

## ANNEX D TEST DATA

For

|                |                           |
|----------------|---------------------------|
| Project No.:   | 8331EU011007W             |
| Client:        | QUEST USA CORP            |
| Product Name:  | IJOY LIP SYNC SPEAKER-MIC |
| Model No.:     | IJ10577-DG                |
| FCC ID:        | 2AJQ7LIPSYNCMIC           |
| Technology:    | Bluetooth BDR&EDR         |
| Test Engineer: | <i>Mikoy zhu</i>          |
| Test Date:     | 2025-06-26                |

## Test Summary

| Item                                                 | Result |
|------------------------------------------------------|--------|
| Duty Cycle                                           | Pass   |
| Bandwidth                                            | Pass   |
| Maximum Conducted Output Power                       | Pass   |
| Carrier Frequency Separation                         | Pass   |
| Number of Hopping Frequencies                        | Pass   |
| Time of Occupancy (Dwell Time)                       | Pass   |
| Unwanted Emissions In Non-restricted Frequency Bands | Pass   |

## 1. Duty Cycle

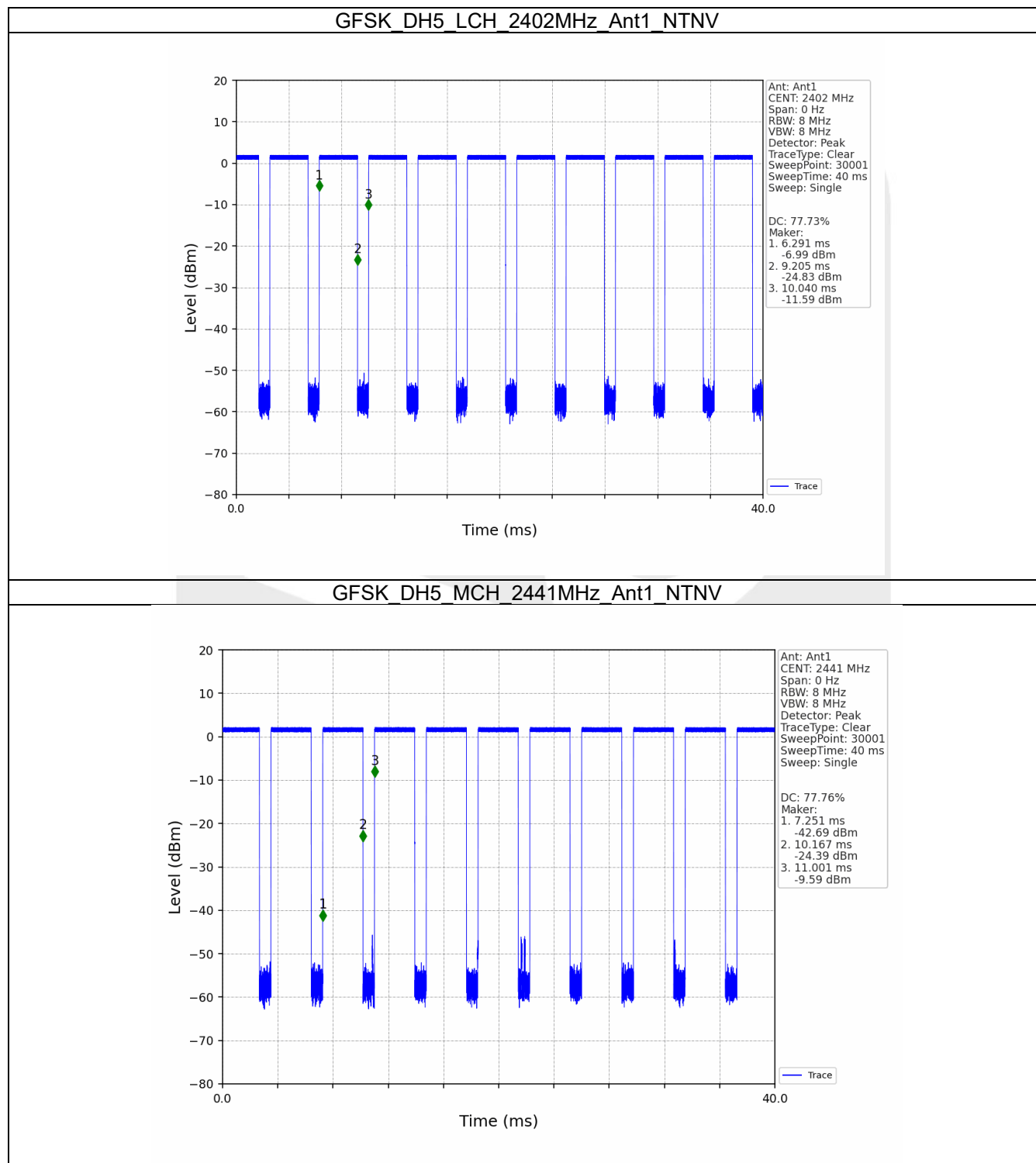
### 1.1 Test Result

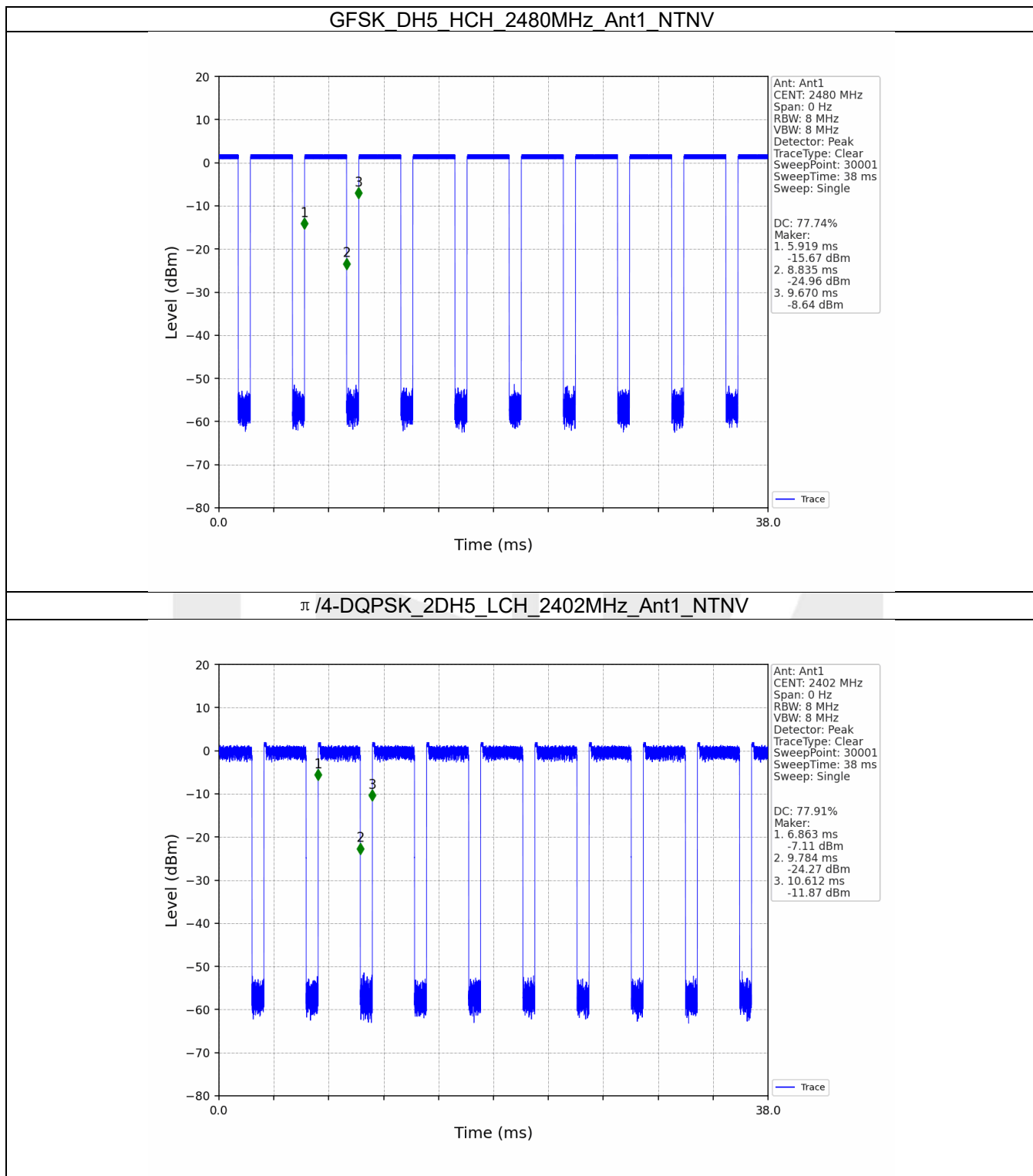
#### 1.1.1 Ant1

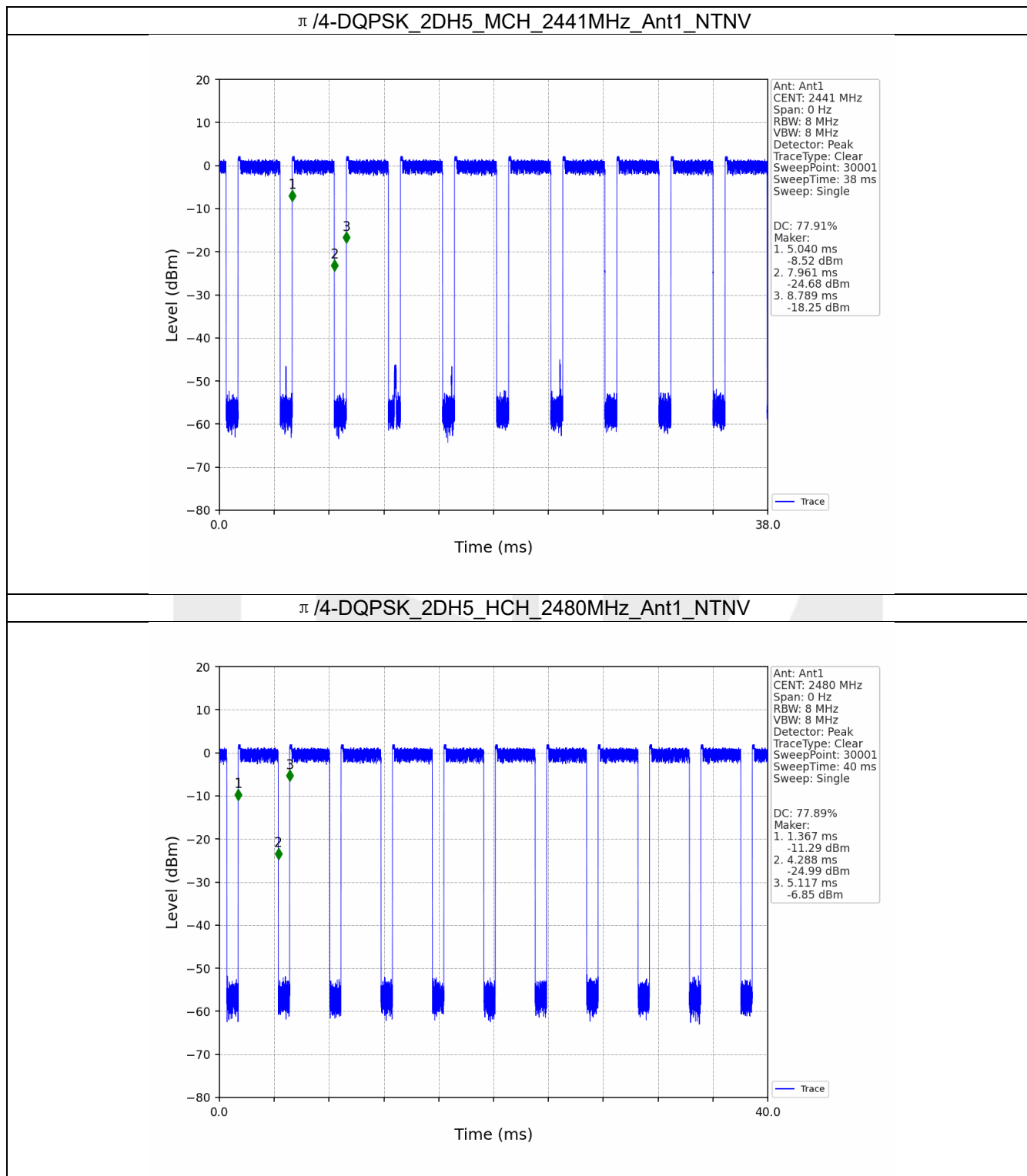
| Ant1           |         |                 |             |                      |             |                |                                   |                       |
|----------------|---------|-----------------|-------------|----------------------|-------------|----------------|-----------------------------------|-----------------------|
| Mode           | TX Type | Frequency (MHz) | Packet Type | T <sub>on</sub> (ms) | Period (ms) | Duty Cycle (%) | Duty Cycle Correction Factor (dB) | Max. DC Variation (%) |
| GFSK           | SISO    | 2402            | DH5         | 2.914                | 3.749       | 77.73          | 1.09                              | 0.01                  |
|                |         | 2441            | DH5         | 2.916                | 3.750       | 77.76          | 1.09                              | 0.03                  |
|                |         | 2480            | DH5         | 2.916                | 3.751       | 77.74          | 1.09                              | 0.03                  |
| $\pi/4$ -DQPSK | SISO    | 2402            | 2DH5        | 2.921                | 3.749       | 77.91          | 1.08                              | 0.01                  |
|                |         | 2441            | 2DH5        | 2.921                | 3.749       | 77.91          | 1.08                              | 0.01                  |
|                |         | 2480            | 2DH5        | 2.921                | 3.750       | 77.89          | 1.08                              | 0.03                  |
| 8DPSK          | SISO    | 2402            | 3DH5        | 2.923                | 3.751       | 77.93          | 1.08                              | 0.03                  |
|                |         | 2441            | 3DH5        | 2.923                | 3.751       | 77.93          | 1.08                              | 0.03                  |
|                |         | 2480            | 3DH5        | 2.923                | 3.751       | 77.93          | 1.08                              | 0.03                  |

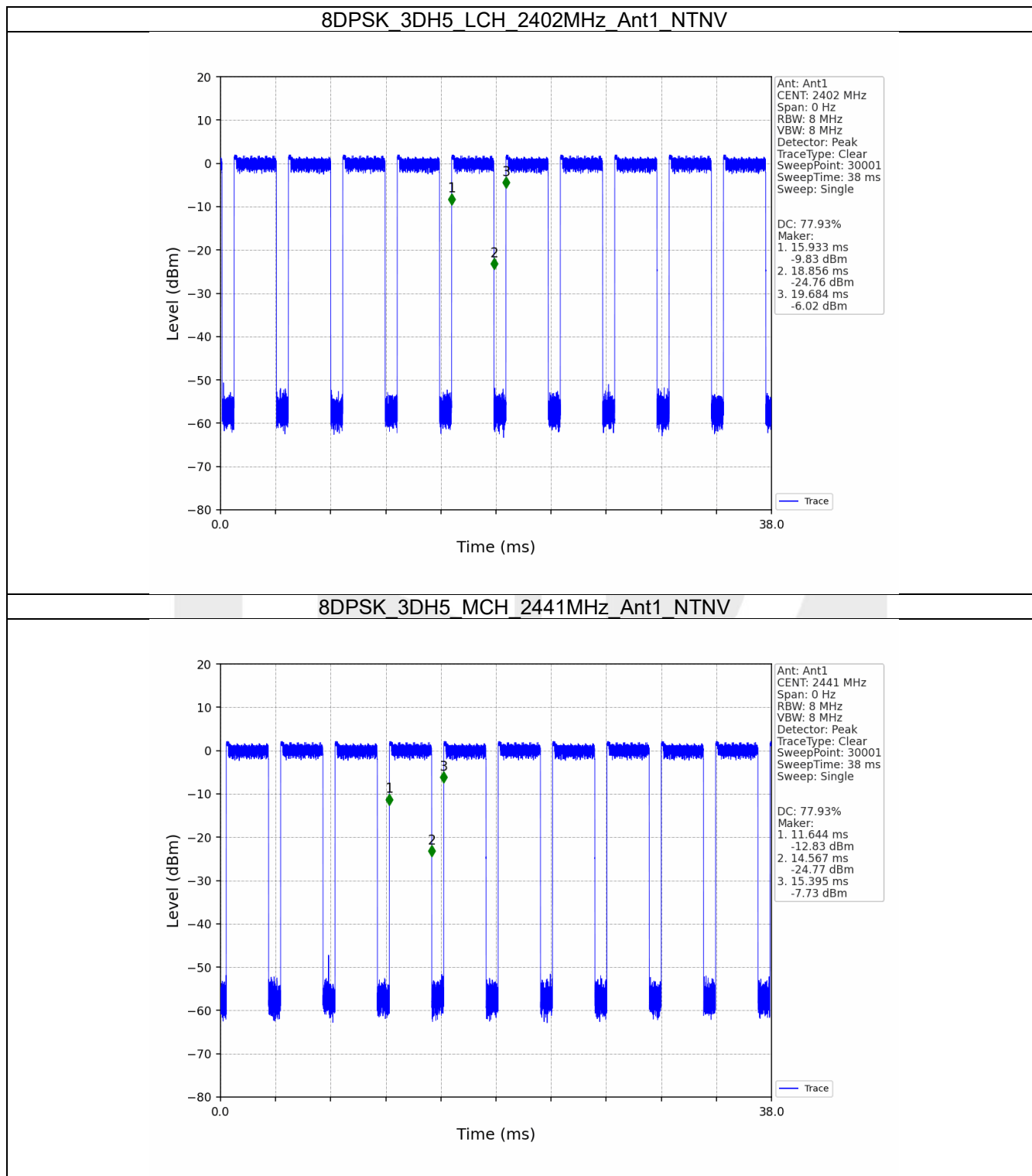
## 1.2 Test Graph

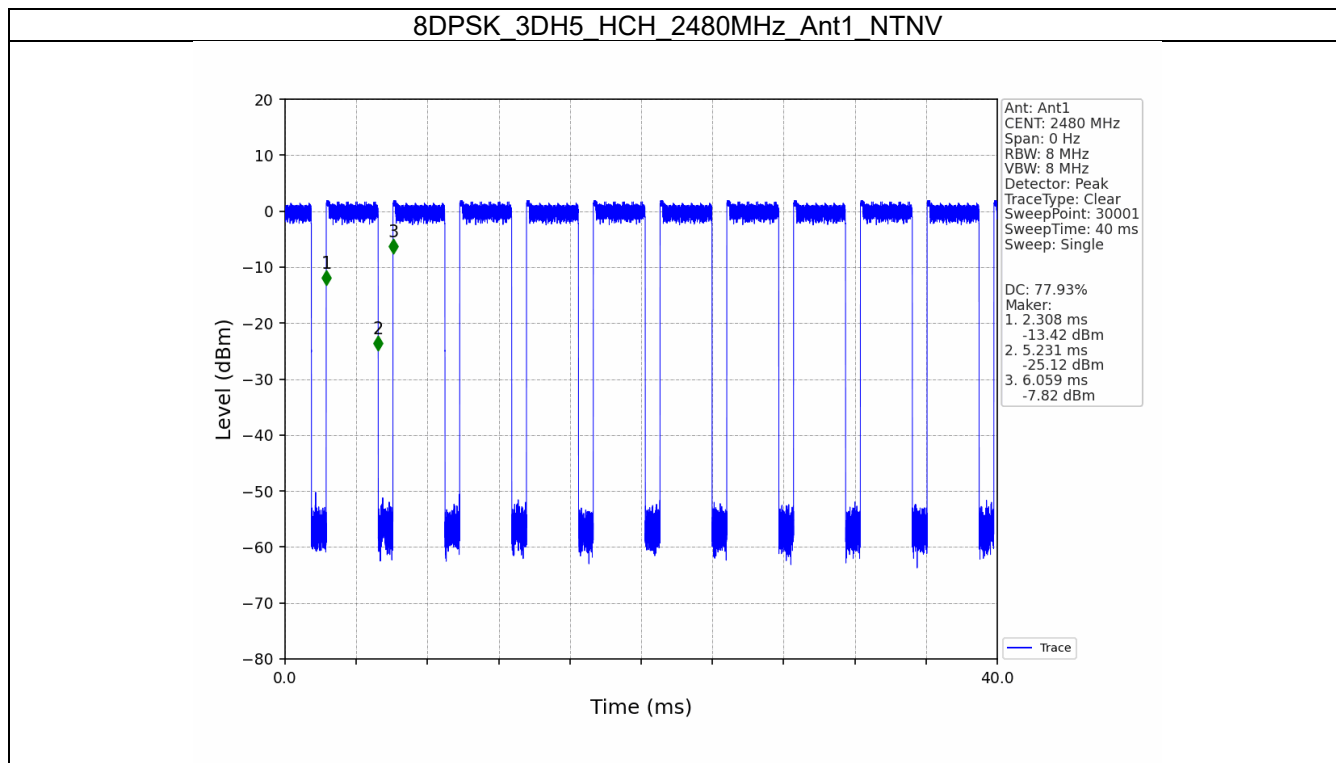
### 1.2.1 Ant1













## 2. Bandwidth

### 2.1 Test Result

#### 2.1.1 OBW

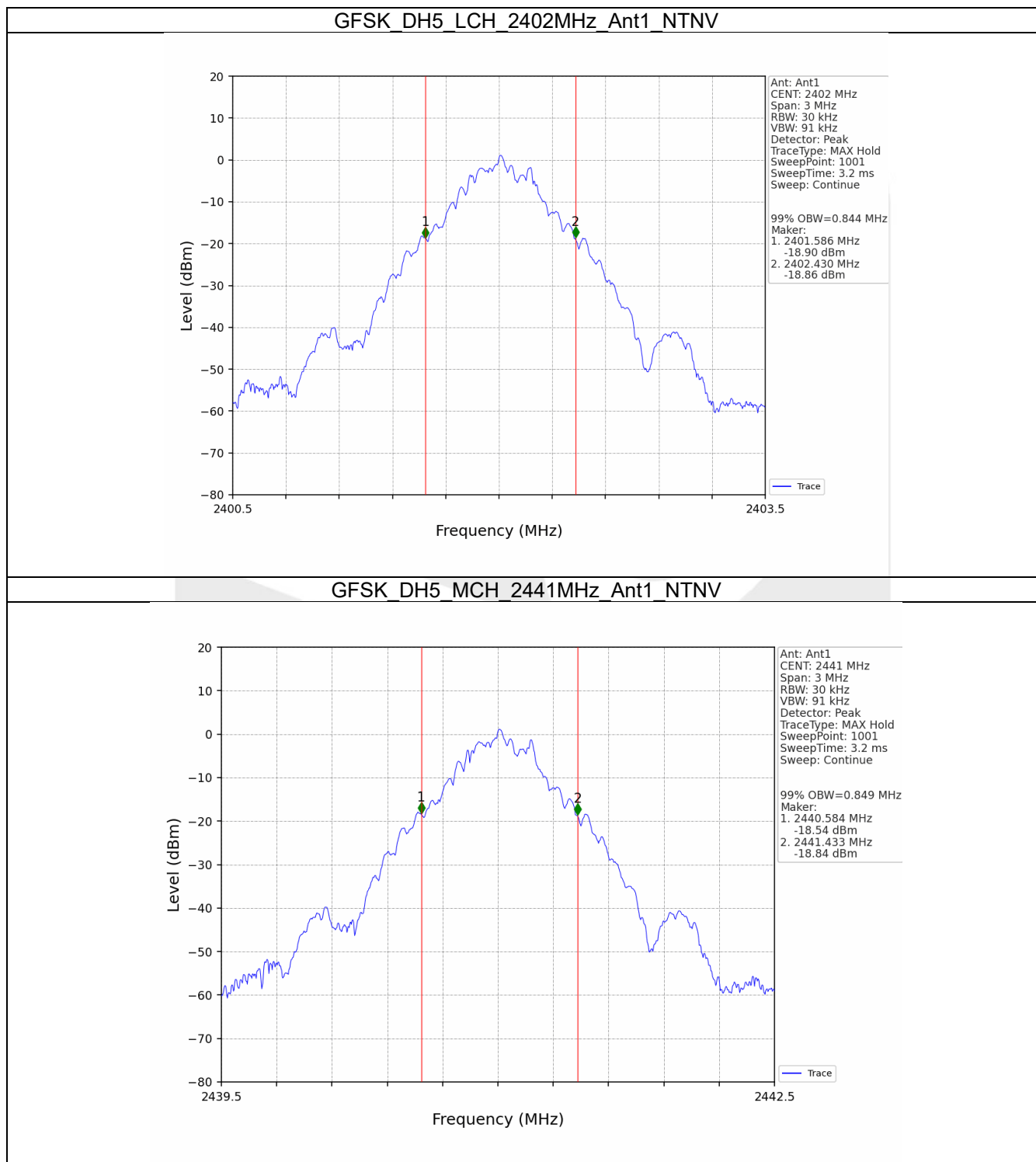
| Mode           | TX Type | Frequency (MHz) | Packet Type | ANT | 99% Occupied Bandwidth (MHz) |       | Verdict |
|----------------|---------|-----------------|-------------|-----|------------------------------|-------|---------|
|                |         |                 |             |     | Result                       | Limit |         |
| GFSK           | SISO    | 2402            | DH5         | 1   | 0.844                        | /     | Pass    |
|                |         | 2441            | DH5         | 1   | 0.849                        | /     | Pass    |
|                |         | 2480            | DH5         | 1   | 0.843                        | /     | Pass    |
| $\pi$ /4-DQPSK | SISO    | 2402            | 2DH5        | 1   | 1.130                        | /     | Pass    |
|                |         | 2441            | 2DH5        | 1   | 1.134                        | /     | Pass    |
|                |         | 2480            | 2DH5        | 1   | 1.130                        | /     | Pass    |
| 8DPSK          | SISO    | 2402            | 3DH5        | 1   | 1.137                        | /     | Pass    |
|                |         | 2441            | 3DH5        | 1   | 1.137                        | /     | Pass    |
|                |         | 2480            | 3DH5        | 1   | 1.140                        | /     | Pass    |

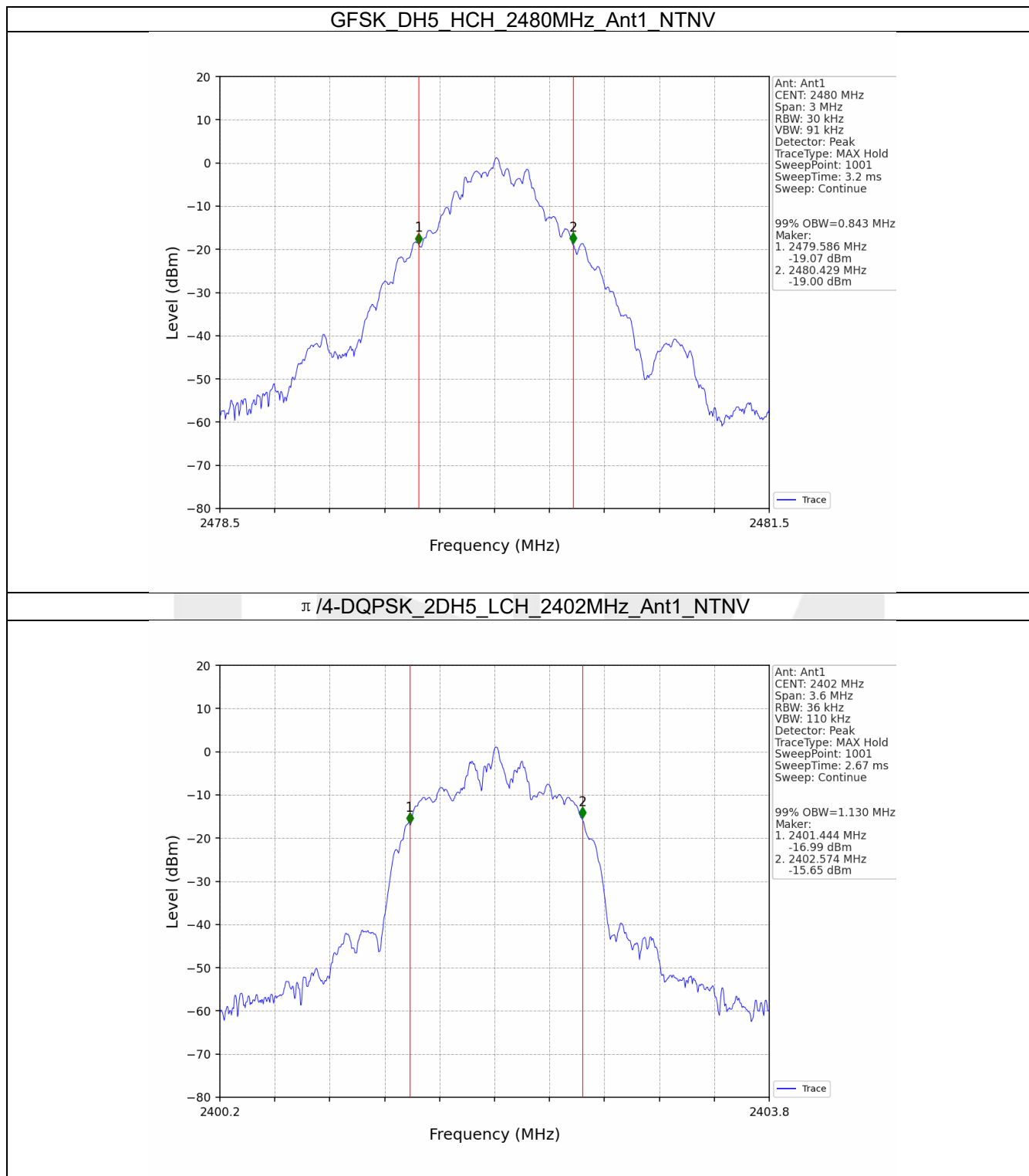
#### 2.1.2 20dB BW

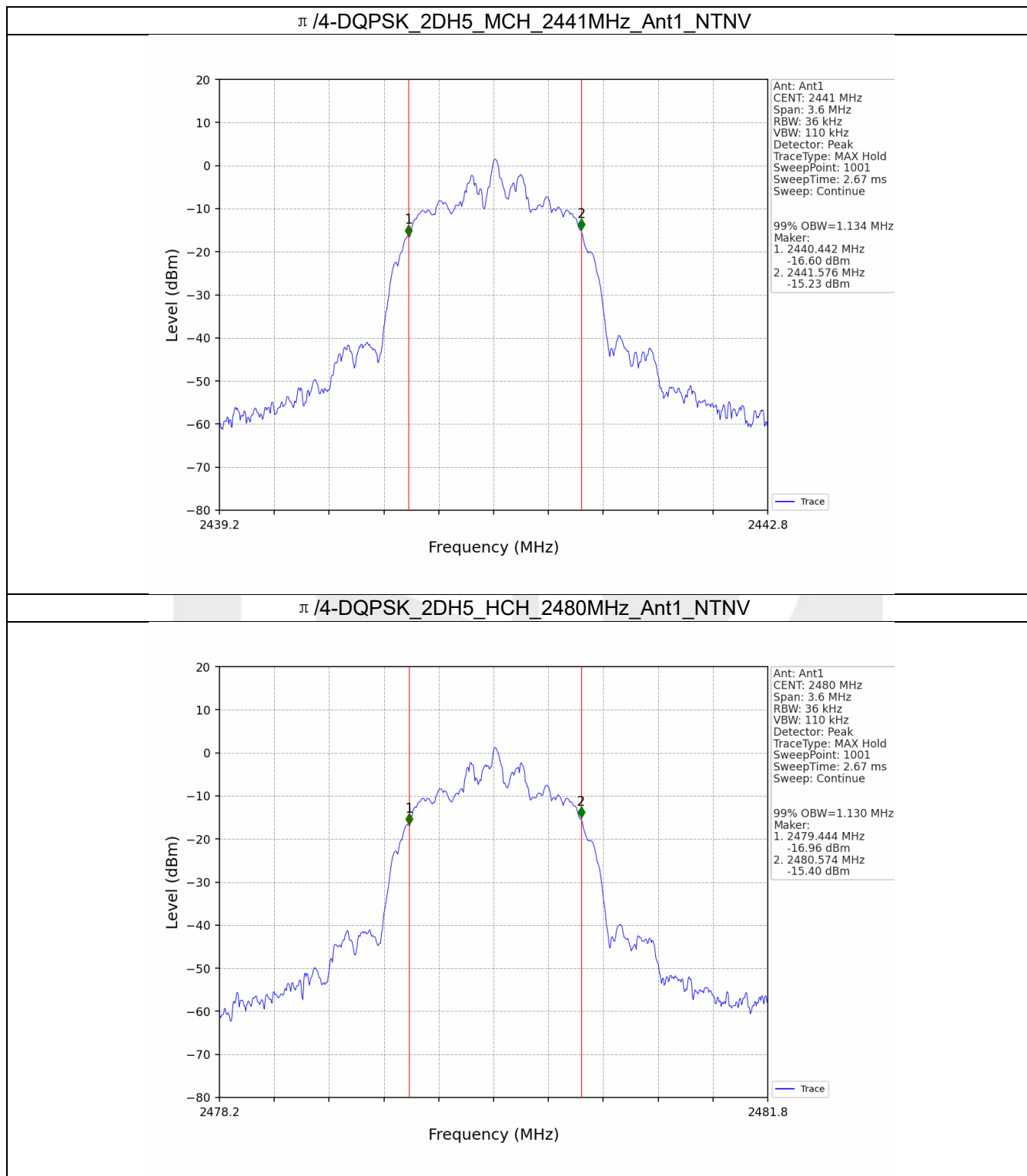
| Mode           | TX Type | Frequency (MHz) | Packet Type | ANT | 20dB Bandwidth (MHz) |       | Verdict |
|----------------|---------|-----------------|-------------|-----|----------------------|-------|---------|
|                |         |                 |             |     | Result               | Limit |         |
| GFSK           | SISO    | 2402            | DH5         | 1   | 0.954                | /     | Pass    |
|                |         | 2441            | DH5         | 1   | 0.930                | /     | Pass    |
|                |         | 2480            | DH5         | 1   | 0.936                | /     | Pass    |
| $\pi$ /4-DQPSK | SISO    | 2402            | 2DH5        | 1   | 1.195                | /     | Pass    |
|                |         | 2441            | 2DH5        | 1   | 1.192                | /     | Pass    |
|                |         | 2480            | 2DH5        | 1   | 1.193                | /     | Pass    |
| 8DPSK          | SISO    | 2402            | 3DH5        | 1   | 1.206                | /     | Pass    |
|                |         | 2441            | 3DH5        | 1   | 1.206                | /     | Pass    |
|                |         | 2480            | 3DH5        | 1   | 1.205                | /     | Pass    |

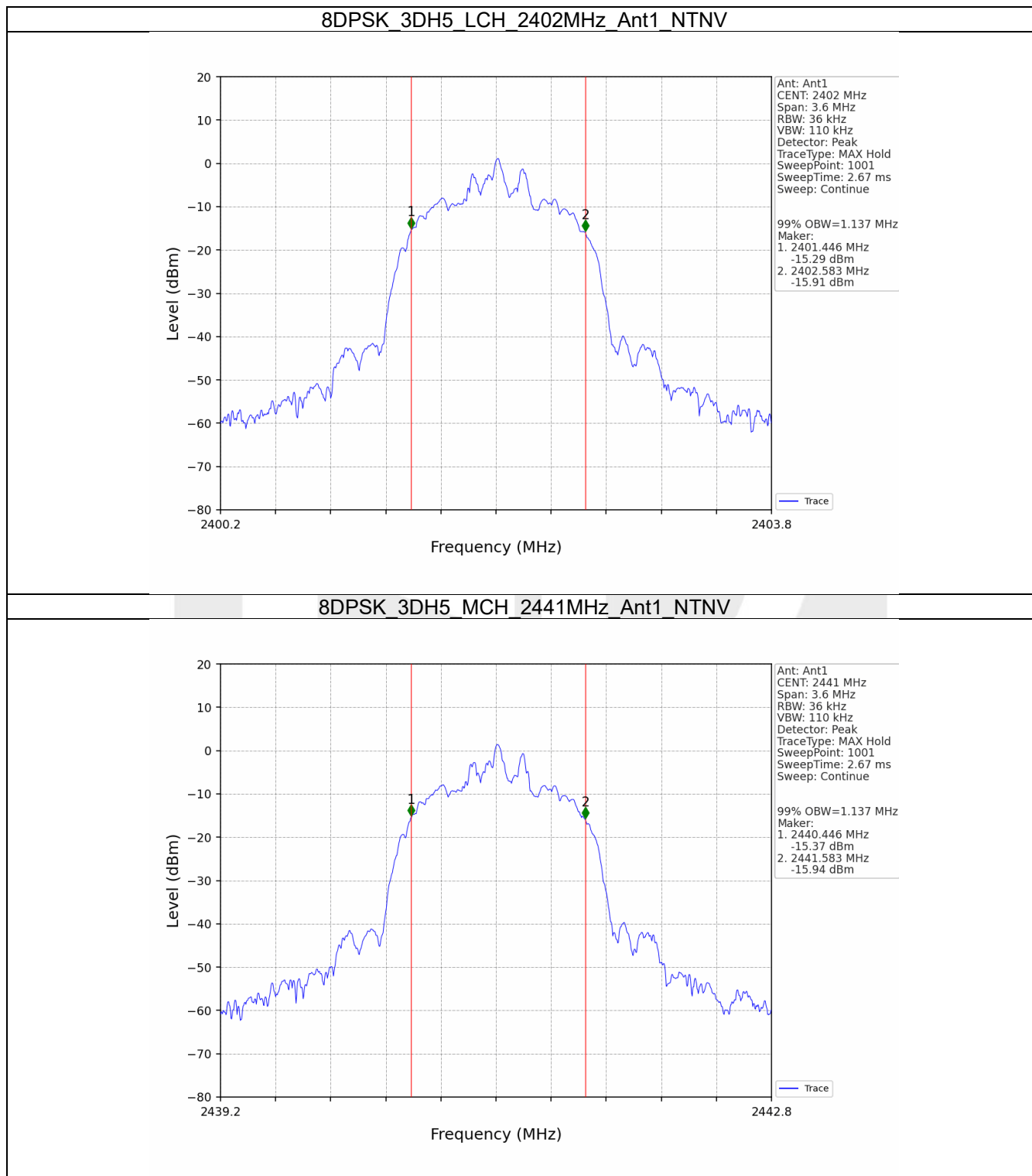
## 2.2 Test Graph

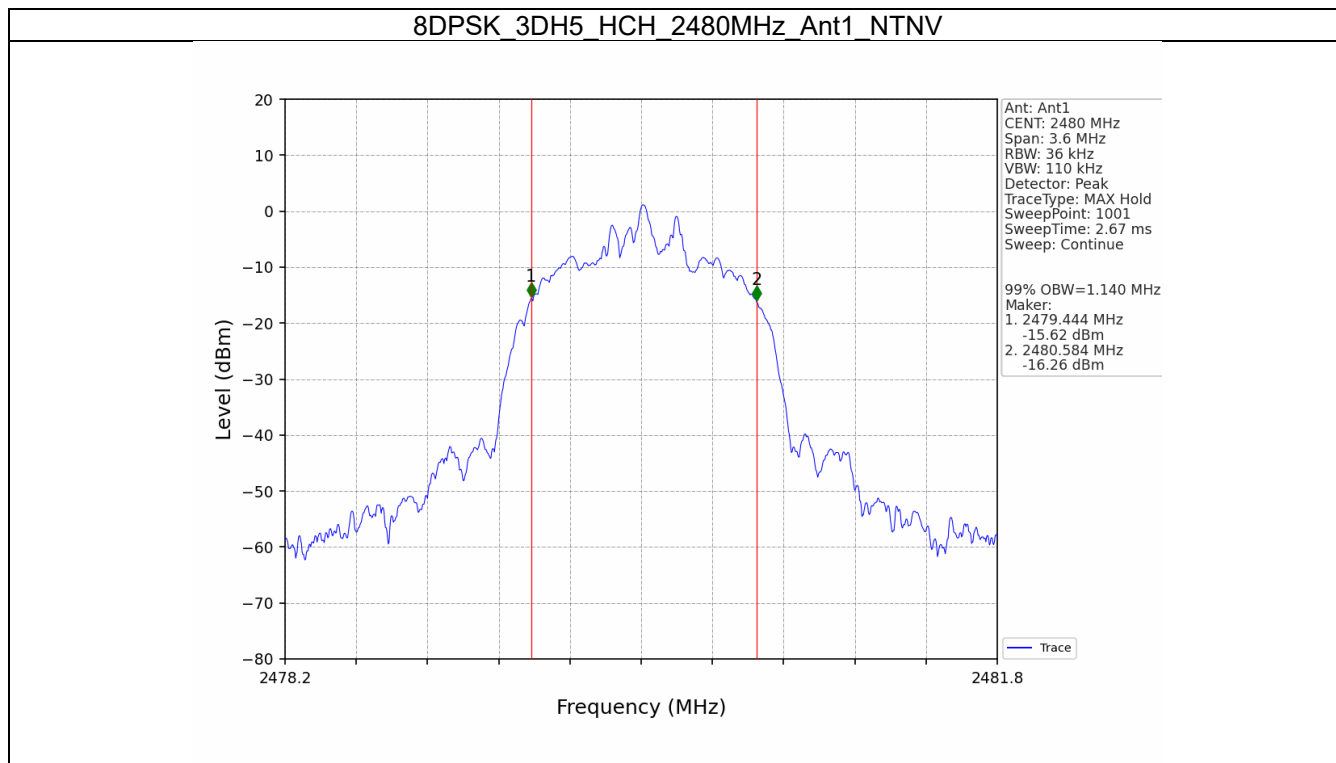
### 2.2.1 OBW



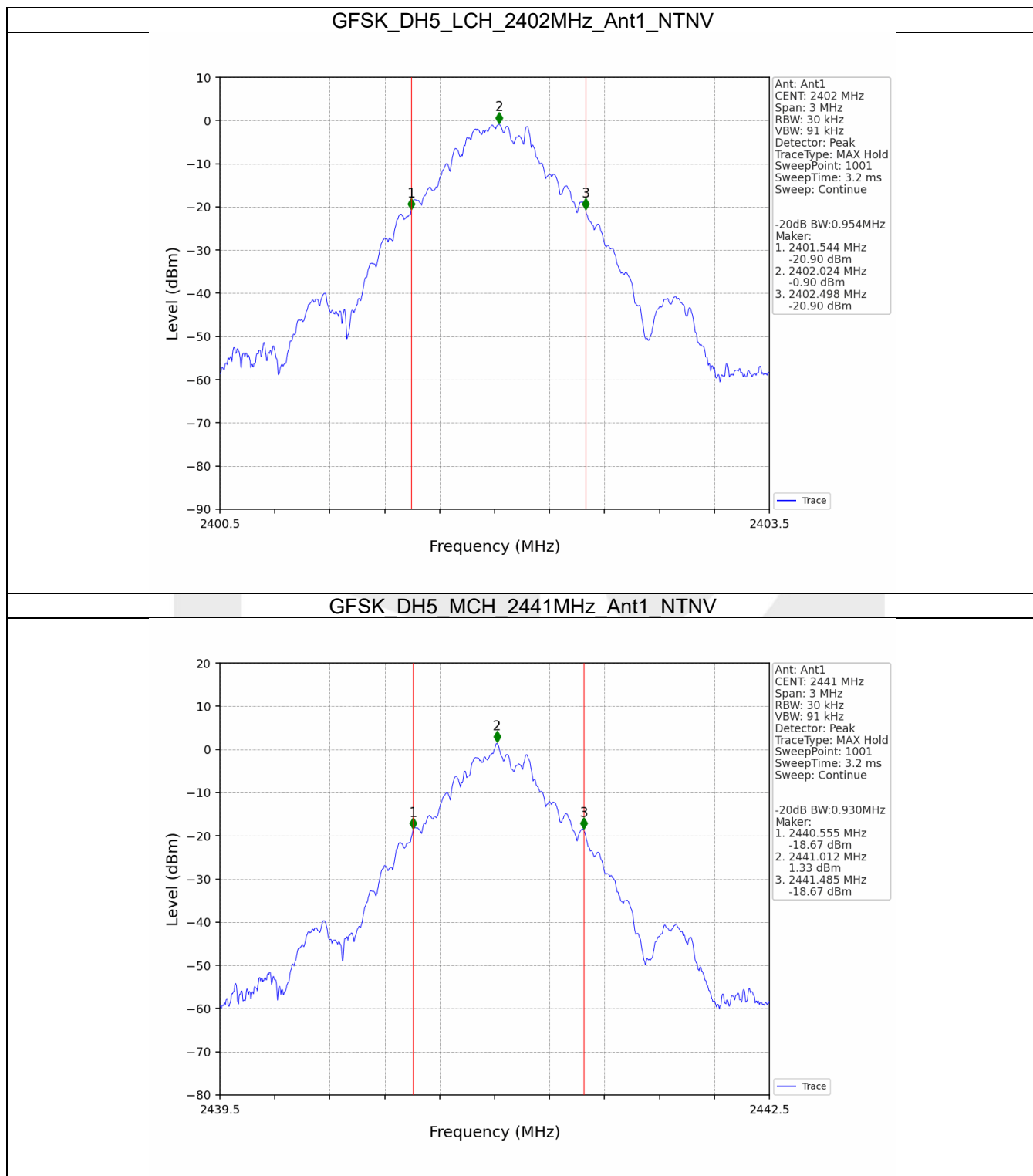


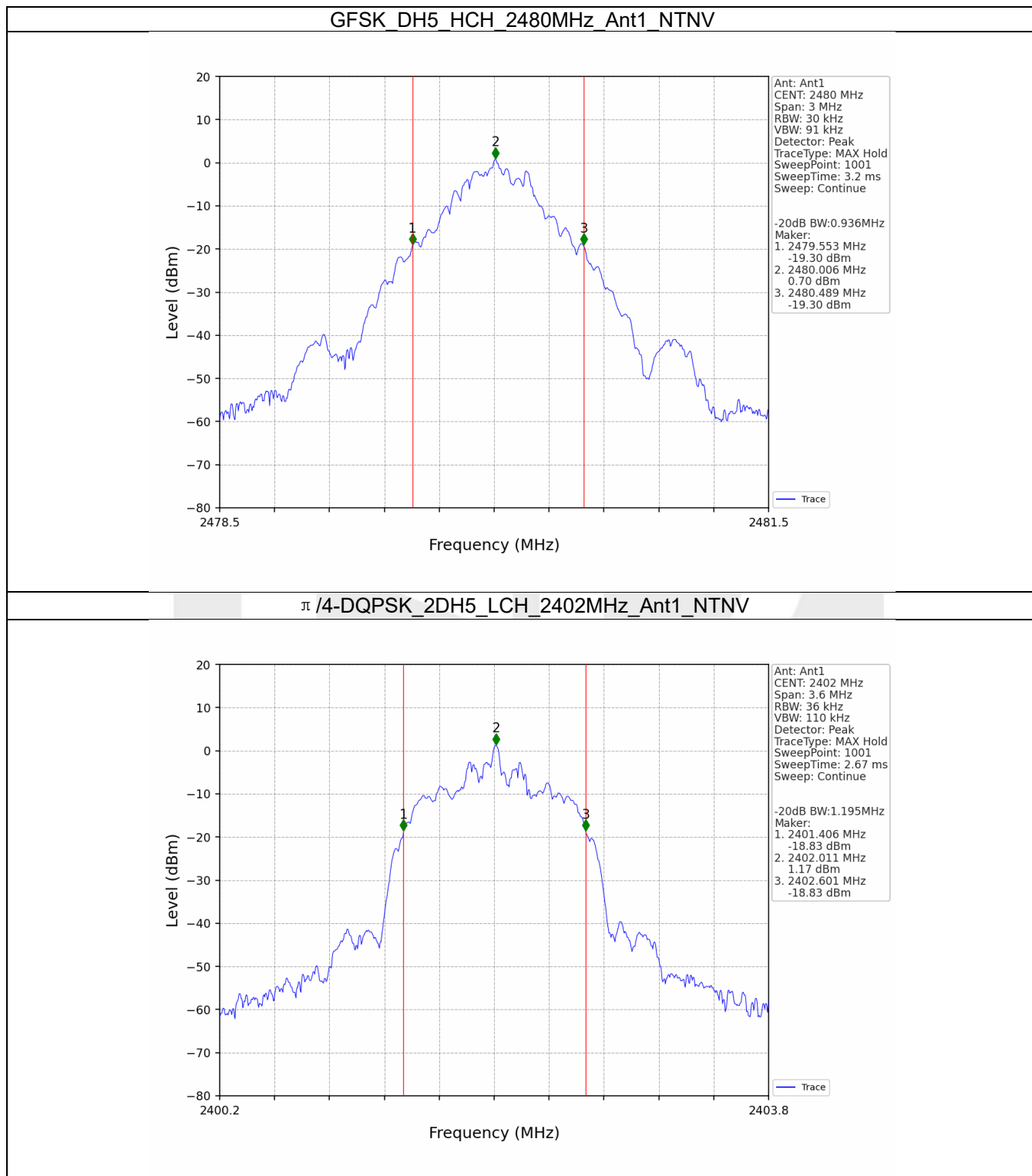




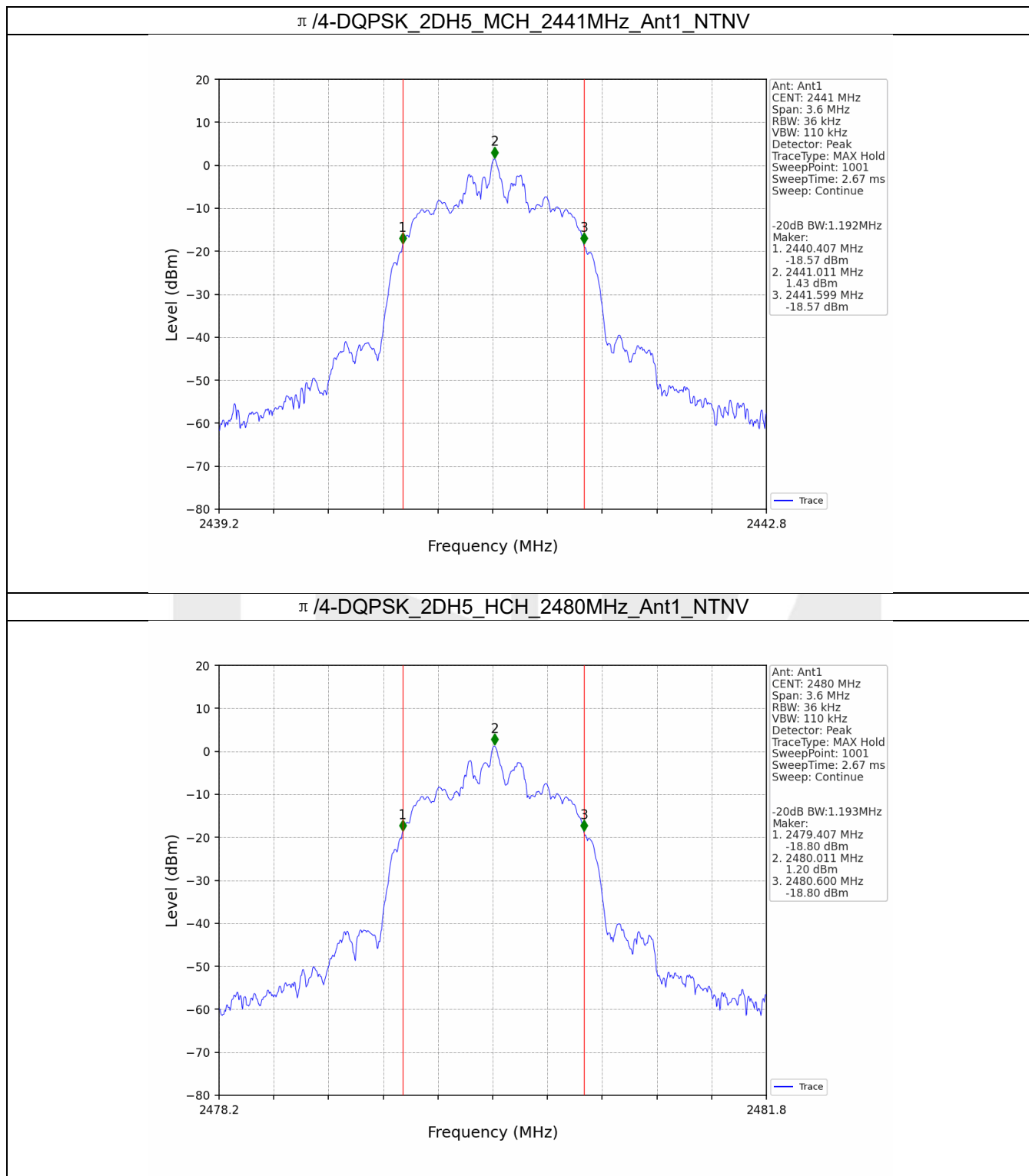


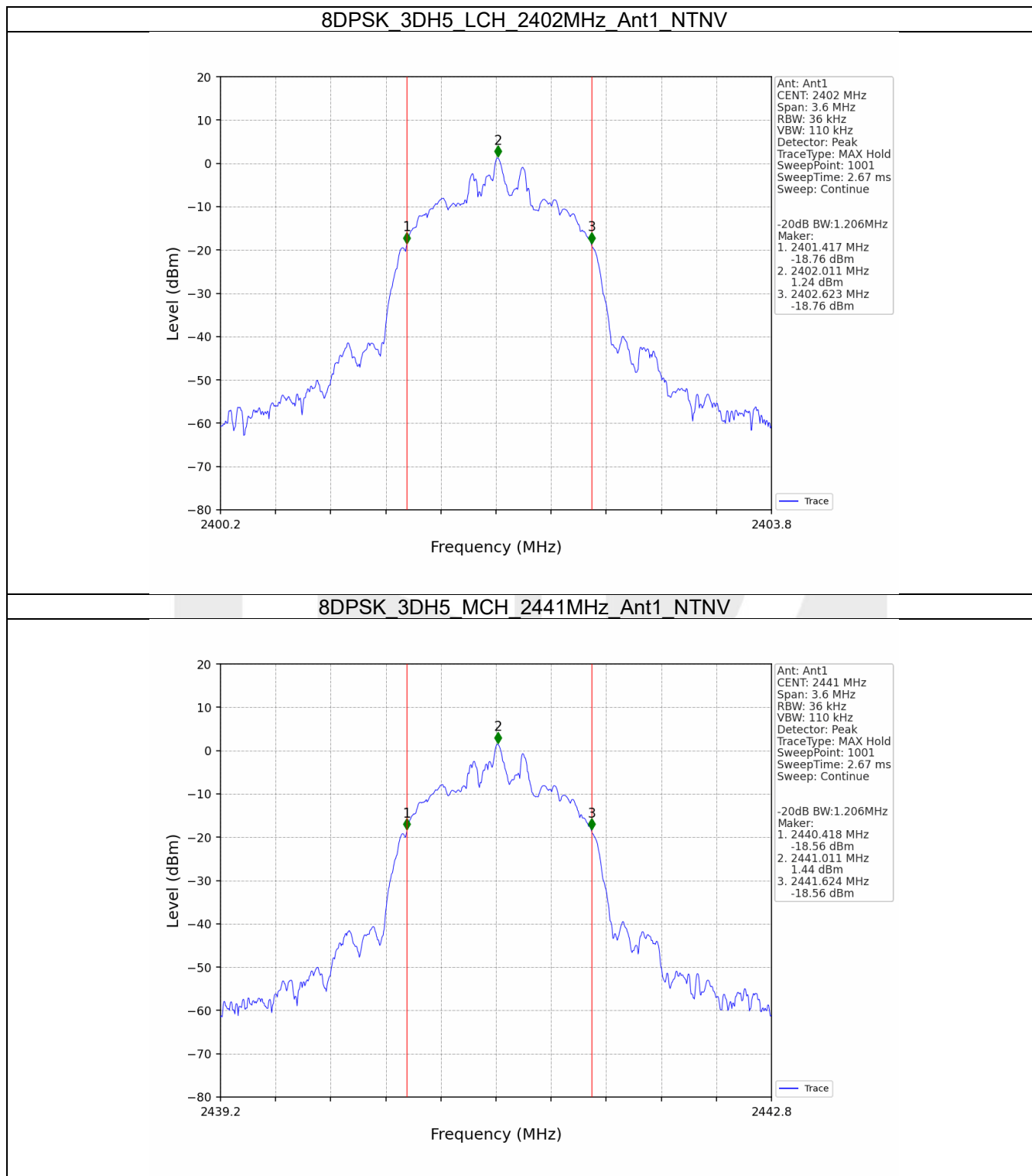
## 2.2.2 20dB BW

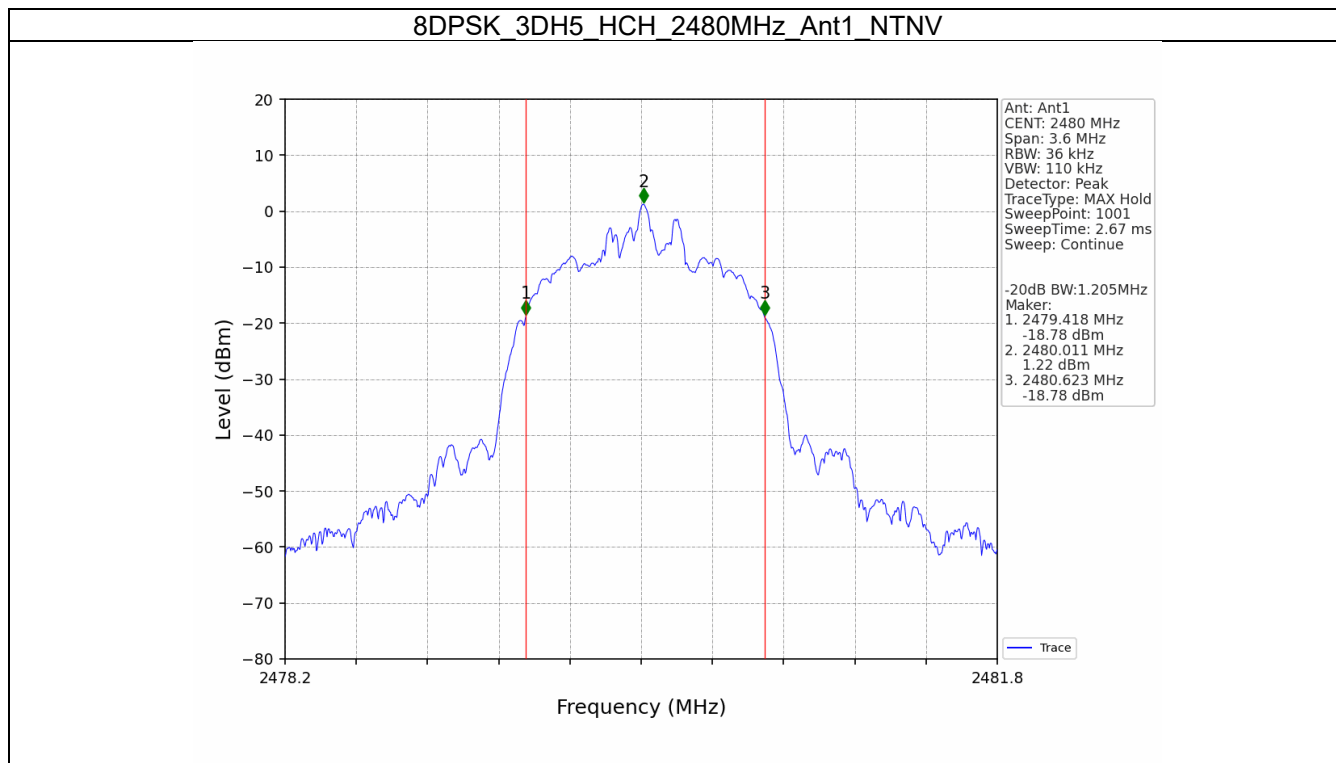












### 3. Maximum Conducted Output Power

#### 3.1 Test Result

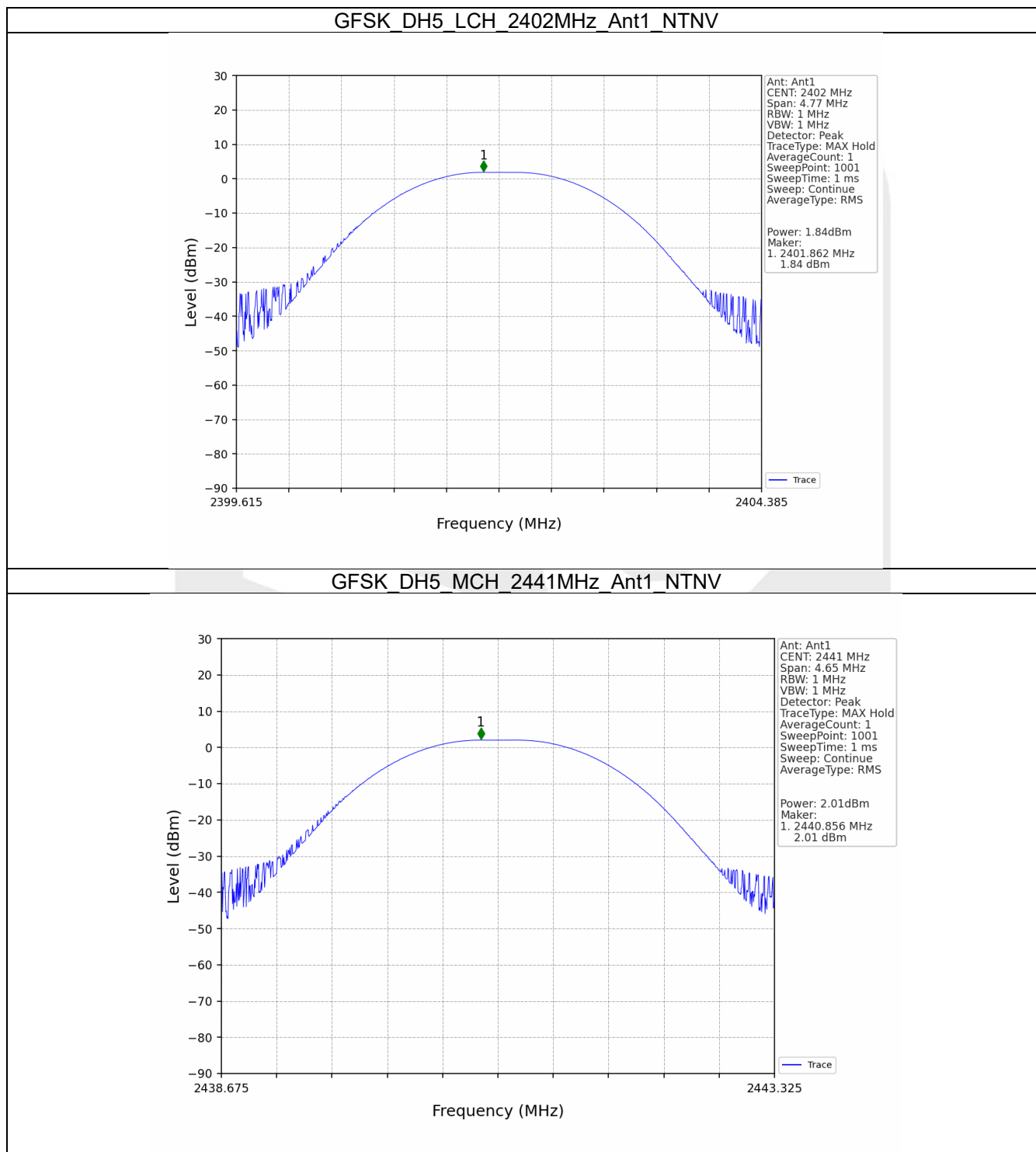
##### 3.1.1 Power

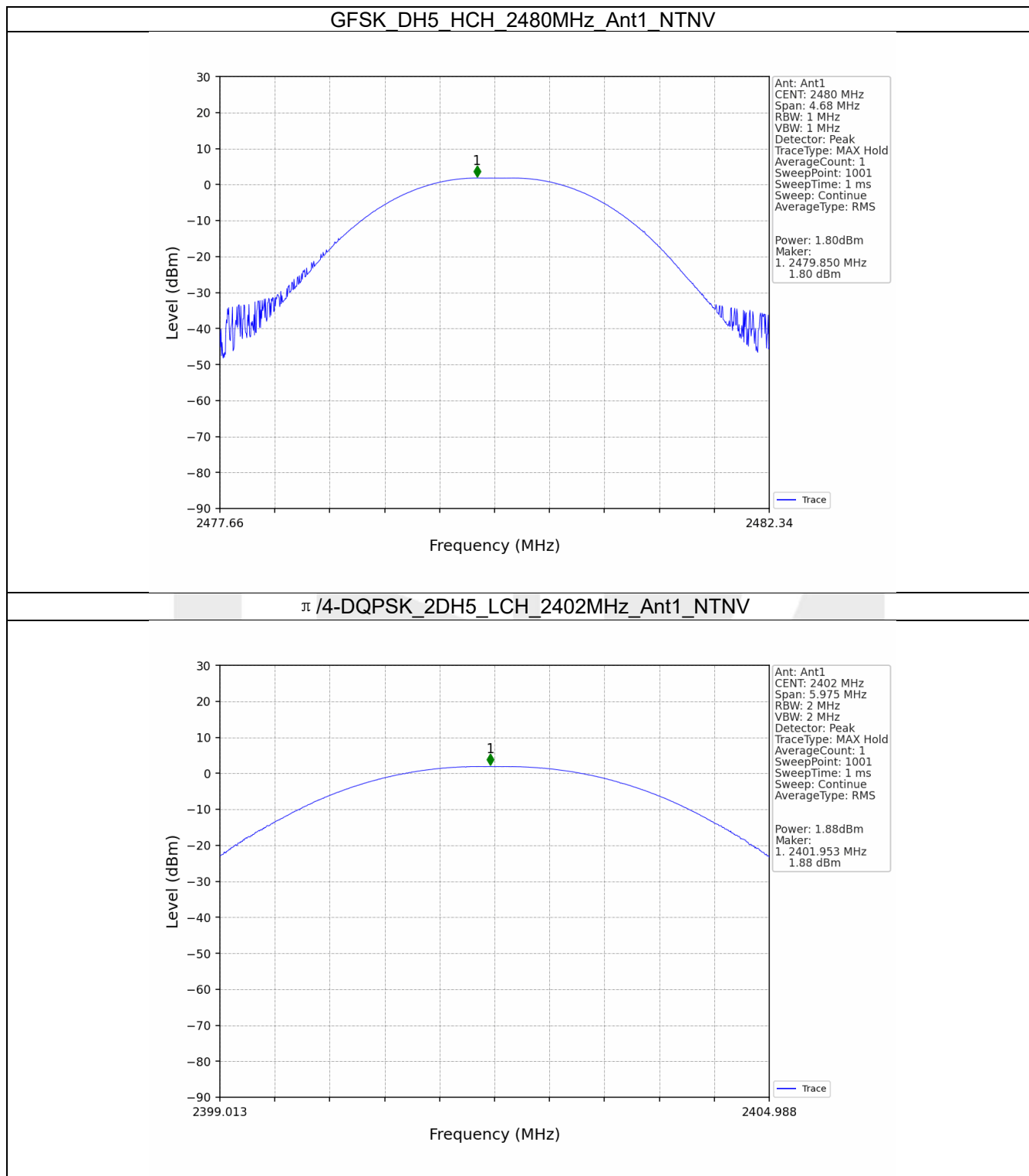
| Mode           | TX Type | Frequency (MHz) | Packet Type | Maximum Peak Conducted Output Power (dBm) |         | Verdict |
|----------------|---------|-----------------|-------------|-------------------------------------------|---------|---------|
|                |         |                 |             | ANT1                                      | Limit   |         |
| GFSK           | SISO    | 2402            | DH5         | 1.84                                      | <=30    | Pass    |
|                |         | 2441            | DH5         | 2.01                                      | <=30    | Pass    |
|                |         | 2480            | DH5         | 1.80                                      | <=30    | Pass    |
| $\pi/4$ -DQPSK | SISO    | 2402            | 2DH5        | 1.88                                      | <=20.97 | Pass    |
|                |         | 2441            | 2DH5        | 2.06                                      | <=20.97 | Pass    |
|                |         | 2480            | 2DH5        | 1.84                                      | <=20.97 | Pass    |
| 8DPSK          | SISO    | 2402            | 3DH5        | 1.88                                      | <=20.97 | Pass    |
|                |         | 2441            | 3DH5        | 2.05                                      | <=20.97 | Pass    |
|                |         | 2480            | 3DH5        | 1.83                                      | <=20.97 | Pass    |

Note1: Antenna Gain: Ant1: -0.58dBi;

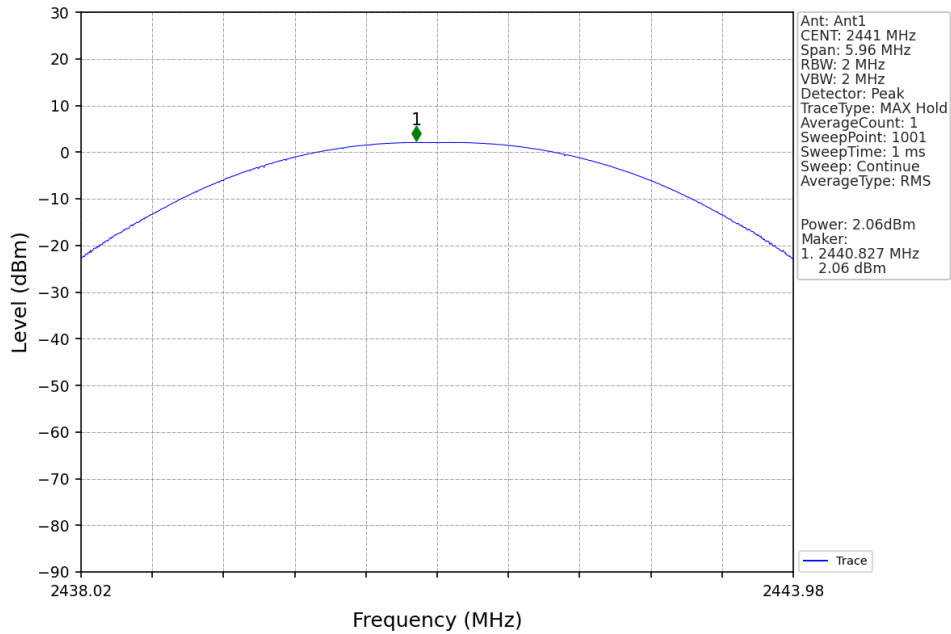
### 3.2 Test Graph

#### 3.2.1 Power

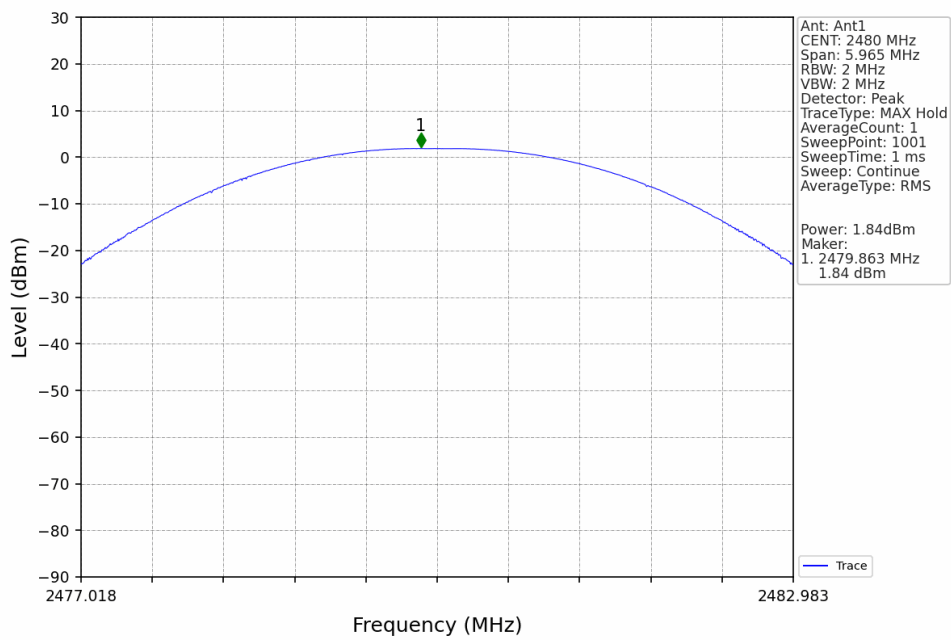


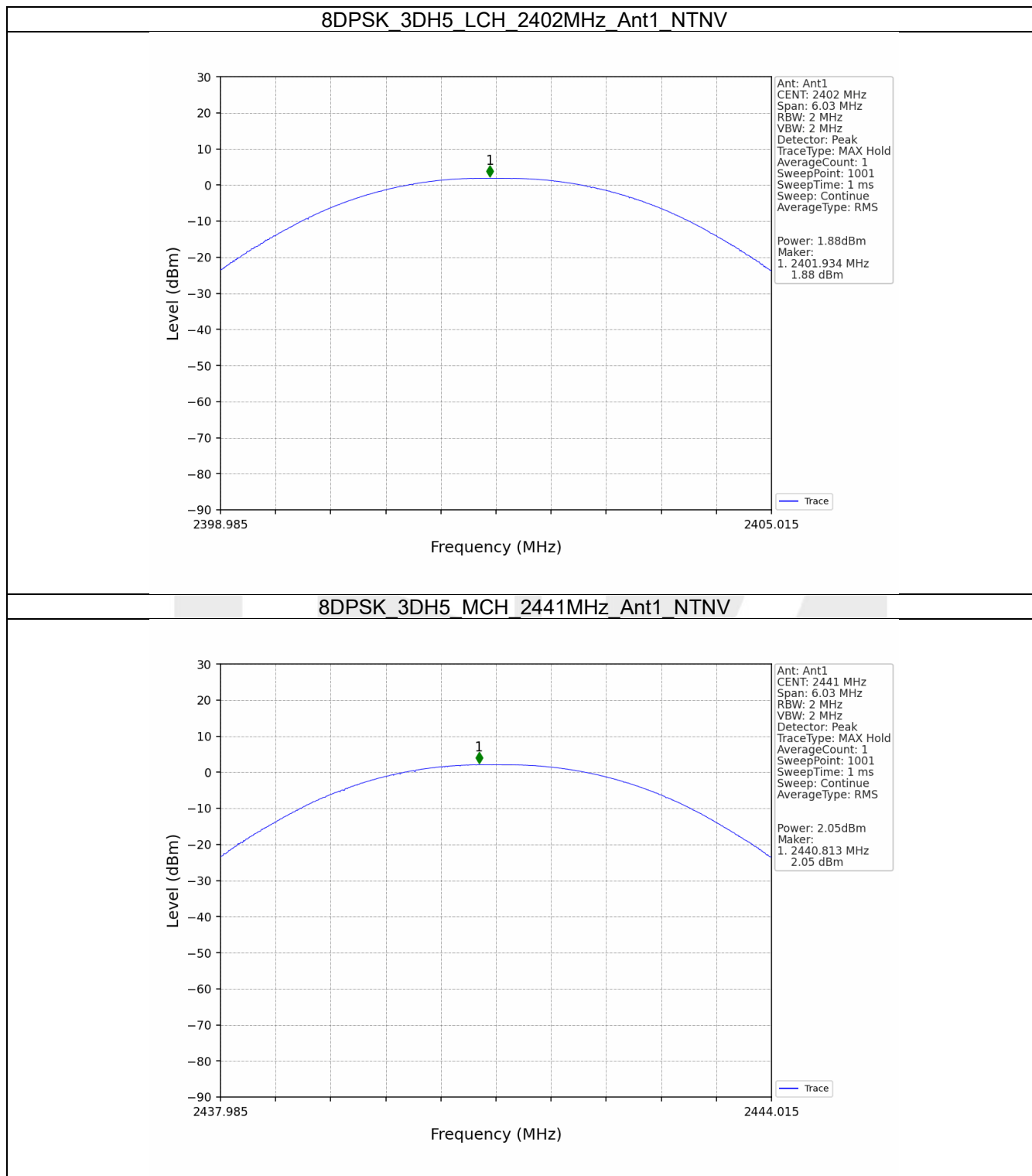


$\pi$  /4-DQPSK\_2DH5\_MCH\_2441MHz\_Ant1\_NTNV

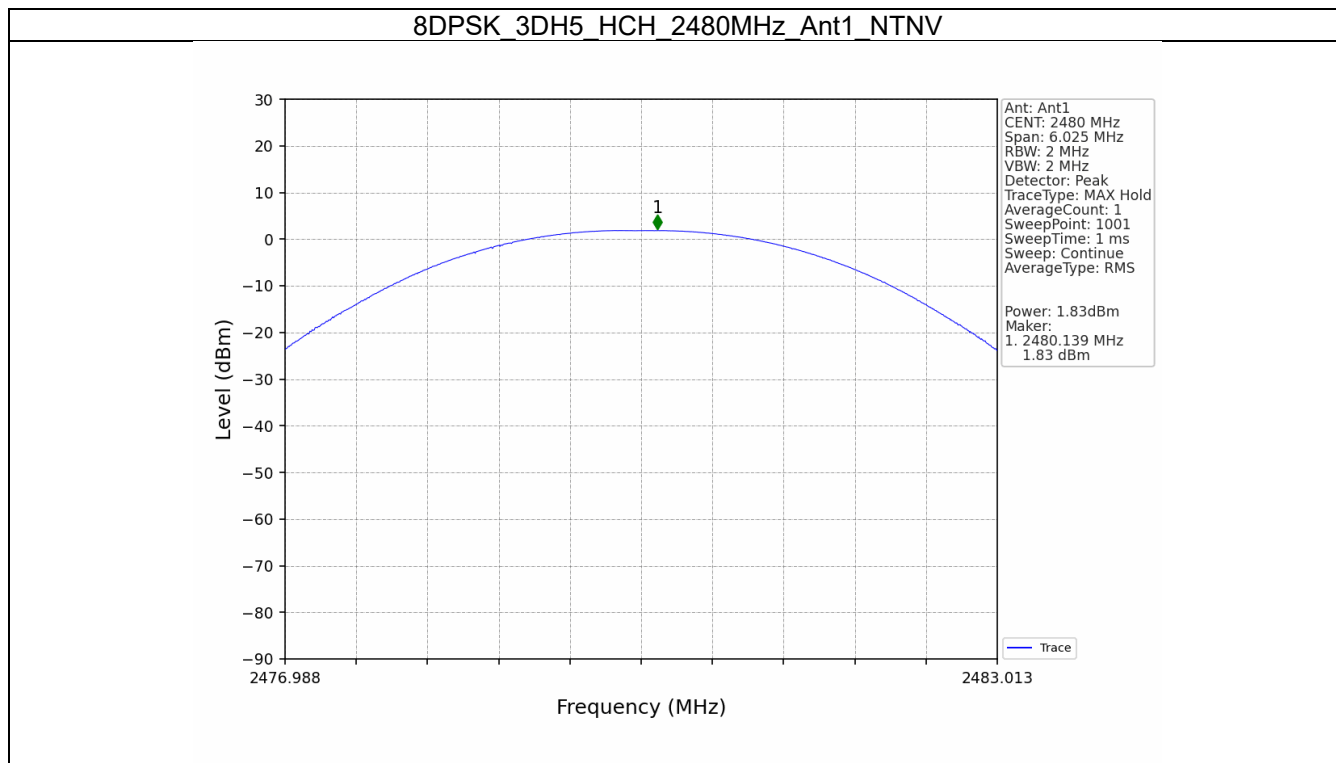


$\pi$  /4-DQPSK\_2DH5\_HCH\_2480MHz\_Ant1\_NTNV









#### 4. Carrier Frequency Separation

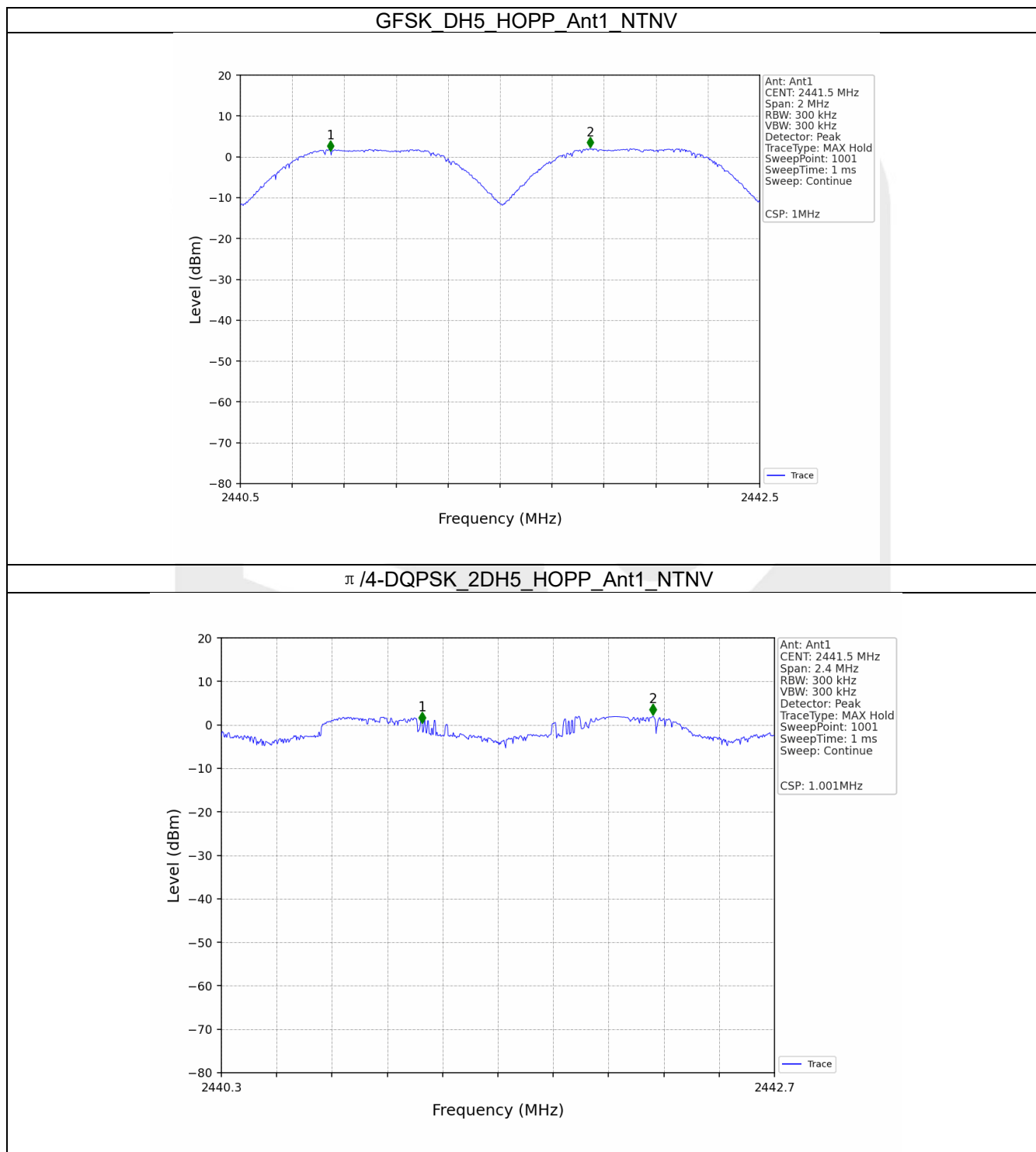
##### 4.1 Test Result

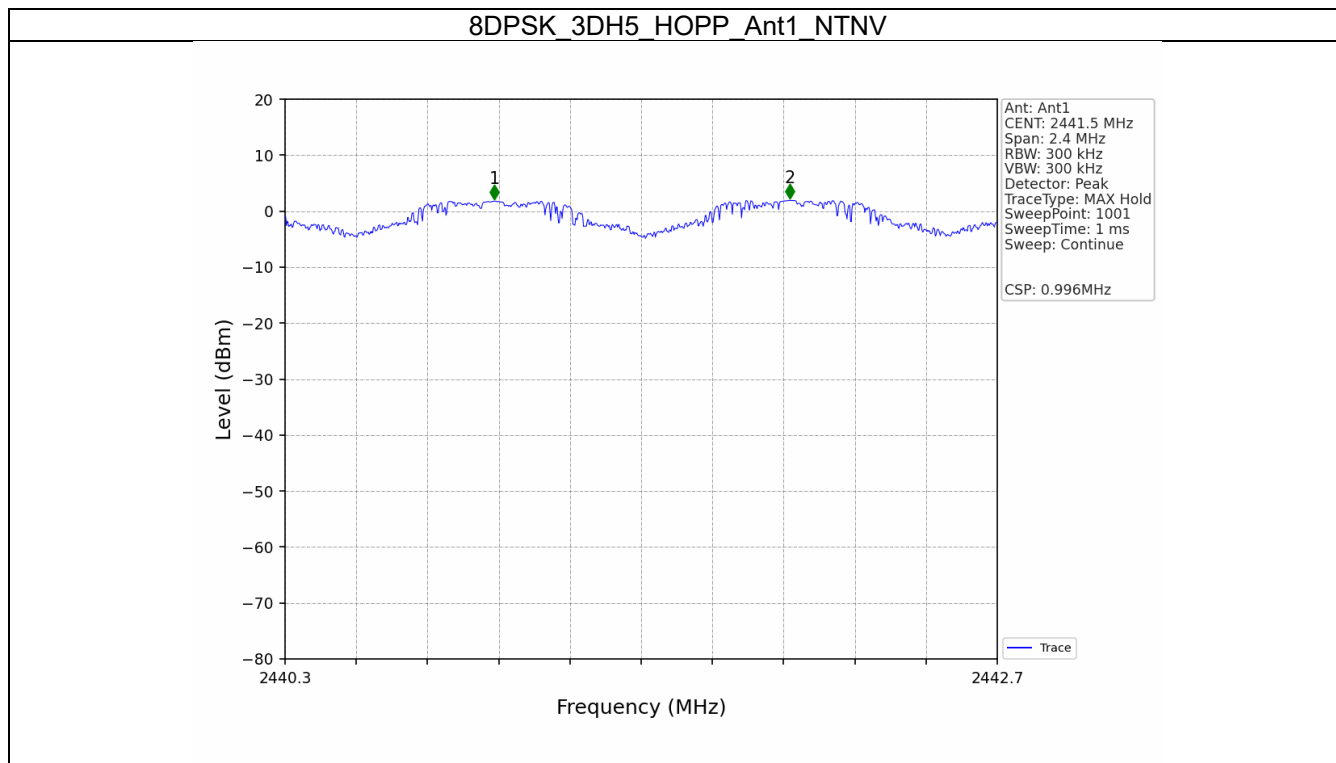
###### 4.1.1 Ant1

| Ant1           |         |                 |             |                          |                      |              |         |
|----------------|---------|-----------------|-------------|--------------------------|----------------------|--------------|---------|
| Mode           | TX Type | Frequency (MHz) | Packet Type | Channel Separation (MHz) | 20dB Bandwidth (MHz) | Limit (MHz)  | Verdict |
| GFSK           | SISO    | HOPP            | DH5         | 1.000                    | 0.954                | $\geq 0.954$ | Pass    |
| $\pi/4$ -DQPSK | SISO    | HOPP            | 2DH5        | 1.001                    | 1.195                | $\geq 0.797$ | Pass    |
| 8DPSK          | SISO    | HOPP            | 3DH5        | 0.996                    | 1.206                | $\geq 0.804$ | Pass    |

## 4.2 Test Graph

### 4.2.1 Ant1





## 5. Number of Hopping Frequencies

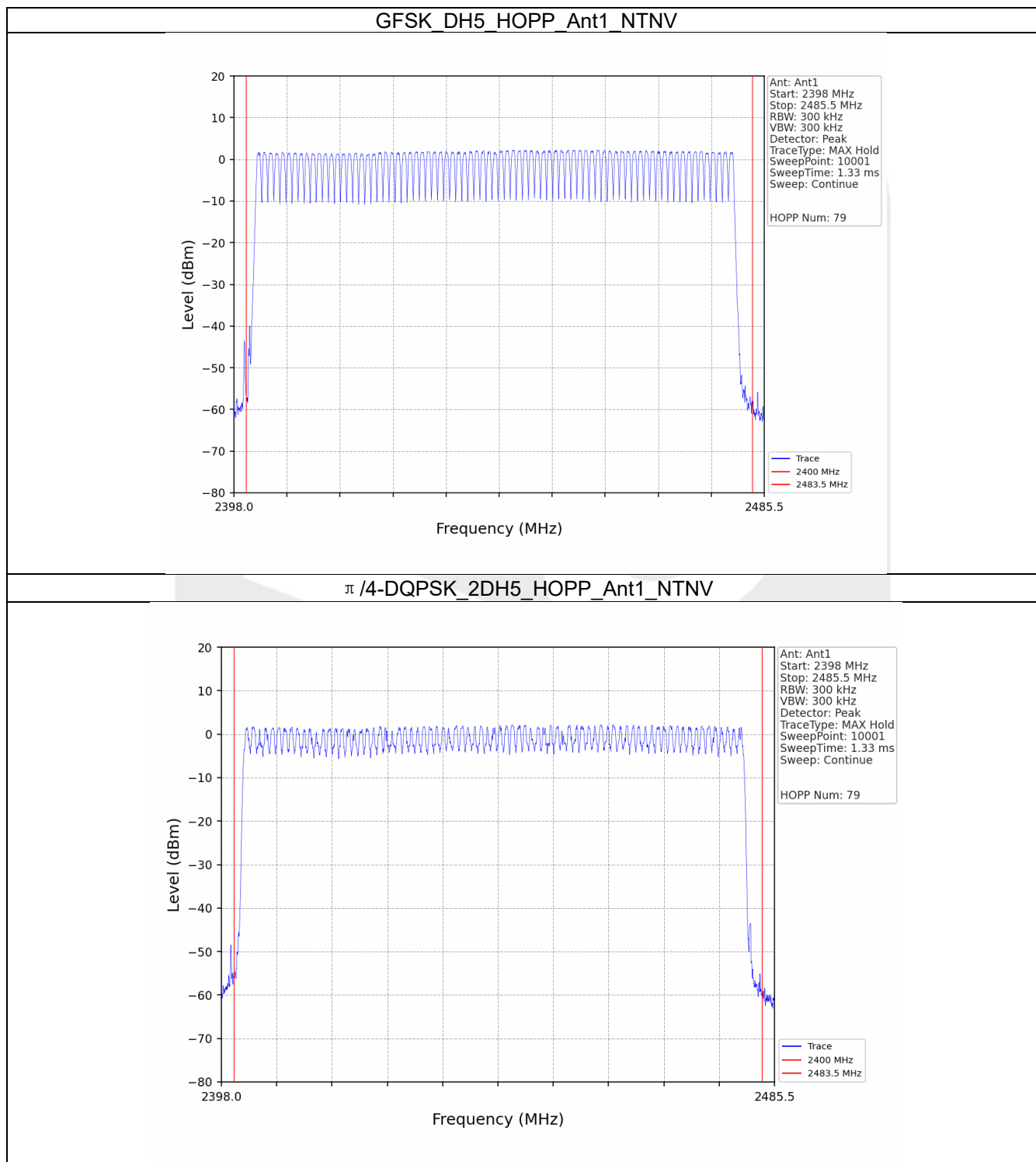
### 5.1 Test Result

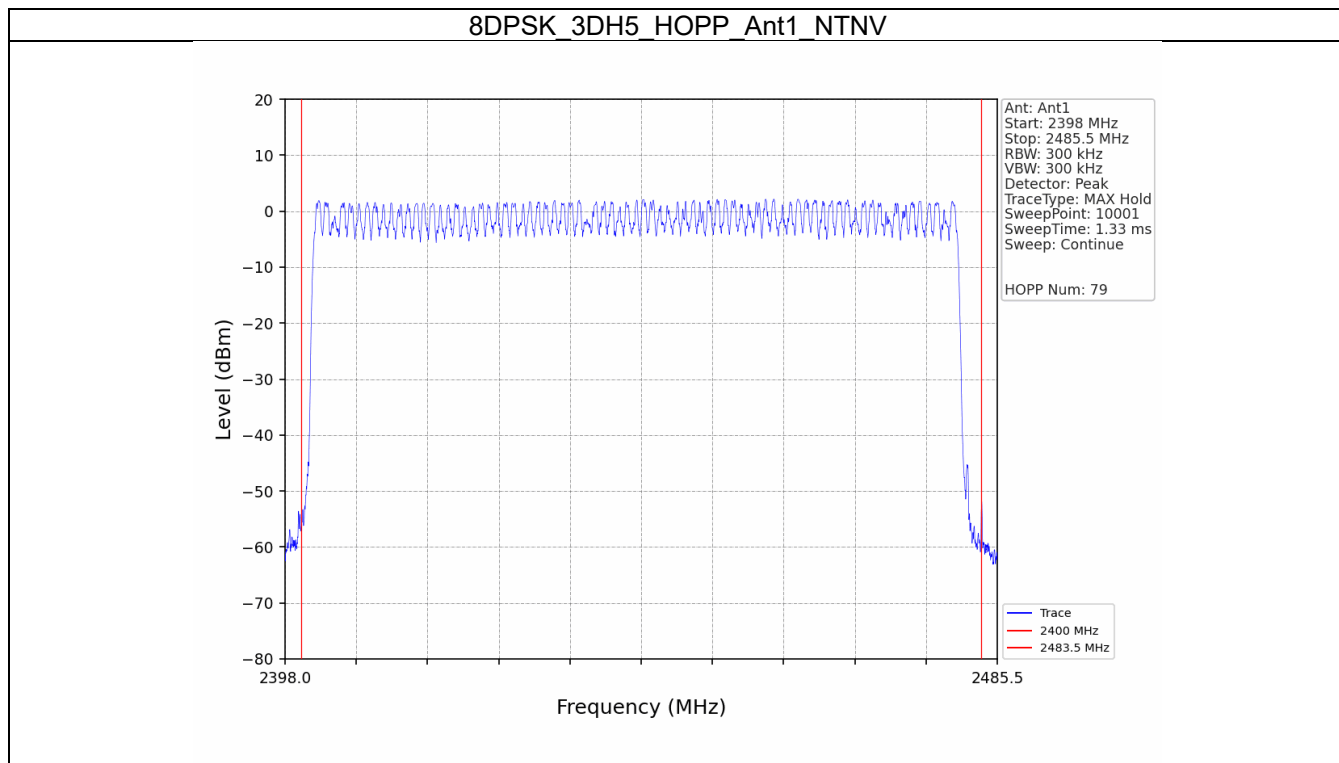
#### 5.1.1 HoppNum

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

## 5.2 Test Graph

### 5.2.1 HoppNum





## 6. Time of Occupancy (Dwell Time)

### 6.1 Test Result

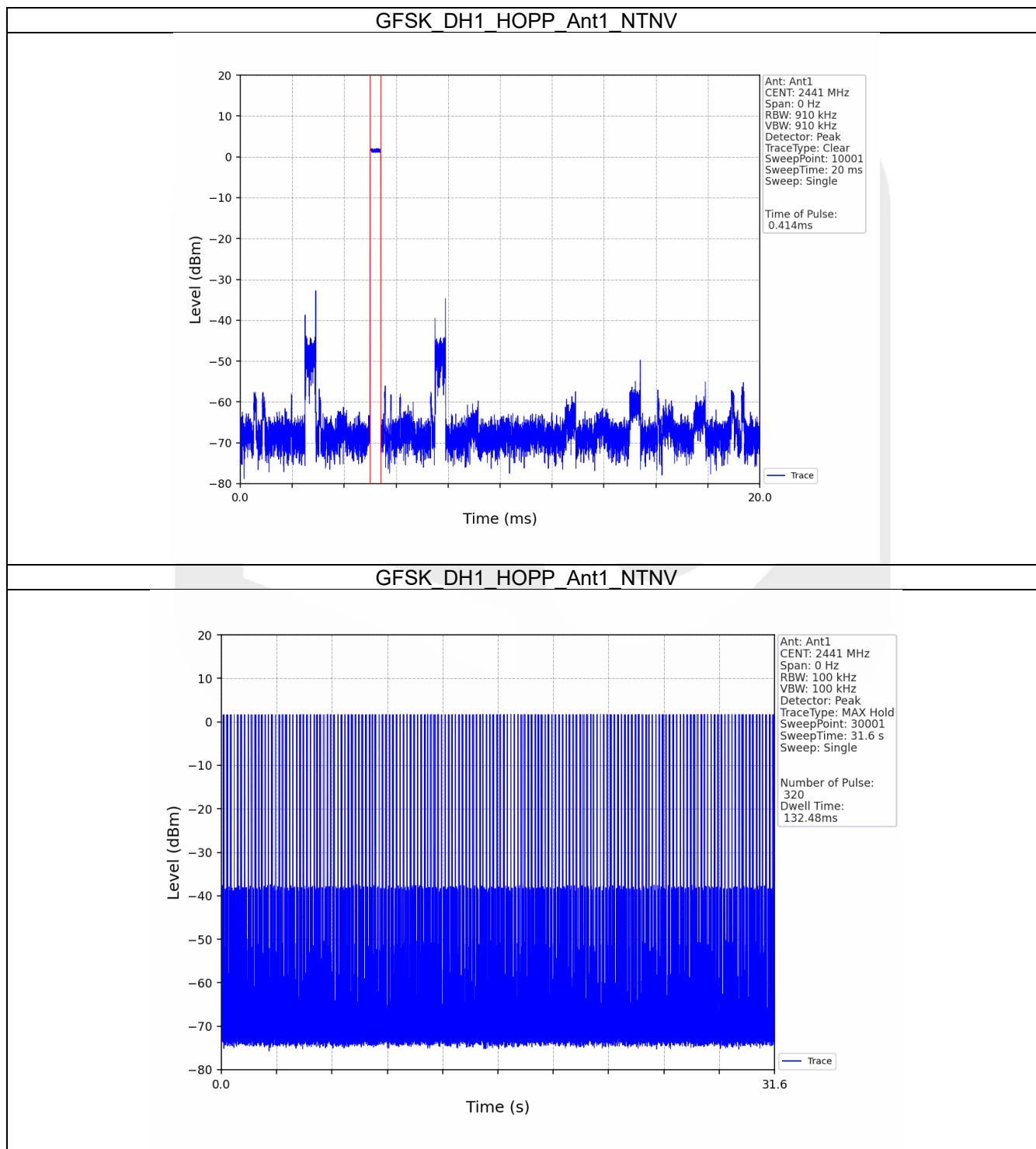
#### 6.1.1 Ant1

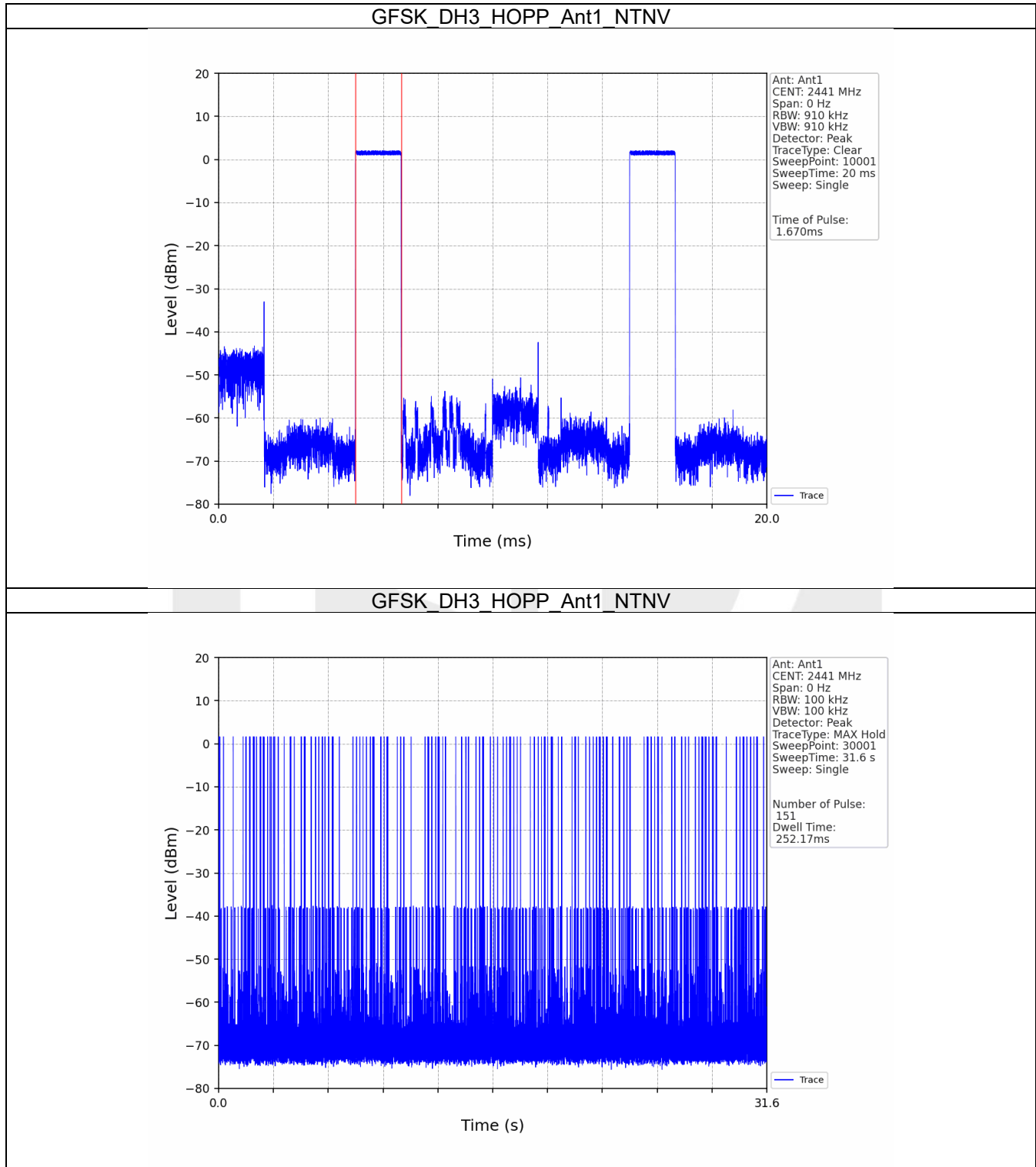
| Ant1           |         |                 |             |                               |                        |                                    |                 |            |         |
|----------------|---------|-----------------|-------------|-------------------------------|------------------------|------------------------------------|-----------------|------------|---------|
| 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         | 0.414                         | 31.600                 | 320                                | 132.480         | <=400      | Pass    |
|                |         |                 | DH3         | 1.670                         | 31.600                 | 151                                | 252.170         | <=400      | Pass    |
|                |         |                 | DH5         | 2.918                         | 31.600                 | 115                                | 335.570         | <=400      | Pass    |
| $\pi/4$ -DQPSK | SISO    | HOPP            | 2DH1        | 0.424                         | 31.600                 | 320                                | 135.680         | <=400      | Pass    |
|                |         |                 | 2DH3        | 1.678                         | 31.600                 | 160                                | 268.480         | <=400      | Pass    |
|                |         |                 | 2DH5        | 2.926                         | 31.600                 | 114                                | 333.564         | <=400      | Pass    |
| 8DPSK          | SISO    | HOPP            | 3DH1        | 0.416                         | 31.600                 | 319                                | 132.704         | <=400      | Pass    |
|                |         |                 | 3DH3        | 1.674                         | 31.600                 | 164                                | 274.536         | <=400      | Pass    |
|                |         |                 | 3DH5        | 2.922                         | 31.600                 | 97                                 | 283.434         | <=400      | Pass    |

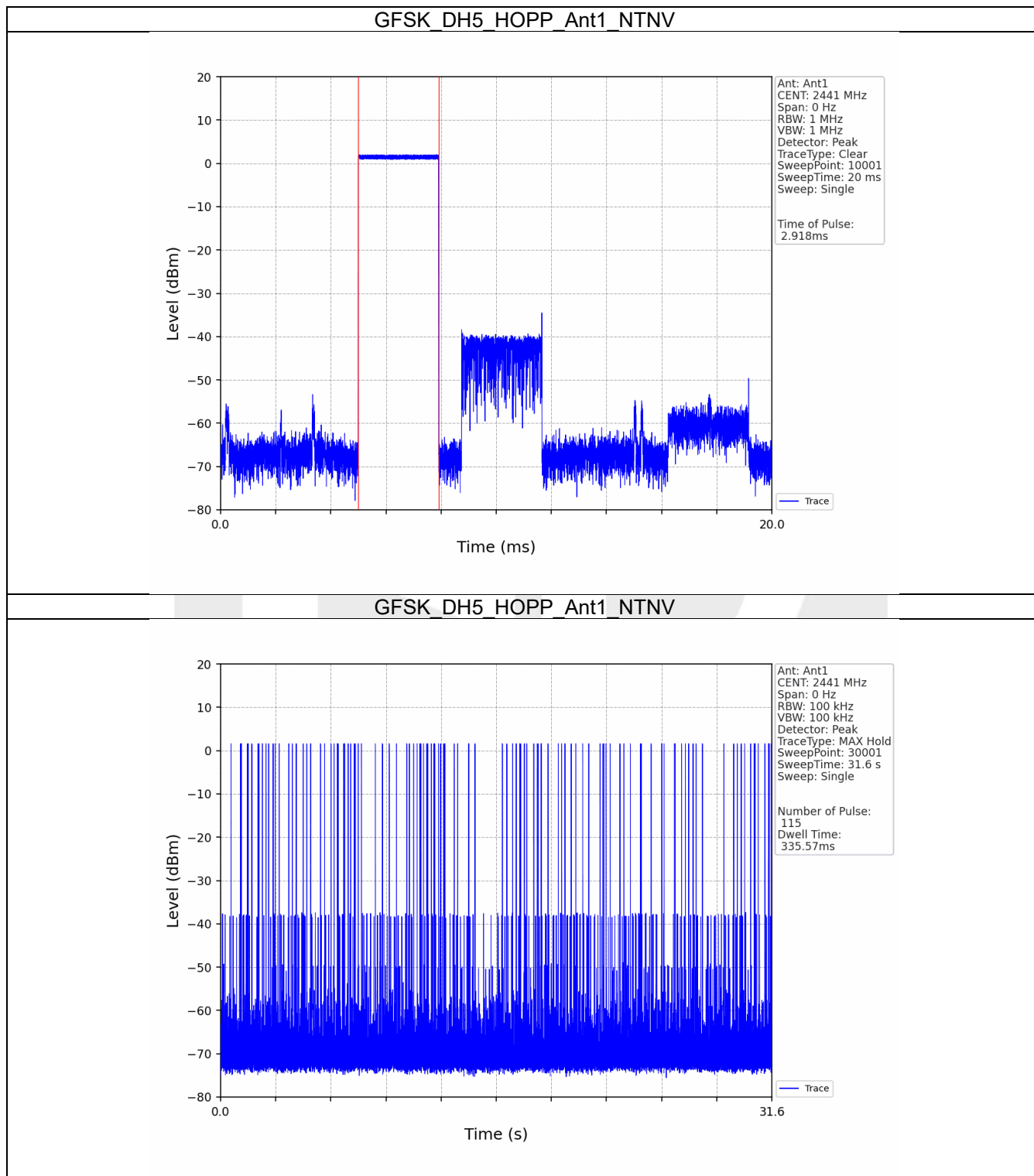


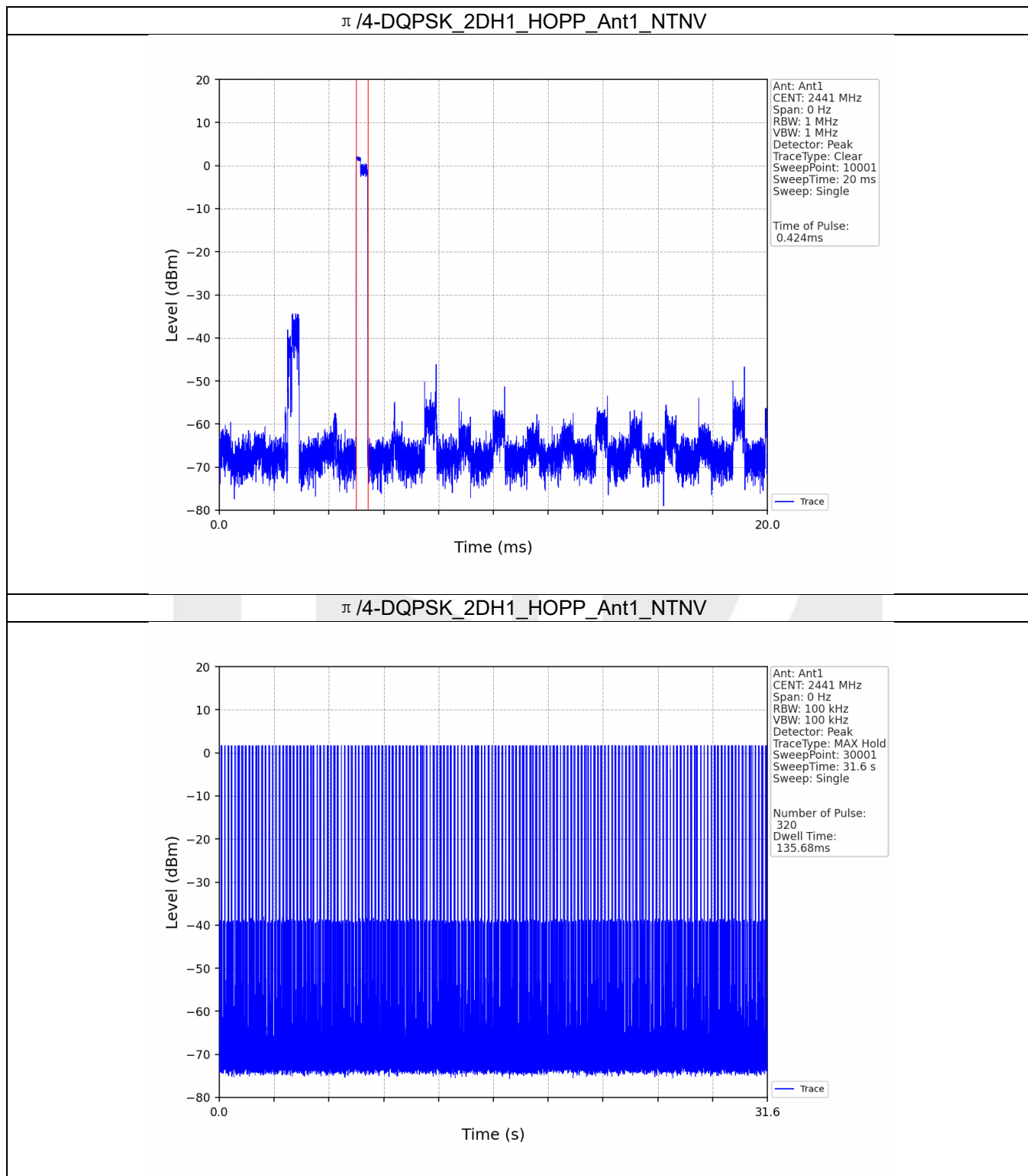
## 6.2 Test Graph

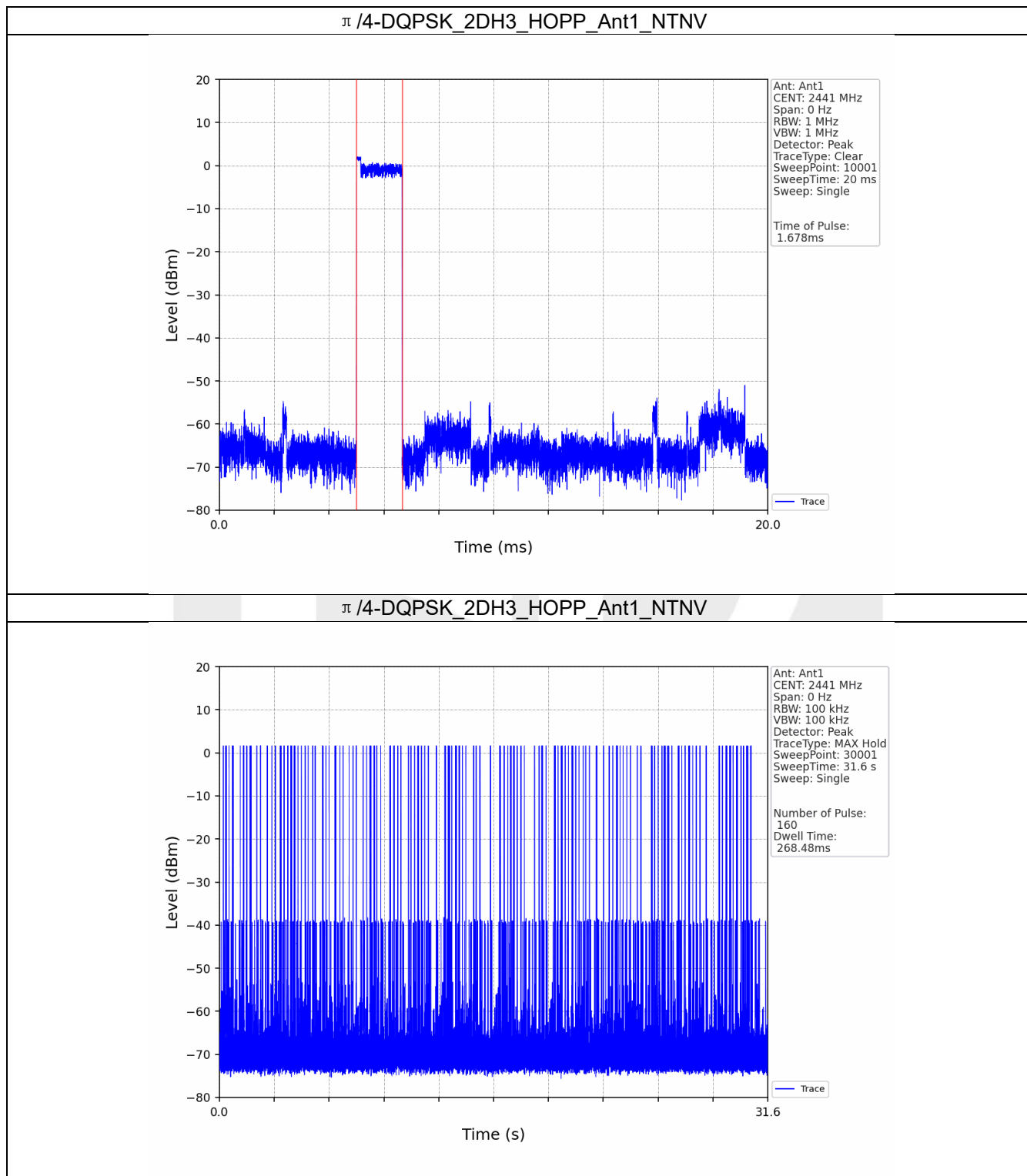
### 6.2.1 Ant1

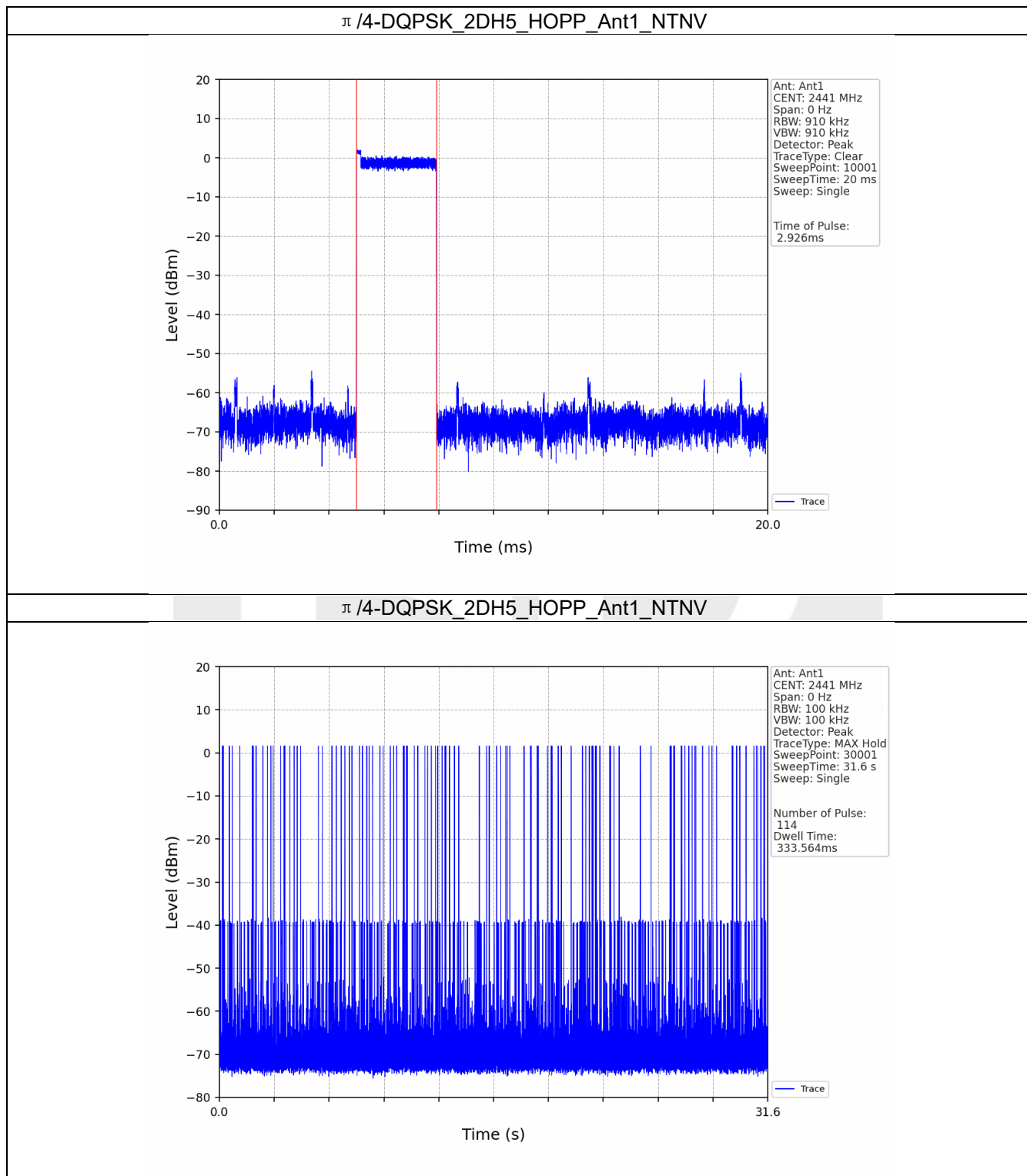


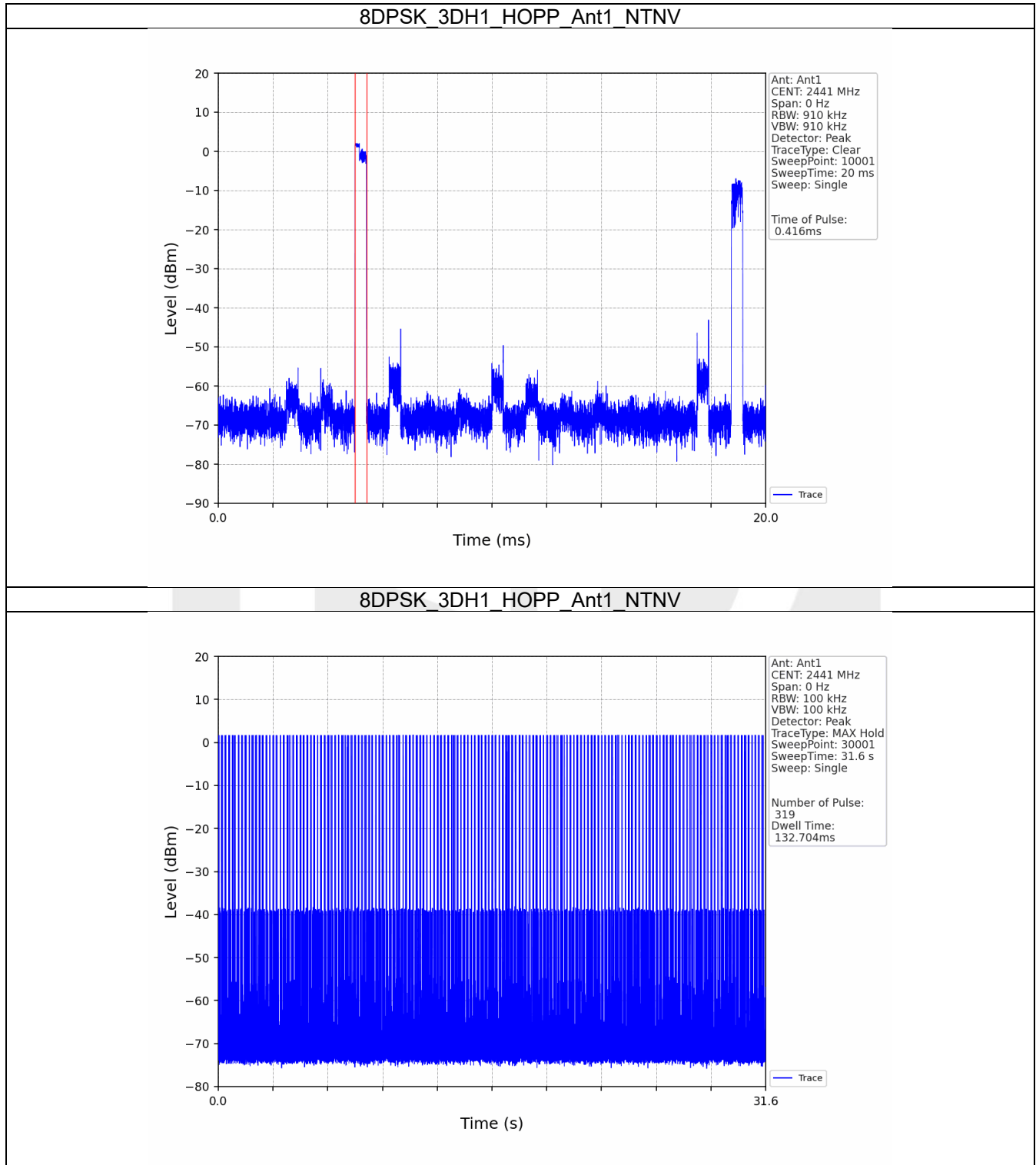


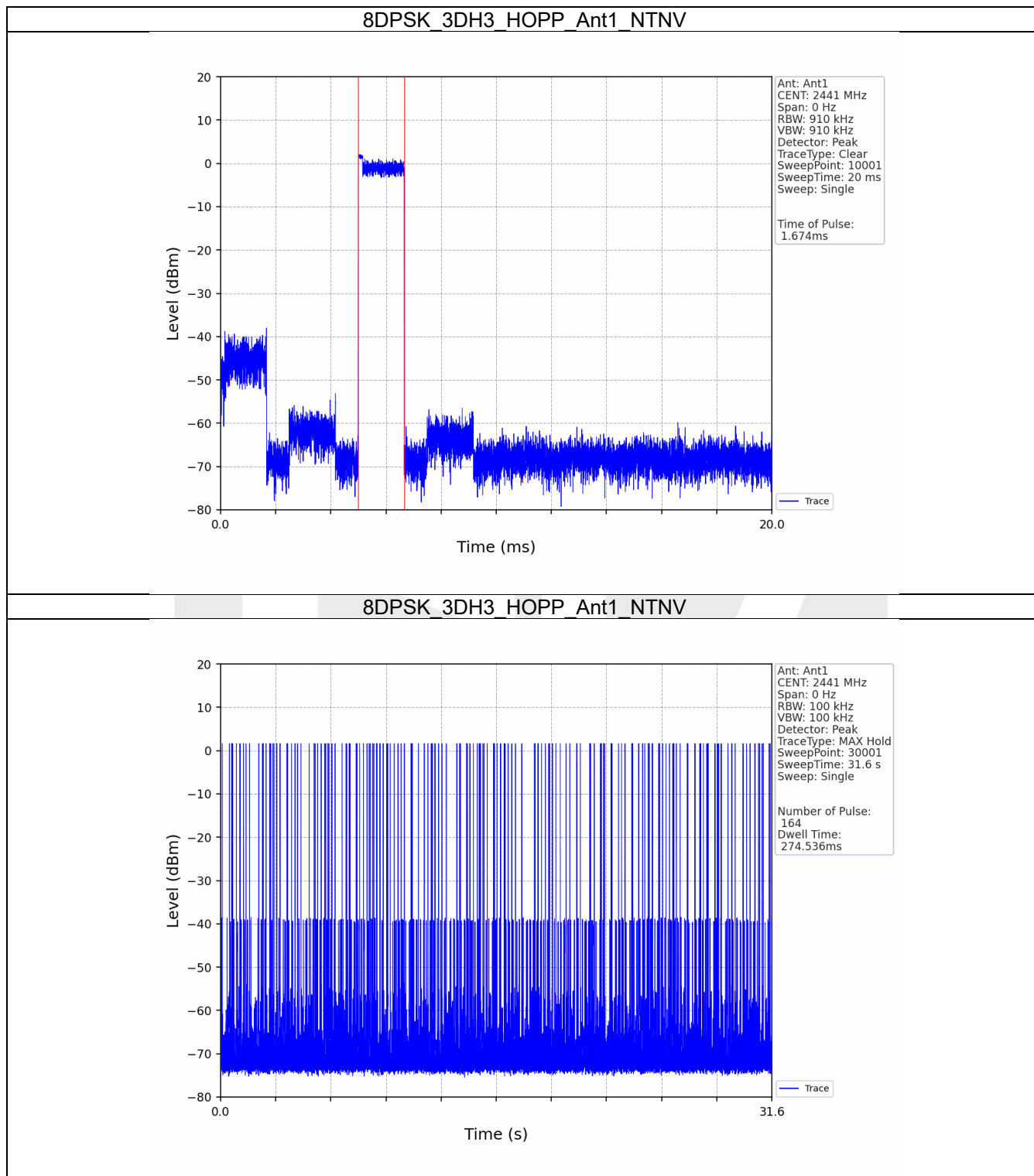




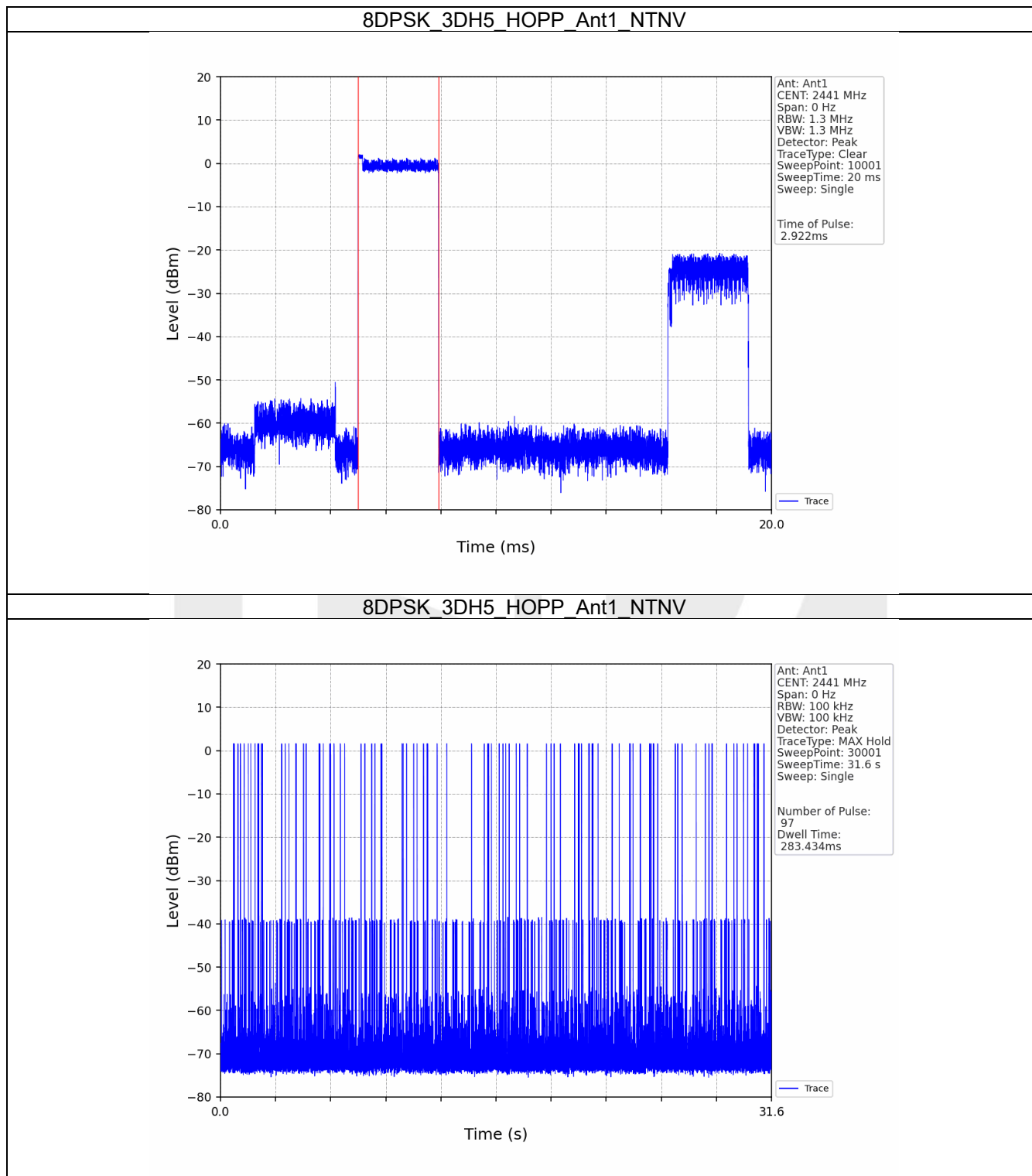












## 7. Unwanted Emissions In Non-restricted Frequency Bands

### 7.1 Test Result

#### 7.1.1 Ref

| Mode           | TX Type | Frequency (MHz) | Packet Type | ANT | Level of Reference (dBm) |
|----------------|---------|-----------------|-------------|-----|--------------------------|
| GFSK           | SISO    | 2402            | DH5         | 1   | 1.49                     |
|                |         | 2441            | DH5         | 1   | 1.69                     |
|                |         | 2480            | DH5         | 1   | 1.46                     |
|                |         | HOPP            | DH5         | 1   | 1.69                     |
|                |         |                 |             |     | 1.69                     |
| $\pi/4$ -DQPSK | SISO    | 2402            | 2DH5        | 1   | 1.46                     |
|                |         | 2441            | 2DH5        | 1   | 1.69                     |
|                |         | 2480            | 2DH5        | 1   | 1.48                     |
|                |         | HOPP            | 2DH5        | 1   | 1.97                     |
|                |         |                 |             |     | 1.97                     |
| 8DPSK          | SISO    | 2402            | 3DH5        | 1   | 1.50                     |
|                |         | 2441            | 3DH5        | 1   | 1.69                     |
|                |         | 2480            | 3DH5        | 1   | 1.47                     |
|                |         | HOPP            | 3DH5        | 1   | 1.97                     |
|                |         |                 |             |     | 1.97                     |

Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level.

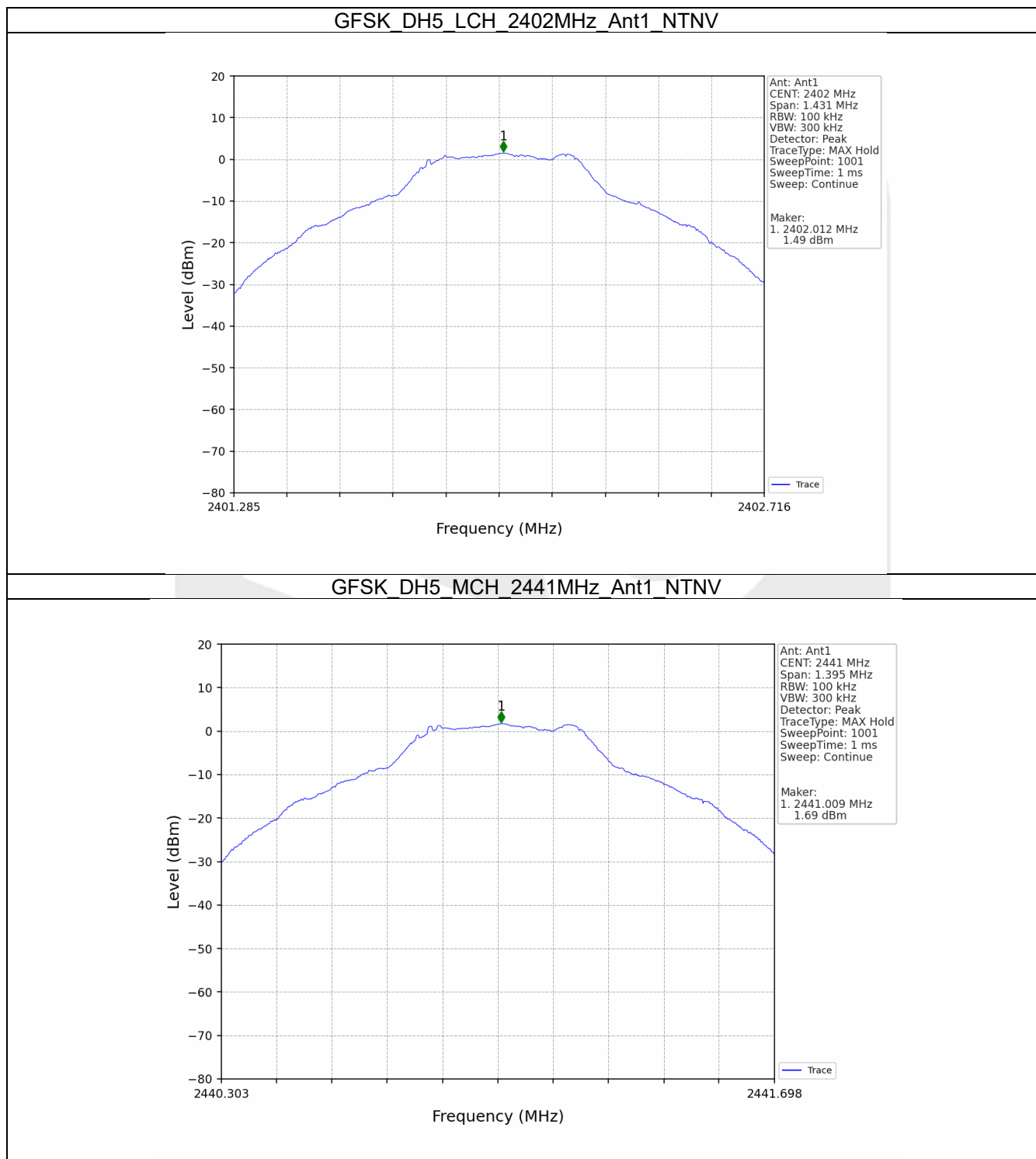
#### 7.1.2 CSE

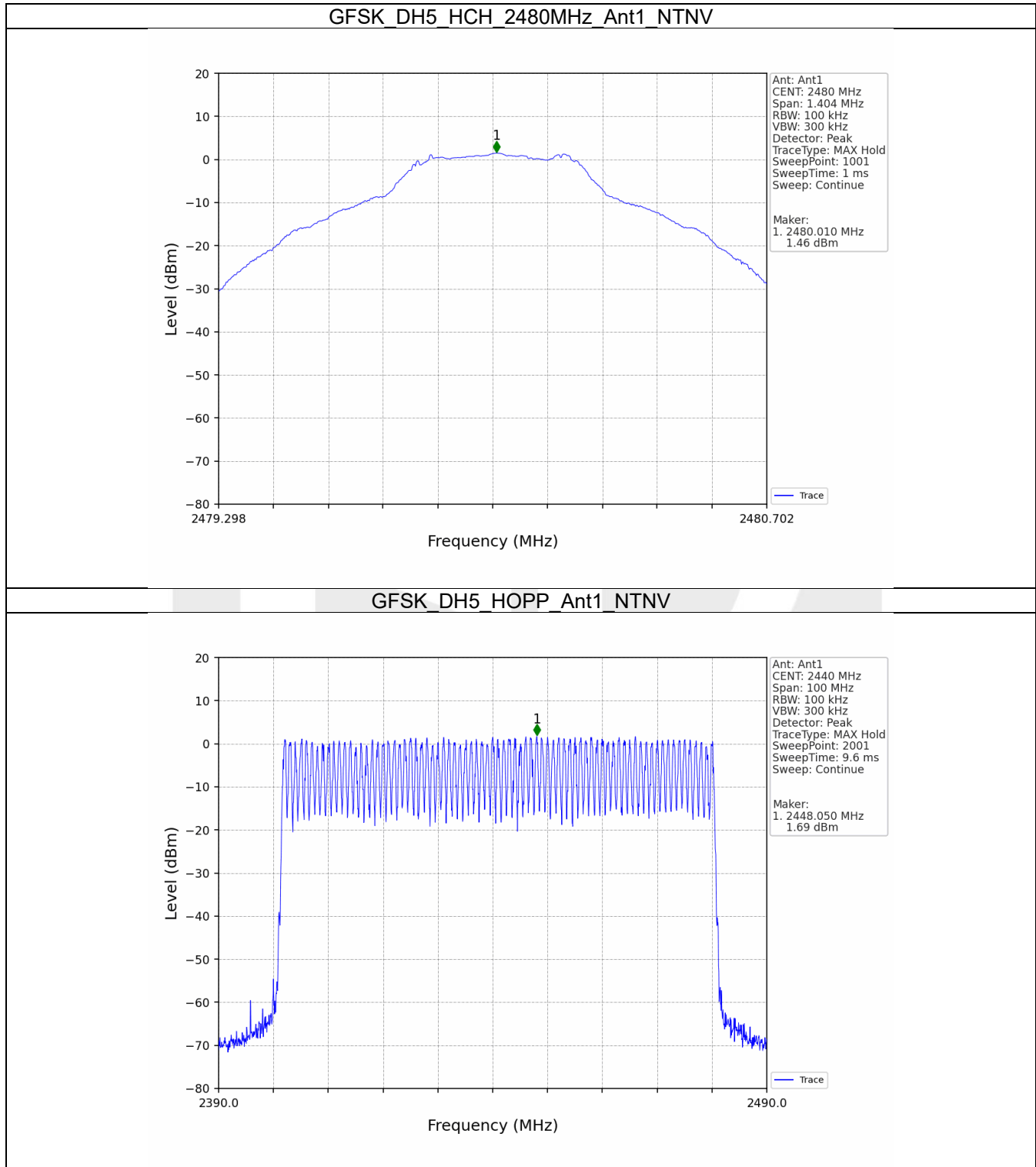
| Mode           | TX Type | Frequency (MHz) | Packet Type | ANT | Level of Reference (dBm) | Limit (dBm) | Verdict |
|----------------|---------|-----------------|-------------|-----|--------------------------|-------------|---------|
| GFSK           | SISO    | 2402            | DH5         | 1   | 1.49                     | -18.51      | Pass    |
|                |         | 2441            | DH5         | 1   | 1.69                     | -18.31      | Pass    |
|                |         | 2480            | DH5         | 1   | 1.46                     | -18.54      | Pass    |
|                |         | HOPP            | DH5         | 1   | 1.69                     | -18.31      | Pass    |
|                |         |                 |             |     | 1.69                     | -18.31      | Pass    |
| $\pi/4$ -DQPSK | SISO    | 2402            | 2DH5        | 1   | 1.46                     | -18.54      | Pass    |
|                |         | 2441            | 2DH5        | 1   | 1.69                     | -18.31      | Pass    |
|                |         | 2480            | 2DH5        | 1   | 1.48                     | -18.52      | Pass    |
|                |         | HOPP            | 2DH5        | 1   | 1.97                     | -18.03      | Pass    |
|                |         |                 |             |     | 1.97                     | -18.03      | Pass    |
| 8DPSK          | SISO    | 2402            | 3DH5        | 1   | 1.50                     | -18.50      | Pass    |
|                |         | 2441            | 3DH5        | 1   | 1.69                     | -18.31      | Pass    |
|                |         | 2480            | 3DH5        | 1   | 1.47                     | -18.53      | Pass    |
|                |         | HOPP            | 3DH5        | 1   | 1.97                     | -18.03      | Pass    |
|                |         |                 |             |     | 1.97                     | -18.03      | Pass    |

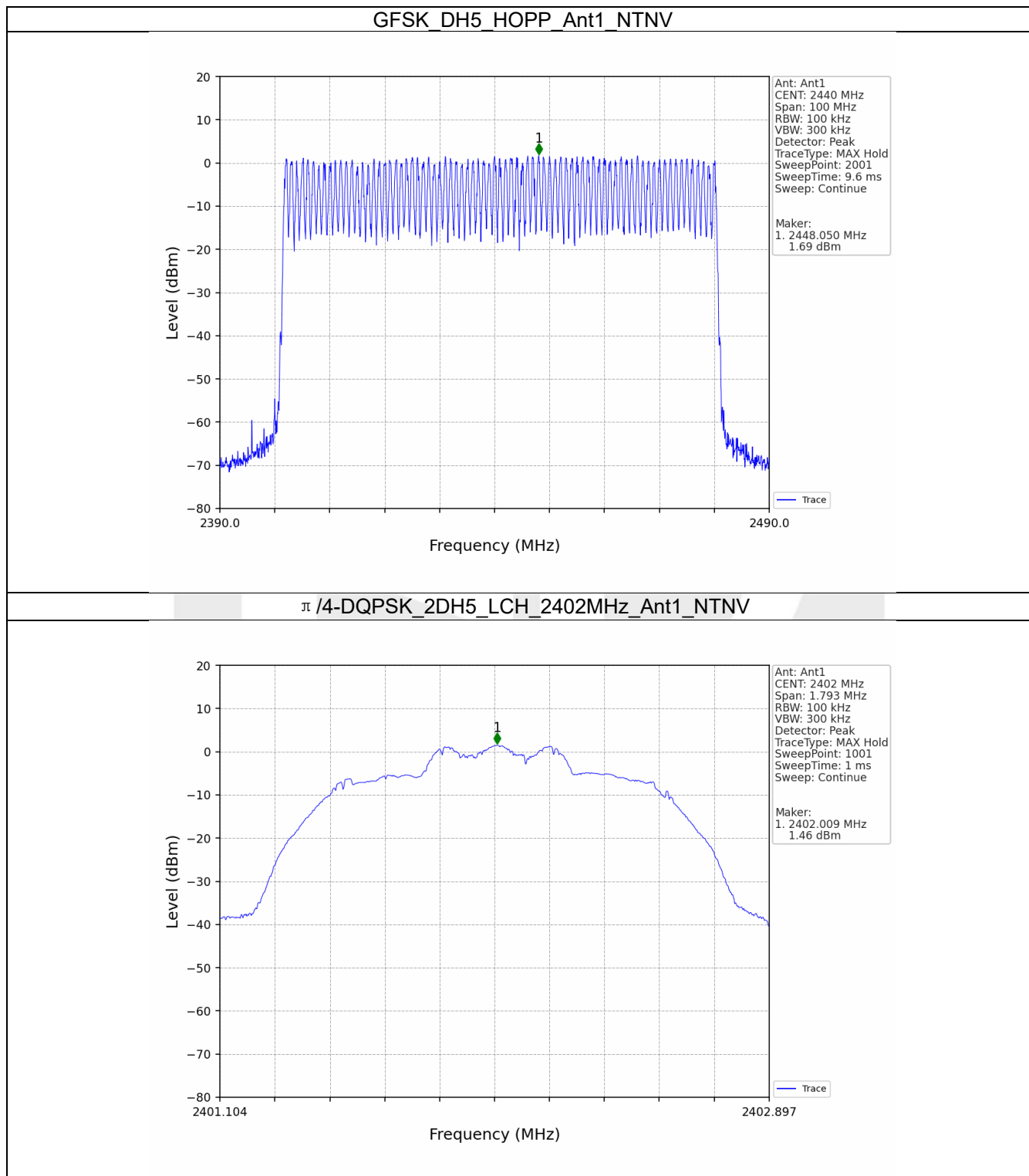
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level.

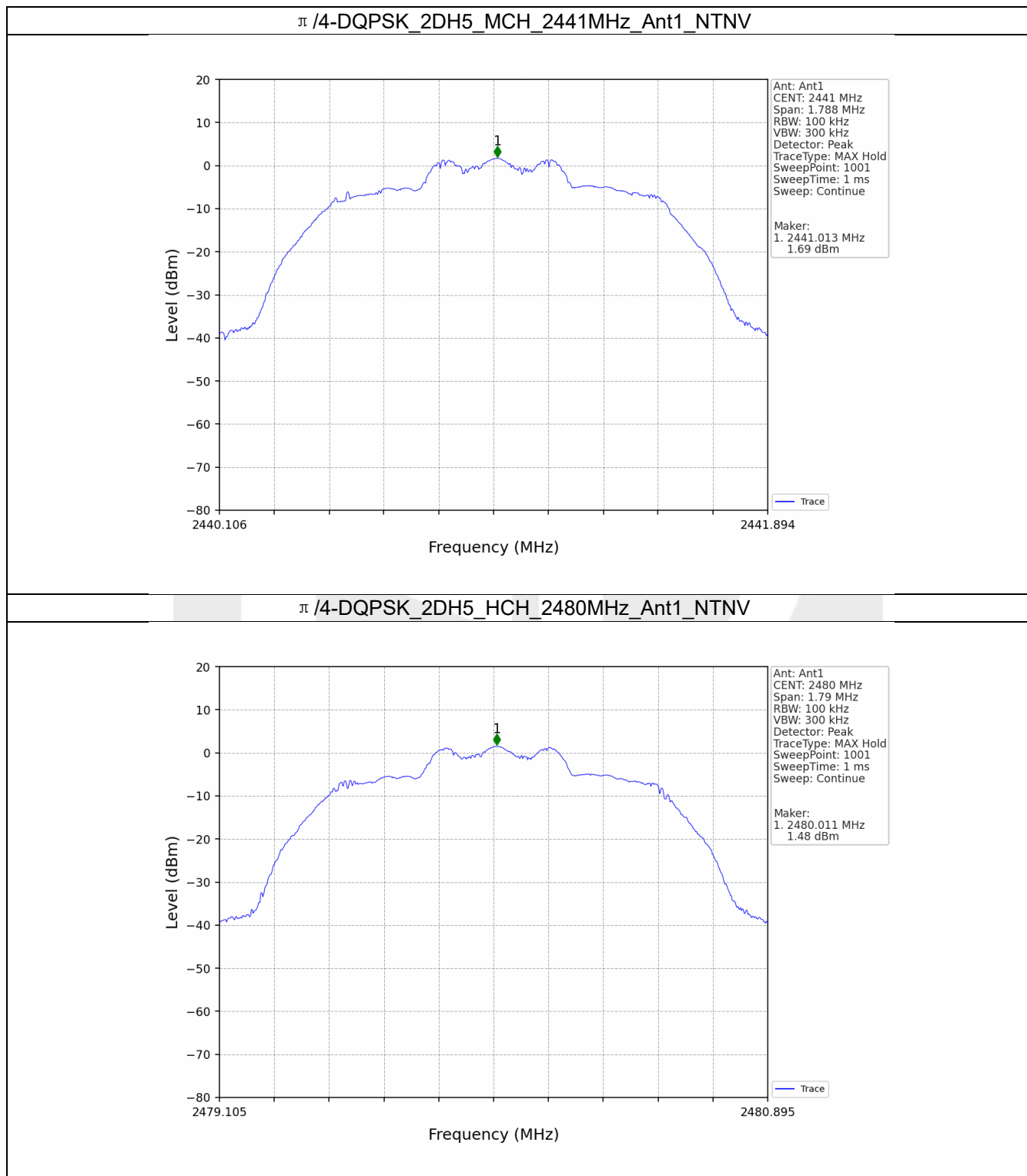
## 7.2 Test Graph

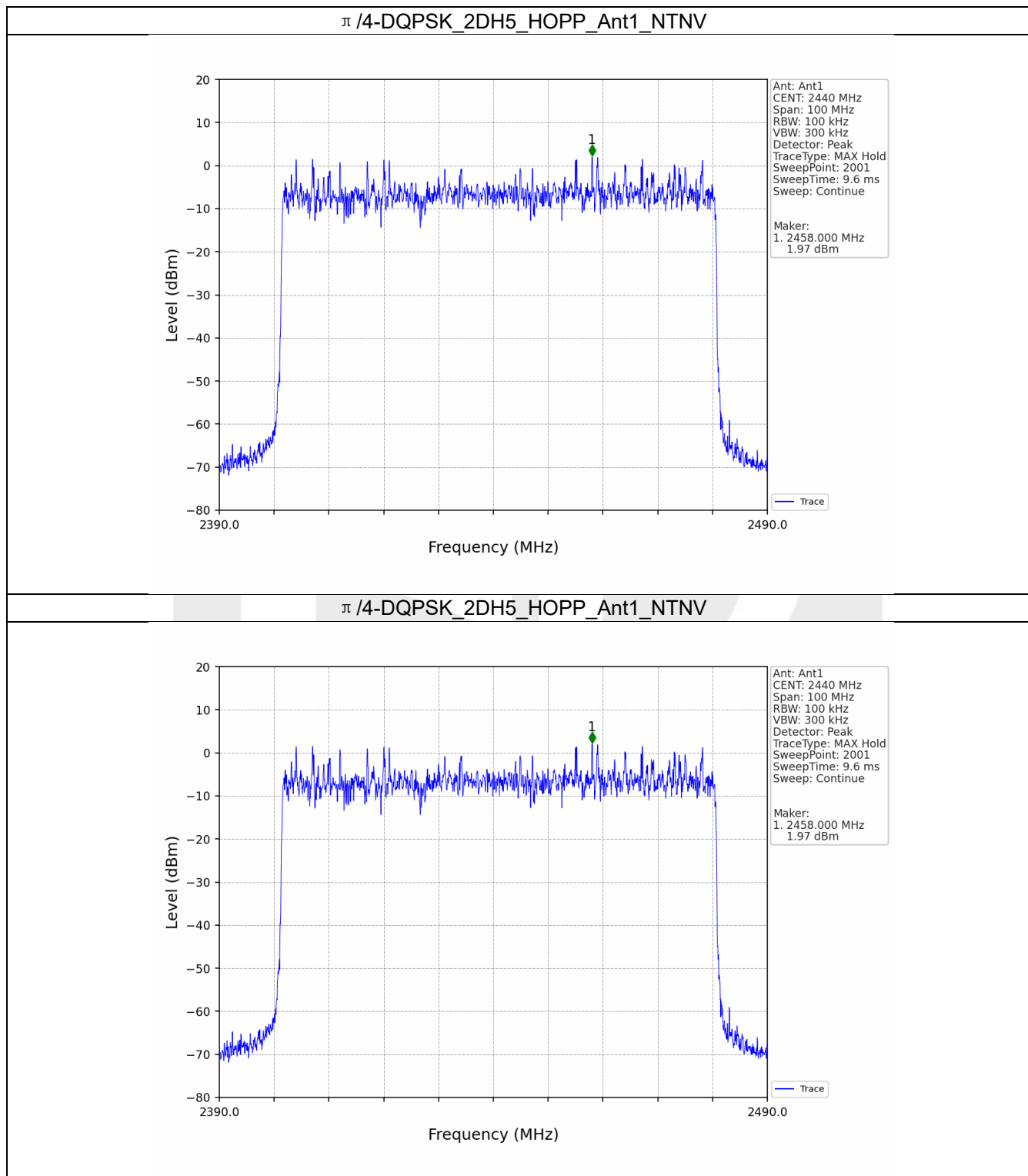
### 7.2.1 Ref

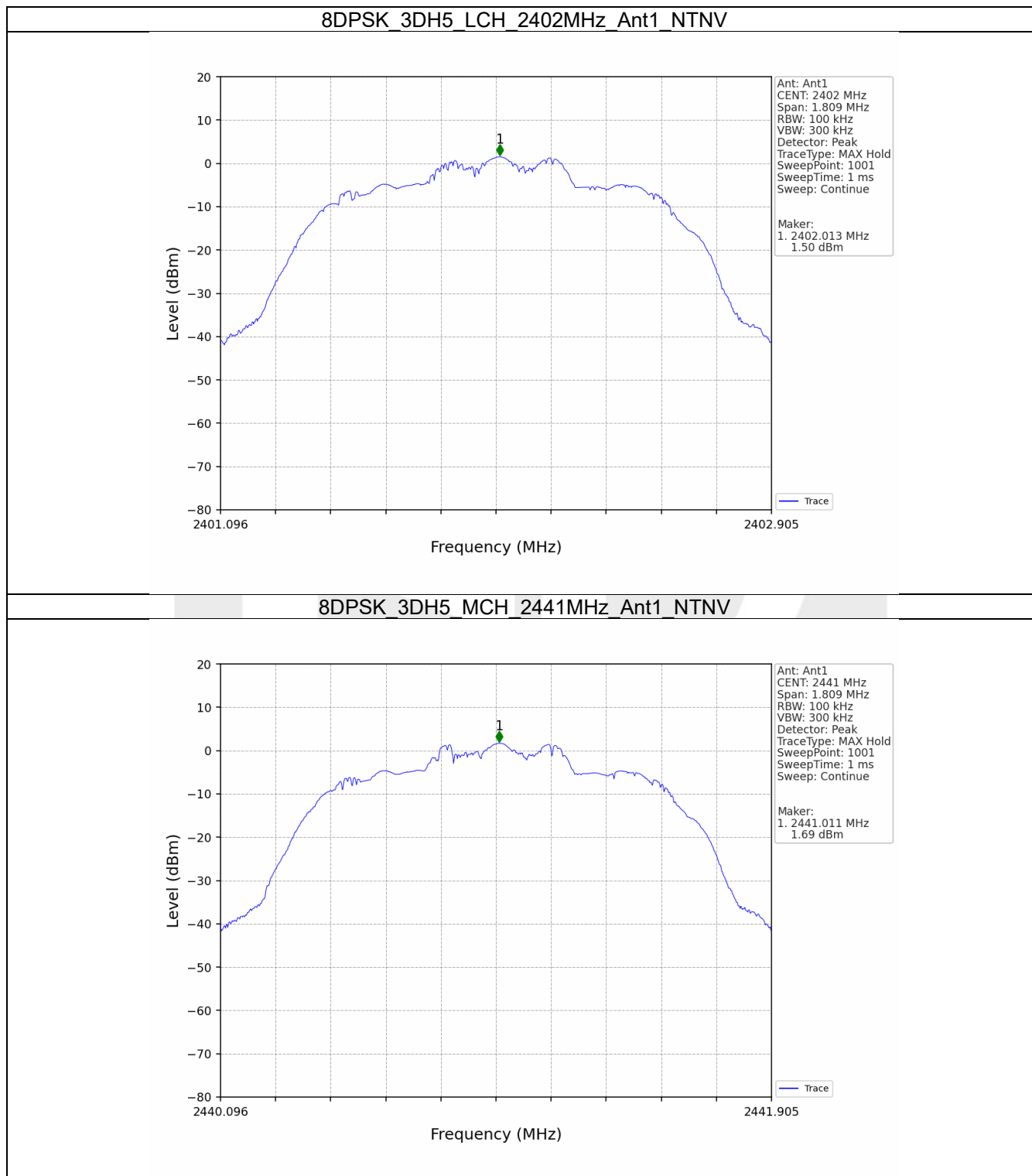




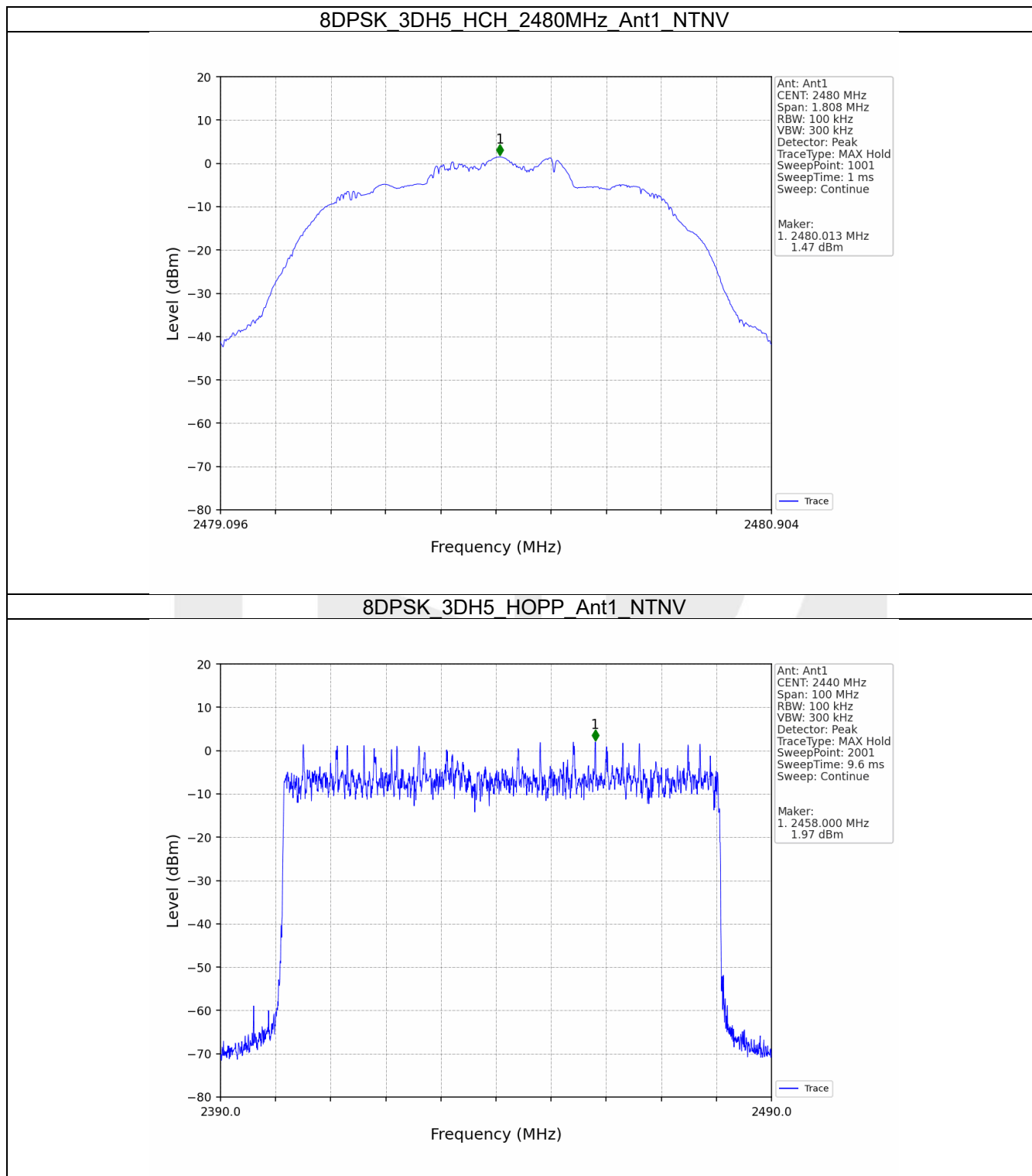


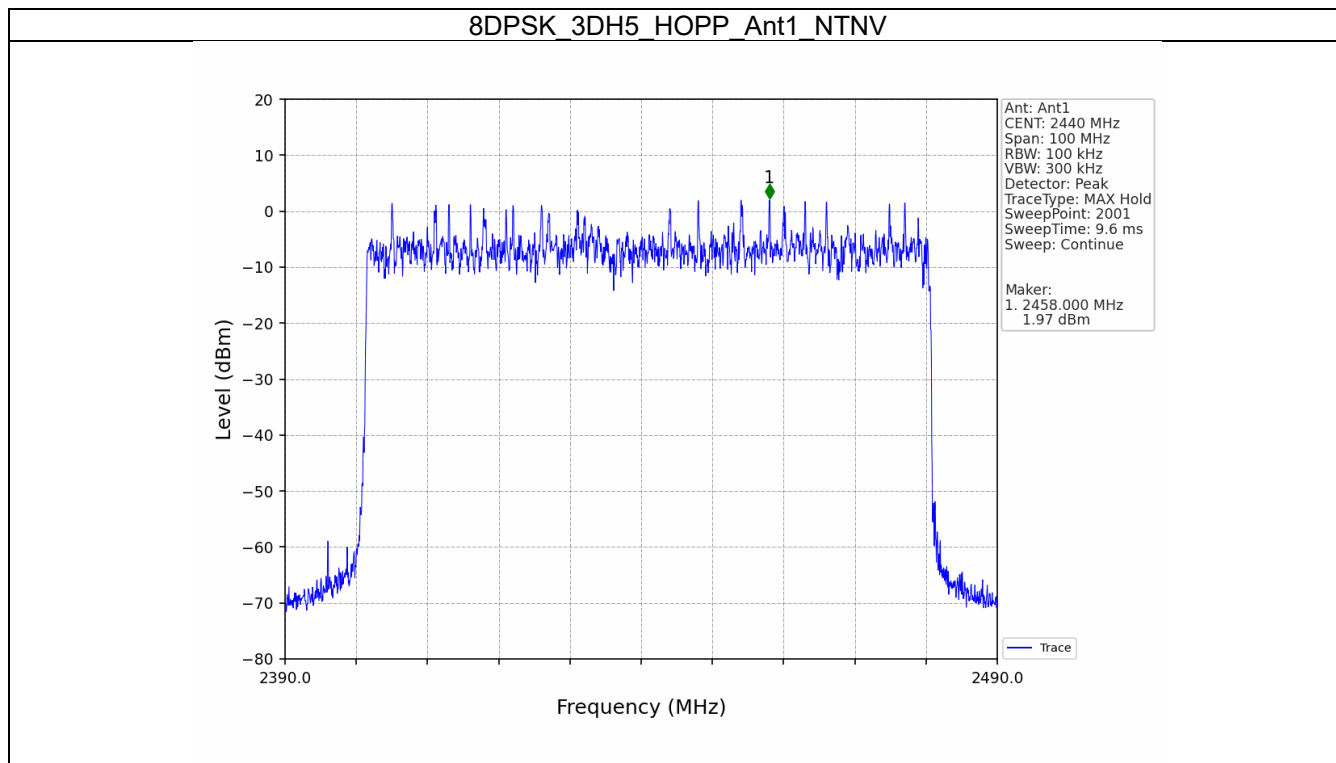




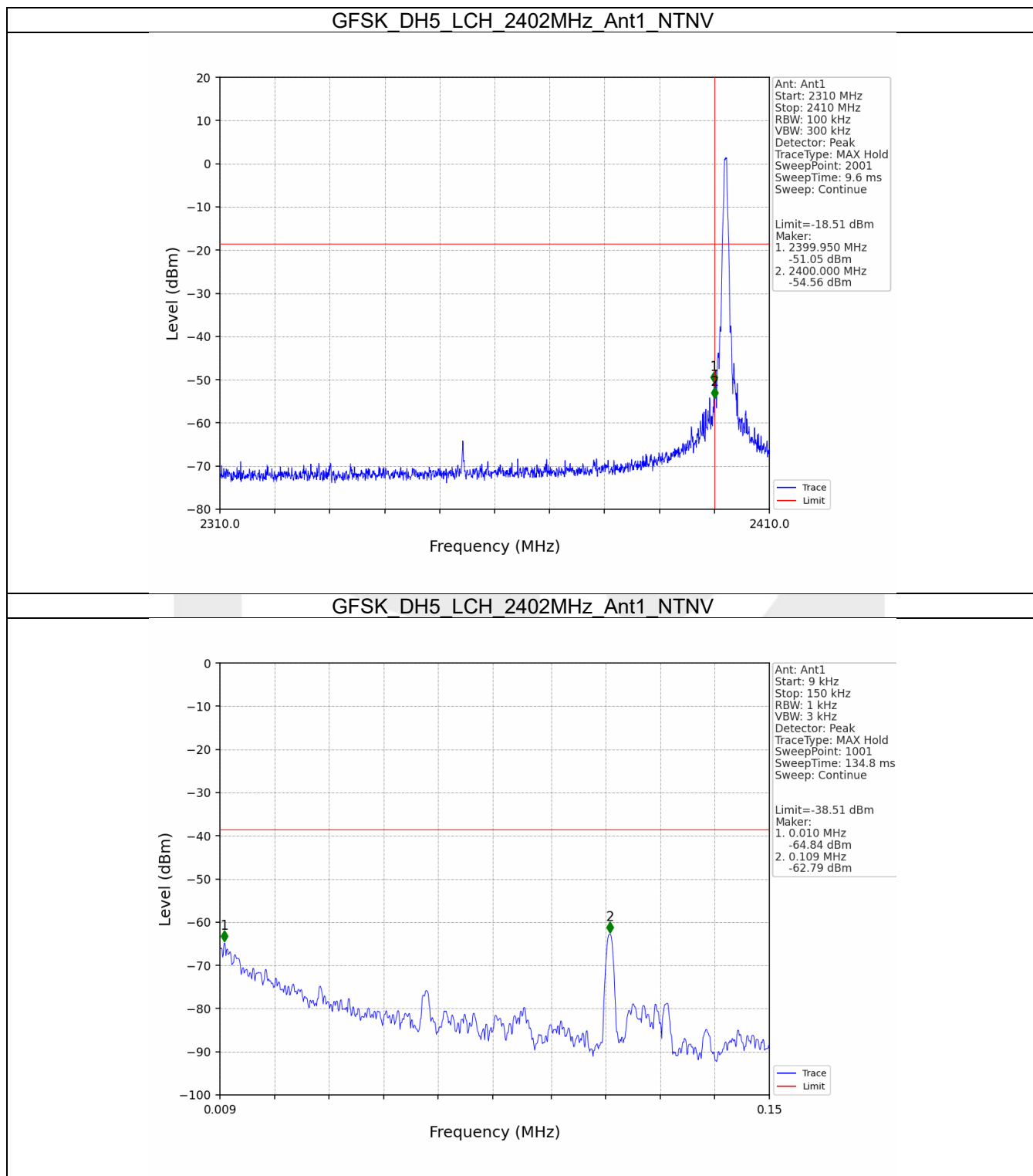


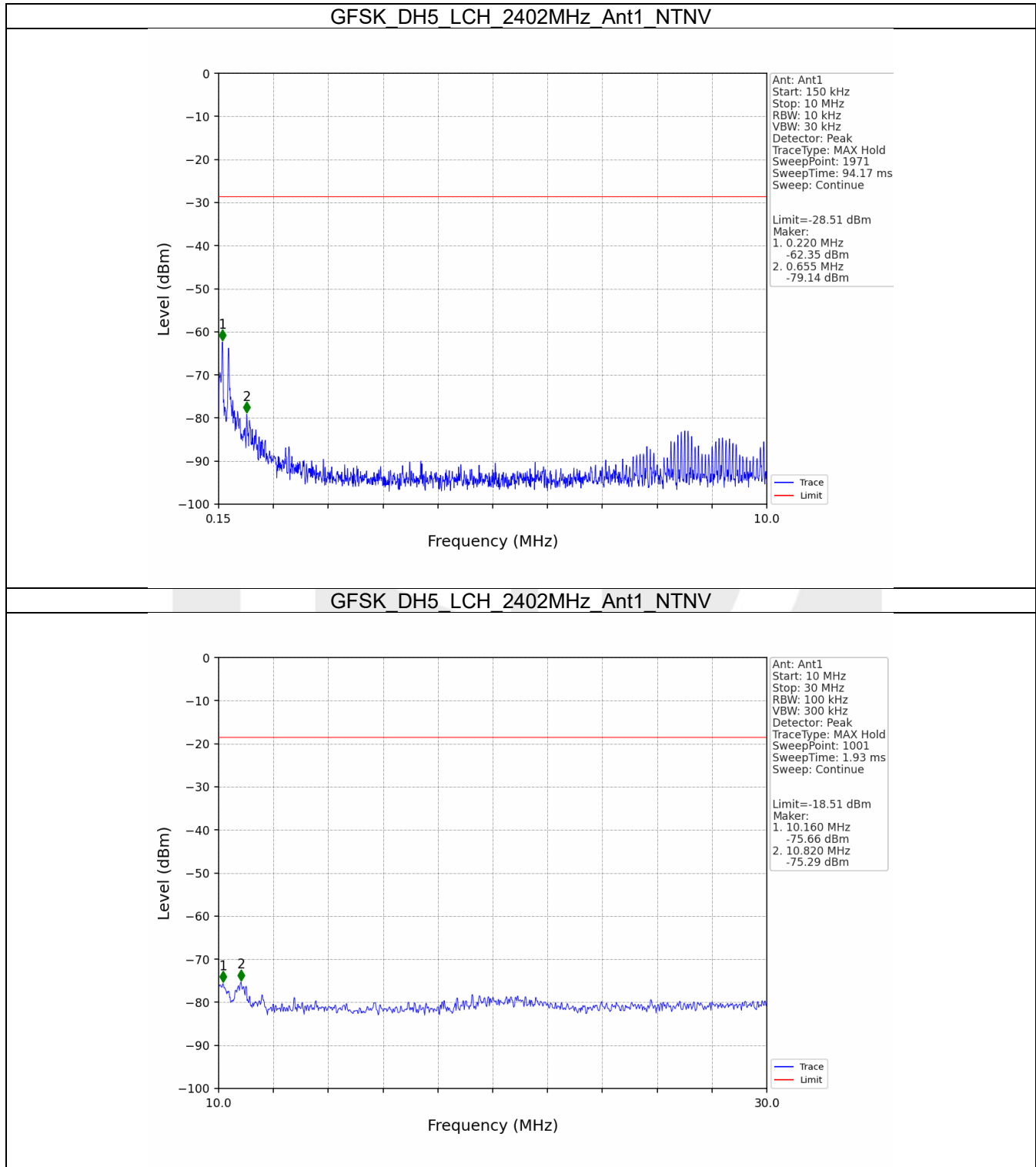


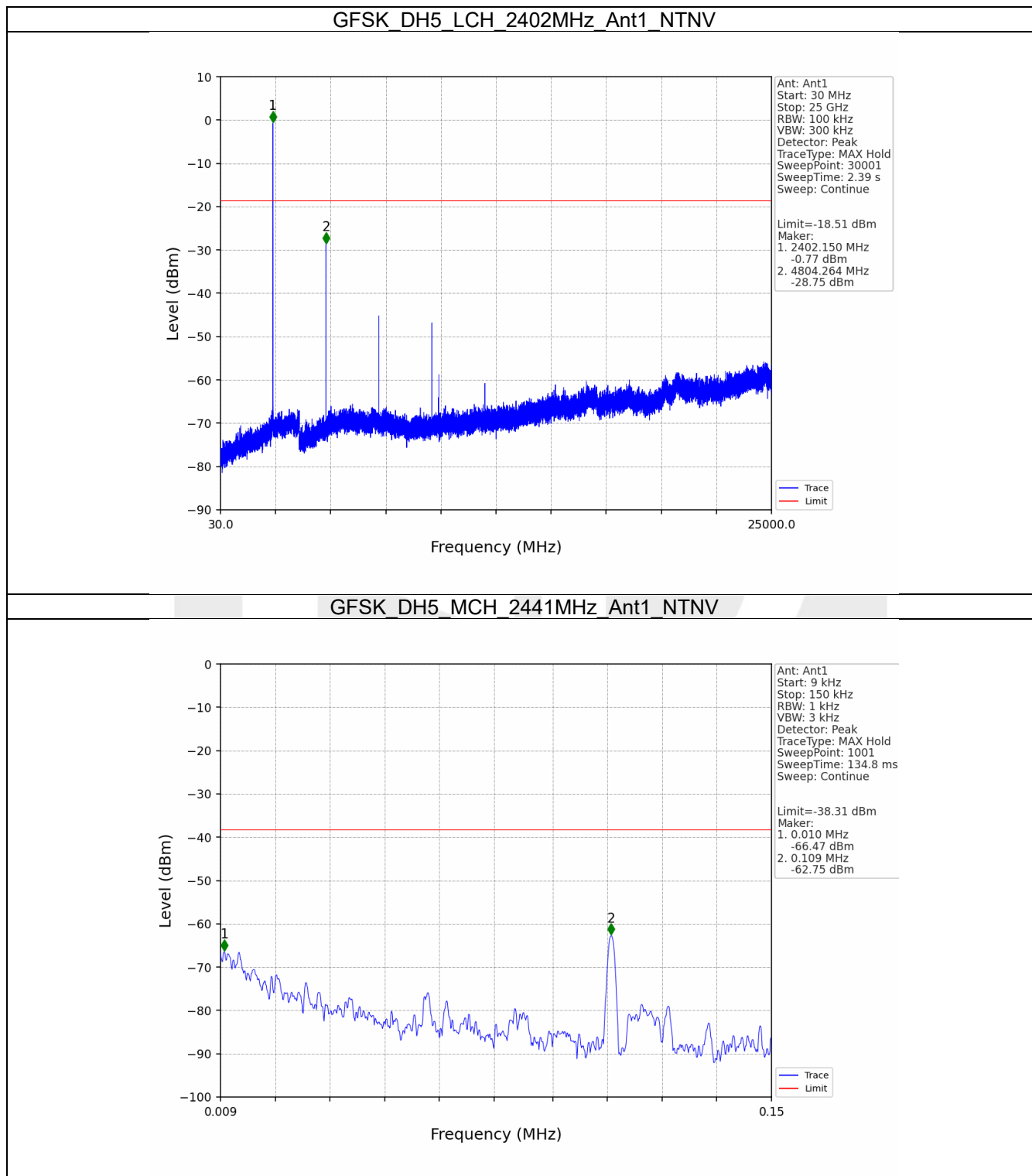


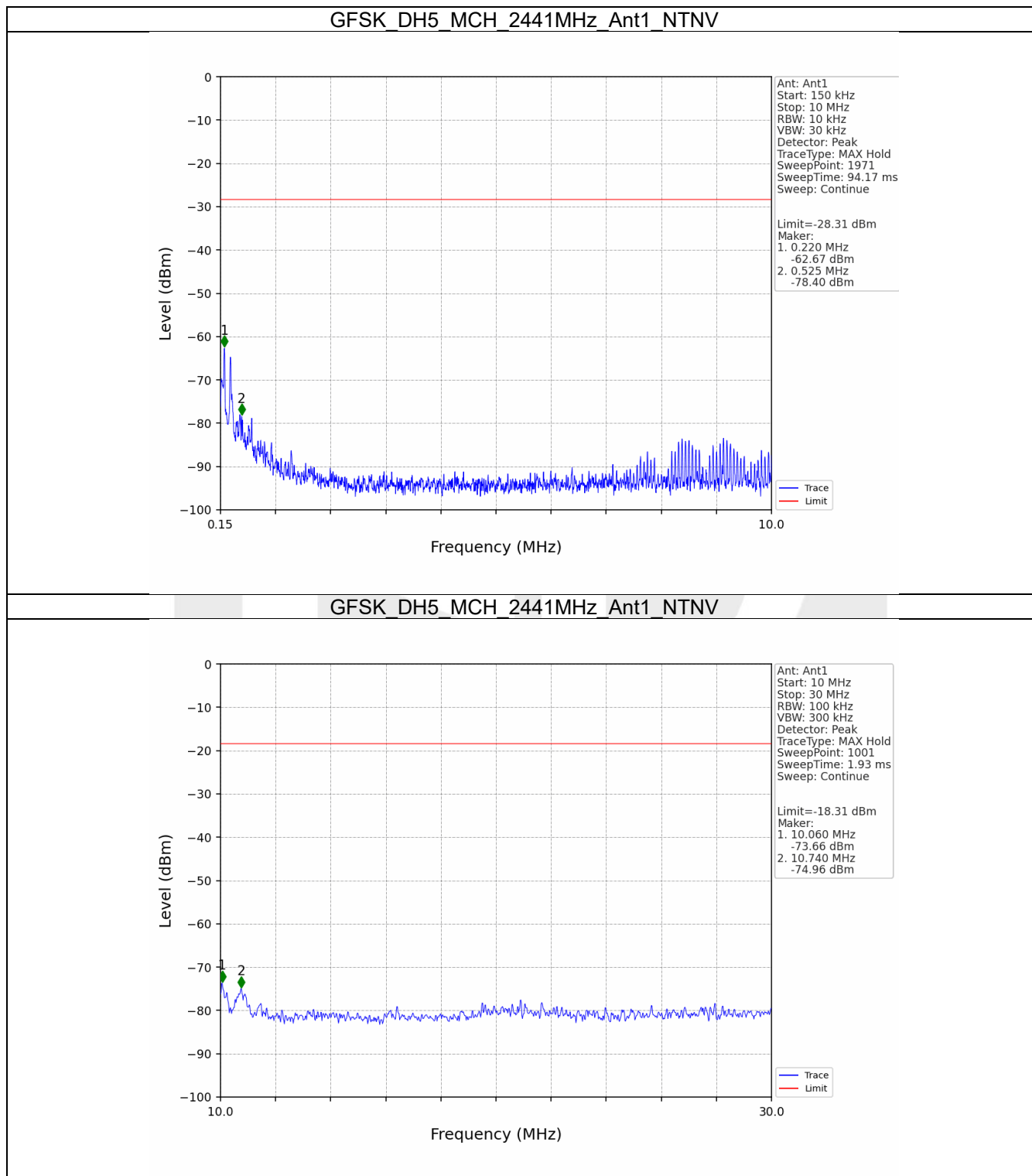


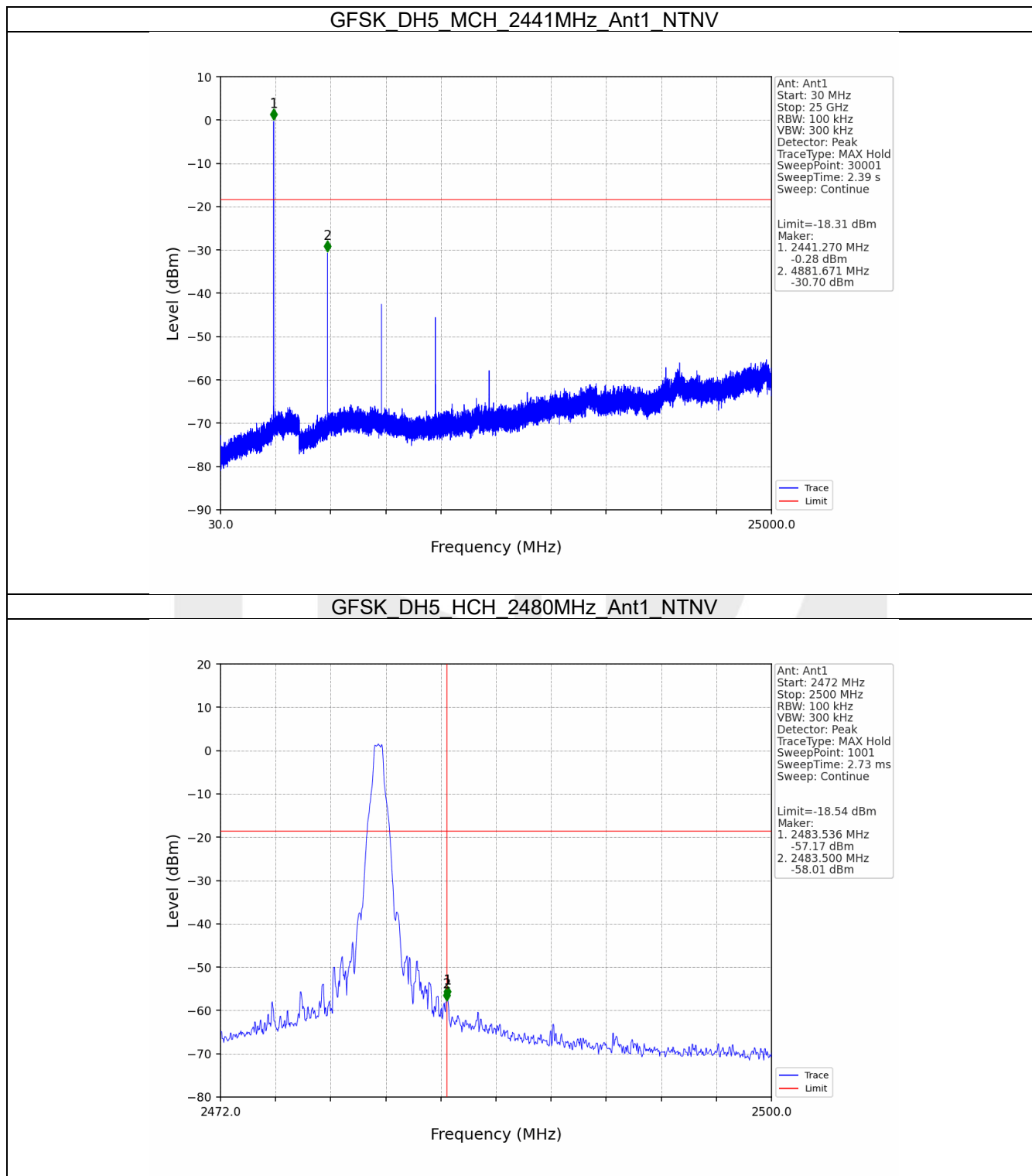
## 7.2.2 CSE

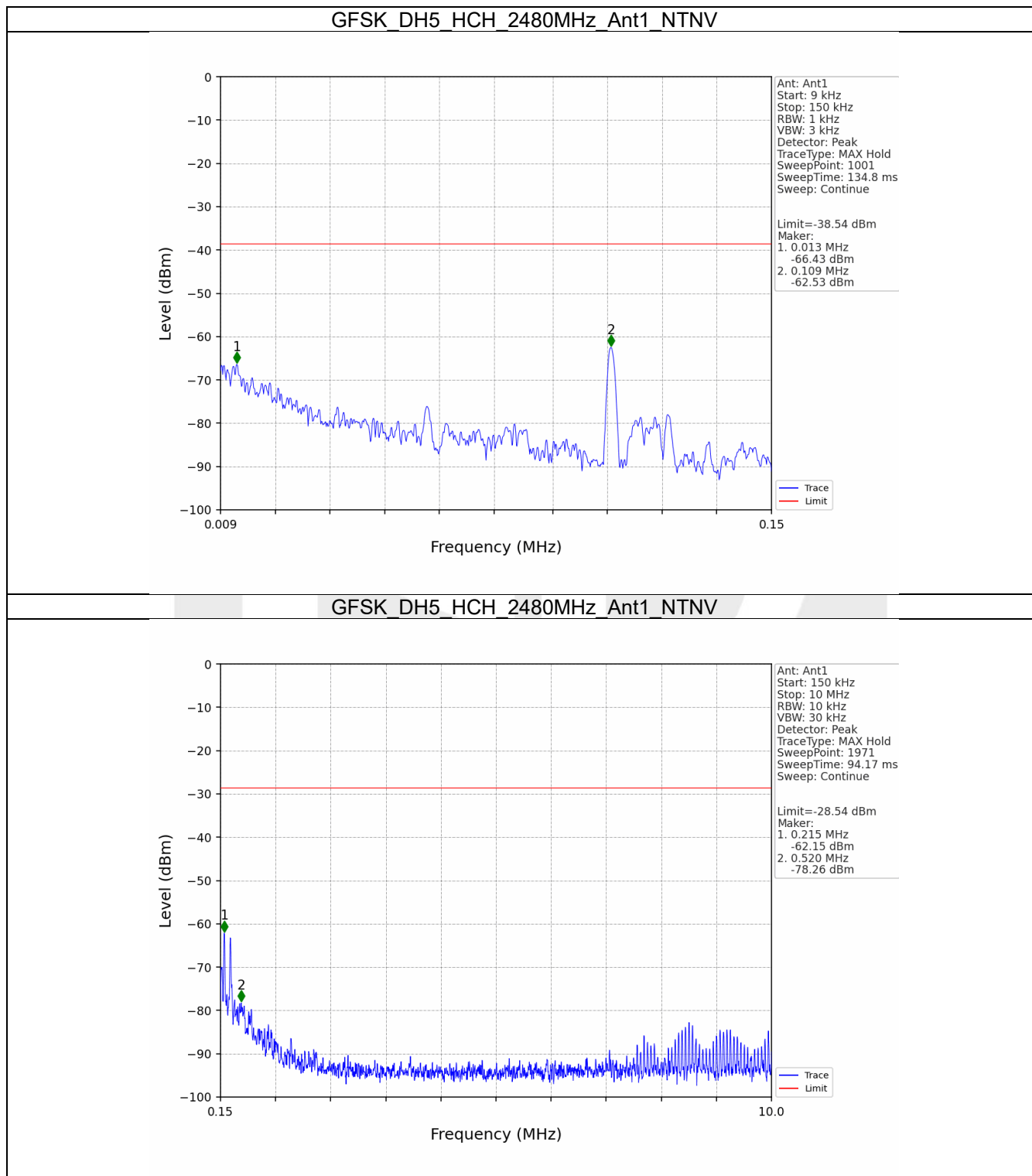




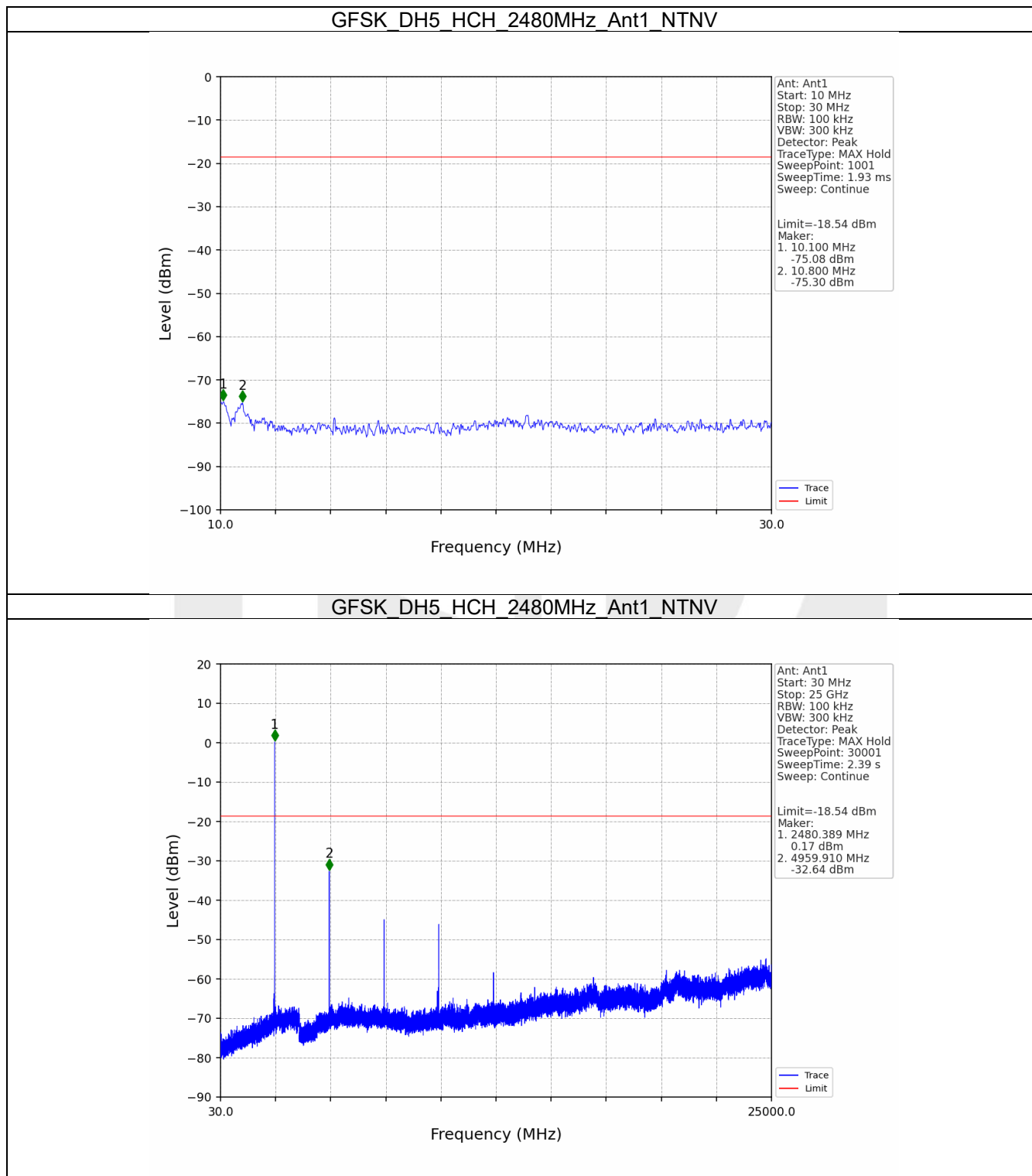


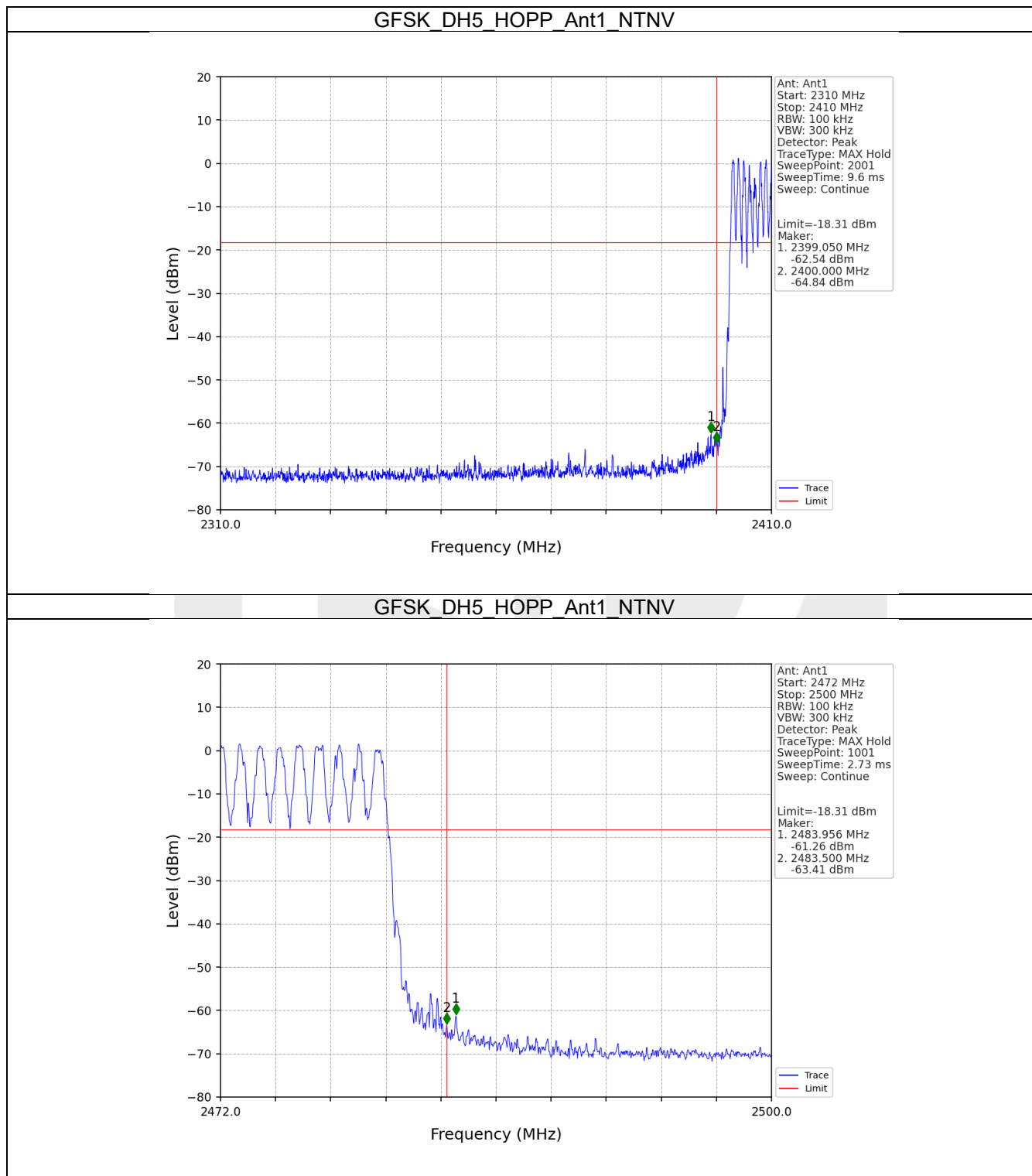


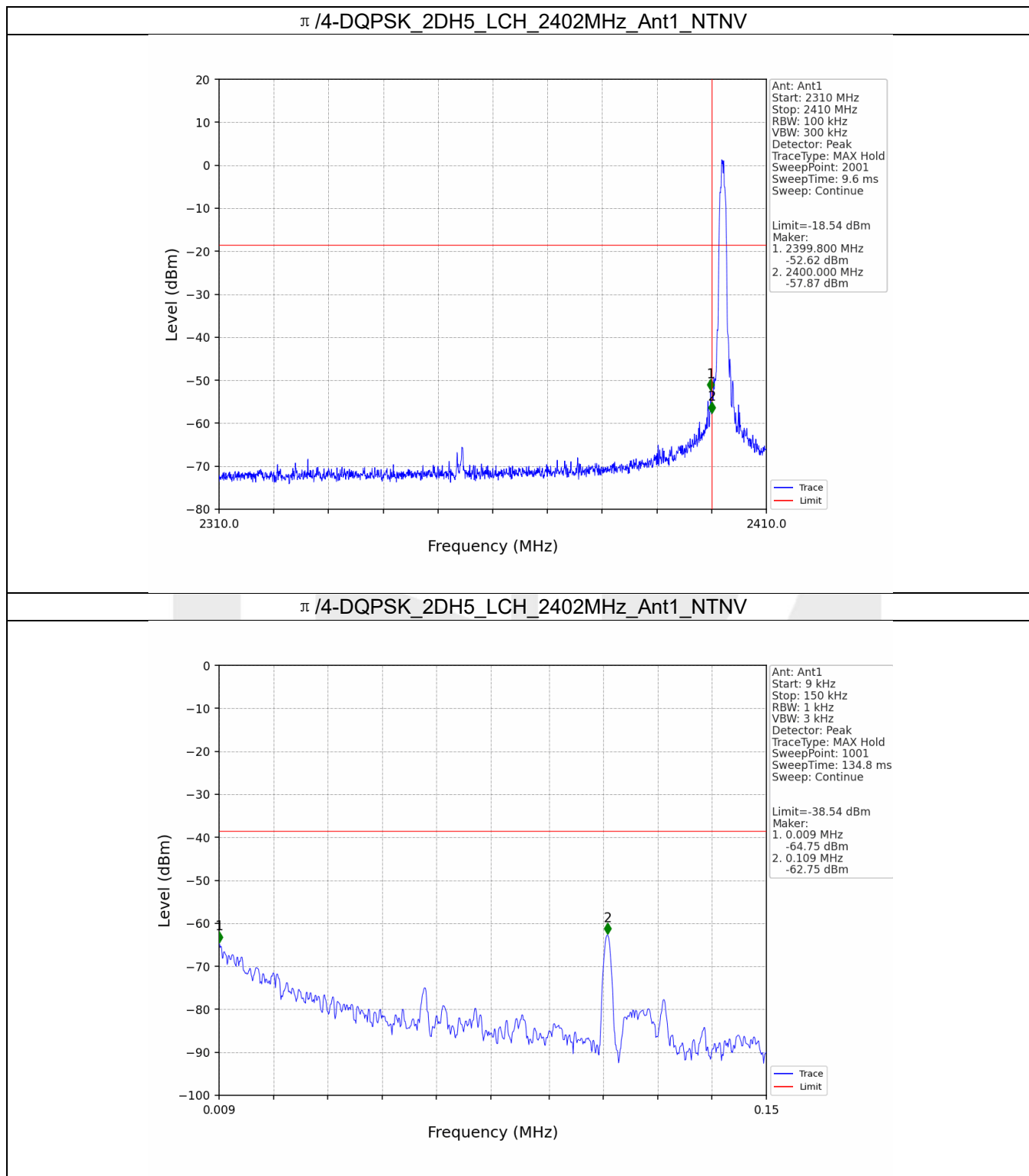


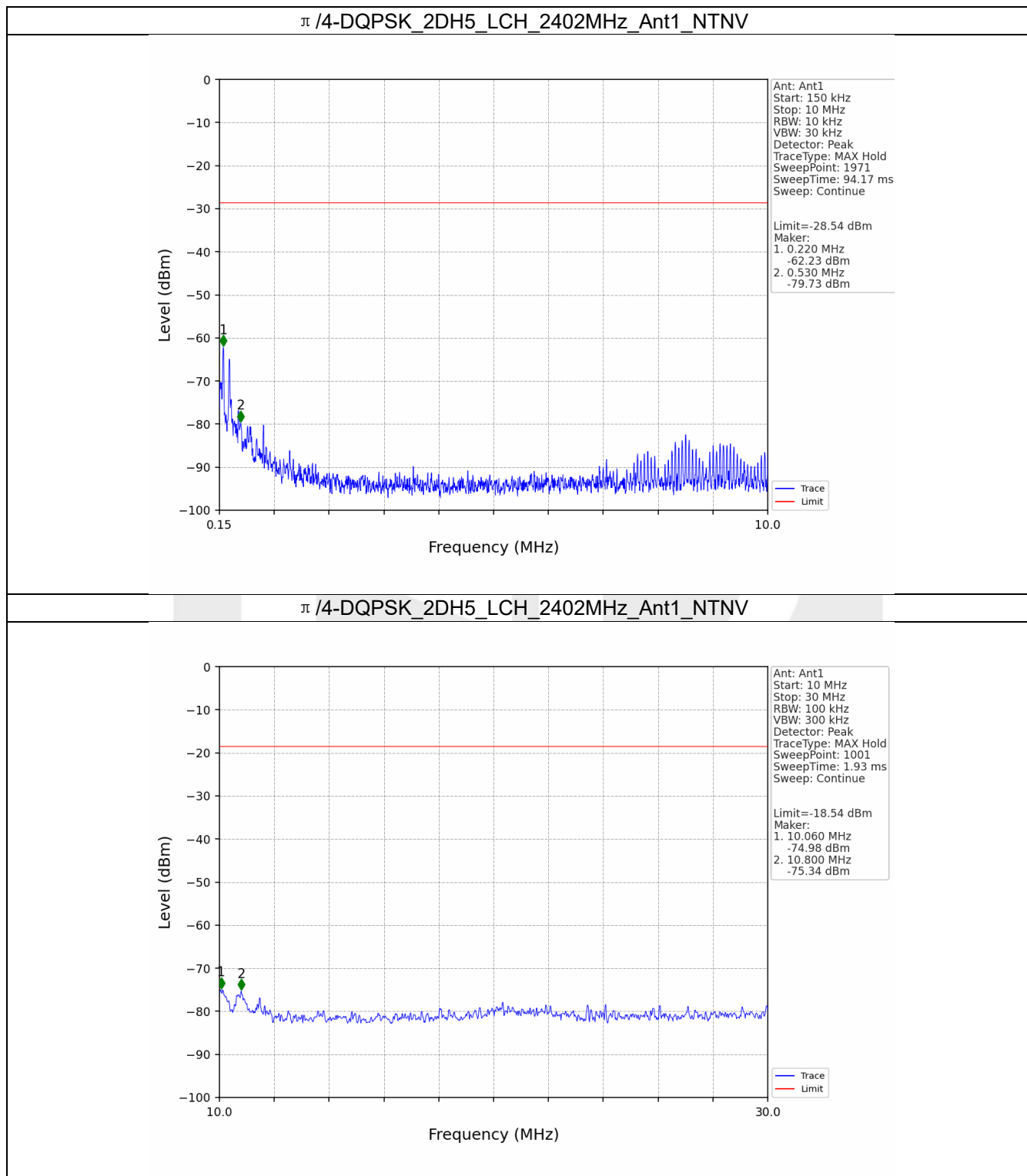


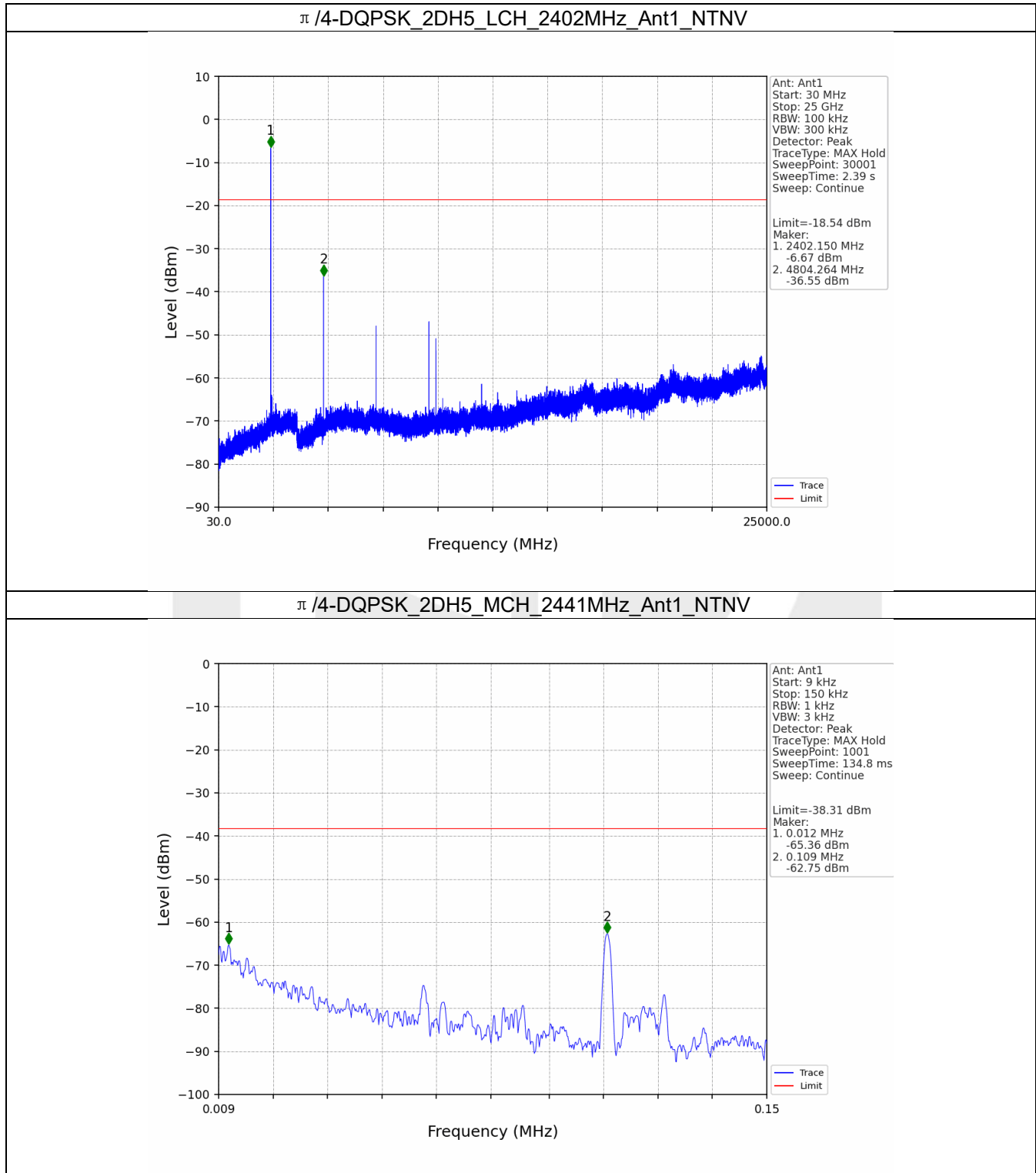


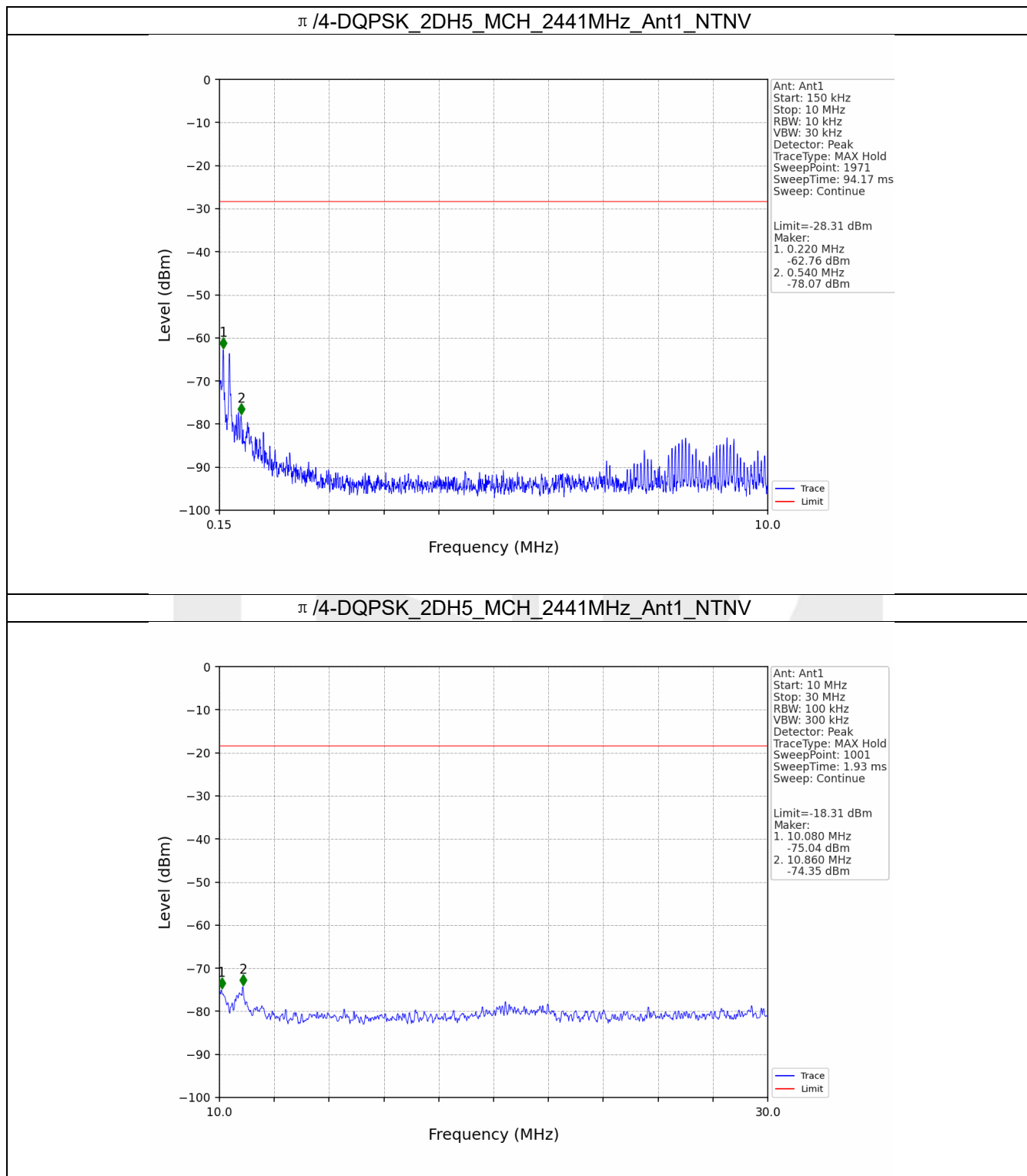


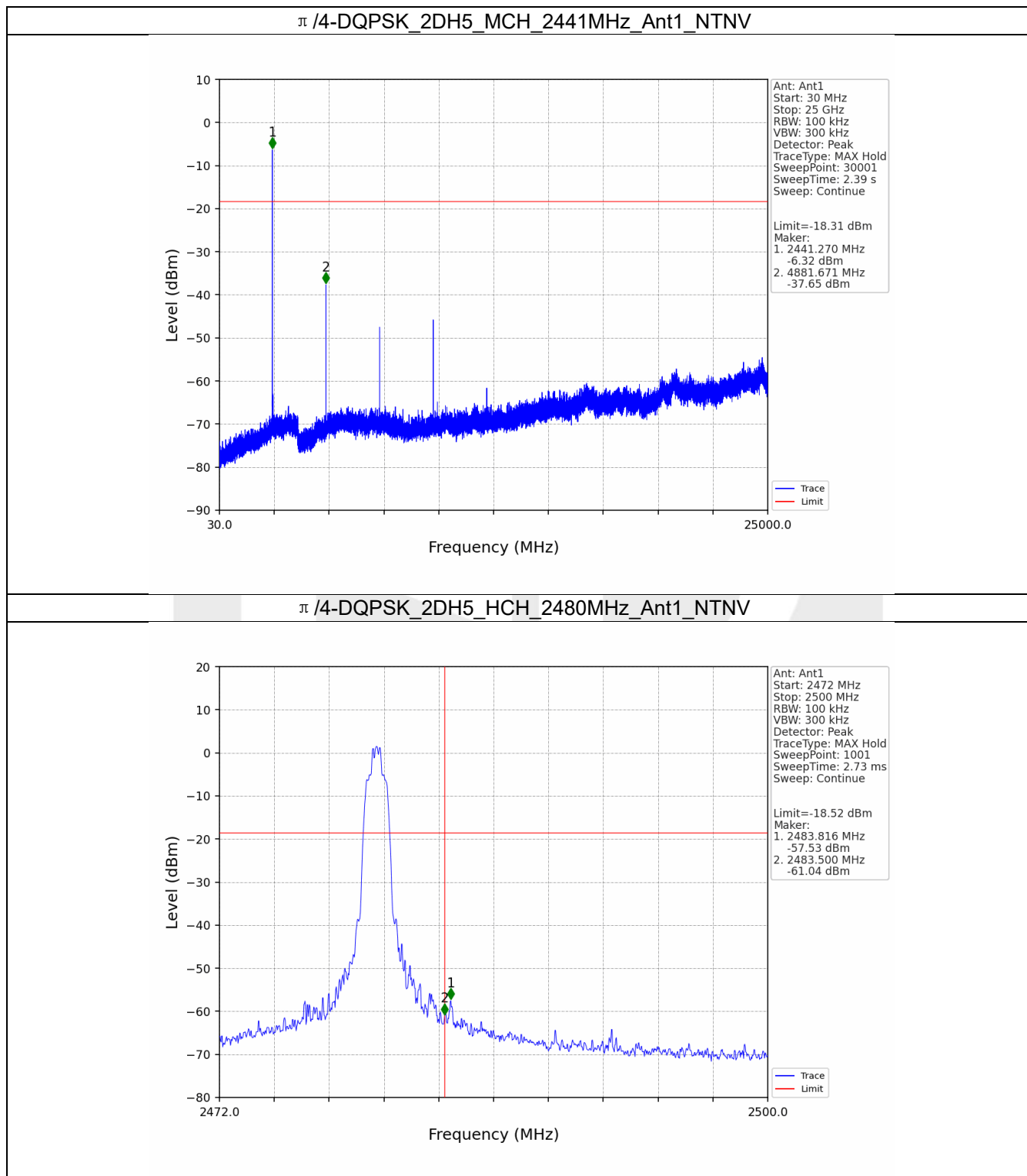


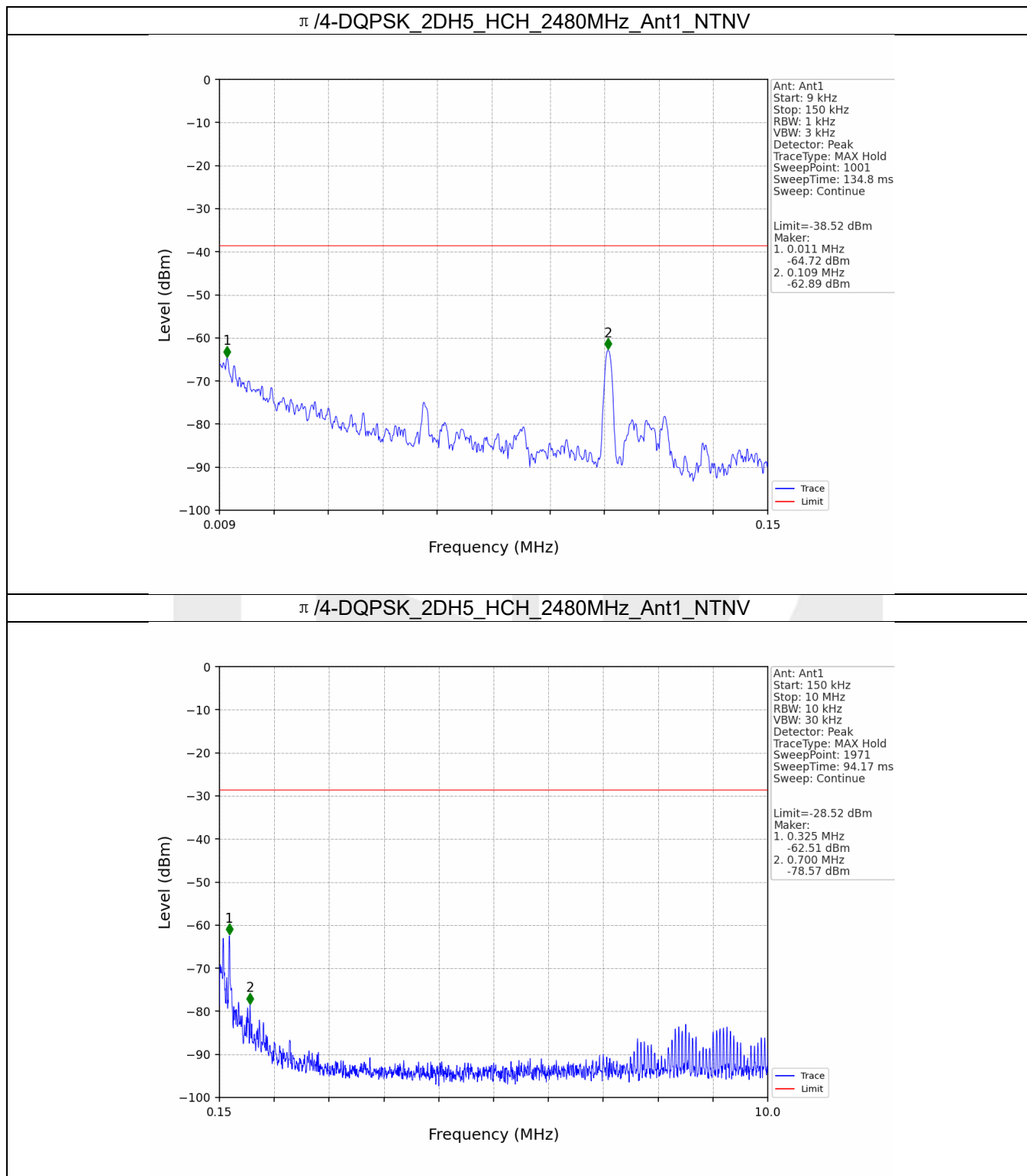




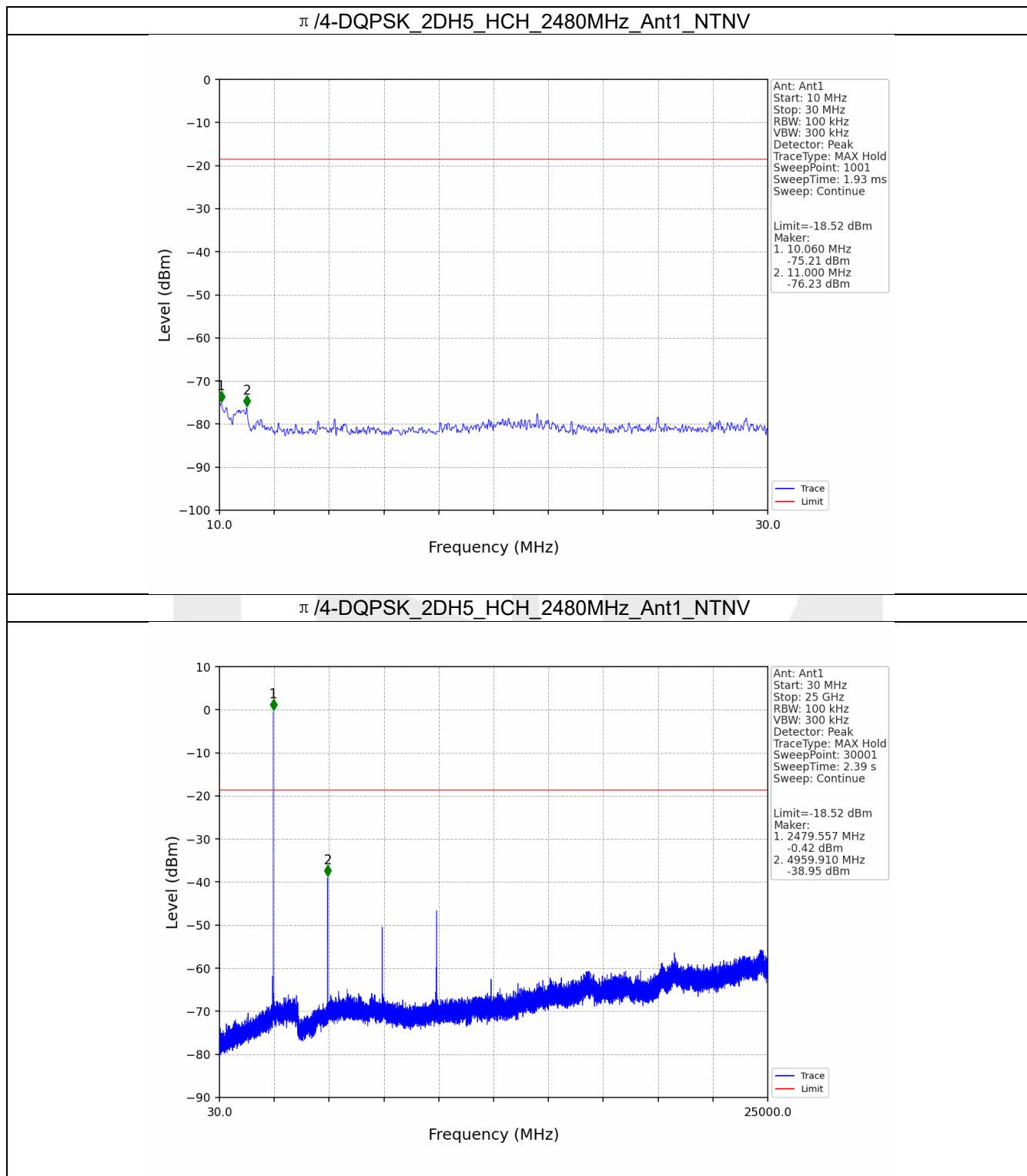


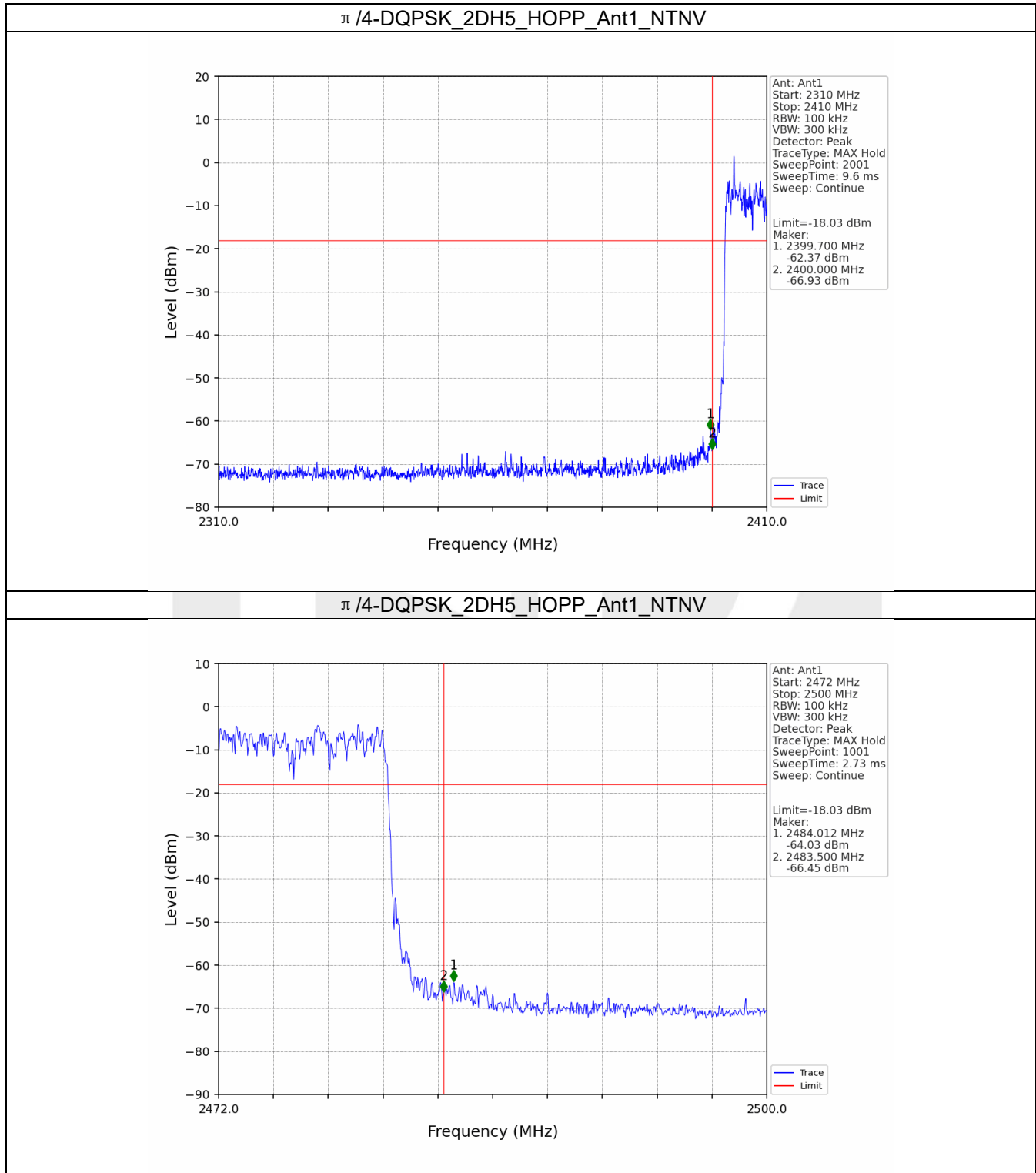


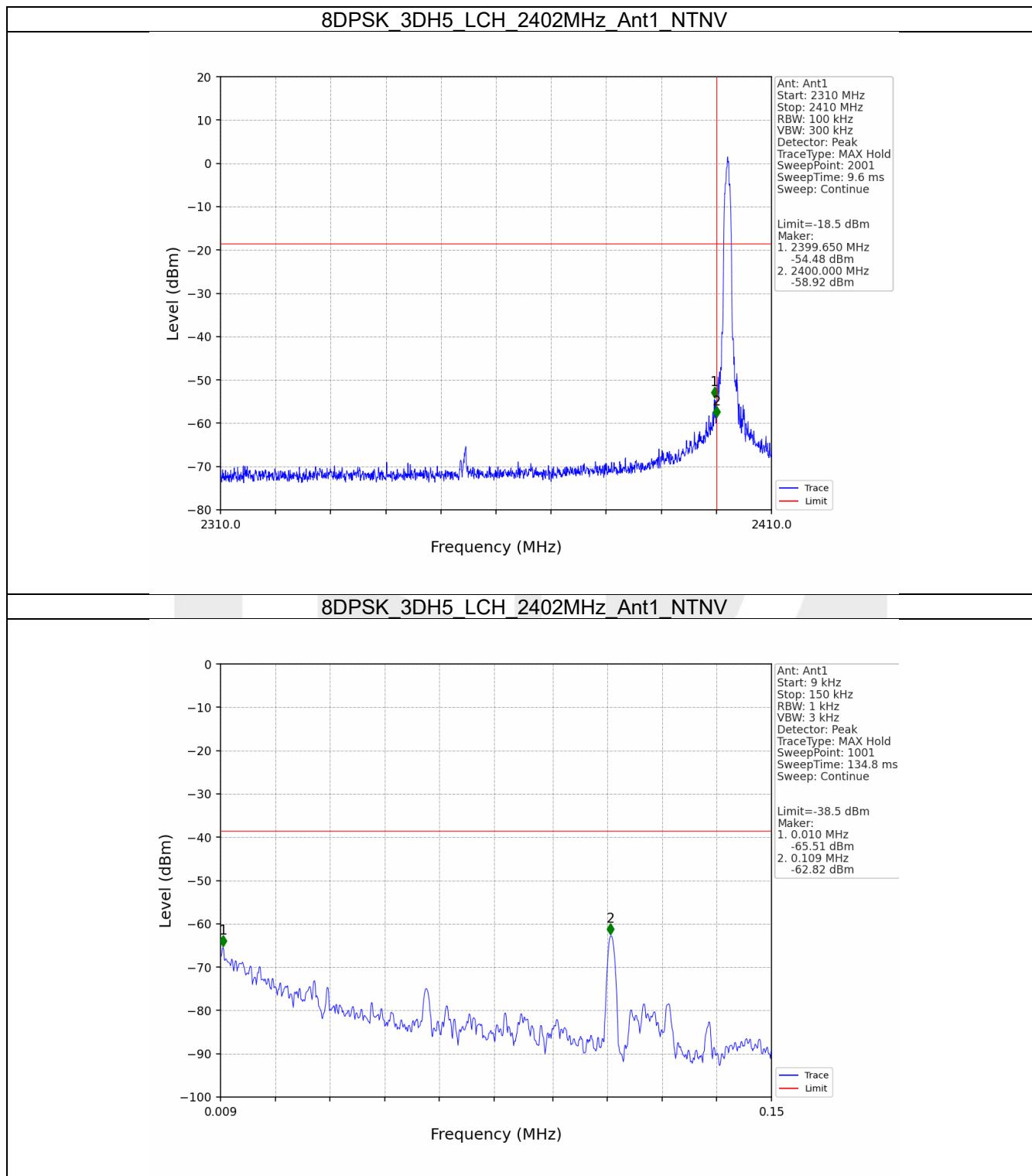


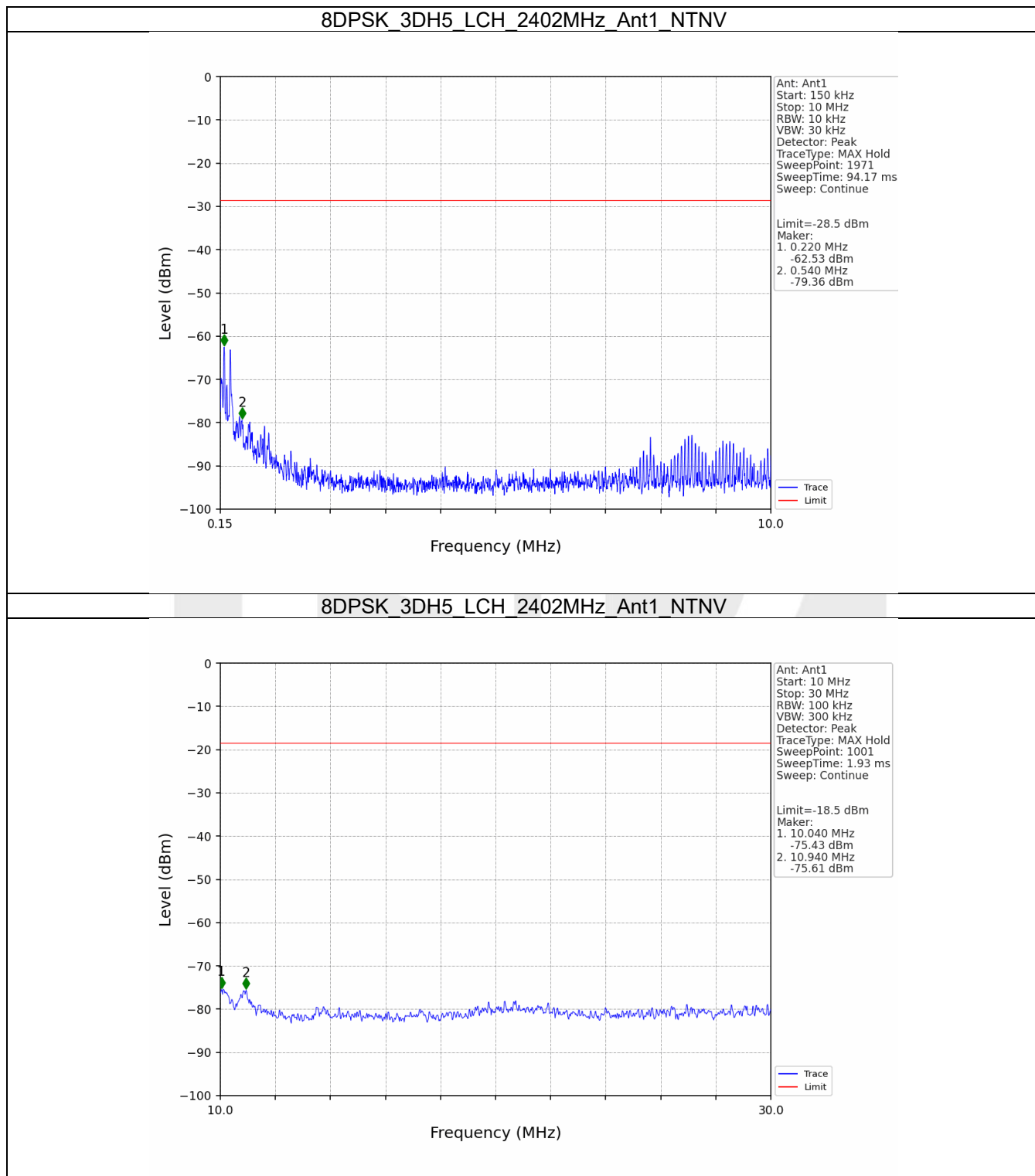


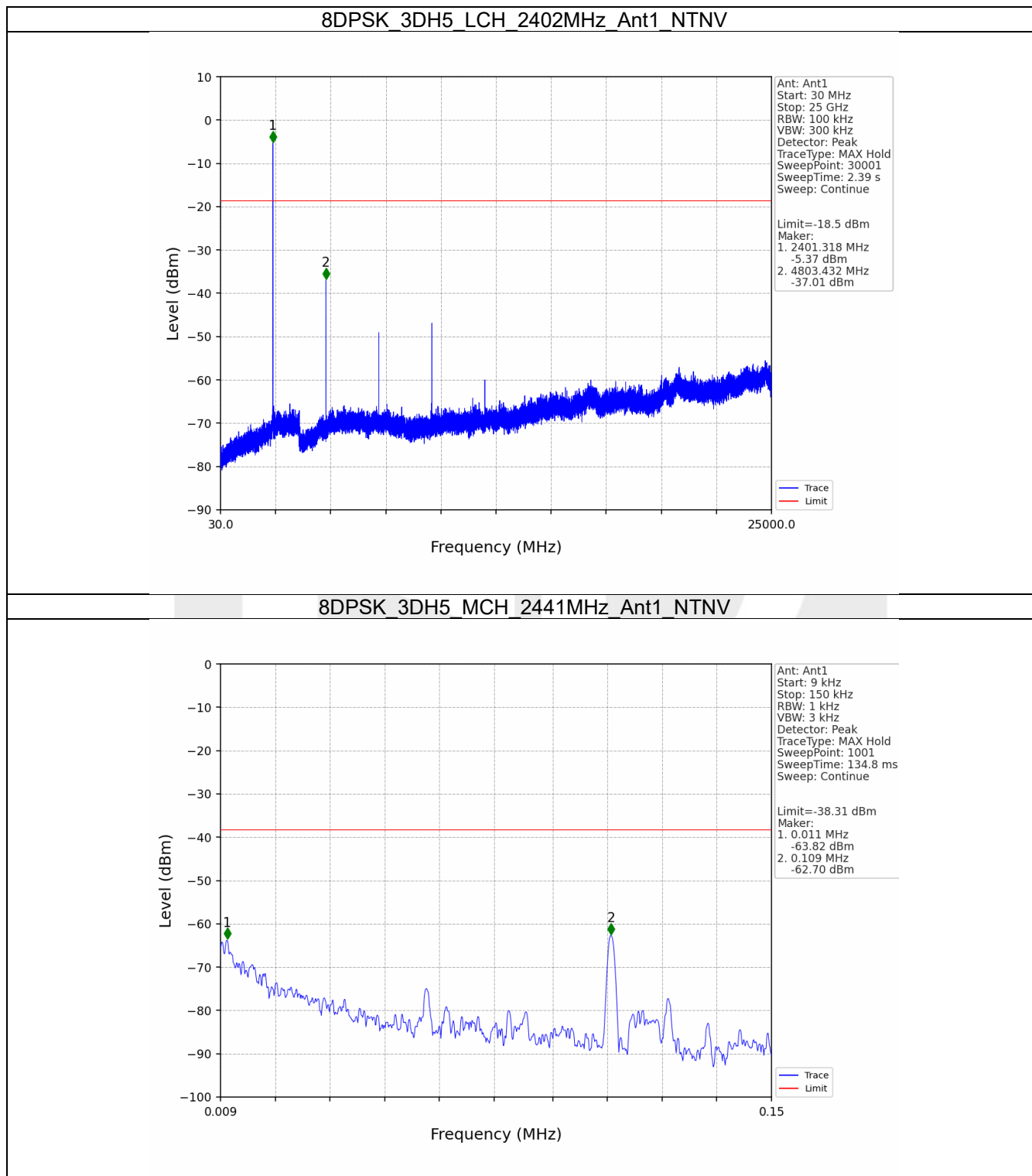


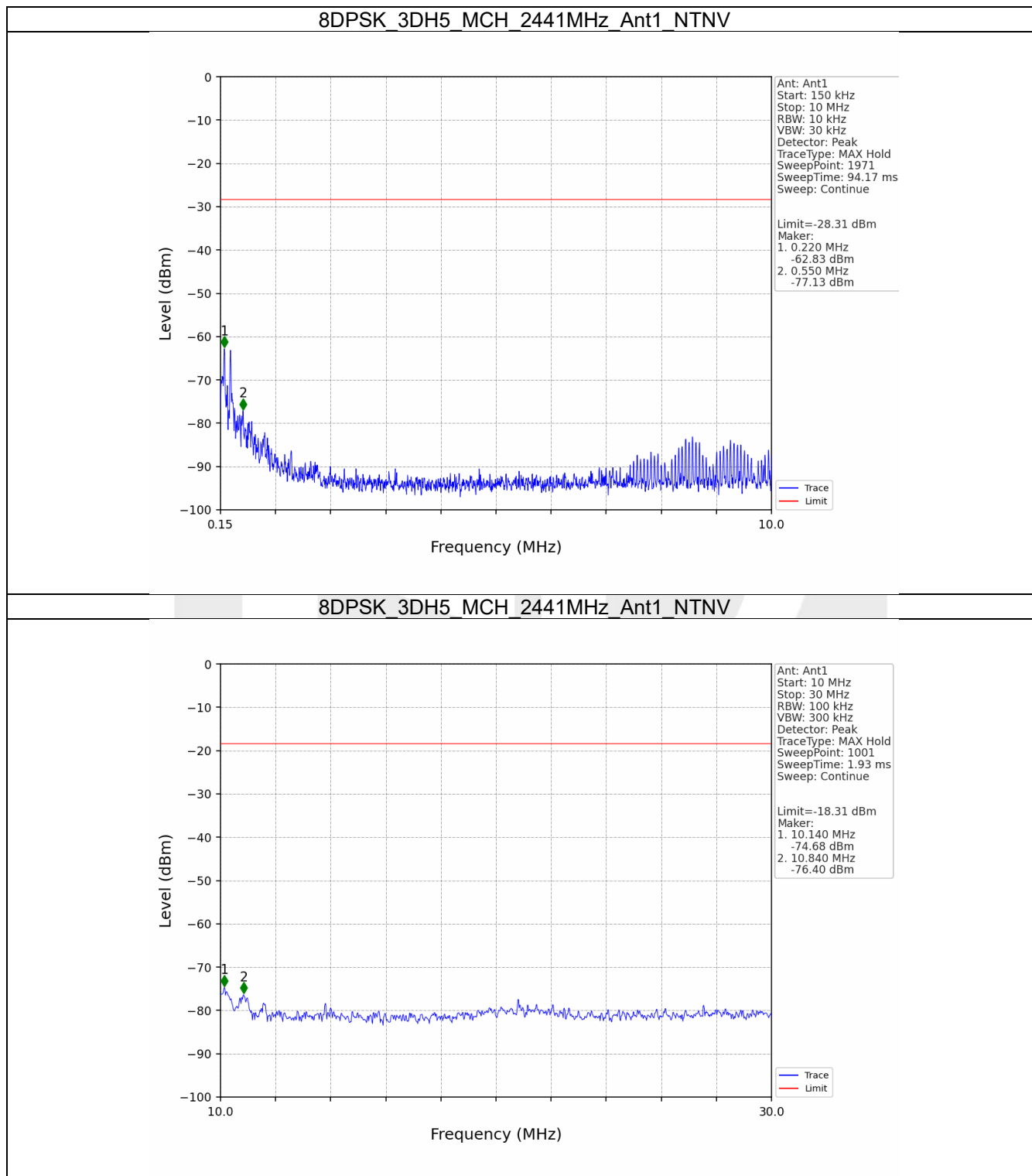


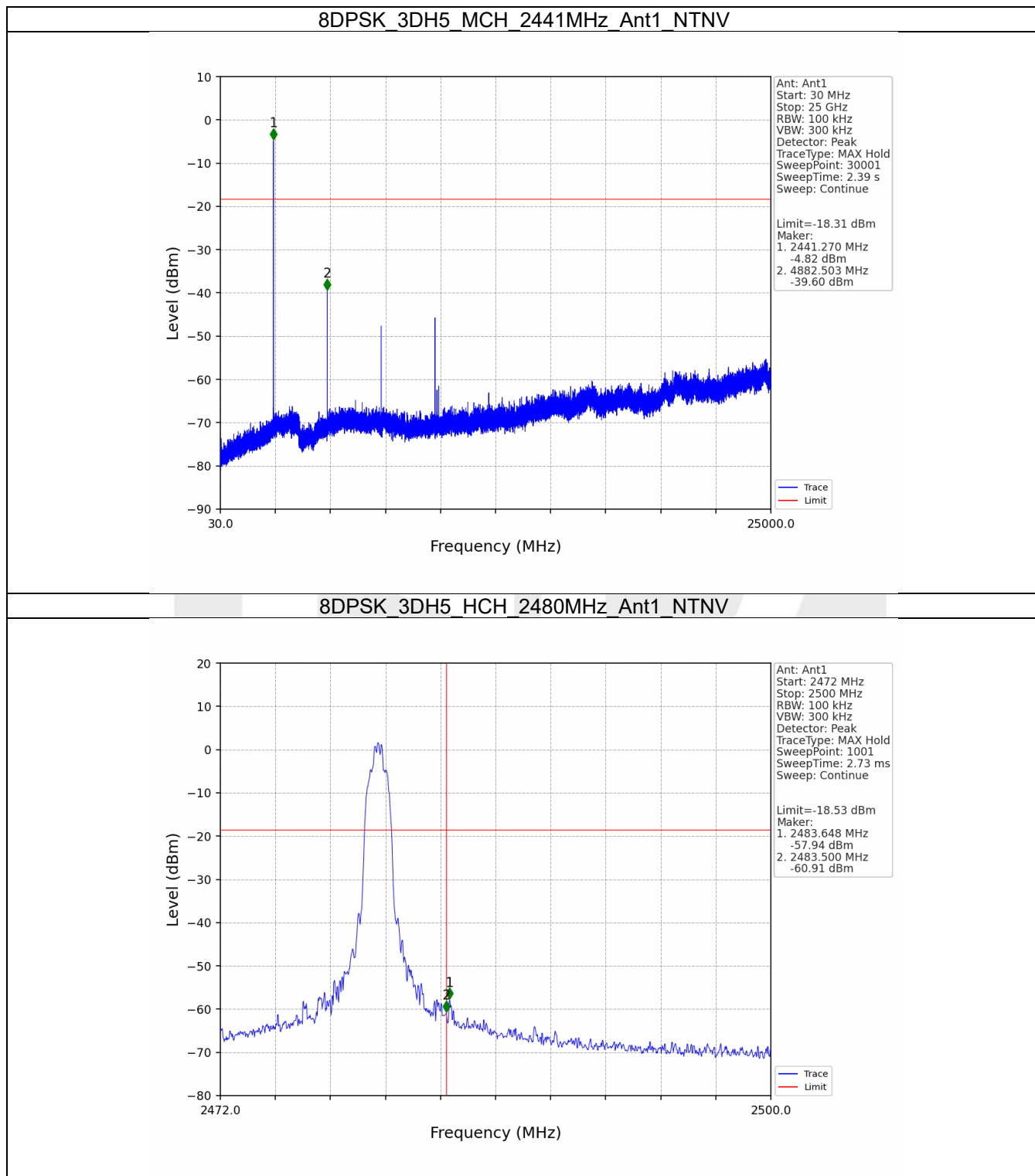


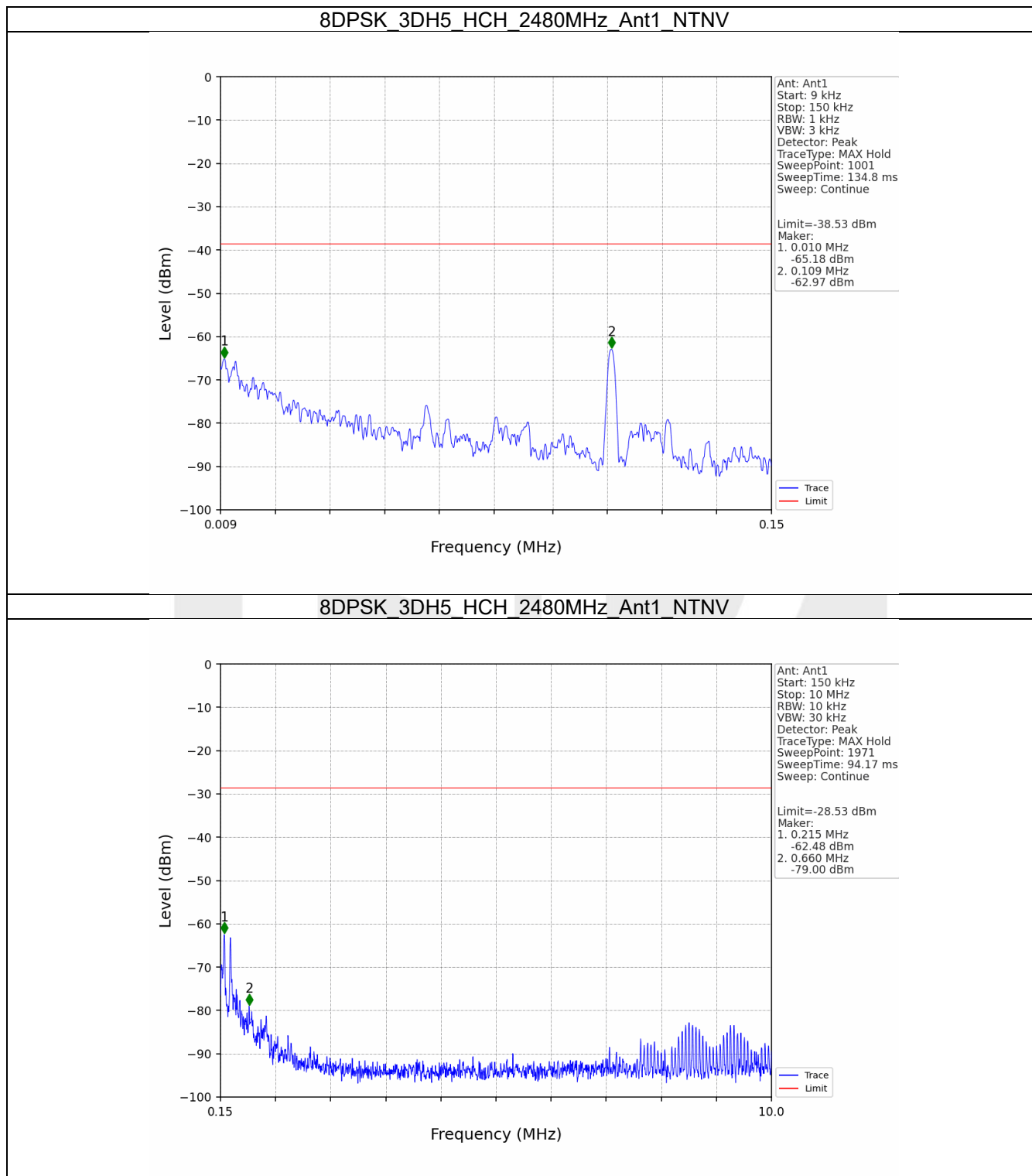




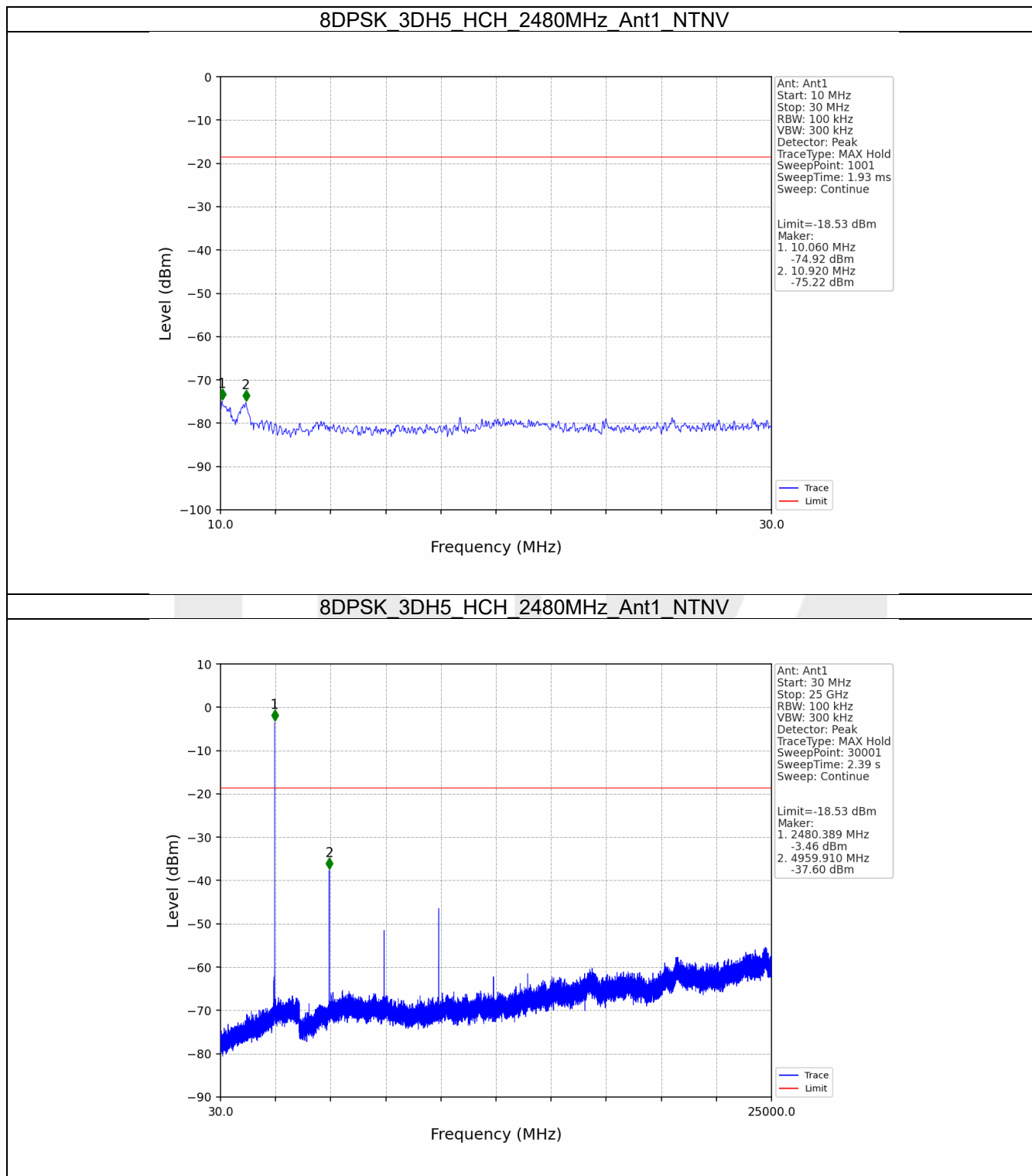


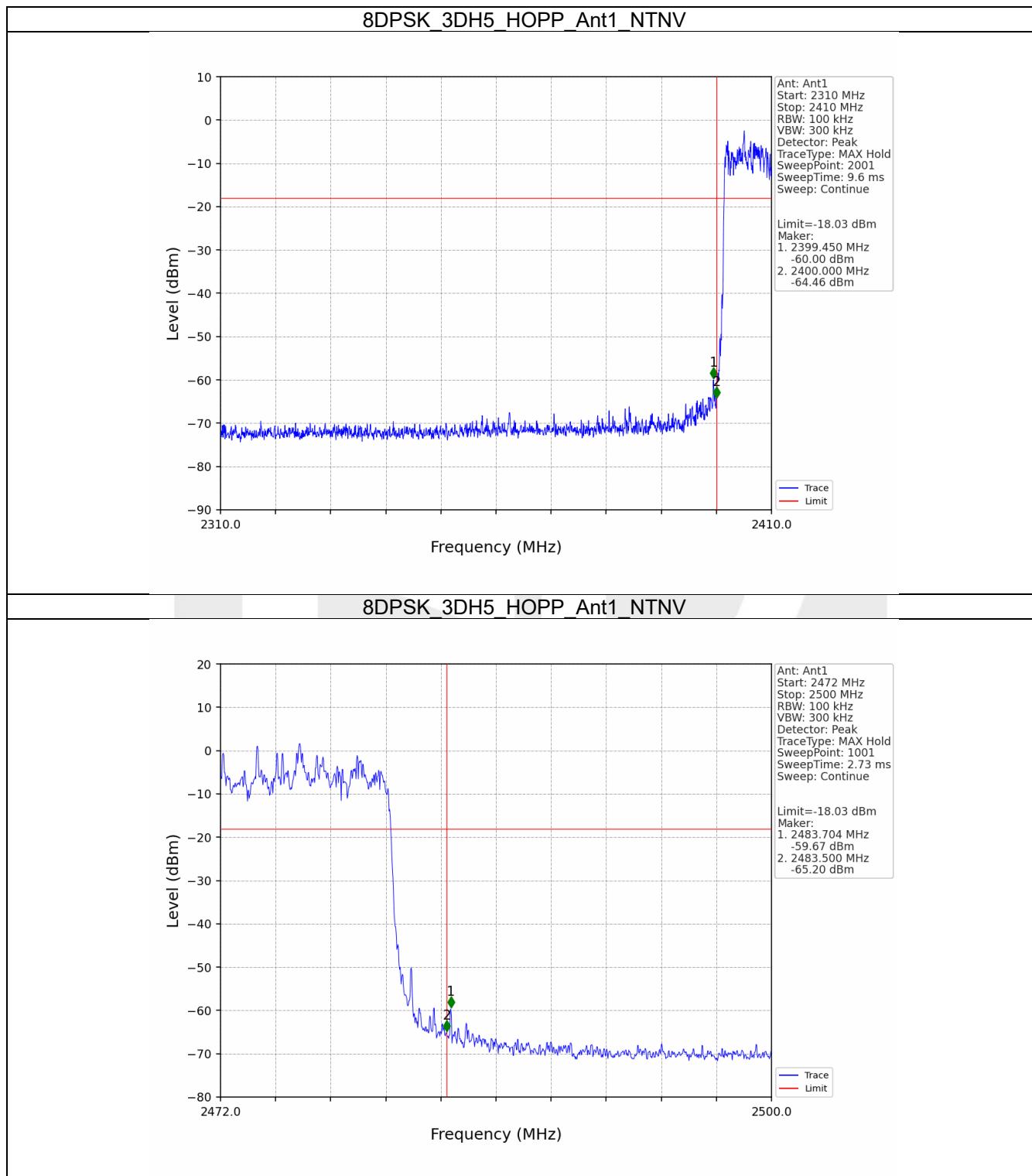












----- End of Report -----