

## Appendix A

### RF Test Data for BT V5.0(BDR/EDR) (Conducted Measurement)

Product Name: True Wireless Speaker

Trade Mark: N/A

Test Model: HSP-50

#### Environmental Conditions

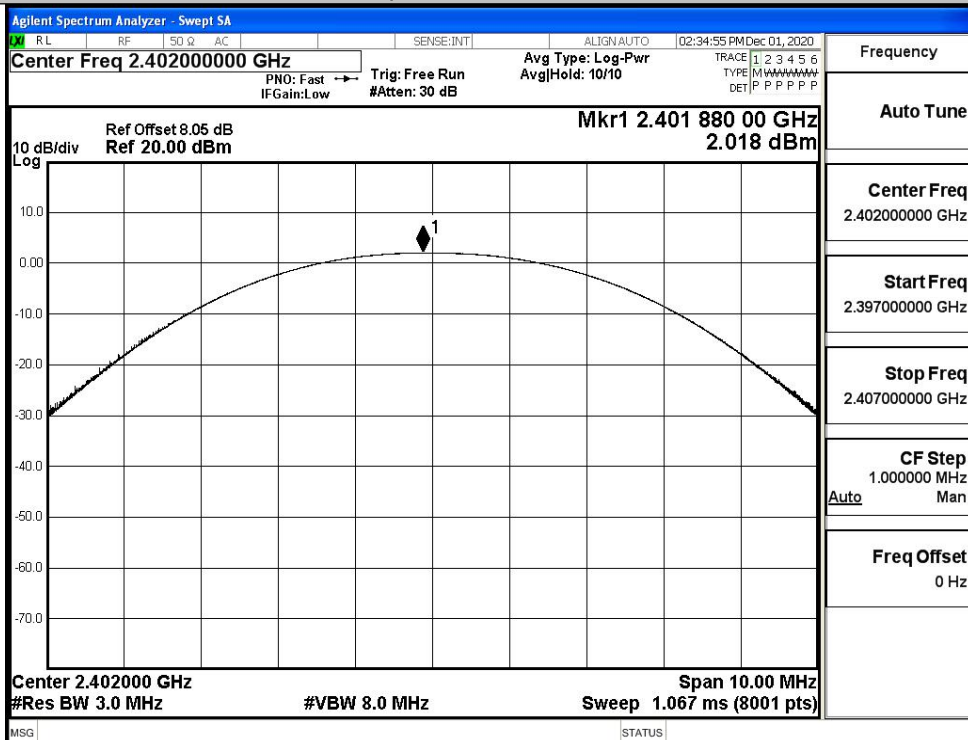
|                    |           |
|--------------------|-----------|
| Temperature:       | 25.3 ° C  |
| Relative Humidity: | 54.6%     |
| ATM Pressure:      | 100.0 kPa |
| Test Engineer:     | Ken He    |
| Supervised by:     | Li Huan   |

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

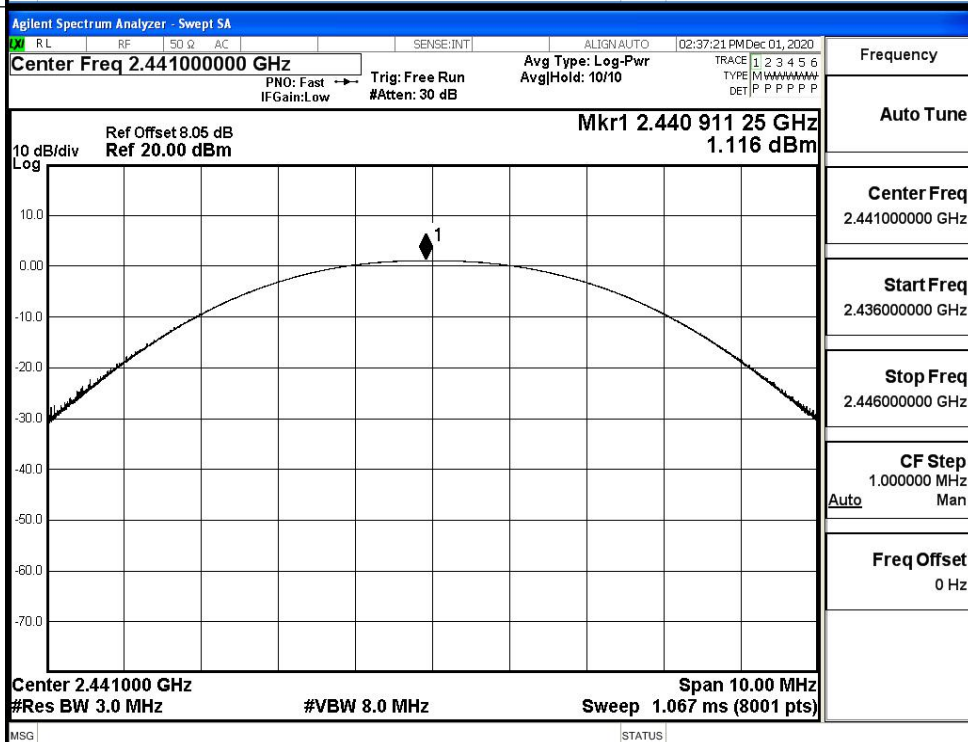
| Mode          | Channel. | Maximum Peak Output Power [dBm] | Limit [dBm] | Verdict |
|---------------|----------|---------------------------------|-------------|---------|
| GFSK          | LCH      | 2.018                           | 21          | PASS    |
|               | MCH      | 1.116                           | 21          | PASS    |
|               | HCH      | -0.215                          | 21          | PASS    |
| $\pi/4$ DQPSK | LCH      | 4.342                           | 21          | PASS    |
|               | MCH      | 3.406                           | 21          | PASS    |
|               | HCH      | 2.064                           | 21          | PASS    |
| 8DPSK         | LCH      | 4.823                           | 21          | PASS    |
|               | MCH      | 3.919                           | 21          | PASS    |
|               | HCH      | 2.604                           | 21          | PASS    |

## Test Graphs

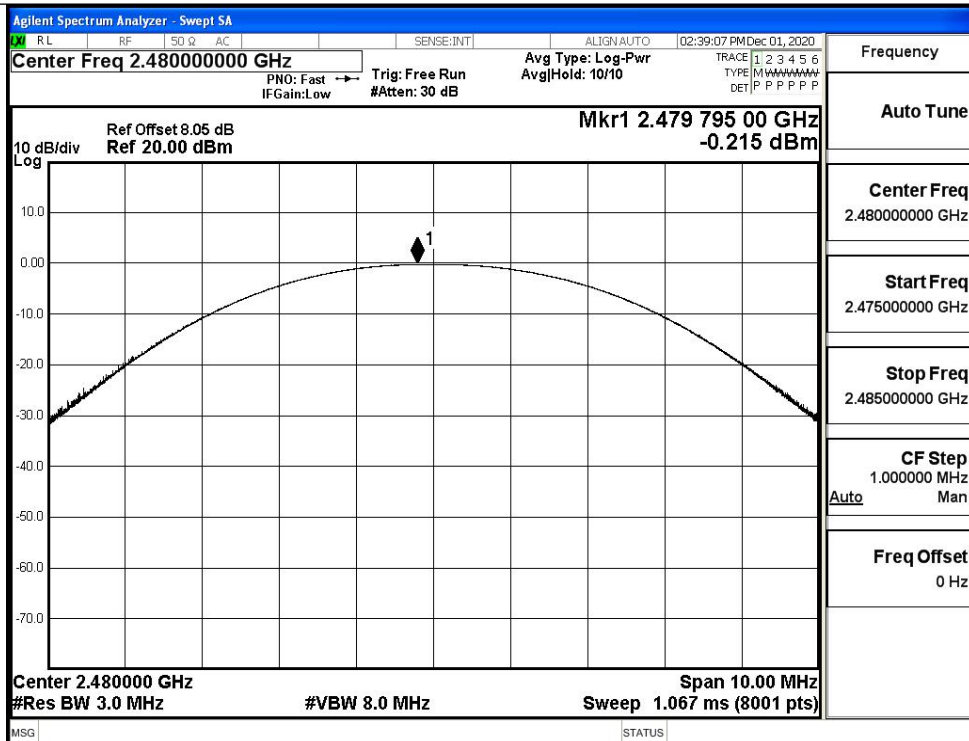
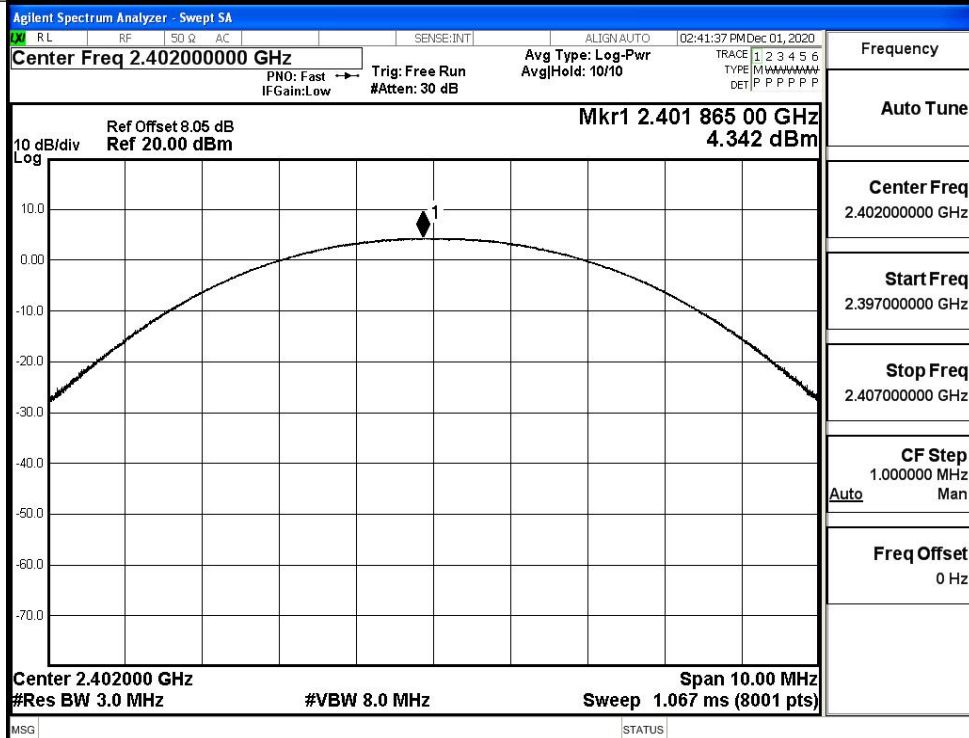
GFSK/LCH

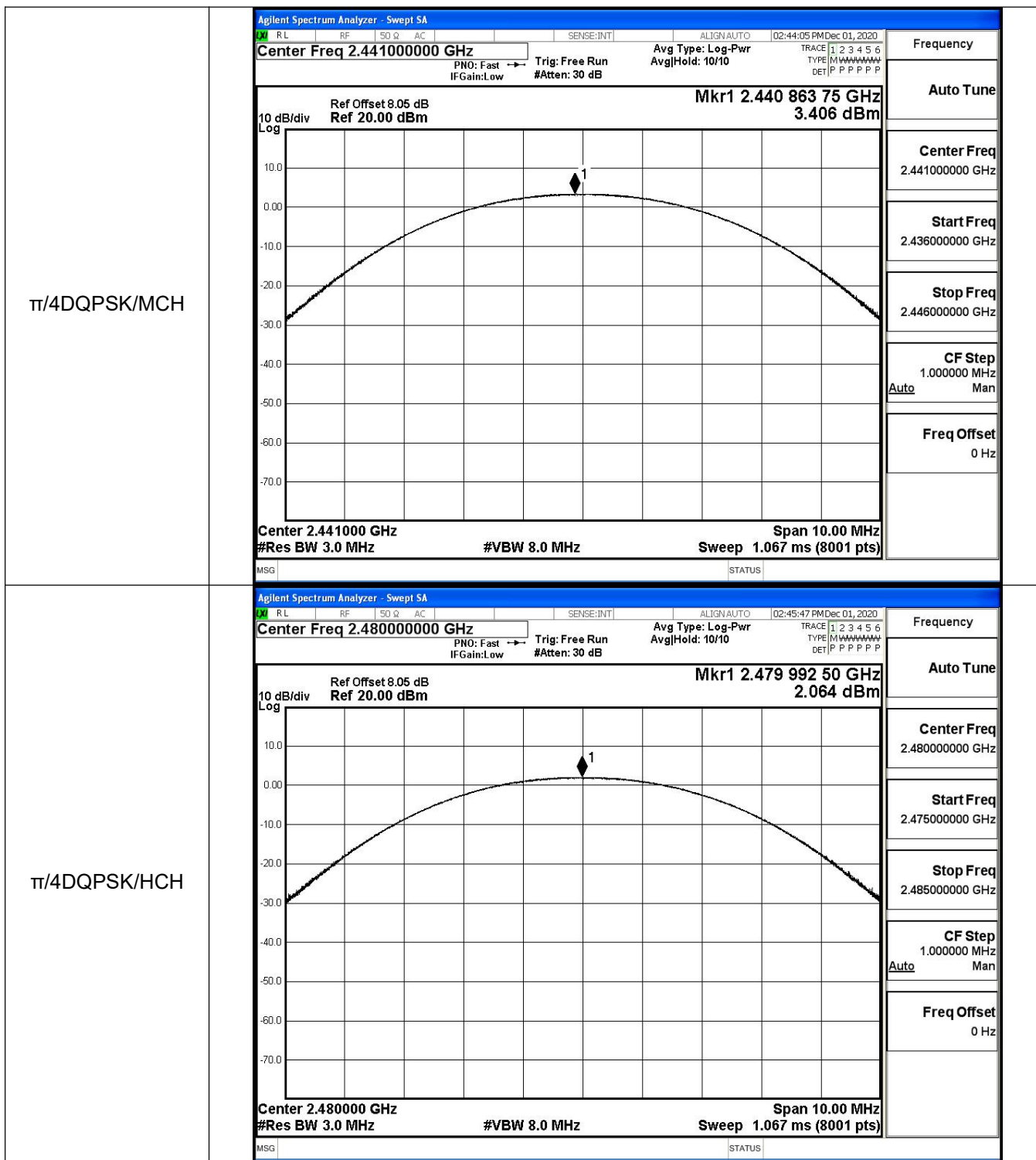


GFSK/MCH

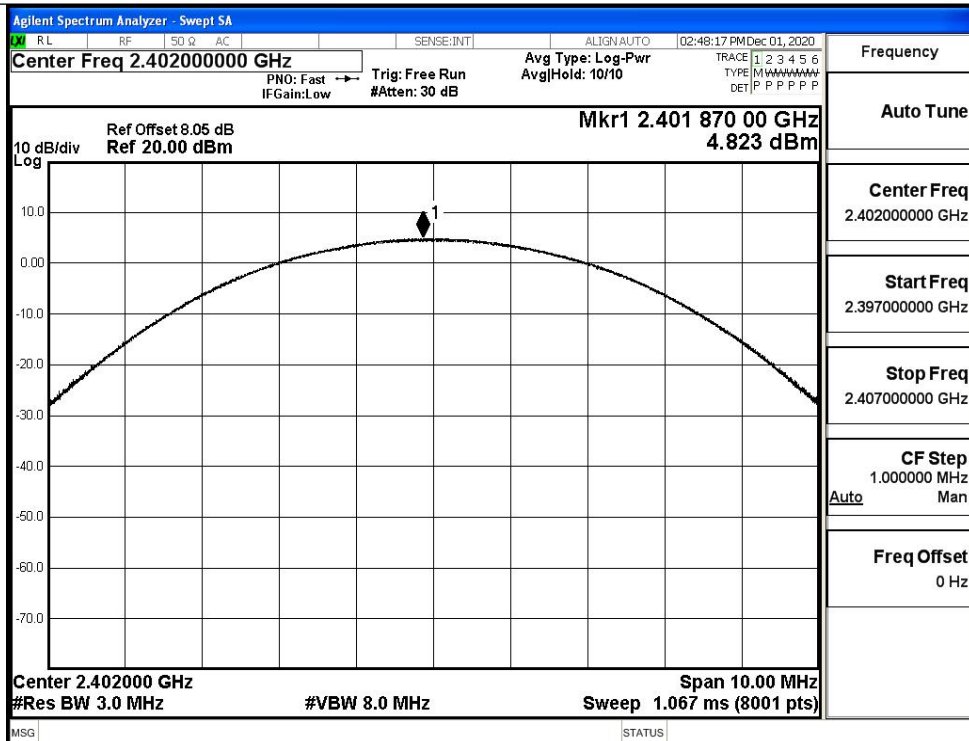


GFSK/HCH

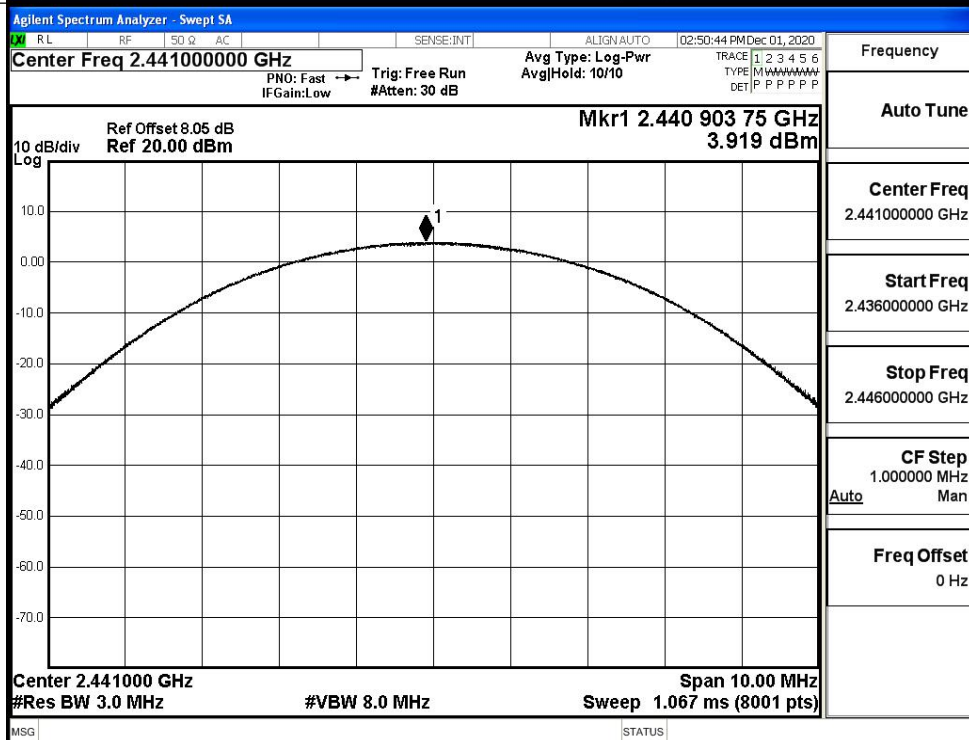
 $\pi$ /4DQPSK/LCH



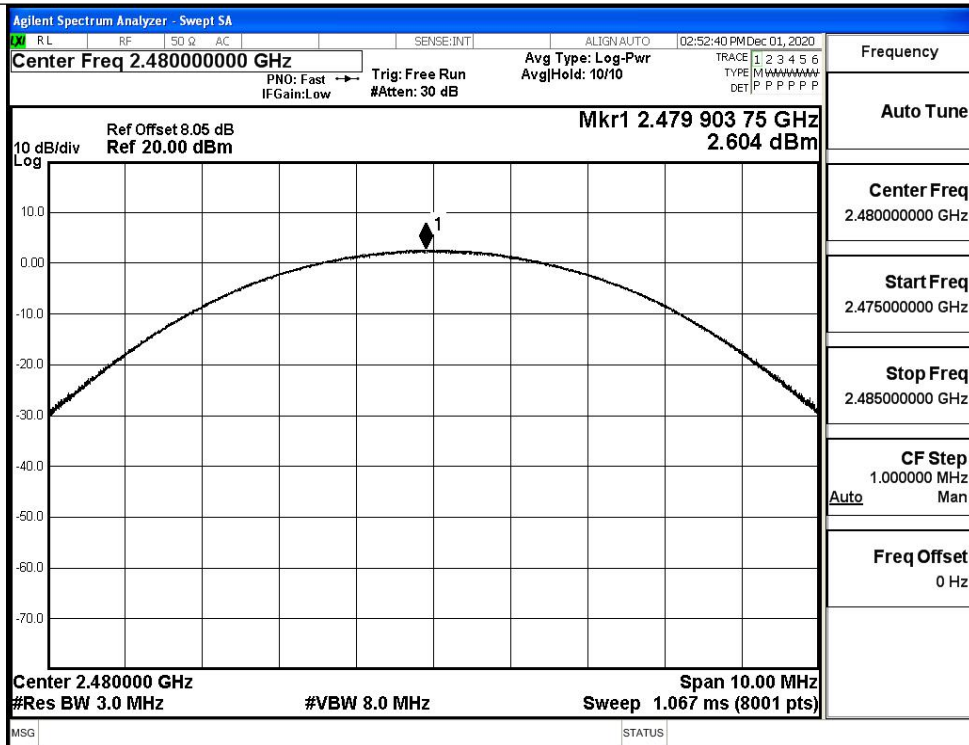
8DPSK/LCH



8DPSK/MCH



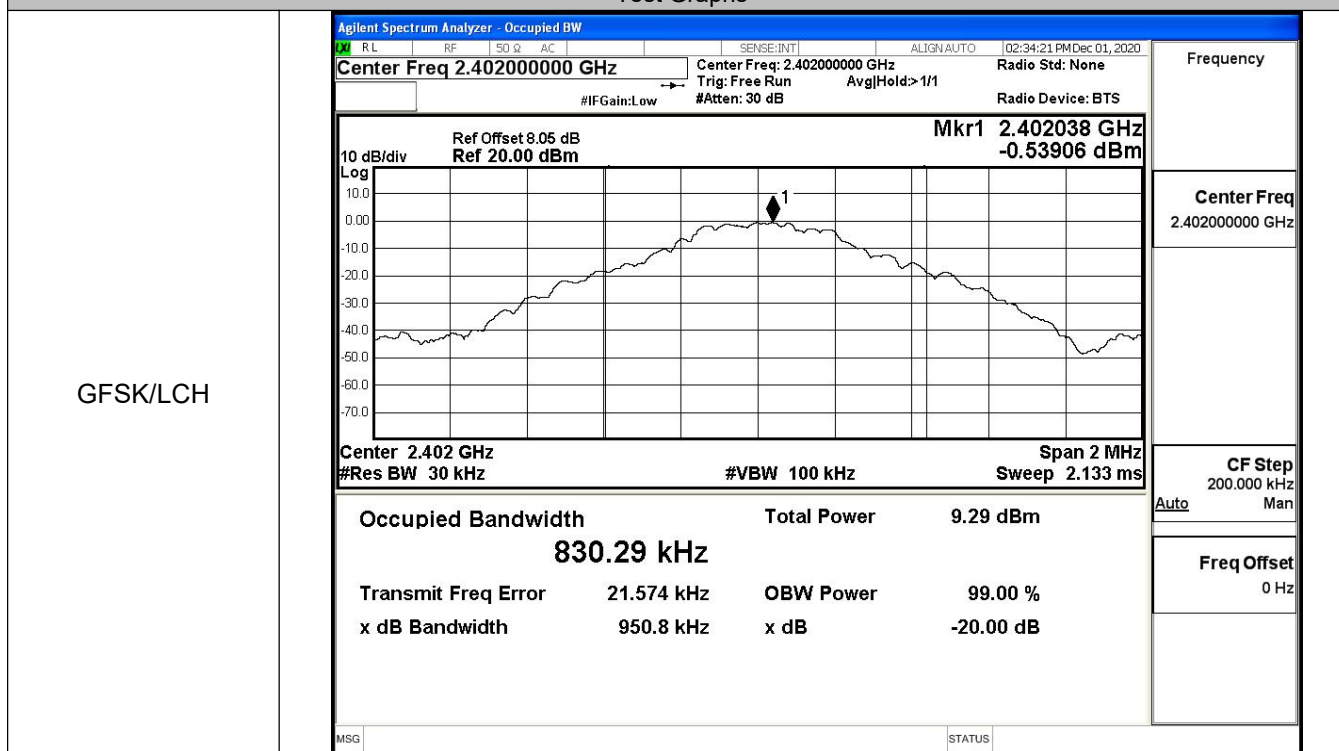
8DPSK/HCH



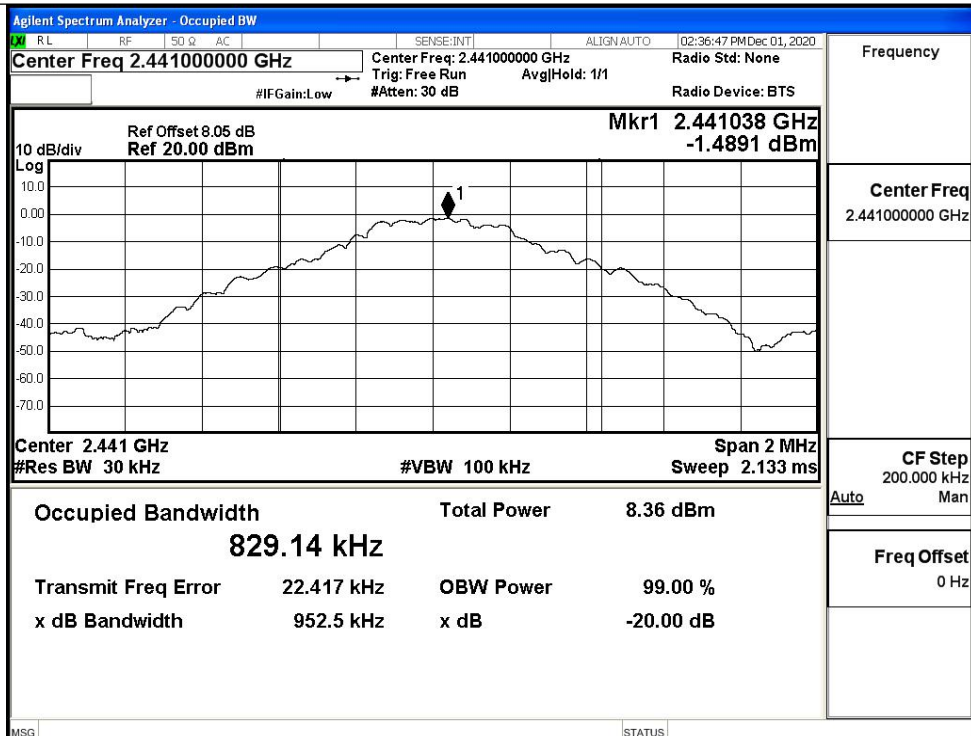
## A.2 20dB Bandwidth

| Mode          | Channel. | 20dB Bandwidth [MHz] | Limit [MHz]   | Verdict |
|---------------|----------|----------------------|---------------|---------|
| GFSK          | LCH      | 0.9508               | Not Specified | PASS    |
|               | MCH      | 0.9525               | Not Specified | PASS    |
|               | HCH      | 0.9528               | Not Specified | PASS    |
| $\pi/4$ DQPSK | LCH      | 1.332                | Not Specified | PASS    |
|               | MCH      | 1.332                | Not Specified | PASS    |
|               | HCH      | 1.332                | Not Specified | PASS    |
| 8DPSK         | LCH      | 1.304                | Not Specified | PASS    |
|               | MCH      | 1.306                | Not Specified | PASS    |
|               | HCH      | 1.304                | Not Specified | PASS    |

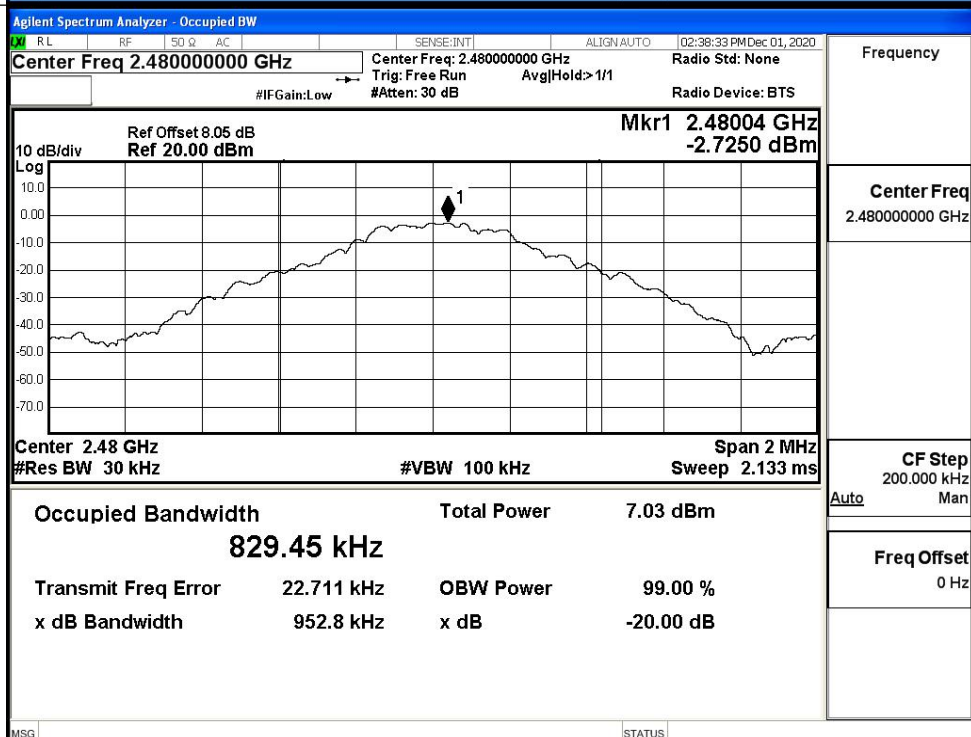
Test Graphs

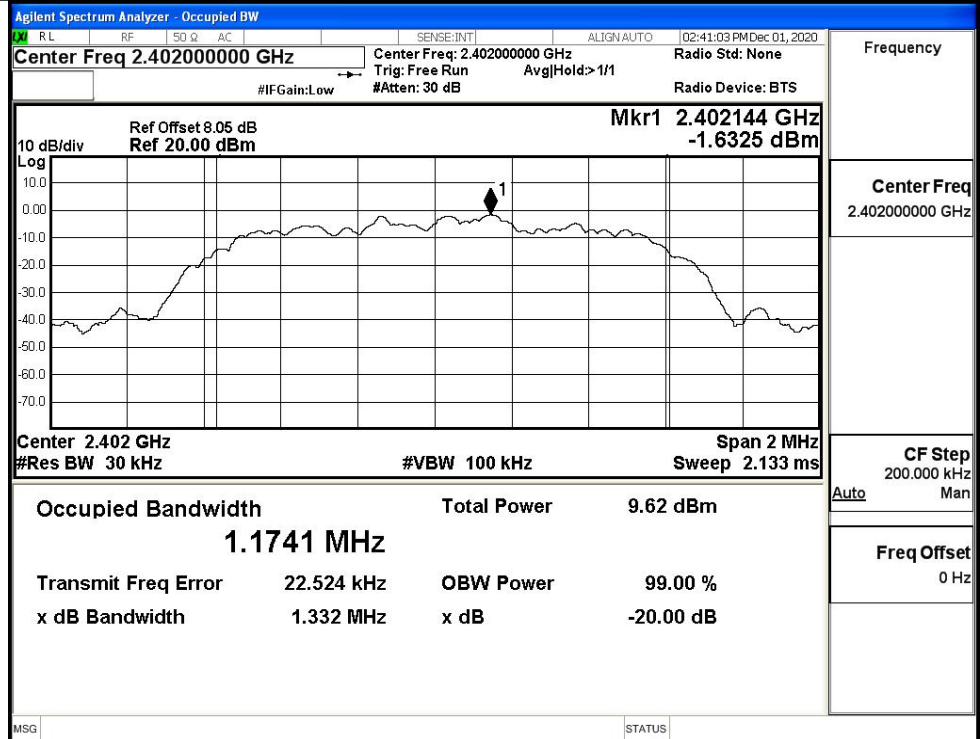
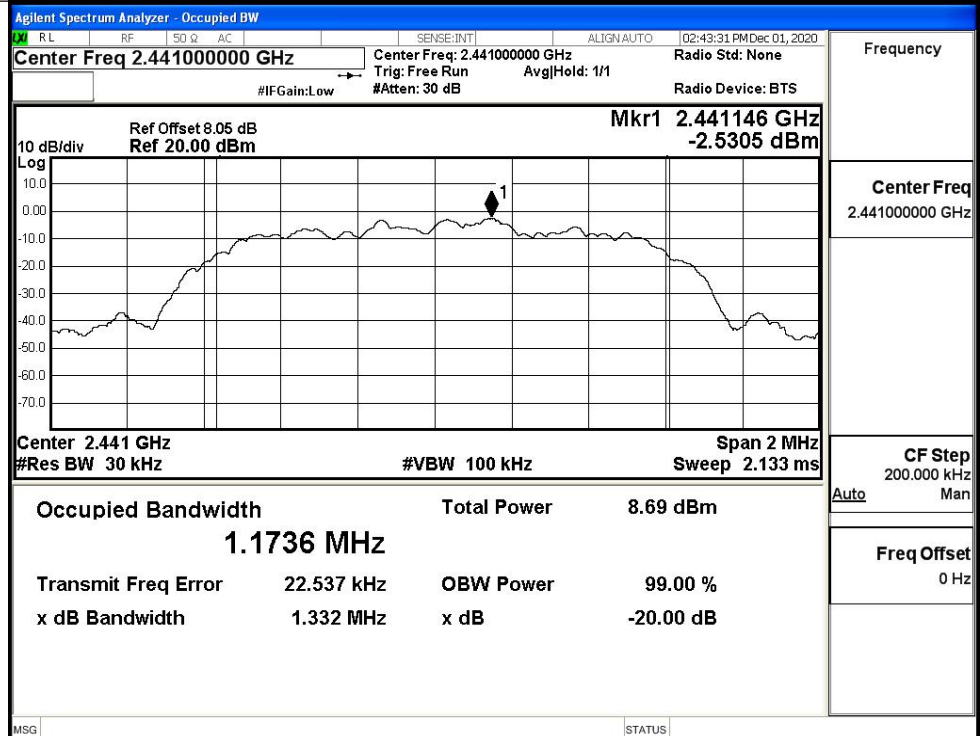


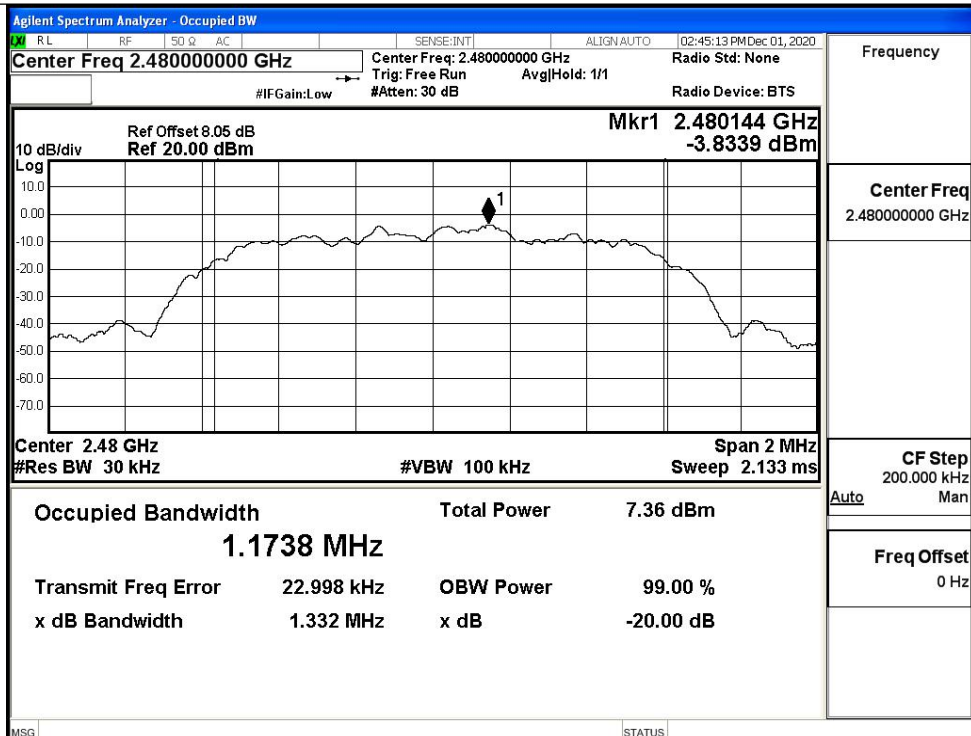
GFSK/MCH



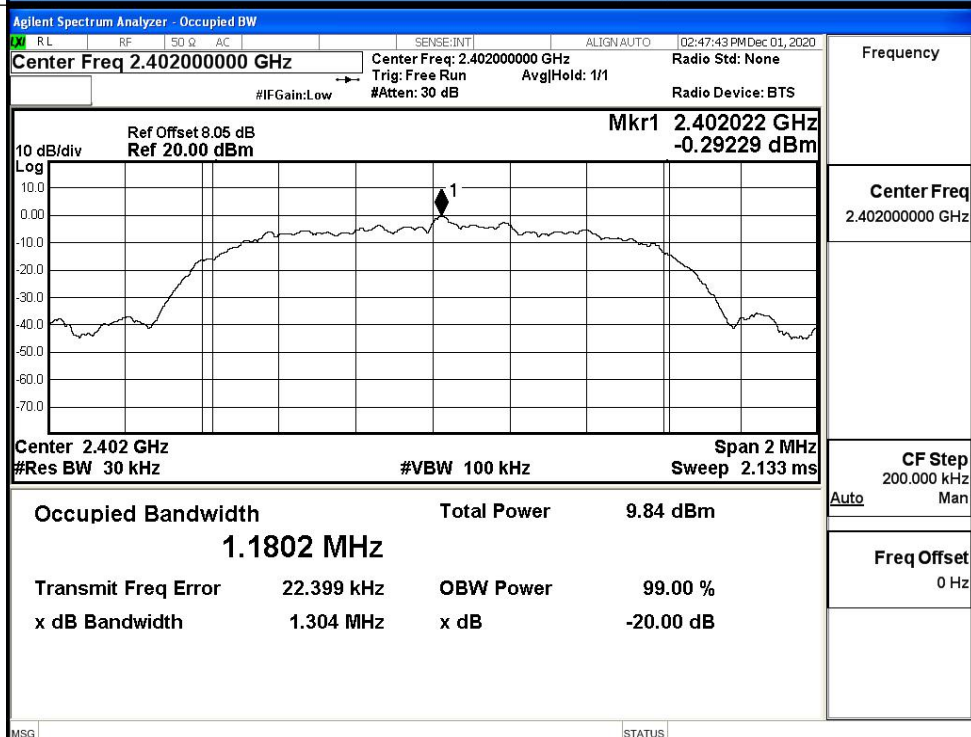
GFSK/HCH



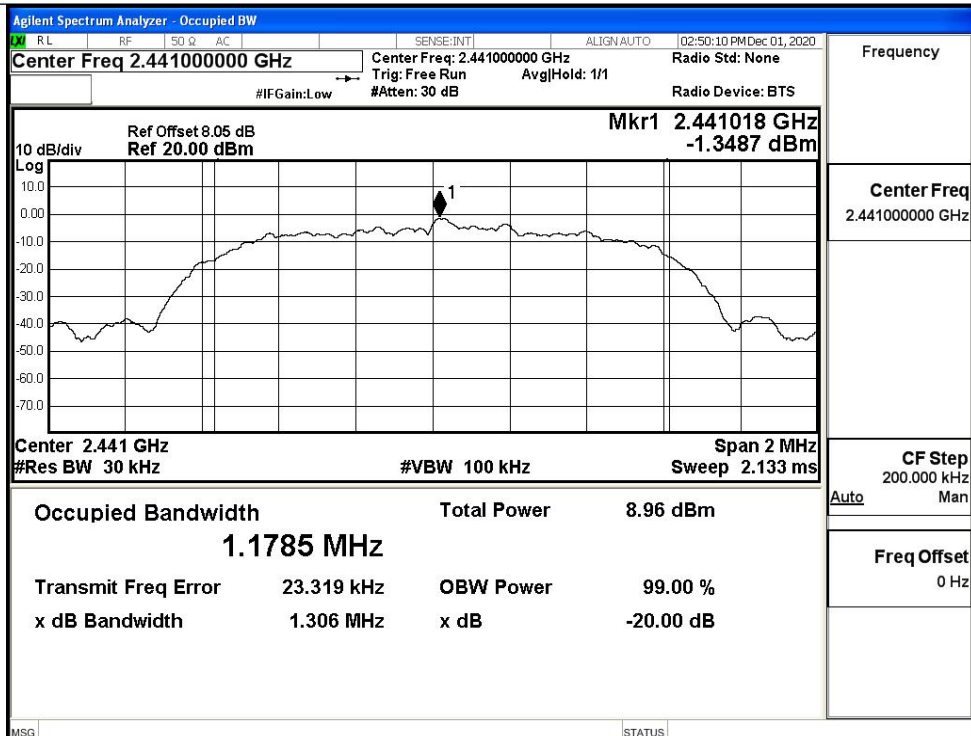
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

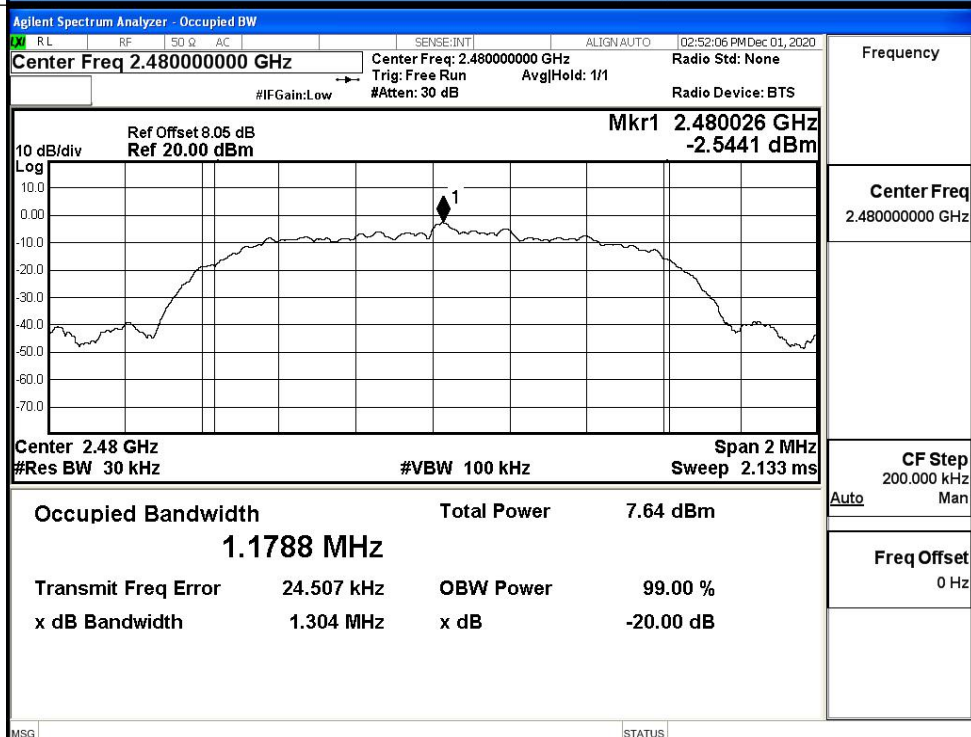
8DPSK/LCH



8DPSK/MCH



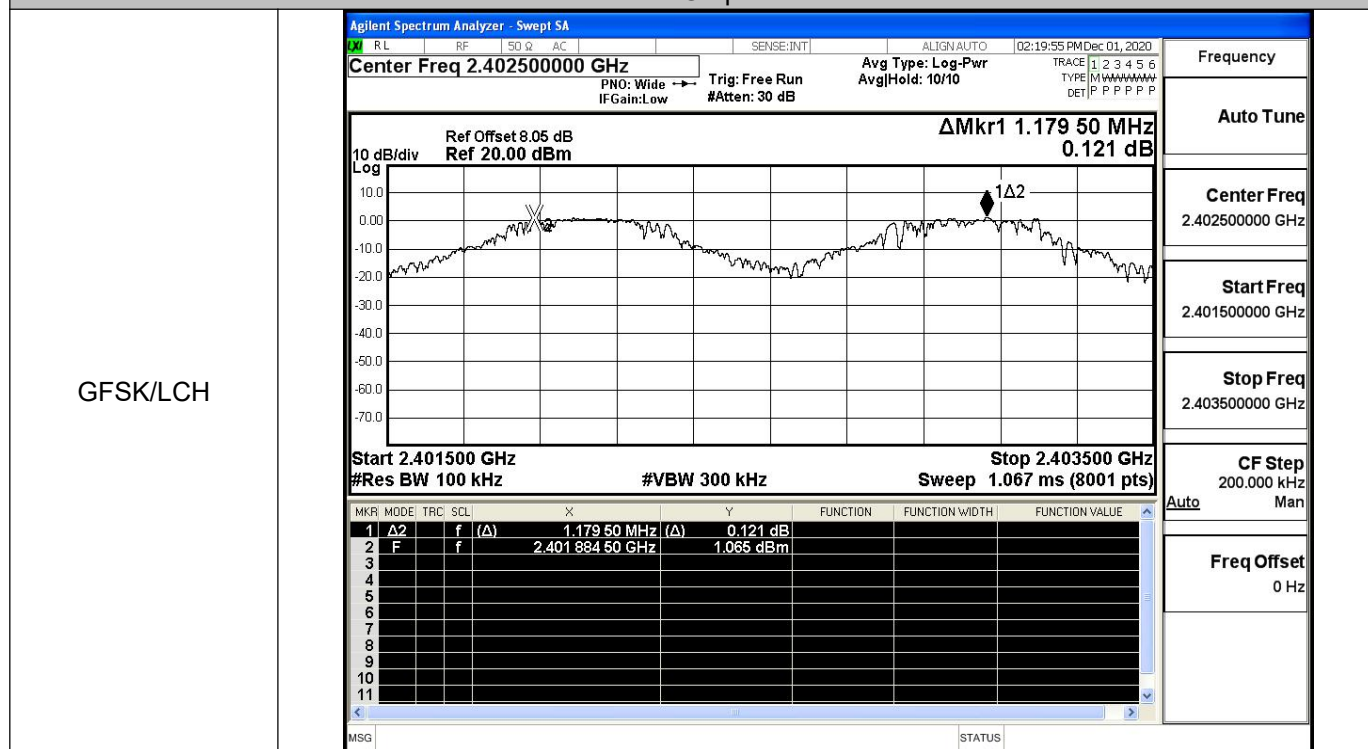
8DPSK/HCH



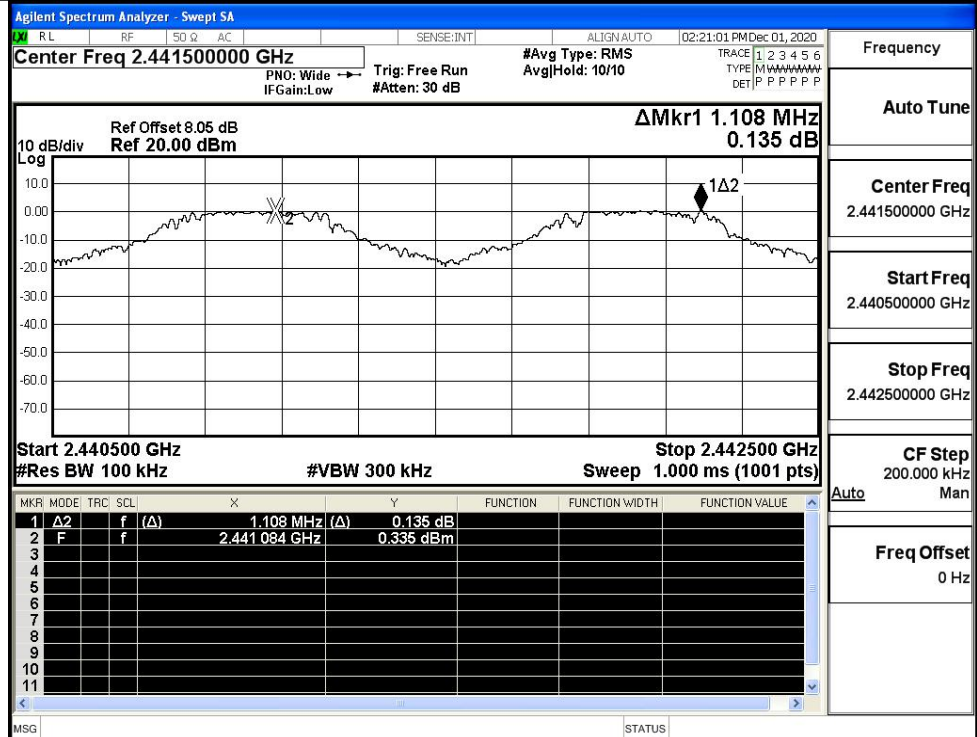
### A.3 Carrier Frequency Separation

| Mode          | Channel. | Carrier Frequency Separation [MHz] | Limit [MHz] | Verdict |
|---------------|----------|------------------------------------|-------------|---------|
| GFSK          | LCH      | 1.179                              | 0.635       | PASS    |
|               | MCH      | 1.108                              | 0.635       | PASS    |
|               | HCH      | 1.084                              | 0.635       | PASS    |
| $\pi/4$ DQPSK | LCH      | 1.030                              | 0.888       | PASS    |
|               | MCH      | 0.912                              | 0.888       | PASS    |
|               | HCH      | 1.038                              | 0.888       | PASS    |
| 8DPSK         | LCH      | 0.992                              | 0.870       | PASS    |
|               | MCH      | 0.982                              | 0.870       | PASS    |
|               | HCH      | 0.950                              | 0.870       | PASS    |

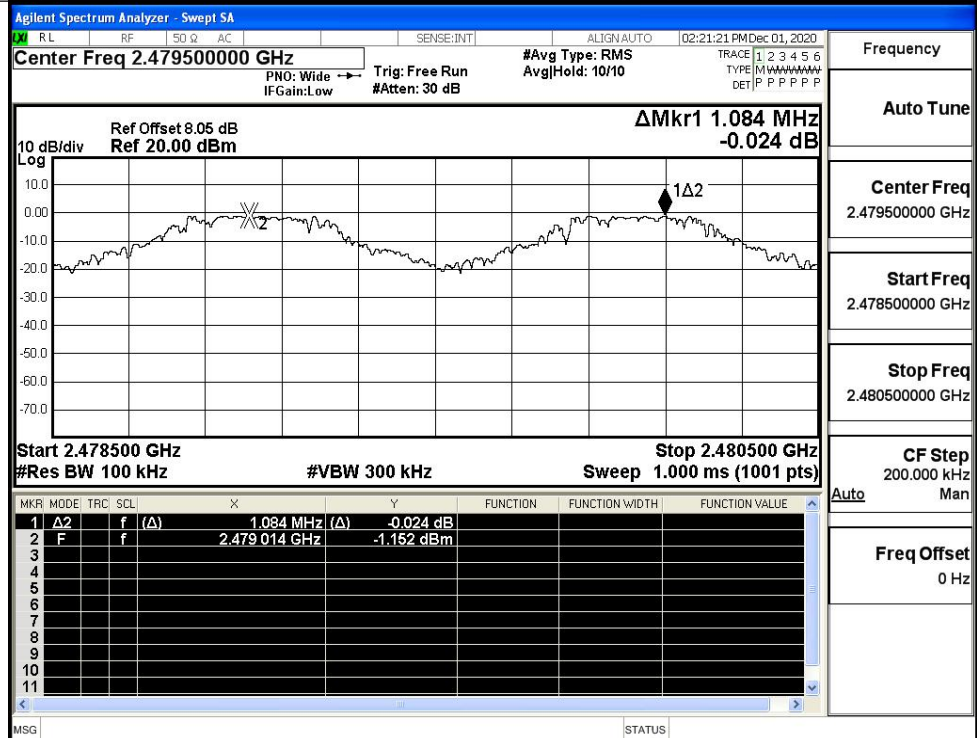
#### Test Graphs

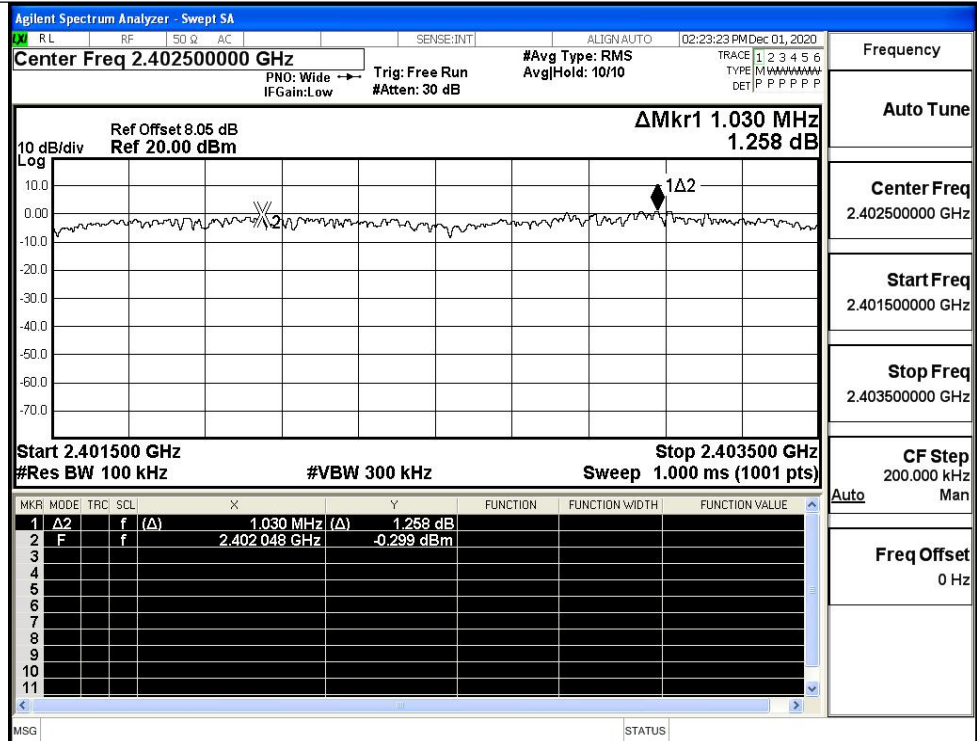
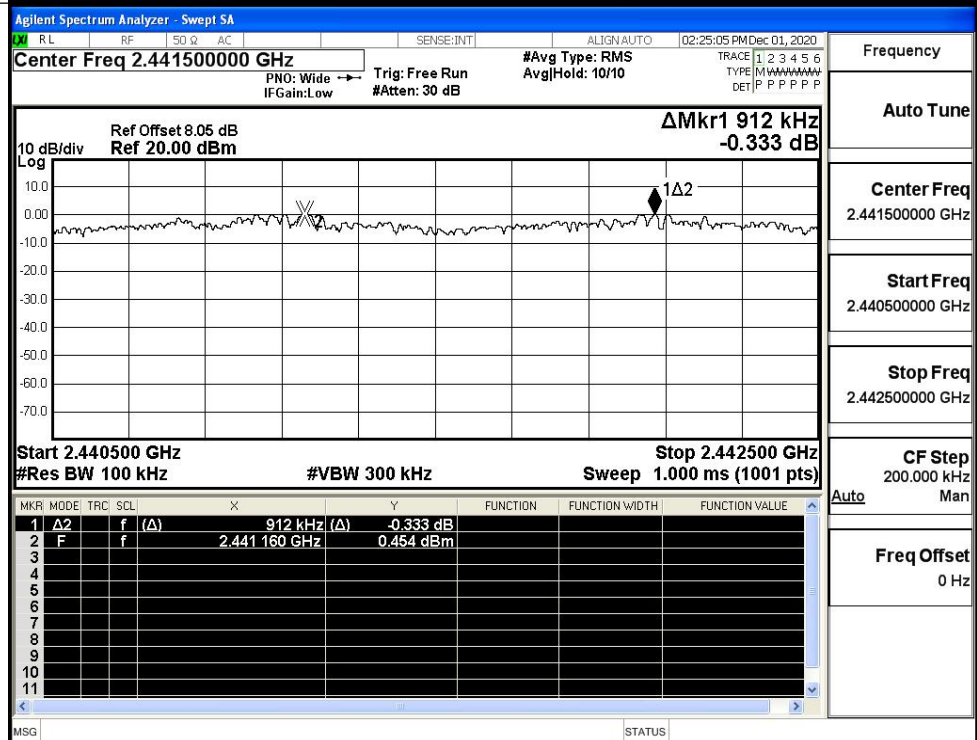


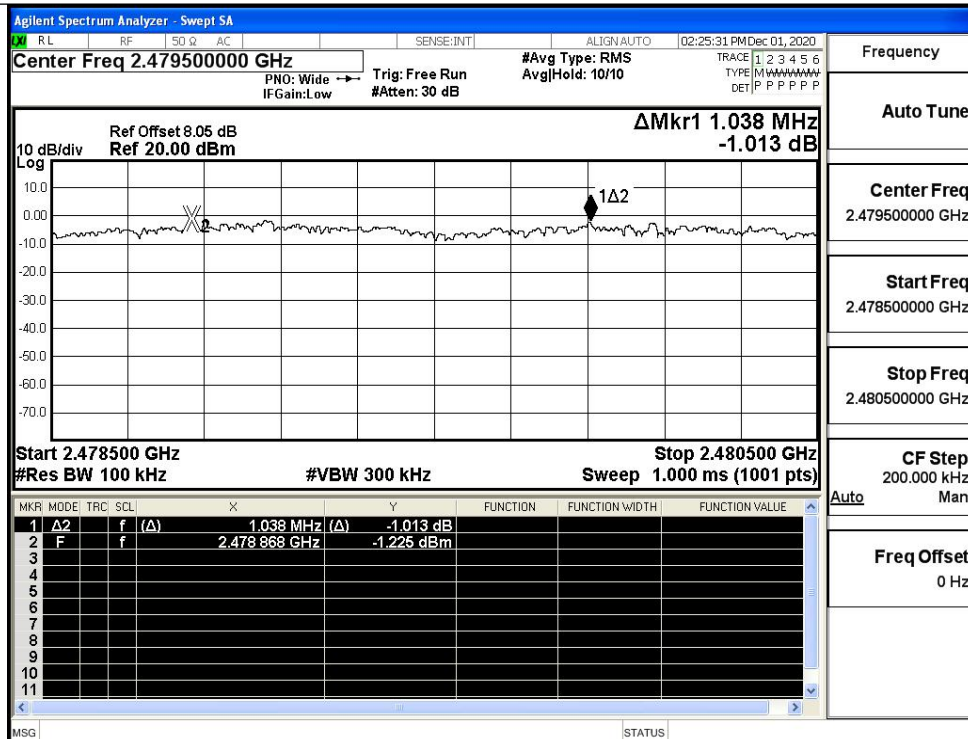
GFSK/MCH



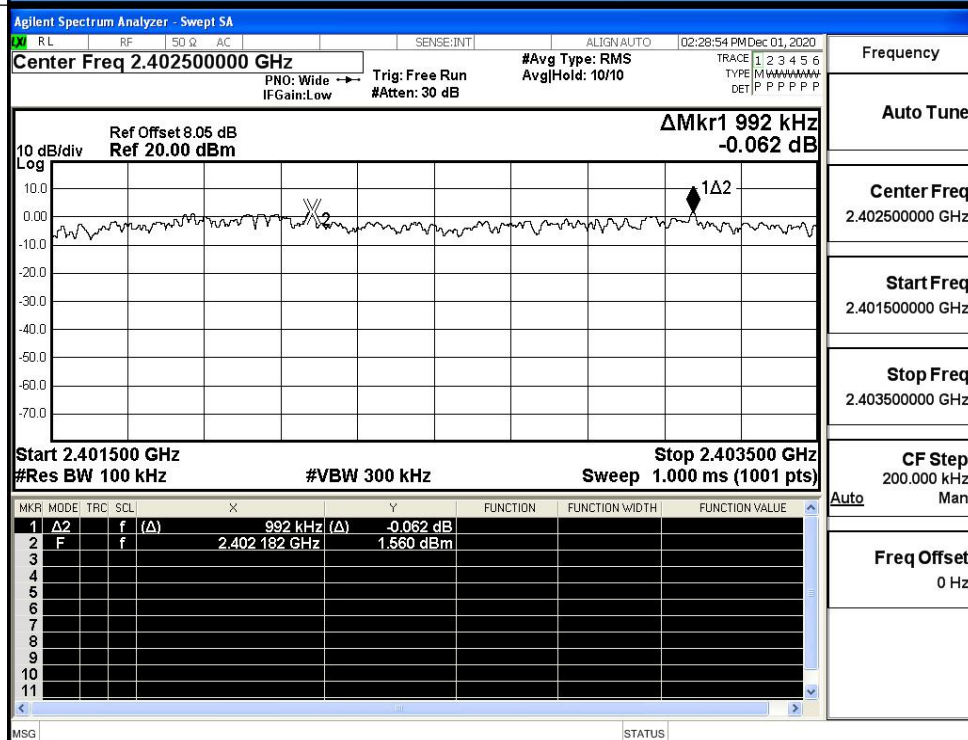
GFSK/HCH



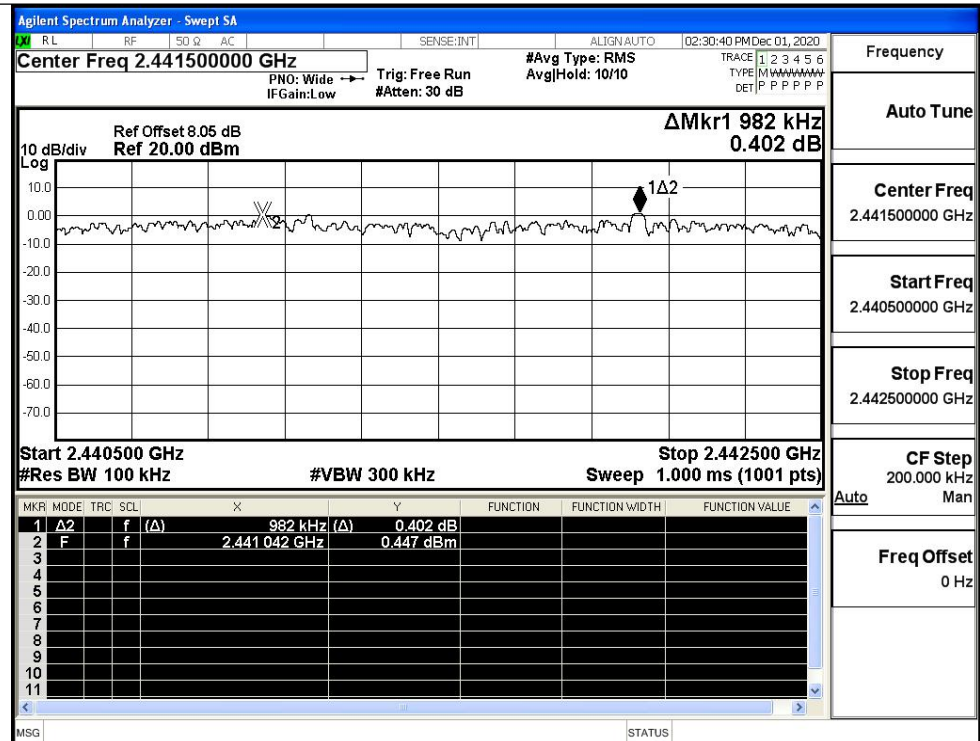
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

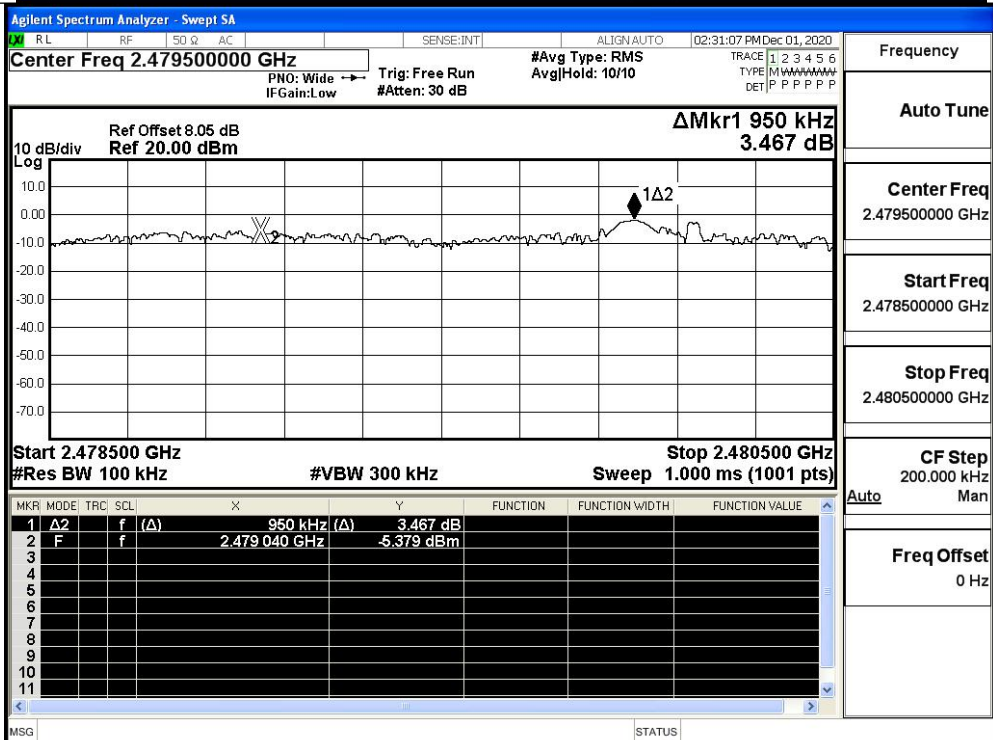
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

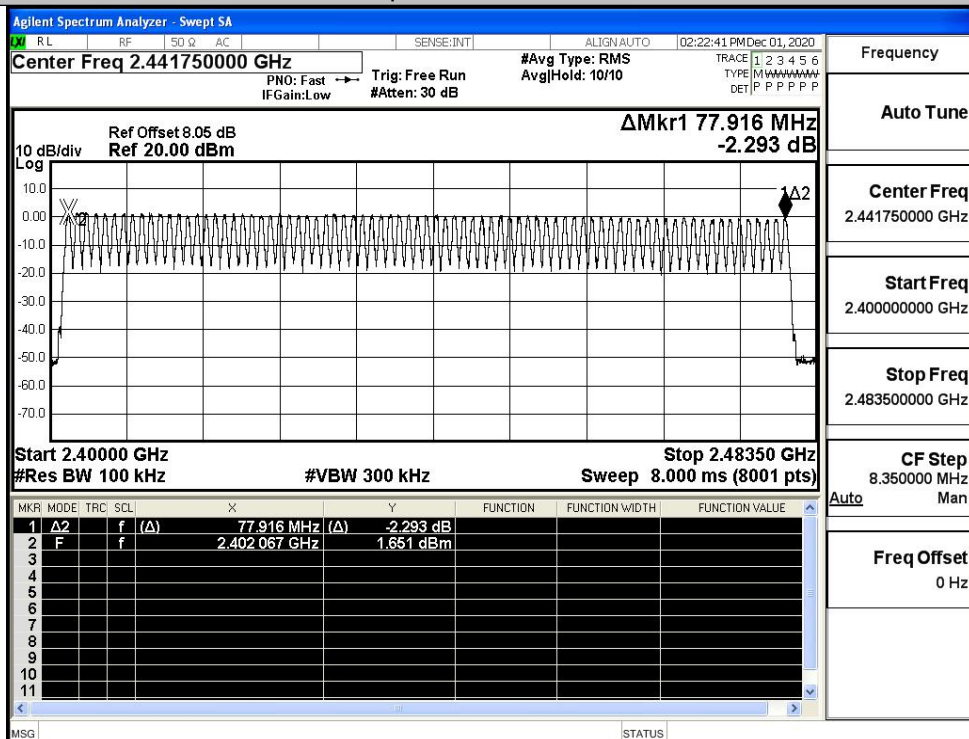


## A.4 Hopping Channel Number

| 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    |

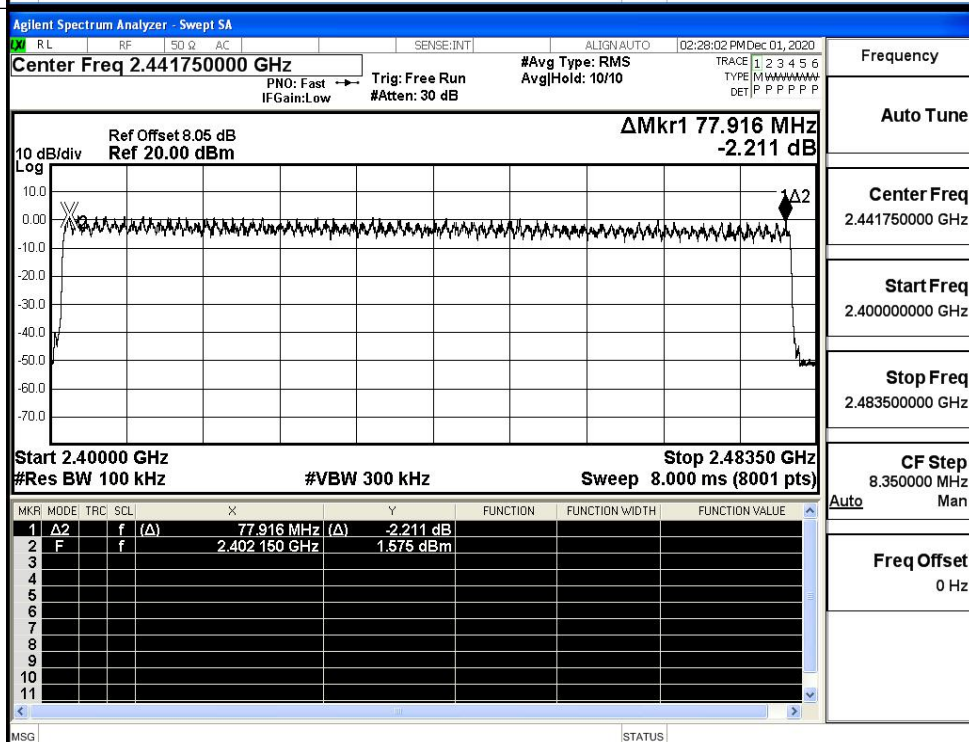
### Test Graphs

GFSK/Hop



Frequency

Auto Tune

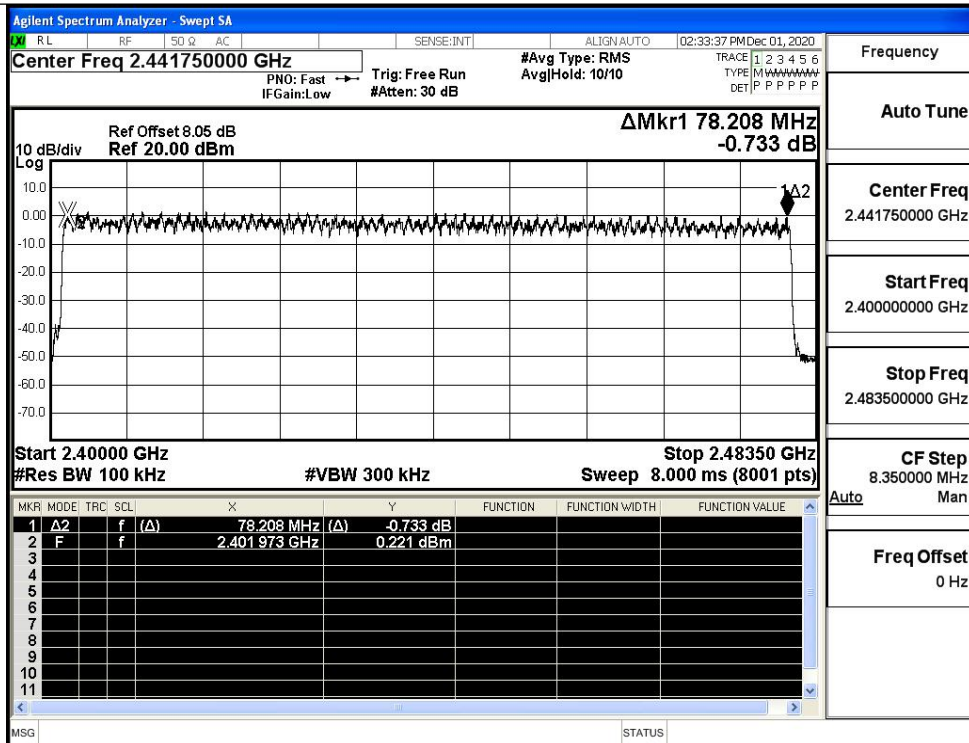
Center Freq  
2.441750000 GHzStart Freq  
2.400000000 GHzStop Freq  
2.483500000 GHzCF Step  
8.350000 MHz  
ManFreq Offset  
0 Hz $\pi/4$ DQPSK/Hop

Frequency

Auto Tune

Center Freq  
2.441750000 GHzStart Freq  
2.400000000 GHzStop Freq  
2.483500000 GHzCF Step  
8.350000 MHz  
ManFreq Offset  
0 Hz

8DPSK/Hop

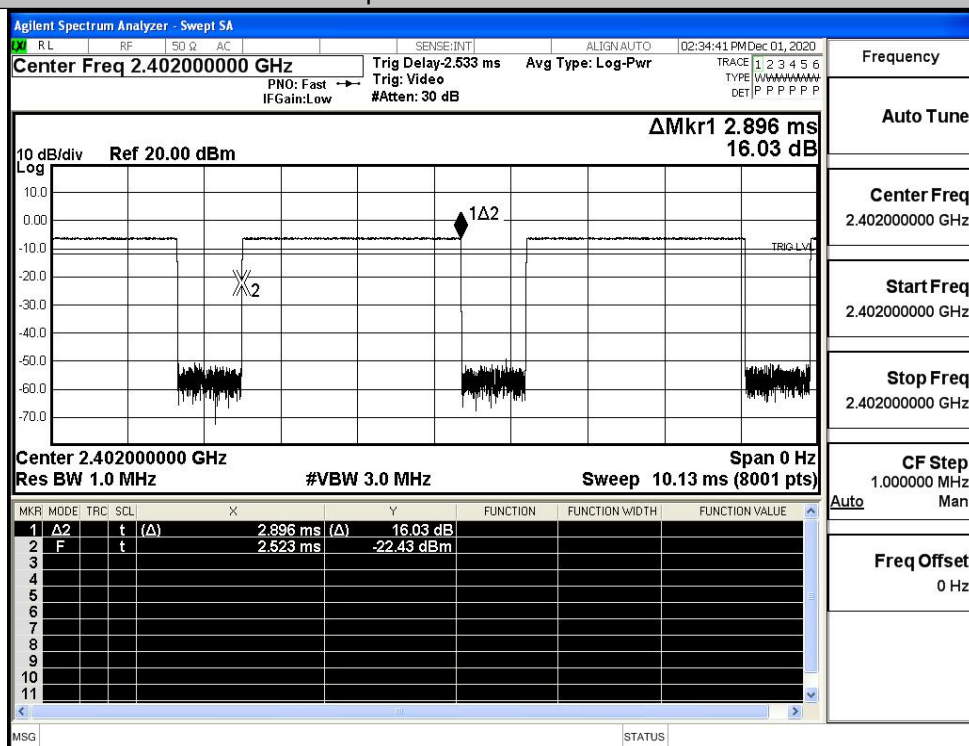


## A.5 Dwell Time

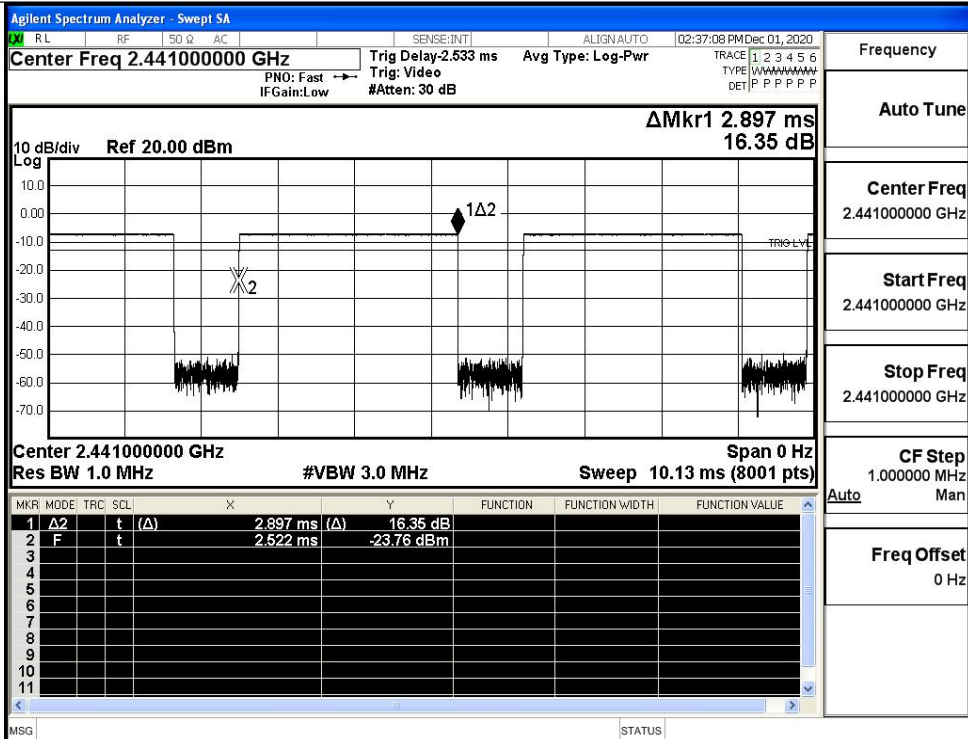
| Mode          | Packet | Channel | Burst Width<br>[ms/hop/ch] | Total<br>Hops[hop*ch] | Dwell Time[s] | Limit [s] | Verdict |
|---------------|--------|---------|----------------------------|-----------------------|---------------|-----------|---------|
| GFSK          | DH5    | LCH     | 2.9                        | 106.7                 | 0.309         | 0.4       | PASS    |
|               | DH5    | MCH     | 2.9                        | 106.7                 | 0.309         | 0.4       | PASS    |
|               | DH5    | HCH     | 2.9                        | 106.7                 | 0.309         | 0.4       | PASS    |
| $\pi/4$ DQPSK | 2DH5   | LCH     | 2.9                        | 106.7                 | 0.309         | 0.4       | PASS    |
|               | 2DH5   | MCH     | 2.9                        | 106.7                 | 0.309         | 0.4       | PASS    |
|               | 2DH5   | HCH     | 2.9                        | 106.7                 | 0.309         | 0.4       | PASS    |
| 8DPSK         | 3DH5   | LCH     | 2.9                        | 106.7                 | 0.309         | 0.4       | PASS    |
|               | 3DH5   | MCH     | 2.9                        | 106.7                 | 0.309         | 0.4       | PASS    |
|               | 3DH5   | HCH     | 2.9                        | 106.7                 | 0.309         | 0.4       | PASS    |

### Test Graphs

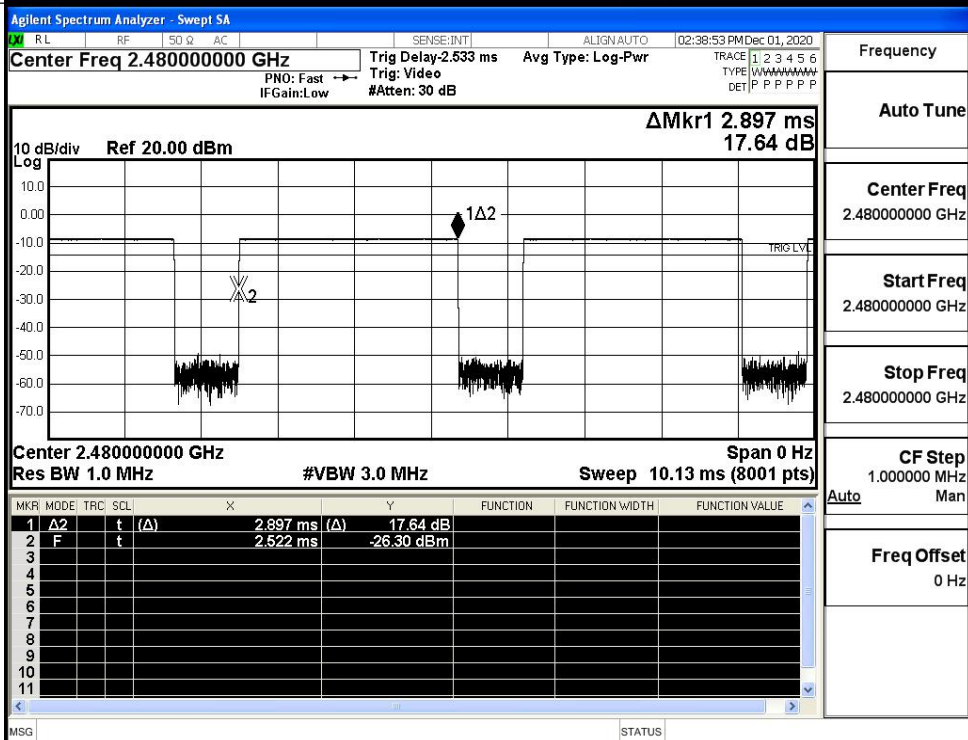
GFSK\_DH5/LCH



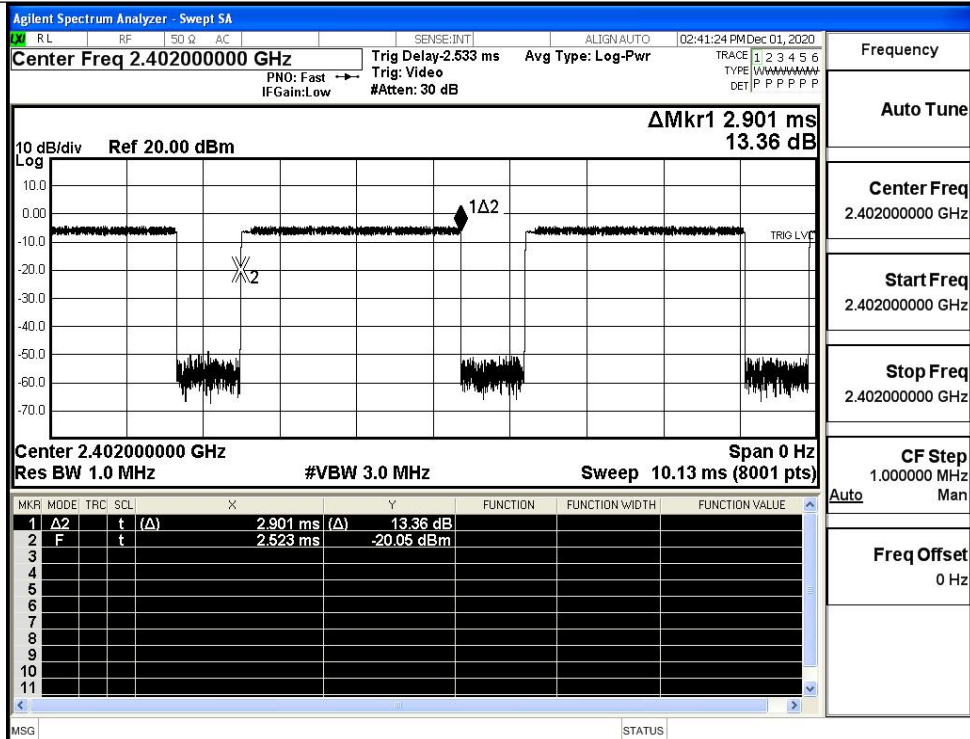
GFSK\_DH5/MCH



GFSK\_DH5/HCH



$\pi/4$ DQPSK  
\_2DH5/LCH



$\pi/4$ DQPSK  
\_2DH5/MCH

