

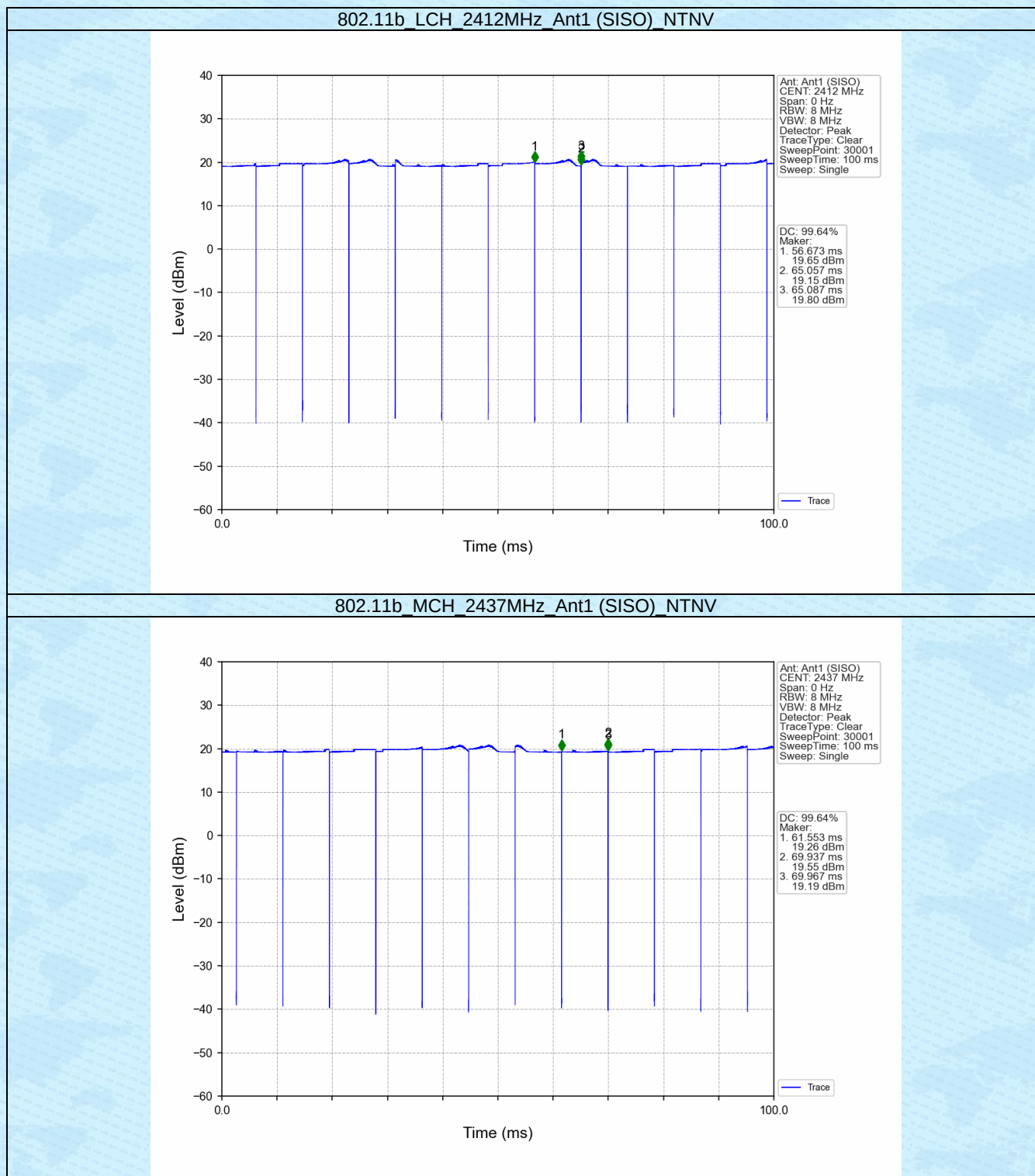
## 1. Duty Cycle

### 1.1 Ant1

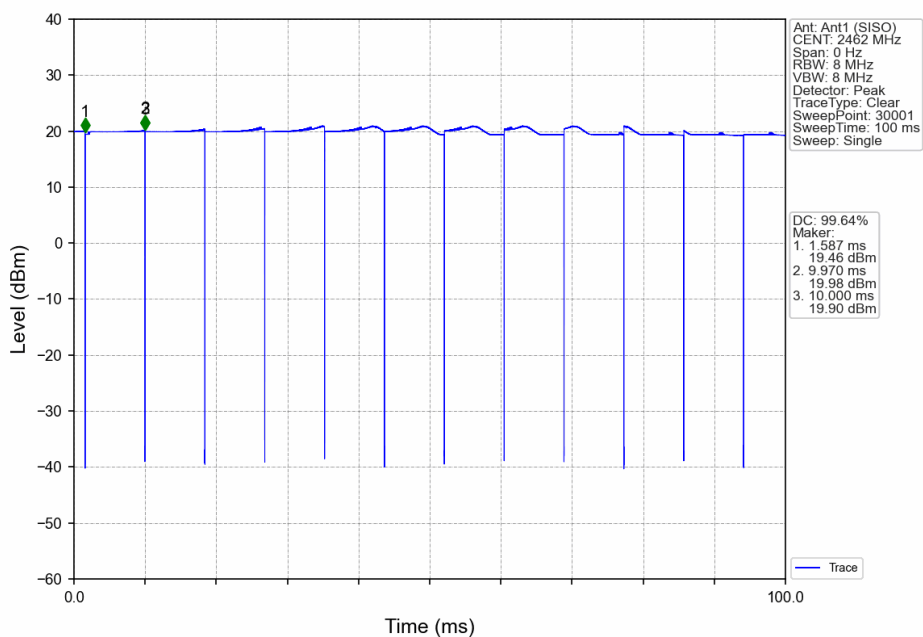
#### 1.1.1 Test Result

| 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            | 8.384     | 8.414       | 99.64          | 0.02                              | 0.04                  |
|                |         | 2437            | 8.384     | 8.414       | 99.64          | 0.02                              | 0.04                  |
|                |         | 2462            | 8.383     | 8.413       | 99.64          | 0.02                              | 0.04                  |
| 802.11g        | SISO    | 2412            | 1.394     | 1.428       | 97.62          | 0.10                              | 0.03                  |
|                |         | 2437            | 1.393     | 1.427       | 97.62          | 0.10                              | 0.03                  |
|                |         | 2462            | 1.393     | 1.427       | 97.62          | 0.10                              | 0.00                  |
| 802.11n (HT20) | MIMO    | 2412            | 1.301     | 1.335       | 97.45          | 0.11                              | 0.03                  |
|                |         | 2437            | 1.302     | 1.336       | 97.46          | 0.11                              | 0.03                  |
|                |         | 2462            | 1.301     | 1.335       | 97.45          | 0.11                              | 0.03                  |
| 802.11n (HT40) | MIMO    | 2422            | 0.649     | 0.683       | 95.02          | 0.22                              | 0.00                  |
|                |         | 2437            | 0.649     | 0.683       | 95.02          | 0.22                              | 0.03                  |
|                |         | 2452            | 0.649     | 0.683       | 95.02          | 0.22                              | 0.07                  |

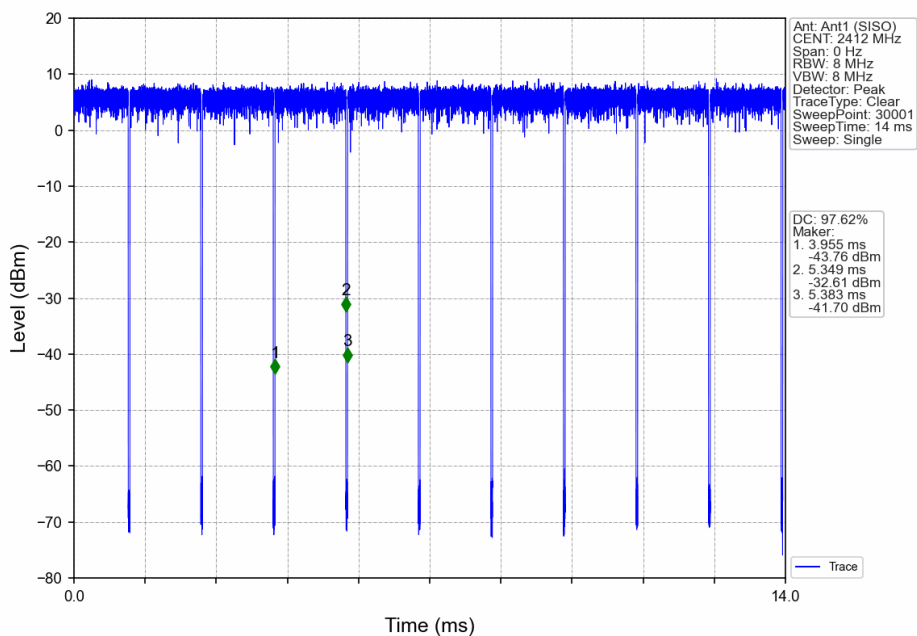
## 1.1.2 Test Graph



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

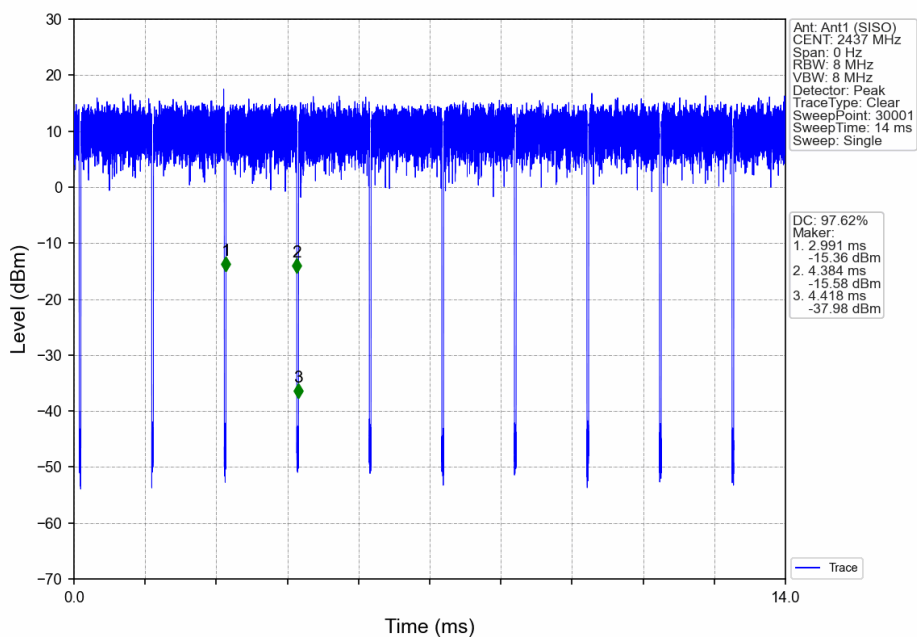


## 802.11g\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV

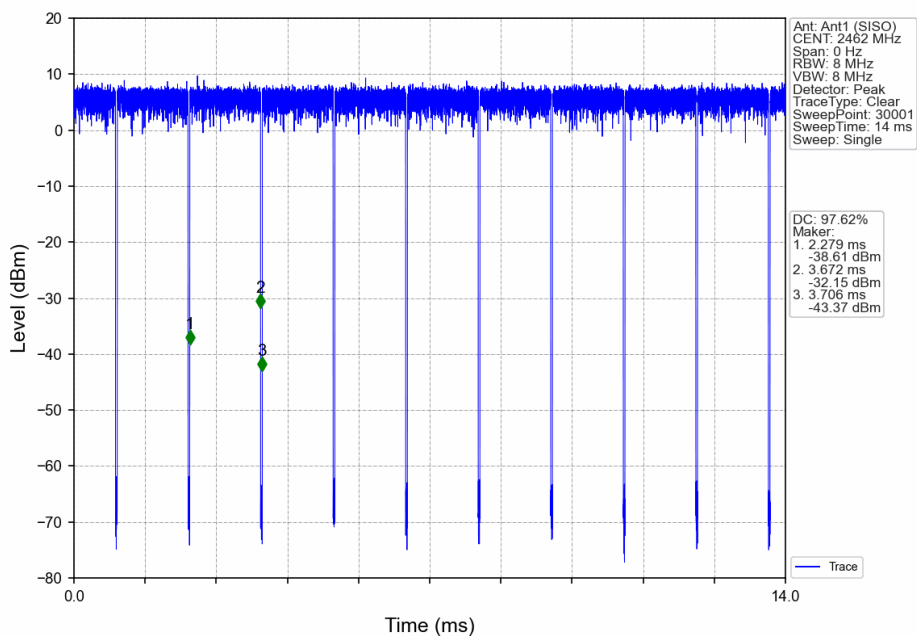




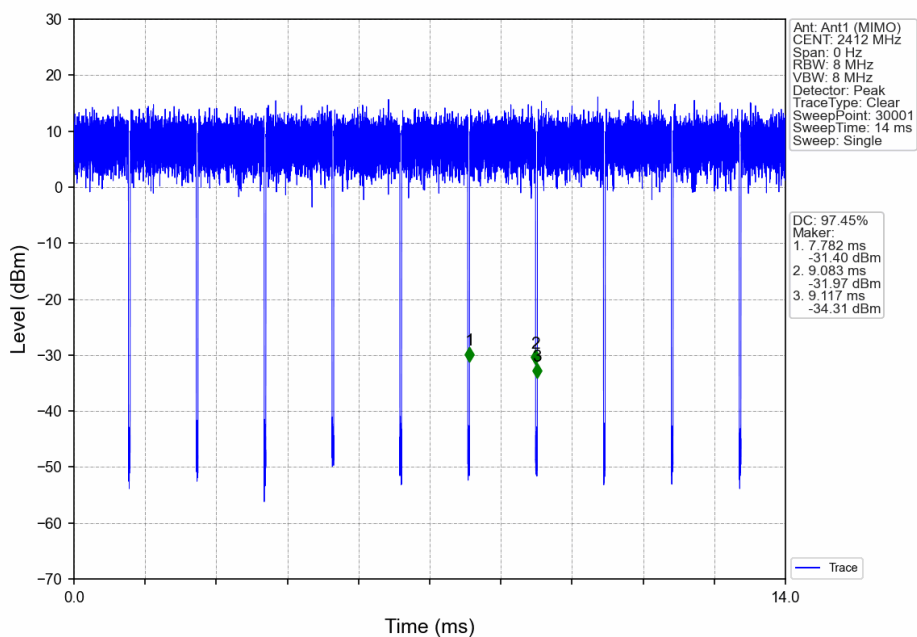
802.11g\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



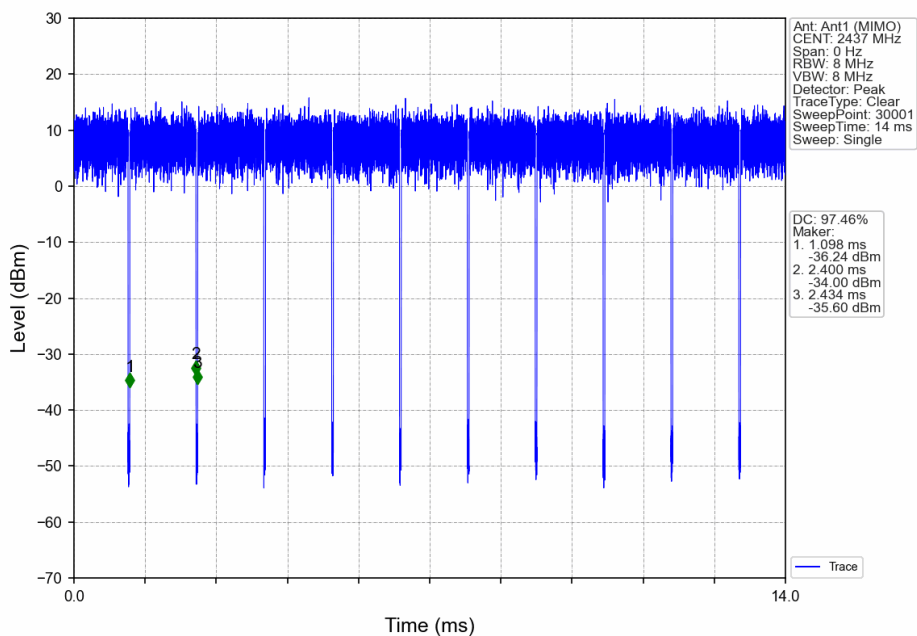
802.11g\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



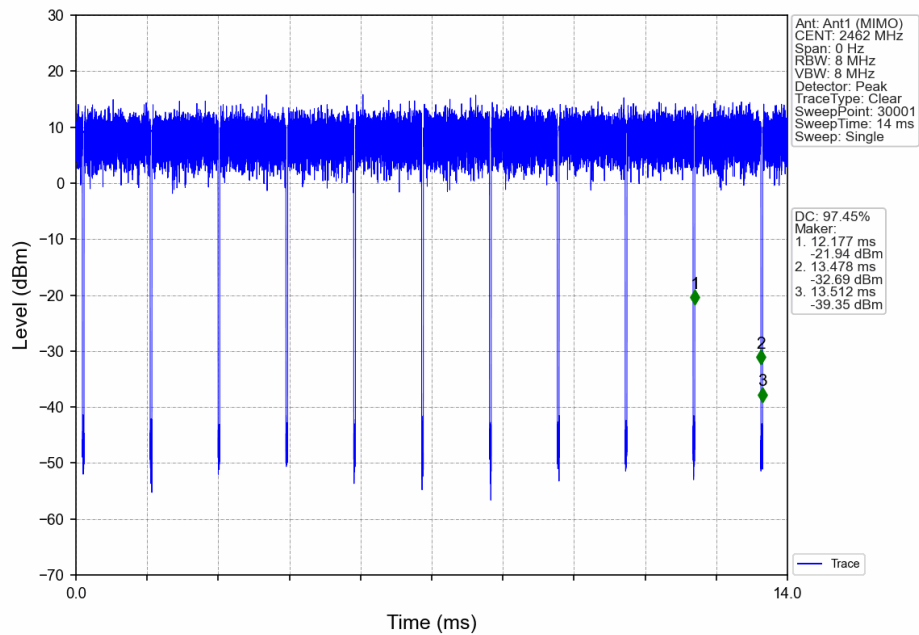
802.11n(HT20)\_LCH\_2412MHz\_Ant1 (MIMO)\_NTNV



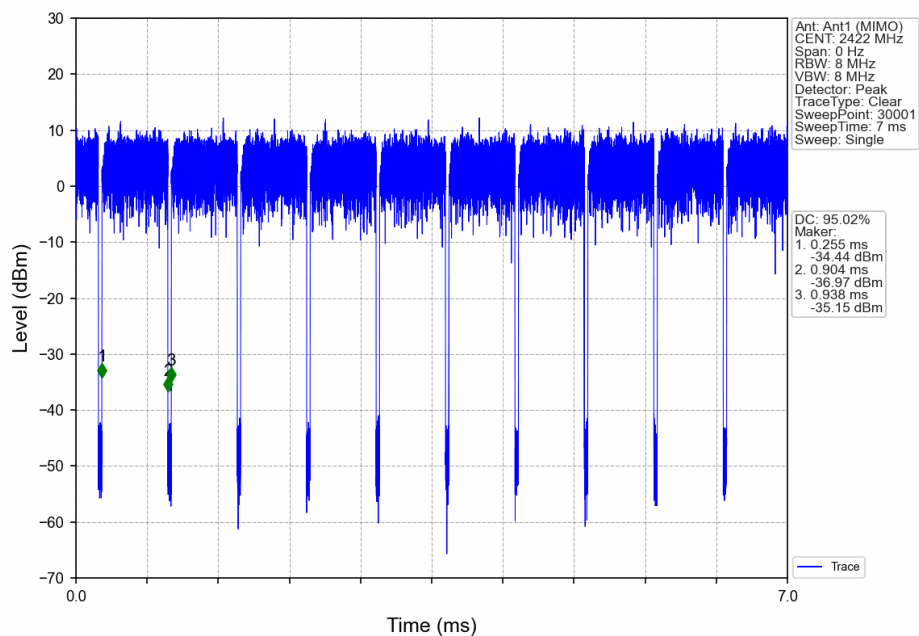
802.11n(HT20)\_MCH\_2437MHz\_Ant1 (MIMO)\_NTNV



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

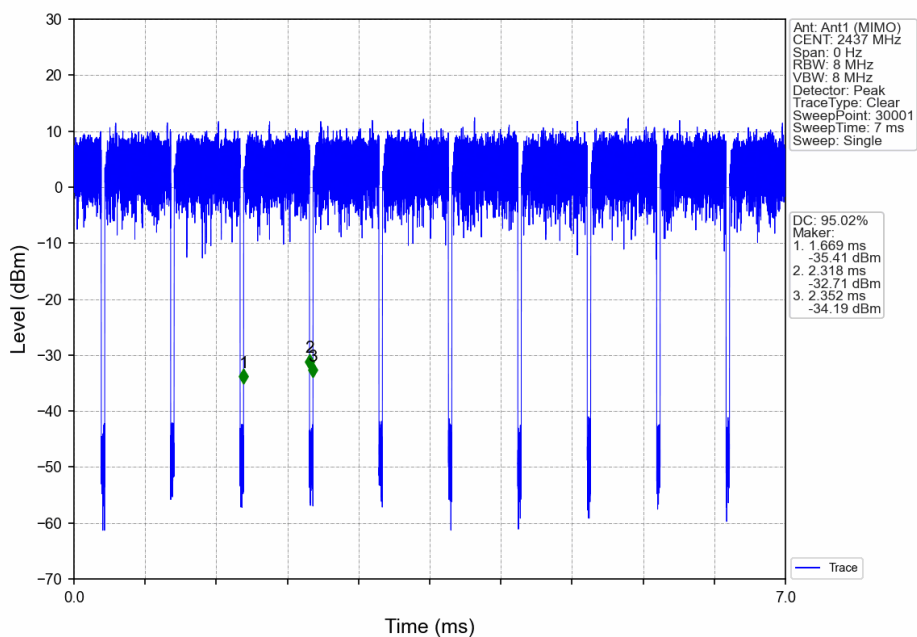


802.11n(HT40)\_LCH\_2422MHz\_Ant1 (MIMO)\_NTNV

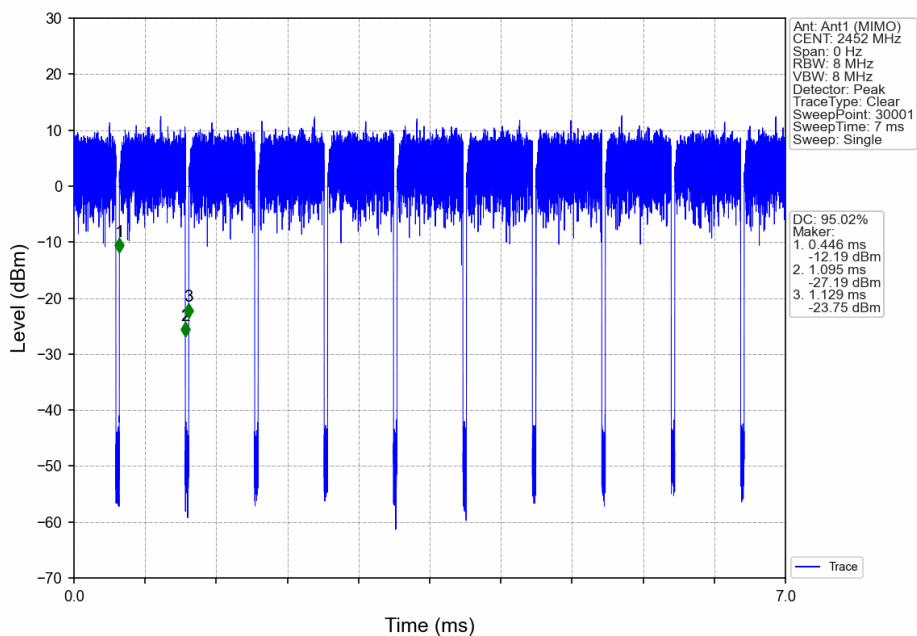




802.11n(HT40)\_MCH\_2437MHz\_Ant1 (MIMO)\_NTNV



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



## 2. Bandwidth

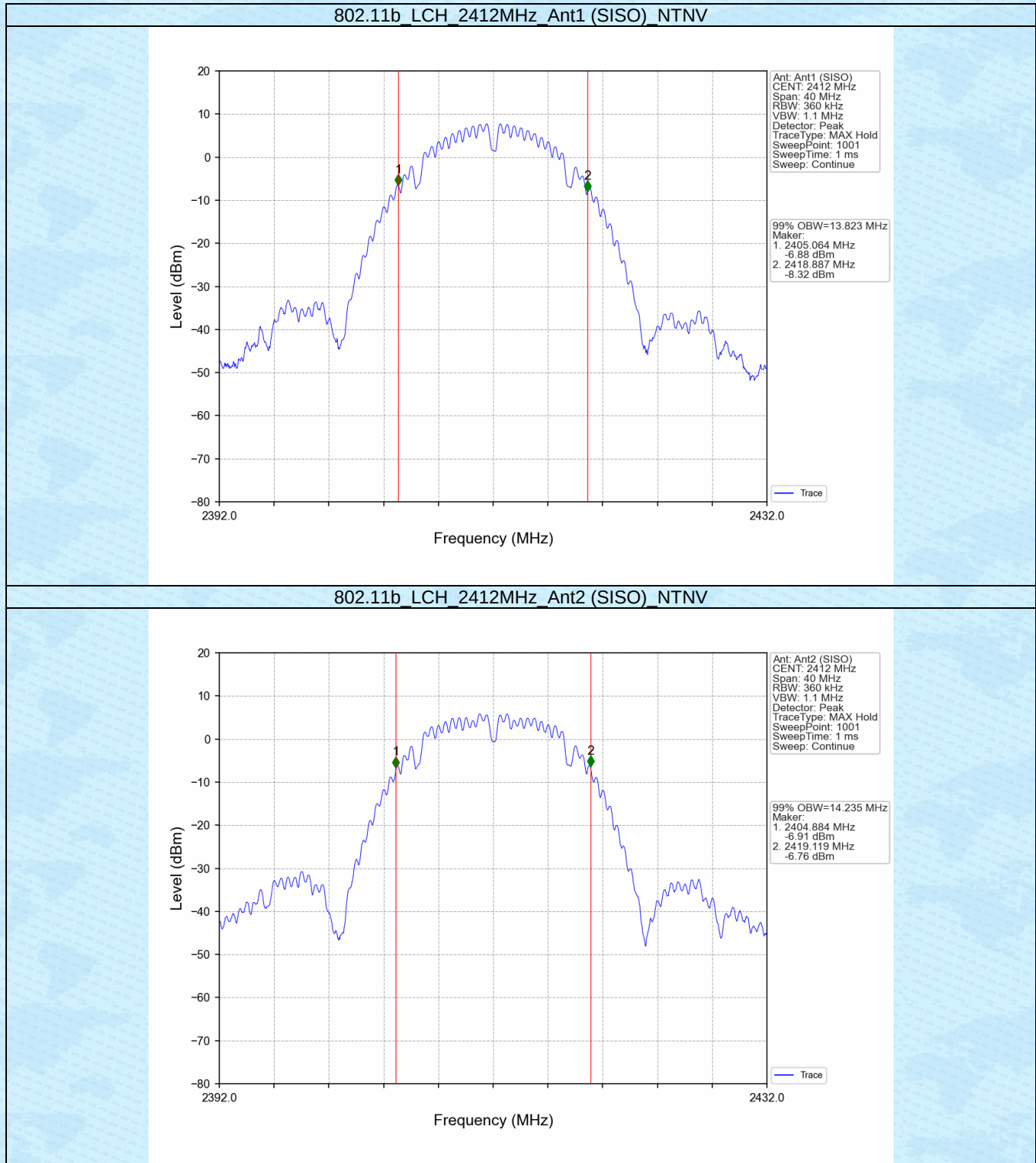
### 2.1 OBW

#### 2.1.1 Test Result

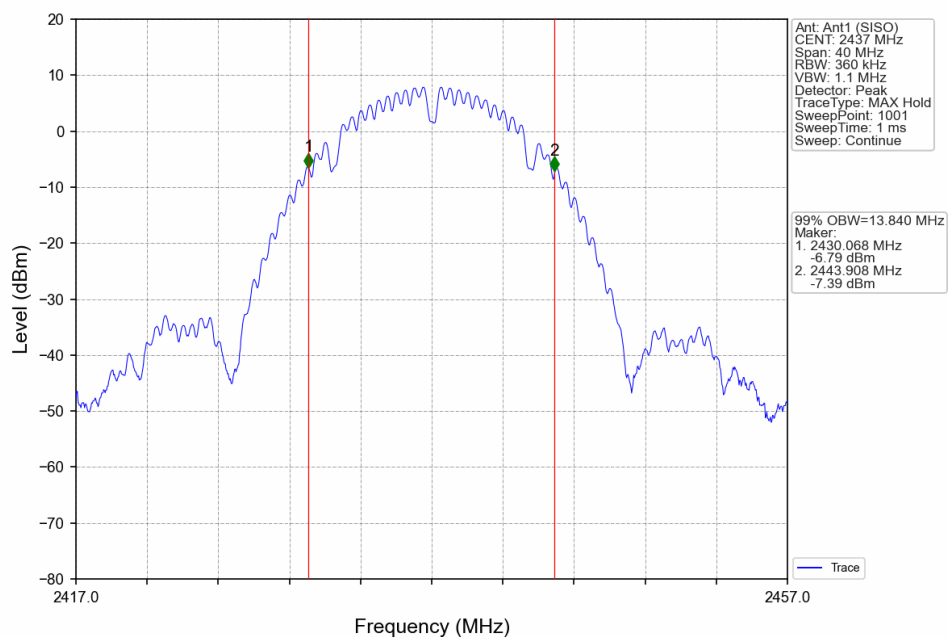
| Mode           | TX Type | Frequency (MHz) | ANT | 99% Occupied Bandwidth (MHz) | Verdict |
|----------------|---------|-----------------|-----|------------------------------|---------|
|                |         |                 |     | Result                       |         |
| 802.11b        | SISO    | 2412            | 1   | 13.823                       | Pass    |
|                |         |                 | 2   | 14.235                       | Pass    |
|                |         | 2437            | 1   | 13.840                       | Pass    |
|                |         |                 | 2   | 13.861                       | Pass    |
|                |         | 2462            | 1   | 13.898                       | Pass    |
|                |         |                 | 2   | 13.960                       | Pass    |
| 802.11g        | SISO    | 2412            | 1   | 17.366                       | Pass    |
|                |         |                 | 2   | 16.963                       | Pass    |
|                |         | 2437            | 1   | 17.364                       | Pass    |
|                |         |                 | 2   | 16.965                       | Pass    |
|                |         | 2462            | 1   | 17.349                       | Pass    |
|                |         |                 | 2   | 16.972                       | Pass    |
| 802.11n (HT20) | MIMO    | 2412            | 1   | 18.116                       | Pass    |
|                |         |                 | 2   | 17.758                       | Pass    |
|                |         | 2437            | 1   | 18.110                       | Pass    |
|                |         |                 | 2   | 17.755                       | Pass    |
|                |         | 2462            | 1   | 18.120                       | Pass    |
|                |         |                 | 2   | 17.768                       | Pass    |
| 802.11n (HT40) | MIMO    | 2422            | 1   | 36.363                       | Pass    |
|                |         |                 | 2   | 36.807                       | Pass    |
|                |         | 2437            | 1   | 36.327                       | Pass    |
|                |         |                 | 2   | 36.853                       | Pass    |
|                |         | 2452            | 1   | 36.357                       | Pass    |
|                |         |                 | 2   | 36.911                       | Pass    |



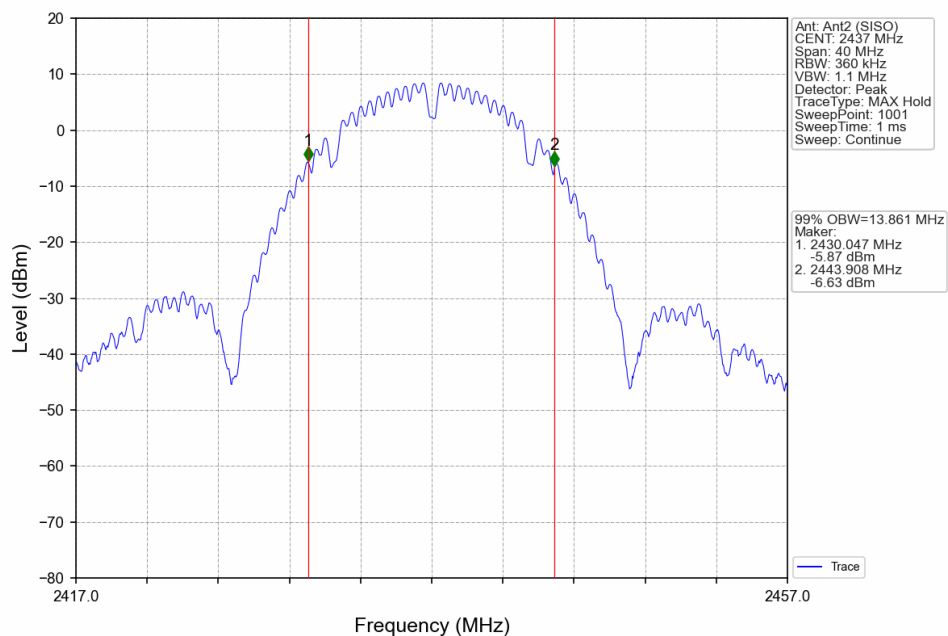
## 2.1.2 Test Graph



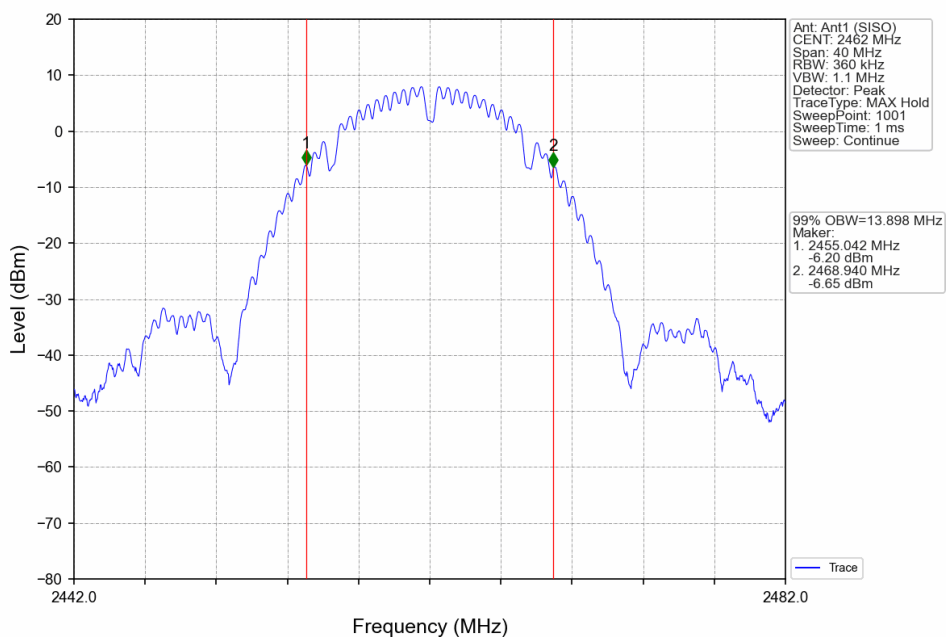
802.11b\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



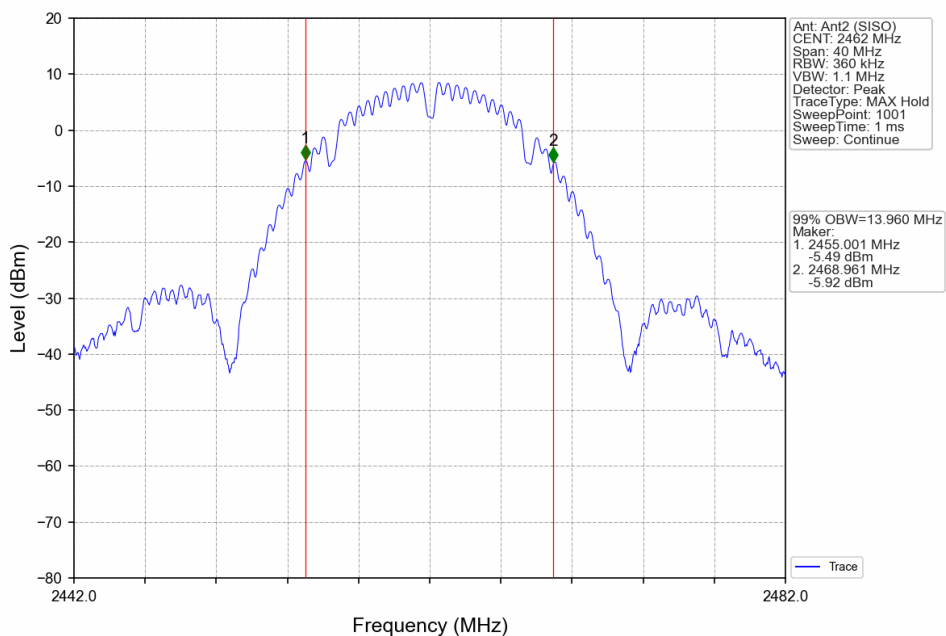
802.11b\_MCH\_2437MHz\_Ant2 (SISO)\_NTNV



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

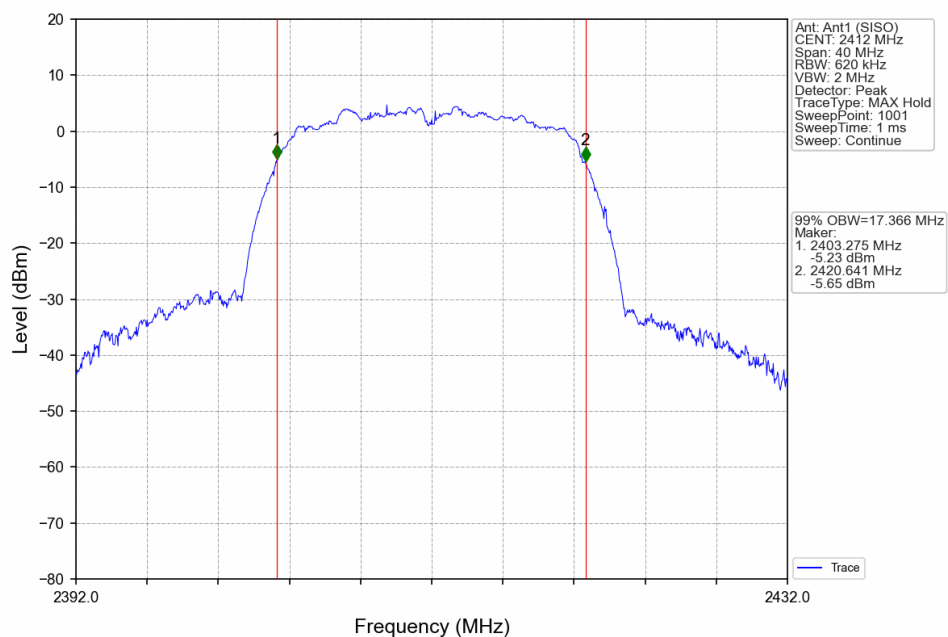


802.11b\_HCH\_2462MHz\_Ant2 (SISO)\_NTNV

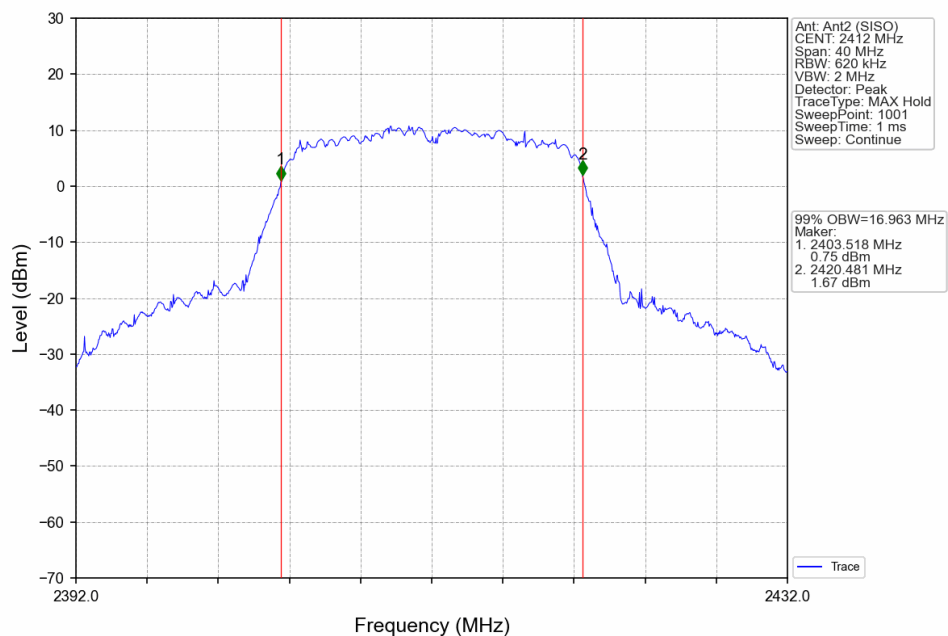




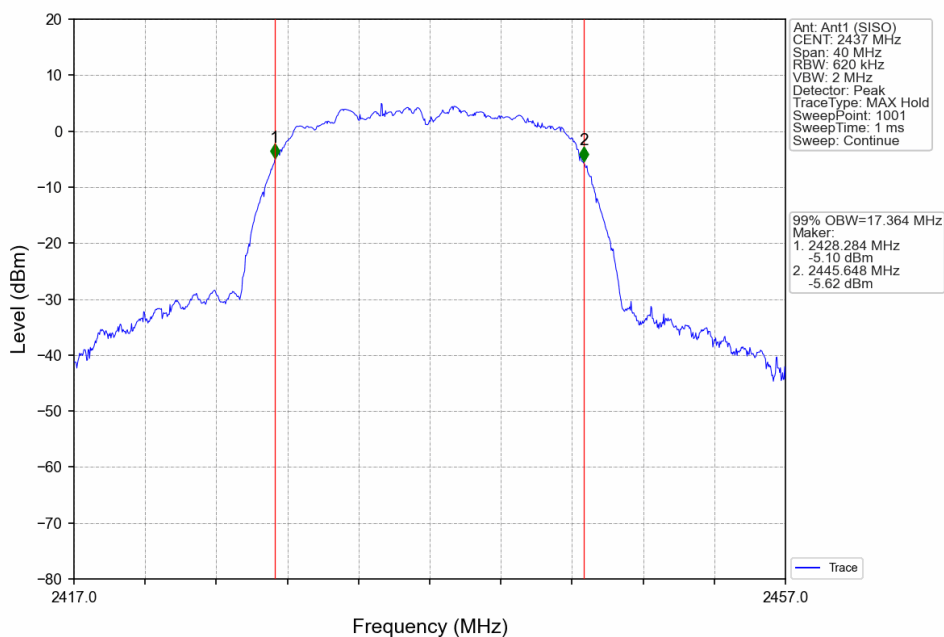
802.11g\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



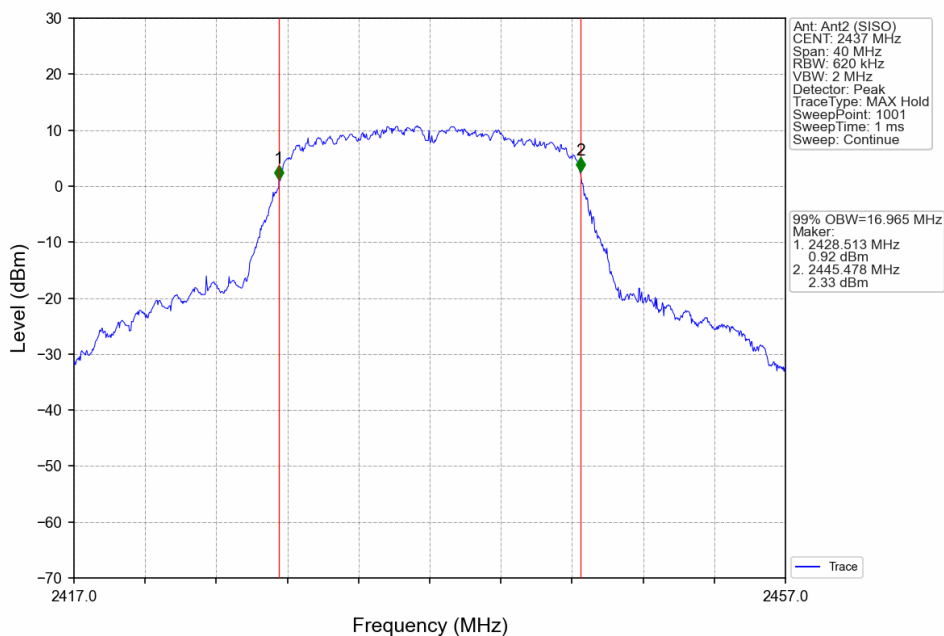
802.11g\_LCH\_2412MHz\_Ant2 (SISO)\_NTNV



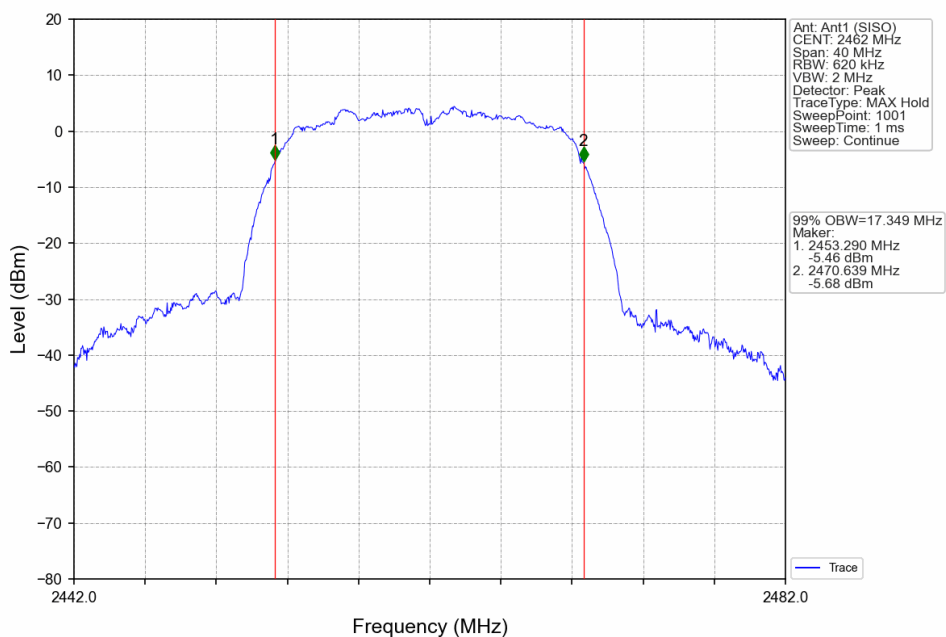
802.11g\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



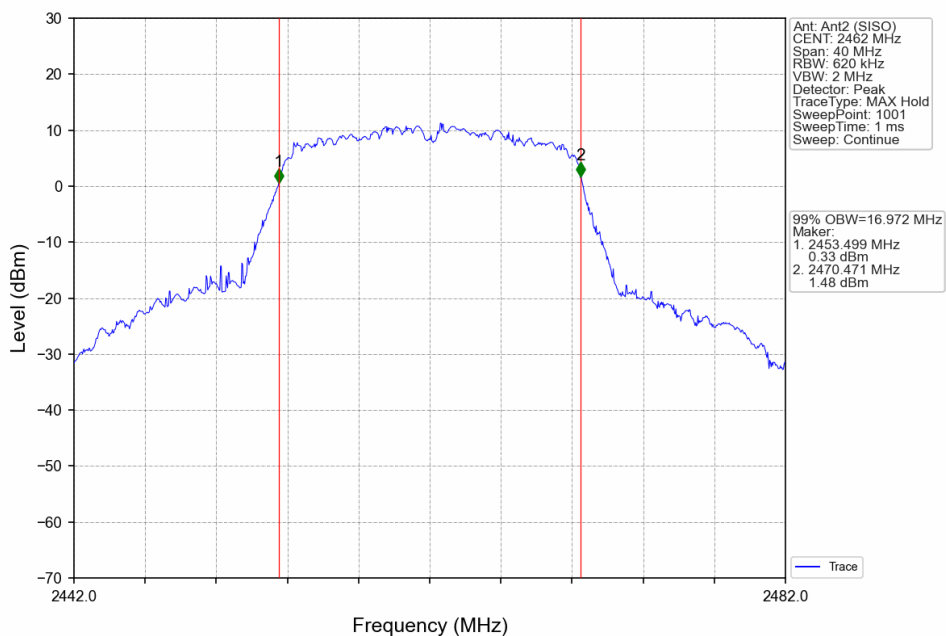
802.11g\_MCH\_2437MHz\_Ant2 (SISO)\_NTNV



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

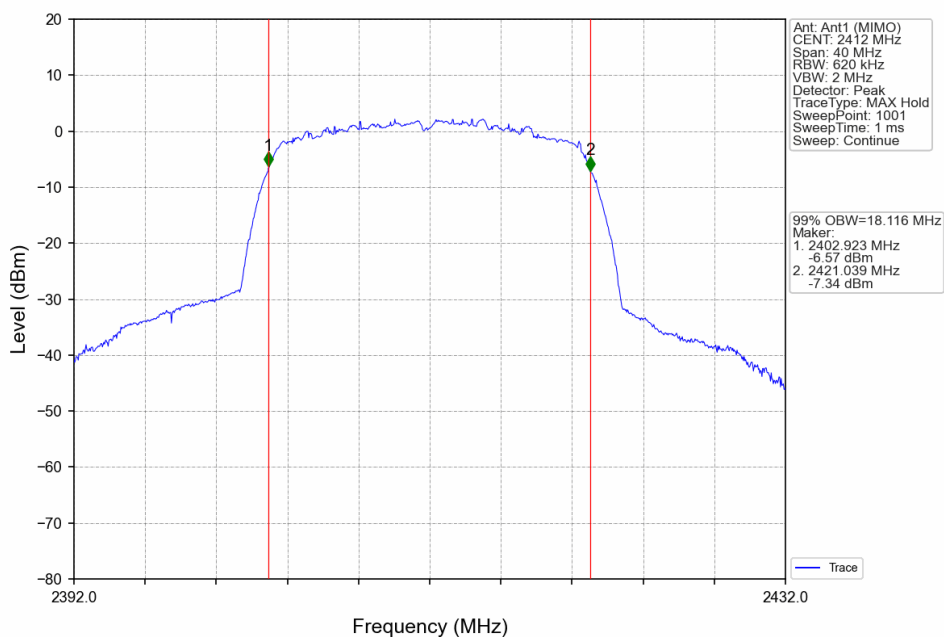


802.11g\_HCH\_2462MHz\_Ant2 (SISO)\_NTNV

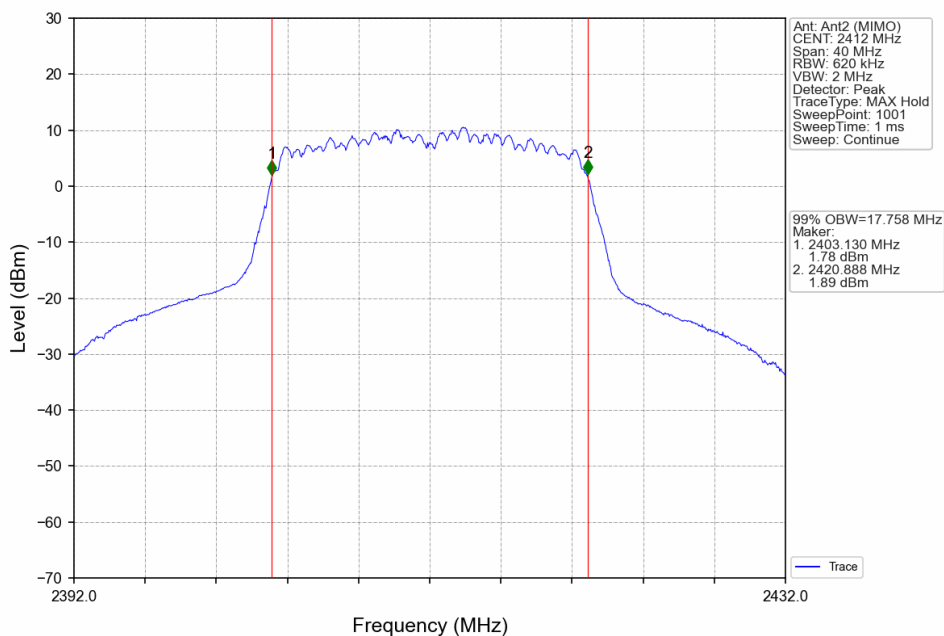




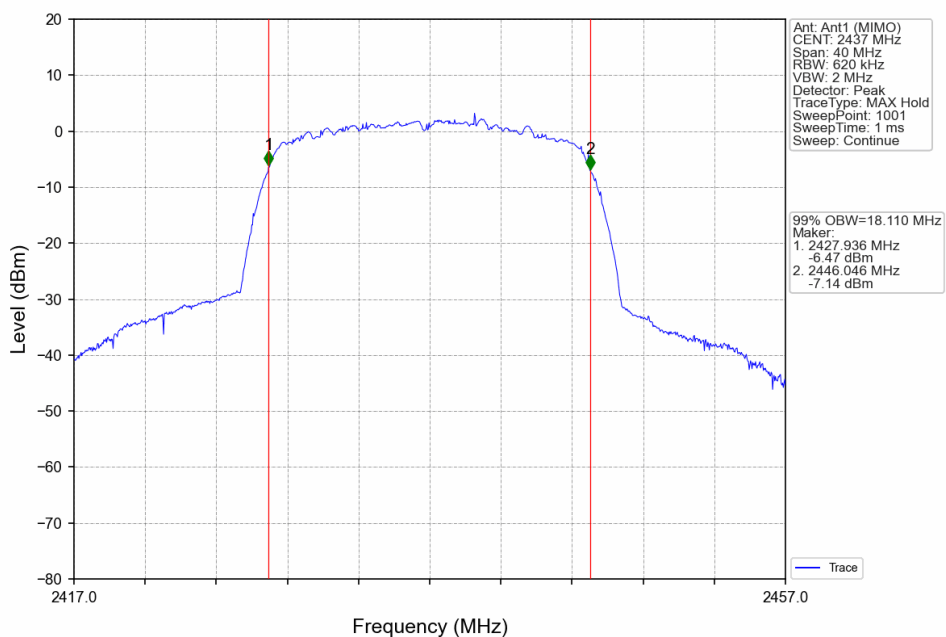
802.11n(HT20)\_LCH\_2412MHz\_Ant1 (MIMO)\_NTNV



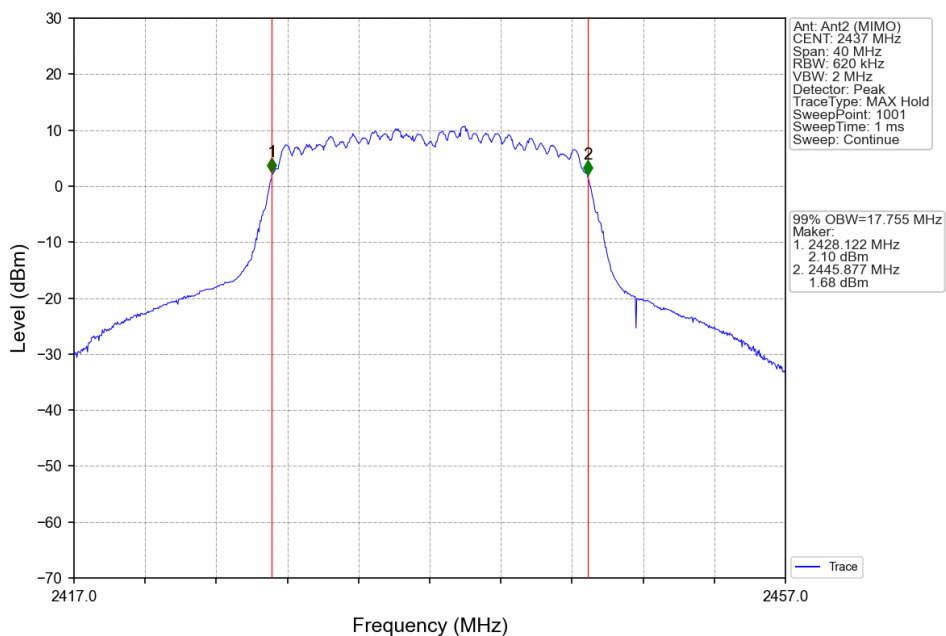
802.11n(HT20)\_LCH\_2412MHz\_Ant2 (MIMO)\_NTNV



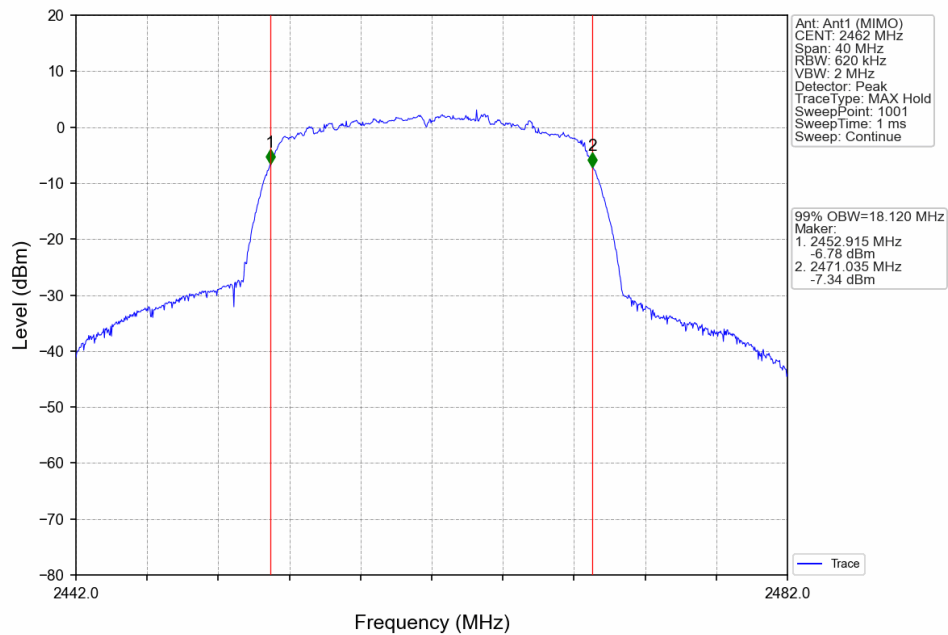
802.11n(HT20)\_MCH\_2437MHz\_Ant1 (MIMO)\_NTNV



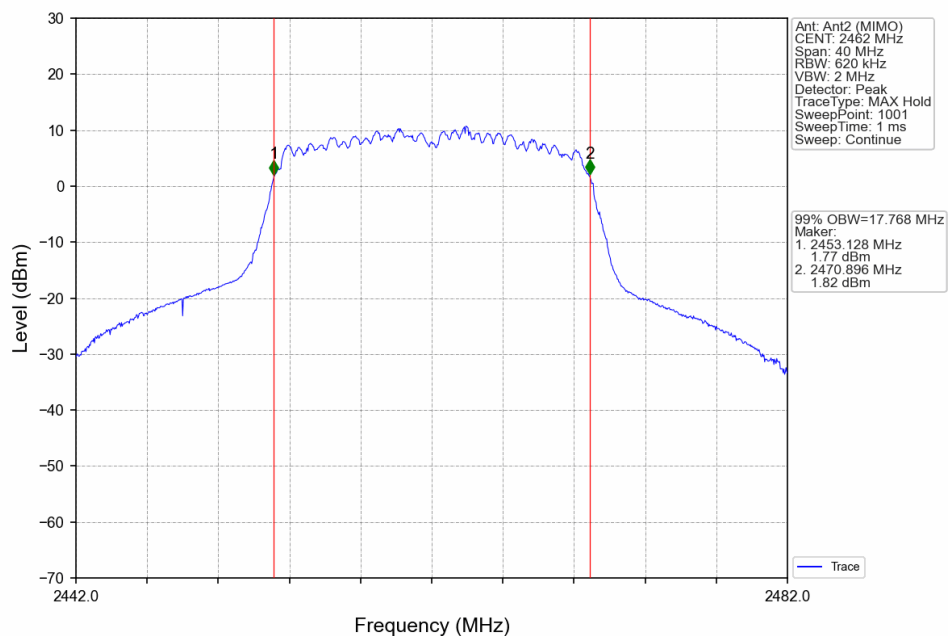
802.11n(HT20)\_MCH\_2437MHz\_Ant2 (MIMO)\_NTNV



802.11n(HT20) HCH 2462MHz\_Ant1 (MIMO) NTN

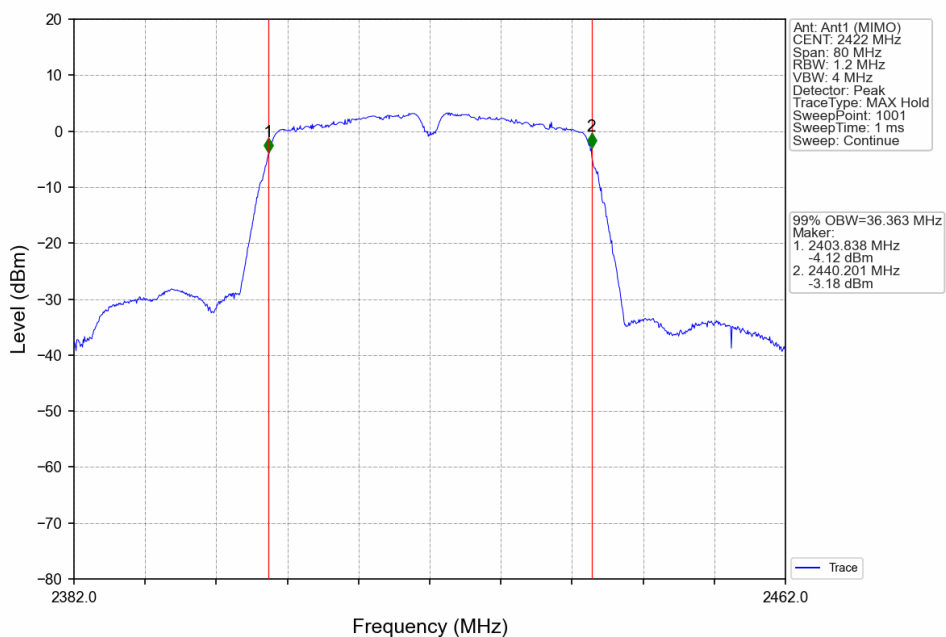


802.11n(HT20) HCH 2462MHz\_Ant2 (MIMO) NTN

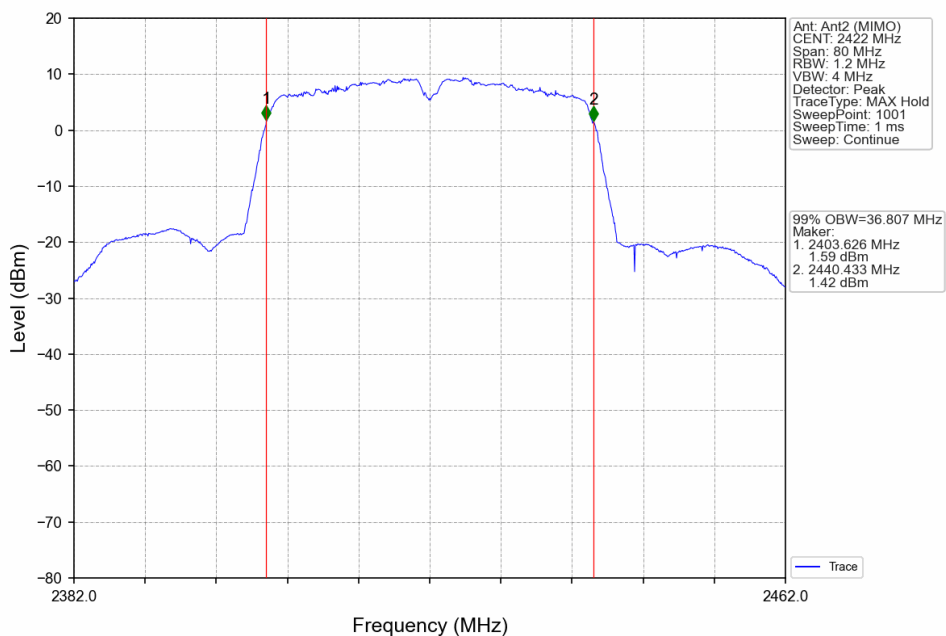




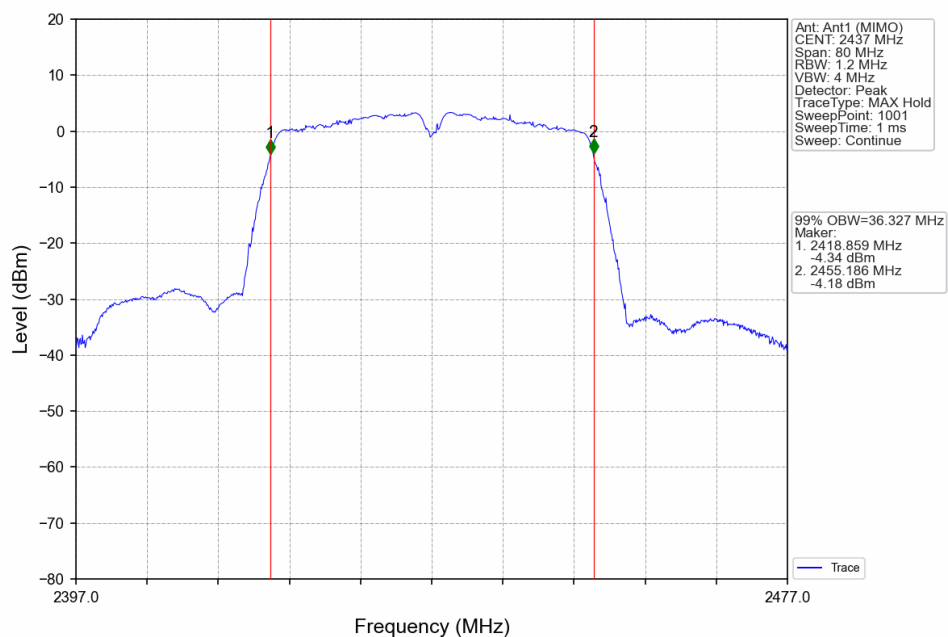
802.11n(HT40)\_LCH\_2422MHz\_Ant1 (MIMO)\_NTNV



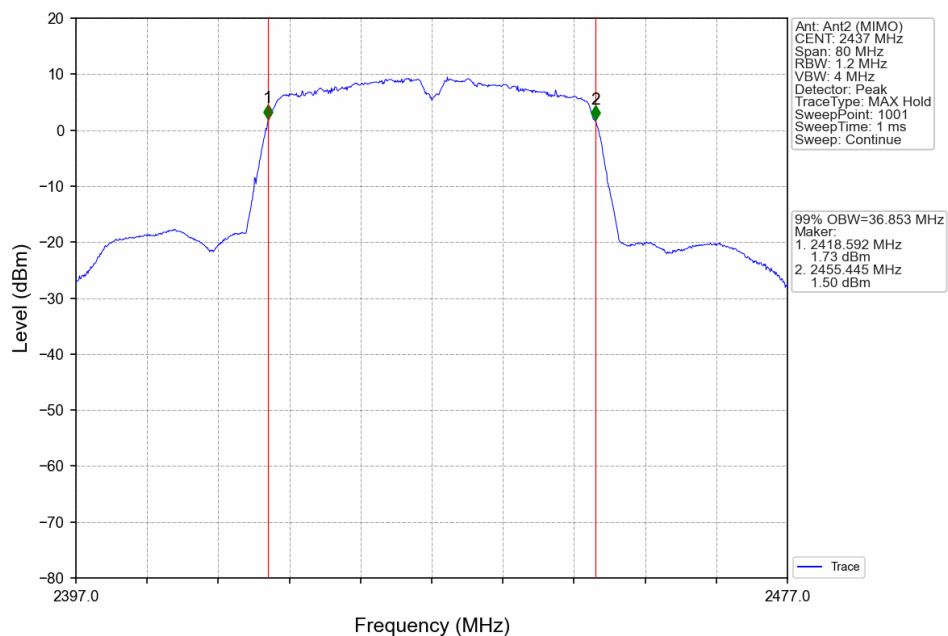
802.11n(HT40)\_LCH\_2422MHz\_Ant2 (MIMO)\_NTNV



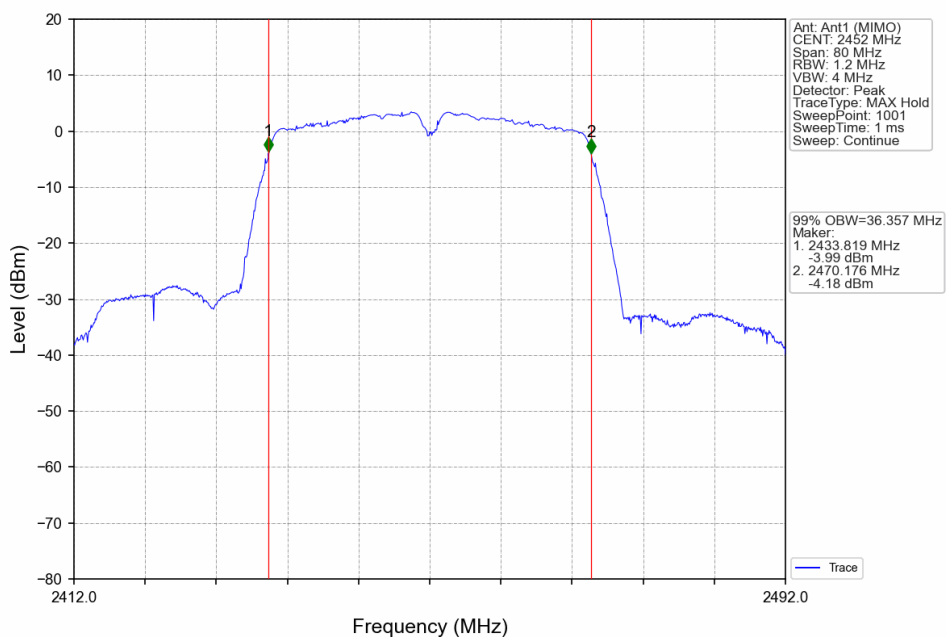
802.11n(HT40)\_MCH\_2437MHz\_Ant1 (MIMO)\_NTNV



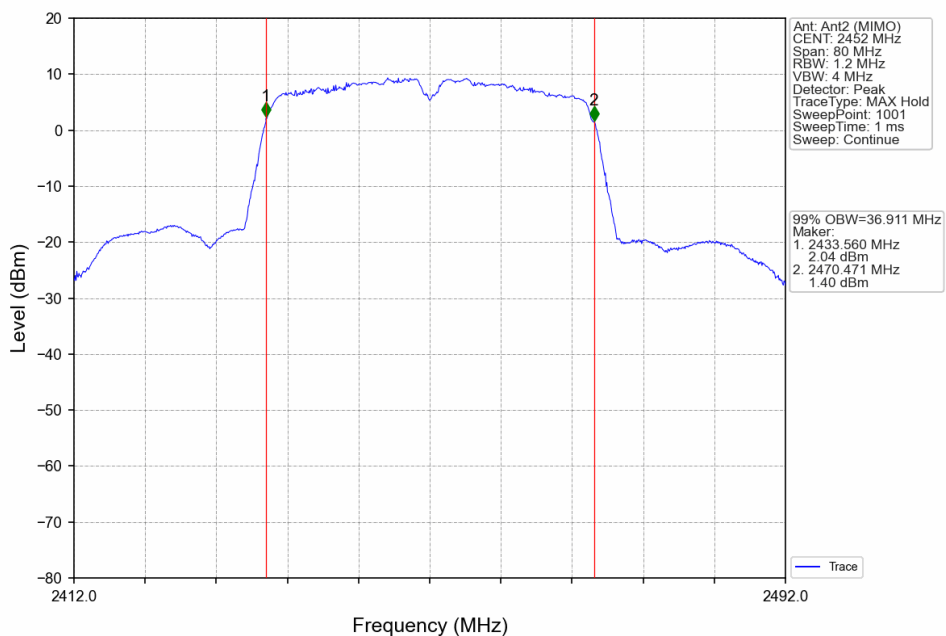
802.11n(HT40)\_MCH\_2437MHz\_Ant2 (MIMO)\_NTNV



802.11n(HT40) HCH 2452MHz\_Ant1 (MIMO) NTN



802.11n(HT40) HCH 2452MHz\_Ant2 (MIMO) NTN



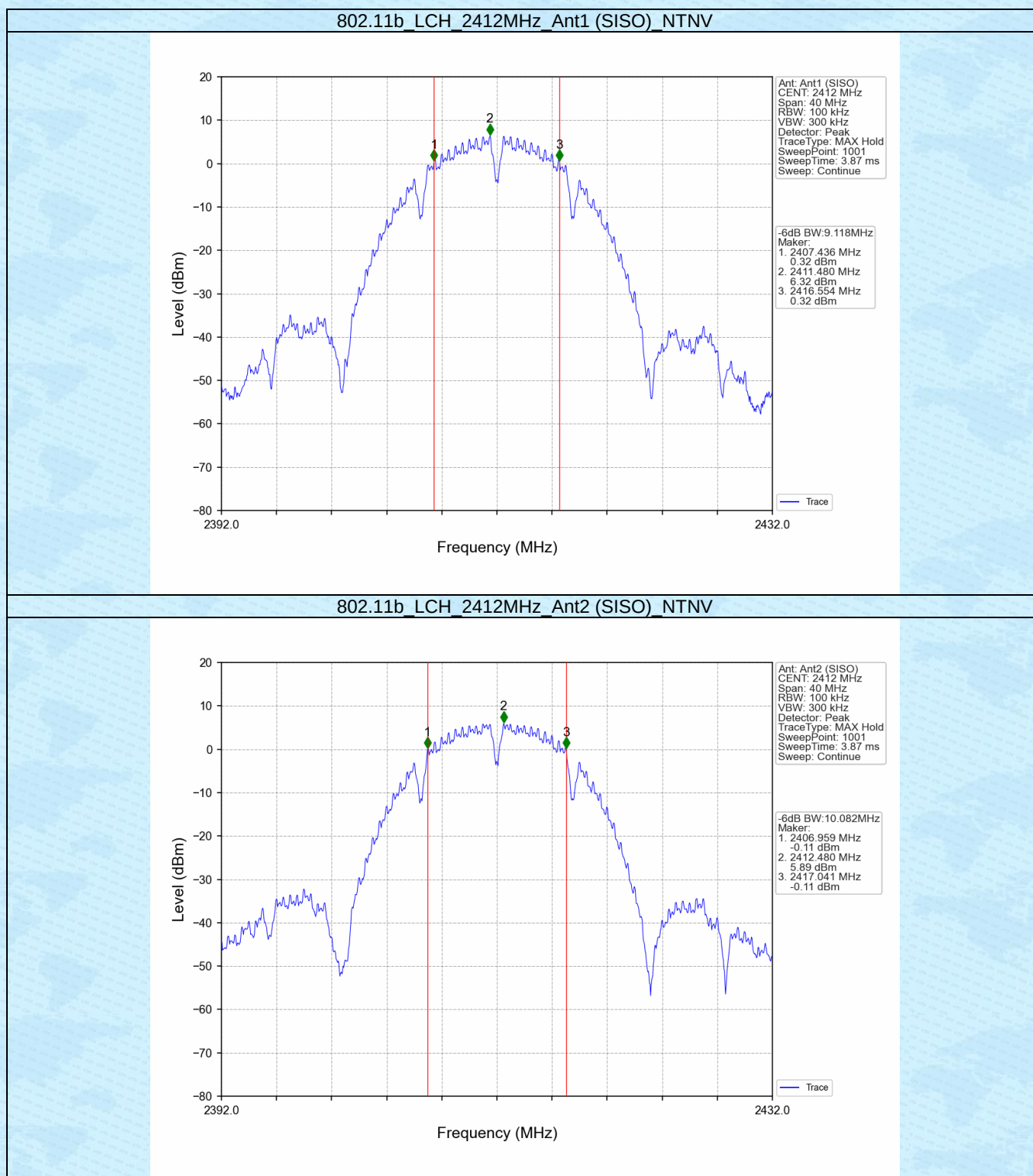


## 2.2 6dB BW

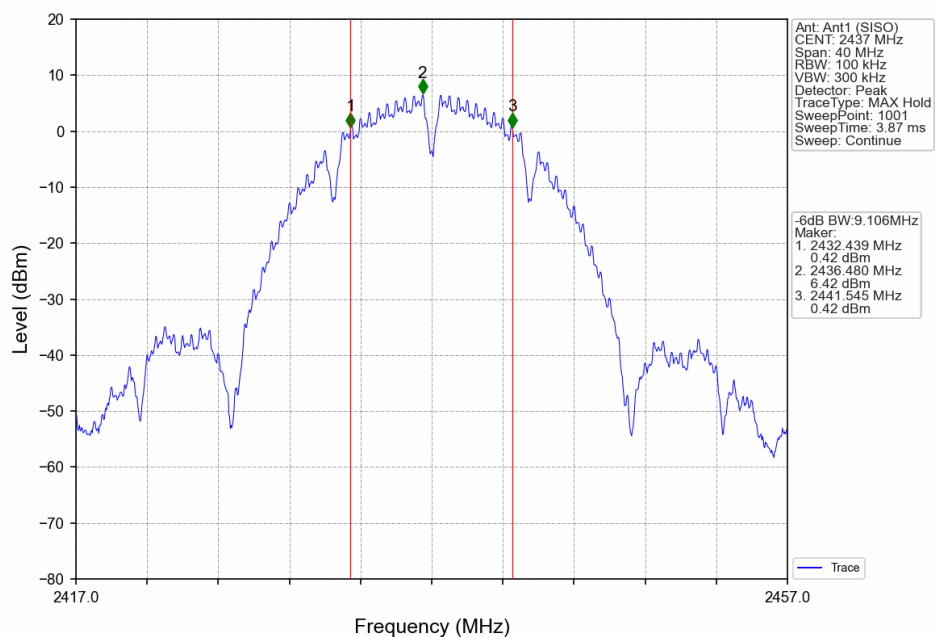
### 2.2.1 Test Result

| Mode           | TX Type | Frequency (MHz) | ANT | 6dB Bandwidth (MHz) |            | Verdict |
|----------------|---------|-----------------|-----|---------------------|------------|---------|
|                |         |                 |     | Result              | Limit      |         |
| 802.11b        | SISO    | 2412            | 1   | 9.118               | $\geq 0.5$ | Pass    |
|                |         |                 | 2   | 10.082              | $\geq 0.5$ | Pass    |
|                |         | 2437            | 1   | 9.106               | $\geq 0.5$ | Pass    |
|                |         |                 | 2   | 9.124               | $\geq 0.5$ | Pass    |
|                |         | 2462            | 1   | 9.123               | $\geq 0.5$ | Pass    |
|                |         |                 | 2   | 9.130               | $\geq 0.5$ | Pass    |
| 802.11g        | SISO    | 2412            | 1   | 15.151              | $\geq 0.5$ | Pass    |
|                |         |                 | 2   | 15.161              | $\geq 0.5$ | Pass    |
|                |         | 2437            | 1   | 15.157              | $\geq 0.5$ | Pass    |
|                |         |                 | 2   | 15.156              | $\geq 0.5$ | Pass    |
|                |         | 2462            | 1   | 15.157              | $\geq 0.5$ | Pass    |
|                |         |                 | 2   | 15.156              | $\geq 0.5$ | Pass    |
| 802.11n (HT20) | MIMO    | 2412            | 1   | 15.145              | $\geq 0.5$ | Pass    |
|                |         |                 | 2   | 16.307              | $\geq 0.5$ | Pass    |
|                |         | 2437            | 1   | 15.155              | $\geq 0.5$ | Pass    |
|                |         |                 | 2   | 15.745              | $\geq 0.5$ | Pass    |
|                |         | 2462            | 1   | 15.158              | $\geq 0.5$ | Pass    |
|                |         |                 | 2   | 15.742              | $\geq 0.5$ | Pass    |
| 802.11n (HT40) | MIMO    | 2422            | 1   | 35.173              | $\geq 0.5$ | Pass    |
|                |         |                 | 2   | 35.163              | $\geq 0.5$ | Pass    |
|                |         | 2437            | 1   | 35.166              | $\geq 0.5$ | Pass    |
|                |         |                 | 2   | 35.159              | $\geq 0.5$ | Pass    |
|                |         | 2452            | 1   | 35.168              | $\geq 0.5$ | Pass    |
|                |         |                 | 2   | 35.167              | $\geq 0.5$ | Pass    |

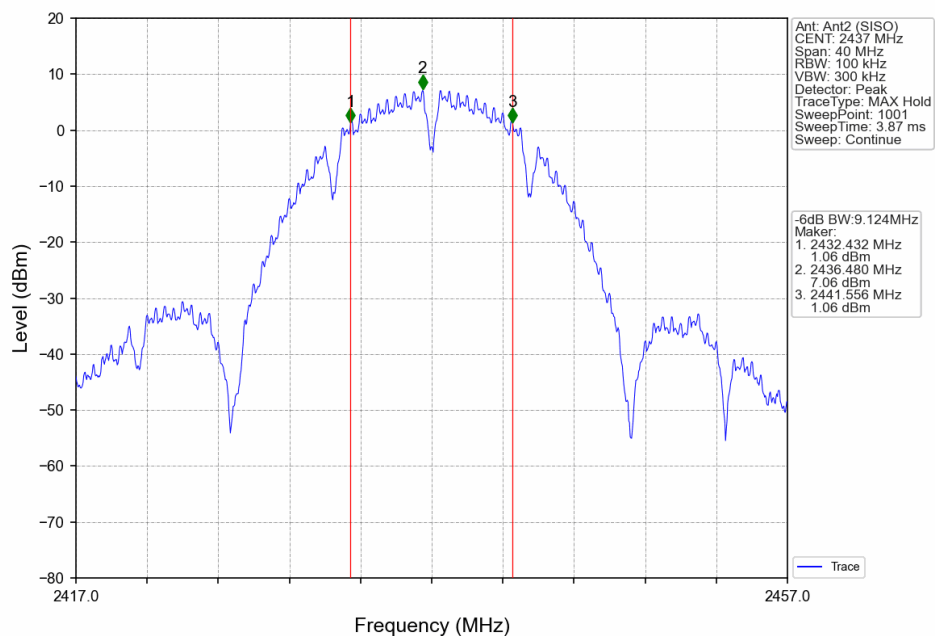
## 2.2.2 Test Graph



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

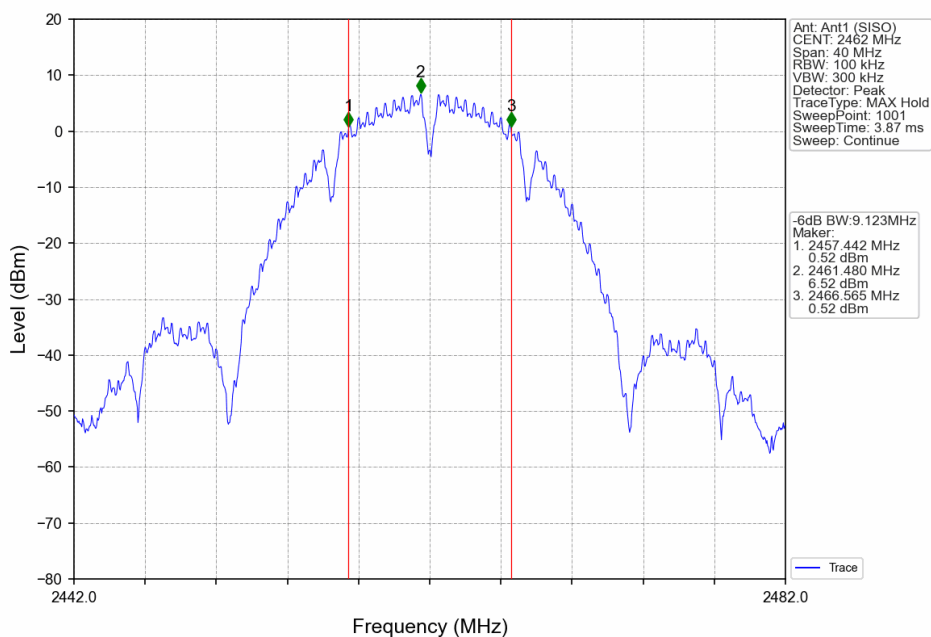


## 802.11b\_MCH\_2437MHz\_Ant2 (SISO)\_NTNV

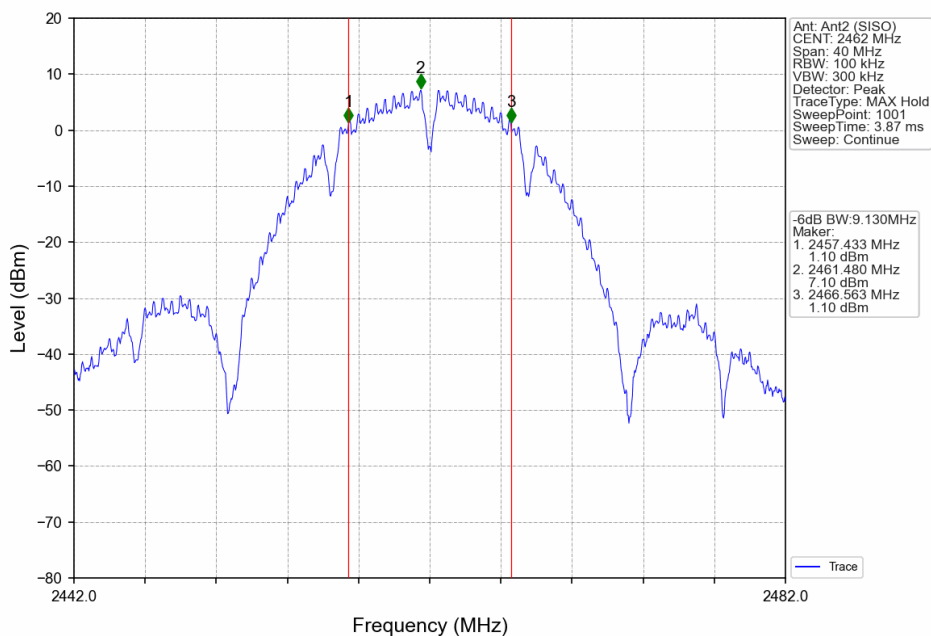




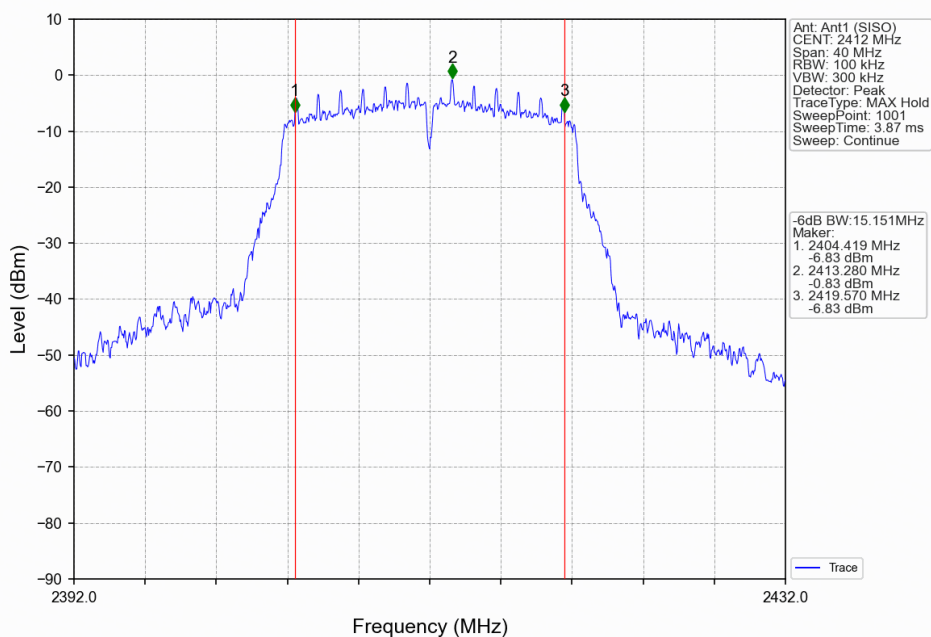
802.11b\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



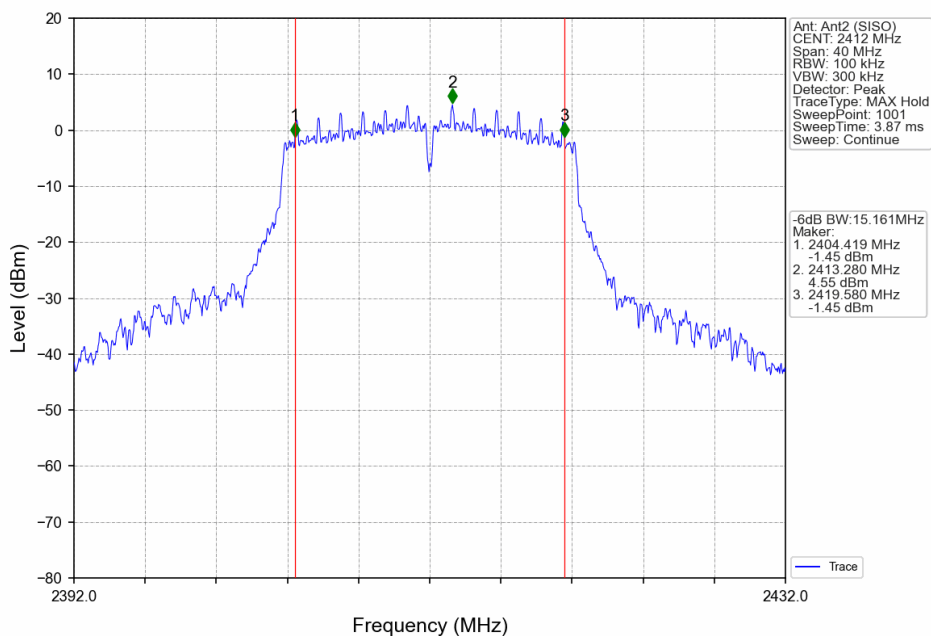
802.11b\_HCH\_2462MHz\_Ant2 (SISO)\_NTNV



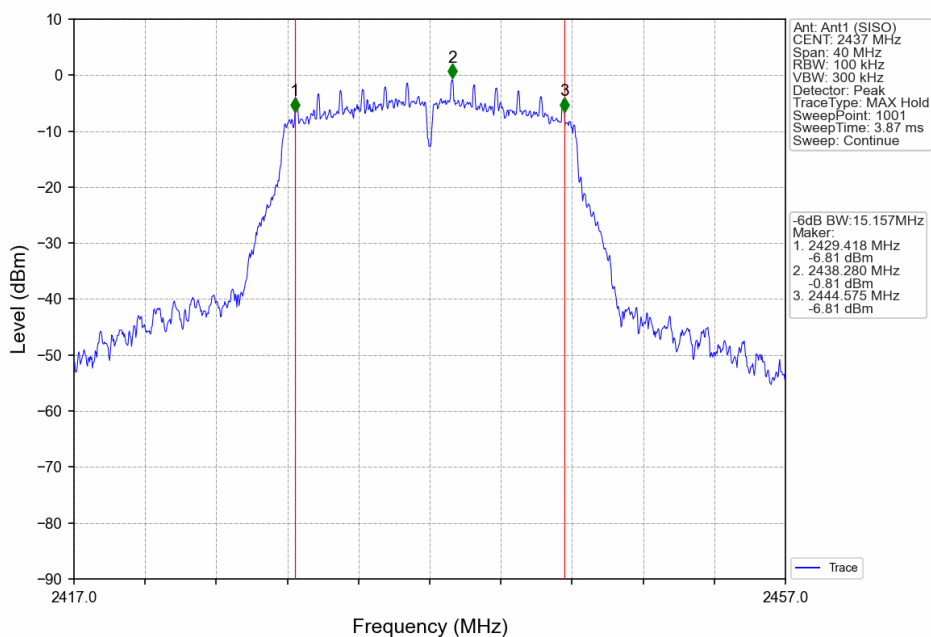
802.11g LCH 2412MHz\_Ant1 (SISO) NTN



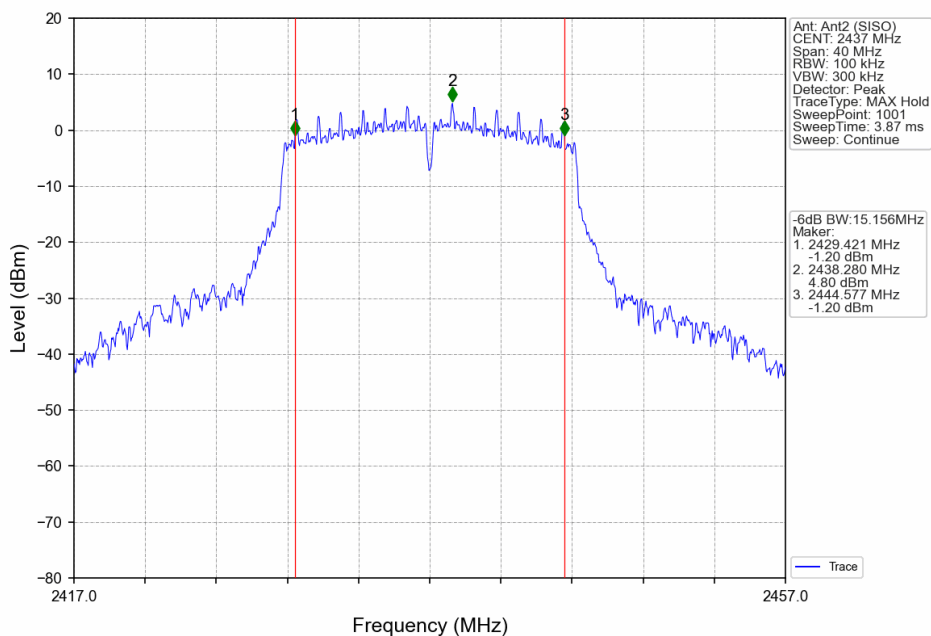
802.11g LCH 2412MHz\_Ant2 (SISO) NTN



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

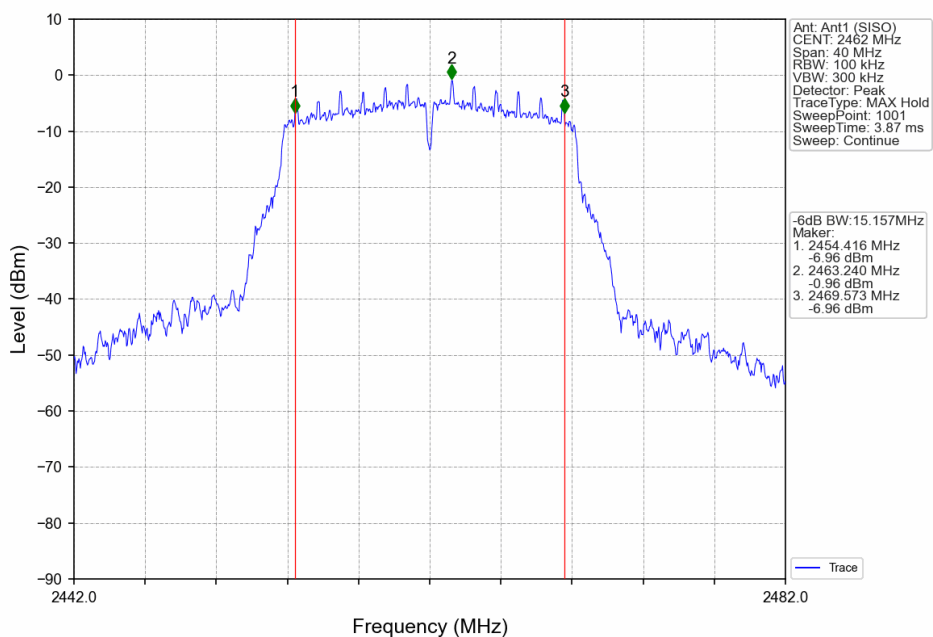


802.11g\_MCH\_2437MHz\_Ant2 (SISO)\_NTNV

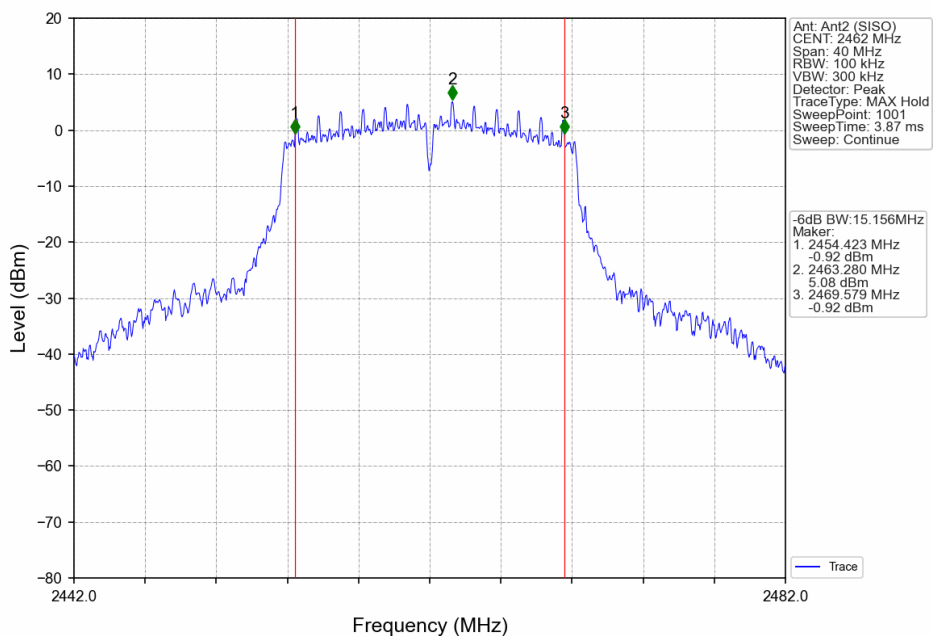




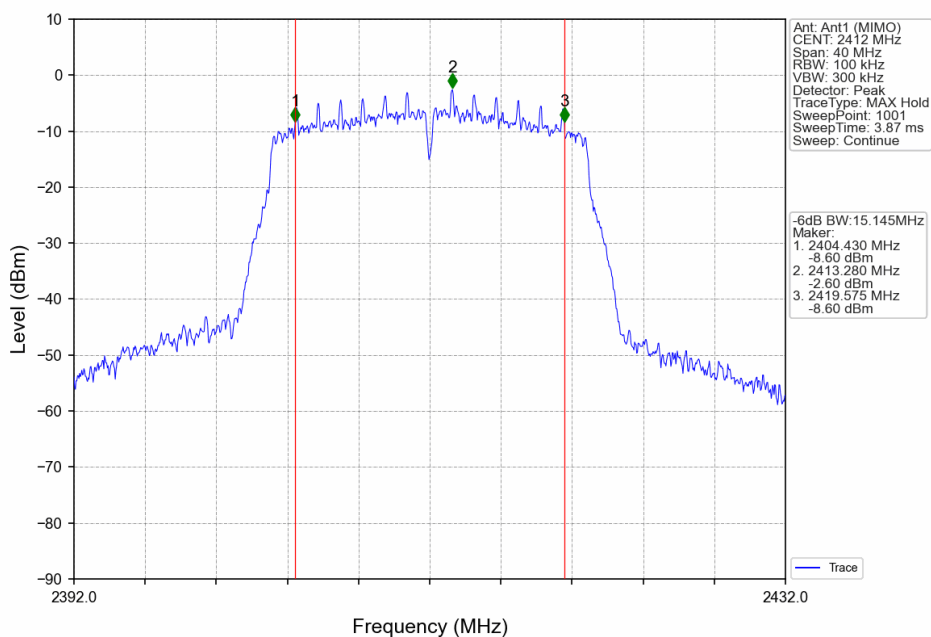
802.11g\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



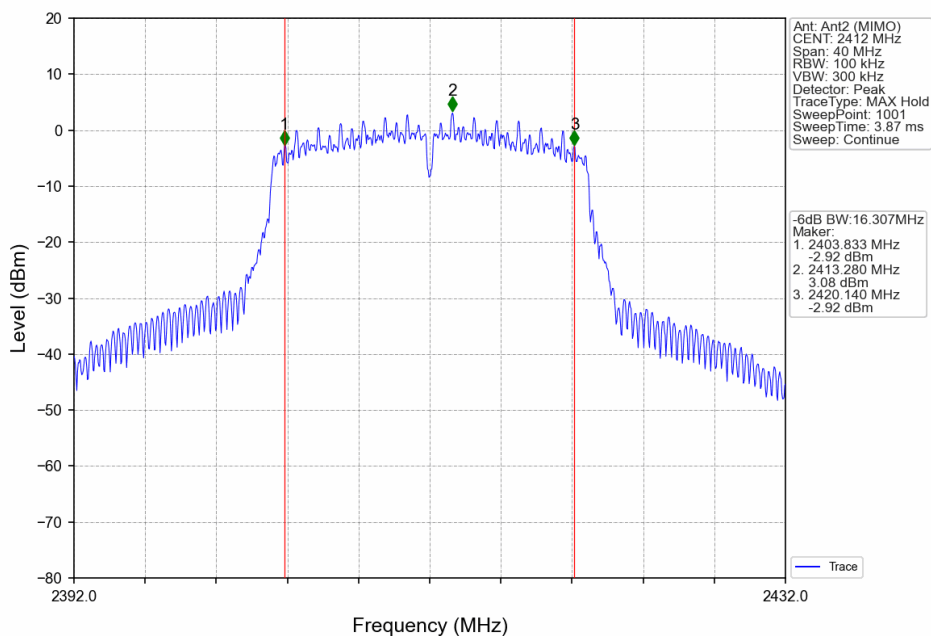
802.11g\_HCH\_2462MHz\_Ant2 (SISO)\_NTNV



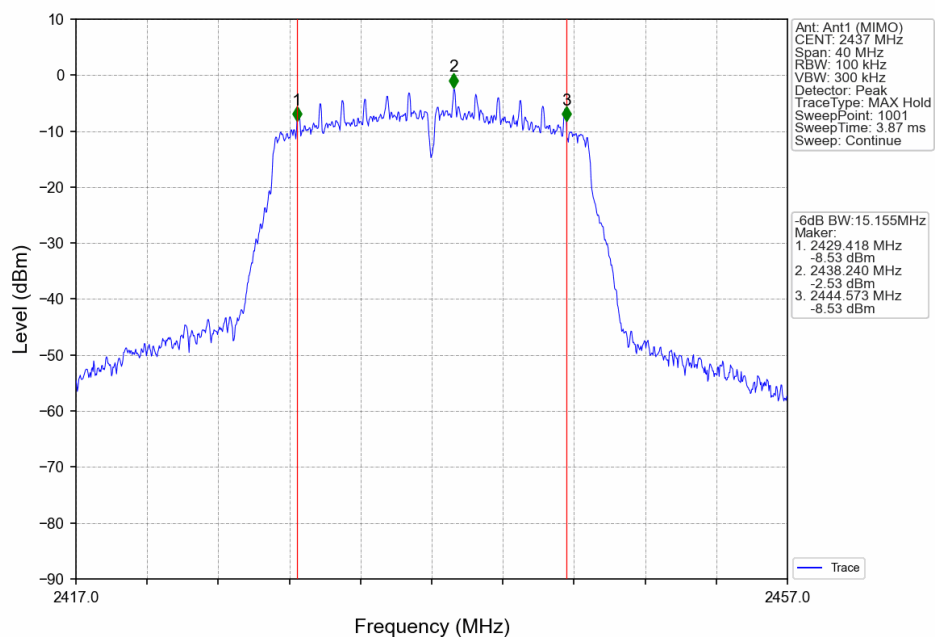
802.11n(HT20)\_LCH\_2412MHz\_Ant1 (MIMO)\_NTNV



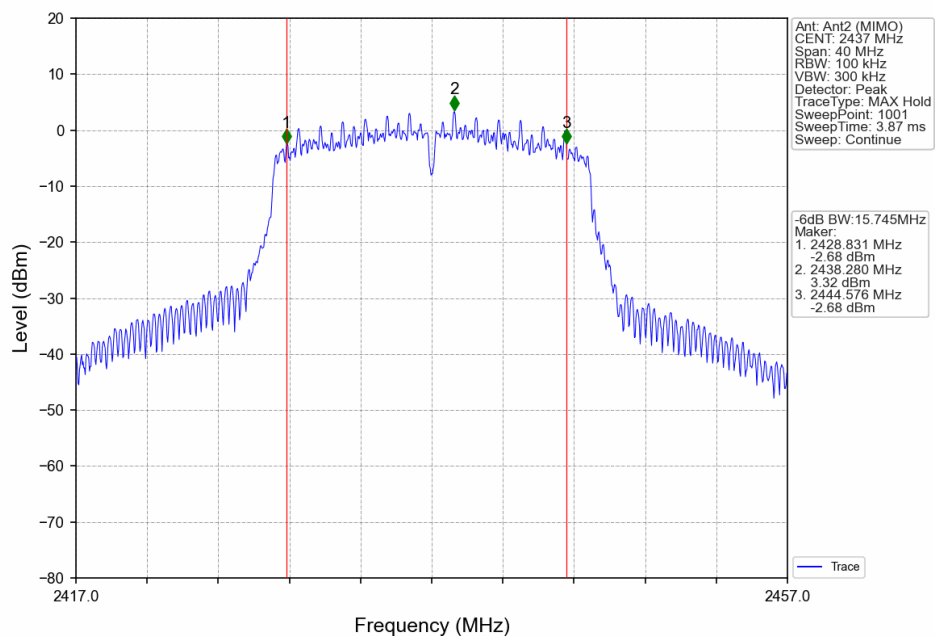
802.11n(HT20)\_LCH\_2412MHz\_Ant2 (MIMO)\_NTNV



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

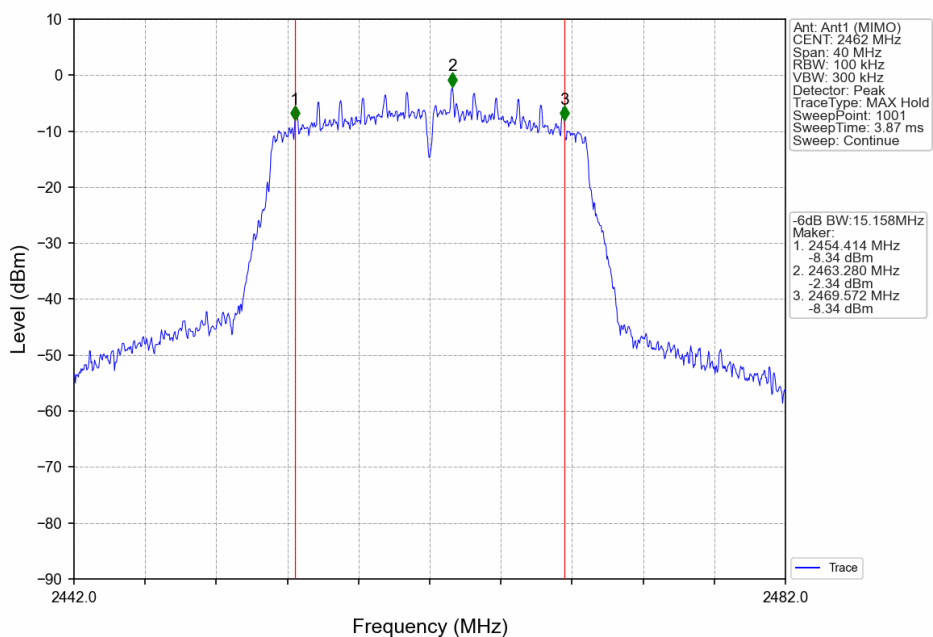


802.11n(HT20)\_MCH\_2437MHz\_Ant2 (MIMO)\_NTNV

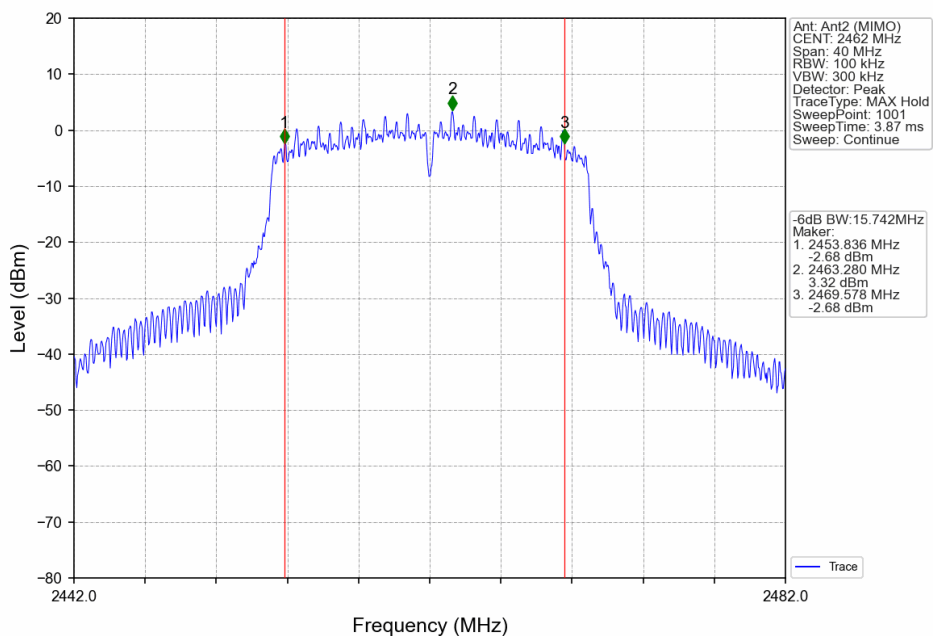




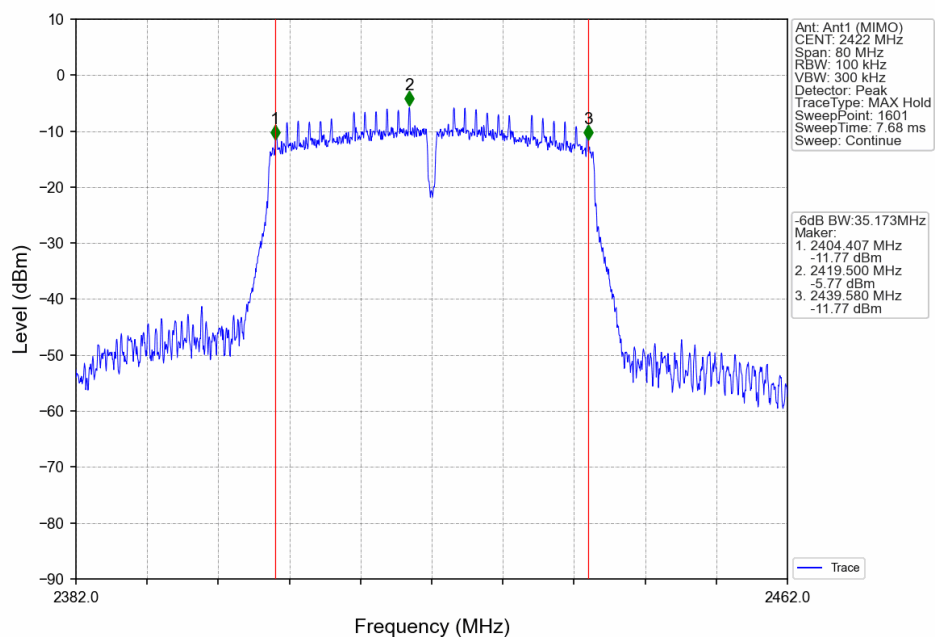
802.11n(HT20) HCH 2462MHz\_Ant1 (MIMO) NTN



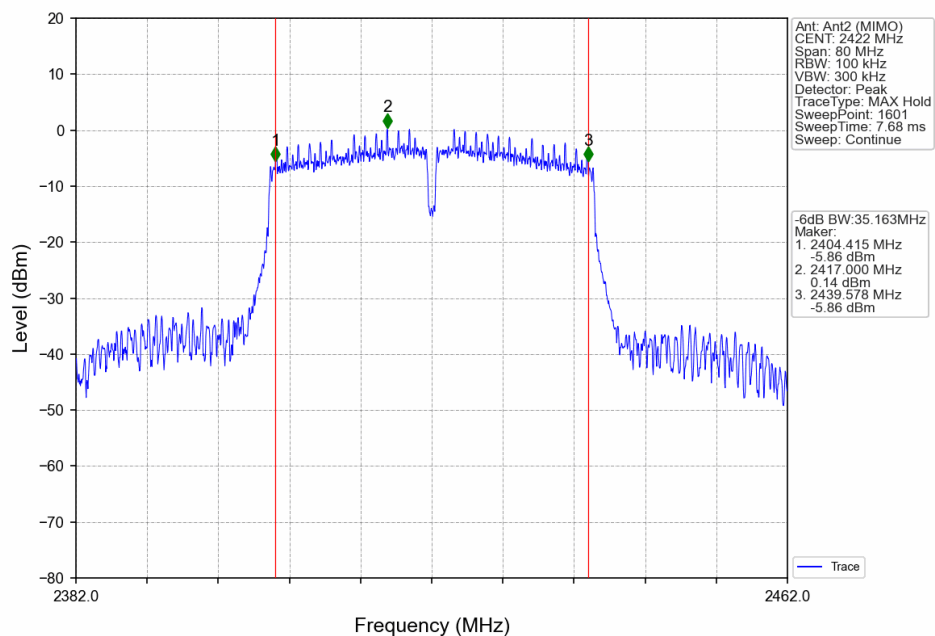
802.11n(HT20) HCH 2462MHz\_Ant2 (MIMO) NTN



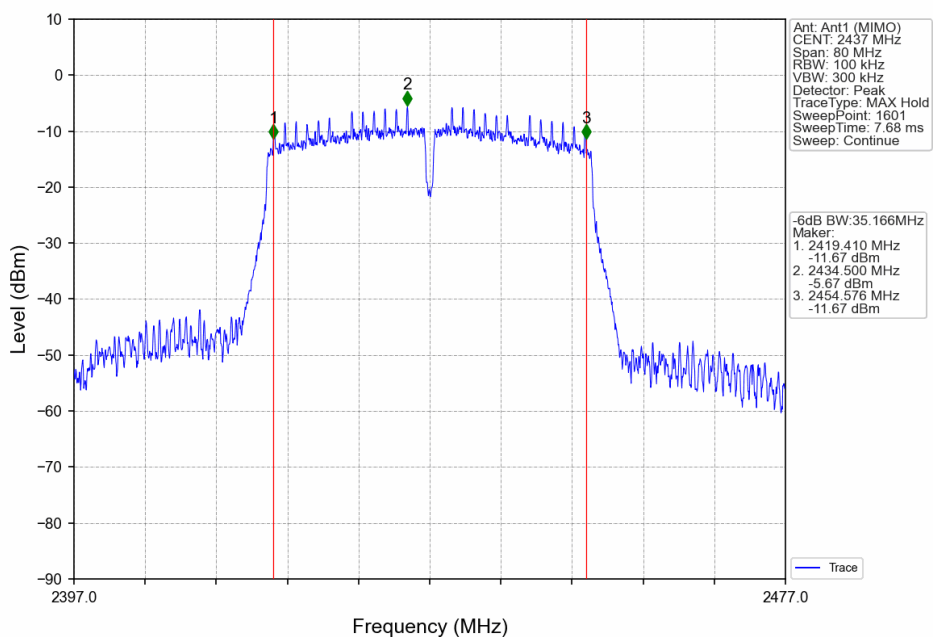
802.11n(HT40)\_LCH\_2422MHz\_Ant1 (MIMO)\_NTNV



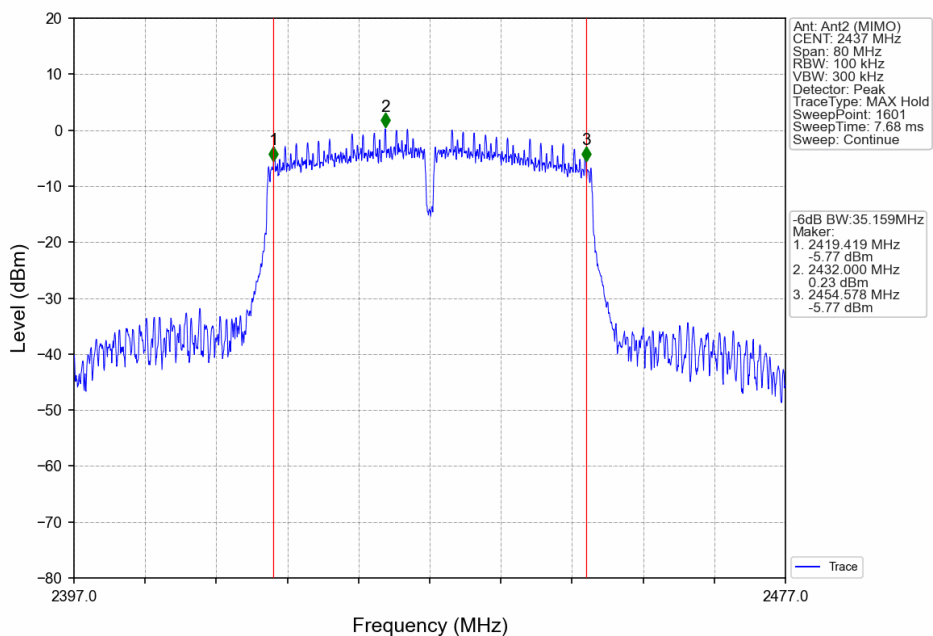
802.11n(HT40)\_LCH\_2422MHz\_Ant2 (MIMO)\_NTNV



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

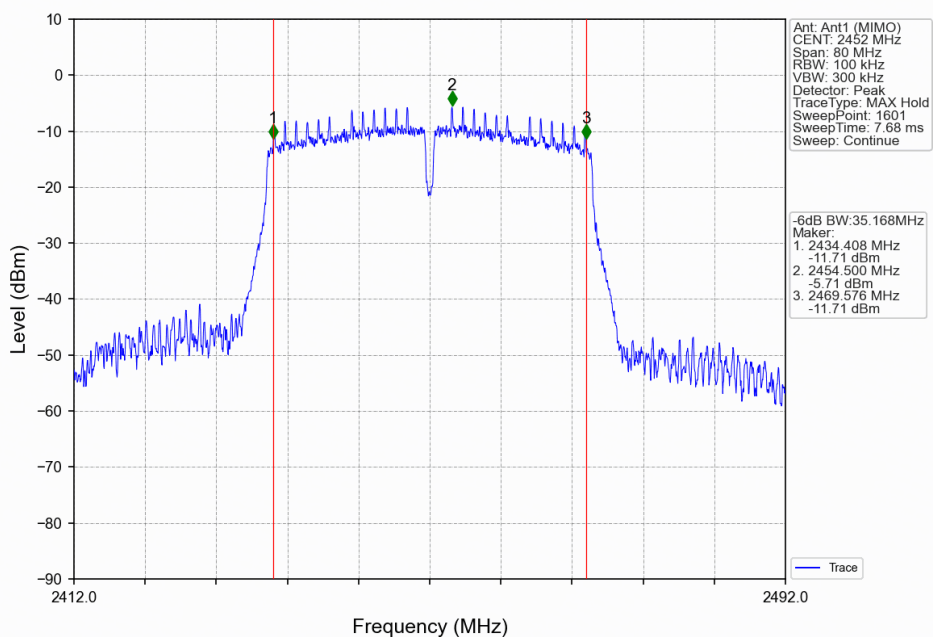


802.11n(HT40)\_MCH\_2437MHz\_Ant2 (MIMO)\_NTNV

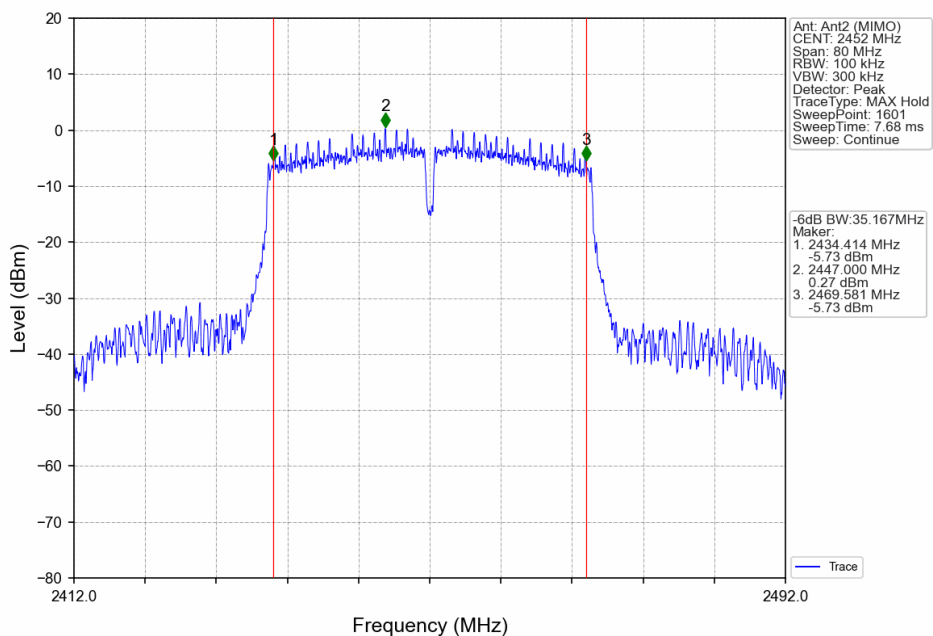




802.11n(HT40) HCH 2452MHz\_Ant1 (MIMO) NTN



802.11n(HT40) HCH 2452MHz\_Ant2 (MIMO) NTN



### 3. Maximum Conducted Output Power

#### 3.1 Power

##### 3.1.1 Test Result

| Mode           | TX Type | Frequency (MHz) | Maximum Peak Conducted Output Power (dBm) |       |       |       | Verdict |
|----------------|---------|-----------------|-------------------------------------------|-------|-------|-------|---------|
|                |         |                 | ANT1                                      | ANT2  | MIMO  | Limit |         |
| 802.11b        | SISO    | 2412            | 18.24                                     | 18.63 | /     | <=30  | Pass    |
|                |         | 2437            | 18.35                                     | 18.66 | /     | <=30  | Pass    |
|                |         | 2462            | 18.45                                     | 18.71 | /     | <=30  | Pass    |
| 802.11g        | SISO    | 2412            | 16.79                                     | 16.12 | /     | <=30  | Pass    |
|                |         | 2437            | 16.91                                     | 17.56 | /     | <=30  | Pass    |
|                |         | 2462            | 16.78                                     | 17.68 | /     | <=30  | Pass    |
| 802.11n (HT20) | MIMO    | 2412            | 15.01                                     | 16.20 | 18.66 | <=30  | Pass    |
|                |         | 2437            | 14.99                                     | 16.48 | 18.81 | <=30  | Pass    |
|                |         | 2462            | 15.16                                     | 16.39 | 18.83 | <=30  | Pass    |
| 802.11n (HT40) | MIMO    | 2422            | 15.48                                     | 16.48 | 19.02 | <=30  | Pass    |
|                |         | 2437            | 15.48                                     | 16.48 | 19.02 | <=30  | Pass    |
|                |         | 2452            | 15.57                                     | 16.54 | 19.09 | <=30  | Pass    |

Note1: Antenna Gain: Ant1: 3.48dBi; Ant2: 3.05dBi;  
Note2: Directional Gain:  $10 \times \log[(10^{3.48/20} + 10^{3.05/20})^2/2] = 6.28 \text{ dBi}$

### 4. Maximum Power Spectral Density

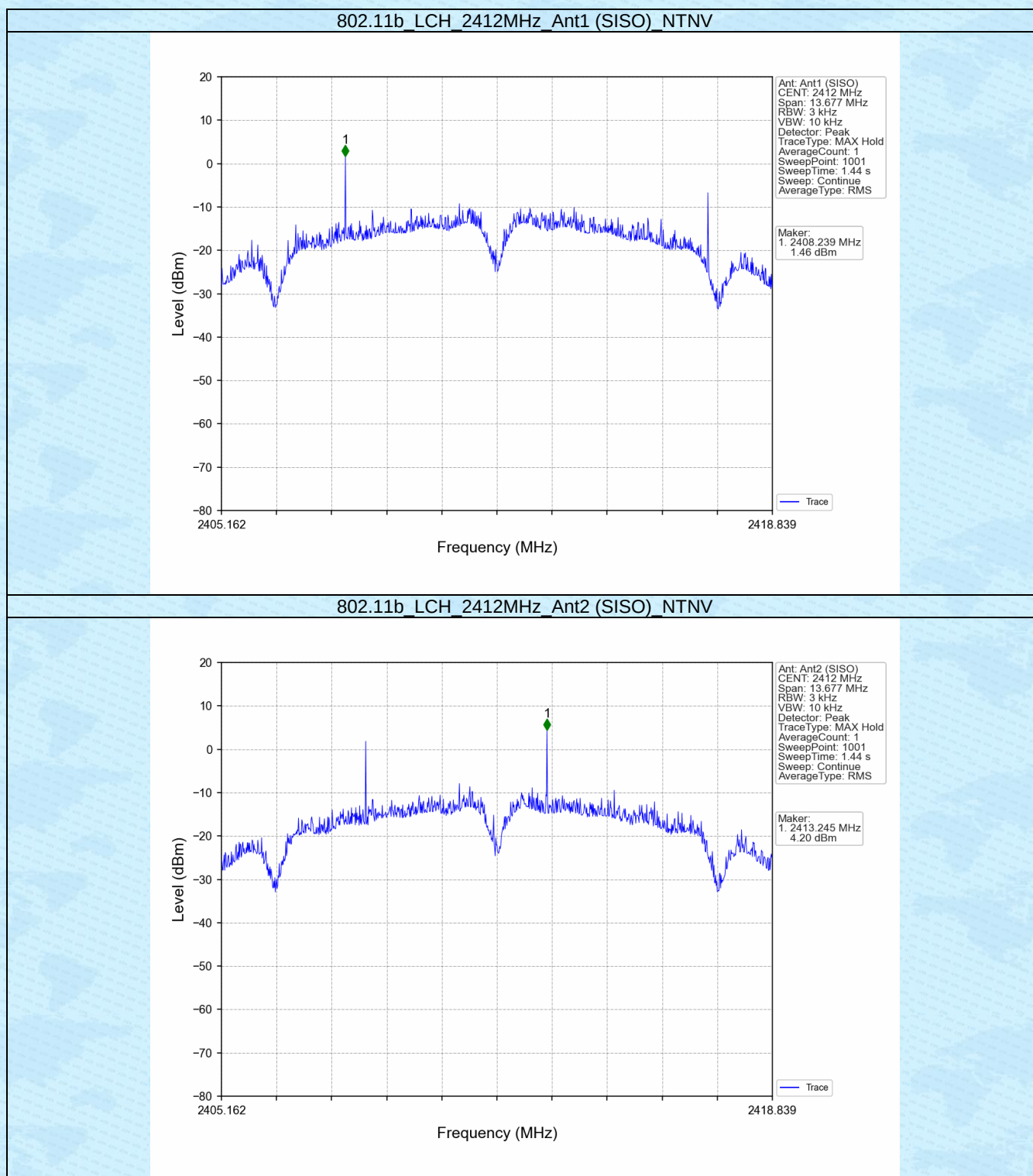
#### 4.1 PSD

##### 4.1.1 Test Result

| Mode           | TX Type | Frequency (MHz) | Maximum PSD (dBm/3kHz) |        |        |       | Verdict |
|----------------|---------|-----------------|------------------------|--------|--------|-------|---------|
|                |         |                 | ANT1                   | ANT2   | MIMO   | Limit |         |
| 802.11b        | SISO    | 2412            | 1.46                   | 4.20   | /      | <=8   | Pass    |
|                |         | 2437            | 4.47                   | 5.81   | /      | <=8   | Pass    |
|                |         | 2462            | 5.61                   | -9.02  | /      | <=8   | Pass    |
| 802.11g        | SISO    | 2412            | -17.56                 | -18.18 | /      | <=8   | Pass    |
|                |         | 2437            | -17.39                 | -16.59 | /      | <=8   | Pass    |
|                |         | 2462            | -17.55                 | -15.75 | /      | <=8   | Pass    |
| 802.11n (HT20) | MIMO    | 2412            | -18.73                 | -16.37 | -15.11 | <=8   | Pass    |
|                |         | 2437            | -18.90                 | -17.74 | -15.77 | <=8   | Pass    |
|                |         | 2462            | -17.90                 | -17.72 | -15.38 | <=8   | Pass    |
| 802.11n (HT40) | MIMO    | 2422            | -21.37                 | -21.54 | -18.45 | <=8   | Pass    |
|                |         | 2437            | -21.11                 | -20.34 | -18.60 | <=8   | Pass    |
|                |         | 2452            | -21.10                 | -20.94 | -18.28 | <=8   | Pass    |

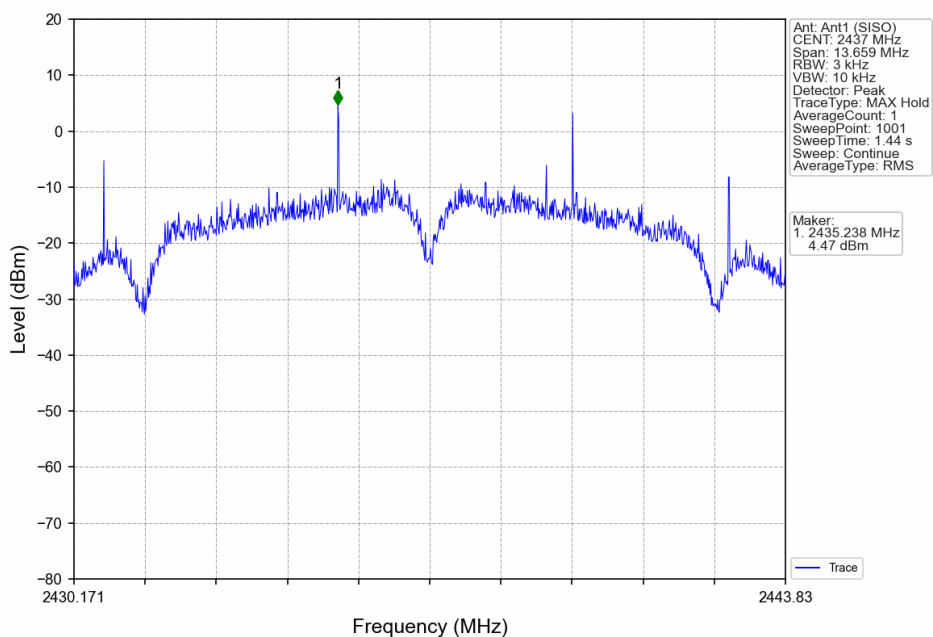
Note1: Antenna Gain: Ant1: 3.48dBi; Ant2: 3.05dBi;  
Note2: Directional Gain:  $10 \times \log[(10^{3.48/20} + 10^{3.05/20})^2/2] = 6.28 \text{ dBi}$

## 4.1.2 Test Graph

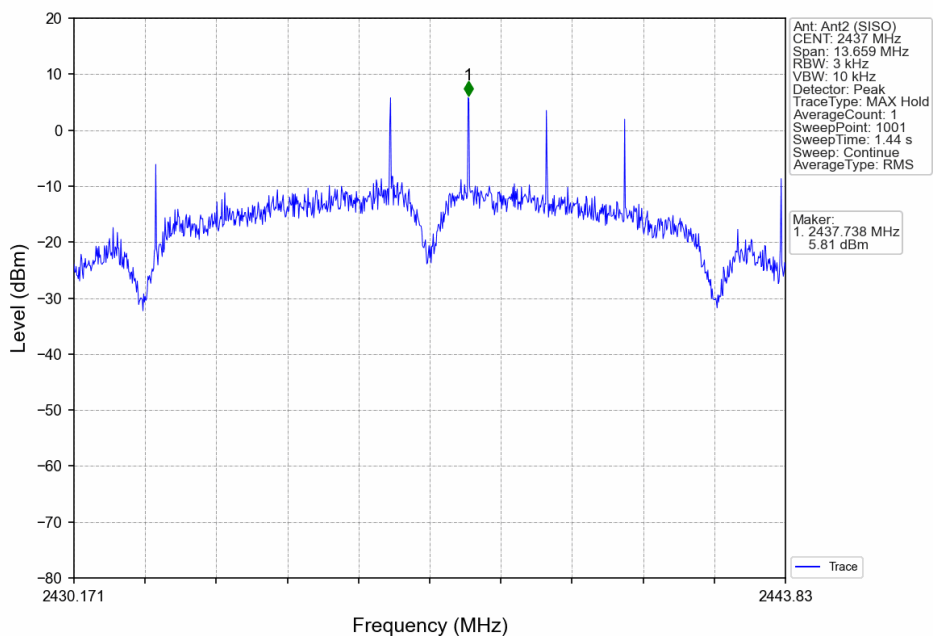




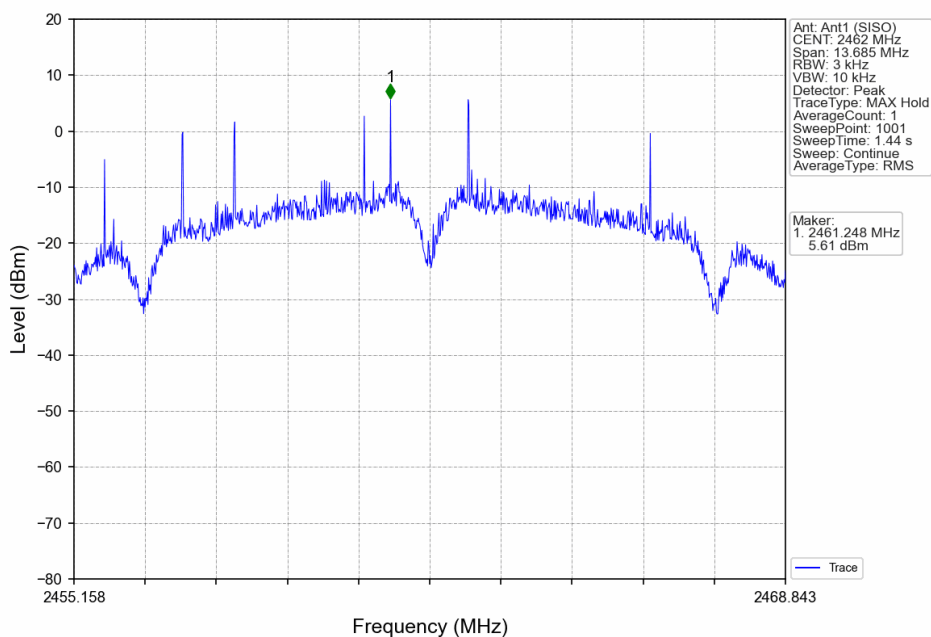
802.11b\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



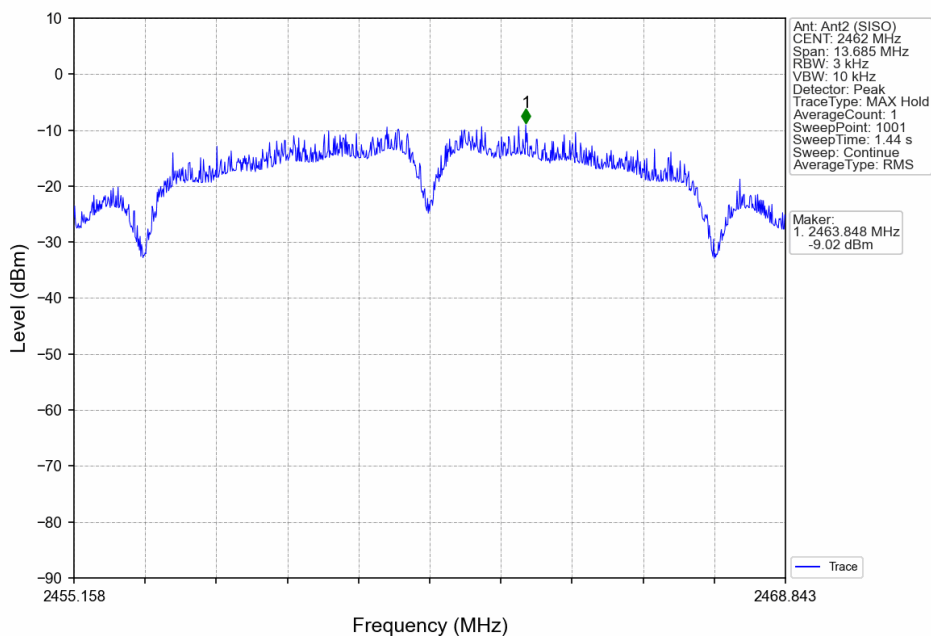
802.11b\_MCH\_2437MHz\_Ant2 (SISO)\_NTNV



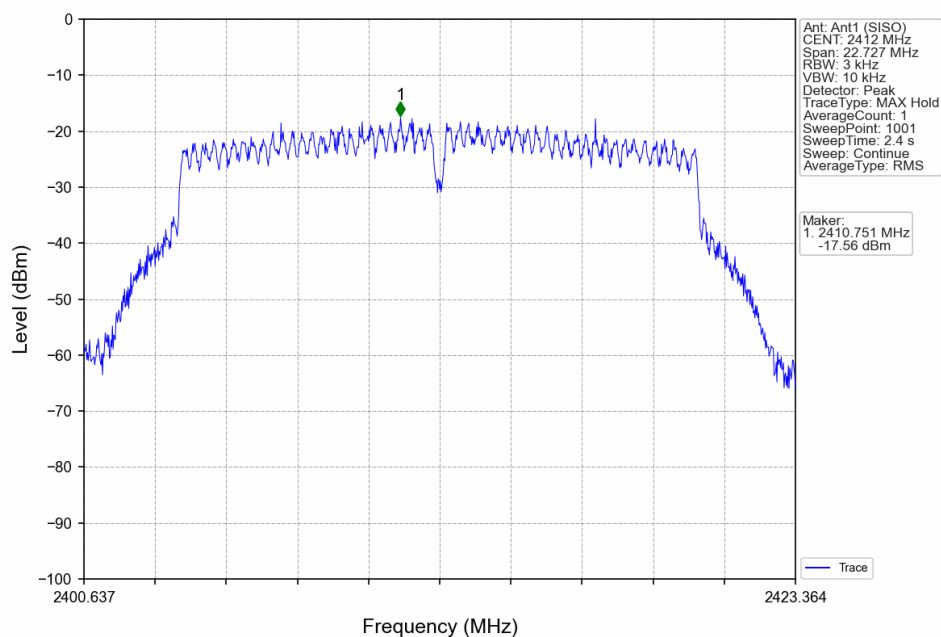
802.11b\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



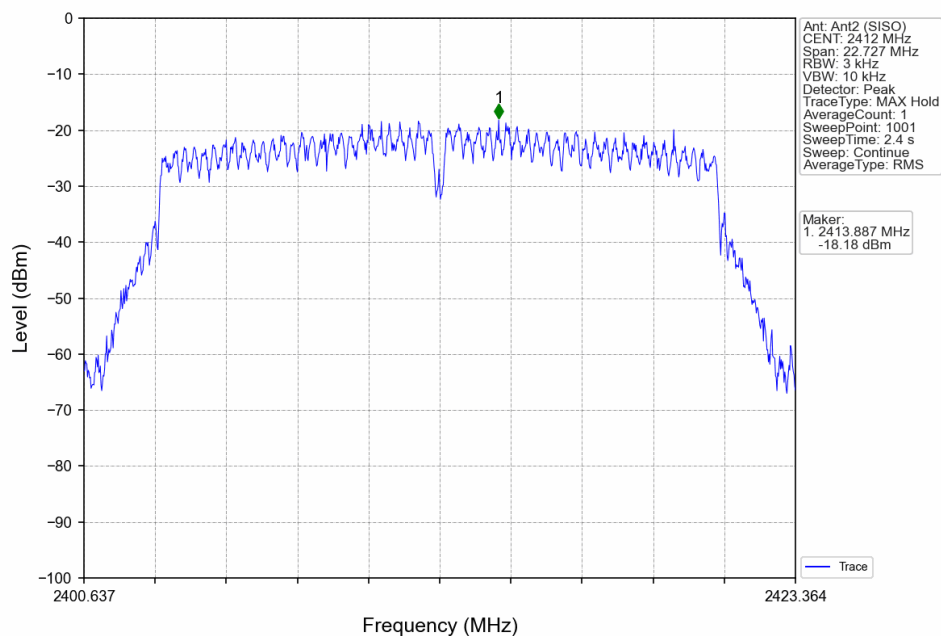
802.11b\_HCH\_2462MHz\_Ant2 (SISO)\_NTNV



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

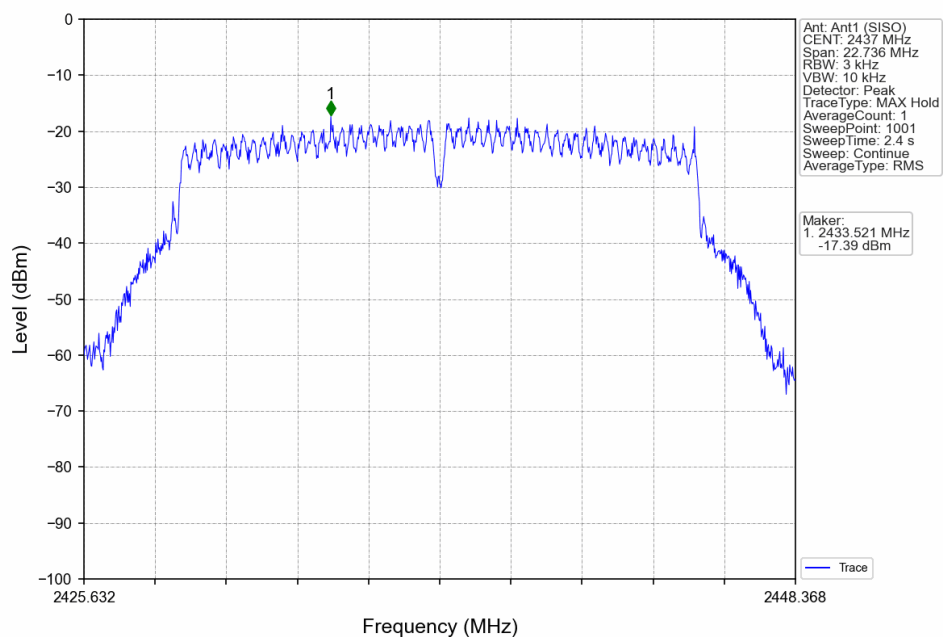


802.11g\_LCH\_2412MHz\_Ant2 (SISO)\_NTNV

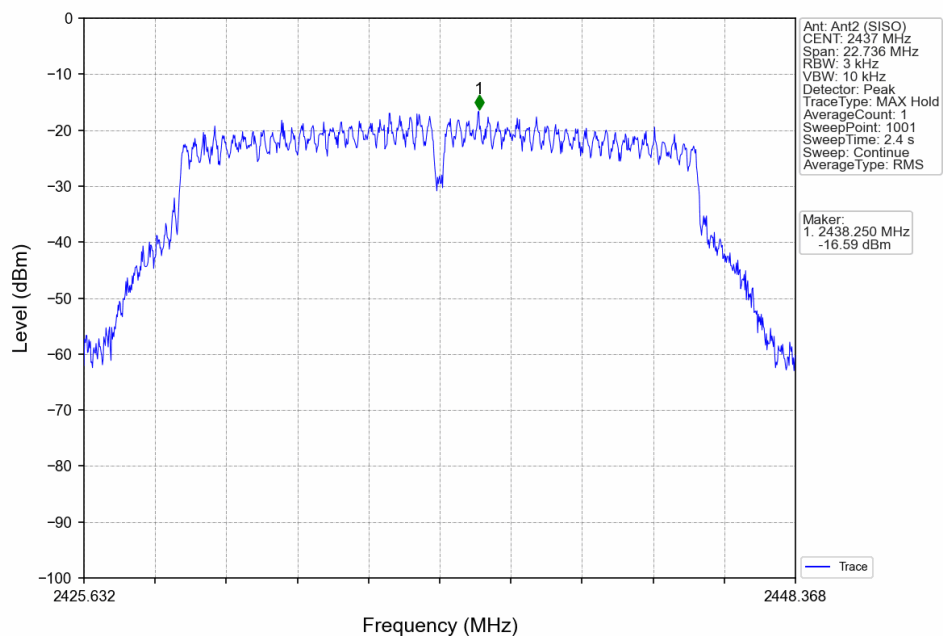




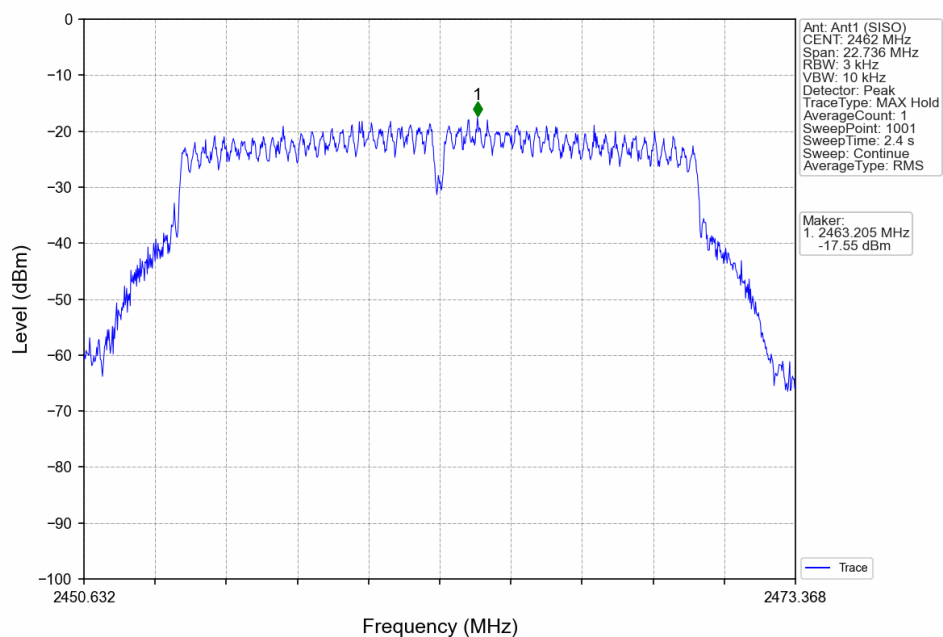
802.11g\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



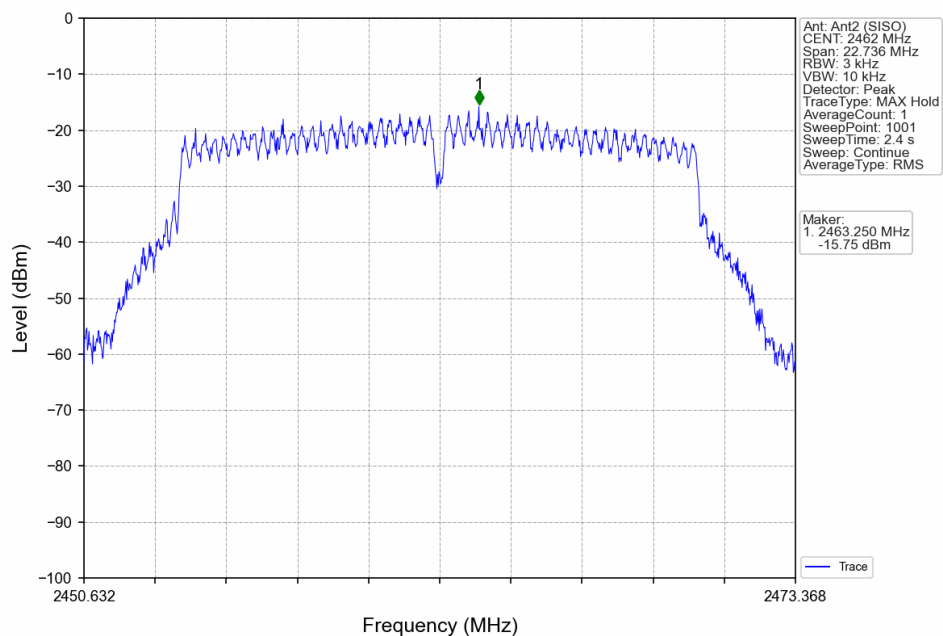
802.11g\_MCH\_2437MHz\_Ant2 (SISO)\_NTNV



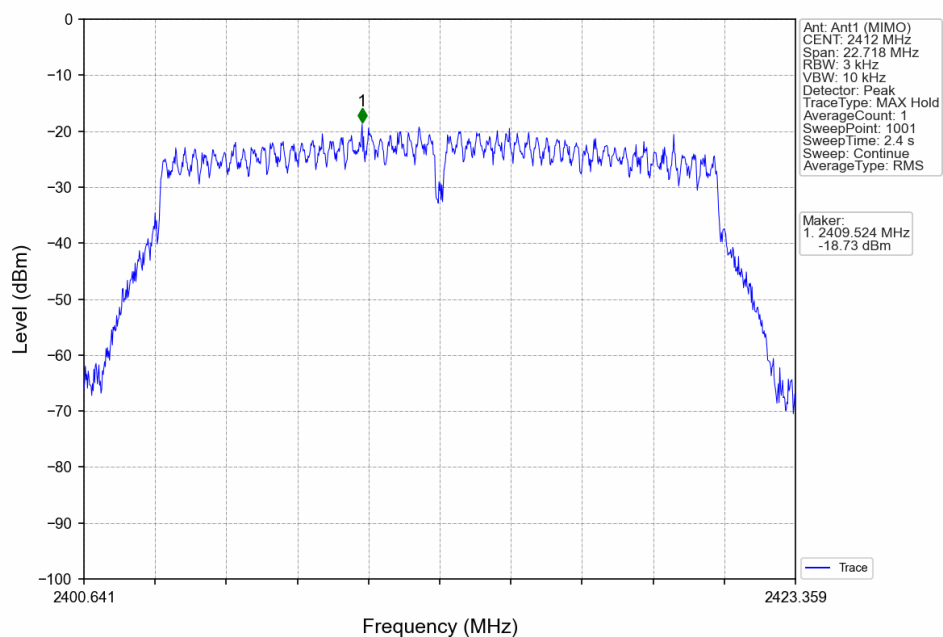
802.11g\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



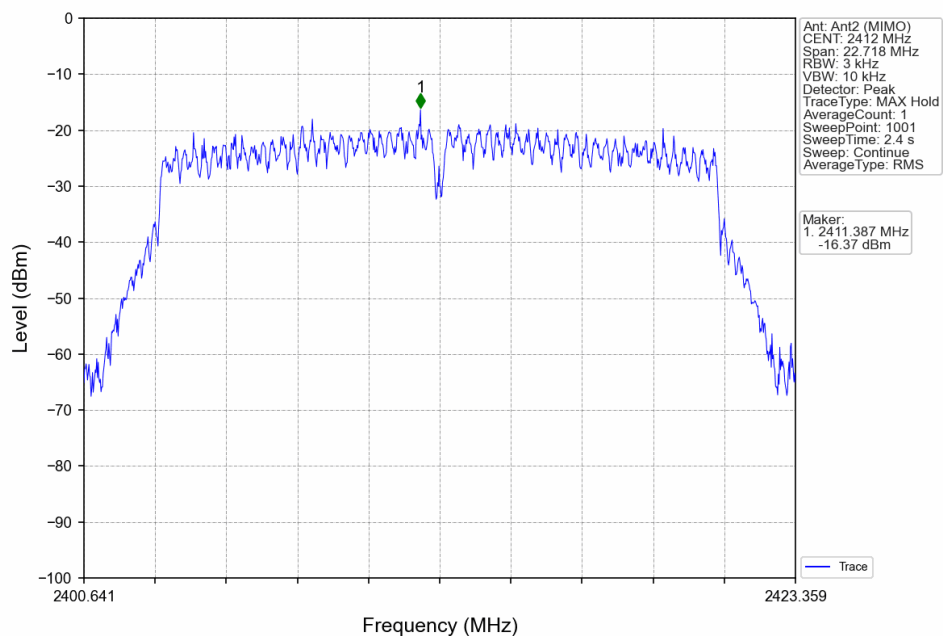
802.11g\_HCH\_2462MHz\_Ant2 (SISO)\_NTNV



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

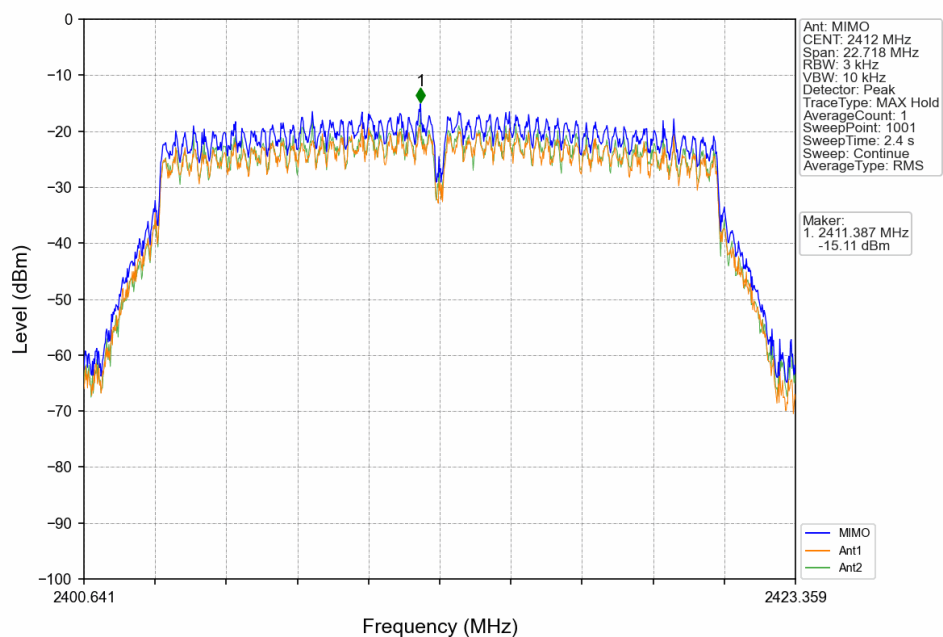


802.11n(HT20)\_LCH\_2412MHz\_Ant2 (MIMO)\_NTNV





802.11n(HT20)\_LCH\_2412MHz\_MIMO\_NTNV



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

