

Appendix A for SHEM210600603601

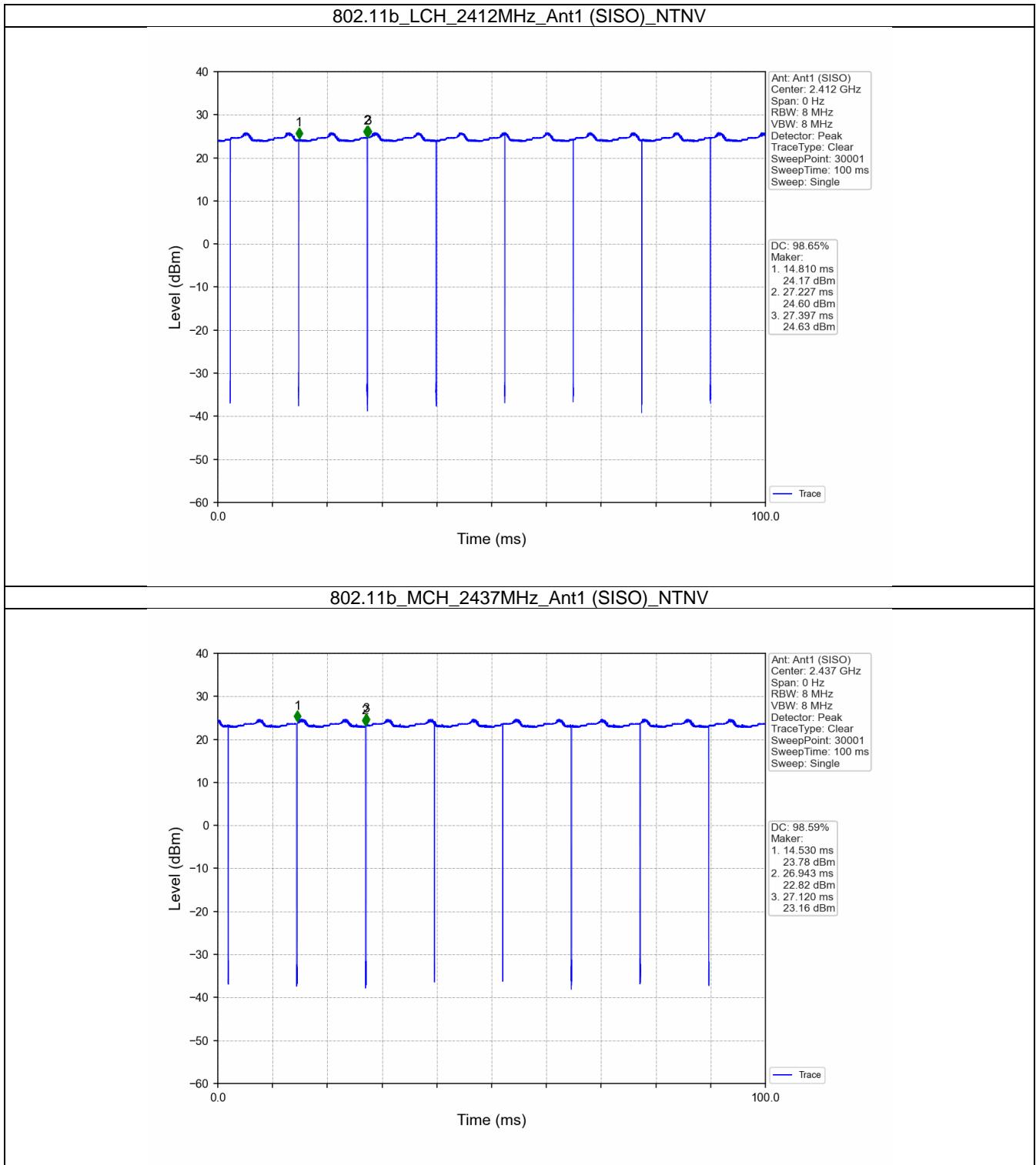
1. Duty Cycle

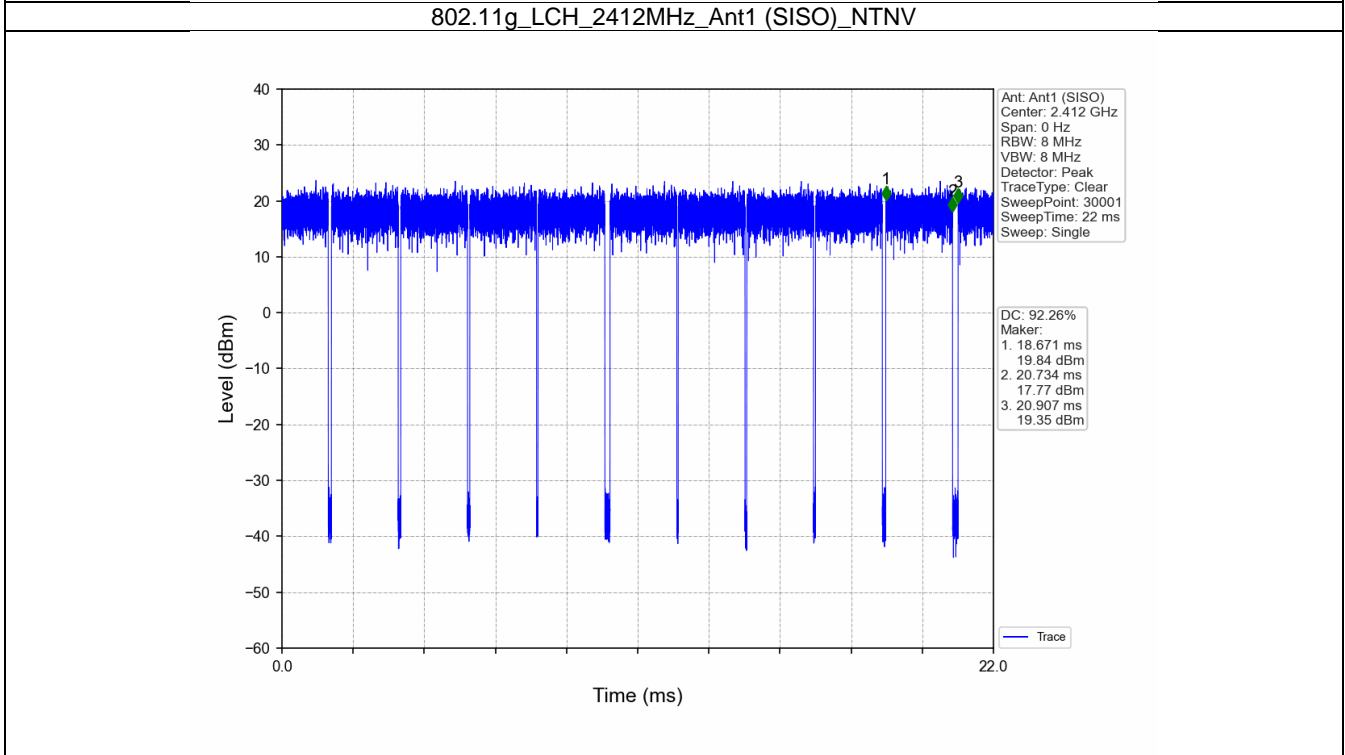
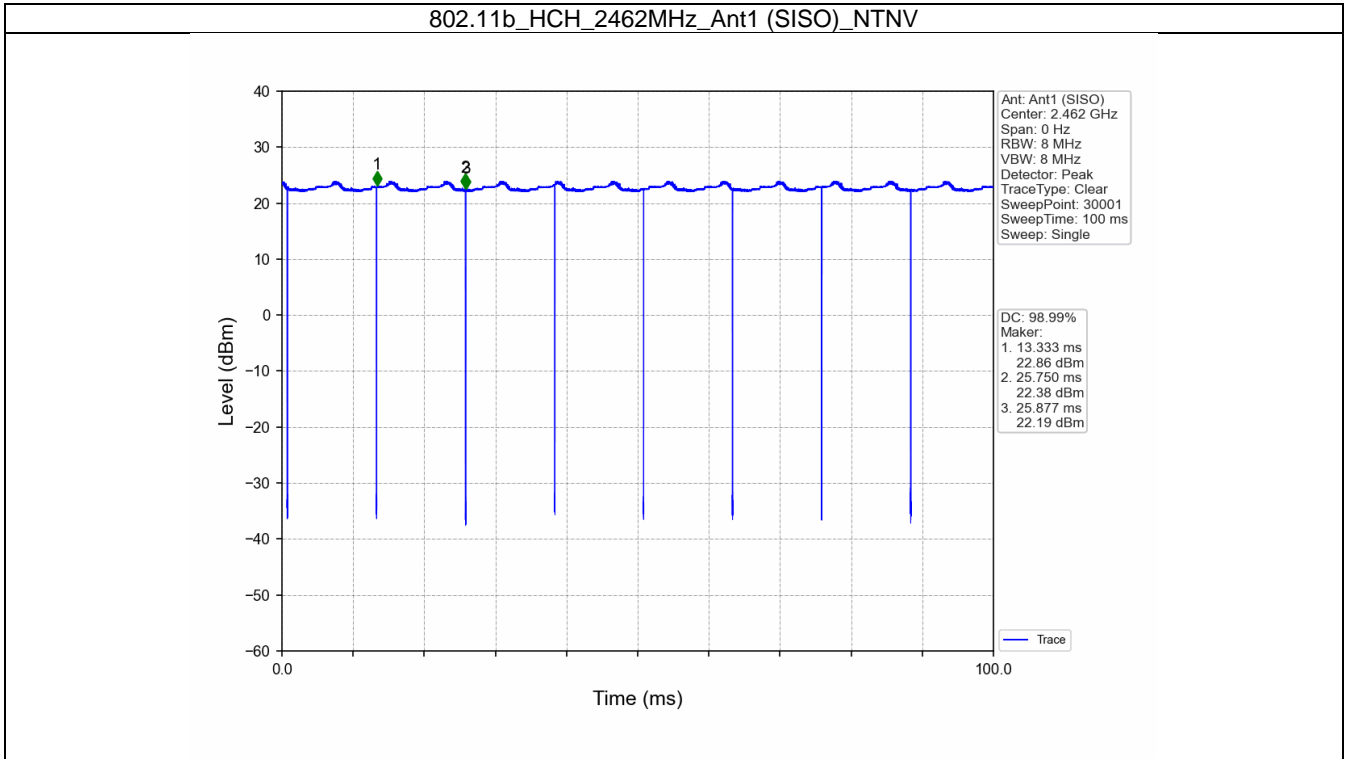
1.1 Ant1

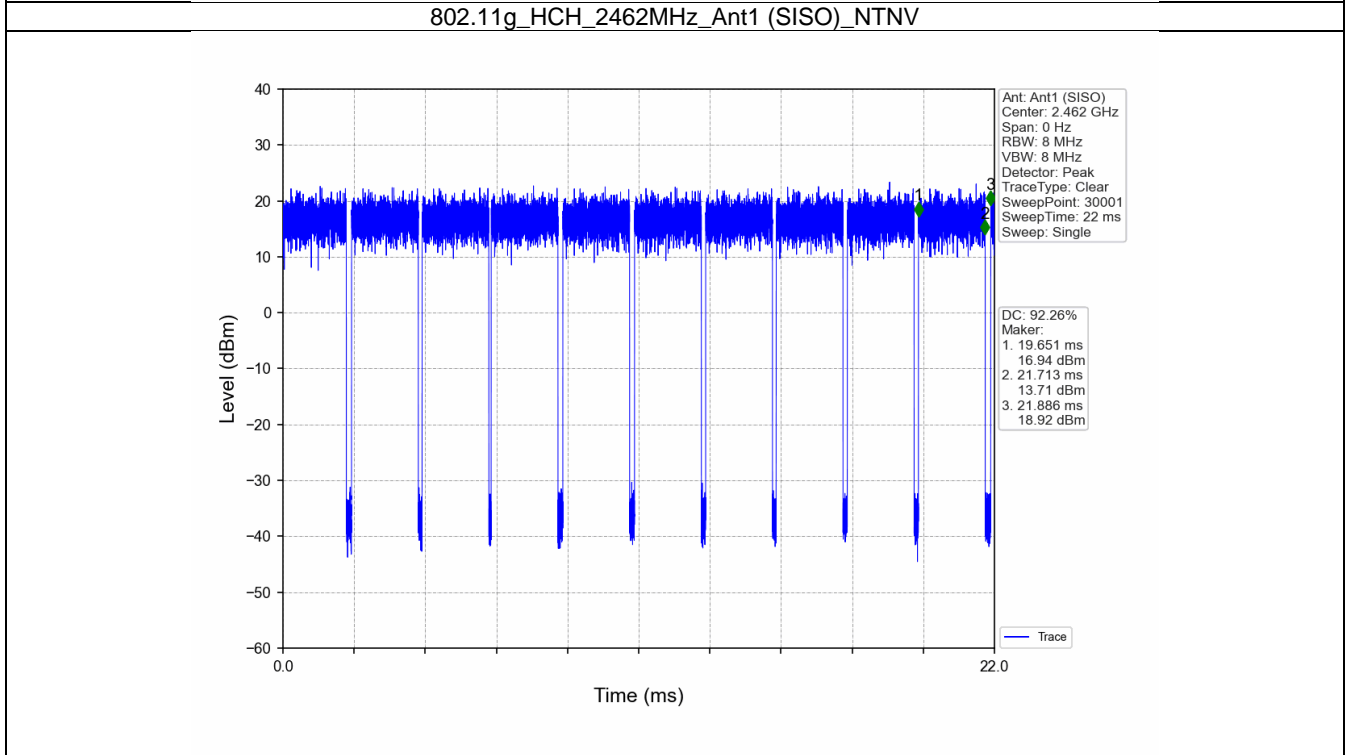
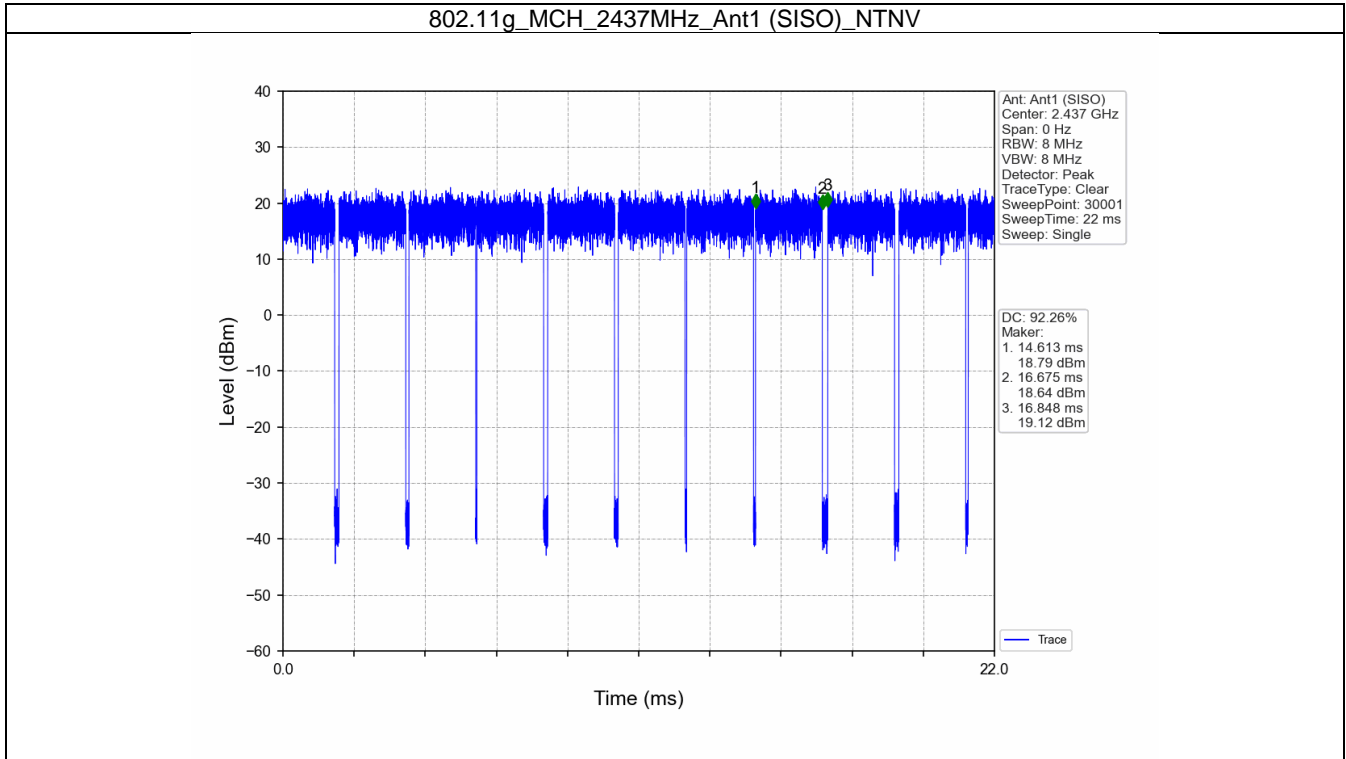
1.1.1 Test Result

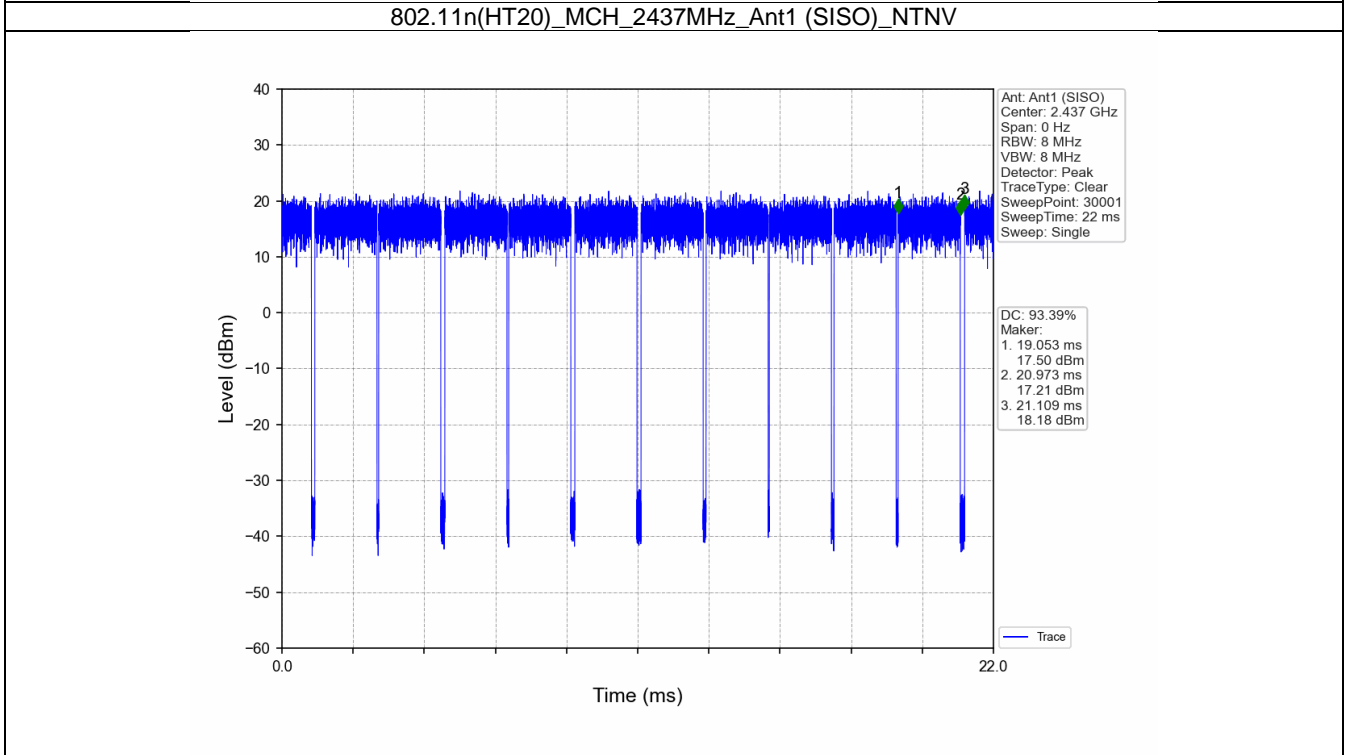
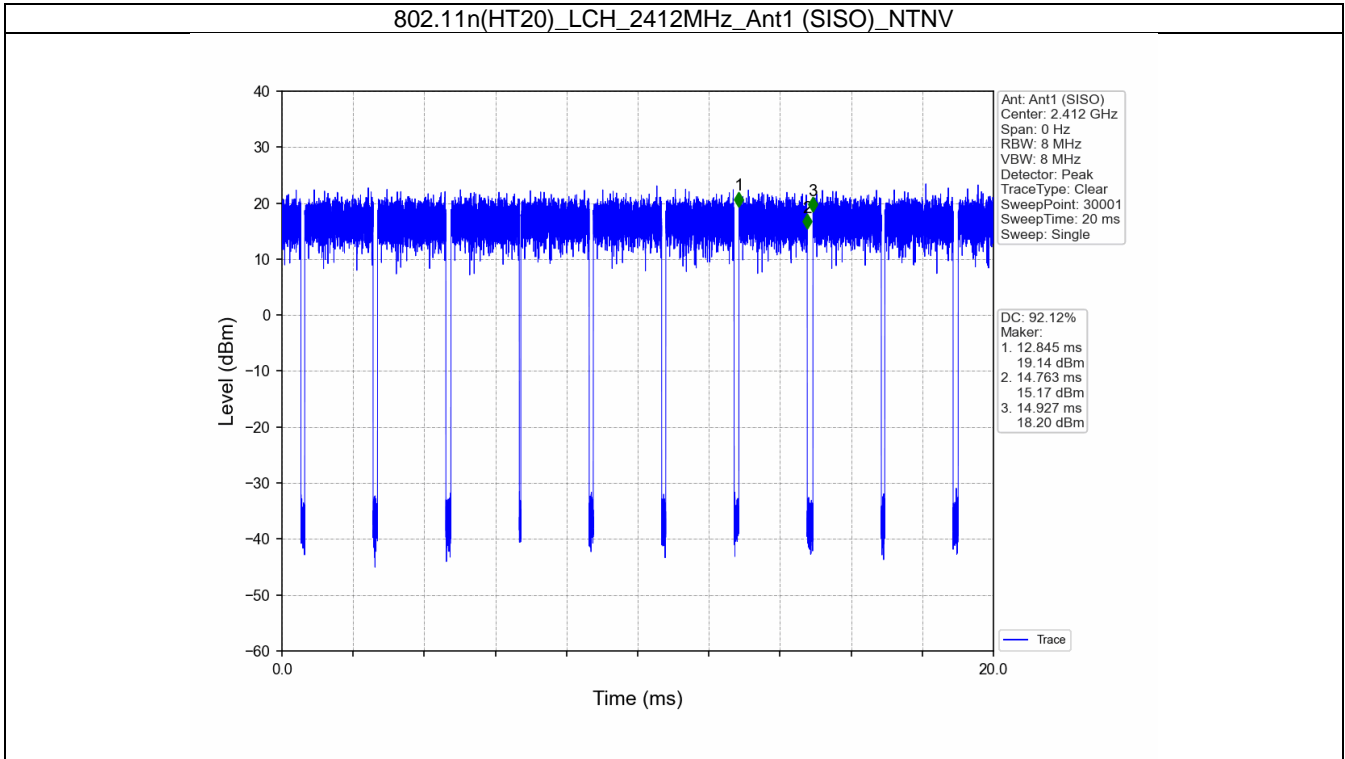
| Ant1 | | | | | | | |
|----------------|---------|-----------------|-----------|-------------|----------------|-----------------------------------|-----------------------|
| Mode | TX Type | Frequency (MHz) | T_on (ms) | Period (ms) | Duty Cycle (%) | Duty Cycle Correction Factor (dB) | Max. DC Variation (%) |
| 802.11b | SISO | 2412 | 12.417 | 12.587 | 98.65 | 0.06 | 0.84 |
| | | 2437 | 12.413 | 12.590 | 98.59 | 0.06 | 1.00 |
| | | 2462 | 12.417 | 12.544 | 98.99 | 0.04 | 0.58 |
| 802.11g | SISO | 2412 | 2.063 | 2.236 | 92.26 | 0.35 | 5.52 |
| | | 2437 | 2.062 | 2.235 | 92.26 | 0.35 | 5.97 |
| | | 2462 | 2.062 | 2.235 | 92.26 | 0.35 | 4.24 |
| 802.11n (HT20) | SISO | 2412 | 1.918 | 2.082 | 92.12 | 0.36 | 2.86 |
| | | 2437 | 1.920 | 2.056 | 93.39 | 0.30 | 4.69 |
| | | 2462 | 1.919 | 2.091 | 91.77 | 0.37 | 6.32 |
| 802.11n (HT40) | SISO | 2422 | 0.942 | 1.106 | 85.17 | 0.70 | 9.20 |
| | | 2437 | 0.943 | 1.115 | 84.57 | 0.73 | 11.61 |
| | | 2452 | 0.942 | 1.115 | 84.48 | 0.73 | 11.64 |

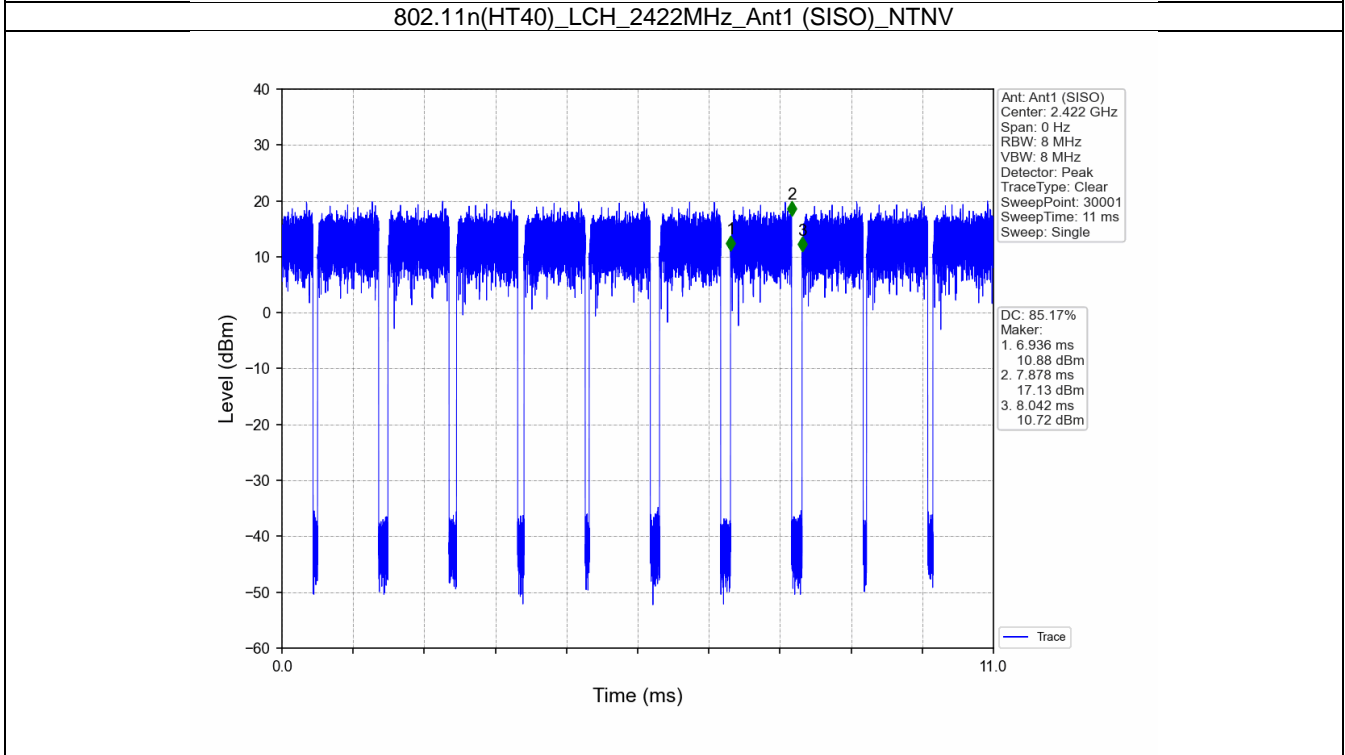
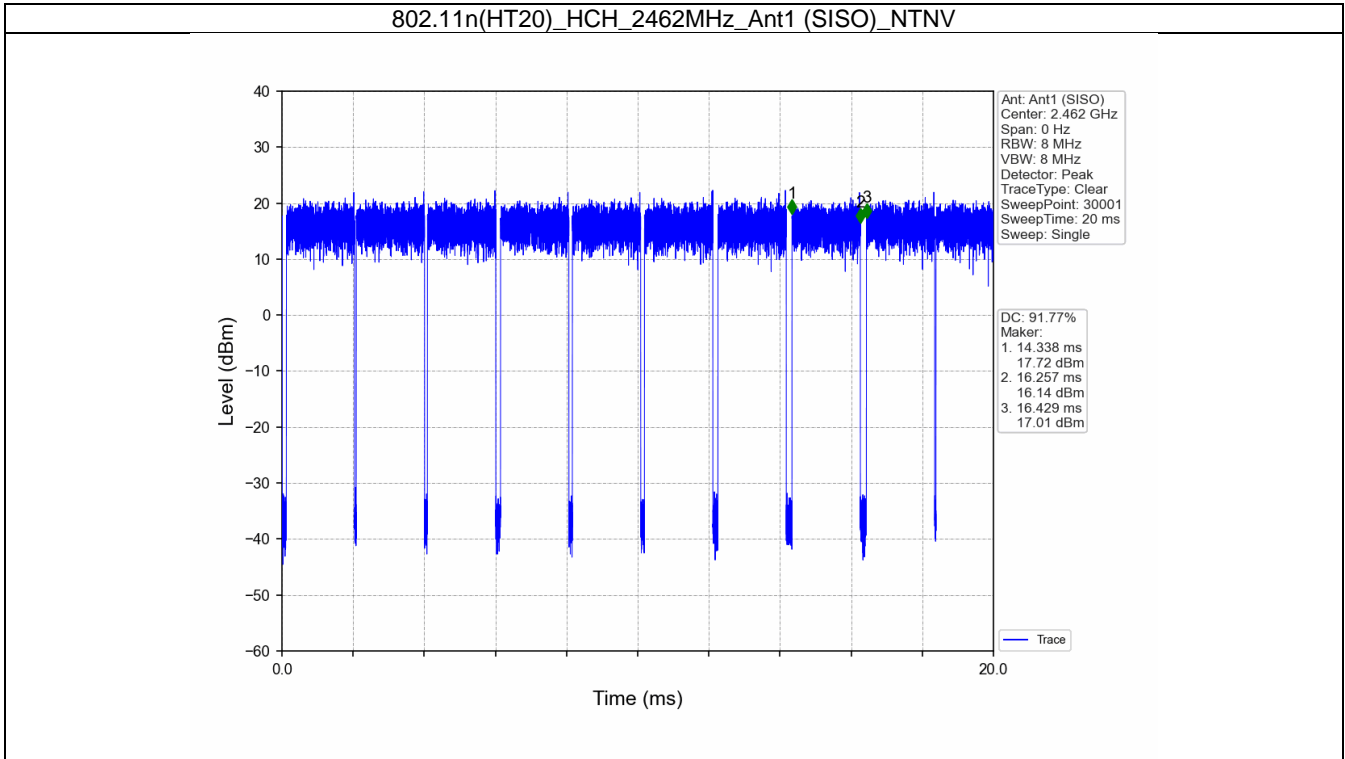
1.1.2 Test Graph

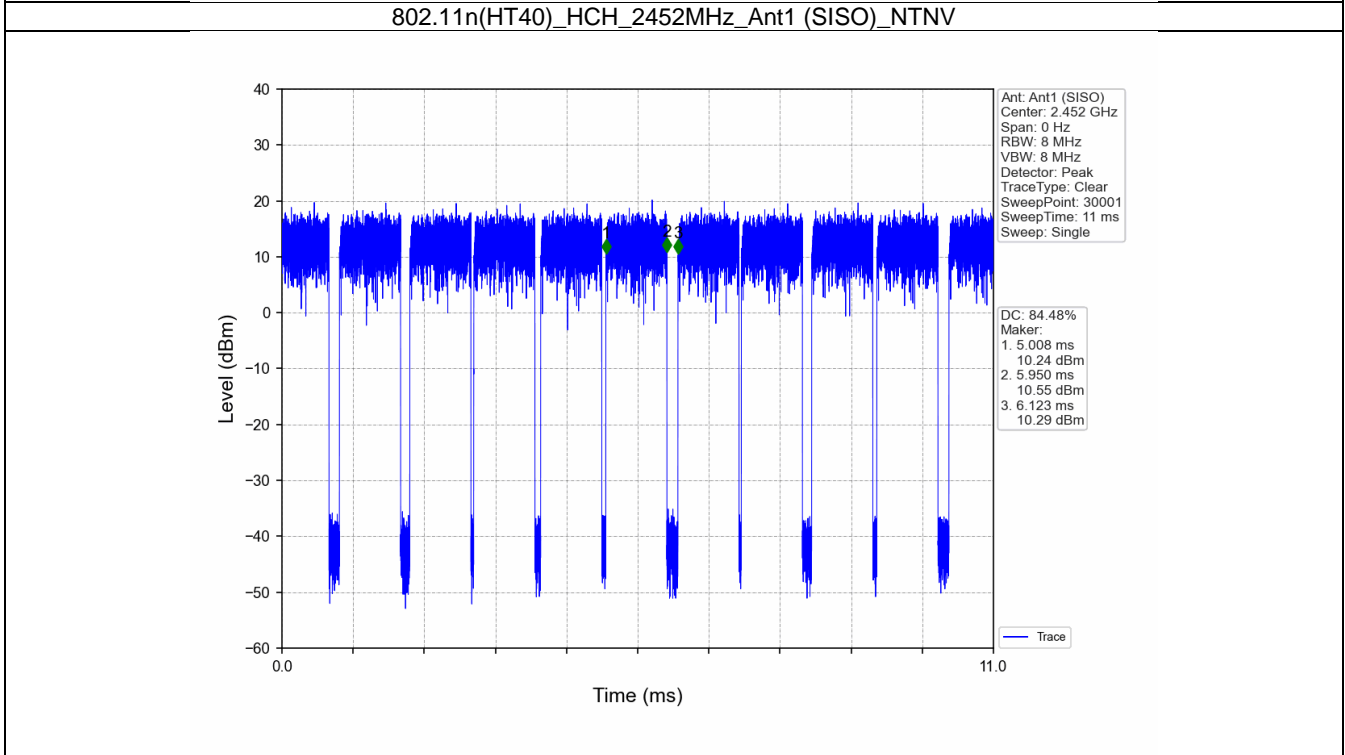
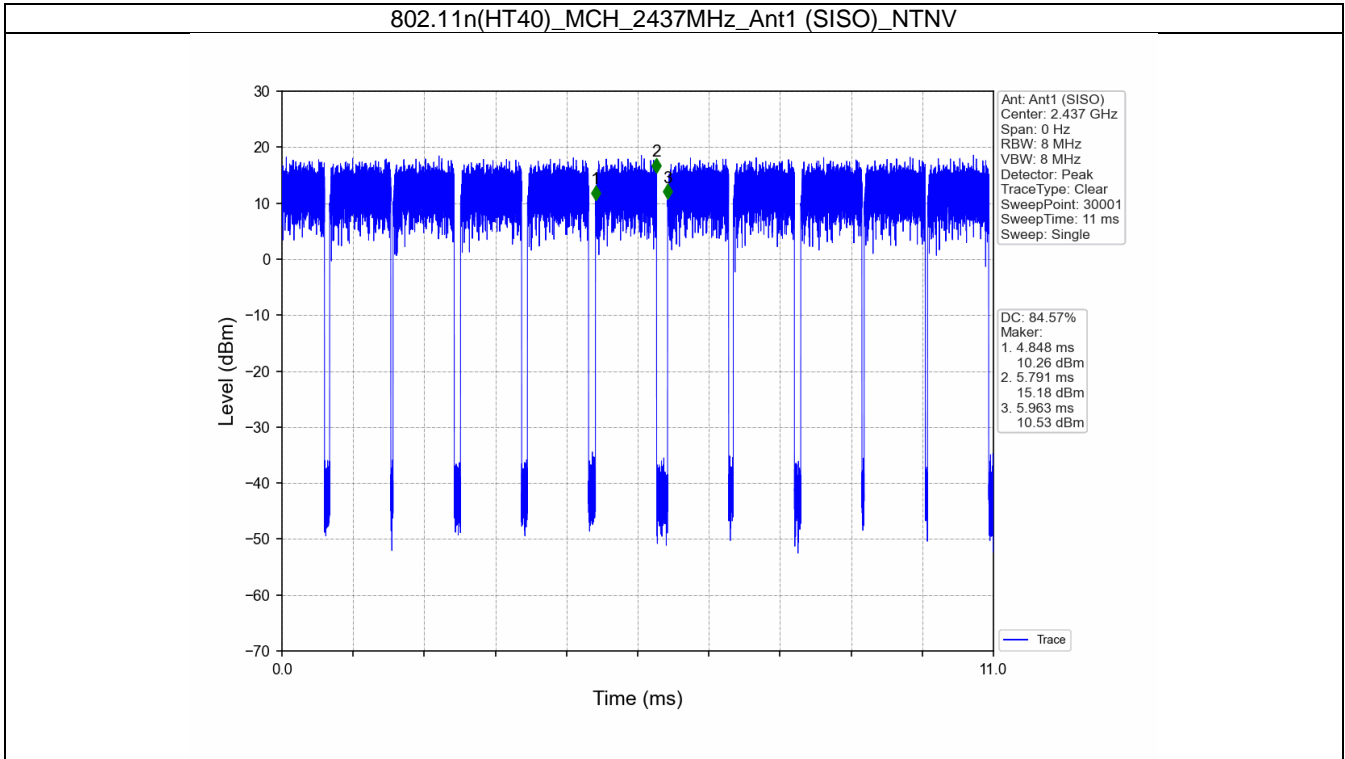














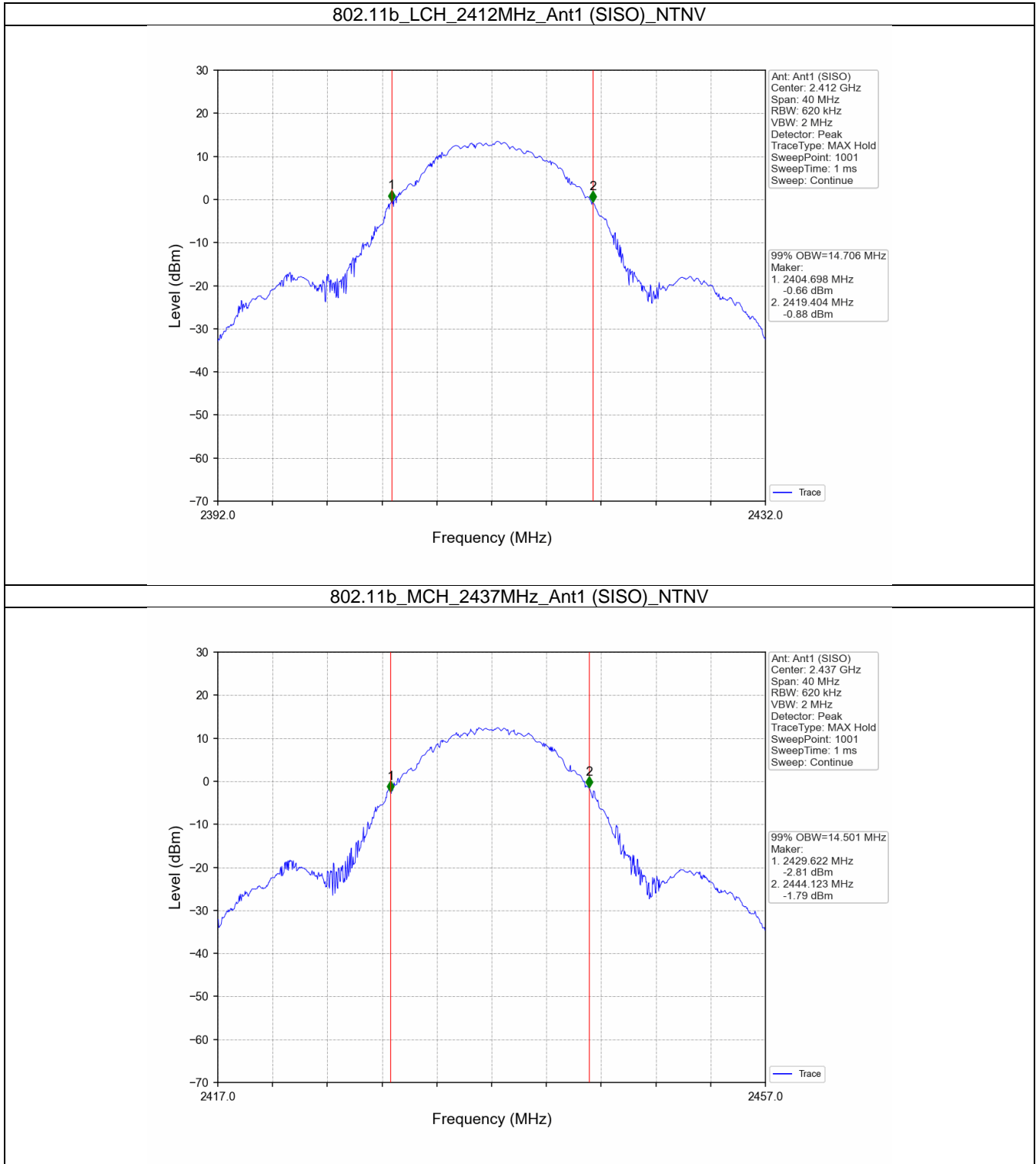
2. Bandwidth

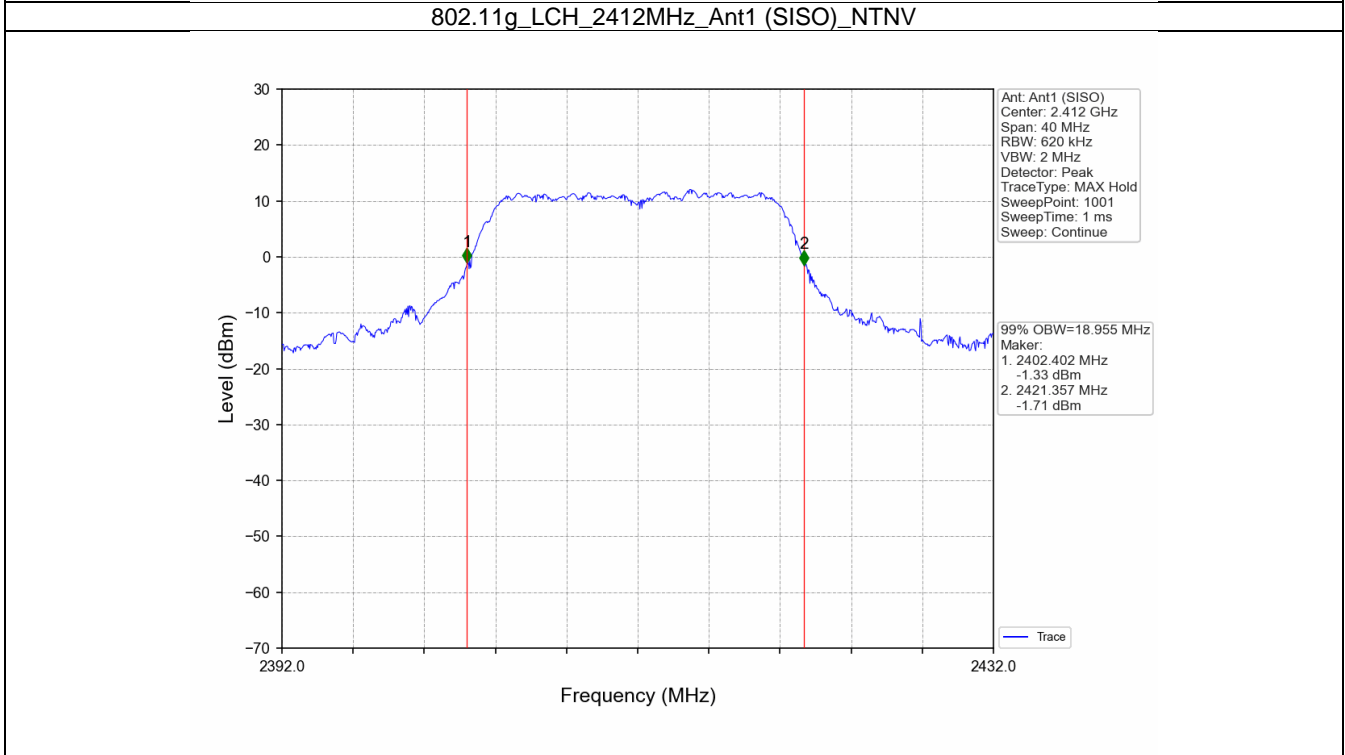
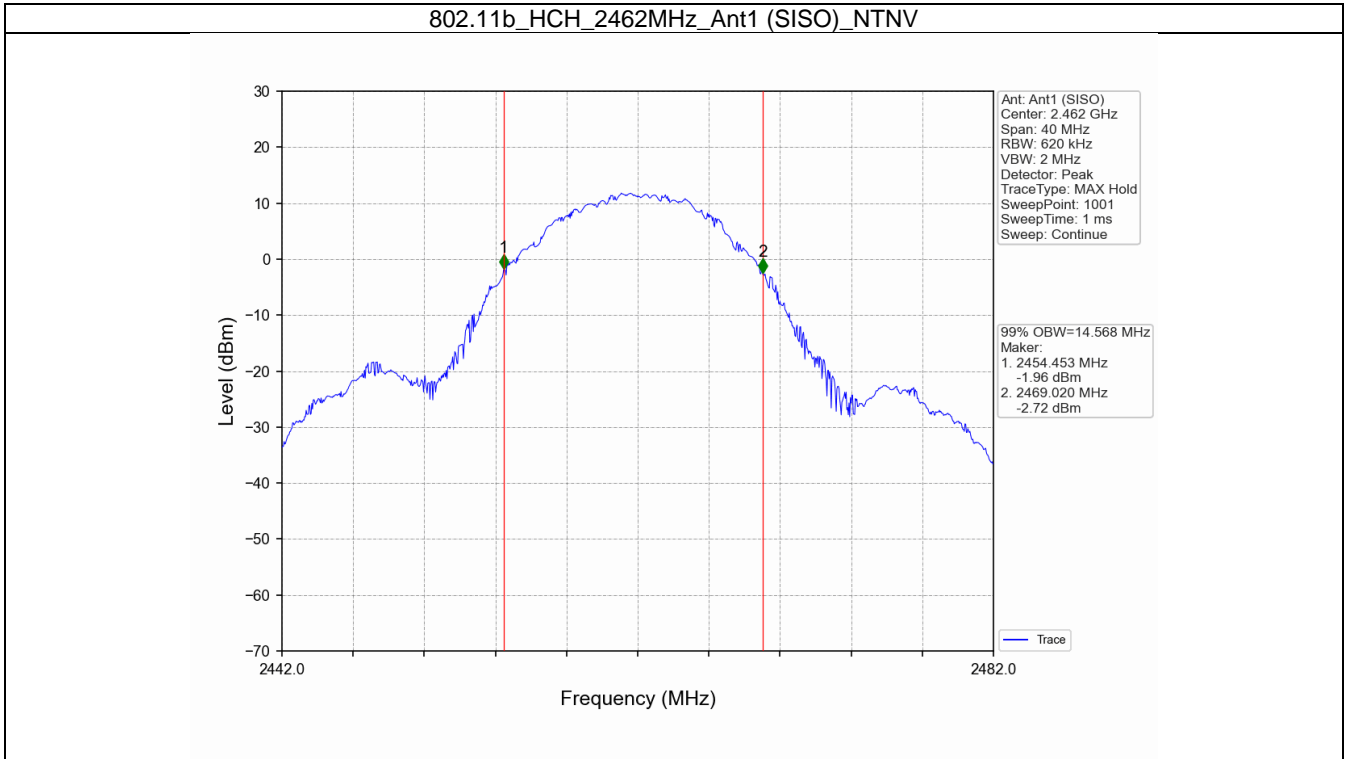
2.1 OBW

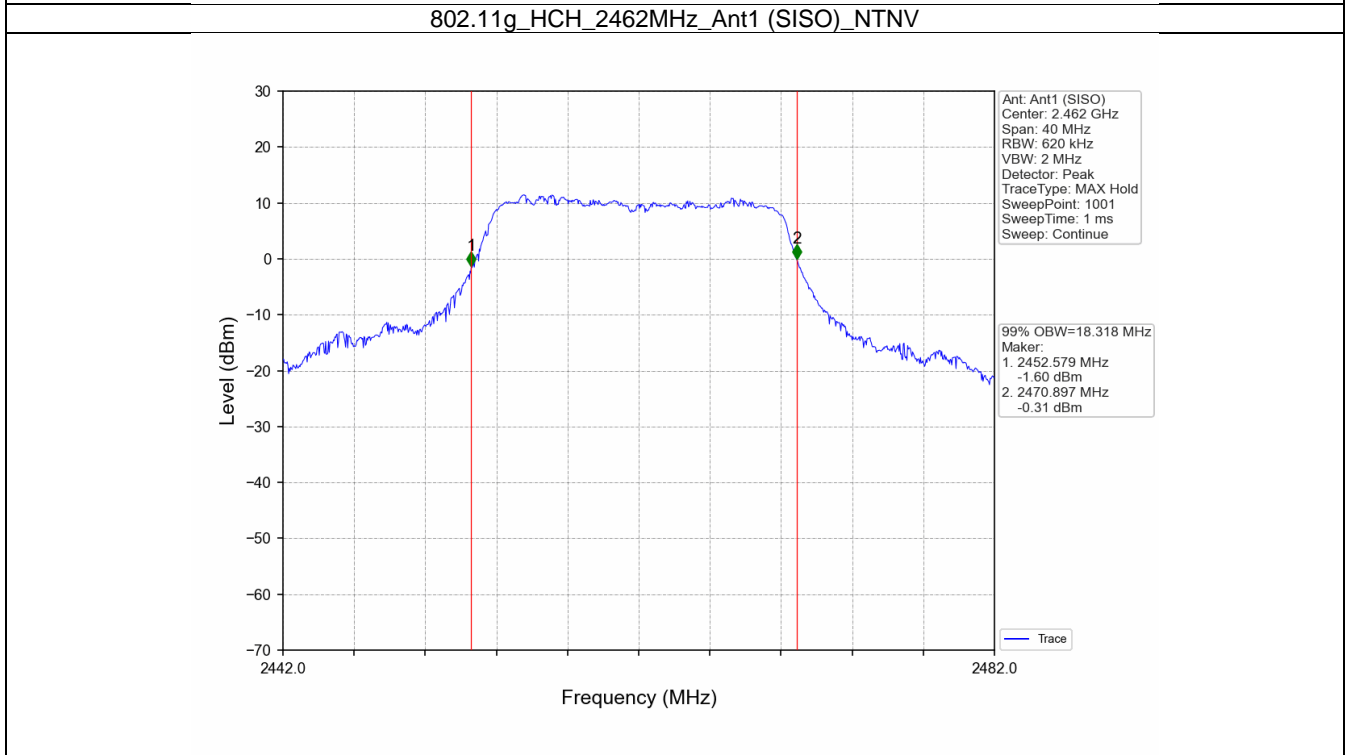
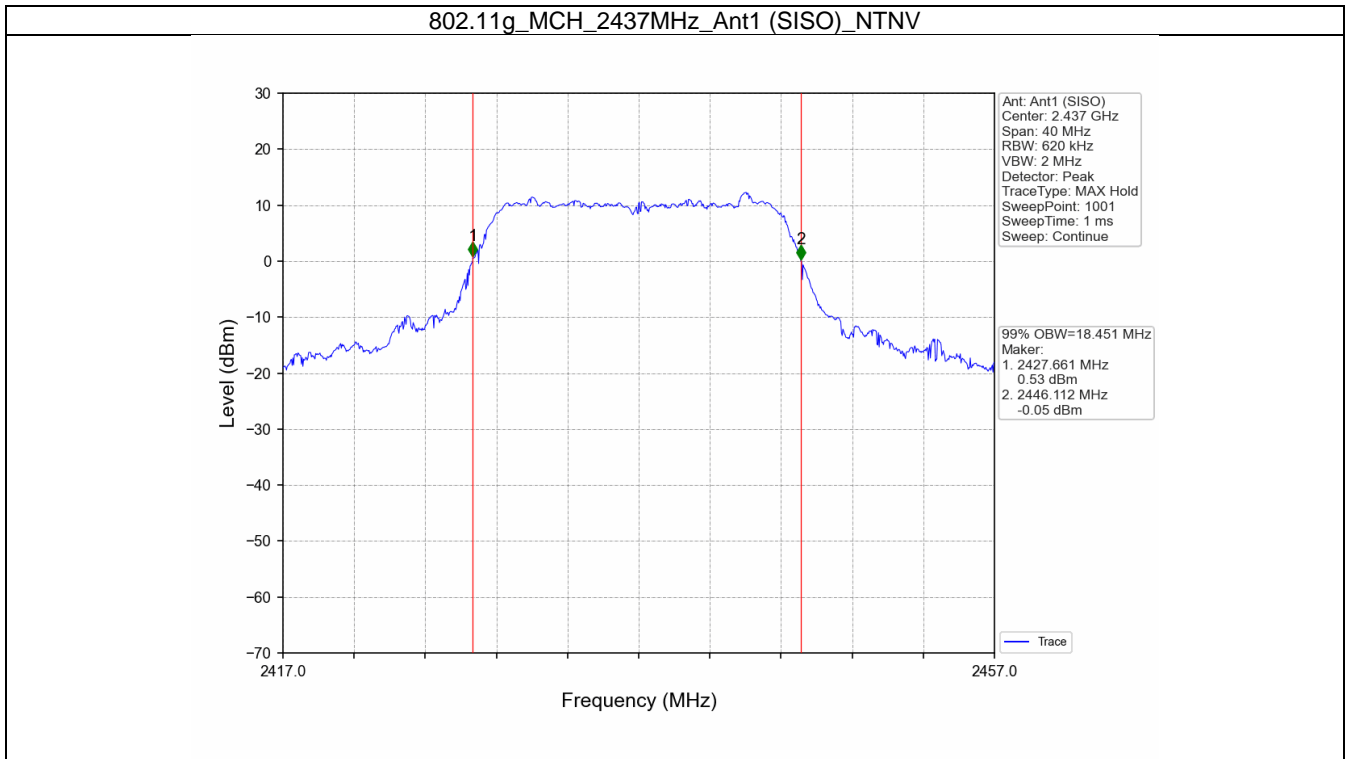
2.1.1 Test Result

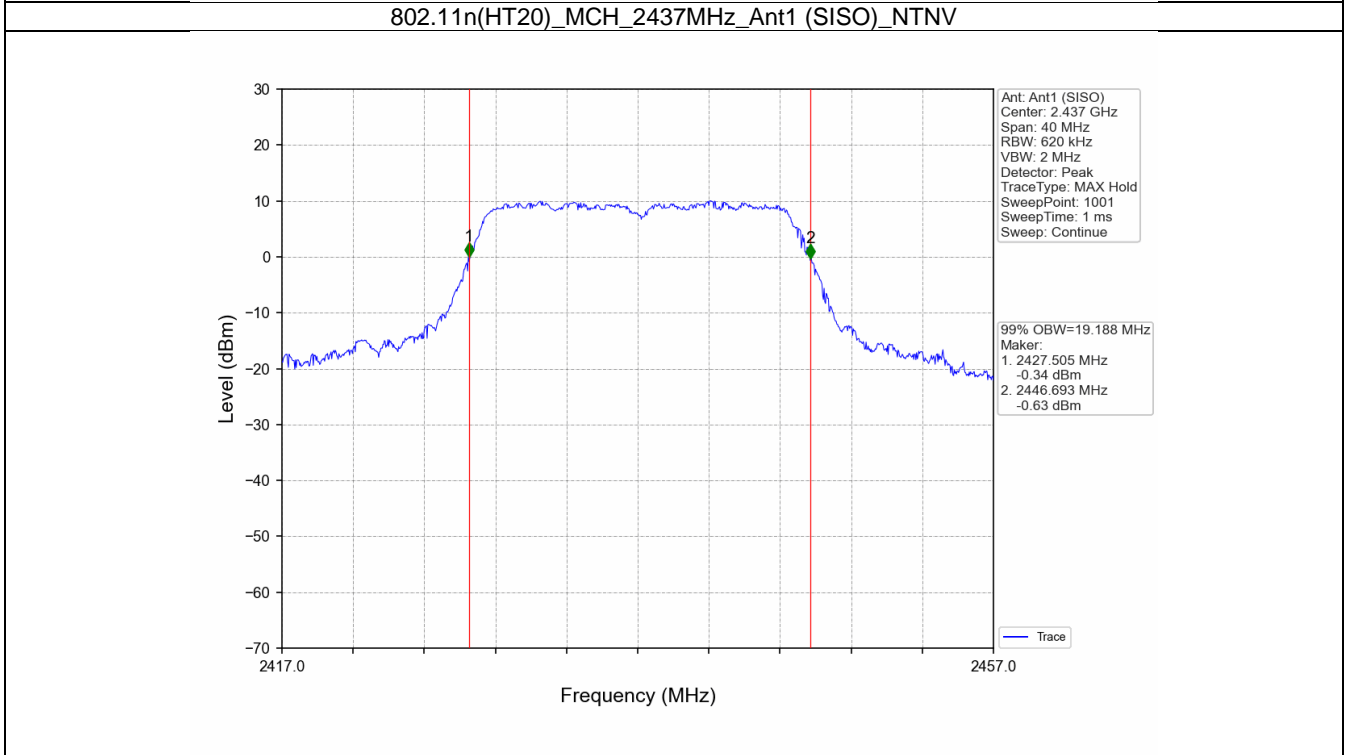
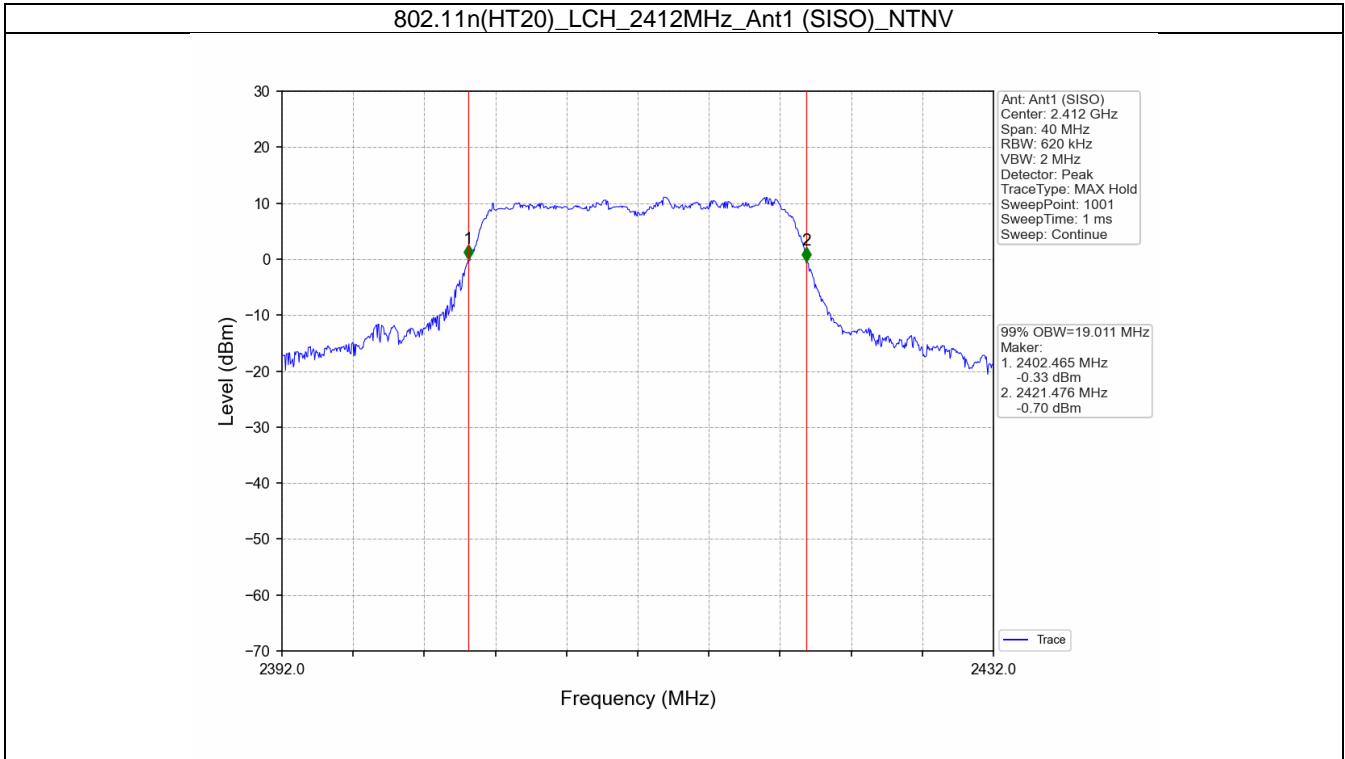
| Mode | TX Type | Frequency (MHz) | Ant | 99% Occupied Bandwidth (MHz) | Limit (MHz) | Verdict |
|-------------------|---------|-----------------|-----|------------------------------|-------------|---------|
| 802.11b | SISO | 2412 | 1 | 14.706 | / | Pass |
| | | 2437 | 1 | 14.501 | / | Pass |
| | | 2462 | 1 | 14.568 | / | Pass |
| 802.11g | SISO | 2412 | 1 | 18.955 | / | Pass |
| | | 2437 | 1 | 18.451 | / | Pass |
| | | 2462 | 1 | 18.318 | / | Pass |
| 802.11n (HT20) | SISO | 2412 | 1 | 19.011 | / | Pass |
| | | 2437 | 1 | 19.188 | / | Pass |
| | | 2462 | 1 | 19.005 | / | Pass |
| 802.11n (HT40) | SISO | 2422 | 1 | 37.180 | / | Pass |
| | | 2437 | 1 | 37.222 | / | Pass |
| | | 2452 | 1 | 37.483 | / | Pass |

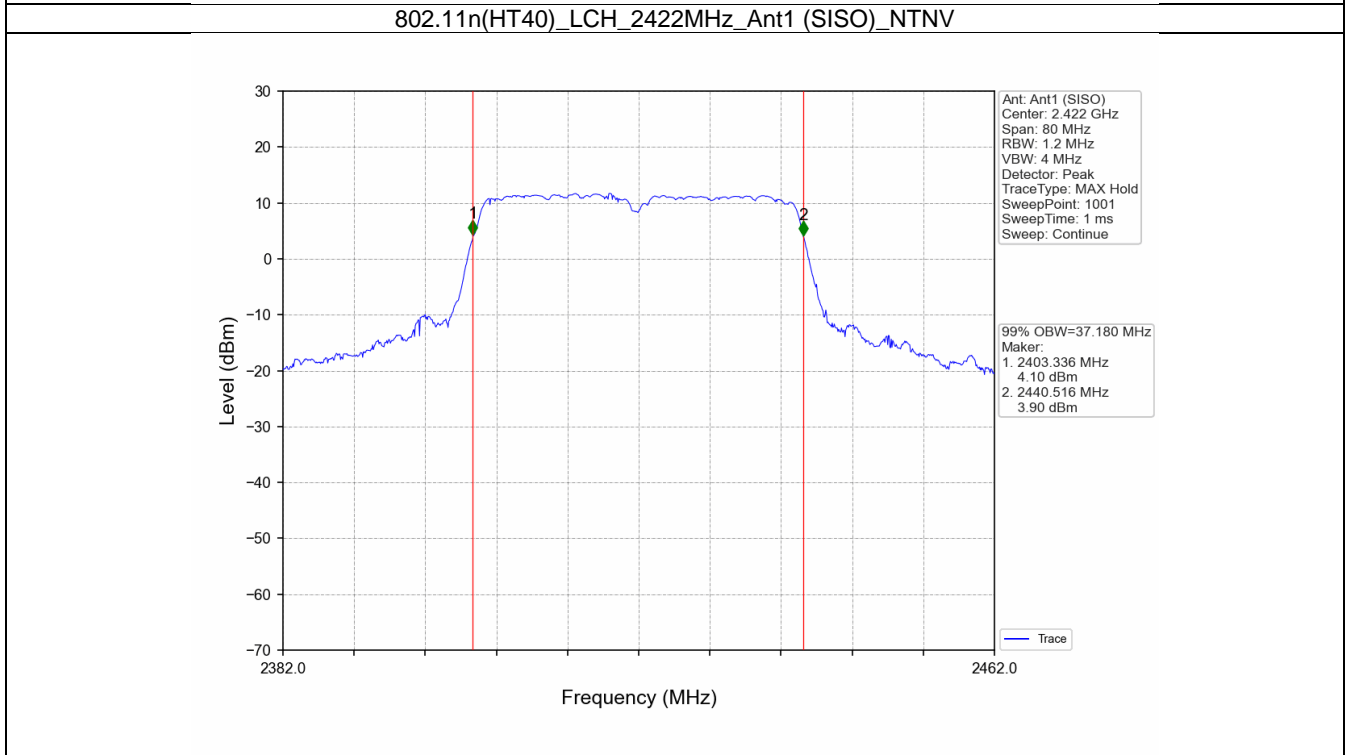
2.1.2 Test Graph

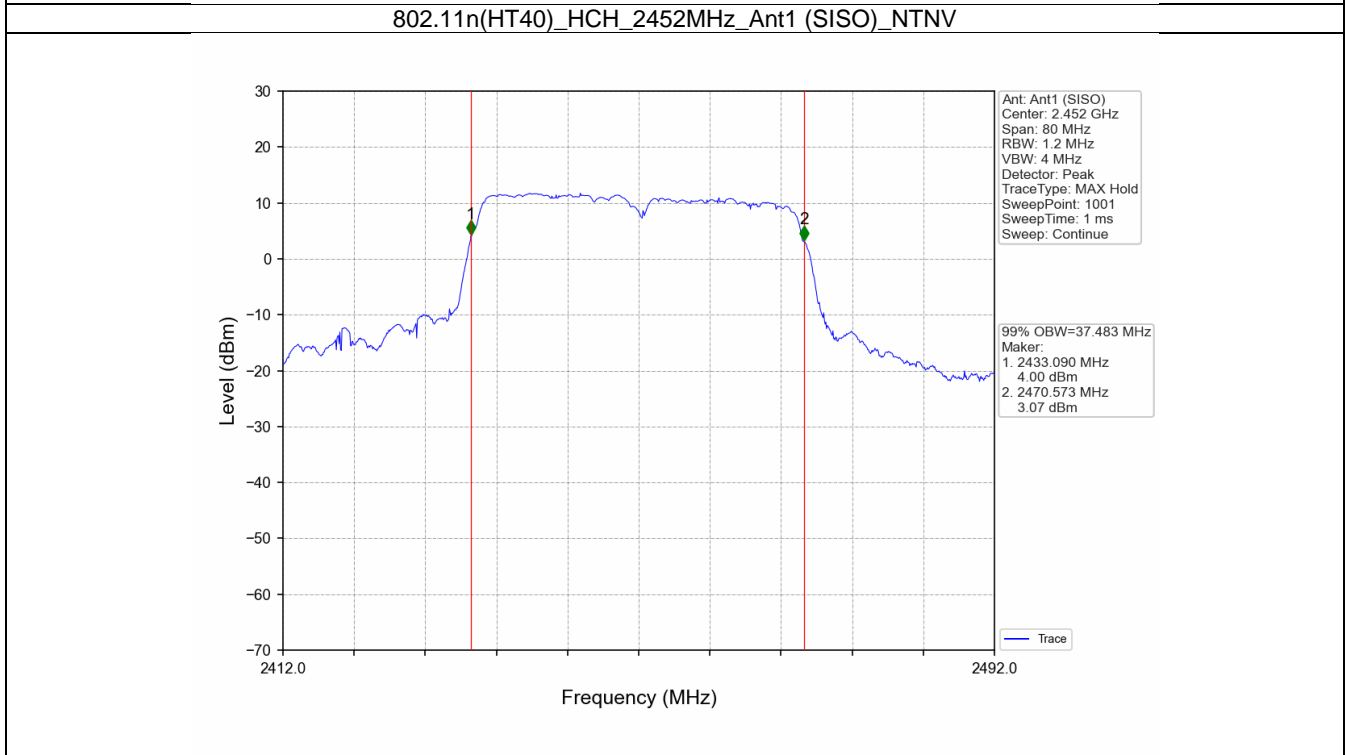
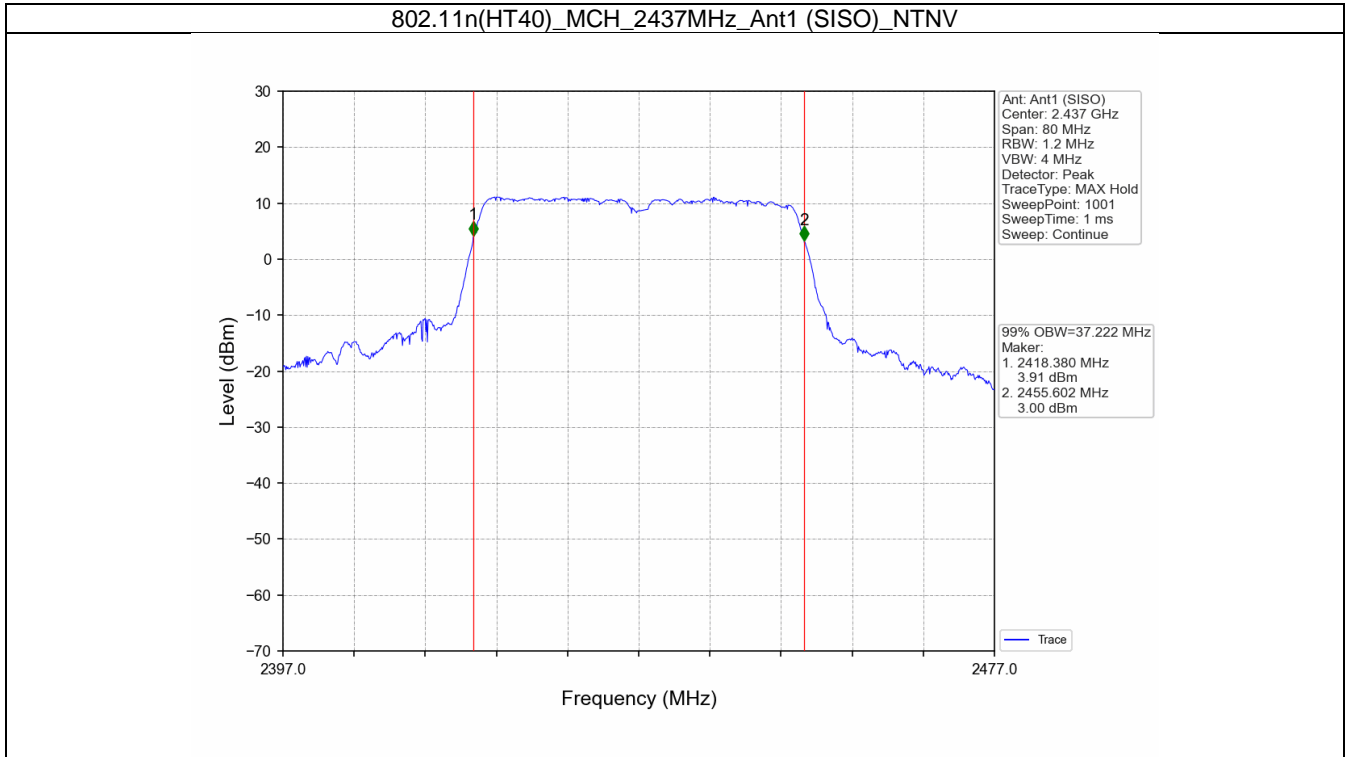












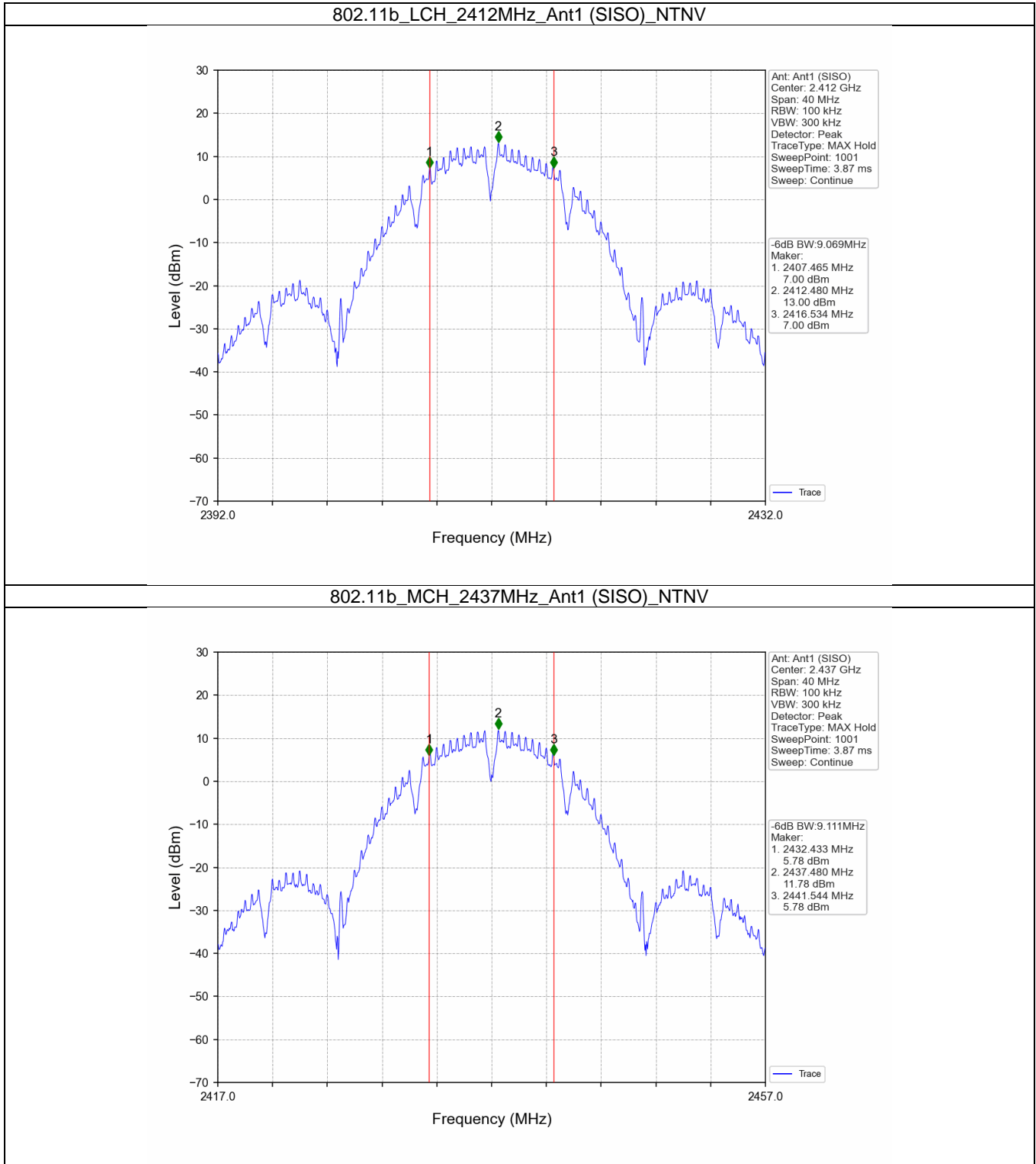


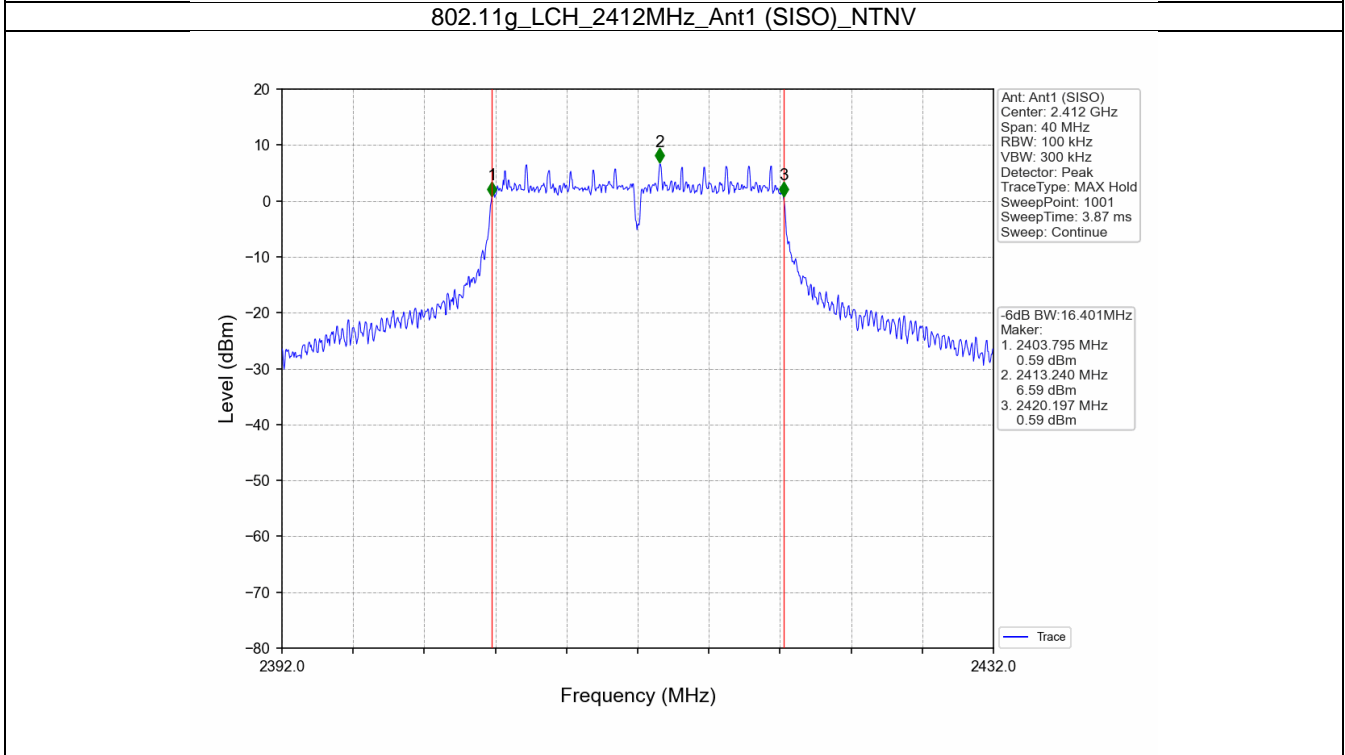
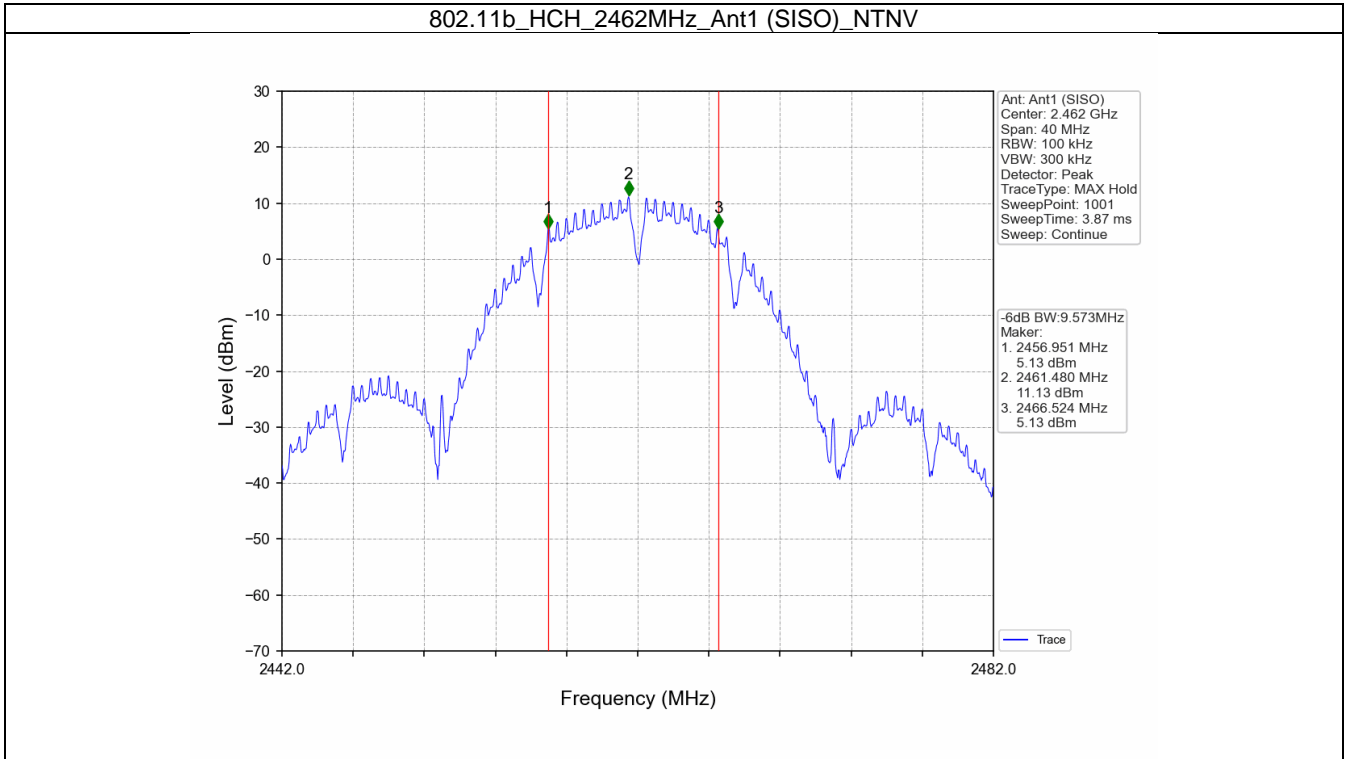
2.2 6dB BW

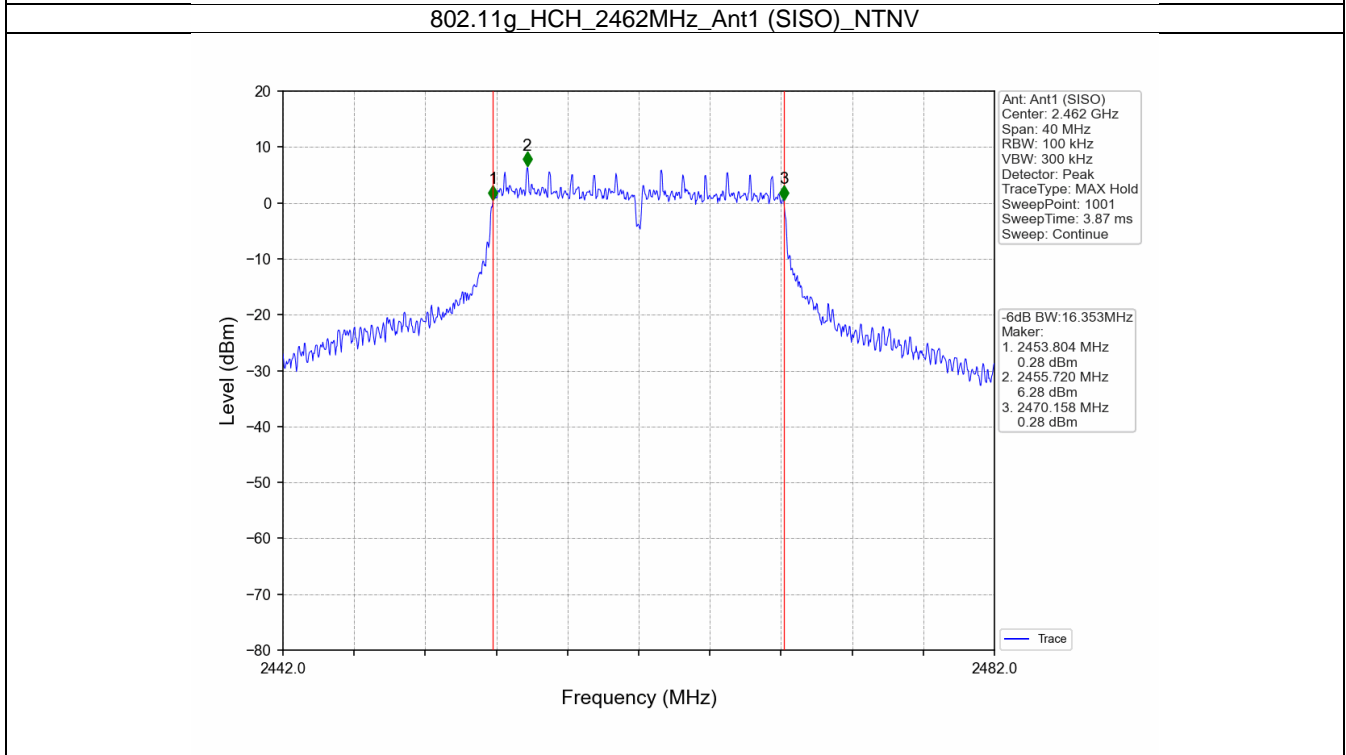
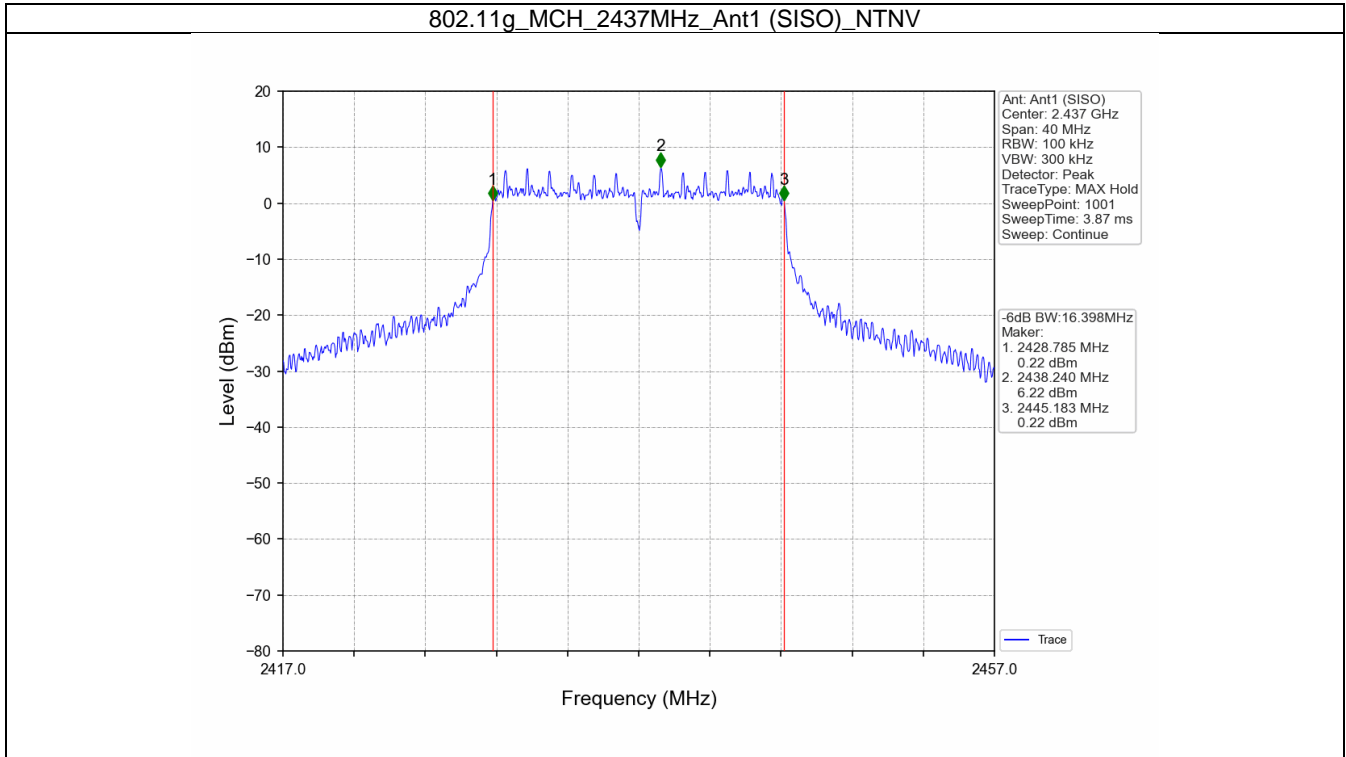
2.2.1 Test Result

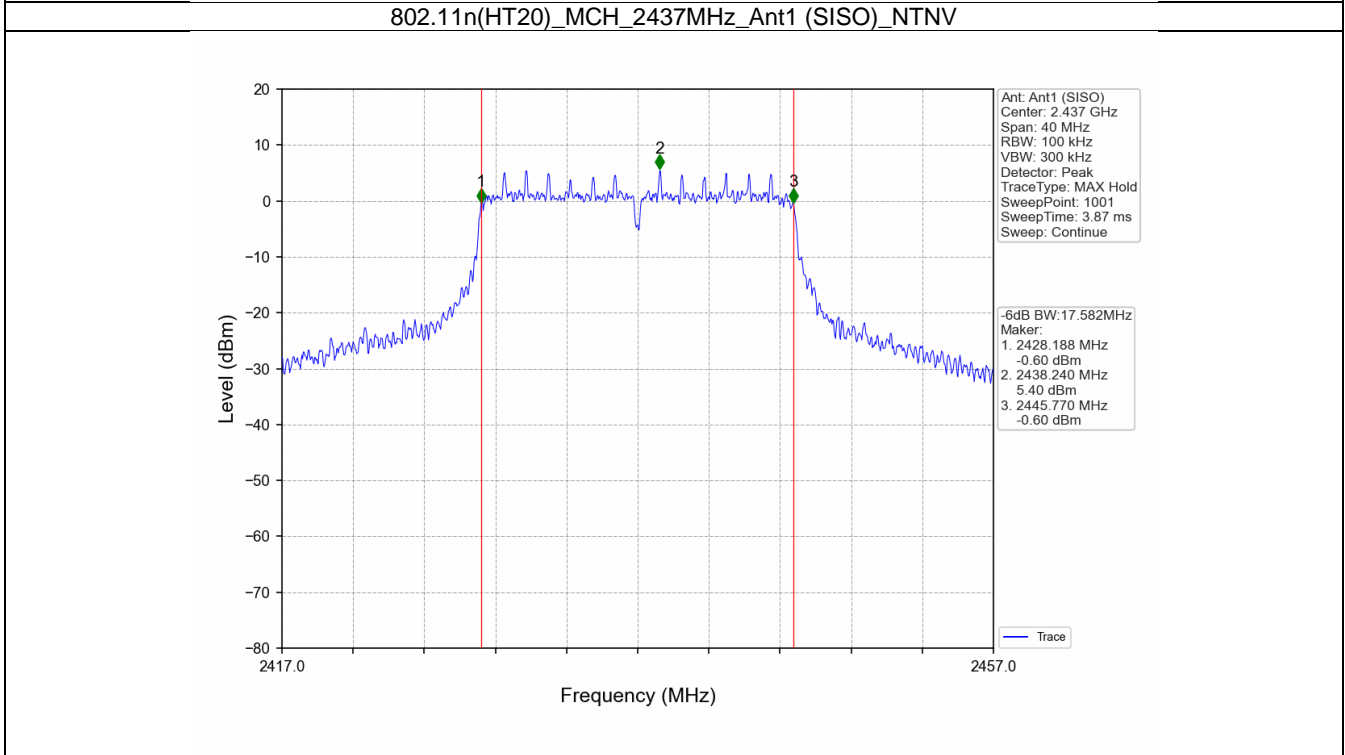
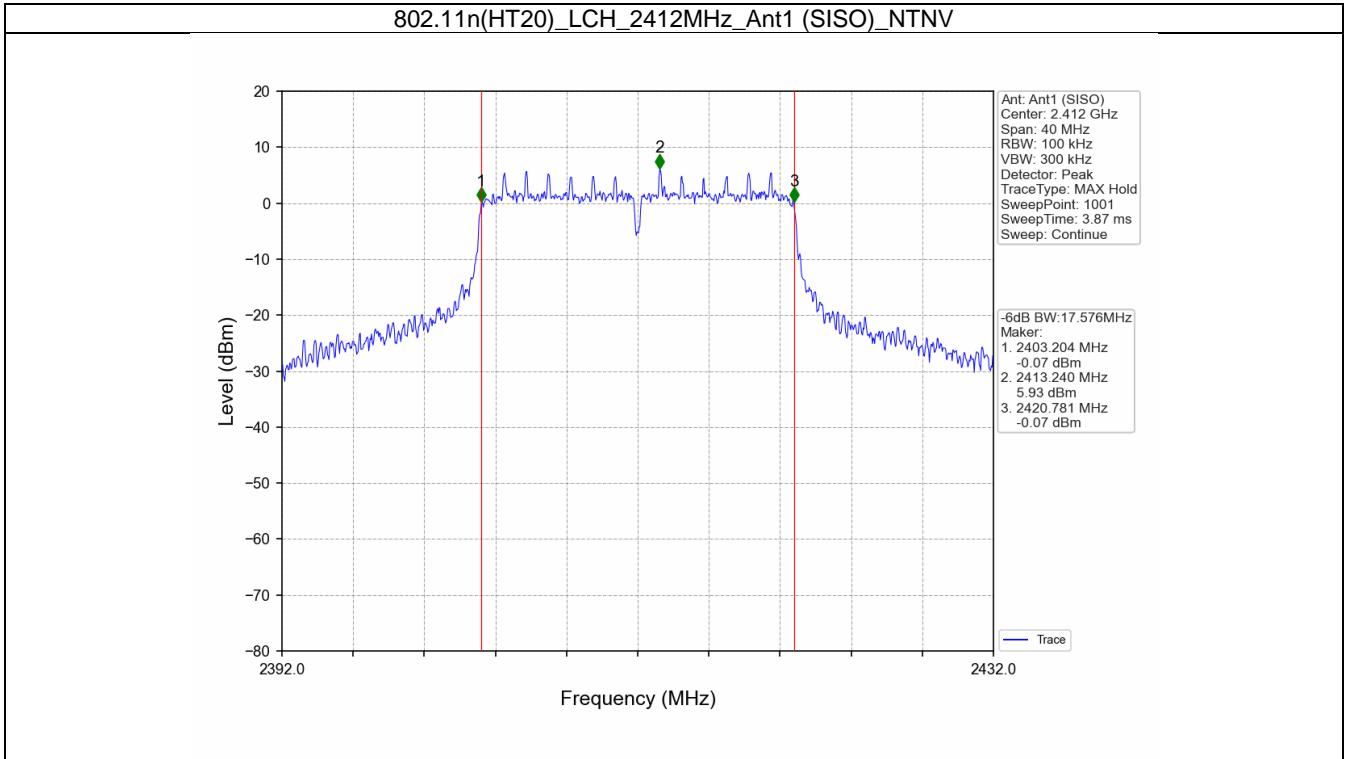
| Mode | TX Type | Frequency (MHz) | Ant | 6dB Bandwidth (MHz) | Limit (MHz) | Verdict |
|-------------------|---------|-----------------|-----|---------------------|-------------|---------|
| 802.11b | SISO | 2412 | 1 | 9.069 | ≥ 0.5 | Pass |
| | | 2437 | 1 | 9.111 | ≥ 0.5 | Pass |
| | | 2462 | 1 | 9.573 | ≥ 0.5 | Pass |
| 802.11g | SISO | 2412 | 1 | 16.401 | ≥ 0.5 | Pass |
| | | 2437 | 1 | 16.398 | ≥ 0.5 | Pass |
| | | 2462 | 1 | 16.353 | ≥ 0.5 | Pass |
| 802.11n (HT20) | SISO | 2412 | 1 | 17.576 | ≥ 0.5 | Pass |
| | | 2437 | 1 | 17.582 | ≥ 0.5 | Pass |
| | | 2462 | 1 | 17.377 | ≥ 0.5 | Pass |
| 802.11n (HT40) | SISO | 2422 | 1 | 35.744 | ≥ 0.5 | Pass |
| | | 2437 | 1 | 35.561 | ≥ 0.5 | Pass |
| | | 2452 | 1 | 35.755 | ≥ 0.5 | Pass |

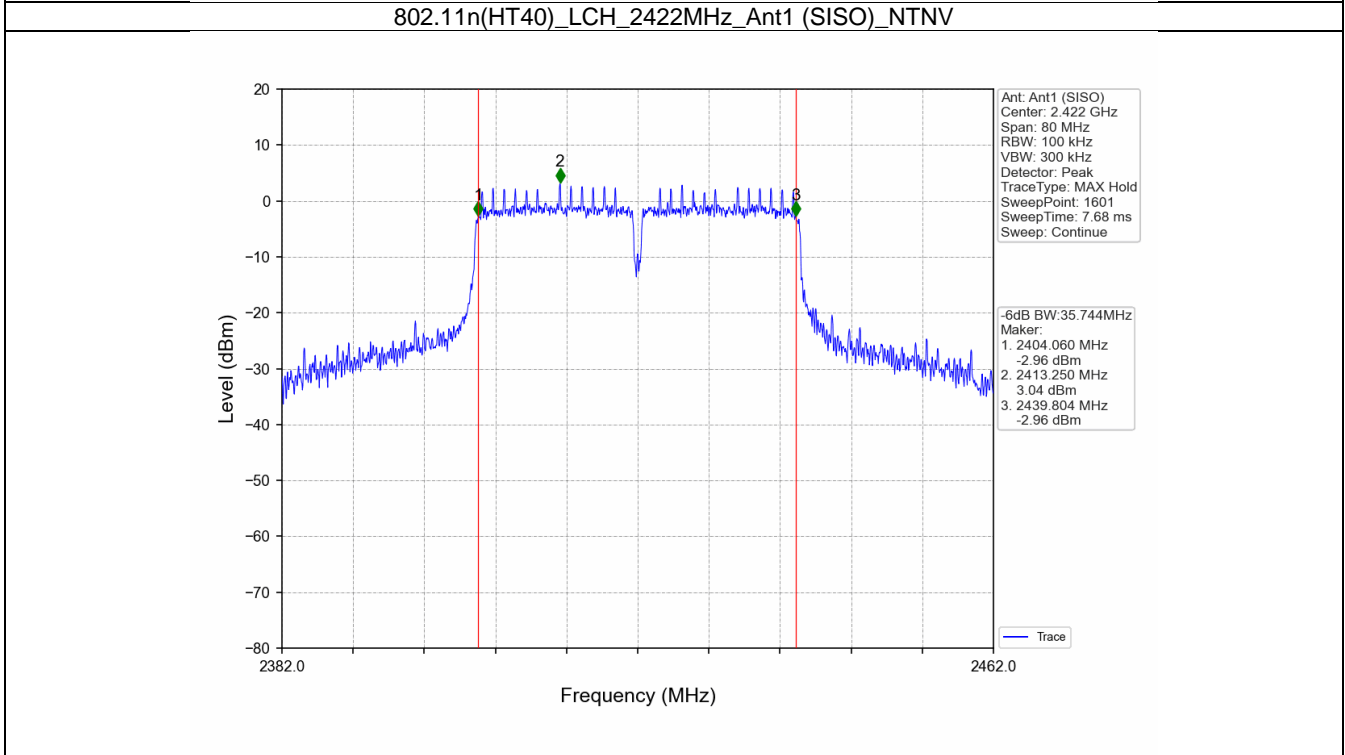
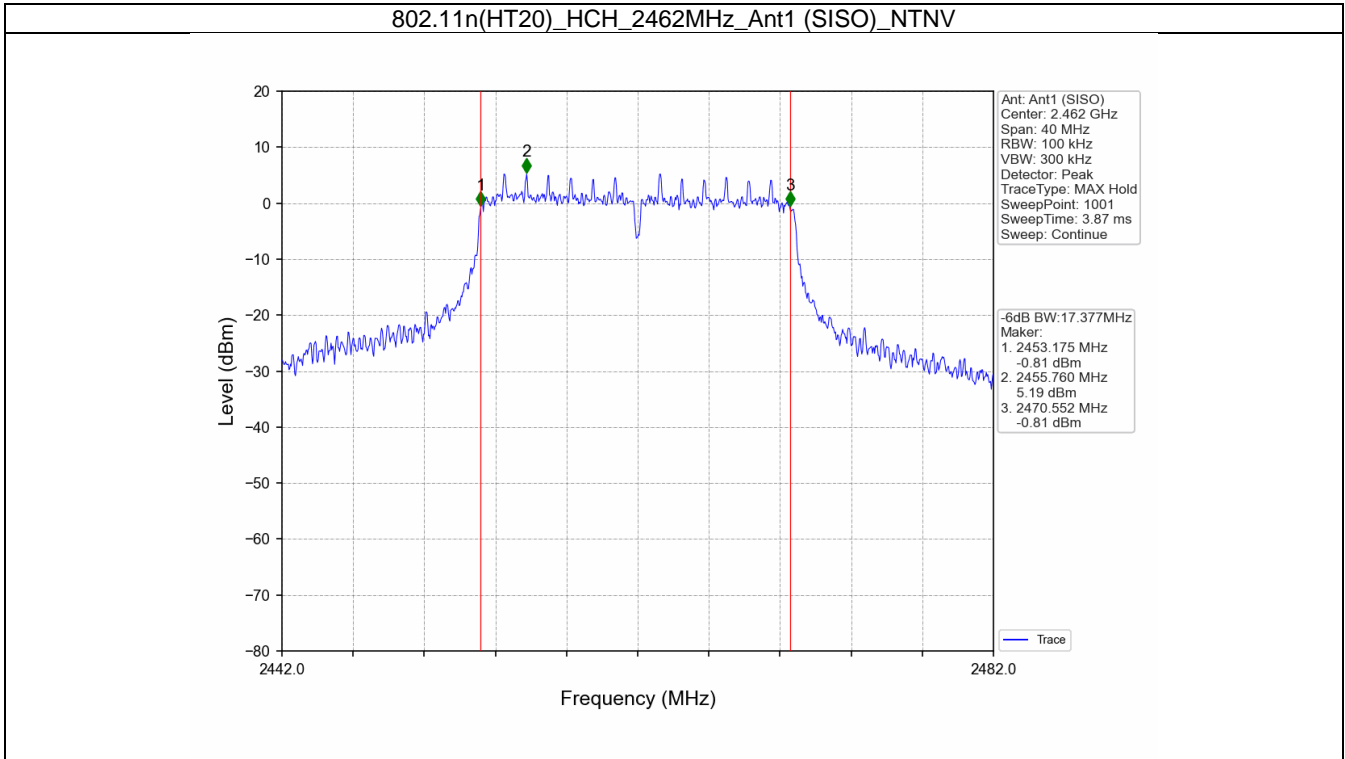
2.2.2 Test Graph

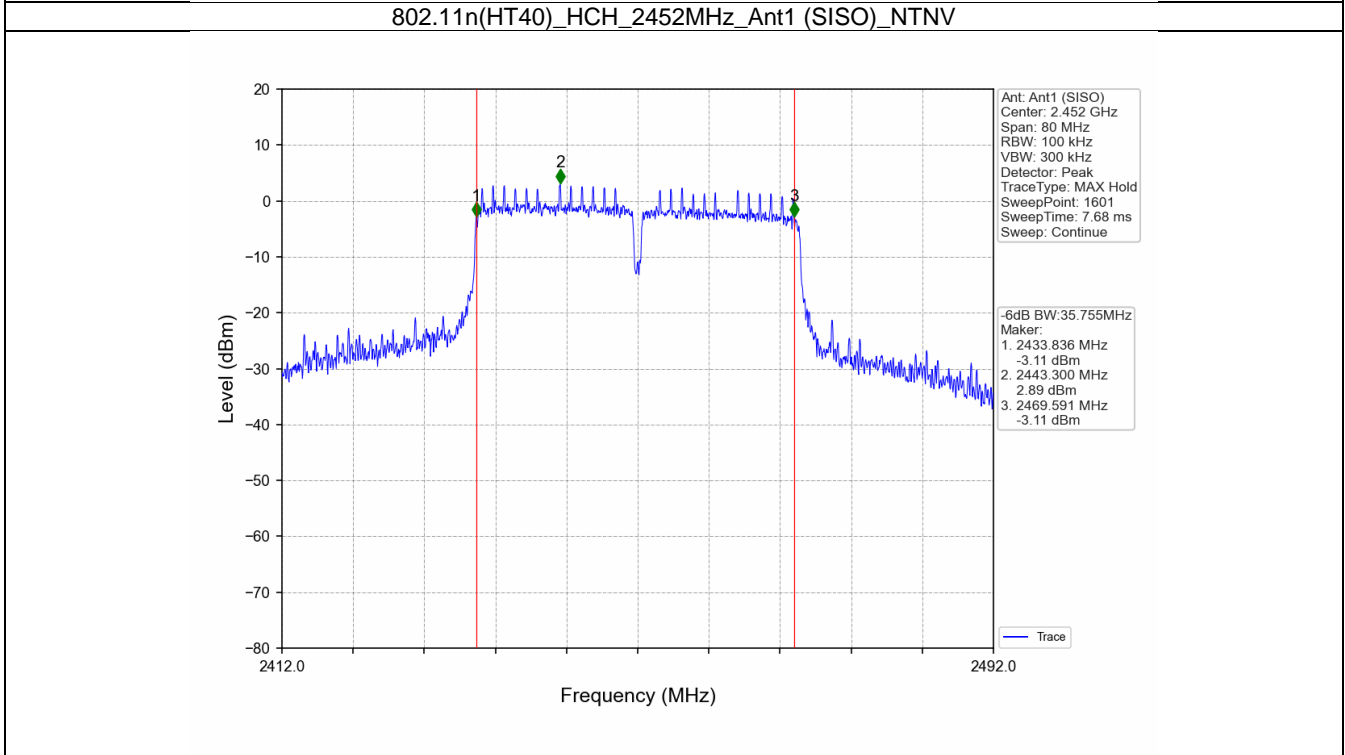
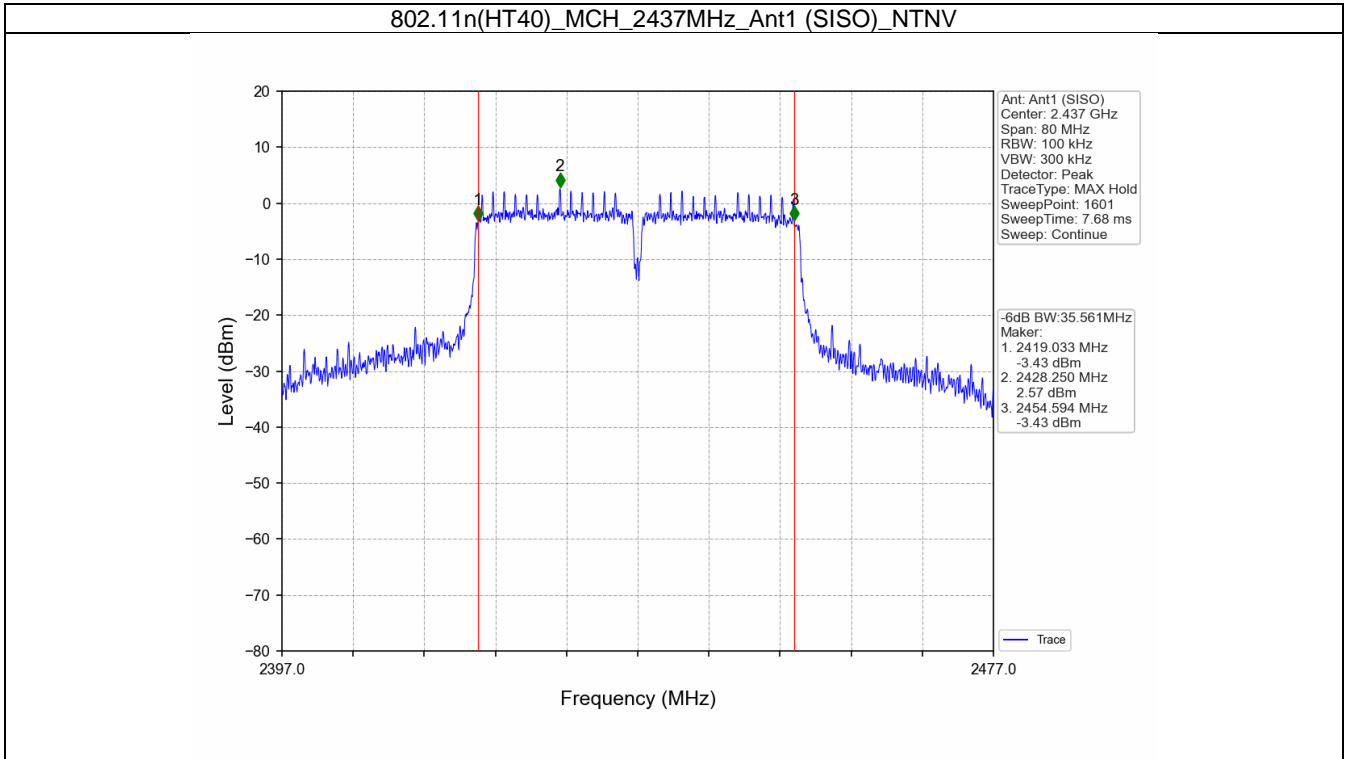












3. Maximum Conducted Output Power

3.1 Power

3.1.1 Test Result

| Mode | TX Type | Frequency (MHz) | Measured Peak Output Power (dBm) | | Verdict |
|-------------------|---------|-----------------|----------------------------------|-------|---------|
| | | | Ant1 | Limit | |
| 802.11b | SISO | 2412 | 23.64 | <=30 | Pass |
| | | 2437 | 23.01 | <=30 | Pass |
| | | 2462 | 22.10 | <=30 | Pass |
| 802.11g | SISO | 2412 | 25.16 | <=30 | Pass |
| | | 2437 | 24.59 | <=30 | Pass |
| | | 2462 | 24.36 | <=30 | Pass |
| 802.11n (HT20) | SISO | 2412 | 24.47 | <=30 | Pass |
| | | 2437 | 23.93 | <=30 | Pass |
| | | 2462 | 23.70 | <=30 | Pass |
| 802.11n (HT40) | SISO | 2422 | 24.68 | <=30 | Pass |
| | | 2437 | 24.12 | <=30 | Pass |
| | | 2452 | 24.40 | <=30 | Pass |

Note1: Antenna Gain: Ant1: 3.77dBi;

4. Maximum Power Spectral Density

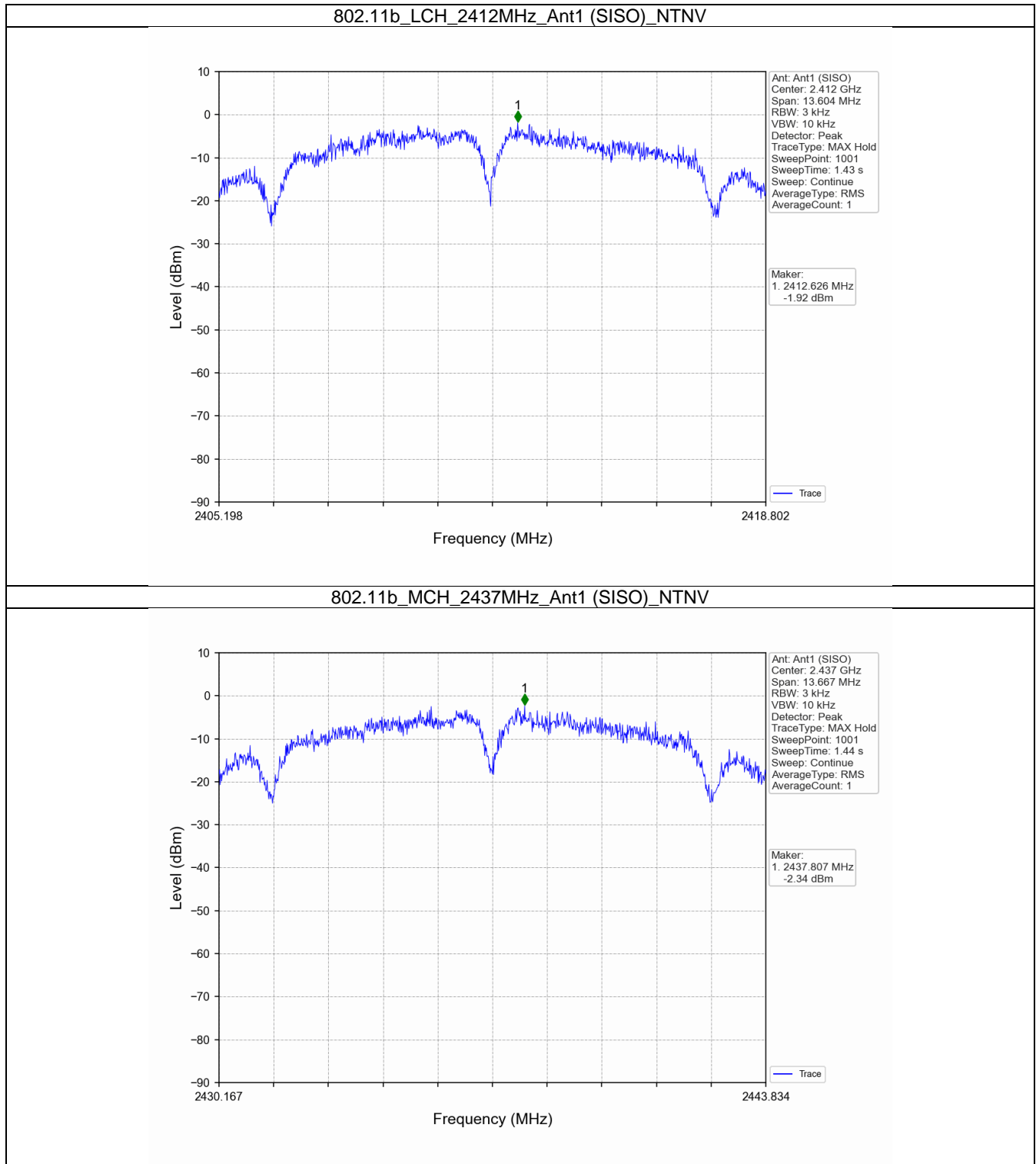
4.1 PSD

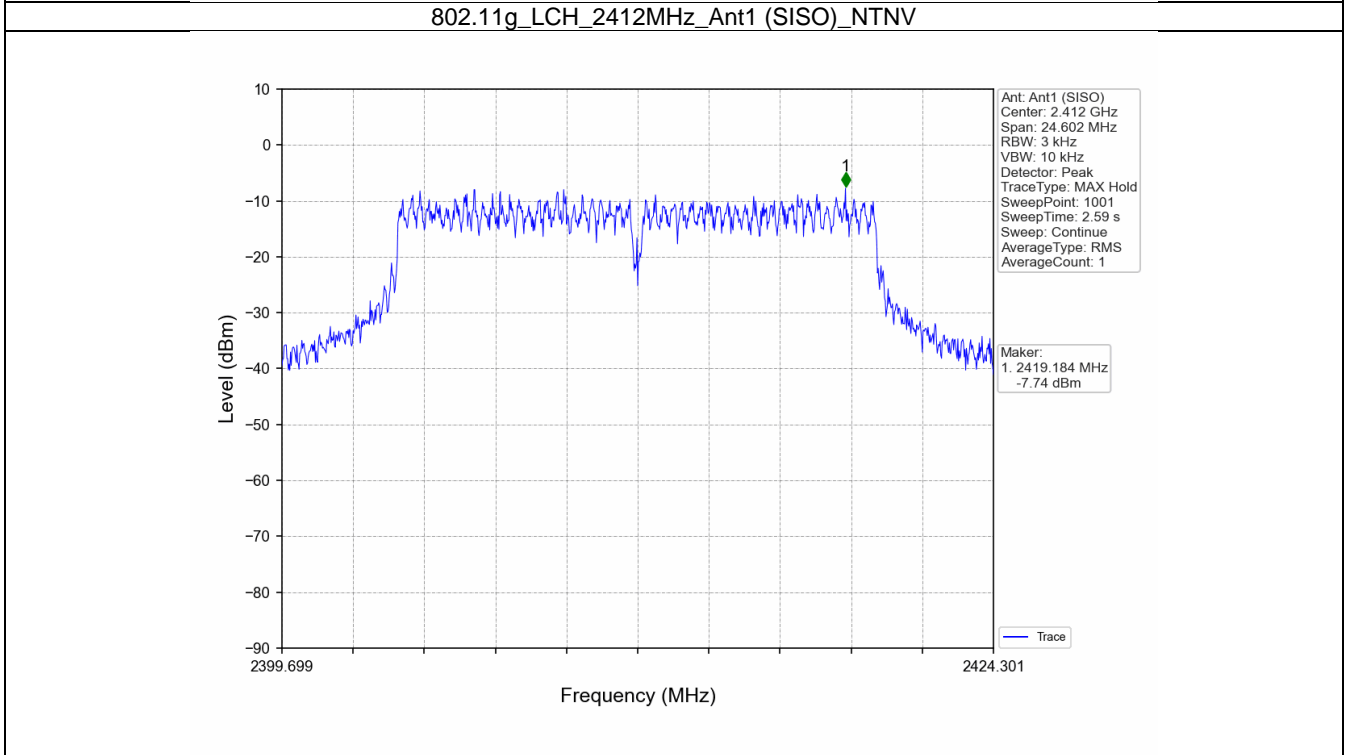
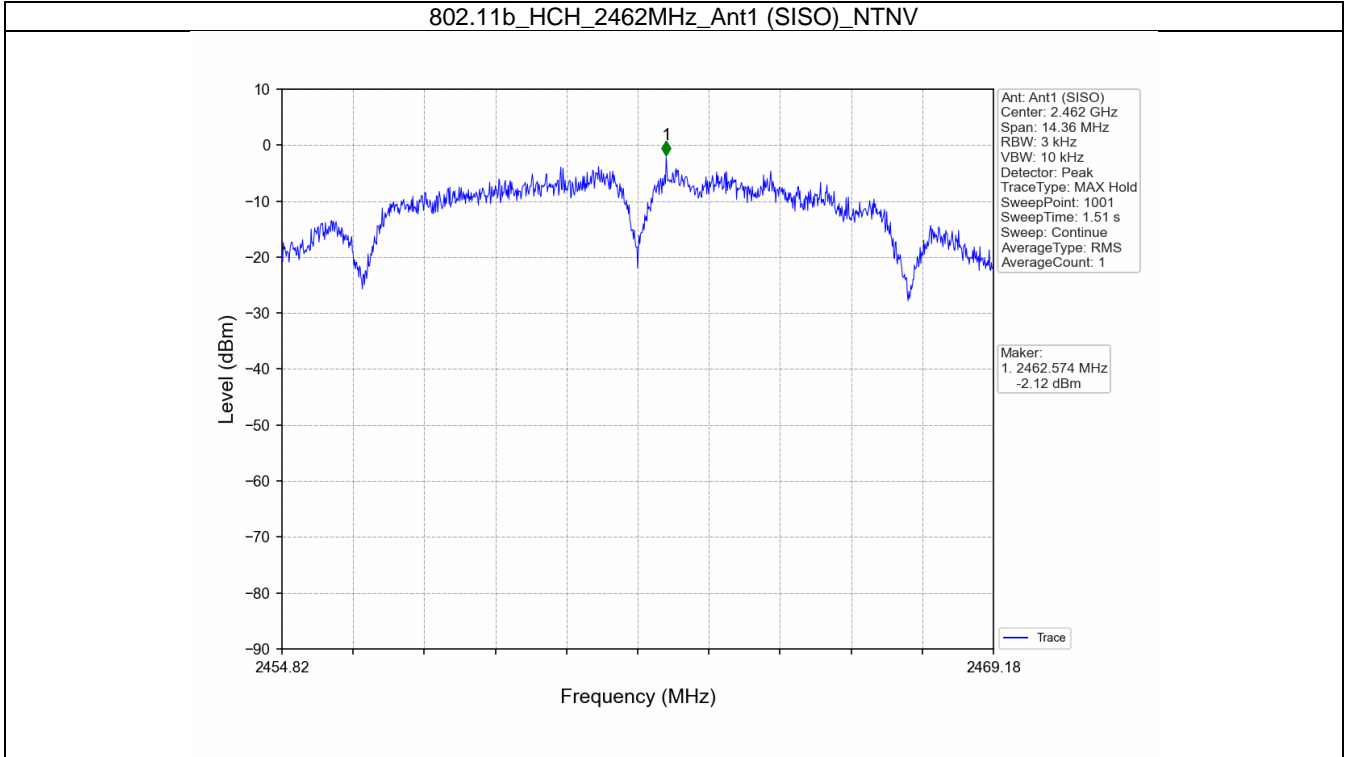
4.1.1 Test Result

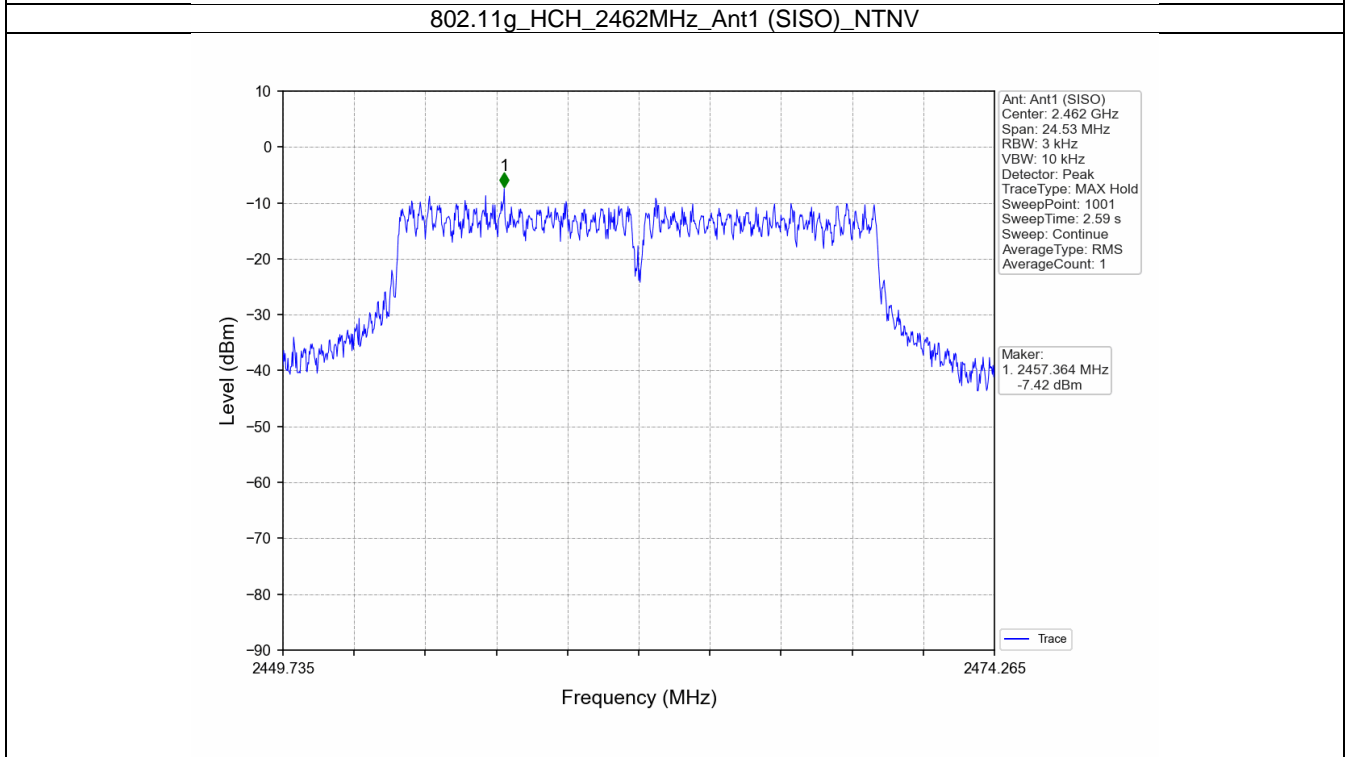
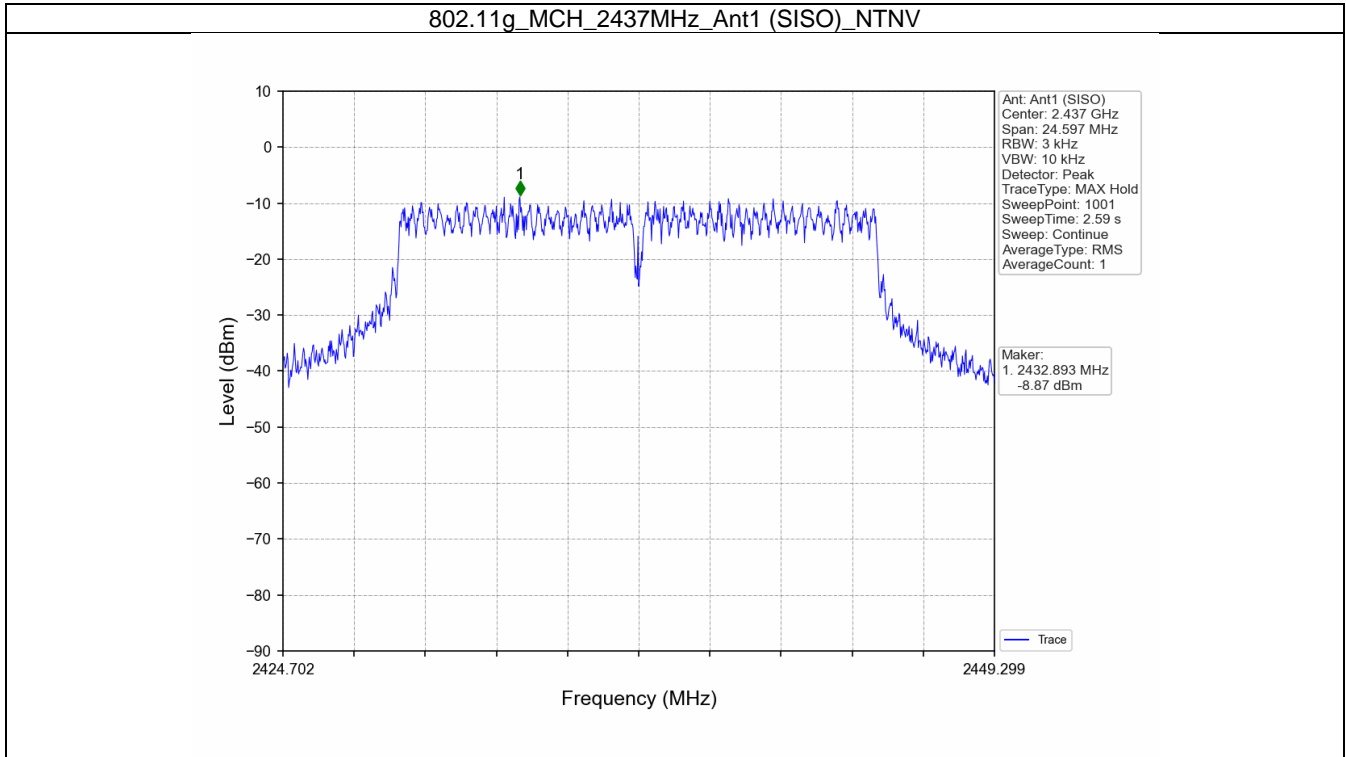
| Mode | TX Type | Frequency (MHz) | Maximum PSD (dBm/3kHz) | | Verdict |
|-------------------|---------|-----------------|------------------------|-------|---------|
| | | | Ant1 | Limit | |
| 802.11b | SISO | 2412 | -1.92 | <=8 | Pass |
| | | 2437 | -2.34 | <=8 | Pass |
| | | 2462 | -2.12 | <=8 | Pass |
| 802.11g | SISO | 2412 | -7.74 | <=8 | Pass |
| | | 2437 | -8.87 | <=8 | Pass |
| | | 2462 | -7.42 | <=8 | Pass |
| 802.11n (HT20) | SISO | 2412 | -8.94 | <=8 | Pass |
| | | 2437 | -8.81 | <=8 | Pass |
| | | 2462 | -9.66 | <=8 | Pass |
| 802.11n (HT40) | SISO | 2422 | -10.72 | <=8 | Pass |
| | | 2437 | -12.15 | <=8 | Pass |
| | | 2452 | -12.01 | <=8 | Pass |

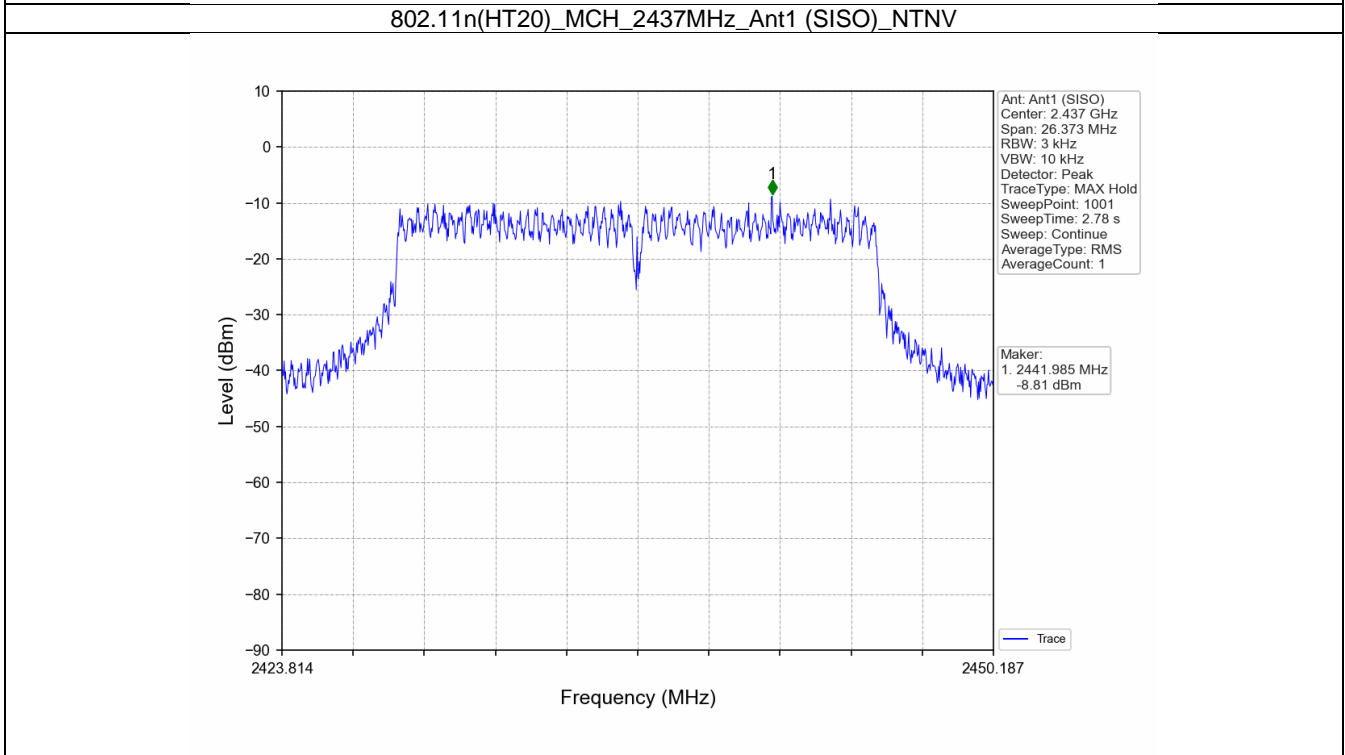
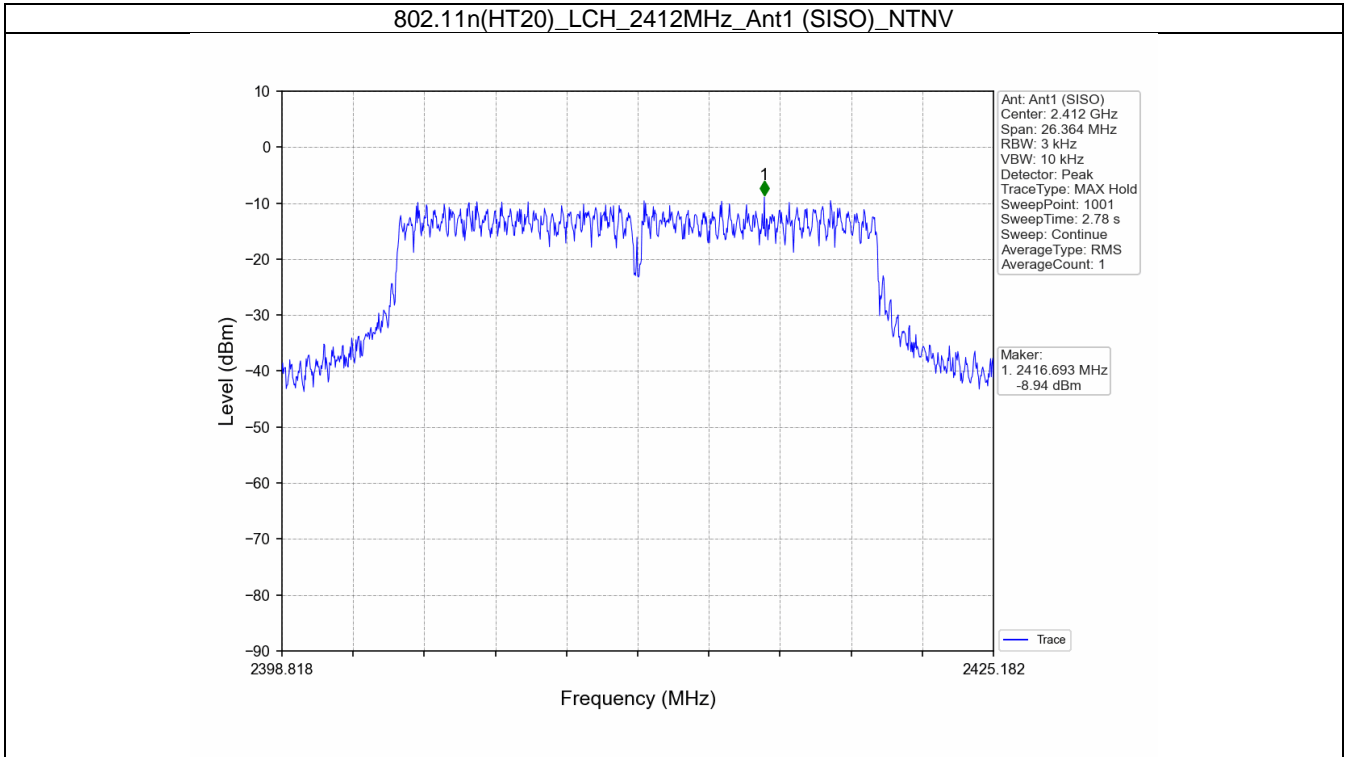
Note1: Antenna Gain: Ant1: 3.77dBi;

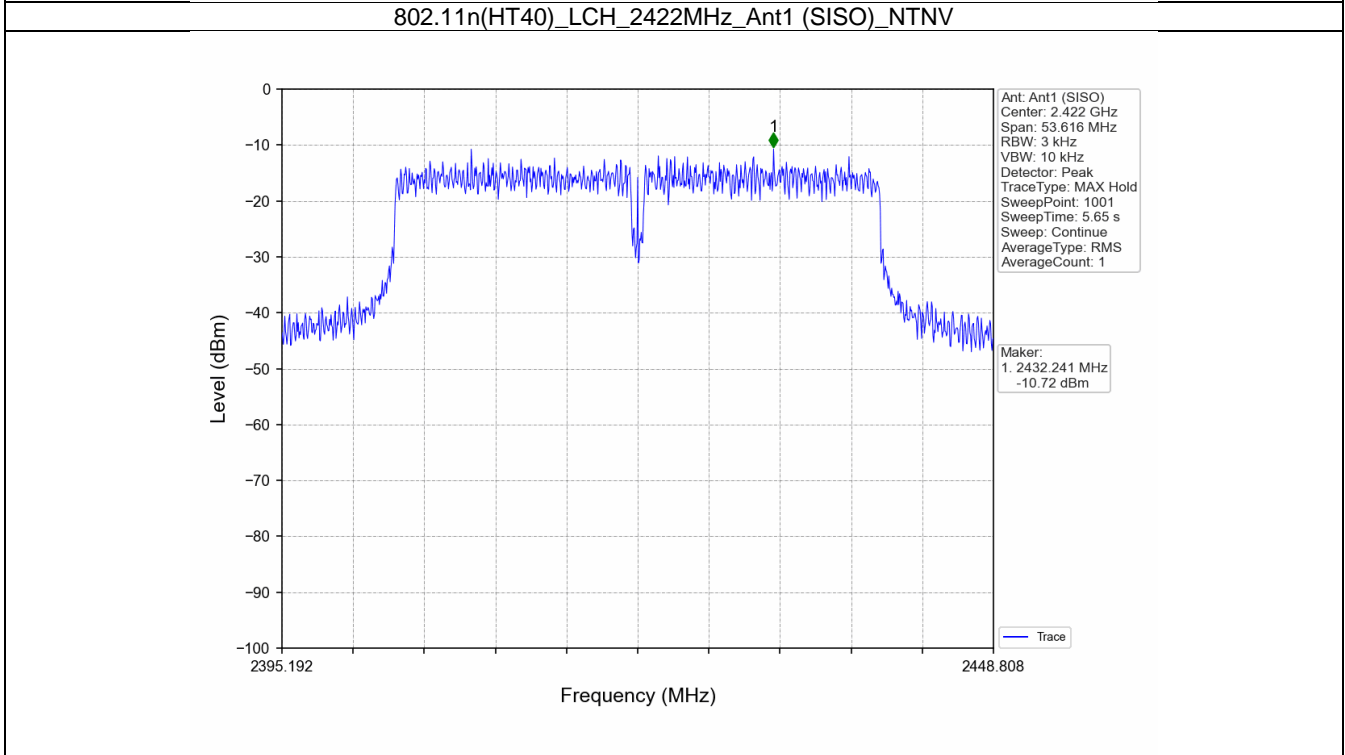
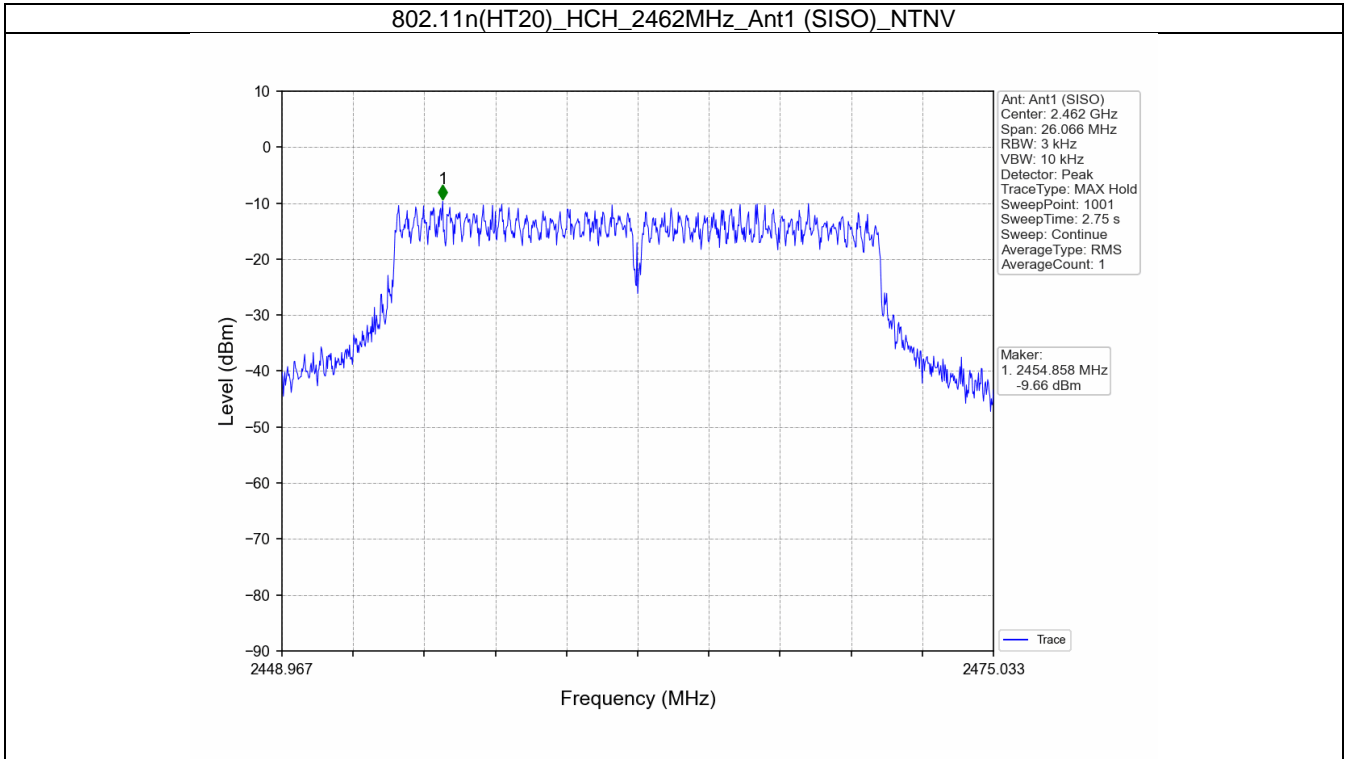
4.1.2 Test Graph

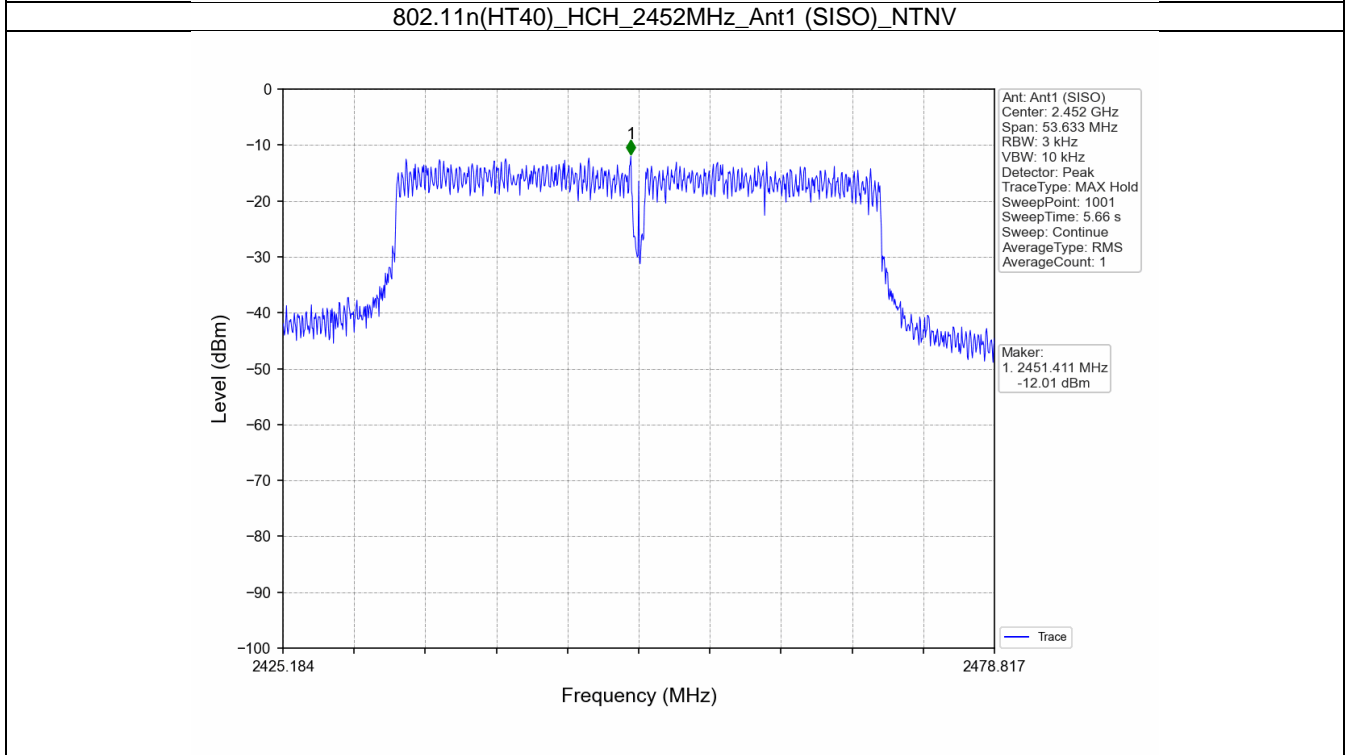
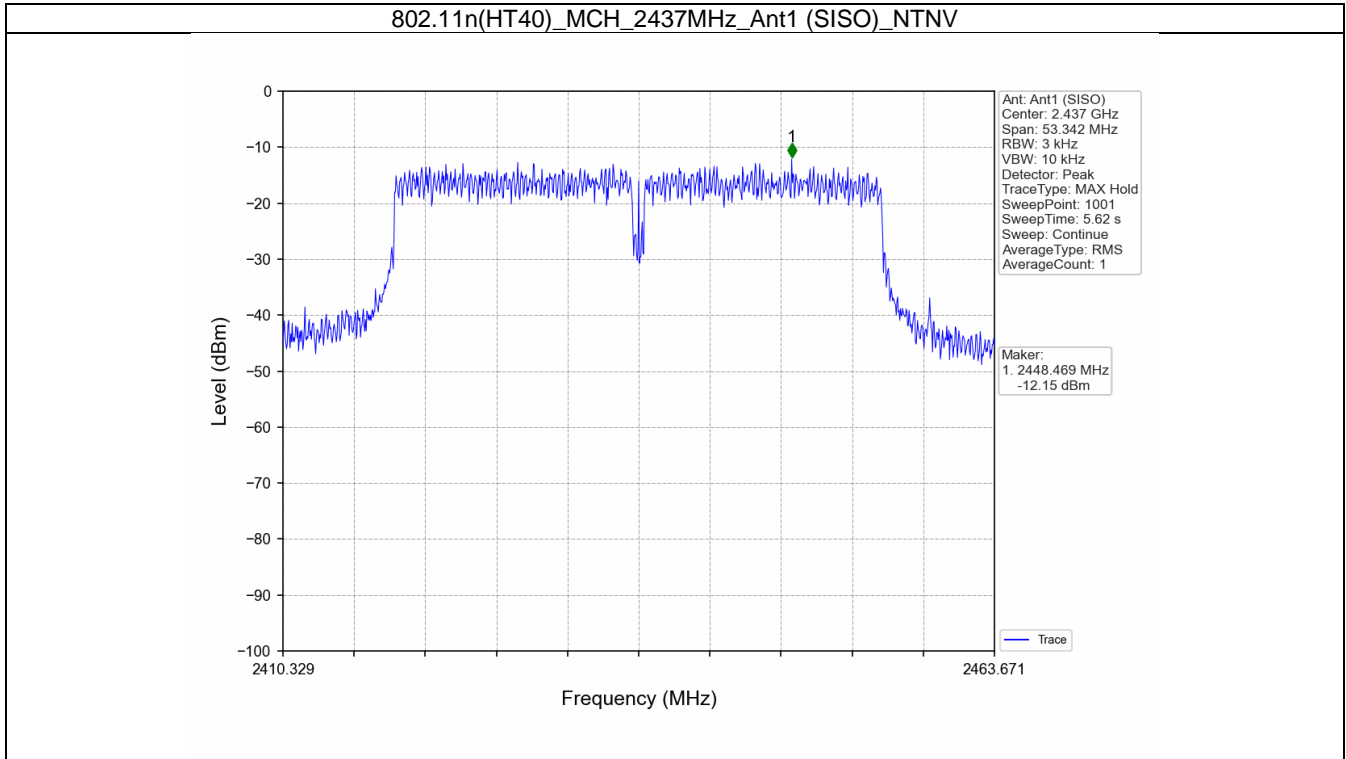












5. Unwanted Emissions In Non-restricted Frequency Bands

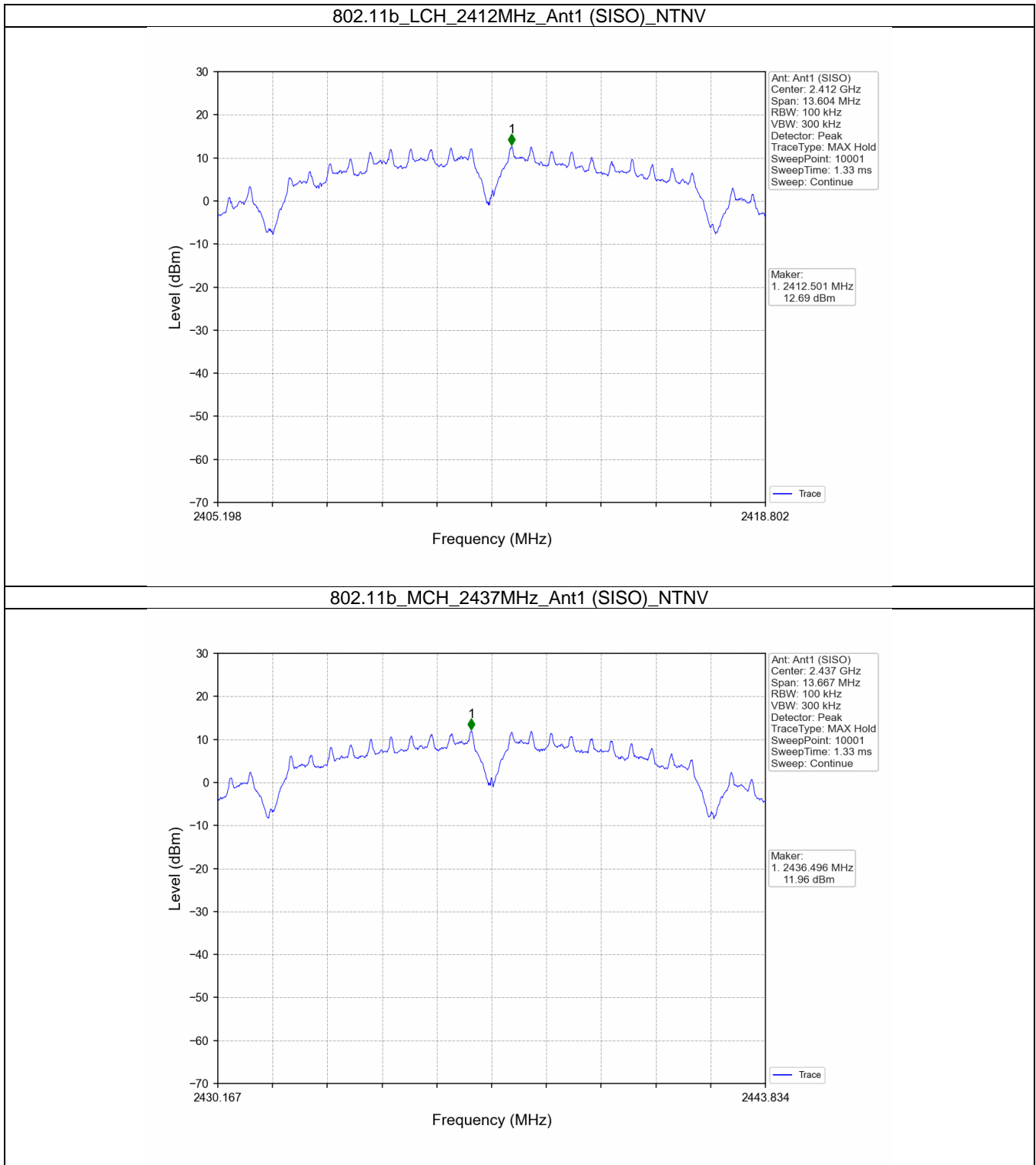
5.1 Ref

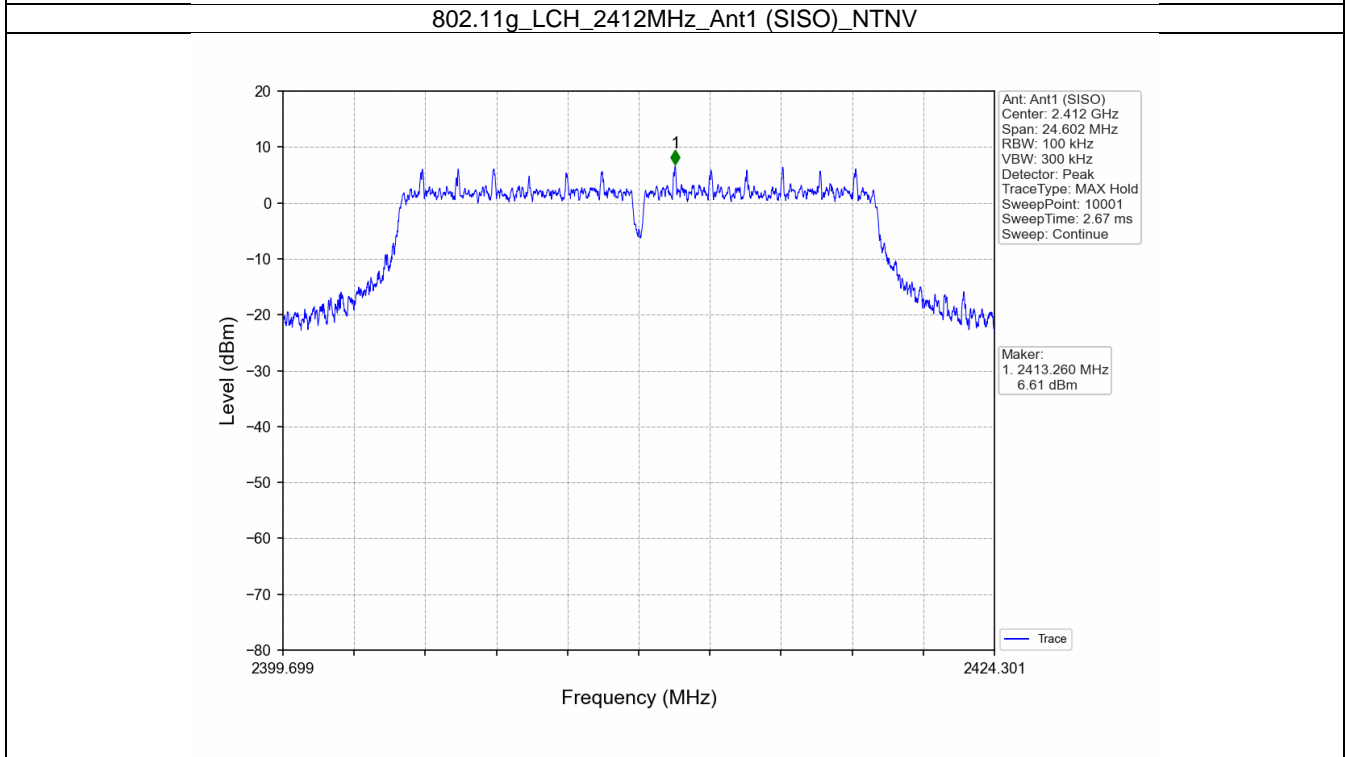
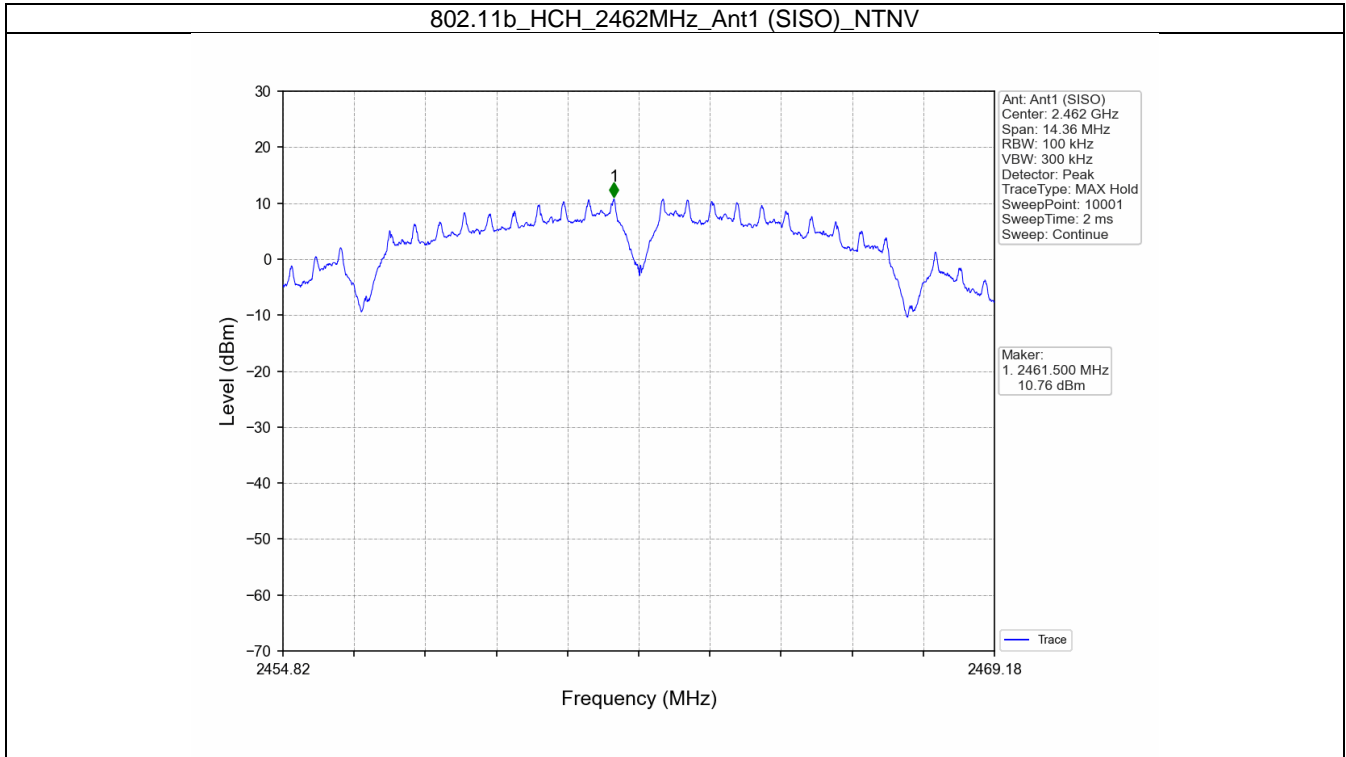
5.1.1 Test Result

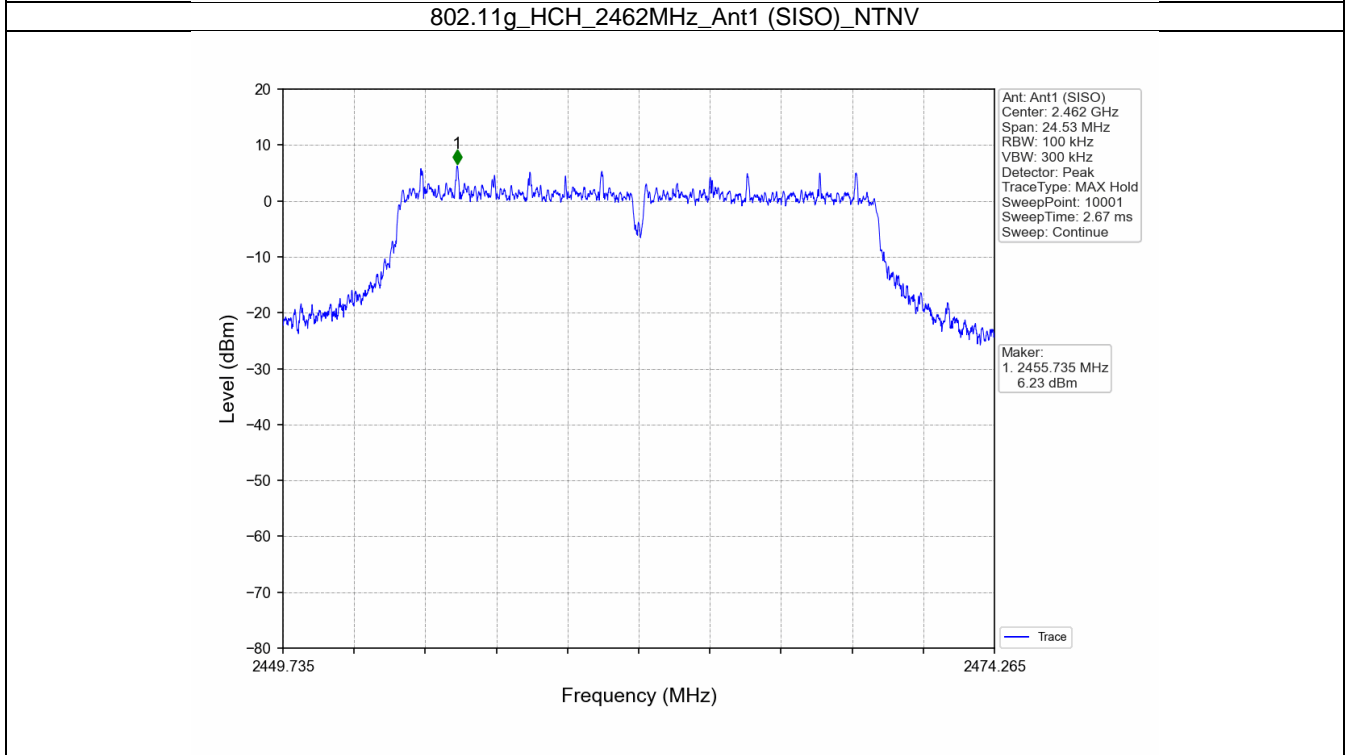
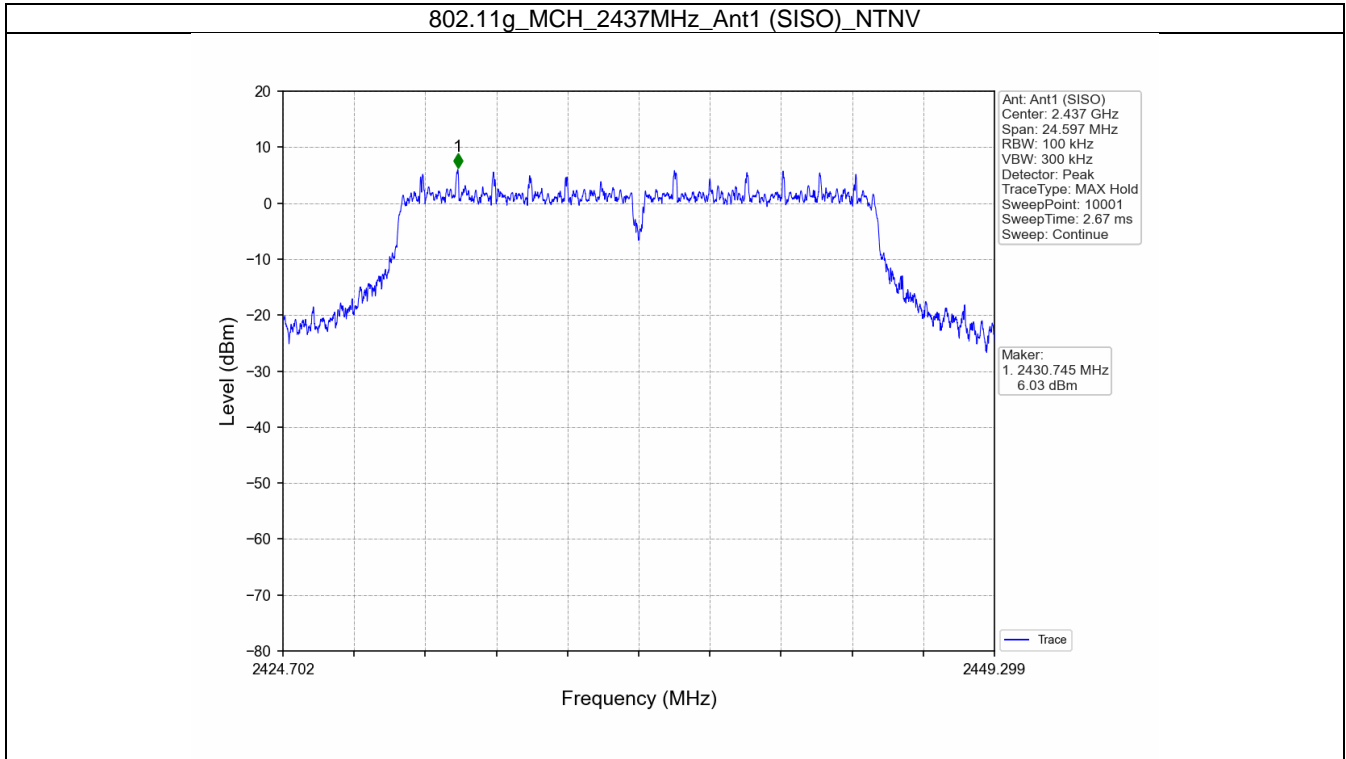
| Mode | TX Type | Frequency (MHz) | Ant | Level of Reference (dBm) |
|----------------|---------|-----------------|-----|--------------------------|
| 802.11b | SISO | 2412 | 1 | 12.69 |
| | | 2437 | 1 | 11.96 |
| | | 2462 | 1 | 10.76 |
| 802.11g | SISO | 2412 | 1 | 6.61 |
| | | 2437 | 1 | 6.03 |
| | | 2462 | 1 | 6.23 |
| 802.11n (HT20) | SISO | 2412 | 1 | 5.71 |
| | | 2437 | 1 | 5.31 |
| | | 2462 | 1 | 5.45 |
| 802.11n (HT40) | SISO | 2422 | 1 | 2.81 |
| | | 2437 | 1 | 2.41 |
| | | 2452 | 1 | 3.16 |

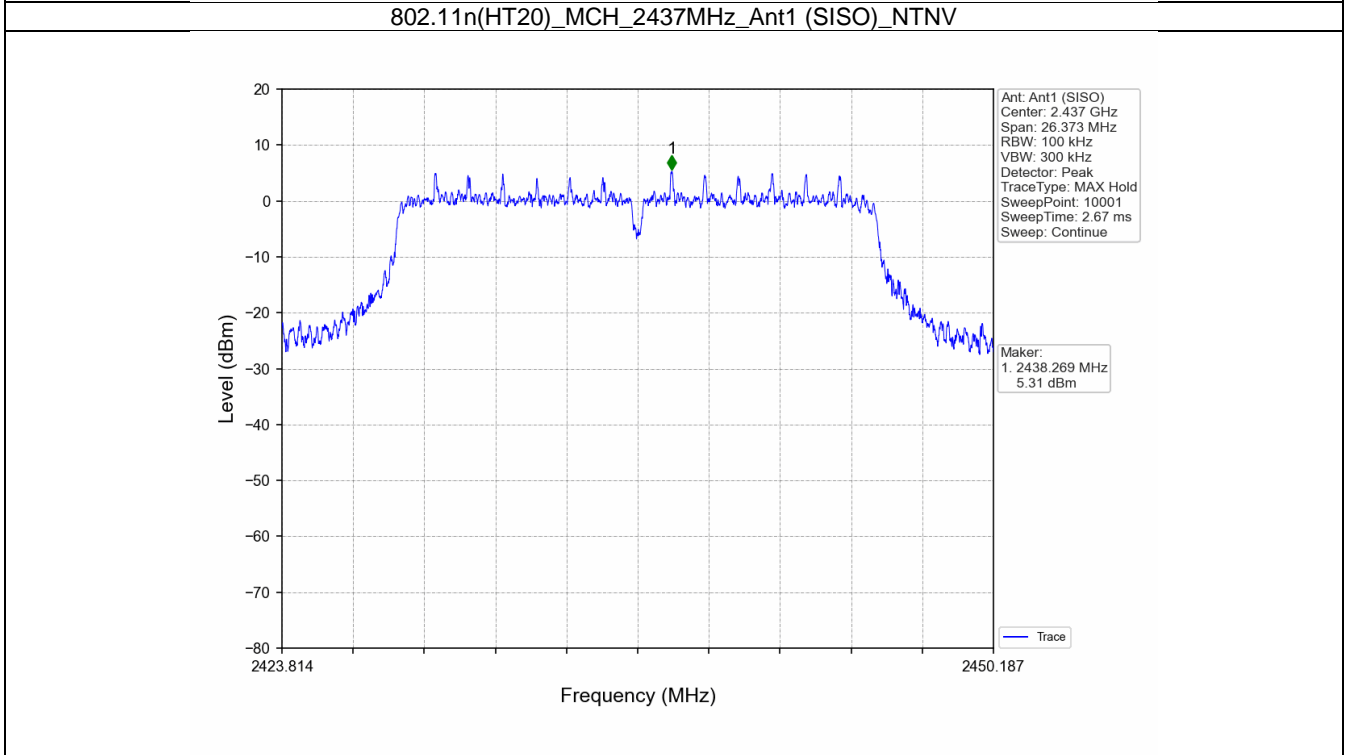
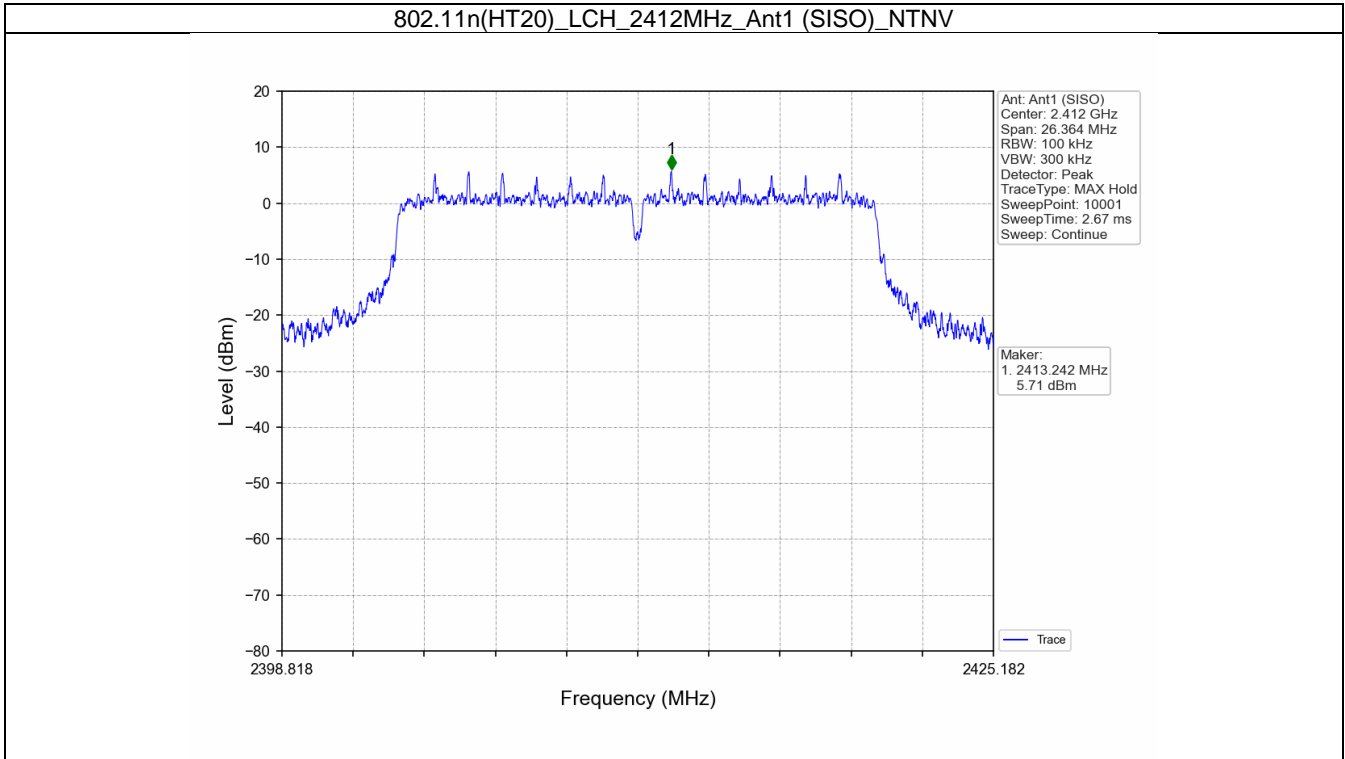
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.

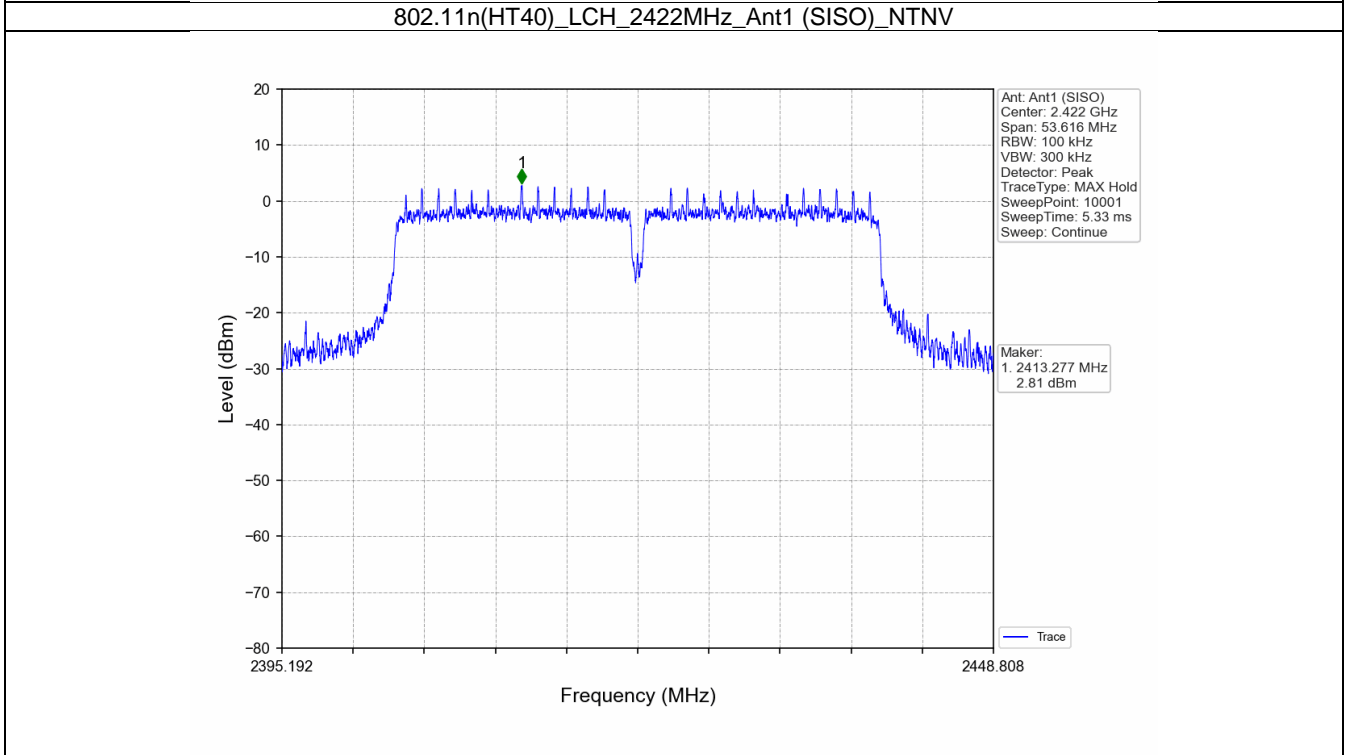
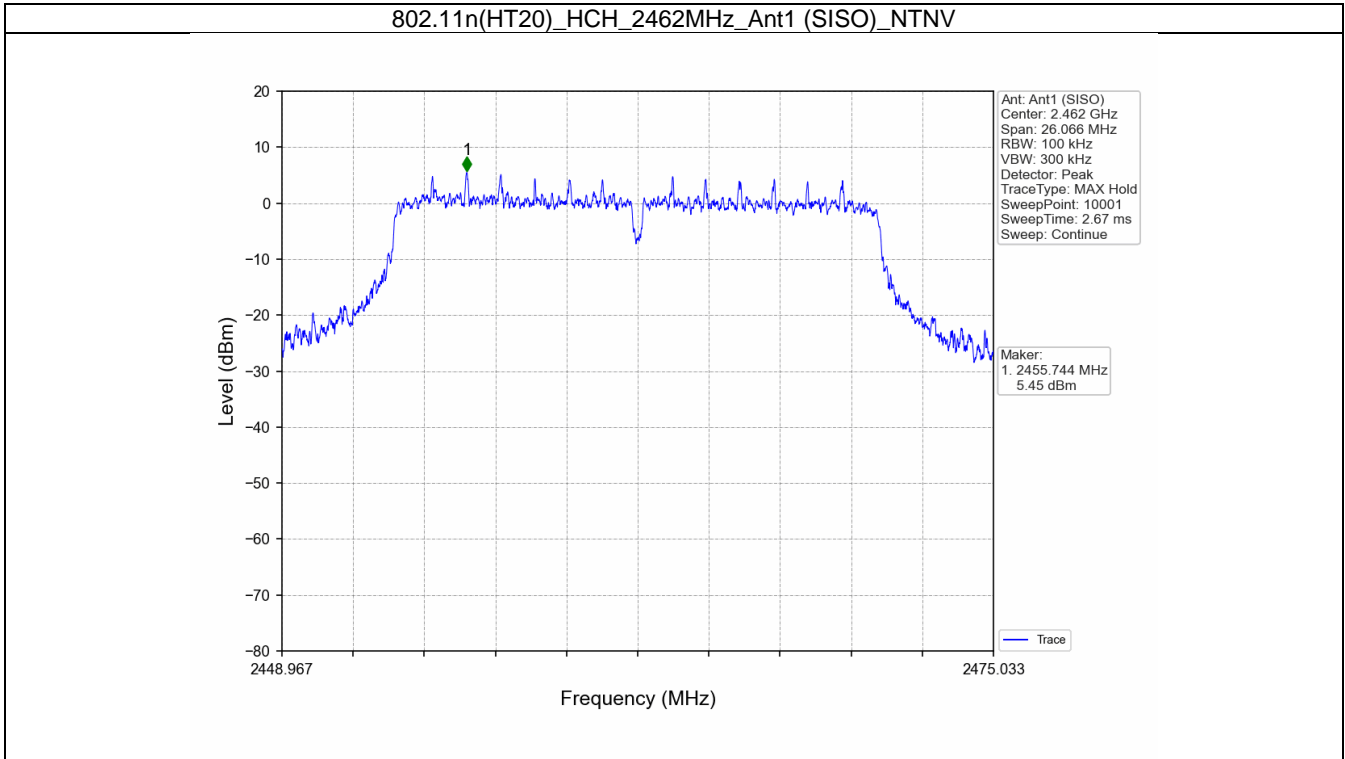
5.1.2 Test Graph

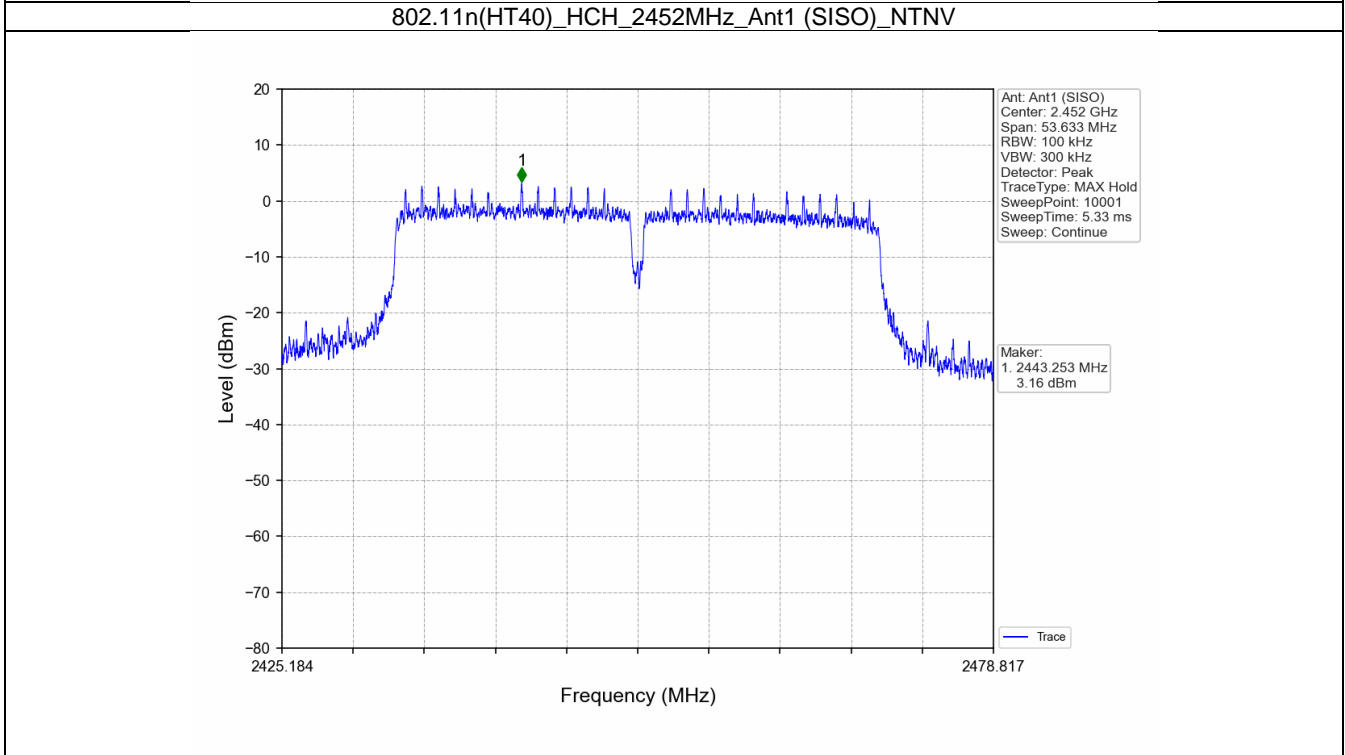
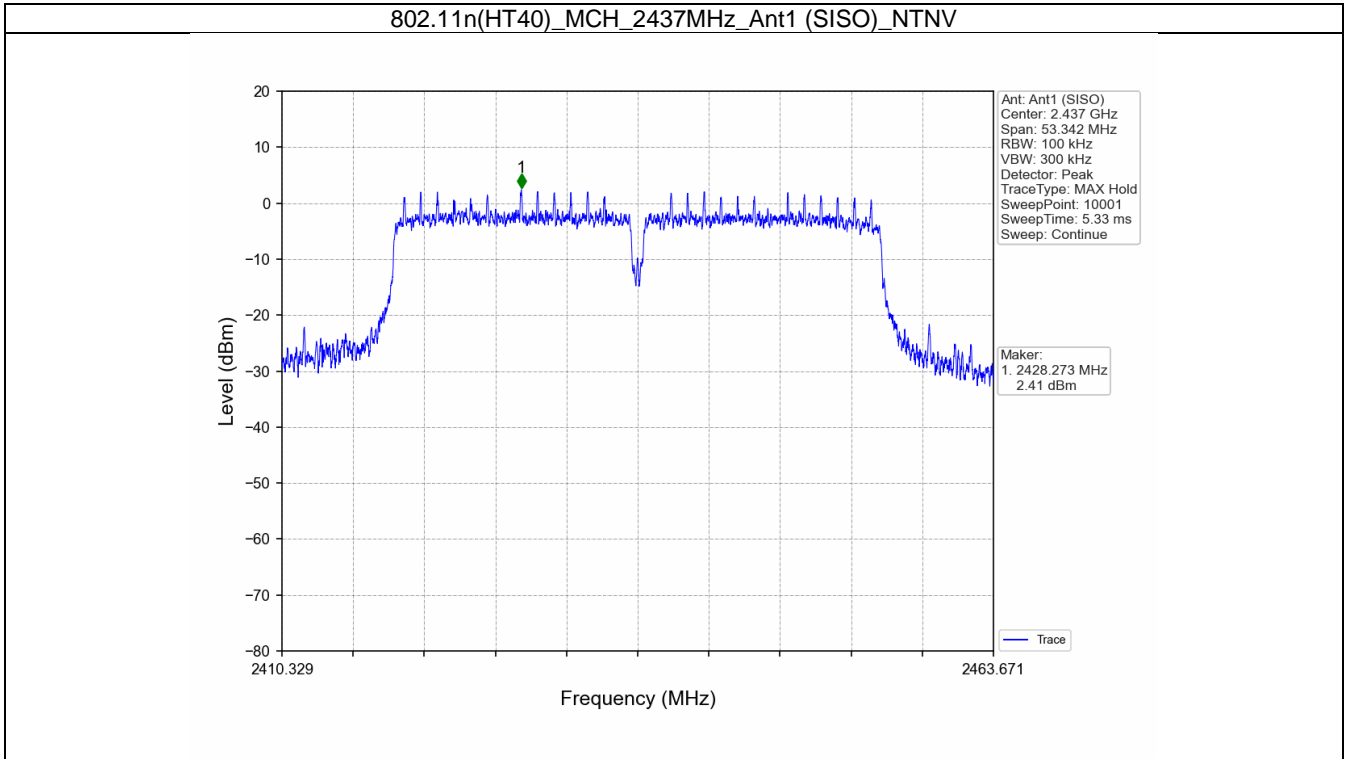












5.2 CSE

5.2.1 Test Result

| Mode | TX Type | Frequency (MHz) | Ant | Level of Reference (dBm) | Limit (dBm) | Verdict |
|-------------------|---------|-----------------|-----|--------------------------|-------------|---------|
| 802.11b | SISO | 2412 | 1 | 12.69 | -7.31 | Pass |
| | | 2437 | 1 | 12.69 | -7.31 | Pass |
| | | 2462 | 1 | 12.69 | -7.31 | Pass |
| 802.11g | SISO | 2412 | 1 | 6.61 | -13.39 | Pass |
| | | 2437 | 1 | 6.61 | -13.39 | Pass |
| | | 2462 | 1 | 6.61 | -13.39 | Pass |
| 802.11n (HT20) | SISO | 2412 | 1 | 5.71 | -14.29 | Pass |
| | | 2437 | 1 | 5.71 | -14.29 | Pass |
| | | 2462 | 1 | 5.71 | -14.29 | Pass |
| 802.11n (HT40) | SISO | 2422 | 1 | 3.16 | -16.84 | Pass |
| | | 2437 | 1 | 3.16 | -16.84 | Pass |
| | | 2452 | 1 | 3.16 | -16.84 | Pass |

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

5.2.2 Test Graph

