

Appendix A

RF Test Data for BT V4.2(BDR/EDR) (Conducted Measurement)

Product Name: Internet Radio

Trade Mark: N/A

Test Model: MA-200

Environmental Conditions

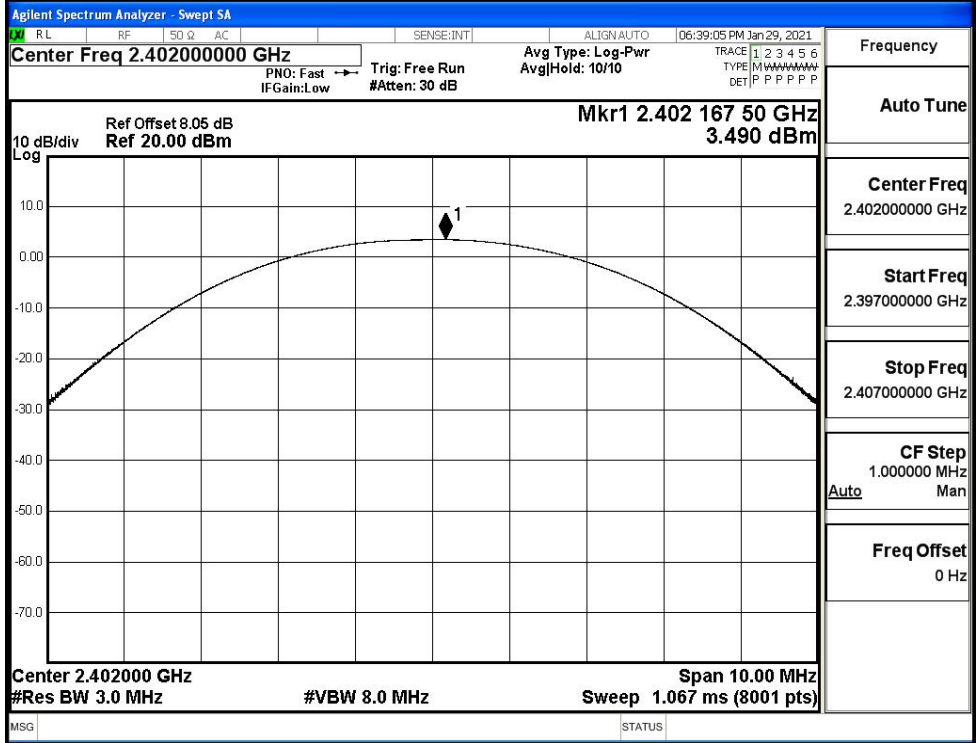
Temperature:	24.6° C
Relative Humidity:	54.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Jay Li
Supervised by:	Li Huan

A.1 Maximum Conducted Peak Output Power

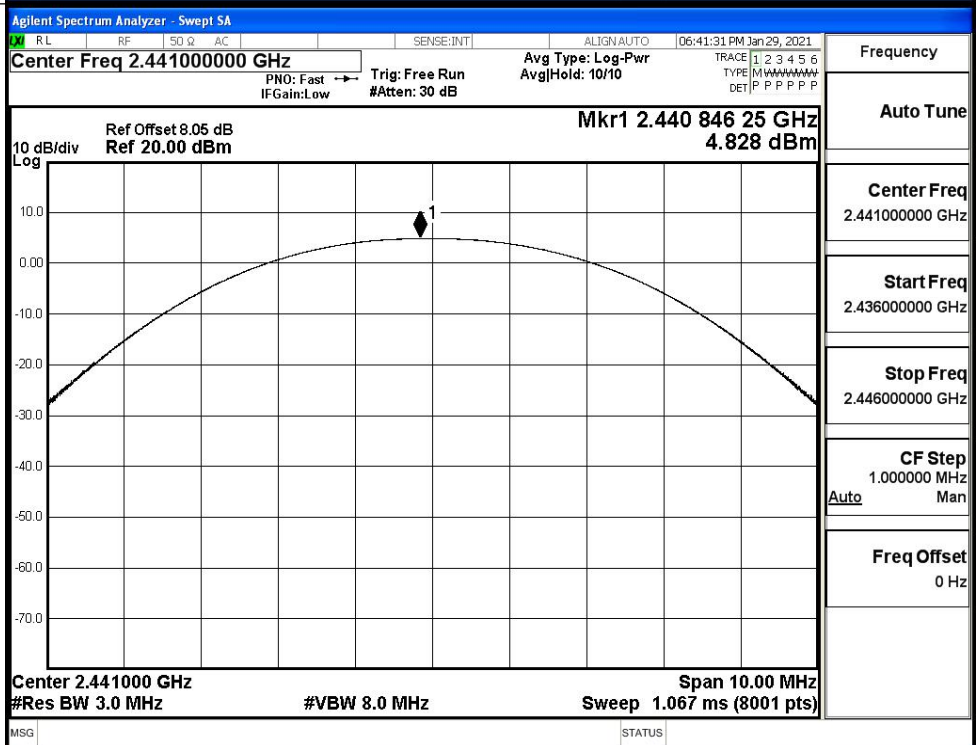
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	3.490	21	PASS
	MCH	4.828	21	PASS
	HCH	3.245	21	PASS
$\pi/4$ DQPSK	LCH	2.586	21	PASS
	MCH	3.961	21	PASS
	HCH	2.504	21	PASS
8DPSK	LCH	2.858	21	PASS
	MCH	4.242	21	PASS
	HCH	2.729	21	PASS

Test Graphs

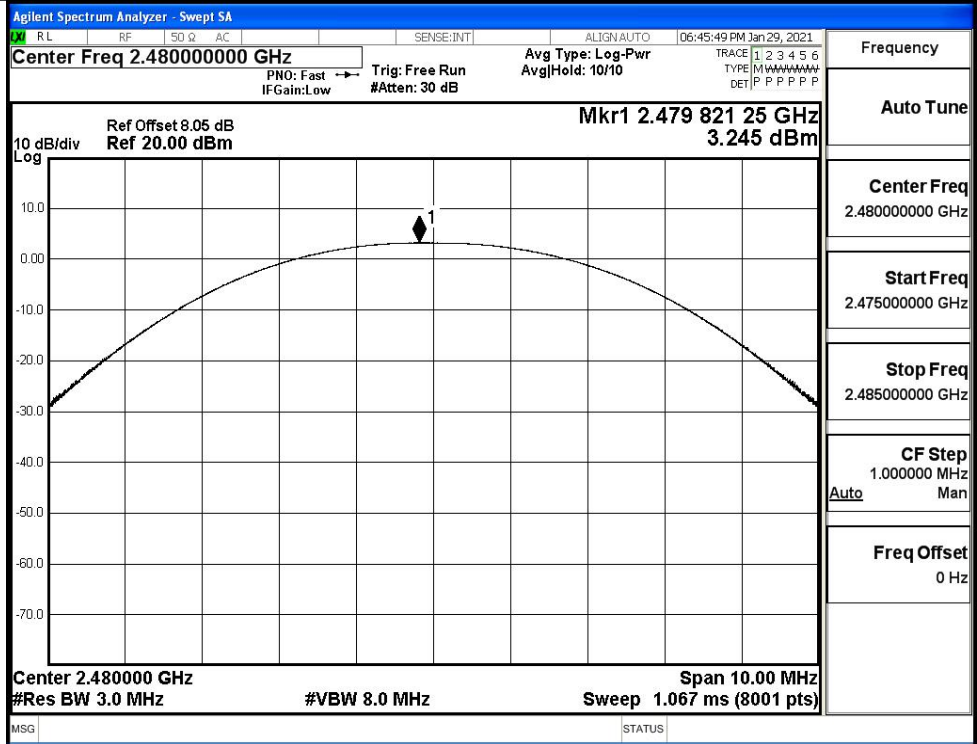
GFSK/LCH



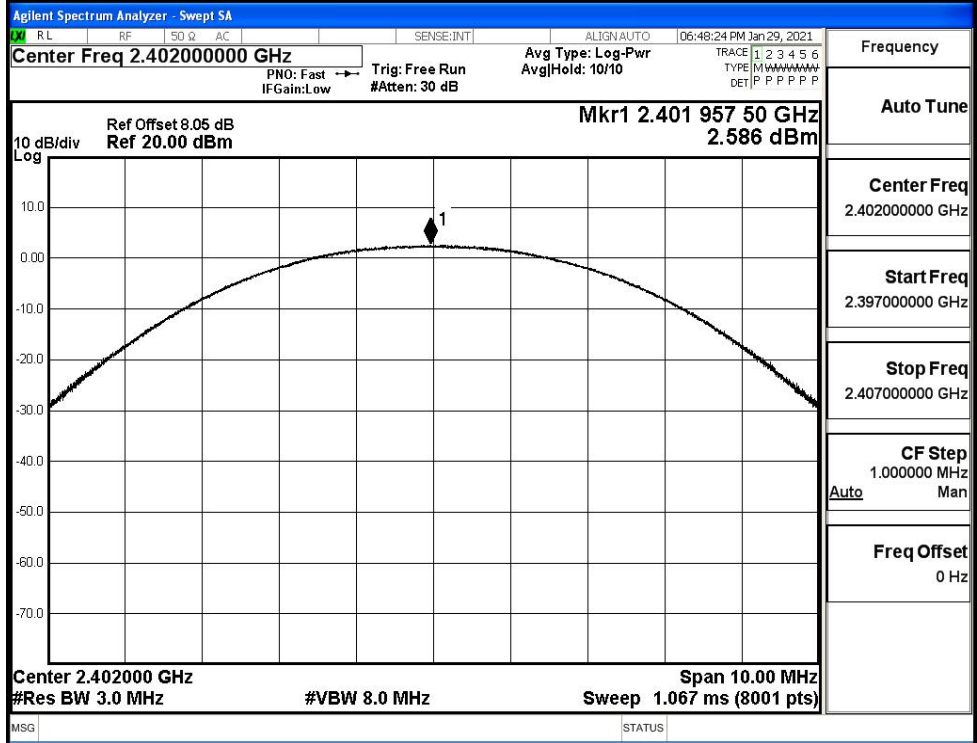
GFSK/MCH

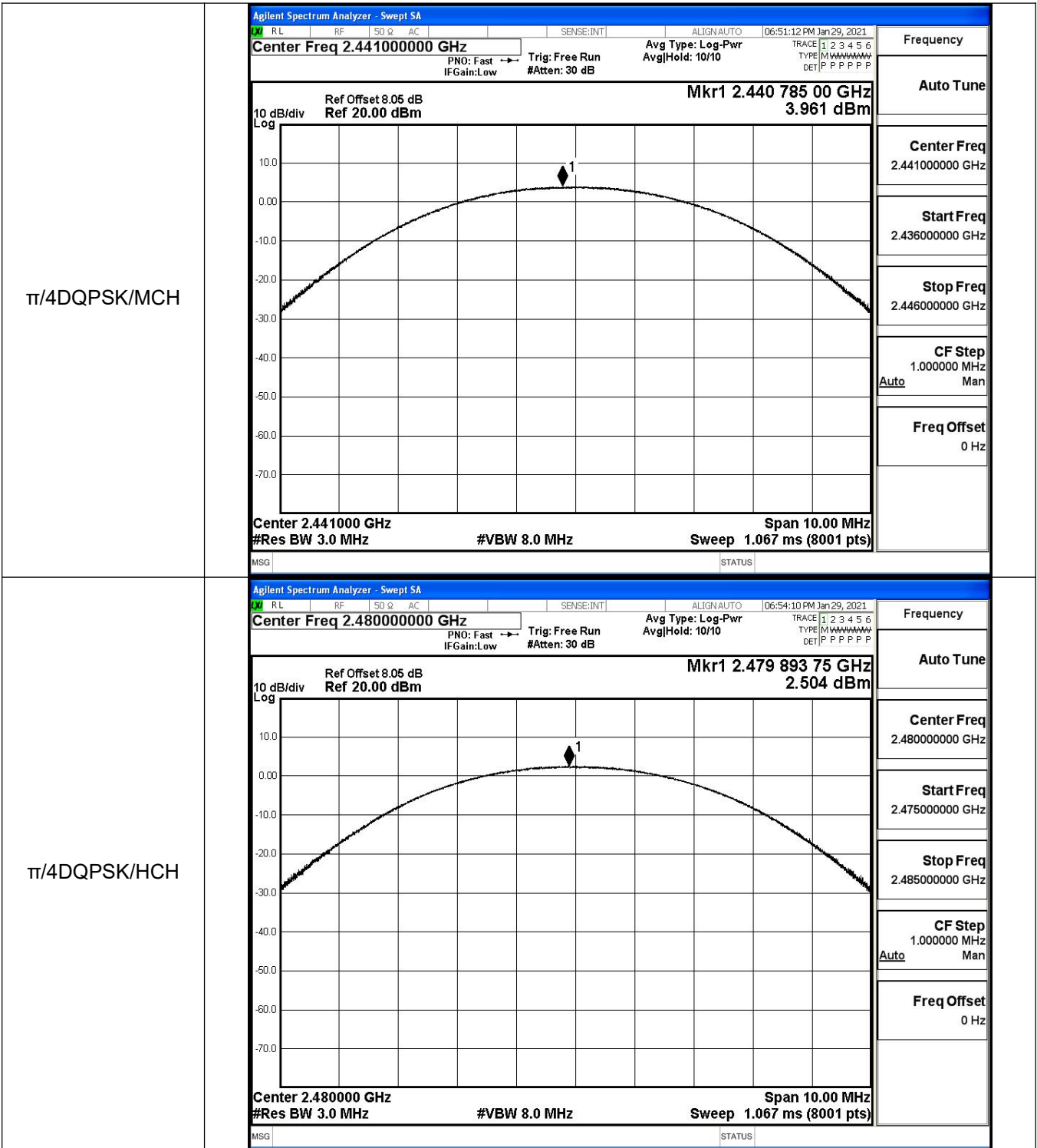


GFSK/HCH

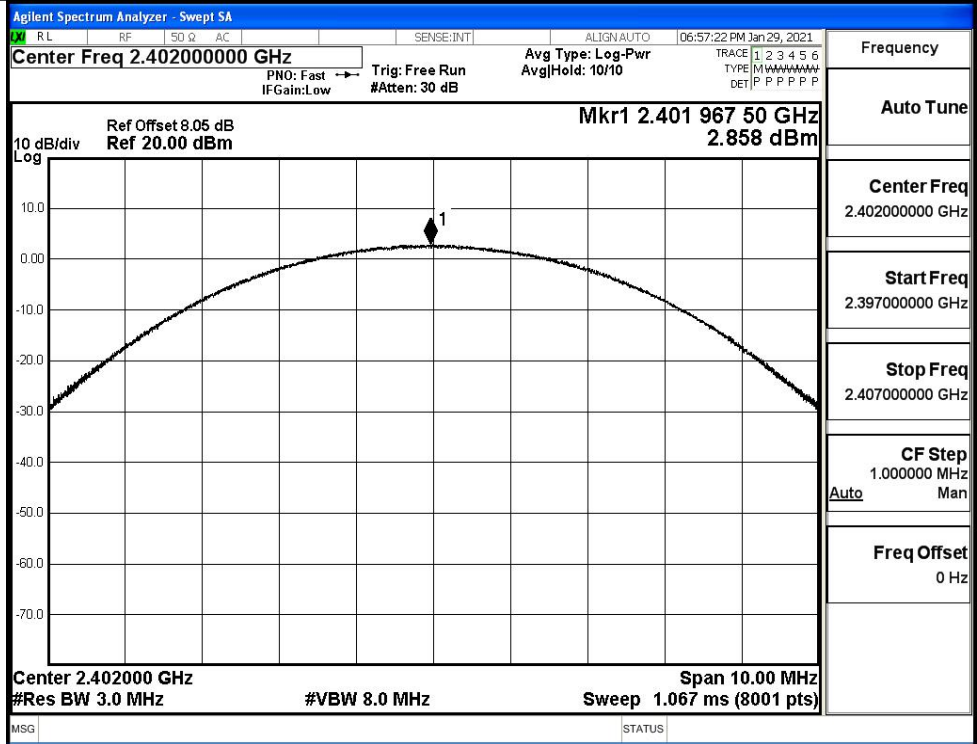


$\pi/4$ DQPSK/LCH

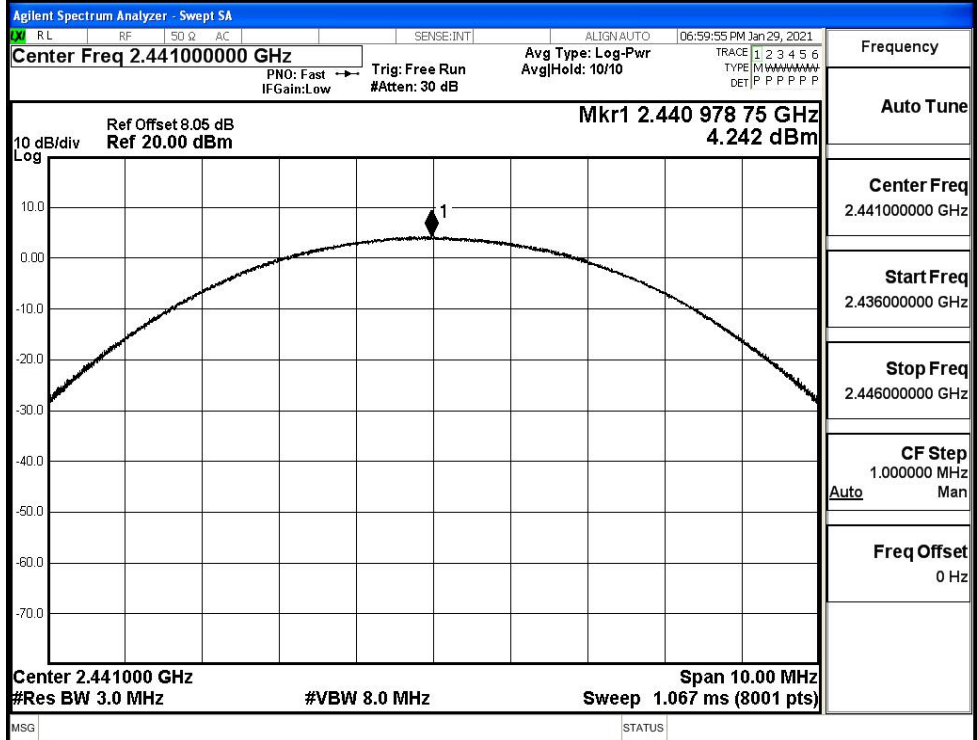




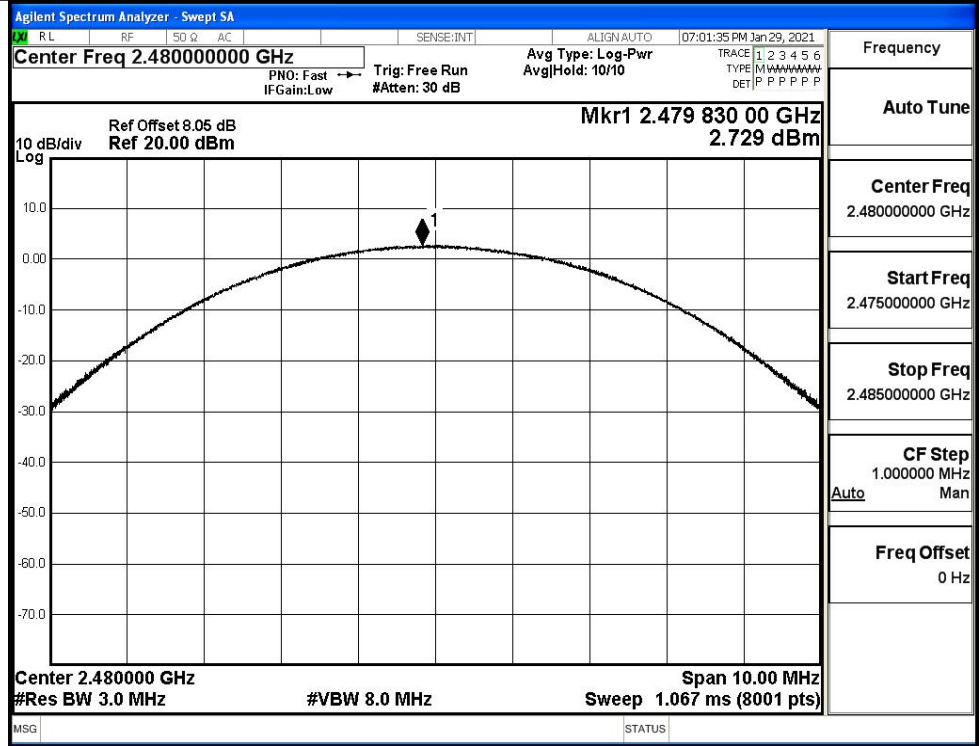
8DPSK/LCH



8DPSK/MCH

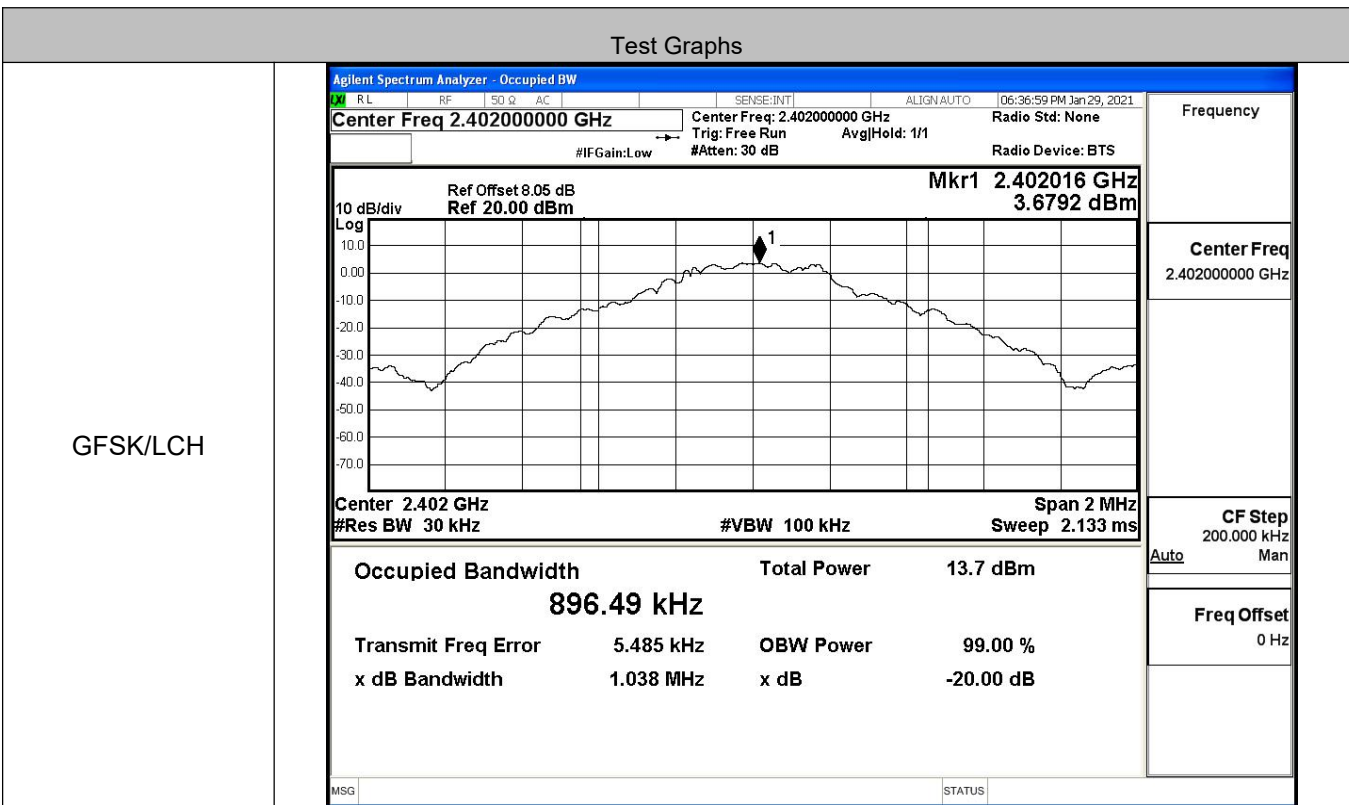


8DPSK/HCH

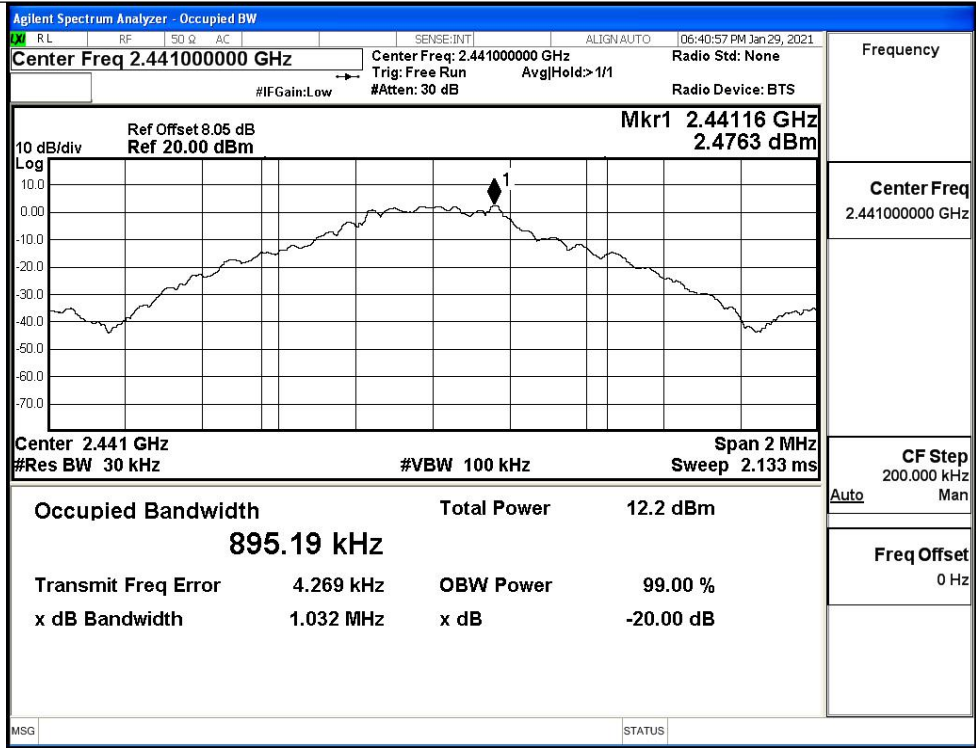


A.2 20dB Bandwidth

Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.038	Not Specified	PASS
	MCH	1.032	Not Specified	PASS
	HCH	1.035	Not Specified	PASS
π/4DQPSK	LCH	1.292	Not Specified	PASS
	MCH	1.296	Not Specified	PASS
	HCH	1.293	Not Specified	PASS
8DPSK	LCH	1.291	Not Specified	PASS
	MCH	1.290	Not Specified	PASS
	HCH	1.286	Not Specified	PASS

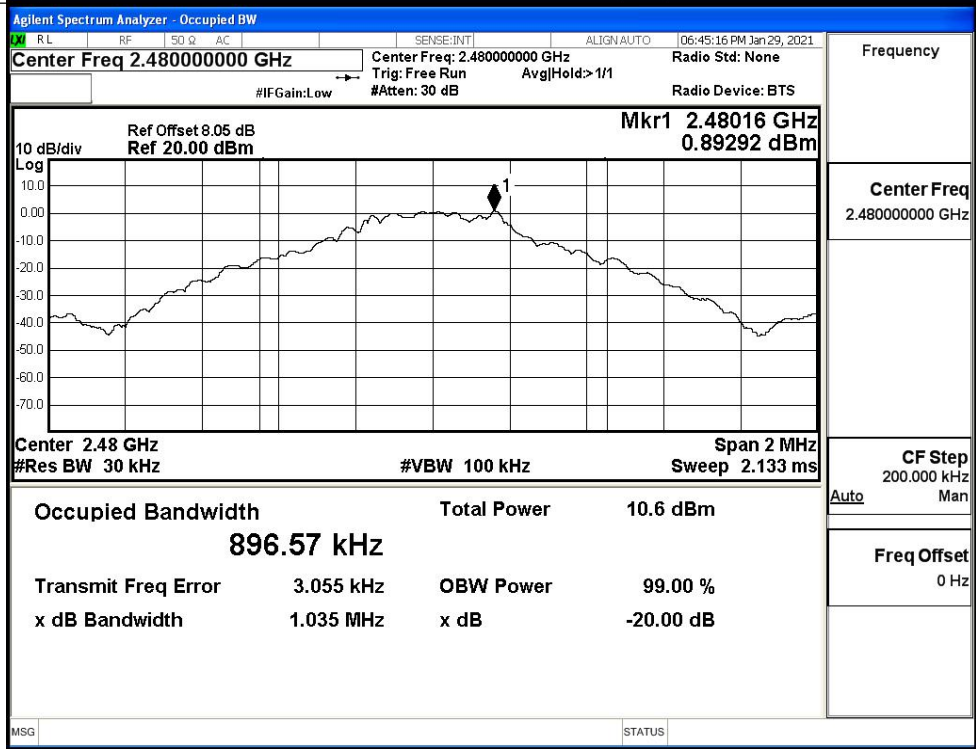


GFSK/MCH



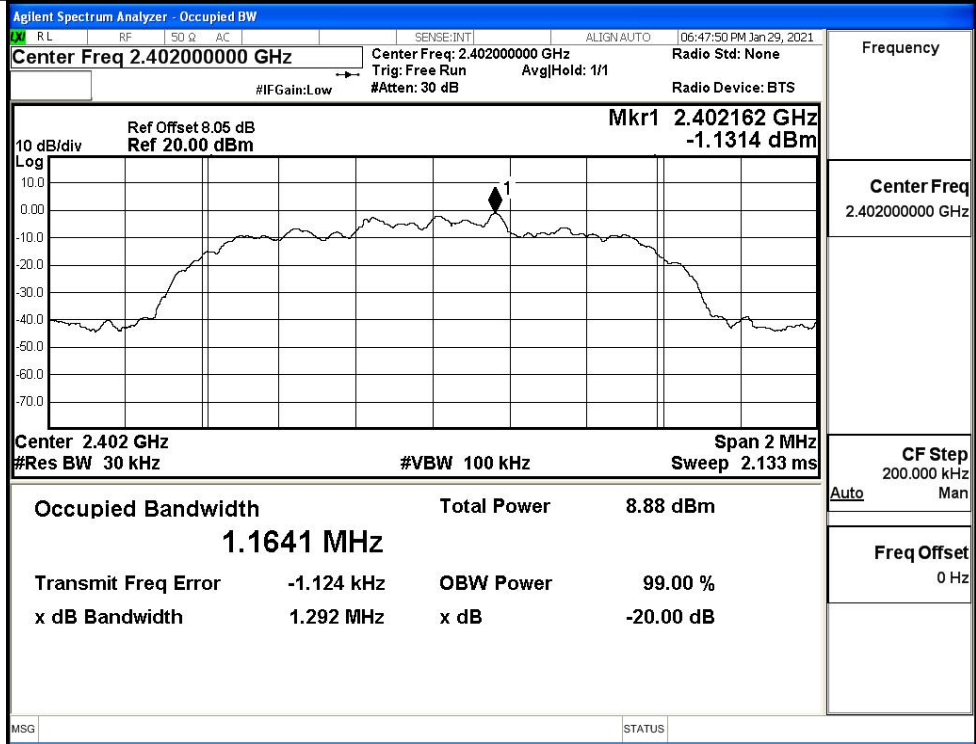
Frequency	2.44100000 GHz
Center Freq	2.44100000 GHz
CF Step	200.000 kHz
Auto	Man
Freq Offset	0 Hz

GFSK/HCH

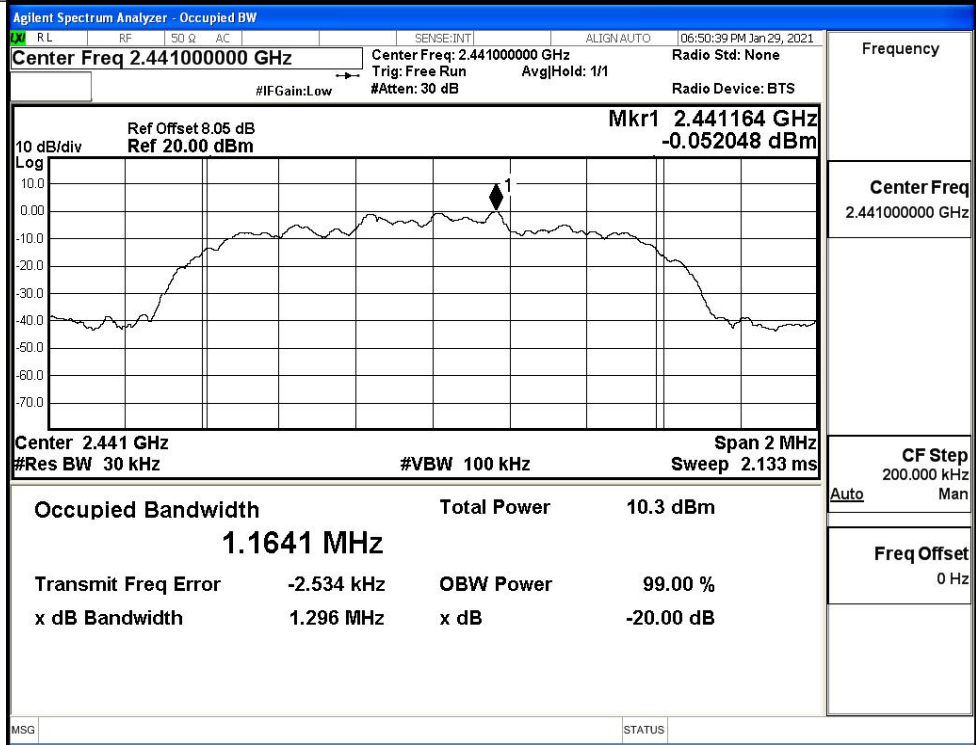


Frequency	2.48000000 GHz
Center Freq	2.48000000 GHz
CF Step	200.000 kHz
Auto	Man
Freq Offset	0 Hz

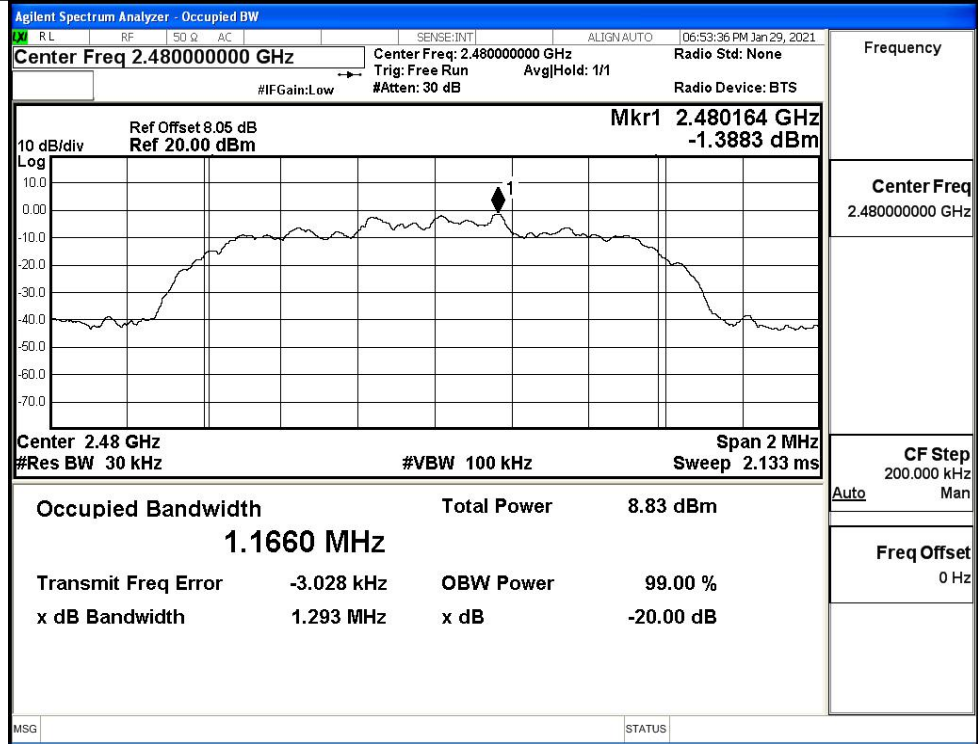
$\pi/4$ DQPSK/LCH



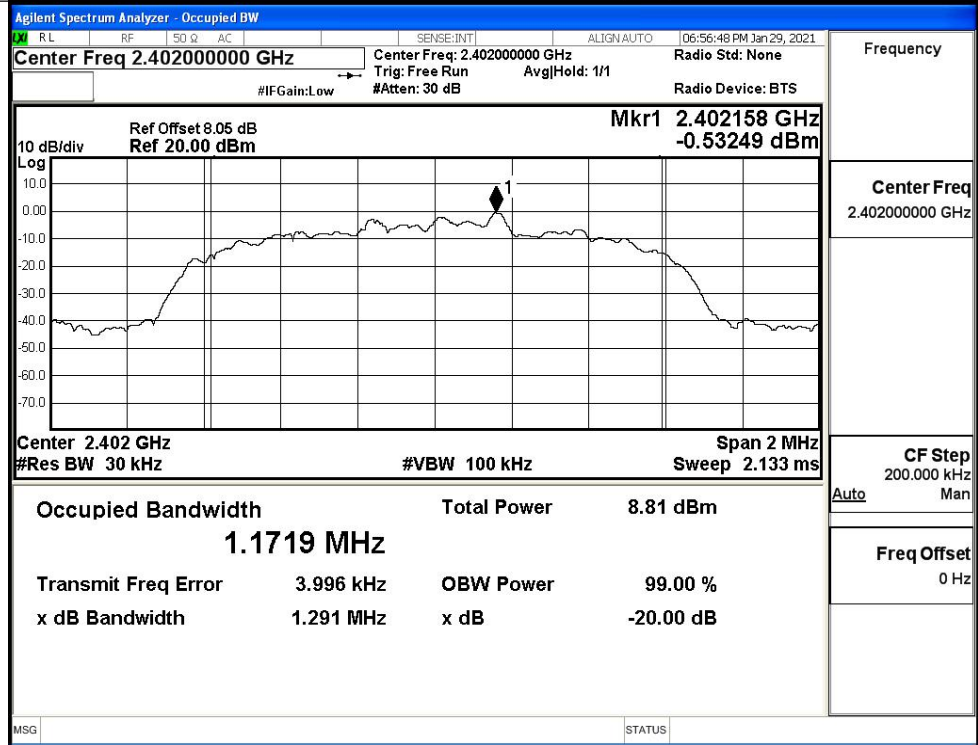
$\pi/4$ DQPSK/MCH



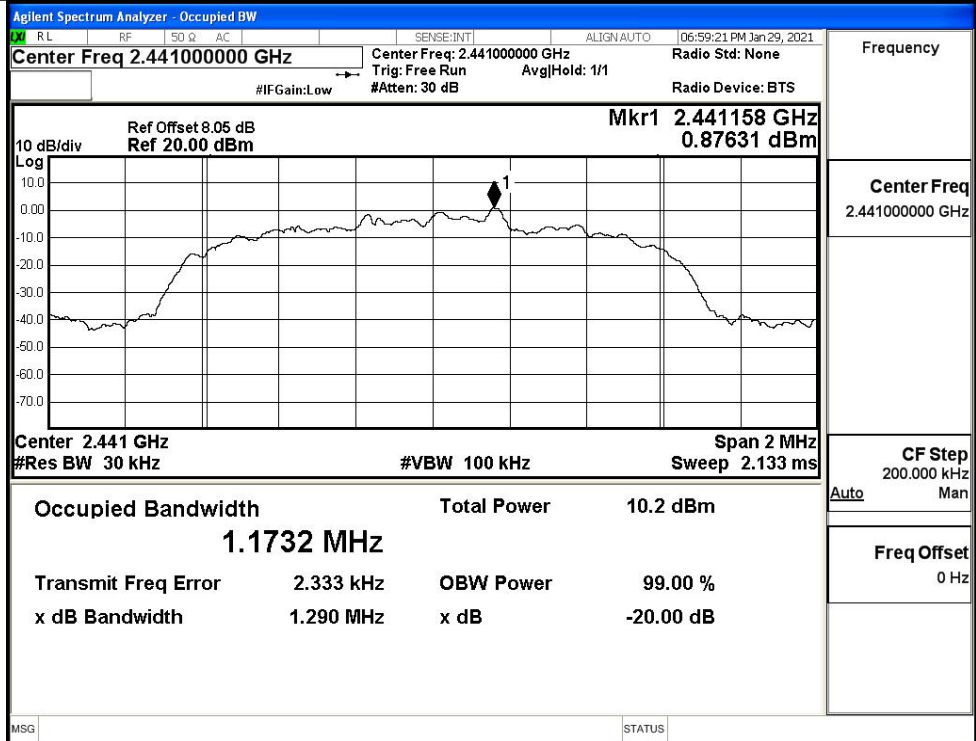
$\pi/4$ DQPSK/HCH



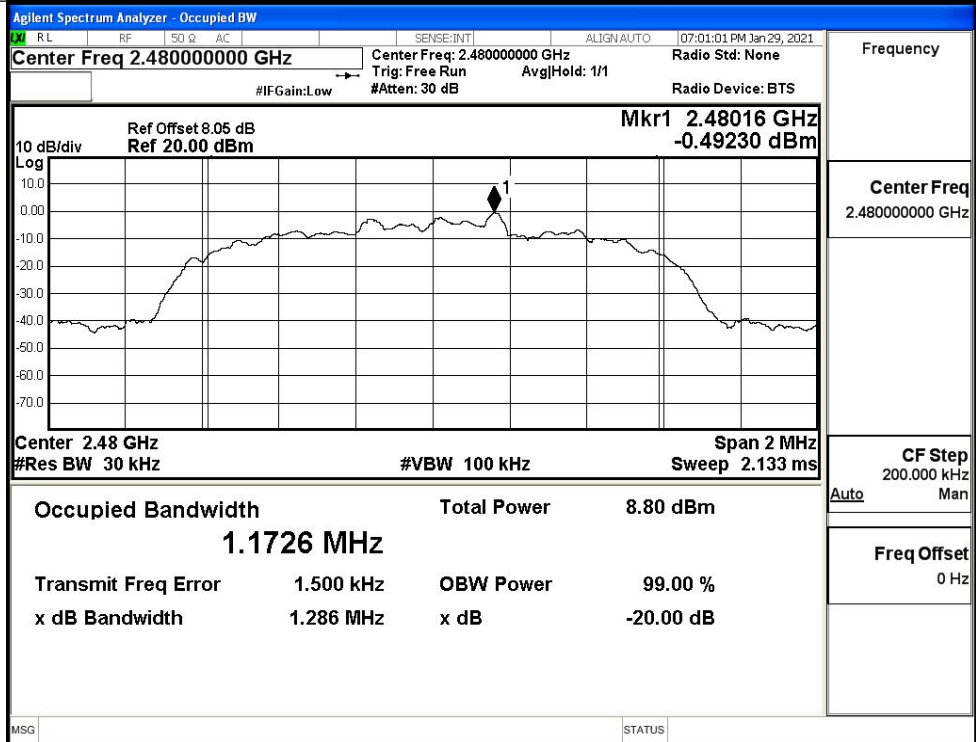
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH



A.3 Carrier Frequency Separation

Mode	Channel	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.052	0.692	PASS
	MCH	0.830	0.692	PASS
	HCH	1.024	0.692	PASS
π/4DQPSK	LCH	1.176	0.864	PASS
	MCH	1.018	0.864	PASS
	HCH	1.112	0.864	PASS
8DPSK	LCH	0.952	0.861	PASS
	MCH	1.210	0.861	PASS
	HCH	1.120	0.861	PASS

Test Graphs

GFSK/LCH

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.402500000 GHz

Ref Offset 8.05 dB
Ref 20.00 dBm

ΔMkr1 1.051 50 MHz
0.199 dB

Start 2.401500 GHz
#Res BW 100 kHz

Stop 2.403500 GHz
#VBW 300 kHz
Sweep 1.067 ms (8001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	Δ2	f	(Δ)	1.051 50 MHz (Δ)	0.199 dB			
2	F	f		2.401 997 50 GHz	2.563 dBm			
3								
4								
5								
6								
7								
8								
9								
10								
11								

Frequency

Auto Tune

Center Freq
2.402500000 GHz

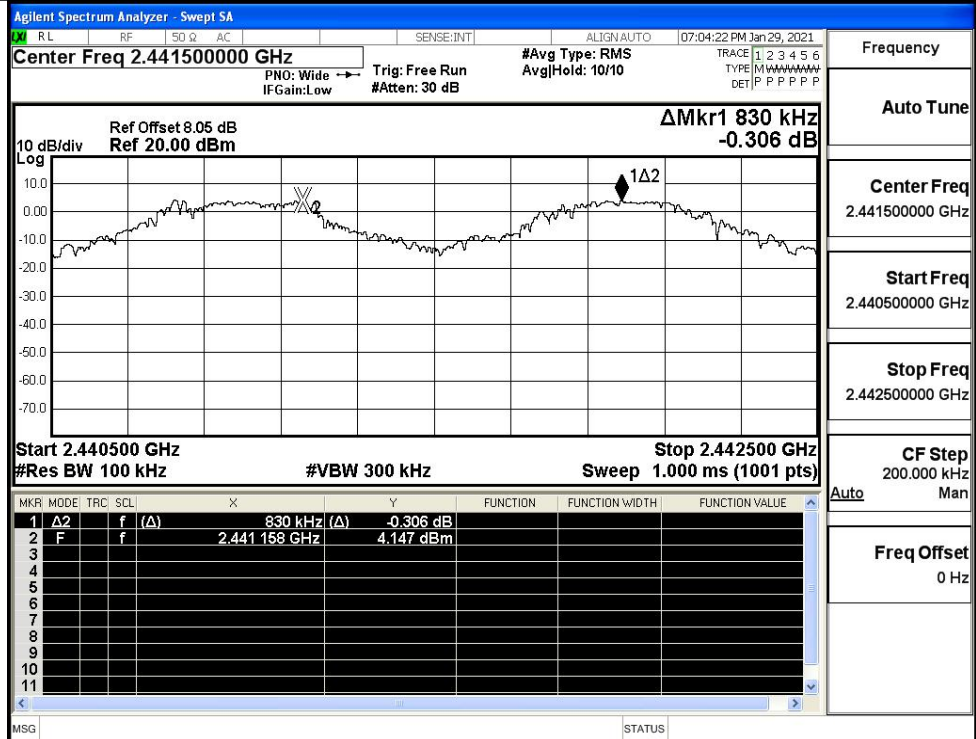
Start Freq
2.401500000 GHz

Stop Freq
2.403500000 GHz

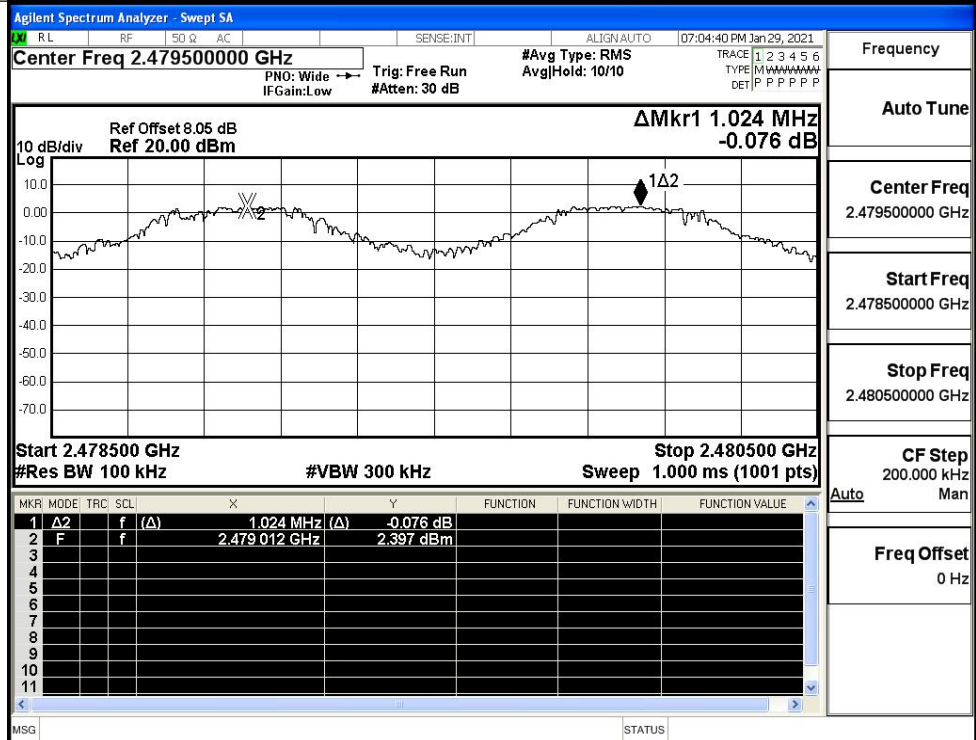
CF Step
200.000 kHz
Auto Man

Freq Offset
0 Hz

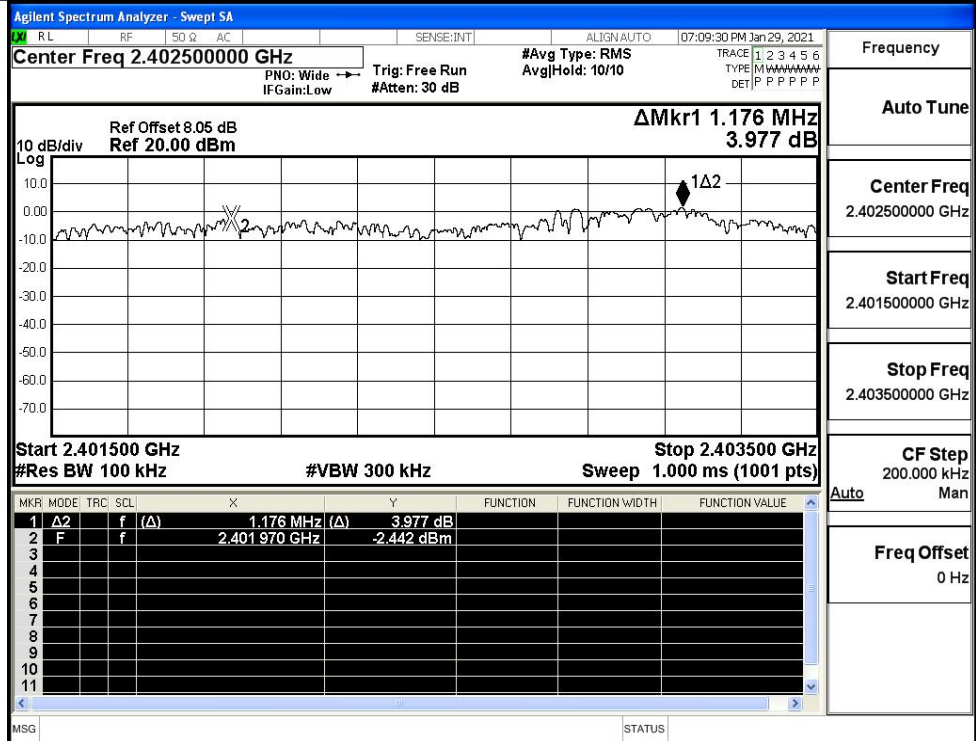
GFSK/MCH



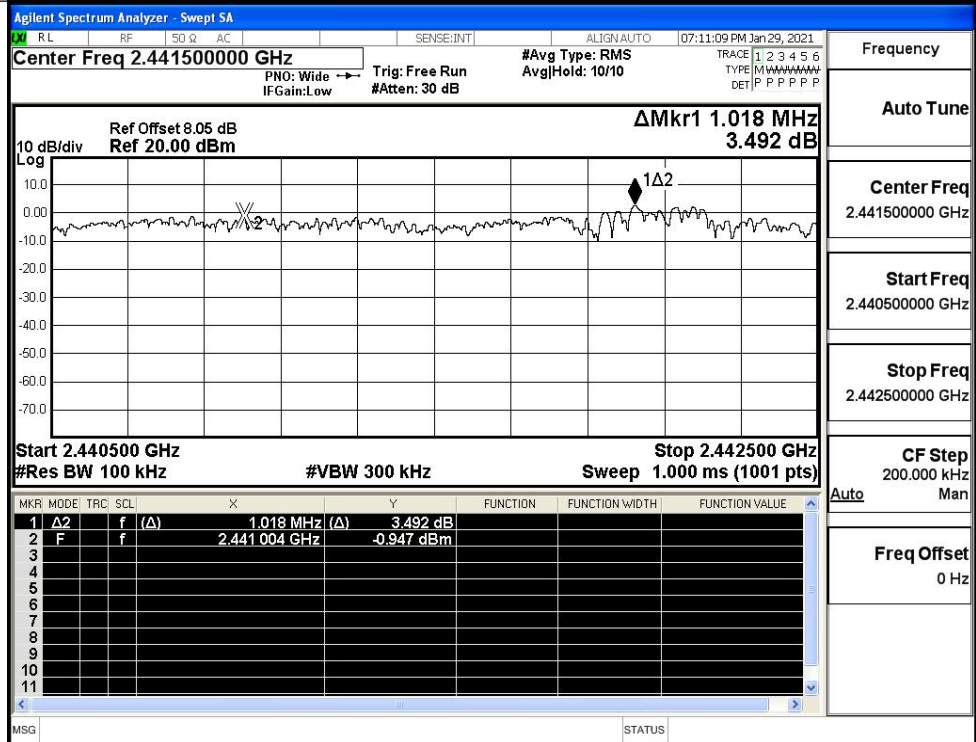
GFSK/HCH



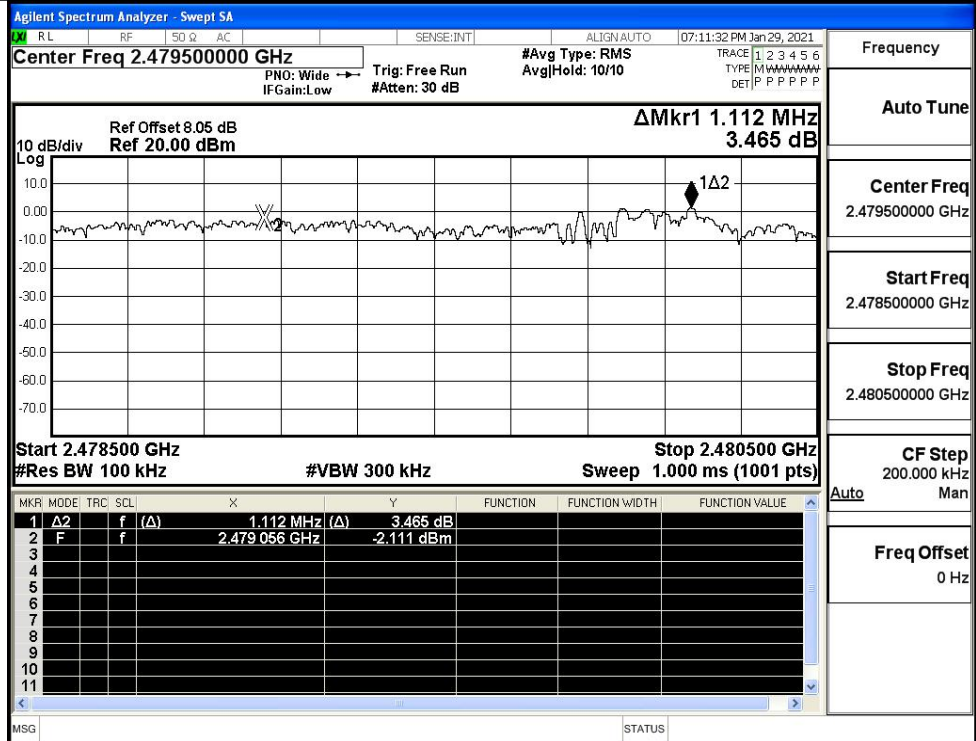
$\pi/4$ DQPSK/LCH



$\pi/4$ DQPSK/MCH

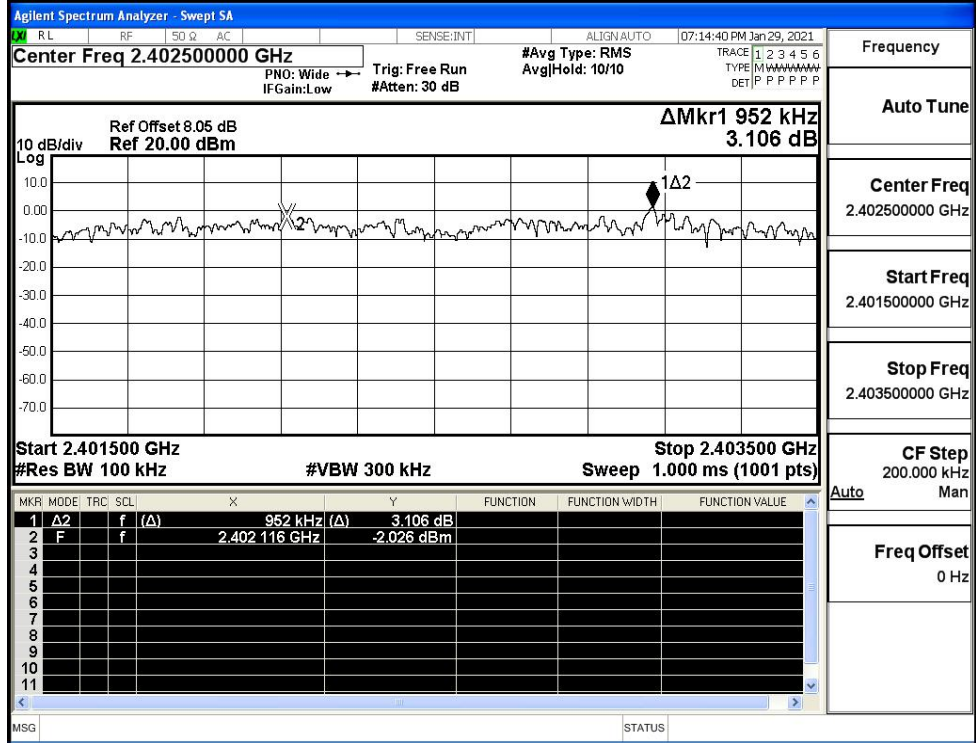


π/4DQPSK/HCH



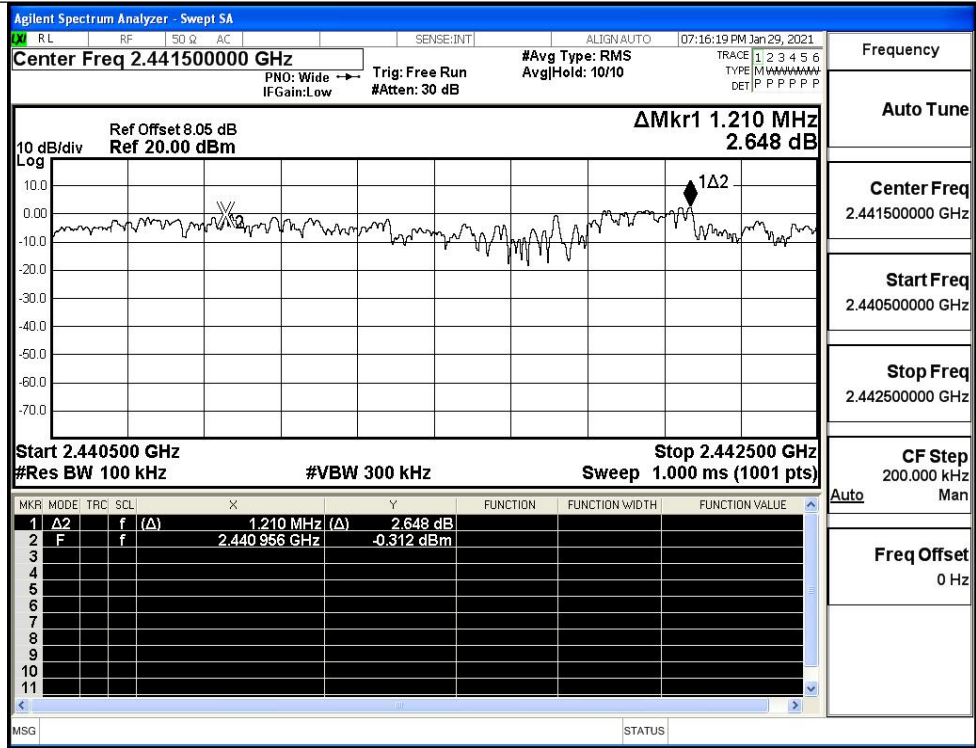
Frequency	2.479500000 GHz
Auto Tune	
Center Freq	2.479500000 GHz
Start Freq	2.478500000 GHz
Stop Freq	2.480500000 GHz
CF Step	200.000 kHz
Auto	Man
Freq Offset	0 Hz

8DPSK/LCH

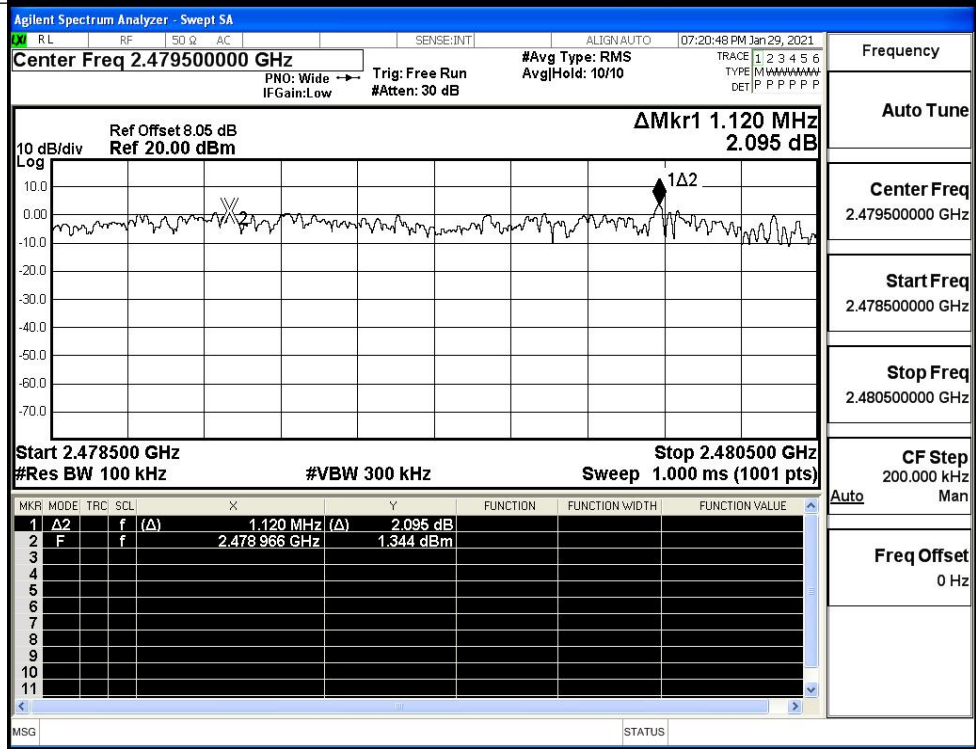


Frequency	2.402500000 GHz
Auto Tune	
Center Freq	2.402500000 GHz
Start Freq	2.401500000 GHz
Stop Freq	2.403500000 GHz
CF Step	200.000 kHz
Auto	Man
Freq Offset	0 Hz

8DPSK/MCH



8DPSK/HCH



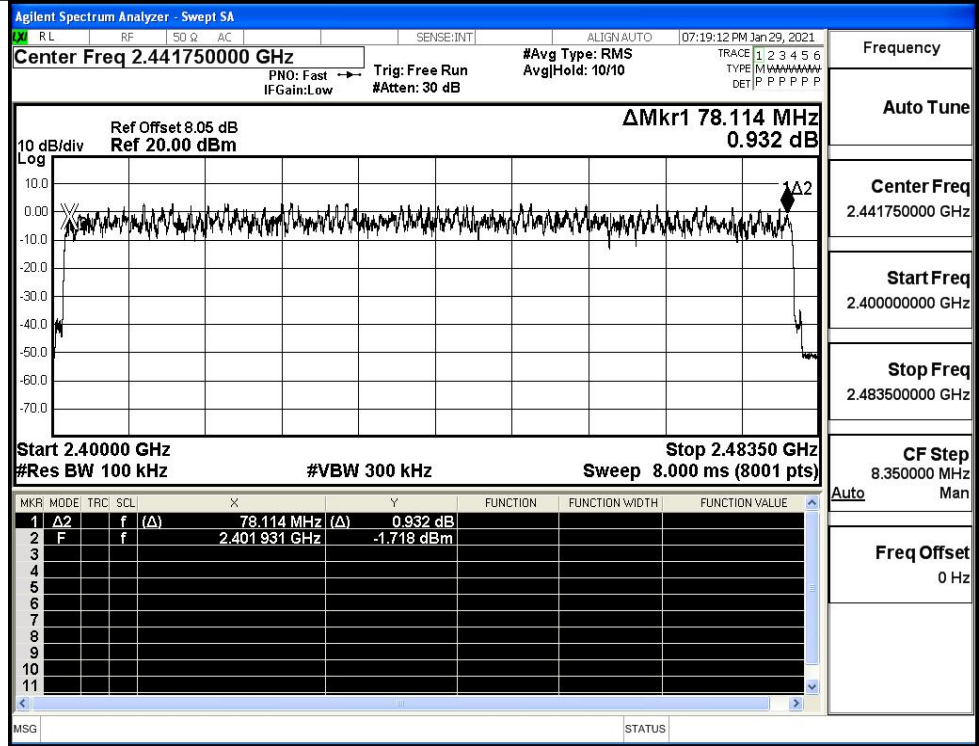
A.4 Hopping Channel Number

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

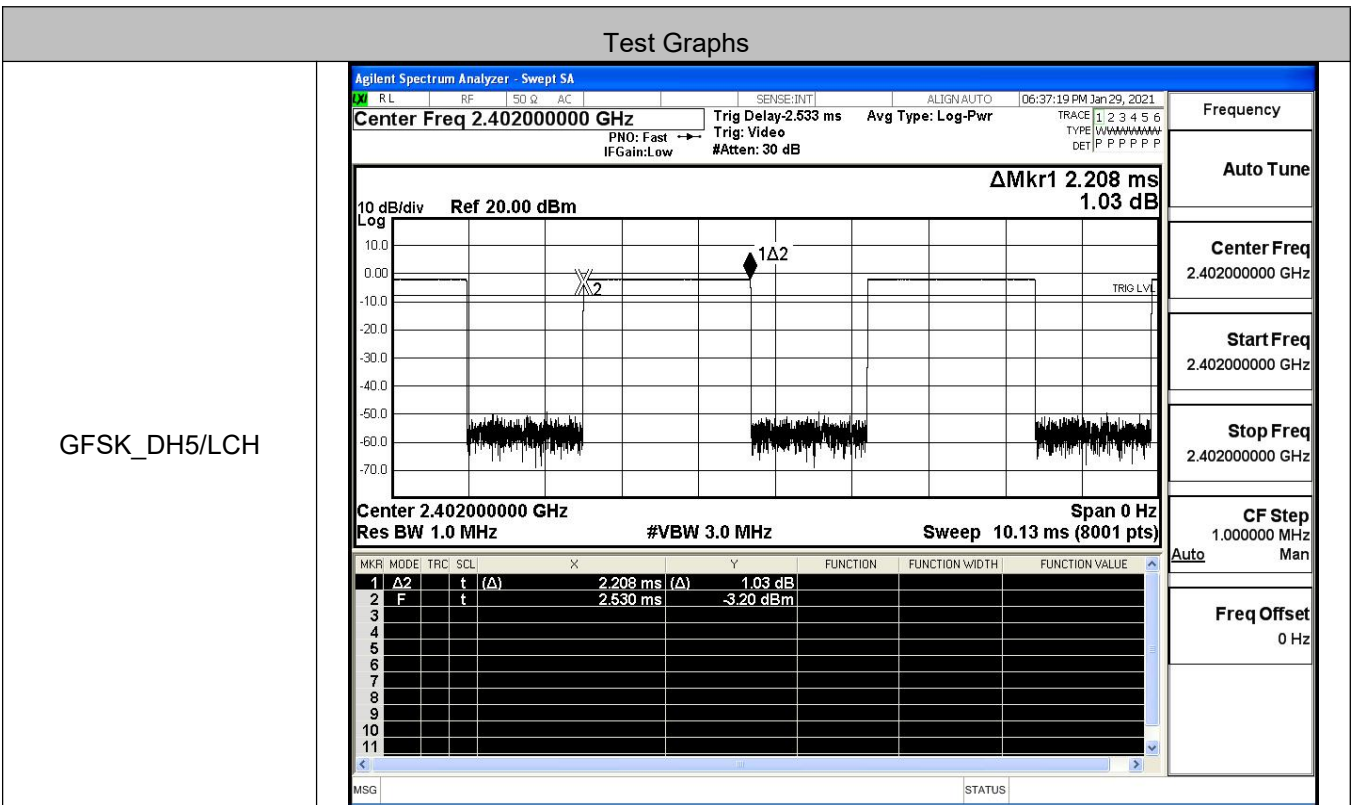
<p>GFSK/Hop</p>	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.441750000 GHz</p> <p>Ref Offset 8.05 dB Ref 20.00 dBm</p> <p>ΔMkr1 77.874 MHz -0.203 dB</p> <p>Start 2.40000 GHz #Res BW 100 kHz</p> <p>Stop 2.48350 GHz #VBW 300 kHz Sweep 8.000 ms (8001 pts)</p> <table border="1"> <thead> <tr> <th>MKR</th> <th>MODE</th> <th>TRC</th> <th>SCL</th> <th>X</th> <th>Y</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Δ2</td> <td>f</td> <td>(Δ)</td> <td>77.874 MHz (Δ)</td> <td>-0.203 dB</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>F</td> <td>f</td> <td>(Δ)</td> <td>2.402004 GHz</td> <td>2.945 dBm</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	Δ 2	f	(Δ)	77.874 MHz (Δ)	-0.203 dB				2	F	f	(Δ)	2.402004 GHz	2.945 dBm				<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.441750000 GHz</p> <p>Start Freq 2.400000000 GHz</p> <p>Stop Freq 2.483500000 GHz</p> <p>CF Step 8.350000 MHz Man</p> <p>Freq Offset 0 Hz</p>
MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																					
1	Δ 2	f	(Δ)	77.874 MHz (Δ)	-0.203 dB																								
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<p>$\pi/4$DQPSK/Hop</p>	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.441750000 GHz</p> <p>Ref Offset 8.05 dB Ref 20.00 dBm</p> <p>ΔMkr1 78.010 MHz 0.019 dB</p> <p>Start 2.40000 GHz #Res BW 100 kHz</p> <p>Stop 2.48350 GHz #VBW 300 kHz Sweep 8.000 ms (8001 pts)</p> <table border="1"> <thead> <tr> <th>MKR</th> <th>MODE</th> <th>TRC</th> <th>SCL</th> <th>X</th> <th>Y</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Δ2</td> <td>f</td> <td>(Δ)</td> <td>78.010 MHz (Δ)</td> <td>0.019 dB</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>F</td> <td>f</td> <td>(Δ)</td> <td>2.401952 GHz</td> <td>-2.300 dBm</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	Δ 2	f	(Δ)	78.010 MHz (Δ)	0.019 dB				2	F	f	(Δ)	2.401952 GHz	-2.300 dBm				<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.441750000 GHz</p> <p>Start Freq 2.400000000 GHz</p> <p>Stop Freq 2.483500000 GHz</p> <p>CF Step 8.350000 MHz Man</p> <p>Freq Offset 0 Hz</p>
MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																					
1	Δ 2	f	(Δ)	78.010 MHz (Δ)	0.019 dB																								
2	F	f	(Δ)	2.401952 GHz	-2.300 dBm																								

8DPSK/Hop

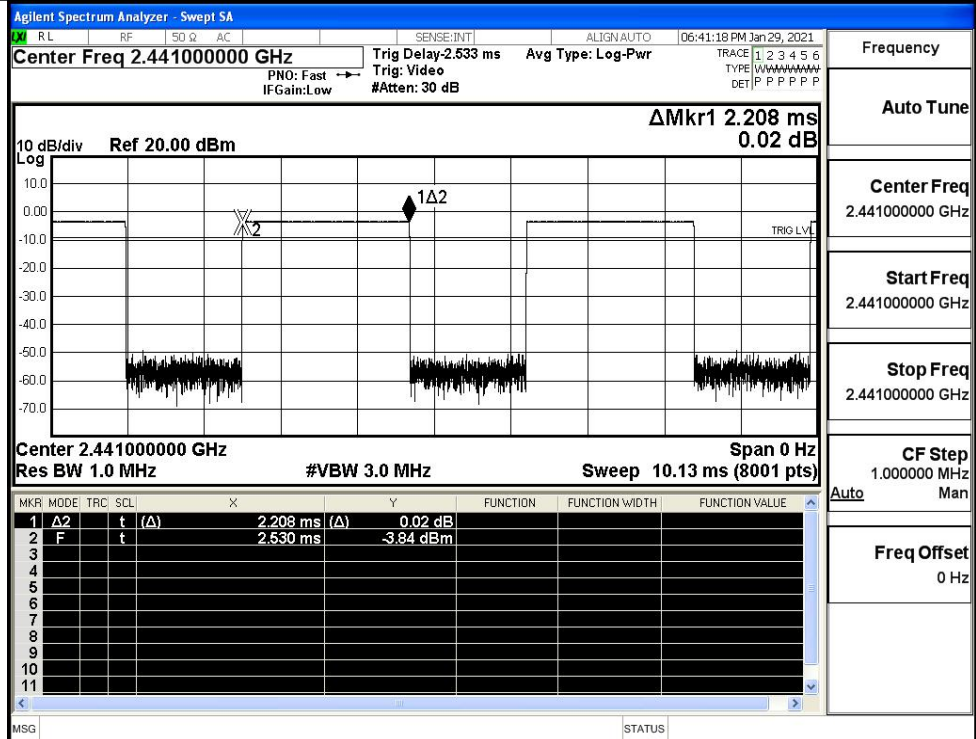


A.5 Dwell Time

Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.21	106.7	0.236	0.4	PASS
	DH5	MCH	2.21	106.7	0.236	0.4	PASS
	DH5	HCH	2.21	106.7	0.236	0.4	PASS
$\pi/4$ DQPSK	2DH5	LCH	1.19	106.7	0.127	0.4	PASS
	2DH5	MCH	1.19	106.7	0.127	0.4	PASS
	2DH5	HCH	1.19	106.7	0.127	0.4	PASS
8DPSK	3DH5	LCH	0.84	106.7	0.09	0.4	PASS
	3DH5	MCH	0.84	106.7	0.09	0.4	PASS
	3DH5	HCH	0.84	106.7	0.09	0.4	PASS

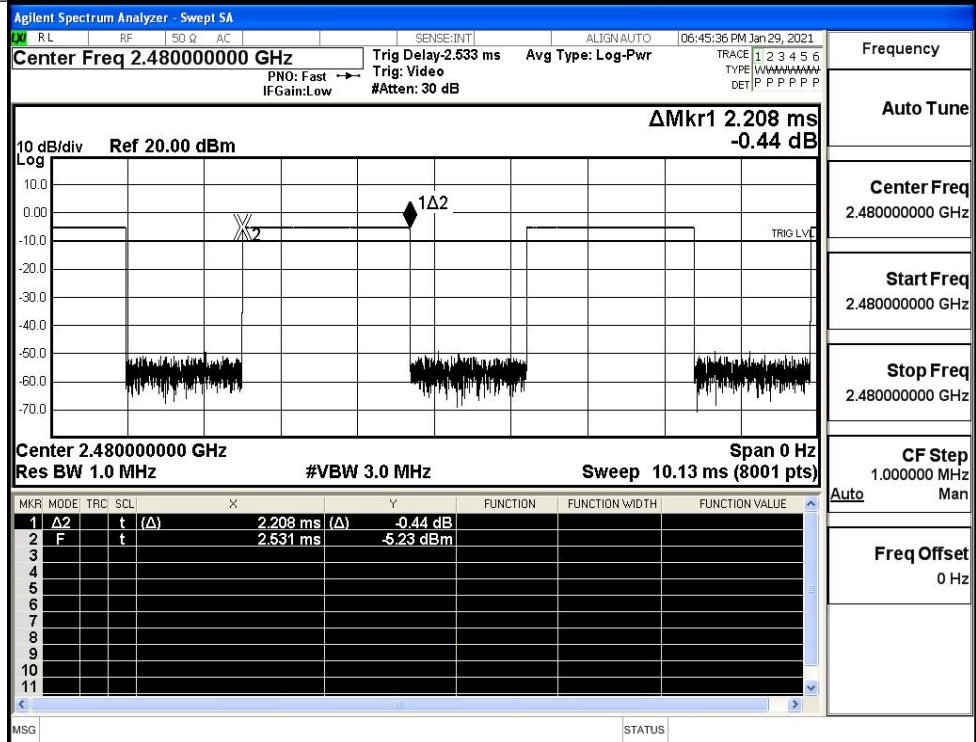


GFSK_DH5/MCH



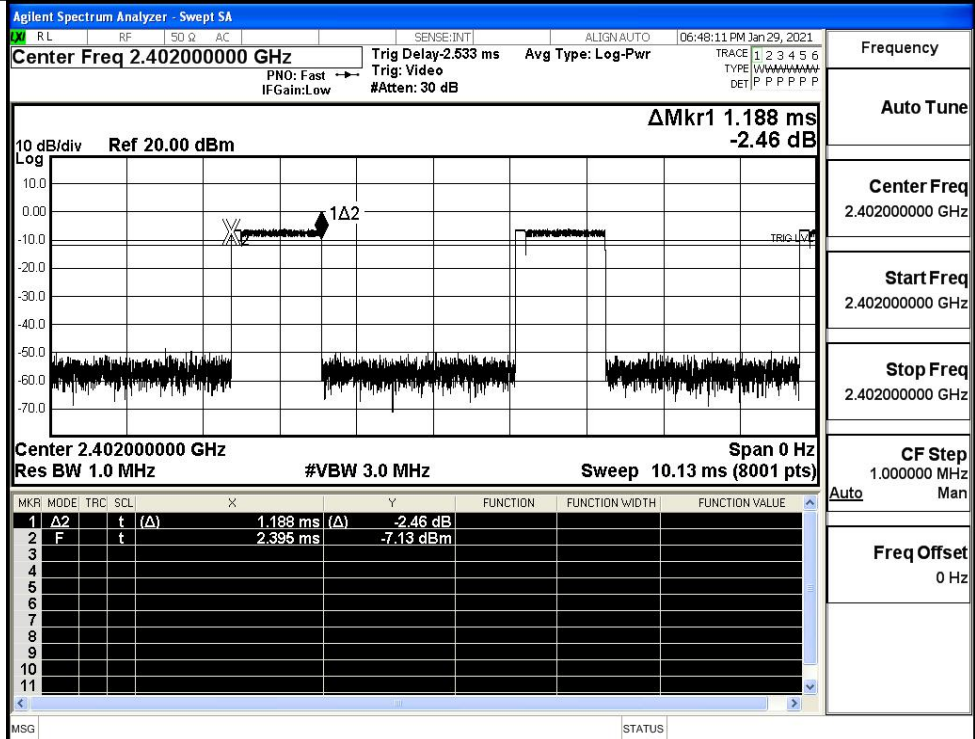
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Auto Tune	
Center Freq	2.441000000 GHz
Start Freq	2.441000000 GHz
Stop Freq	2.441000000 GHz
CF Step	1.000000 MHz
Auto	Man
Freq Offset	0 Hz

GFSK_DH5/HCH

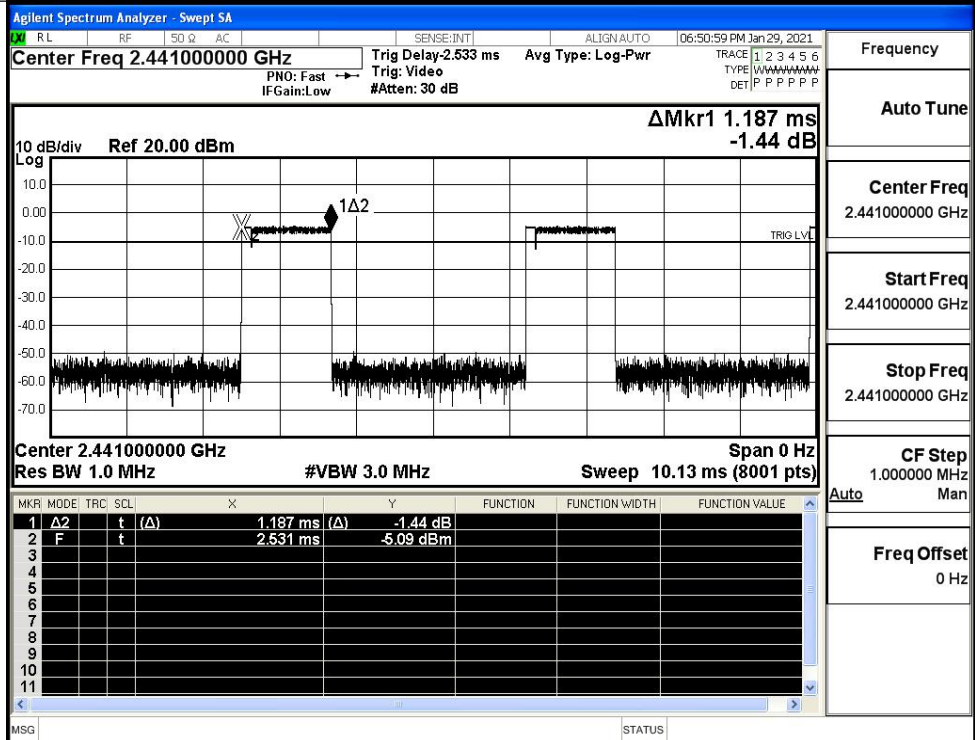


Frequency	2.480000000 GHz
Auto Tune	
Center Freq	2.480000000 GHz
Start Freq	2.480000000 GHz
Stop Freq	2.480000000 GHz
CF Step	1.000000 MHz
Auto	Man
Freq Offset	0 Hz

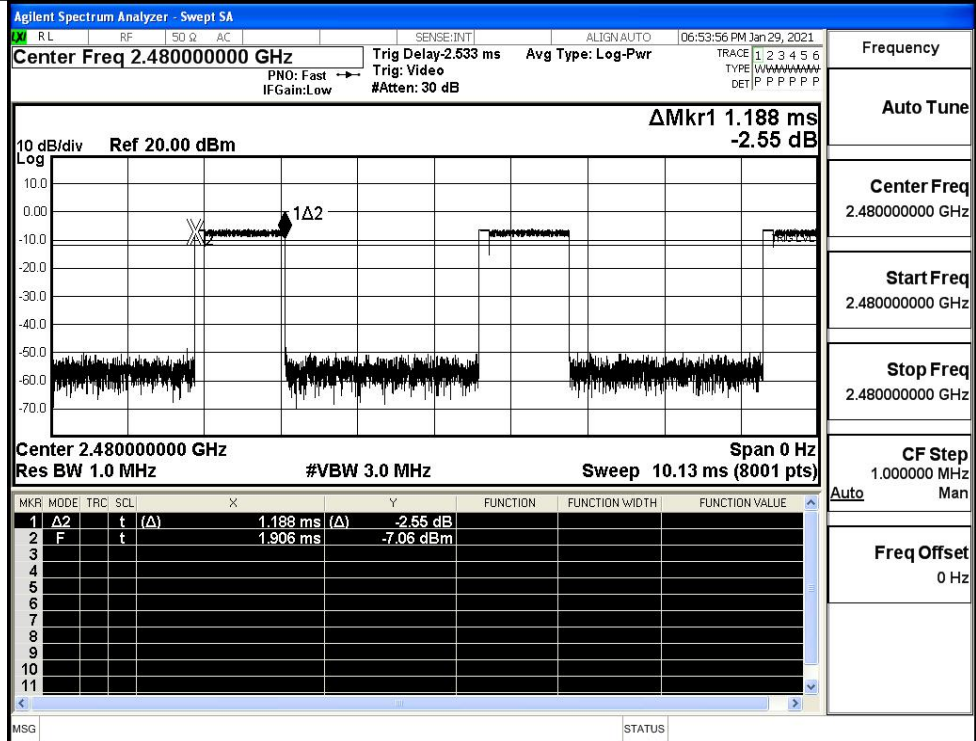
$\pi/4$ DQPSK
_2DH5/LCH



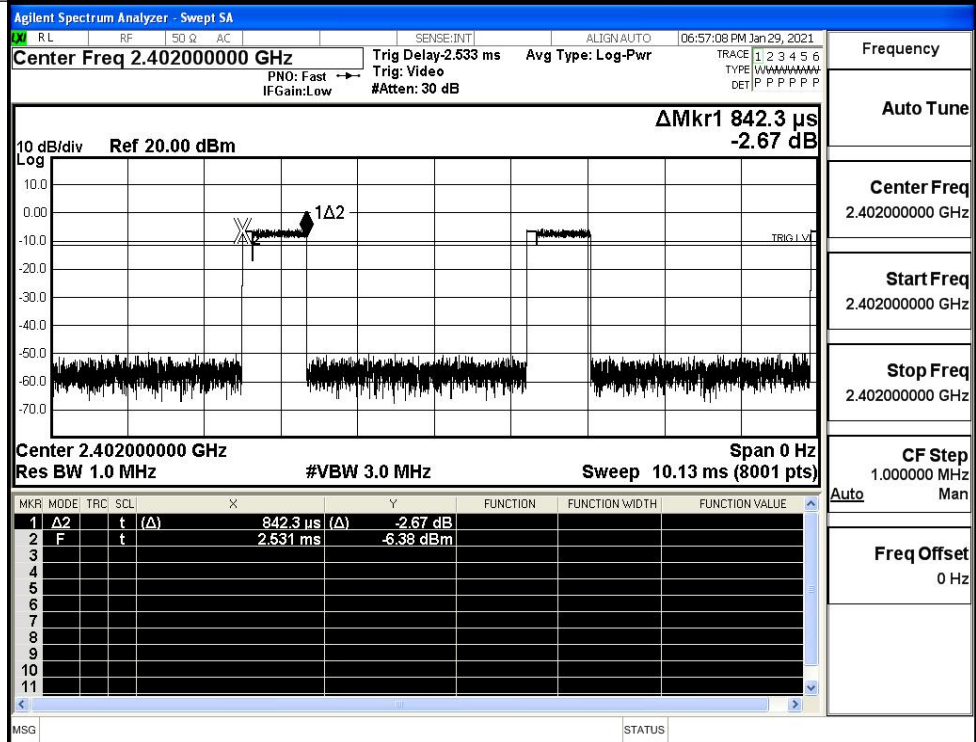
$\pi/4$ DQPSK
_2DH5/MCH



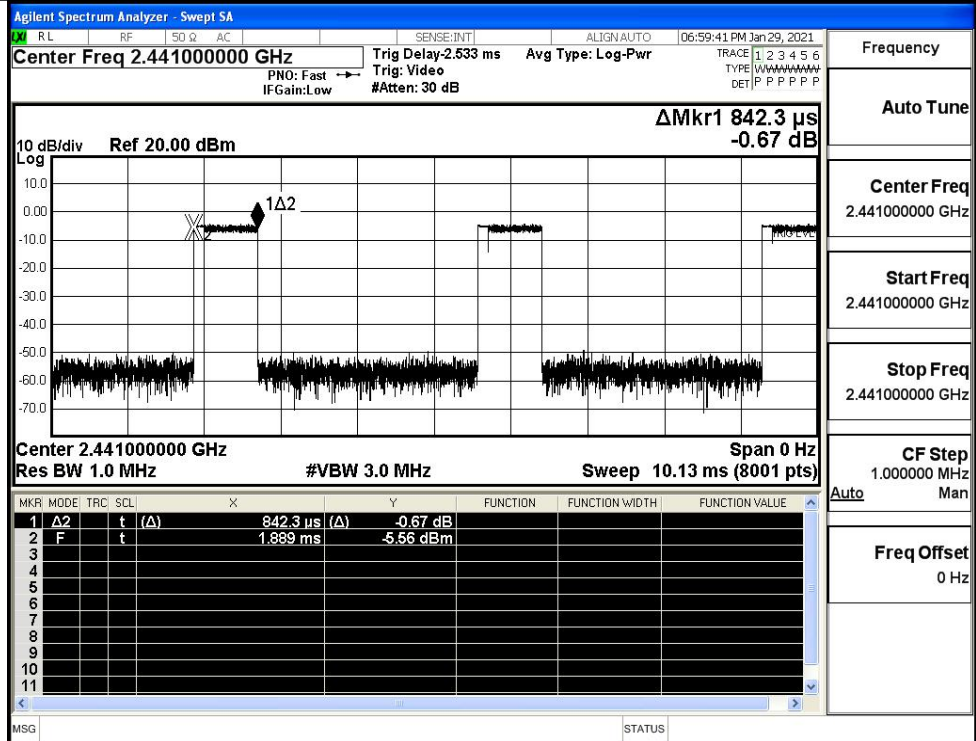
π /4DQPSK
_2DH5/HCH



8DPSK_3DH5/LCH



8DPSK_3DH5/MCH



8DPSK_3DH5/HCH

