

## **Appendix RF Test Data for BT**

**Company:** : Hunan Dengta Medical Devices Co., Ltd.

**EUT** : Wearable smart watch

**FCC ID:** : 2BYNE-DT3

**Model Number** : DT3

**Report No.** : HTT202609494F01

**Reviewed By** : Heber He

# 1. Duty Cycle

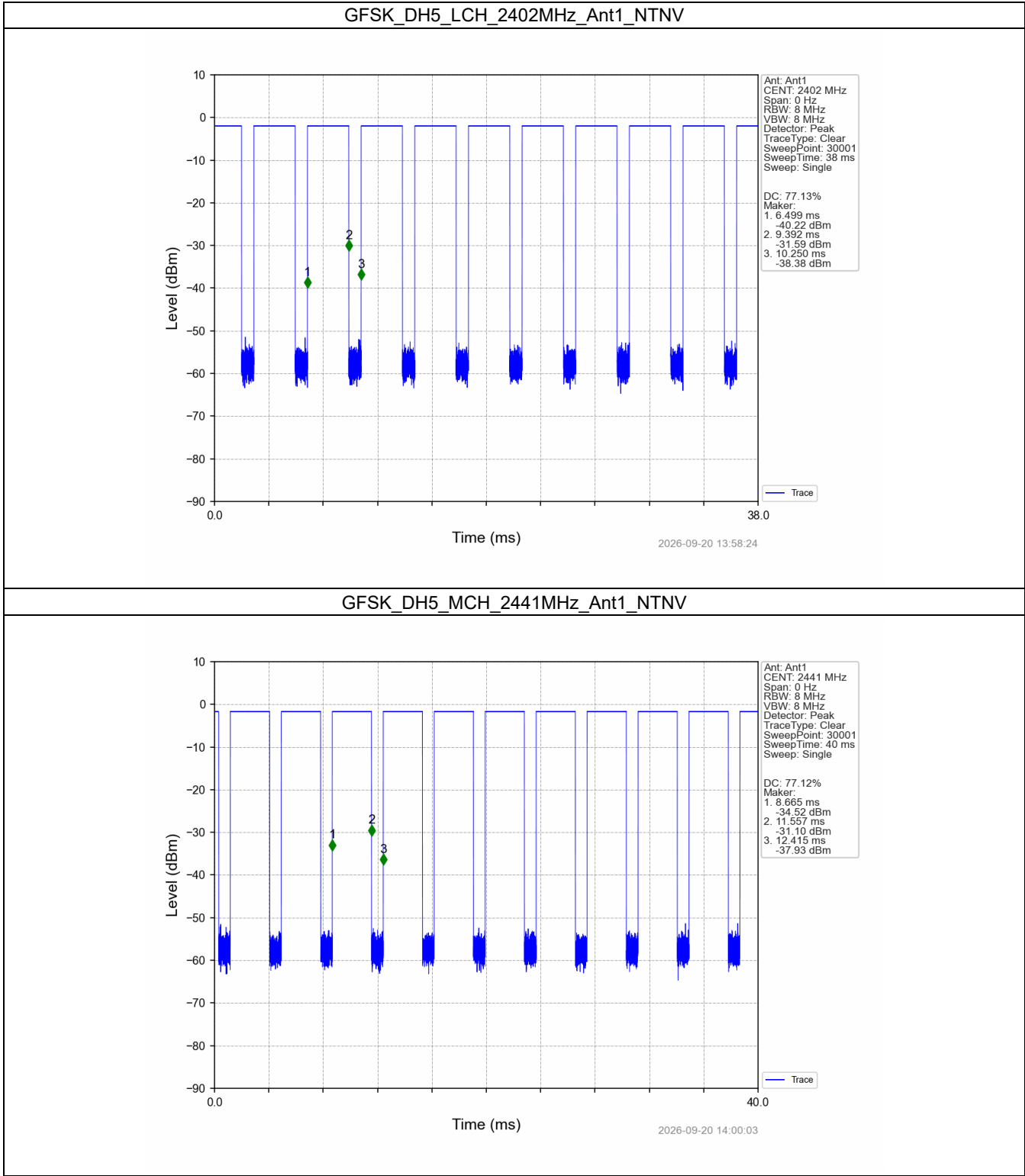
## 1.1 Test Result

### 1.1.1 Ant1

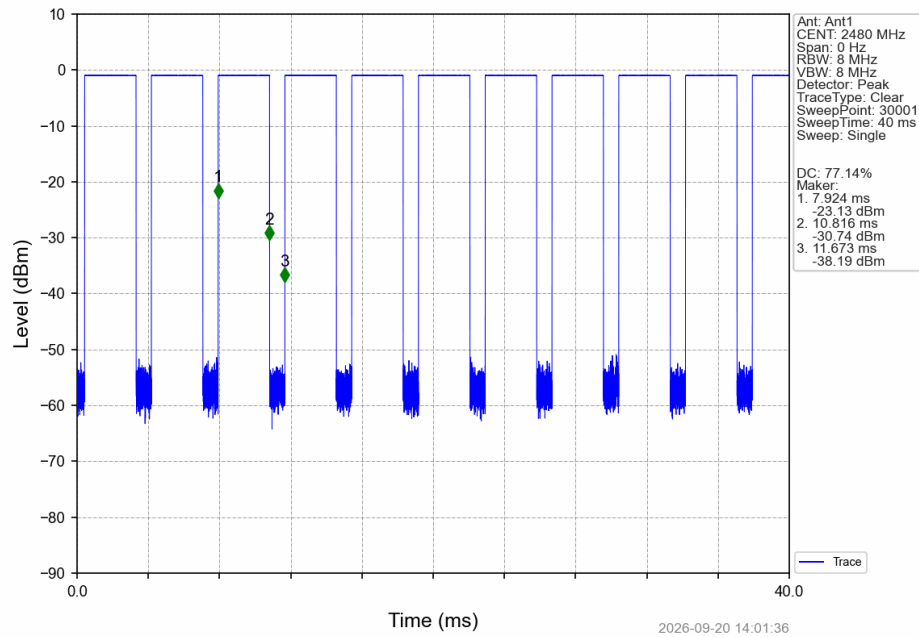
| Ant1      |         |                 |             |           |             |                |                                   |                       |
|-----------|---------|-----------------|-------------|-----------|-------------|----------------|-----------------------------------|-----------------------|
| 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         | 2.893     | 3.751       | 77.13          | 1.13                              | 0.03                  |
|           |         | 2441            | DH5         | 2.892     | 3.750       | 77.12          | 1.13                              | 0.04                  |
|           |         | 2480            | DH5         | 2.892     | 3.749       | 77.14          | 1.13                              | 0.04                  |
| Pi/4DQPSK | SISO    | 2402            | 2DH5        | 2.898     | 3.750       | 77.28          | 1.12                              | 0.04                  |
|           |         | 2441            | 2DH5        | 2.898     | 3.751       | 77.26          | 1.12                              | 0.06                  |
|           |         | 2480            | 2DH5        | 2.898     | 3.751       | 77.26          | 1.12                              | 0.06                  |

# 1.2 Test Graph

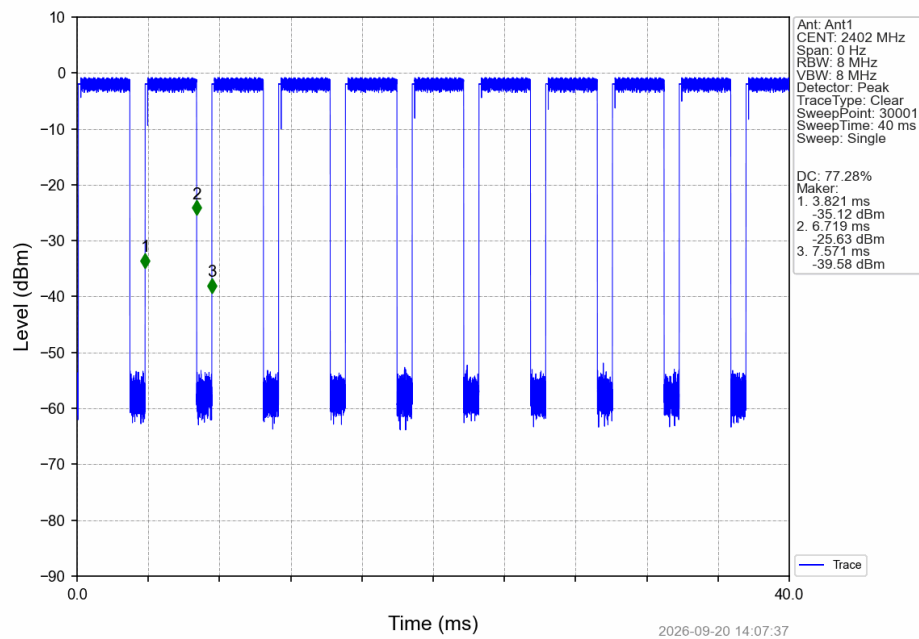
## 1.2.1 Ant1



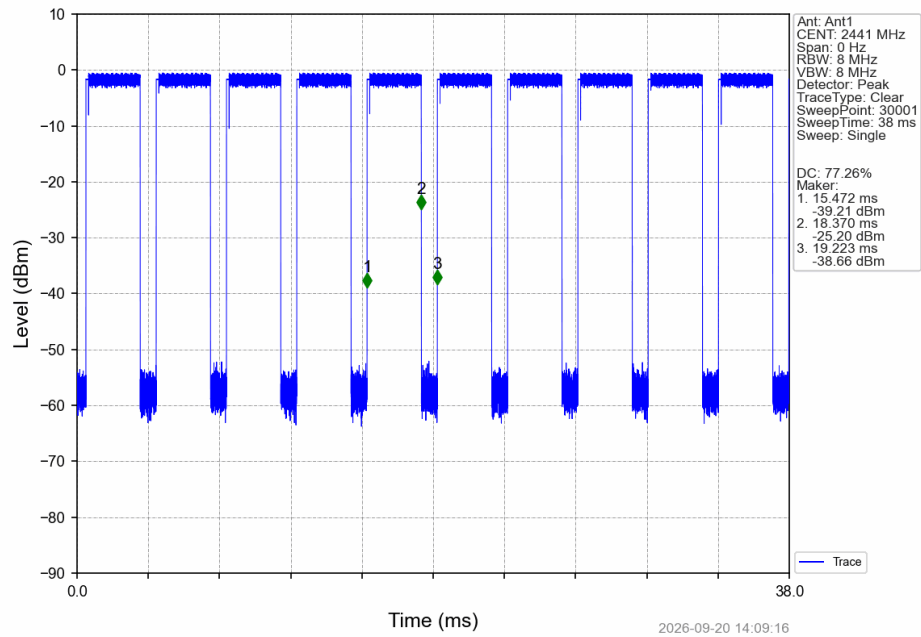
# GFSK\_DH5\_HCH\_2480MHz\_Ant1\_NTNV



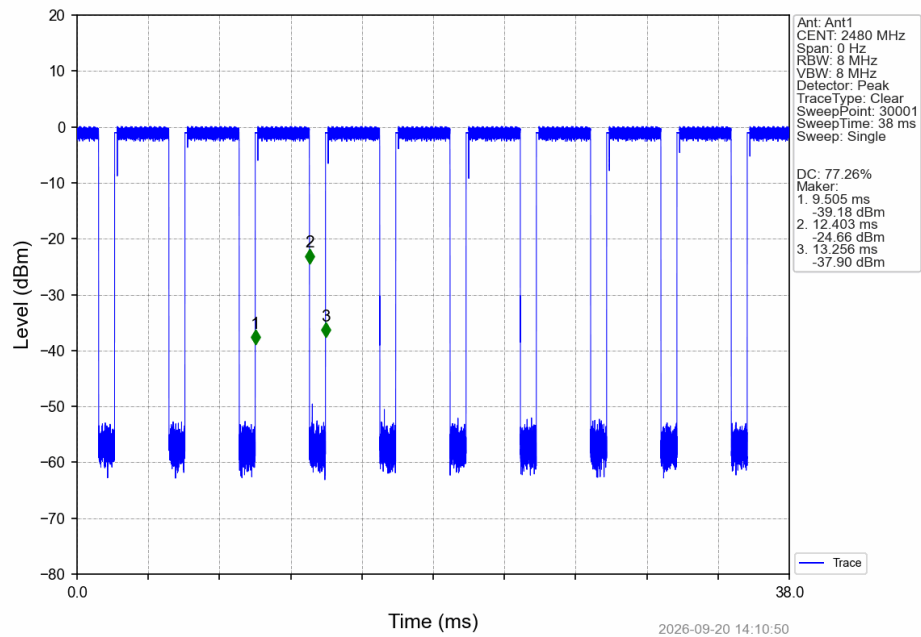
# Pi/4DQPSK\_2DH5\_LCH\_2402MHz\_Ant1\_NTNV



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



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



## 2. Bandwidth

### 2.1 Test Result

#### 2.1.1 OBW

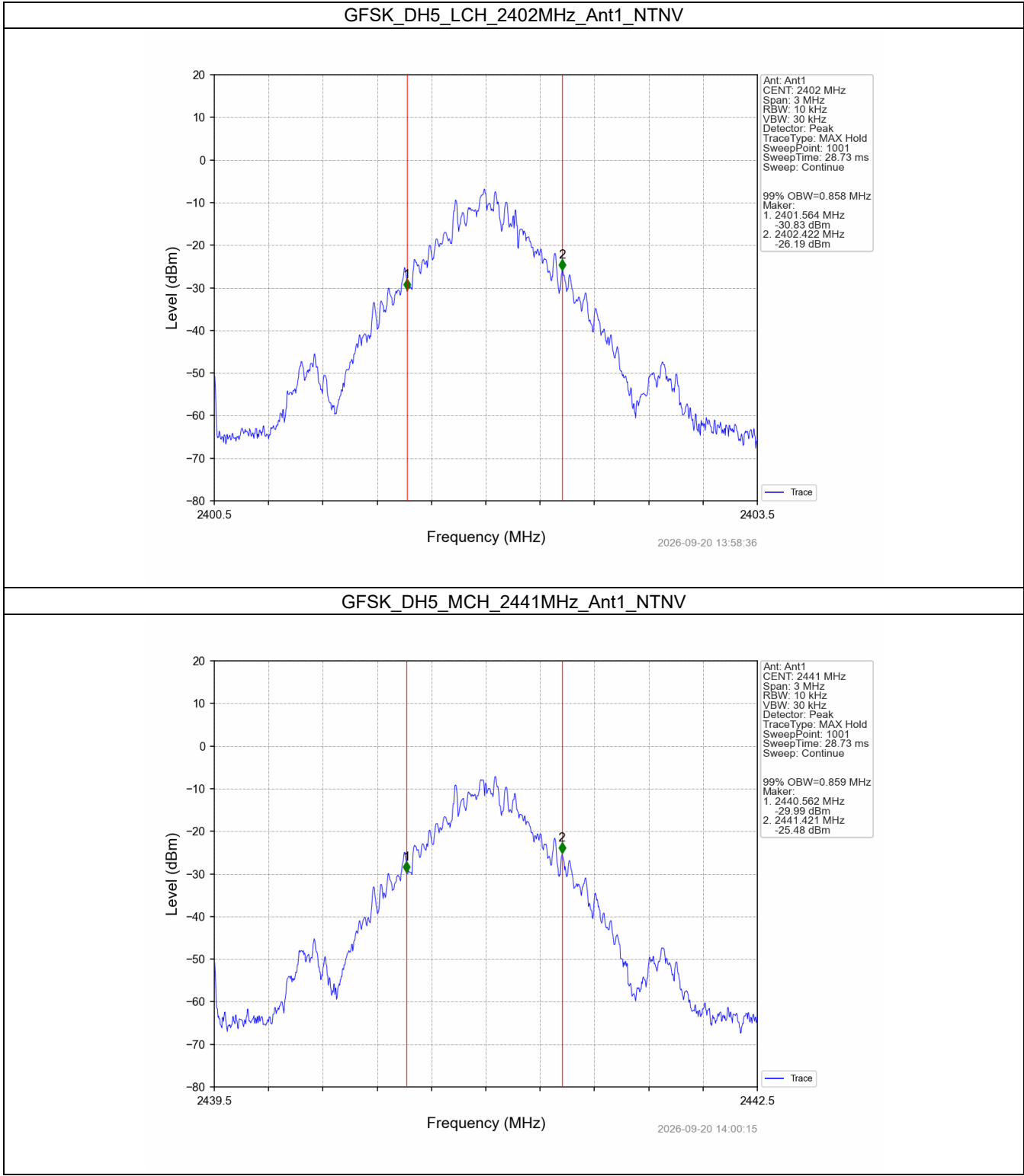
| Mode      | TX Type | Frequency (MHz) | Packet Type | ANT | 99% Occupied Bandwidth (MHz) |       | Verdict |
|-----------|---------|-----------------|-------------|-----|------------------------------|-------|---------|
|           |         |                 |             |     | Result                       | Limit |         |
| GFSK      | SISO    | 2402            | DH5         | 1   | 0.858                        | /     | Pass    |
|           |         | 2441            | DH5         | 1   | 0.859                        | /     | Pass    |
|           |         | 2480            | DH5         | 1   | 0.862                        | /     | Pass    |
| Pi/4DQPSK | SISO    | 2402            | 2DH5        | 1   | 1.177                        | /     | Pass    |
|           |         | 2441            | 2DH5        | 1   | 1.187                        | /     | Pass    |
|           |         | 2480            | 2DH5        | 1   | 1.180                        | /     | Pass    |

#### 2.1.2 20dB BW

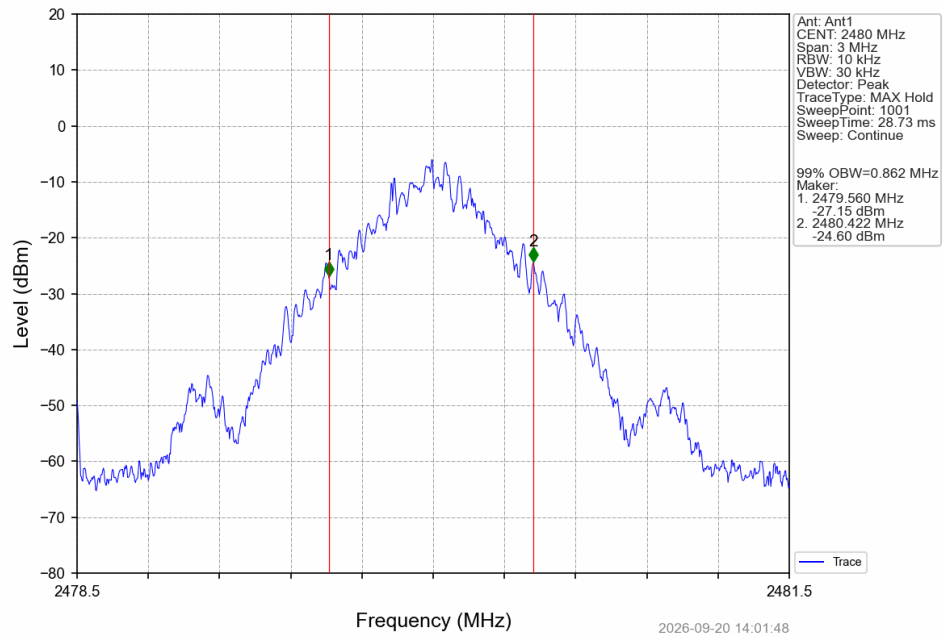
| Mode      | TX Type | Frequency (MHz) | Packet Type | ANT | 20dB Bandwidth (MHz) |       | Verdict |
|-----------|---------|-----------------|-------------|-----|----------------------|-------|---------|
|           |         |                 |             |     | Result               | Limit |         |
| GFSK      | SISO    | 2402            | DH5         | 1   | 0.882                | /     | Pass    |
|           |         | 2441            | DH5         | 1   | 0.883                | /     | Pass    |
|           |         | 2480            | DH5         | 1   | 0.884                | /     | Pass    |
| Pi/4DQPSK | SISO    | 2402            | 2DH5        | 1   | 1.257                | /     | Pass    |
|           |         | 2441            | 2DH5        | 1   | 1.259                | /     | Pass    |
|           |         | 2480            | 2DH5        | 1   | 1.259                | /     | Pass    |

## 2.2 Test Graph

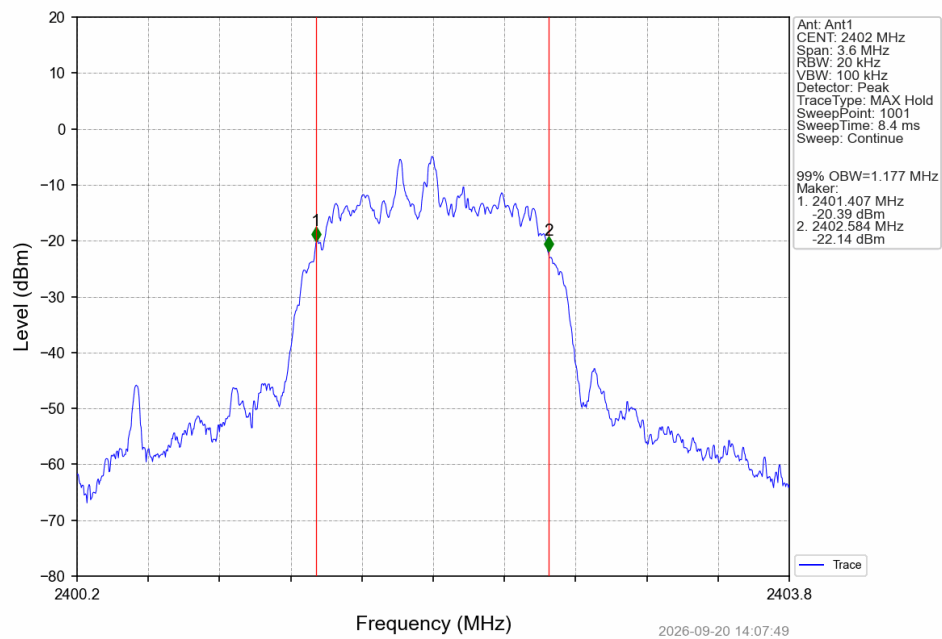
### 2.2.1 OBW



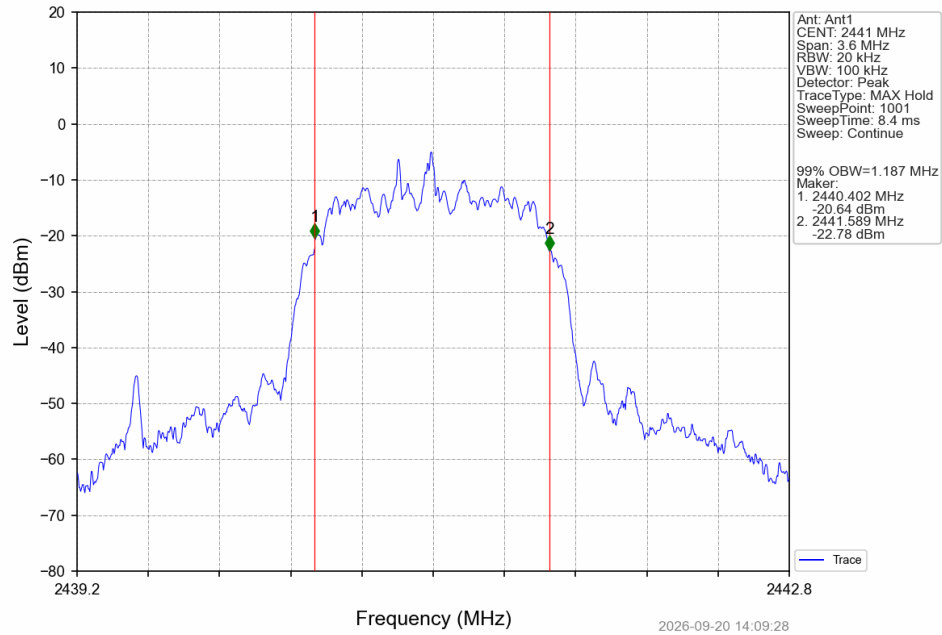
# GFSK\_DH5\_HCH\_2480MHz\_Ant1\_NTNV



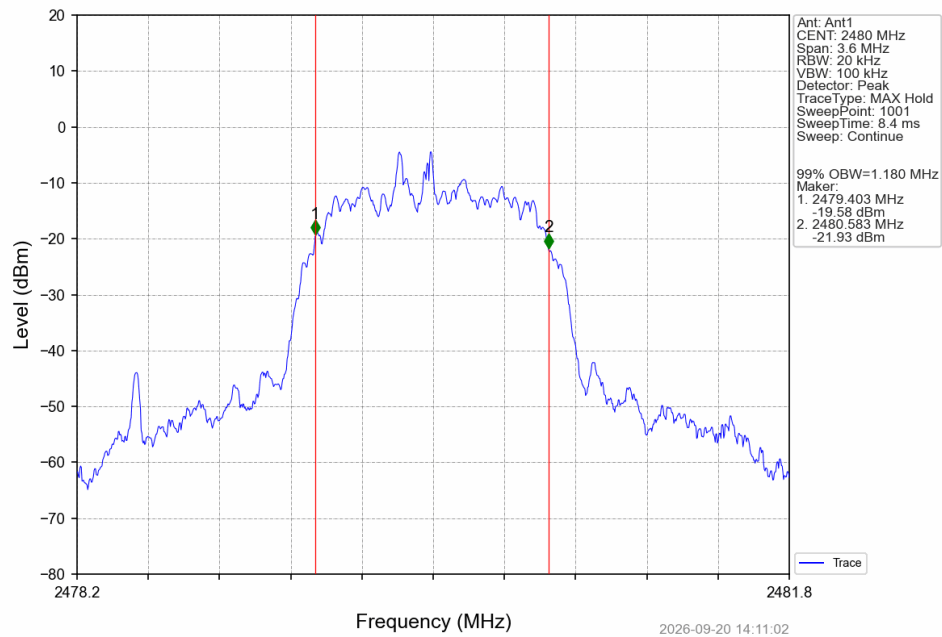
# Pi/4DQPSK\_2DH5\_LCH\_2402MHz\_Ant1\_NTNV



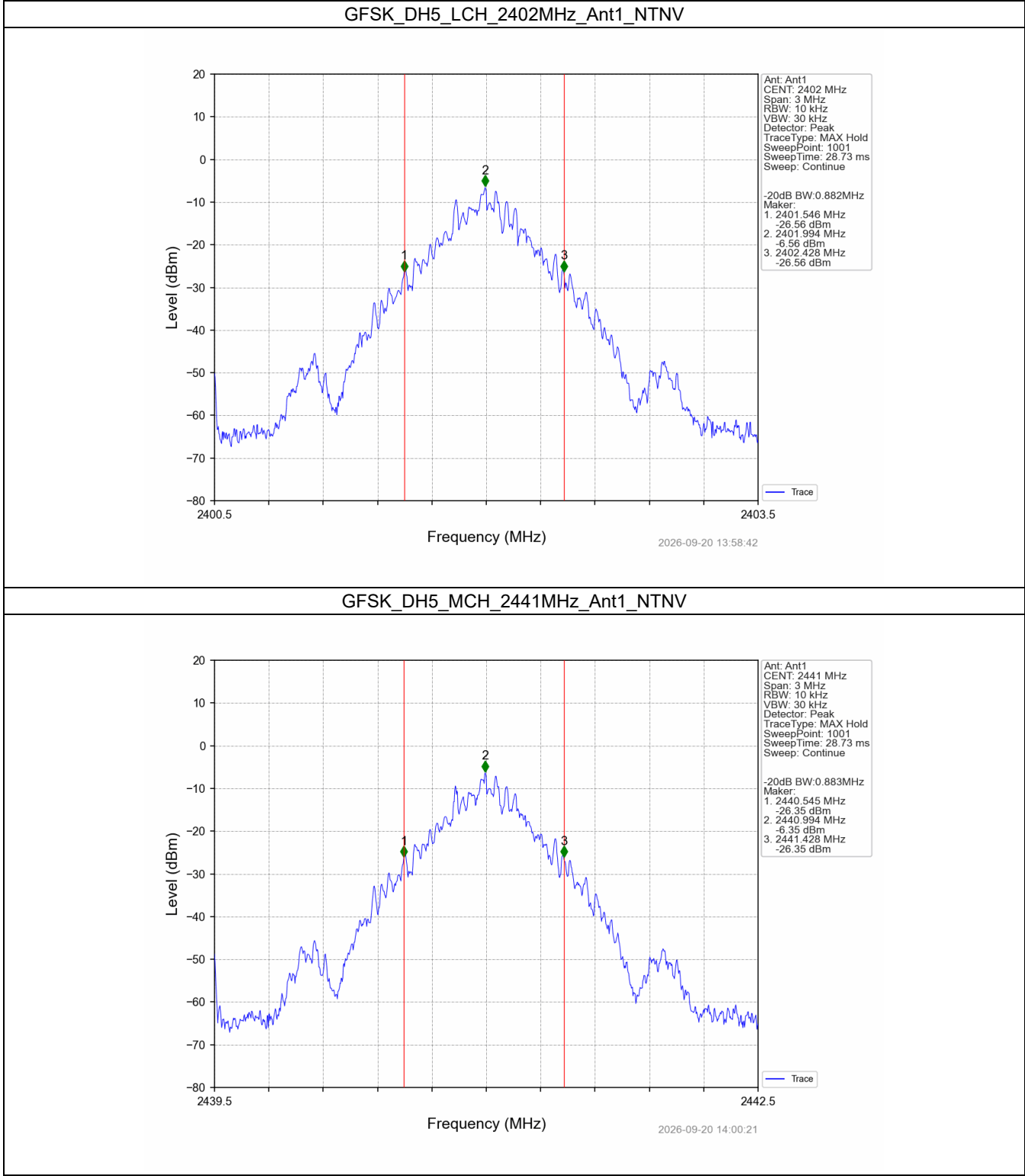
# Pi/4DQPSK\_2DH5\_MCH\_2441MHz\_Ant1\_NTNV



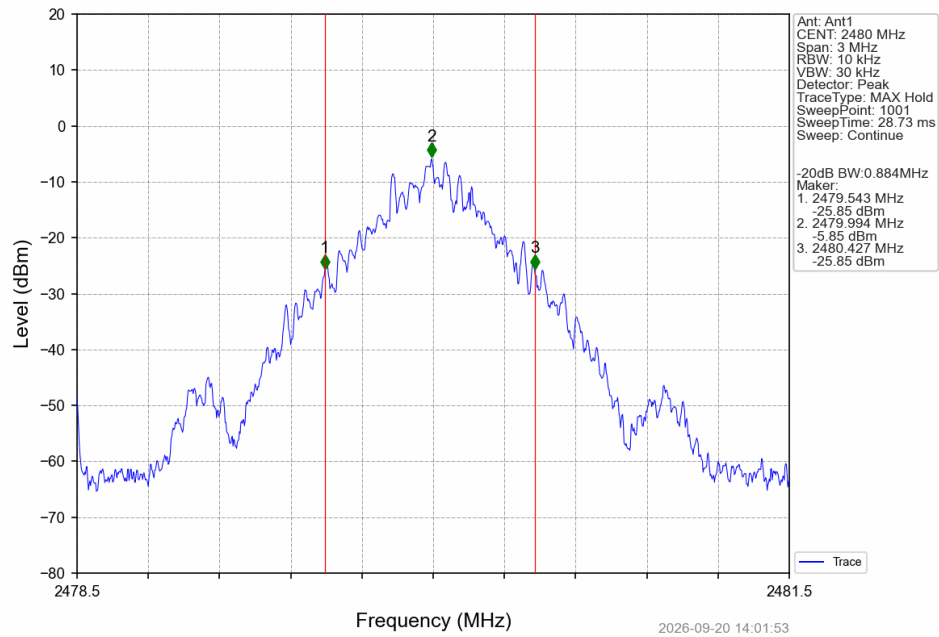
# Pi/4DQPSK\_2DH5\_HCH\_2480MHz\_Ant1\_NTNV



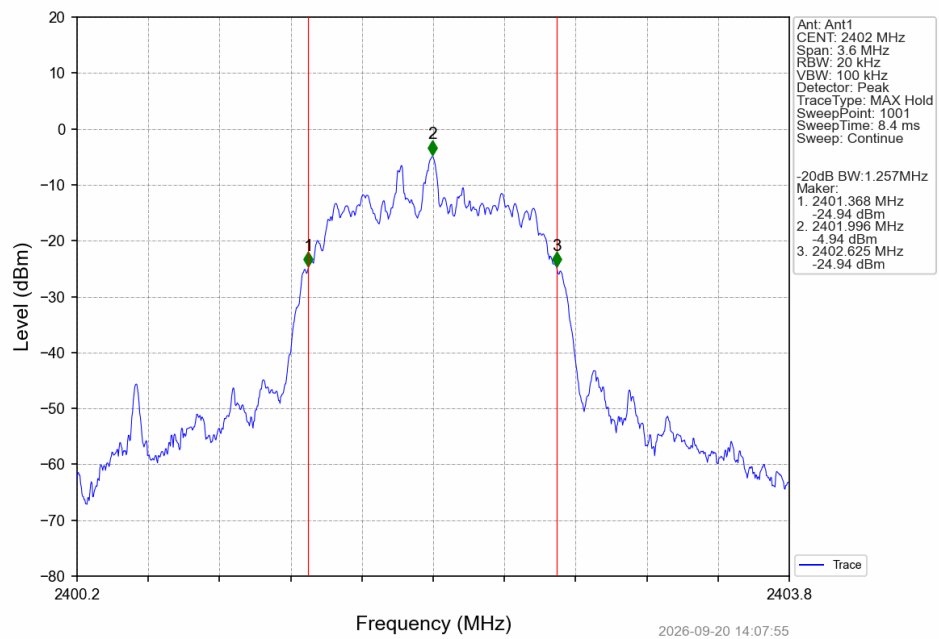
2.2.2 20dB BW



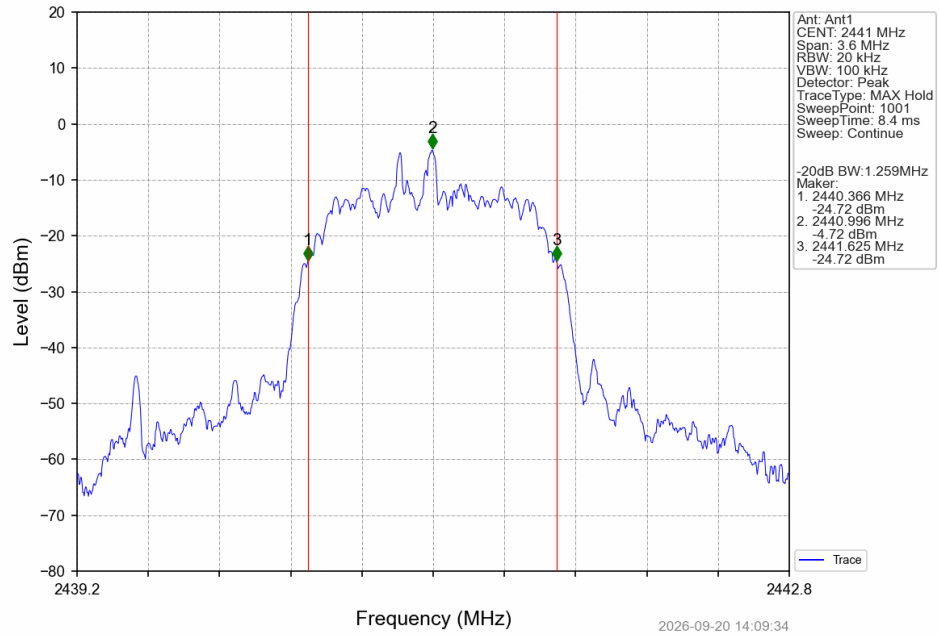
# GFSK\_DH5\_HCH\_2480MHz\_Ant1\_NTNV



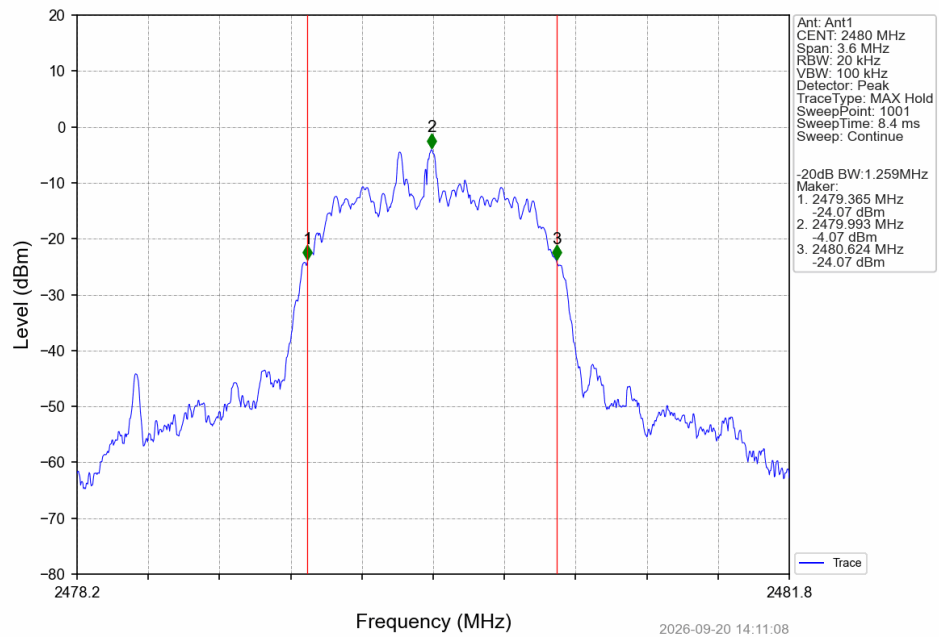
# Pi/4DQPSK\_2DH5\_LCH\_2402MHz\_Ant1\_NTNV



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



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



### 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         | -1.94                                     | <=30    | Pass    |
|           |         | 2441            | DH5         | -1.65                                     | <=30    | Pass    |
|           |         | 2480            | DH5         | -1.00                                     | <=30    | Pass    |
| Pi/4DQPSK | SISO    | 2402            | 2DH5        | -1.02                                     | <=20.97 | Pass    |
|           |         | 2441            | 2DH5        | -0.73                                     | <=20.97 | Pass    |
|           |         | 2480            | 2DH5        | -0.10                                     | <=20.97 | Pass    |

## 4. Carrier Frequency Separation

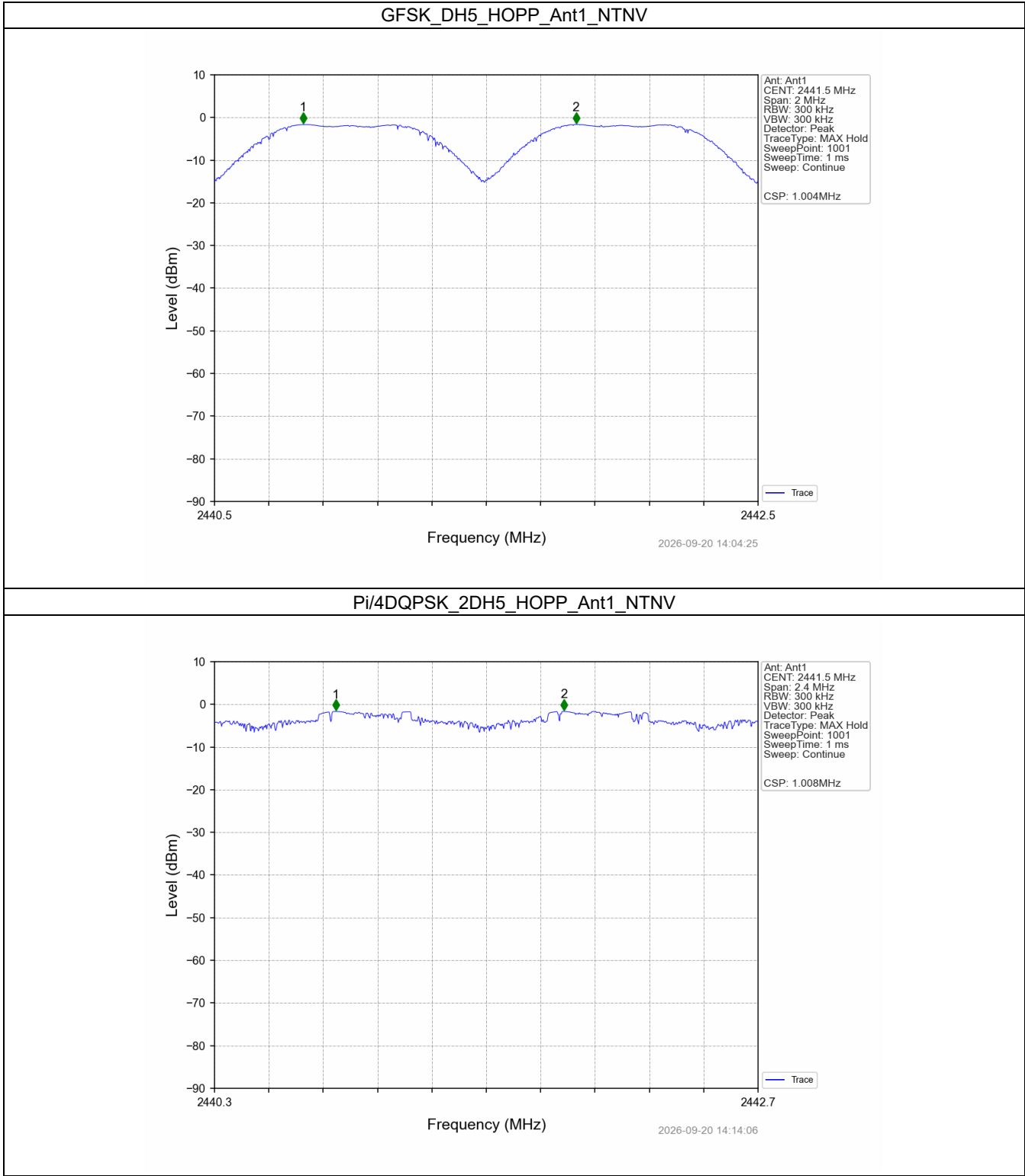
### 4.1 Test Result

#### 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         | 1.004                    | 0.884                | $\geq 0.884$ | Pass    |
| Pi/4DQPSK | SISO    | HOPP            | 2DH5        | 1.008                    | 1.259                | $\geq 0.839$ | Pass    |

# 4.2 Test Graph

## 4.2.1 Ant1



## 5. Number of Hopping Frequencies

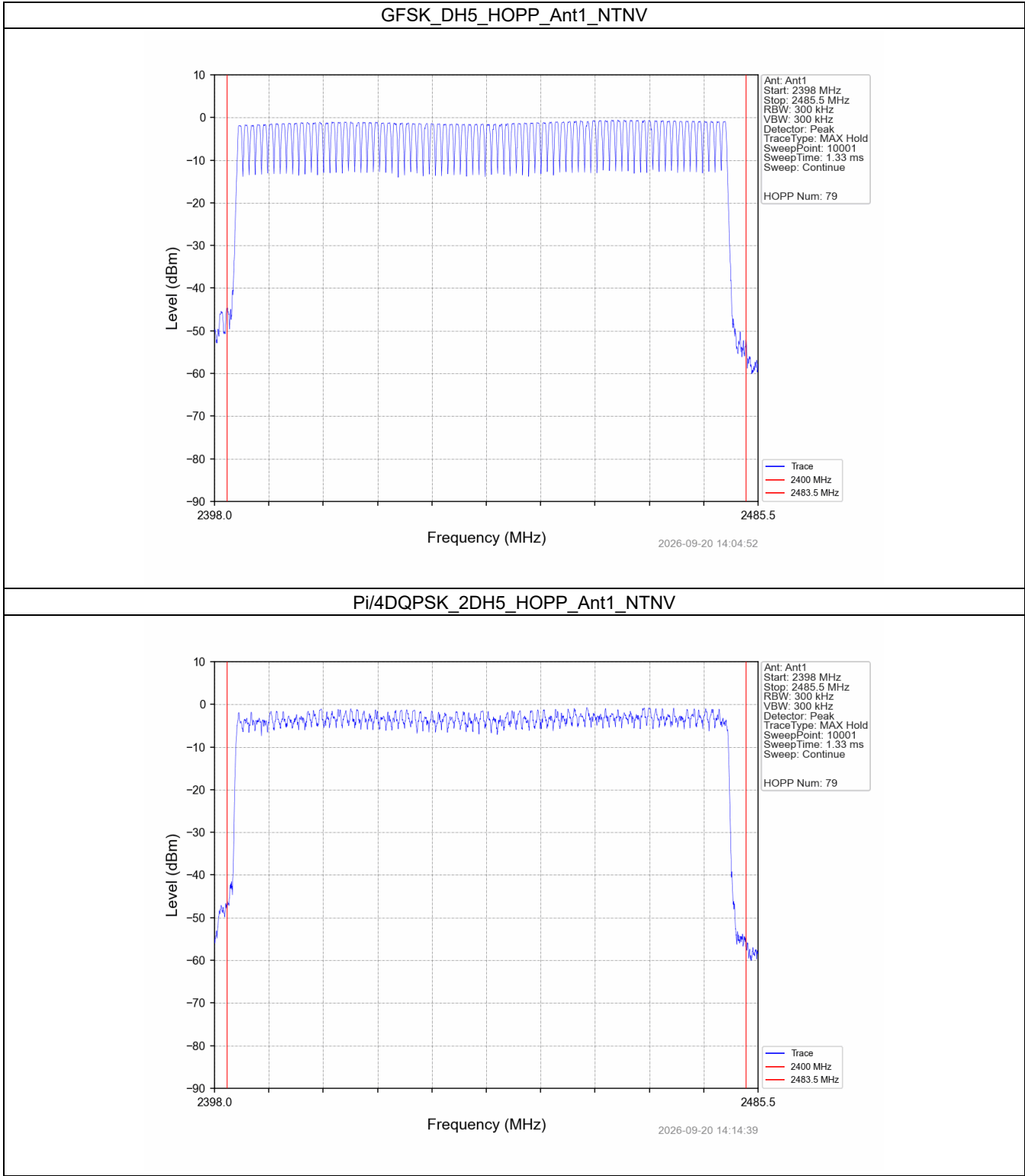
### 5.1 Test Result

#### 5.1.1 HoppNum

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

# 5.2 Test Graph

## 5.2.1 HoppNum



## 6. Time of Occupancy (Dwell Time)

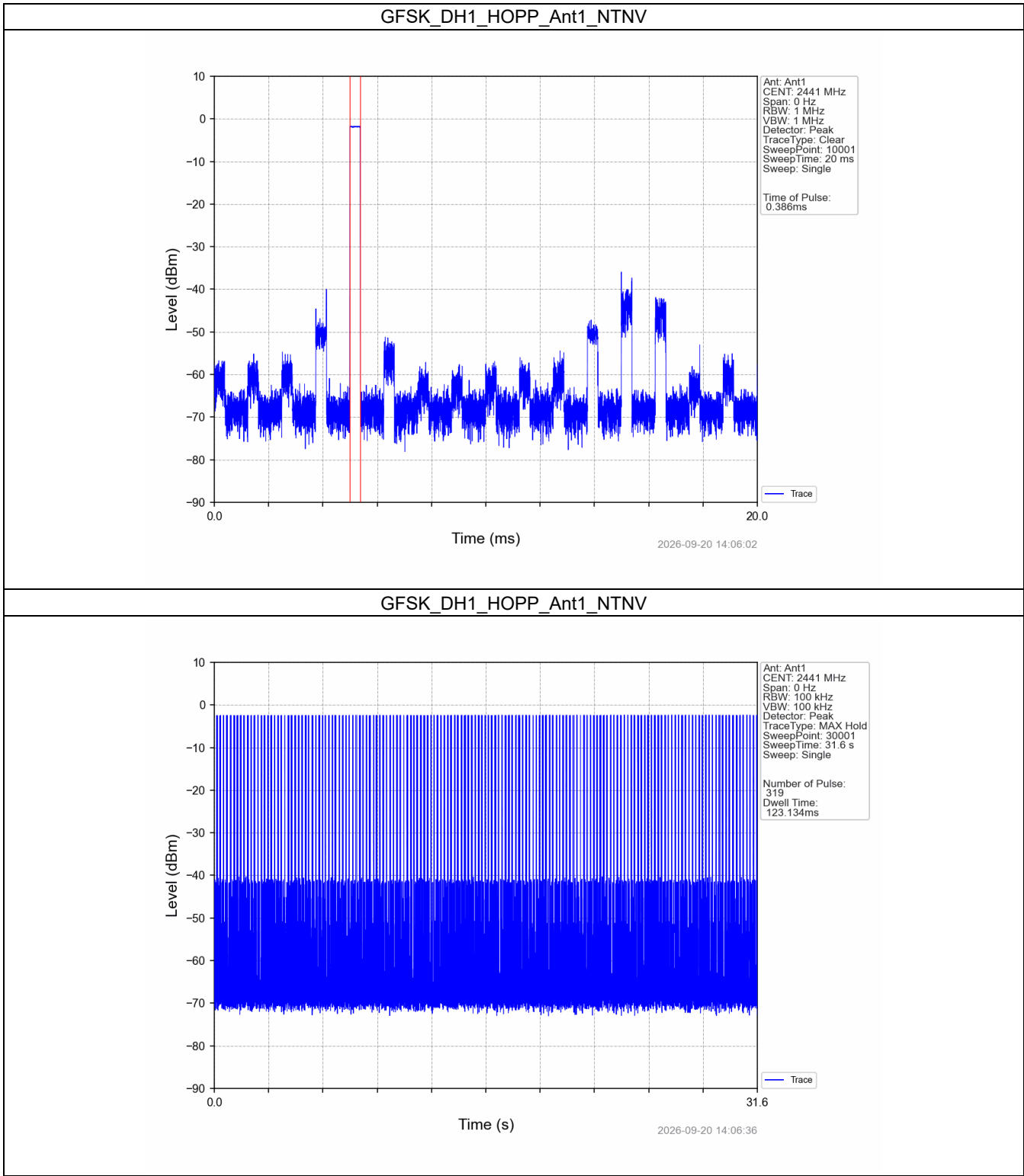
### 6.1 Test Result

#### 6.1.1 Ant1

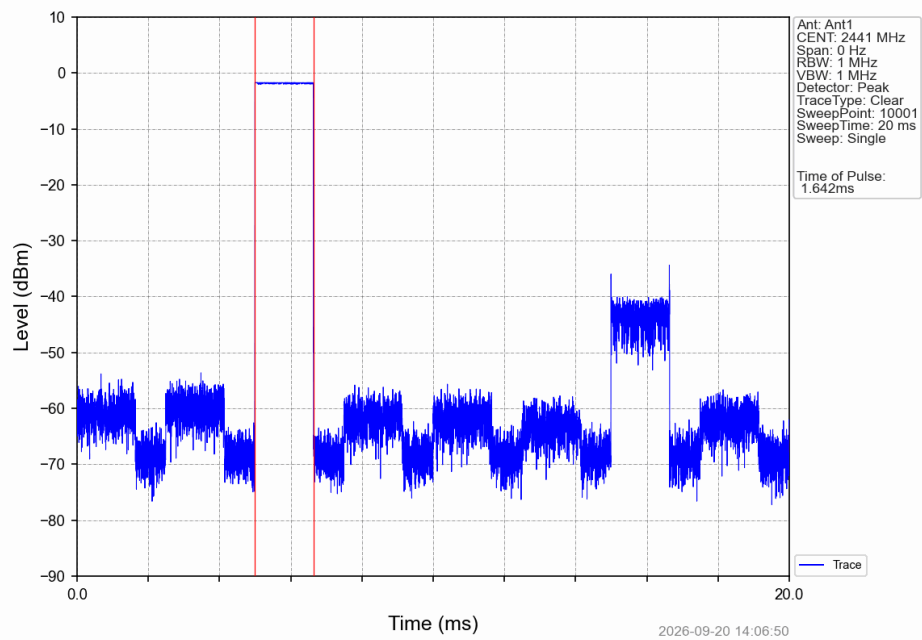
| Ant1      |         |                 |             |                               |                        |                                    |                 |            |         |
|-----------|---------|-----------------|-------------|-------------------------------|------------------------|------------------------------------|-----------------|------------|---------|
| 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         | 0.386                         | 31.600                 | 319                                | 123.134         | <=400      | Pass    |
|           |         |                 | DH3         | 1.642                         | 31.600                 | 150                                | 246.300         | <=400      | Pass    |
|           |         |                 | DH5         | 2.890                         | 31.600                 | 102                                | 294.780         | <=400      | Pass    |
| Pi/4DQPSK | SISO    | HOPP            | 2DH1        | 0.394                         | 31.600                 | 319                                | 125.686         | <=400      | Pass    |
|           |         |                 | 2DH3        | 1.648                         | 31.600                 | 166                                | 273.568         | <=400      | Pass    |
|           |         |                 | 2DH5        | 2.896                         | 31.600                 | 102                                | 295.392         | <=400      | Pass    |

# 6.2 Test Graph

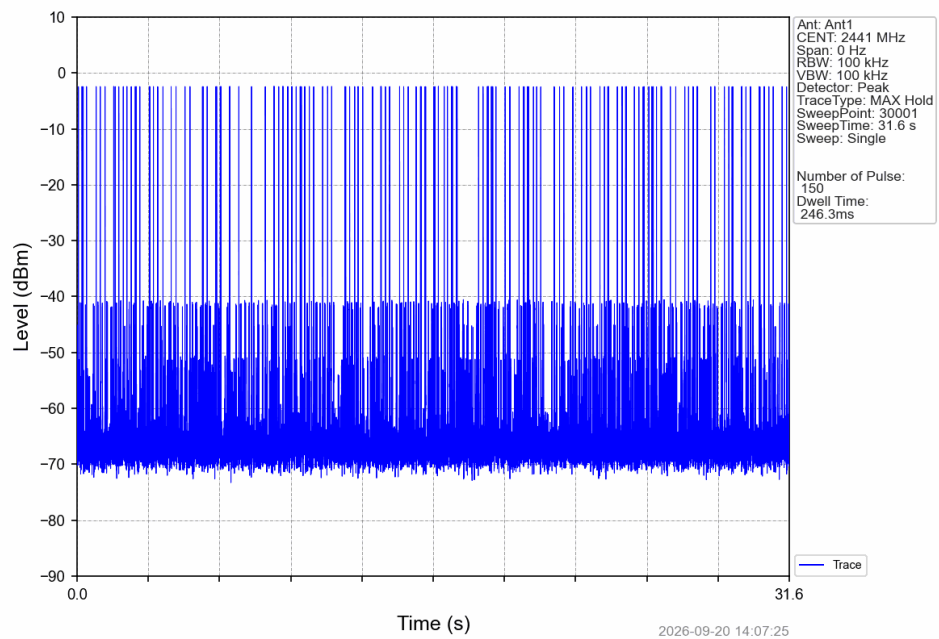
## 6.2.1 Ant1



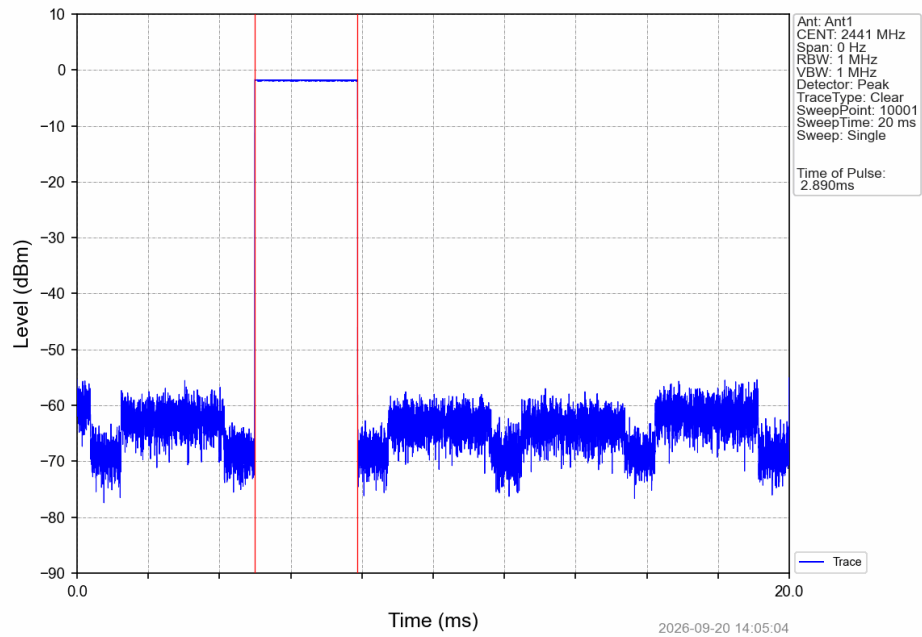
# GFSK\_DH3\_HOPP\_Ant1\_NTNV



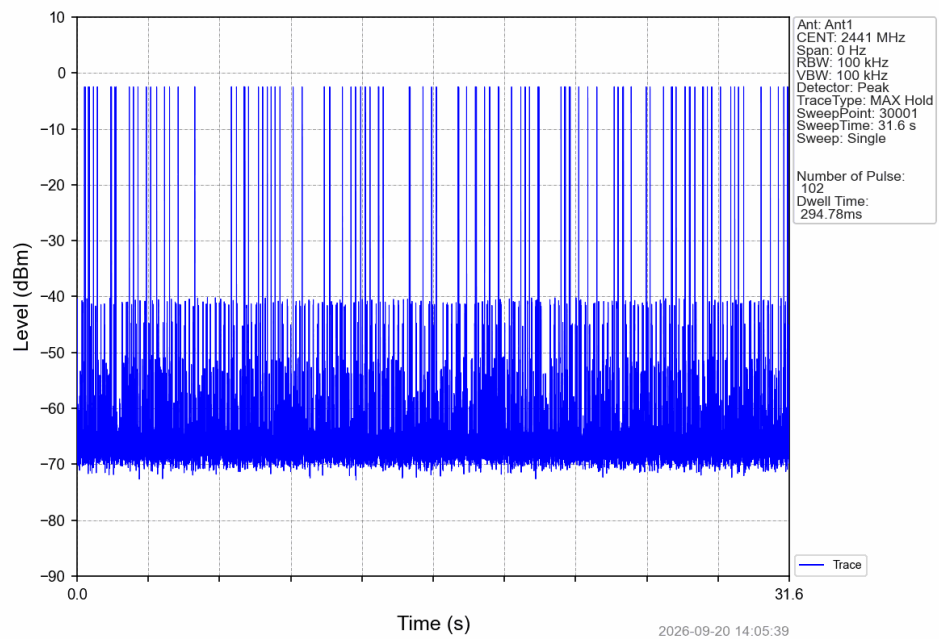
# GFSK\_DH3\_HOPP\_Ant1\_NTNV



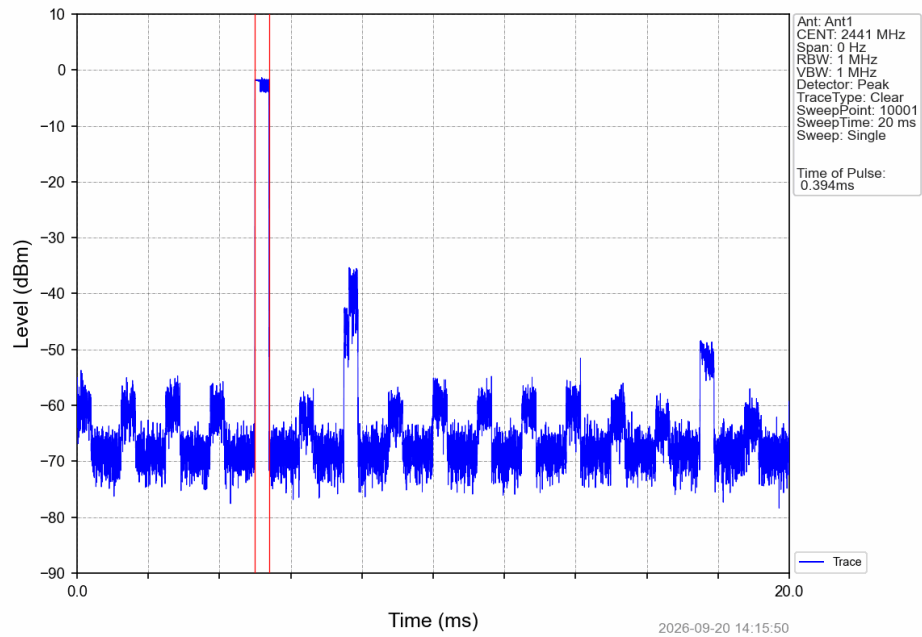
# GFSK\_DH5\_HOPP\_Ant1\_NTNV



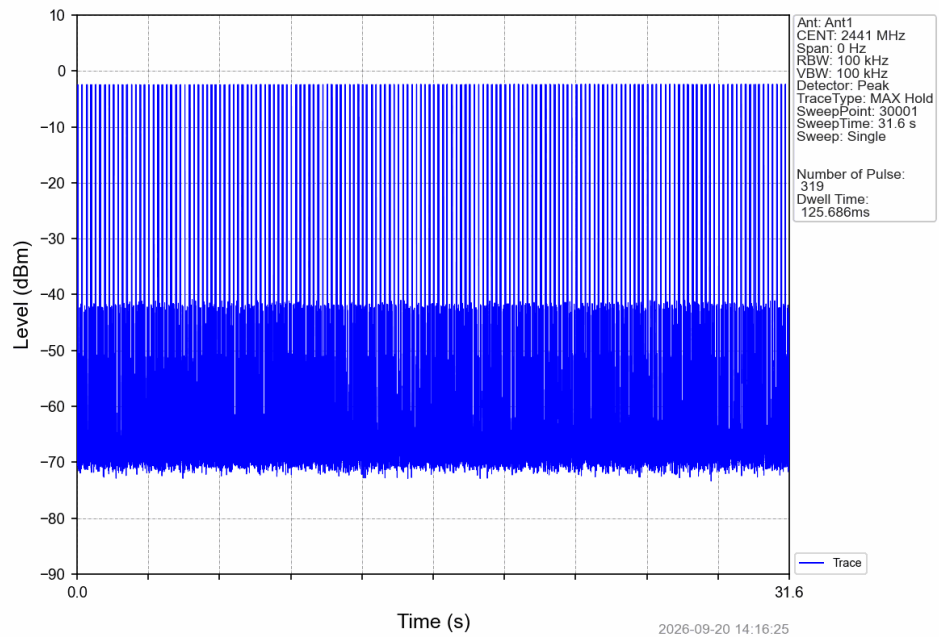
# GFSK\_DH5\_HOPP\_Ant1\_NTNV



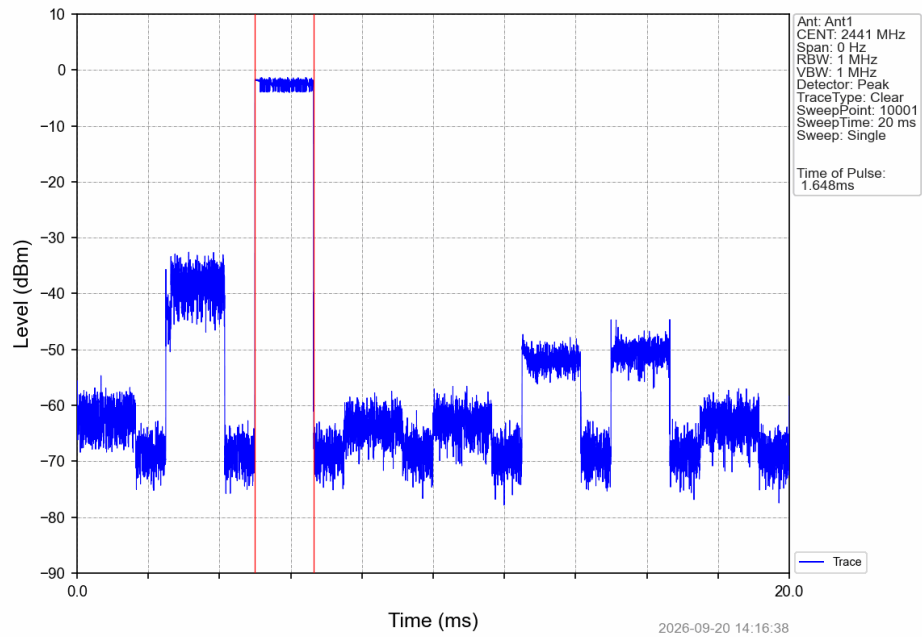
# Pi/4DQPSK\_2DH1\_HOPP\_Ant1\_NTNV



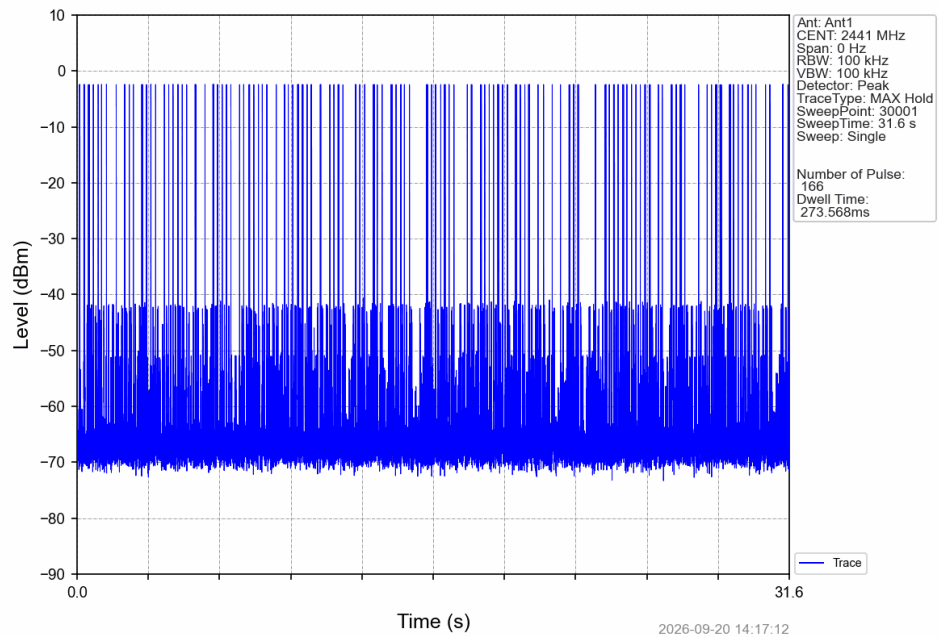
# Pi/4DQPSK\_2DH1\_HOPP\_Ant1\_NTNV



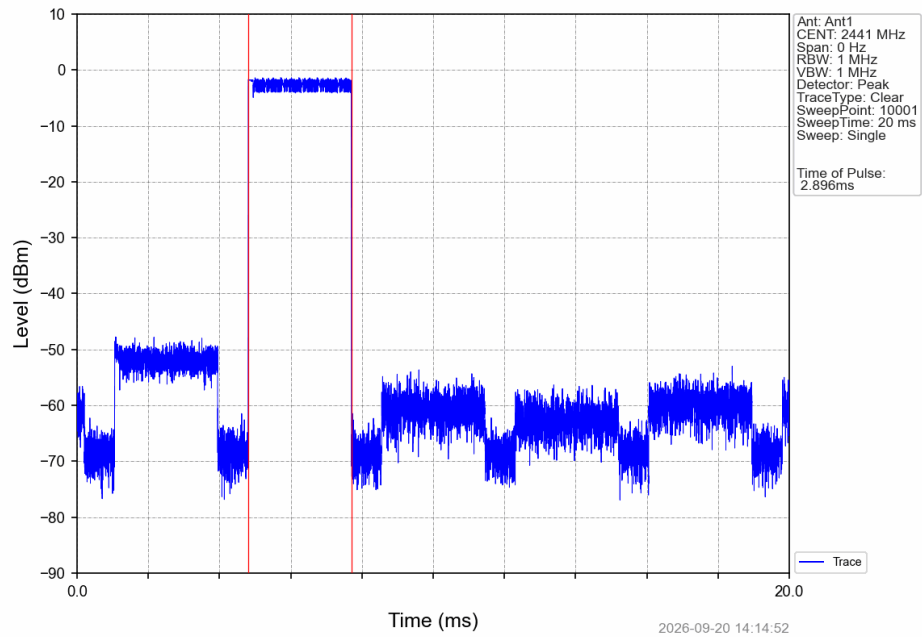
# Pi/4DQPSK\_2DH3\_HOPP\_Ant1\_NTNV



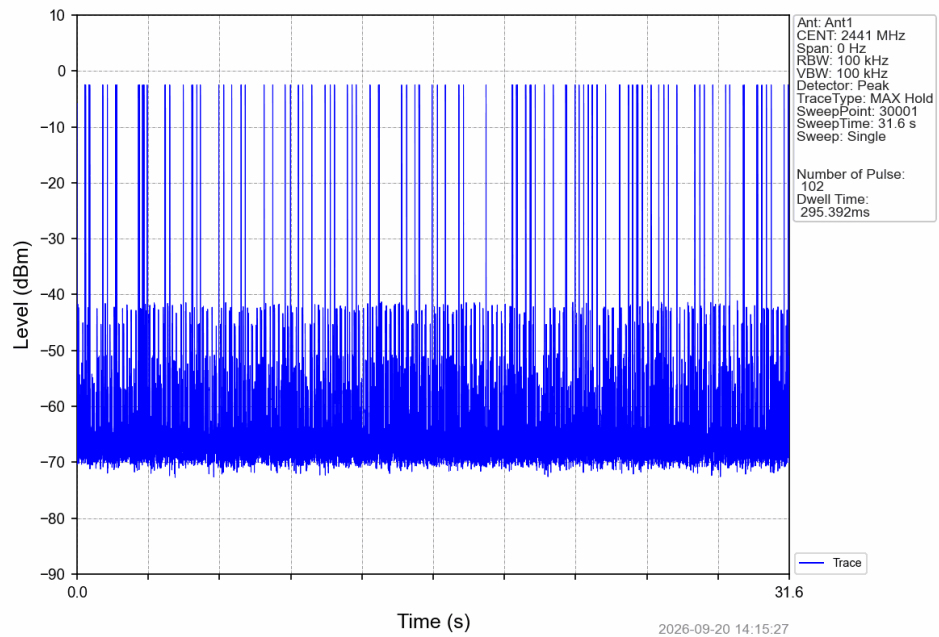
# Pi/4DQPSK\_2DH3\_HOPP\_Ant1\_NTNV



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



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



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

### 7.1 Test Result

#### 7.1.1 Ref

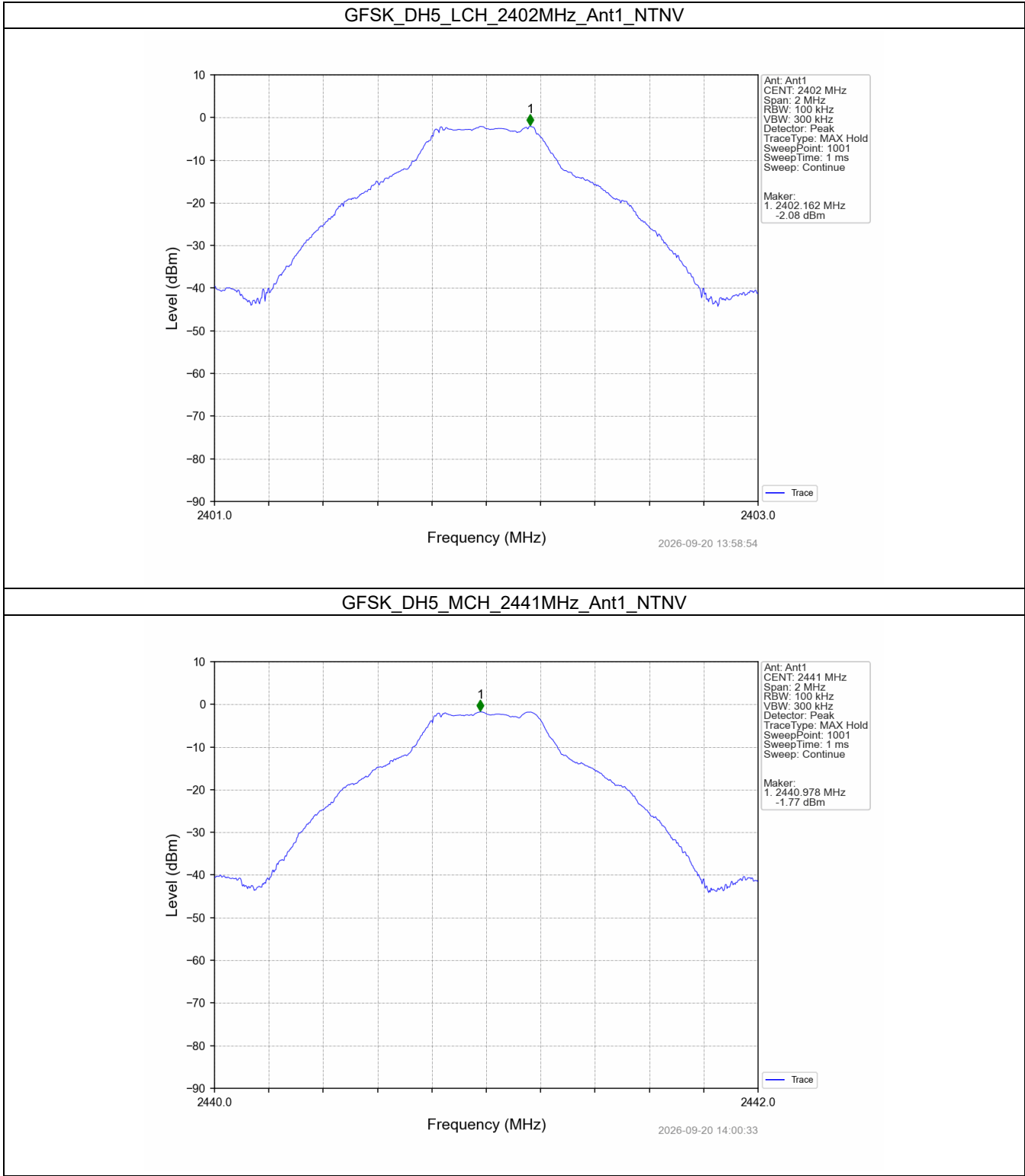
| Mode      | TX Type | Frequency (MHz) | Packet Type | ANT | Level of Reference (dBm) |
|-----------|---------|-----------------|-------------|-----|--------------------------|
| GFSK      | SISO    | 2402            | DH5         | 1   | -2.08                    |
|           |         | 2441            | DH5         | 1   | -1.77                    |
|           |         | 2480            | DH5         | 1   | -1.14                    |
|           |         | HOPP            | DH5         | 1   | -0.81                    |
|           |         |                 |             |     | -0.81                    |
| Pi/4DQPSK | SISO    | 2402            | 2DH5        | 1   | -2.09                    |
|           |         | 2441            | 2DH5        | 1   | -1.79                    |
|           |         | 2480            | 2DH5        | 1   | -1.05                    |
|           |         | HOPP            | 2DH5        | 1   | -0.94                    |
|           |         |                 |             |     | -0.94                    |

#### 7.1.2 CSE

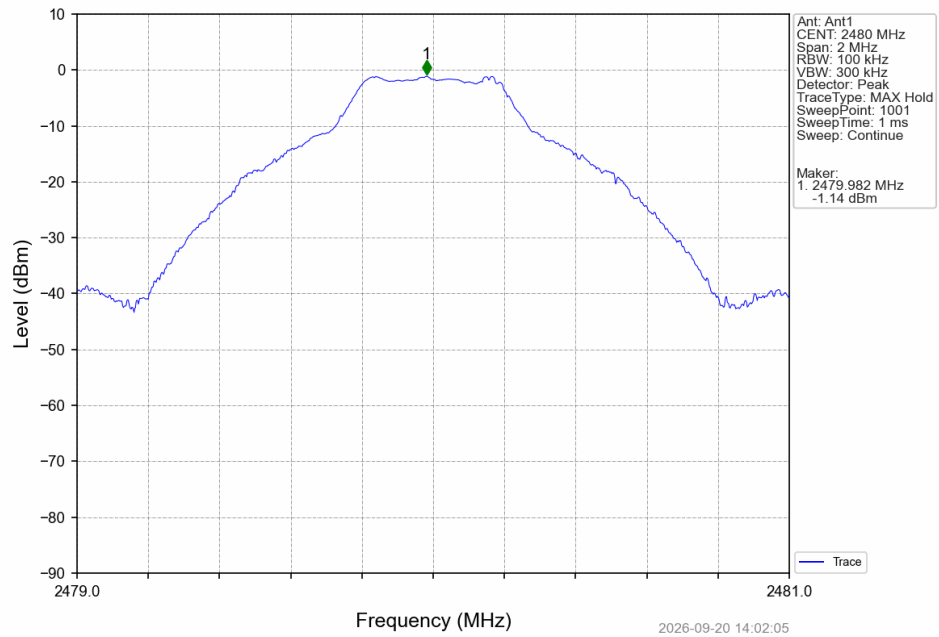
| Mode      | TX Type | Frequency (MHz) | Packet Type | ANT | Level of Reference (dBm) | Limit (dBm) | Verdict |
|-----------|---------|-----------------|-------------|-----|--------------------------|-------------|---------|
| GFSK      | SISO    | 2402            | DH5         | 1   | -2.08                    | -22.08      | Pass    |
|           |         | 2441            | DH5         | 1   | -1.77                    | -21.77      | Pass    |
|           |         | 2480            | DH5         | 1   | -1.14                    | -21.14      | Pass    |
|           |         | HOPP            | DH5         | 1   | -0.81                    | -20.81      | Pass    |
|           |         |                 |             |     | -0.81                    | -20.81      | Pass    |
| Pi/4DQPSK | SISO    | 2402            | 2DH5        | 1   | -2.09                    | -22.09      | Pass    |
|           |         | 2441            | 2DH5        | 1   | -1.79                    | -21.79      | Pass    |
|           |         | 2480            | 2DH5        | 1   | -1.05                    | -21.05      | Pass    |
|           |         | HOPP            | 2DH5        | 1   | -0.94                    | -20.94      | Pass    |
|           |         |                 |             |     | -0.94                    | -20.94      | Pass    |

7.2 Test Graph

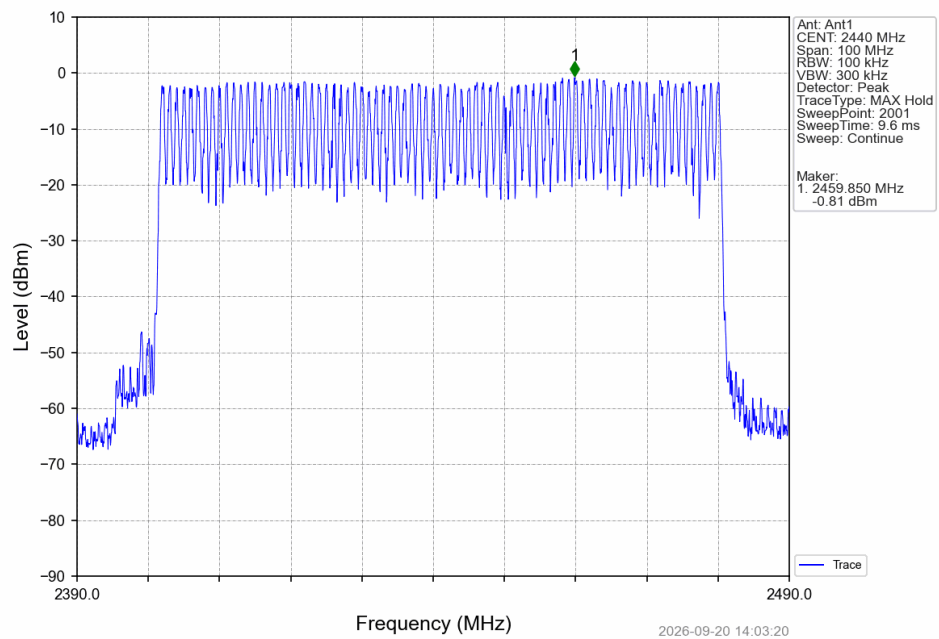
7.2.1 Ref



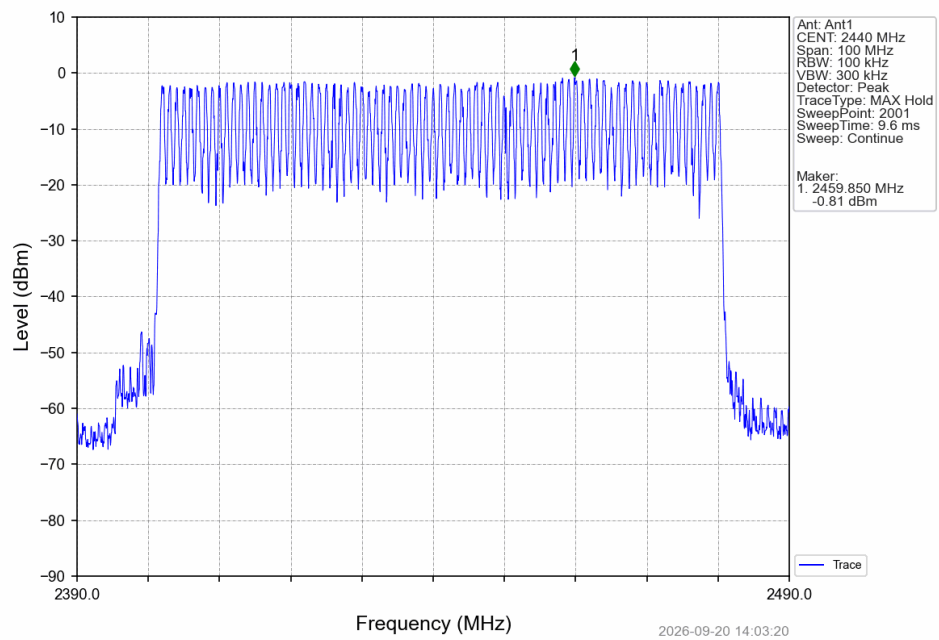
# GFSK\_DH5\_HCH\_2480MHz\_Ant1\_NTNV



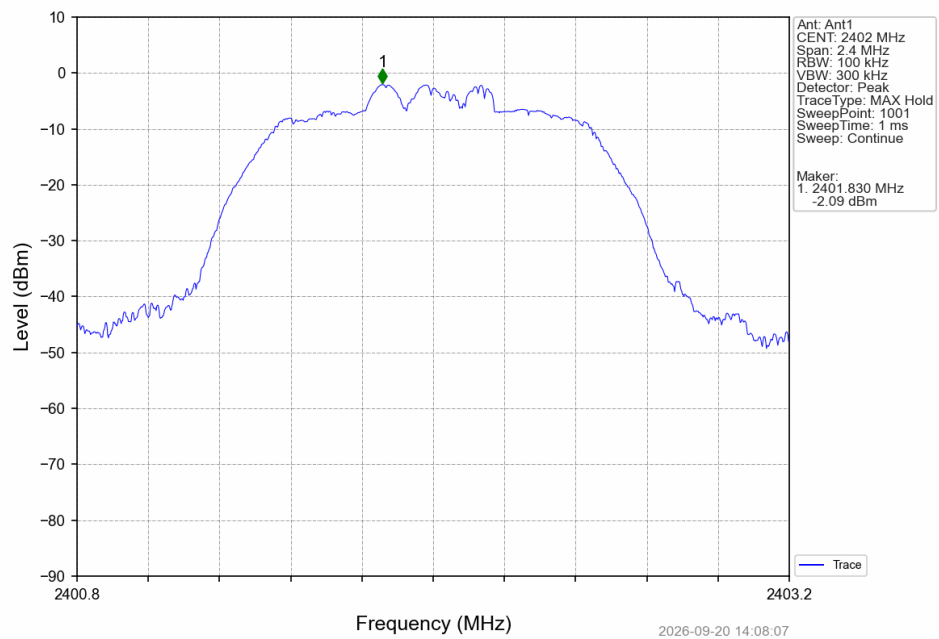
# GFSK\_DH5\_HOPP\_2440MHz\_Ant1\_NTNV



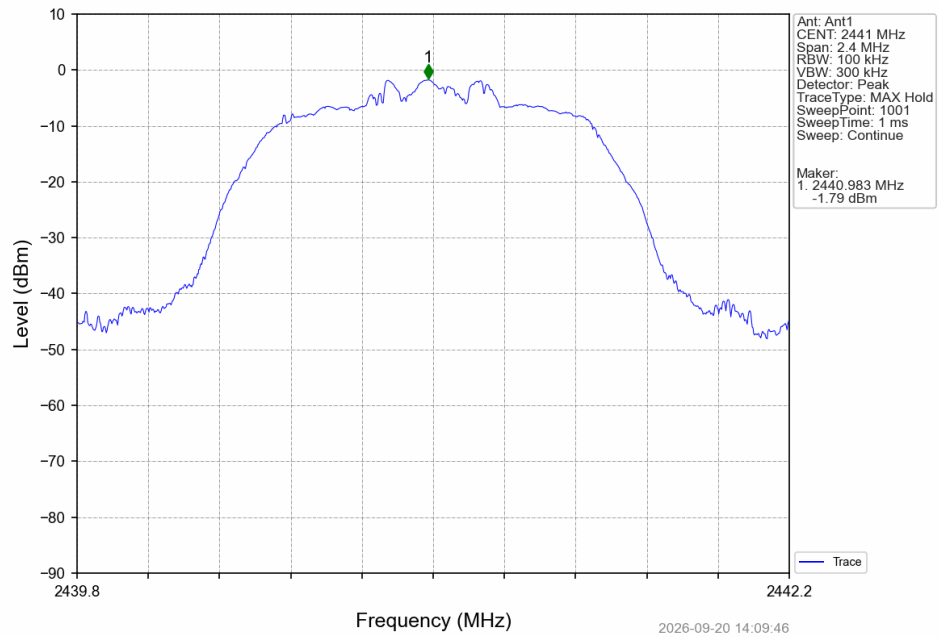
# GFSK\_DH5\_HOPP\_Ant1\_NTNV



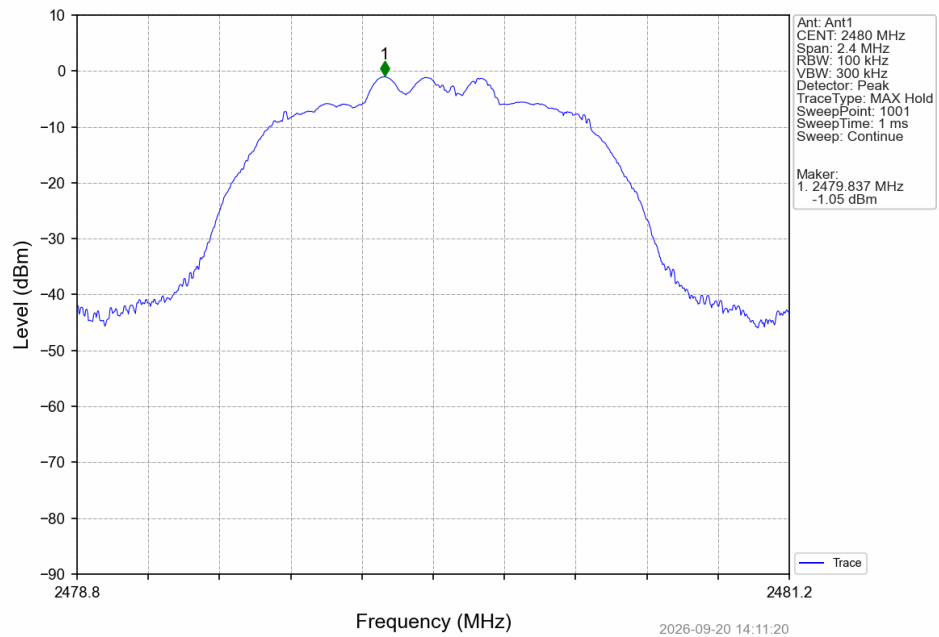
# Pi/4DQPSK\_2DH5\_LCH\_2402MHz\_Ant1\_NTNV



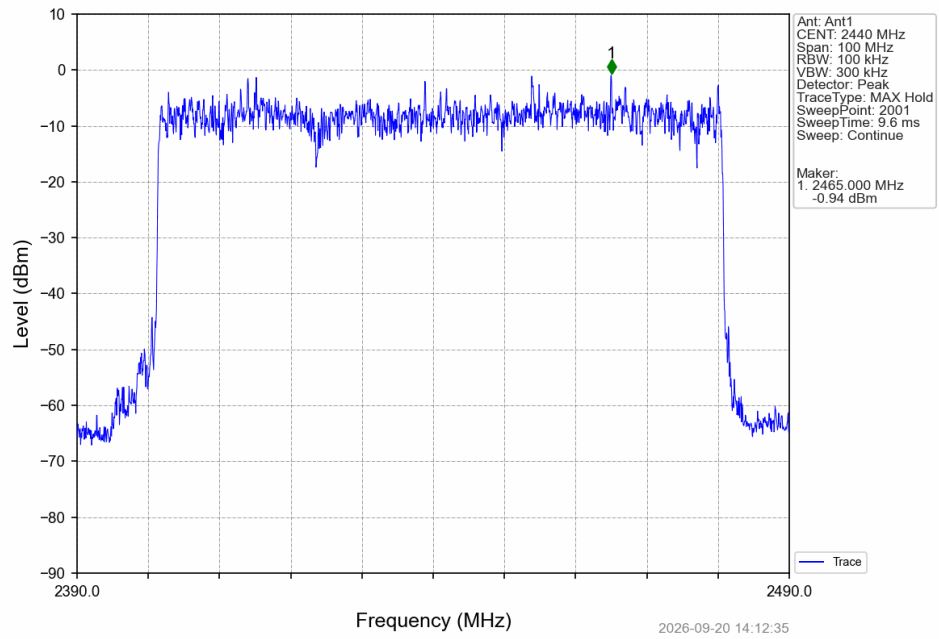
# Pi/4DQPSK\_2DH5\_MCH\_2441MHz\_Ant1\_NTNV



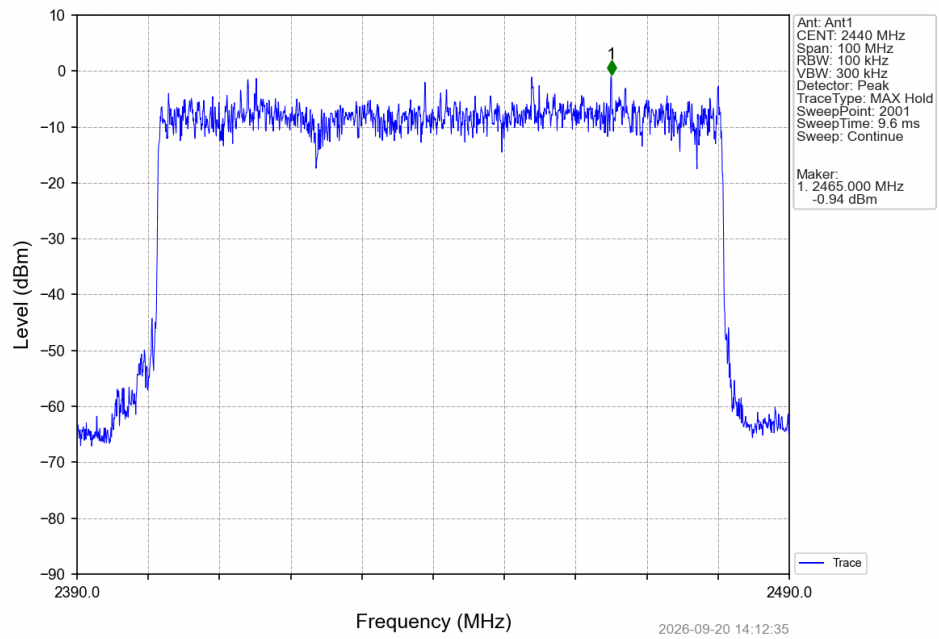
# Pi/4DQPSK\_2DH5\_HCH\_2480MHz\_Ant1\_NTNV



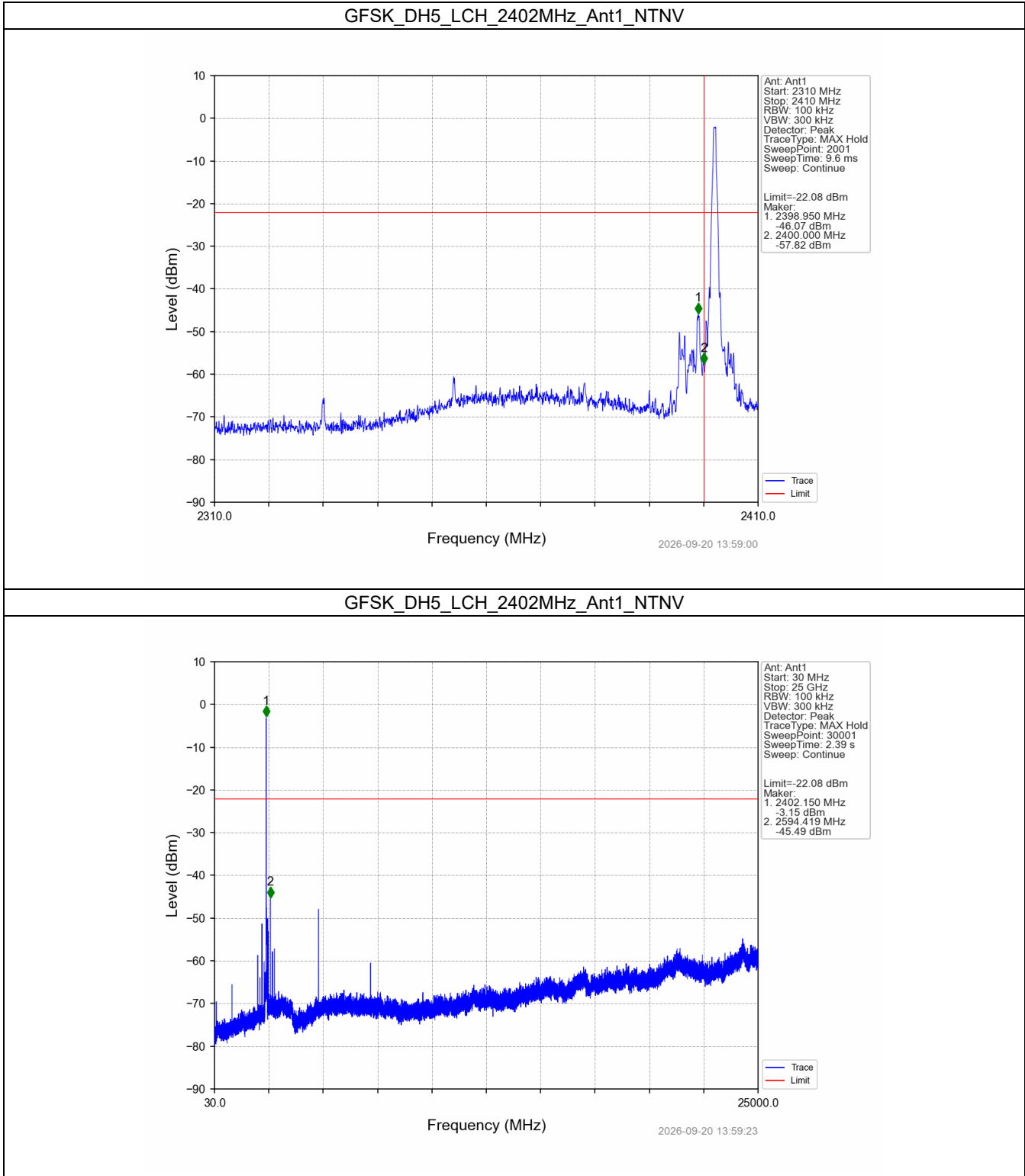
# Pi/4DQPSK\_2DH5\_HOPP\_Ant1\_NTNV



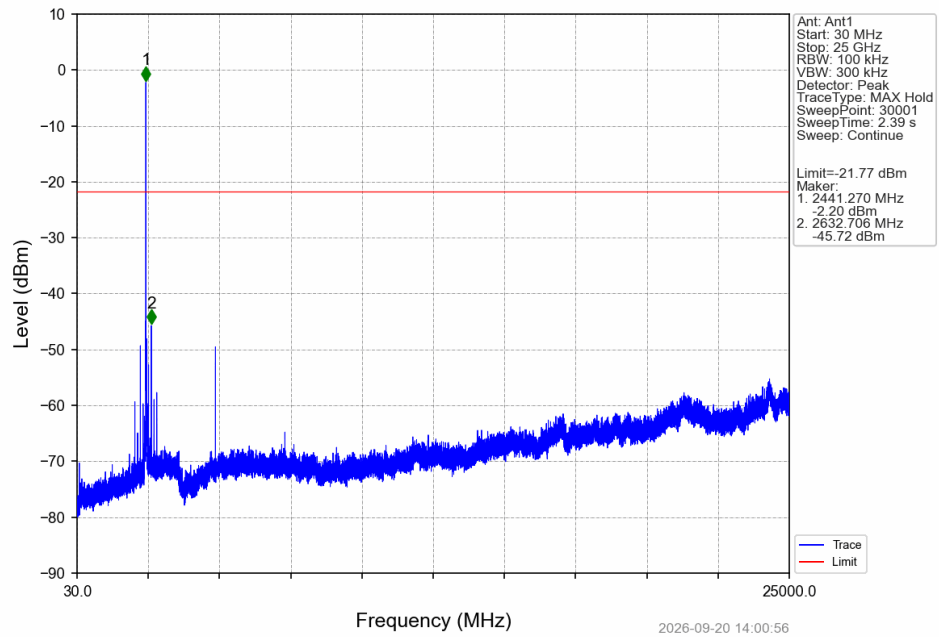
# Pi/4DQPSK\_2DH5\_HOPP\_Ant1\_NTNV



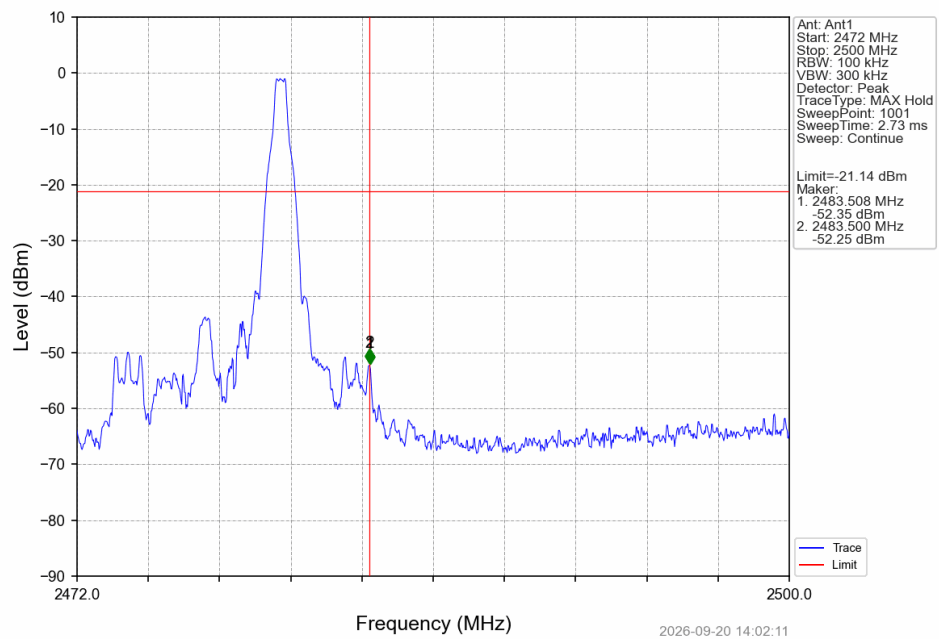
7.2.2 CSE



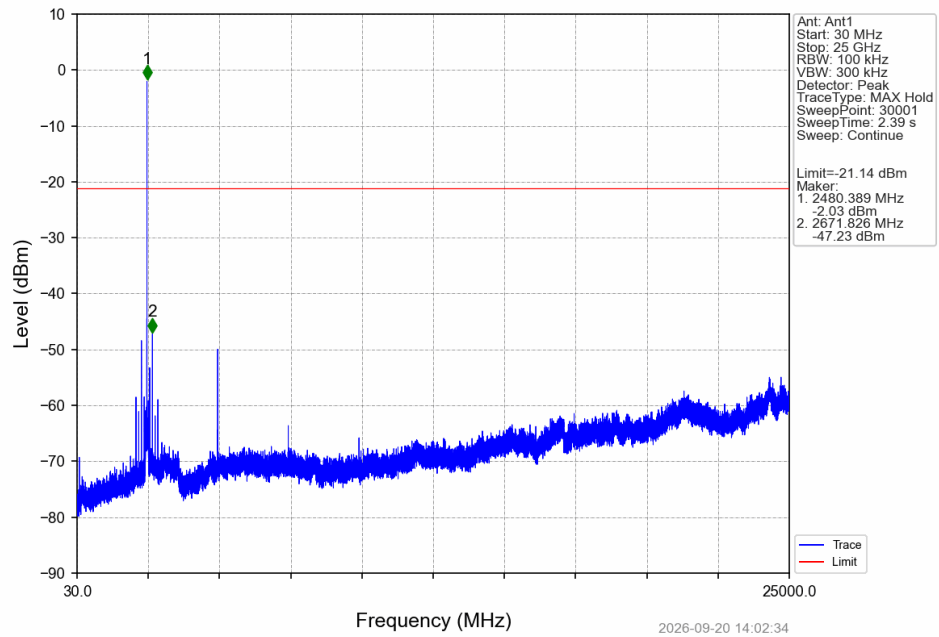
# GFSK\_DH5\_MCH\_2441MHz\_Ant1\_NTNV



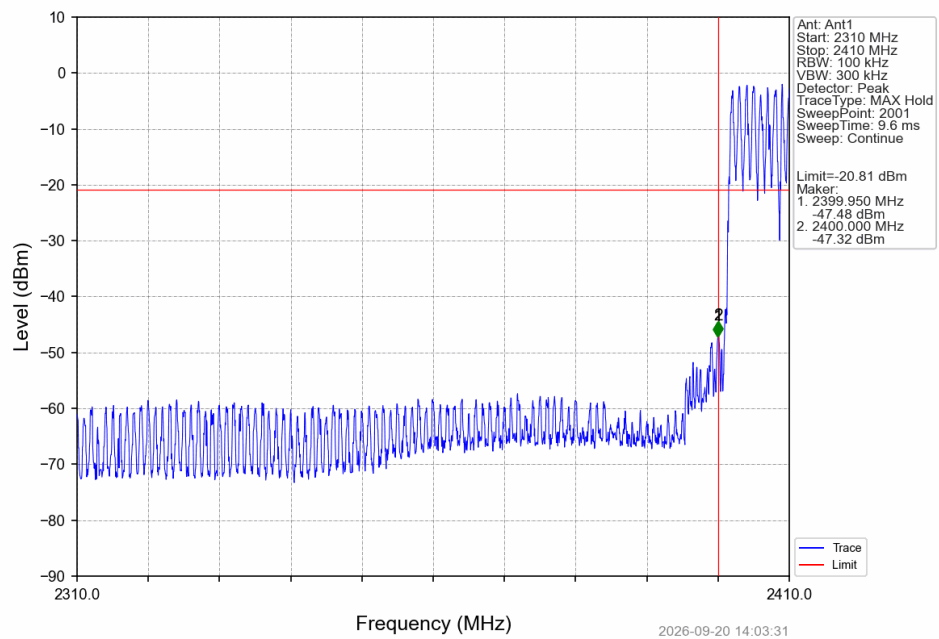
# GFSK\_DH5\_HCH\_2480MHz\_Ant1\_NTNV



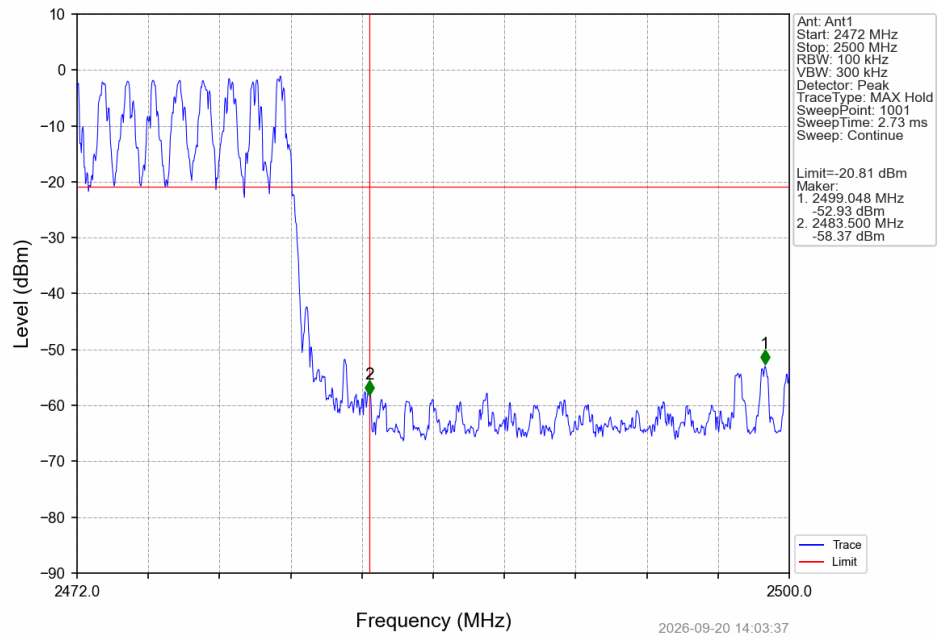
# GFSK\_DH5\_HCH\_2480MHz\_Ant1\_NTNV



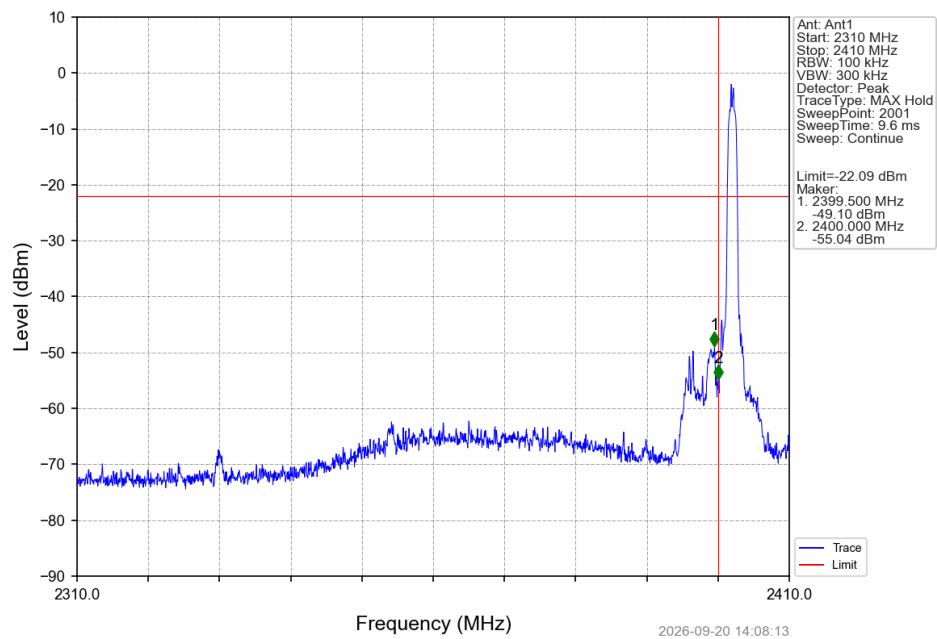
# GFSK\_DH5\_HOPP\_Ant1\_NTNV



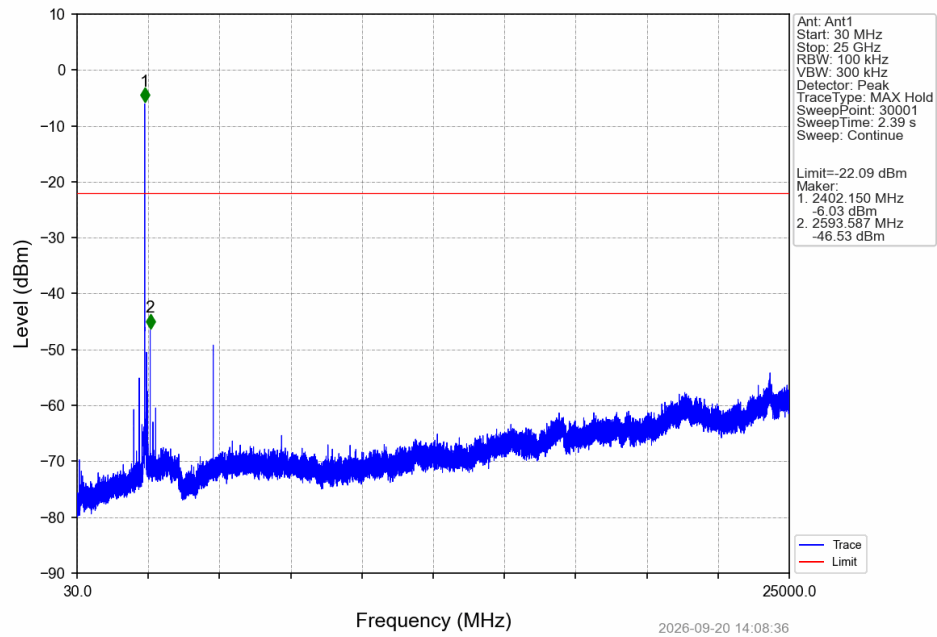
# GFSK\_DH5\_HOPP\_Ant1\_NTNV



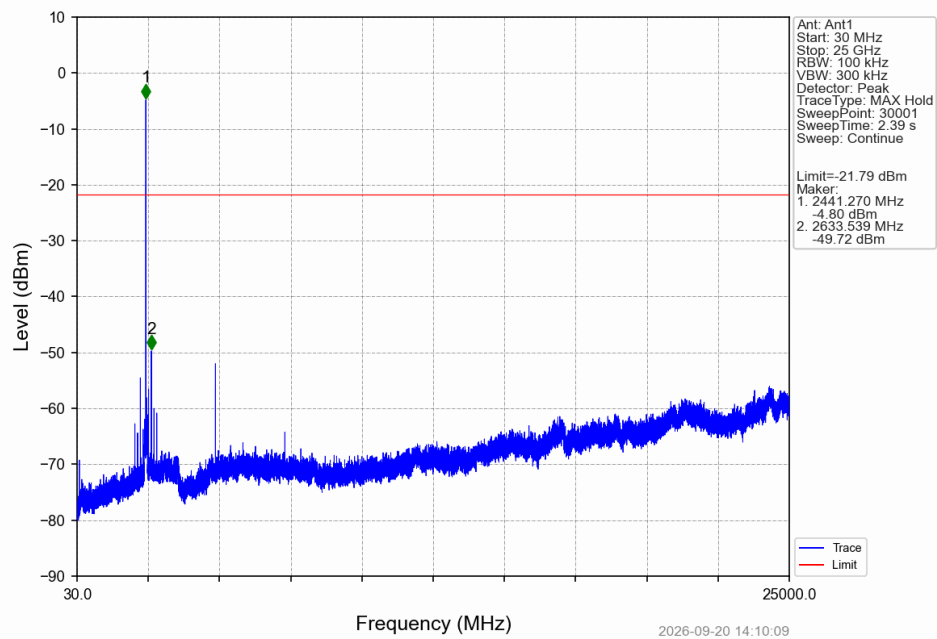
# Pi/4DQPSK\_2DH5\_LCH\_2402MHz\_Ant1\_NTNV



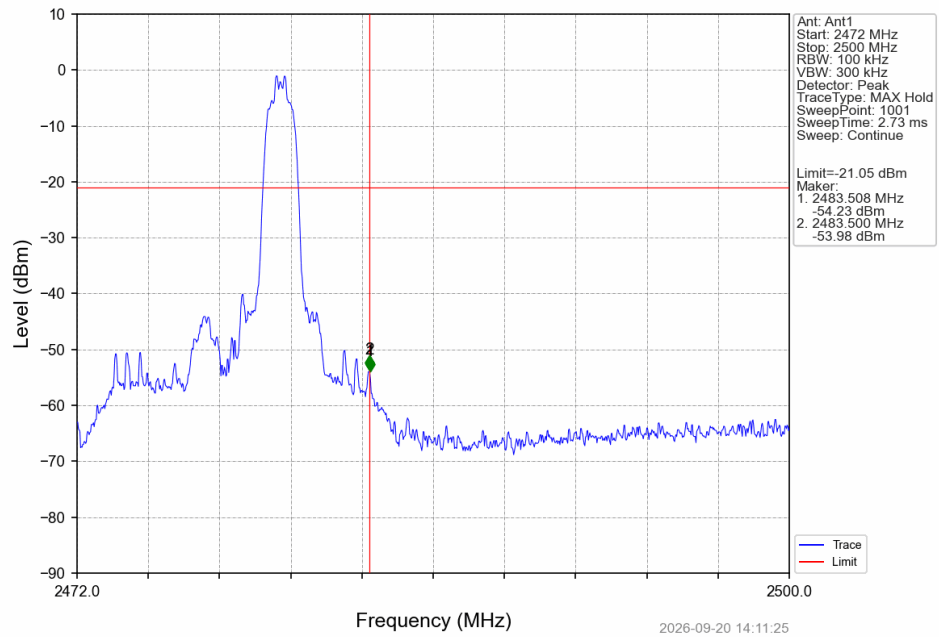
# Pi/4DQPSK\_2DH5\_LCH\_2402MHz\_Ant1\_NTNV



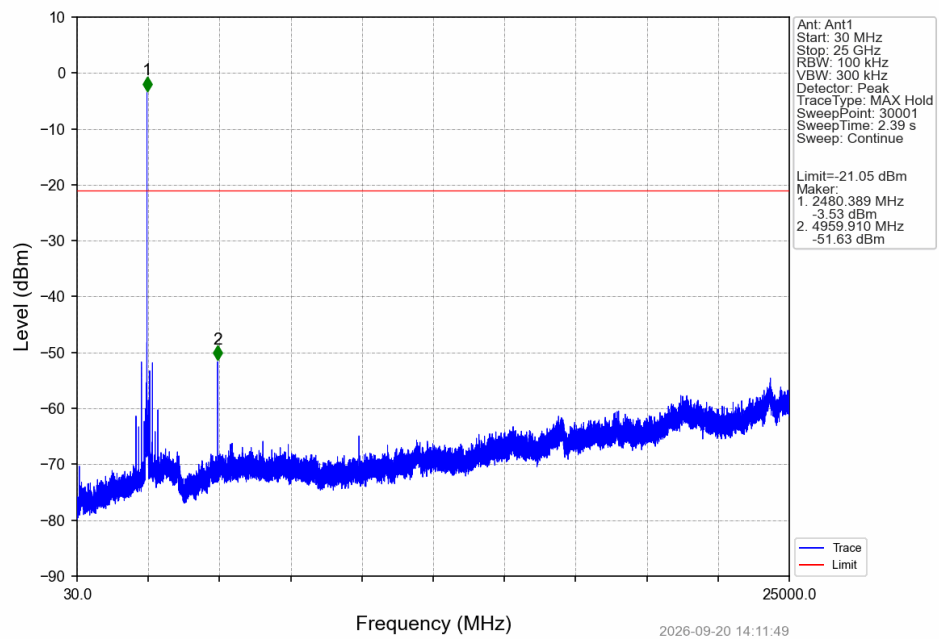
# Pi/4DQPSK\_2DH5\_MCH\_2441MHz\_Ant1\_NTNV



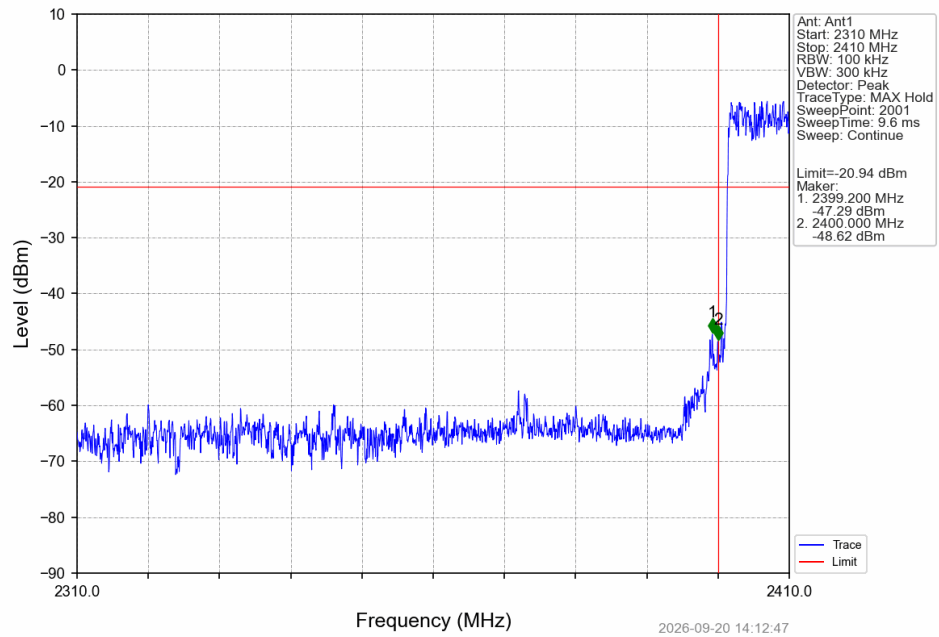
# Pi/4DQPSK\_2DH5\_HCH\_2480MHz\_Ant1\_NTNV



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



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



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

