



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: BLUETOOTH SPEAKER

Test Model: MPD1255XB

Environmental Conditions

| | |
|--------------------|-----------|
| Temperature: | 24.9°C |
| Relative Humidity: | 53.8% |
| ATM Pressure: | 100.0 kPa |
| Test Engineer: | Can Kun |
| Supervised by: | Nick Peng |





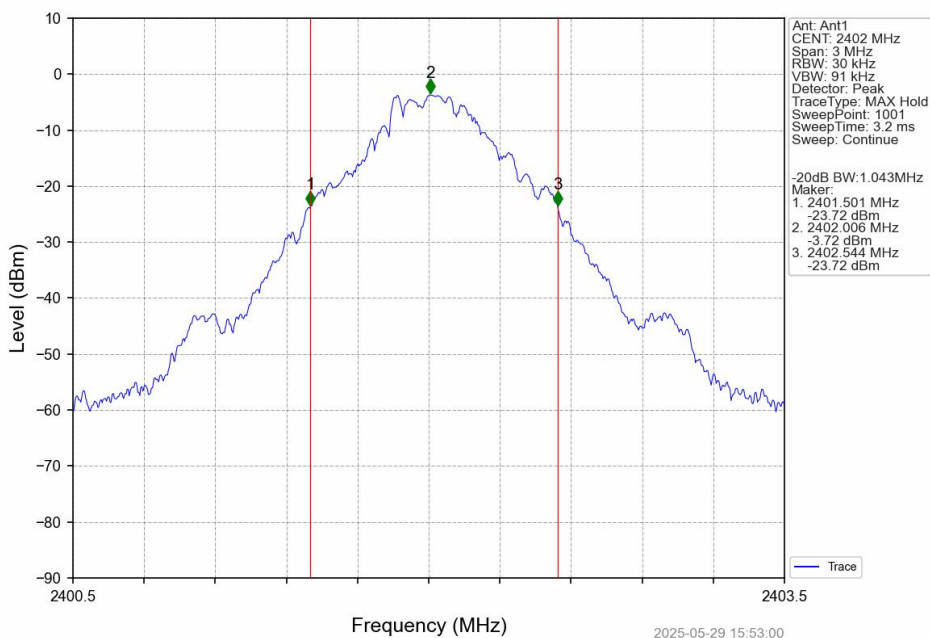
A.1 20dB Bandwidth

| Mode | TX Type | Frequency (MHz) | Packet Type | ANT | 20dB Bandwidth (MHz) | | Verdict |
|-----------|---------|-----------------|-------------|-----|----------------------|-------|---------|
| | | | | | Result | Limit | |
| GFSK | SISO | 2402 | DH5 | 1 | 1.043 | / | Pass |
| | | 2441 | DH5 | 1 | 1.042 | / | Pass |
| | | 2480 | DH5 | 1 | 1.046 | / | Pass |
| Pi/4DQPSK | SISO | 2402 | 2DH5 | 1 | 1.327 | / | Pass |
| | | 2441 | 2DH5 | 1 | 1.335 | / | Pass |
| | | 2480 | 2DH5 | 1 | 1.338 | / | Pass |
| 8DPSK | SISO | 2402 | 3DH5 | 1 | 1.308 | / | Pass |
| | | 2441 | 3DH5 | 1 | 1.304 | / | Pass |
| | | 2480 | 3DH5 | 1 | 1.298 | / | Pass |

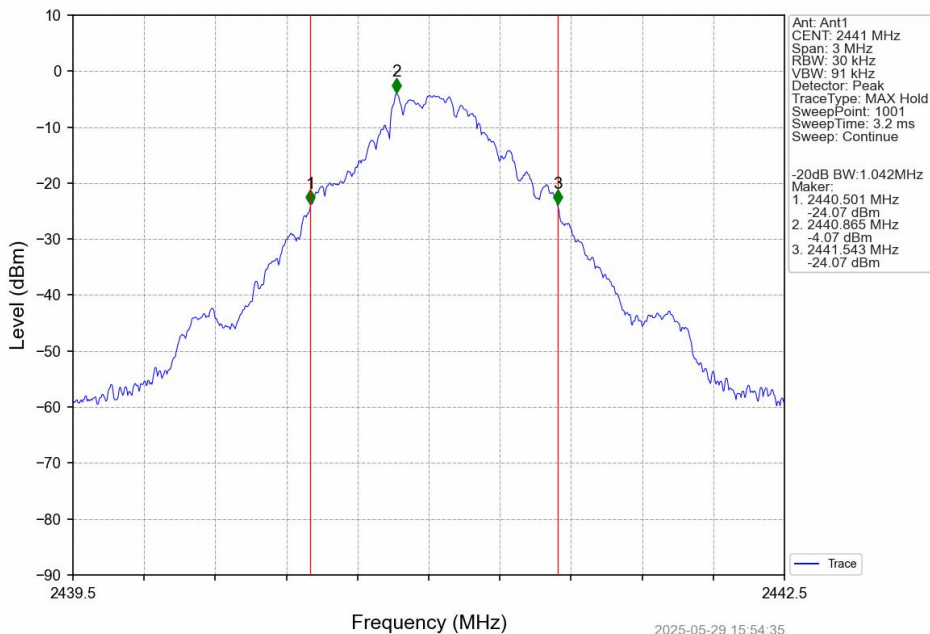




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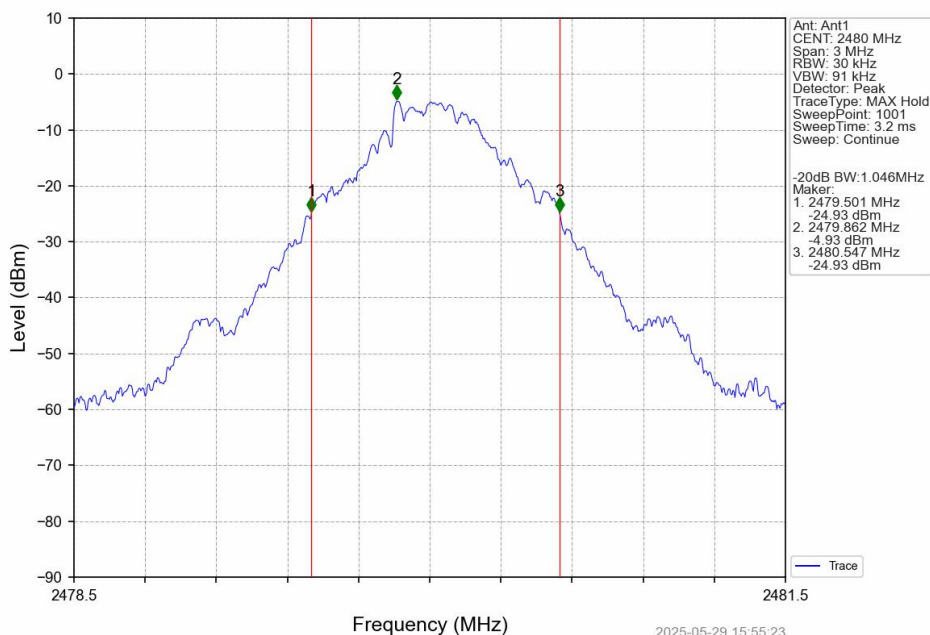


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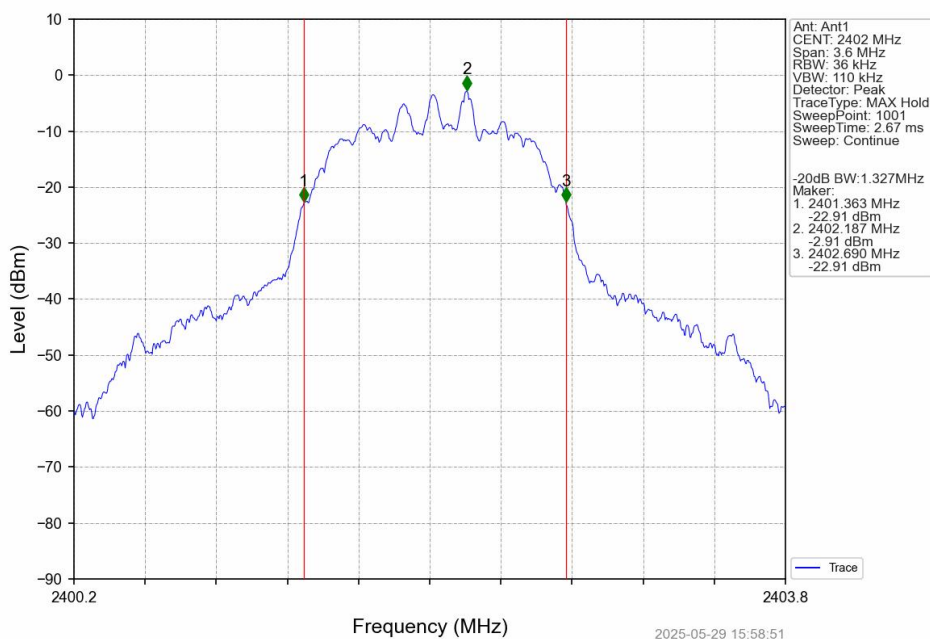




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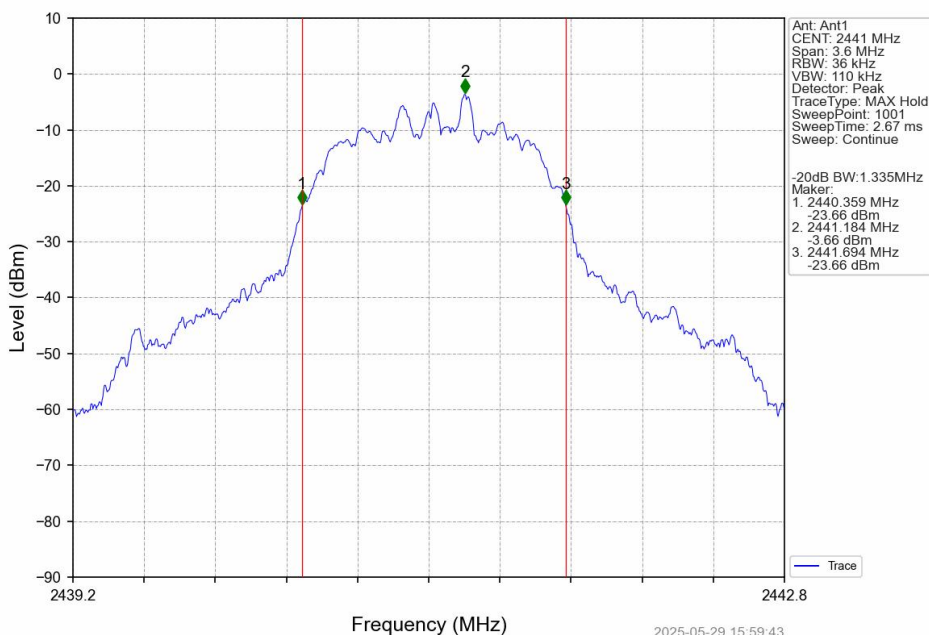


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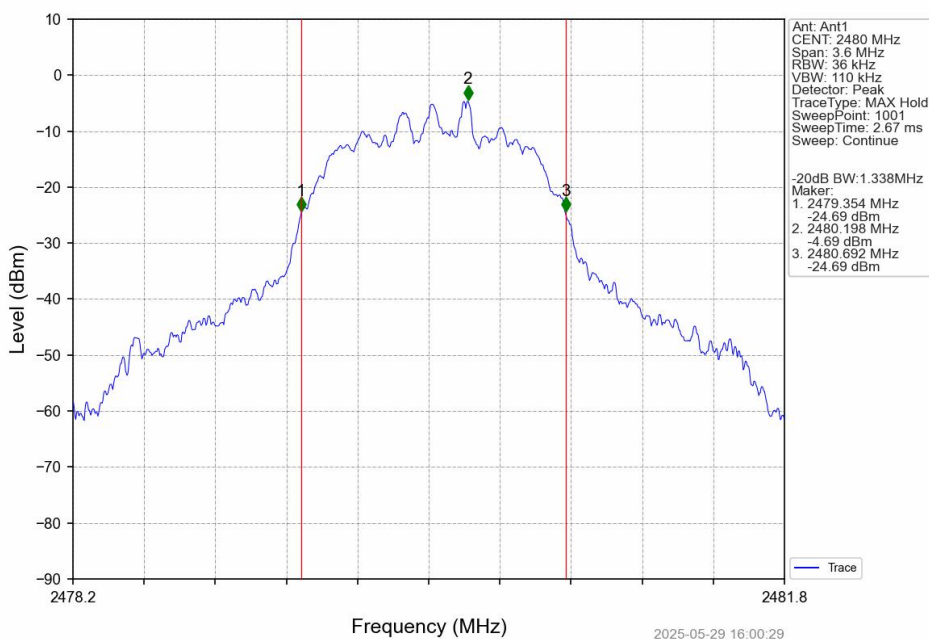




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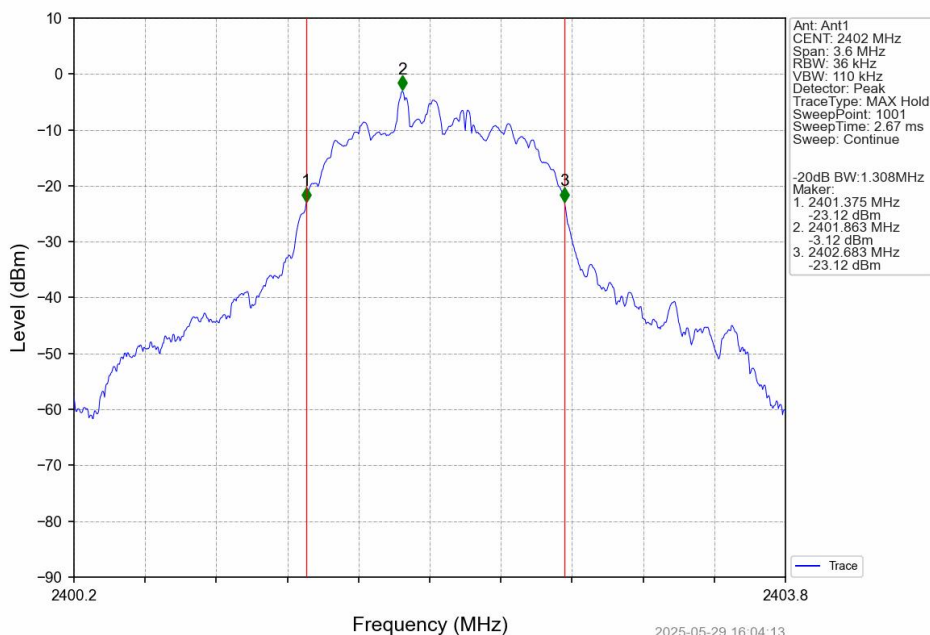


Pi/4DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV

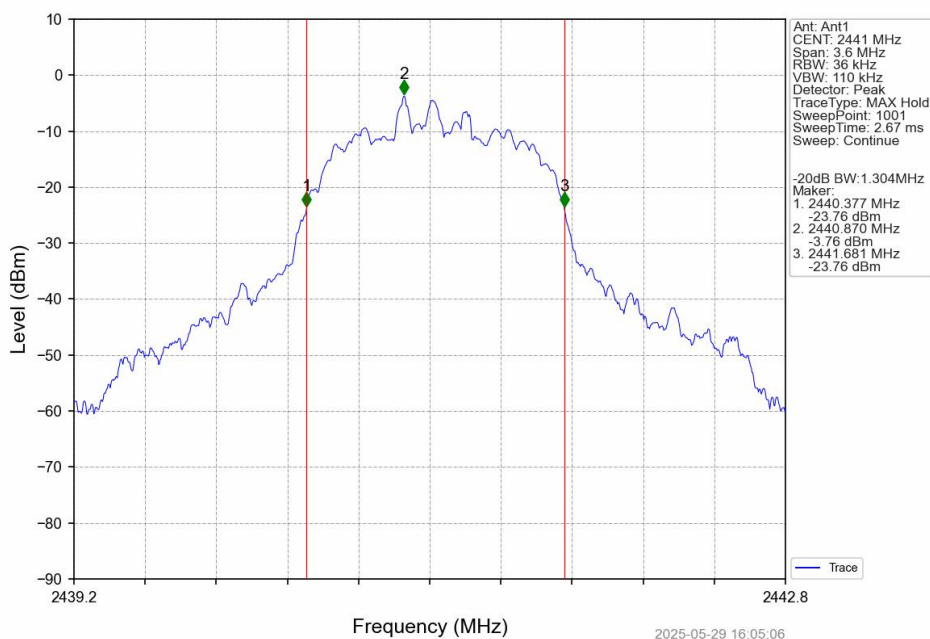




8DPSK_3DH5_LCH_2402MHz_Ant1_NTNV

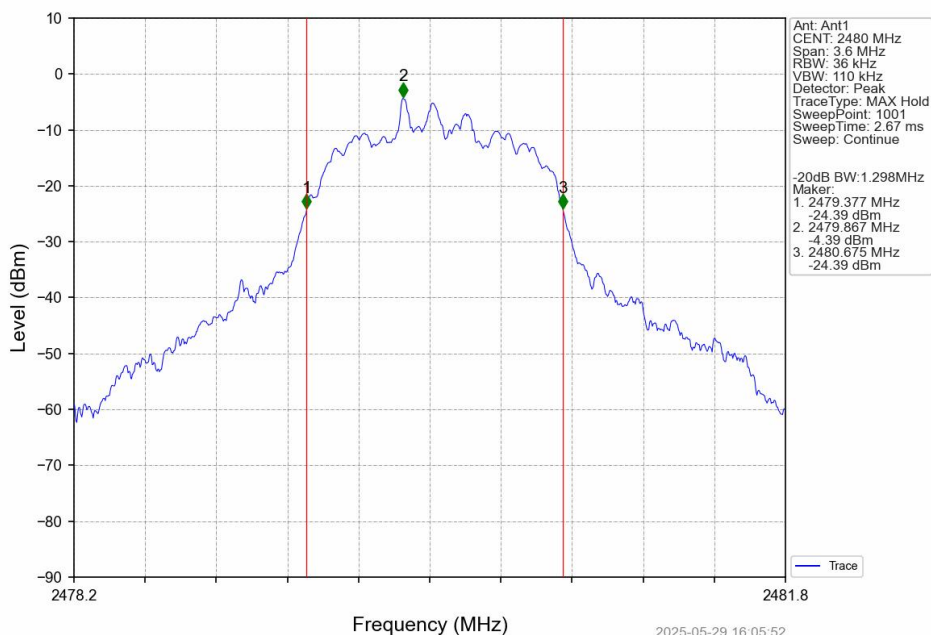


8DPSK_3DH5_MCH_2441MHz_Ant1_NTNV





8DPSK_3DH5_HCH_2480MHz_Ant1_NTNV





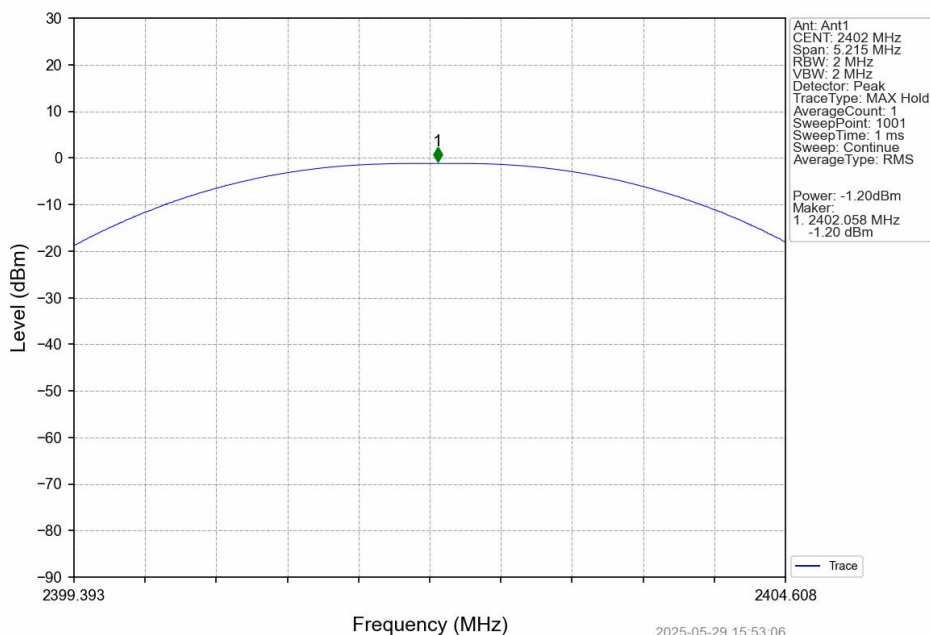
A.2 Maximum Peak Conducted Output Power

| Mode | TX Type | Frequency (MHz) | Packet Type | Maximum Peak Conducted Output Power (dBm) | | Verdict |
|-----------|---------|-----------------|-------------|---|-------|---------|
| | | | | ANT1 | Limit | |
| GFSK | SISO | 2402 | DH5 | -1.20 | <=21 | Pass |
| | | 2441 | DH5 | -1.76 | <=21 | Pass |
| | | 2480 | DH5 | -2.48 | <=21 | Pass |
| Pi/4DQPSK | SISO | 2402 | 2DH5 | -0.40 | <=21 | Pass |
| | | 2441 | 2DH5 | -0.95 | <=21 | Pass |
| | | 2480 | 2DH5 | -1.65 | <=21 | Pass |
| 8DPSK | SISO | 2402 | 3DH5 | -0.05 | <=21 | Pass |
| | | 2441 | 3DH5 | -0.59 | <=21 | Pass |
| | | 2480 | 3DH5 | -1.32 | <=21 | Pass |

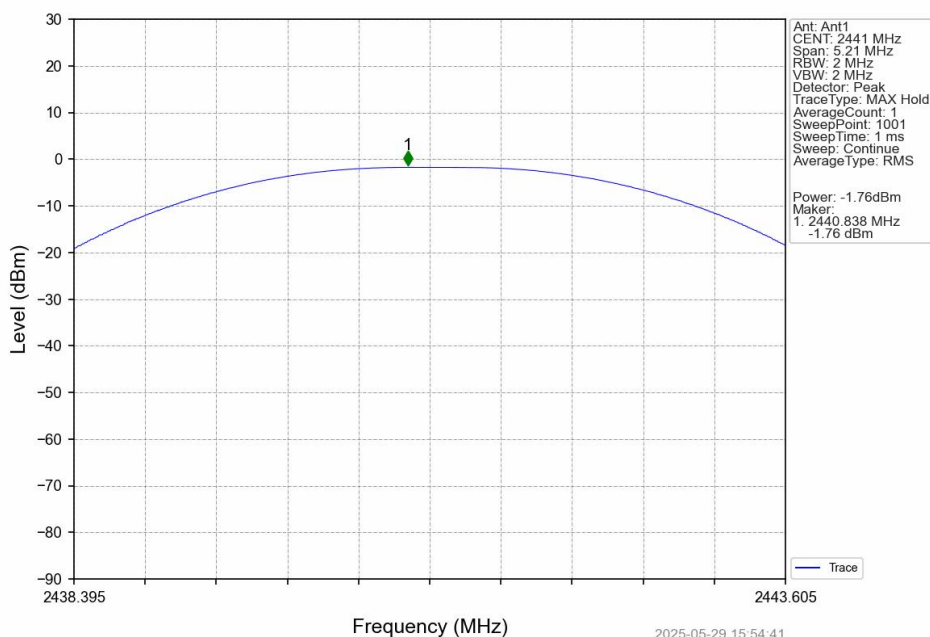




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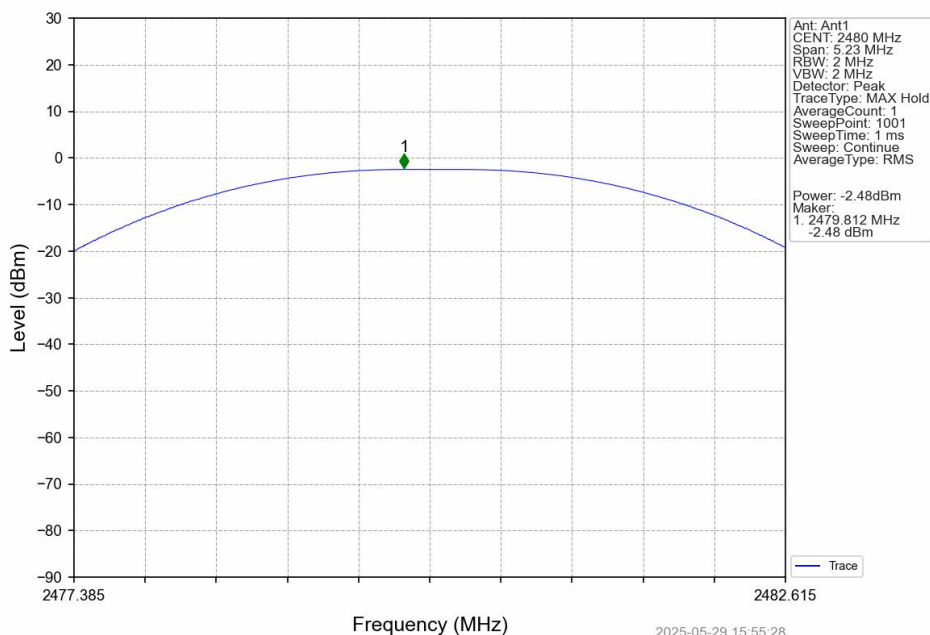


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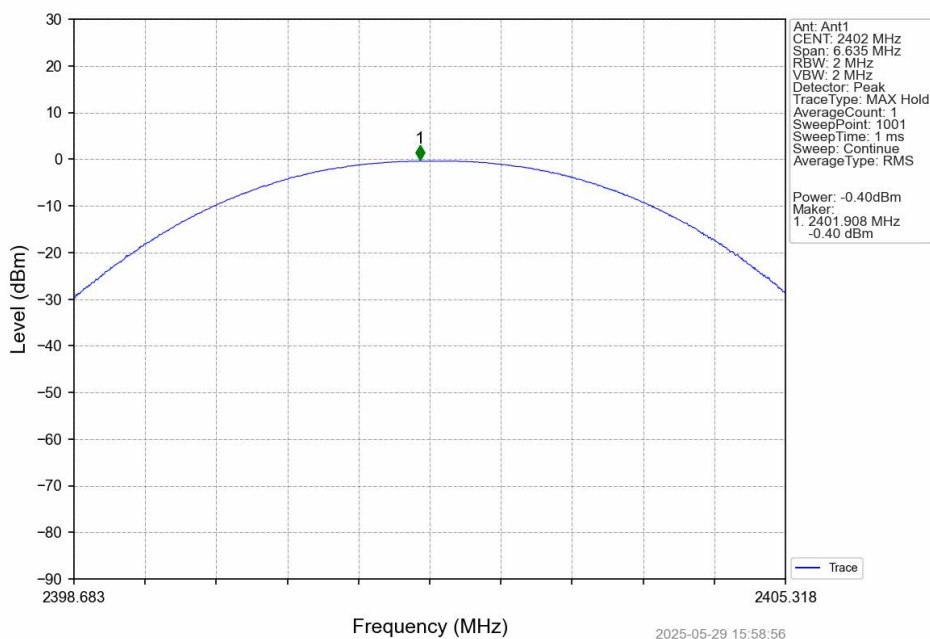




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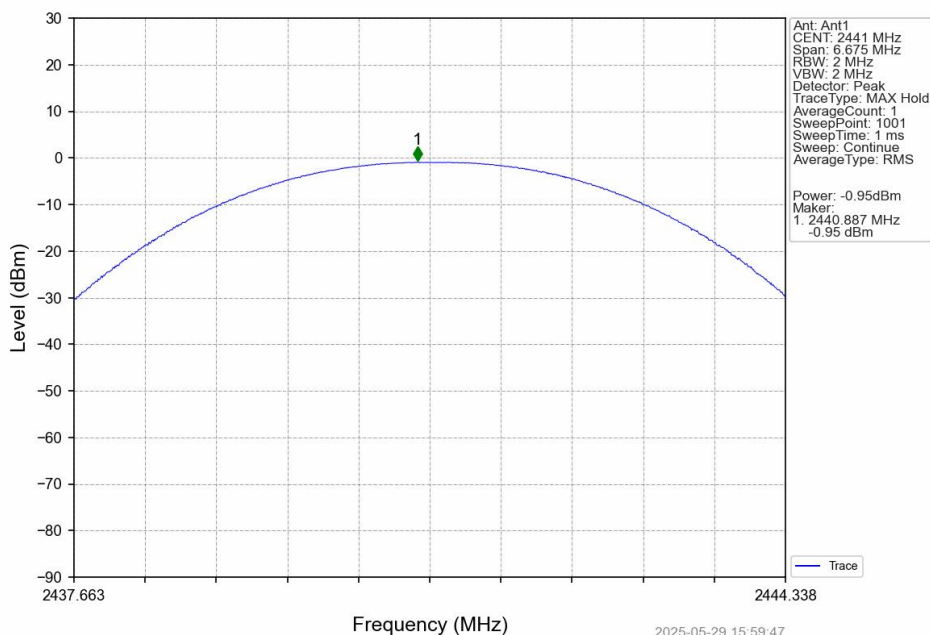


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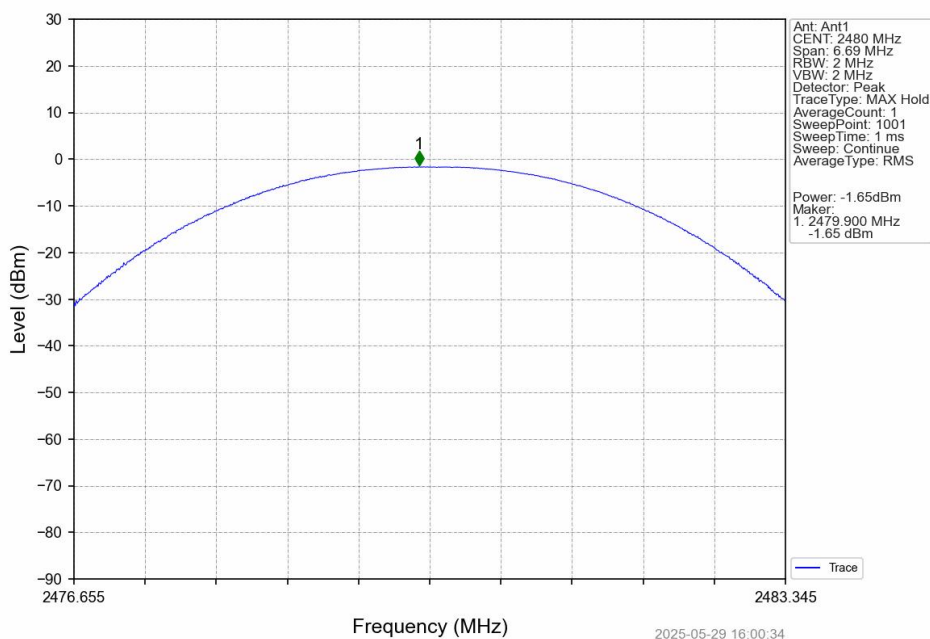




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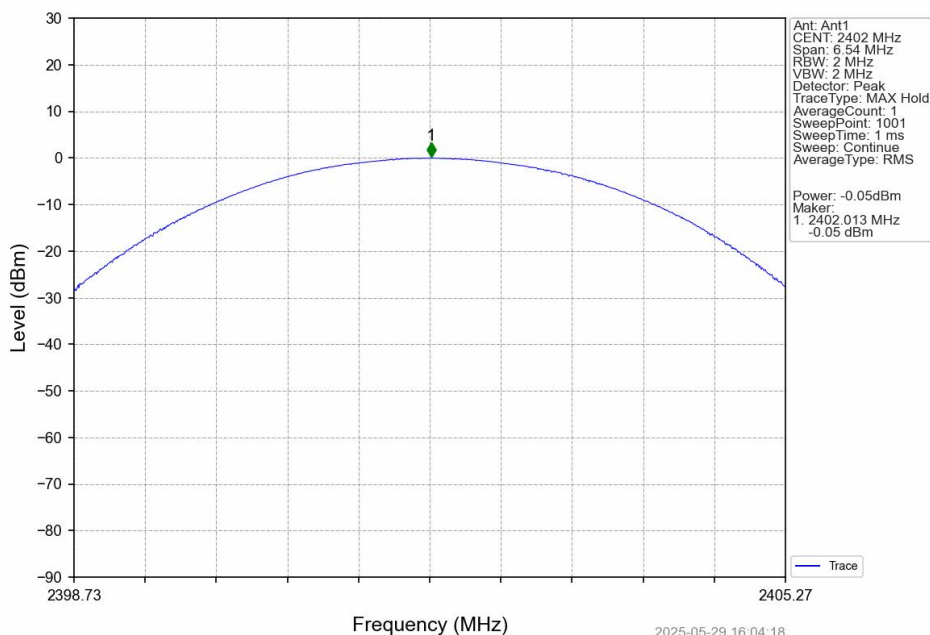


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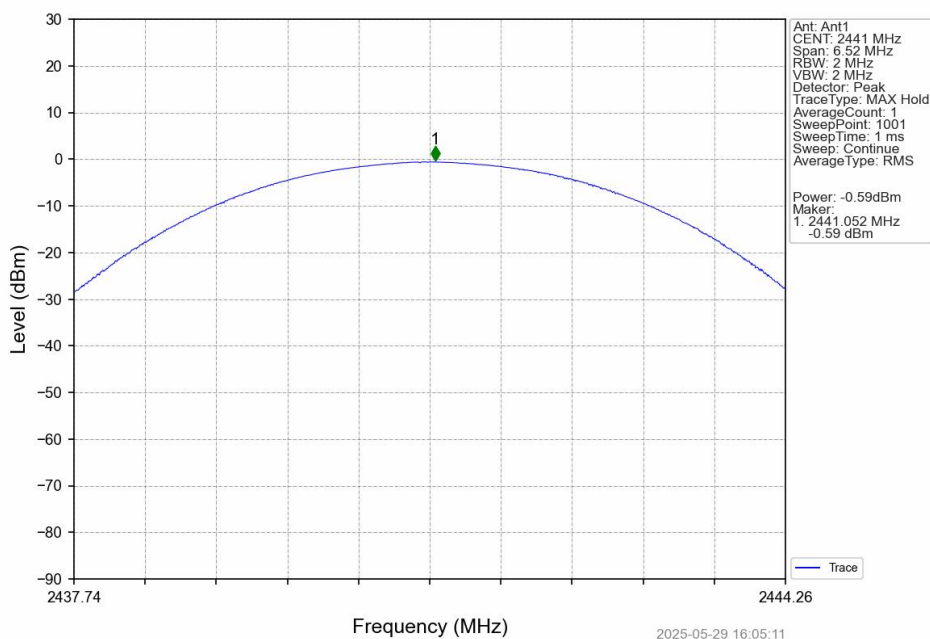


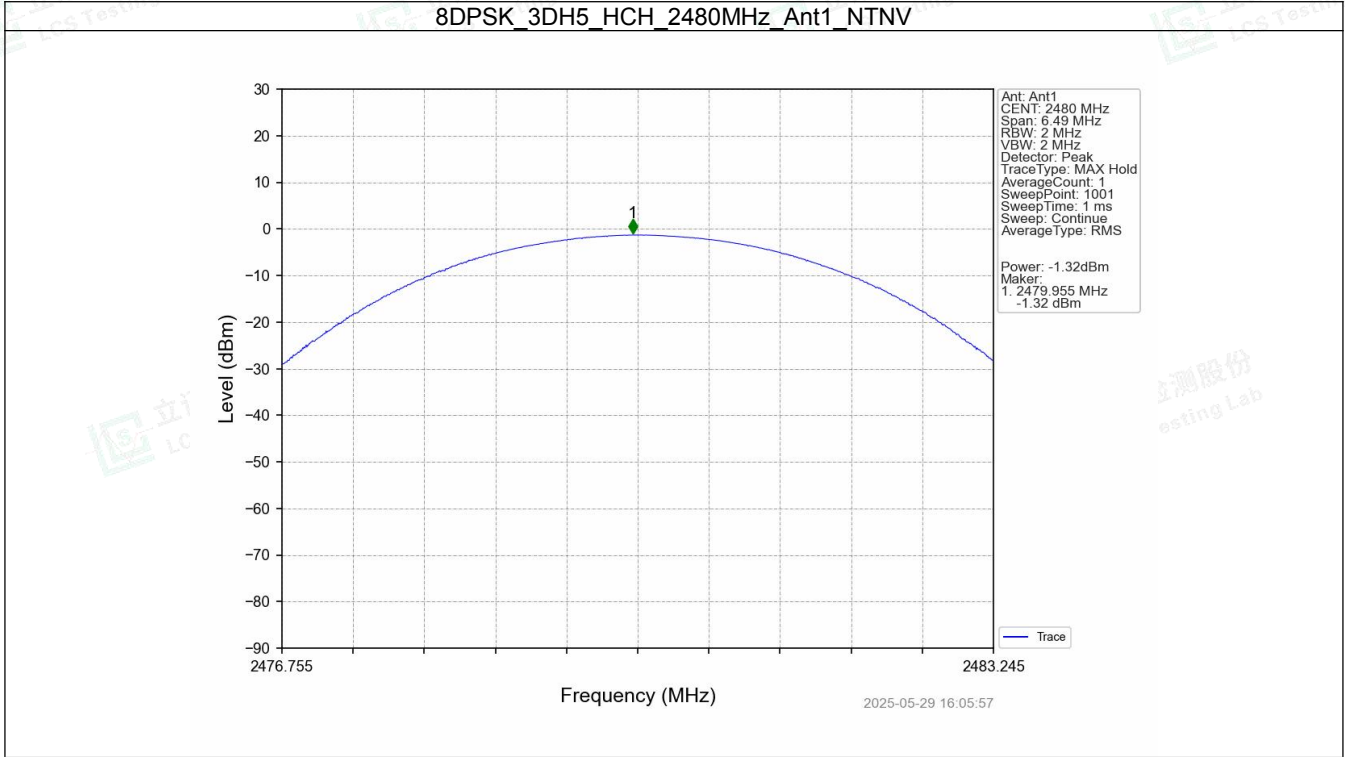


8DPSK_3DH5_LCH_2402MHz_Ant1_NTNV



8DPSK_3DH5_MCH_2441MHz_Ant1_NTNV







A.3 Frequency Separation

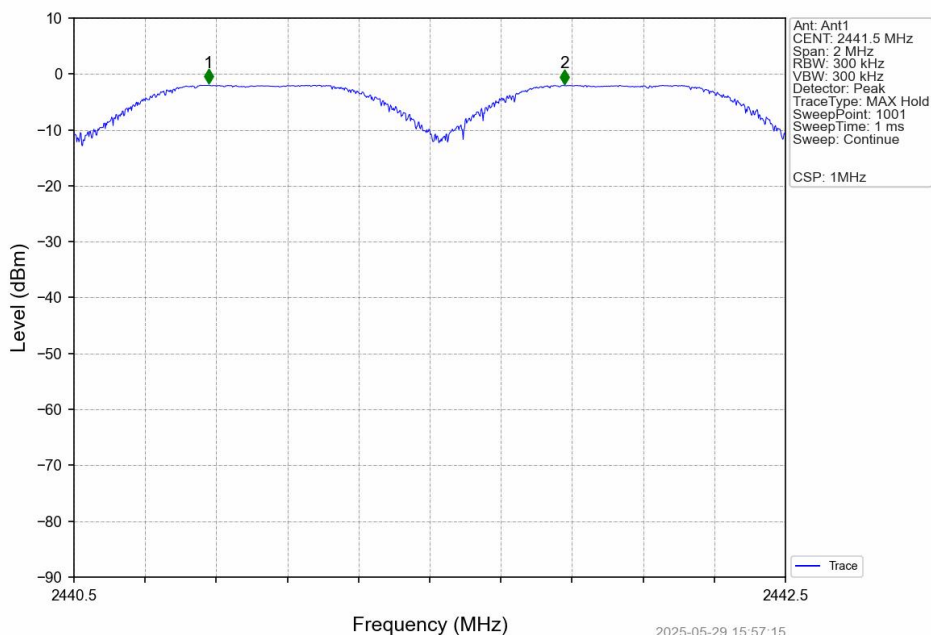
| Ant1 | | | | | | | |
|-----------|---------|-----------------|-------------|--------------------------|----------------------|-------------|---------|
| Mode | TX Type | Frequency (MHz) | Packet Type | Channel Separation (MHz) | 20dB Bandwidth (MHz) | Limit (MHz) | Verdict |
| GFSK | SISO | HOPP | DH5 | 1.000 | 1.046 | >=0.697 | Pass |
| Pi/4DQPSK | SISO | HOPP | 2DH5 | 1.001 | 1.338 | >=0.892 | Pass |
| 8DPSK | SISO | HOPP | 3DH5 | 1.006 | 1.308 | >=0.872 | Pass |



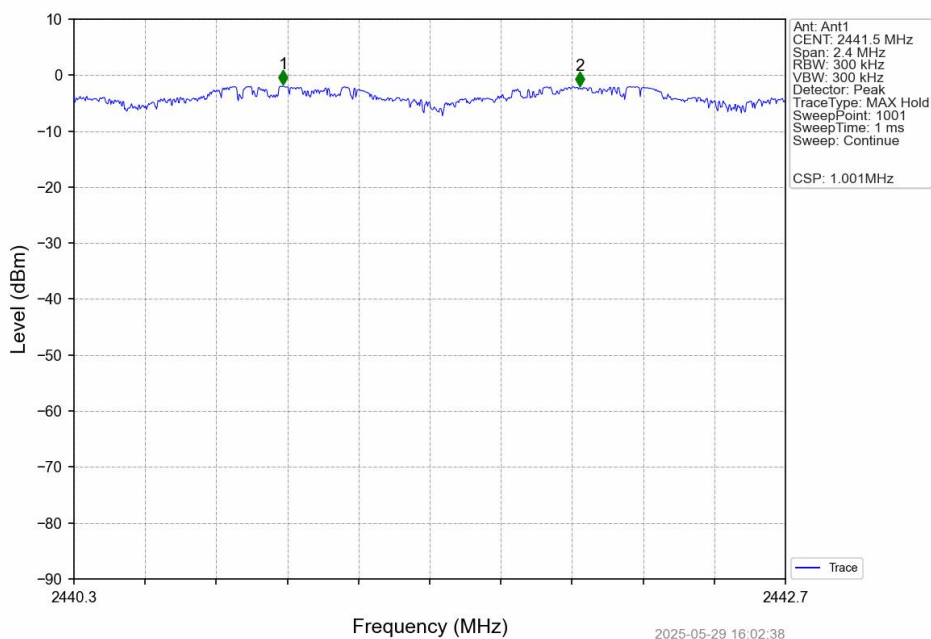
Shenzhen LCS Compliance Testing Laboratory Ltd.
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 Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
 Scan code to check authenticity



GFSK_DH5_HOPP_Ant1_NTNV

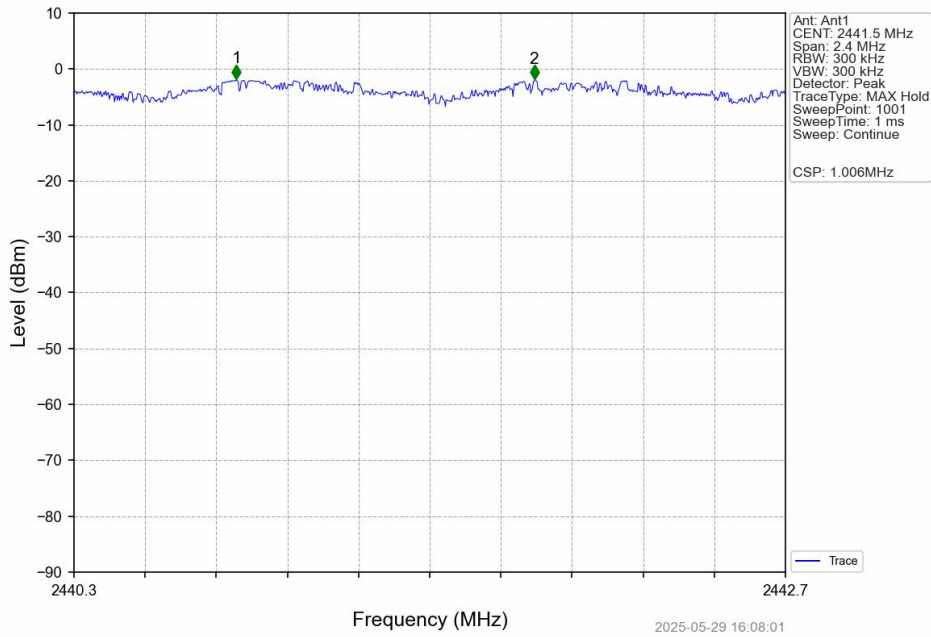


Pi/4DQPSK_2DH5_HOPP_Ant1_NTNV





8DPSK_3DH5_HOPP_Ant1_NTNV



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A.4 Time of Occupancy (Dwell Time)

| 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 | DH5 | 2.886 | 31.600 | 100 | 288.600 | <=400 | Pass |
| Pi/4DQPSK | SISO | HOPP | 2DH5 | 2.896 | 31.600 | 111 | 321.456 | <=400 | Pass |
| 8DPSK | SISO | HOPP | 3DH5 | 2.898 | 31.600 | 102 | 295.596 | <=400 | Pass |



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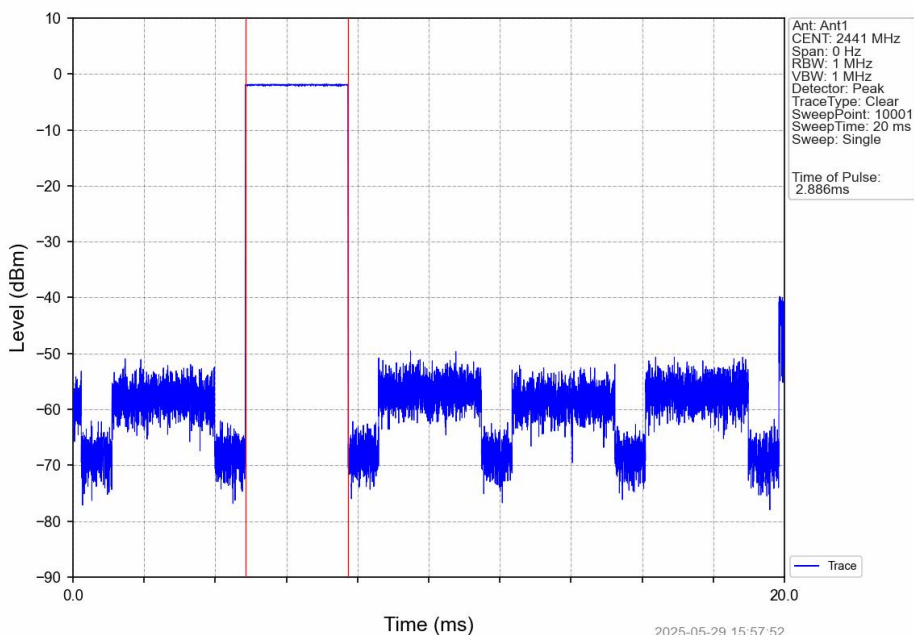
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Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

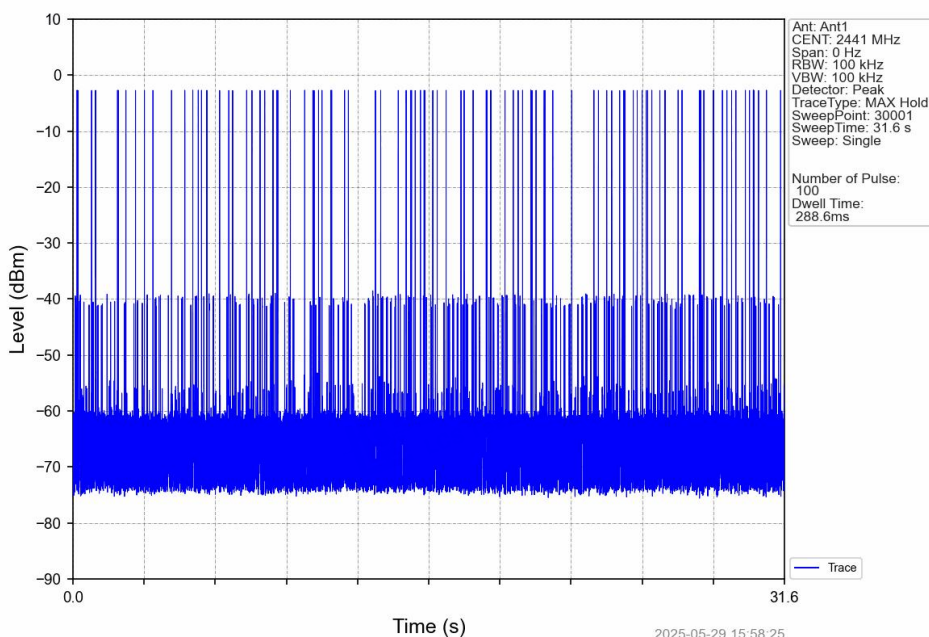
Scan code to check authenticity



GFSK_DH5_HOPP_Ant1_NTNV

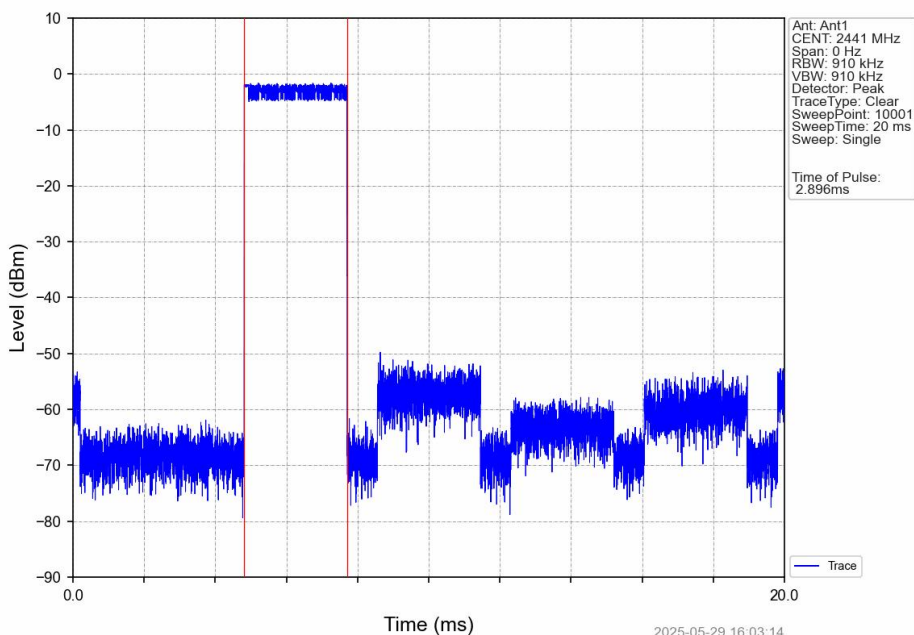


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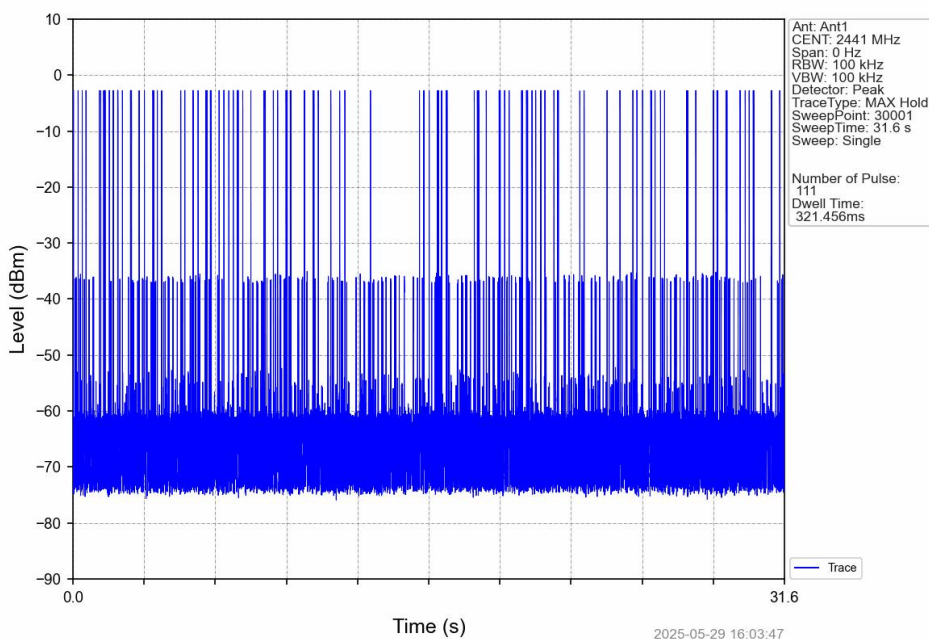




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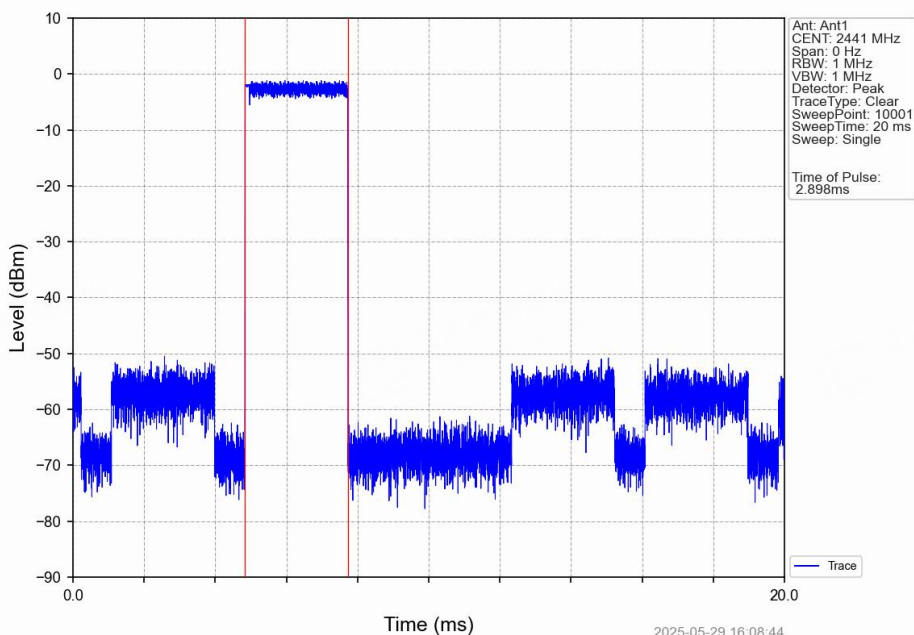


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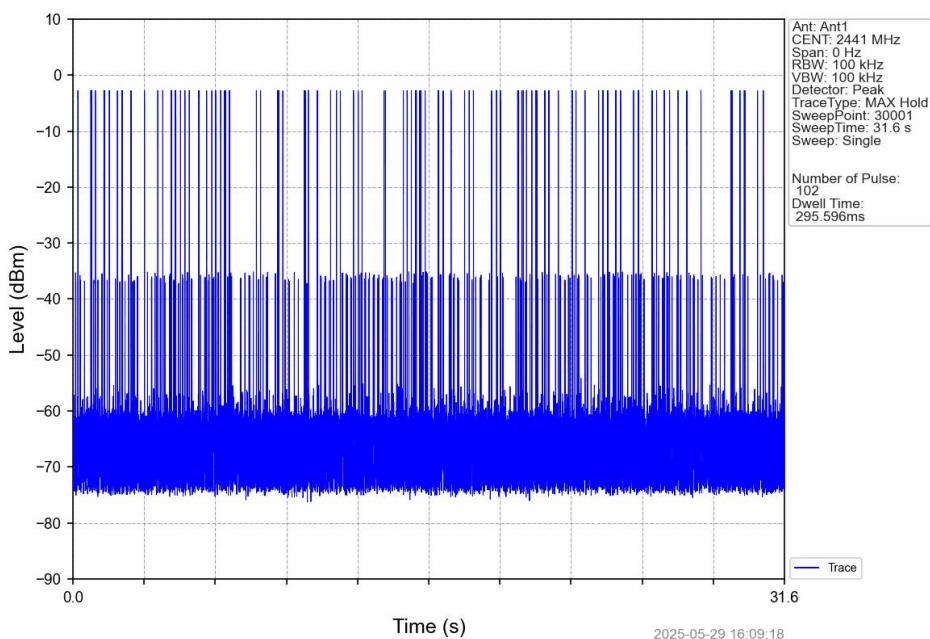




8DPSK_3DH5_HOPP_Ant1_NTNV



8DPSK_3DH5_HOPP_Ant1_NTNV





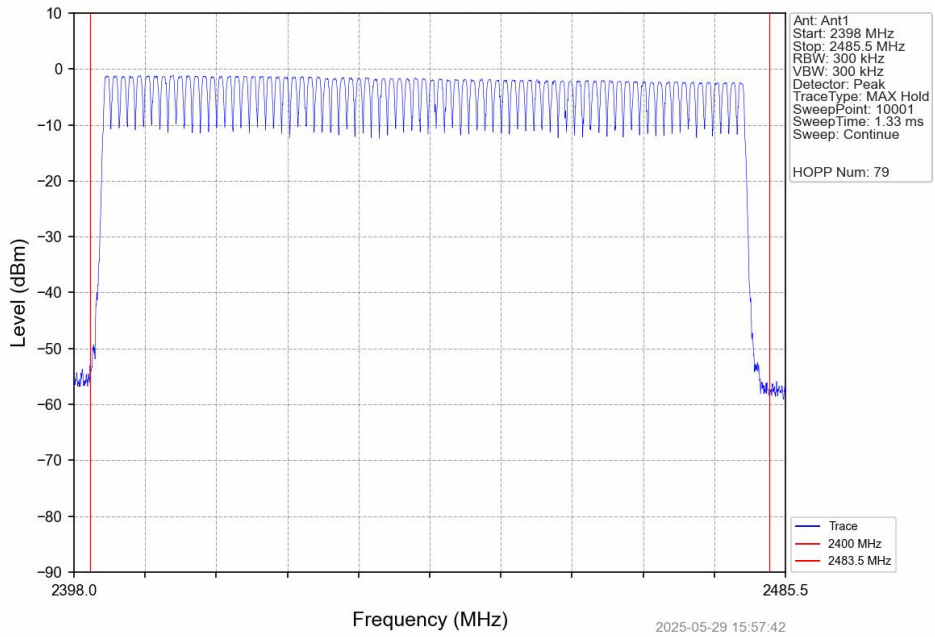
A.5 Number of Hopping Frequencies

| 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 |

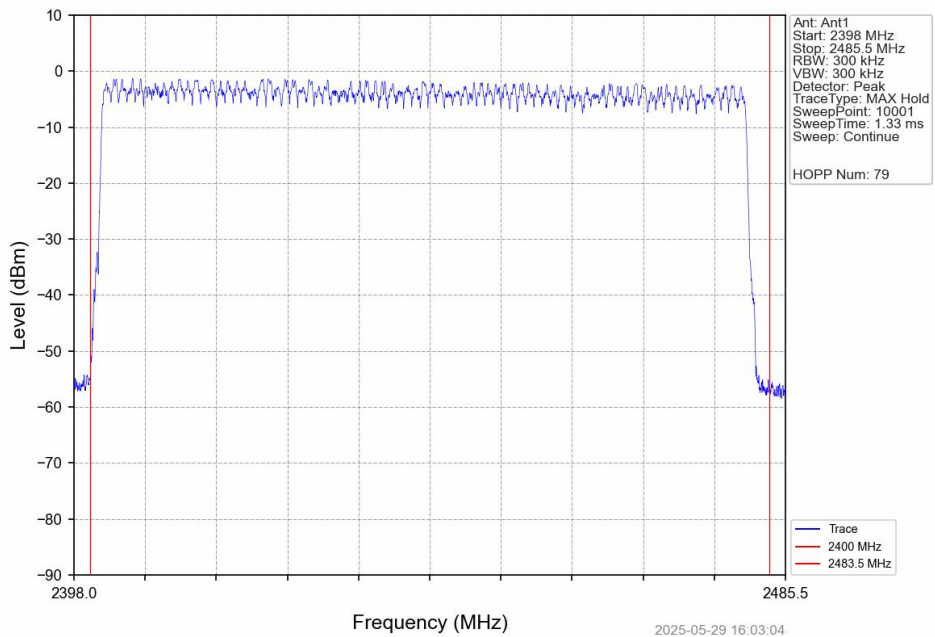




GFSK_DH5_HOPP_Ant1_NTNV

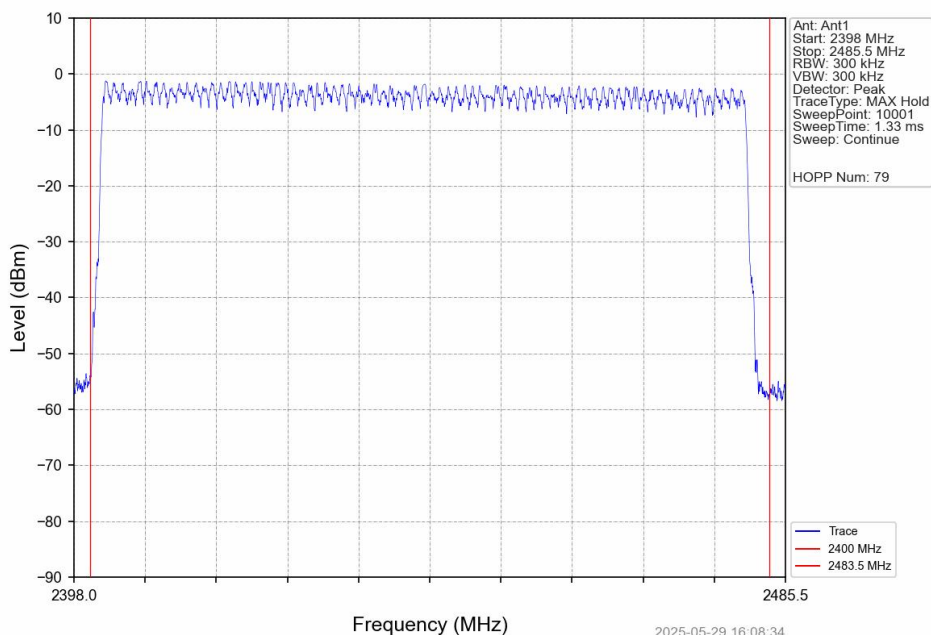


Pi/4DQPSK_2DH5_HOPP_Ant1_NTNV





8DPSK_3DH5_HOPP_Ant1_NTNV





A.6 Band Edge

| Mode | TX Type | Frequency (MHz) | Packet Type | ANT | Level of Reference (dBm) | Limit (dBm) | Verdict |
|-----------|---------|-----------------|-------------|-----|--------------------------|-------------|---------|
| GFSK | SISO | 2402 | DH5 | 1 | -1.51 | -21.51 | Pass |
| | | 2441 | DH5 | 1 | -2.09 | -22.09 | Pass |
| | | 2480 | DH5 | 1 | -2.83 | -22.83 | Pass |
| | | HOPP | DH5 | 1 | -1.72 | -21.72 | Pass |
| Pi/4DQPSK | SISO | 2402 | 2DH5 | 1 | -1.52 | -21.52 | Pass |
| | | 2441 | 2DH5 | 1 | -2.11 | -22.11 | Pass |
| | | 2480 | 2DH5 | 1 | -2.87 | -22.87 | Pass |
| | | HOPP | 2DH5 | 1 | -2.01 | -22.01 | Pass |
| | | | | | -2.01 | -22.01 | Pass |
| 8DPSK | SISO | 2402 | 3DH5 | 1 | -1.55 | -21.55 | Pass |
| | | 2441 | 3DH5 | 1 | -2.14 | -22.14 | Pass |
| | | 2480 | 3DH5 | 1 | -2.85 | -22.85 | Pass |
| | | HOPP | 3DH5 | 1 | -1.51 | -21.51 | Pass |
| | | | | | -1.51 | -21.51 | Pass |

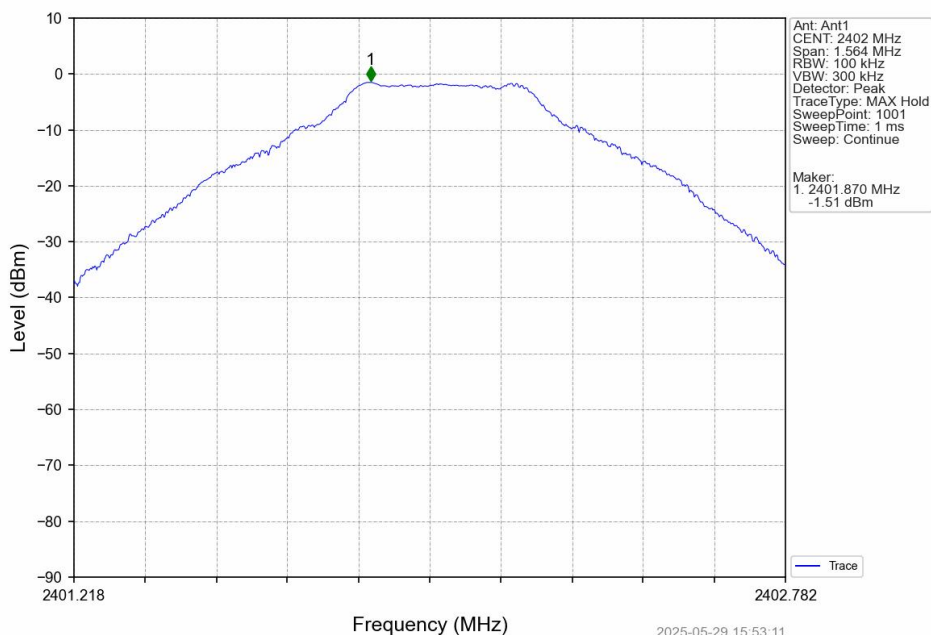
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.



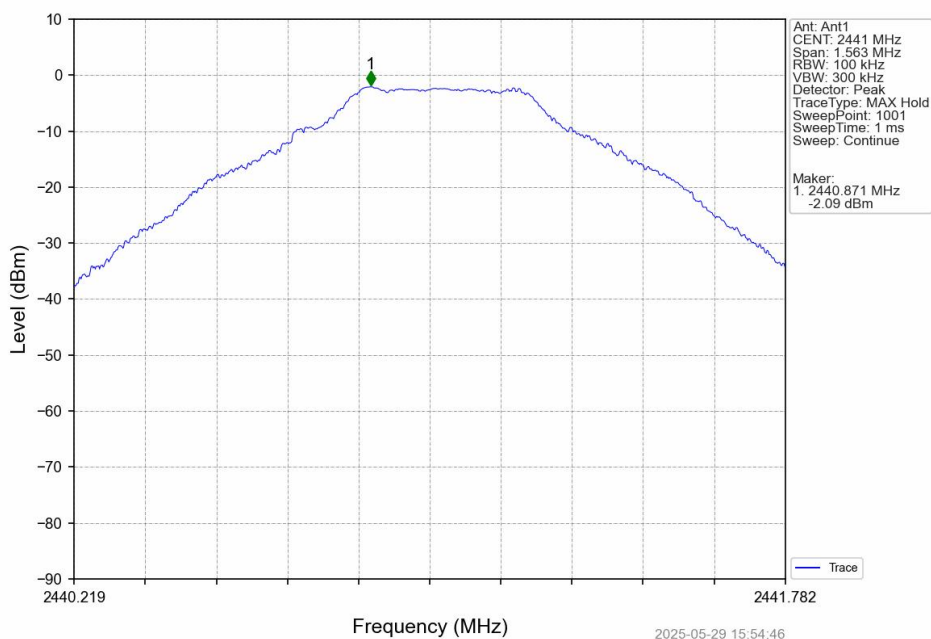
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GFSK_DH5_LCH_2402MHz_Ant1_NTNV

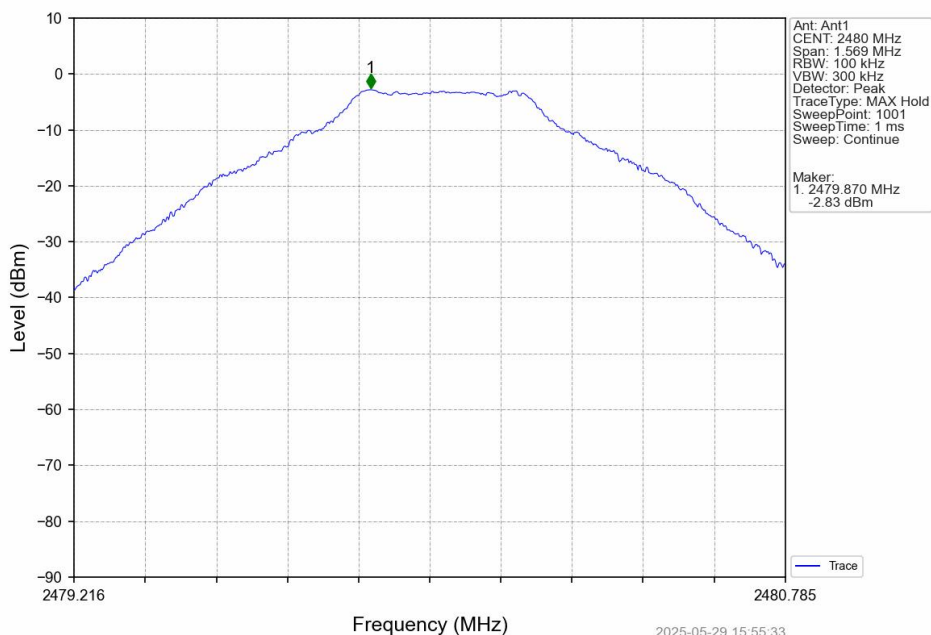


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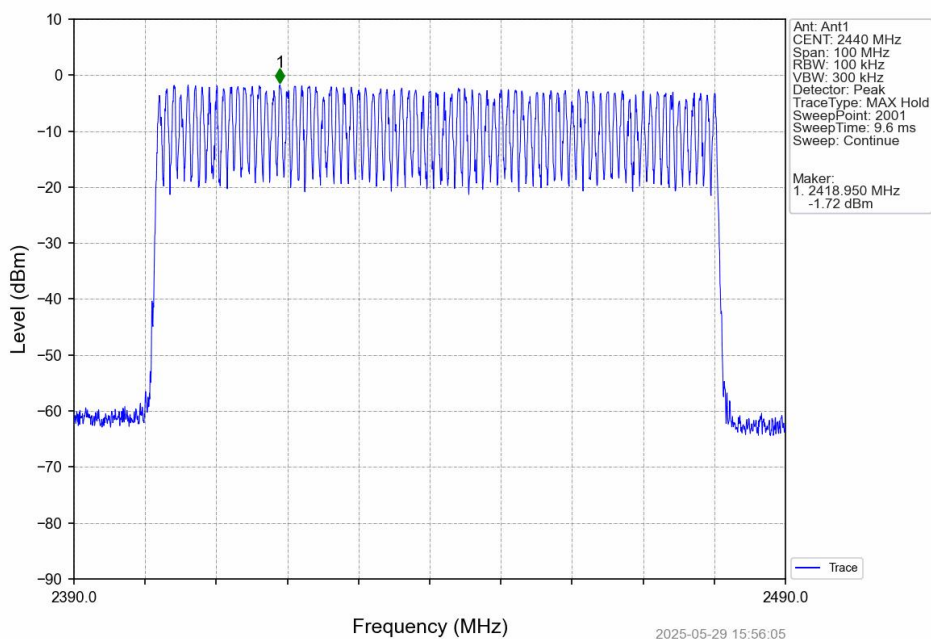




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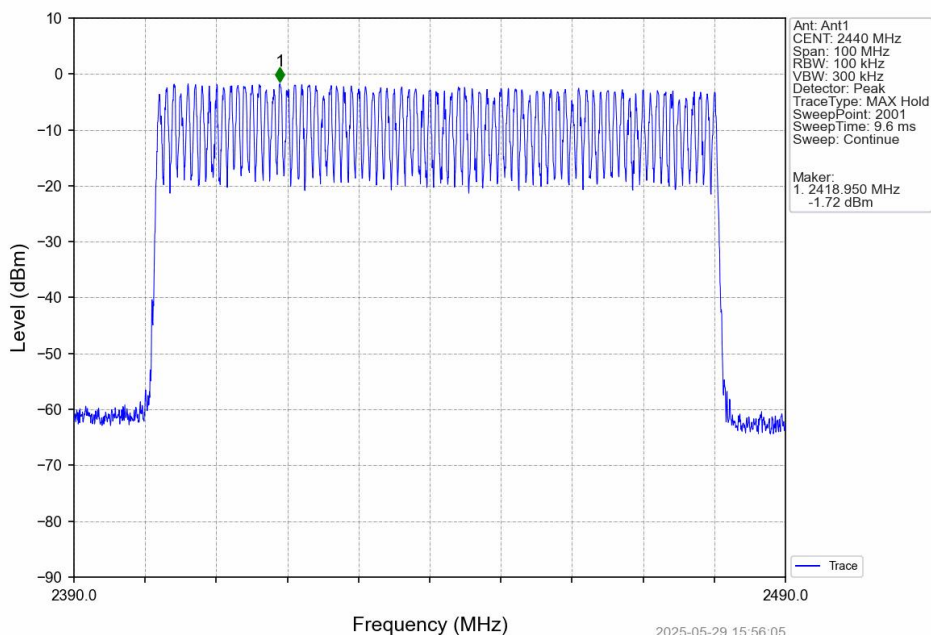


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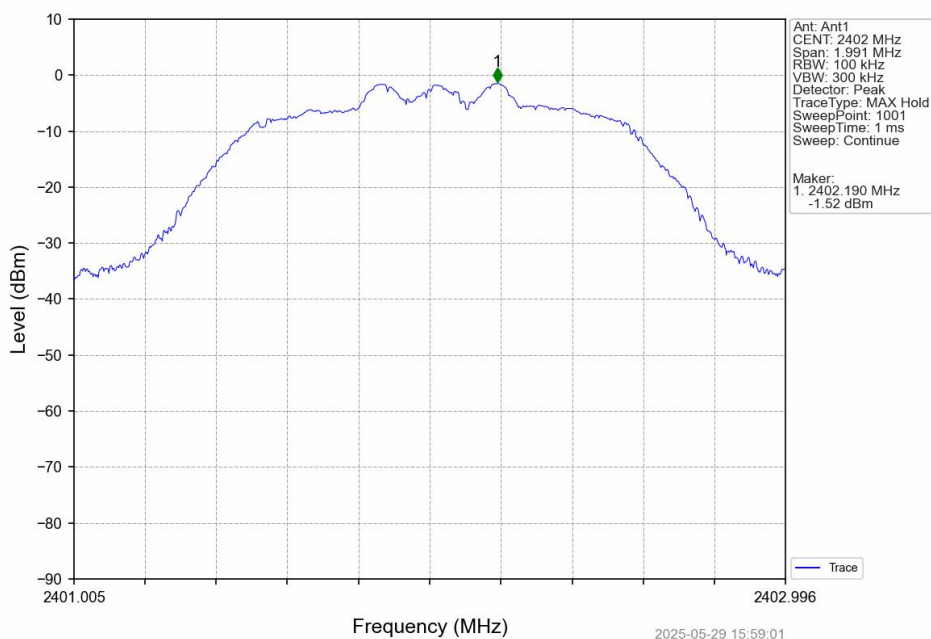




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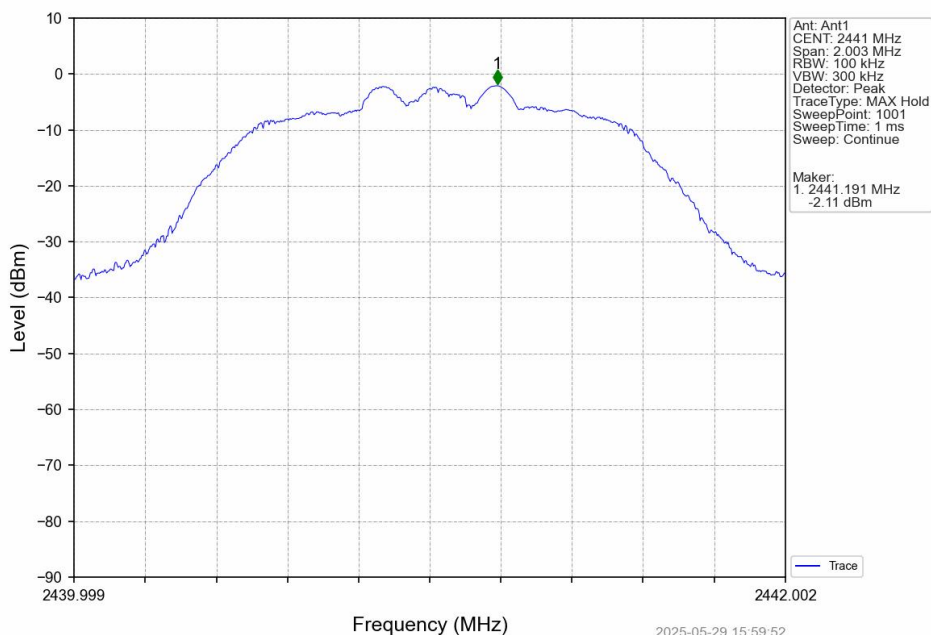


Pi/4DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV

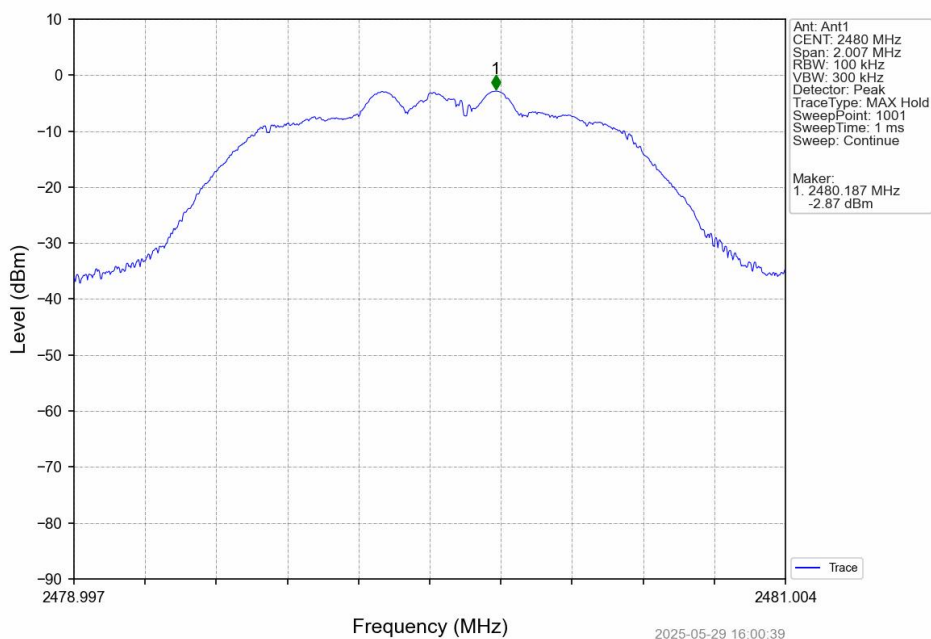




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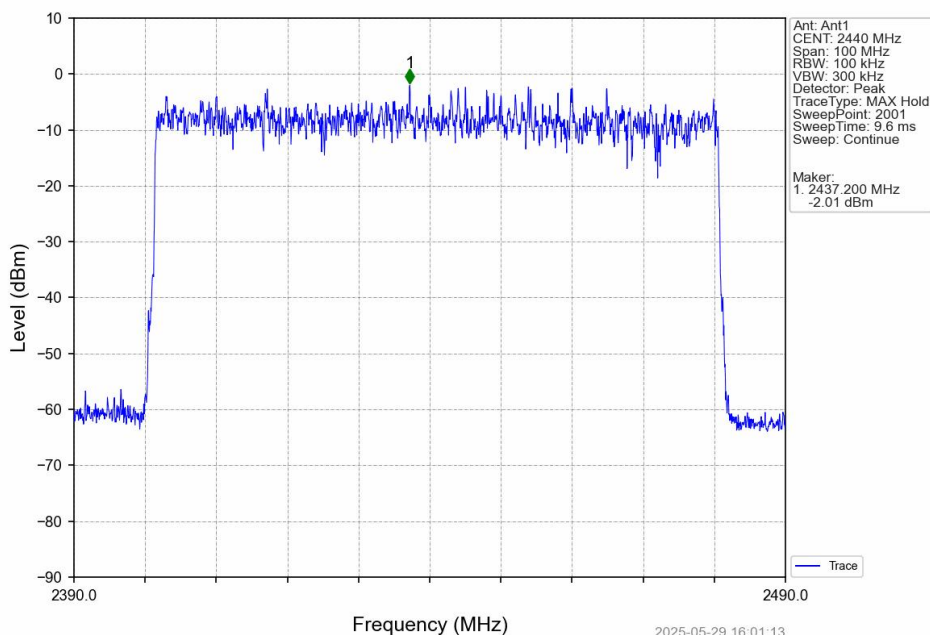


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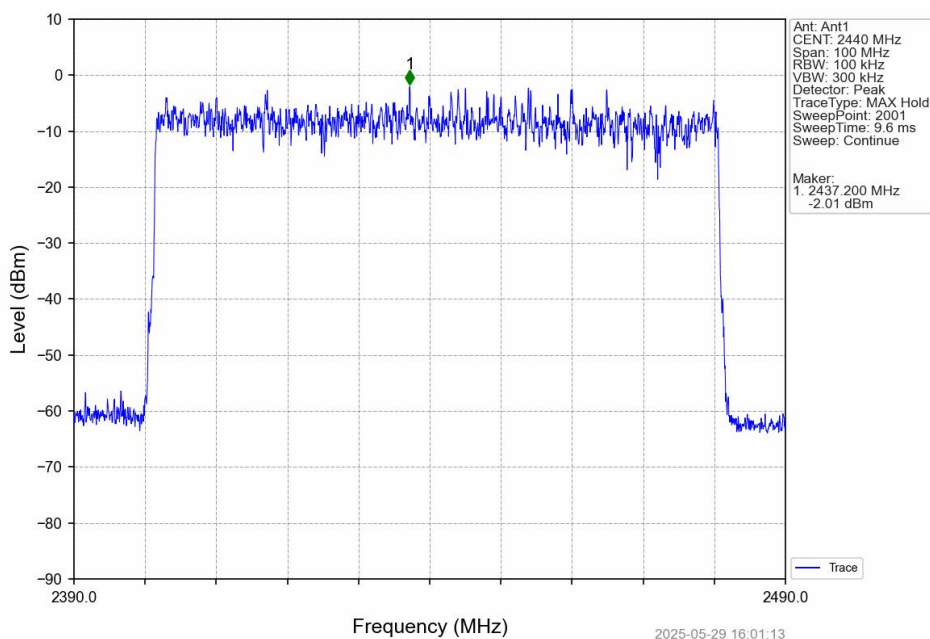




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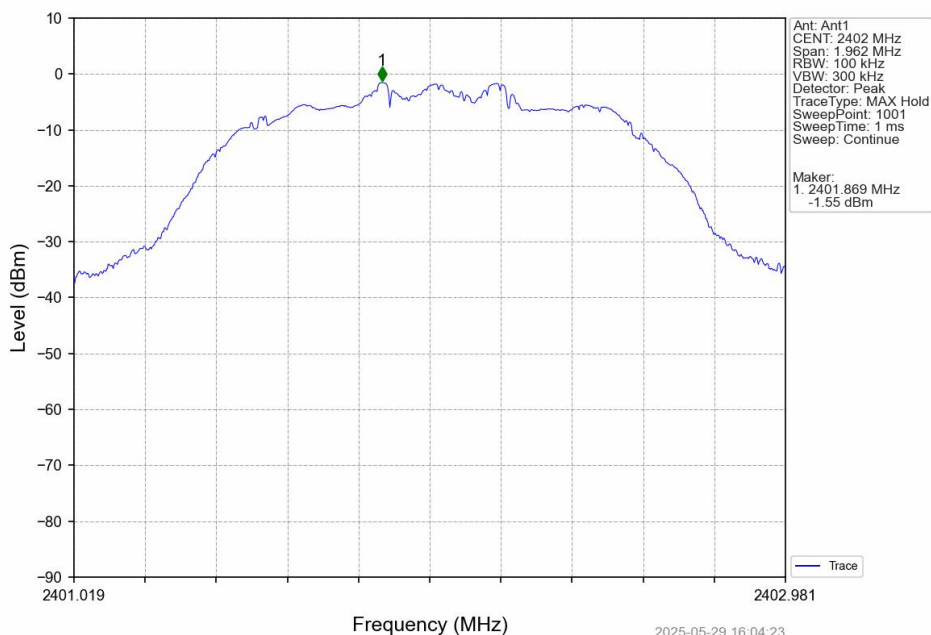


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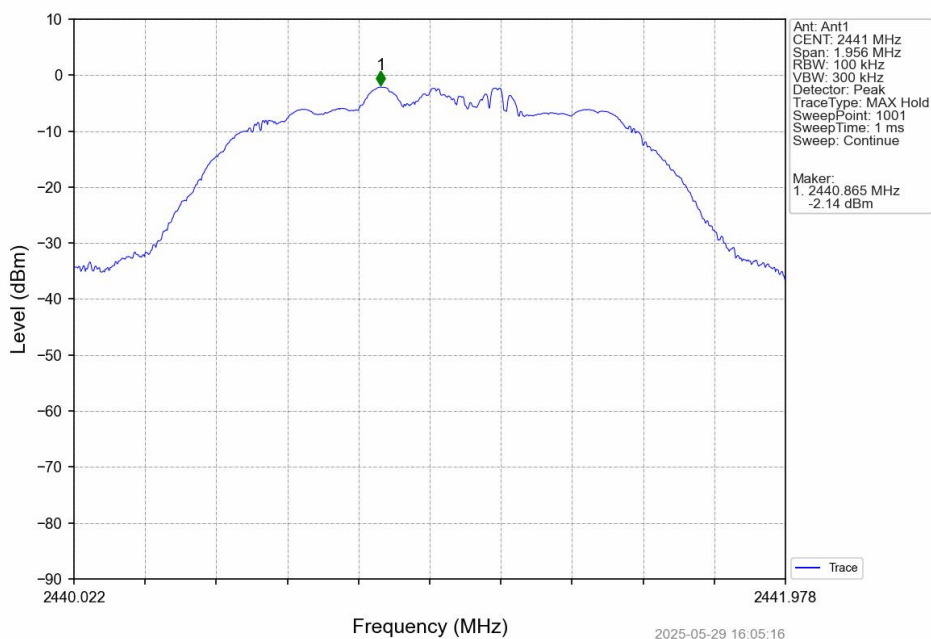




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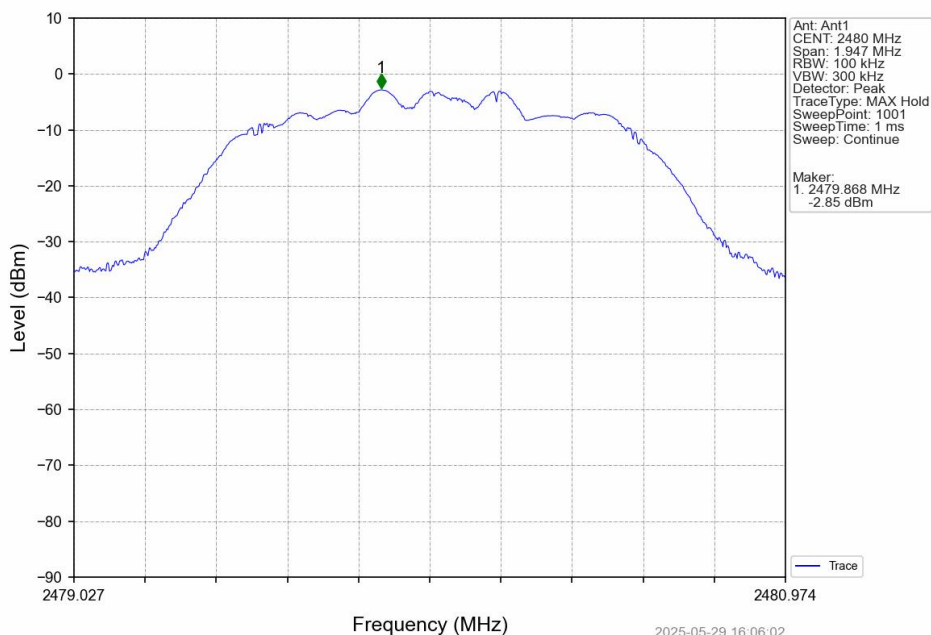


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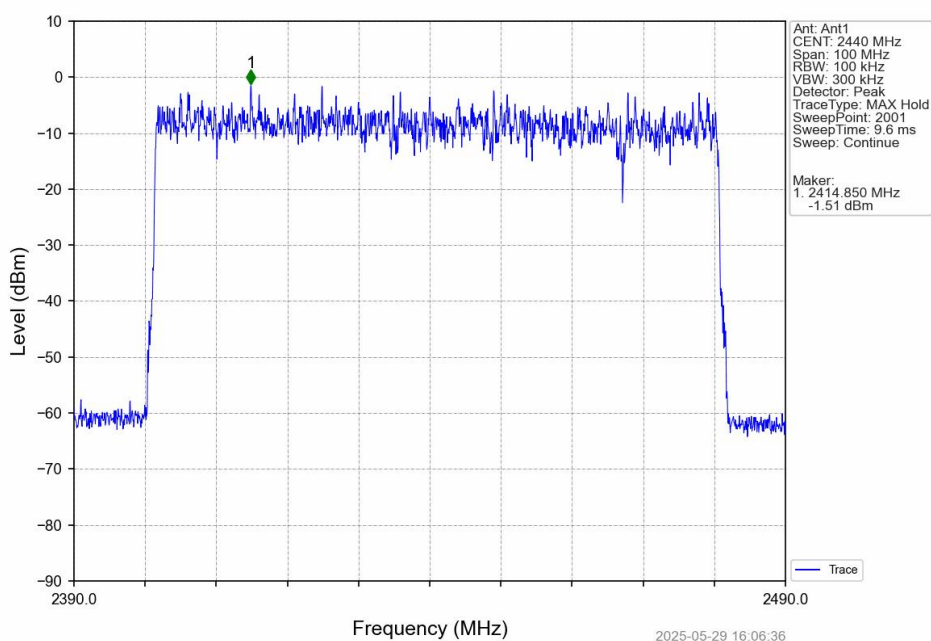




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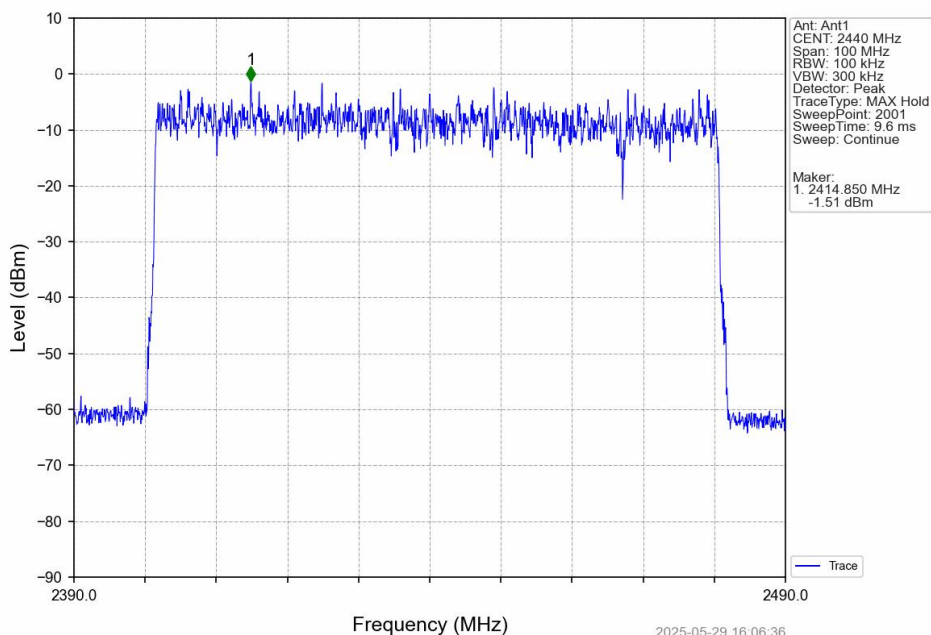


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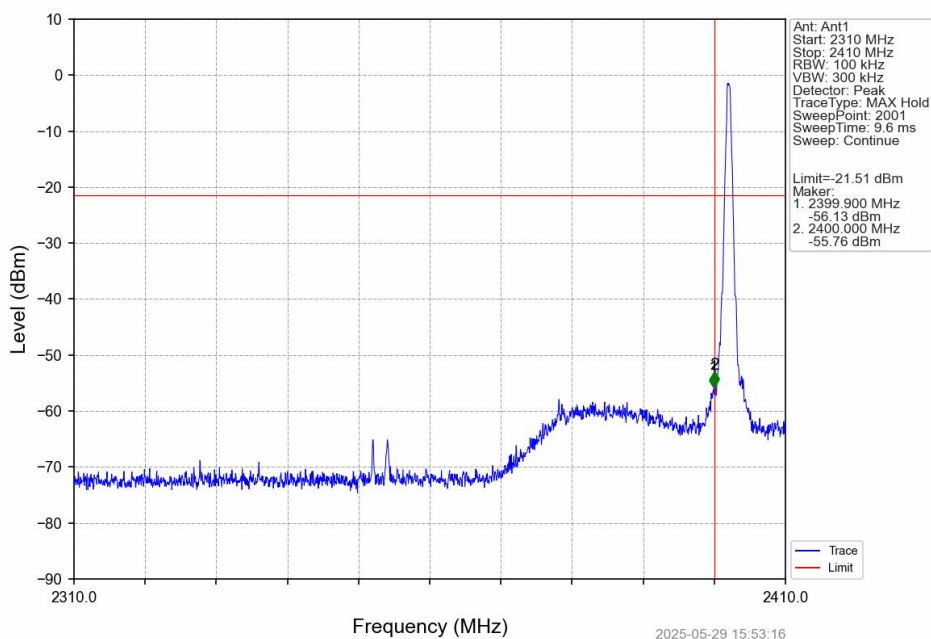




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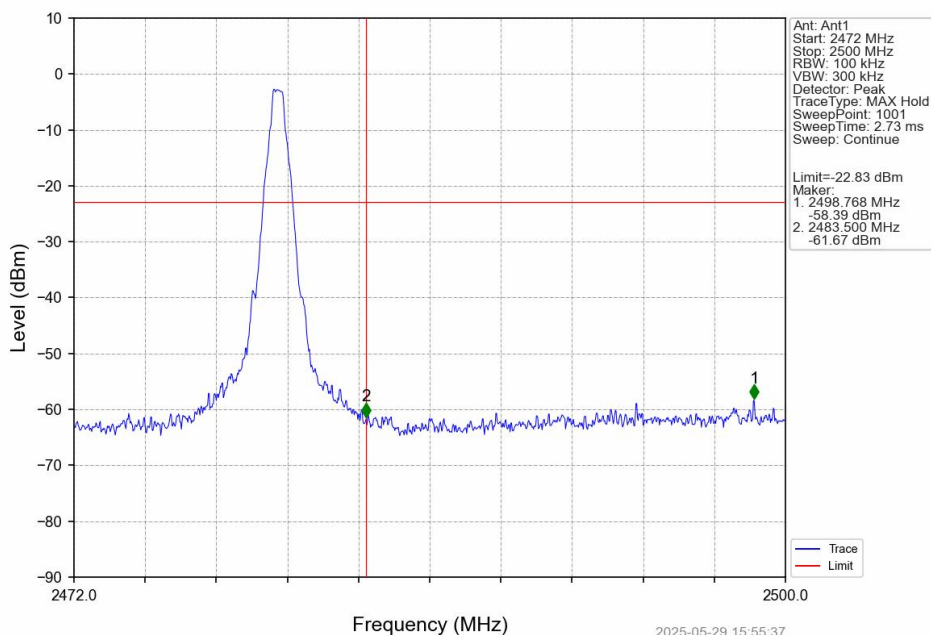


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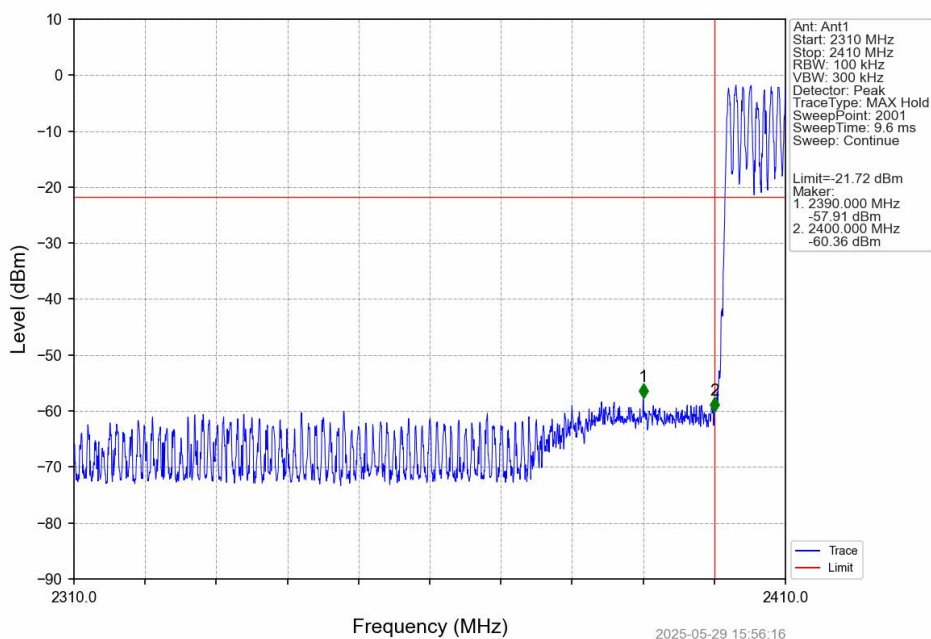




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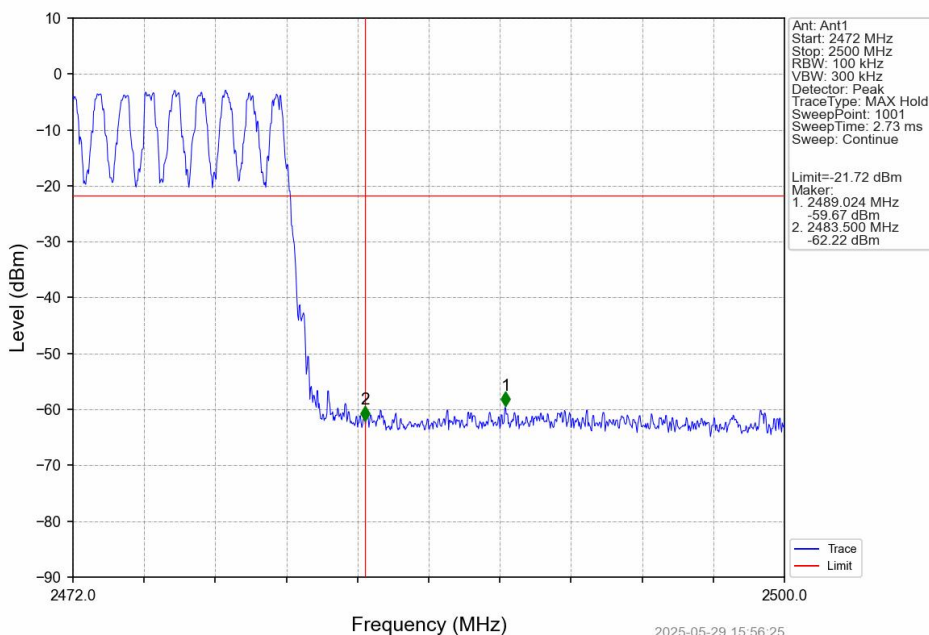


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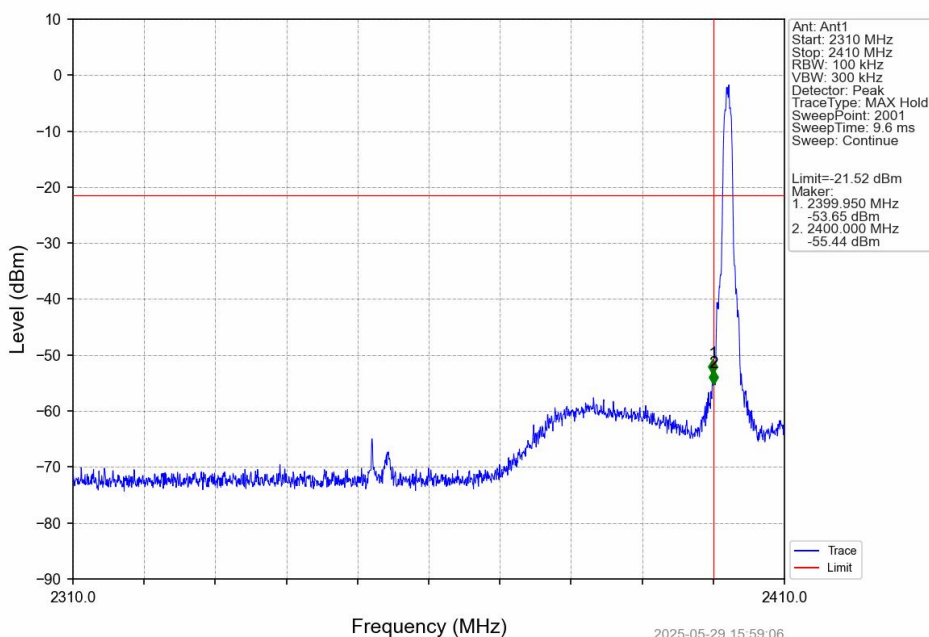




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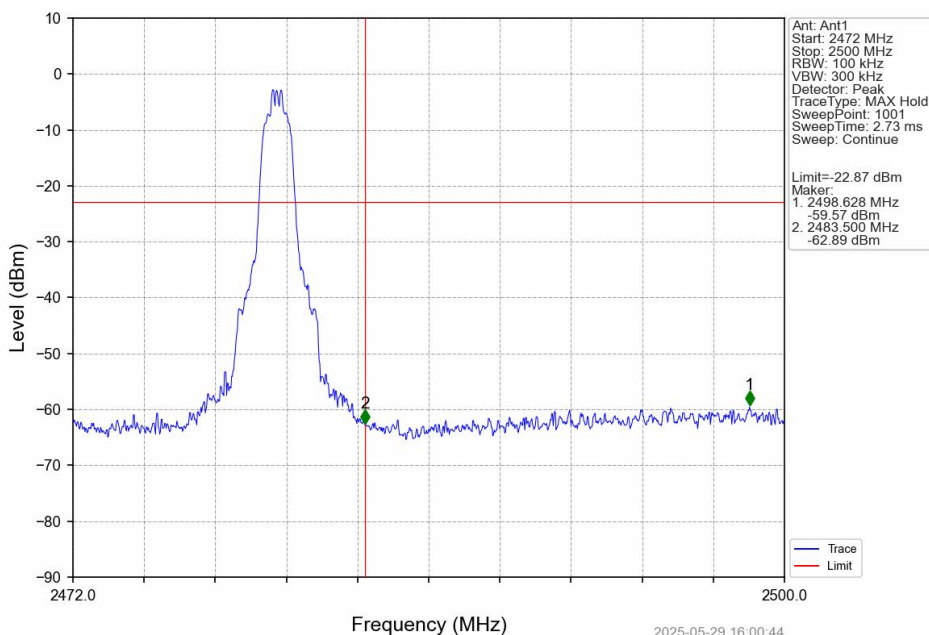


Pi/4DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV

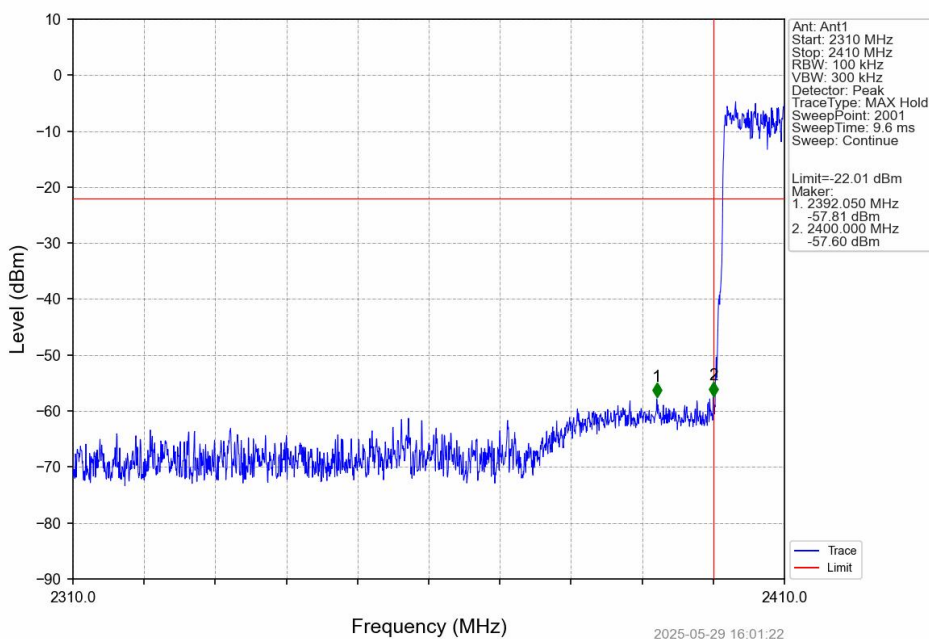




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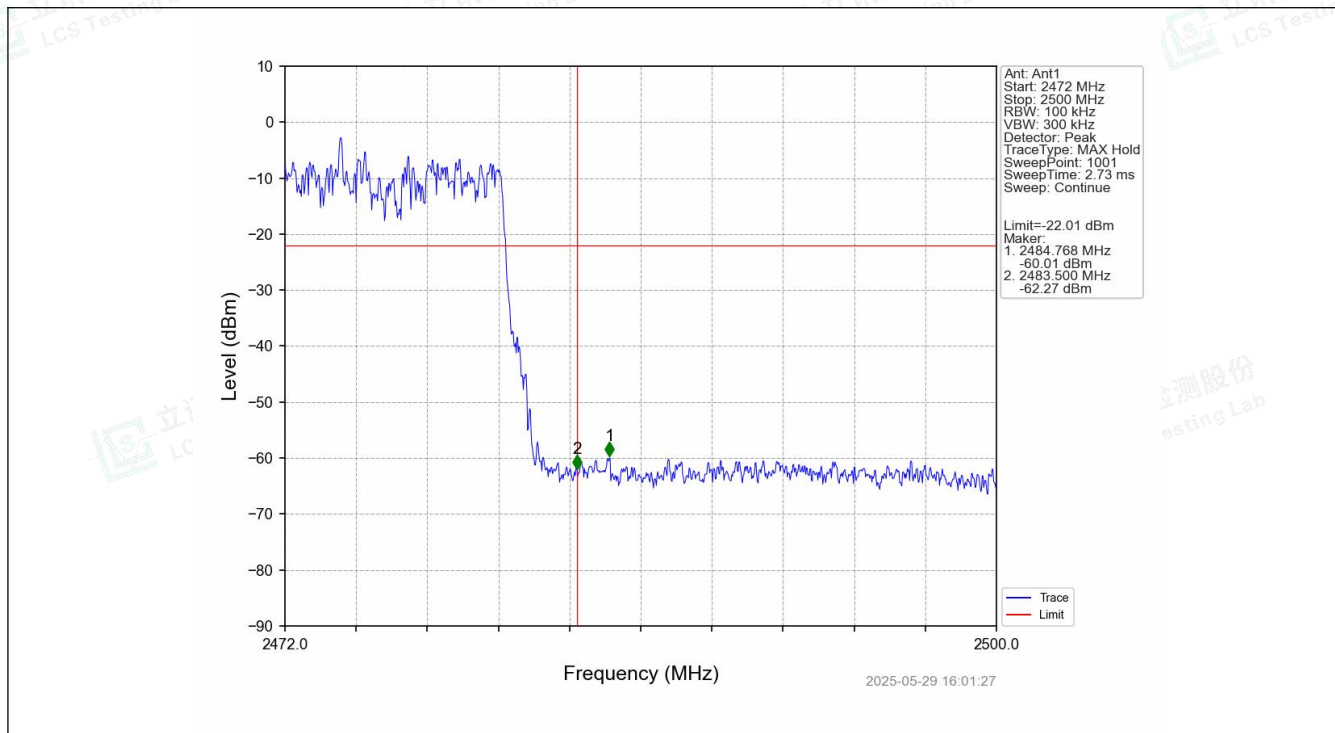


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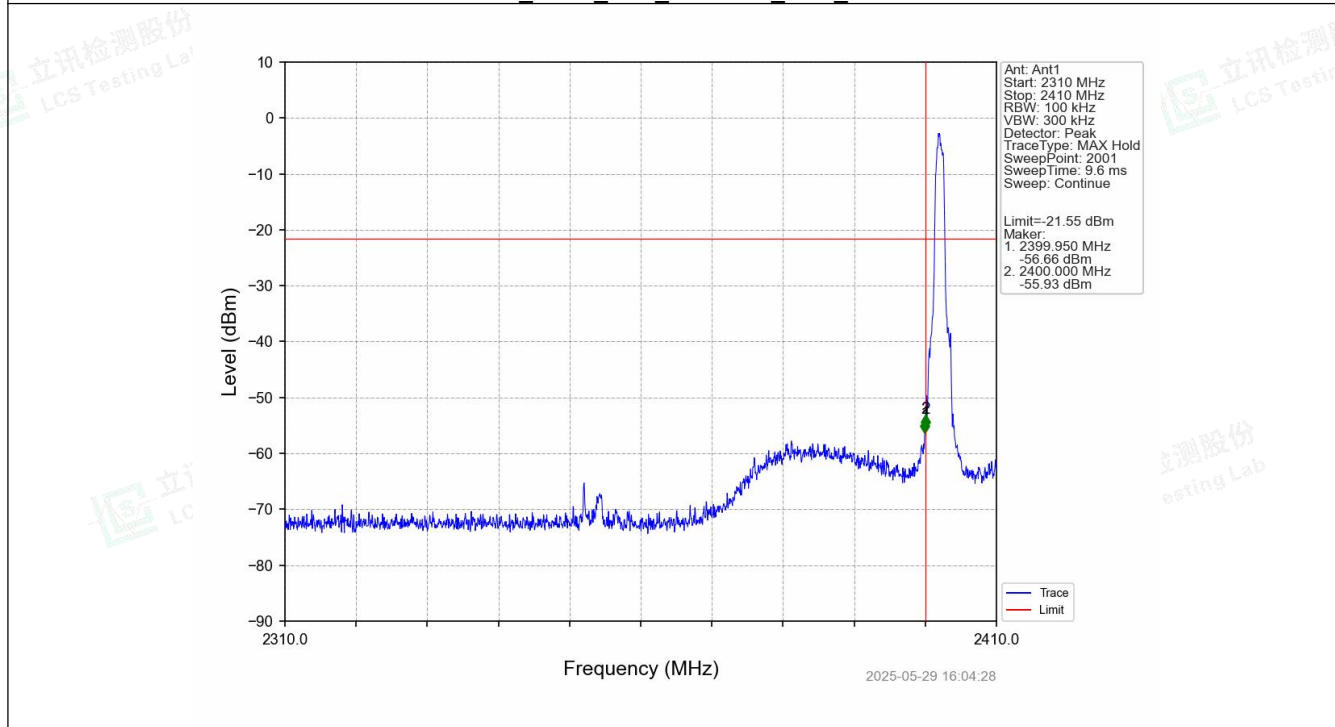


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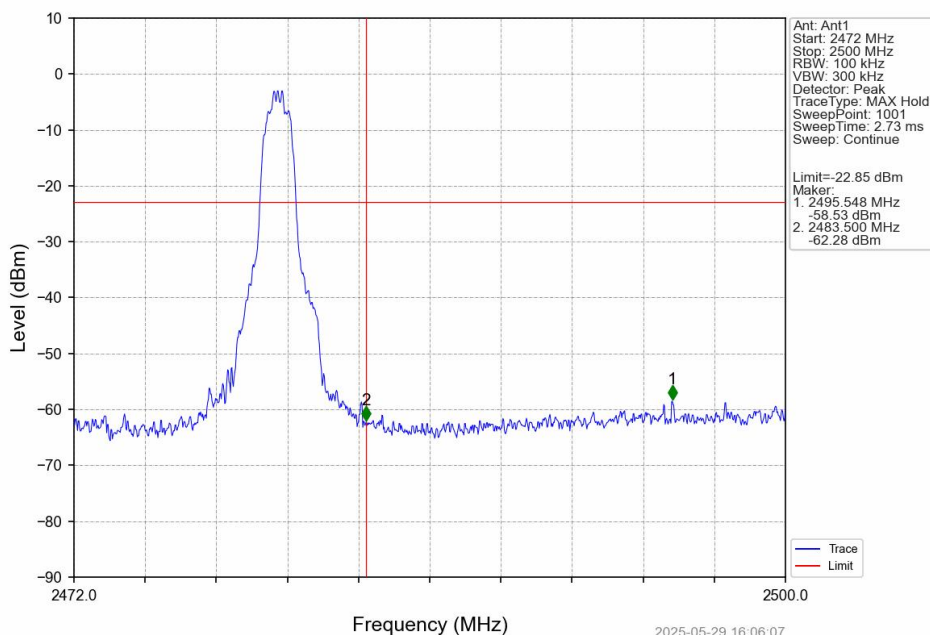


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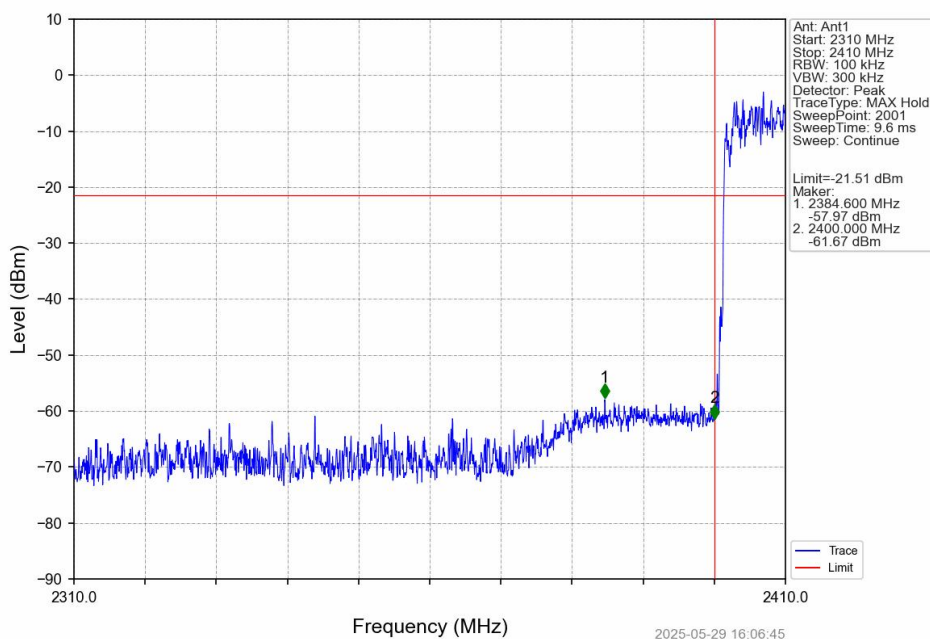




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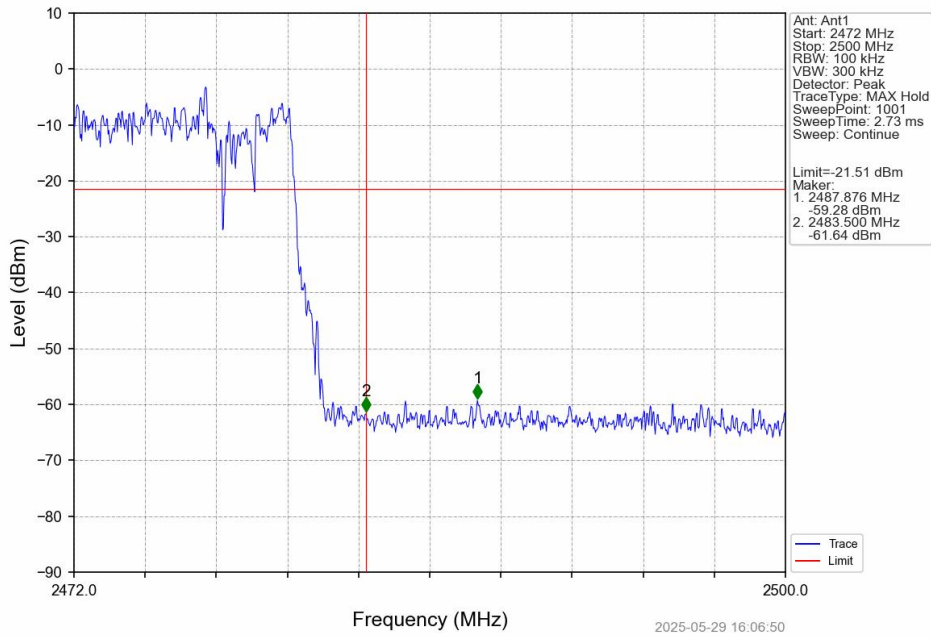


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8DPSK_3DH5_HOPP_Ant1_NTNV





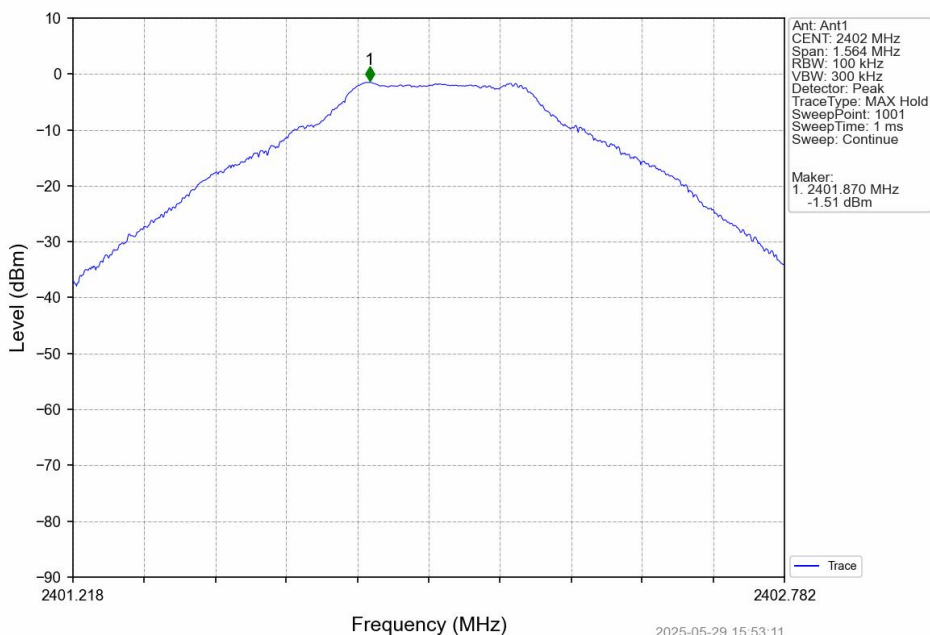
A.7 Conducted RF Spurious Emission

| Mode | TX Type | Frequency (MHz) | Packet Type | ANT | Level of Reference (dBm) |
|---|---------|-----------------|-------------|-----|--------------------------|
| GFSK | SISO | 2402 | DH5 | 1 | -1.51 |
| | | 2441 | DH5 | 1 | -2.09 |
| | | 2480 | DH5 | 1 | -2.83 |
| | | HOPP | DH5 | 1 | -1.72 |
| Pi/4DQPSK | SISO | 2402 | 2DH5 | 1 | -1.52 |
| | | 2441 | 2DH5 | 1 | -2.11 |
| | | 2480 | 2DH5 | 1 | -2.87 |
| | | HOPP | 2DH5 | 1 | -2.01 |
| 8DPSK | SISO | 2402 | 3DH5 | 1 | -1.55 |
| | | 2441 | 3DH5 | 1 | -2.14 |
| | | 2480 | 3DH5 | 1 | -2.85 |
| | | HOPP | 3DH5 | 1 | -1.51 |
| 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. | | | | | |

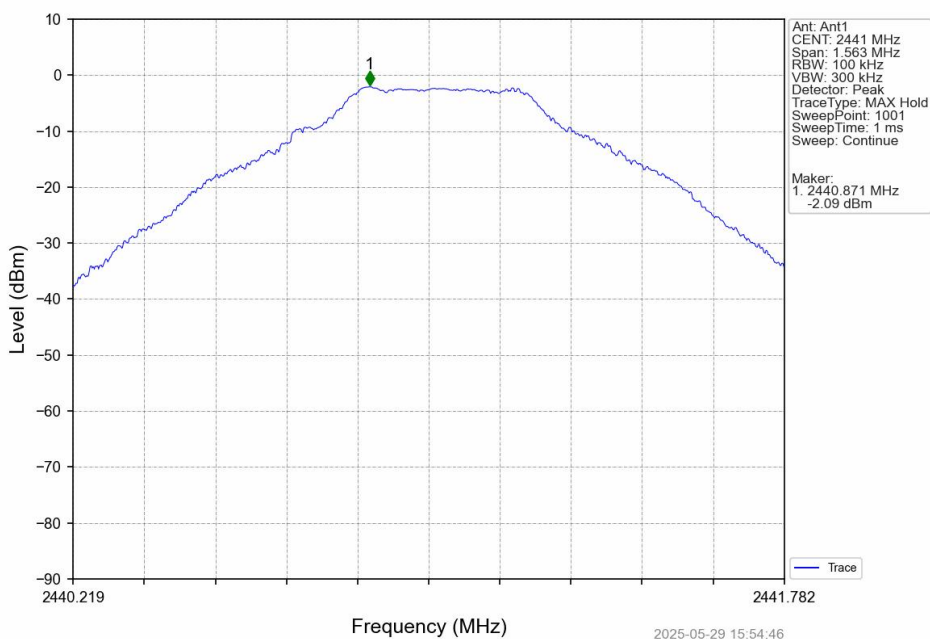




GFSK_DH5_LCH_2402MHz_Ant1_NTNV

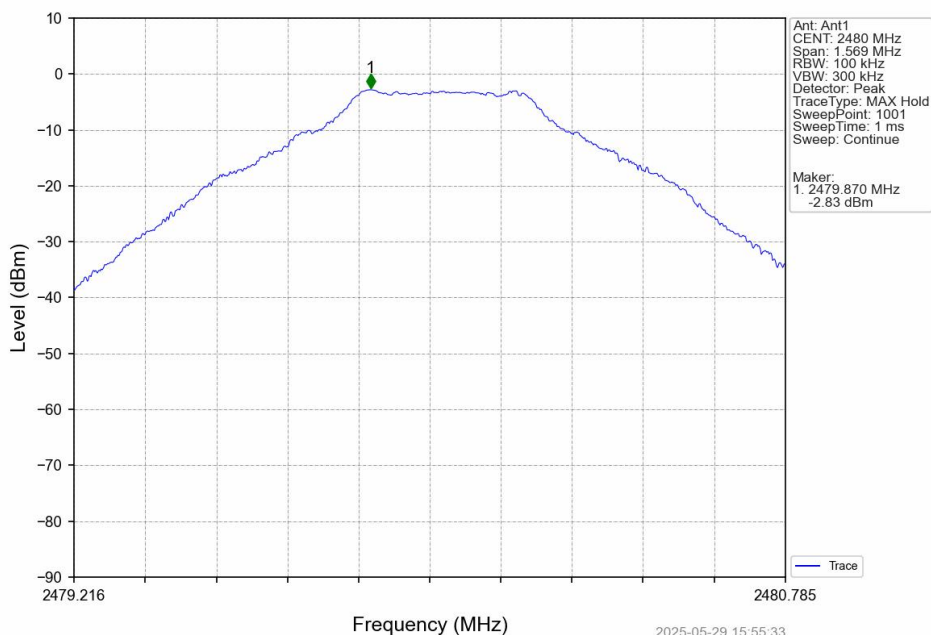


GFSK_DH5_MCH_2441MHz_Ant1_NTNV

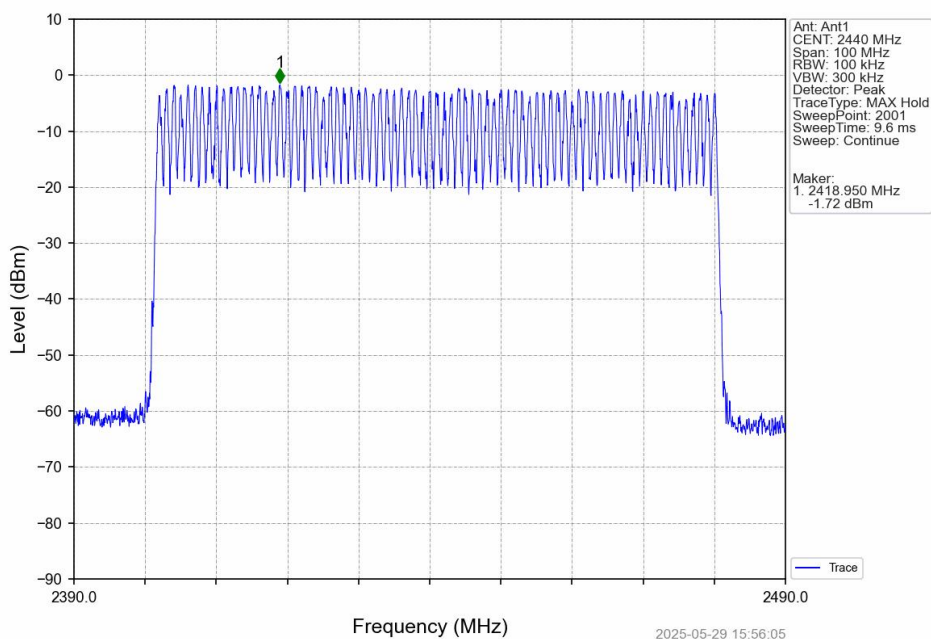




GFSK_DH5_HCH_2480MHz_Ant1_NTNV

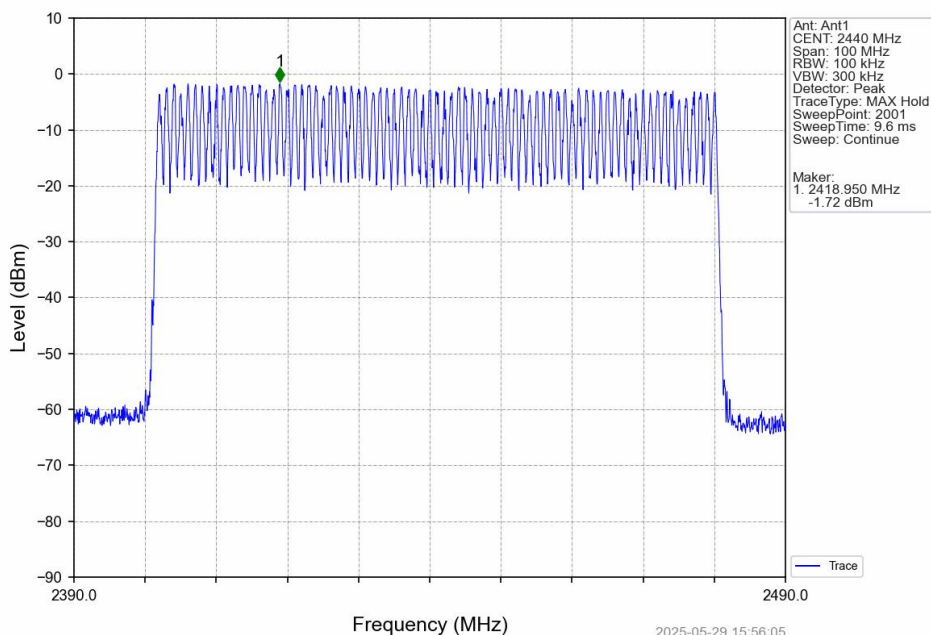


GFSK_DH5_HOPP_Ant1_NTNV





GFSK_DH5_HOPP_Ant1_NTNV



Pi/4DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV

