



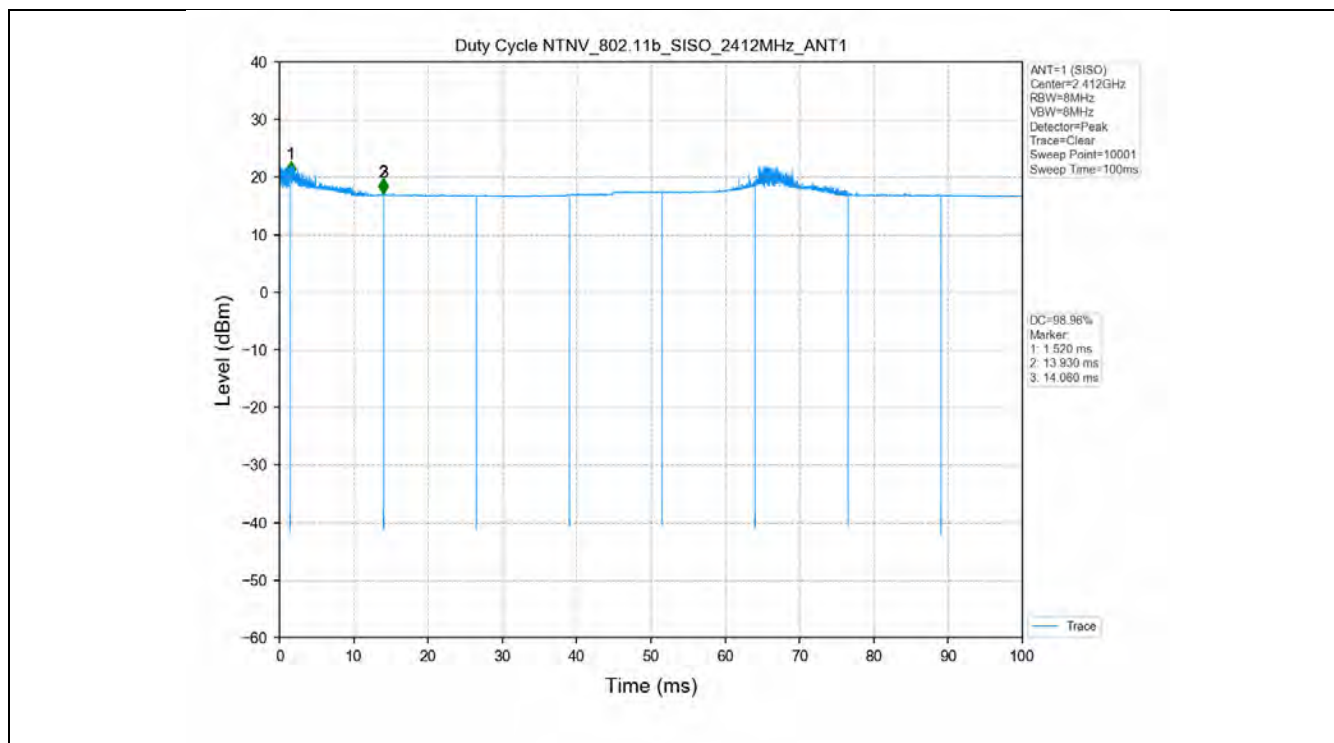
## Appendix for SHEM2004002398CR

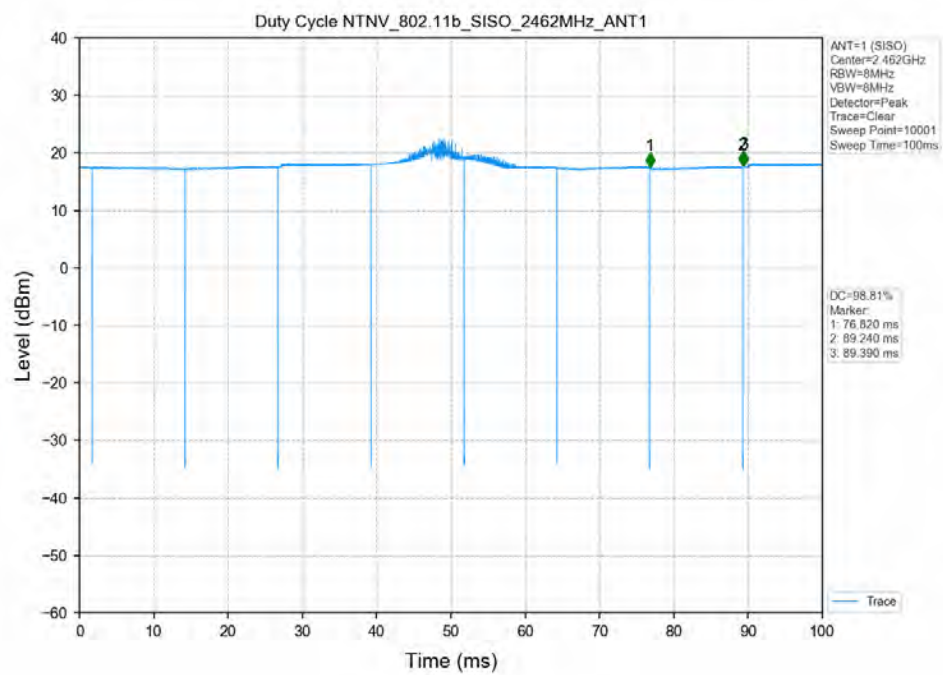
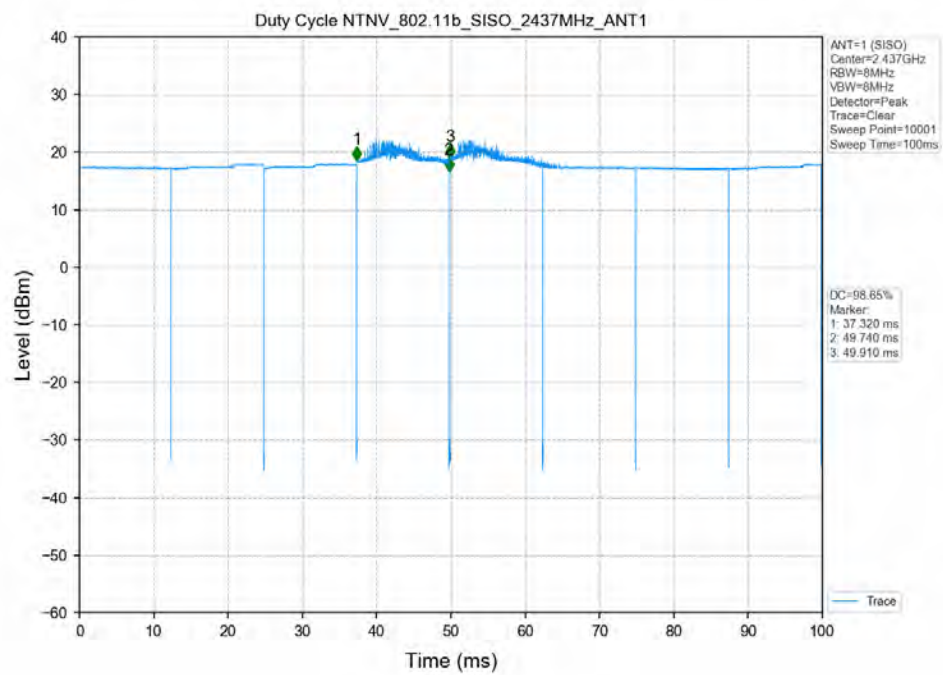
### 1. Duty Cycle

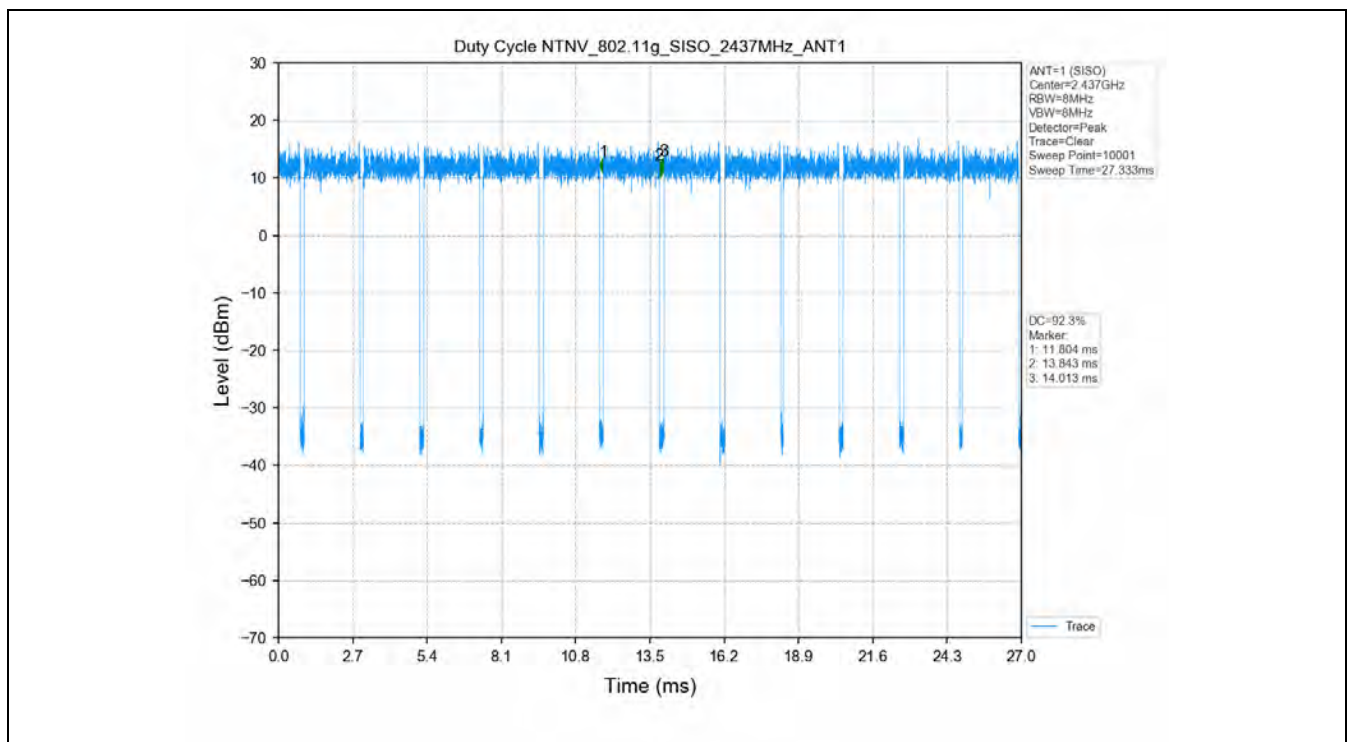
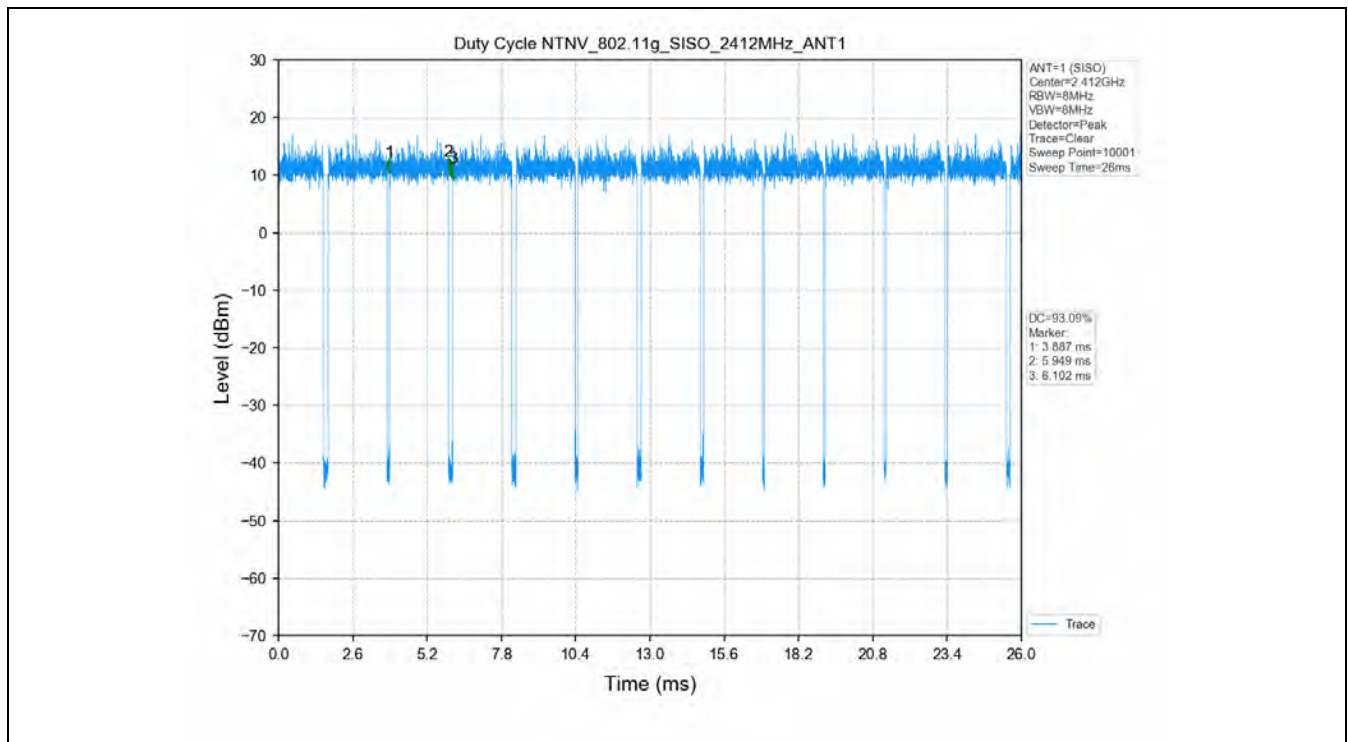
#### 1.1 Test Result

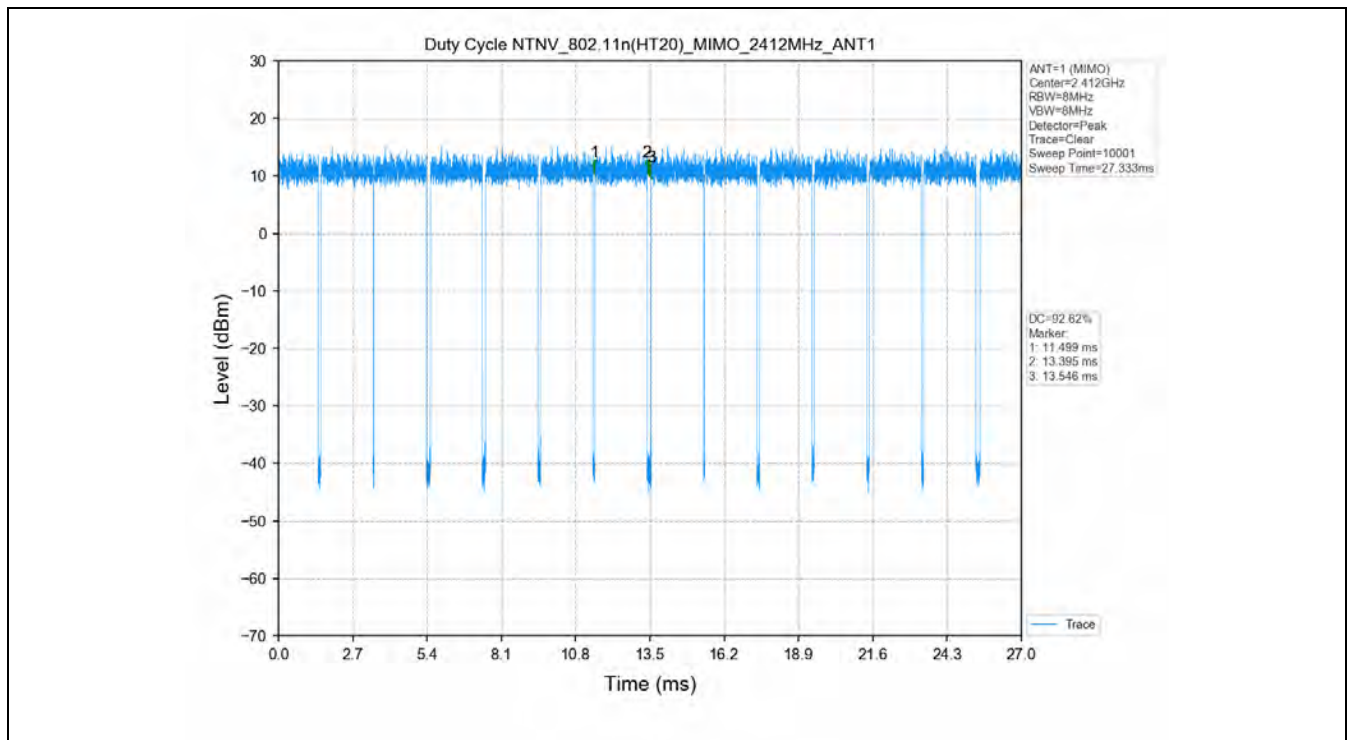
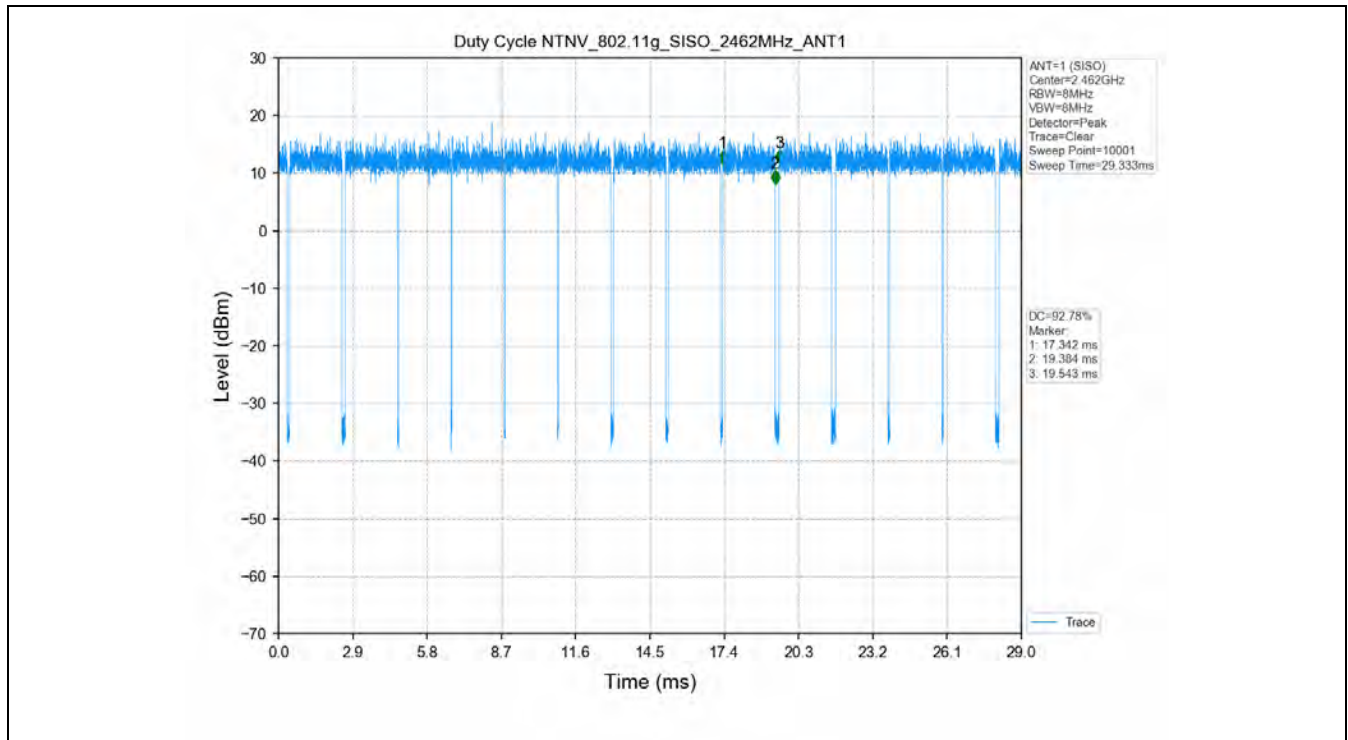
| Test Mode     | Channel Frequency(MHz) | TX Type | ANT No. | T_on (ms) | Period (ms) | Duty Cycle (%) | Duty Cycle Correction Factor (dB) |
|---------------|------------------------|---------|---------|-----------|-------------|----------------|-----------------------------------|
| 802.11b       | 2412                   | SISO    | 1       | 12.410    | 12.540      | 98.96          | 0.05                              |
|               | 2437                   | SISO    | 1       | 12.420    | 12.590      | 98.65          | 0.06                              |
|               | 2462                   | SISO    | 1       | 12.420    | 12.570      | 98.81          | 0.05                              |
| 802.11g       | 2412                   | SISO    | 1       | 2.062     | 2.215       | 93.09          | 0.31                              |
|               | 2437                   | SISO    | 1       | 2.039     | 2.209       | 92.30          | 0.35                              |
|               | 2462                   | SISO    | 1       | 2.042     | 2.201       | 92.78          | 0.33                              |
| 802.11n(HT20) | 2412                   | MIMO    | 1       | 1.896     | 2.047       | 92.62          | 0.33                              |
|               | 2437                   | MIMO    | 1       | 1.895     | 2.062       | 91.90          | 0.37                              |
|               | 2462                   | MIMO    | 1       | 1.893     | 2.045       | 92.57          | 0.34                              |
| 802.11n(HT40) | 2422                   | MIMO    | 1       | 0.920     | 1.078       | 85.34          | 0.69                              |
|               | 2437                   | MIMO    | 1       | 0.944     | 1.078       | 87.57          | 0.58                              |
|               | 2452                   | MIMO    | 1       | 0.920     | 1.079       | 85.26          | 0.69                              |

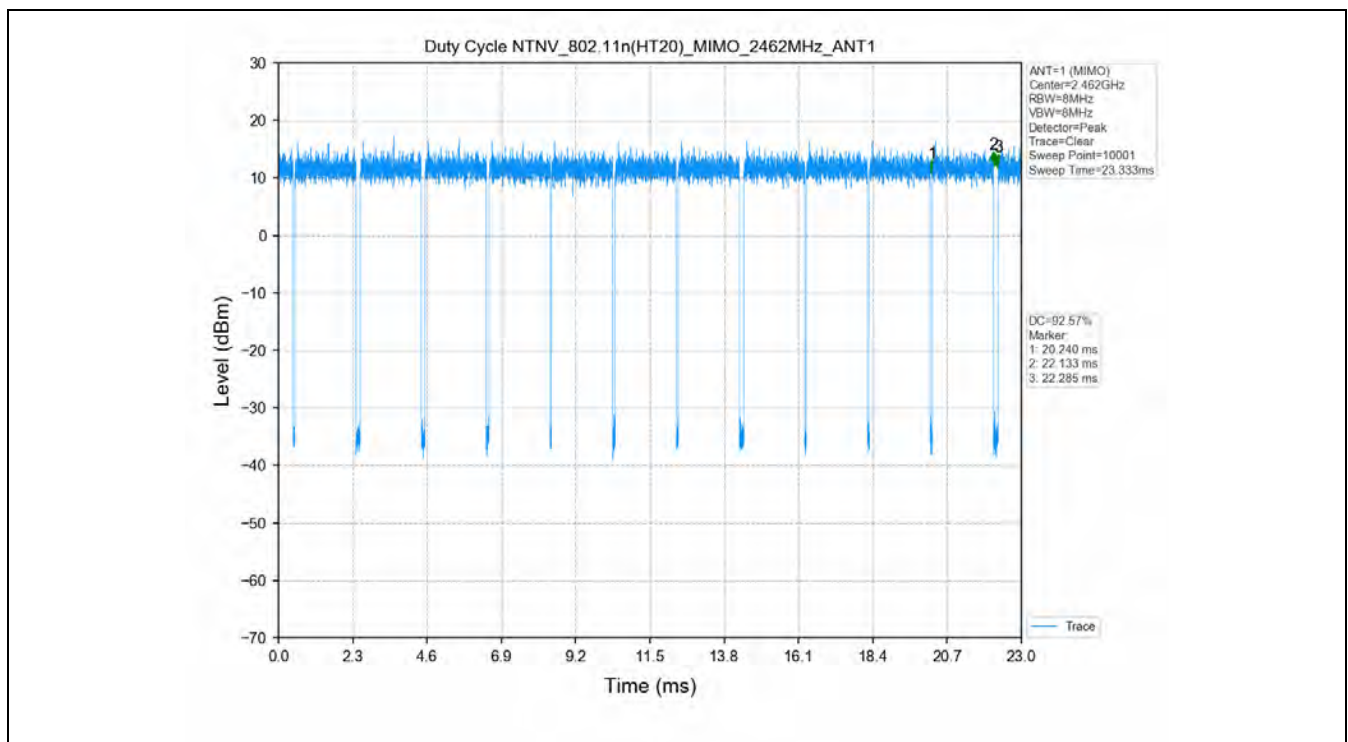
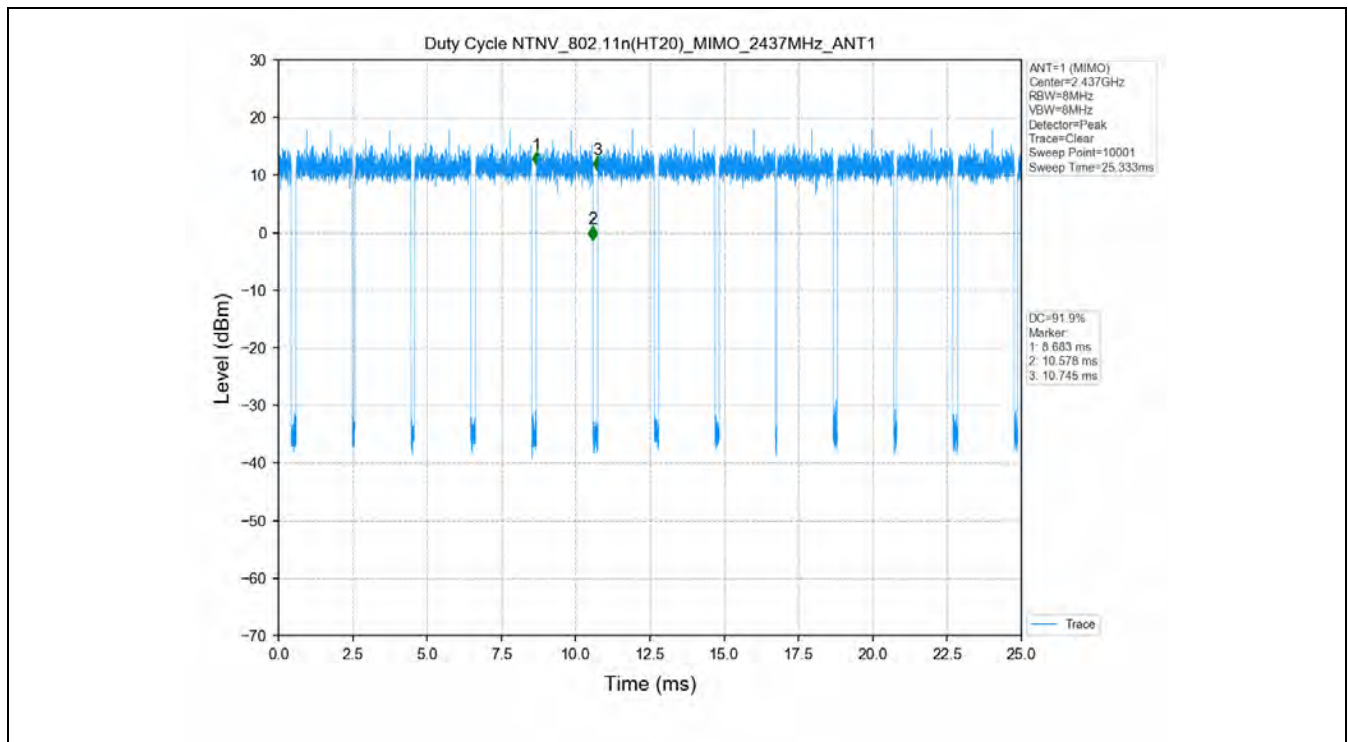
#### 1.2 Test Graph

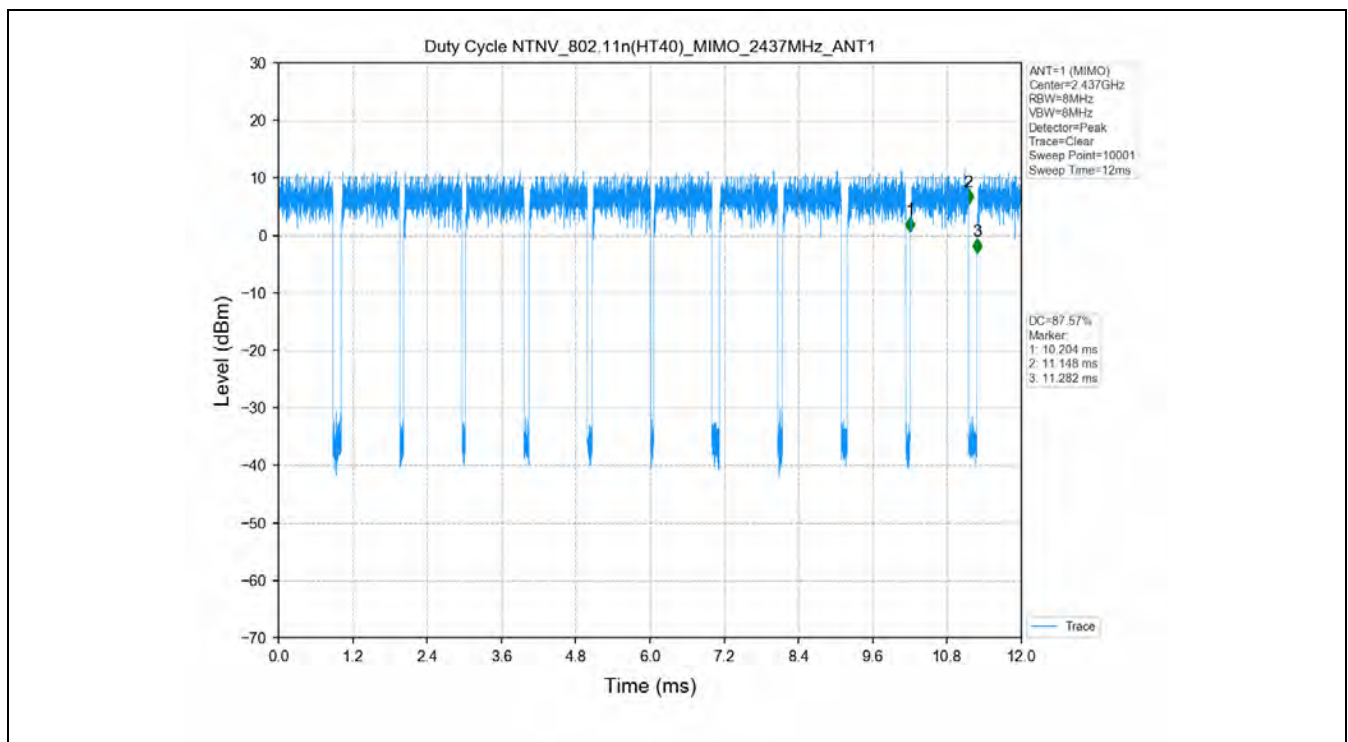
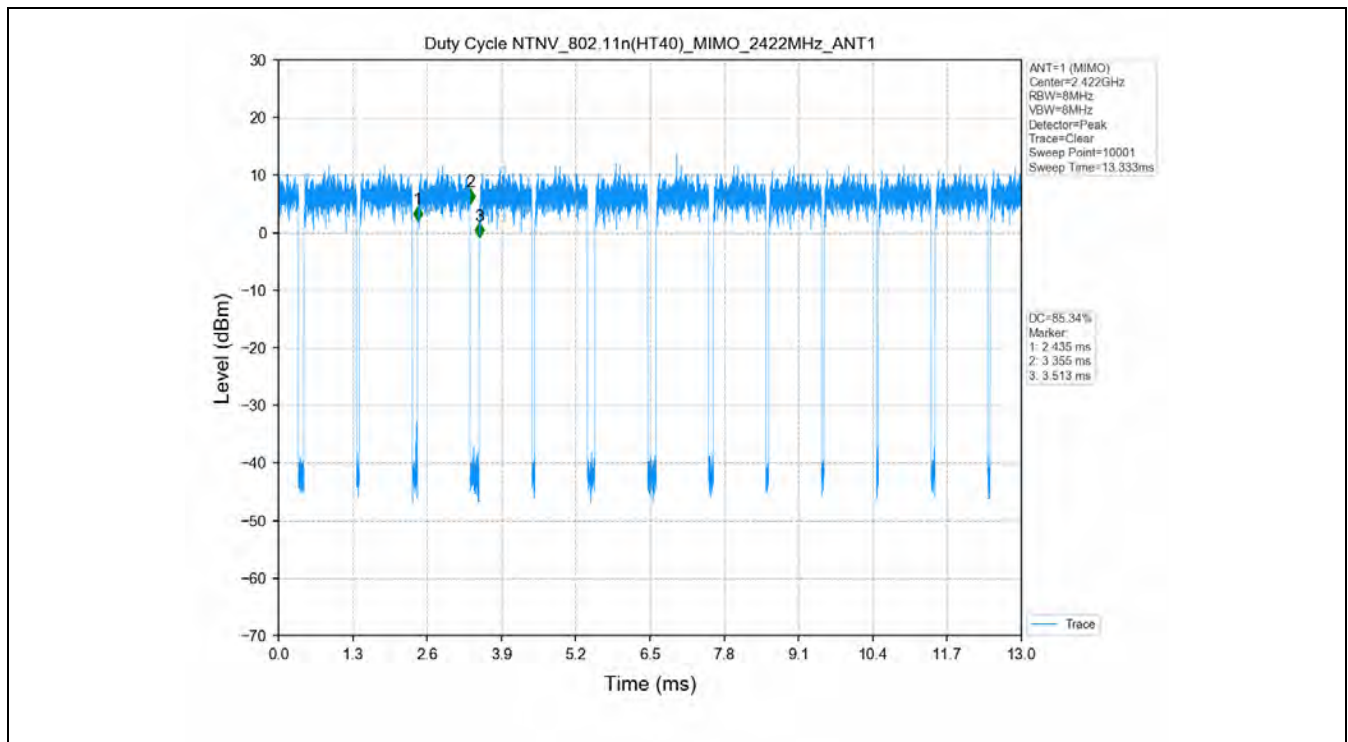


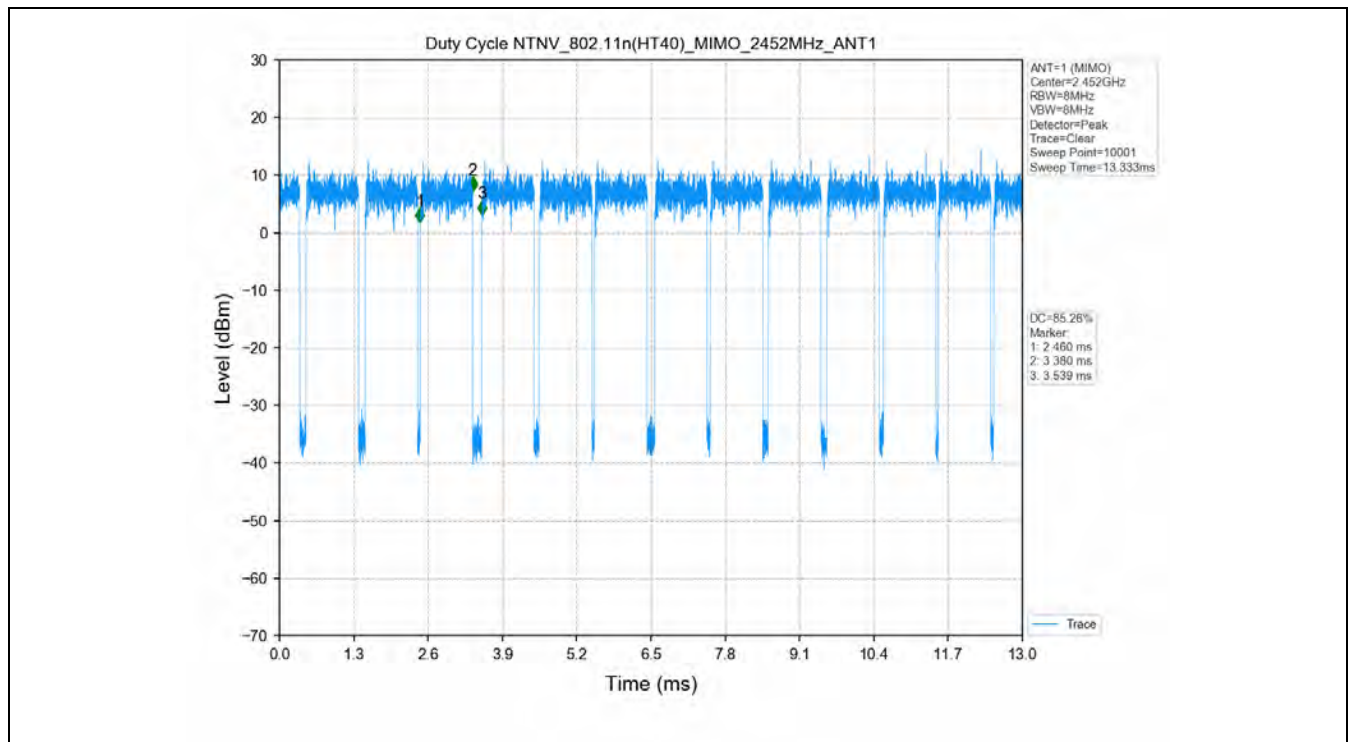












## 2. Bandwidth

### 2.1 Test Result

| Test Mode     | Frequency (MHz) | TX Type | ANT No. | 6dB Bandwidth     |              | Verdict |
|---------------|-----------------|---------|---------|-------------------|--------------|---------|
|               |                 |         |         | Test Result (MHz) | Limits (MHz) |         |
| 802.11b       | 2412            | SISO    | 1       | 10.062            | $\geq 0.5$   | PASS    |
|               |                 |         | 2       | 10.062            | $\geq 0.5$   | PASS    |
|               | 2437            | SISO    | 1       | 10.082            | $\geq 0.5$   | PASS    |
|               |                 |         | 2       | 10.100            | $\geq 0.5$   | PASS    |
|               | 2462            | SISO    | 1       | 10.052            | $\geq 0.5$   | PASS    |
|               |                 |         | 2       | 9.121             | $\geq 0.5$   | PASS    |
| 802.11g       | 2412            | SISO    | 1       | 16.424            | $\geq 0.5$   | PASS    |
|               |                 |         | 2       | 16.423            | $\geq 0.5$   | PASS    |
|               | 2437            | SISO    | 1       | 16.402            | $\geq 0.5$   | PASS    |
|               |                 |         | 2       | 16.424            | $\geq 0.5$   | PASS    |
|               | 2462            | SISO    | 1       | 16.424            | $\geq 0.5$   | PASS    |
|               |                 |         | 2       | 16.437            | $\geq 0.5$   | PASS    |
| 802.11n(HT20) | 2412            | MIMO    | 1       | 17.641            | $\geq 0.5$   | PASS    |
|               |                 |         | 2       | 17.622            | $\geq 0.5$   | PASS    |
|               | 2437            | MIMO    | 1       | 17.613            | $\geq 0.5$   | PASS    |
|               |                 |         | 2       | 17.623            | $\geq 0.5$   | PASS    |
|               | 2462            | MIMO    | 1       | 17.601            | $\geq 0.5$   | PASS    |
|               |                 |         | 2       | 17.632            | $\geq 0.5$   | PASS    |
| 802.11n(HT40) | 2422            | MIMO    | 1       | 35.534            | $\geq 0.5$   | PASS    |
|               |                 |         | 2       | 35.596            | $\geq 0.5$   | PASS    |
|               | 2437            | MIMO    | 1       | 35.788            | $\geq 0.5$   | PASS    |

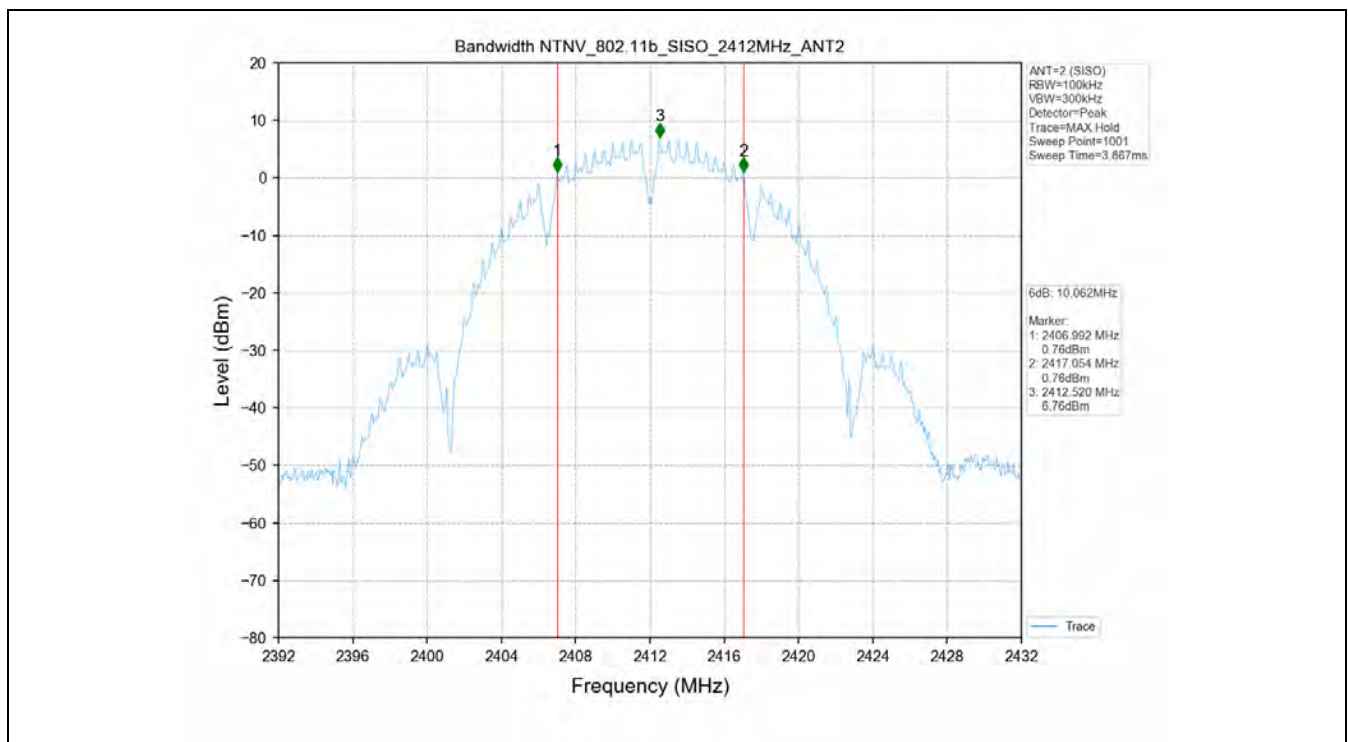
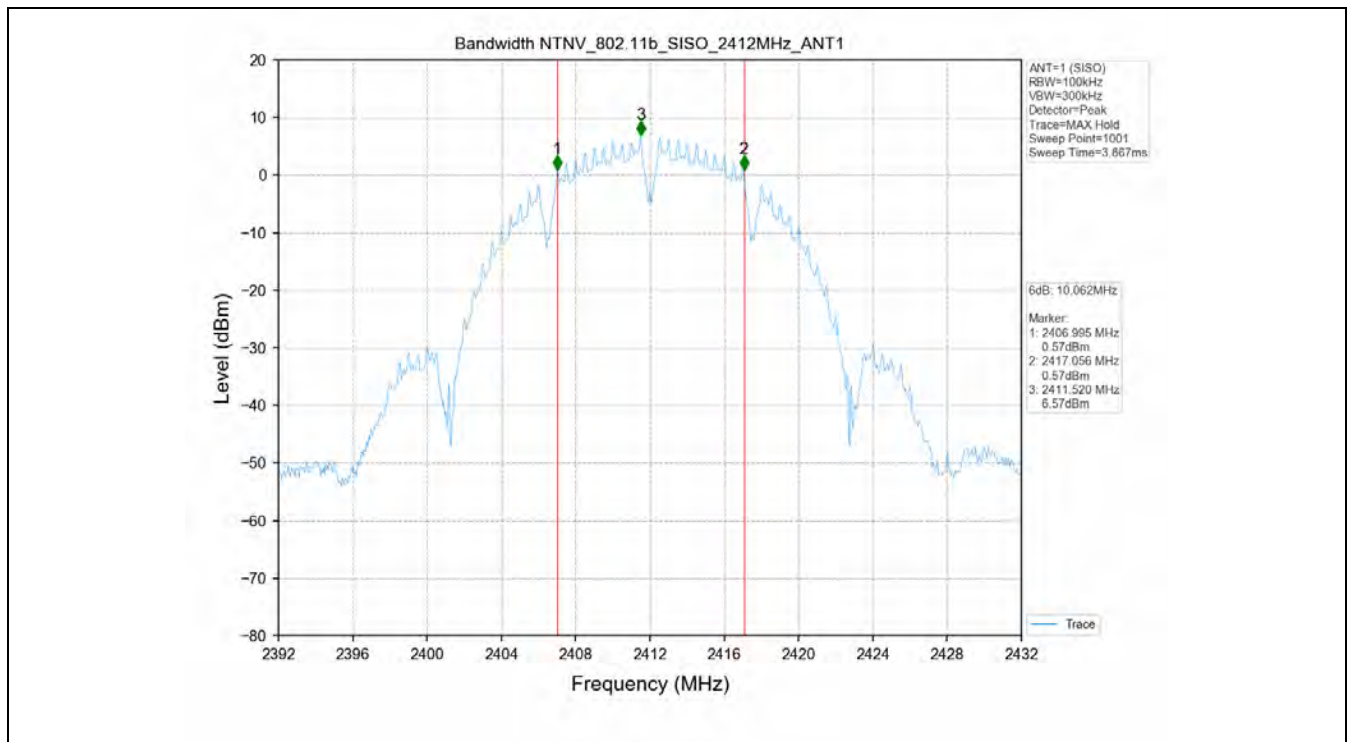


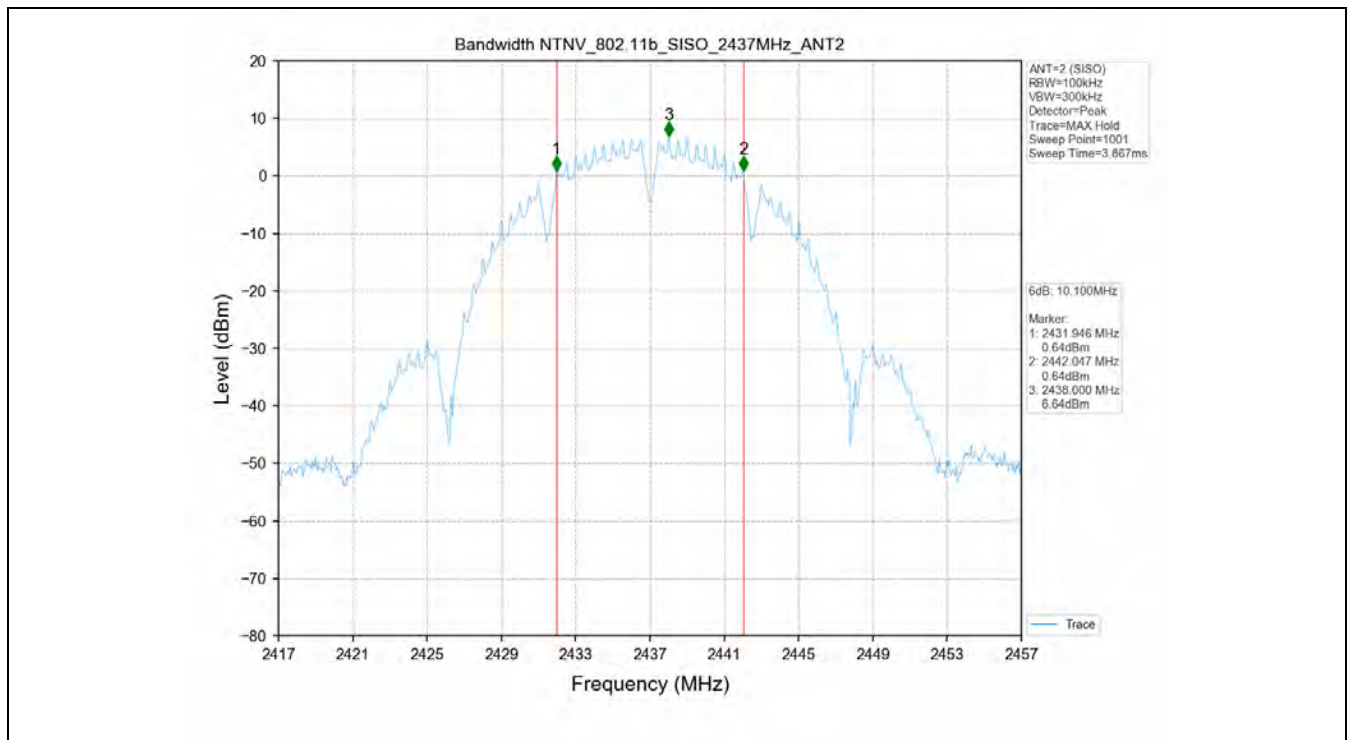
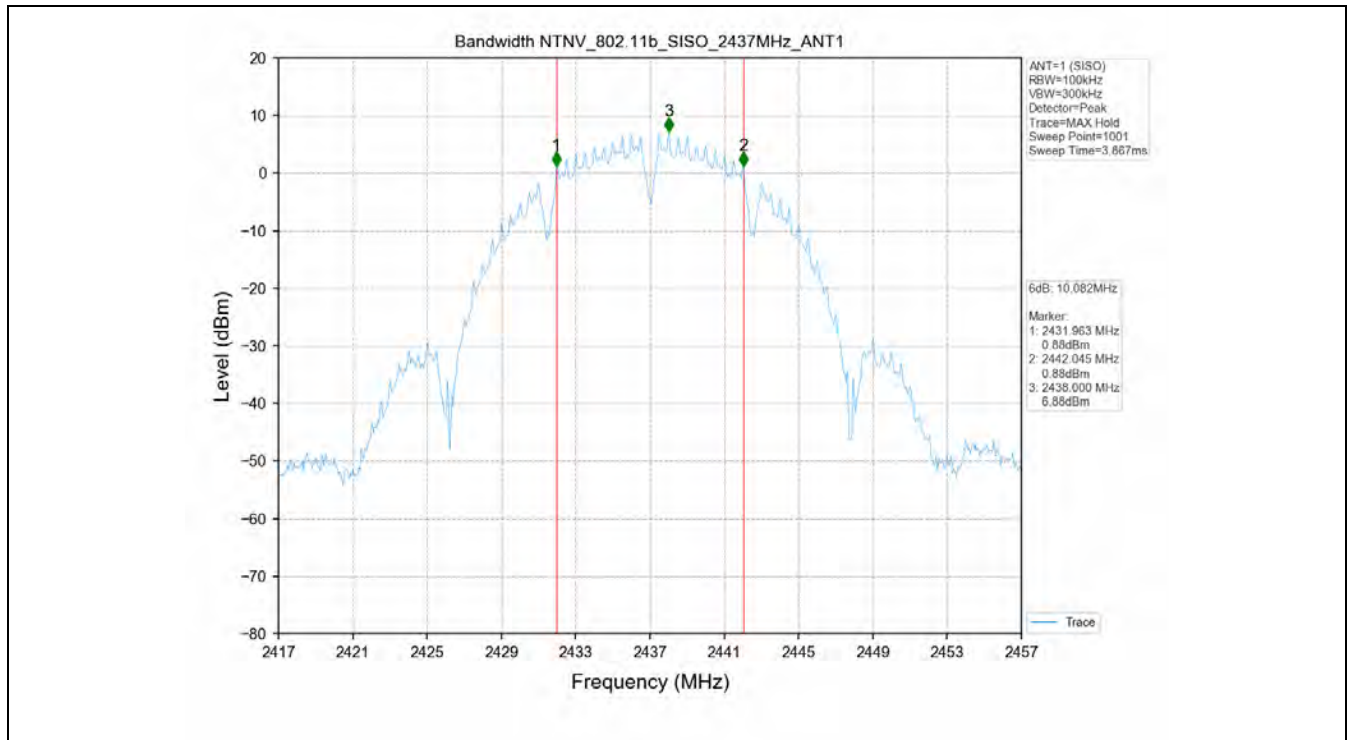
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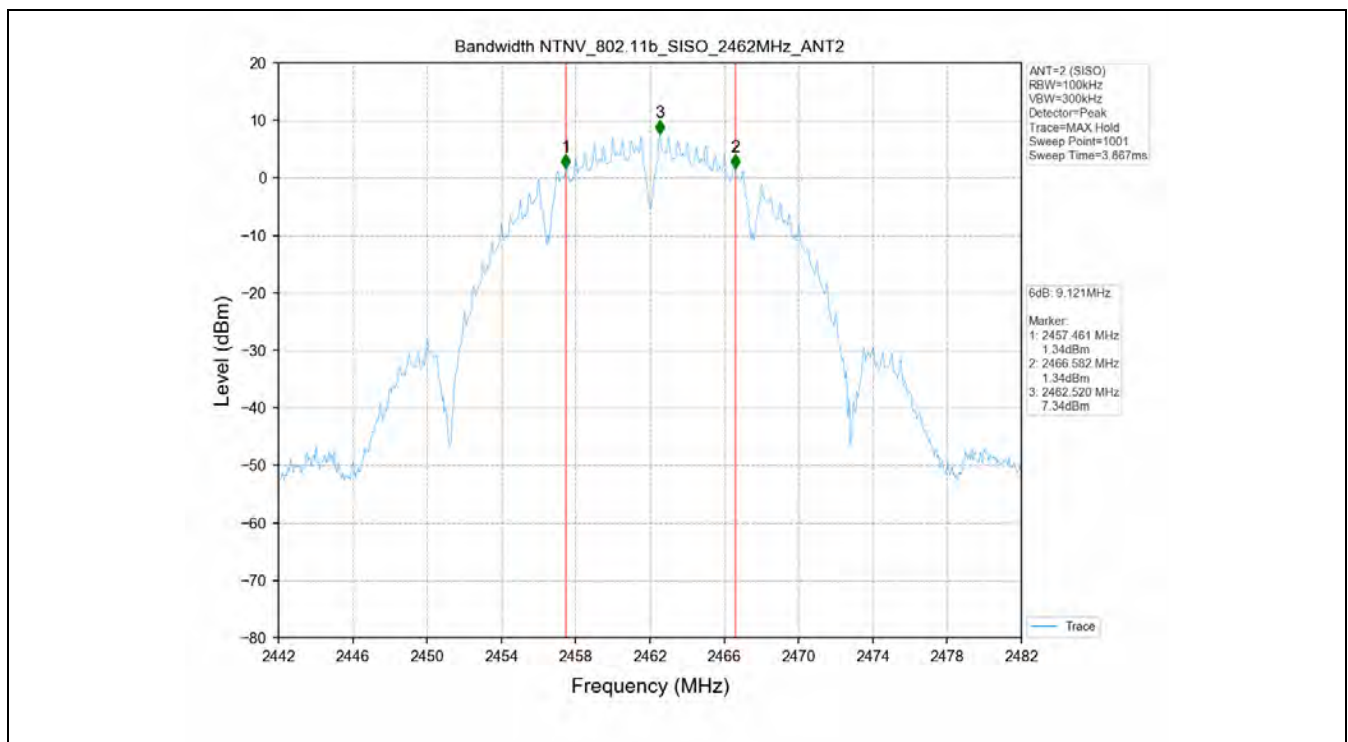
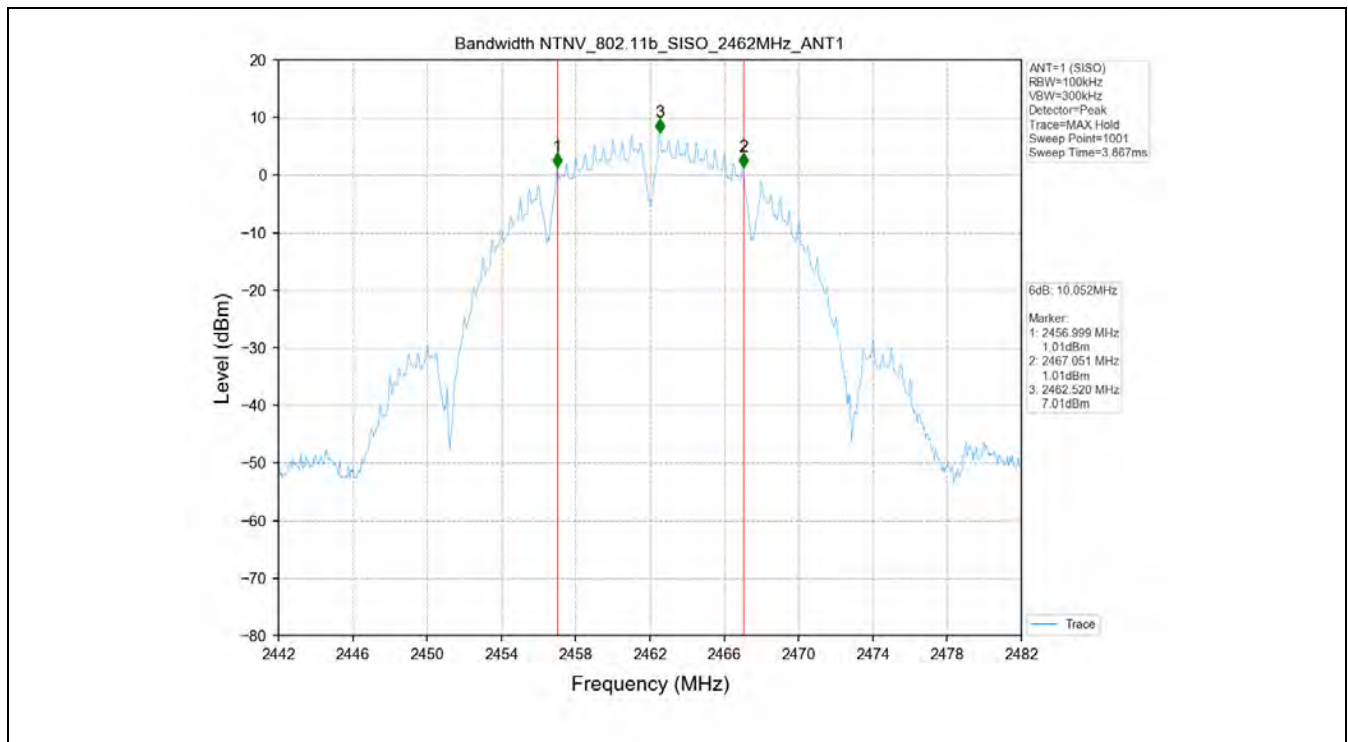
|  |      |      |   |        |            |      |
|--|------|------|---|--------|------------|------|
|  | 2452 | MIMO | 2 | 35.540 | $\geq 0.5$ | PASS |
|  |      |      | 1 | 35.663 | $\geq 0.5$ | PASS |
|  |      |      | 2 | 35.445 | $\geq 0.5$ | PASS |

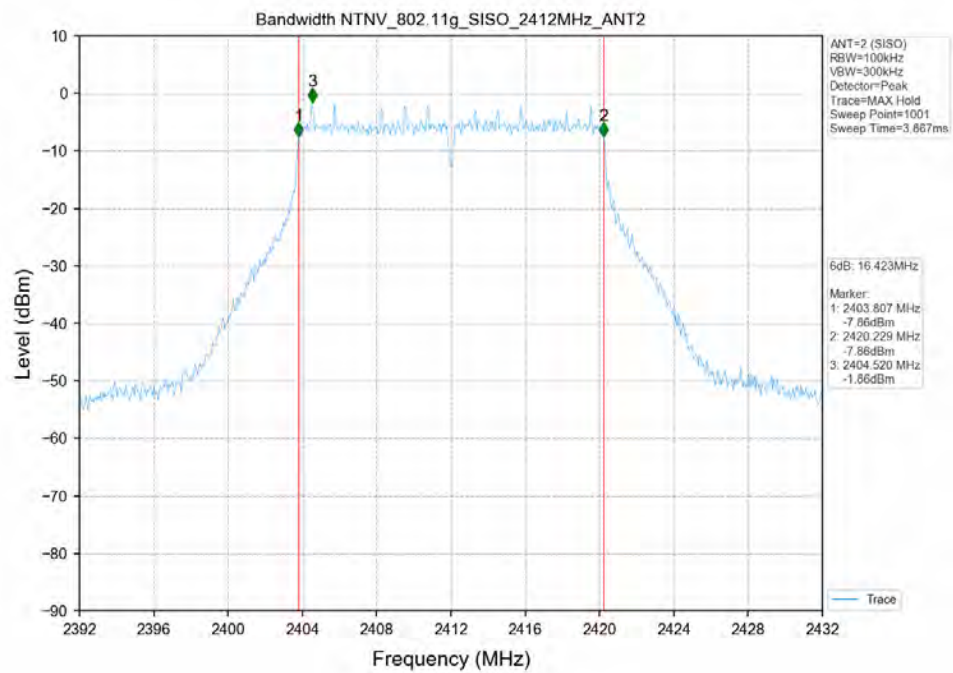
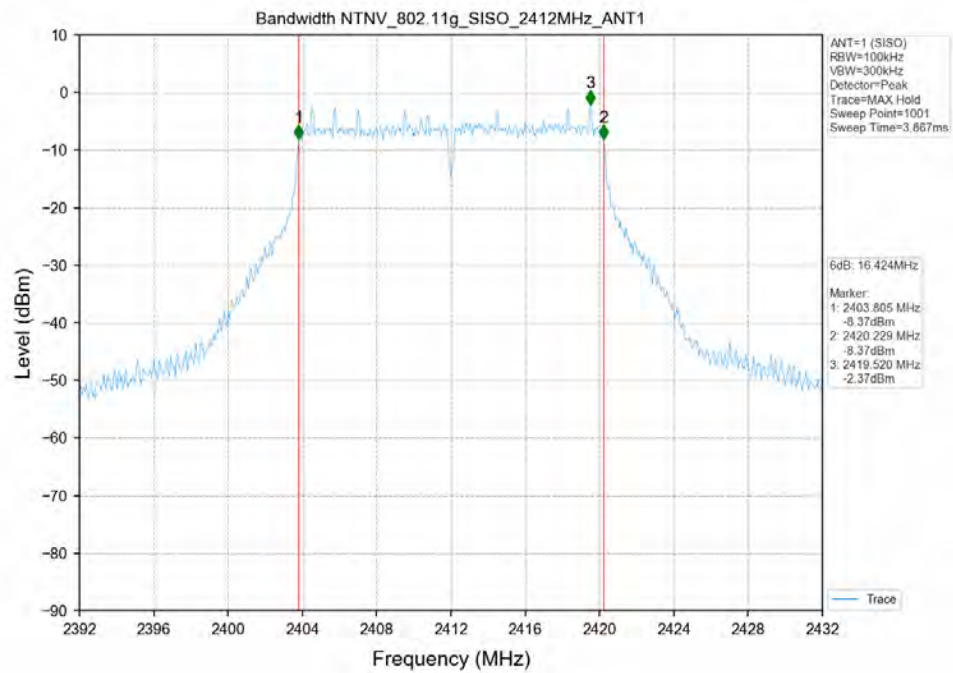
| Test Mode     | Frequency (MHz) | TX Type | ANT No. | 99% Occupied Bandwidth |                     |
|---------------|-----------------|---------|---------|------------------------|---------------------|
|               |                 |         |         | Test Result (MHz)      |                     |
| 802.11b       | 2412            | SISO    | 1       | 15.101                 | Only for Report Use |
|               |                 |         | 2       | 15.125                 | Only for Report Use |
|               | 2437            | SISO    | 1       | 15.101                 | Only for Report Use |
|               |                 |         | 2       | 15.124                 | Only for Report Use |
|               | 2462            | SISO    | 1       | 15.101                 | Only for Report Use |
|               |                 |         | 2       | 15.120                 | Only for Report Use |
| 802.11g       | 2412            | SISO    | 1       | 16.998                 | Only for Report Use |
|               |                 |         | 2       | 16.859                 | Only for Report Use |
|               | 2437            | SISO    | 1       | 16.974                 | Only for Report Use |
|               |                 |         | 2       | 16.941                 | Only for Report Use |
|               | 2462            | SISO    | 1       | 17.126                 | Only for Report Use |
|               |                 |         | 2       | 16.951                 | Only for Report Use |
| 802.11n(HT20) | 2412            | MIMO    | 1       | 18.003                 | Only for Report Use |
|               |                 |         | 2       | 18.012                 | Only for Report Use |
|               | 2437            | MIMO    | 1       | 18.039                 | Only for Report Use |
|               |                 |         | 2       | 18.011                 | Only for Report Use |
|               | 2462            | MIMO    | 1       | 18.201                 | Only for Report Use |
|               |                 |         | 2       | 18.211                 | Only for Report Use |
| 802.11n(HT40) | 2422            | MIMO    | 1       | 36.649                 | Only for Report Use |
|               |                 |         | 2       | 36.661                 | Only for Report Use |
|               | 2437            | MIMO    | 1       | 36.353                 | Only for Report Use |
|               |                 |         | 2       | 36.484                 | Only for Report Use |
|               | 2452            | MIMO    | 1       | 36.646                 | Only for Report Use |
|               |                 |         | 2       | 36.617                 | Only for Report Use |

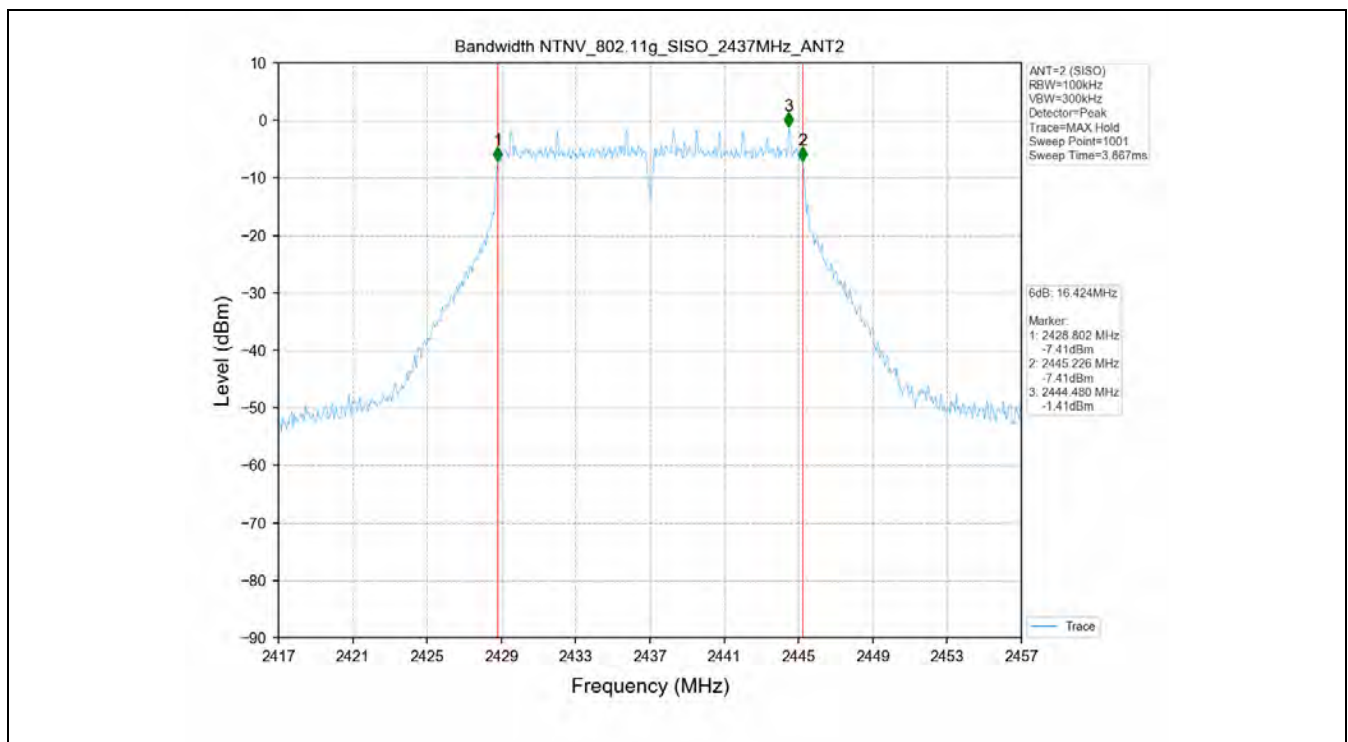
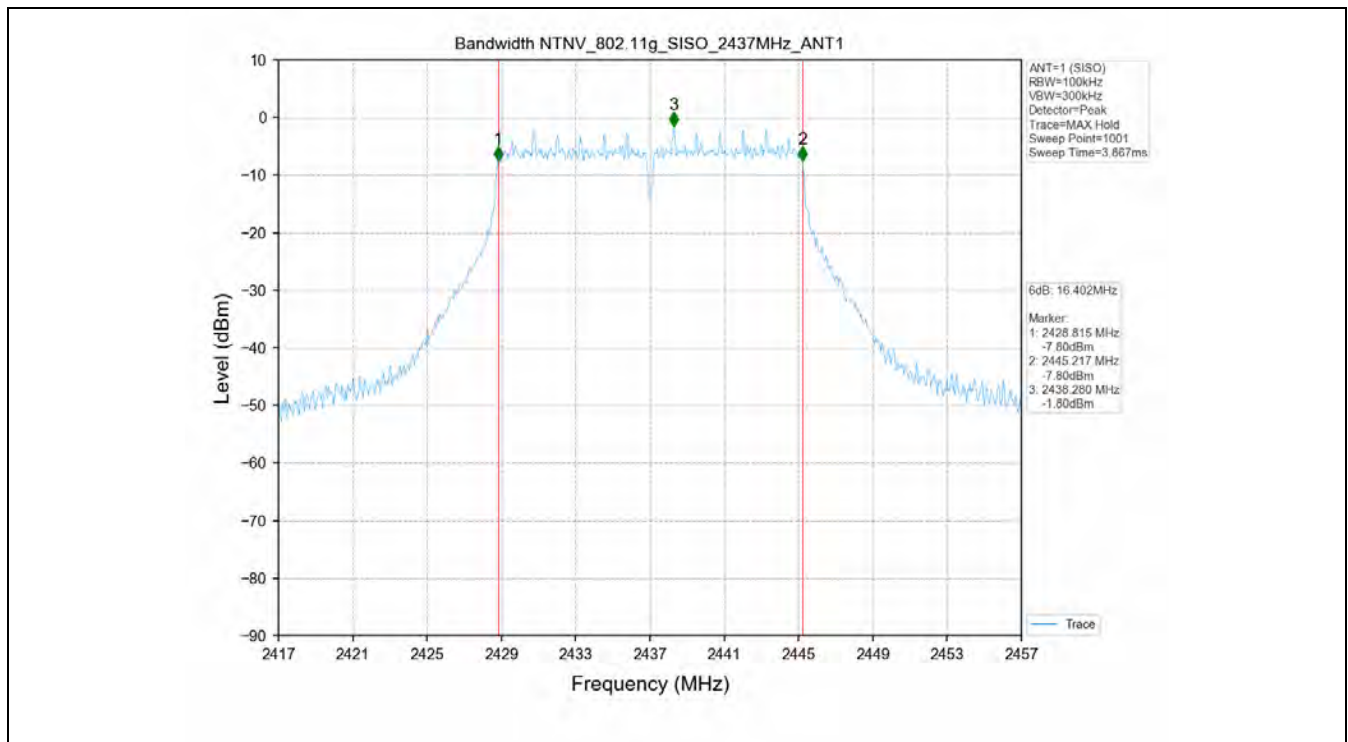
### 2.2 Test Graph - 6dB Bandwidth

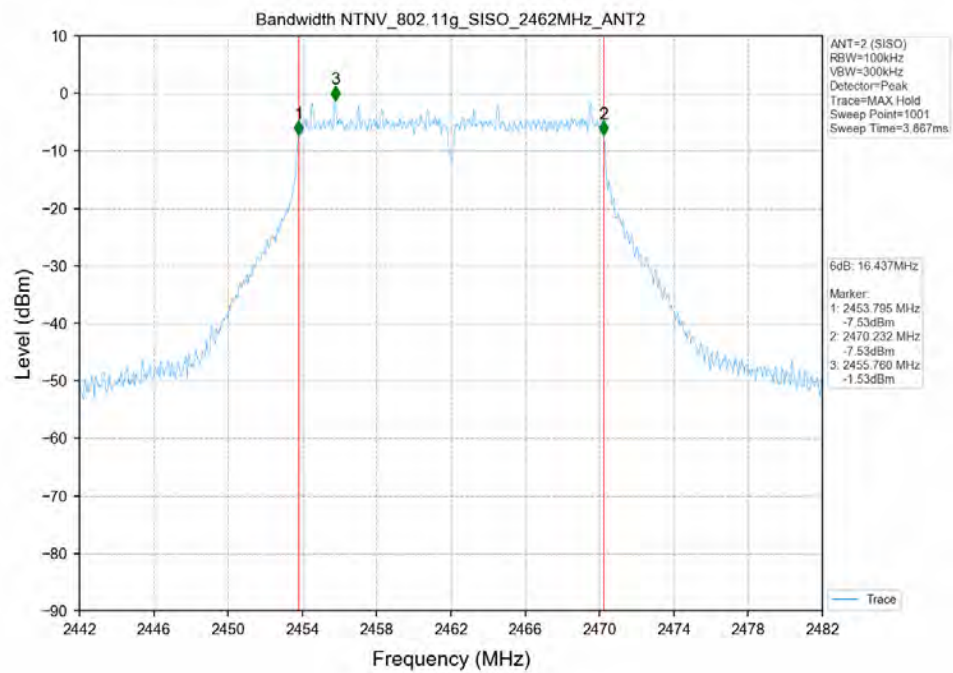
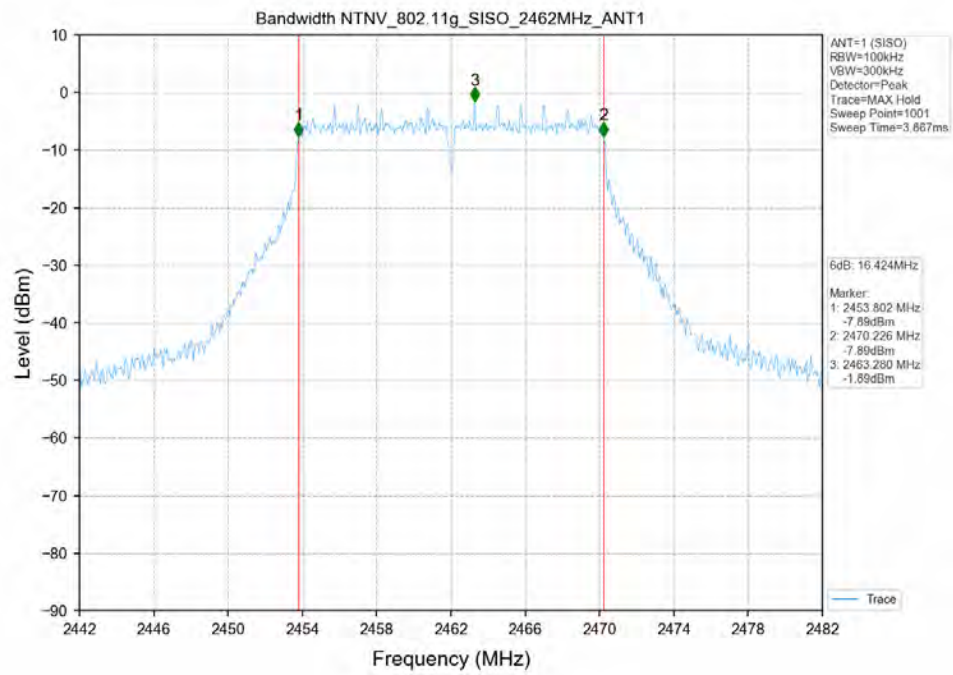


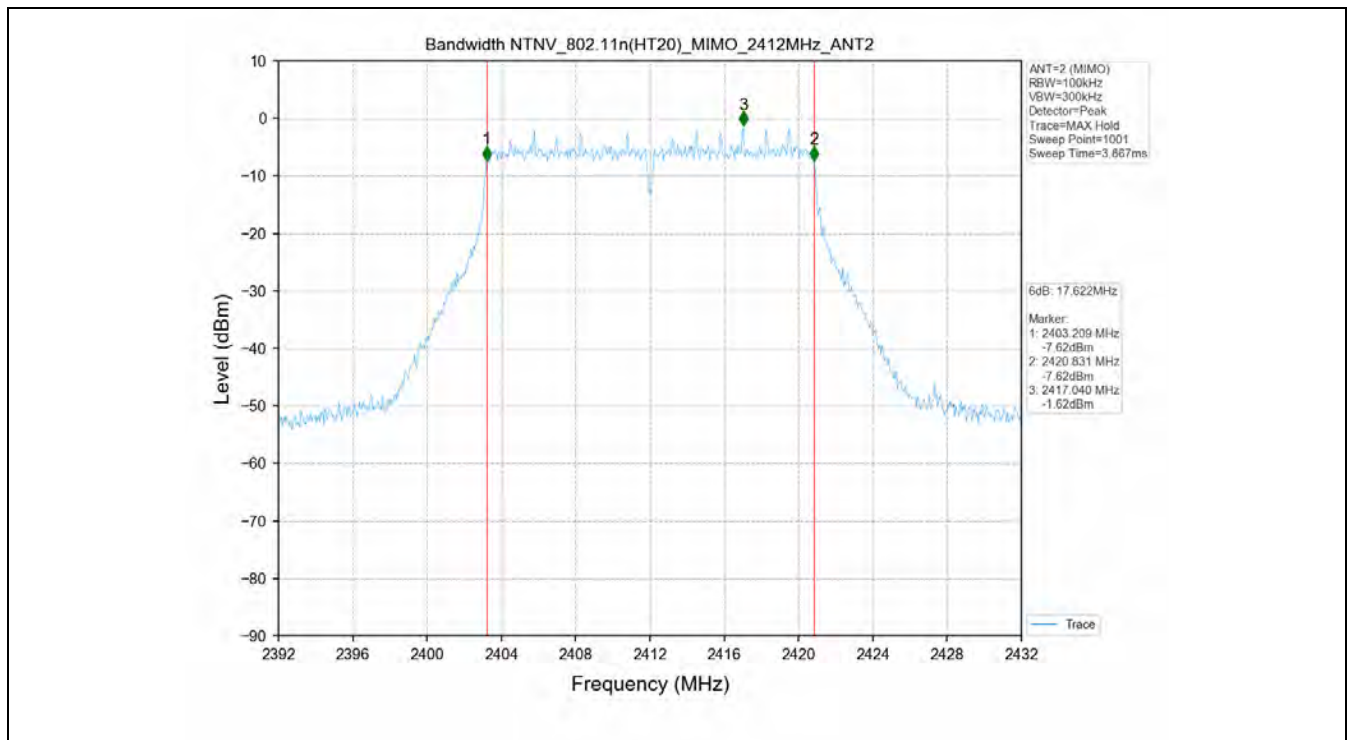
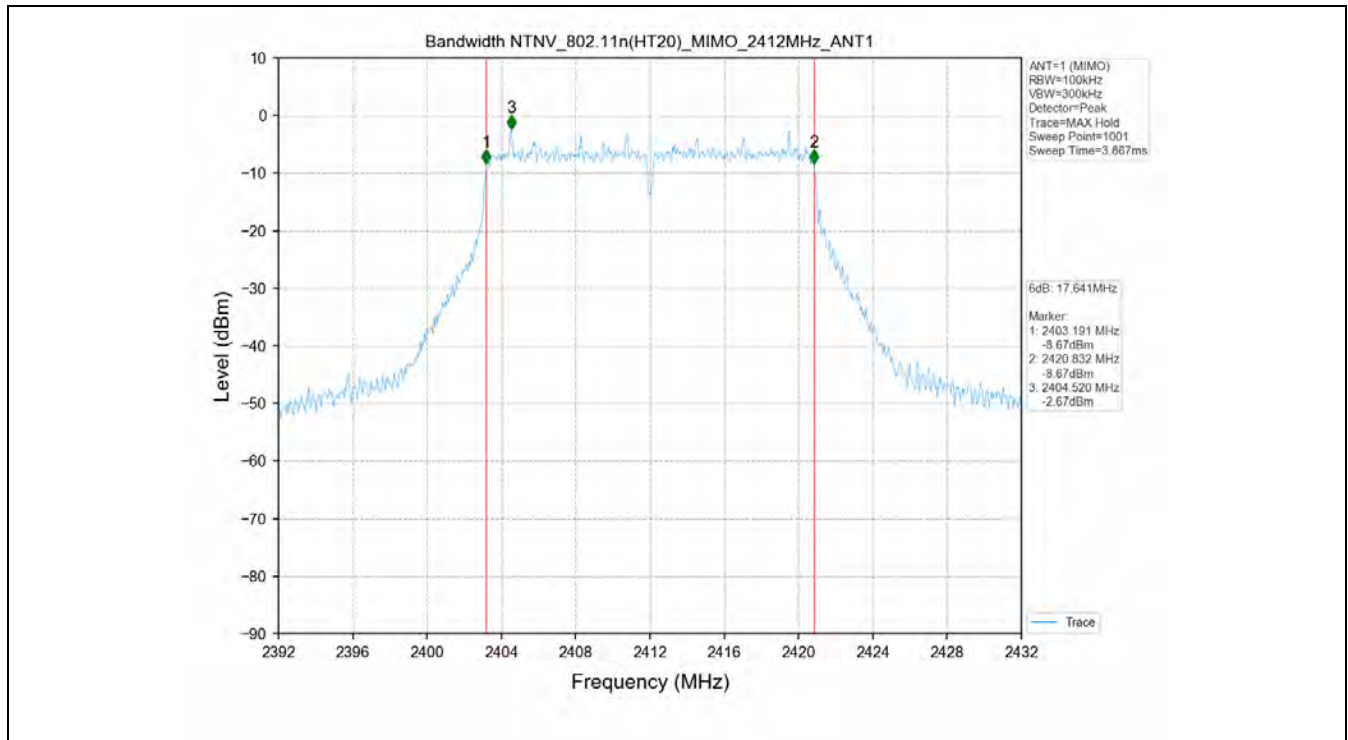


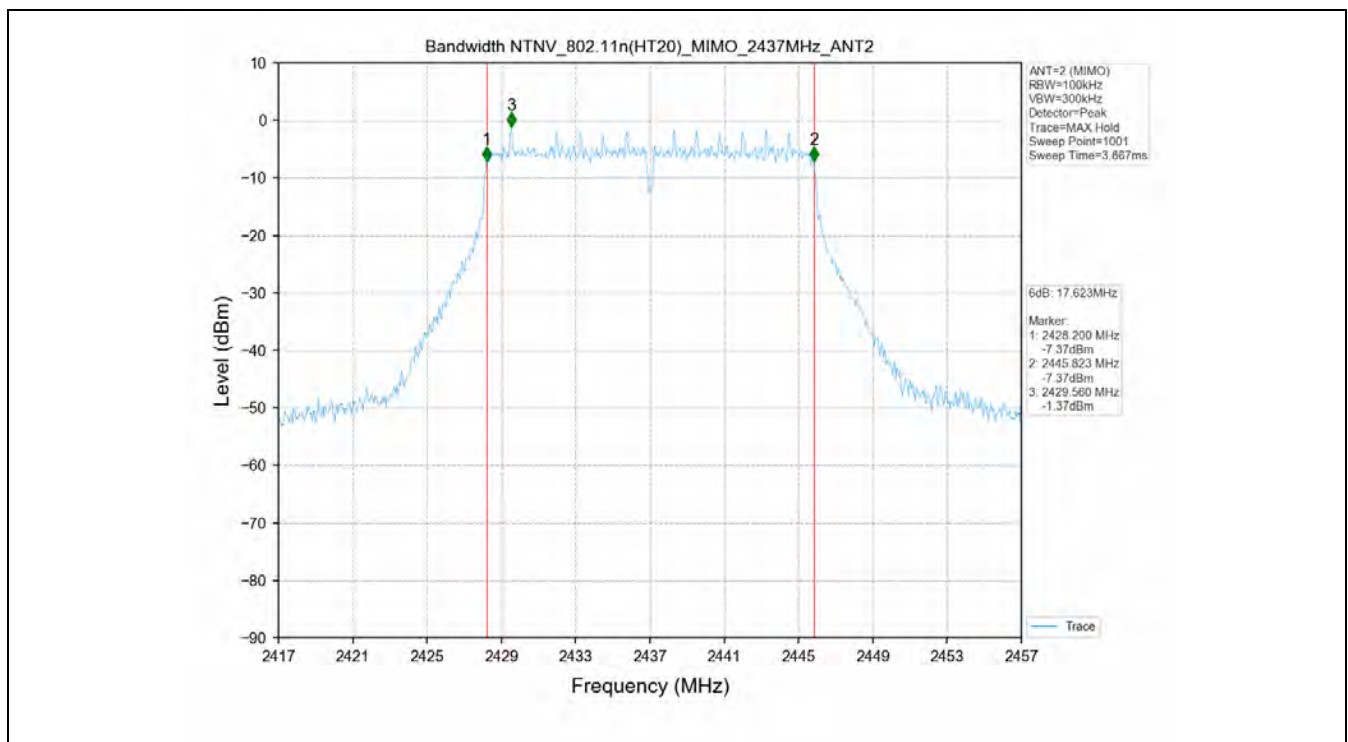
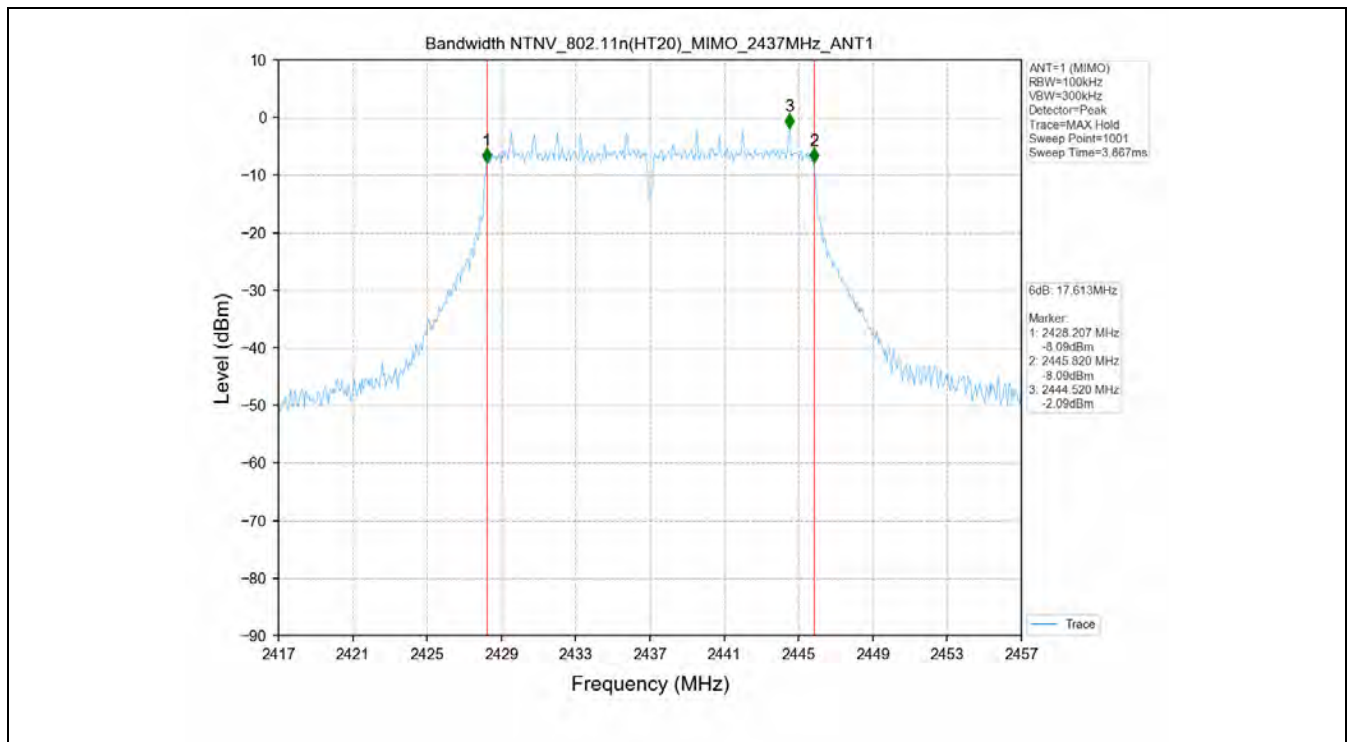


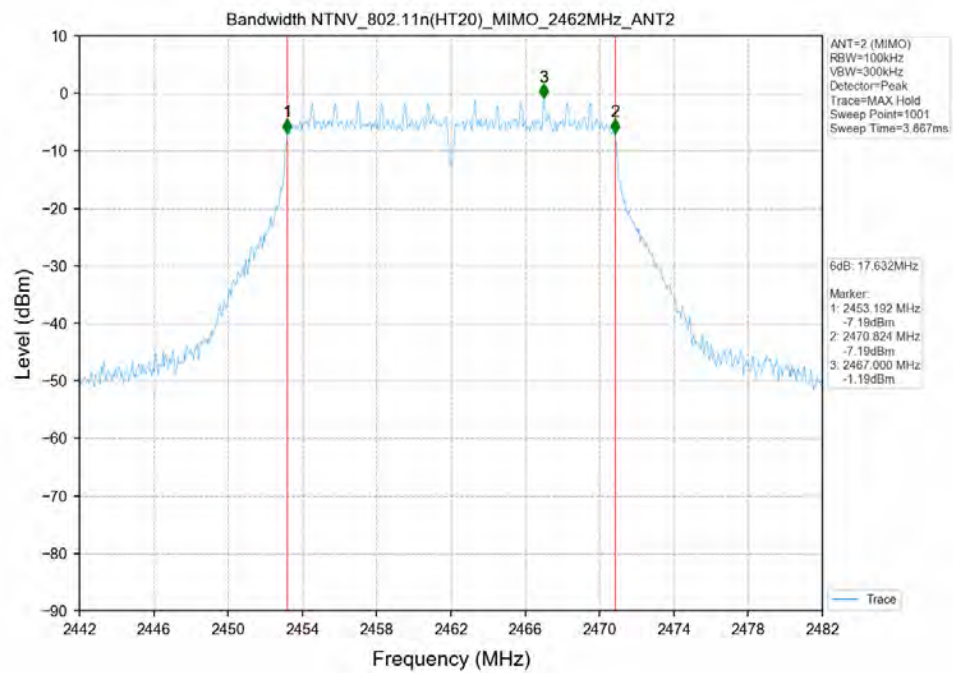
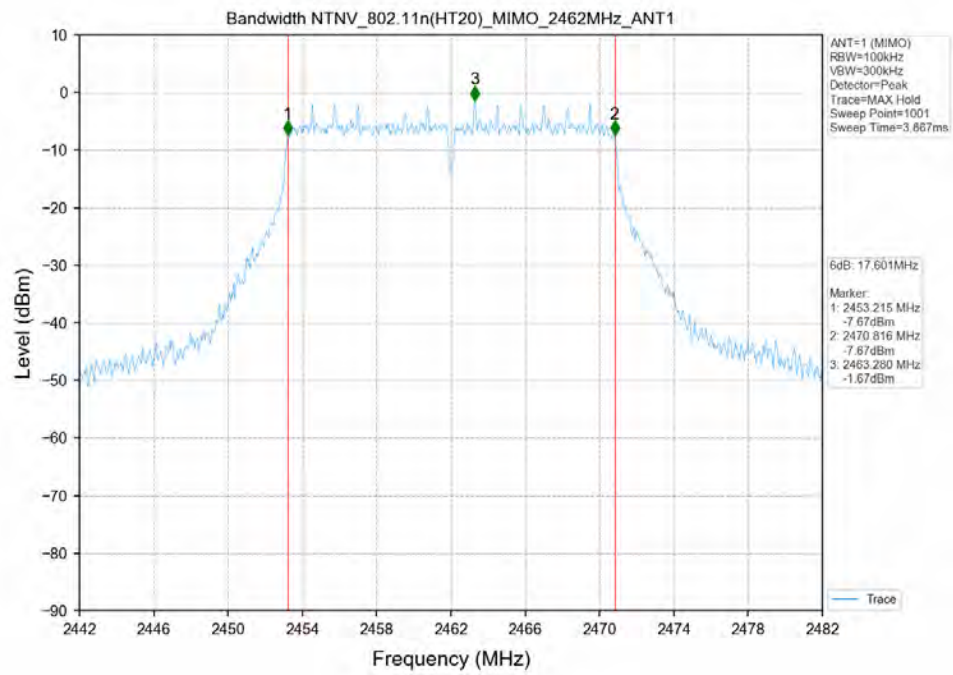


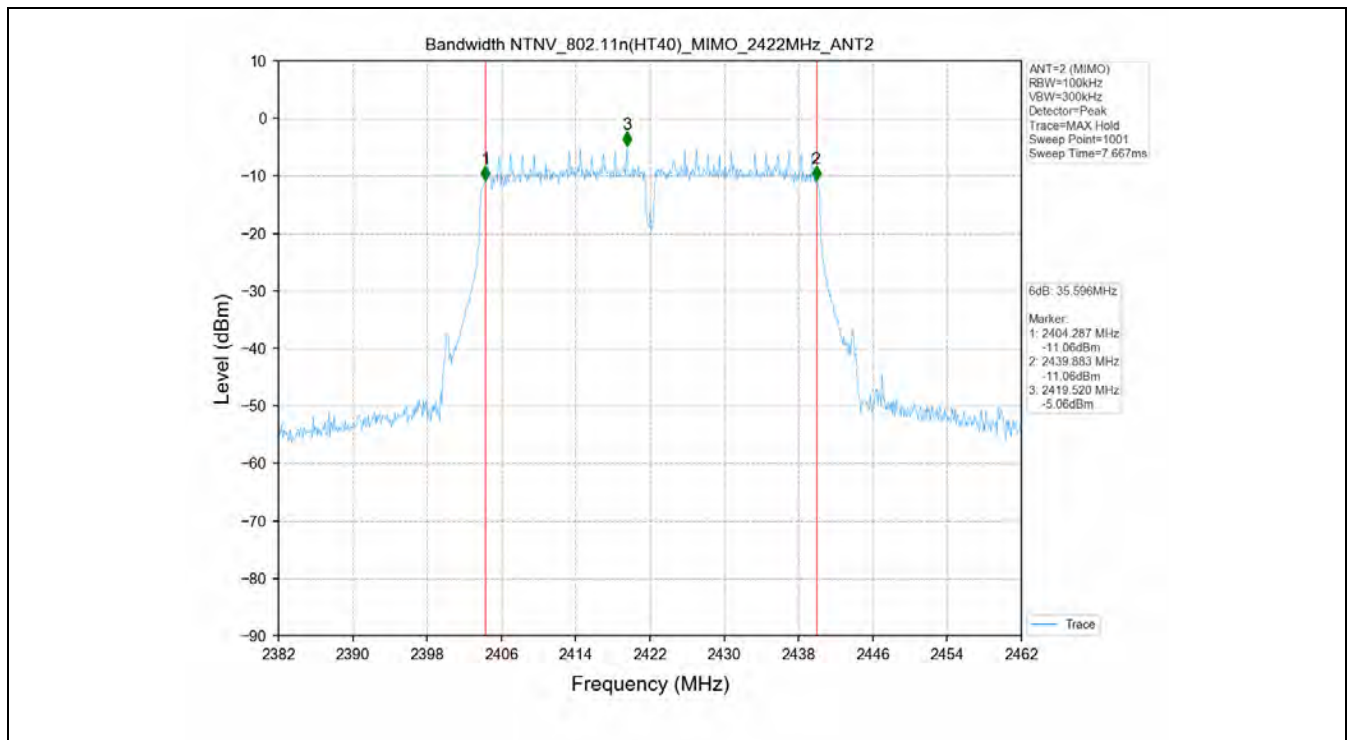
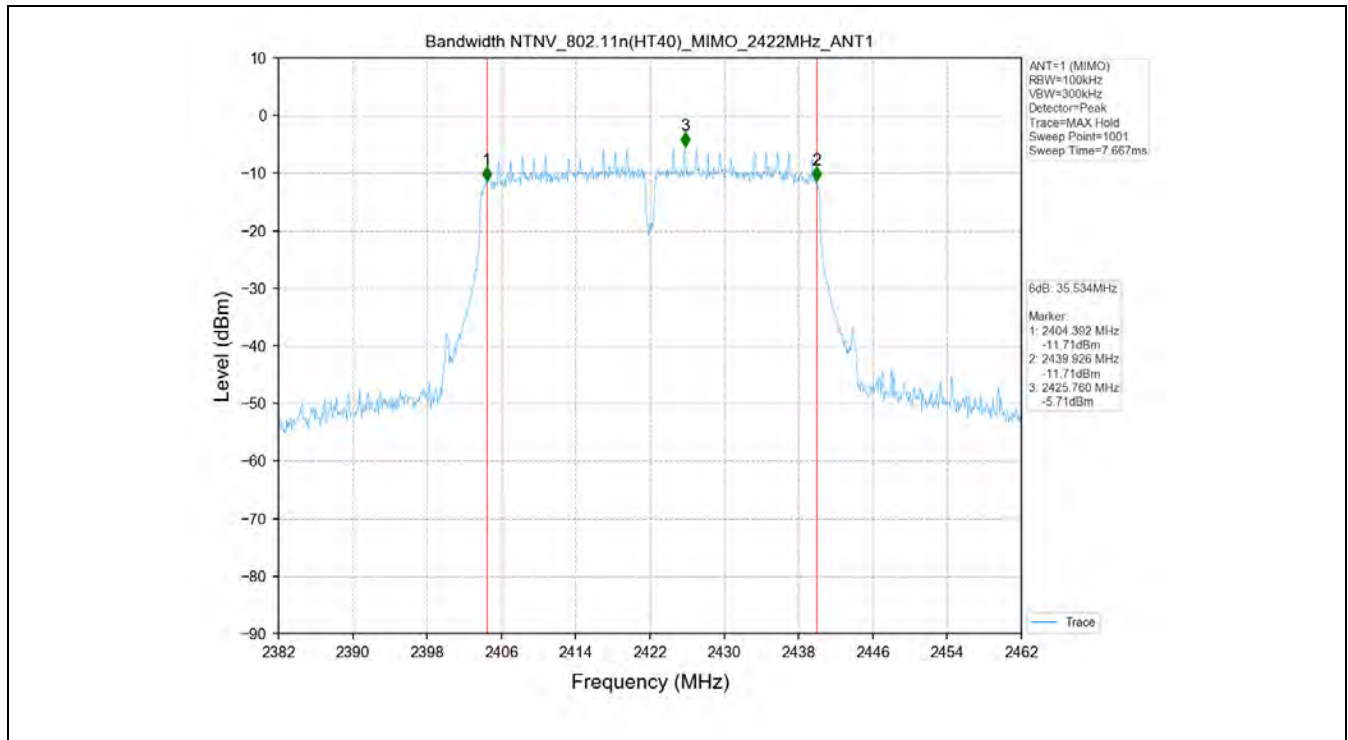


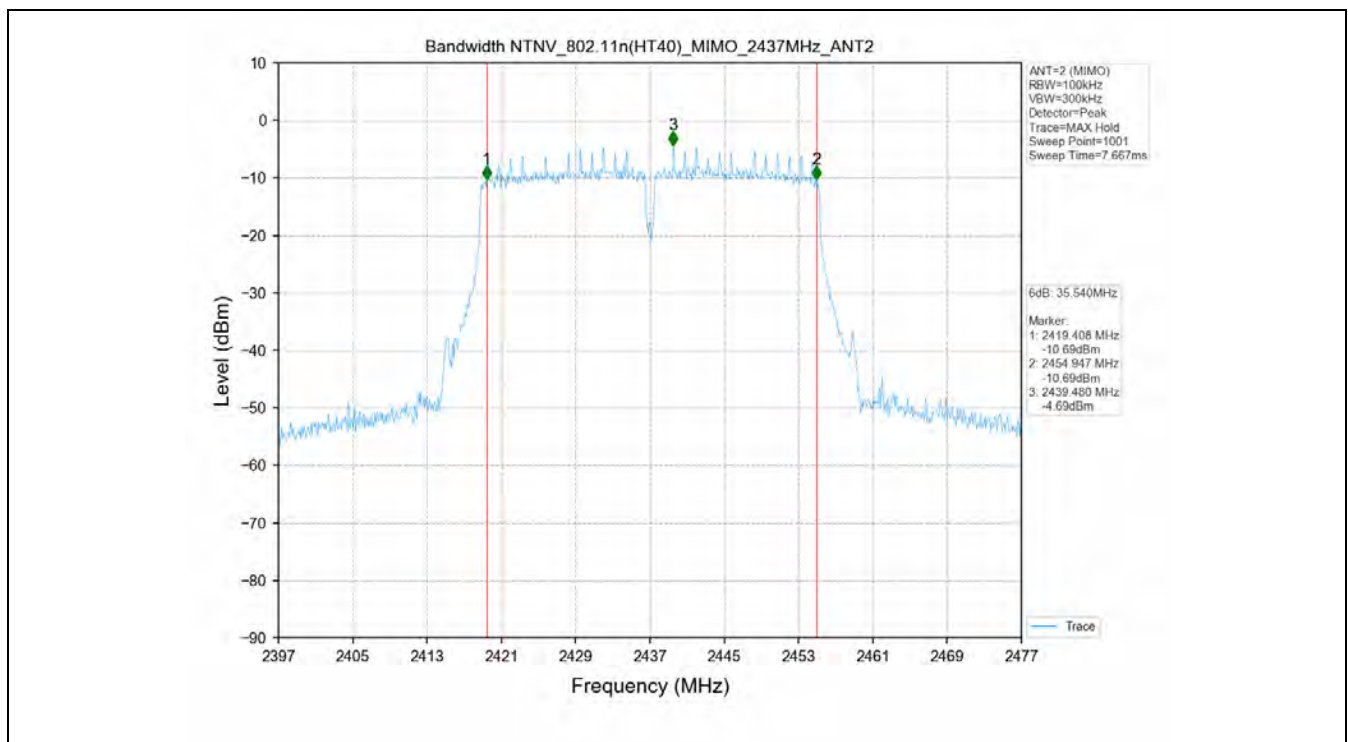
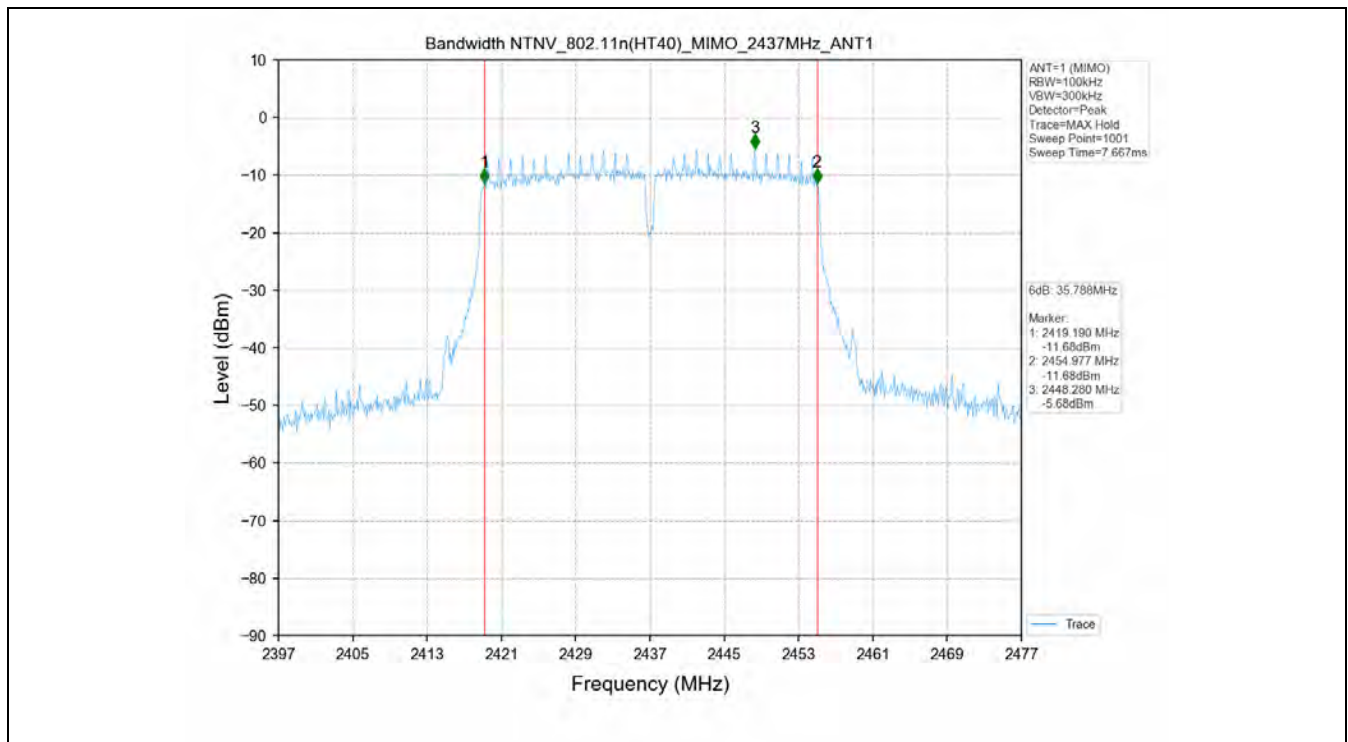


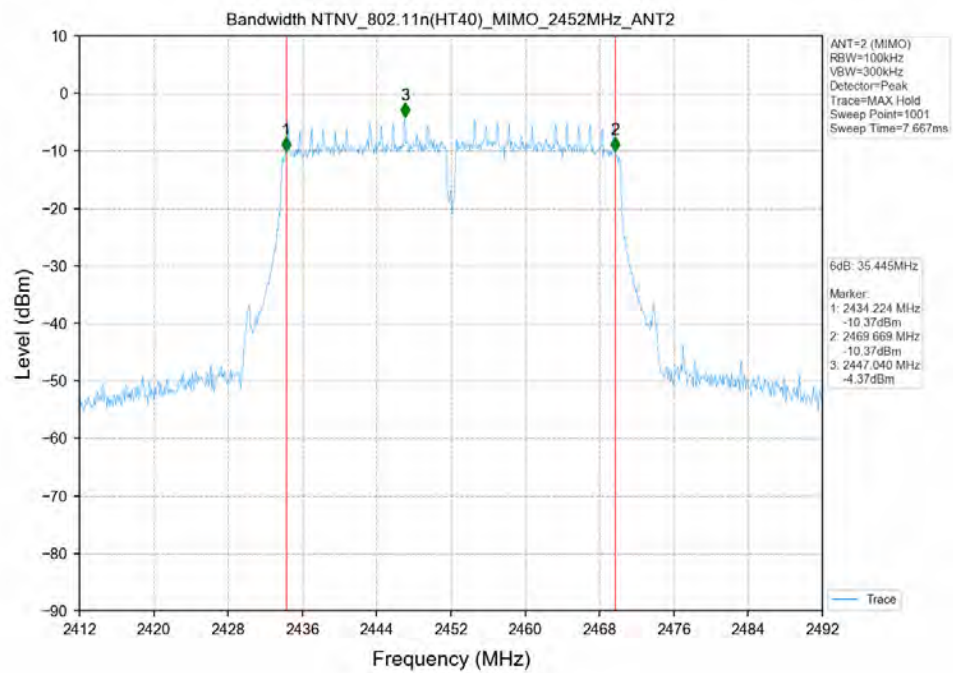
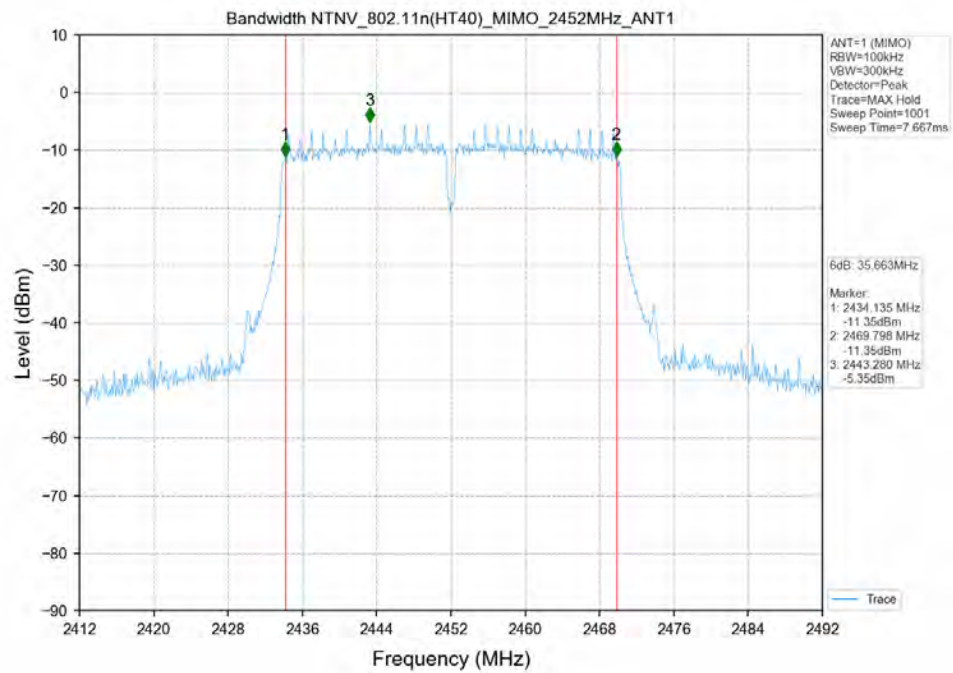






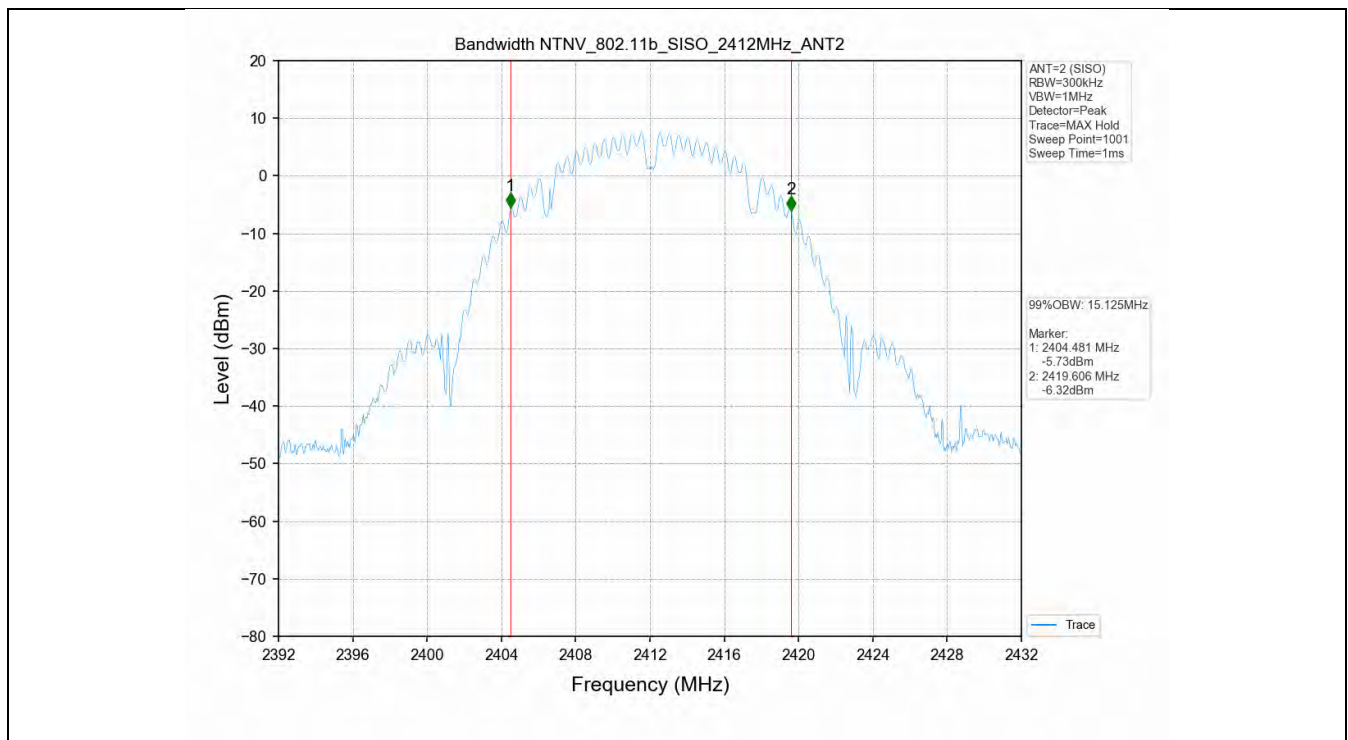
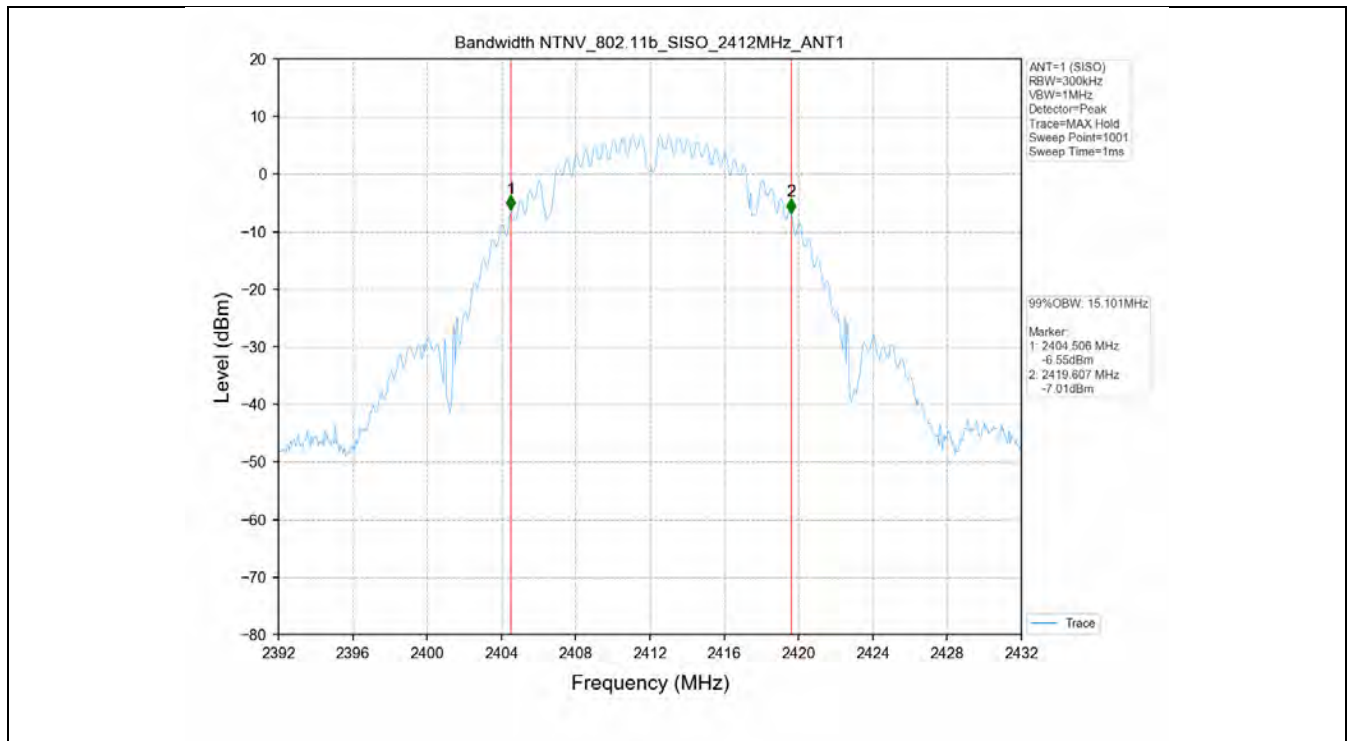


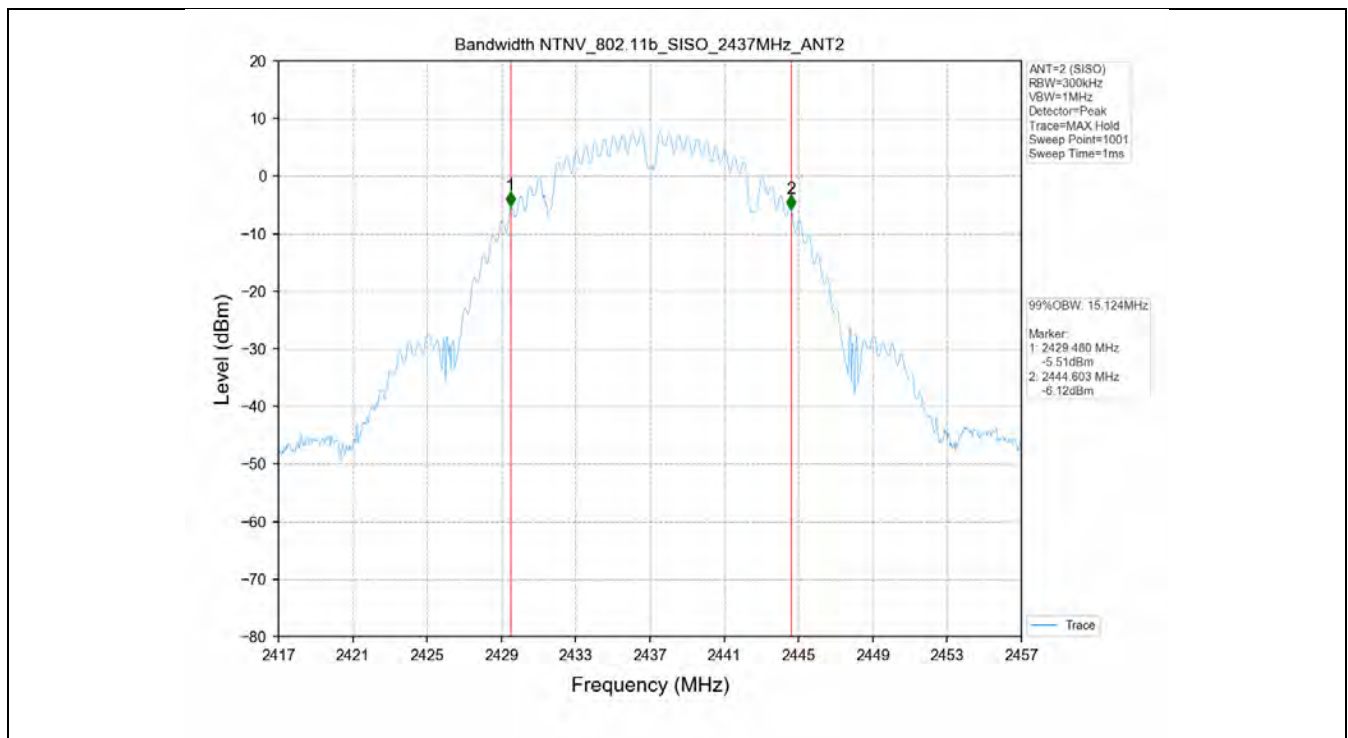
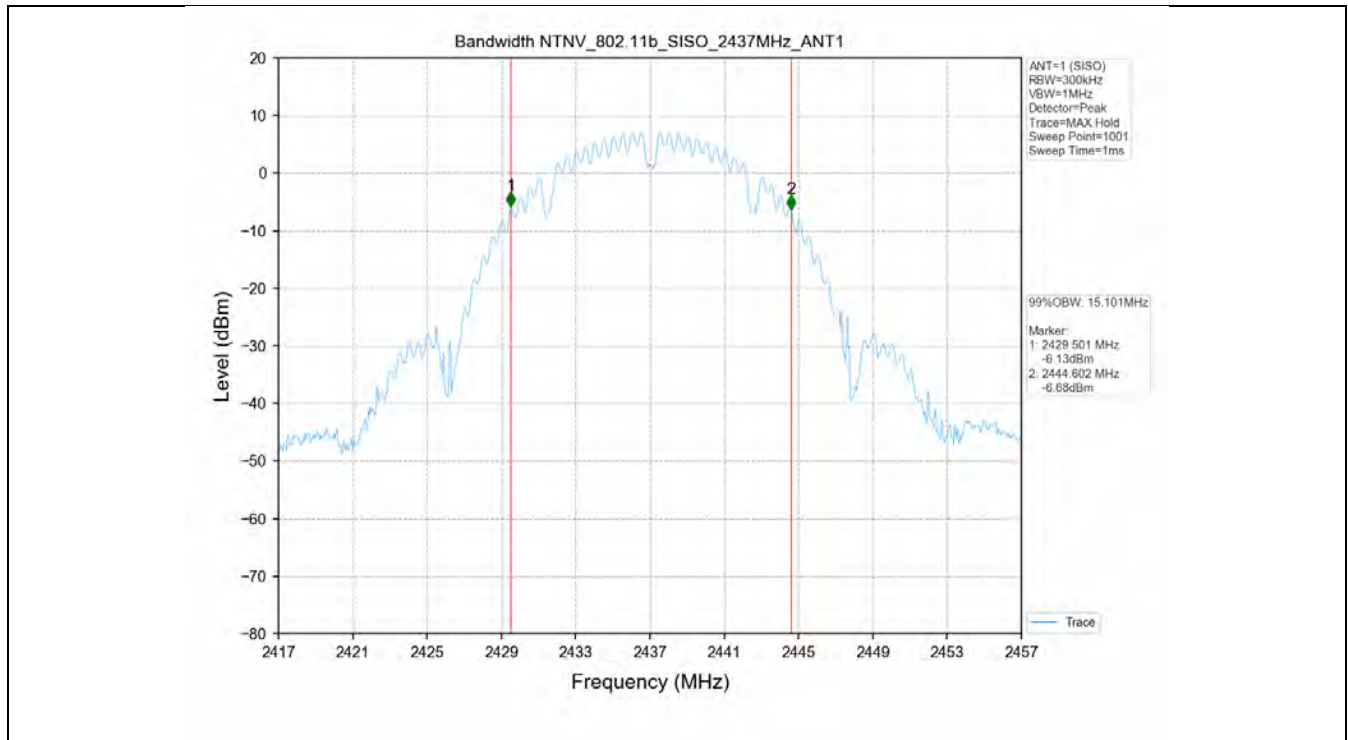


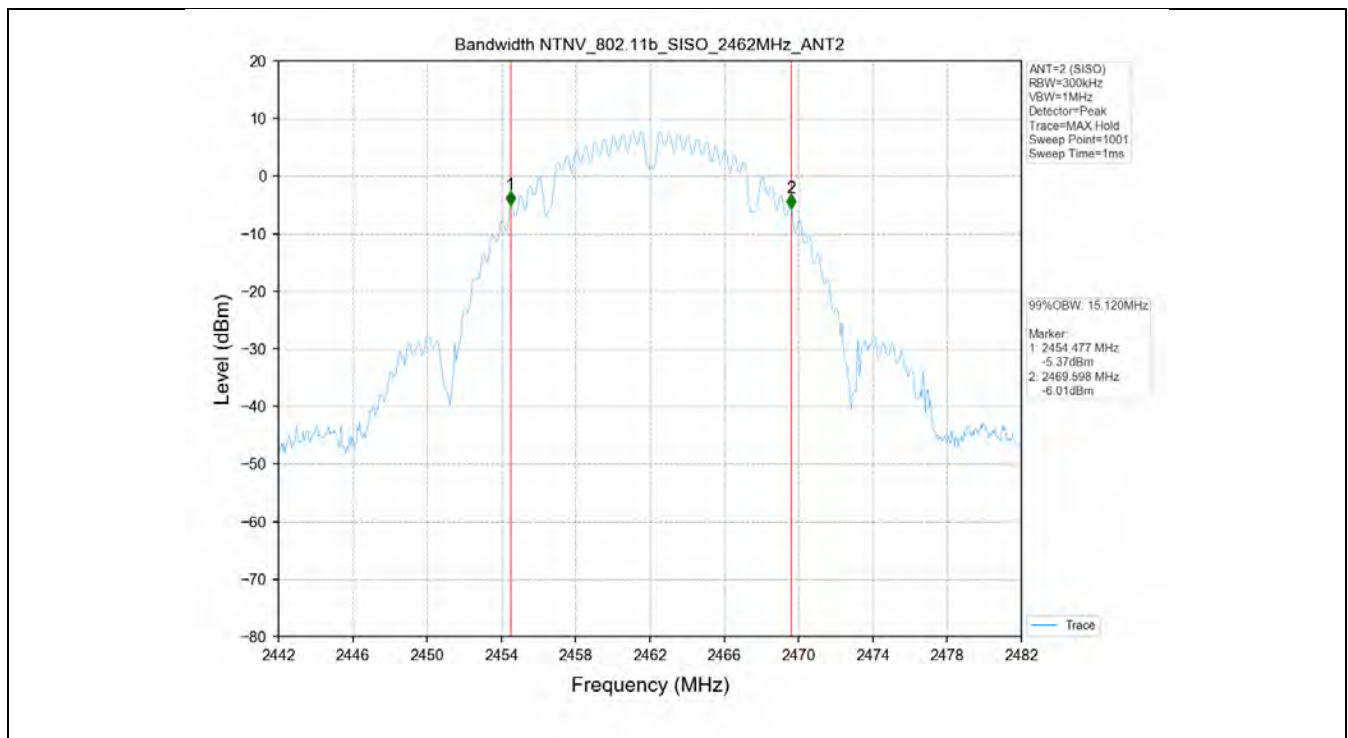
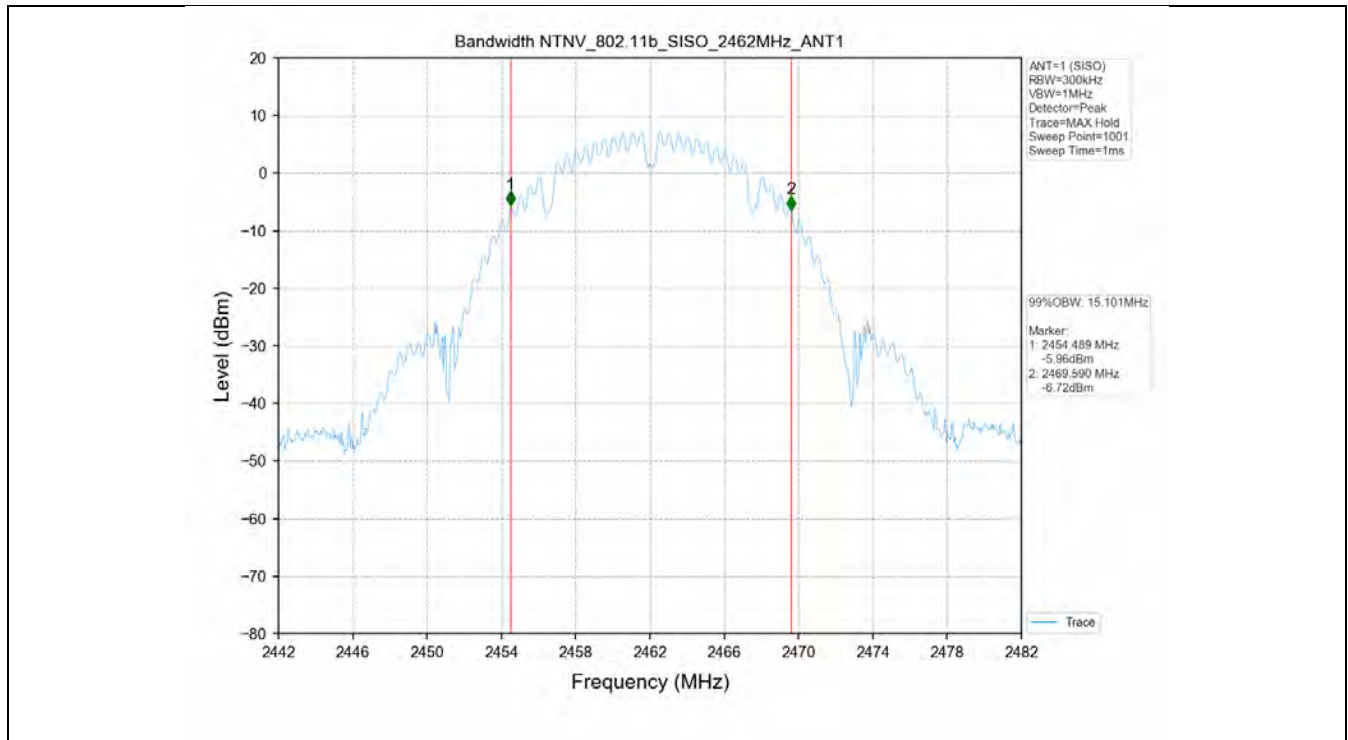


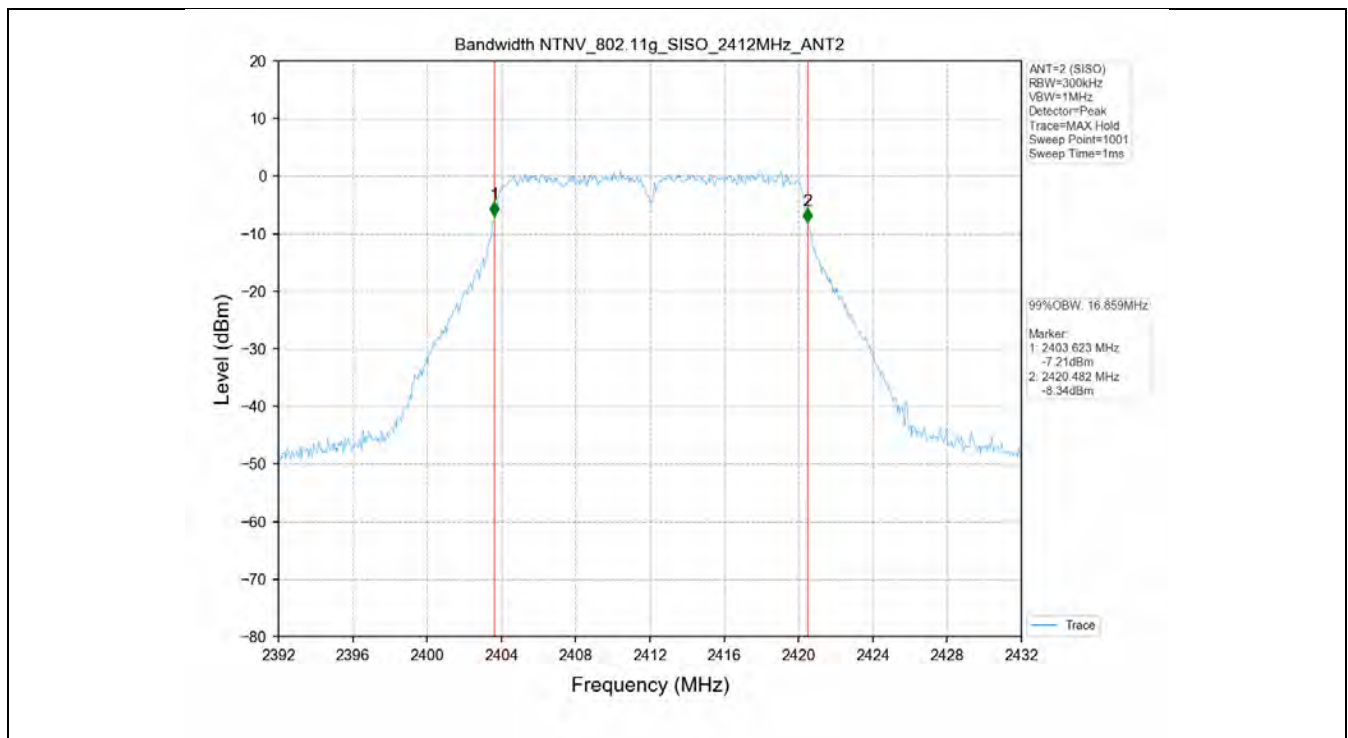
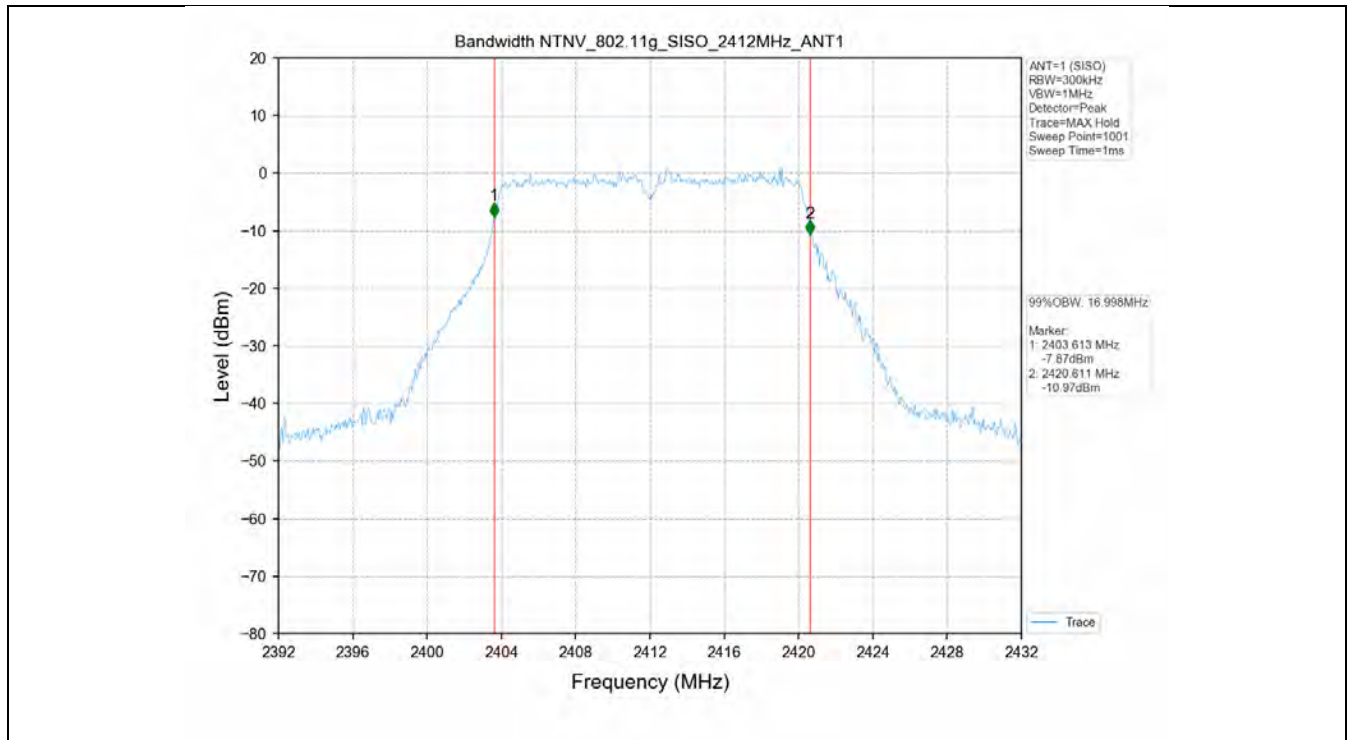


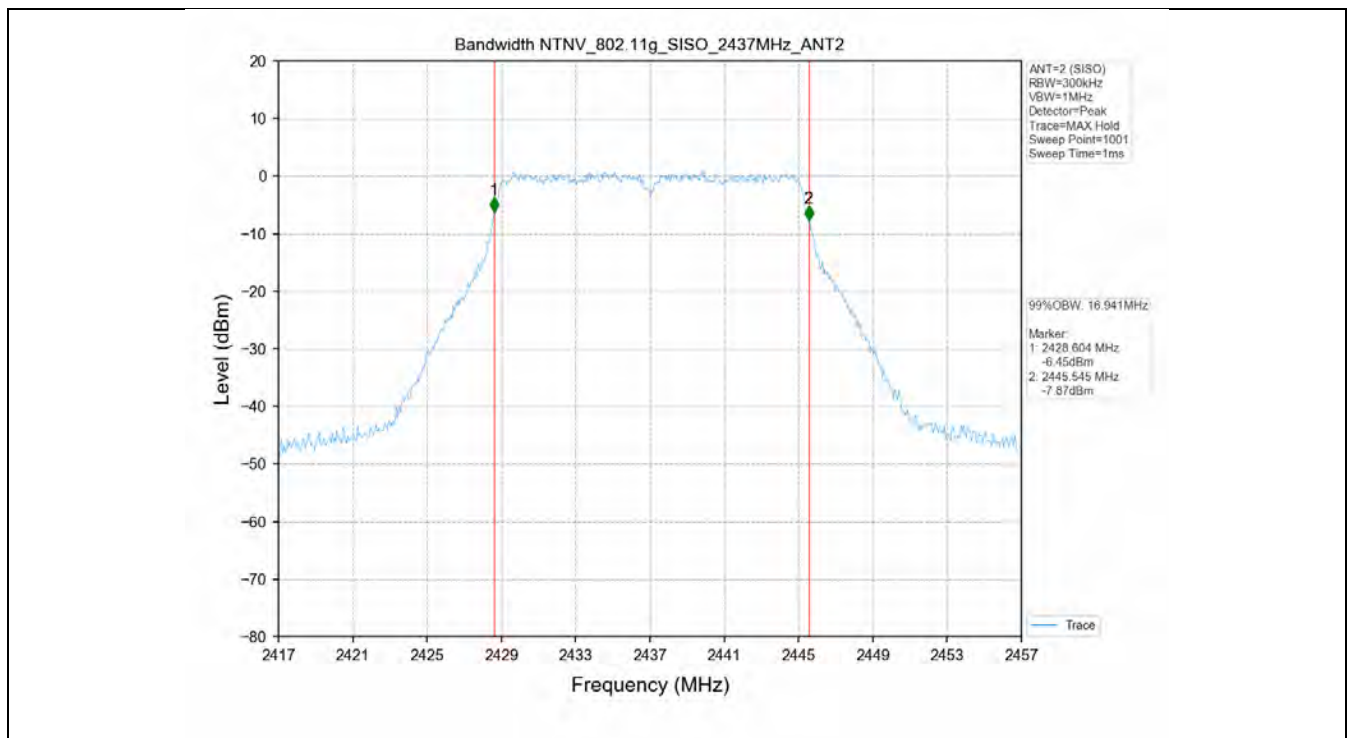
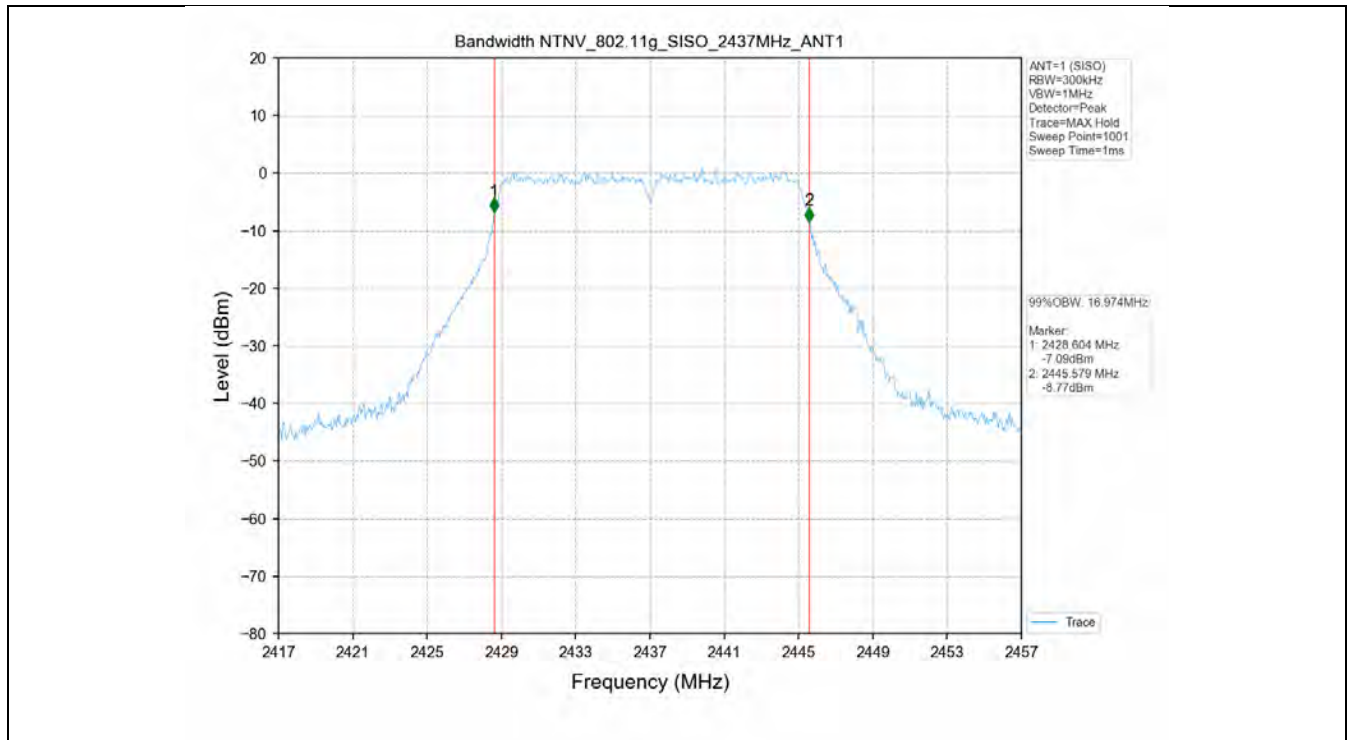
## 2.3 Test Graph - 99% Occupied Bandwidth

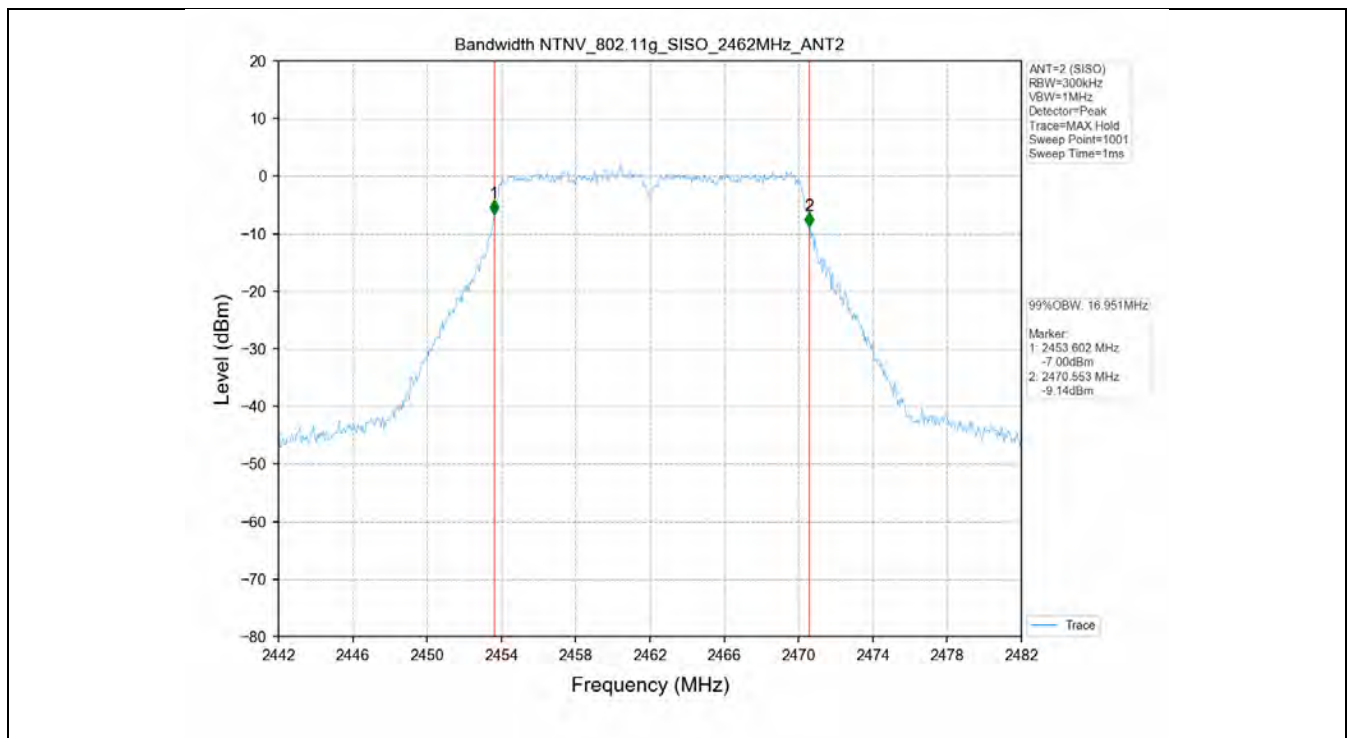
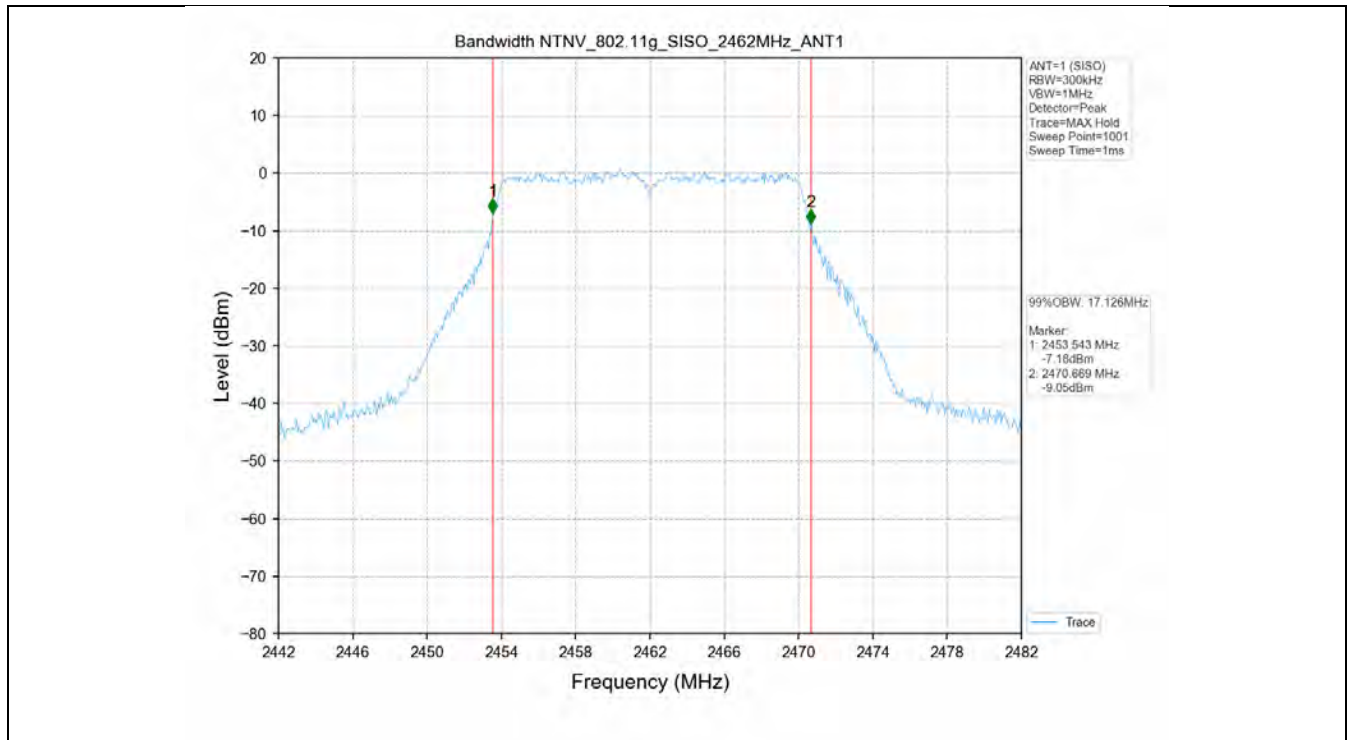


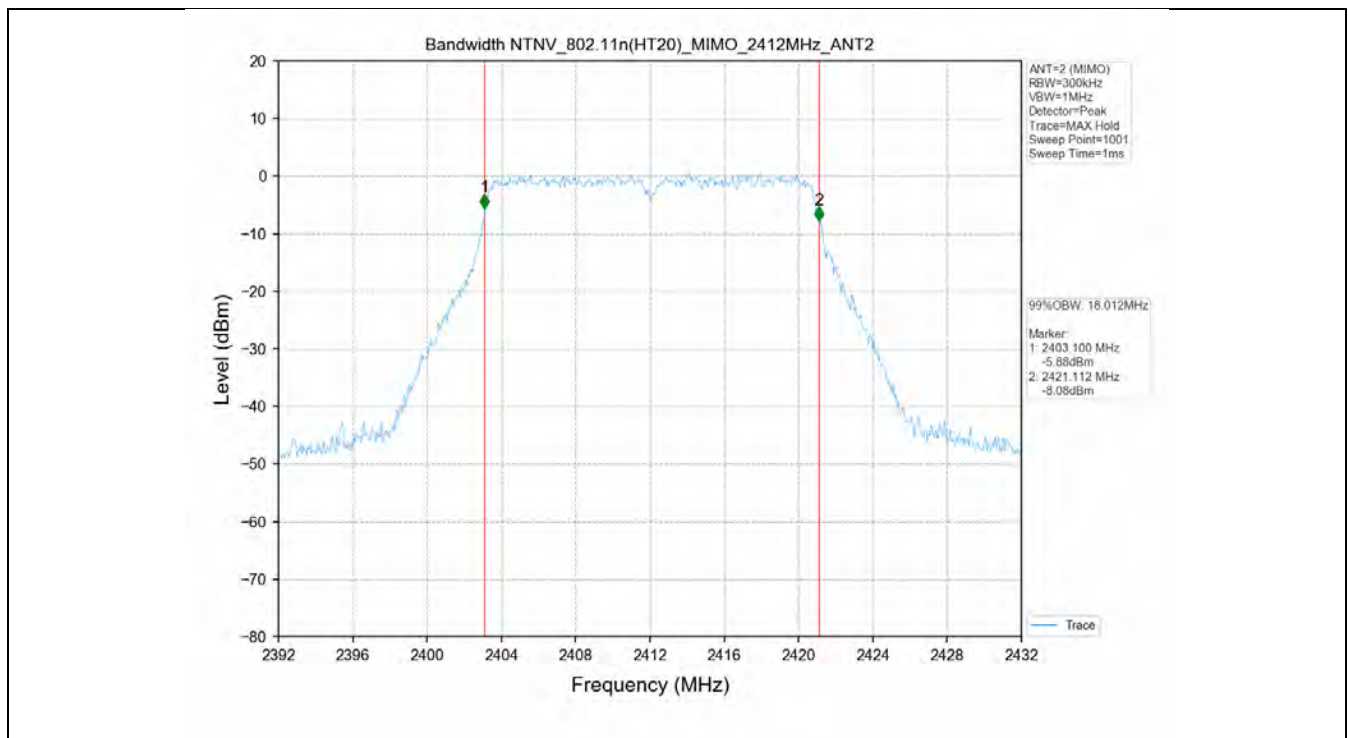
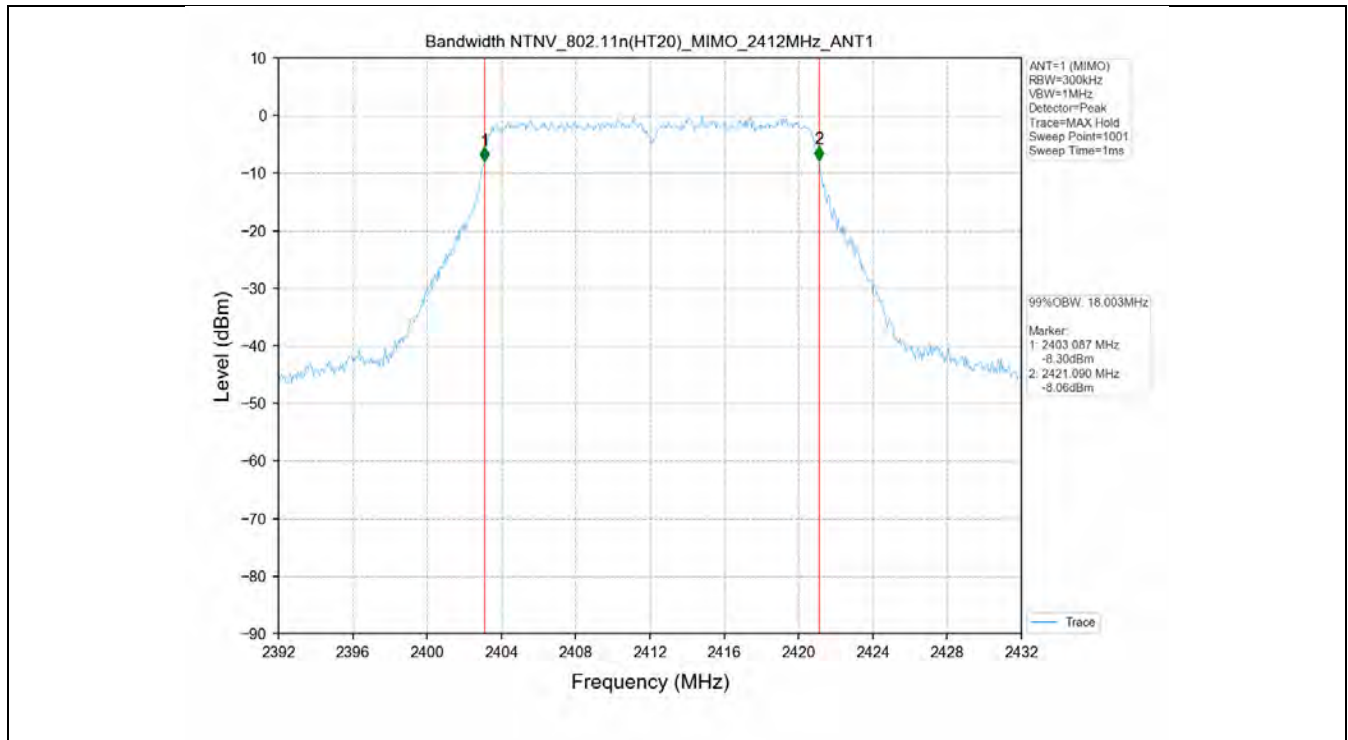


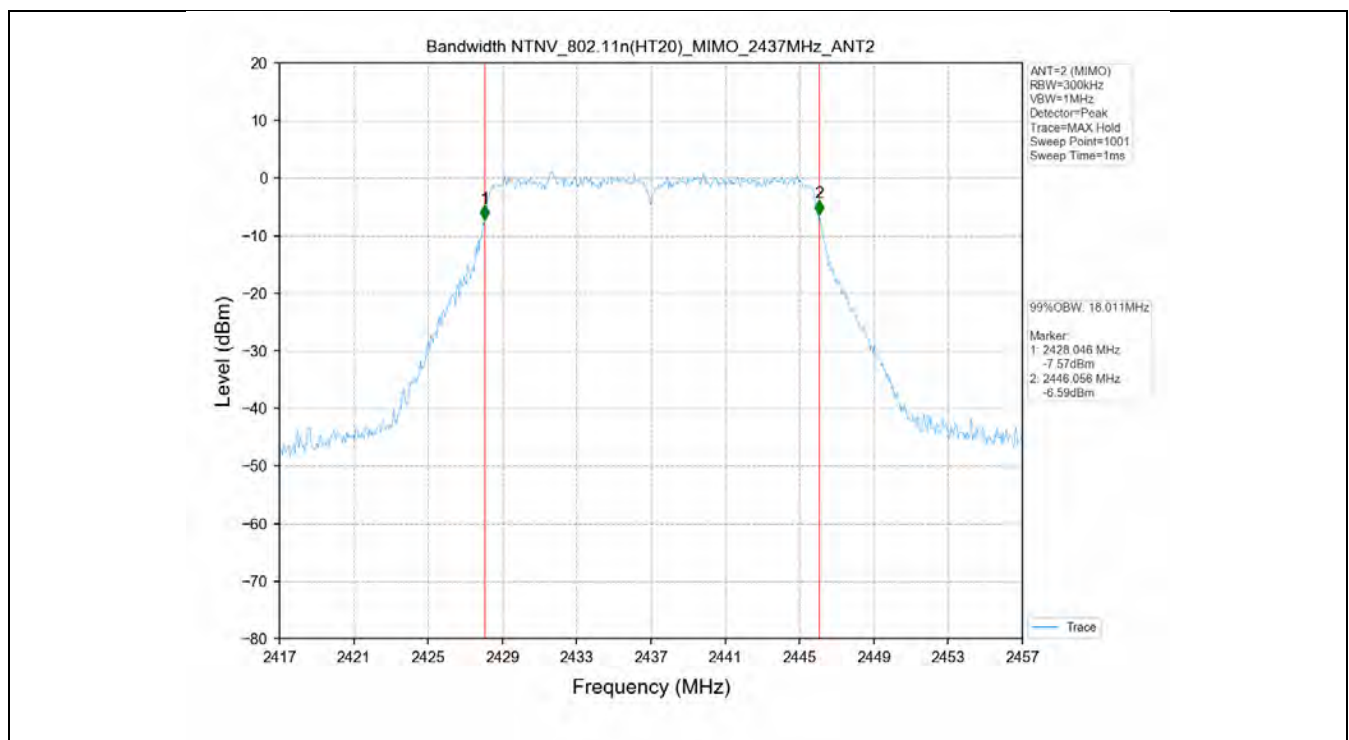
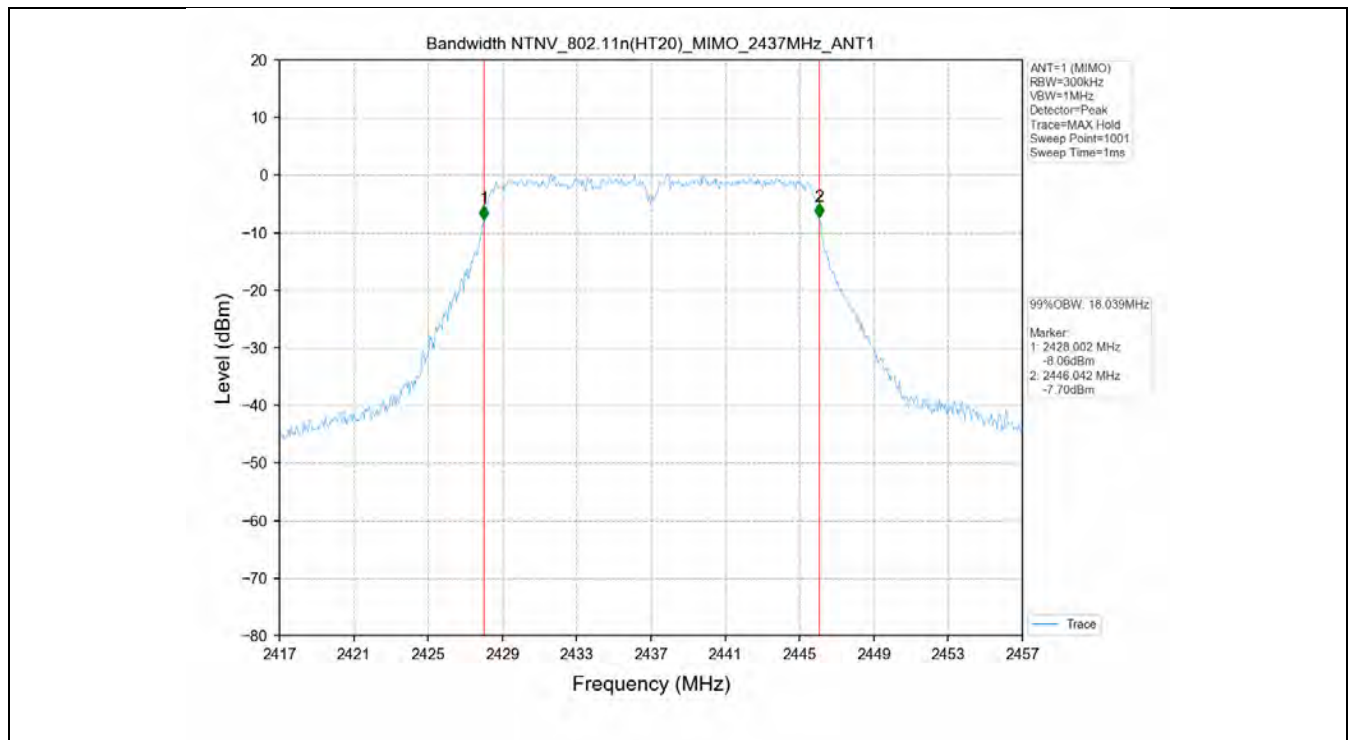


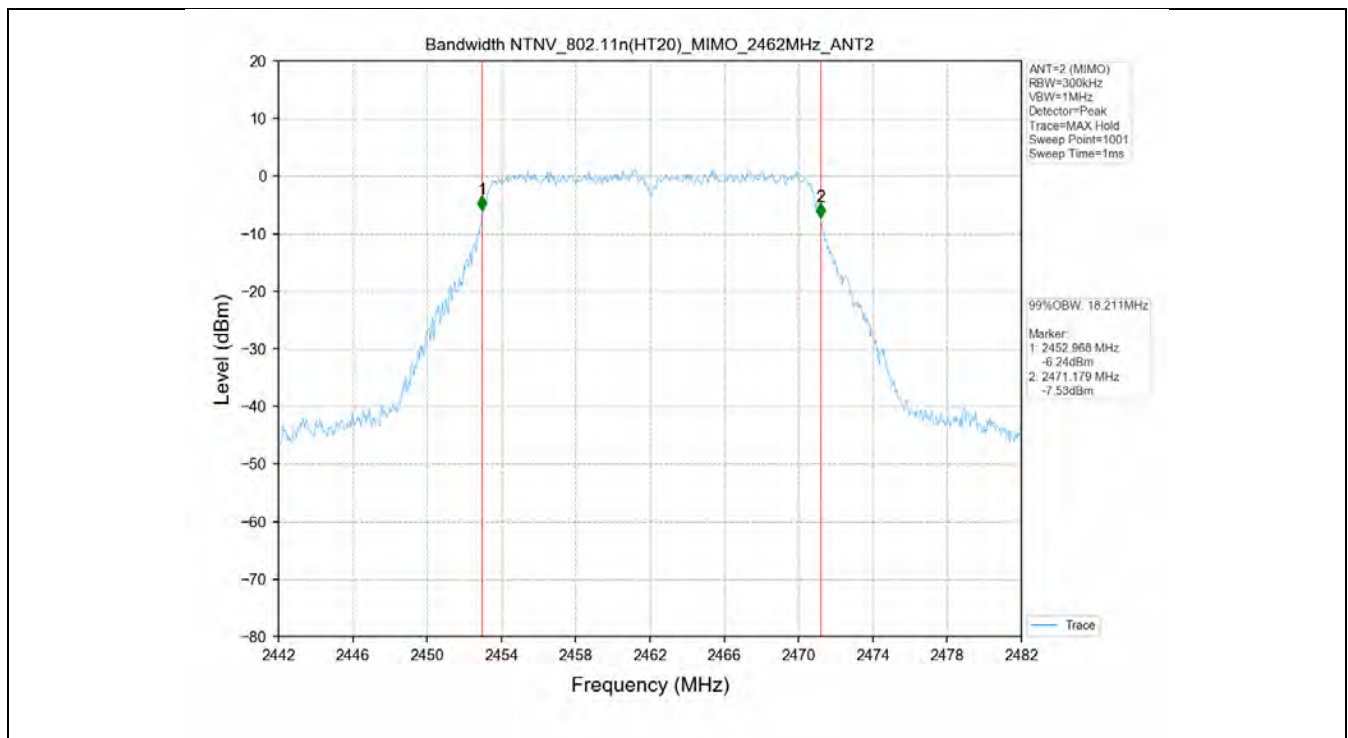
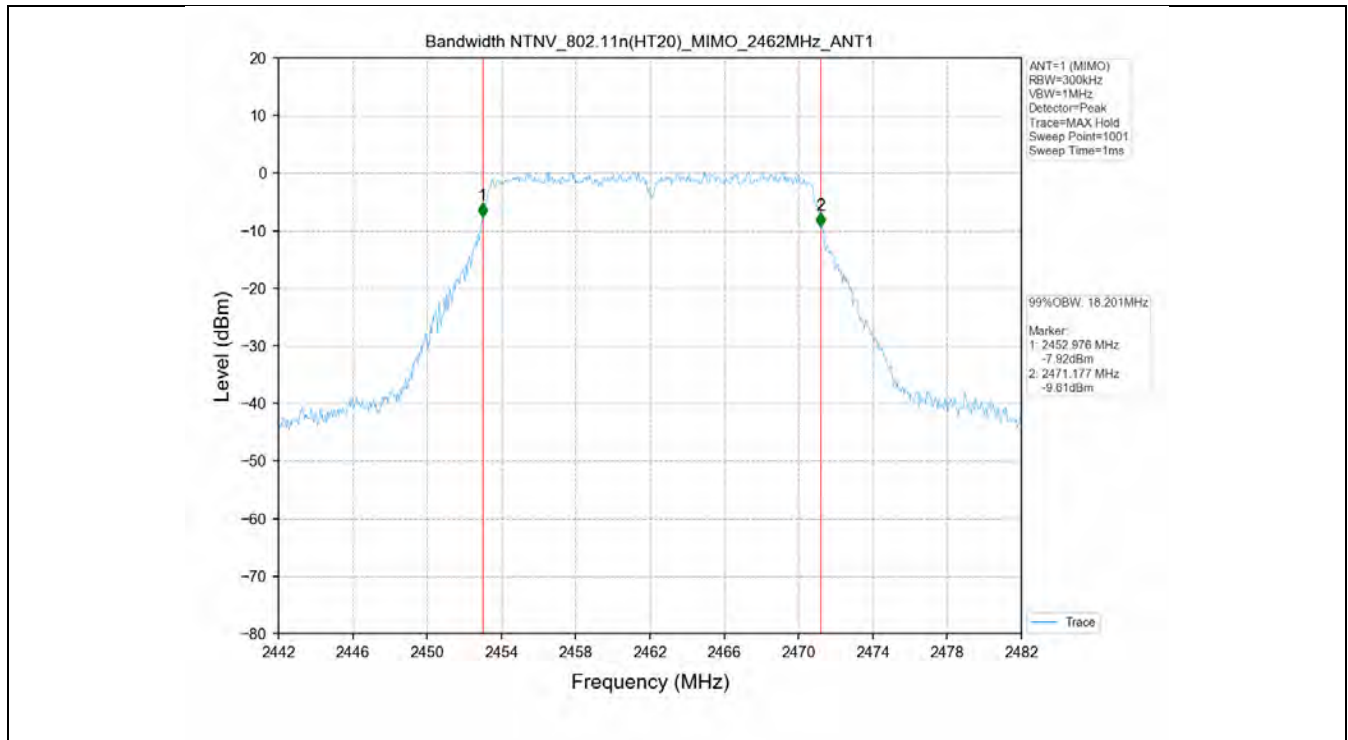


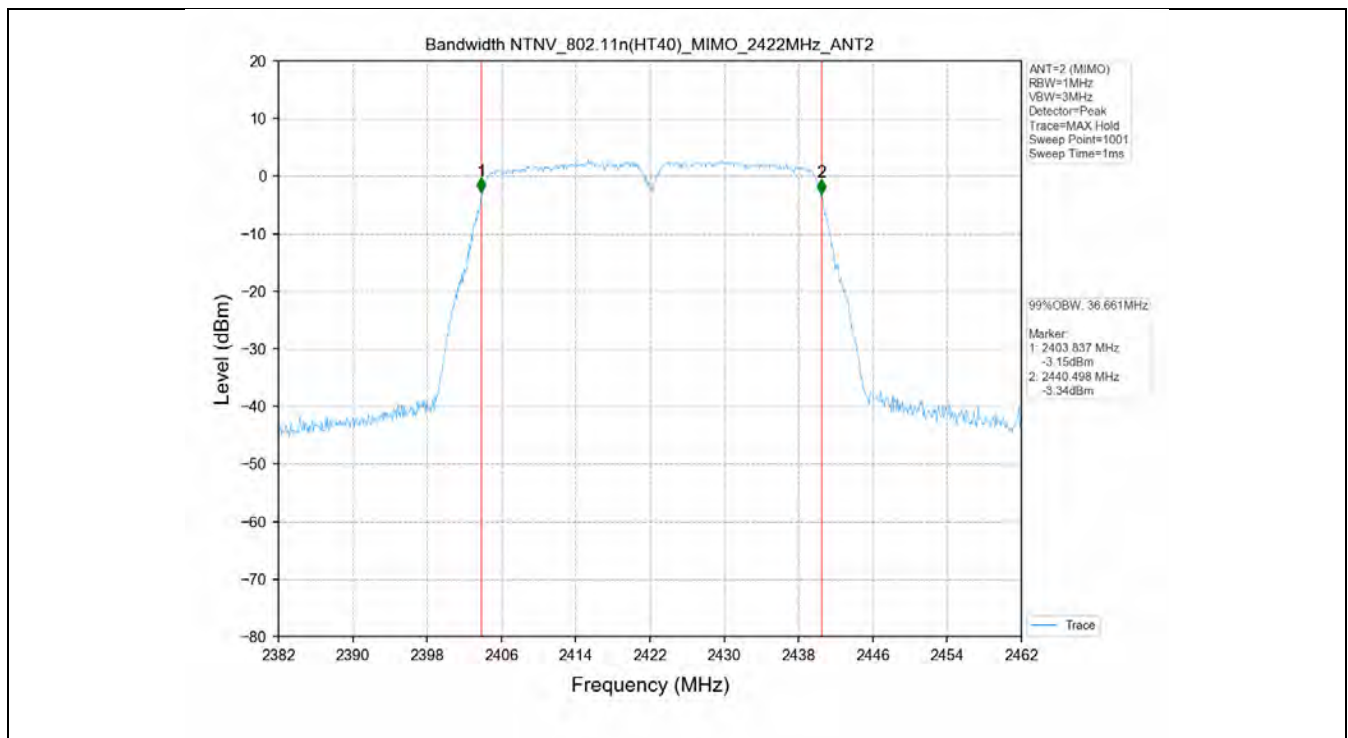
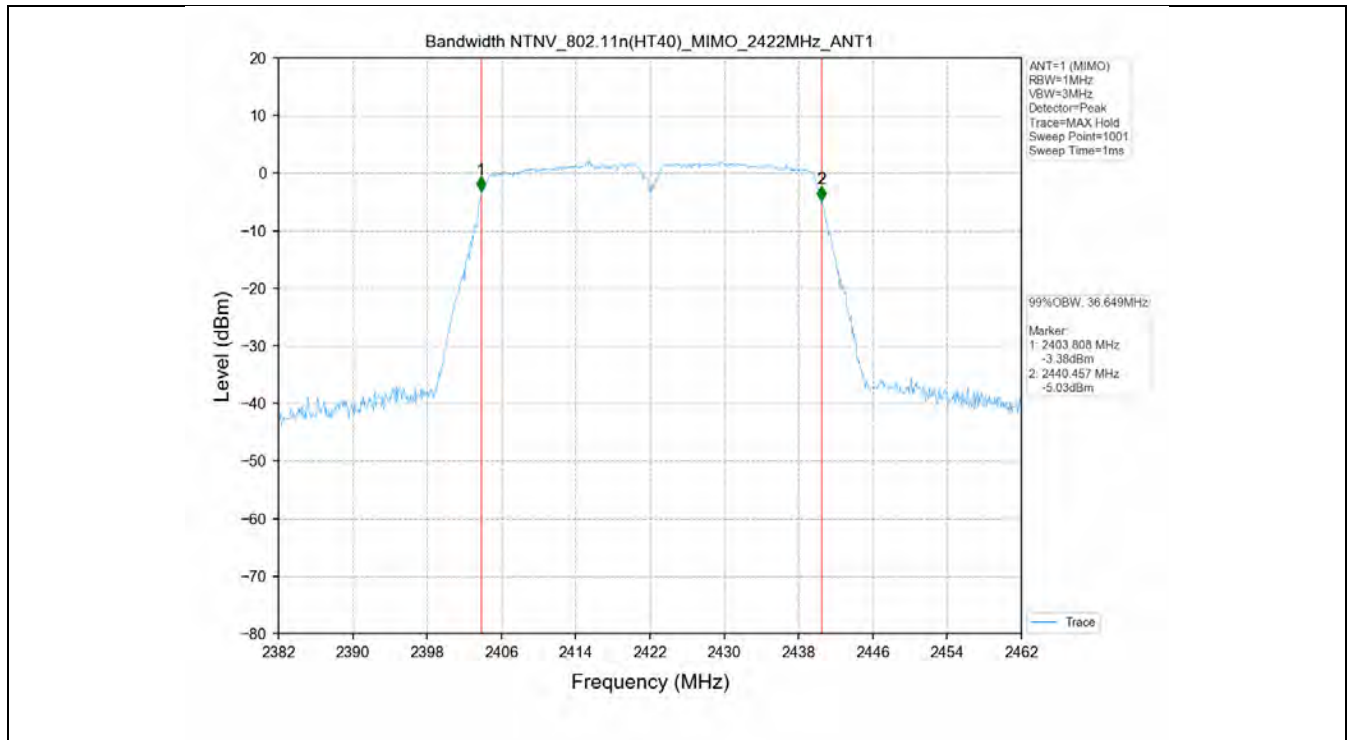


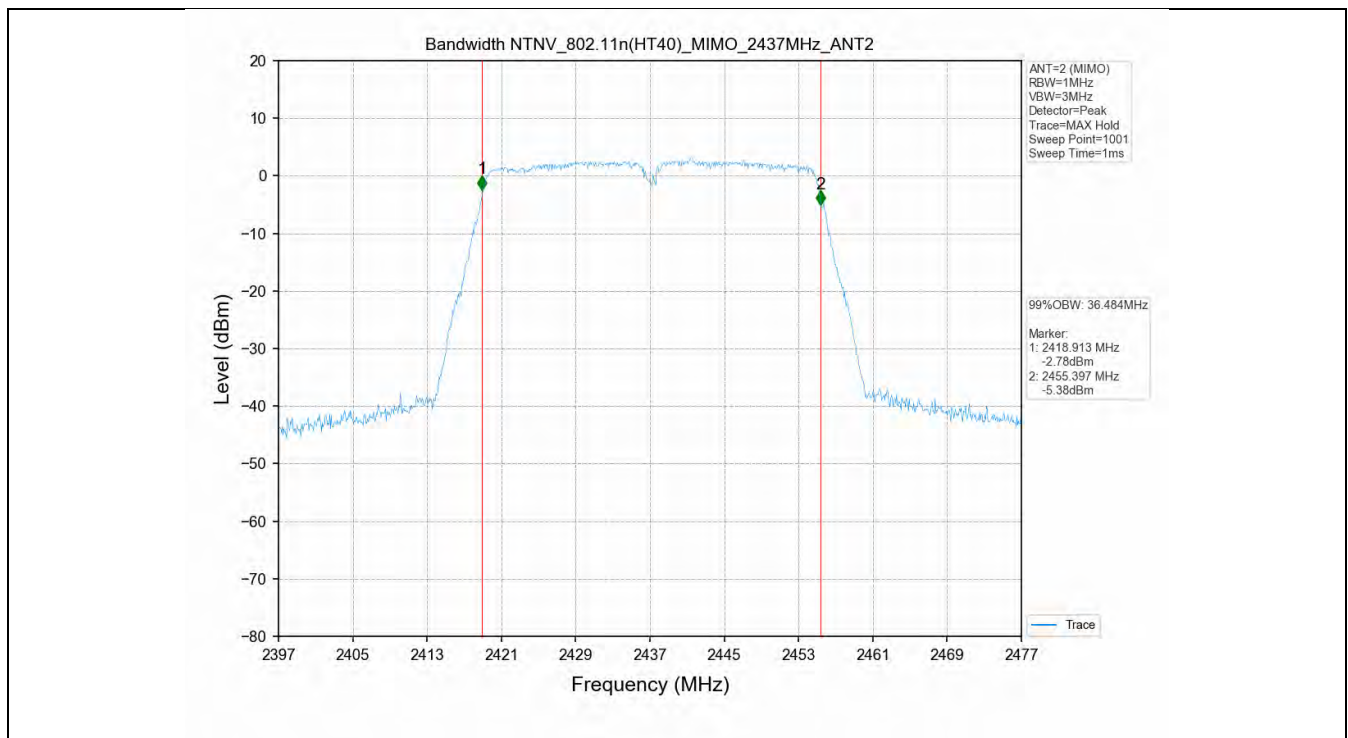
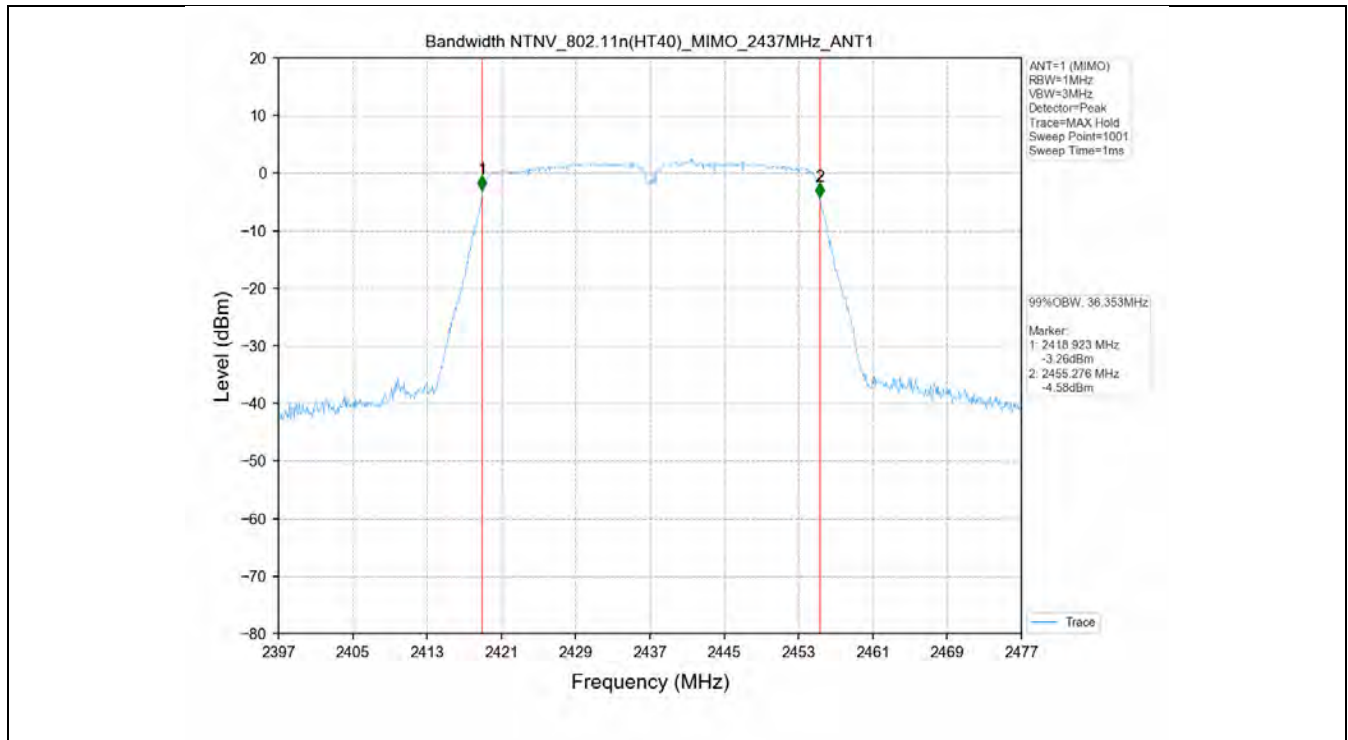


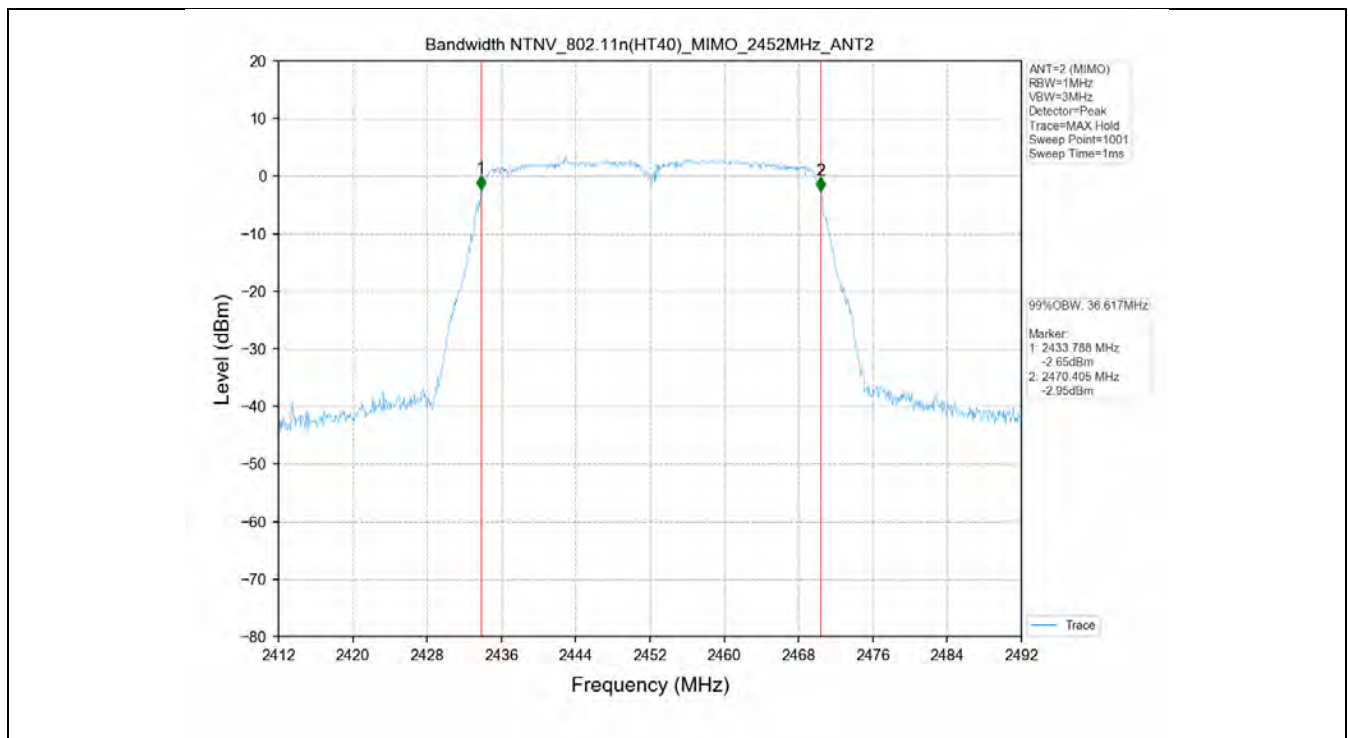
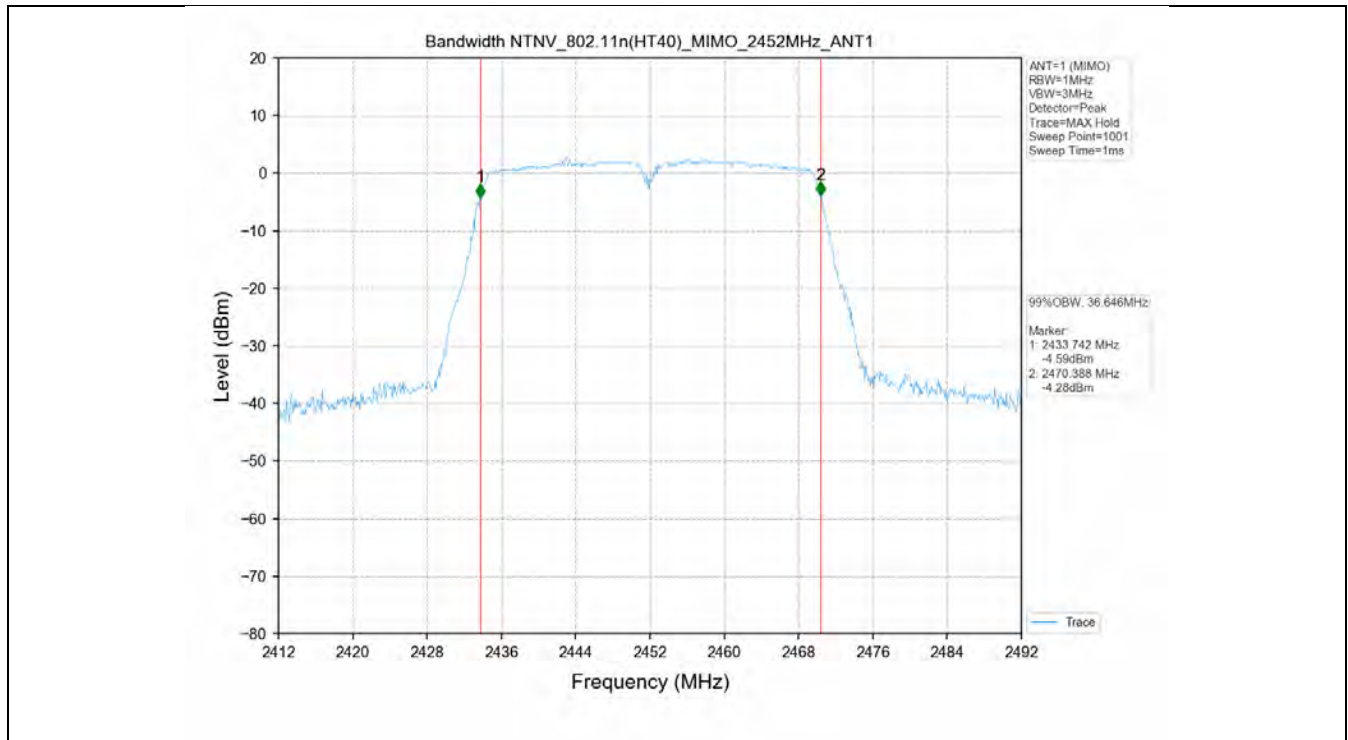












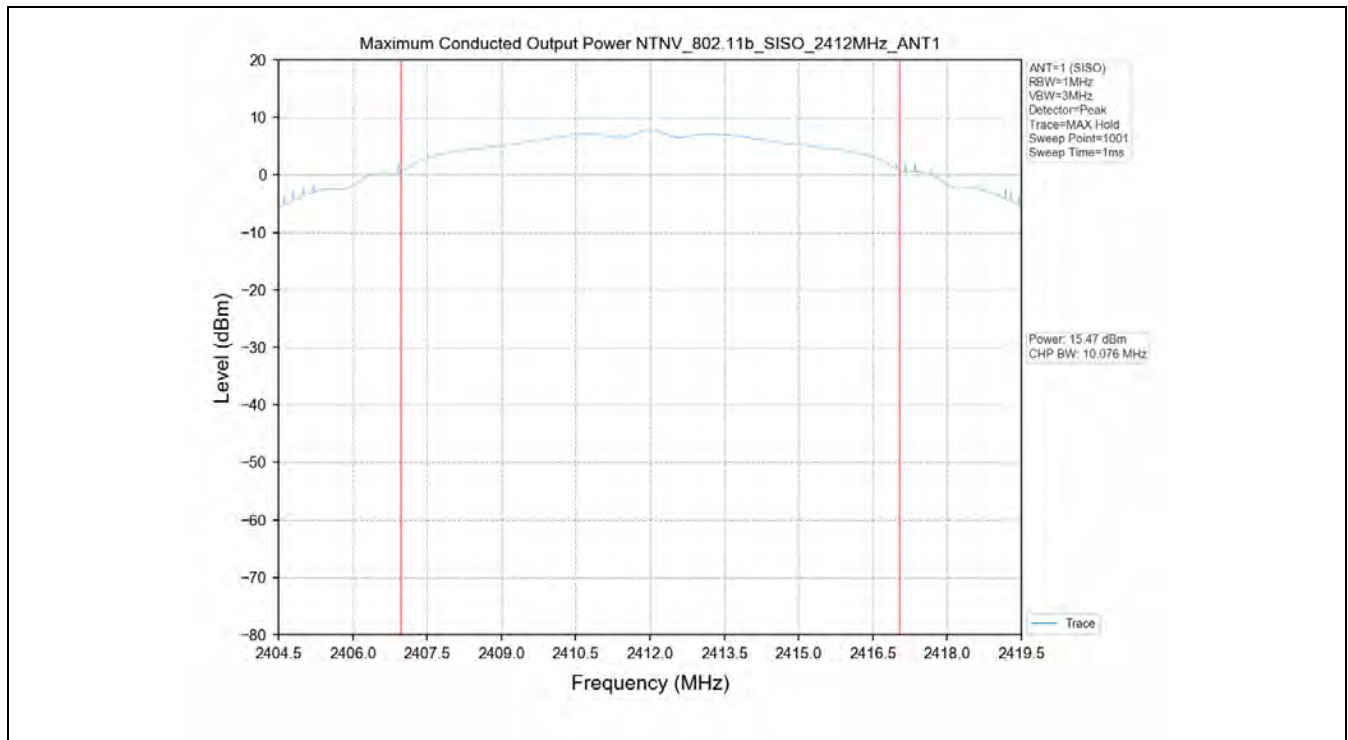


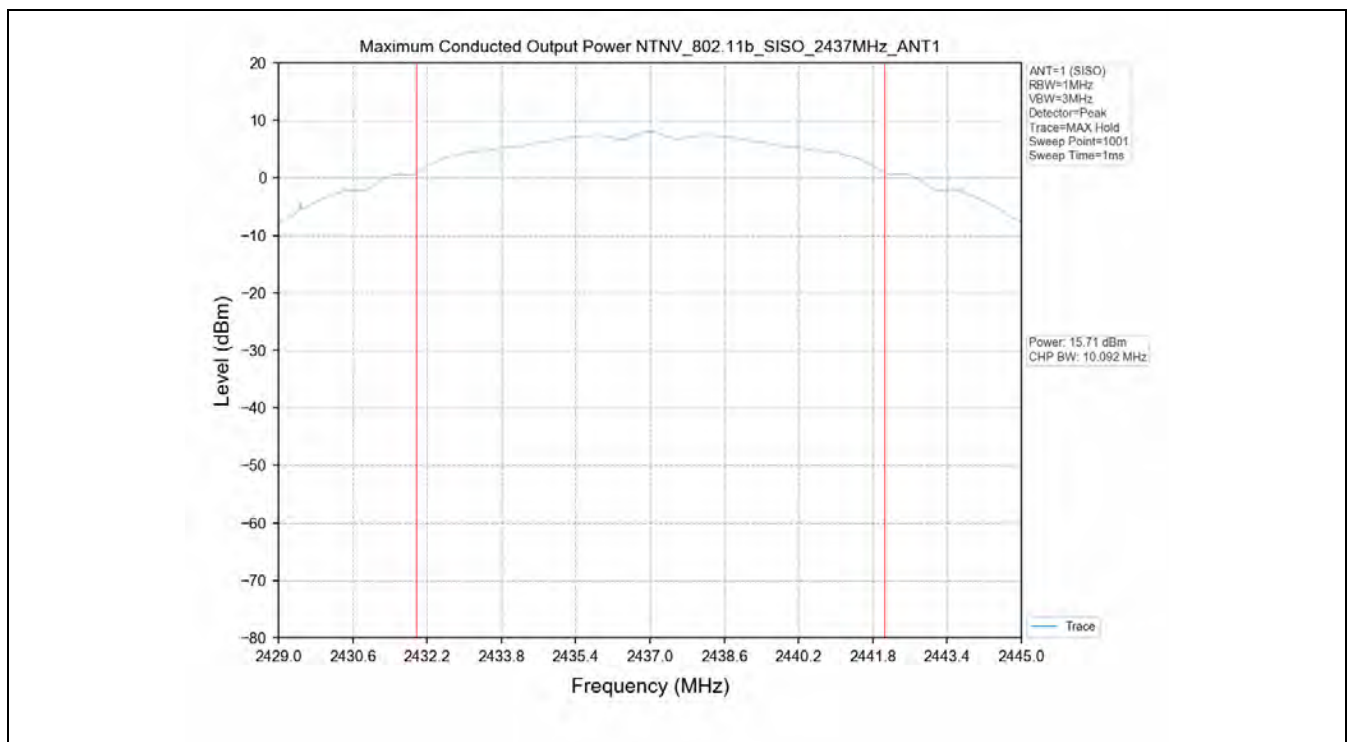
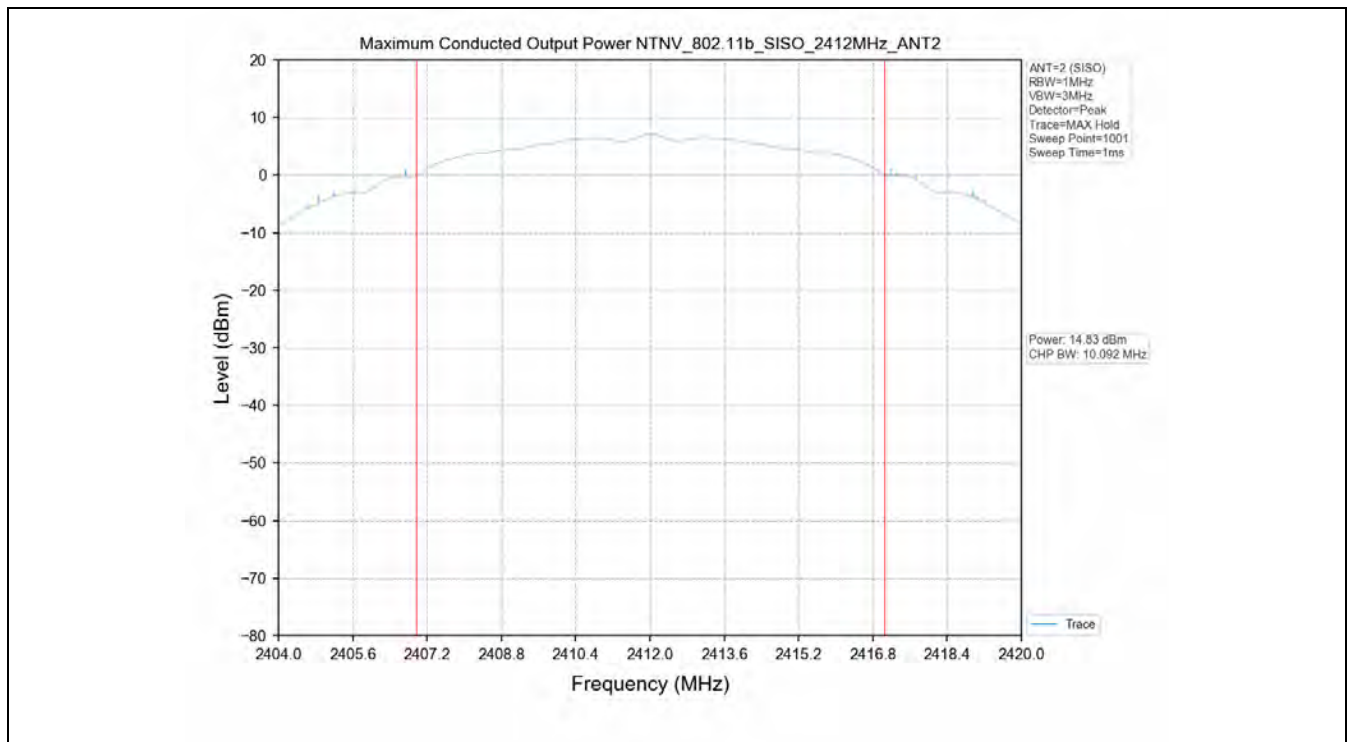
### 3. Maximum Conducted Output Power

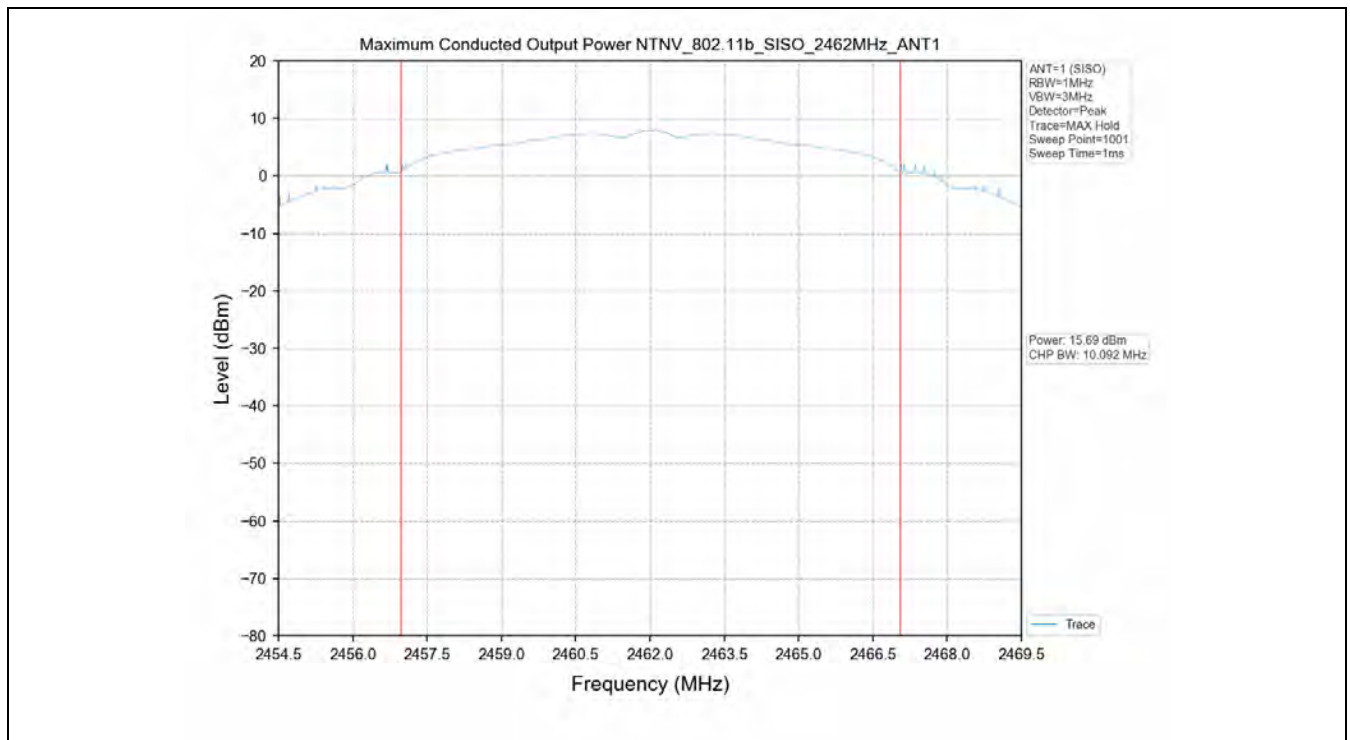
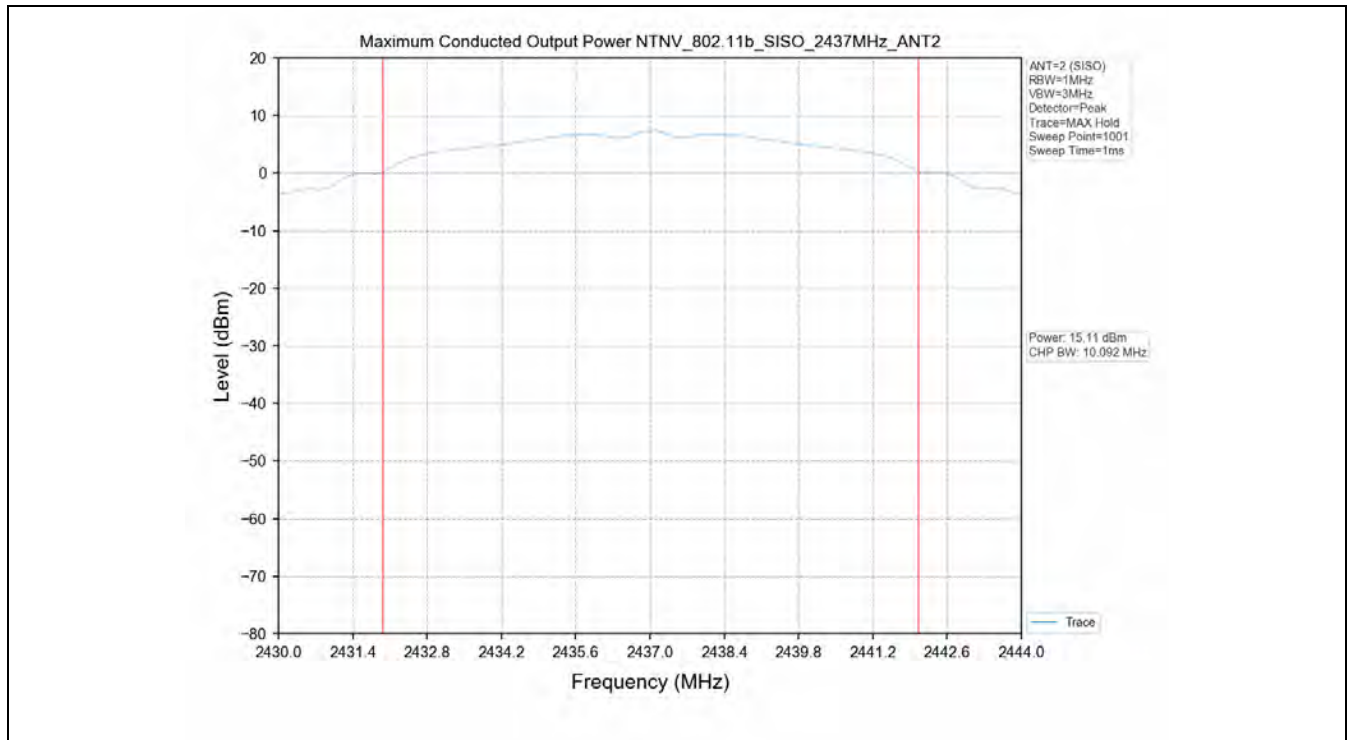
#### 3.1 Test Result

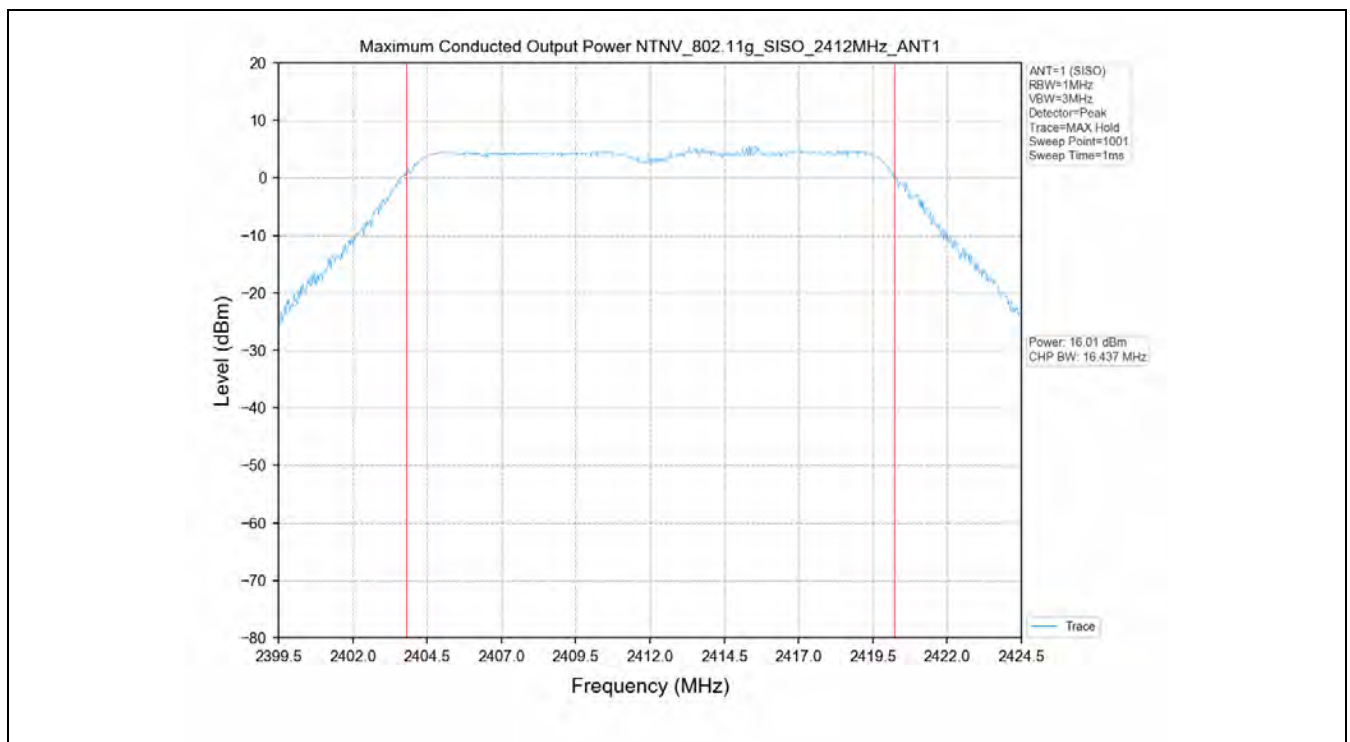
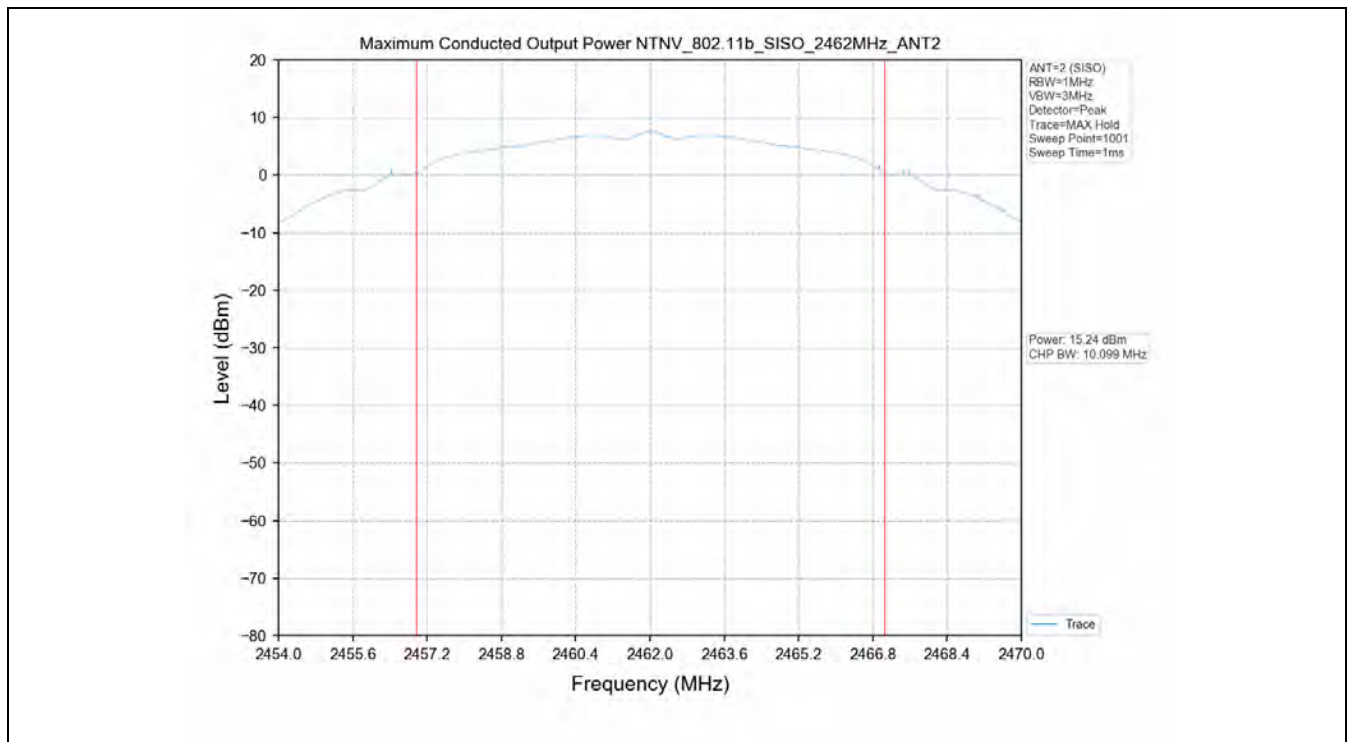
| Test Mode     | Frequency (MHz) | Tx Type | Measured Peak Output Power (dBm) |       |       | Limits (dBm) | Verdict |
|---------------|-----------------|---------|----------------------------------|-------|-------|--------------|---------|
|               |                 |         | Ant 1                            | Ant 2 | Total |              |         |
| 802.11b       | 2412            | SISO    | 15.47                            | 14.83 | /     | 30           | PASS    |
|               | 2437            | SISO    | 15.71                            | 15.11 | /     | 30           | PASS    |
|               | 2462            | SISO    | 15.69                            | 15.24 | /     | 30           | PASS    |
| 802.11g       | 2412            | SISO    | 16.01                            | 15.48 | /     | 30           | PASS    |
|               | 2437            | SISO    | 16.46                            | 15.88 | /     | 30           | PASS    |
|               | 2462            | SISO    | 16.46                            | 16.08 | /     | 30           | PASS    |
| 802.11n(HT20) | 2412            | MIMO    | 14.93                            | 14.39 | 17.68 | 30           | PASS    |
|               | 2437            | MIMO    | 15.27                            | 14.93 | 18.11 | 30           | PASS    |
|               | 2462            | MIMO    | 15.32                            | 15.09 | 18.22 | 30           | PASS    |
| 802.11n(HT40) | 2422            | MIMO    | 14.50                            | 13.86 | 17.20 | 30           | PASS    |
|               | 2437            | MIMO    | 14.48                            | 13.98 | 17.25 | 30           | PASS    |
|               | 2452            | MIMO    | 14.50                            | 14.08 | 17.31 | 30           | PASS    |

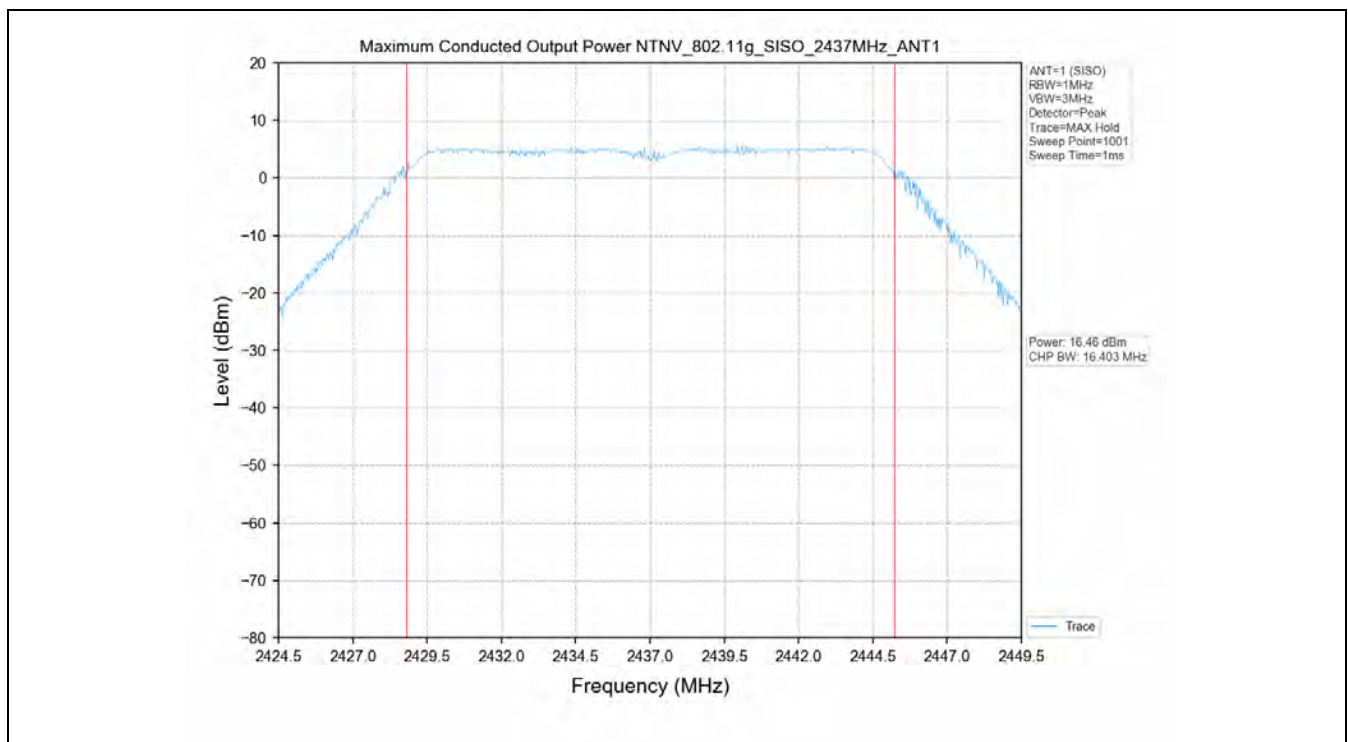
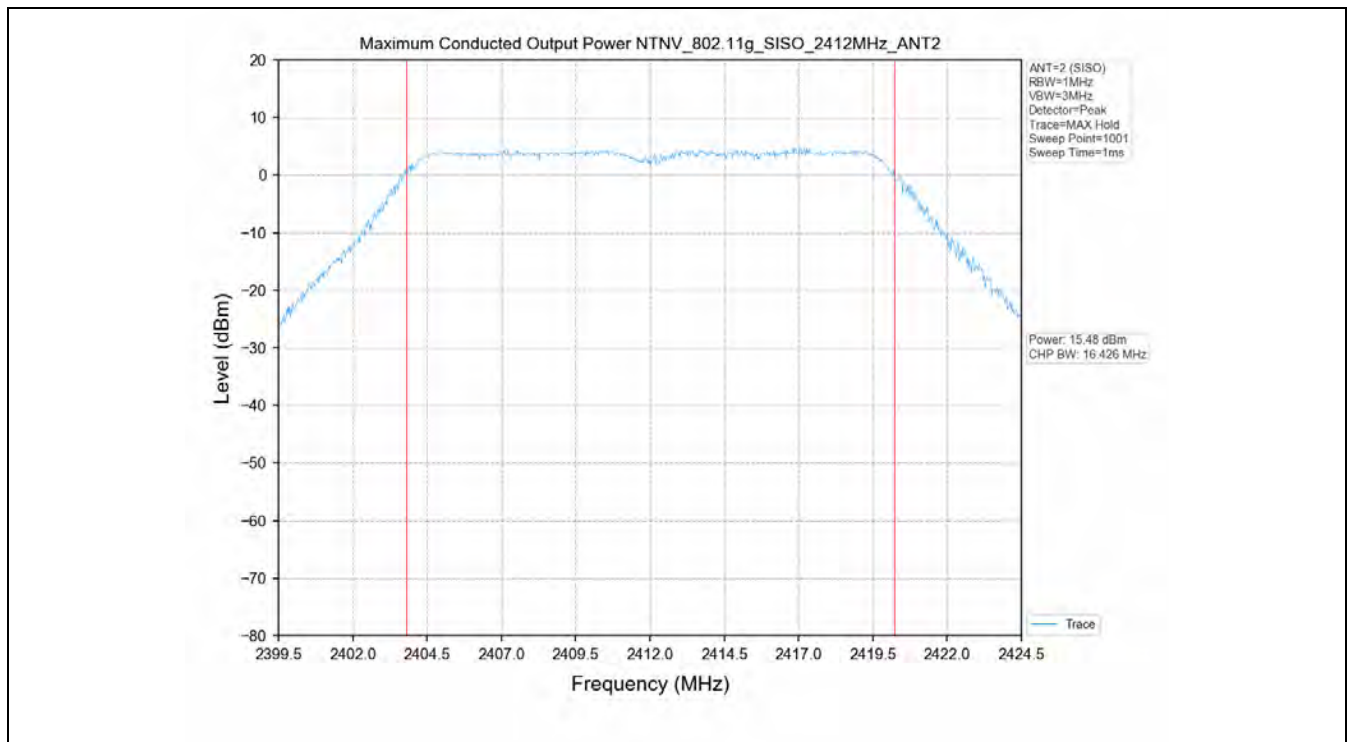
#### 3.2 Test Graph

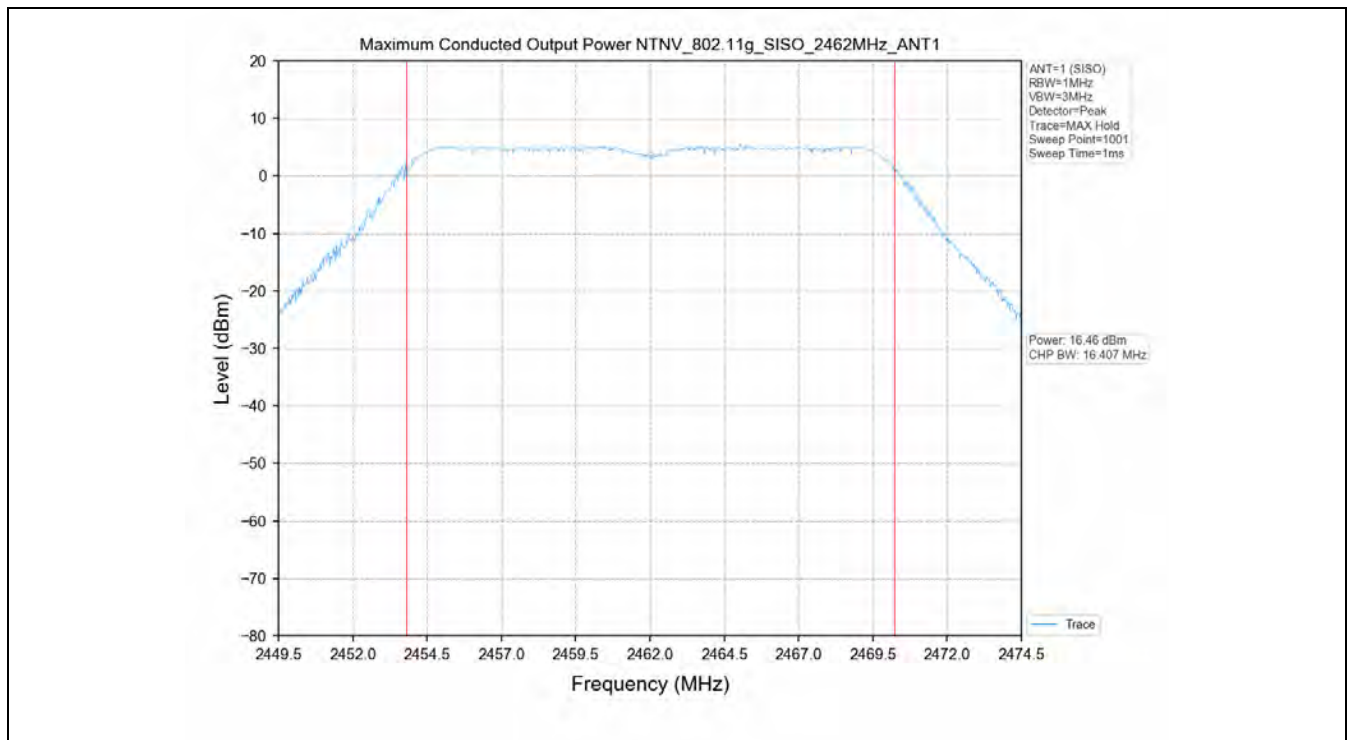
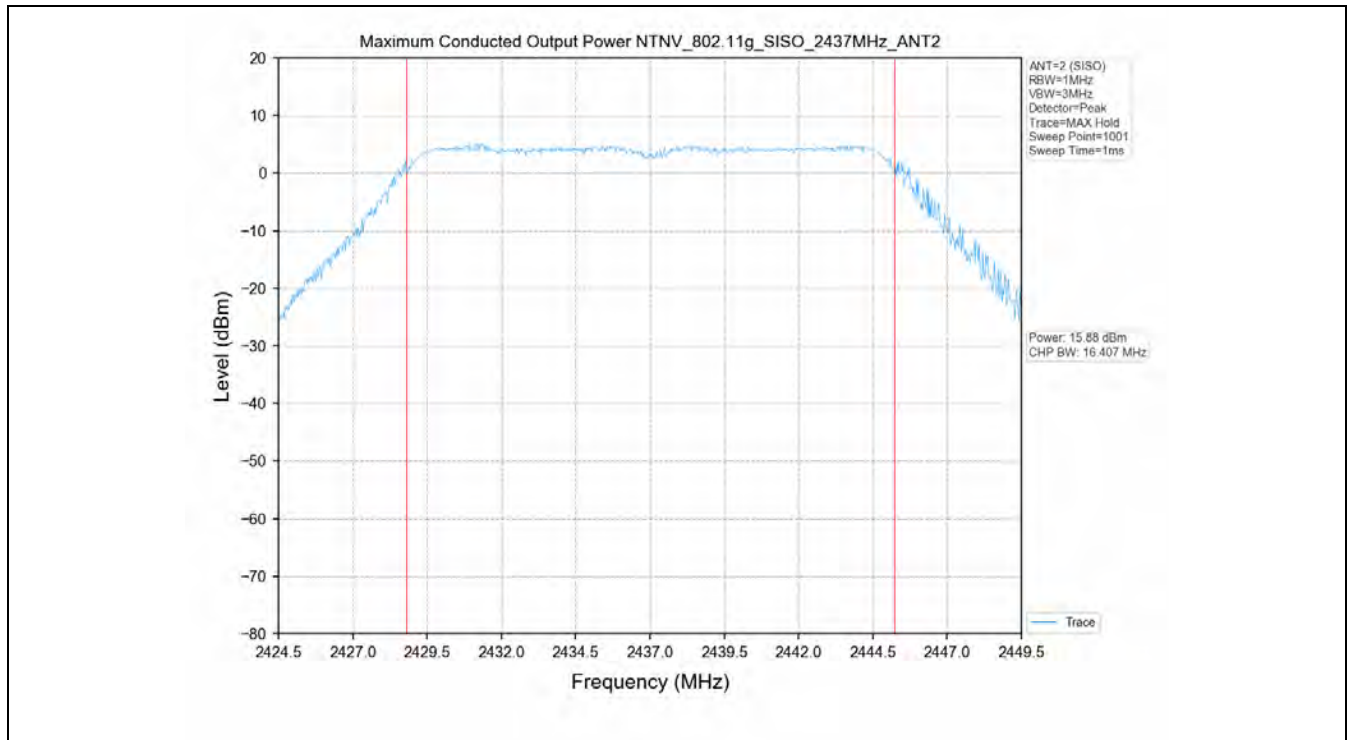


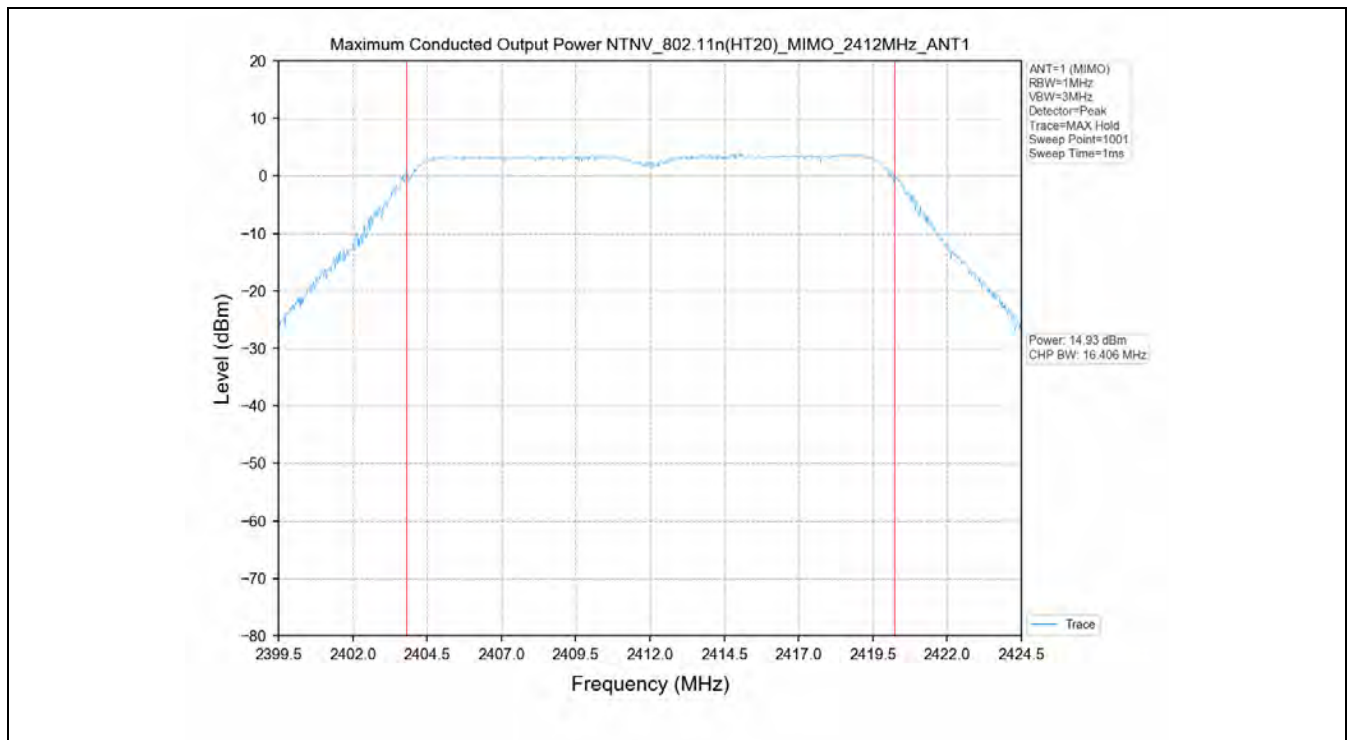
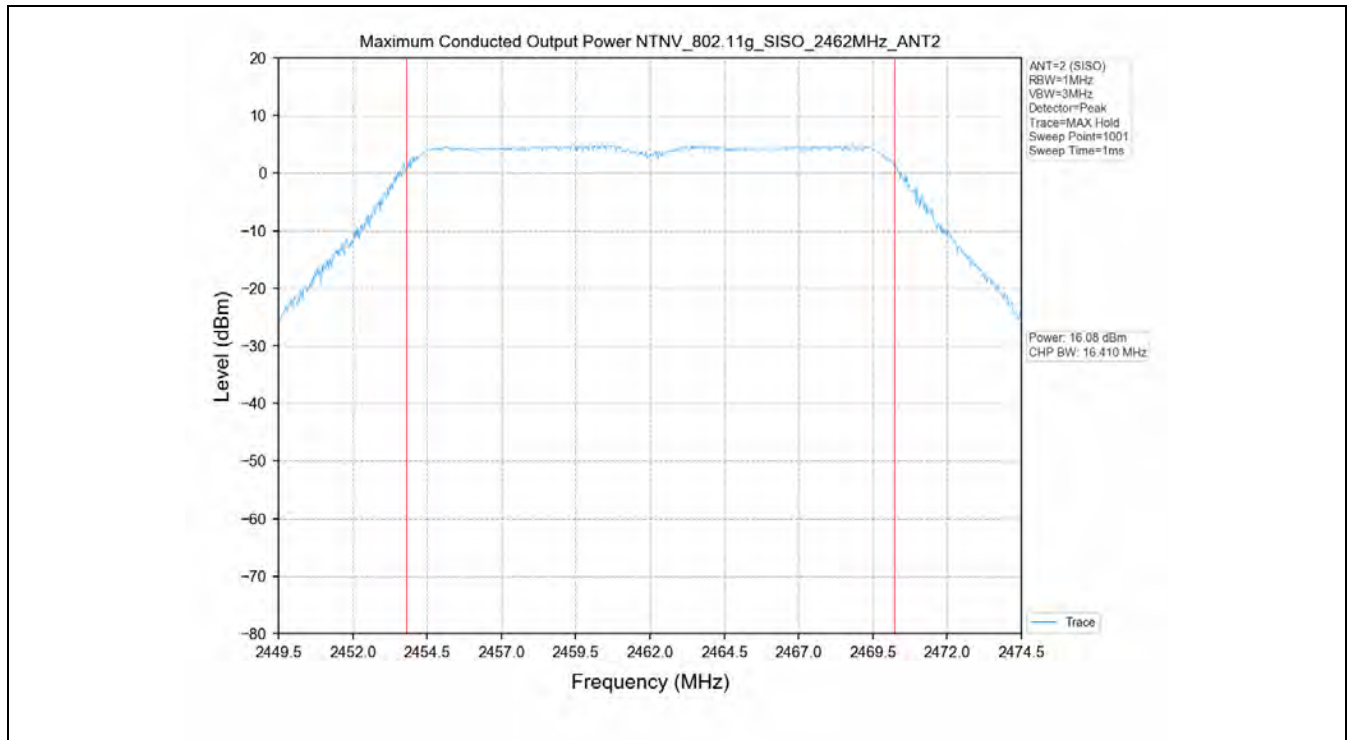


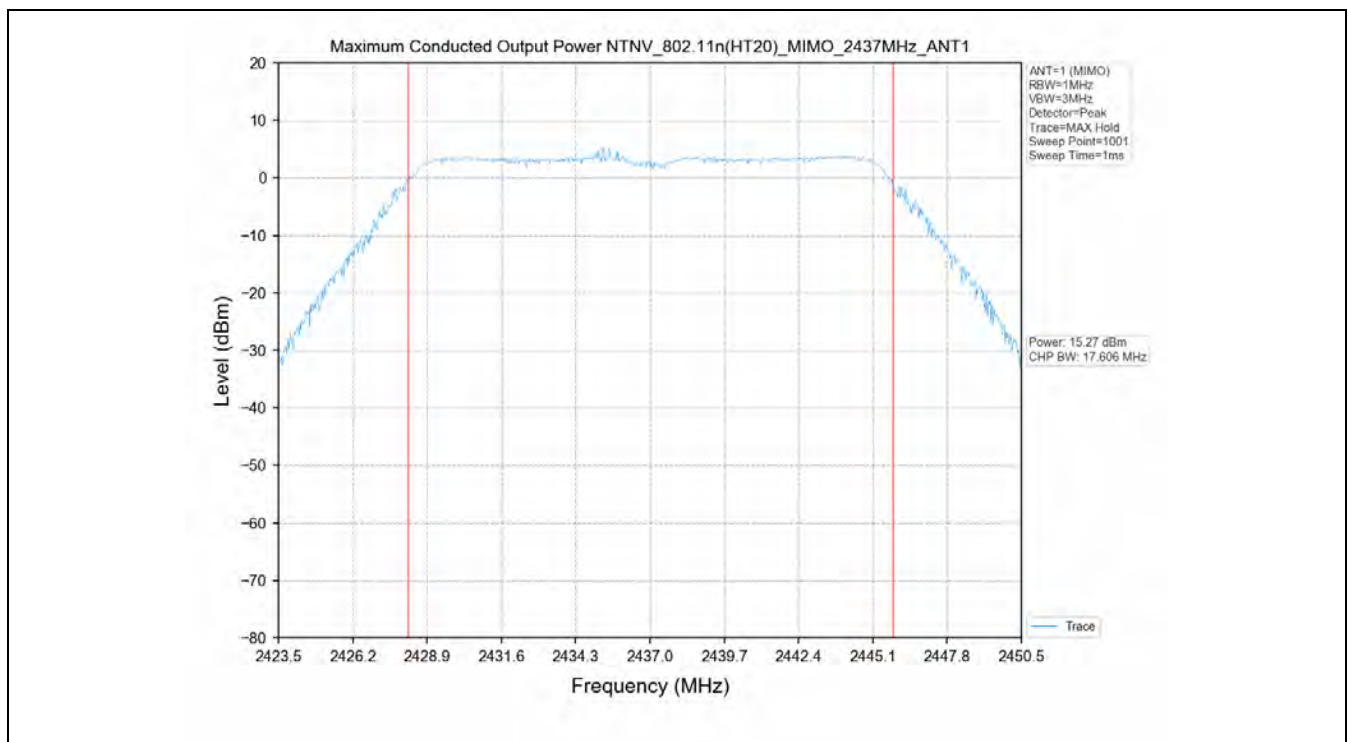
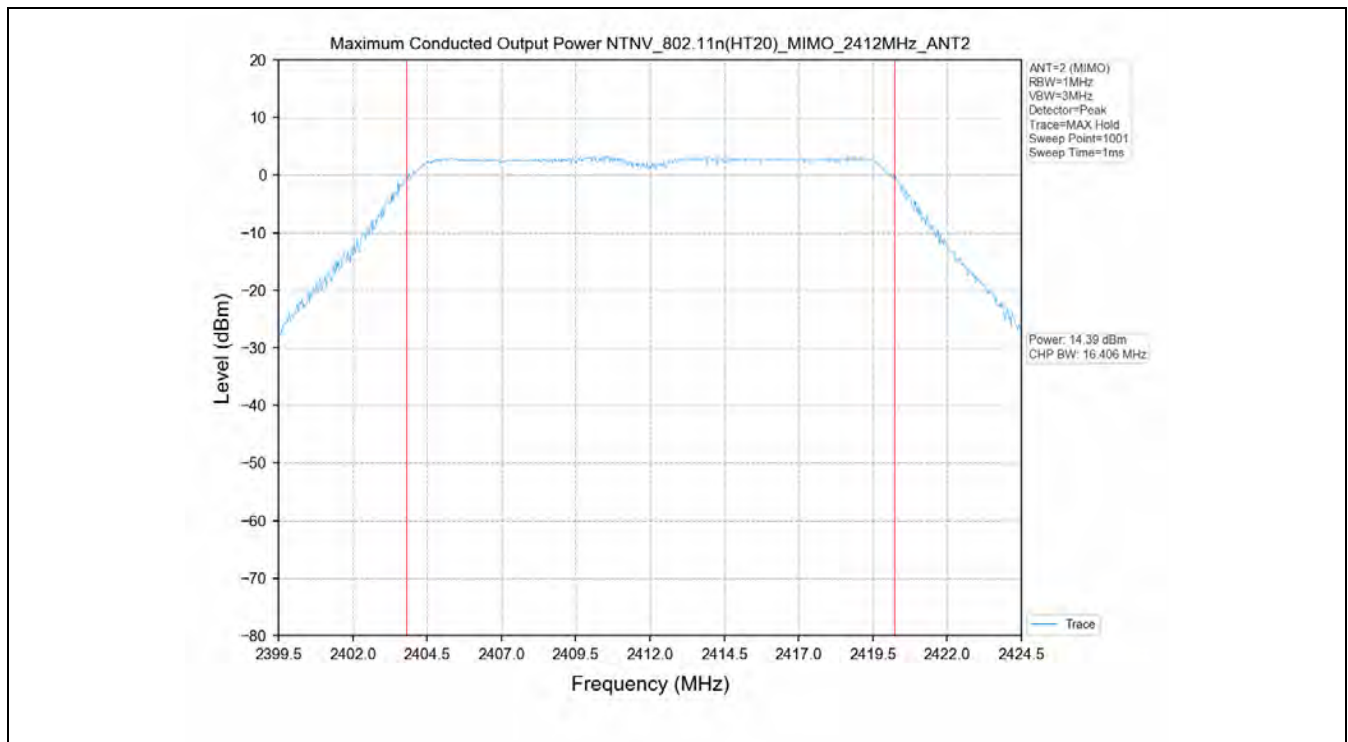


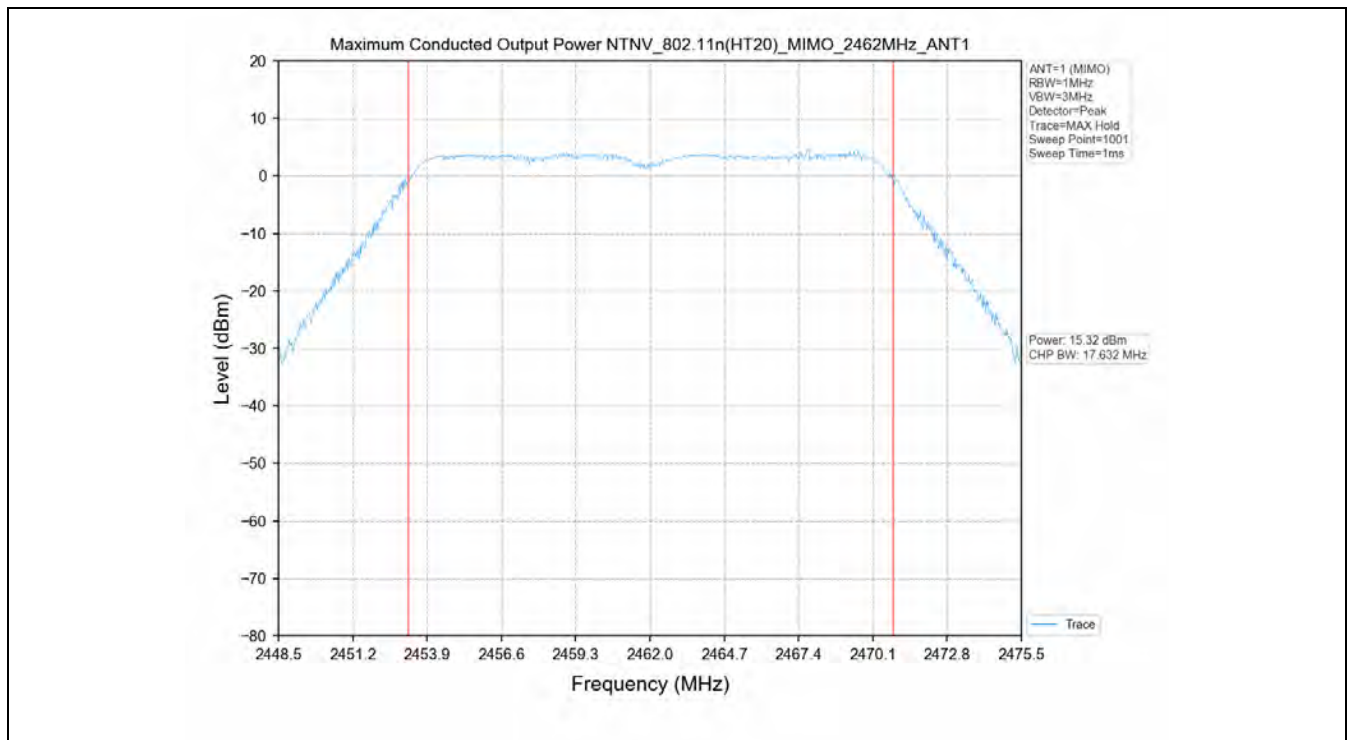
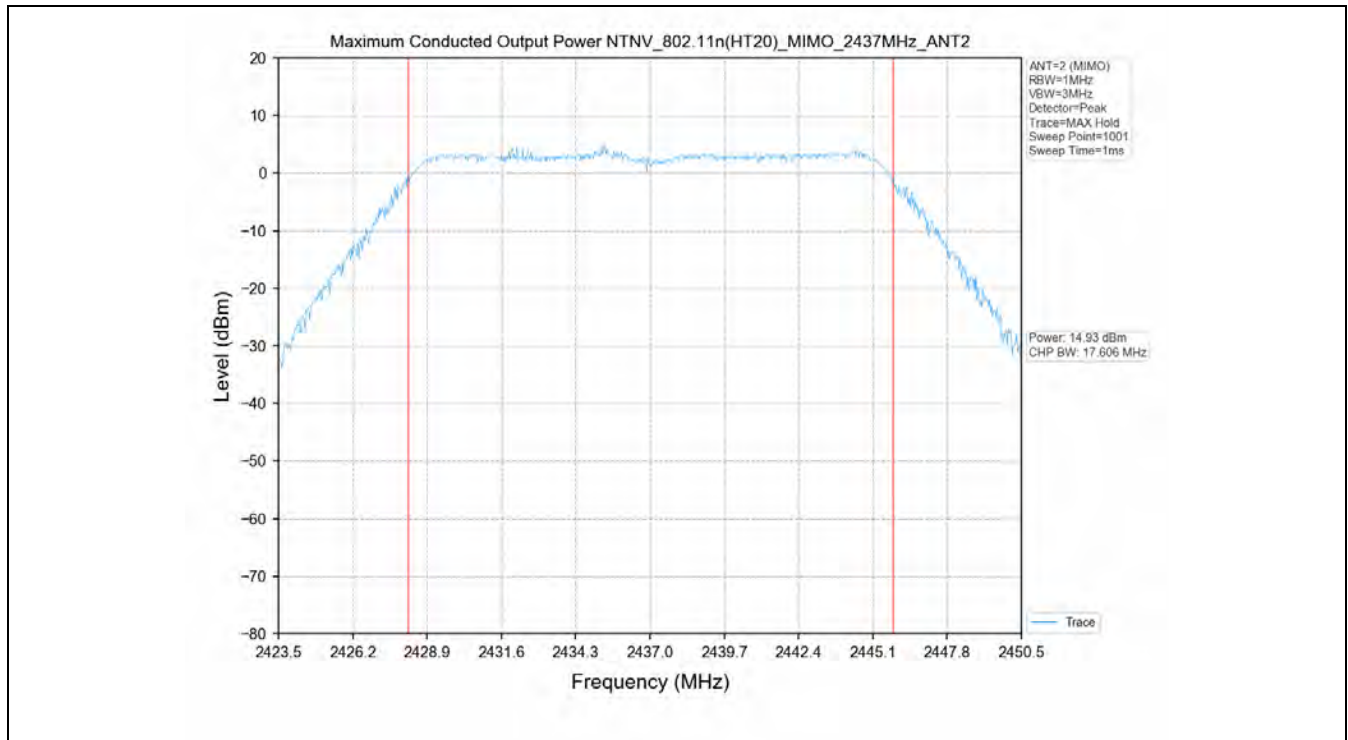


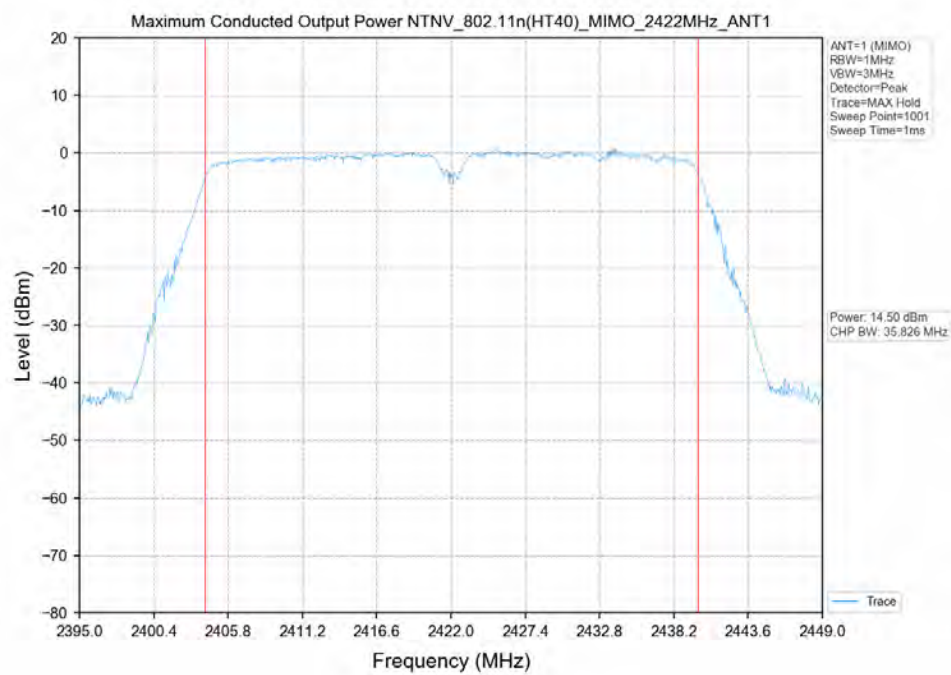
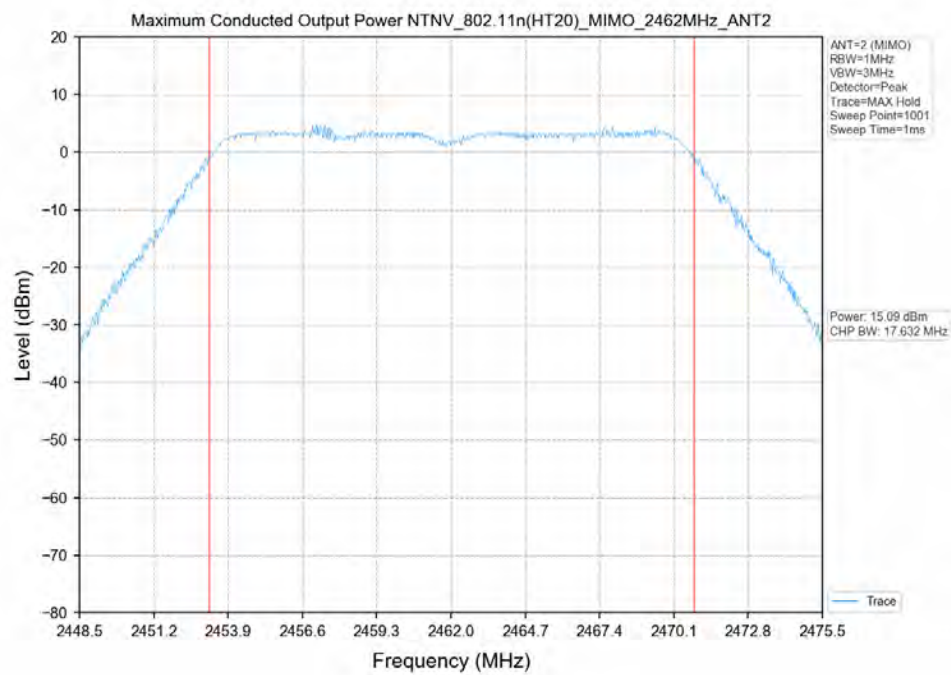


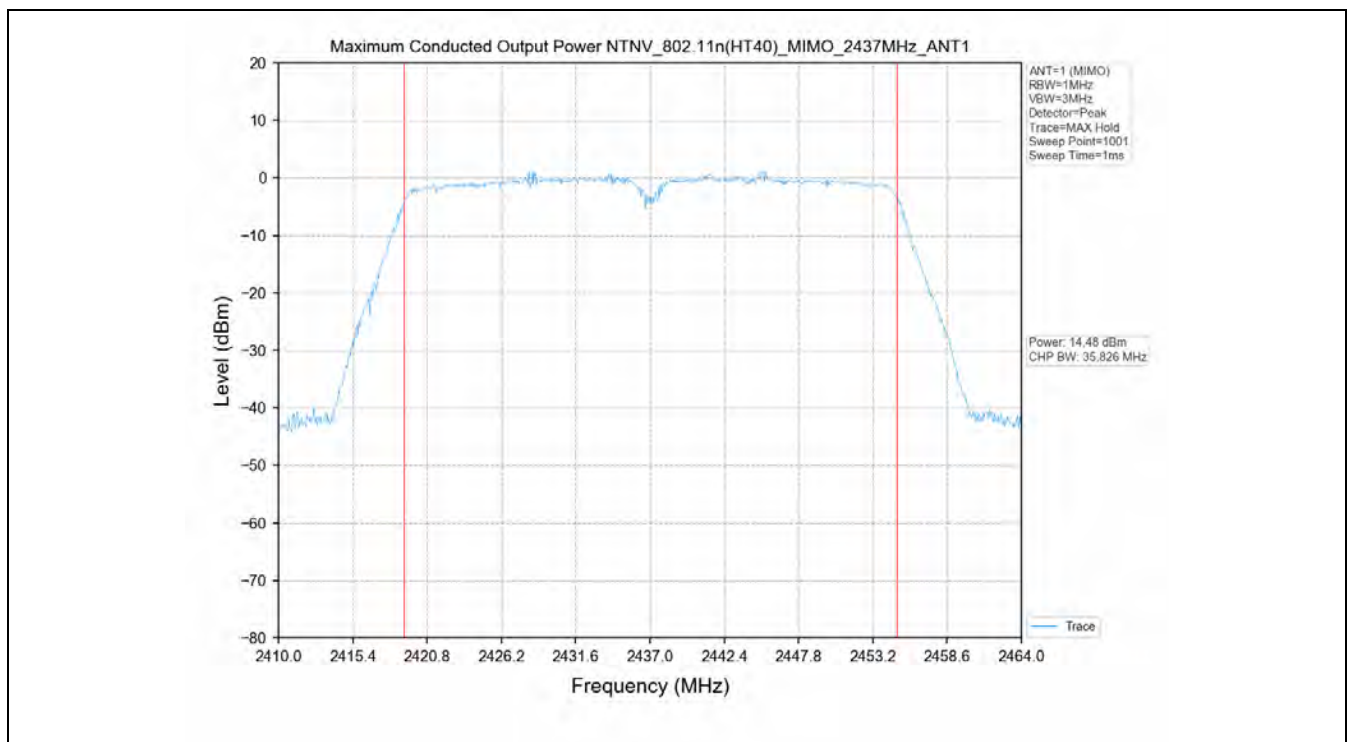
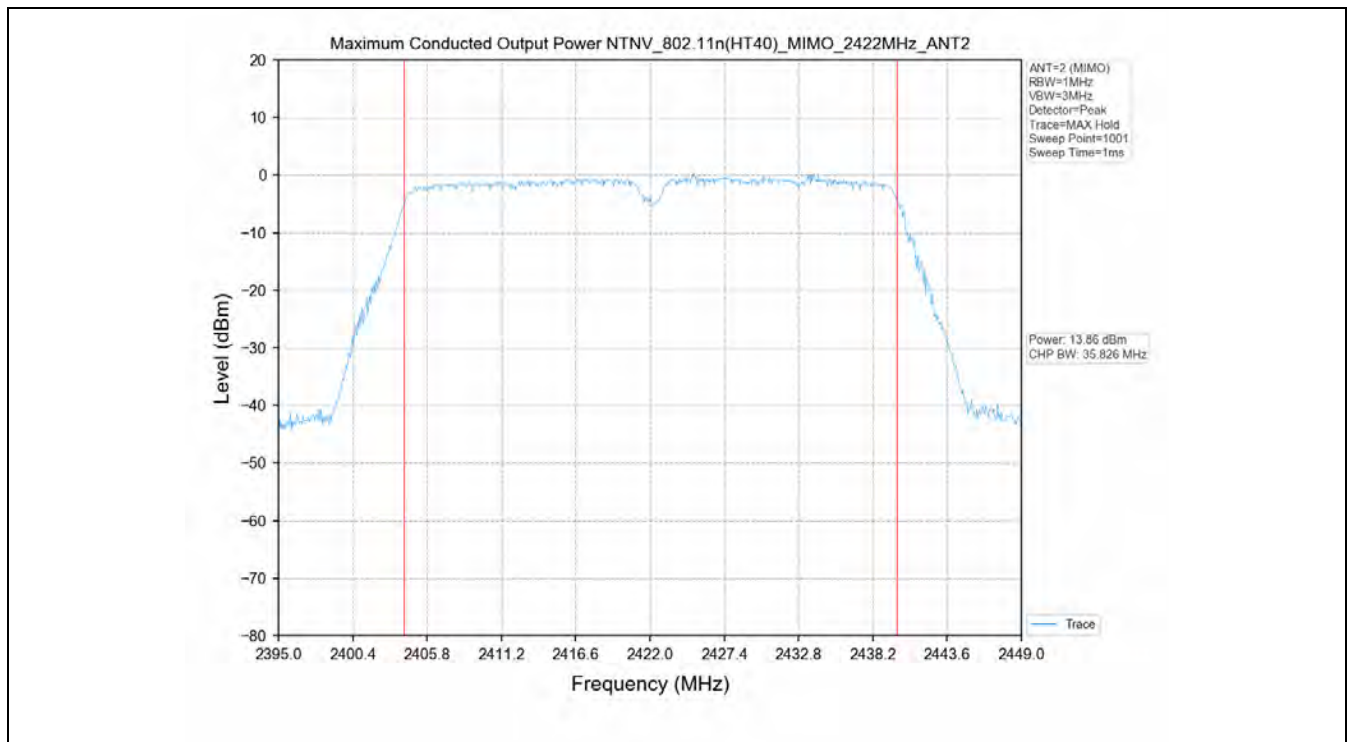


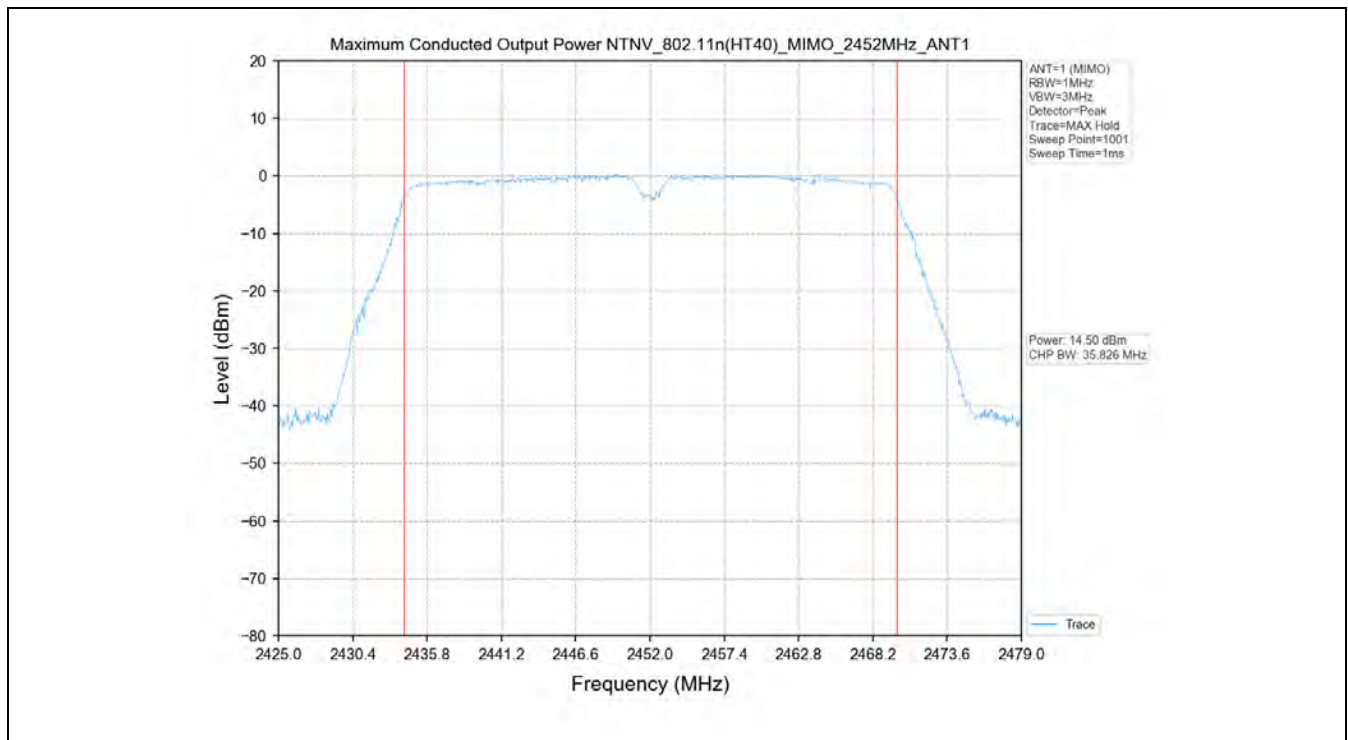
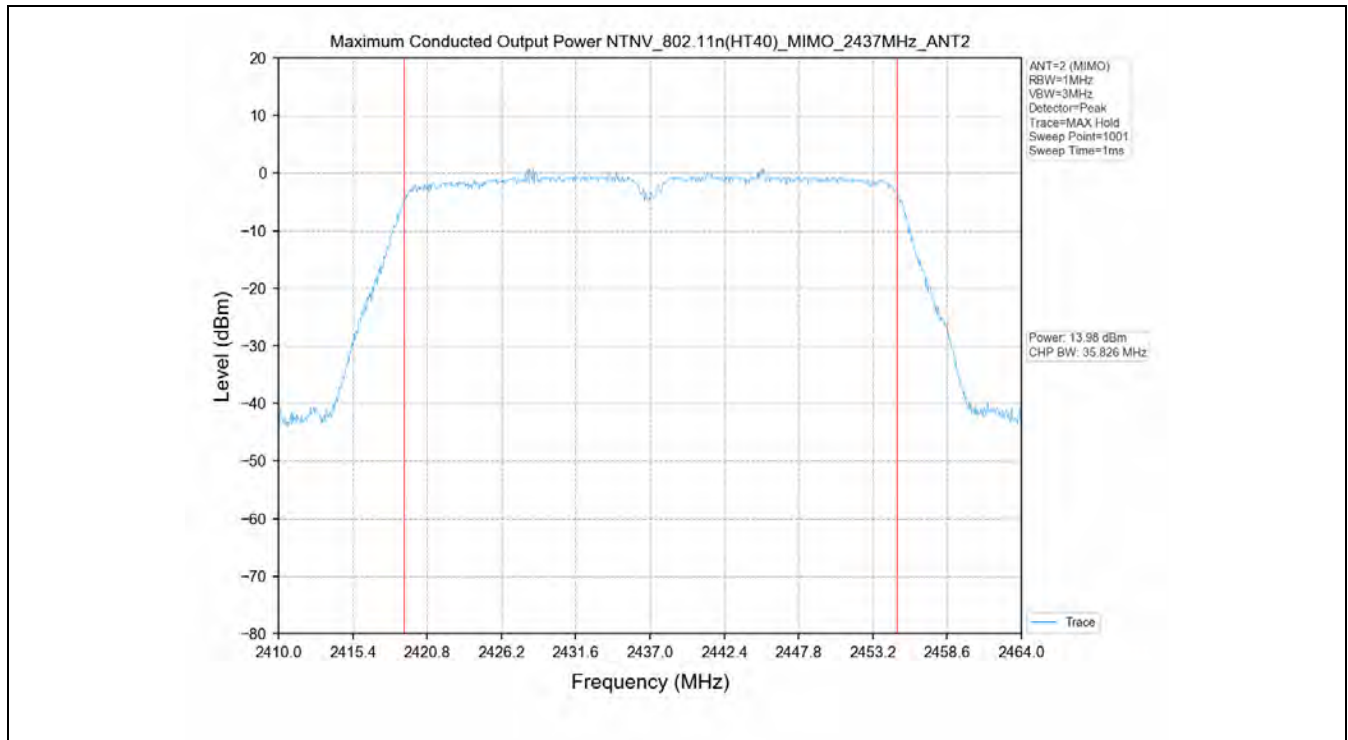


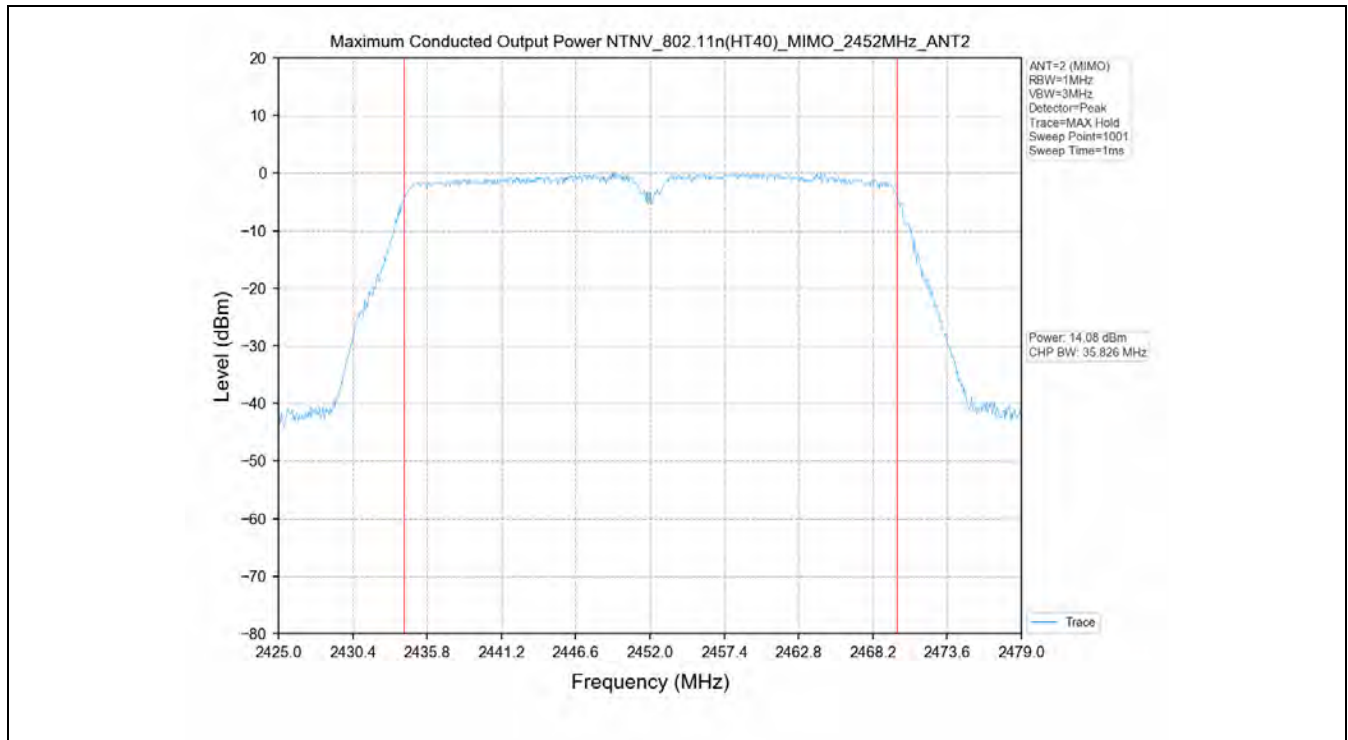










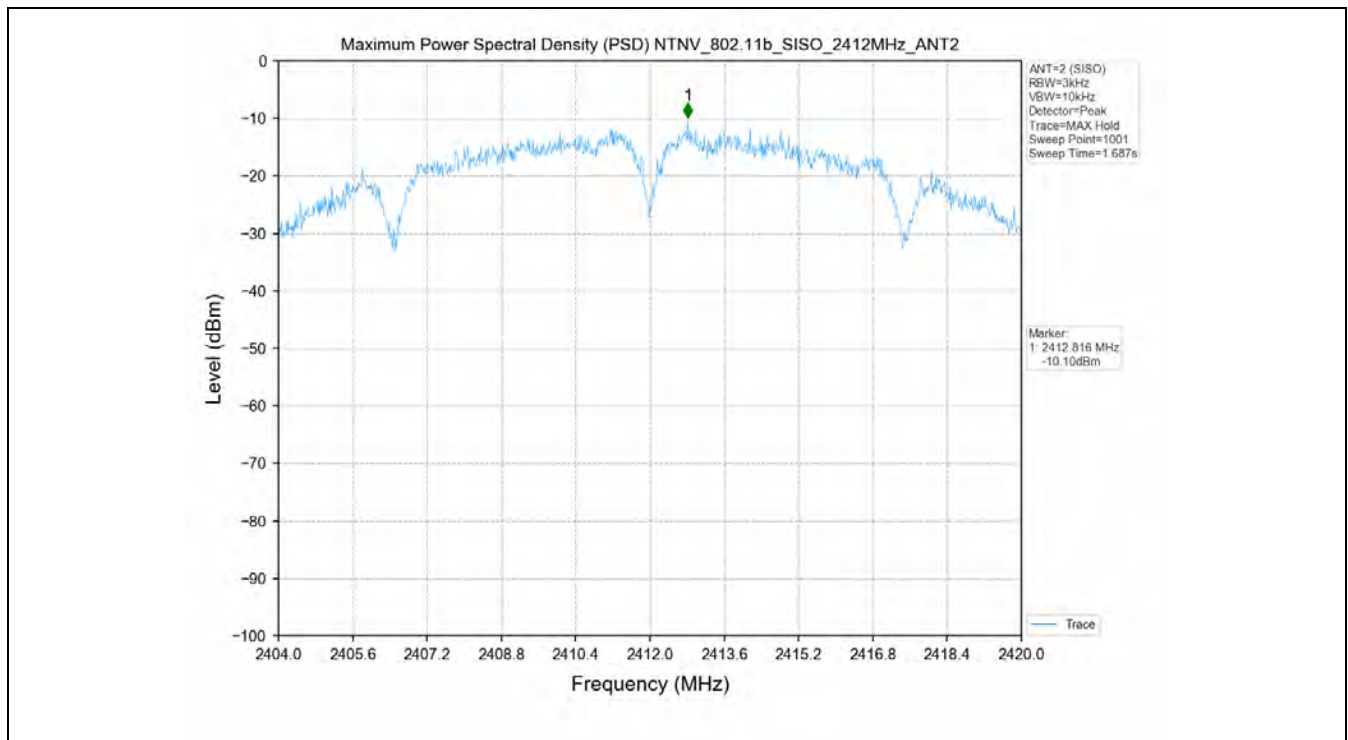
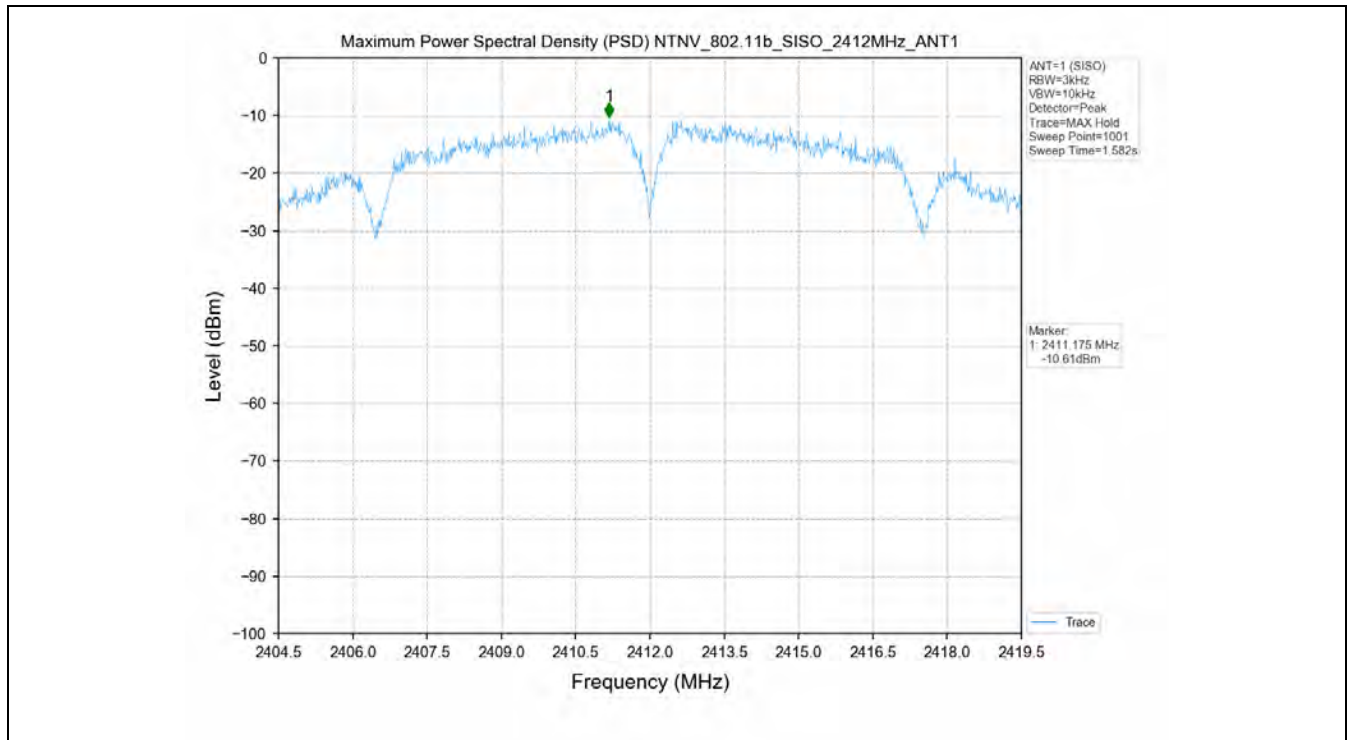


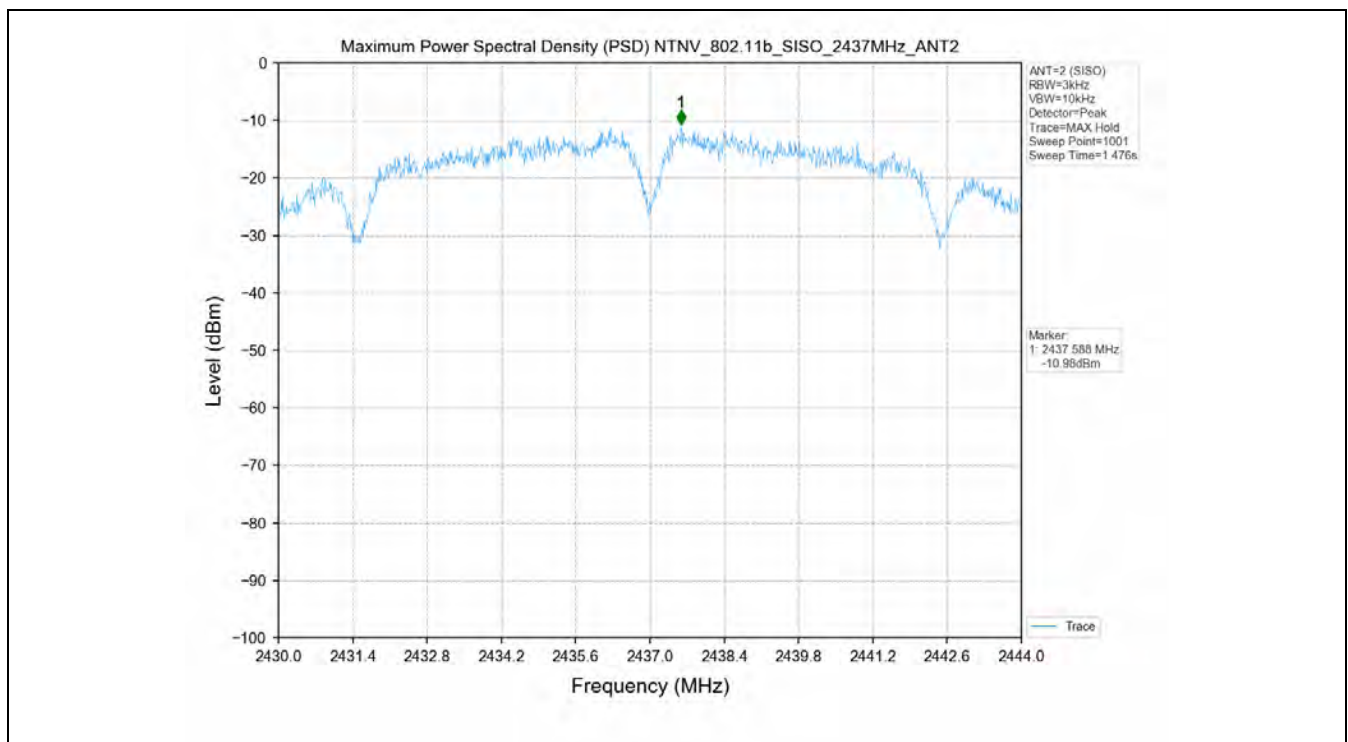
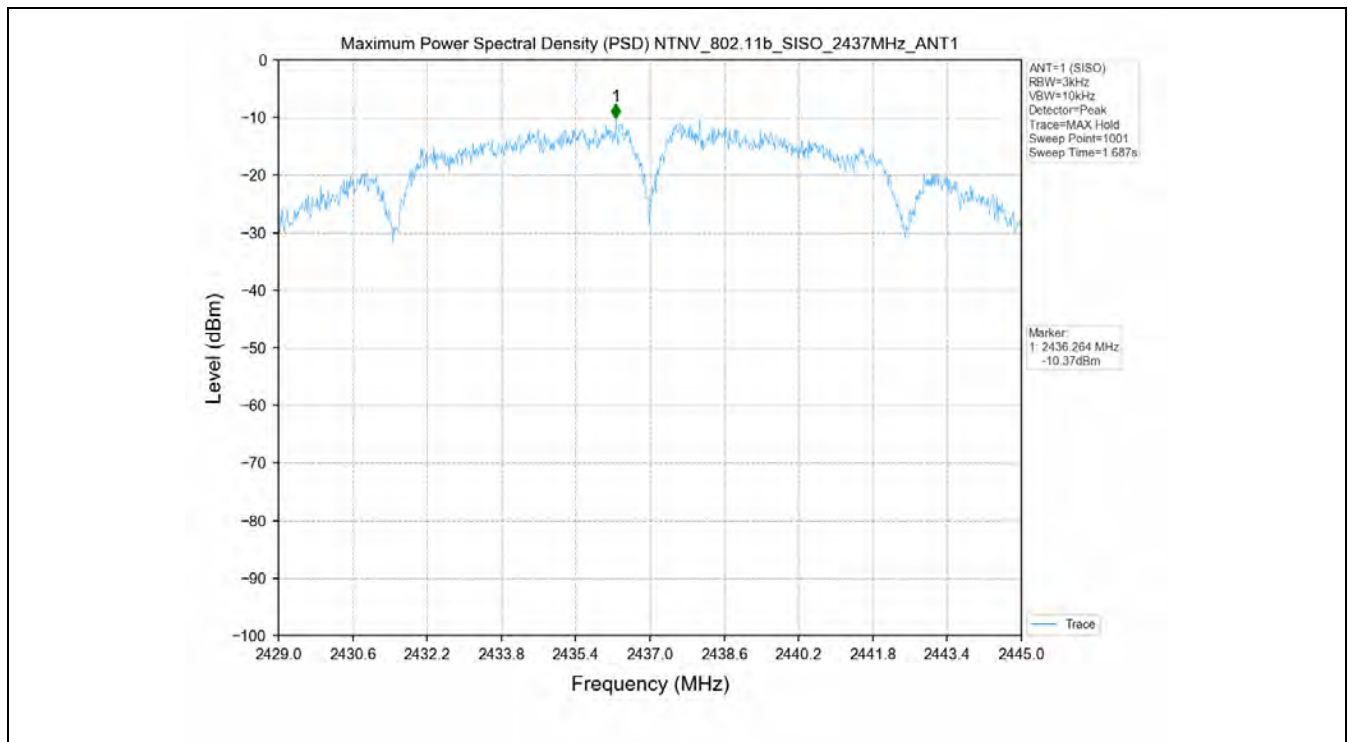
## 4. Maximum Power Spectral Density (PSD)

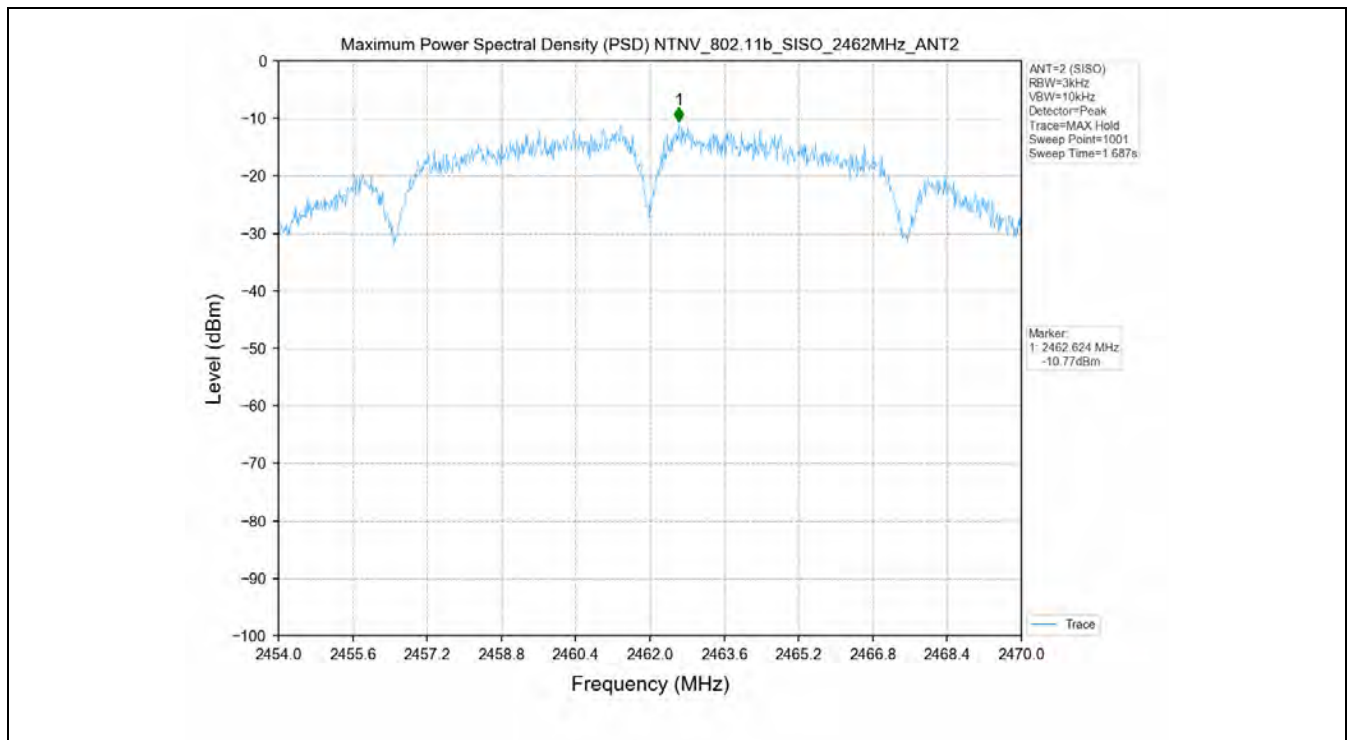
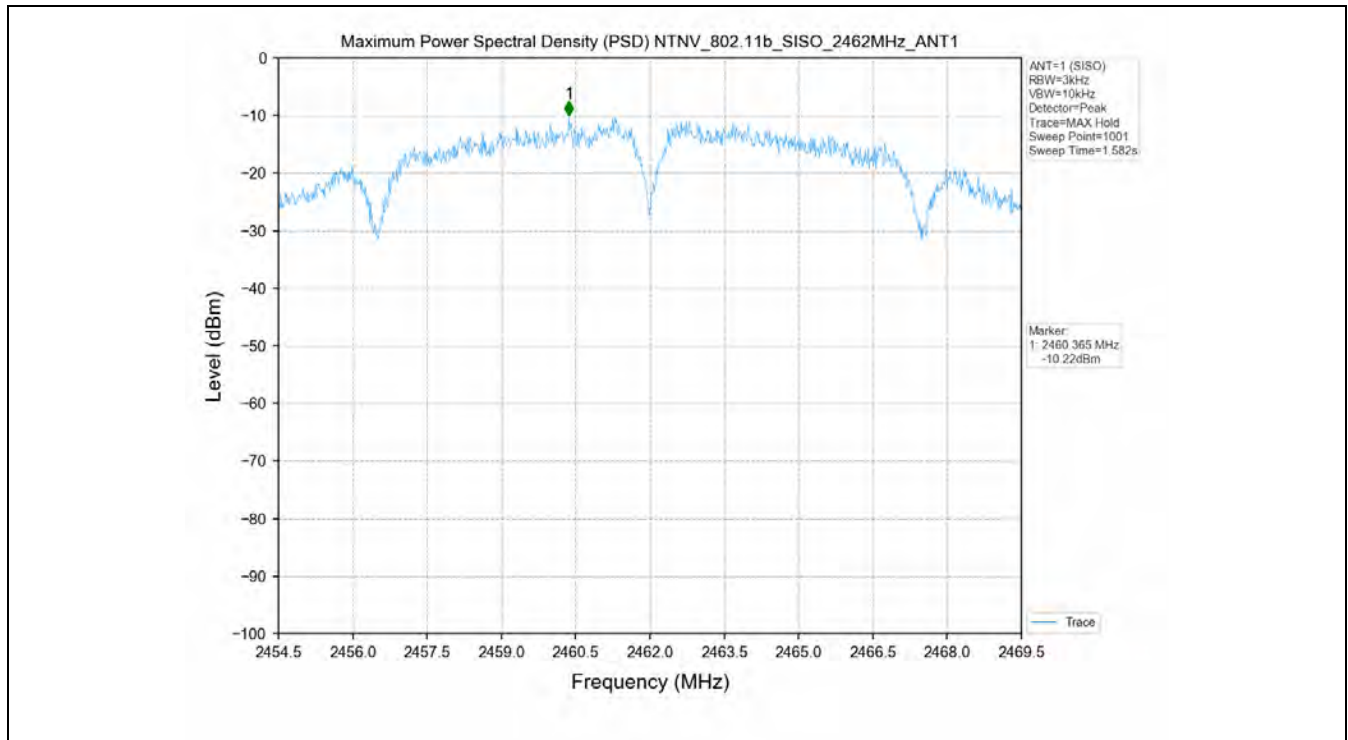
### 4.1 Test Result

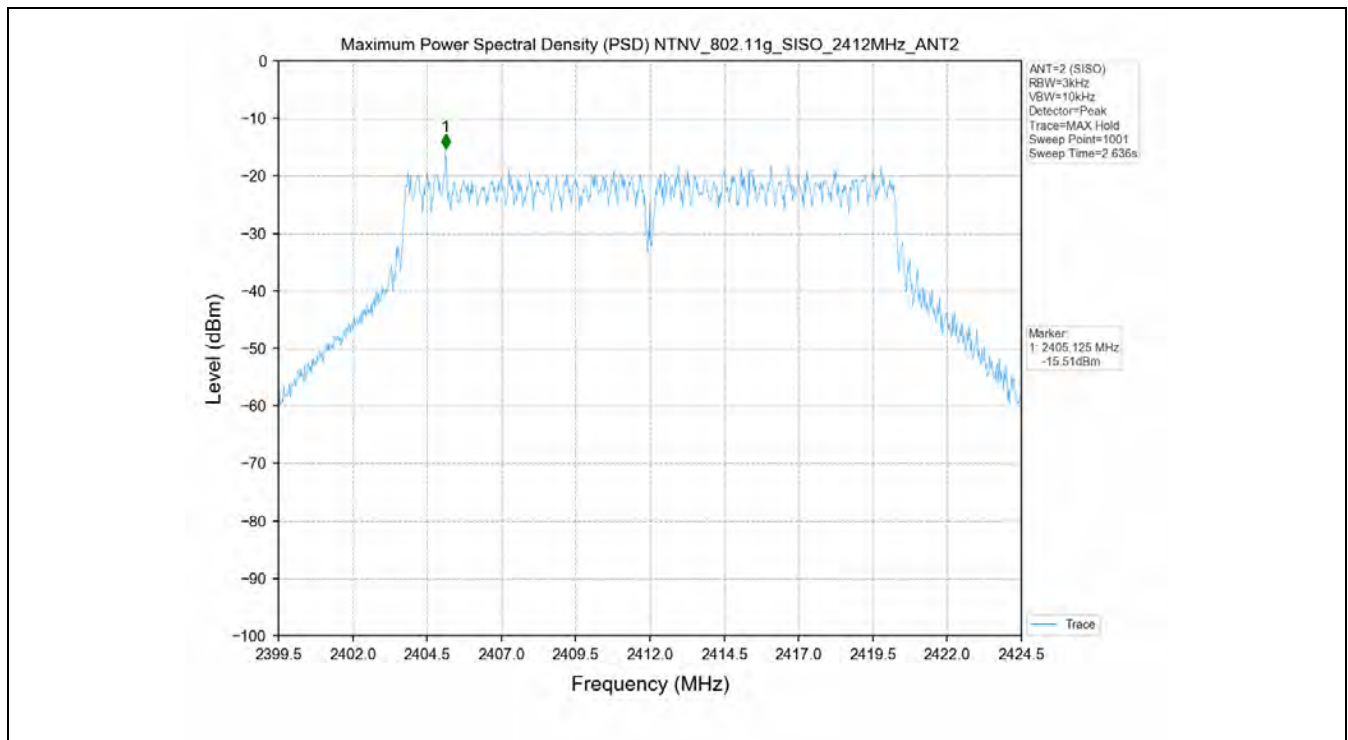
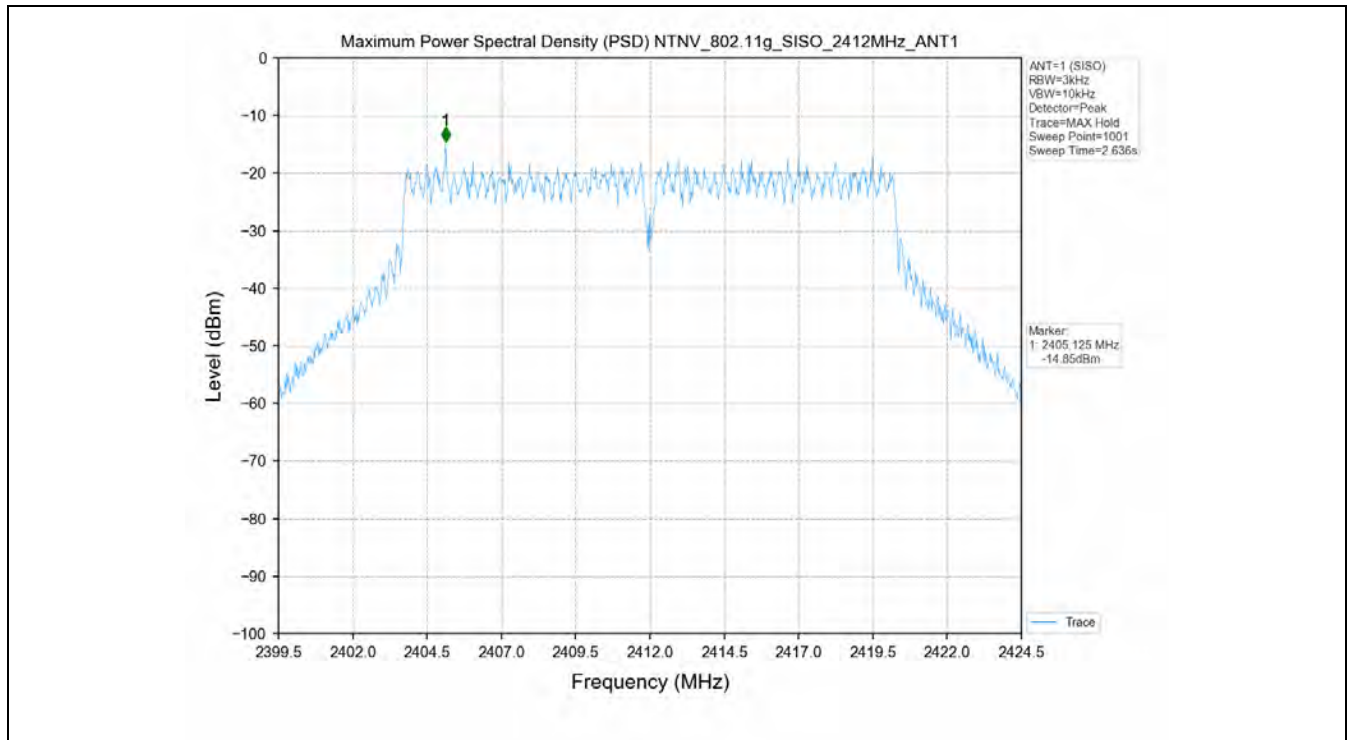
| Test Mode     | Frequency (MHz) | Tx Type | Maximum Power Spectral Density (dBm/3KHz) |        |        | Limits (dBm/3kHz) | Verdict |
|---------------|-----------------|---------|-------------------------------------------|--------|--------|-------------------|---------|
|               |                 |         | Ant 1                                     | Ant 2  | Total  |                   |         |
| 802.11b       | 2412            | SISO    | -10.61                                    | -10.10 | /      | ≤8                | PASS    |
|               | 2437            | SISO    | -10.37                                    | -10.98 | /      | ≤8                | PASS    |
|               | 2462            | SISO    | -10.22                                    | -10.77 | /      | ≤8                | PASS    |
| 802.11g       | 2412            | SISO    | -14.85                                    | -15.51 | /      | ≤8                | PASS    |
|               | 2437            | SISO    | -16.34                                    | -16.89 | /      | ≤8                | PASS    |
|               | 2462            | SISO    | -16.12                                    | -16.08 | /      | ≤8                | PASS    |
| 802.11n(HT20) | 2412            | MIMO    | -17.66                                    | -17.73 | -14.91 | ≤8                | PASS    |
|               | 2437            | MIMO    | -17.72                                    | -18.14 | -14.91 | ≤8                | PASS    |
|               | 2462            | MIMO    | -17.83                                    | -18.67 | -15.58 | ≤8                | PASS    |
| 802.11n(HT40) | 2422            | MIMO    | -21.70                                    | -22.20 | -18.97 | ≤8                | PASS    |
|               | 2437            | MIMO    | -20.66                                    | -20.79 | -17.72 | ≤8                | PASS    |
|               | 2452            | MIMO    | -21.48                                    | -22.51 | -19.05 | ≤8                | PASS    |

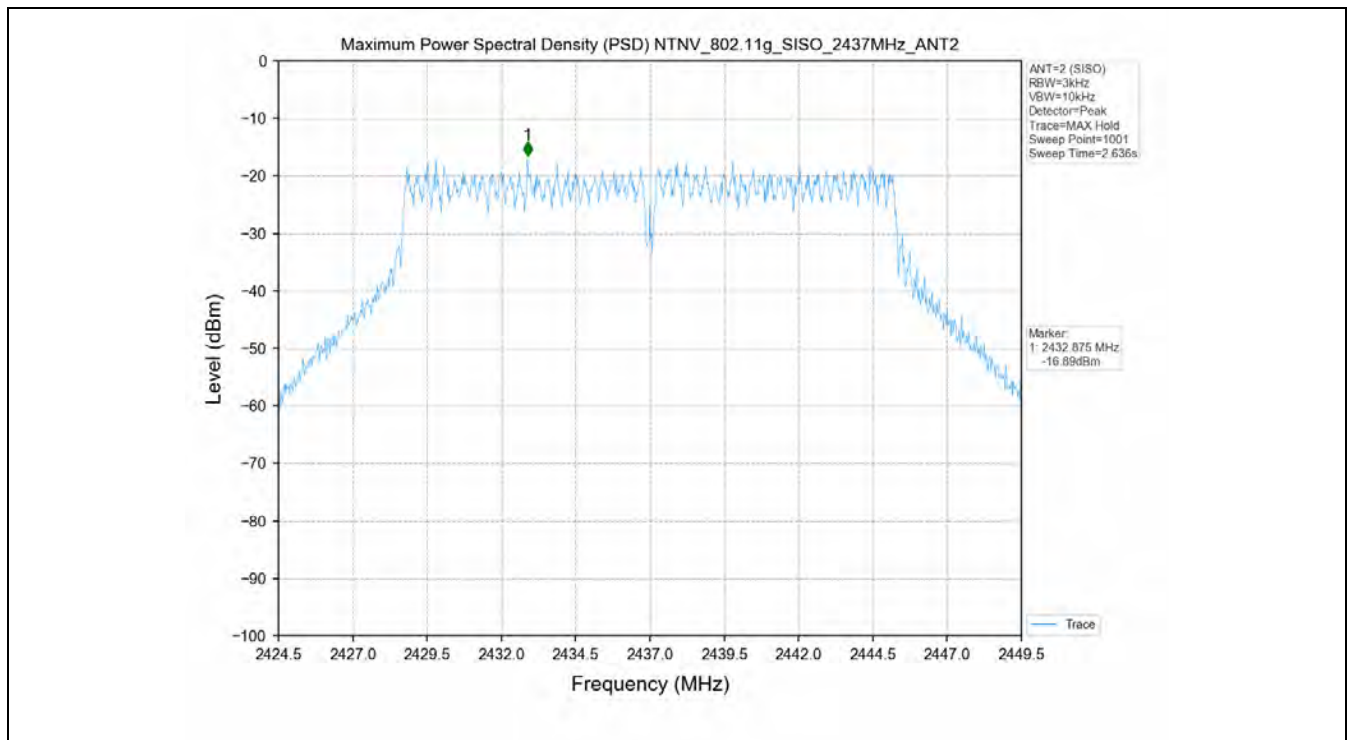
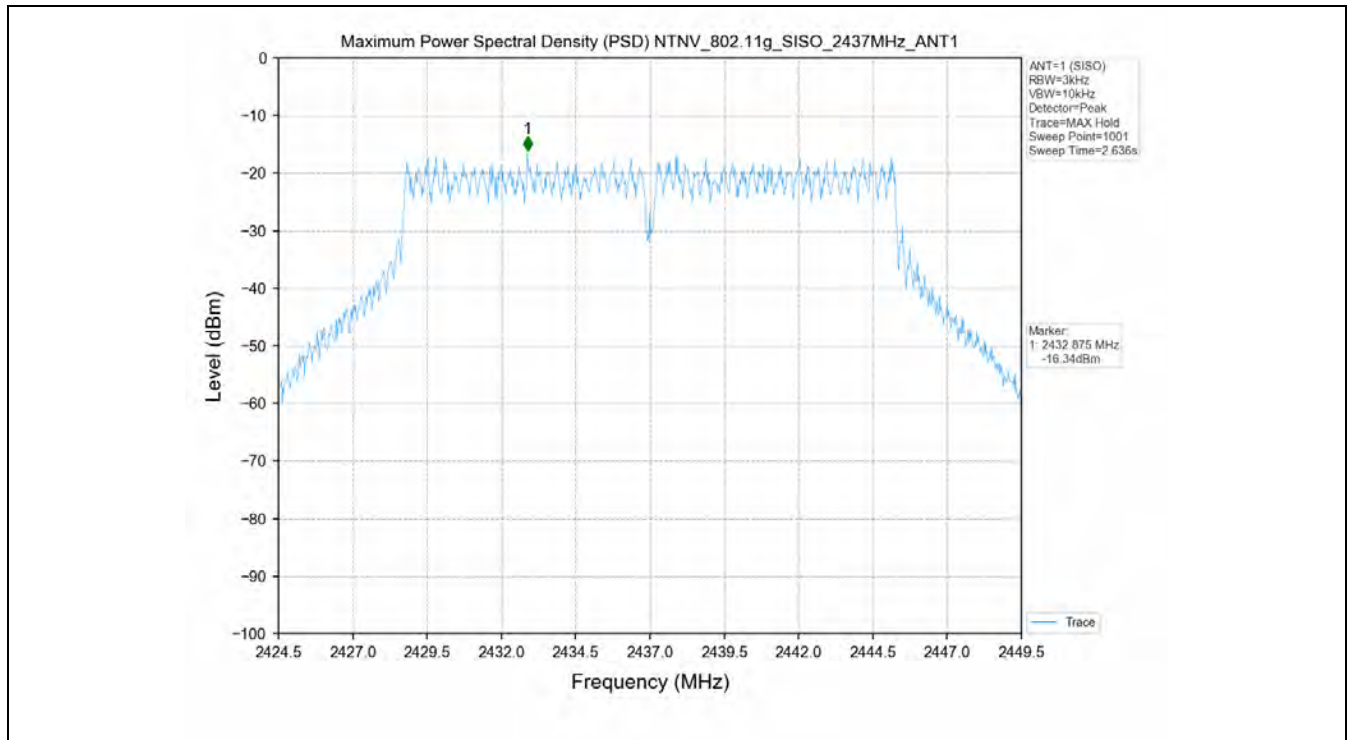
### 4.2 Test Graph

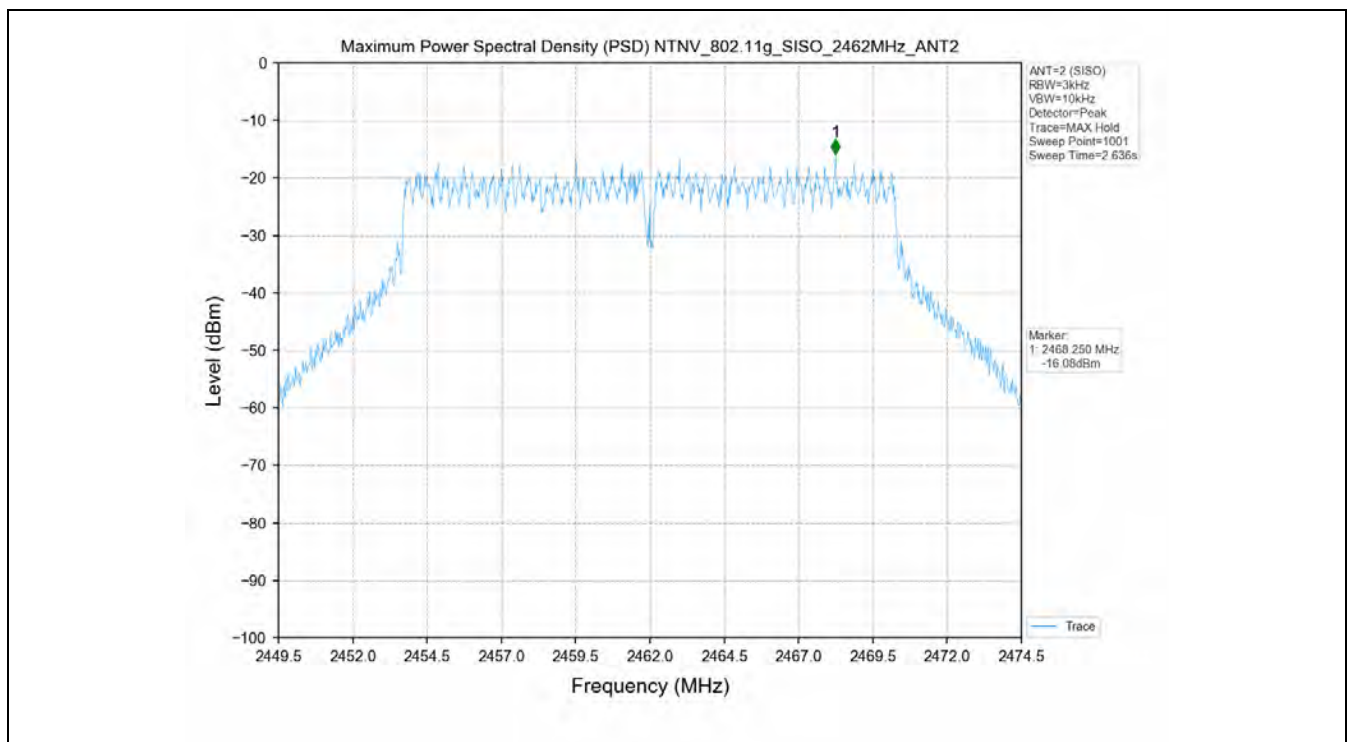
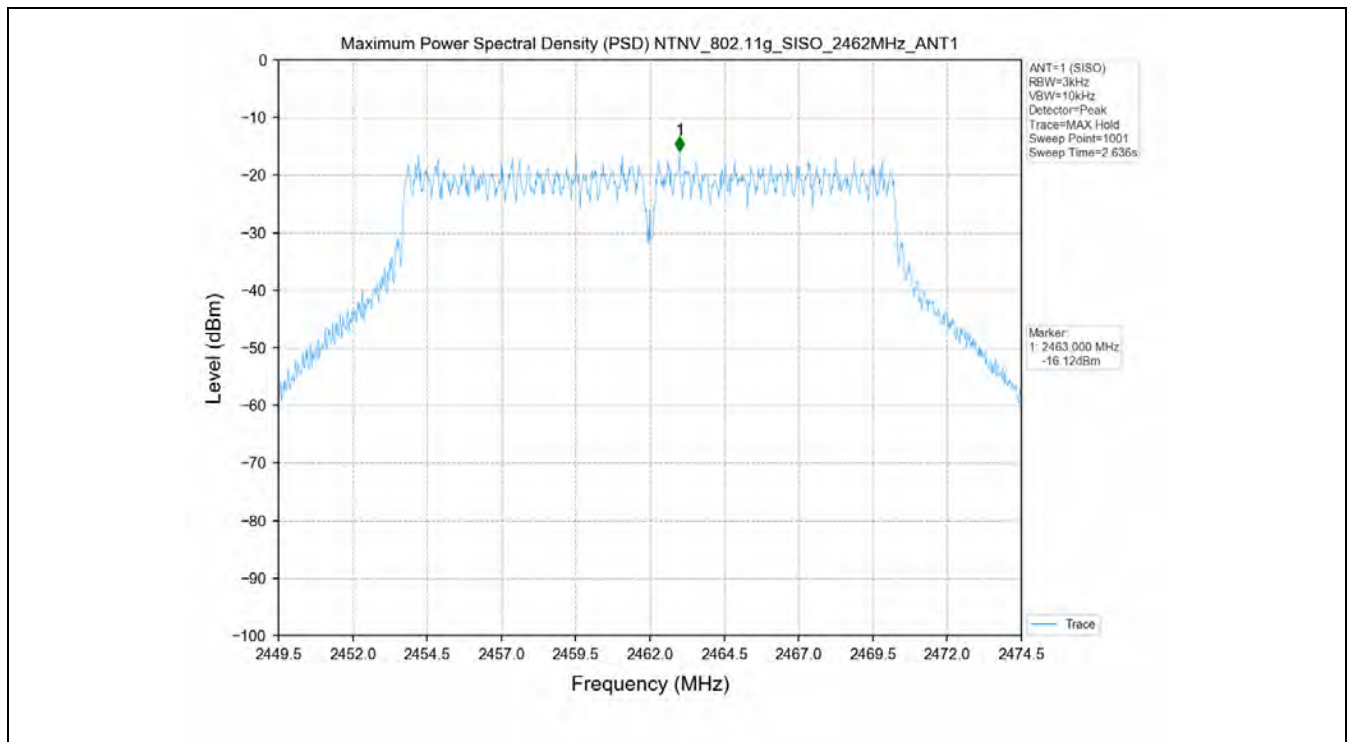


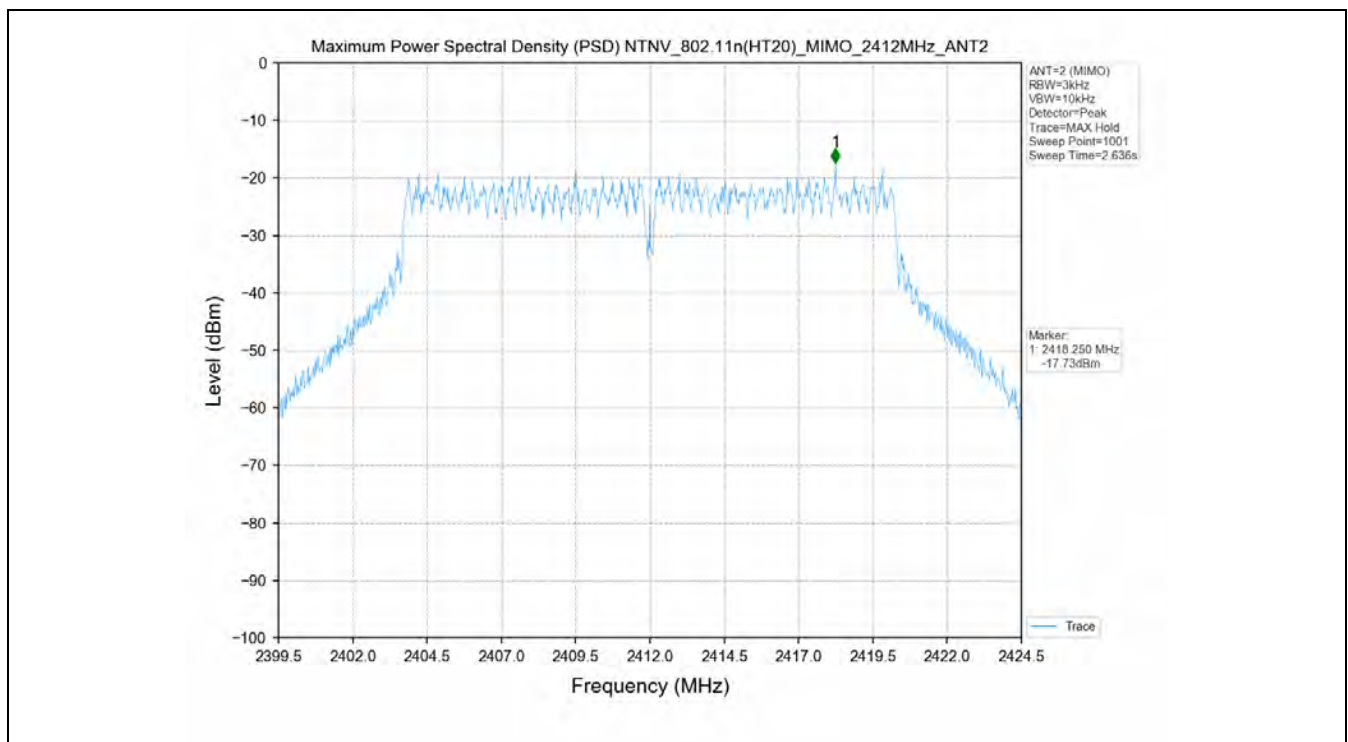
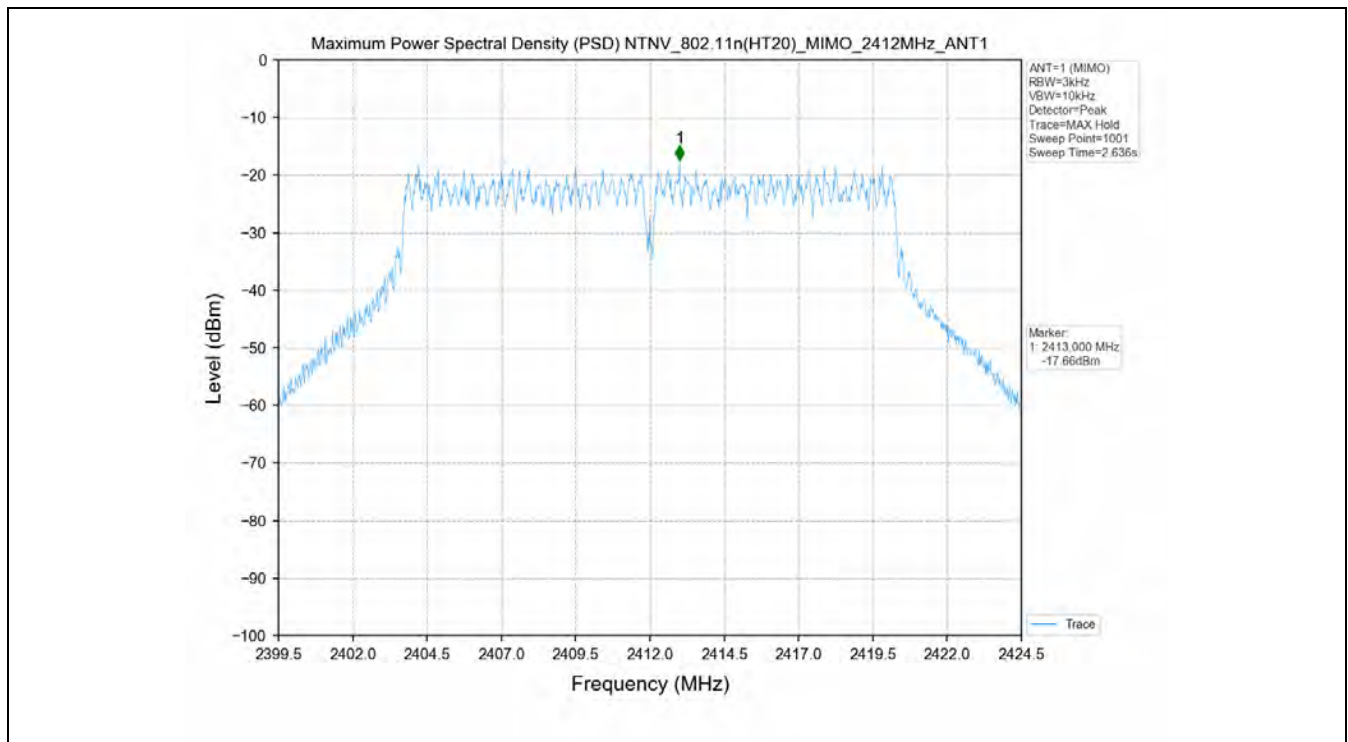


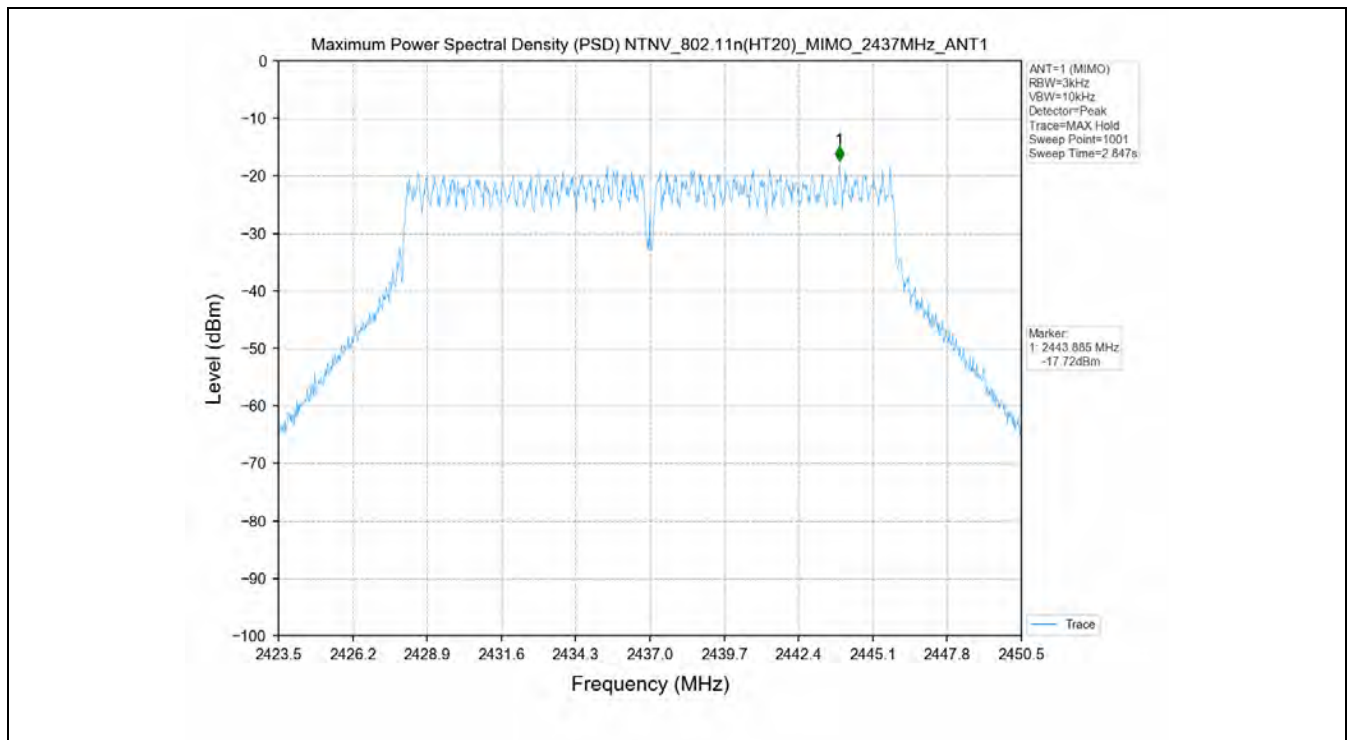
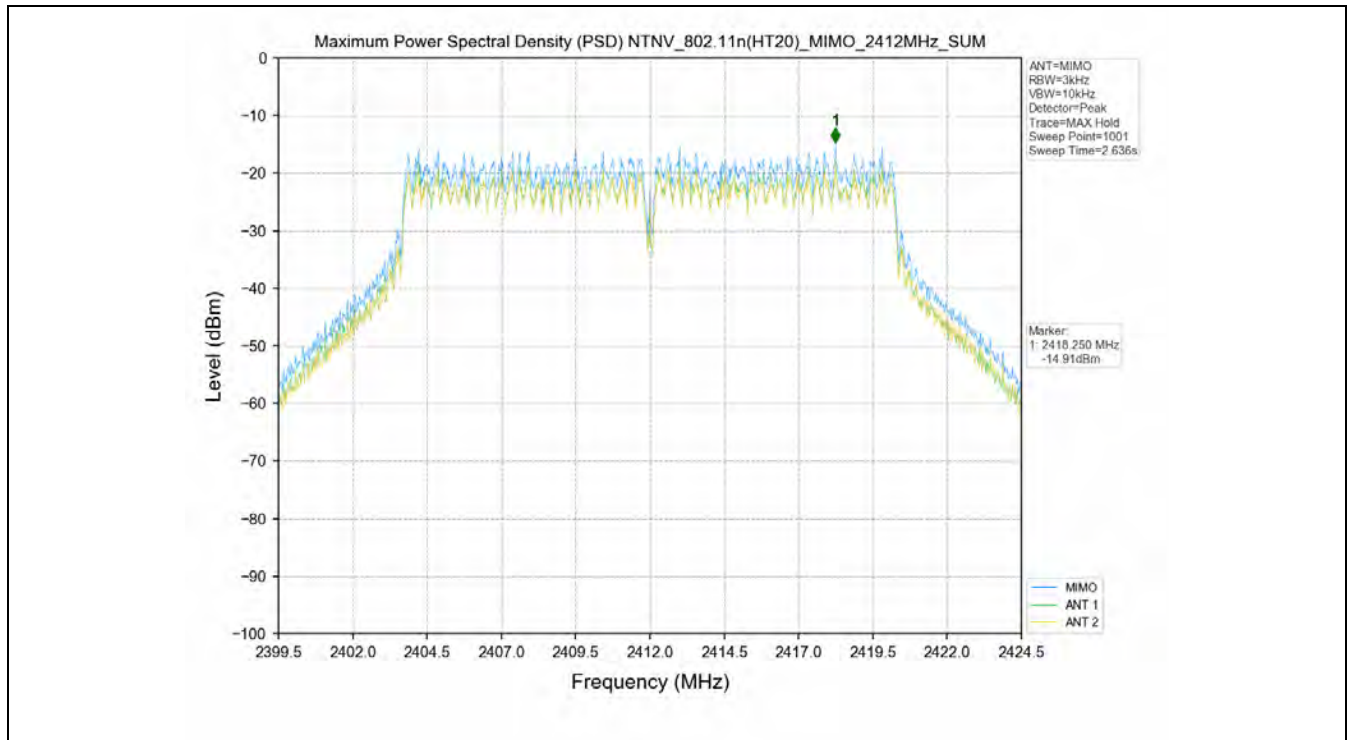


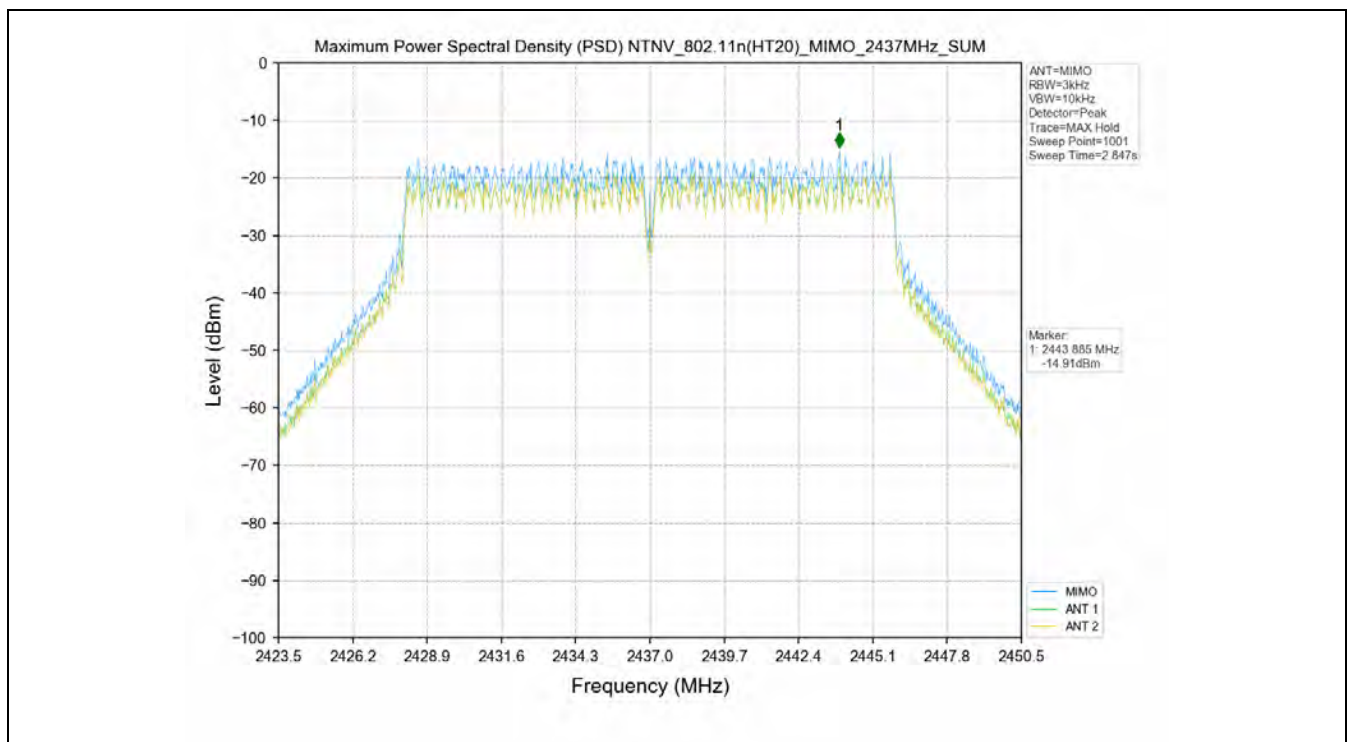
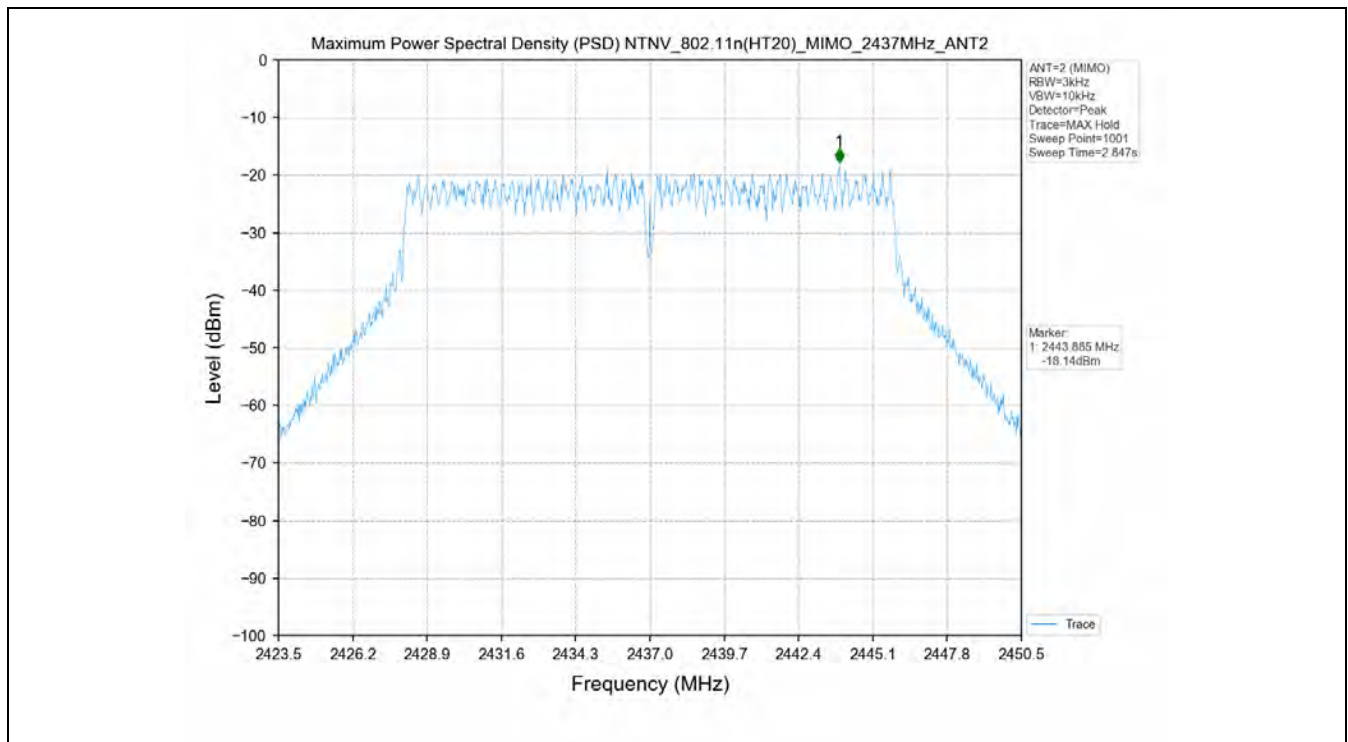


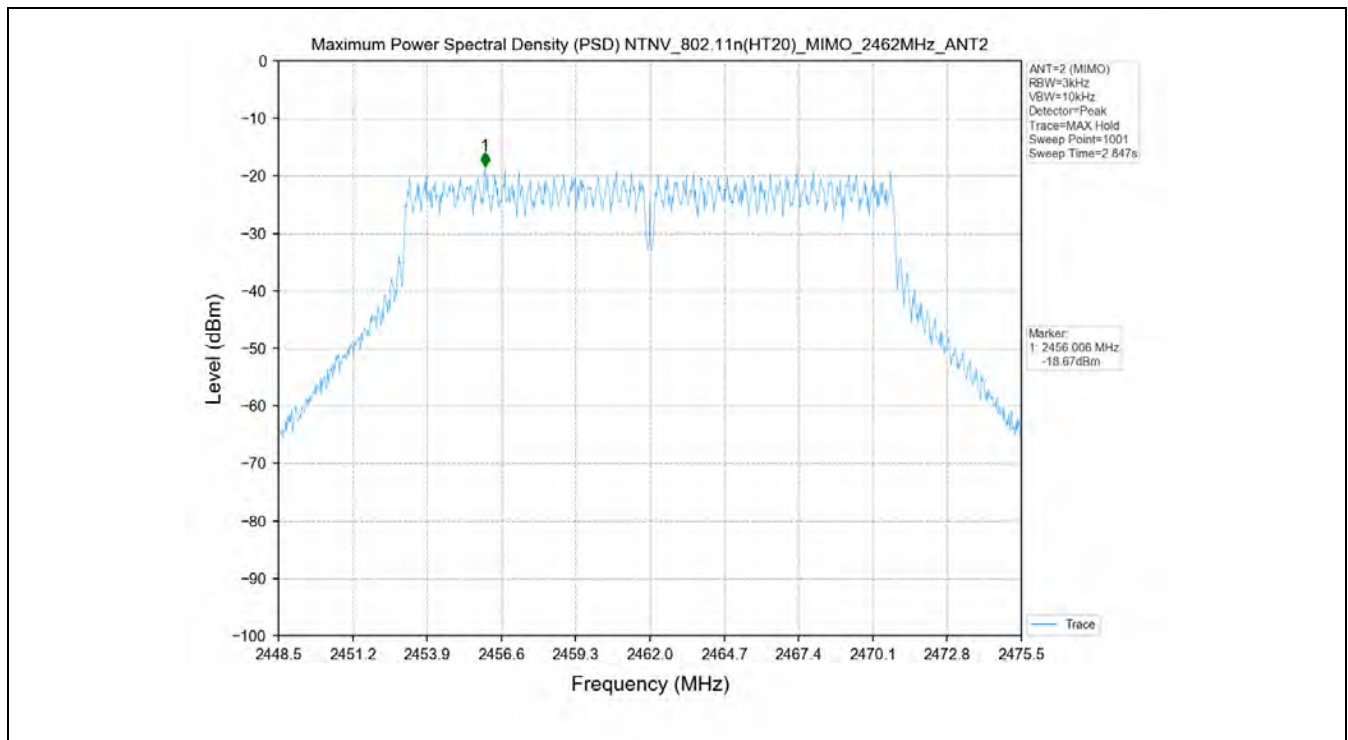
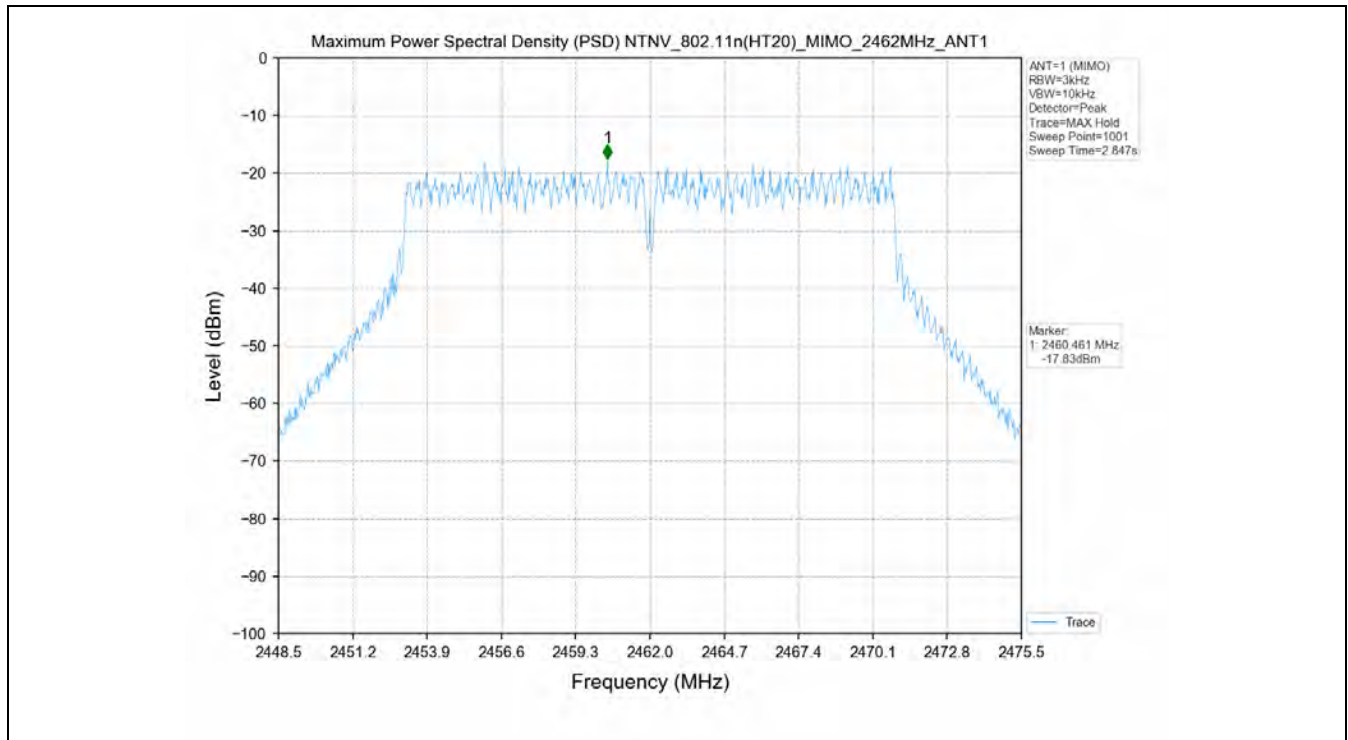


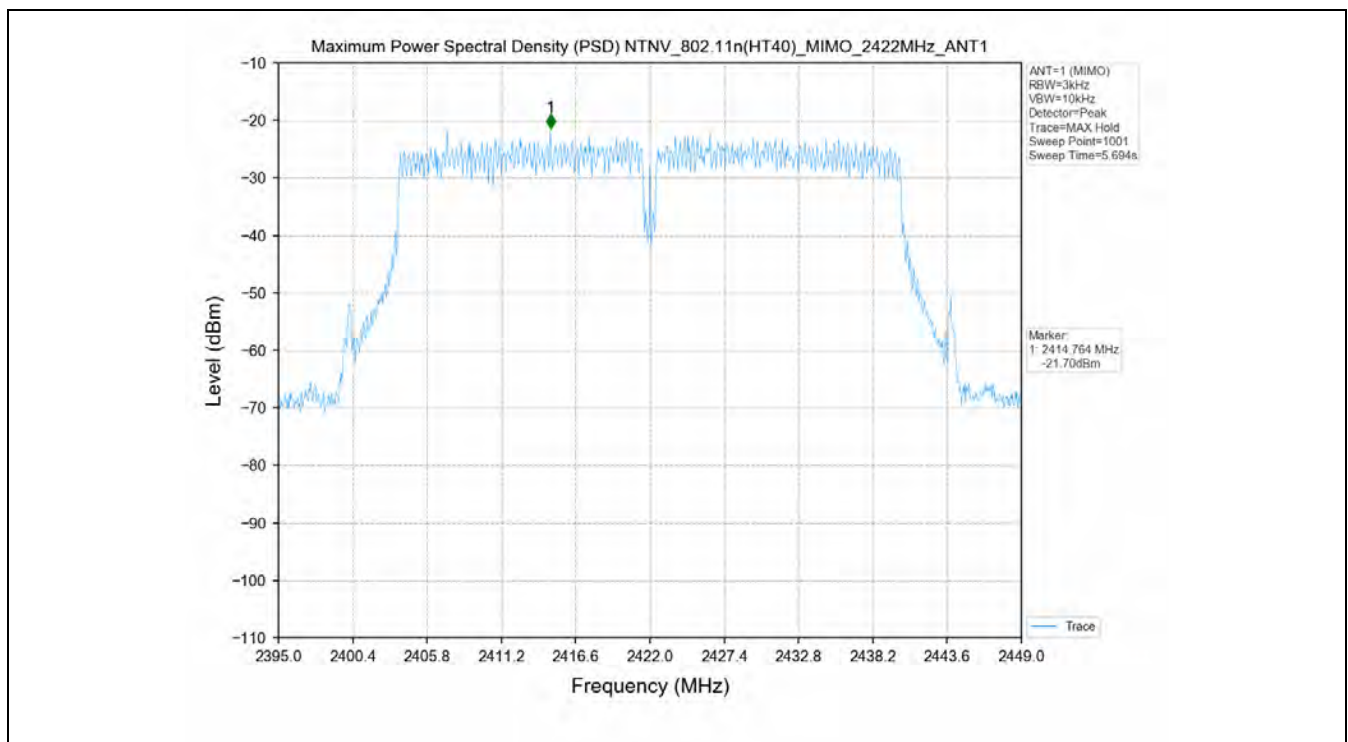
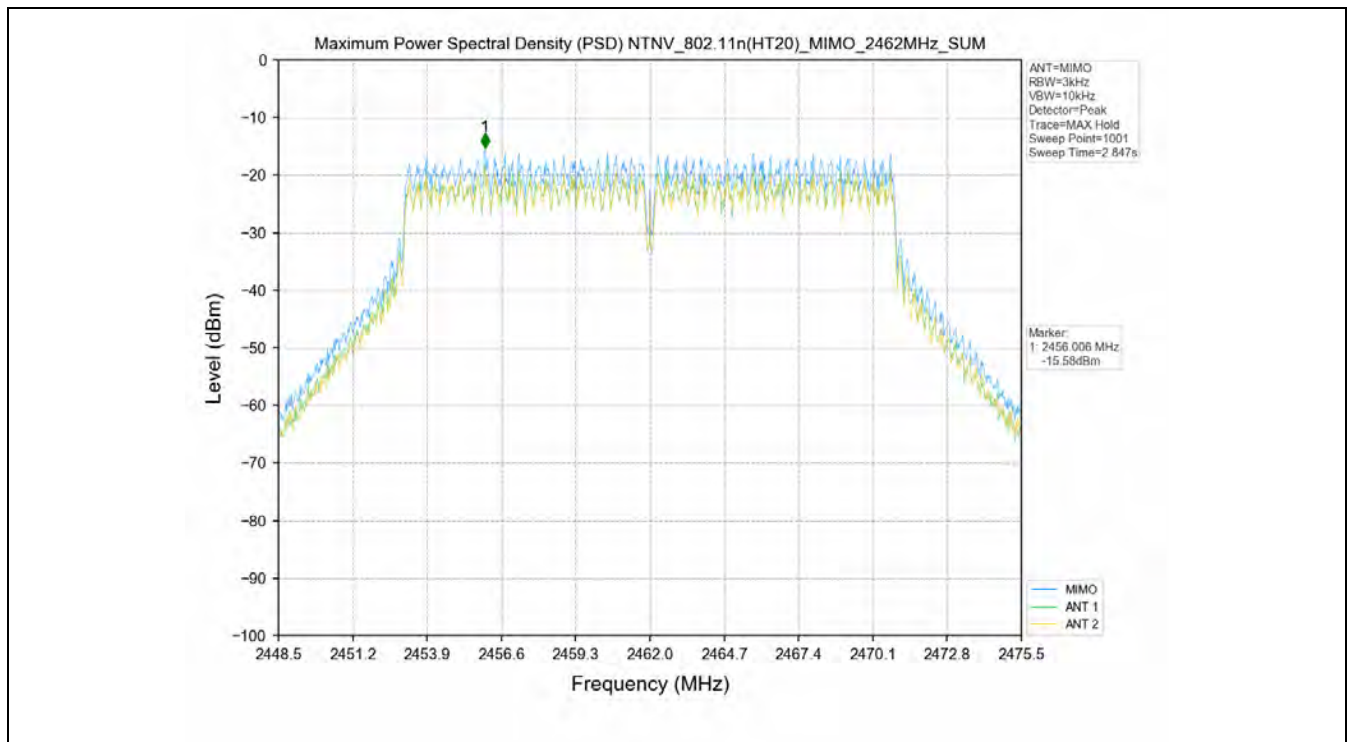


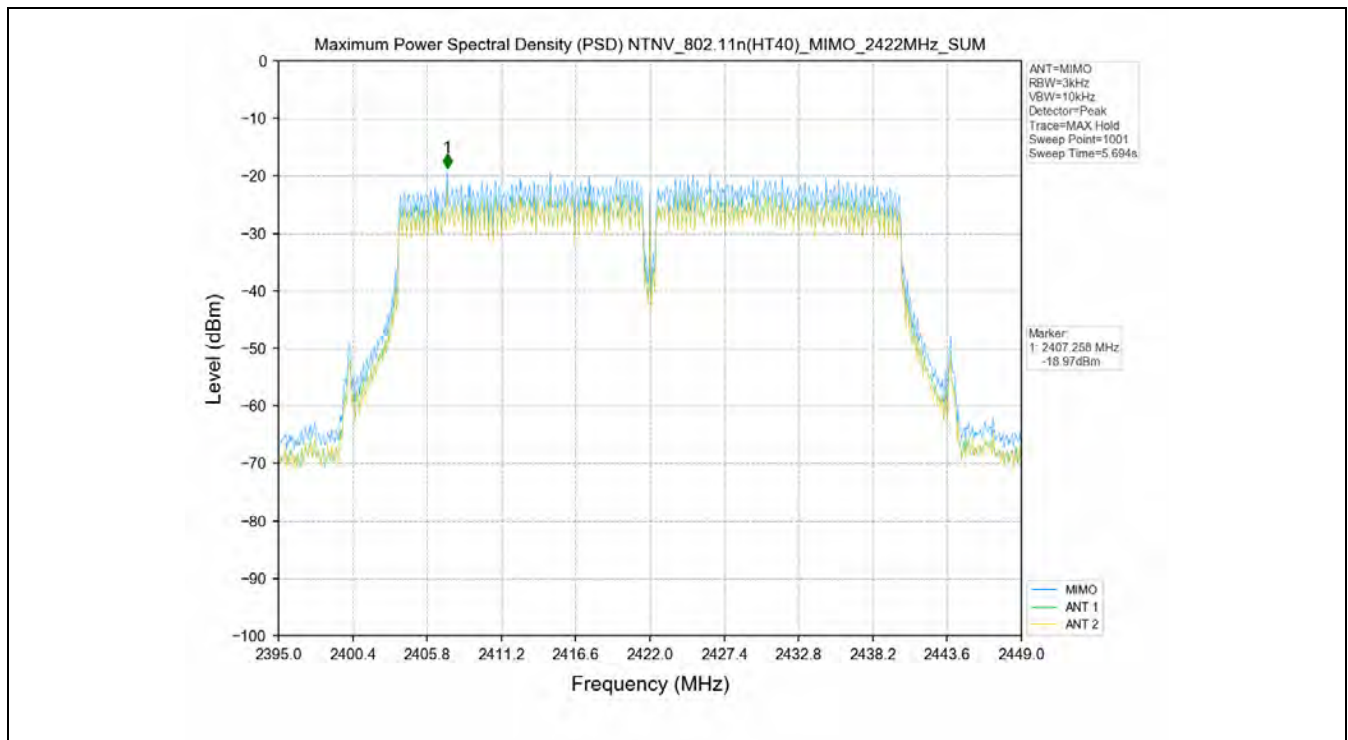
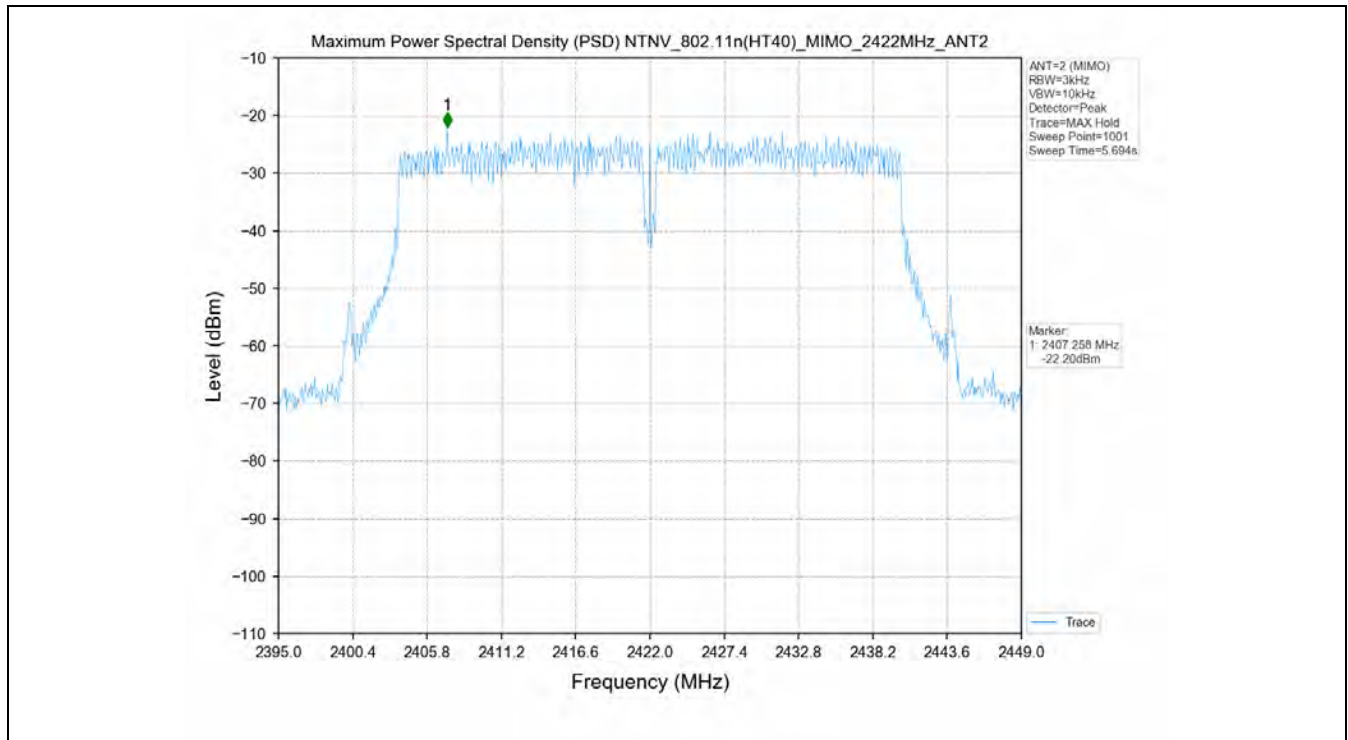


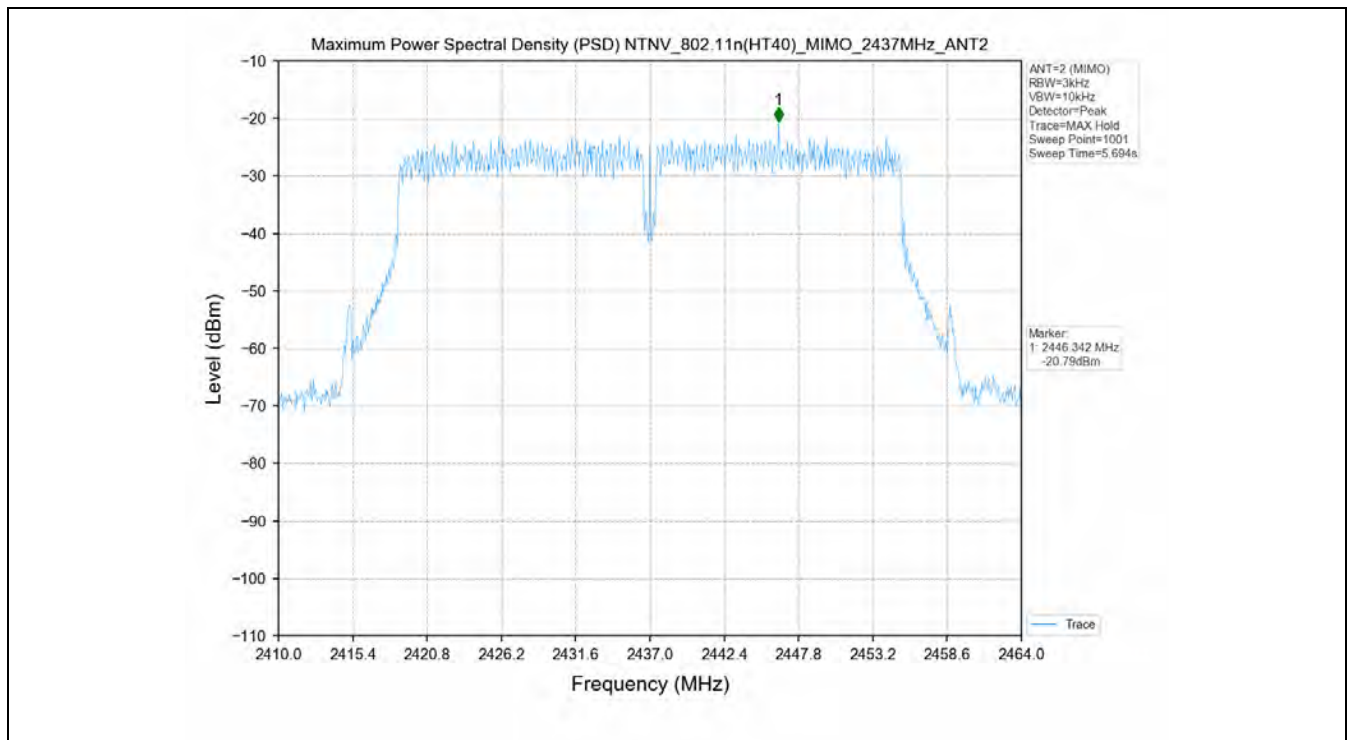
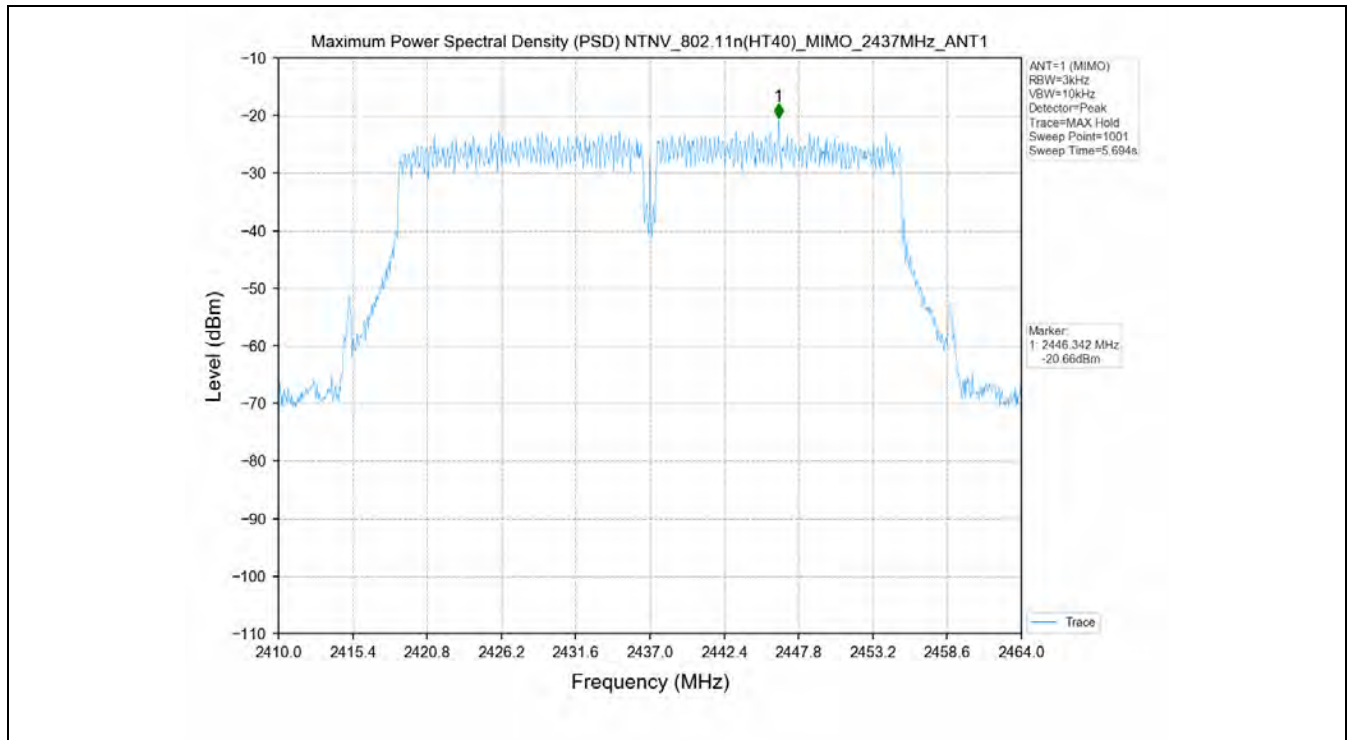


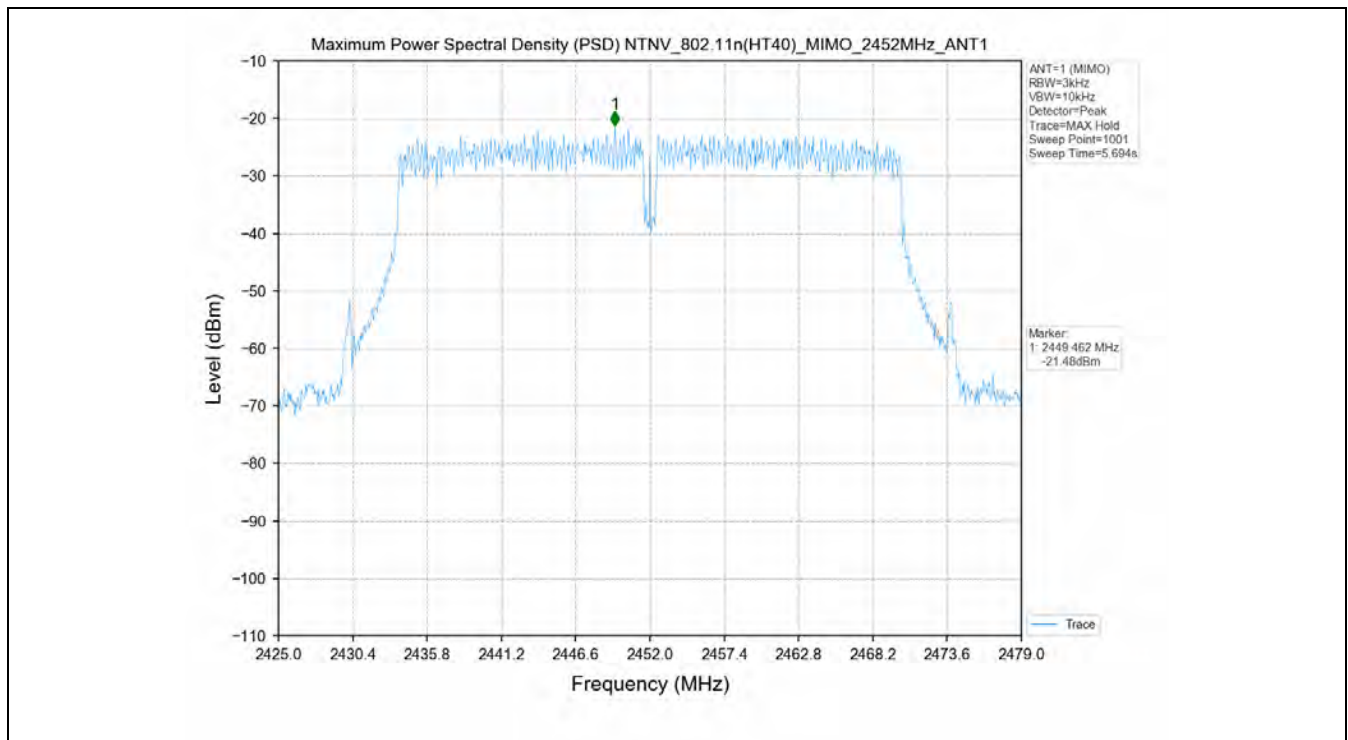
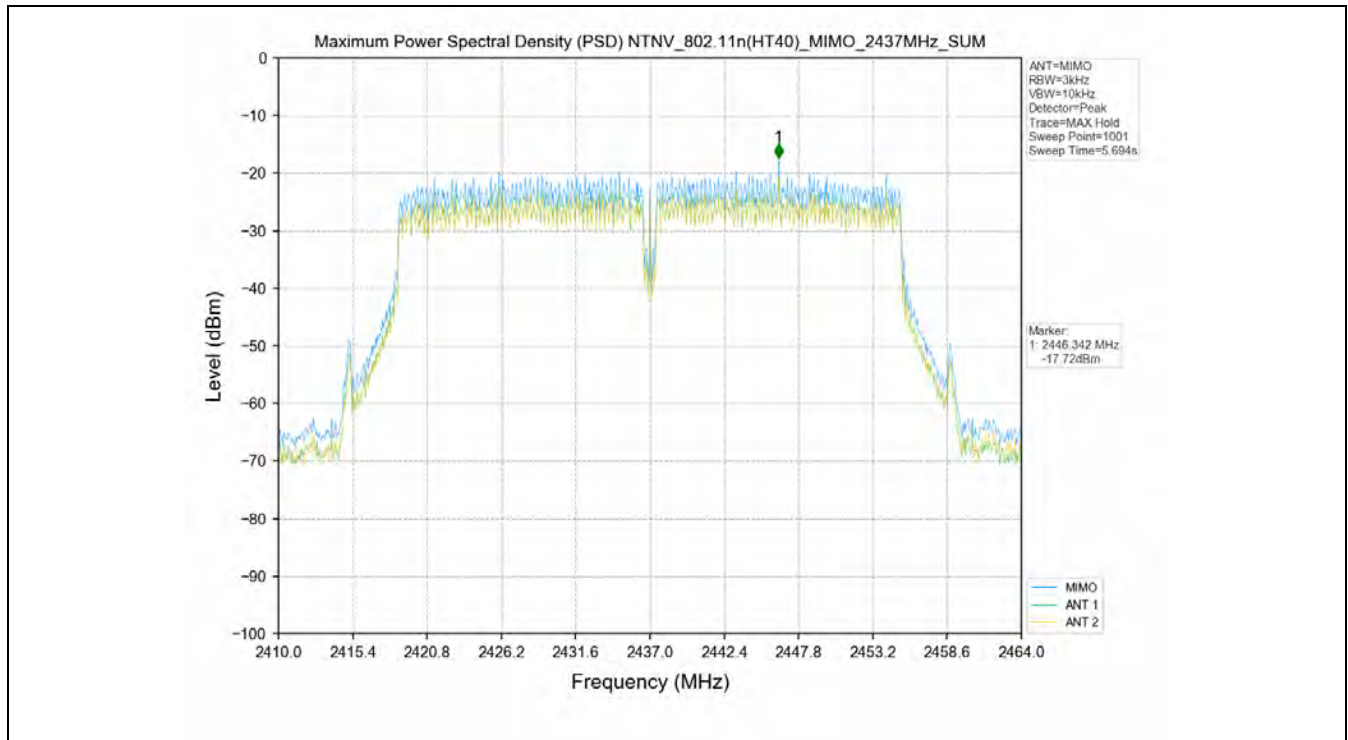


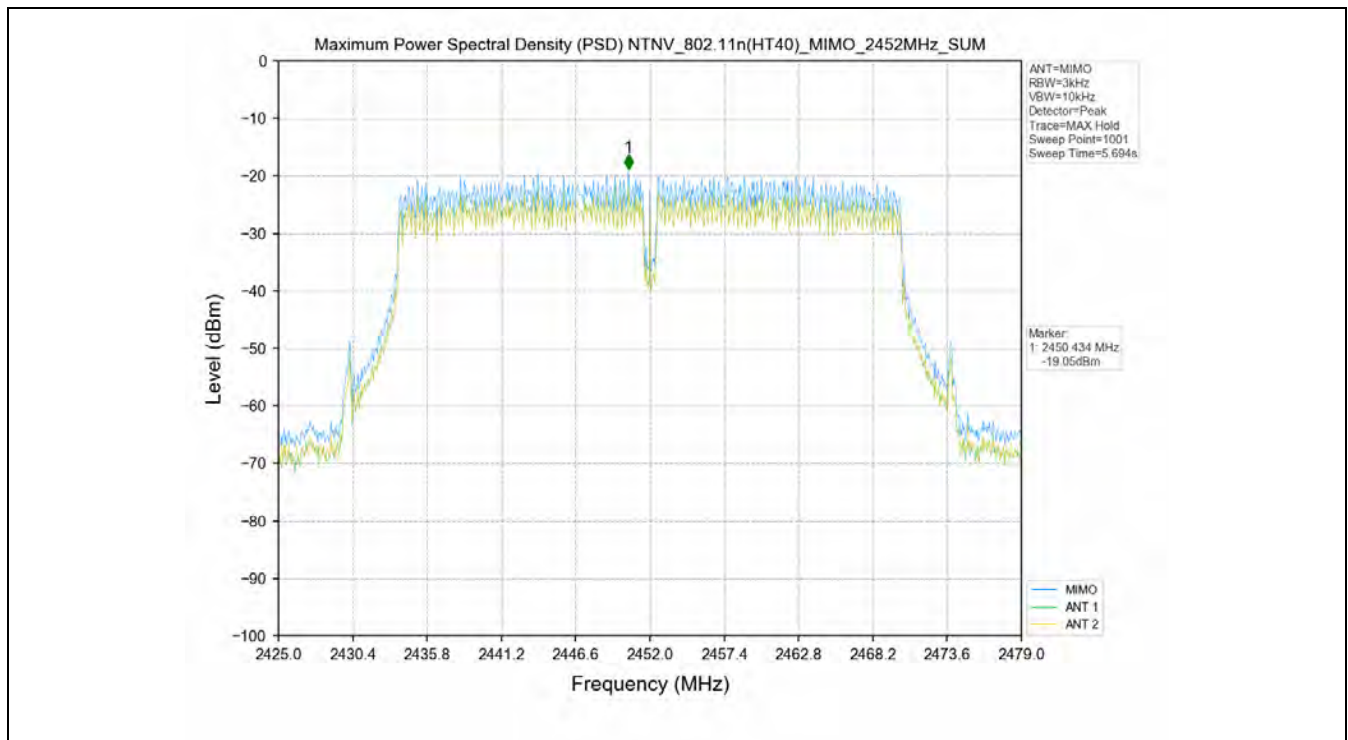
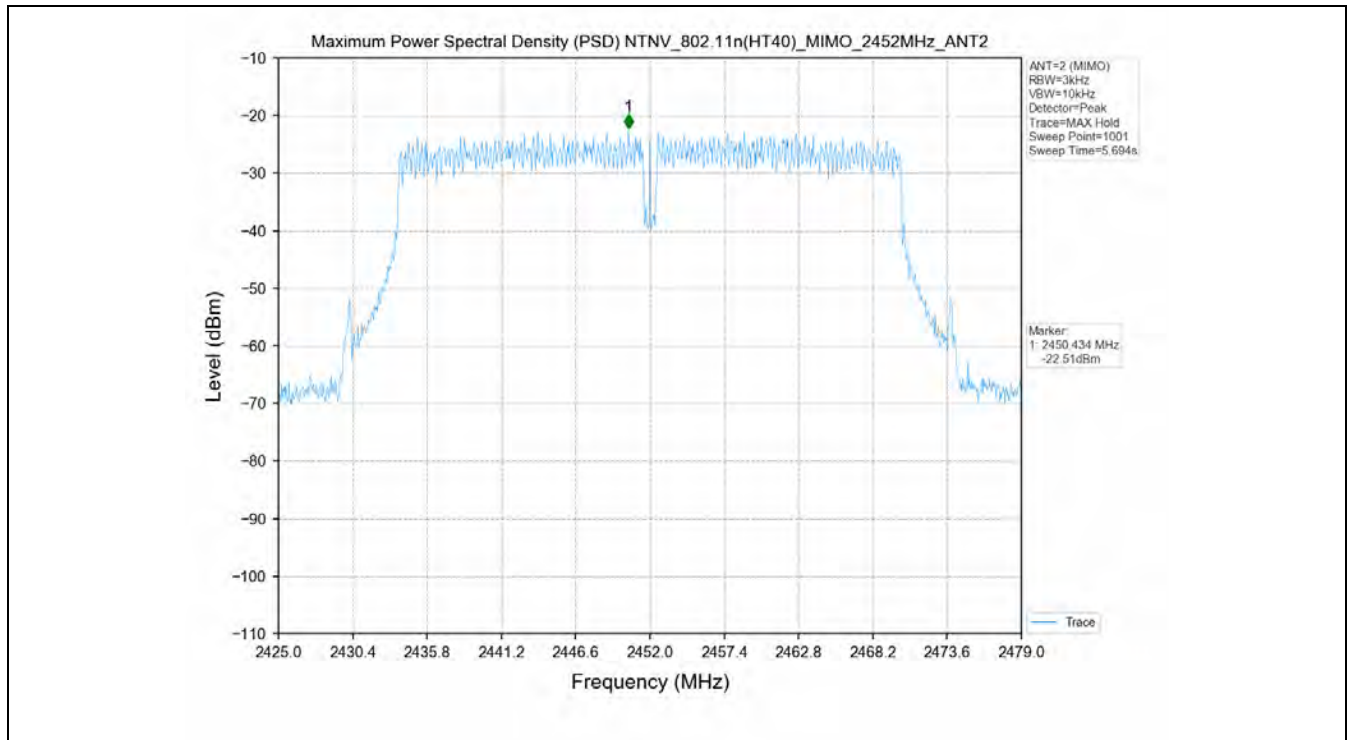














## 5. Unwanted Emissions in Non-restricted Frequency Bands

### 5.1 Test Result

| Test Mode     | Frequency (MHz) | TX Type | ANT No. | Spurious Conducted Emission (dBm) | Limits (dBc) | Verdict |
|---------------|-----------------|---------|---------|-----------------------------------|--------------|---------|
| 802.11b       | 2412            | SISO    | 1       | Refer to test graph               | -20          | PASS    |
|               |                 |         | 2       | Refer to test graph               | -20          | PASS    |
|               | 2437            | SISO    | 1       | Refer to test graph               | -20          | PASS    |
|               |                 |         | 2       | Refer to test graph               | -20          | PASS    |
|               | 2462            | SISO    | 1       | Refer to test graph               | -20          | PASS    |
|               |                 |         | 2       | Refer to test graph               | -20          | PASS    |
| 802.11g       | 2412            | SISO    | 1       | Refer to test graph               | -20          | PASS    |
|               |                 |         | 2       | Refer to test graph               | -20          | PASS    |
|               | 2437            | SISO    | 1       | Refer to test graph               | -20          | PASS    |
|               |                 |         | 2       | Refer to test graph               | -20          | PASS    |
|               | 2462            | SISO    | 1       | Refer to test graph               | -20          | PASS    |
|               |                 |         | 2       | Refer to test graph               | -20          | PASS    |
| 802.11n(HT20) | 2412            | MIMO    | /       | Refer to test graph               | -20          | PASS    |
|               | 2437            | MIMO    | /       | Refer to test graph               | -20          | PASS    |
|               | 2462            | MIMO    | /       | Refer to test graph               | -20          | PASS    |
| 802.11n(HT40) | 2422            | MIMO    | /       | Refer to test graph               | -20          | PASS    |
|               | 2437            | MIMO    | /       | Refer to test graph               | -20          | PASS    |
|               | 2452            | MIMO    | /       | Refer to test graph               | -20          | PASS    |

### 5.2 Test Graph

