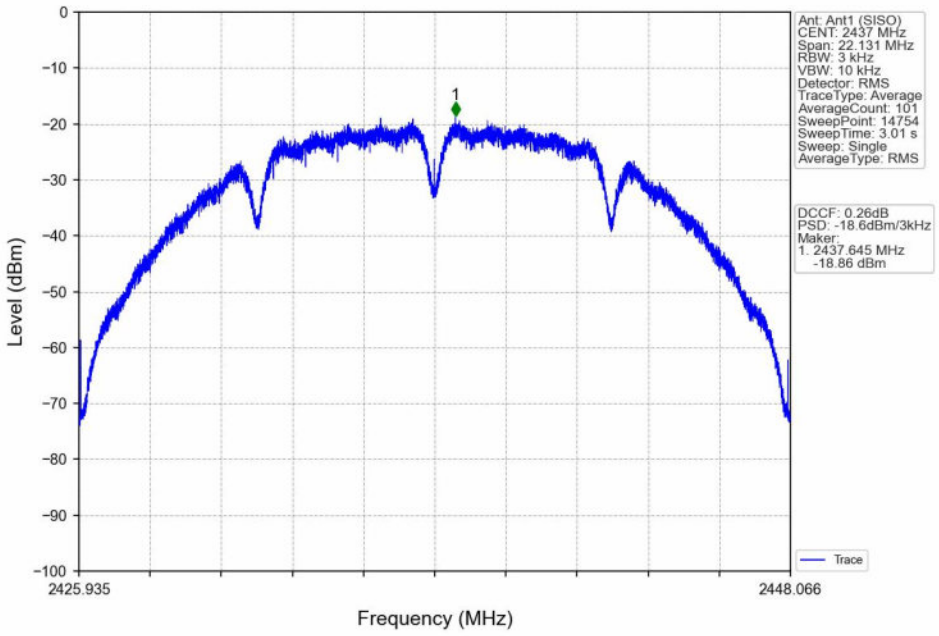
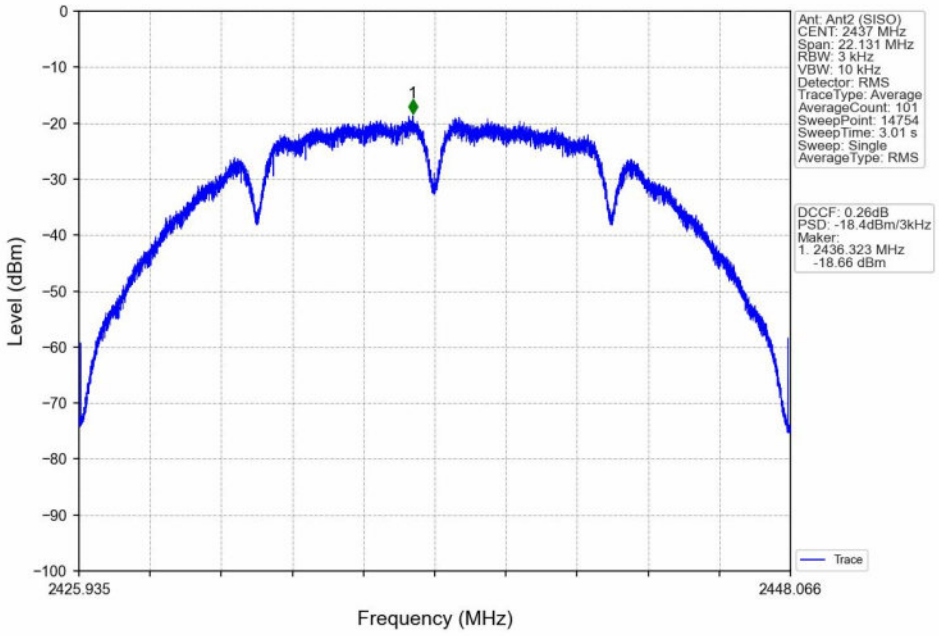
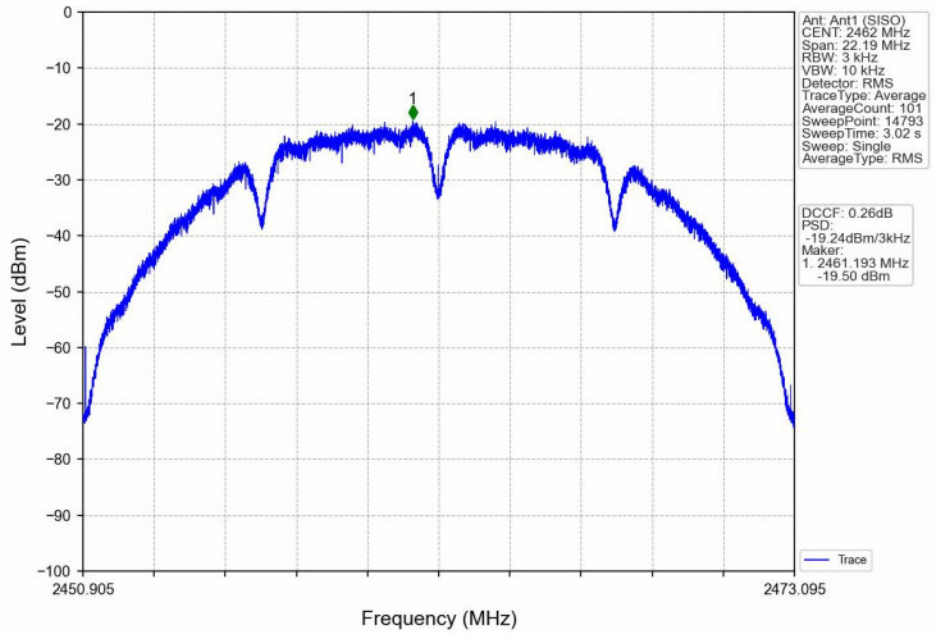
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV




802.11b_MCH_2437MHz_Ant2 (SISO)_NTNV



802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV

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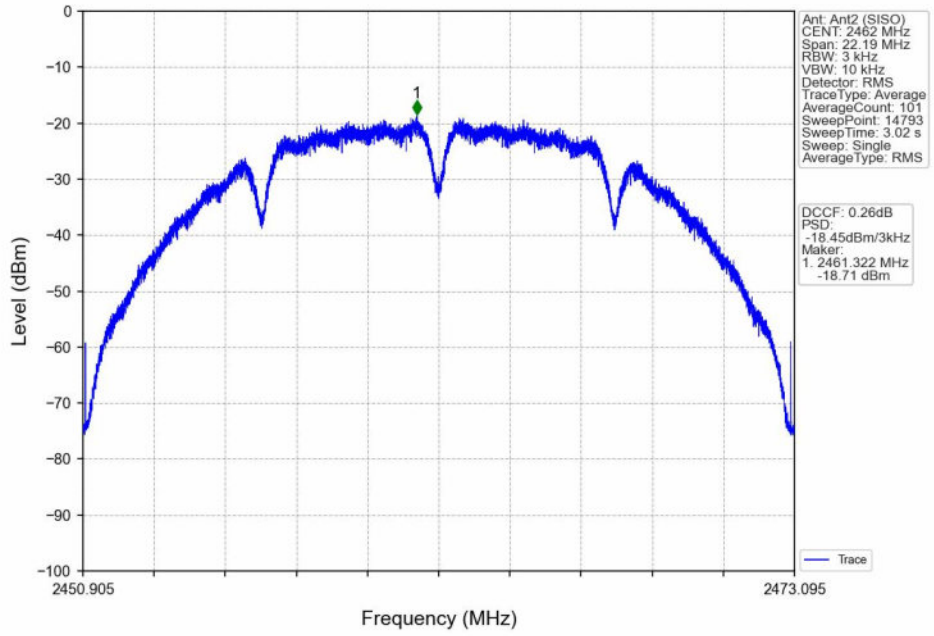
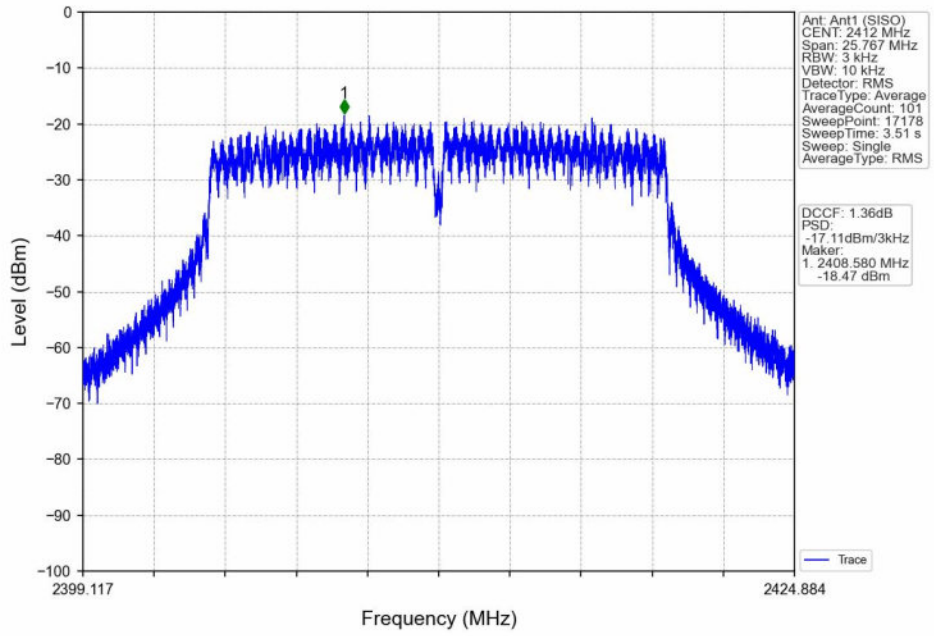
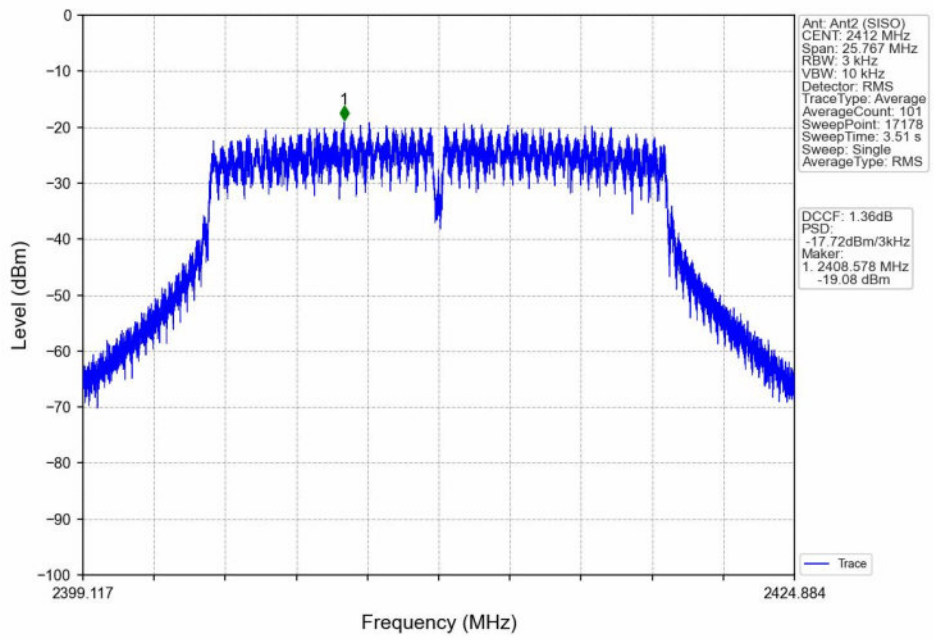


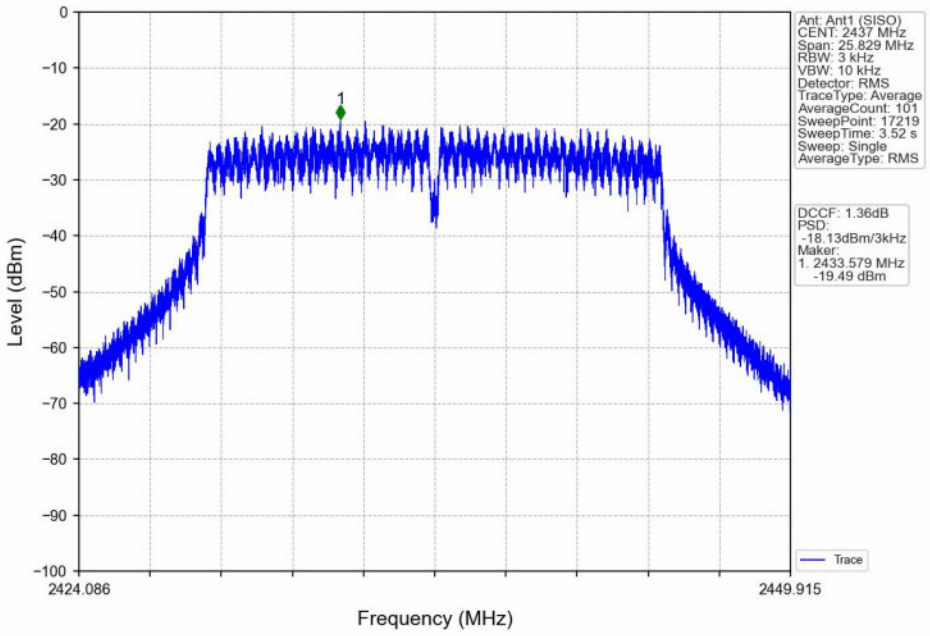
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV




802.11g_LCH_2412MHz_Ant2 (SISO)_NTNV



802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV

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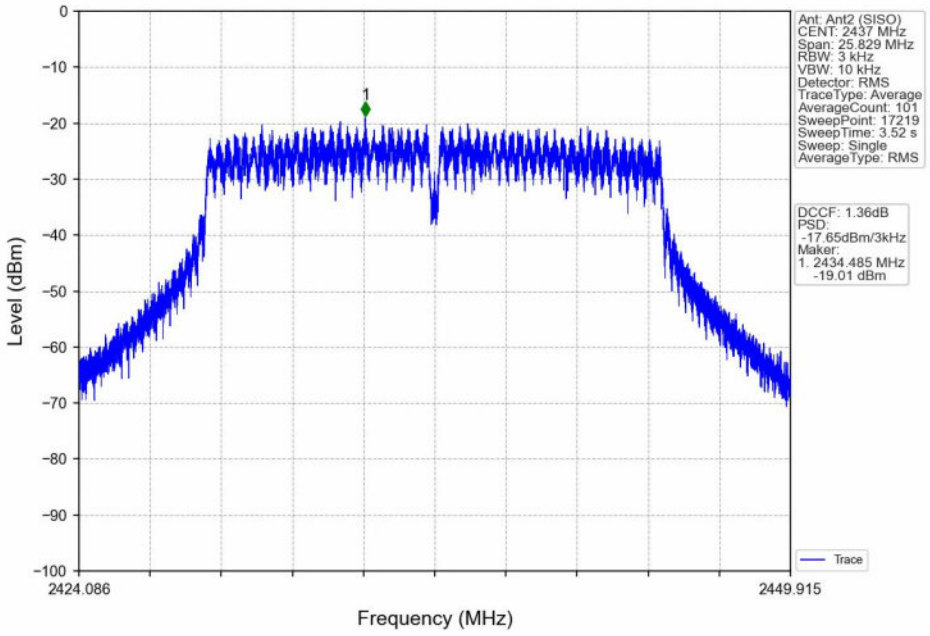
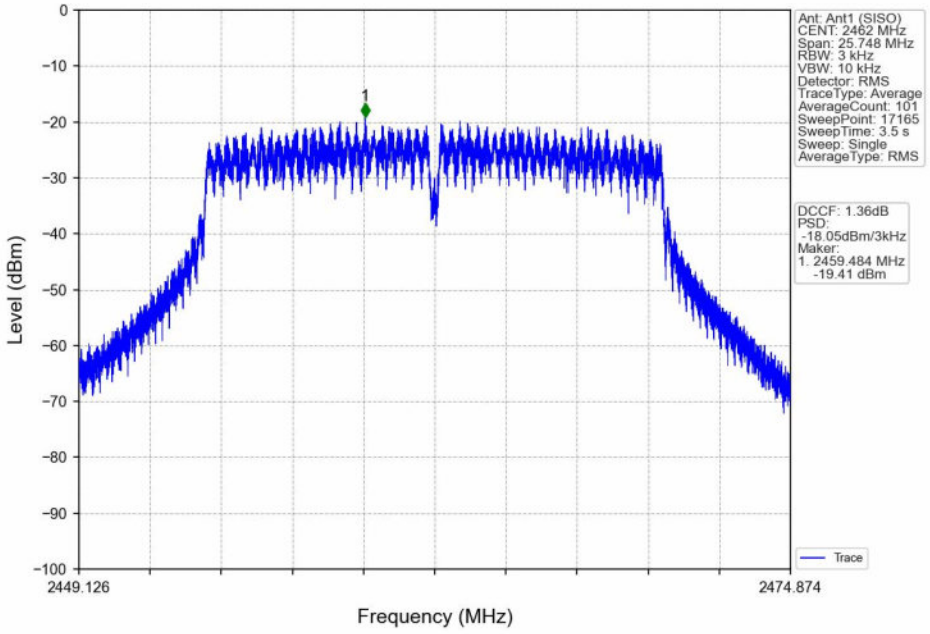
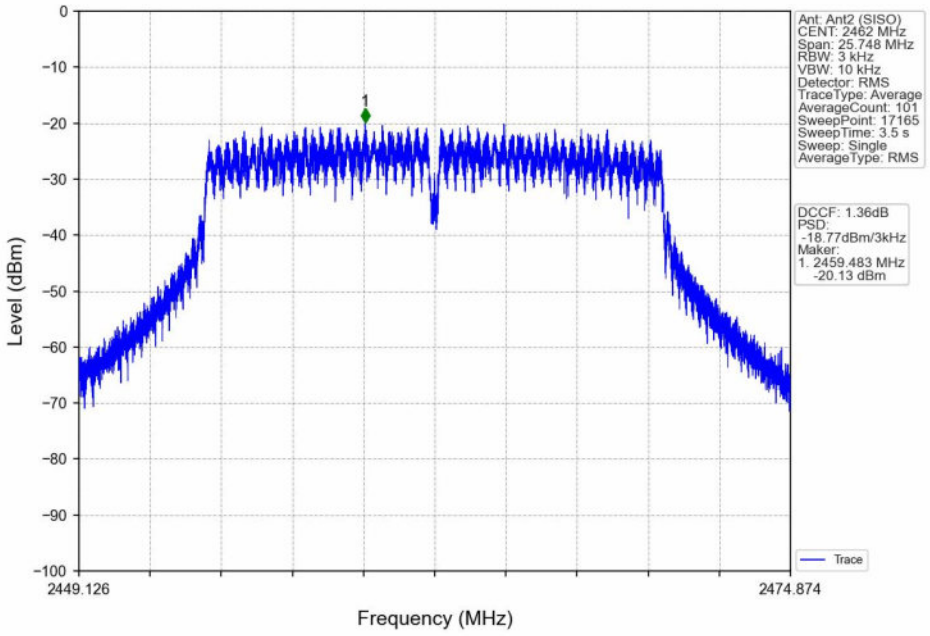


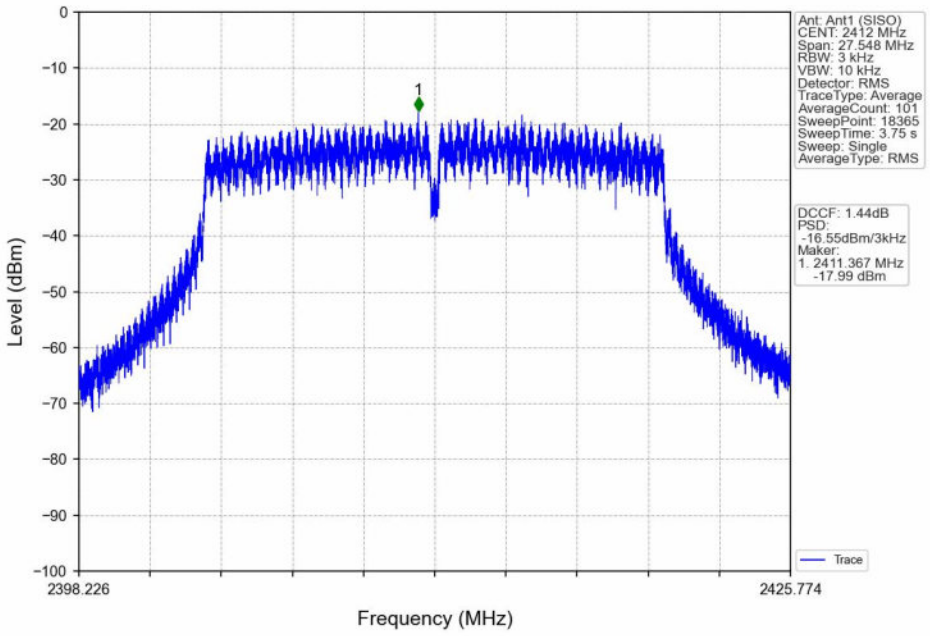
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



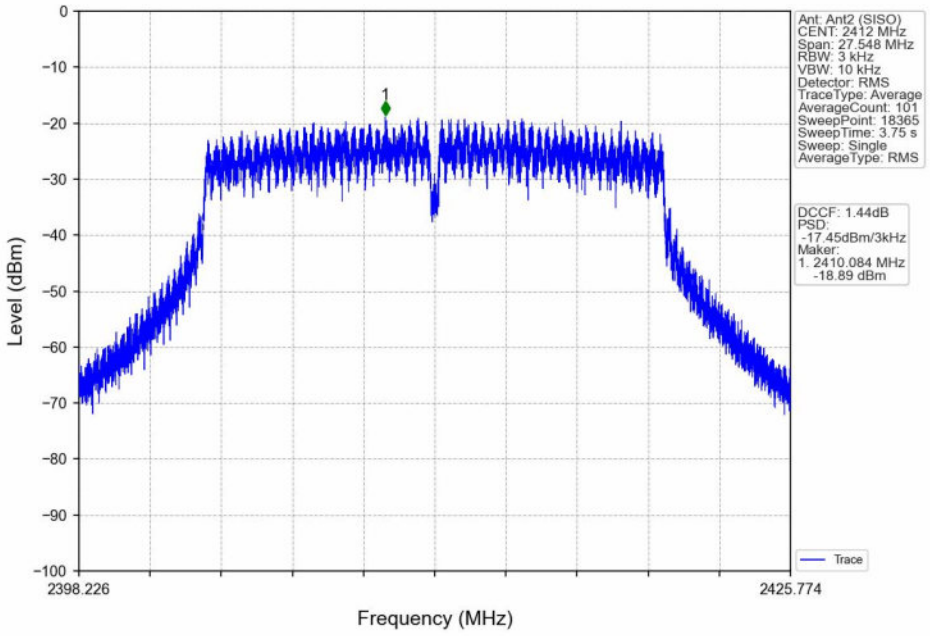

802.11g_HCH_2462MHz_Ant2 (SISO)_NTNV



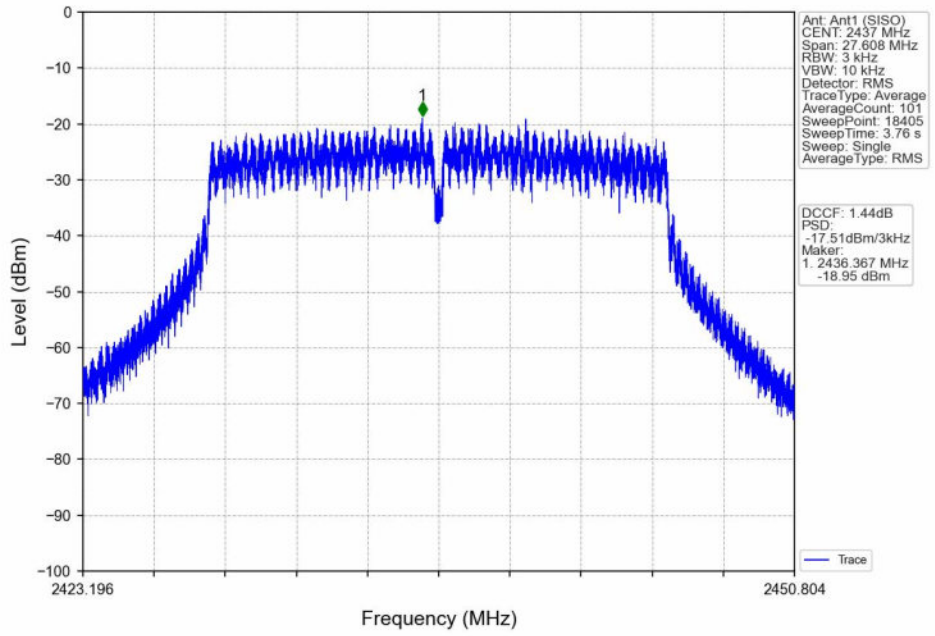
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



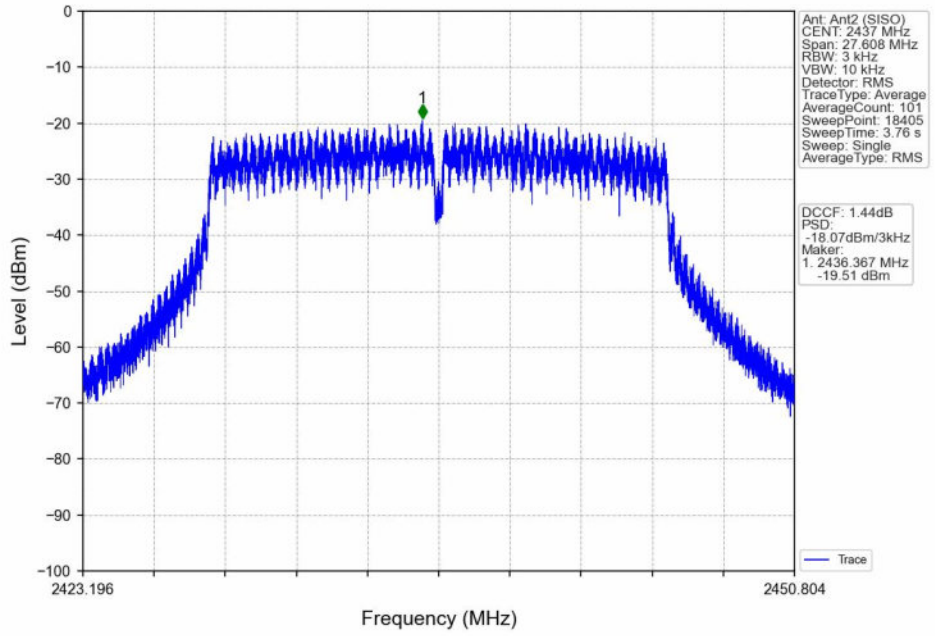

802.11n(HT20)_LCH_2412MHz_Ant2 (SISO)_NTNV



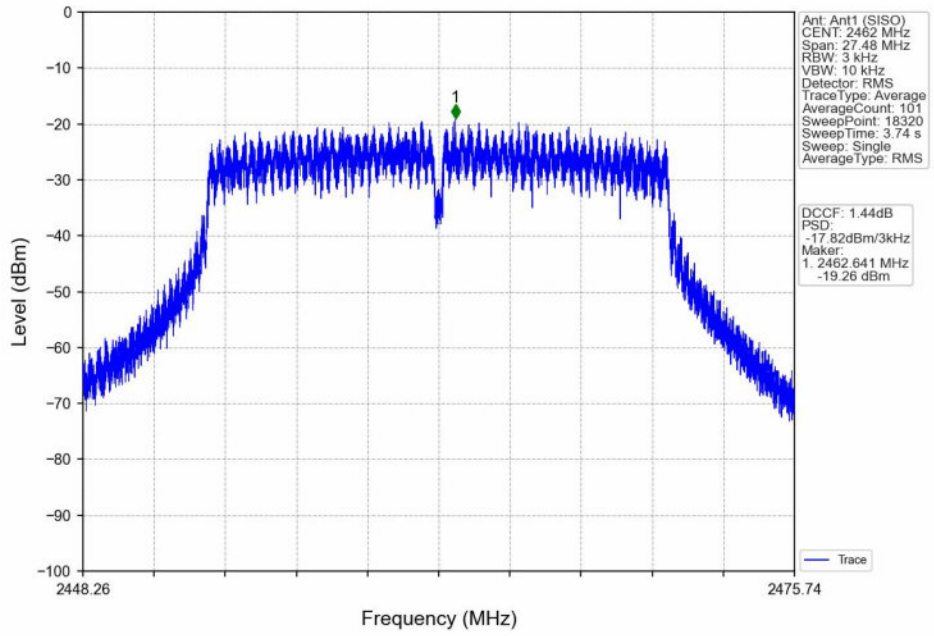
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



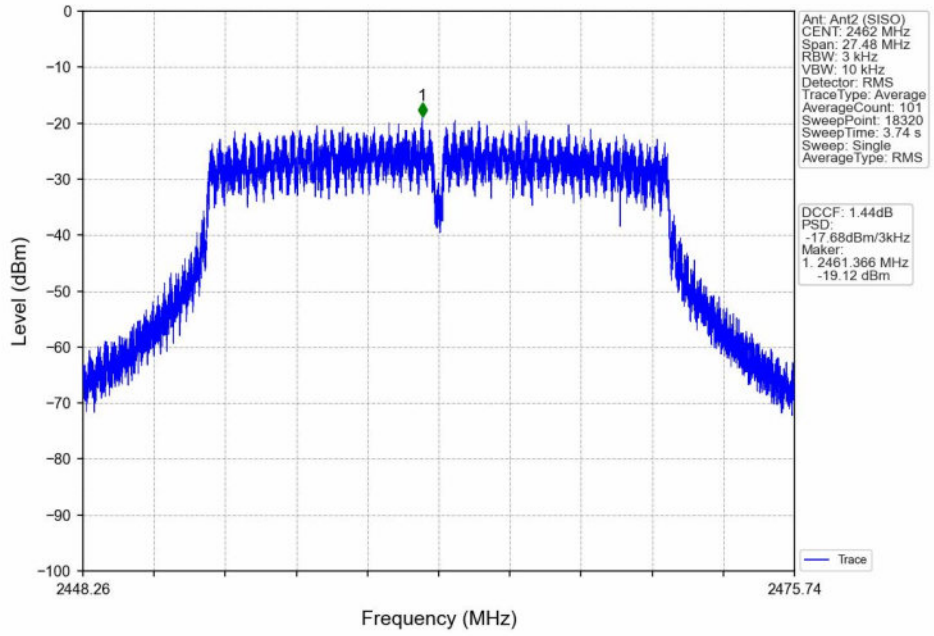

802.11n(HT20)_MCH_2437MHz_Ant2 (SISO)_NTNV



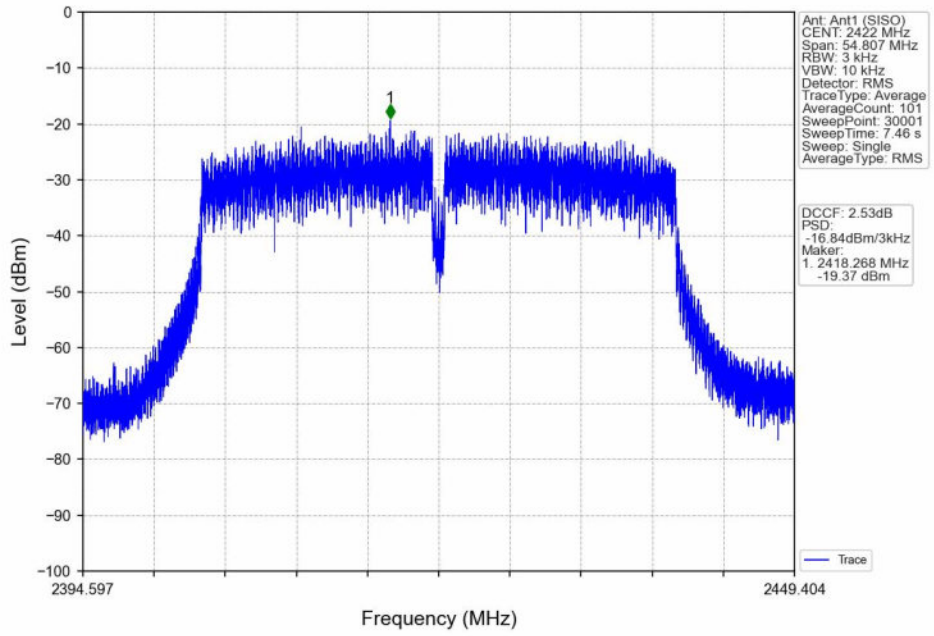
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



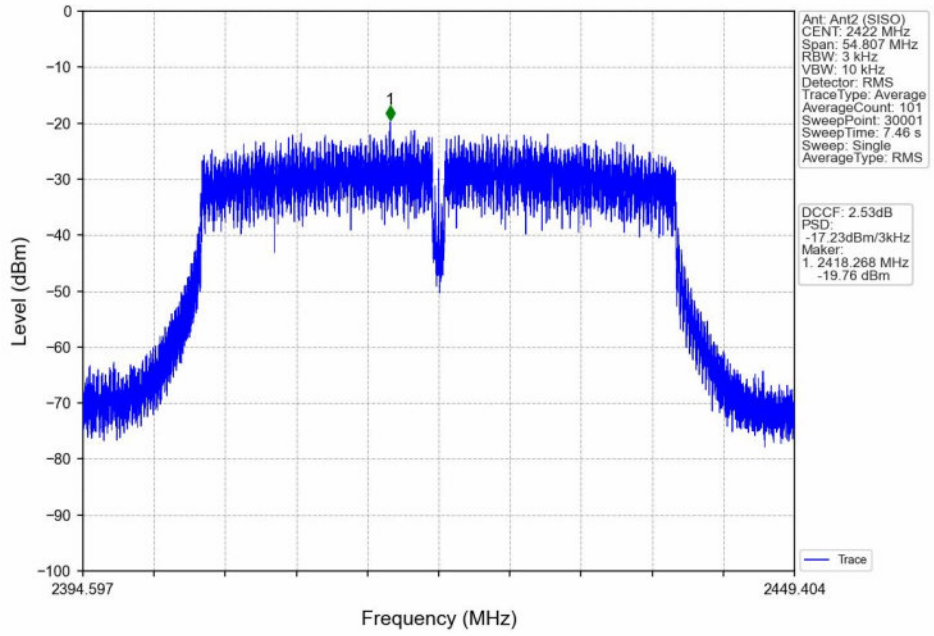

802.11n(HT20)_HCH_2462MHz_Ant2 (SISO)_NTNV



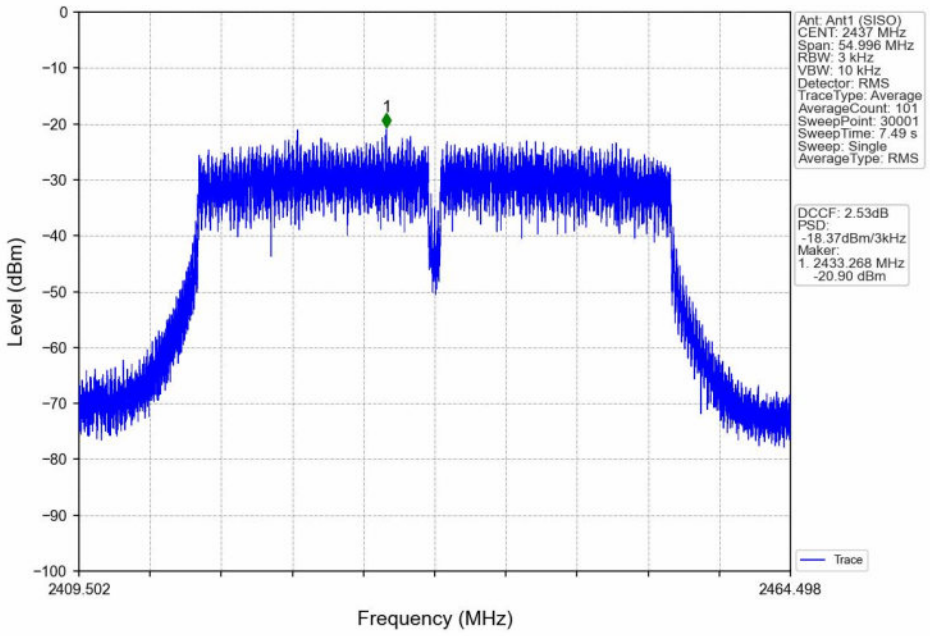
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



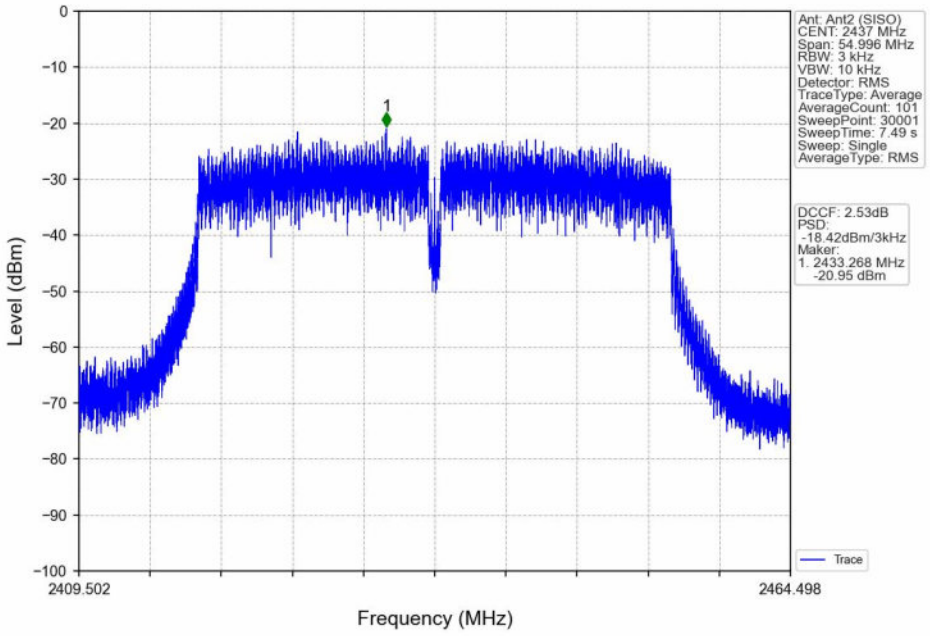

802.11n(HT40)_LCH_2422MHz_Ant2 (SISO)_NTNV



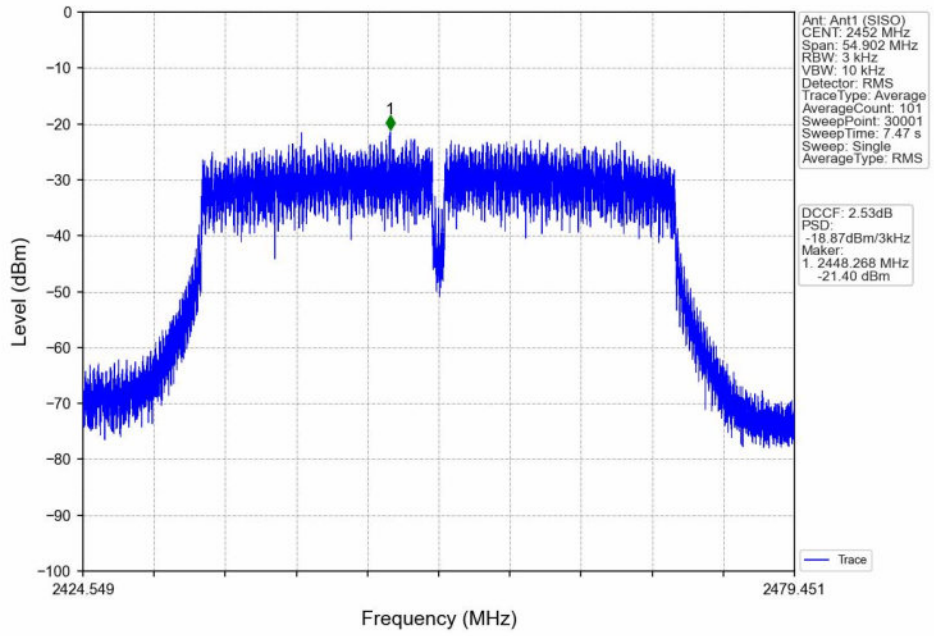
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



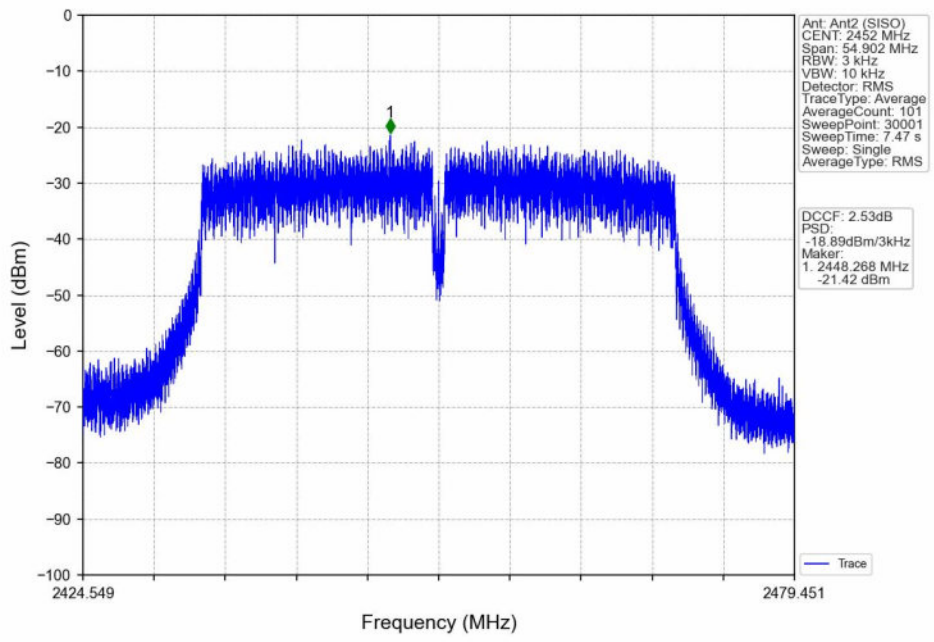

802.11n(HT40)_MCH_2437MHz_Ant2 (SISO)_NTNV



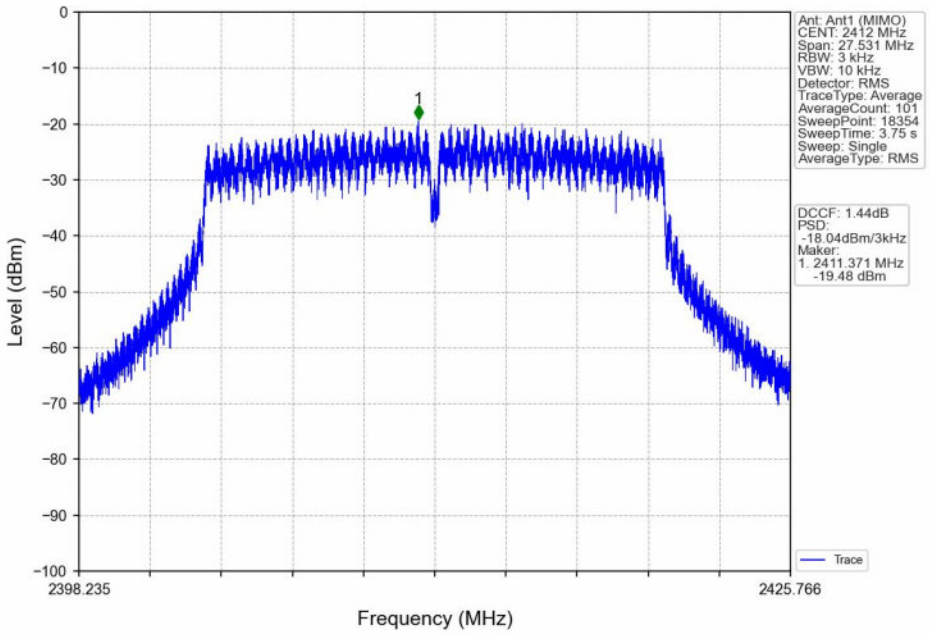
802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



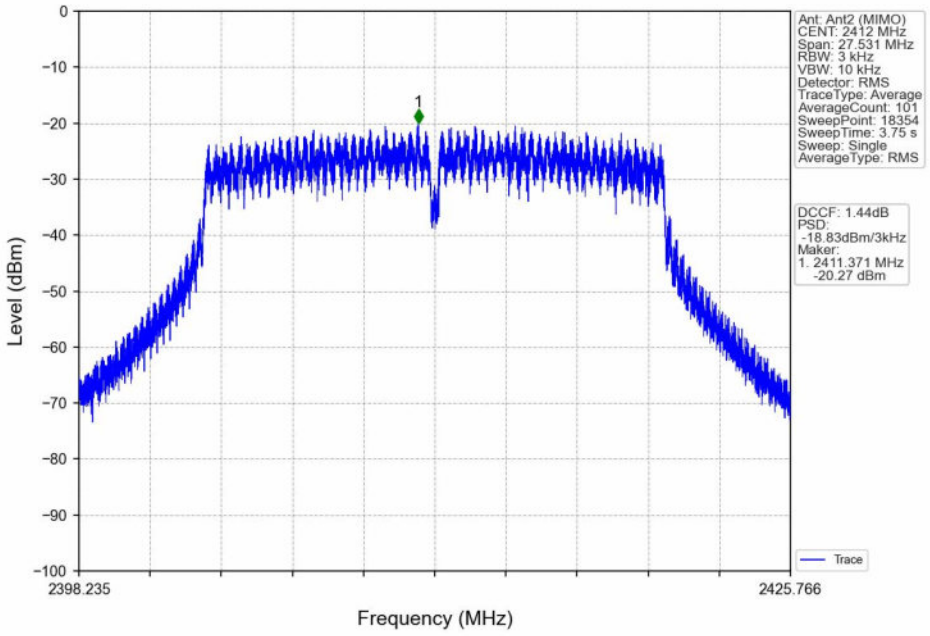

802.11n(HT40)_HCH_2452MHz_Ant2 (SISO)_NTNV



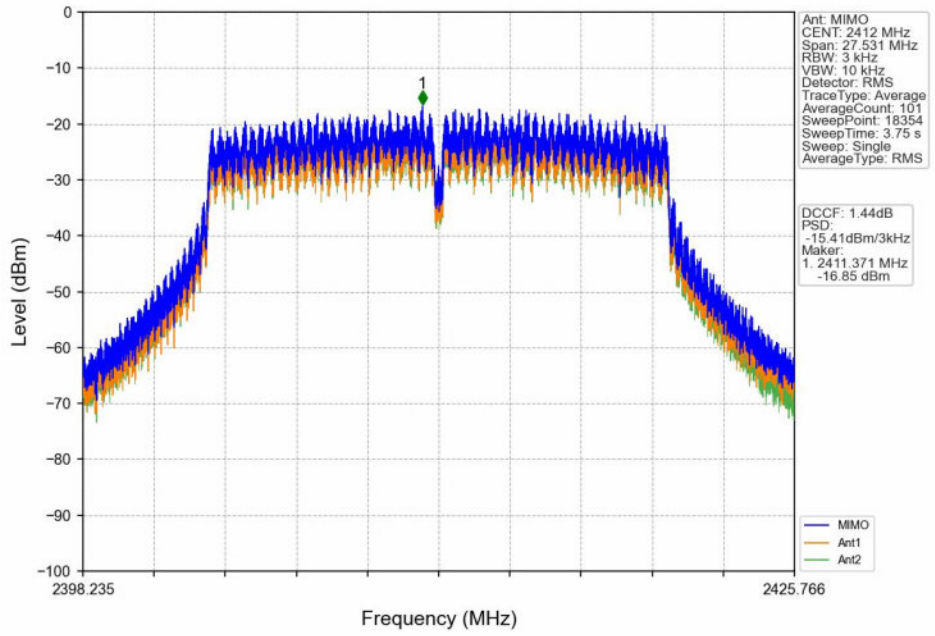
802.11n(HT20)_LCH_2412MHz_Ant1 (MIMO)_NTNV



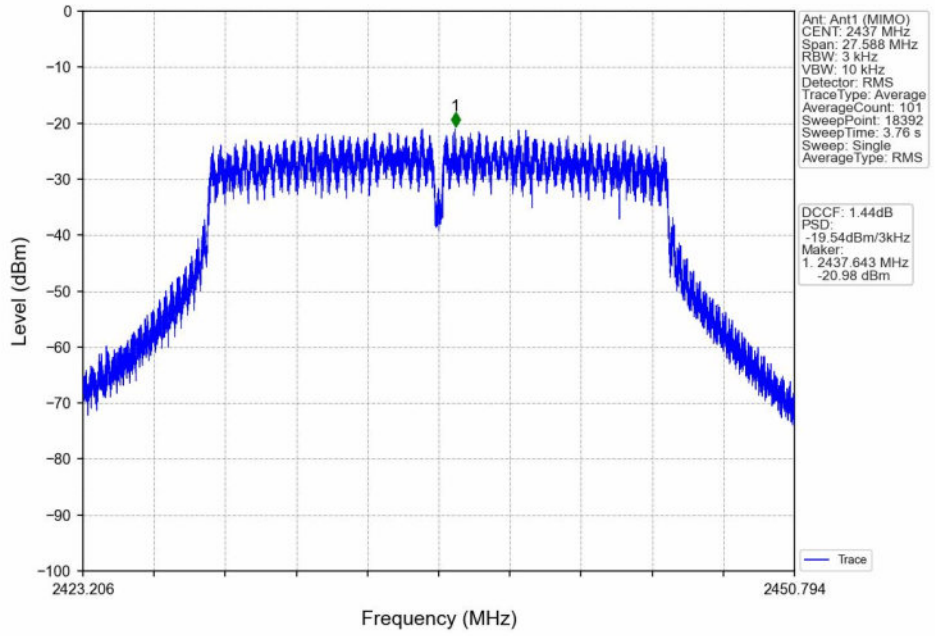

802.11n(HT20)_LCH_2412MHz_Ant2 (MIMO)_NTNV



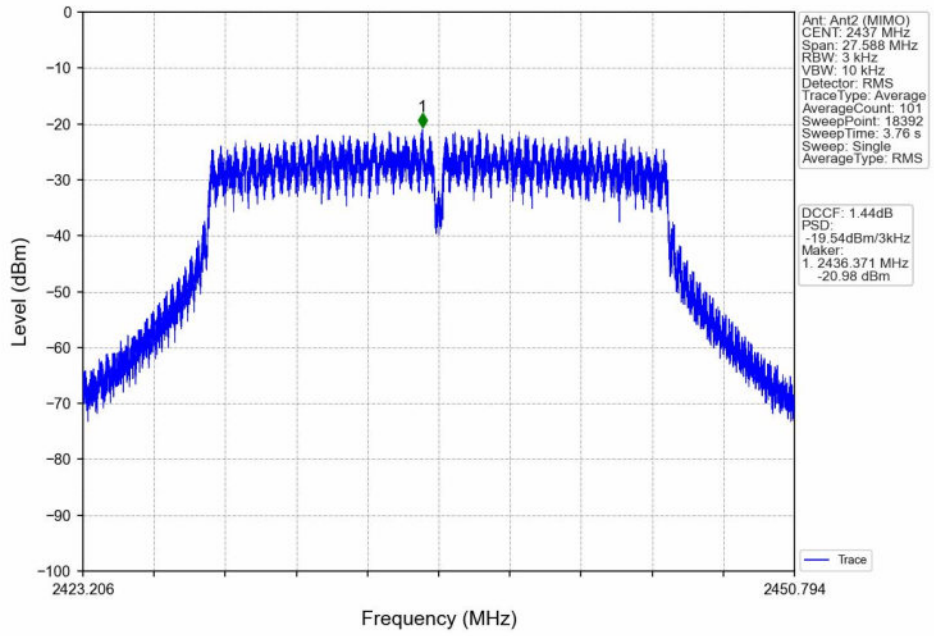
802.11n(HT20)_LCH_2412MHz_MIMO_NTNV



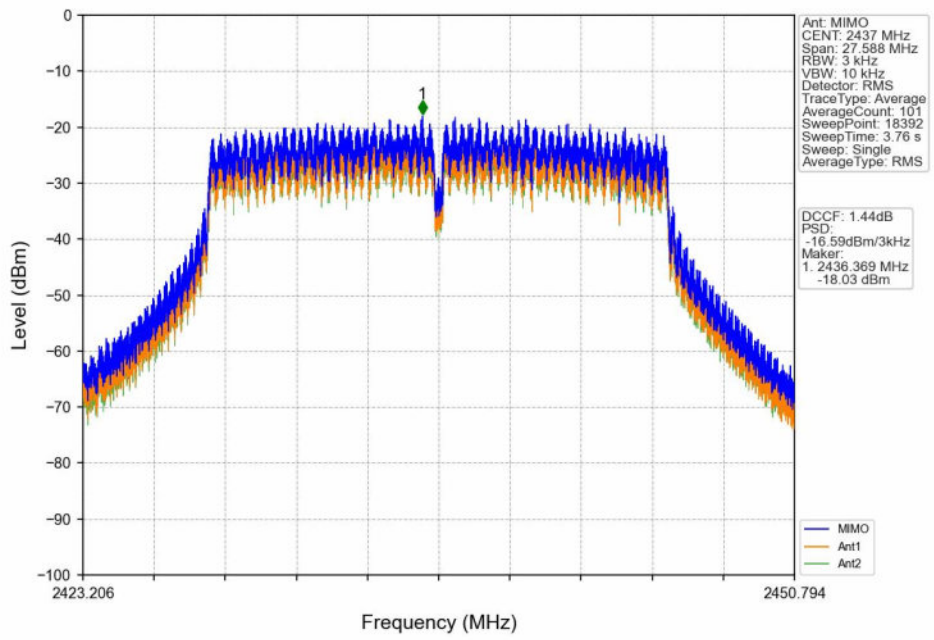

802.11n(HT20)_MCH_2437MHz_Ant1 (MIMO)_NTNV



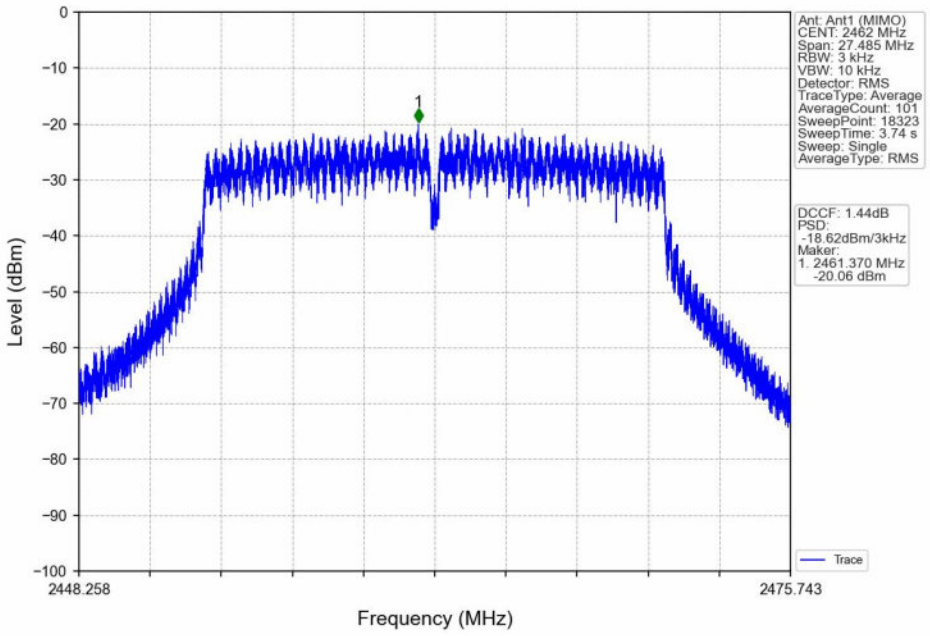
802.11n(HT20)_MCH_2437MHz_Ant2 (MIMO)_NTNV



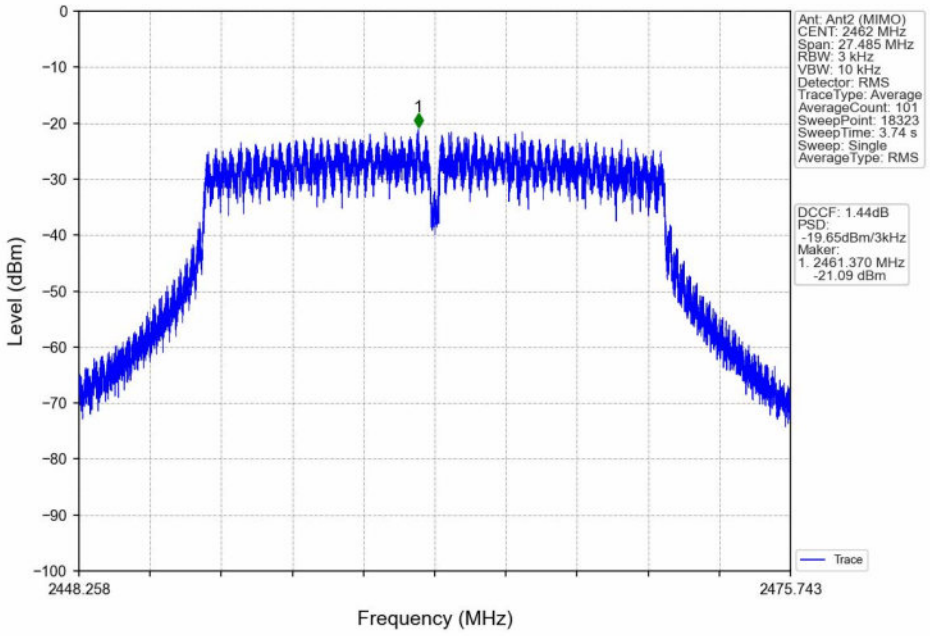

802.11n(HT20)_MCH_2437MHz_MIMO_NTNV



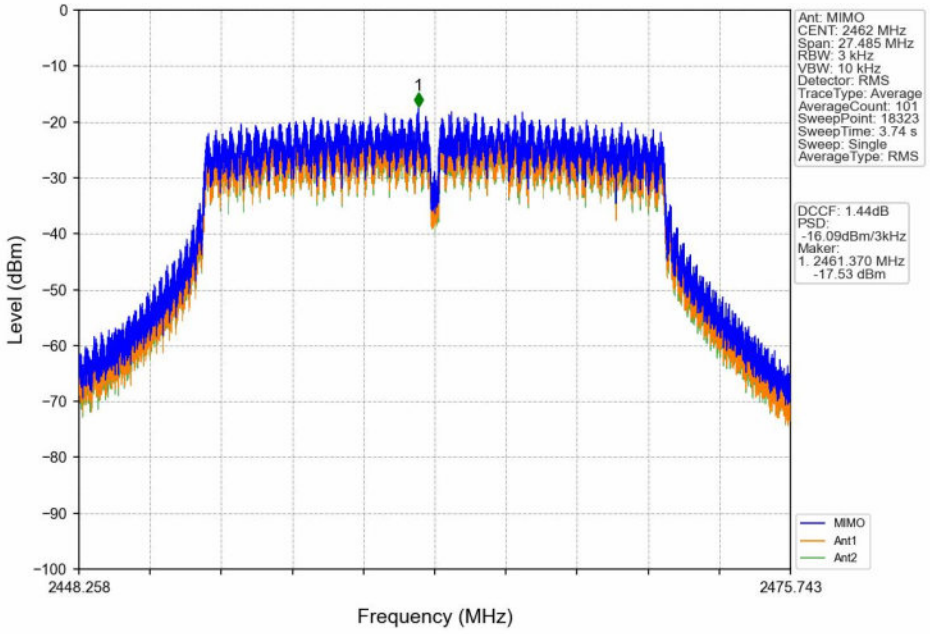
802.11n(HT20)_HCH_2462MHz_Ant1 (MIMO)_NTNV



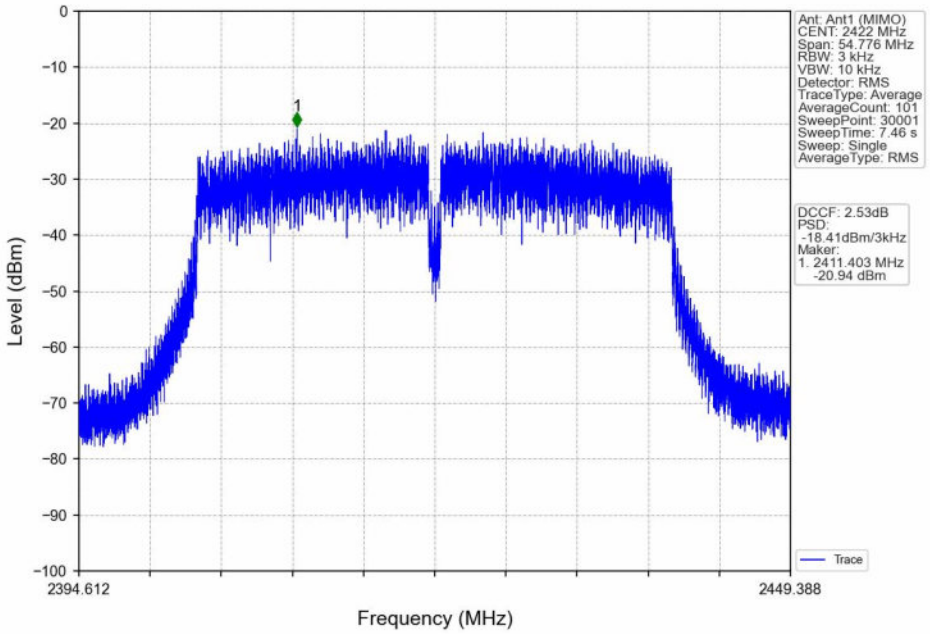

802.11n(HT20)_HCH_2462MHz_Ant2 (MIMO)_NTNV



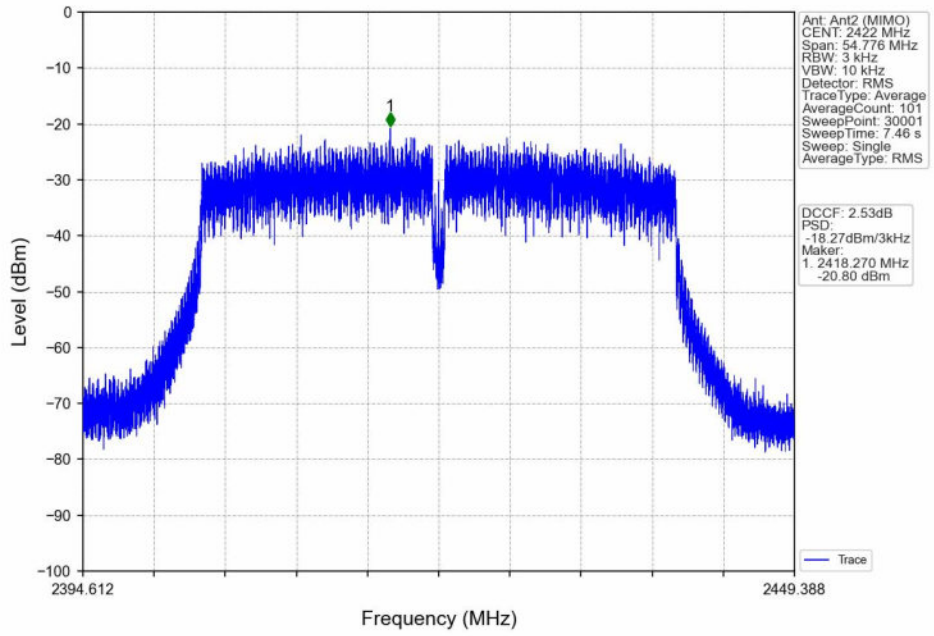
802.11n(HT20)_HCH_2462MHz_MIMO_NTNV



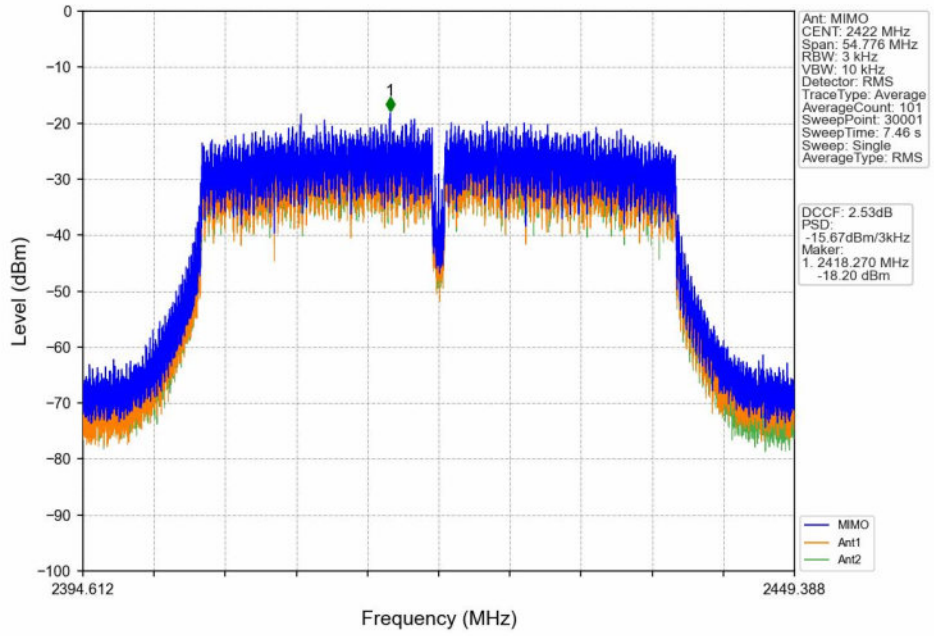

802.11n(HT40)_LCH_2422MHz_Ant1 (MIMO)_NTNV



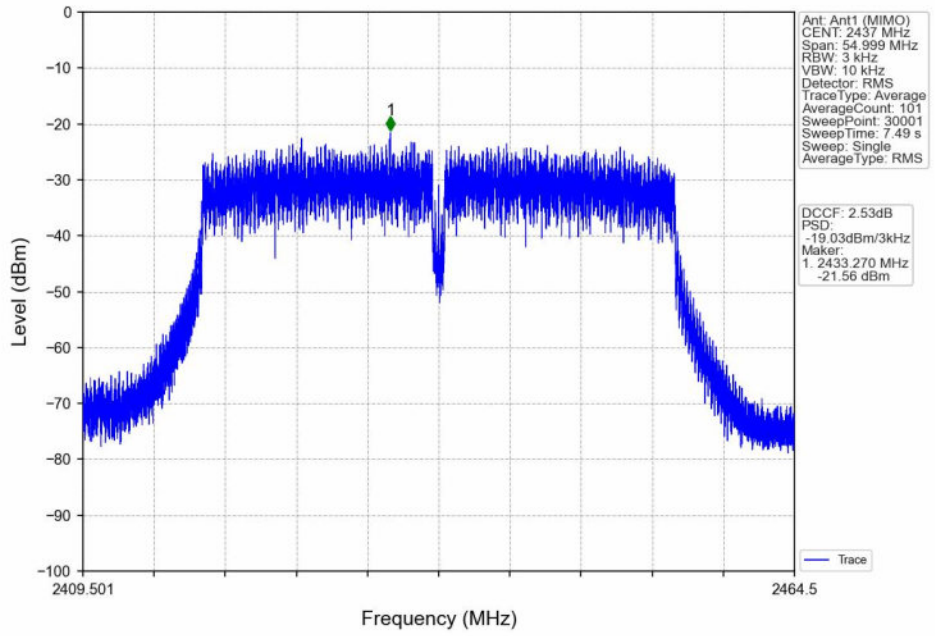
802.11n(HT40)_LCH_2422MHz_Ant2 (MIMO)_NTNV



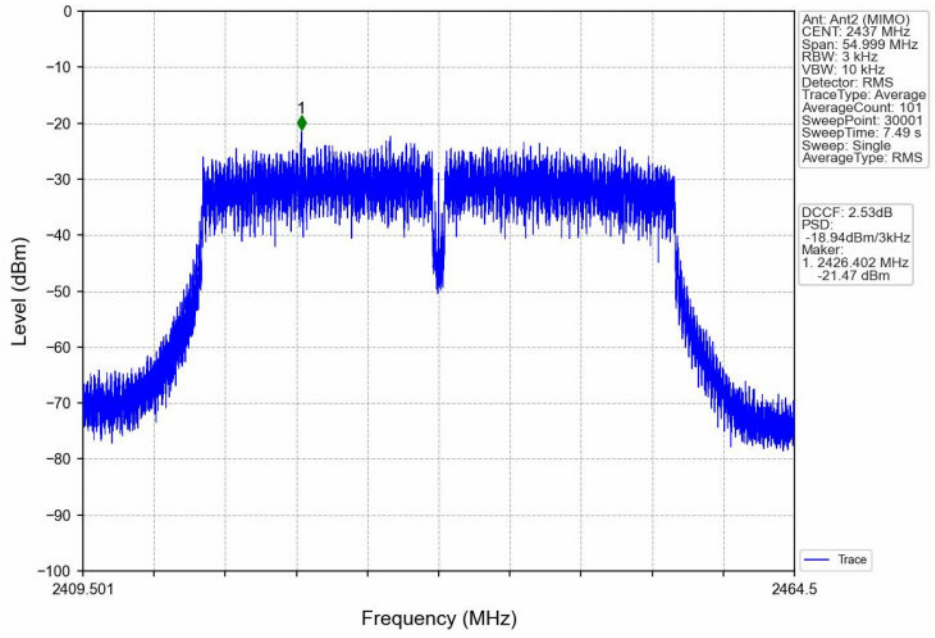

802.11n(HT40)_LCH_2422MHz_MIMO_NTNV



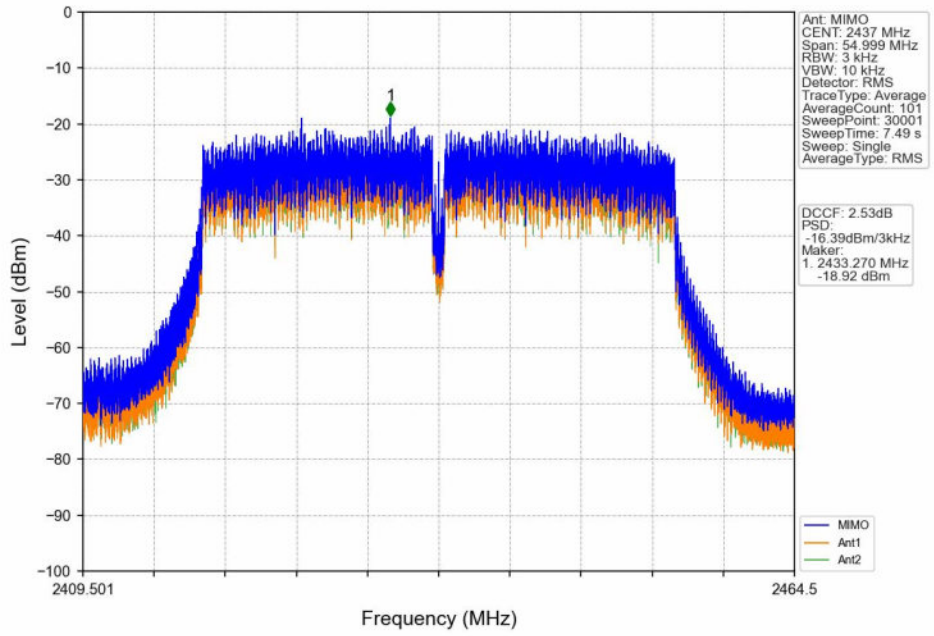
802.11n(HT40)_MCH_2437MHz_Ant1 (MIMO)_NTNV



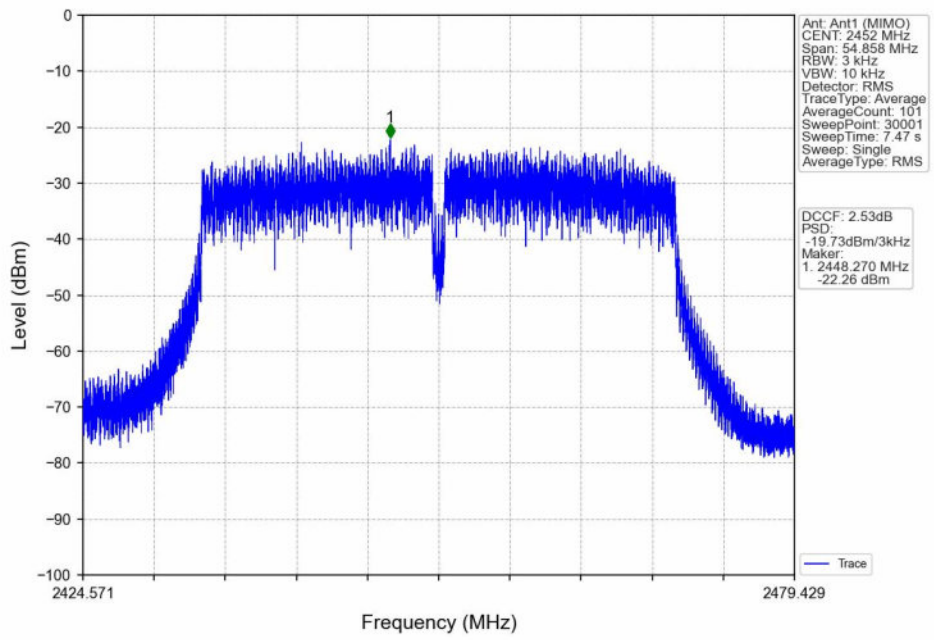

802.11n(HT40)_MCH_2437MHz_Ant2 (MIMO)_NTNV



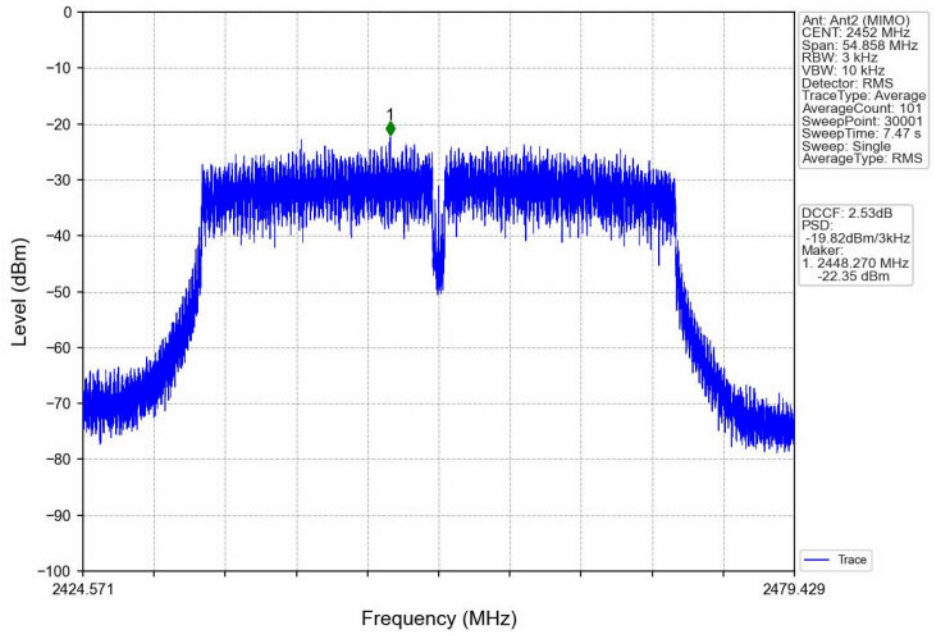
802.11n(HT40)_MCH_2437MHz_MIMO_NTNV



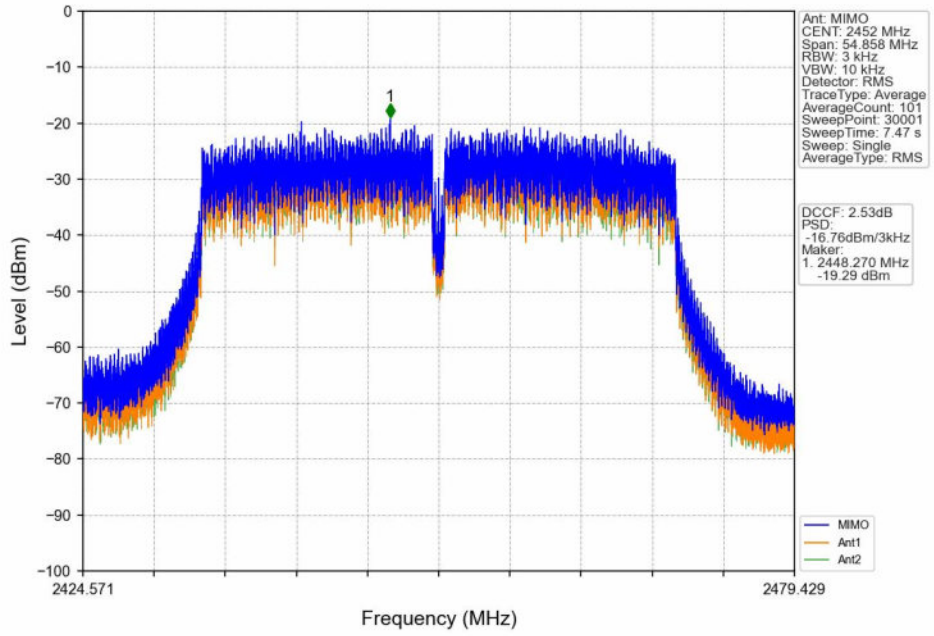

802.11n(HT40)_HCH_2452MHz_Ant1 (MIMO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant2 (MIMO)_NTNV




802.11n(HT40)_HCH_2452MHz_MIMO_NTNV



# 4. Unwanted Emissions In Non-restricted Frequency Bands

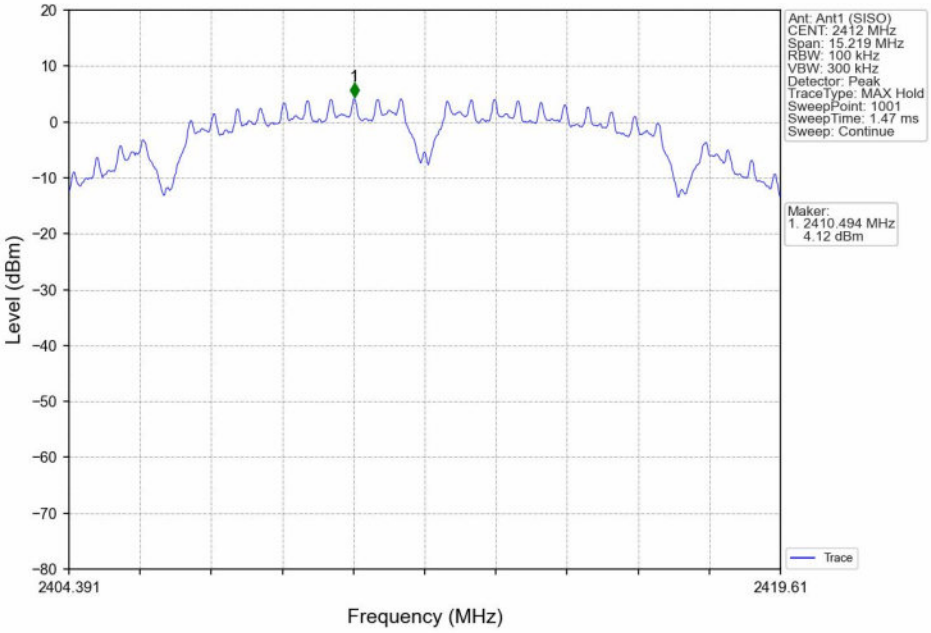
## 4.1 Ref

### 4.1.1 Test Result

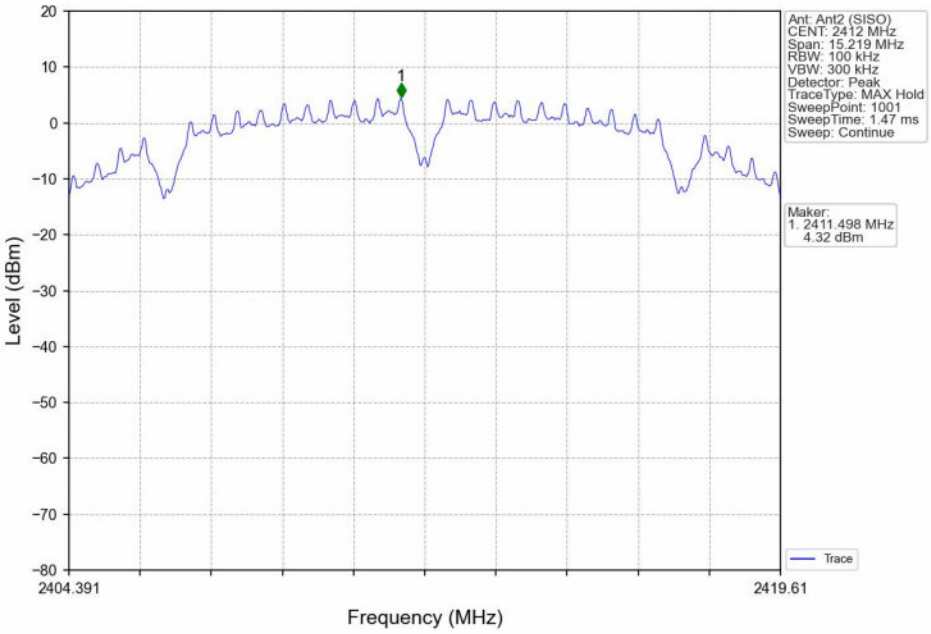
| Mode | TX Type | Frequency (MHz) | ANT | Level of Reference (dBm) |
|---|---|---|---|---|
| 802.11b | SISO | 2412 | 1 | **4.12** |
| | | | 2 | **4.32** |
| | | 2437 | 1 | 3.34 |
| | | | 2 | 3.90 |
| | | 2462 | 1 | 3.20 |
| | | | 2 | 3.69 |
| 802.11g | SISO | 2412 | 1 | **3.10** |
| | | | 2 | **2.97** |
| | | 2437 | 1 | 2.15 |
| | | | 2 | 2.12 |
| | | 2462 | 1 | 2.16 |
| | | | 2 | 1.81 |
| 802.11n (HT20) | SISO | 2412 | 1 | **3.45** |
| | | | 2 | **2.87** |
| | | 2437 | 1 | 2.35 |
| | | | 2 | 2.12 |
| | | 2462 | 1 | 1.91 |
| | | | 2 | 1.88 |
| 802.11n (HT40) | SISO | 2422 | 1 | **0.33** |
| | | | 2 | **0.28** |
| | | 2437 | 1 | -0.32 |
| | | | 2 | -0.40 |
| | | 2452 | 1 | -0.70 |
| | | | 2 | -0.80 |
| 802.11n (HT20) | MIMO | 2412 | 1 | **2.46** |
| | | | 2 | **1.97** |
| | | 2437 | 1 | 1.38 |
| | | | 2 | 1.13 |
| | | 2462 | 1 | 1.43 |
| | | | 2 | 0.89 |
| 802.11n (HT40) | MIMO | 2422 | 1 | **-0.42** |
| | | | 2 | **-0.57** |
| | | 2437 | 1 | -1.29 |
| | | | 2 | -1.03 |
| | | 2452 | 1 | -1.11 |
| | | | 2 | -1.33 |
| 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. | | | | |

## 4.1.2 Test Graph

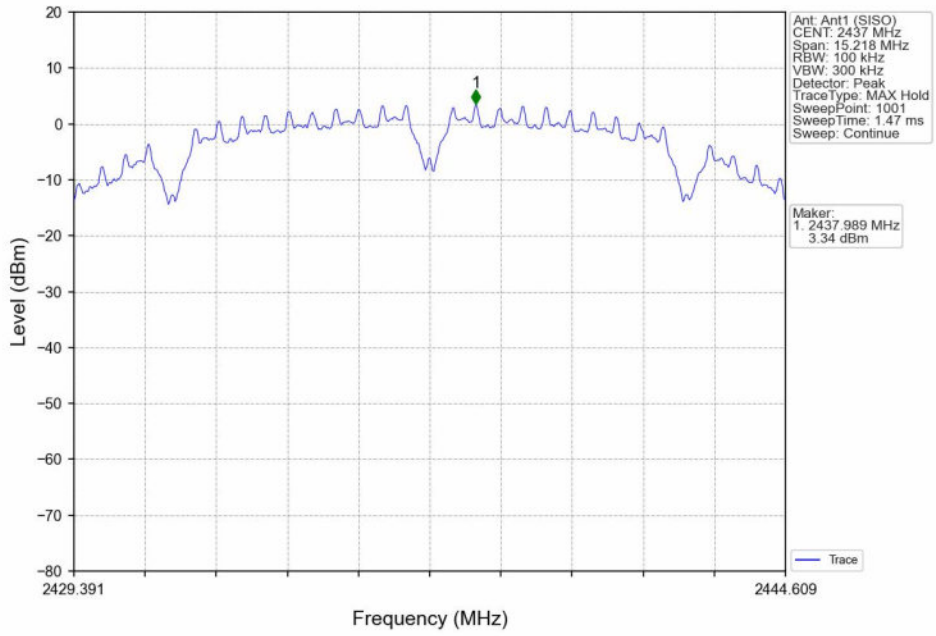
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



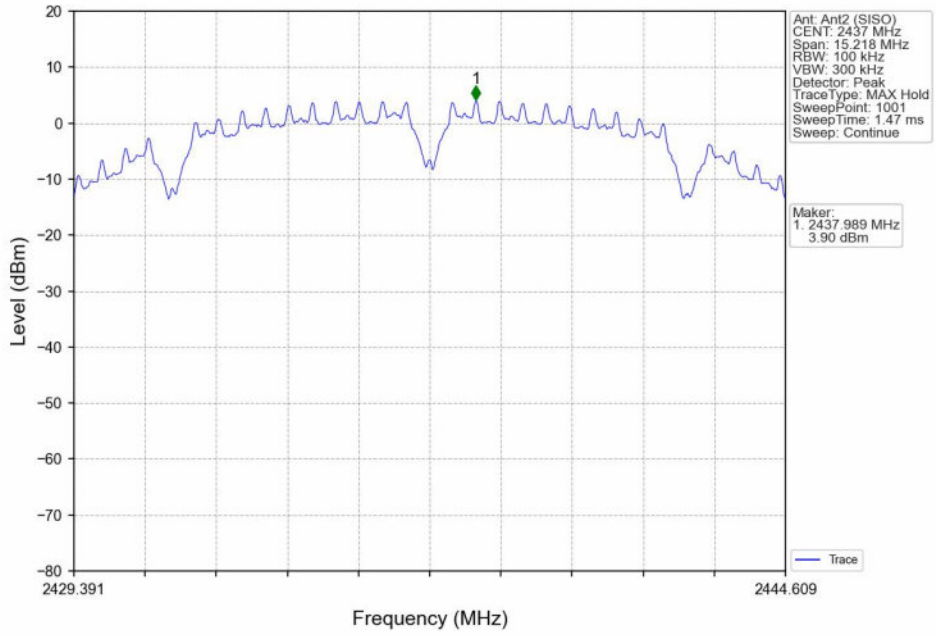

802.11b_LCH_2412MHz_Ant2 (SISO)_NTNV



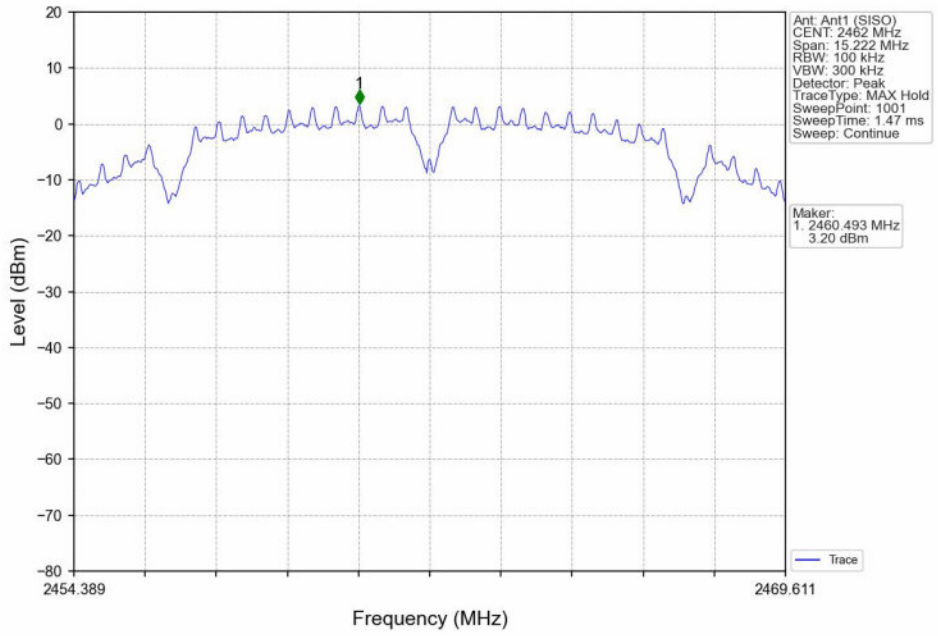
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



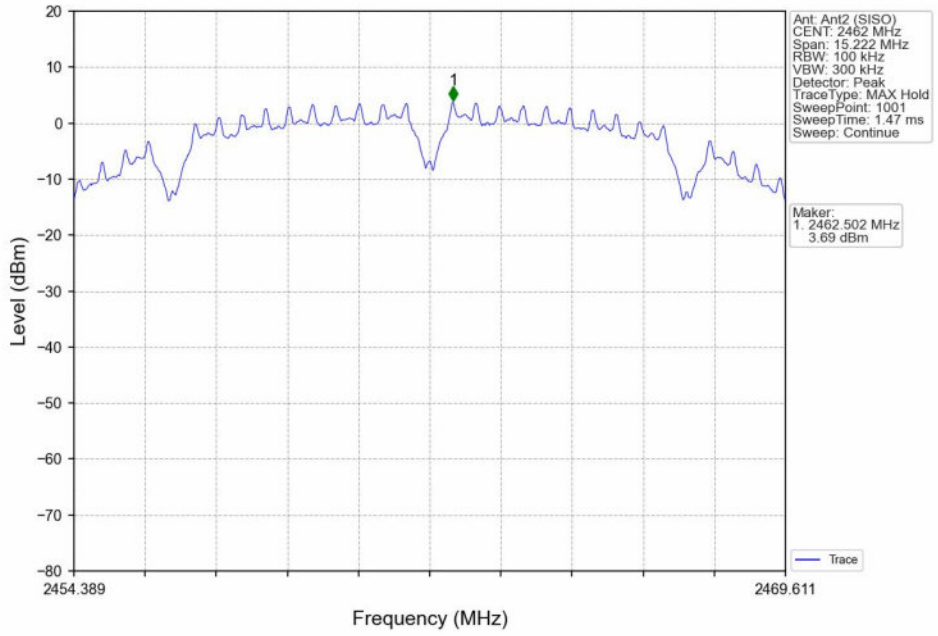

802.11b_MCH_2437MHz_Ant2 (SISO)_NTNV



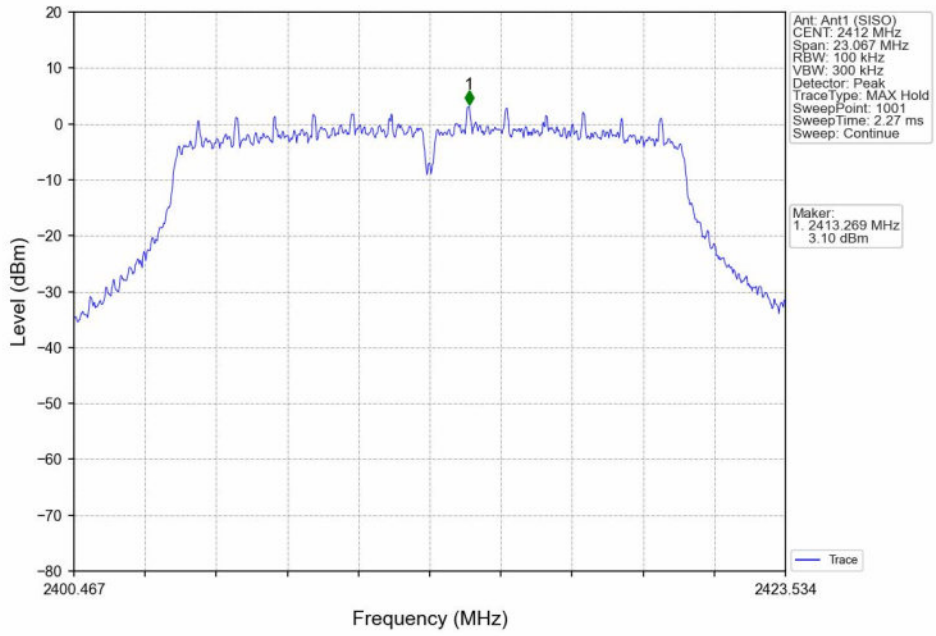
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



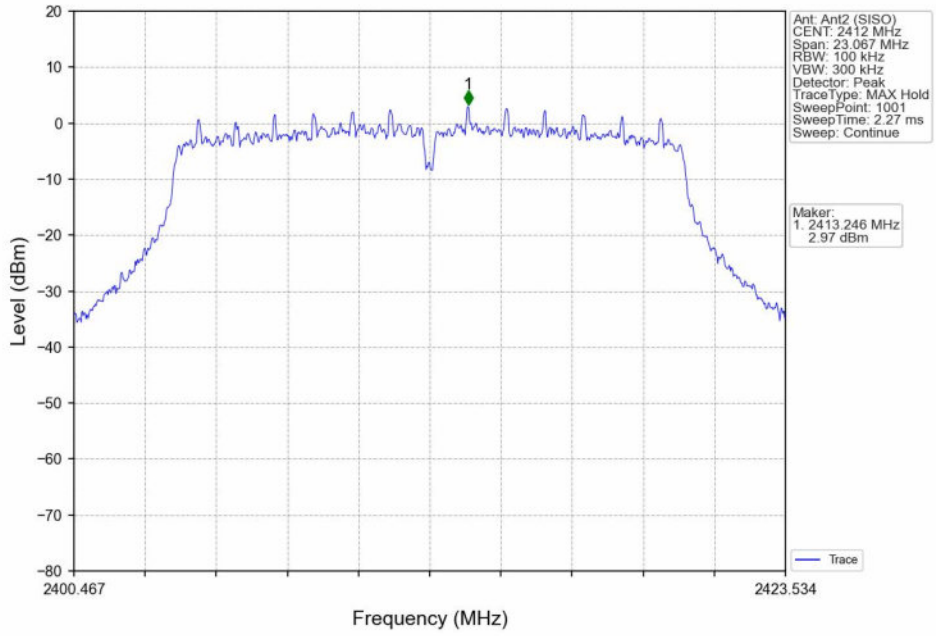

802.11b_HCH_2462MHz_Ant2 (SISO)_NTNV



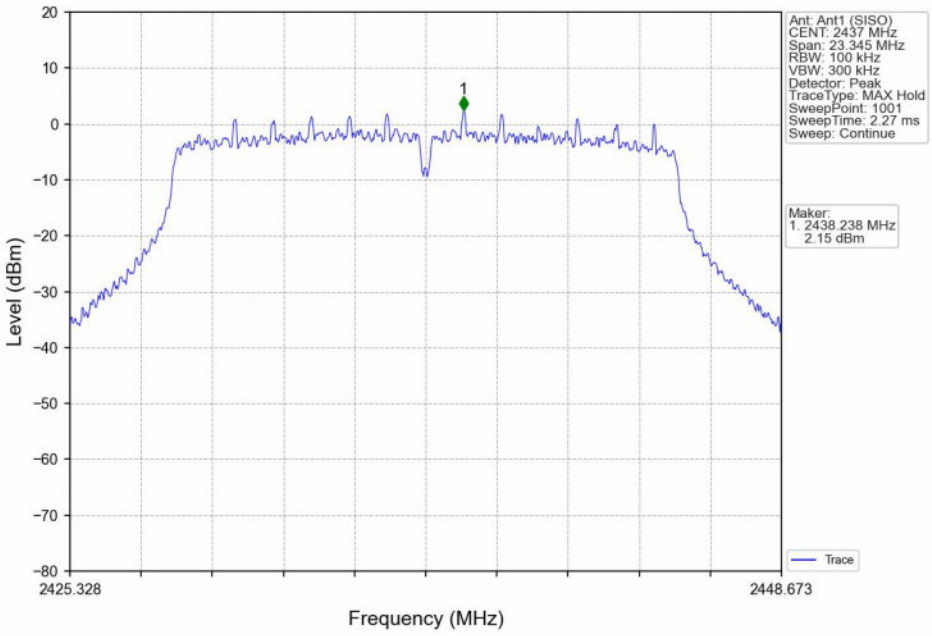
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



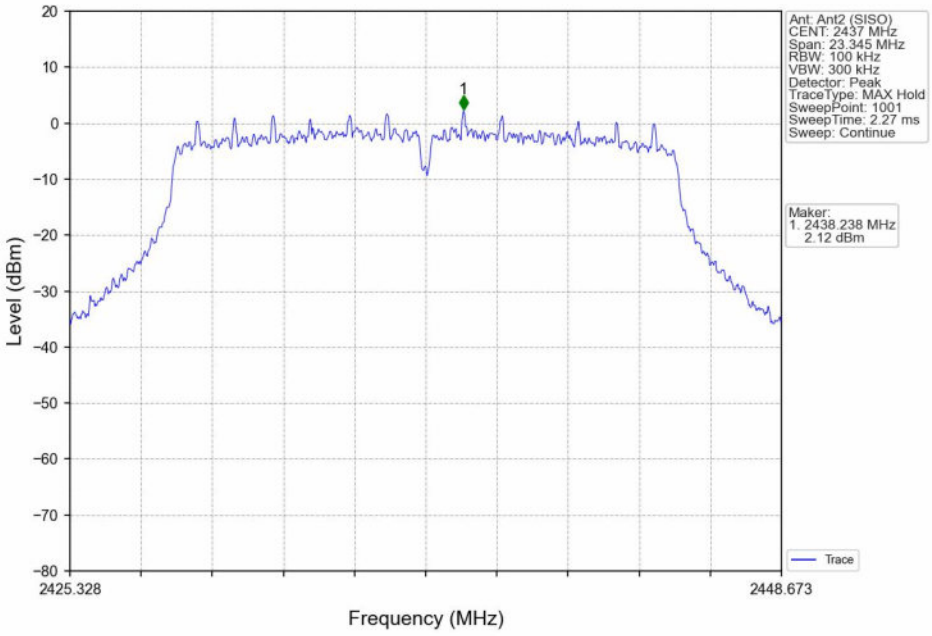

802.11g_LCH_2412MHz_Ant2 (SISO)_NTNV



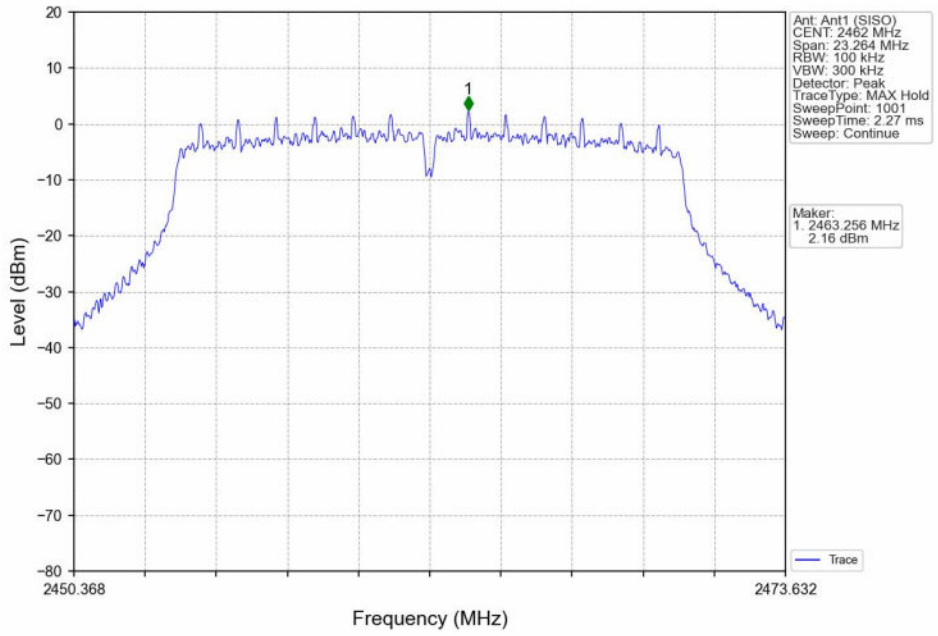
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



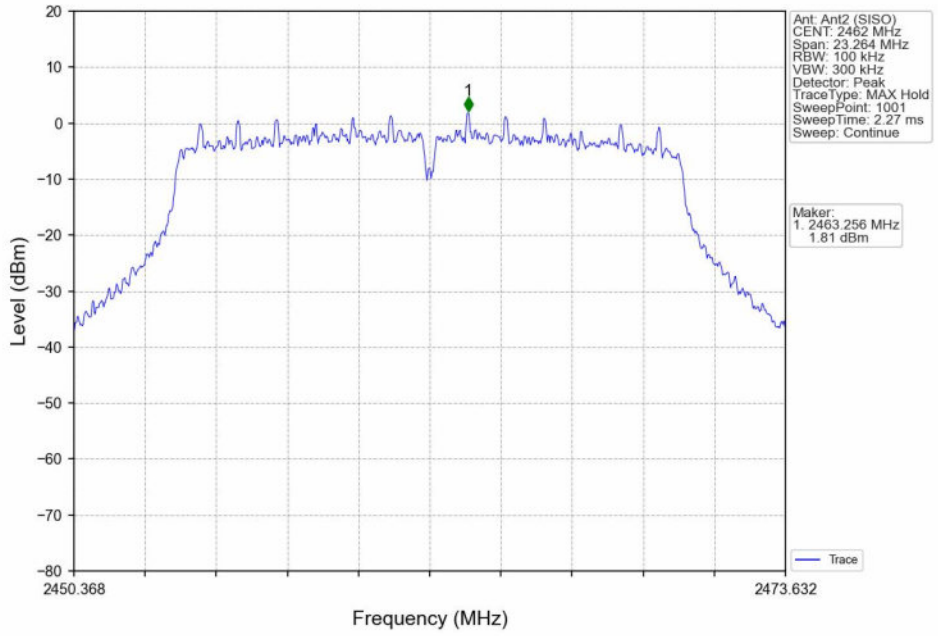

802.11g_MCH_2437MHz_Ant2 (SISO)_NTNV



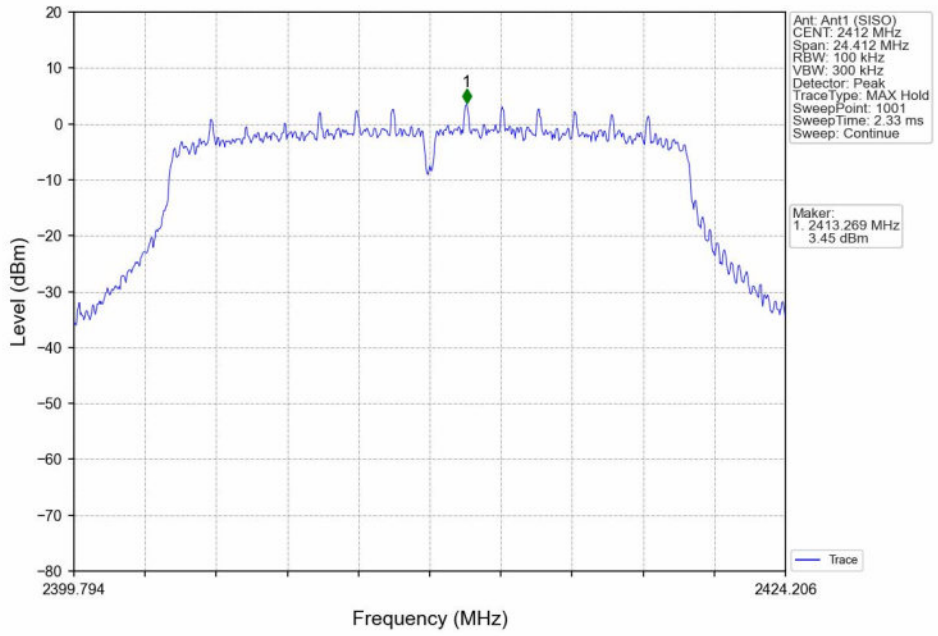
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



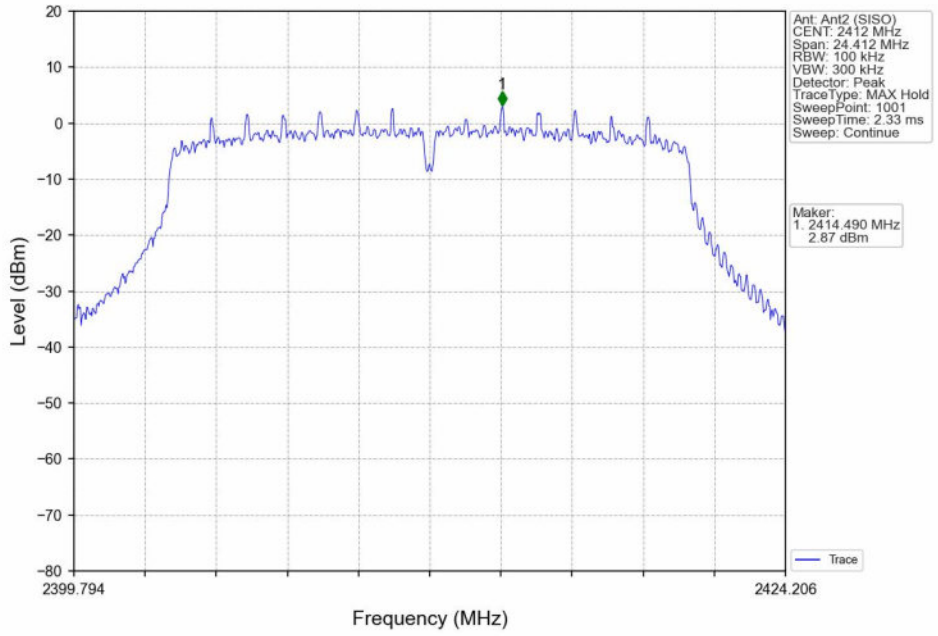

802.11g_HCH_2462MHz_Ant2 (SISO)_NTNV



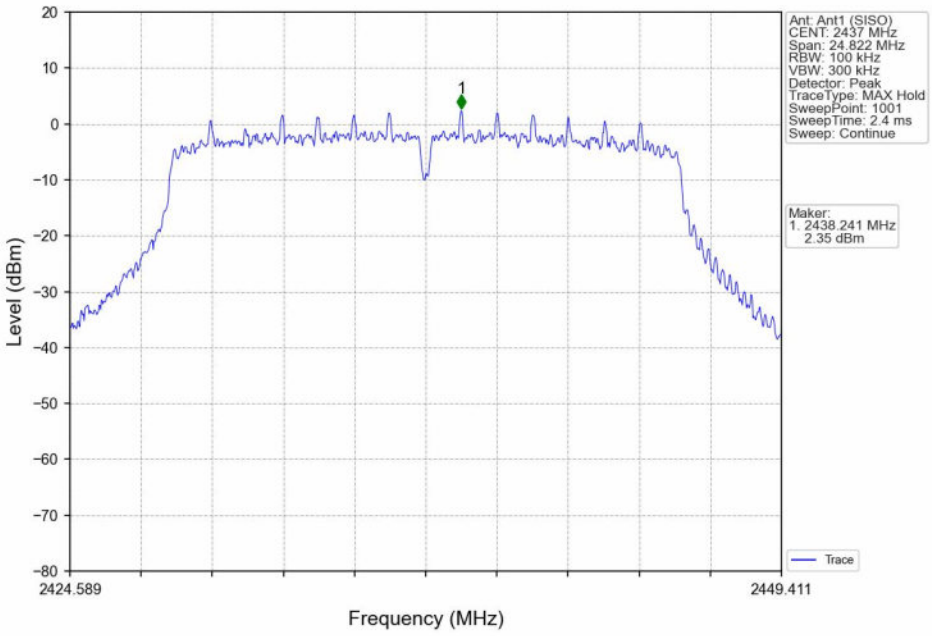
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



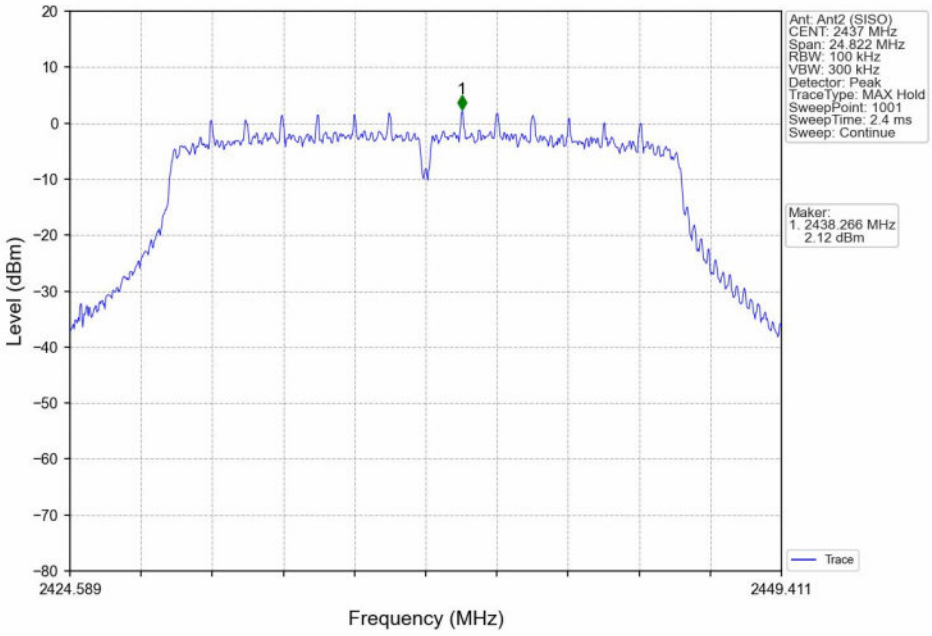

802.11n(HT20)_LCH_2412MHz_Ant2 (SISO)_NTNV



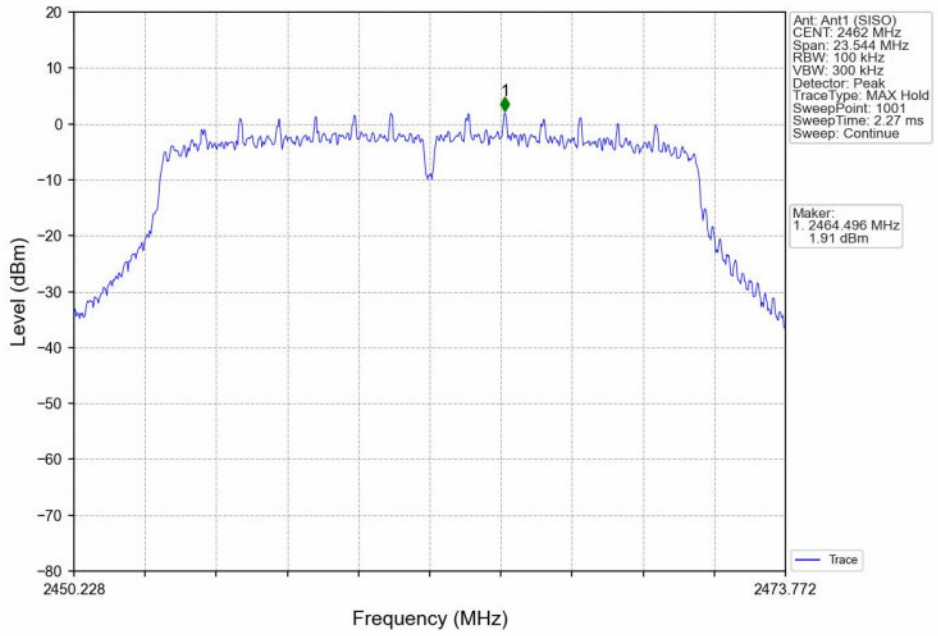
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



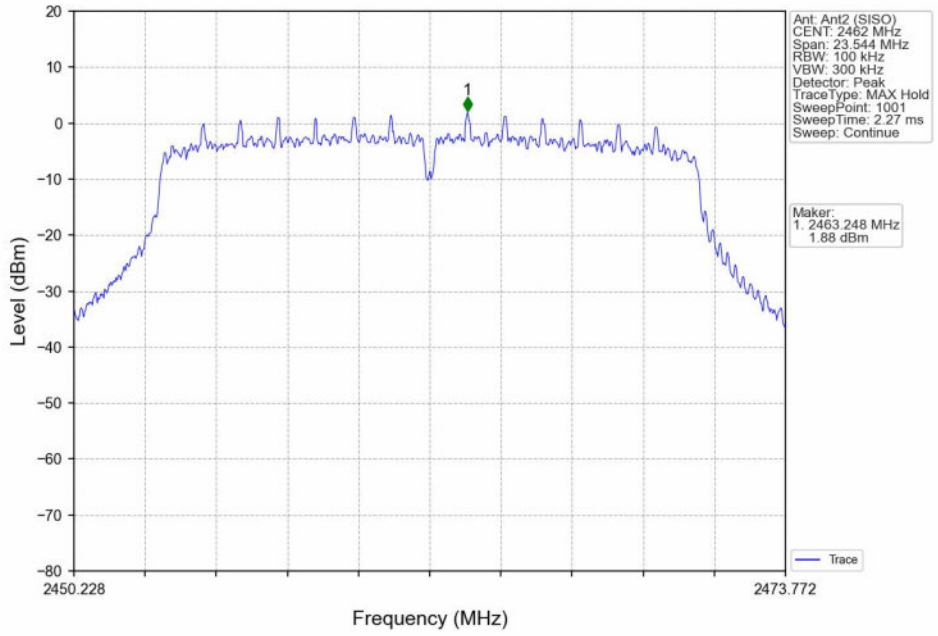

802.11n(HT20)_MCH_2437MHz_Ant2 (SISO)_NTNV



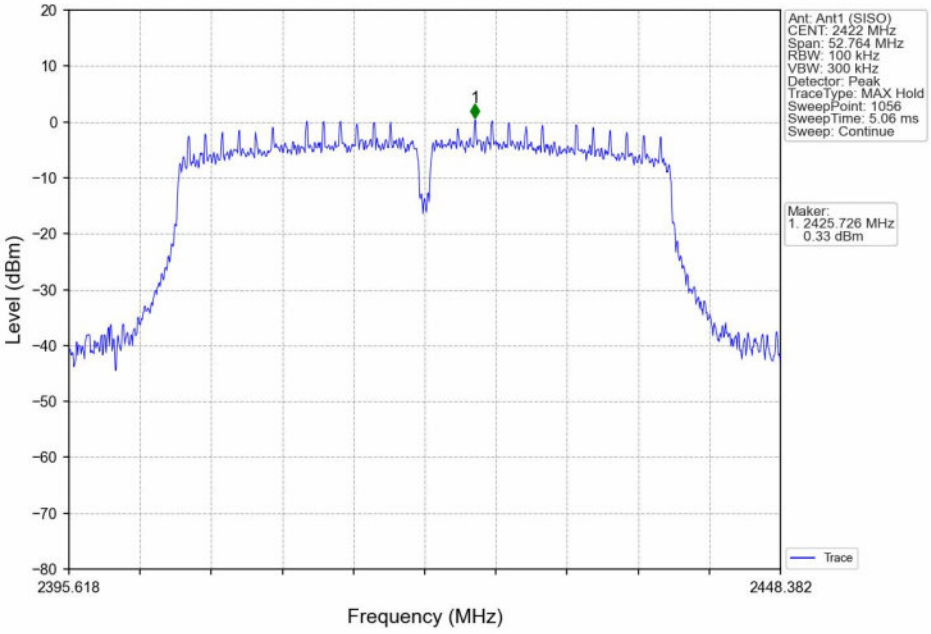
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



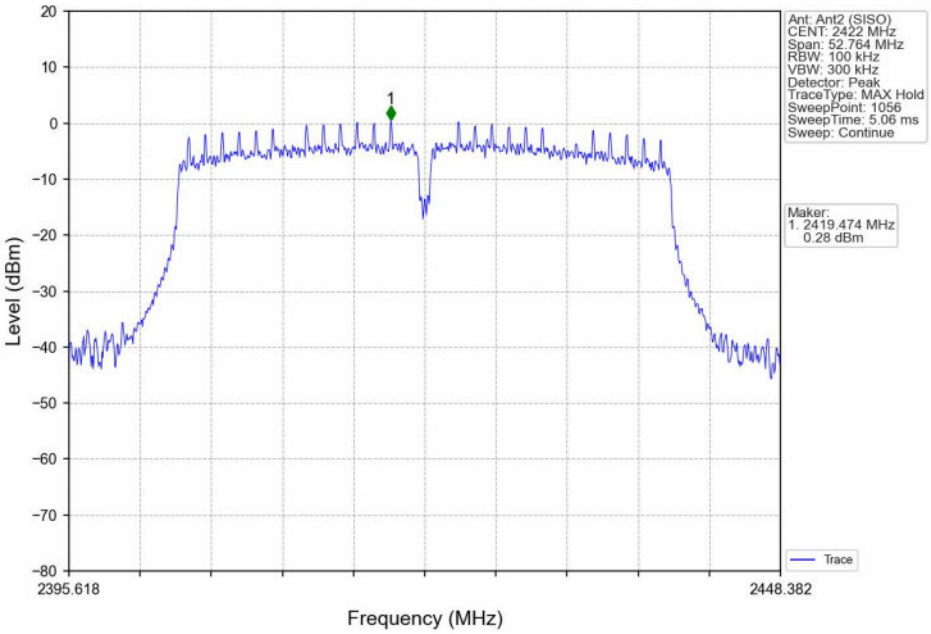

802.11n(HT20)_HCH_2462MHz_Ant2 (SISO)_NTNV



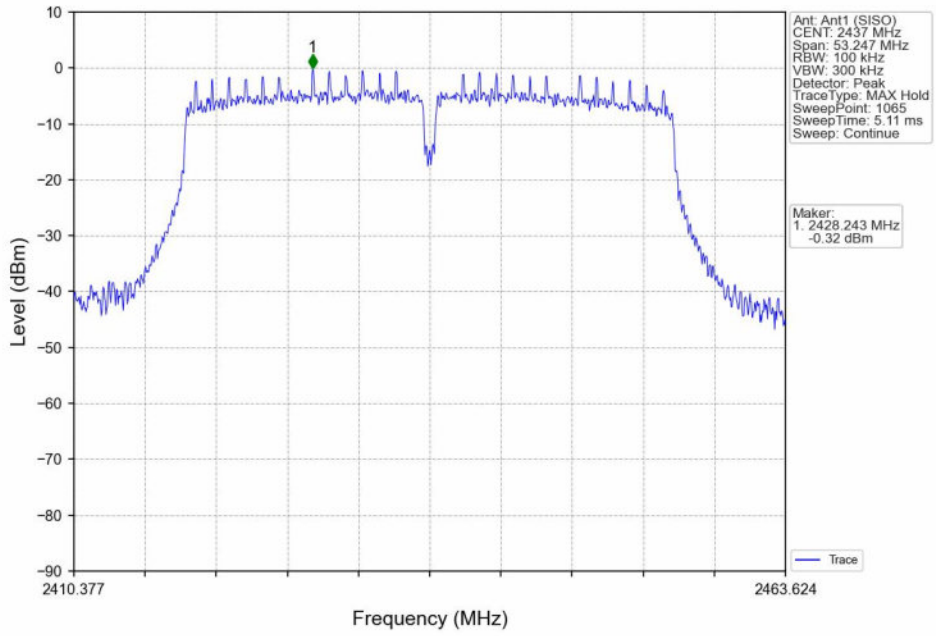
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



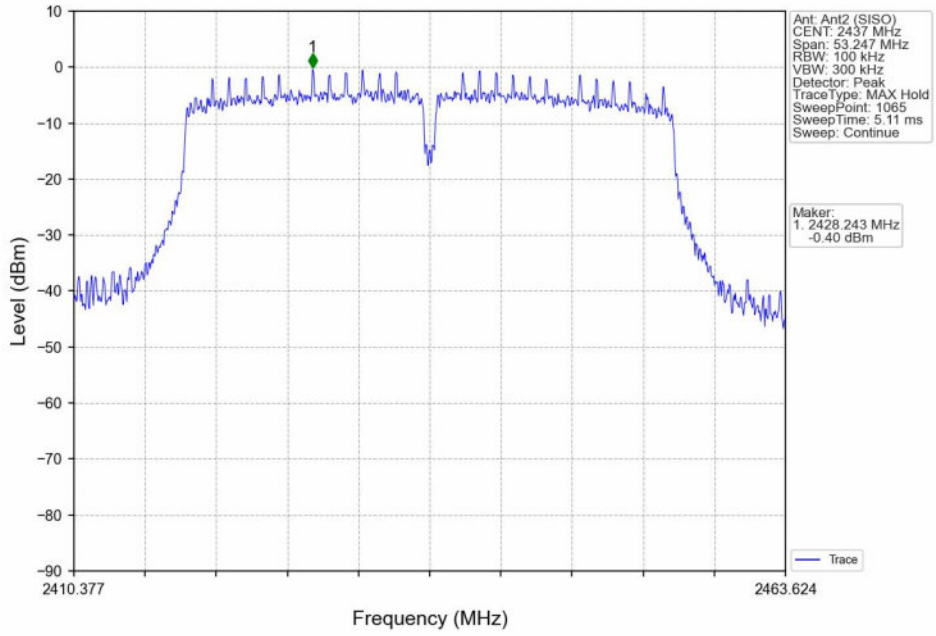

802.11n(HT40)_LCH_2422MHz_Ant2 (SISO)_NTNV



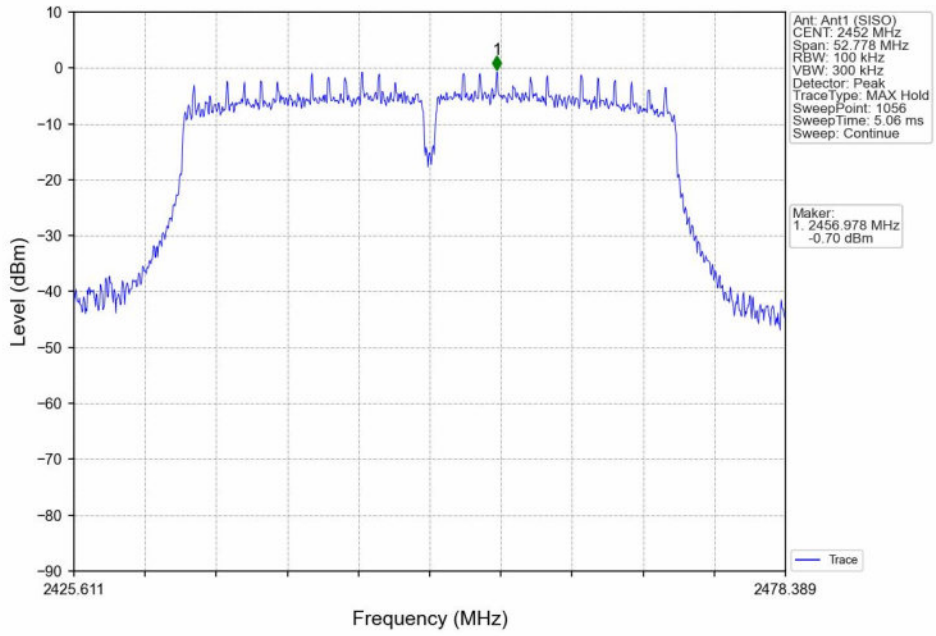
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



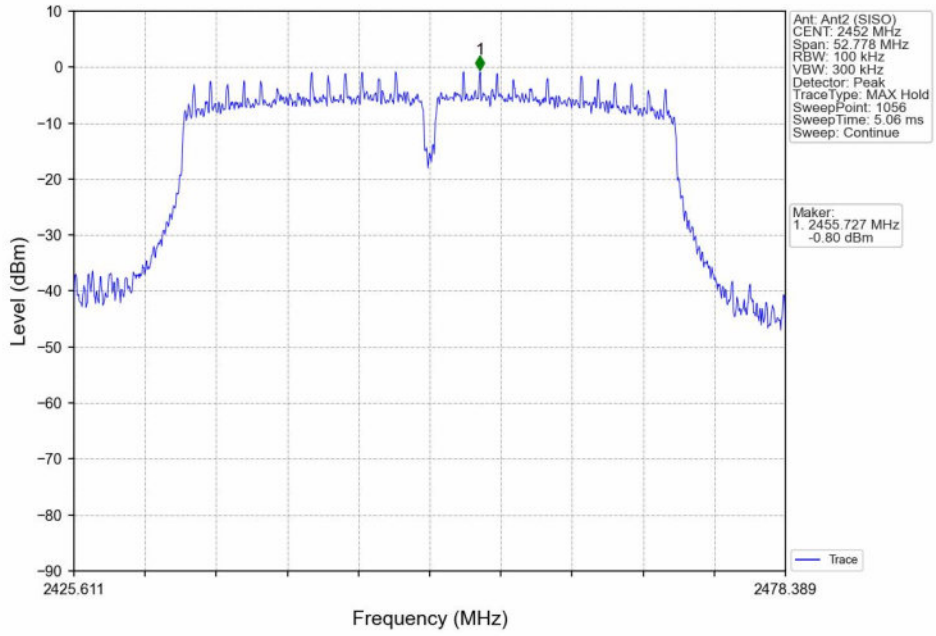

802.11n(HT40)_MCH_2437MHz_Ant2 (SISO)_NTNV



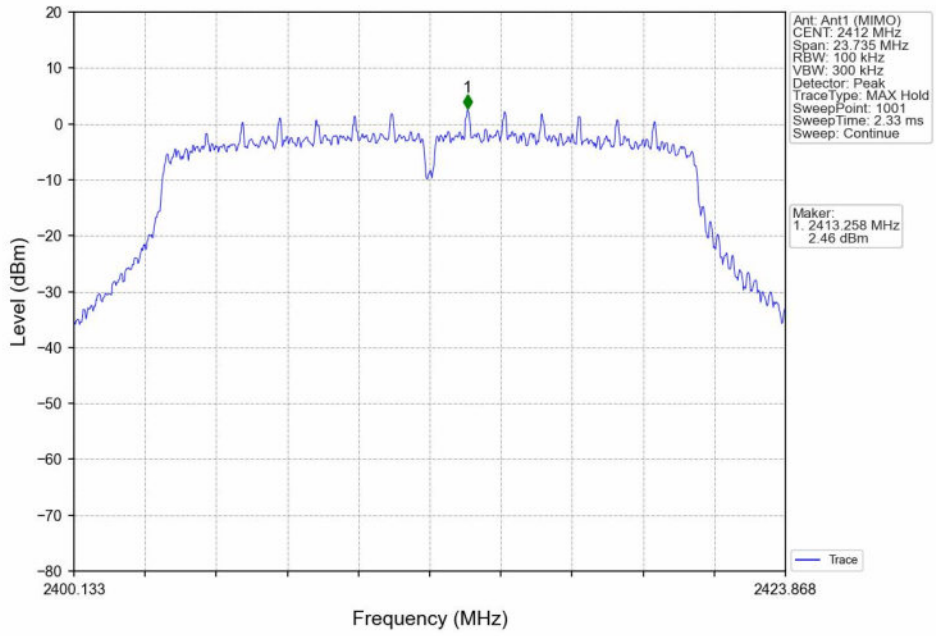
802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



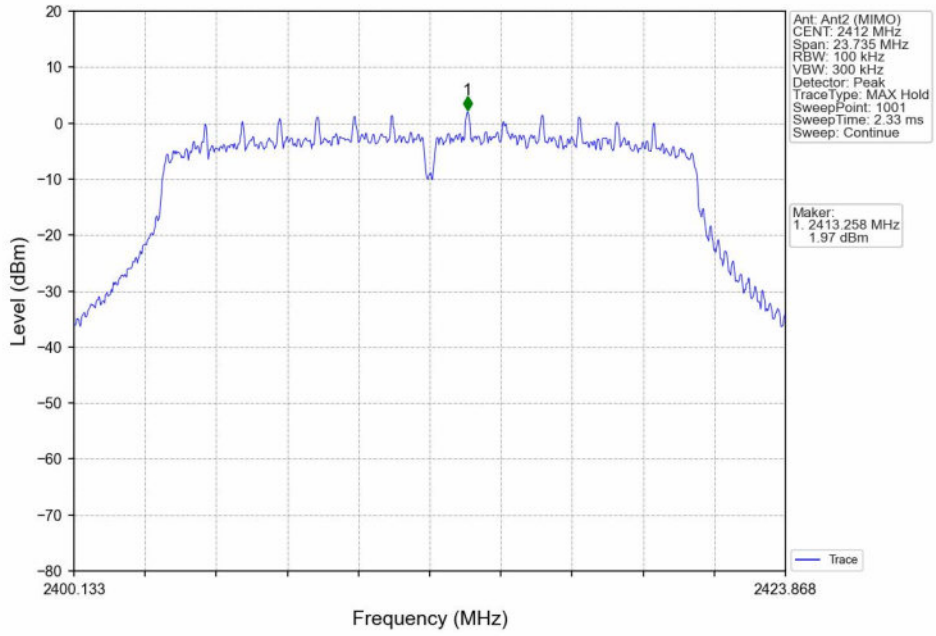

802.11n(HT40)_HCH_2452MHz_Ant2 (SISO)_NTNV



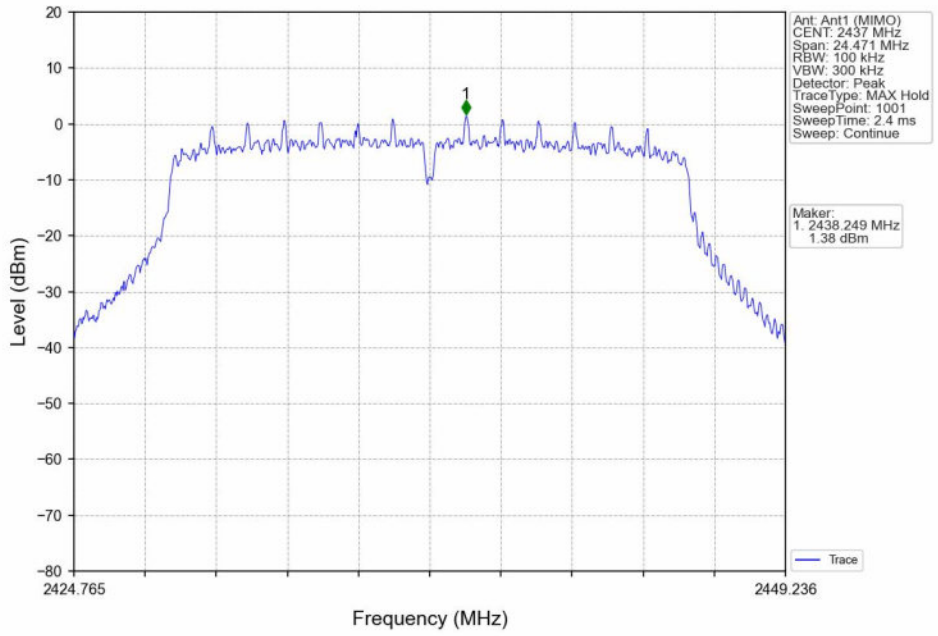
802.11n(HT20)_LCH_2412MHz_Ant1 (MIMO)_NTNV



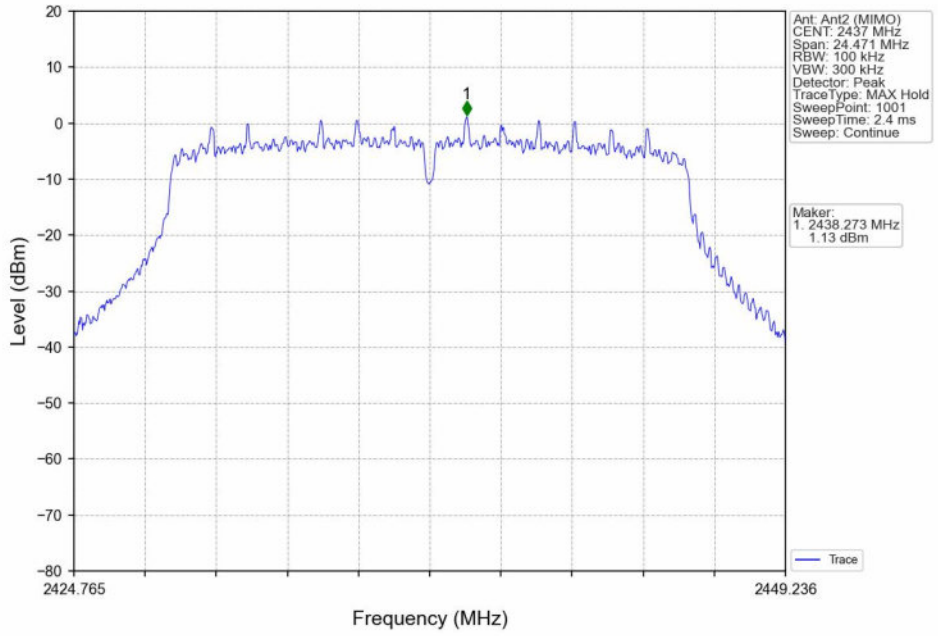

802.11n(HT20)_LCH_2412MHz_Ant2 (MIMO)_NTNV



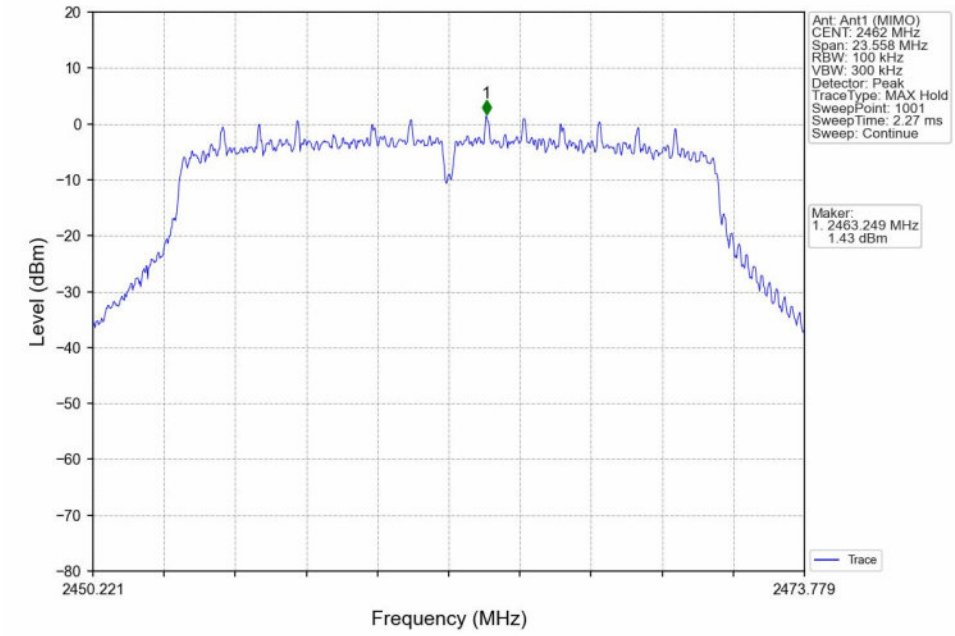
802.11n(HT20)_MCH_2437MHz_Ant1 (MIMO)_NTNV



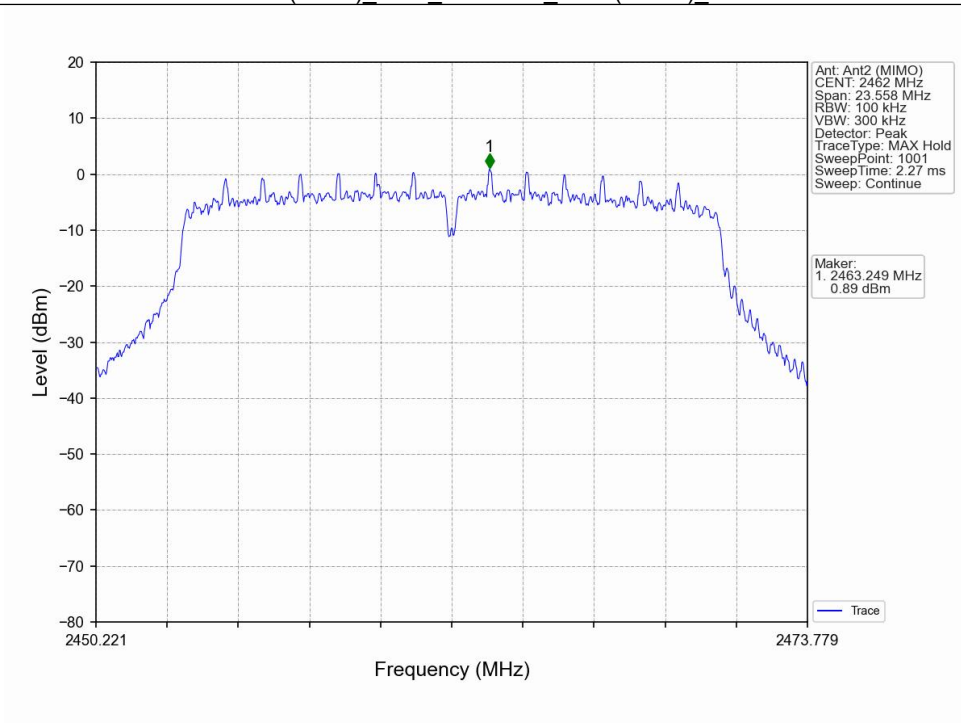

802.11n(HT20)_MCH_2437MHz_Ant2 (MIMO)_NTNV



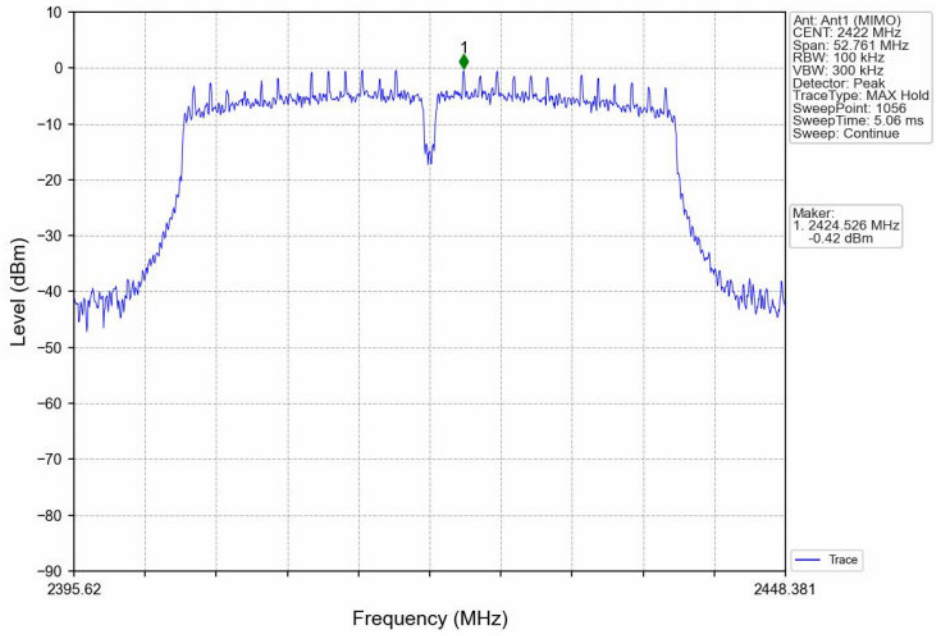
802.11n(HT20)_HCH_2462MHz_Ant1 (MIMO)_NTNV



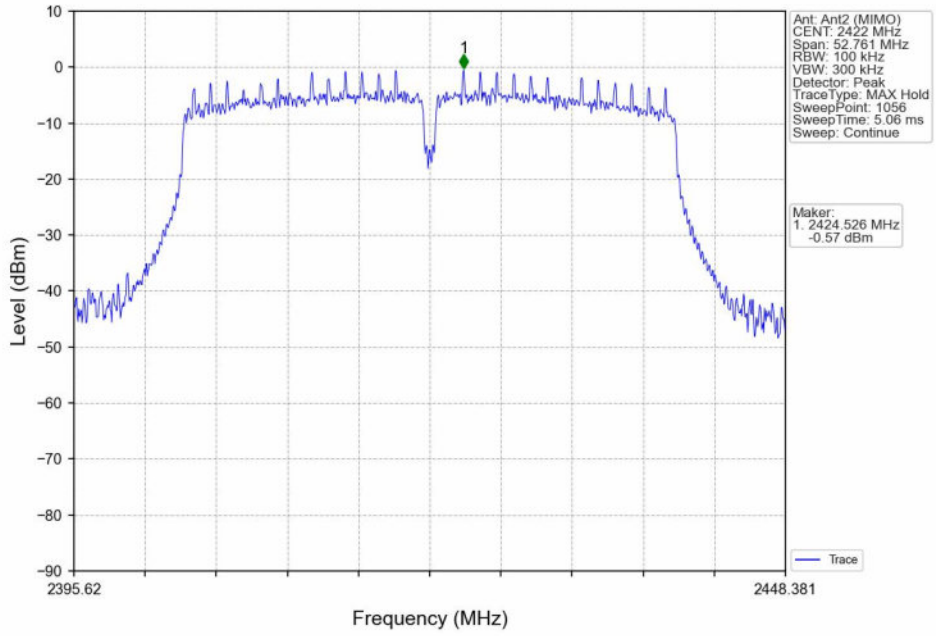

802.11n(HT20)_HCH_2462MHz_Ant2 (MIMO)_NTNV



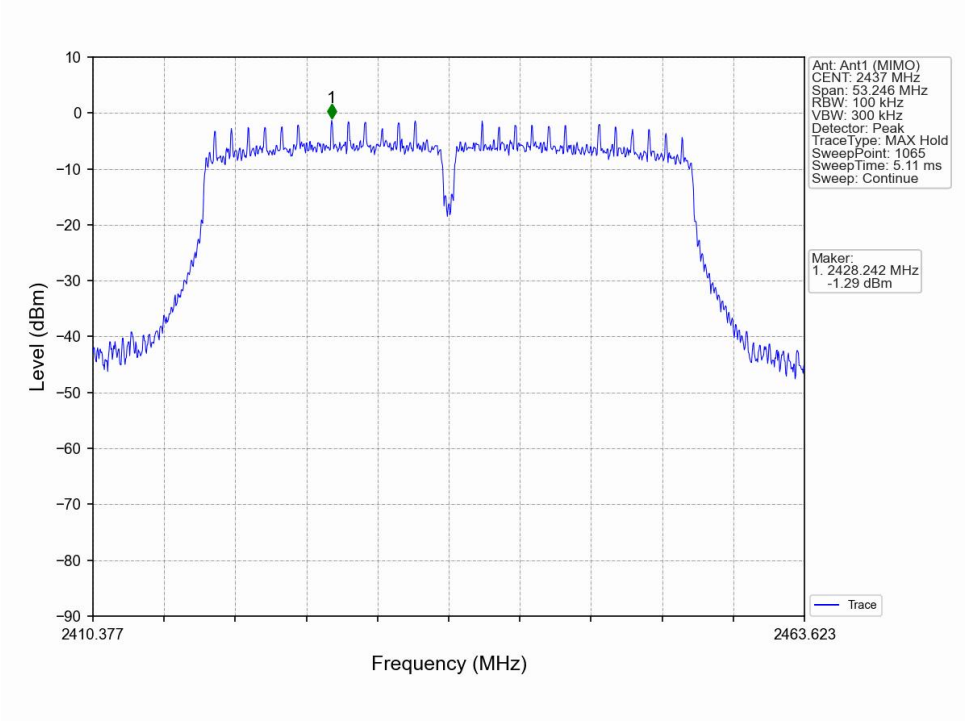
802.11n(HT40)_LCH_2422MHz_Ant1 (MIMO)_NTNV



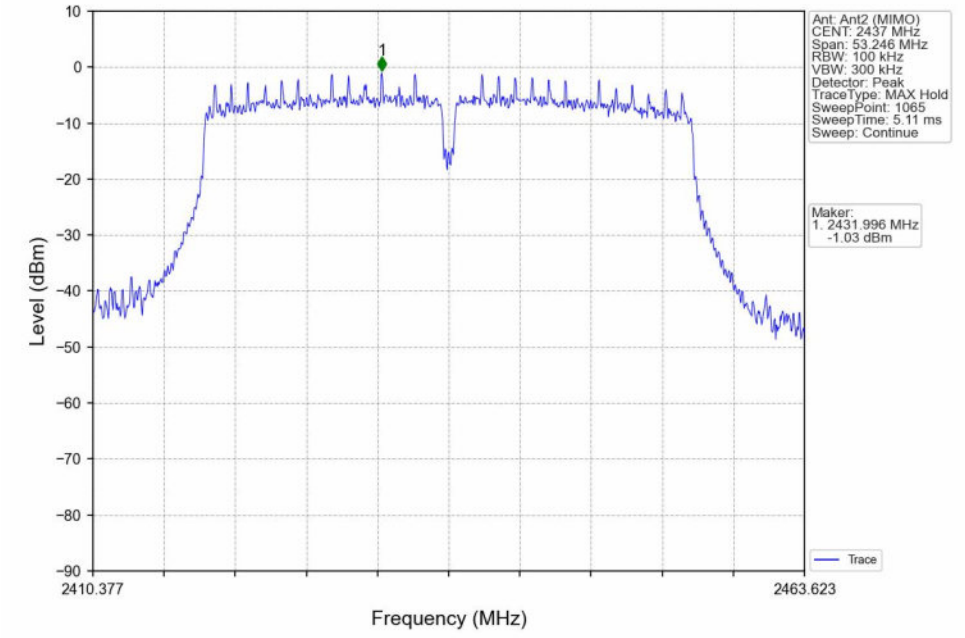

802.11n(HT40)_LCH_2422MHz_Ant2 (MIMO)_NTNV



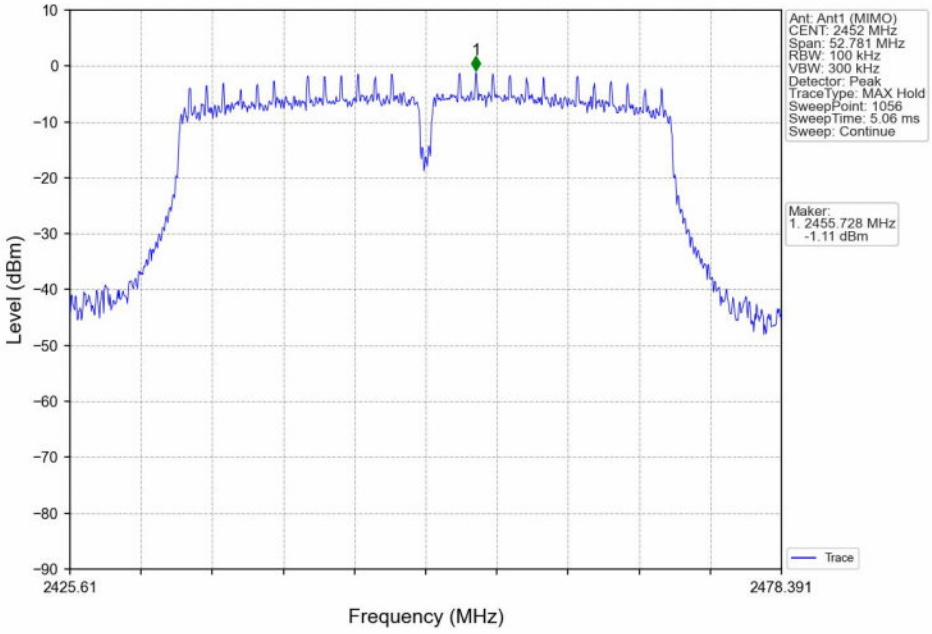
802.11n(HT40)_MCH_2437MHz_Ant1 (MIMO)_NTNV



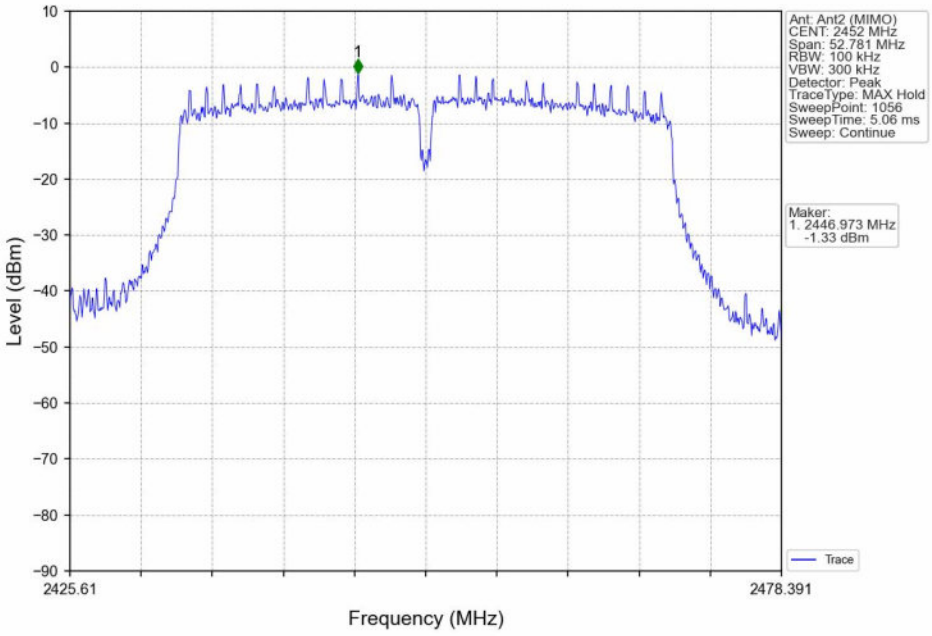

802.11n(HT40)_MCH_2437MHz_Ant2 (MIMO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (MIMO)_NTNV




802.11n(HT40)_HCH_2452MHz_Ant2 (MIMO)_NTNV



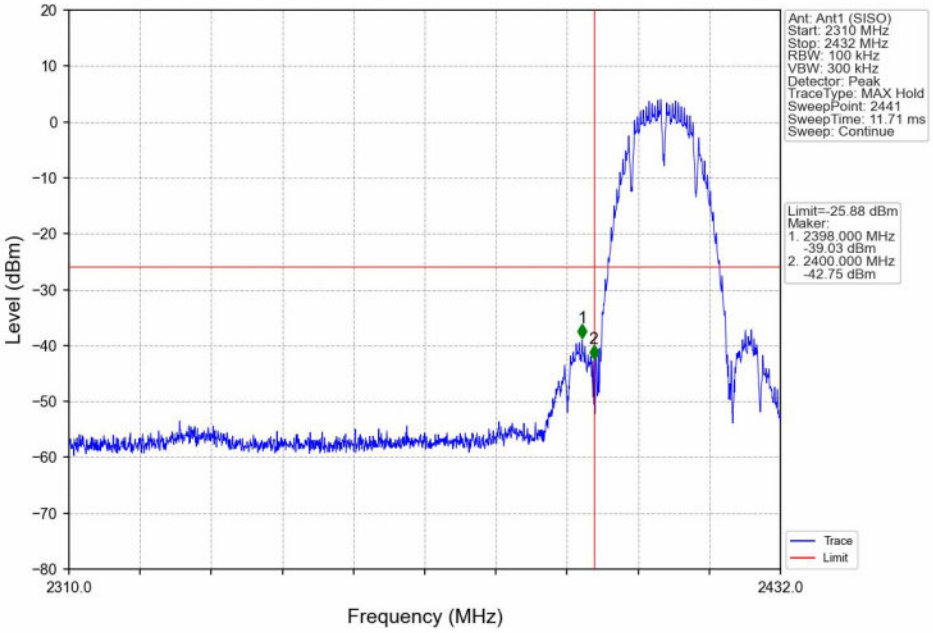
## 4.2 CSE

### 4.2.1 Test Result

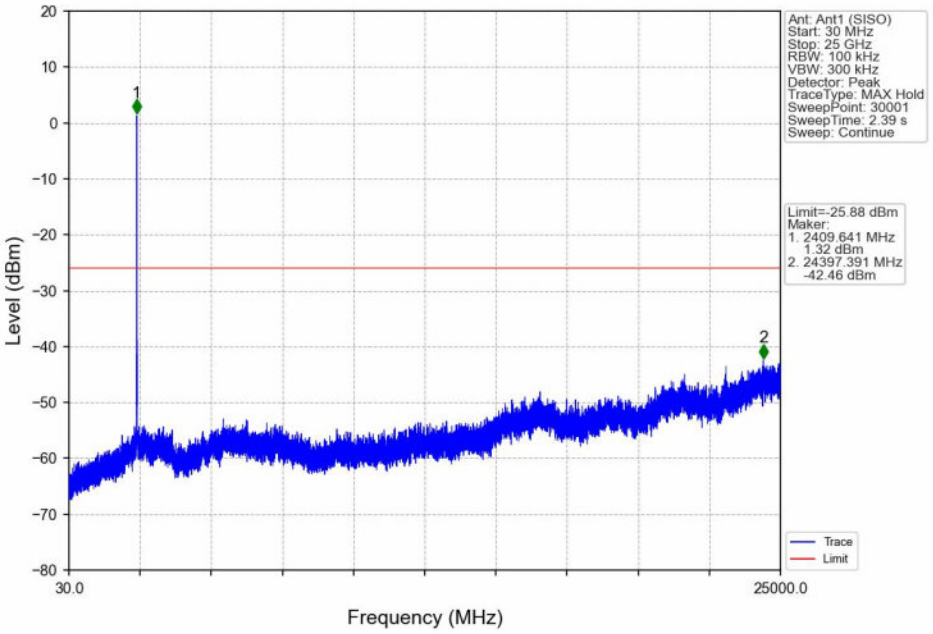
| Mode | TX Type | Frequency (MHz) | ANT | Level of Reference (dBm) | Limit (dBm) | Verdict |
|---|---|---|---|---|---|---|
| 802.11b | SISO | 2412 | 1 | 4.12 | -25.88 | Pass |
| | | | 2 | 4.32 | -25.68 | Pass |
| | | 2437 | 1 | 4.12 | -25.88 | Pass |
| | | | 2 | 4.32 | -25.68 | Pass |
| | | 2462 | 1 | 4.12 | -25.88 | Pass |
| | | | 2 | 4.32 | -25.68 | Pass |
| 802.11g | SISO | 2412 | 1 | 3.10 | -26.90 | Pass |
| | | | 2 | 2.97 | -27.03 | Pass |
| | | 2437 | 1 | 3.10 | -26.90 | Pass |
| | | | 2 | 2.97 | -27.03 | Pass |
| | | 2462 | 1 | 3.10 | -26.90 | Pass |
| | | | 2 | 2.97 | -27.03 | Pass |
| 802.11n (HT20) | SISO | 2412 | 1 | 3.45 | -26.55 | Pass |
| | | | 2 | 2.87 | -27.13 | Pass |
| | | 2437 | 1 | 3.45 | -26.55 | Pass |
| | | | 2 | 2.87 | -27.13 | Pass |
| | | 2462 | 1 | 3.45 | -26.55 | Pass |
| | | | 2 | 2.87 | -27.13 | Pass |
| 802.11n (HT40) | SISO | 2422 | 1 | 0.33 | -29.67 | Pass |
| | | | 2 | 0.28 | -29.72 | Pass |
| | | 2437 | 1 | 0.33 | -29.67 | Pass |
| | | | 2 | 0.28 | -29.72 | Pass |
| | | 2452 | 1 | 0.33 | -29.67 | Pass |
| | | | 2 | 0.28 | -29.72 | Pass |
| 802.11n (HT20) | MIMO | 2412 | 1 | 2.46 | -27.54 | Pass |
| | | | 2 | 1.97 | -28.03 | Pass |
| | | 2437 | 1 | 2.46 | -27.54 | Pass |
| | | | 2 | 1.97 | -28.03 | Pass |
| | | 2462 | 1 | 2.46 | -27.54 | Pass |
| | | | 2 | 1.97 | -28.03 | Pass |
| 802.11n (HT40) | MIMO | 2422 | 1 | -0.42 | -30.42 | Pass |
| | | | 2 | -0.57 | -30.57 | Pass |
| | | 2437 | 1 | -0.42 | -30.42 | Pass |
| | | | 2 | -0.57 | -30.57 | Pass |
| | | 2452 | 1 | -0.42 | -30.42 | Pass |
| | | | 2 | -0.57 | -30.57 | 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. | | | | | | |

## 4.2.2 Test Graph

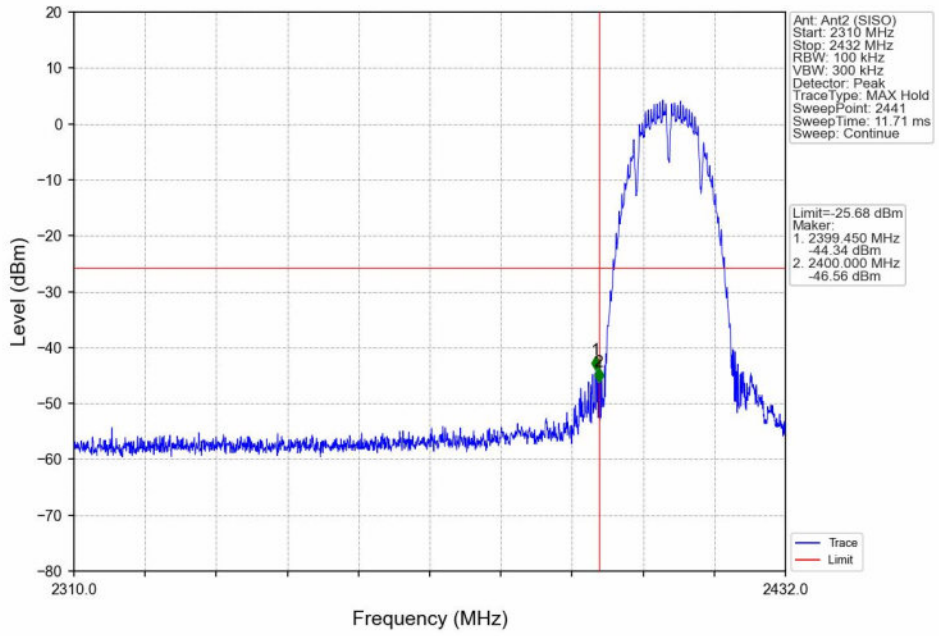
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



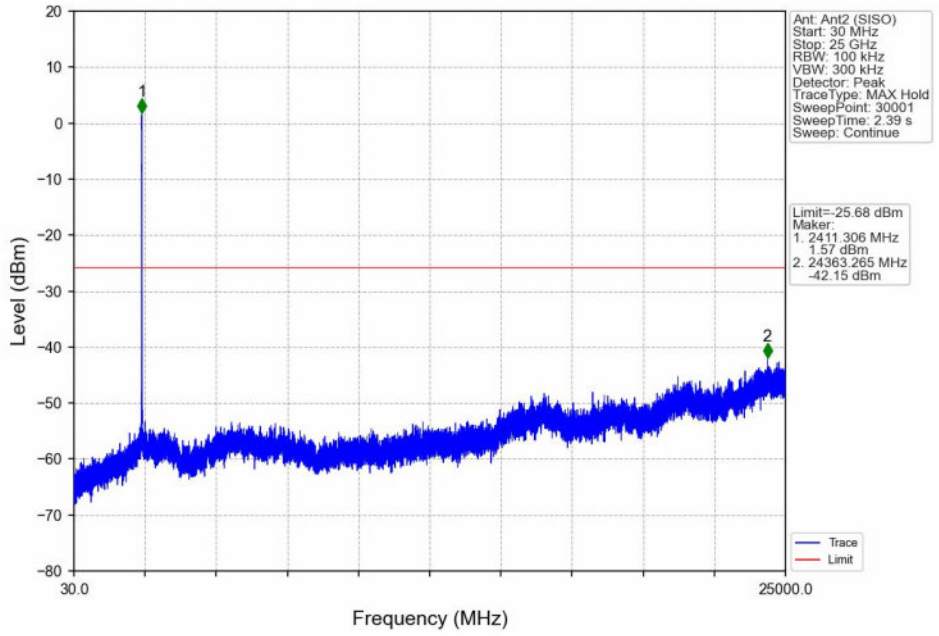

802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



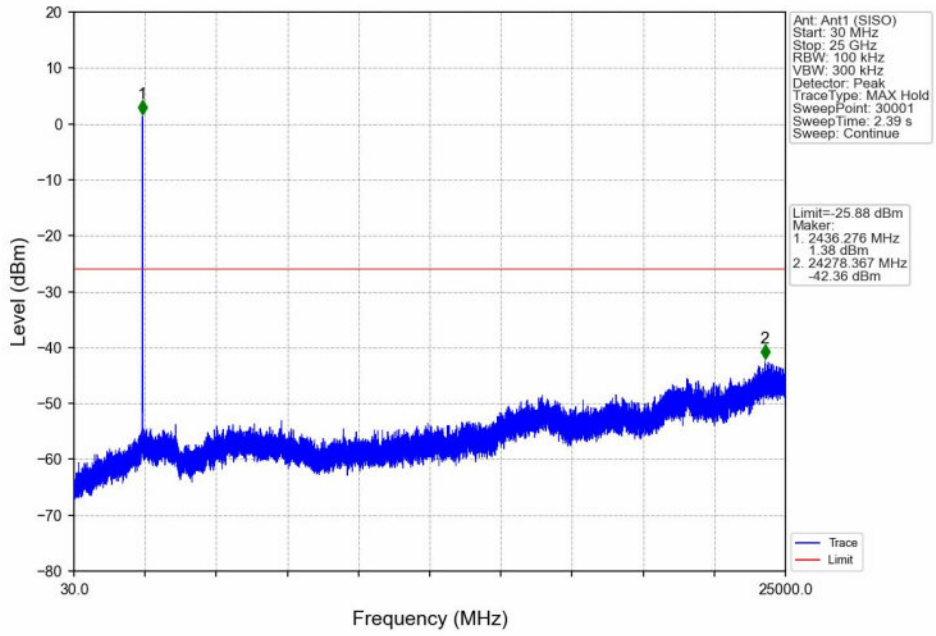
802.11b_LCH_2412MHz_Ant2 (SISO)_NTNV

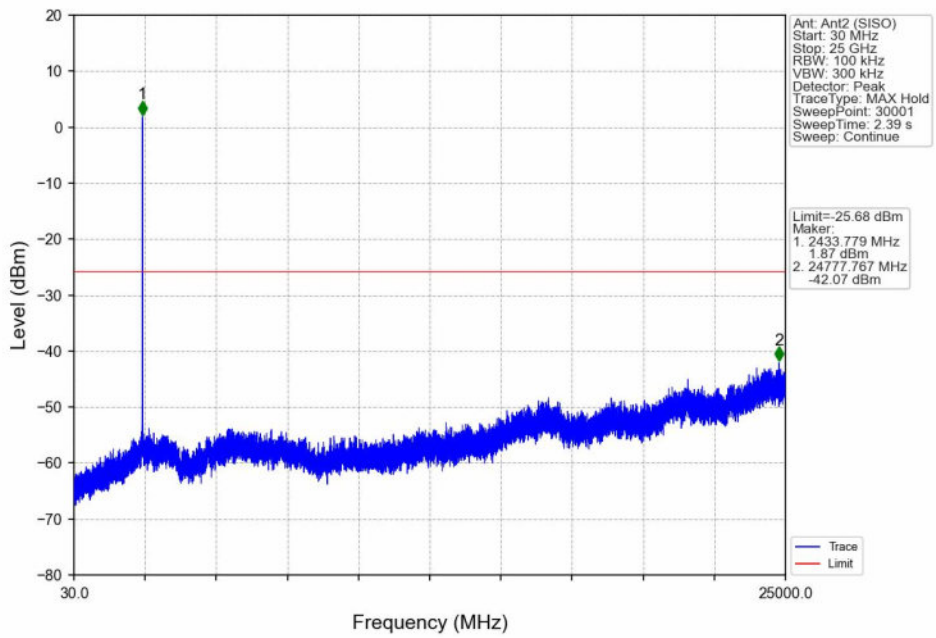



802.11b_LCH_2412MHz_Ant2 (SISO)_NTNV



802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV




802.11b_MCH_2437MHz_Ant2 (SISO)_NTNV