

1. Bandwidth

1.1 Test Result

1.1.1 OBW

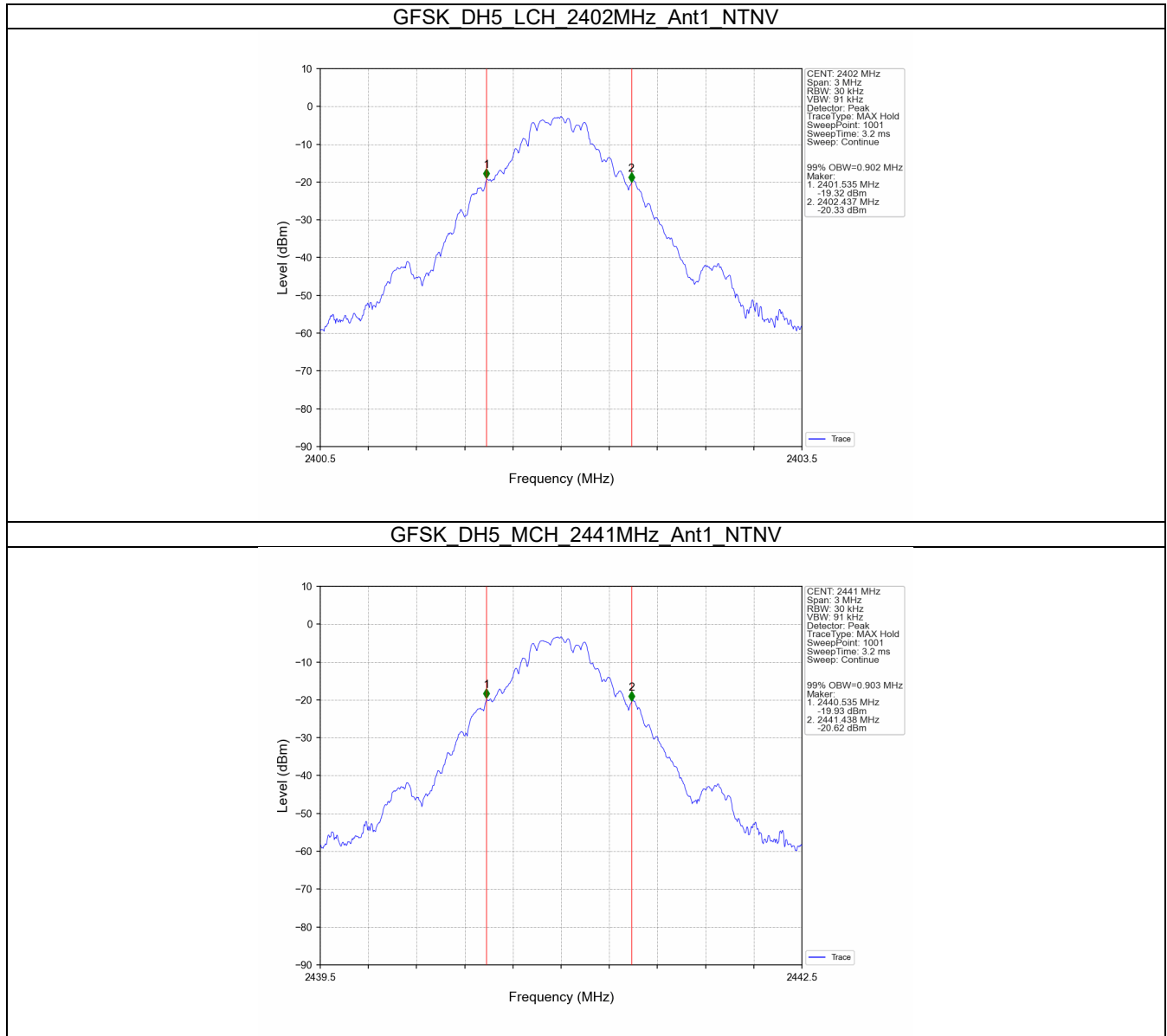
| Mode | TX Type | Frequency (MHz) | Packet Type | ANT | 99% Occupied Bandwidth (MHz) | | Verdict |
|-----------|---------|-----------------|-------------|-----|------------------------------|-------|---------|
| | | | | | Result | Limit | |
| GFSK | SISO | 2402 | DH5 | 1 | 0.902 | / | Pass |
| | | 2441 | DH5 | 1 | 0.903 | / | Pass |
| | | 2480 | DH5 | 1 | 0.900 | / | Pass |
| Pi/4DQPSK | SISO | 2402 | 2DH5 | 1 | 1.183 | / | Pass |
| | | 2441 | 2DH5 | 1 | 1.180 | / | Pass |
| | | 2480 | 2DH5 | 1 | 1.177 | / | Pass |
| 8DPSK | SISO | 2402 | 3DH5 | 1 | 0.898 | / | Pass |
| | | 2441 | 3DH5 | 1 | 0.904 | / | Pass |
| | | 2480 | 3DH5 | 1 | 0.908 | / | Pass |

1.1.2 20dB BW

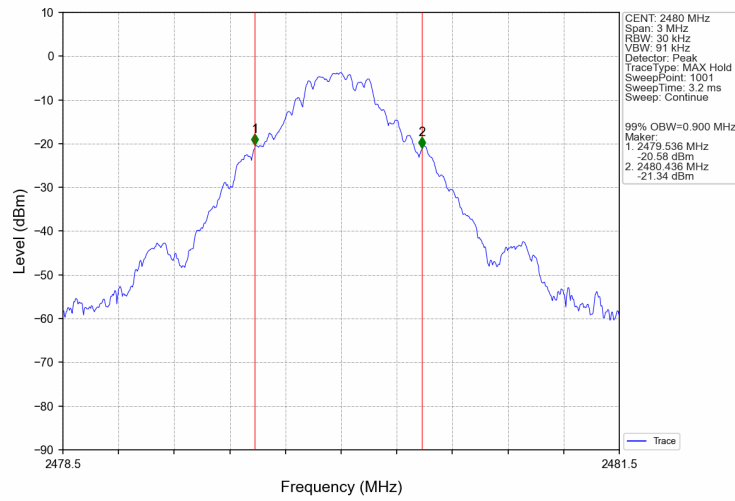
| Mode | TX Type | Frequency (MHz) | Packet Type | ANT | 20dB Bandwidth (MHz) | | Verdict |
|-----------|---------|-----------------|-------------|-----|----------------------|-------|---------|
| | | | | | Result | Limit | |
| GFSK | SISO | 2402 | DH5 | 1 | 1.031 | / | Pass |
| | | 2441 | DH5 | 1 | 1.033 | / | Pass |
| | | 2480 | DH5 | 1 | 1.034 | / | Pass |
| Pi/4DQPSK | SISO | 2402 | 2DH5 | 1 | 1.318 | / | Pass |
| | | 2441 | 2DH5 | 1 | 1.321 | / | Pass |
| | | 2480 | 2DH5 | 1 | 1.296 | / | Pass |
| 8DPSK | SISO | 2402 | 3DH5 | 1 | 1.038 | / | Pass |
| | | 2441 | 3DH5 | 1 | 1.038 | / | Pass |
| | | 2480 | 3DH5 | 1 | 1.035 | / | Pass |

1.2 Test Graph

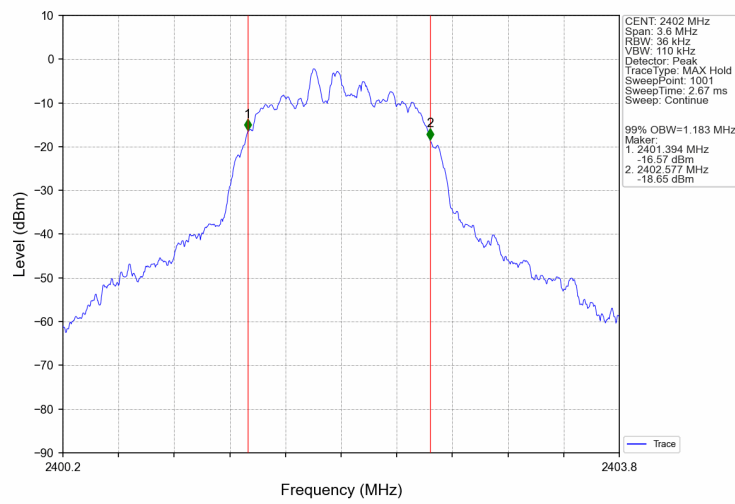
1.2.1 OBW



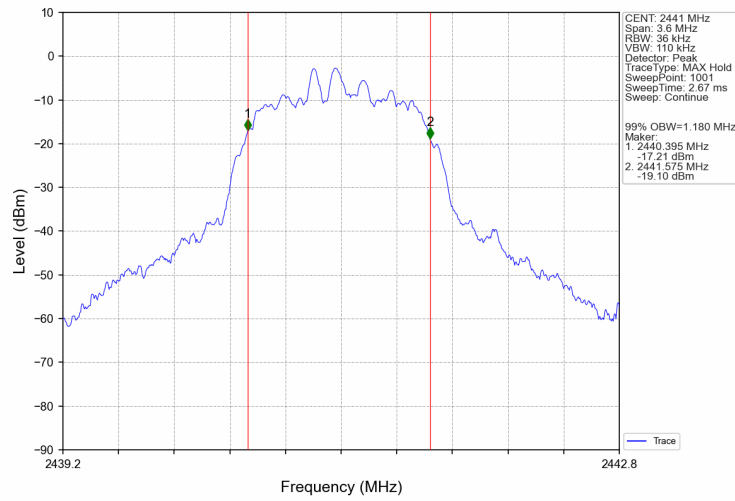
GFSK DH5 HCH 2480MHz Ant1 NTN



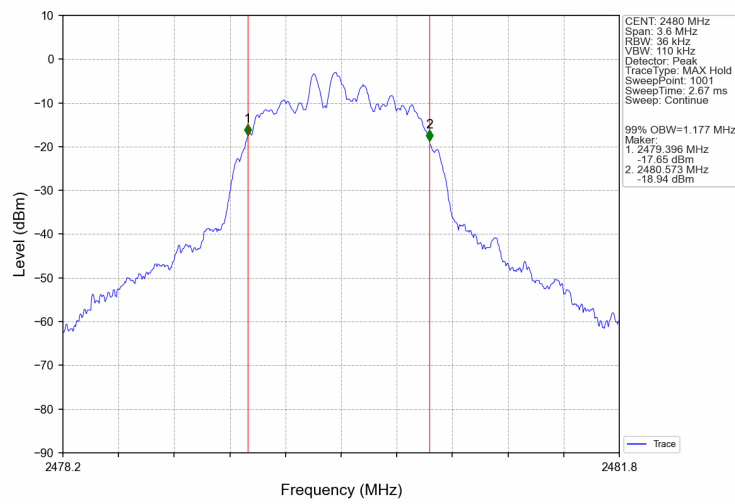
Pi/4DQPSK 2DH5 LCH 2402MHz Ant1 NTN



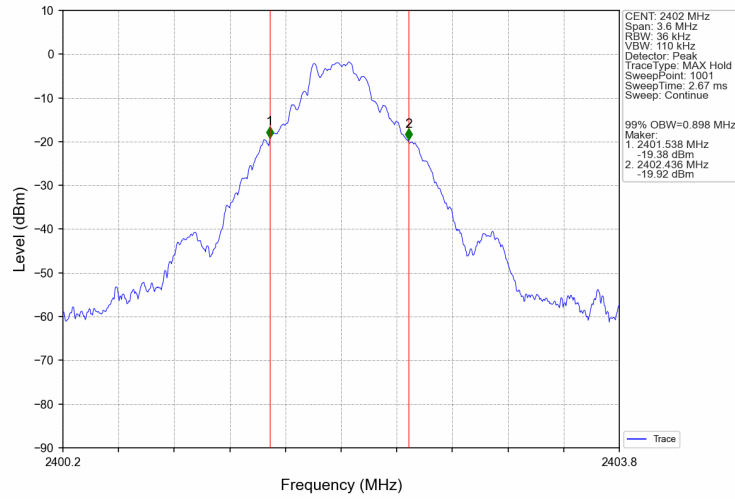
Pi/4DQPSK_2DH5_MCH_2441MHz_Ant1_NTNV



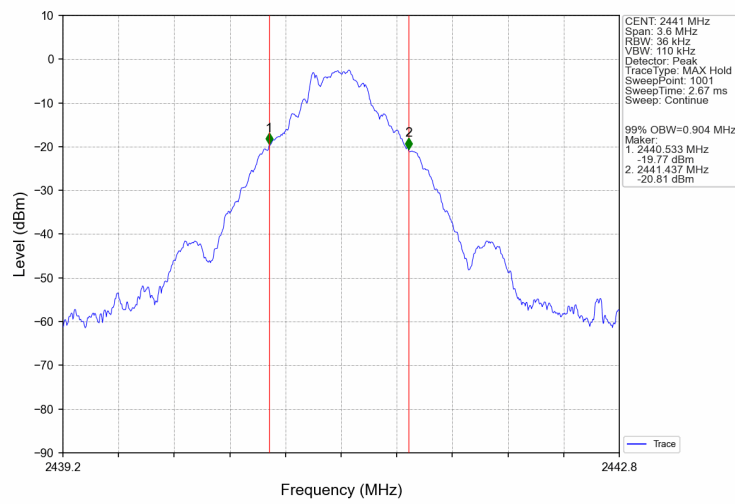
Pi/4DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV



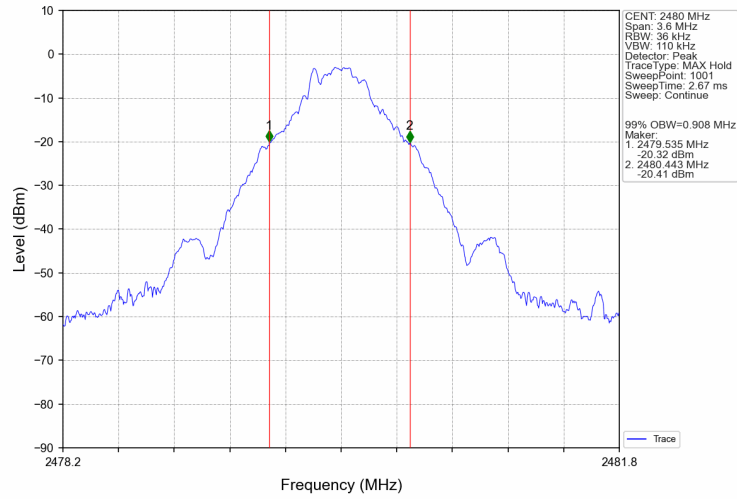
8DPSK_3DH5_LCH_2402MHz_Ant1_NTNV



8DPSK_3DH5_MCH_2441MHz_Ant1_NTNV

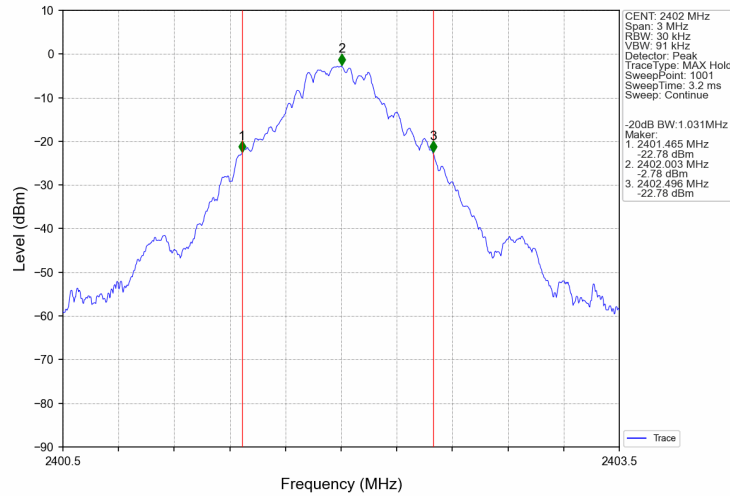


8DPSK_3DH5_HCH_2480MHz_Ant1_NTNV

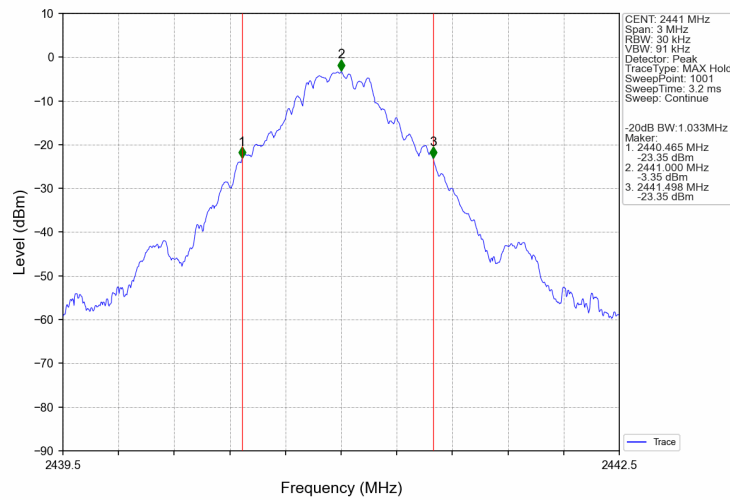


1.2.2 20dB BW

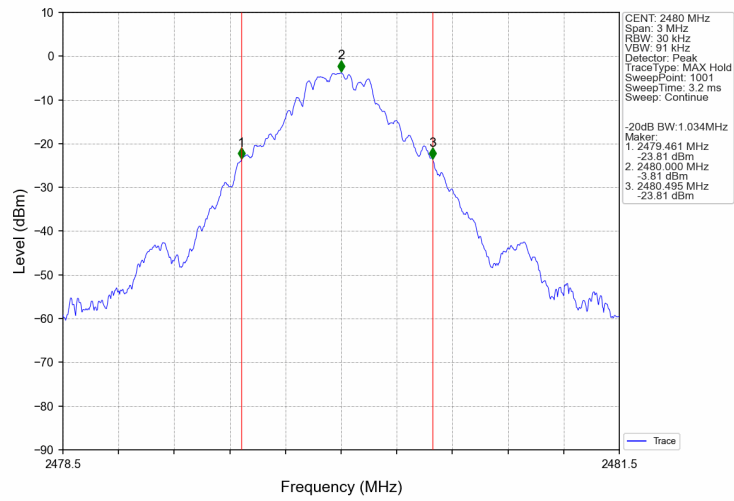
GFSK DH5 LCH 2402MHz Ant1 NTN



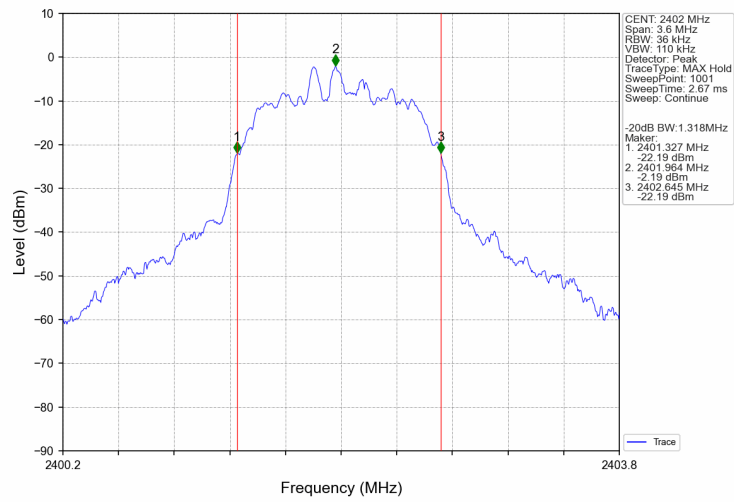
GFSK DH5 MCH 2441MHz Ant1 NTN



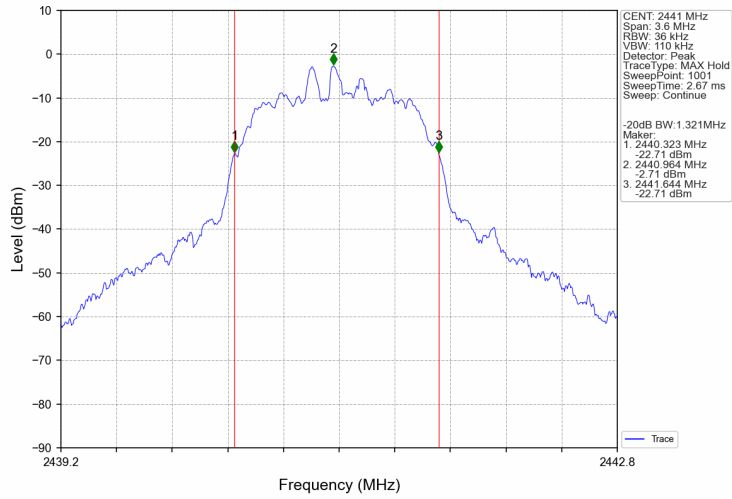
GFSK DH5 HCH 2480MHz Ant1 NTN



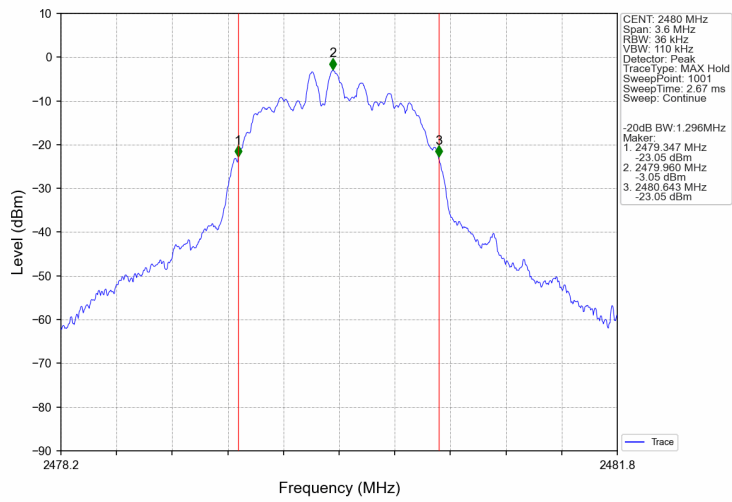
Pi/4DQPSK 2DH5 LCH 2402MHz Ant1 NTN



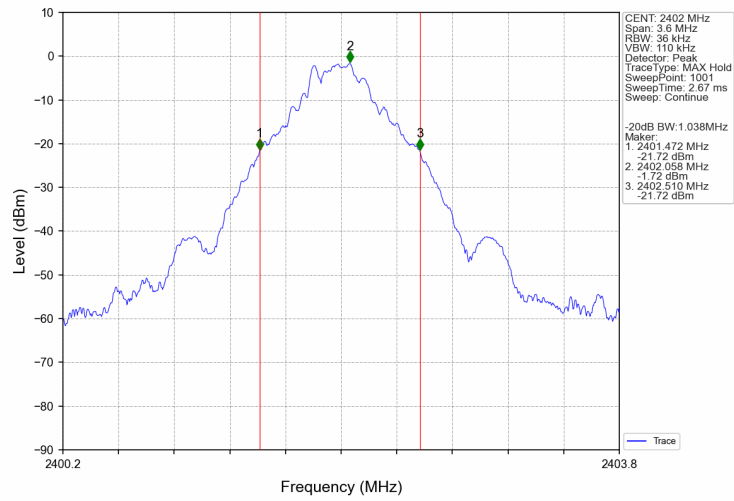
Pi/4DQPSK_2DH5_MCH_2441MHz_Ant1_NTNV



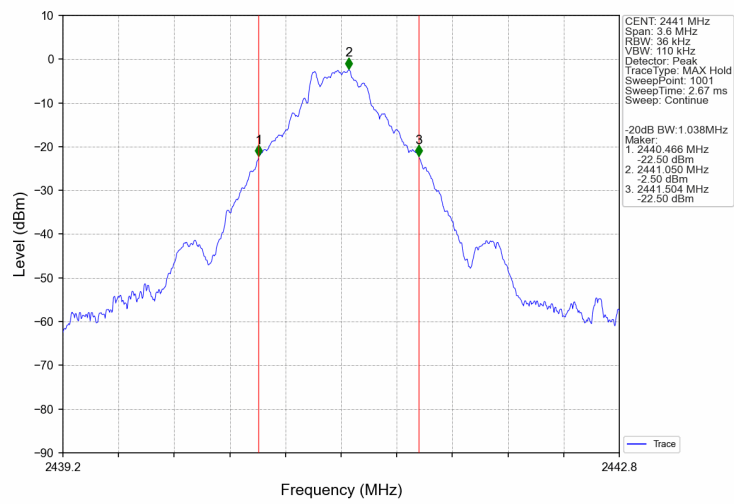
Pi/4DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV



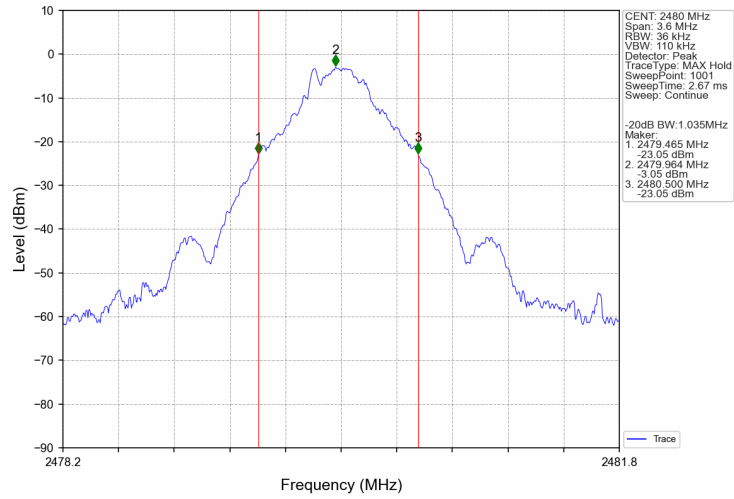
8DPSK_3DH5_LCH_2402MHz_Ant1_NTNV



8DPSK_3DH5_MCH_2441MHz_Ant1_NTNV



8DPSK_3DH5_HCH_2480MHz_Ant1_NTNV



2. Maximum Conducted Output Power

2.1 Test Result

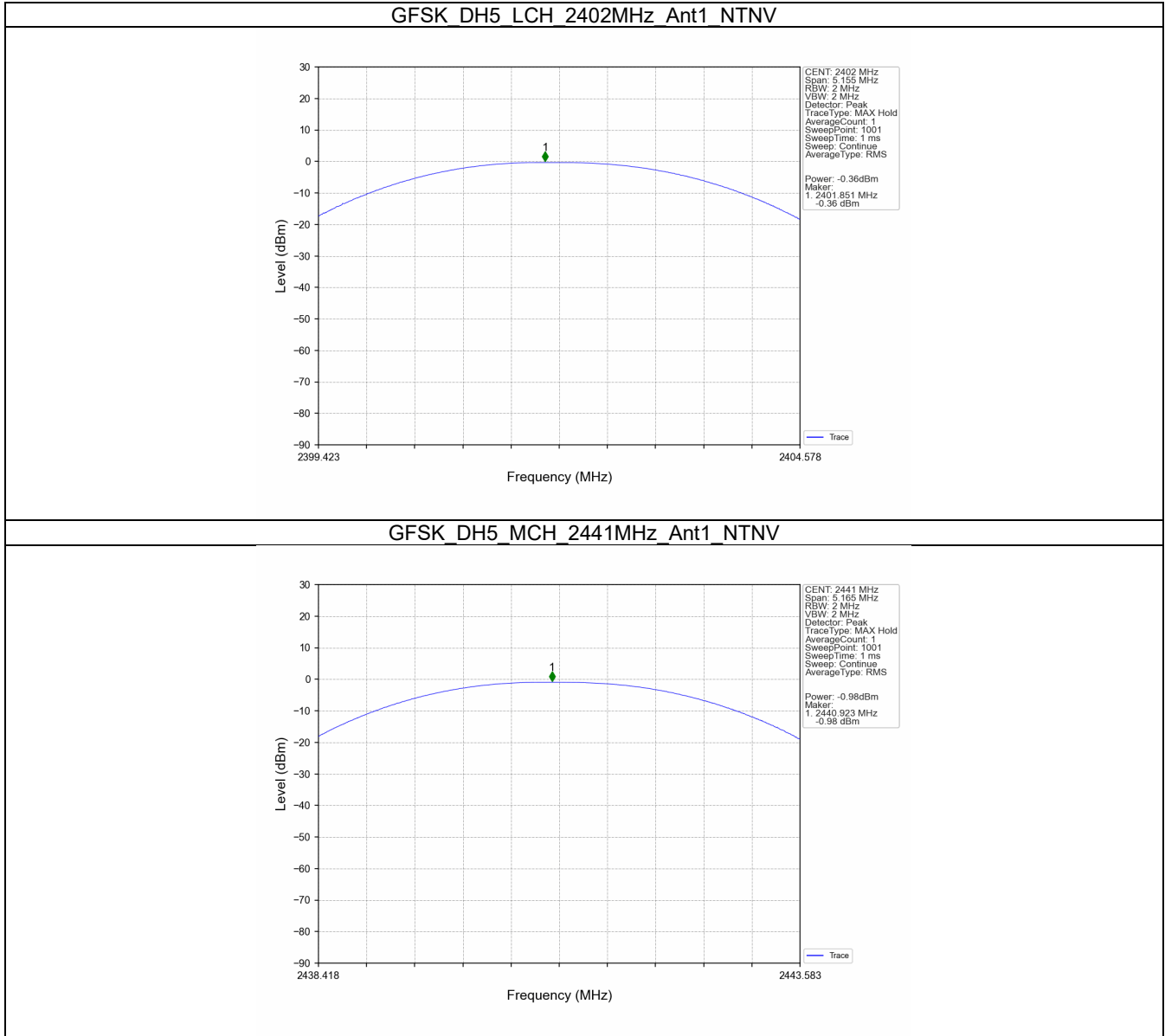
2.1.1 Power

| Mode | TX Type | Frequency (MHz) | Packet Type | Maximum Peak Conducted Output Power (dBm) | | Verdict |
|-----------|---------|-----------------|-------------|---|---------|---------|
| | | | | ANT1 | Limit | |
| GFSK | SISO | 2402 | DH5 | -0.36 | <=20.97 | Pass |
| | | 2441 | DH5 | -0.98 | <=20.97 | Pass |
| | | 2480 | DH5 | -1.38 | <=20.97 | Pass |
| Pi/4DQPSK | SISO | 2402 | 2DH5 | 0.57 | <=20.97 | Pass |
| | | 2441 | 2DH5 | -0.06 | <=20.97 | Pass |
| | | 2480 | 2DH5 | -0.48 | <=20.97 | Pass |
| 8DPSK | SISO | 2402 | 3DH5 | -0.29 | <=20.97 | Pass |
| | | 2441 | 3DH5 | -0.90 | <=20.97 | Pass |
| | | 2480 | 3DH5 | -1.31 | <=20.97 | Pass |

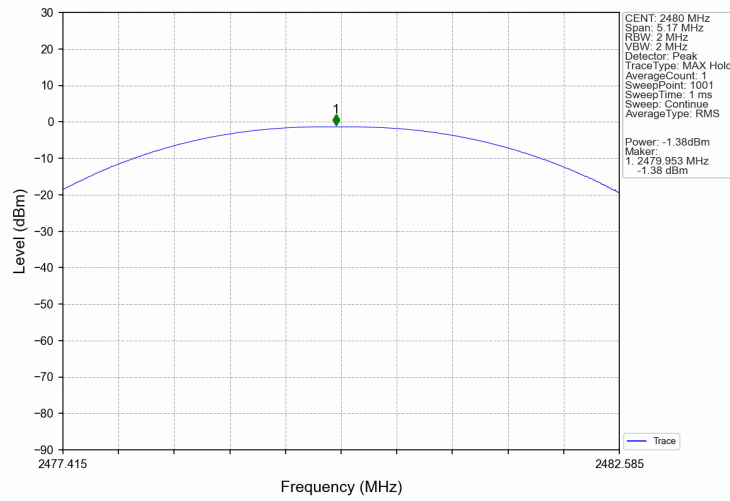
Note1: Antenna Gain: Ant1: 2.78dBi;

2.2 Test Graph

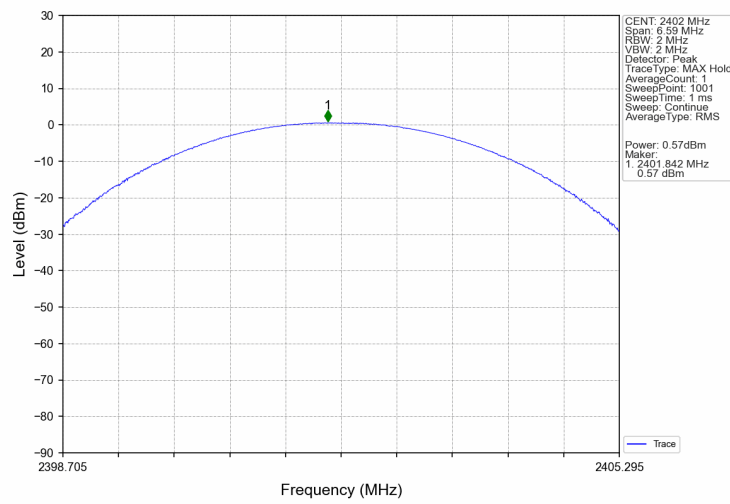
2.2.1 Power



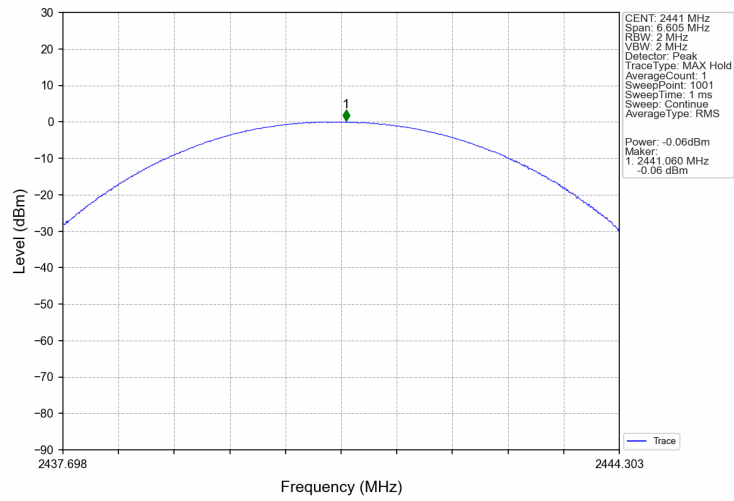
GFSK DH5 HCH 2480MHz Ant1 NTN



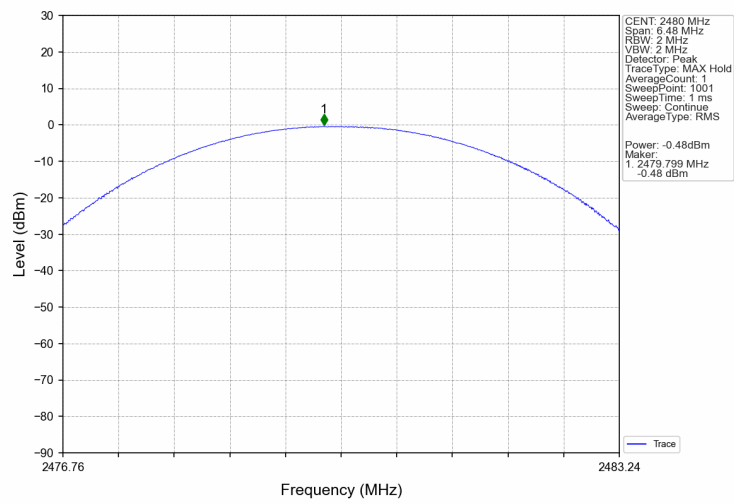
PI/4DQPSK 2DH5 LCH 2402MHz Ant1 NTN



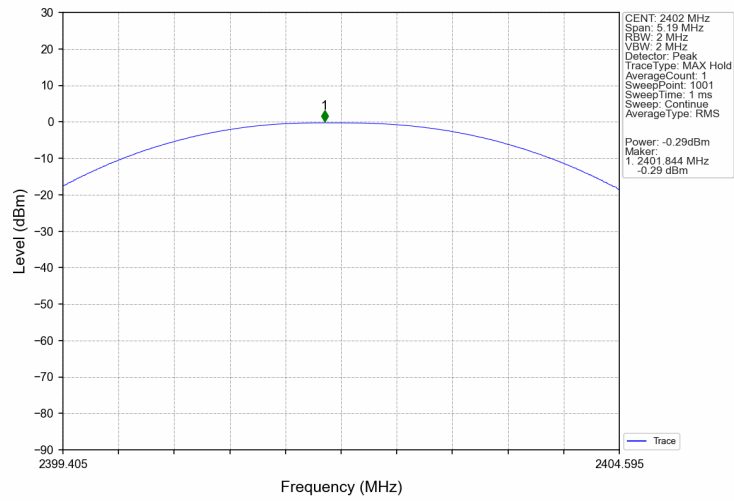
Pi/4DQPSK_2DH5_MCH_2441MHz_Ant1_NTNV



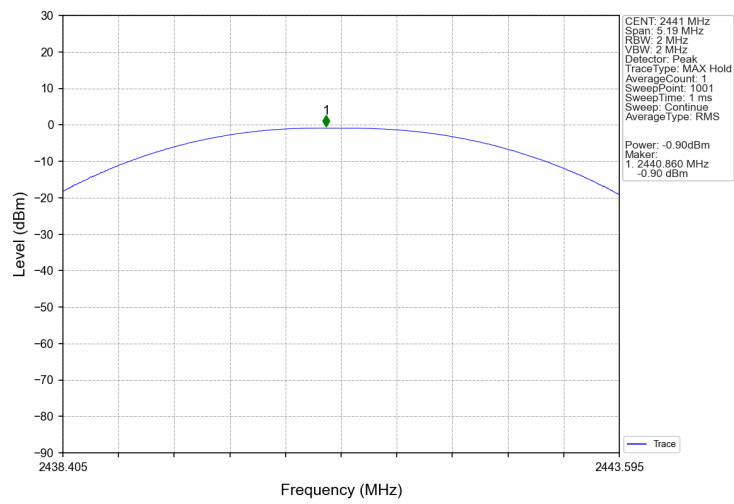
Pi/4DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV



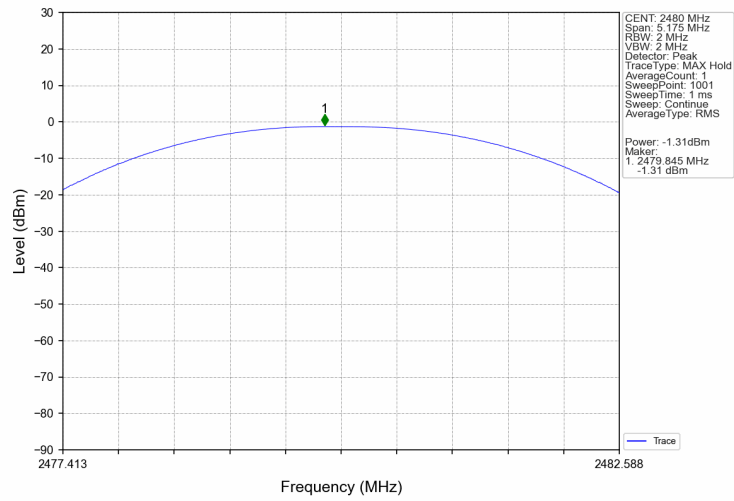
8DPSK_3DH5_LCH_2402MHz_Ant1_NTNV



8DPSK_3DH5_MCH_2441MHz_Ant1_NTNV



8DPSK_3DH5_HCH_2480MHz_Ant1_NTNV



3. Carrier Frequency Separation

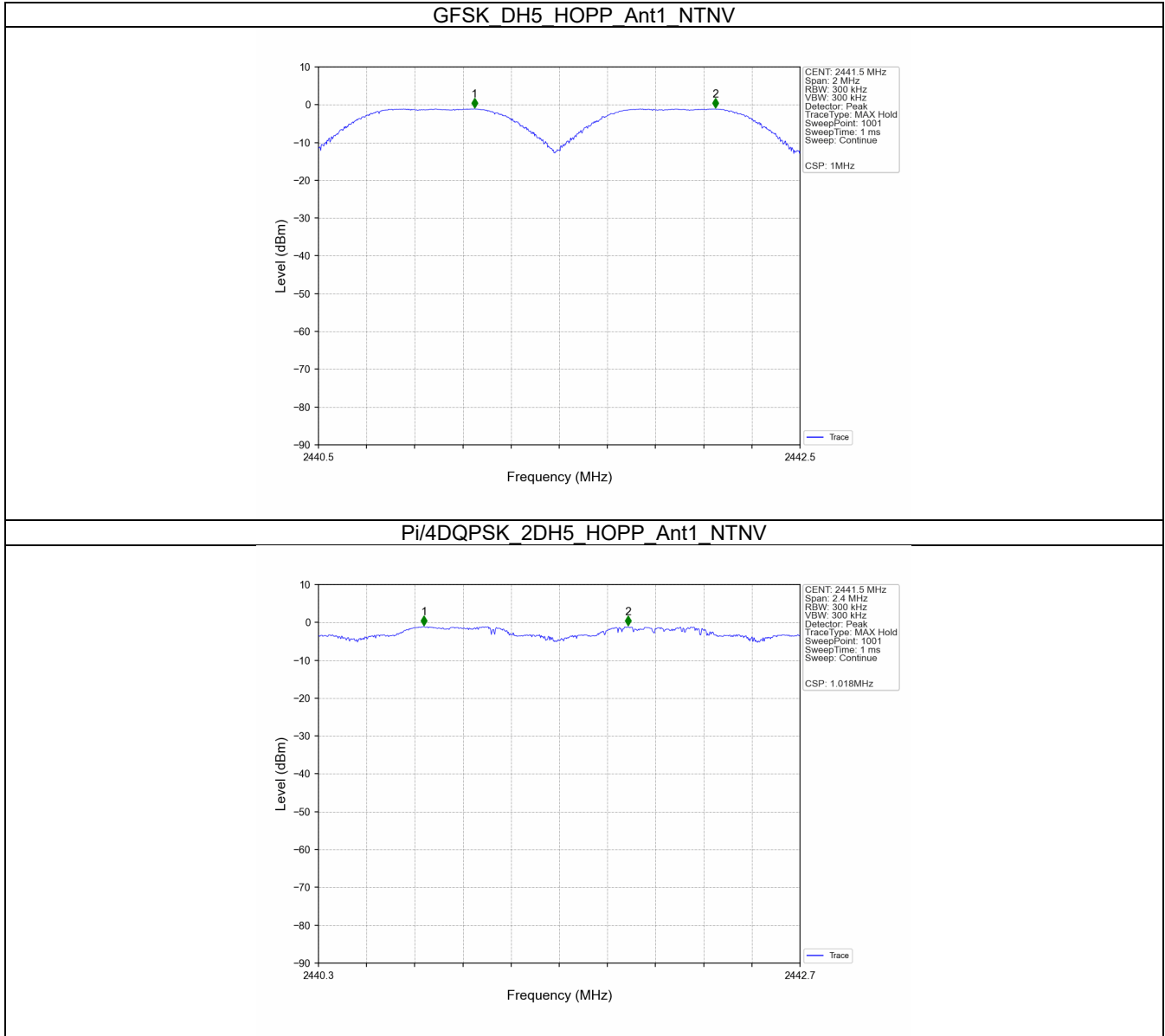
3.1 Test Result

3.1.1 Ant1

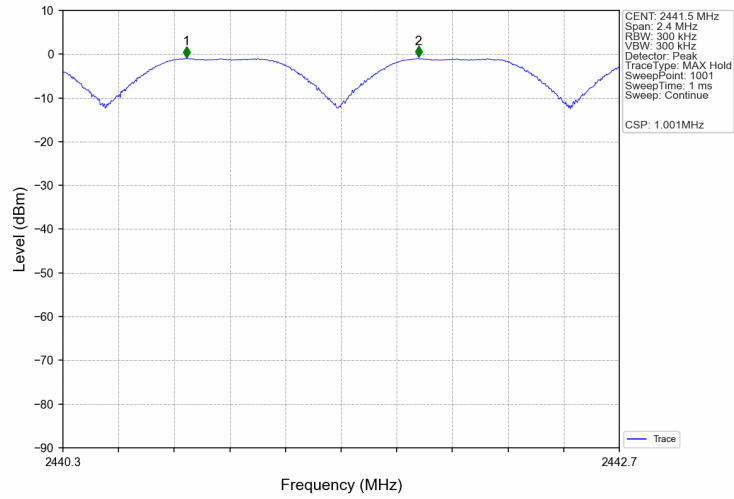
| Ant1 | | | | | | | |
|-----------|---------|-----------------|-------------|--------------------------|----------------------|--------------|---------|
| Mode | TX Type | Frequency (MHz) | Packet Type | Channel Separation (MHz) | 20dB Bandwidth (MHz) | Limit (MHz) | Verdict |
| GFSK | SISO | HOPP | DH5 | 1.000 | 1.034 | ≥ 0.689 | Pass |
| Pi/4DQPSK | SISO | HOPP | 2DH5 | 1.018 | 1.321 | ≥ 0.881 | Pass |
| 8DPSK | SISO | HOPP | 3DH5 | 1.001 | 1.038 | ≥ 0.692 | Pass |

3.2 Test Graph

3.2.1 Ant1



8DPSK_3DH5_HOPP_Ant1_NTNV



4. Number of Hopping Frequencies

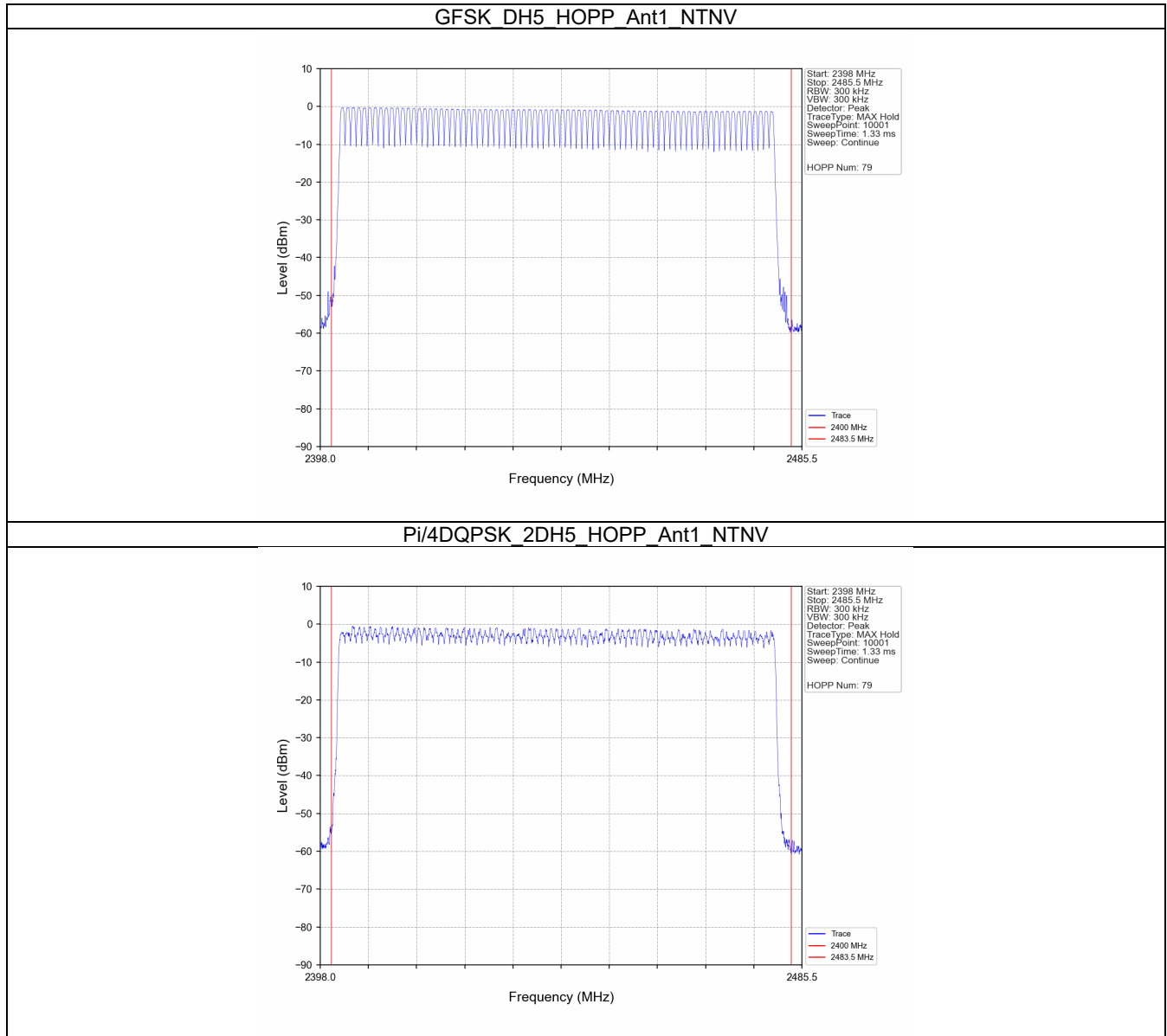
4.1 Test Result

4.1.1 HoppNum

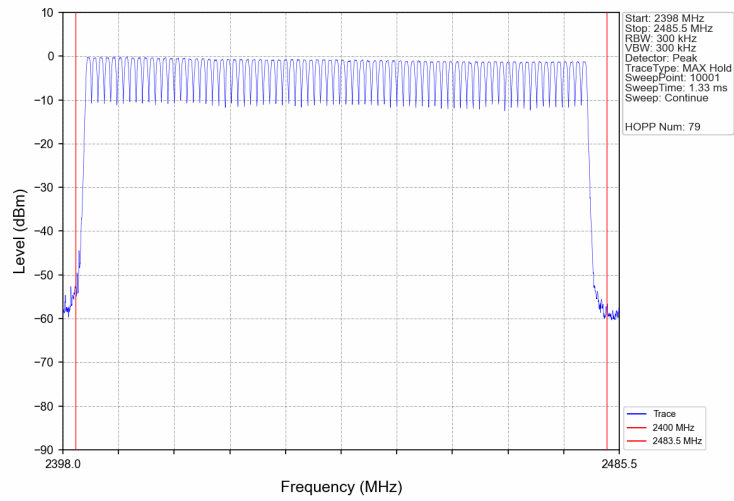
| Mode | TX Type | Frequency (MHz) | Packet Type | Num of Hopping Frequencies | | Verdict |
|-----------|---------|-----------------|-------------|----------------------------|-----------|---------|
| | | | | ANT1 | Limit | |
| GFSK | SISO | HOPP | DH5 | 79 | ≥ 15 | Pass |
| Pi/4DQPSK | SISO | HOPP |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

4.2 Test Graph

4.2.1 HoppNum



8DPSK_3DH5_HOPP_Ant1_NTNV



5. Time of Occupancy (Dwell Time)

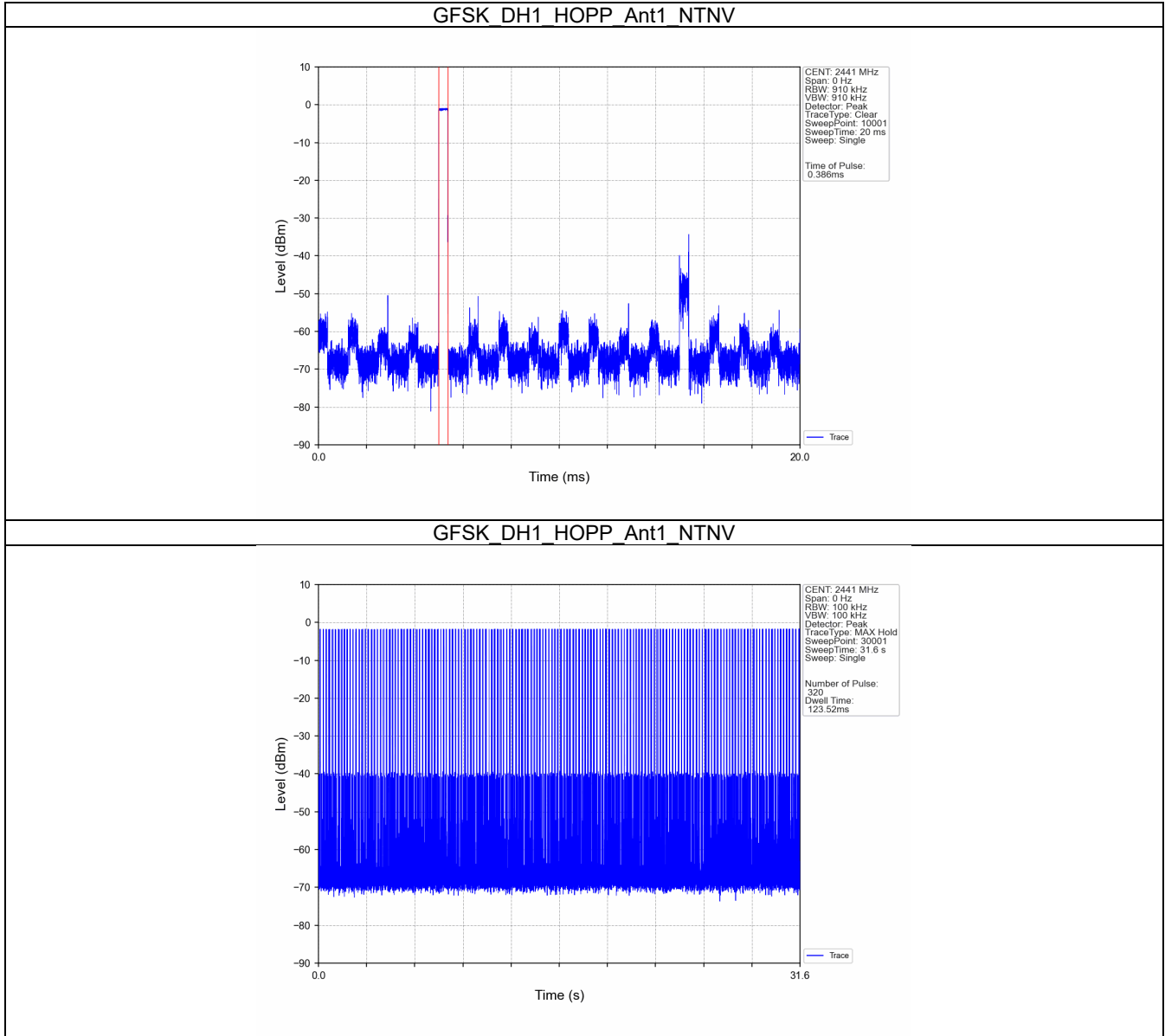
5.1 Test Result

5.1.1 Ant1

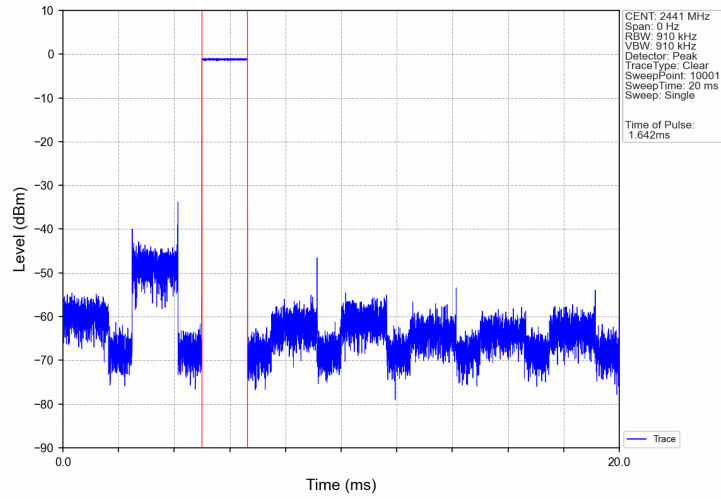
| Ant1 | | | | | | | | | |
|-----------|---------|-----------------|-------------|-------------------------------|------------------------|------------------------------------|-----------------|------------|---------|
| Mode | TX Type | Frequency (MHz) | Packet Type | Duration of Single Pulse (ms) | Observation Period (s) | Num of Pulse in Observation Period | Dwell Time (ms) | Limit (ms) | Verdict |
| GFSK | SISO | HOPP | DH1 | 0.386 | 31.600 | 320 | 123.520 | <=400 | Pass |
| | | | DH3 | 1.642 | 31.600 | 160 | 262.720 | <=400 | Pass |
| | | | DH5 | 2.896 | 31.600 | 96 | 278.016 | <=400 | Pass |
| Pi/4DQPSK | SISO | HOPP | 2DH1 | 0.396 | 31.600 | 433 | 171.468 | <=400 | Pass |
| | | | 2DH3 | 1.654 | 31.600 | 165 | 272.910 | <=400 | Pass |
| | | | 2DH5 | 2.902 | 31.600 | 104 | 301.808 | <=400 | Pass |
| 8DPSK | SISO | HOPP | 3DH1 | 6.676 | 31.600 | 51 | 340.476 | <=400 | Pass |
| | | | 3DH3 | 1.624 | 31.600 | 162 | 263.088 | <=400 | Pass |
| | | | 3DH5 | 2.374 | 31.600 | 108 | 256.392 | <=400 | Pass |

5.2 Test Graph

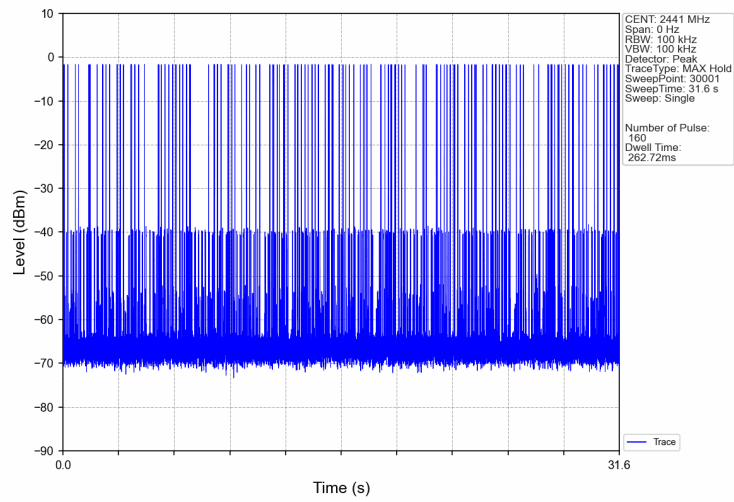
5.2.1 Ant1



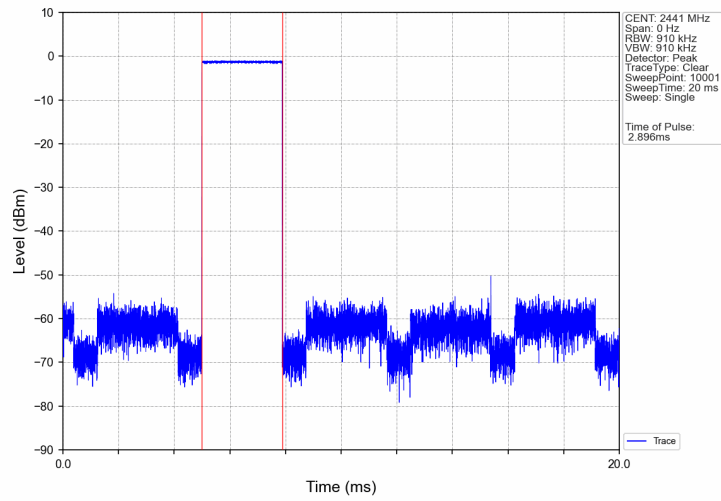
GFSK_DH3_HOPP_Ant1_NTNV



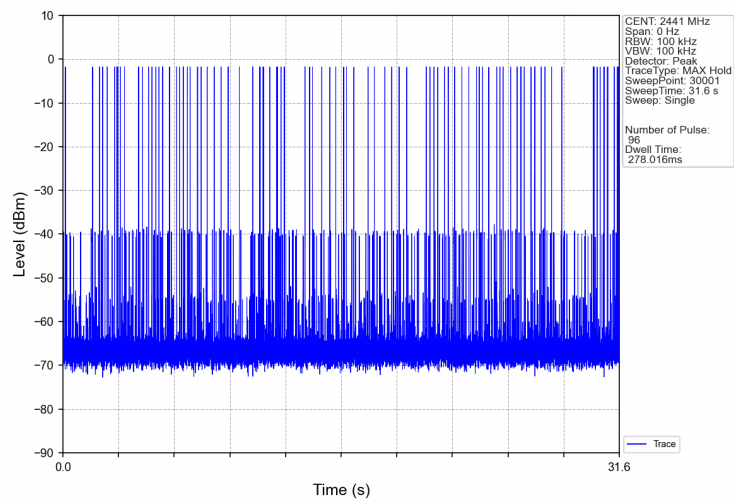
GFSK_DH3_HOPP_Ant1_NTNV



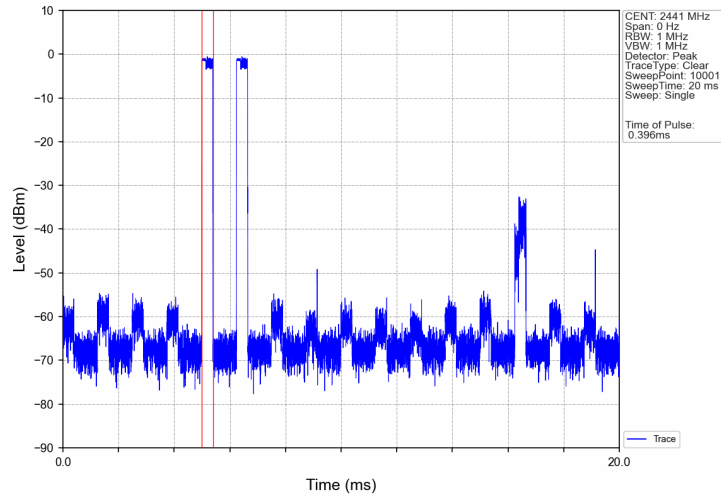
GFSK_DH5_HOPP_Ant1_NTNV



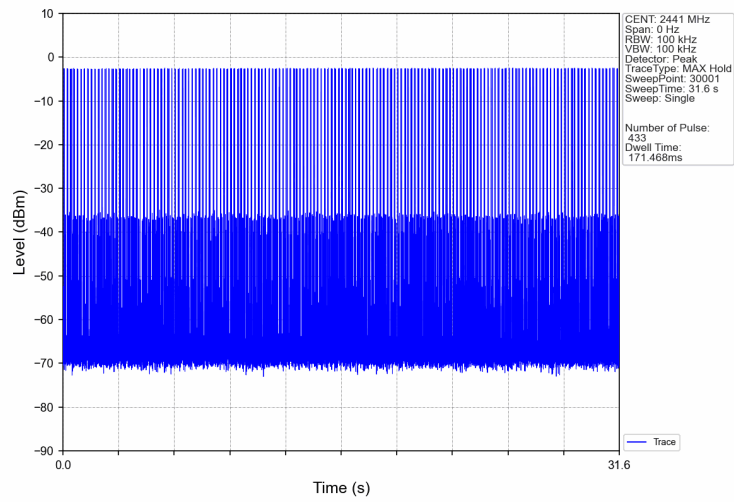
GFSK_DH5_HOPP_Ant1_NTNV



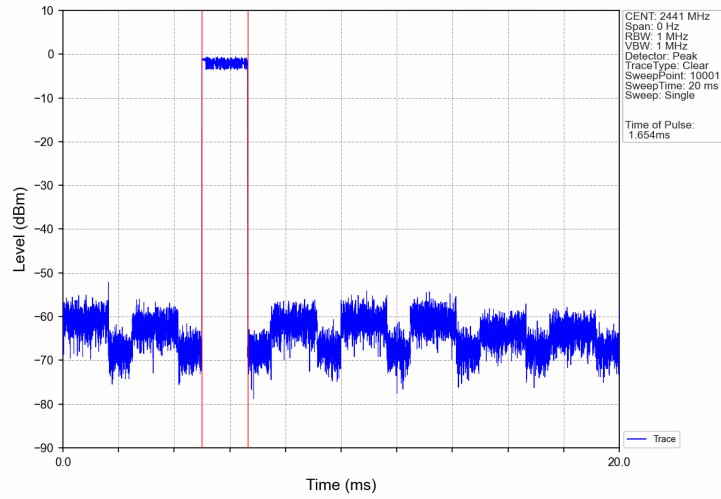
Pi/4DQPSK_2DH1_HOPP_Ant1_NTNV



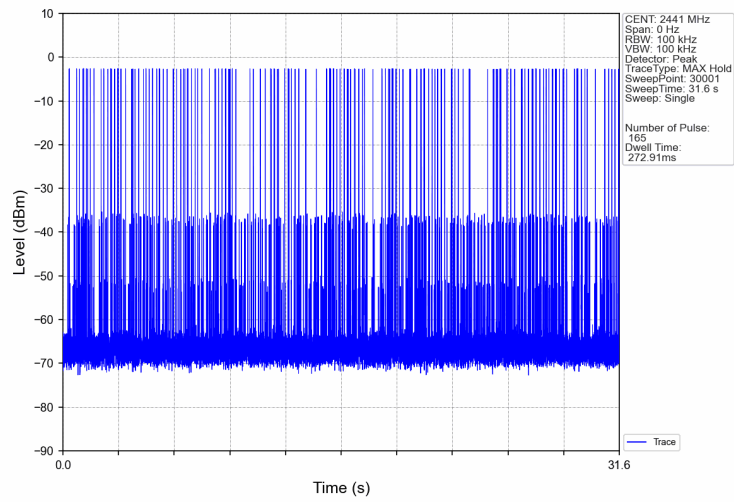
Pi/4DQPSK_2DH1_HOPP_Ant1_NTNV



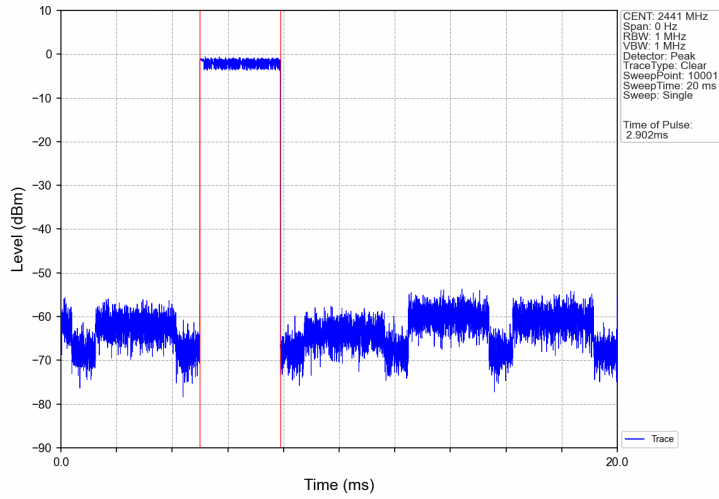
Pi/4DQPSK_2DH3_HOPP_Ant1_NTNV



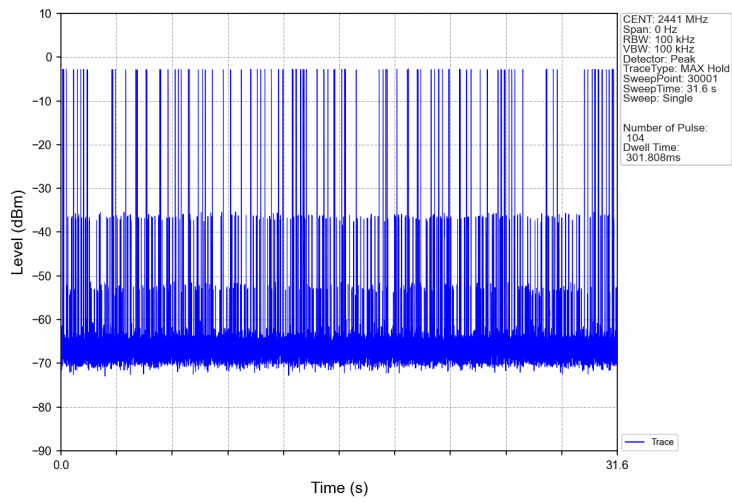
Pi/4DQPSK_2DH3_HOPP_Ant1_NTNV



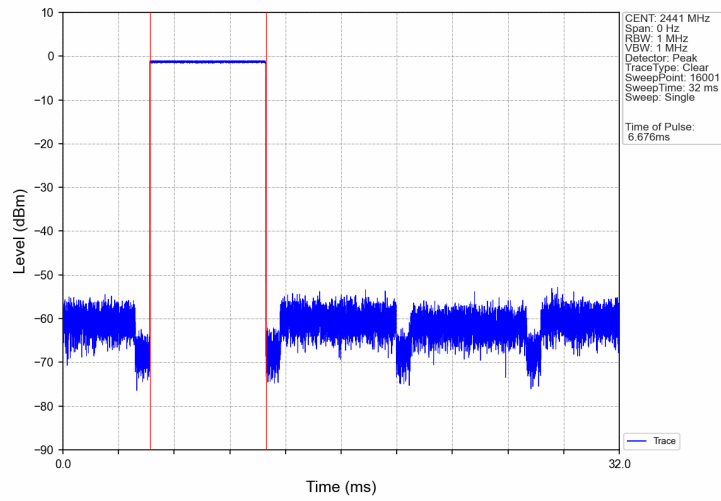
Pi/4DQPSK_2DH5_HOPP_Ant1_NTNV



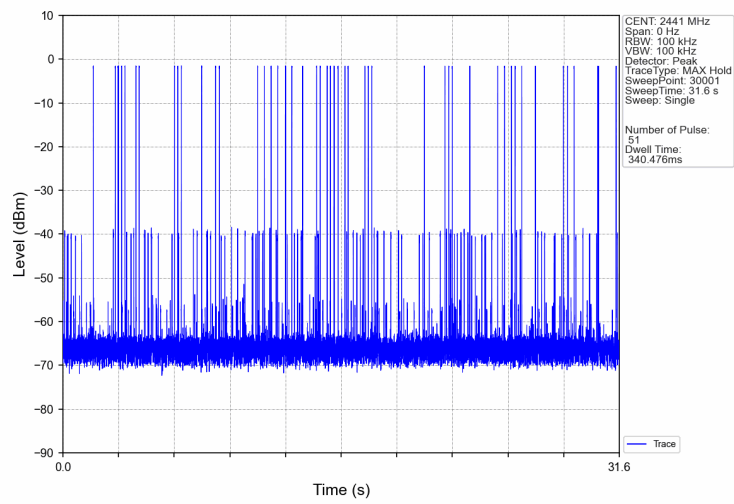
Pi/4DQPSK_2DH5_HOPP_Ant1_NTNV



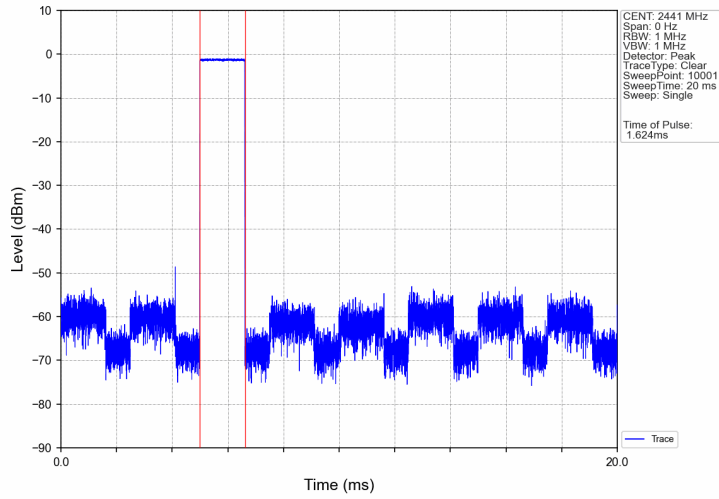
8DPSK_3DH1_HOPP_Ant1_NTNV



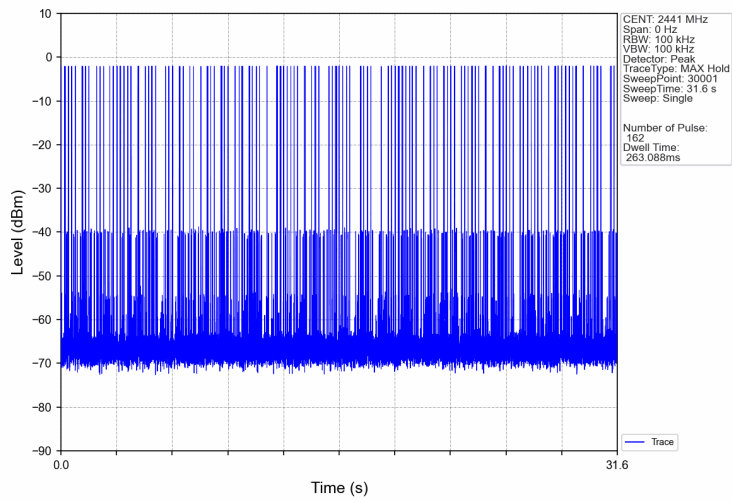
8DPSK_3DH1_HOPP_Ant1_NTNV



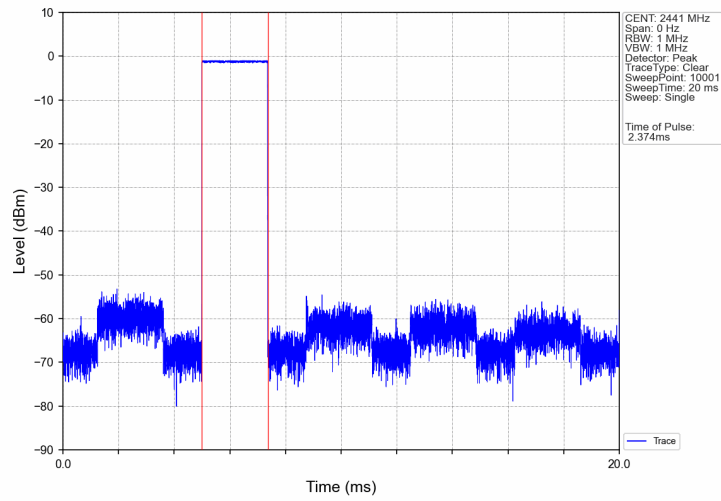
8DPSK_3DH3_HOPP_Ant1_NTNV



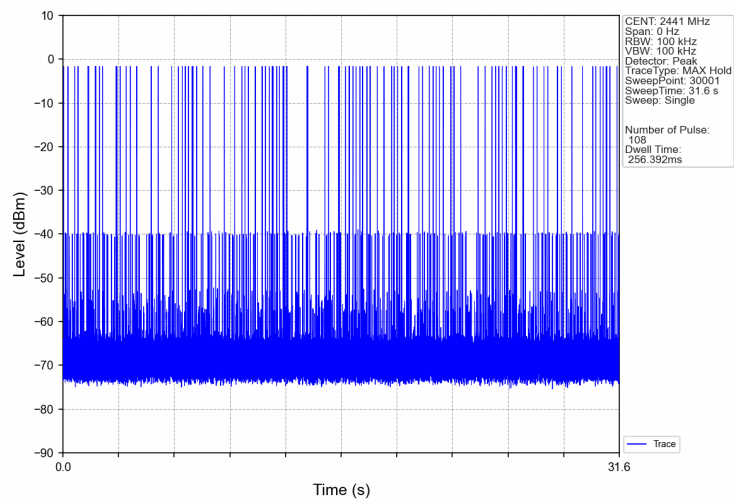
8DPSK_3DH3_HOPP_Ant1_NTNV



8DPSK_3DH5_HOPP_Ant1_NTNV



8DPSK_3DH5_HOPP_Ant1_NTNV



6. Unwanted Emissions In Non-restricted Frequency Bands

6.1 Test Result

6.1.1 Ref

| Mode | TX Type | Frequency (MHz) | Packet Type | ANT | Level of Reference (dBm) |
|-----------|---------|-----------------|-------------|-----|--------------------------|
| GFSK | SISO | 2402 | DH5 | 1 | -0.73 |
| | | 2441 | DH5 | 1 | -1.29 |
| | | 2480 | DH5 | 1 | -1.74 |
| | | HOPP | DH5 | 1 | -0.59 |
| | | | | | -0.59 |
| Pi/4DQPSK | SISO | 2402 | 2DH5 | 1 | -0.66 |
| | | 2441 | 2DH5 | 1 | -1.33 |
| | | 2480 | 2DH5 | 1 | -1.69 |
| | | HOPP | 2DH5 | 1 | -0.75 |
| | | | | | -0.75 |
| 8DPSK | SISO | 2402 | 3DH5 | 1 | -0.55 |
| | | 2441 | 3DH5 | 1 | -1.19 |
| | | 2480 | 3DH5 | 1 | -1.62 |
| | | HOPP | 3DH5 | 1 | -0.75 |
| | | | | | -0.75 |

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

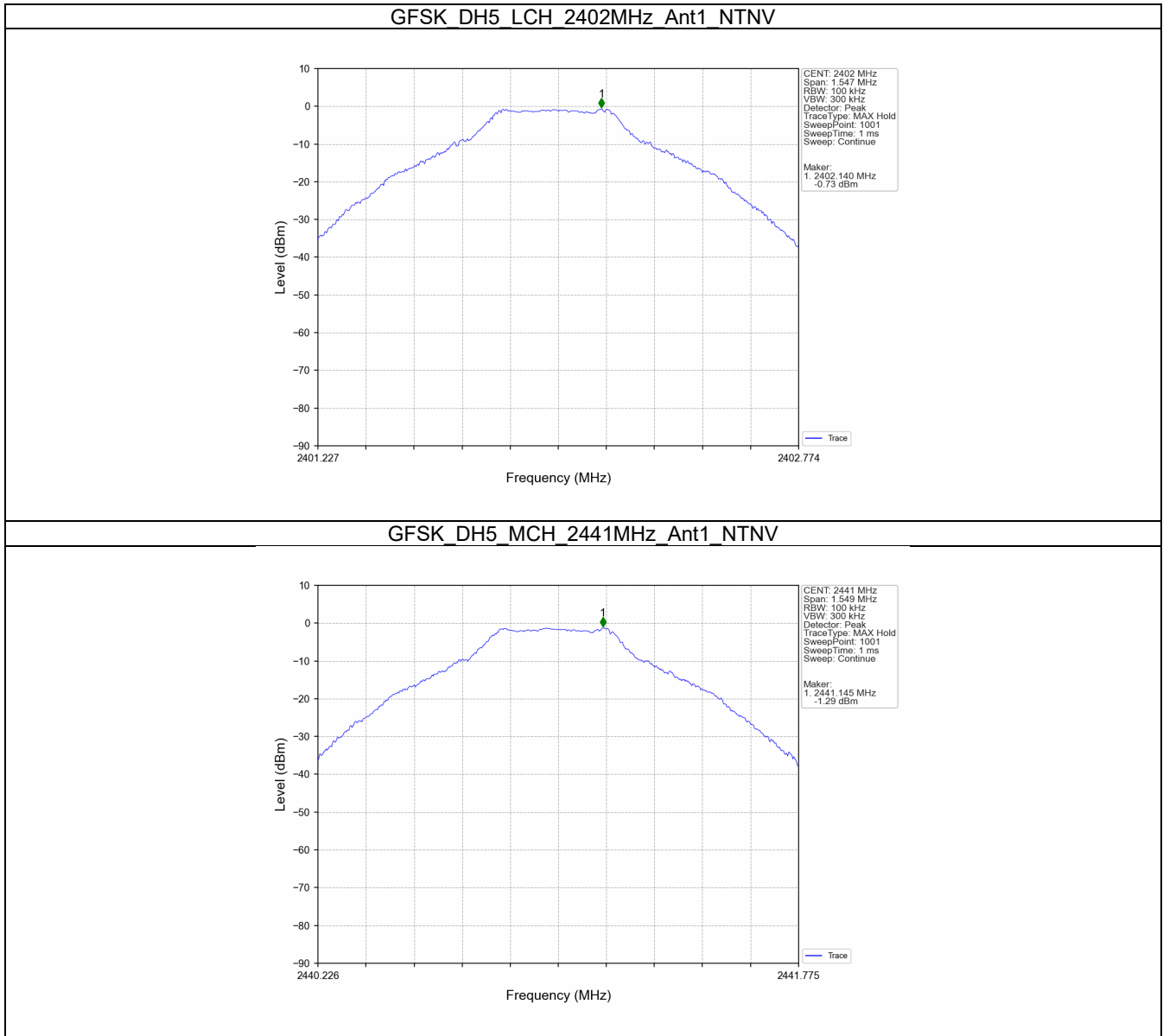
6.1.2 CSE

| Mode | TX Type | Frequency (MHz) | Packet Type | ANT | Level of Reference (dBm) | Limit (dBm) | Verdict |
|-----------|---------|-----------------|-------------|-----|--------------------------|-------------|---------|
| GFSK | SISO | 2402 | DH5 | 1 | -0.73 | -20.73 | Pass |
| | | 2441 | DH5 | 1 | -1.29 | -21.29 | Pass |
| | | 2480 | DH5 | 1 | -1.74 | -21.74 | Pass |
| | | HOPP | DH5 | 1 | -0.59 | -20.59 | Pass |
| | | | | | -0.59 | -20.59 | Pass |
| Pi/4DQPSK | SISO | 2402 | 2DH5 | 1 | -0.66 | -20.66 | Pass |
| | | 2441 | 2DH5 | 1 | -1.33 | -21.33 | Pass |
| | | 2480 | 2DH5 | 1 | -1.69 | -21.69 | Pass |
| | | HOPP | 2DH5 | 1 | -0.75 | -20.75 | Pass |
| | | | | | -0.75 | -20.75 | Pass |
| 8DPSK | SISO | 2402 | 3DH5 | 1 | -0.55 | -20.55 | Pass |
| | | 2441 | 3DH5 | 1 | -1.19 | -21.19 | Pass |
| | | 2480 | 3DH5 | 1 | -1.62 | -21.62 | Pass |
| | | HOPP | 3DH5 | 1 | -0.75 | -20.75 | Pass |
| | | | | | -0.75 | -20.75 | Pass |

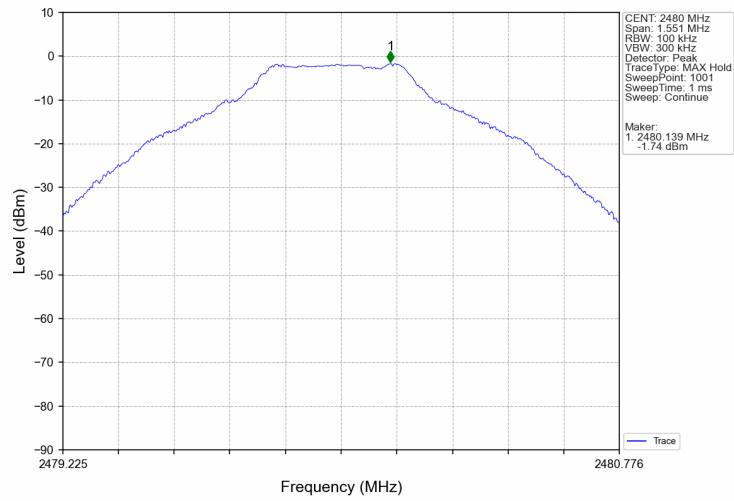
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.

6.2 Test Graph

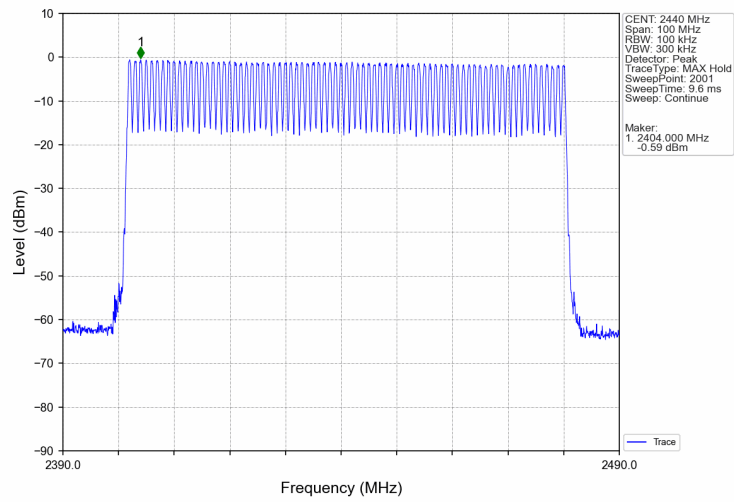
6.2.1 Ref



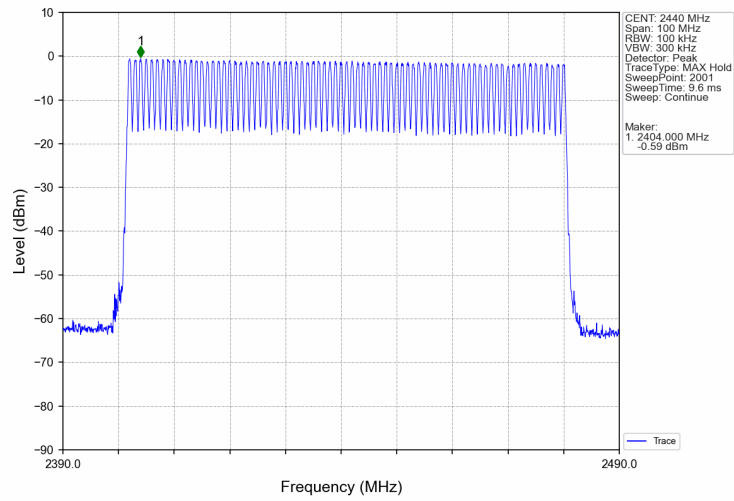
GFSK DH5 HCH 2480MHz Ant1 NTN



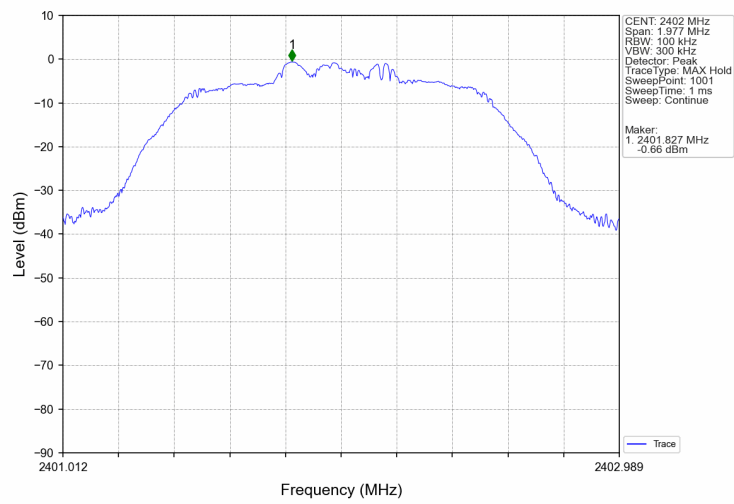
GFSK DH5 HOPP Ant1 NTN



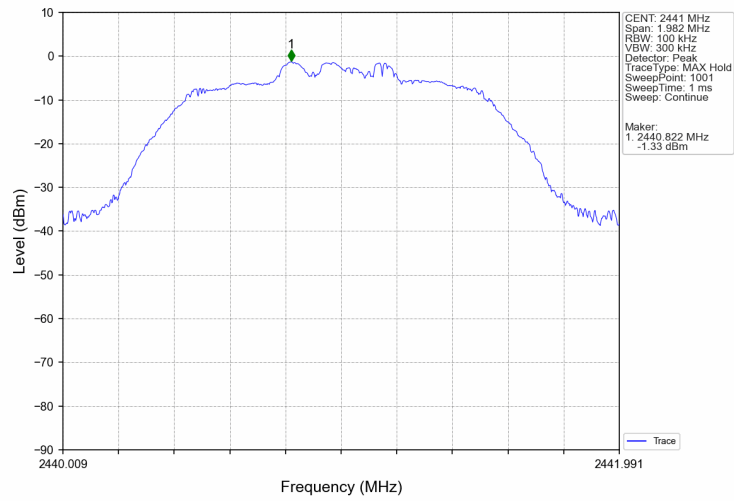
GFSK_DH5_HOPP_Ant1_NTNV



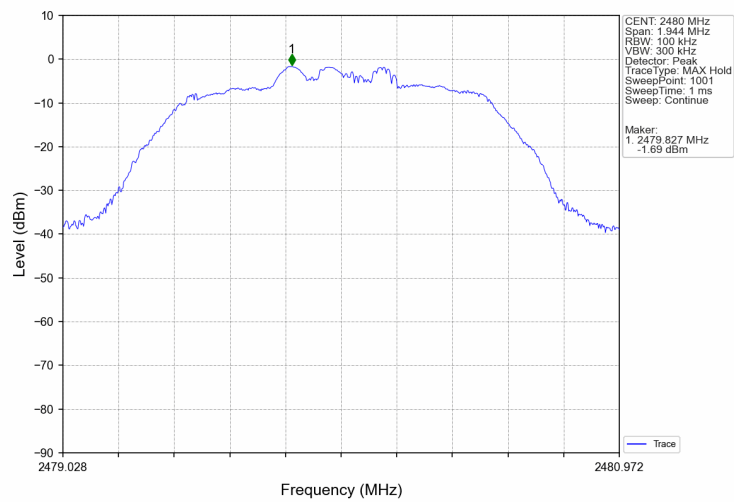
Pi/4DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV



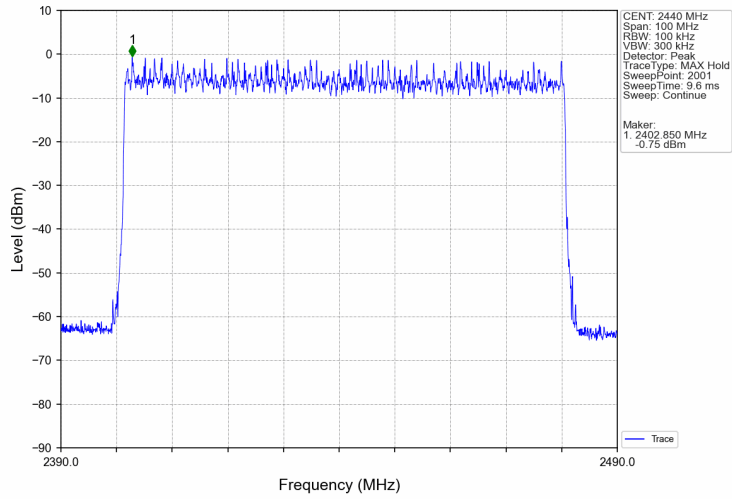
Pi/4DQPSK_2DH5_MCH_2441MHz_Ant1_NTNV



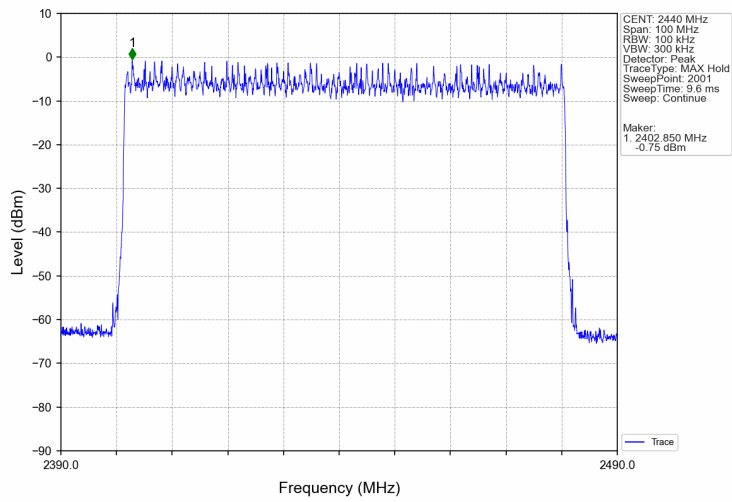
Pi/4DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV



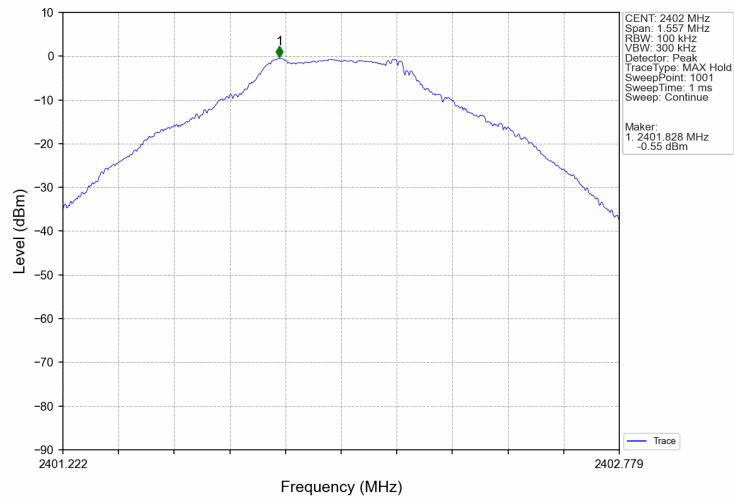
Pi/4DQPSK_2DH5_HOPP_Ant1_NTNV



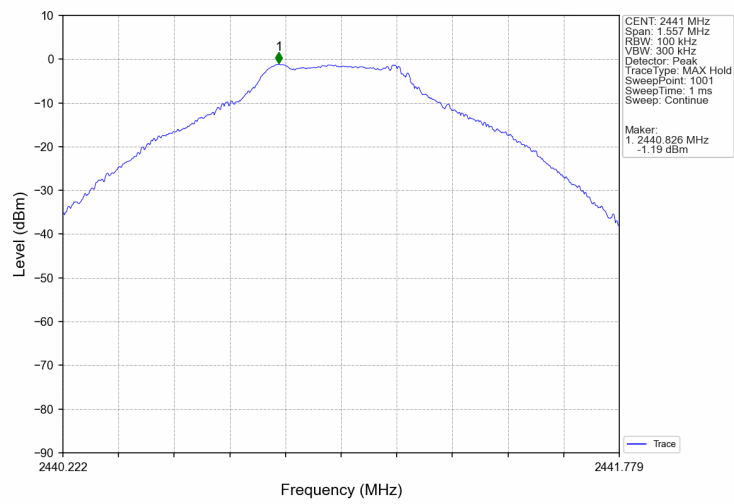
Pi/4DQPSK_2DH5_HOPP_Ant1_NTNV



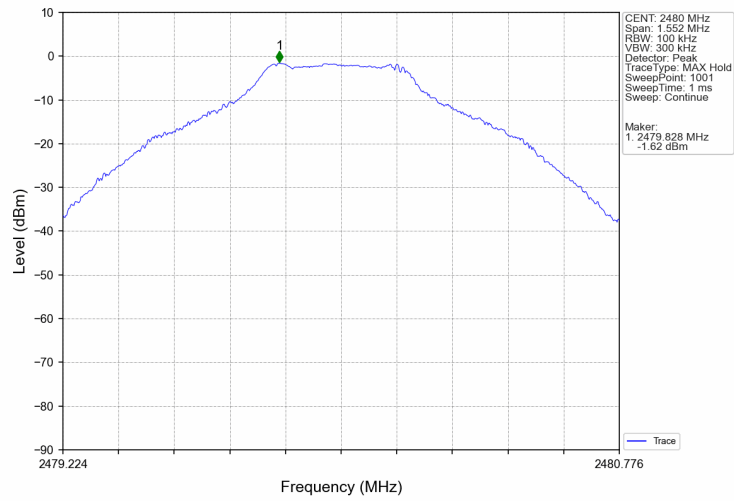
8DPSK_3DH5_LCH_2402MHz_Ant1_NTNV



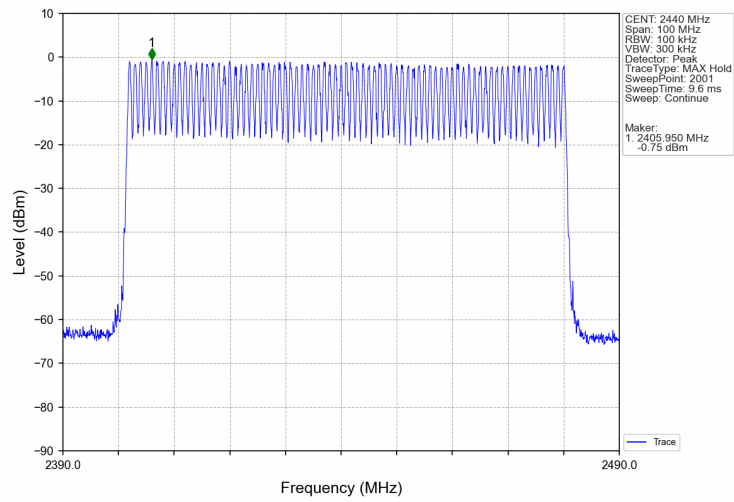
8DPSK_3DH5_MCH_2441MHz_Ant1_NTNV



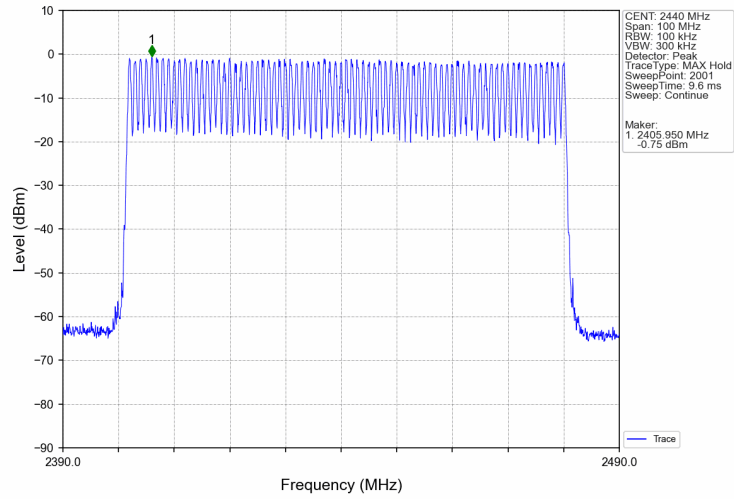
8DPSK_3DH5_HCH_2480MHz_Ant1_NTNV



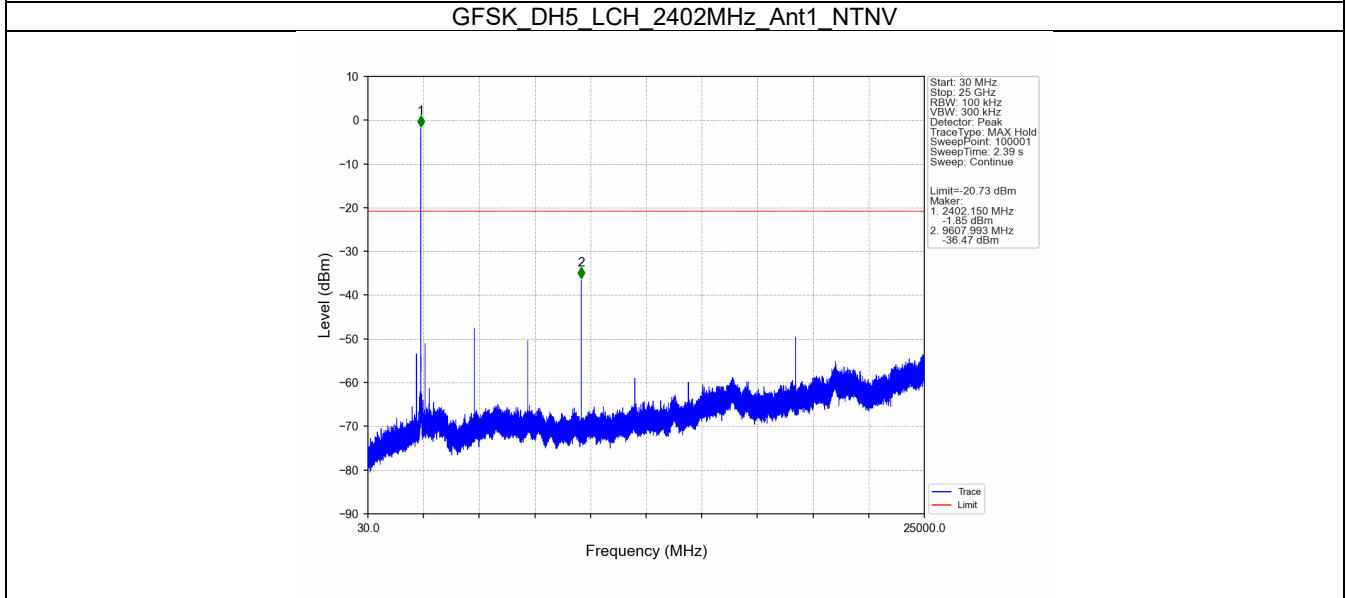
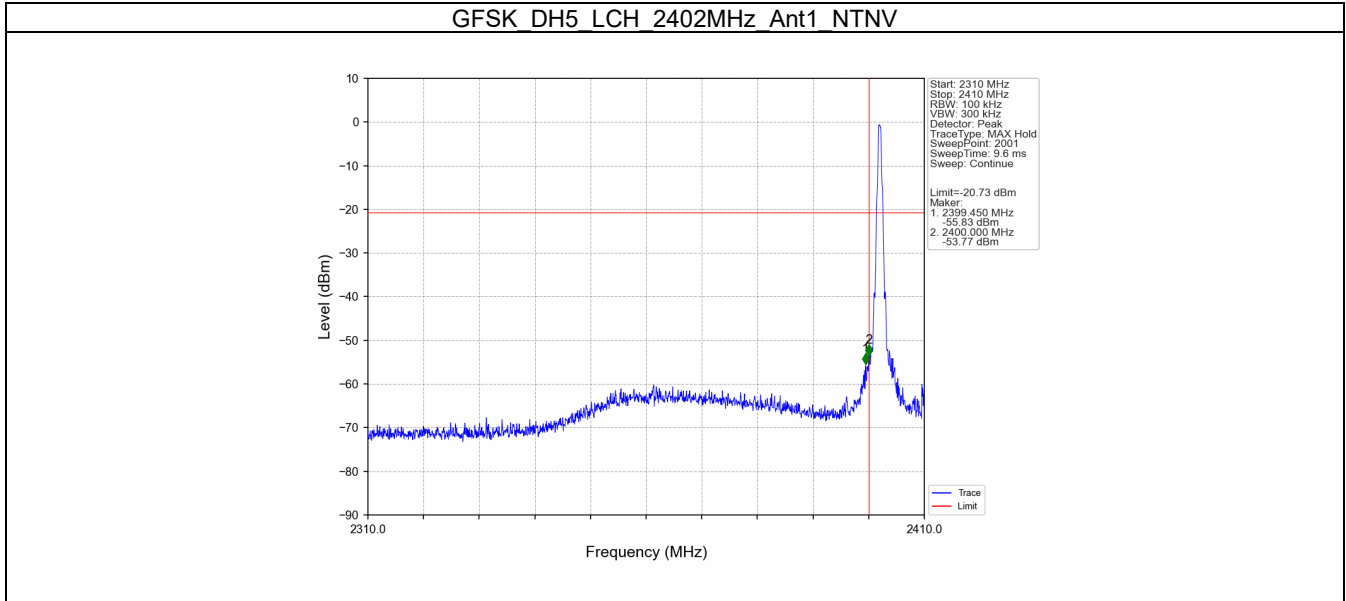
8DPSK_3DH5_HOPP_Ant1_NTNV



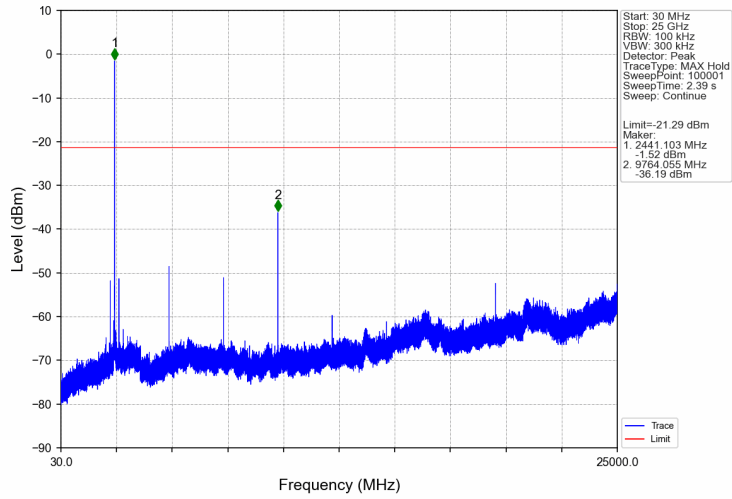
8DPSK_3DH5_HOPP_Ant1_NTNV



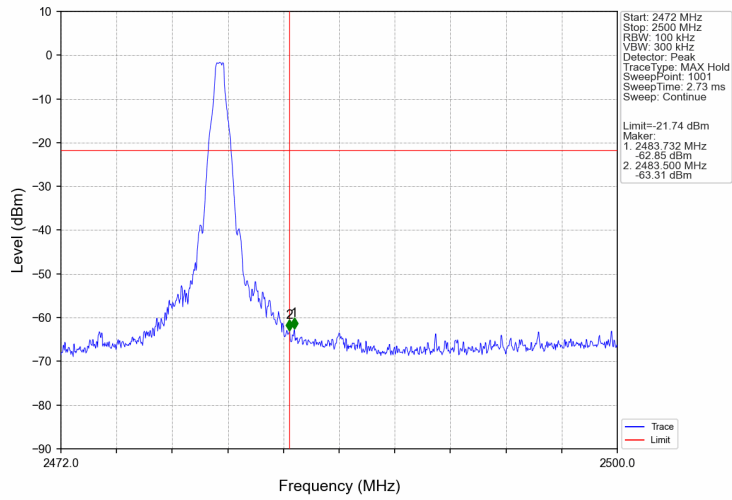
6.2.2 CSE



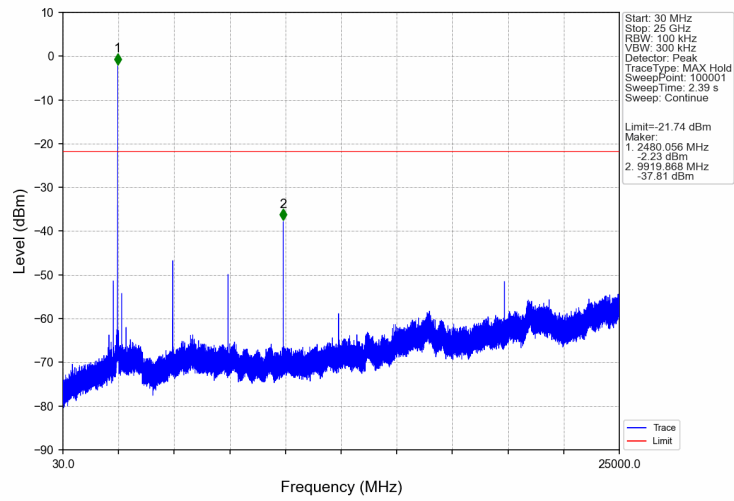
GFSK_DH5_MCH_2441MHz_Ant1_NTNV



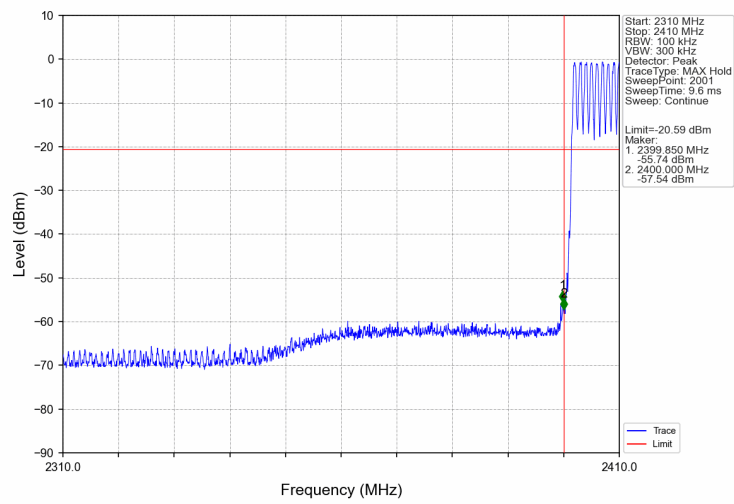
GFSK_DH5_HCH_2480MHz_Ant1_NTNV



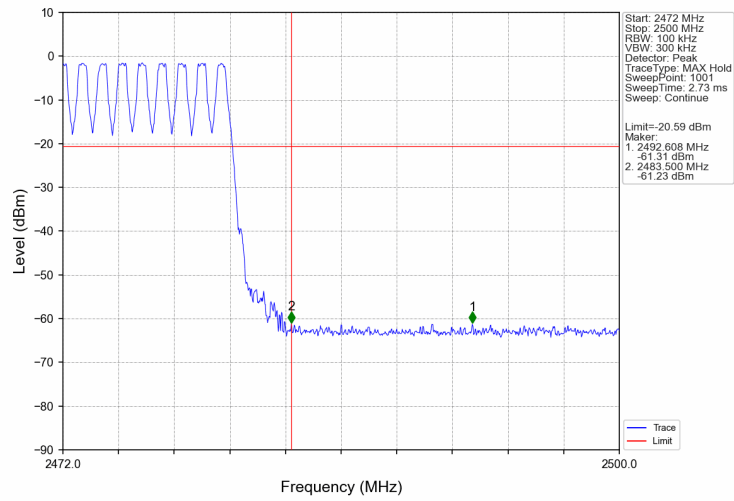
GFSK DH5_HCH_2480MHz_Ant1_NTNV



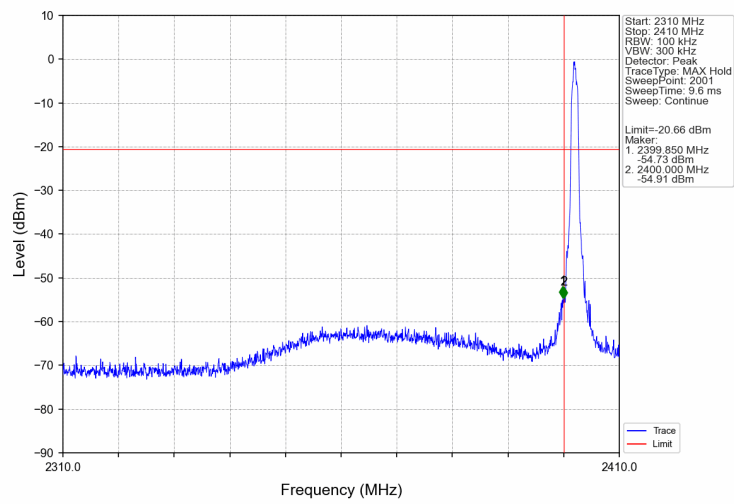
GFSK DH5_HOPP_Ant1_NTNV



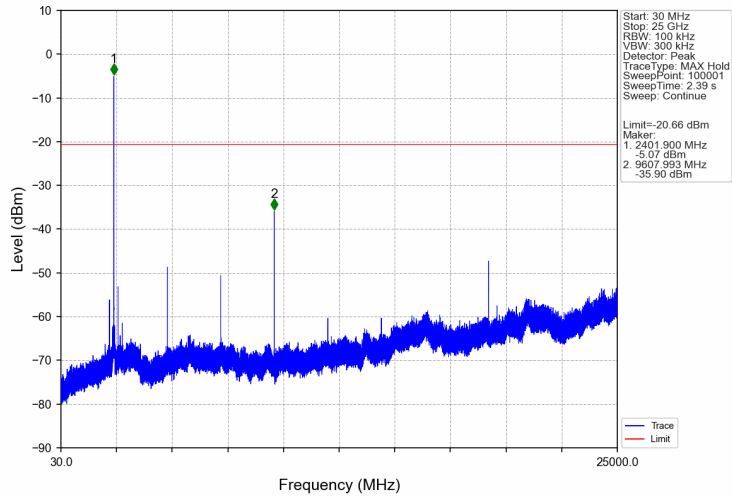
GFSK_DH5_HOPP_Ant1_NTNV



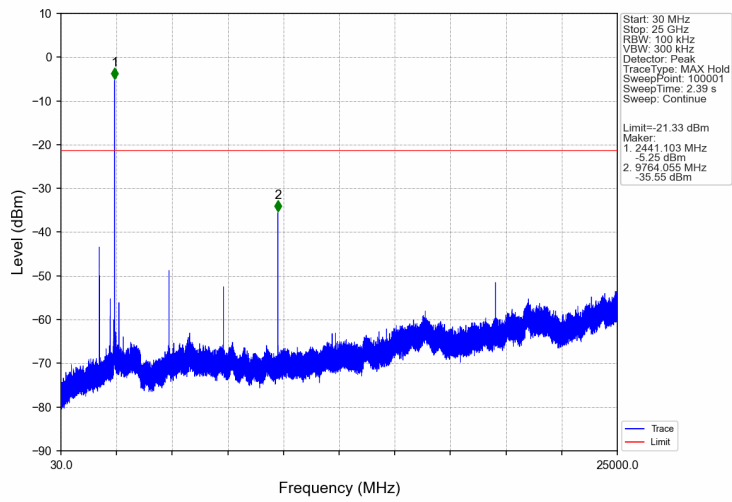
Pi/4DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV



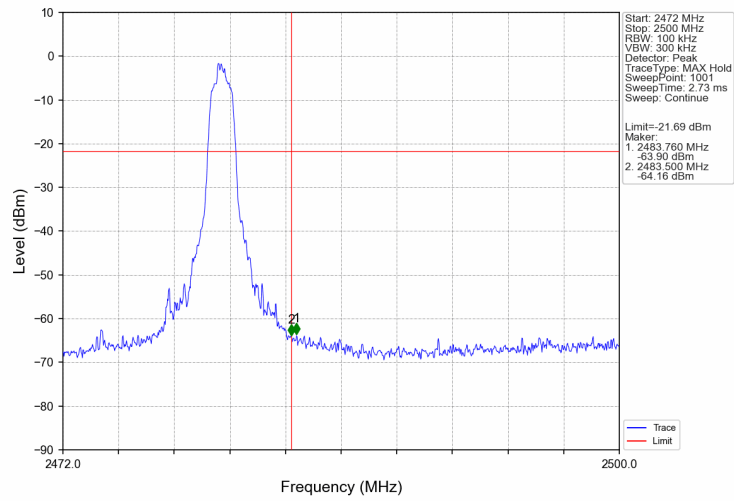
Pi/4DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV



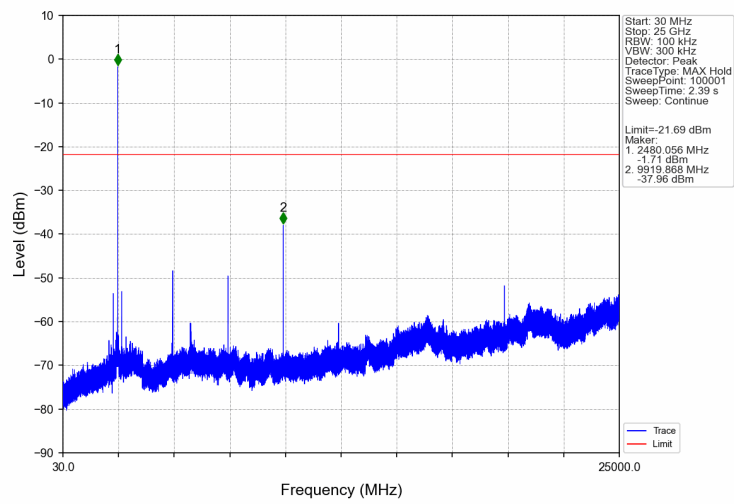
Pi/4DQPSK_2DH5_MCH_2441MHz_Ant1_NTNV



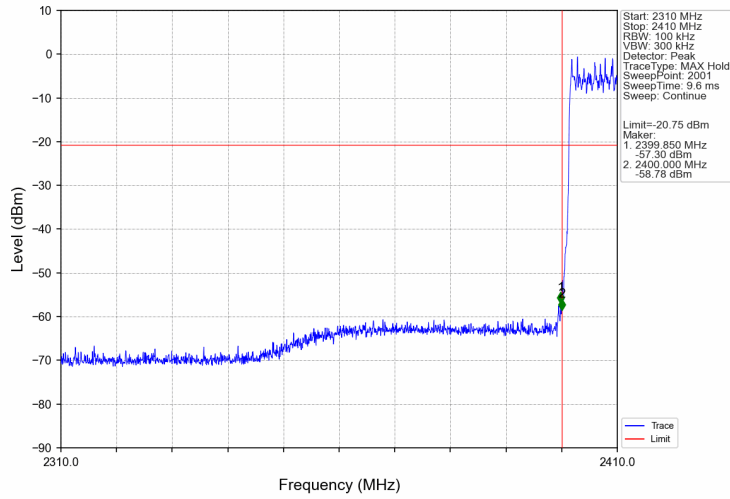
Pi/4DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV



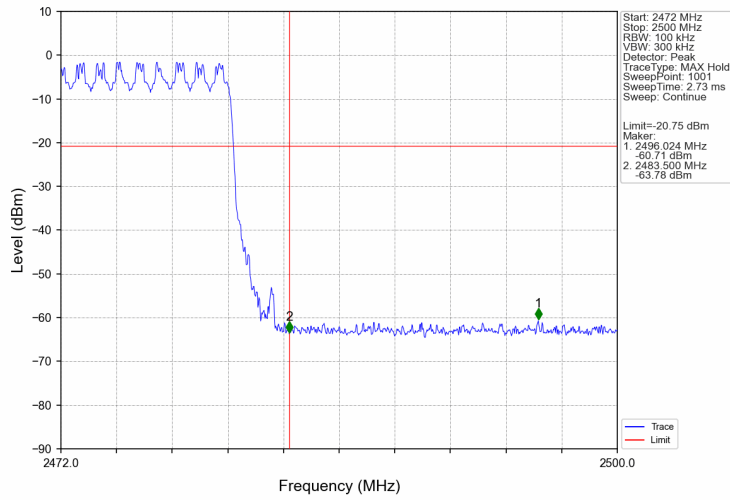
Pi/4DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV



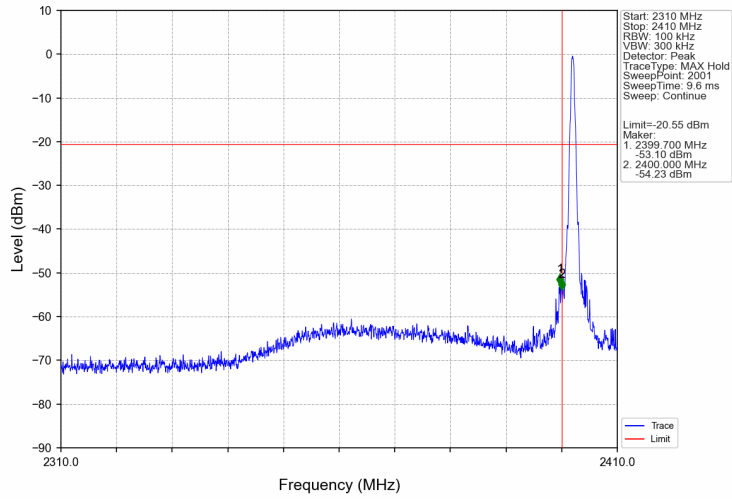
Pi/4DQPSK_2DH5_HOPP_Ant1_NTNV



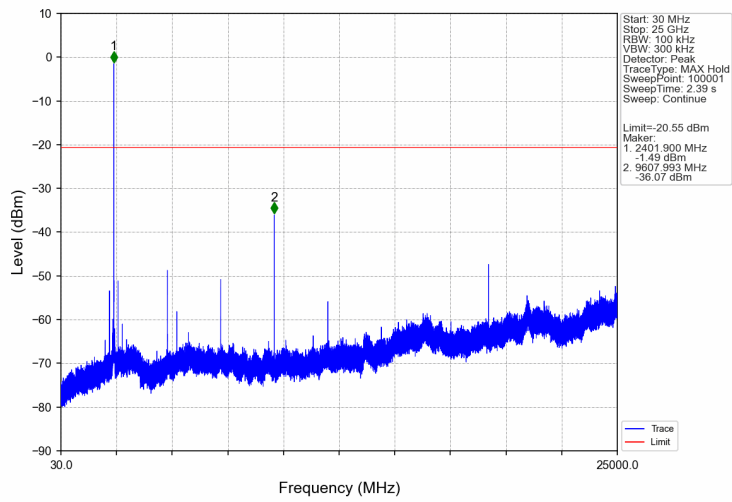
Pi/4DQPSK_2DH5_HOPP_Ant1_NTNV



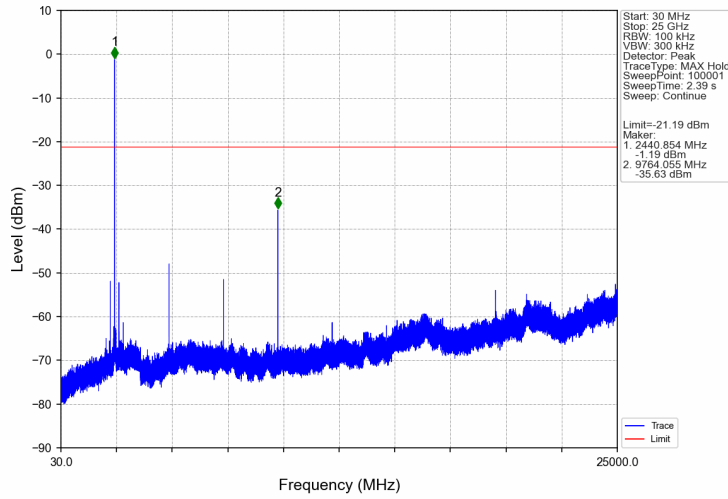
8DPSK_3DH5_LCH_2402MHz_Ant1_NTNV



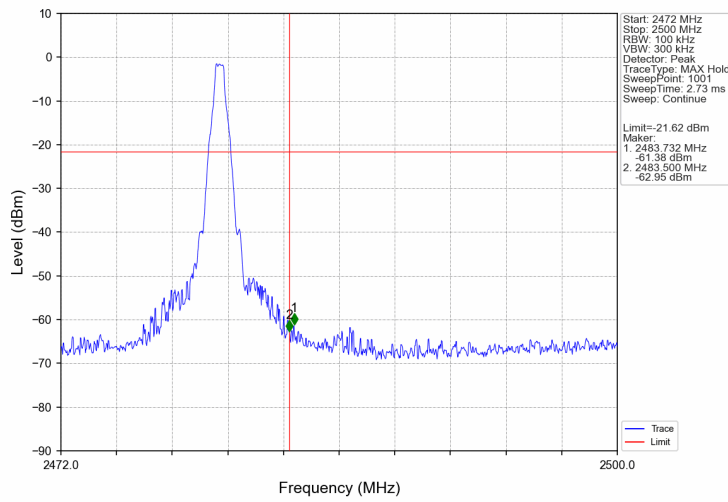
8DPSK_3DH5_LCH_2402MHz_Ant1_NTNV



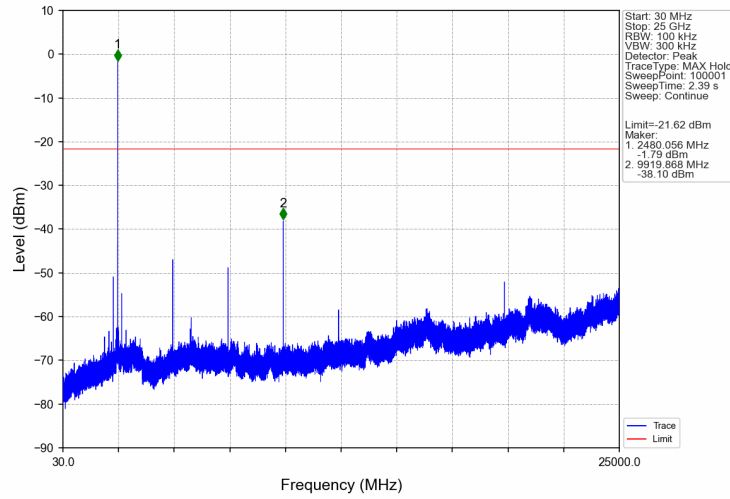
8DPSK_3DH5_MCH_2441MHz_Ant1_NTNV



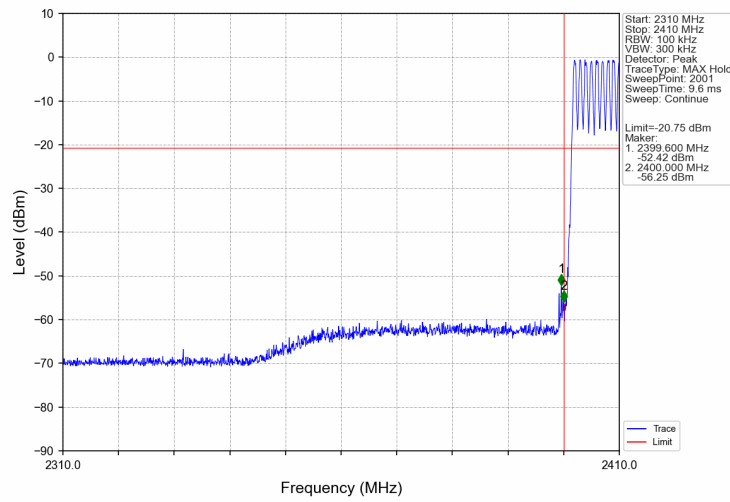
8DPSK_3DH5_HCH_2480MHz_Ant1_NTNV



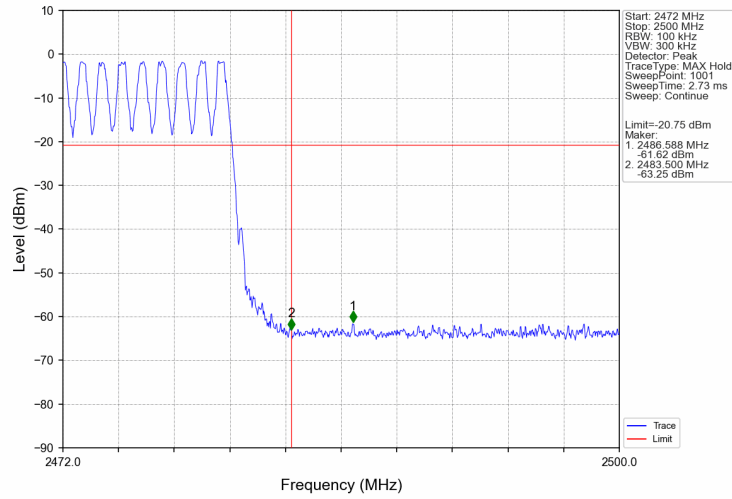
8DPSK_3DH5_HCH_2480MHz_Ant1_NTNV



8DPSK_3DH5_HOPP_Ant1_NTNV



8DPSK_3DH5_HOPP_Ant1_NTNV



7. Form731

7.1 Test Result

7.1.1 Form731

| Lower Freq (MHz) | High Freq (MHz) | MAX Power (W) | MAX Power (dBm) |
|------------------|-----------------|---------------|-----------------|
| 2402 | 2480 | 0.0011 | 0.57 |