

## Appendix for 15.247

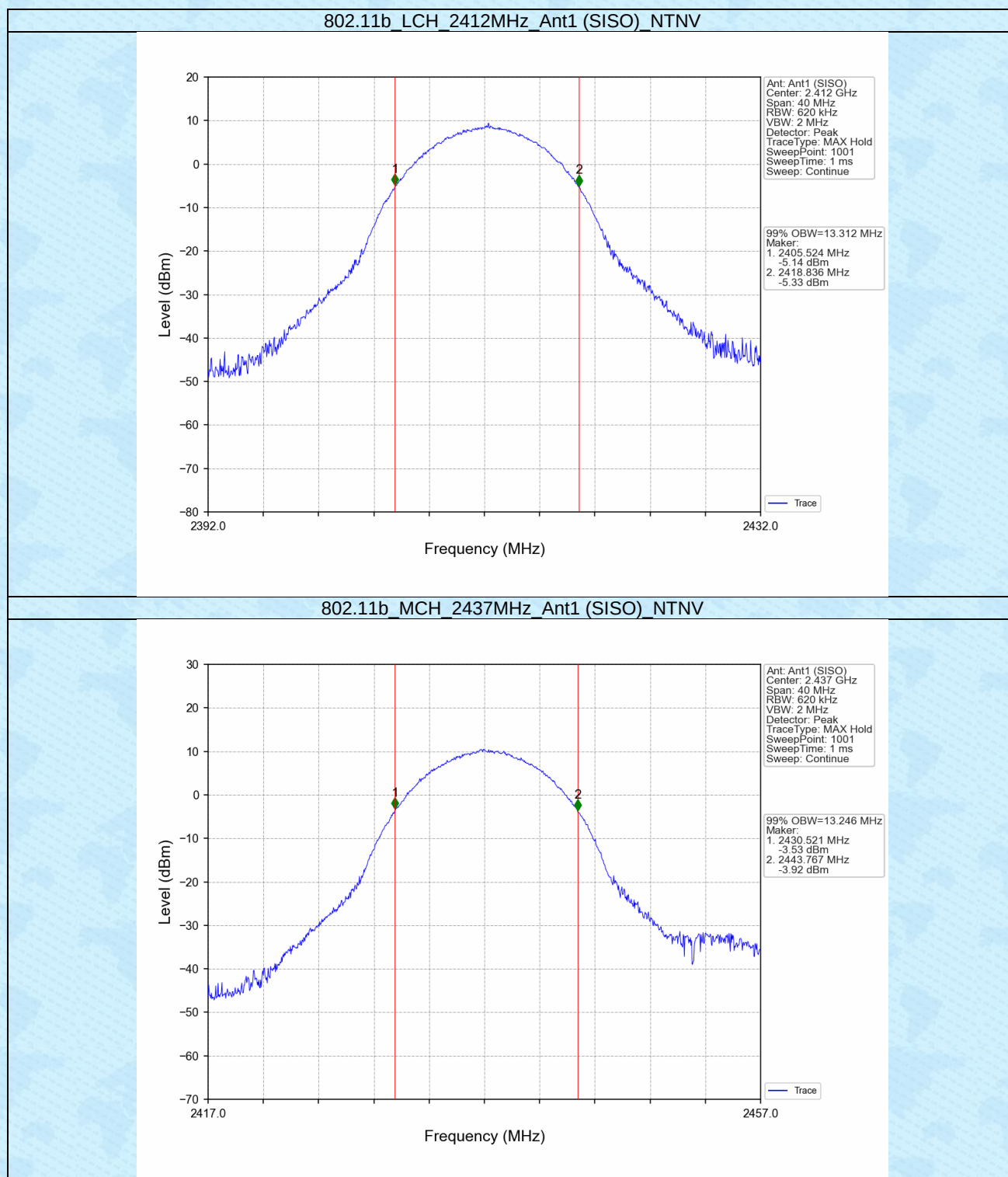
### 1. Bandwidth

#### 1.1 OBW

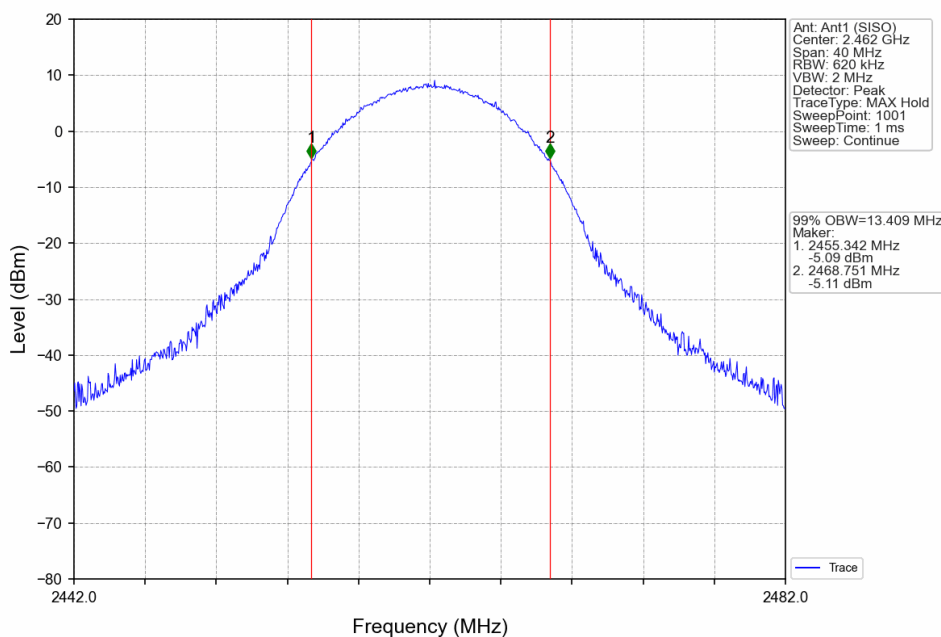
##### 1.1.1 Test Result

| Mode           | TX Type | Frequency (MHz) | ANT | 99% Occupied Bandwidth (MHz) | Verdict |
|----------------|---------|-----------------|-----|------------------------------|---------|
|                |         |                 |     | Result                       |         |
| 802.11b        | SISO    | 2412            | 1   | 13.312                       | Pass    |
|                |         | 2437            | 1   | 13.246                       | Pass    |
|                |         | 2462            | 1   | 13.409                       | Pass    |
| 802.11g        | SISO    | 2412            | 1   | 13.302                       | Pass    |
|                |         | 2437            | 1   | 13.274                       | Pass    |
|                |         | 2462            | 1   | 13.296                       | Pass    |
| 802.11n (HT20) | SISO    | 2412            | 1   | 13.317                       | Pass    |
|                |         | 2437            | 1   | 13.253                       | Pass    |
|                |         | 2462            | 1   | 13.314                       | Pass    |

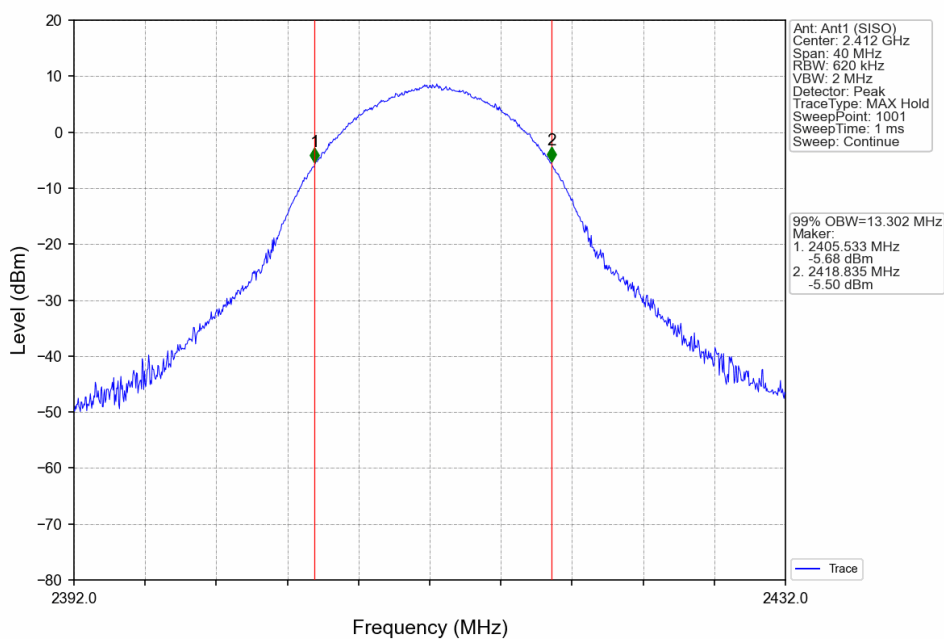
## 1.1.2 Test Graph



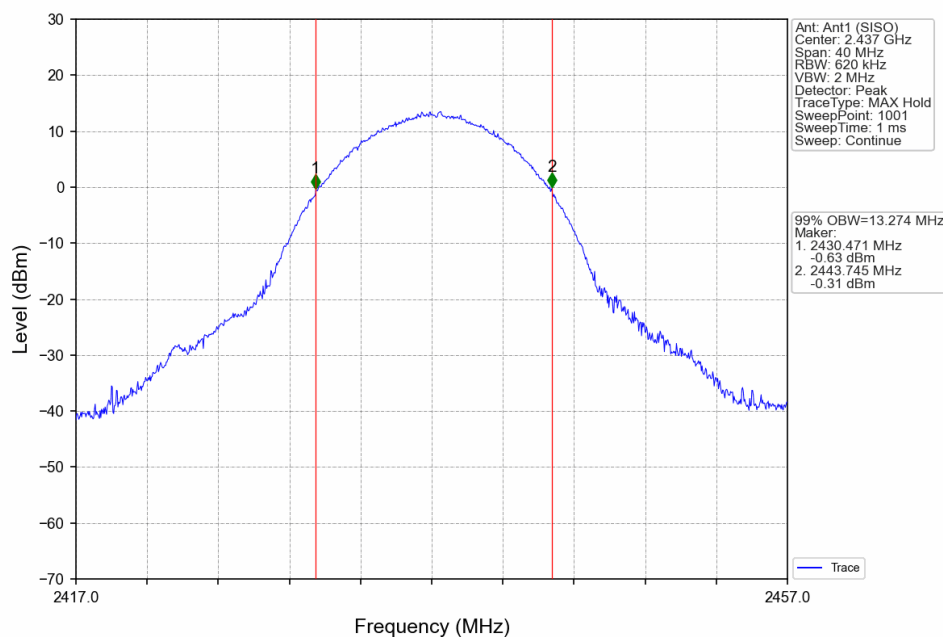
## 802.11b\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



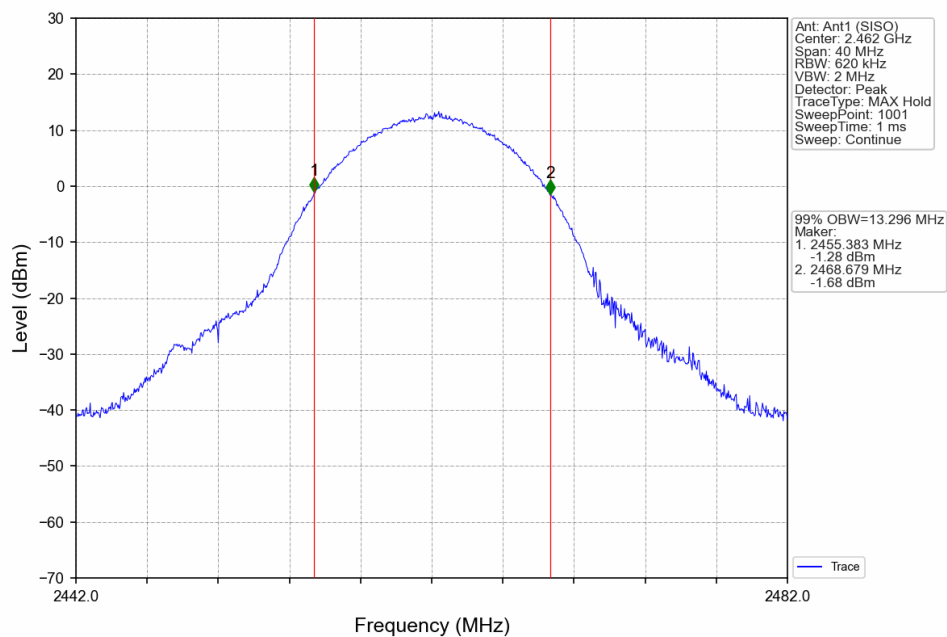
## 802.11g\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



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

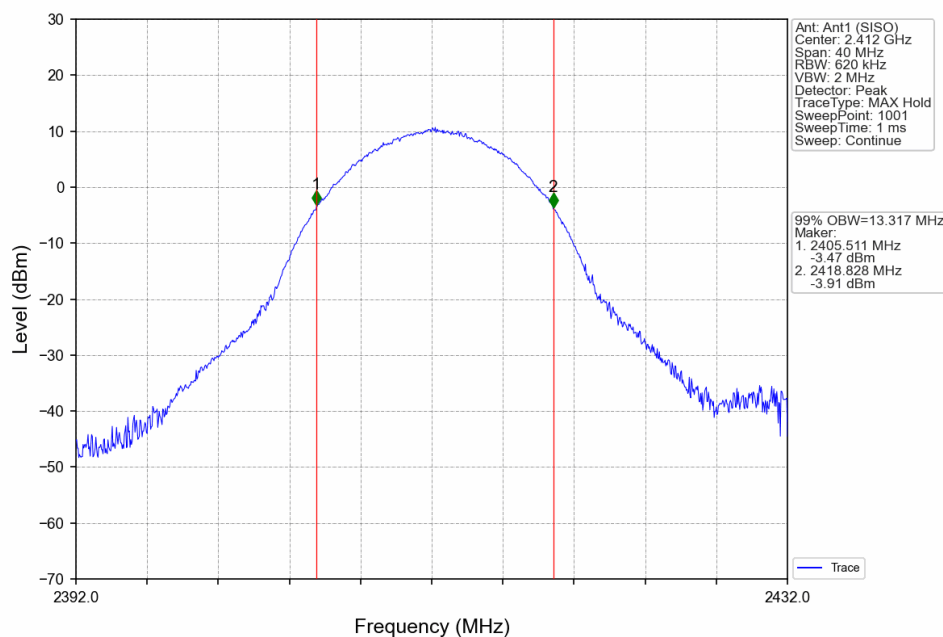


## 802.11g\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV

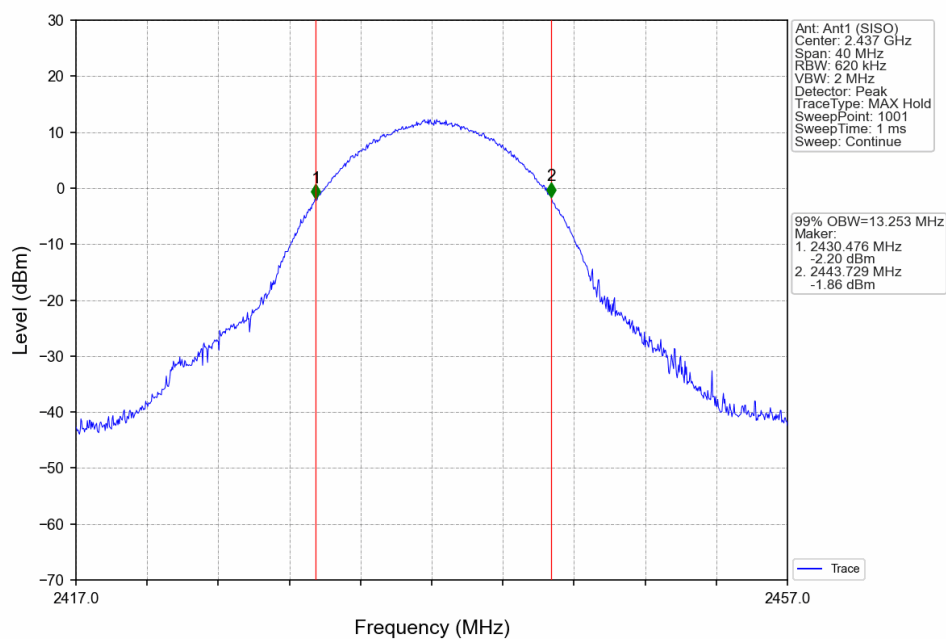




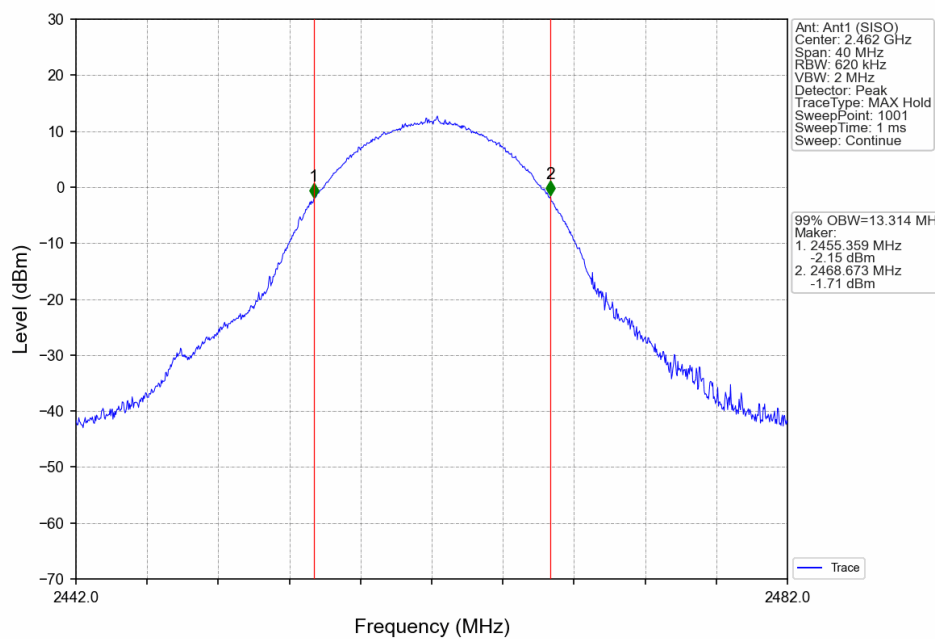
802.11n(HT20)\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



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



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

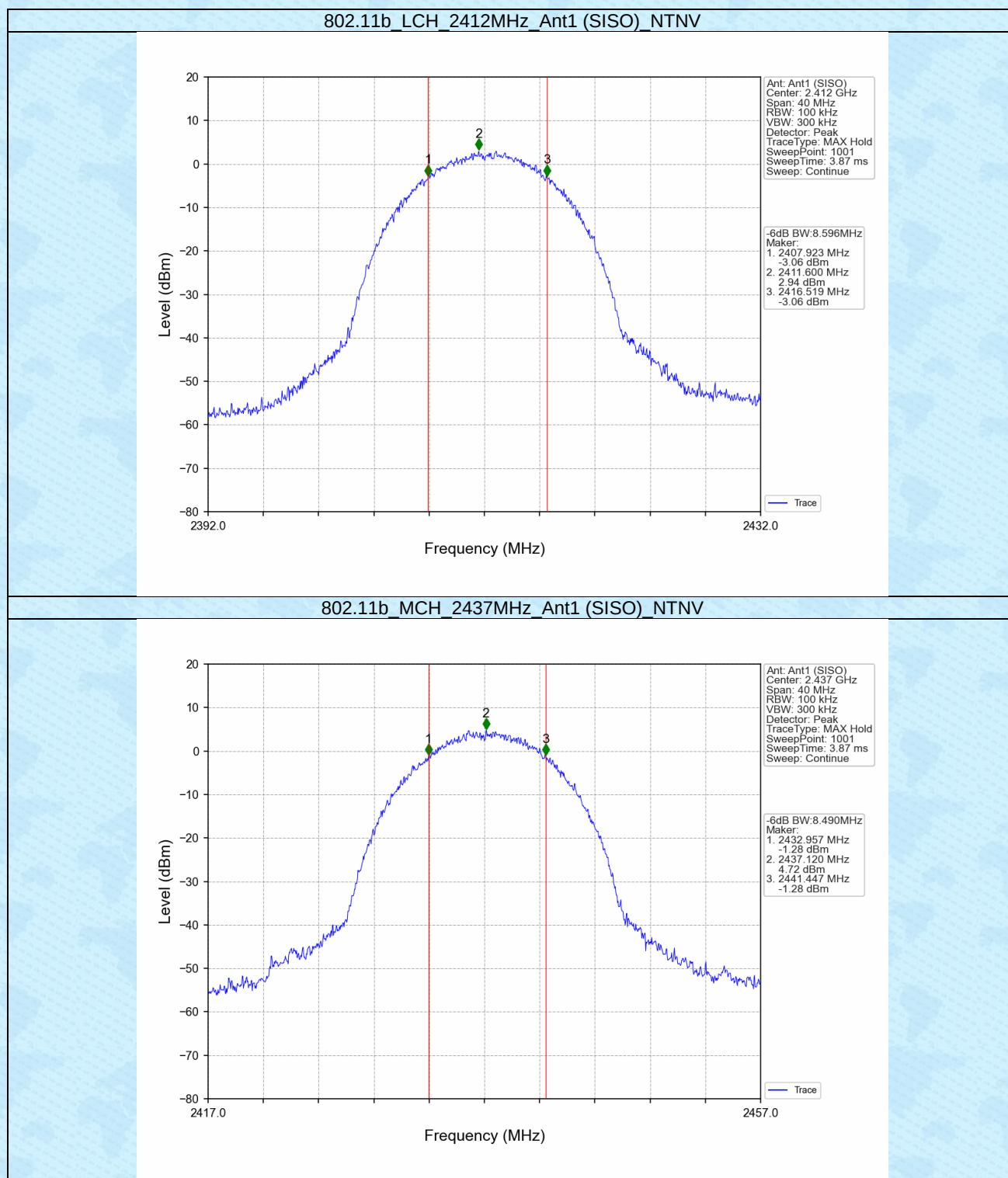


## 1.2 6dB BW

### 1.2.1 Test Result

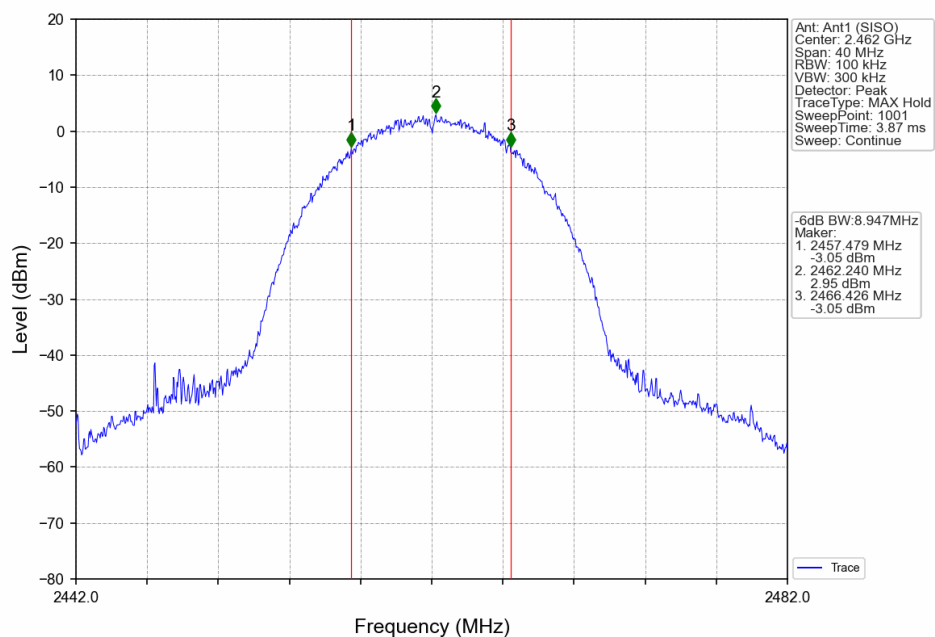
| Mode           | TX Type | Frequency (MHz) | ANT | 6dB Bandwidth (MHz) |            | Verdict |
|----------------|---------|-----------------|-----|---------------------|------------|---------|
|                |         |                 |     | Result              | Limit      |         |
| 802.11b        | SISO    | 2412            | 1   | 8.596               | $\geq 0.5$ | Pass    |
|                |         | 2437            | 1   | 8.490               | $\geq 0.5$ | Pass    |
|                |         | 2462            | 1   | 8.947               | $\geq 0.5$ | Pass    |
| 802.11g        | SISO    | 2412            | 1   | 8.694               | $\geq 0.5$ | Pass    |
|                |         | 2437            | 1   | 7.895               | $\geq 0.5$ | Pass    |
|                |         | 2462            | 1   | 8.203               | $\geq 0.5$ | Pass    |
| 802.11n (HT20) | SISO    | 2412            | 1   | 8.477               | $\geq 0.5$ | Pass    |
|                |         | 2437            | 1   | 8.921               | $\geq 0.5$ | Pass    |
|                |         | 2462            | 1   | 8.421               | $\geq 0.5$ | Pass    |

## 1.2.2 Test Graph

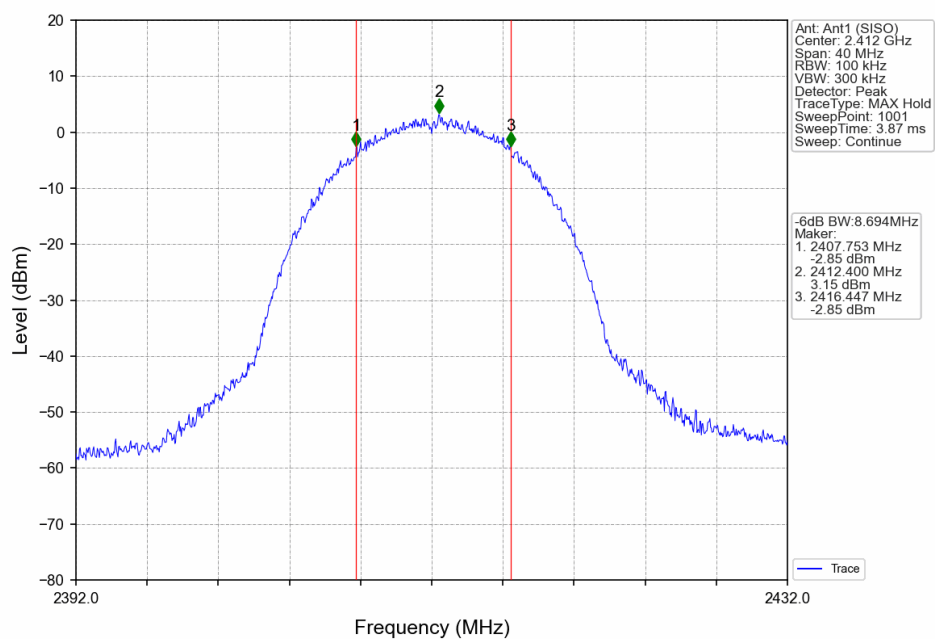




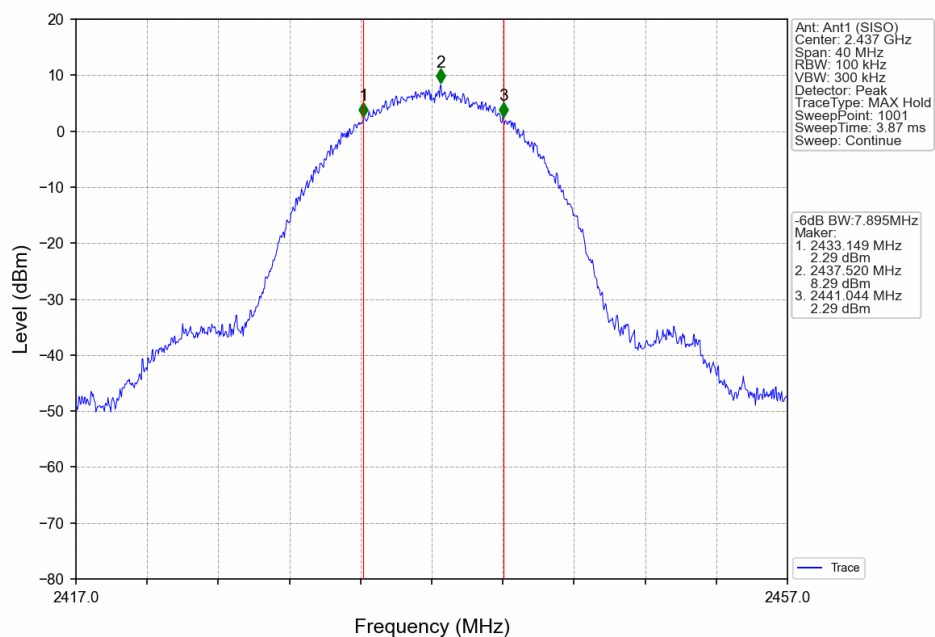
## 802.11b\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



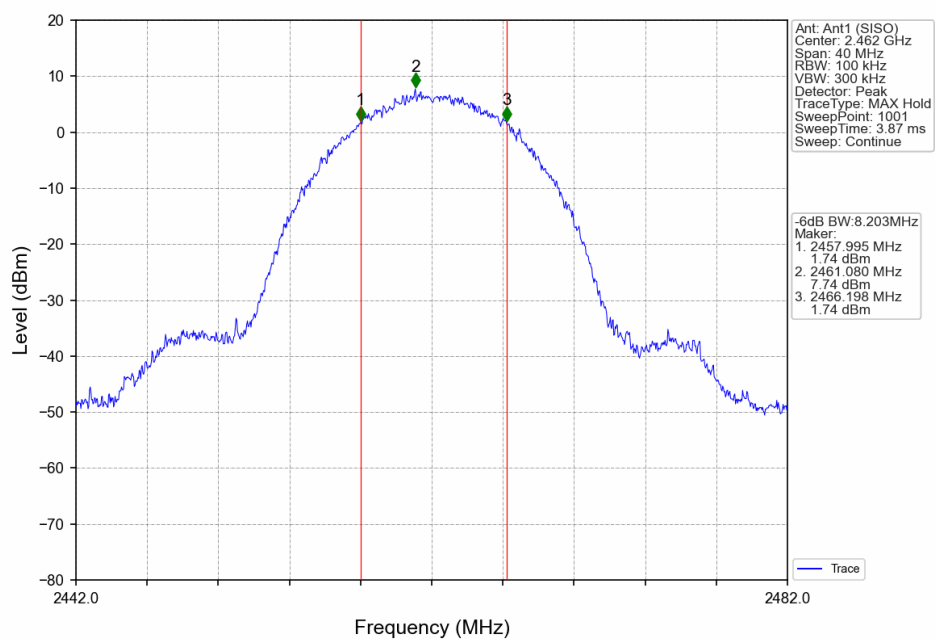
## 802.11g\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



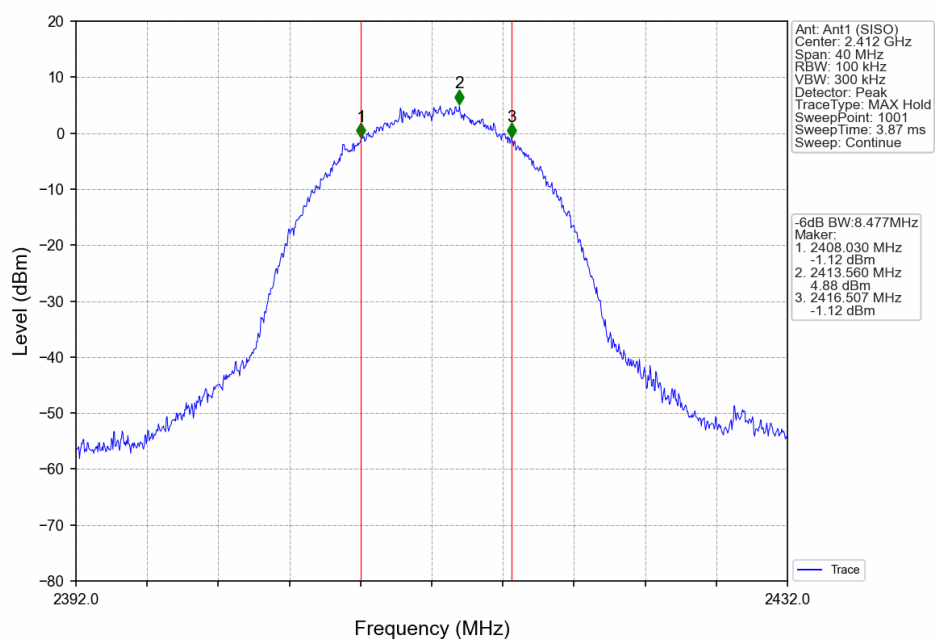
## 802.11g\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



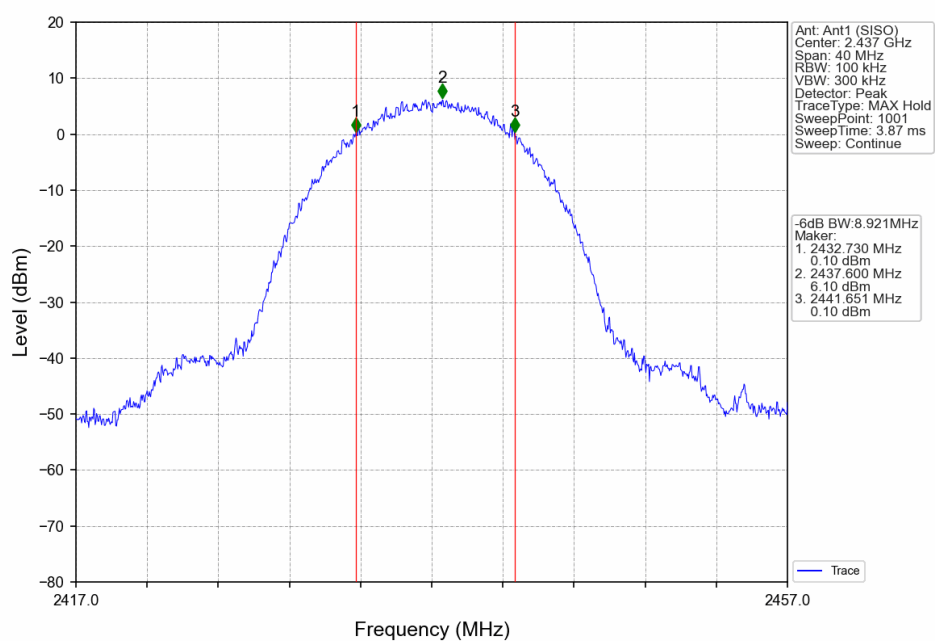
## 802.11g\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



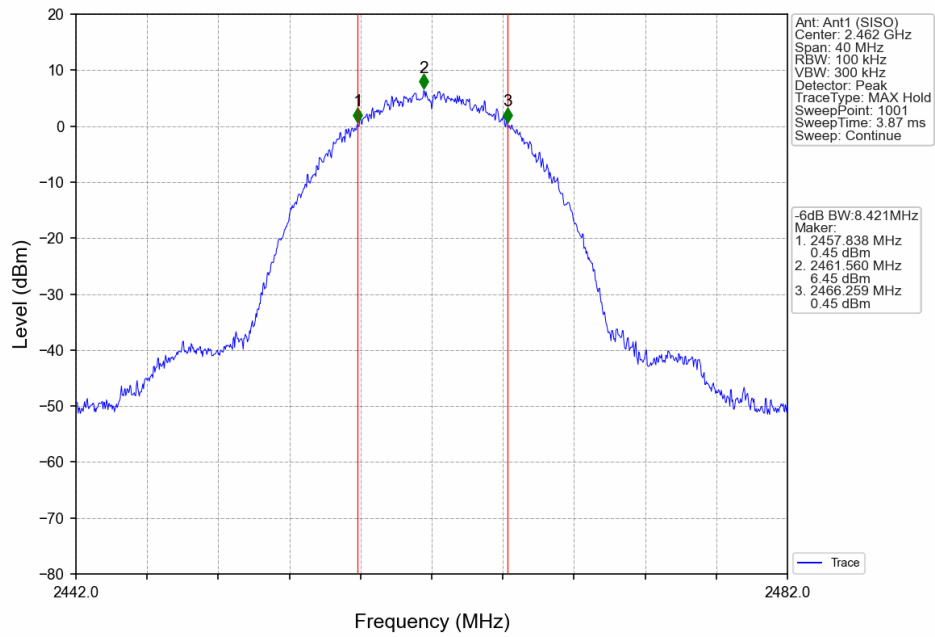
## 802.11n(HT20)\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



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



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





## 2. Maximum Conducted Output Power

### 2.1 Power

#### 2.1.1 Test Result

| Mode           | TX Type | Frequency (MHz) | Maximum Peak Conducted Output Power (dBm) |       | Verdict |
|----------------|---------|-----------------|-------------------------------------------|-------|---------|
|                |         |                 | ANT1                                      | Limit |         |
| 802.11b        | SISO    | 2412            | 17.16                                     | <=30  | Pass    |
|                |         | 2437            | 18.83                                     | <=30  | Pass    |
|                |         | 2462            | 17.17                                     | <=30  | Pass    |
| 802.11g        | SISO    | 2412            | 16.85                                     | <=30  | Pass    |
|                |         | 2437            | 21.36                                     | <=30  | Pass    |
|                |         | 2462            | 21.38                                     | <=30  | Pass    |
| 802.11n (HT20) | SISO    | 2412            | 18.88                                     | <=30  | Pass    |
|                |         | 2437            | 20.77                                     | <=30  | Pass    |
|                |         | 2462            | 20.50                                     | <=30  | Pass    |

Note1: Antenna Gain: Ant1: 3.14dBi;

## 3. Maximum Power Spectral Density

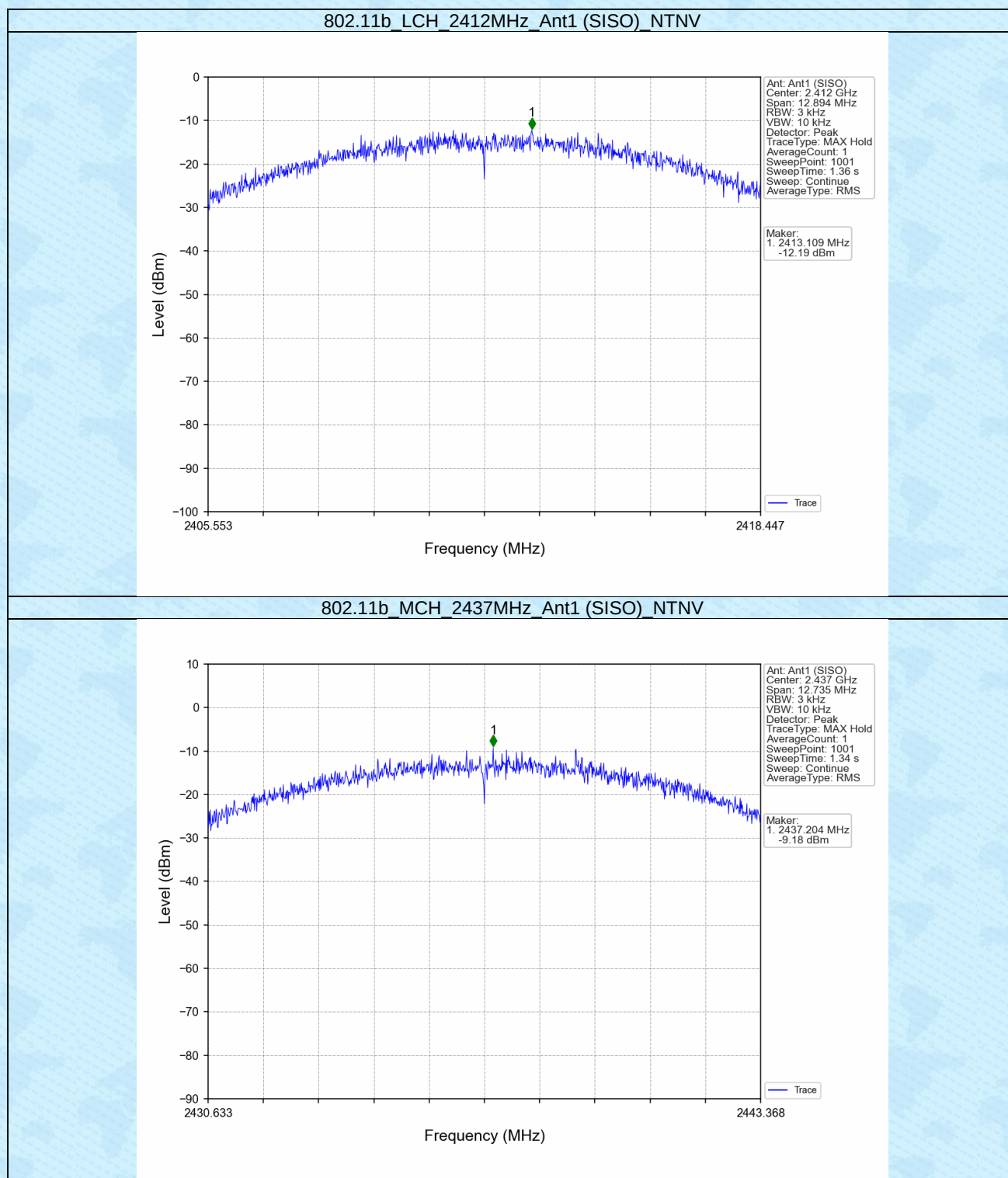
### 3.1 PSD

#### 3.1.1 Test Result

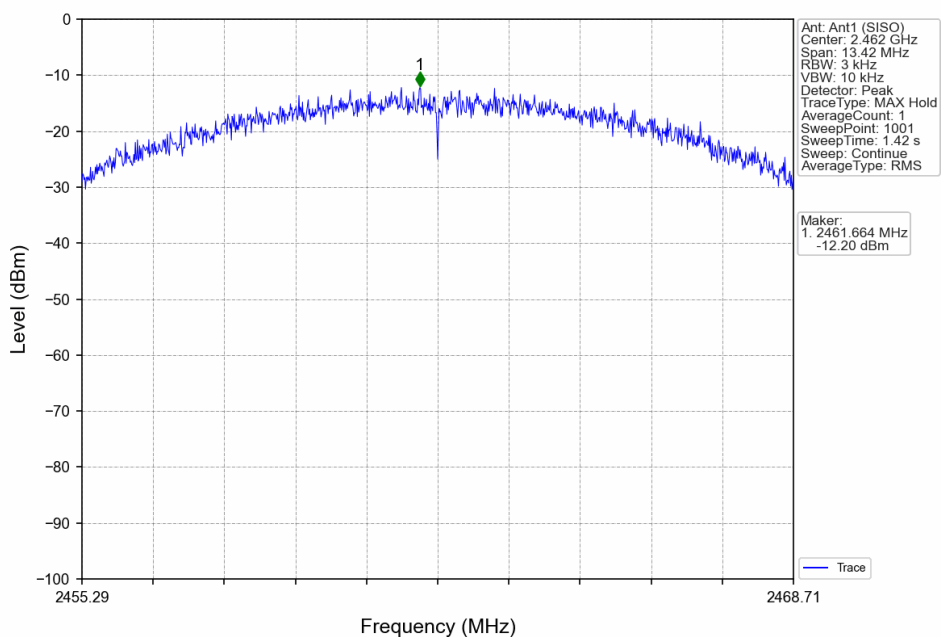
| Mode           | TX Type | Frequency (MHz) | Maximum PSD (dBm/3kHz) |       | Verdict |
|----------------|---------|-----------------|------------------------|-------|---------|
|                |         |                 | ANT1                   | Limit |         |
| 802.11b        | SISO    | 2412            | -12.19                 | <=8   | Pass    |
|                |         | 2437            | -9.18                  | <=8   | Pass    |
|                |         | 2462            | -12.20                 | <=8   | Pass    |
| 802.11g        | SISO    | 2412            | -12.45                 | <=8   | Pass    |
|                |         | 2437            | -7.08                  | <=8   | Pass    |
|                |         | 2462            | -7.42                  | <=8   | Pass    |
| 802.11n (HT20) | SISO    | 2412            | -9.52                  | <=8   | Pass    |
|                |         | 2437            | -7.08                  | <=8   | Pass    |
|                |         | 2462            | -8.28                  | <=8   | Pass    |

Note1: Antenna Gain: Ant1: 3.14dBi;

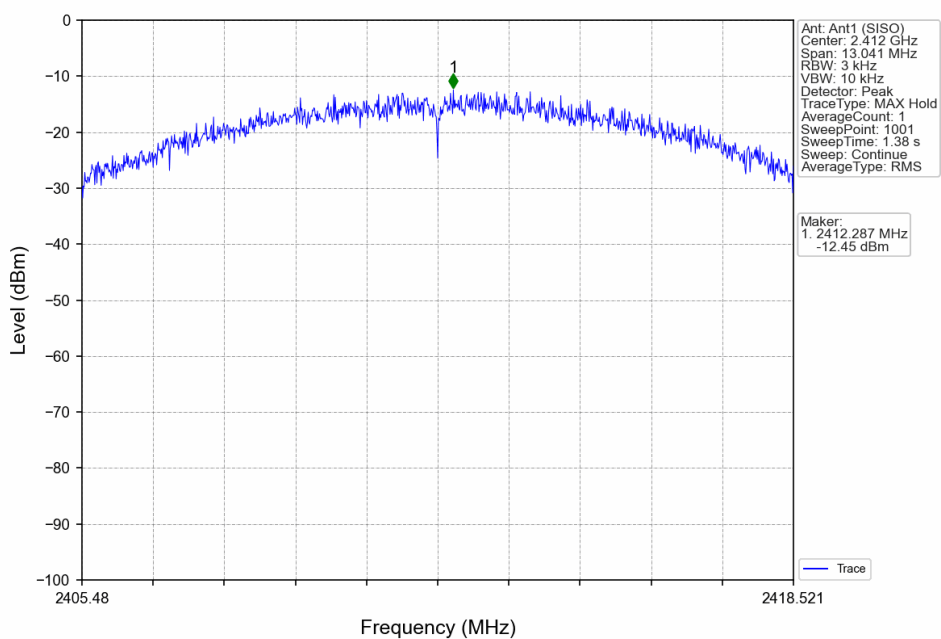
## 3.1.2 Test Graph



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

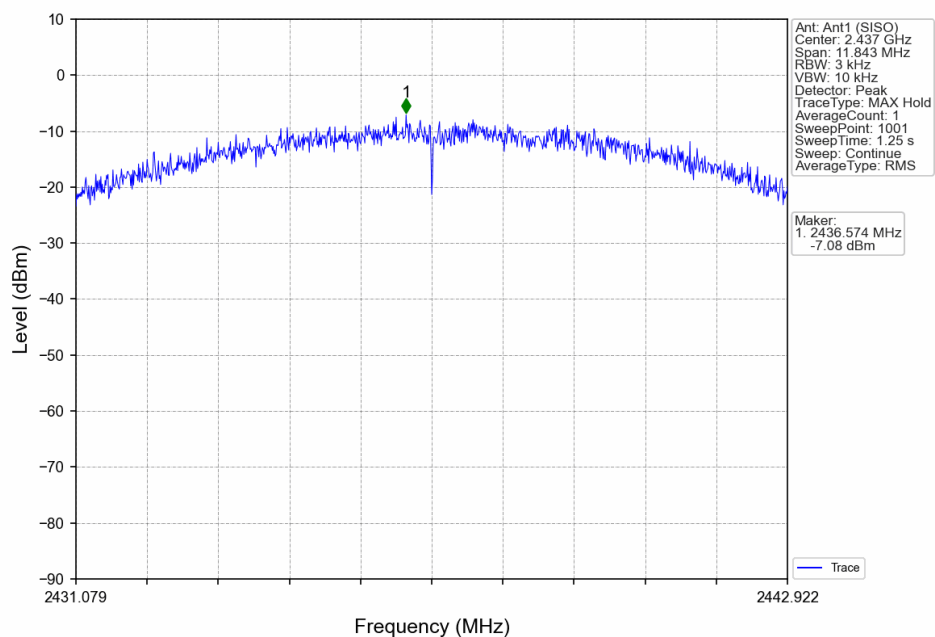


## 802.11g\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV

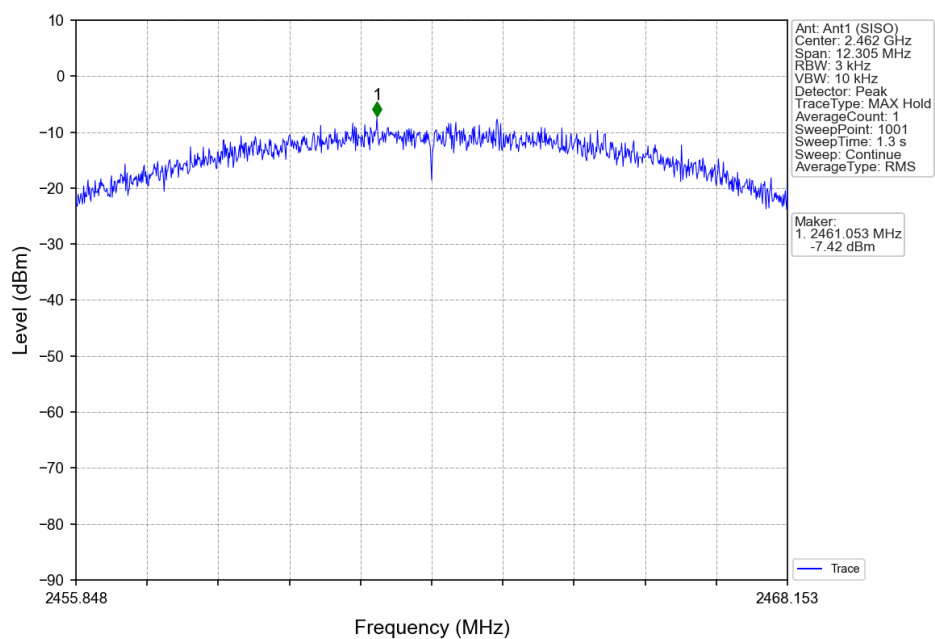




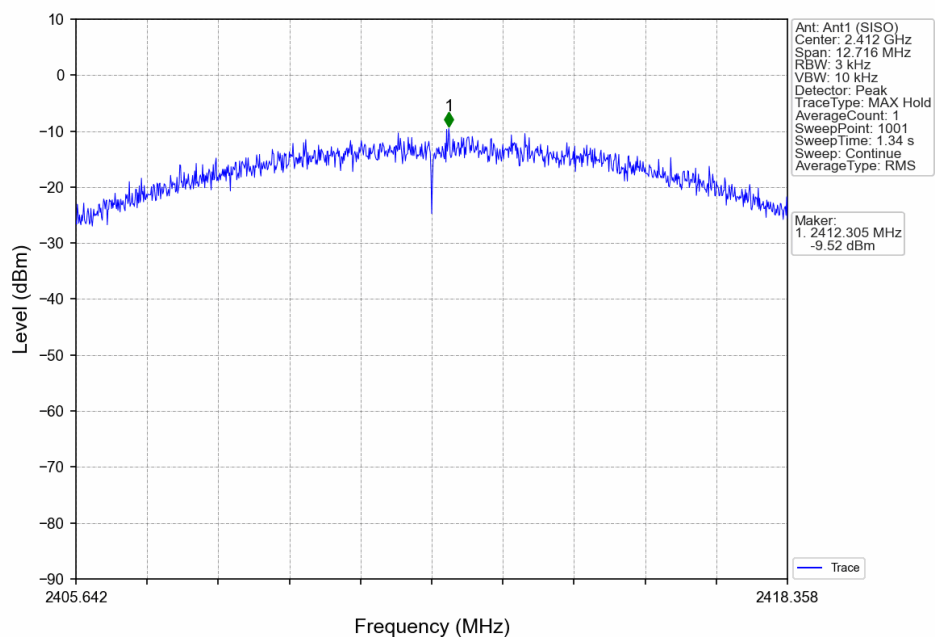
## 802.11g\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



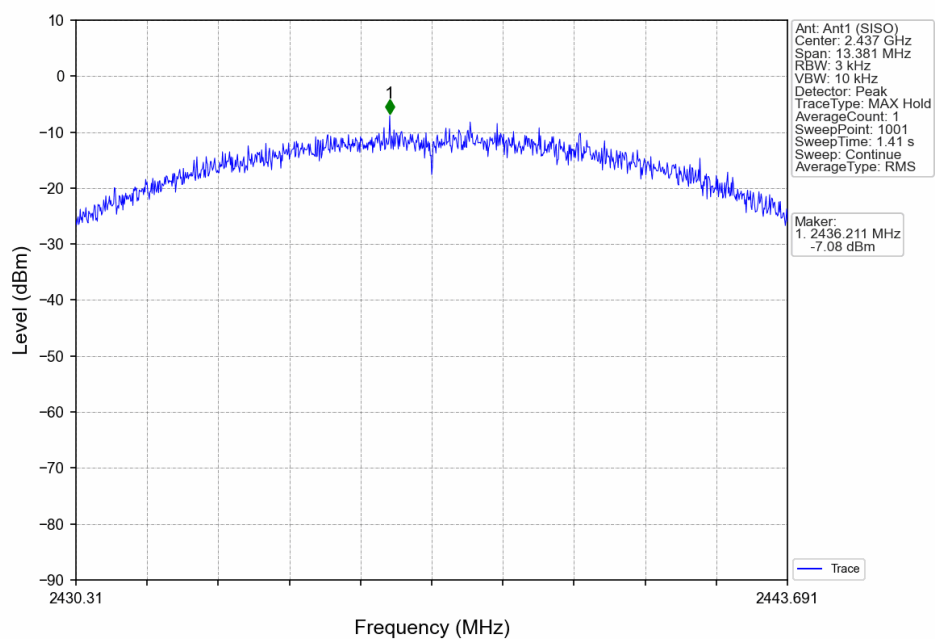
## 802.11g\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



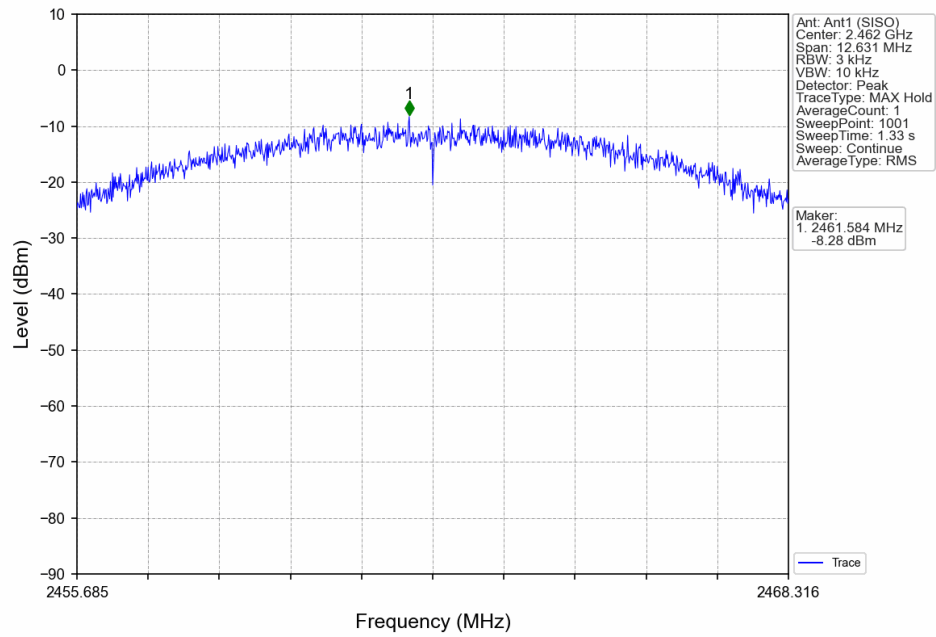
802.11n(HT20)\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



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



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



## 4. Unwanted Emissions InStandard Non-restricted Frequency Bands

### 4.1 Ref

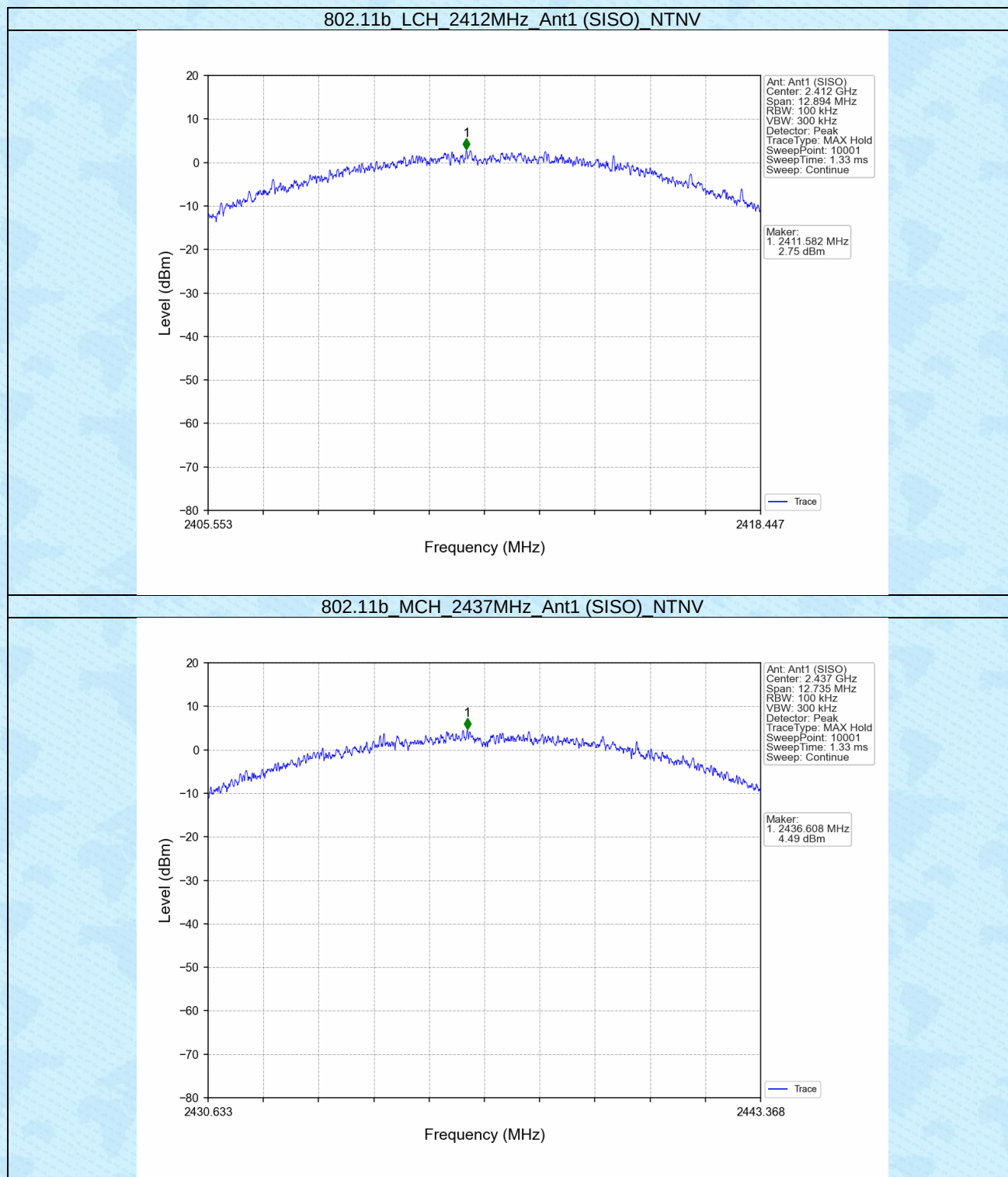
#### 4.1.1 Test Result

| Mode           | TX Type | Frequency (MHz) | ANT | Level of Reference (dBm) |
|----------------|---------|-----------------|-----|--------------------------|
| 802.11b        | SISO    | 2412            | 1   | 2.75                     |
|                |         | 2437            | 1   | 4.49                     |
|                |         | 2462            | 1   | 3.60                     |
| 802.11g        | SISO    | 2412            | 1   | 2.62                     |
|                |         | 2437            | 1   | 6.83                     |
|                |         | 2462            | 1   | 7.39                     |
| 802.11n (HT20) | SISO    | 2412            | 1   | 4.15                     |
|                |         | 2437            | 1   | 6.60                     |
|                |         | 2462            | 1   | 6.76                     |

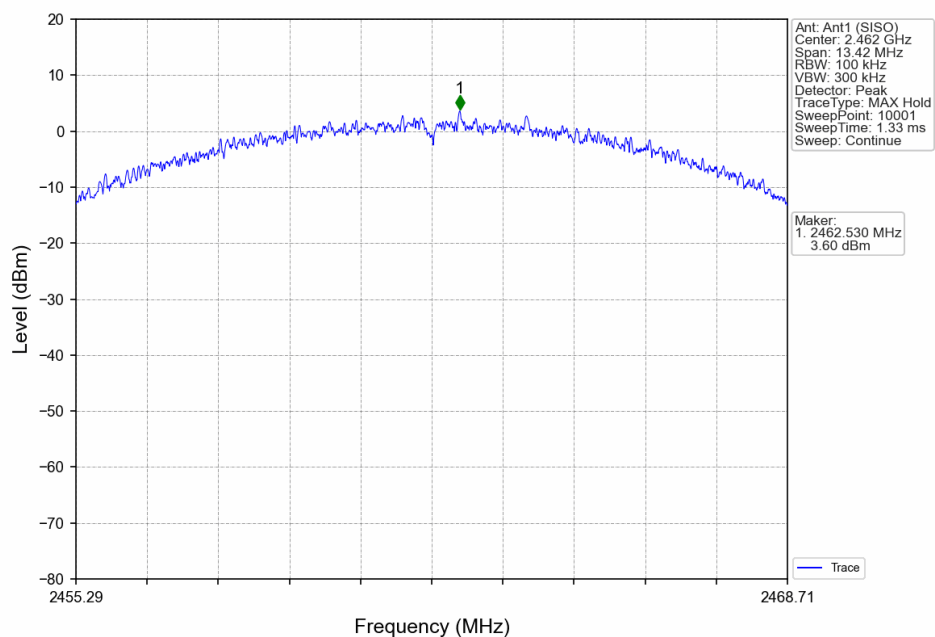
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.  
 Note2: RBW = 1MHz was used during the pre-test. The final test will be performed at RBW=100kHz while the margin is less than 3dB.



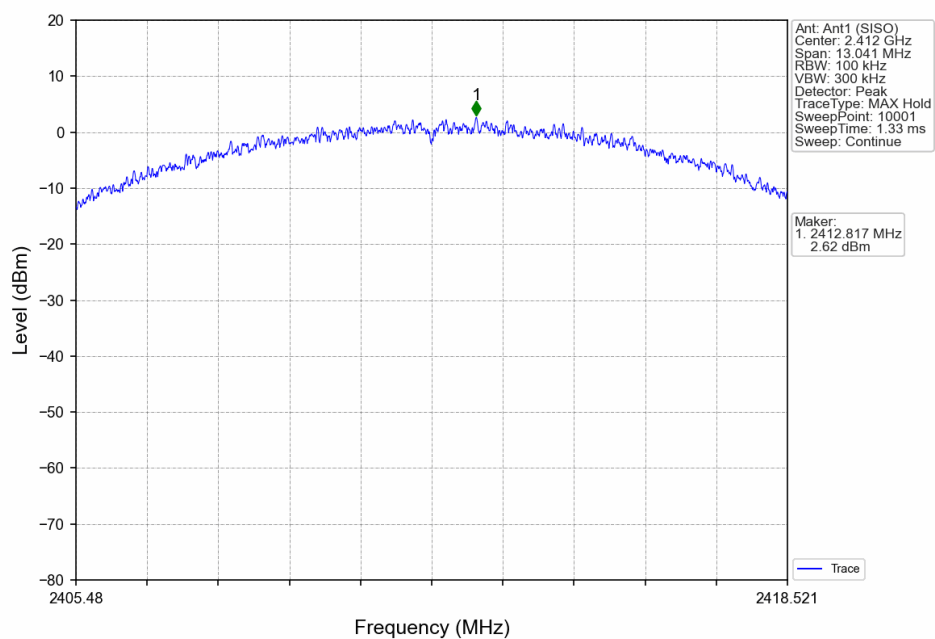
## 4.1.2 Test Graph



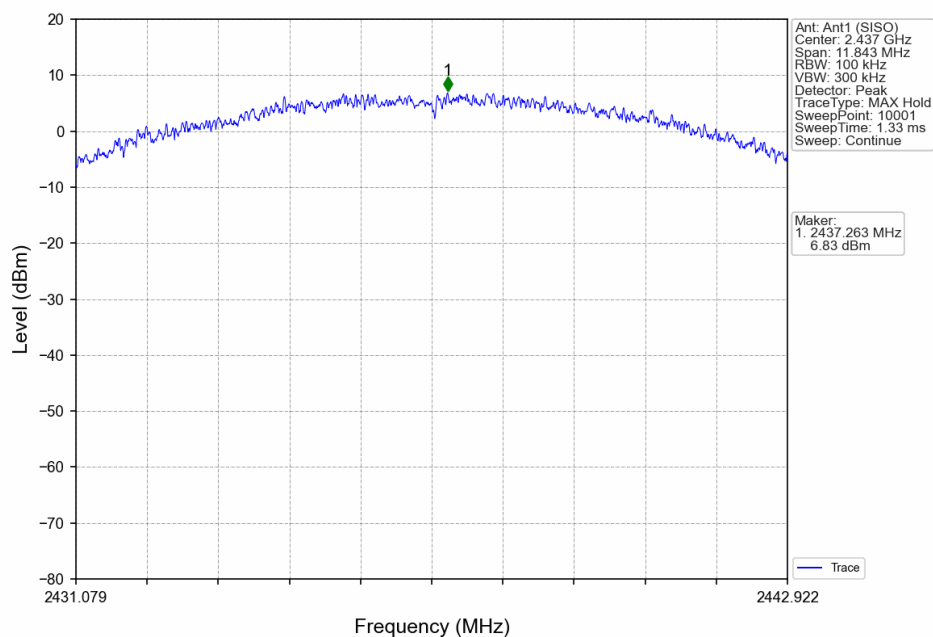
## 802.11b\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



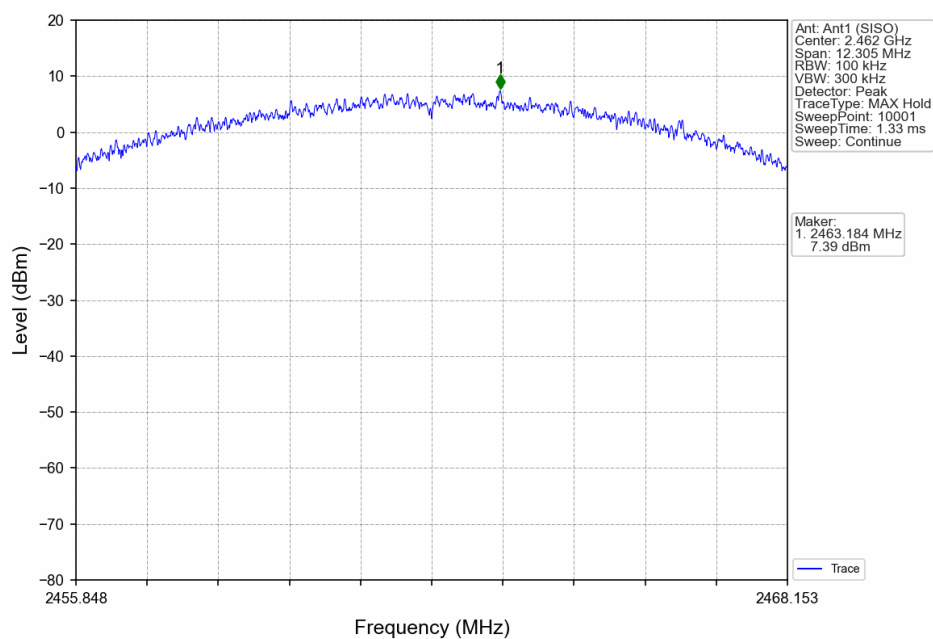
## 802.11g\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



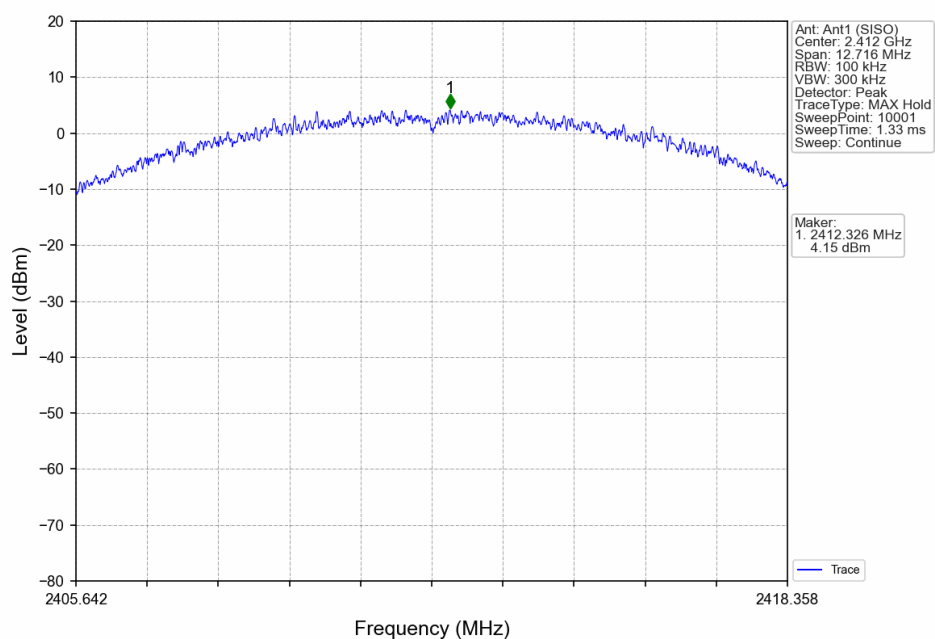
## 802.11g\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



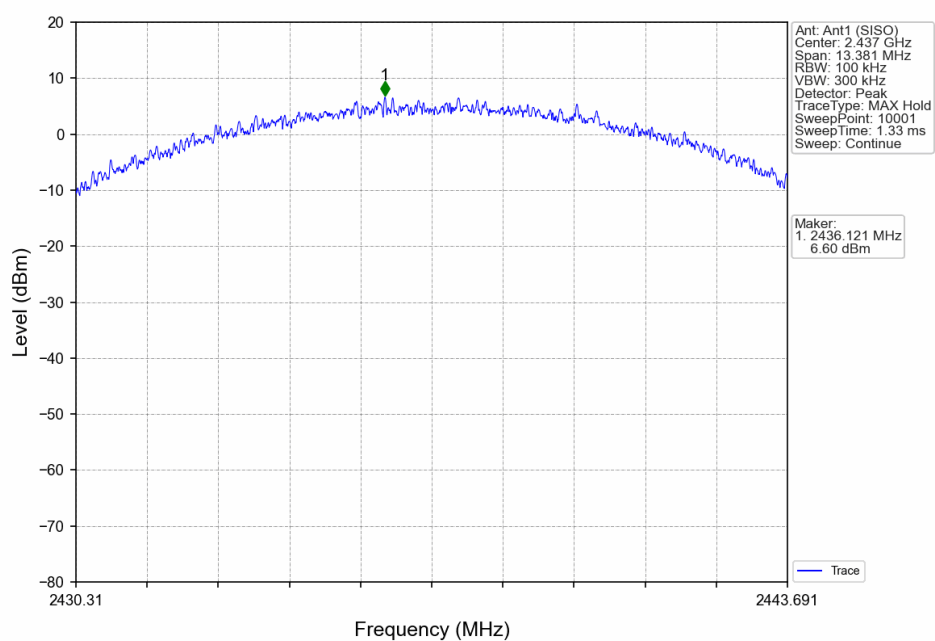
## 802.11g\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



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

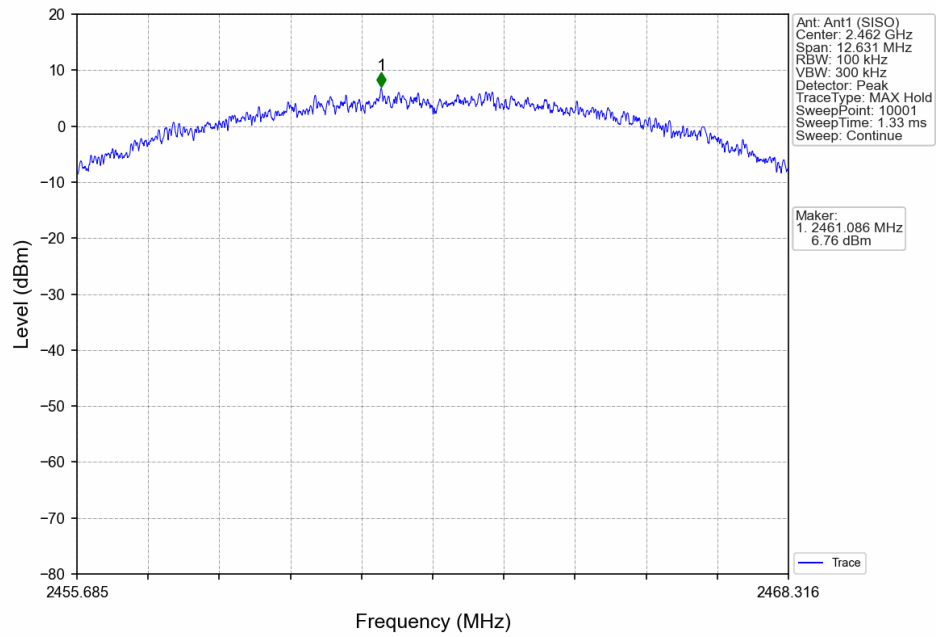


## 802.11n(HT20)\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV





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



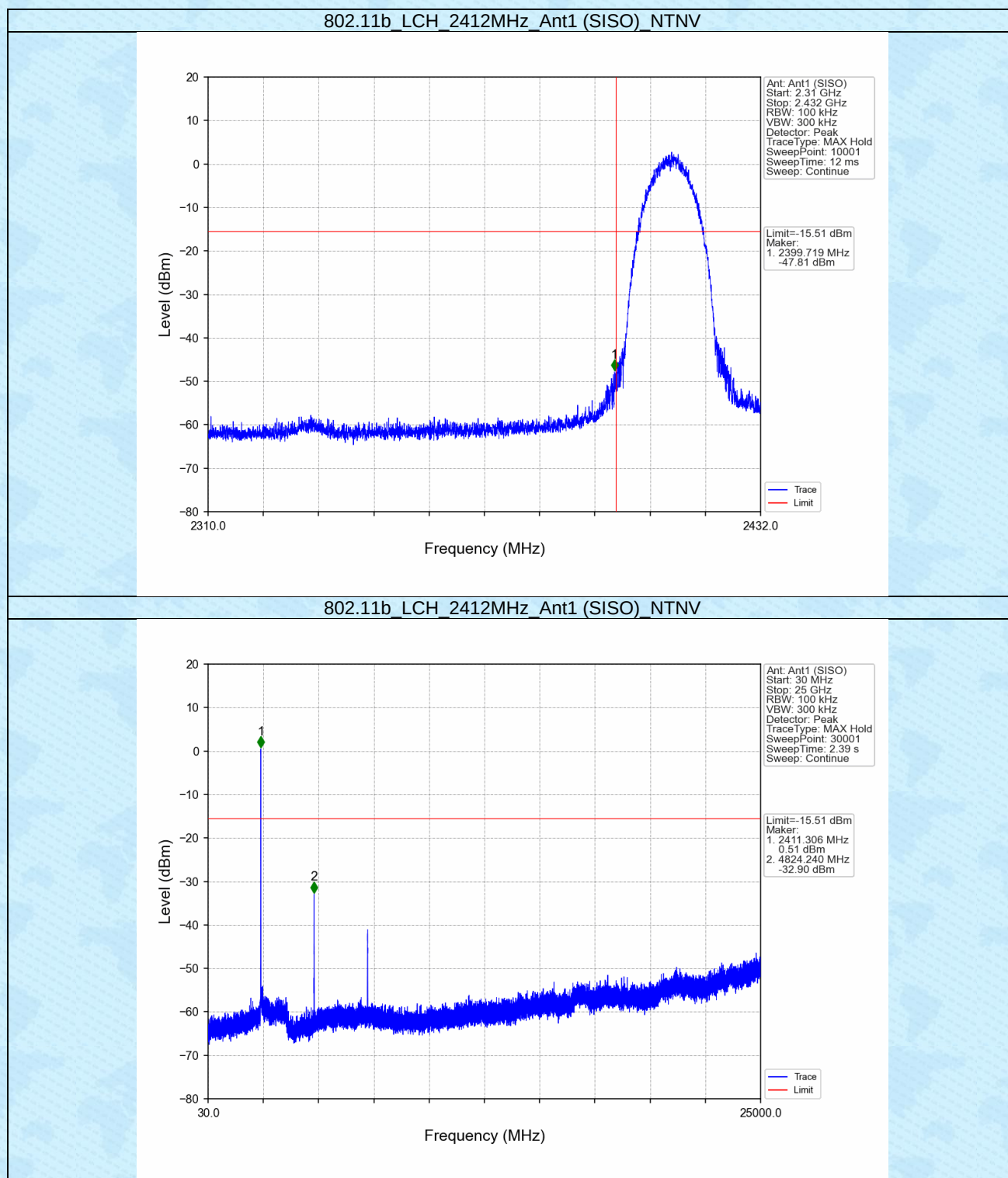
## 4.2 CSE

### 4.2.1 Test Result

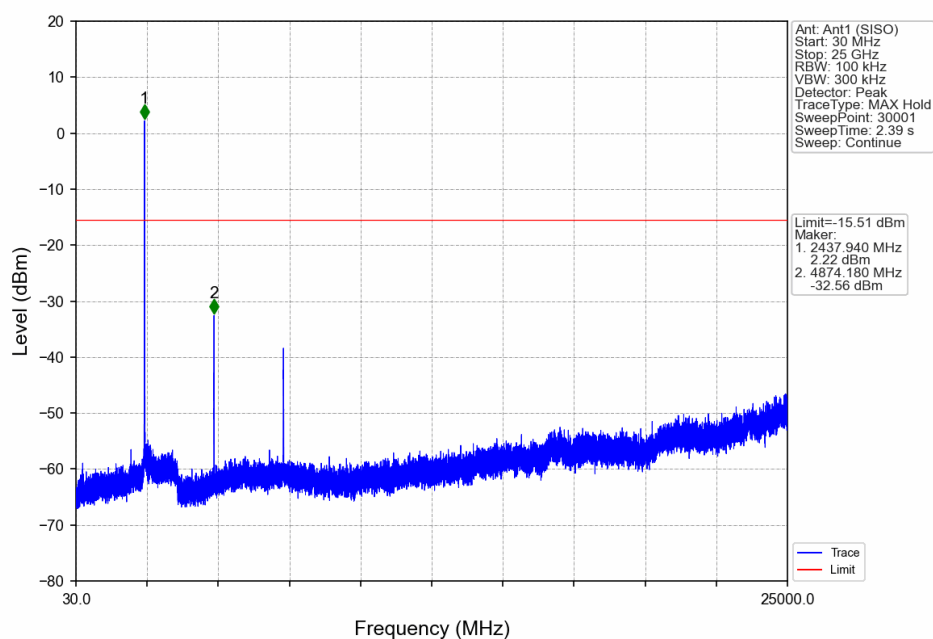
| Mode           | TX Type | Frequency (MHz) | ANT | Level of Reference (dBm) | Limit (dBm) | Verdict |
|----------------|---------|-----------------|-----|--------------------------|-------------|---------|
| 802.11b        | SISO    | 2412            | 1   | 4.49                     | -15.51      | Pass    |
|                |         | 2437            | 1   | 4.49                     | -15.51      | Pass    |
|                |         | 2462            | 1   | 4.49                     | -15.51      | Pass    |
| 802.11g        | SISO    | 2412            | 1   | 7.39                     | -12.61      | Pass    |
|                |         | 2437            | 1   | 7.39                     | -12.61      | Pass    |
|                |         | 2462            | 1   | 7.39                     | -12.61      | Pass    |
| 802.11n (HT20) | SISO    | 2412            | 1   | 6.76                     | -13.24      | Pass    |
|                |         | 2437            | 1   | 6.76                     | -13.24      | Pass    |
|                |         | 2462            | 1   | 6.76                     | -13.24      | 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.  
Note2: RBW = 1MHz was used during the pre-test. The final test will be performed at RBW=100kHz while the margin is less than 3dB.

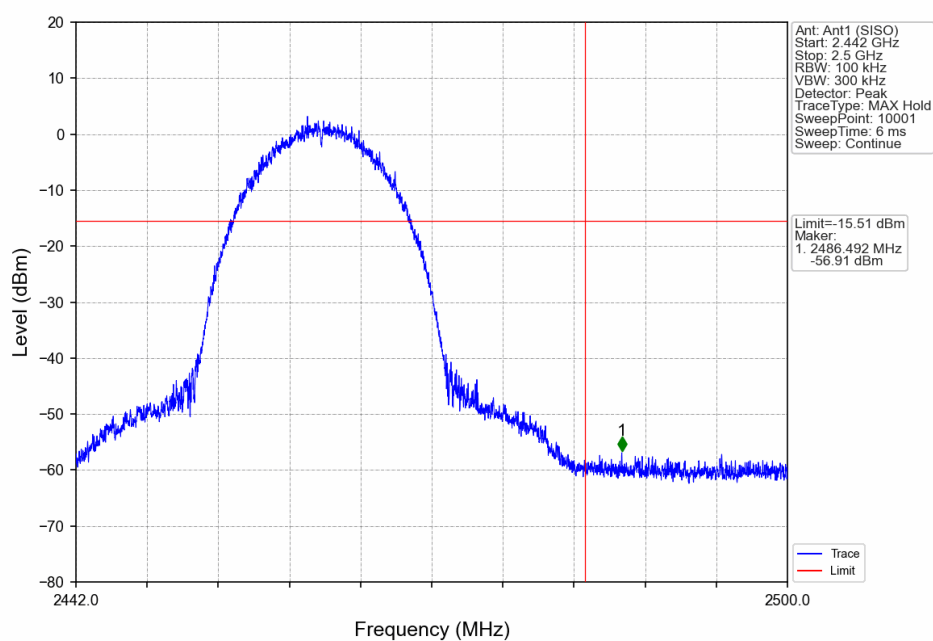
## 4.2.2 Test Graph



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

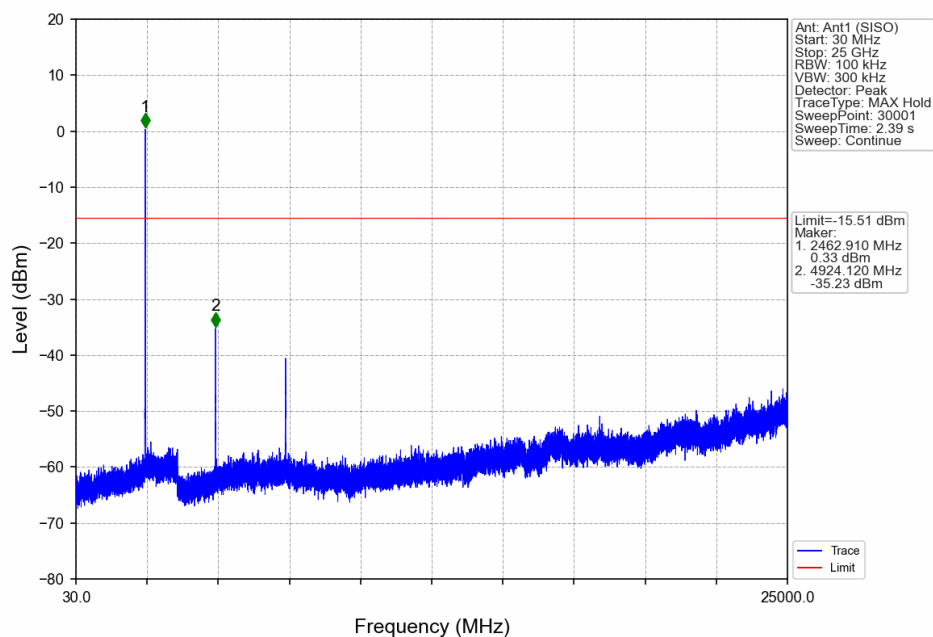


## 802.11b\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV

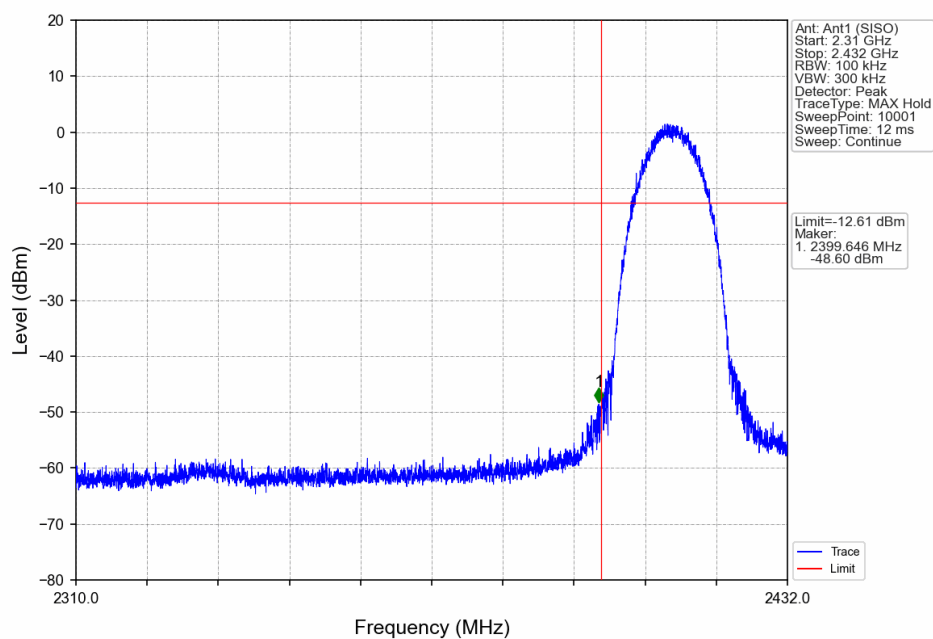




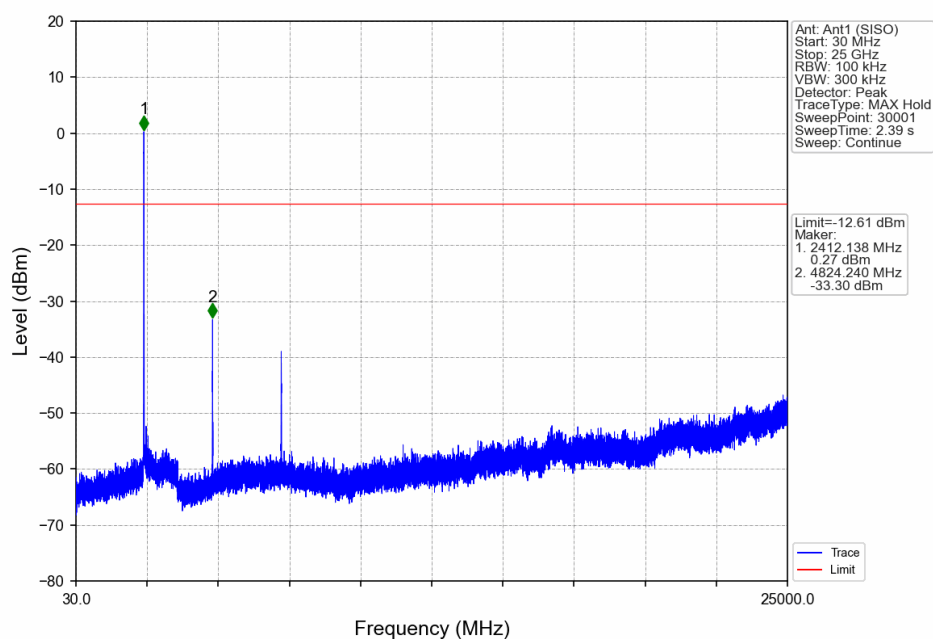
## 802.11b\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



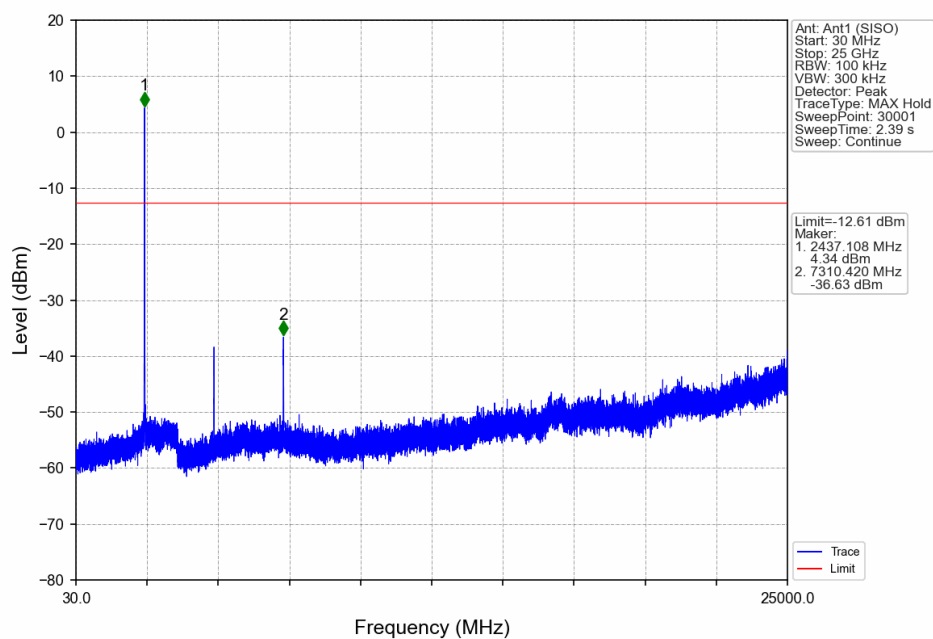
## 802.11g\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



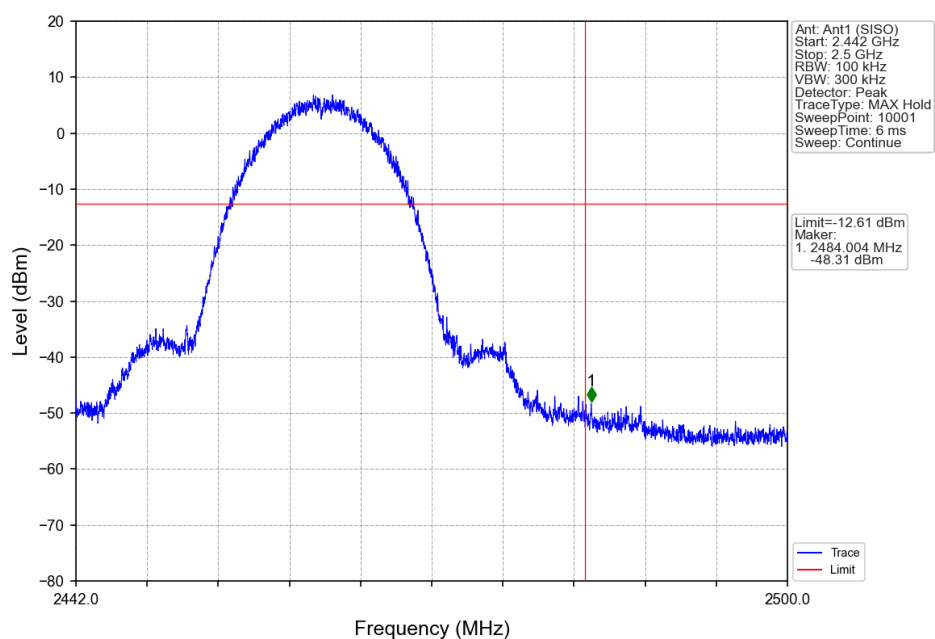
## 802.11g\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



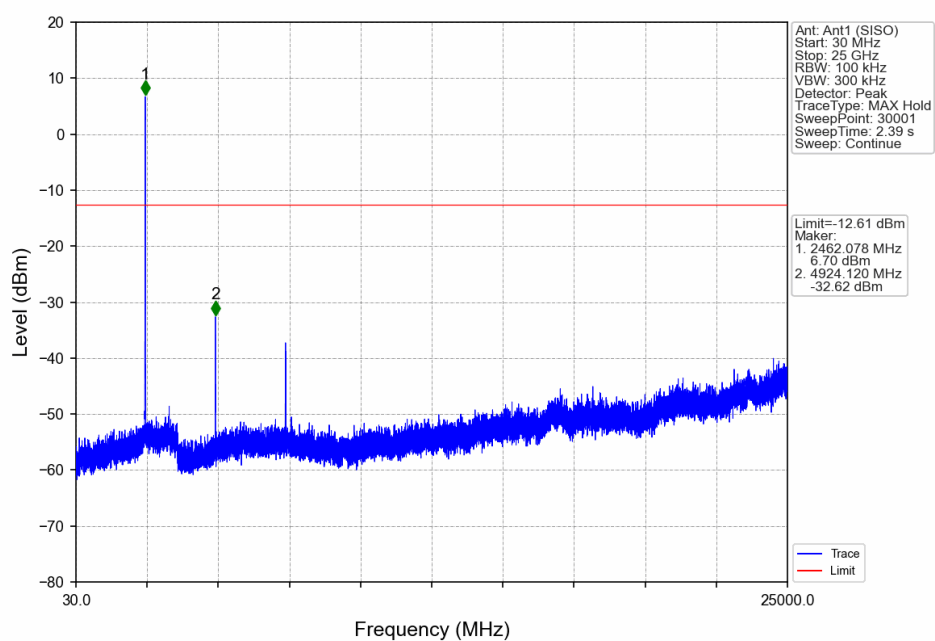
## 802.11g\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



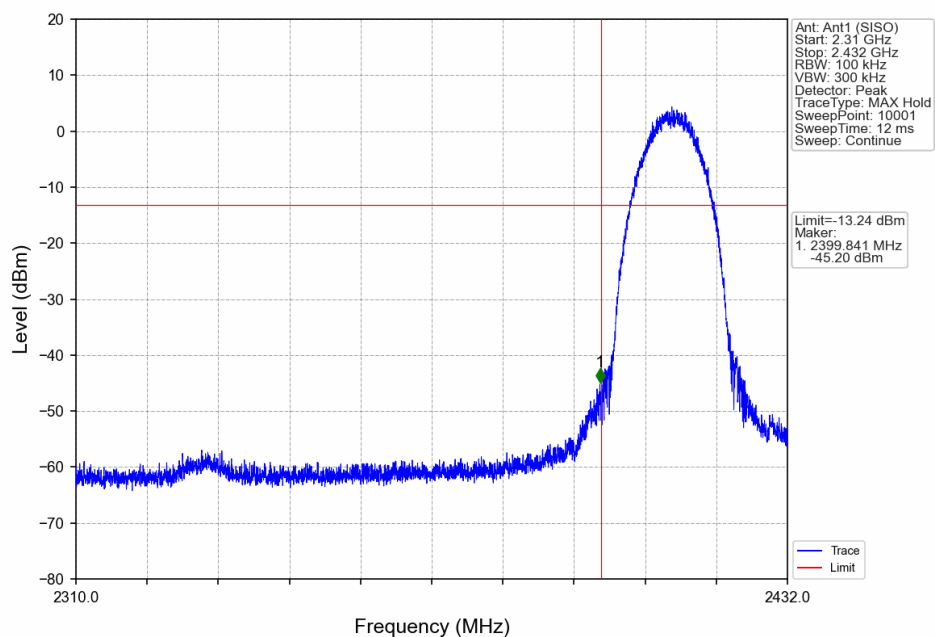
## 802.11g\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



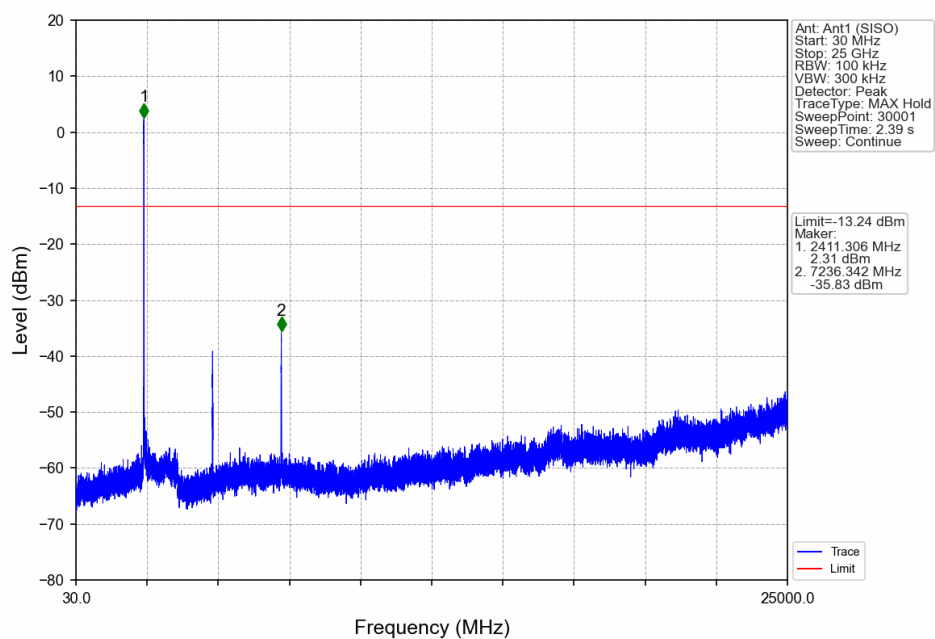
## 802.11g\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



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

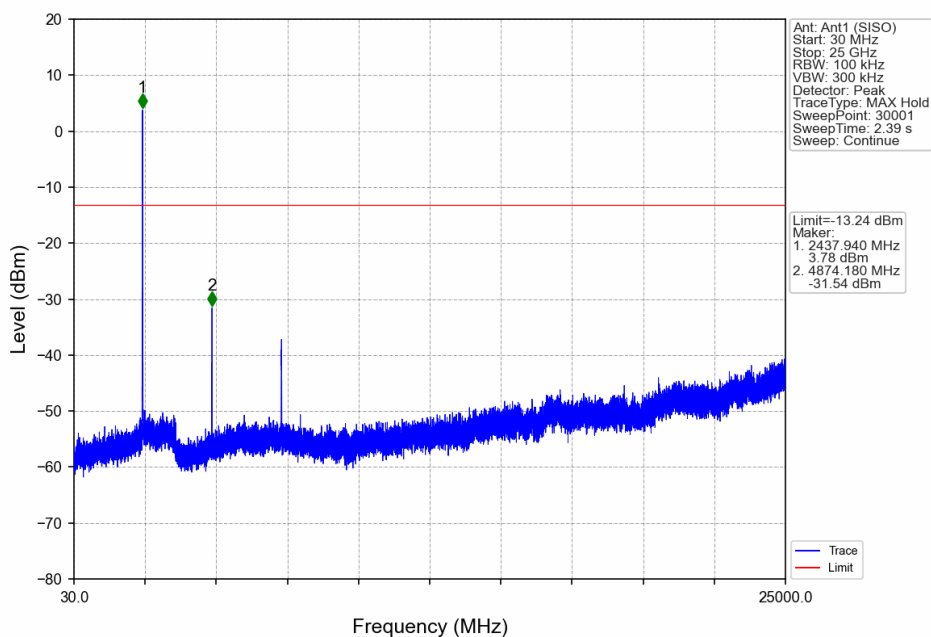


802.11n(HT20)\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV

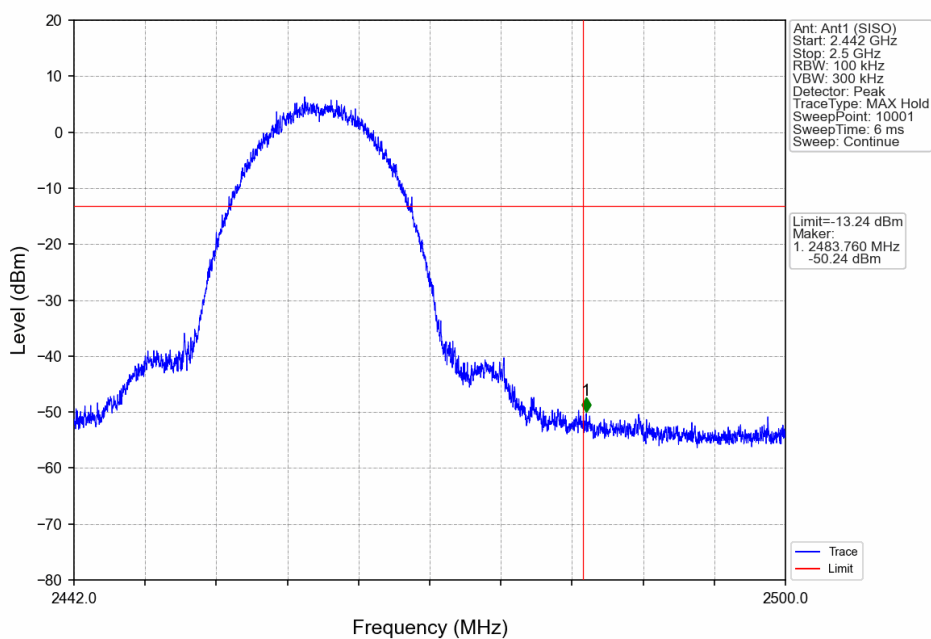




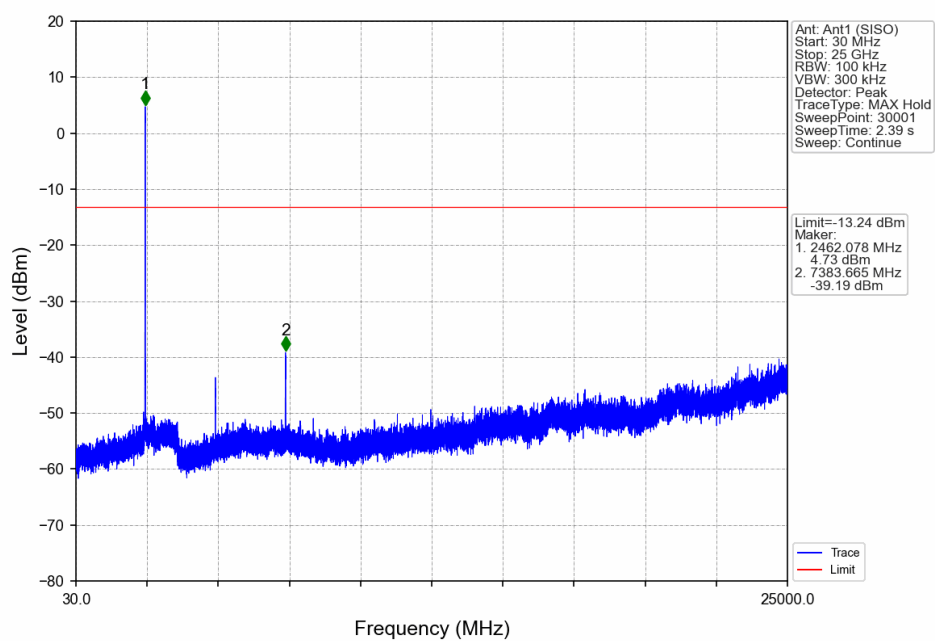
802.11n(HT20)\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



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



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



-----End-----