# Appendix-BT

# Conducted Test Data

## Conducted Output Power

### Test Result

| Modulation | Packet Type | Channel | Peak Output Power (dBm) | Peak Output Power (mW) | Max. Avg. Power (dBm) | Limit (dBm) | Result |
|---|---|---|---|---|---|---|---|
| GFSK | DH1 | 0 | 5.271 | 3.366 | 4.966 | ≤30 | PASS |
| | | 39 | 5.422 | 3.485 | 5.292 | | PASS |
| | | 78 | 5.479 | 3.531 | 5.434 | | PASS |
| | DH3 | 0 | 5.282 | 3.374 | 5.129 | | PASS |
| | | 39 | 5.417 | 3.481 | 5.321 | | PASS |
| | | 78 | **5.484** | 3.535 | 5.395 | | PASS |
| | DH5 | 0 | 5.276 | 3.370 | 5.258 | | PASS |
| | | 39 | 5.430 | 3.491 | 5.328 | | PASS |
| | | 78 | 5.474 | 3.527 | 5.350 | | PASS |
| π/4DQPSK | 2-DH1 | 0 | 7.480 | 5.598 | 4.860 | | PASS |
| | | 39 | 7.532 | 5.665 | 4.725 | | PASS |
| | | 78 | 7.605 | 5.761 | 4.530 | | PASS |
| | 2-DH3 | 0 | 7.448 | 5.556 | 4.724 | | PASS |
| | | 39 | 7.493 | 5.614 | 4.714 | | PASS |
| | | 78 | 7.596 | 5.749 | 4.747 | | PASS |
| | 2-DH5 | 0 | 7.484 | 5.603 | 4.656 | | PASS |
| | | 39 | 7.523 | 5.653 | 4.670 | | PASS |
| | | 78 | **7.630** | 5.794 | 4.758 | | PASS |
| 8DPSK | 3-DH1 | 0 | 7.753 | 5.961 | 4.516 | | PASS |
| | | 39 | 7.804 | 6.031 | 4.560 | | PASS |
| | | 78 | 7.913 | 6.184 | 4.867 | | PASS |
| | 3-DH3 | 0 | 7.750 | 5.957 | 4.643 | | PASS |
| | | 39 | 7.836 | 6.076 | 4.629 | | PASS |
| | | 78 | 7.927 | 6.204 | 4.718 | | PASS |
| | 3-DH5 | 0 | 7.754 | 5.962 | 4.626 | | PASS |
| | | 39 | 7.827 | 6.063 | 4.685 | | PASS |
| | | 78 | **7.932** | 6.212 | 4.667 | | PASS |

Note: EIRP = $P_{out}$ + $G_{ant}$, where $P_{out}$ is the conducted output power (i.e., the Peak Output Power in the table), and $G_{ant}$ is the antenna gain equal to 1.25 dBi.

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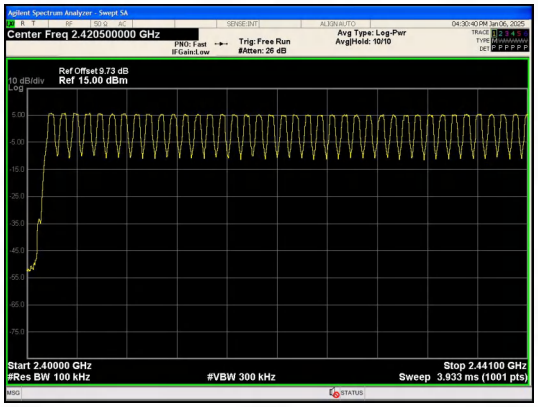
# Number of Hopping Frequencies

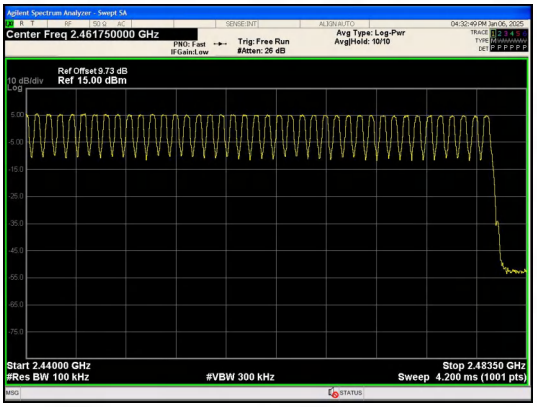
## Test Result

| Modulation | Packet | Number of Hopping Channel | Limit | Result |
|---|---|---|---|---|
| GFSK | DH5 | 79 | 15 | PASS |
| GFSK | DH5 | 79 | 15 | PASS |
| GFSK | DH5 | 79 | 15 | PASS |
| π/4DQPSK | 2-DH1 | 79 | 15 | PASS |
| π/4DQPSK | 2-DH1 | 79 | 15 | PASS |
| π/4DQPSK | 2-DH1 | 79 | 15 | PASS |
| 8DPSK | 3-DH1 | 79 | 15 | PASS |
| 8DPSK | 3-DH1 | 79 | 15 | PASS |
| 8DPSK | 3-DH1 | 79 | 15 | PASS |

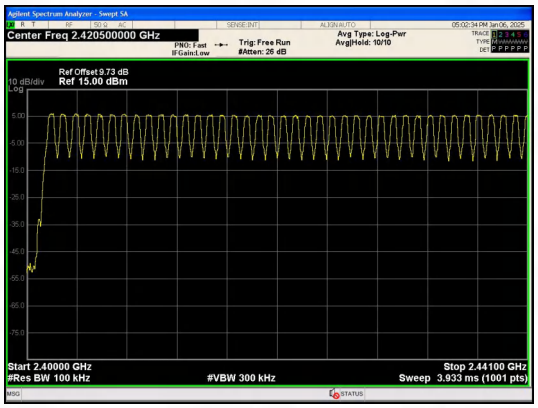
## Test Graphs



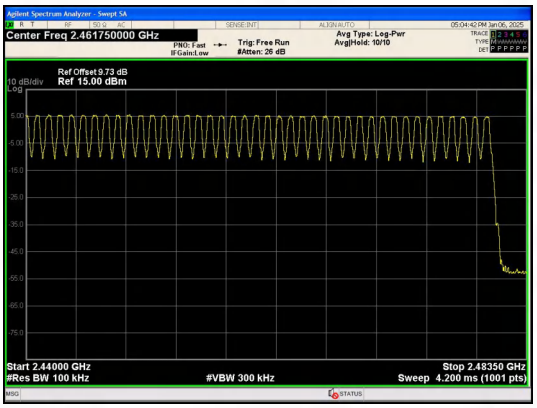

Low End Spectrum Channel Hopping Plot
GFSK




High End Spectrum Channel Hopping Plot
GFSK




Low End Spectrum Channel Hopping Plot
GFSK




High End Spectrum Channel Hopping Plot
GFSK

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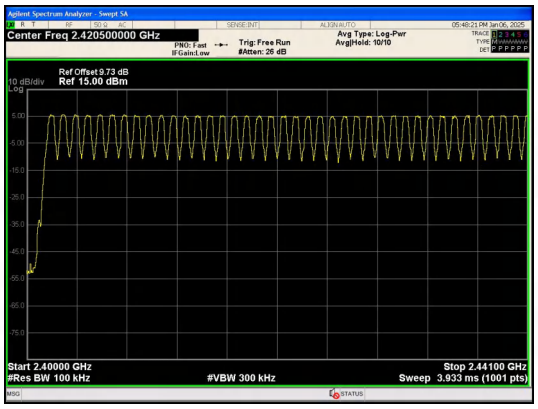
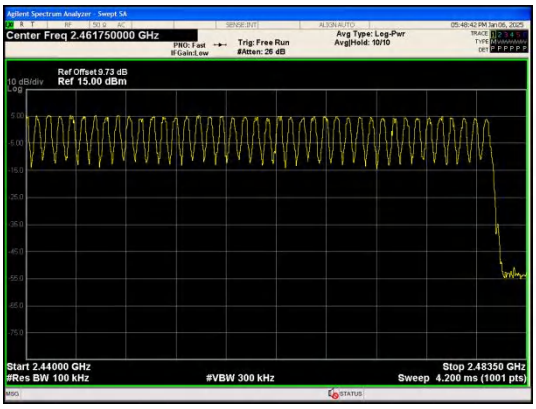


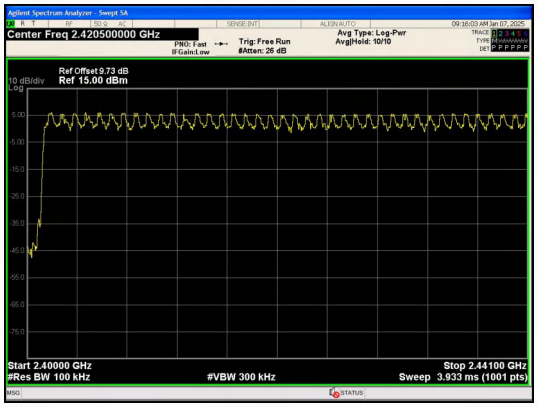

Low End Spectrum Channel Hopping Plot

GFSK



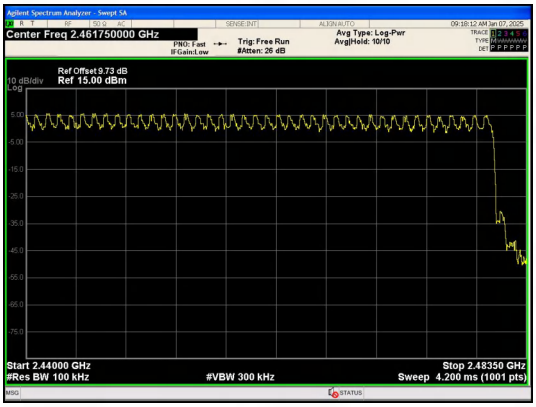

High End Spectrum Channel Hopping Plot

GFSK



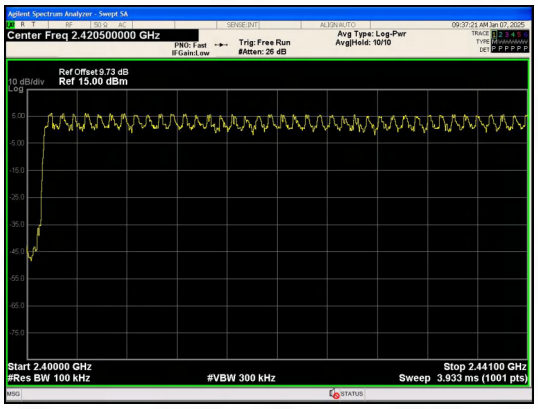

Low End Spectrum Channel Hopping Plot

π/4DQPSK



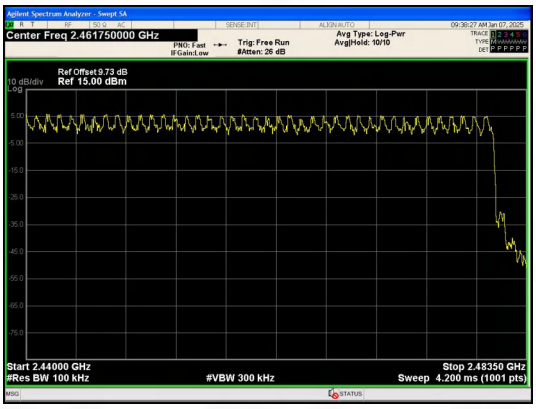

High End Spectrum Channel Hopping Plot

π/4DQPSK



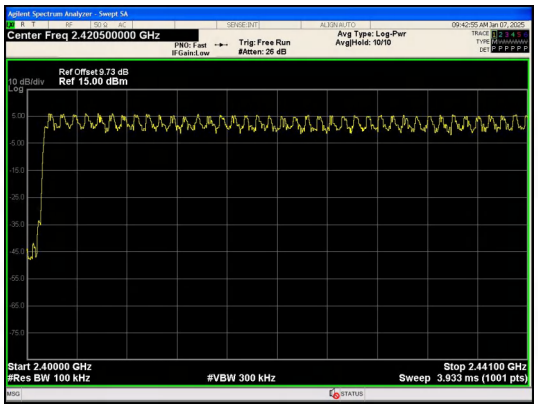

Low End Spectrum Channel Hopping Plot

π/4DQPSK



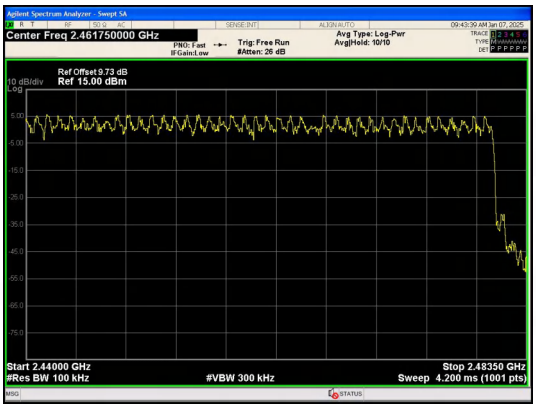

High End Spectrum Channel Hopping Plot

π/4DQPSK



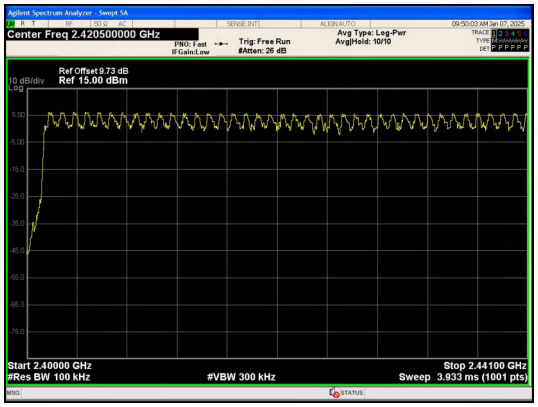

Low End Spectrum Channel Hopping Plot

π/4DQPSK



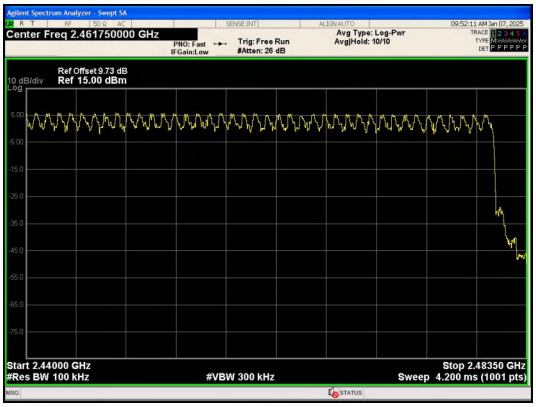

High End Spectrum Channel Hopping Plot

π/4DQPSK



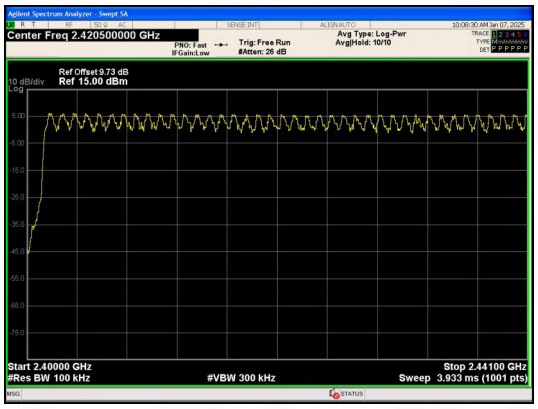

Low End Spectrum Channel Hopping Plot

8DPSK



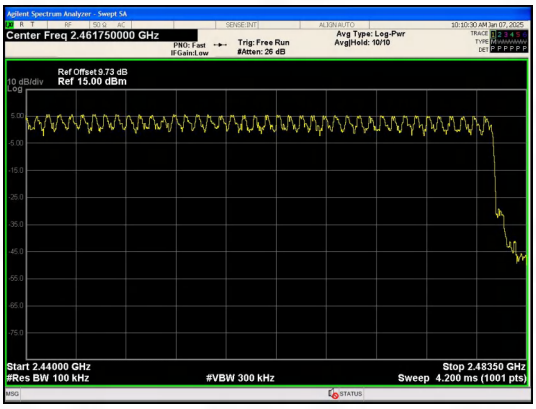

High End Spectrum Channel Hopping Plot

8DPSK




Low End Spectrum Channel Hopping Plot

8DPSK




High End Spectrum Channel Hopping Plot

8DPSK

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| | |
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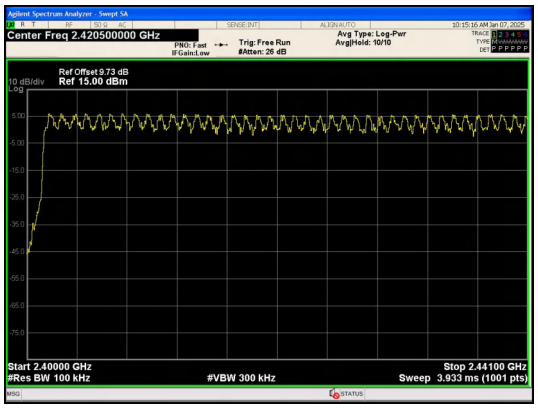
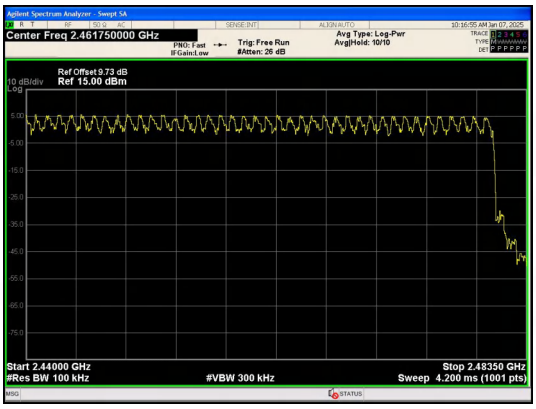
|  |  |
| **Low End Spectrum Channel Hopping Plot**<br>**8DPSK** | **High End Spectrum Channel Hopping Plot**<br>**8DPSK** |

# Duty Cycle and Dwell Time

## Duty Cycle

### Test Result

| Modulation | Packets | Channel | On Time (ms) | Period (ms) | Duty Cycle (%) | Duty Cycle (linear) | Duty Cycle Factor (dB) | 1/T |
|---|---|---|---|---|---|---|---|---|
| GFSK | DH1 | 0 | 0.385 | 1.249 | 30.79 | 0.3079 | 5.1159 | 2.5974 |
| | | 39 | 0.385 | 1.250 | 30.77 | 0.3077 | 5.1187 | 2.5974 |
| | | 78 | 0.385 | 1.250 | 30.77 | 0.3077 | 5.1187 | 2.5974 |
| | DH3 | 0 | 1.641 | 2.499 | 65.64 | 0.6564 | 1.8283 | 0.6094 |
| | | 39 | 1.641 | 2.499 | 65.64 | 0.6564 | 1.8283 | 0.6094 |
| | | 78 | 1.641 | 2.499 | 65.64 | 0.6564 | 1.8283 | 0.6094 |
| | DH5 | 0 | 2.888 | 3.748 | 77.05 | 0.7705 | 1.1323 | 0.3463 |
| | | 39 | 2.888 | 3.748 | 77.05 | 0.7705 | 1.1323 | 0.3463 |
| | | 78 | 2.888 | 3.748 | 77.05 | 0.7705 | 1.1323 | 0.3463 |
| π/4DQPSK | 2-DH1 | 0 | 0.386 | 1.250 | 30.87 | 0.3087 | 5.1046 | 2.5907 |
| | | 39 | 0.386 | 1.250 | 30.87 | 0.3087 | 5.1046 | 2.5907 |
| | | 78 | 0.386 | 1.249 | 30.88 | 0.3088 | 5.1032 | 2.5907 |
| | 2-DH3 | 0 | 1.638 | 2.498 | 65.56 | 0.6556 | 1.8336 | 0.6105 |
| | | 39 | 1.638 | 2.498 | 65.56 | 0.6556 | 1.8336 | 0.6105 |
| | | 78 | 1.638 | 2.498 | 65.56 | 0.6556 | 1.8336 | 0.6105 |
| | 2-DH5 | 0 | 2.886 | 3.748 | 77.00 | 0.7700 | 1.1351 | 0.3465 |
| | | 39 | 2.886 | 3.748 | 77.00 | 0.7700 | 1.1351 | 0.3465 |
| | | 78 | 2.884 | 3.748 | 76.95 | 0.7695 | 1.1379 | 0.3467 |
| 8DPSK | 3-DH1 | 0 | 0.385 | 1.249 | 30.79 | 0.3079 | 5.1159 | 2.5974 |
| | | 39 | 0.385 | 1.249 | 30.79 | 0.3079 | 5.1159 | 2.5974 |
| | | 78 | 0.385 | 1.250 | 30.82 | 0.3082 | 5.1117 | 2.5974 |
| | 3-DH3 | 0 | 1.635 | 2.498 | 65.44 | 0.6544 | 1.8416 | 0.6116 |
| | | 39 | 1.635 | 2.498 | 65.44 | 0.6544 | 1.8416 | 0.6116 |
| | | 78 | 1.635 | 2.498 | 65.44 | 0.6544 | 1.8416 | 0.6116 |
| | 3-DH5 | 0 | 2.886 | 3.748 | 77.00 | 0.7700 | 1.1351 | 0.3465 |
| | | 39 | 2.886 | 3.748 | 77.00 | 0.7700 | 1.1351 | 0.3465 |
| | | 78 | 2.886 | 3.748 | 77.00 | 0.7700 | 1.1351 | 0.3465 |

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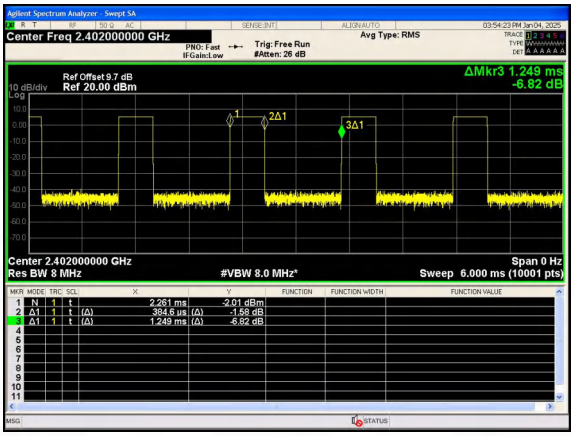
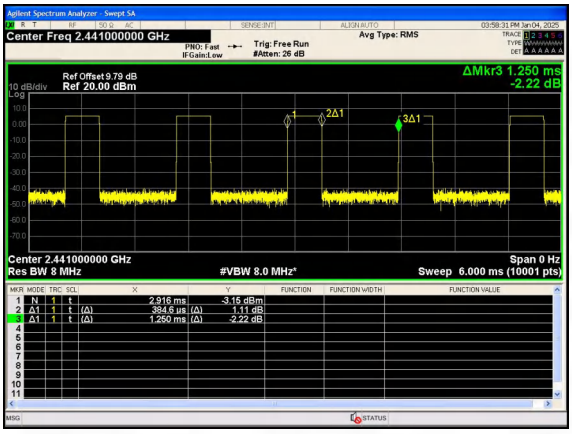
## Test Graphs




GFSK(DH1)_Channel 0

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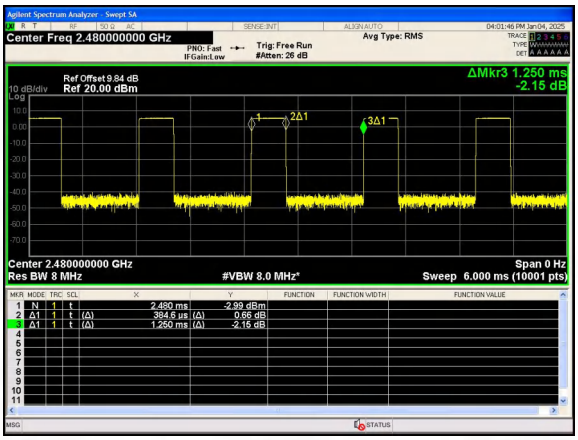
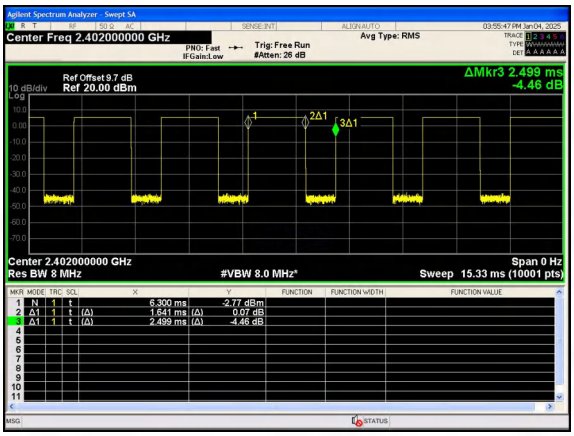
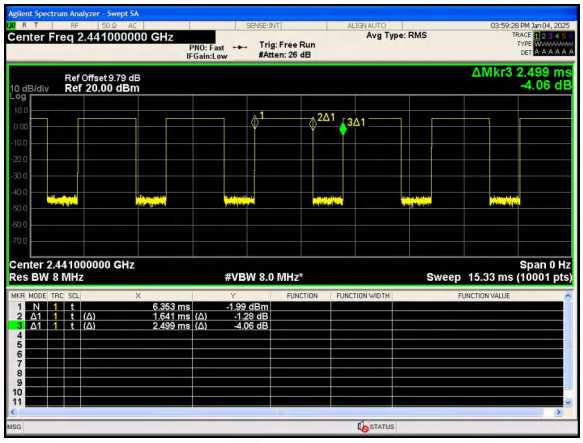



GFSK(DH1)_Channel 78




GFSK(DH3)_Channel 0

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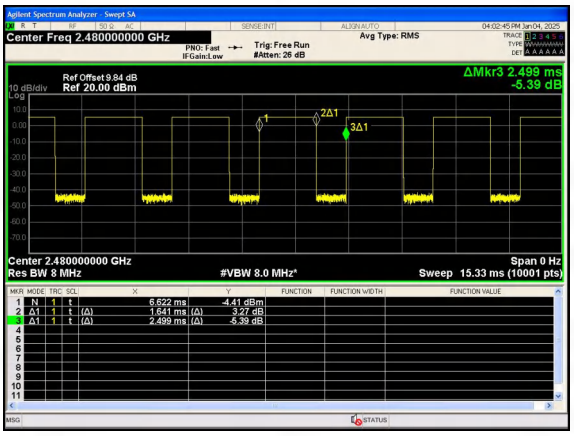


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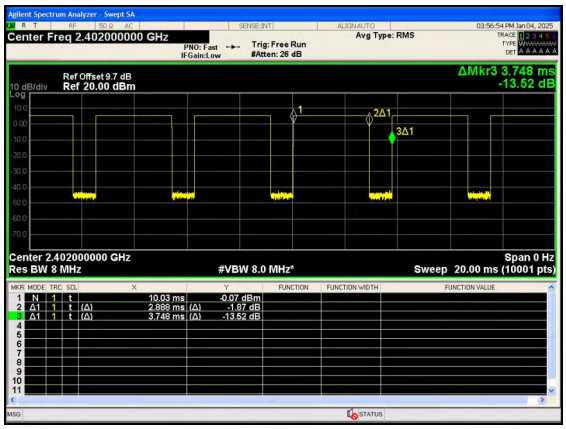


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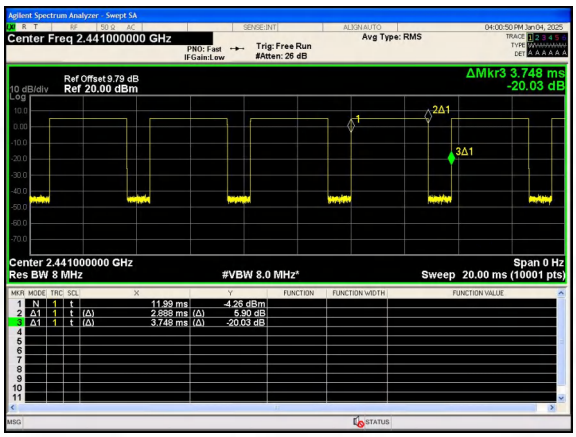


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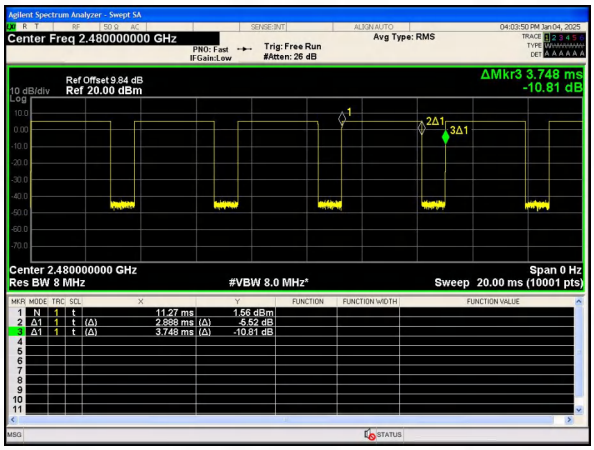


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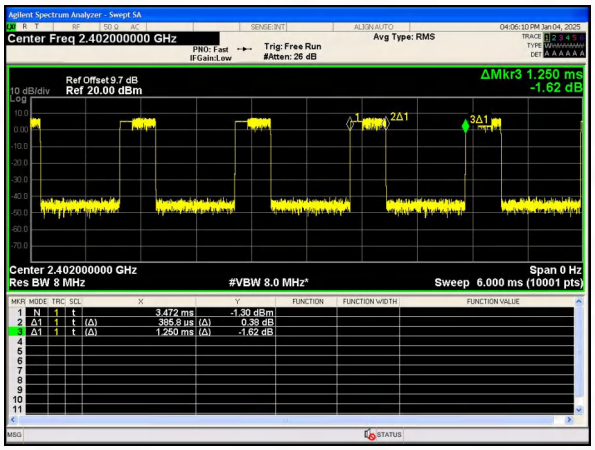
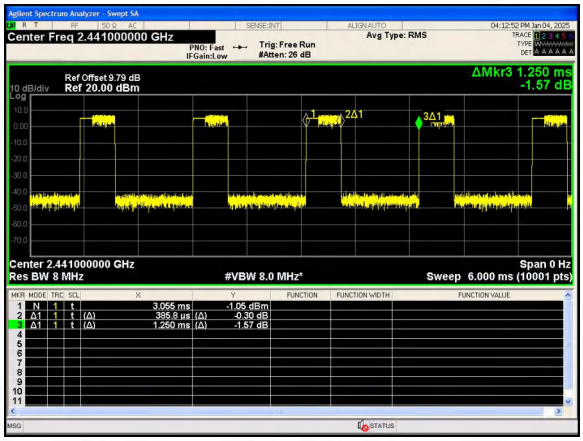
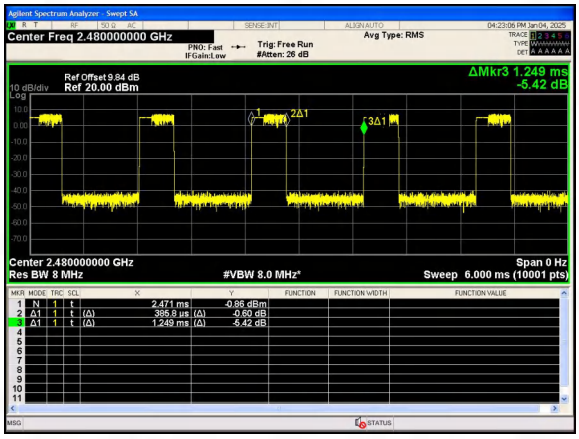



π/4DQPSK(2-DH1)_Channel 0




π/4DQPSK(2-DH1)_Channel 39




π/4DQPSK(2-DH1)_Channel 78

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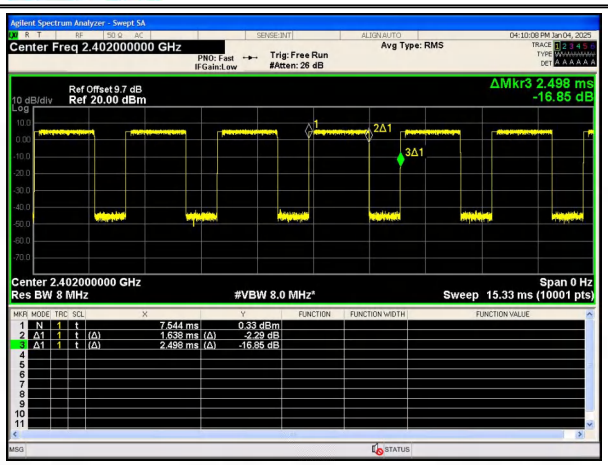


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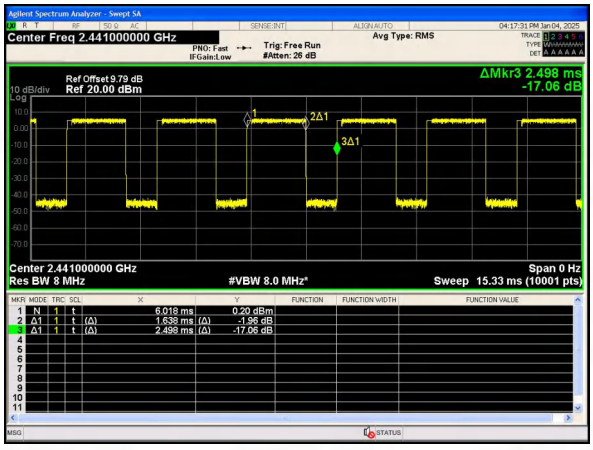


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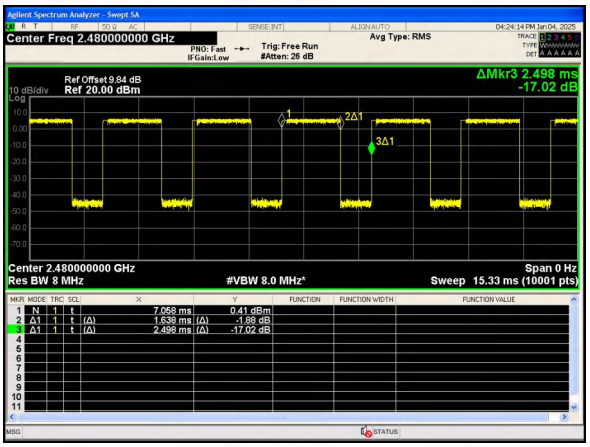


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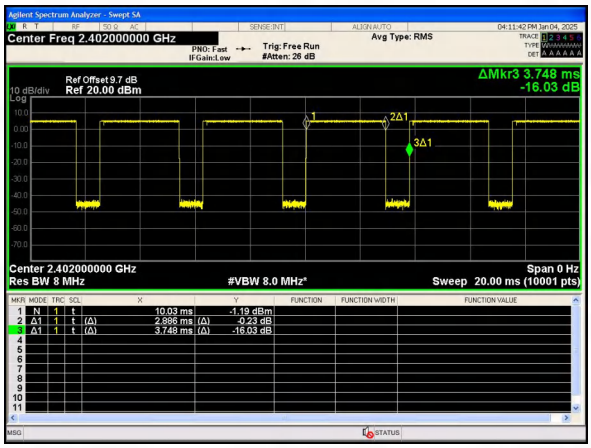


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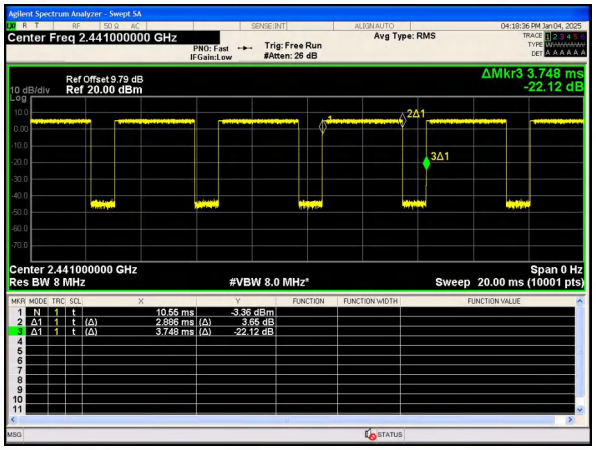
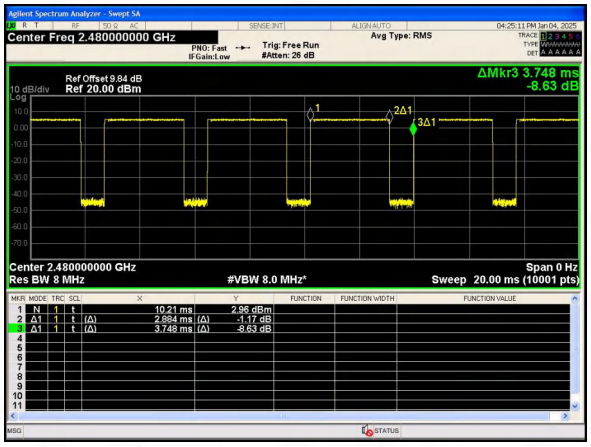



π/4DQPSK(2-DH5)_Channel 39




π/4DQPSK(2-DH5)_Channel 78

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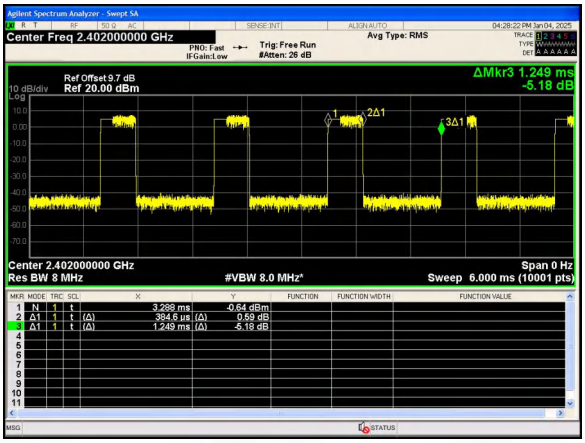
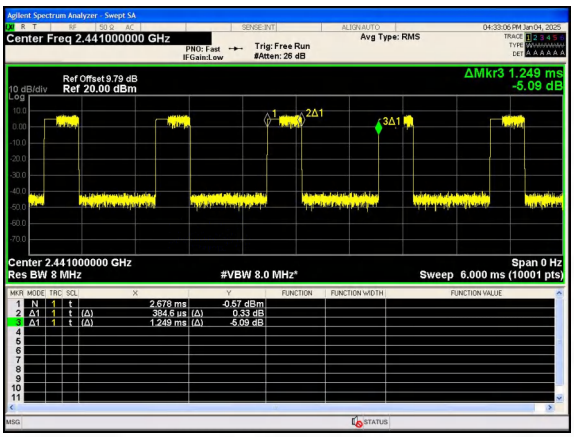
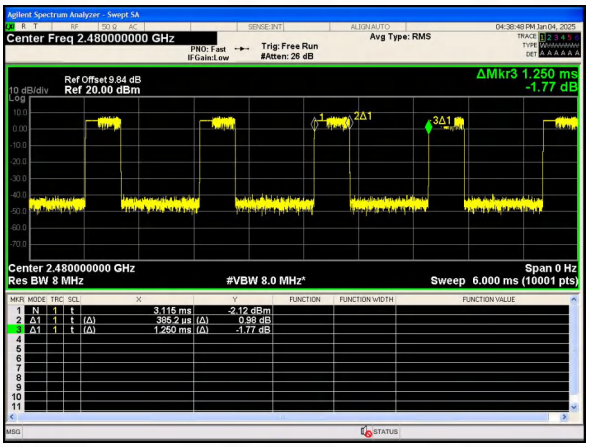


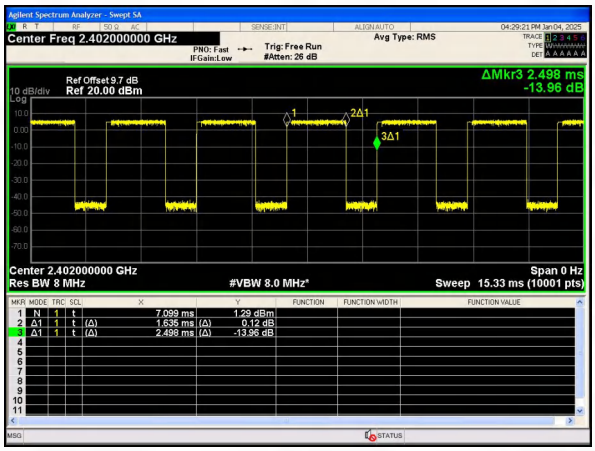

8DPSK(3-DH1)_Channel 0



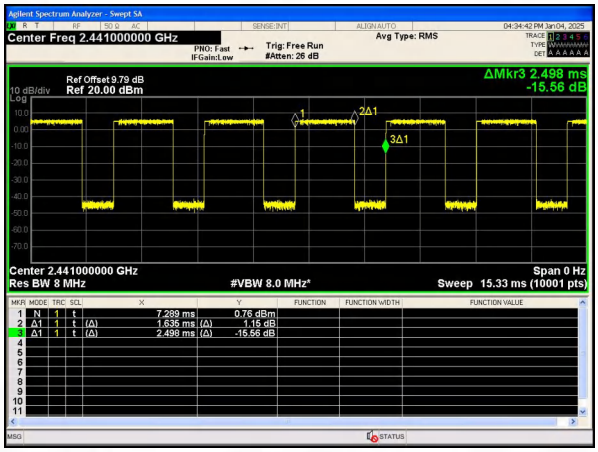

8DPSK(3-DH1)_Channel 39



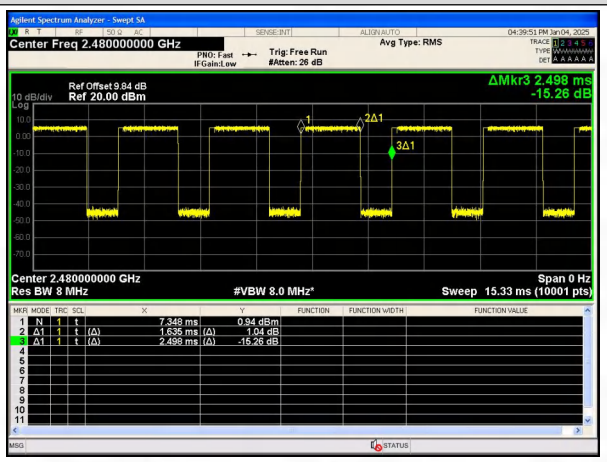

8DPSK(3-DH1)_Channel 78




8DPSK(3-DH3)_Channel 0




8DPSK(3-DH3)_Channel 39




8DPSK(3-DH3)_Channel 78

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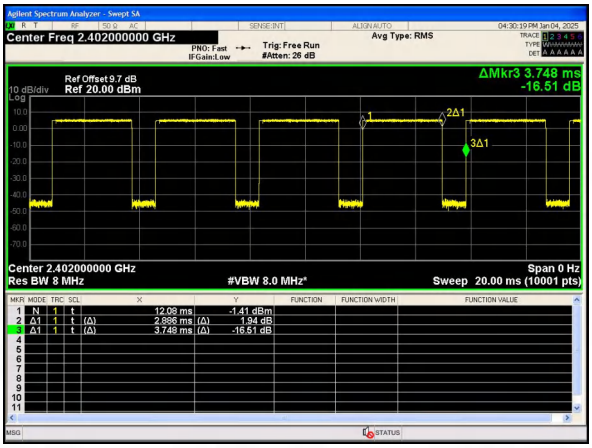
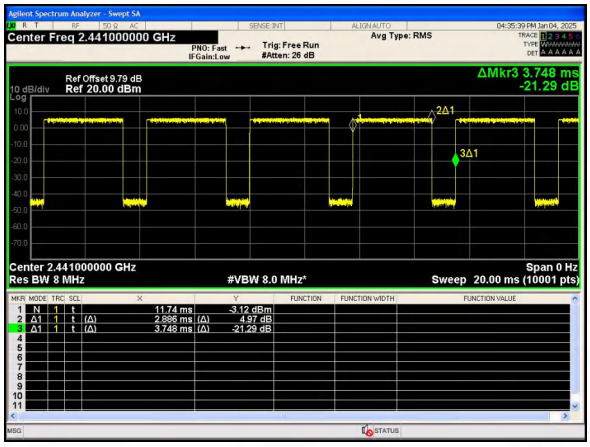
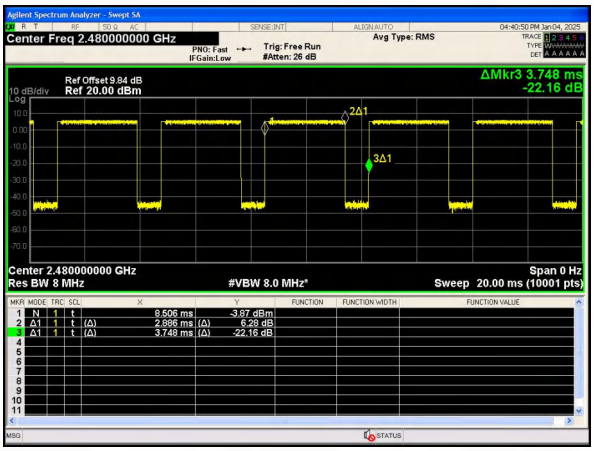



8DPSK(3-DH5)_Channel 0




8DPSK(3-DH5)_Channel 39



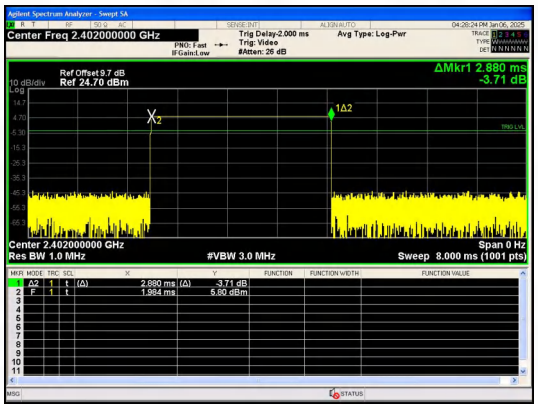

8DPSK(3-DH5)_Channel 78

## Dwell Time

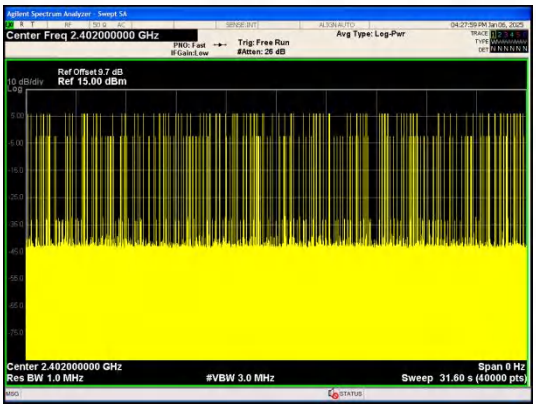
### Test Result

| Modulation | Packet | Channel | Pulse Width (ms) | Number of Pulses in 31.6 seconds | Dwell Time (ms) | Limit (ms) | Result |
|---|---|---|---|---|---|---|---|
| GFSK | DH5 | CH0 (2402MHz) | 2.880 | 116 | 334.08 | < 400 | PASS |
| | DH5 | CH39 (2441MHz) | 2.896 | 116 | 335.94 | | PASS |
| | DH5 | CH78 (2480MHz) | 2.888 | 118 | 340.78 | | PASS |
| π/4DQPSK | 2-DH1 | CH0 (2402MHz) | 0.3840 | 315 | 120.96 | | PASS |
| | 2-DH1 | CH39 (2441MHz) | 0.3840 | 320 | 122.88 | | PASS |
| | 2-DH1 | CH78 (2480MHz) | 0.3840 | 316 | 121.34 | | PASS |
| 8DPSK | 3-DH1 | CH0 (2402MHz) | 0.3840 | 315 | 120.96 | | PASS |
| | 3-DH1 | CH39 (2441MHz) | 0.3828 | 313 | 119.82 | | PASS |
| | 3-DH1 | CH78 (2480MHz) | 0.3840 | 315 | 120.96 | | PASS |

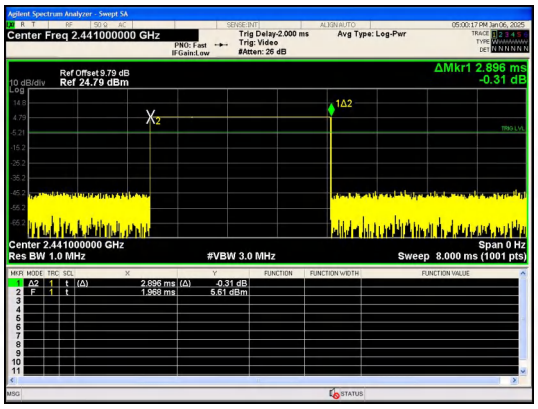
### Test Graphs




Pulse Width
GFSK_DH5

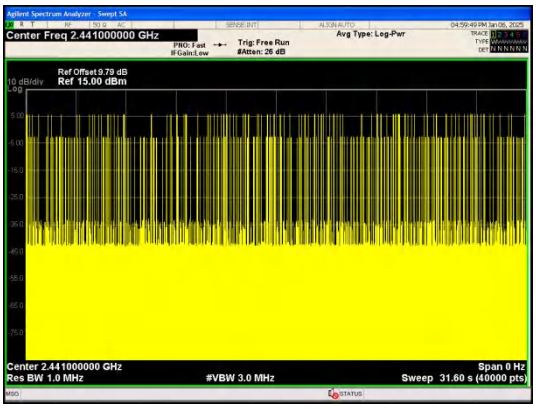



Number of Pulses in 31.6 seconds
GFSK_DH5



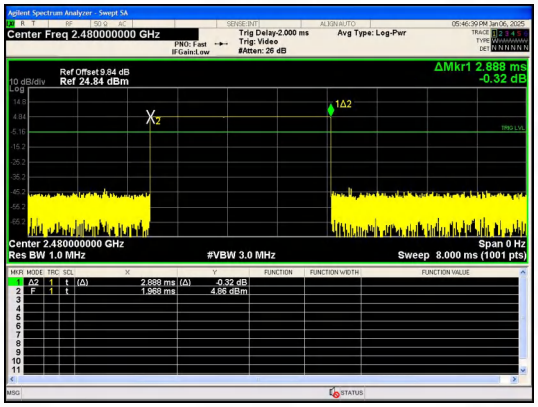

Pulse Width

GFSK_DH5



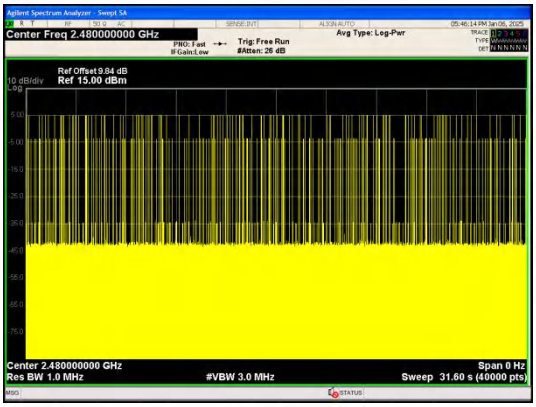

Number of Pulses in 31.6 seconds

GFSK_DH5



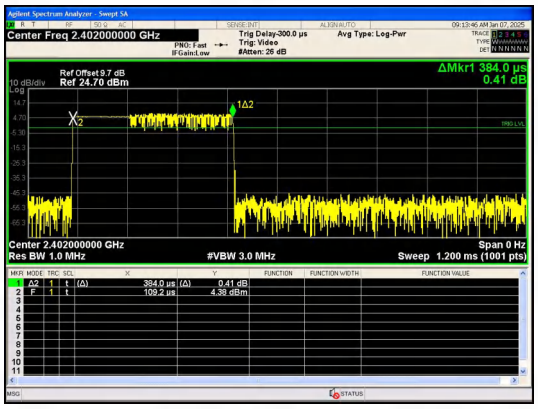

Pulse Width

GFSK_DH5



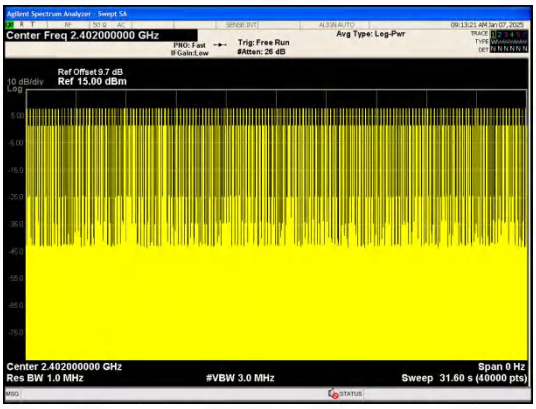

Number of Pulses in 31.6 seconds

GFSK_DH5



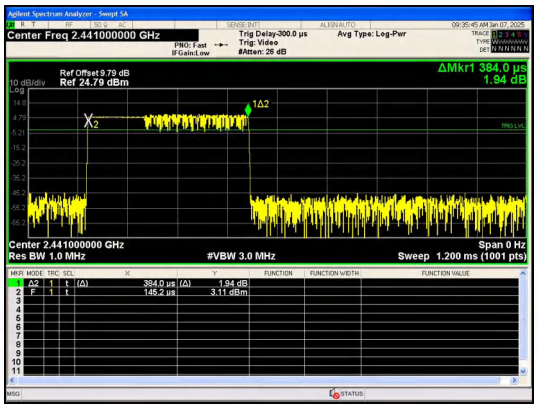

Pulse Width

π/4DQPSK_2-DH1



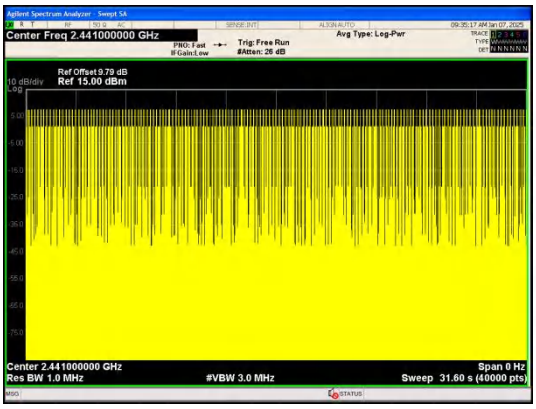

Number of Pulses in 31.6 seconds

π/4DQPSK_2-DH1



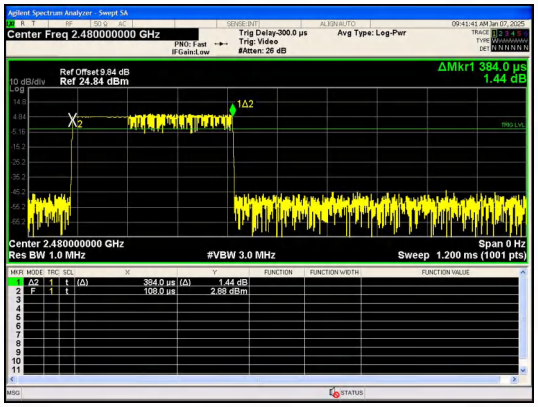

Pulse Width

π/4DQPSK_2-DH1



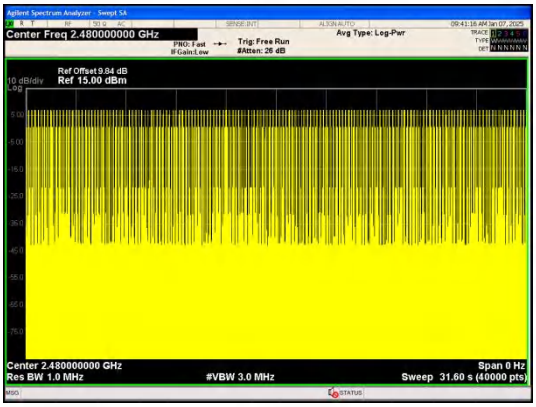

Number of Pulses in 31.6 seconds

π/4DQPSK_2-DH1



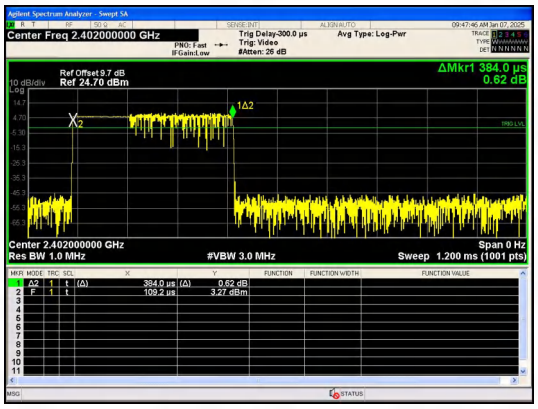

Pulse Width

π/4DQPSK_2-DH1



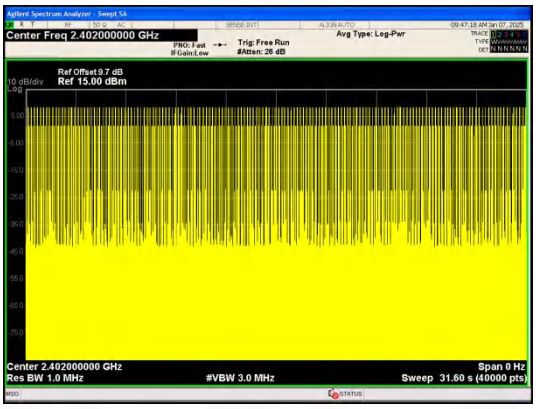

Number of Pulses in 31.6 seconds

π/4DQPSK_2-DH1




Pulse Width

8DPSK_3-DH1




Number of Pulses in 31.6 seconds

8DPSK_3-DH1

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