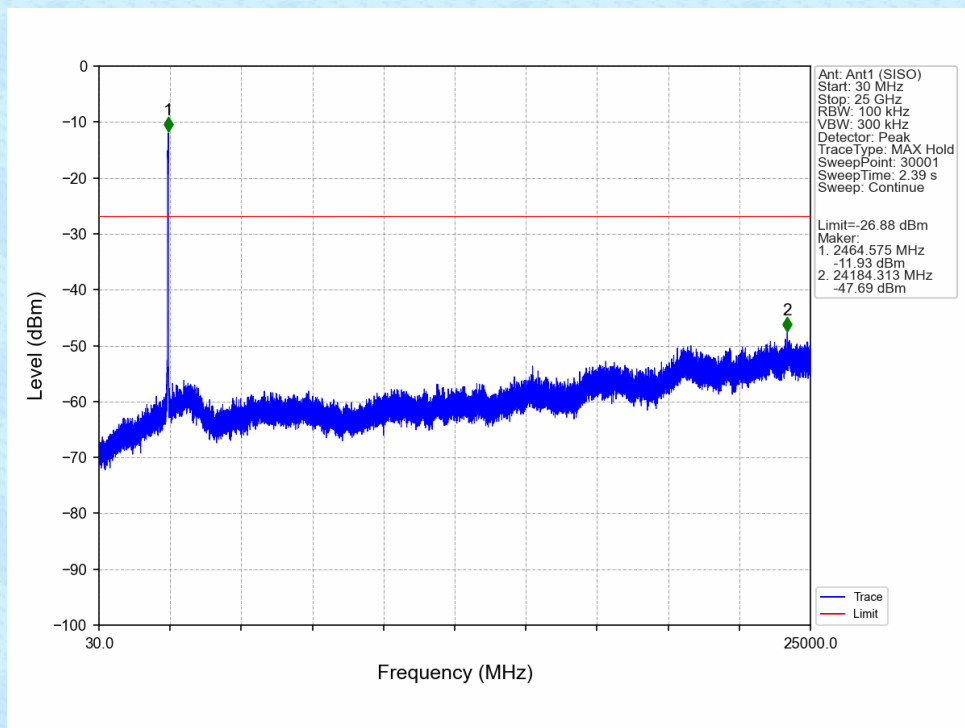




802.11n(HT40)\_HCH\_2452MHz\_Ant1 (SISO)\_NTNV



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



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