

## 1. Bandwidth

### 1.1 Test Result

#### 1.1.1 OBW

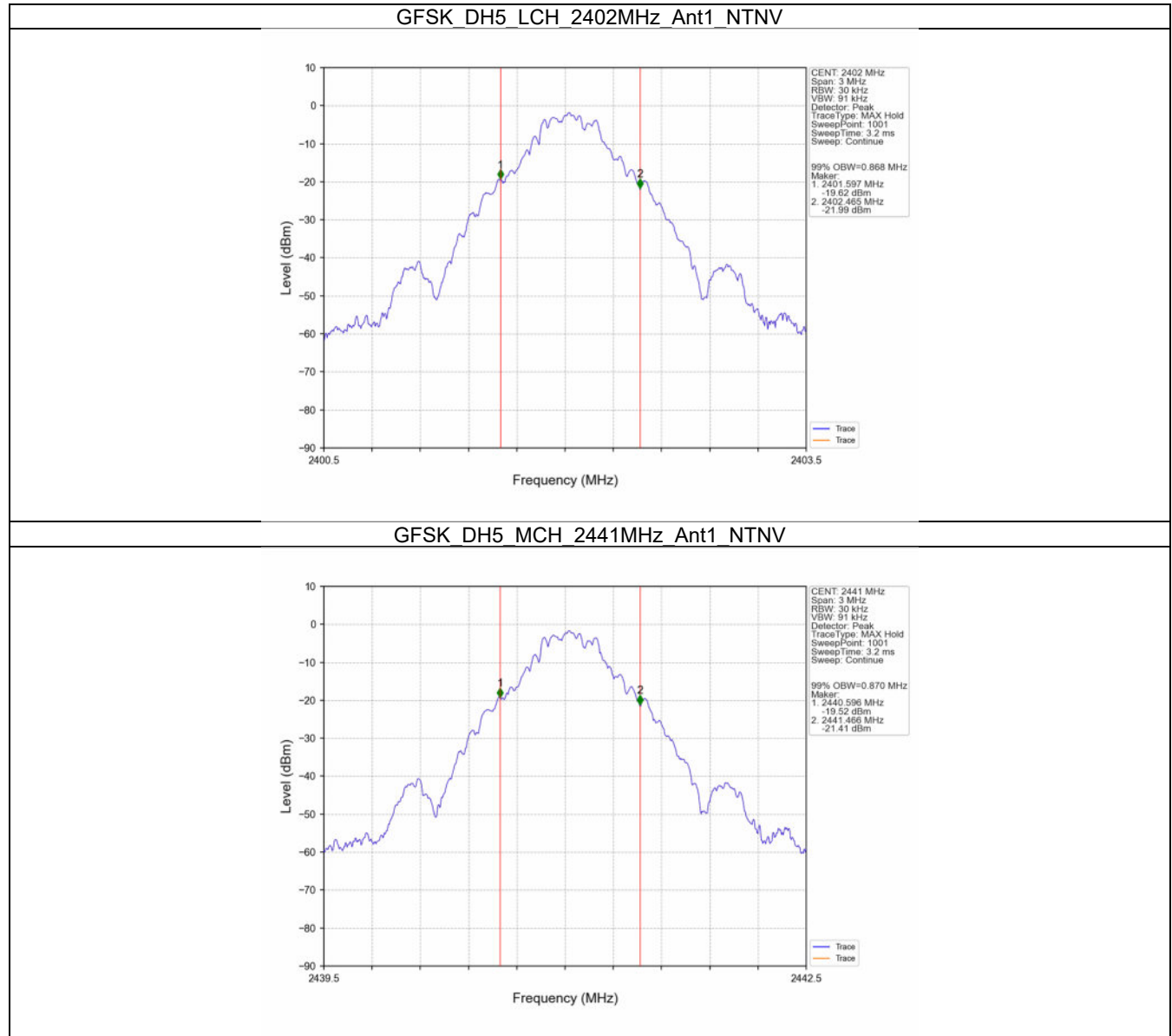
| Mode      | TX Type | Frequency (MHz) | Packet Type | ANT | 99% Occupied Bandwidth (MHz) |       | Verdict |
|-----------|---------|-----------------|-------------|-----|------------------------------|-------|---------|
|           |         |                 |             |     | Result                       | Limit |         |
| GFSK      | SISO    | 2402            | DH5         | 1   | 0.868                        | /     | Pass    |
|           |         | 2441            | DH5         | 1   | 0.870                        | /     | Pass    |
|           |         | 2480            | DH5         | 1   | 0.874                        | /     | Pass    |
| Pi/4DQPSK | SISO    | 2402            | 2DH5        | 1   | 1.173                        | /     | Pass    |
|           |         | 2441            | 2DH5        | 1   | 1.175                        | /     | Pass    |
|           |         | 2480            | 2DH5        | 1   | 1.178                        | /     | Pass    |
| 8DPSK     | SISO    | 2402            | 3DH5        | 1   | 1.169                        | /     | Pass    |
|           |         | 2441            | 3DH5        | 1   | 1.172                        | /     | Pass    |
|           |         | 2480            | 3DH5        | 1   | 1.170                        | /     | Pass    |

#### 1.1.2 20dB BW

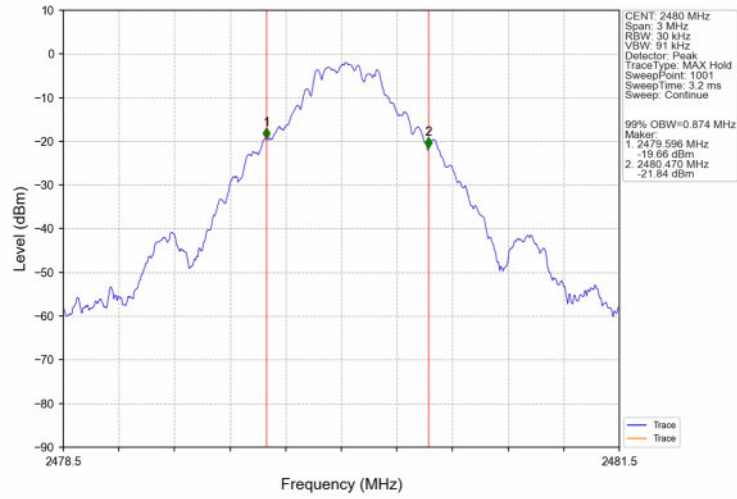
| Mode      | TX Type | Frequency (MHz) | Packet Type | ANT | 20dB Bandwidth (MHz) |       | Verdict |
|-----------|---------|-----------------|-------------|-----|----------------------|-------|---------|
|           |         |                 |             |     | Result               | Limit |         |
| GFSK      | SISO    | 2402            | DH5         | 1   | 0.954                | /     | Pass    |
|           |         | 2441            | DH5         | 1   | 0.959                | /     | Pass    |
|           |         | 2480            | DH5         | 1   | 0.961                | /     | Pass    |
| Pi/4DQPSK | SISO    | 2402            | 2DH5        | 1   | 1.289                | /     | Pass    |
|           |         | 2441            | 2DH5        | 1   | 1.319                | /     | Pass    |
|           |         | 2480            | 2DH5        | 1   | 1.320                | /     | Pass    |
| 8DPSK     | SISO    | 2402            | 3DH5        | 1   | 1.287                | /     | Pass    |
|           |         | 2441            | 3DH5        | 1   | 1.285                | /     | Pass    |
|           |         | 2480            | 3DH5        | 1   | 1.285                | /     | Pass    |

## 1.2 Test Graph

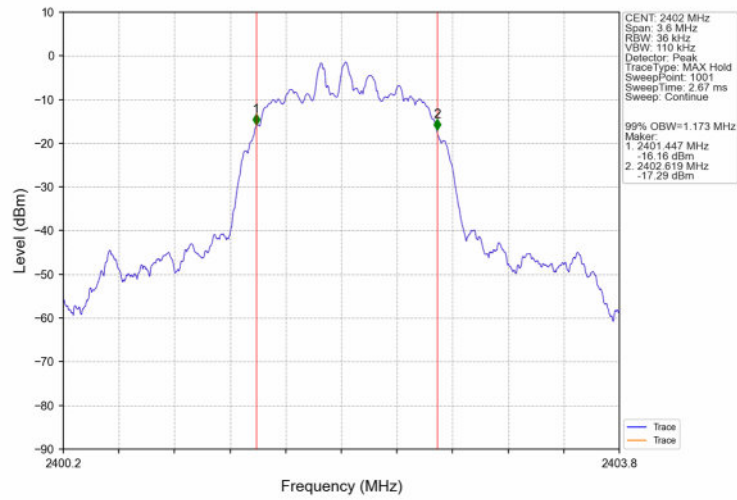
### 1.2.1 OBW



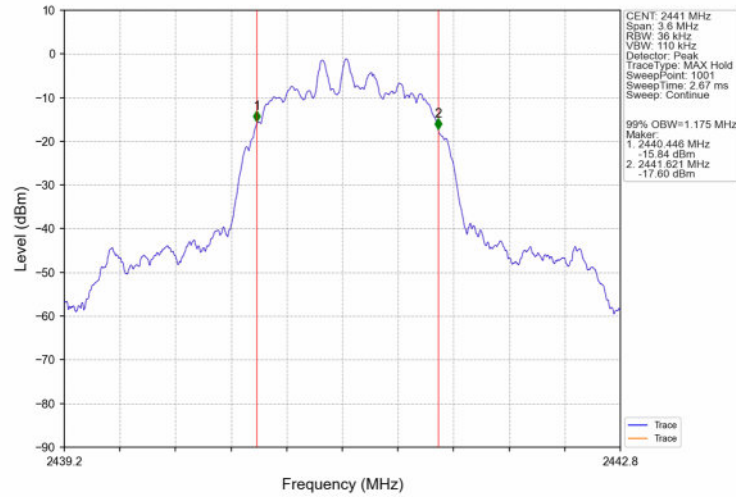
### GFSK\_DH5\_HCH\_2480MHz\_Ant1\_NTNV



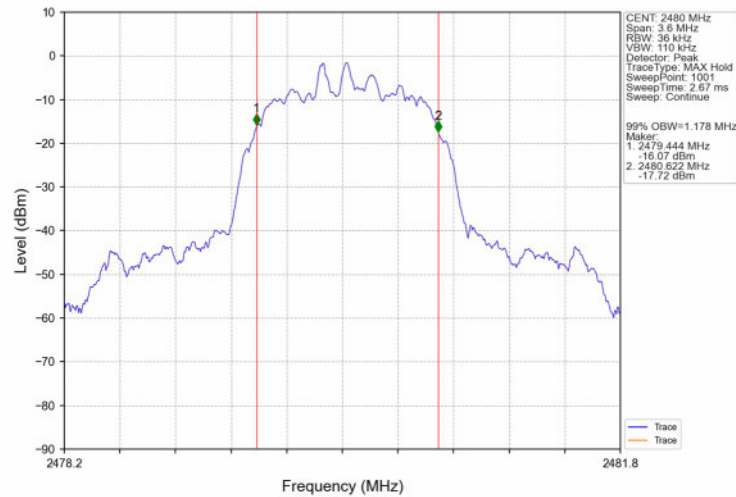
### Pi/4DQPSK\_2DH5\_LCH\_2402MHz\_Ant1\_NTNV



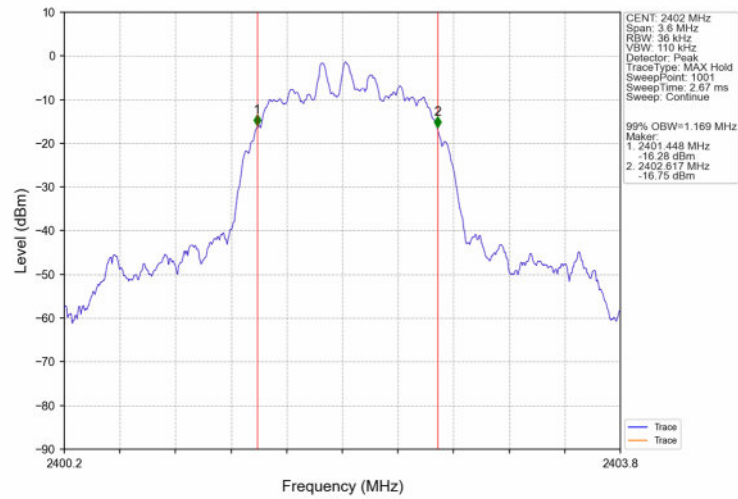
### Pi/4DQPSK\_2DH5\_MCH\_2441MHz\_Ant1\_NTNV



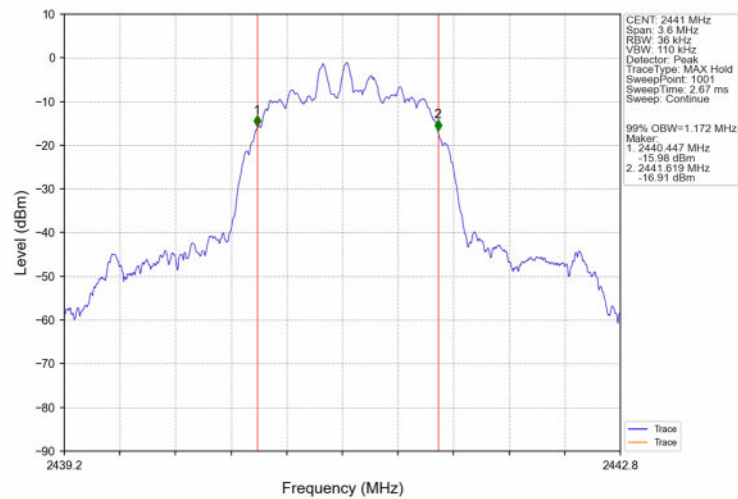
### Pi/4DQPSK\_2DH5\_HCH\_2480MHz\_Ant1\_NTNV



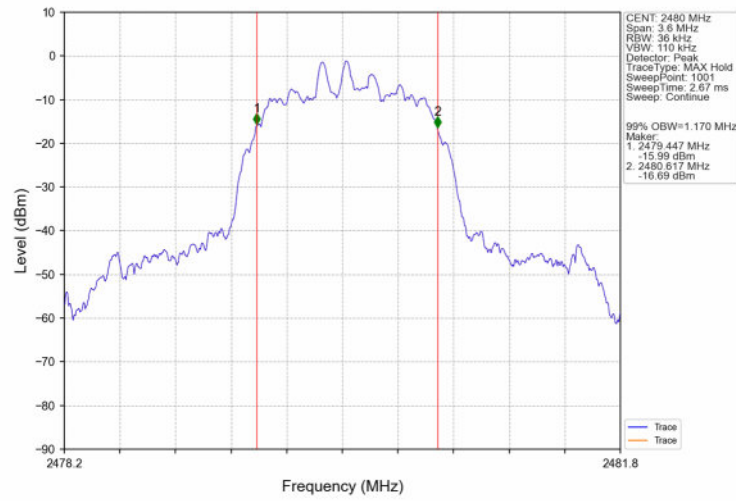
## 8DPSK\_3DH5\_LCH\_2402MHz\_Ant1\_NTNV



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

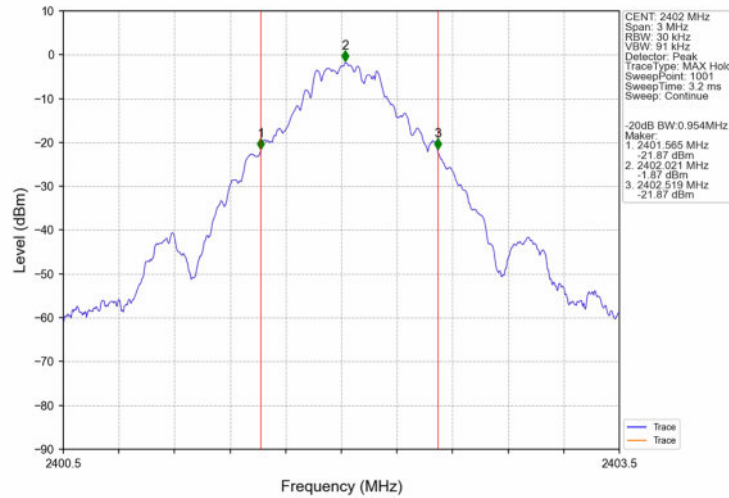


## 8DPSK\_3DH5\_HCH\_2480MHz\_Ant1\_NTNV

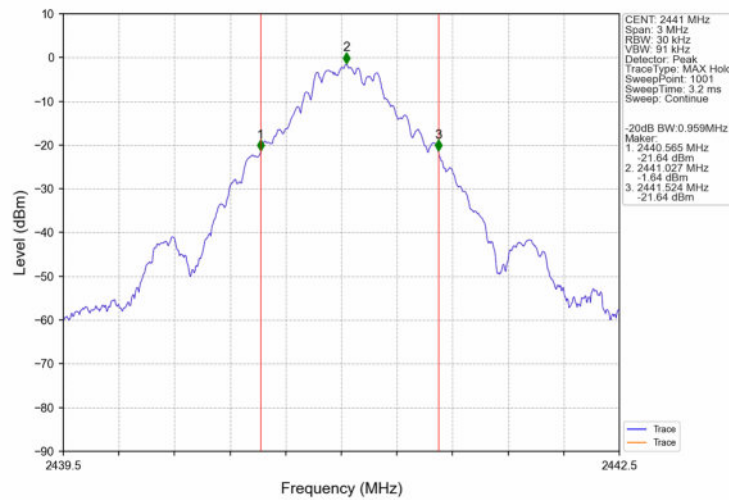


### 1.2.2 20dB BW

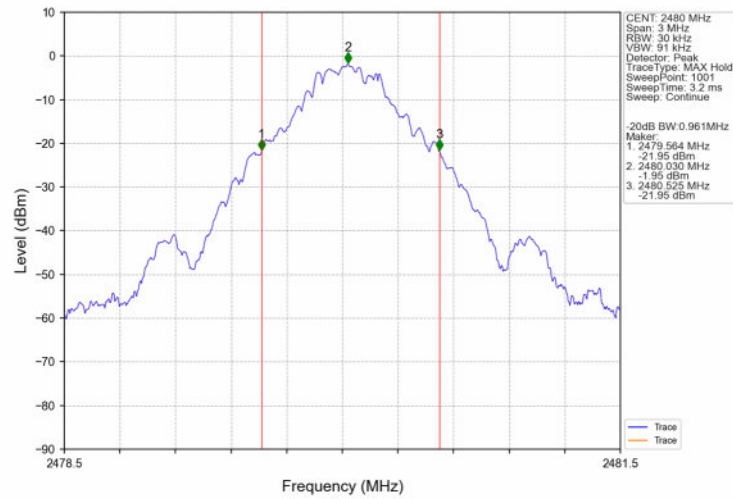
GFSK DH5 LCH 2402MHz Ant1 NTN



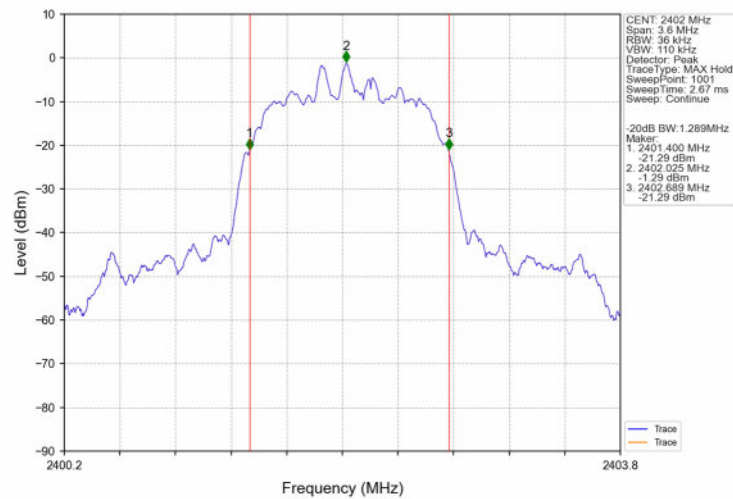
GFSK DH5 MCH 2441MHz Ant1 NTN



## GFSK\_DH5\_HCH\_2480MHz\_Ant1\_NTNV

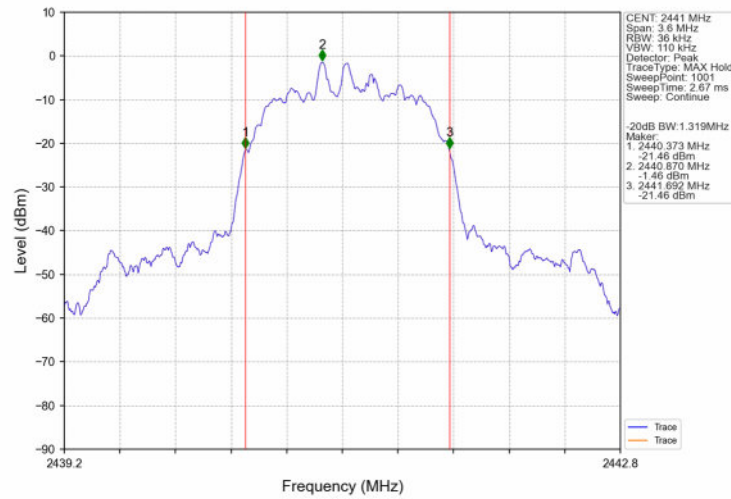


## Pi/4DQPSK\_2DH5\_LCH\_2402MHz\_Ant1\_NTNV

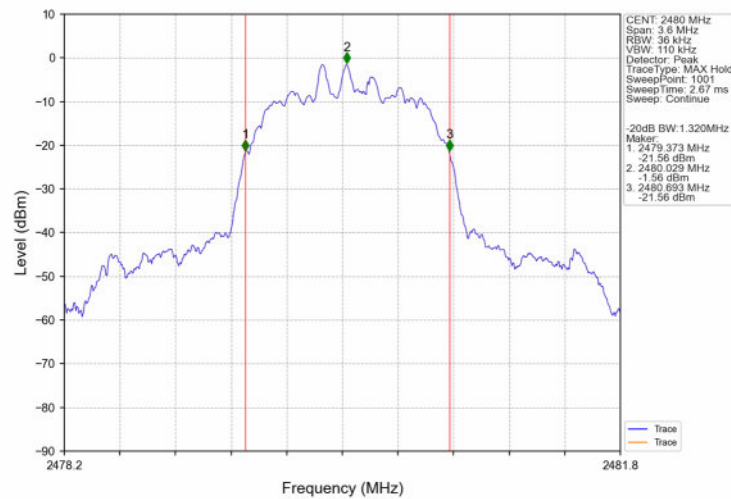




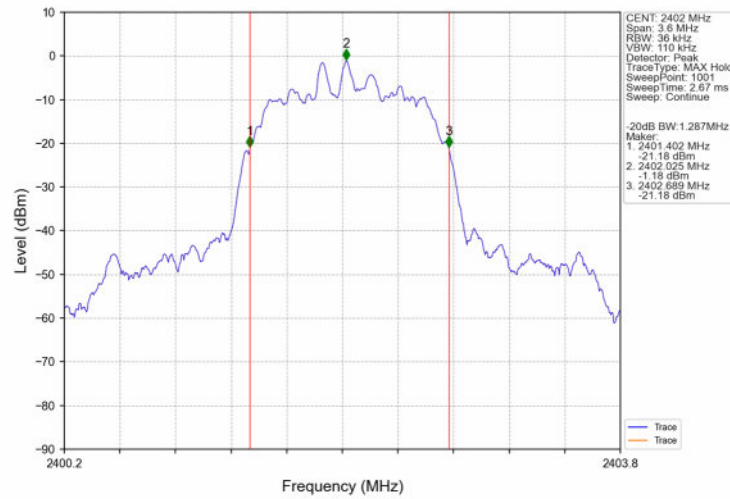
Pi/4DQPSK\_2DH5\_MCH\_2441MHz\_Ant1\_NTNV



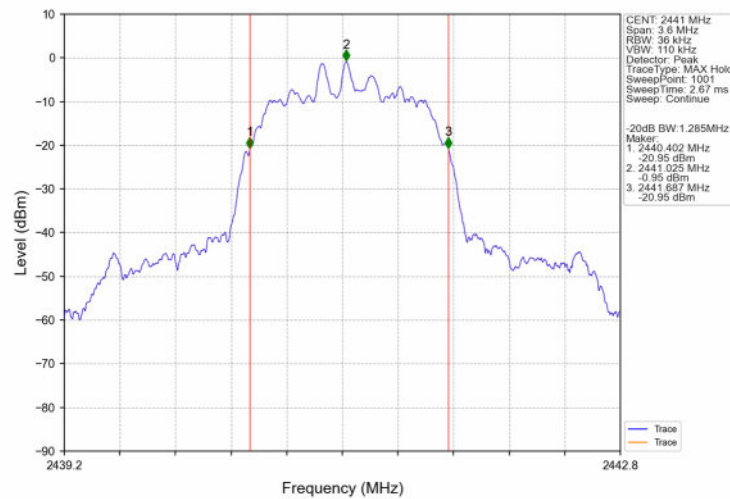
Pi/4DQPSK\_2DH5\_HCH\_2480MHz\_Ant1\_NTNV



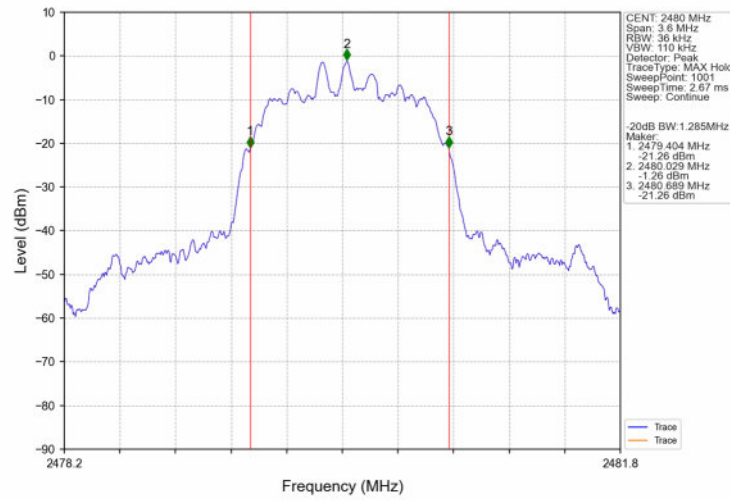
## 8DPSK\_3DH5\_LCH\_2402MHz\_Ant1\_NTNV

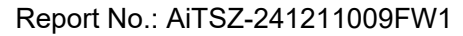


## 8DPSK\_3DH5\_MCH\_2441MHz\_Ant1\_NTNV



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

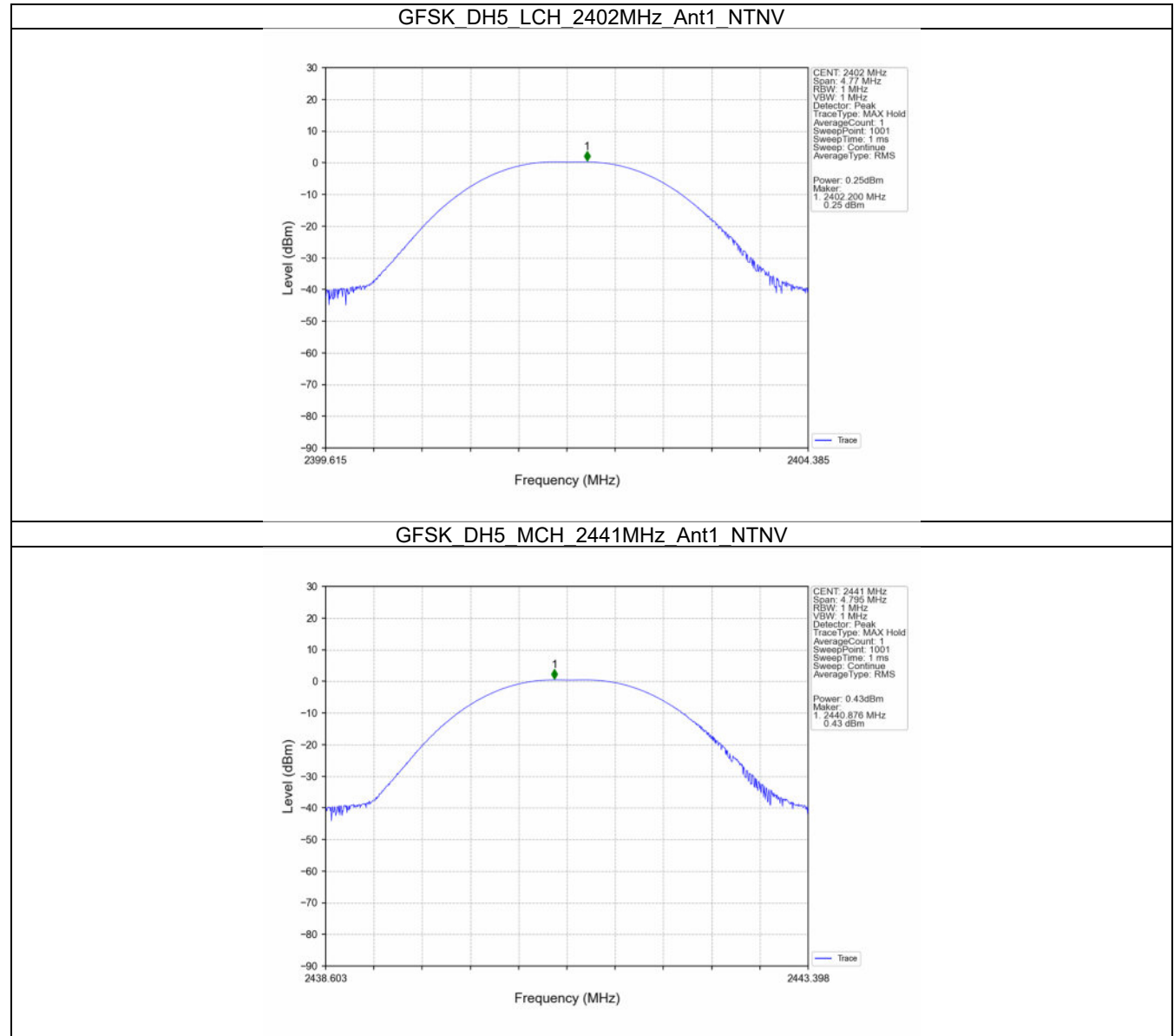




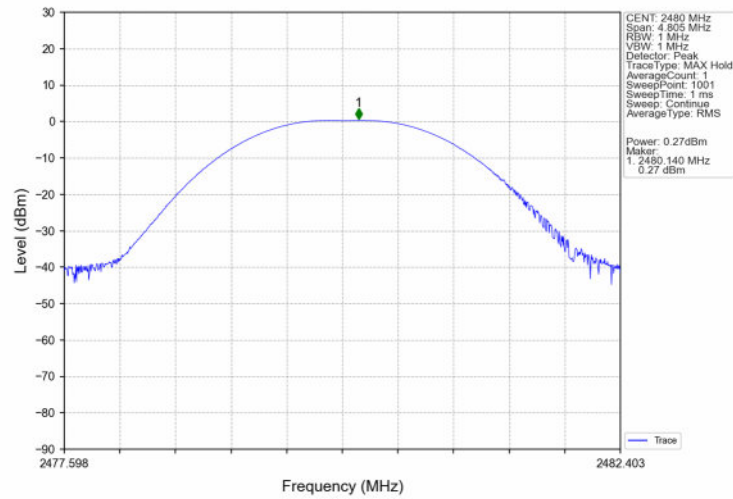
| Mode                               | TX Type | Frequency (MHz) | Packet Type | Maximum Peak Conducted Output Power (dBm) |         | Verdict |
|------------------------------------|---------|-----------------|-------------|-------------------------------------------|---------|---------|
|                                    |         |                 |             | ANT1                                      | Limit   |         |
| GFSK                               | SISO    | 2402            | DH5         | 0.25                                      | <=30    | Pass    |
|                                    |         | 2441            | DH5         | 0.43                                      | <=30    | Pass    |
|                                    |         | 2480            | DH5         | 0.27                                      | <=30    | Pass    |
| Pi/4DQPSK                          | SISO    | 2402            | 2DH5        | 1.16                                      | <=20.97 | Pass    |
|                                    |         | 2441            | 2DH5        | 1.31                                      | <=20.97 | Pass    |
|                                    |         | 2480            | 2DH5        | 1.13                                      | <=20.97 | Pass    |
| 8DPSK                              | SISO    | 2402            | 3DH5        | 1.22                                      | <=20.97 | Pass    |
|                                    |         | 2441            | 3DH5        | 1.40                                      | <=20.97 | Pass    |
|                                    |         | 2480            | 3DH5        | 1.24                                      | <=20.97 | Pass    |
| Note1: Antenna Gain: Ant1:2.07dBi; |         |                 |             |                                           |         |         |

## 2.2 Test Graph

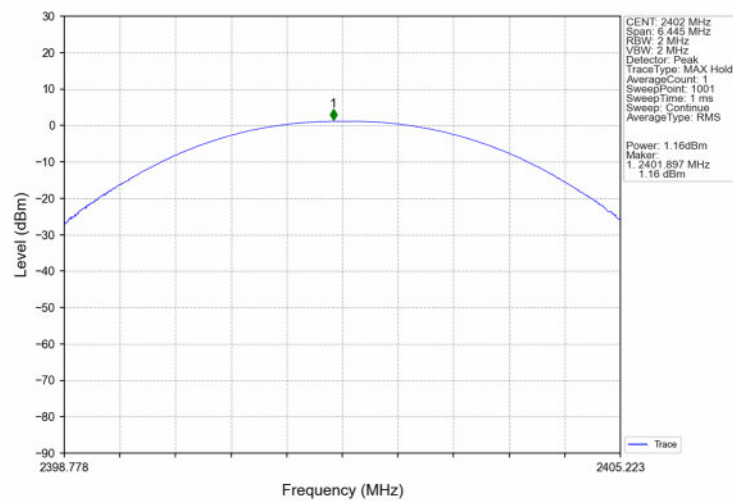
### 2.2.1 Power



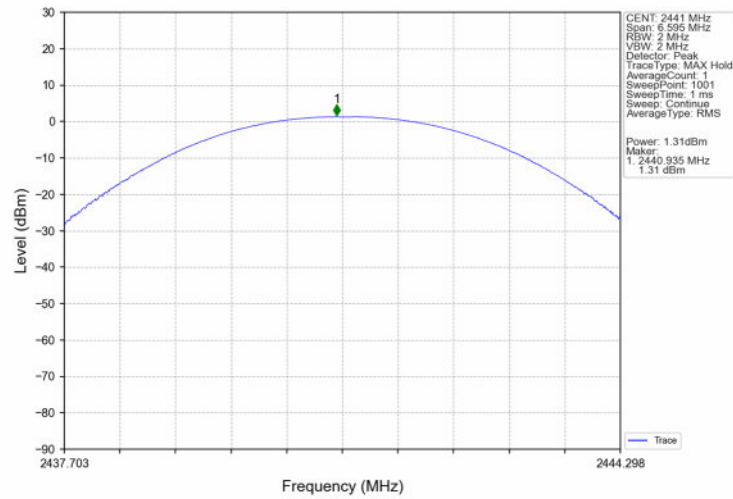
### GFSK\_DH5\_HCH\_2480MHz\_Ant1\_NTNV



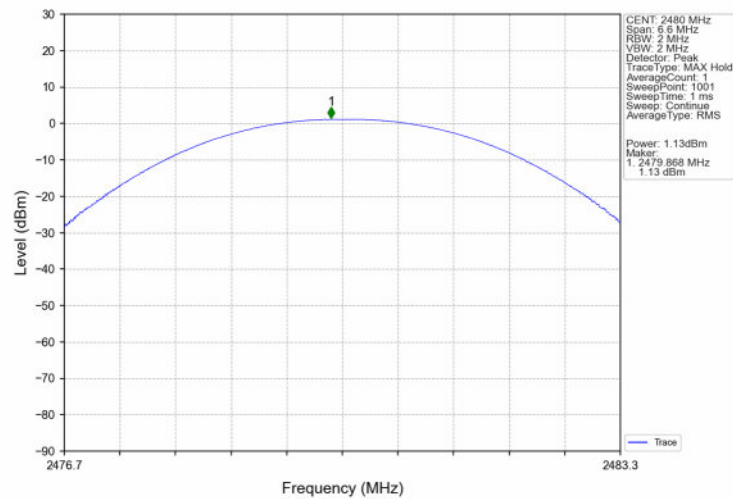
### Pi/4DQPSK\_2DH5\_LCH\_2402MHz\_Ant1\_NTNV



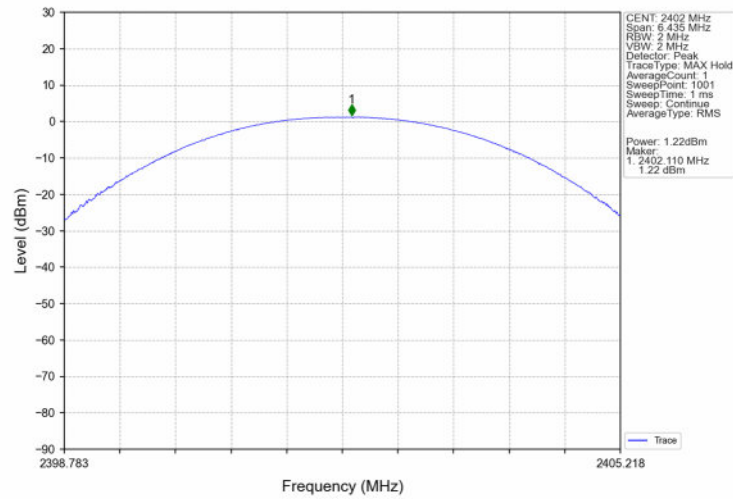
Pi/4DQPSK\_2DH5\_MCH\_2441MHz\_Ant1\_NTNV



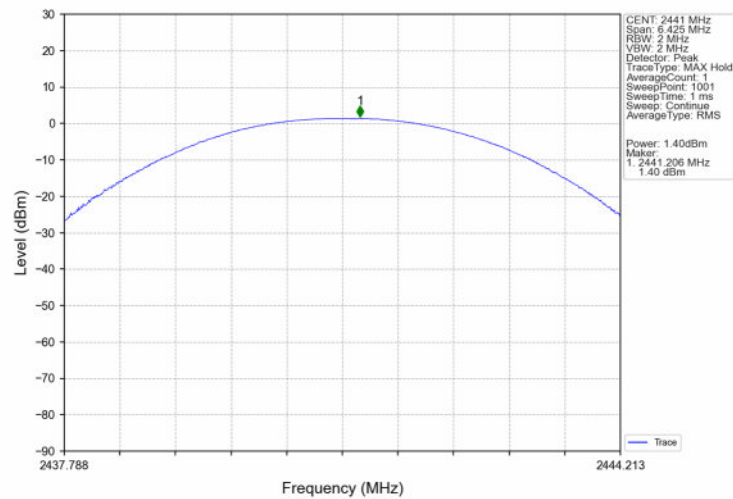
Pi/4DQPSK\_2DH5\_HCH\_2480MHz\_Ant1\_NTNV



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

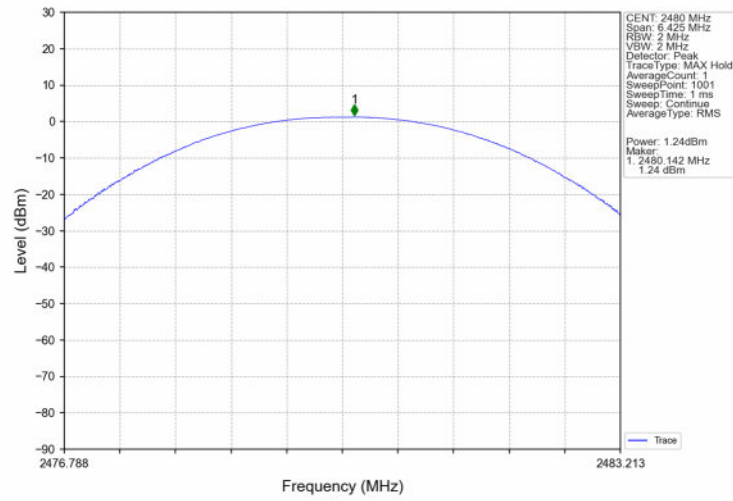


## 8DPSK\_3DH5\_MCH\_2441MHz\_Ant1\_NTNV





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



### 3. Carrier Frequency Separation

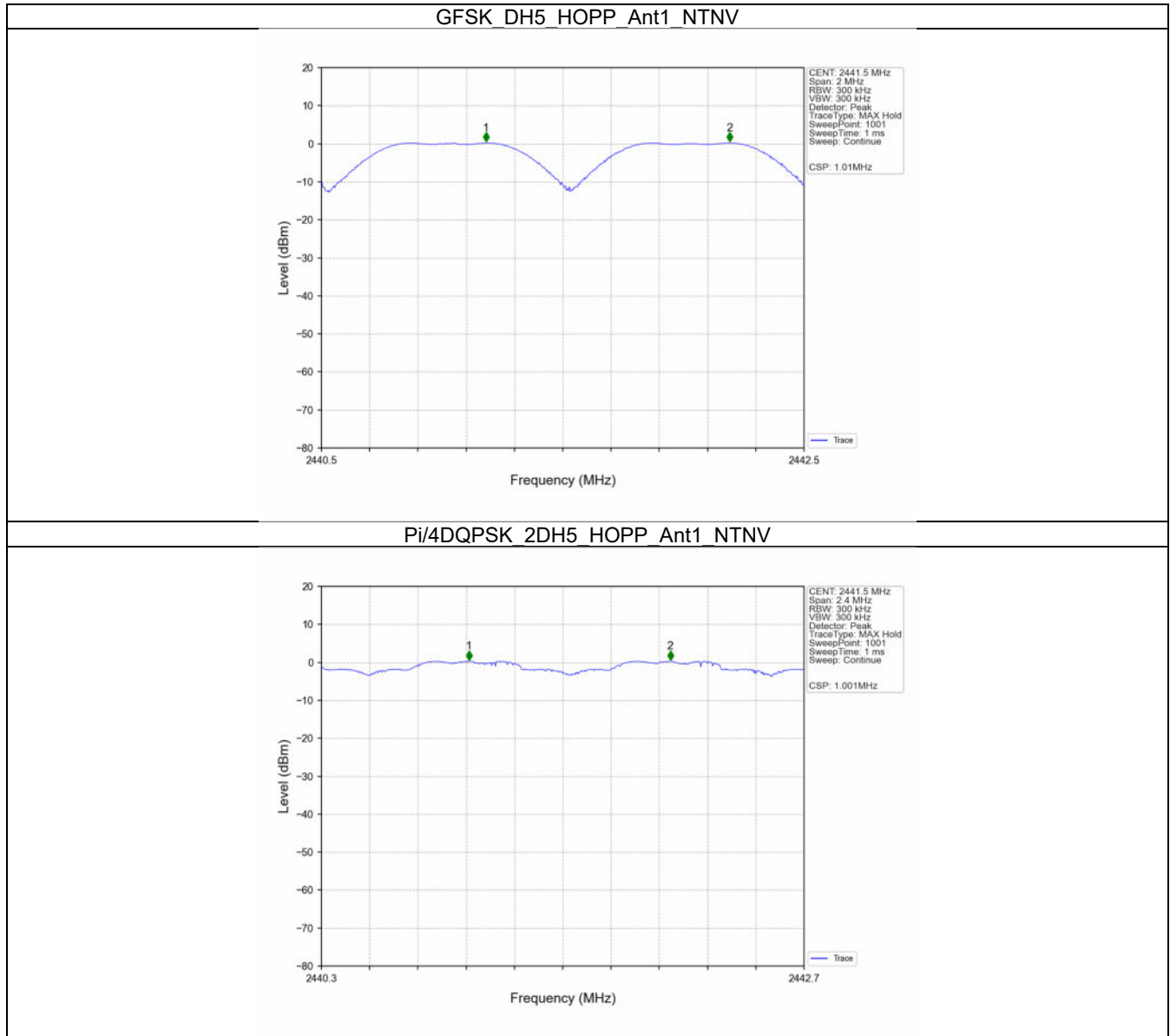
#### 3.1 Test Result

##### 3.1.1 Ant1

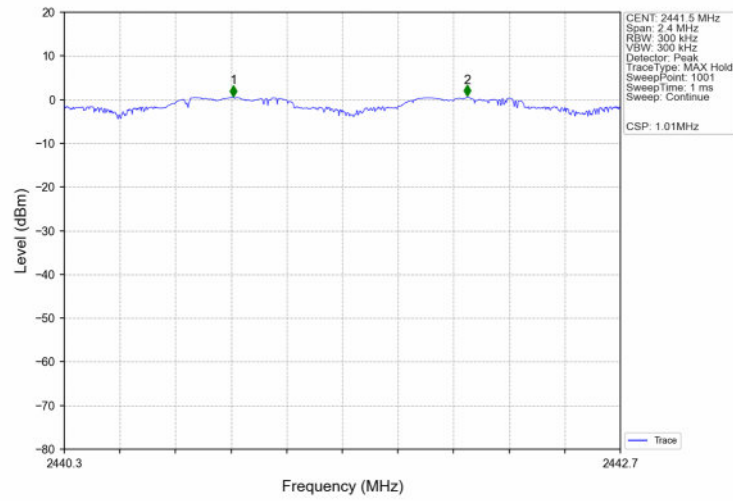
| Ant1      |         |                 |             |                          |                      |              |         |
|-----------|---------|-----------------|-------------|--------------------------|----------------------|--------------|---------|
| Mode      | TX Type | Frequency (MHz) | Packet Type | Channel Separation (MHz) | 20dB Bandwidth (MHz) | Limit (MHz)  | Verdict |
| GFSK      | SISO    | HOPP            | DH5         | 1.010                    | 0.961                | $\geq 0.961$ | Pass    |
| Pi/4DQPSK | SISO    | HOPP            | 2DH5        | 1.001                    | 1.320                | $\geq 0.88$  | Pass    |
| 8DPSK     | SISO    | HOPP            | 3DH5        | 1.010                    | 1.287                | $\geq 0.858$ | Pass    |

## 3.2 Test Graph

### 3.2.1 Ant1



### 8DPSK\_3DH5\_HOPP\_Ant1\_NTNV



## 4. Number of Hopping Frequencies

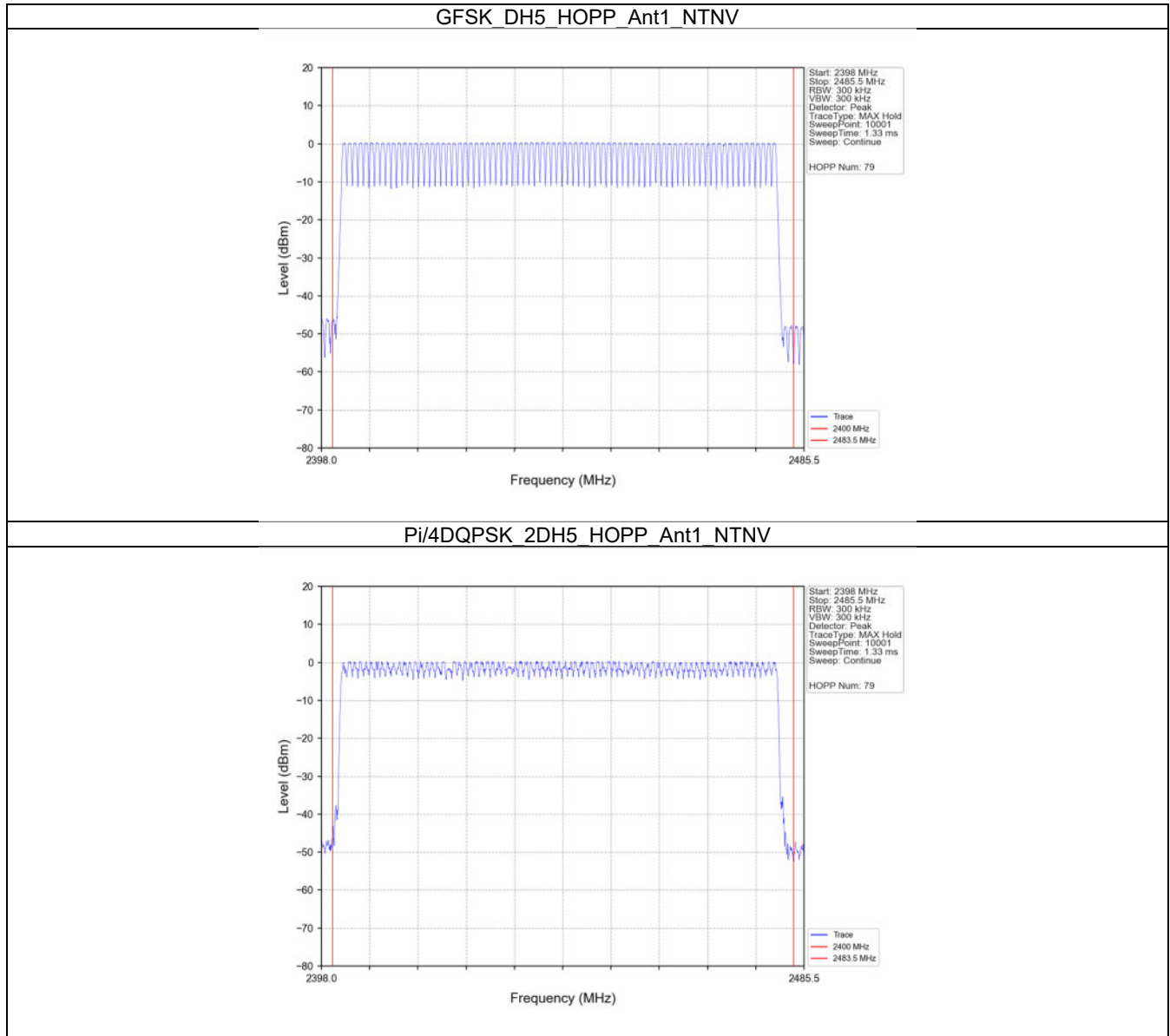
### 4.1 Test Result

#### 4.1.1 HoppNum

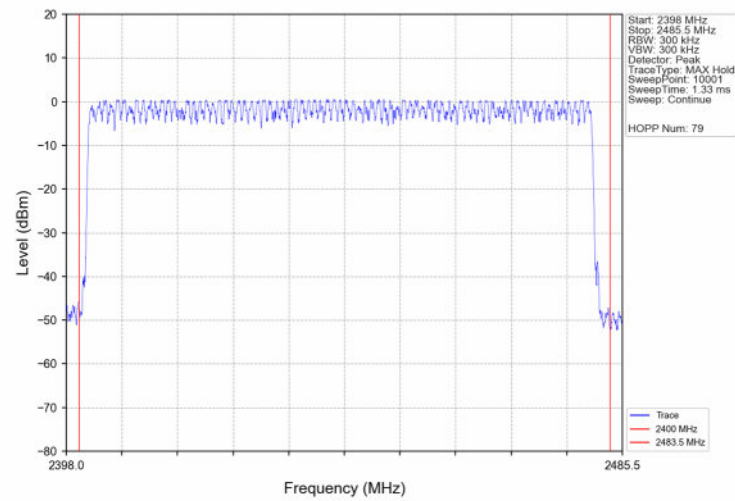
| Mode      | TX Type | Frequency (MHz) | Packet Type | Num of Hopping Frequencies |           | Verdict |
|-----------|---------|-----------------|-------------|----------------------------|-----------|---------|
|           |         |                 |             | ANT1                       | Limit     |         |
| 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    |

## 4.2 Test Graph

### 4.2.1 HoppNum



### 8DPSK\_3DH5\_HOPP\_Ant1\_NTNV



## 5. Time of Occupancy (Dwell Time)

### 5.1 Test Result

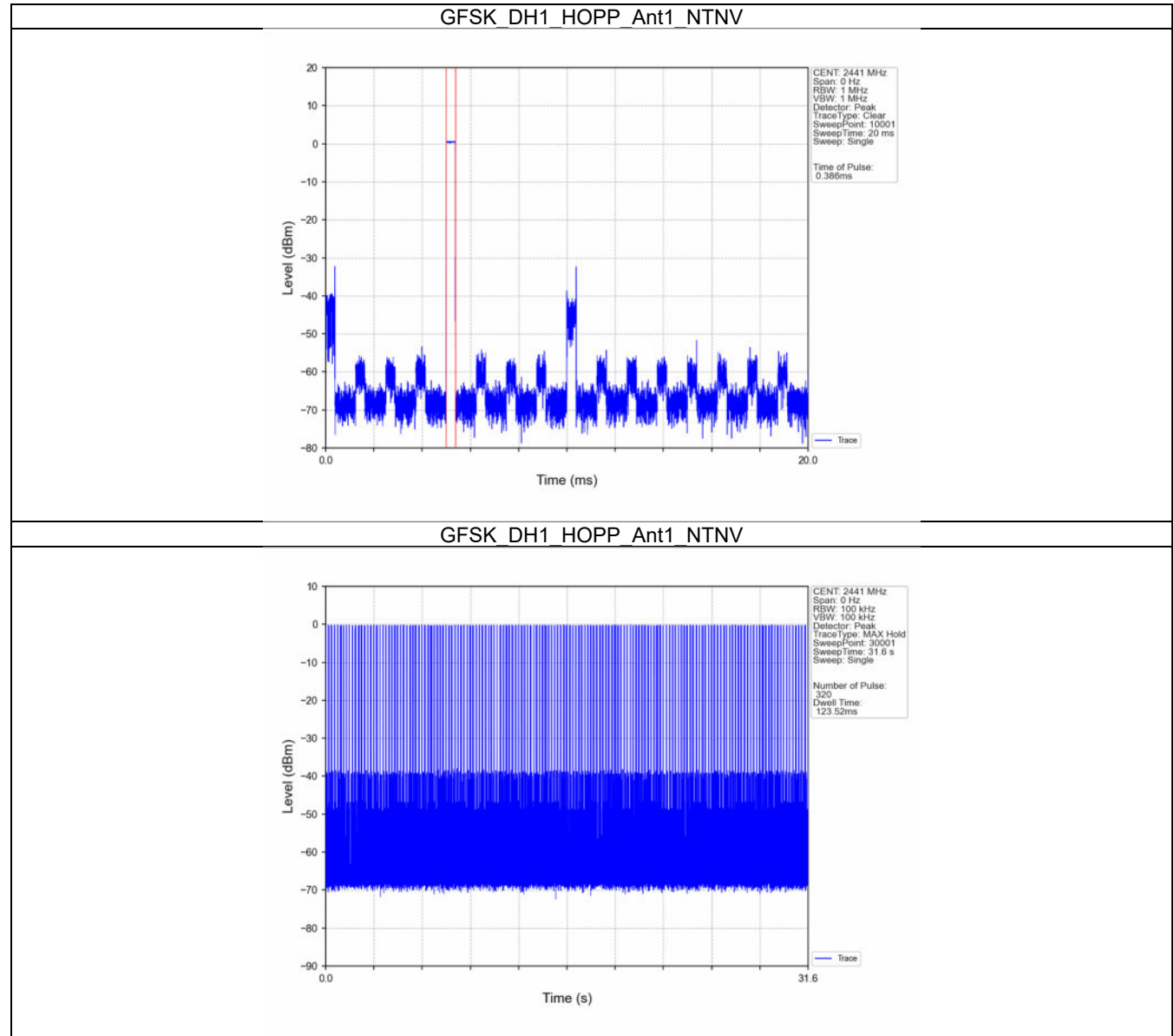
#### 5.1.1 Ant1

| 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         | 0.386                         | 31.600                 | 320                                | 123.520         | <=400      | Pass    |
|           |         |                 | DH3         | 1.642                         | 31.600                 | 163                                | 267.646         | <=400      | Pass    |
|           |         |                 | DH5         | 2.896                         | 31.600                 | 117                                | 338.832         | <=400      | Pass    |
| Pi/4DQPSK | SISO    | HOPP            | 2DH1        | 0.396                         | 31.600                 | 320                                | 126.720         | <=400      | Pass    |
|           |         |                 | 2DH3        | 1.648                         | 31.600                 | 151                                | 248.848         | <=400      | Pass    |
|           |         |                 | 2DH5        | 2.904                         | 31.600                 | 109                                | 316.536         | <=400      | Pass    |
| 8DPSK     | SISO    | HOPP            | 3DH1        | 0.390                         | 31.600                 | 318                                | 124.020         | <=400      | Pass    |
|           |         |                 | 3DH3        | 1.646                         | 31.600                 | 160                                | 263.360         | <=400      | Pass    |
|           |         |                 | 3DH5        | 2.898                         | 31.600                 | 105                                | 304.290         | <=400      | Pass    |

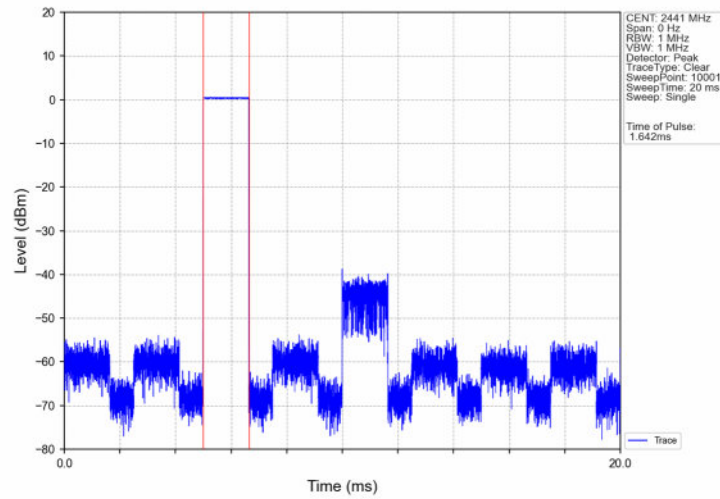


## 5.2 Test Graph

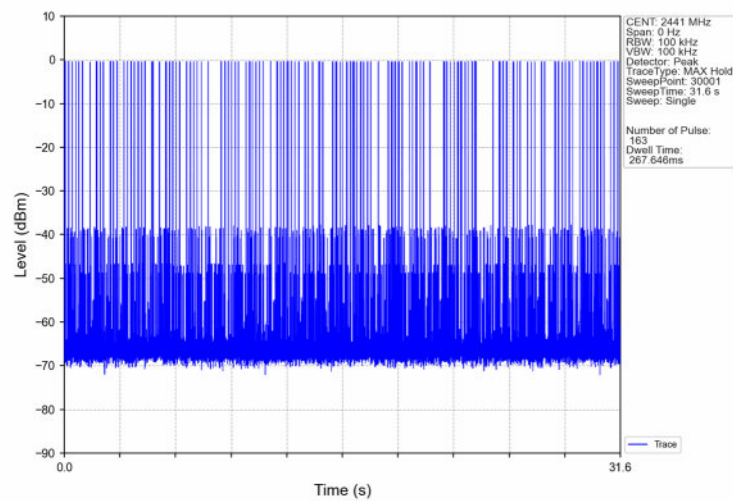
### 5.2.1 Ant1



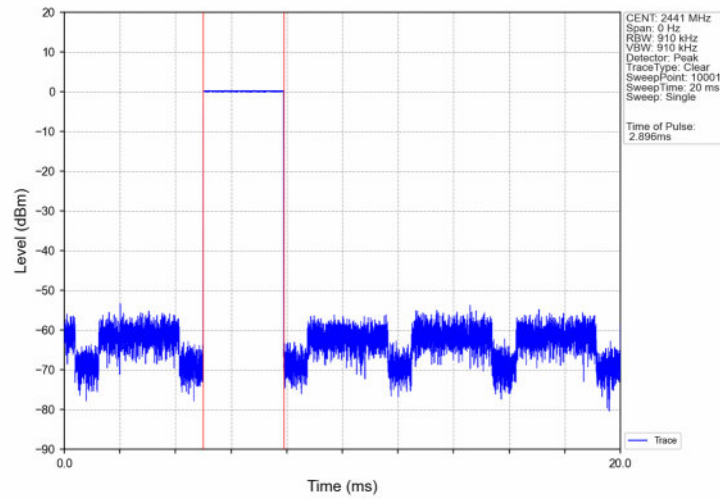
### GFSK\_DH3\_HOPP\_Ant1\_NTNV



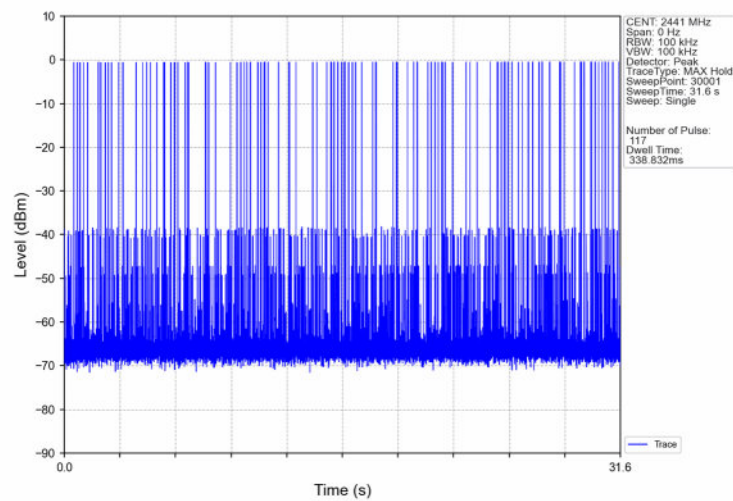
### GFSK\_DH3\_HOPP\_Ant1\_NTNV



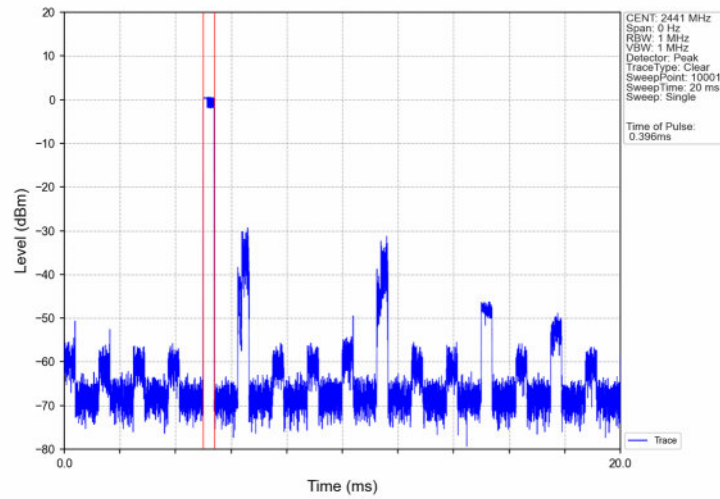
### GFSK\_DH5\_HOPP\_Ant1\_NTNV



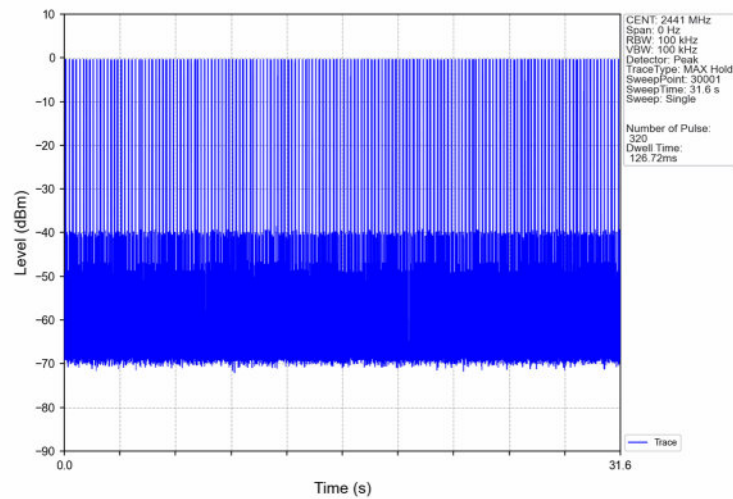
### GFSK\_DH5\_HOPP\_Ant1\_NTNV



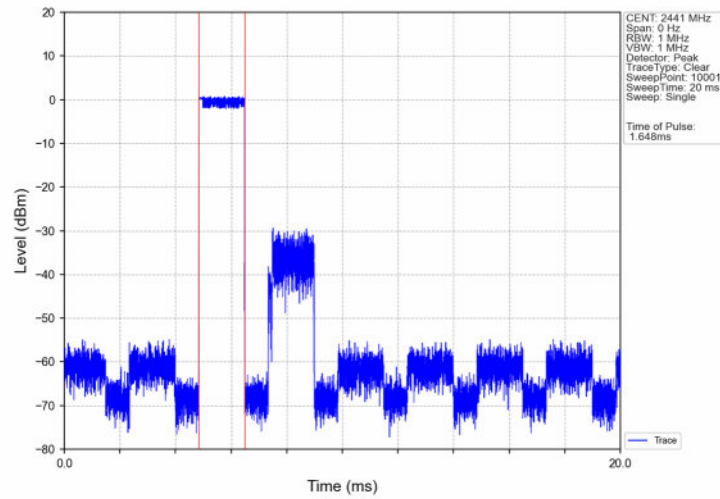
### Pi/4DQPSK\_2DH1\_HOPP\_Ant1\_NTNV



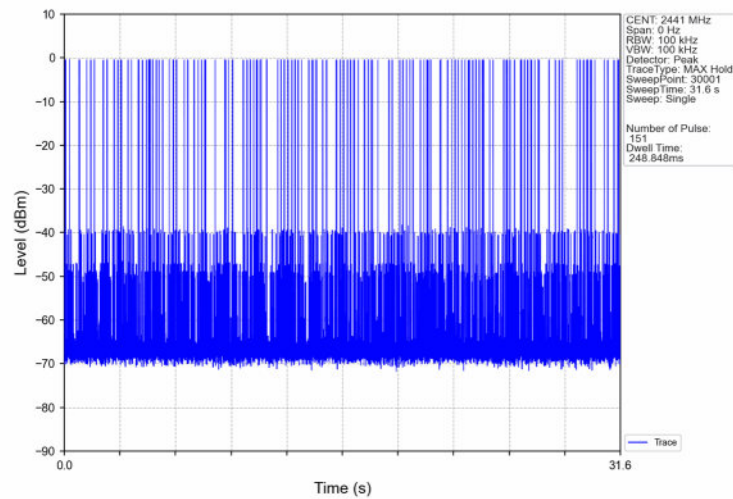
### Pi/4DQPSK\_2DH1\_HOPP\_Ant1\_NTNV



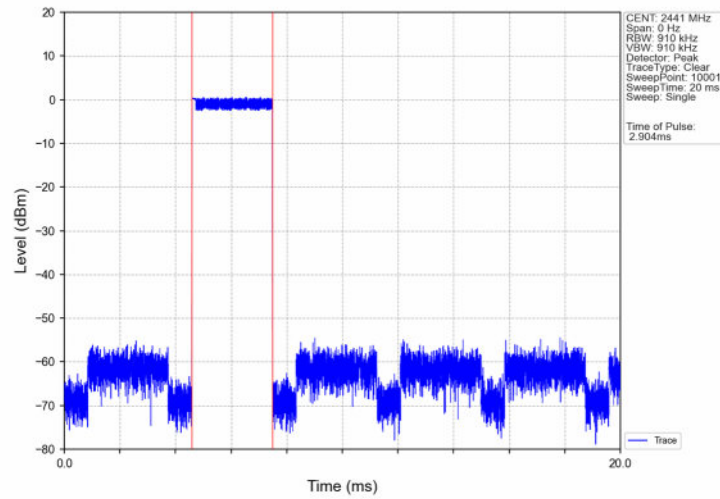
Pi/4DQPSK\_2DH3\_HOPP\_Ant1\_NTNV



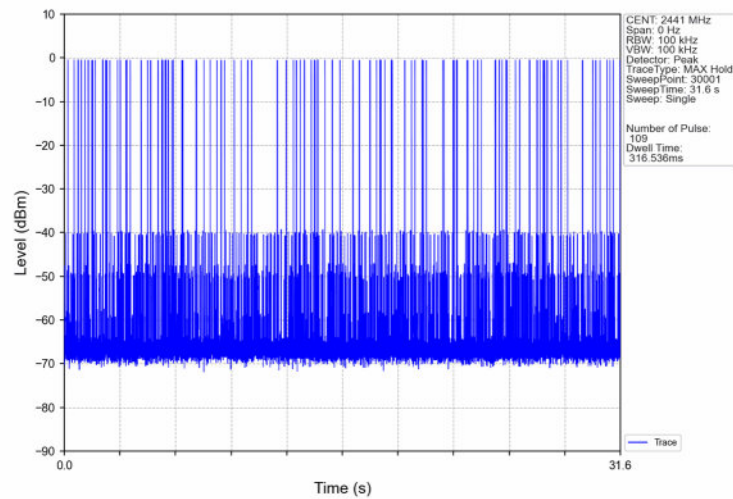
Pi/4DQPSK\_2DH3\_HOPP\_Ant1\_NTNV



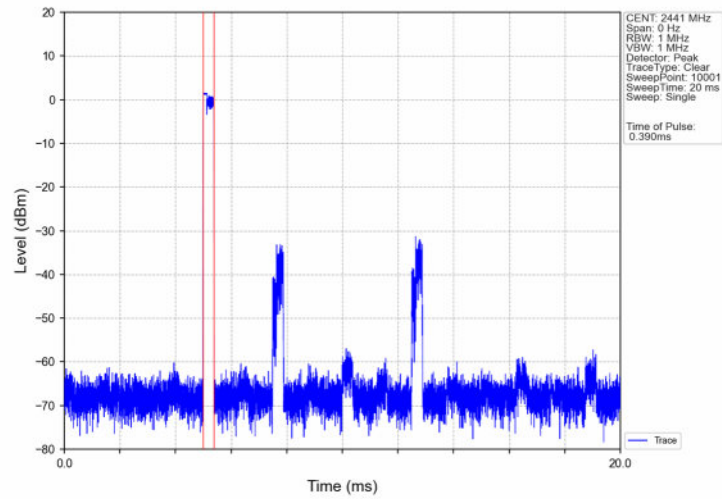
### Pi/4DQPSK\_2DH5\_HOPP\_Ant1\_NTNV



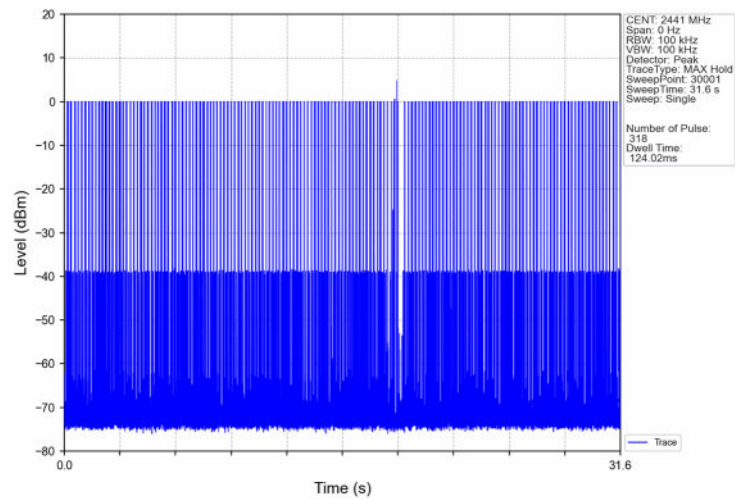
### Pi/4DQPSK\_2DH5\_HOPP\_Ant1\_NTNV



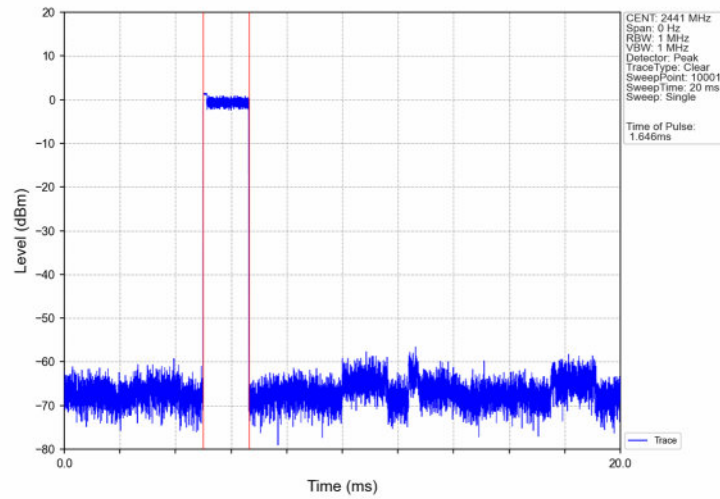
## 8DPSK\_3DH1\_HOPP\_Ant1\_NTNV



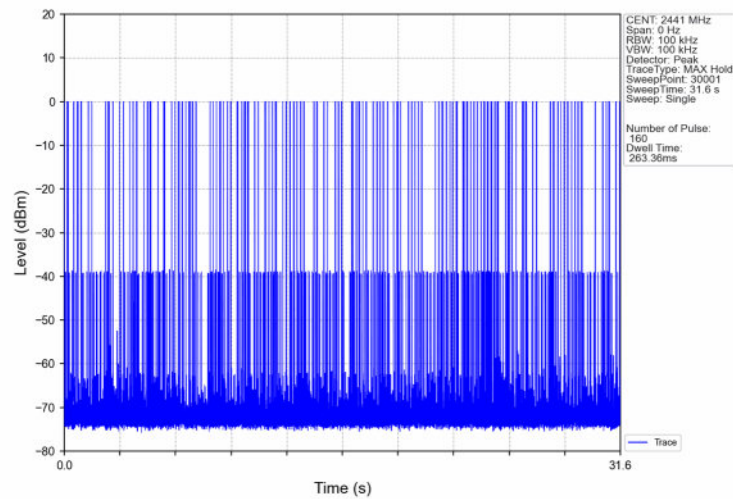
## 8DPSK\_3DH1\_HOPP\_Ant1\_NTNV



## 8DPSK\_3DH3\_HOPP\_Ant1\_NTNV

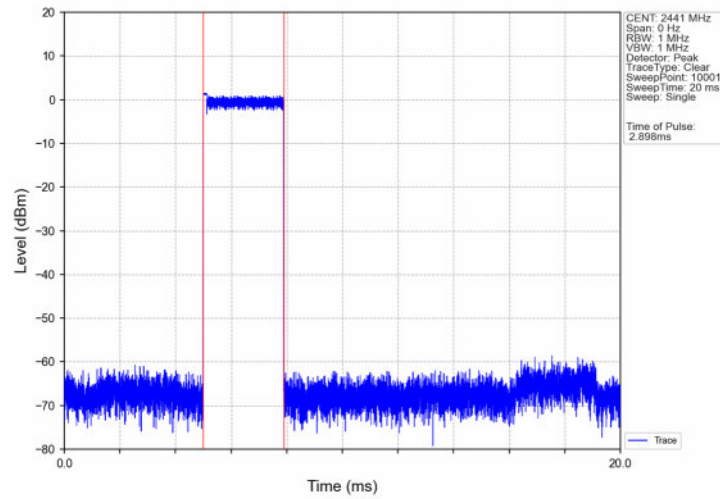


## 8DPSK\_3DH3\_HOPP\_Ant1\_NTNV

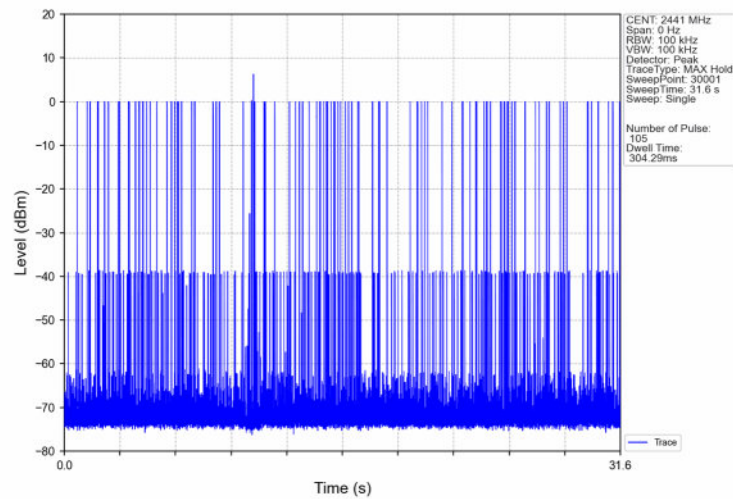




## 8DPSK\_3DH5\_HOPP\_Ant1\_NTNV



## 8DPSK\_3DH5\_HOPP\_Ant1\_NTNV



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

### 6.1 Test Result

#### 6.1.1 Ref

| Mode      | TX Type | Frequency (MHz) | Packet Type | ANT | Level of Reference (dBm) |
|-----------|---------|-----------------|-------------|-----|--------------------------|
| GFSK      | SISO    | 2402            | DH5         | 1   | -0.02                    |
|           |         | 2441            | DH5         | 1   | 0.17                     |
|           |         | 2480            | DH5         | 1   | -0.04                    |
|           |         | HOPP            | DH5         | 1   | 0.24                     |
|           |         |                 |             |     | 0.24                     |
| Pi/4DQPSK | SISO    | 2402            | 2DH5        | 1   | 0.06                     |
|           |         | 2441            | 2DH5        | 1   | 0.22                     |
|           |         | 2480            | 2DH5        | 1   | 0.01                     |
|           |         | HOPP            | 2DH5        | 1   | 0.22                     |
|           |         |                 |             |     | 0.22                     |
| 8DPSK     | SISO    | 2402            | 3DH5        | 1   | 0.14                     |
|           |         | 2441            | 3DH5        | 1   | 0.30                     |
|           |         | 2480            | 3DH5        | 1   | 0.15                     |
|           |         | HOPP            | 3DH5        | 1   | 0.41                     |
|           |         |                 |             |     | 0.41                     |

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.

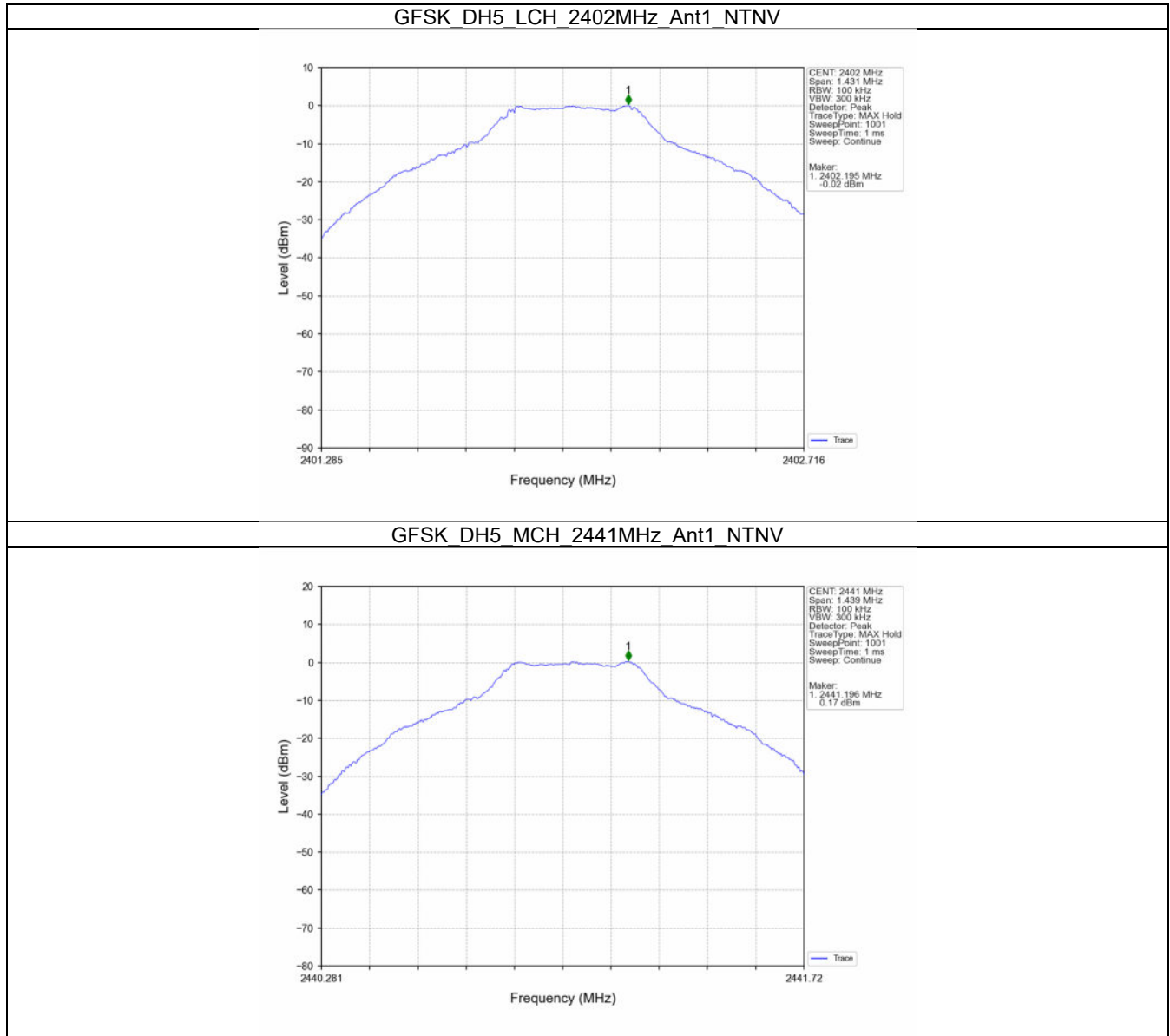
#### 6.1.2 CSE

| Mode      | TX Type | Frequency (MHz) | Packet Type | ANT | Level of Reference (dBm) | Limit (dBm) | Verdict |
|-----------|---------|-----------------|-------------|-----|--------------------------|-------------|---------|
| GFSK      | SISO    | 2402            | DH5         | 1   | -0.02                    | -20.02      | Pass    |
|           |         | 2441            | DH5         | 1   | 0.17                     | -19.83      | Pass    |
|           |         | 2480            | DH5         | 1   | -0.04                    | -20.04      | Pass    |
|           |         | HOPP            | DH5         | 1   | 0.24                     | -19.76      | Pass    |
|           |         |                 |             |     | 0.24                     | -19.76      | Pass    |
| Pi/4DQPSK | SISO    | 2402            | 2DH5        | 1   | 0.06                     | -19.94      | Pass    |
|           |         | 2441            | 2DH5        | 1   | 0.22                     | -19.78      | Pass    |
|           |         | 2480            | 2DH5        | 1   | 0.01                     | -19.99      | Pass    |
|           |         | HOPP            | 2DH5        | 1   | 0.22                     | -19.78      | Pass    |
|           |         |                 |             |     | 0.22                     | -19.78      | Pass    |
| 8DPSK     | SISO    | 2402            | 3DH5        | 1   | 0.14                     | -19.86      | Pass    |
|           |         | 2441            | 3DH5        | 1   | 0.30                     | -19.70      | Pass    |
|           |         | 2480            | 3DH5        | 1   | 0.15                     | -19.85      | Pass    |
|           |         | HOPP            | 3DH5        | 1   | 0.41                     | -19.59      | Pass    |
|           |         |                 |             |     | 0.41                     | -19.59      | Pass    |

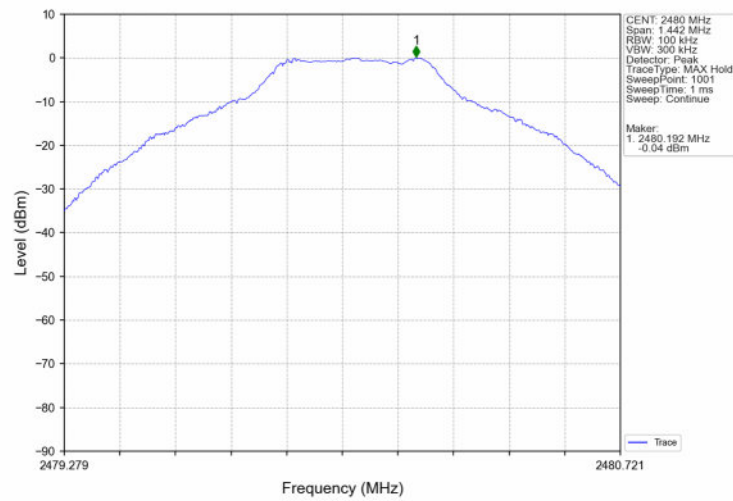
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.

## 6.2 Test Graph

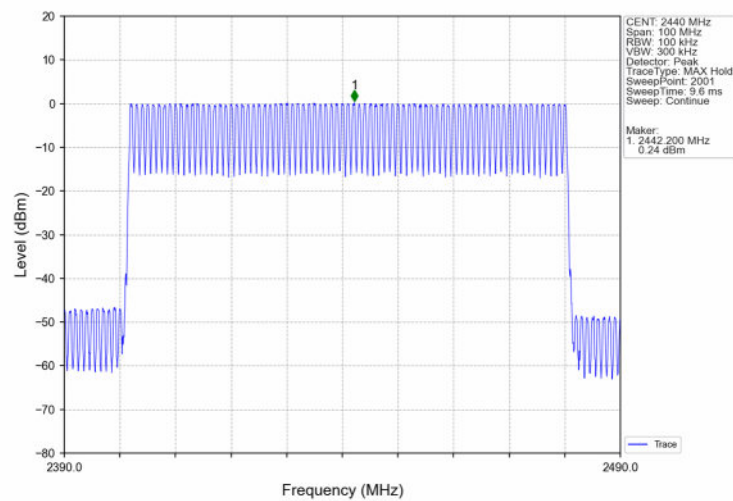
### 6.2.1 Ref



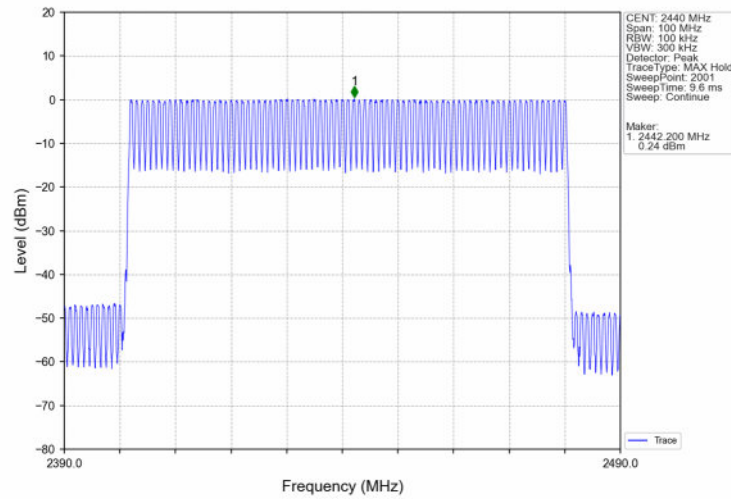
### GFSK\_DH5\_HCH\_2480MHz\_Ant1\_NTNV



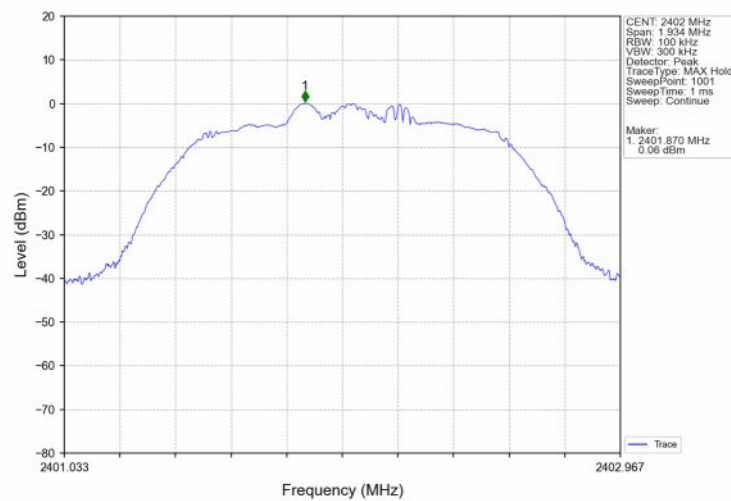
### GFSK\_DH5\_HOPP\_Ant1\_NTNV



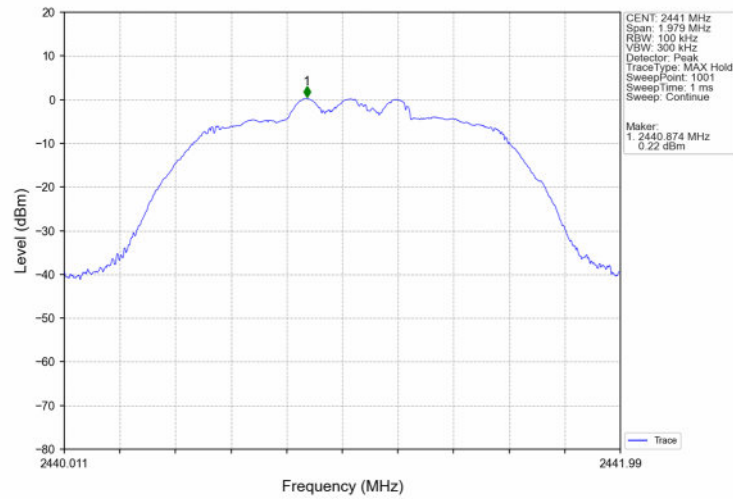
## GFSK\_DH5\_HOPP\_Ant1\_NTNV



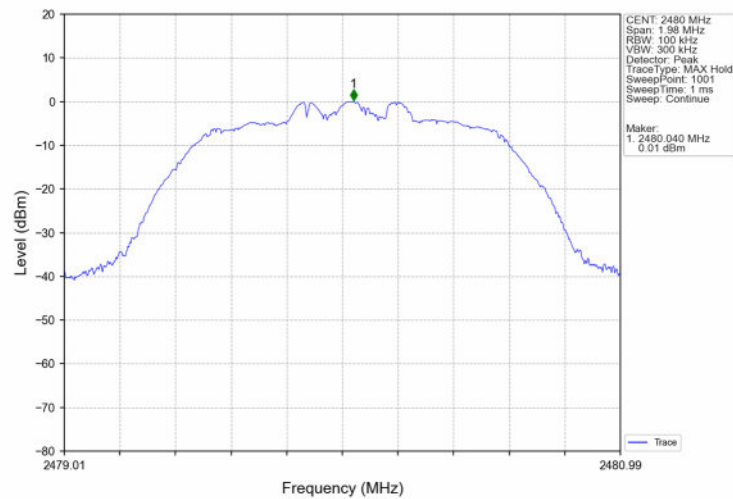
## Pi/4DQPSK\_2DH5\_LCH\_2402MHz\_Ant1\_NTNV



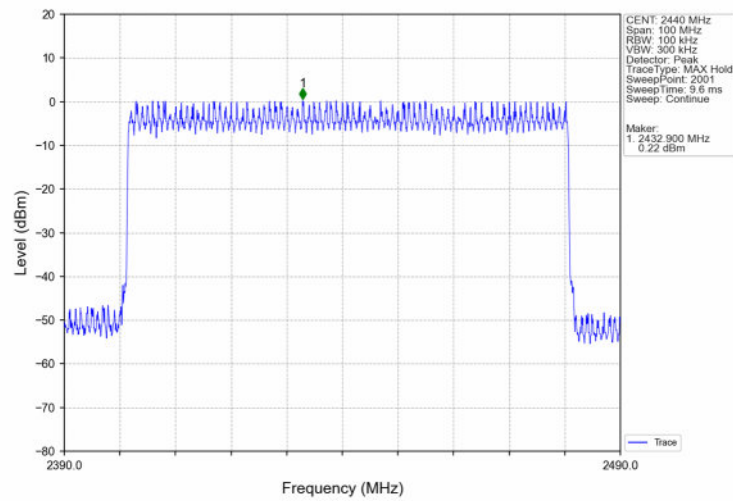
Pi/4DQPSK\_2DH5\_MCH\_2441MHz\_Ant1\_NTNV



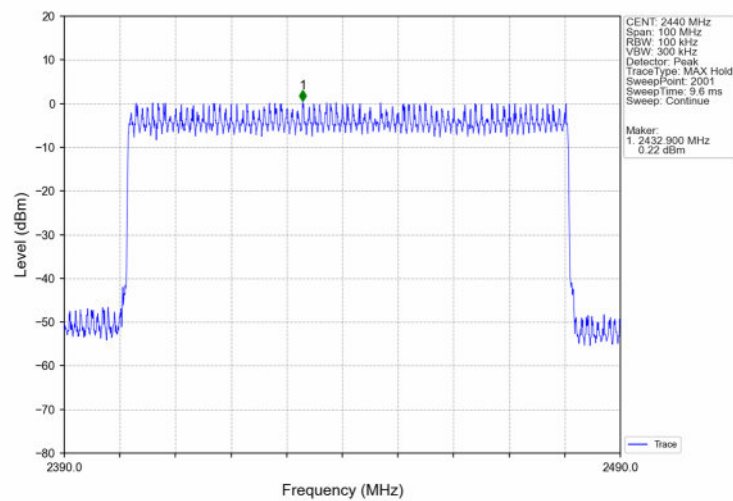
Pi/4DQPSK\_2DH5\_HCH\_2480MHz\_Ant1\_NTNV



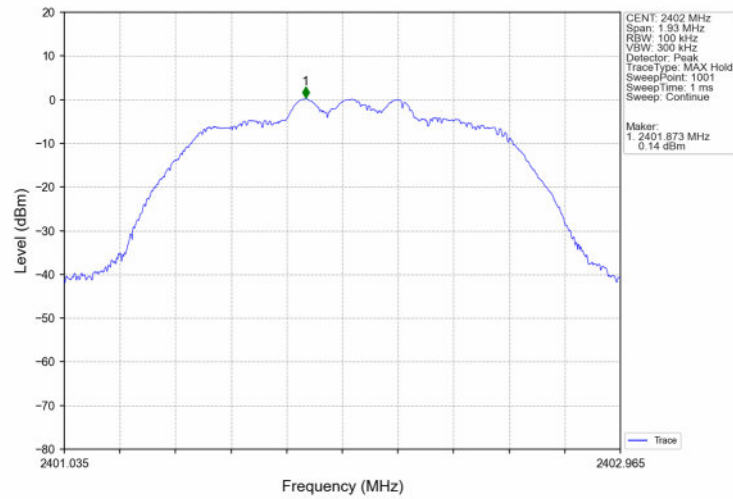
Pi/4DQPSK\_2DH5\_HOPP\_Ant1\_NTNV



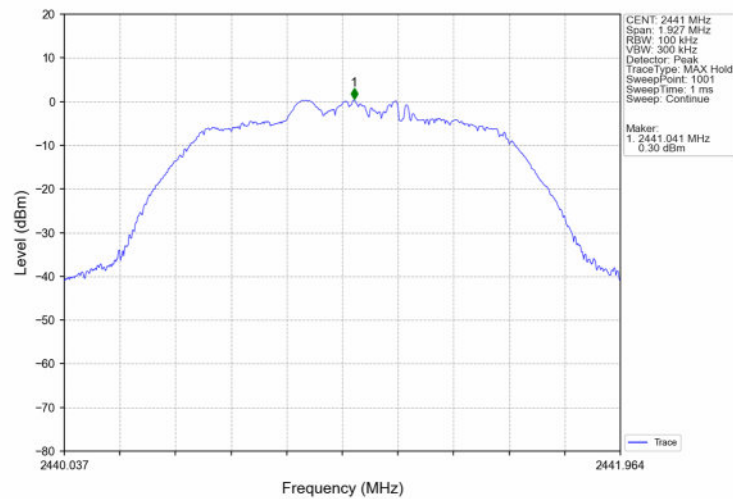
Pi/4DQPSK\_2DH5\_HOPP\_Ant1\_NTNV



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

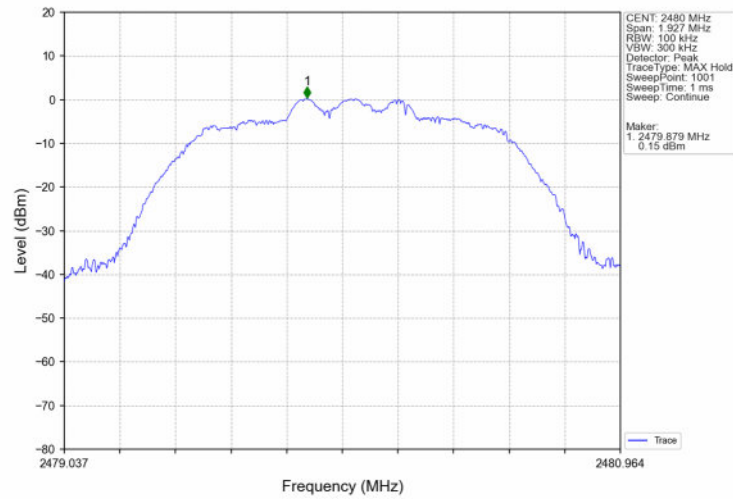


## 8DPSK\_3DH5\_MCH\_2441MHz\_Ant1\_NTNV

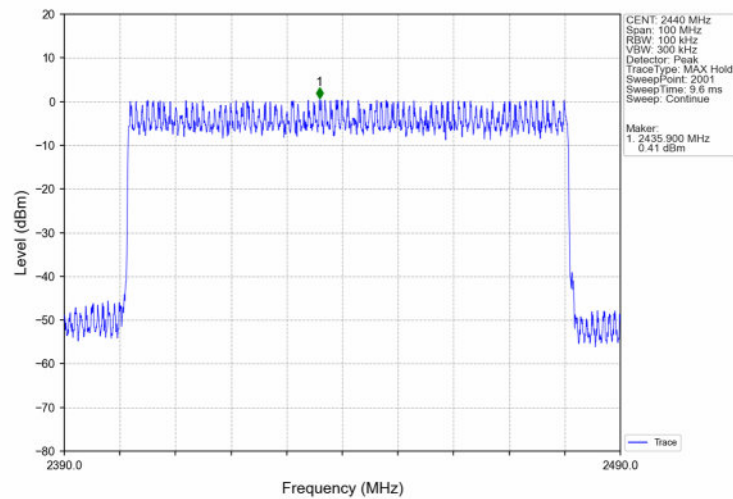




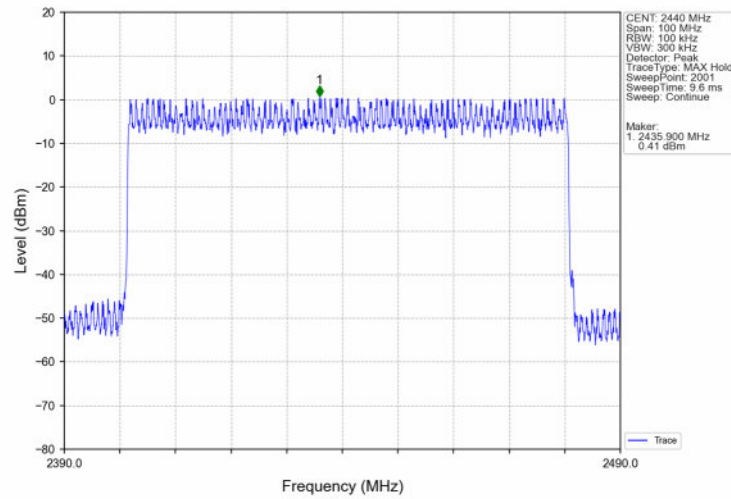
## 8DPSK\_3DH5\_HCH\_2480MHz\_Ant1\_NTNV



## 8DPSK\_3DH5\_HOPP\_Ant1\_NTNV

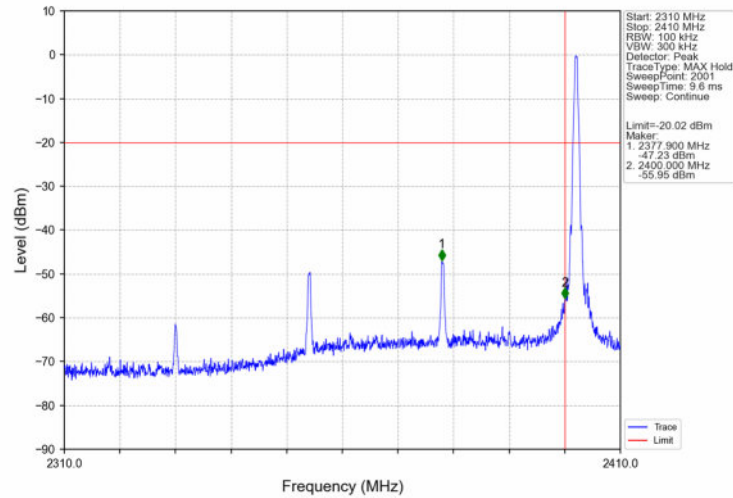


## 8DPSK\_3DH5\_HOPP\_Ant1\_NTNV

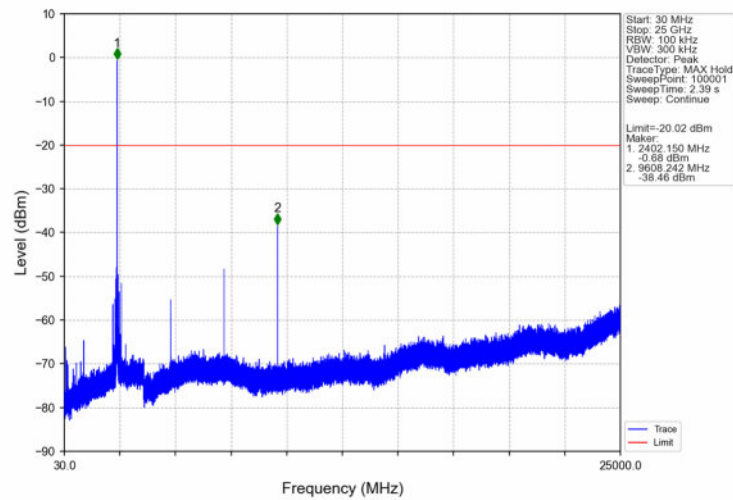


## 6.2.2 CSE

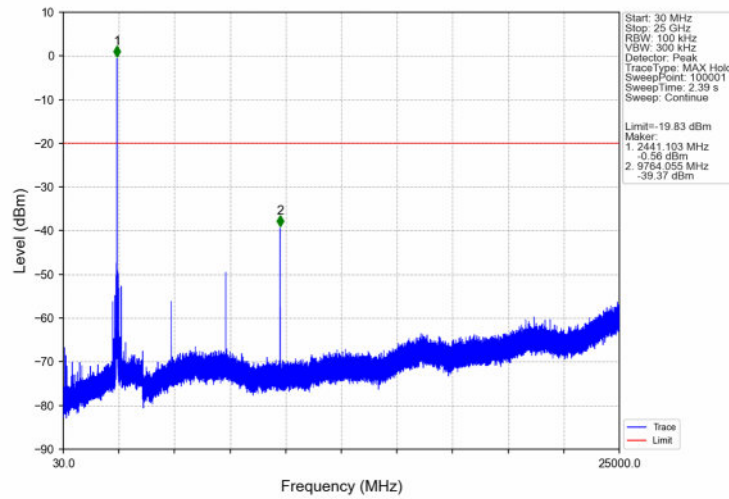
GFSK DH5 LCH 2402MHz Ant1 NTN



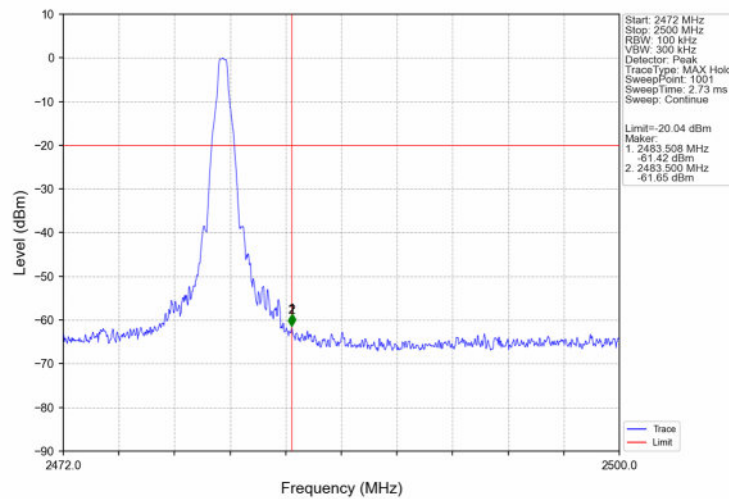
GFSK DH5 LCH 2402MHz Ant1 NTN



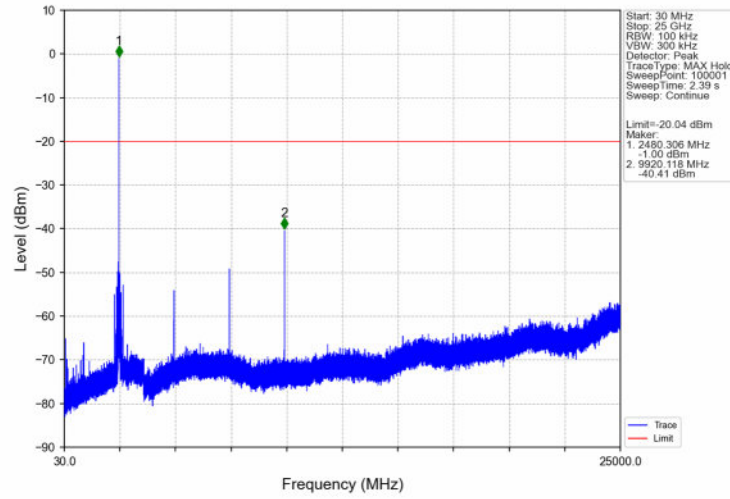
### GFSK\_DH5\_MCH\_2441MHz\_Ant1\_NTNV



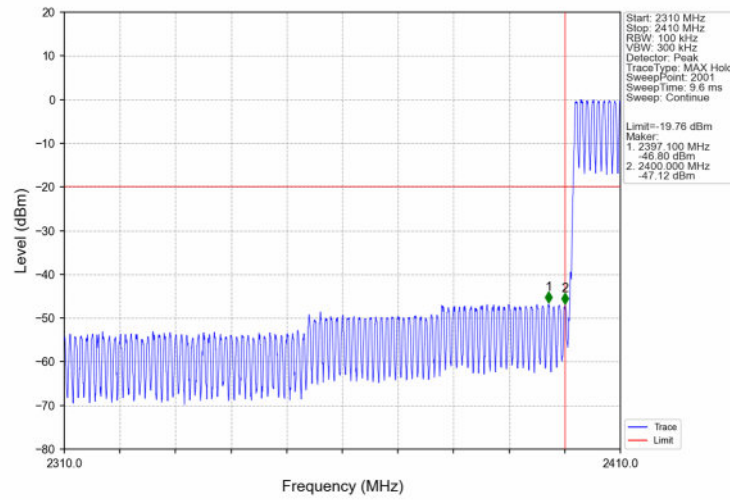
### GFSK\_DH5\_HCH\_2480MHz\_Ant1\_NTNV



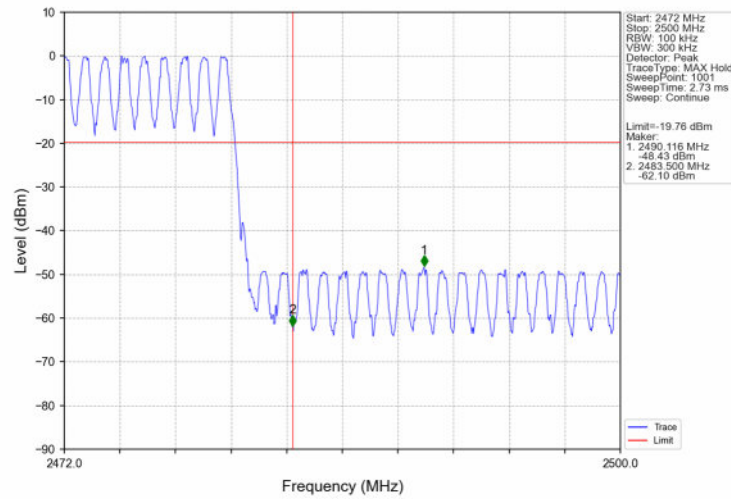
## GFSK\_DH5\_HCH\_2480MHz\_Ant1\_NTNV



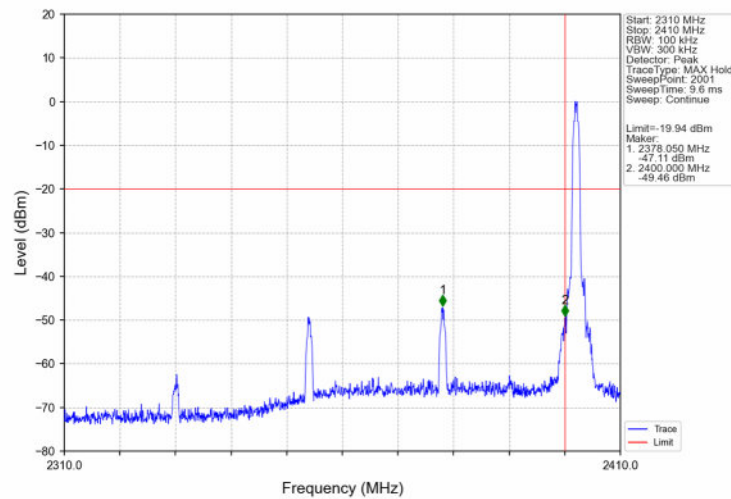
## GFSK\_DH5\_HOPP\_Ant1\_NTNV



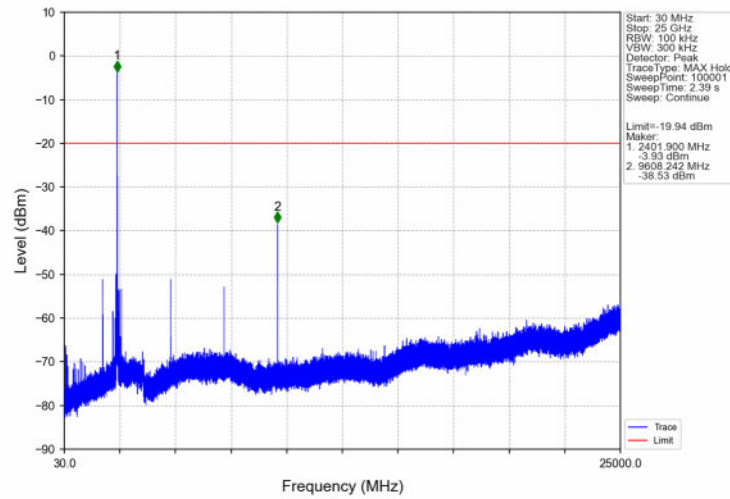
## GFSK\_DH5\_HOPP\_Ant1\_NTNV



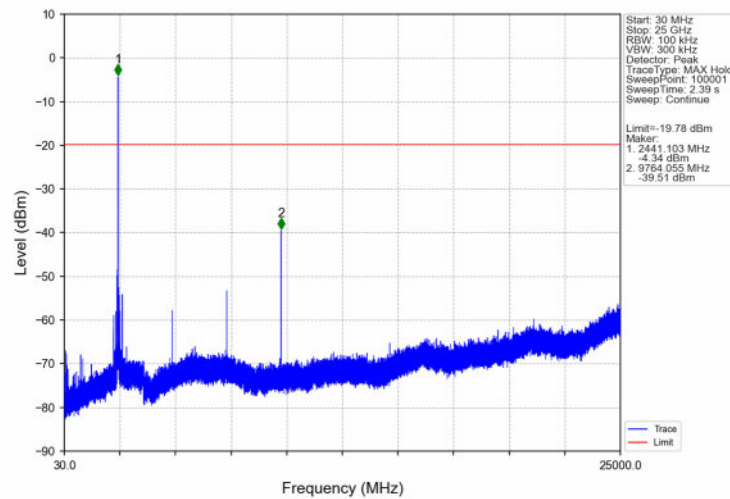
## Pi/4DQPSK\_2DH5\_LCH\_2402MHz\_Ant1\_NTNV



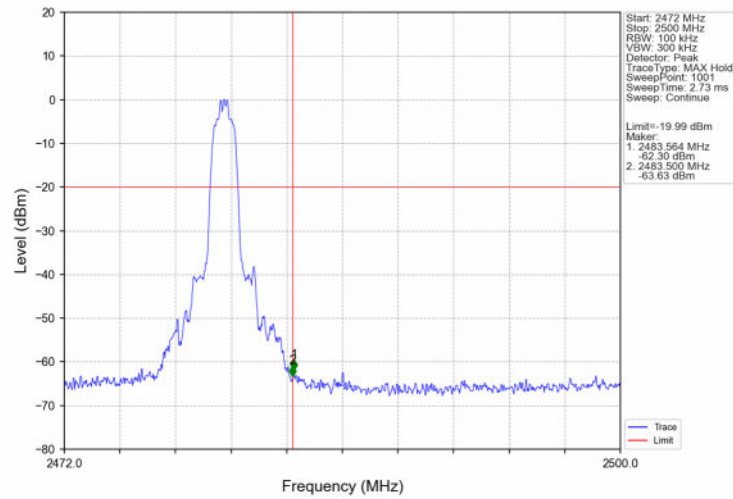
## Pi/4DQPSK\_2DH5\_LCH\_2402MHz\_Ant1\_NTNV



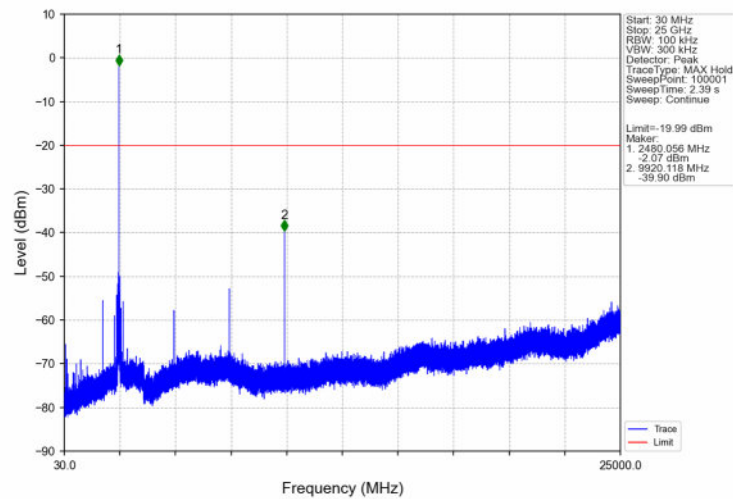
## Pi/4DQPSK\_2DH5\_MCH\_2441MHz\_Ant1\_NTNV



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

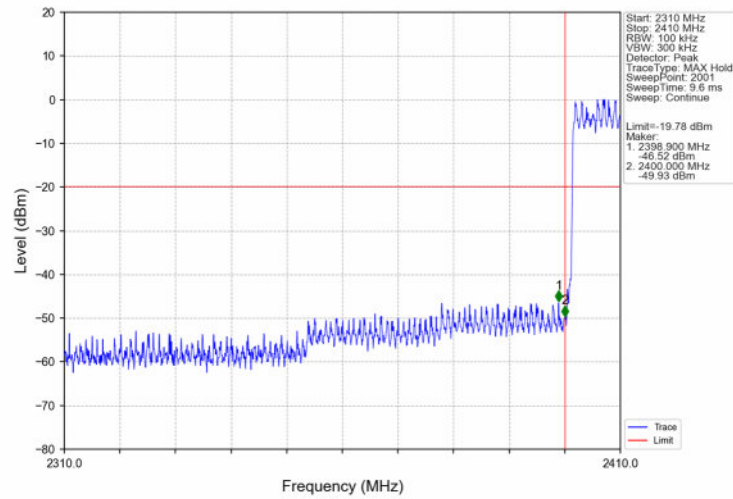


Pi/4DQPSK\_2DH5\_HCH\_2480MHz\_Ant1\_NTNV

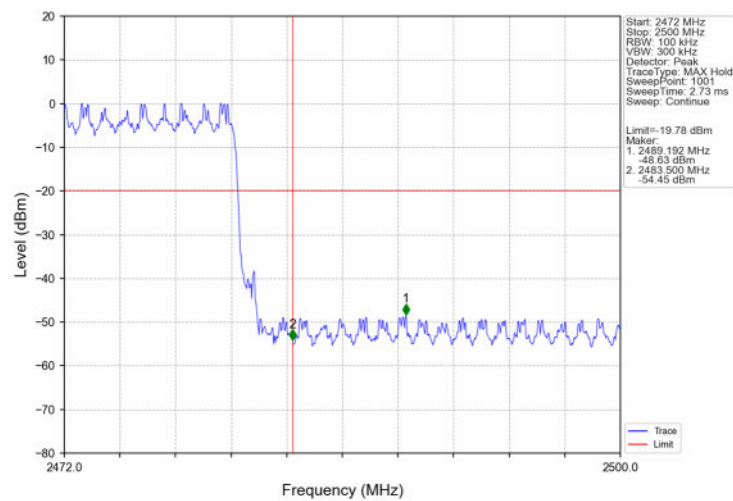




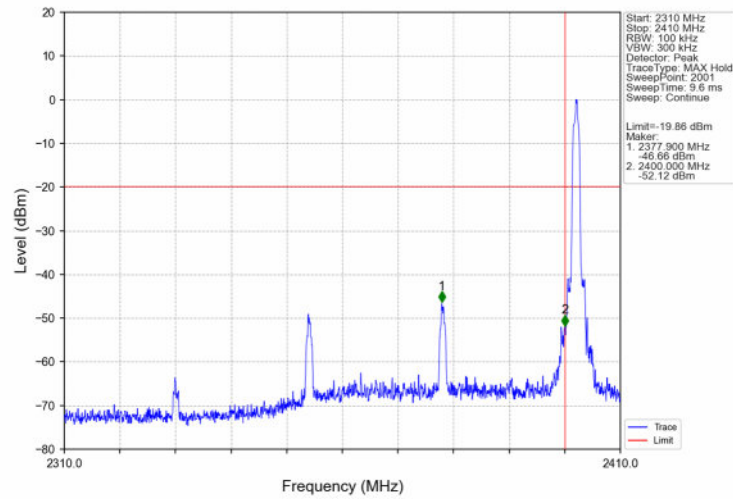
### Pi/4DQPSK\_2DH5\_HOPP\_Ant1\_NTNV



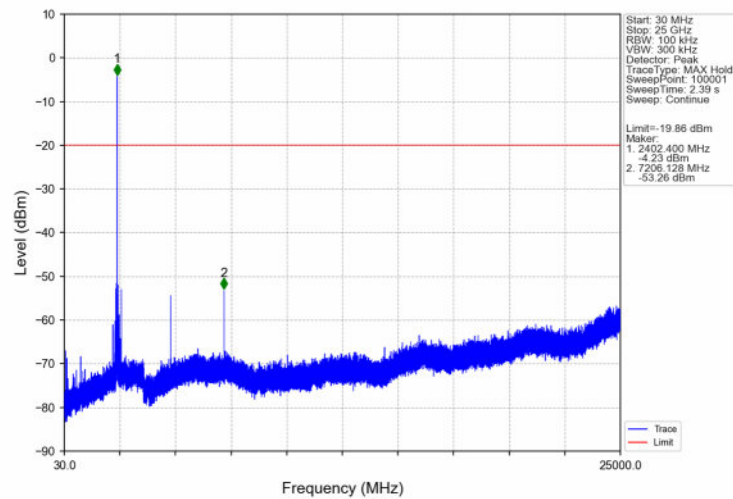
### Pi/4DQPSK\_2DH5\_HOPP\_Ant1\_NTNV



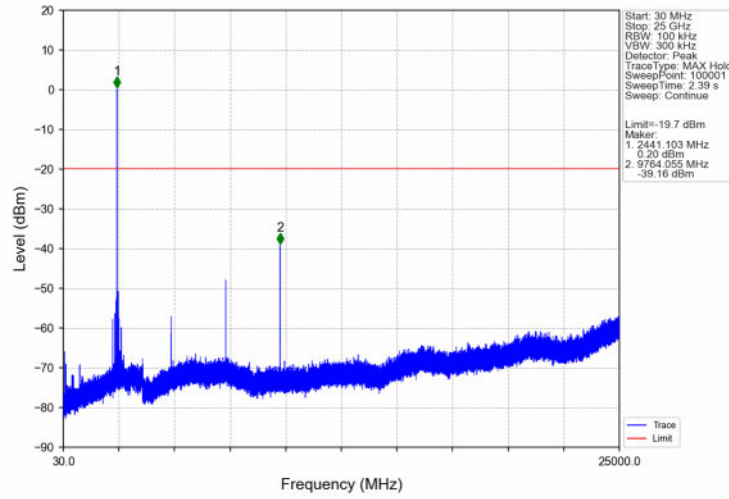
## 8DPSK\_3DH5\_LCH\_2402MHz\_Ant1\_NTNV



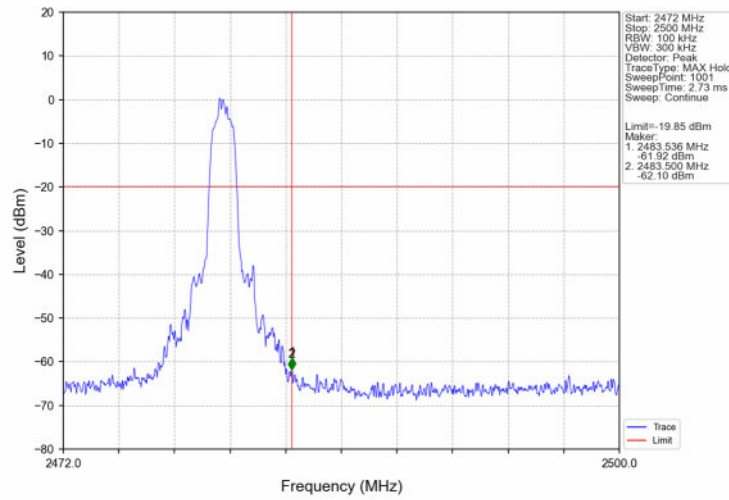
## 8DPSK\_3DH5\_LCH\_2402MHz\_Ant1\_NTNV



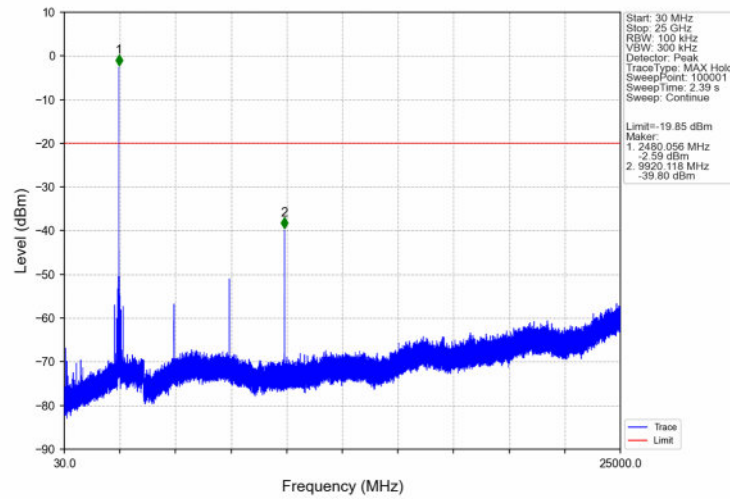
## 8DPSK\_3DH5\_MCH\_2441MHz\_Ant1\_NTNV



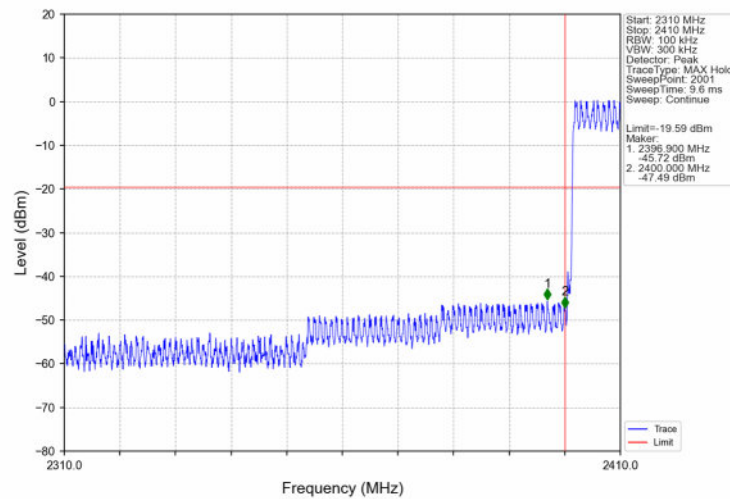
## 8DPSK\_3DH5\_HCH\_2480MHz\_Ant1\_NTNV



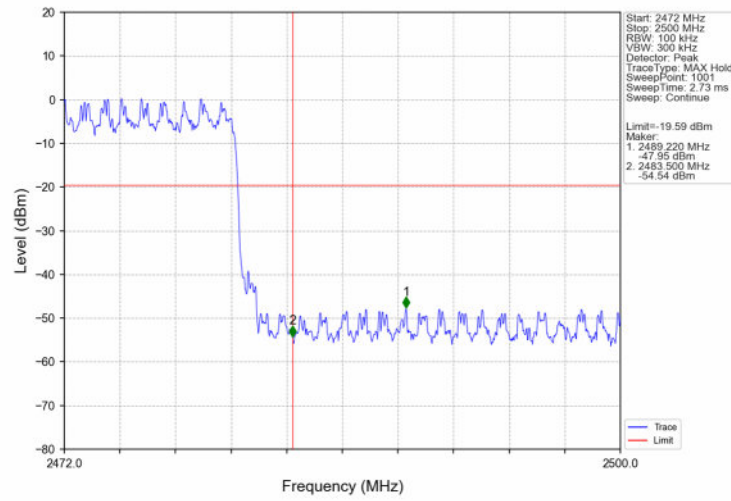
## 8DPSK\_3DH5\_HCH\_2480MHz\_Ant1\_NTNV



## 8DPSK\_3DH5\_HOPP\_Ant1\_NTNV



## 8DPSK\_3DH5\_HOPP\_Ant1\_NTNV



## 7. Form731

### 7.1 Test Result

#### 7.1.1 Form731

| Lower Freq (MHz) | High Freq (MHz) | MAX Power (W) | MAX Power (dBm) |
|------------------|-----------------|---------------|-----------------|
| 2402             | 2480            | 0.0014        | 1.40            |