

## ANNEX D TEST DATA

For

|                |                                        |
|----------------|----------------------------------------|
| Project No.:   | 8330EU010613W                          |
| Client:        | Shenzhen Vitalitim Technology Co., Ltd |
| Product Name:  | Bluetooth Transmitter Receiver Adapter |
| Model No.:     | V90                                    |
| FCC ID:        | 2AMUQ-V90                              |
| Technology:    | Bluetooth BDR&EDR                      |
| Test Engineer: | <i>Mikoy zhu</i>                       |
| Test Date:     | 2025-05-12                             |

## 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   |

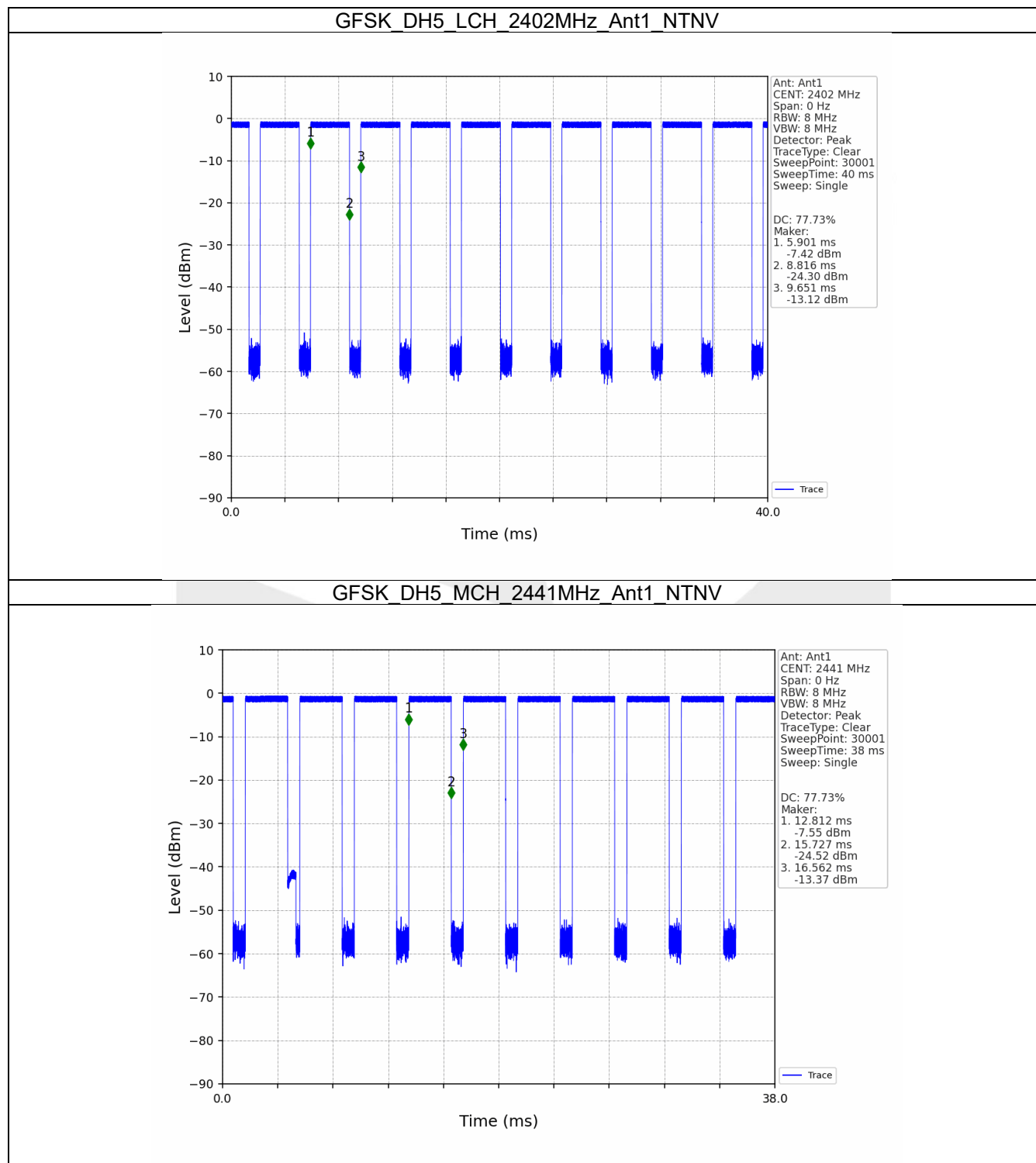
## 1.1 Test Result

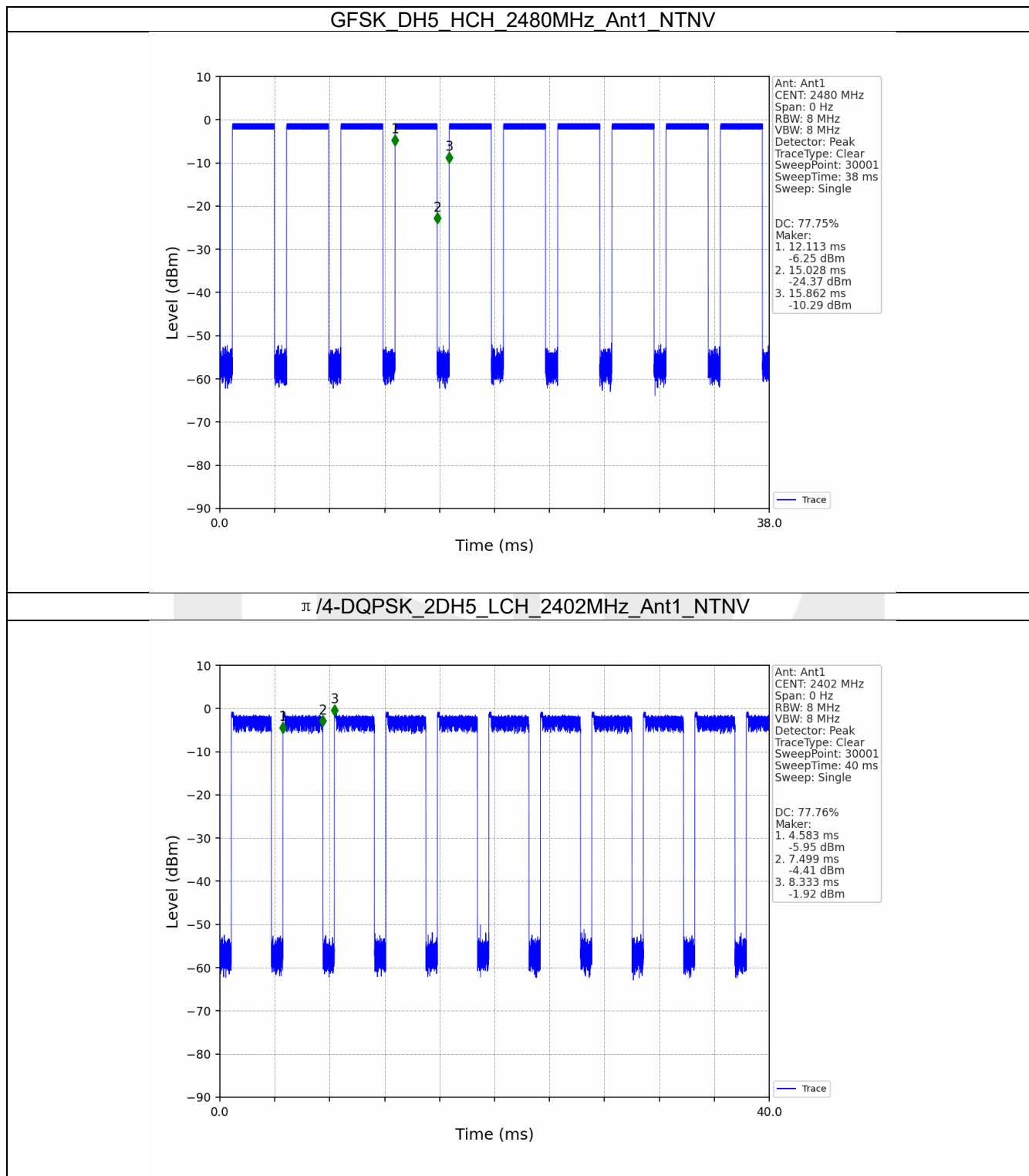
### 1.1.1 Ant1

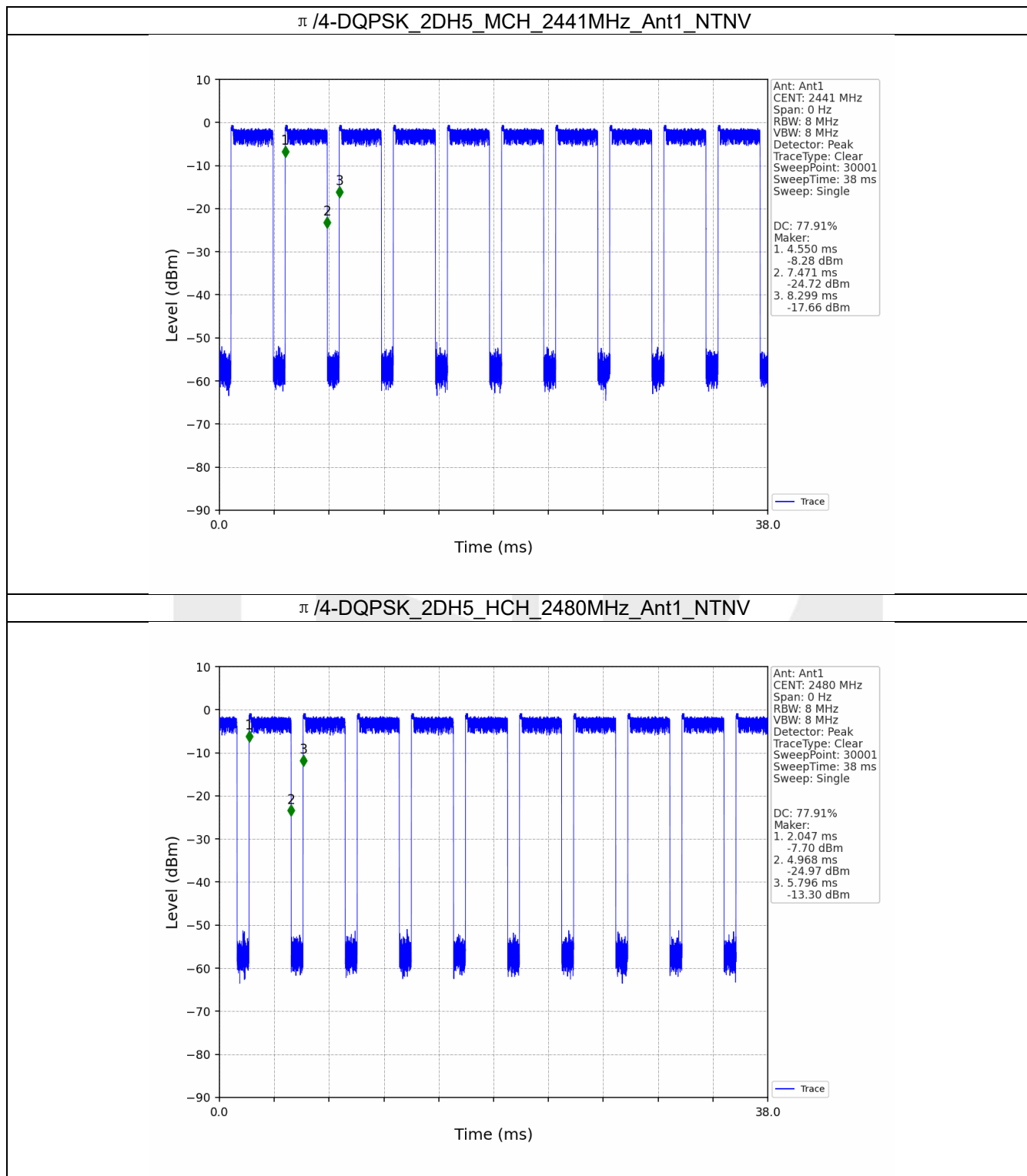
| Ant1           |         |                 |             |           |             |                |                                   |                       |
|----------------|---------|-----------------|-------------|-----------|-------------|----------------|-----------------------------------|-----------------------|
| Mode           | TX Type | Frequency (MHz) | Packet Type | T_on (ms) | Period (ms) | Duty Cycle (%) | Duty Cycle Correction Factor (dB) | Max. DC Variation (%) |
| GFSK           | SISO    | 2402            | DH5         | 2.915     | 3.750       | 77.73          | 1.09                              | 0.01                  |
|                |         | 2441            | DH5         | 2.915     | 3.750       | 77.73          | 1.09                              | 15.17                 |
|                |         | 2480            | DH5         | 2.915     | 3.749       | 77.75          | 1.09                              | 0.03                  |
| $\pi/4$ -DQPSK | SISO    | 2402            | 2DH5        | 2.916     | 3.750       | 77.76          | 1.09                              | 0.03                  |
|                |         | 2441            | 2DH5        | 2.921     | 3.749       | 77.91          | 1.08                              | 0.01                  |
|                |         | 2480            | 2DH5        | 2.921     | 3.749       | 77.91          | 1.08                              | 0.01                  |
| 8DPSK          | SISO    | 2402            | 3DH5        | 2.921     | 3.749       | 77.91          | 1.08                              | 0.04                  |
|                |         | 2441            | 3DH5        | 2.922     | 3.750       | 77.92          | 1.08                              | 0.03                  |
|                |         | 2480            | 3DH5        | 2.922     | 3.750       | 77.92          | 1.08                              | 0.03                  |

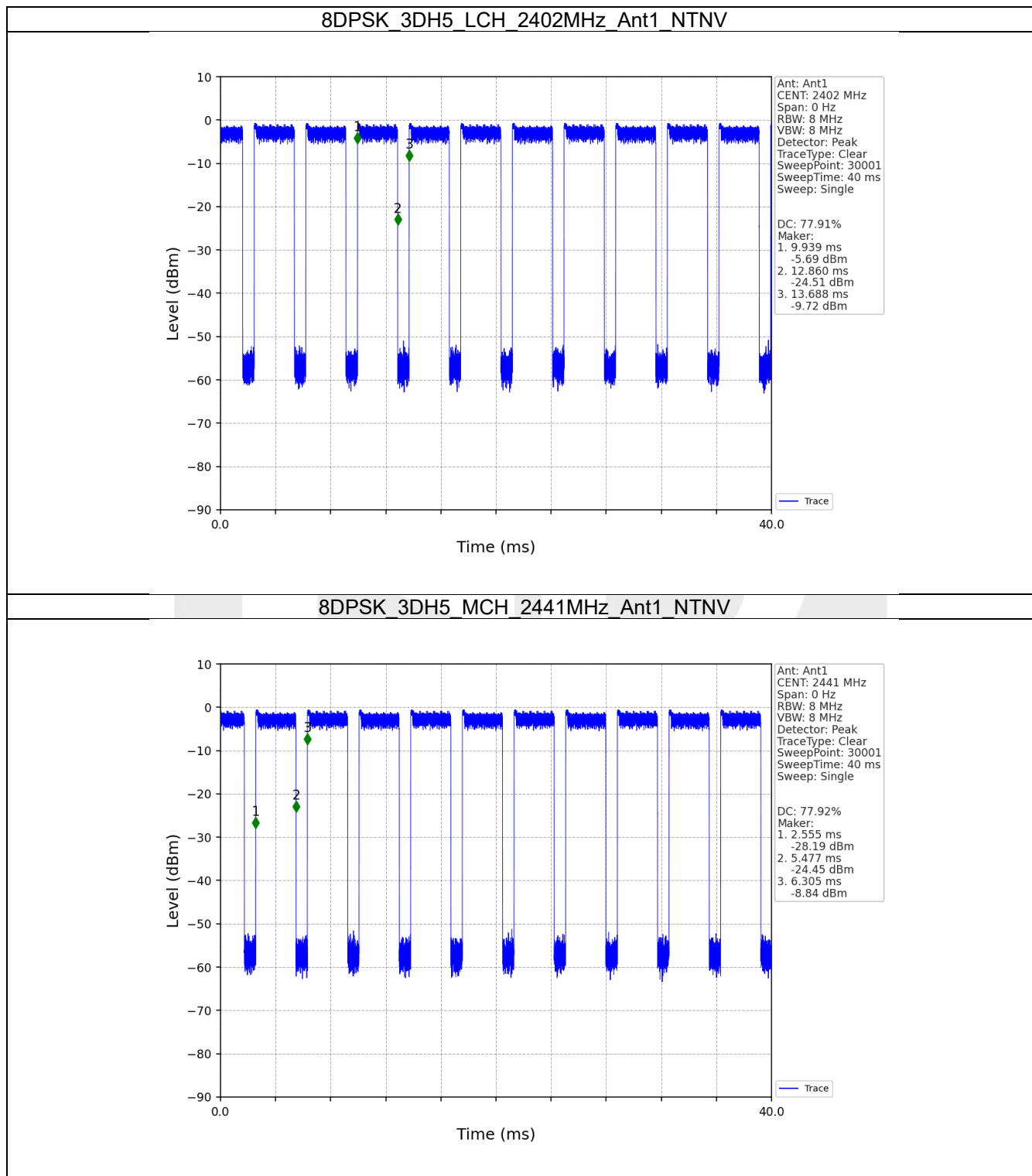
## 1.2 Test Graph

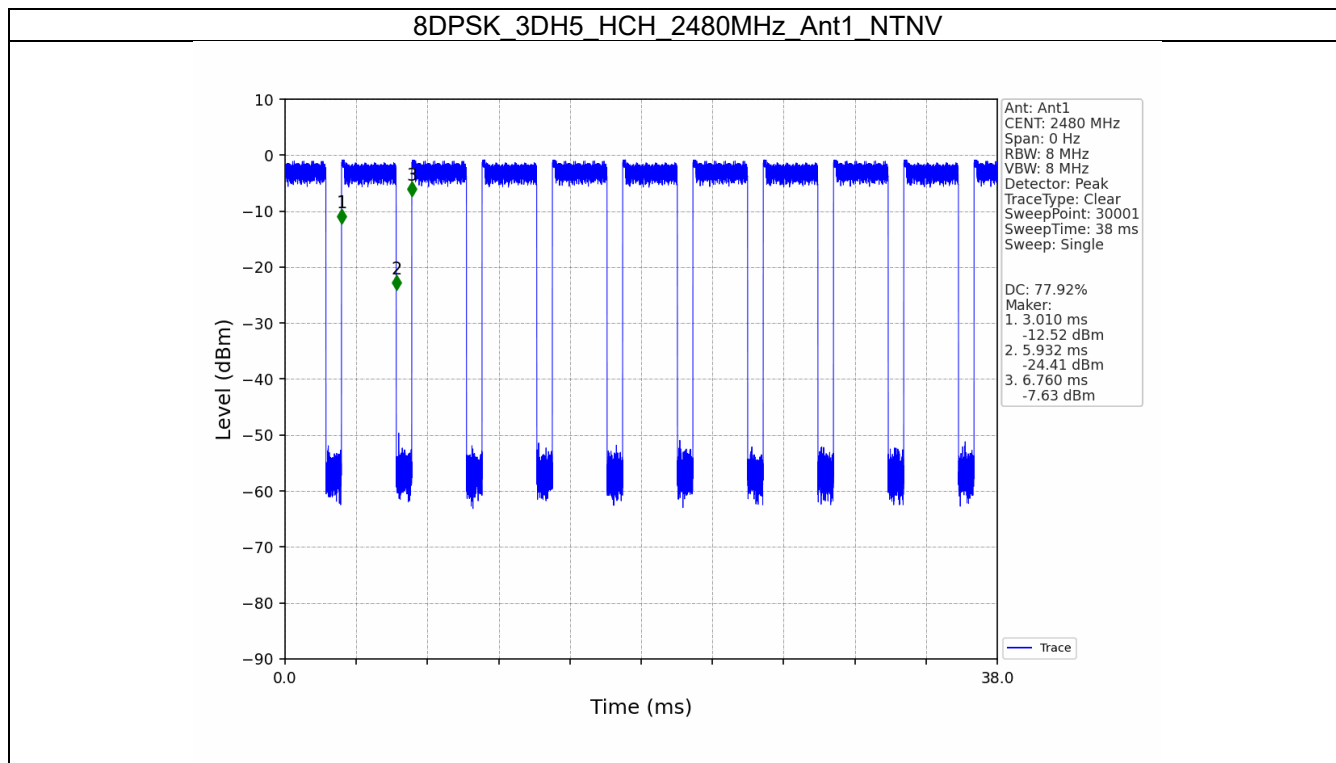
### 1.2.1 Ant1











## 2. Bandwidth

### 2.1 Test Result

#### 2.1.1 OBW

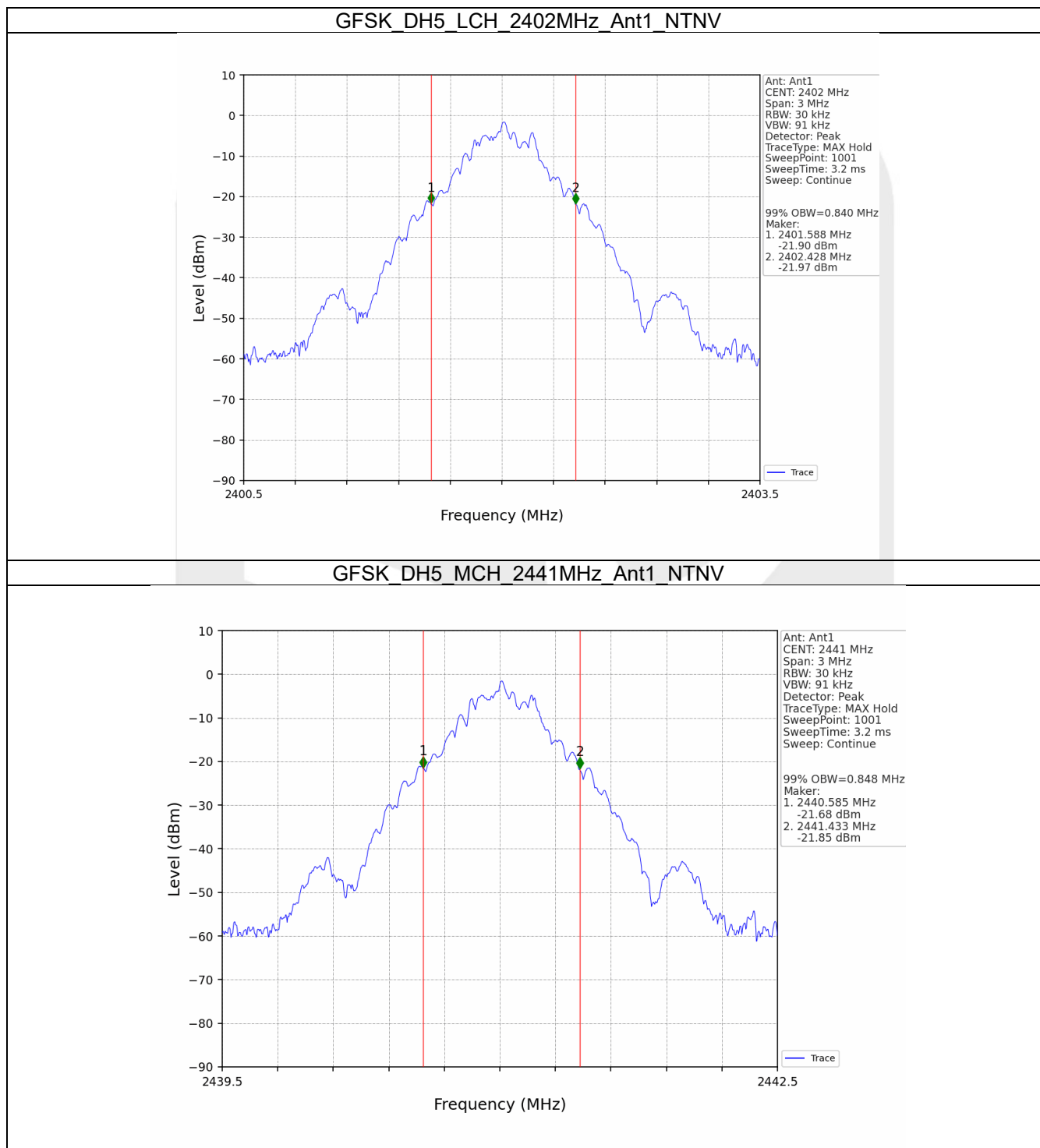
| Mode           | TX Type | Frequency (MHz) | Packet Type | ANT | 99% Occupied Bandwidth (MHz) |       | Verdict |
|----------------|---------|-----------------|-------------|-----|------------------------------|-------|---------|
|                |         |                 |             |     | Result                       | Limit |         |
| GFSK           | SISO    | 2402            | DH5         | 1   | 0.840                        | /     | Pass    |
|                |         | 2441            | DH5         | 1   | 0.848                        | /     | Pass    |
|                |         | 2480            | DH5         | 1   | 0.842                        | /     | Pass    |
| $\pi$ /4-DQPSK | SISO    | 2402            | 2DH5        | 1   | 1.128                        | /     | Pass    |
|                |         | 2441            | 2DH5        | 1   | 1.130                        | /     | Pass    |
|                |         | 2480            | 2DH5        | 1   | 1.130                        | /     | Pass    |
| 8DPSK          | SISO    | 2402            | 3DH5        | 1   | 1.137                        | /     | Pass    |
|                |         | 2441            | 3DH5        | 1   | 1.136                        | /     | Pass    |
|                |         | 2480            | 3DH5        | 1   | 1.140                        | /     | Pass    |

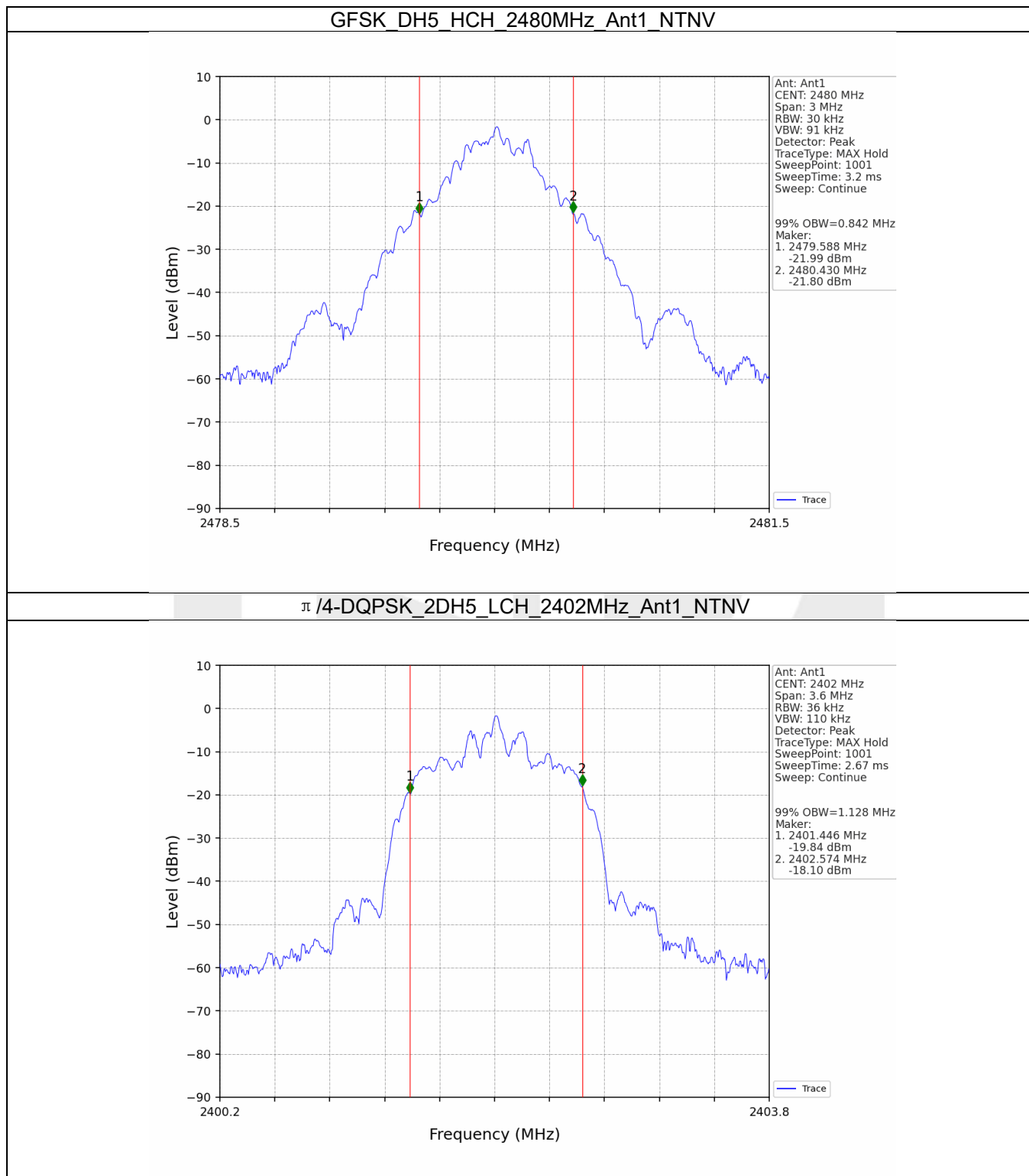
#### 2.1.2 20dB BW

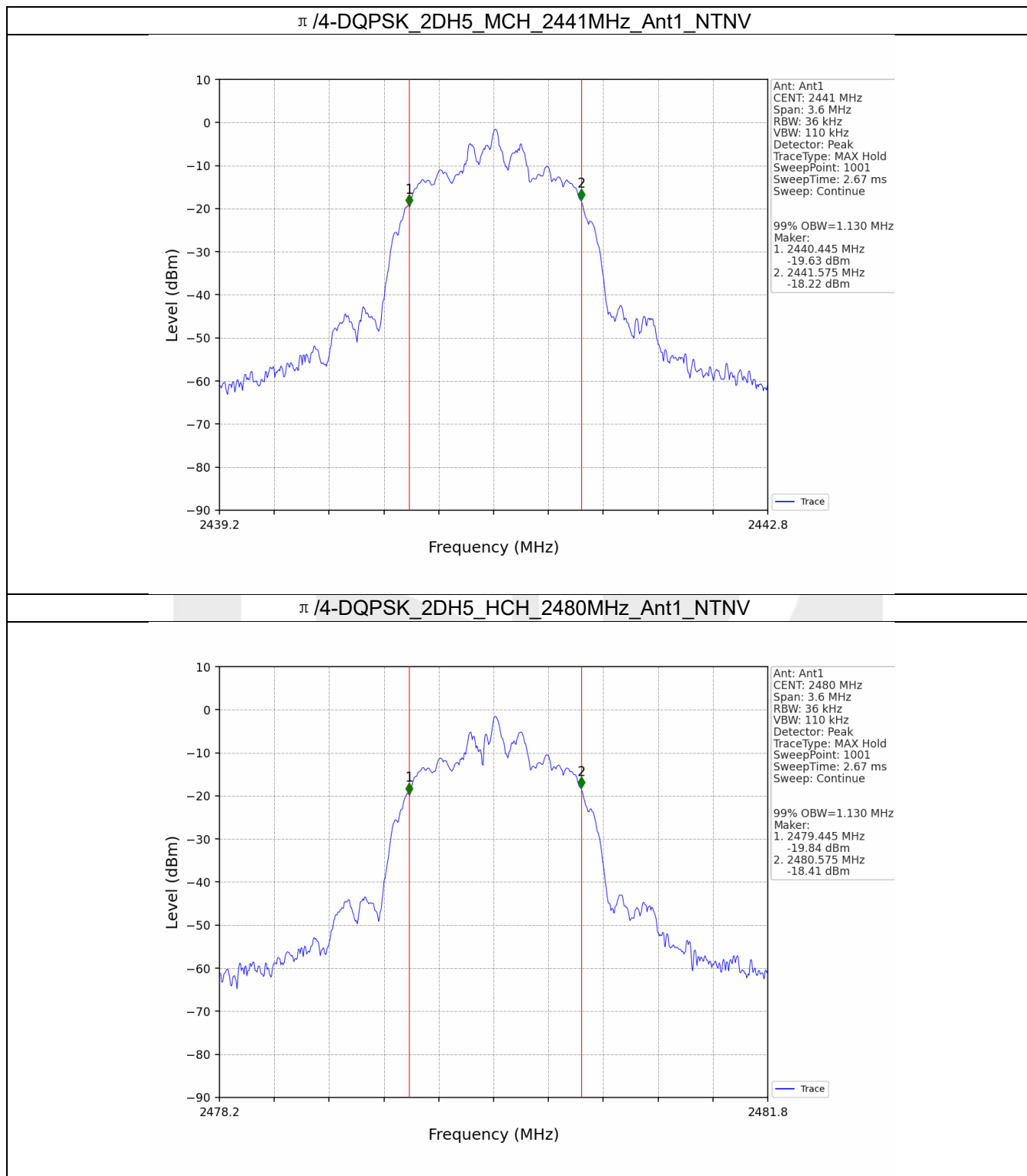
| Mode           | TX Type | Frequency (MHz) | Packet Type | ANT | 20dB Bandwidth (MHz) |       | Verdict |
|----------------|---------|-----------------|-------------|-----|----------------------|-------|---------|
|                |         |                 |             |     | Result               | Limit |         |
| GFSK           | SISO    | 2402            | DH5         | 1   | 0.868                | /     | Pass    |
|                |         | 2441            | DH5         | 1   | 0.927                | /     | Pass    |
|                |         | 2480            | DH5         | 1   | 0.929                | /     | Pass    |
| $\pi$ /4-DQPSK | SISO    | 2402            | 2DH5        | 1   | 1.195                | /     | Pass    |
|                |         | 2441            | 2DH5        | 1   | 1.195                | /     | Pass    |
|                |         | 2480            | 2DH5        | 1   | 1.191                | /     | Pass    |
| 8DPSK          | SISO    | 2402            | 3DH5        | 1   | 1.207                | /     | Pass    |
|                |         | 2441            | 3DH5        | 1   | 1.207                | /     | Pass    |
|                |         | 2480            | 3DH5        | 1   | 1.206                | /     | Pass    |

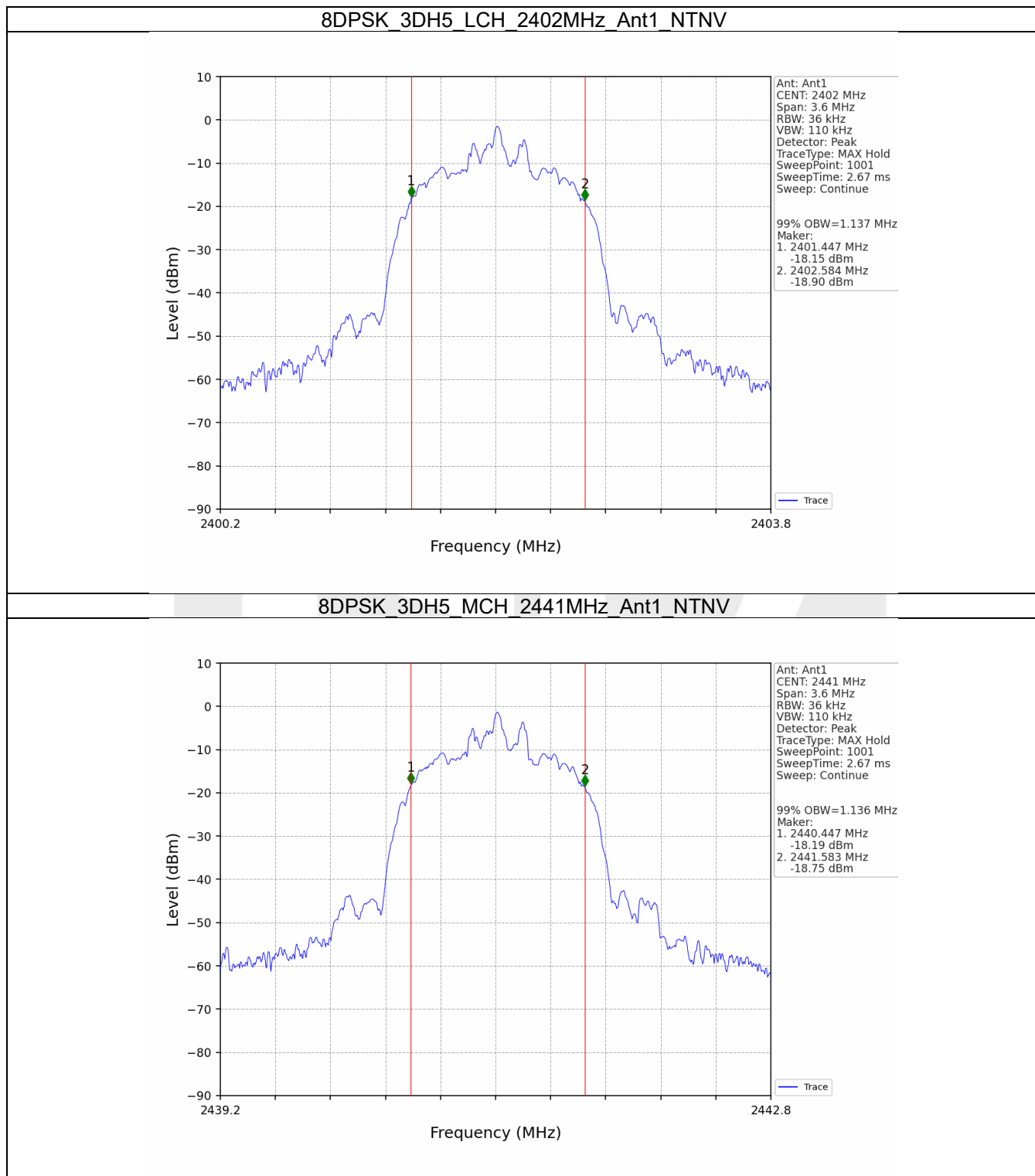
## 2.2 Test Graph

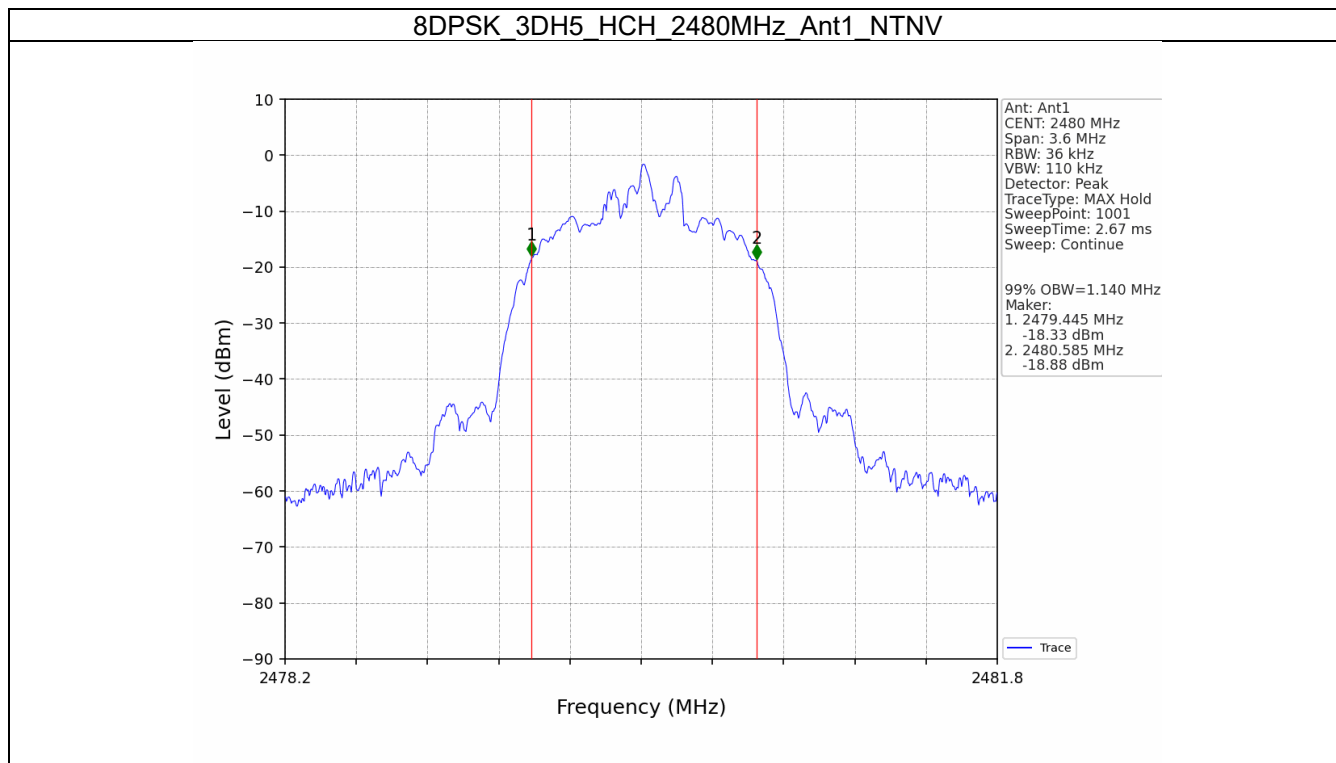
### 2.2.1 OBW



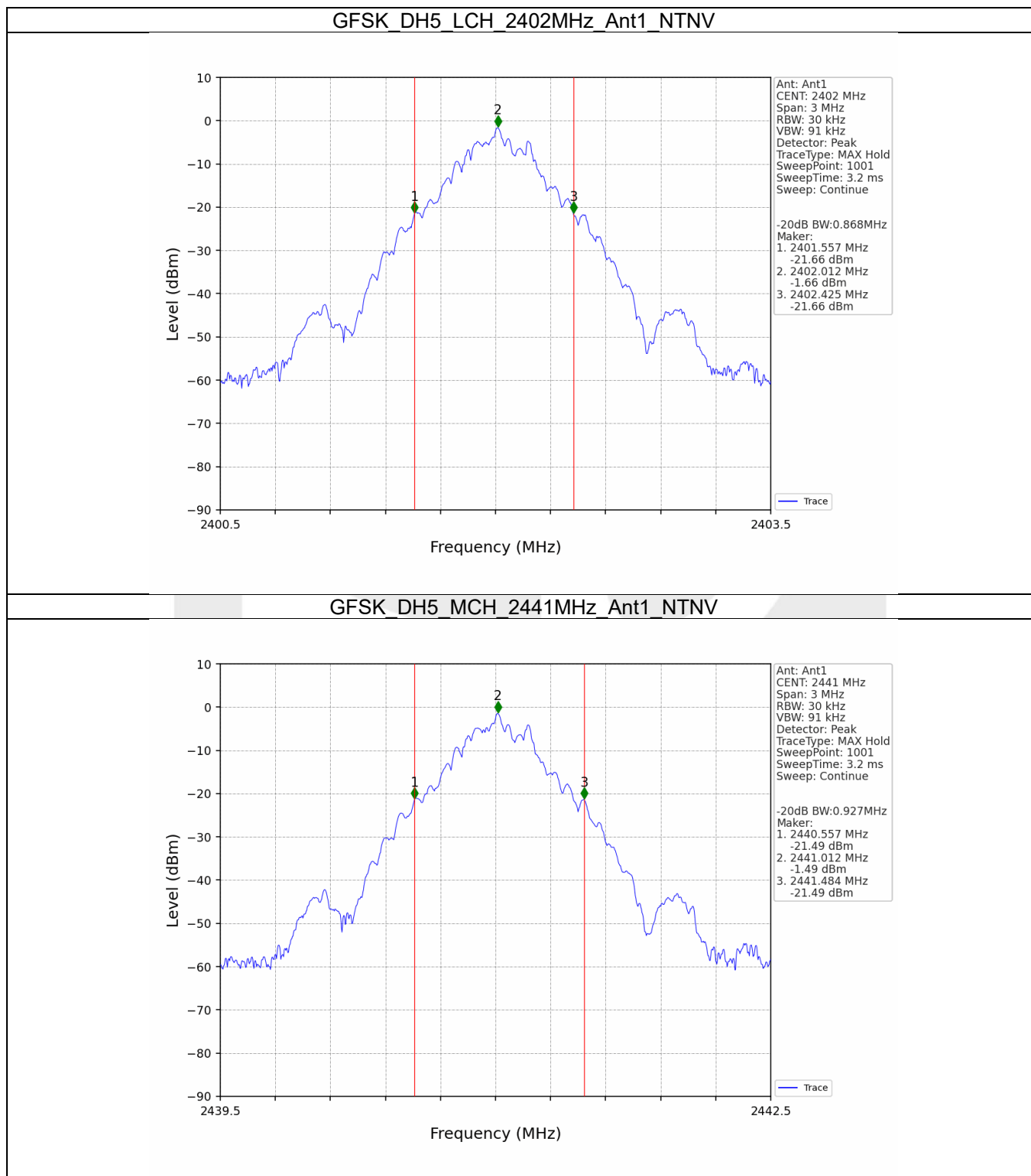


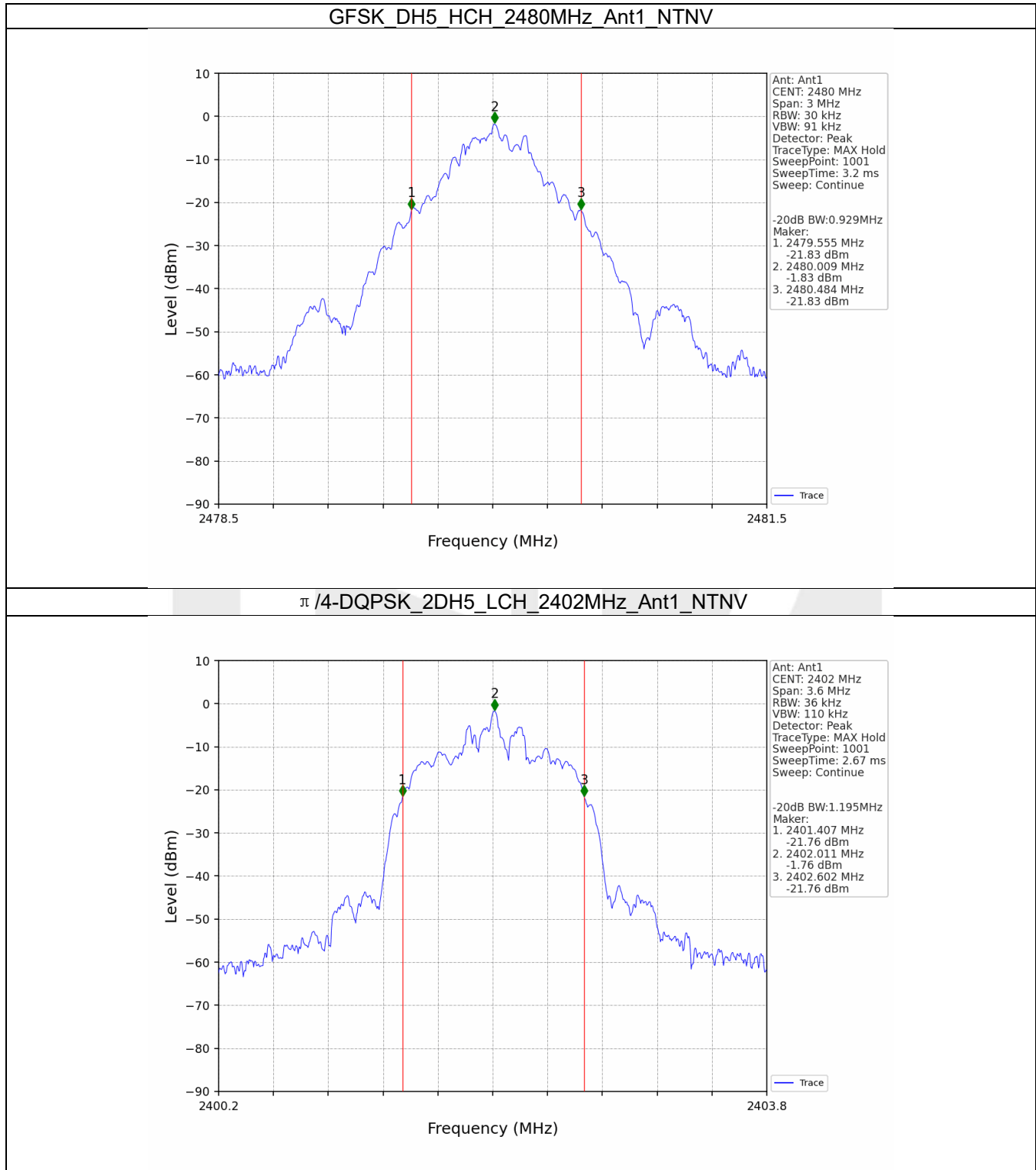


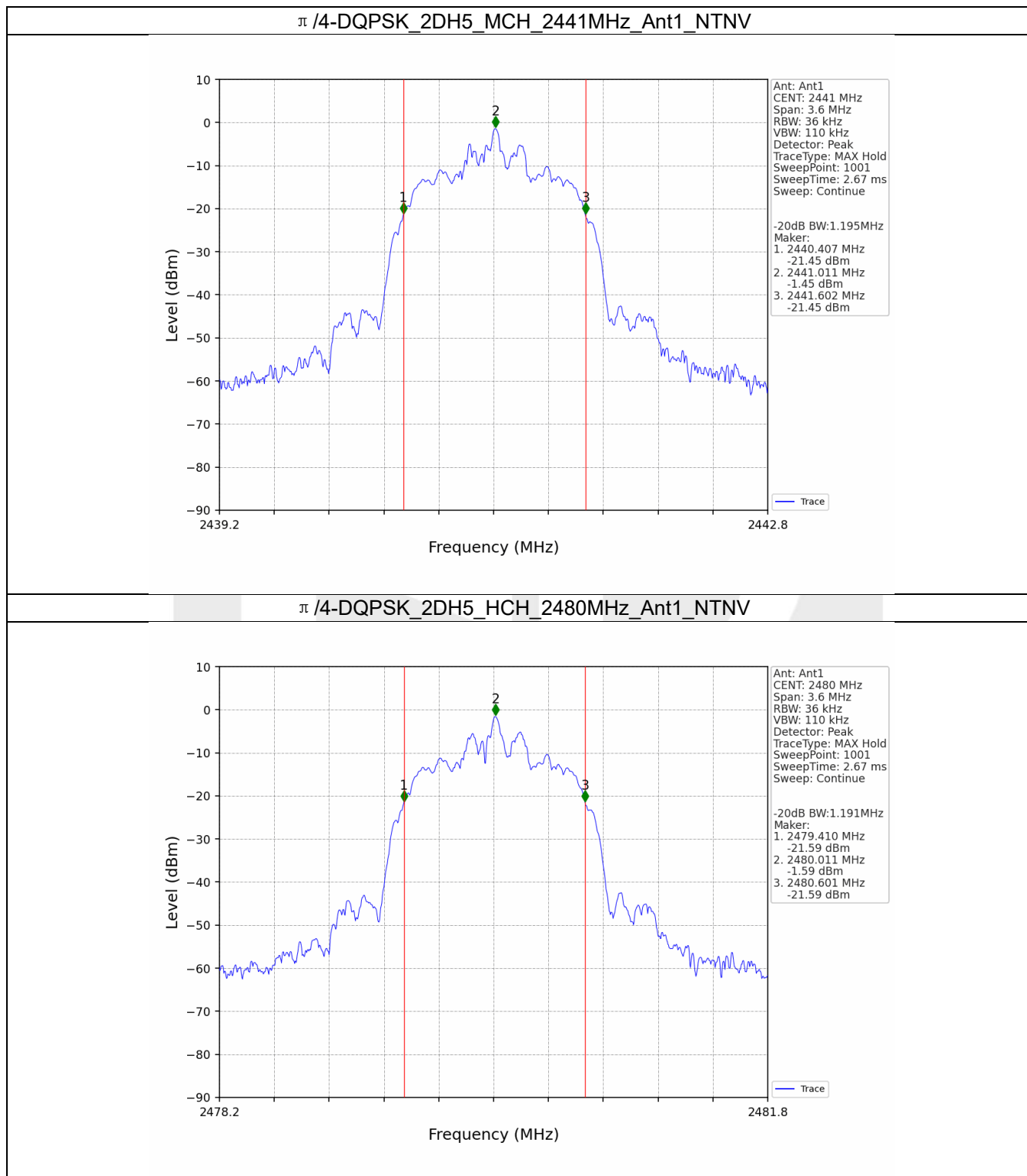


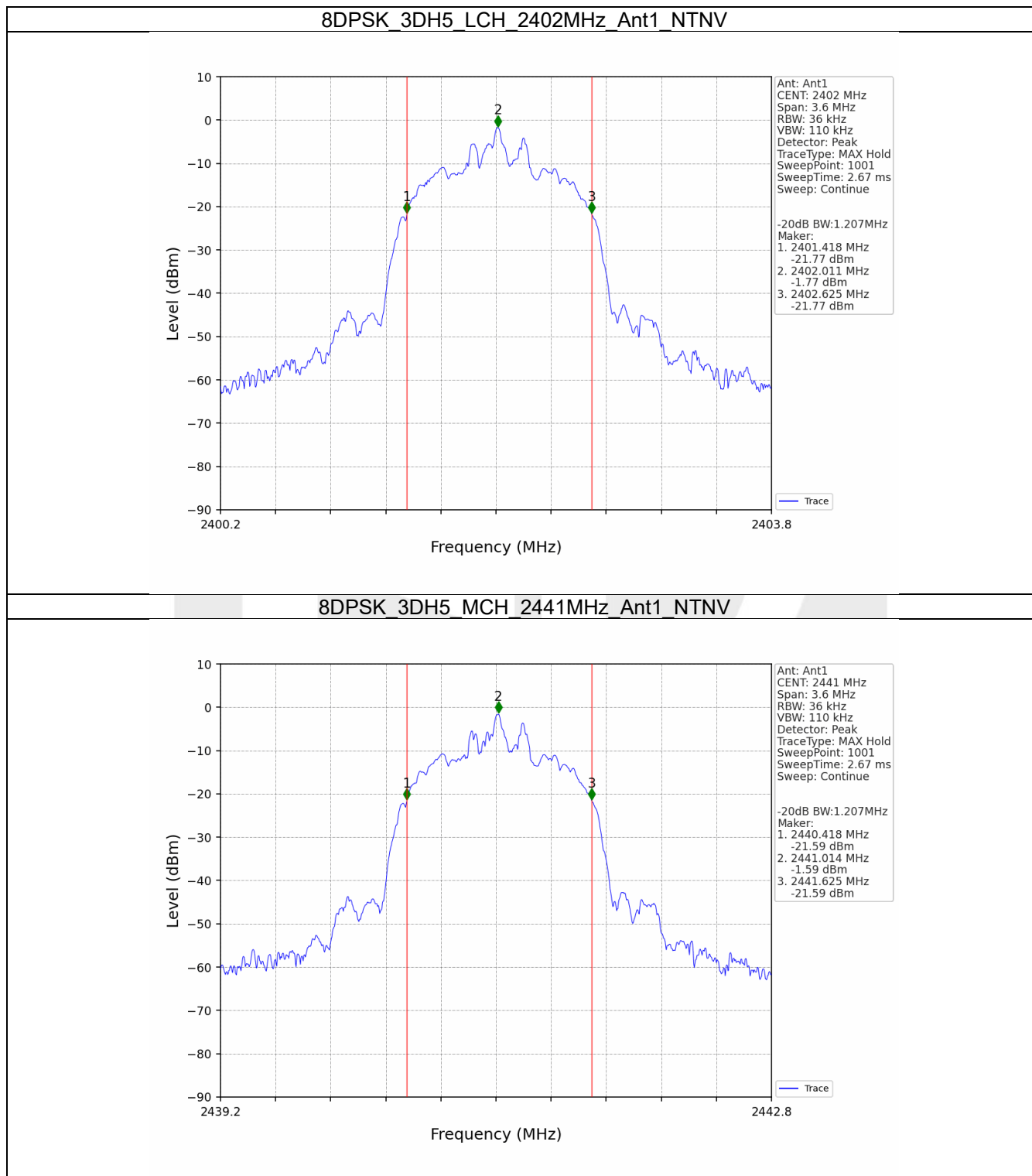


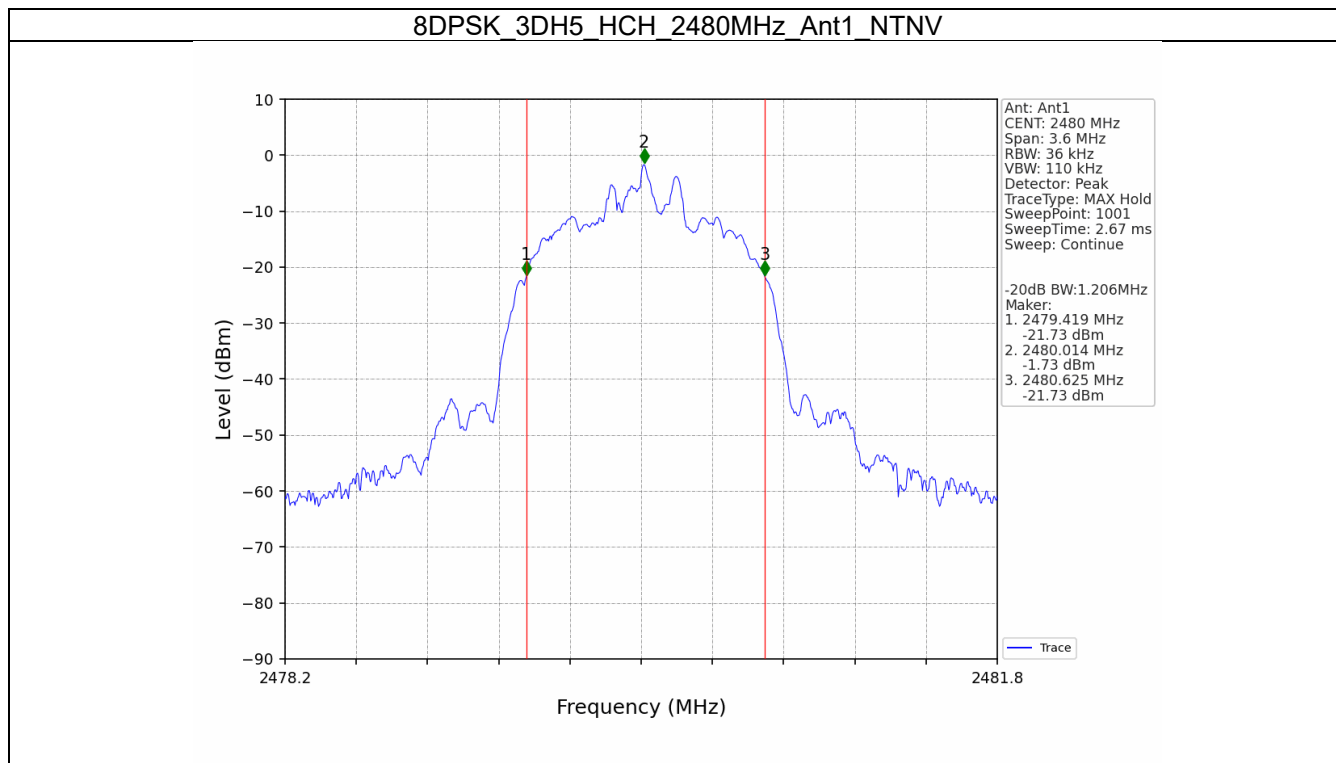
### 2.2.2 20dB BW











### 3. Maximum Conducted Output Power

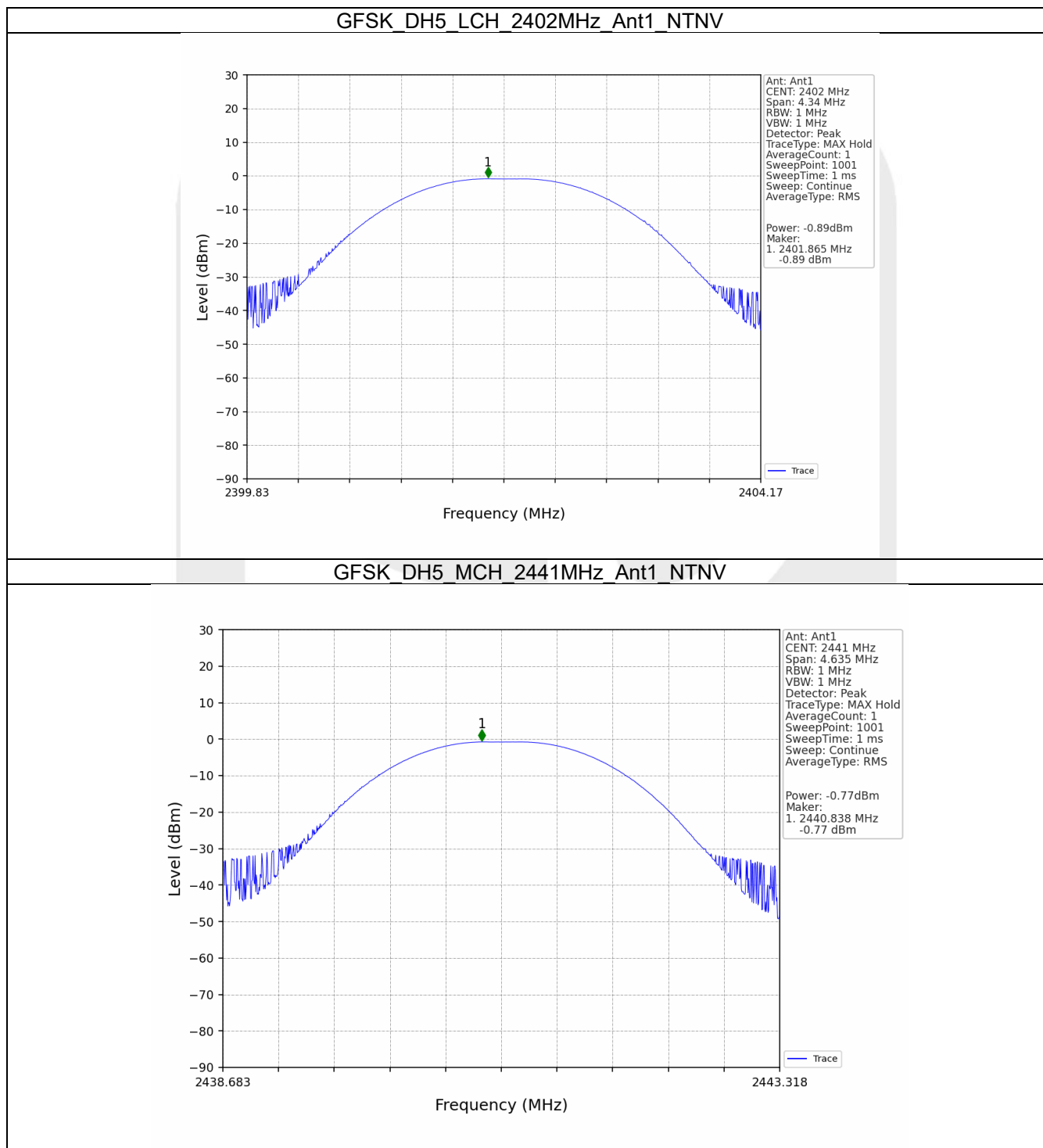
#### 3.1 Test Result

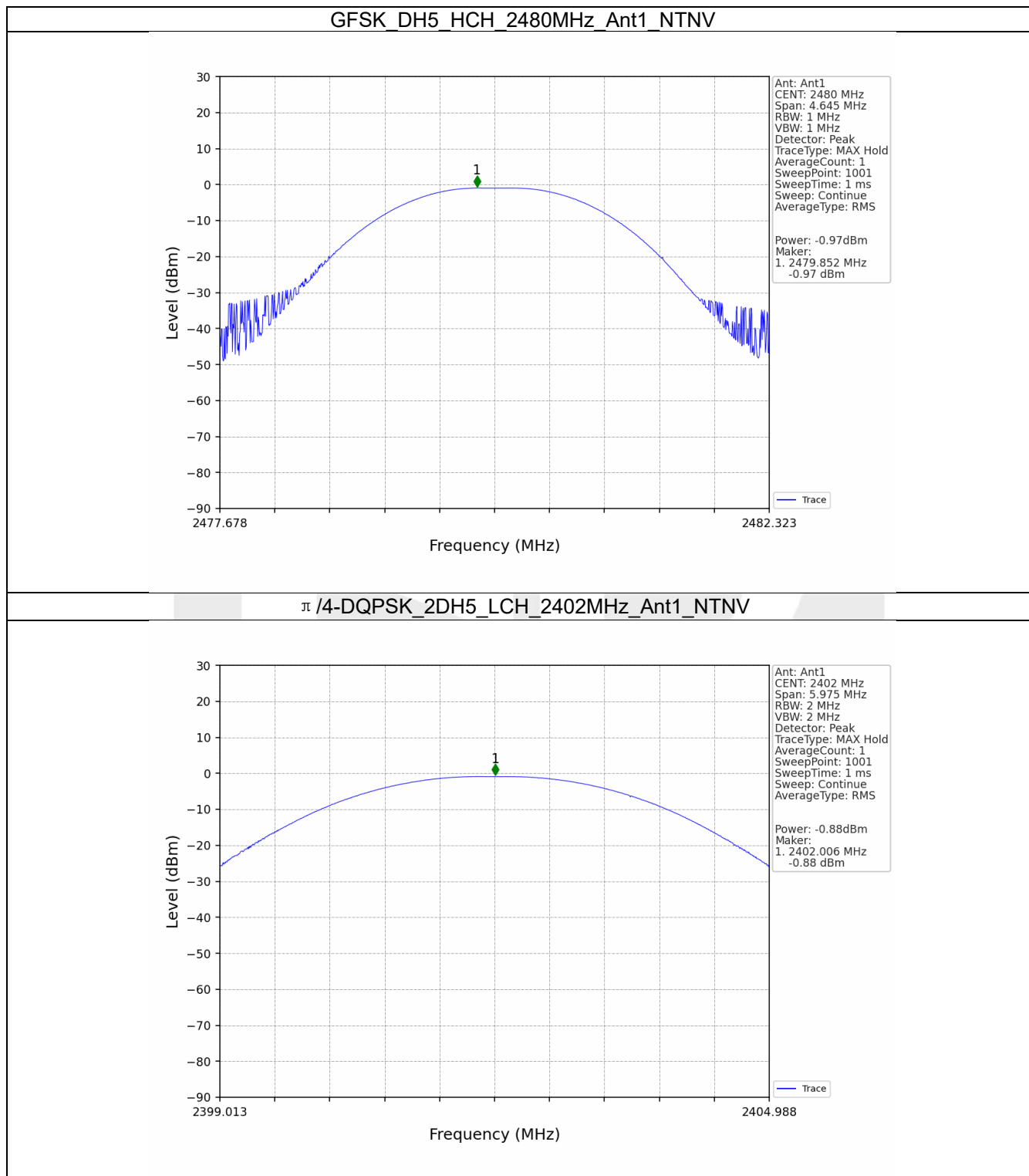
##### 3.1.1 Power

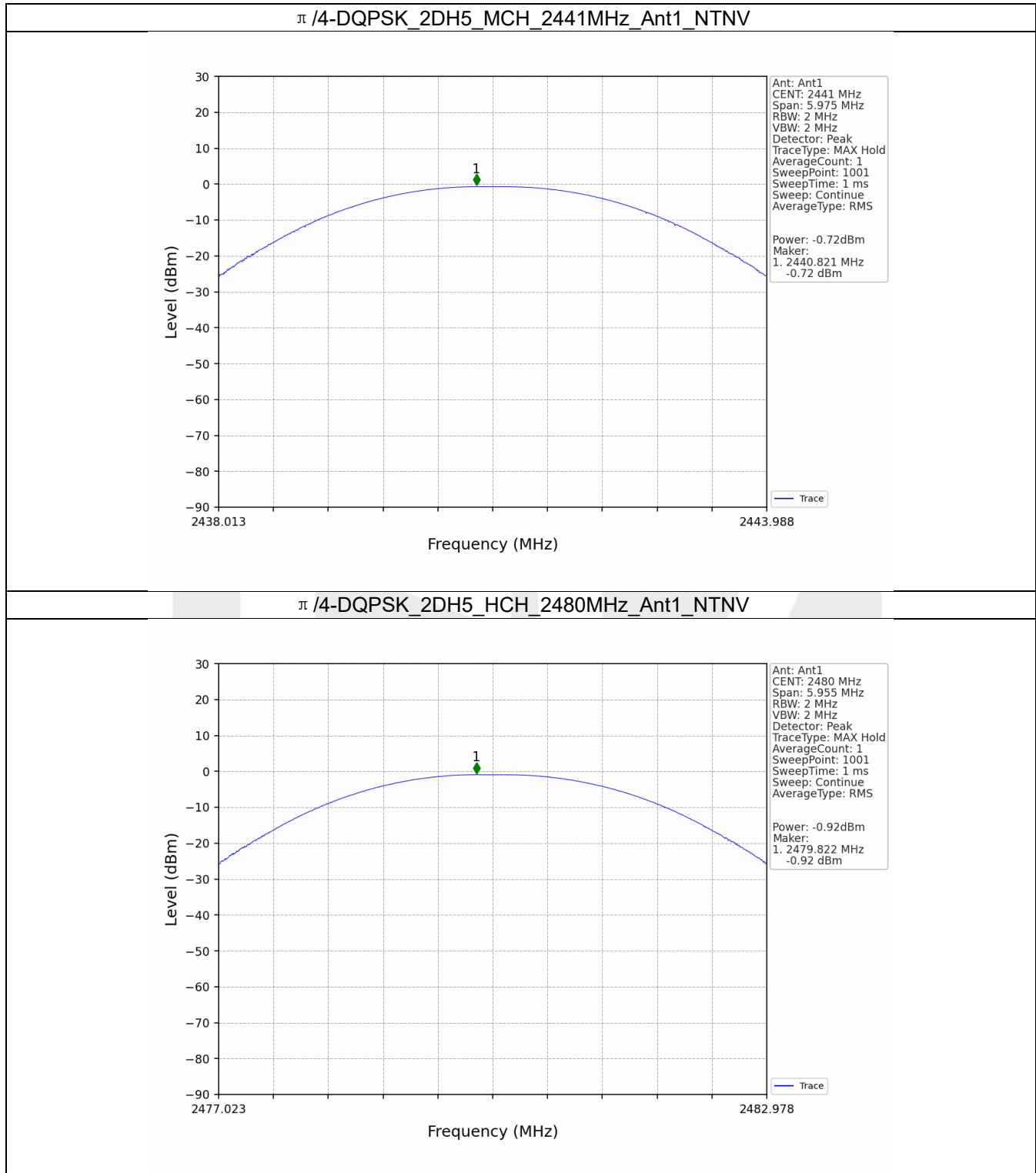
| Mode           | TX Type | Frequency (MHz) | Packet Type | Maximum Peak Conducted Output Power (dBm) |         | Verdict |
|----------------|---------|-----------------|-------------|-------------------------------------------|---------|---------|
|                |         |                 |             | ANT1                                      | Limit   |         |
| GFSK           | SISO    | 2402            | DH5         | -0.89                                     | <=30    | Pass    |
|                |         | 2441            | DH5         | -0.77                                     | <=30    | Pass    |
|                |         | 2480            | DH5         | -0.97                                     | <=30    | Pass    |
| $\pi/4$ -DQPSK | SISO    | 2402            | 2DH5        | -0.88                                     | <=20.97 | Pass    |
|                |         | 2441            | 2DH5        | -0.72                                     | <=20.97 | Pass    |
|                |         | 2480            | 2DH5        | -0.92                                     | <=20.97 | Pass    |
| 8DPSK          | SISO    | 2402            | 3DH5        | -0.87                                     | <=20.97 | Pass    |
|                |         | 2441            | 3DH5        | -0.71                                     | <=20.97 | Pass    |
|                |         | 2480            | 3DH5        | -0.90                                     | <=20.97 | Pass    |

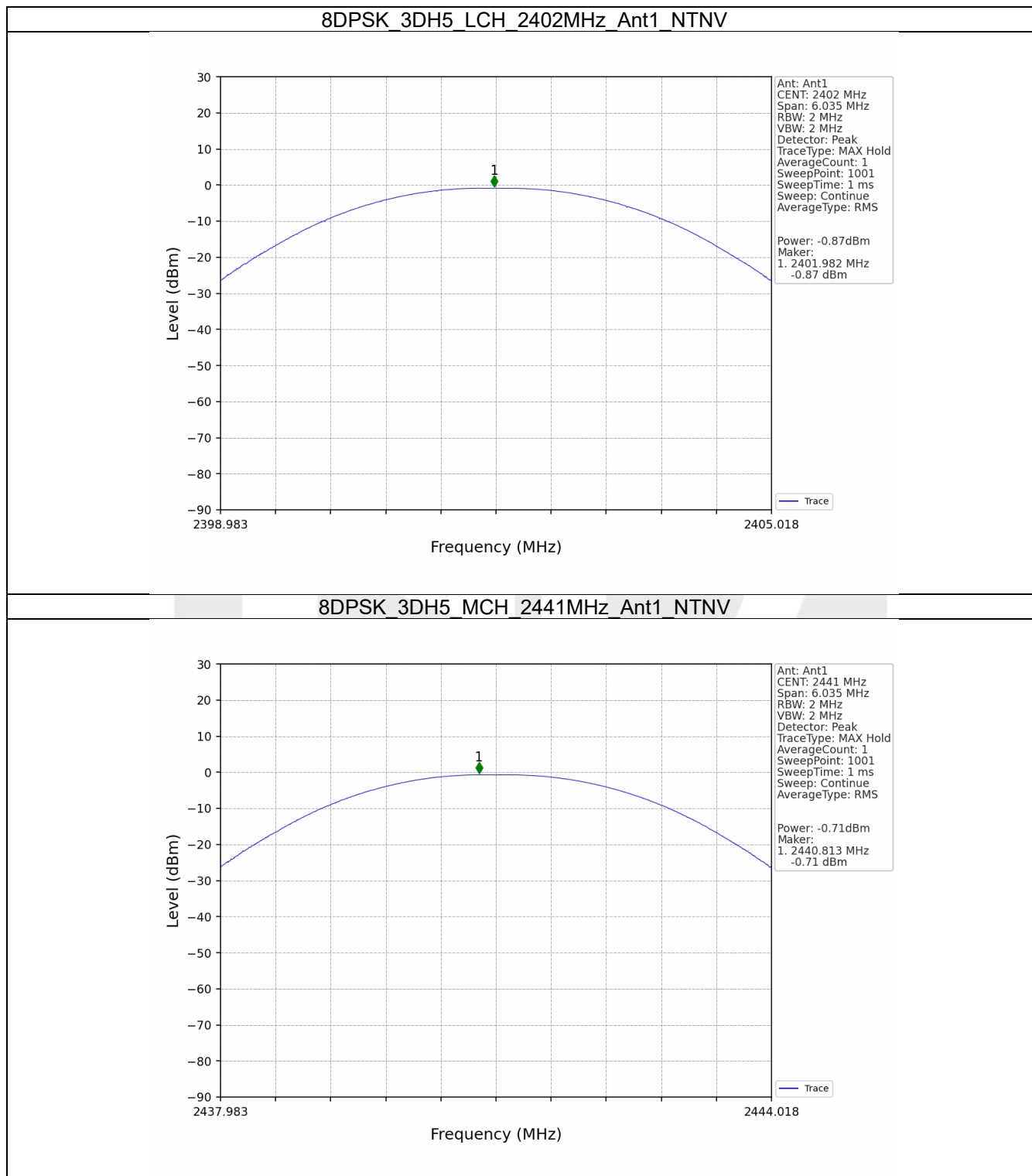
## 3.2 Test Graph

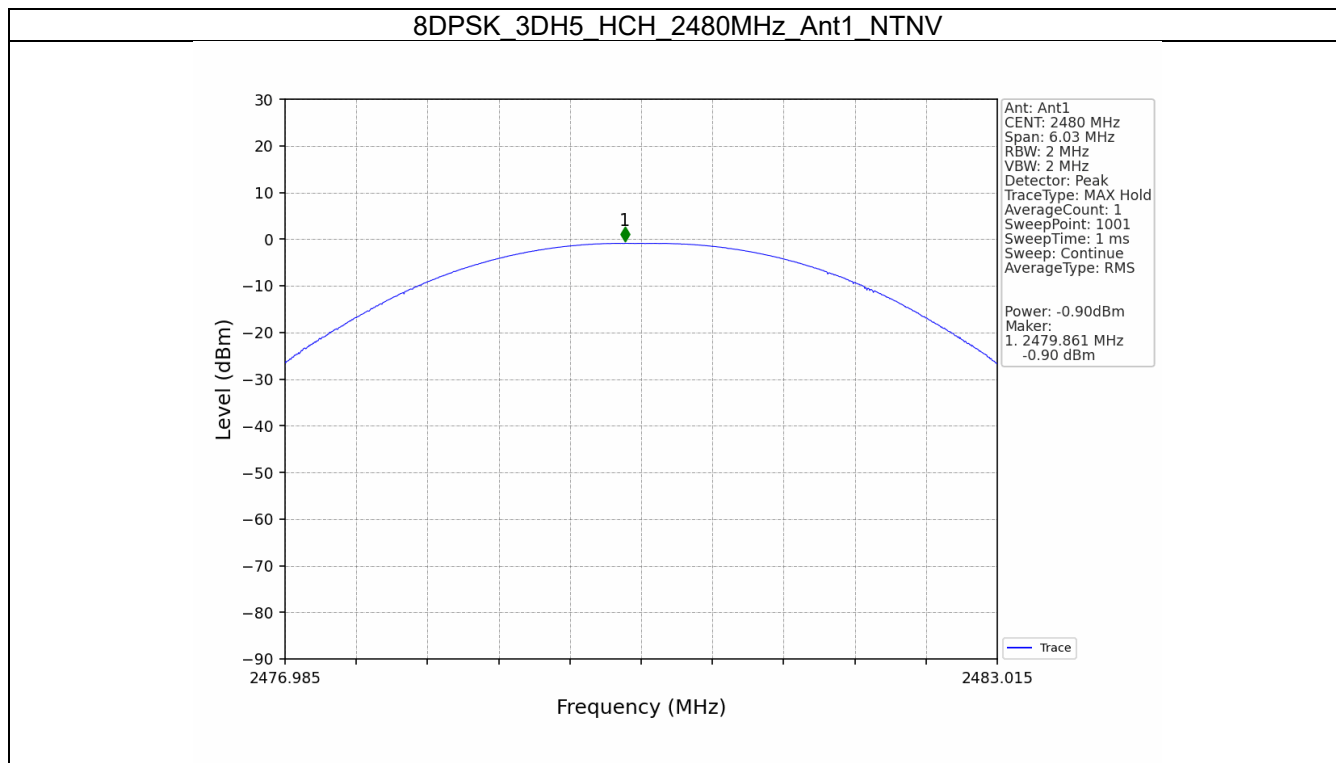
### 3.2.1 Power











#### 4. Carrier Frequency Separation

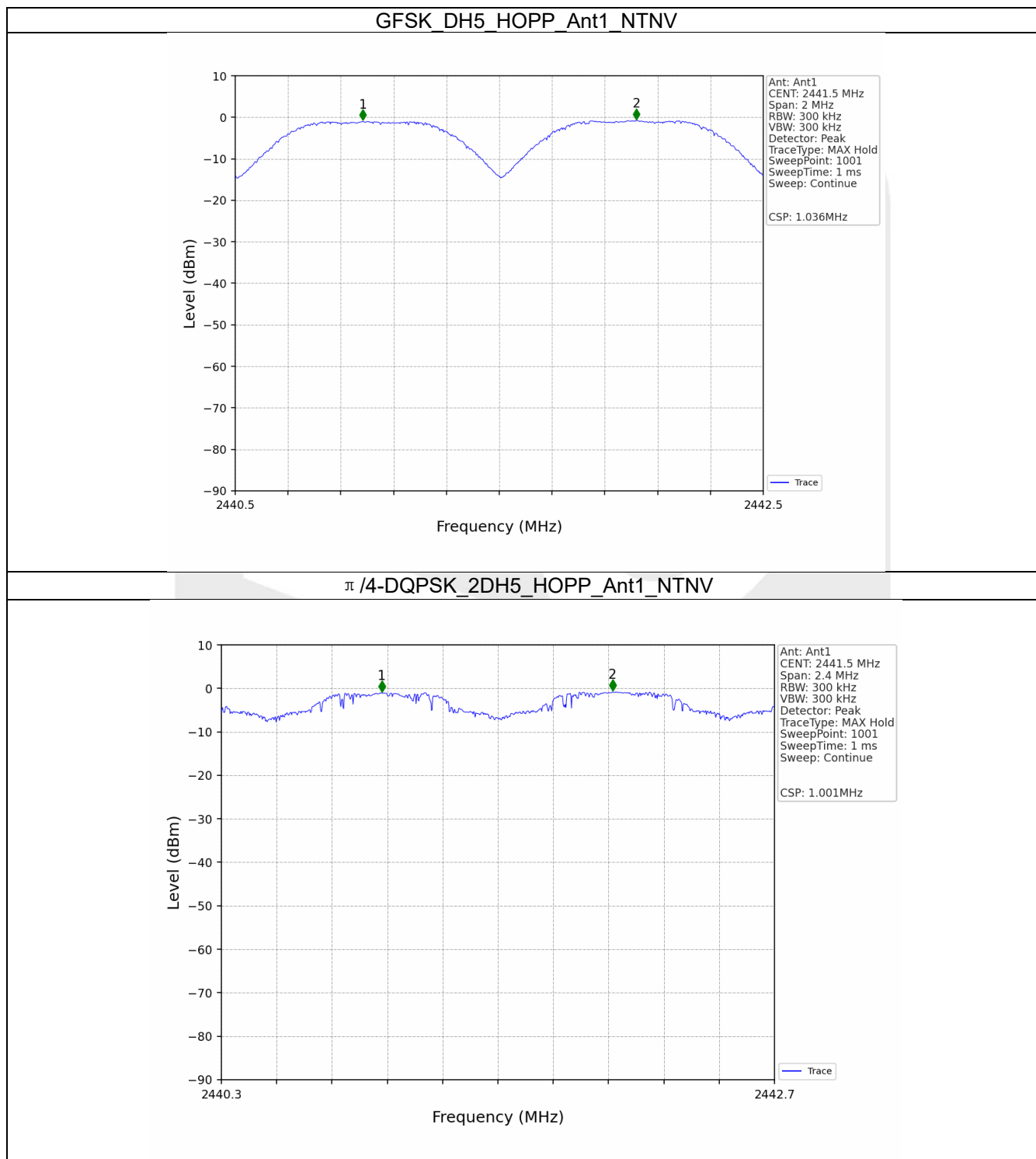
##### 4.1 Test Result

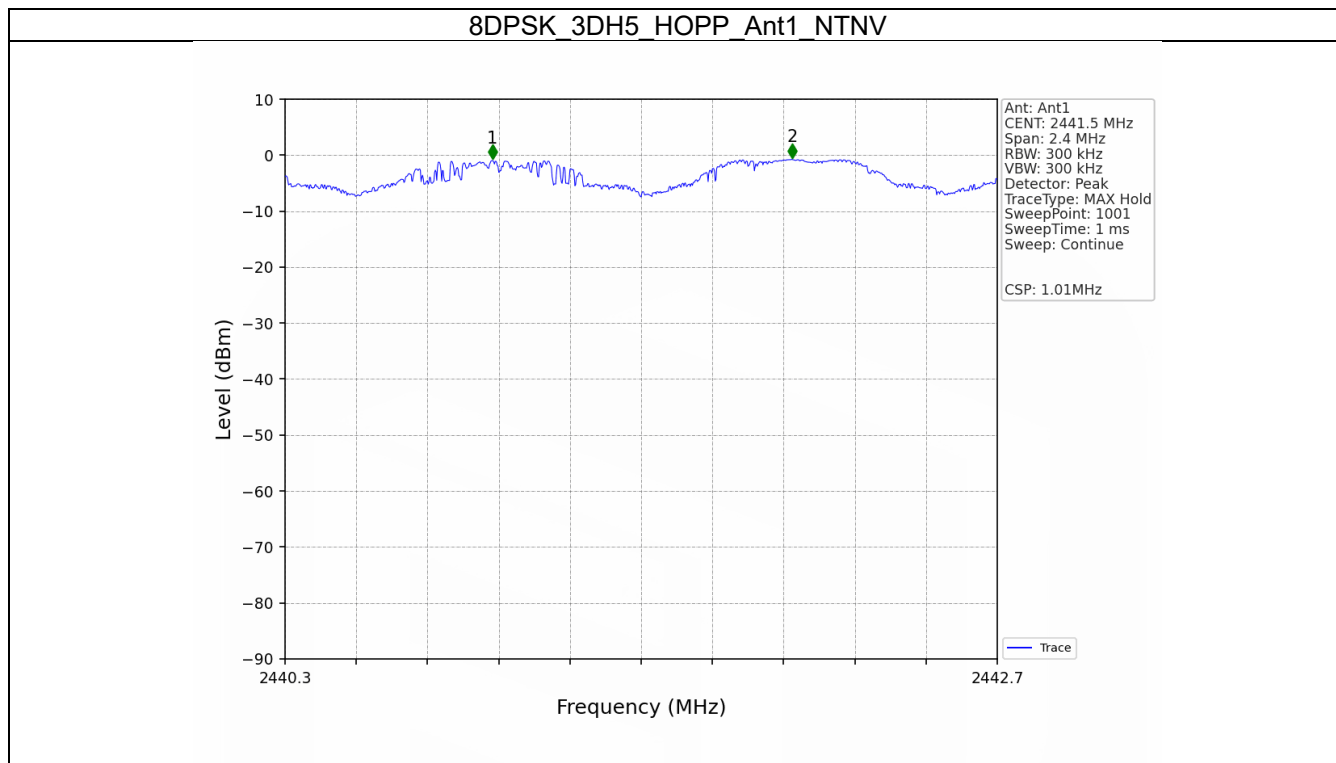
###### 4.1.1 Ant1

| Ant1           |         |                 |             |                          |                      |              |         |
|----------------|---------|-----------------|-------------|--------------------------|----------------------|--------------|---------|
| Mode           | TX Type | Frequency (MHz) | Packet Type | Channel Separation (MHz) | 20dB Bandwidth (MHz) | Limit (MHz)  | Verdict |
| GFSK           | SISO    | HOPP            | DH5         | 1.036                    | 0.929                | $\geq 0.929$ | Pass    |
| $\pi/4$ -DQPSK | SISO    | HOPP            | 2DH5        | 1.001                    | 1.195                | $\geq 0.797$ | Pass    |
| 8DPSK          | SISO    | HOPP            | 3DH5        | 1.010                    | 1.207                | $\geq 0.805$ | Pass    |

## 4.2 Test Graph

### 4.2.1 Ant1





## 5. Number of Hopping Frequencies

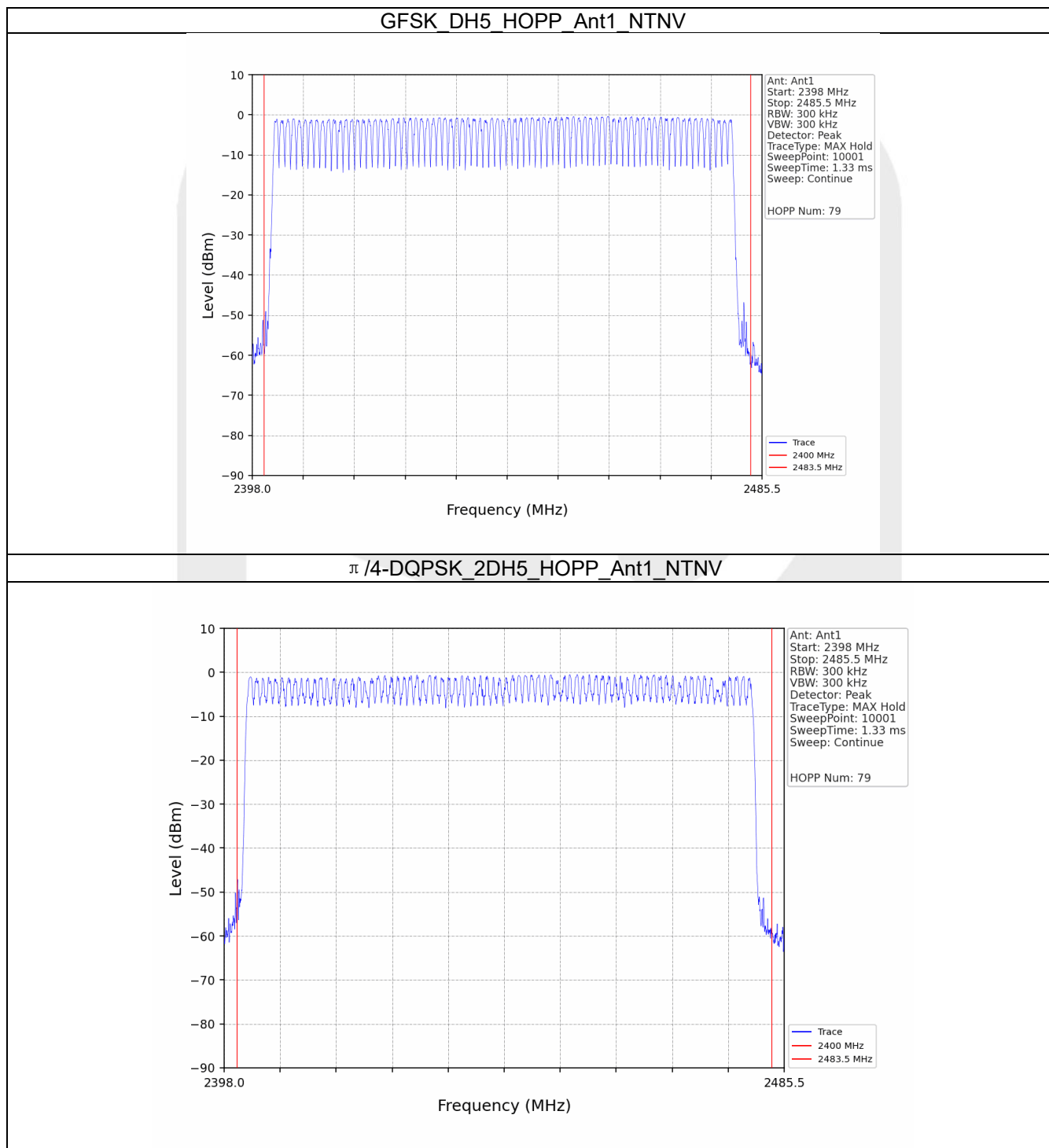
### 5.1 Test Result

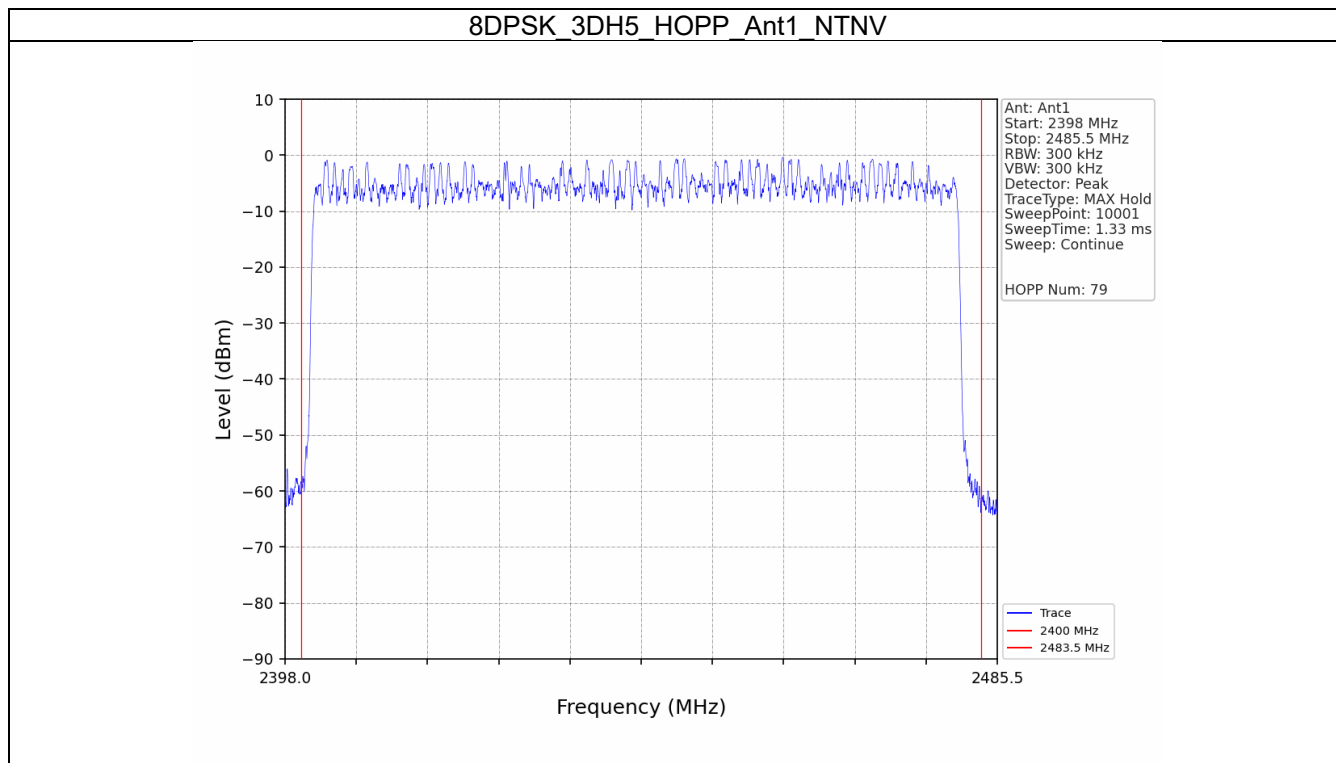
#### 5.1.1 HoppNum

| 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)

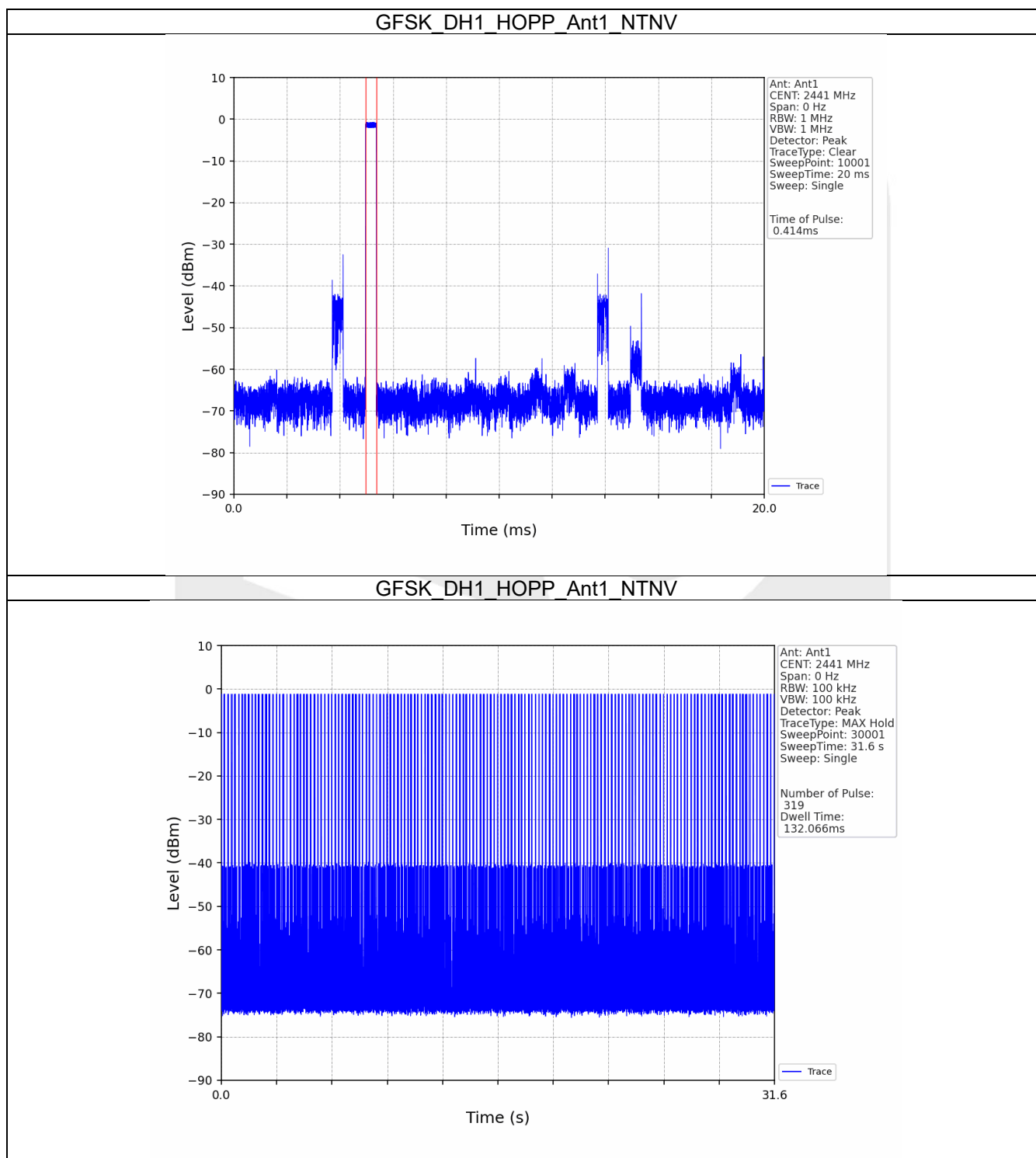
### 6.1 Test Result

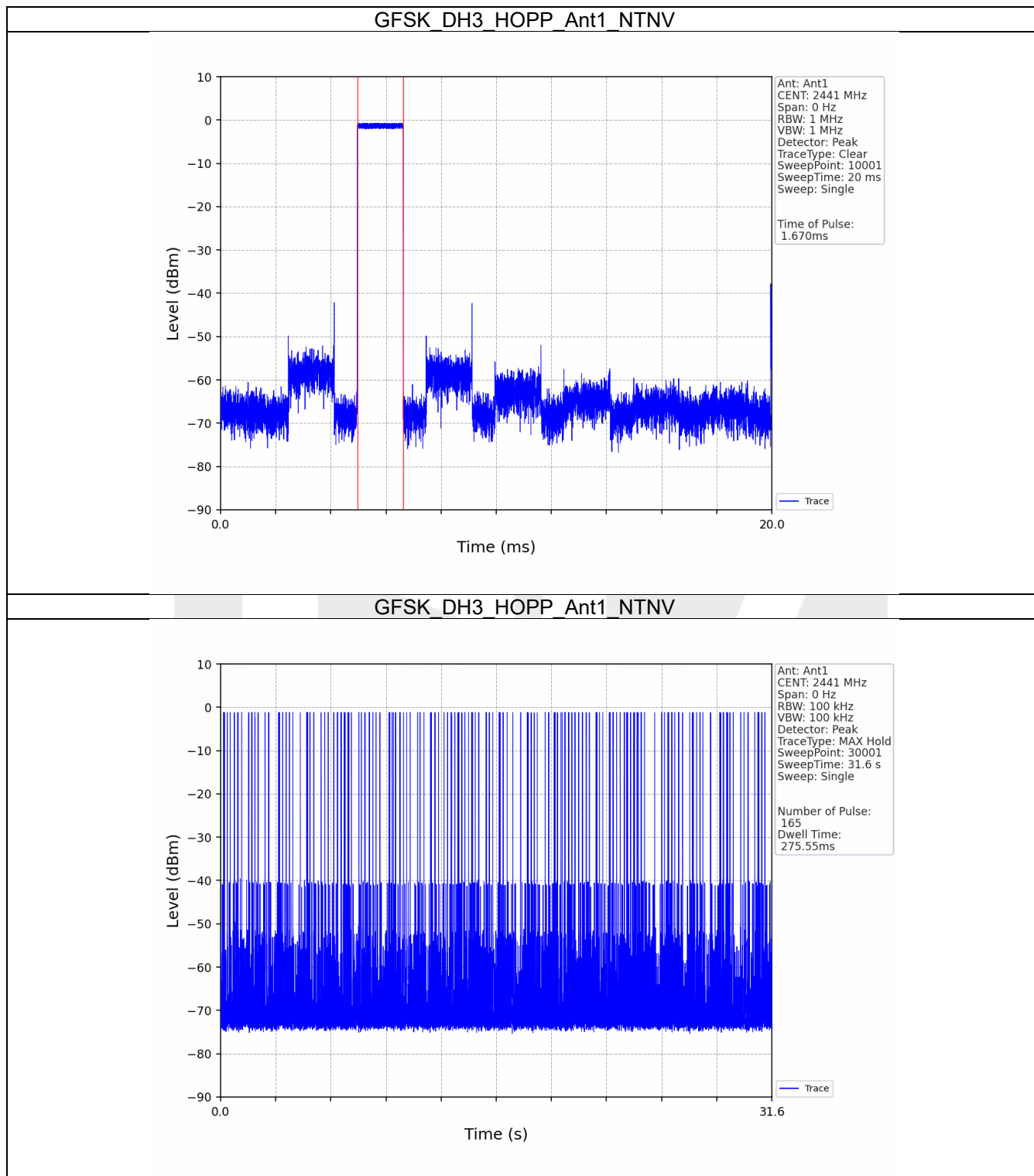
#### 6.1.1 Ant1

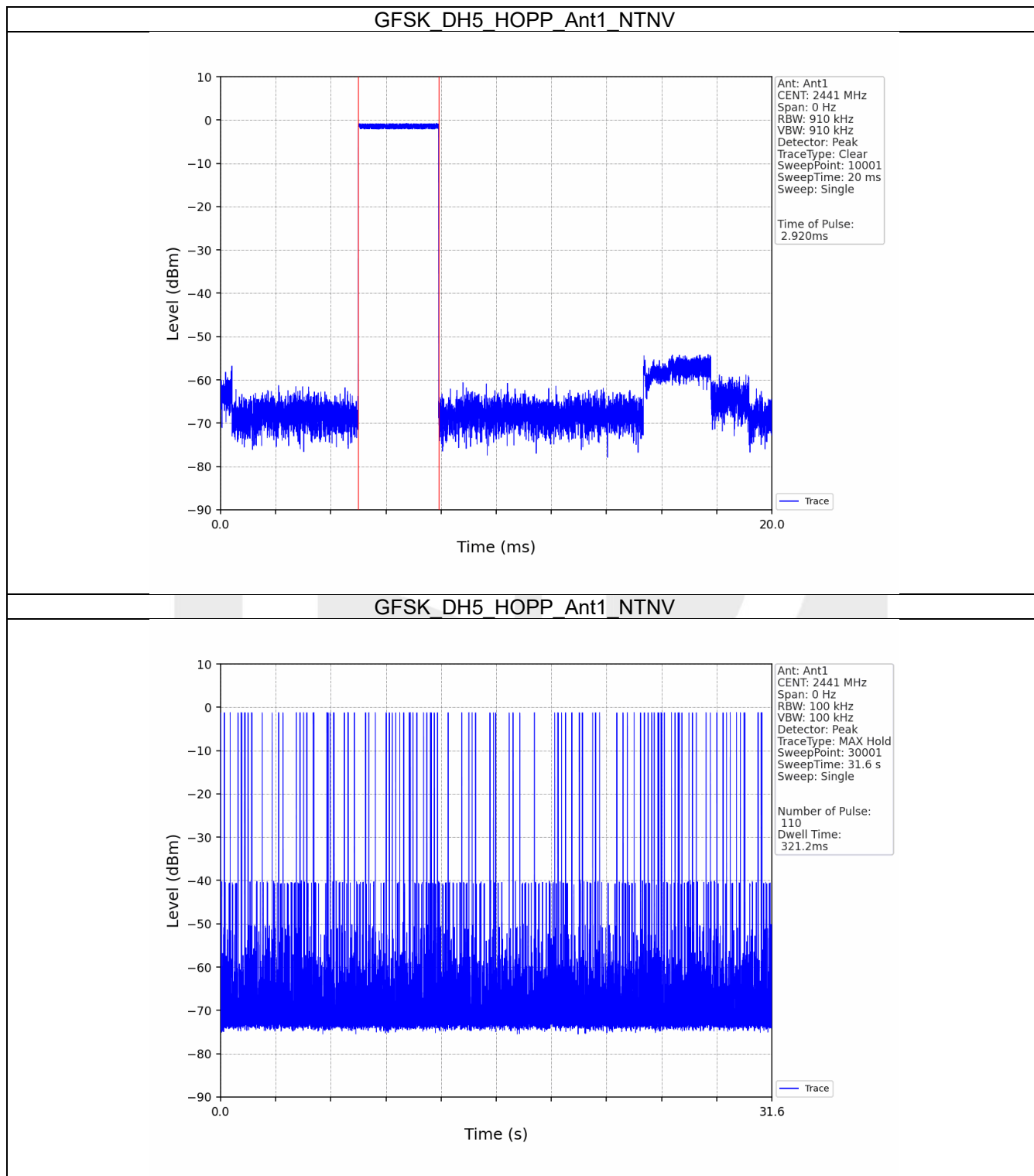
| Ant1           |         |                 |             |                               |                        |                                    |                 |            |         |
|----------------|---------|-----------------|-------------|-------------------------------|------------------------|------------------------------------|-----------------|------------|---------|
| 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                 | 319                                | 132.066         | <=400      | Pass    |
|                |         |                 | DH3         | 1.670                         | 31.600                 | 165                                | 275.550         | <=400      | Pass    |
|                |         |                 | DH5         | 2.920                         | 31.600                 | 110                                | 321.200         | <=400      | Pass    |
| $\pi/4$ -DQPSK | SISO    | HOPP            | 2DH1        | 0.424                         | 31.600                 | 320                                | 135.680         | <=400      | Pass    |
|                |         |                 | 2DH3        | 1.676                         | 31.600                 | 161                                | 269.836         | <=400      | Pass    |
|                |         |                 | 2DH5        | 2.926                         | 31.600                 | 109                                | 318.934         | <=400      | Pass    |
| 8DPSK          | SISO    | HOPP            | 3DH1        | 0.424                         | 31.600                 | 320                                | 135.680         | <=400      | Pass    |
|                |         |                 | 3DH3        | 1.674                         | 31.600                 | 160                                | 267.840         | <=400      | Pass    |
|                |         |                 | 3DH5        | 2.926                         | 31.600                 | 98                                 | 286.748         | <=400      | Pass    |

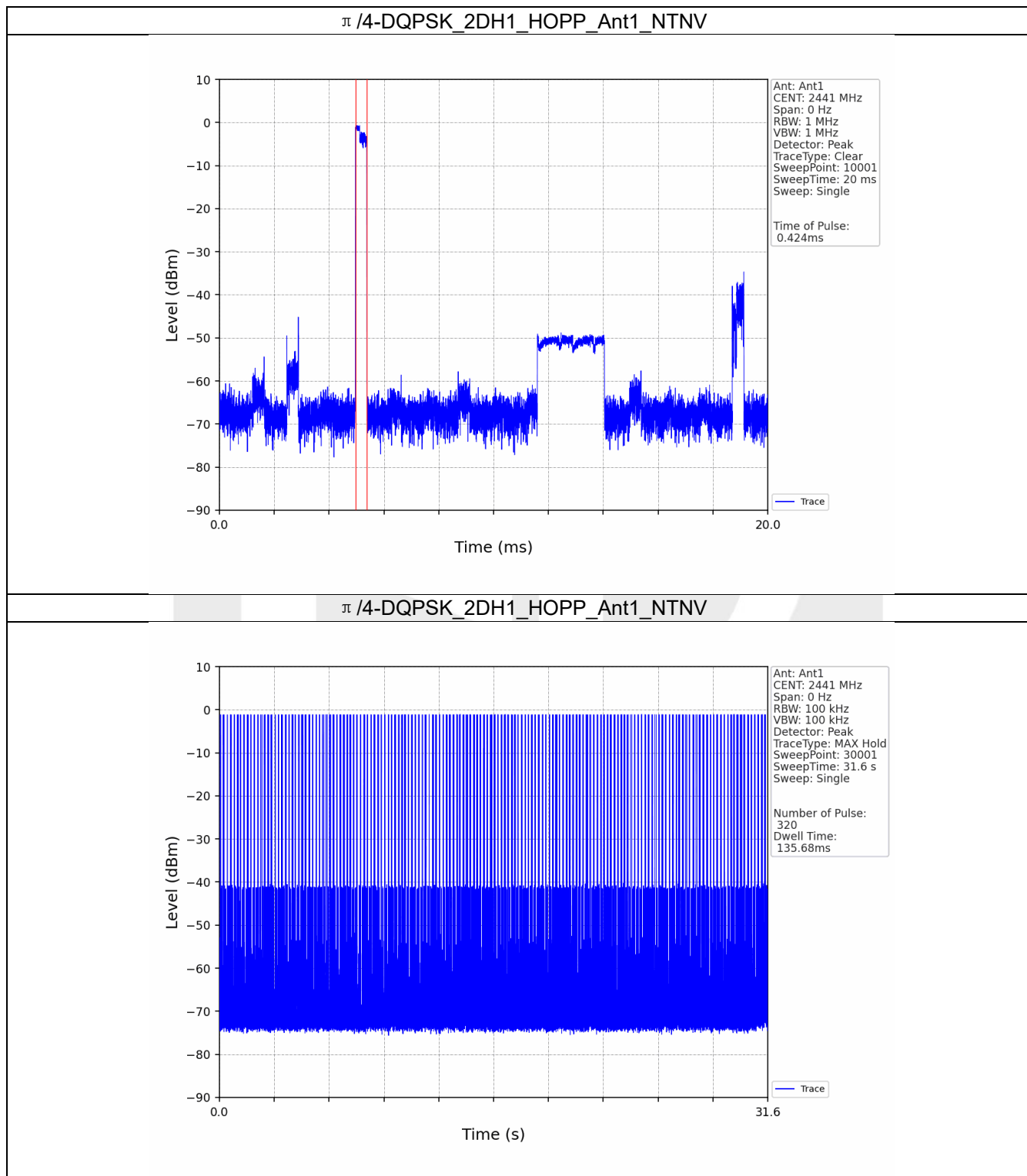
## 6.2 Test Graph

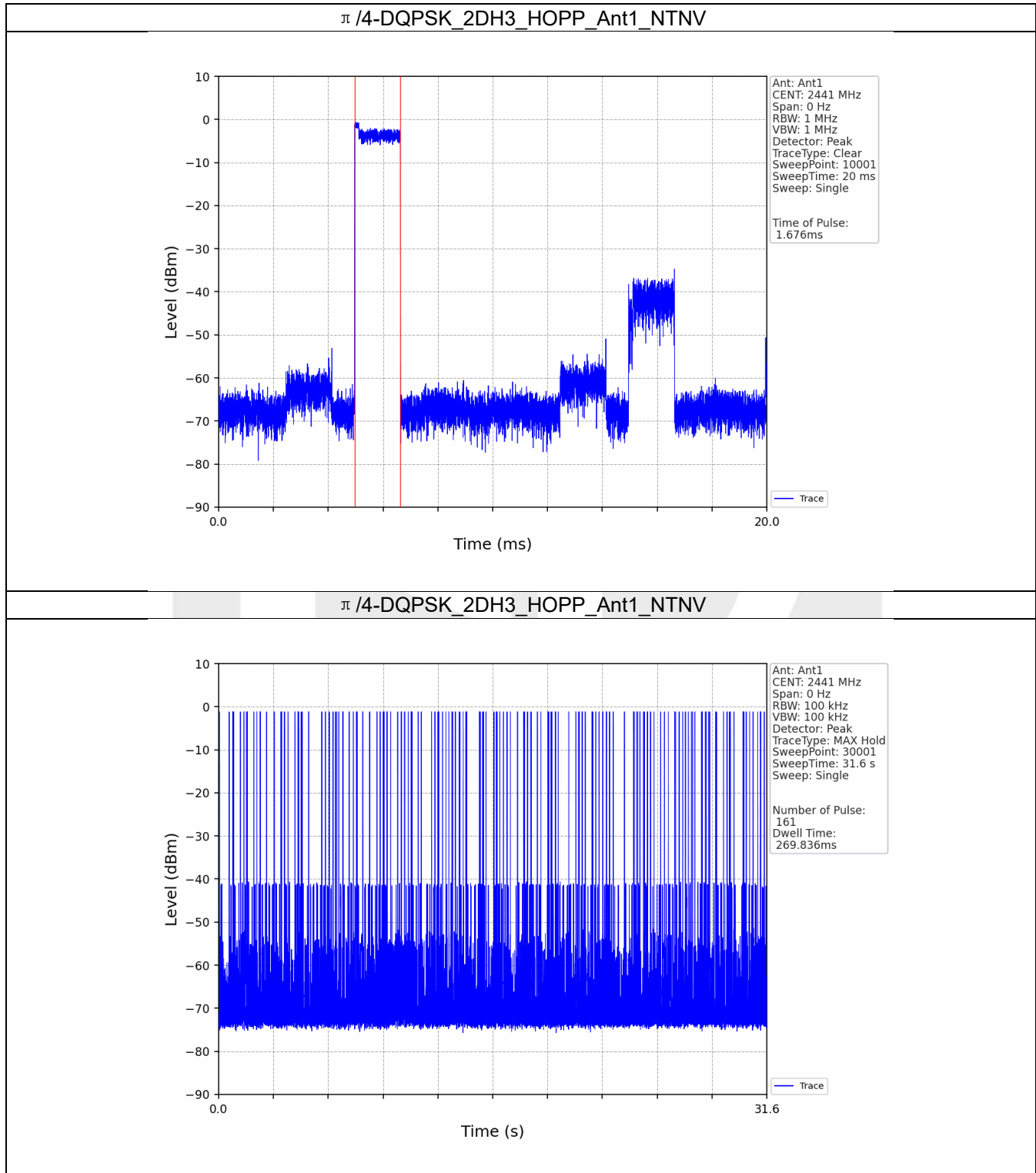
### 6.2.1 Ant1

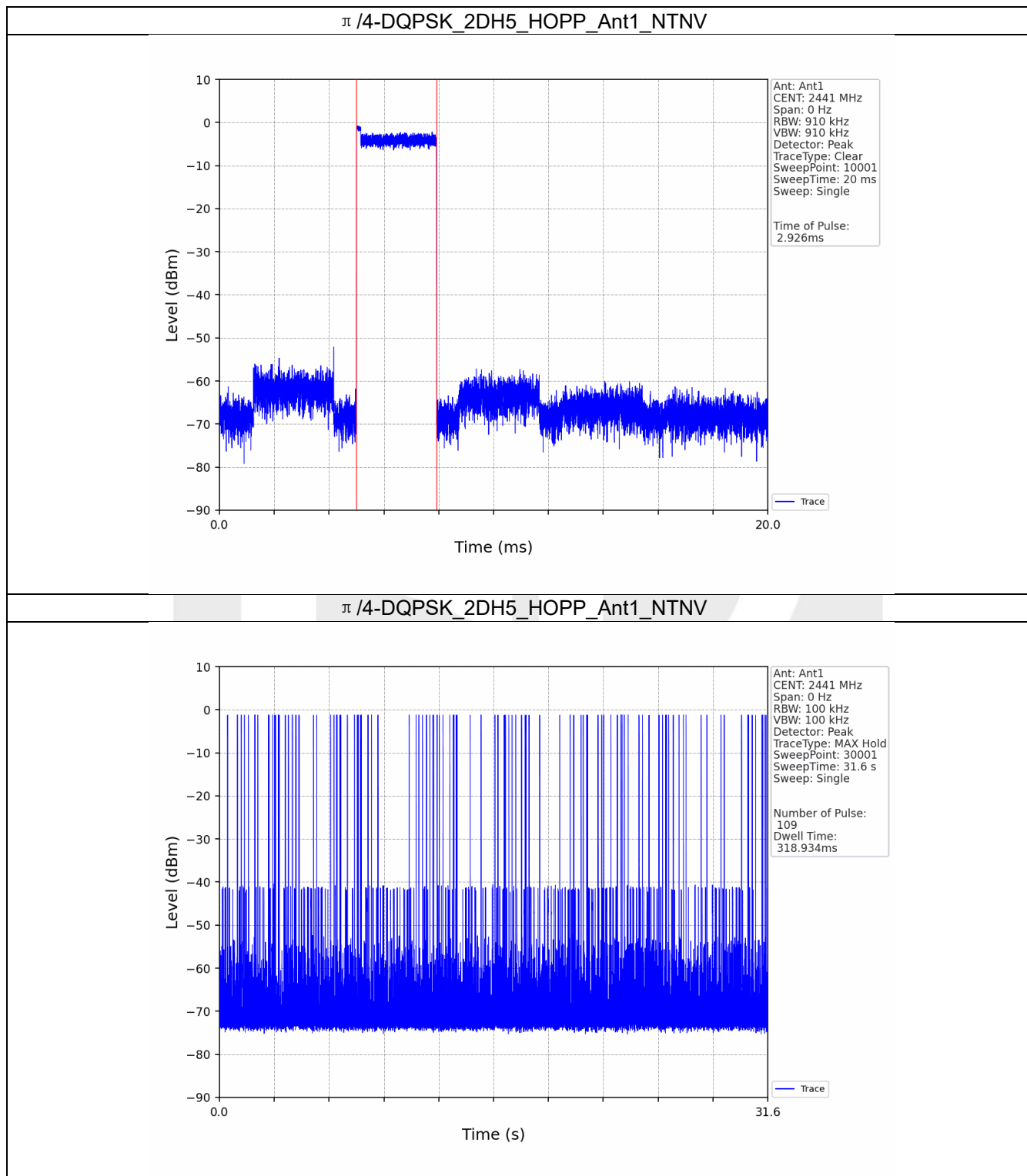


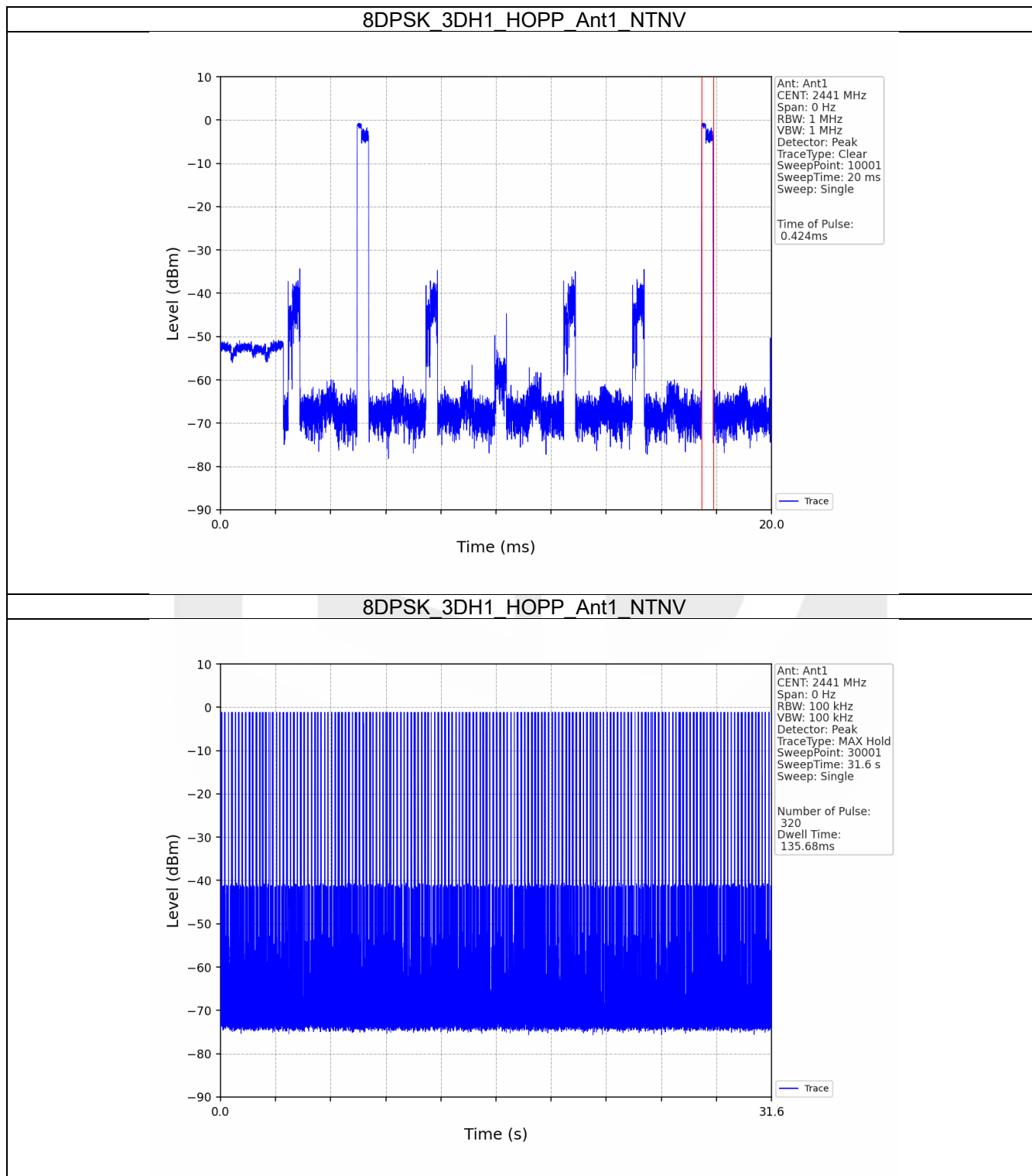


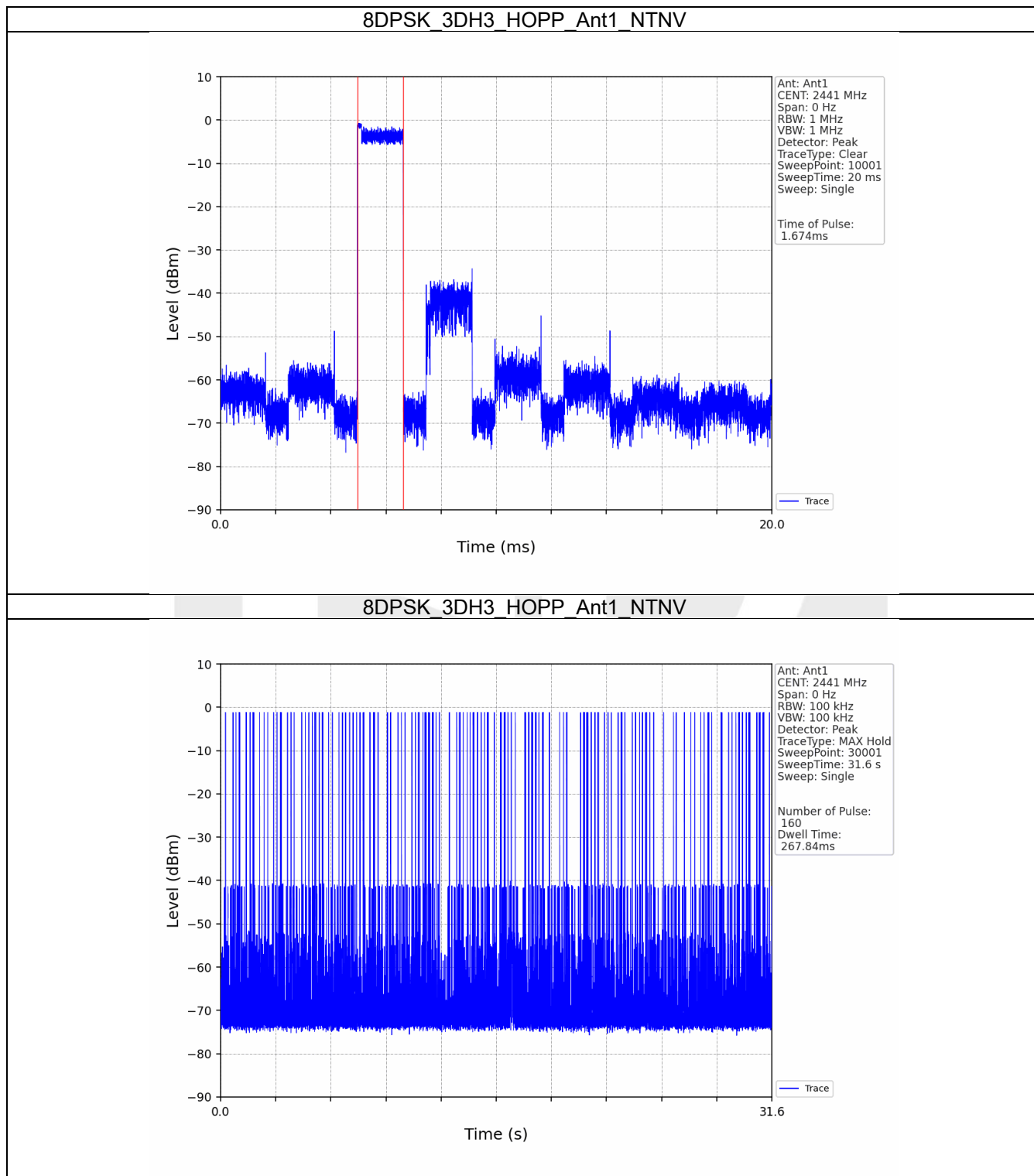


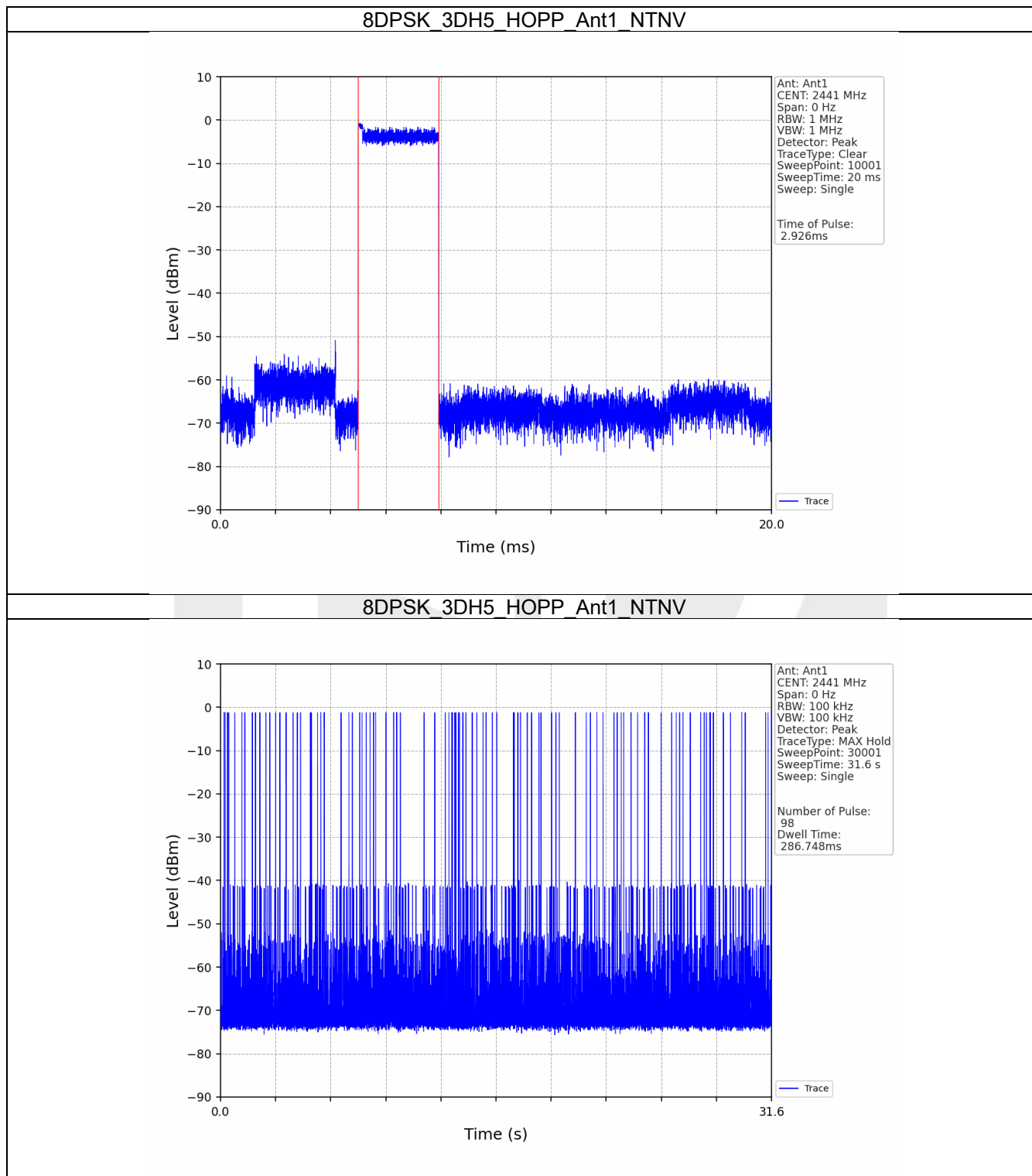












## 7. Unwanted Emissions In Non-restricted Frequency Bands

### 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   | -1.28                    |
|                |         | 2441            | DH5         | 1   | -1.15                    |
|                |         | 2480            | DH5         | 1   | -1.34                    |
|                |         | HOPP            | DH5         | 1   | -0.86                    |
|                |         |                 |             |     | -0.86                    |
| $\pi/4$ -DQPSK | SISO    | 2402            | 2DH5        | 1   | -1.31                    |
|                |         | 2441            | 2DH5        | 1   | -1.13                    |
|                |         | 2480            | 2DH5        | 1   | -1.33                    |
|                |         | HOPP            | 2DH5        | 1   | -0.65                    |
|                |         |                 |             |     | -0.65                    |
| 8DPSK          | SISO    | 2402            | 3DH5        | 1   | -1.30                    |
|                |         | 2441            | 3DH5        | 1   | -1.11                    |
|                |         | 2480            | 3DH5        | 1   | -1.31                    |
|                |         | HOPP            | 3DH5        | 1   | -0.66                    |
|                |         |                 |             |     | -0.66                    |

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.

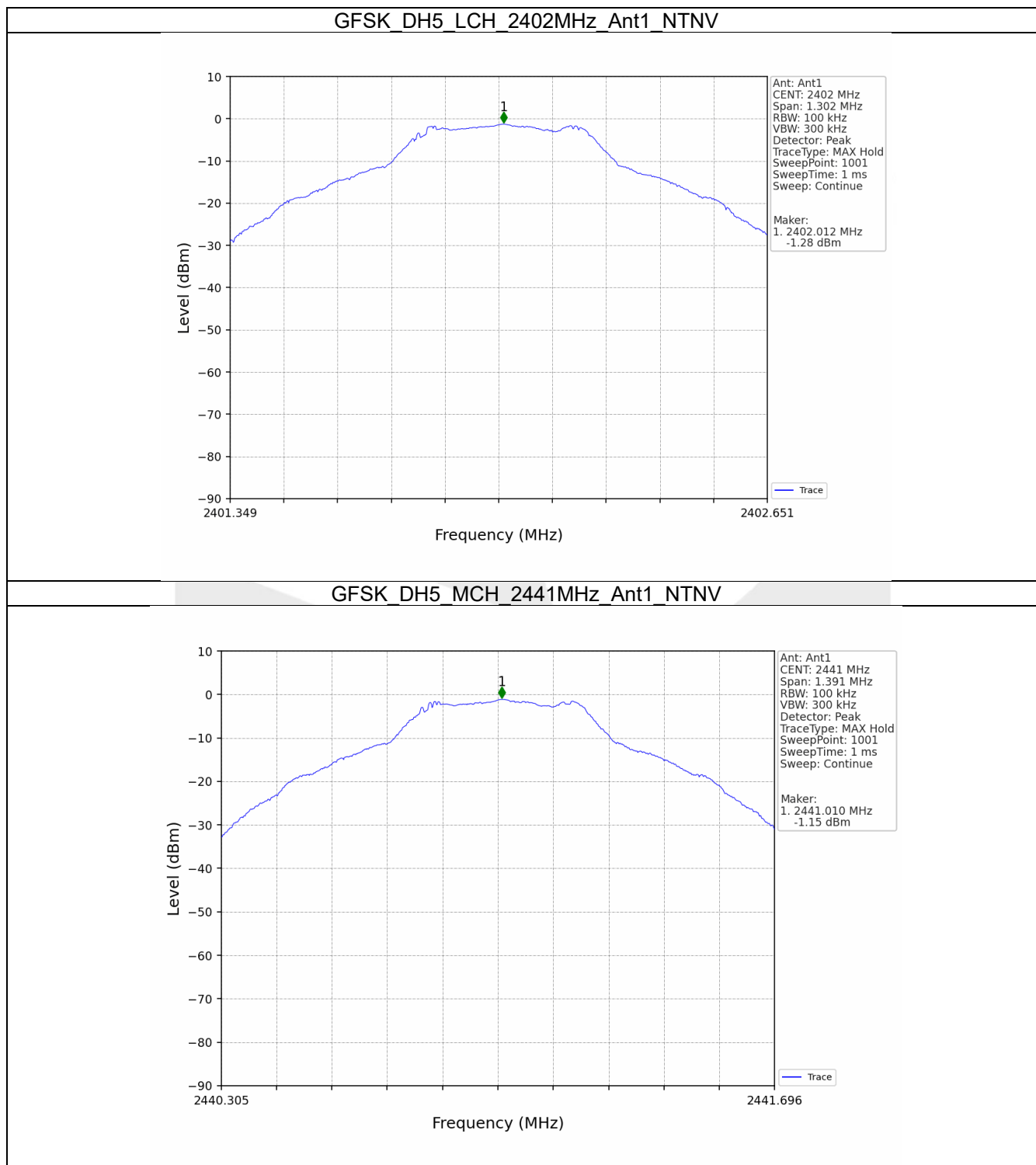
#### 7.1.2 CSE

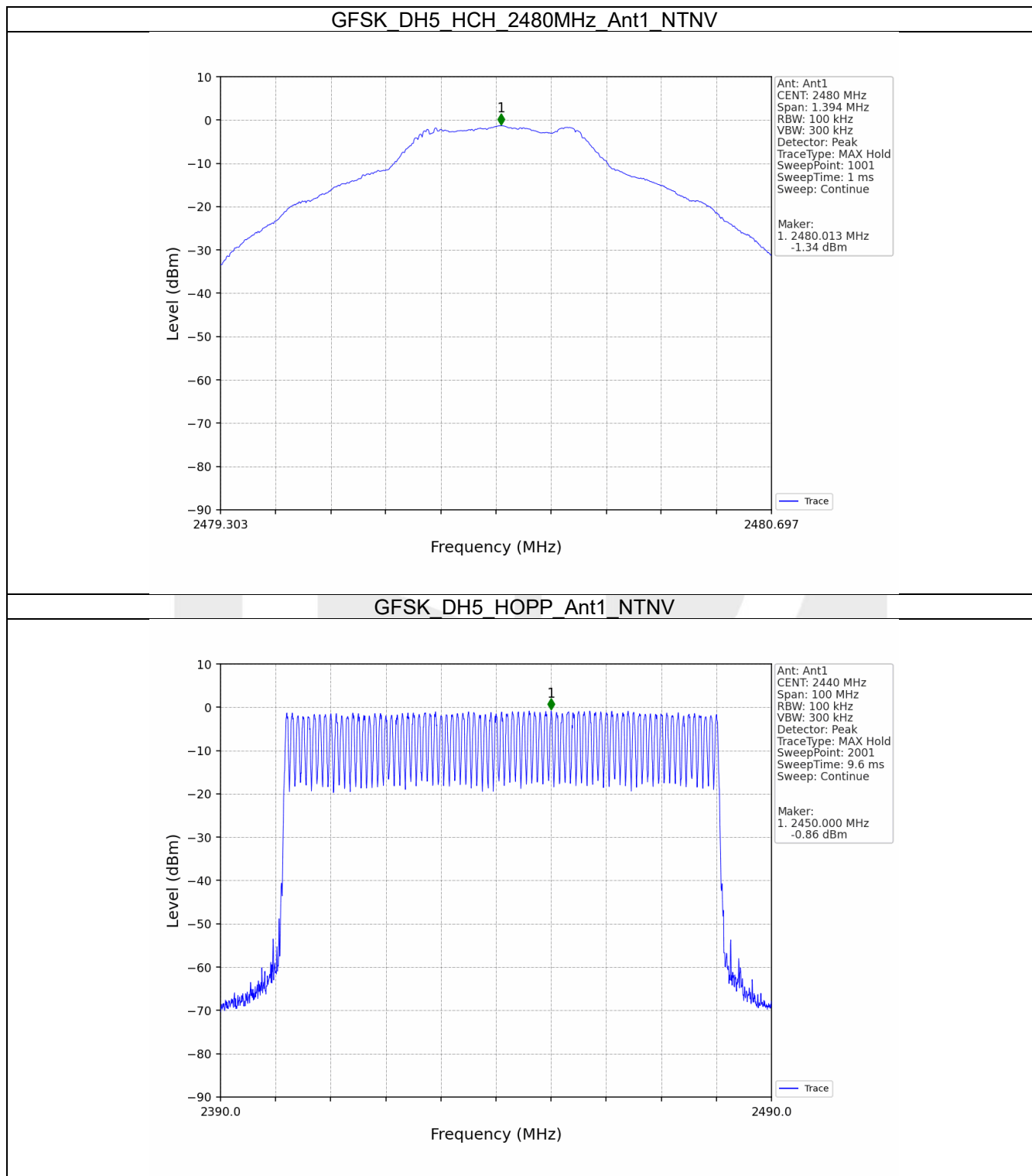
| Mode           | TX Type | Frequency (MHz) | Packet Type | ANT | Level of Reference (dBm) | Limit (dBm) | Verdict |
|----------------|---------|-----------------|-------------|-----|--------------------------|-------------|---------|
| GFSK           | SISO    | 2402            | DH5         | 1   | -1.28                    | -21.28      | Pass    |
|                |         | 2441            | DH5         | 1   | -1.15                    | -21.15      | Pass    |
|                |         | 2480            | DH5         | 1   | -1.34                    | -21.34      | Pass    |
|                |         | HOPP            | DH5         | 1   | -0.86                    | -20.86      | Pass    |
|                |         |                 |             |     | -0.86                    | -20.86      | Pass    |
| $\pi/4$ -DQPSK | SISO    | 2402            | 2DH5        | 1   | -1.31                    | -21.31      | Pass    |
|                |         | 2441            | 2DH5        | 1   | -1.13                    | -21.13      | Pass    |
|                |         | 2480            | 2DH5        | 1   | -1.33                    | -21.33      | Pass    |
|                |         | HOPP            | 2DH5        | 1   | -0.65                    | -20.65      | Pass    |
|                |         |                 |             |     | -0.65                    | -20.65      | Pass    |
| 8DPSK          | SISO    | 2402            | 3DH5        | 1   | -1.30                    | -21.30      | Pass    |
|                |         | 2441            | 3DH5        | 1   | -1.11                    | -21.11      | Pass    |
|                |         | 2480            | 3DH5        | 1   | -1.31                    | -21.31      | Pass    |
|                |         | HOPP            | 3DH5        | 1   | -0.66                    | -20.66      | Pass    |
|                |         |                 |             |     | -0.66                    | -20.66      | Pass    |

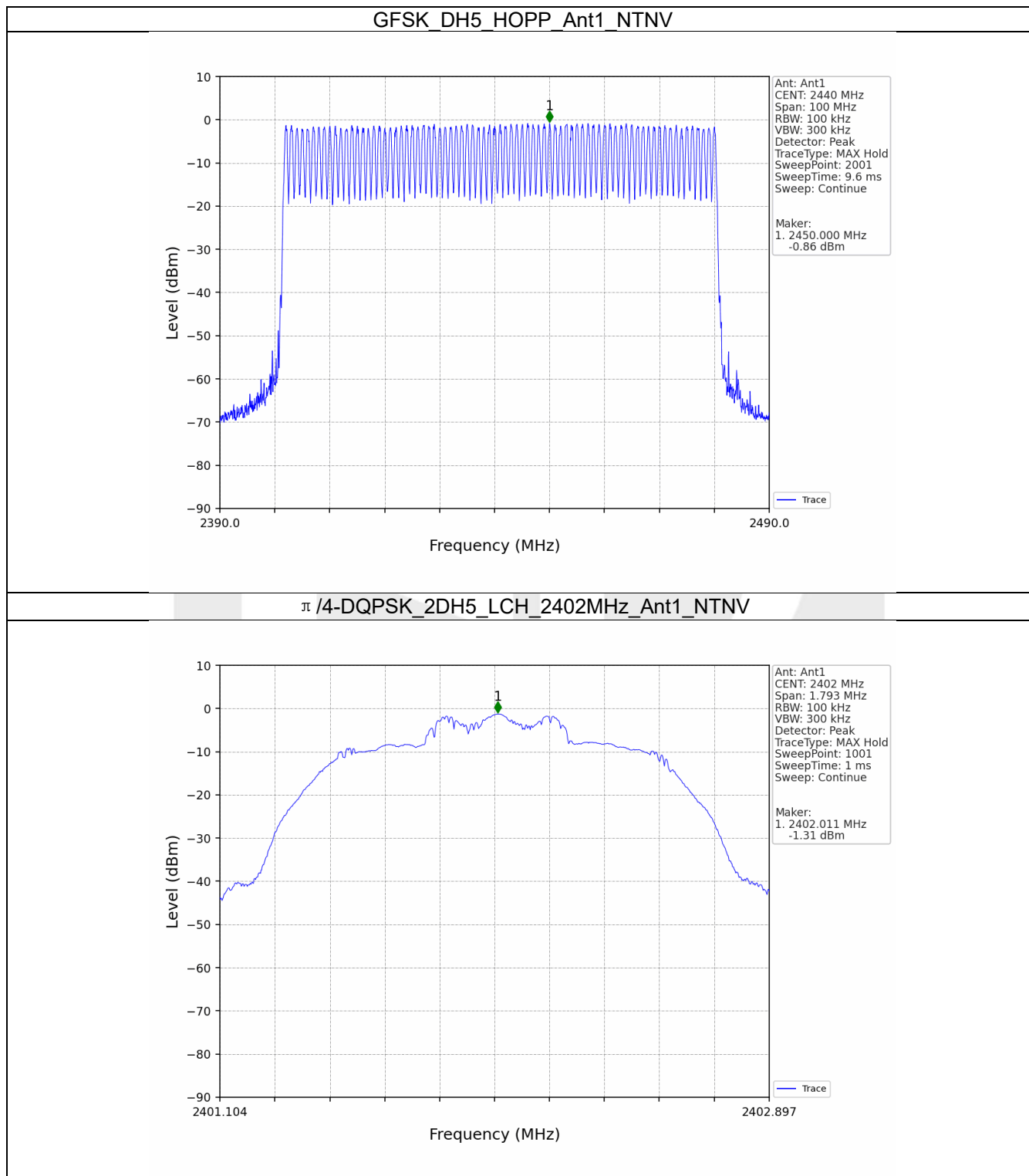
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level.

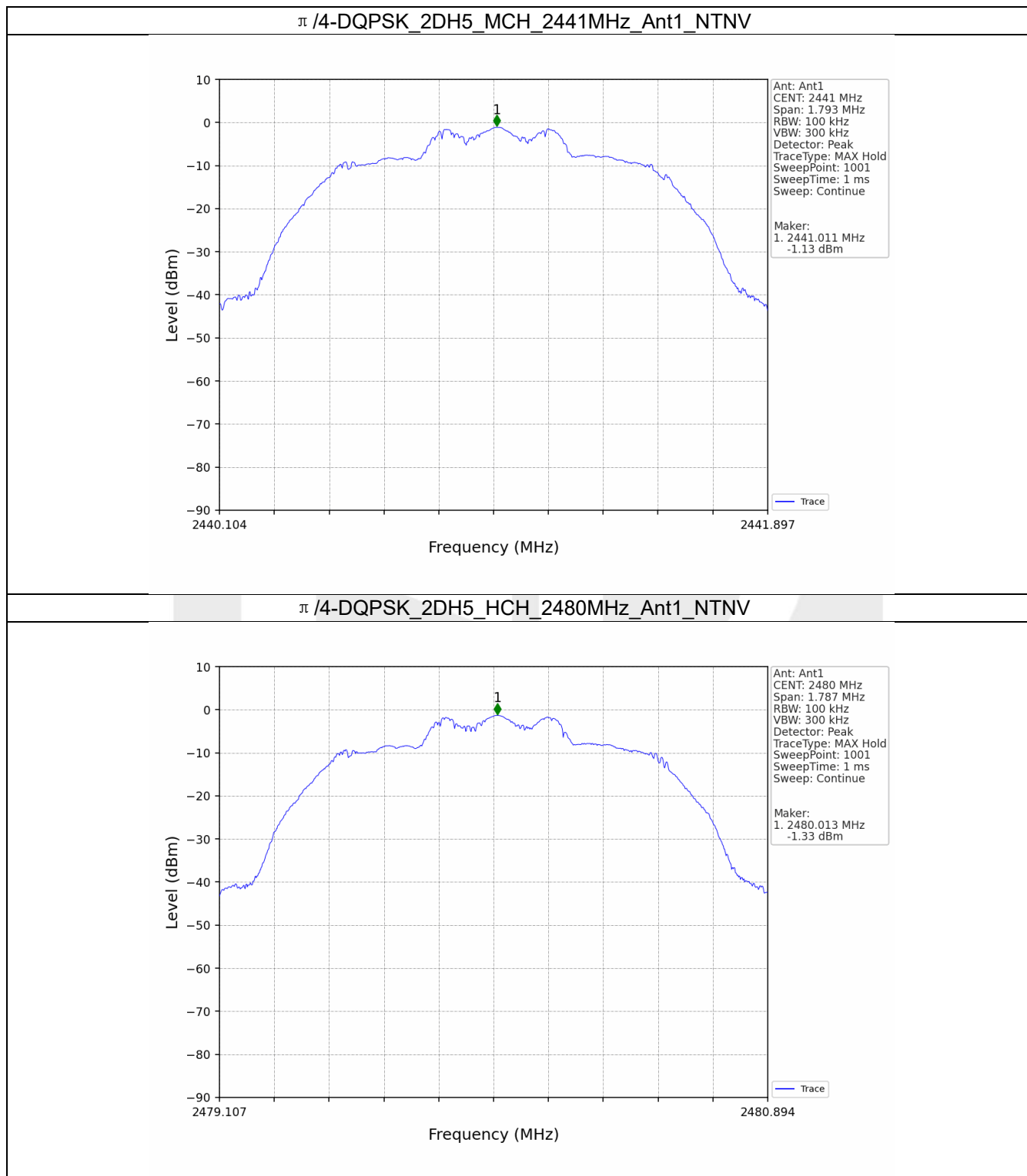
## 7.2 Test Graph

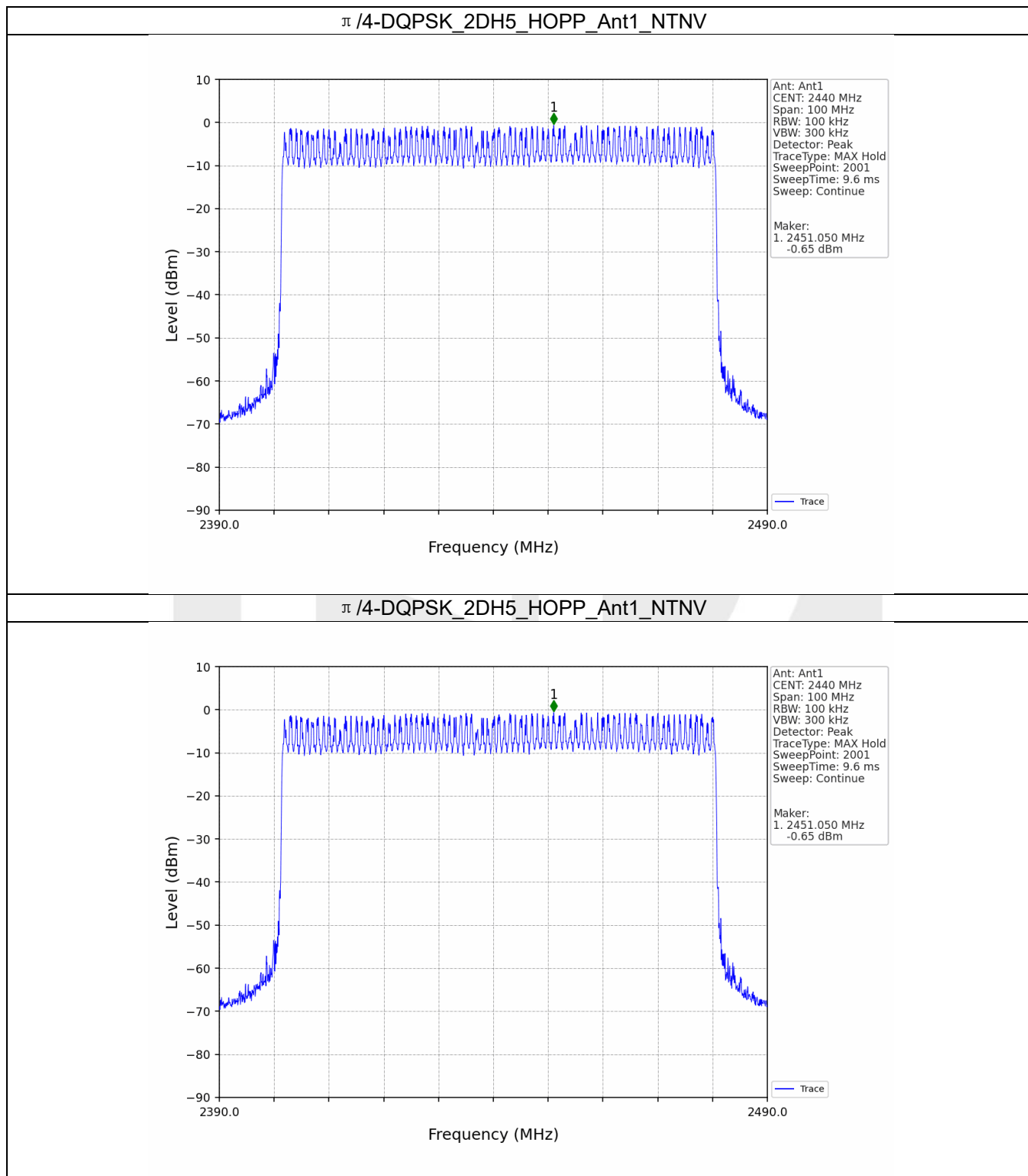
### 7.2.1 Ref

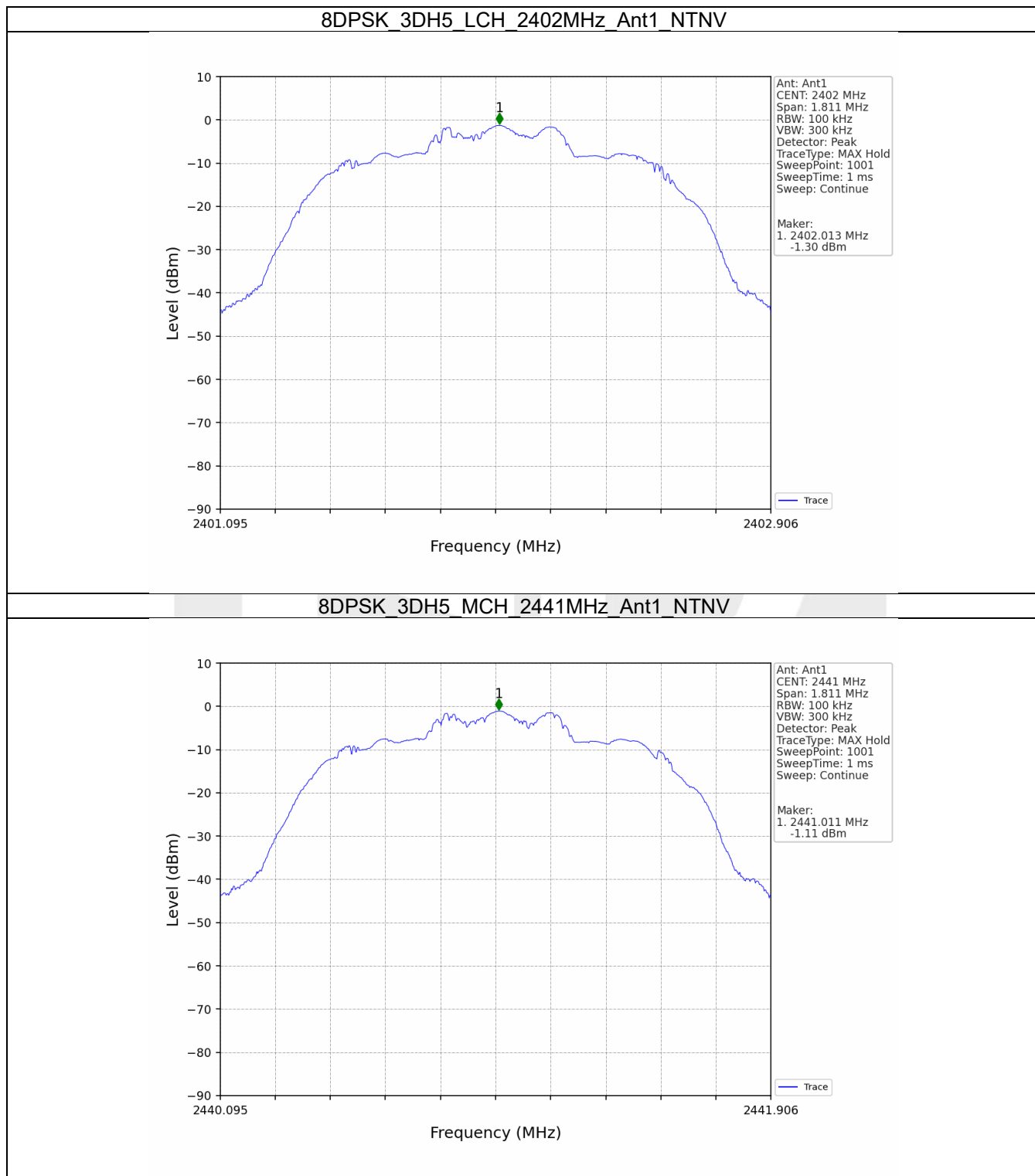


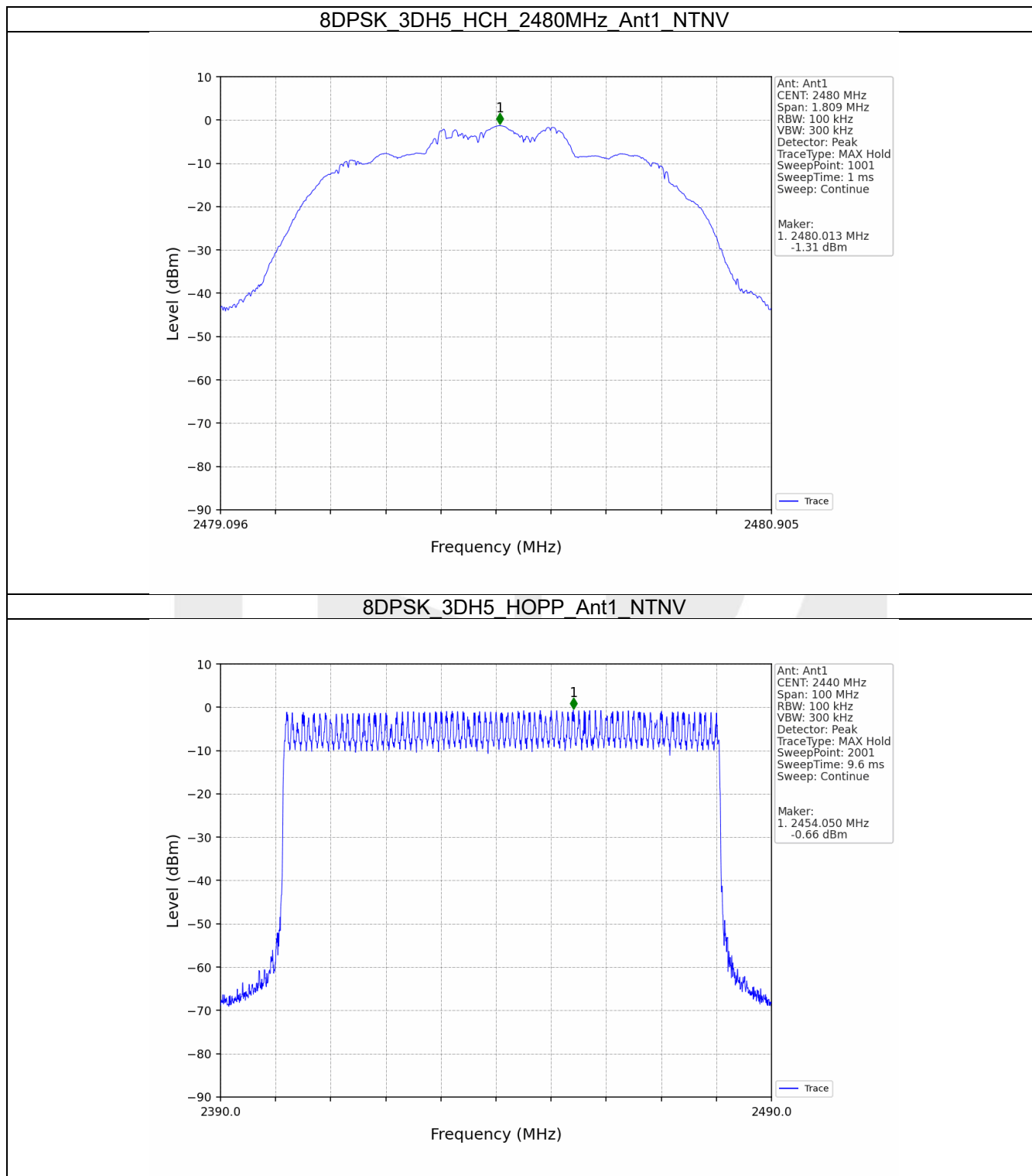


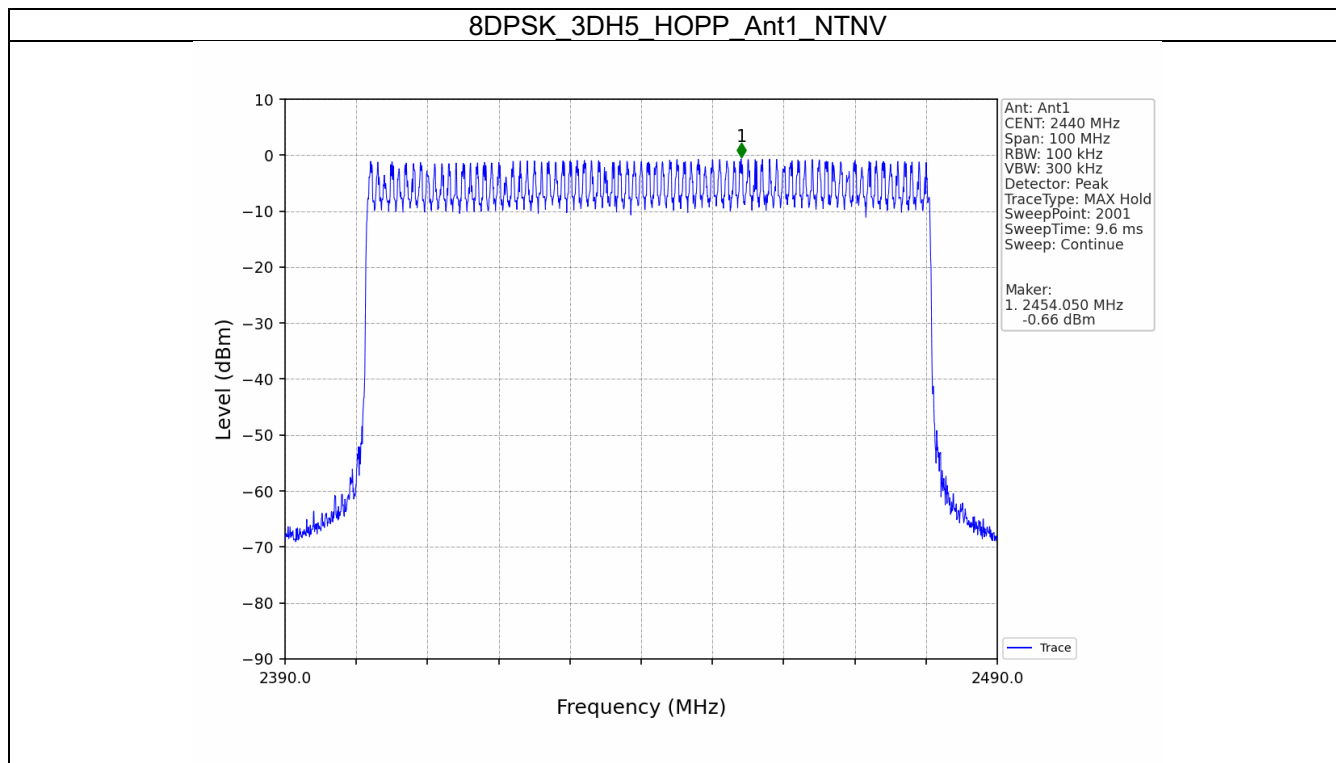




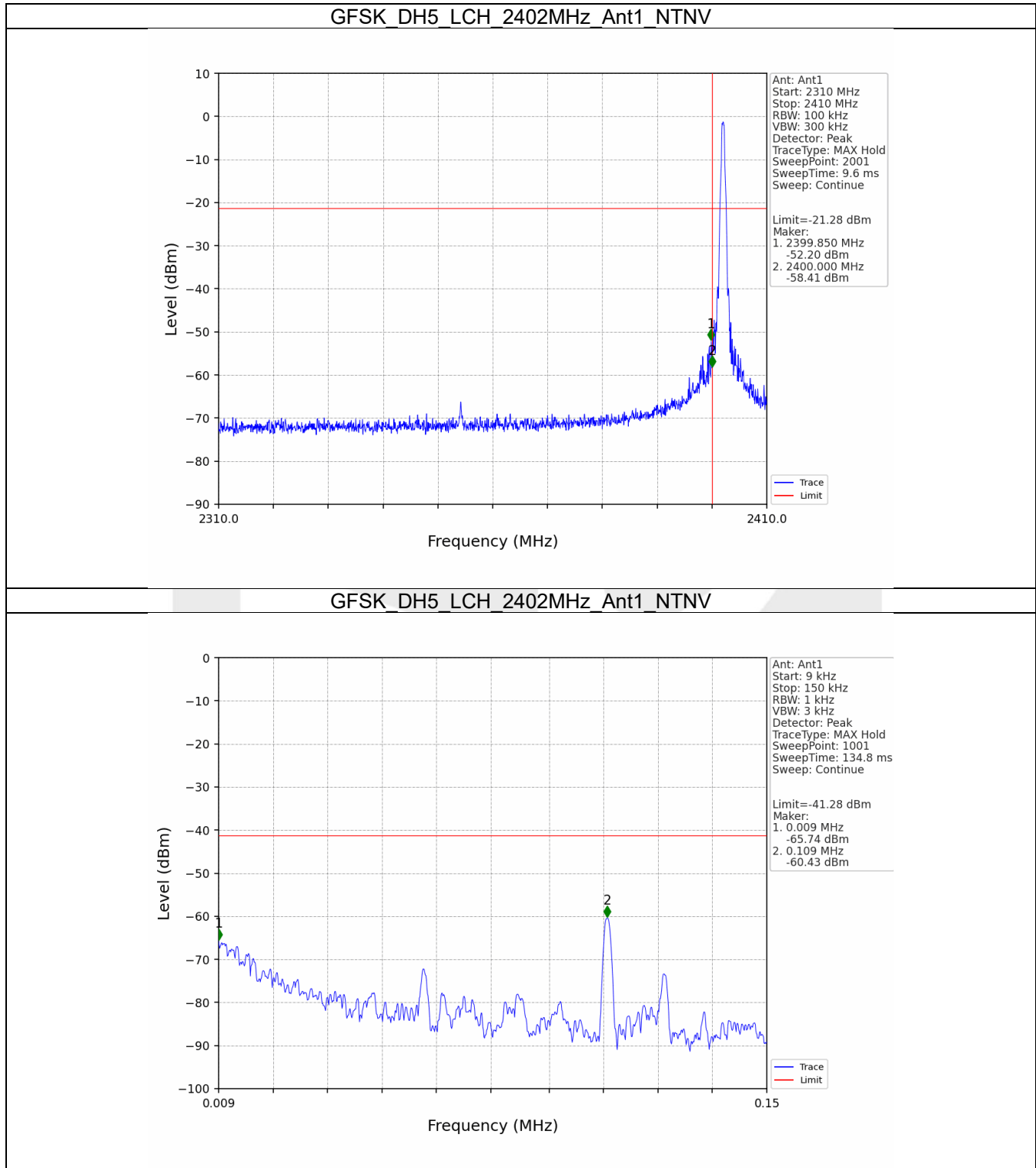


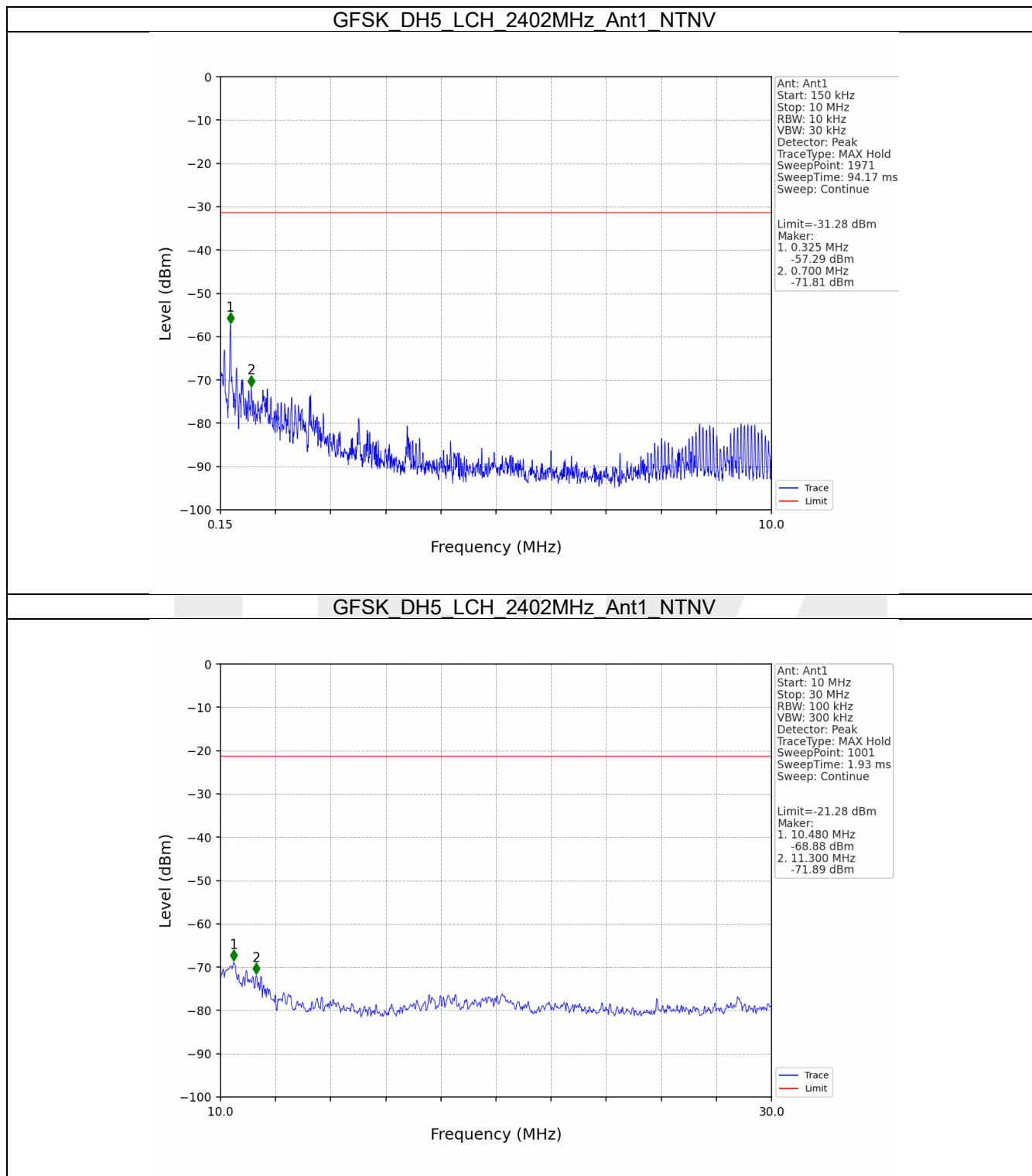


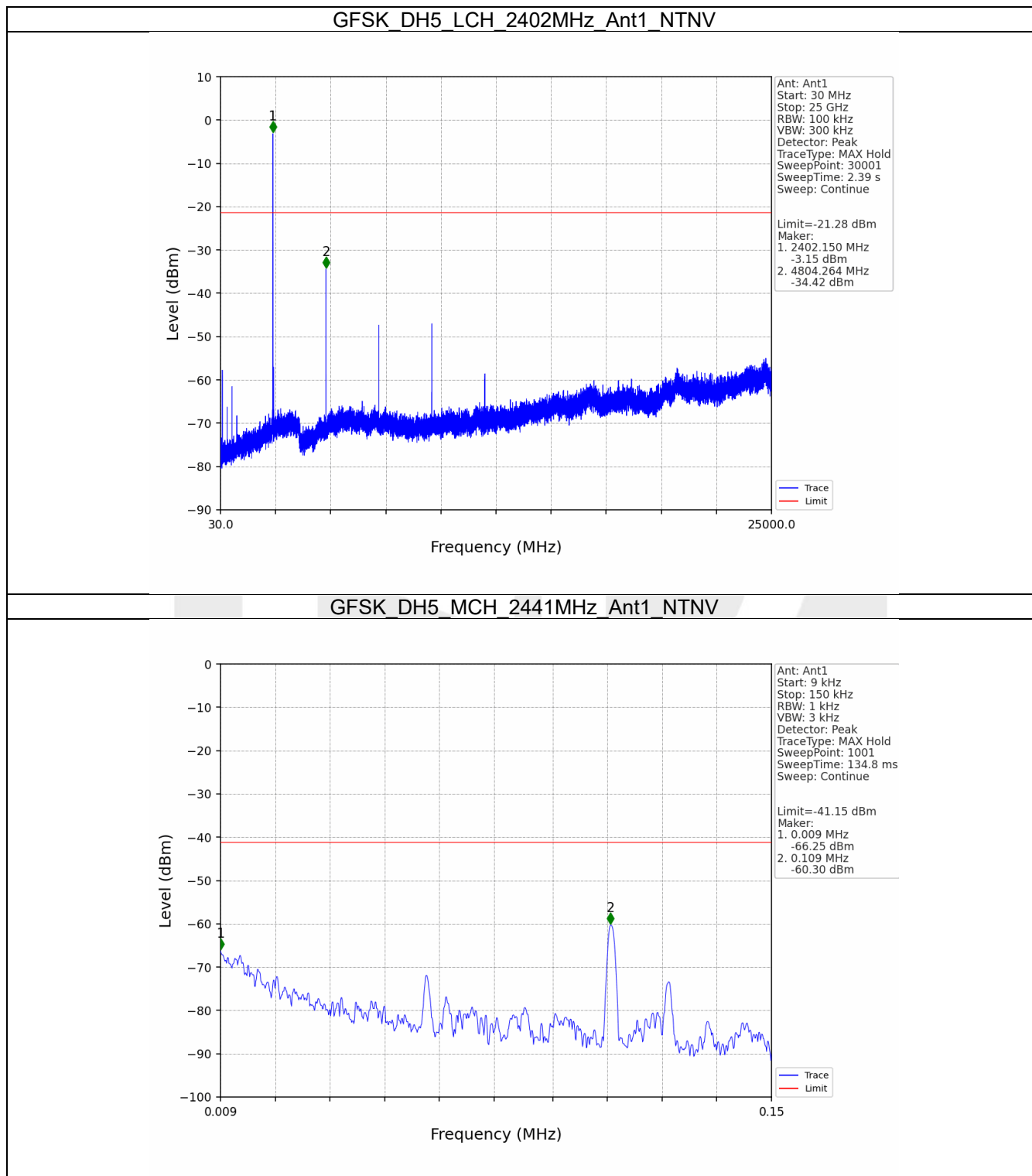


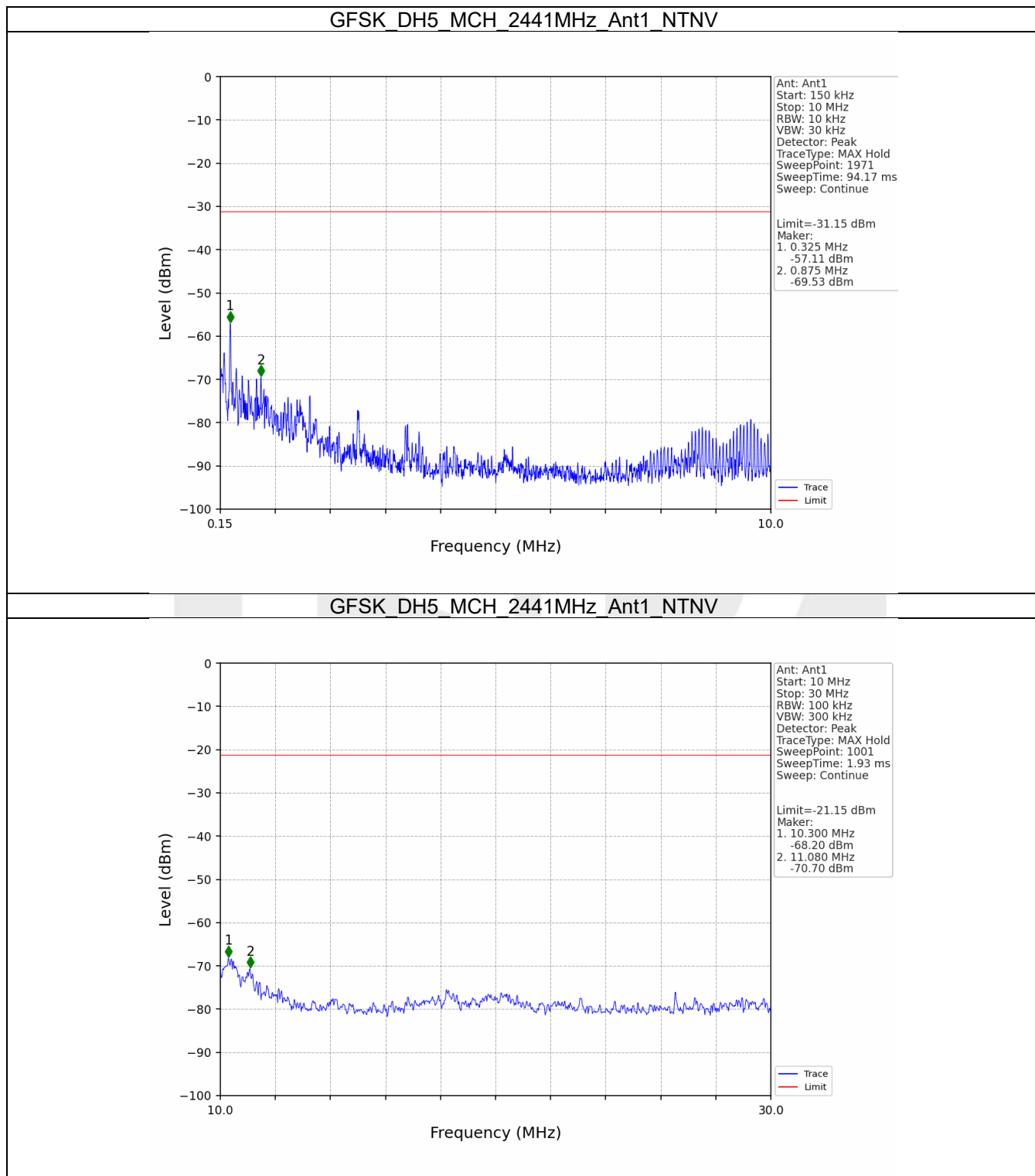


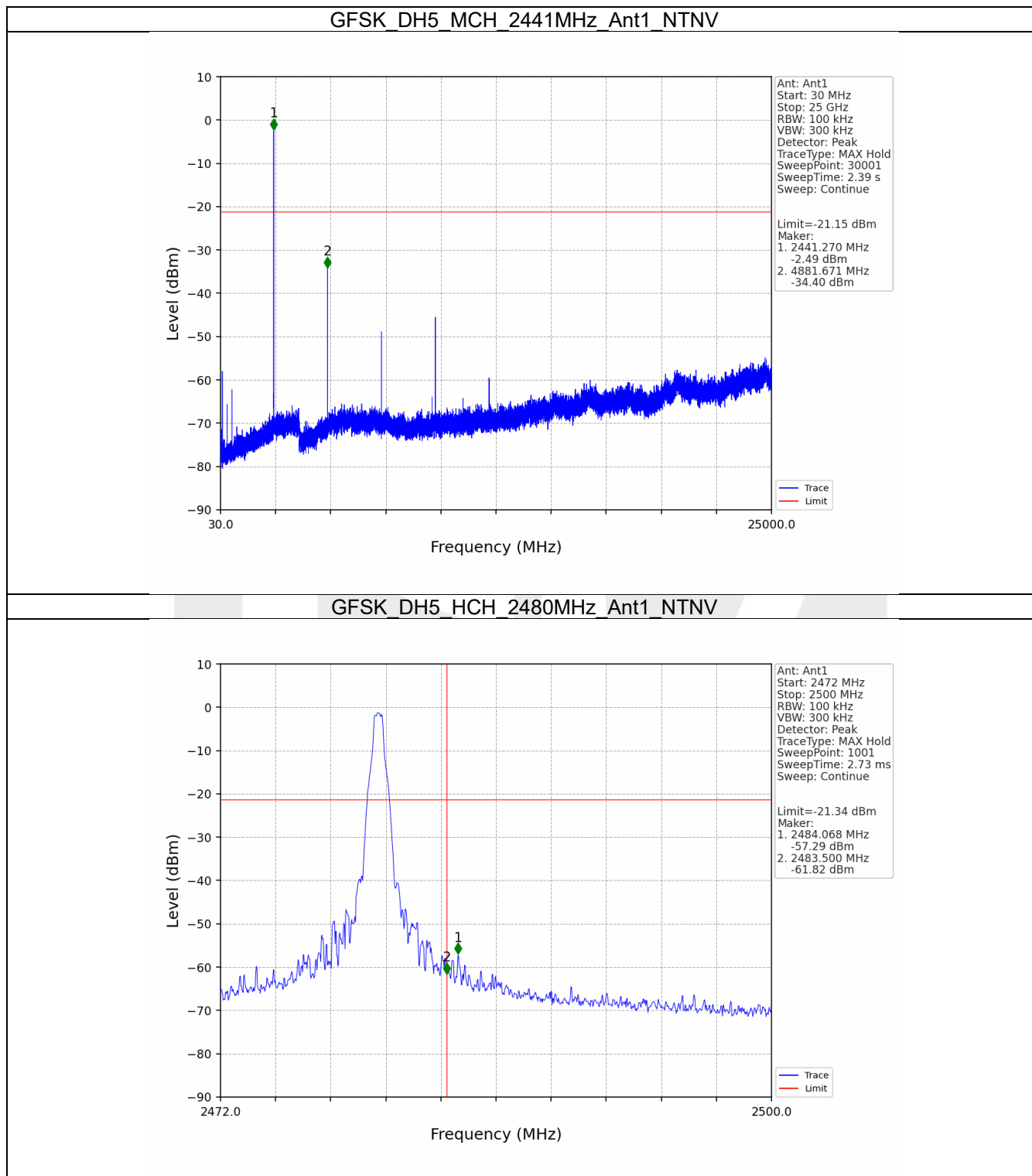
## 7.2.2 CSE

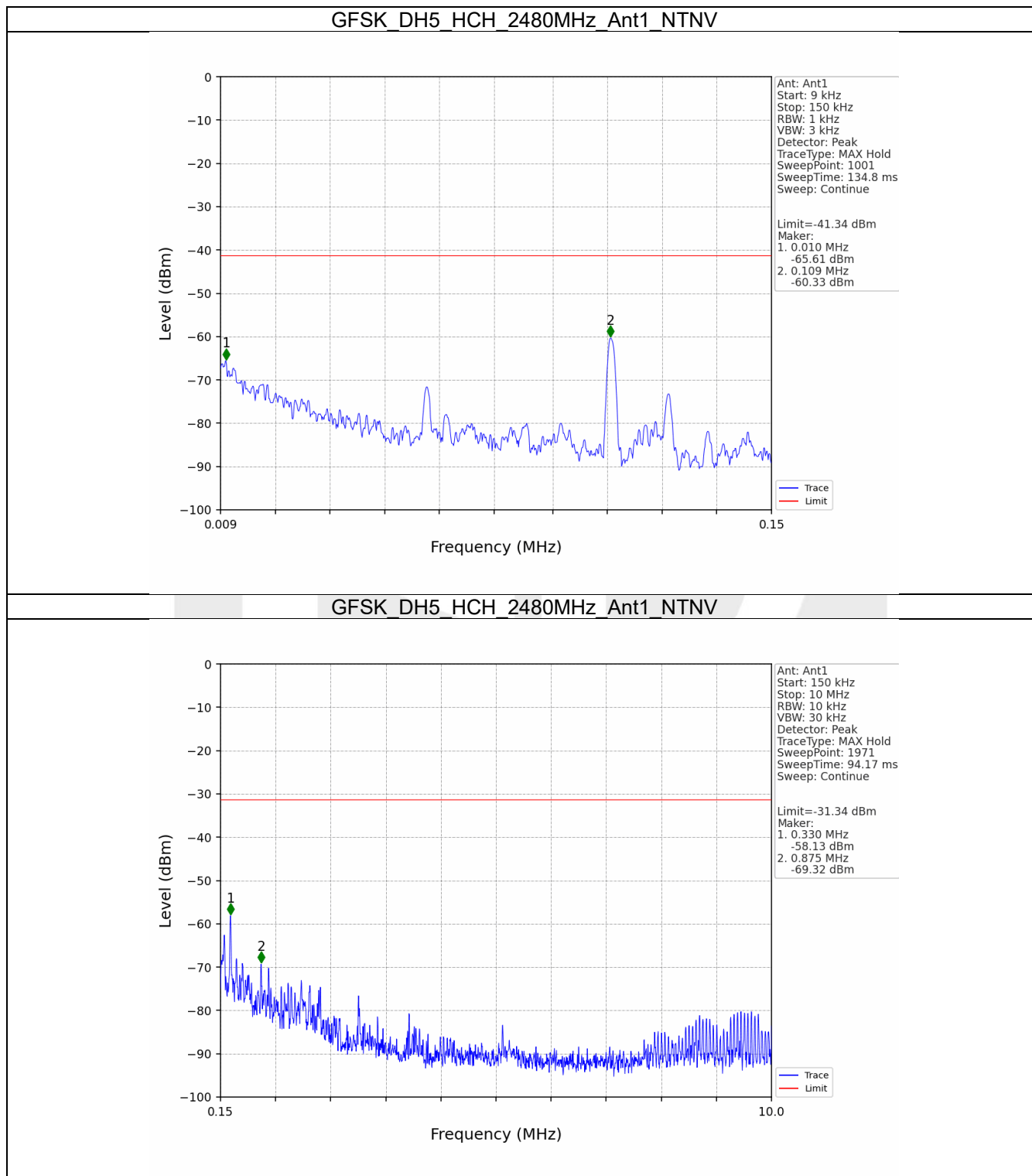


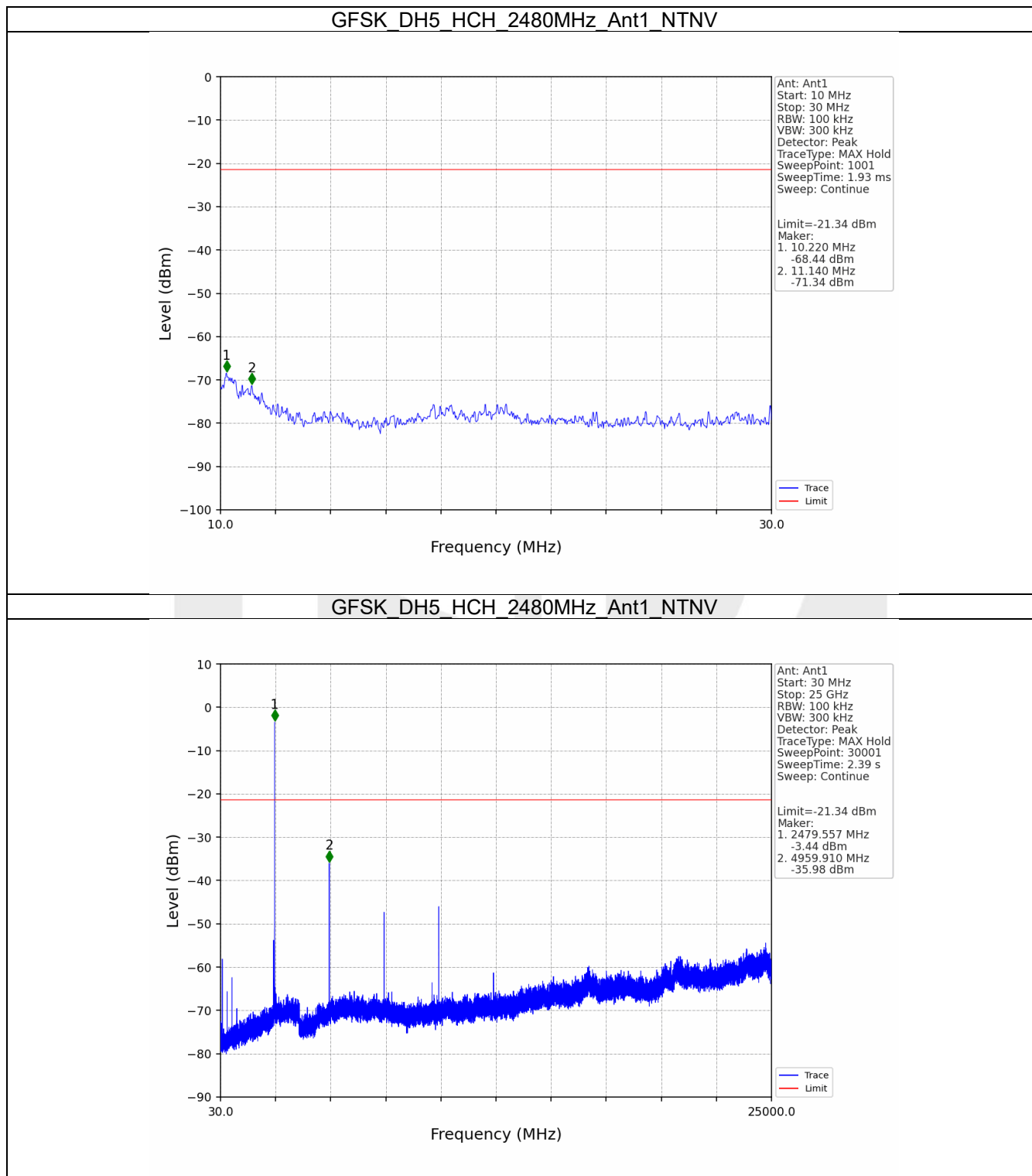


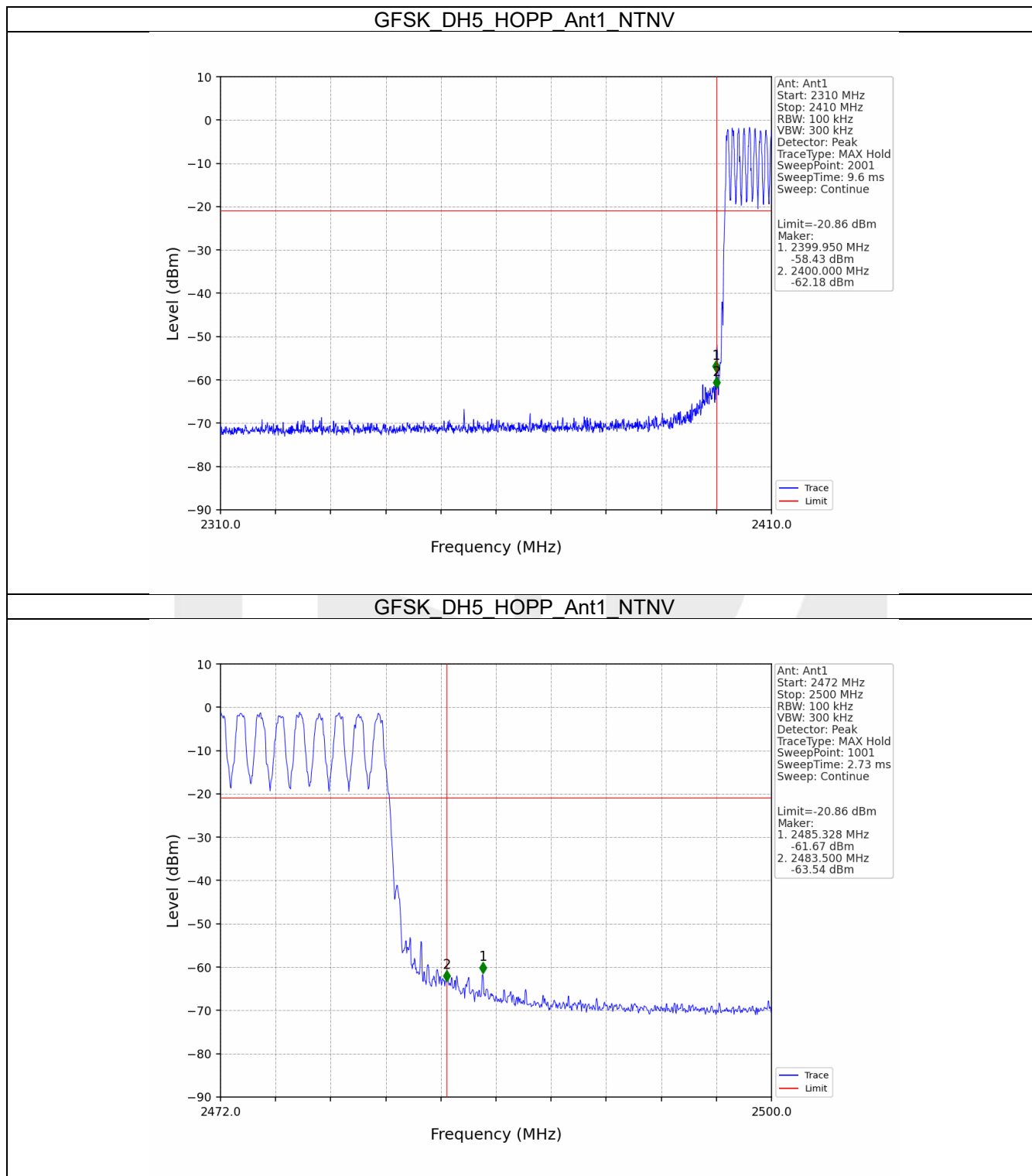


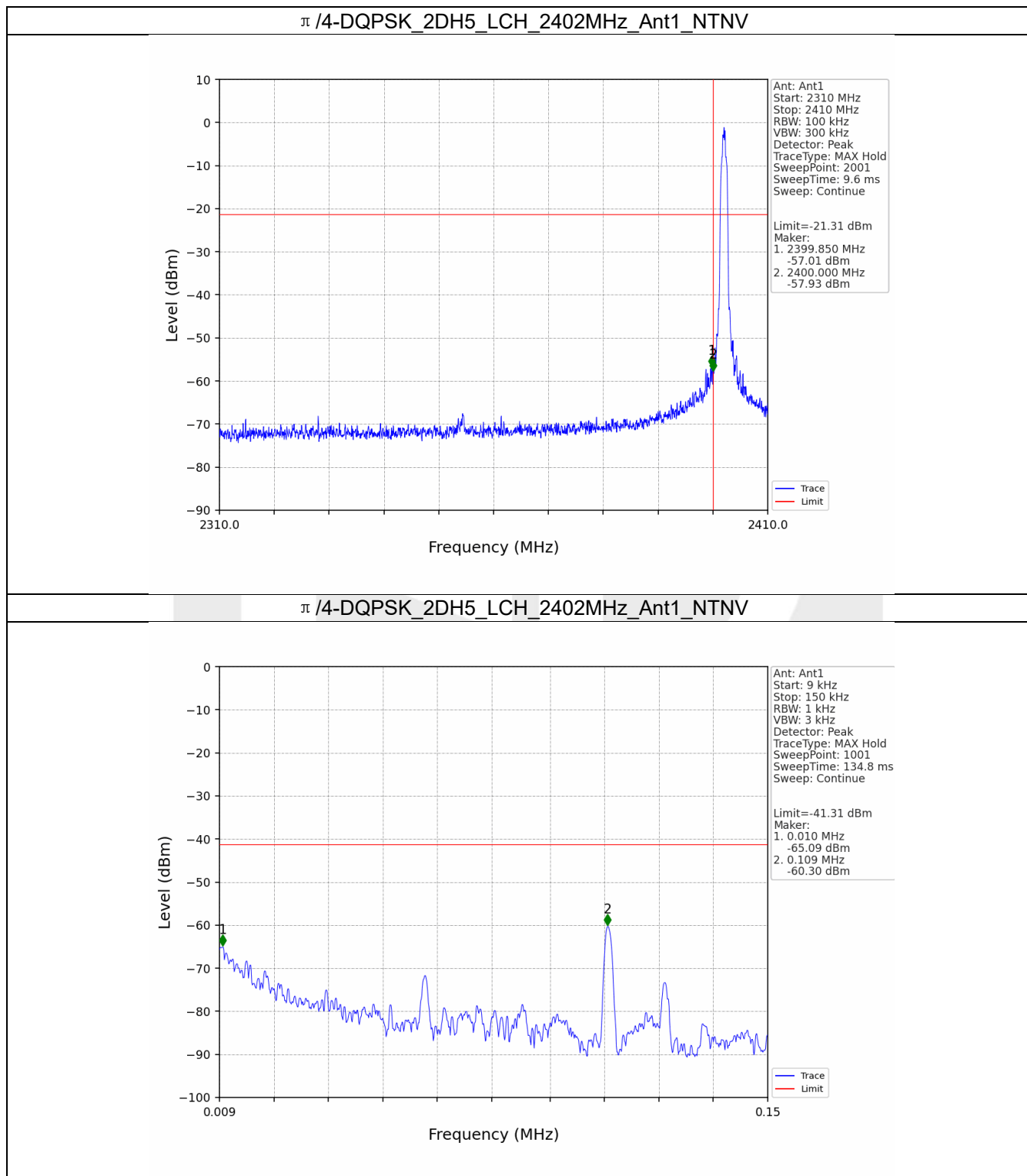


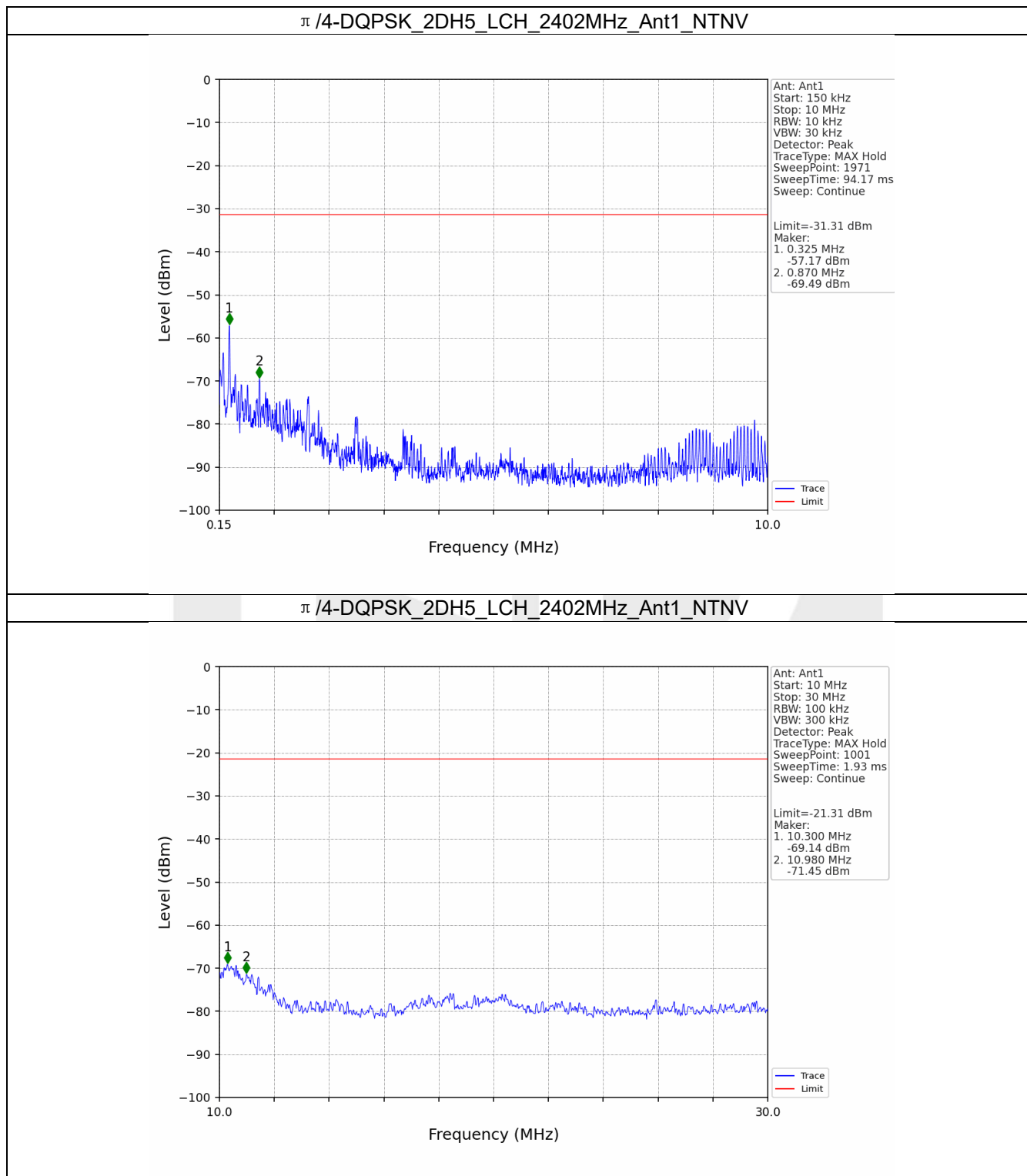


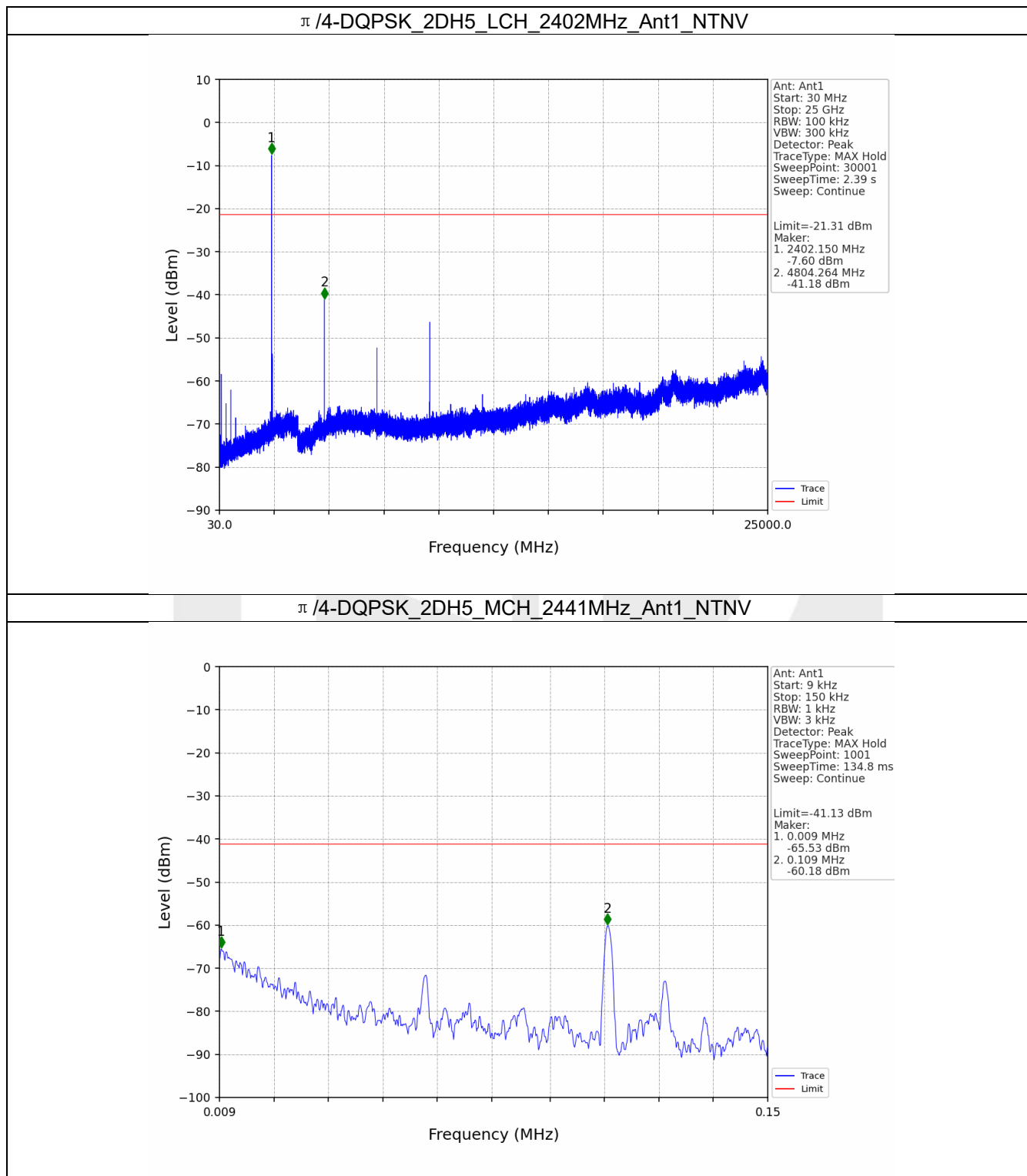


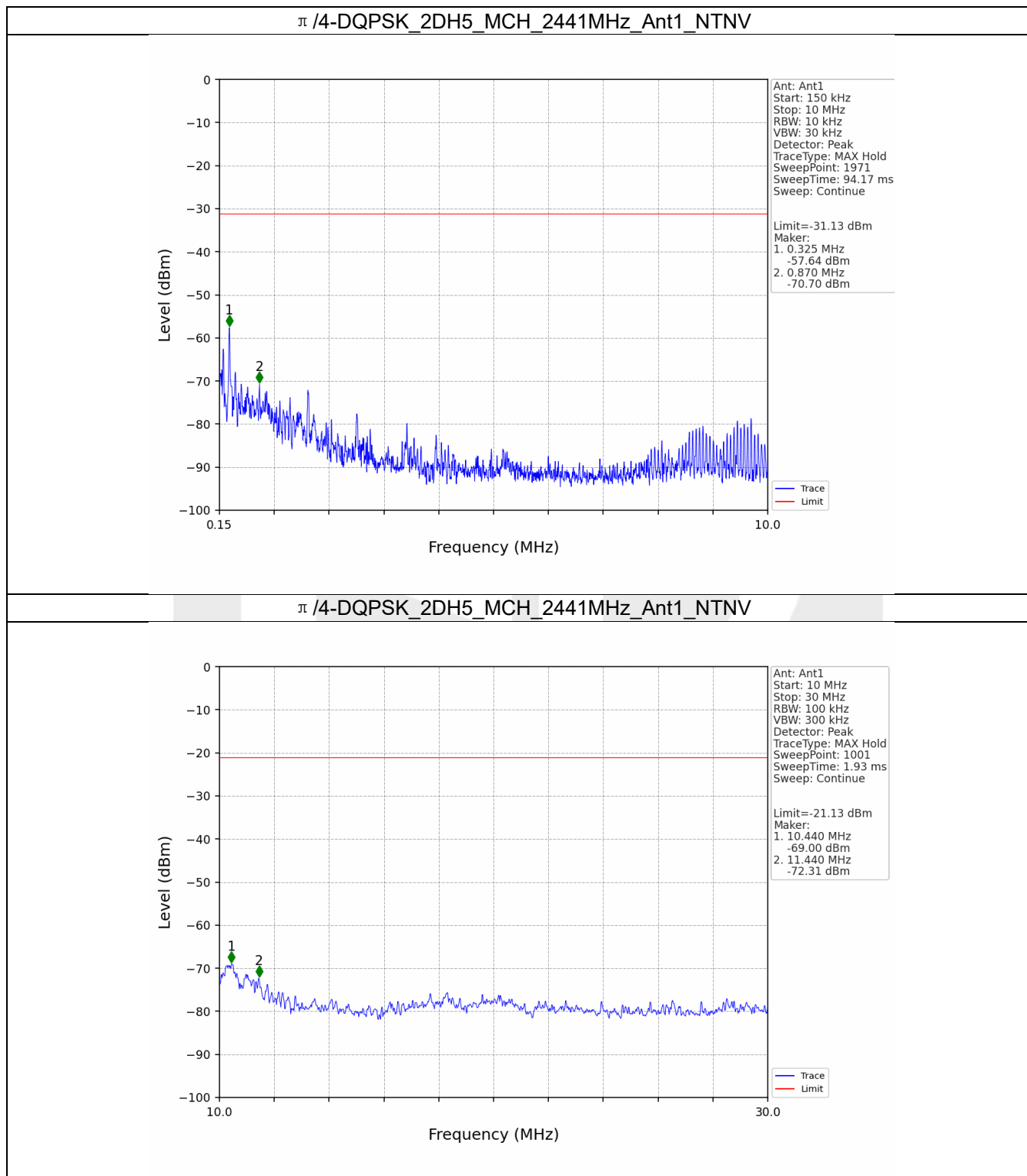


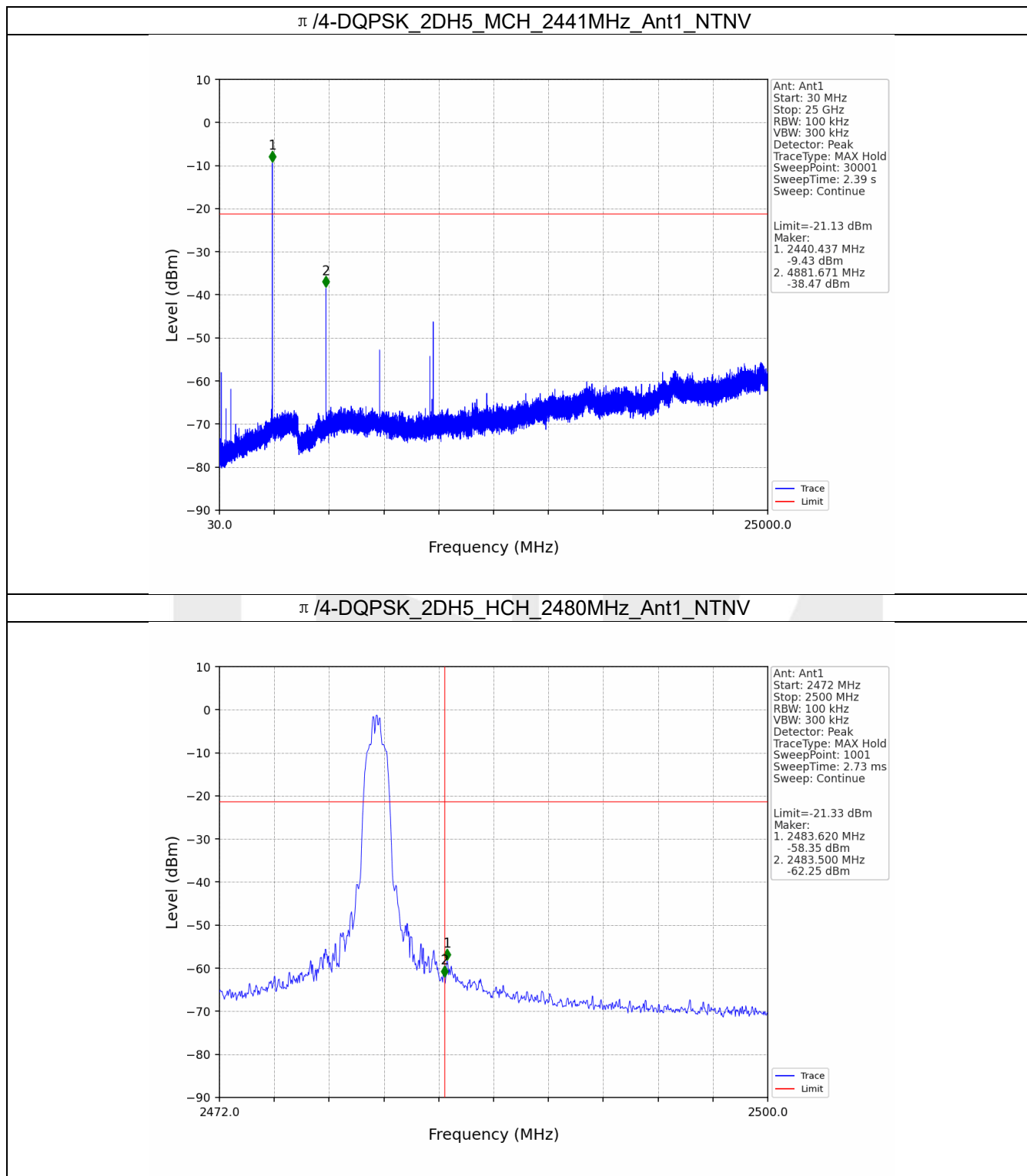


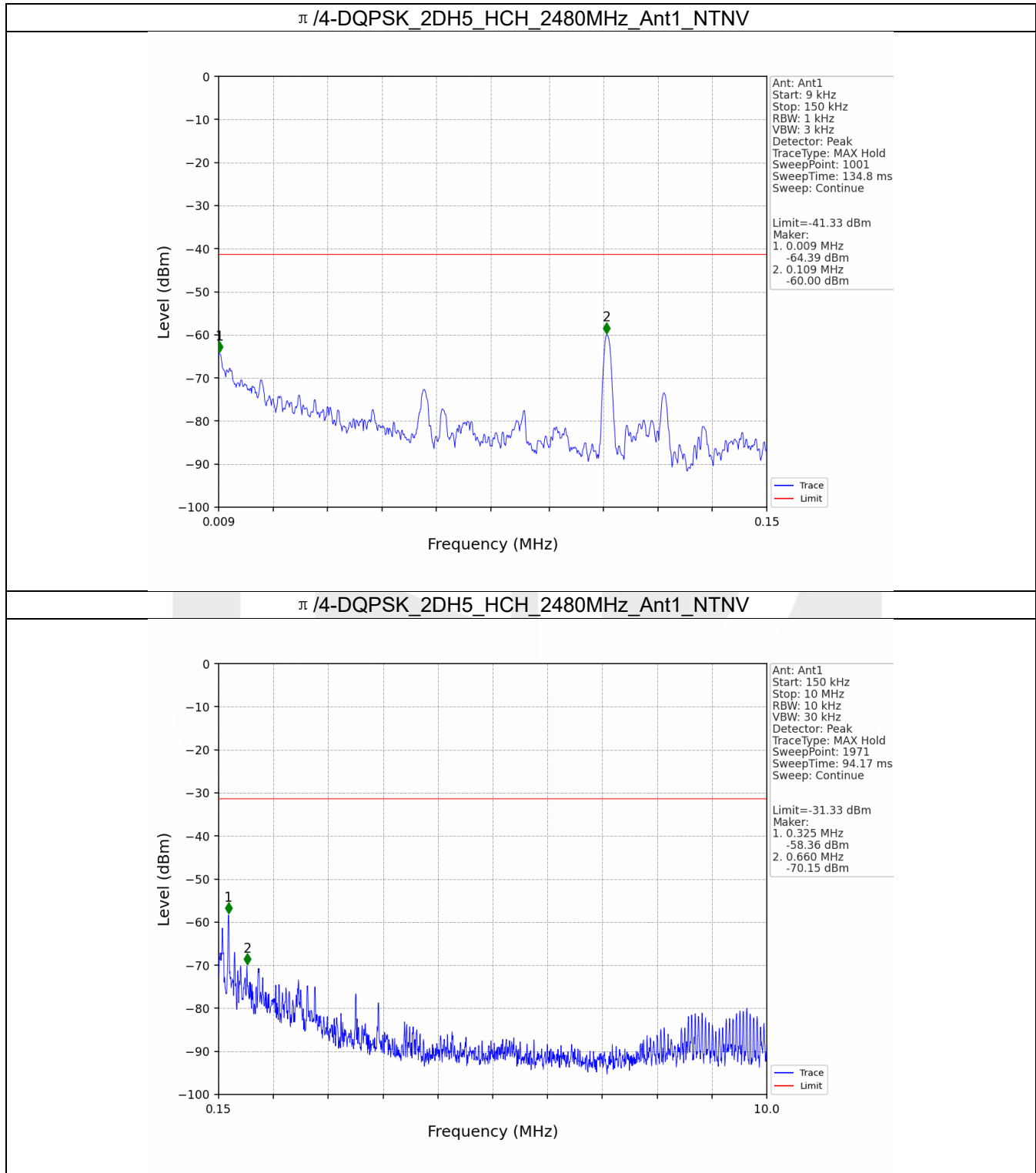


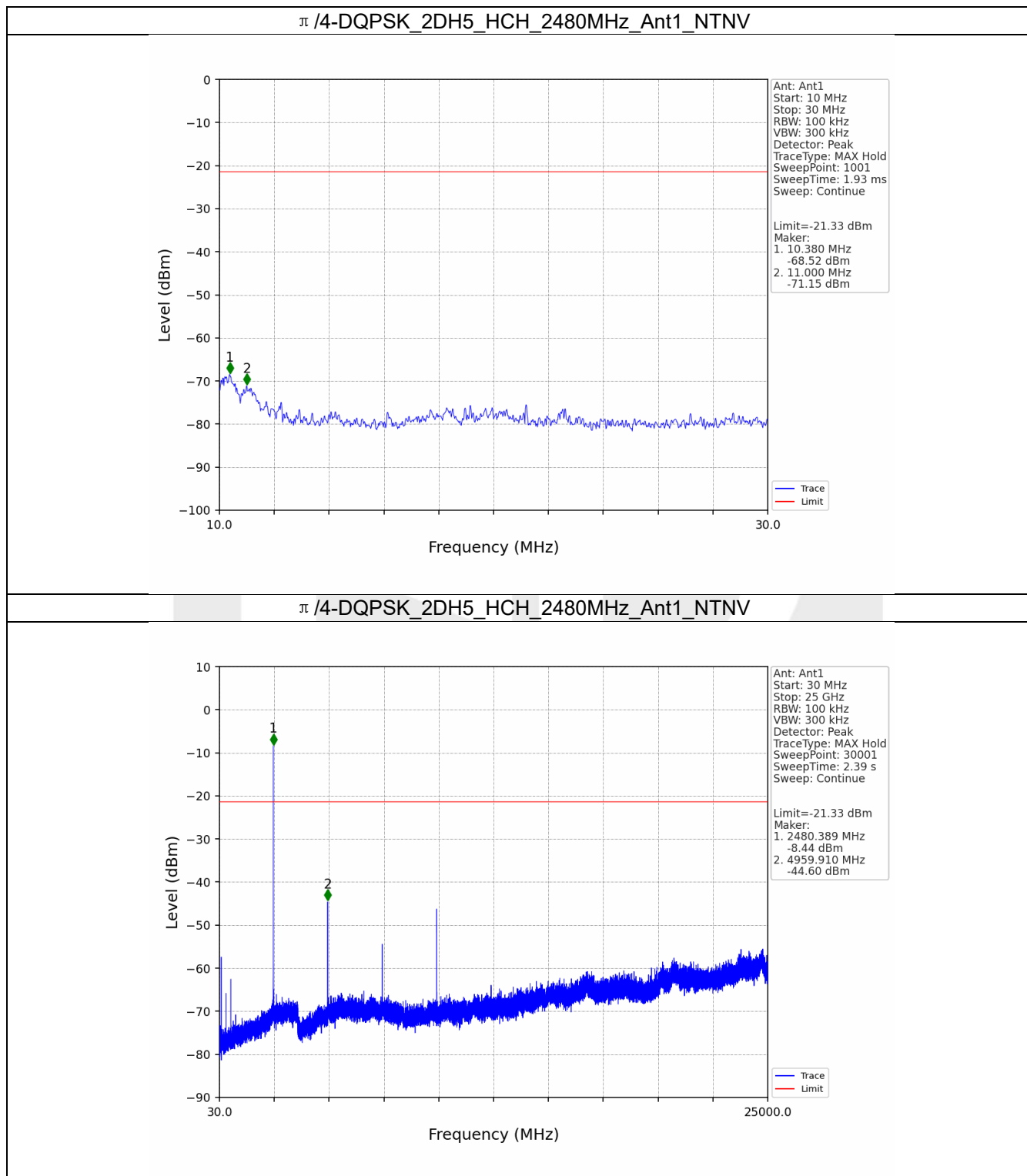


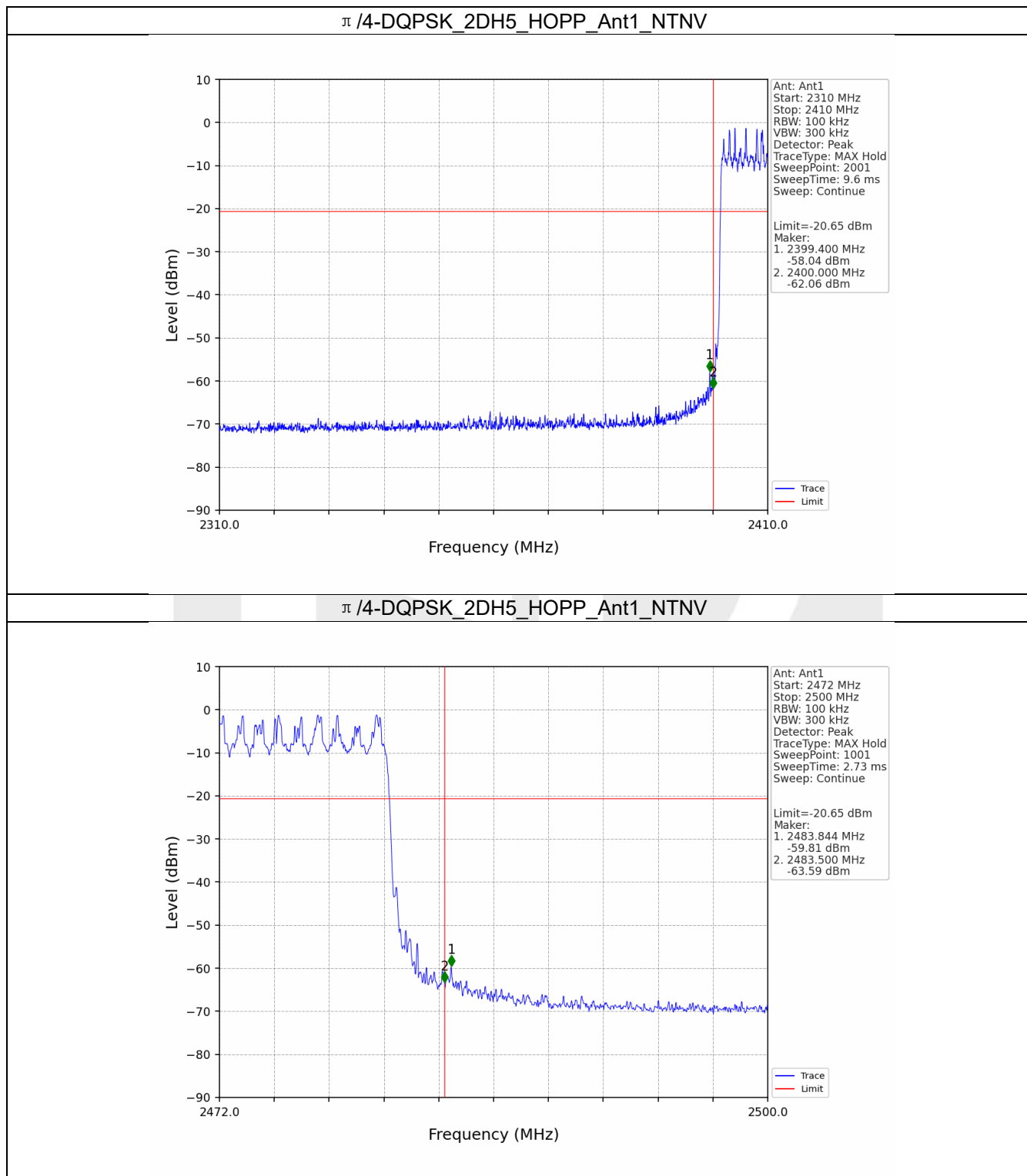


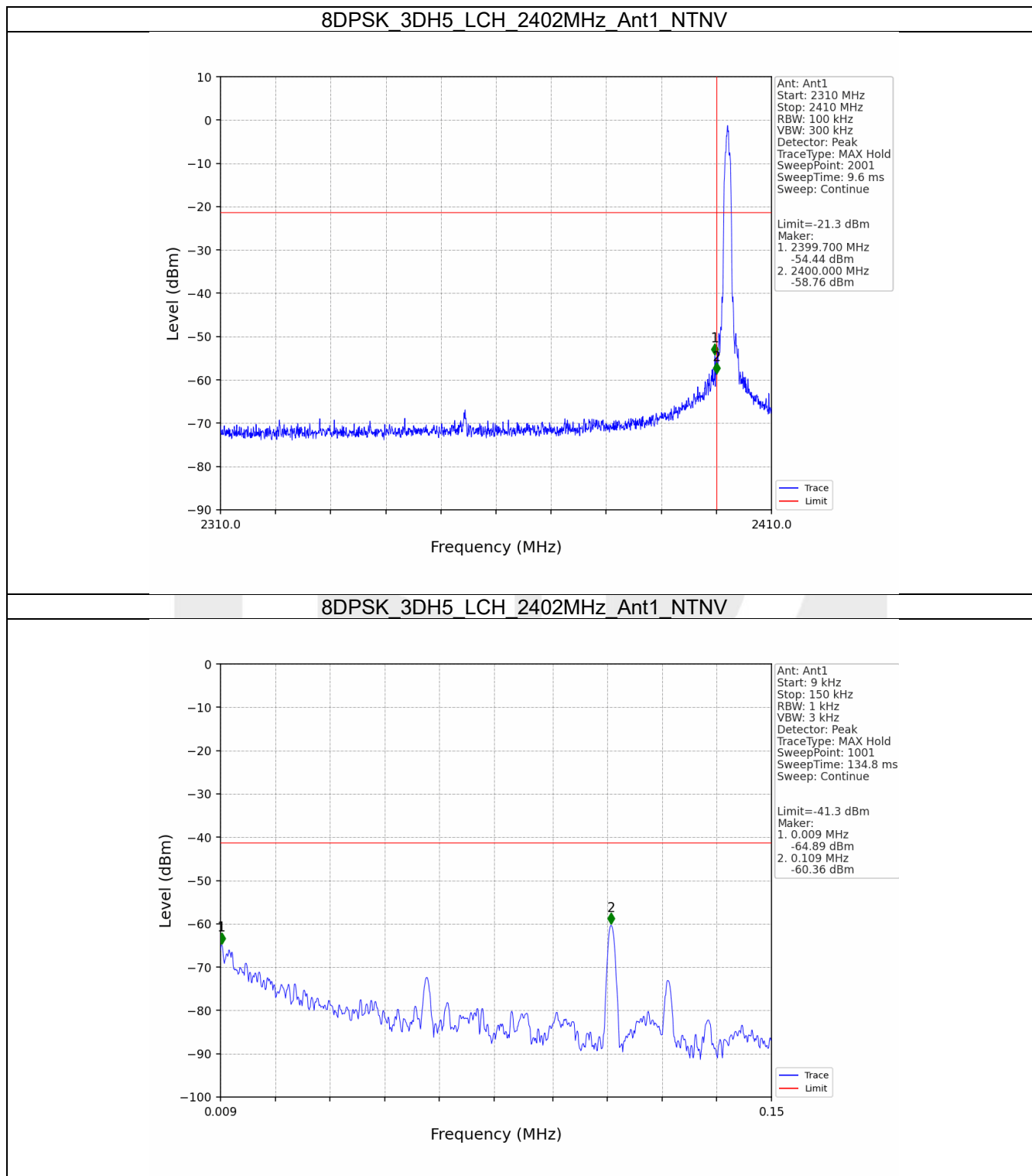


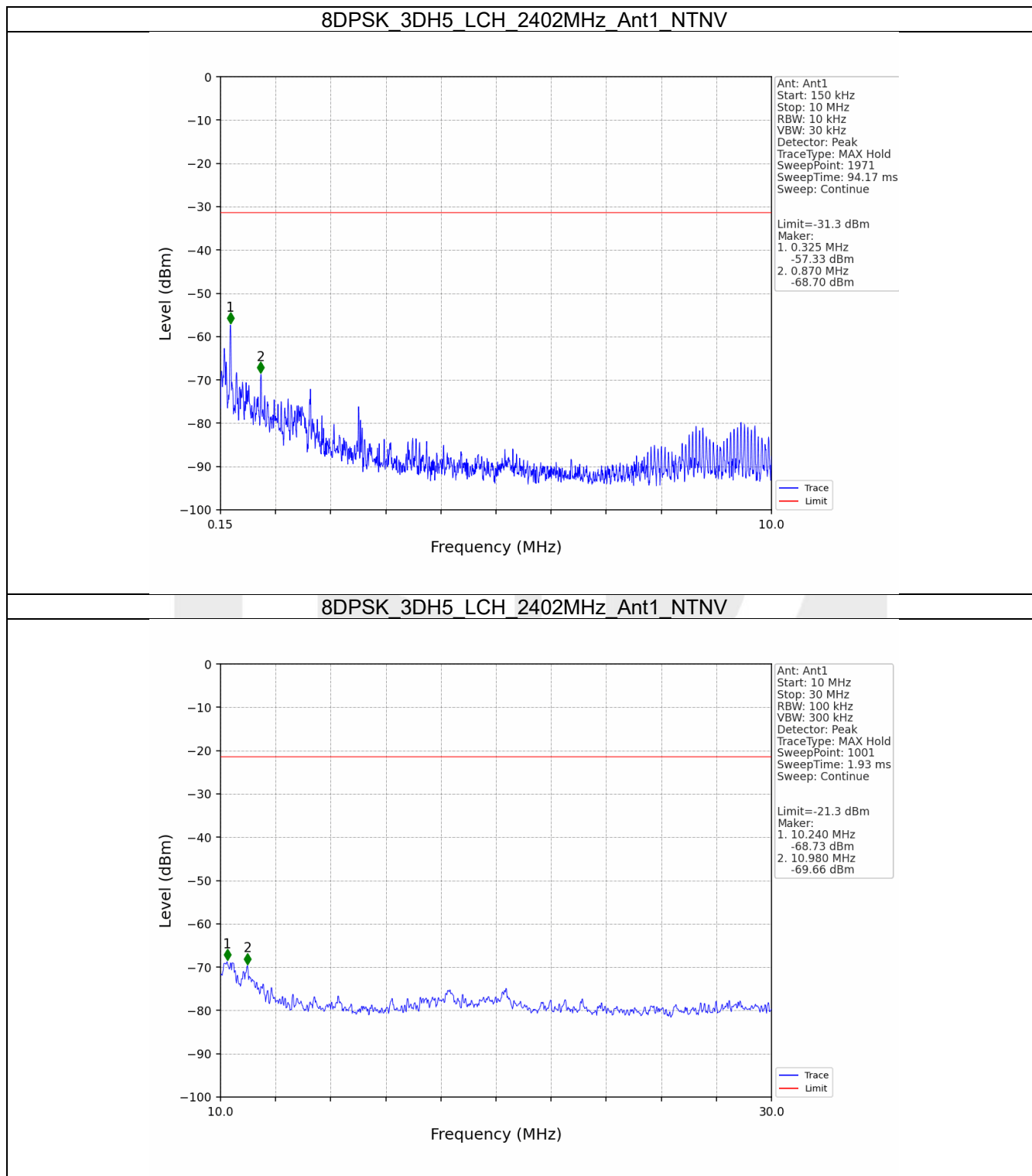


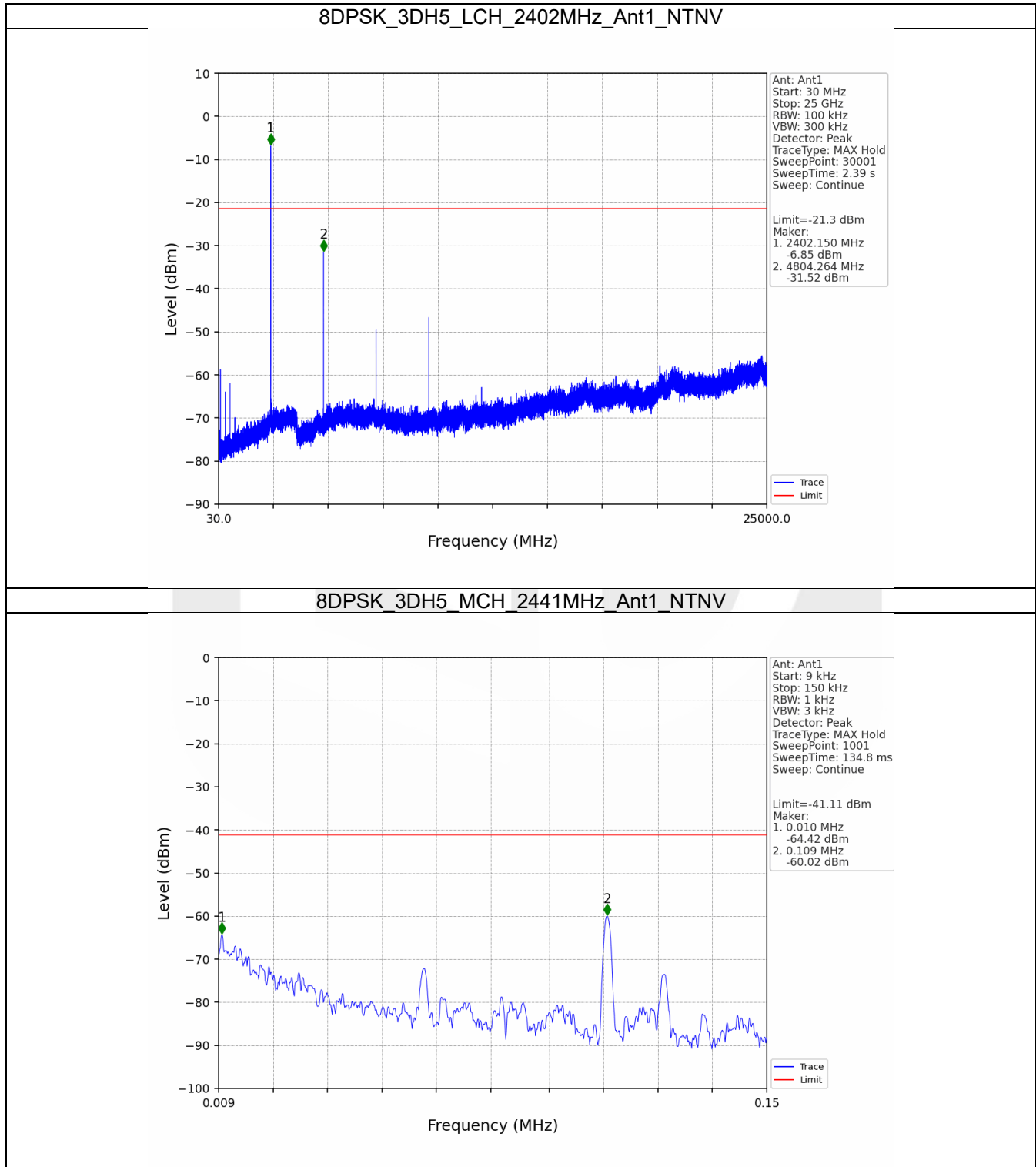


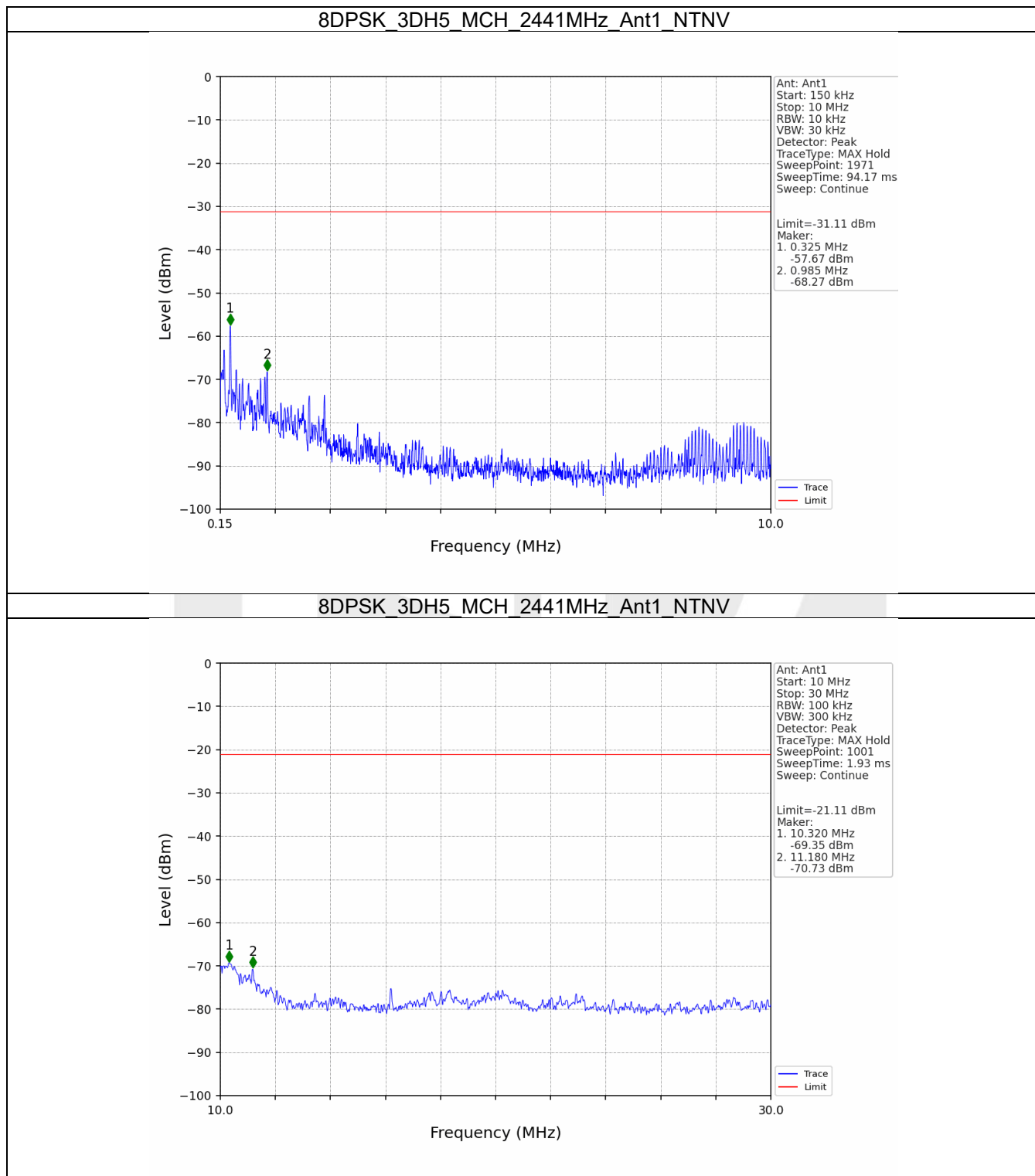


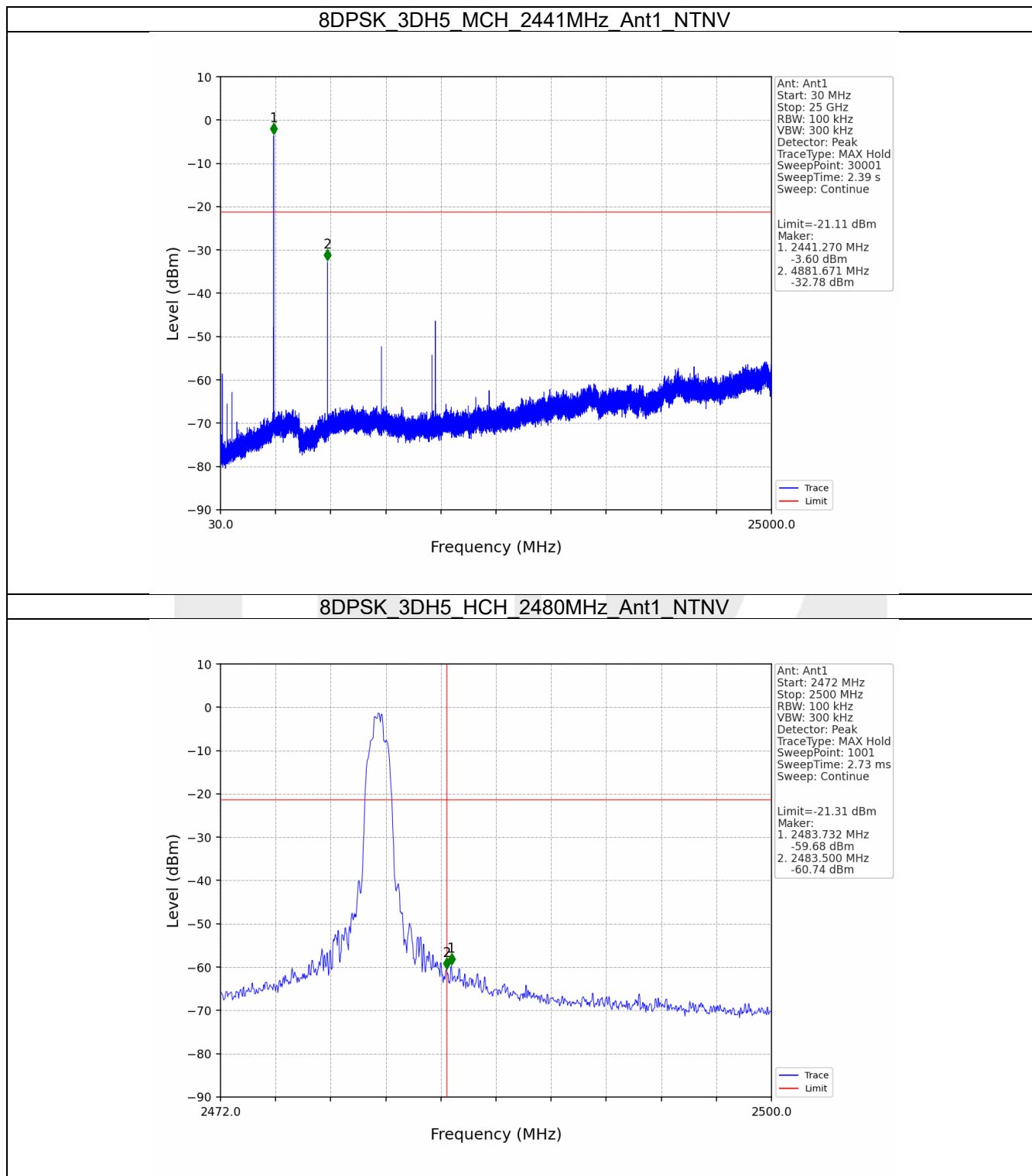


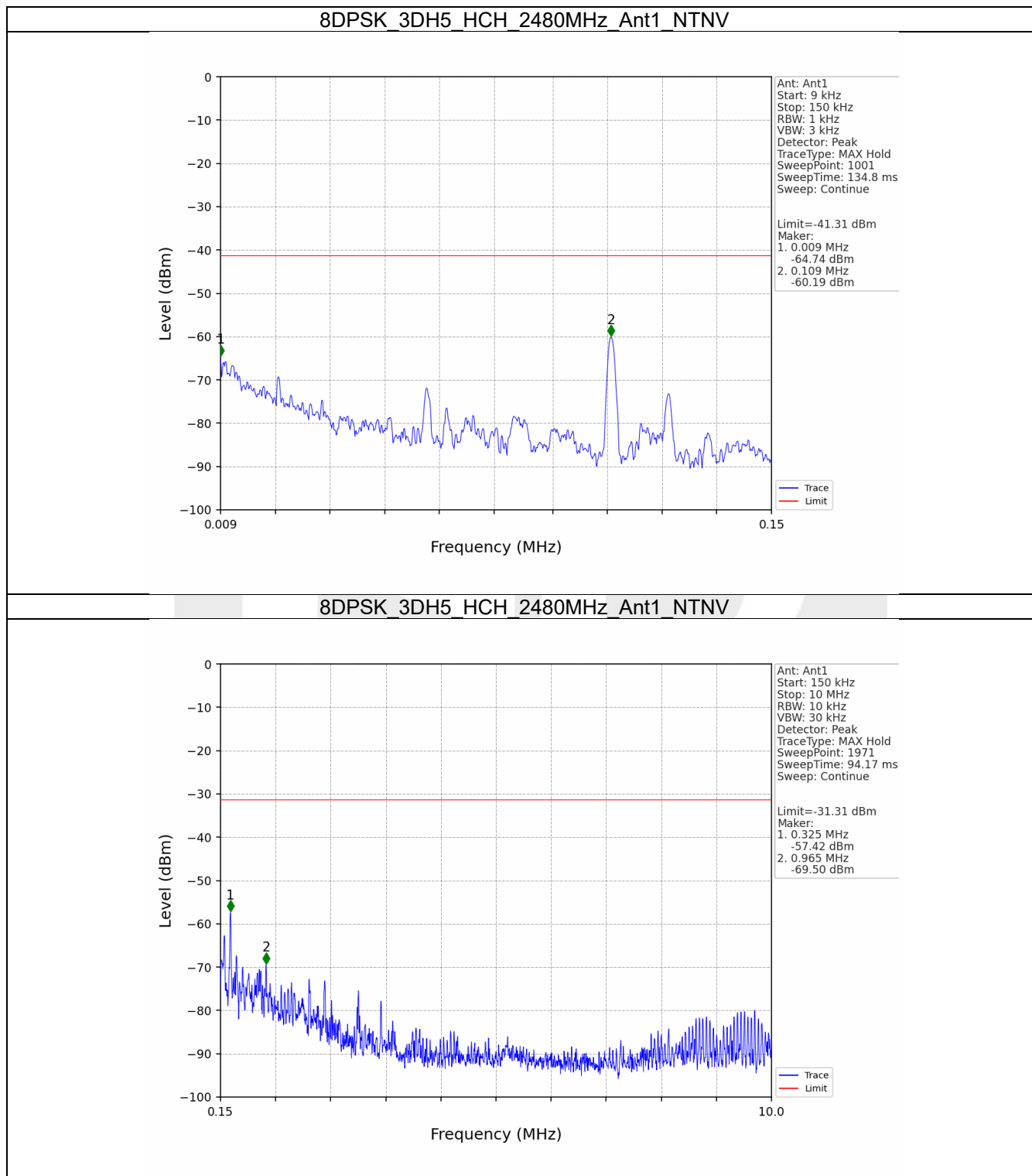


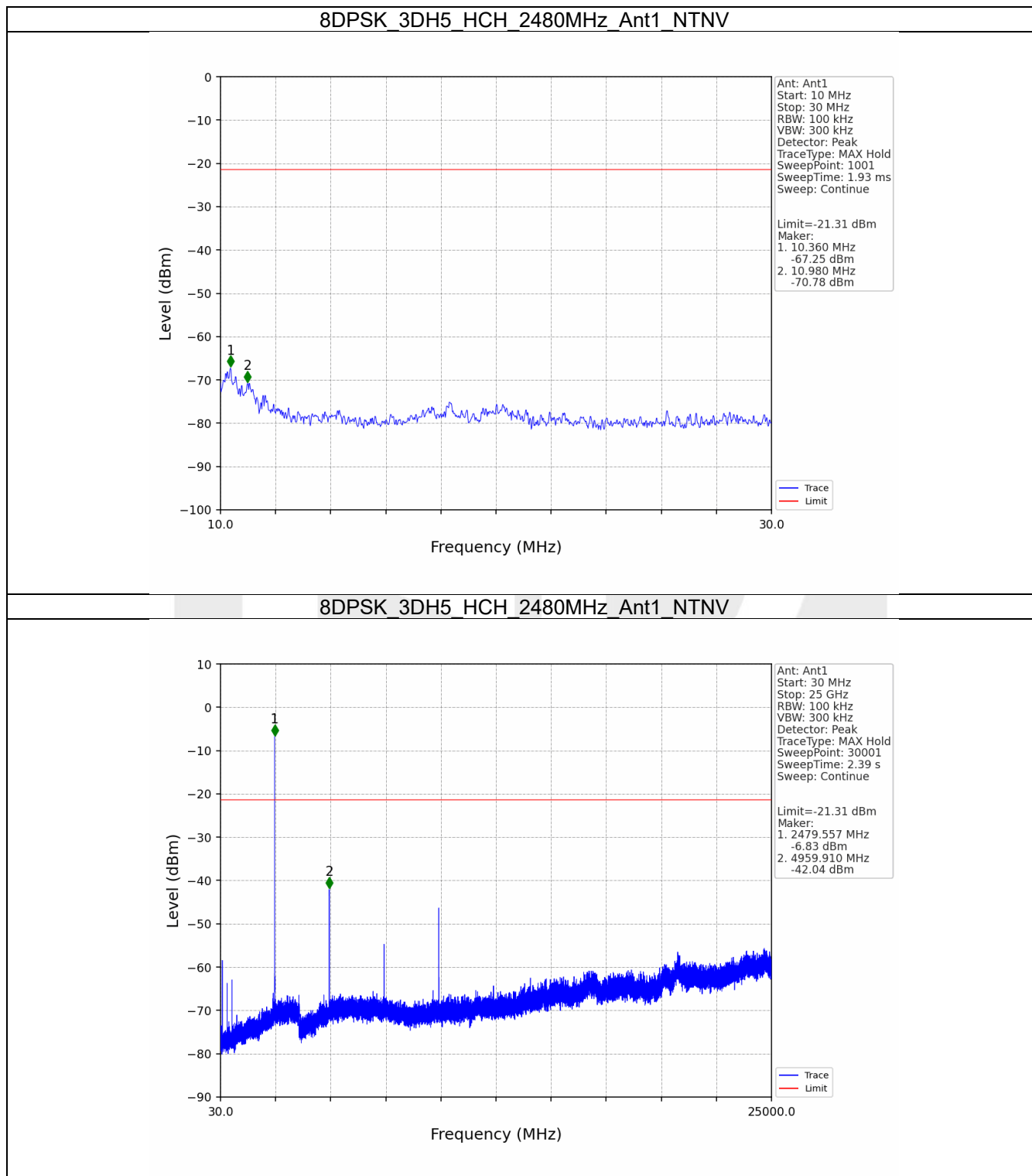


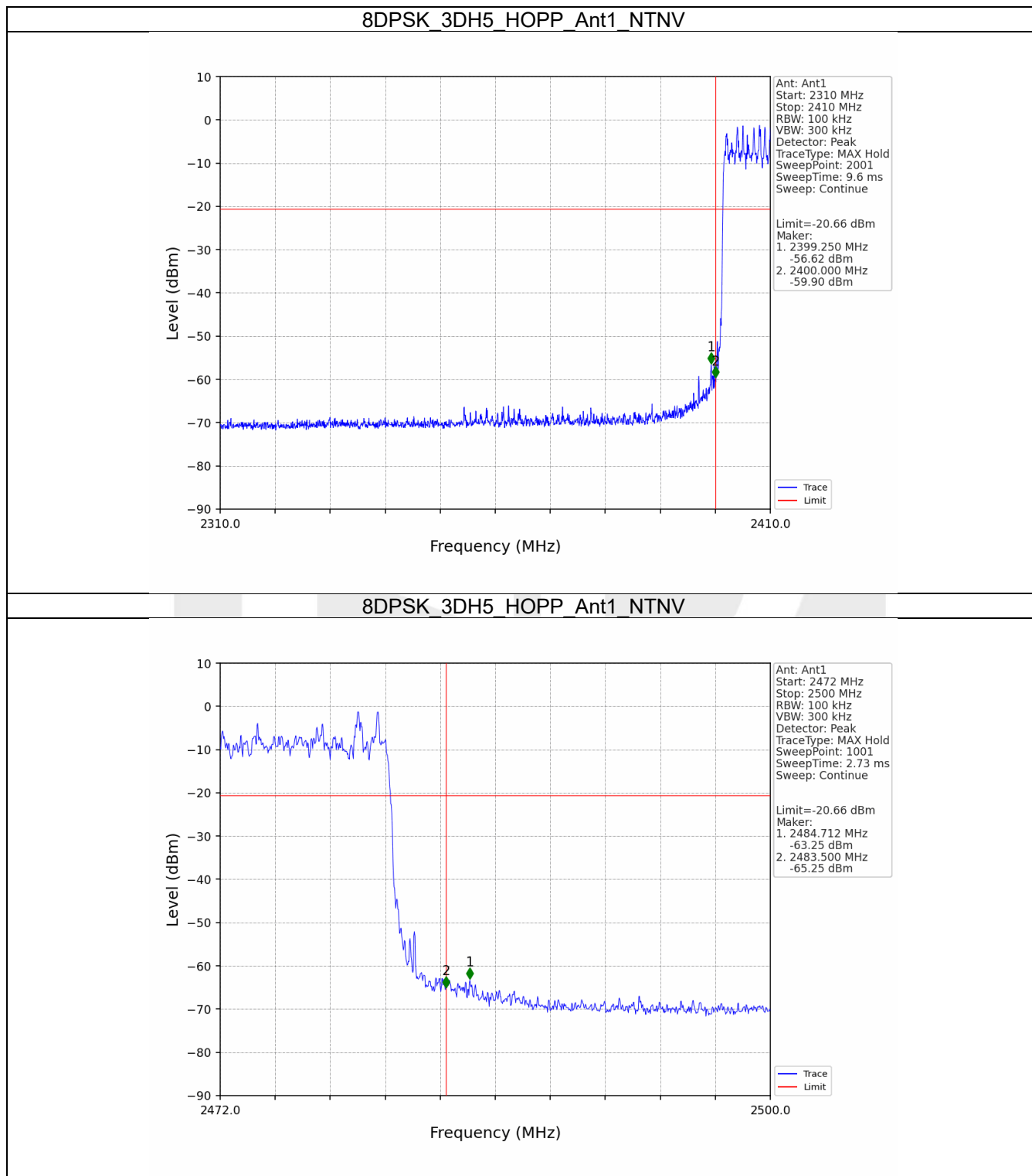












----- End of Report -----