



1. Bandwidth

1.1 Test Result

1.1.1 OBW

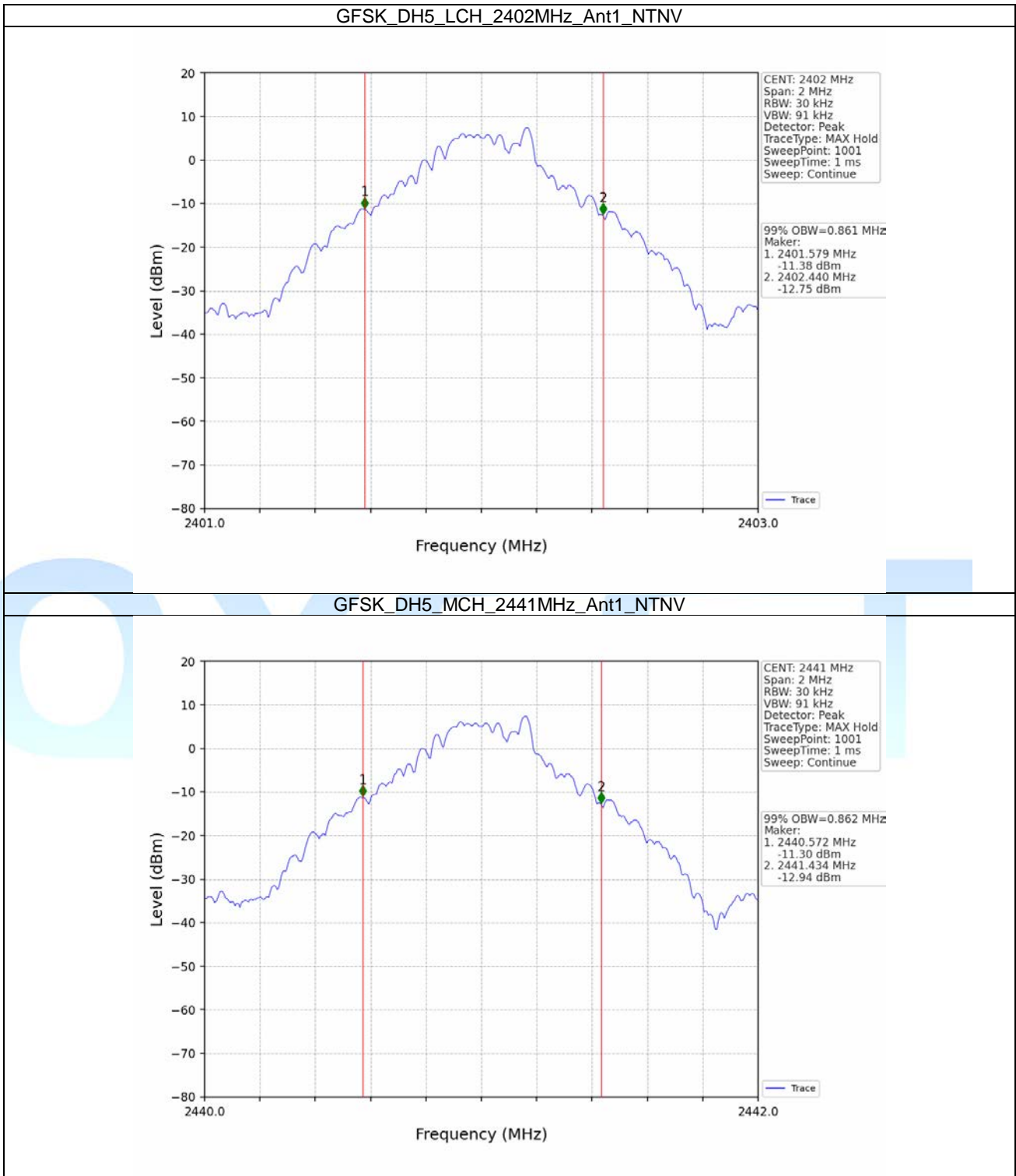
| Mode | TX Type | Frequency (MHz) | Packet Type | ANT | 99% Occupied Bandwidth (MHz) | | Verdict |
|-----------|---------|-----------------|-------------|-----|------------------------------|-------|---------|
| | | | | | Result | Limit | |
| GFSK | SISO | 2402 | DH5 | 1 | 0.861 | / | Pass |
| | | 2441 | DH5 | 1 | 0.862 | / | Pass |
| | | 2480 | DH5 | 1 | 0.861 | / | Pass |
| Pi/4DQPSK | SISO | 2402 | 2DH5 | 1 | 1.197 | / | Pass |
| | | 2441 | 2DH5 | 1 | 1.198 | / | Pass |
| | | 2480 | 2DH5 | 1 | 1.204 | / | Pass |
| 8DPSK | SISO | 2402 | 3DH5 | 1 | 1.193 | / | Pass |
| | | 2441 | 3DH5 | 1 | 1.195 | / | Pass |
| | | 2480 | 3DH5 | 1 | 1.201 | / | Pass |

1.1.2 20dB BW

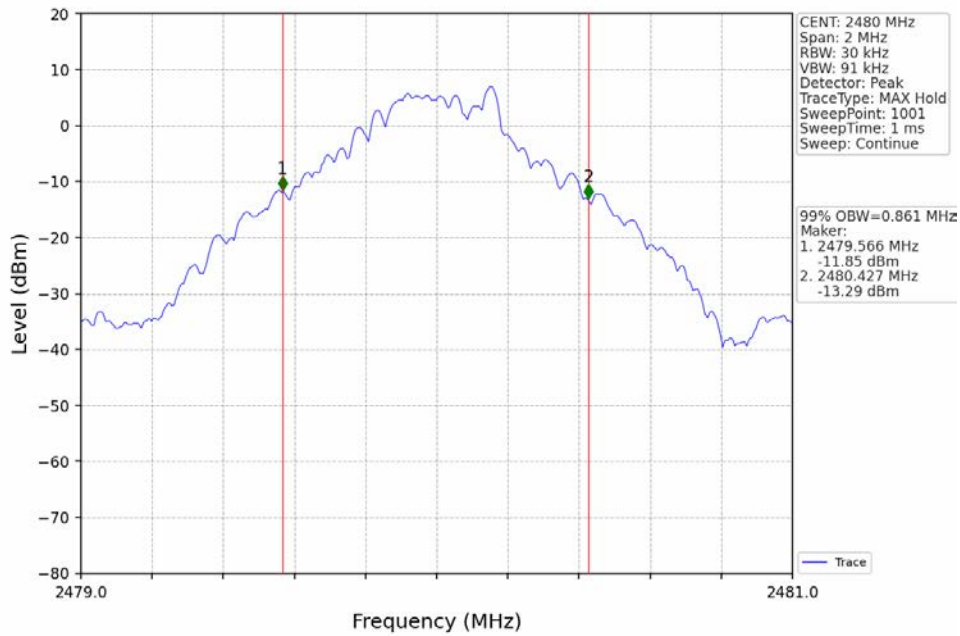
| Mode | TX Type | Frequency (MHz) | Packet Type | ANT | 20dB Bandwidth (MHz) | | Verdict |
|-----------|---------|-----------------|-------------|-----|----------------------|-------|---------|
| | | | | | Result | Limit | |
| GFSK | SISO | 2402 | DH5 | 1 | 0.935 | / | Pass |
| | | 2441 | DH5 | 1 | 0.937 | / | Pass |
| | | 2480 | DH5 | 1 | 0.955 | / | Pass |
| Pi/4DQPSK | SISO | 2402 | 2DH5 | 1 | 1.349 | / | Pass |
| | | 2441 | 2DH5 | 1 | 1.350 | / | Pass |
| | | 2480 | 2DH5 | 1 | 1.357 | / | Pass |
| 8DPSK | SISO | 2402 | 3DH5 | 1 | 1.317 | / | Pass |
| | | 2441 | 3DH5 | 1 | 1.318 | / | Pass |
| | | 2480 | 3DH5 | 1 | 1.327 | / | Pass |

1.2 Test Graph

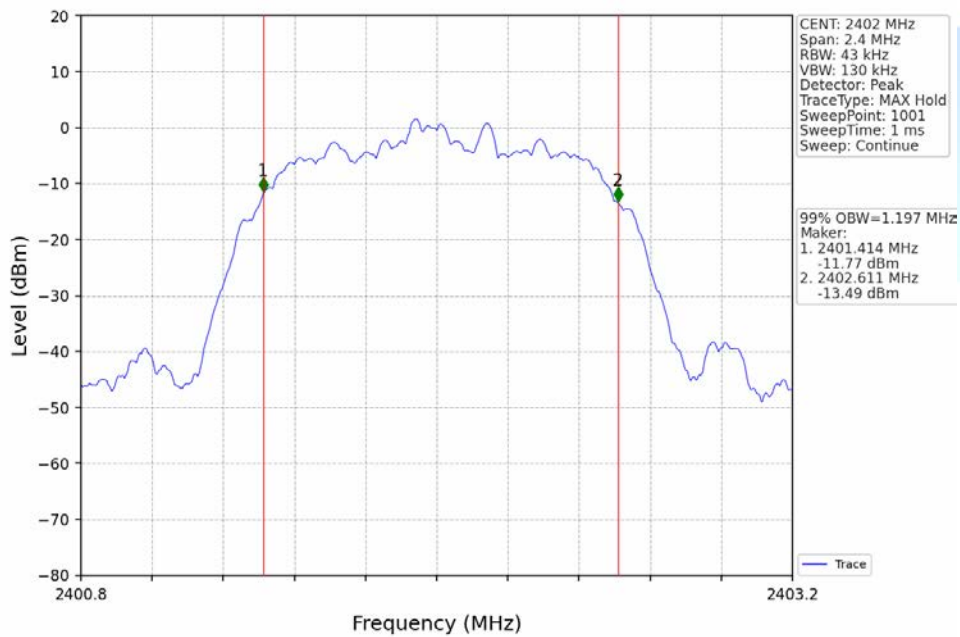
1.2.1 OBW



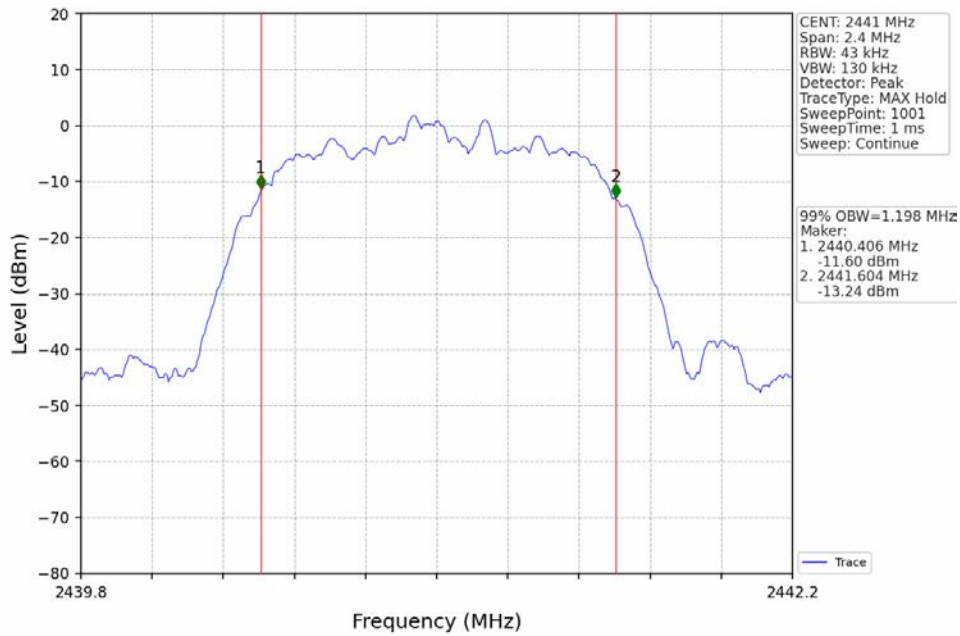
GFSK_DH5_HCH_2480MHz_Ant1_NTNV



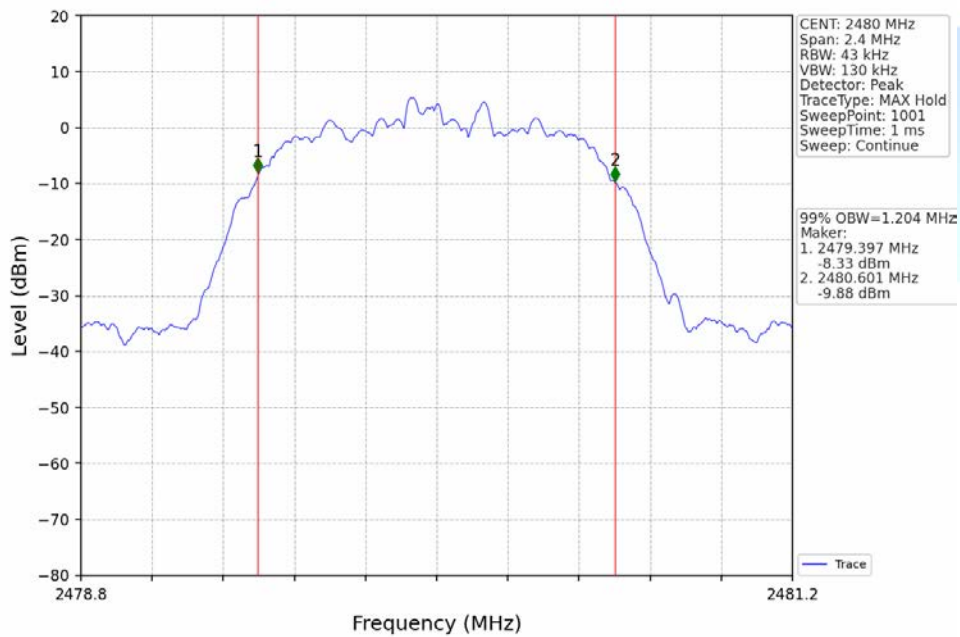
Pi/4DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV



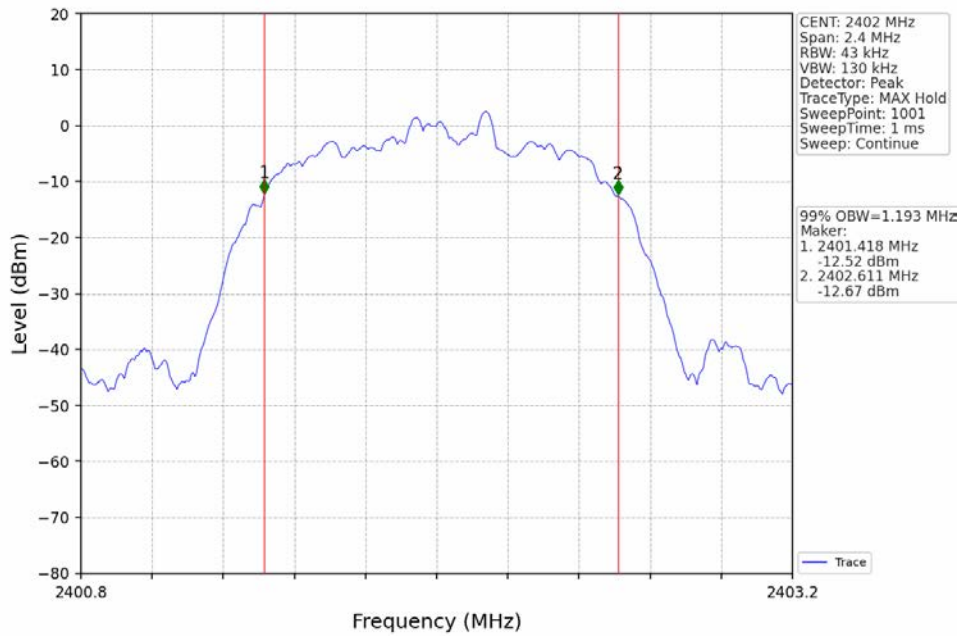
Pi/4DQPSK_2DH5_MCH_2441MHz_Ant1_NTNV



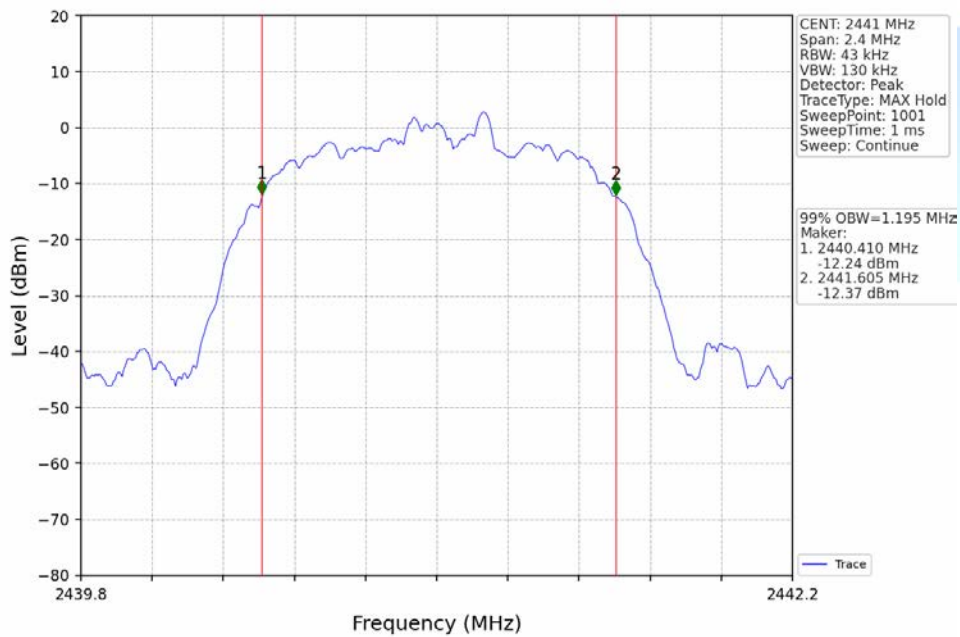
Pi/4DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV

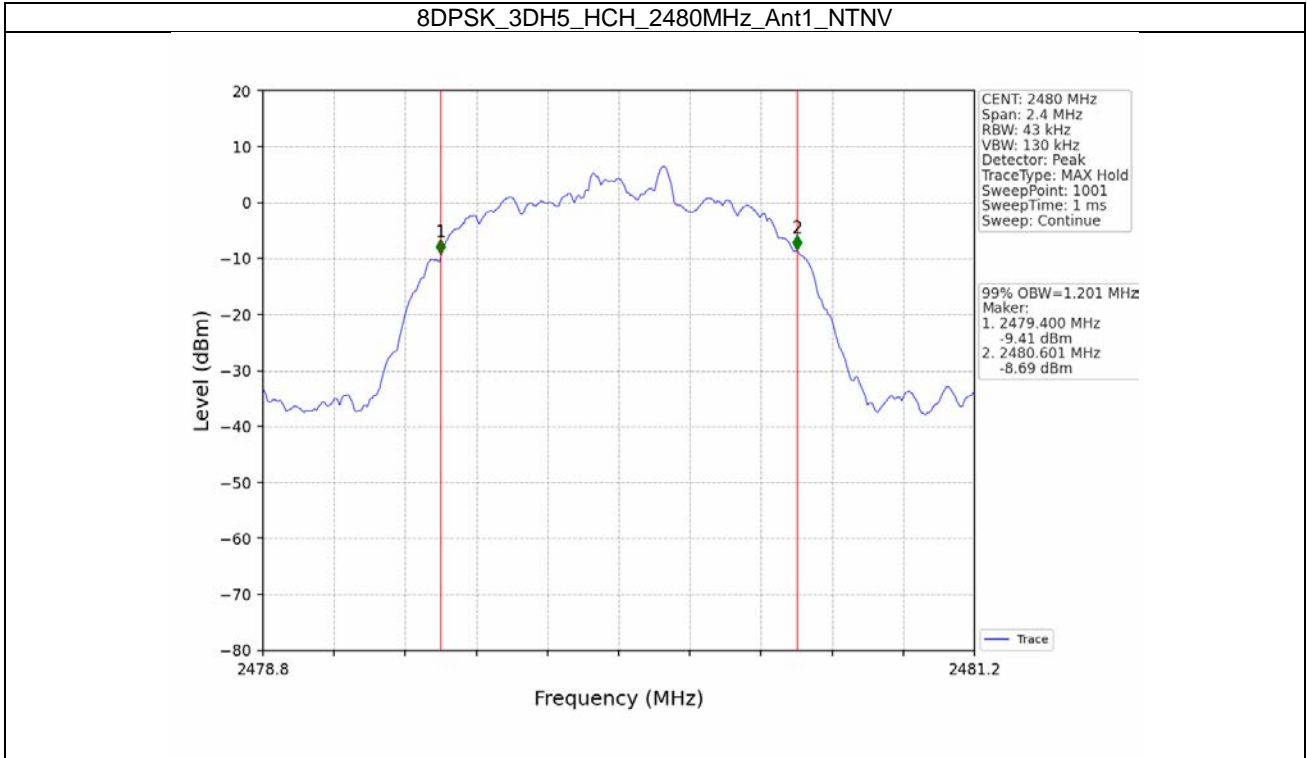


8DPSK_3DH5_LCH_2402MHz_Ant1_NTNV

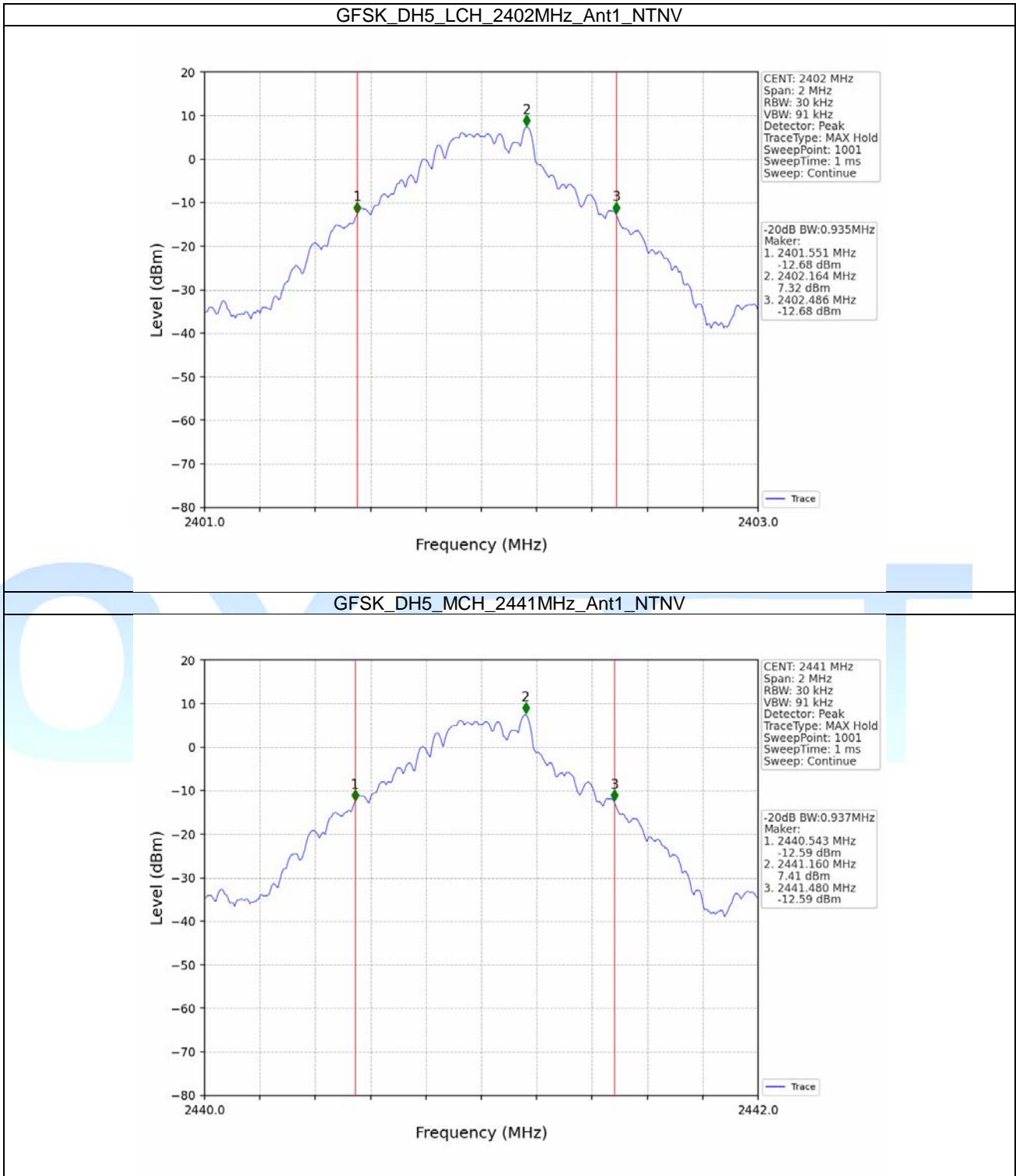


8DPSK_3DH5_MCH_2441MHz_Ant1_NTNV

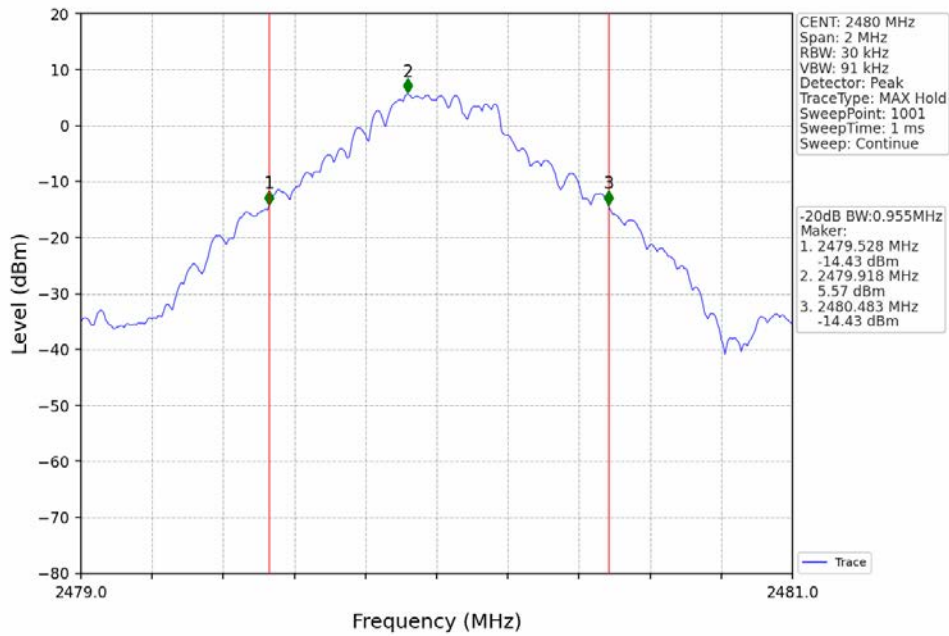




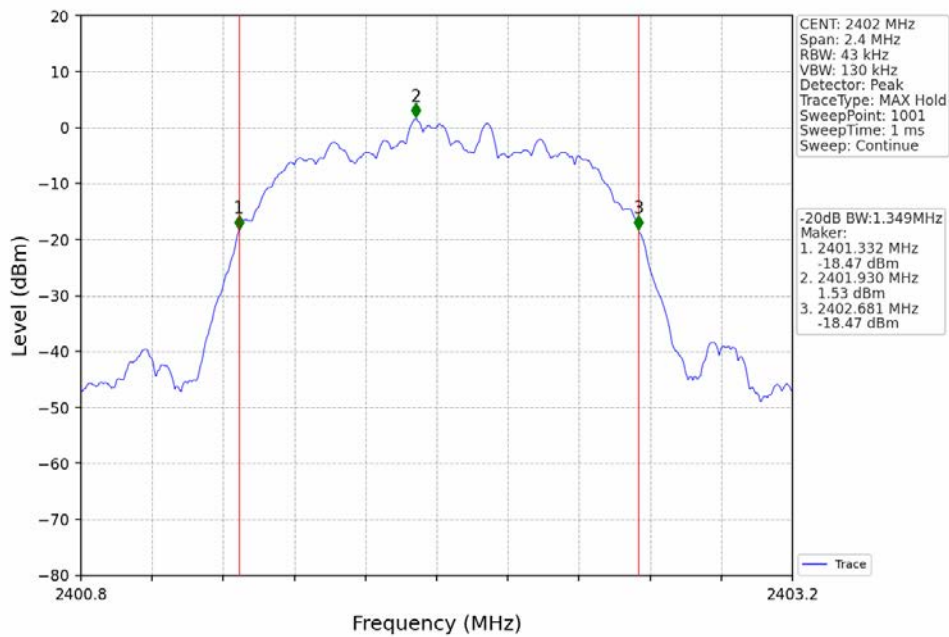
1.2.2 20dB BW



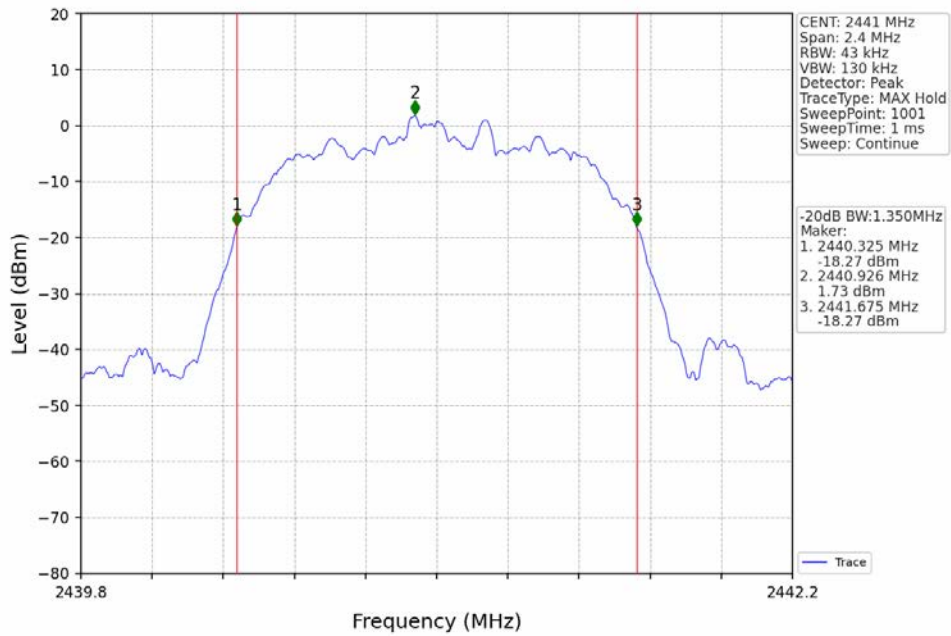
GFSK_DH5_HCH_2480MHz_Ant1_NTNV



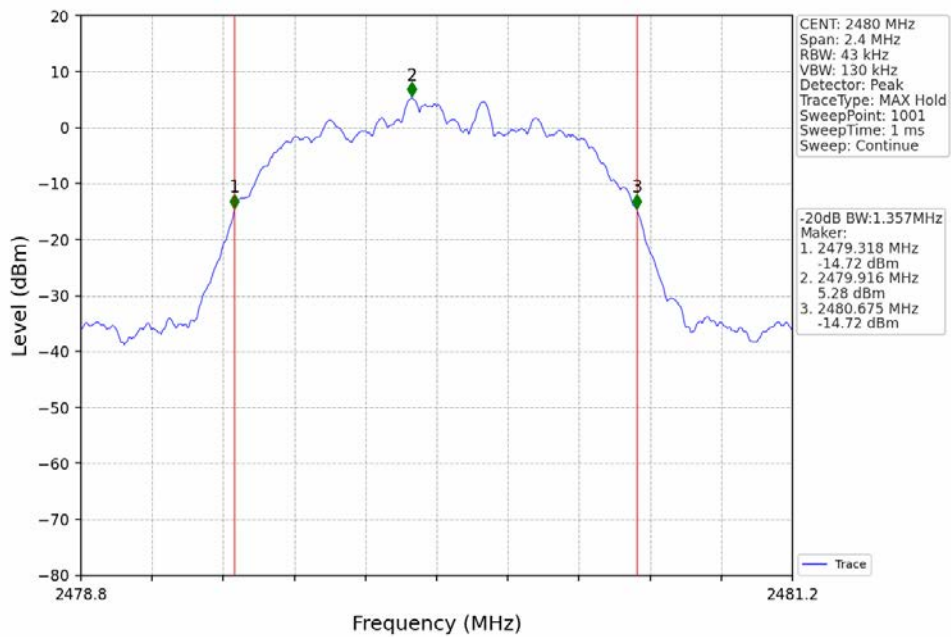
Pi/4DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV



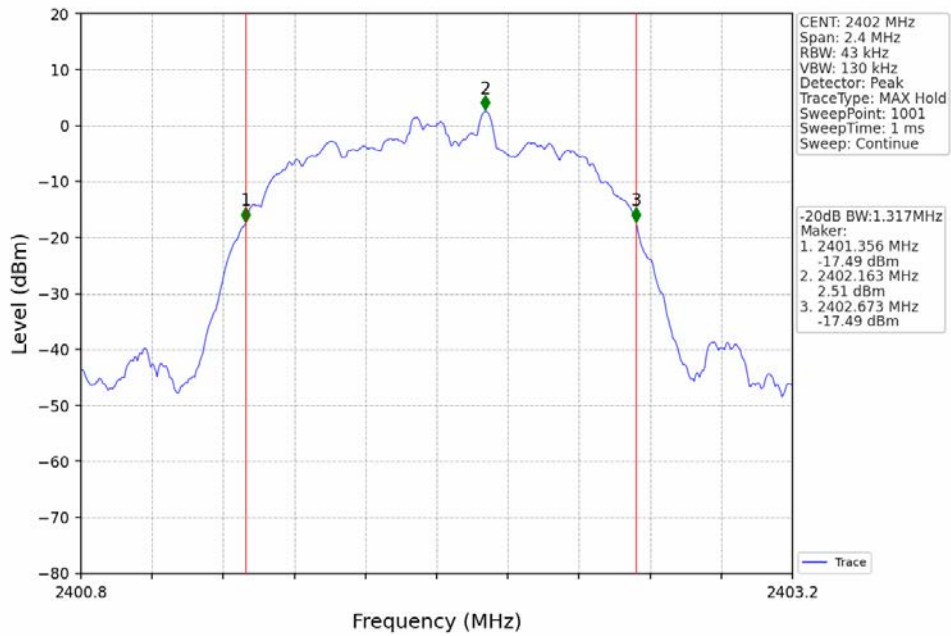
Pi/4DQPSK_2DH5_MCH_2441MHz_Ant1_NTNV



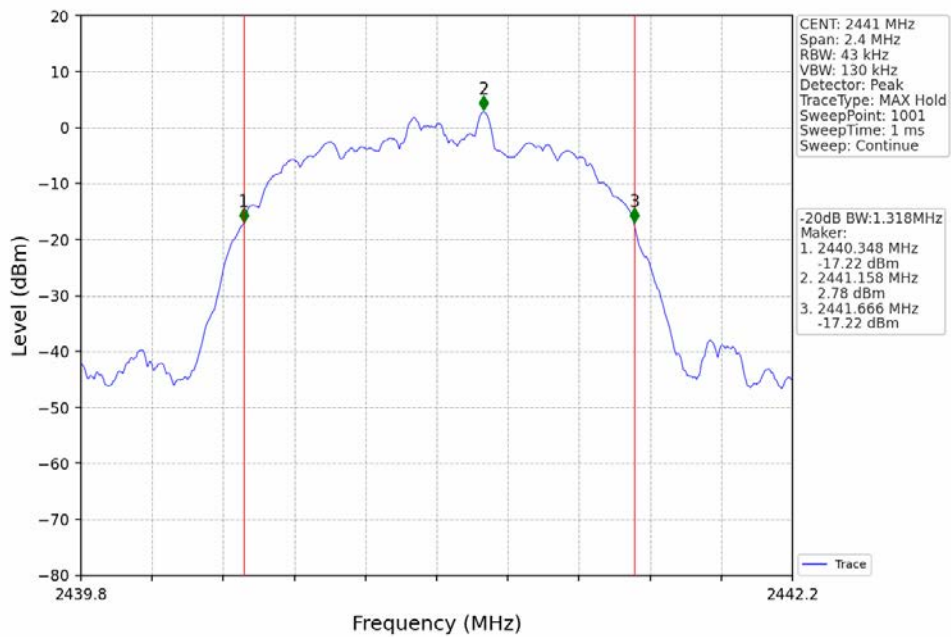
Pi/4DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV

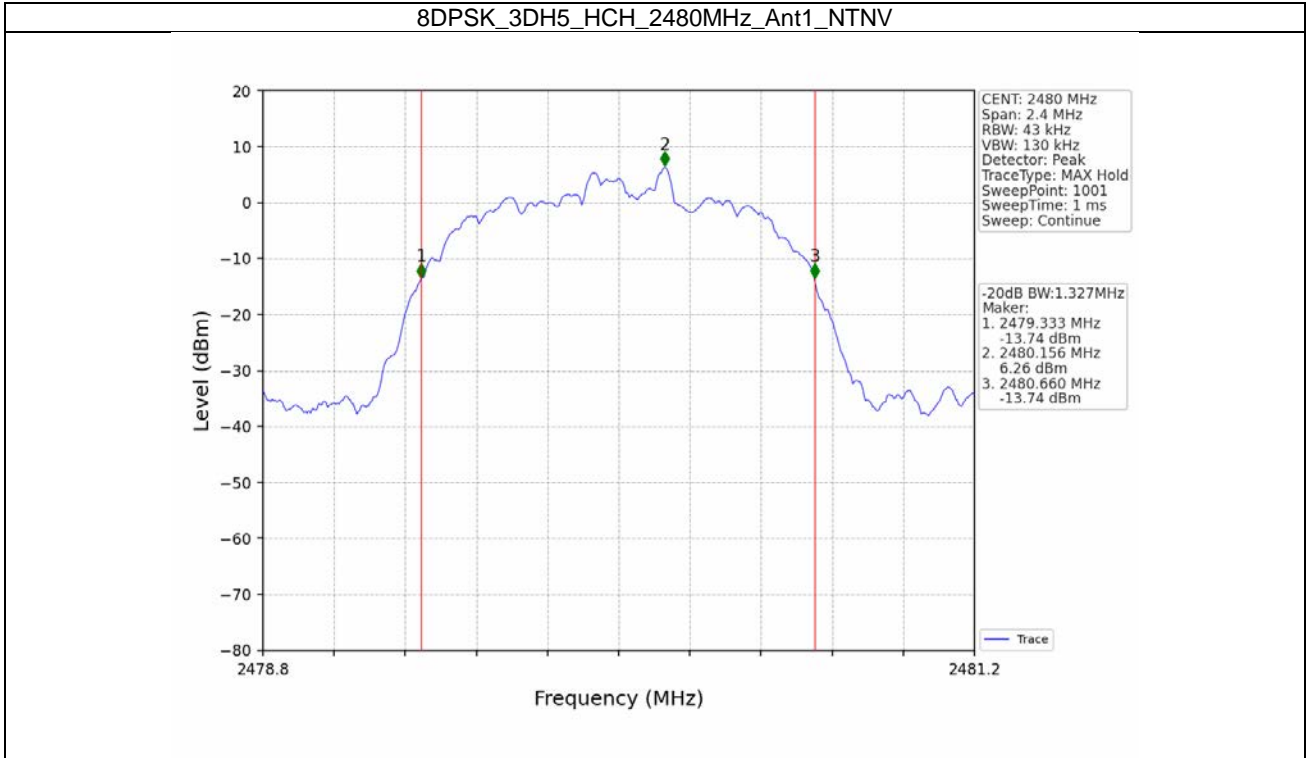


8DPSK_3DH5_LCH_2402MHz_Ant1_NTNV



8DPSK_3DH5_MCH_2441MHz_Ant1_NTNV





2. Maximum Conducted Output Power

2.1 Test Result

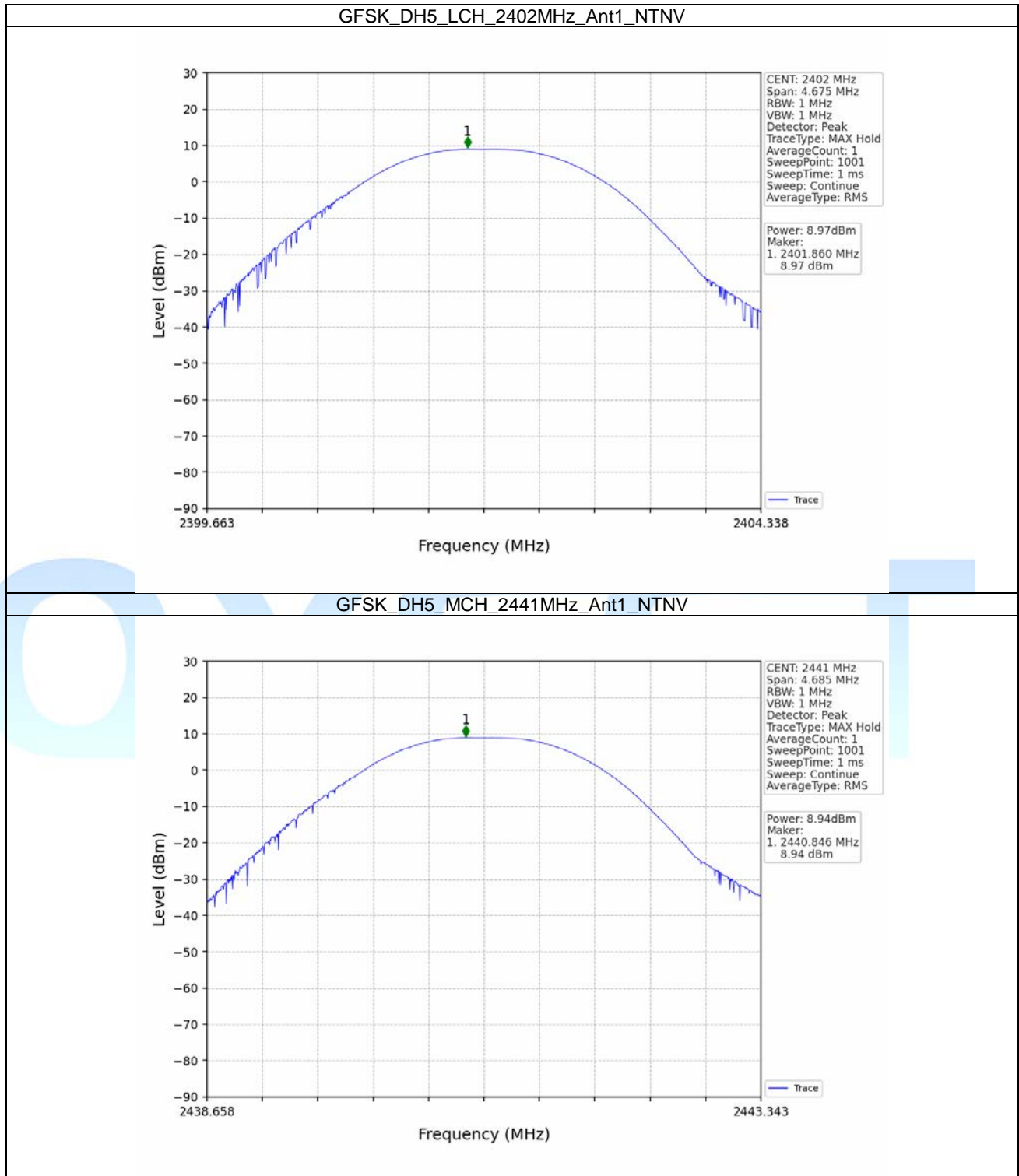
2.1.1 Power

| Mode | TX Type | Frequency (MHz) | Packet Type | Maximum Peak Conducted Output Power (dBm) | | Verdict |
|-----------|---------|-----------------|-------------|---|--------------|---------|
| | | | | ANT1 | Limit | |
| GFSK | SISO | 2402 | DH5 | 8.97 | ≤ 20.97 | Pass |
| | | 2441 | DH5 | 8.94 | ≤ 20.97 | Pass |
| | | 2480 | DH5 | 8.50 | ≤ 20.97 | Pass |
| Pi/4DQPSK | SISO | 2402 | 2DH5 | 5.32 | ≤ 20.97 | Pass |
| | | 2441 | 2DH5 | 5.49 | ≤ 20.97 | Pass |
| | | 2480 | 2DH5 | 8.85 | ≤ 20.97 | Pass |
| 8DPSK | SISO | 2402 | 3DH5 | 5.65 | ≤ 20.97 | Pass |
| | | 2441 | 3DH5 | 5.84 | ≤ 20.97 | Pass |
| | | 2480 | 3DH5 | 9.23 | ≤ 20.97 | Pass |

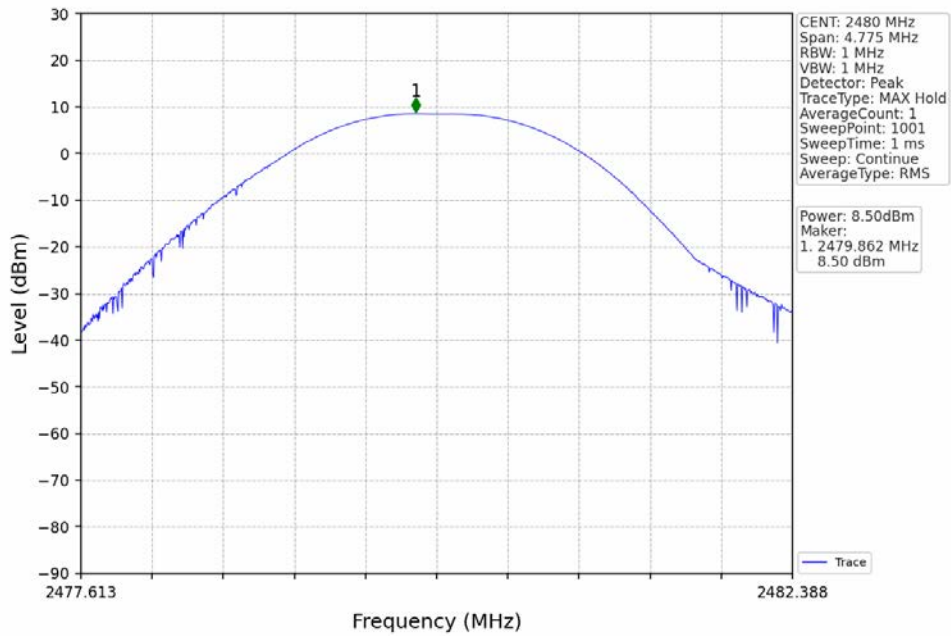
Note1: Antenna Gain: Ant1: 2.96dBi;

2.2 Test Graph

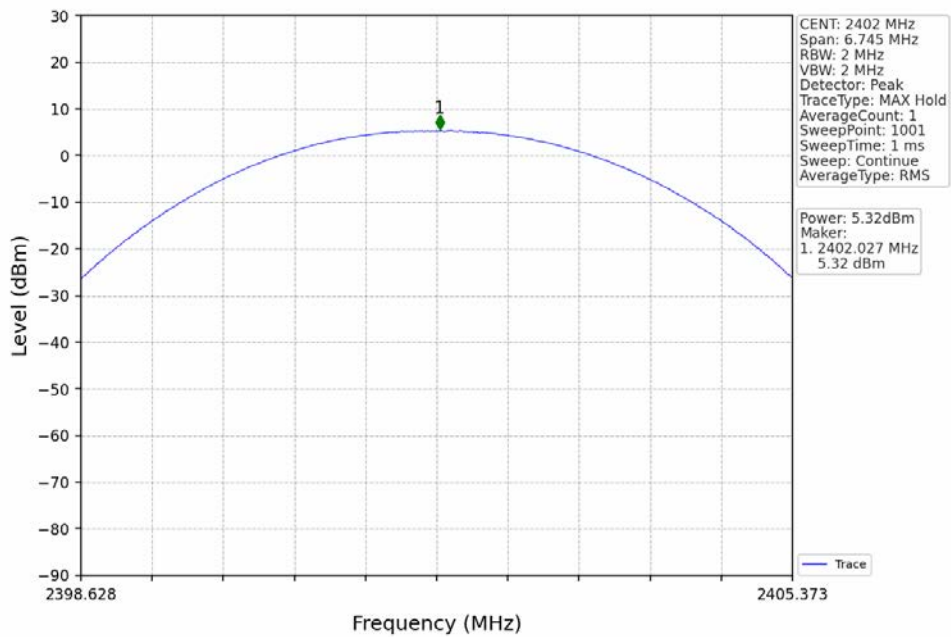
2.2.1 Power



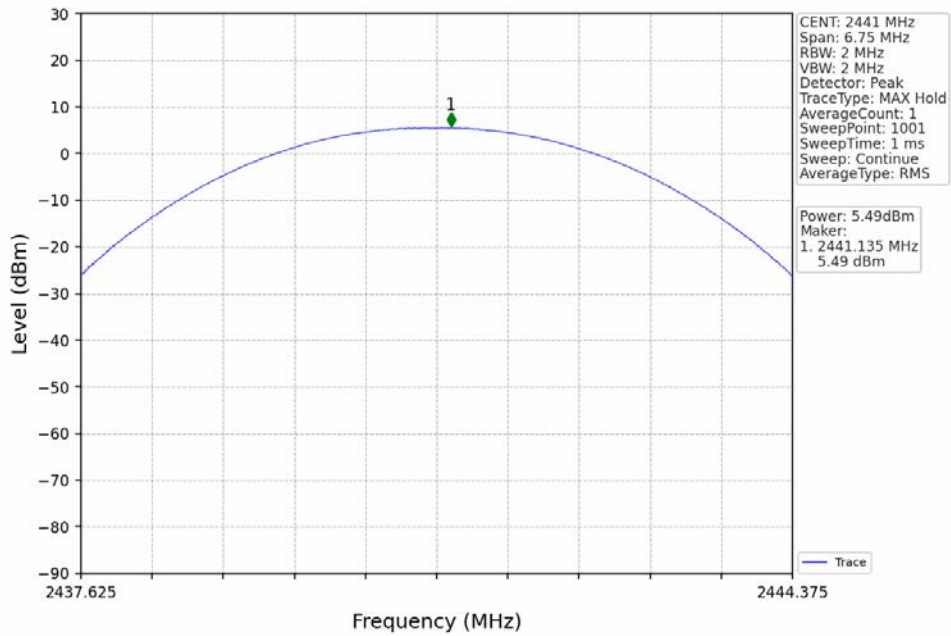
GFSK_DH5_HCH_2480MHz_Ant1_NTNV



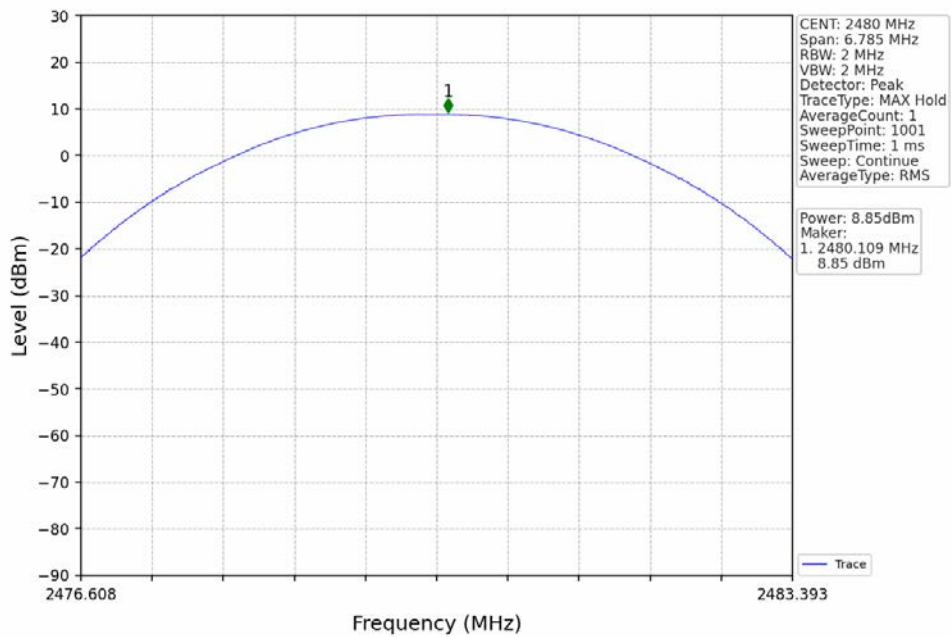
Pi/4QPSK_2DH5_LCH_2402MHz_Ant1_NTNV



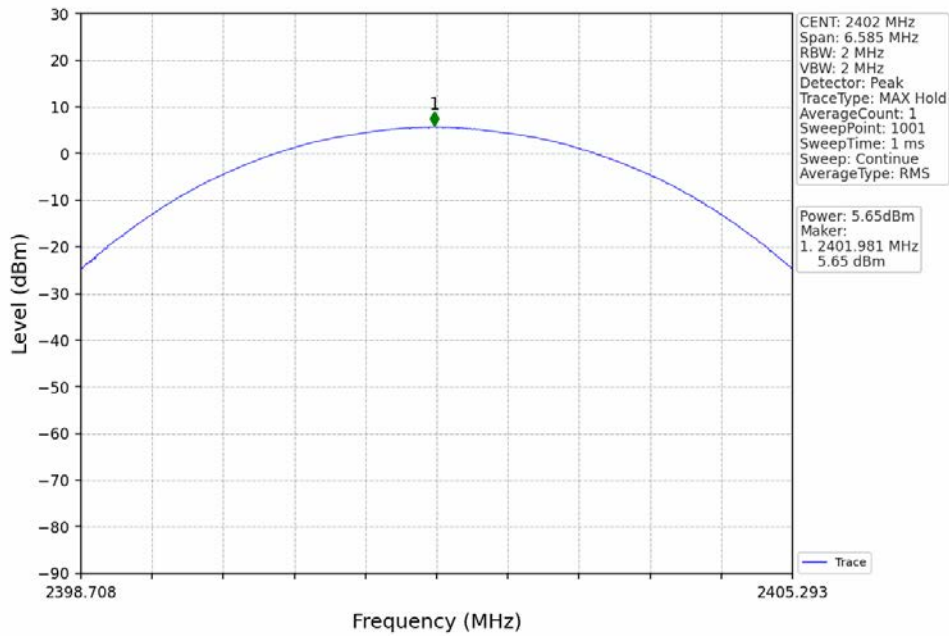
Pi/4DQPSK_2DH5_MCH_2441MHz_Ant1_NTNV



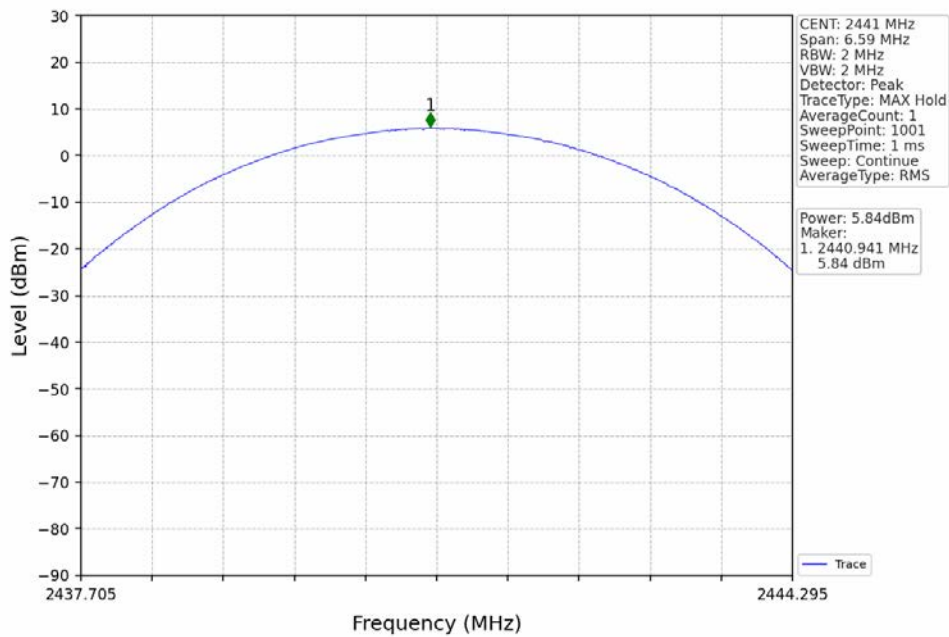
Pi/4DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV

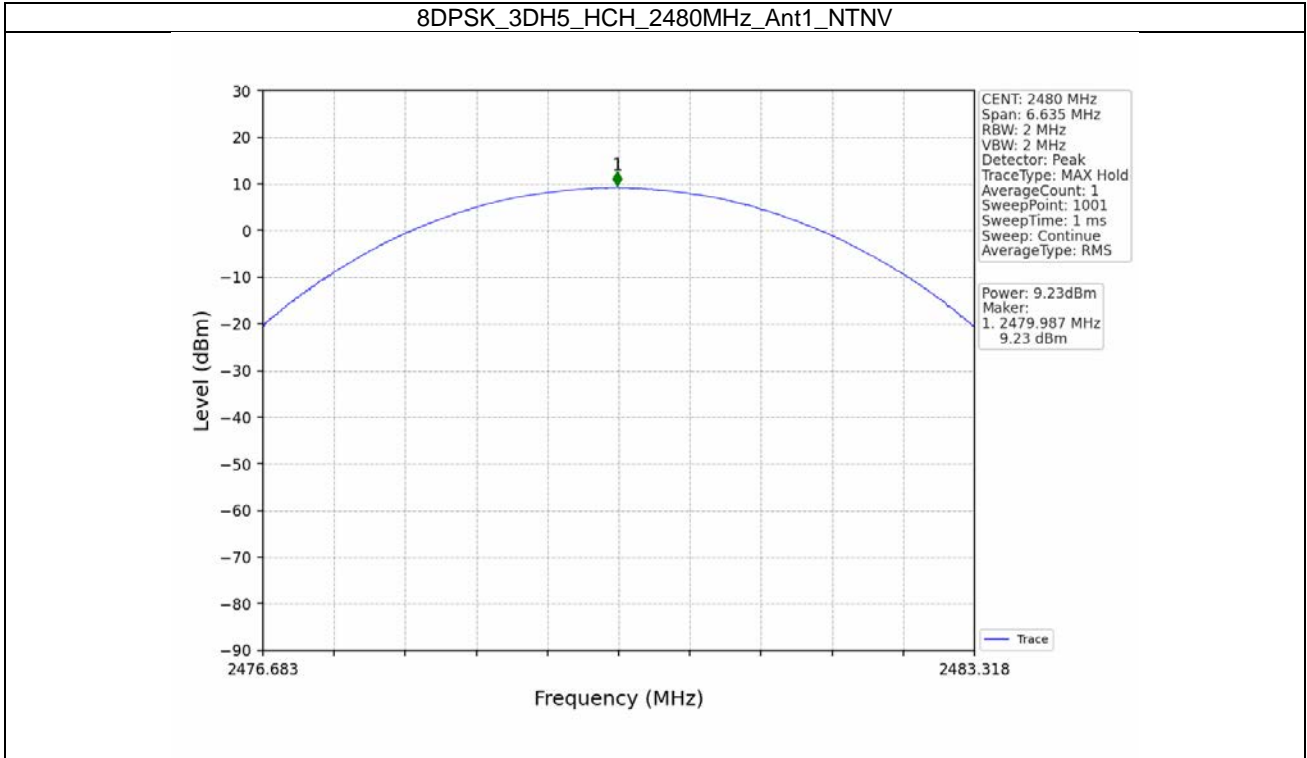


8DPSK_3DH5_LCH_2402MHz_Ant1_NTNV



8DPSK_3DH5_MCH_2441MHz_Ant1_NTNV





3. Carrier Frequency Separation

3.1 Test Result

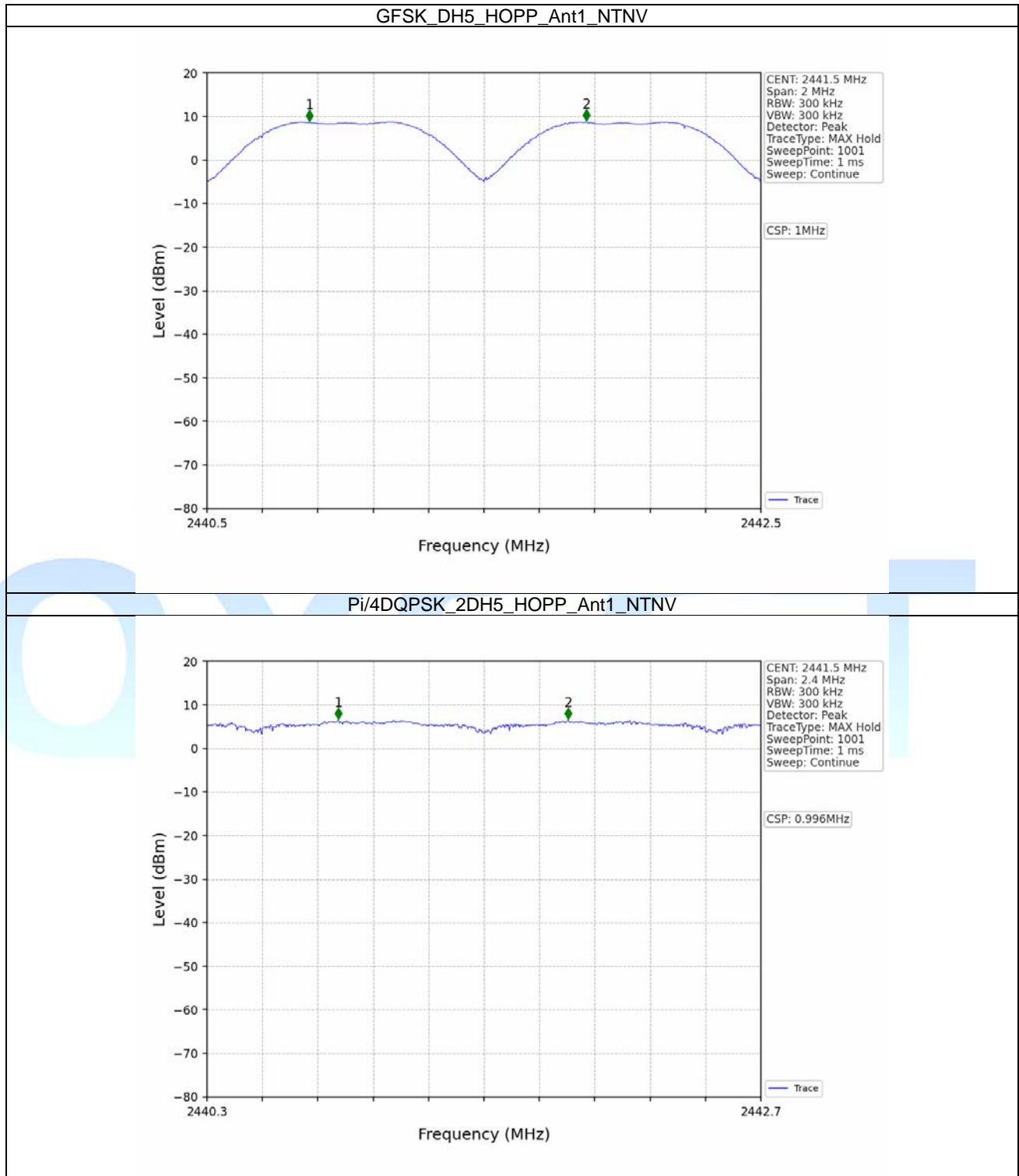
3.1.1 Ant1

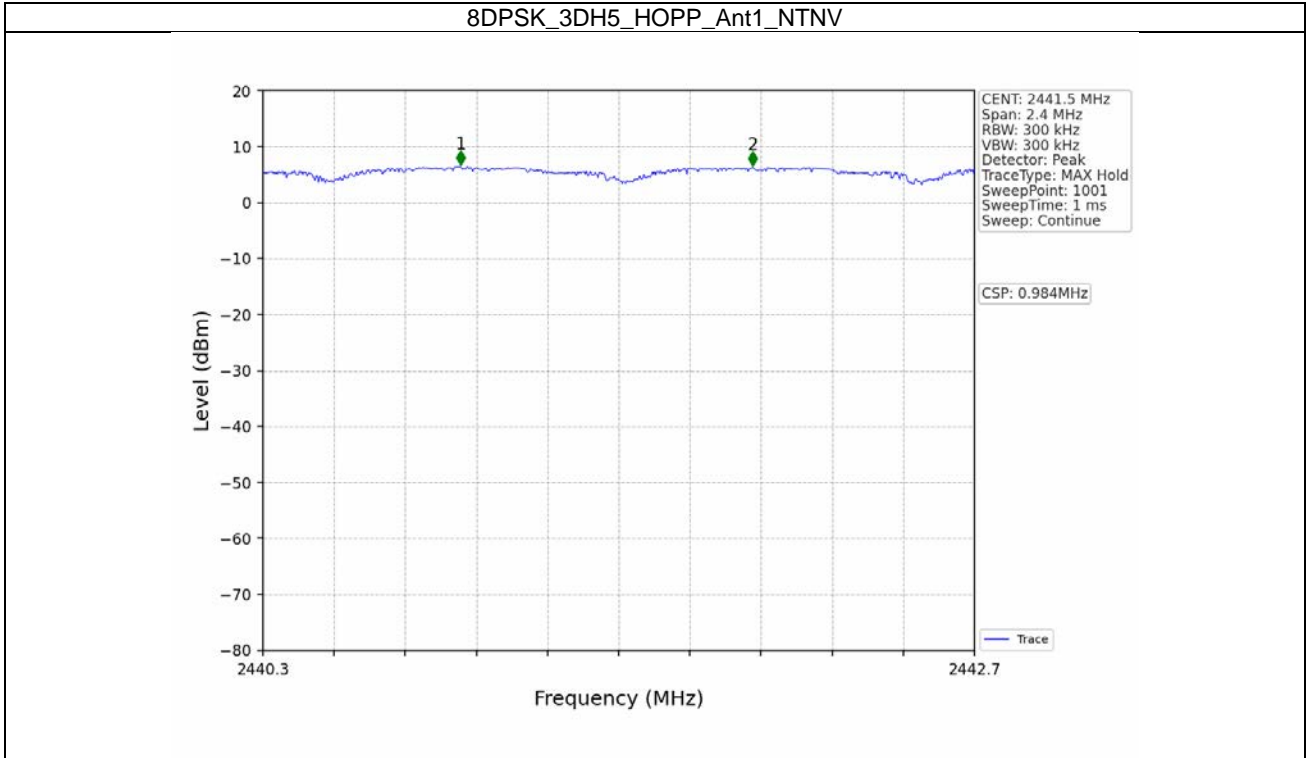
| Ant1 | | | | | | | |
|-----------|---------|-----------------|-------------|--------------------------|----------------------|--------------|---------|
| Mode | TX Type | Frequency (MHz) | Packet Type | Channel Separation (MHz) | 20dB Bandwidth (MHz) | Limit (MHz) | Verdict |
| GFSK | SISO | HOPP | DH5 | 1.000 | 0.955 | ≥ 0.955 | Pass |
| Pi/4DQPSK | SISO | HOPP | 2DH5 | 0.996 | 1.357 | ≥ 0.905 | Pass |
| 8DPSK | SISO | HOPP | 3DH5 | 0.984 | 1.327 | ≥ 0.885 | Pass |



3.2 Test Graph

3.2.1 Ant1





4. Number of Hopping Frequencies

4.1 Test Result

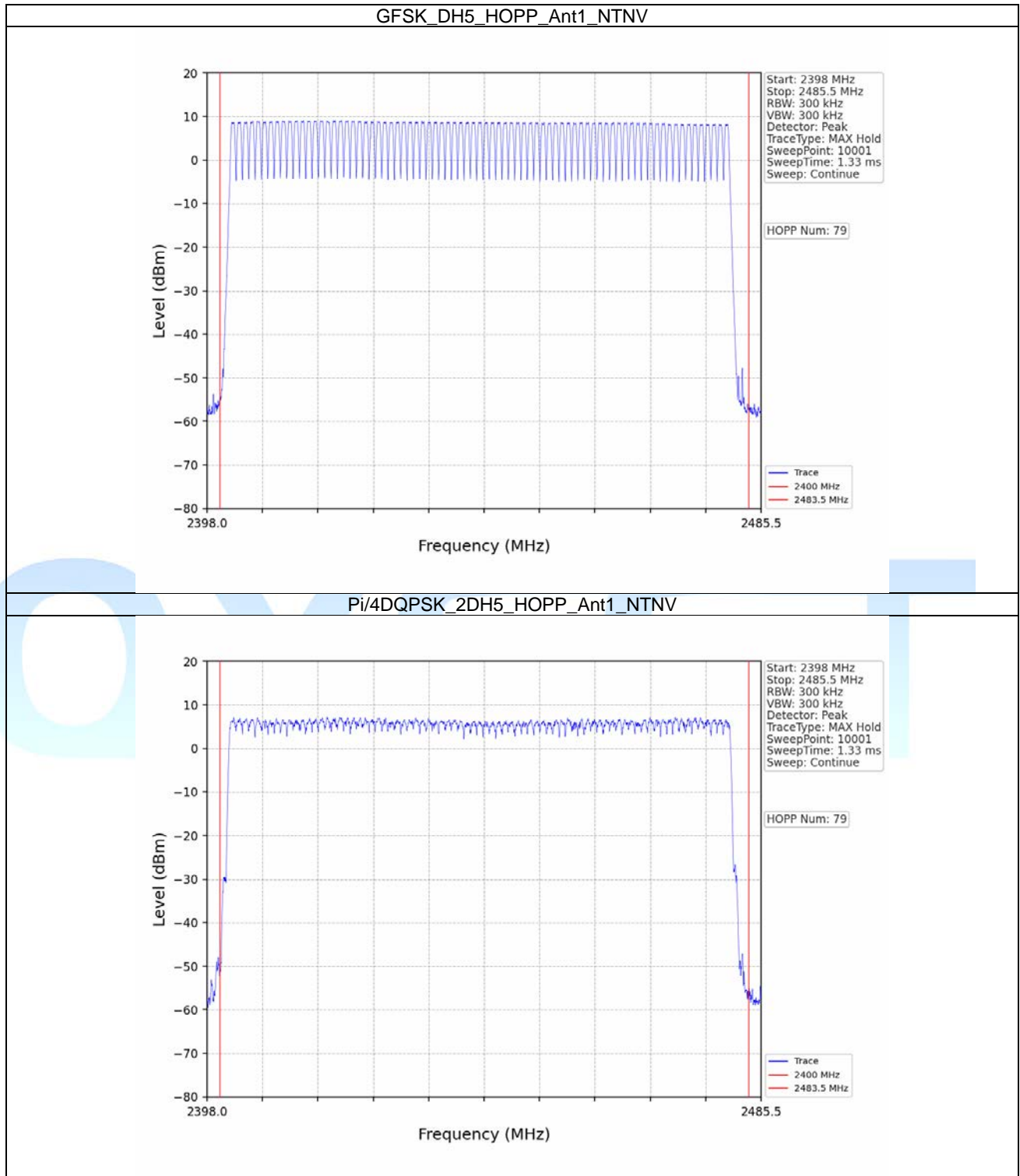
4.1.1 HoppNum

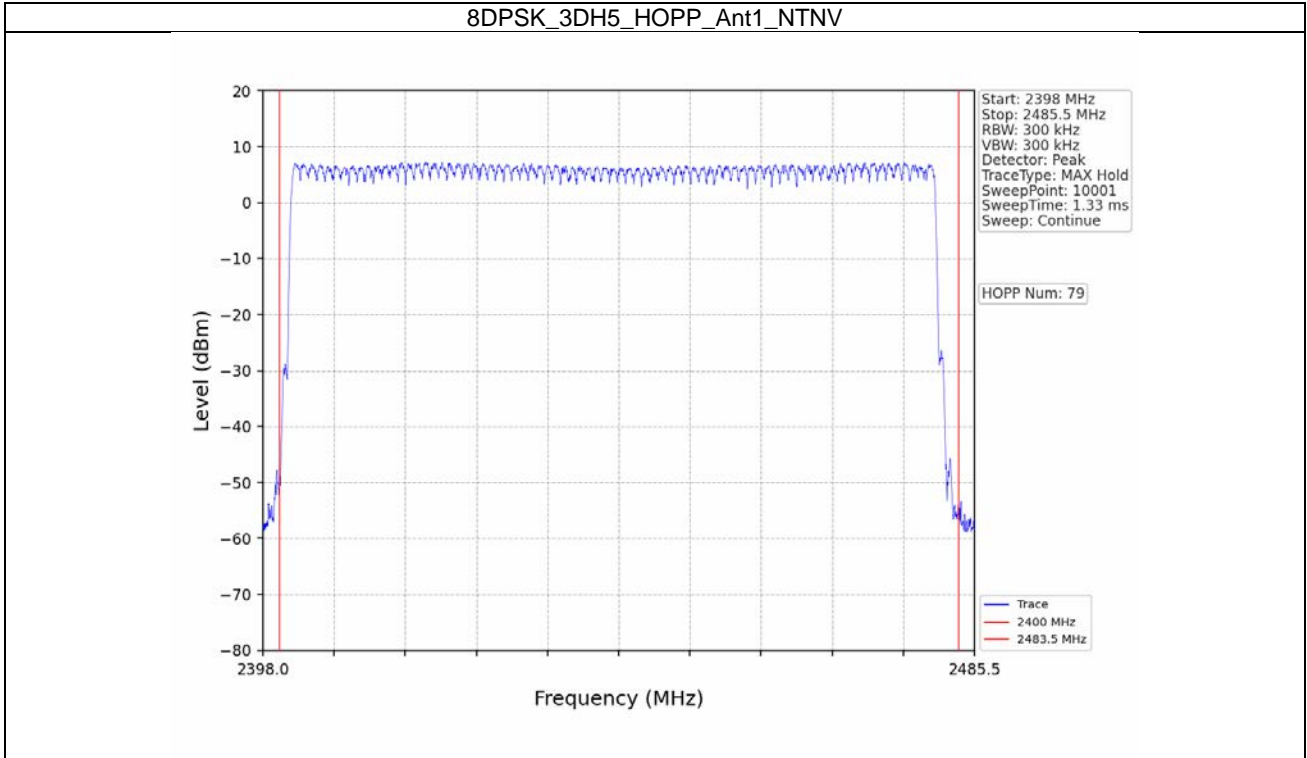
| Mode | TX Type | Frequency (MHz) | Packet Type | Num of Hopping Frequencies | | Verdict |
|-----------|---------|-----------------|-------------|----------------------------|-----------|---------|
| | | | | ANT1 | Limit | |
| GFSK | SISO | HOPP | DH5 | 79 | ≥ 15 | Pass |
| Pi/4DQPSK | SISO | HOPP |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



4.2 Test Graph

4.2.1 HoppNum





5. Time of Occupancy (Dwell Time)

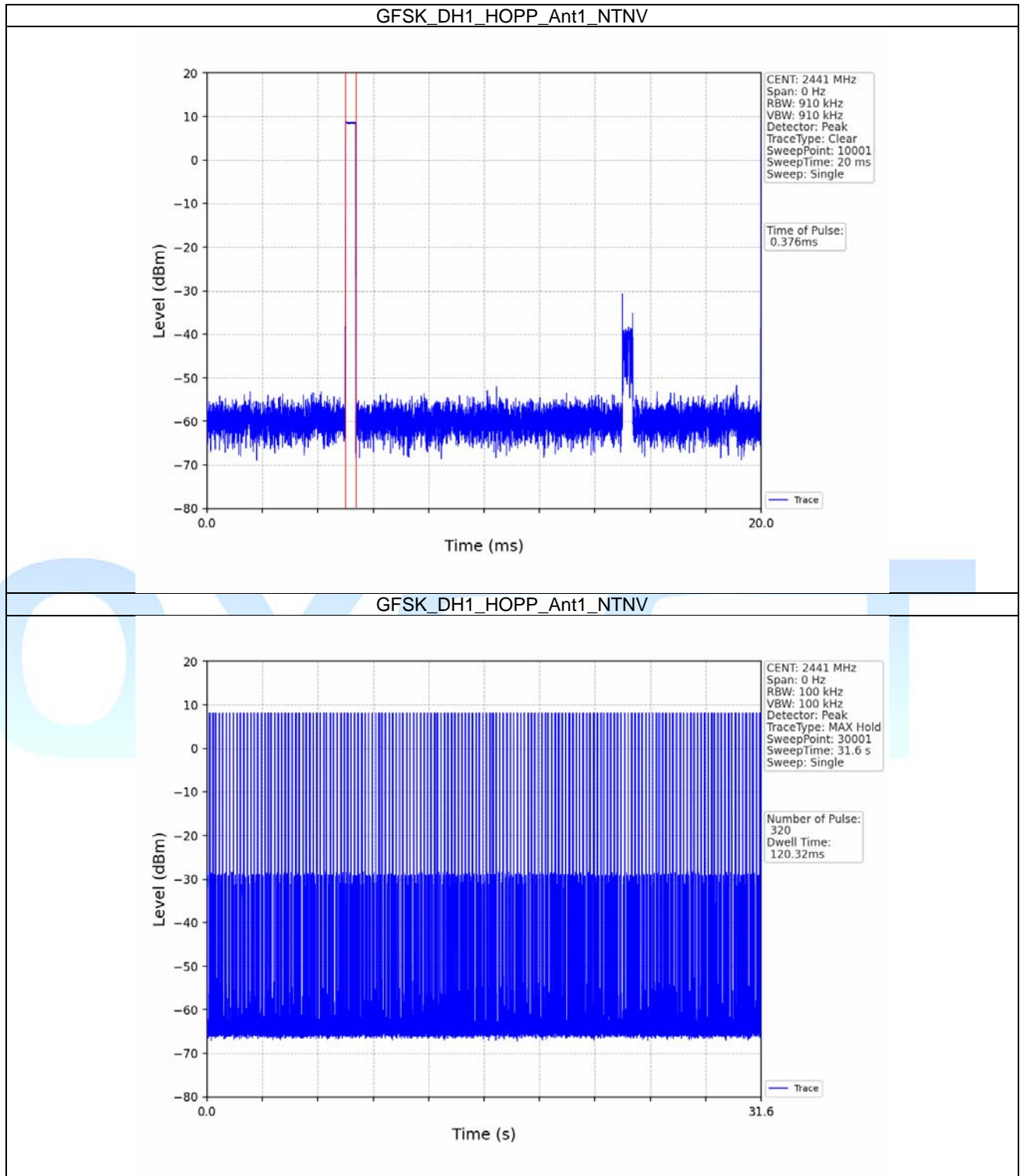
5.1 Test Result

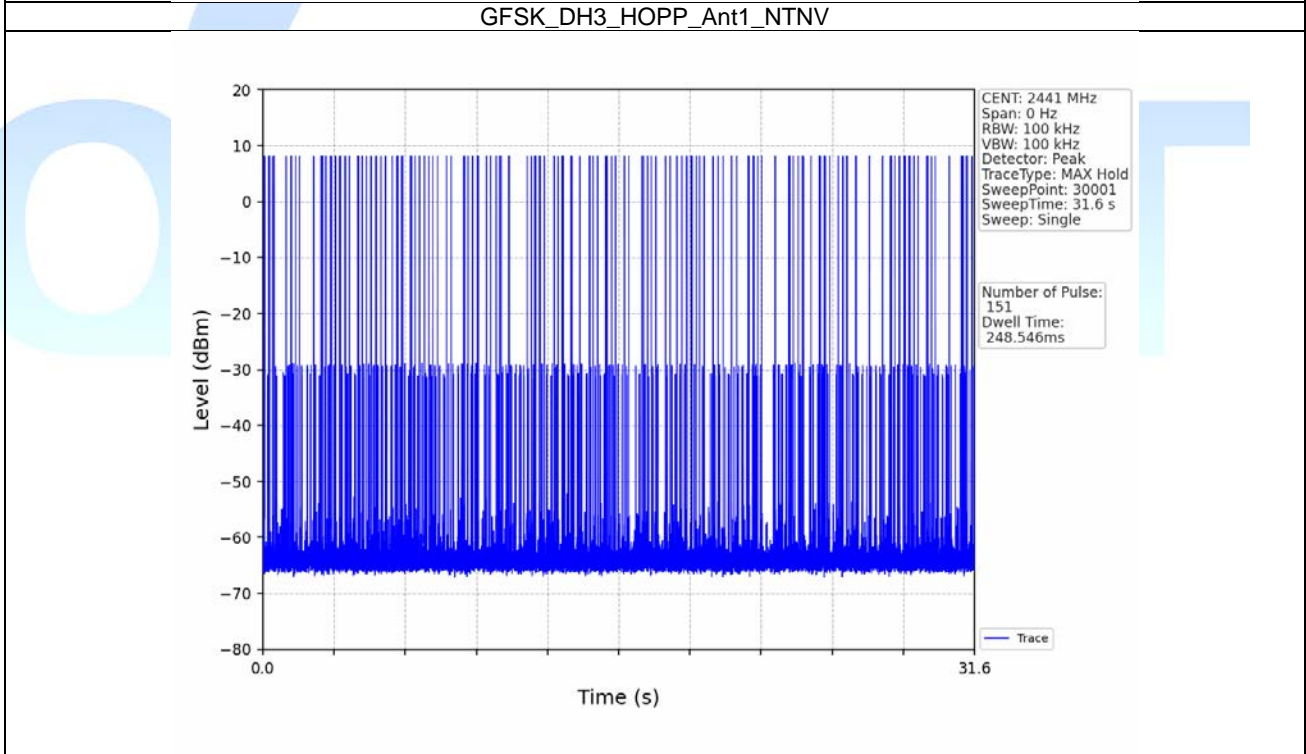
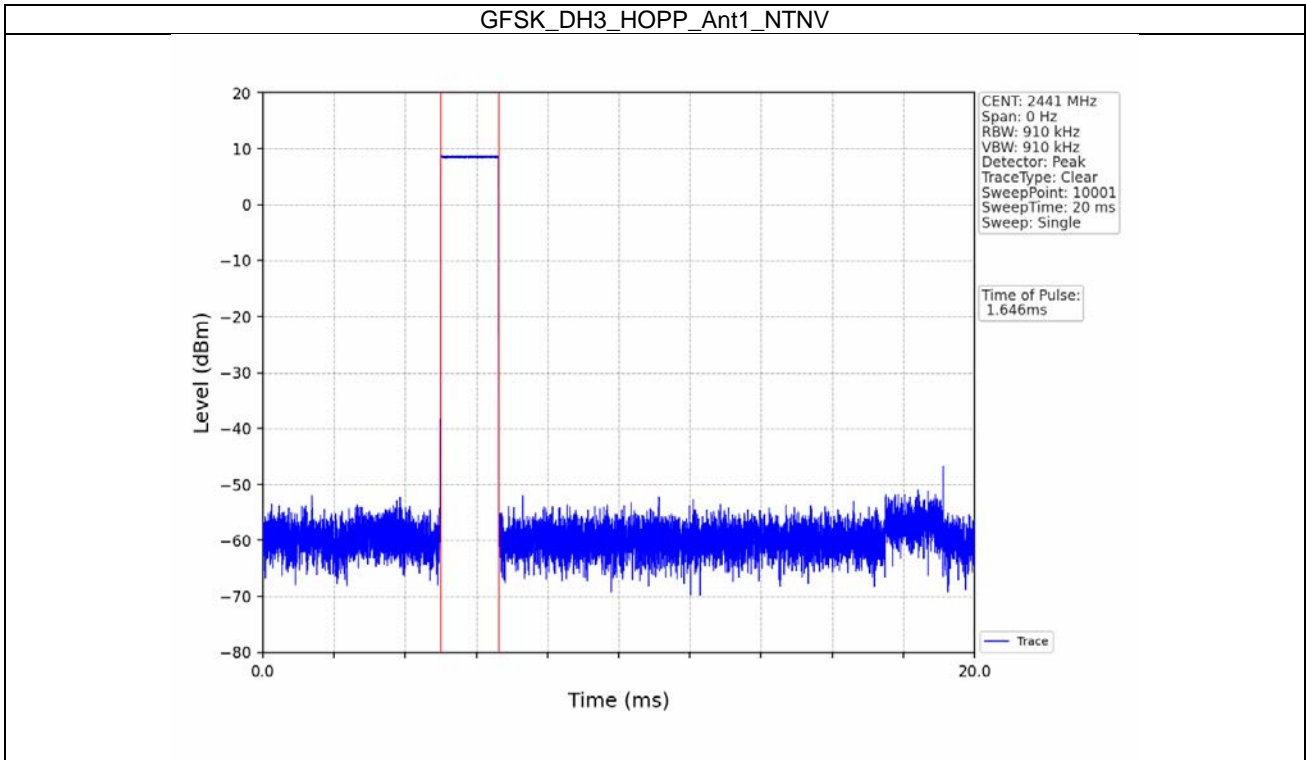
5.1.1 Ant1

| 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 | 0.376 | 31.600 | 320 | 120.320 | <=400 | Pass |
| | | | DH3 | 1.646 | 31.600 | 151 | 248.546 | <=400 | Pass |
| | | | DH5 | 2.894 | 31.600 | 89 | 257.566 | <=400 | Pass |
| Pi/4DQPSK | SISO | HOPP | 2DH1 | 0.382 | 31.600 | 320 | 122.240 | <=400 | Pass |
| | | | 2DH3 | 1.634 | 31.600 | 172 | 281.048 | <=400 | Pass |
| | | | 2DH5 | 2.882 | 31.600 | 99 | 285.318 | <=400 | Pass |
| 8DPSK | SISO | HOPP | 3DH1 | 0.382 | 31.600 | 320 | 122.240 | <=400 | Pass |
| | | | 3DH3 | 1.646 | 31.600 | 158 | 260.068 | <=400 | Pass |
| | | | 3DH5 | 2.884 | 31.600 | 123 | 354.732 | <=400 | Pass |

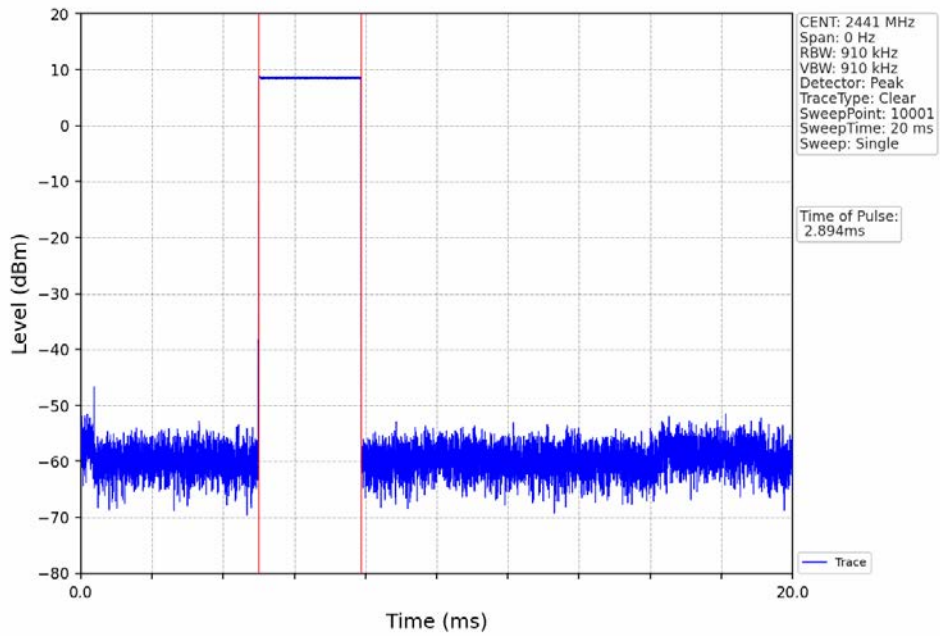
5.2 Test Graph

5.2.1 Ant1

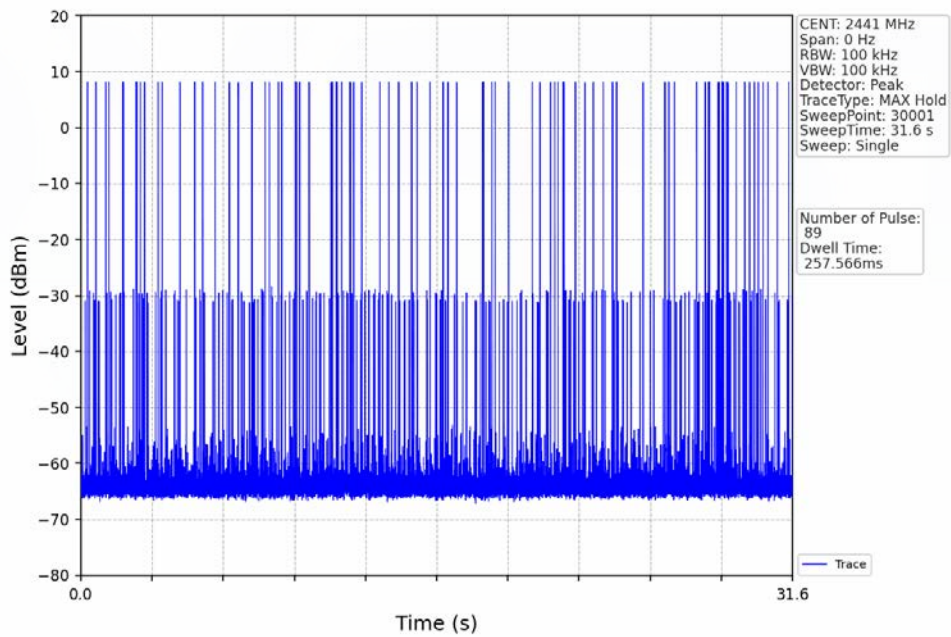




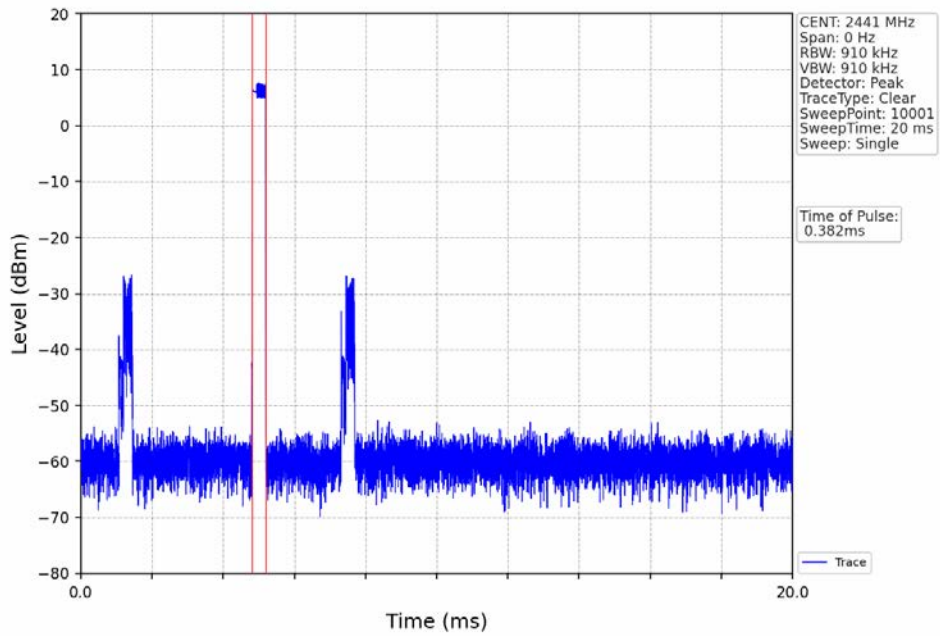
GFSK_DH5_HOPP_Ant1_NTNV



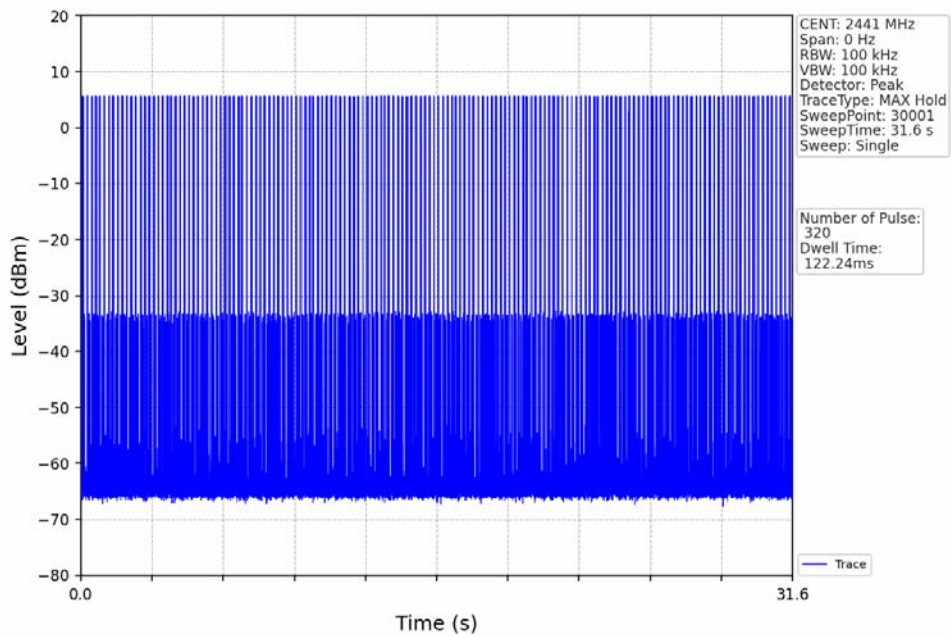
GFSK_DH5_HOPP_Ant1_NTNV



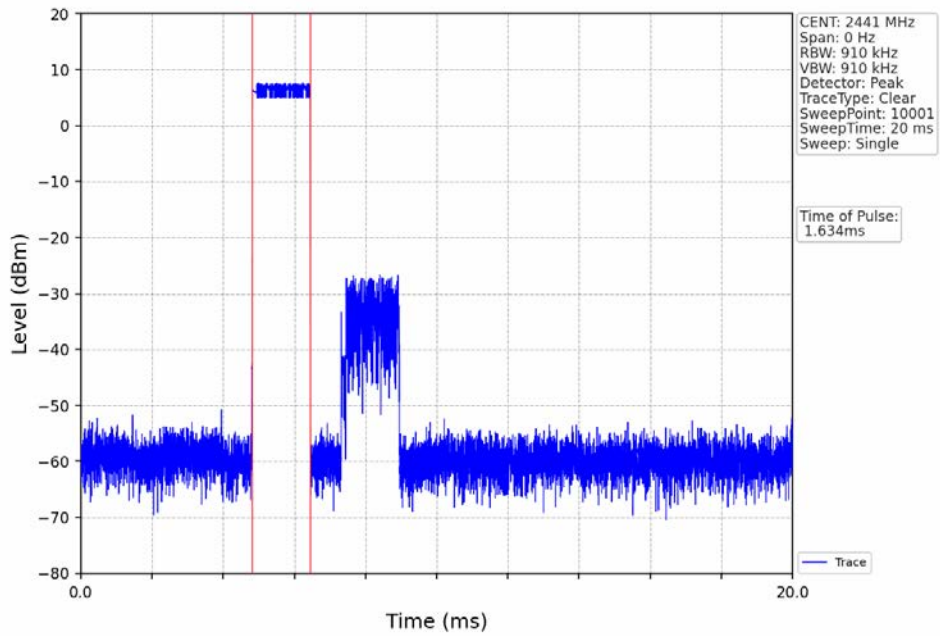
Pi/4DQPSK_2DH1_HOPP_Ant1_NTNV



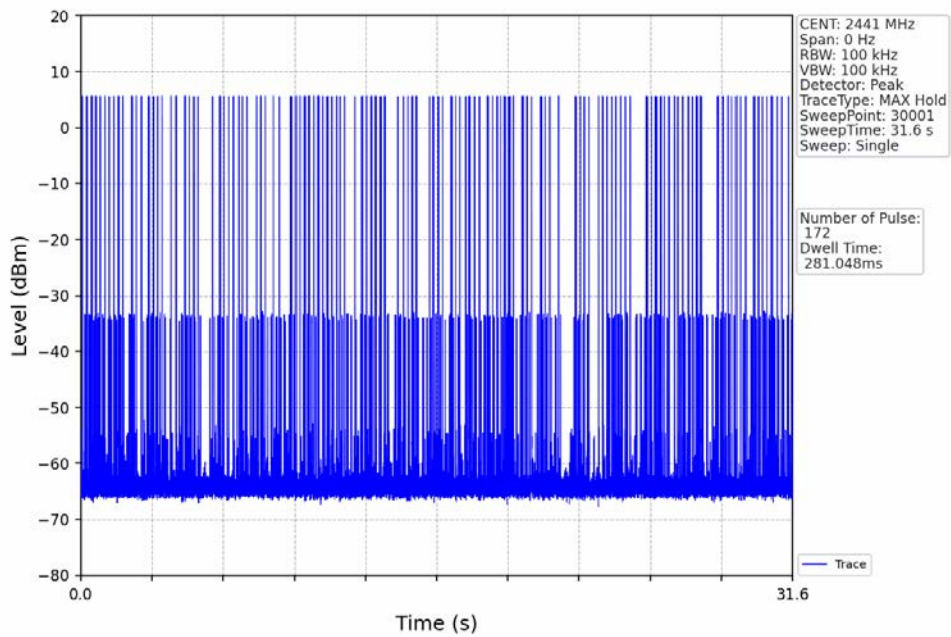
Pi/4DQPSK_2DH1_HOPP_Ant1_NTNV

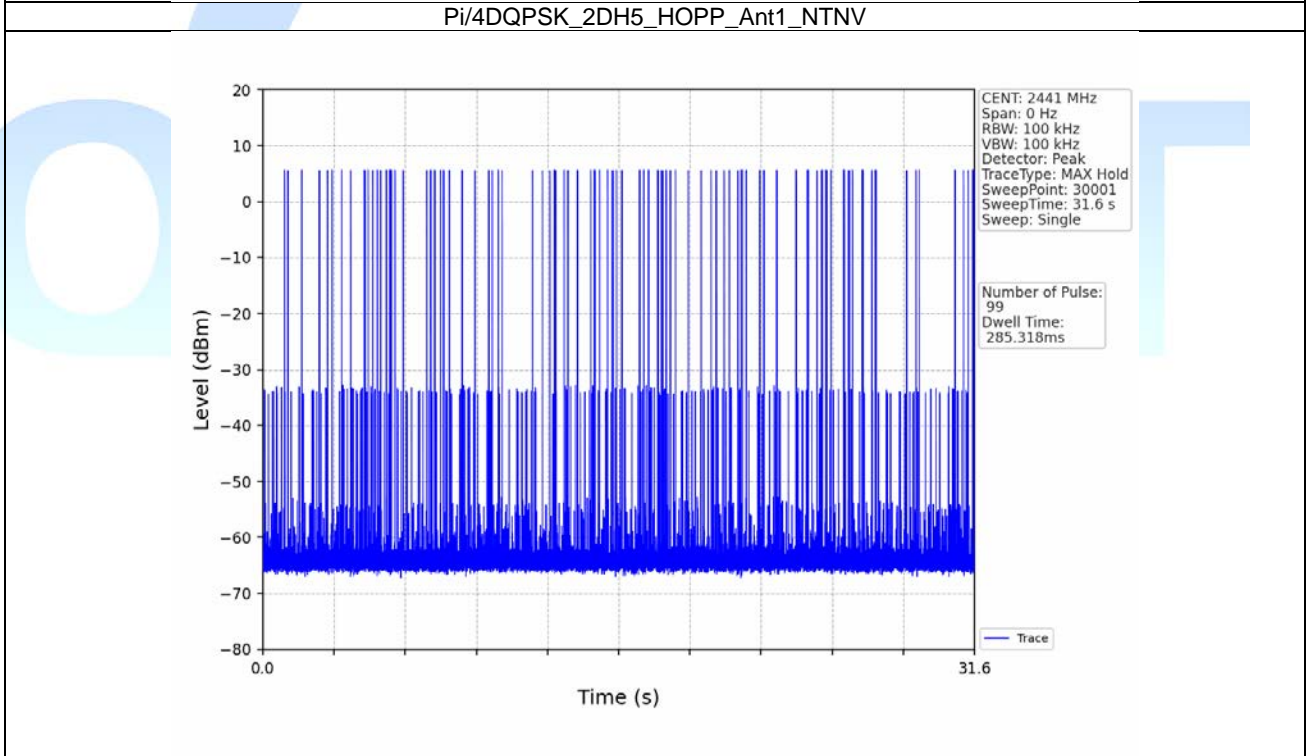
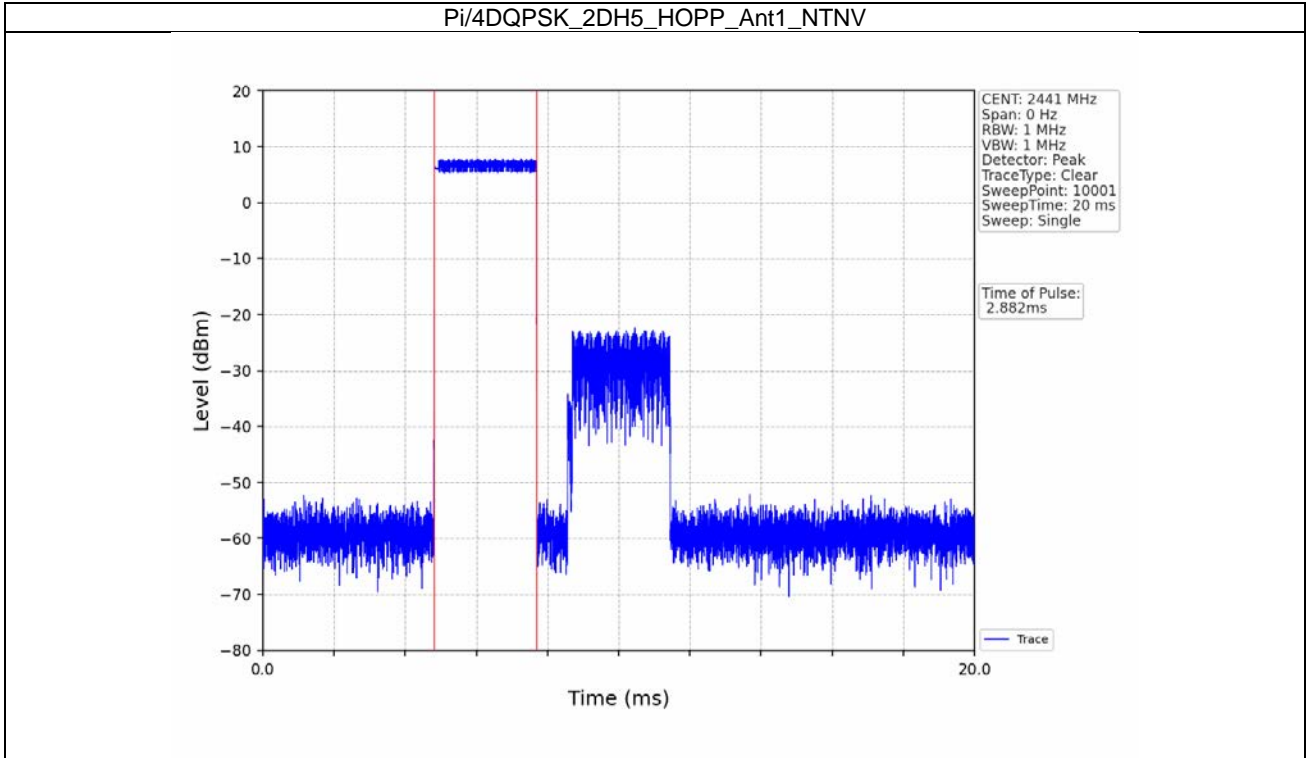


Pi/4DQPSK_2DH3_HOPP_Ant1_NTNV

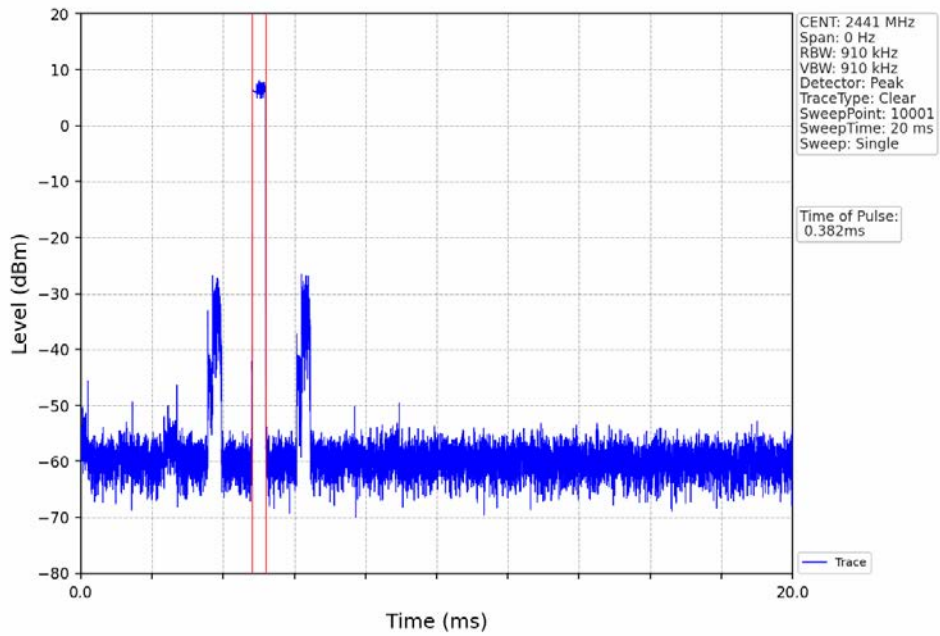


Pi/4DQPSK_2DH3_HOPP_Ant1_NTNV

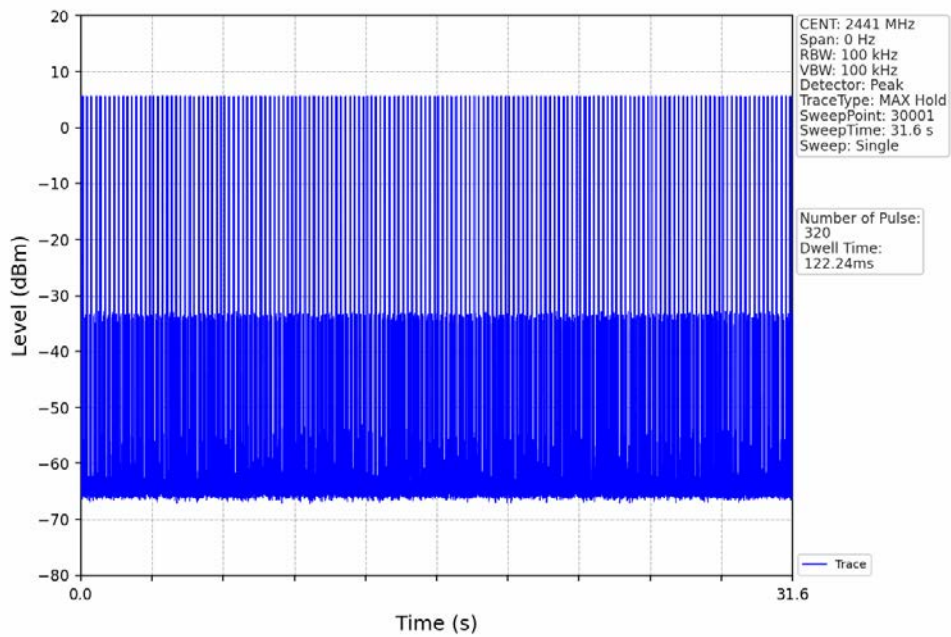




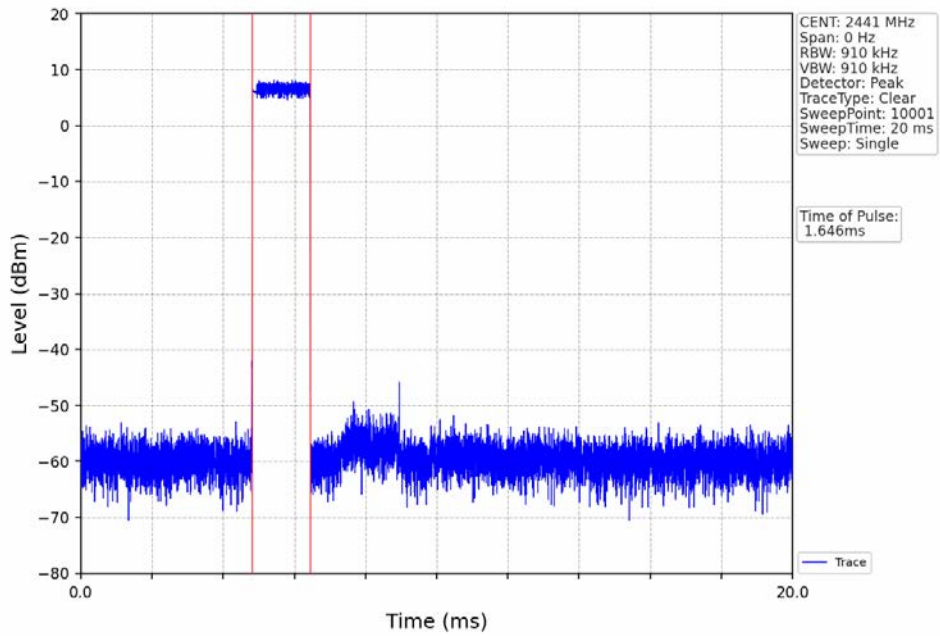
8DPSK_3DH1_HOPP_Ant1_NTNV



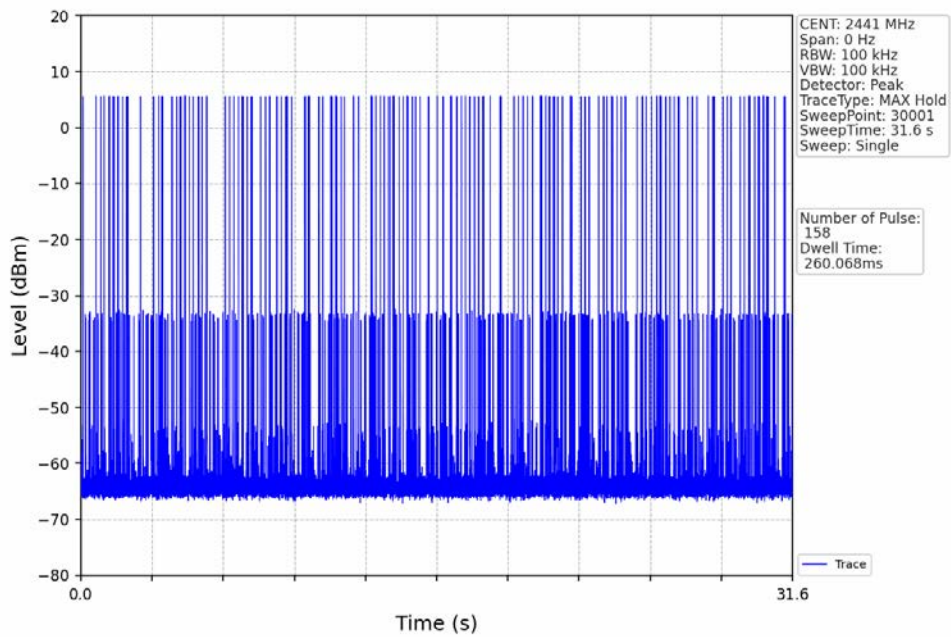
8DPSK_3DH1_HOPP_Ant1_NTNV



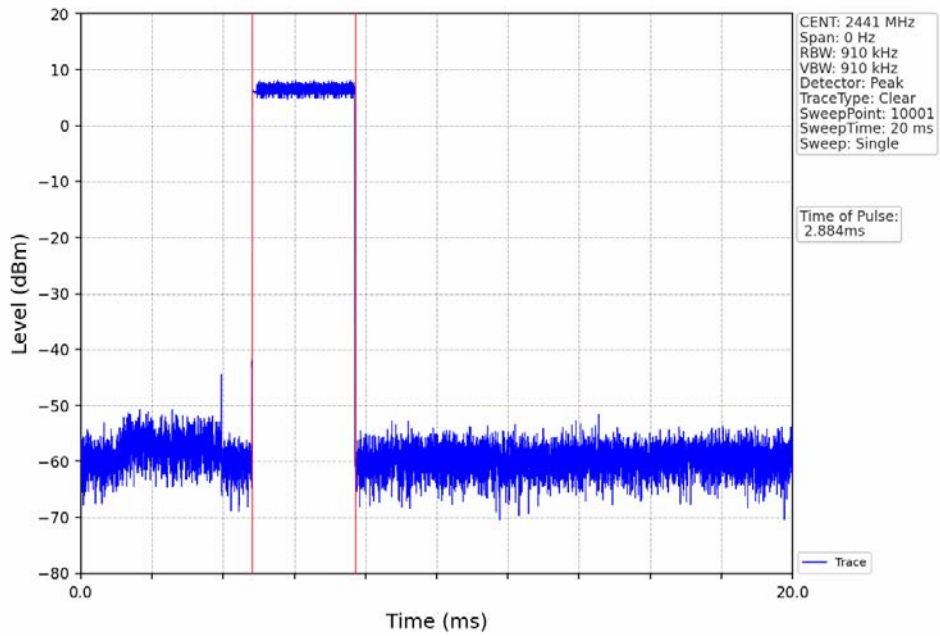
8DPSK_3DH3_HOPP_Ant1_NTNV



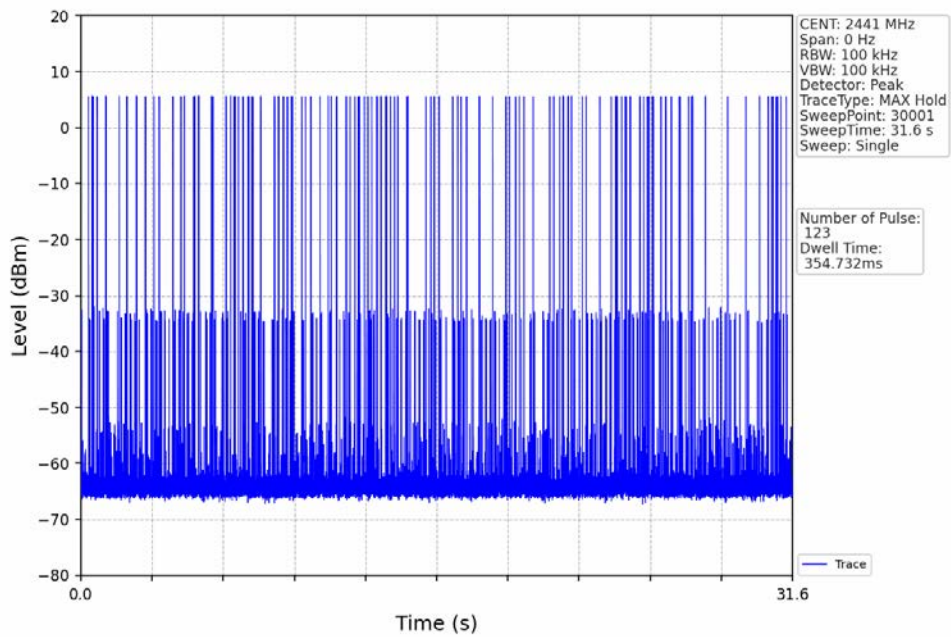
8DPSK_3DH3_HOPP_Ant1_NTNV



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 | 8.68 |
| | | 2441 | DH5 | 1 | 8.70 |
| | | 2480 | DH5 | 1 | 8.28 |
| Pi/4DQPSK | SISO | 2402 | 2DH5 | 1 | 2.72 |
| | | 2441 | 2DH5 | 1 | 2.96 |
| | | 2480 | 2DH5 | 1 | 6.61 |
| 8DPSK | SISO | 2402 | 3DH5 | 1 | 2.86 |
| | | 2441 | 3DH5 | 1 | 3.10 |
| | | 2480 | 3DH5 | 1 | 6.78 |

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.

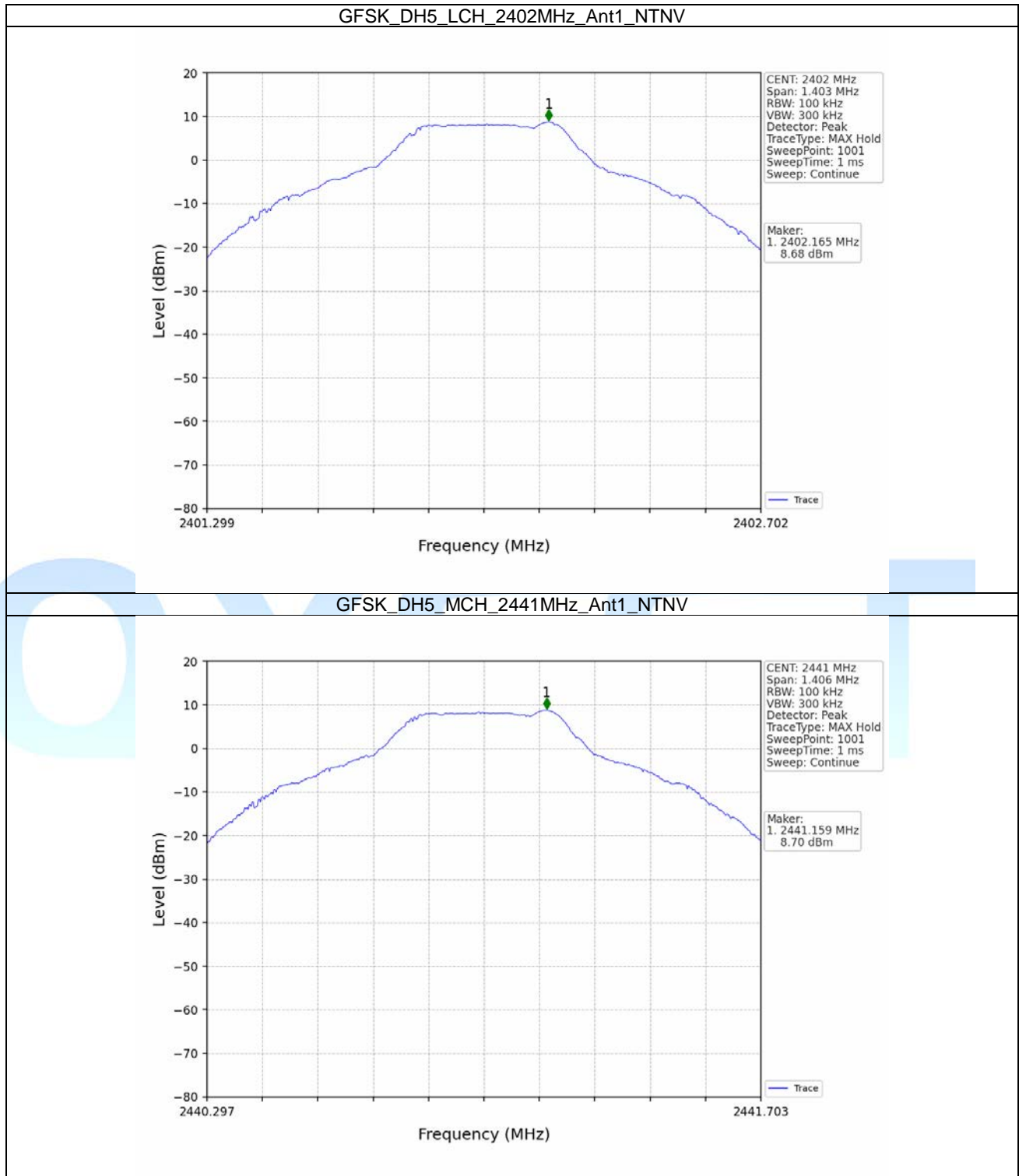
6.1.2 CSE

| Mode | TX Type | Frequency (MHz) | Packet Type | ANT | Level of Reference (dBm) | Limit (dBm) | Verdict |
|-----------|---------|-----------------|-------------|-----|--------------------------|-------------|---------|
| GFSK | SISO | 2402 | DH5 | 1 | 8.70 | -11.30 | Pass |
| | | 2441 | DH5 | 1 | 8.70 | -11.30 | Pass |
| | | 2480 | DH5 | 1 | 8.70 | -11.30 | Pass |
| | | HOPP | DH5 | 1 | 8.70 | -11.30 | Pass |
| | | | | | | 8.70 | -11.30 |
| Pi/4DQPSK | SISO | 2402 | 2DH5 | 1 | 6.61 | -13.39 | Pass |
| | | 2441 | 2DH5 | 1 | 6.61 | -13.39 | Pass |
| | | 2480 | 2DH5 | 1 | 6.61 | -13.39 | Pass |
| | | HOPP | 2DH5 | 1 | 6.61 | -13.39 | Pass |
| | | | | | | 6.61 | -13.39 |
| 8DPSK | SISO | 2402 | 3DH5 | 1 | 6.78 | -13.22 | Pass |
| | | 2441 | 3DH5 | 1 | 6.78 | -13.22 | Pass |
| | | 2480 | 3DH5 | 1 | 6.78 | -13.22 | Pass |
| | | HOPP | 3DH5 | 1 | 6.78 | -13.22 | Pass |
| | | | | | | 6.78 | -13.22 |

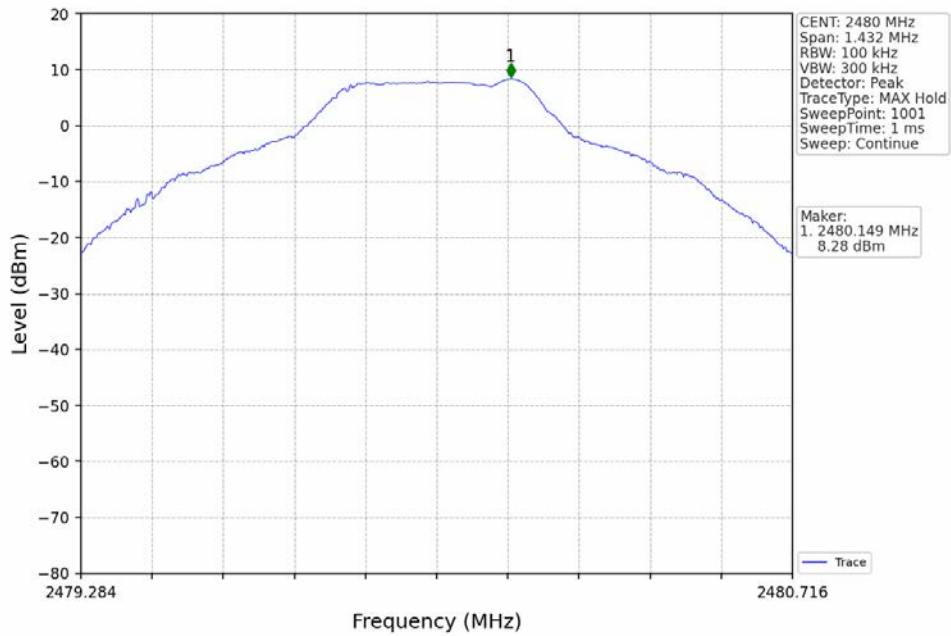
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.

6.2 Test Graph

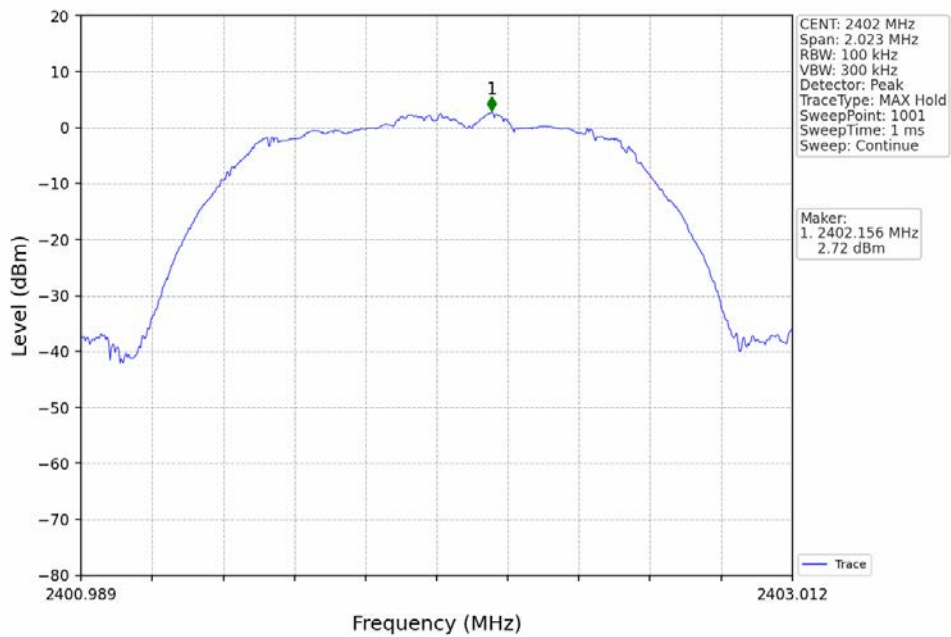
6.2.1 Ref



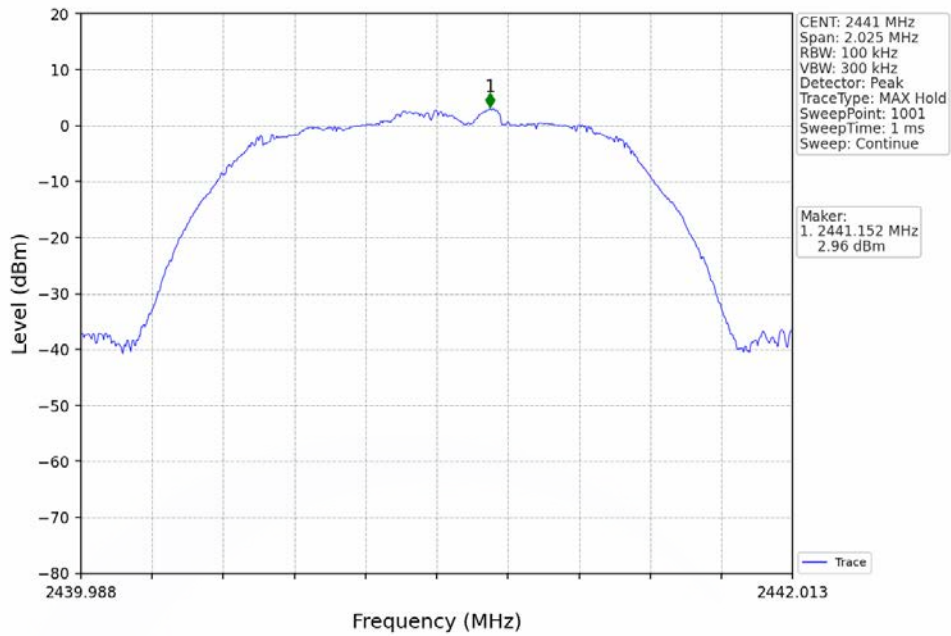
GFSK_DH5_HCH_2480MHz_Ant1_NTNV



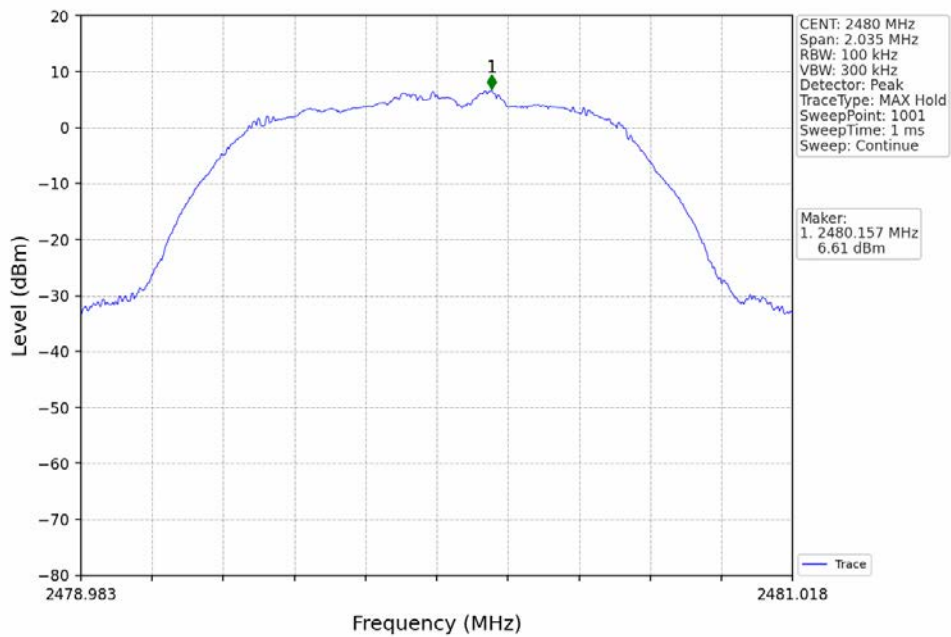
Pi/4DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV



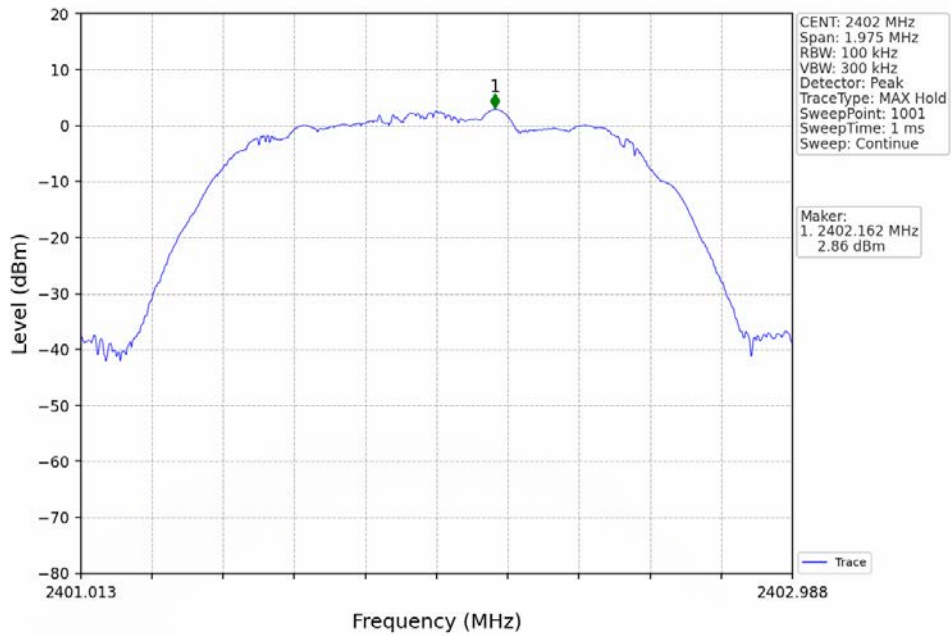
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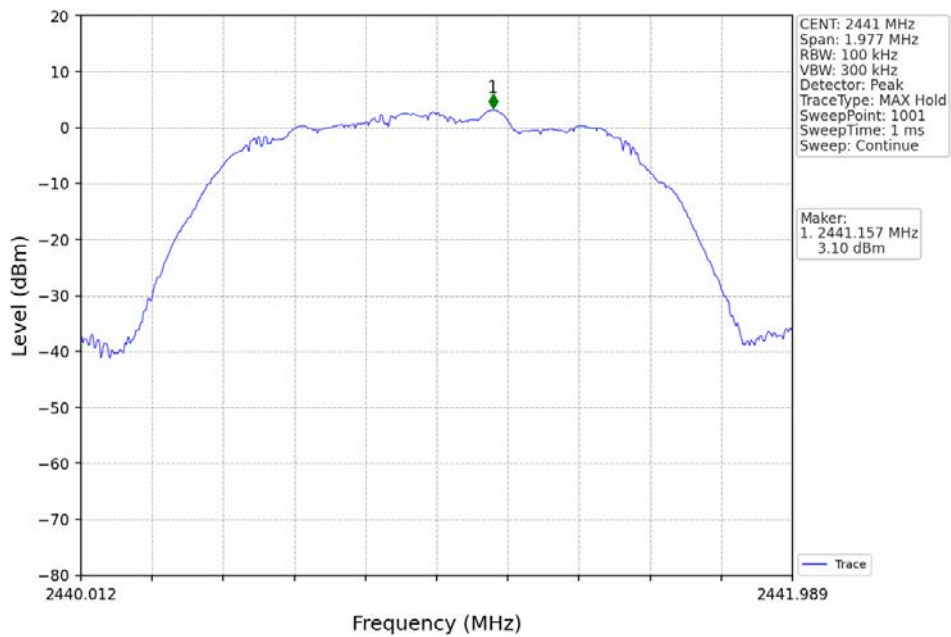
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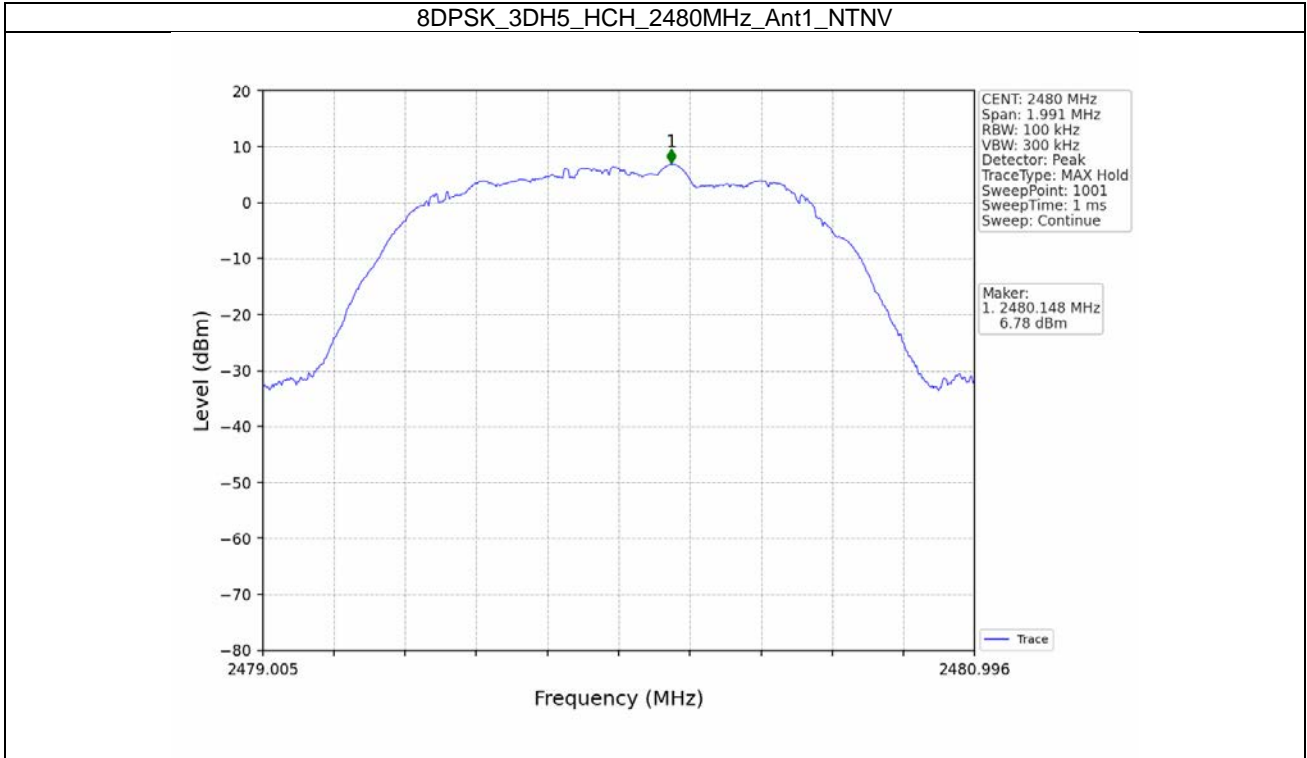


8DPSK_3DH5_LCH_2402MHz_Ant1_NTNV

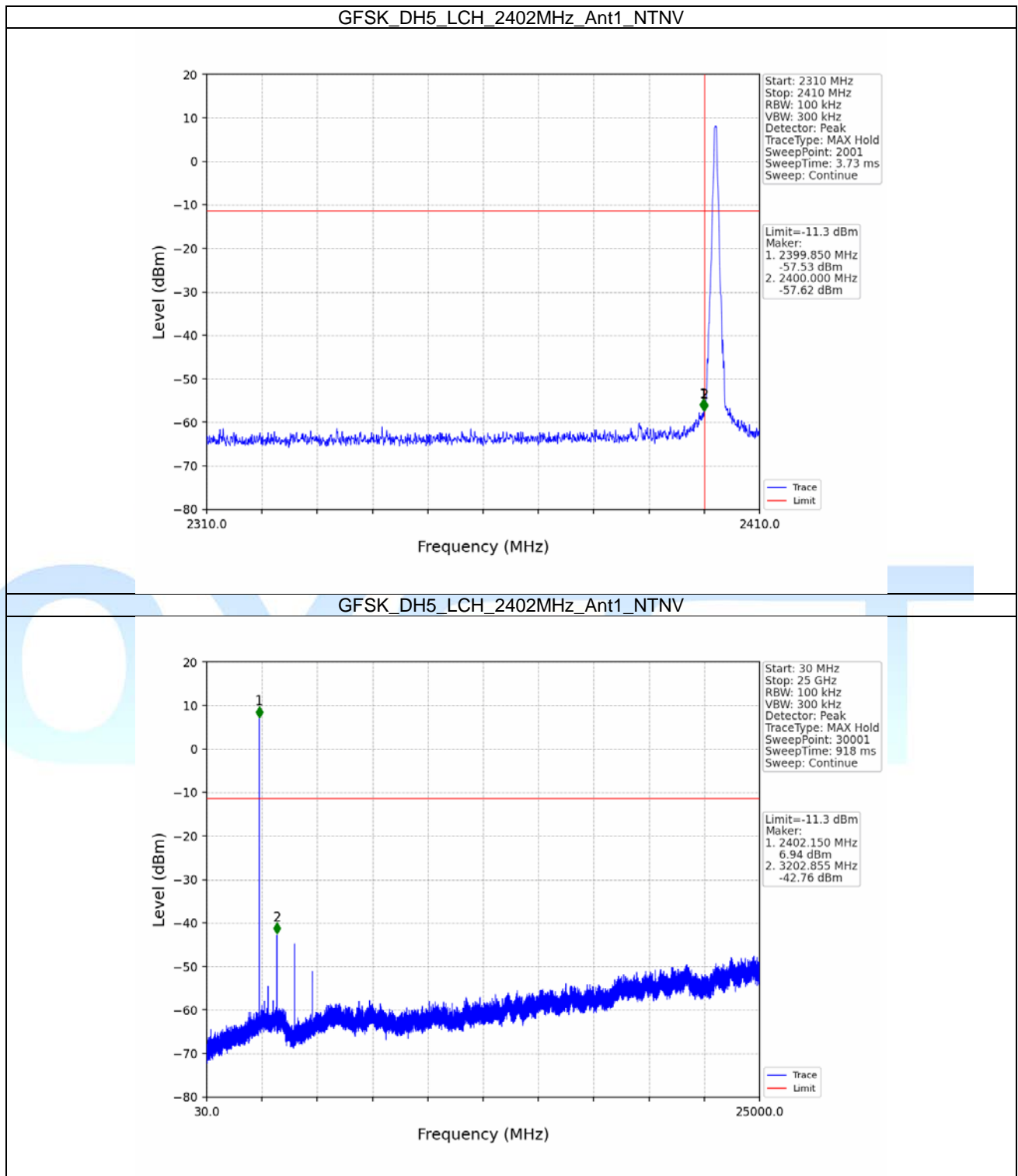


8DPSK_3DH5_MCH_2441MHz_Ant1_NTNV

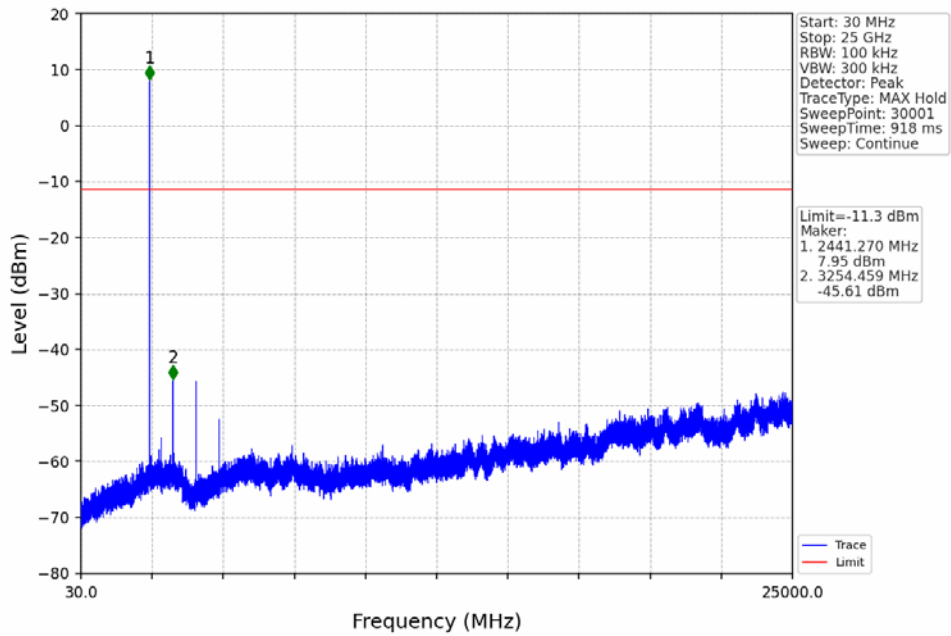




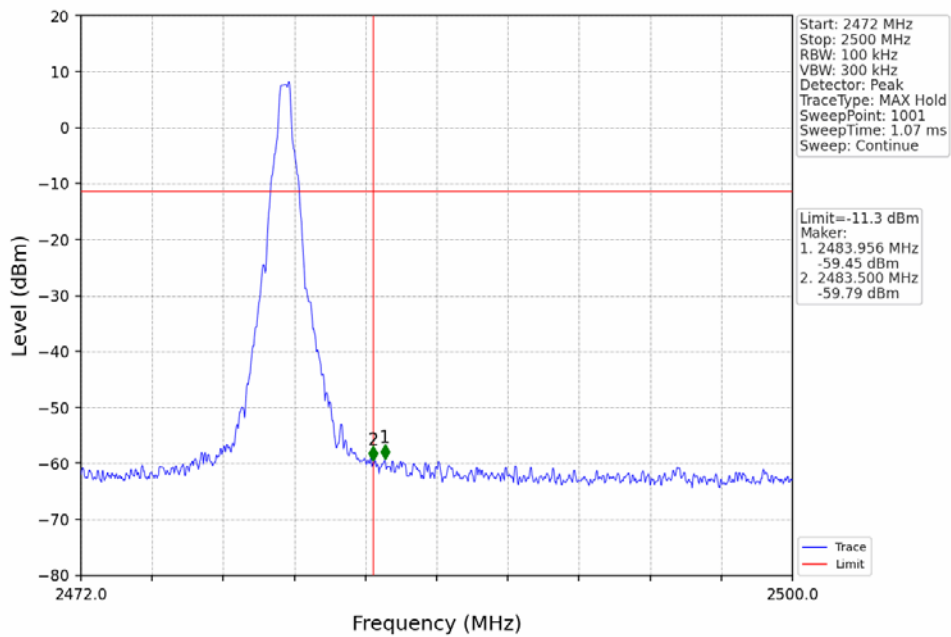
6.2.2 CSE



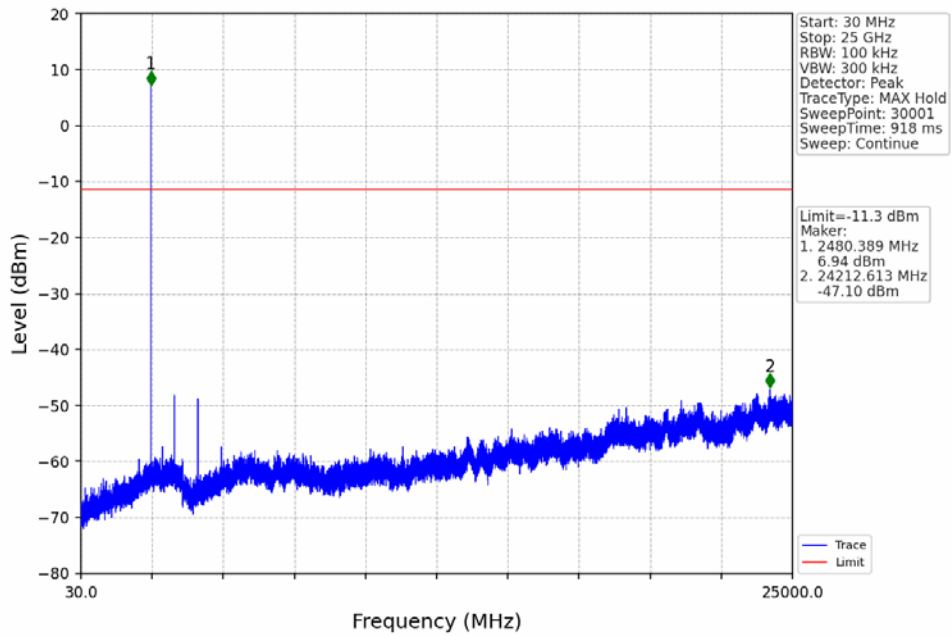
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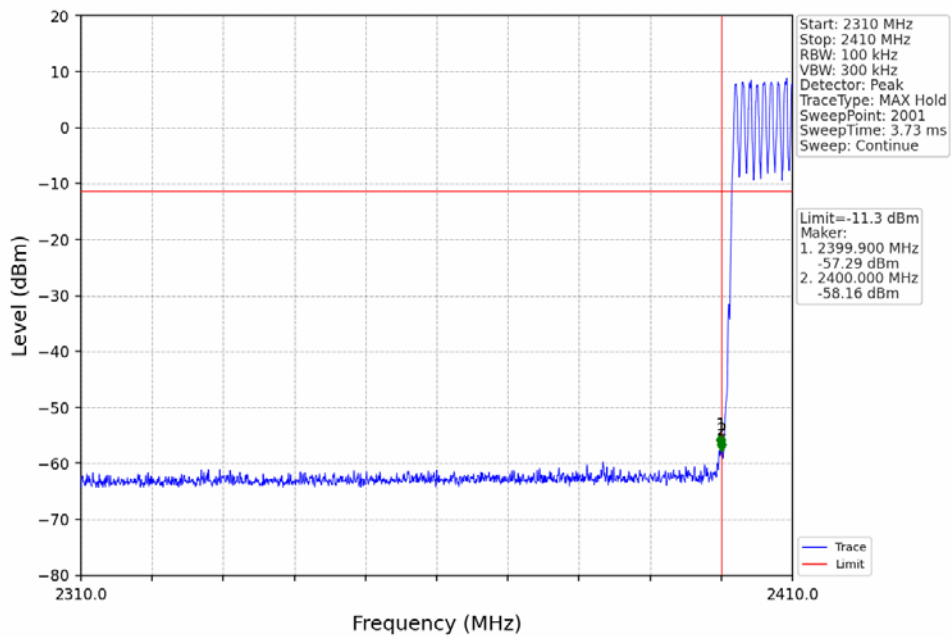
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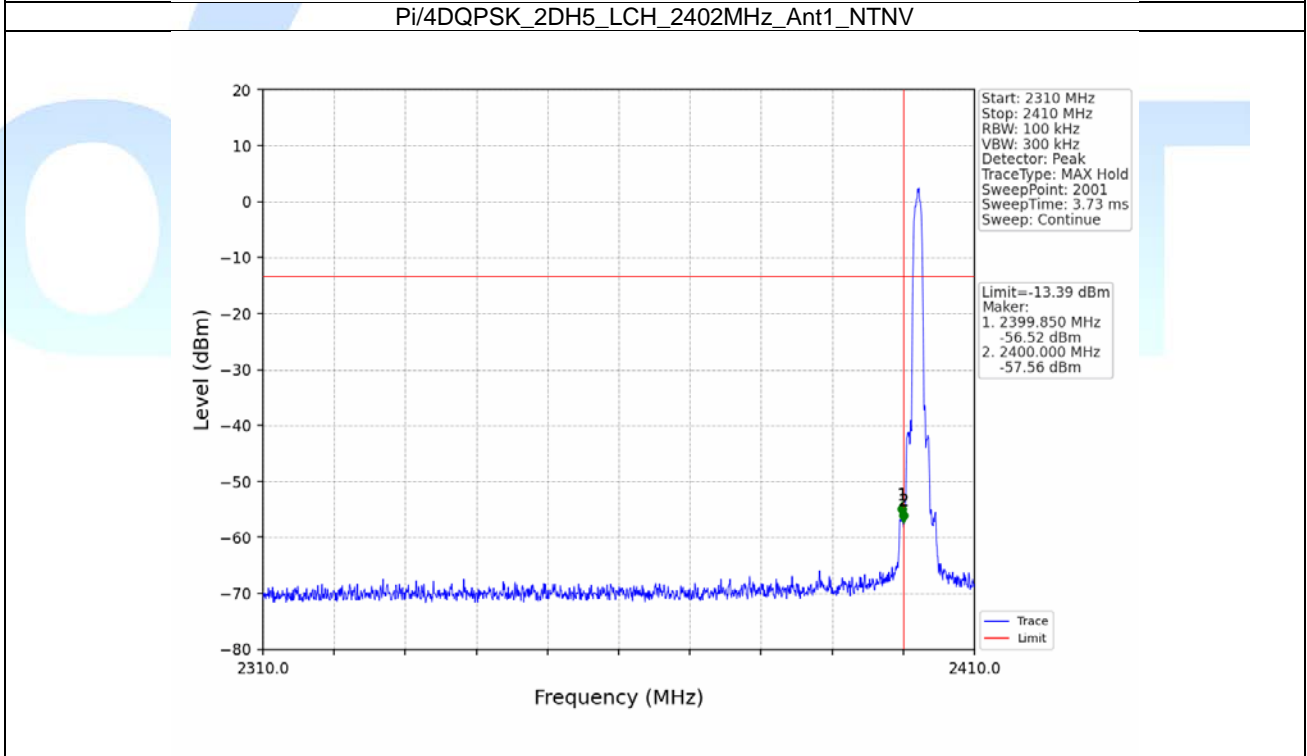
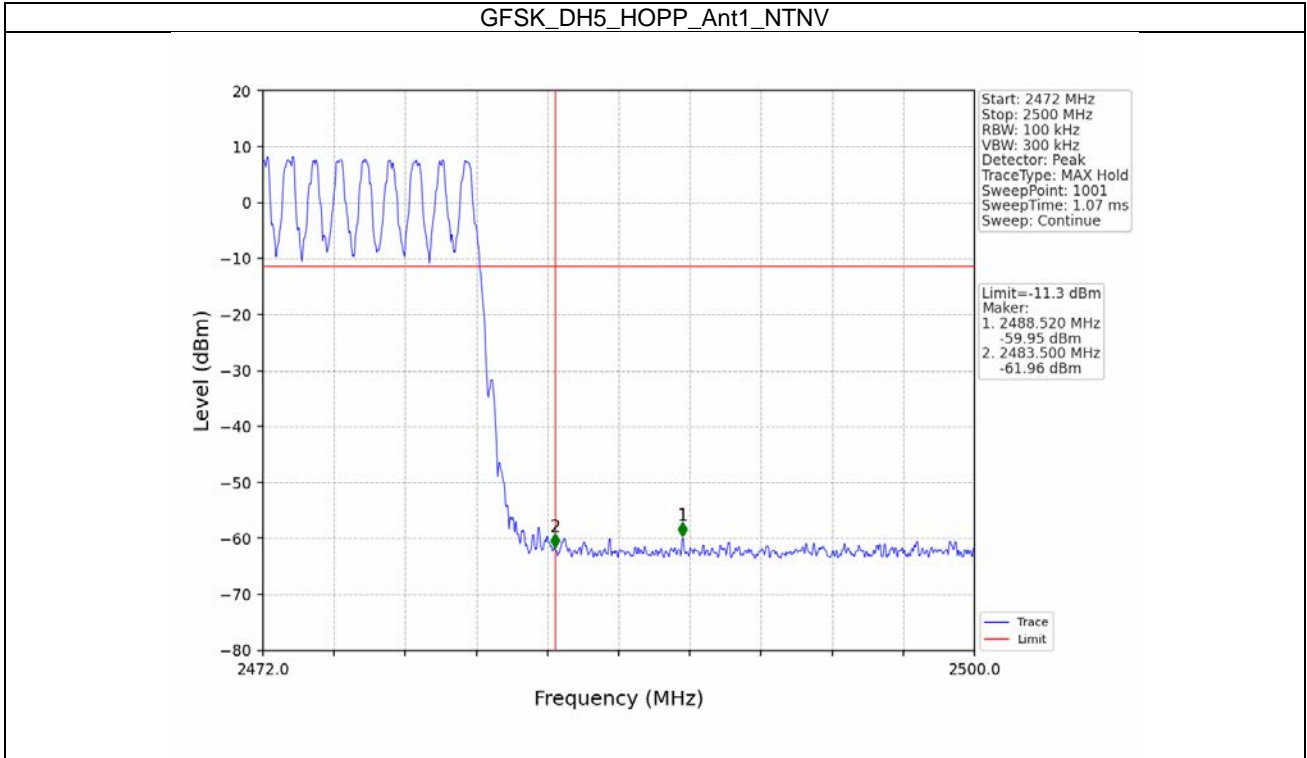


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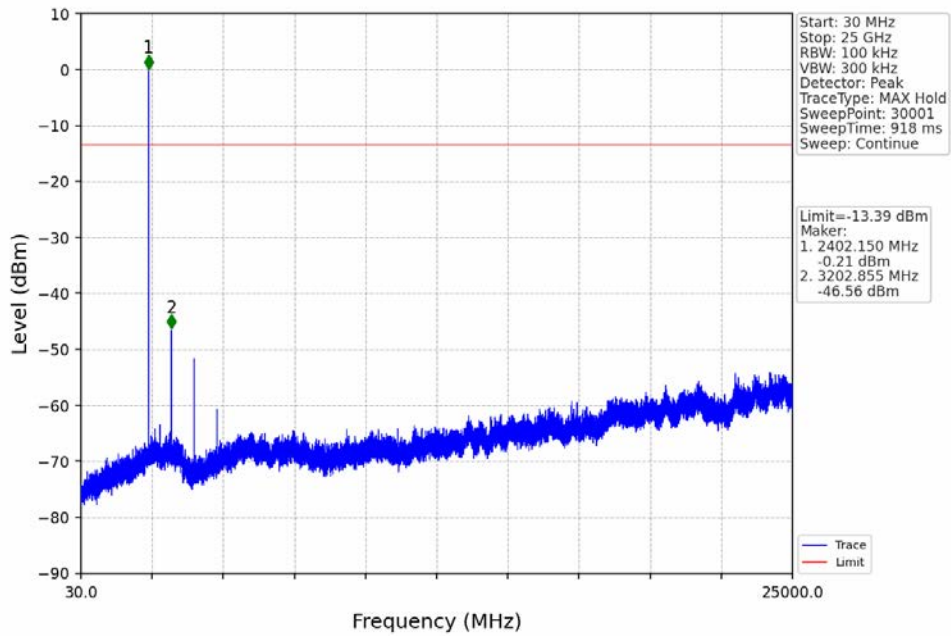


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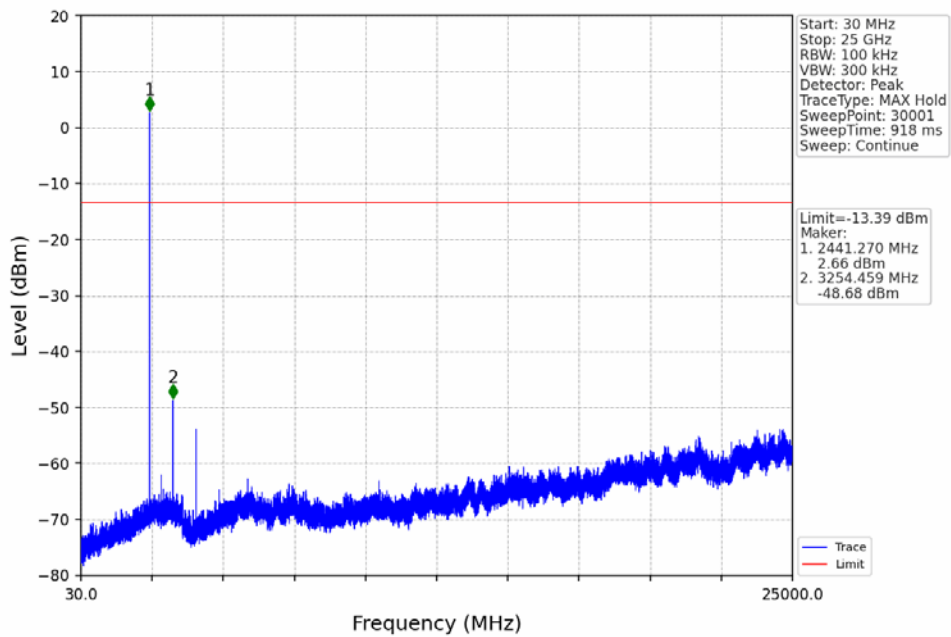




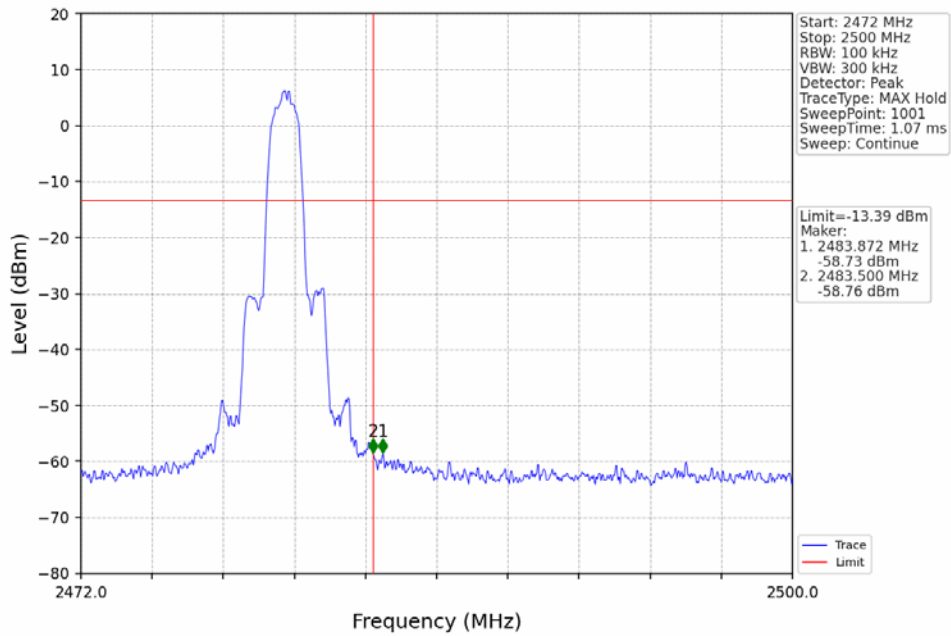
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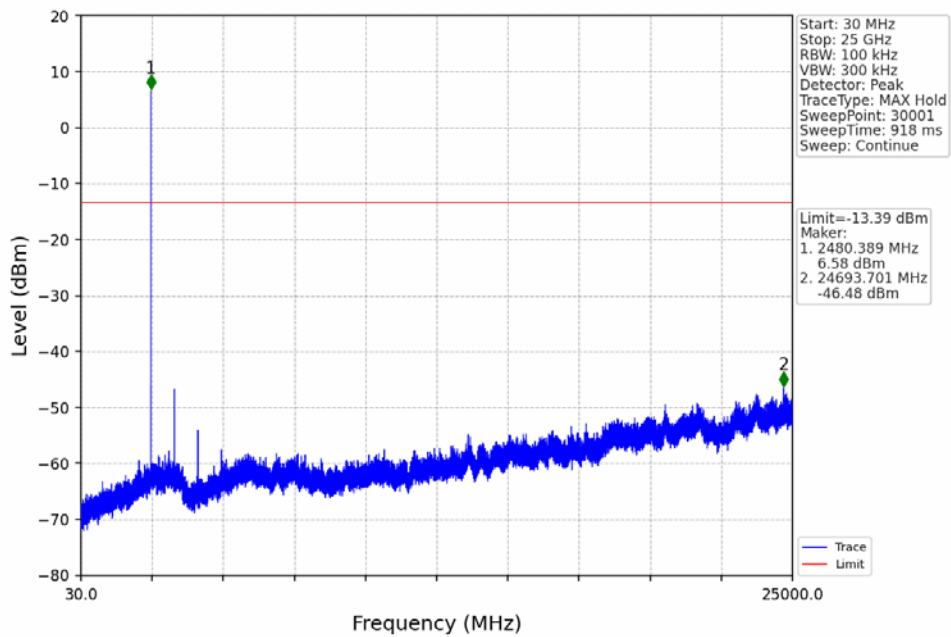
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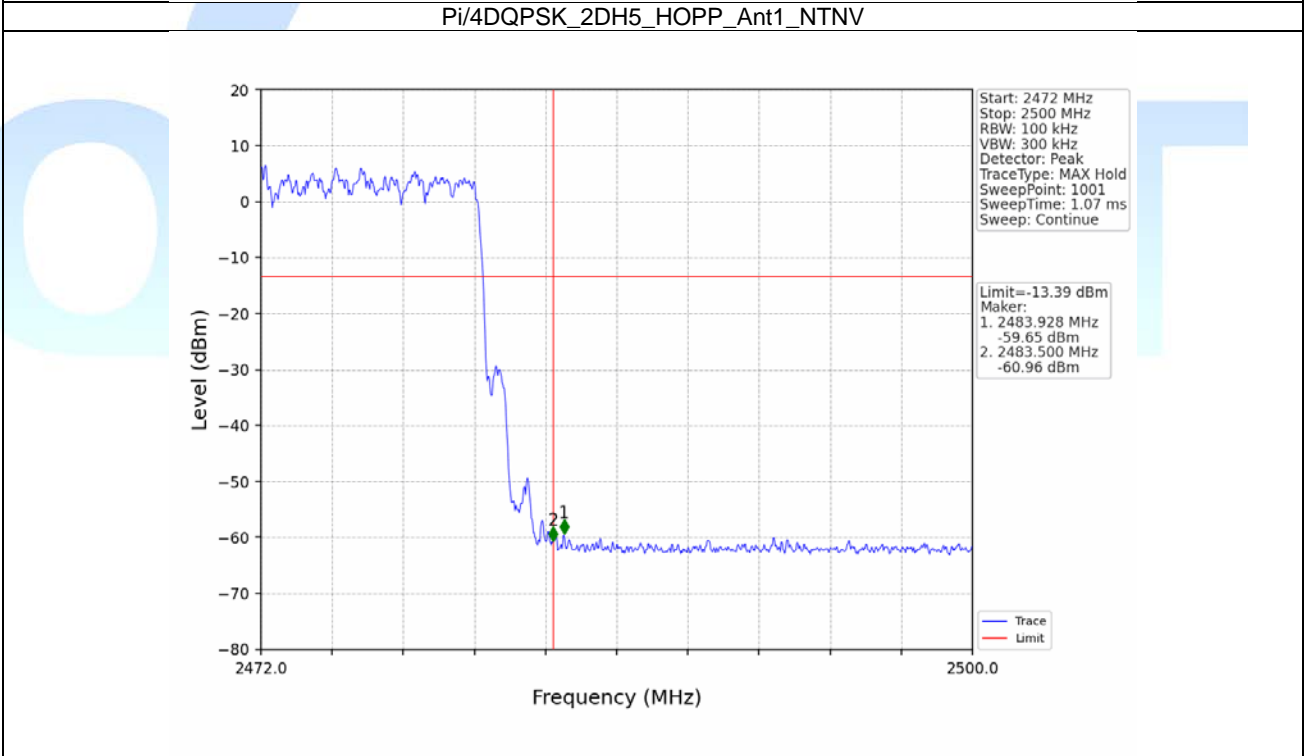
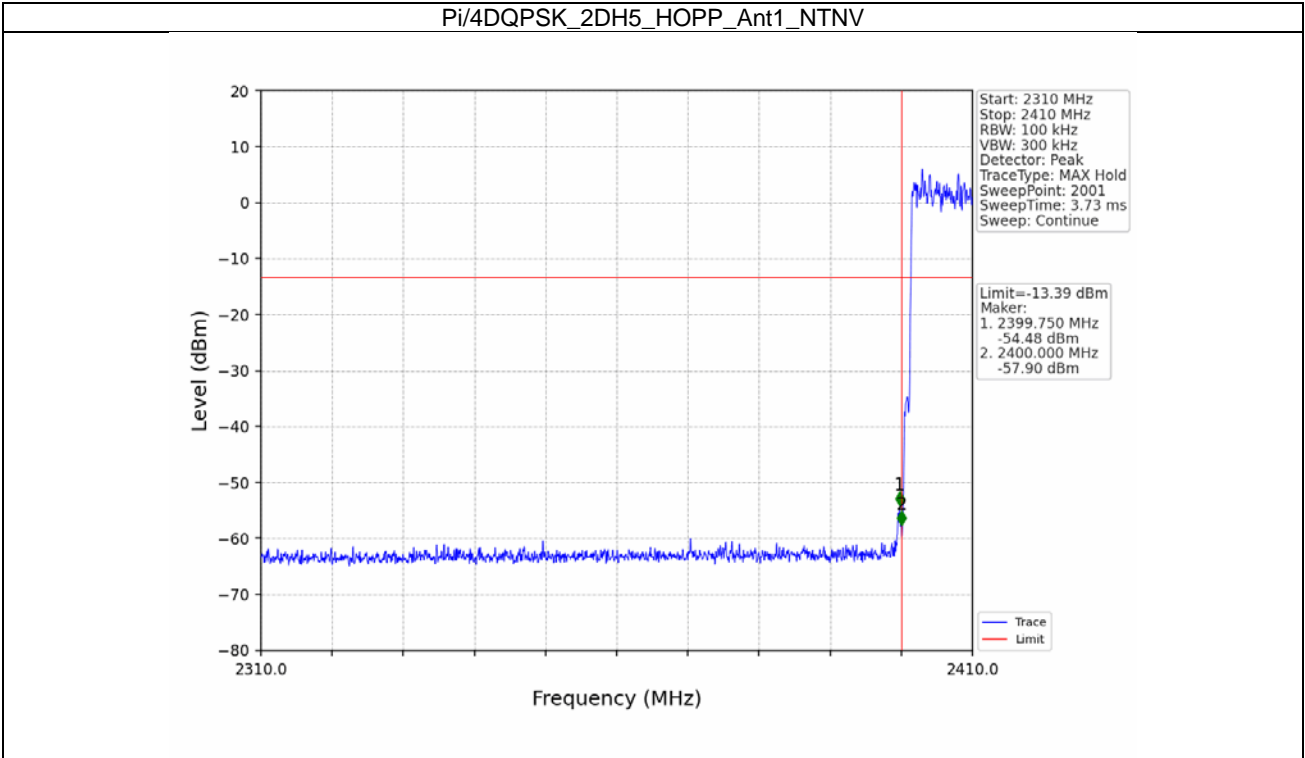


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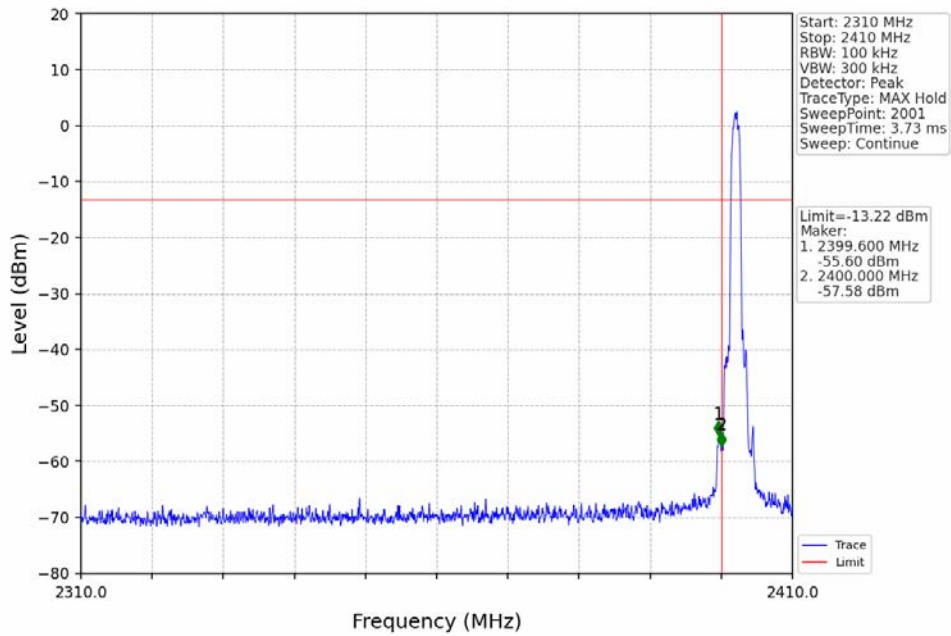


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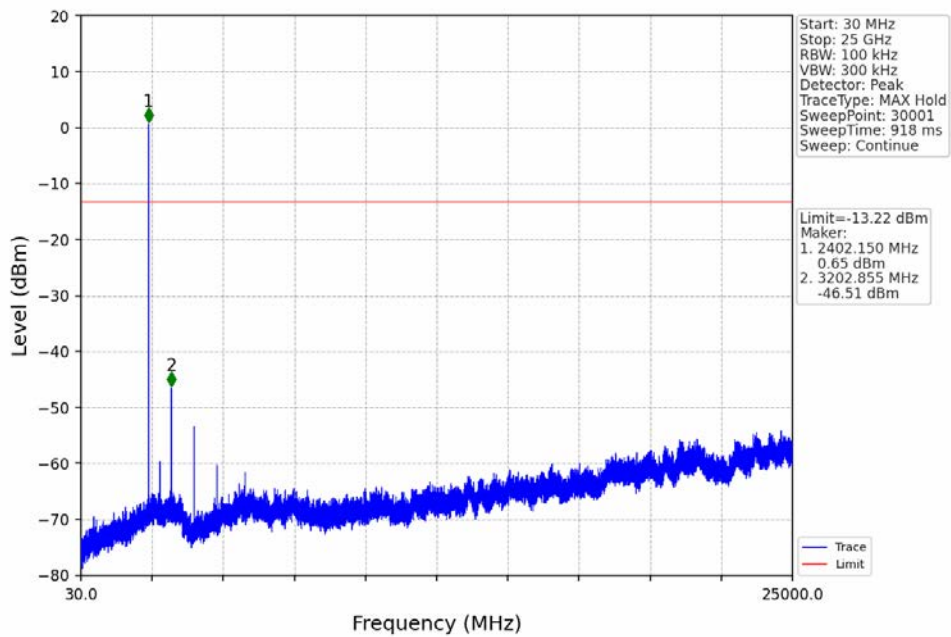




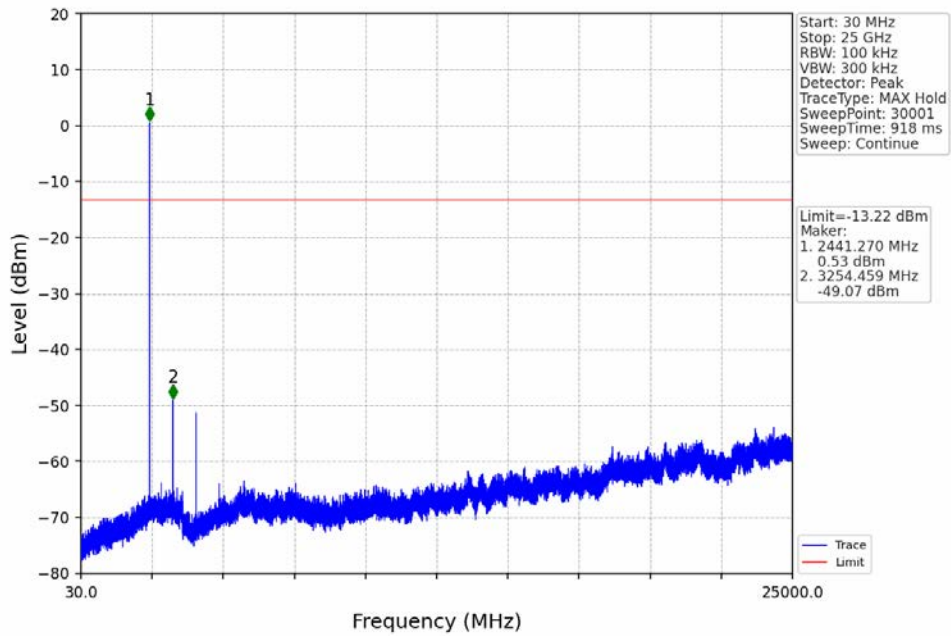
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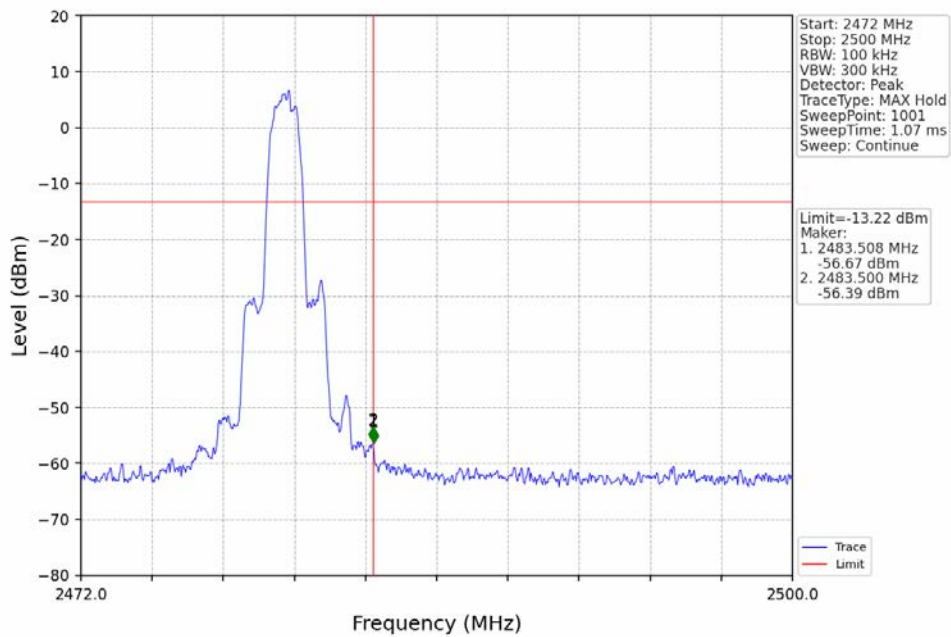
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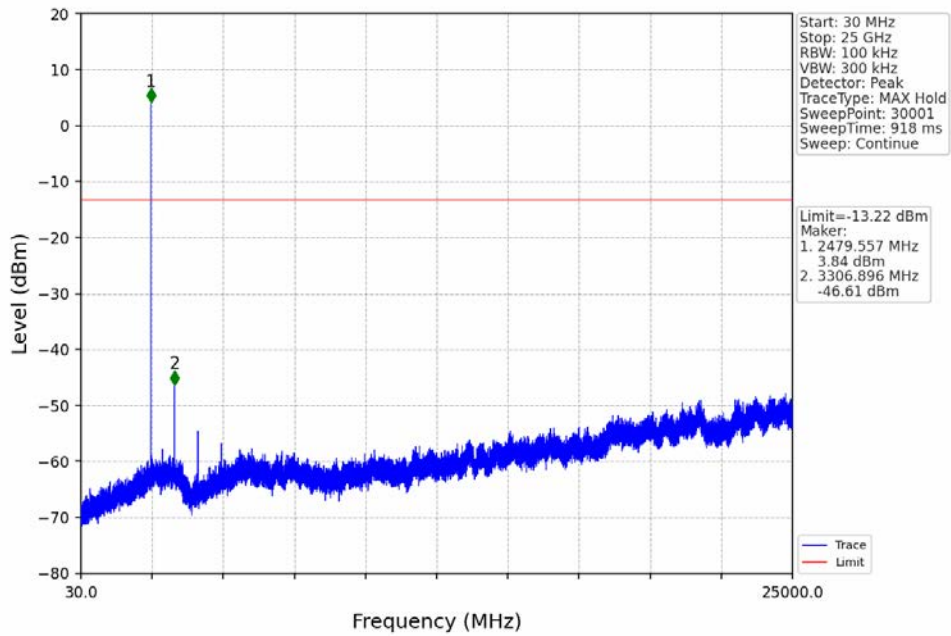
8DPSK_3DH5_MCH_2441MHz_Ant1_NTNV



8DPSK_3DH5_HCH_2480MHz_Ant1_NTNV



8DPSK_3DH5_HCH_2480MHz_Ant1_NTNV



8DPSK_3DH5_HOPP_Ant1_NTNV

