

## 1. Bandwidth

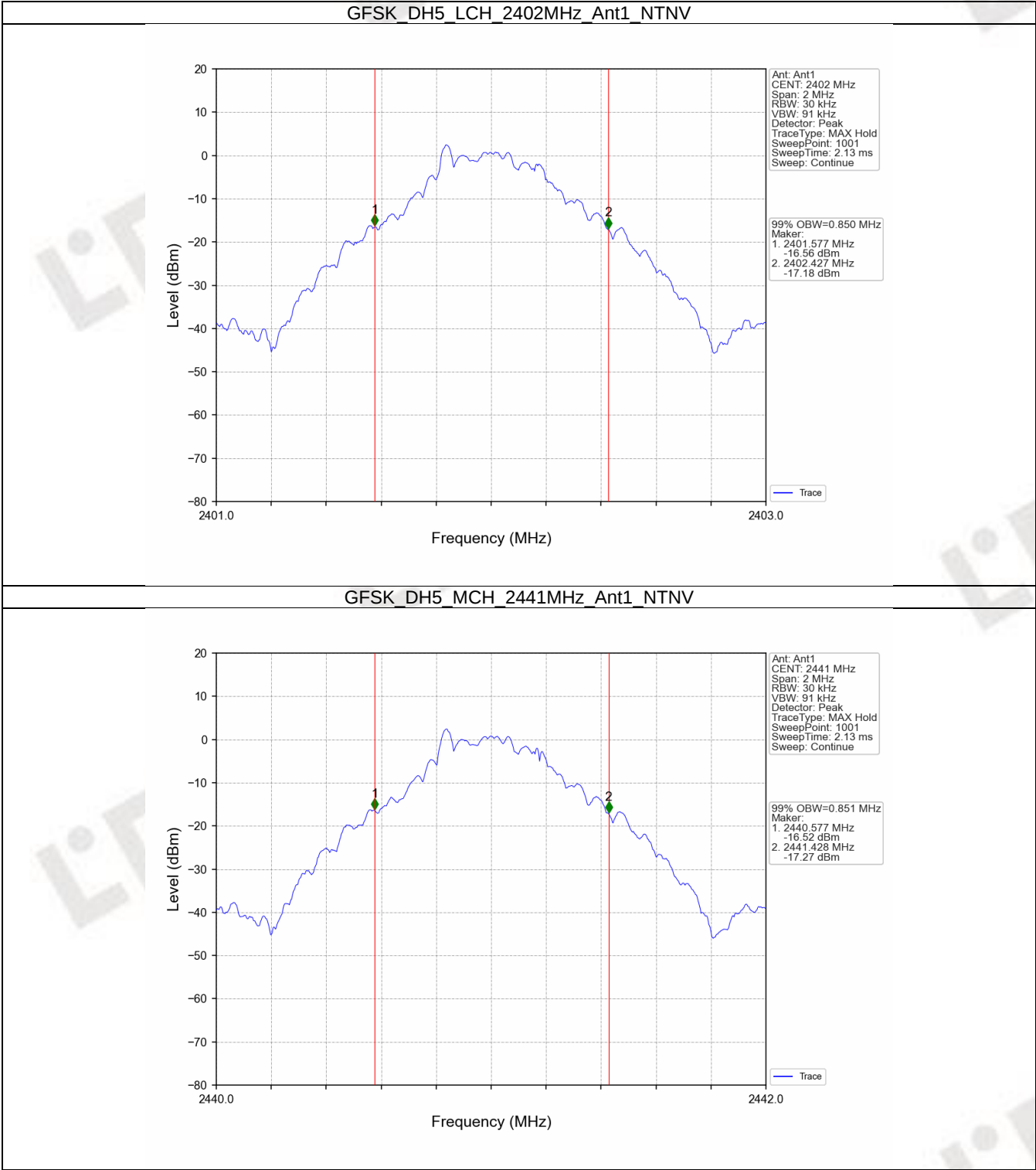
### 1.1 OBW

#### 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   | 0.850                        | /     | Pass    |
|           |         | 2441            | DH5         | 1   | 0.851                        | /     | Pass    |
|           |         | 2480            | DH5         | 1   | 0.846                        | /     | Pass    |
| Pi/4DQPSK | SISO    | 2402            | 2DH5        | 1   | 1.165                        | /     | Pass    |
|           |         | 2441            | 2DH5        | 1   | 1.163                        | /     | Pass    |
|           |         | 2480            | 2DH5        | 1   | 1.165                        | /     | Pass    |
| 8DPSK     | SISO    | 2402            | 3DH5        | 1   | 1.158                        | /     | Pass    |
|           |         | 2441            | 3DH5        | 1   | 1.158                        | /     | Pass    |
|           |         | 2480            | 3DH5        | 1   | 1.157                        | /     | Pass    |

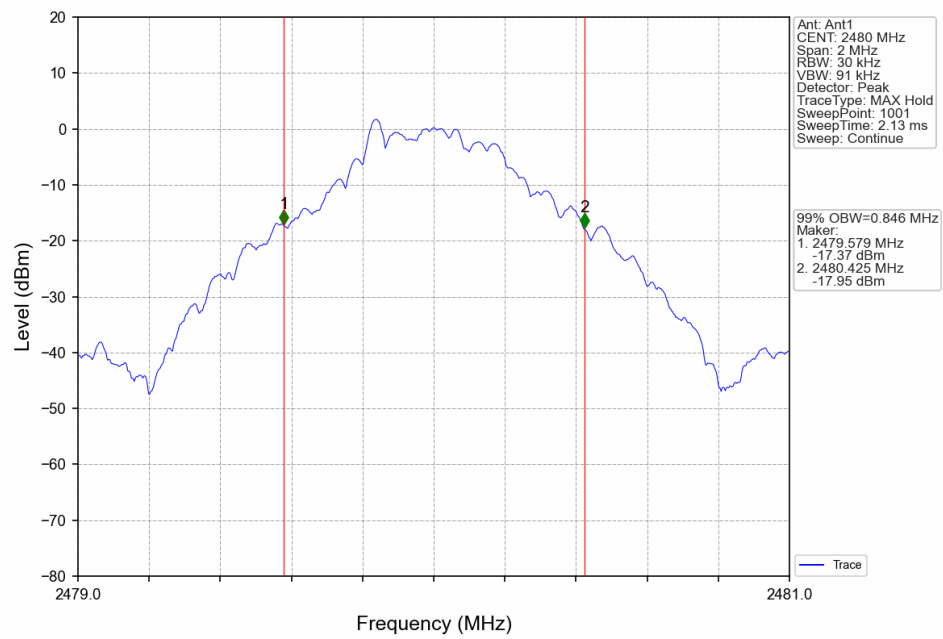
Model: YAMATRACK B

1.1.2 Test Graph

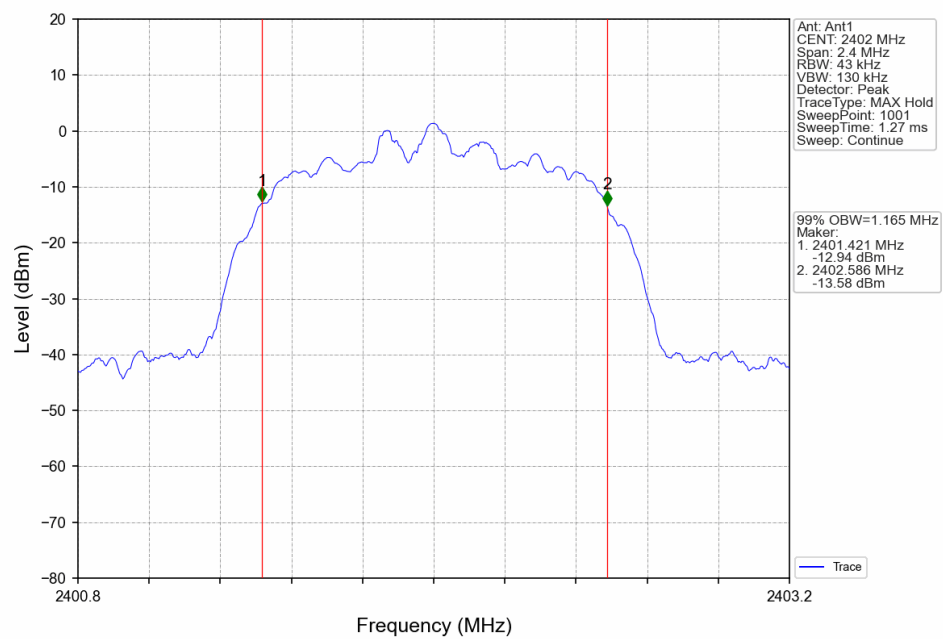


Model: YAMATRACK B

GFSK DH5 HCH 2480MHz Ant1 NTNV

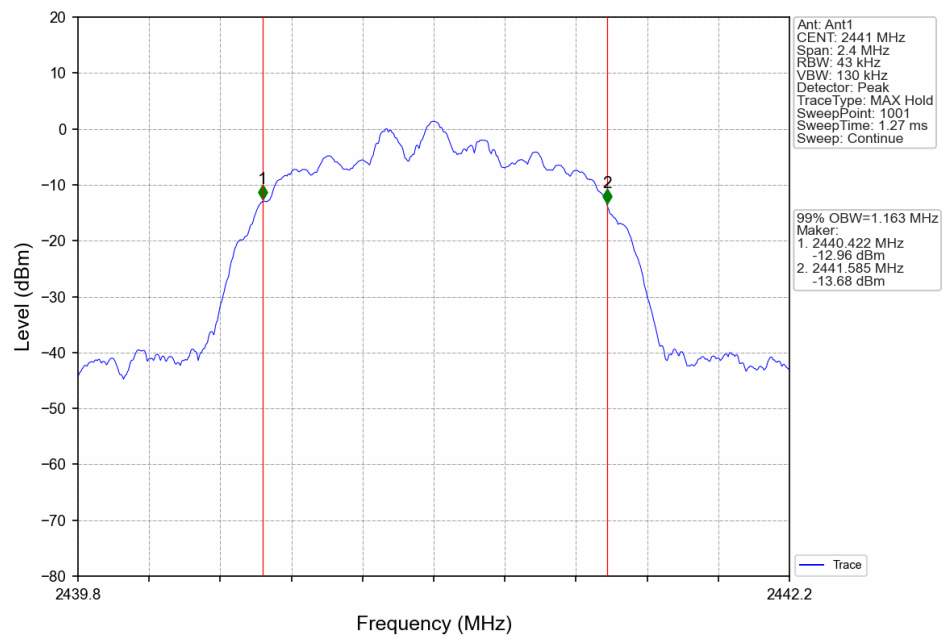


Pi/4DQPSK 2DH5 LCH 2402MHz Ant1 NTNV

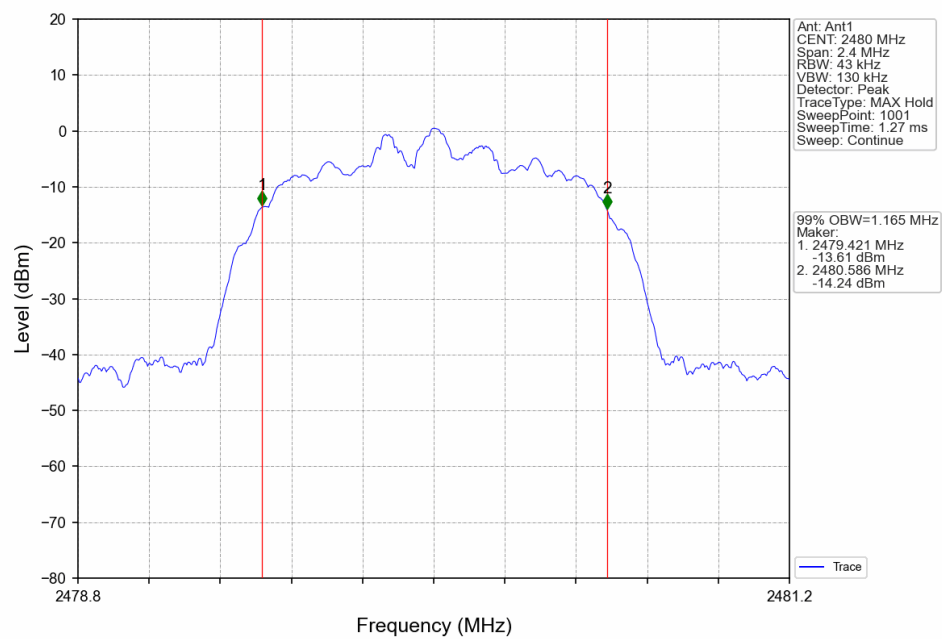


Model: YAMATRACK B

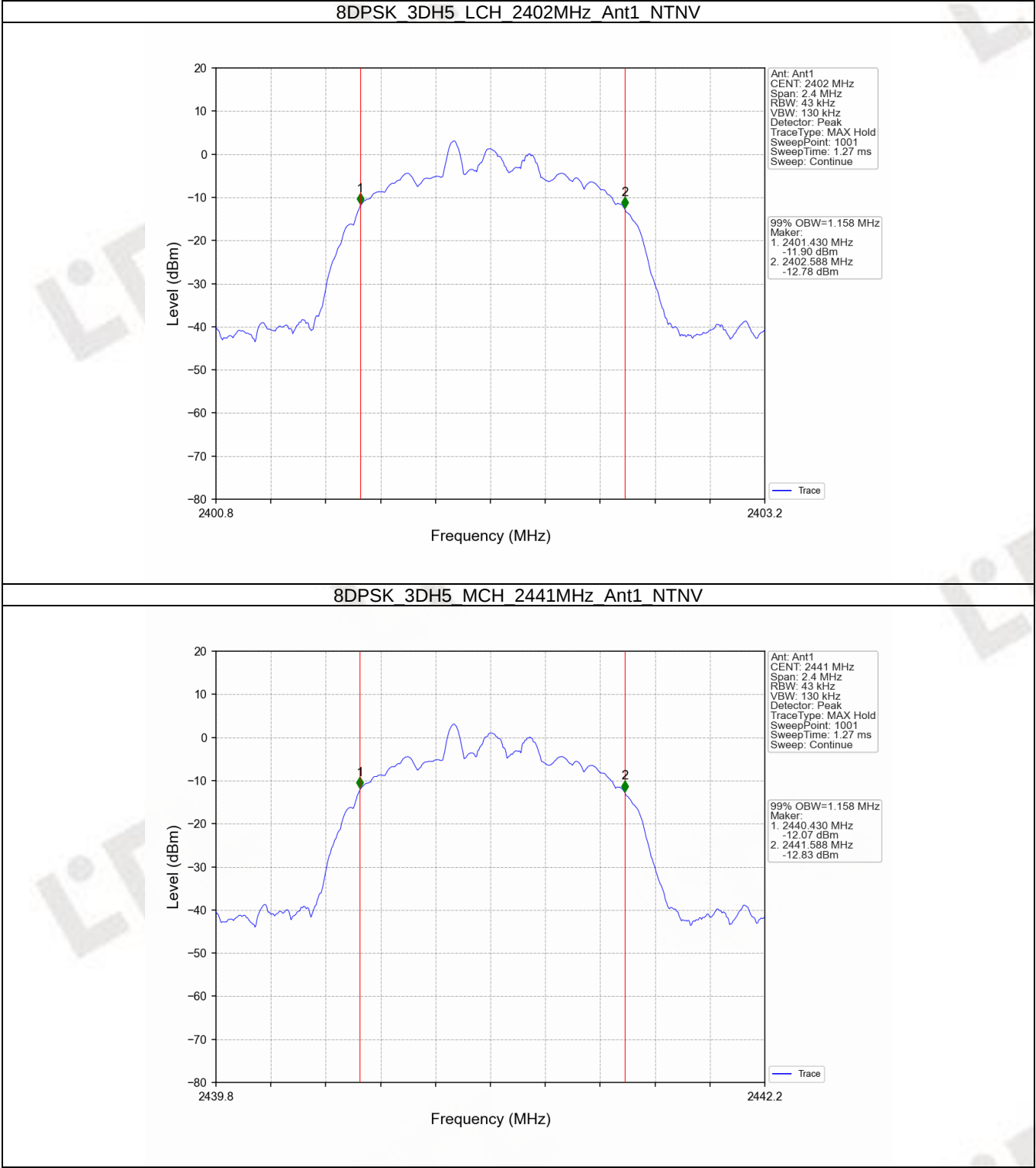
Pi/4DQPSK 2DH5 MCH 2441MHz Ant1 NTN



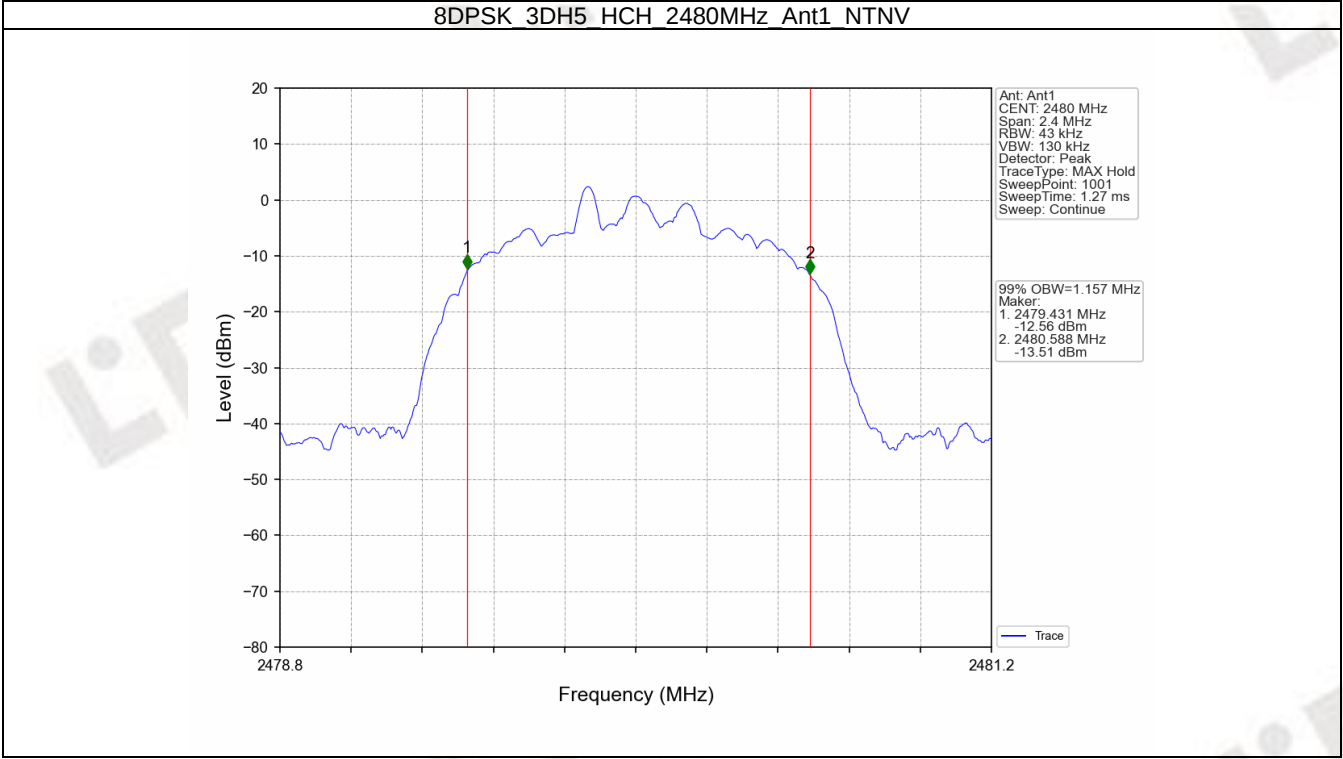
Pi/4DQPSK 2DH5 HCH 2480MHz Ant1 NTN



Model: YAMATRACK B



Model: YAMATRACK B



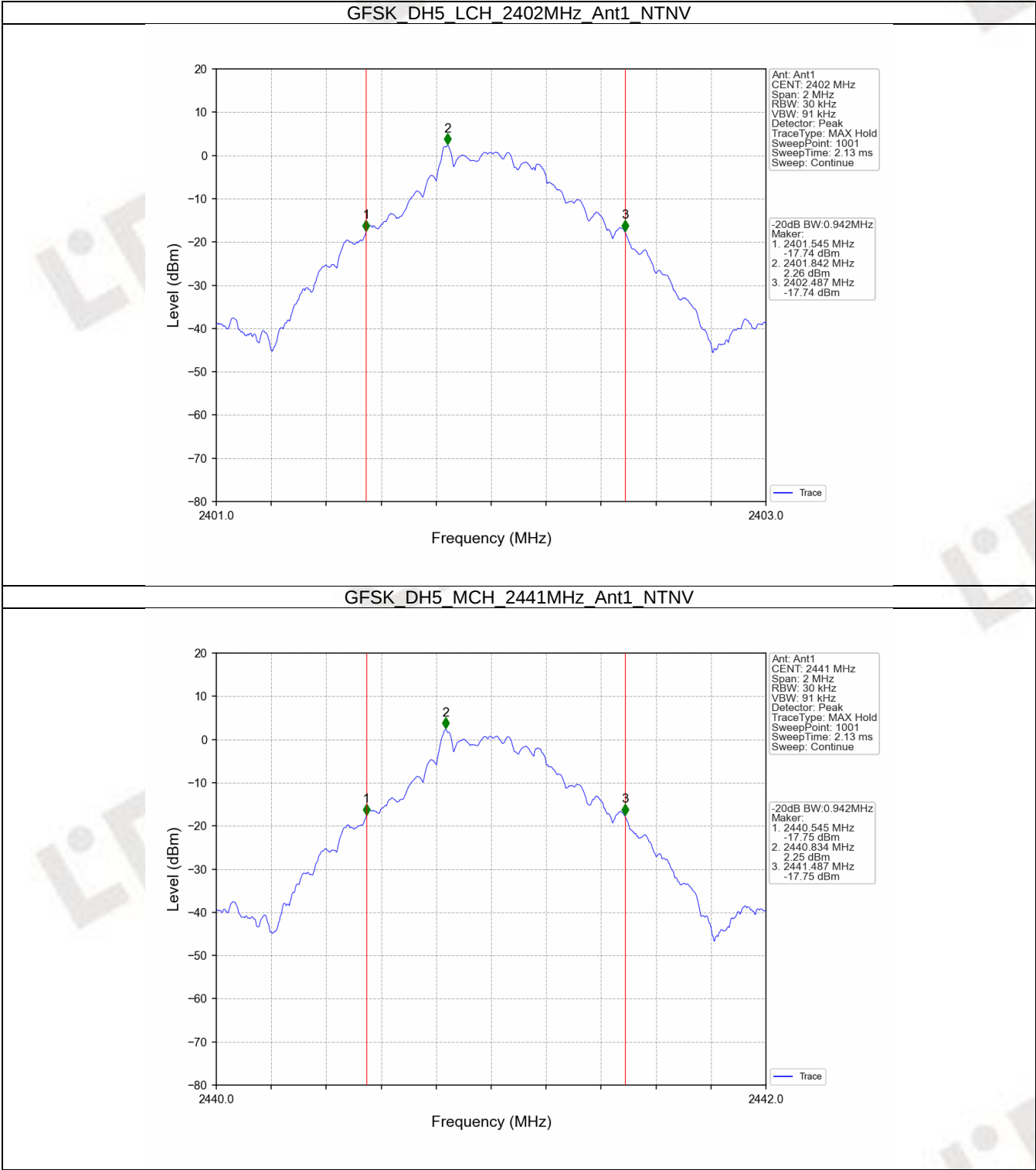
1.2 20dB BW

1.2.1 Test Result

| Mode      | TX Type | Frequency (MHz) | Packet Type | ANT | 20dB Bandwidth (MHz) |       | Verdict |
|-----------|---------|-----------------|-------------|-----|----------------------|-------|---------|
|           |         |                 |             |     | Result               | Limit |         |
| GFSK      | SISO    | 2402            | DH5         | 1   | 0.942                | /     | Pass    |
|           |         | 2441            | DH5         | 1   | 0.942                | /     | Pass    |
|           |         | 2480            | DH5         | 1   | 0.942                | /     | Pass    |
| Pi/4DQPSK | SISO    | 2402            | 2DH5        | 1   | 1.290                | /     | Pass    |
|           |         | 2441            | 2DH5        | 1   | 1.285                | /     | Pass    |
|           |         | 2480            | 2DH5        | 1   | 1.305                | /     | Pass    |
| 8DPSK     | SISO    | 2402            | 3DH5        | 1   | 1.280                | /     | Pass    |
|           |         | 2441            | 3DH5        | 1   | 1.278                | /     | Pass    |
|           |         | 2480            | 3DH5        | 1   | 1.276                | /     | Pass    |

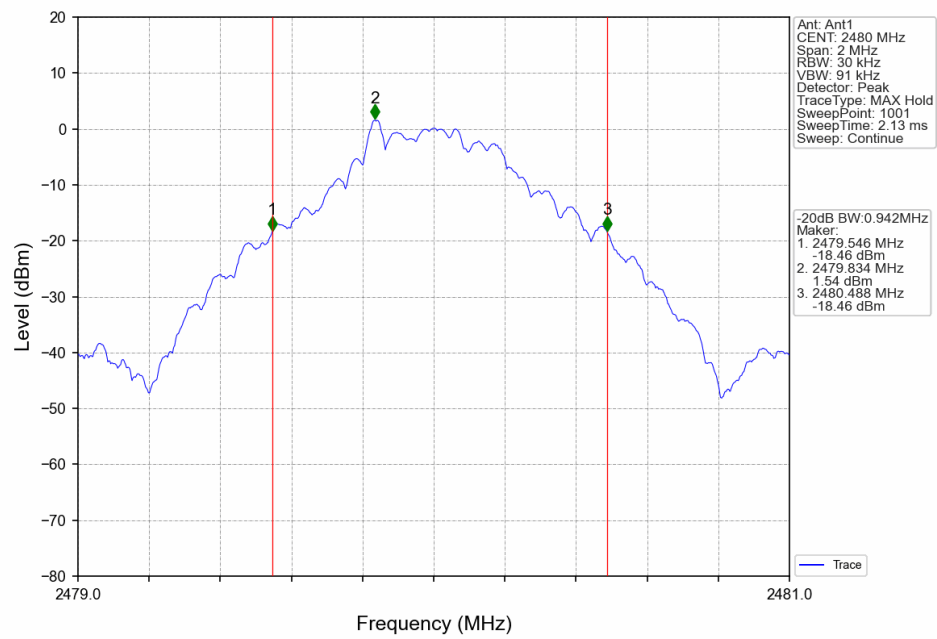
Model: YAMATRACK B

1.2.2 Test Graph

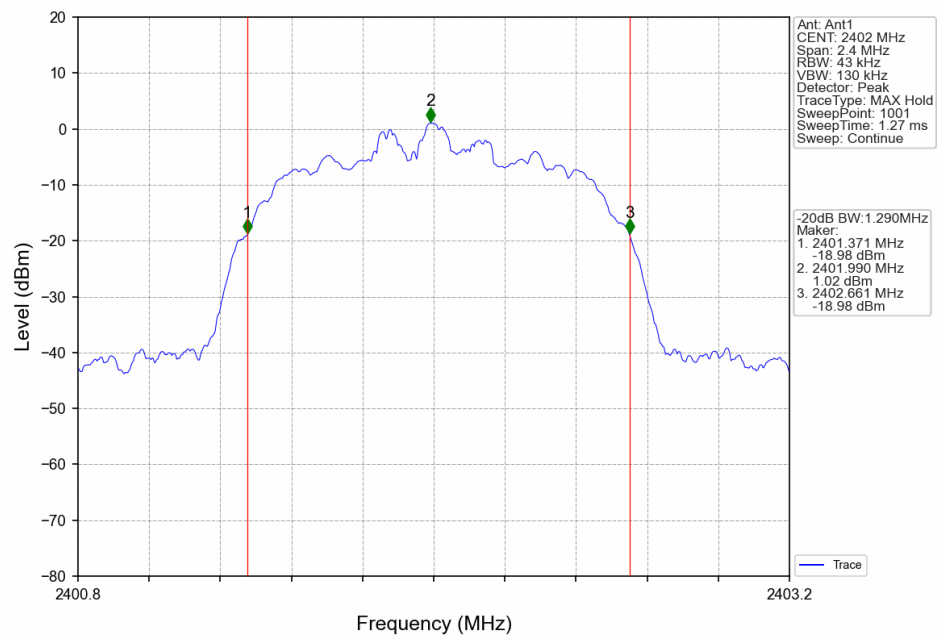


Model: YAMATRACK B

GFSK DH5 HCH 2480MHz Ant1 NTN

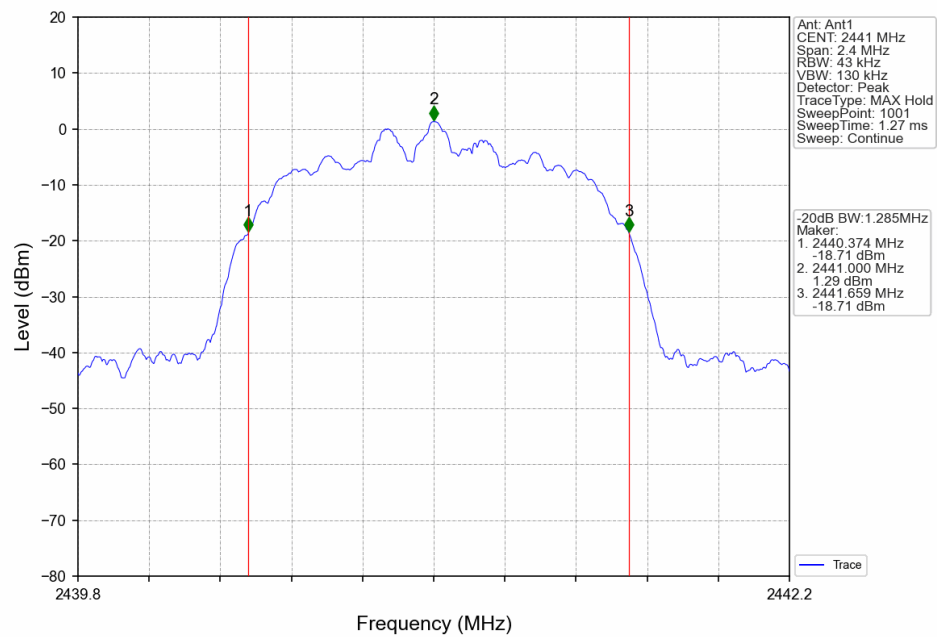


Pi/4DQPSK 2DH5 LCH 2402MHz Ant1 NTN

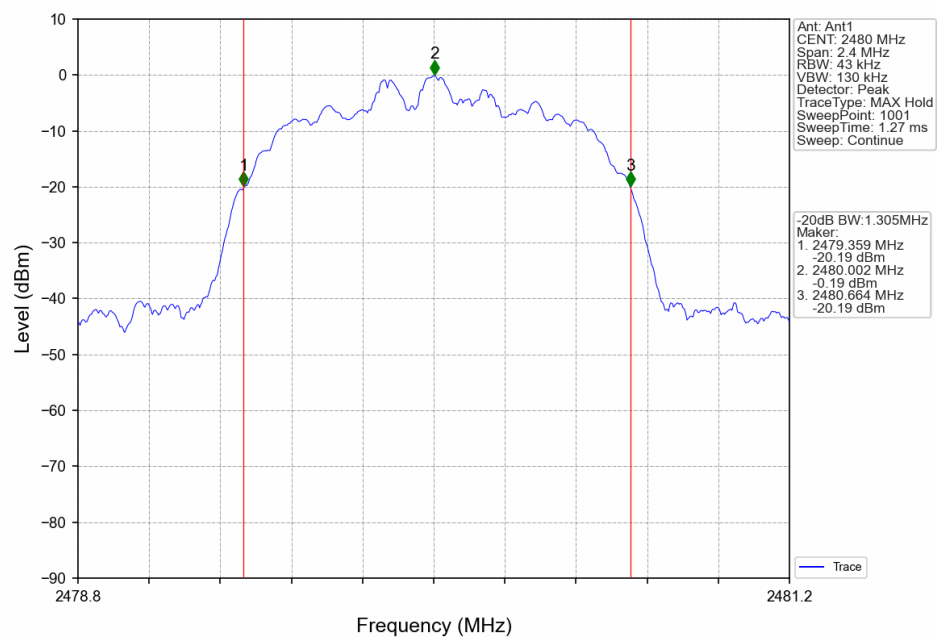


Model: YAMATRACK B

Pi/4DQPSK 2DH5 MCH 2441MHz Ant1 NTN

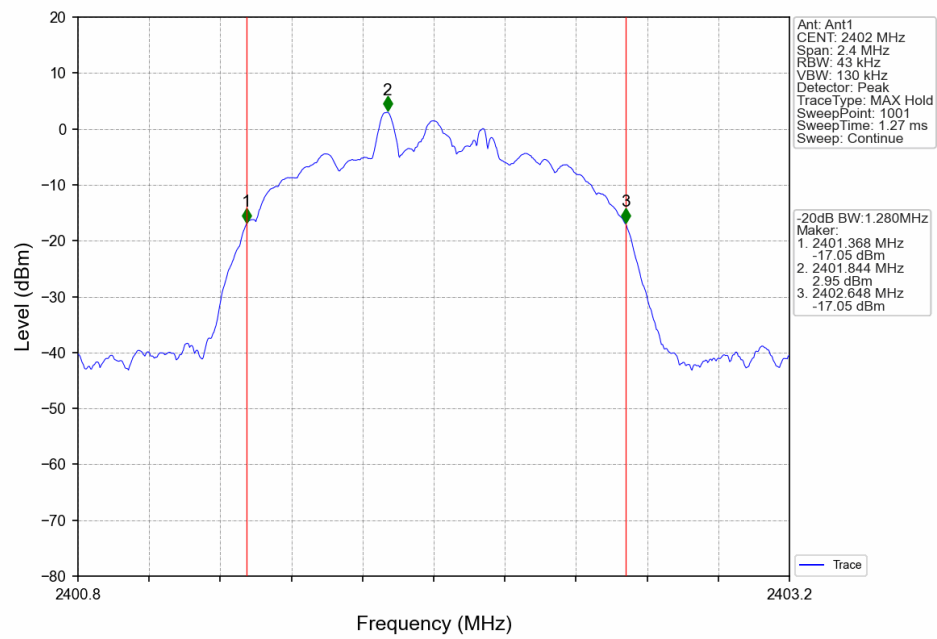


Pi/4DQPSK 2DH5 HCH 2480MHz Ant1 NTN

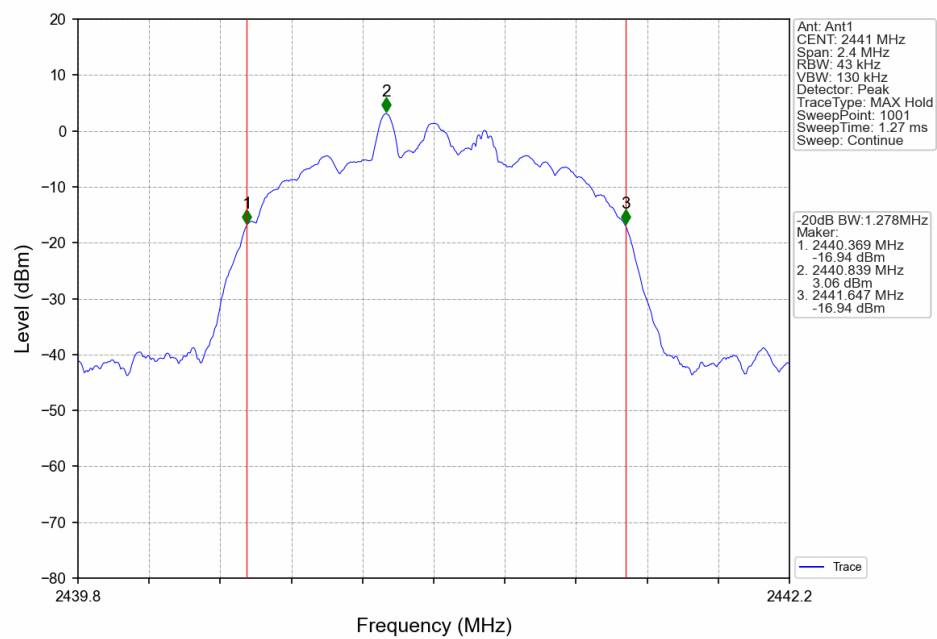


Model: YAMATRACK B

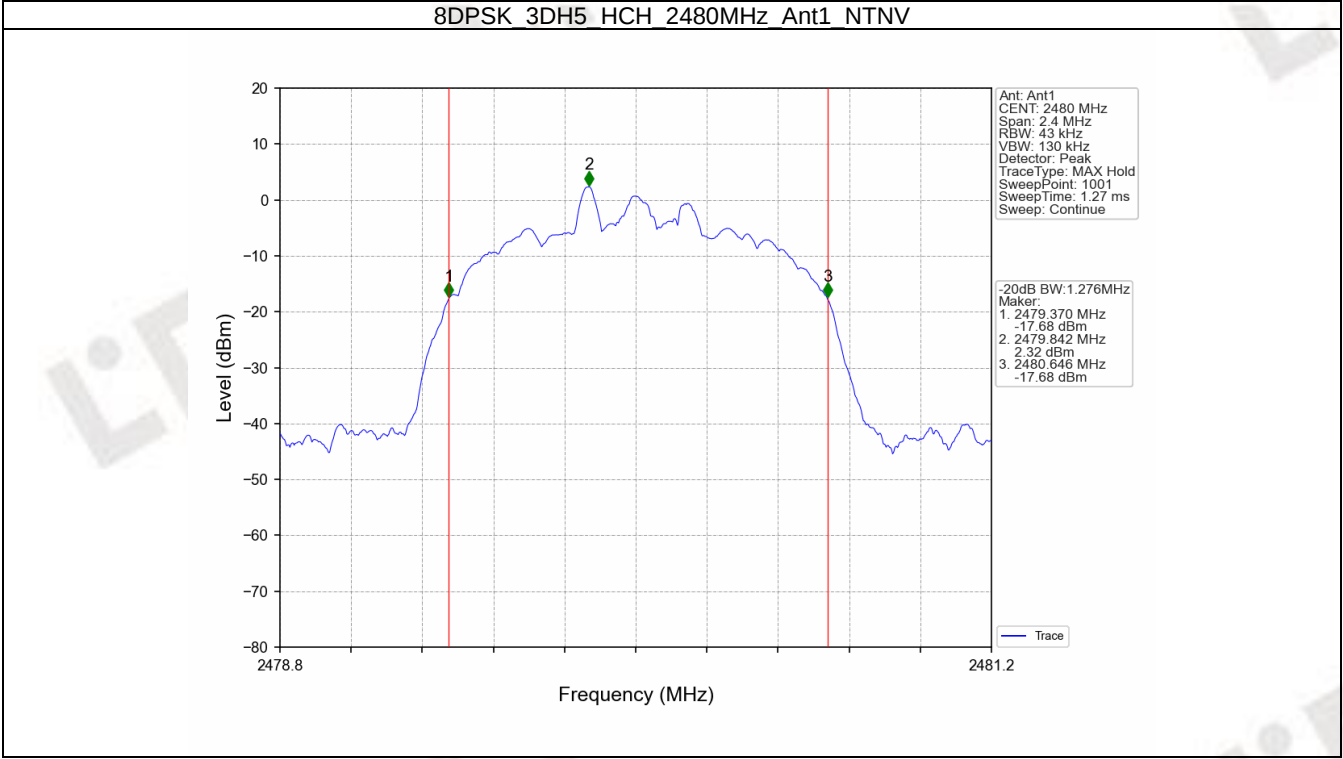
8DPSK 3DH5 LCH 2402MHz Ant1 NTNV



8DPSK 3DH5 MCH 2441MHz Ant1 NTNV



Model: YAMATRACK B



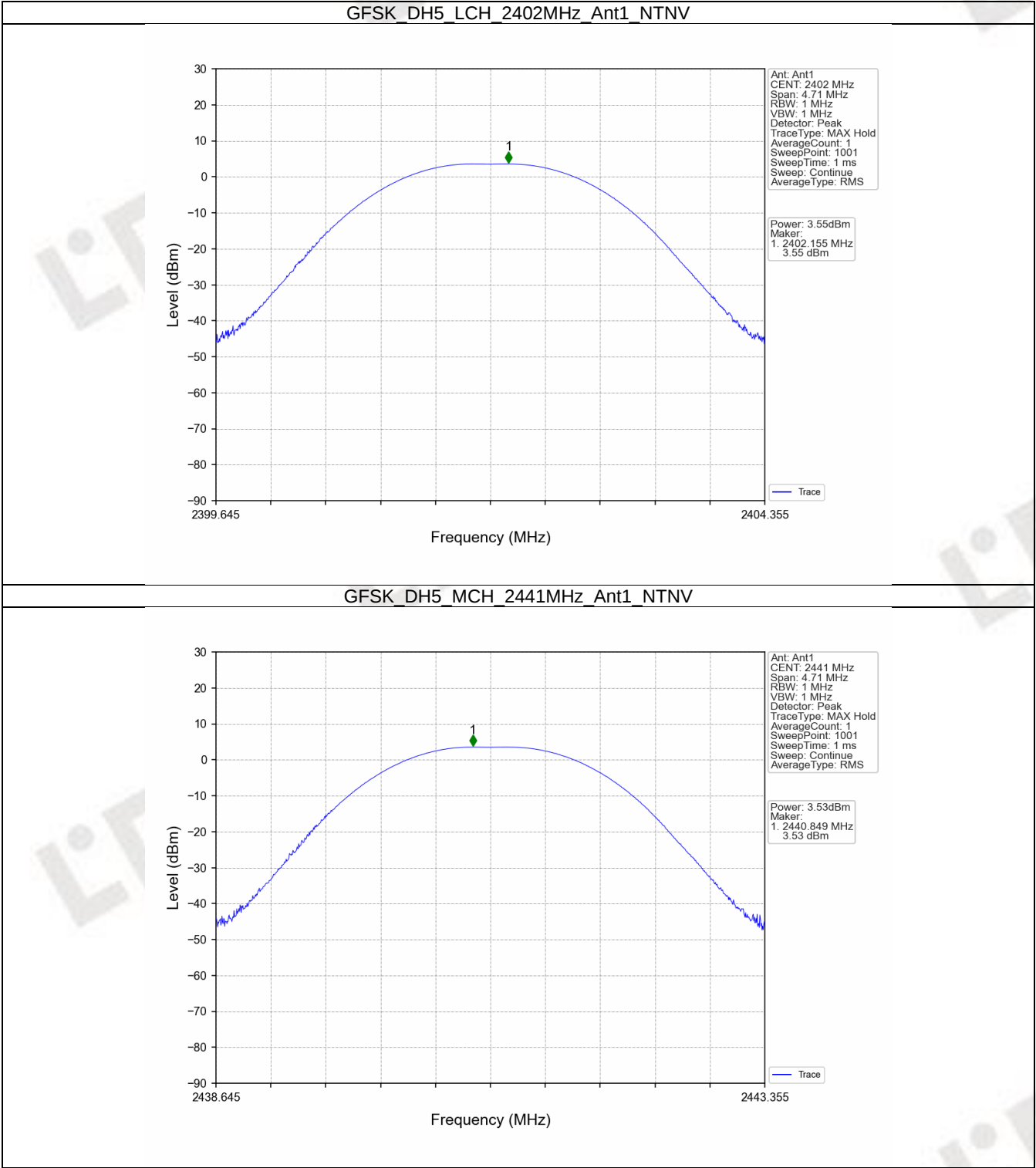
## 2.1 Power

| Mode      | TX Type | Frequency (MHz) | Packet Type | Maximum Peak Conducted Output Power (dBm) |         | Verdict |
|-----------|---------|-----------------|-------------|-------------------------------------------|---------|---------|
|           |         |                 |             | ANT1                                      | Limit   |         |
| GFSK      | SISO    | 2402            | DH5         | 3.55                                      | <=30    | Pass    |
|           |         | 2441            | DH5         | 3.53                                      | <=30    | Pass    |
|           |         | 2480            | DH5         | 2.89                                      | <=30    | Pass    |
| Pi/4DQPSK | SISO    | 2402            | 2DH5        | 3.58                                      | <=20.97 | Pass    |
|           |         | 2441            | 2DH5        | 3.53                                      | <=20.97 | Pass    |
|           |         | 2480            | 2DH5        | 2.90                                      | <=20.97 | Pass    |
| 8DPSK     | SISO    | 2402            | 3DH5        | 3.67                                      | <=20.97 | Pass    |
|           |         | 2441            | 3DH5        | 3.64                                      | <=20.97 | Pass    |
|           |         | 2480            | 3DH5        | 2.99                                      | <=20.97 | Pass    |

Note1: Antenna Gain: Ant1: 2.39dBi;

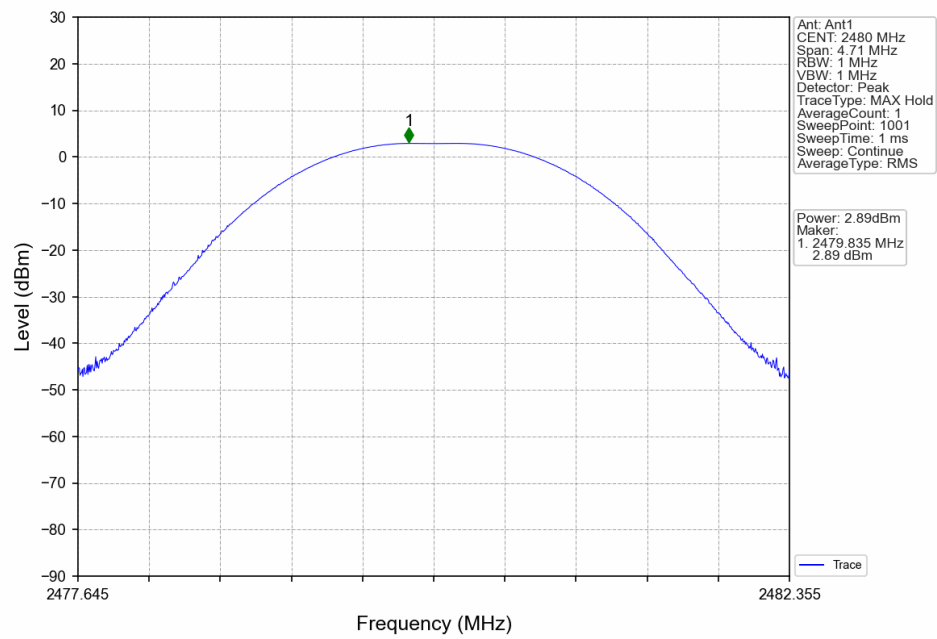
Note1: Antenna Gain: Ant1: 2.39dBi;

2.1.2 Test Graph

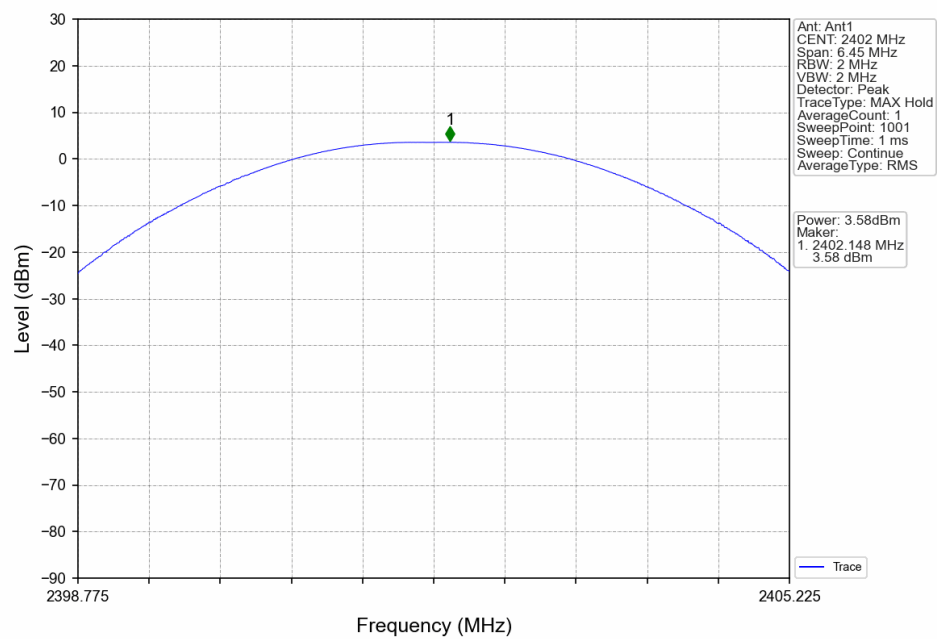


Model: YAMATRACK B

GFSK DH5 HCH 2480MHz Ant1 NTNV

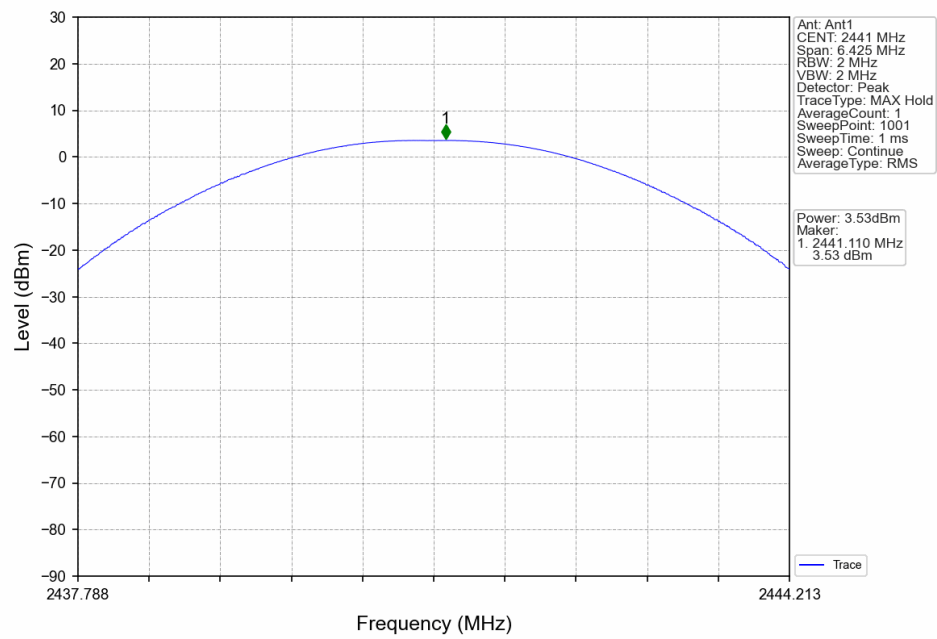


Pi/4DQPSK 2DH5 LCH 2402MHz Ant1 NTNV

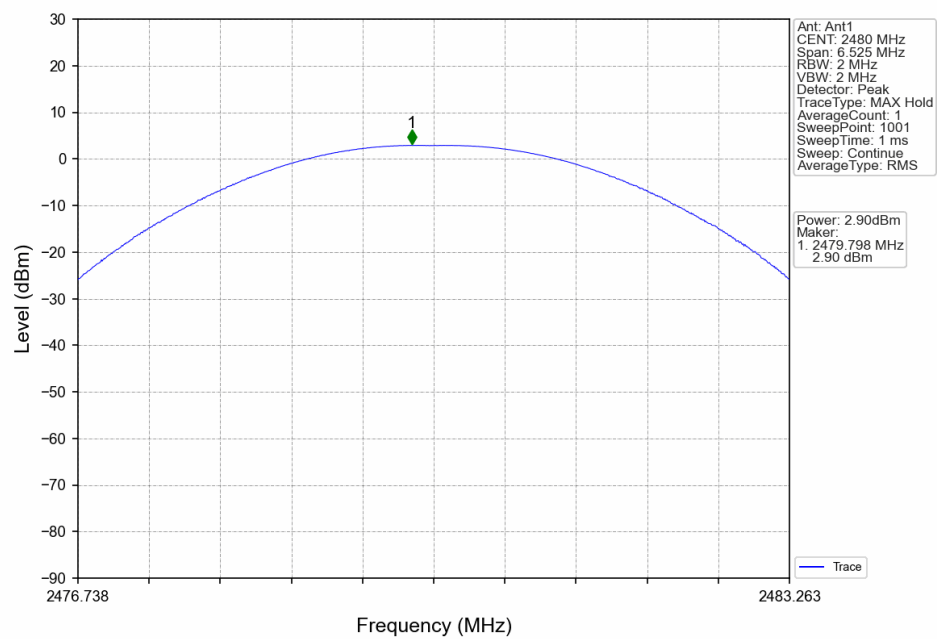


Model: YAMATRACK B

Pi/4DQPSK 2DH5 MCH 2441MHz Ant1 NTNV

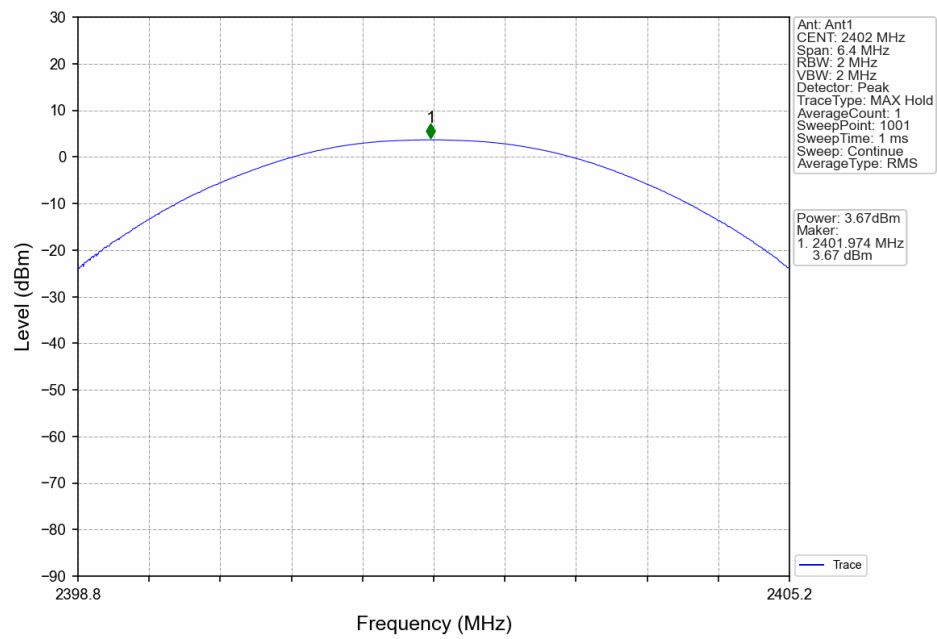


Pi/4DQPSK 2DH5 HCH 2480MHz Ant1 NTNV

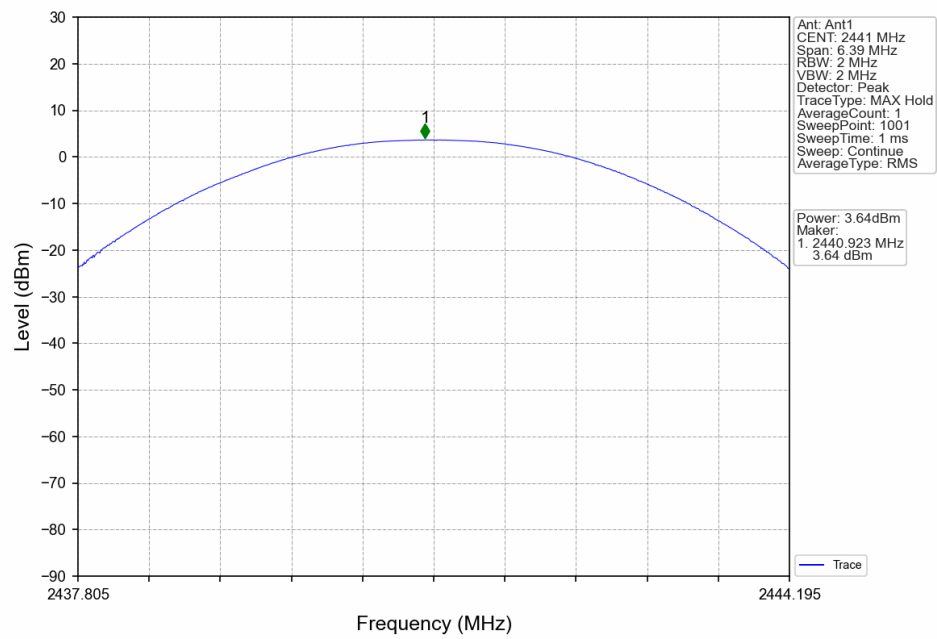


Model: YAMATRACK B

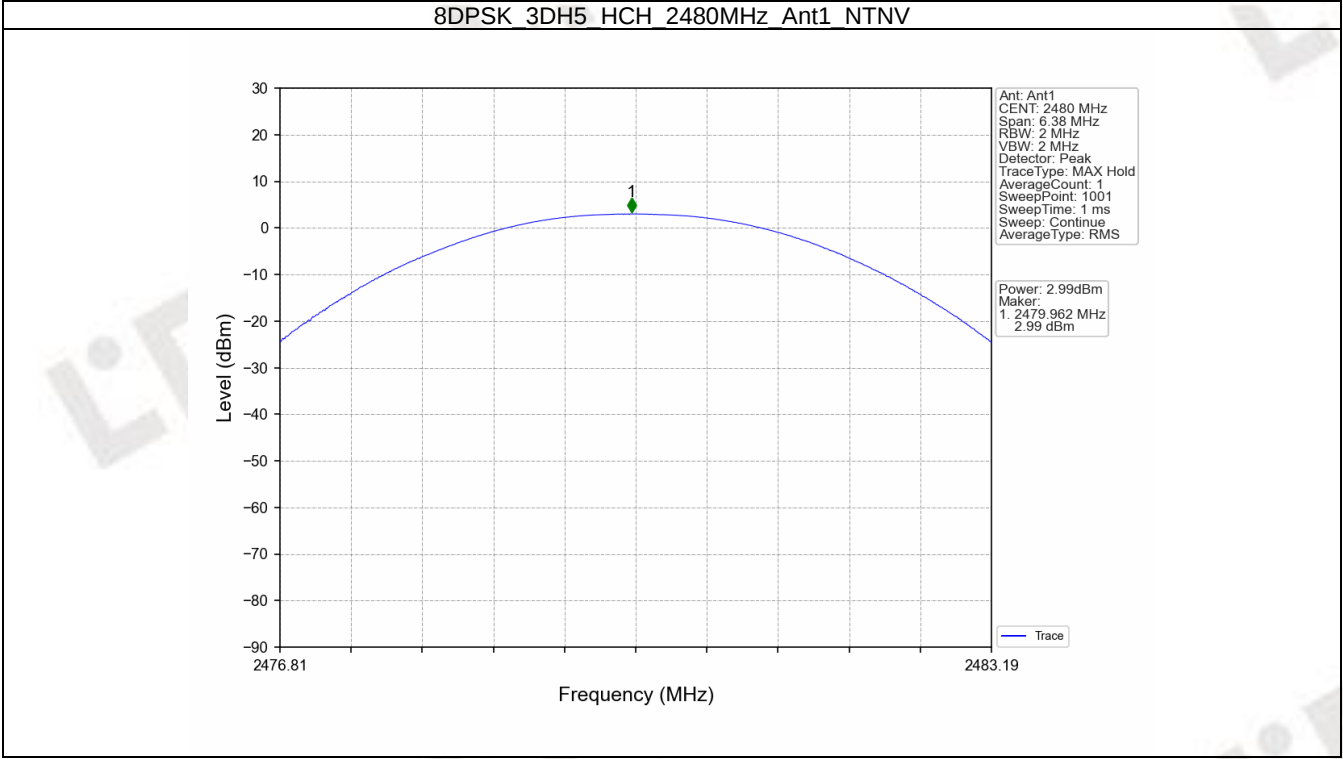
8DPSK 3DH5 LCH 2402MHz Ant1 NTN



8DPSK 3DH5 MCH 2441MHz Ant1 NTN



Model: YAMATRACK B



## 2.2 EIRP

### 2.2.1 Test Result

| Mode                                                                                  | TX Type | Frequency (MHz) | Packet Type | E.I.R.P (dBm) |         | Verdict |
|---------------------------------------------------------------------------------------|---------|-----------------|-------------|---------------|---------|---------|
|                                                                                       |         |                 |             | ANT1          | Limit   |         |
| GFSK                                                                                  | SISO    | 2402            | DH5         | 5.94          | <=36.02 | Pass    |
|                                                                                       |         | 2441            | DH5         | 5.92          | <=36.02 | Pass    |
|                                                                                       |         | 2480            | DH5         | 5.28          | <=36.02 | Pass    |
| Pi/4DQPSK                                                                             | SISO    | 2402            | 2DH5        | 5.97          | <=36.02 | Pass    |
|                                                                                       |         | 2441            | 2DH5        | 5.92          | <=36.02 | Pass    |
|                                                                                       |         | 2480            | 2DH5        | 5.29          | <=36.02 | Pass    |
| 8DPSK                                                                                 | SISO    | 2402            | 3DH5        | 6.06          | <=36.02 | Pass    |
|                                                                                       |         | 2441            | 3DH5        | 6.03          | <=36.02 | Pass    |
|                                                                                       |         | 2480            | 3DH5        | 5.38          | <=36.02 | Pass    |
| Note1: Antenna Gain: Ant1: 2.39dBi;<br>Note2: E.I.R.P = Measured Power + Antenna Gain |         |                 |             |               |         |         |

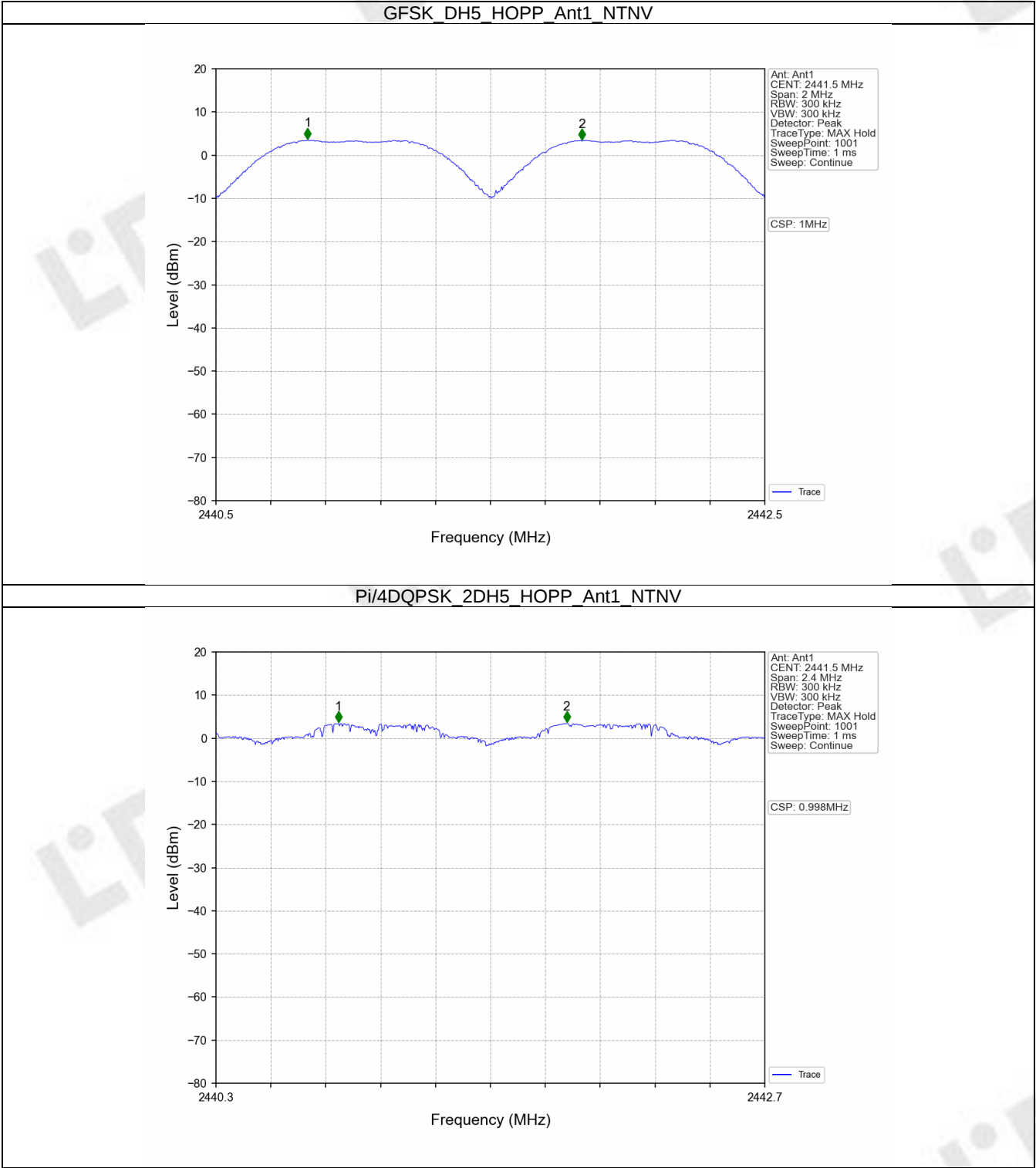
## 3. Carrier Frequency Separation

### 3.1 Ant1

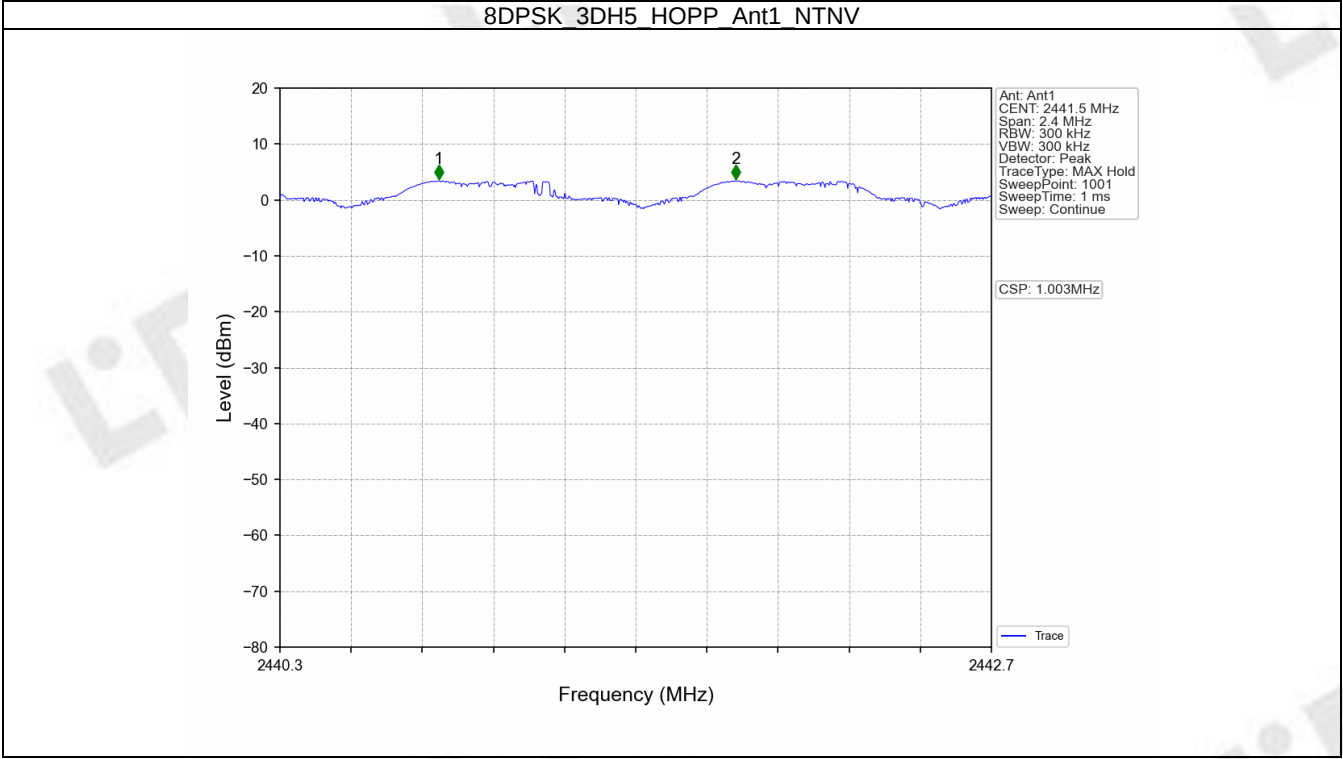
#### 3.1.1 Test Result

| Ant1      |         |                 |             |                          |                      |             |         |
|-----------|---------|-----------------|-------------|--------------------------|----------------------|-------------|---------|
| Mode      | TX Type | Frequency (MHz) | Packet Type | Channel Separation (MHz) | 20dB Bandwidth (MHz) | Limit (MHz) | Verdict |
| GFSK      | SISO    | HOPP            | DH5         | 1.000                    | 0.942                | >=0.942     | Pass    |
| Pi/4DQPSK | SISO    | HOPP            | 2DH5        | 0.998                    | 1.305                | >=0.87      | Pass    |
| 8DPSK     | SISO    | HOPP            | 3DH5        | 1.003                    | 1.280                | >=0.853     | Pass    |

3.1.2 Test Graph



Model: YAMATRACK B



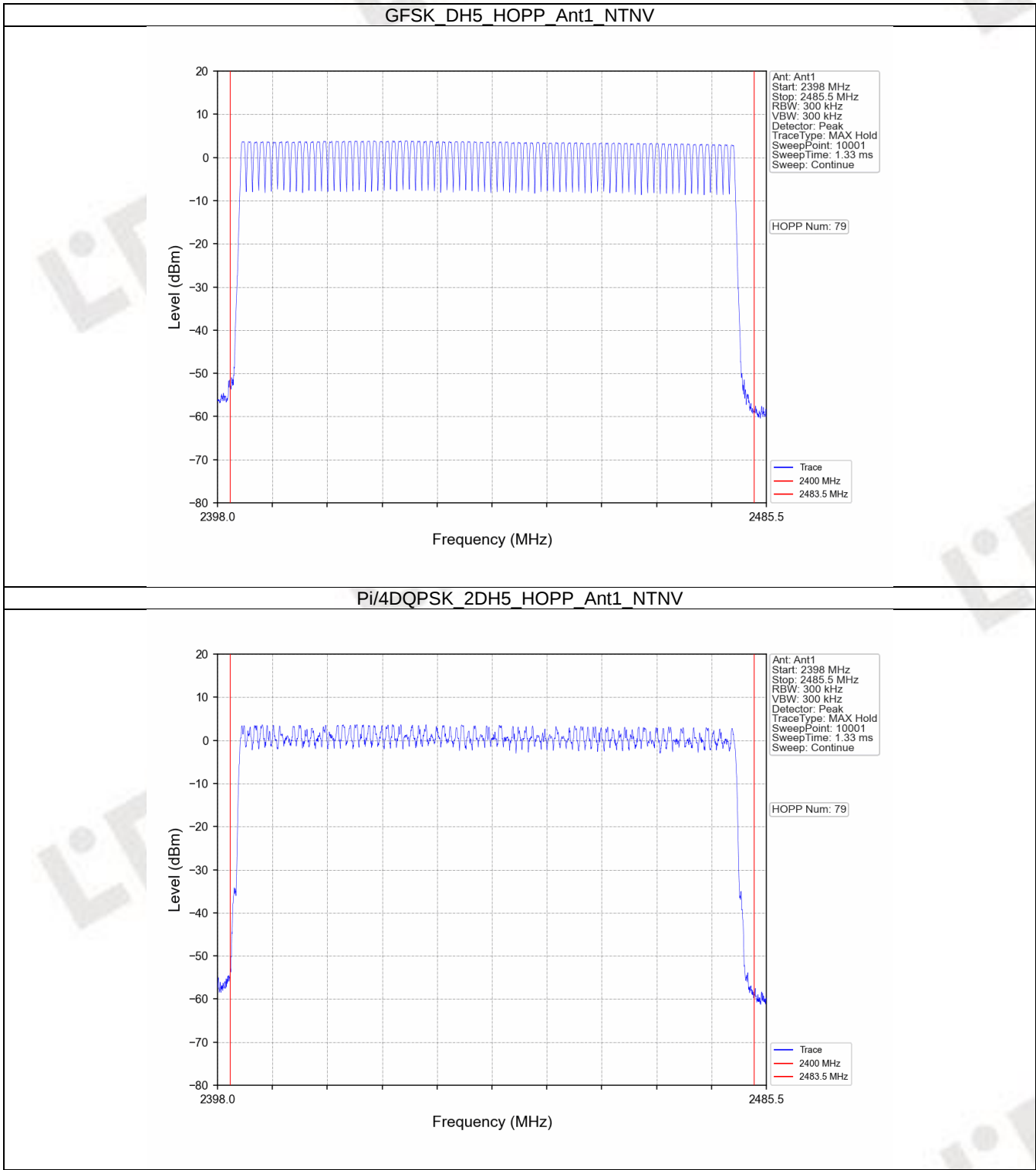
## 4. Number of Hopping Frequencies

### 4.1 HoppNum

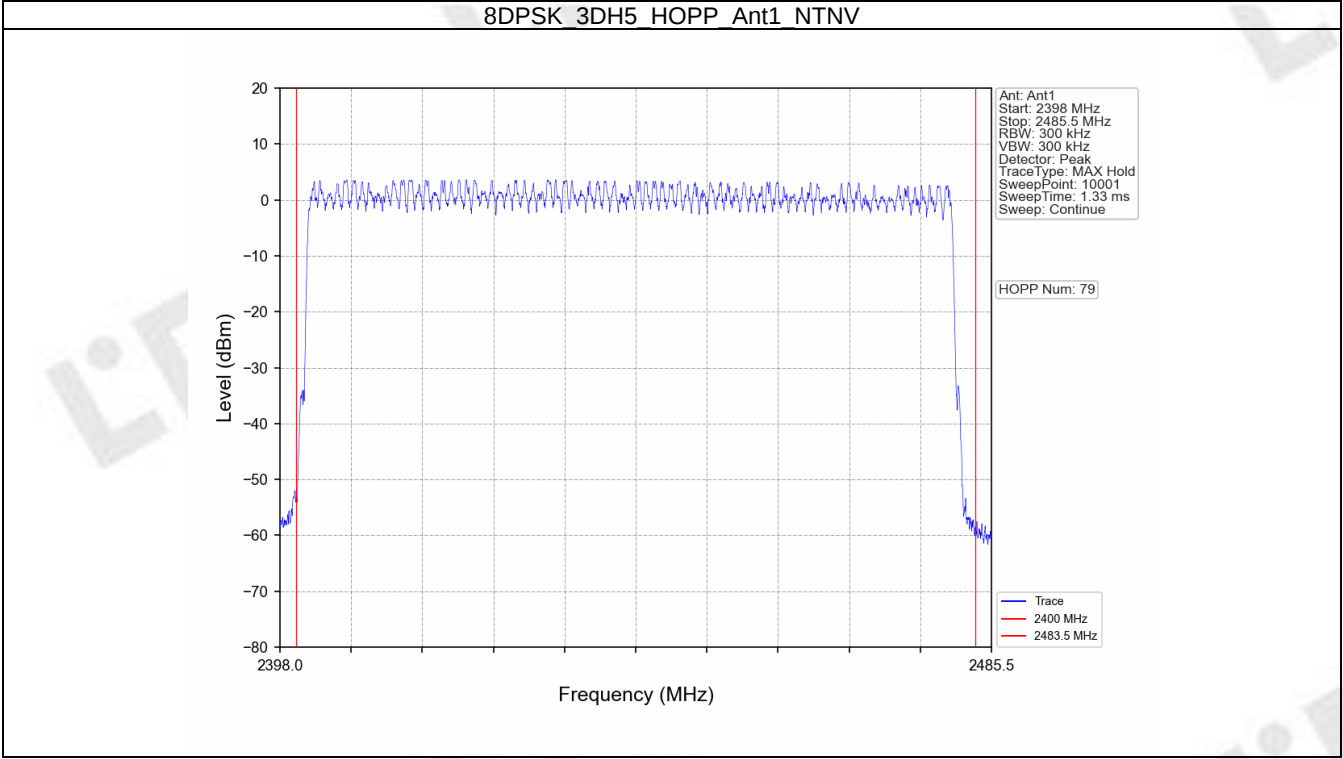
#### 4.1.1 Test Result

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

4.1.2 Test Graph



Model: YAMATRACK B



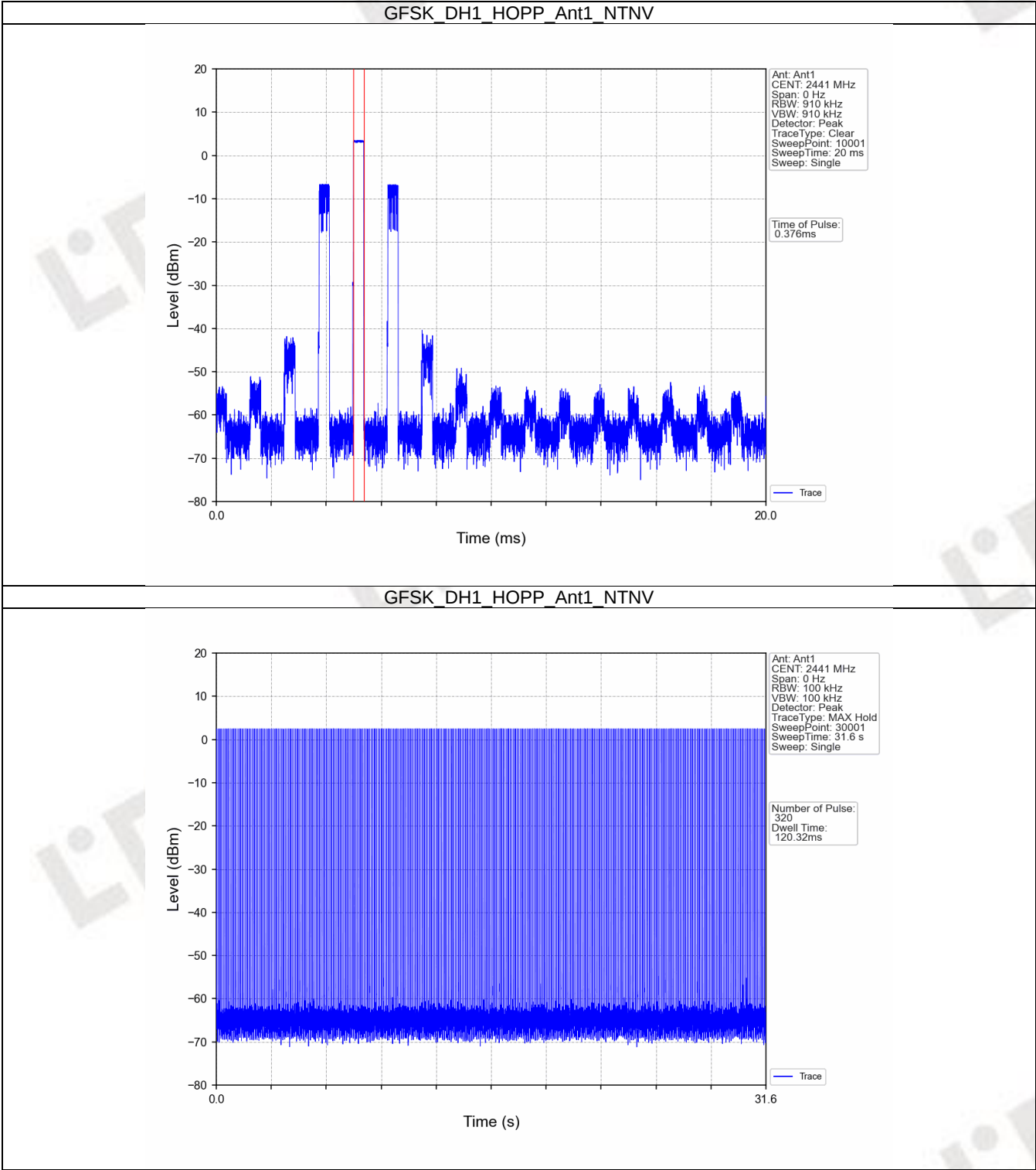
## 5. Time of Occupancy (Dwell Time)

### 5.1 Ant1

#### 5.1.1 Test Result

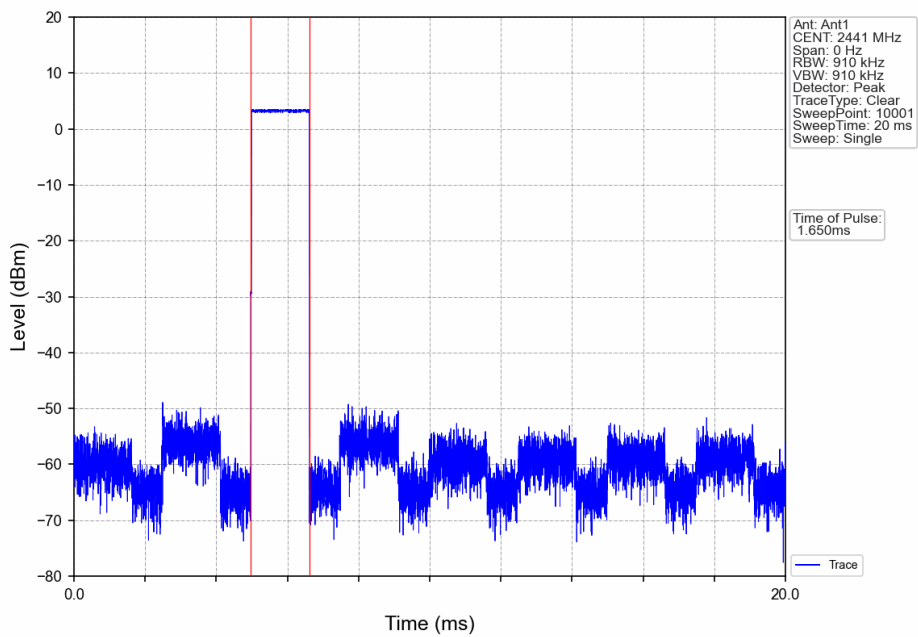
| Ant1      |         |                 |             |                               |                        |                                    |                 |            |         |
|-----------|---------|-----------------|-------------|-------------------------------|------------------------|------------------------------------|-----------------|------------|---------|
| 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         | 0.376                         | 31.600                 | 320                                | 120.320         | <=400      | Pass    |
|           |         |                 | DH3         | 1.650                         | 31.600                 | 160                                | 264.000         | <=400      | Pass    |
|           |         |                 | DH5         | 2.898                         | 31.600                 | 107                                | 310.086         | <=400      | Pass    |
| Pi/4DQPSK | SISO    | HOPP            | 2DH1        | 0.382                         | 31.600                 | 319                                | 121.858         | <=400      | Pass    |
|           |         |                 | 2DH3        | 1.662                         | 31.600                 | 160                                | 265.920         | <=400      | Pass    |
|           |         |                 | 2DH5        | 2.910                         | 31.600                 | 107                                | 311.370         | <=400      | Pass    |
| 8DPSK     | SISO    | HOPP            | 3DH1        | 0.382                         | 31.600                 | 320                                | 122.240         | <=400      | Pass    |
|           |         |                 | 3DH3        | 1.662                         | 31.600                 | 160                                | 265.920         | <=400      | Pass    |
|           |         |                 | 3DH5        | 2.912                         | 31.600                 | 107                                | 311.584         | <=400      | Pass    |

5.1.2 Test Graph

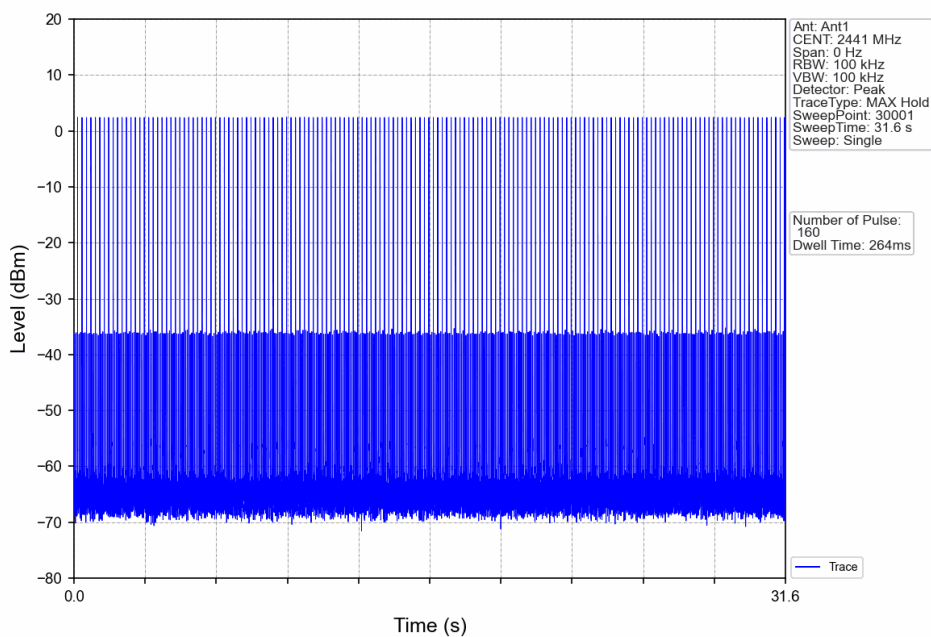


Model: YAMATRACK B

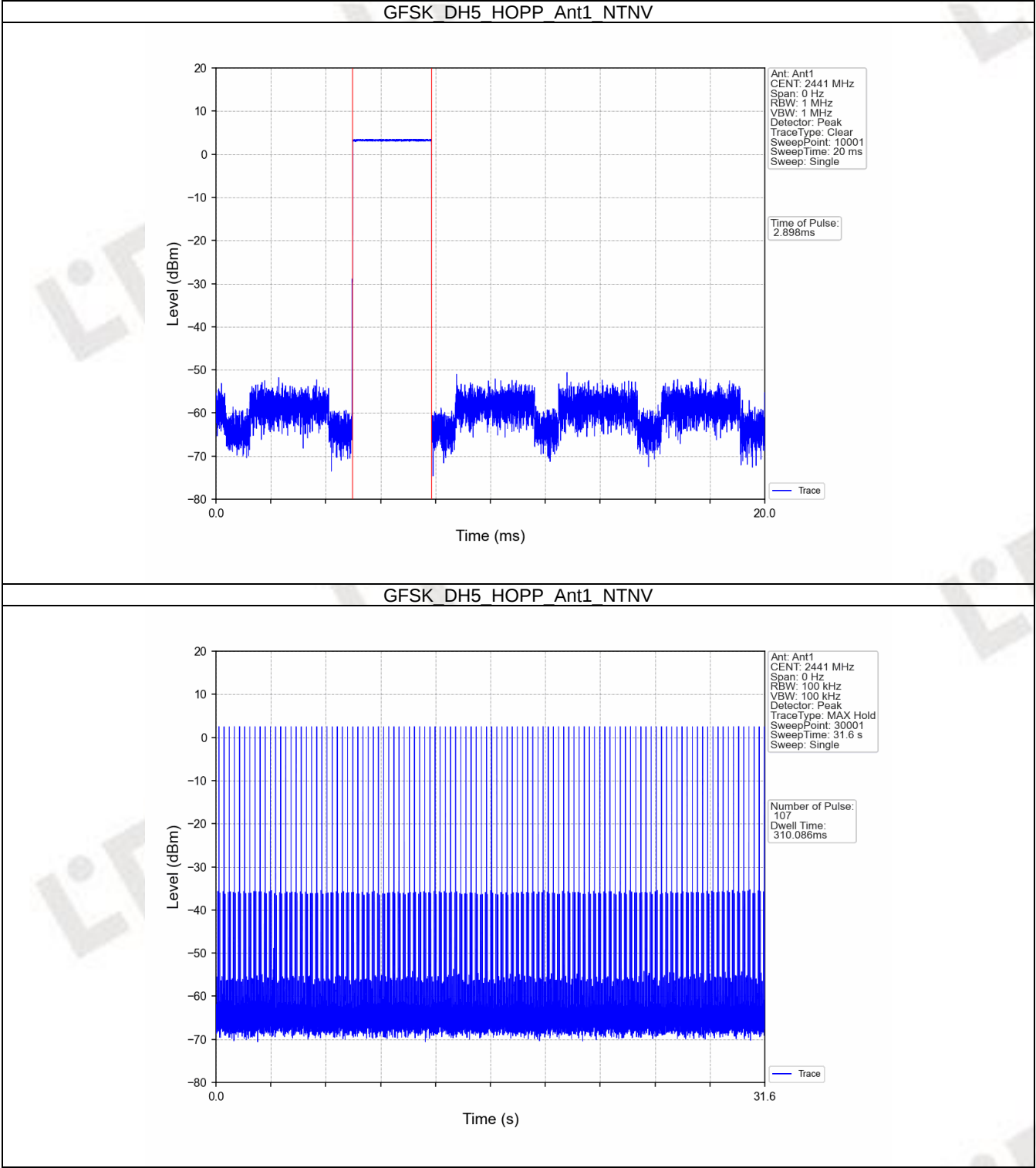
GFSK DH3 HOPP Ant1 NTN



GFSK DH3 HOPP Ant1 NTN

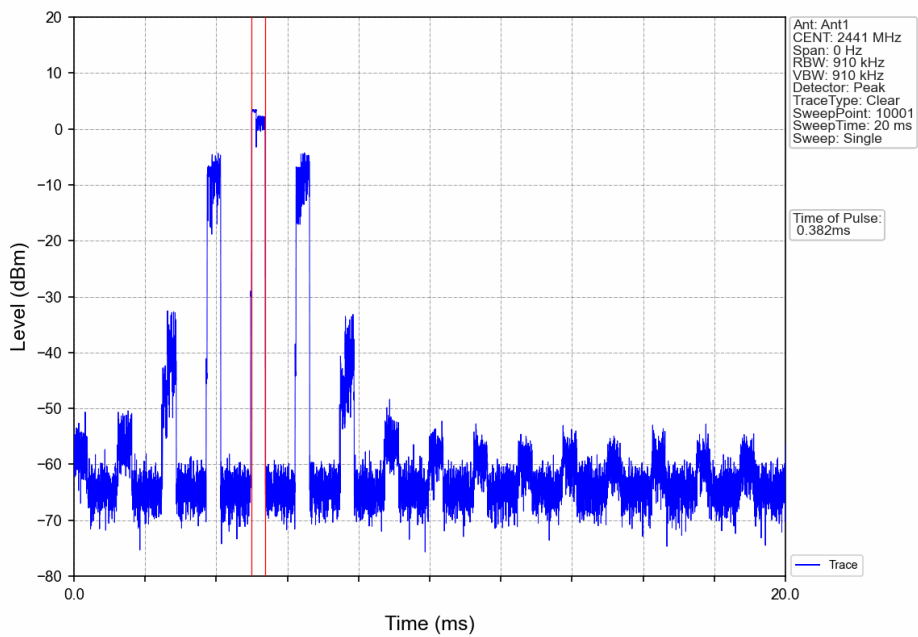


Model: YAMATRACK B

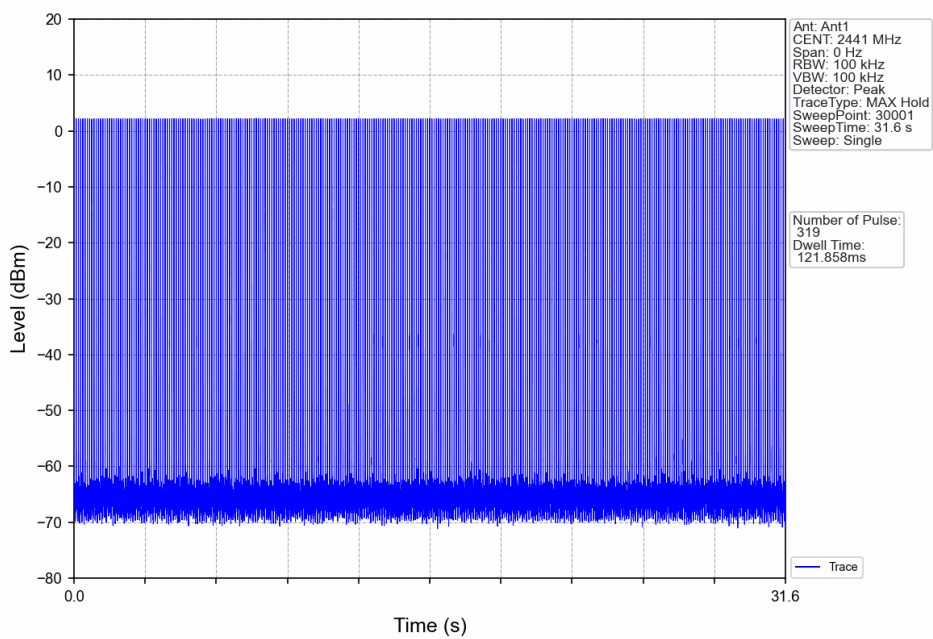


Model: YAMATRACK B

Pi/4DQPSK 2DH1 HOPP Ant1 NTN

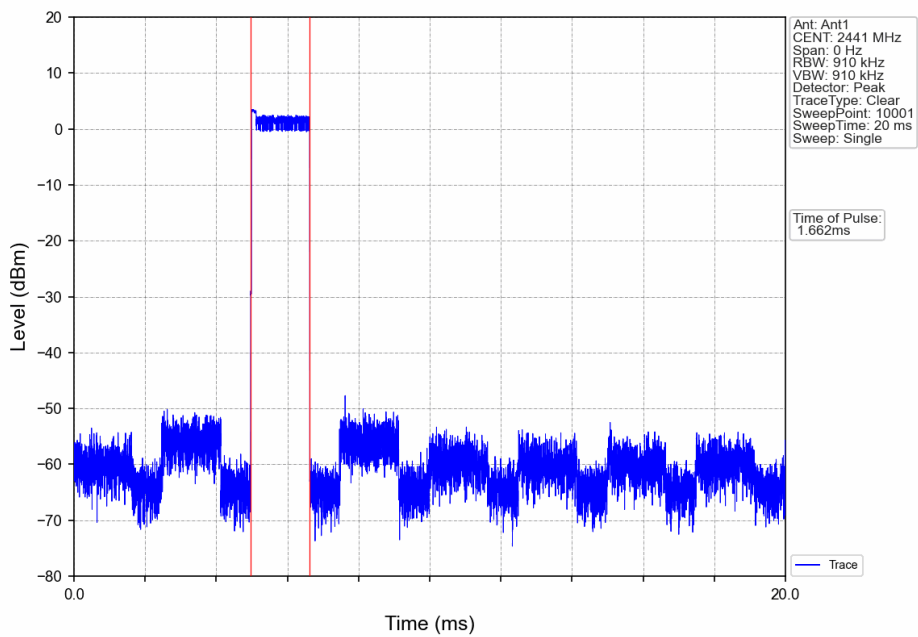


Pi/4DQPSK 2DH1 HOPP Ant1 NTN

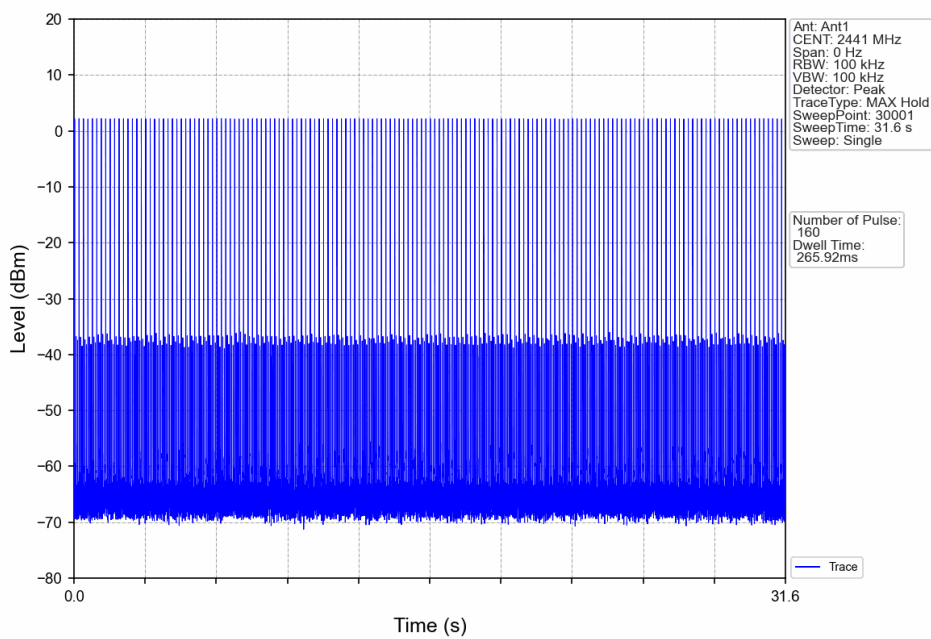


Model: YAMATRACK B

Pi/4DQPSK 2DH3 HOPP Ant1 NTN

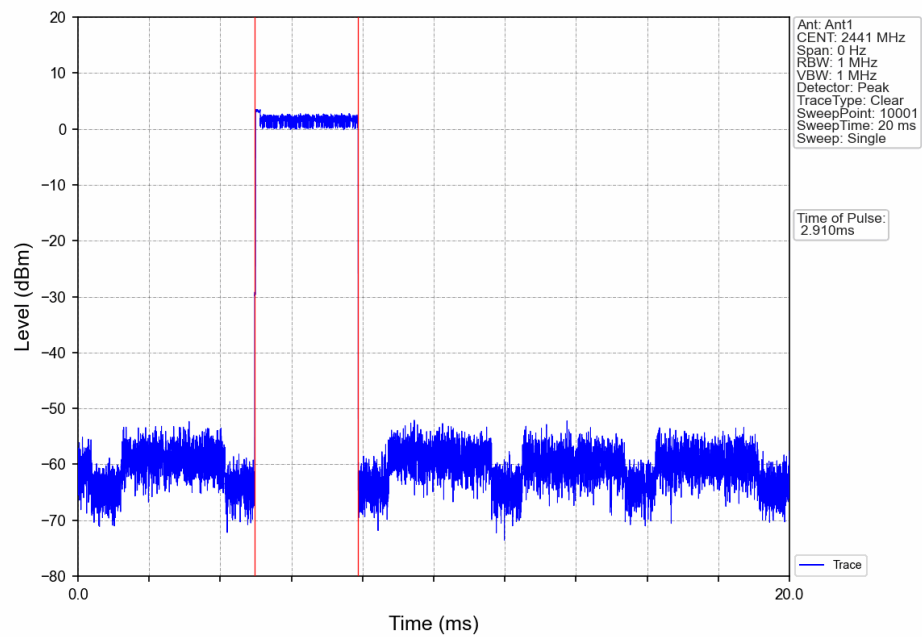


Pi/4DQPSK 2DH3 HOPP Ant1 NTN

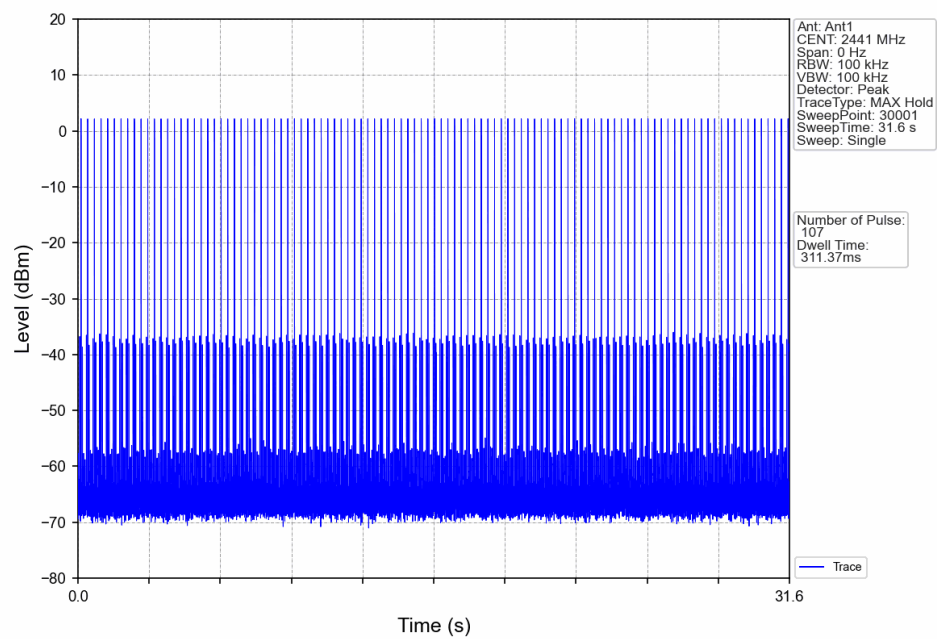


Model: YAMATRACK B

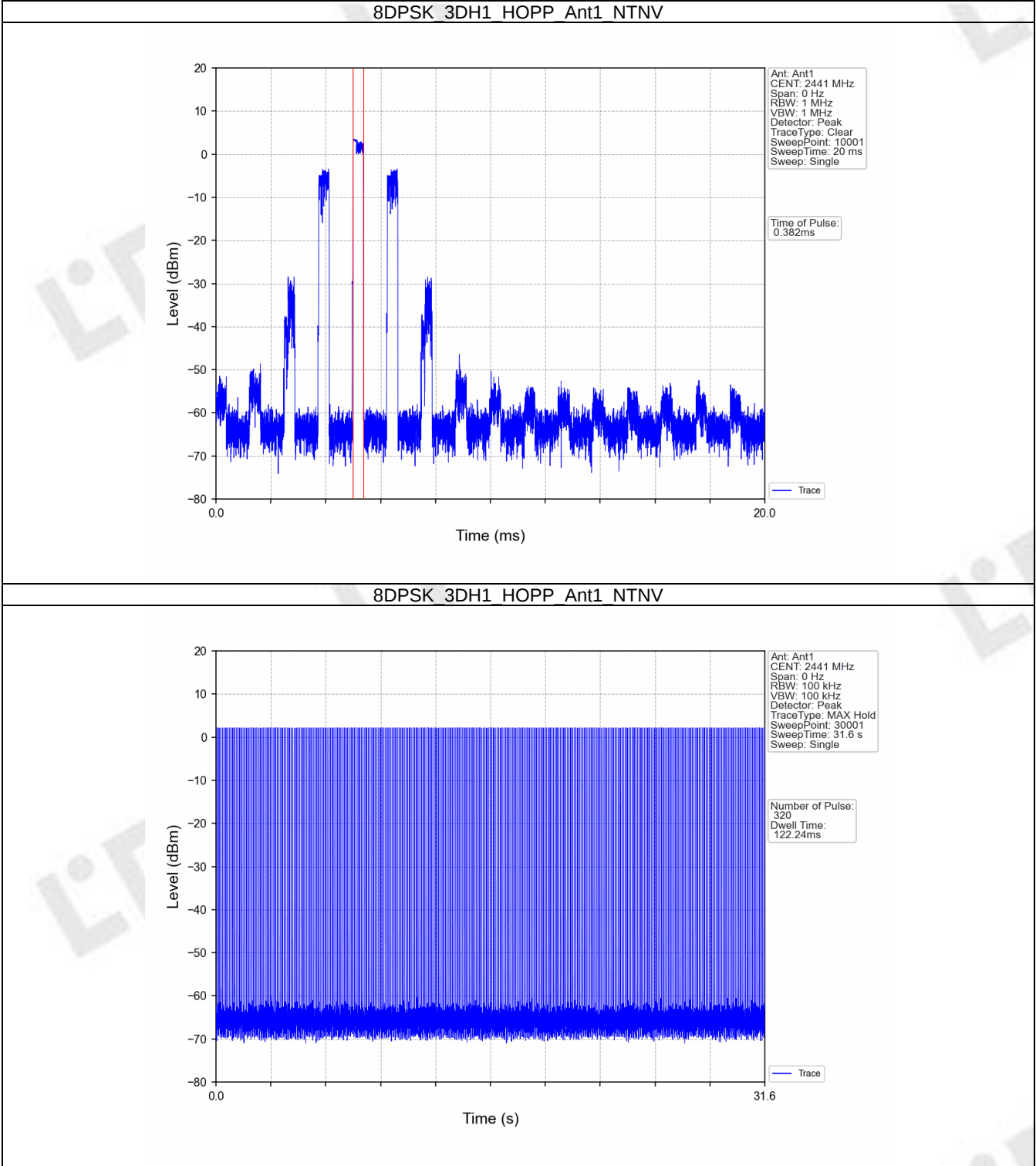
Pi/4DQPSK 2DH5 HOPP Ant1 NTN



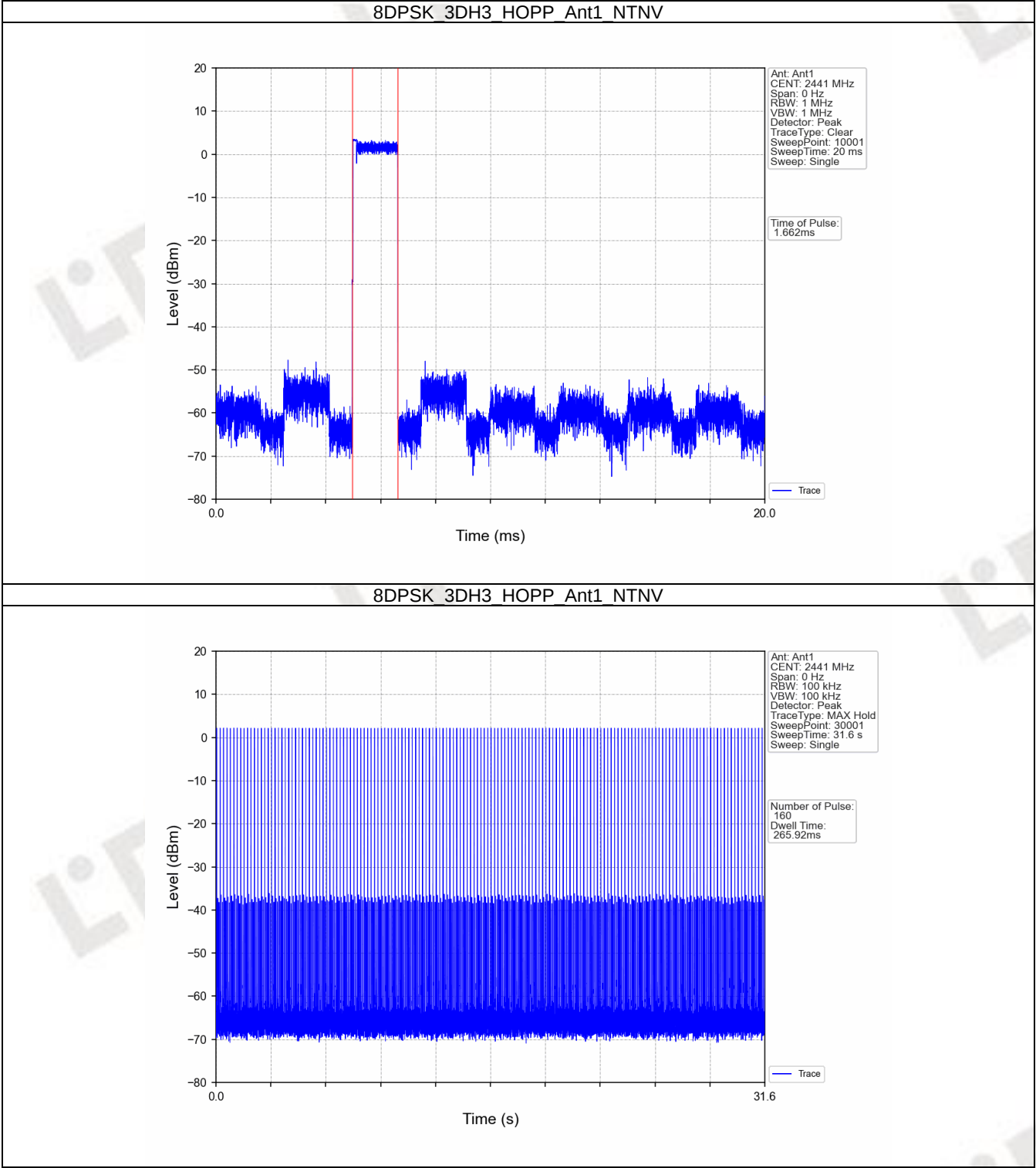
Pi/4DQPSK 2DH5 HOPP Ant1 NTN



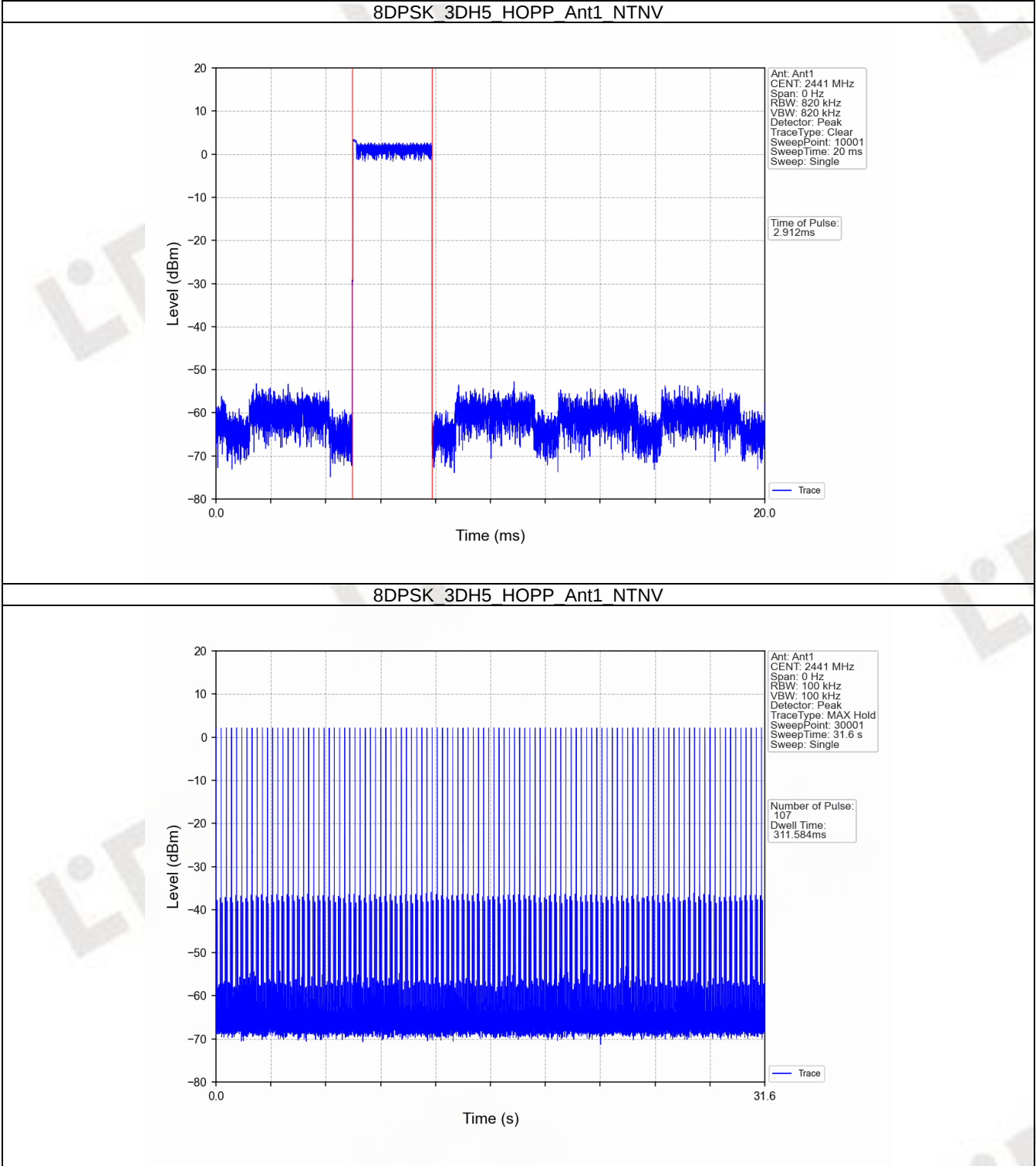
Model: YAMATRACK B



Model: YAMATRACK B



Model: YAMATRACK B



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

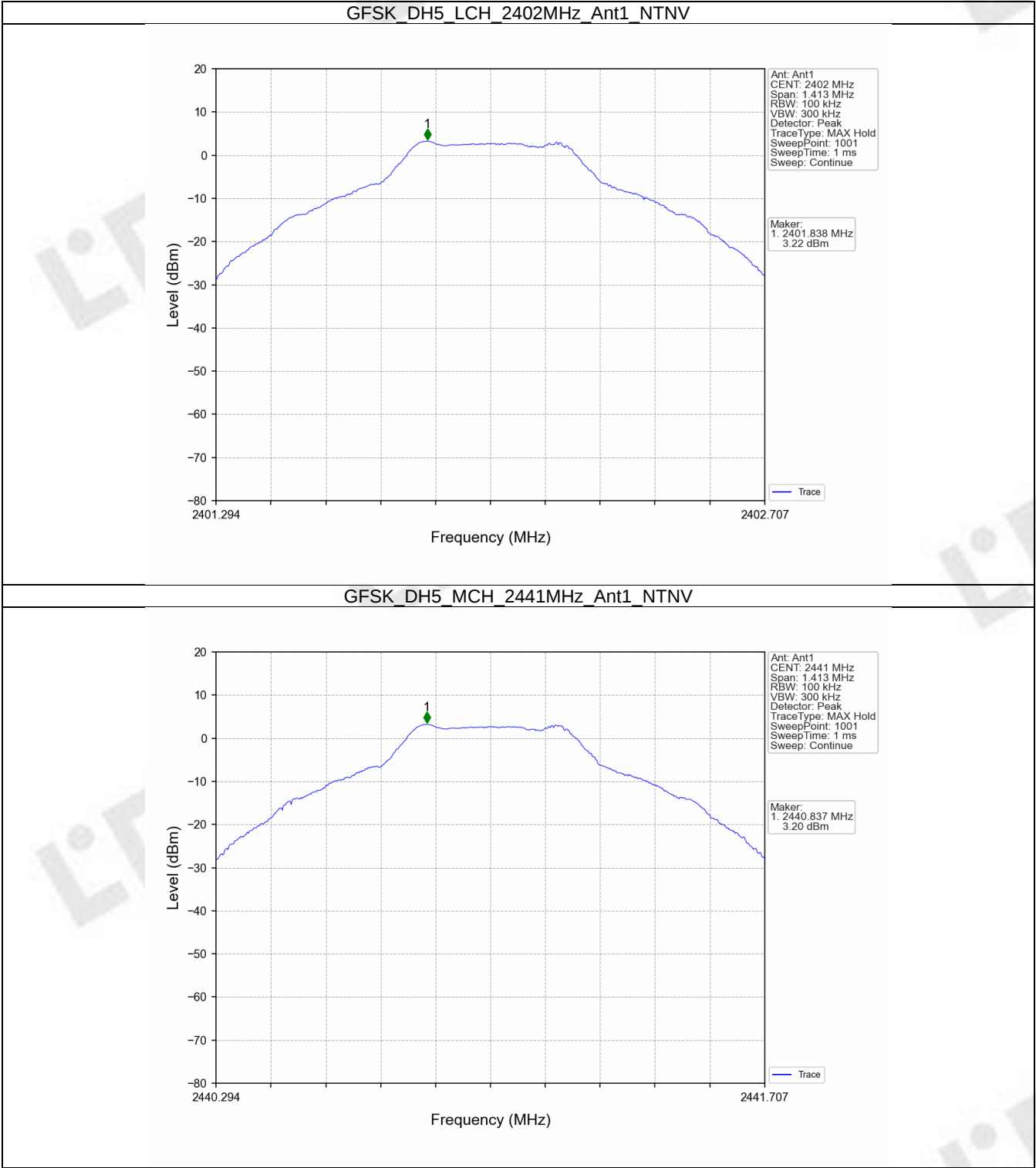
### 6.1 Ref

#### 6.1.1 Test Result

| Mode      | TX Type | Frequency (MHz) | Packet Type | ANT | Level of Reference (dBm) |
|-----------|---------|-----------------|-------------|-----|--------------------------|
| GFSK      | SISO    | 2402            | DH5         | 1   | 3.22                     |
|           |         | 2441            | DH5         | 1   | 3.20                     |
|           |         | 2480            | DH5         | 1   | 2.55                     |
| Pi/4DQPSK | SISO    | 2402            | 2DH5        | 1   | 3.04                     |
|           |         | 2441            | 2DH5        | 1   | 3.02                     |
|           |         | 2480            | 2DH5        | 1   | 2.40                     |
| 8DPSK     | SISO    | 2402            | 3DH5        | 1   | 3.23                     |
|           |         | 2441            | 3DH5        | 1   | 3.20                     |
|           |         | 2480            | 3DH5        | 1   | 2.54                     |

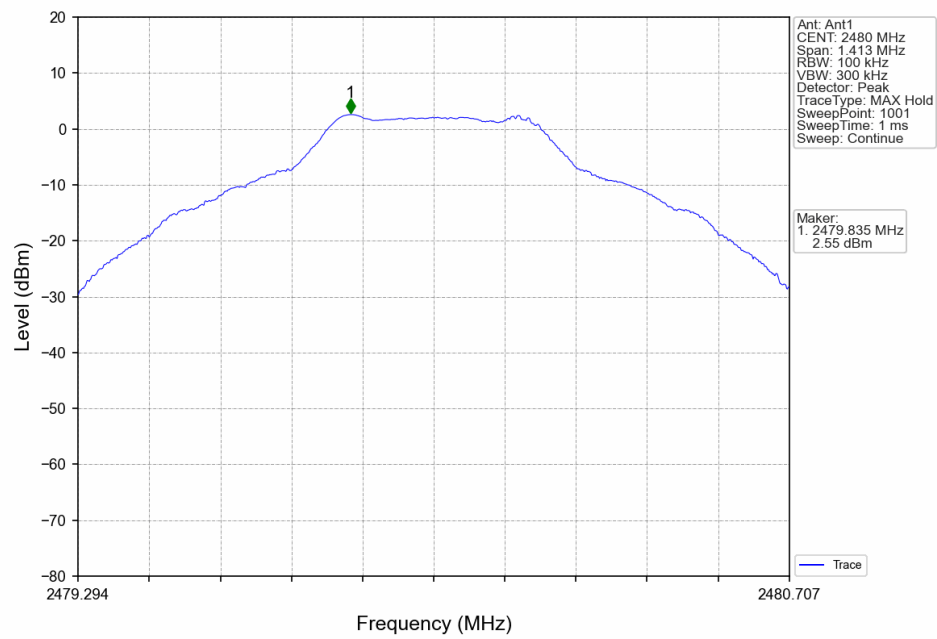
Note1: Refer to RSS-247 Issue 2 section 5.5 and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.

6.1.2 Test Graph

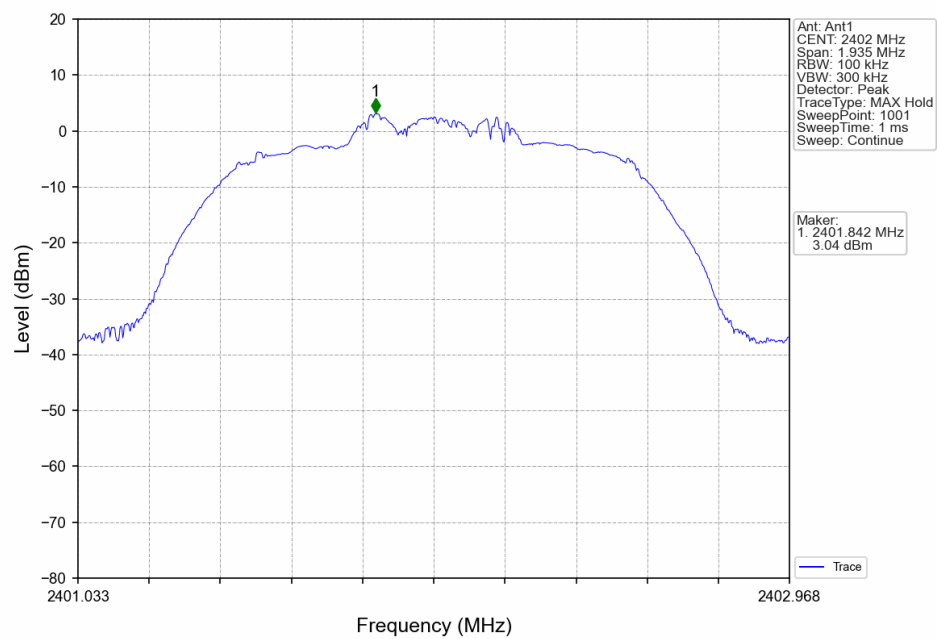


Model: YAMATRACK B

GFSK DH5 HCH 2480MHz Ant1 NTNV

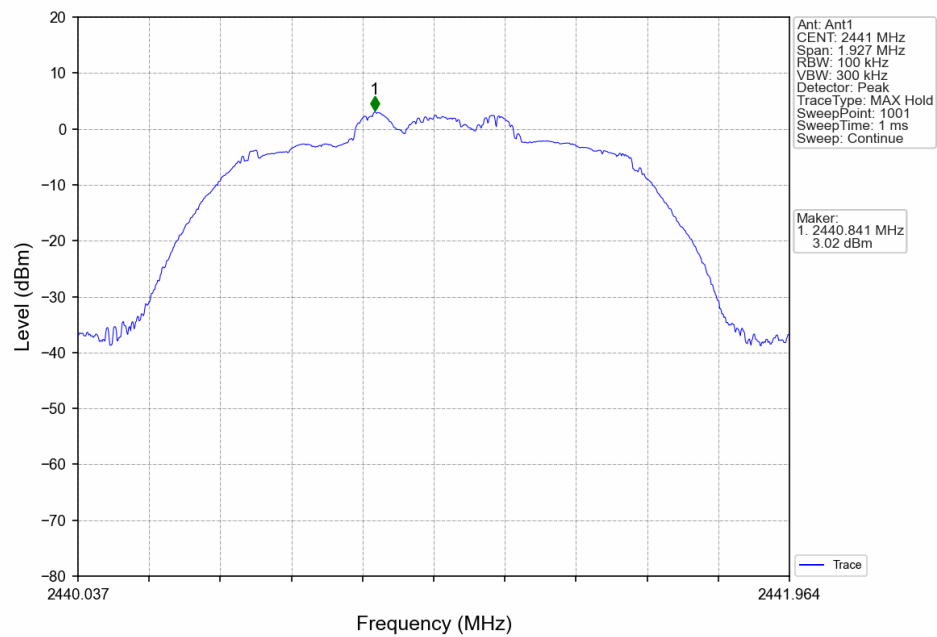


Pi/4DQPSK 2DH5 LCH 2402MHz Ant1 NTNV

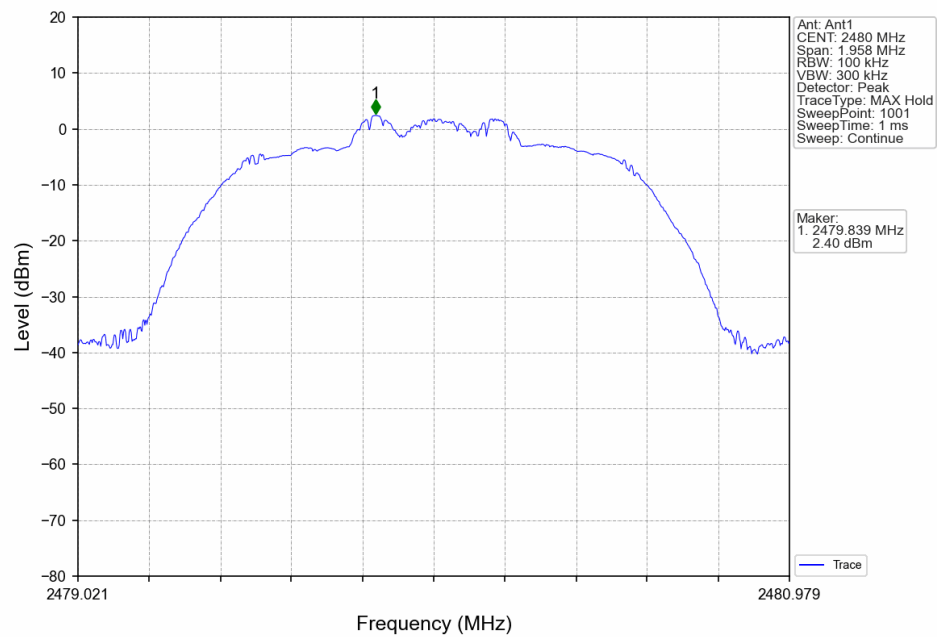


Model: YAMATRACK B

Pi/4DQPSK 2DH5 MCH 2441MHz Ant1 NTNV

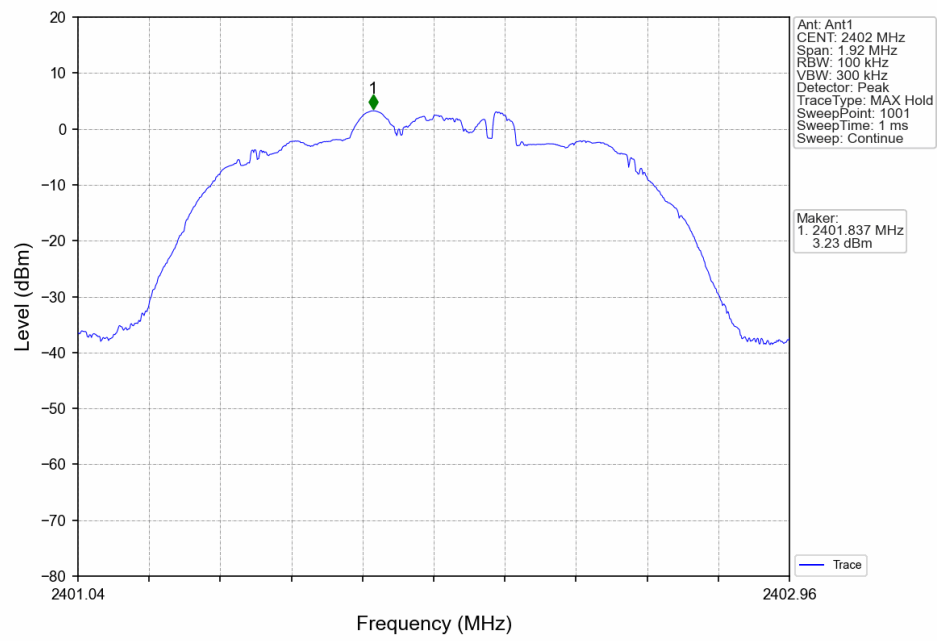


Pi/4DQPSK 2DH5 HCH 2480MHz Ant1 NTNV

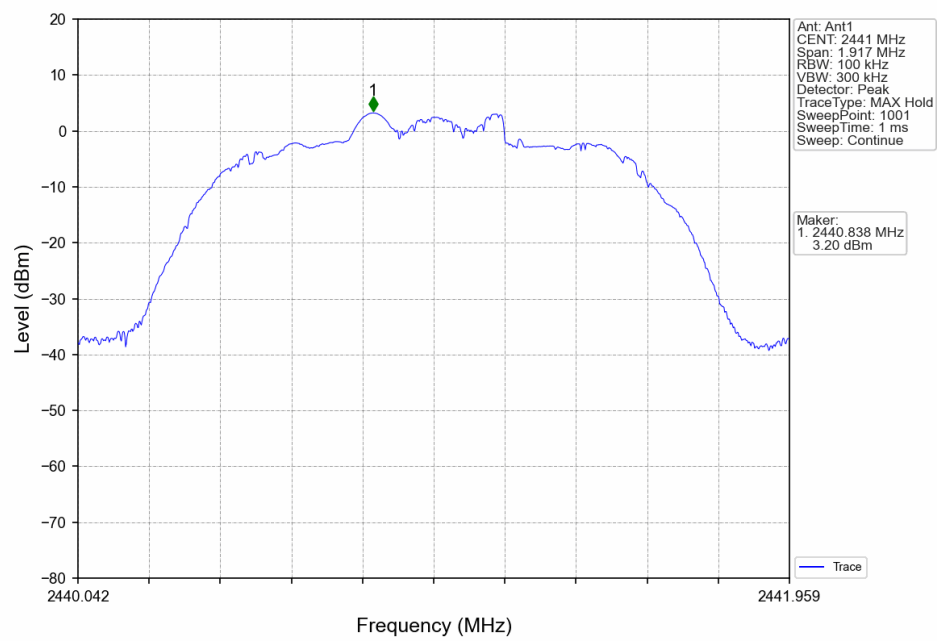


Model: YAMATRACK B

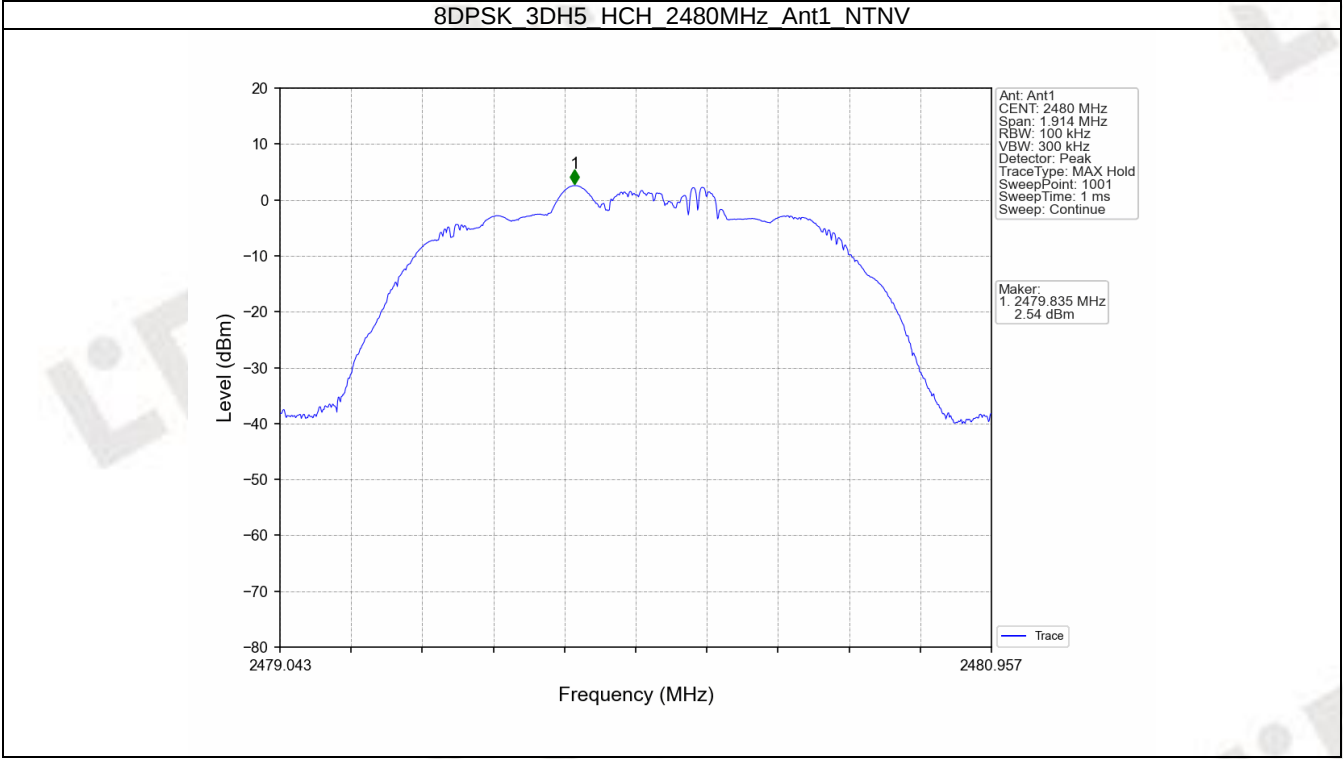
8DPSK 3DH5 LCH 2402MHz Ant1 NTV



8DPSK 3DH5 MCH 2441MHz Ant1 NTV



Model: YAMATRACK B



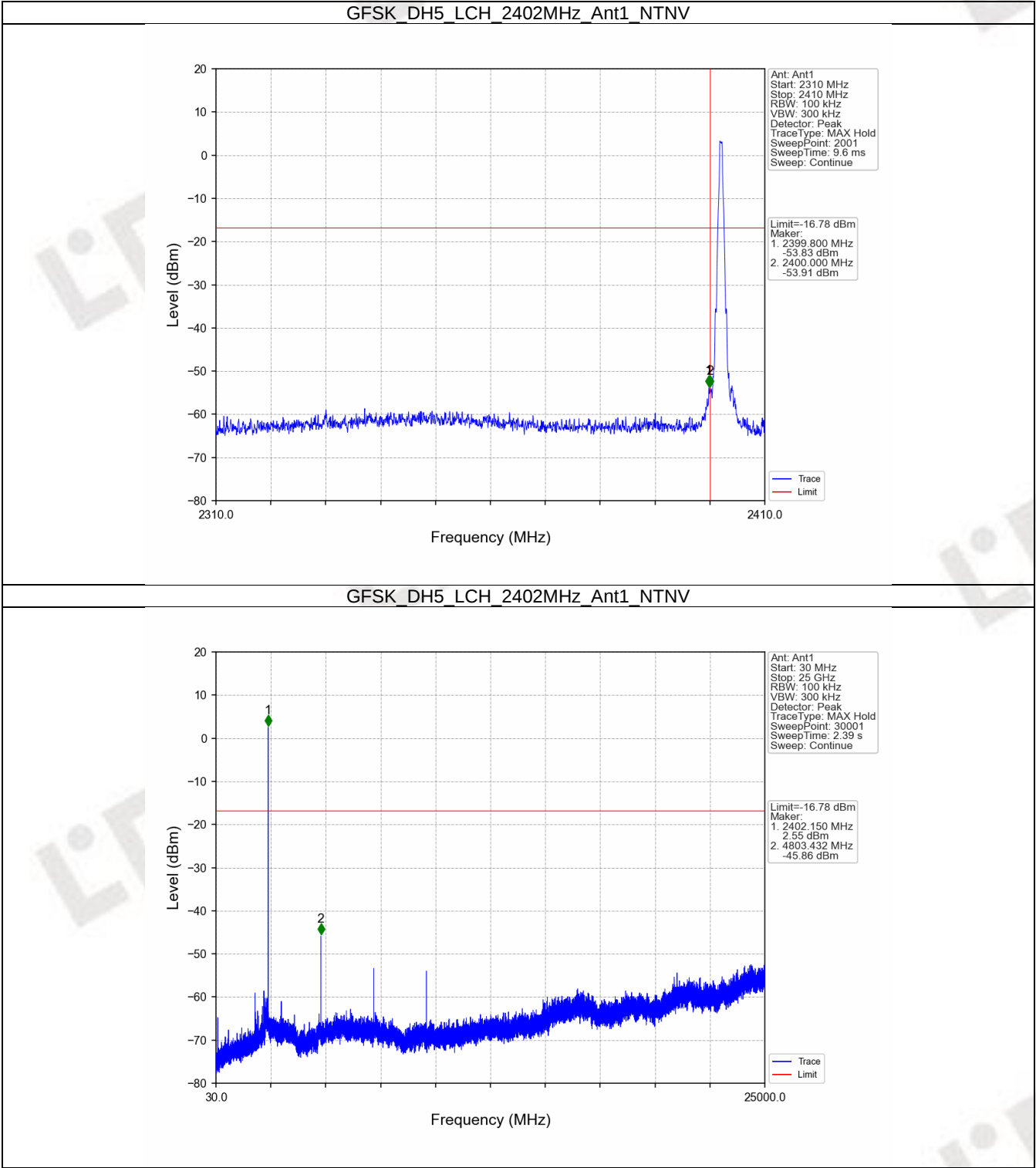
## 6.2 CSE

### 6.2.1 Test Result

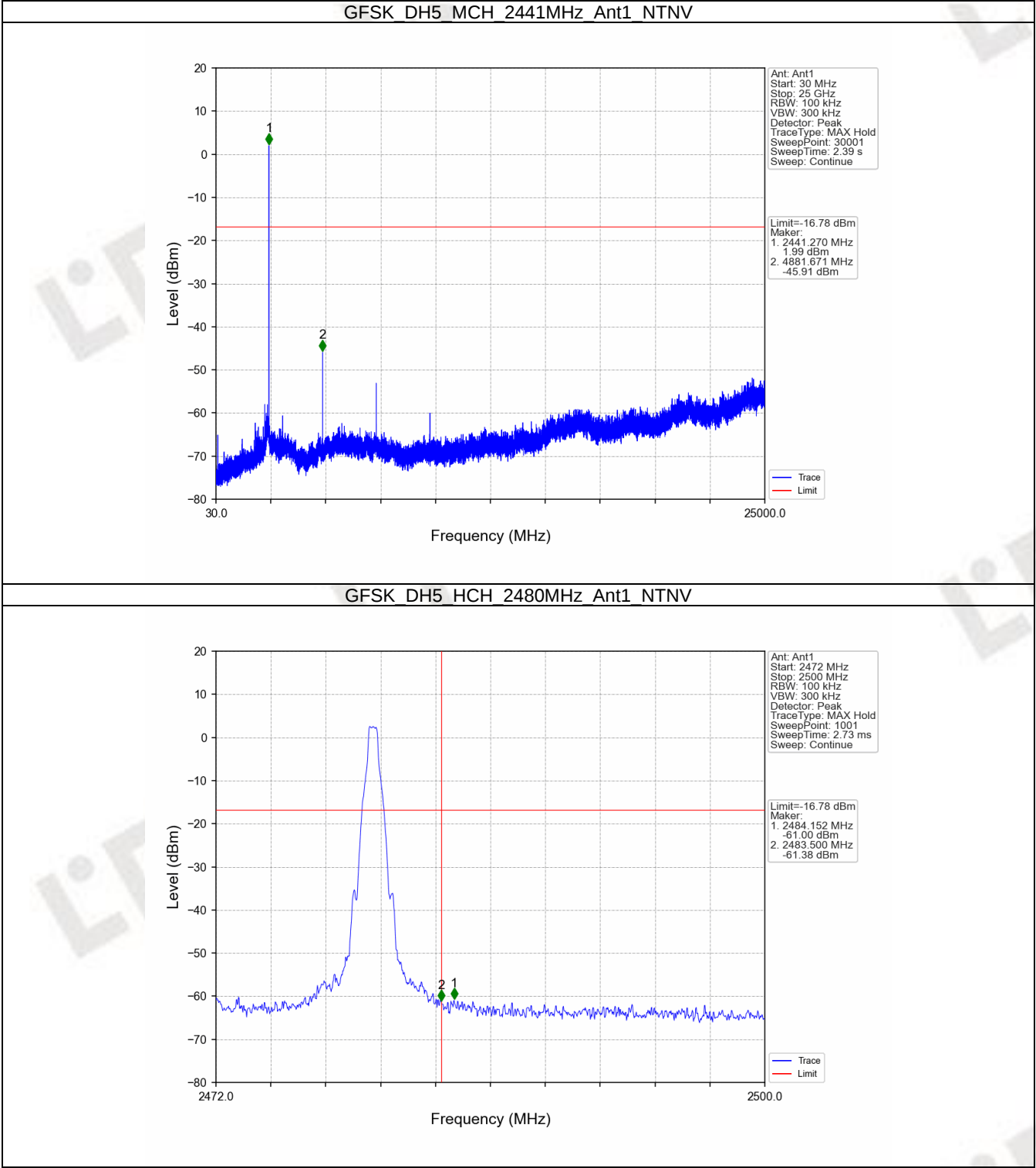
| Mode      | TX Type | Frequency (MHz) | Packet Type | ANT | Level of Reference (dBm) | Limit (dBm) | Verdict |
|-----------|---------|-----------------|-------------|-----|--------------------------|-------------|---------|
| GFSK      | SISO    | 2402            | DH5         | 1   | 3.22                     | -16.78      | Pass    |
|           |         | 2441            | DH5         | 1   | 3.22                     | -16.78      | Pass    |
|           |         | 2480            | DH5         | 1   | 3.22                     | -16.78      | Pass    |
|           |         | HOPP            | DH5         | 1   | 3.22                     | -16.78      | Pass    |
|           |         |                 |             |     | 3.22                     | -16.78      | Pass    |
| Pi/4DQPSK | SISO    | 2402            | 2DH5        | 1   | 3.04                     | -16.96      | Pass    |
|           |         | 2441            | 2DH5        | 1   | 3.04                     | -16.96      | Pass    |
|           |         | 2480            | 2DH5        | 1   | 3.04                     | -16.96      | Pass    |
|           |         | HOPP            | 2DH5        | 1   | 3.04                     | -16.96      | Pass    |
|           |         |                 |             |     | 3.04                     | -16.96      | Pass    |
| 8DPSK     | SISO    | 2402            | 3DH5        | 1   | 3.23                     | -16.77      | Pass    |
|           |         | 2441            | 3DH5        | 1   | 3.23                     | -16.77      | Pass    |
|           |         | 2480            | 3DH5        | 1   | 3.23                     | -16.77      | Pass    |
|           |         | HOPP            | 3DH5        | 1   | 3.23                     | -16.77      | Pass    |
|           |         |                 |             |     | 3.23                     | -16.77      | Pass    |

Note1: Refer to RSS-247 Issue 2 section 5.5 and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.

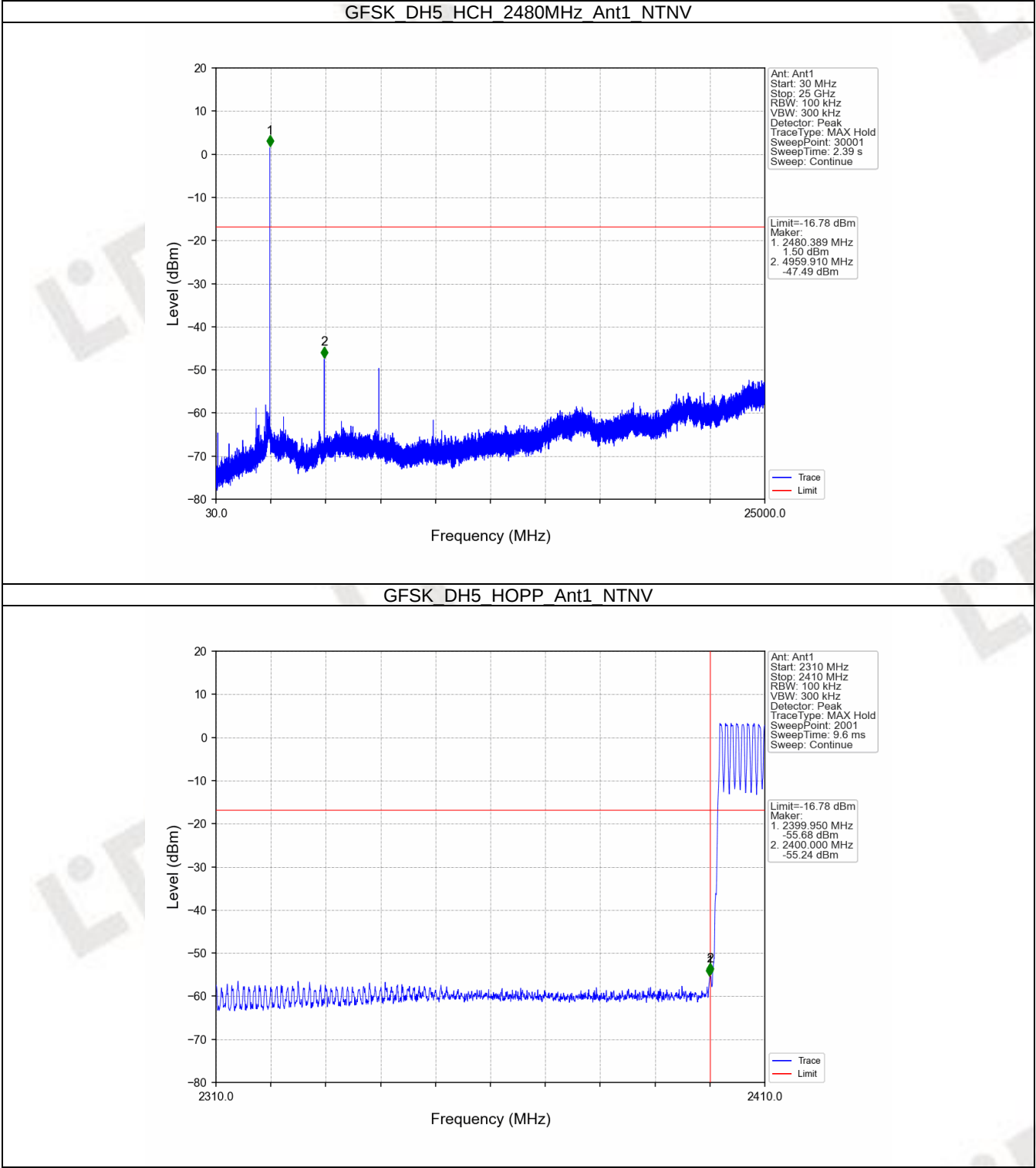
6.2.2 Test Graph



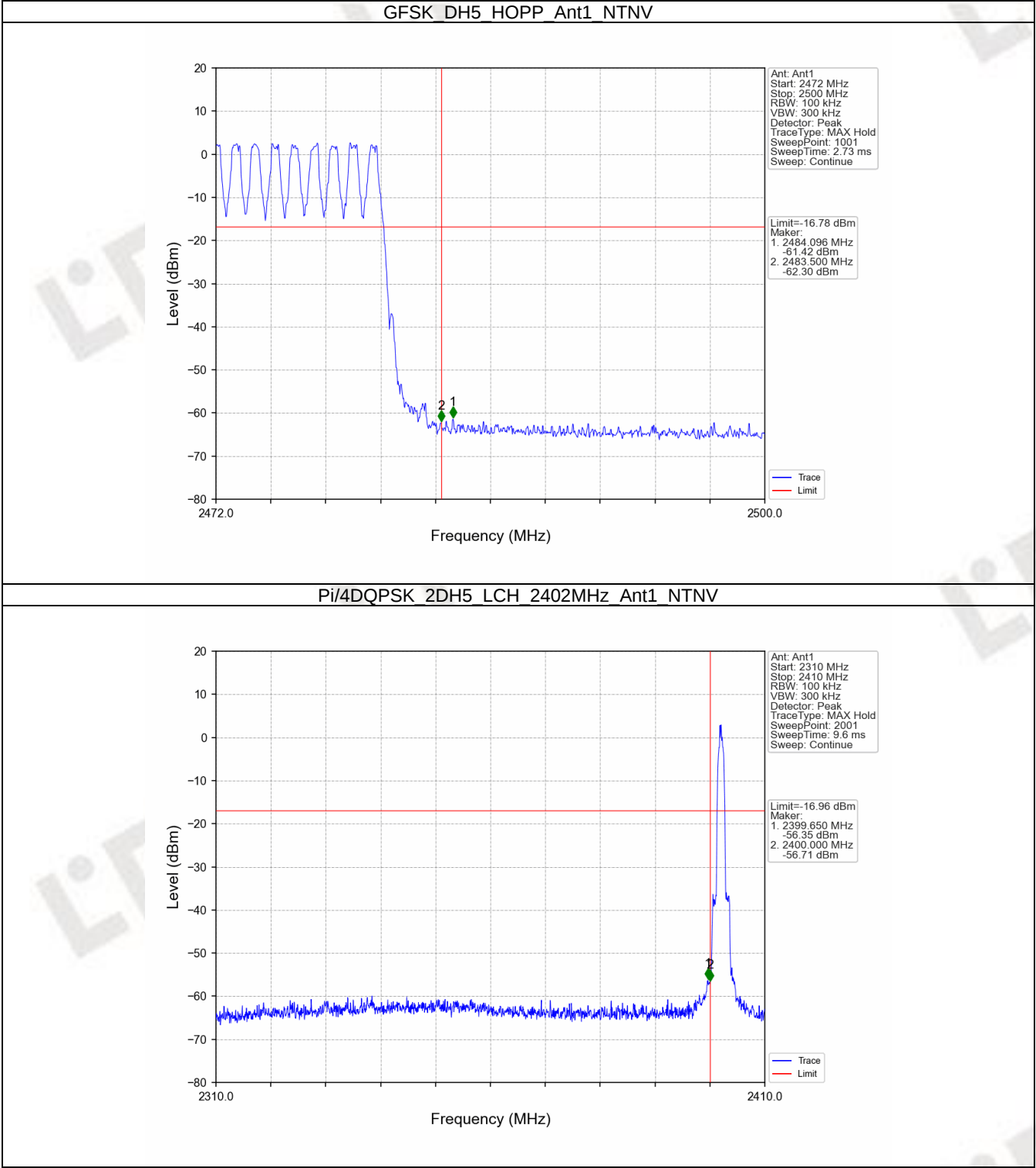
Model: YAMATRACK B



Model: YAMATRACK B

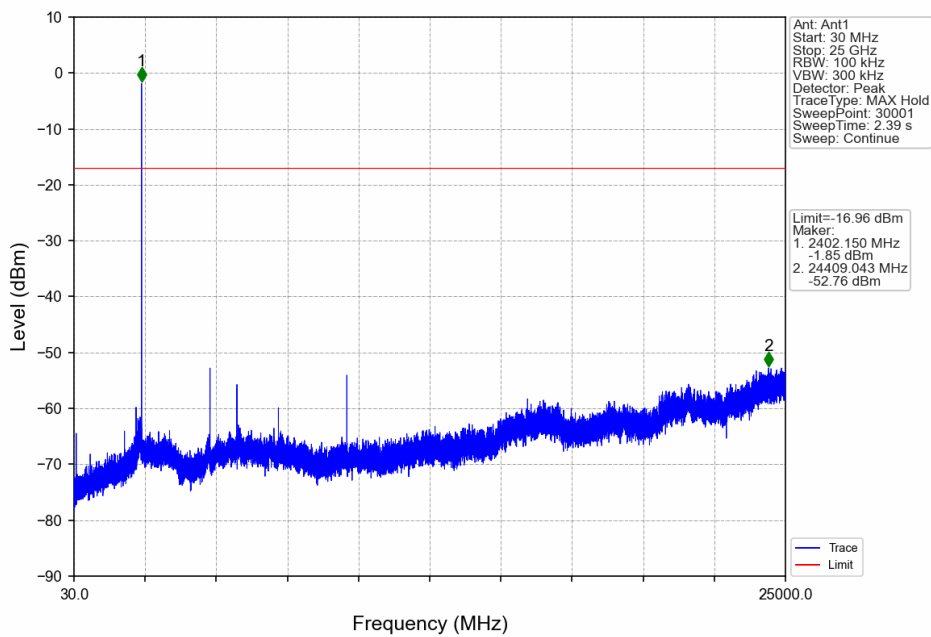


Model: YAMATRACK B

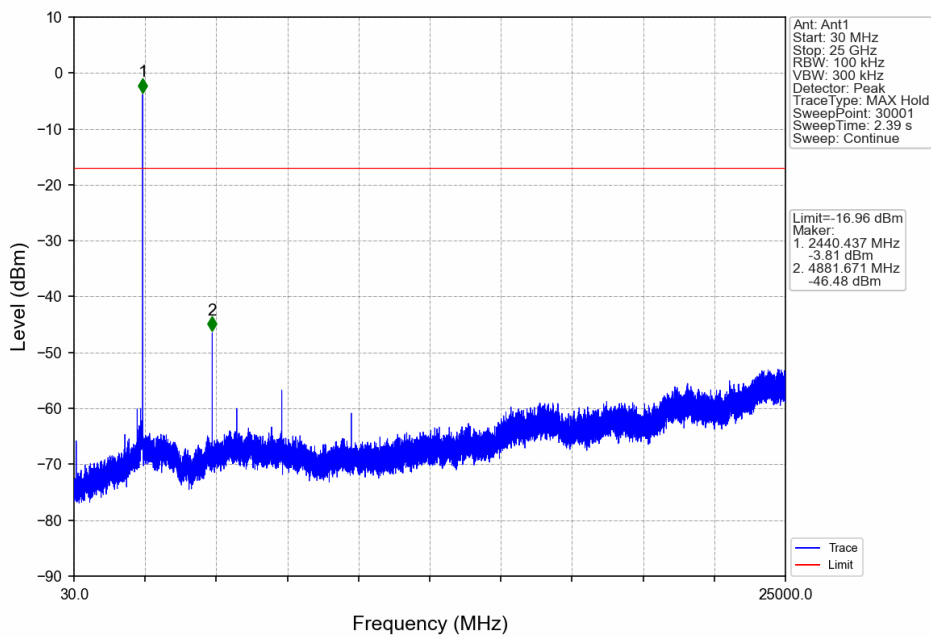


Model: YAMATRACK B

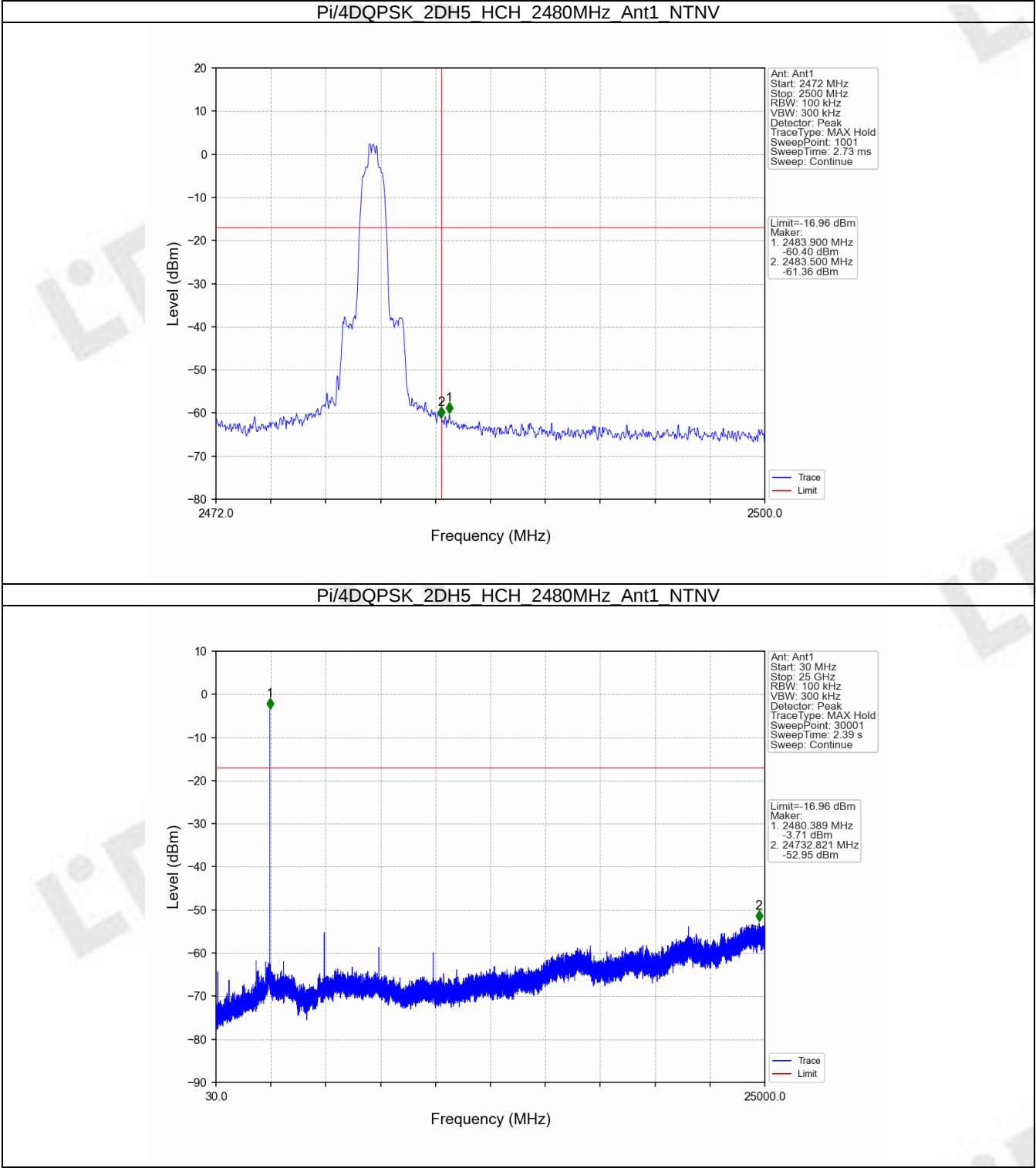
Pi/4DQPSK 2DH5 LCH 2402MHz Ant1 NTNV



Pi/4DQPSK 2DH5 MCH 2441MHz Ant1 NTNV

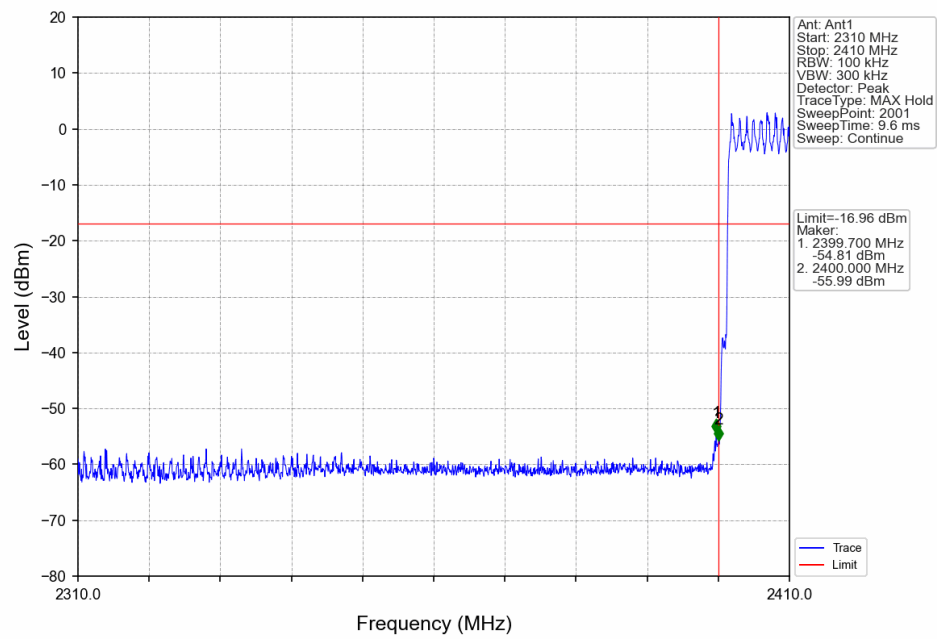


Model: YAMATRACK B

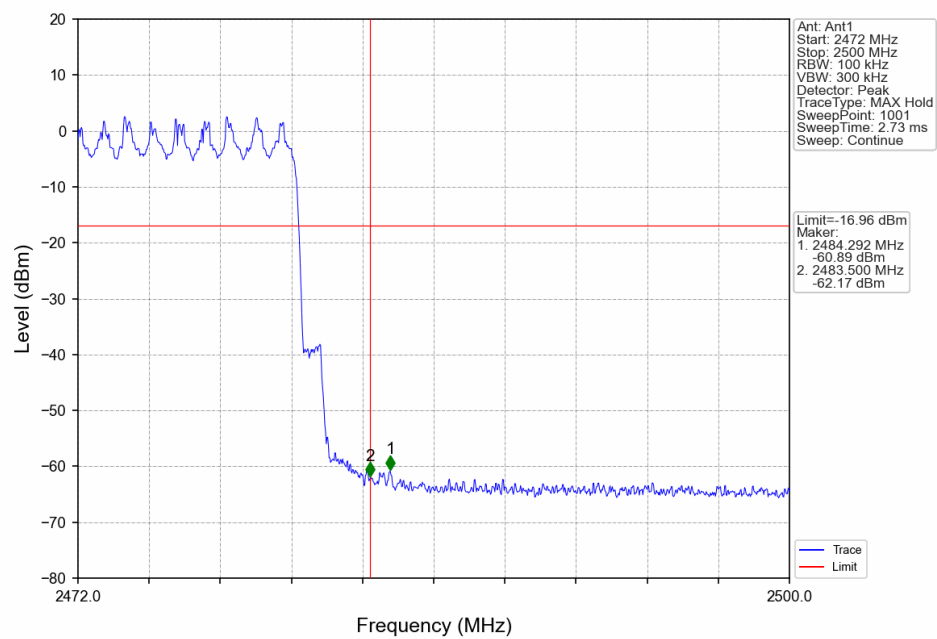


Model: YAMATRACK B

Pi/4DQPSK 2DH5 HOPP Ant1 NTN

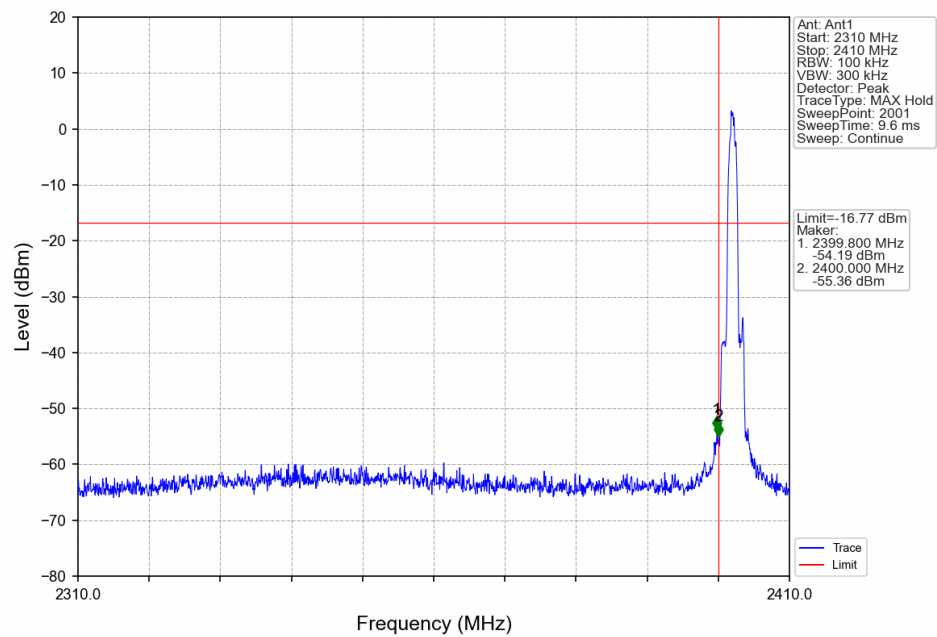


Pi/4DQPSK 2DH5 HOPP Ant1 NTN

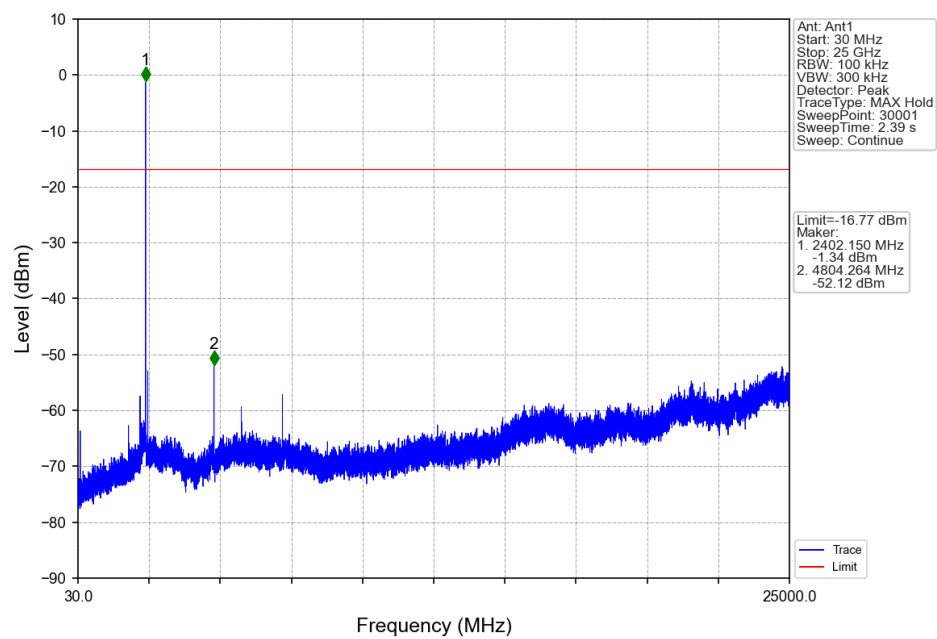


Model: YAMATRACK B

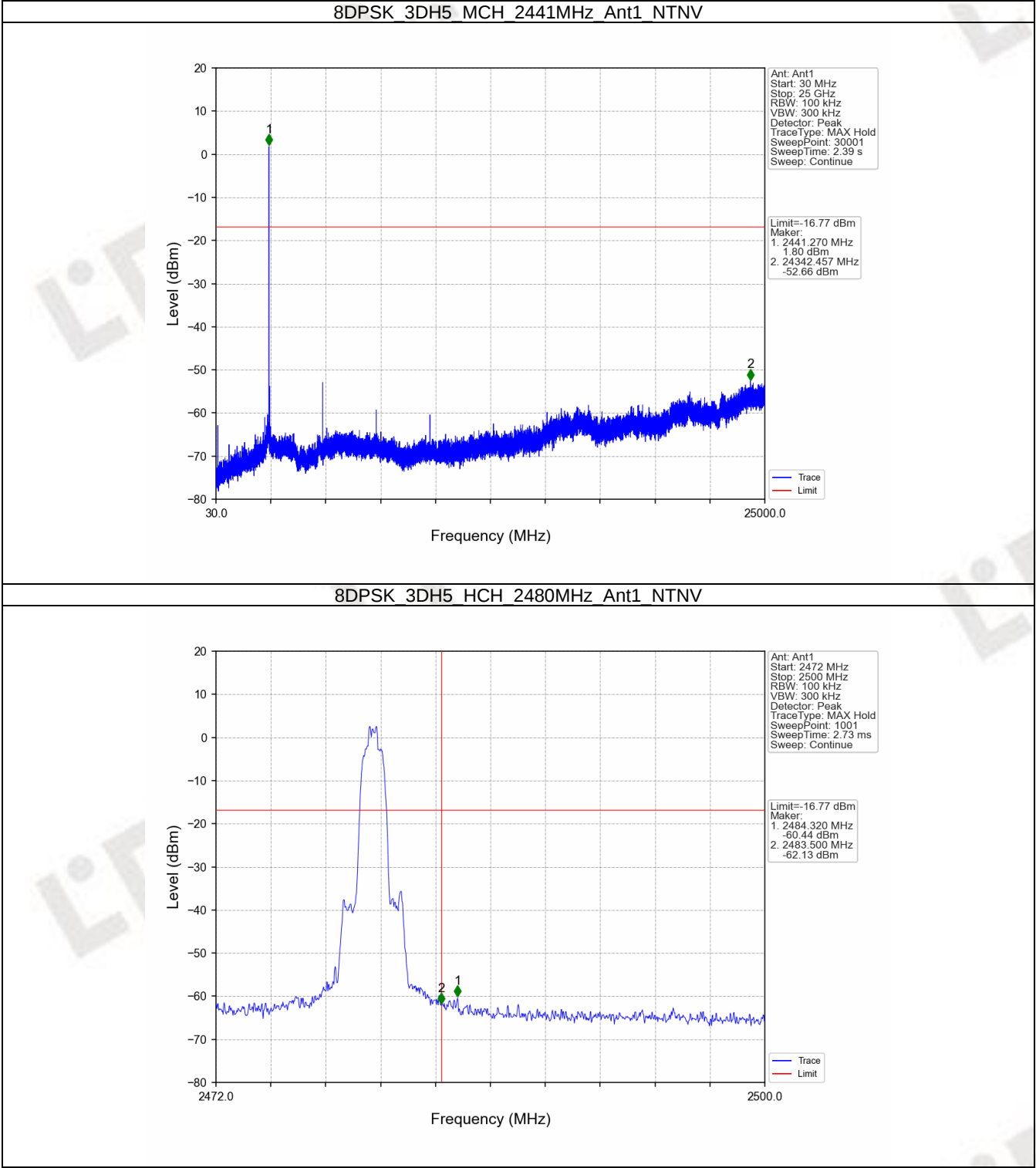
8DPSK 3DH5 LCH 2402MHz Ant1 NTNV



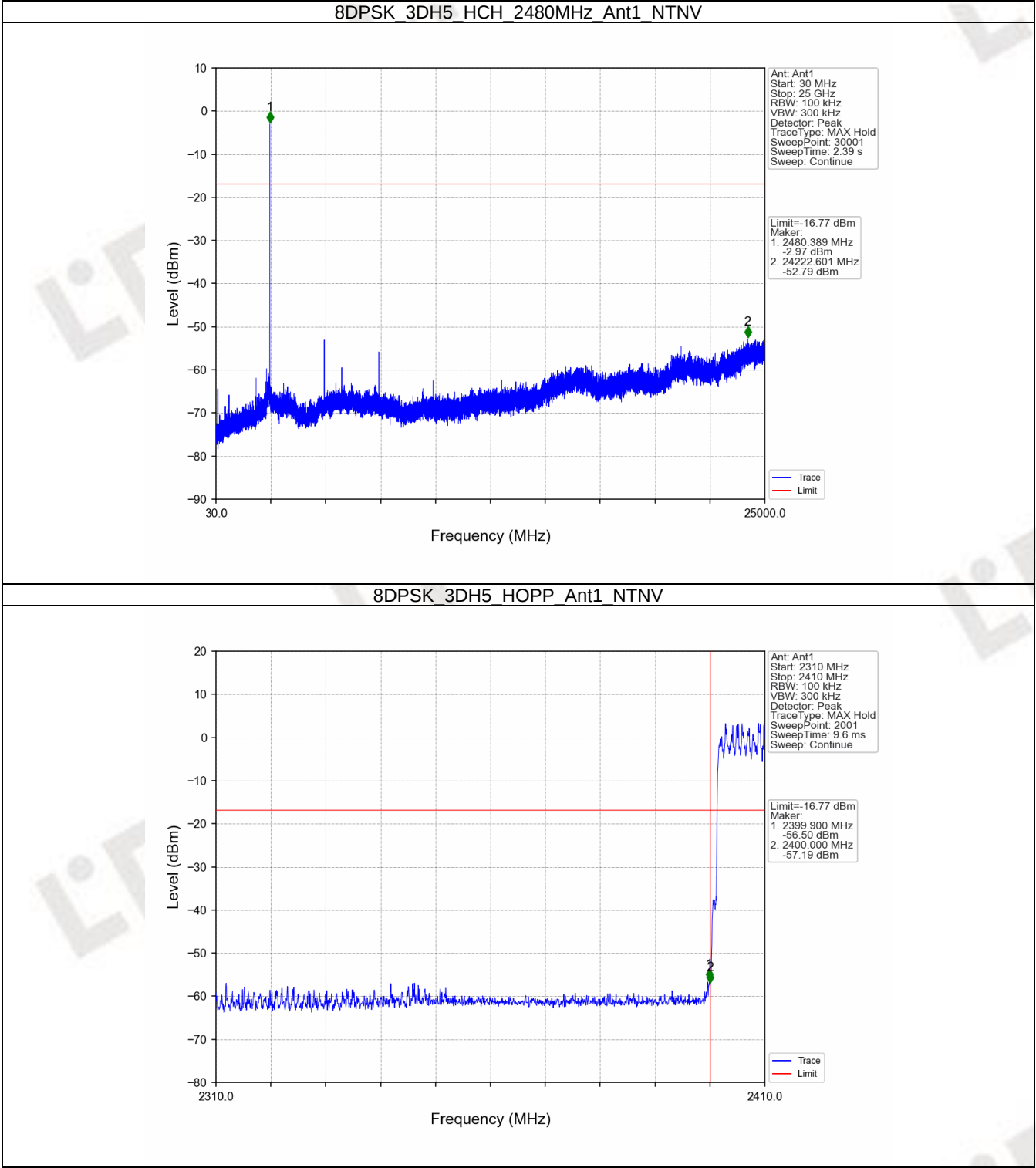
8DPSK 3DH5 LCH 2402MHz Ant1 NTNV



Model: YAMATRACK B



Model: YAMATRACK B



Model: YAMATRACK B

