

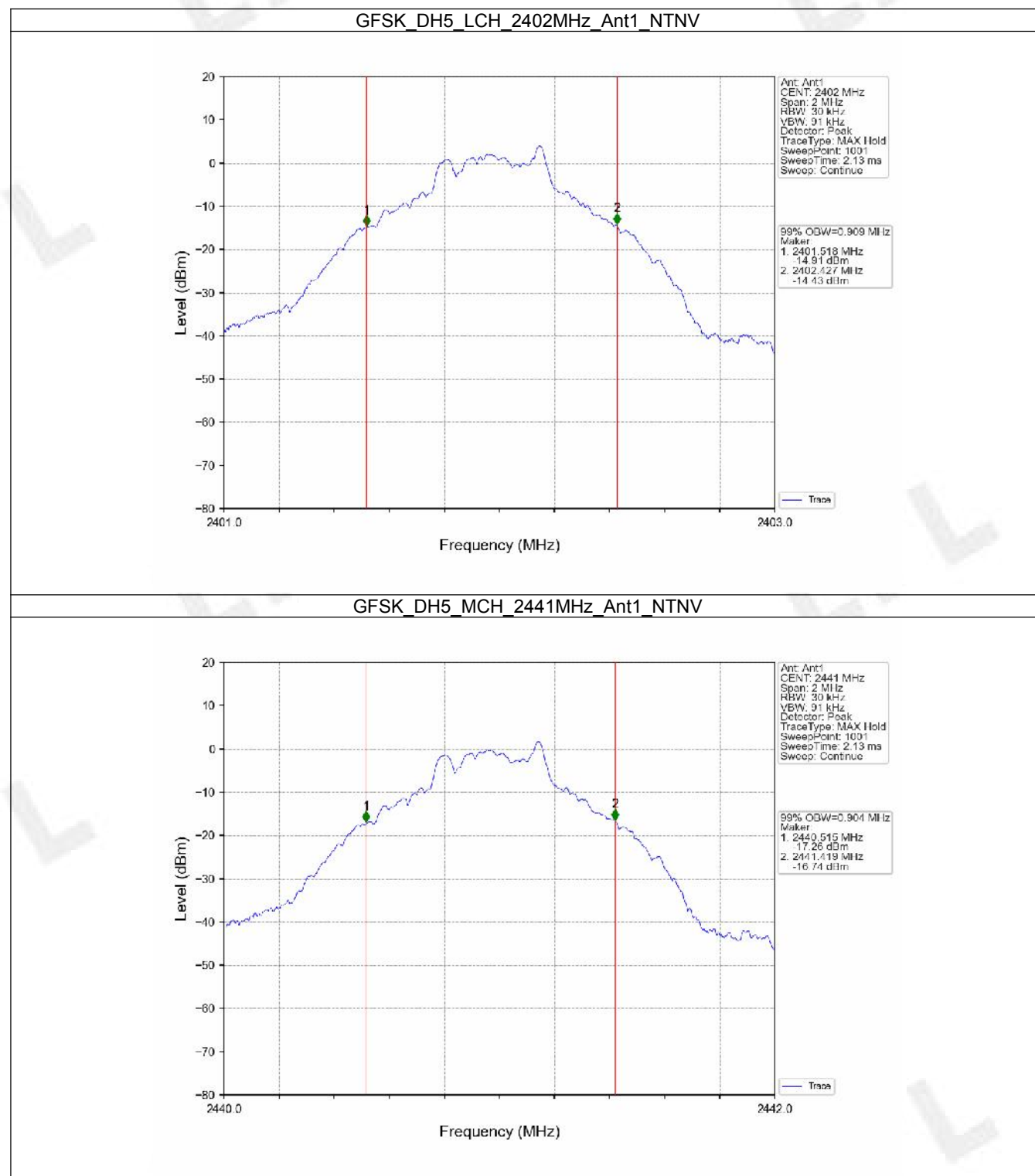
## 1. Bandwidth

## 1.1 OBW

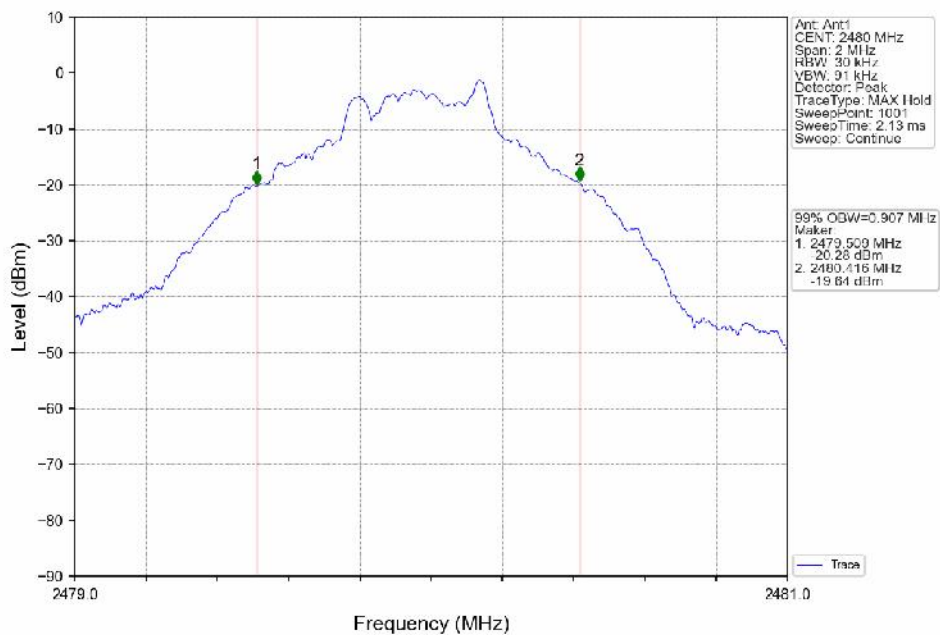
## 1.1.1 Test Result

| Mode      | TX Type | Frequency (MHz) | Packet Type | ANT | 99% Occupied Bandwidth (MHz) |       | Verdict |
|-----------|---------|-----------------|-------------|-----|------------------------------|-------|---------|
|           |         |                 |             |     | Result                       | Limit |         |
| GFSK      | SISO    | 2402            | DH5         | 1   | 0.909                        | /     | Pass    |
|           |         | 2441            | DH5         | 1   | 0.904                        | /     | Pass    |
|           |         | 2480            | DH5         | 1   | 0.907                        | /     | Pass    |
| Pi/4DQPSK | SISO    | 2402            | 2DH5        | 1   | 1.187                        | /     | Pass    |
|           |         | 2441            | 2DH5        | 1   | 1.186                        | /     | Pass    |
|           |         | 2480            | 2DH5        | 1   | 1.188                        | /     | Pass    |
| 8DPSK     | SISO    | 2402            | 3DH5        | 1   | 1.176                        | /     | Pass    |
|           |         | 2441            | 3DH5        | 1   | 1.176                        | /     | Pass    |
|           |         | 2480            | 3DH5        | 1   | 1.182                        | /     | Pass    |

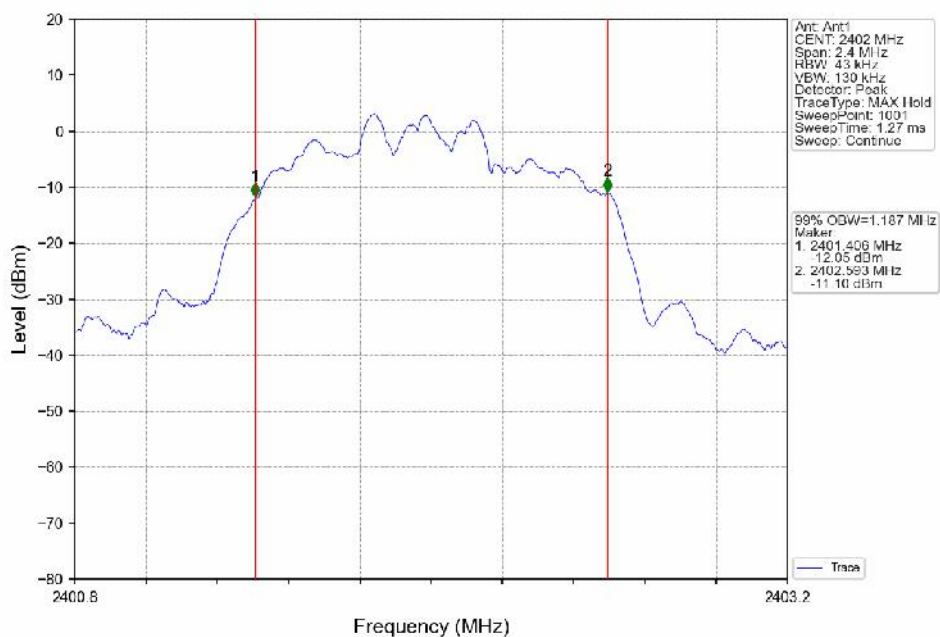
## 1.1.2 Test Graph



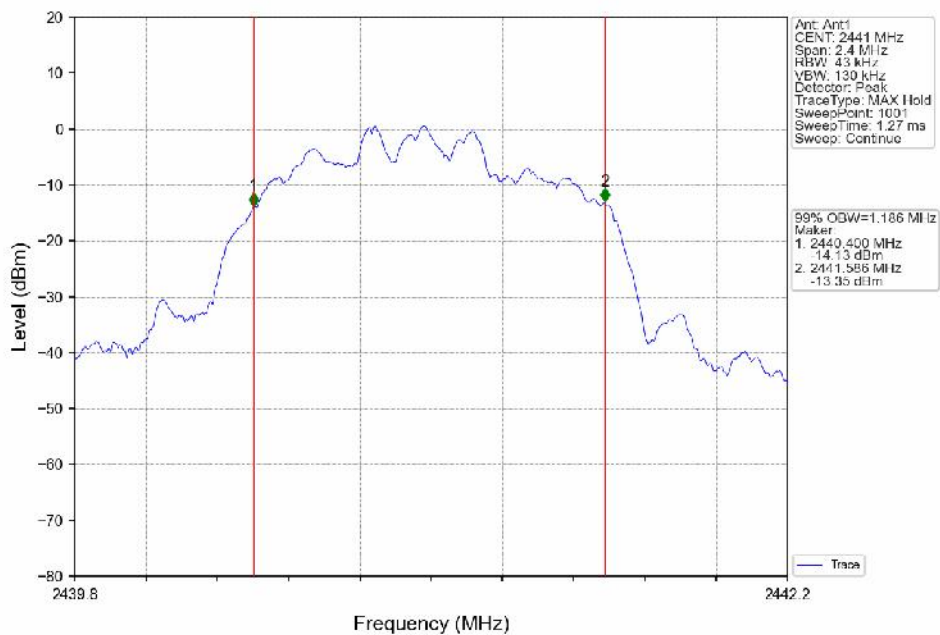
GFSK\_DH5\_HCH\_2480MHz\_Ant1\_NTNV



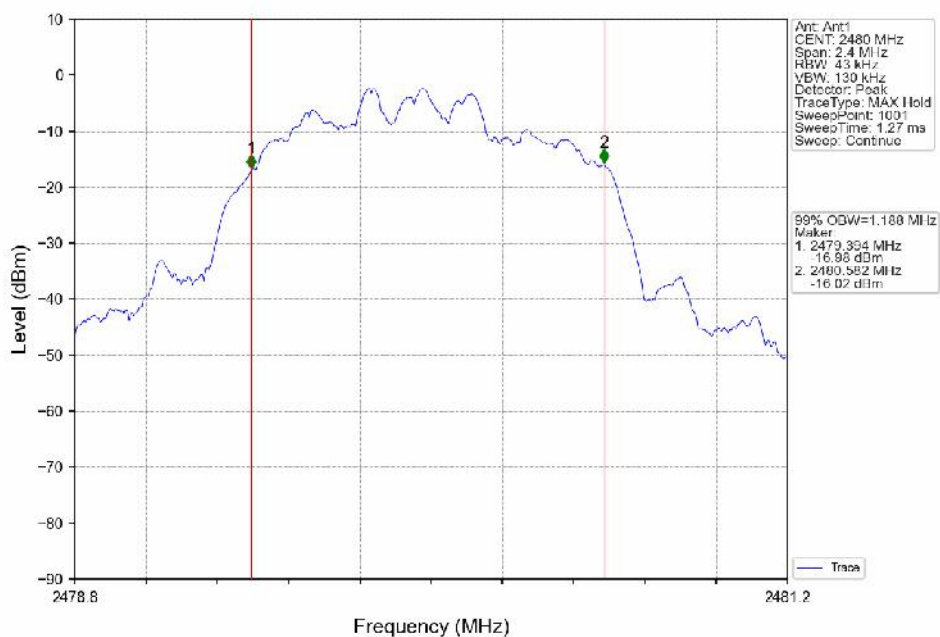
Pi/4DQPSK\_2DH5\_LCH\_2402MHz\_Ant1\_NTNV



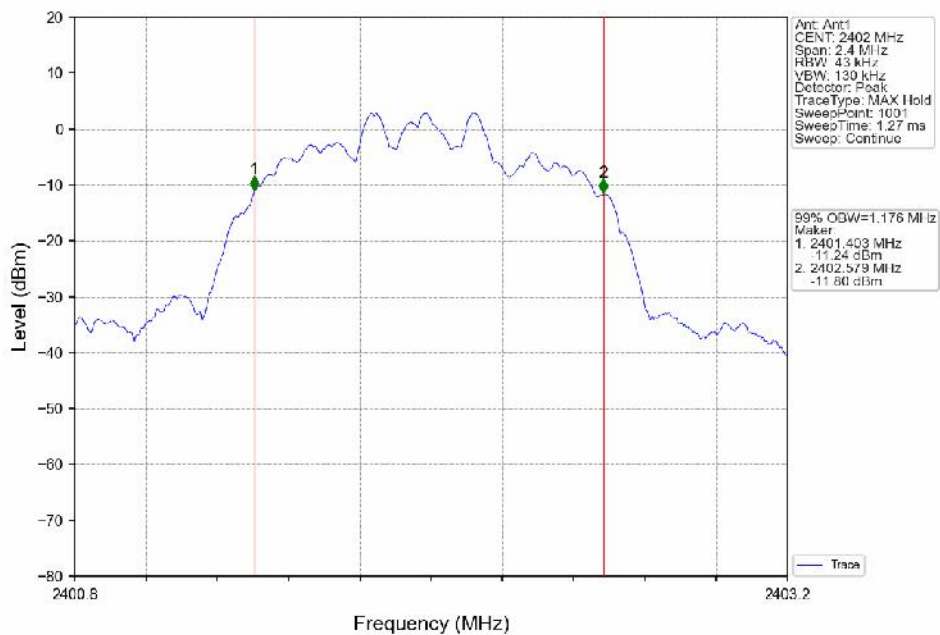
Pi/4DQPSK\_2DH5\_MCH\_2441MHz\_Ant1\_NTNV



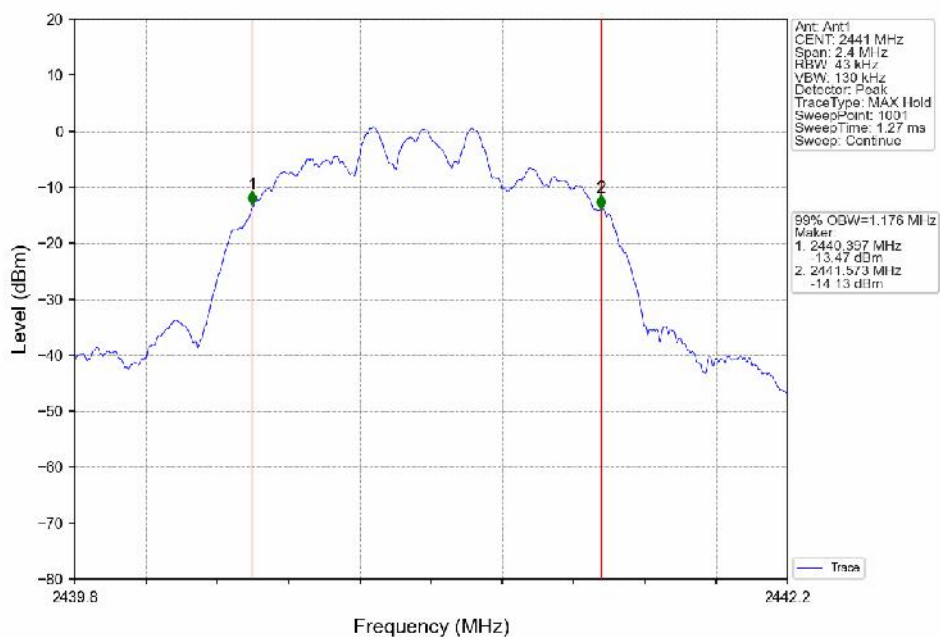
Pi/4DQPSK\_2DH5\_HCH\_2480MHz\_Ant1\_NTNV

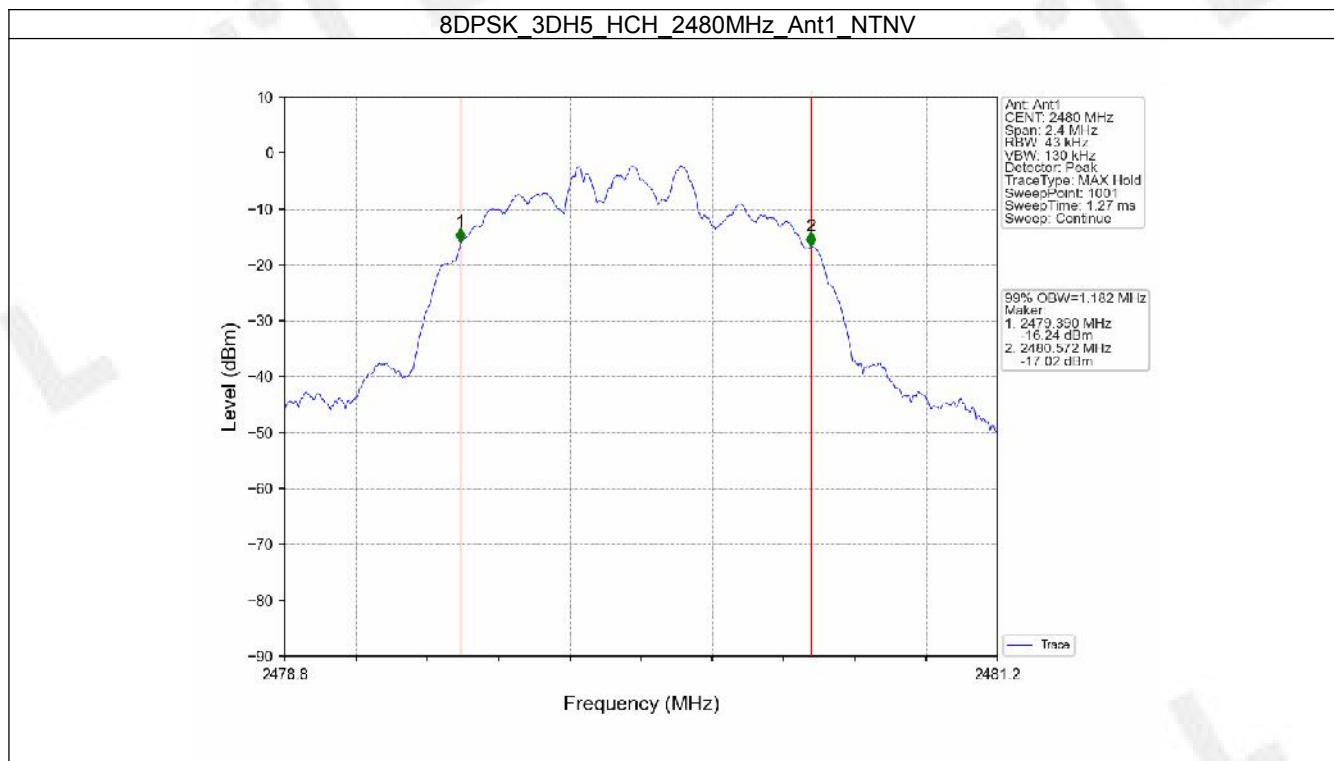


8DPSK\_3DH5\_LCH\_2402MHz\_Ant1\_NTNV



8DPSK\_3DH5\_MCH\_2441MHz\_Ant1\_NTNV



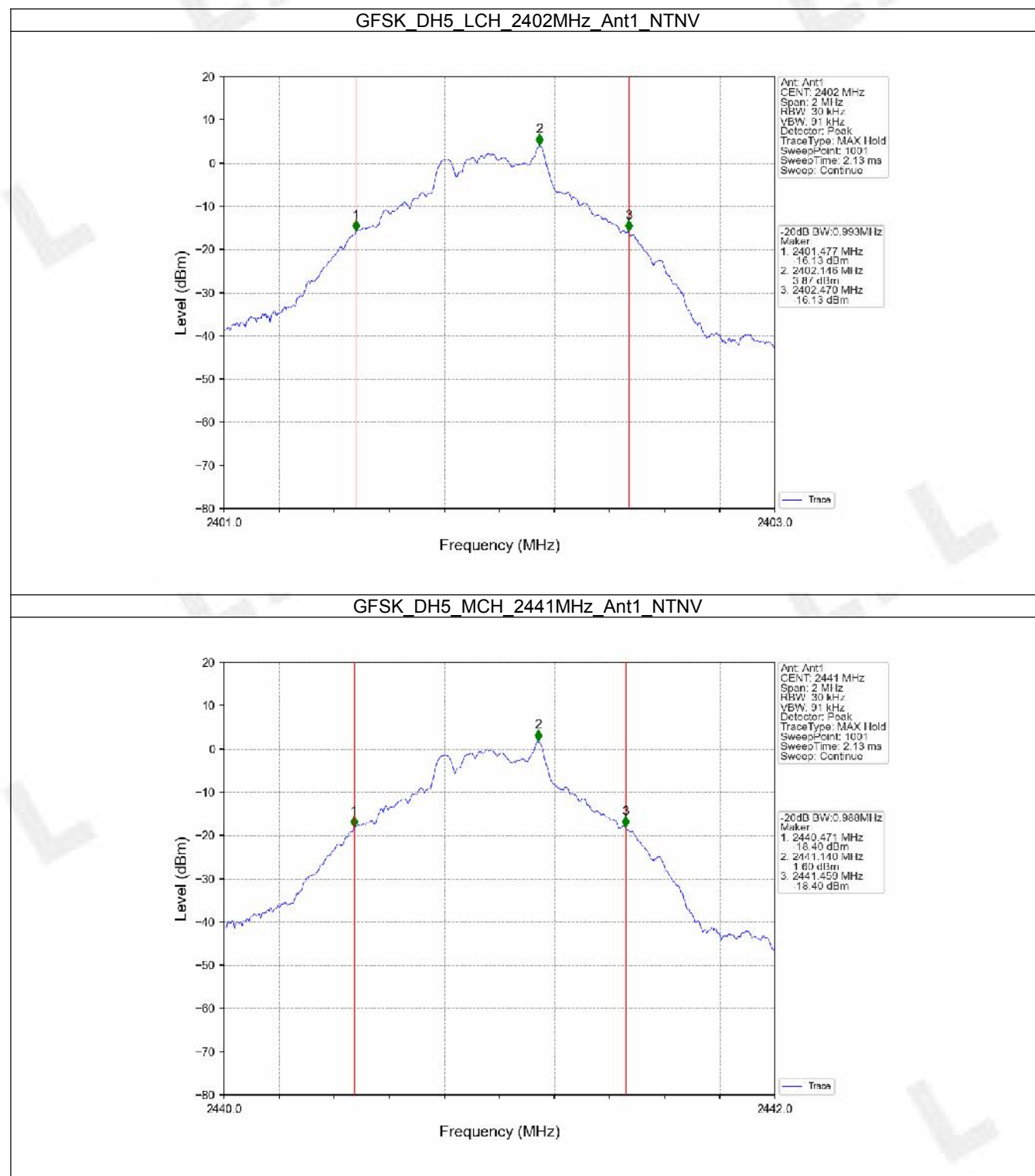


## 1.2 20dB BW

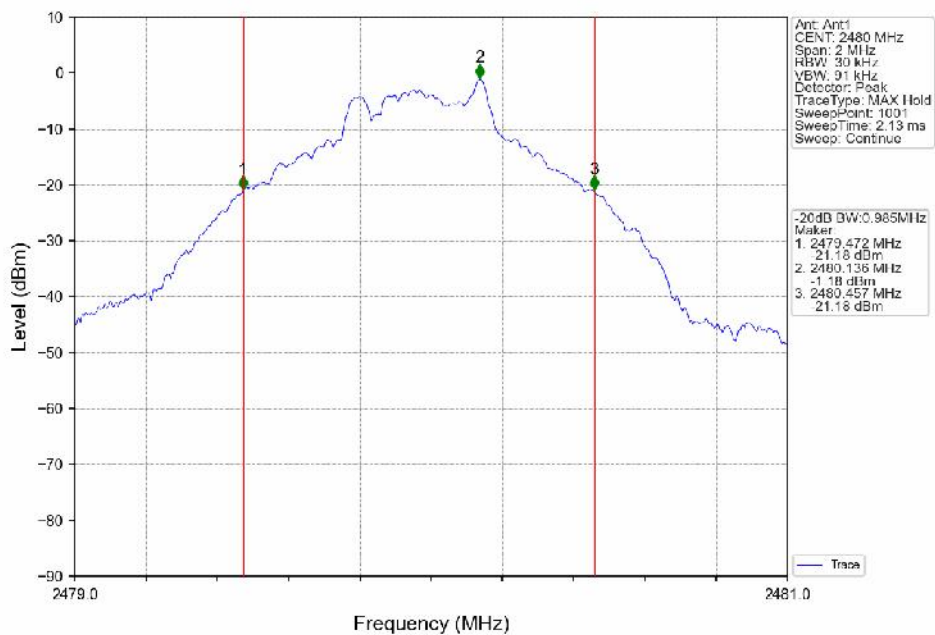
## 1.2.1 Test Result

| Mode      | TX Type | Frequency (MHz) | Packet Type | ANT | 20dB Bandwidth (MHz) |       | Verdict |
|-----------|---------|-----------------|-------------|-----|----------------------|-------|---------|
|           |         |                 |             |     | Result               | Limit |         |
| GFSK      | SISO    | 2402            | DH5         | 1   | 0.993                | /     | Pass    |
|           |         | 2441            | DH5         | 1   | 0.988                | /     | Pass    |
|           |         | 2480            | DH5         | 1   | 0.985                | /     | Pass    |
| Pi/4DQPSK | SISO    | 2402            | 2DH5        | 1   | 1.306                | /     | Pass    |
|           |         | 2441            | 2DH5        | 1   | 1.311                | /     | Pass    |
|           |         | 2480            | 2DH5        | 1   | 1.321                | /     | Pass    |
| 8DPSK     | SISO    | 2402            | 3DH5        | 1   | 1.308                | /     | Pass    |
|           |         | 2441            | 3DH5        | 1   | 1.312                | /     | Pass    |
|           |         | 2480            | 3DH5        | 1   | 1.311                | /     | Pass    |

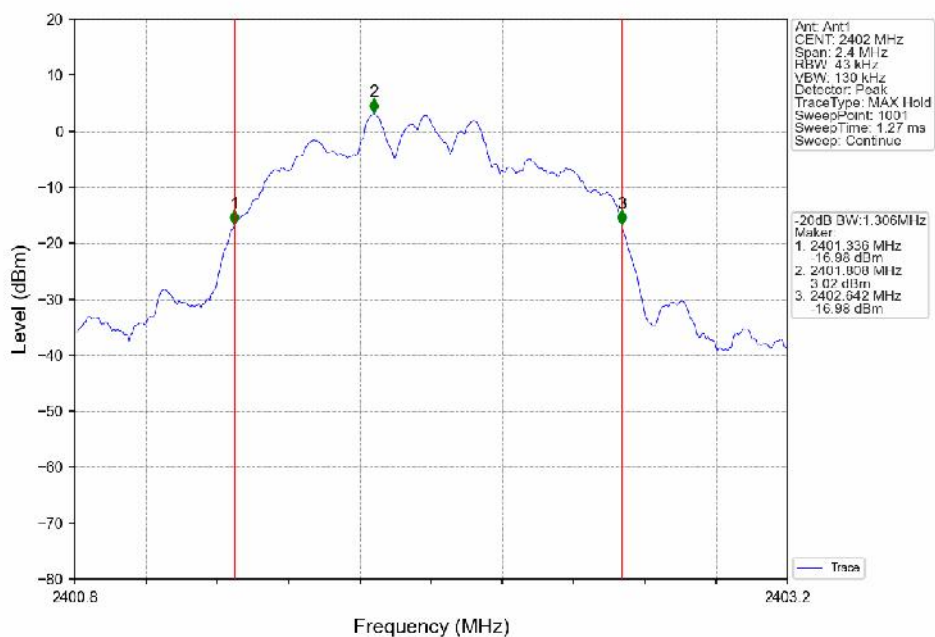
## 1.2.2 Test Graph



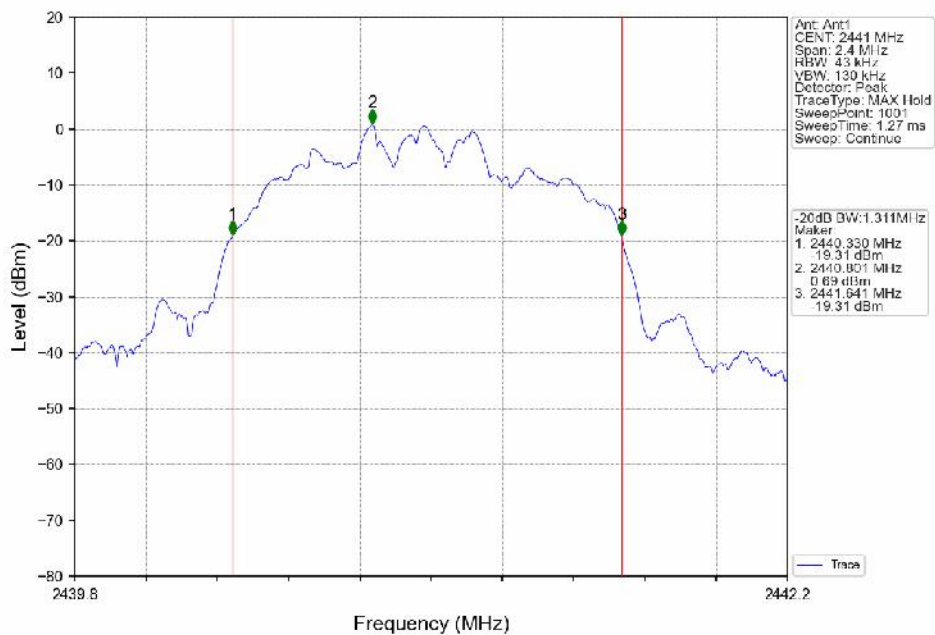
GFSK\_DH5\_HCH\_2480MHz\_Ant1\_NTNV



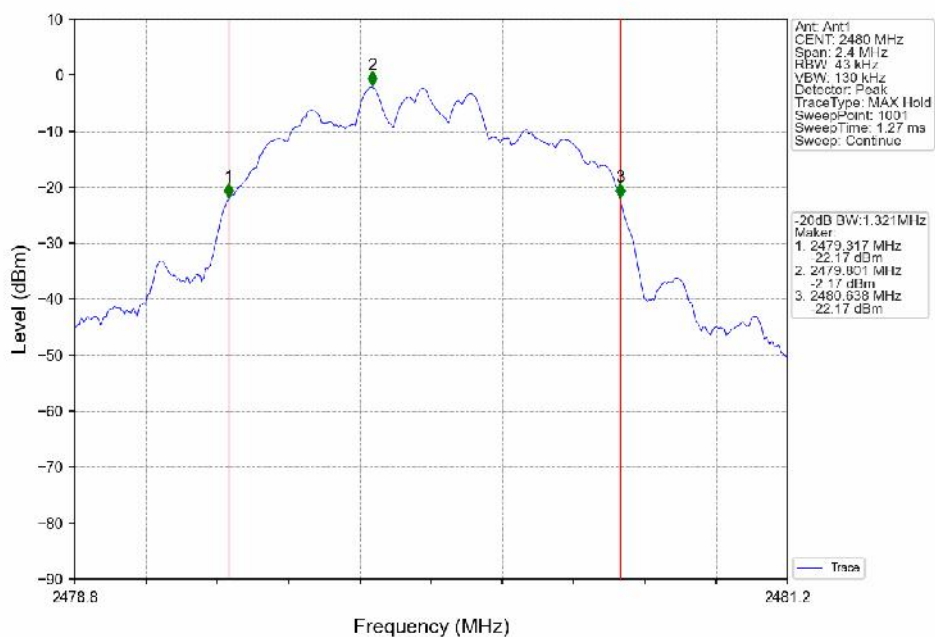
Pi/4DQPSK\_2DH5\_LCH\_2402MHz\_Ant1\_NTNV



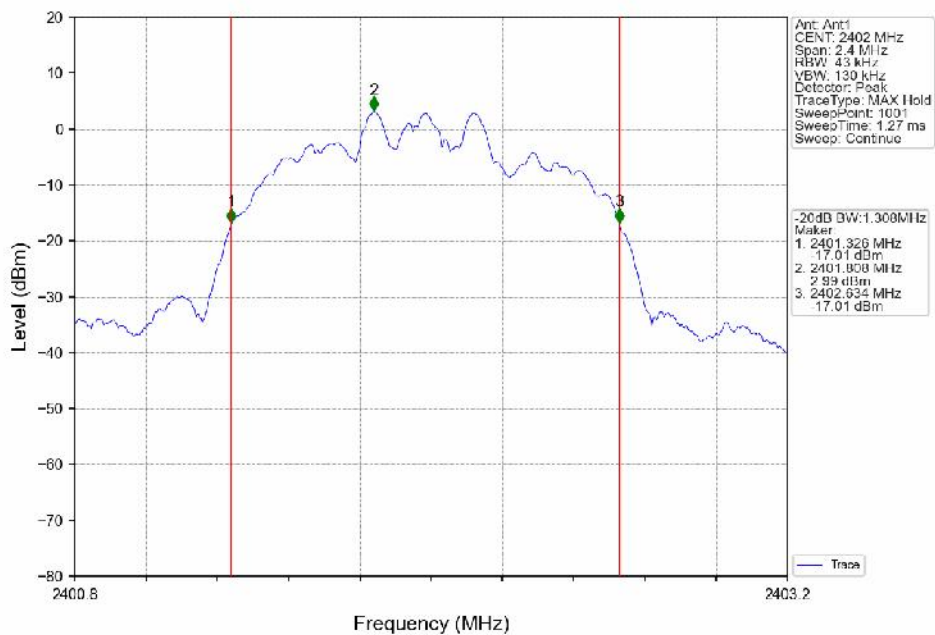
Pi/4DQPSK\_2DH5\_MCH\_2441MHz\_Ant1\_NTNV



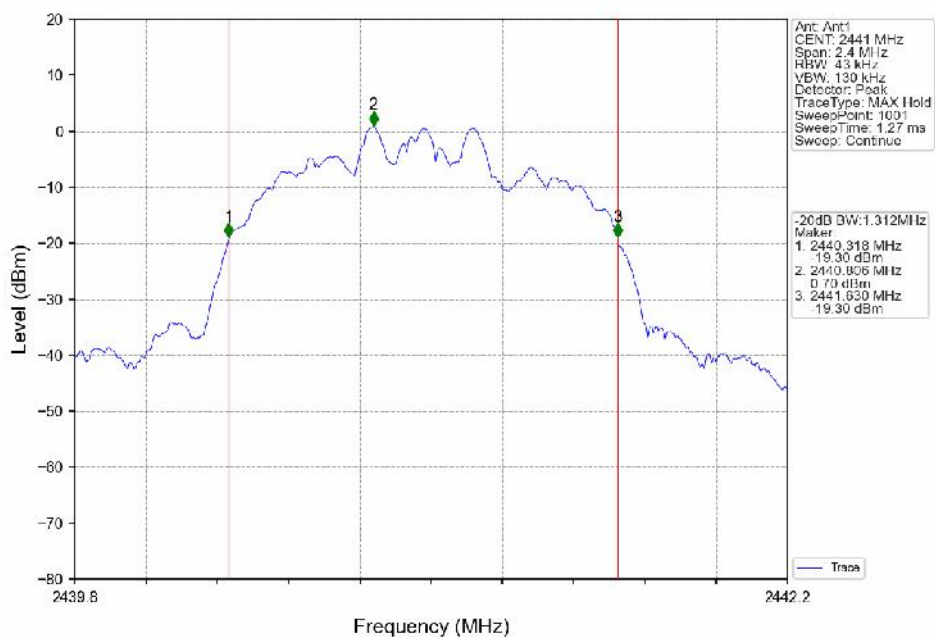
Pi/4DQPSK\_2DH5\_HCH\_2480MHz\_Ant1\_NTNV

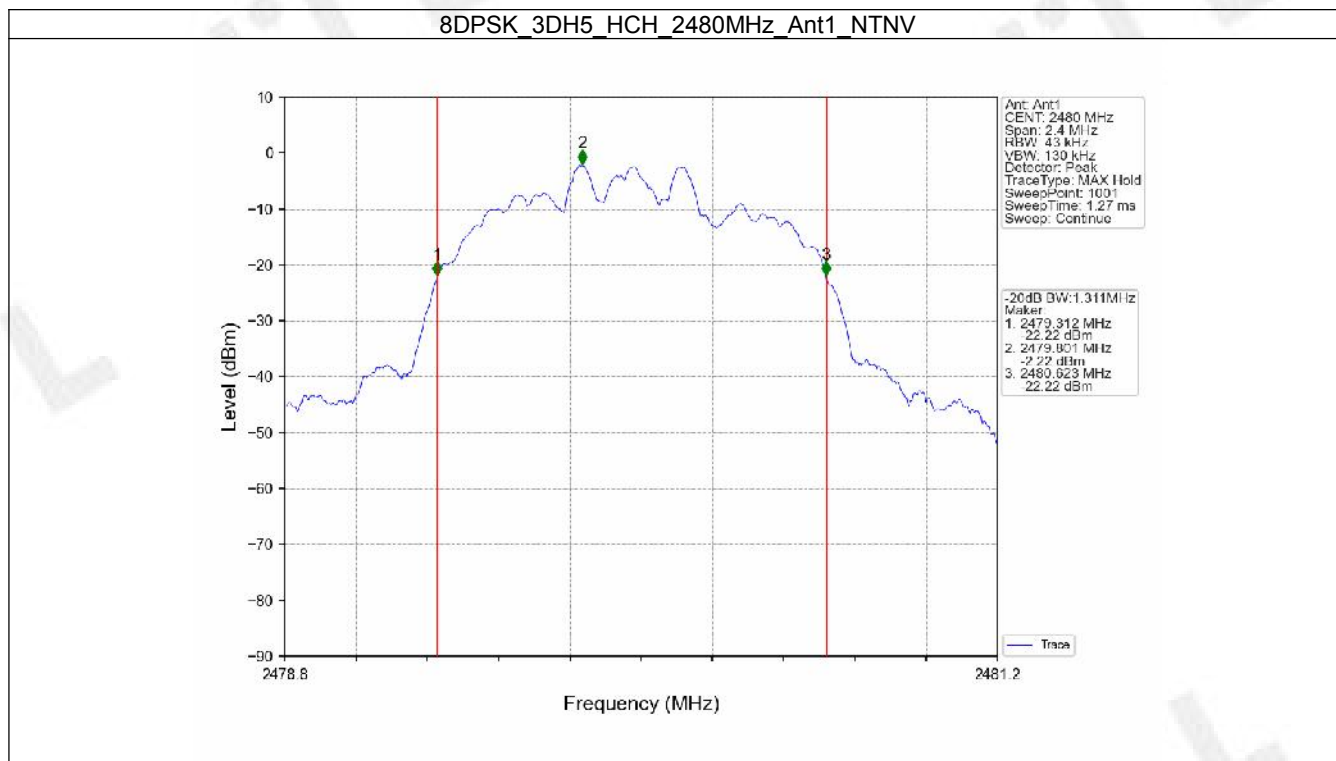


8DPSK\_3DH5\_LCH\_2402MHz\_Ant1\_NTNV



8DPSK\_3DH5\_MCH\_2441MHz\_Ant1\_NTNV





## 2. Maximum Conducted Output Power

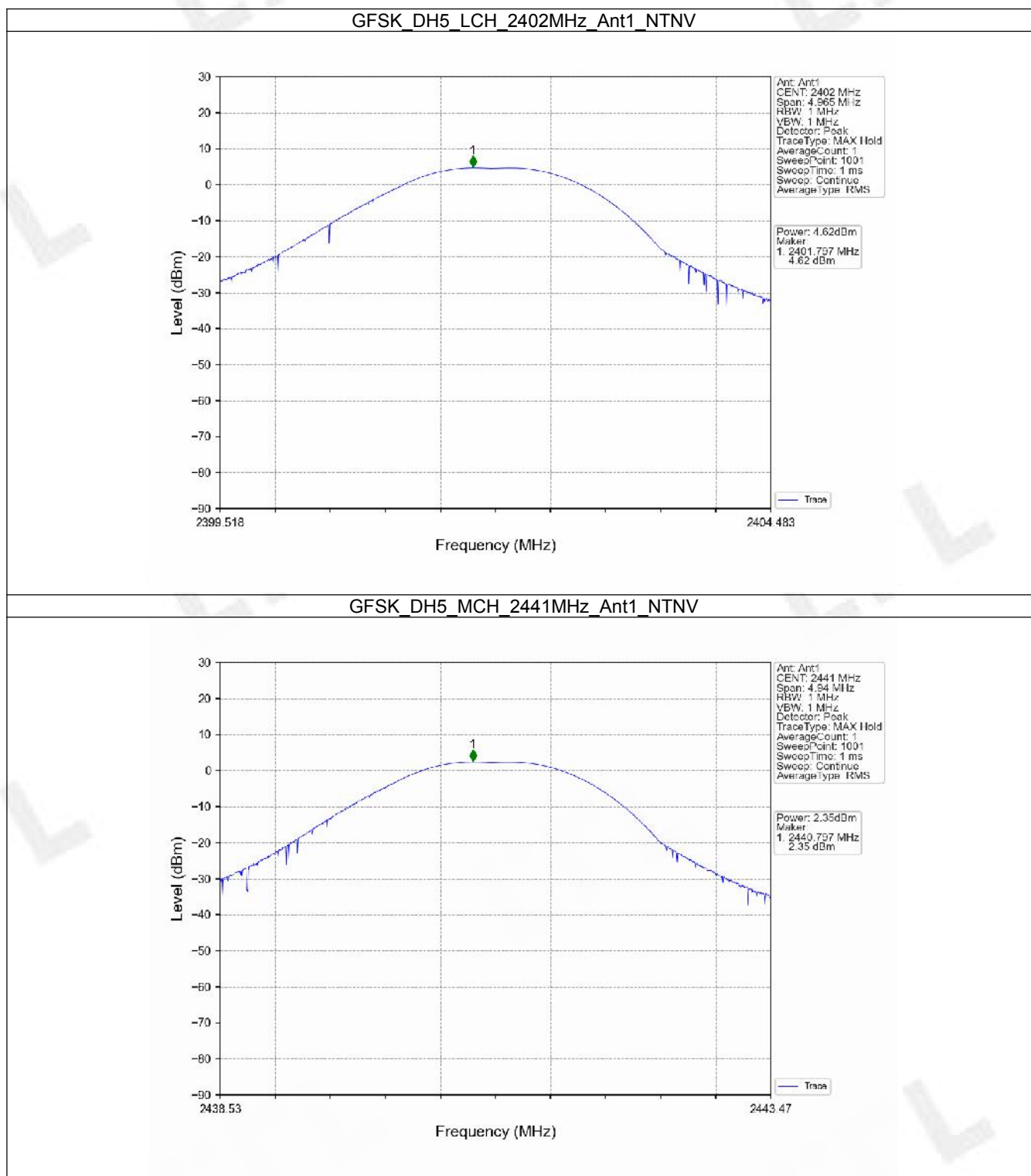
### 2.1 Power

#### 2.1.1 Test Result

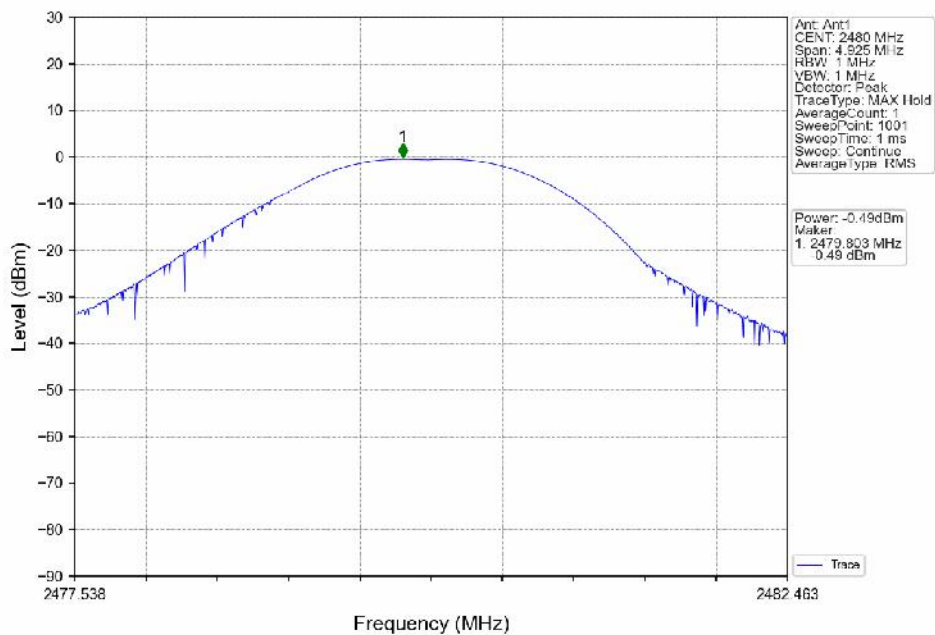
| Mode      | TX Type | Frequency (MHz) | Packet Type | Maximum Peak Conducted Output Power (dBm) |         | Verdict |
|-----------|---------|-----------------|-------------|-------------------------------------------|---------|---------|
|           |         |                 |             | ANT1                                      | Limit   |         |
| GFSK      | SISO    | 2402            | DH5         | 4.62                                      | <=20.97 | Pass    |
|           |         | 2441            | DH5         | 2.35                                      | <=20.97 | Pass    |
|           |         | 2480            | DH5         | -0.49                                     | <=20.97 | Pass    |
| Pi/4DQPSK | SISO    | 2402            | 2DH5        | 4.75                                      | <=20.97 | Pass    |
|           |         | 2441            | 2DH5        | 2.42                                      | <=20.97 | Pass    |
|           |         | 2480            | 2DH5        | -0.45                                     | <=20.97 | Pass    |
| 8DPSK     | SISO    | 2402            | 3DH5        | 4.72                                      | <=20.97 | Pass    |
|           |         | 2441            | 3DH5        | 2.41                                      | <=20.97 | Pass    |
|           |         | 2480            | 3DH5        | -0.47                                     | <=20.97 | Pass    |

Note1: Antenna Gain: Ant1: 3.38dBi;

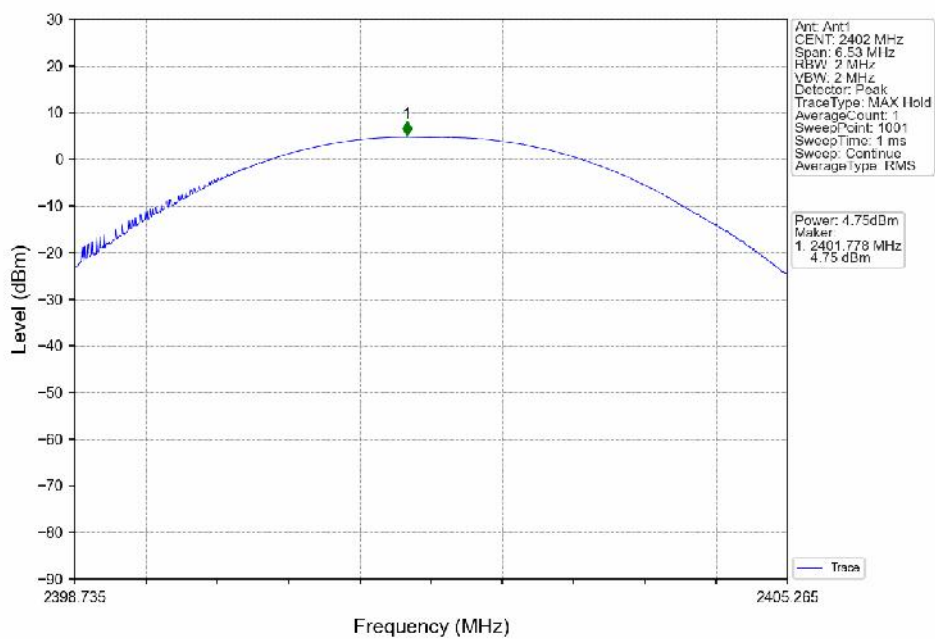
## 2.1.2 Test Graph



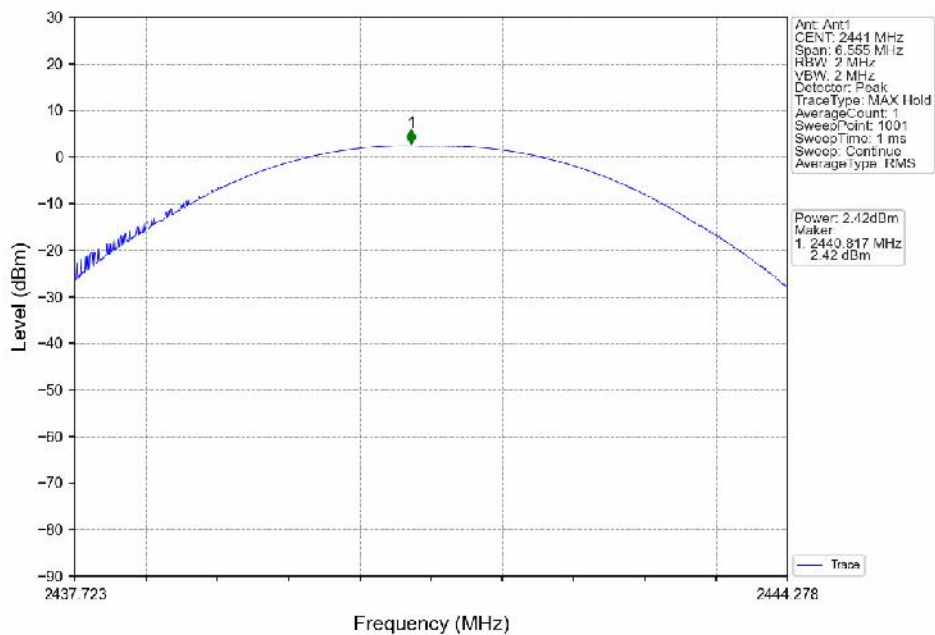
GFSK DH5\_HCH\_2480MHz\_Ant1\_NTNV



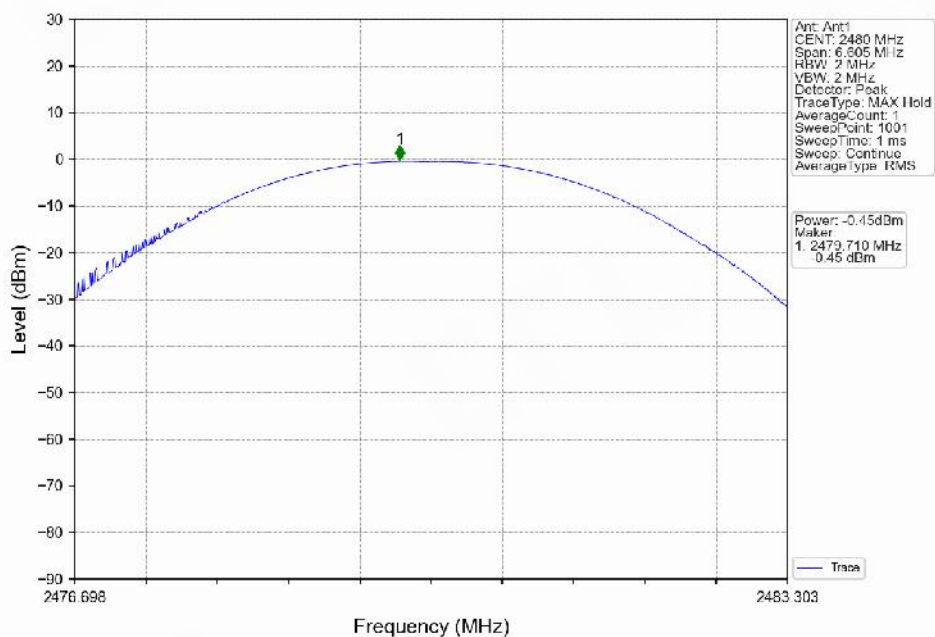
Pi/4DQPSK\_2DH5\_LCH\_2402MHz\_Ant1\_NTNV



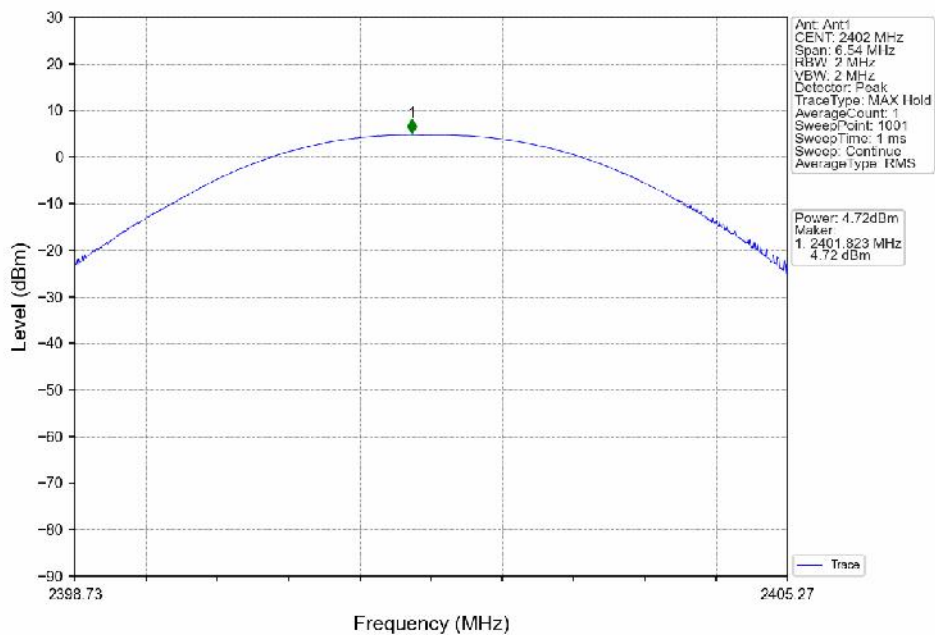
Pi/4DQPSK\_2DH5\_MCH\_2441MHz\_Ant1\_NTNV



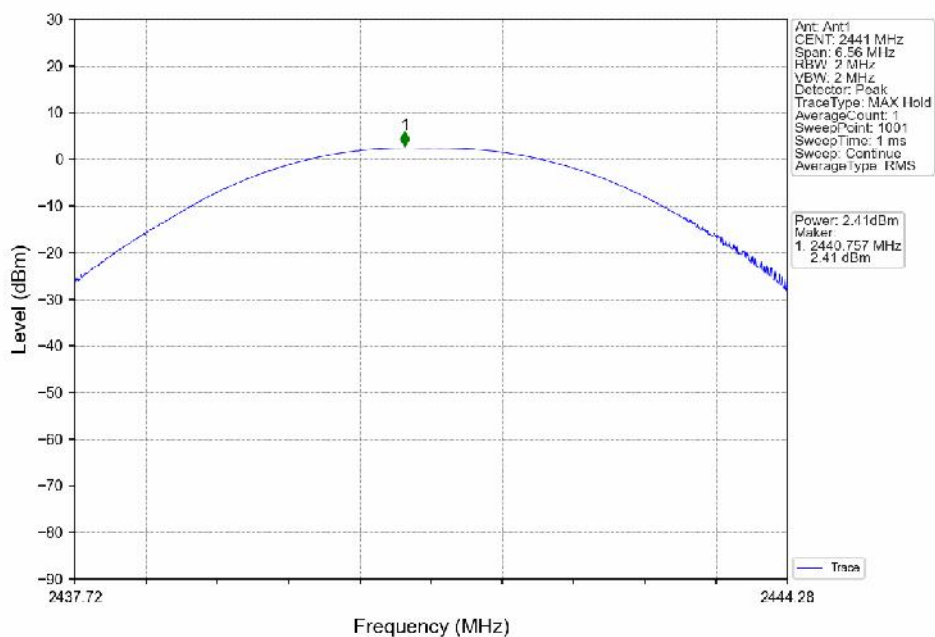
Pi/4DQPSK\_2DH5\_HCH\_2480MHz\_Ant1\_NTNV

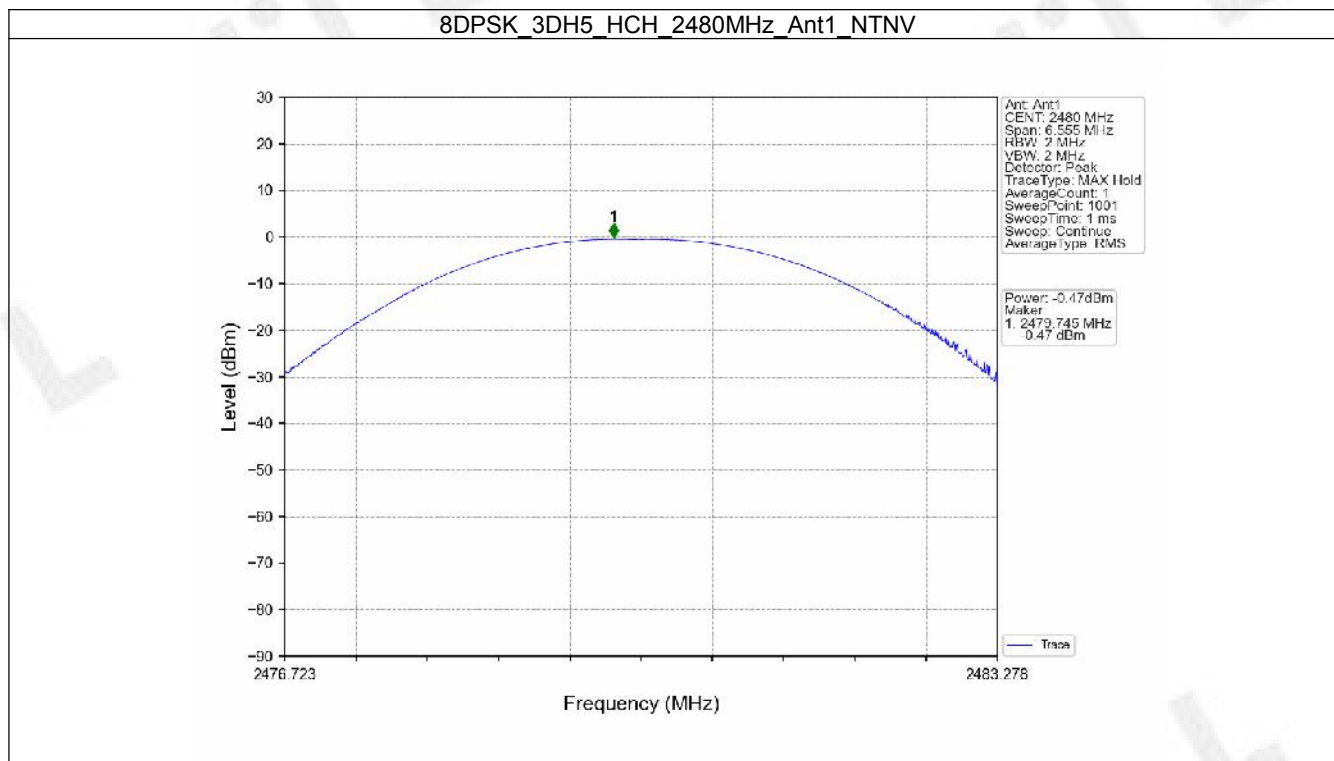


8DPSK\_3DH5\_LCH\_2402MHz\_Ant1\_NTNV



8DPSK\_3DH5\_MCH\_2441MHz\_Ant1\_NTNV





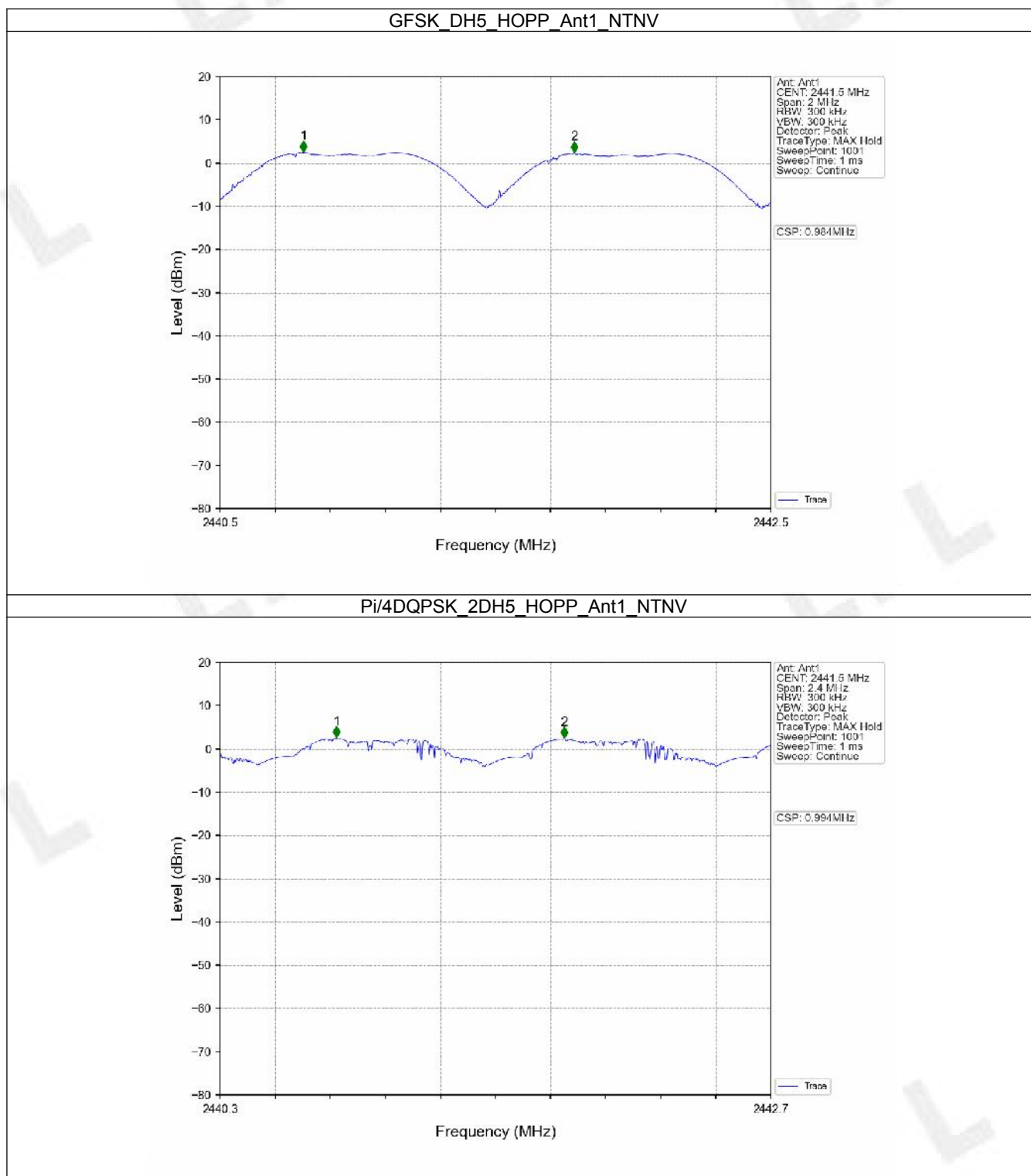
### 3. Carrier Frequency Separation

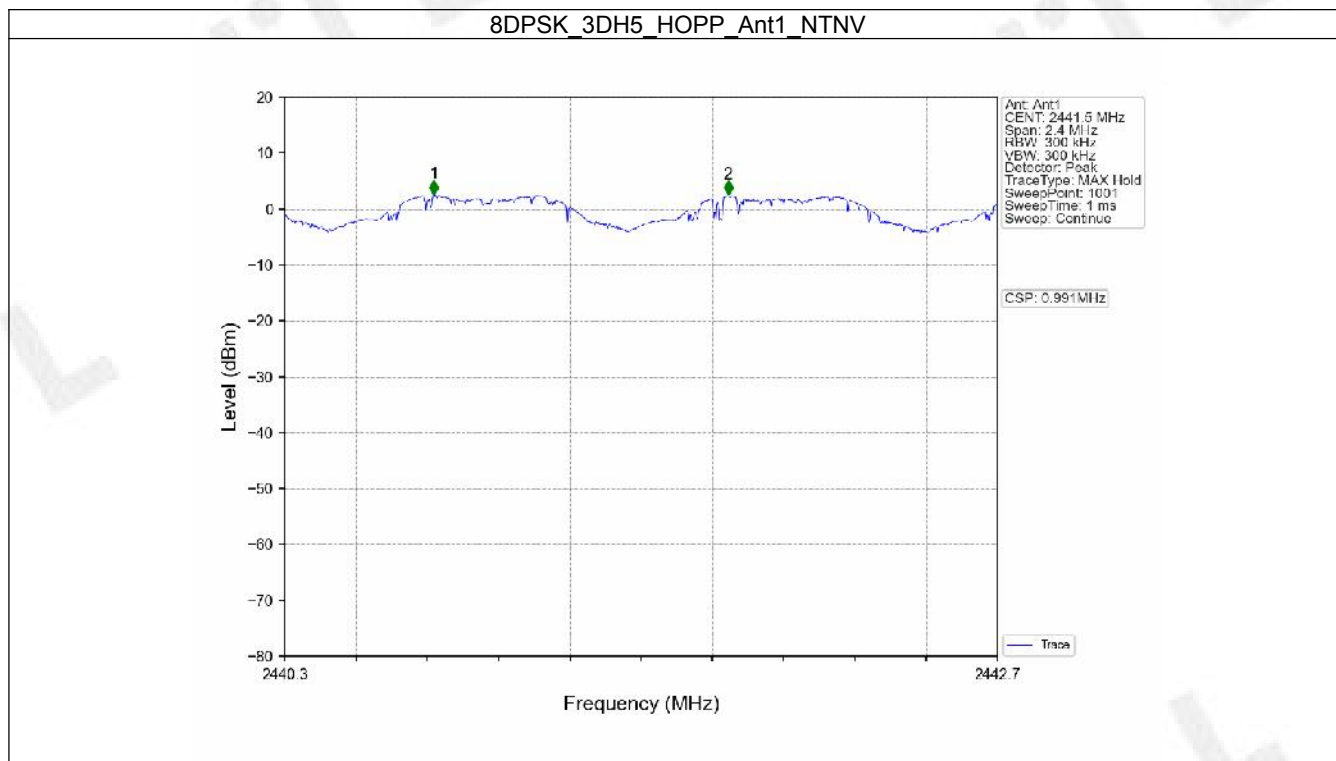
#### 3.1 Ant1

##### 3.1.1 Test Result

| Ant1      |         |                 |             |                          |                      |              |         |
|-----------|---------|-----------------|-------------|--------------------------|----------------------|--------------|---------|
| Mode      | TX Type | Frequency (MHz) | Packet Type | Channel Separation (MHz) | 20dB Bandwidth (MHz) | Limit (MHz)  | Verdict |
| GFSK      | SISO    | HOPP            | DH5         | 0.984                    | 0.993                | $\geq 0.662$ | Pass    |
| Pi/4DQPSK | SISO    | HOPP            | 2DH5        | 0.994                    | 1.321                | $\geq 0.881$ | Pass    |
| 8DPSK     | SISO    | HOPP            | 3DH5        | 0.991                    | 1.312                | $\geq 0.875$ | Pass    |

## 3.1.2 Test Graph





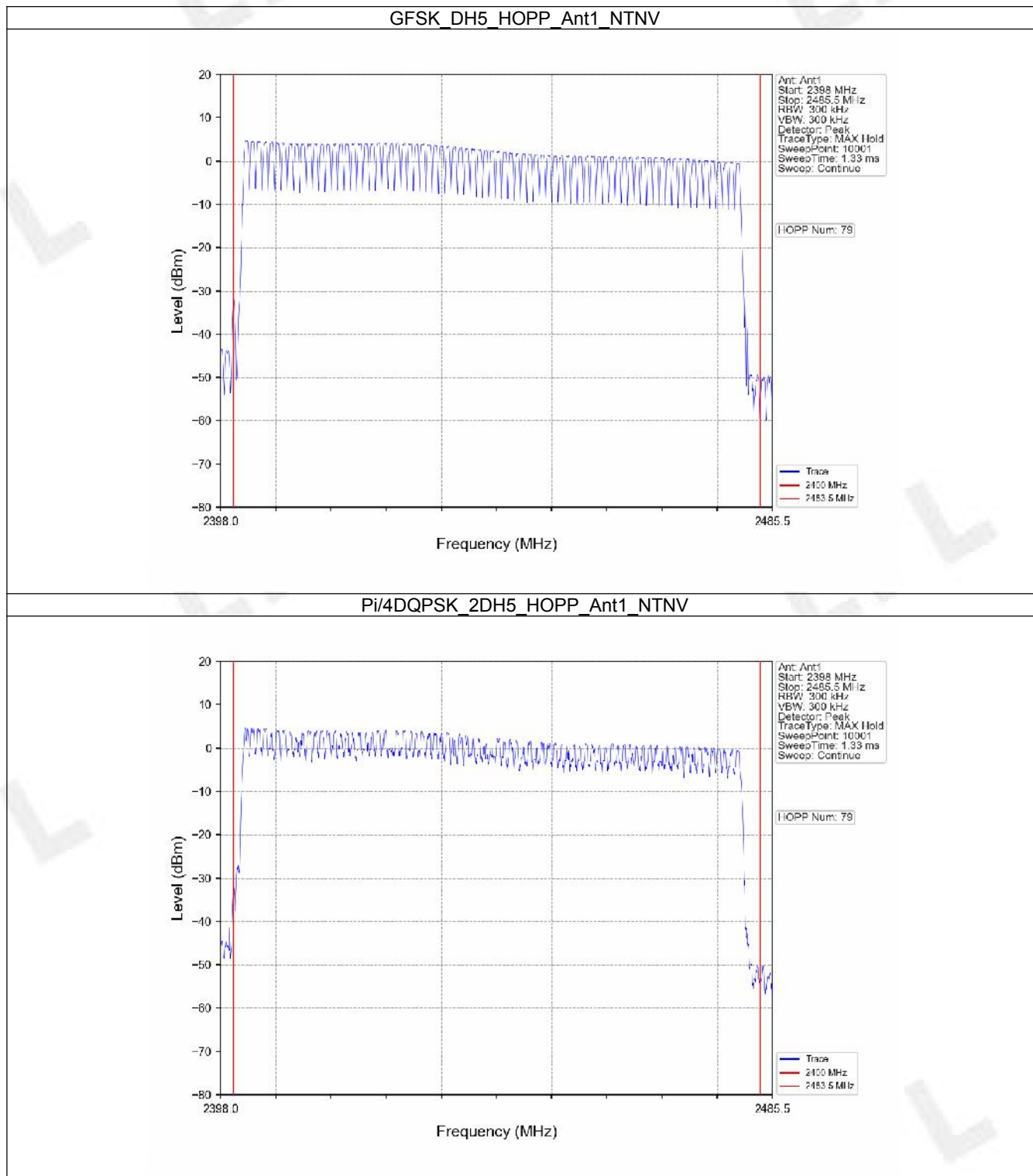
## 4. Number of Hopping Frequencies

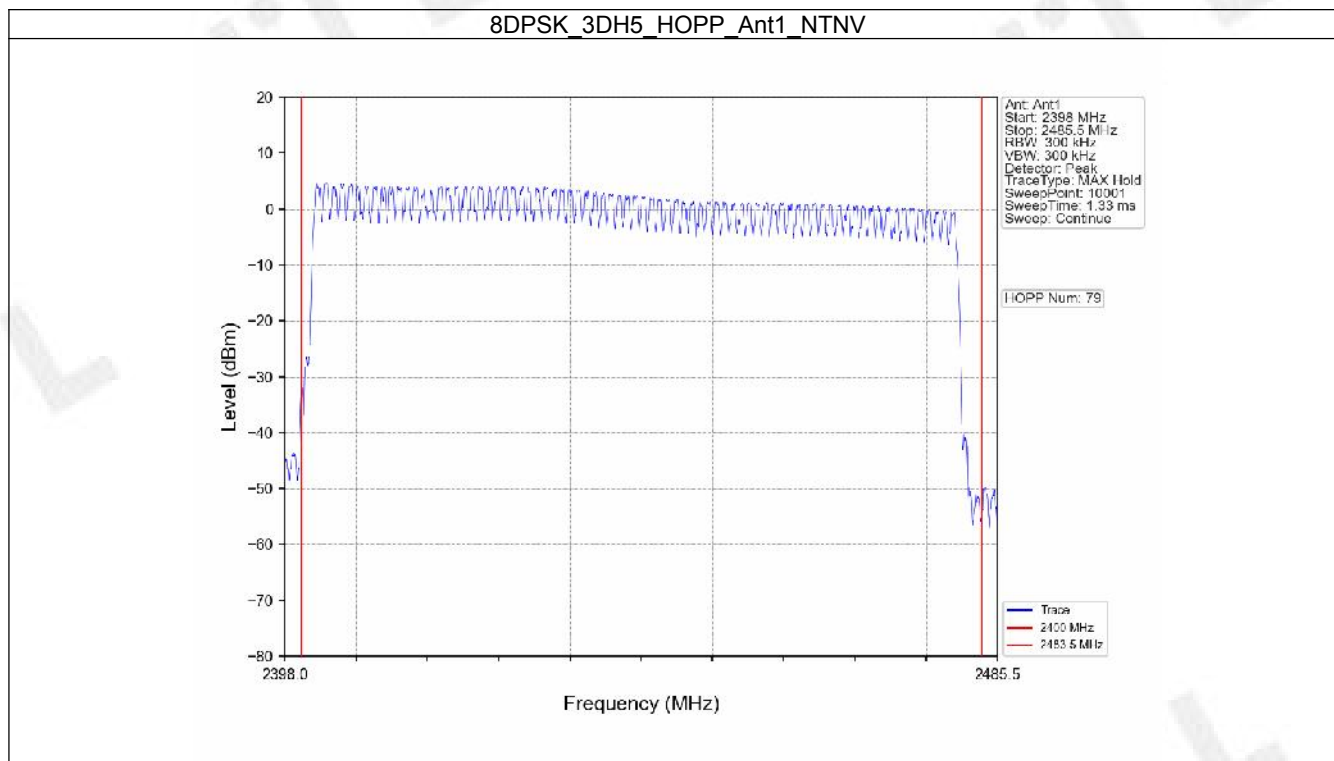
### 4.1 HoppNum

#### 4.1.1 Test Result

| Mode      | TX Type | Frequency (MHz) | Packet Type | Num of Hopping Frequencies |           | Verdict |
|-----------|---------|-----------------|-------------|----------------------------|-----------|---------|
|           |         |                 |             | ANT1                       | Limit     |         |
| GFSK      | SISO    | HOPP            | DH5         | 79                         | $\geq 15$ | Pass    |
| Pi/4DQPSK | SISO    | HOPP            | 2DH5        | 79                         | $\geq 15$ | Pass    |
| 8DPSK     | SISO    | HOPP            | 3DH5        | 79                         | $\geq 15$ | Pass    |

## 4.1.2 Test Graph





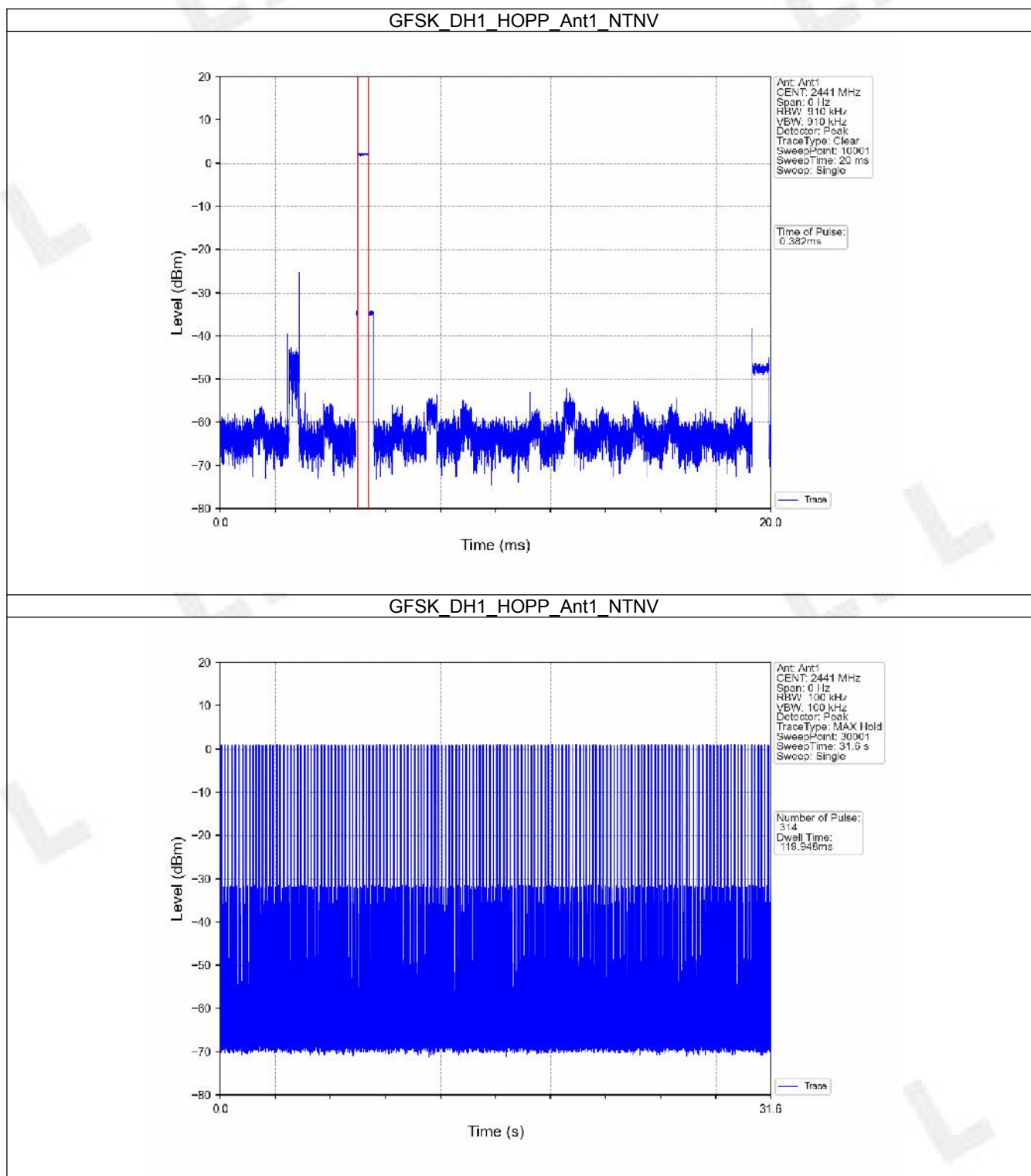
## 5. Time of Occupancy (Dwell Time)

### 5.1 Ant1

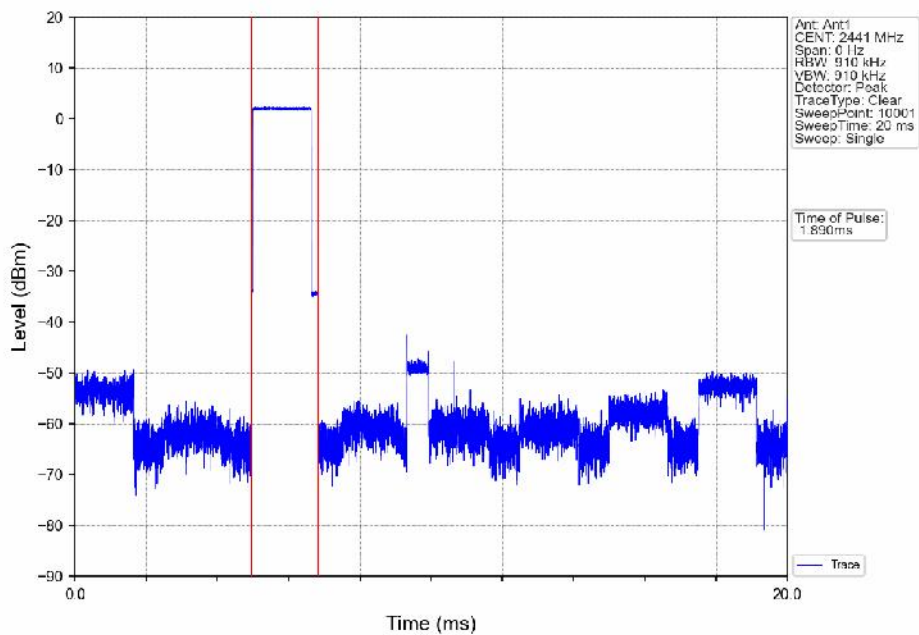
#### 5.1.1 Test Result

| Ant1      |         |                 |             |                               |                        |                                    |                 |            |         |
|-----------|---------|-----------------|-------------|-------------------------------|------------------------|------------------------------------|-----------------|------------|---------|
| Mode      | TX Type | Frequency (MHz) | Packet Type | Duration of Single Pulse (ms) | Observation Period (s) | Num of Pulse in Observation Period | Dwell Time (ms) | Limit (ms) | Verdict |
| GFSK      | SISO    | HOPP            | DH1         | 0.382                         | 31.600                 | 314                                | 119.948         | <=400      | Pass    |
|           |         |                 | DH3         | 1.890                         | 31.600                 | 173                                | 326.970         | <=400      | Pass    |
|           |         |                 | DH5         | 3.140                         | 31.600                 | 102                                | 320.280         | <=400      | Pass    |
| Pi/4DQPSK | SISO    | HOPP            | 2DH1        | 0.392                         | 31.600                 | 314                                | 123.088         | <=400      | Pass    |
|           |         |                 | 2DH3        | 1.642                         | 31.600                 | 173                                | 284.066         | <=400      | Pass    |
|           |         |                 | 2DH5        | 3.140                         | 31.600                 | 91                                 | 285.740         | <=400      | Pass    |
| 8DPSK     | SISO    | HOPP            | 3DH1        | 0.392                         | 31.600                 | 314                                | 123.088         | <=400      | Pass    |
|           |         |                 | 3DH3        | 1.892                         | 31.600                 | 171                                | 323.532         | <=400      | Pass    |
|           |         |                 | 3DH5        | 3.142                         | 31.600                 | 116                                | 364.472         | <=400      | Pass    |

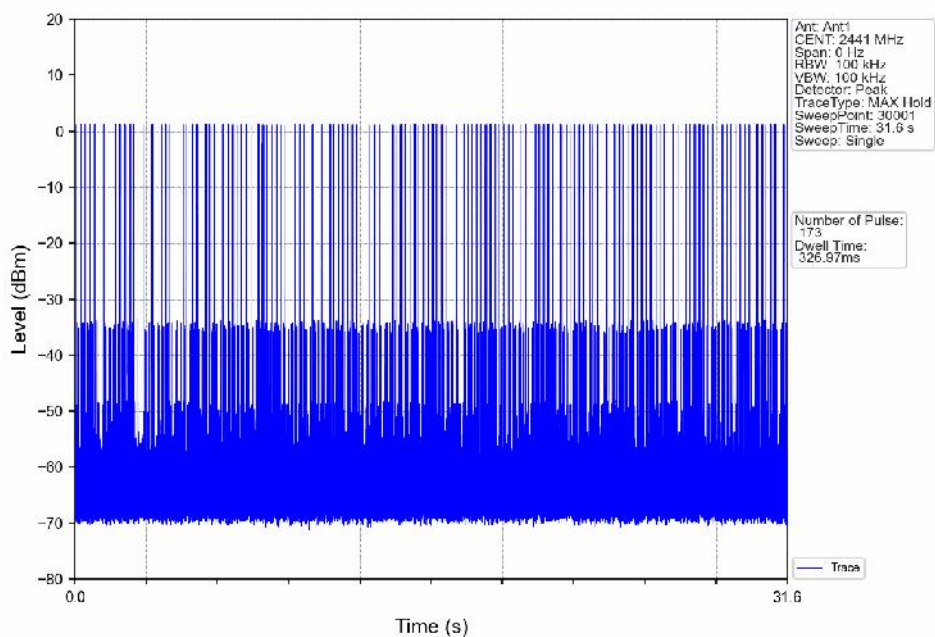
## 5.1.2 Test Graph



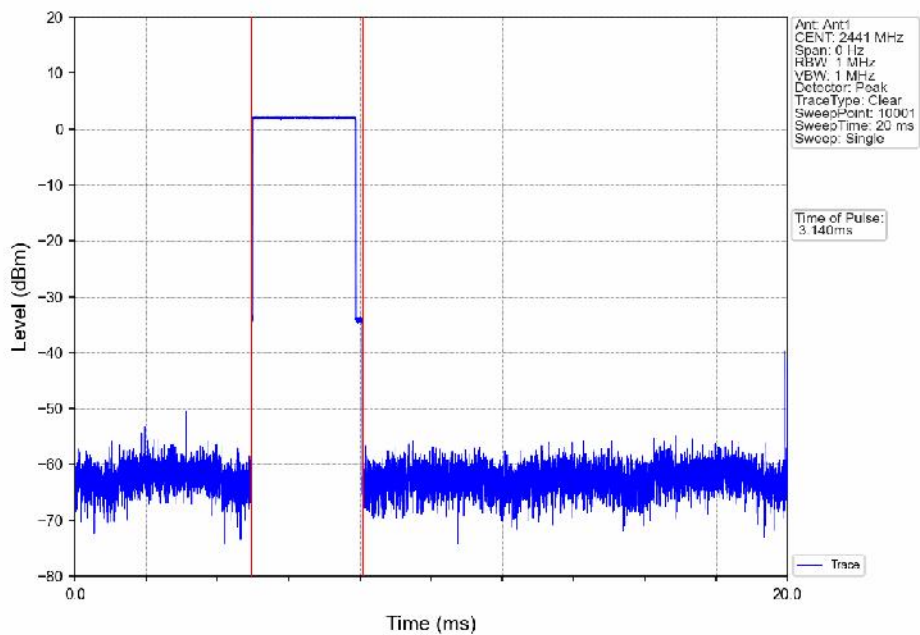
GFSK\_DH3\_HOPP\_Ant1\_NTNV



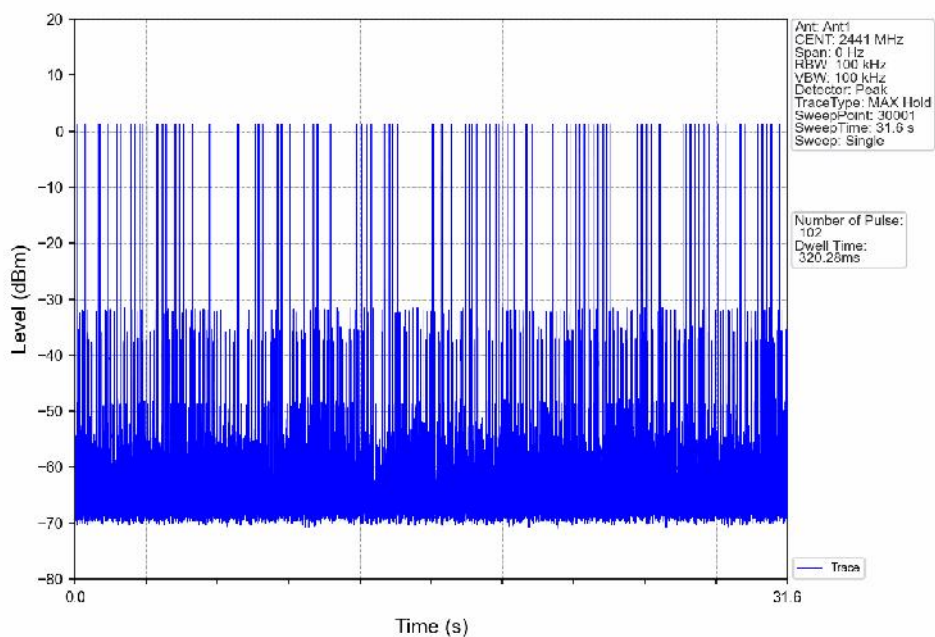
GFSK\_DH3\_HOPP\_Ant1\_NTNV



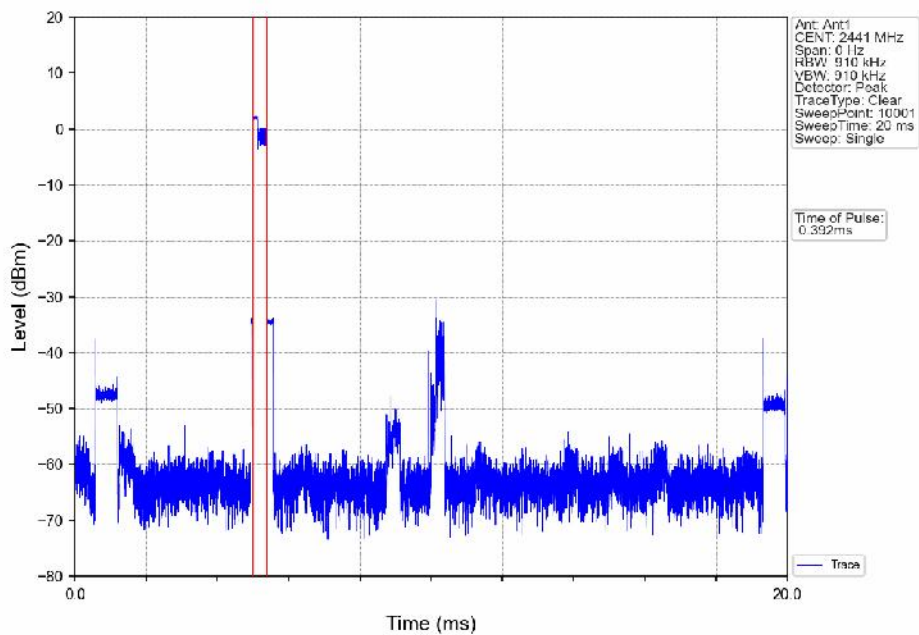
GFSK\_DH5\_HOPP\_Ant1\_NTNV



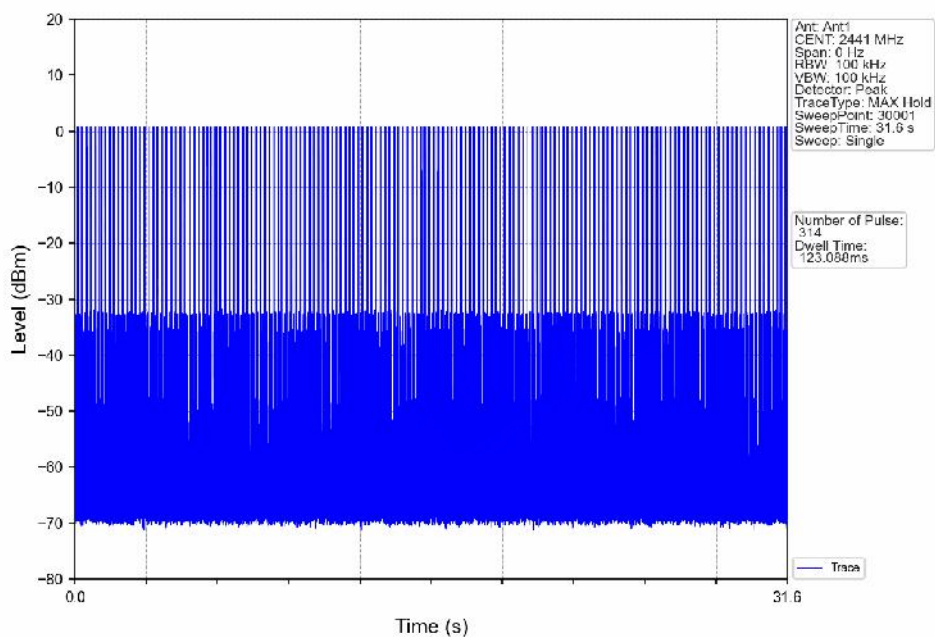
GFSK\_DH5\_HOPP\_Ant1\_NTNV



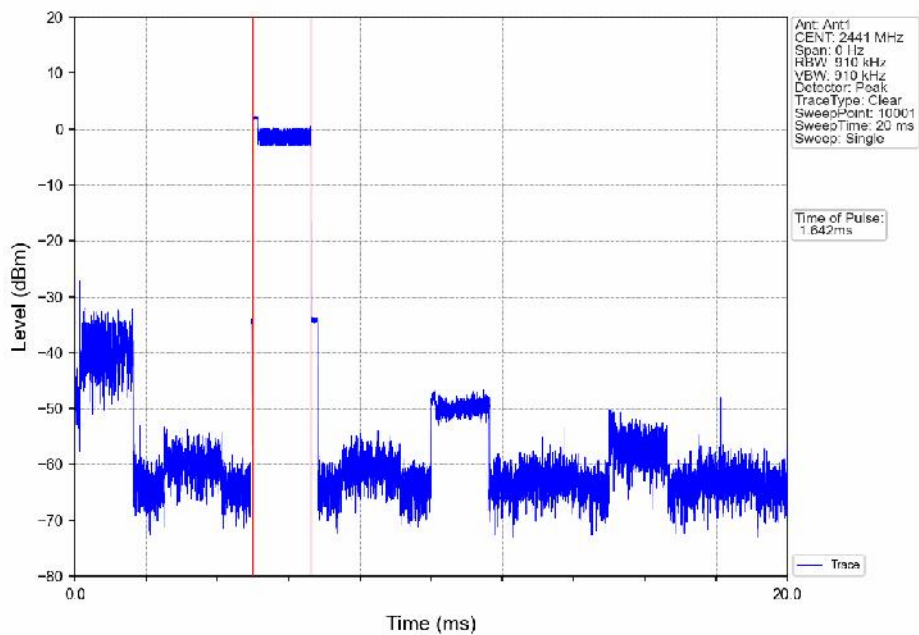
Pi/4DQPSK\_2DH1\_HOPP\_Ant1\_NTNV



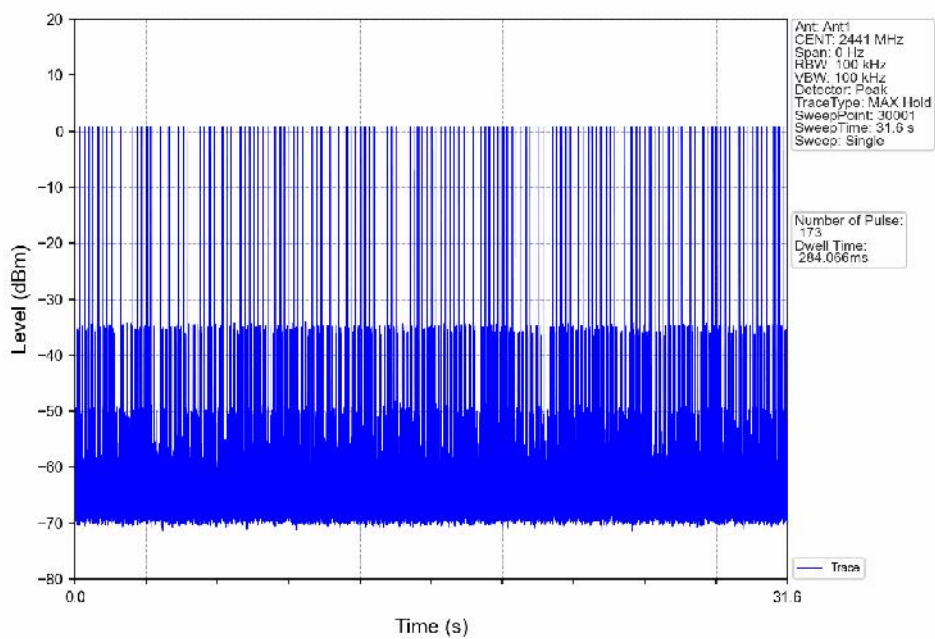
Pi/4DQPSK\_2DH1\_HOPP\_Ant1\_NTNV



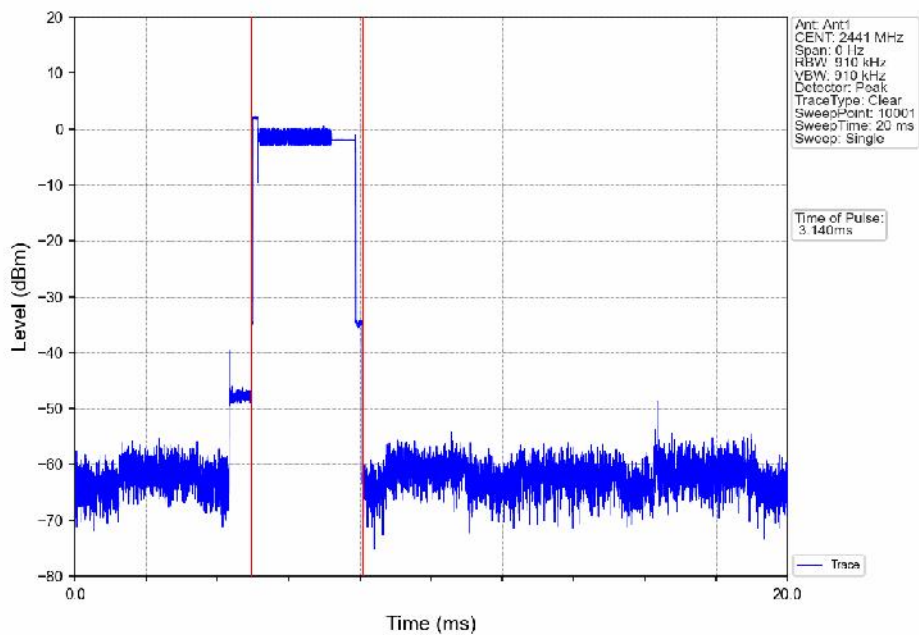
Pi/4DQPSK\_2DH3\_HOPP\_Ant1\_NTNV



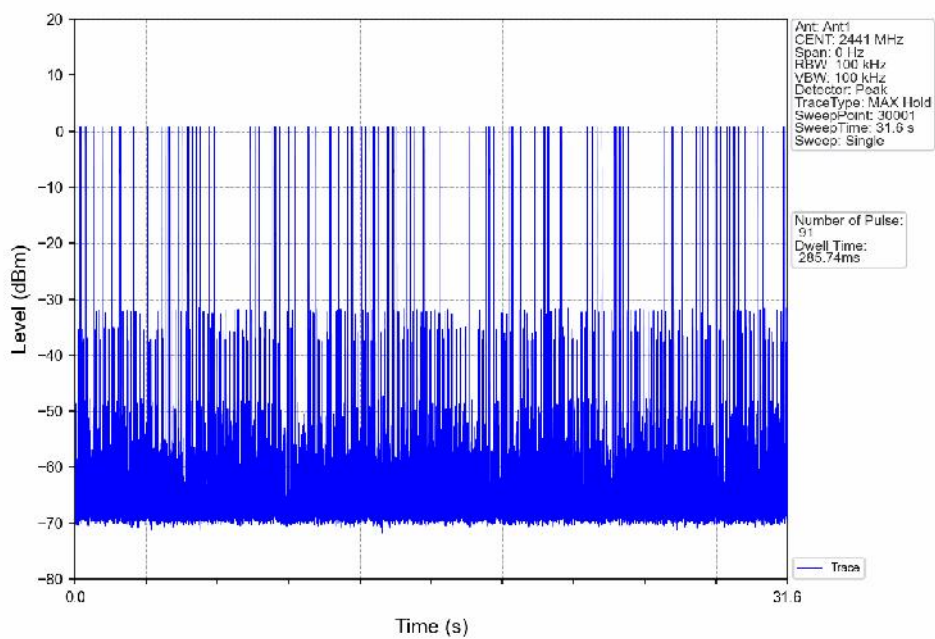
Pi/4DQPSK\_2DH3\_HOPP\_Ant1\_NTNV



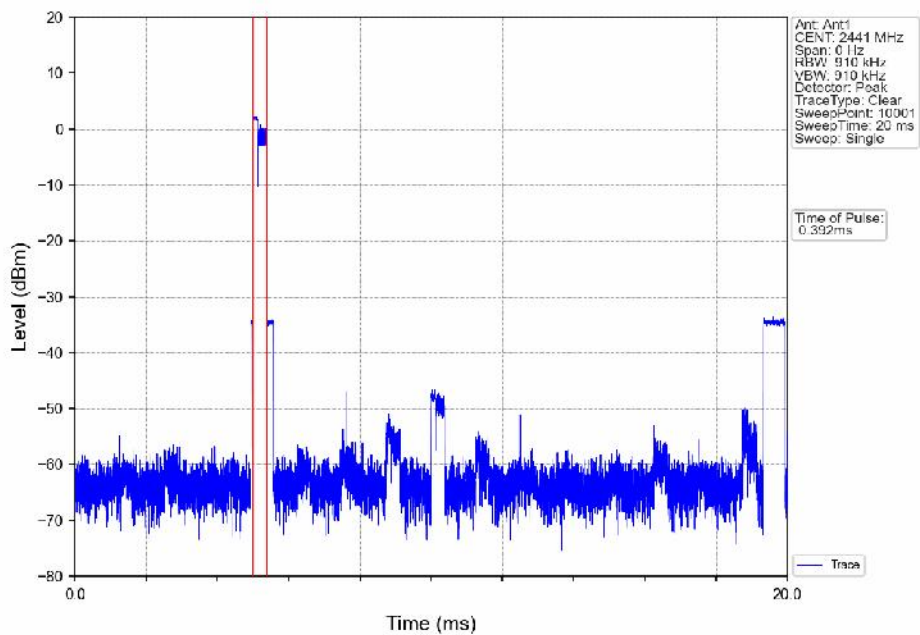
Pi/4DQPSK\_2DH5\_HOPP\_Ant1\_NTNV



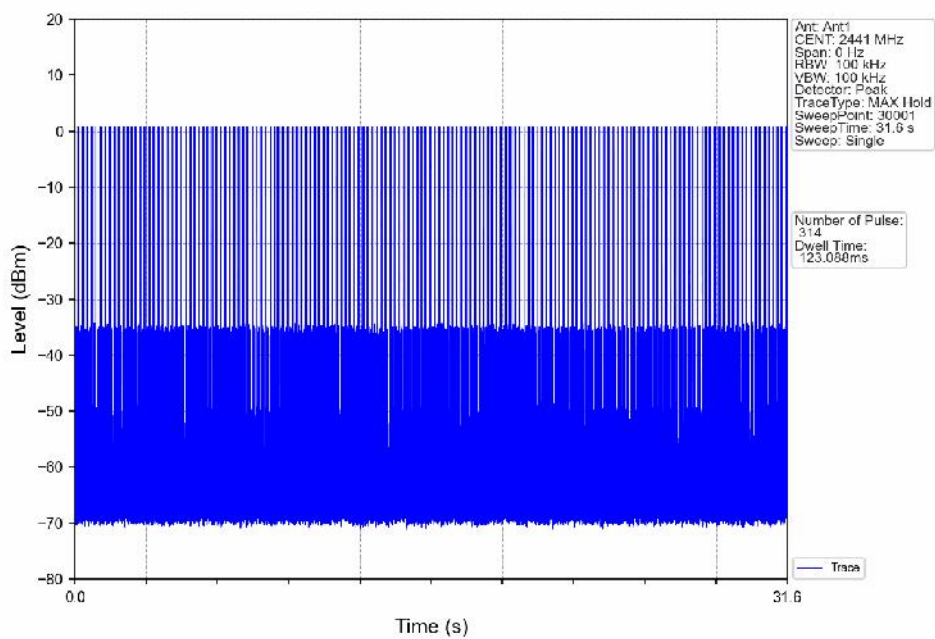
Pi/4DQPSK\_2DH5\_HOPP\_Ant1\_NTNV



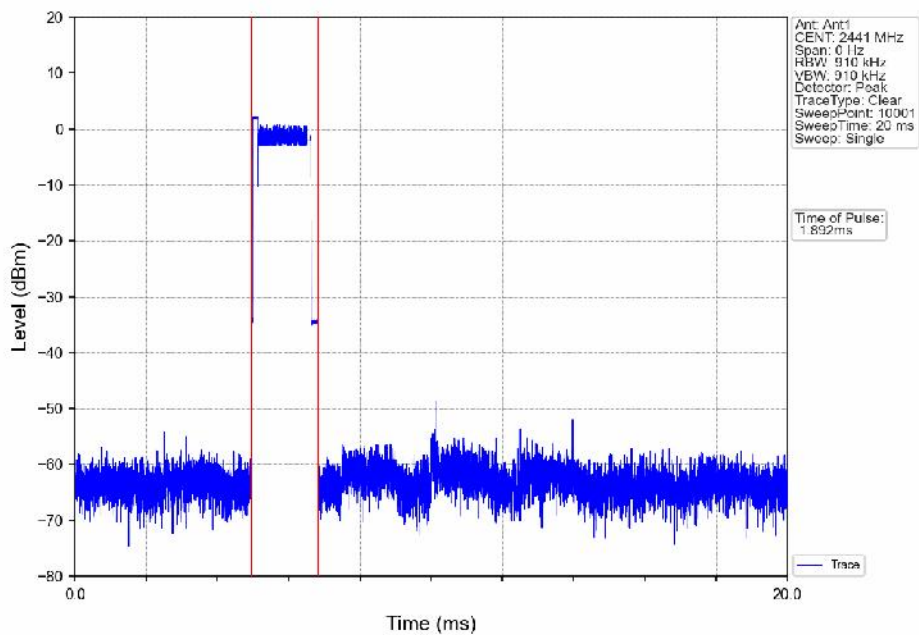
8DPSK\_3DH1\_HOPP\_Ant1\_NTNV



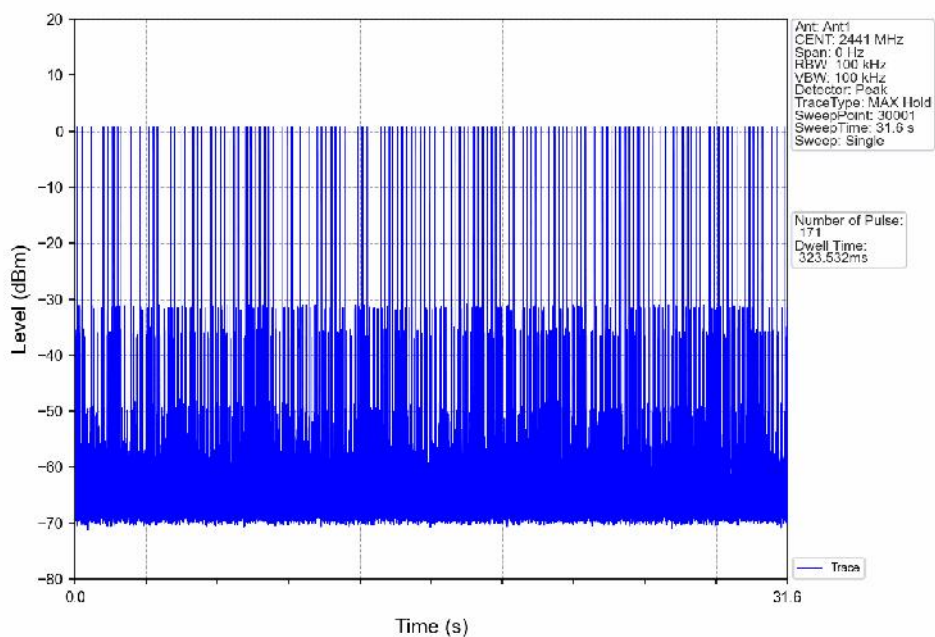
8DPSK\_3DH1\_HOPP\_Ant1\_NTNV



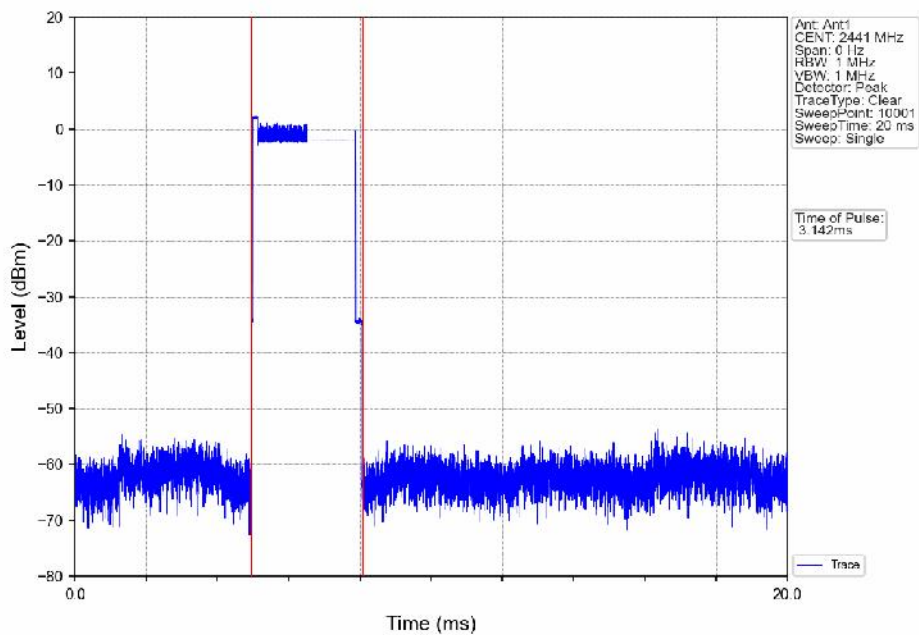
8DPSK\_3DH3\_HOPP\_Ant1\_NTNV



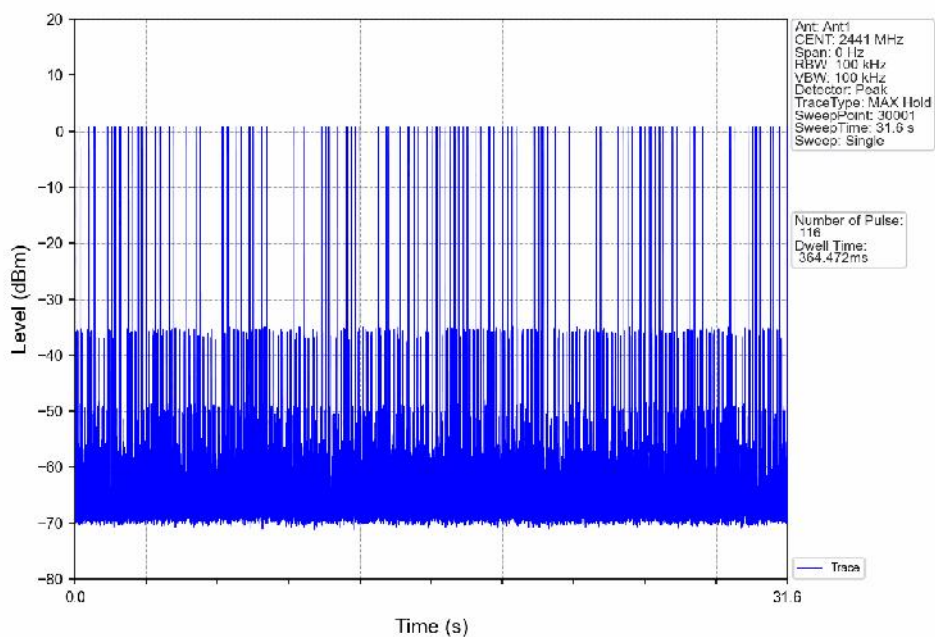
8DPSK\_3DH3\_HOPP\_Ant1\_NTNV



8DPSK\_3DH5\_HOPP\_Ant1\_NTNV



8DPSK\_3DH5\_HOPP\_Ant1\_NTNV



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

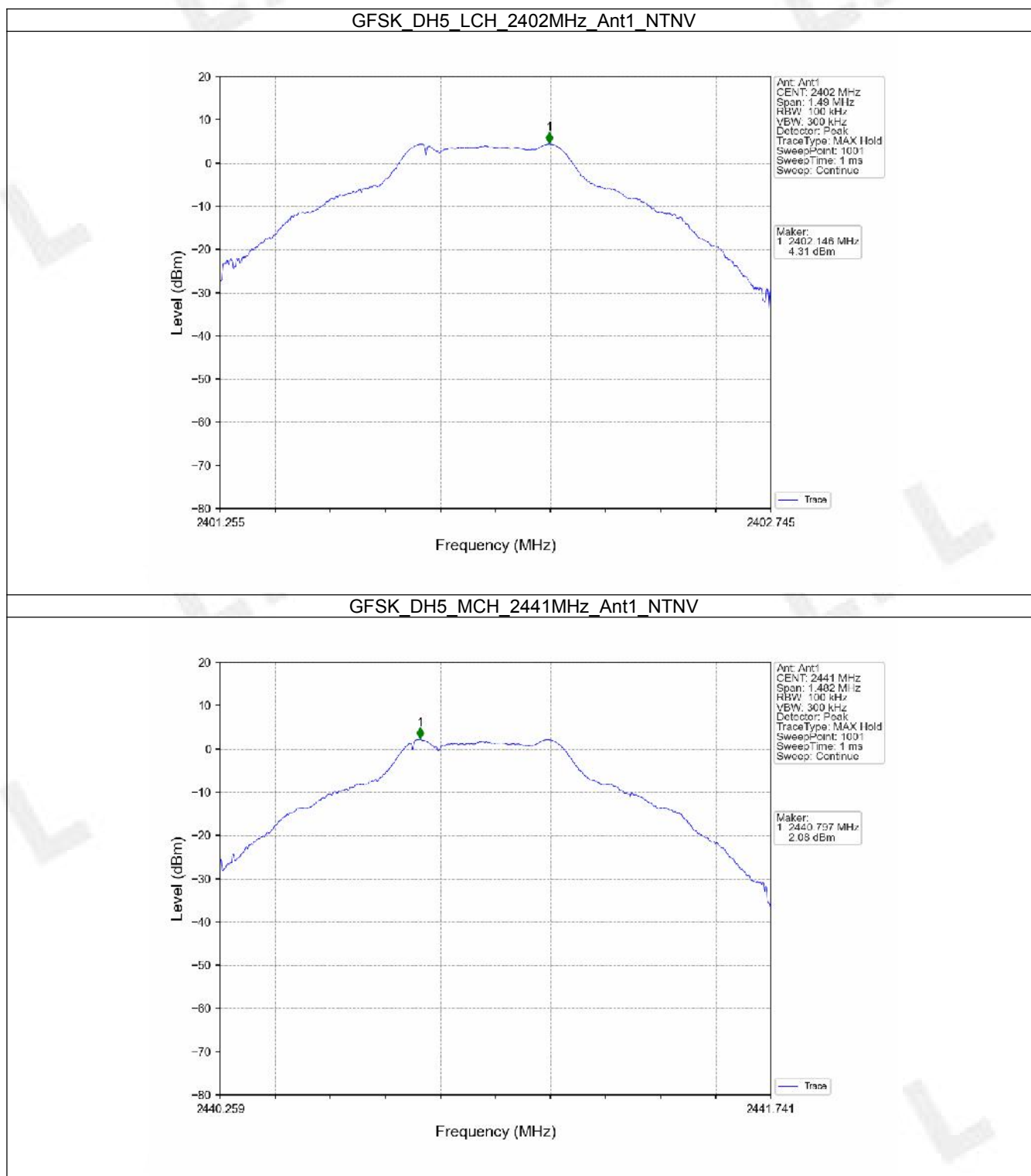
### 6.1 Ref

#### 6.1.1 Test Result

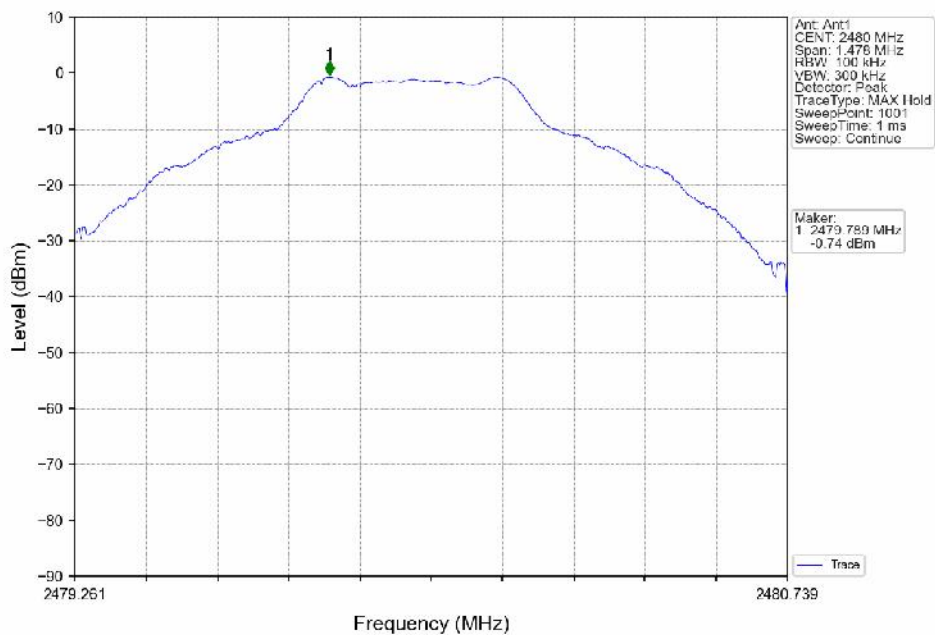
| Mode      | TX Type | Frequency (MHz) | Packet Type | ANT | Level of Reference (dBm) |
|-----------|---------|-----------------|-------------|-----|--------------------------|
| GFSK      | SISO    | 2402            | DH5         | 1   | 4.31                     |
|           |         | 2441            | DH5         | 1   | 2.08                     |
|           |         | 2480            | DH5         | 1   | -0.74                    |
| Pi/4DQPSK | SISO    | 2402            | 2DH5        | 1   | 4.40                     |
|           |         | 2441            | 2DH5        | 1   | 2.15                     |
|           |         | 2480            | 2DH5        | 1   | -0.71                    |
| 8DPSK     | SISO    | 2402            | 3DH5        | 1   | 4.46                     |
|           |         | 2441            | 3DH5        | 1   | 2.09                     |
|           |         | 2480            | 3DH5        | 1   | -0.78                    |

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.

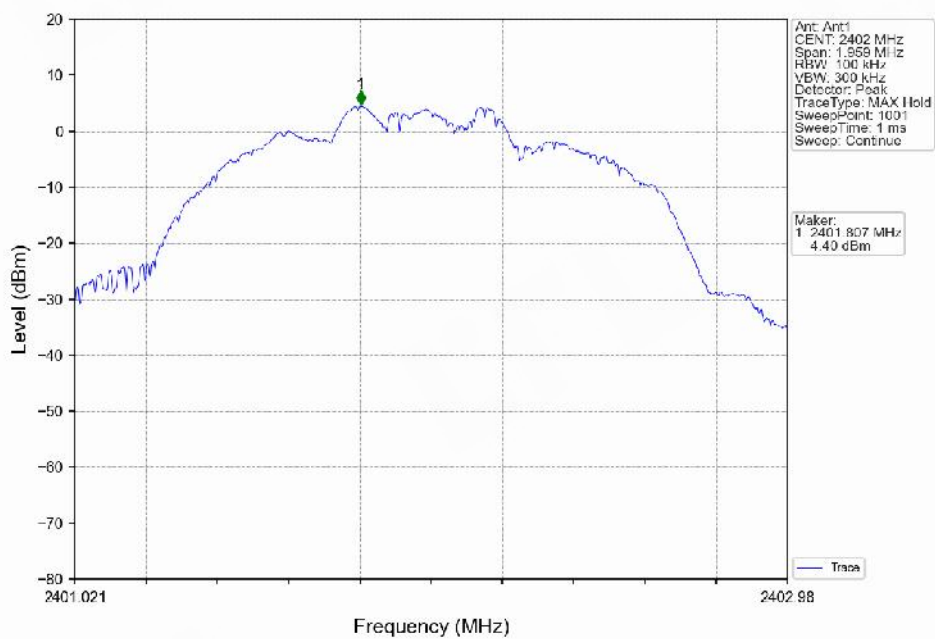
## 6.1.2 Test Graph



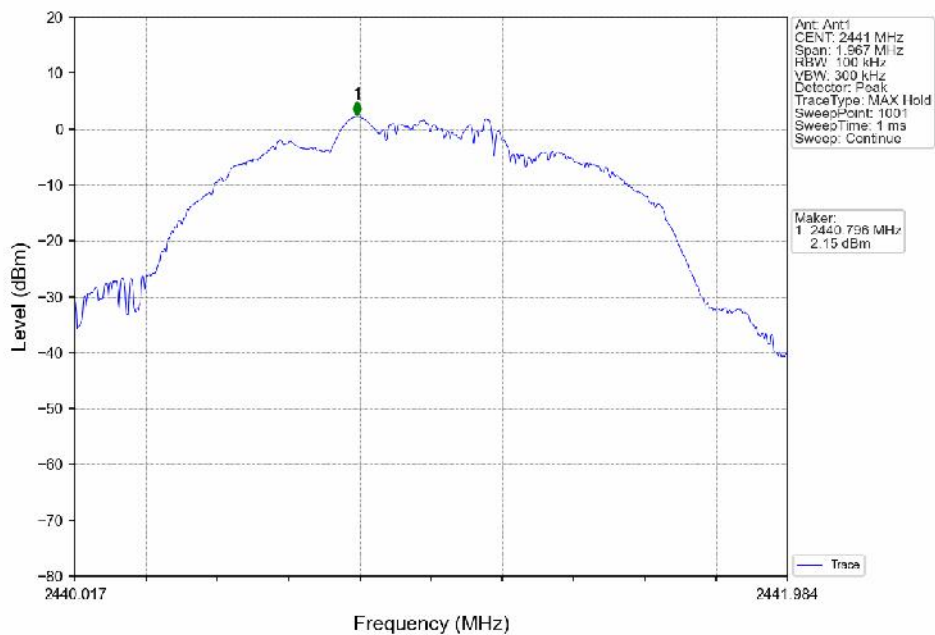
GFSK\_DH5\_HCH\_2480MHz\_Ant1\_NTNV



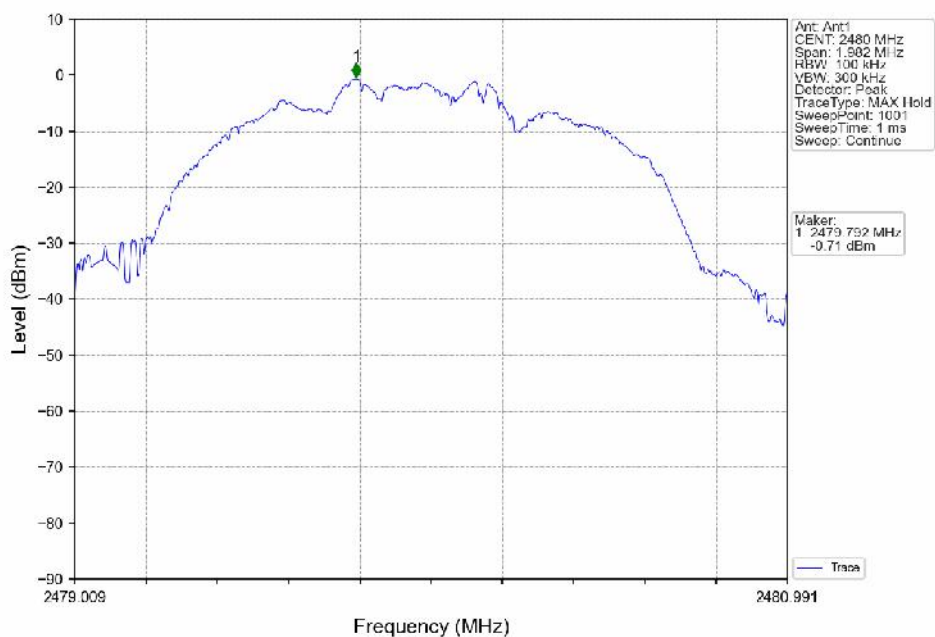
Pi/4DQPSK\_2DH5\_LCH\_2402MHz\_Ant1\_NTNV



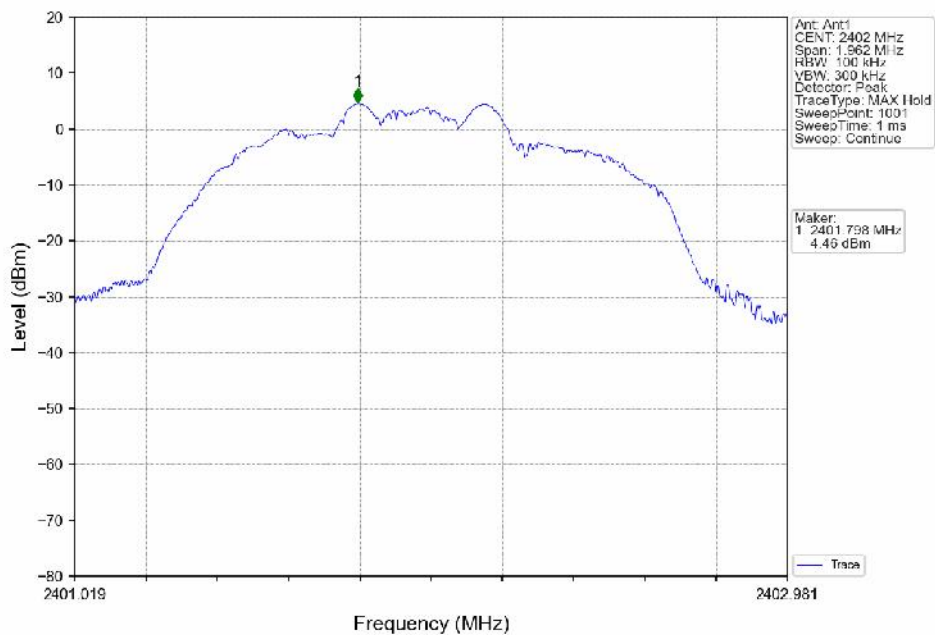
Pi/4DQPSK\_2DH5\_MCH\_2441MHz\_Ant1\_NTNV



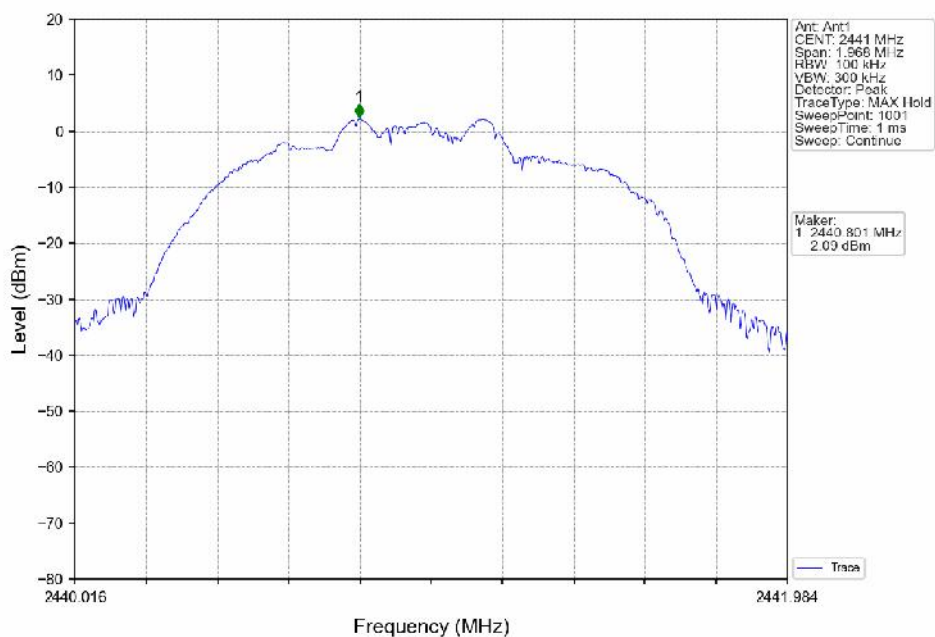
Pi/4DQPSK\_2DH5\_HCH\_2480MHz\_Ant1\_NTNV

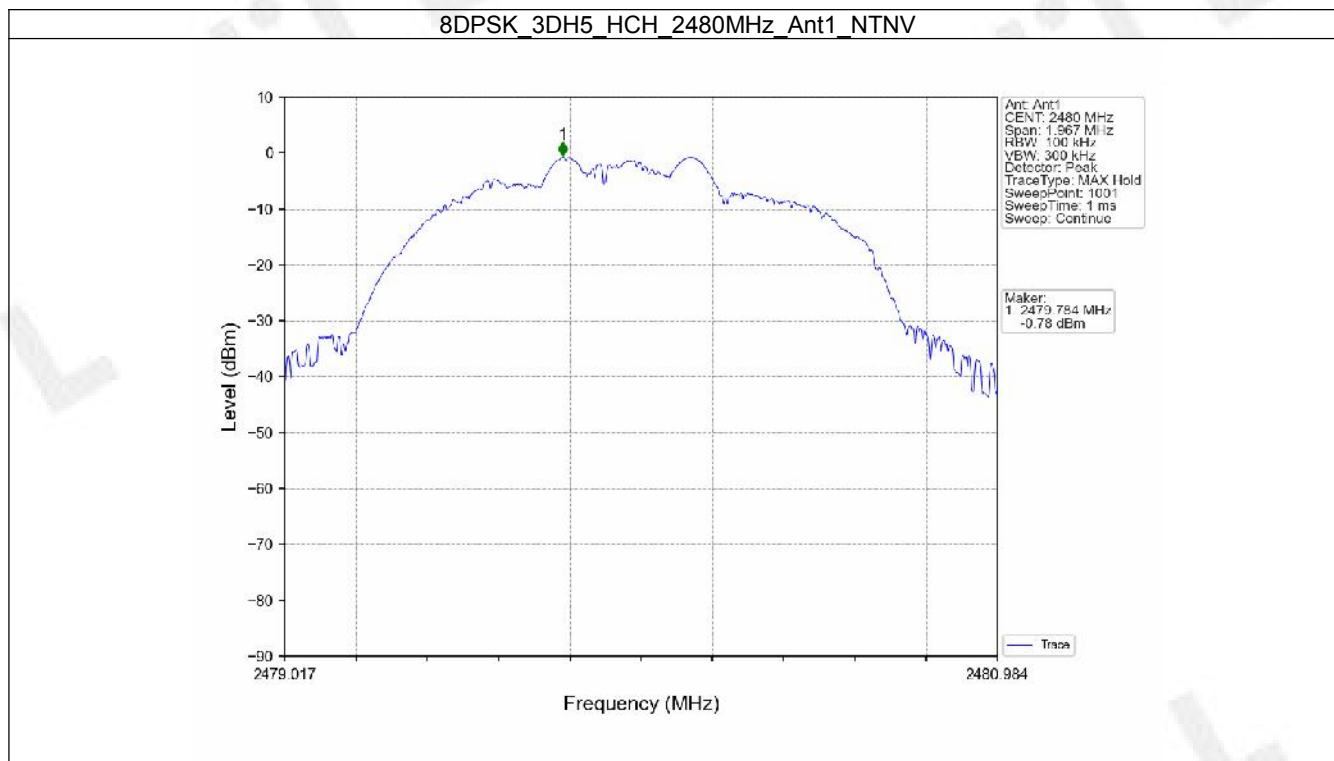


8DPSK\_3DH5\_LCH\_2402MHz\_Ant1\_NTNV



8DPSK\_3DH5\_MCH\_2441MHz\_Ant1\_NTNV



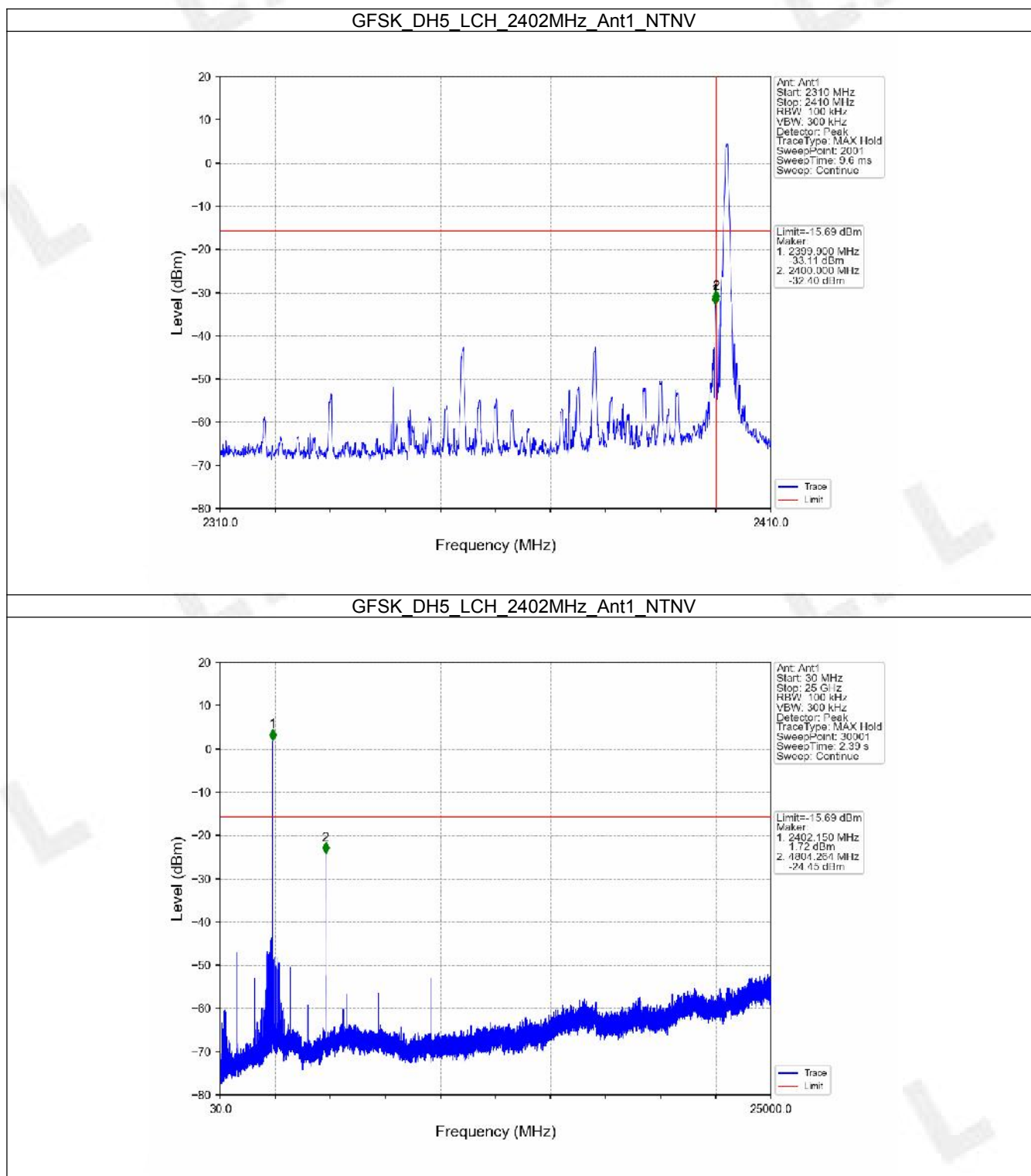


### 6.2.1 Test Result

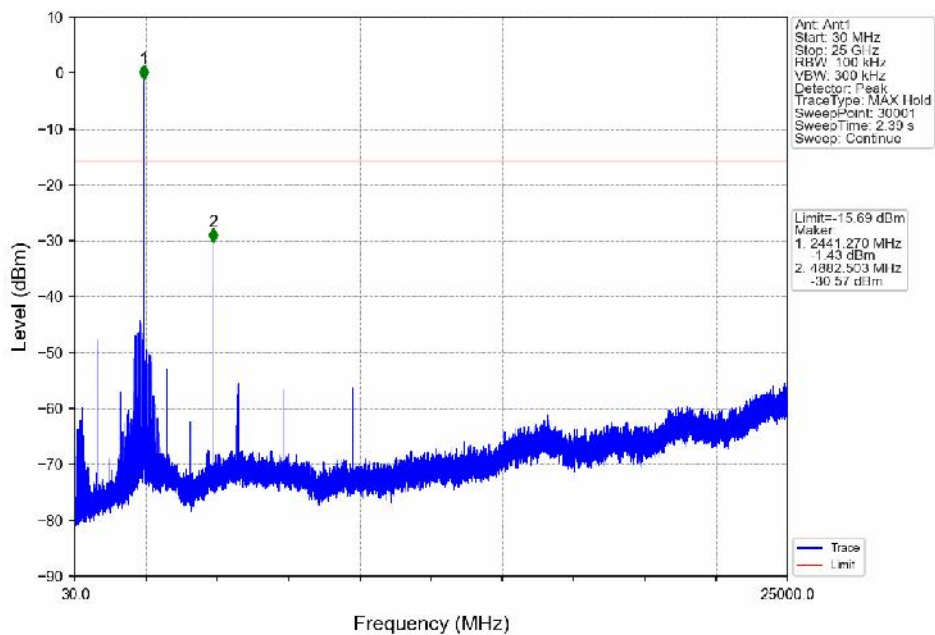
| Mode      | TX Type | Frequency (MHz) | Packet Type | ANT | Level of Reference (dBm) | Limit (dBm) | Verdict |
|-----------|---------|-----------------|-------------|-----|--------------------------|-------------|---------|
| GFSK      | SISO    | 2402            | DH5         | 1   | 4.31                     | -15.69      | Pass    |
|           |         | 2441            | DH5         | 1   | 4.31                     | -15.69      | Pass    |
|           |         | 2480            | DH5         | 1   | 4.31                     | -15.69      | Pass    |
|           |         | HOPP            | DH5         | 1   | 4.31                     | -15.69      | Pass    |
|           |         |                 |             |     | 4.31                     | -15.69      | Pass    |
| Pi/4DQPSK | SISO    | 2402            | 2DH5        | 1   | 4.40                     | -15.60      | Pass    |
|           |         | 2441            | 2DH5        | 1   | 4.40                     | -15.60      | Pass    |
|           |         | 2480            | 2DH5        | 1   | 4.40                     | -15.60      | Pass    |
|           |         | HOPP            | 2DH5        | 1   | 4.40                     | -15.60      | Pass    |
|           |         |                 |             |     | 4.40                     | -15.60      | Pass    |
| 8DPSK     | SISO    | 2402            | 3DH5        | 1   | 4.46                     | -15.54      | Pass    |
|           |         | 2441            | 3DH5        | 1   | 4.46                     | -15.54      | Pass    |
|           |         | 2480            | 3DH5        | 1   | 4.46                     | -15.54      | Pass    |
|           |         | HOPP            | 3DH5        | 1   | 4.46                     | -15.54      | Pass    |
|           |         |                 |             |     | 4.46                     | -15.54      | 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.

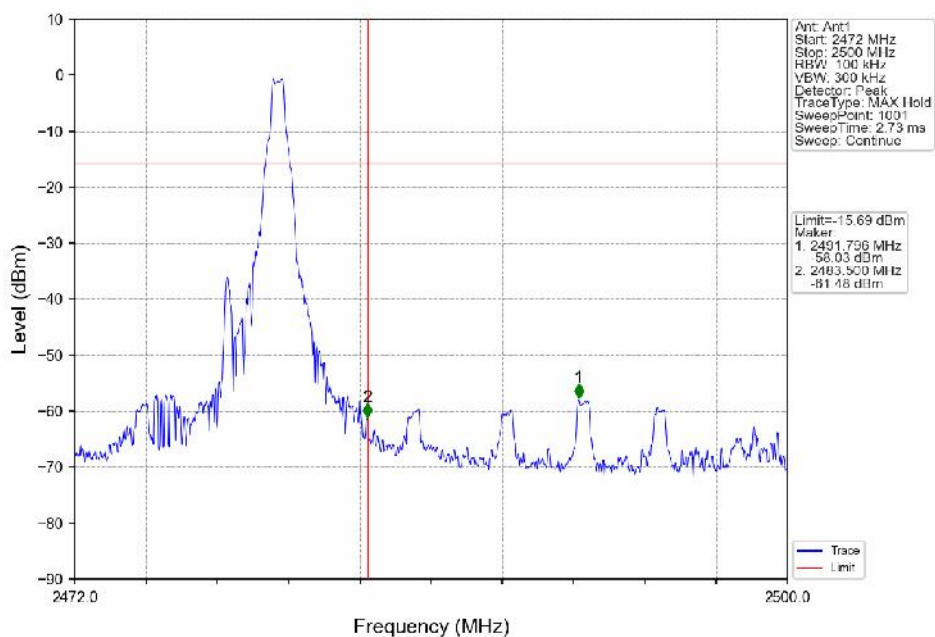
## 6.2.2 Test Graph



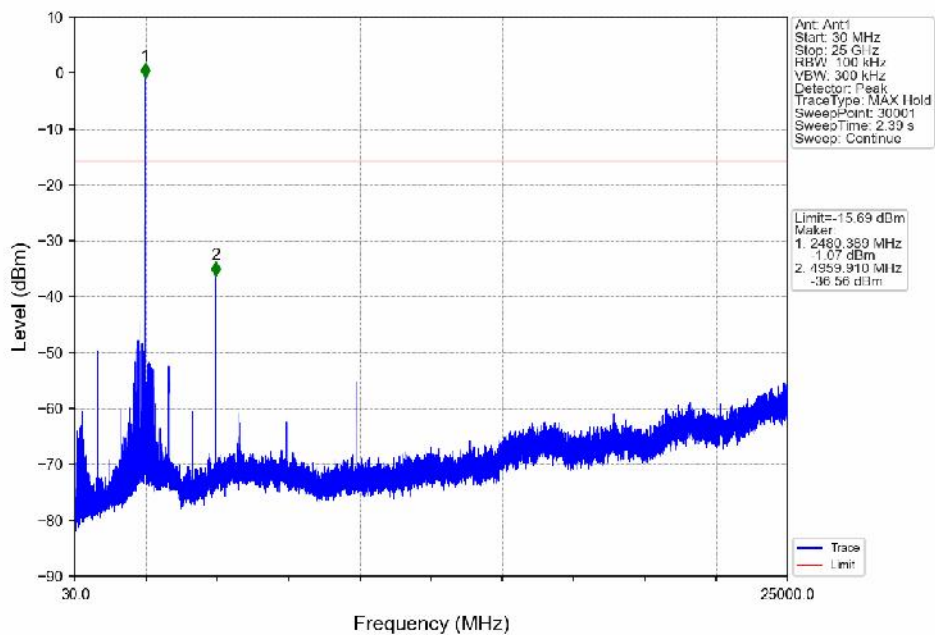
GFSK\_DH5\_MCH\_2441MHz\_Ant1\_NTNV



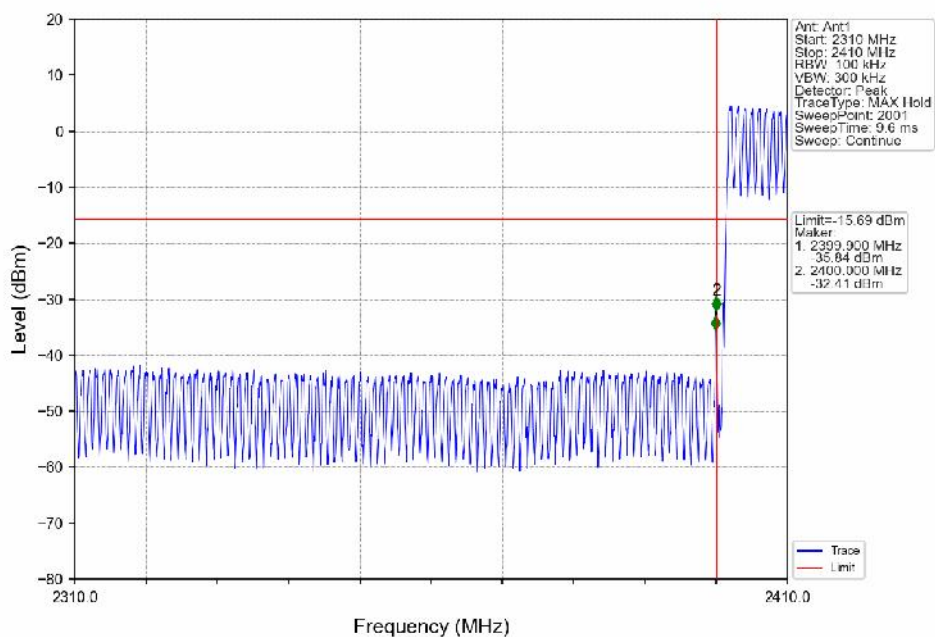
GFSK\_DH5\_HCH\_2480MHz\_Ant1\_NTNV



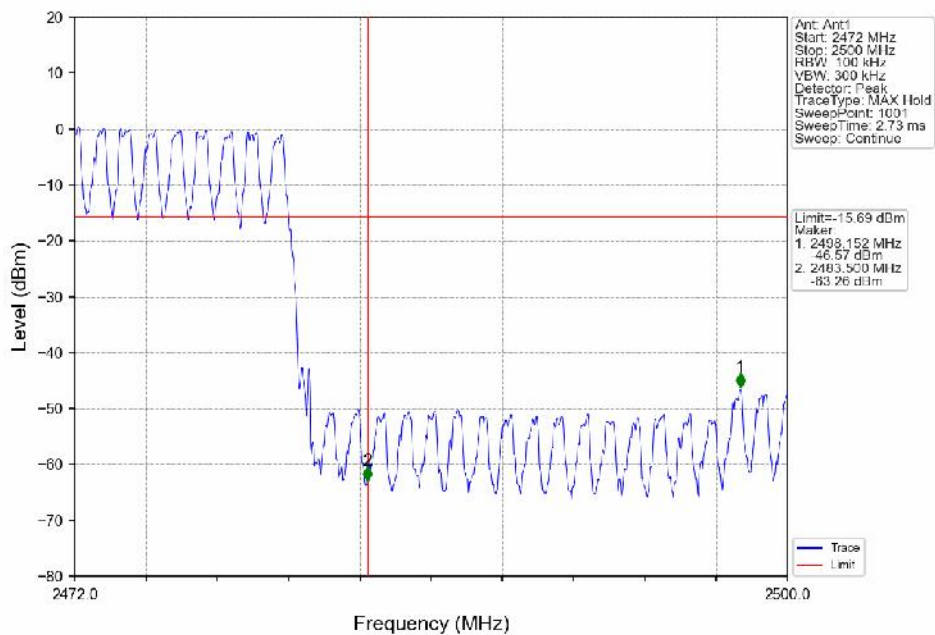
GFSK\_DH5\_HCH\_2480MHz\_Ant1\_NTNV



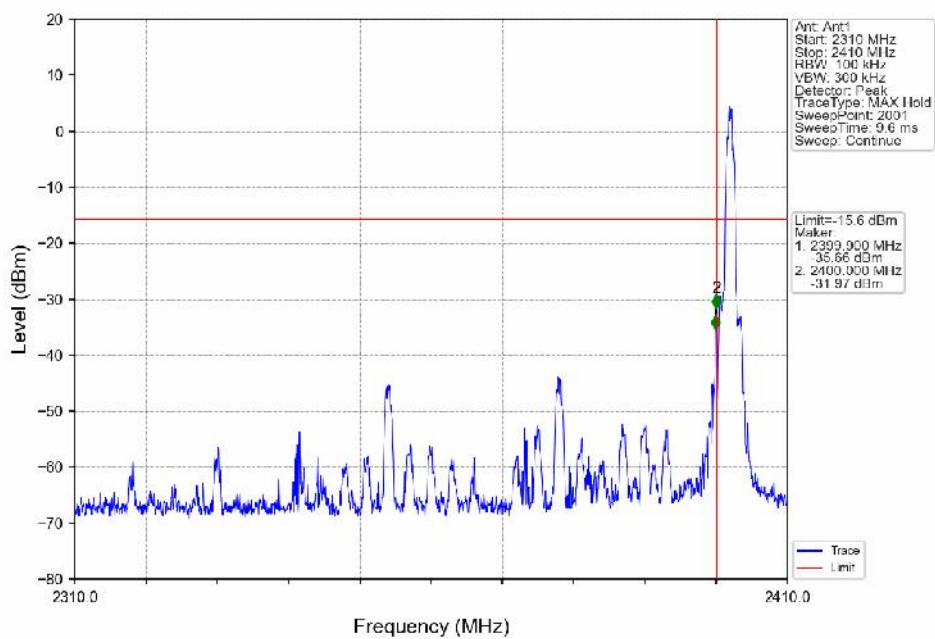
GFSK\_DH5\_HOPP\_2410MHz\_Ant1\_NTNV



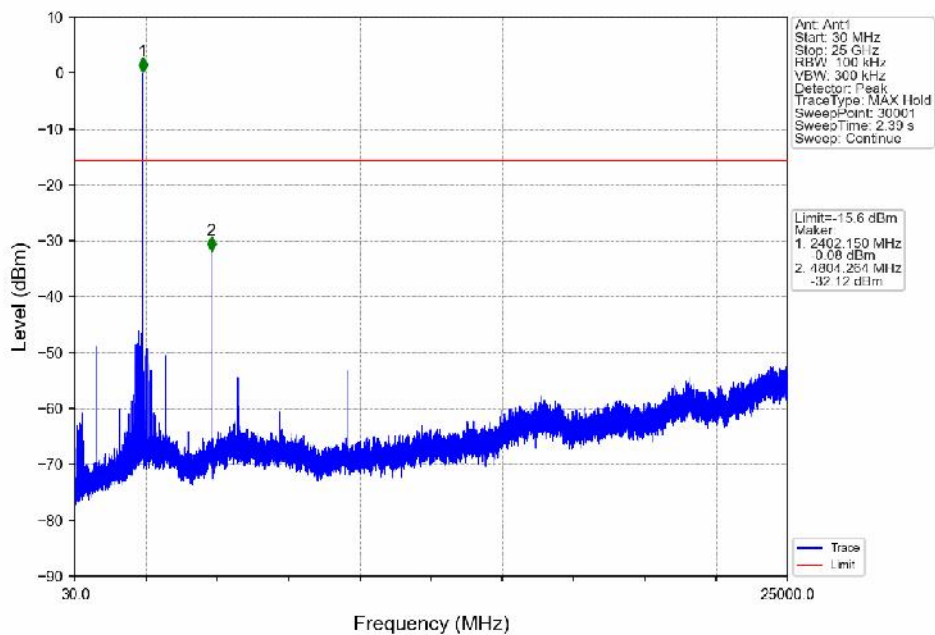
GFSK\_DH5\_HOPP\_Ant1\_NTNV



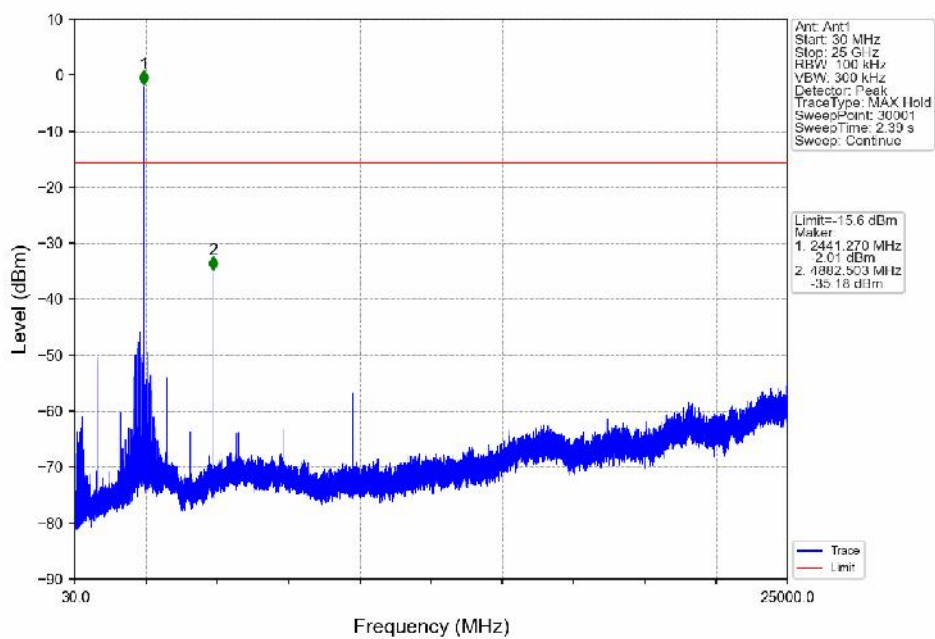
Pi/4DQPSK\_2DH5\_LCH\_2402MHz\_Ant1\_NTNV



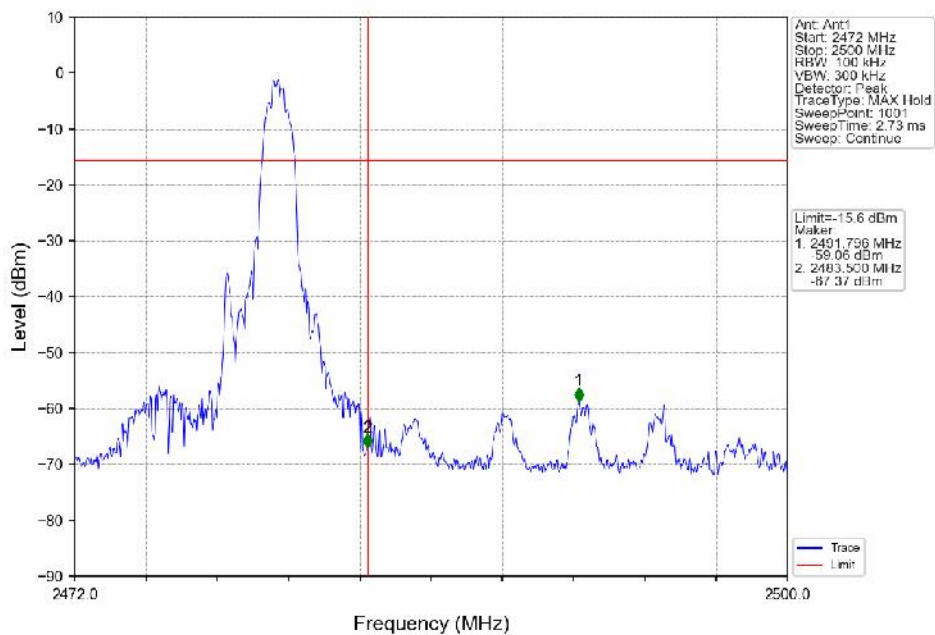
Pi/4DQPSK\_2DH5\_LCH\_2402MHz\_Ant1\_NTNV



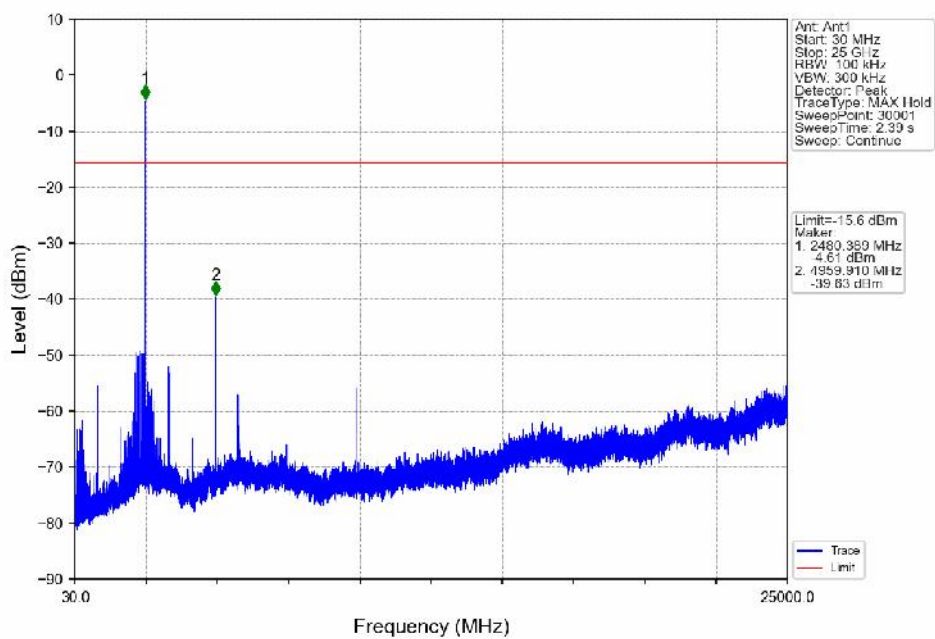
Pi/4DQPSK\_2DH5\_MCH\_2441MHz\_Ant1\_NTNV



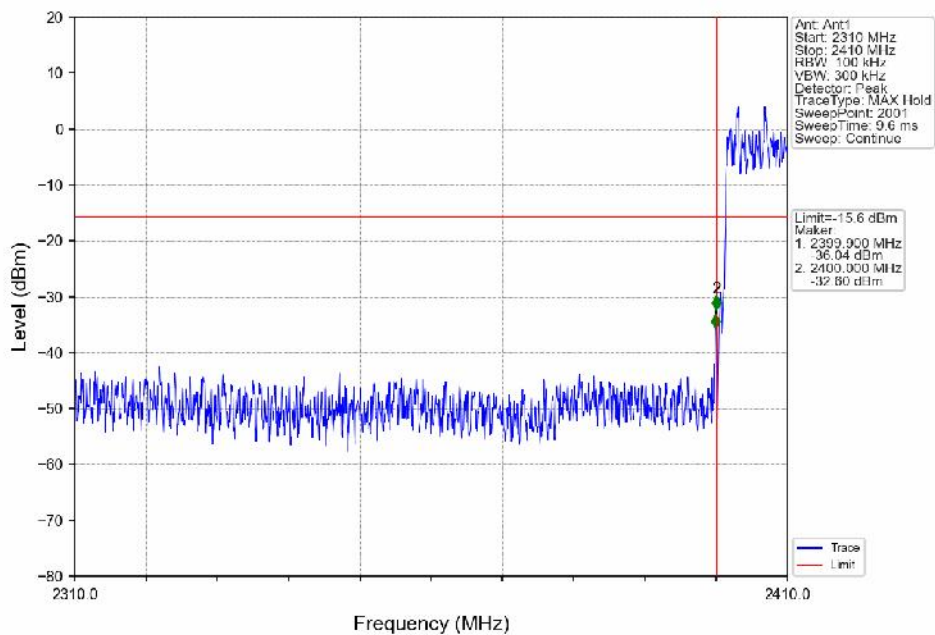
Pi/4DQPSK\_2DH5\_HCH\_2480MHz\_Ant1\_NTNV



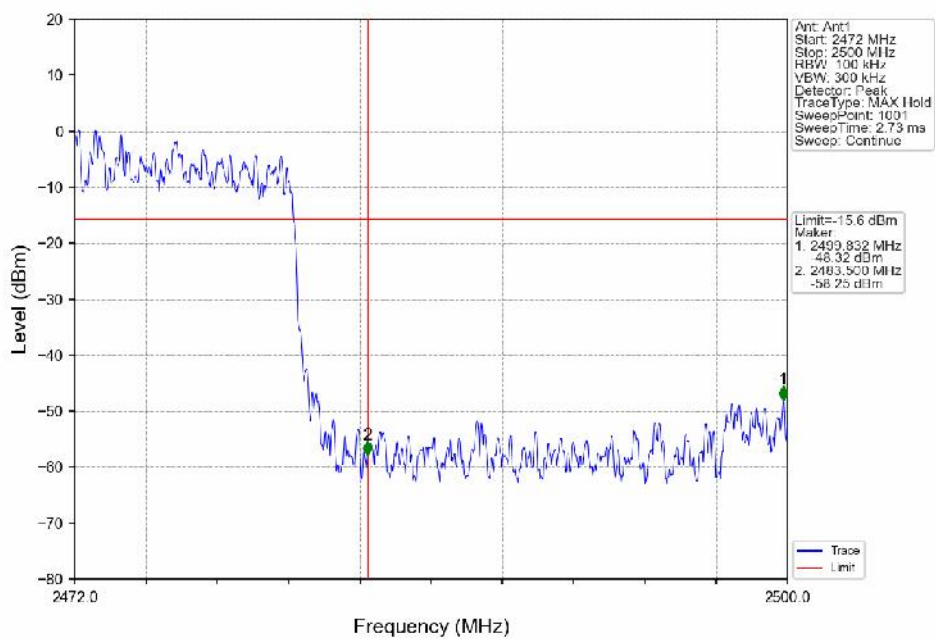
Pi/4DQPSK\_2DH5\_HCH\_2480MHz\_Ant1\_NTNV



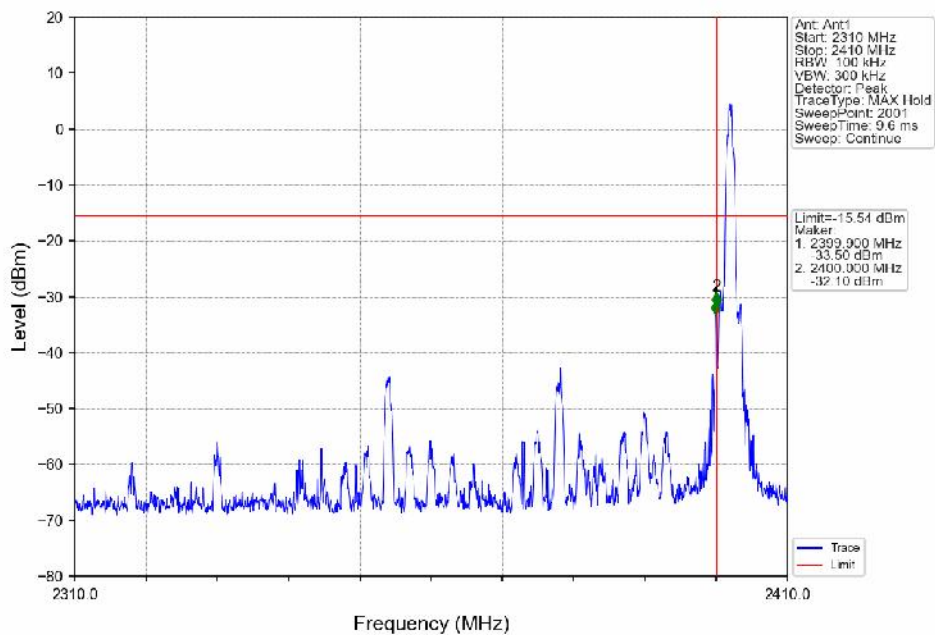
Pi/4DQPSK\_2DH5\_HOPP\_Ant1\_NTNV



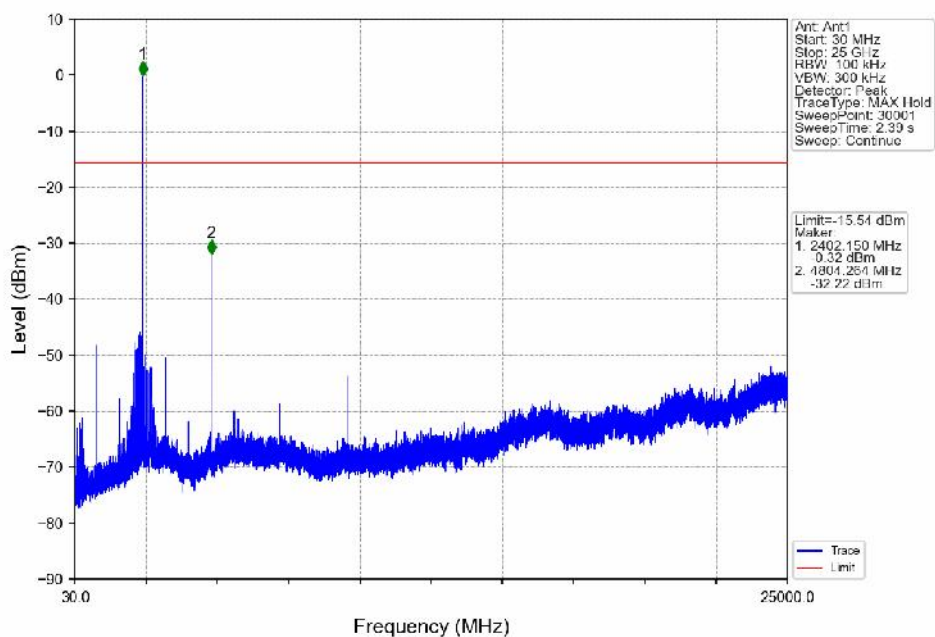
Pi/4DQPSK\_2DH5\_HOPP\_Ant1\_NTNV



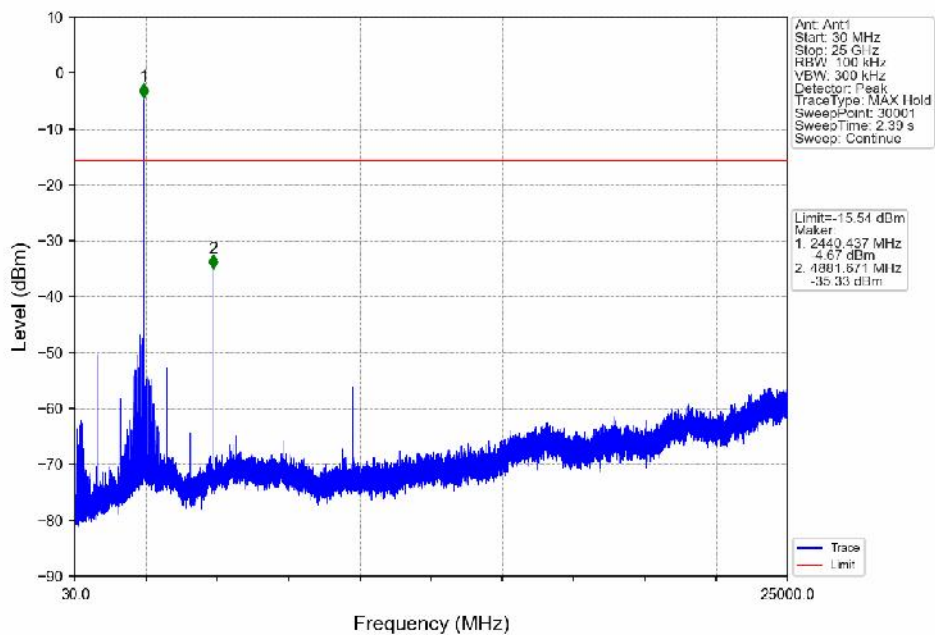
8DPSK\_3DH5\_LCH\_2402MHz\_Ant1\_NTNV



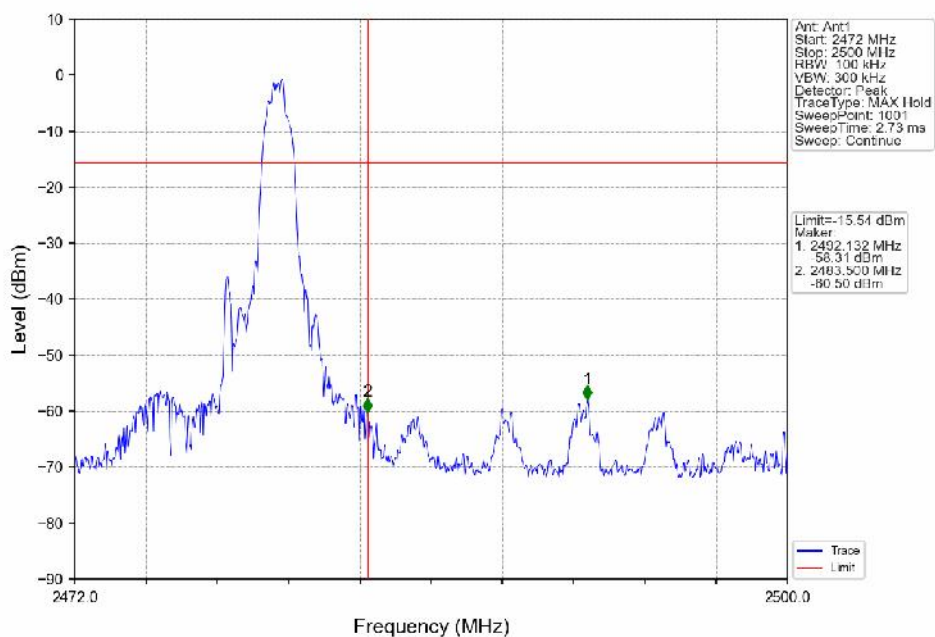
8DPSK\_3DH5\_LCH\_2402MHz\_Ant1\_NTNV



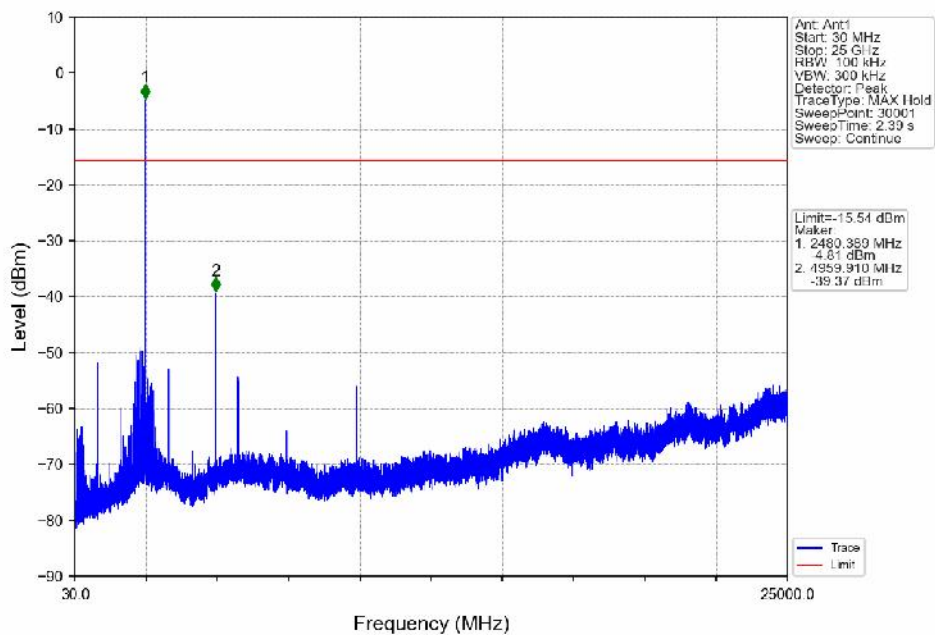
8DPSK\_3DH5\_MCH\_2441MHz\_Ant1\_NTNV



8DPSK\_3DH5\_HCH\_2480MHz\_Ant1\_NTNV



8DPSK\_3DH5\_HCH\_2480MHz\_Ant1\_NTNV



8DPSK\_3DH5\_HOPP\_Ant1\_NTNV

