# Appendix A

# RF Test Data for BT V5.2(BDR/EDR) (Conducted Measurement)

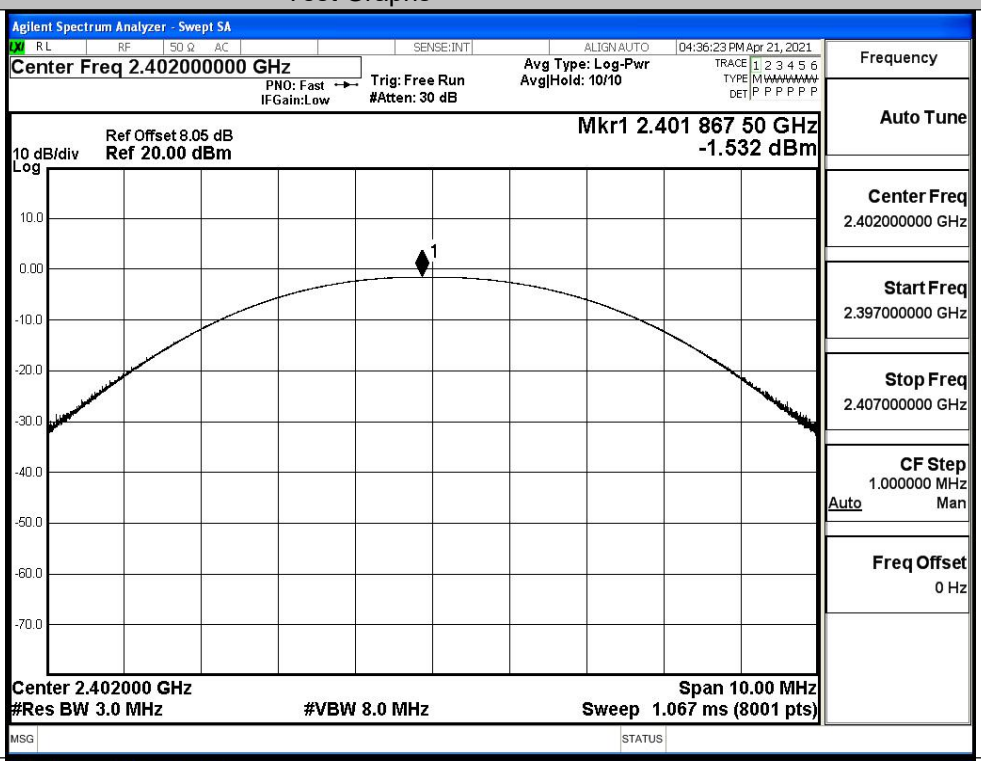
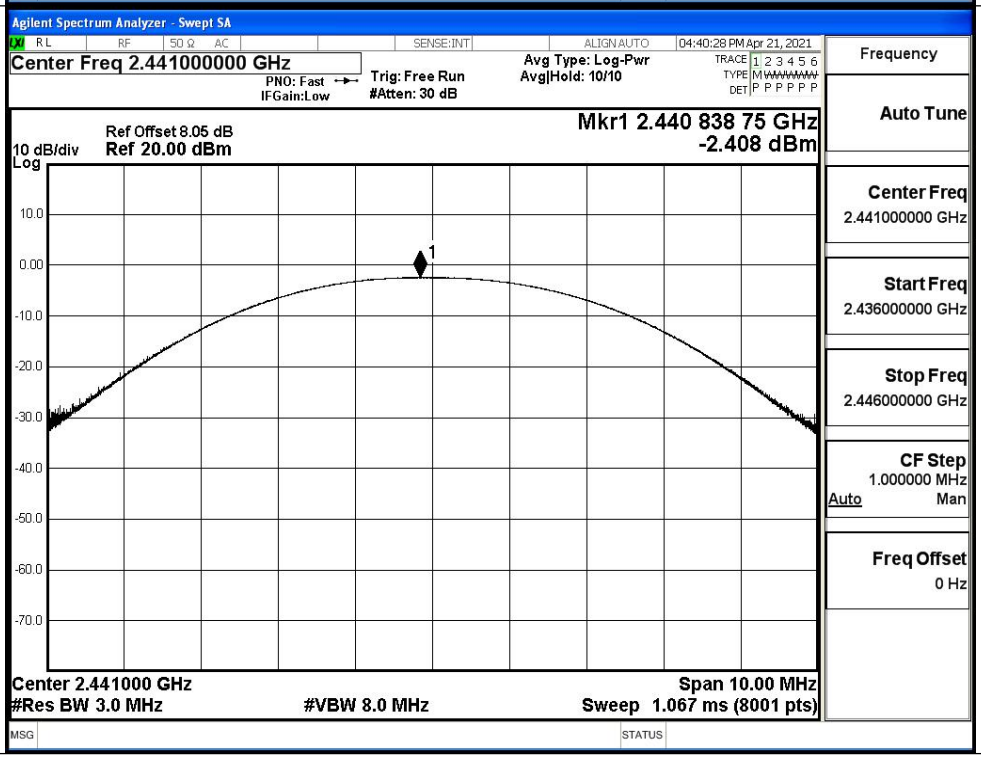
**Product Name: TWS Bluetooth Headset**
**Trade Mark: AIHOOR**
**Test Model: AIHOOR A2**

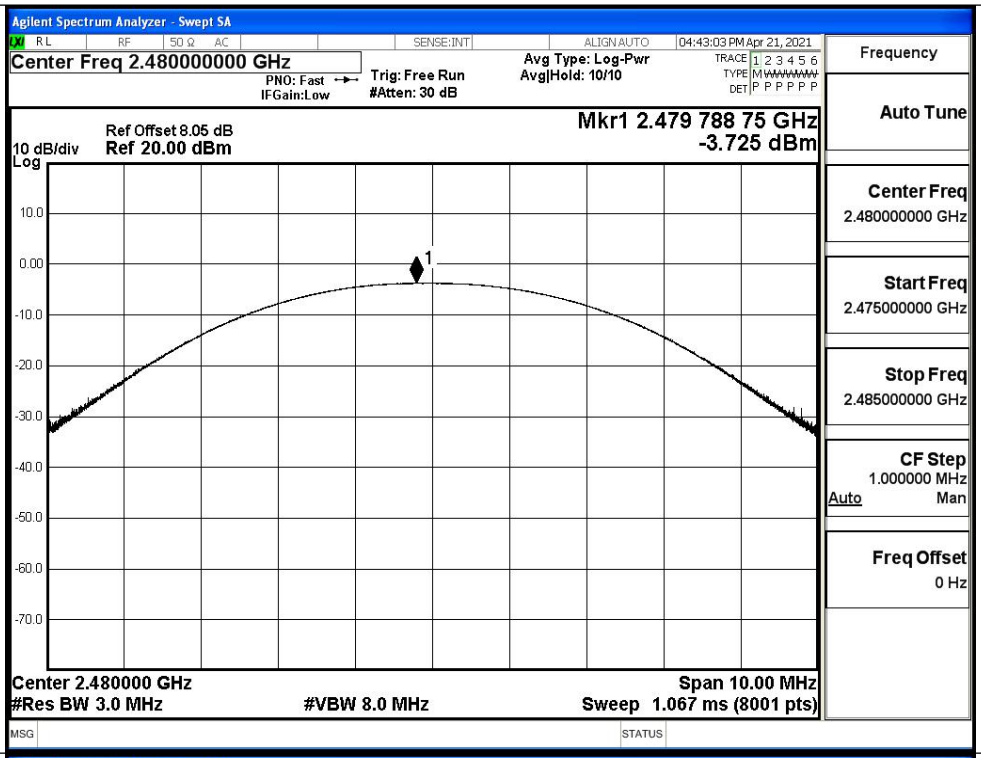
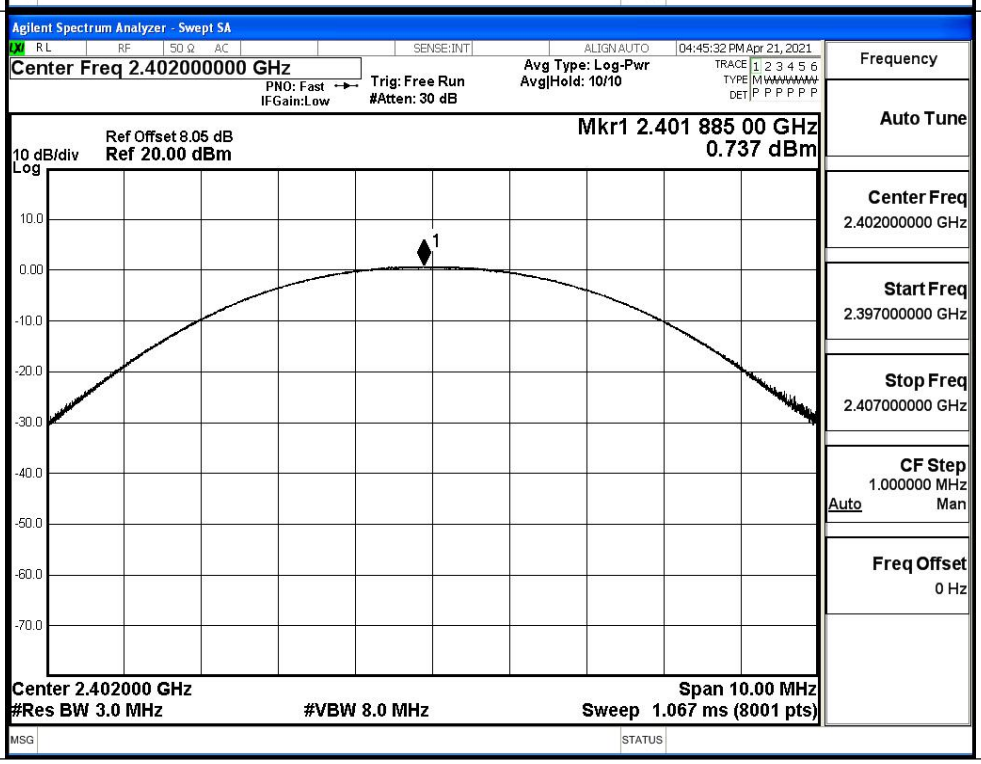
**Environmental Conditions**

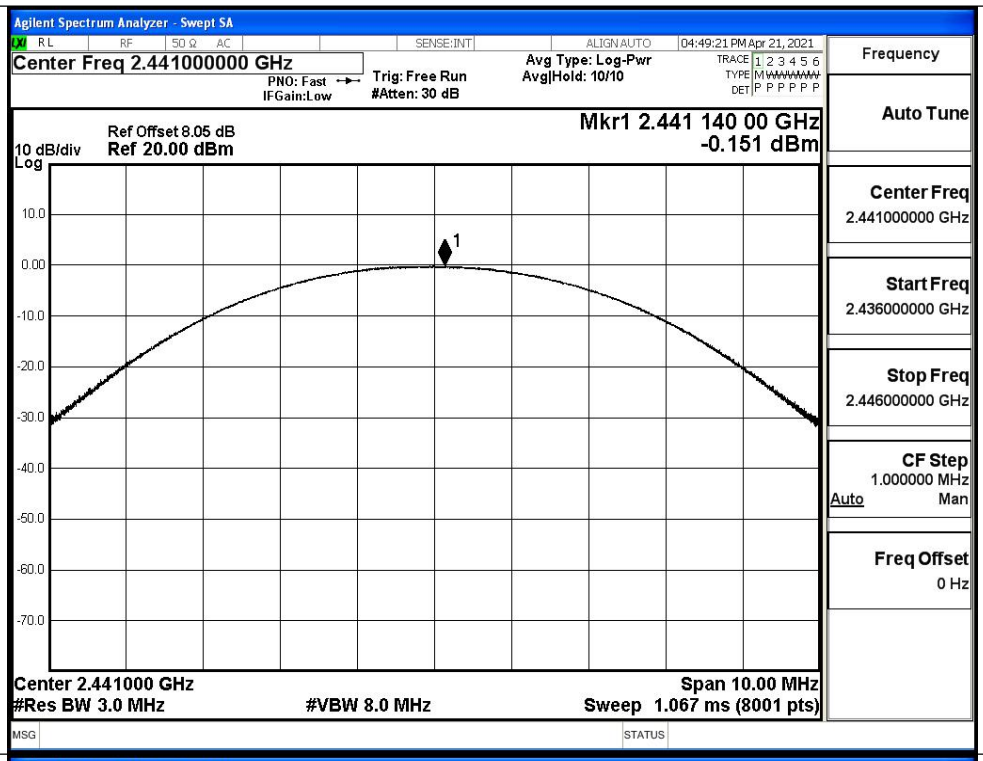
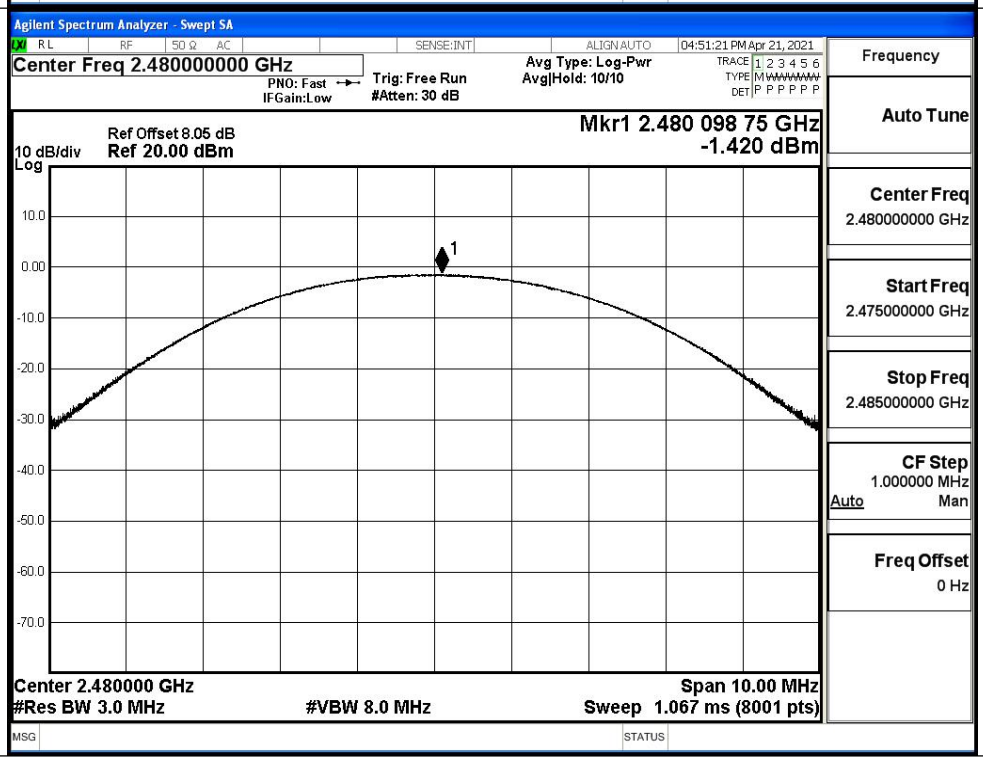
| | |
|---|---|
| Temperature: | 24.6° C |
| Relative Humidity: | 54.1% |
| ATM Pressure: | 100.0 kPa |
| Test Engineer: | Kay Hu |
| Supervised by: | Li Huan |

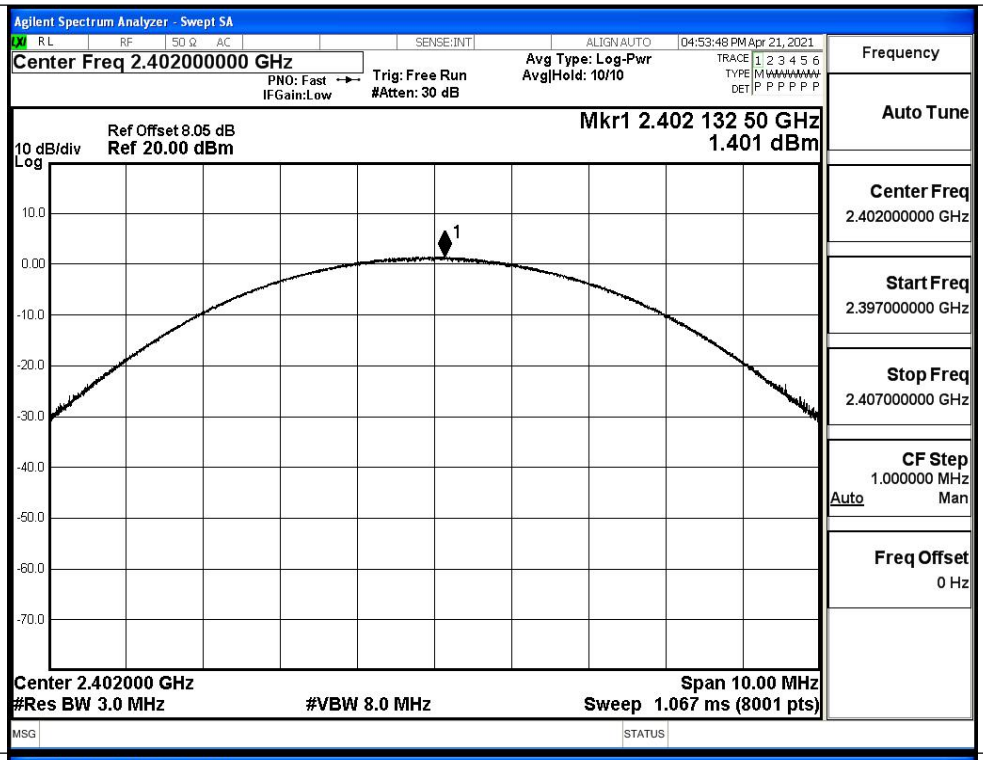
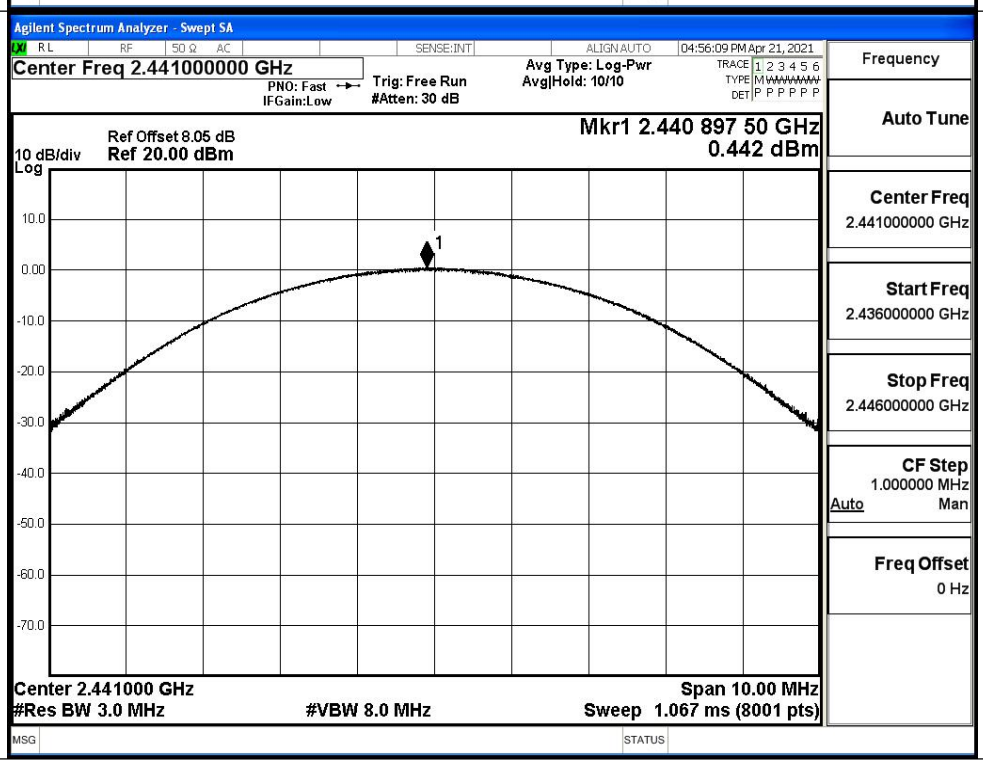
## A.1 Maxmum Conducted Peak Output Power

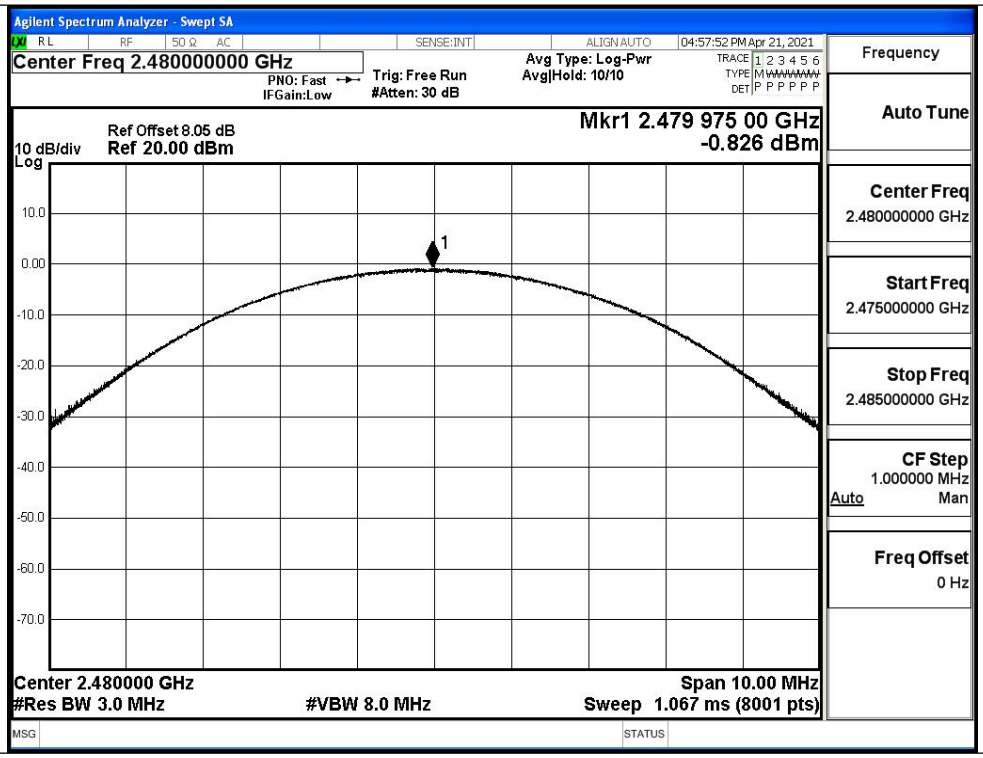
| Mode | Channel. | Maximum Peak Output Power [dBm] | Limit [dBm] | Verdict |
|---|---|---|---|---|
| GFSK | LCH | -1.532 | 21 | PASS |
| | MCH | -2.408 | 21 | PASS |
| | HCH | -3.725 | 21 | PASS |
| π/4DQPSK | LCH | 0.737 | 21 | PASS |
| | MCH | -0.151 | 21 | PASS |
| | HCH | -1.420 | 21 | PASS |
| 8DPSK | LCH | 1.401 | 21 | PASS |
| | MCH | 0.442 | 21 | PASS |
| | HCH | -0.826 | 21 | PASS |

| Test Graphs | | |
|---|---|---|
| GFSK/LCH | |  |
| GFSK/MCH | |  |

| | | |
|---|---|---|
| GFSK/HCH | |  |
| π/4DQPSK/LCH | |  |

| | |
|---|---|
| π/4DQPSK/MCH |  |
| π/4DQPSK/HCH |  |

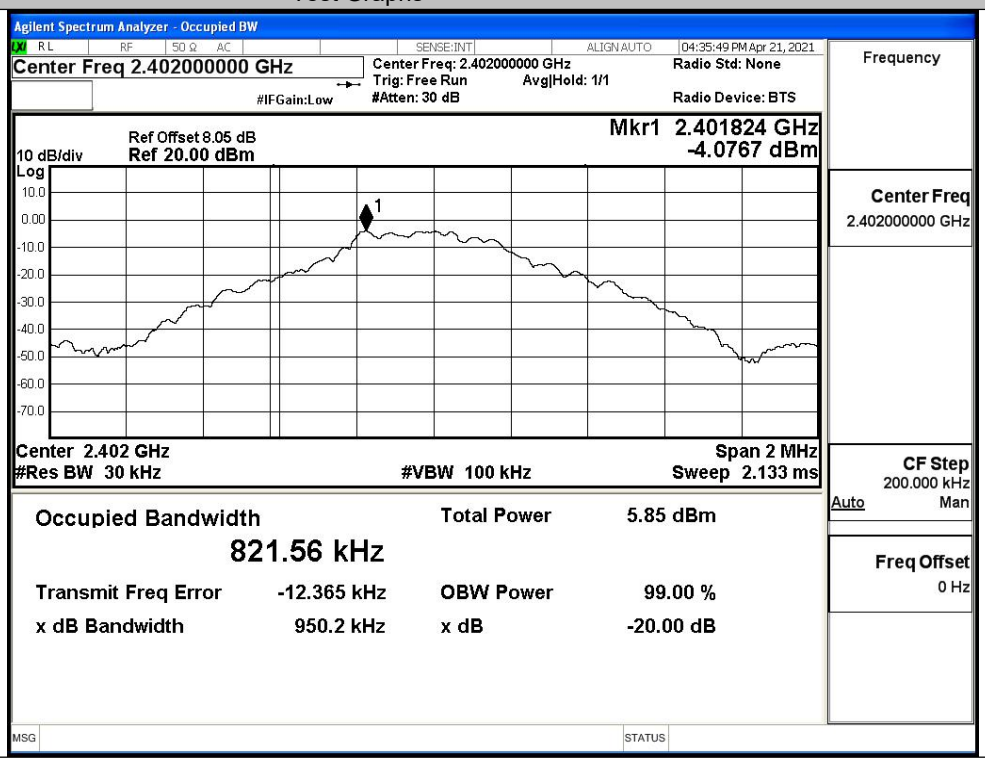
| | | |
|---|---|---|
| 8DPSK/LCH | |  |
| 8DPSK/MCH | |  |

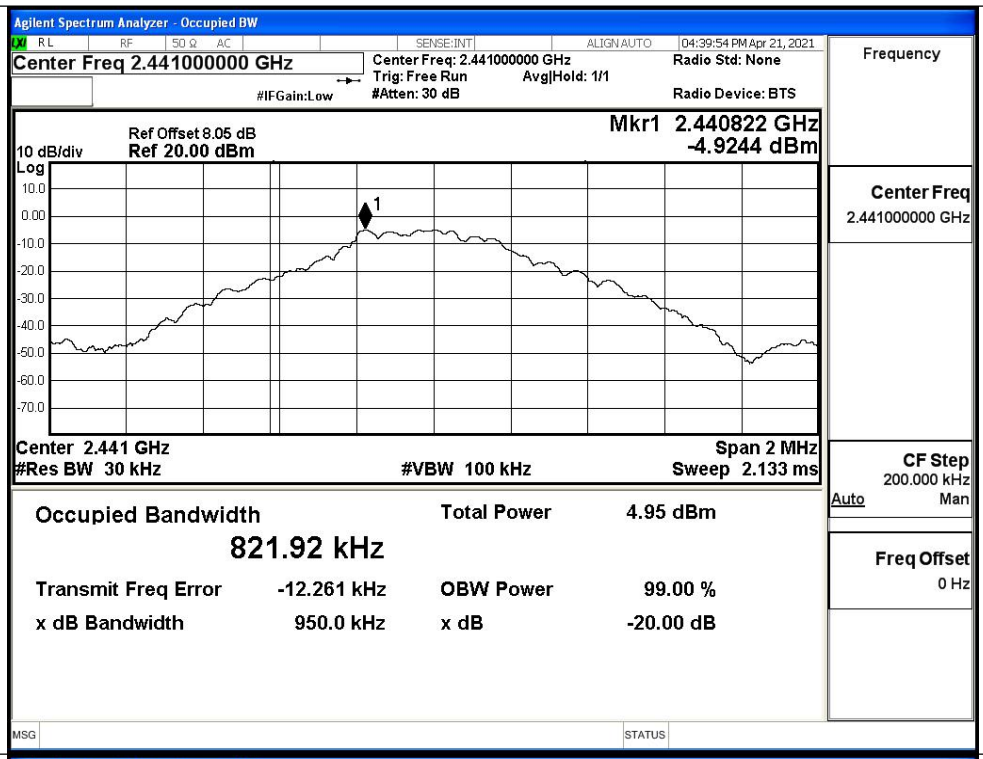
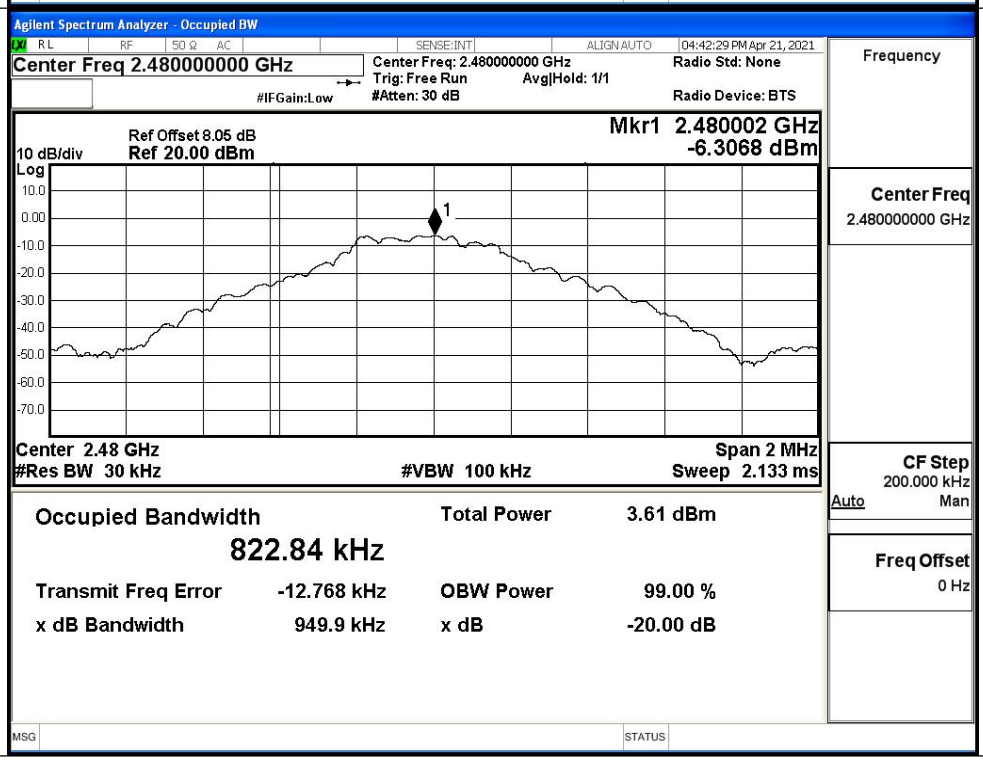
| | | |
|---|---|---|
| 8DPSK/HCH | |  |

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.480000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 10/10
04:57:52 PM Apr 21, 2021
Ref Offset 8.05 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr1 2.479 975 00 GHz
-0.826 dBm
Center 2.480000 GHz
#Res BW 3.0 MHz
#VBW 8.0 MHz
Span 10.00 MHz
Sweep 1.067 ms (8001 pts)
Frequency
Auto Tune
Center Freq
2.480000000 GHz
Start Freq
2.475000000 GHz
Stop Freq
2.485000000 GHz
CF Step
1.000000 MHz
Auto
Man
Freq Offset
0 Hz

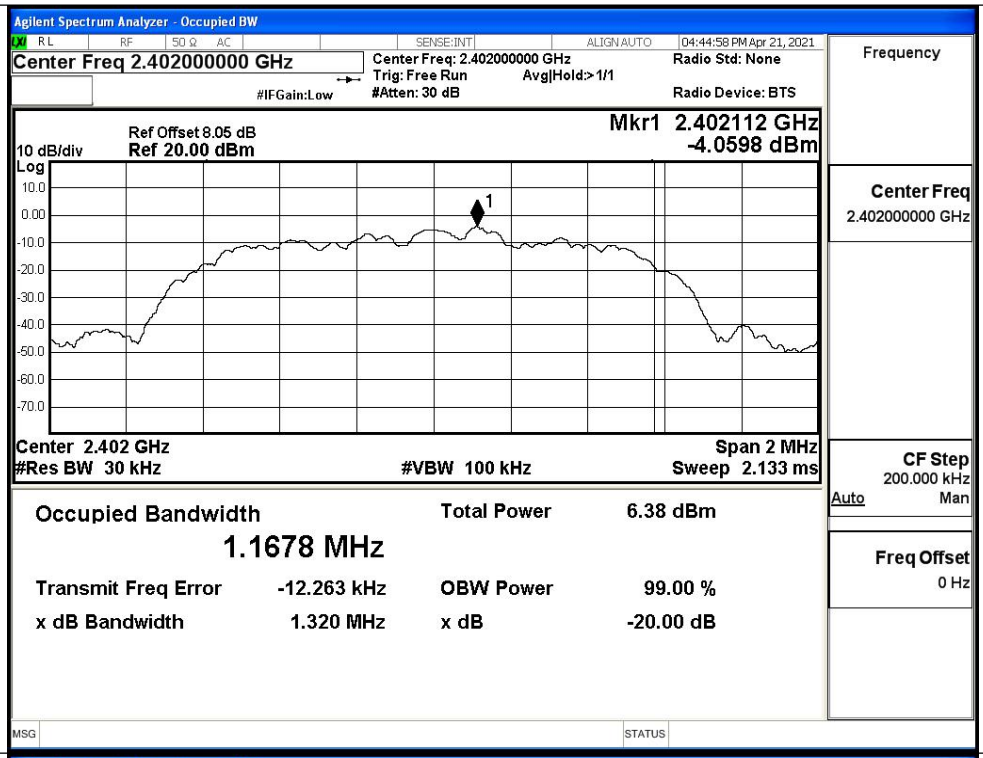
## A.2 20dB Bandwidth

| Mode | Channel. | 20dB Bandwidth [MHz] | Limit [MHz] | Verdict |
|---|---|---|---|---|
| GFSK | LCH | 0.9502 | Not Specified | PASS |
| | MCH | 0.9500 | Not Specified | PASS |
| | HCH | 0.9499 | Not Specified | PASS |
| π/4DQPSK | LCH | 1.320 | Not Specified | PASS |
| | MCH | 1.320 | Not Specified | PASS |
| | HCH | 1.320 | Not Specified | PASS |
| 8DPSK | LCH | 1.266 | Not Specified | PASS |
| | MCH | 1.267 | Not Specified | PASS |
| | HCH | 1.272 | Not Specified | PASS |

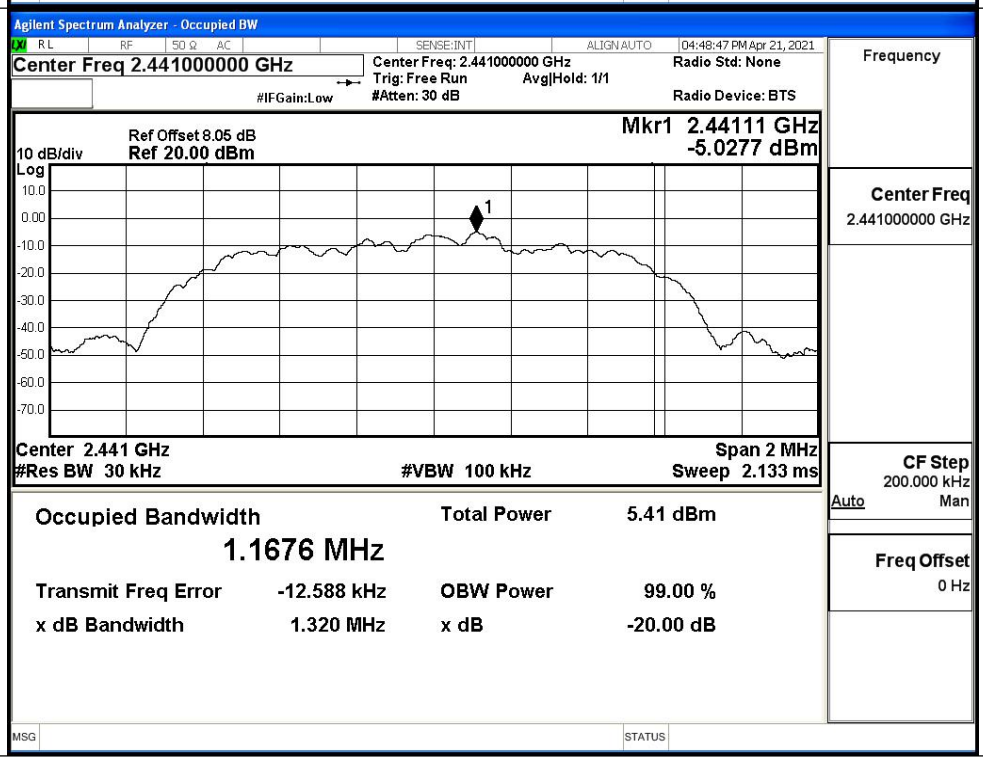
| Test Graphs | | |
|---|---|---|
| GFSK/LCH | |  |

| | |
|---|---|
| GFSK/MCH |  |
| GFSK/HCH |  |

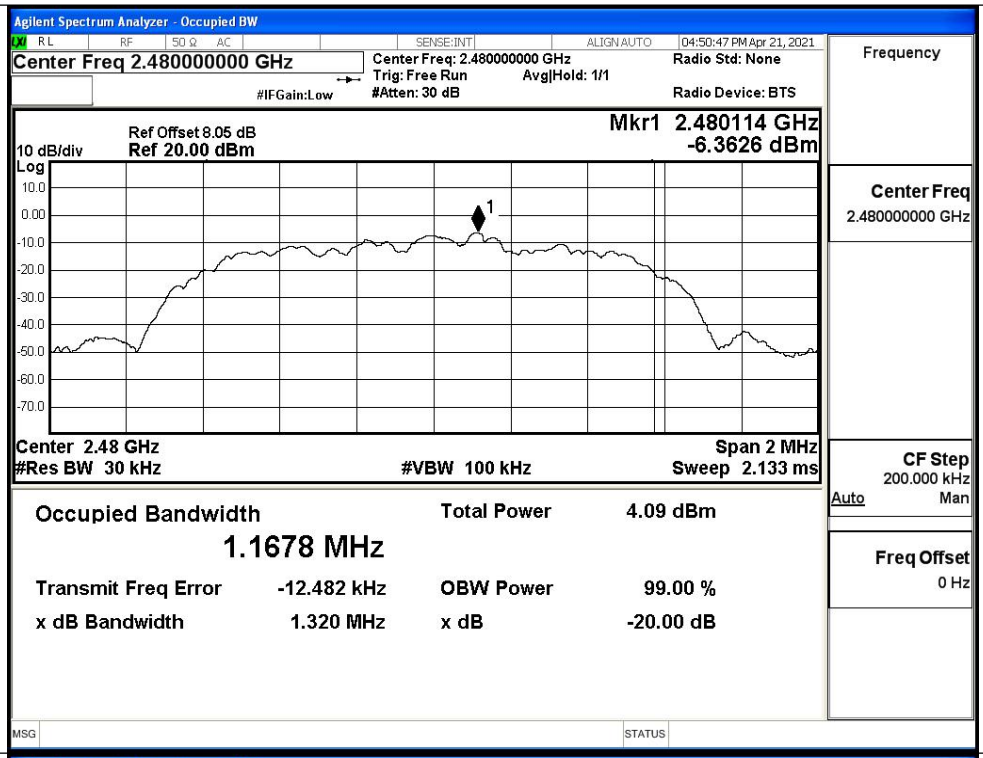
π/4DQPSK/LCH



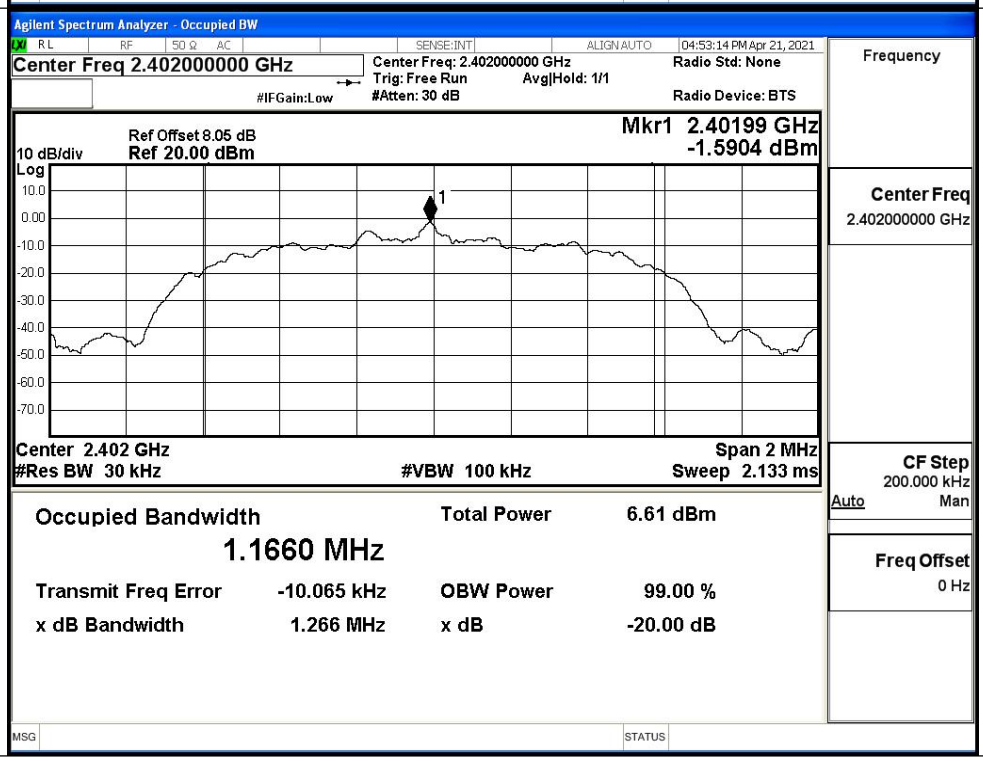

π/4DQPSK/MCH



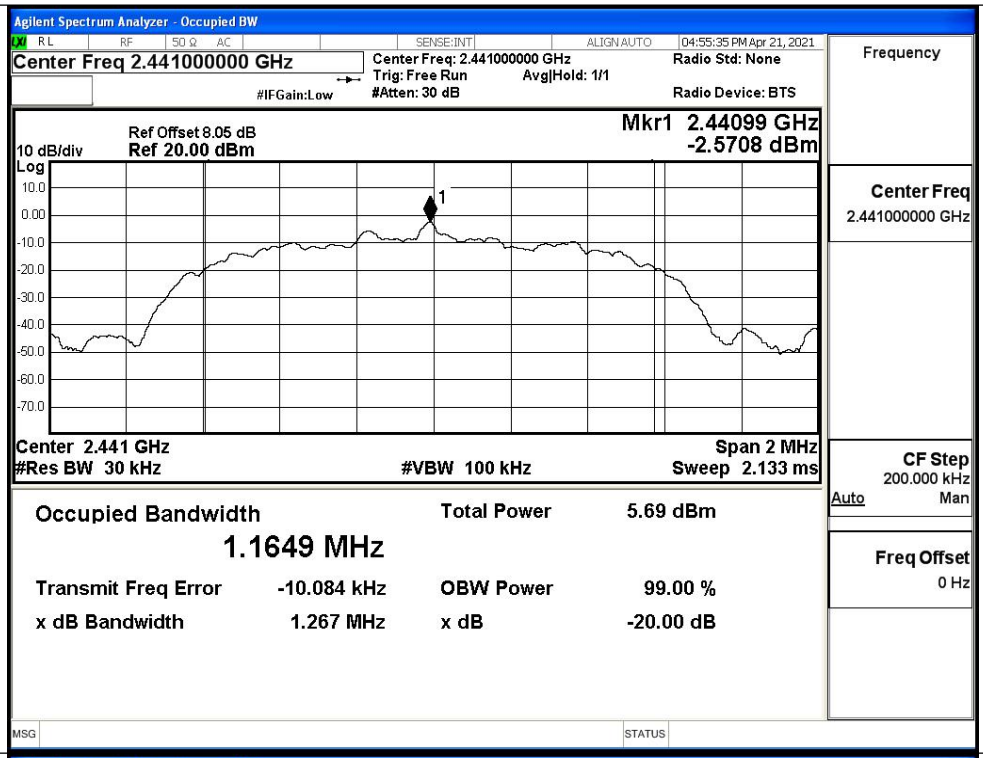
π/4DQPSK/HCH



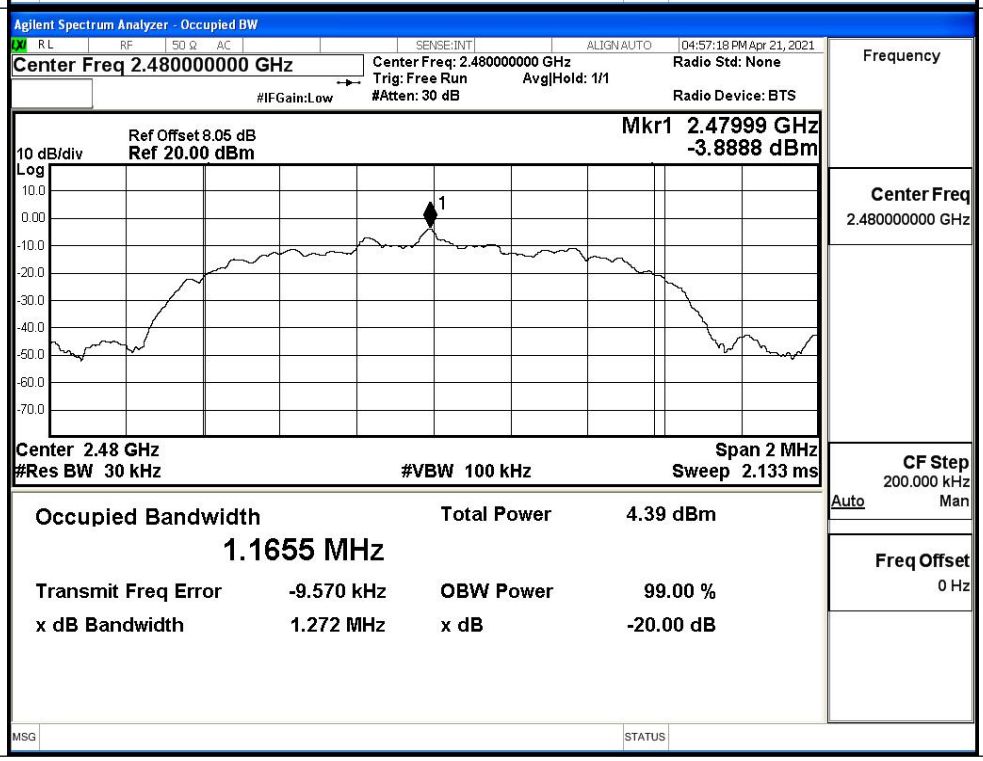

8DPSK/LCH



8DPSK/MCH

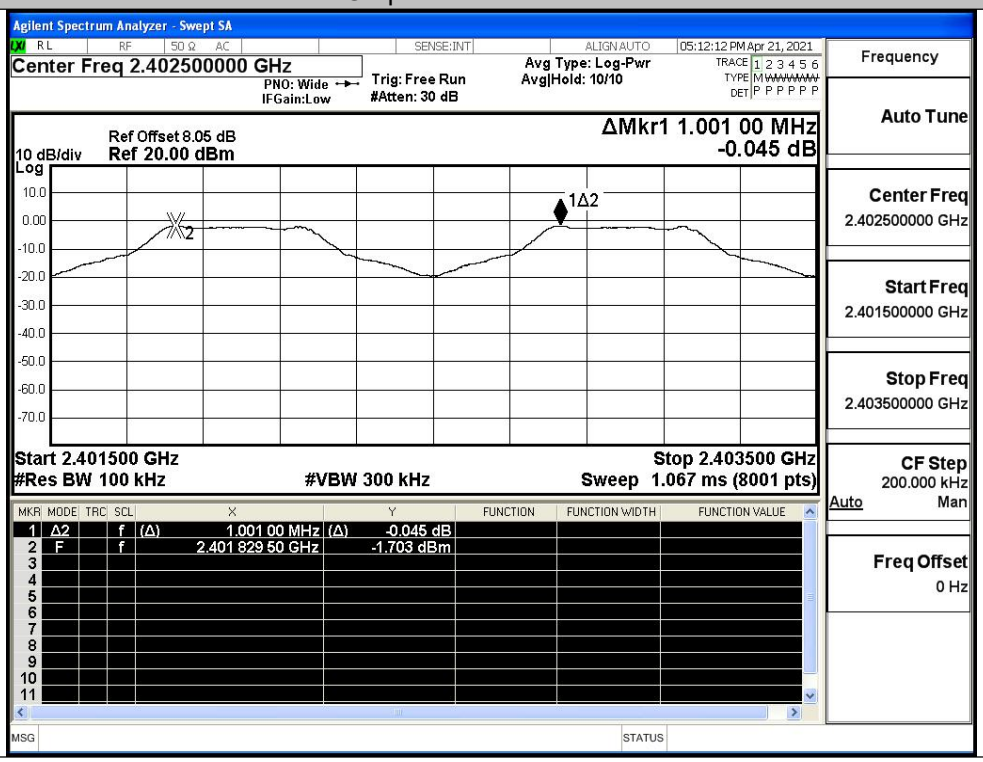


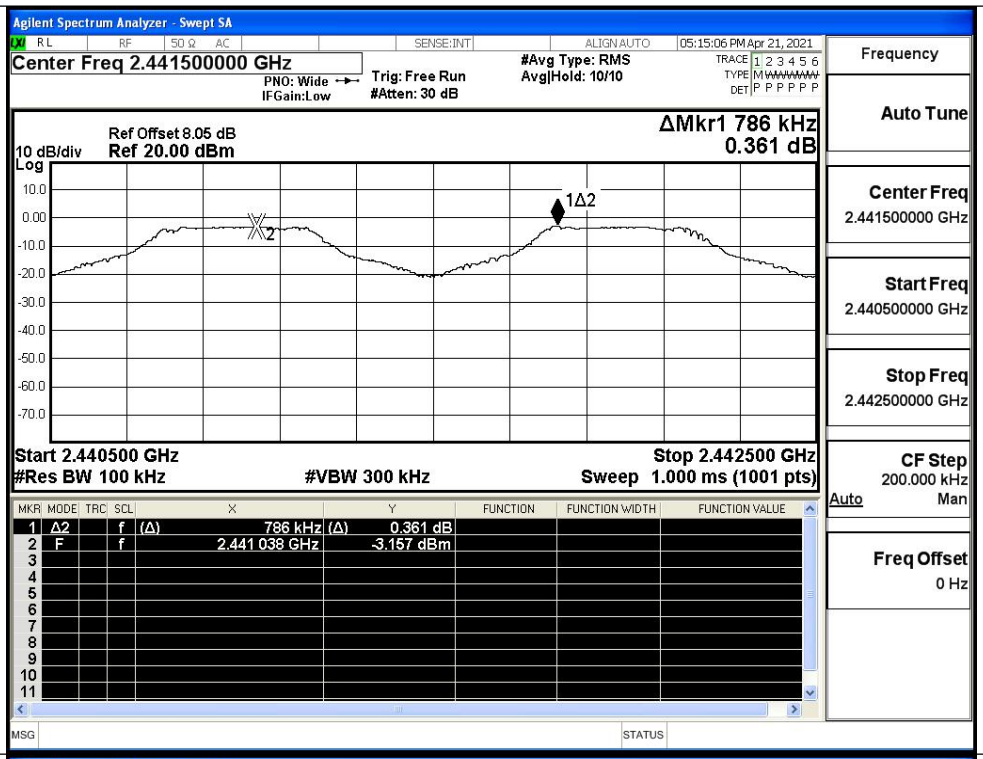
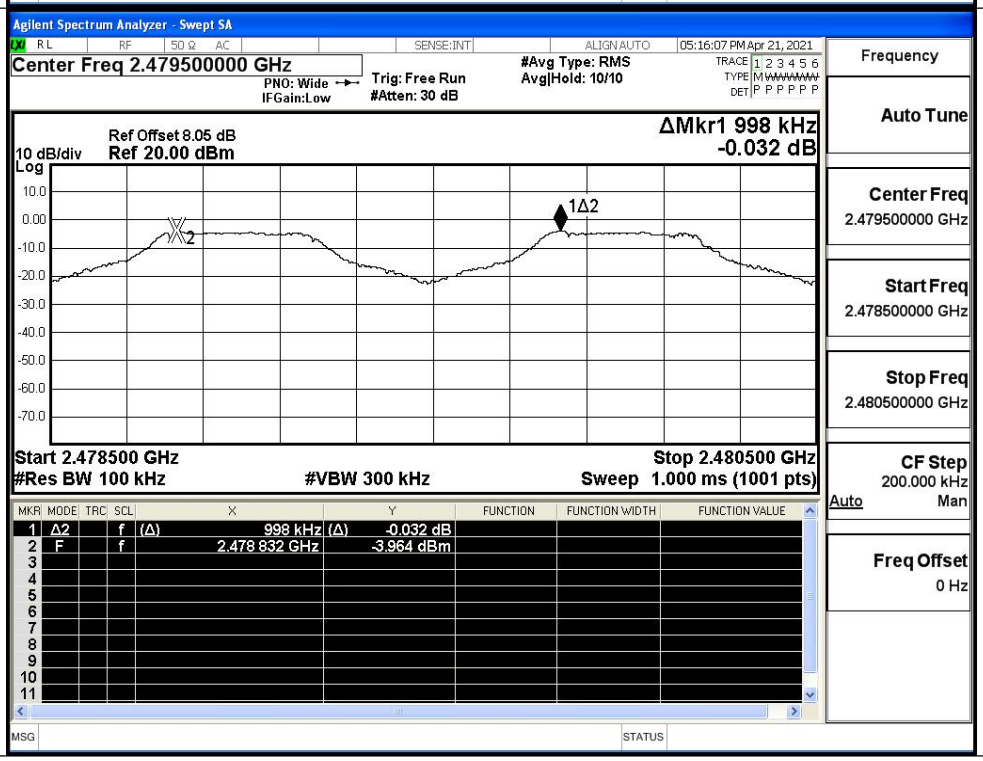

8DPSK/HCH



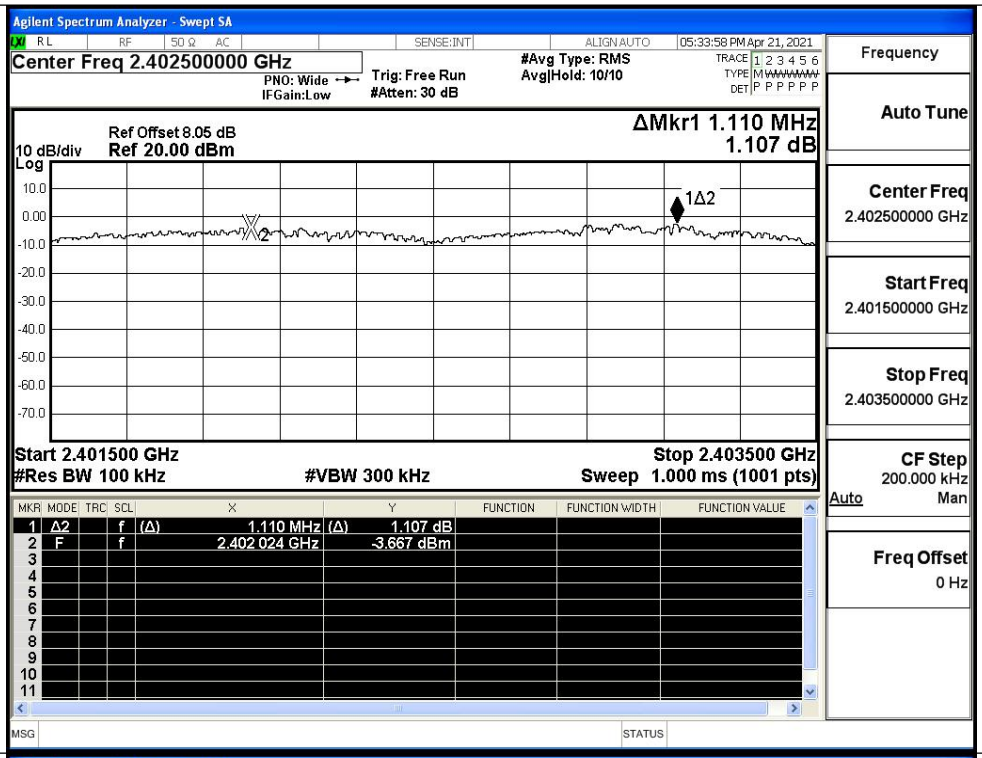
## A.3 Carrier Frequency Separation

| Mode | Channel. | Carrier Frequency Separation [MHz] | Limit [MHz] | Verdict |
|---|---|---|---|---|
| GFSK | LCH | 1.001 | 0.633 | PASS |
| | MCH | 0.786 | 0.633 | PASS |
| | HCH | 0.998 | 0.633 | PASS |
| π/4DQPSK | LCH | 1.110 | 0.880 | PASS |
| | MCH | 1.014 | 0.880 | PASS |
| | HCH | 0.904 | 0.880 | PASS |
| 8DPSK | LCH | 1.002 | 0.848 | PASS |
| | MCH | 1.000 | 0.848 | PASS |
| | HCH | 0.998 | 0.848 | PASS |

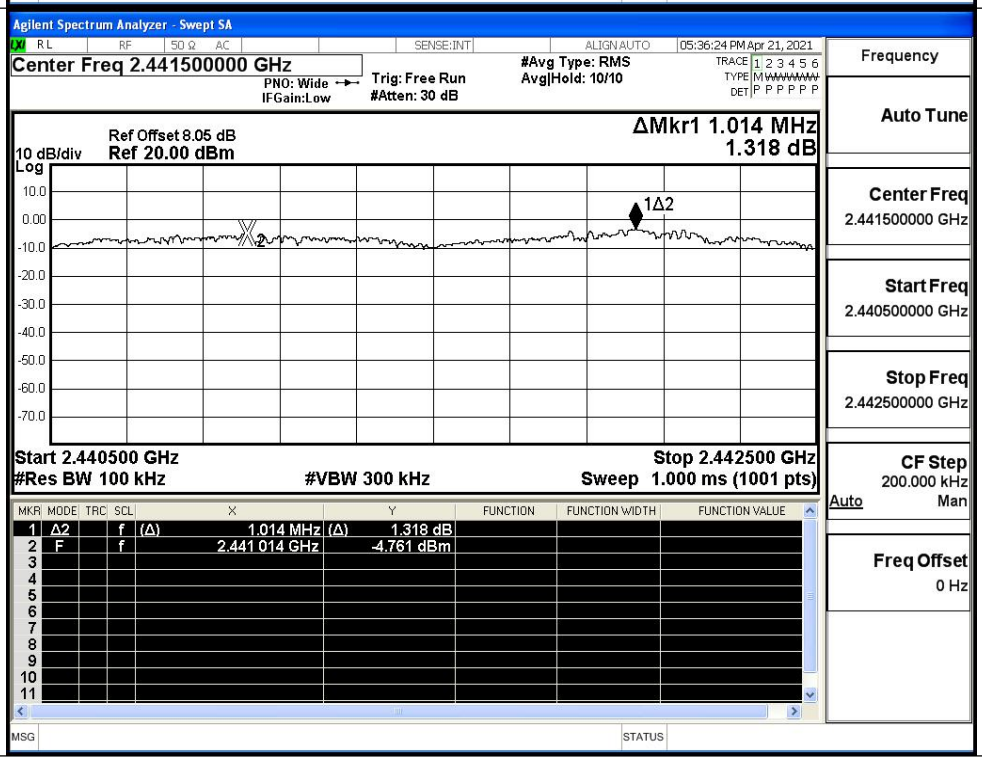
| Test Graphs | | |
|---|---|---|
| GFSK/LCH | |  |

| | | |
|---|---|---|
| GFSK/MCH | |  |
| GFSK/HCH | |  |

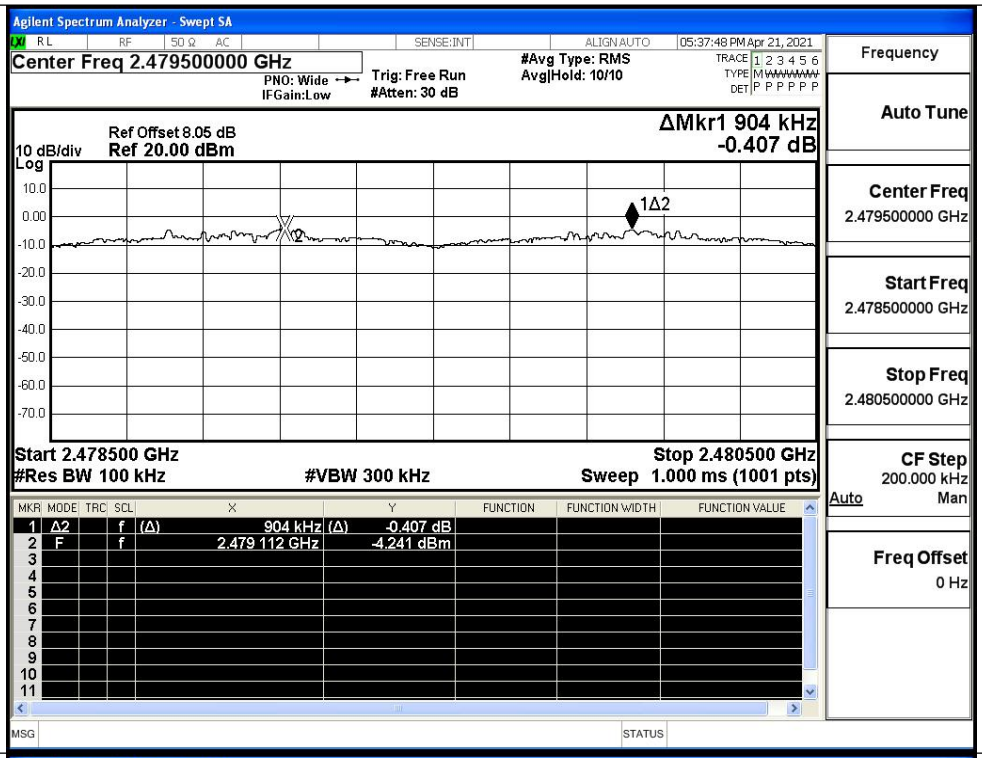
π/4DQPSK/LCH



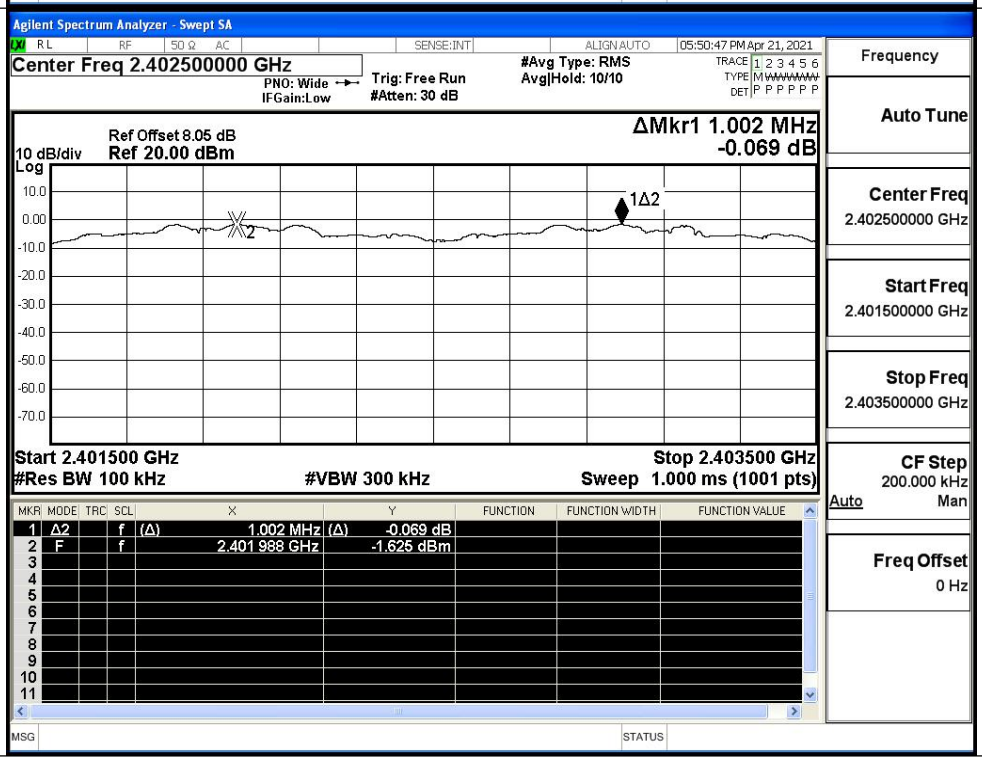

π/4DQPSK/MCH



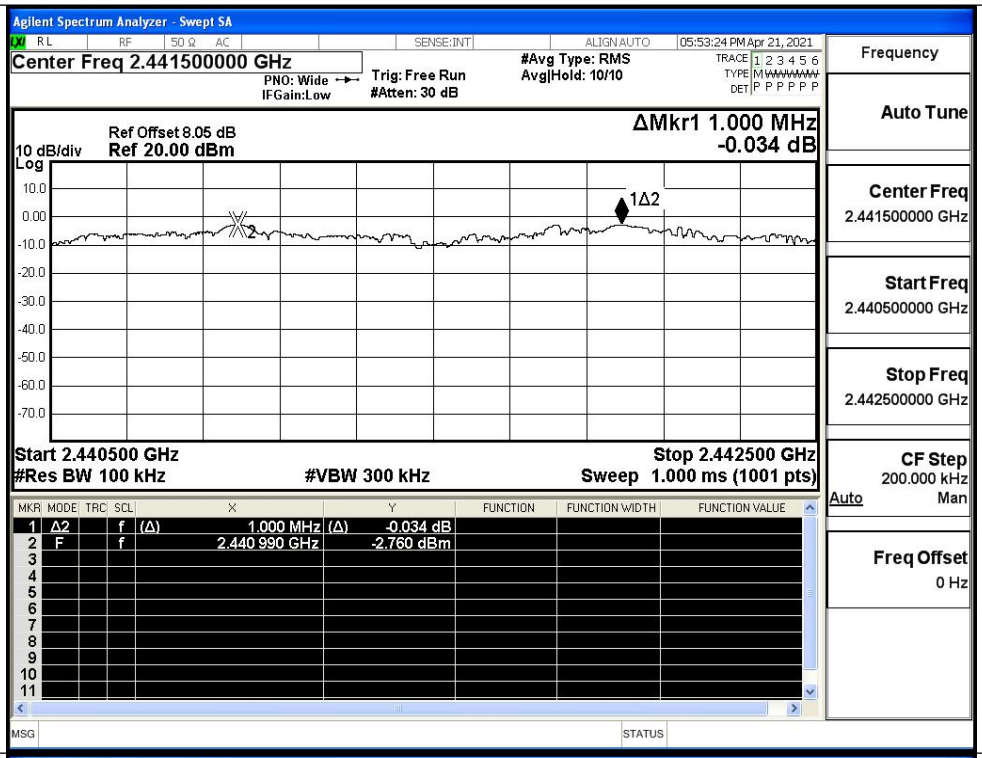
π/4DQPSK/HCH



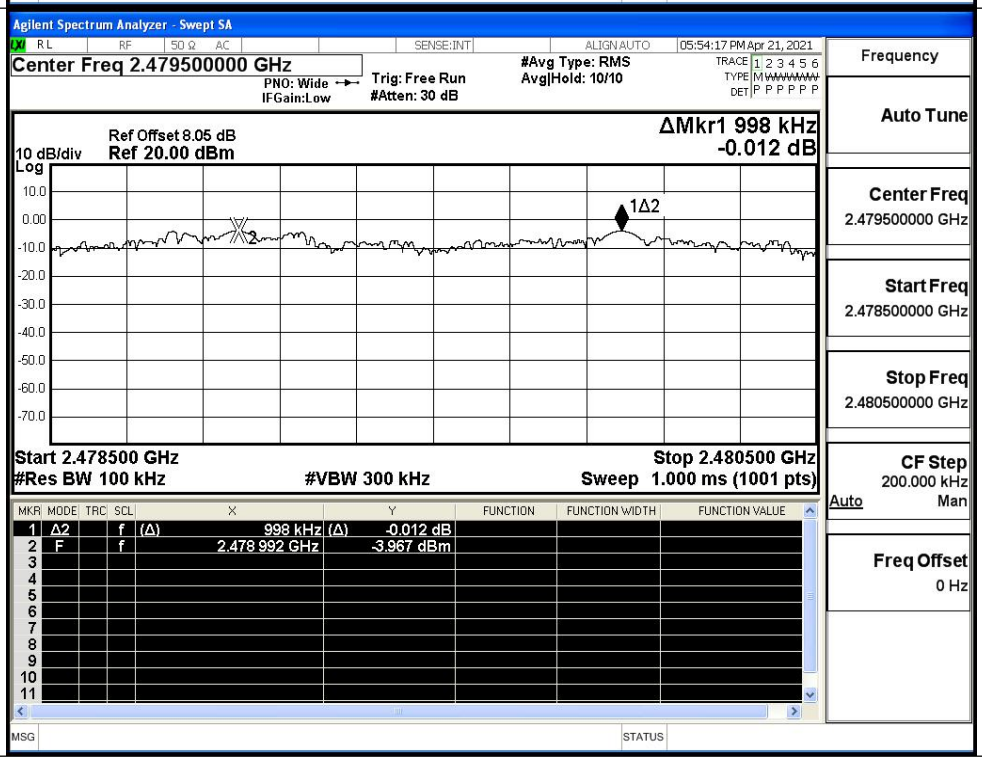

8DPSK/LCH



8DPSK/MCH

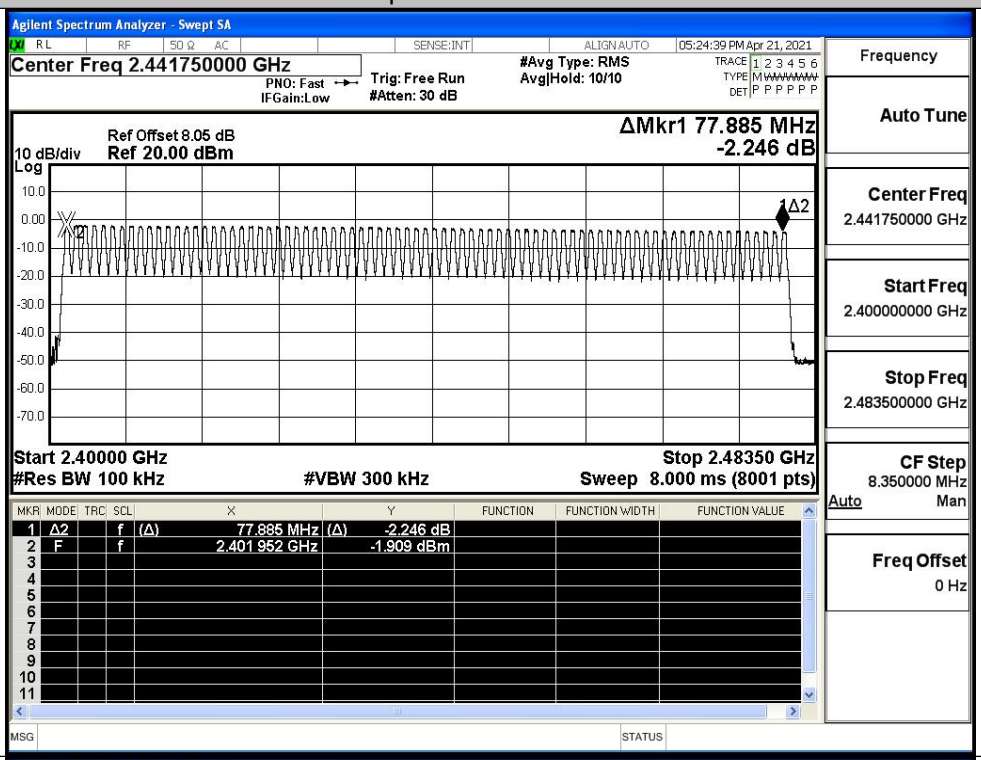
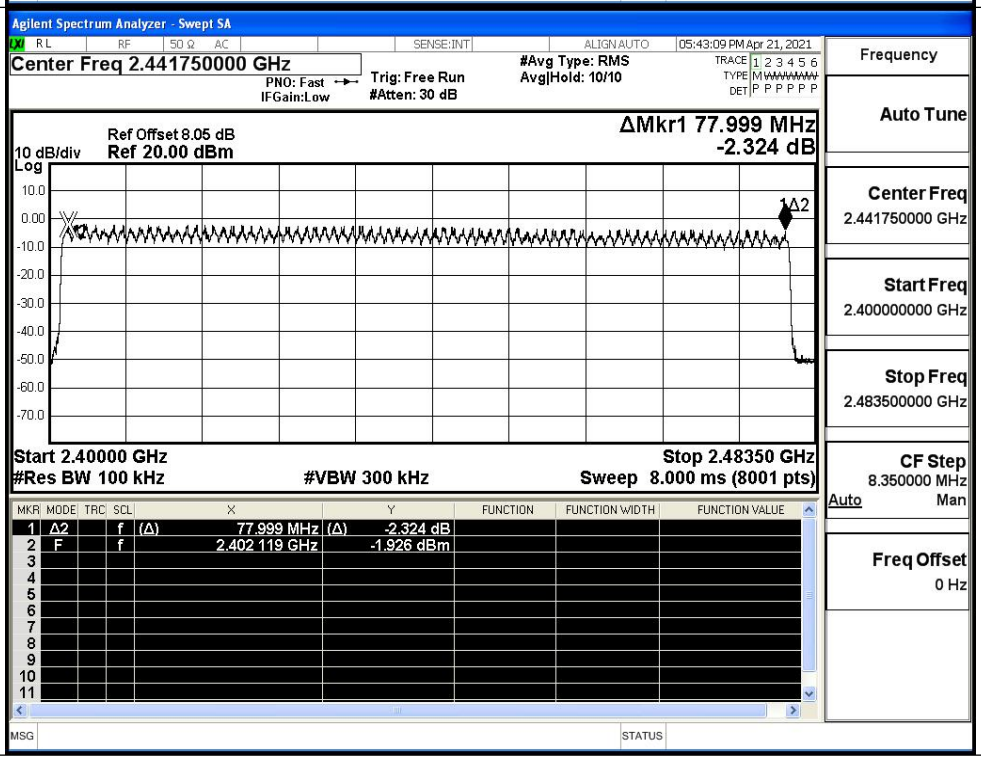


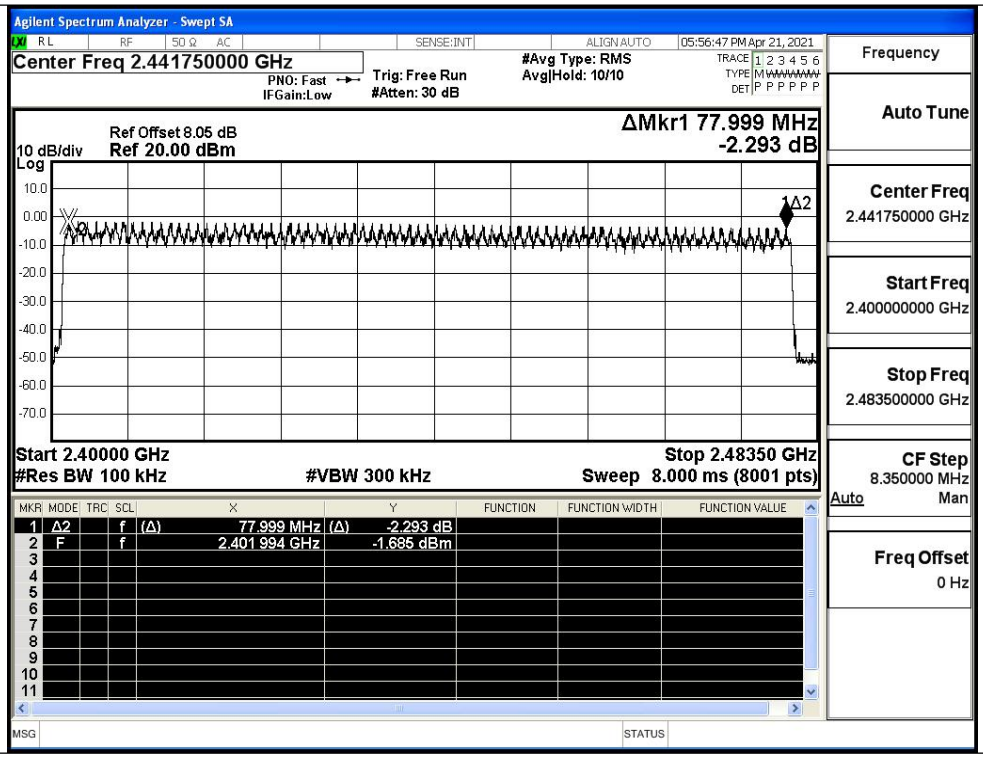

8DPSK/HCH



## A.4 Hopping Channel Number

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

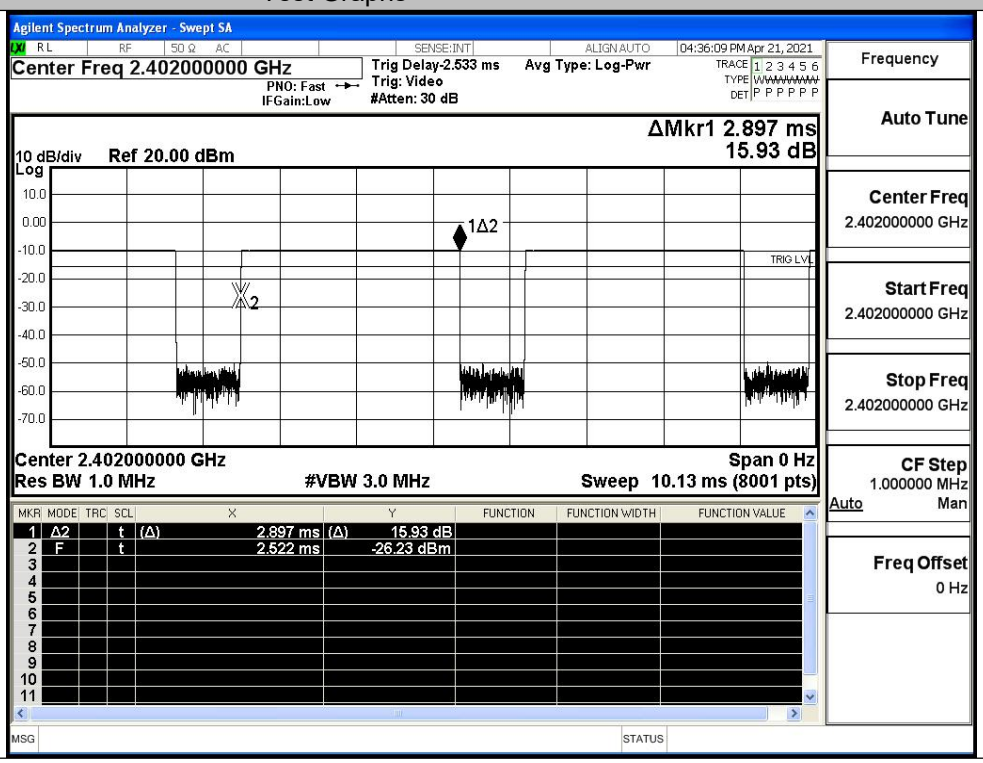
| Test Graphs | |
|---|---|
| GFSK/Hop |  |
| π/4DQPSK/Hop |  |

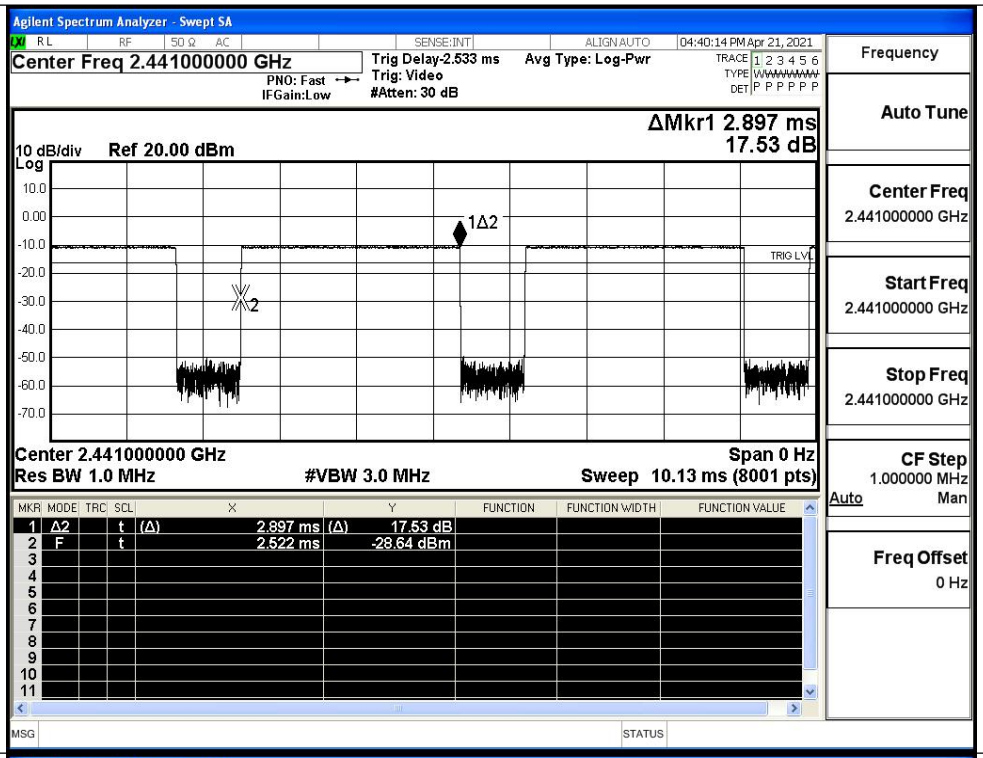
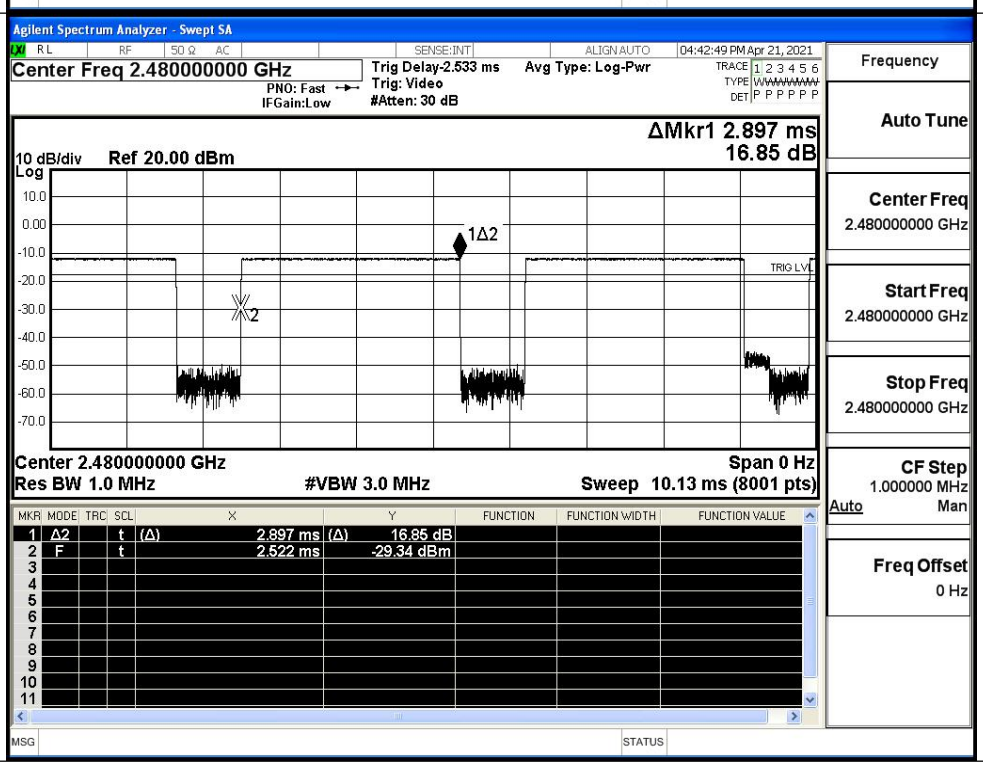
| | | |
|---|---|---|
| 8DPSK/Hop | |  |

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.441750000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
Avg|Hold: 10/10
05:56:47 PM Apr 21, 2021
Ref Offset 8.05 dB
10 dB/div
Ref 20.00 dBm
ΔMkr1 77.999 MHz
-2.293 dB
Start 2.40000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 2.48350 GHz
Sweep 8.000 ms (8001 pts)
1 Δ2 f (Δ) 77.999 MHz (Δ) -2.293 dB
2 F f 2.401 994 GHz -1.685 dBm
Frequency
Auto Tune
Center Freq
2.441750000 GHz
Start Freq
2.400000000 GHz
Stop Freq
2.483500000 GHz
CF Step
8.350000 MHz
Auto Man
Freq Offset
0 Hz

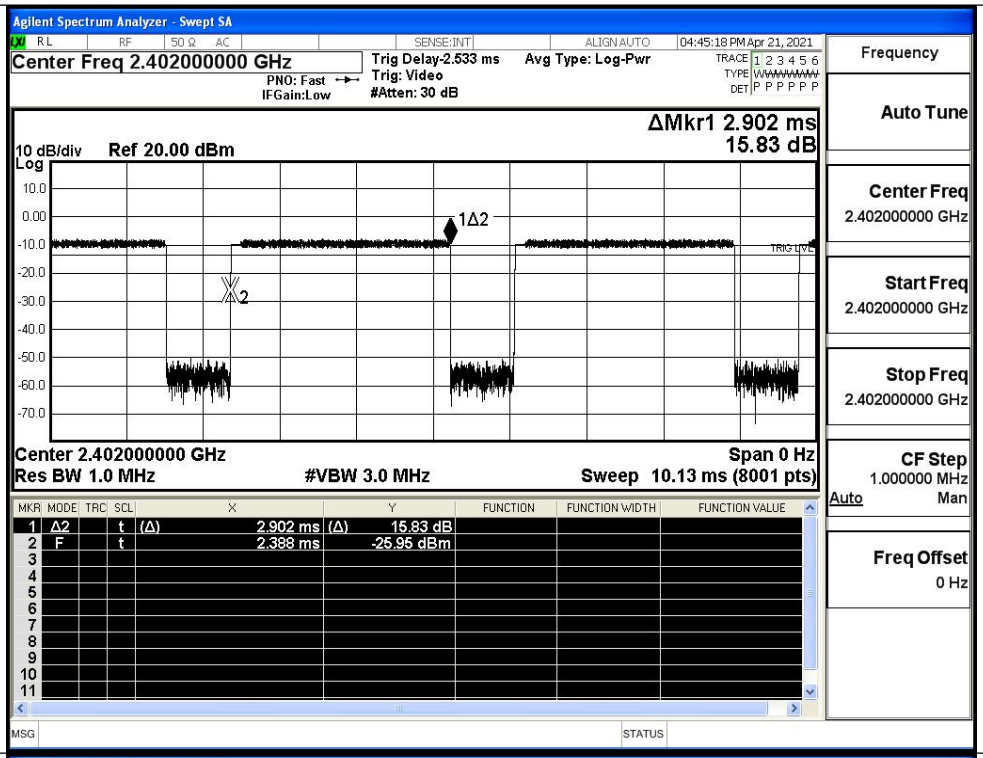
## A.5 Dwell Time

| Mode | Packet | Channel | Burst Width [ms/hop/ch] | Total 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 |
| π/4DQPSK | 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 |

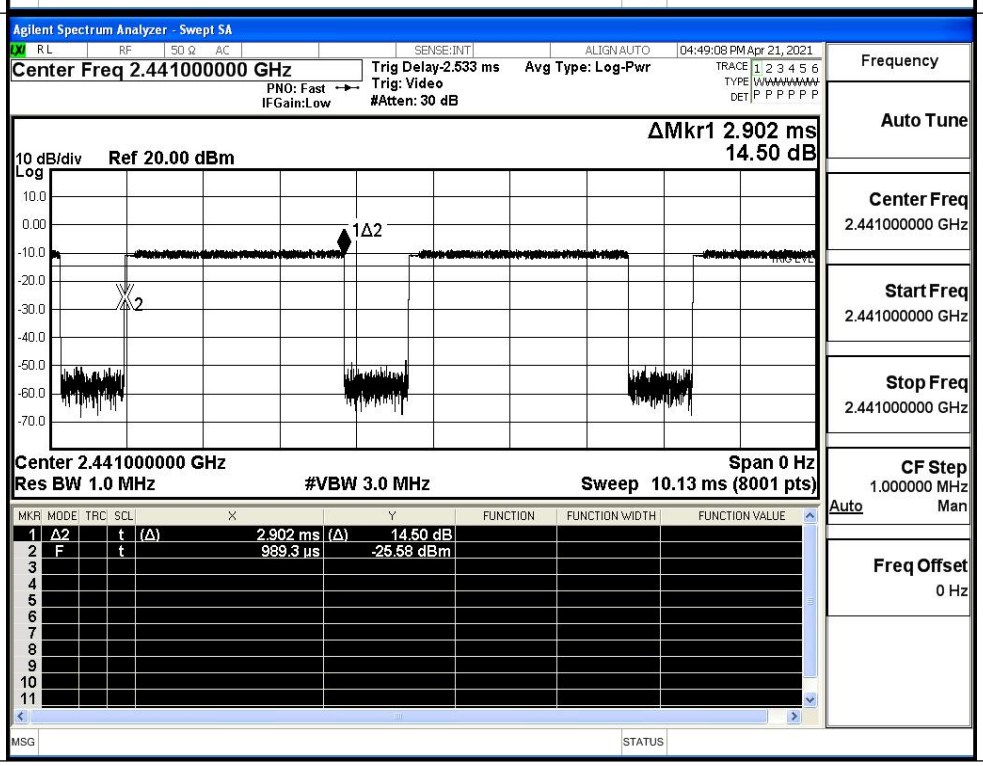
| Test Graphs | |
|---|---|
| GFSK_DH5/LCH |  |

| | |
|---|---|
| GFSK_DH5/MCH |  |
| GFSK_DH5/HCH |  |

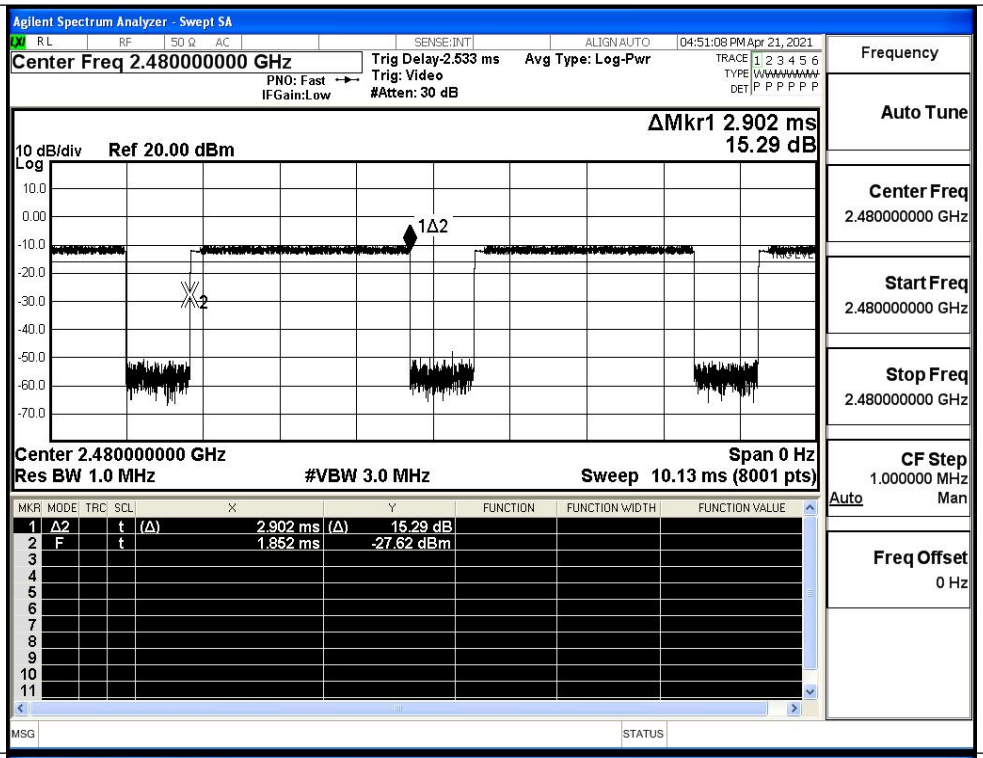
π/4DQPSK
_2DH5/LCH



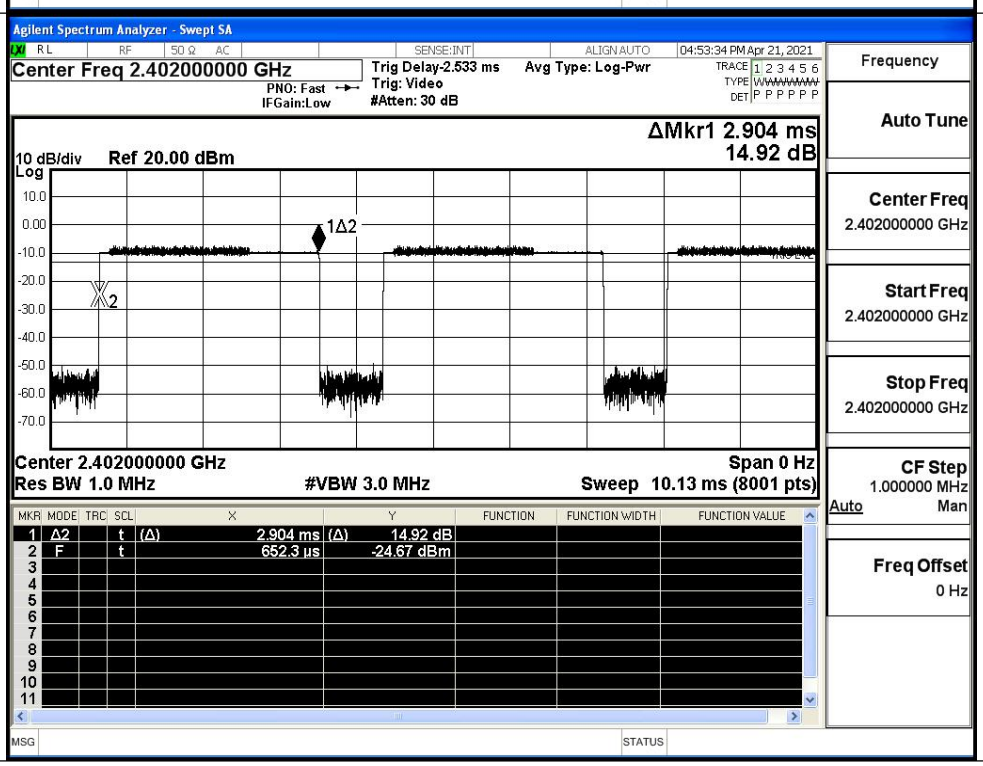

π/4DQPSK
_2DH5/MCH

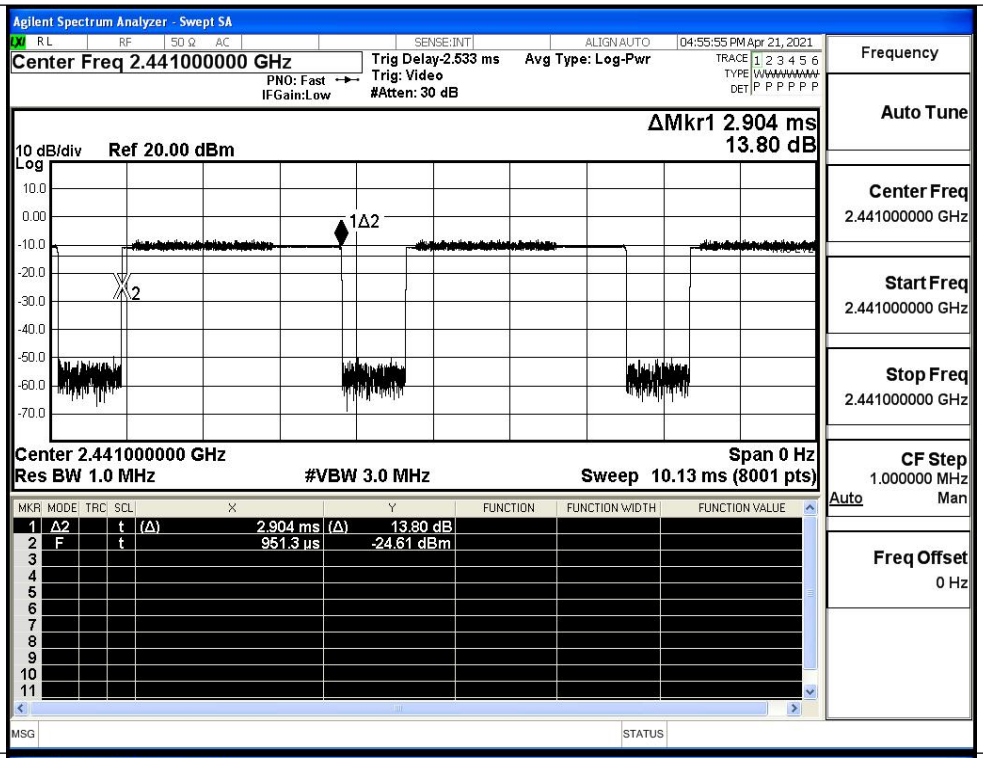
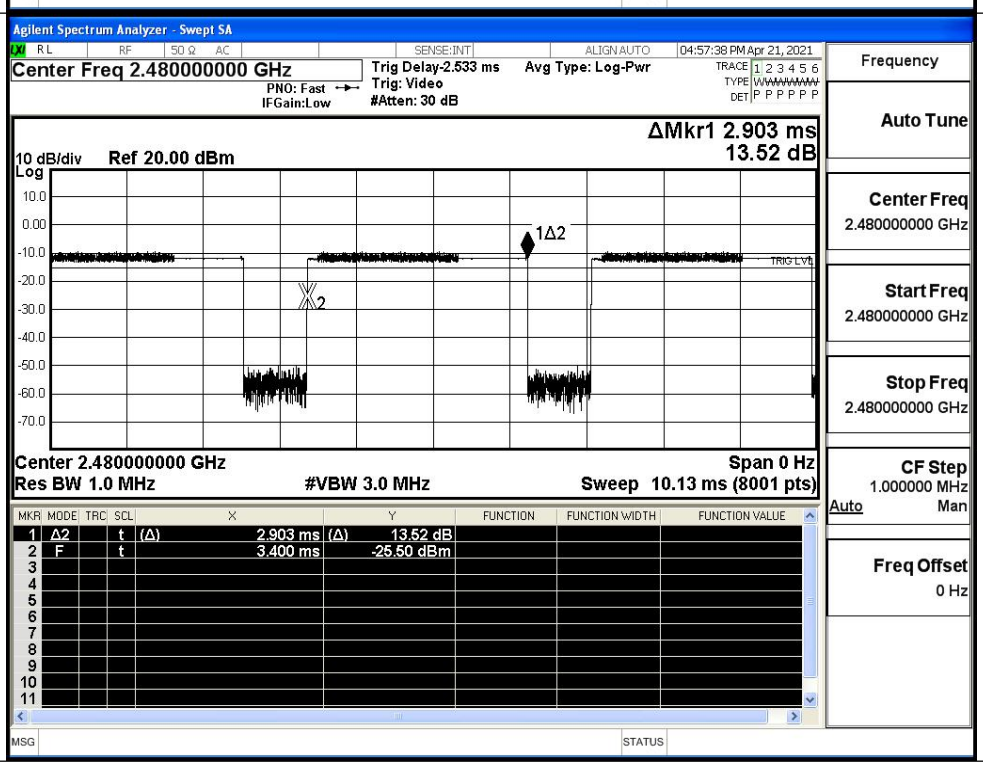


π/4DQPSK _2DH5/HCH



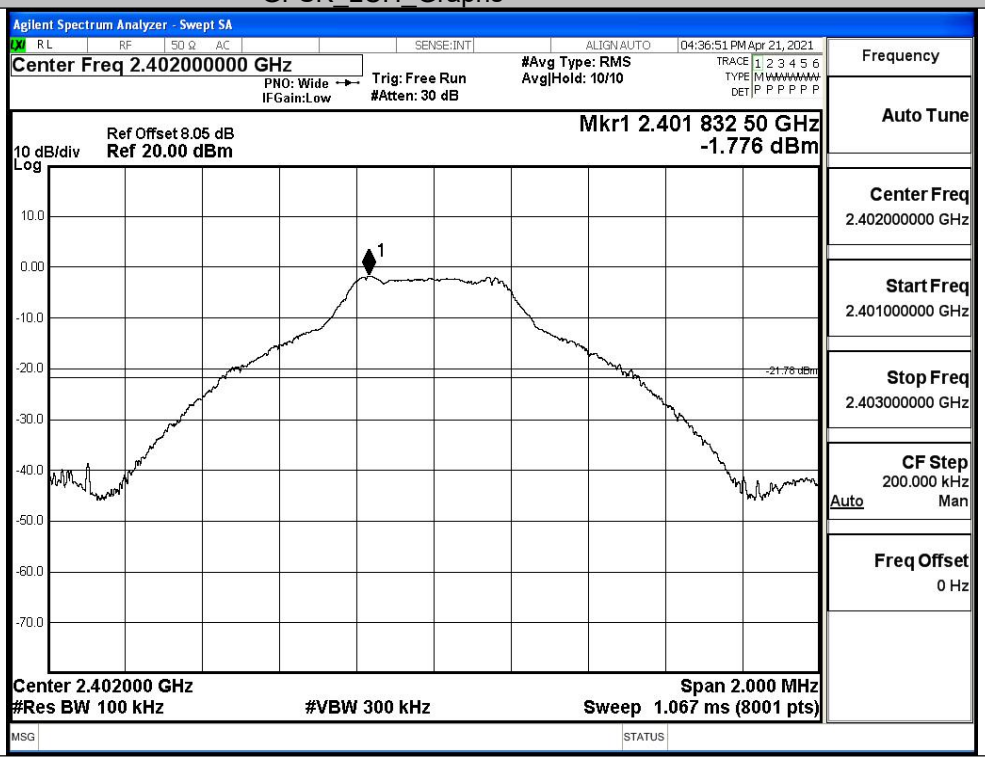

8DPSK _3DH5/LCH

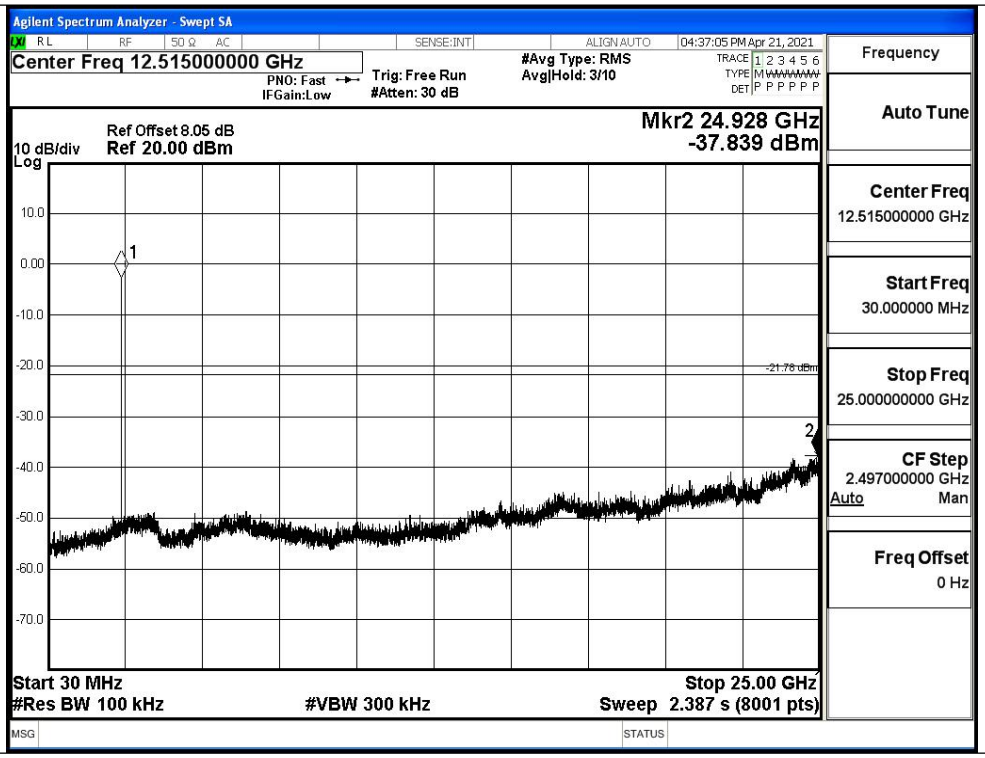


| | |
|---|---|
| 8DPSK _3DH5/MCH |  |
| 8DPSK _3DH5/HCH |  |

## A.6 RF Conducted Spurious Emissions

| Mode | Channel | Pref [dBm] | Max. Level [dBm] | Limit [dBm] | Verdict |
|---|---|---|---|---|---|
| GFSK | LCH | -1.776 | -37.839 | -21.776 | PASS |
| | MCH | -2.668 | -38.553 | -22.668 | PASS |
| | HCH | -4.169 | -37.967 | -24.169 | PASS |
| π/4DQPSK | LCH | -1.92 | -37.276 | -21.920 | PASS |
| | MCH | -2.857 | -37.861 | -22.857 | PASS |
| | HCH | -4.152 | -37.829 | -24.152 | PASS |
| 8DPSK | LCH | -1.608 | -37.766 | -21.608 | PASS |
| | MCH | -2.618 | -38.297 | -22.618 | PASS |
| | HCH | -3.932 | -37.135 | -23.932 | PASS |

| GFSK_LCH_Graphs | | |
|---|---|---|
| Pref | |  |

| | | |
|---|---|---|
| Puw | |  |

Agilent Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
04:37:05 PM Apr 21, 2021
Center Freq 12.515000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
Avg|Hold: 3/10
TRACE 1 2 3 4 5 6
TYPE M
DET P P P P P
Ref Offset 8.05 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr2 24.928 GHz
-37.839 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-21.78 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.387 s (8001 pts)
MSG
STATUS
Frequency
Auto Tune
Center Freq
12.515000000 GHz
Start Freq
30.000000 MHz
Stop Freq
25.000000000 GHz
CF Step
2.497000000 GHz
Auto
Man
Freq Offset
0 Hz