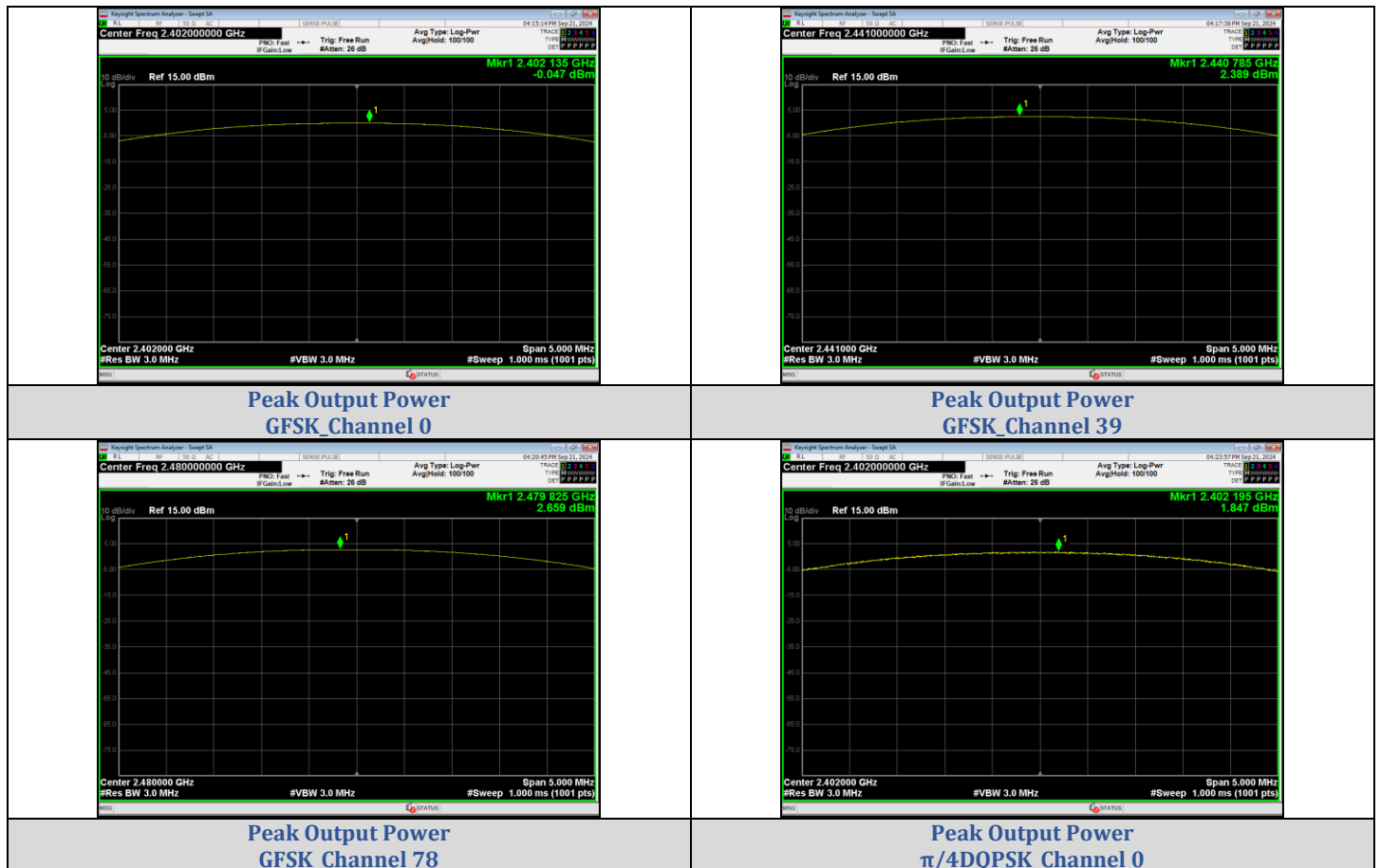


## Conducted Output Power

### Test Result

| Modulation    | Packet Type | Channel | Peak Output Power (dBm) | Peak Output Power (mW) | Max. Avg. Power (dBm) | Limit (dBm) | Result |
|---------------|-------------|---------|-------------------------|------------------------|-----------------------|-------------|--------|
| GFSK          | DH5         | 0       | -0.047                  | 0.989                  | None                  | ≤30         | PASS   |
|               |             | 39      | 2.389                   | 1.733                  | None                  |             | PASS   |
|               |             | 78      | 2.659                   | 1.845                  | None                  |             | PASS   |
| $\pi/4$ DQPSK | 2-DH5       | 0       | 1.847                   | 1.530                  | None                  | ≤20.97      | PASS   |
|               |             | 39      | 4.202                   | 2.631                  | None                  |             | PASS   |
|               |             | 78      | 4.501                   | 2.819                  | None                  |             | PASS   |
| 8DPSK         | 3-DH5       | 0       | 2.075                   | 1.613                  | None                  |             | PASS   |
|               |             | 39      | 4.437                   | 2.778                  | None                  |             | PASS   |
|               |             | 78      | 4.689                   | 2.944                  | None                  |             | PASS   |

### Test Graphs





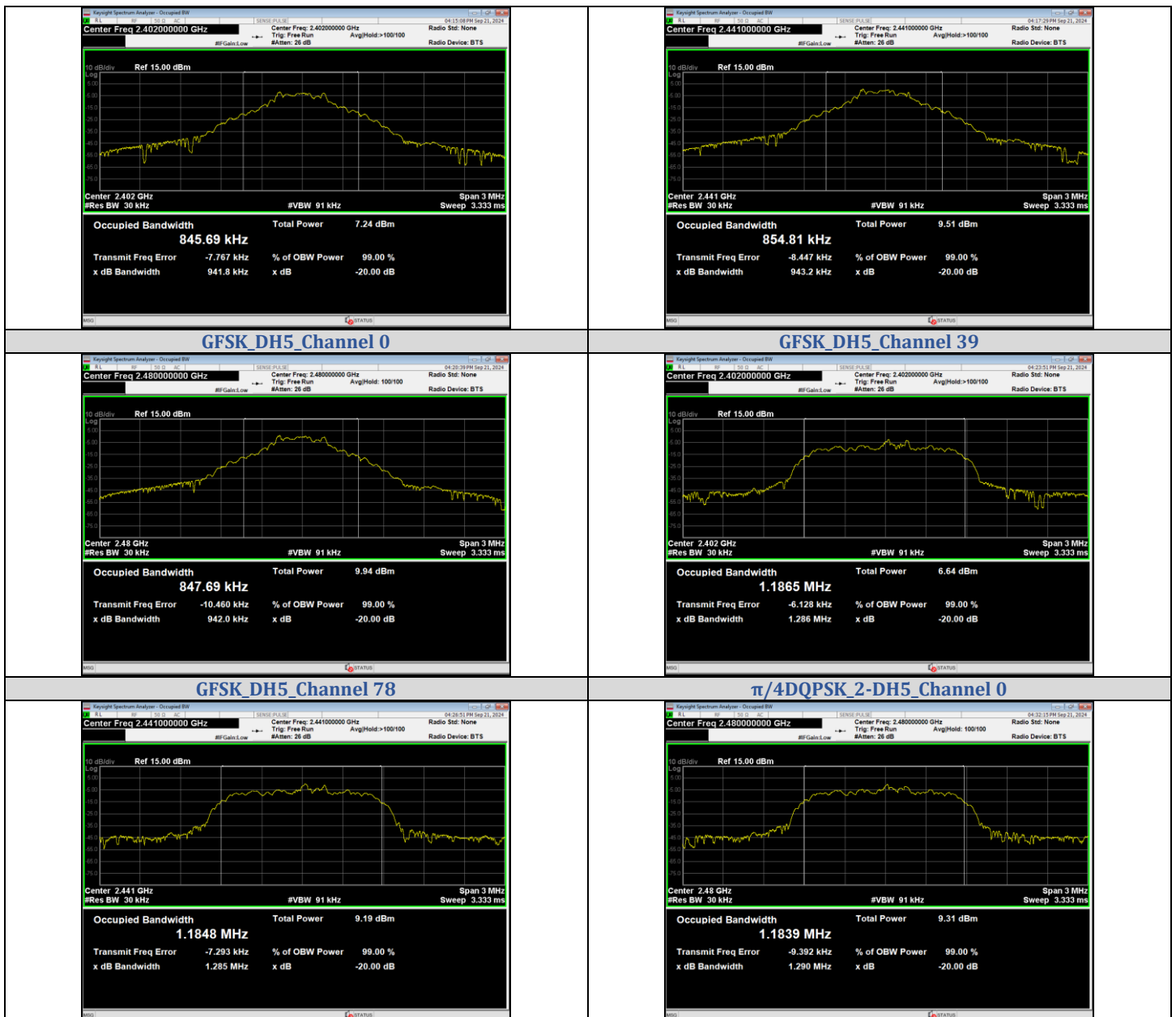


## 20dB Bandwidth

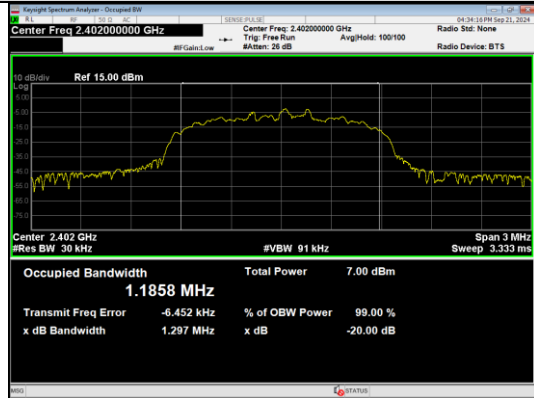
### Test Result

| Modulation    | Channel | Center Frequency (MHz) | 20 dB Bandwidth (MHz) |
|---------------|---------|------------------------|-----------------------|
| GFSK          | 0       | 2402 MHz               | 0.9418                |
|               | 39      | 2441 MHz               | 0.9432                |
|               | 78      | 2480 MHz               | 0.9420                |
| $\pi/4$ DQPSK | 0       | 2402 MHz               | 1.286                 |
|               | 39      | 2441 MHz               | 1.285                 |
|               | 78      | 2480 MHz               | 1.290                 |
| 8DPSK         | 0       | 2402 MHz               | 1.297                 |
|               | 39      | 2441 MHz               | 1.297                 |
|               | 78      | 2480 MHz               | 1.301                 |

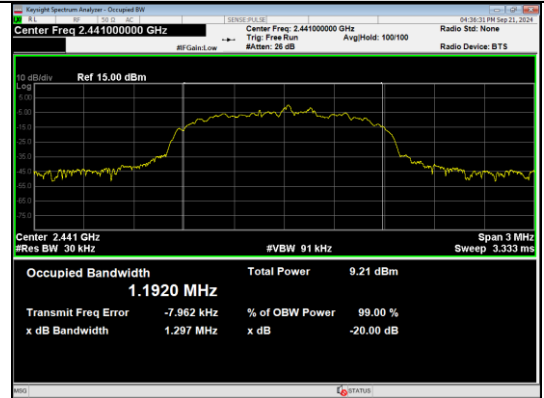
### Test Graphs



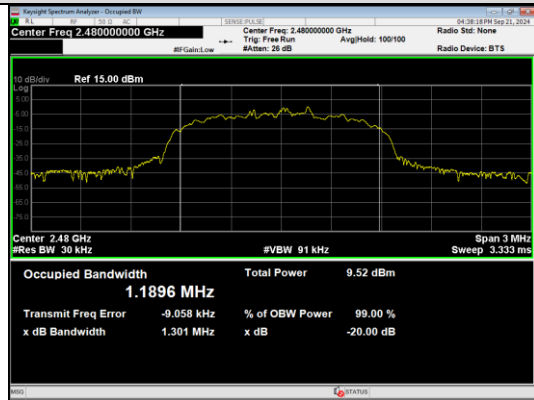
### $\pi/4$ DQPSK\_2-DH5\_Channel 39



### $\pi/4$ DQPSK\_2-DH5\_Channel 78



### 8DPSK\_3-DH5\_Channel 0



### 8DPSK\_3-DH5\_Channel 39

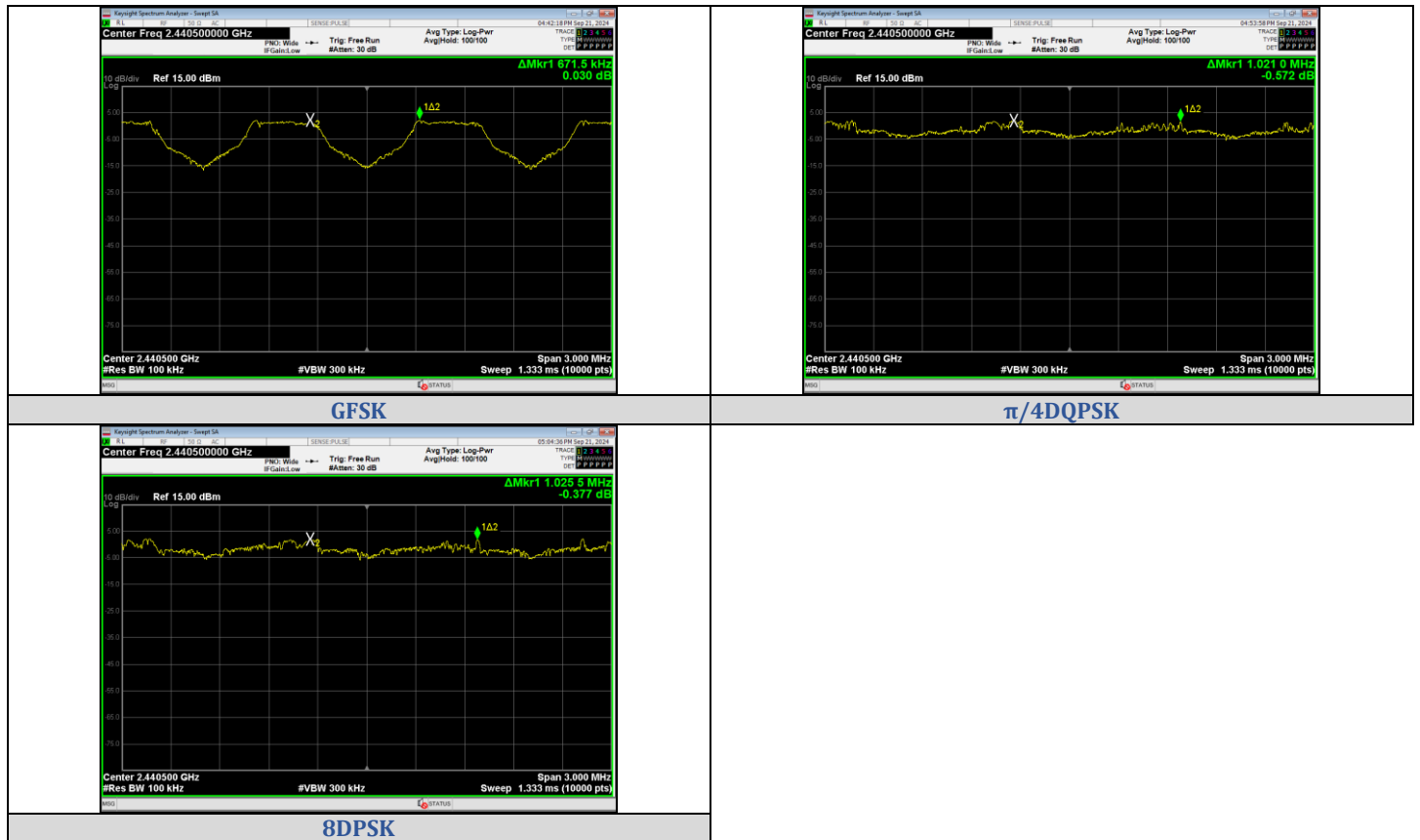
### 8DPSK\_3-DH5\_Channel 78

## Carrier Frequencies Separation

### Test Result

| Modulation    | Packet | Left Center frequency (MHz) | Right Center frequency (MHz) | Hopping Frequency Separation (MHz) | Limit (MHz) | Result |
|---------------|--------|-----------------------------|------------------------------|------------------------------------|-------------|--------|
| GFSK          | DH5    | 2440.1515                   | 2440.823                     | 0.6715                             | 0.628       | PASS   |
| $\pi/4$ DQPSK | 2-DH5  | 2440.1575                   | 2441.1785                    | 1.0210                             | 0.86        | PASS   |
| 8DPSK         | 3-DH5  | 2440.1518                   | 2441.1773                    | 1.0255                             | 0.867       | PASS   |

### Test Graphs



## Conducted Out Of Band Emission

### Test Result

#### Non-Hopping

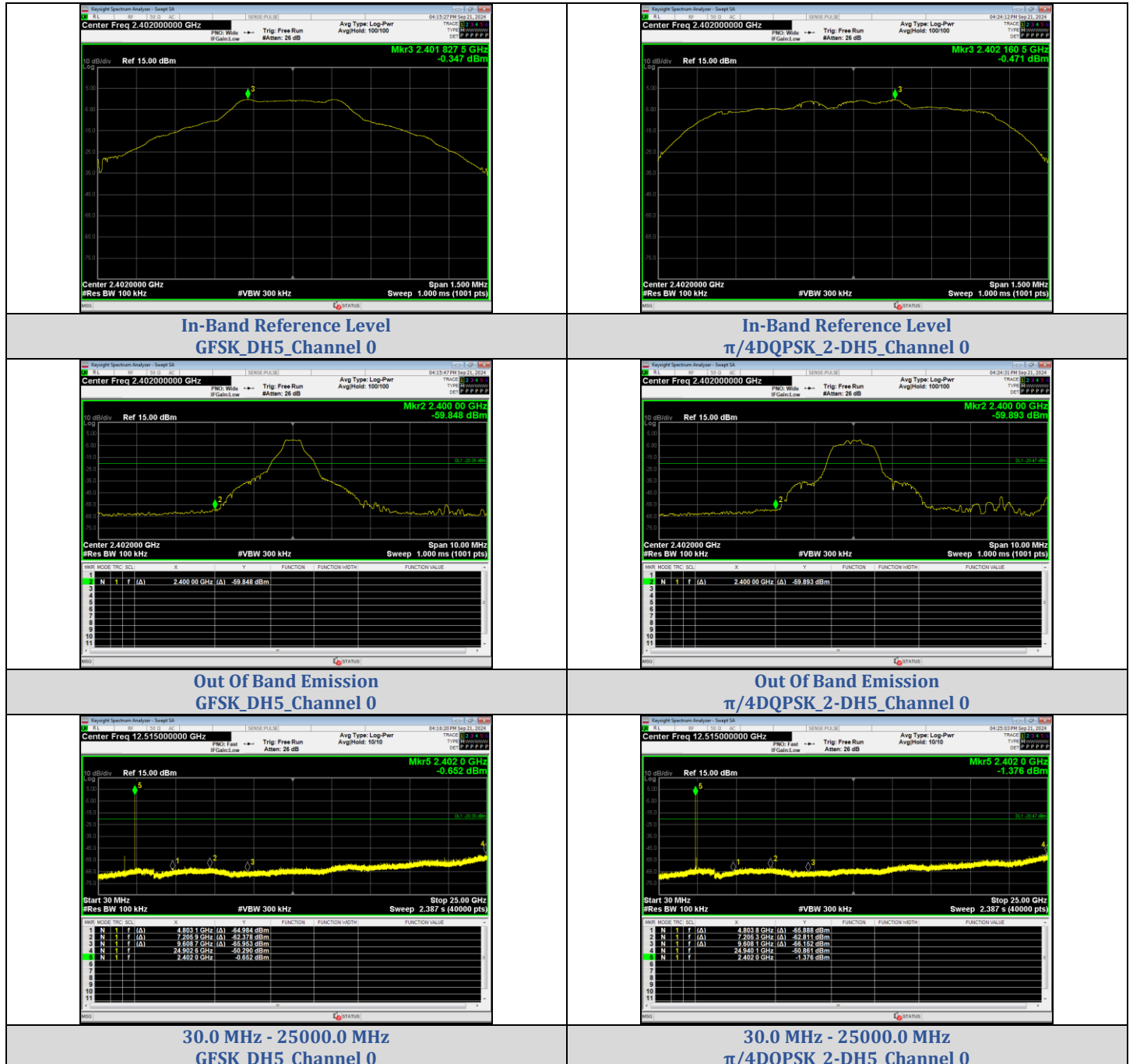
| Modulation    | Packet | Channel | OOB Emission Frequency (MHz) | OOB Emission Level (dBm) | Limit (dBm) | Over Limit (dB) | Result |
|---------------|--------|---------|------------------------------|--------------------------|-------------|-----------------|--------|
| GFSK          | DH5    | 0       | 2400.00                      | -59.848                  | -20.35      | -39.498         | PASS   |
|               |        |         | 4803.13                      | -64.984                  | -20.35      | -44.634         | PASS   |
|               |        |         | 7205.93                      | -62.377                  | -20.35      | -42.027         | PASS   |
|               |        |         | 9608.73                      | -65.953                  | -20.35      | -45.603         | PASS   |
|               |        |         | 24902.6                      | -50.290                  | -20.35      | -29.940         | PASS   |
|               |        | 39      | 4881.79                      | -63.816                  | -17.84      | -45.976         | PASS   |
|               |        |         | 7322.67                      | -59.313                  | -17.84      | -41.473         | PASS   |
|               |        |         | 9764.80                      | -66.097                  | -17.84      | -48.257         | PASS   |
|               |        |         | 24500.6                      | -49.774                  | -17.84      | -31.934         | PASS   |
|               |        | 78      | 2483.50                      | -60.837                  | -17.57      | -43.267         | PASS   |
|               |        |         | 4959.20                      | -65.671                  | -17.57      | -48.101         | PASS   |
|               |        |         | 7439.41                      | -58.834                  | -17.57      | -41.264         | PASS   |
|               |        |         | 9920.86                      | -66.857                  | -17.57      | -49.287         | PASS   |
|               |        |         | 24873.9                      | -49.616                  | -17.57      | -32.046         | PASS   |
| $\pi/4$ DQPSK | 2-DH5  | 0       | 2400.00                      | -59.893                  | -20.47      | -39.423         | PASS   |
|               |        |         | 4803.76                      | -65.888                  | -20.47      | -45.418         | PASS   |
|               |        |         | 7205.31                      | -62.811                  | -20.47      | -42.341         | PASS   |
|               |        |         | 9608.11                      | -66.152                  | -20.47      | -45.682         | PASS   |
|               |        |         | 24940.1                      | -50.861                  | -20.47      | -30.391         | PASS   |
|               |        | 39      | 4882.42                      | -65.515                  | -18.05      | -47.465         | PASS   |
|               |        |         | 7323.30                      | -60.489                  | -18.05      | -42.439         | PASS   |
|               |        |         | 9763.55                      | -66.513                  | -18.05      | -48.463         | PASS   |
|               |        |         | 24986.9                      | -50.457                  | -18.05      | -32.407         | PASS   |
|               |        | 78      | 2483.50                      | -61.403                  | -17.74      | -43.663         | PASS   |
|               |        |         | 4959.20                      | -65.139                  | -17.74      | -47.399         | PASS   |
|               |        |         | 7440.03                      | -59.871                  | -17.74      | -42.131         | PASS   |
|               |        |         | 9919.62                      | -66.971                  | -17.74      | -49.231         | PASS   |
|               |        |         | 24883.3                      | -50.621                  | -17.74      | -32.881         | PASS   |
| 8DPSK         | 3-DH5  | 0       | 2400.00                      | -59.215                  | -20.3       | -38.915         | PASS   |
|               |        |         | 4804.38                      | -65.722                  | -20.3       | -45.422         | PASS   |
|               |        |         | 7205.93                      | -63.480                  | -20.3       | -43.180         | PASS   |
|               |        |         | 9607.48                      | -66.662                  | -20.3       | -46.362         | PASS   |
|               |        |         | 24867.7                      | -50.339                  | -20.3       | -30.039         | PASS   |
|               |        | 39      | 4881.17                      | -64.740                  | -17.92      | -46.820         | PASS   |
|               |        |         | 7322.67                      | -61.215                  | -17.92      | -43.295         | PASS   |
|               |        |         | 9764.17                      | -67.029                  | -17.92      | -49.109         | PASS   |
|               |        |         | 24802.7                      | -50.119                  | -17.92      | -32.199         | PASS   |
|               |        | 78      | 2483.50                      | -60.841                  | -17.62      | -43.221         | PASS   |
|               |        |         | 4959.20                      | -64.264                  | -17.62      | -46.644         | PASS   |
|               |        |         | 7440.03                      | -60.739                  | -17.62      | -43.119         | PASS   |
|               |        |         | 9920.24                      | -65.996                  | -17.62      | -48.376         | PASS   |
|               |        |         | 24897.0                      | -50.026                  | -17.62      | -32.406         | PASS   |

#### Hopping

| Modulation | Packet | Channel | OOB Emission Frequency (MHz) | OOB Emission Level (dBm) | Limit (dBm) | Over Limit (dB) | Result |
|------------|--------|---------|------------------------------|--------------------------|-------------|-----------------|--------|
| GFSK       | DH5    | Hopping | 2396.50                      | -61.850                  | -20.21      | -41.640         | PASS   |

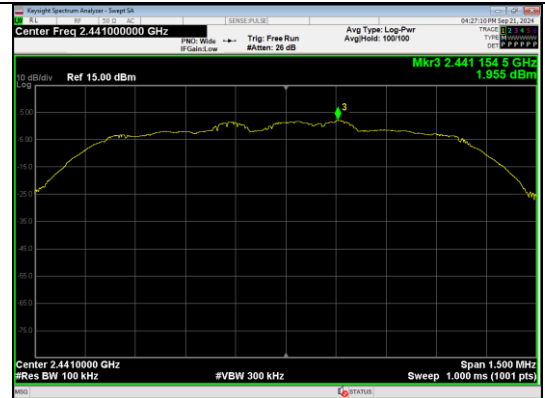
|               |       |  |         |         |        |         |      |
|---------------|-------|--|---------|---------|--------|---------|------|
| $\pi/4$ DQPSK | 2-DH5 |  | 2400.00 | -62.588 | -20.21 | -42.378 | PASS |
|               |       |  | 2483.50 | -61.919 | -17.52 | -44.399 | PASS |
|               |       |  | 2396.87 | -60.204 | -20.6  | -39.604 | PASS |
|               |       |  | 2400.00 | -62.166 | -20.6  | -41.566 | PASS |
|               |       |  | 2483.50 | -62.668 | -17.71 | -44.958 | PASS |
| 8DPSK         | 3-DH5 |  | 2400.00 | -59.610 | -20.29 | -39.320 | PASS |
|               |       |  | 2483.50 | -60.958 | -17.4  | -43.558 | PASS |

## Test Graphs

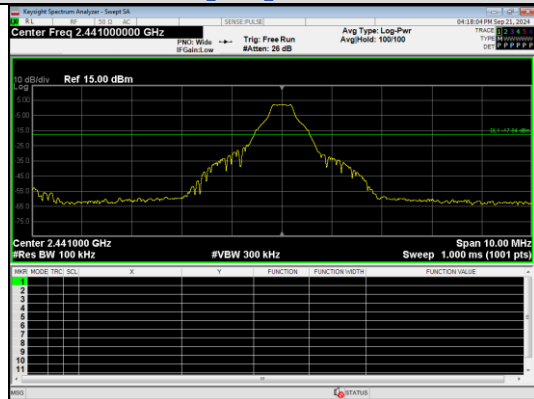




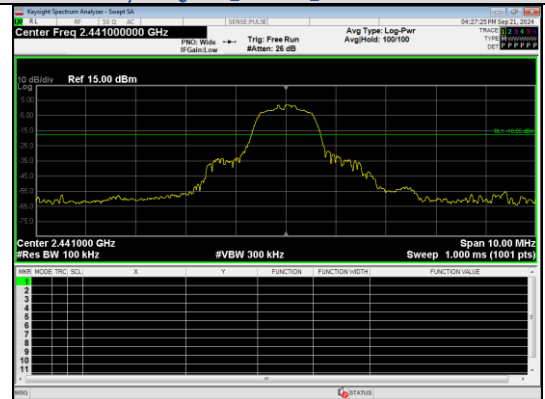
In-Band Reference Level  
GFSK\_DH5\_Channel 39



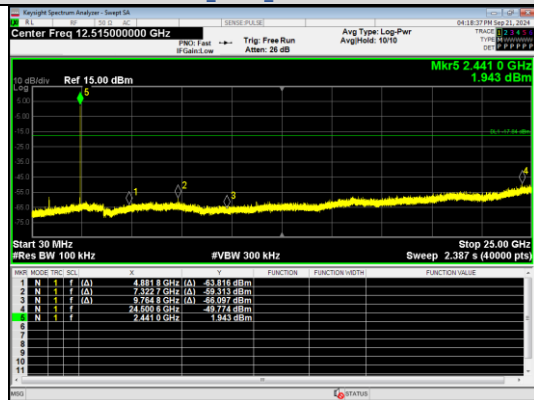
In-Band Reference Level  
 $\pi/4$ DQPSK\_2-DH5\_Channel 39



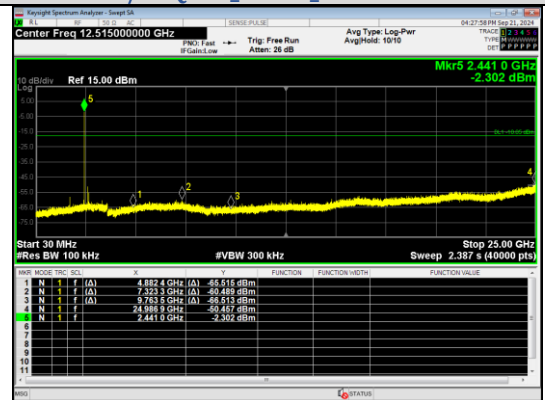
Out Of Band Emission  
GFSK\_DH5\_Channel 39



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



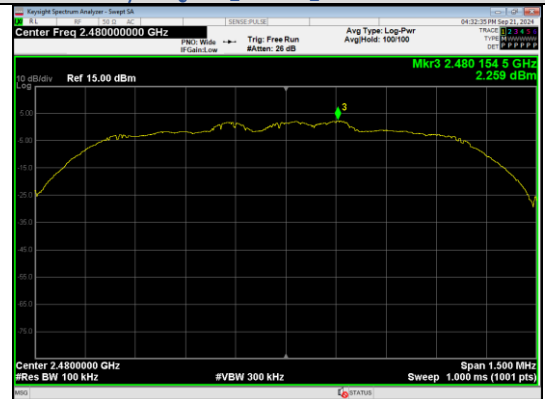
30.0 MHz - 25000.0 MHz  
GFSK\_DH5\_Channel 39



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



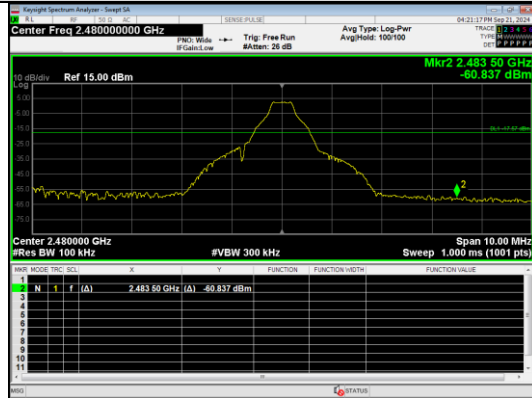
In-Band Reference Level



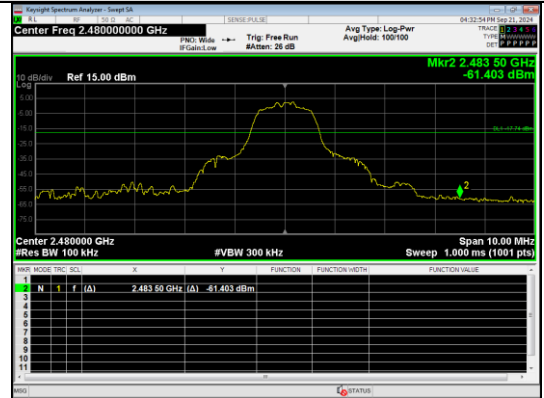
In-Band Reference Level



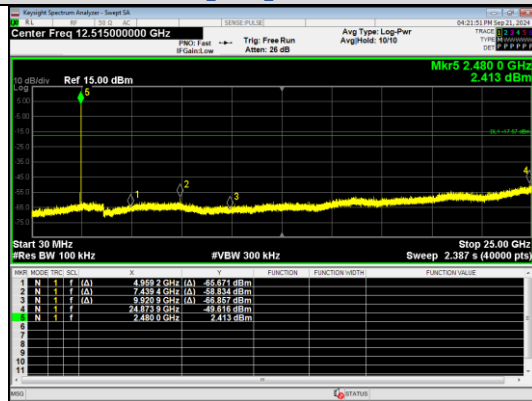
### GFSK\_DH5\_Channel 78



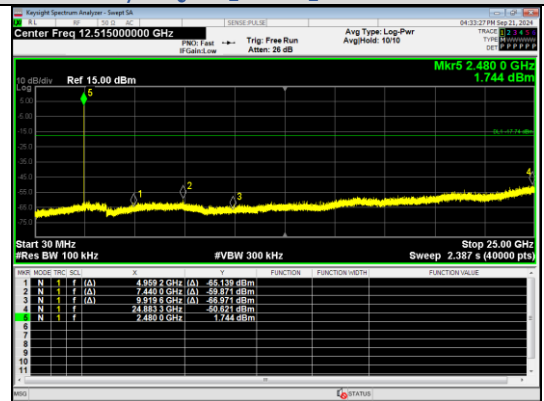
### $\pi/4$ DQPSK\_2-DH5\_Channel 78



### Out Of Band Emission GFSK\_DH5\_Channel 78

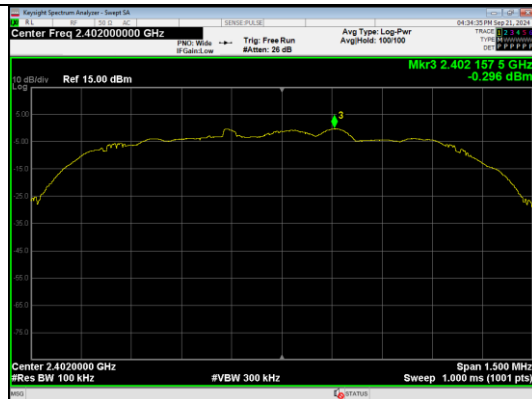


### Out Of Band Emission $\pi/4$ DQPSK\_2-DH5\_Channel 78

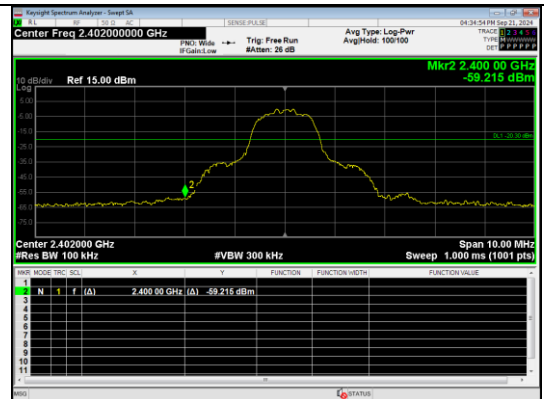


### 30.0 MHz - 25000.0 MHz GFSK\_DH5\_Channel 78

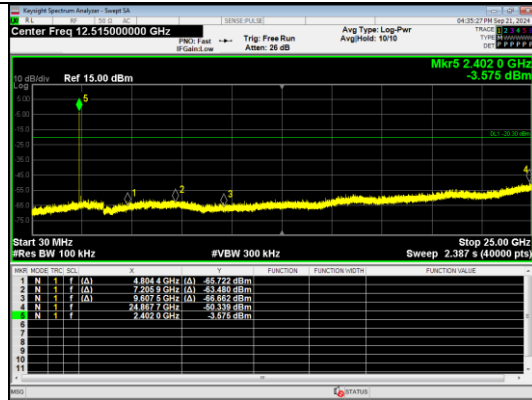
### 30.0 MHz - 25000.0 MHz $\pi/4$ DQPSK\_2-DH5\_Channel 78



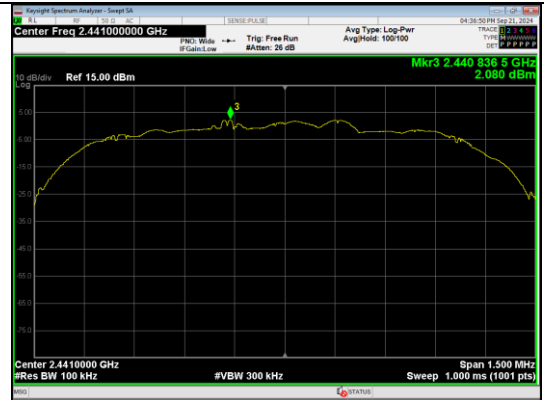
### In-Band Reference Level 8DPSK\_3-DH5\_Channel 0



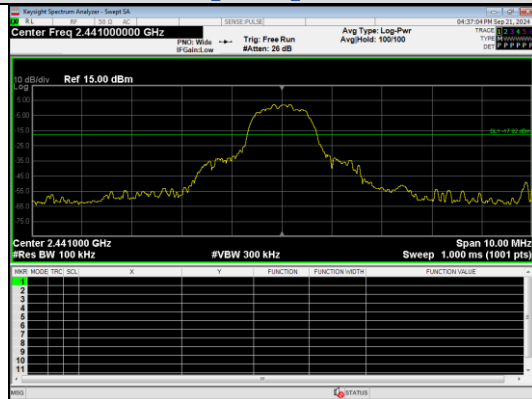
### Out Of Band Emission 8DPSK\_3-DH5\_Channel 0



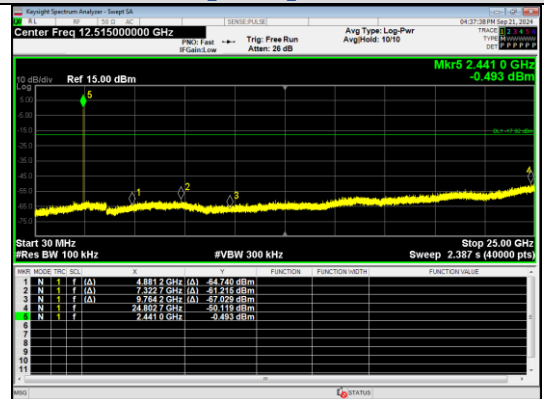
30.0 MHz - 25000.0 MHz  
8DPSK\_3-DH5\_Channel 0



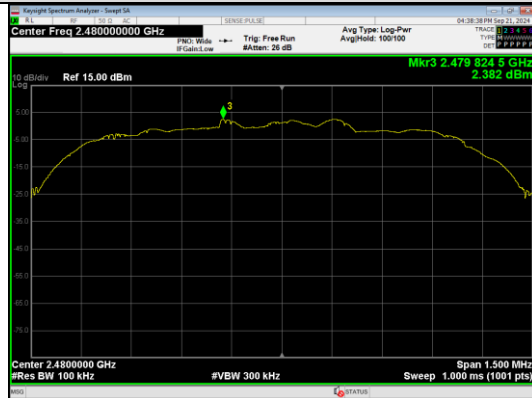
In-Band Reference Level  
8DPSK\_3-DH5\_Channel 39



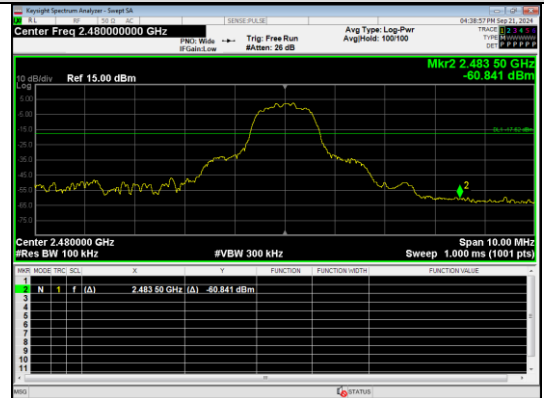
Out Of Band Emission  
8DPSK\_3-DH5\_Channel 39



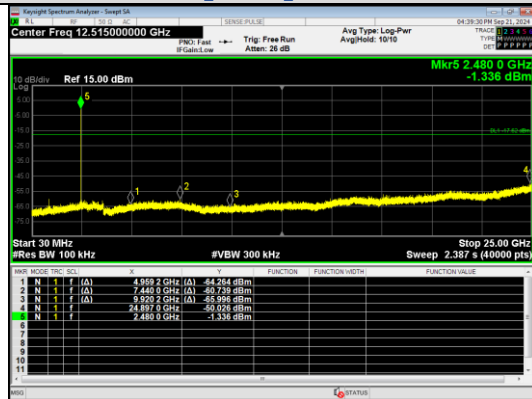
30.0 MHz - 25000.0 MHz  
8DPSK\_3-DH5\_Channel 39



In-Band Reference Level  
8DPSK\_3-DH5\_Channel 78

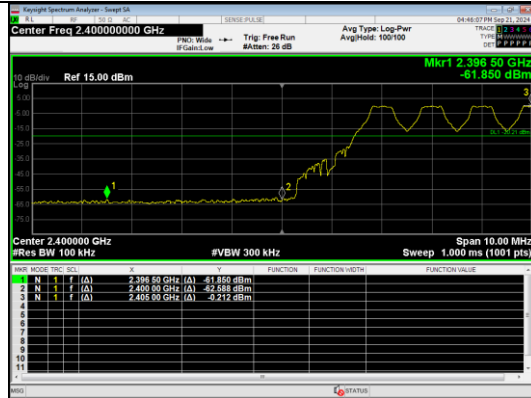


Out Of Band Emission  
8DPSK\_3-DH5\_Channel 78



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

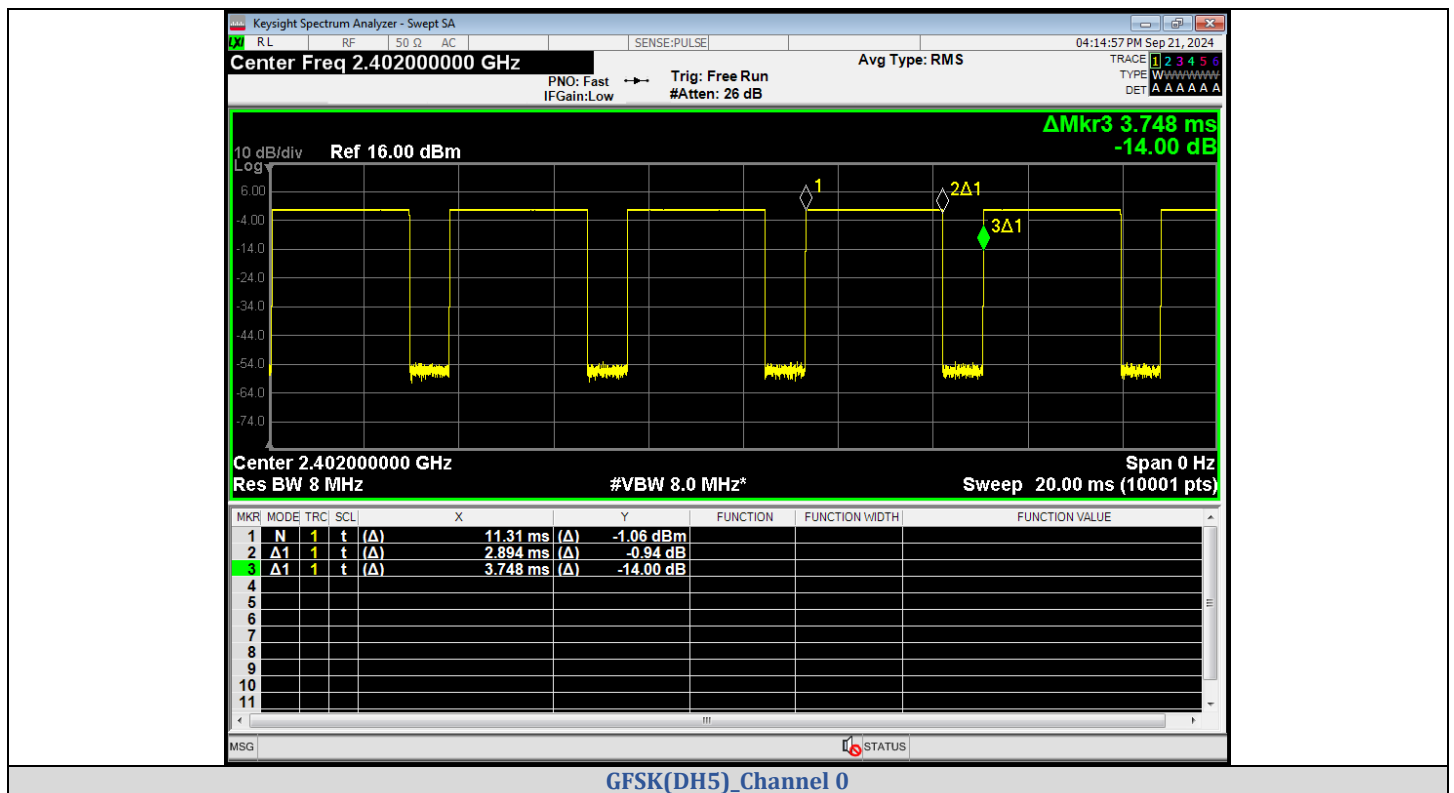
Out Of Band Emission(Right)  
8DPSK\_3-DH5\_Channel Hopping

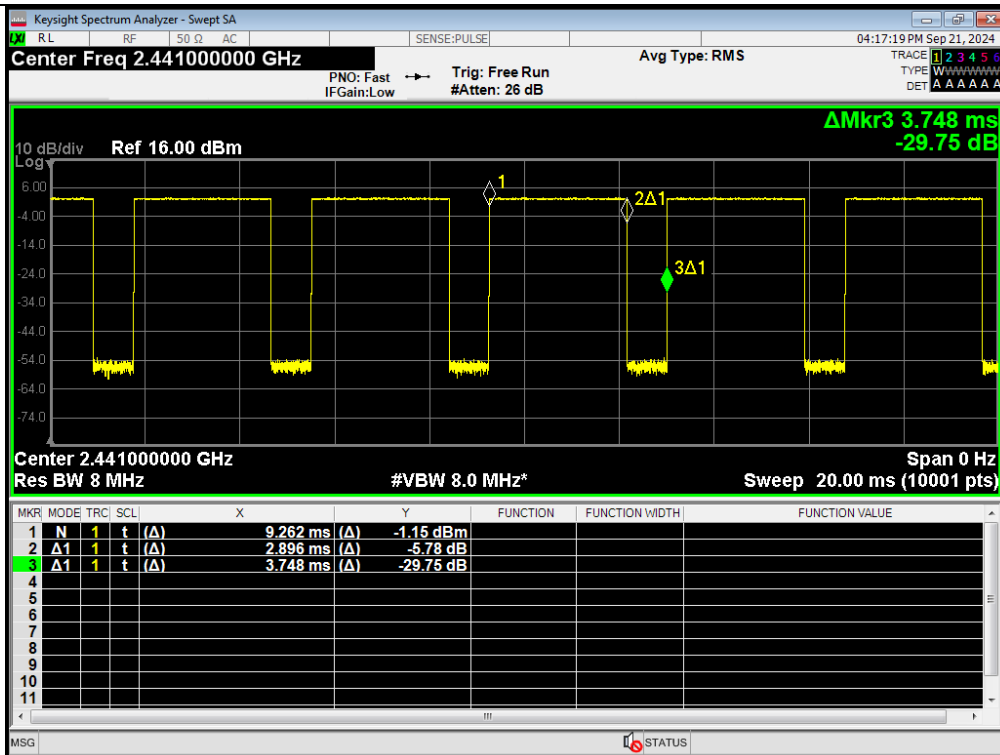
## Duty Cycle

### Test Result

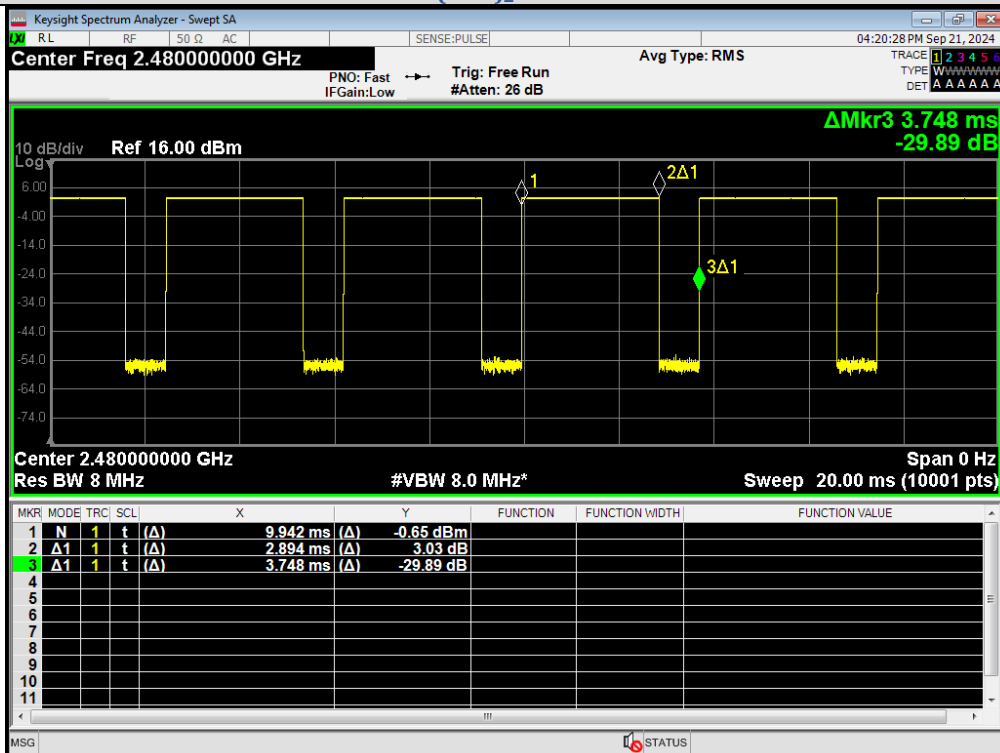
| Modulation    | Packets | Channel | On Time (ms) | Period (ms) | Duty Cycle (%) | Duty Cycle (linear) | Duty Cycle Factor (dB) |
|---------------|---------|---------|--------------|-------------|----------------|---------------------|------------------------|
| GFSK          | DH5     | 0       | 2.894        | 3.748       | 77.21          | 0.7721              | 1.1233                 |
|               |         | 39      | 2.896        | 3.748       | 77.27          | 0.7727              | 1.1199                 |
|               |         | 78      | 2.894        | 3.748       | 77.21          | 0.7721              | 1.1233                 |
| $\pi/4$ DQPSK | 2-DH5   | 0       | 2.884        | 3.748       | 76.95          | 0.7695              | 1.1379                 |
|               |         | 39      | 2.884        | 3.748       | 76.95          | 0.7695              | 1.1379                 |
|               |         | 78      | 2.884        | 3.748       | 76.95          | 0.7695              | 1.1379                 |
| 8DPSK         | 3-DH5   | 0       | 2.882        | 3.748       | 76.89          | 0.7689              | 1.1413                 |
|               |         | 39      | 2.882        | 3.748       | 76.89          | 0.7689              | 1.1413                 |
|               |         | 78      | 2.882        | 3.748       | 76.89          | 0.7689              | 1.1413                 |

### Test Graphs

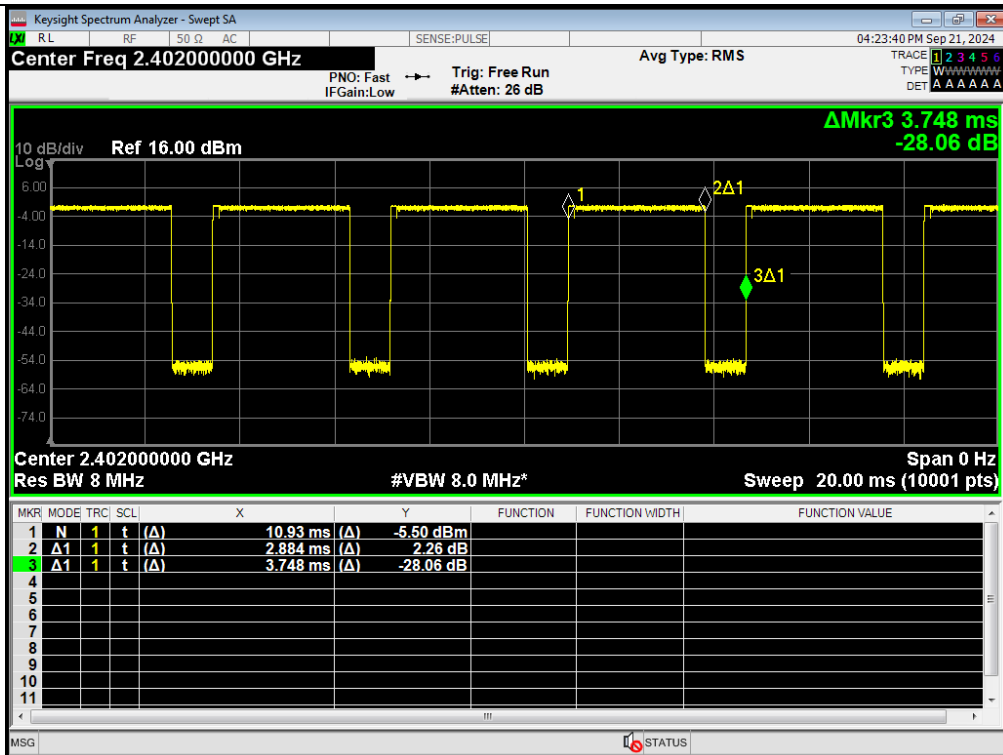




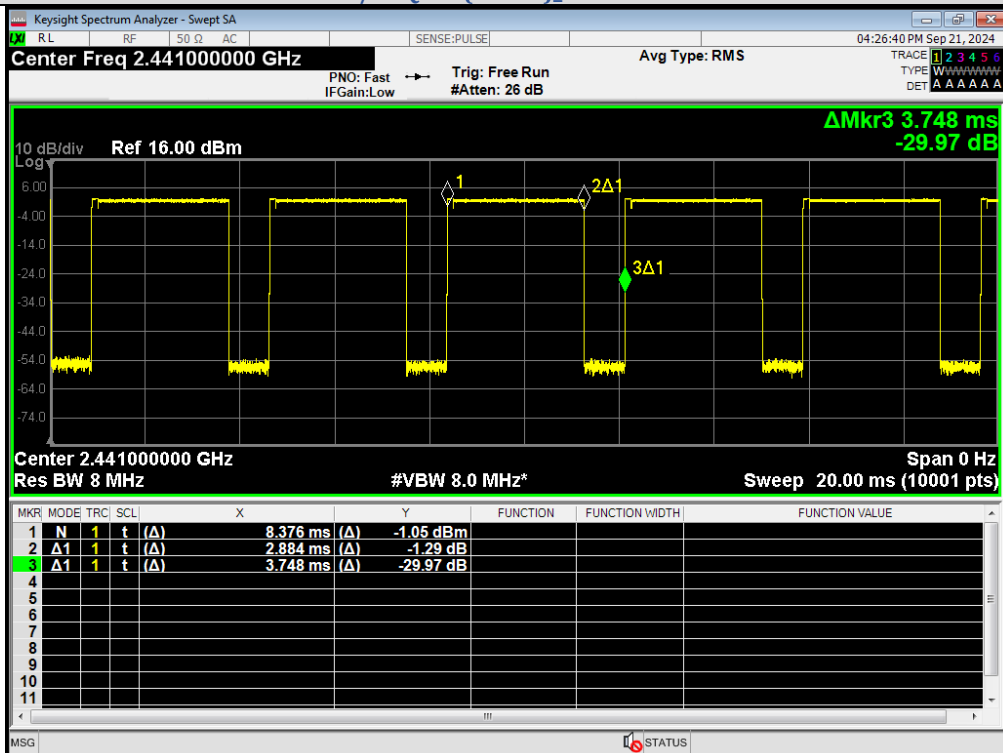
### GFSK(DH5)\_Channel 39



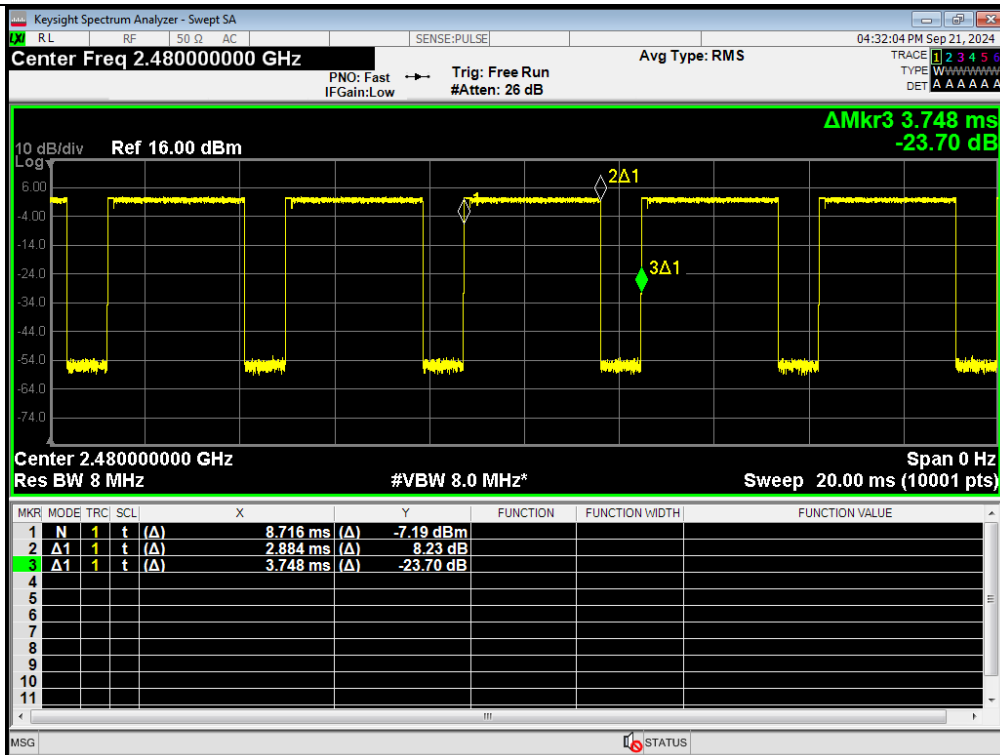
### GFSK(DH5)\_Channel 78



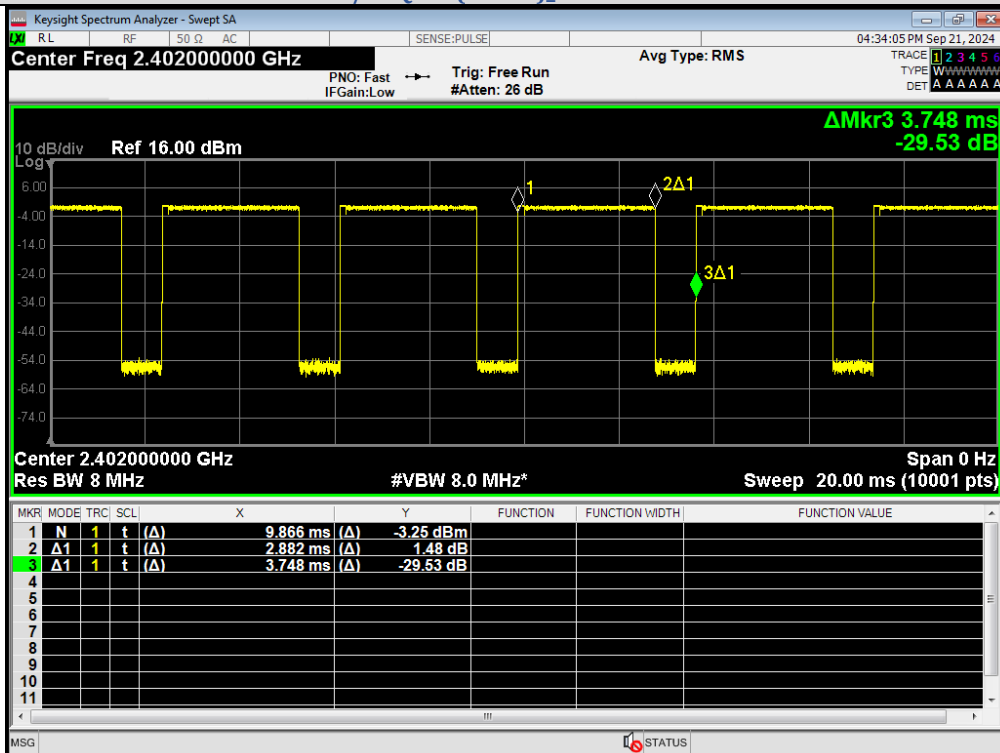
### $\pi/4$ DQPSK(2-DH5)\_Channel 0



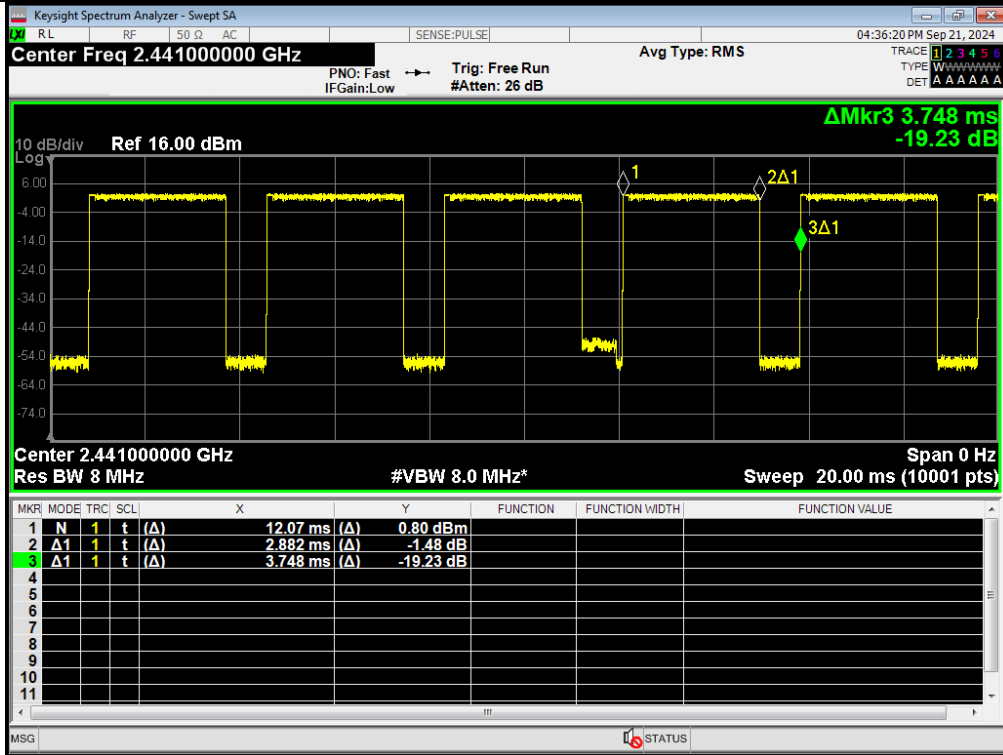
### $\pi/4$ DQPSK(2-DH5)\_Channel 39



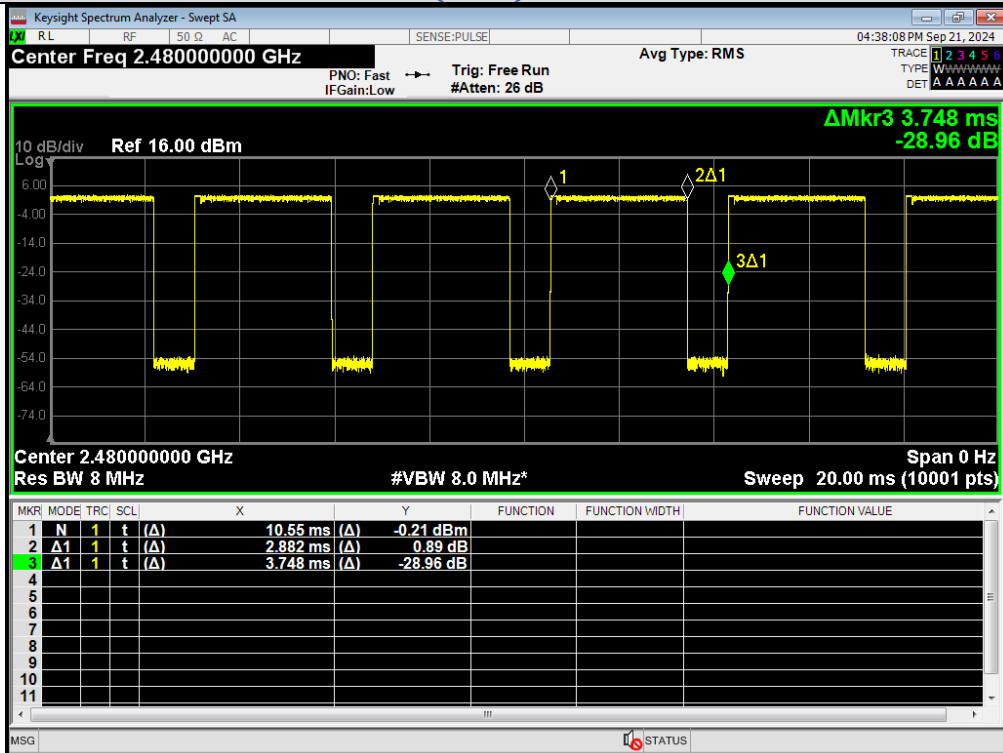
### $\pi/4$ DQPSK(2-DH5)\_Channel 78



### 8DPSK(3-DH5)\_Channel 0



### 8DPSK(3-DH5)\_Channel 39



### 8DPSK(3-DH5)\_Channel 78

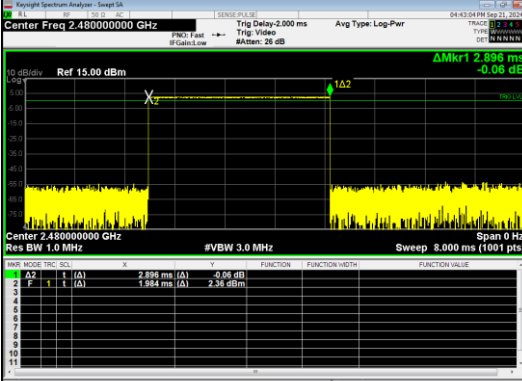
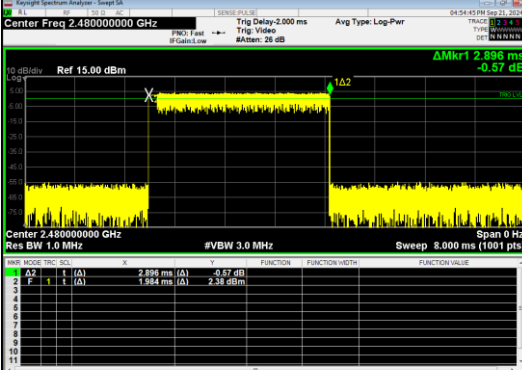
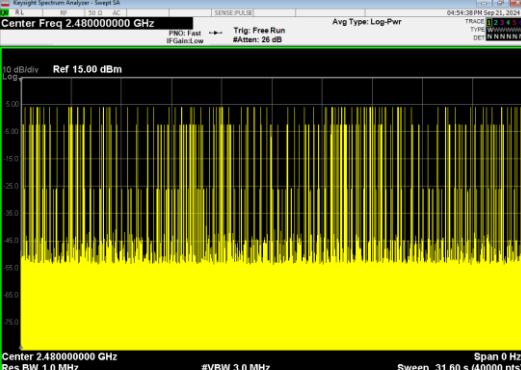


## Dwell Time

### Test Result

| Modulation    | Packet | Channel           | Pulse Width (ms) | Number of Pulses in 31.6 seconds | Dwell Time (ms) | Limit (ms) | Result |
|---------------|--------|-------------------|------------------|----------------------------------|-----------------|------------|--------|
| GFSK          | DH5    | CH78<br>(2480MHz) | 2.896            | 93                               | 269.33          | < 400      | PASS   |
| $\pi/4$ DQPSK | 2-DH5  |                   | 2.896            | 106                              | 306.98          |            | PASS   |
| 8DPSK         | 3-DH5  |                   | 2.880            | 115                              | 331.2           |            | PASS   |

### Test Graphs

|                                                                                     |                                                                                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|    |    |
| <p><b>Pulse Width<br/>GFSK_DH5</b></p>                                              | <p><b>Number of Pulses in 31.6 seconds<br/>GFSK_DH5</b></p>                          |
|  |  |
| <p><b>Pulse Width<br/><math>\pi/4</math>DQPSK_2-DH5</b></p>                         | <p><b>Number of Pulses in 31.6 seconds<br/><math>\pi/4</math>DQPSK_2-DH5</b></p>     |
|  |  |
| <p><b>Pulse Width<br/>8DPSK_3-DH5</b></p>                                           | <p><b>Number of Pulses in 31.6 seconds<br/>8DPSK_3-DH5</b></p>                       |

## Number Of Hopping Channel

### Test Result

| 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

