

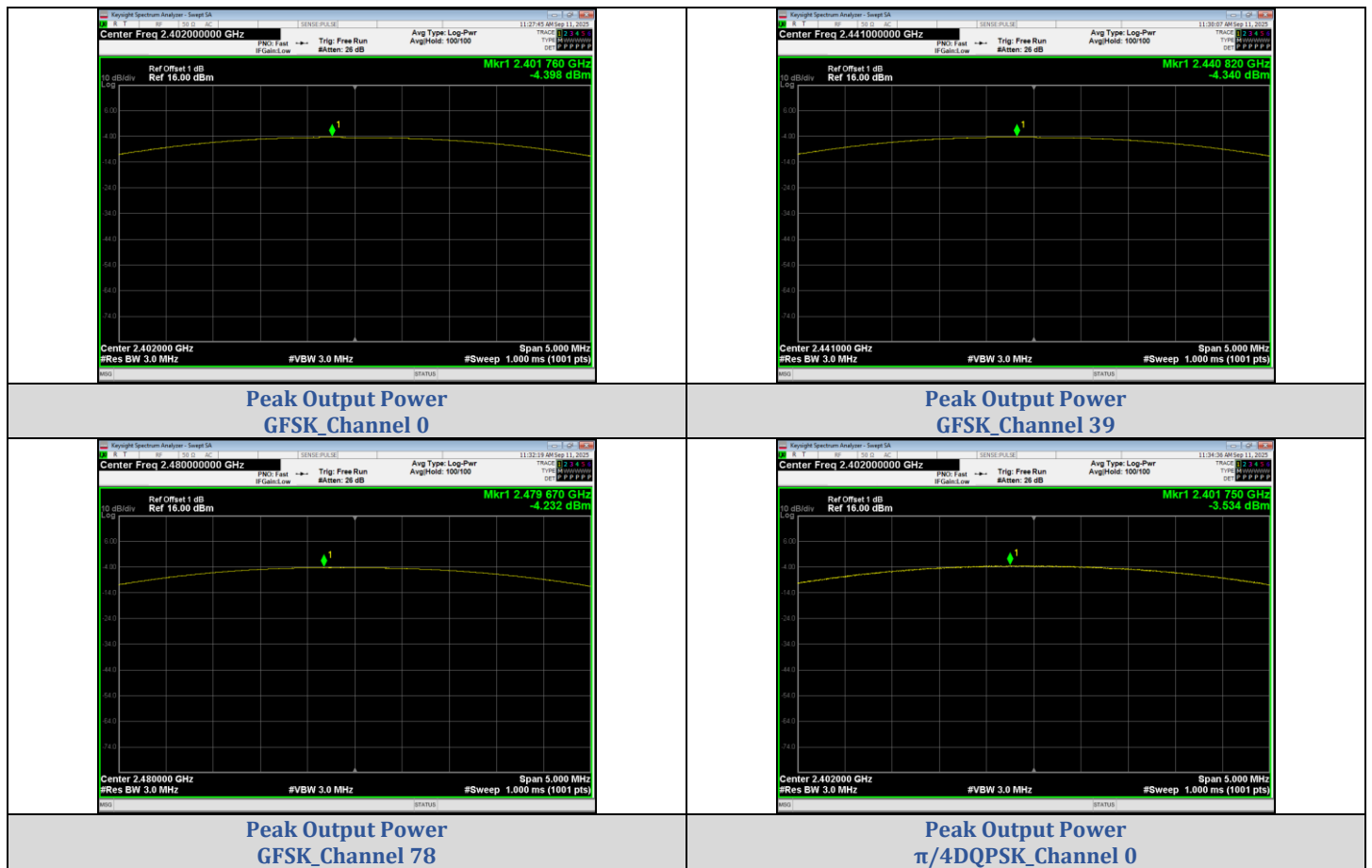
## Conducted Output Power

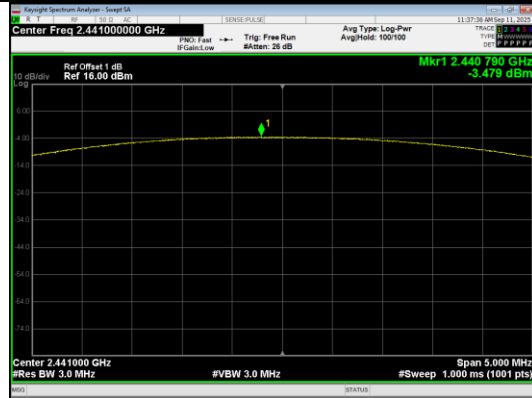
### Test Result

Left:

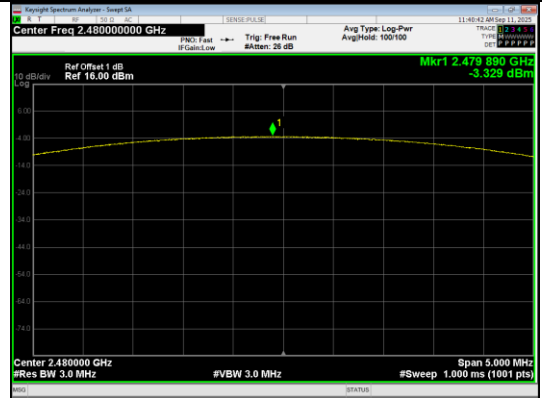
| Modulation    | Packet Type | Channel | Peak Output Power (dBm) | Peak Output Power (mW) | Max. Avg. Power (dBm) | Limit (dBm) | Result |
|---------------|-------------|---------|-------------------------|------------------------|-----------------------|-------------|--------|
| GFSK          | DH5         | 0       | -4.40                   | 0.36                   | -4.54                 | ≤30         | PASS   |
|               |             | 39      | -4.34                   | 0.37                   | -4.58                 |             | PASS   |
|               |             | 78      | -4.23                   | 0.38                   | -4.40                 |             | PASS   |
| $\pi/4$ DQPSK | 2-DH5       | 0       | -3.53                   | 0.44                   | -6.29                 | ≤20.97      | PASS   |
|               |             | 39      | -3.48                   | 0.45                   | -6.19                 |             | PASS   |
|               |             | 78      | -3.33                   | 0.46                   | -6.11                 |             | PASS   |
| 8DPSK         | 3-DH5       | 0       | -3.16                   | 0.48                   | -6.33                 |             | PASS   |
|               |             | 39      | -3.03                   | 0.50                   | -6.25                 |             | PASS   |
|               |             | 78      | -2.95                   | 0.51                   | -6.08                 |             | PASS   |

### Test Graphs

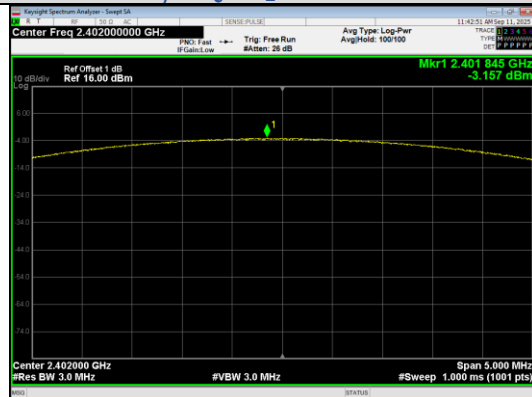




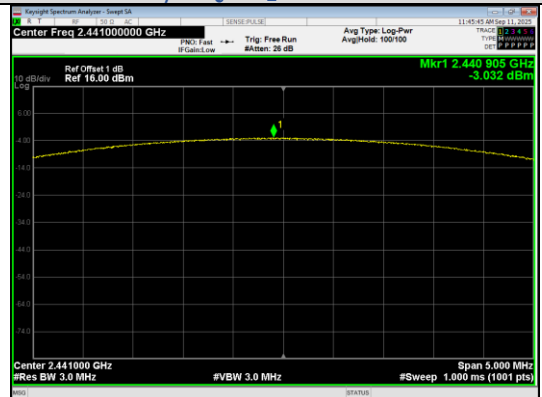
Peak Output Power  
 $\pi/4$ DQPSK\_Channel 39



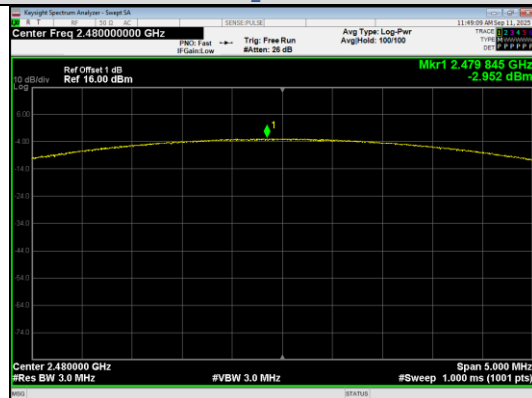
Peak Output Power  
 $\pi/4$ DQPSK\_Channel 78



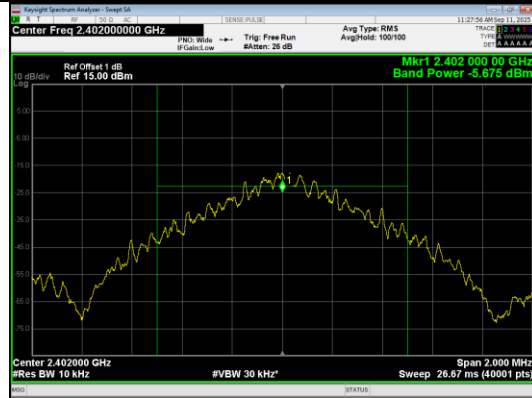
Peak Output Power  
8DPSK\_Channel 0



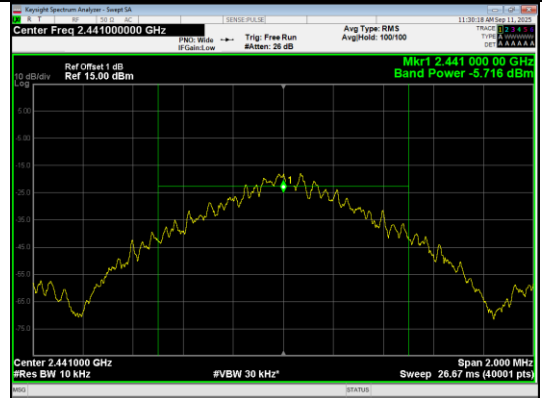
Peak Output Power  
8DPSK\_Channel 39



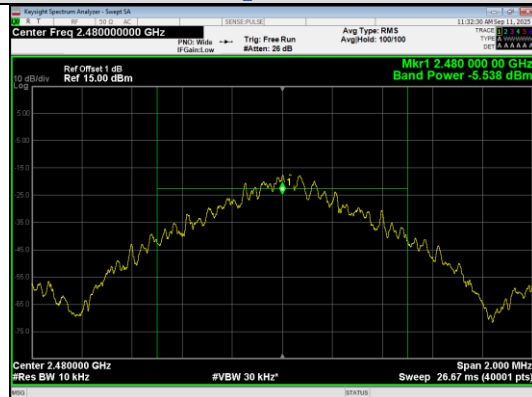
Peak Output Power  
8DPSK\_Channel 78



Average Output Power  
GFSK\_Channel 0



Average Output Power  
GFSK\_Channel 39



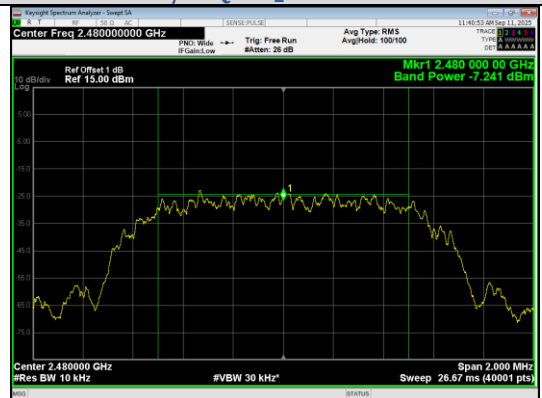
Average Output Power  
GFSK\_Channel 78



Average Output Power  
 $\pi/4$ DQPSK\_Channel 0



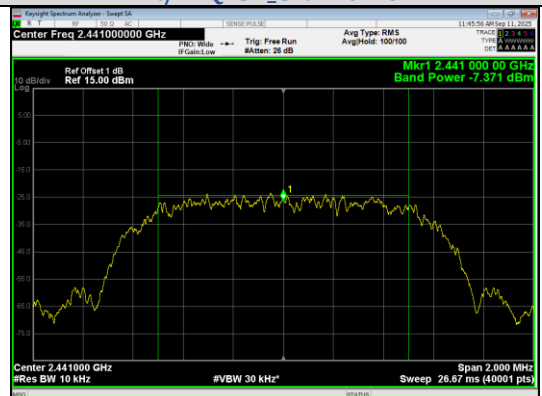
Average Output Power  
 $\pi/4$ DQPSK\_Channel 39



Average Output Power  
 $\pi/4$ DQPSK\_Channel 78



Average Output Power



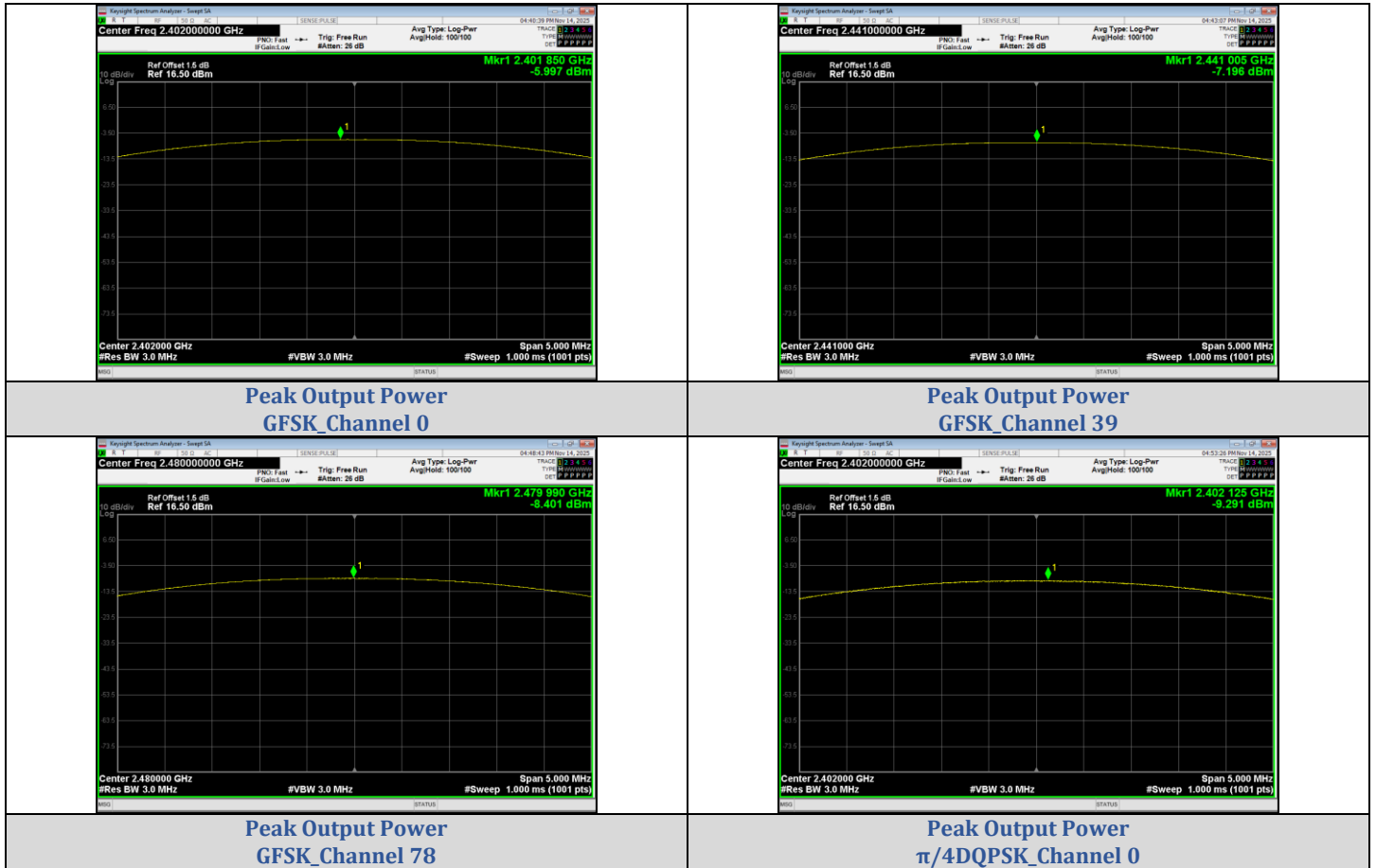
Average Output Power

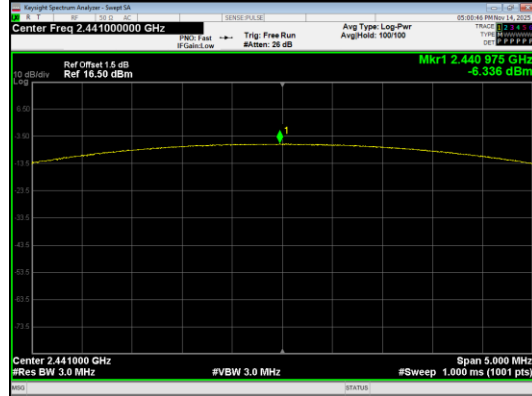


Right:

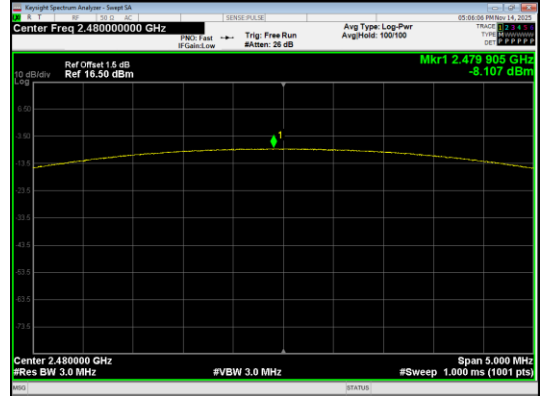
| Modulation    | Packet Type | Channel | Peak Output Power (dBm) | Peak Output Power (mW) | Max. Avg. Power (dBm) | Limit (dBm) | Result |
|---------------|-------------|---------|-------------------------|------------------------|-----------------------|-------------|--------|
| GFSK          | DH5         | 0       | -6.00                   | 0.25                   | -6.22                 | ≤30         | PASS   |
|               |             | 39      | -7.20                   | 0.19                   | -7.42                 |             | PASS   |
|               |             | 78      | -8.40                   | 0.14                   | -8.69                 |             | PASS   |
| $\pi/4$ DQPSK | 2-DH5       | 0       | -9.29                   | 0.12                   | -12.02                | ≤20.97      | PASS   |
|               |             | 39      | -6.34                   | 0.23                   | -9.03                 |             | PASS   |
|               |             | 78      | -8.11                   | 0.15                   | -10.84                |             | PASS   |
| 8DPSK         | 3-DH5       | 0       | -5.65                   | 0.27                   | -8.85                 |             | PASS   |
|               |             | 39      | -6.66                   | 0.22                   | -9.91                 |             | PASS   |
|               |             | 78      | -7.65                   | 0.17                   | -10.78                |             | PASS   |

## Test Graphs

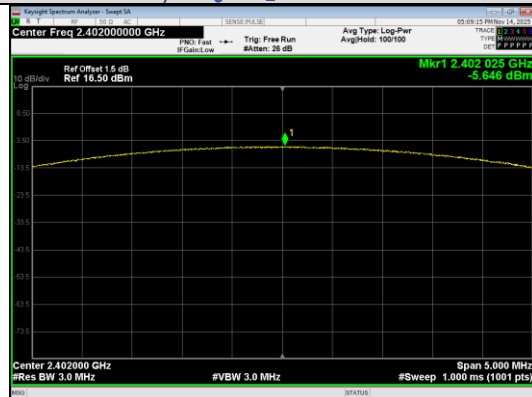




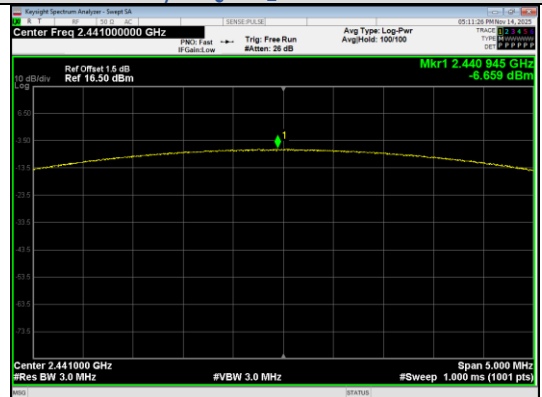
Peak Output Power  
 $\pi/4$ DQPSK\_Channel 39



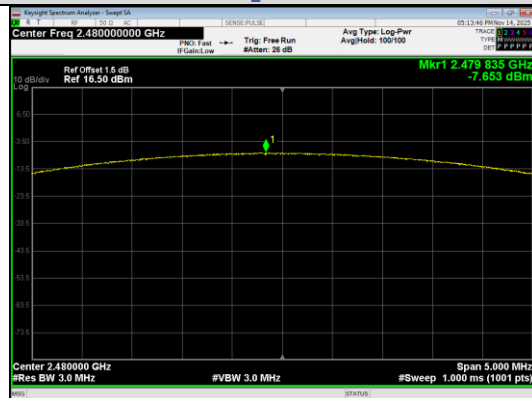
Peak Output Power  
 $\pi/4$ DQPSK\_Channel 78



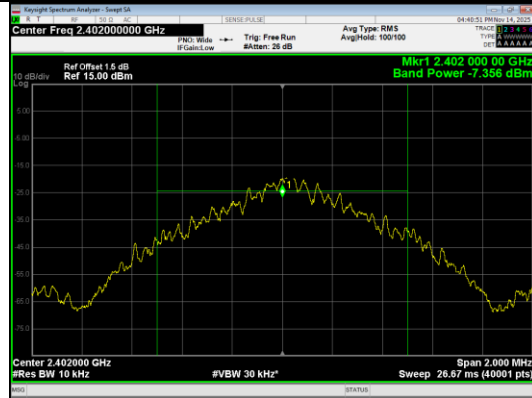
Peak Output Power  
8DPSK\_Channel 0



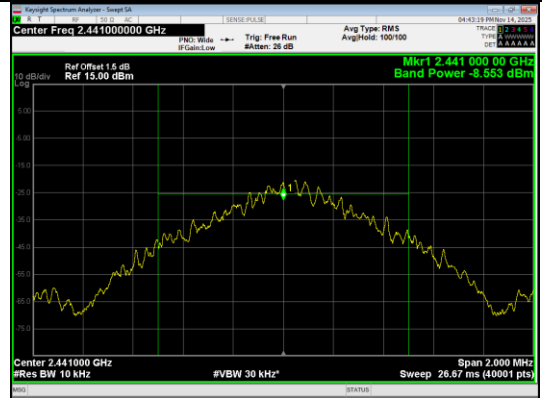
Peak Output Power  
8DPSK\_Channel 39



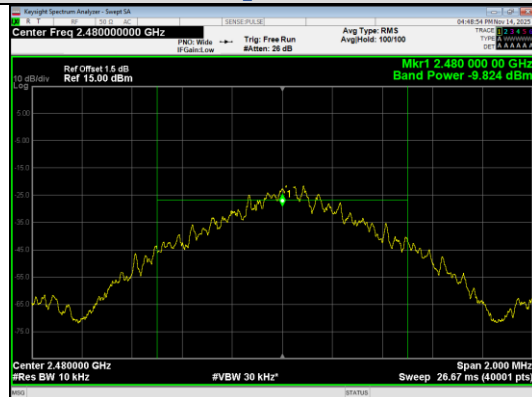
Peak Output Power  
8DPSK\_Channel 78



Average Output Power  
GFSK\_Channel 0



Average Output Power  
GFSK\_Channel 39



Average Output Power  
GFSK\_Channel 78



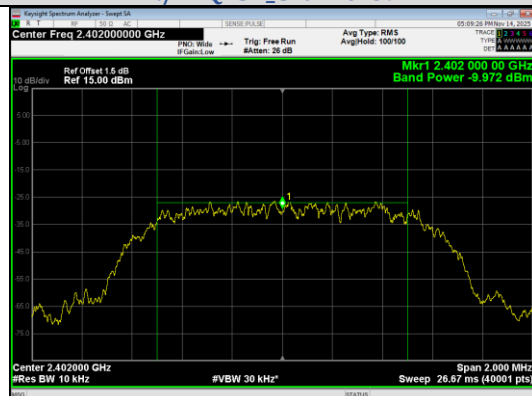
Average Output Power  
 $\pi/4$ DQPSK\_Channel 0



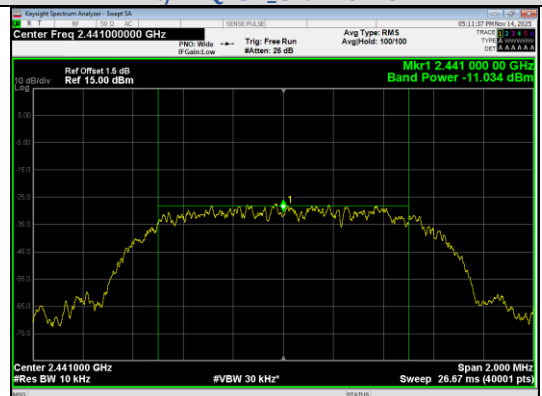
Average Output Power  
 $\pi/4$ DQPSK\_Channel 39



Average Output Power  
 $\pi/4$ DQPSK\_Channel 78



Average Output Power



Average Output Power



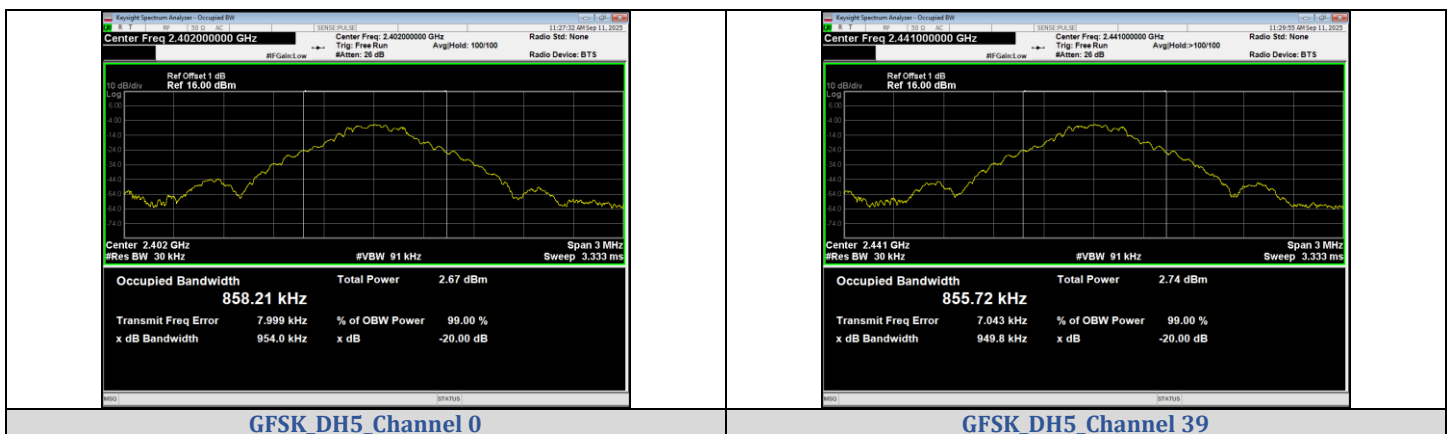
## 20dB Bandwidth

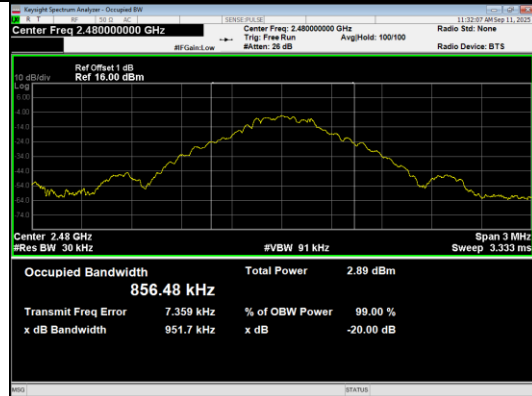
### Test Result

| Modulation    | Channel | Center Frequency (MHz) | 20 dB Bandwidth (MHz) |
|---------------|---------|------------------------|-----------------------|
| GFSK          | 0       | 2402 MHz               | 0.9500                |
|               | 39      | 2441 MHz               | 0.9500                |
|               | 78      | 2480 MHz               | 0.9500                |
| $\pi/4$ DQPSK | 0       | 2402 MHz               | 1.280                 |
|               | 39      | 2441 MHz               | 1.270                 |
|               | 78      | 2480 MHz               | 1.280                 |
| 8DPSK         | 0       | 2402 MHz               | 1.290                 |
|               | 39      | 2441 MHz               | 1.290                 |
|               | 78      | 2480 MHz               | 1.290                 |

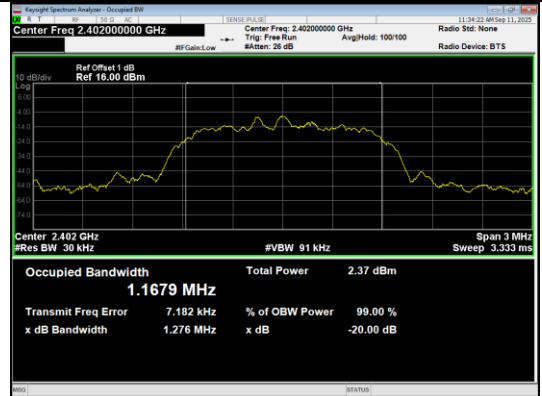
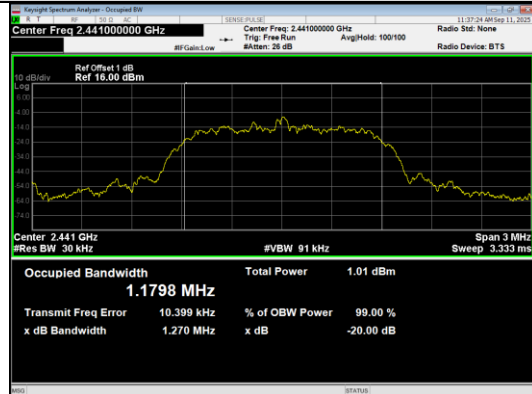
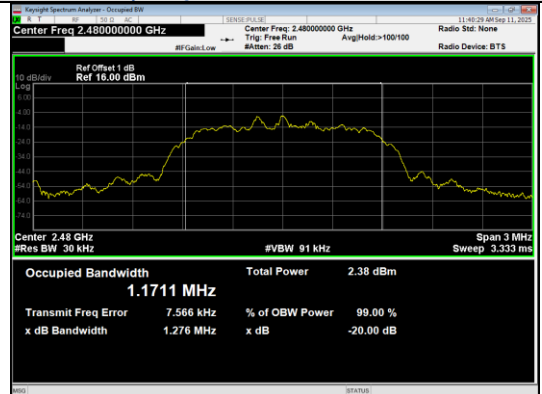
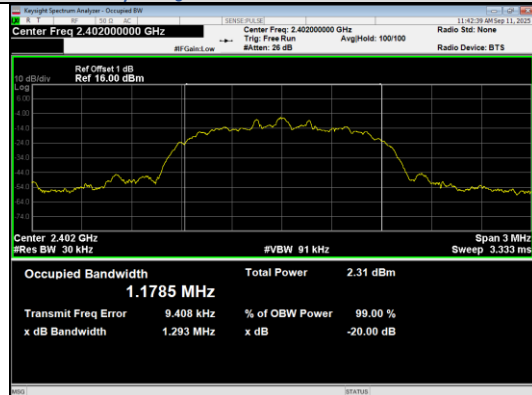
Remark: The report only shows the worst data. The left side is the worst when working.

### Test Graphs

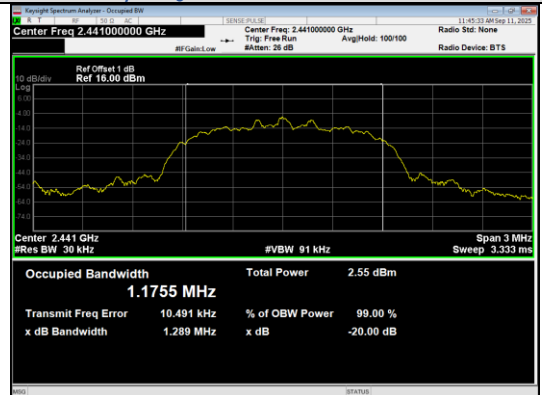




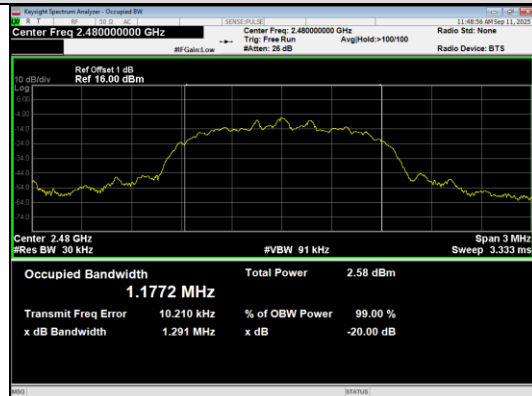
GFSK DH5\_Channel 78


 $\pi/4$ DQPSK 2-DH5\_Channel 0

 $\pi/4$ DQPSK 2-DH5\_Channel 39

 $\pi/4$ DQPSK 2-DH5\_Channel 78


8DPSK\_3-DH5\_Channel 0



8DPSK\_3-DH5\_Channel 39



8DPSK\_3-DH5\_Channel 78

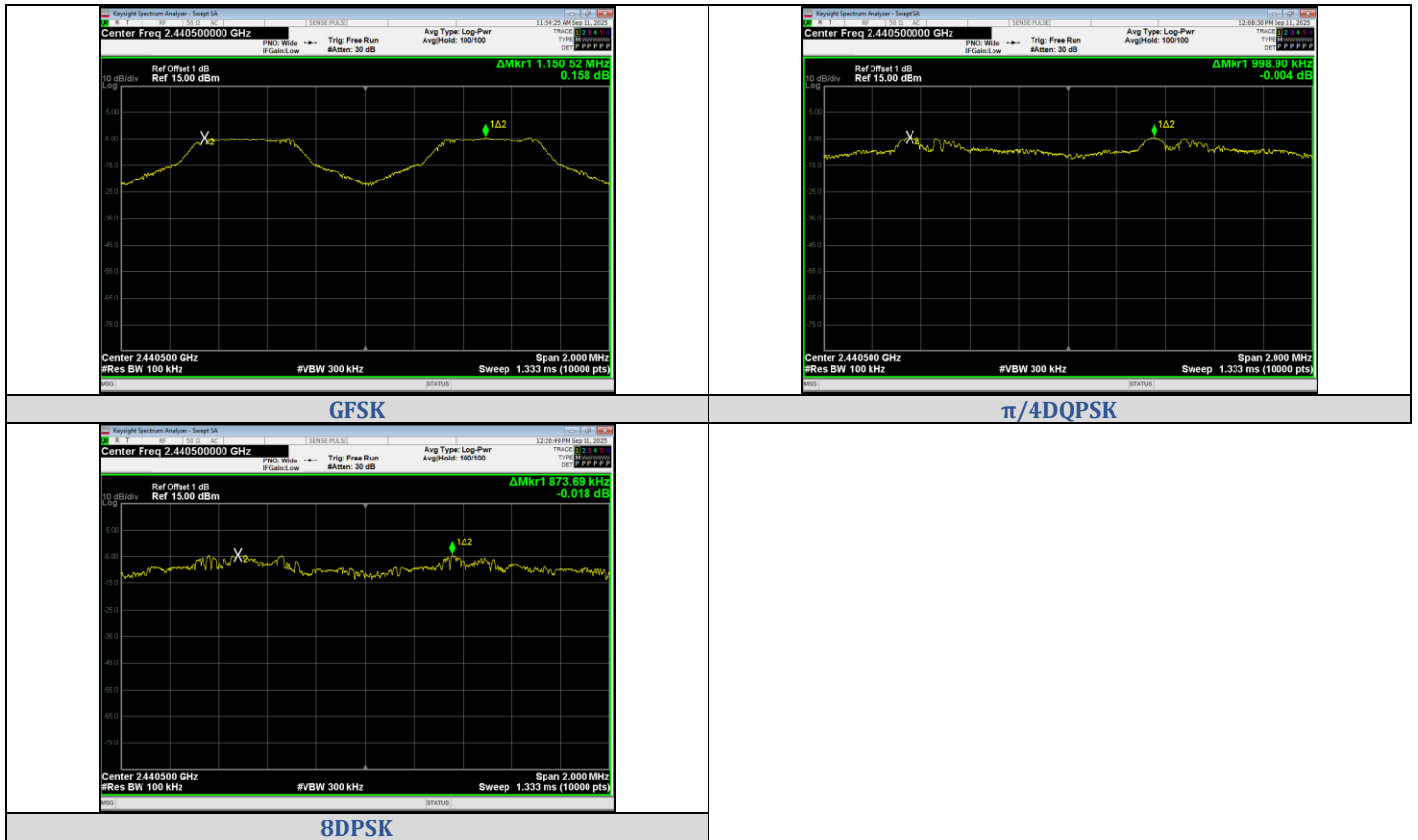
## Carrier Frequencies Separation

### Test Result

| Modulation    | Packet | Left Center frequency (MHz) | Right Center frequency (MHz) | Hopping Frequency Separation (MHz) | Limit (MHz) | Result |
|---------------|--------|-----------------------------|------------------------------|------------------------------------|-------------|--------|
| GFSK          | DH5    | 2439.8422                   | 2440.9927                    | 1.1505                             | 0.633       | PASS   |
| $\pi/4$ DQPSK | 2-DH5  | 2439.8532                   | 2440.8521                    | 0.9989                             | 0.853       | PASS   |
| 8DPSK         | 3-DH5  | 2439.9804                   | 2440.8541                    | 0.8737                             | 0.860       | PASS   |

Remark: The report only shows the worst data. The left side is the worst when working.

### Test Graphs



## Conducted Out Of Band Emission

### Test Result

Remark: The report only shows the worst data. The left side is the worst when working.

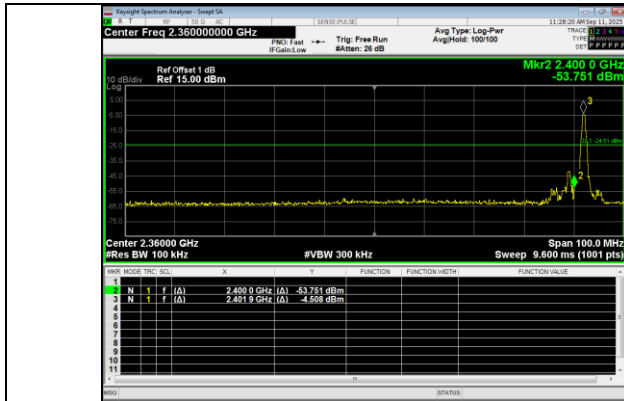
#### Non-Hopping

| Modulation    | Packet | Channel | OOB Emission Frequency (MHz) | OOB Emission Level (dBm) | Limit (dBm) | Over Limit (dB) | Result |
|---------------|--------|---------|------------------------------|--------------------------|-------------|-----------------|--------|
| GFSK          | DH5    | 0       | 2399.00                      | -41.802                  | -24.51      | -17.292         | PASS   |
|               |        |         | 2400.00                      | -53.750                  | -24.51      | -29.240         | PASS   |
|               |        |         | 9602.20                      | -43.346                  | -24.51      | -18.836         | PASS   |
|               |        | 39      | 9758.31                      | -44.432                  | -24.39      | -20.042         | PASS   |
|               |        | 78      | 2483.50                      | -55.820                  | -24.33      | -31.490         | PASS   |
|               |        |         | 9913.75                      | -43.885                  | -24.33      | -19.555         | PASS   |
| $\pi/4$ DQPSK | 2-DH5  | 0       | 2399.00                      | -42.142                  | -24.62      | -17.522         | PASS   |
|               |        |         | 2400.00                      | -56.560                  | -24.62      | -31.940         | PASS   |
|               |        |         | 9602.20                      | -42.902                  | -24.62      | -18.282         | PASS   |
|               |        | 39      | 9758.31                      | -44.477                  | -24.47      | -20.007         | PASS   |
|               |        | 78      | 2483.50                      | -58.190                  | -24.31      | -33.880         | PASS   |
|               |        |         | 9913.75                      | -43.568                  | -24.31      | -19.258         | PASS   |
| 8DPSK         | 3-DH5  | 0       | 2399.00                      | -41.908                  | -24.65      | -17.258         | PASS   |
|               |        |         | 2400.00                      | -55.440                  | -24.65      | -30.790         | PASS   |
|               |        |         | 9602.20                      | -43.034                  | -24.65      | -18.384         | PASS   |
|               |        | 39      | 9758.31                      | -44.487                  | -24.6       | -19.887         | PASS   |
|               |        | 78      | 2483.50                      | -57.640                  | -24.51      | -33.130         | PASS   |
|               |        |         | 9913.75                      | -43.400                  | -24.51      | -18.890         | PASS   |

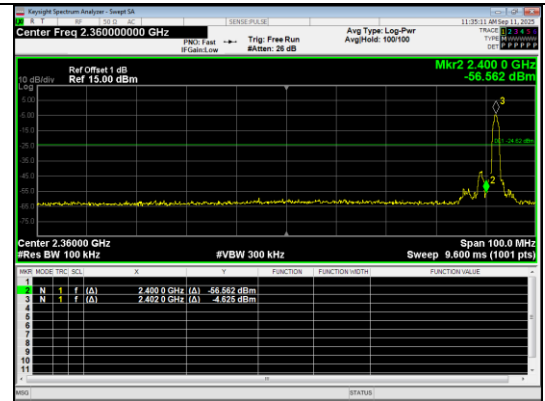
#### Hopping

| Modulation    | Packet | Channel | OOB<br>Emission<br>Frequency<br>(MHz) | OOB<br>Emission<br>Level<br>(dBm) | Limit<br>(dBm) | Over Limit<br>(dB) | Result |
|---------------|--------|---------|---------------------------------------|-----------------------------------|----------------|--------------------|--------|
| GFSK          | DH5    | Hopping | 2400.00                               | -42.080                           | -24.44         | -17.640            | PASS   |
|               |        |         | 2483.50                               | -57.480                           | -24.34         | -33.140            | PASS   |
| $\pi/4$ DQPSK | 2-DH5  |         | 2400.00                               | -43.270                           | -24.49         | -18.780            | PASS   |
|               |        |         | 2483.50                               | -60.390                           | -24.29         | -36.100            | PASS   |
| 8DPSK         | 3-DH5  |         | 2400.00                               | -44.590                           | -24.37         | -20.220            | PASS   |
|               |        |         | 2483.50                               | -59.050                           | -24.26         | -34.790            | PASS   |

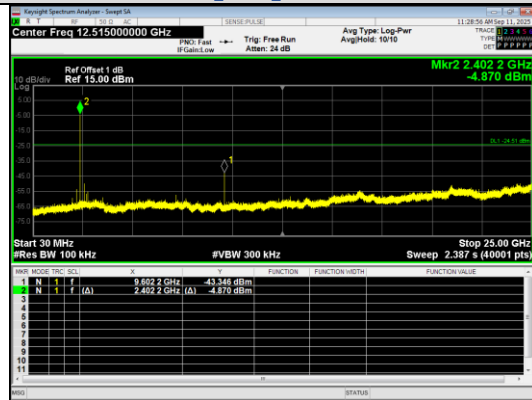
## Test Graphs



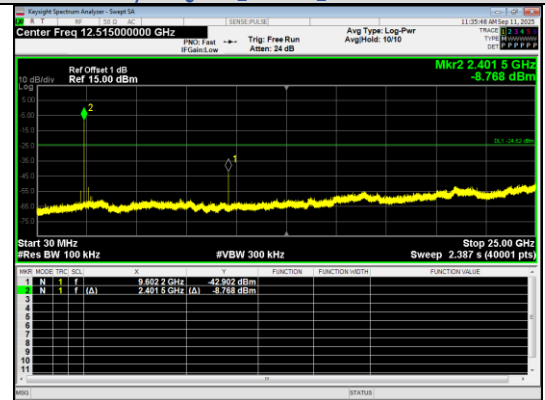
Out Of Band Emission  
GFSK\_DH5\_Channel 0



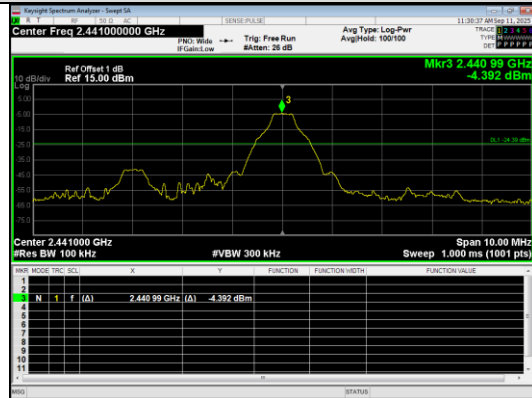
Out Of Band Emission  
 $\pi/4$ DQPSK\_2-DH5\_Channel 0



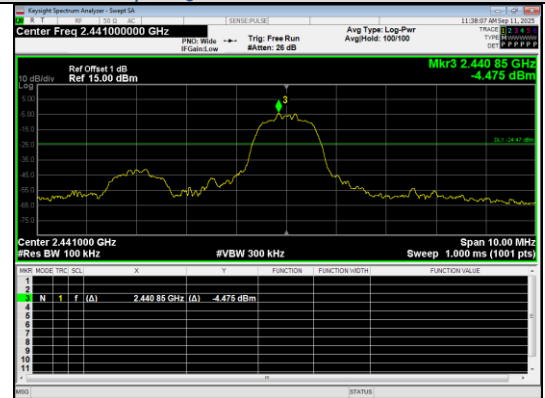
30.0 MHz - 25000.0 MHz  
GFSK\_DH5\_Channel 0



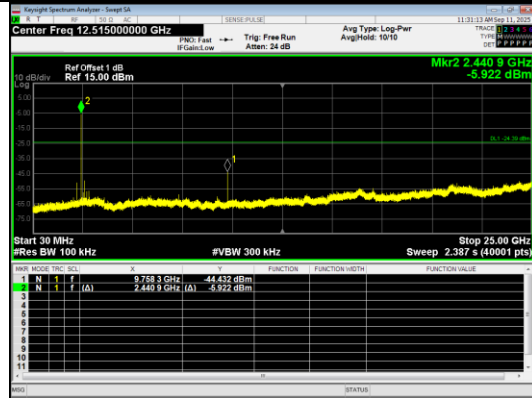
30.0 MHz - 25000.0 MHz  
 $\pi/4$ DQPSK\_2-DH5\_Channel 0



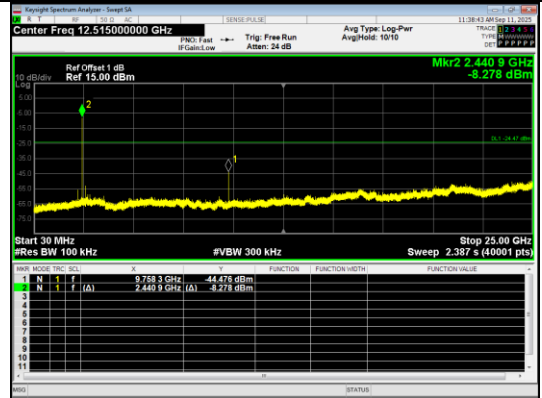
Out Of Band Emission  
GFSK\_DH5\_Channel 39



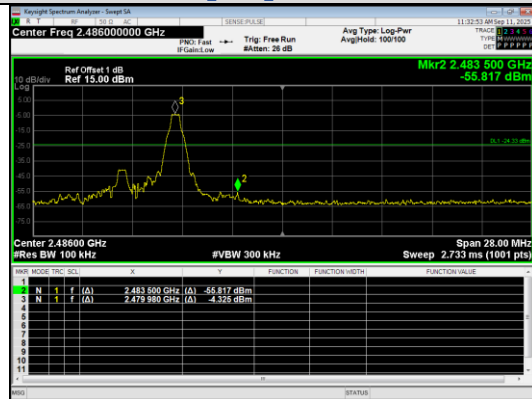
Out Of Band Emission  
 $\pi/4$ DQPSK\_2-DH5\_Channel 39



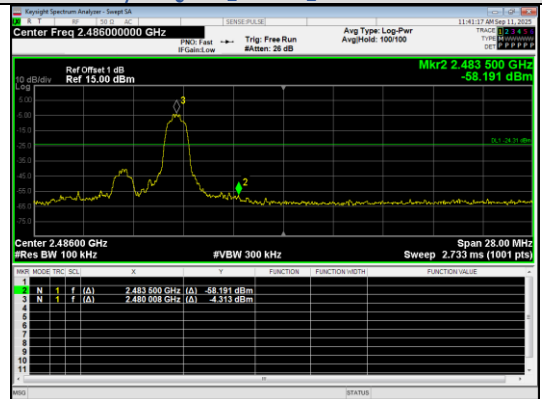
30.0 MHz - 25000.0 MHz  
GFSK\_DH5\_Channel 39



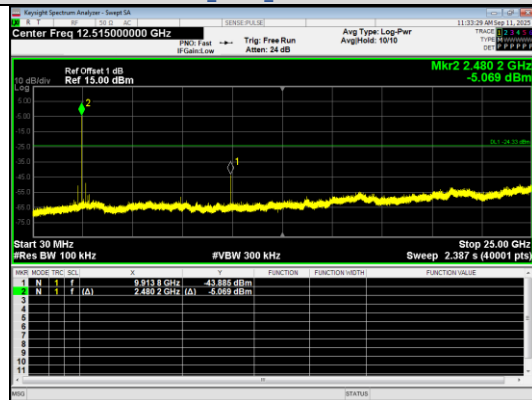
30.0 MHz - 25000.0 MHz  
 $\pi/4$ DQPSK\_2-DH5\_Channel 39



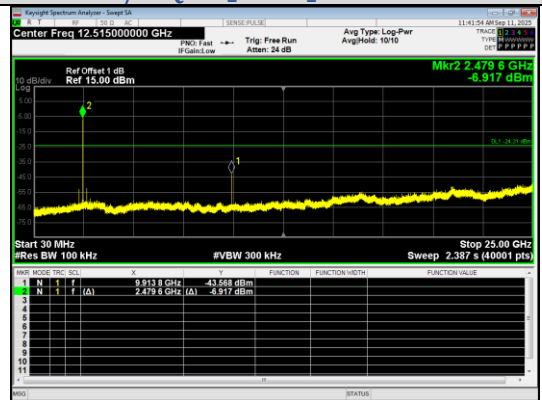
Out Of Band Emission  
GFSK\_DH5\_Channel 78



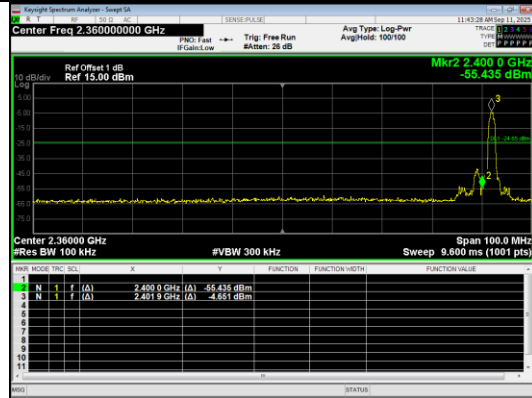
Out Of Band Emission  
 $\pi/4$ DQPSK\_2-DH5\_Channel 78



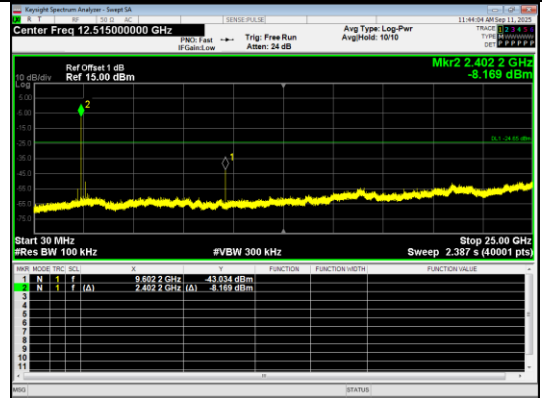
30.0 MHz - 25000.0 MHz  
GFSK\_DH5\_Channel 78



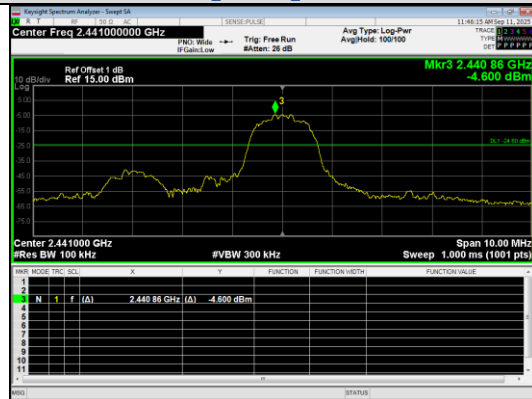
30.0 MHz - 25000.0 MHz  
 $\pi/4$ DQPSK\_2-DH5\_Channel 78



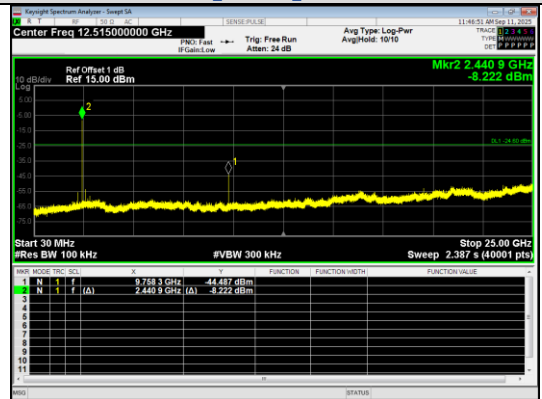
Out Of Band Emission  
8DPSK\_3-DH5\_Channel 0



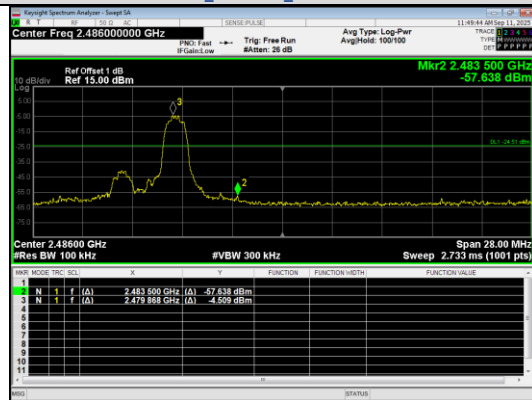
30.0 MHz - 25000.0 MHz  
8DPSK\_3-DH5\_Channel 0



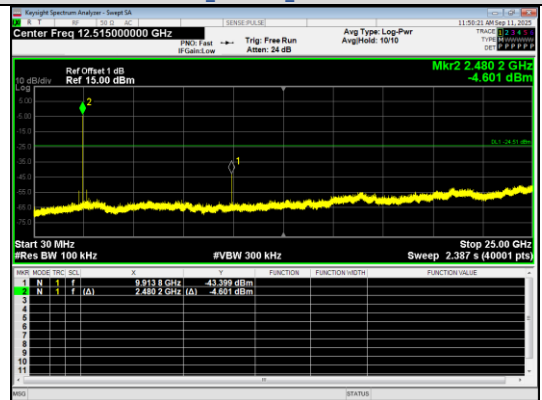
Out Of Band Emission  
8DPSK\_3-DH5\_Channel 39



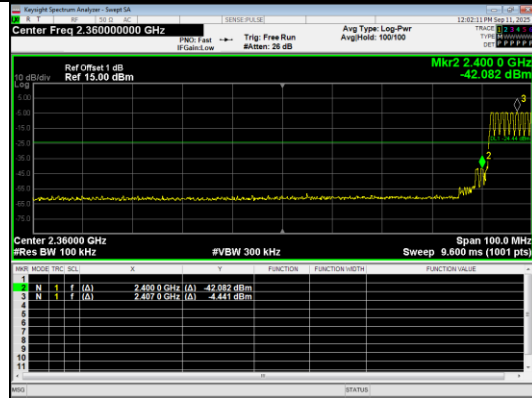
30.0 MHz - 25000.0 MHz  
8DPSK\_3-DH5\_Channel 39



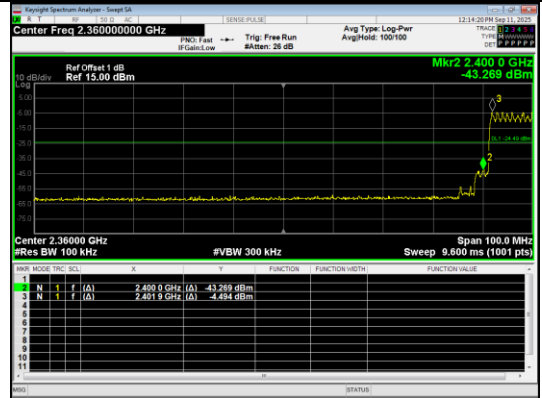
Out Of Band Emission  
8DPSK\_3-DH5\_Channel 78



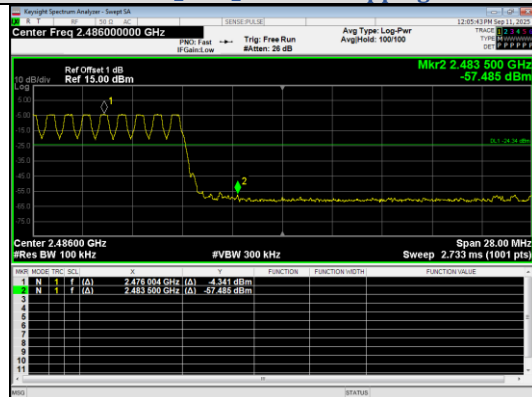
30.0 MHz - 25000.0 MHz  
8DPSK\_3-DH5\_Channel 78



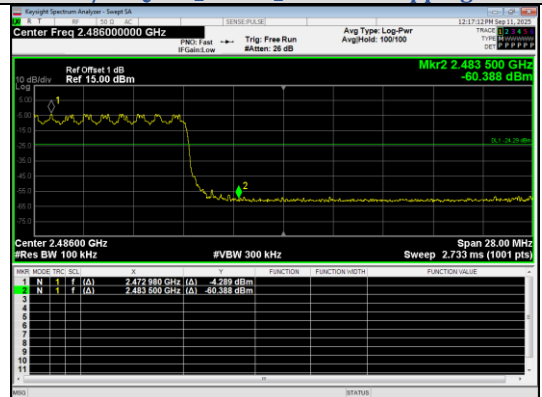
Out Of Band Emission(Left)  
GFSK\_DH5\_Channel Hopping



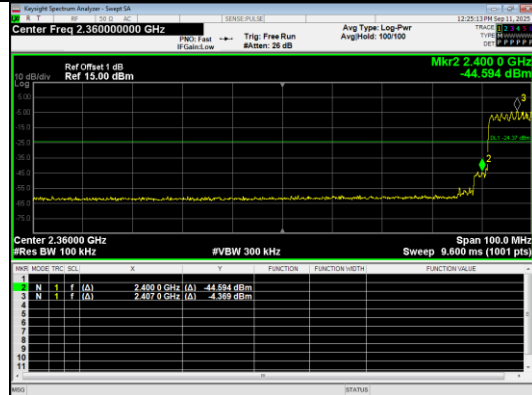
Out Of Band Emission(Left)  
 $\pi/4$ DQPSK\_2-DH5\_Channel Hopping



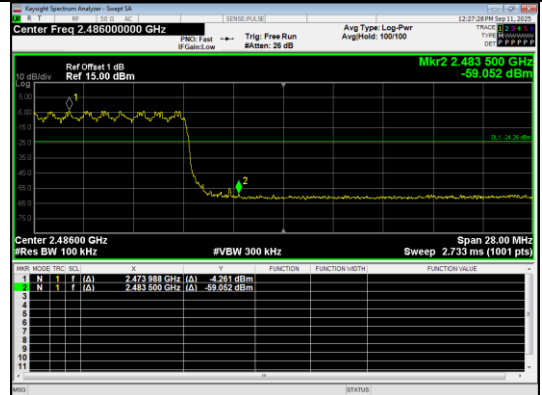
Out Of Band Emission(Right)  
GFSK\_DH5\_Channel Hopping



Out Of Band Emission(Right)  
 $\pi/4$ DQPSK\_2-DH5\_Channel Hopping



Out Of Band Emission(Left)  
8DPSK\_3-DH5\_Channel Hopping



Out Of Band Emission(Right)  
8DPSK\_3-DH5\_Channel Hopping

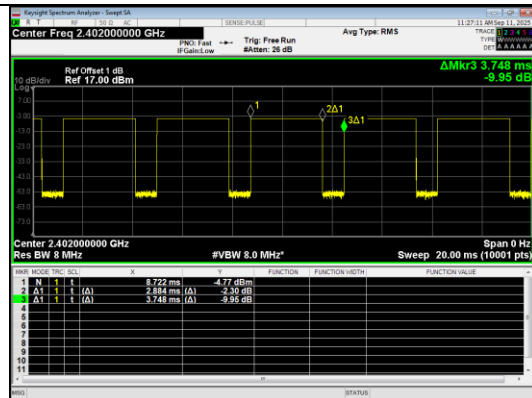
## Duty Cycle

### Test Result

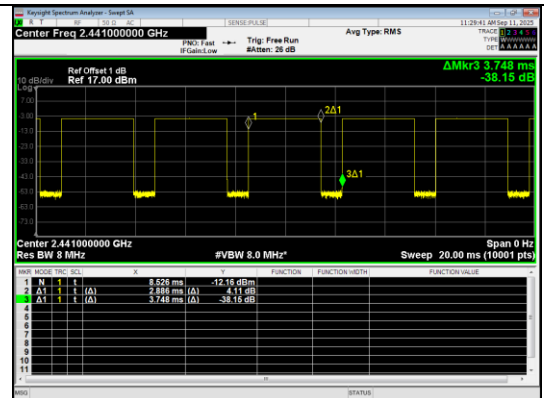
Remark: The report only shows the worst data. The left side is the worst when working.

| Modulation    | Packets | Channel | On Time (ms) | Period (ms) | Duty Cycle (%) | Duty Cycle (linear) | Duty Cycle Factor (dB) | 1/T    |
|---------------|---------|---------|--------------|-------------|----------------|---------------------|------------------------|--------|
| GFSK          | DH5     | 0       | 2.884        | 3.748       | 76.95          | 0.7695              | 1.1379                 | 0.3467 |
|               |         | 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 |
| $\pi/4$ DQPSK | 2-DH5   | 0       | 2.890        | 3.748       | 77.11          | 0.7711              | 1.1289                 | 0.3460 |
|               |         | 39      | 2.892        | 3.748       | 77.16          | 0.7716              | 1.1261                 | 0.3458 |
|               |         | 78      | 2.890        | 3.748       | 77.11          | 0.7711              | 1.1289                 | 0.3460 |
| 8DPSK         | 3-DH5   | 0       | 2.894        | 3.748       | 77.21          | 0.7721              | 1.1233                 | 0.3455 |
|               |         | 39      | 2.892        | 3.746       | 77.20          | 0.7720              | 1.1238                 | 0.3458 |
|               |         | 78      | 2.892        | 3.748       | 77.16          | 0.7716              | 1.1261                 | 0.3458 |

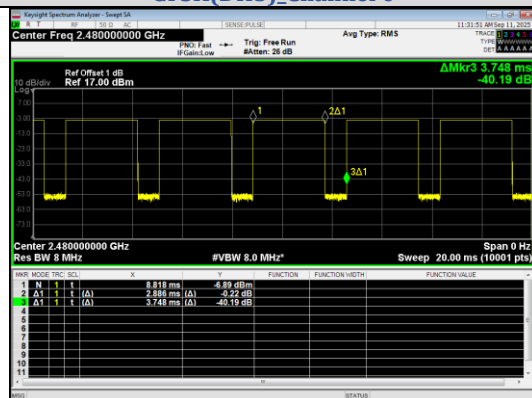
## Test Graphs



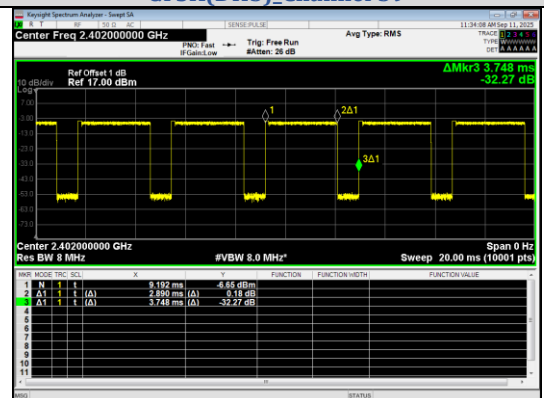
GFSK(DH5)\_Channel 0



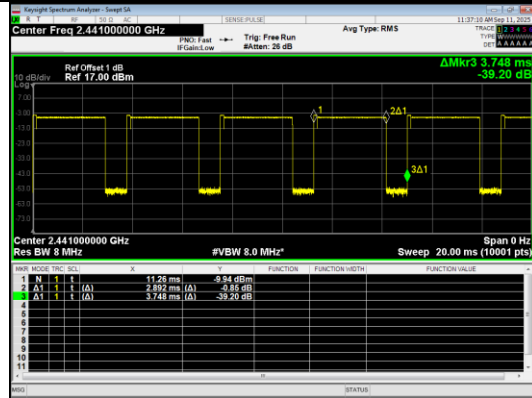
GFSK(DH5)\_Channel 39



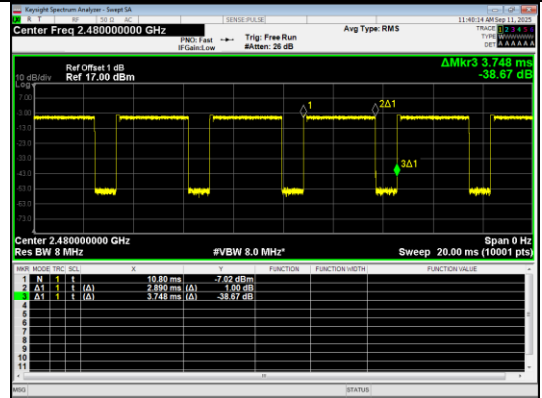
GFSK(DH5)\_Channel 78



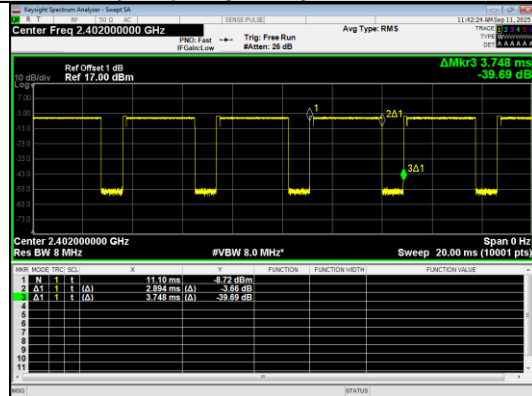
$\pi/4$ DQPSK(2-DH5)\_Channel 0



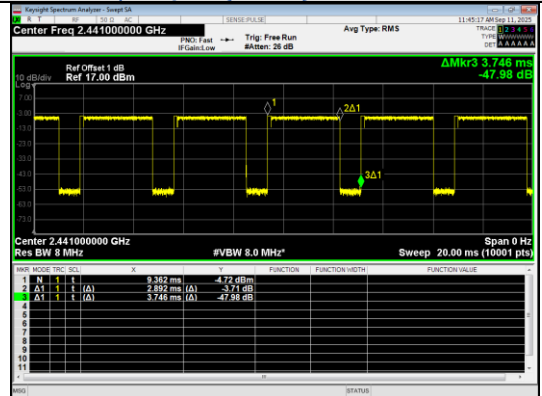
$\pi/4$ DQPSK(2-DH5)\_Channel 39



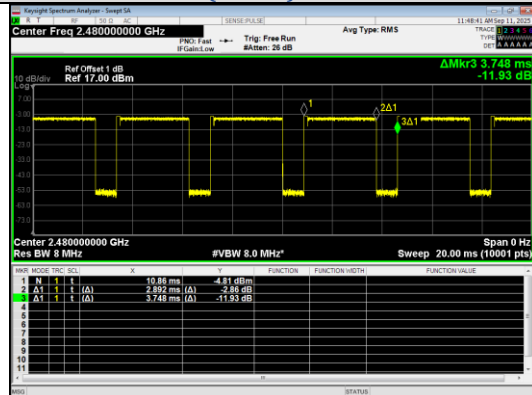
$\pi/4$ DQPSK(2-DH5)\_Channel 78



8DPSK(3-DH5)\_Channel 0



8DPSK(3-DH5)\_Channel 39



8DPSK(3-DH5)\_Channel 78

## Dwell Time

### Test Result

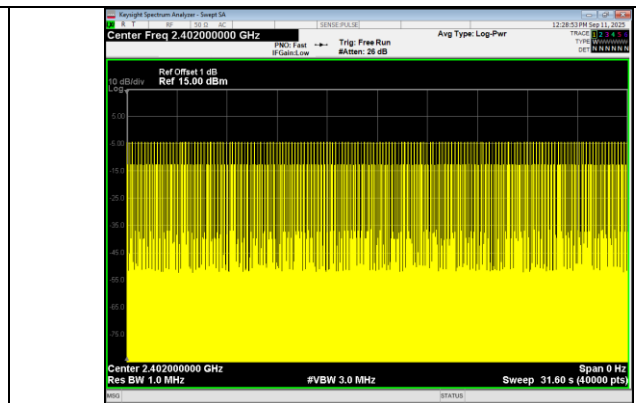
Remark: The report only shows the worst data. The left side is the worst when working.

| Modulation    | Packet | Channel | Pulse Width (ms) | Number of Pulses in 31.6 seconds | Dwell Time (ms) | Limit (ms) | Result |
|---------------|--------|---------|------------------|----------------------------------|-----------------|------------|--------|
| GFSK          | DH1    | Hopping | 0.3804           | 315                              | 119.83          | < 400      | PASS   |
|               | DH3    |         | 1.632            | 155                              | 252.96          |            | PASS   |
|               | DH5    |         | 2.880            | 115                              | 331.2           |            | PASS   |
| $\pi/4$ DQPSK | 2-DH1  |         | 0.3912           | 318                              | 124.4           |            | PASS   |
|               | 2-DH3  |         | 1.656            | 160                              | 264.96          |            | PASS   |
|               | 2-DH5  |         | 2.896            | 115                              | 333.04          |            | PASS   |
| 8DPSK         | 3-DH1  |         | 0.3912           | 315                              | 123.23          |            | PASS   |
|               | 3-DH3  |         | 1.656            | 159                              | 263.3           |            | PASS   |
|               | 3-DH5  |         | 2.880            | 112                              | 322.56          |            | PASS   |

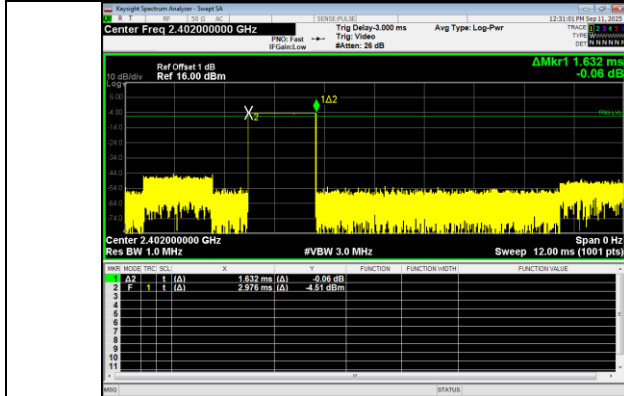
### Test Graphs



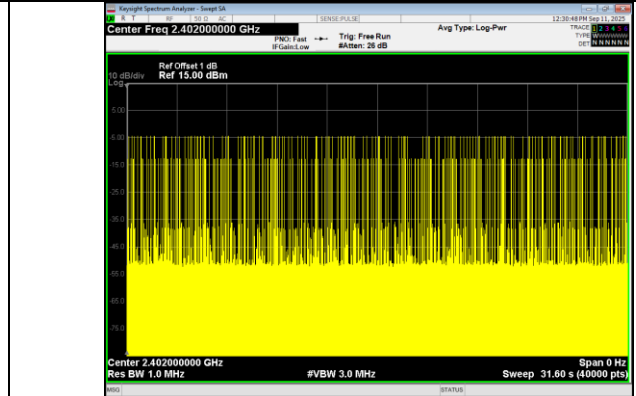
Pulse Width  
GFSK\_DH1



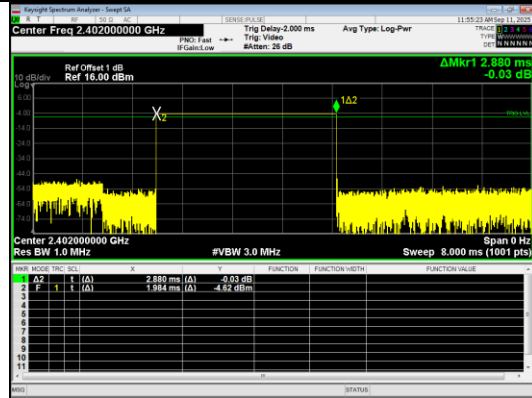
Number of Pulses in 31.6 seconds  
GFSK\_DH1



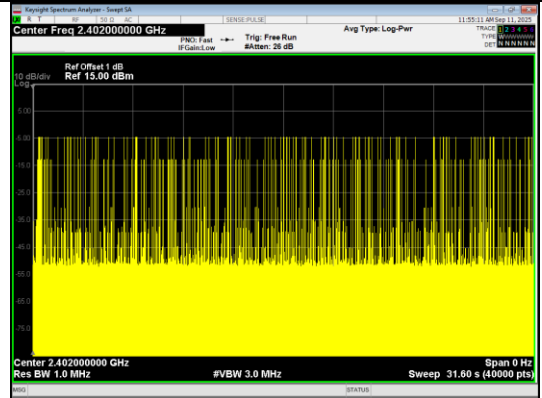
Pulse Width  
GFSK\_DH3



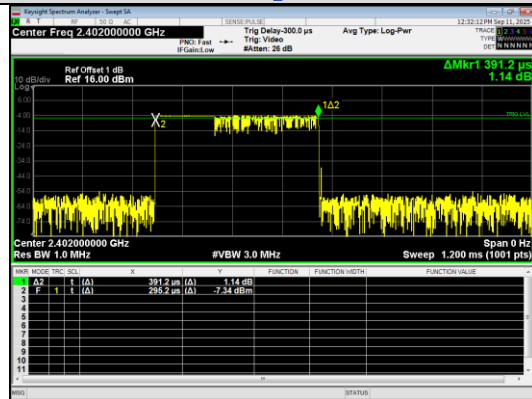
Number of Pulses in 31.6 seconds  
GFSK\_DH3



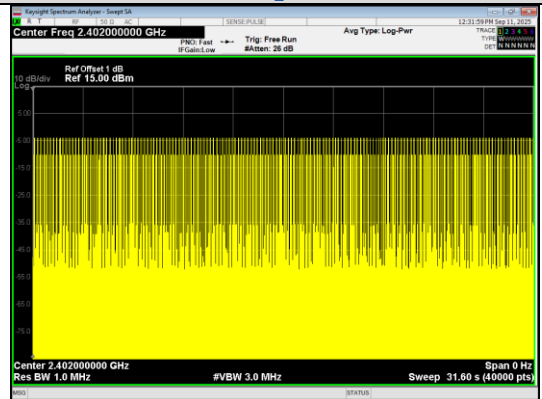
Pulse Width  
GFSK\_DH5



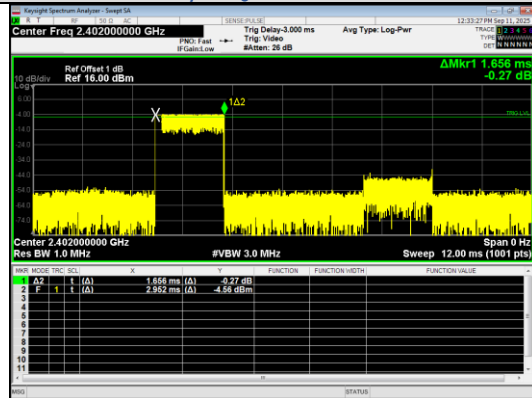
Number of Pulses in 31.6 seconds  
GFSK\_DH5



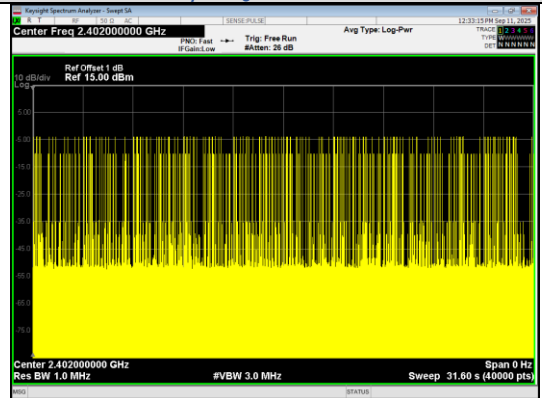
Pulse Width  
 $\pi/4$ DQPSK\_2-DH1



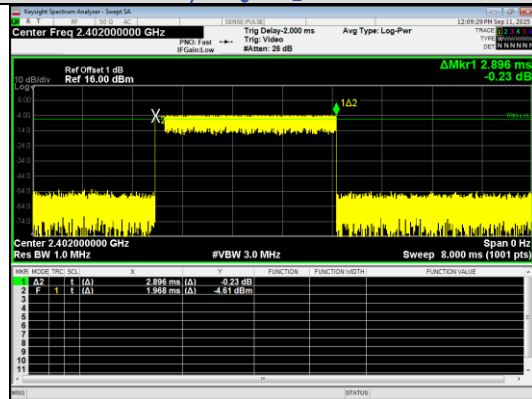
Number of Pulses in 31.6 seconds  
 $\pi/4$ DQPSK\_2-DH1



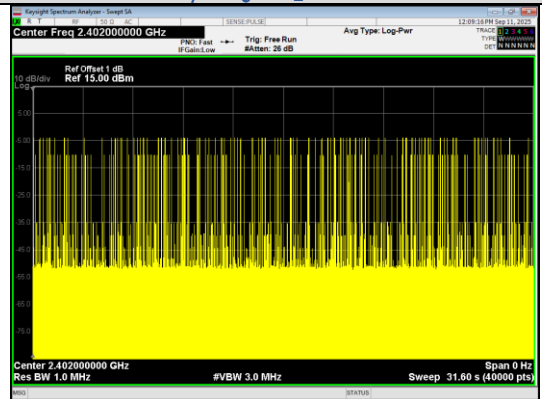
Pulse Width  
 $\pi/4$ DQPSK\_2-DH3



Number of Pulses in 31.6 seconds  
 $\pi/4$ DQPSK\_2-DH3

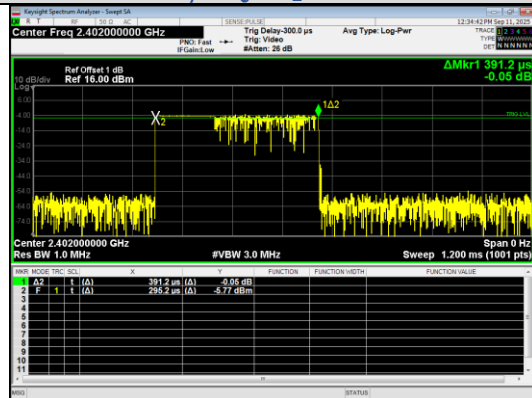
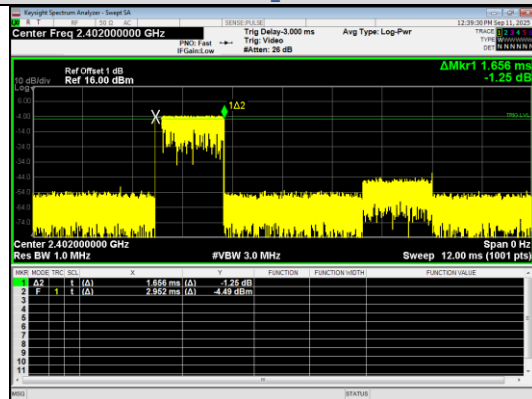


Pulse Width

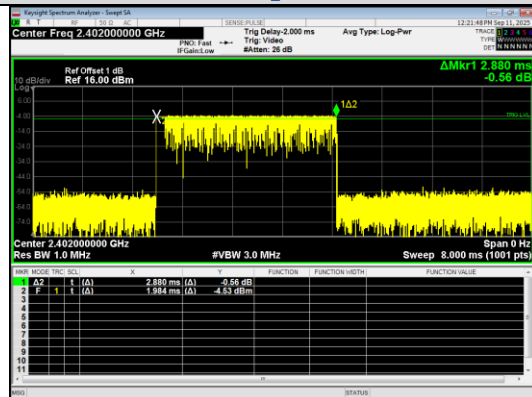


Number of Pulses in 31.6 seconds

$\pi/4$ DQPSK\_2-DH5

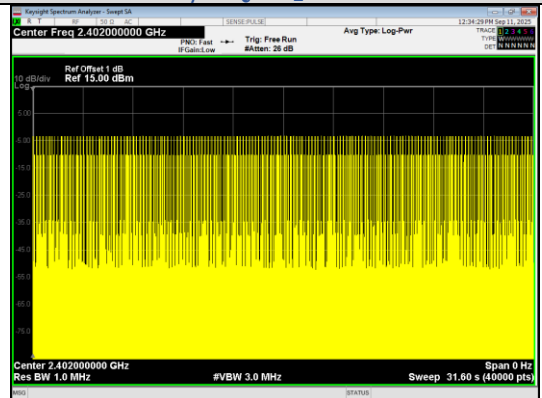
Pulse Width  
8DPSK\_3-DH1

### Pulse Width 8DPSK\_3-DH3

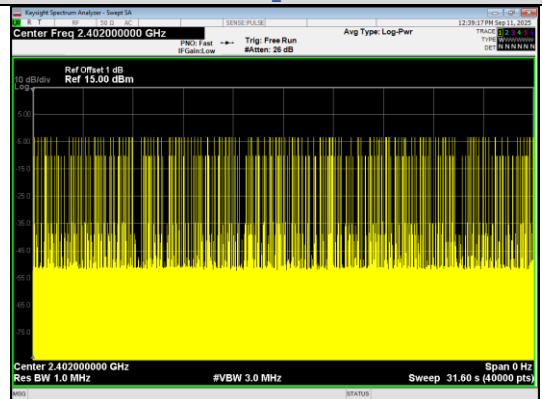


## Pulse Width 8DPSK\_3-DH5

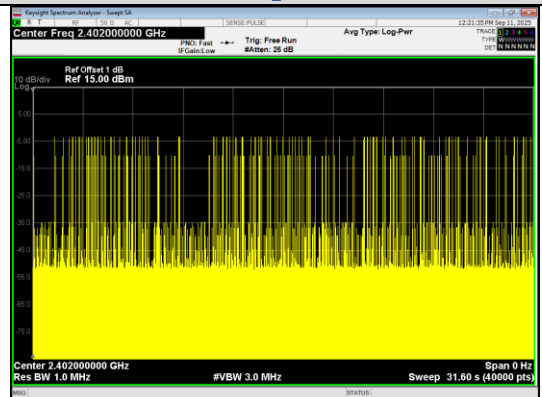
$\pi/4$ DQPSK\_2-DH5



**Number of Pulses in 31.6 seconds**  
**8DPSK\_3-DH1**



**Number of Pulses in 31.6 seconds**  
**8DPSK\_3-DH3**



**Number of Pulses in 31.6 seconds**  
**8DPSK\_3-DH5**

## Number Of Hopping Channel

### Test Result

Remark: The report only shows the worst data. The left side is the worst when working.

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

### Test Graphs

