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## Appendix for 15.247

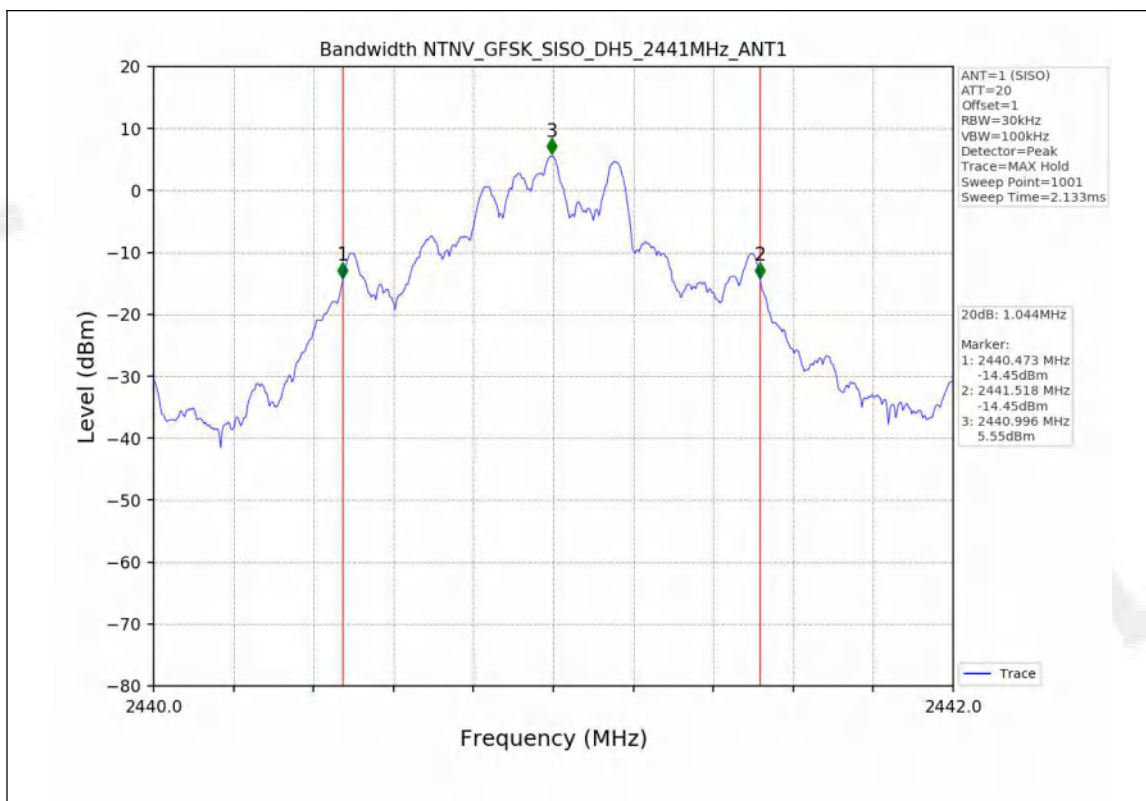
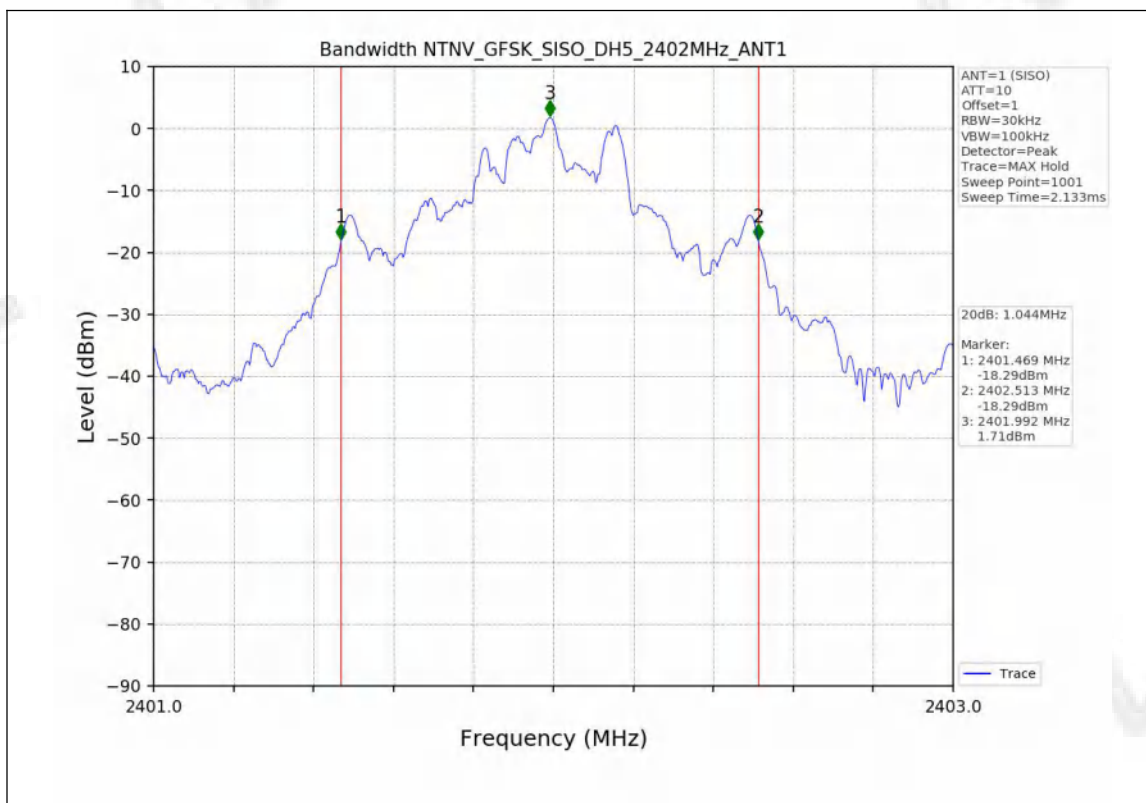
### 1. Bandwidth

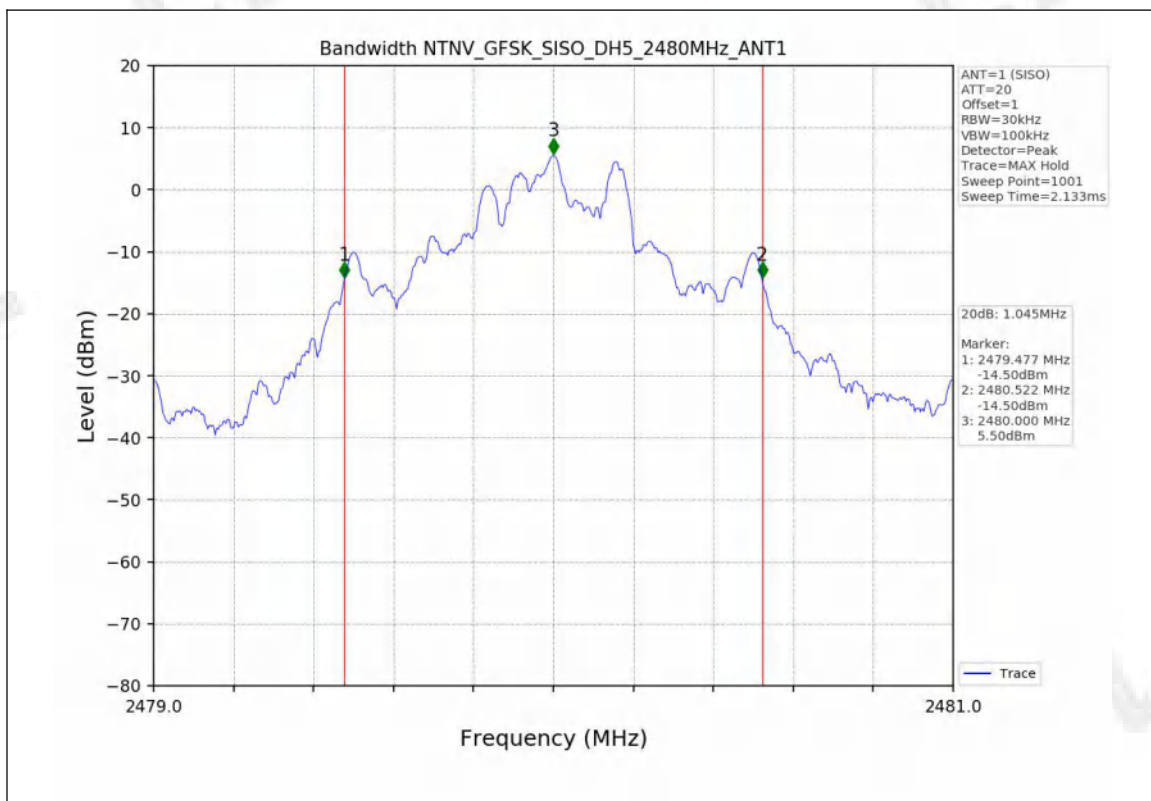
#### 1.1 Test Result

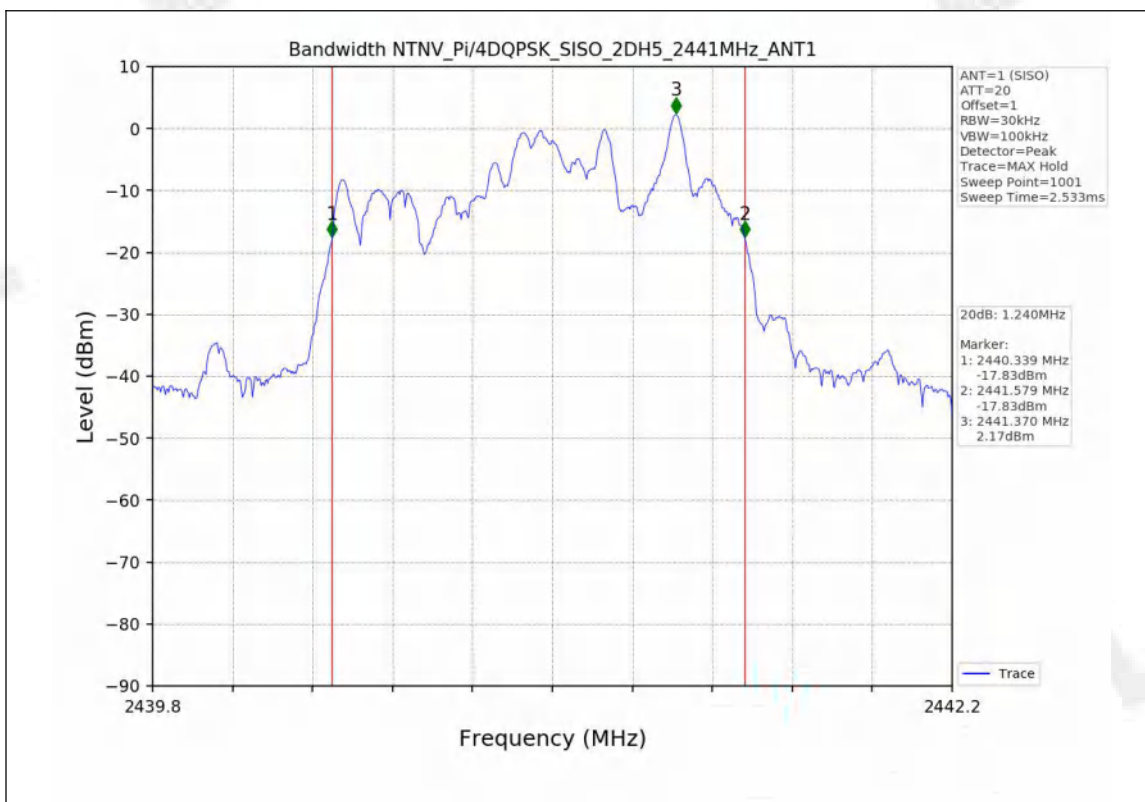
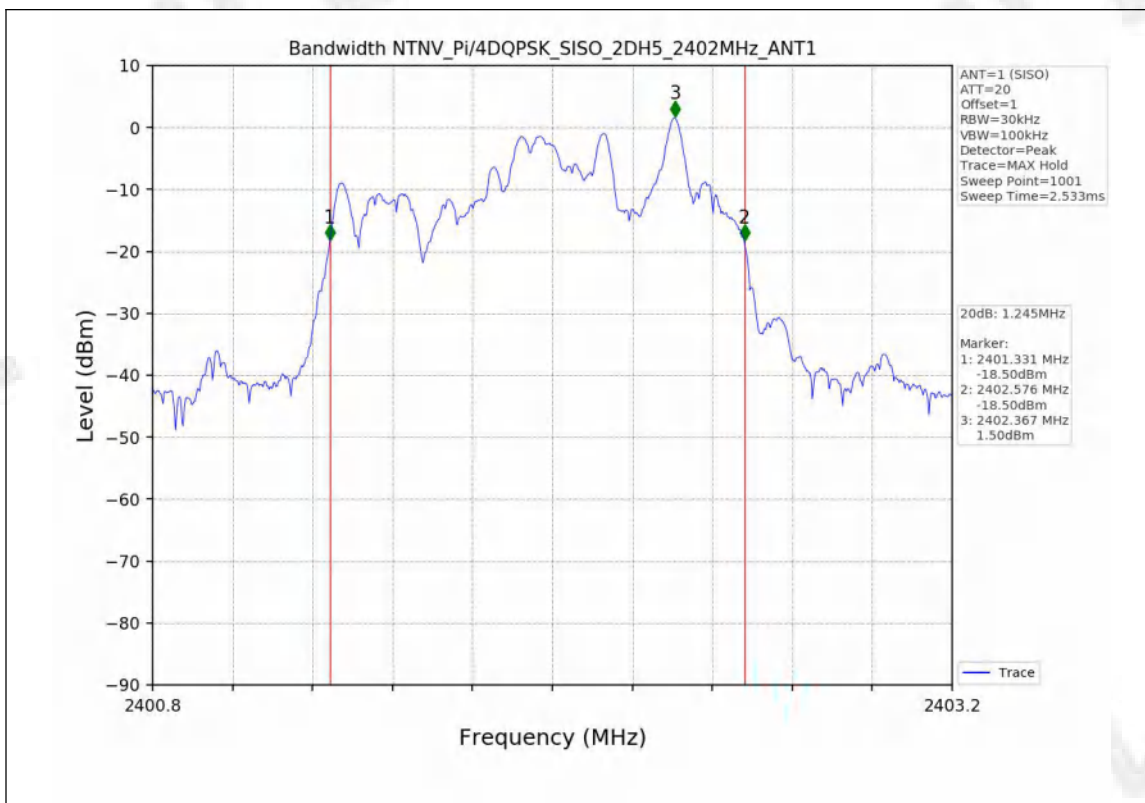
| Test Mode | Frequency (MHz) | TX Type | ANT No. | 20dB Bandwidth    | Verdict |
|-----------|-----------------|---------|---------|-------------------|---------|
|           |                 |         |         | Test Result (MHz) |         |
| GFSK      | 2402            | SISO    | 1       | 1.044             | PASS    |
|           | 2441            | SISO    | 1       | 1.044             | PASS    |
|           | 2480            | SISO    | 1       | 1.045             | PASS    |
| Pi/4DQPSK | 2402            | SISO    | 1       | 1.245             | PASS    |
|           | 2441            | SISO    | 1       | 1.240             | PASS    |
|           | 2480            | SISO    | 1       | 1.244             | PASS    |
| 8DPSK     | 2402            | SISO    | 1       | 1.185             | PASS    |
|           | 2441            | SISO    | 1       | 1.185             | PASS    |
|           | 2480            | SISO    | 1       | 1.179             | PASS    |

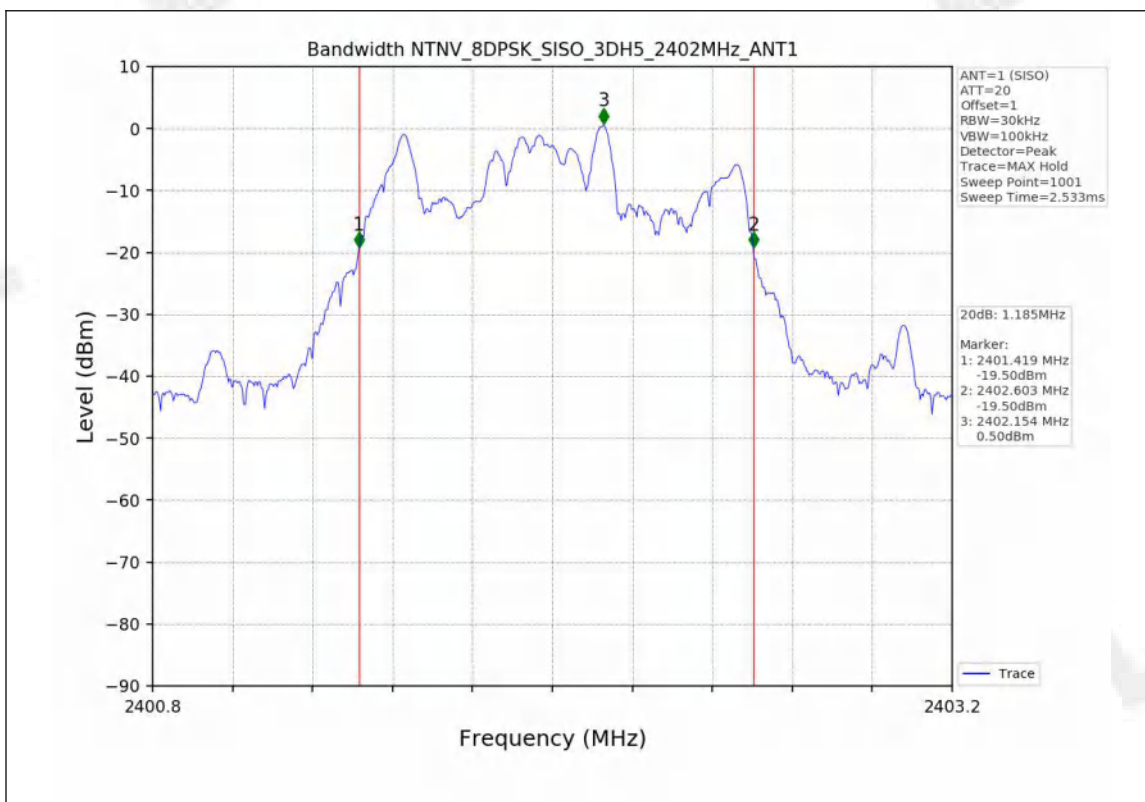
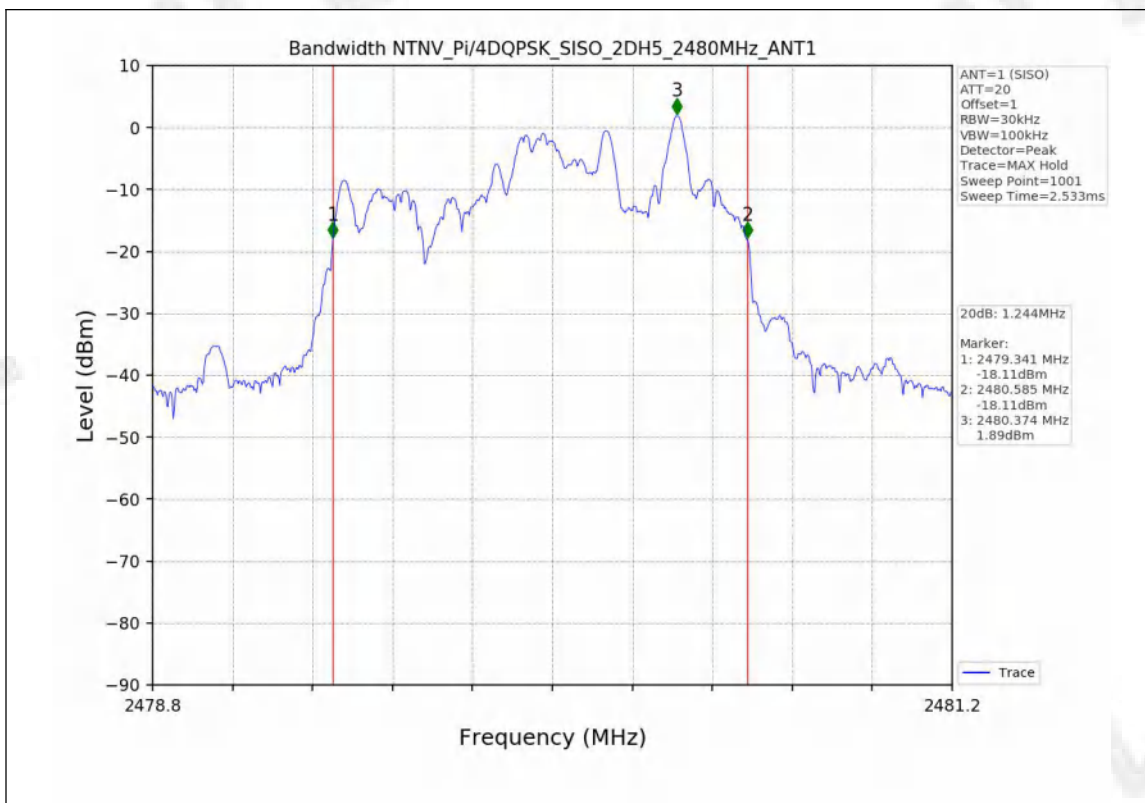
| Test Mode | Frequency (MHz) | TX Type | ANT No. | 99% Occupied Bandwidth |                     |
|-----------|-----------------|---------|---------|------------------------|---------------------|
|           |                 |         |         | Test Result (MHz)      |                     |
| GFSK      | 2402            | SISO    | 1       | 1.002                  | Only for Report Use |
|           | 2441            | SISO    | 1       | 1.001                  | Only for Report Use |
|           | 2480            | SISO    | 1       | 1.000                  | Only for Report Use |
| Pi/4DQPSK | 2402            | SISO    | 1       | 1.184                  | Only for Report Use |
|           | 2441            | SISO    | 1       | 1.183                  | Only for Report Use |
|           | 2480            | SISO    | 1       | 1.182                  | Only for Report Use |
| 8DPSK     | 2402            | SISO    | 1       | 1.127                  | Only for Report Use |
|           | 2441            | SISO    | 1       | 1.125                  | Only for Report Use |
|           | 2480            | SISO    | 1       | 1.129                  | Only for Report Use |

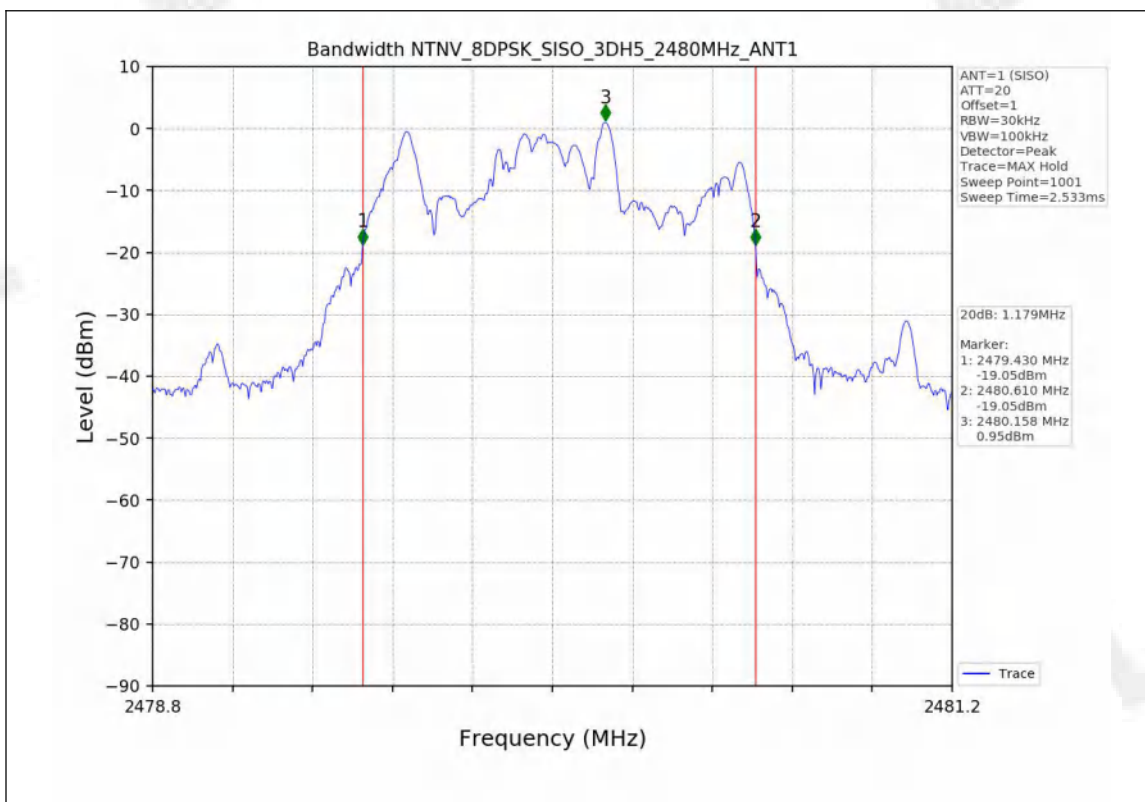
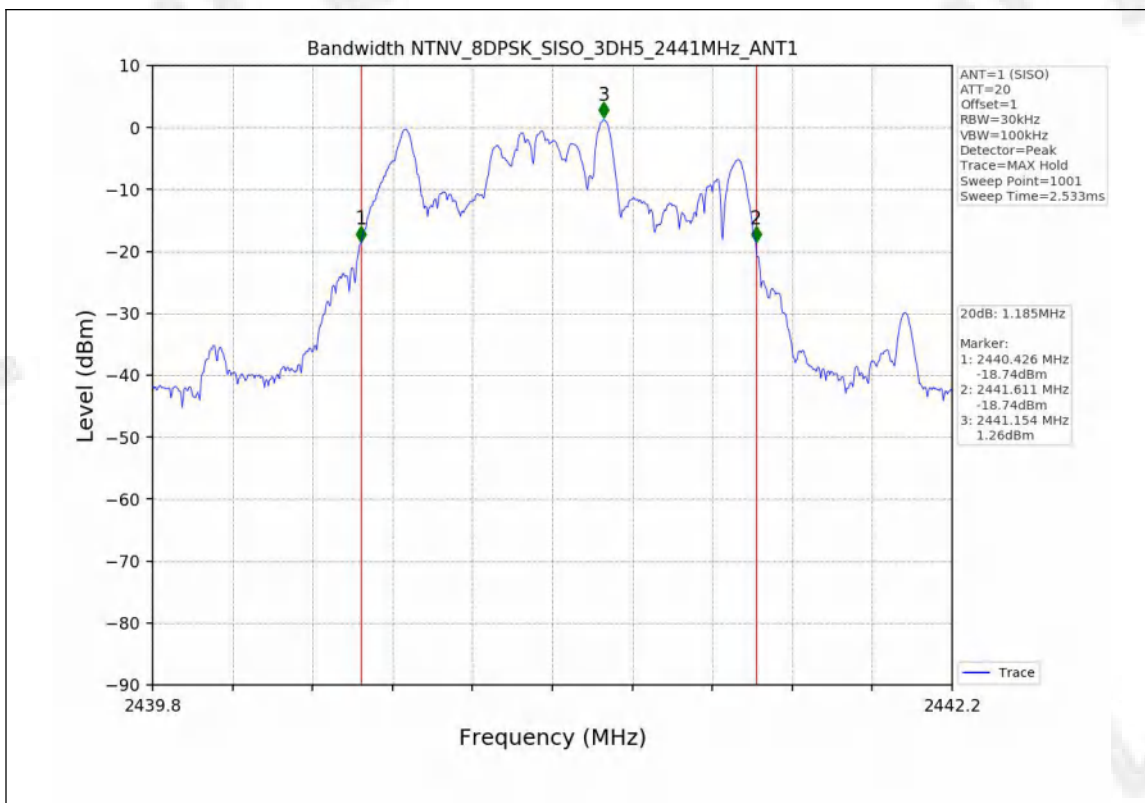
## 1.2 Test Graph - 20dB Bandwidth





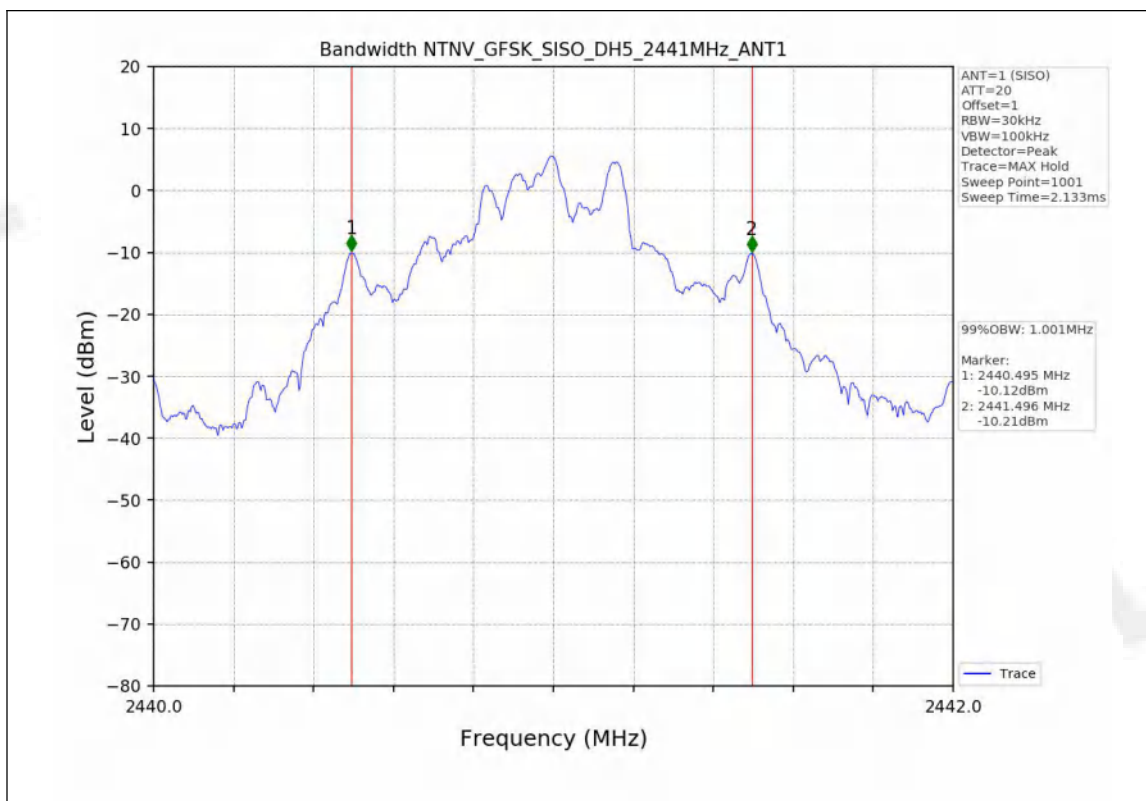
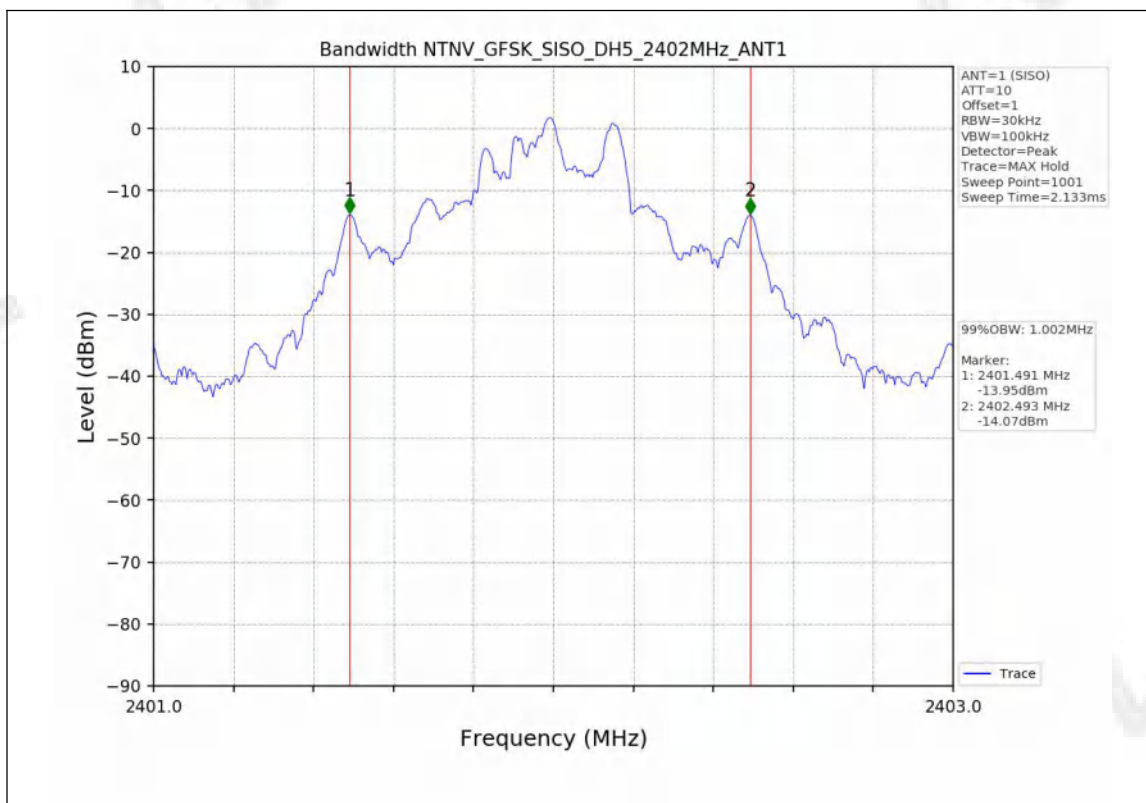


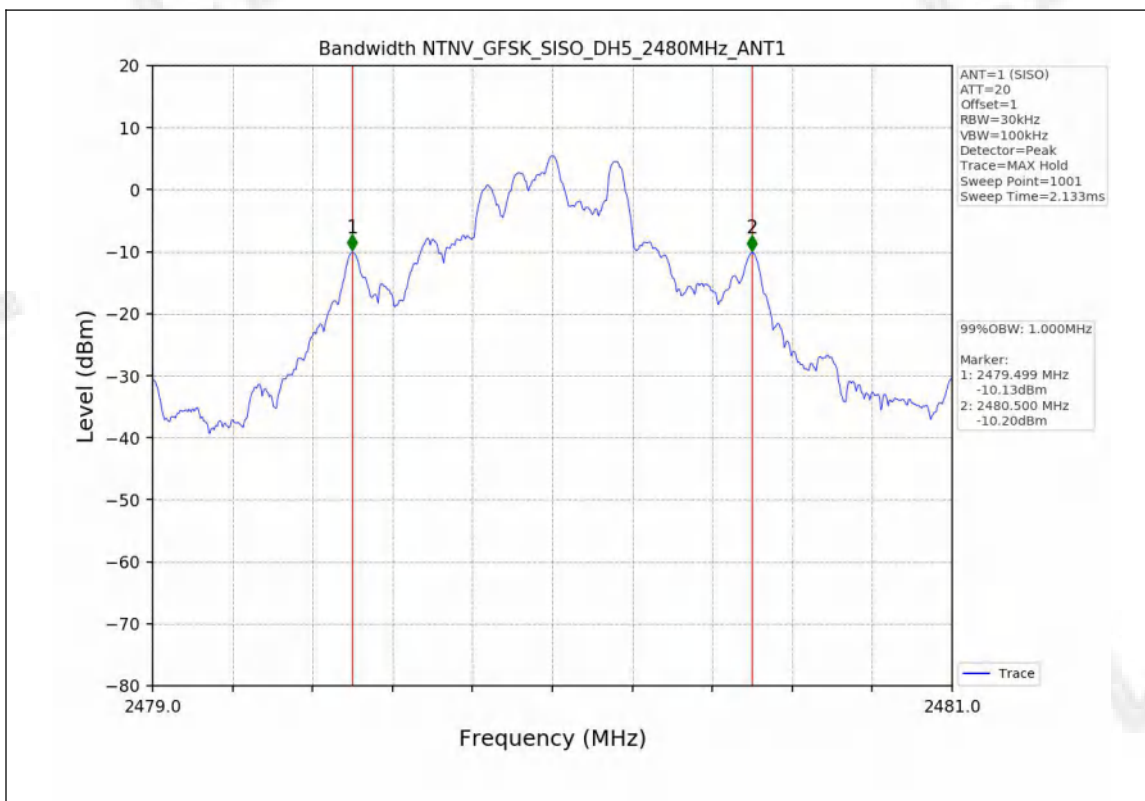




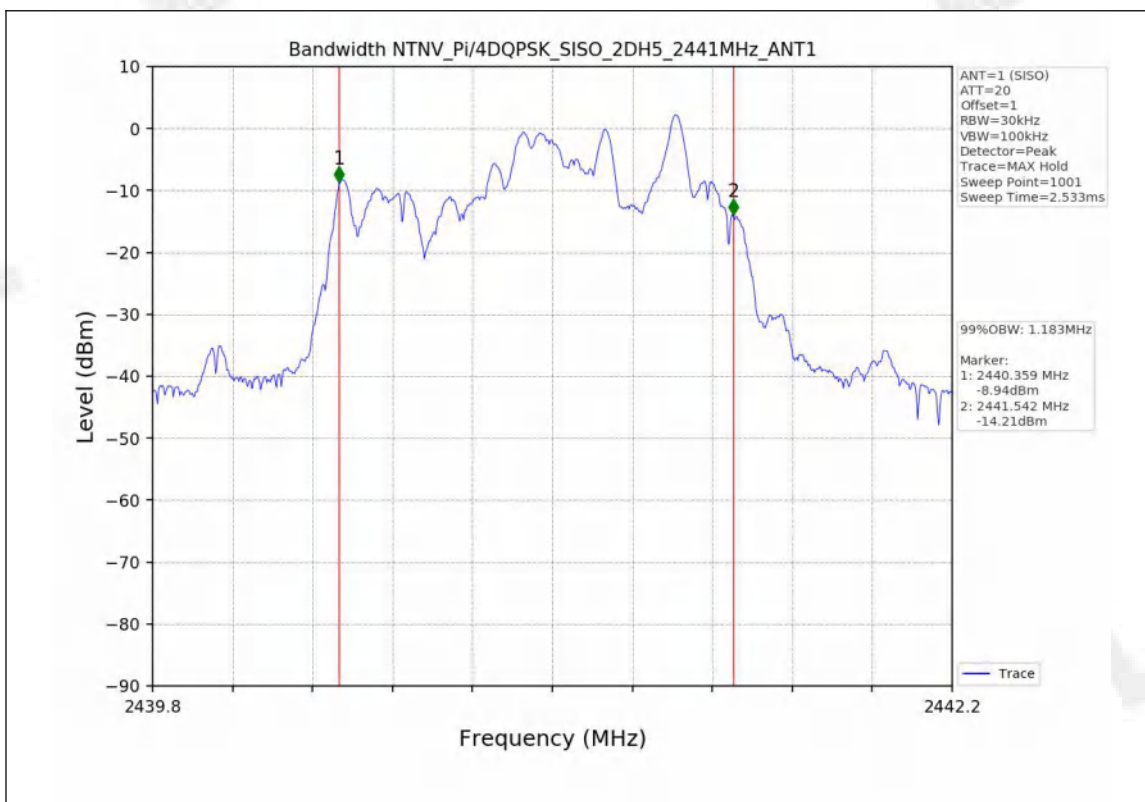
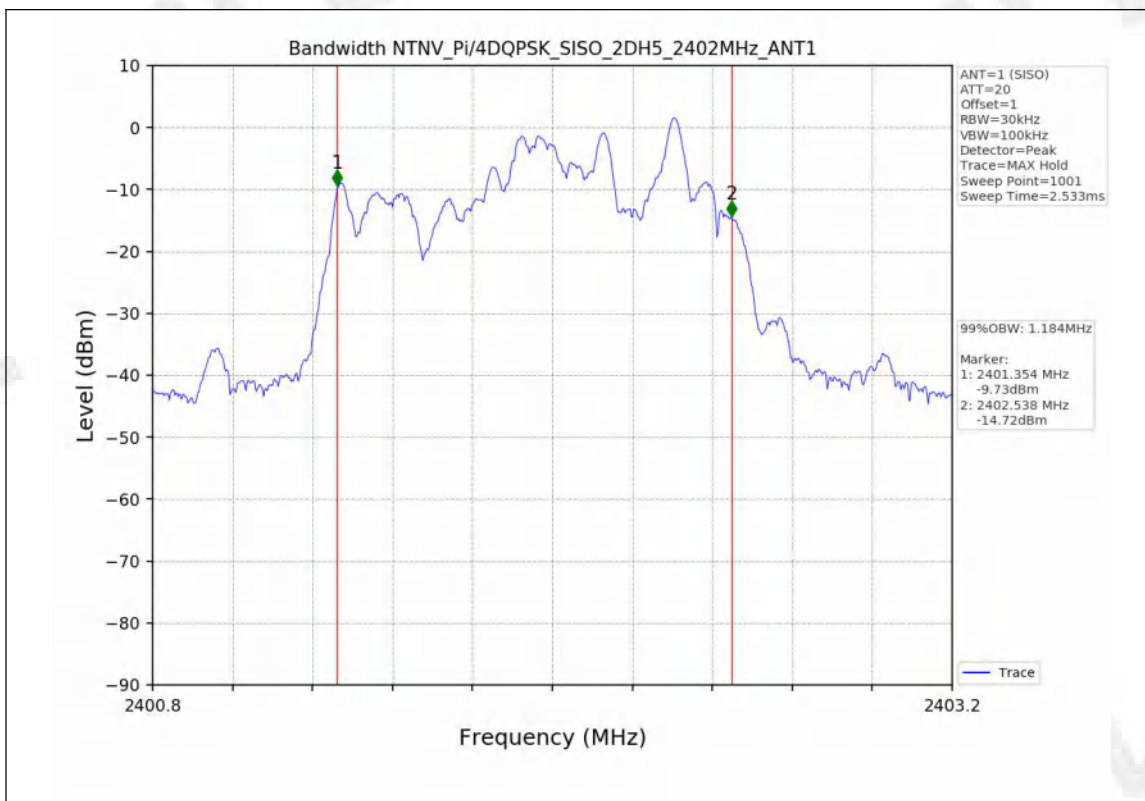


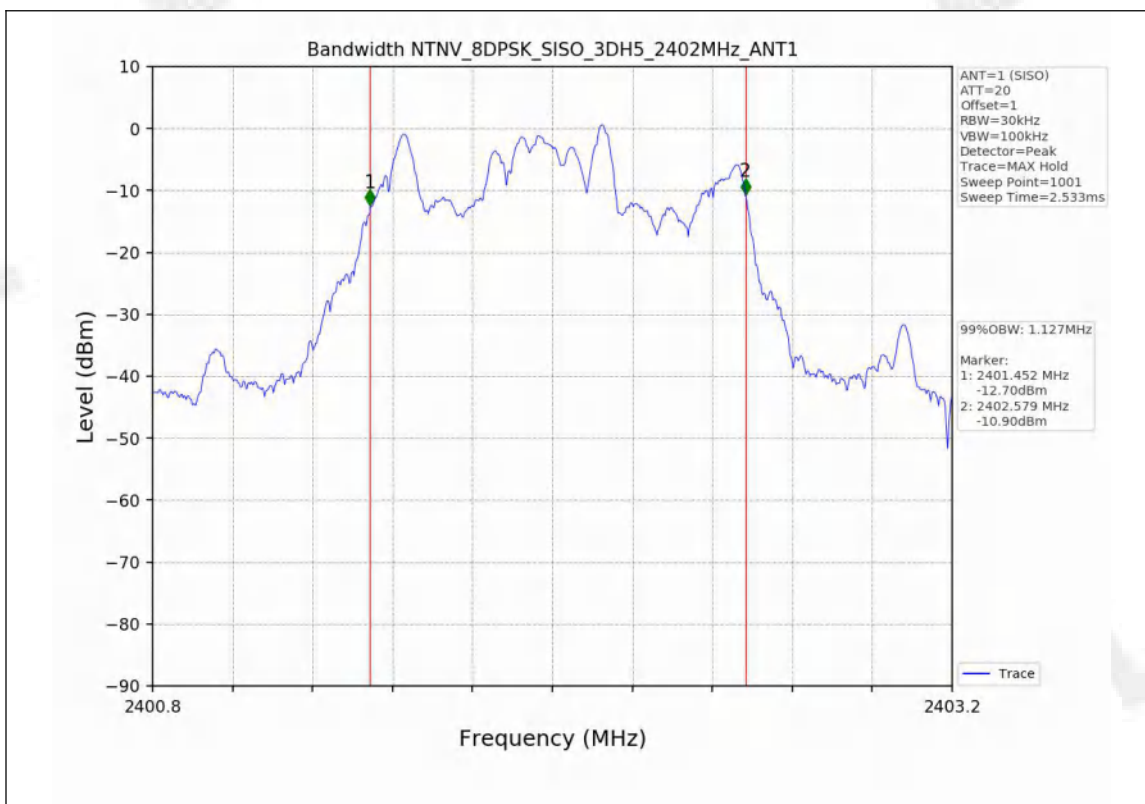
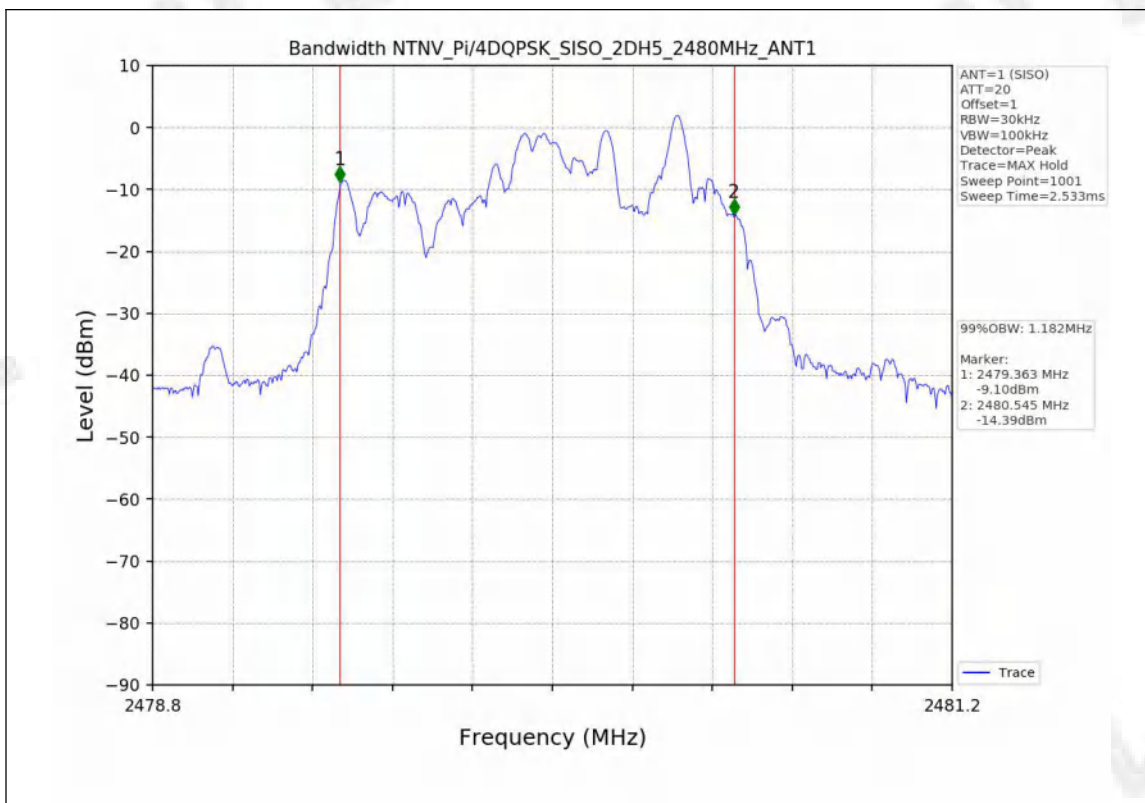
## 1.3 Test Graph - 99% Occupied Bandwidth

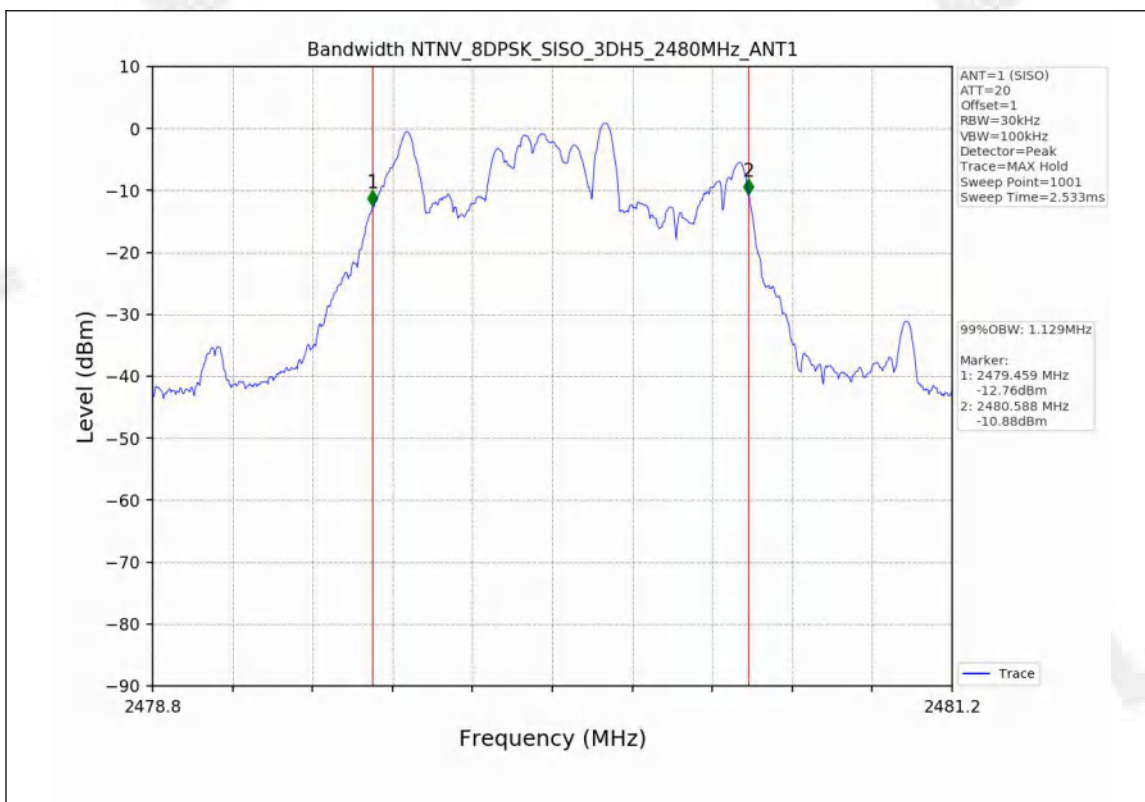
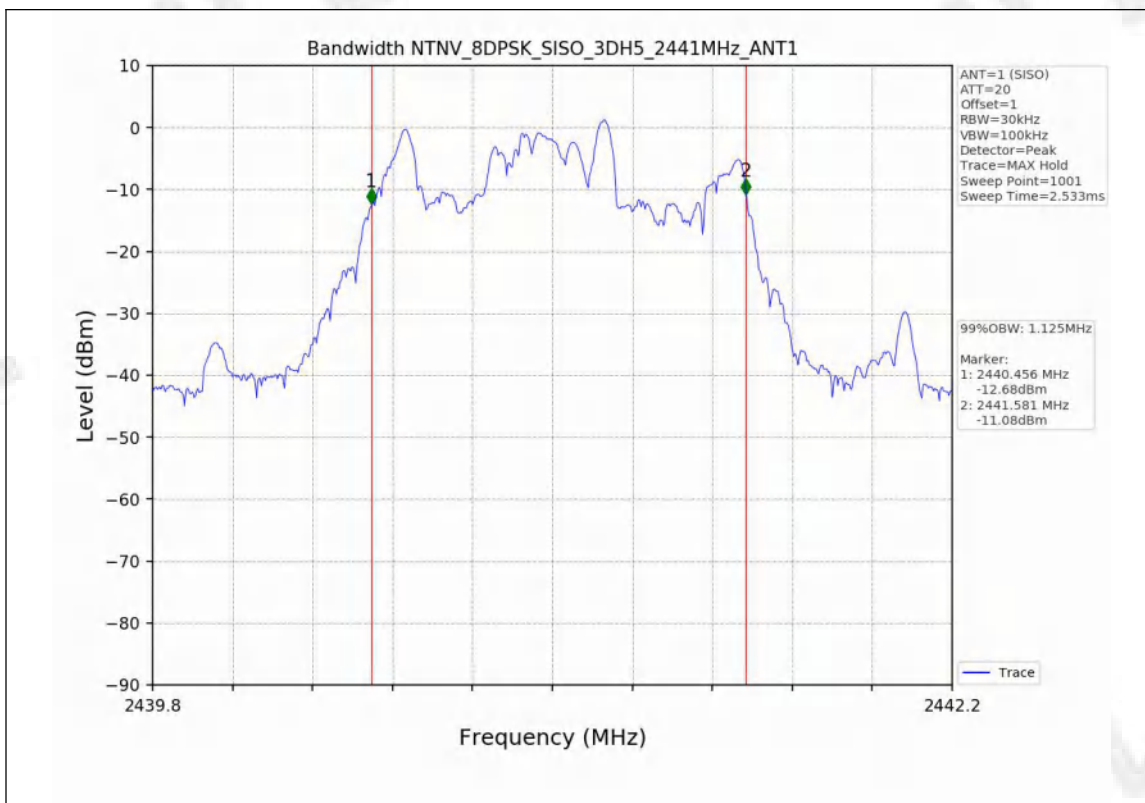










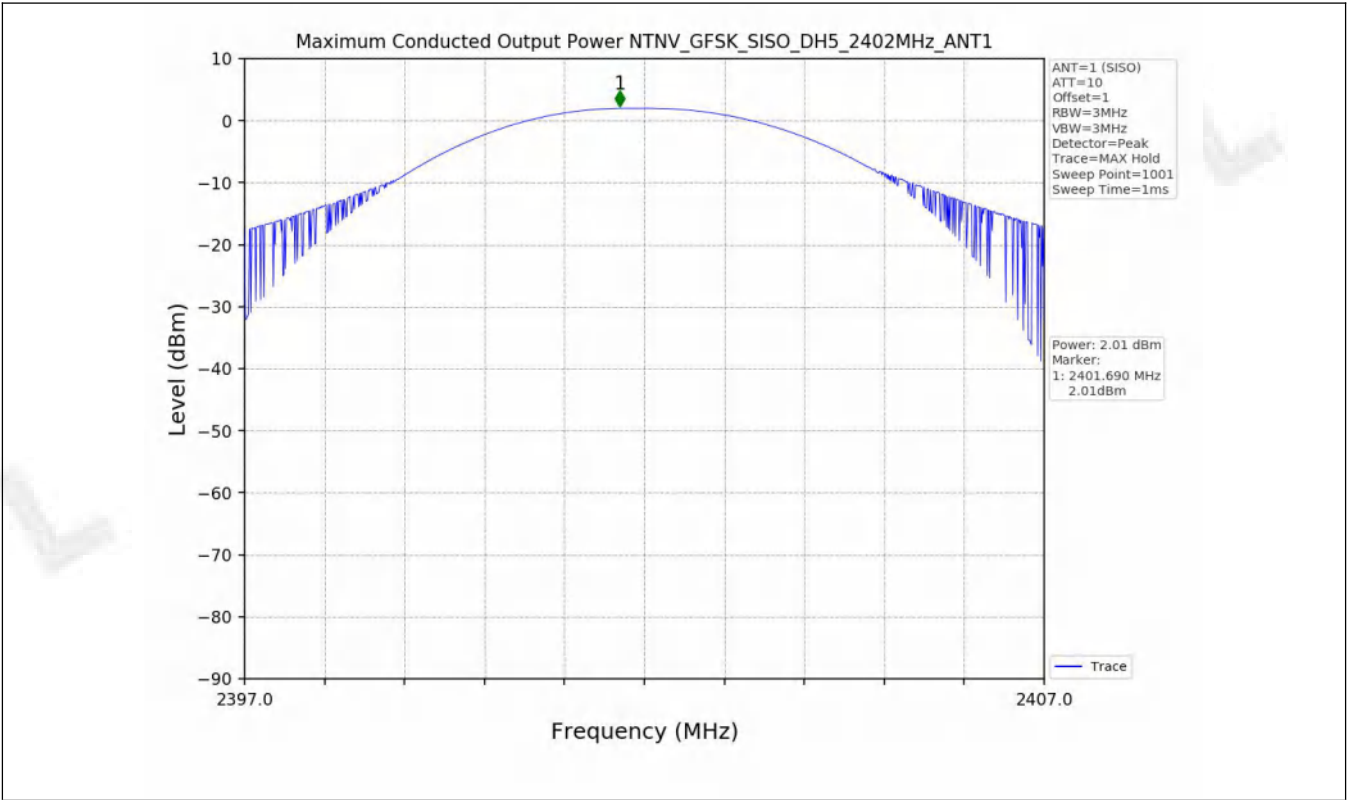


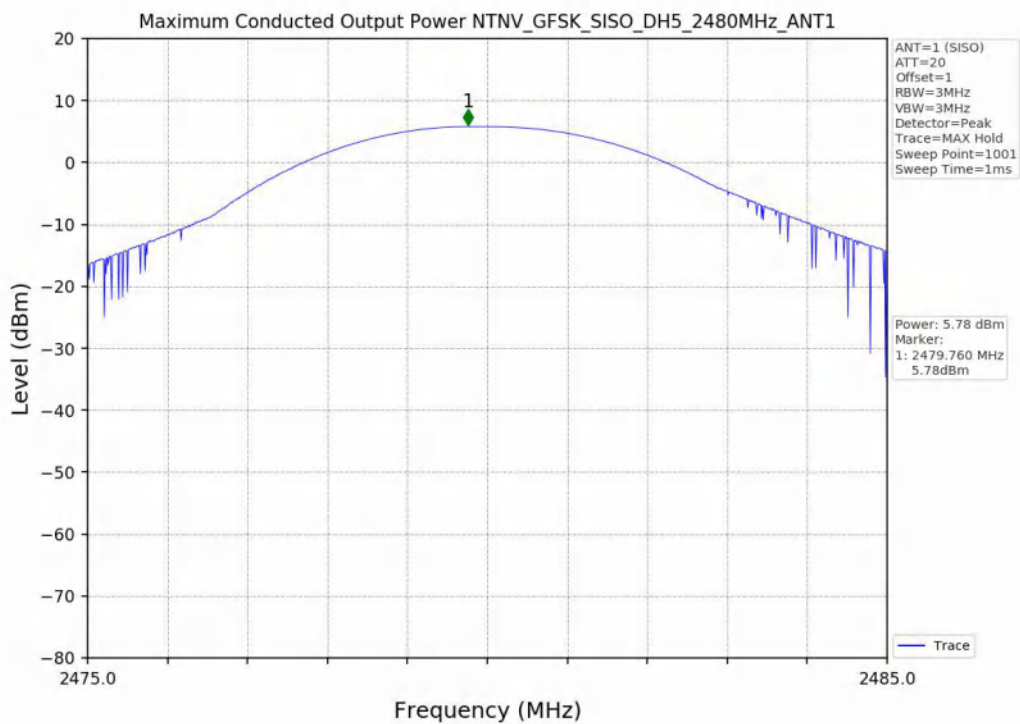
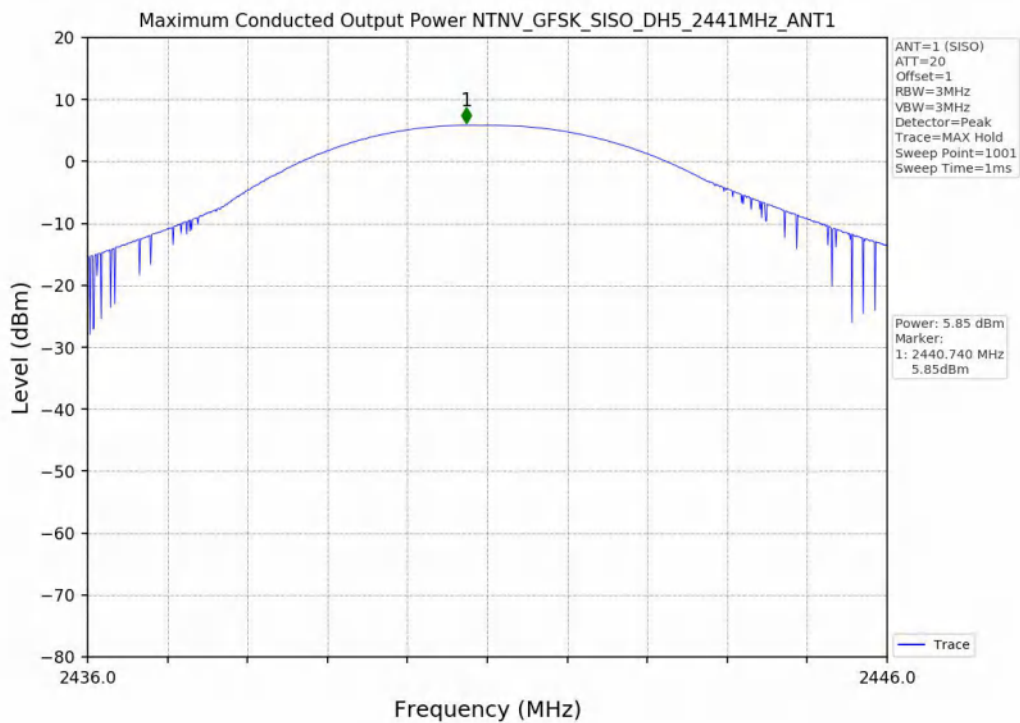
2. Maximum Conducted Output Power

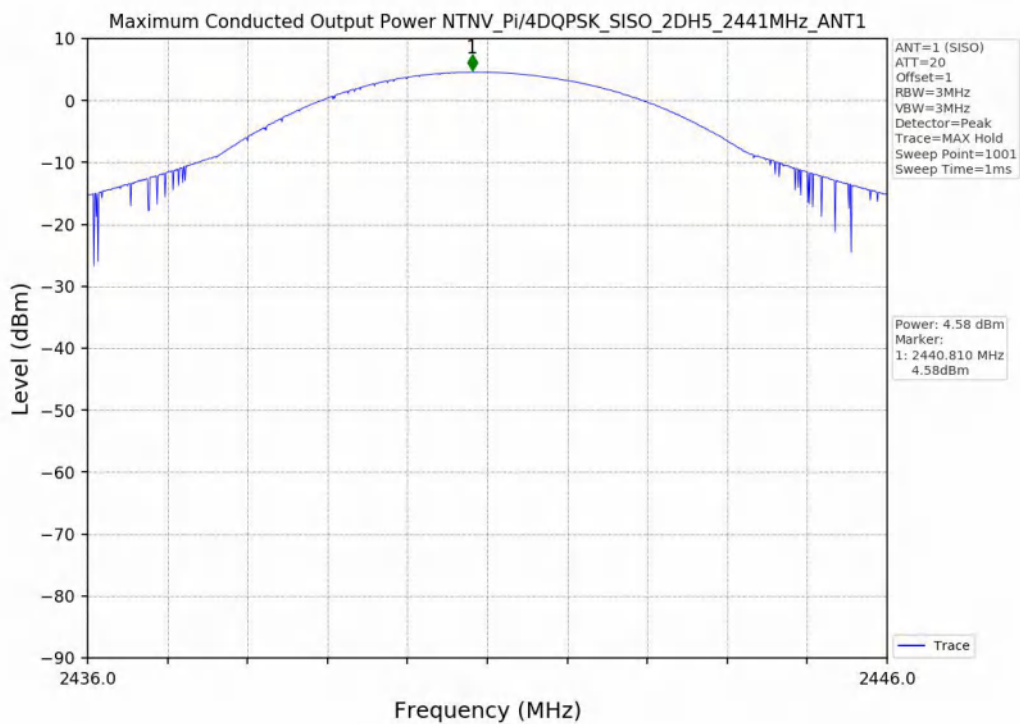
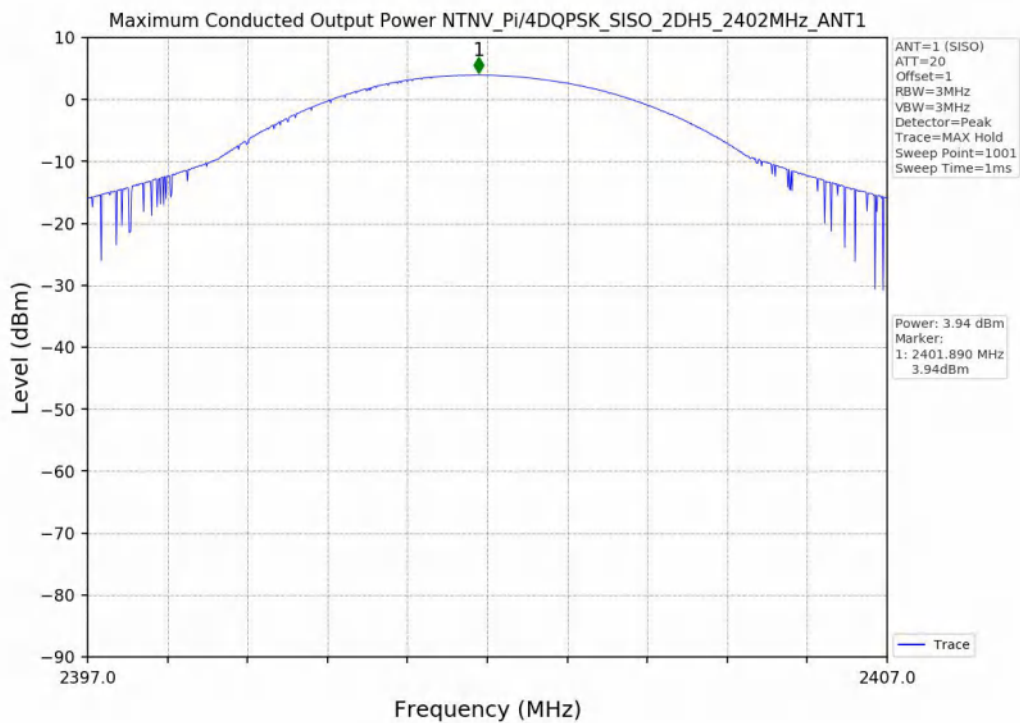
2.1 Test Result

| Test Mode | Frequency (MHz) | Tx Type | Measured Peak<br>Output Power (dBm) | Limits (dBm) | Verdict |
|-----------|-----------------|---------|-------------------------------------|--------------|---------|
|           |                 |         | Ant 1                               |              |         |
| GFSK      | 2402            | SISO    | 2.01                                | 20.97        | PASS    |
|           | 2441            | SISO    | 5.85                                | 20.97        | PASS    |
|           | 2480            | SISO    | 5.78                                | 20.97        | PASS    |
| Pi/4DQPSK | 2402            | SISO    | 3.94                                | 20.97        | PASS    |
|           | 2441            | SISO    | 4.58                                | 20.97        | PASS    |
|           | 2480            | SISO    | 4.37                                | 20.97        | PASS    |
| 8DPSK     | 2402            | SISO    | 3.95                                | 20.97        | PASS    |
|           | 2441            | SISO    | 4.57                                | 20.97        | PASS    |
|           | 2480            | SISO    | 4.35                                | 20.97        | PASS    |

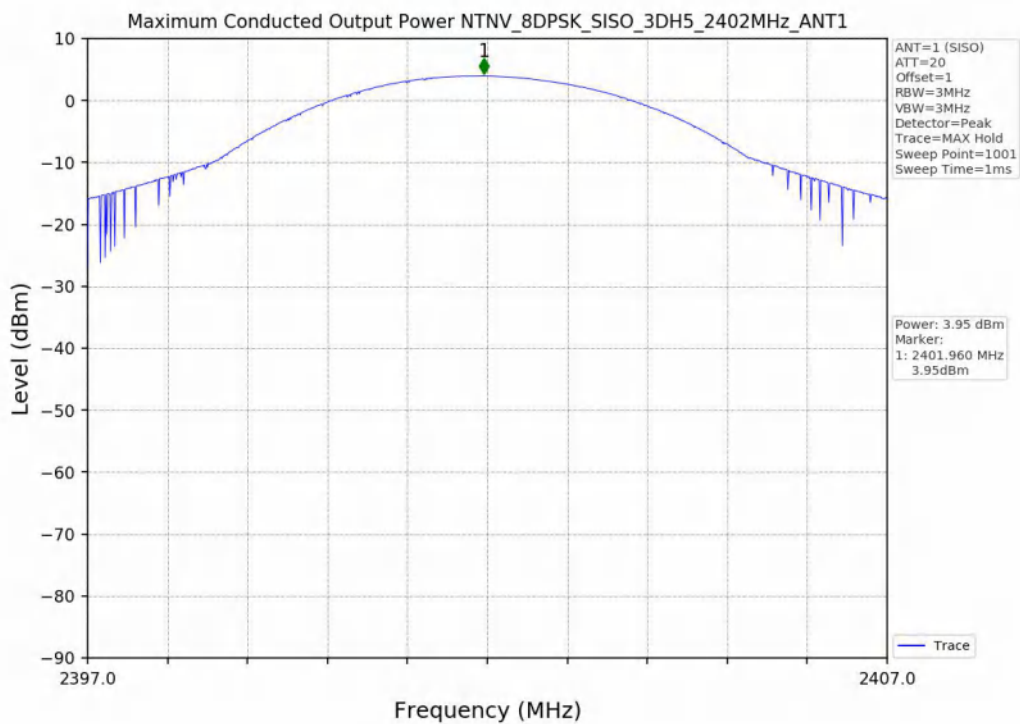
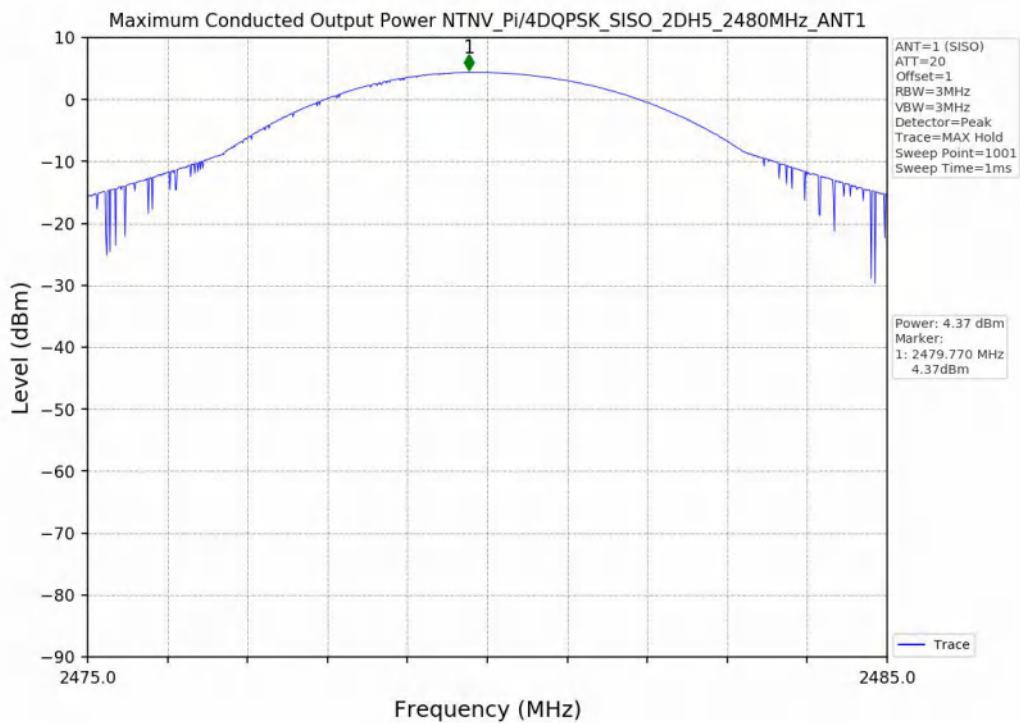
2.2 Test Graph

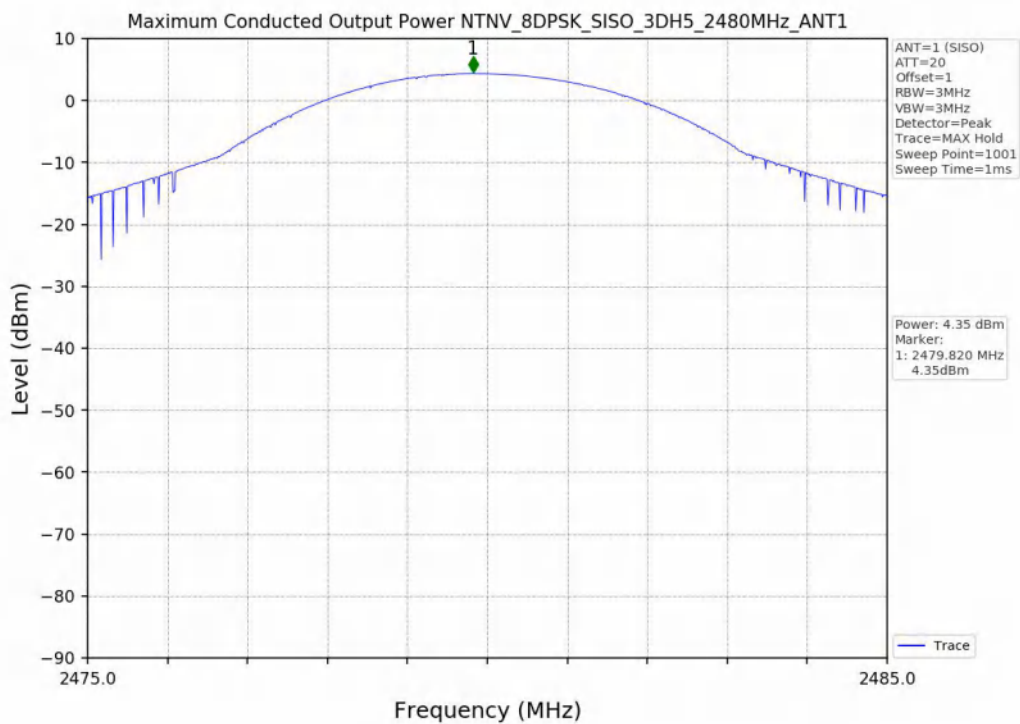
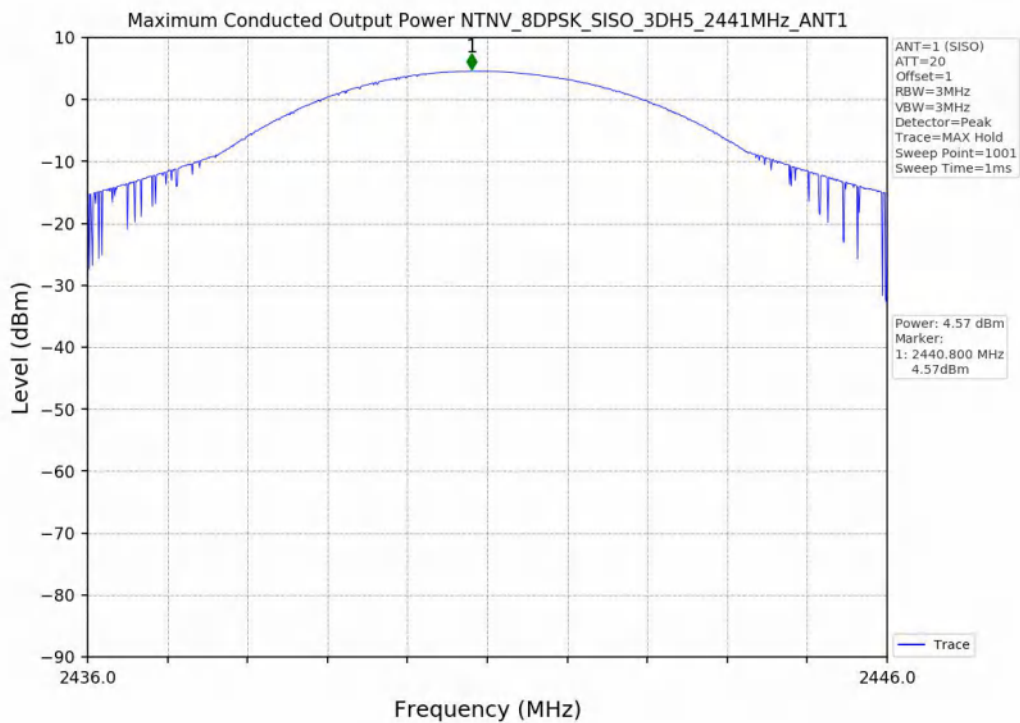










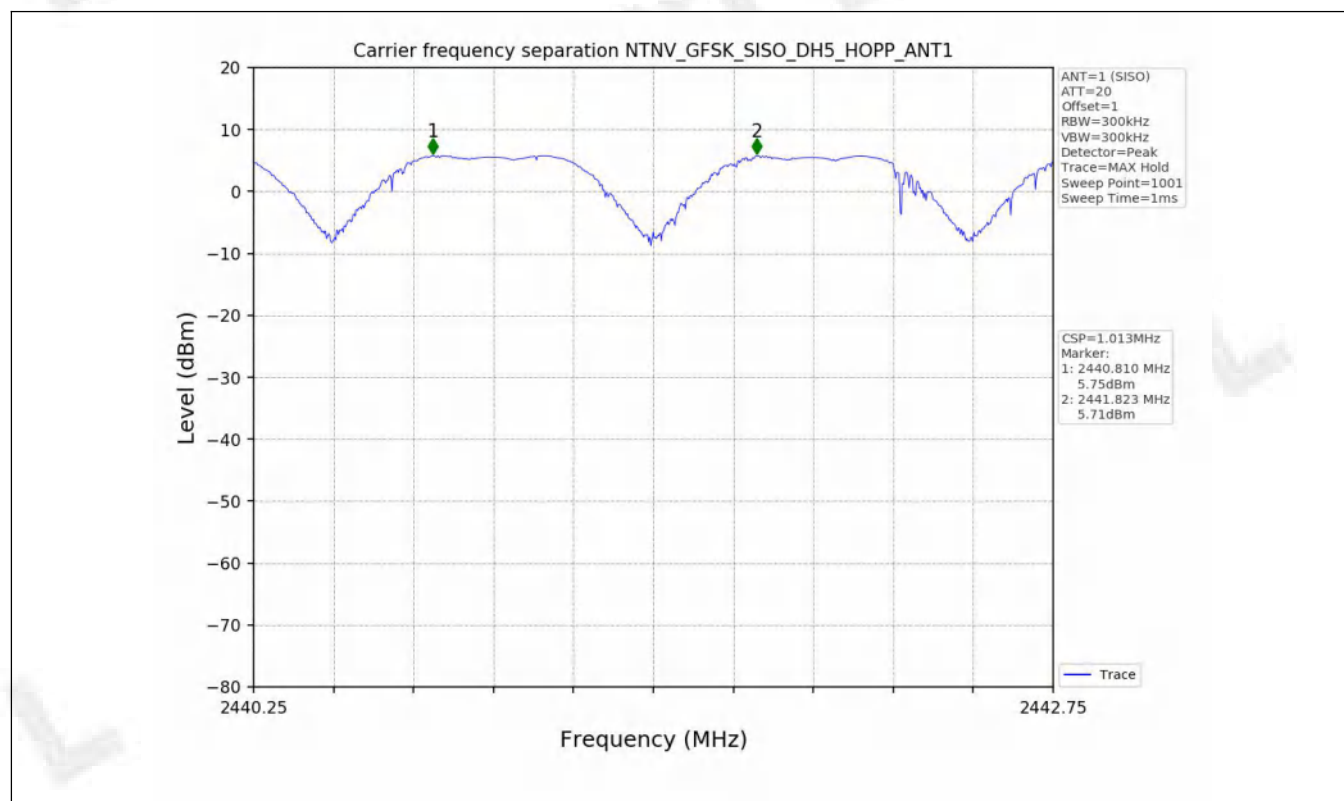


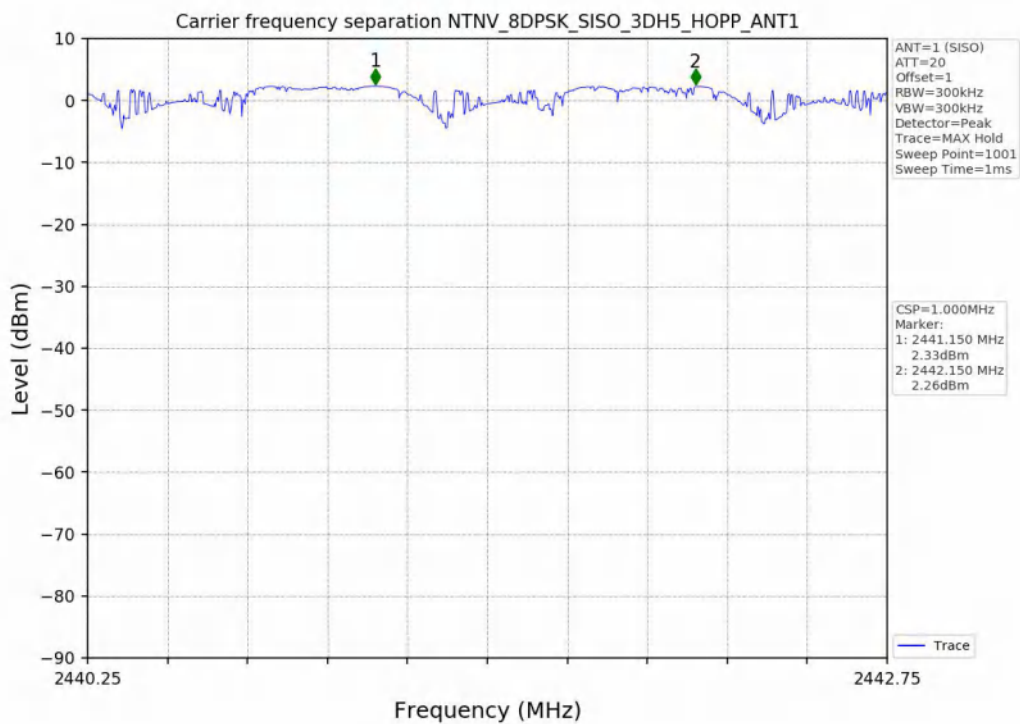
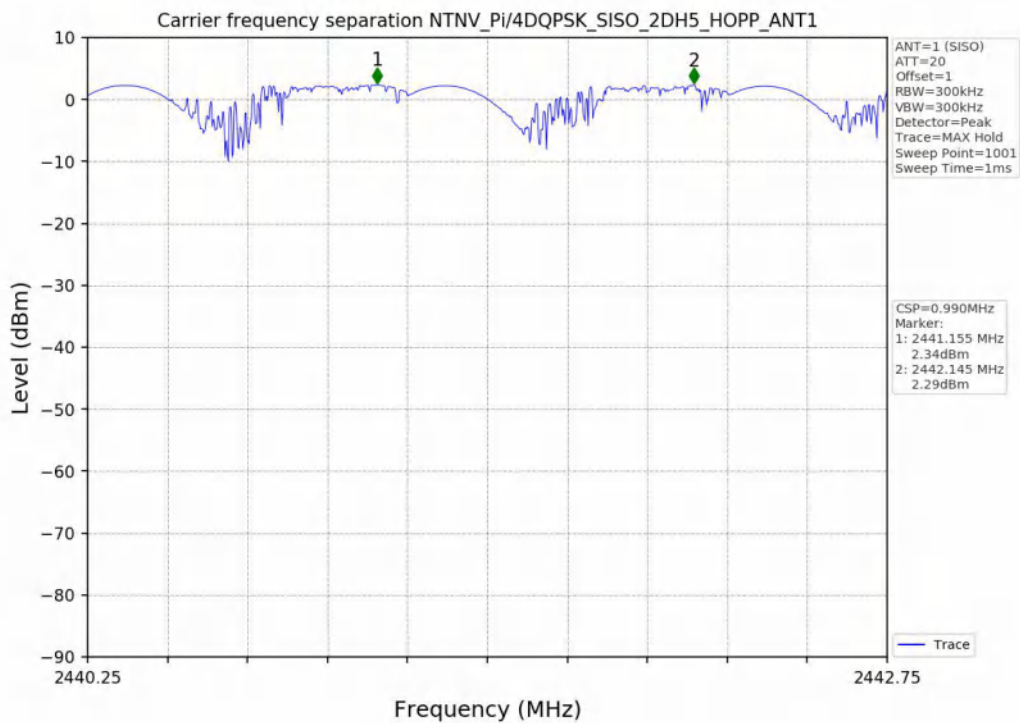
### 3. Carrier frequency separation

#### 3.1 Test Result

| Test Mode | TX Type | ANT No. | Channel Separation (MHz) | 20dB Bandwidth (MHz) | Limits (MHz) | Verdict |
|-----------|---------|---------|--------------------------|----------------------|--------------|---------|
| GFSK      | SISO    | 1       | 1.013                    | 1.045                | $\geq 0.697$ | PASS    |
| Pi/4DQPSK | SISO    | 1       | 0.990                    | 1.245                | $\geq 0.830$ | PASS    |
| 8DPSK     | SISO    | 1       | 1.000                    | 1.185                | $\geq 0.790$ | PASS    |

#### 3.2 Test Graph



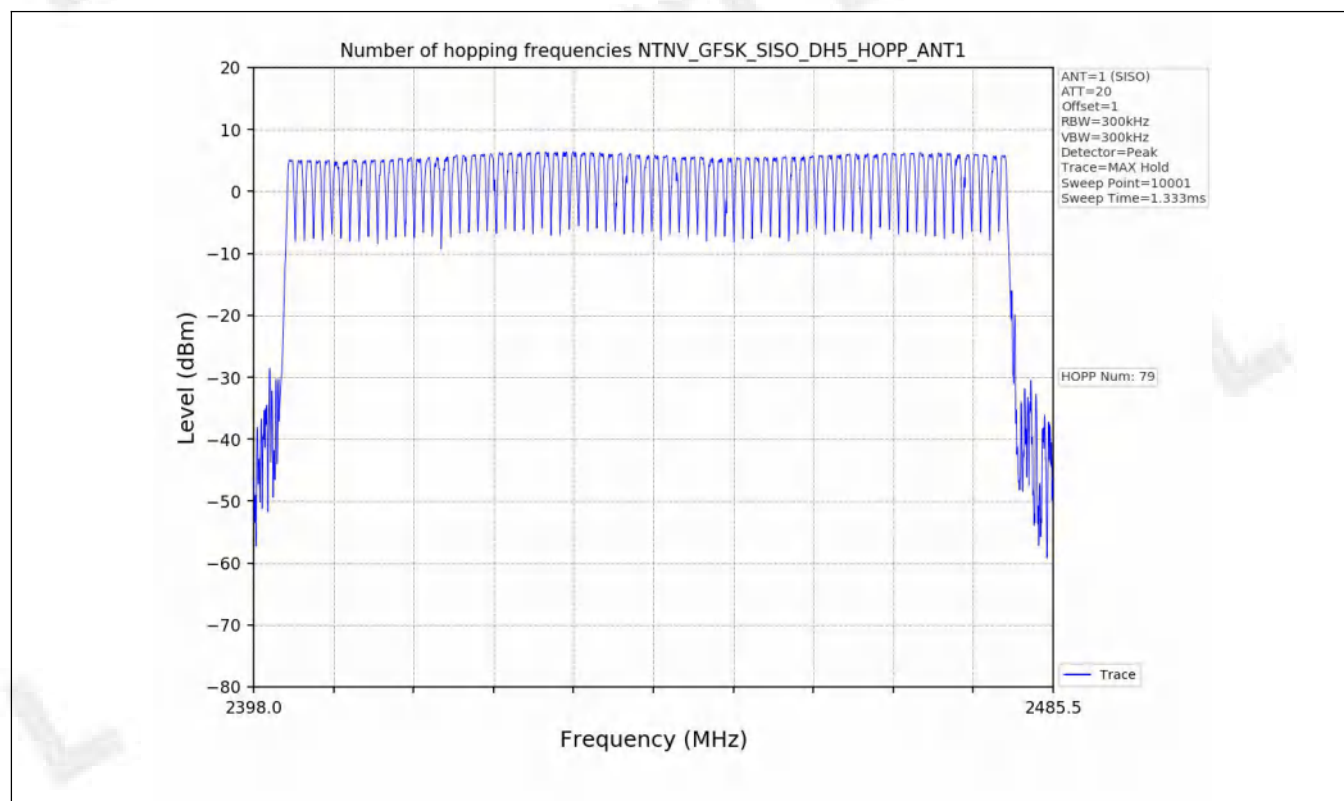


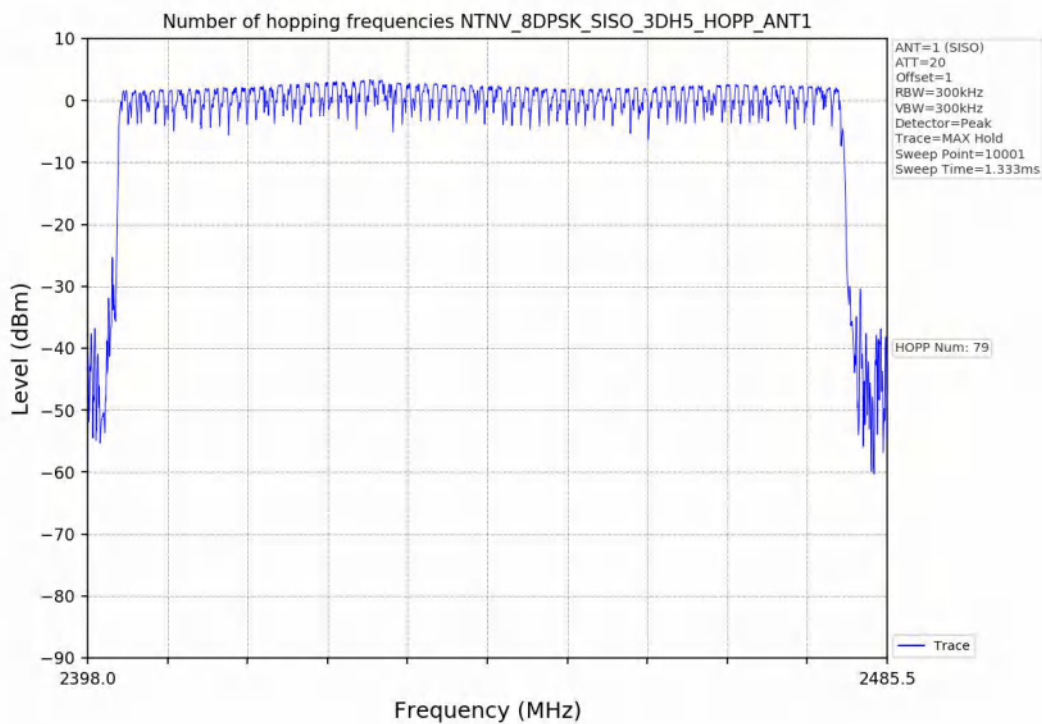
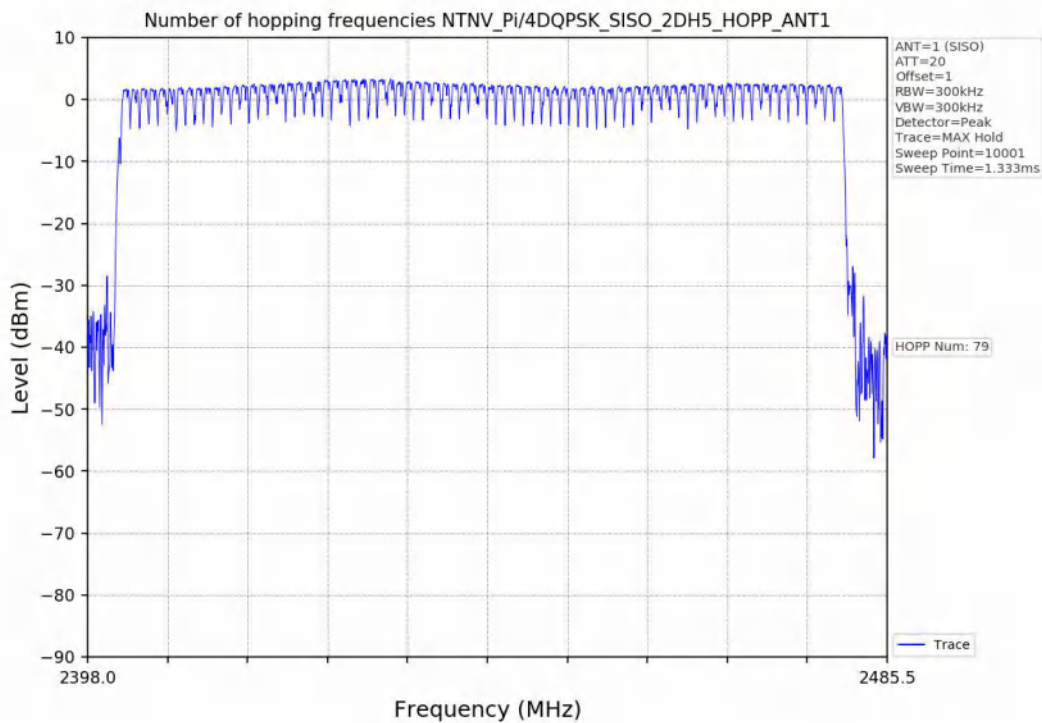
## 4. Number of hopping frequencies

### 4.1 Test Result

| Test Mode | TX Type | ANT No. | Num of Hopping Frequencies | Limits    | Verdict |
|-----------|---------|---------|----------------------------|-----------|---------|
| GFSK      | SISO    | 1       | 79                         | $\geq 15$ | PASS    |
| PI/4DQPSK | SISO    | 1       | 79                         | $\geq 15$ | PASS    |
| 8DPSK     | SISO    | 1       | 79                         | $\geq 15$ | PASS    |

### 4.2 Test Graph





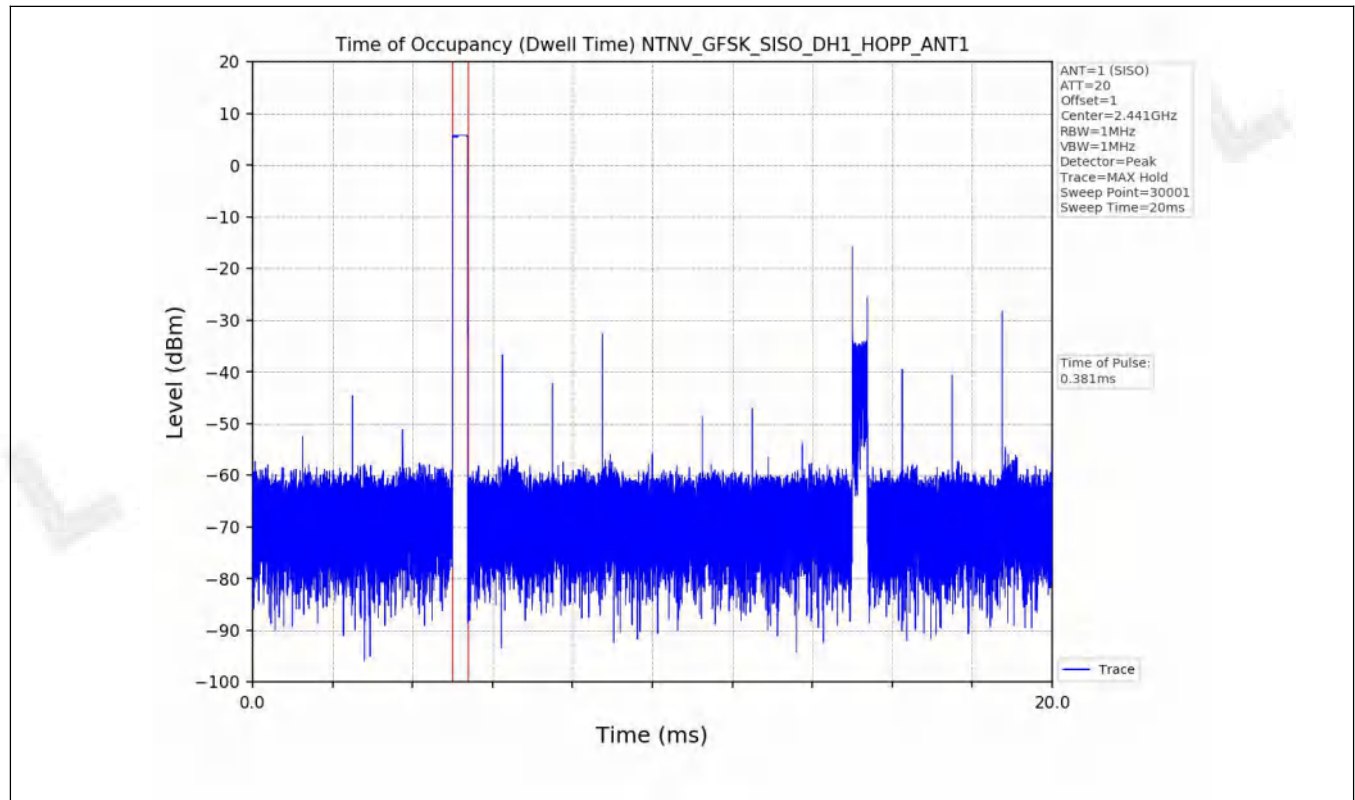


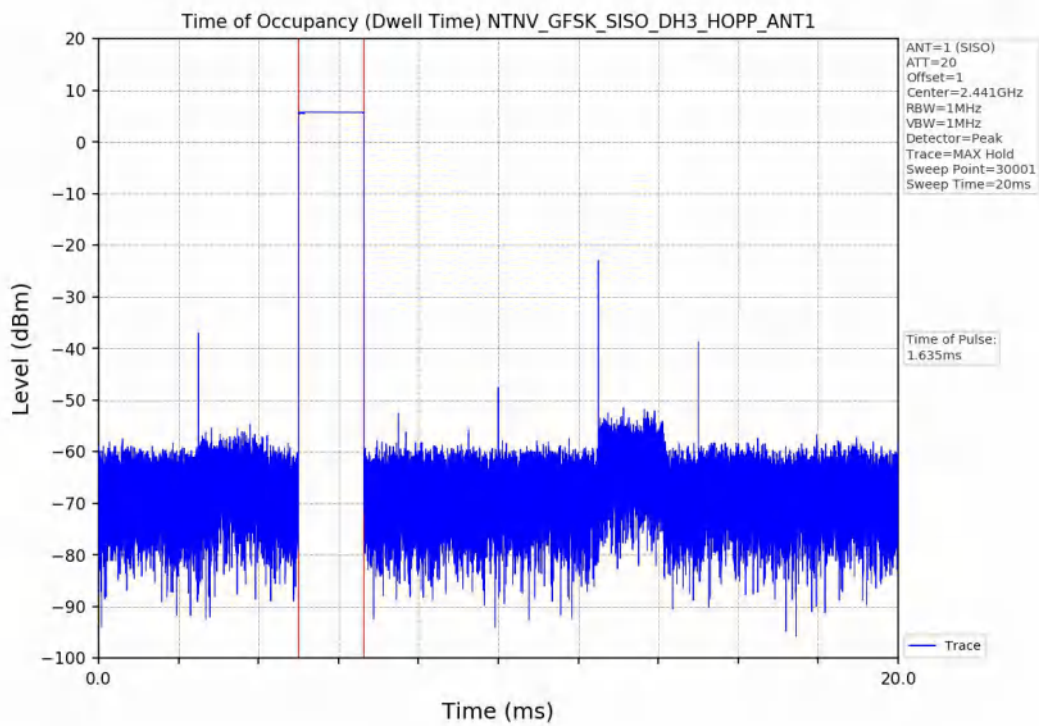
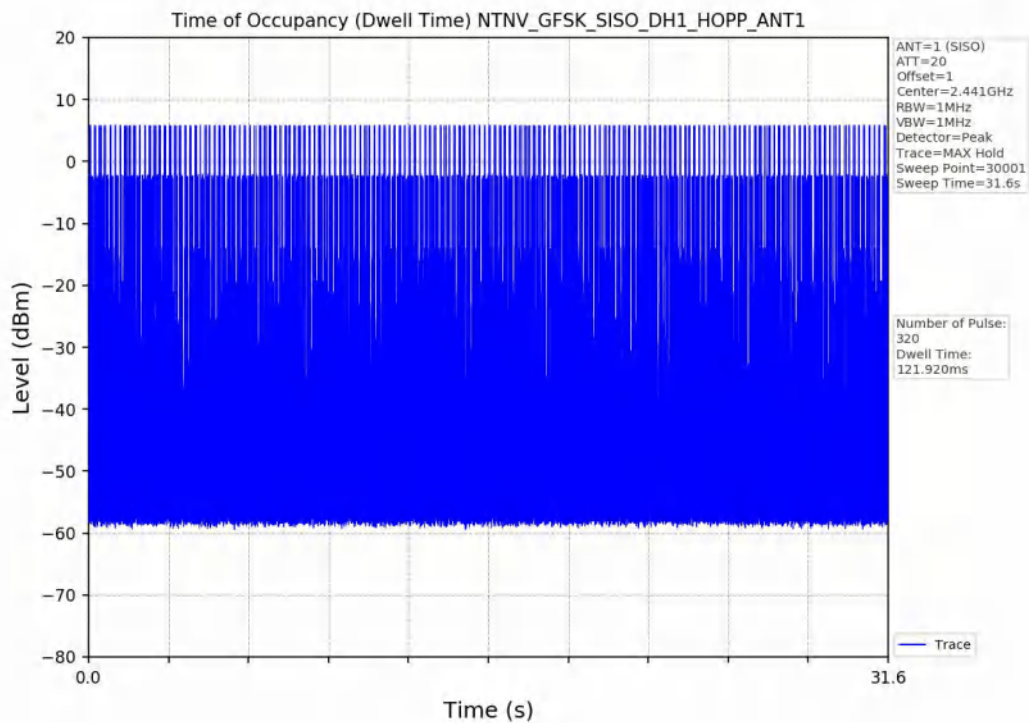
## 5. Time of occupancy (dwell time)

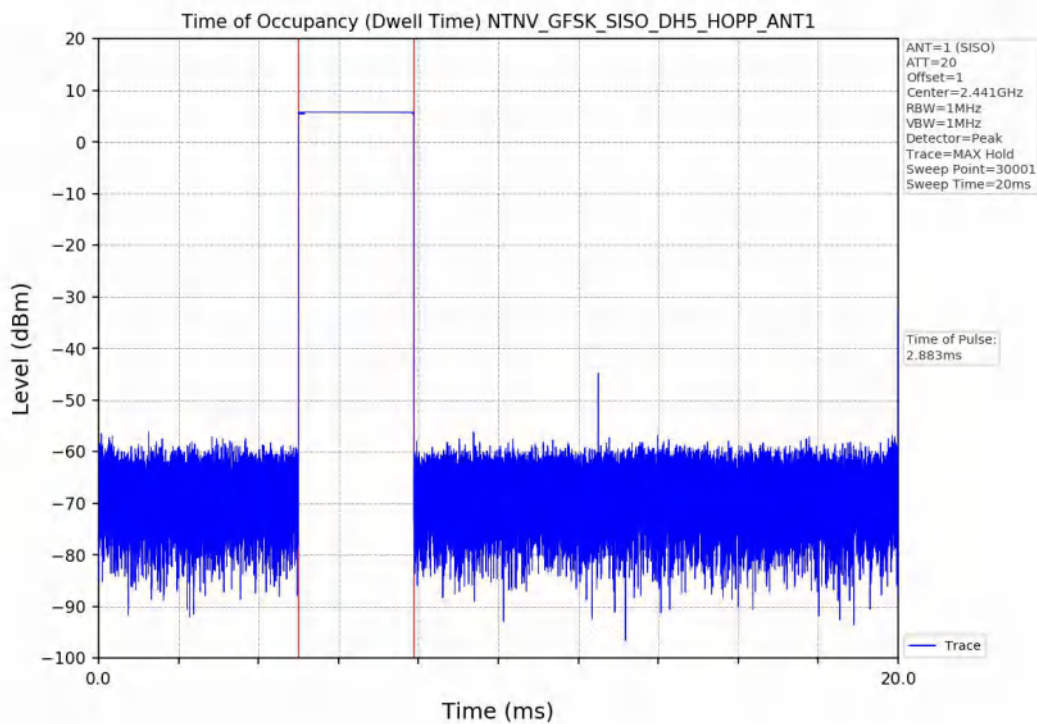
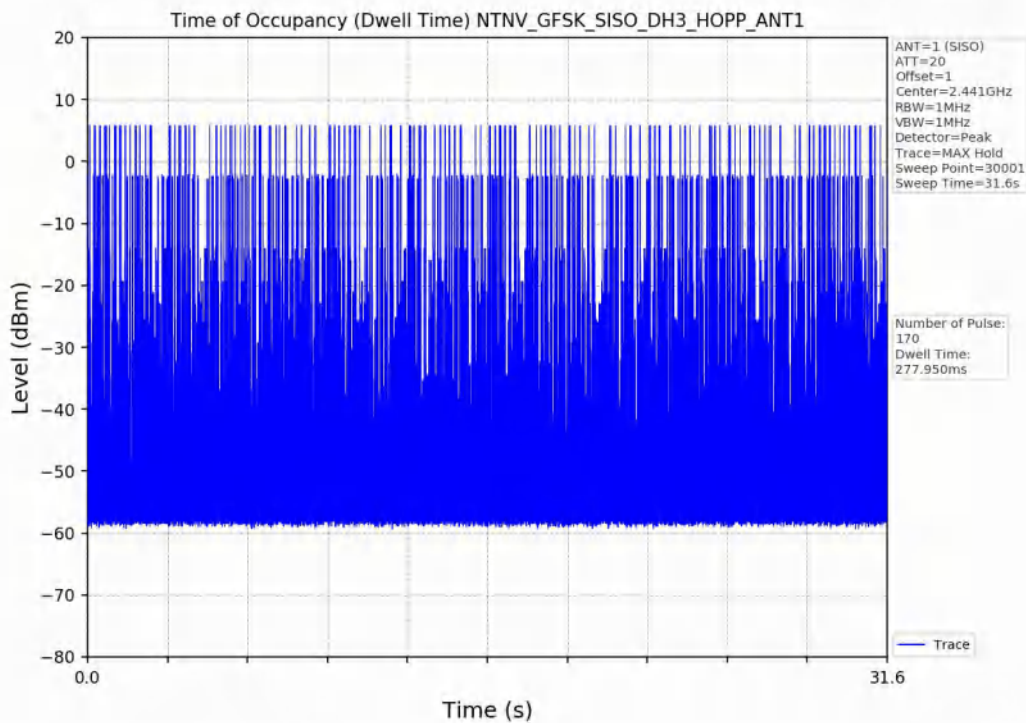
### 5.1 Test Result

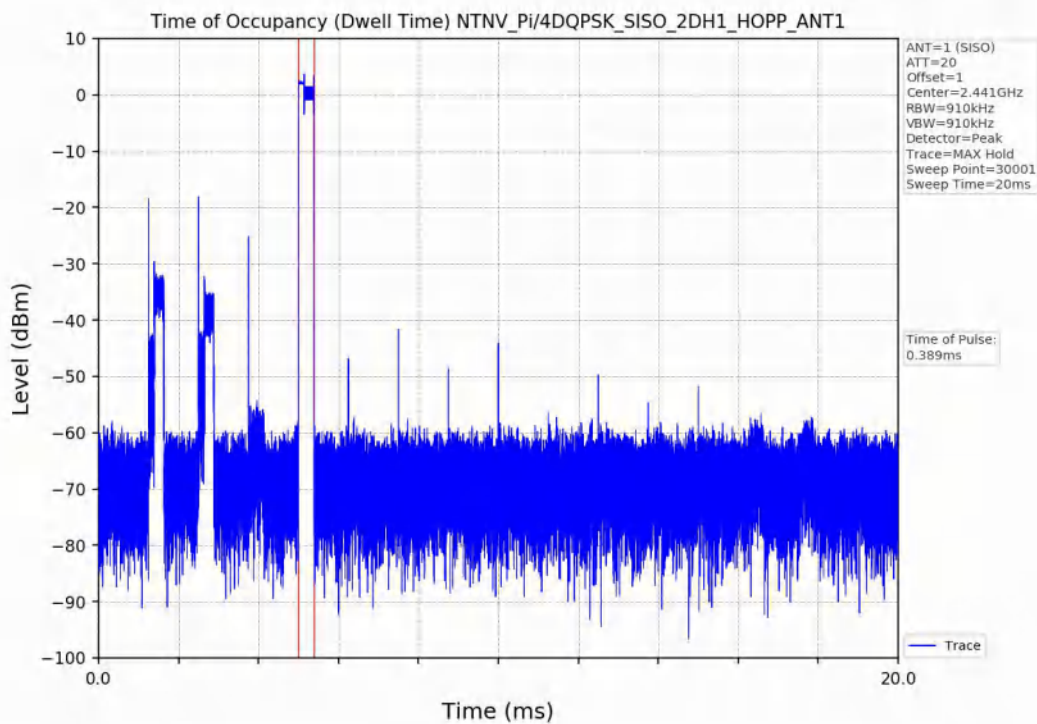
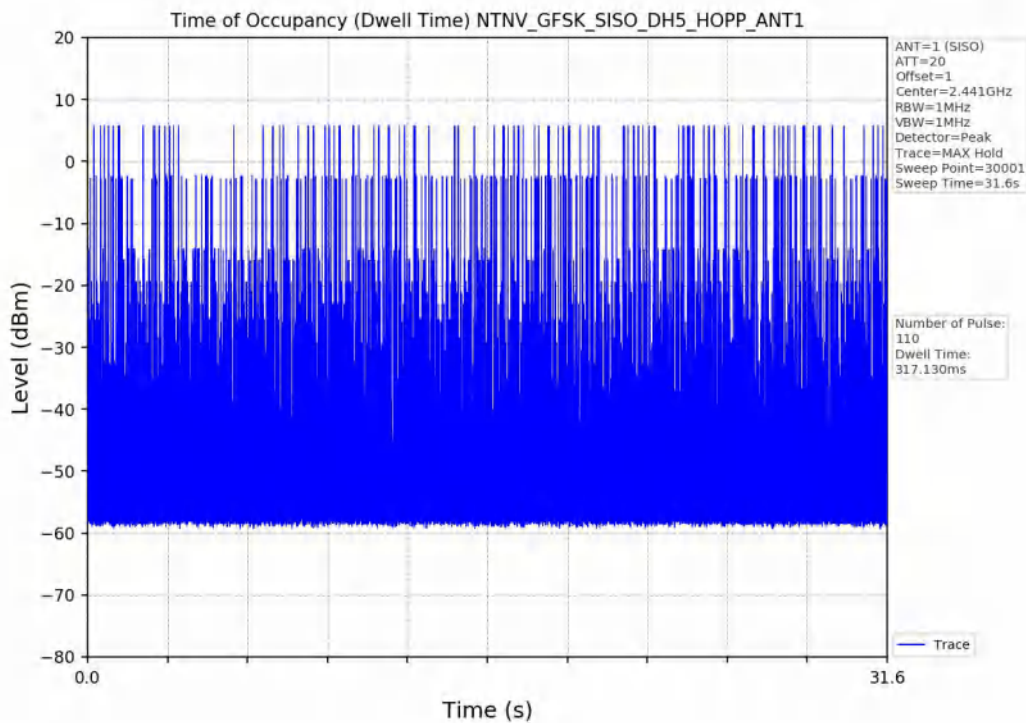
| Test Mode | Packet Type | TX Type | ANT No. | Duration of Single Pulse (ms) | Observation Period (s) | Num of Pulse in Observation Period | Dwell Time (ms) | Limits (ms) | Verdict |
|-----------|-------------|---------|---------|-------------------------------|------------------------|------------------------------------|-----------------|-------------|---------|
| GFSK      | DH1         | SISO    | 1       | 0.381                         | 31.6                   | 320                                | 121.920         | ≤400        | PASS    |
|           | DH3         | SISO    | 1       | 1.635                         | 31.6                   | 170                                | 277.950         | ≤400        | PASS    |
|           | DH5         | SISO    | 1       | 2.883                         | 31.6                   | 110                                | 317.130         | ≤400        | PASS    |
| Pi/4DQPSK | 2DH1        | SISO    | 1       | 0.389                         | 31.6                   | 320                                | 124.480         | ≤400        | PASS    |
|           | 2DH3        | SISO    | 1       | 1.638                         | 31.6                   | 172                                | 281.736         | ≤400        | PASS    |
|           | 2DH5        | SISO    | 1       | 2.885                         | 31.6                   | 109                                | 314.465         | ≤400        | PASS    |
| 8DPSK     | 3DH1        | SISO    | 1       | 0.390                         | 31.6                   | 315                                | 122.850         | ≤400        | PASS    |
|           | 3DH3        | SISO    | 1       | 1.641                         | 31.6                   | 158                                | 259.278         | ≤400        | PASS    |
|           | 3DH5        | SISO    | 1       | 2.891                         | 31.6                   | 96                                 | 277.536         | ≤400        | PASS    |

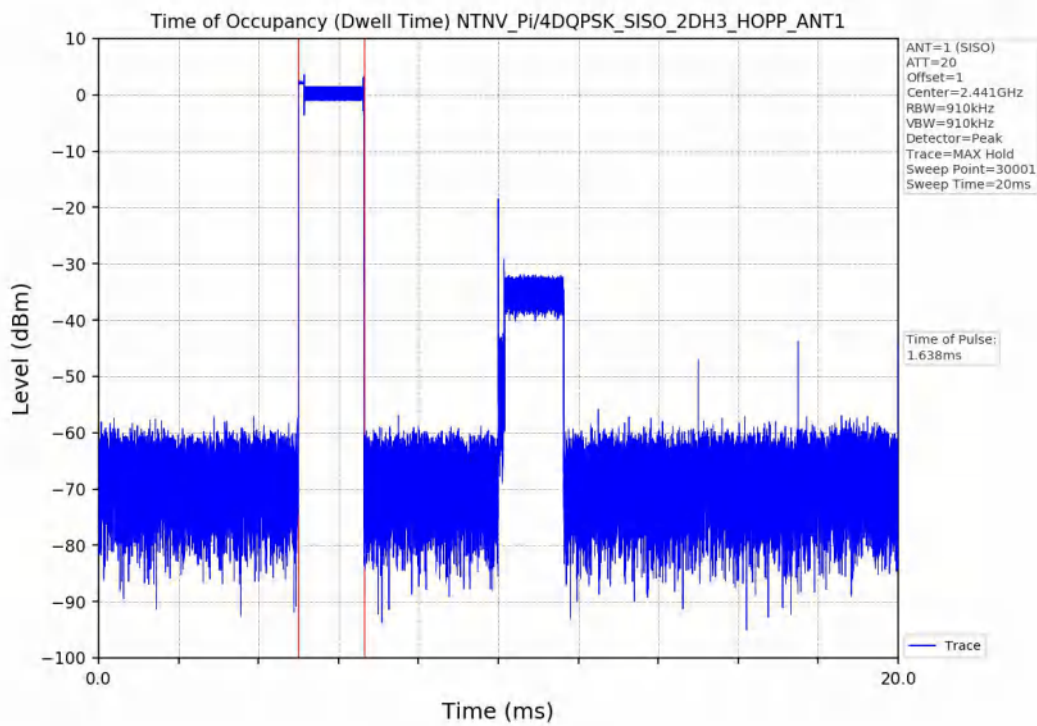
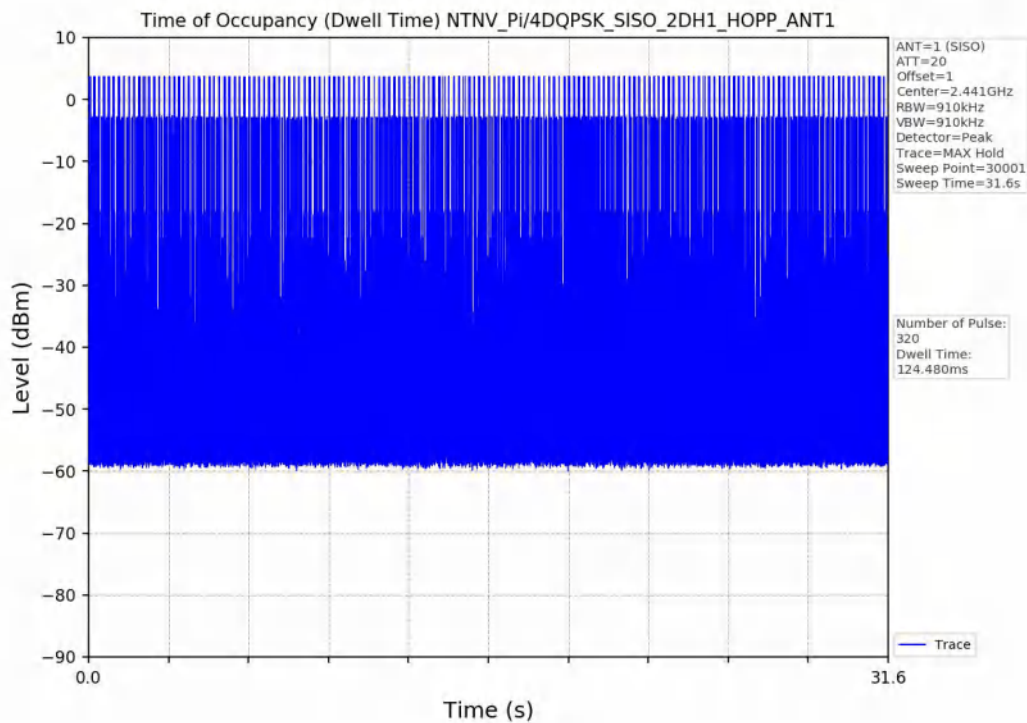
### 5.2 Test Graph



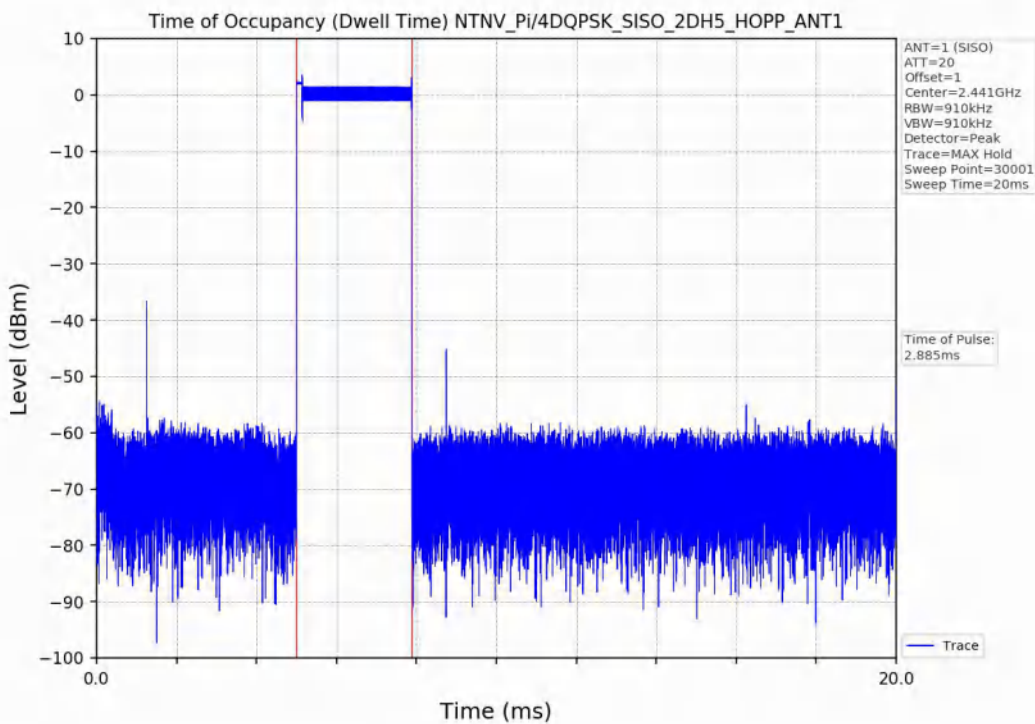
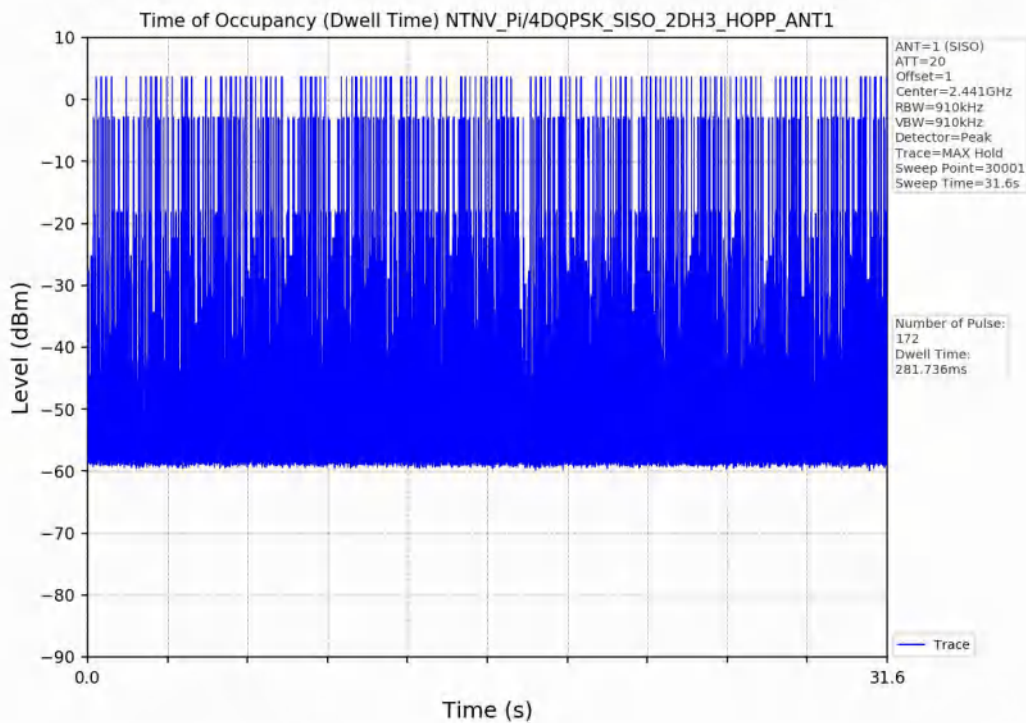




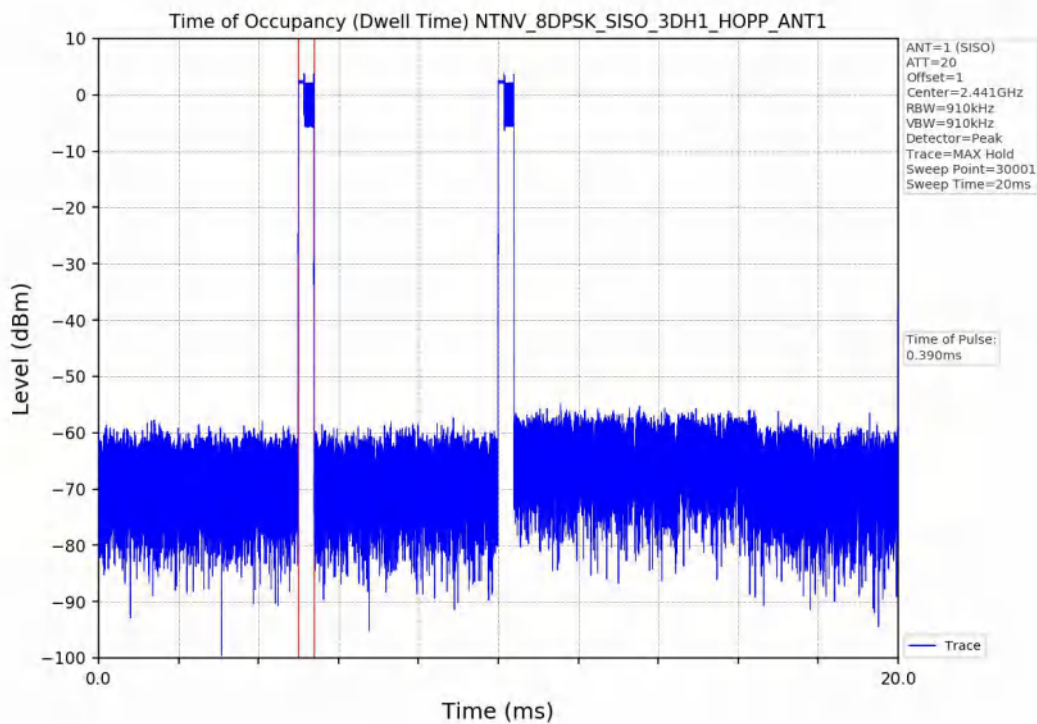
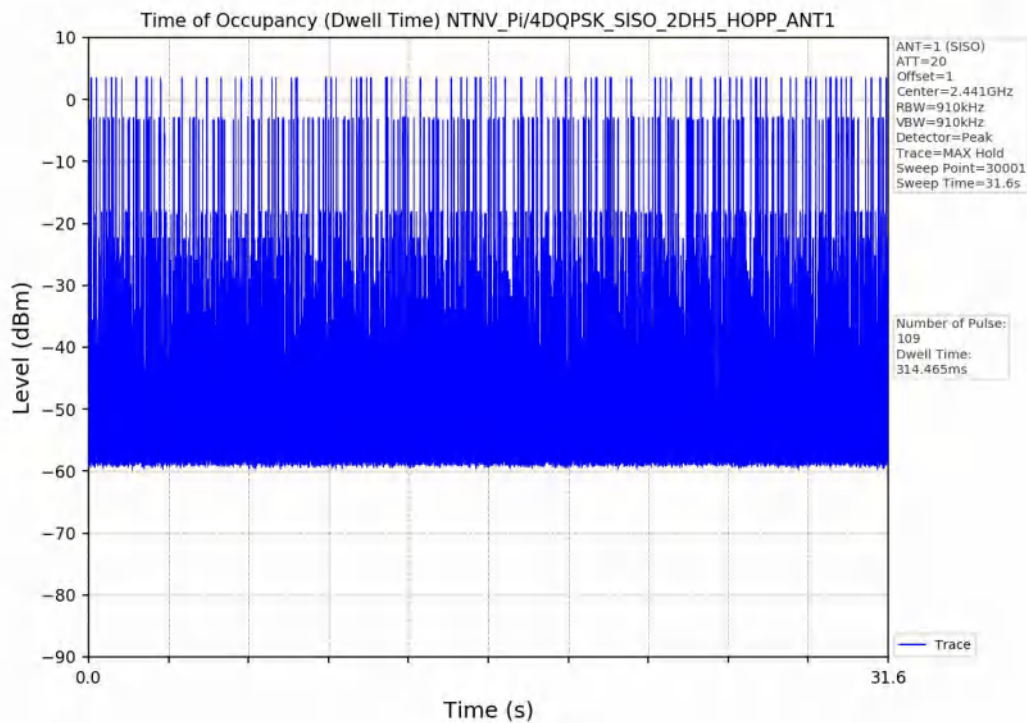


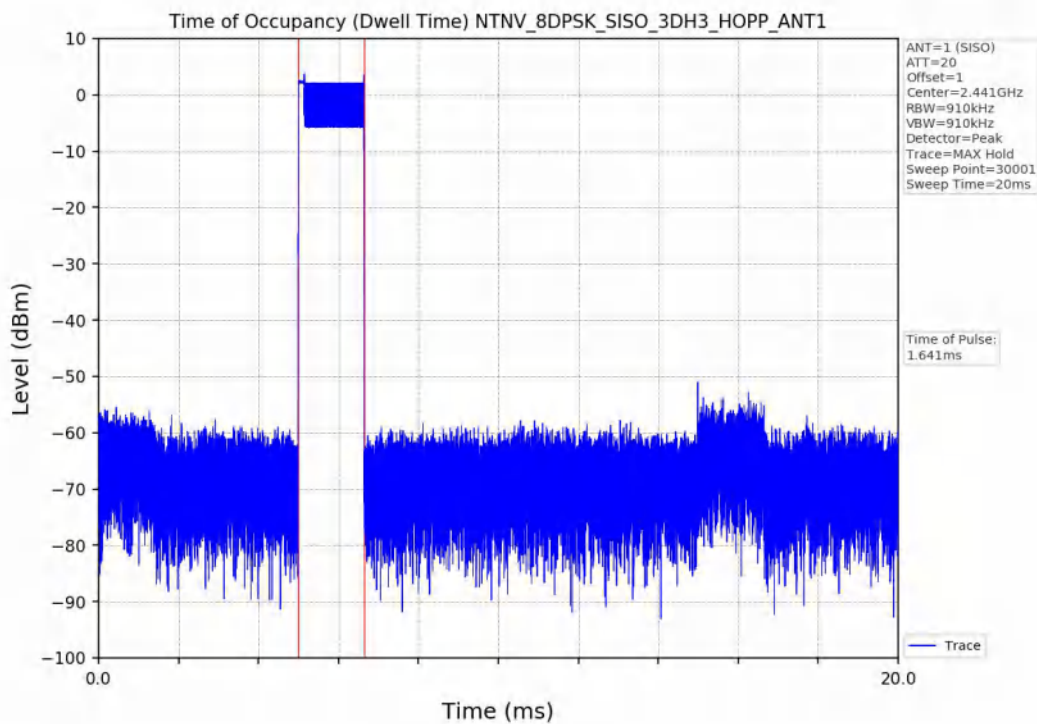
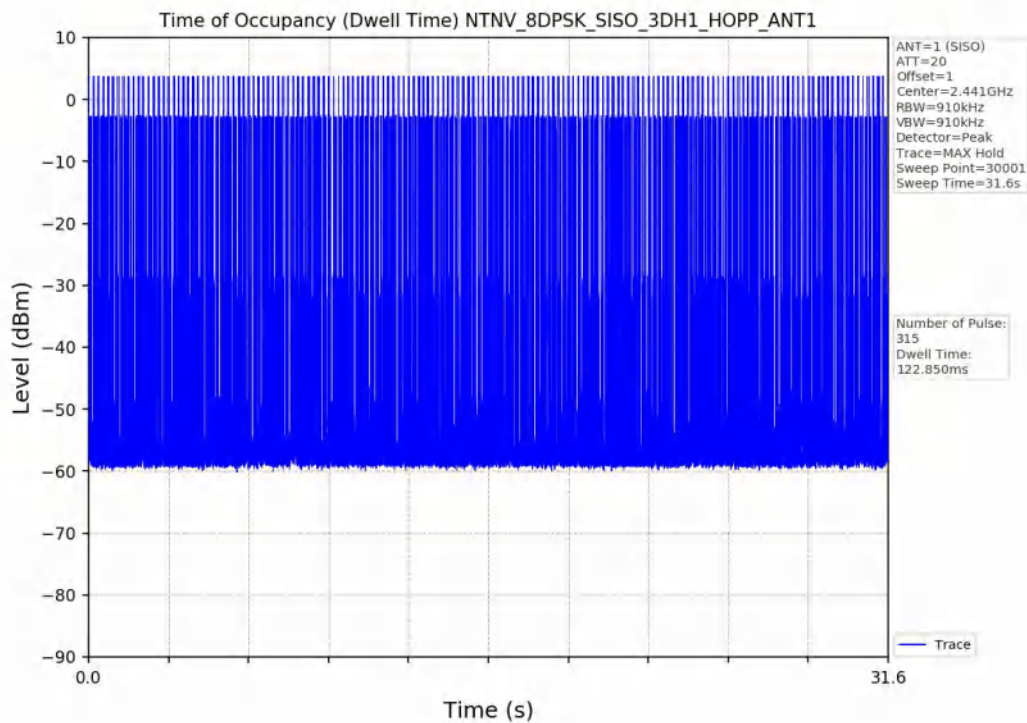


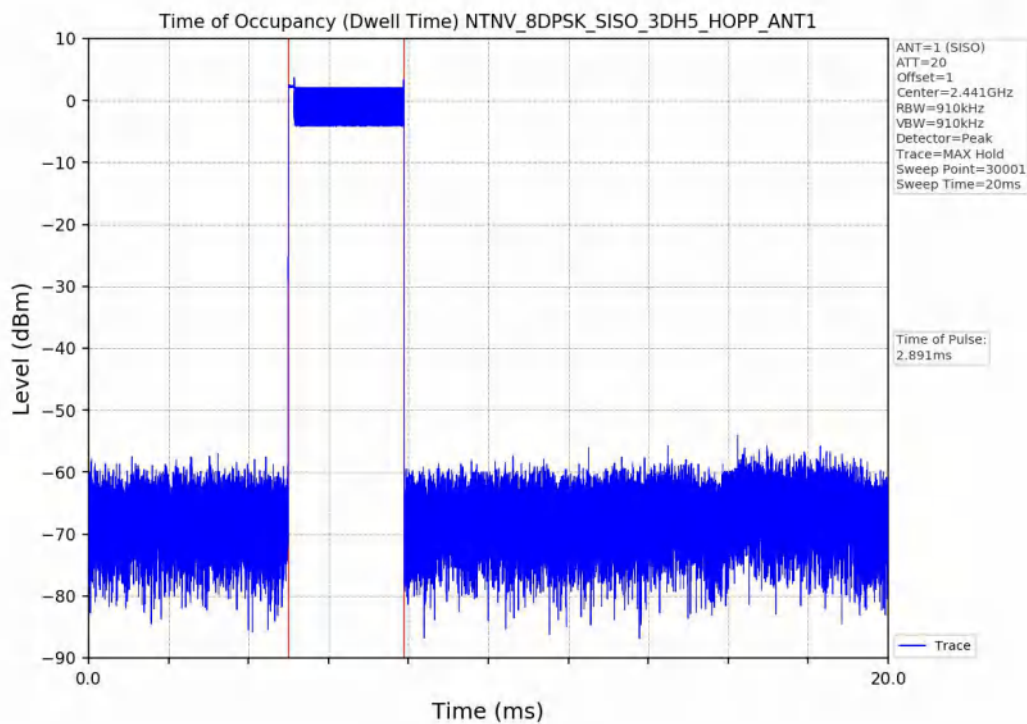
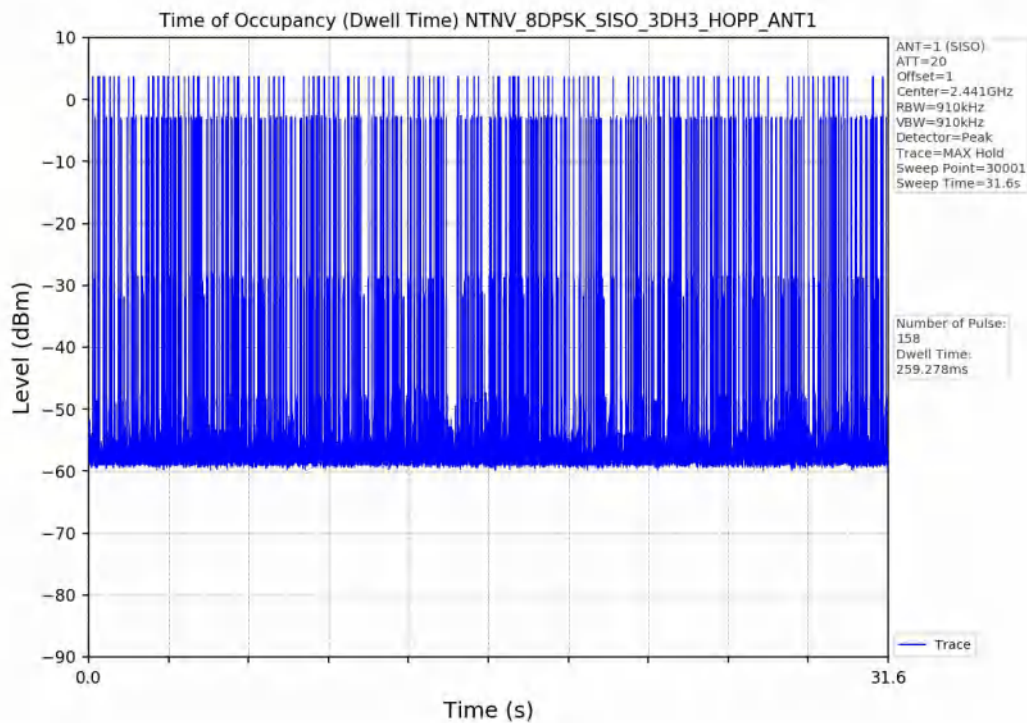


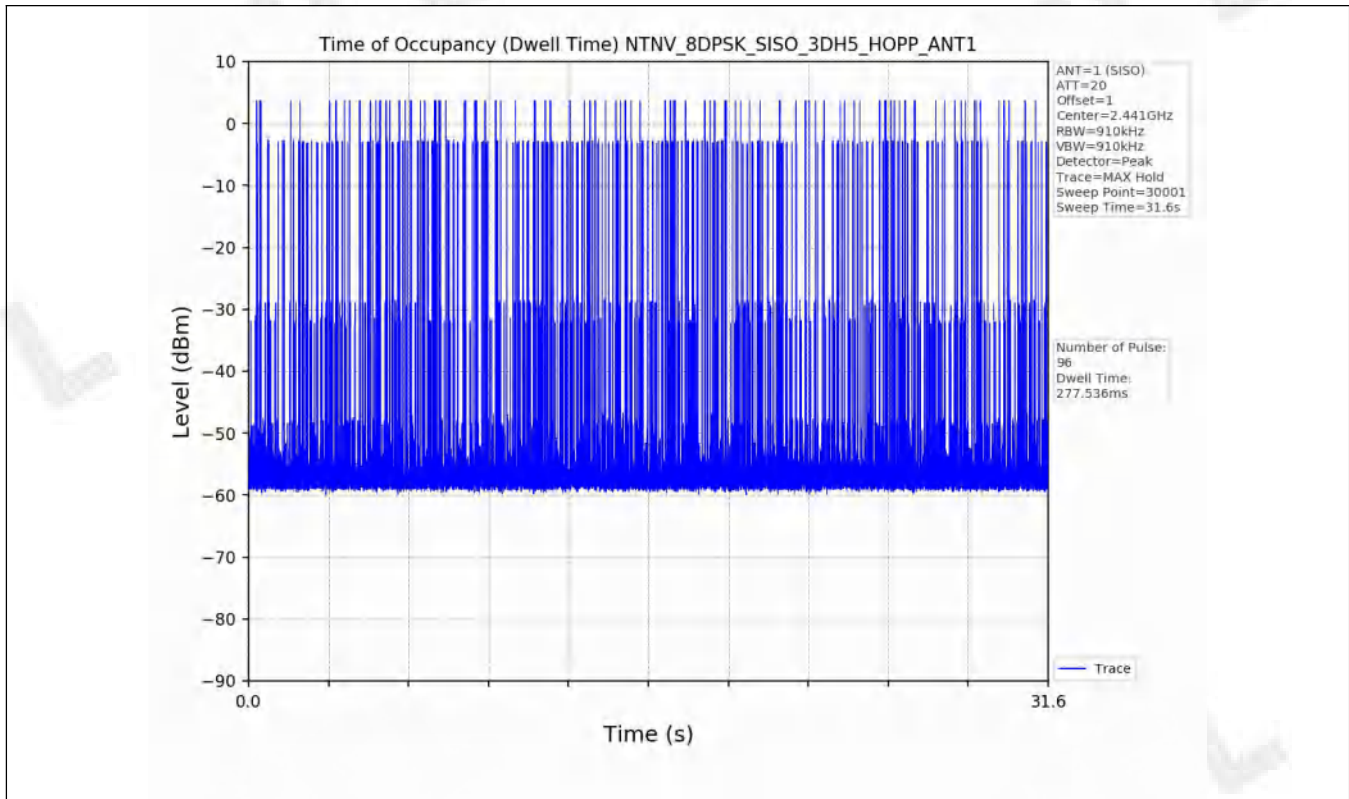












## 6. Unwanted Emissions in Non-restricted Frequency Bands

### 6.1 Test Result

| Test Mode | Frequency (MHz) | TX Type | ANT No. | Spurious Conducted Emission (dBm) | Limits (dBm) | Verdict |
|-----------|-----------------|---------|---------|-----------------------------------|--------------|---------|
| GFSK      | 2402            | SISO    | 1       | Refer to test graph               | -14.27       | PASS    |
|           | 2441            | SISO    | 1       | Refer to test graph               | -14.27       | PASS    |
|           | 2480            | SISO    | 1       | Refer to test graph               | -14.27       | PASS    |
|           | Hopping         | SISO    | 1       | Refer to test graph               | -14.27       | PASS    |
| Pi/4DQPSK | 2402            | SISO    | 1       | Refer to test graph               | -17.84       | PASS    |
|           | 2441            | SISO    | 1       | Refer to test graph               | -17.84       | PASS    |
|           | 2480            | SISO    | 1       | Refer to test graph               | -17.84       | PASS    |
|           | Hopping         | SISO    | 1       | Refer to test graph               | -17.84       | PASS    |
| 8DPSK     | 2402            | SISO    | 1       | Refer to test graph               | -17.71       | PASS    |
|           | 2441            | SISO    | 1       | Refer to test graph               | -17.71       | PASS    |
|           | 2480            | SISO    | 1       | Refer to test graph               | -17.71       | PASS    |

|  |         |      |   |                     |        |      |
|--|---------|------|---|---------------------|--------|------|
|  | Hopping | SISO | 1 | Refer to test graph | -17.71 | PASS |
|--|---------|------|---|---------------------|--------|------|

## 6.2 Test Graph

