# 1. Duty Cycle

## 1.1 Test Result

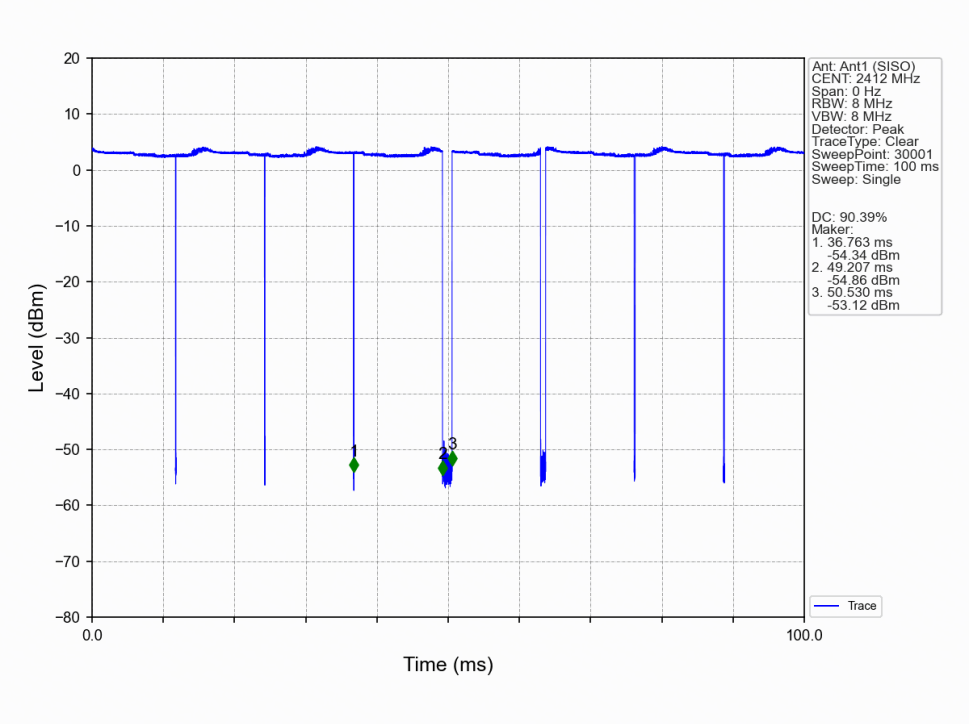
### 1.1.1 Ant1

| 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 | 12.444 | 13.767 | 90.39 | 0.44 | 9.27 |
| | | 2437 | 12.420 | 13.770 | 90.20 | 0.45 | 9.43 |
| | | 2462 | 12.420 | 12.547 | 98.99 | 0.04 | 0.45 |
| 802.11g | SISO | 2412 | 2.063 | 11.433 | 18.04 | 7.44 | 7.52 |
| | | 2437 | 2.067 | 11.293 | 18.30 | 7.37 | 5.49 |
| | | 2462 | 2.063 | 13.723 | 15.03 | 8.23 | 8.21 |
| 802.11n (HT20) | SISO | 2412 | 1.920 | 11.084 | 17.32 | 7.61 | 4.22 |
| | | 2437 | 1.920 | 12.916 | 14.87 | 8.28 | 12.26 |
| | | 2462 | 1.920 | 18.907 | 10.15 | 9.93 | 9.12 |
| 802.11n (HT40) | SISO | 2422 | 0.943 | 13.433 | 7.02 | 11.54 | 9.09 |
| | | 2437 | 0.946 | 10.970 | 8.62 | 10.64 | 1.90 |
| | | 2452 | 0.946 | 12.343 | 7.66 | 11.16 | 4.61 |

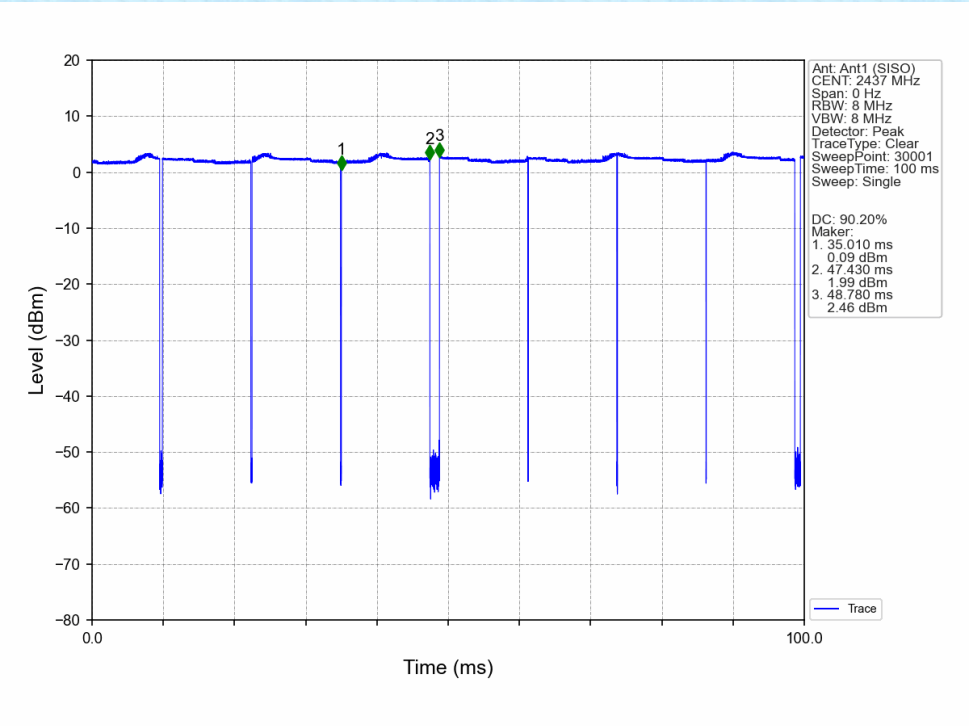
## 1.2 Test Graph

### 1.2.1 Ant1

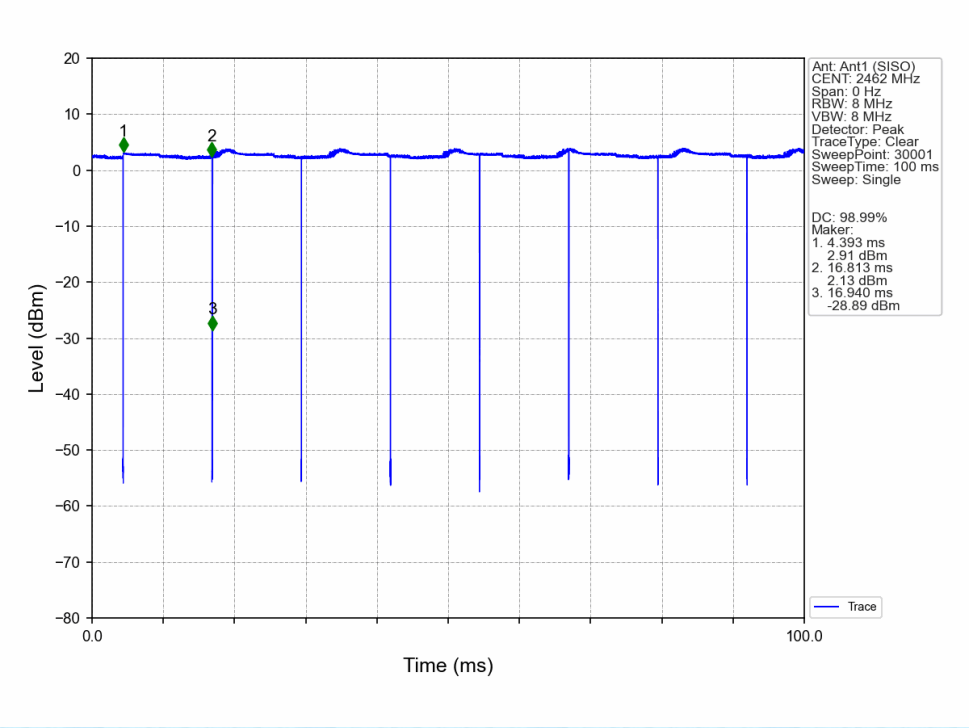
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



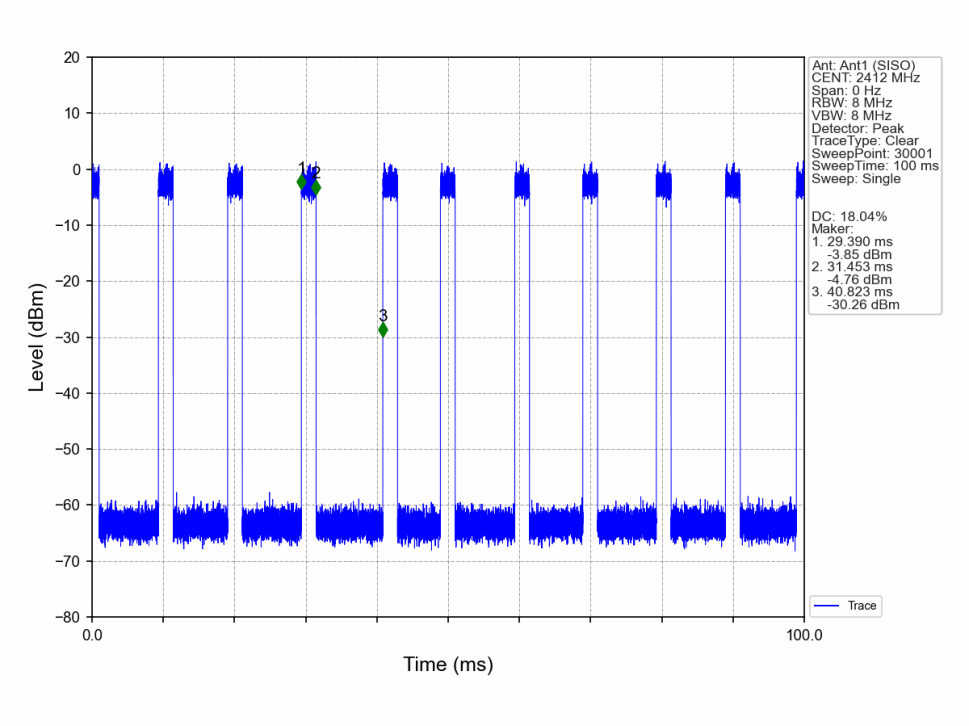

802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



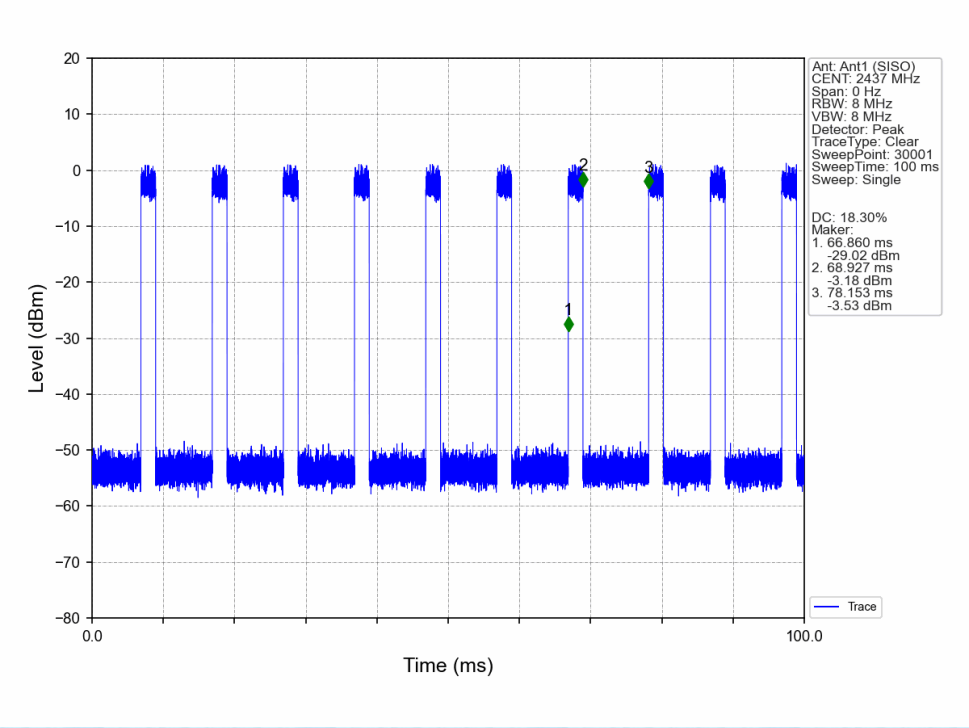
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



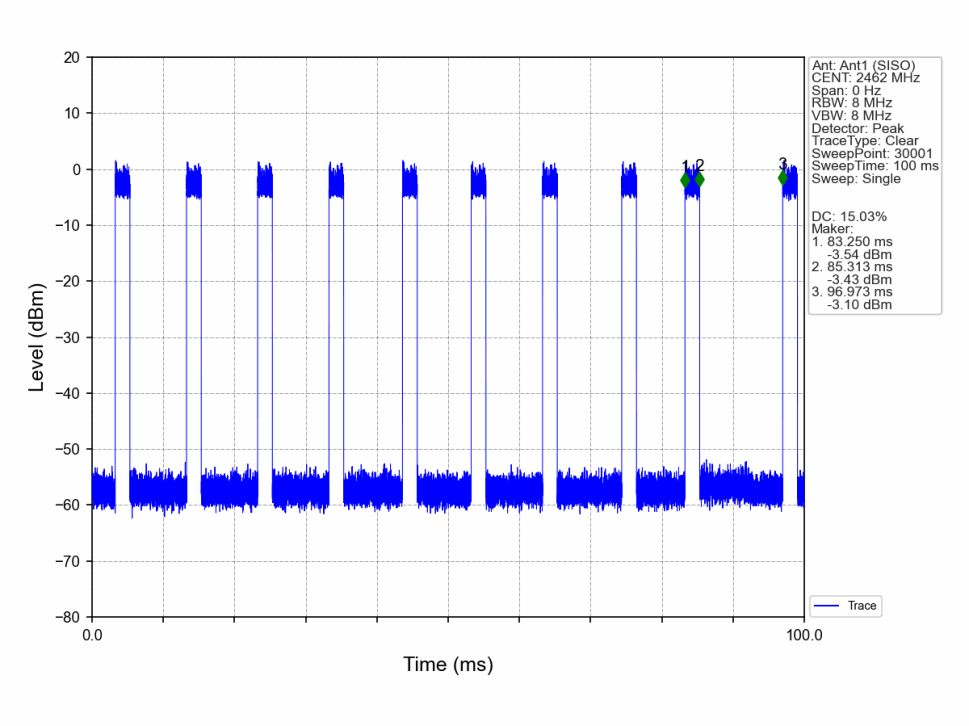

802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



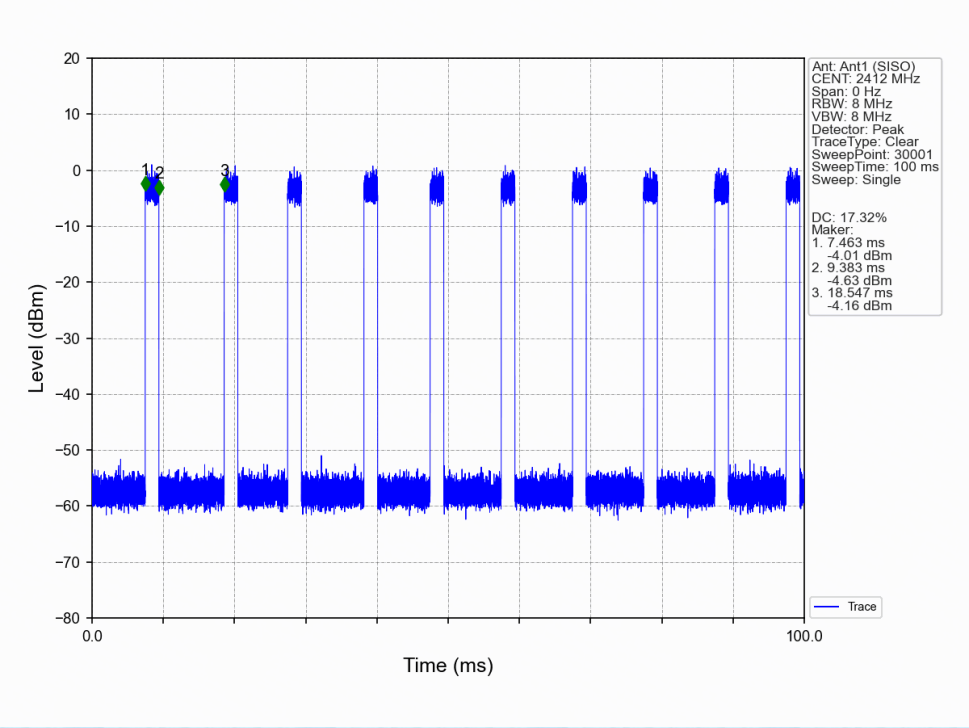
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



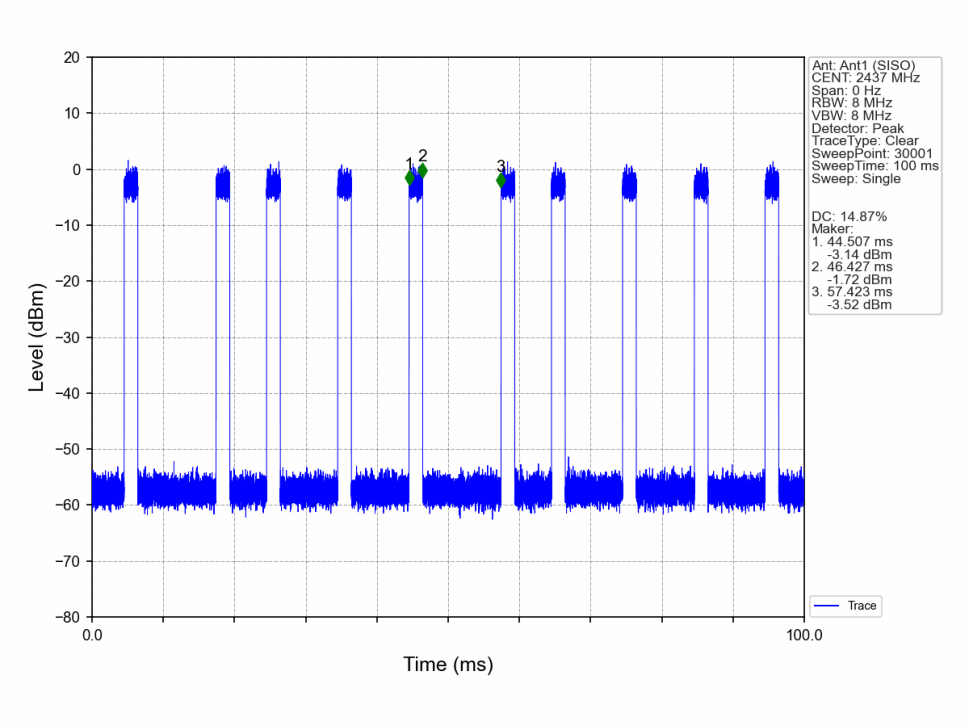

802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



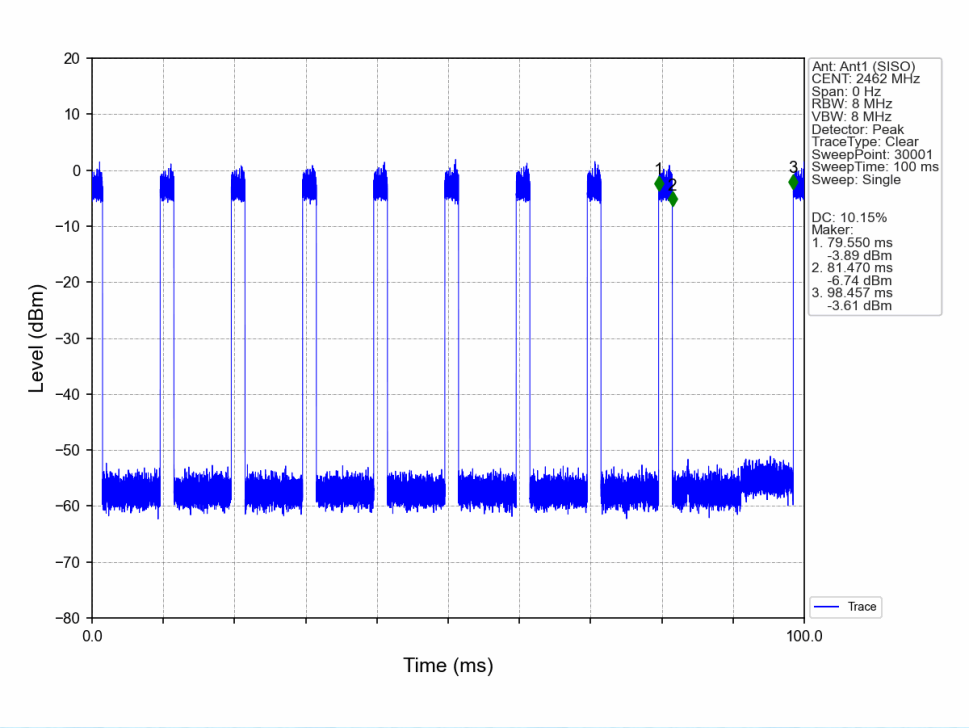
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



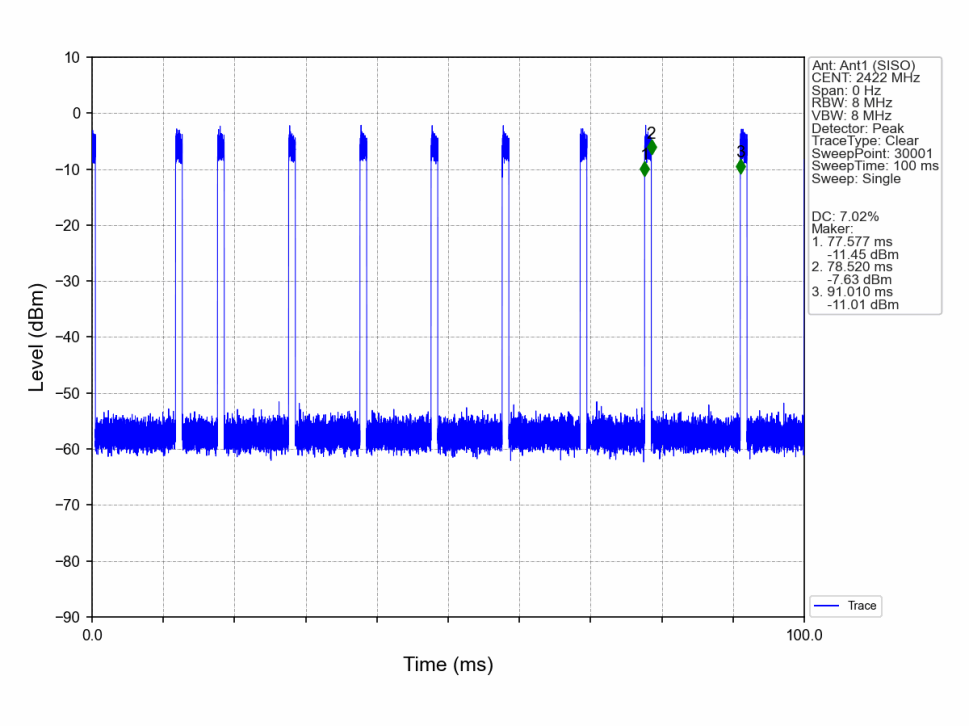

802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



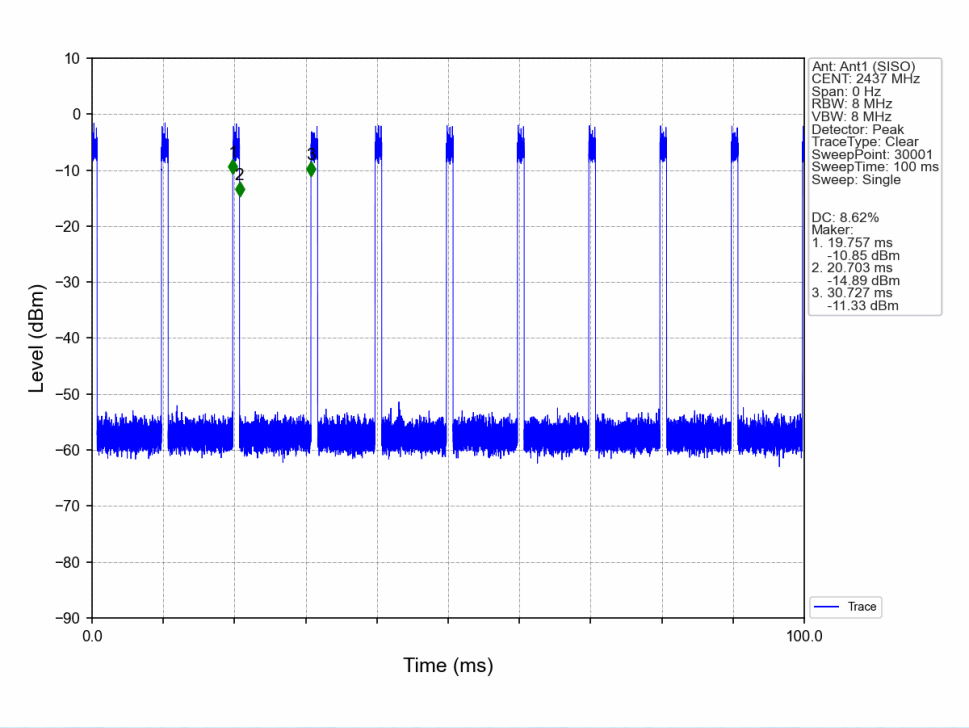
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



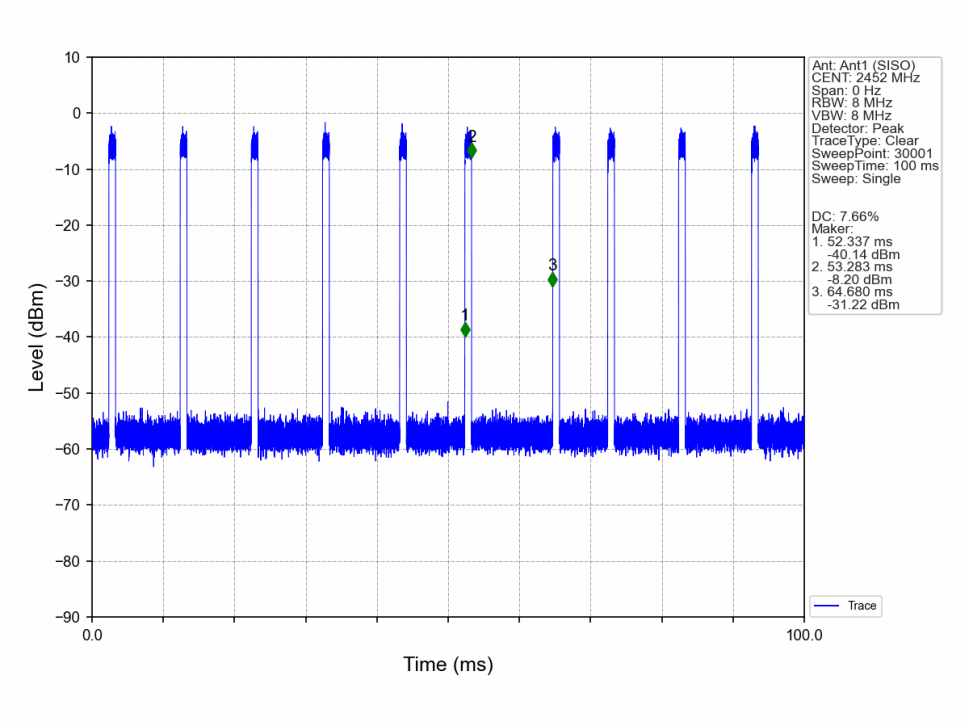

802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV




802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



# 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 | 13.311 | / | Pass |
| | | 2437 | 1 | 13.326 | / | Pass |
| | | 2462 | 1 | 13.311 | / | Pass |
| 802.11g | SISO | 2412 | 1 | 17.485 | / | Pass |
| | | 2437 | 1 | 17.532 | / | Pass |
| | | 2462 | 1 | 17.445 | / | Pass |
| 802.11n (HT20) | SISO | 2412 | 1 | 18.393 | / | Pass |
| | | 2437 | 1 | 18.410 | / | Pass |
| | | 2462 | 1 | 18.440 | / | Pass |
| 802.11n (HT40) | SISO | 2422 | 1 | 36.310 | / | Pass |
| | | 2437 | 1 | 36.390 | / | Pass |
| | | 2452 | 1 | 36.395 | / | Pass |

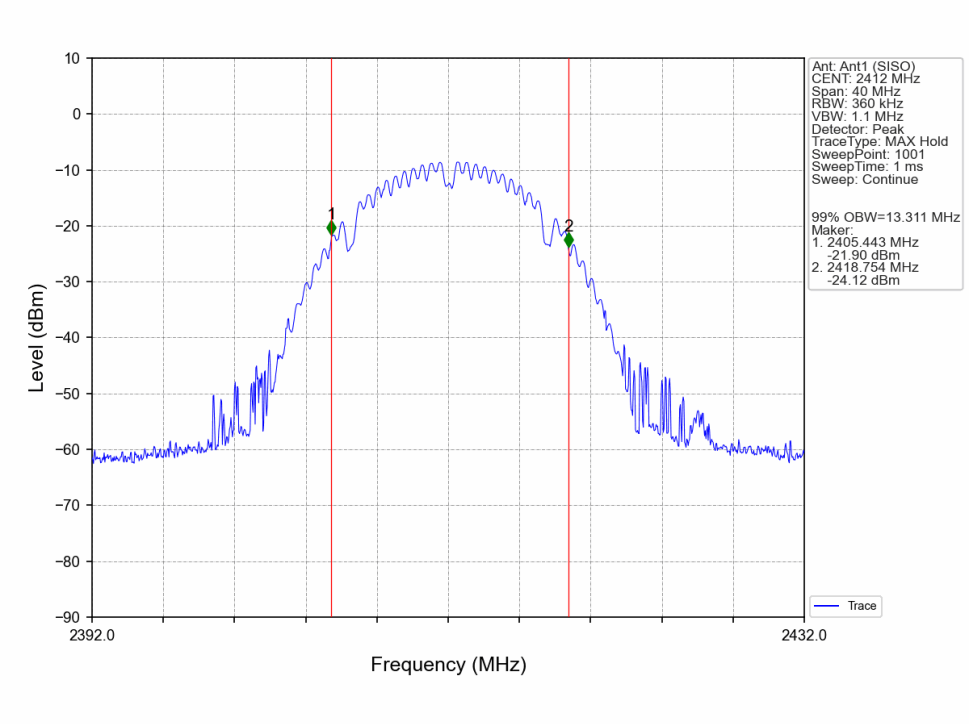
### 2.1.2 6dB BW

| Mode | TX Type | Frequency (MHz) | ANT | 6dB Bandwidth (MHz) | | Verdict |
|---|---|---|---|---|---|---|
| | | | | Result | Limit | |
| 802.11b | SISO | 2412 | 1 | 9.061 | >=0.5 | Pass |
| | | 2437 | 1 | 8.606 | >=0.5 | Pass |
| | | 2462 | 1 | 8.564 | >=0.5 | Pass |
| 802.11g | SISO | 2412 | 1 | 16.386 | >=0.5 | Pass |
| | | 2437 | 1 | 16.370 | >=0.5 | Pass |
| | | 2462 | 1 | 16.374 | >=0.5 | Pass |
| 802.11n (HT20) | SISO | 2412 | 1 | 17.351 | >=0.5 | Pass |
| | | 2437 | 1 | 17.561 | >=0.5 | Pass |
| | | 2462 | 1 | 17.575 | >=0.5 | Pass |
| 802.11n (HT40) | SISO | 2422 | 1 | 34.275 | >=0.5 | Pass |
| | | 2437 | 1 | 35.095 | >=0.5 | Pass |
| | | 2452 | 1 | 34.833 | >=0.5 | Pass |

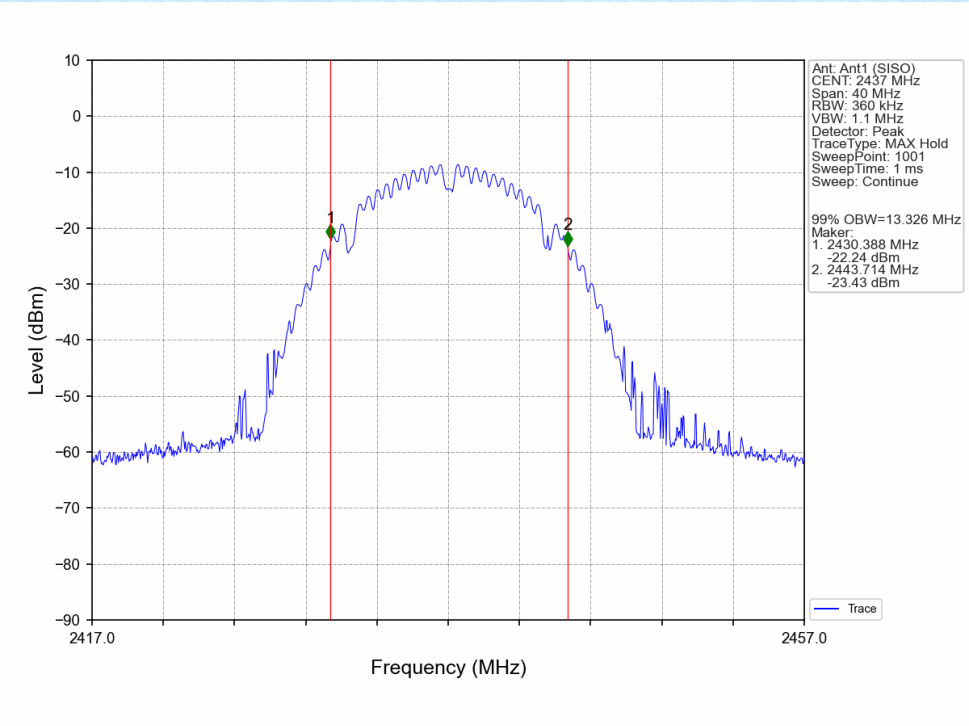
## 2.2 Test Graph

### 2.2.1 OBW

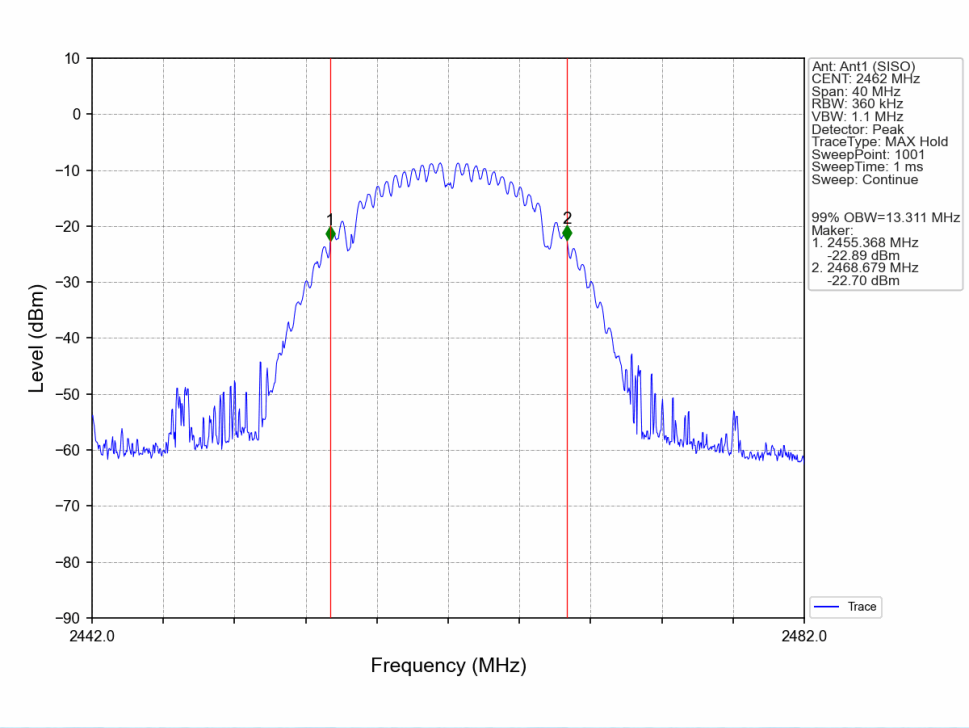
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



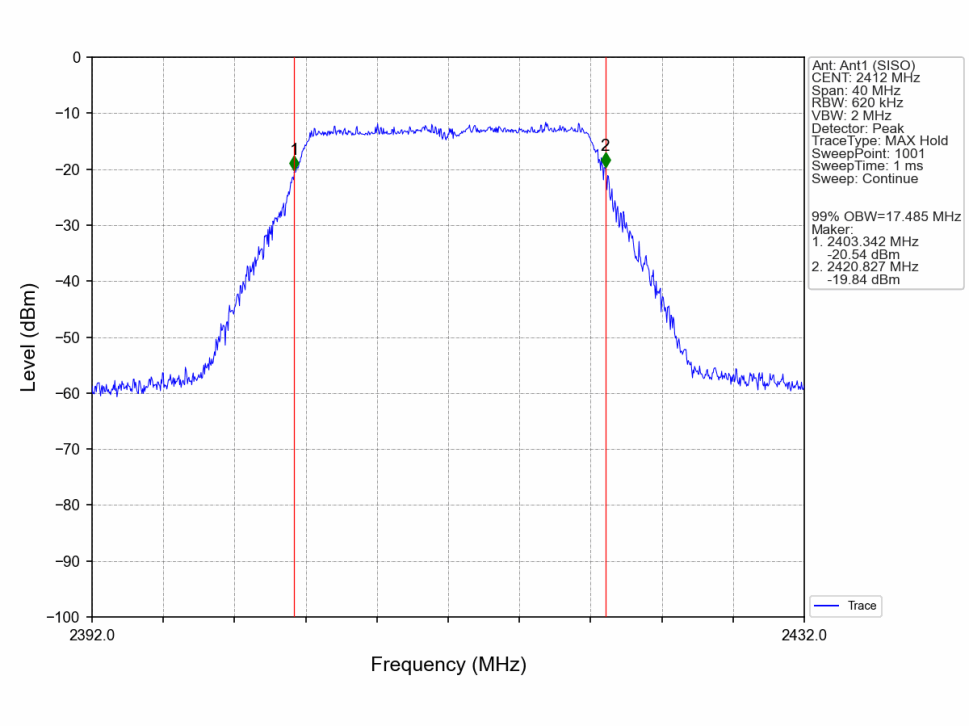

802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



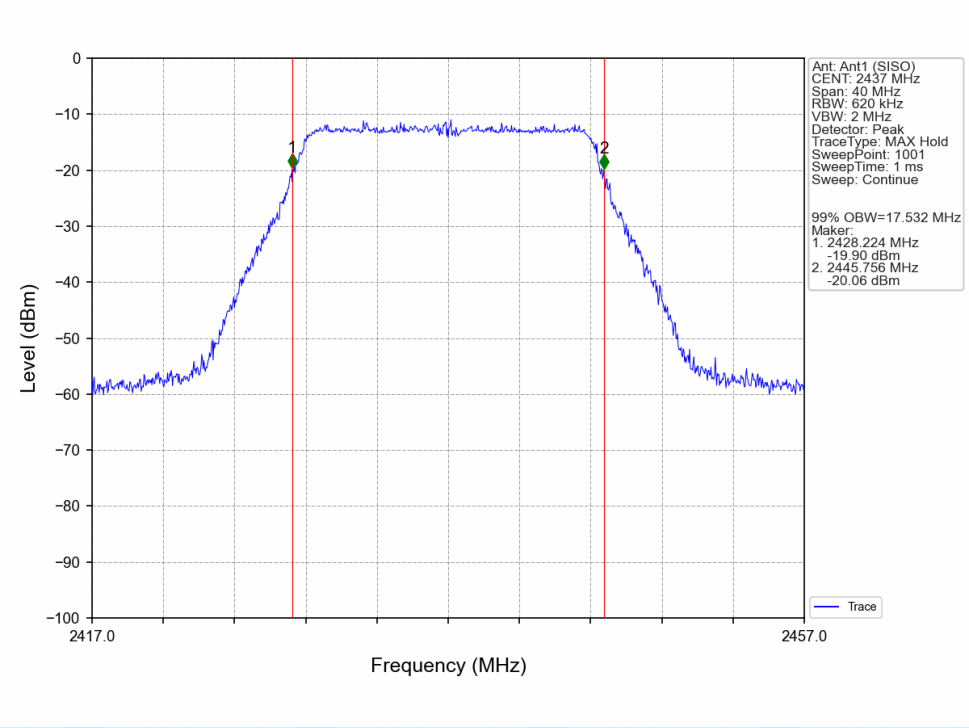
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



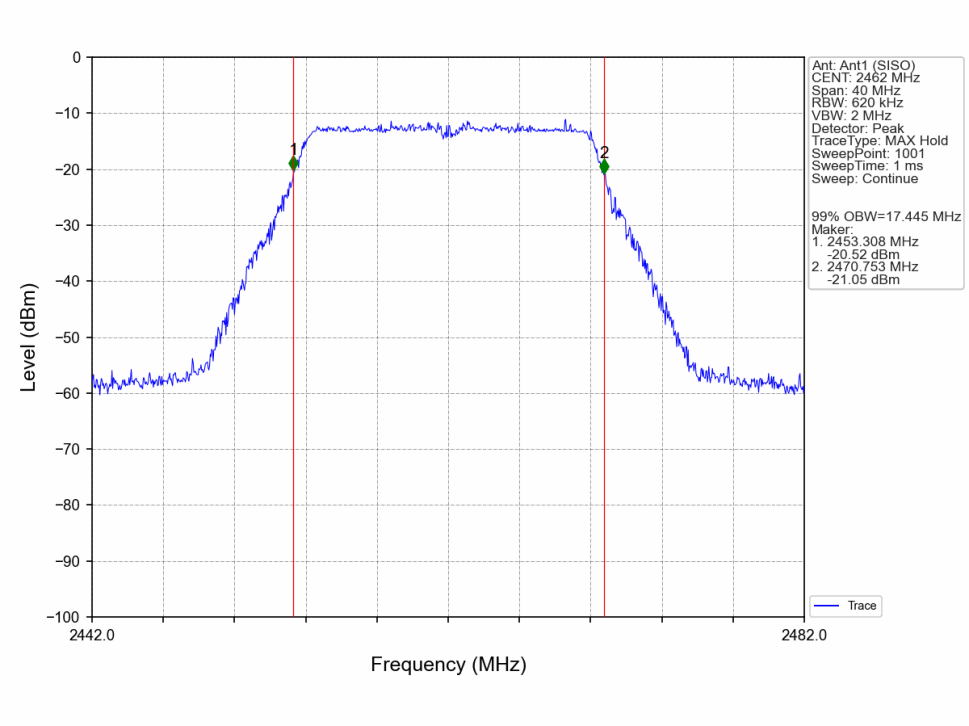

802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



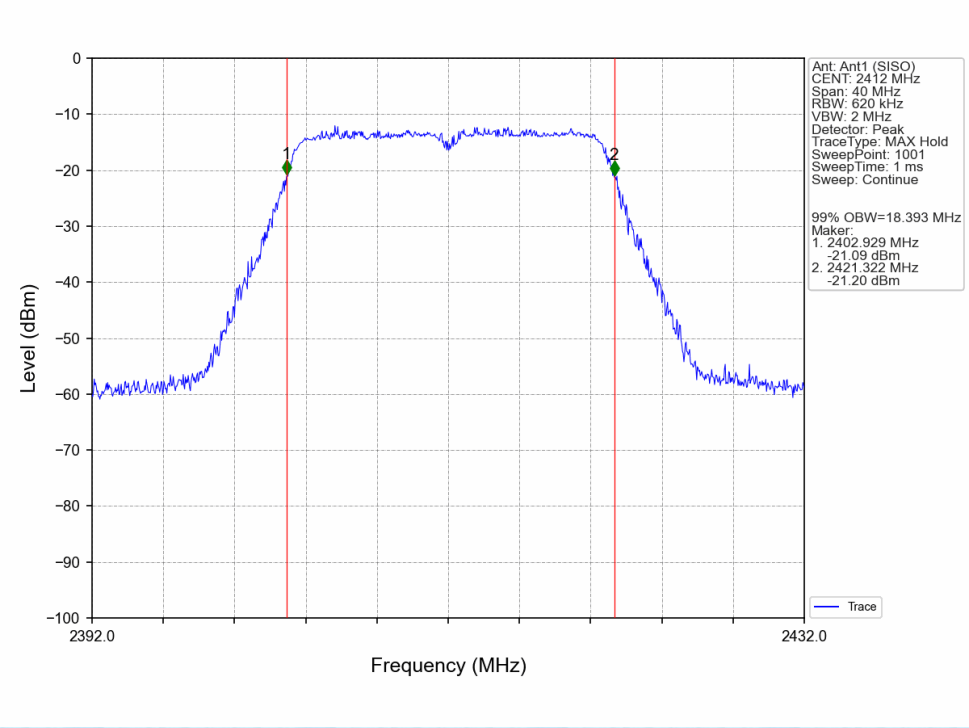
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



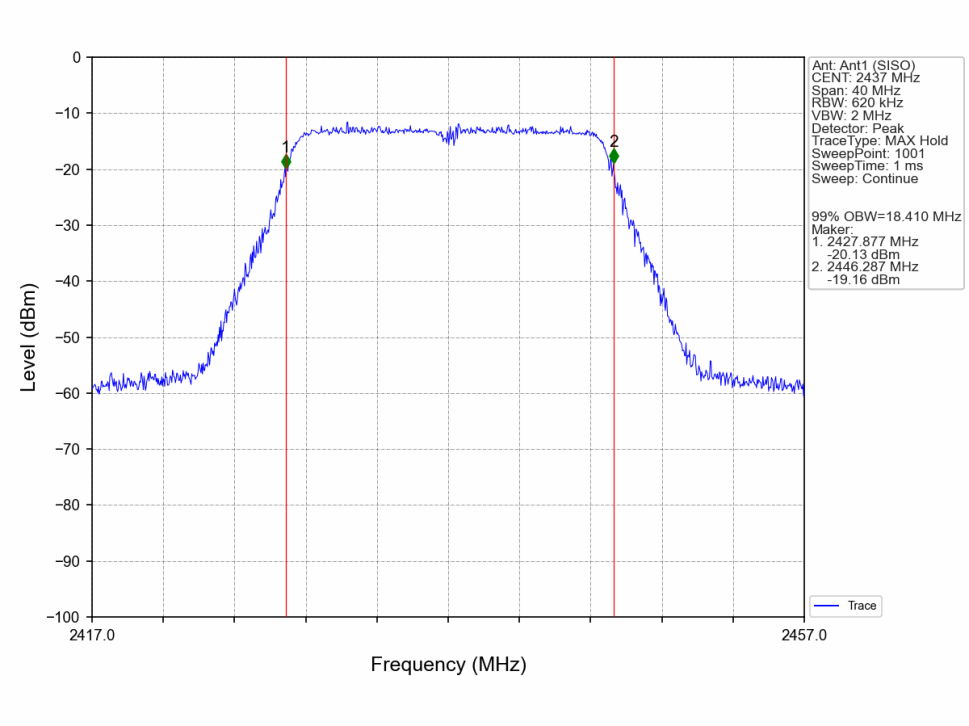

802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



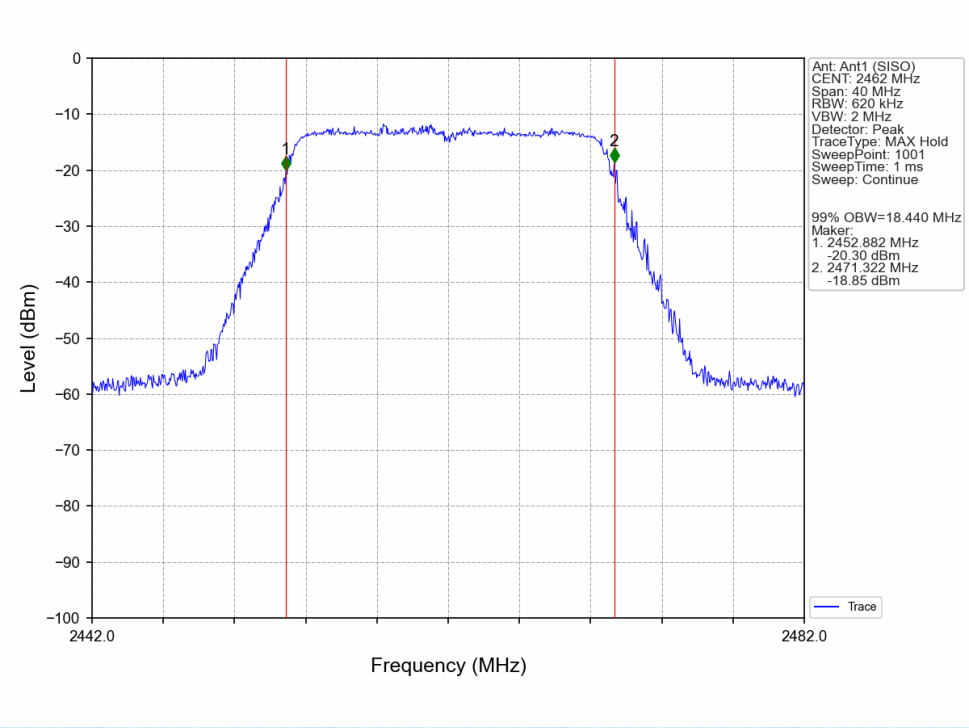
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



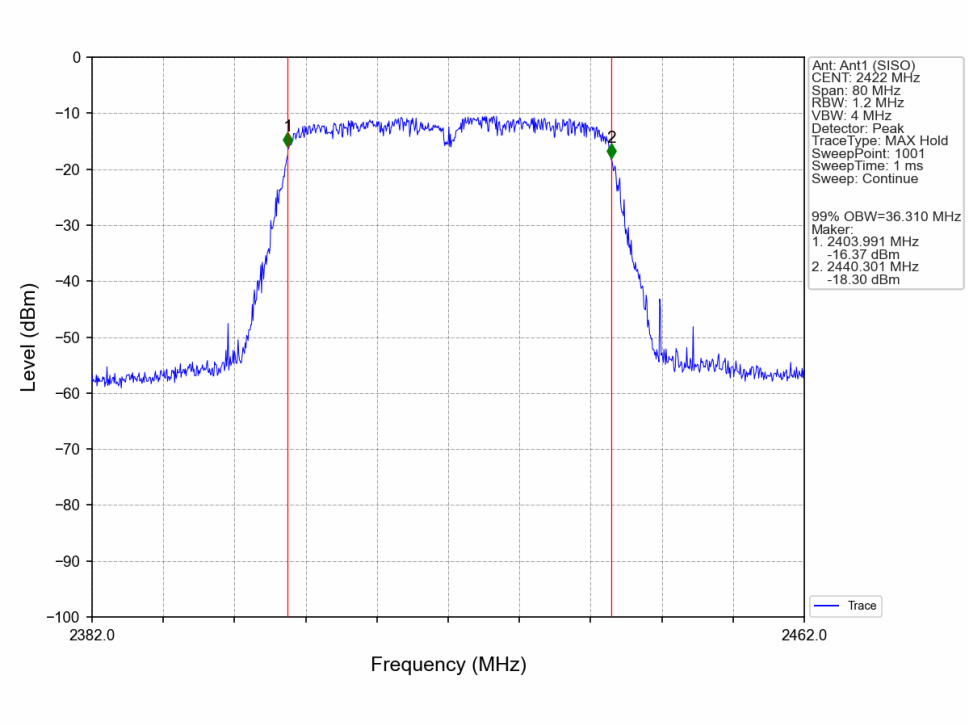

802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



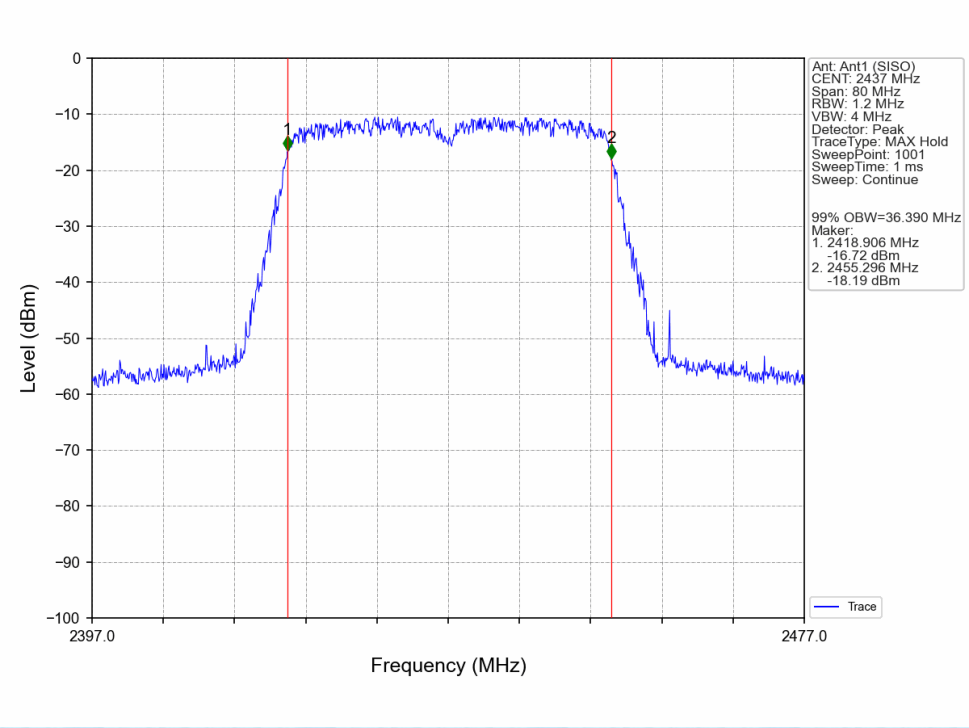
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



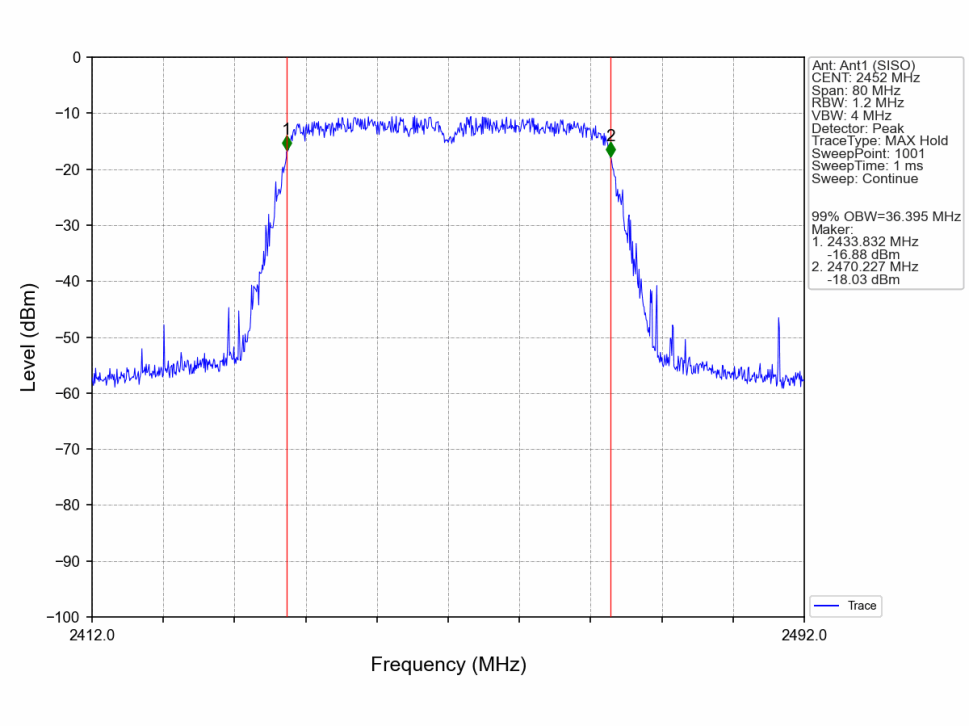

802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV

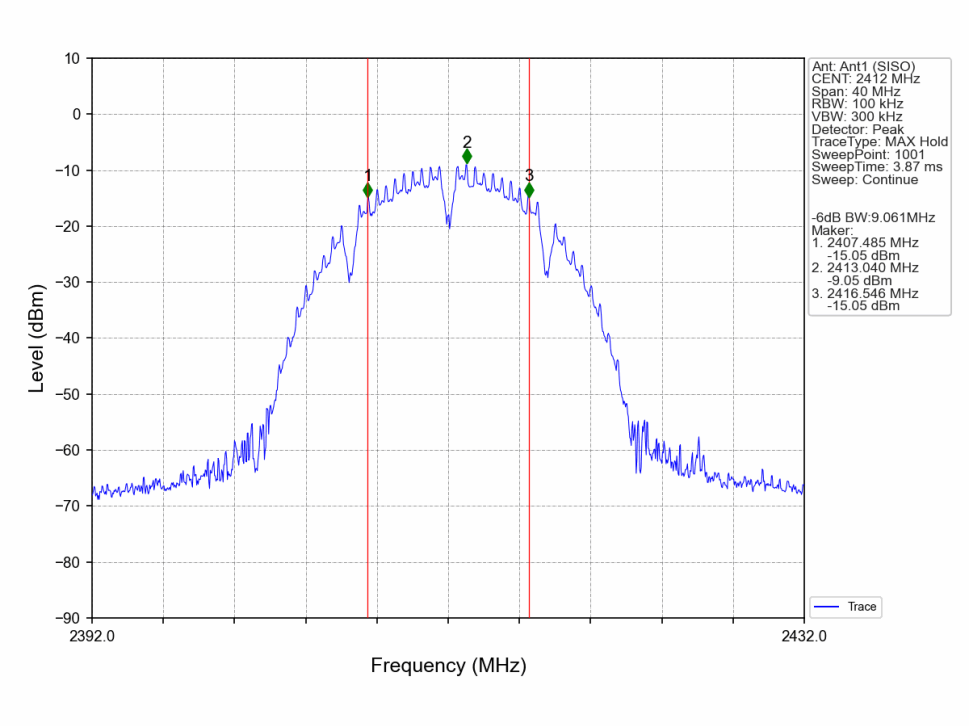



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV

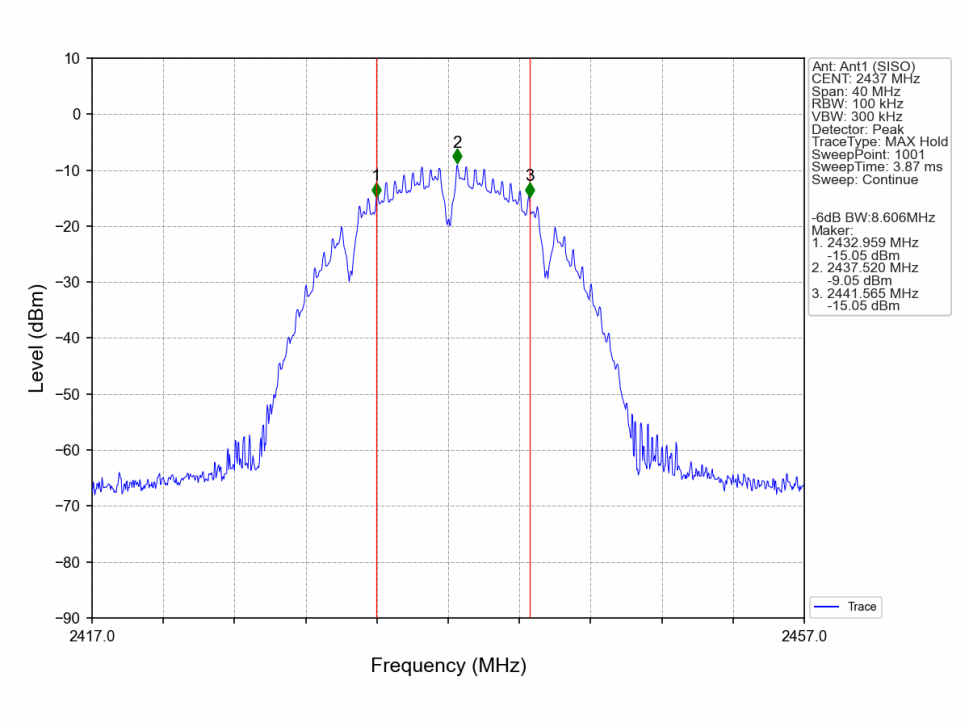


## 2.2.2 6dB BW

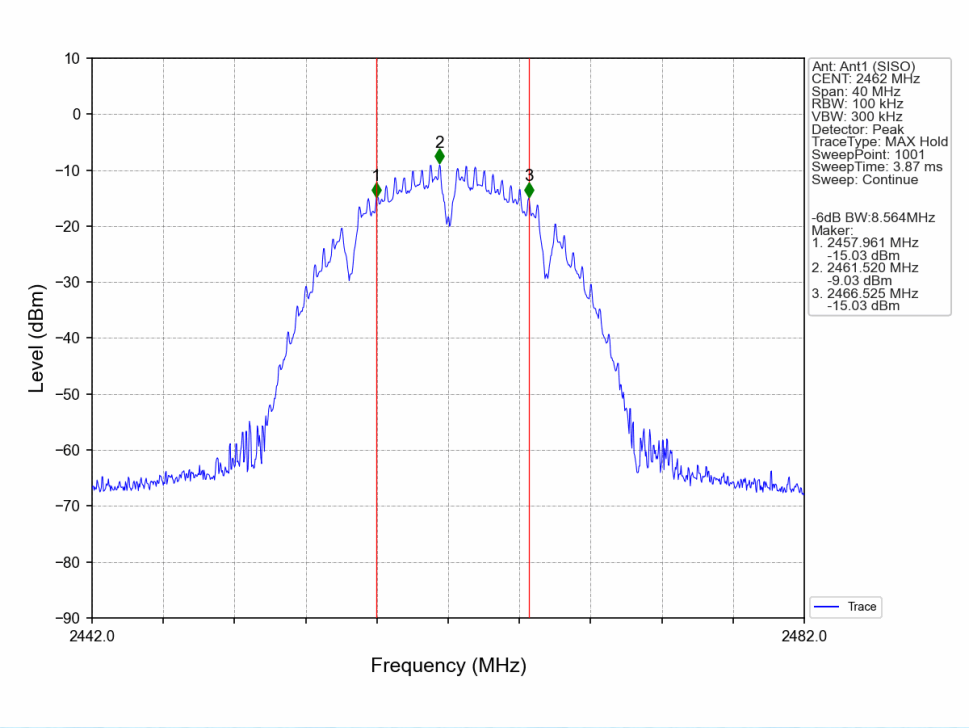
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



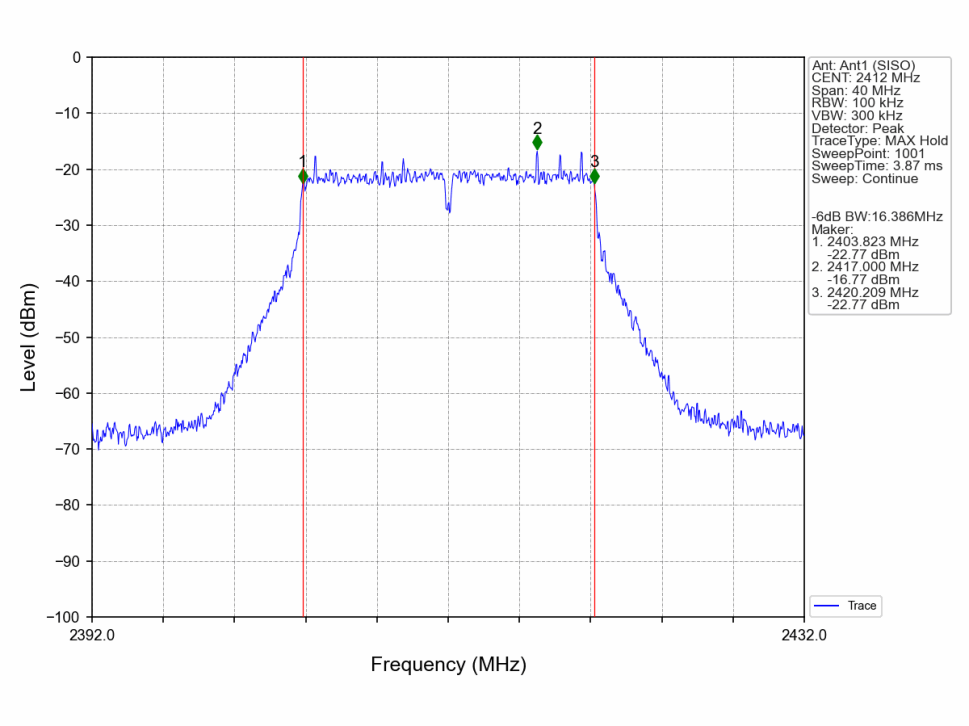

802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



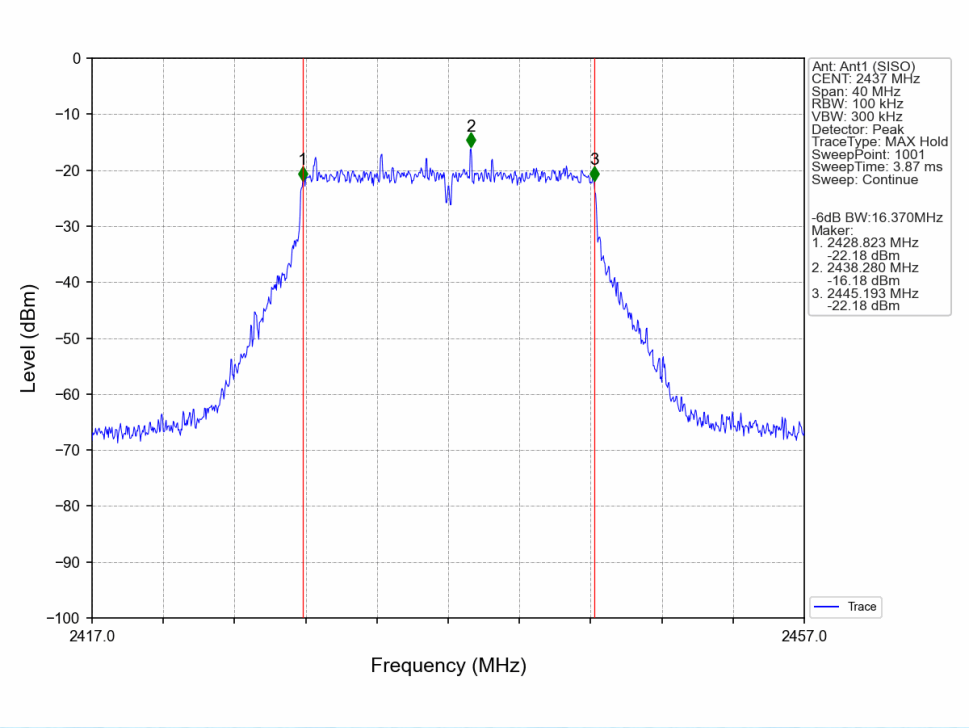
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



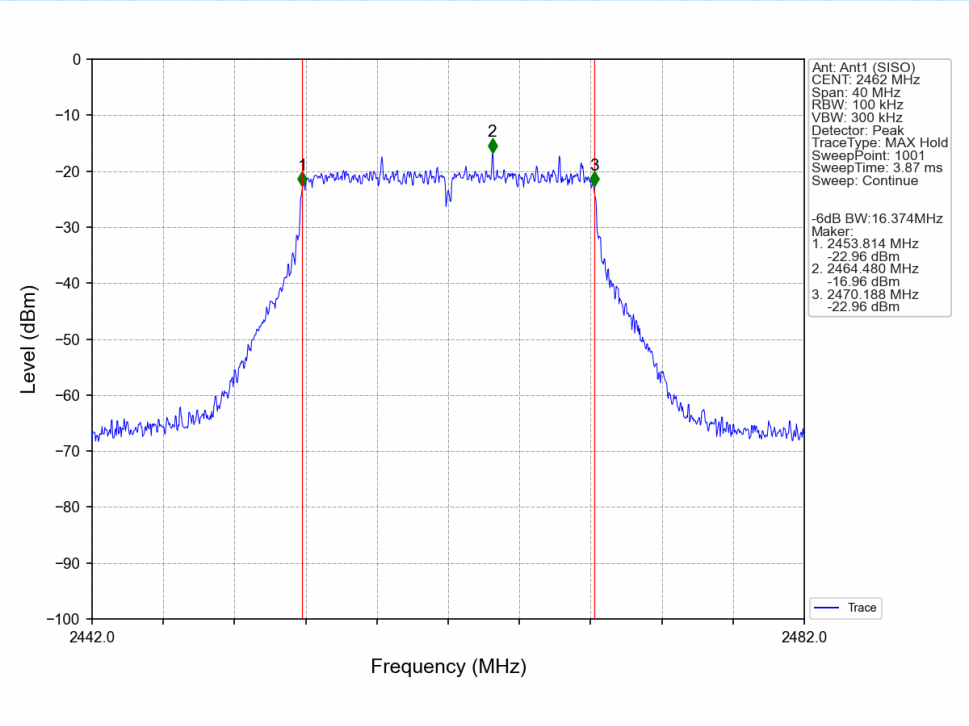

802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



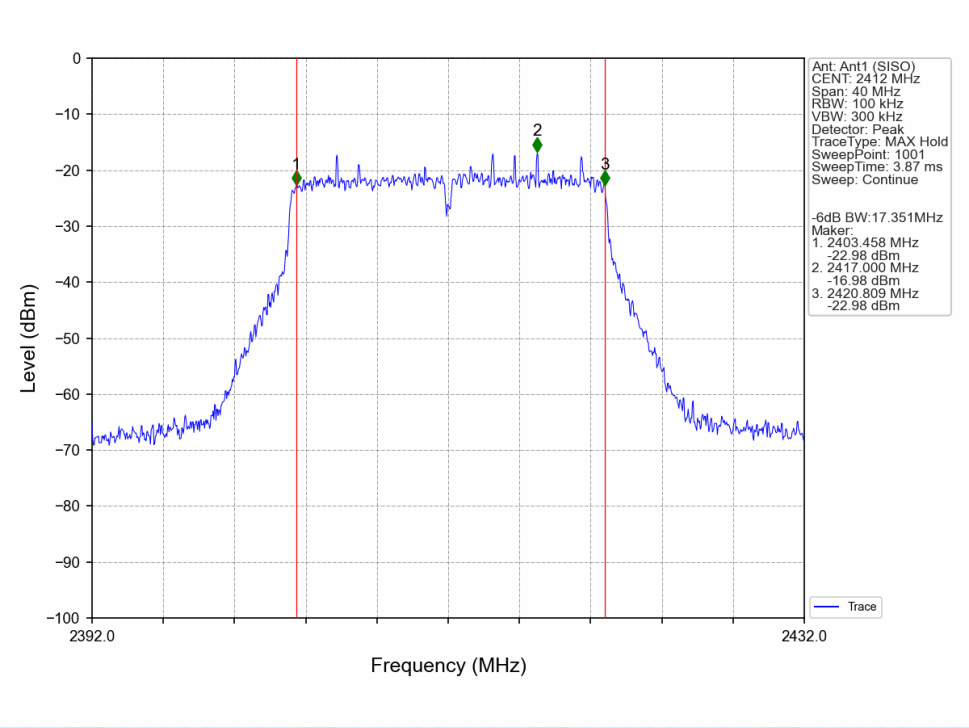
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



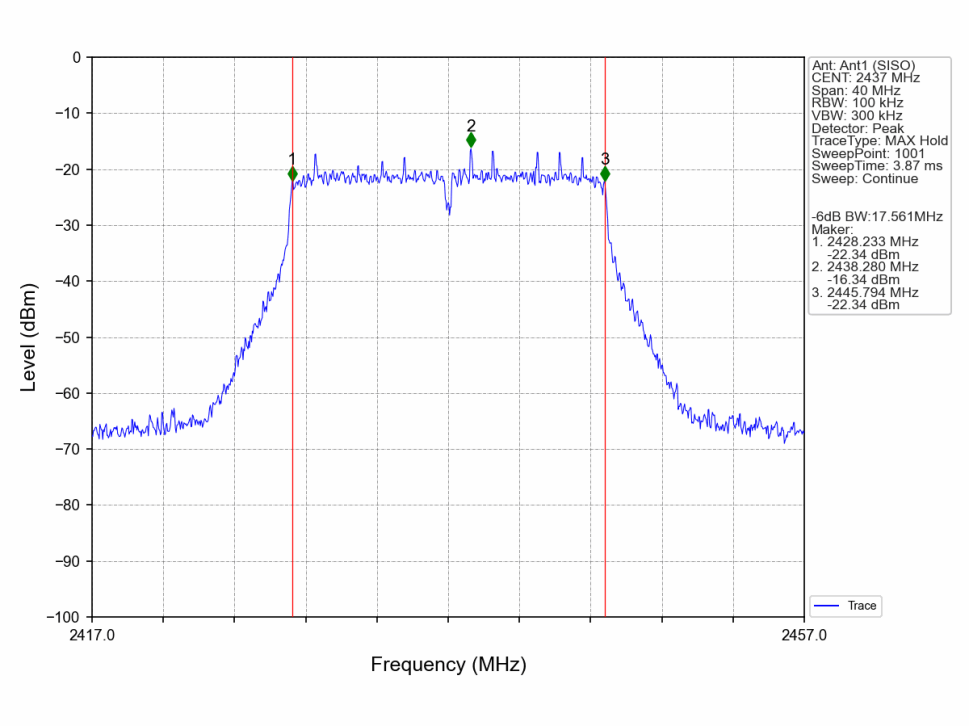

802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



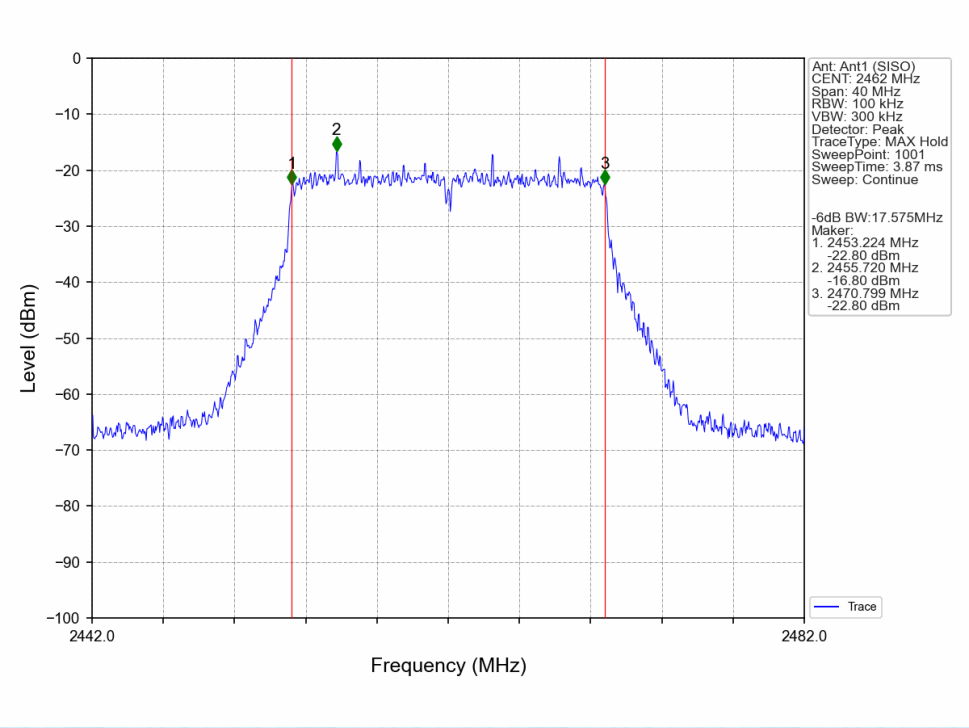
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



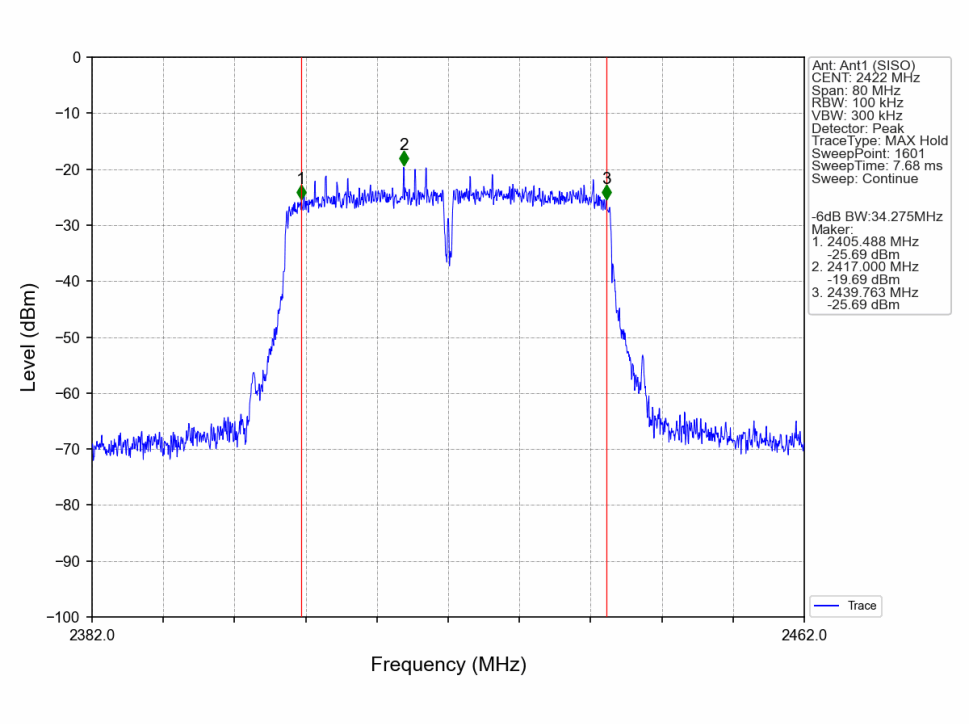

802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



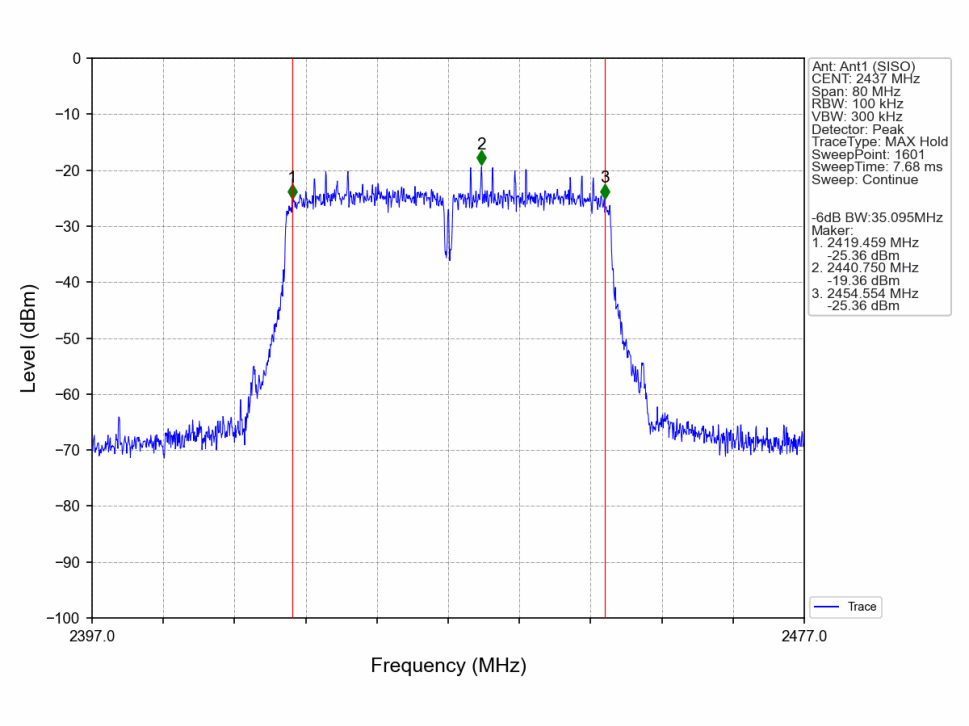
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



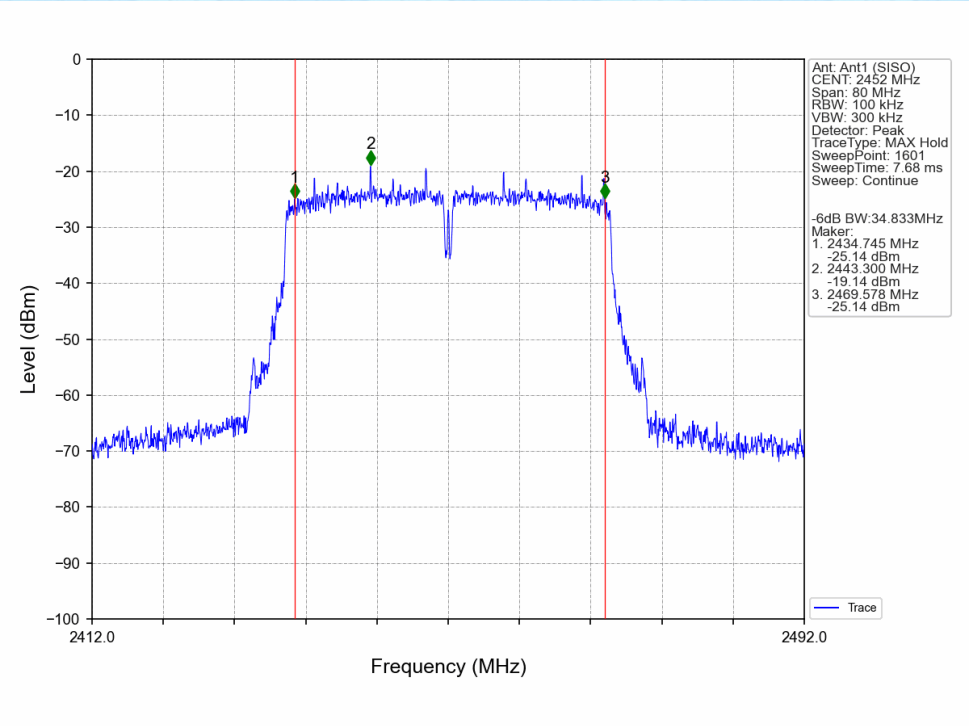

802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



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

| Test Mode | Antenna | Frequency [MHz] | Rate | Peak Power [dBm] | Conducted Limit[dBm] | Gain [dBi] | EIRP [dBm] | EIRP Limit[dBm] | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 11B | Ant1 | 2412 | 1Mbps | 2.17 | ≤30.00 | 1.54 | 3.71 | ≤36.00 | PASS |
| 11B | Ant1 | 2437 | 1Mbps | 1.95 | ≤30.00 | 1.54 | 3.49 | ≤36.00 | PASS |
| 11B | Ant1 | 2462 | 1Mbps | 1.95 | ≤30.00 | 1.54 | 3.49 | ≤36.00 | PASS |
| 11G | Ant1 | 2412 | 6Mbps | 1.70 | ≤30.00 | 1.54 | 3.24 | ≤36.00 | PASS |
| 11G | Ant1 | 2437 | 6Mbps | 2.15 | ≤30.00 | 1.54 | 3.69 | ≤36.00 | PASS |
| 11G | Ant1 | 2462 | 6Mbps | 2.08 | ≤30.00 | 1.54 | 3.62 | ≤36.00 | PASS |
| 11N20SISO | Ant1 | 2412 | MCS0 | 1.49 | ≤30.00 | 1.54 | 3.03 | ≤36.00 | PASS |
| 11N20SISO | Ant1 | 2437 | MCS0 | 1.91 | ≤30.00 | 1.54 | 3.45 | ≤36.00 | PASS |
| 11N20SISO | Ant1 | 2462 | MCS0 | 1.90 | ≤30.00 | 1.54 | 3.44 | ≤36.00 | PASS |
| 11N40SISO | Ant1 | 2422 | MCS0 | 1.48 | ≤30.00 | 1.54 | 3.02 | ≤36.00 | PASS |
| 11N40SISO | Ant1 | 2437 | MCS0 | 1.78 | ≤30.00 | 1.54 | 3.32 | ≤36.00 | PASS |
| 11N40SISO | Ant1 | 2452 | MCS0 | 1.69 | ≤30.00 | 1.54 | 3.23 | ≤36.00 | PASS |

# 4. Maximum Power Spectral Density

## 4.1 Test Result

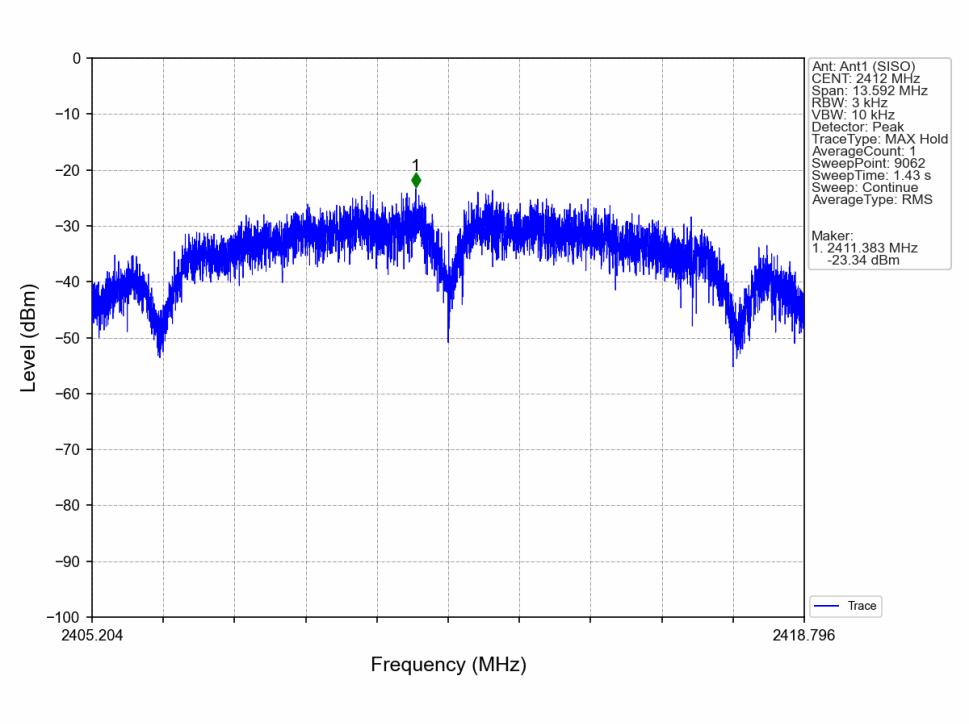
### 4.1.1 PSD

| Mode | TX Type | Frequency (MHz) | Maximum PSD (dBm/3kHz) | | Verdict |
|---|---|---|---|---|---|
| | | | ANT1 | Limit | |
| 802.11b | SISO | 2412 | -23.34 | <=8 | Pass |
| | | 2437 | -22.28 | <=8 | Pass |
| | | 2462 | -23.08 | <=8 | Pass |
| 802.11g | SISO | 2412 | -26.86 | <=8 | Pass |
| | | 2437 | -27.49 | <=8 | Pass |
| | | 2462 | -28.17 | <=8 | Pass |
| 802.11n (HT20) | SISO | 2412 | -26.86 | <=8 | Pass |
| | | 2437 | -26.94 | <=8 | Pass |
| | | 2462 | -28.59 | <=8 | Pass |
| 802.11n (HT40) | SISO | 2422 | -30.96 | <=8 | Pass |
| | | 2437 | -30.94 | <=8 | Pass |
| | | 2452 | -30.02 | <=8 | Pass |
| Note1: Antenna Gain: Ant1: 1.54dBi; | | | | | |

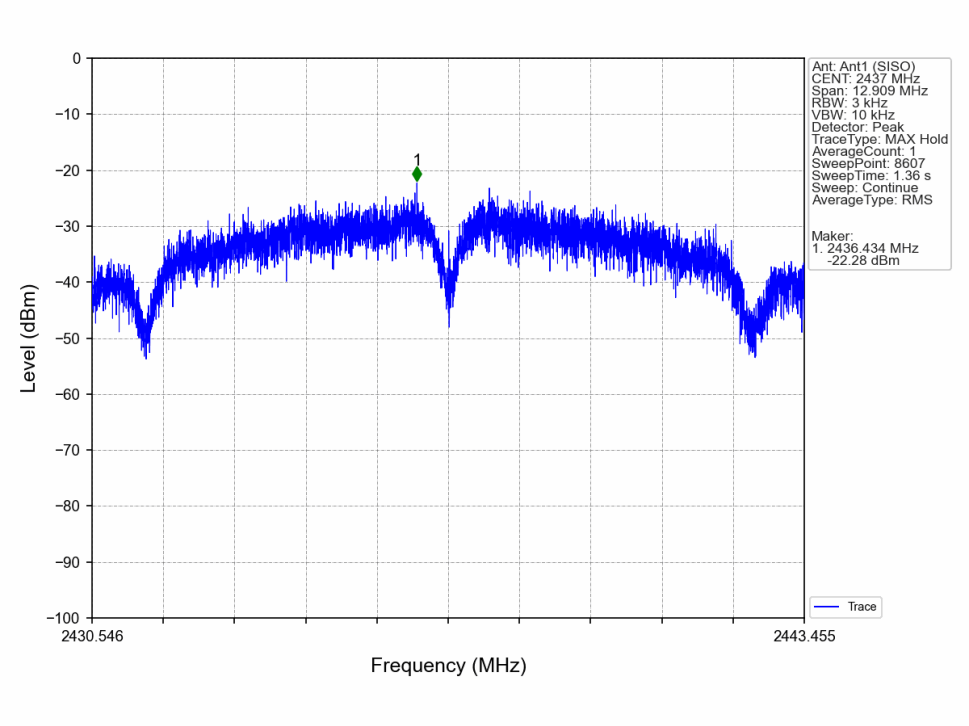
## 4.2 Test Graph

### 4.2.1 PSD

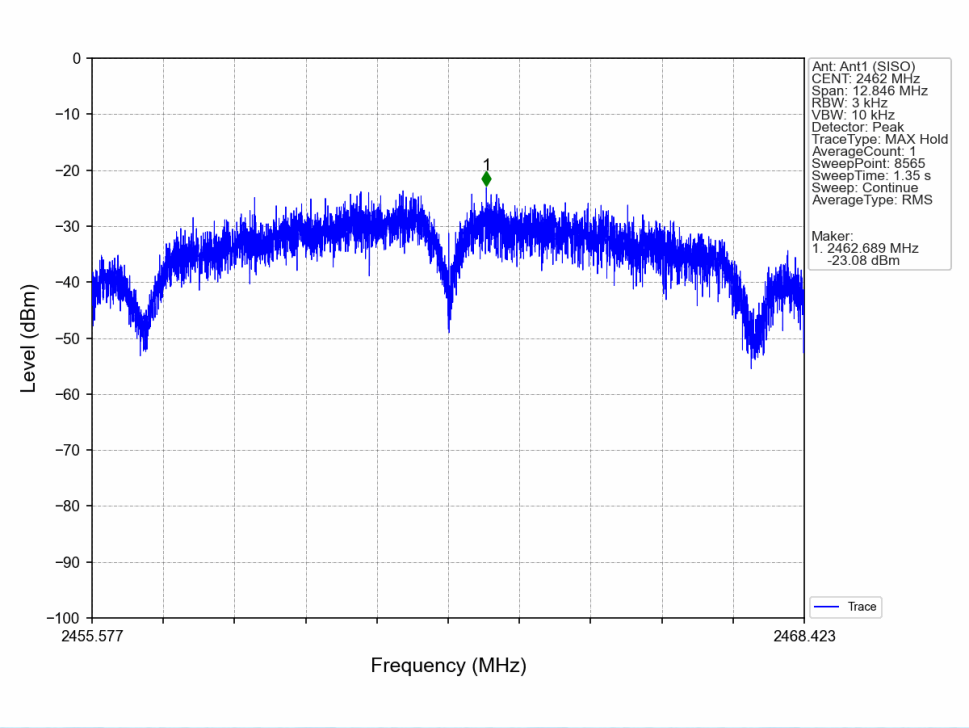
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



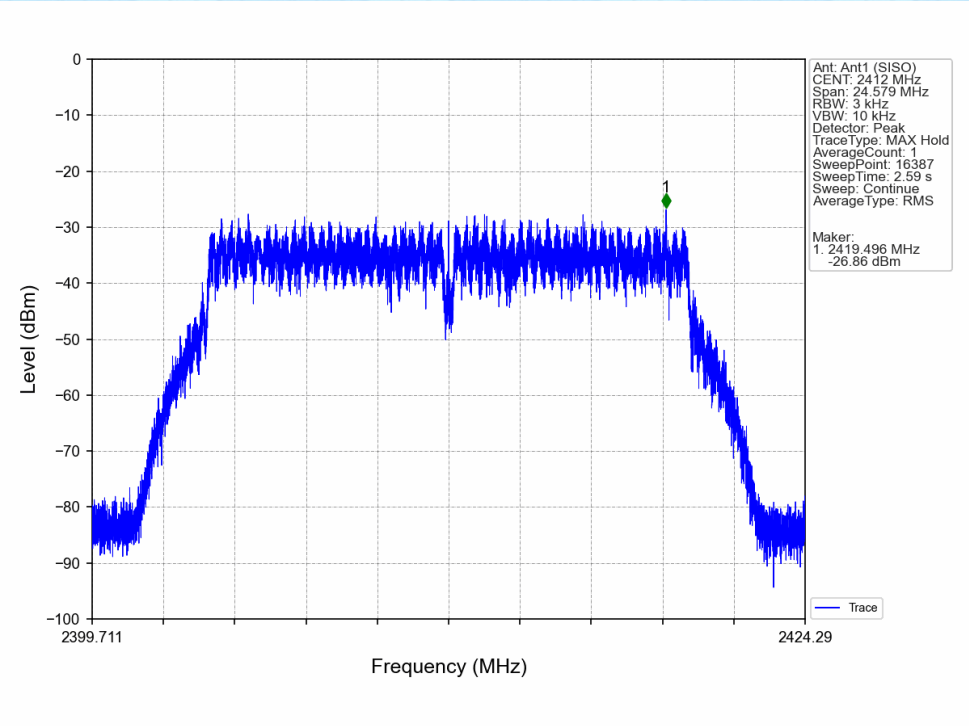

802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



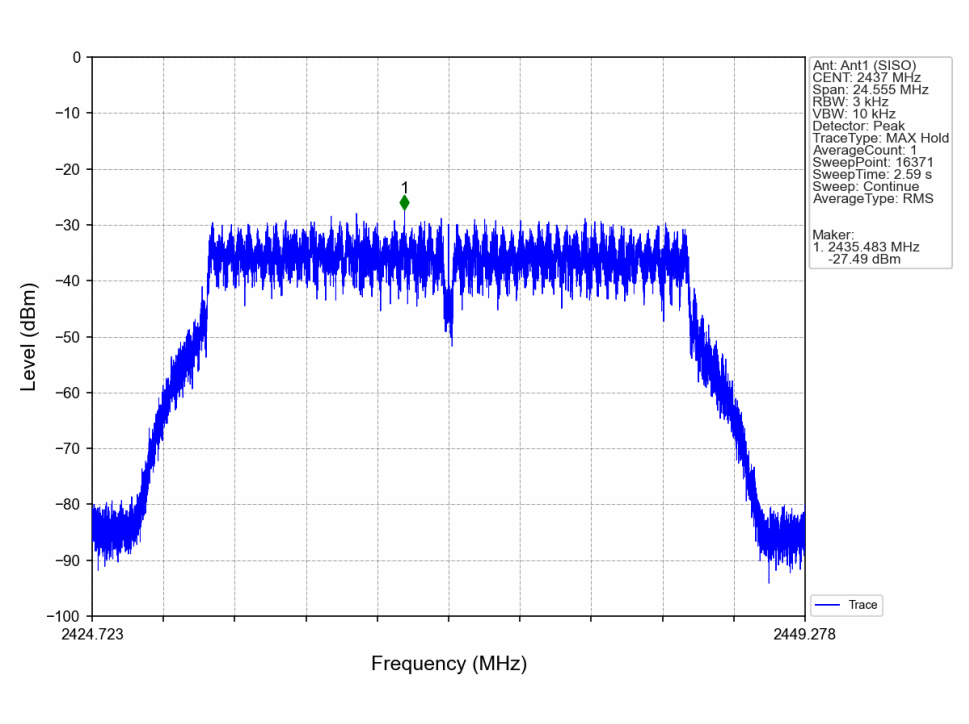
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



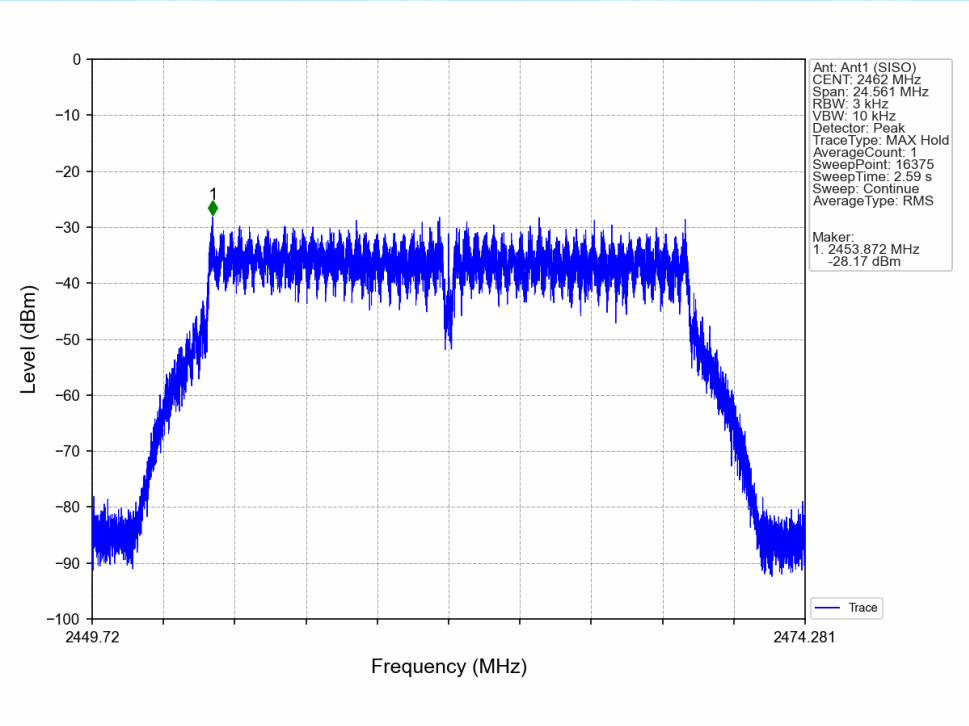

802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



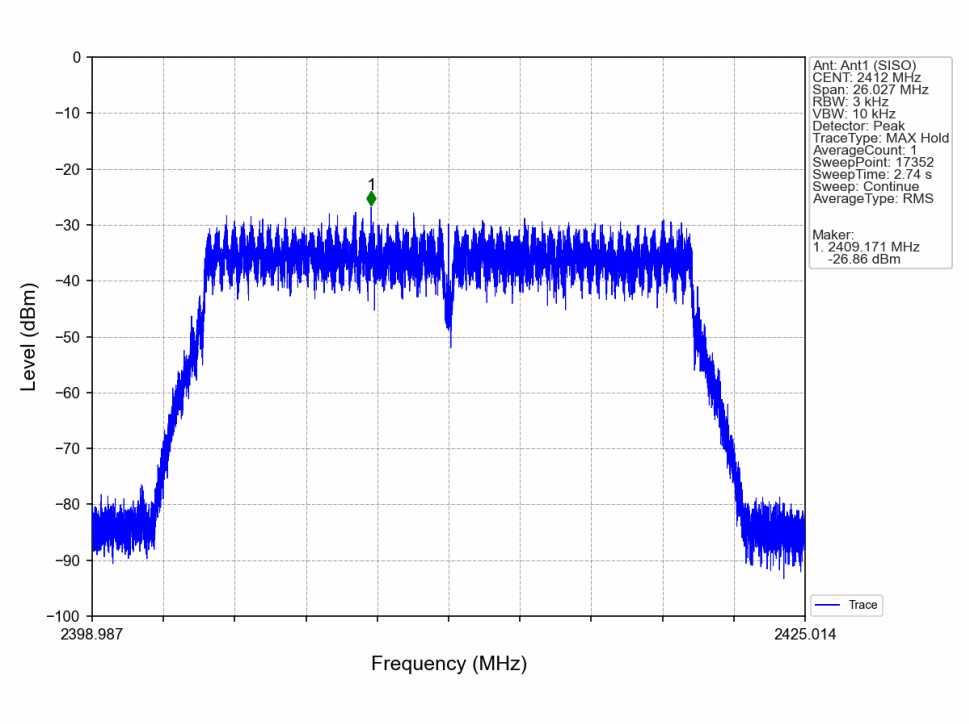
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



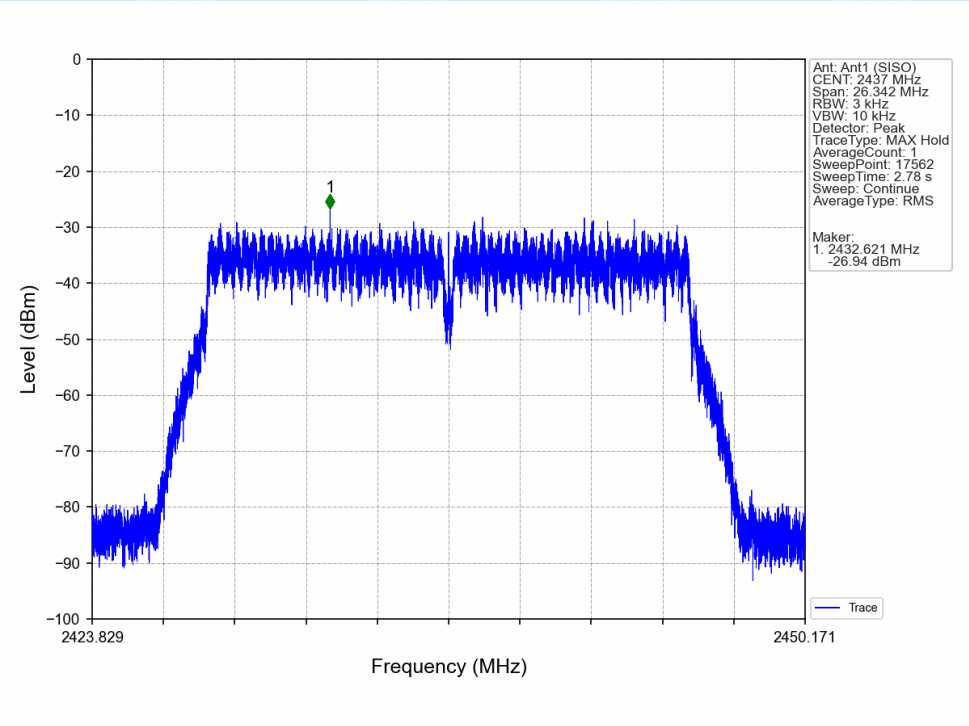

802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



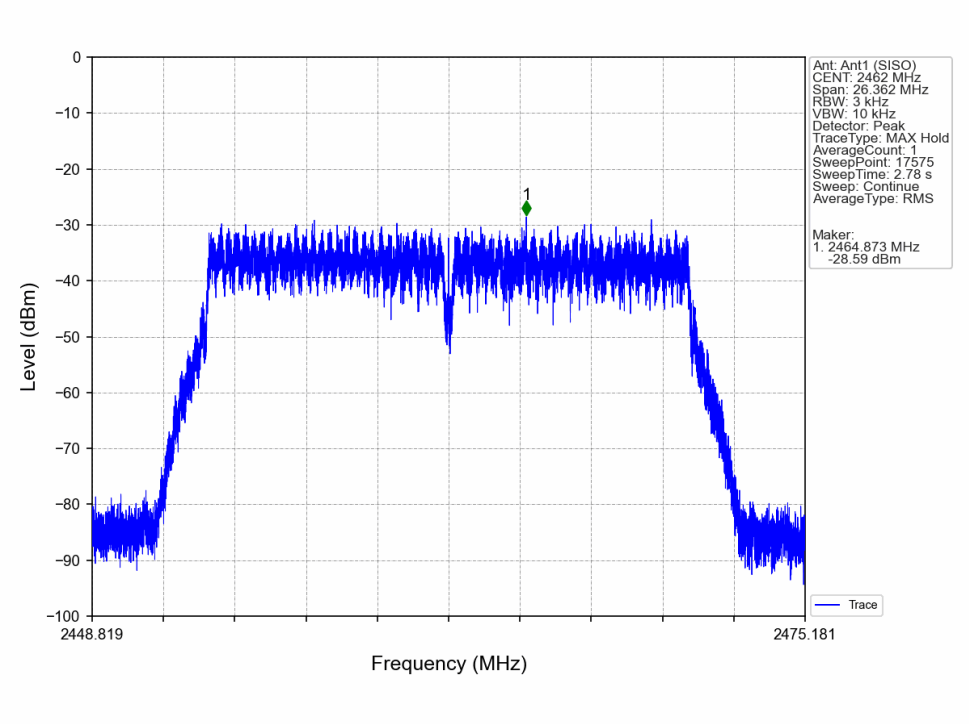
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



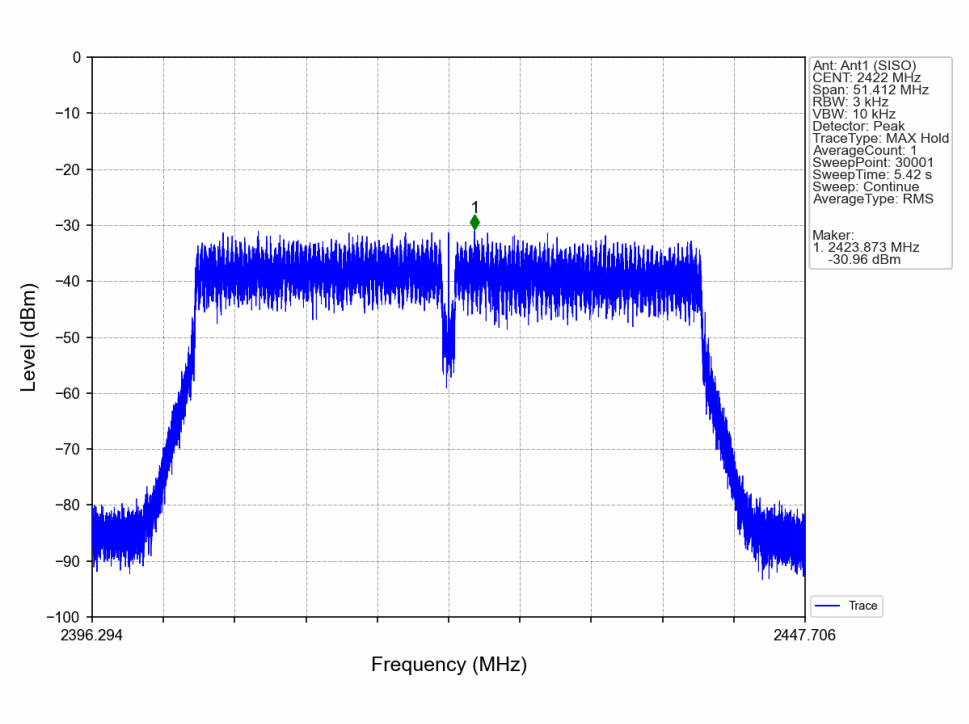

802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



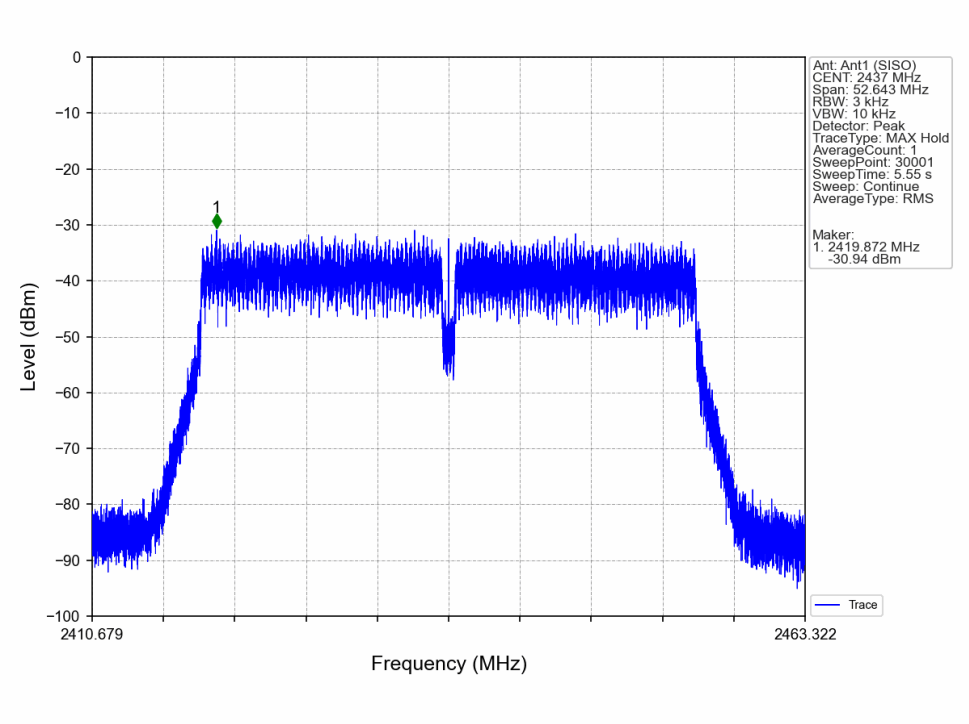
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



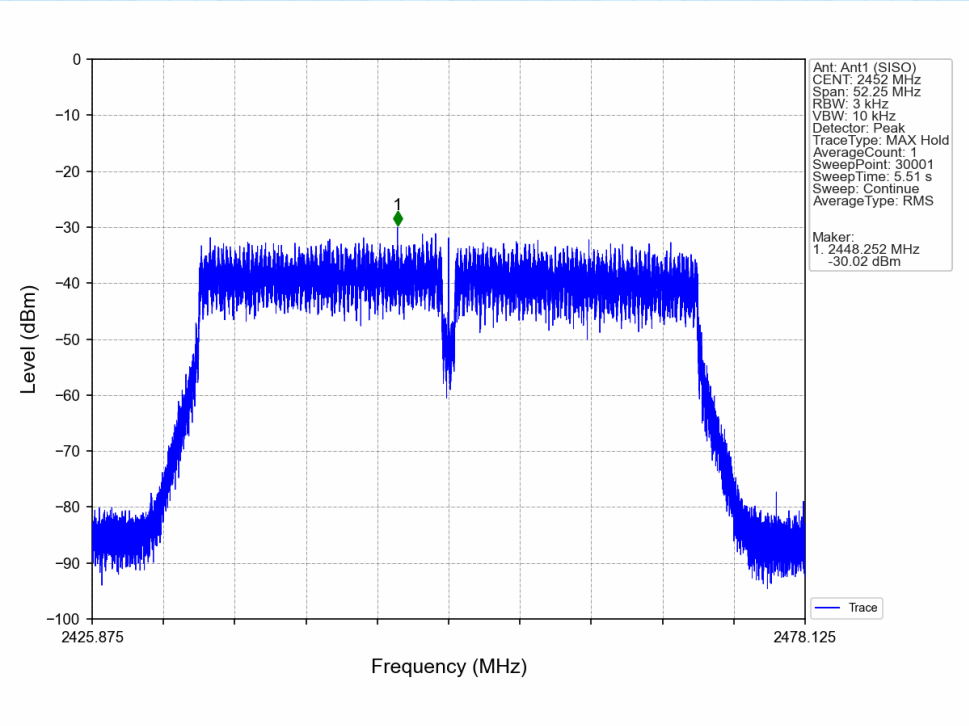

802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV




802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



# 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 | -9.11 |
| | | 2437 | 1 | -9.11 |
| | | 2462 | 1 | -9.19 |
| 802.11g | SISO | 2412 | 1 | -16.81 |
| | | 2437 | 1 | -16.21 |
| | | 2462 | 1 | -16.91 |
| 802.11n (HT20) | SISO | 2412 | 1 | -16.83 |
| | | 2437 | 1 | -16.64 |
| | | 2462 | 1 | -17.48 |
| 802.11n (HT40) | SISO | 2422 | 1 | -19.70 |
| | | 2437 | 1 | -19.44 |
| | | 2452 | 1 | -19.54 |
| Note1: Refer to RSS-247 Issue 3 section 5.5 and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level. | | | | |

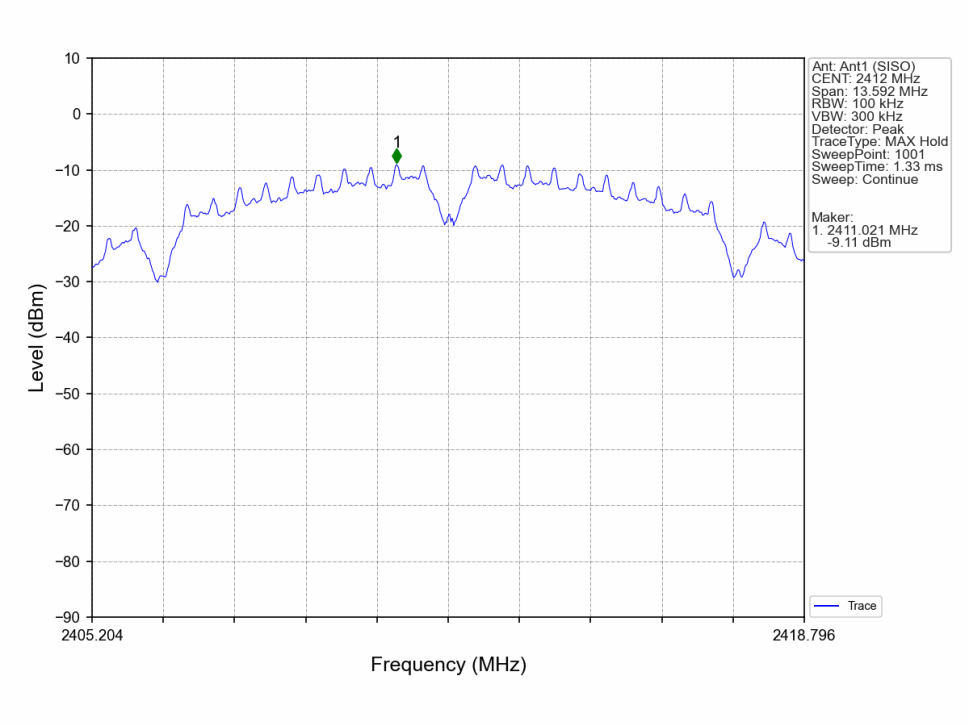
### 5.1.2 CSE

| Mode | TX Type | Frequency (MHz) | ANT | Level of Reference (dBm) | Limit (dBm) | Verdict |
|---|---|---|---|---|---|---|
| 802.11b | SISO | 2412 | 1 | -9.11 | -29.11 | Pass |
| | | 2437 | 1 | -9.11 | -29.11 | Pass |
| | | 2462 | 1 | -9.11 | -29.11 | Pass |
| 802.11g | SISO | 2412 | 1 | -16.21 | -36.21 | Pass |
| | | 2437 | 1 | -16.21 | -36.21 | Pass |
| | | 2462 | 1 | -16.21 | -36.21 | Pass |
| 802.11n (HT20) | SISO | 2412 | 1 | -16.64 | -36.64 | Pass |
| | | 2437 | 1 | -16.64 | -36.64 | Pass |
| | | 2462 | 1 | -16.64 | -36.64 | Pass |
| 802.11n (HT40) | SISO | 2422 | 1 | -19.44 | -39.44 | Pass |
| | | 2437 | 1 | -19.44 | -39.44 | Pass |
| | | 2452 | 1 | -19.44 | -39.44 | Pass |
| Note1: Refer to RSS-247 Issue 3 section 5.5 and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level. | | | | | | |

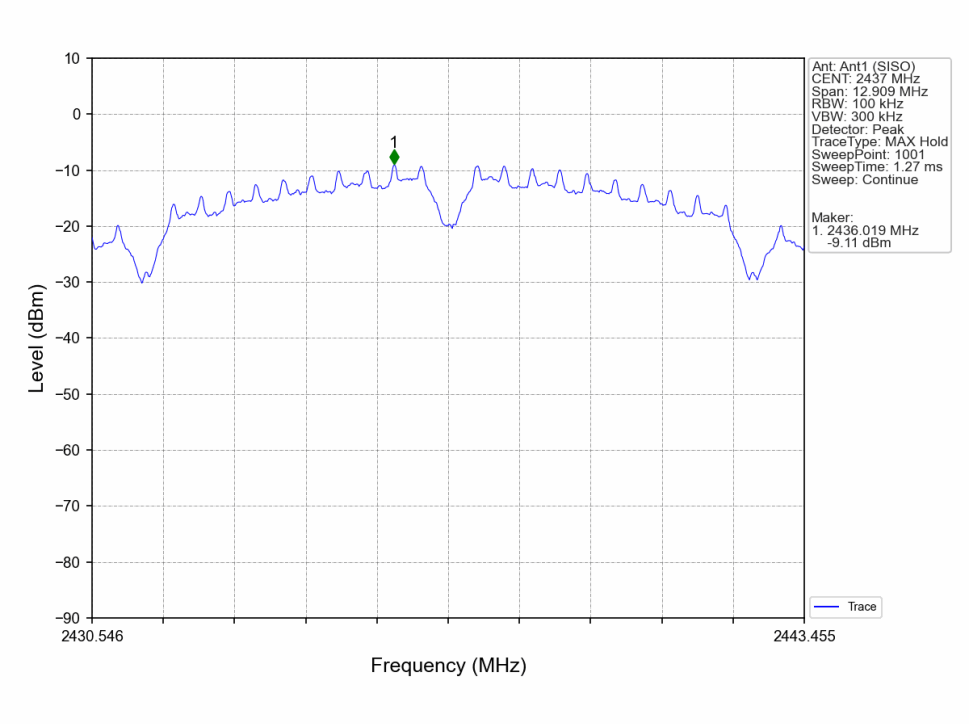
## 5.2 Test Graph

### 5.2.1 Ref

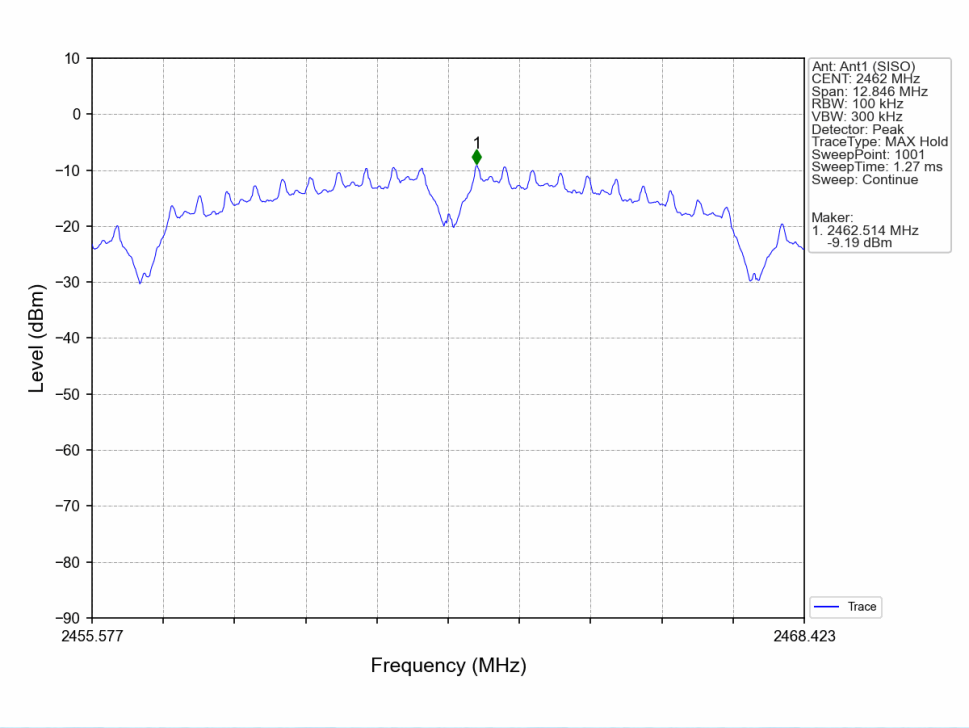
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



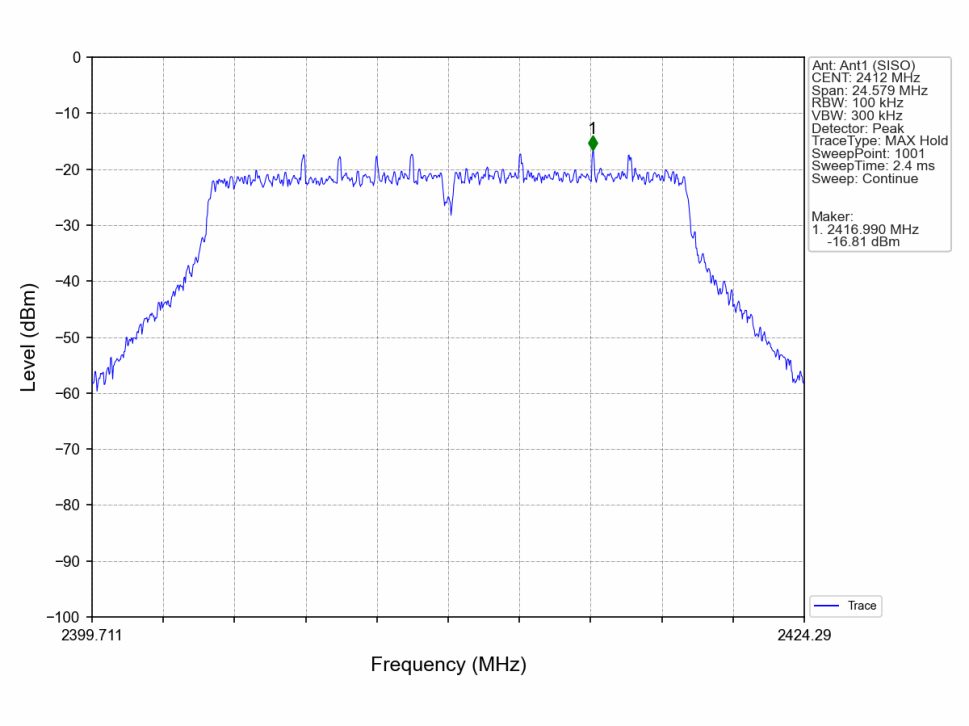

802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



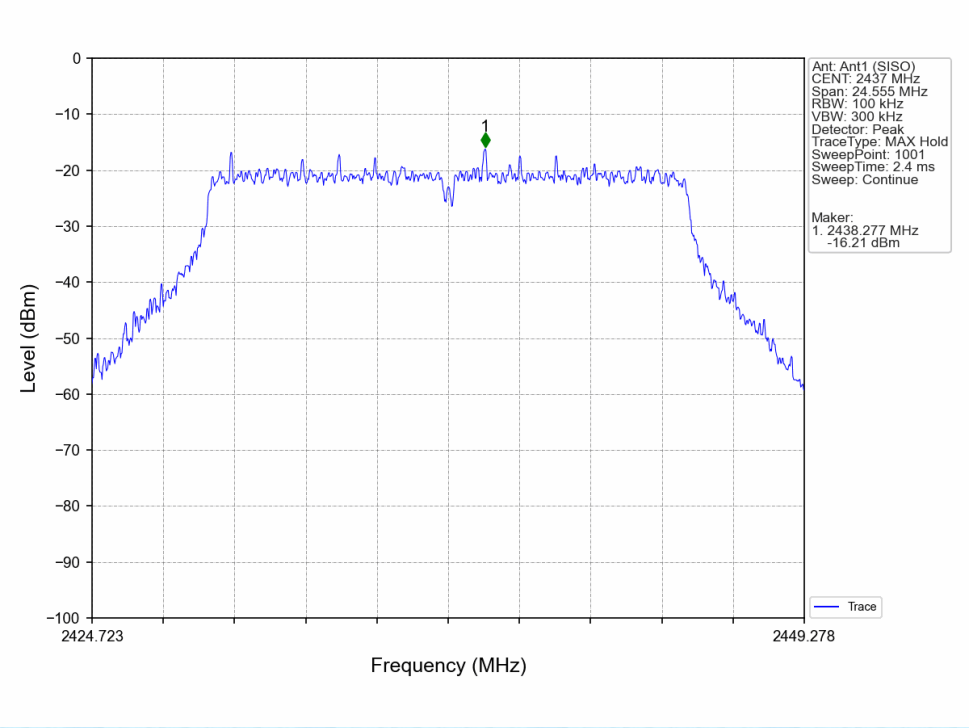
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



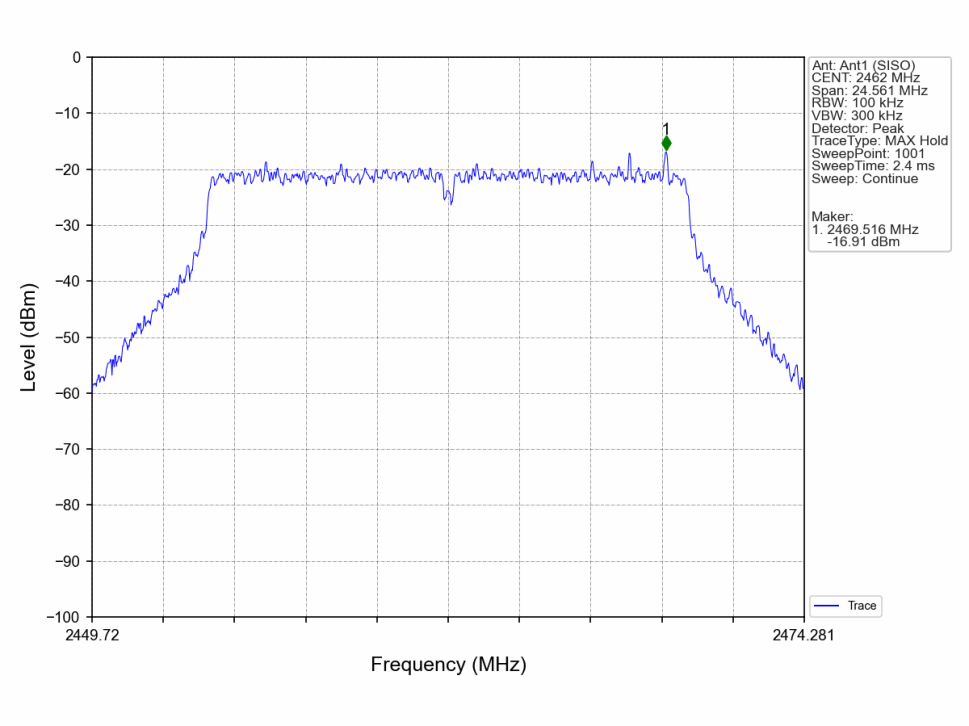

802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



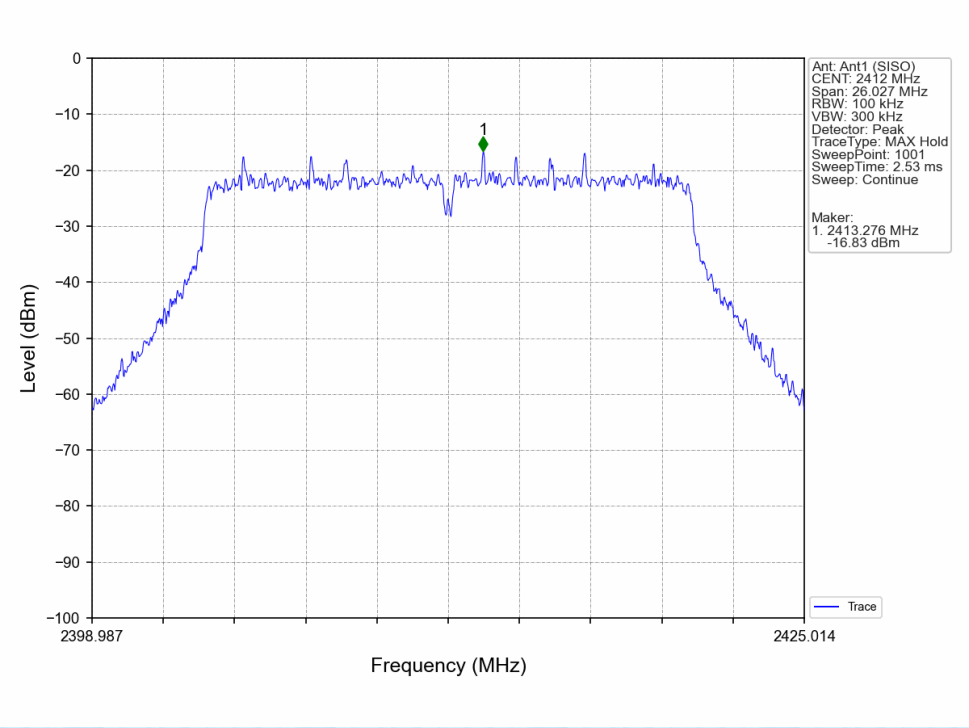
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



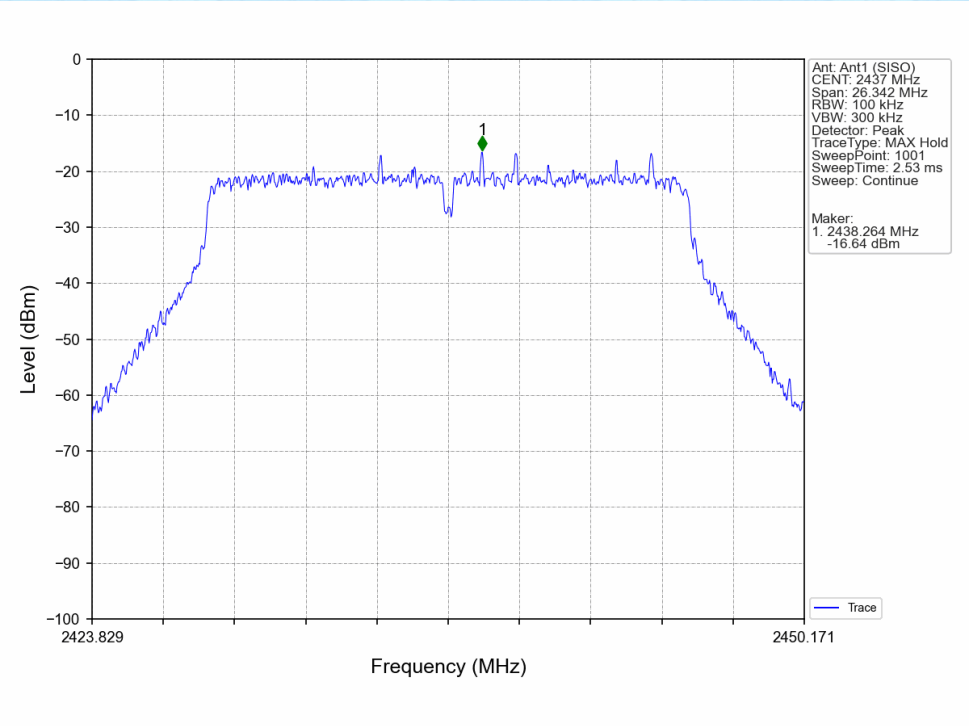

802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



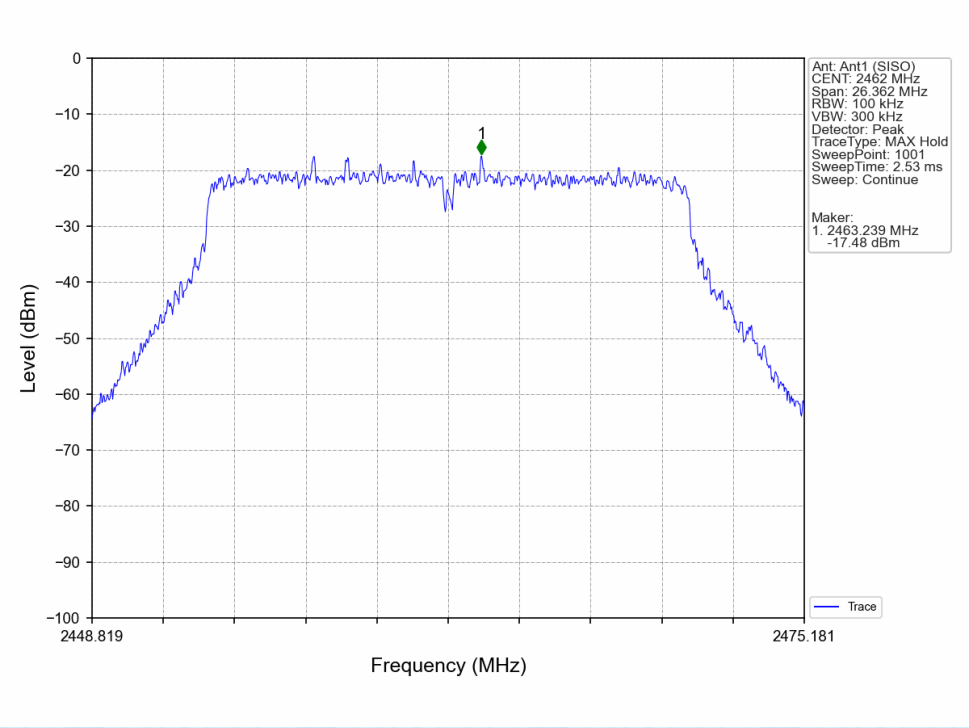
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



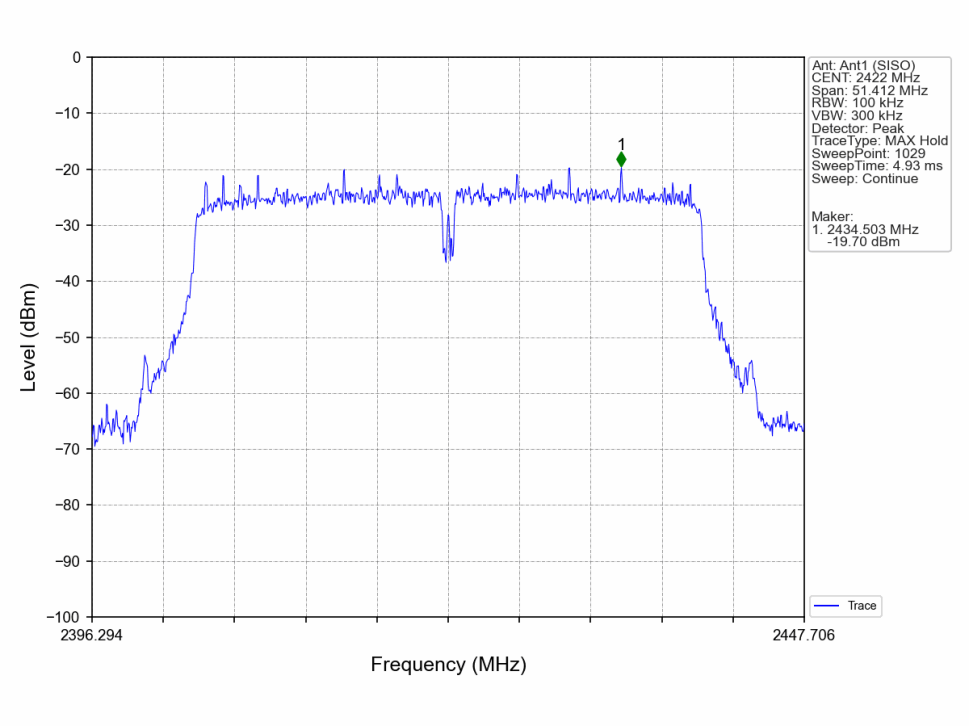

802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



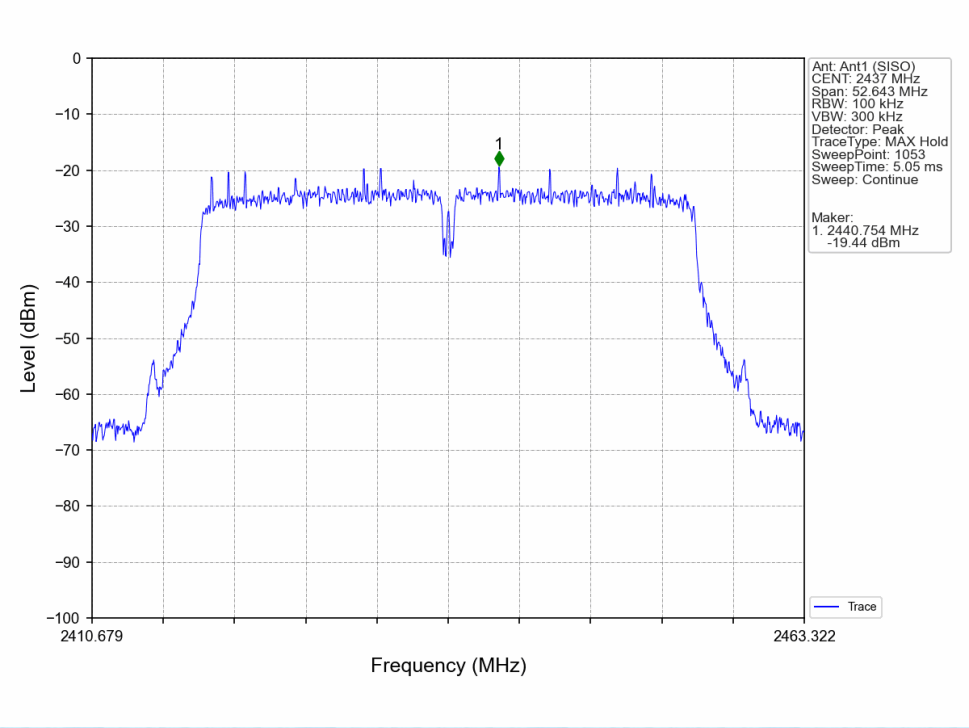
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



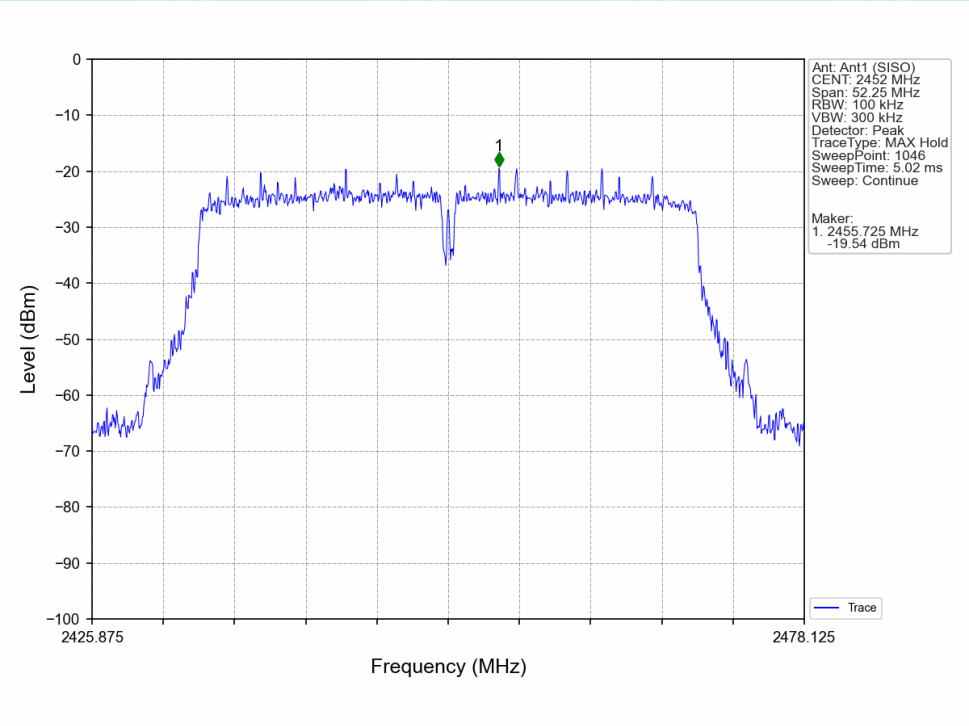

802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV

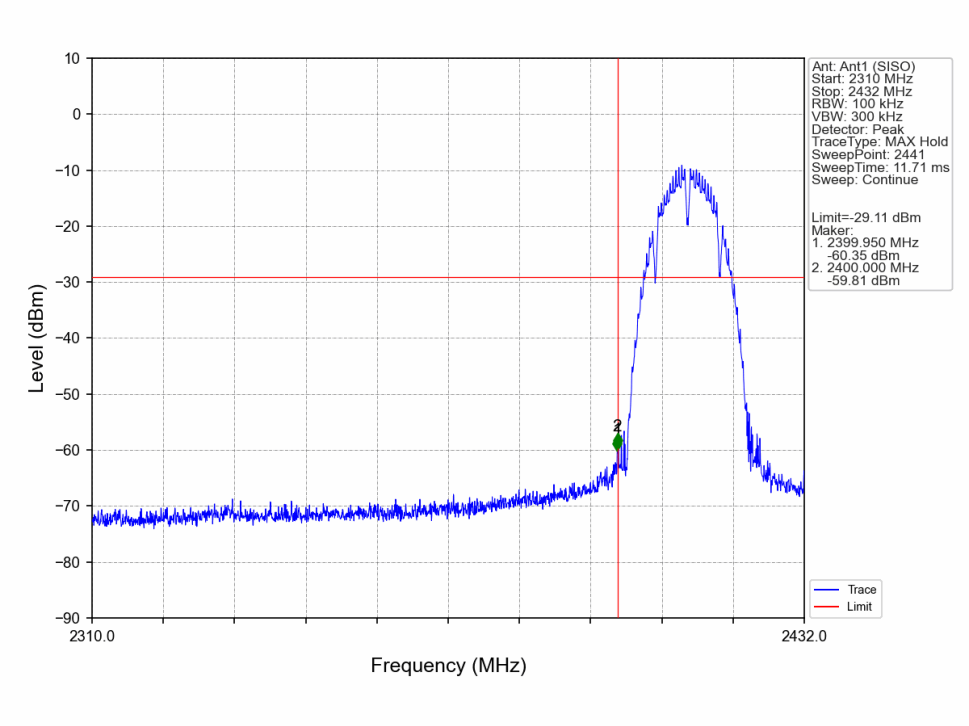



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV

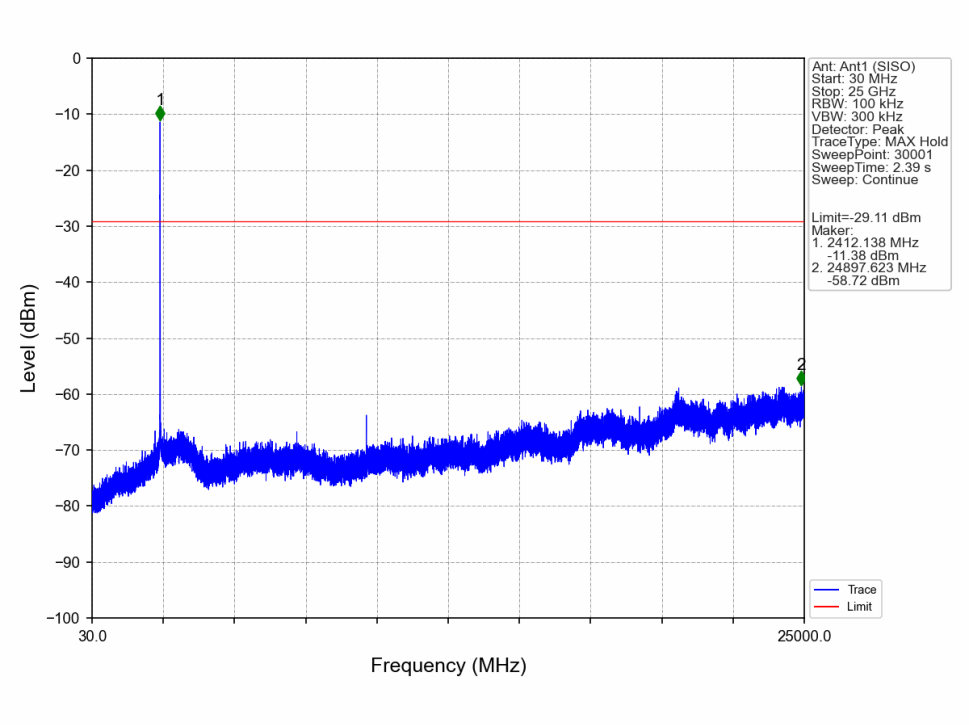


## 5.2.2 CSE

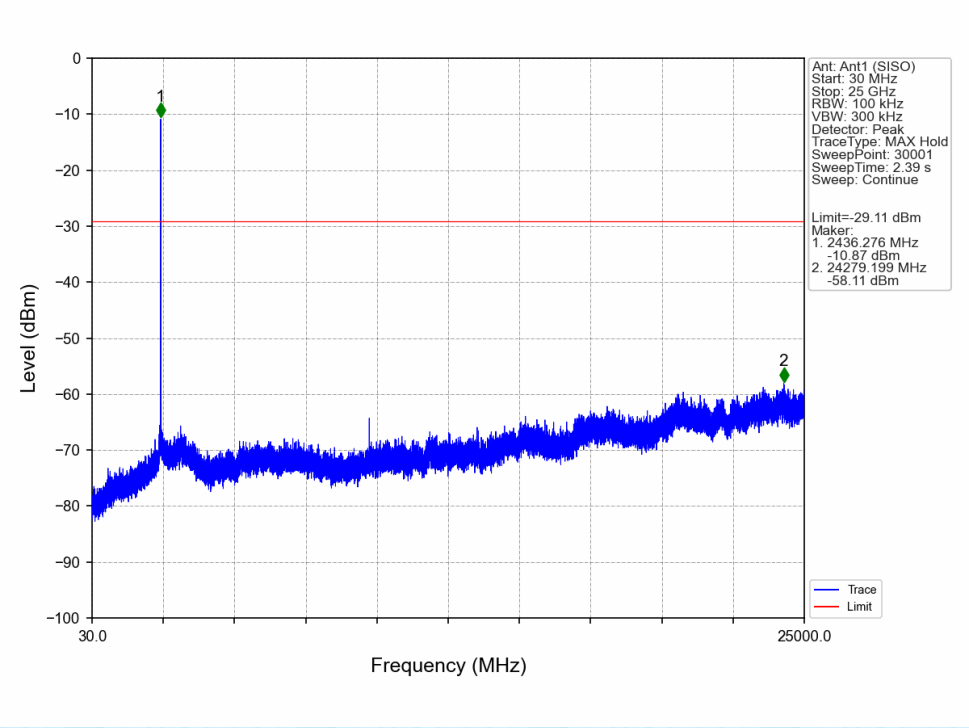
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



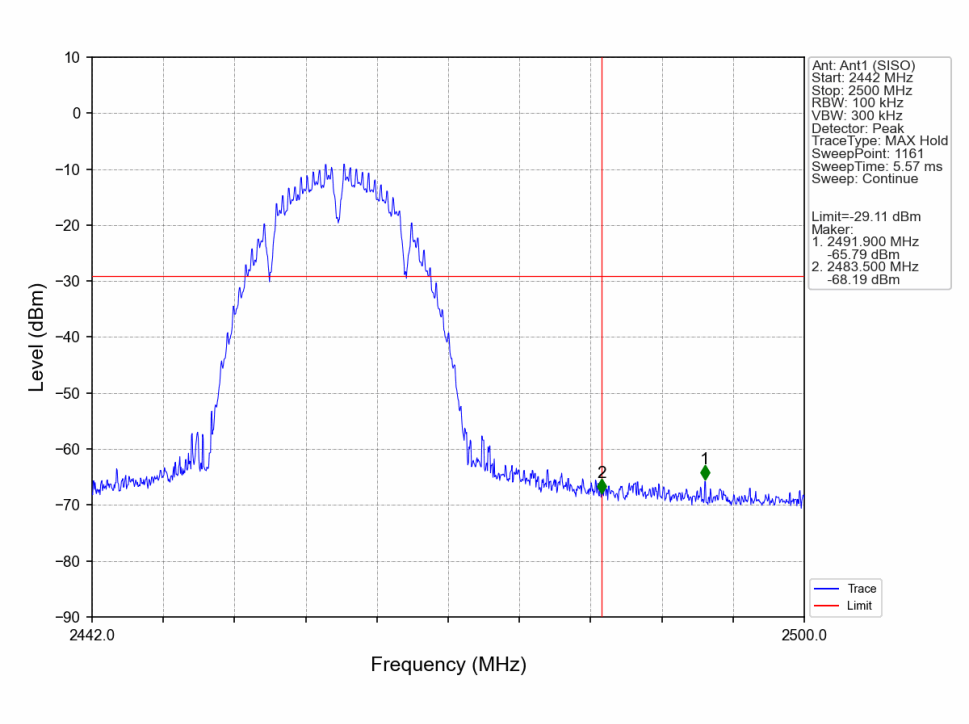

802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



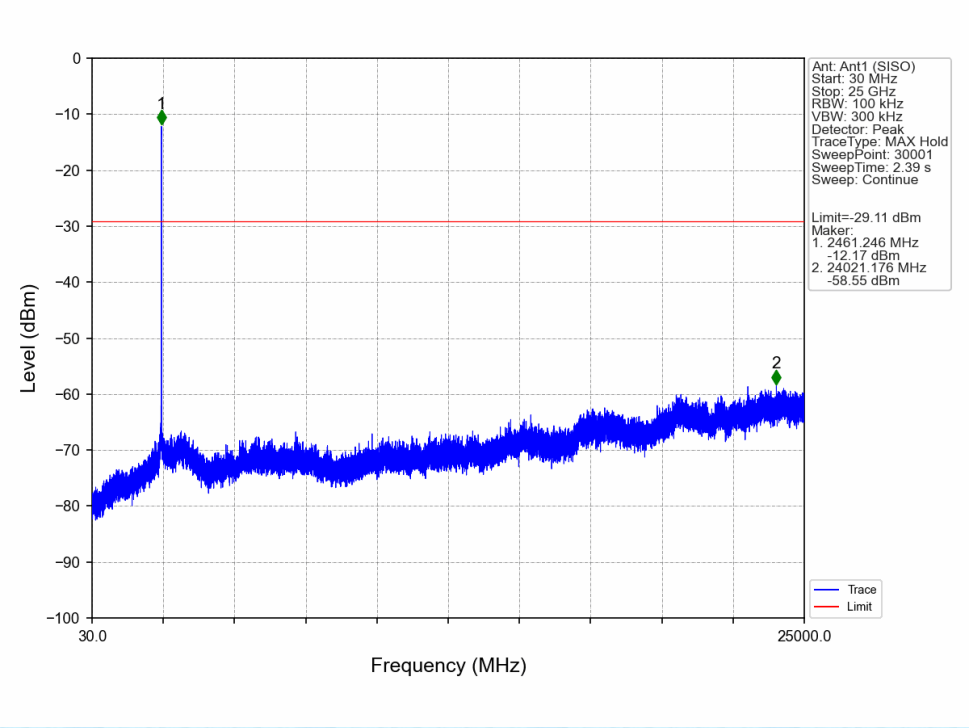
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



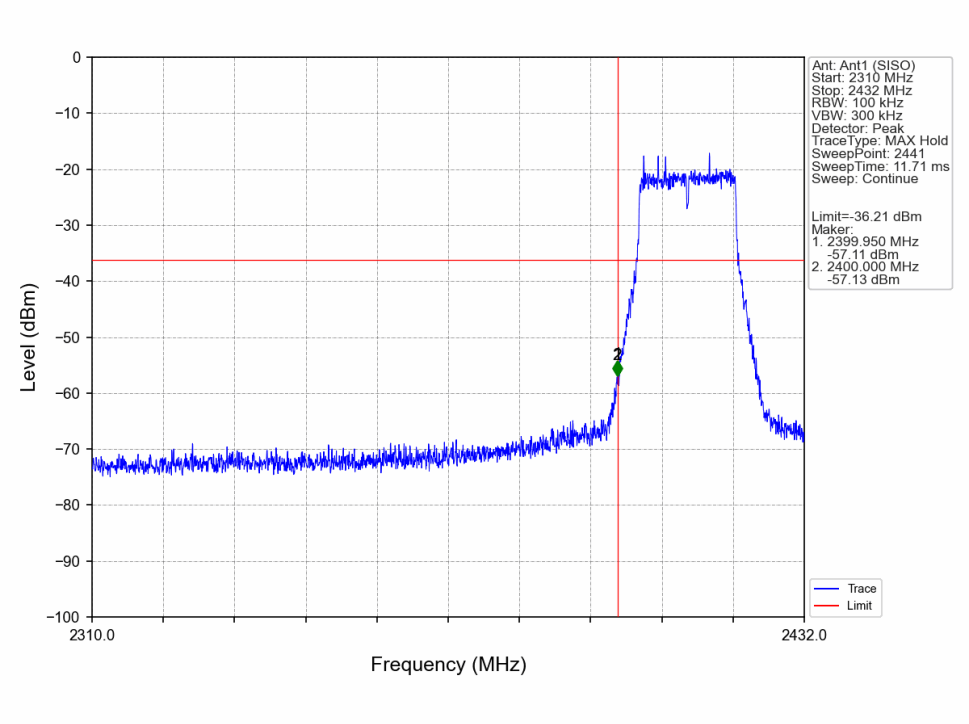

802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



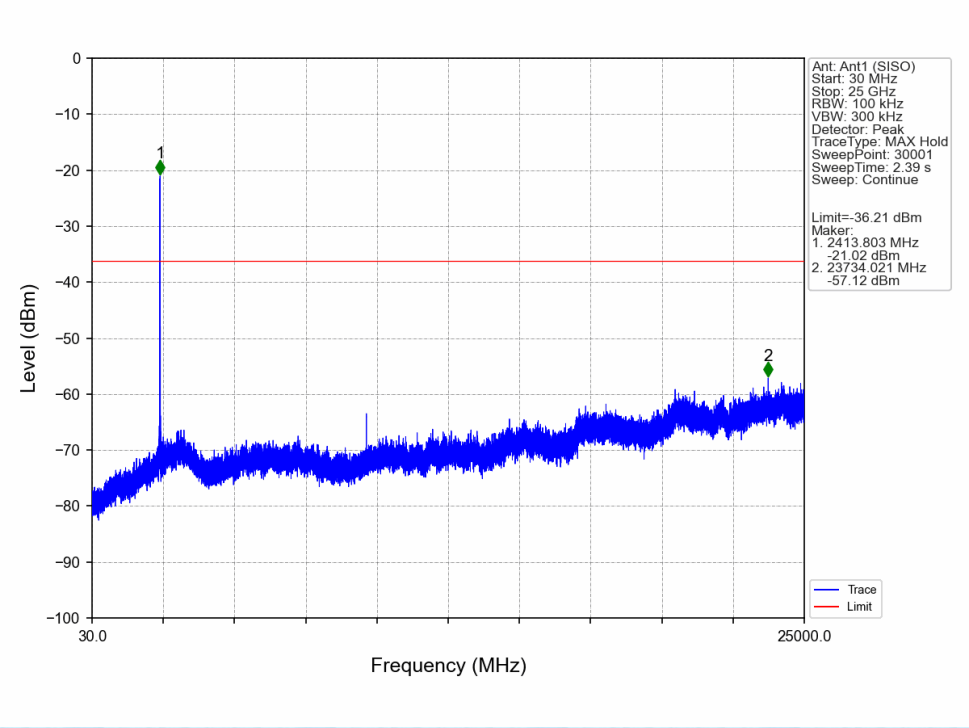
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



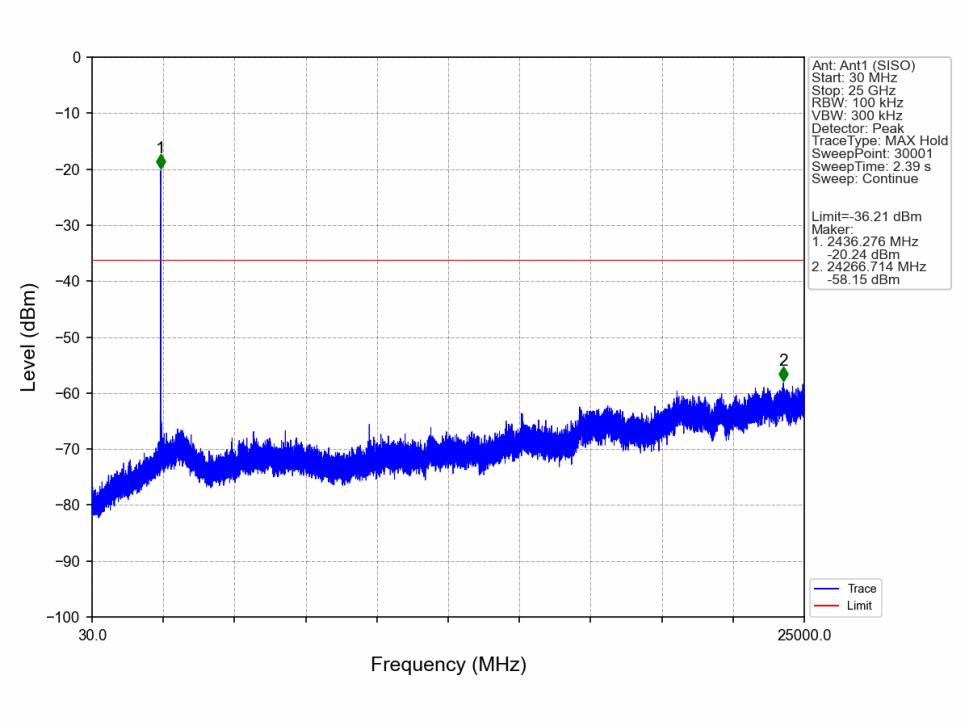

802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



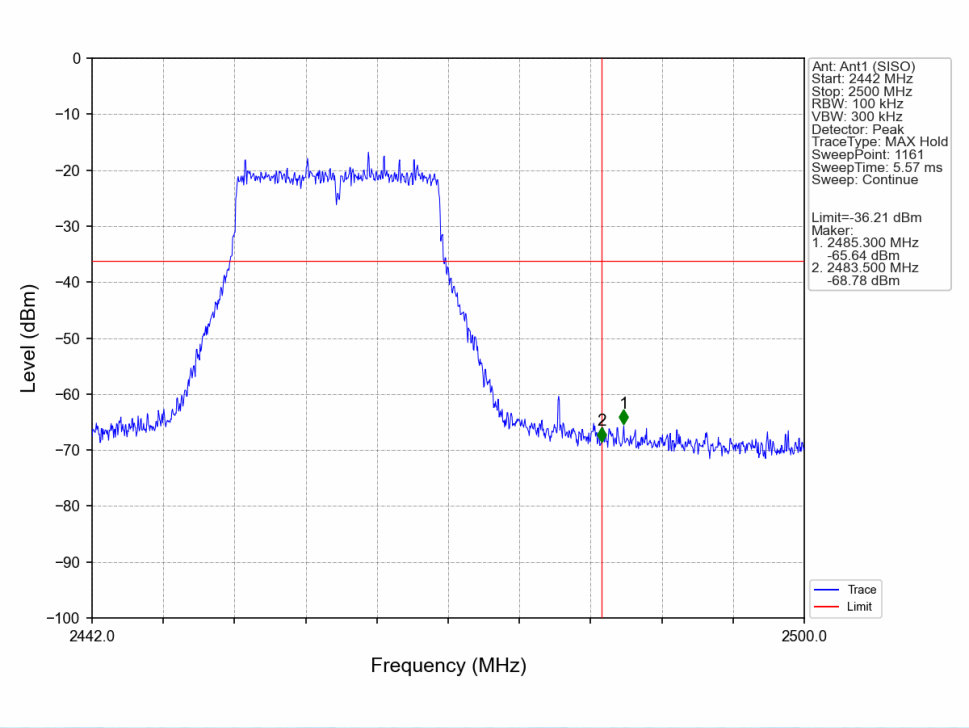
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



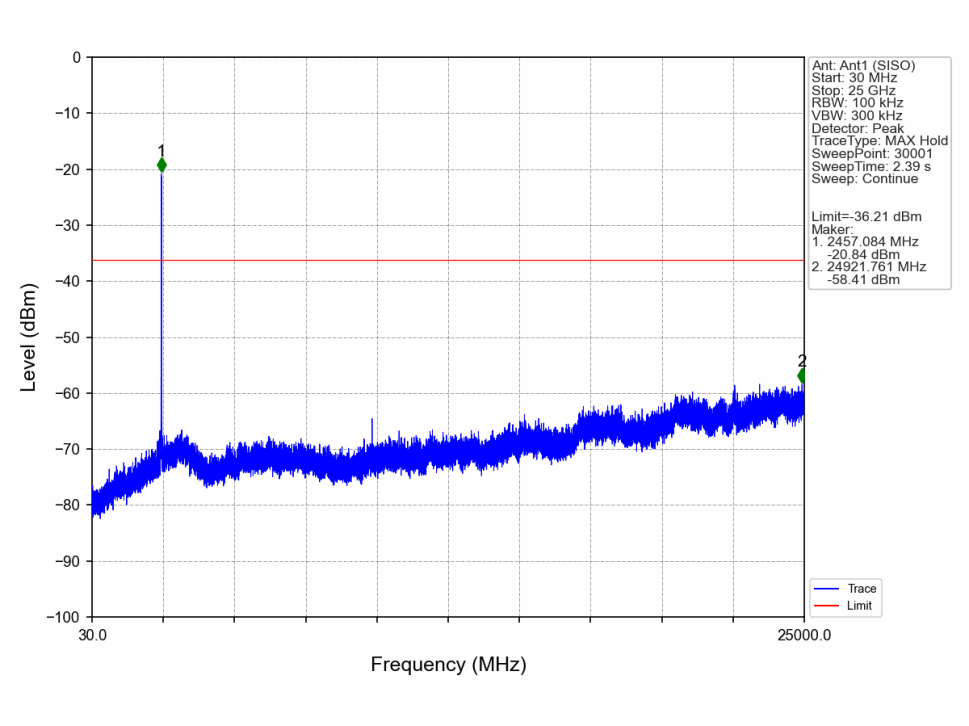

802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



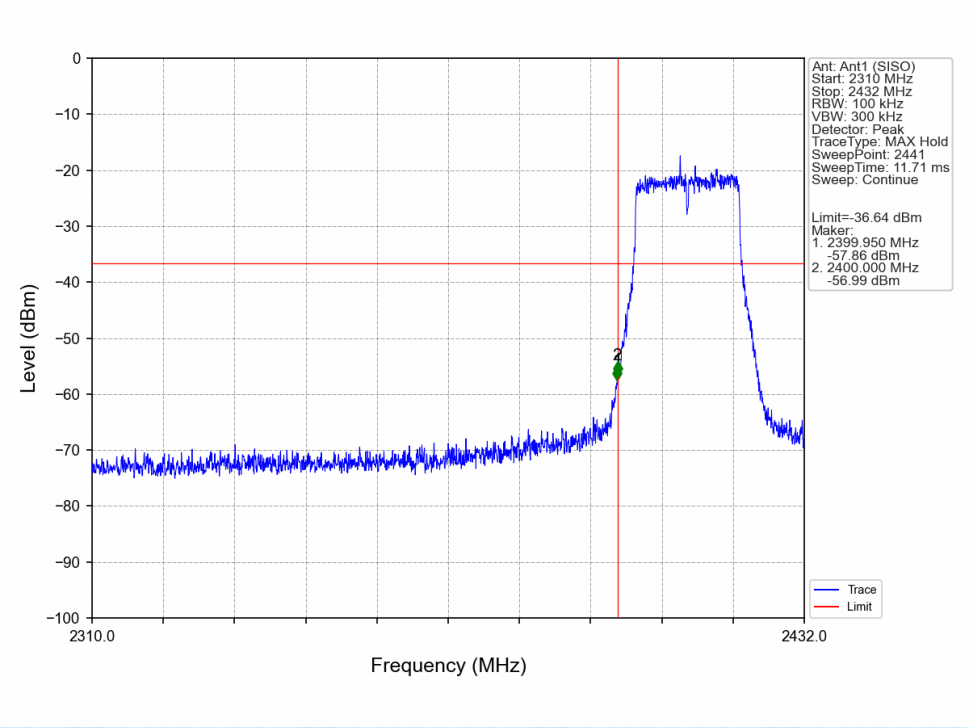
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



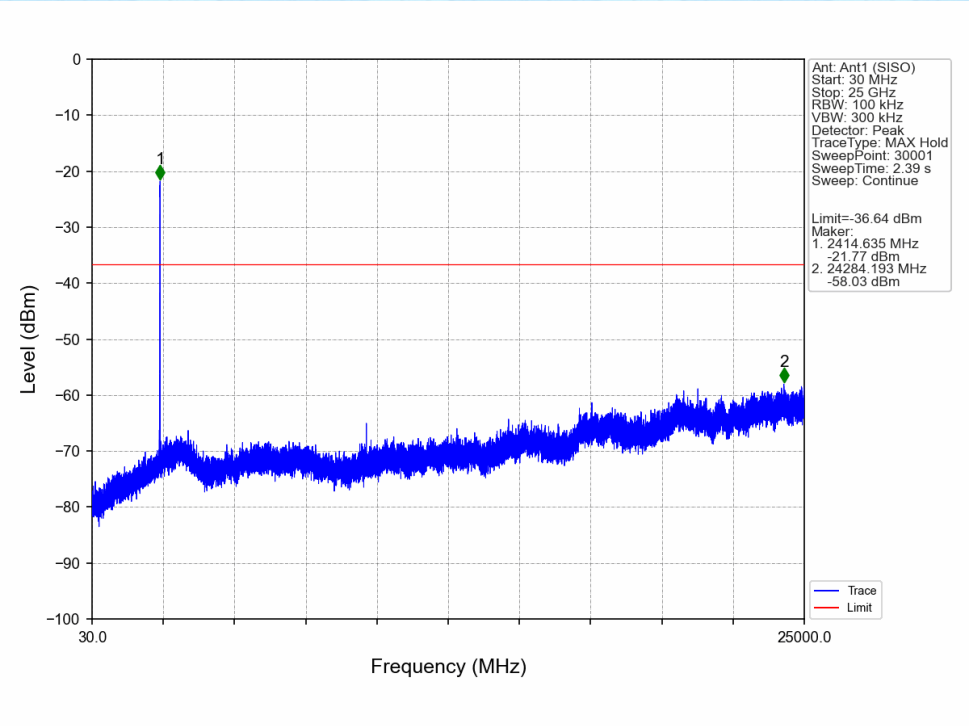

802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



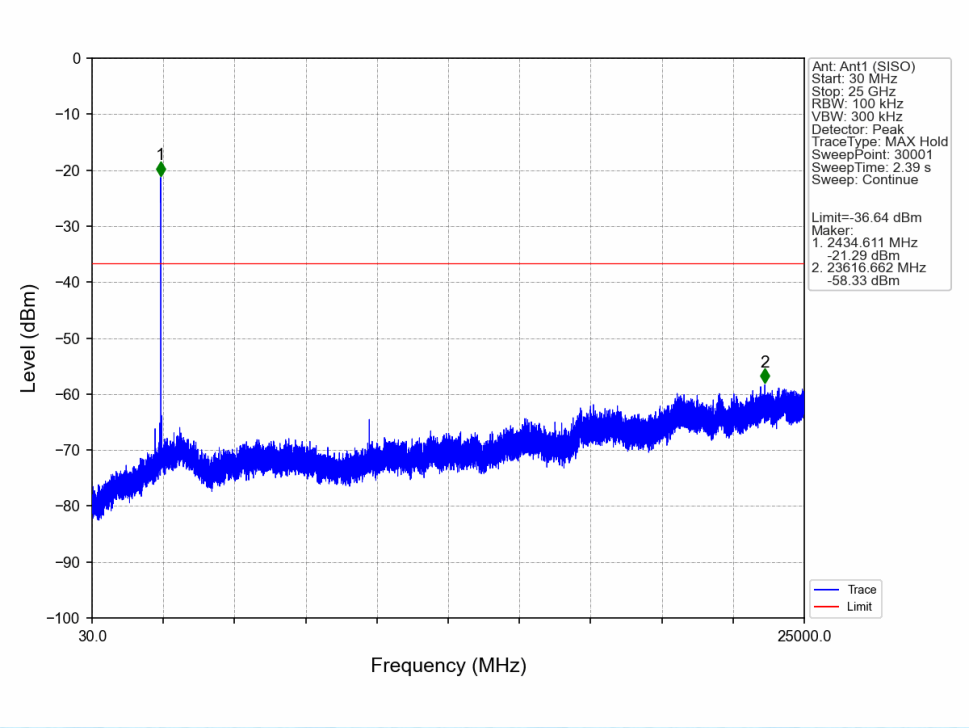
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



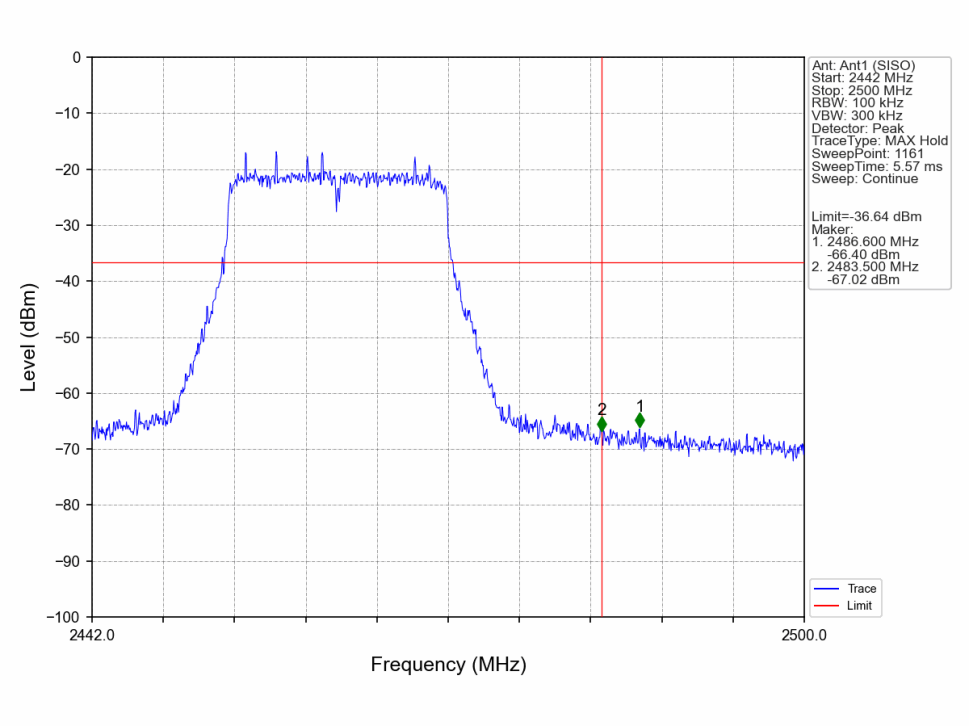

802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



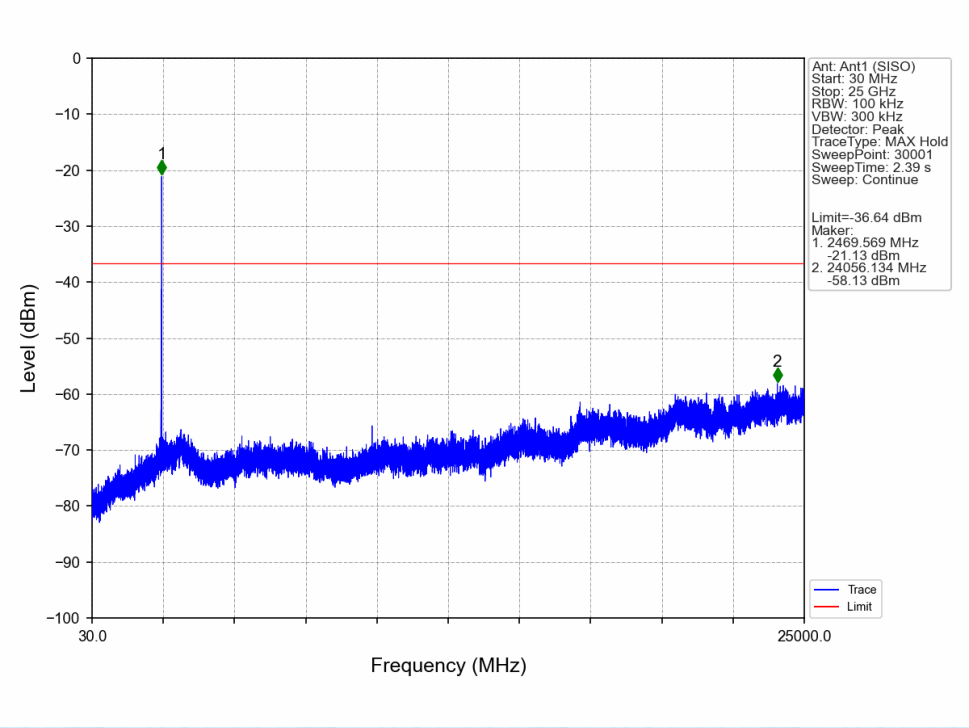
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



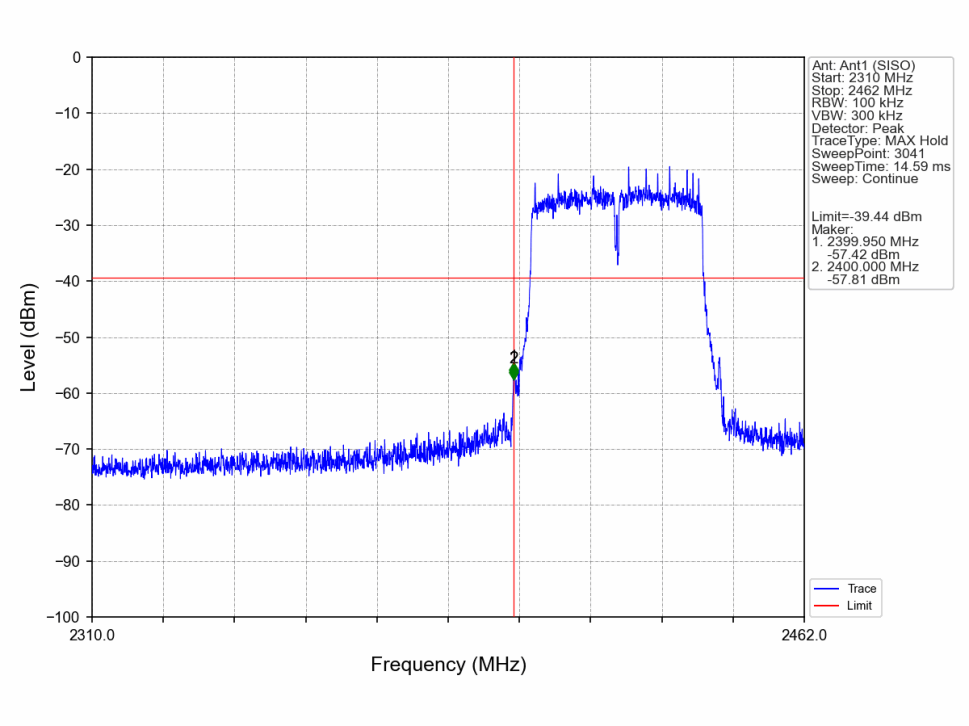

802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



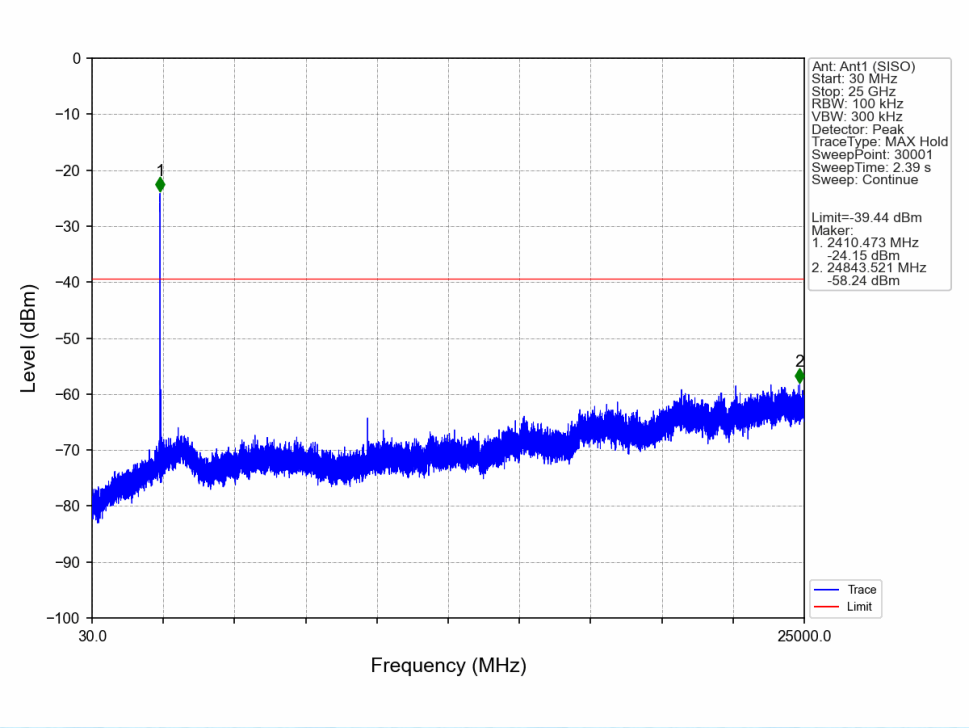
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



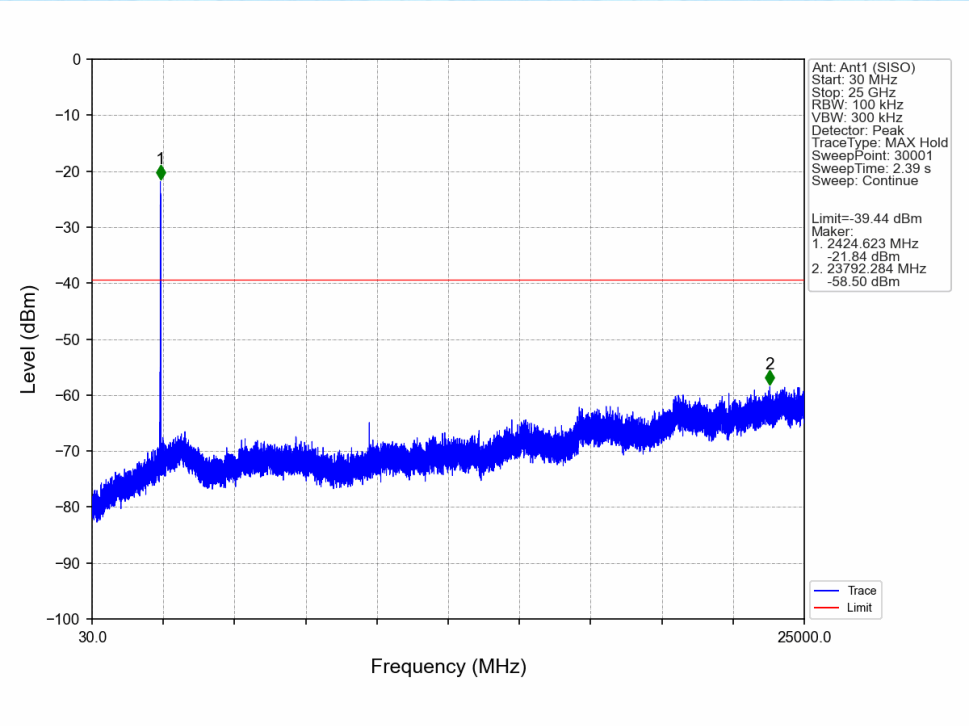

802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



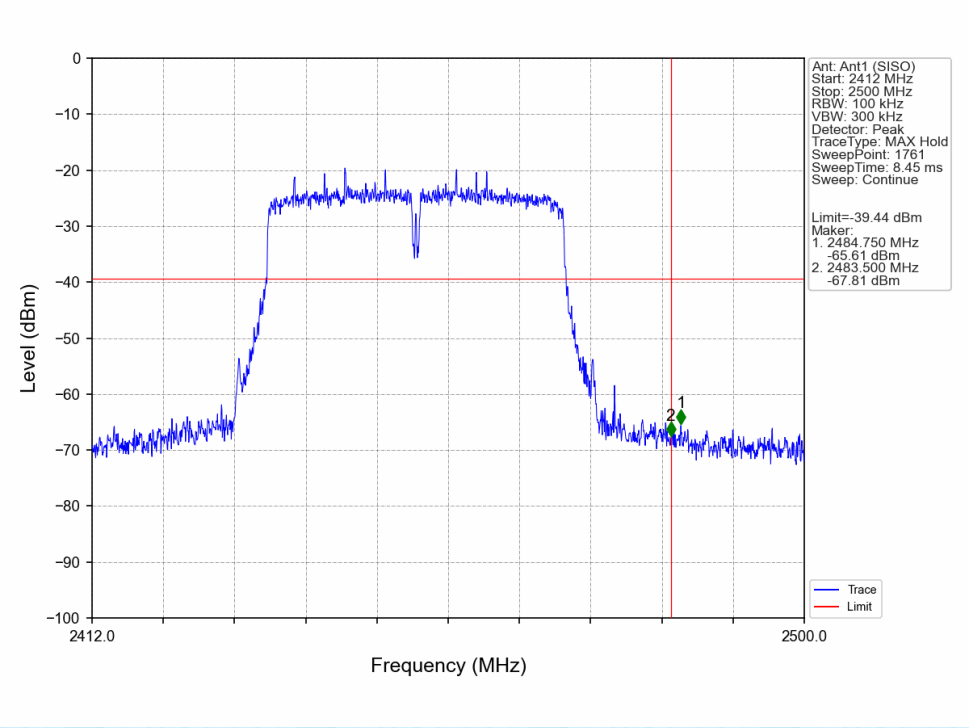
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



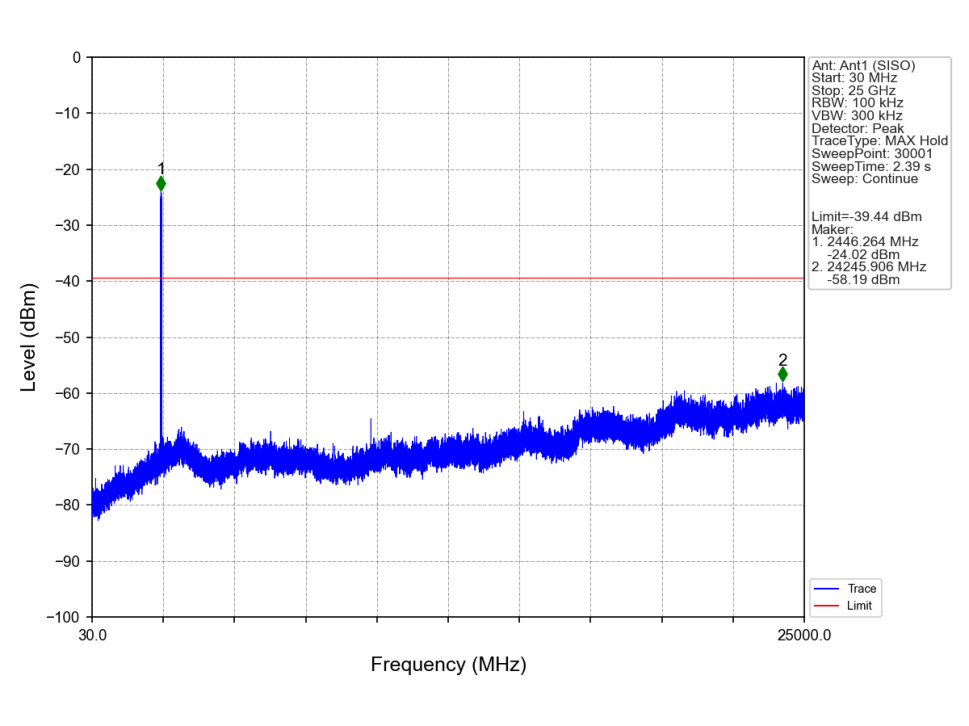

802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV




802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV




------End------