

## Appendix A

### RF Test Data for BT V5.0(DSS) (Conducted Measurement)

Product Name: True Wireless Earphone

Trade Mark:  Meiita 美她

Test Model: MT-E3

#### Environmental Conditions

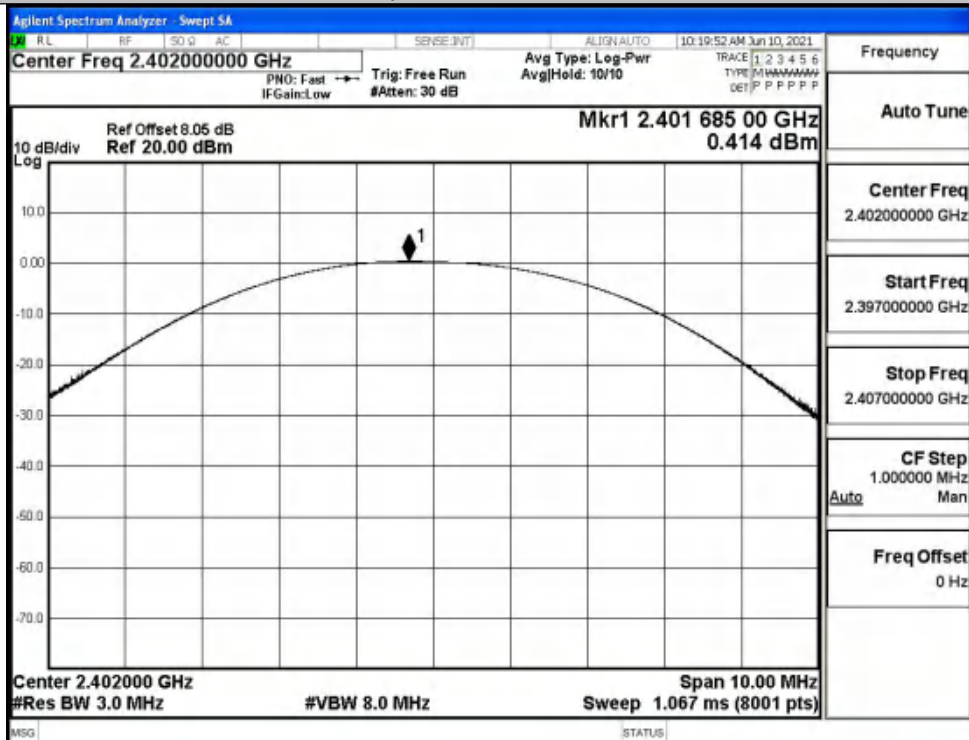
|                    |           |
|--------------------|-----------|
| Temperature:       | 24.6 ° C  |
| Relative Humidity: | 54.1%     |
| ATM Pressure:      | 100.0 kPa |
| Test Engineer:     | Kay Hu    |
| Supervised by:     | Li Huan   |

#### A.1 Maximum Conducted Peak Output Power

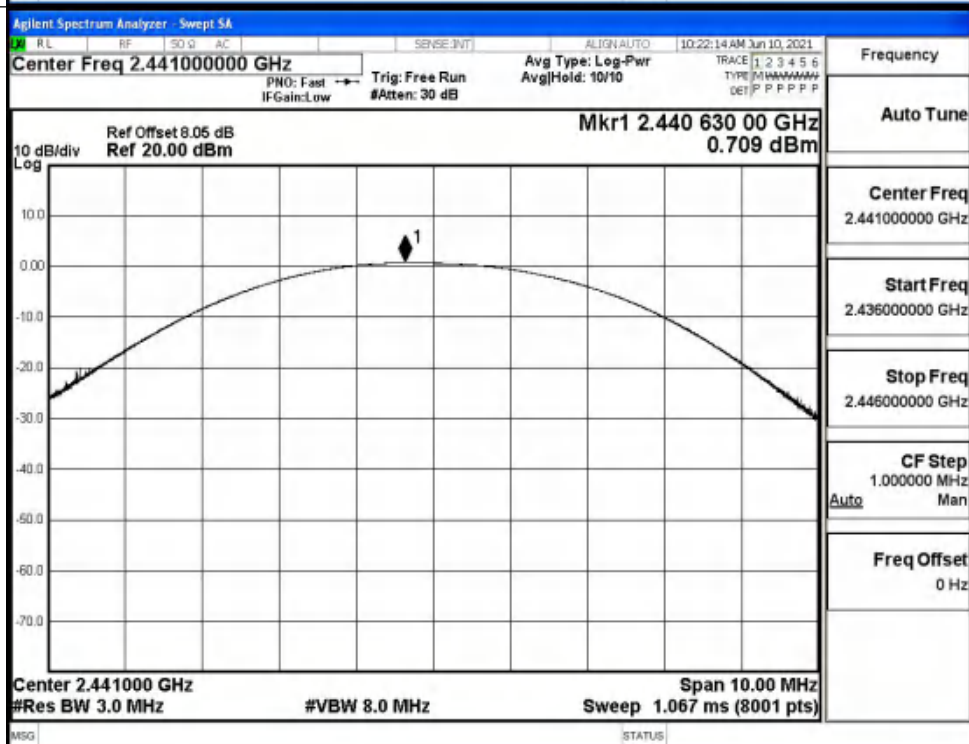
| Mode          | Channel. | Maximum Peak Output Power [dBm] | Limit [dBm] | Verdict |
|---------------|----------|---------------------------------|-------------|---------|
| GFSK          | LCH      | 0.414                           | 21          | PASS    |
|               | MCH      | 0.709                           | 21          | PASS    |
|               | HCH      | 0.432                           | 21          | PASS    |
| $\pi/4$ DQPSK | LCH      | 1.112                           | 21          | PASS    |
|               | MCH      | 1.353                           | 21          | PASS    |
|               | HCH      | 1.071                           | 21          | PASS    |
| 8DPSK         | LCH      | 1.072                           | 21          | PASS    |
|               | MCH      | 1.390                           | 21          | PASS    |
|               | HCH      | 1.065                           | 21          | PASS    |

## Test Graphs

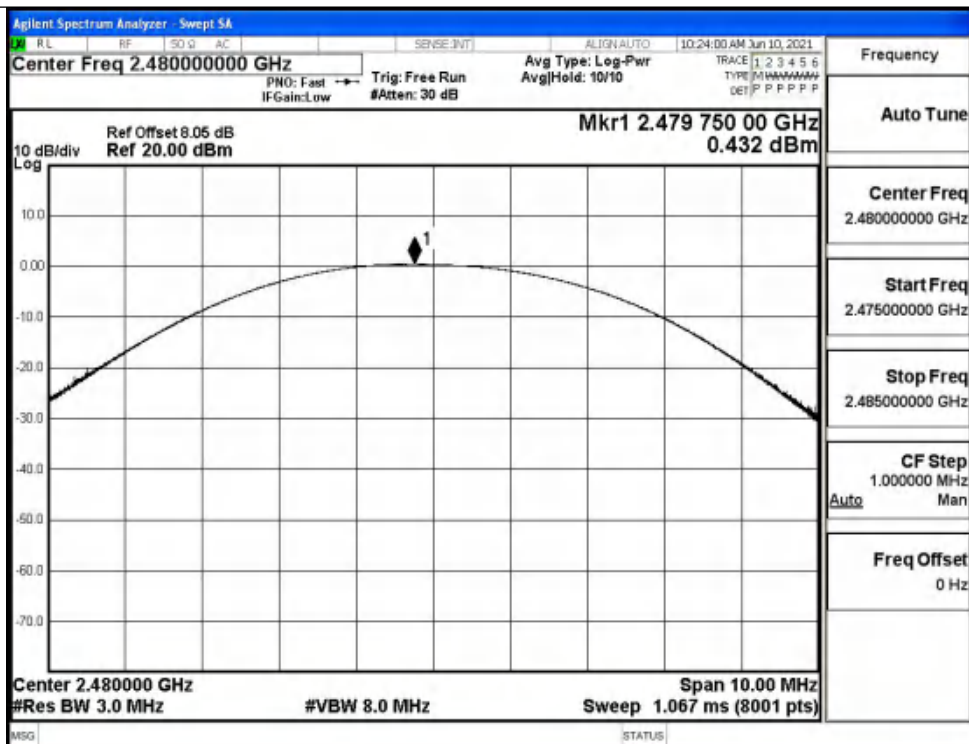
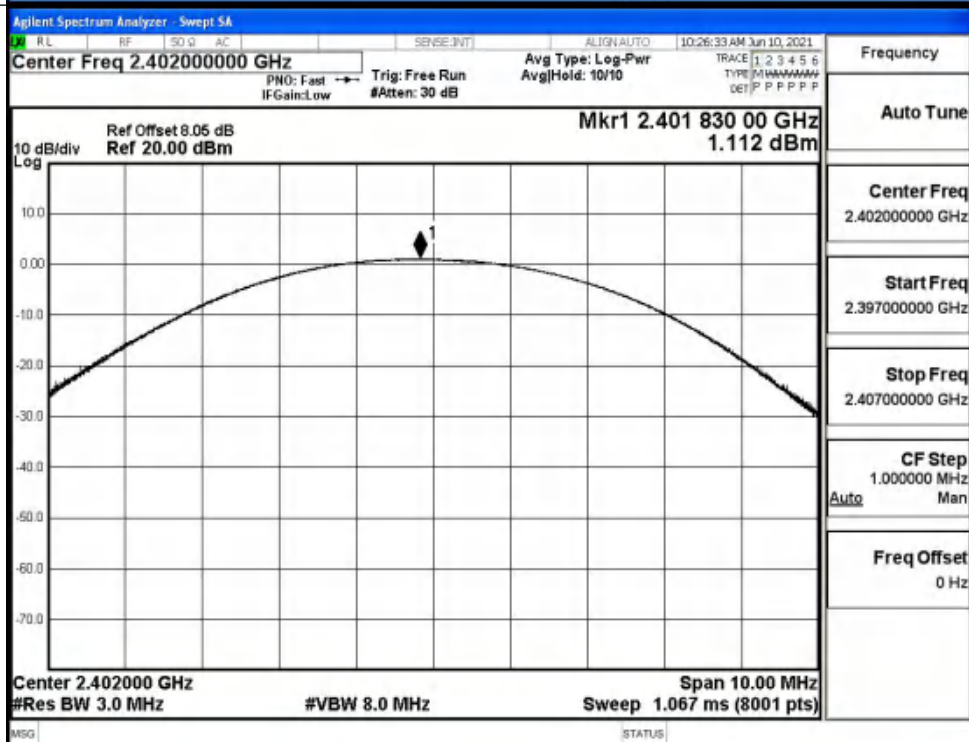
GFSK/LCH

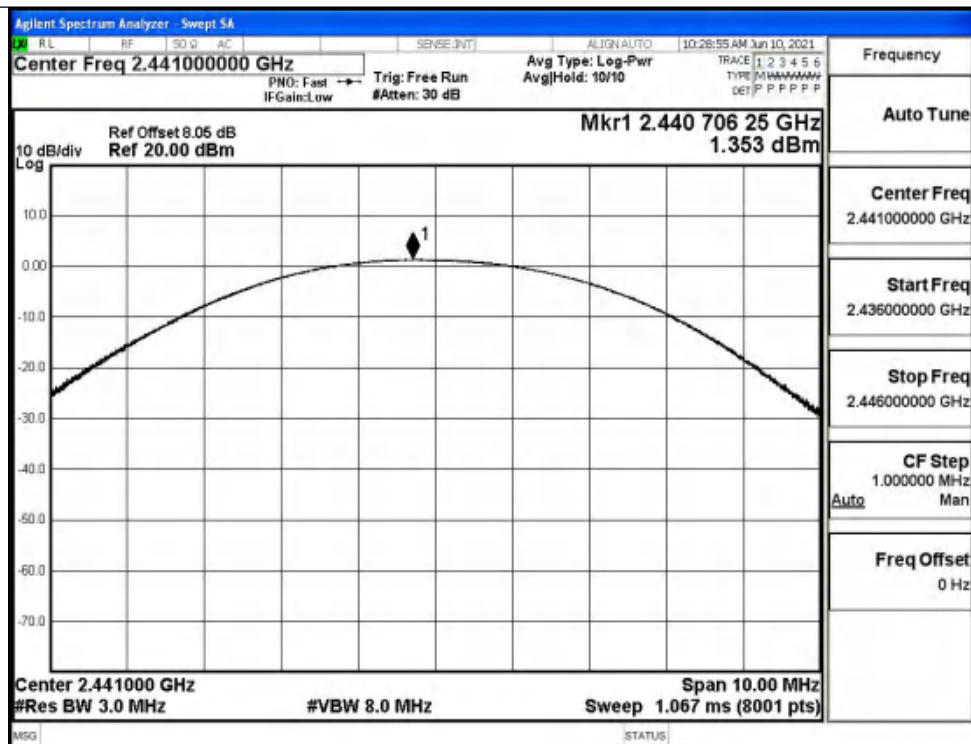
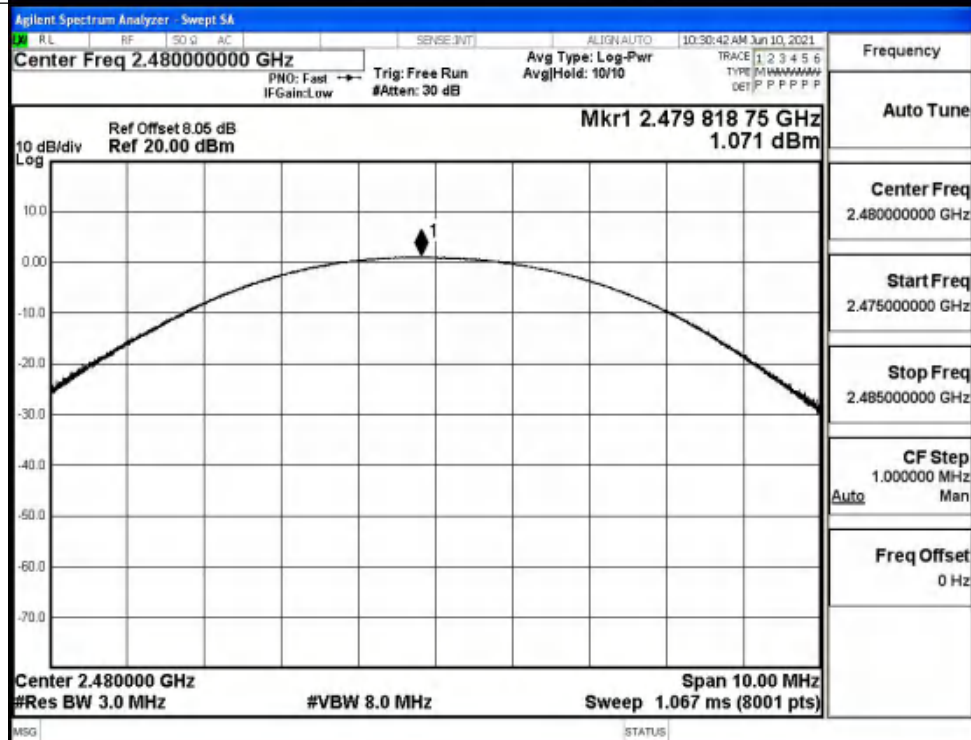


GFSK/MCH

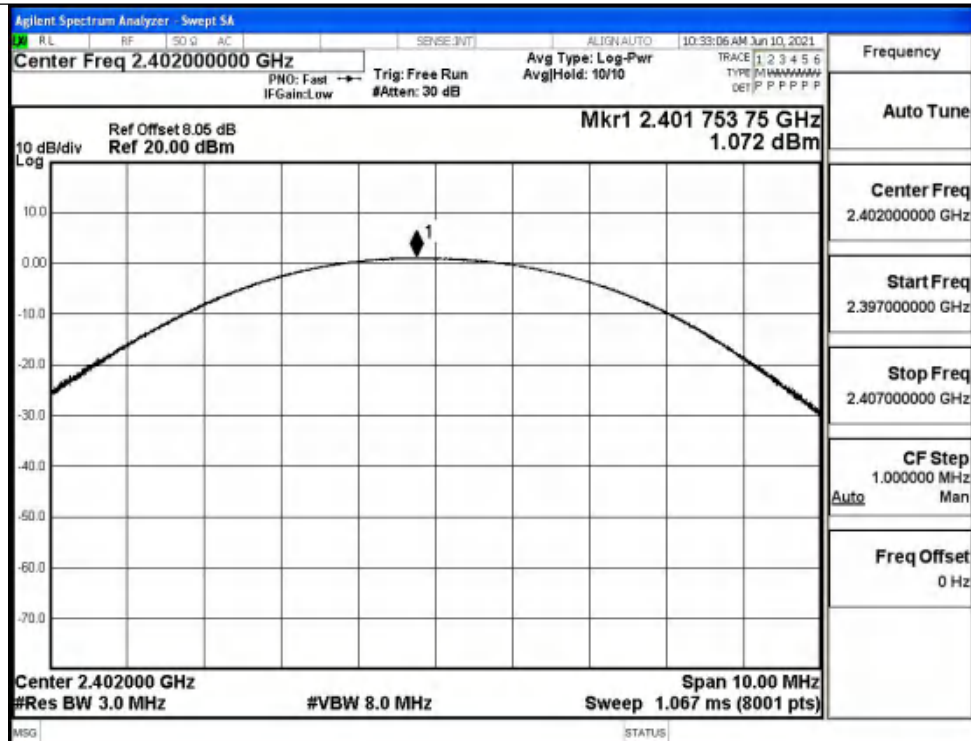


GFSK/HCH

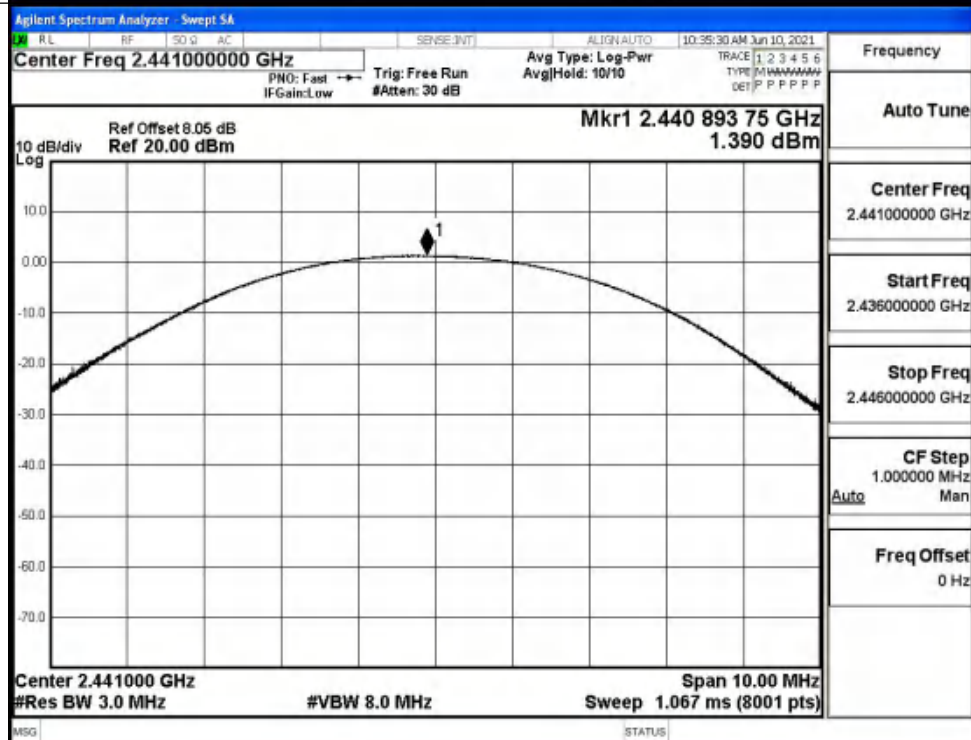
 $\pi/4$ DQPSK/LCH

$\pi/4$ DQPSK/MCH $\pi/4$ DQPSK/HCH

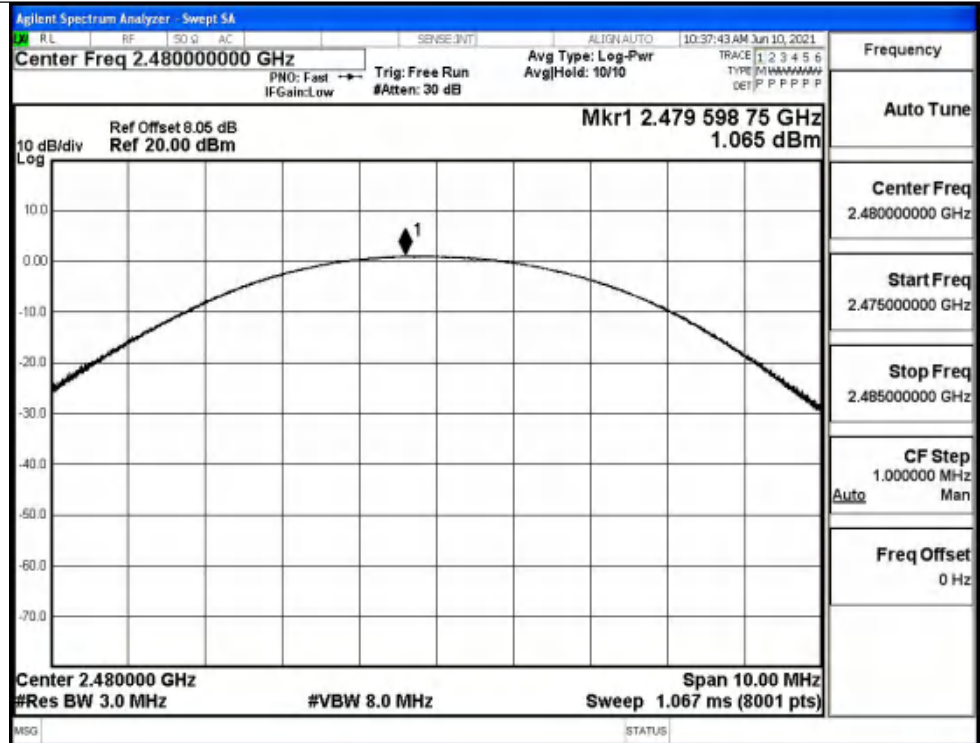
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

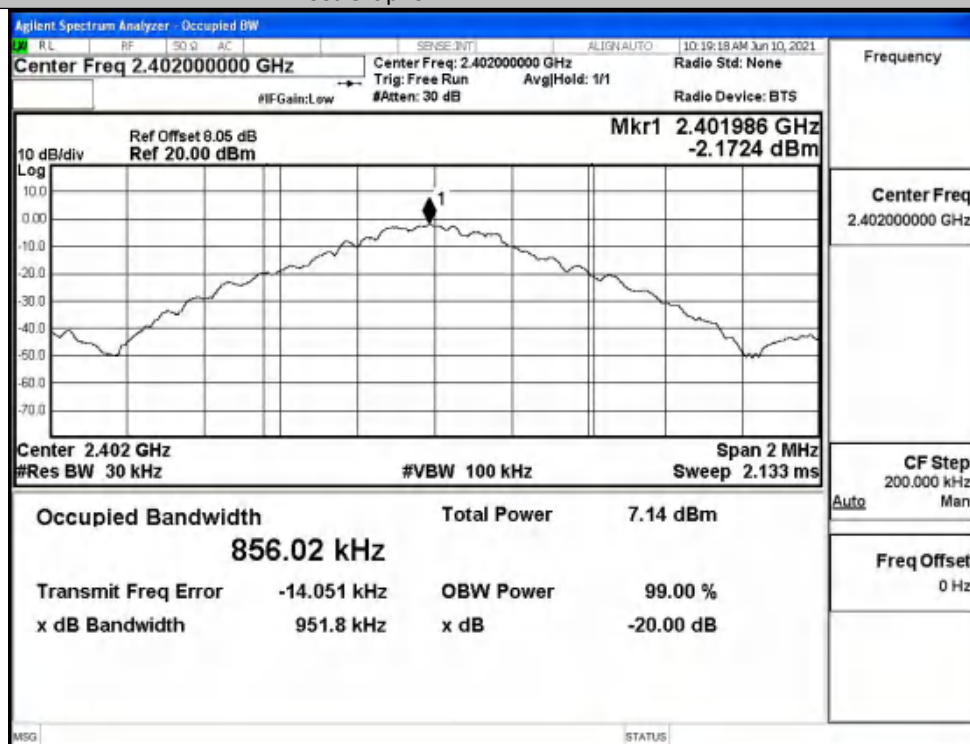


## A.2 20dB Bandwidth

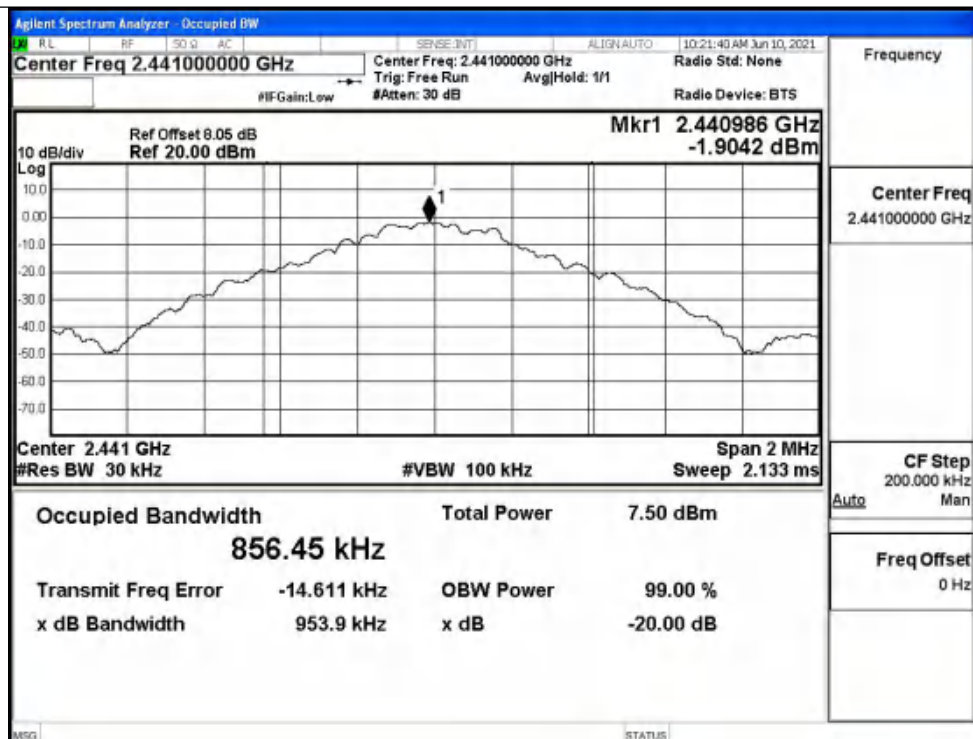
| Mode          | Channel. | 20dB Bandwidth [MHz] | Limit [MHz]   | Verdict |
|---------------|----------|----------------------|---------------|---------|
| GFSK          | LCH      | 0.9518               | Not Specified | PASS    |
|               | MCH      | 0.9539               | Not Specified | PASS    |
|               | HCH      | 0.9579               | Not Specified | PASS    |
| $\pi/4$ DQPSK | LCH      | 1.313                | Not Specified | PASS    |
|               | MCH      | 1.313                | Not Specified | PASS    |
|               | HCH      | 1.312                | Not Specified | PASS    |
| 8DPSK         | LCH      | 1.312                | Not Specified | PASS    |
|               | MCH      | 1.313                | Not Specified | PASS    |
|               | HCH      | 1.314                | Not Specified | PASS    |

Test Graphs

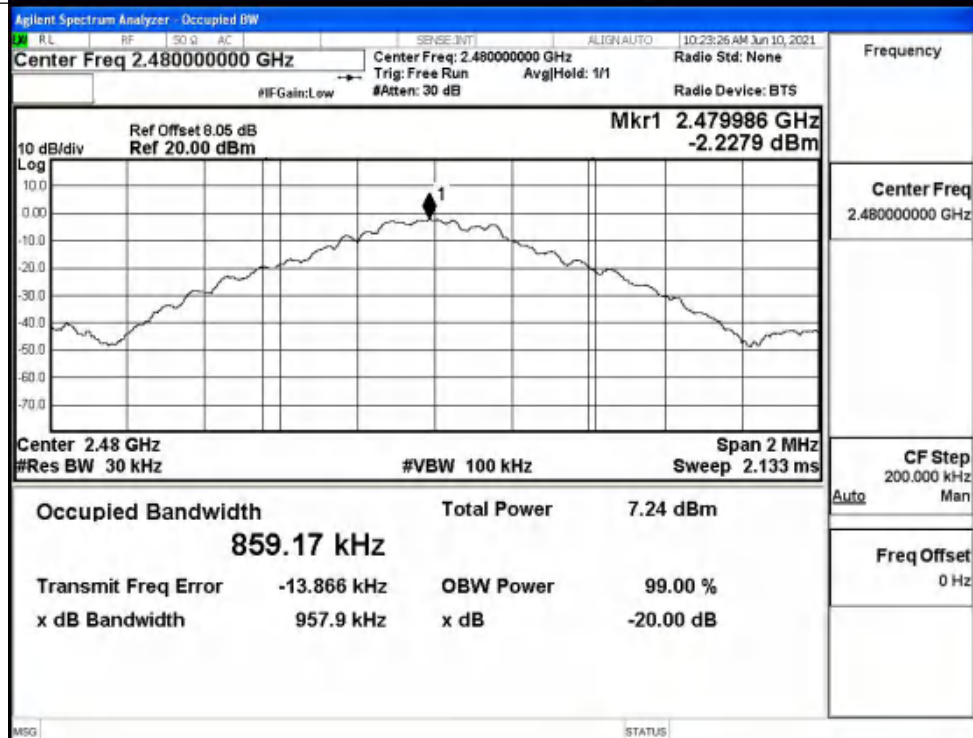
GFSK/LCH

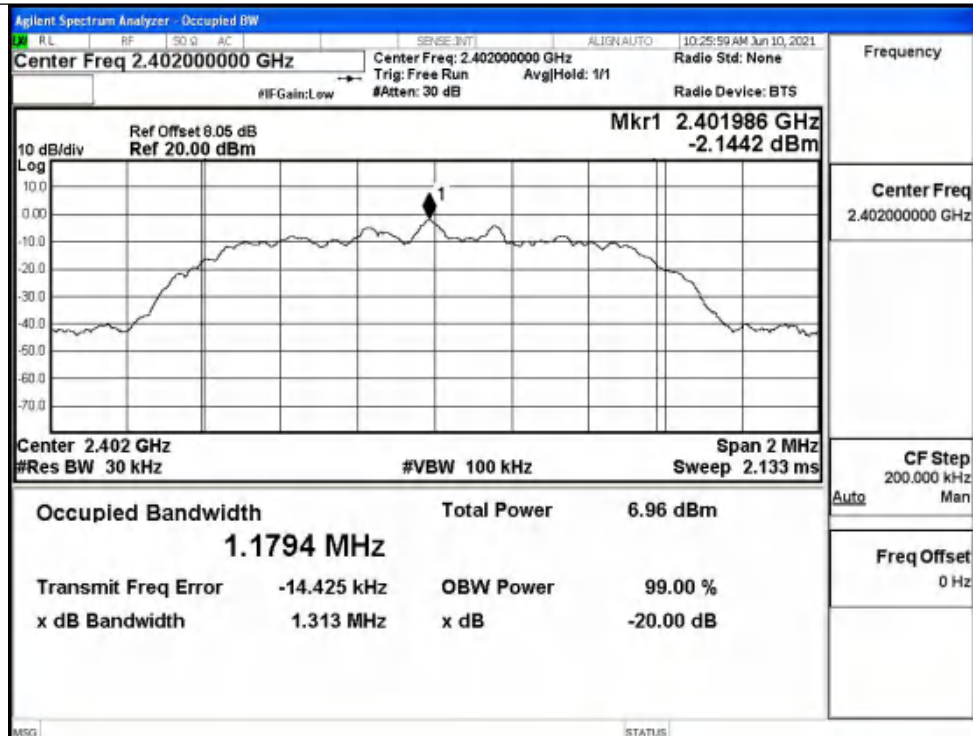
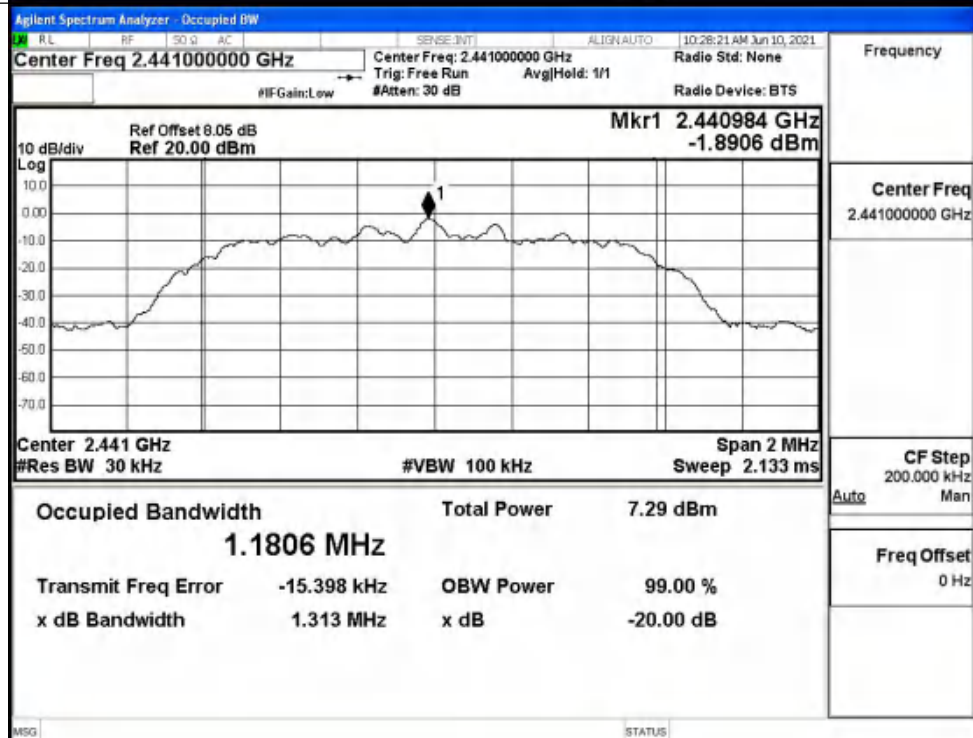


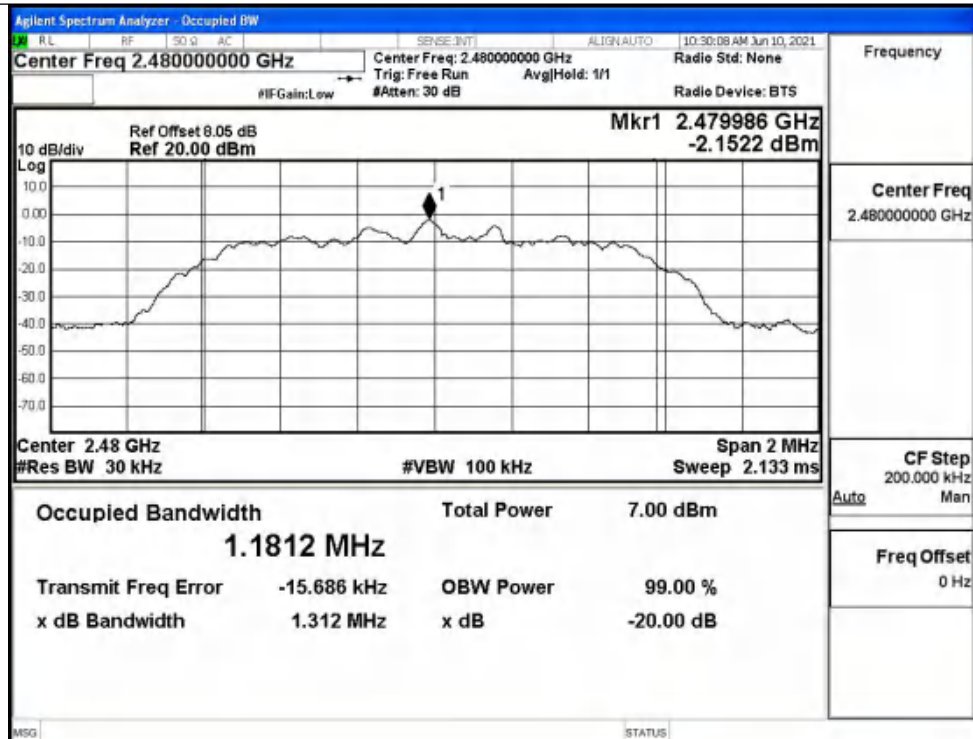
GFSK/MCH



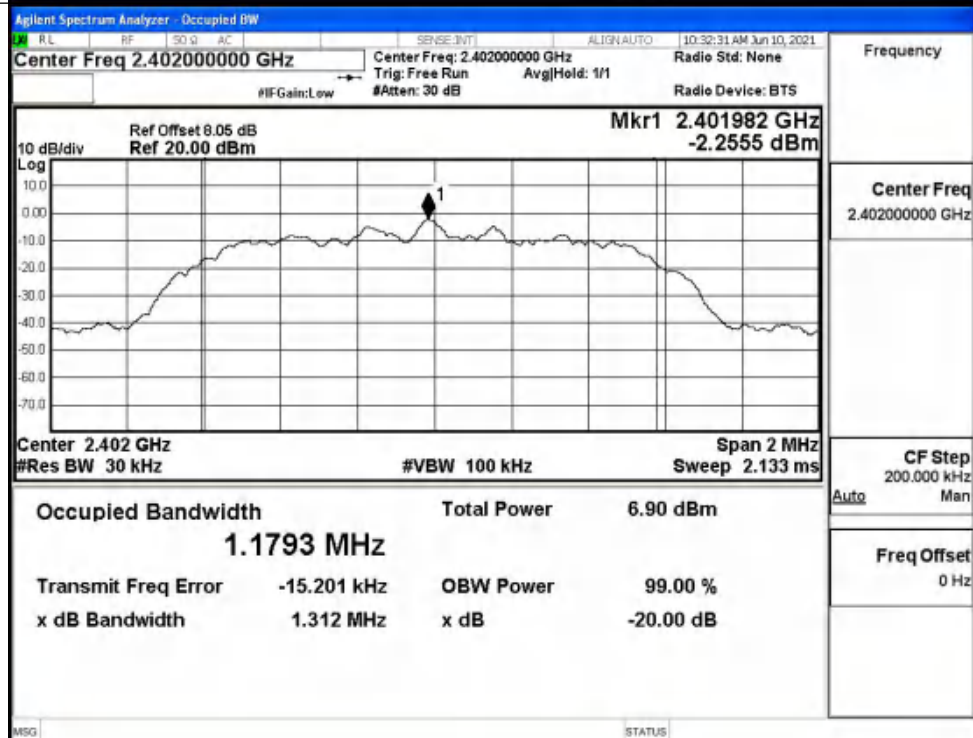
GFSK/HCH



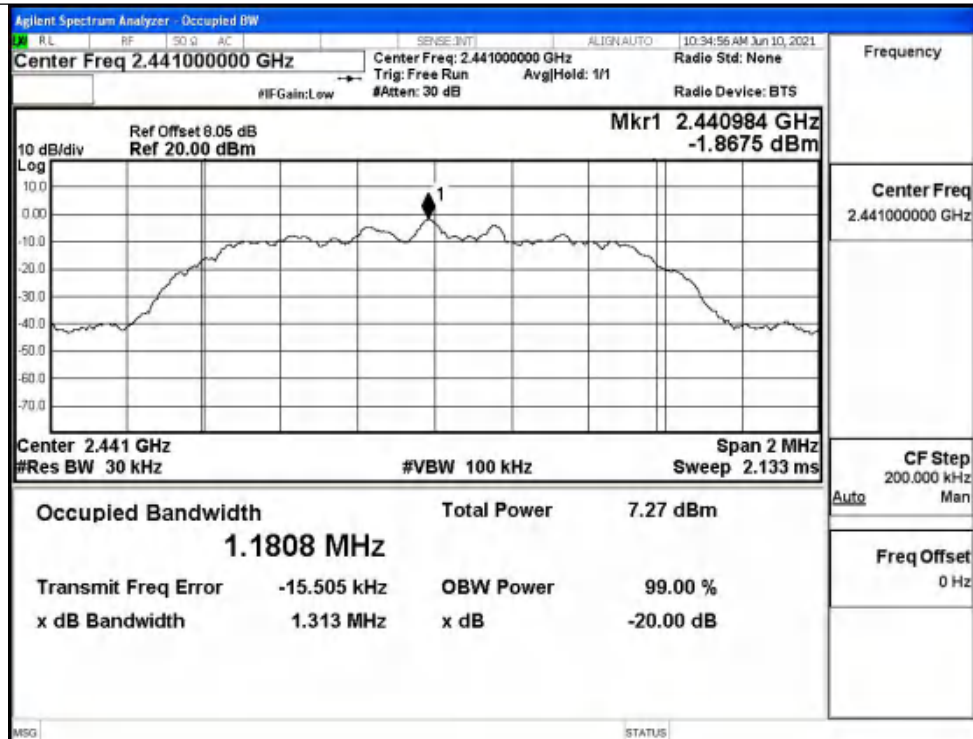
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

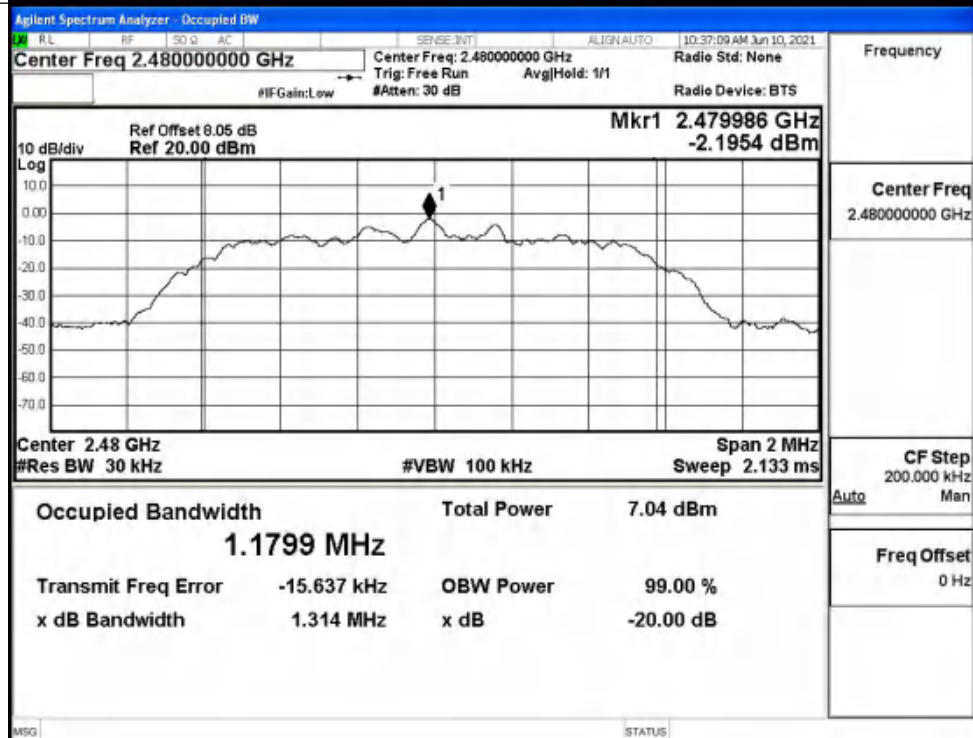
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

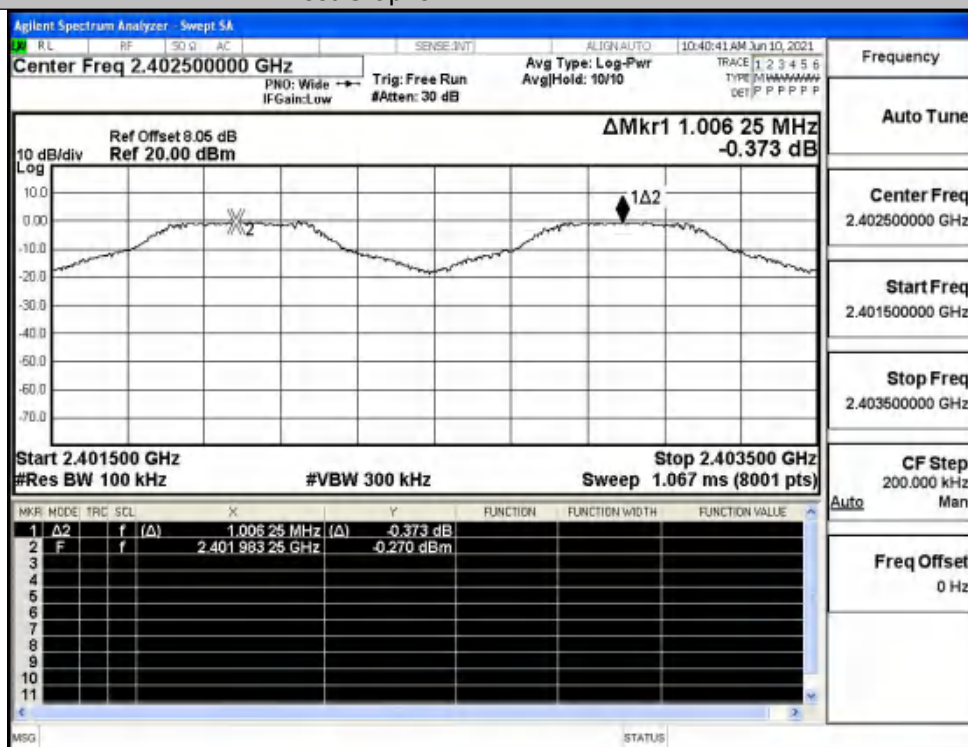


### A.3 Carrier Frequency Separation

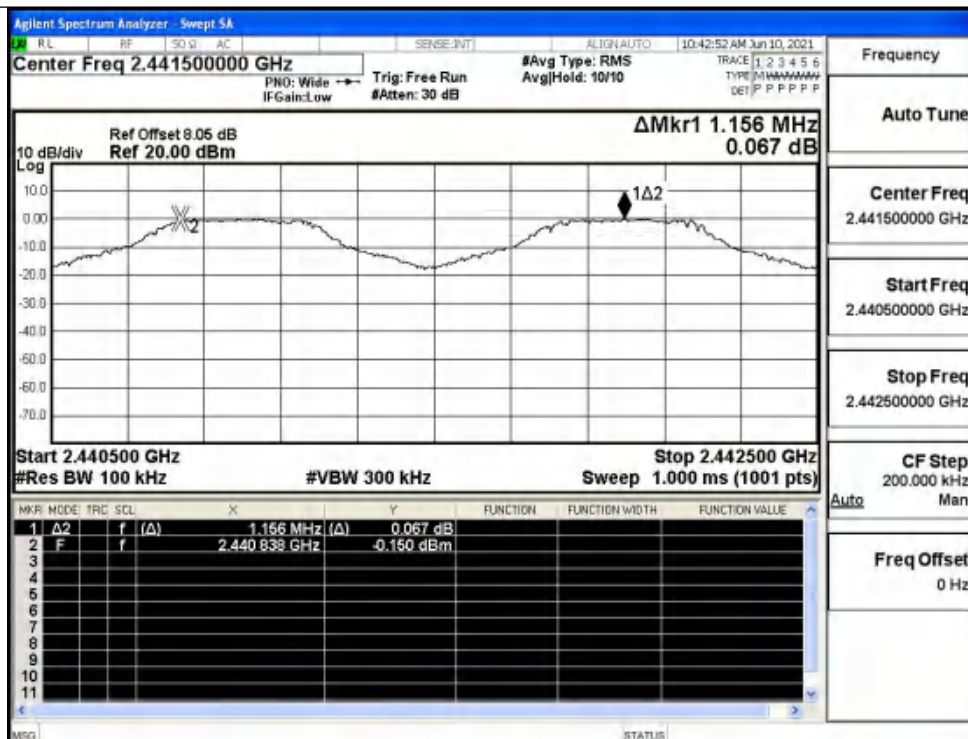
| Mode          | Channel. | Carrier Frequency Separation [MHz] | Limit [MHz] | Verdict |
|---------------|----------|------------------------------------|-------------|---------|
| GFSK          | LCH      | 1.006                              | 0.639       | PASS    |
|               | MCH      | 1.156                              | 0.639       | PASS    |
|               | HCH      | 0.950                              | 0.639       | PASS    |
| $\pi/4$ DQPSK | LCH      | 1.022                              | 0.875       | PASS    |
|               | MCH      | 0.972                              | 0.875       | PASS    |
|               | HCH      | 0.998                              | 0.875       | PASS    |
| 8DPSK         | LCH      | 0.876                              | 0.876       | PASS    |
|               | MCH      | 1.224                              | 0.876       | PASS    |
|               | HCH      | 1.170                              | 0.876       | PASS    |

Test Graphs

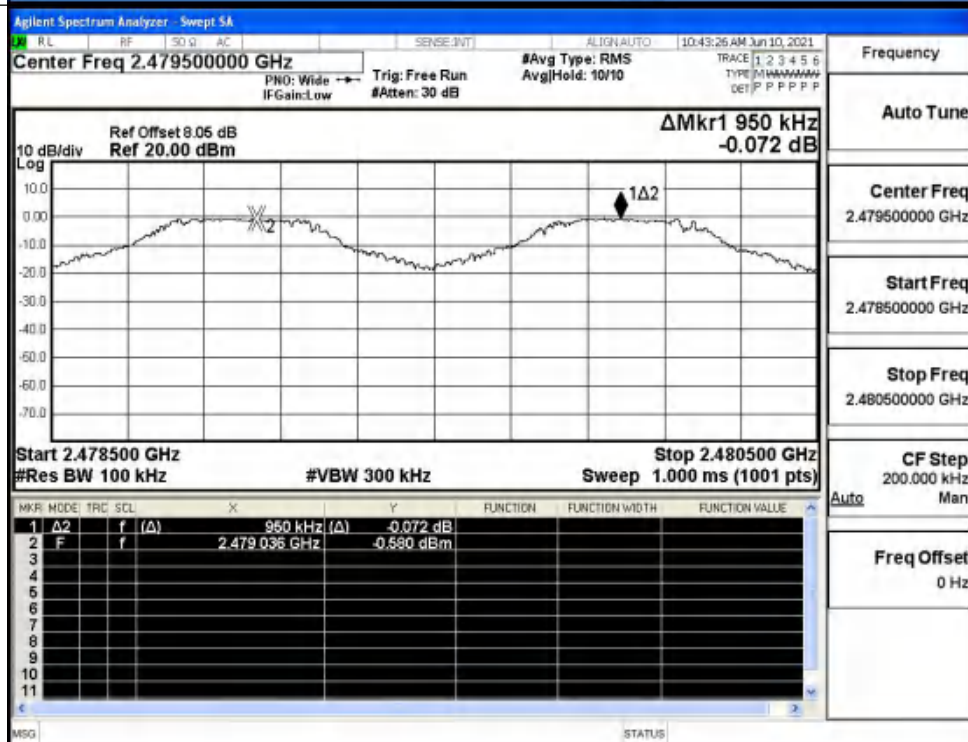
GFSK/LCH

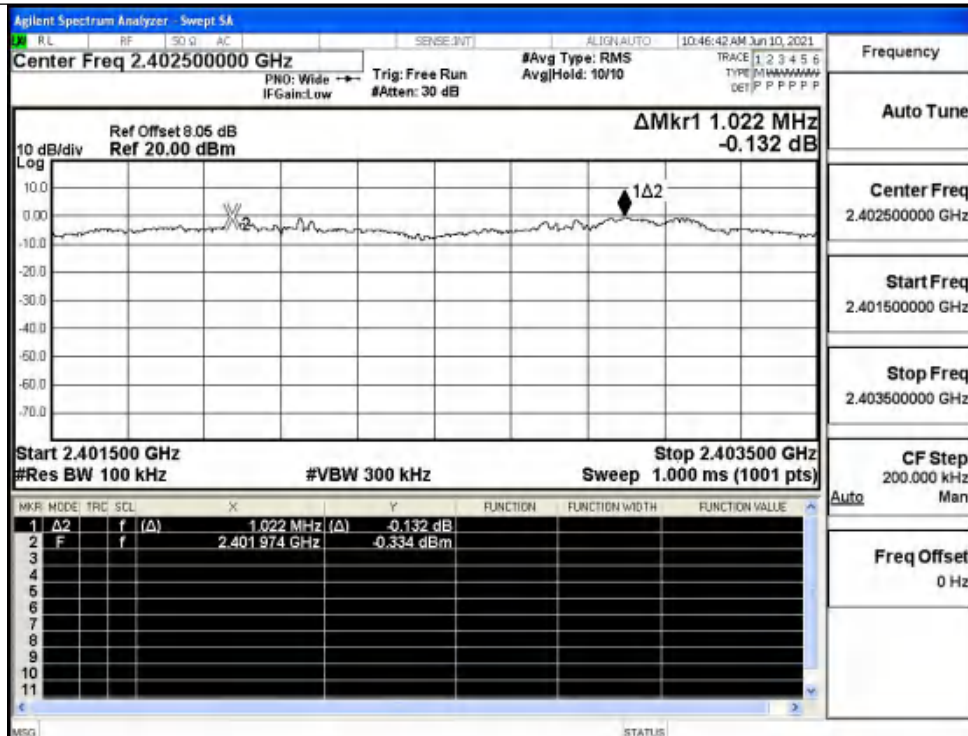
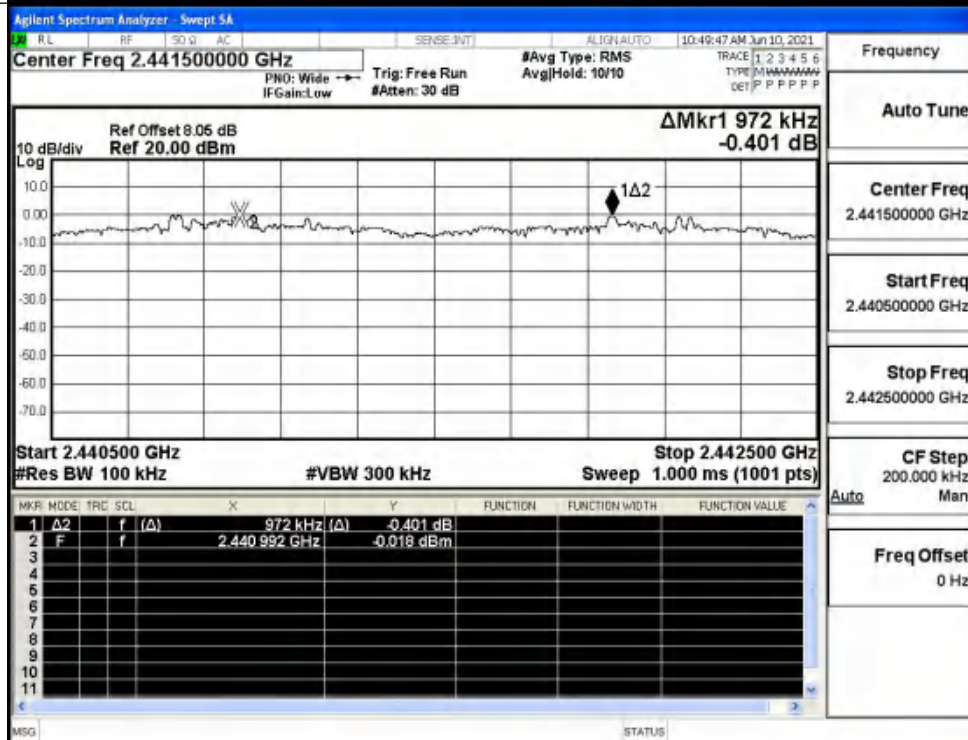


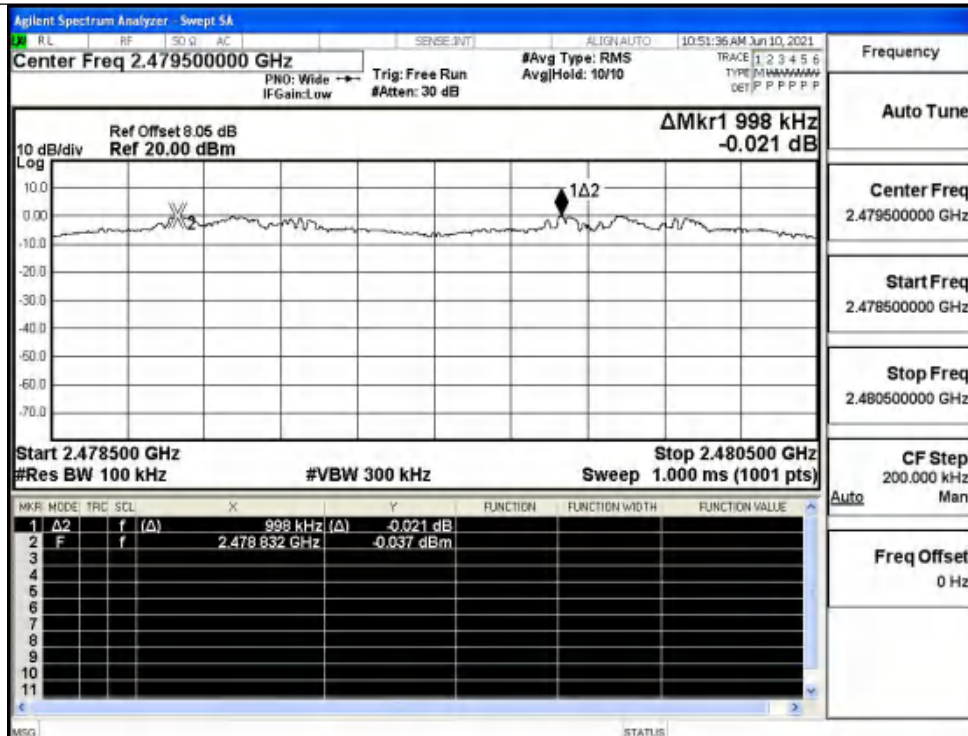
GFSK/MCH



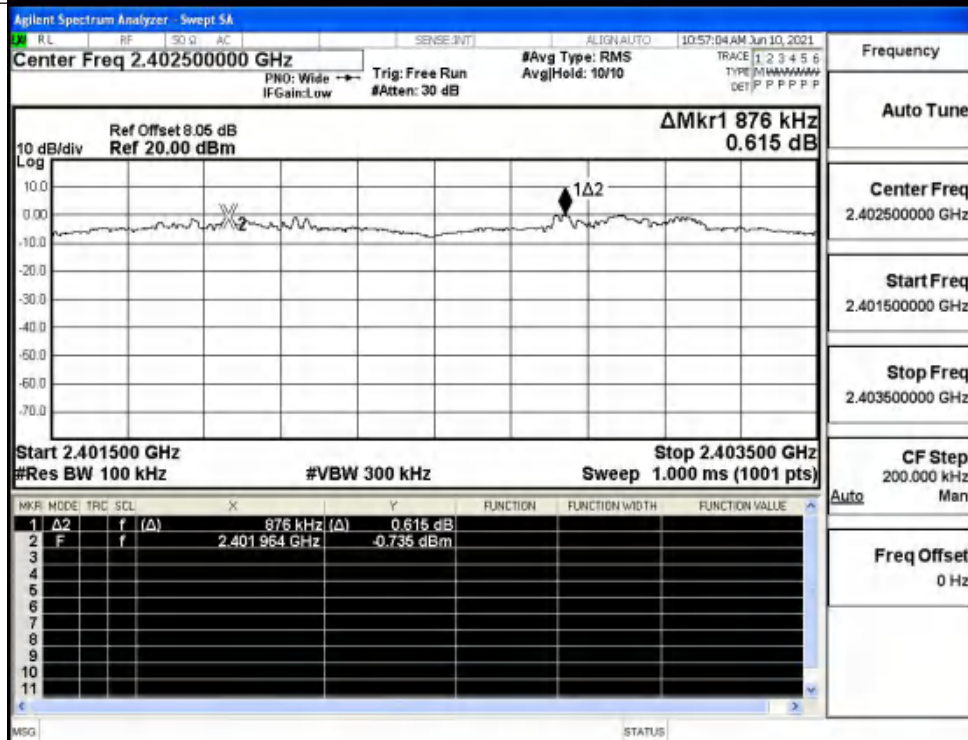
GFSK/HCH



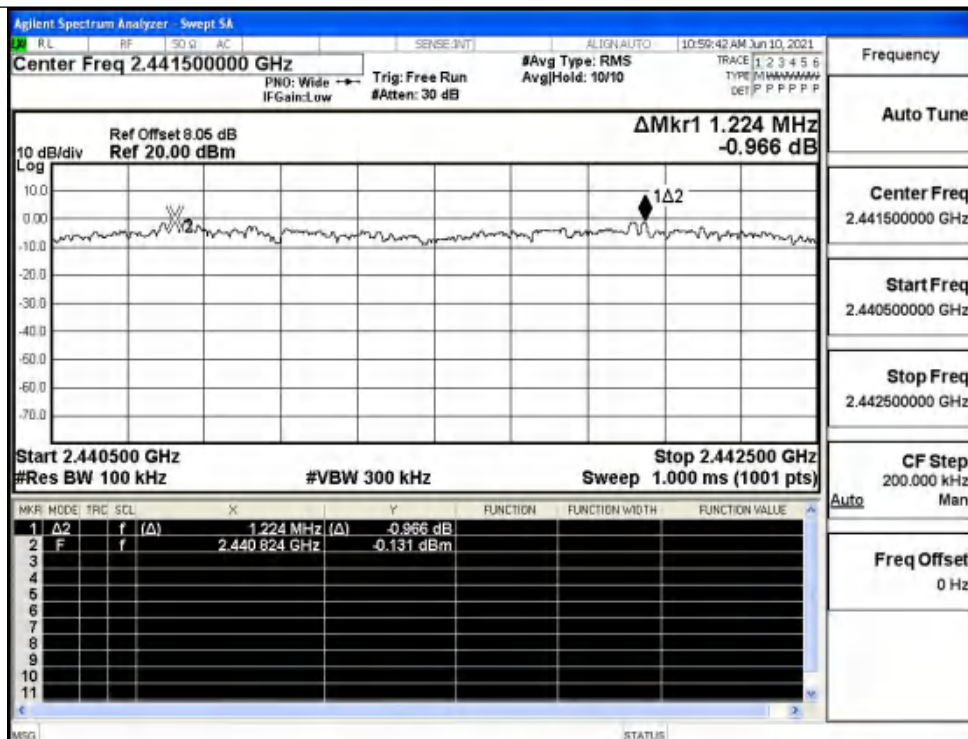
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

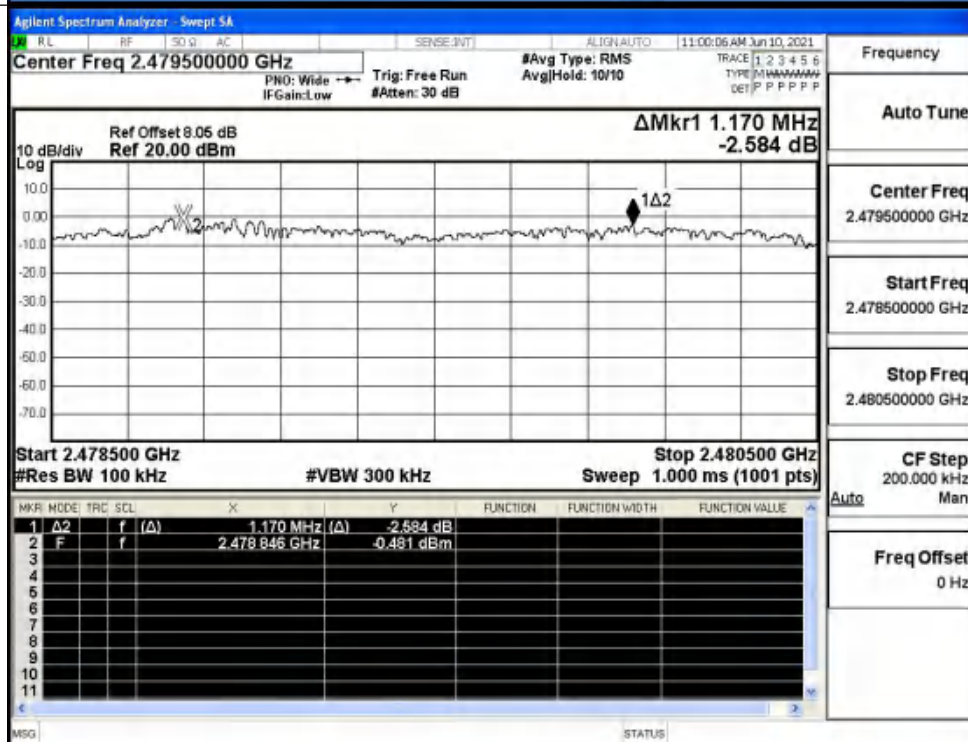
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

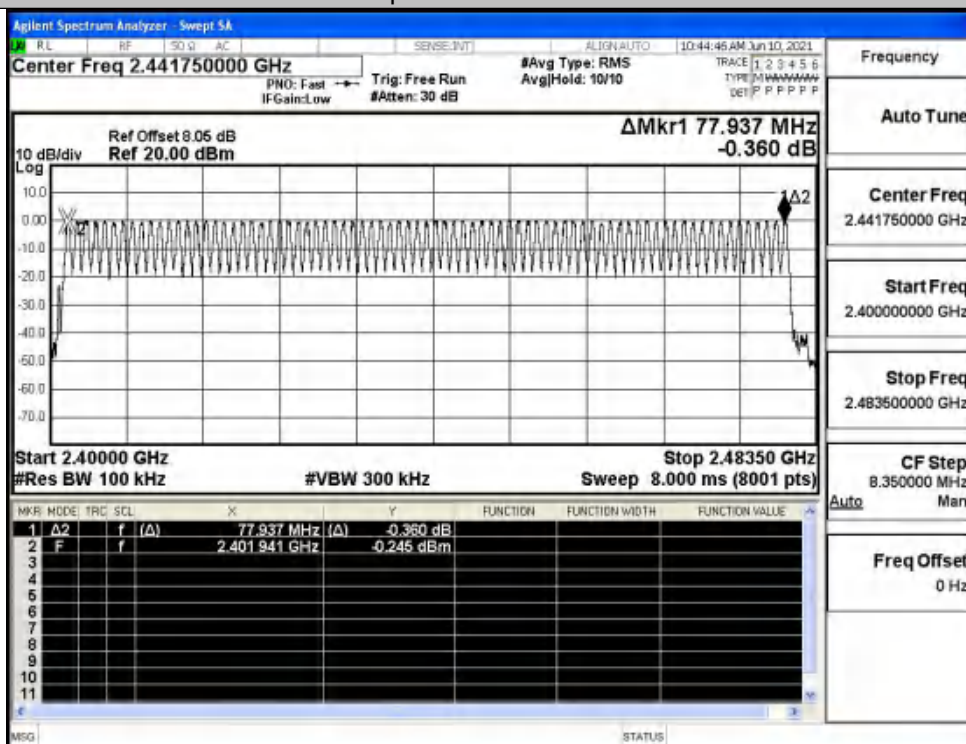
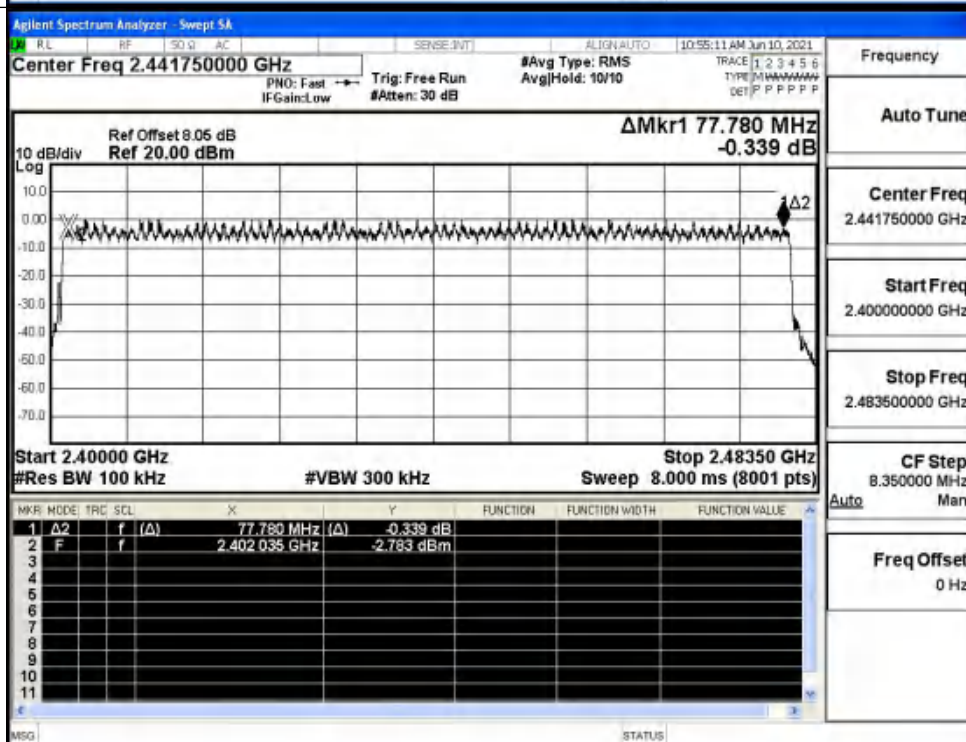


## A.4 Hopping Channel Number

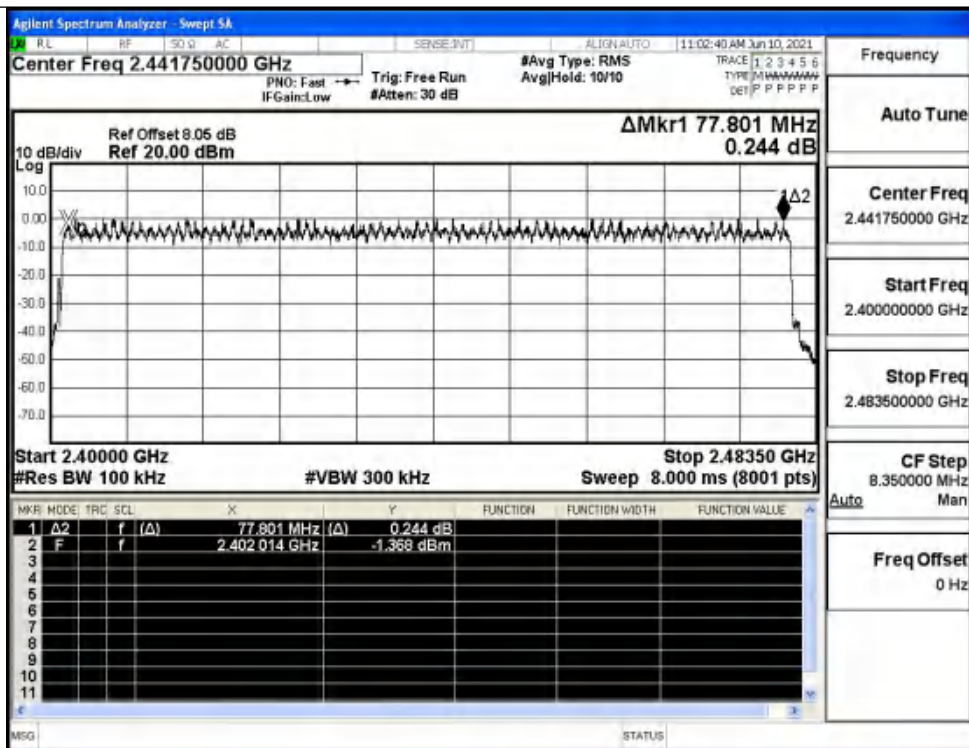
| Mode          | Channel. | Number of Hopping Channel [N] | Limit [N] | Verdict |
|---------------|----------|-------------------------------|-----------|---------|
| GFSK          | Hop      | 79                            | >=15      | PASS    |
| $\pi/4$ DQPSK | Hop      | 79                            | >=15      | PASS    |
| 8DPSK         | Hop      | 79                            | >=15      | PASS    |

### Test Graphs

GFSK/Hop

 $\pi/4$ DQPSK/Hop

8DPSK/Hop

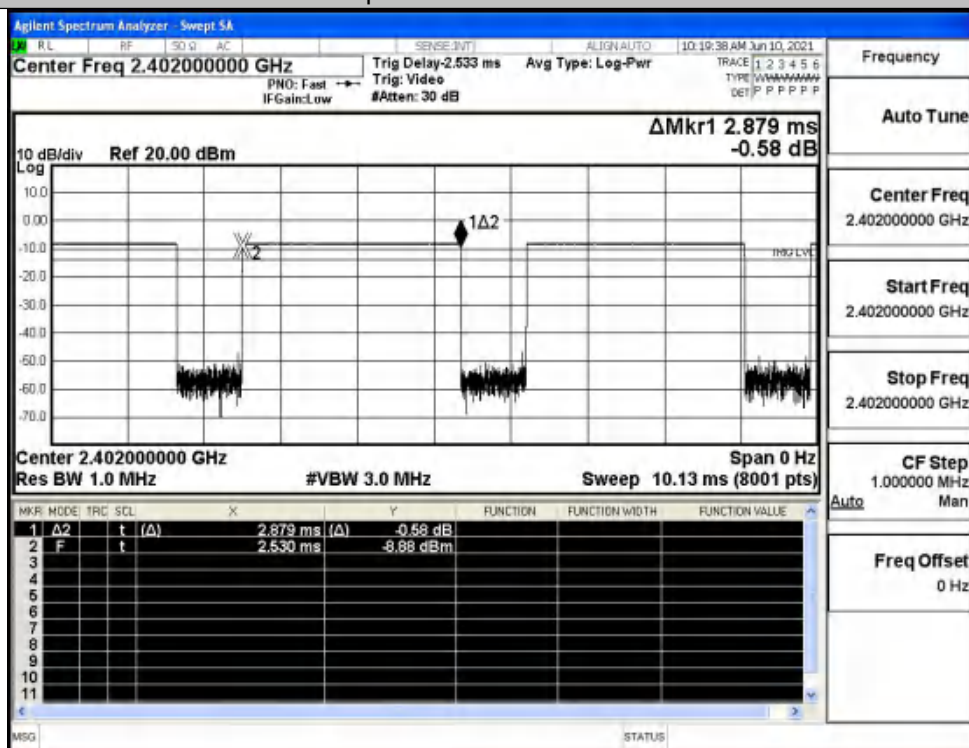


## A.5 Dwell Time

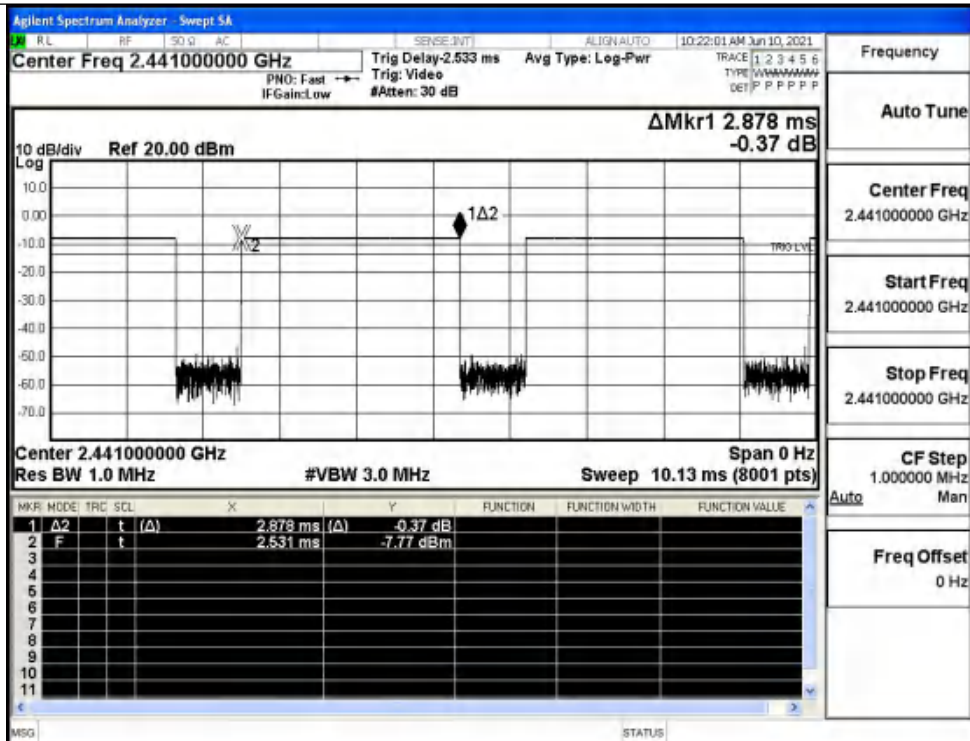
| Mode          | Packet | Channel | Burst Width<br>[ms/hop/ch] | Total<br>Hops[hop*ch] | Dwell Time[s] | Limit [s] | Verdict |
|---------------|--------|---------|----------------------------|-----------------------|---------------|-----------|---------|
| GFSK          | DH5    | LCH     | 2.88                       | 106.7                 | 0.307         | 0.4       | PASS    |
|               | DH5    | MCH     | 2.88                       | 106.7                 | 0.307         | 0.4       | PASS    |
|               | DH5    | HCH     | 2.88                       | 106.7                 | 0.307         | 0.4       | PASS    |
| $\pi/4$ DQPSK | 2DH5   | LCH     | 2.88                       | 106.7                 | 0.307         | 0.4       | PASS    |
|               | 2DH5   | MCH     | 2.88                       | 106.7                 | 0.307         | 0.4       | PASS    |
|               | 2DH5   | HCH     | 2.89                       | 106.7                 | 0.308         | 0.4       | PASS    |
| 8DPSK         | 3DH5   | LCH     | 2.88                       | 106.7                 | 0.307         | 0.4       | PASS    |
|               | 3DH5   | MCH     | 2.88                       | 106.7                 | 0.307         | 0.4       | PASS    |
|               | 3DH5   | HCH     | 2.88                       | 106.7                 | 0.307         | 0.4       | PASS    |

Test Graphs

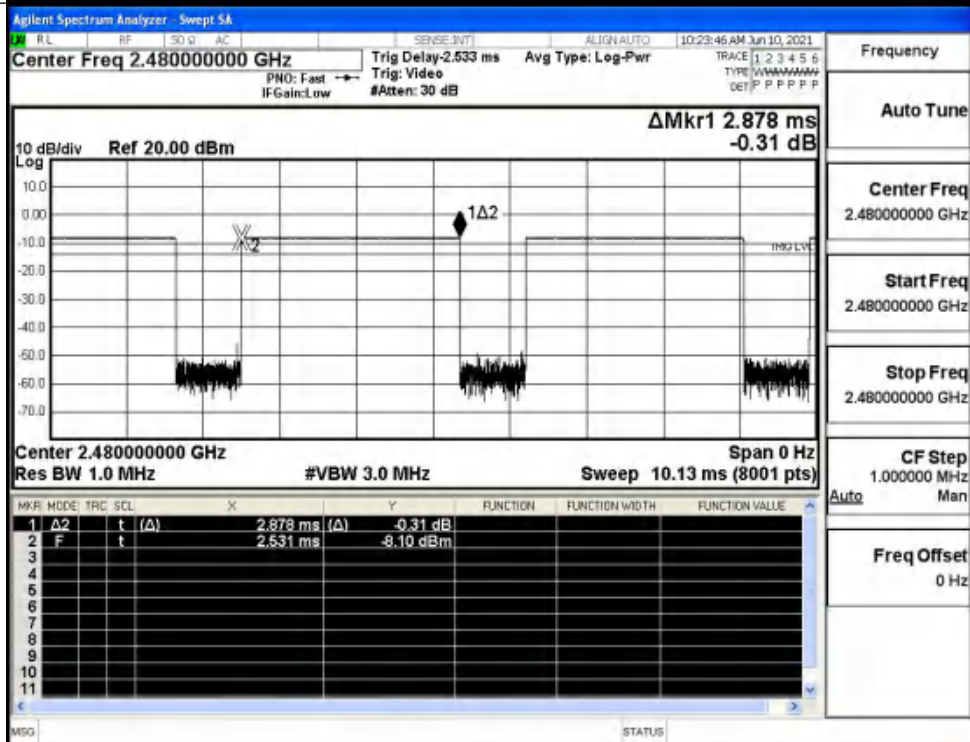
GFSK\_DH5/LCH



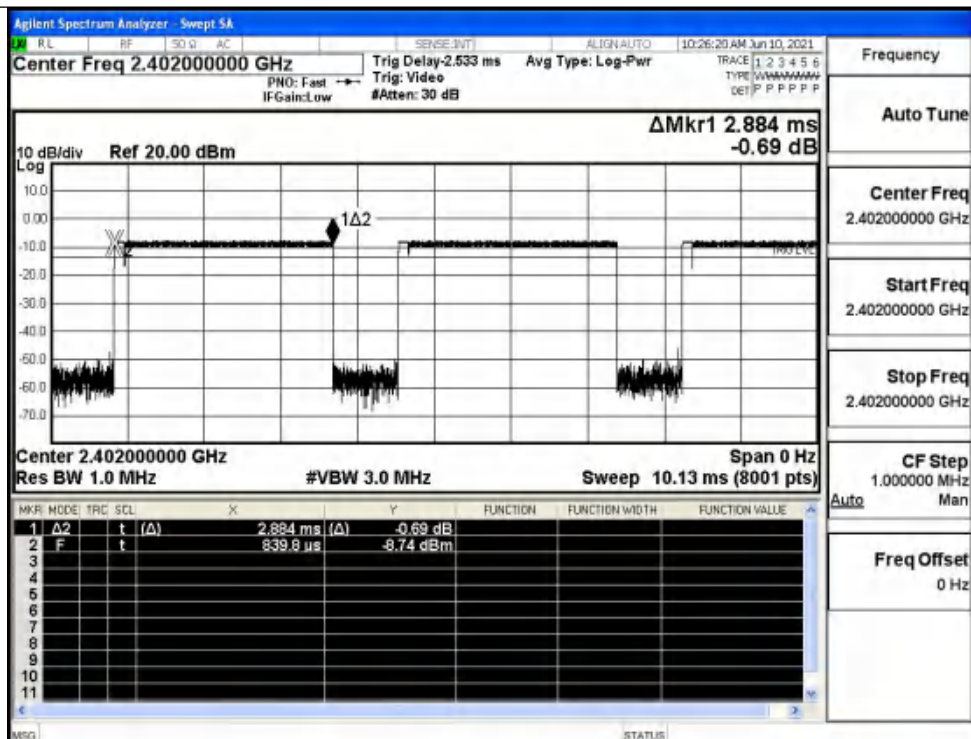
GFSK\_DH5/MCH



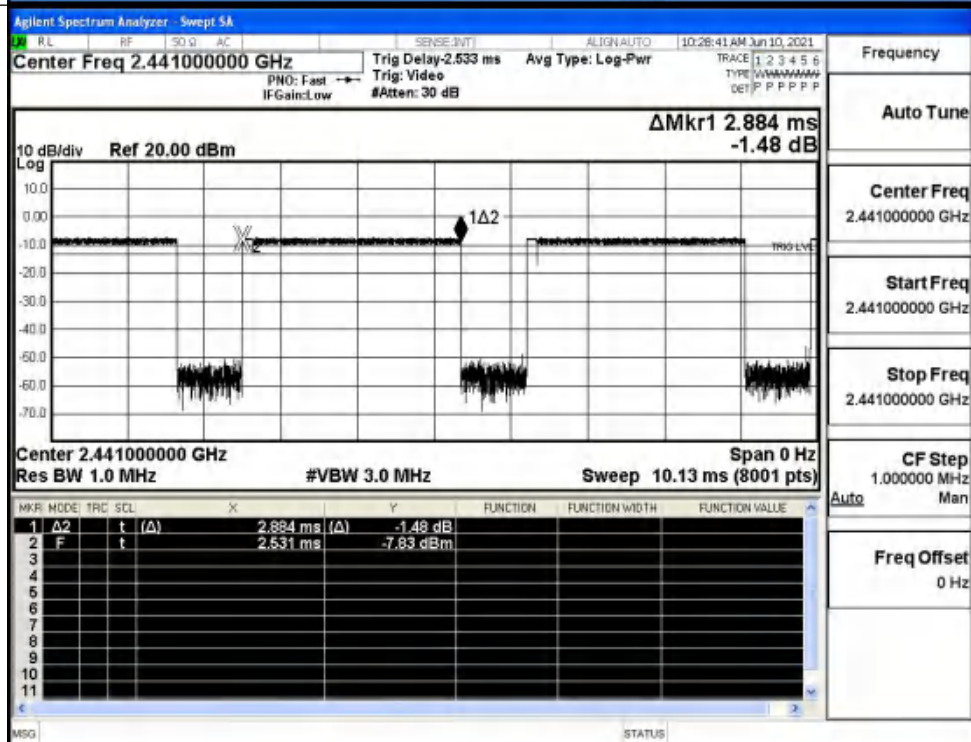
GFSK\_DH5/HCH



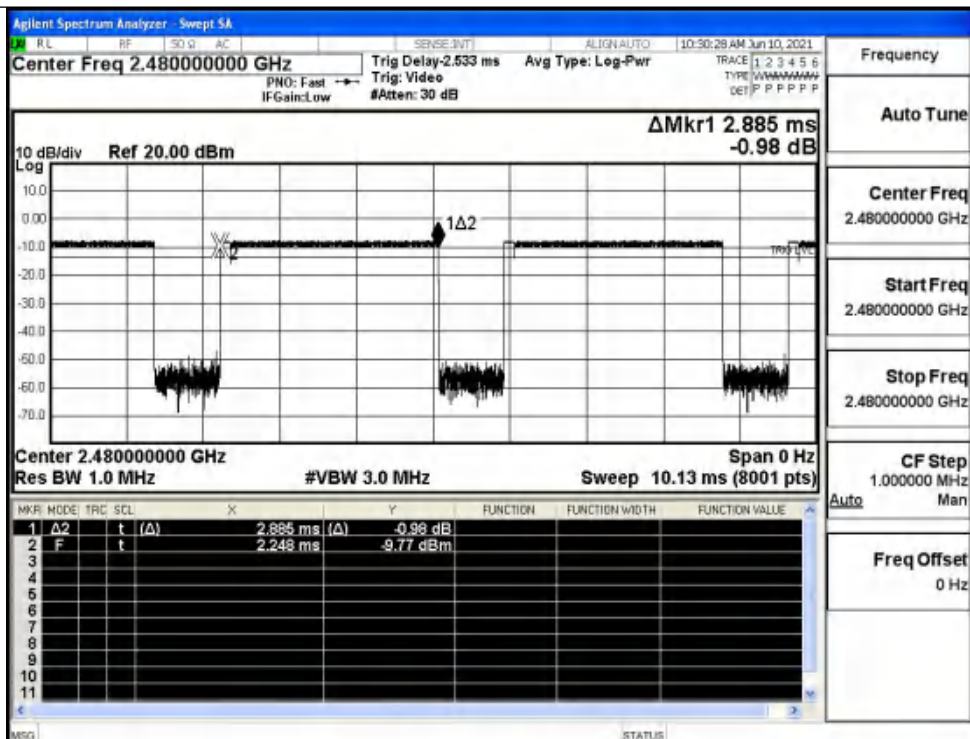
$\pi/4$ DQPSK  
\_2DH5/LCH



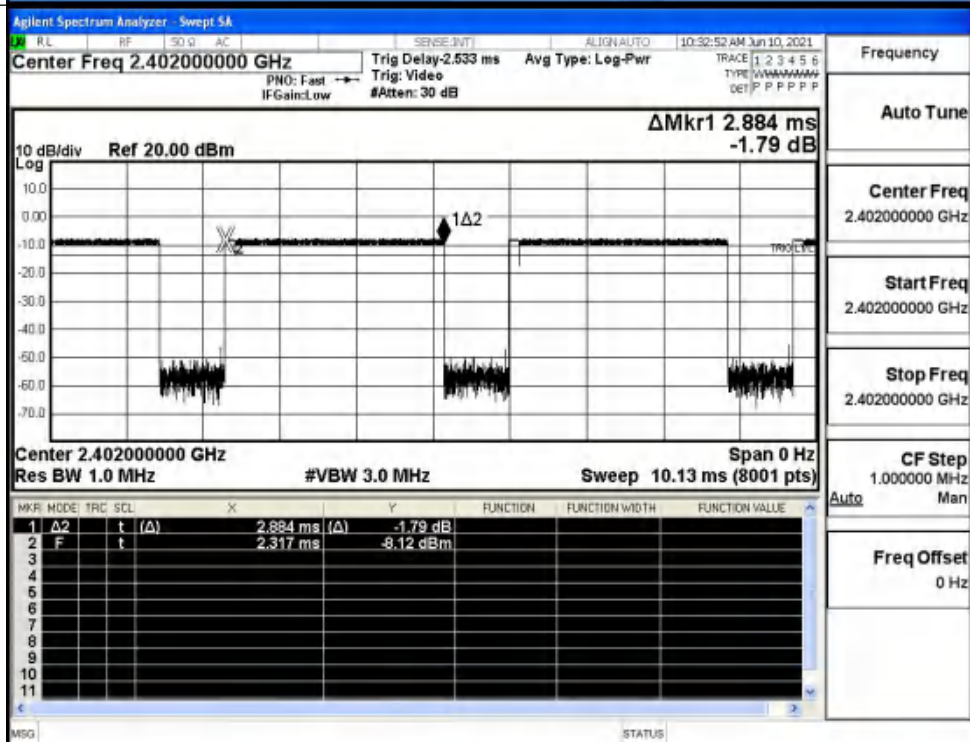
$\pi/4$ DQPSK  
\_2DH5/MCH



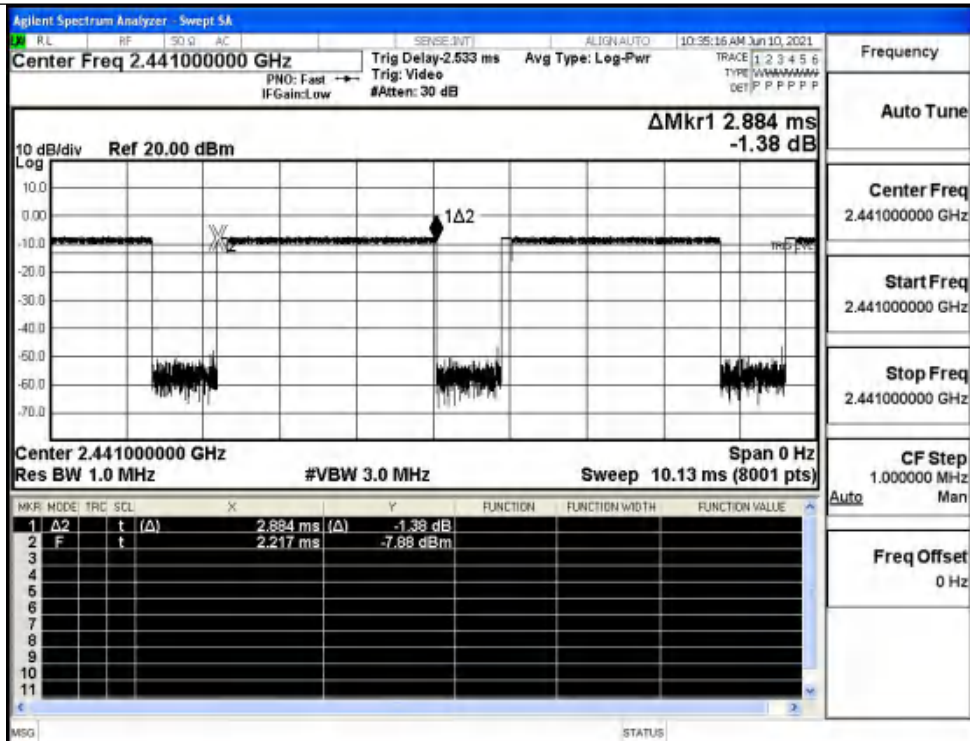
$\pi/4$ DQPSK  
\_2DH5/HCH



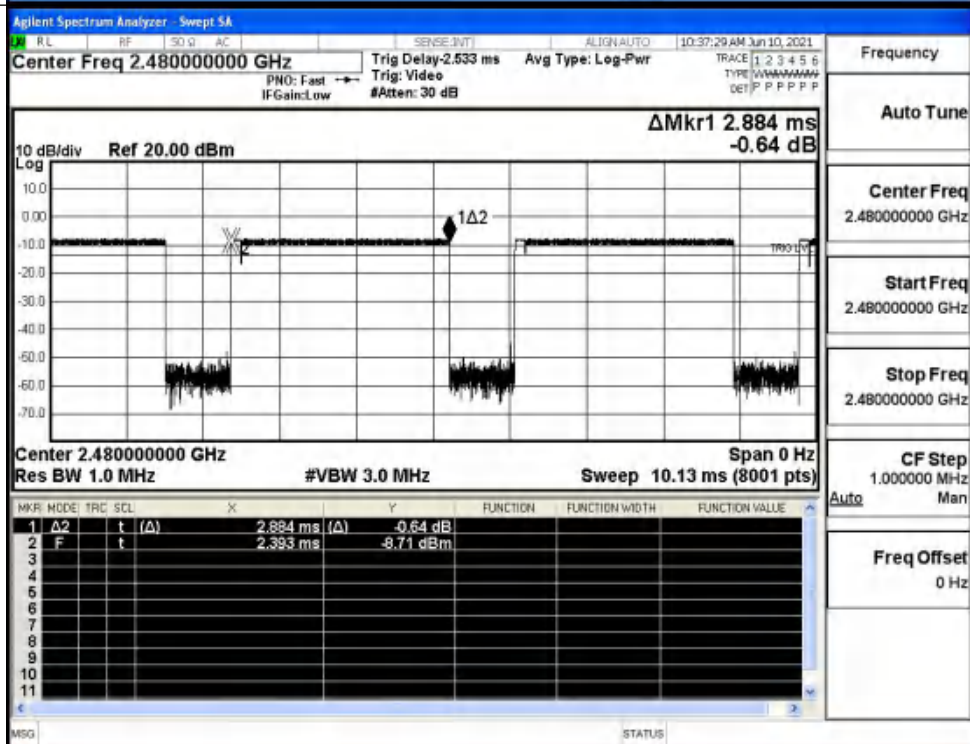
8DPSK \_3DH5/LCH



8DPSK\_3DH5/MCH

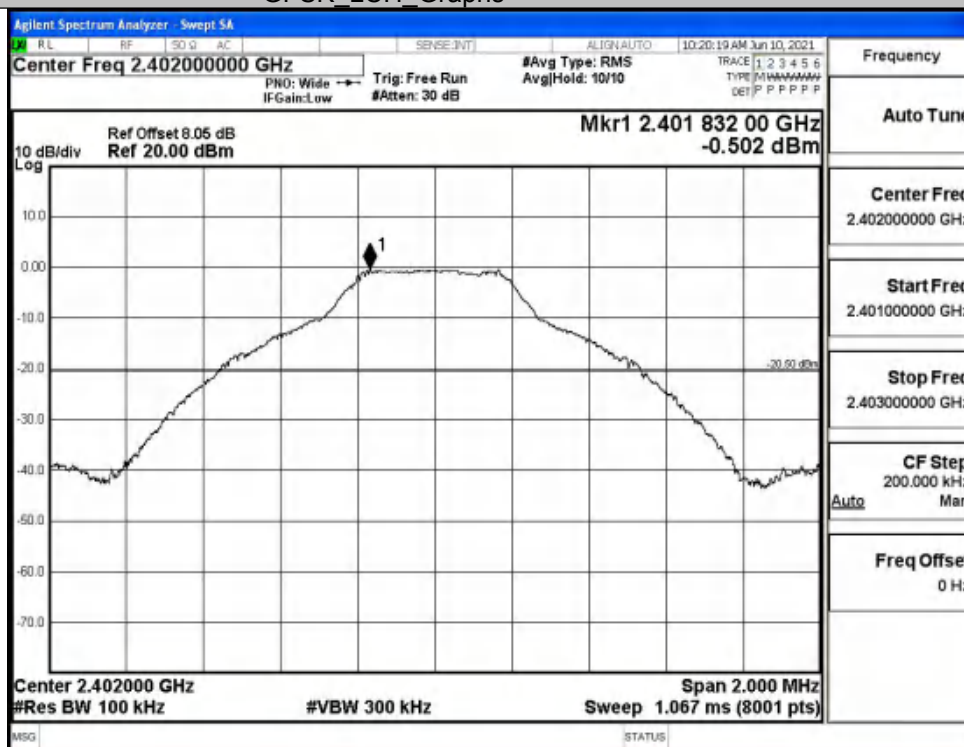


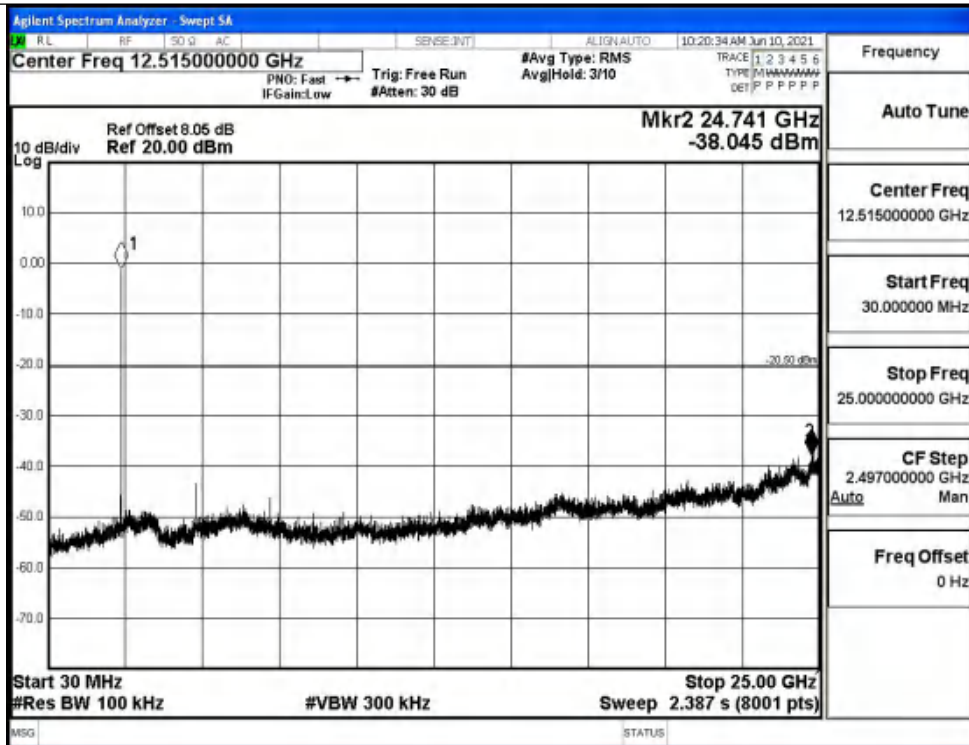
8DPSK\_3DH5/HCH



| Mode          | Channel | Pref [dBm] | Max. Level [dBm] | Limit [dBm] | Verdict |
|---------------|---------|------------|------------------|-------------|---------|
| GFSK          | LCH     | -0.502     | -38.045          | -20.502     | PASS    |
|               | MCH     | 0.06       | -37.407          | -19.940     | PASS    |
|               | HCH     | -0.272     | -37.478          | -20.272     | PASS    |
| $\pi/4$ DQPSK | LCH     | -0.086     | -38.202          | -20.086     | PASS    |
|               | MCH     | 0.228      | -37.733          | -19.772     | PASS    |
|               | HCH     | -0.259     | -37.120          | -20.259     | PASS    |
| 8DPSK         | LCH     | -0.103     | -36.595          | -20.103     | PASS    |
|               | MCH     | 0.174      | -37.863          | -19.826     | PASS    |
|               | HCH     | -0.262     | -37.920          | -20.262     | PASS    |

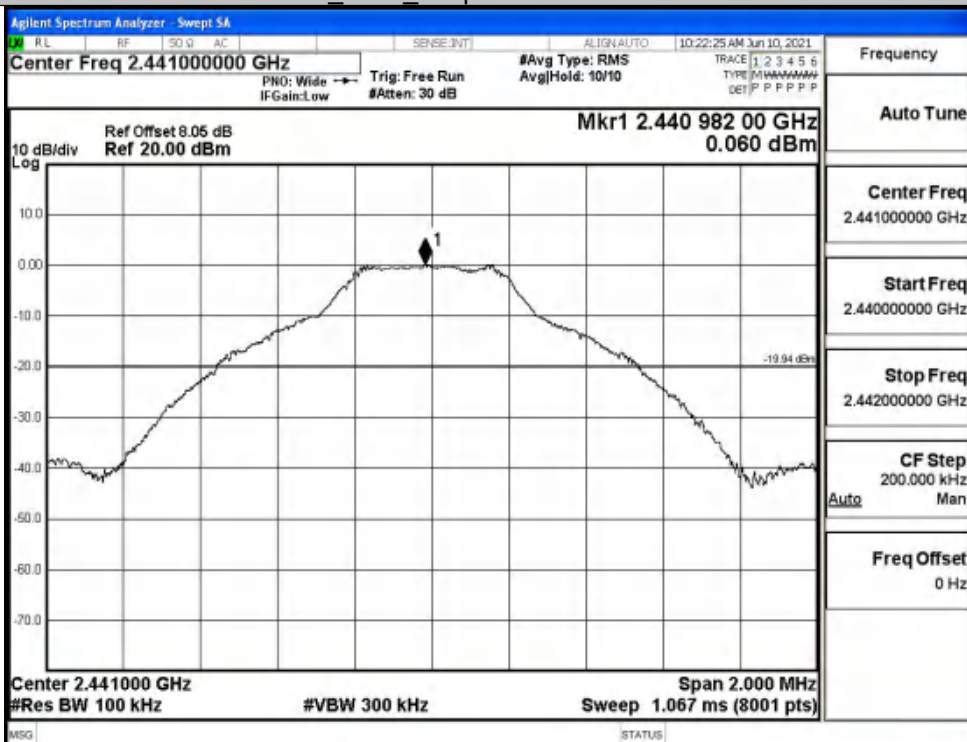
Pref



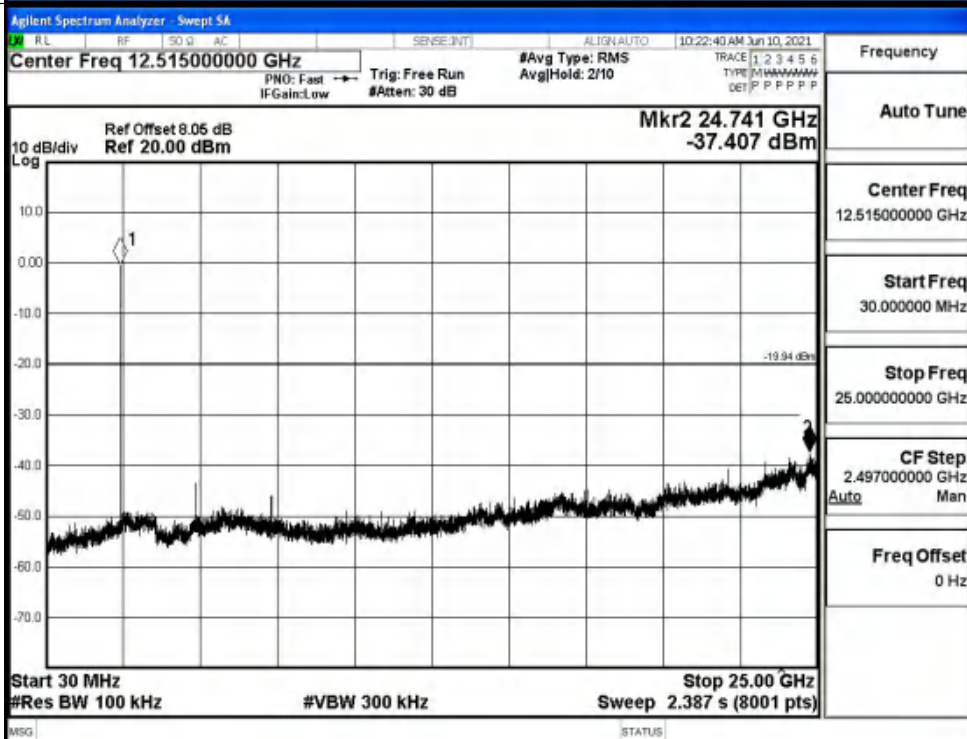
P<sub>u</sub>

## GFSK\_MCH\_Graphs

Pref

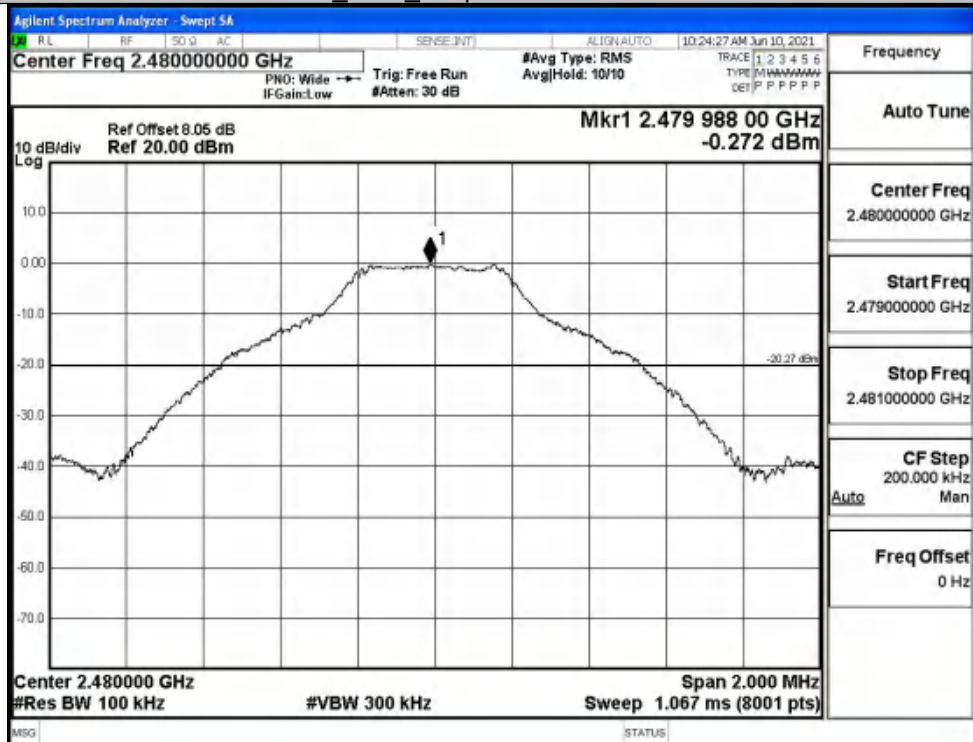


Puw

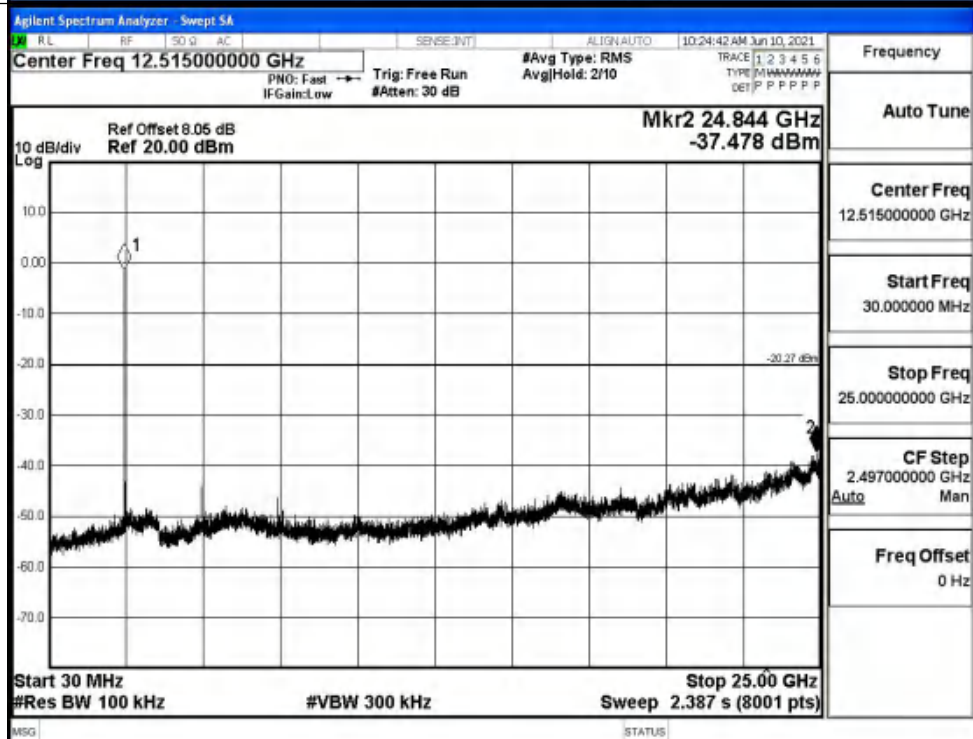


## GFSK\_HCH\_Graphs

Pref

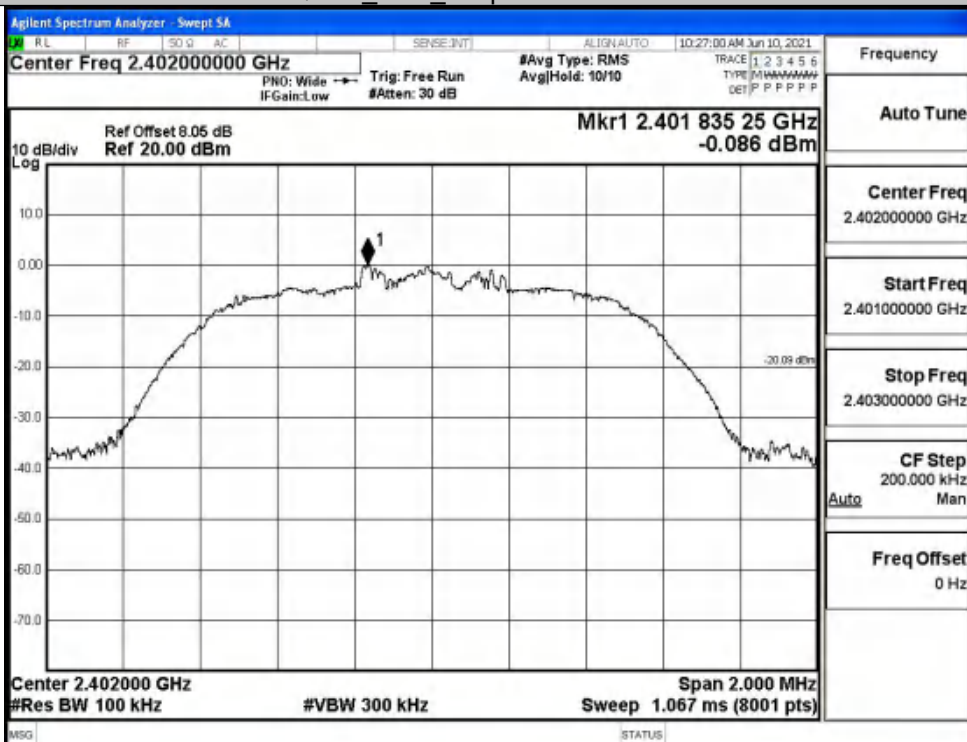


Puw

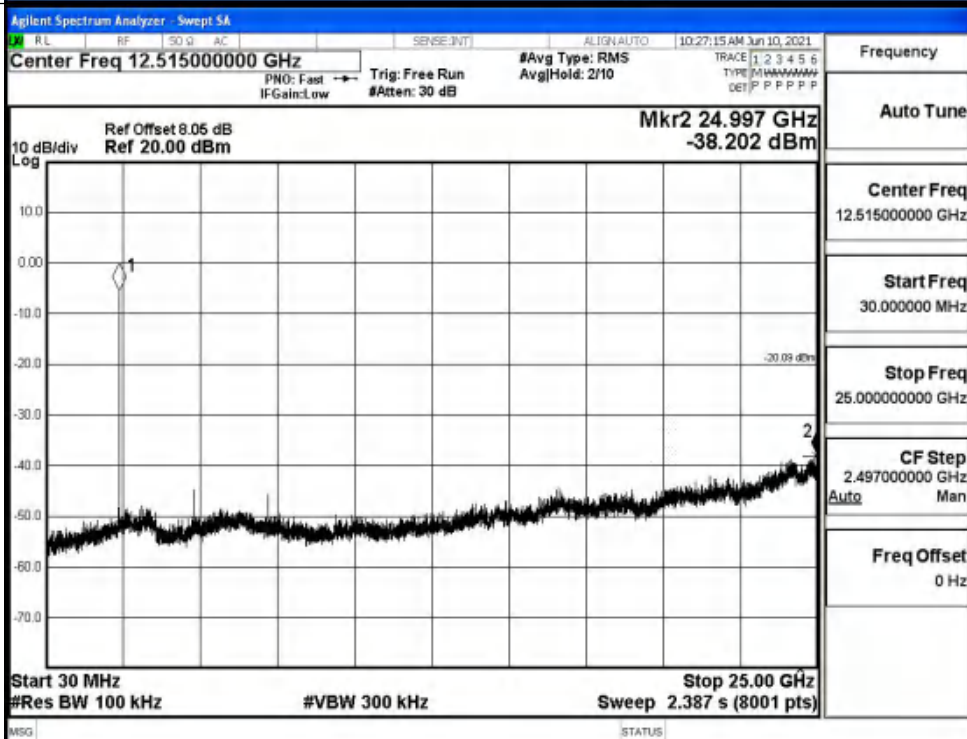


$\pi/4$ DQPSK\_LCH\_Graphs

Pref

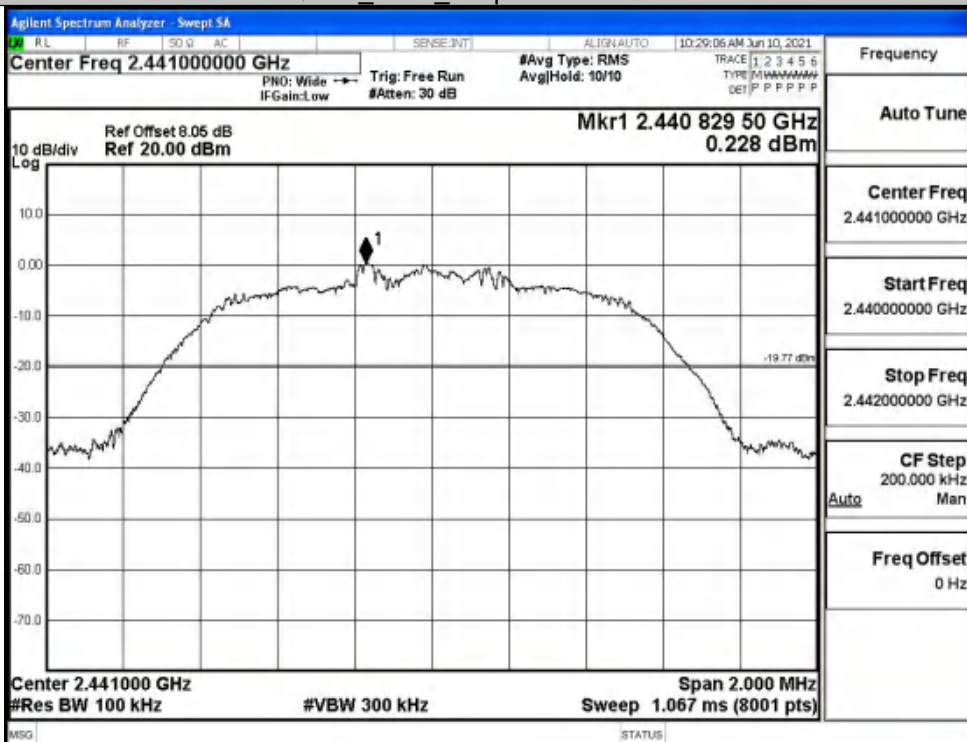


Puw

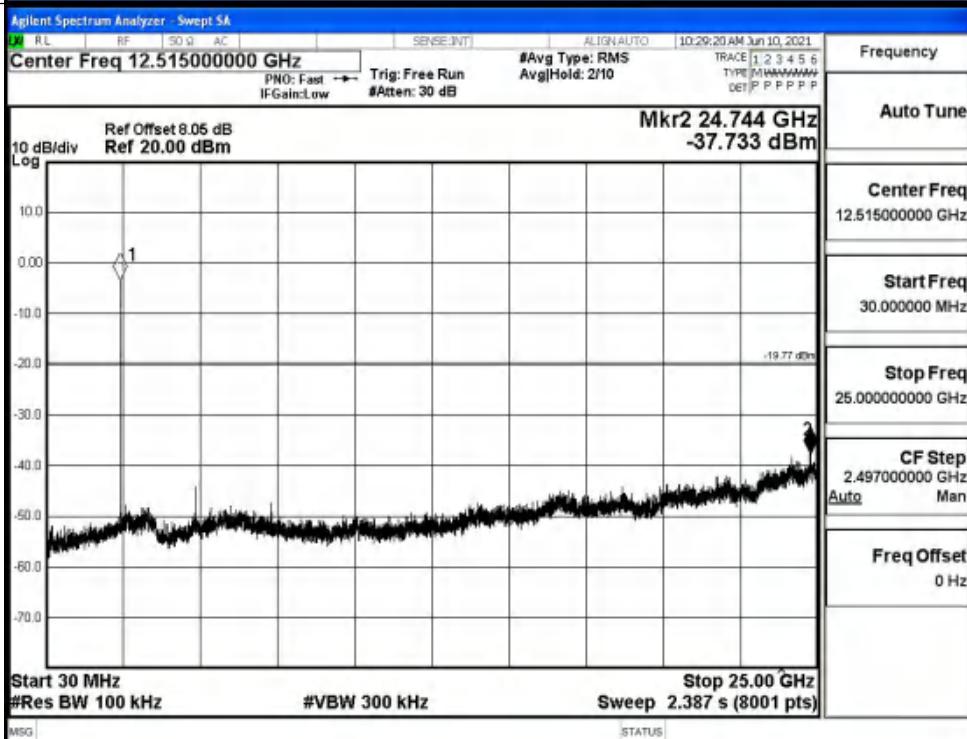


$\pi/4$ DQPSK\_MCH\_Graphs

Pref

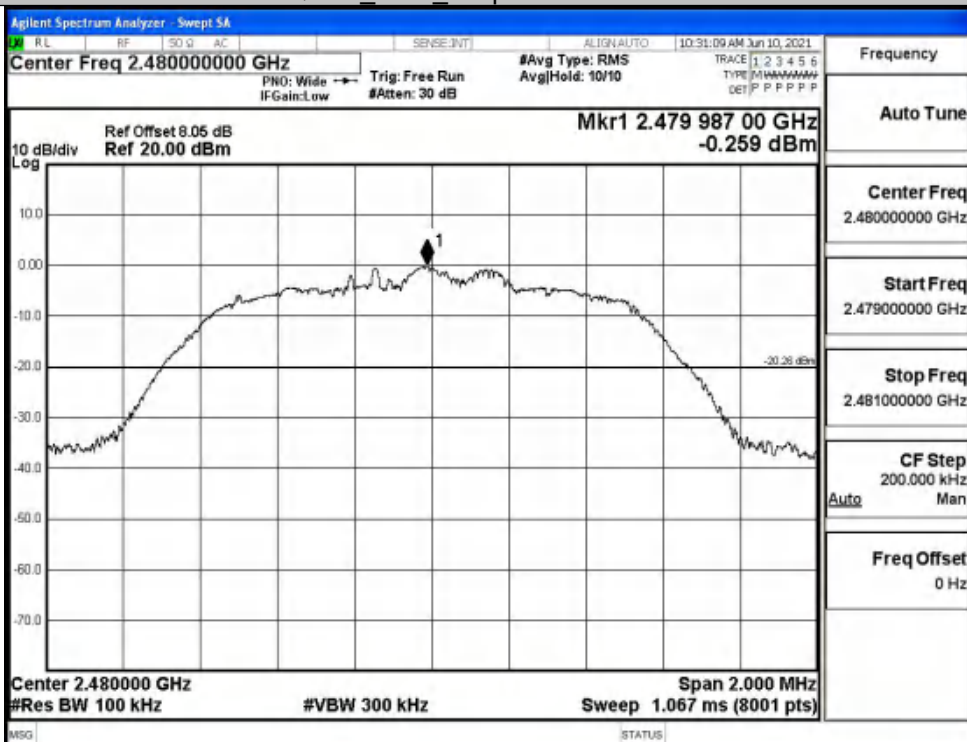


Puw

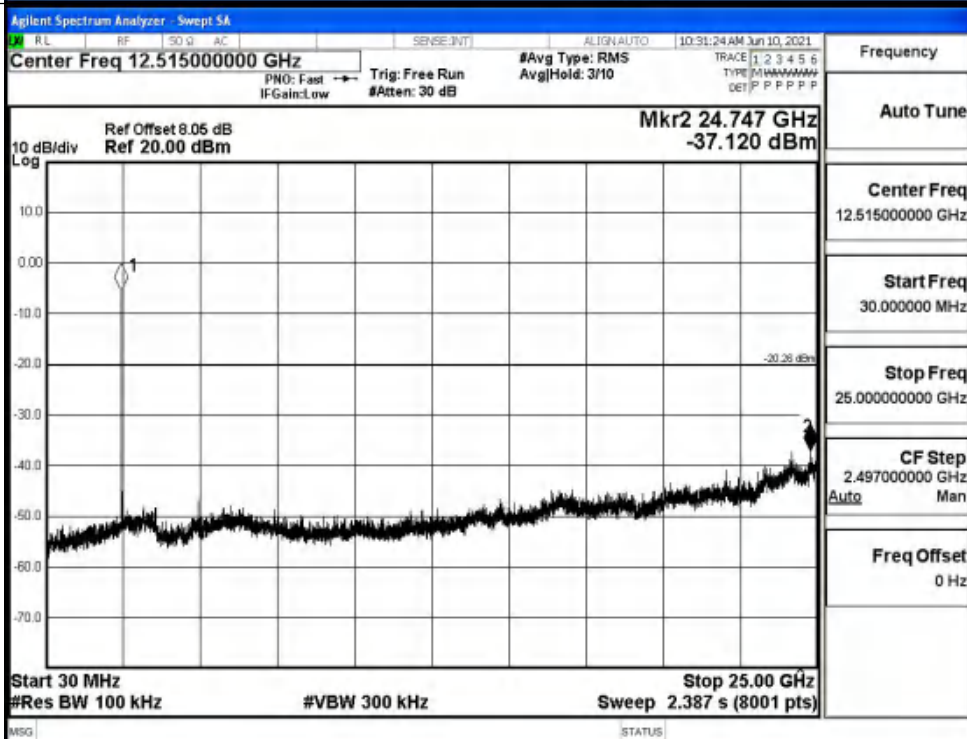


$\pi/4$ DQPSK\_HCH\_Graphs

Pref

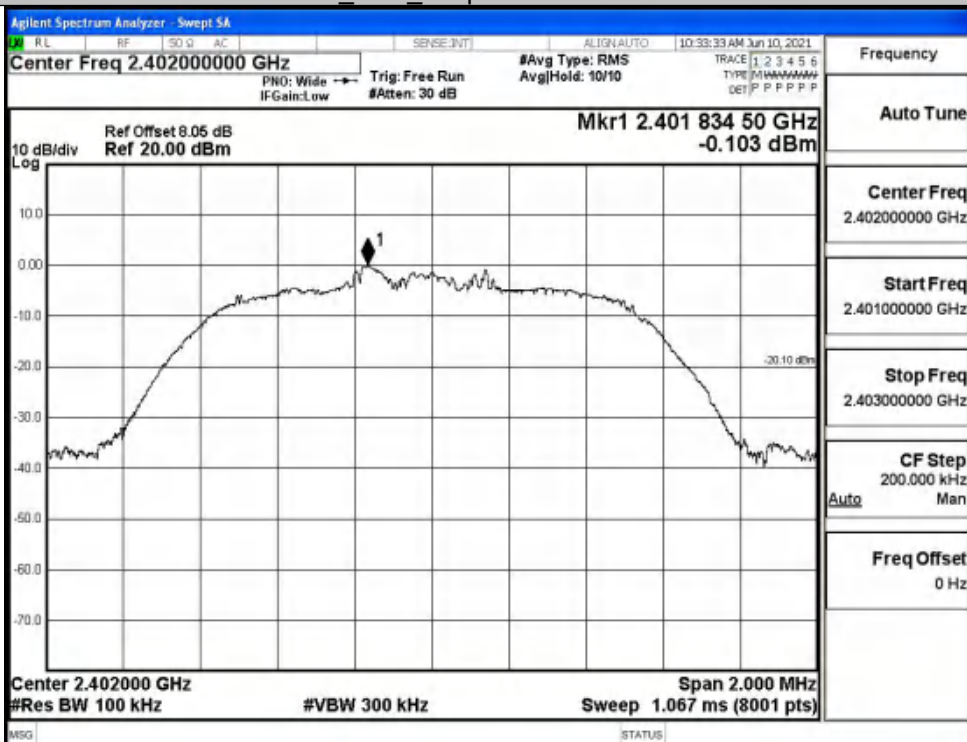


Puw



## 8DPSK\_LCH\_Graphs

Pref

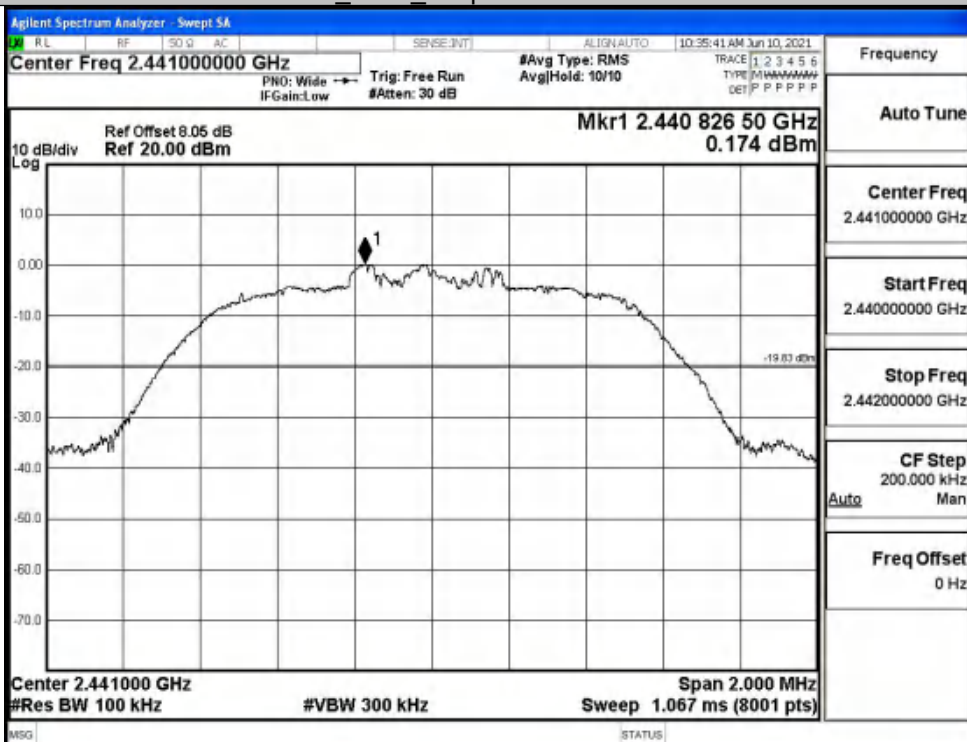


Puw

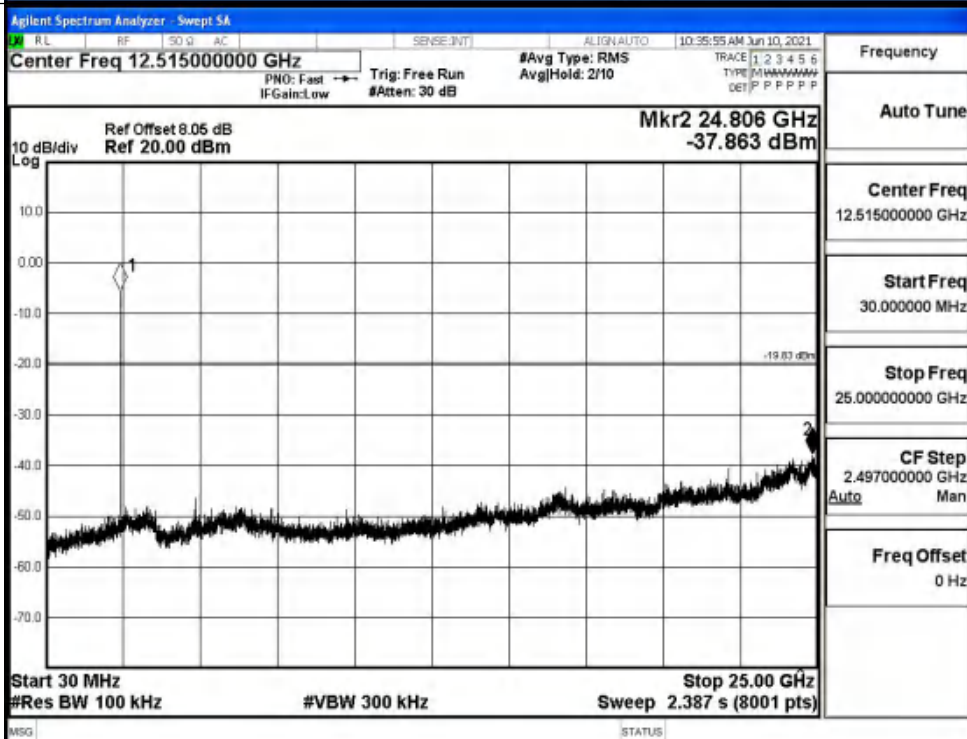


## 8DPSK\_MCH\_Graphs

Pref

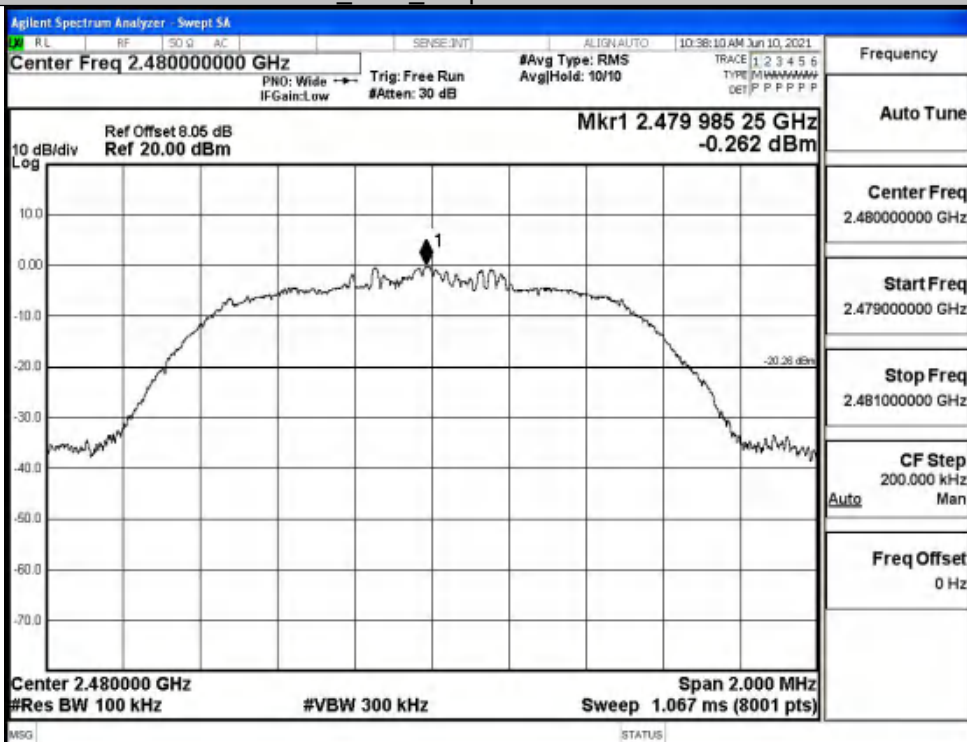


Puw



## 8DPSK\_HCH\_Graphs

Pref



Puw

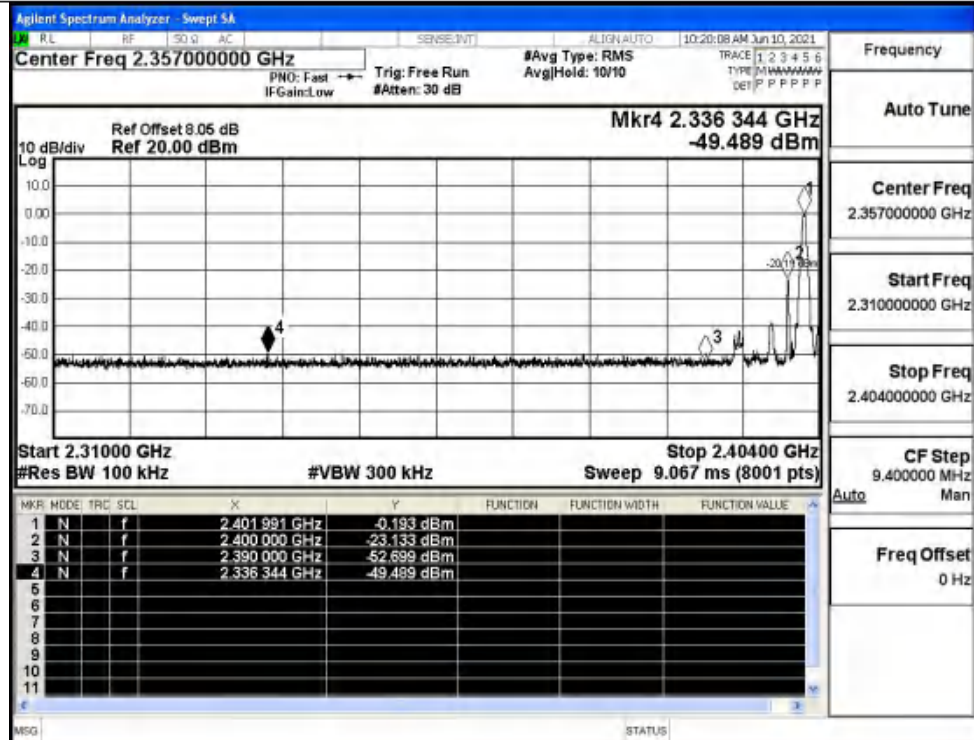


## A.7 Band-edge for RF Conducted Emissions

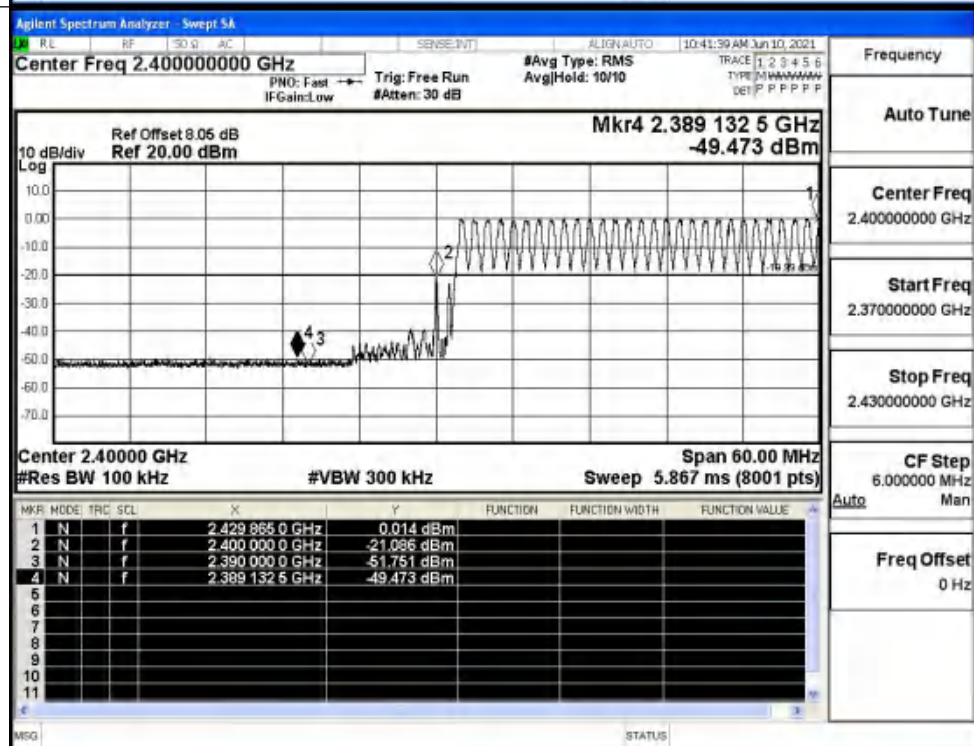
| Mode          | Channel | Carrier Frequency [MHz] | Carrier Power [dBm] | Frequency Hopping | Max Spurious Level [dBm] | Limit [dBm] | Verdict |
|---------------|---------|-------------------------|---------------------|-------------------|--------------------------|-------------|---------|
| GFSK          | LCH     | 2402                    | -0.193              | Off               | -49.489                  | -20.19      | PASS    |
|               |         |                         | 0.014               | On                | -49.473                  | -19.99      | PASS    |
|               | HCH     | 2480                    | -0.154              | Off               | -48.786                  | -20.15      | PASS    |
|               |         |                         | 0.034               | On                | -48.492                  | -19.97      | PASS    |
| $\pi/4$ DQPSK | LCH     | 2402                    | -0.039              | Off               | -49.815                  | -20.04      | PASS    |
|               |         |                         | 0.130               | On                | -49.144                  | -19.87      | PASS    |
|               | HCH     | 2480                    | 0.042               | Off               | -48.085                  | -19.96      | PASS    |
|               |         |                         | 0.276               | On                | -48.706                  | -19.72      | PASS    |
| 8DPSK         | LCH     | 2402                    | -0.684              | Off               | -49.688                  | -20.68      | PASS    |
|               |         |                         | 0.078               | On                | -49.165                  | -19.92      | PASS    |
|               | HCH     | 2480                    | -0.301              | Off               | -48.308                  | -20.3       | PASS    |
|               |         |                         | 0.279               | On                | -48.086                  | -19.72      | PASS    |

## Test Graphs

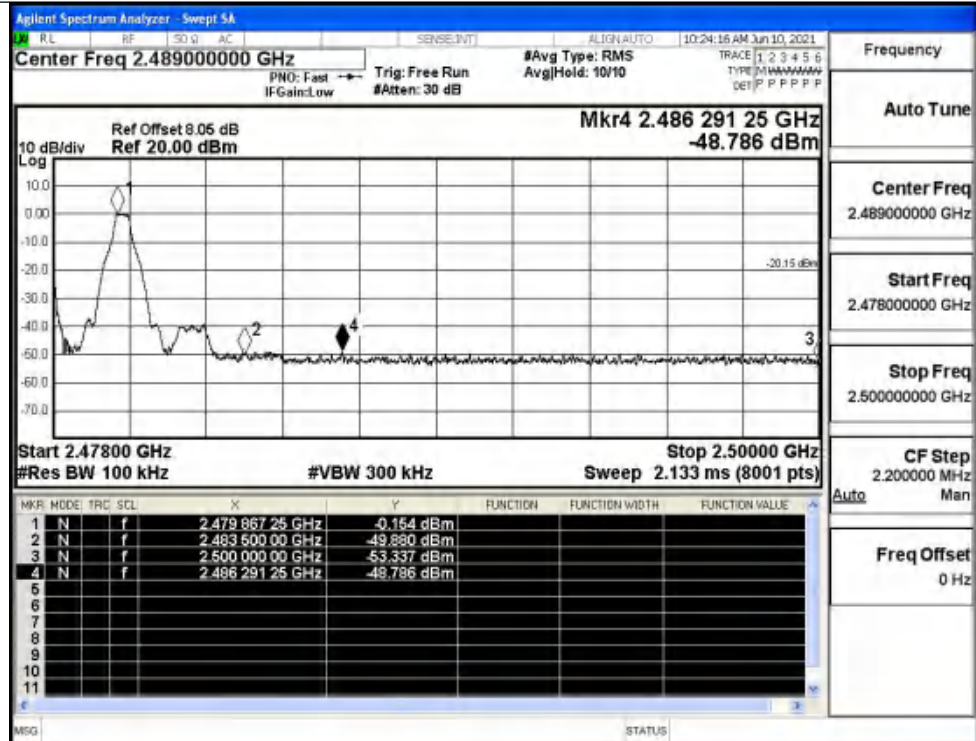
GFSK/LCH/No Hop



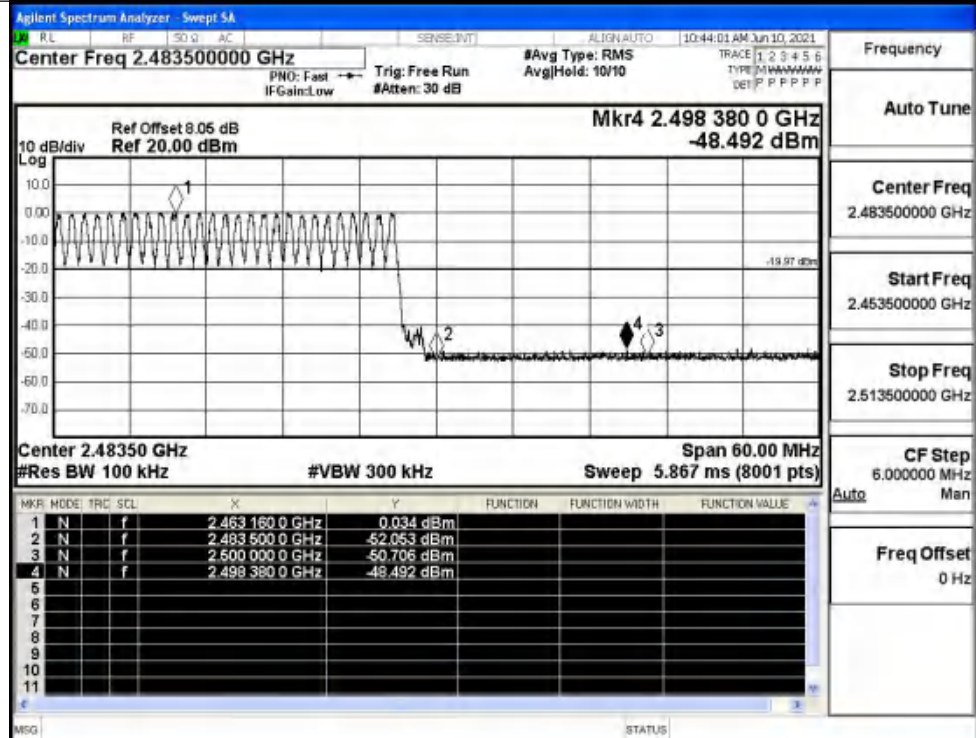
GFSK/LCH/Hop



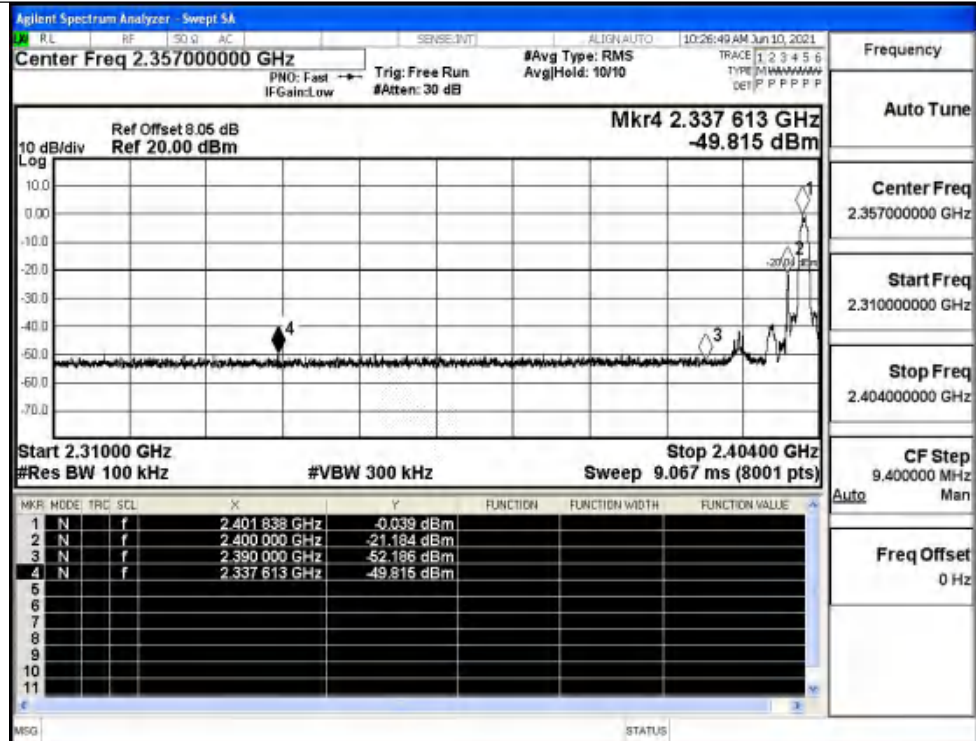
GFSK/HCH/No Hop



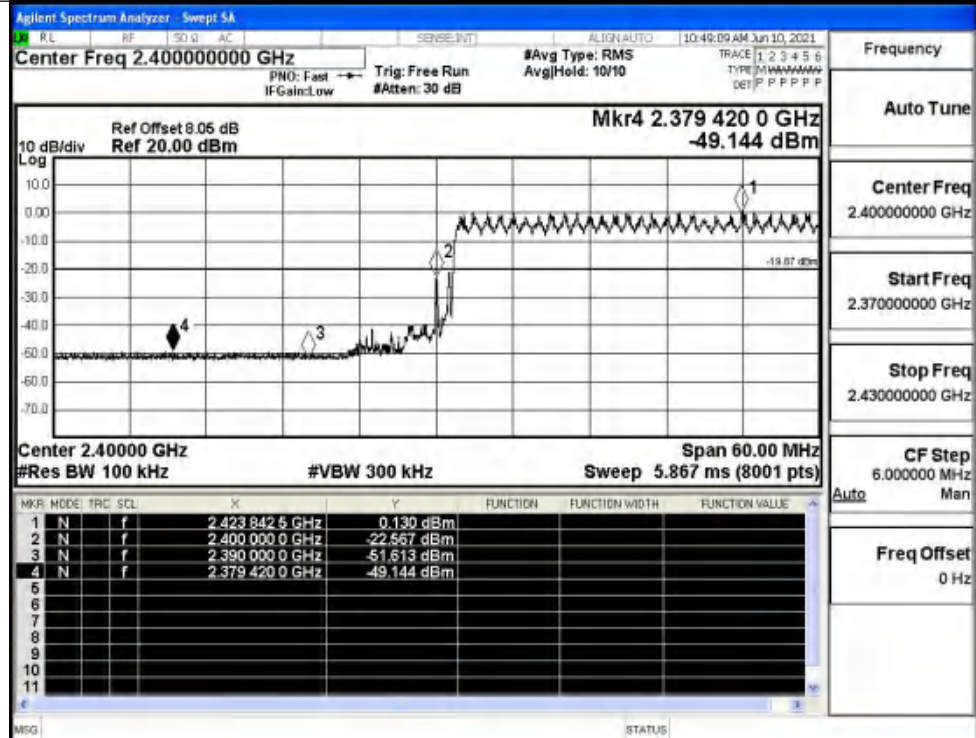
GFSK/HCH/Hop



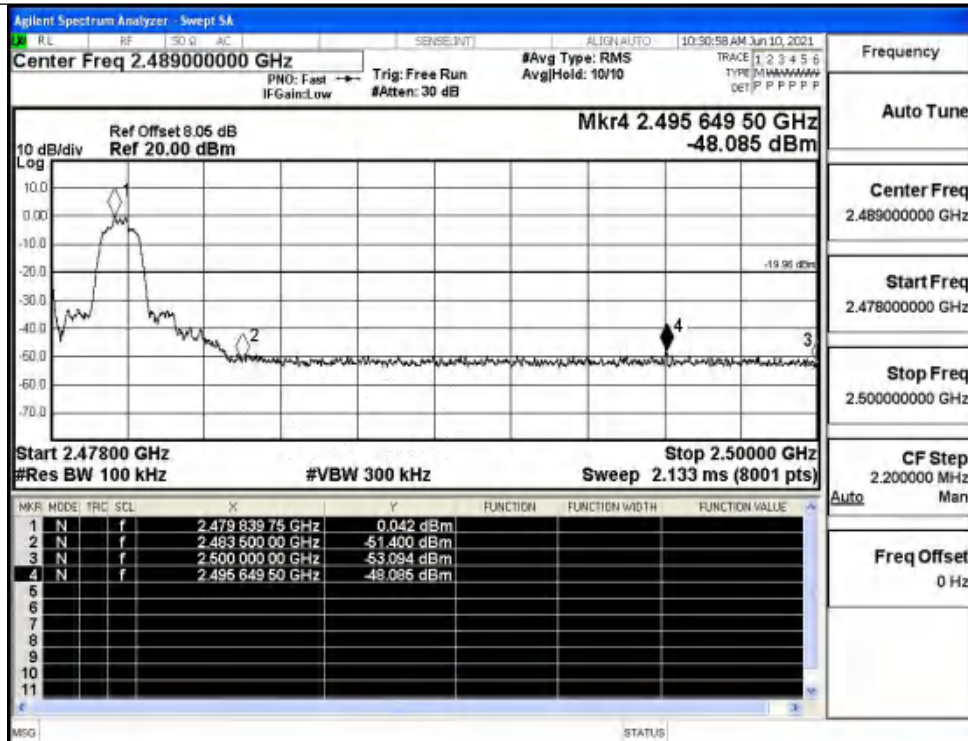
$\pi/4$ DQPSK/LCH/No  
Hop



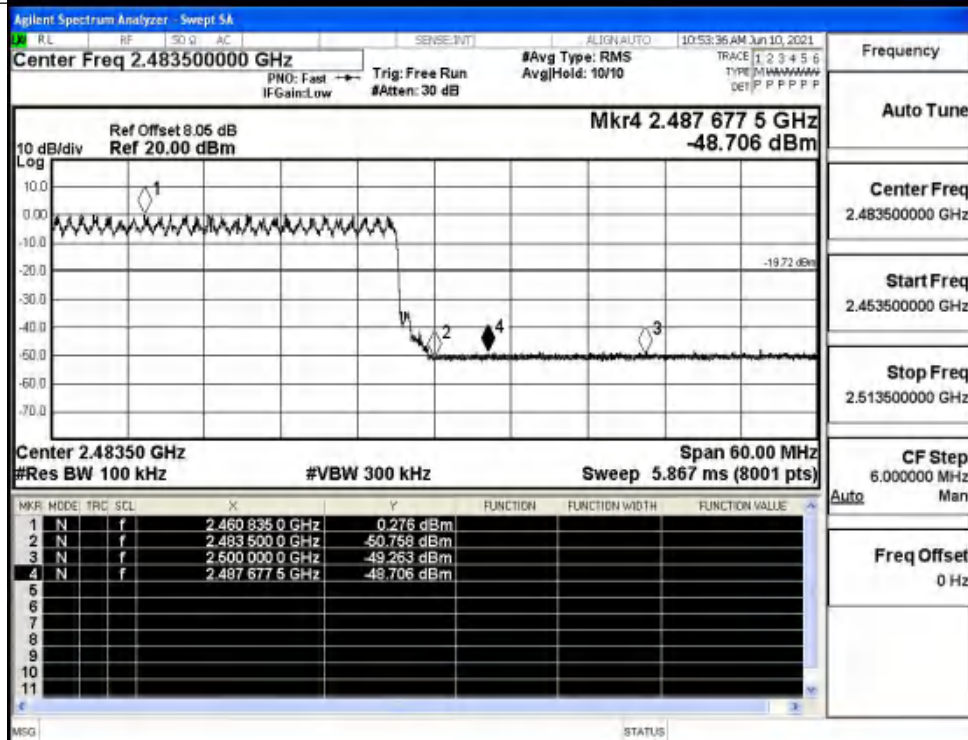
$\pi/4$ DQPSK/LCH/Hop



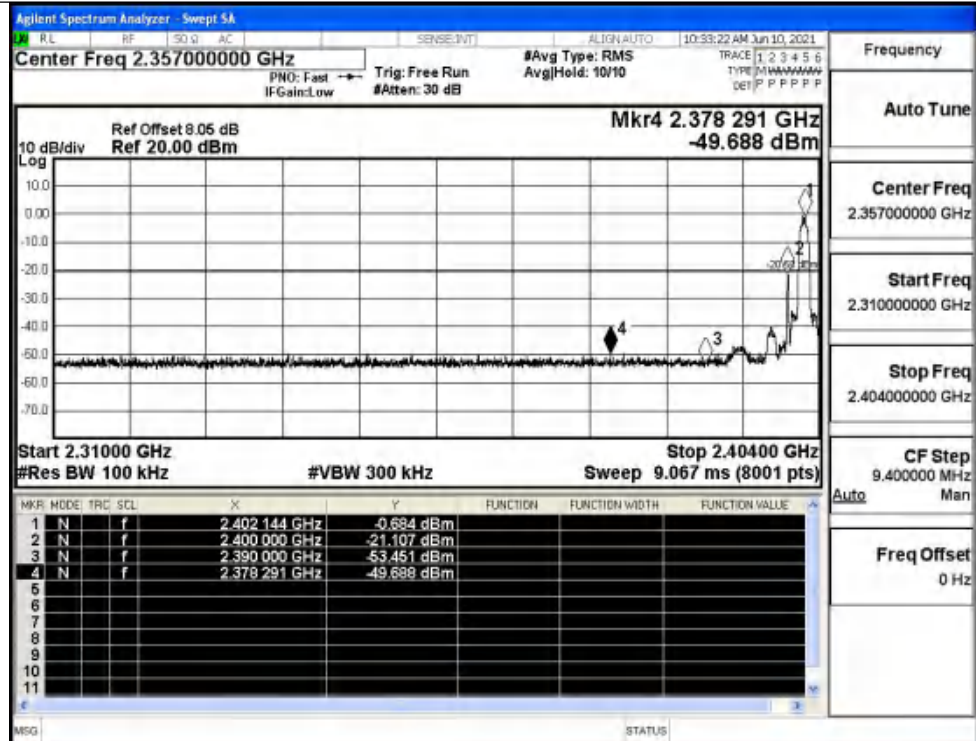
$\pi$ /4DQPSK/HCH/No  
Hop



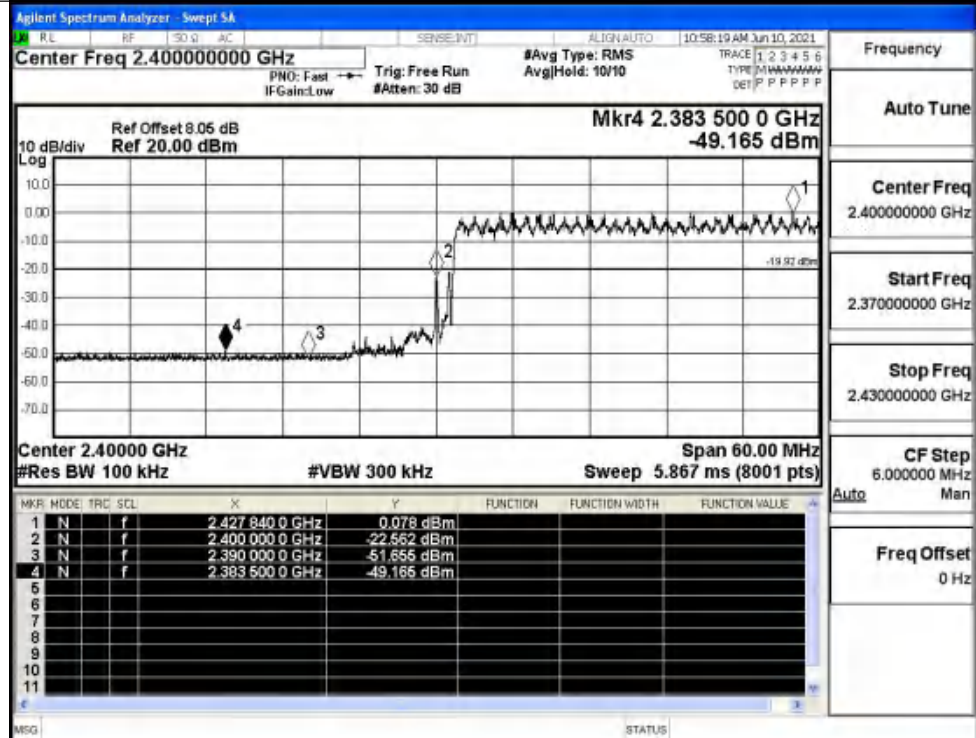
$\pi$ /4DQPSK/HCH/Hop



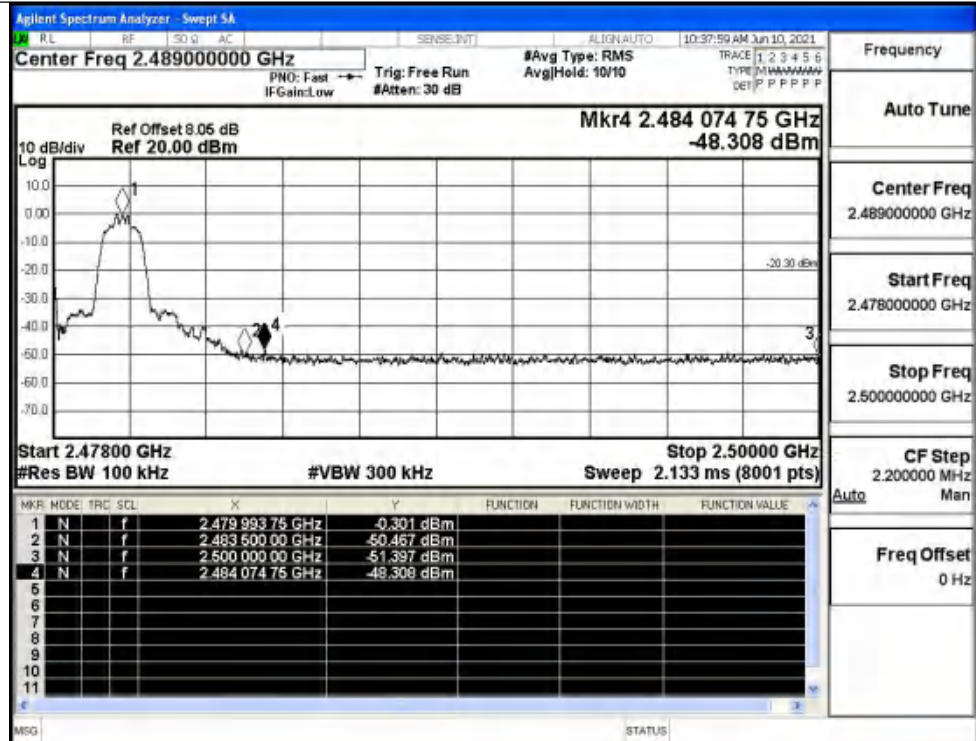
8DPSK/LCH/No Hop



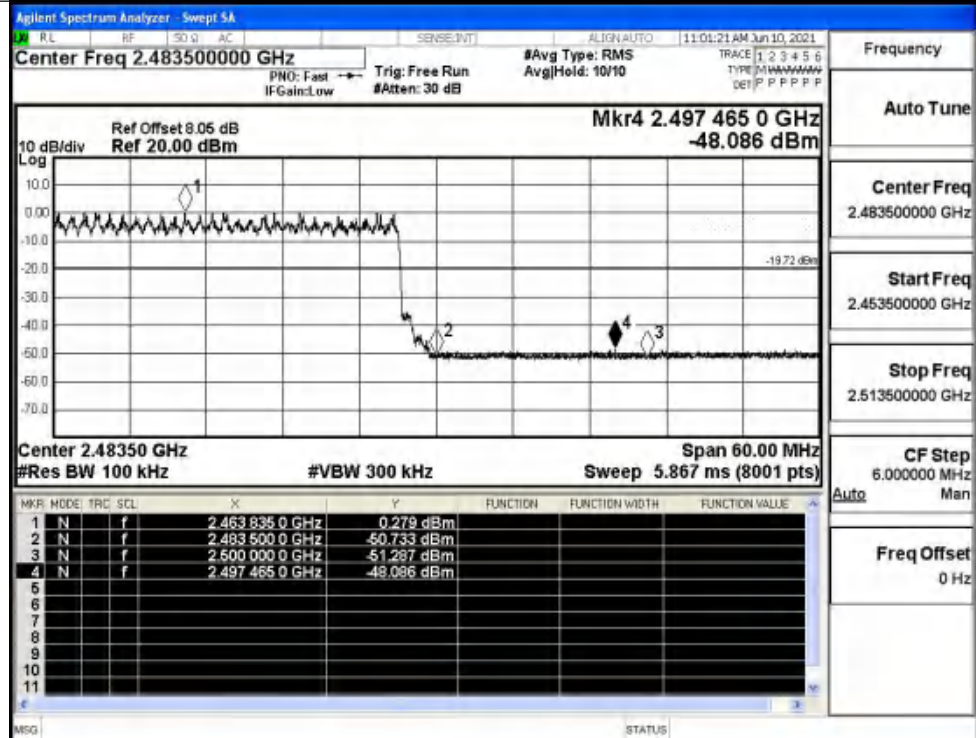
8DPSK/LCH/Hop



8DPSK/HCH/No Hop



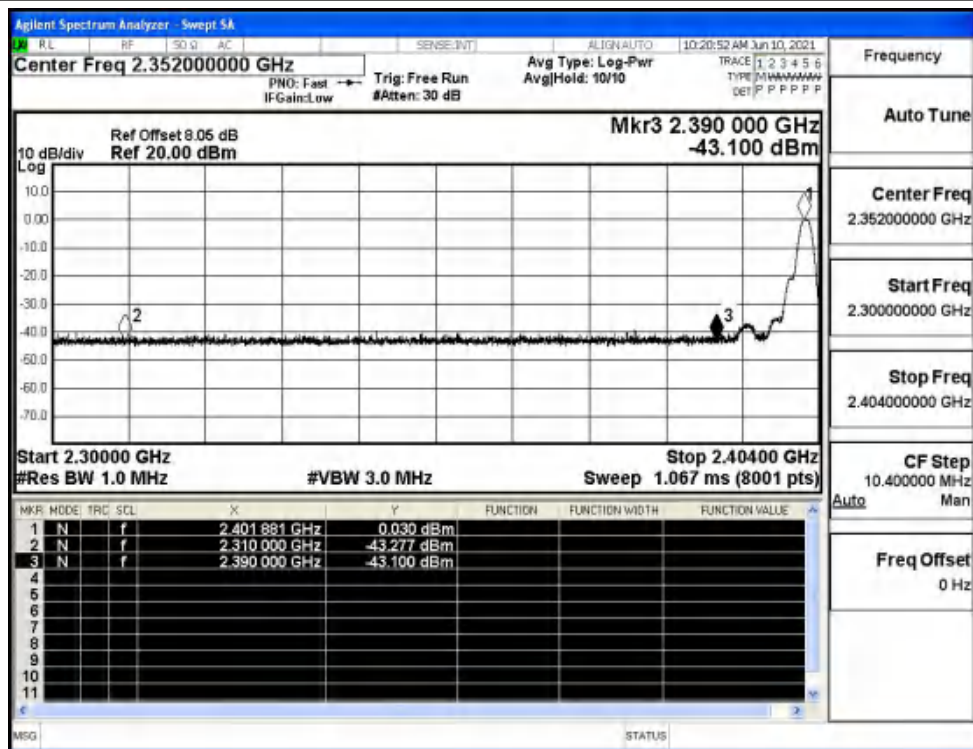
8DPSK/HCH/Hop



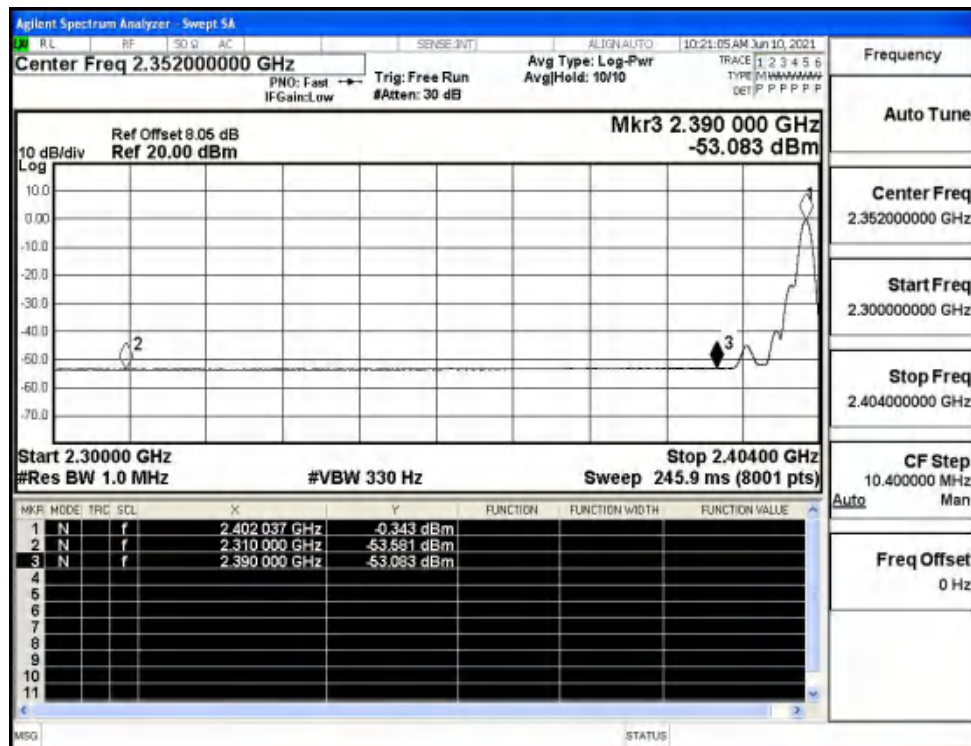
## A.8 Restrict-band band-edge measurements

| Test Mode     | Hopping | Freq.  | Power [dBm] | Gain | Ground Factor | E [dBuV/m] | Detector | Limit [dBuV/m] | Verdict |
|---------------|---------|--------|-------------|------|---------------|------------|----------|----------------|---------|
| GFSK          | Off     | 2310.0 | -43.28      | 2.7  | 0             | 54.65      | PEAK     | 74             | PASS    |
|               | Off     | 2310.0 | -53.58      | 2.7  | 0             | 44.35      | AV       | 54             | PASS    |
|               | Off     | 2390.0 | -43.10      | 2.7  | 0             | 54.83      | PEAK     | 74             | PASS    |
|               | Off     | 2390.0 | -53.08      | 2.7  | 0             | 44.85      | AV       | 54             | PASS    |
|               | Off     | 2483.5 | -41.03      | 2.7  | 0             | 56.90      | PEAK     | 74             | PASS    |
|               | Off     | 2483.5 | -50.38      | 2.7  | 0             | 47.55      | AV       | 54             | PASS    |
|               | Off     | 2500.0 | -41.73      | 2.7  | 0             | 56.20      | PEAK     | 74             | PASS    |
|               | Off     | 2500.0 | -52.51      | 2.7  | 0             | 45.42      | AV       | 54             | PASS    |
| $\pi/4$ DQPSK | Off     | 2310.0 | -41.68      | 2.7  | 0             | 56.25      | PEAK     | 74             | PASS    |
|               | Off     | 2310.0 | -53.42      | 2.7  | 0             | 44.51      | AV       | 54             | PASS    |
|               | Off     | 2390.0 | -44.09      | 2.7  | 0             | 53.84      | PEAK     | 74             | PASS    |
|               | Off     | 2390.0 | -53.05      | 2.7  | 0             | 44.88      | AV       | 54             | PASS    |
|               | Off     | 2483.5 | -40.80      | 2.7  | 0             | 57.13      | PEAK     | 74             | PASS    |
|               | Off     | 2483.5 | -50.33      | 2.7  | 0             | 47.60      | AV       | 54             | PASS    |
|               | Off     | 2500.0 | -40.63      | 2.7  | 0             | 57.30      | PEAK     | 74             | PASS    |
|               | Off     | 2500.0 | -52.38      | 2.7  | 0             | 45.55      | AV       | 54             | PASS    |
| 8DPSK         | Off     | 2310.0 | -42.98      | 2.7  | 0             | 54.95      | PEAK     | 74             | PASS    |
|               | Off     | 2310.0 | -53.56      | 2.7  | 0             | 44.37      | AV       | 54             | PASS    |
|               | Off     | 2390.0 | -42.88      | 2.7  | 0             | 55.05      | PEAK     | 74             | PASS    |
|               | Off     | 2390.0 | -53.18      | 2.7  | 0             | 44.75      | AV       | 54             | PASS    |
|               | Off     | 2483.5 | -40.87      | 2.7  | 0             | 57.06      | PEAK     | 74             | PASS    |
|               | Off     | 2483.5 | -50.35      | 2.7  | 0             | 47.58      | AV       | 54             | PASS    |
|               | Off     | 2500.0 | -41.86      | 2.7  | 0             | 56.07      | PEAK     | 74             | PASS    |
|               | Off     | 2500.0 | -52.41      | 2.7  | 0             | 45.52      | AV       | 54             | PASS    |

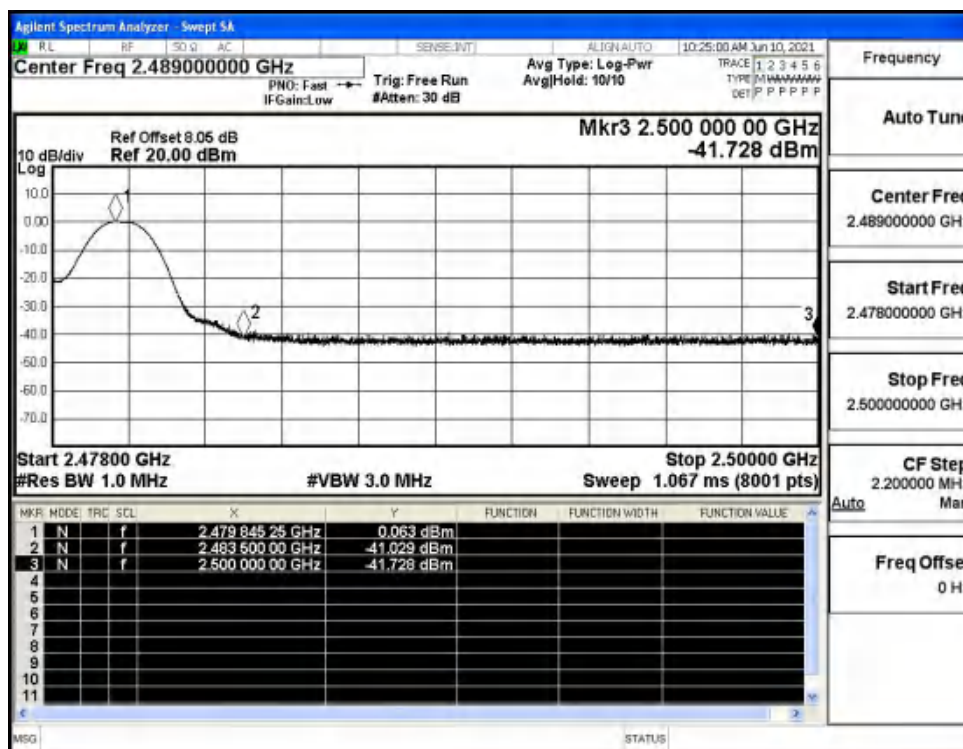
## Restrict-band band-edge measurements\_Hopping Off\_GFSK\_PEAK (Low Channel)



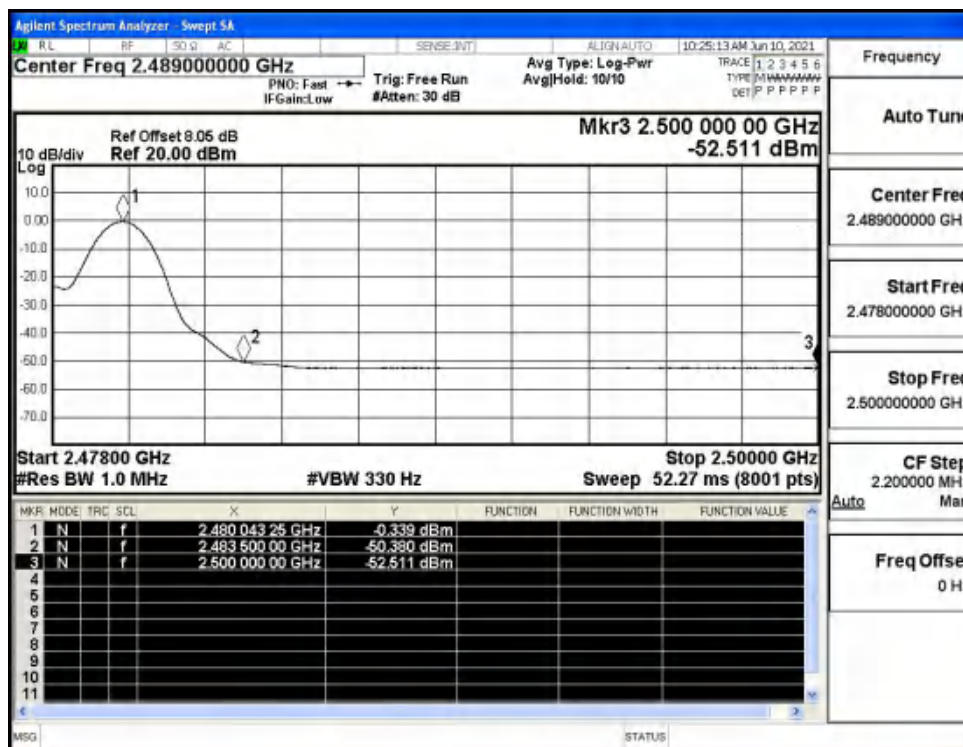
## Restrict-band band-edge measurements\_Hopping Off\_GFSK\_Average (Low Channel)

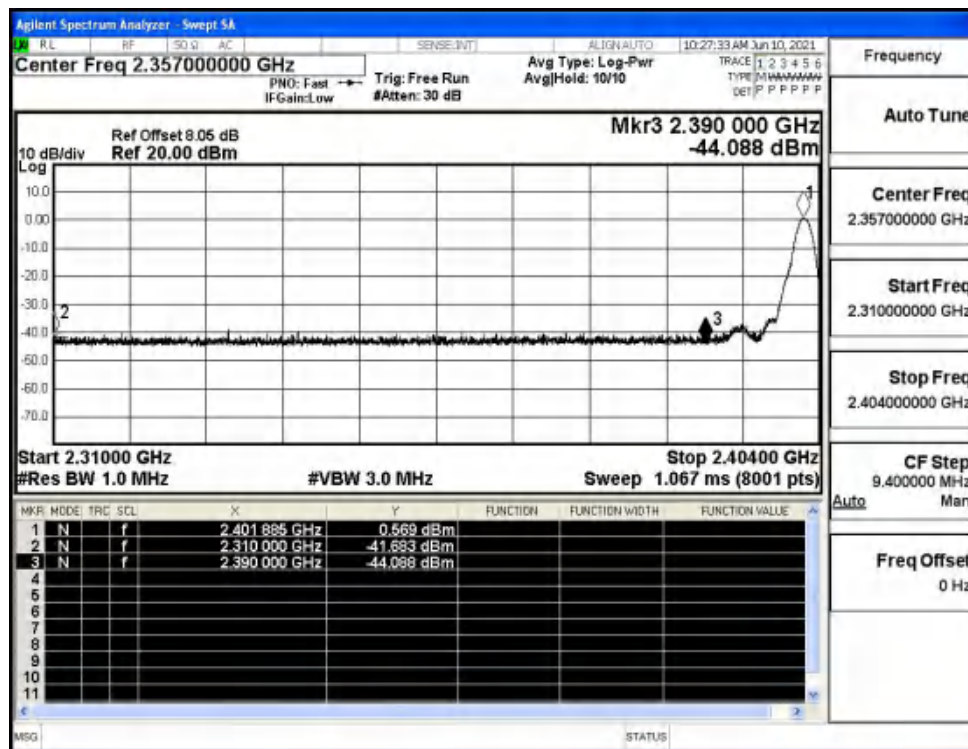
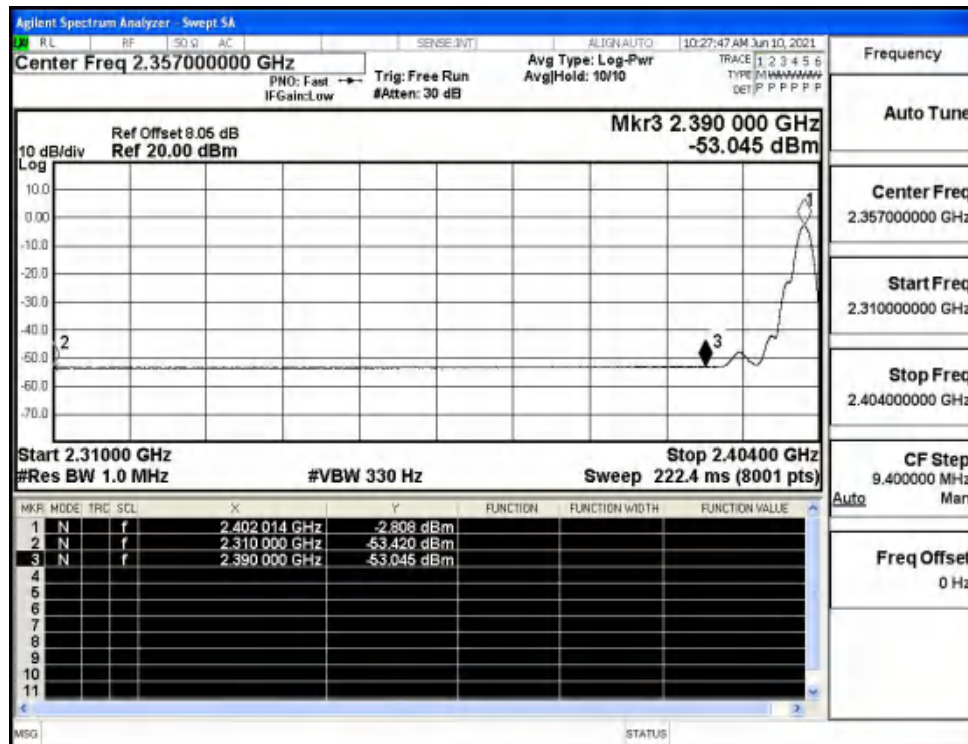


## Restrict-band band-edge measurements\_Hopping Off\_ GFSK\_PEAK (High Channel)

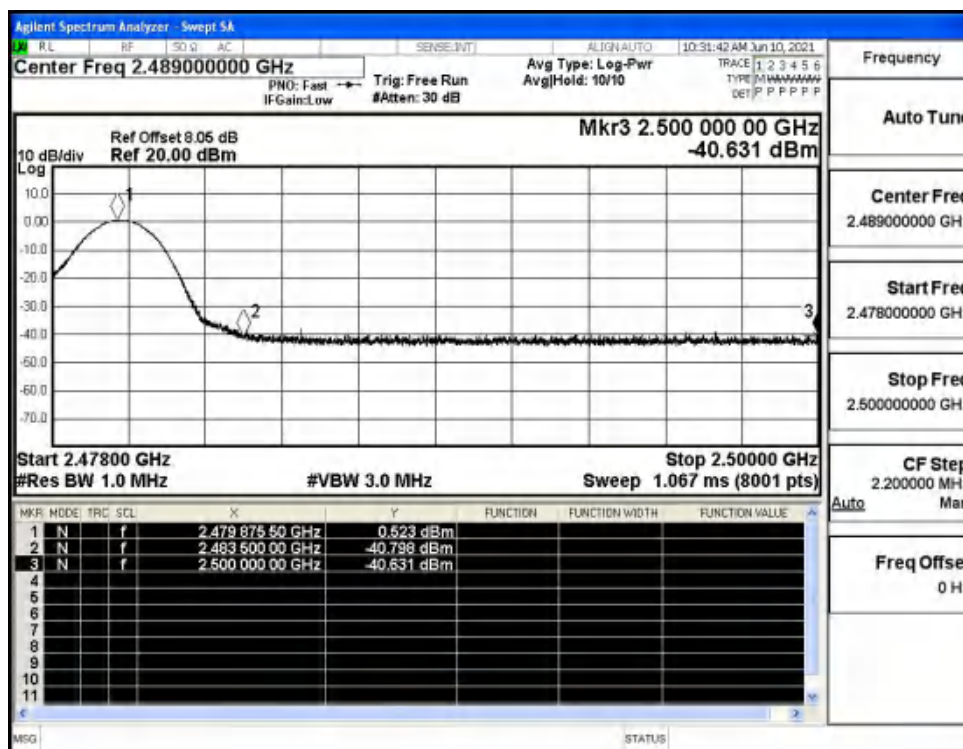


## Restrict-band band-edge measurements\_Hopping Off\_ GFSK\_Average (High Channel)

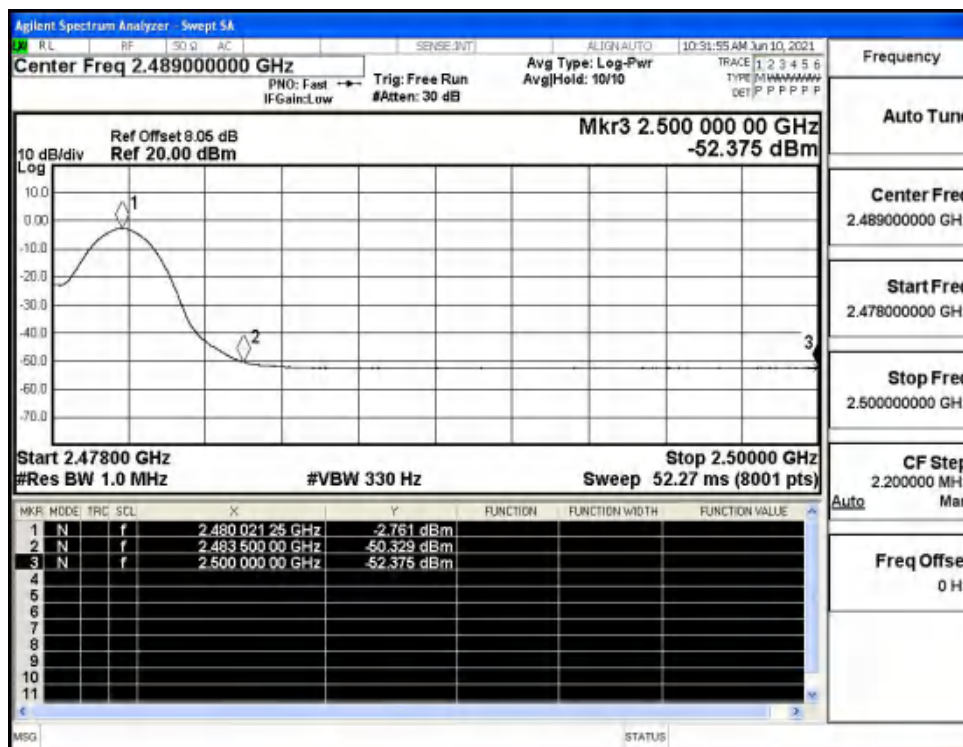


Restrict-band band-edge measurements\_Hopping Off  $\pi/4$ -DQPSK\_PEAK (Low Channel)Restrict-band band-edge measurements\_Hopping Off  $\pi/4$ -DQPSK\_Average (Low Channel)

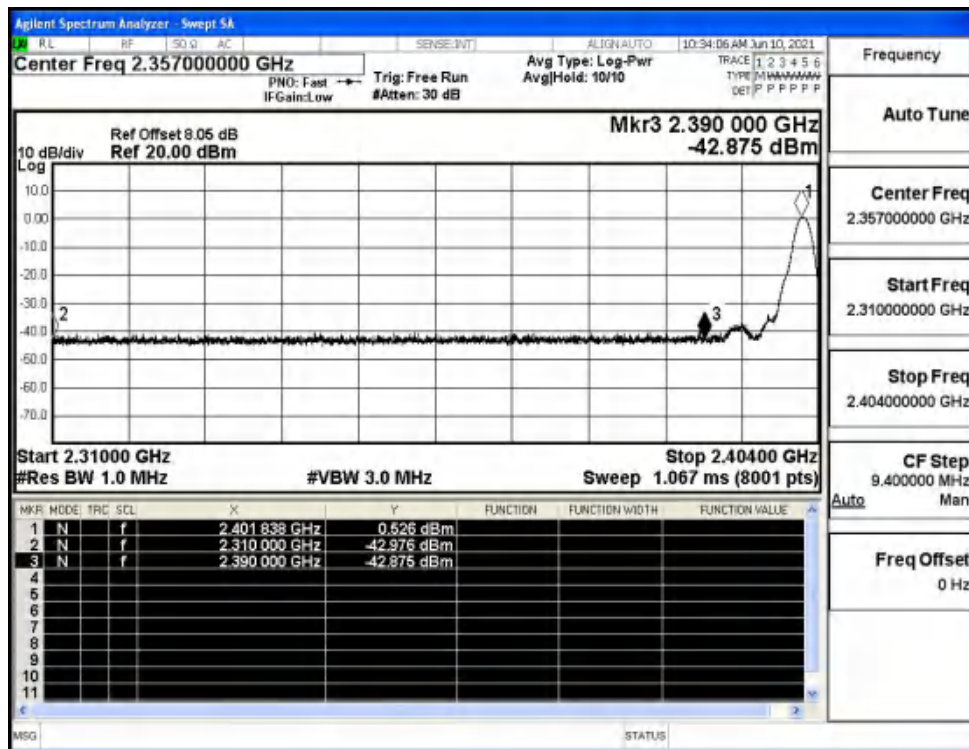
## Restrict-band band-edge measurements\_Hopping Off\_π/4-DQPSK\_PEAK (High Channel)



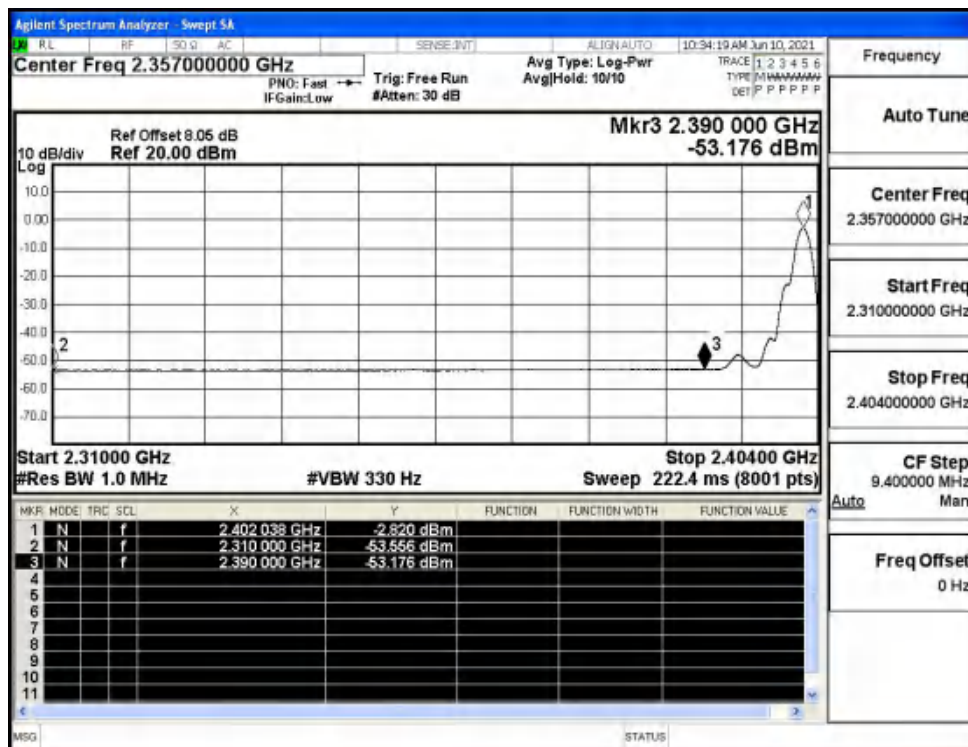
## Restrict-band band-edge measurements\_Hopping Off\_π/4-DQPSK\_Average (High Channel)



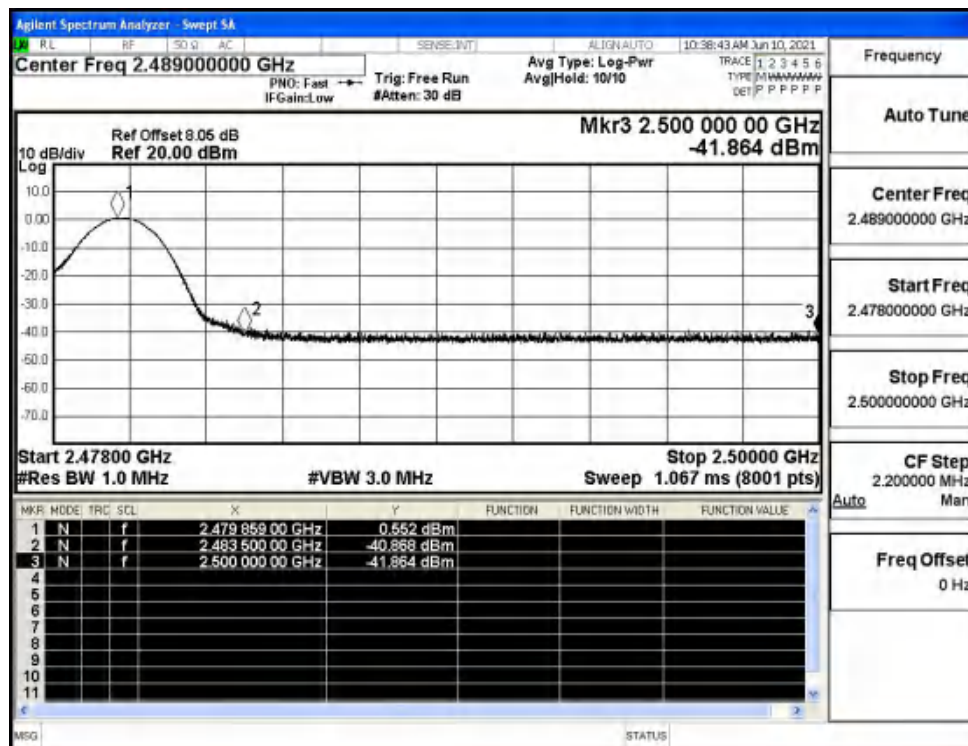
## Restrict-band band-edge measurements\_Hopping Off\_8DPSK\_PEAK (Low Channel)



## Restrict-band band-edge measurements\_Hopping Off\_8DPSK\_Average (Low Channel)



## Restrict-band band-edge measurements\_Hopping Off\_8DPSK\_PEAK (High Channel)



## Restrict-band band-edge measurements\_Hopping Off\_8DPSK\_Average (High Channel)

