

Appendix A

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

Product Name: EcoExtreme2

Trade Mark: ECOXGEAR

Test Model: GDI-EX3W210

Environmental Conditions

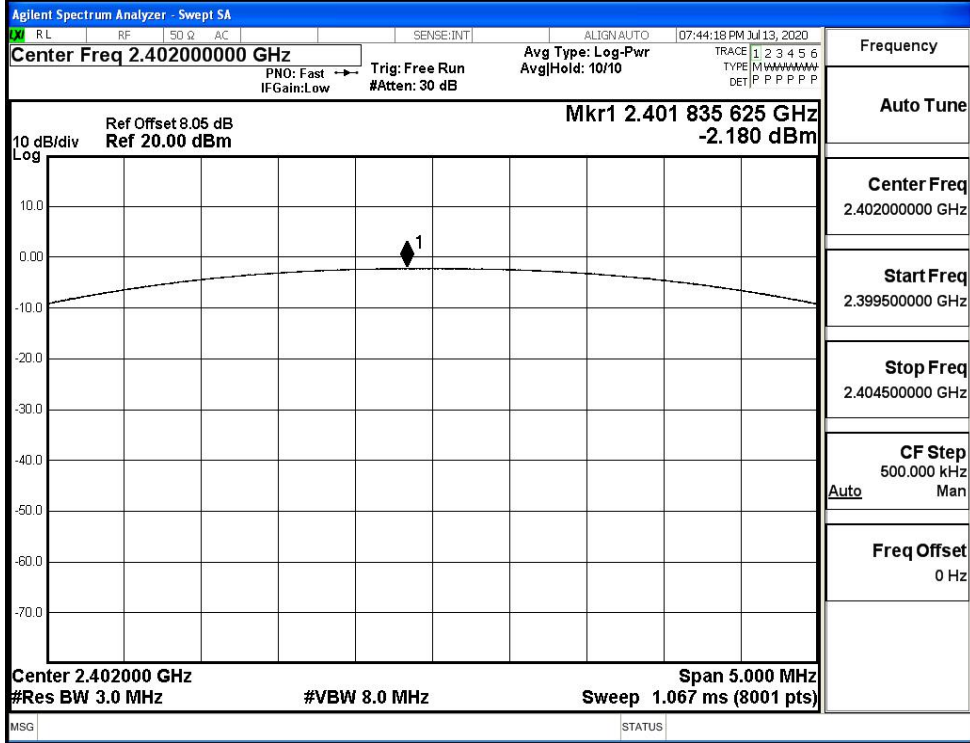
Temperature:	24.6° C
Relative Humidity:	54.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Qu Xin
Supervised by:	Li Huan

A.1 Maximum Conducted Peak Output Power

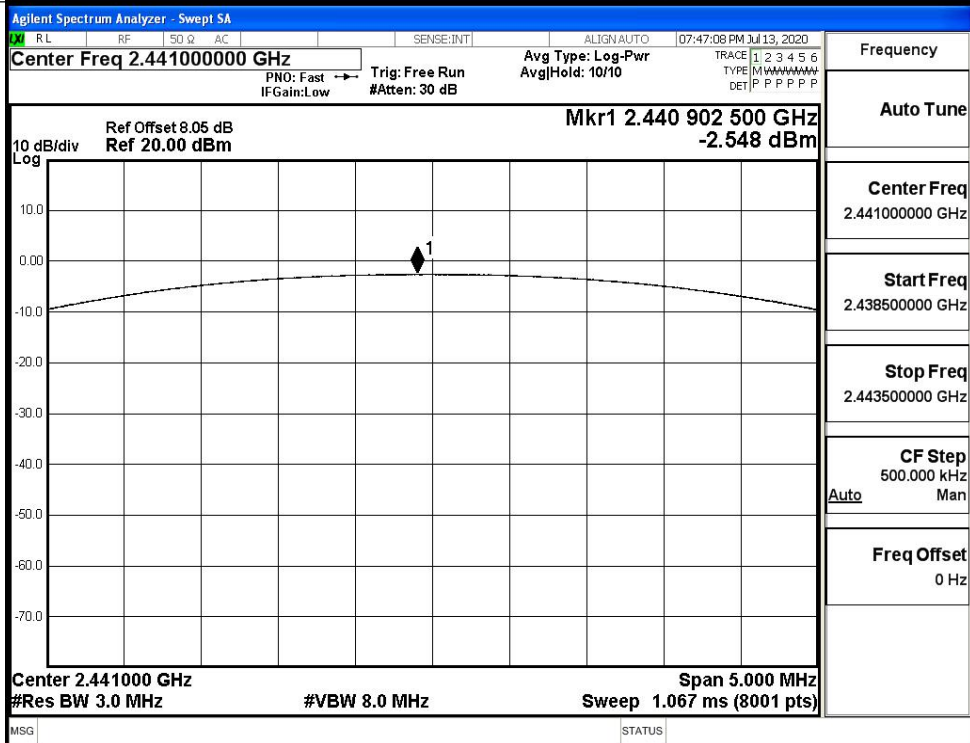
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-2.180	21	PASS
	MCH	-2.548	21	PASS
	HCH	-2.959	21	PASS
$\pi/4$ DQPSK	LCH	0.025	21	PASS
	MCH	-0.320	21	PASS
	HCH	-0.752	21	PASS
8DPSK	LCH	0.316	21	PASS
	MCH	0.049	21	PASS
	HCH	-0.482	21	PASS

Test Graphs

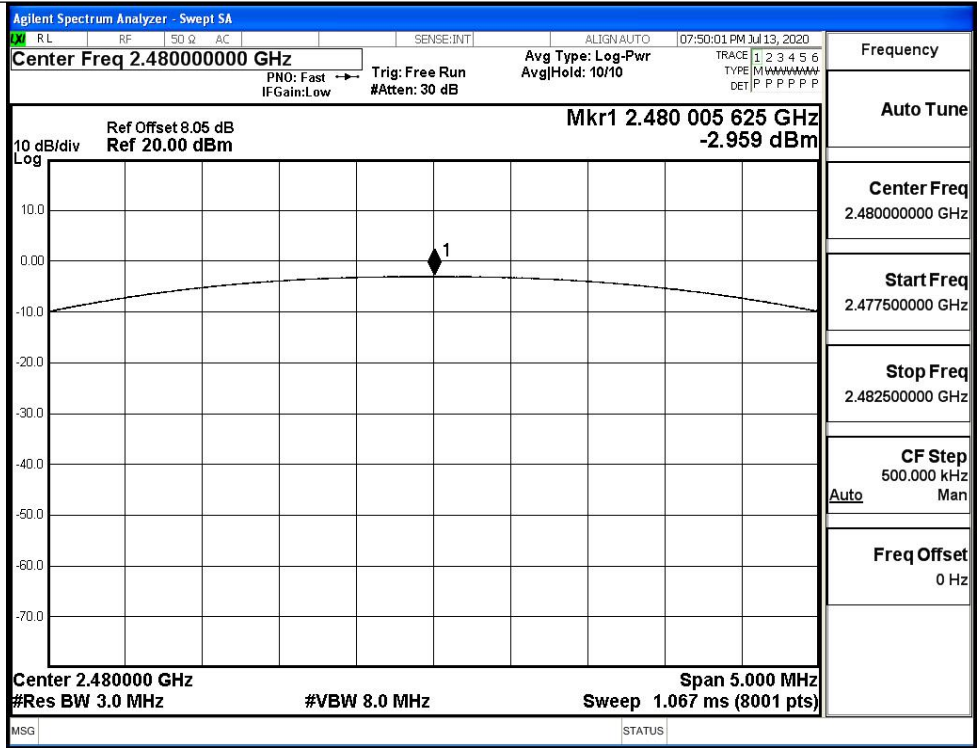
GFSK/LCH



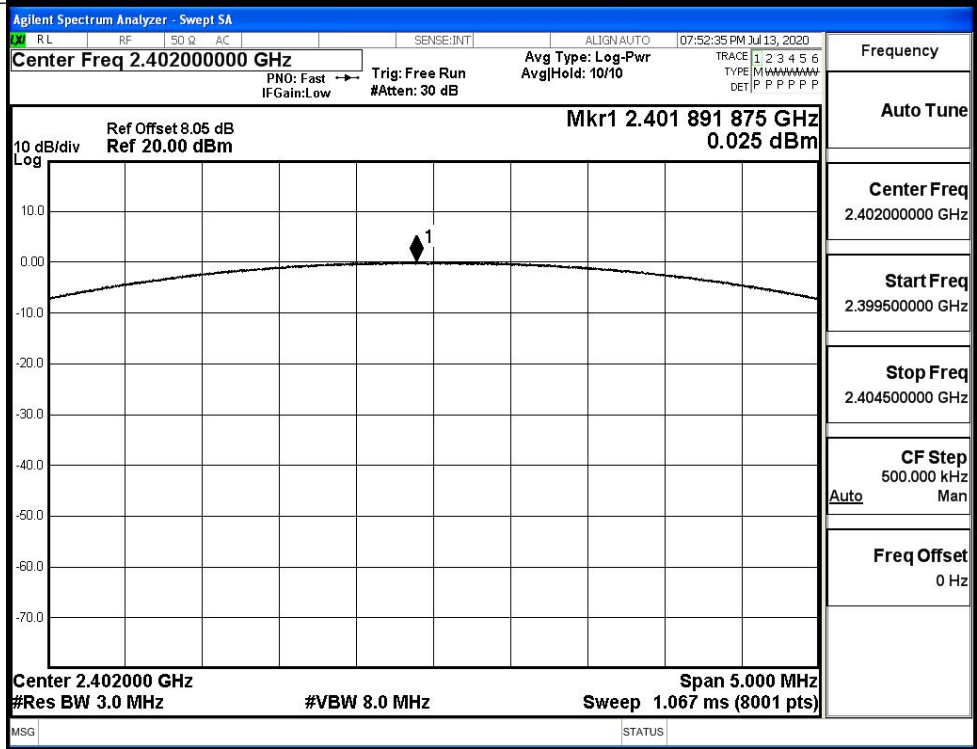
GFSK/MCH

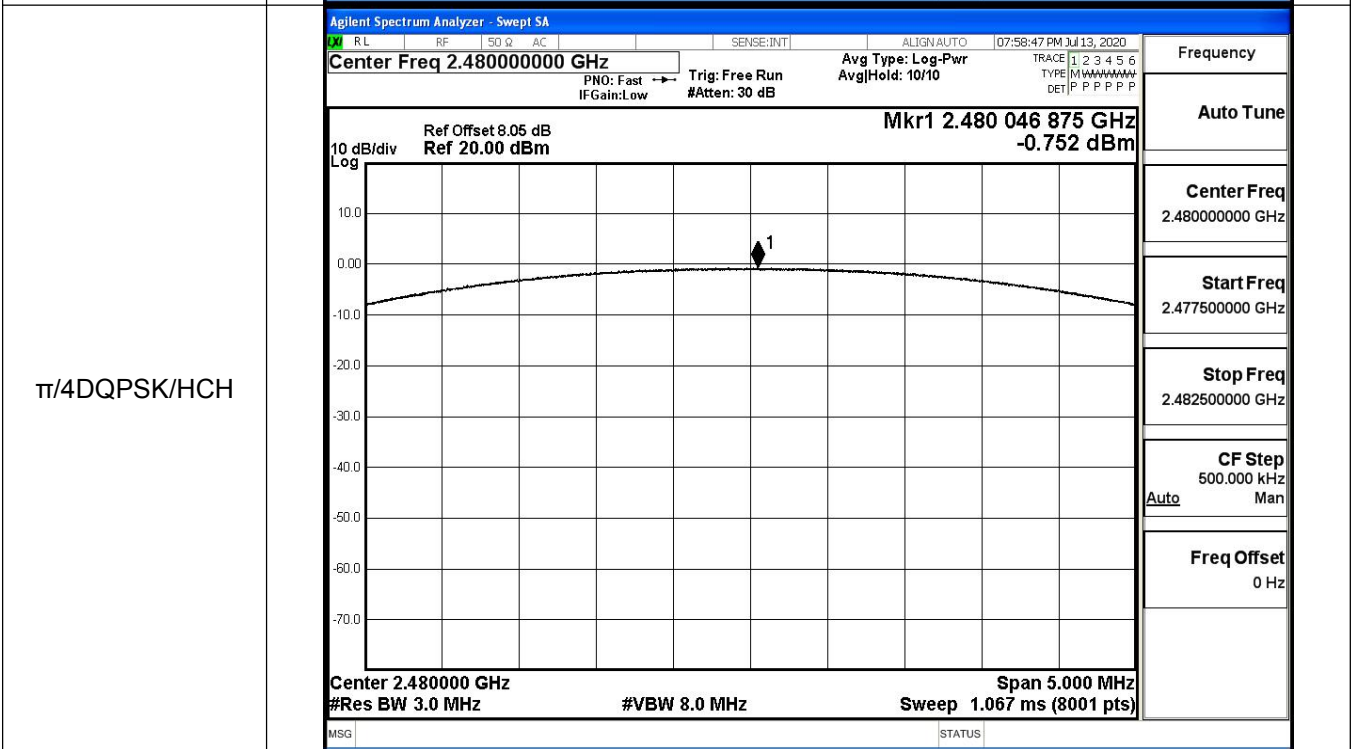
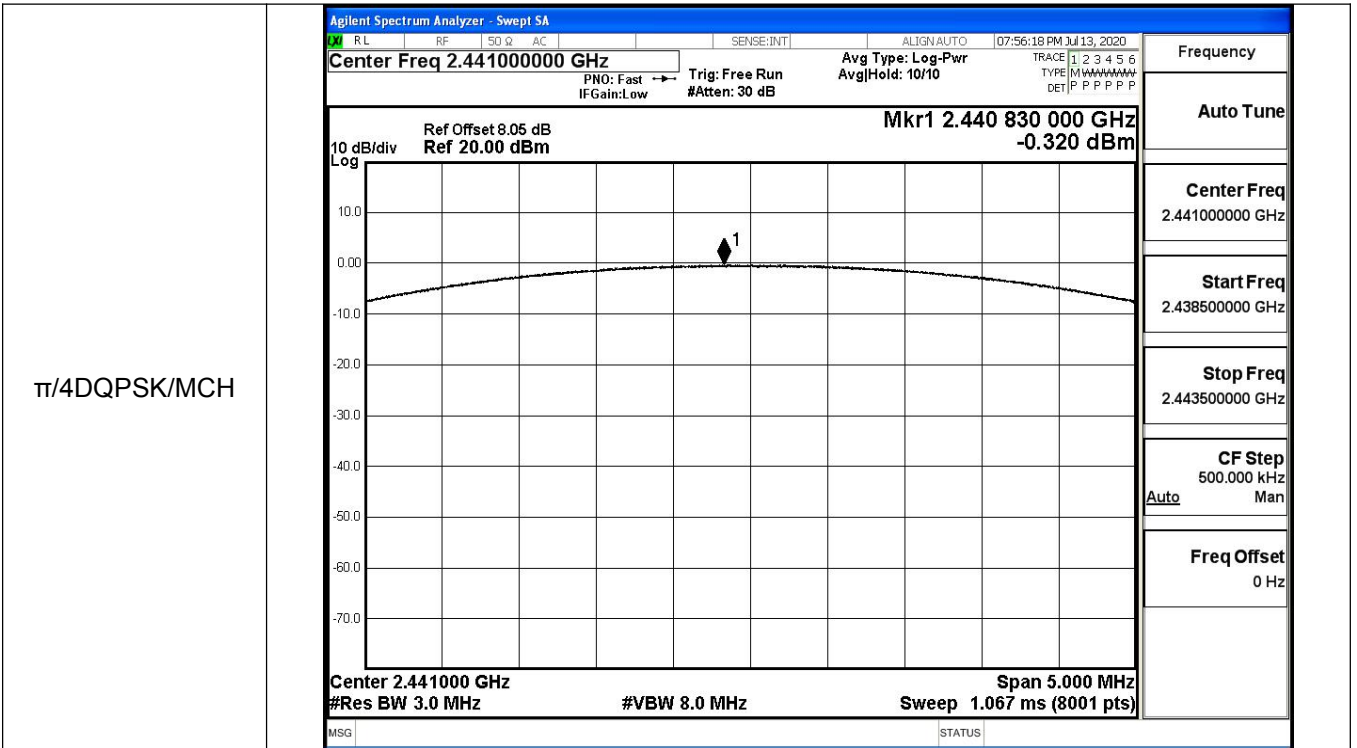


GFSK/HCH

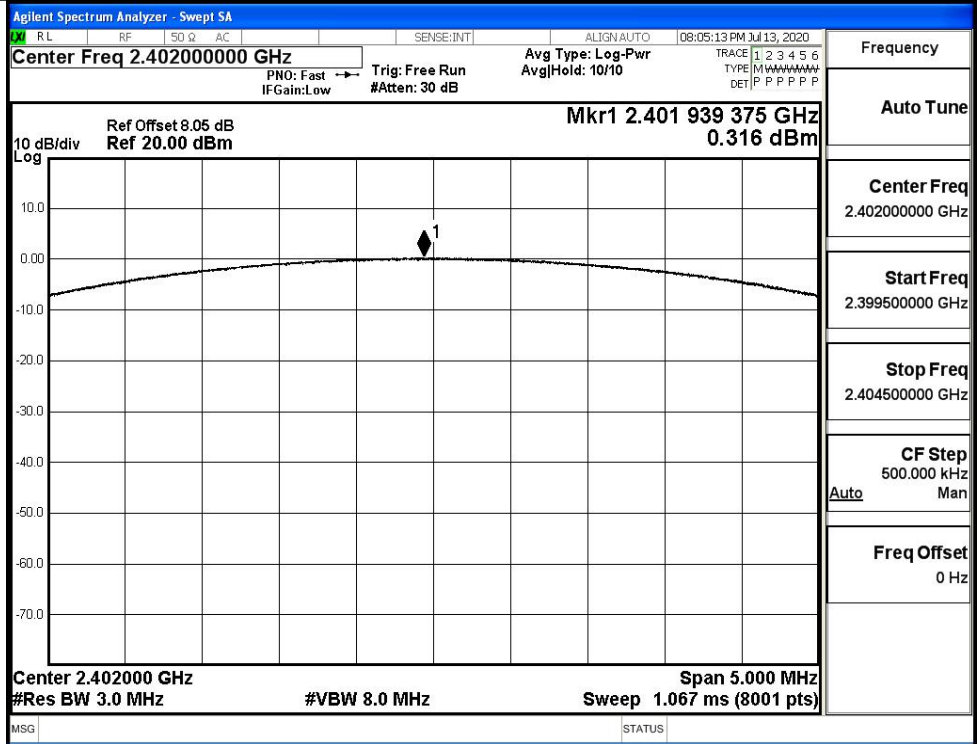


$\pi/4$ DQPSK/LCH

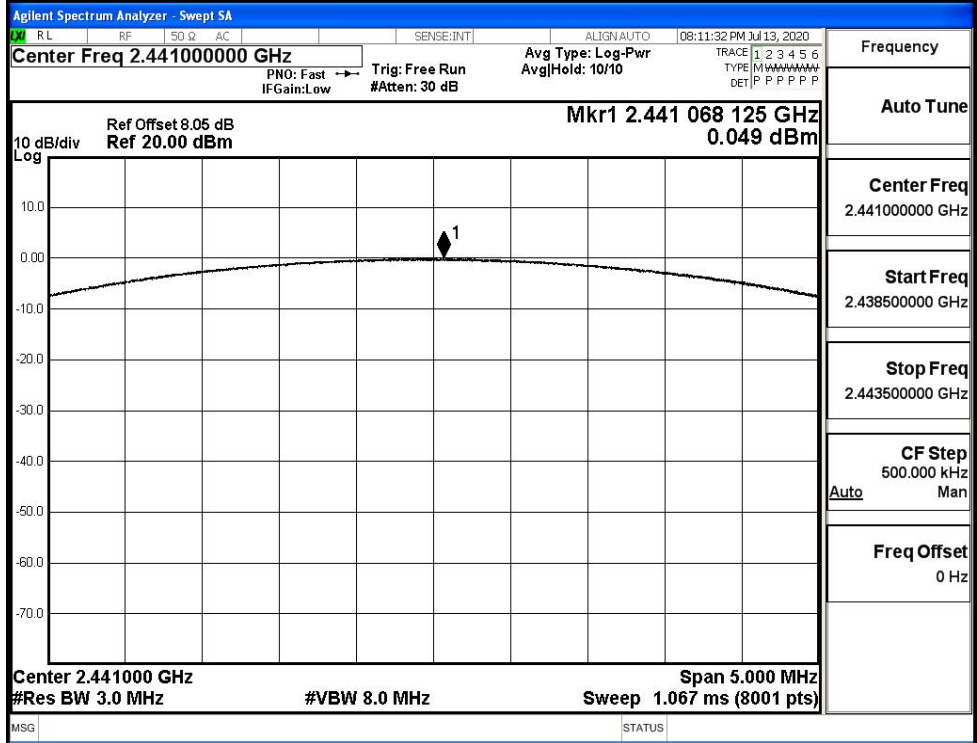




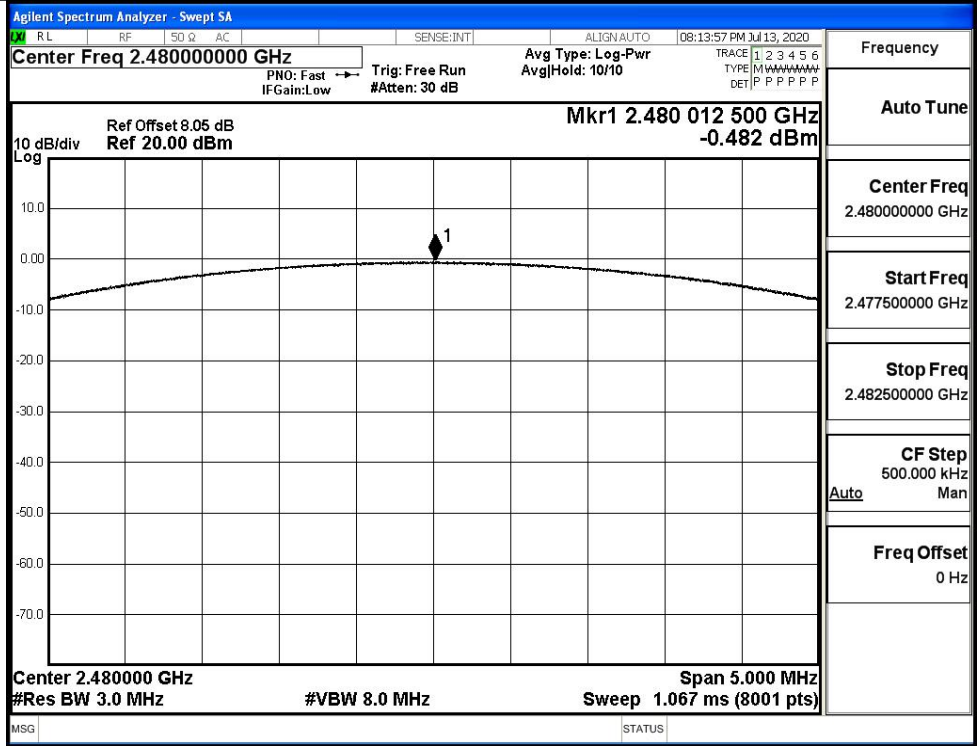
8DPSK/LCH



8DPSK/MCH



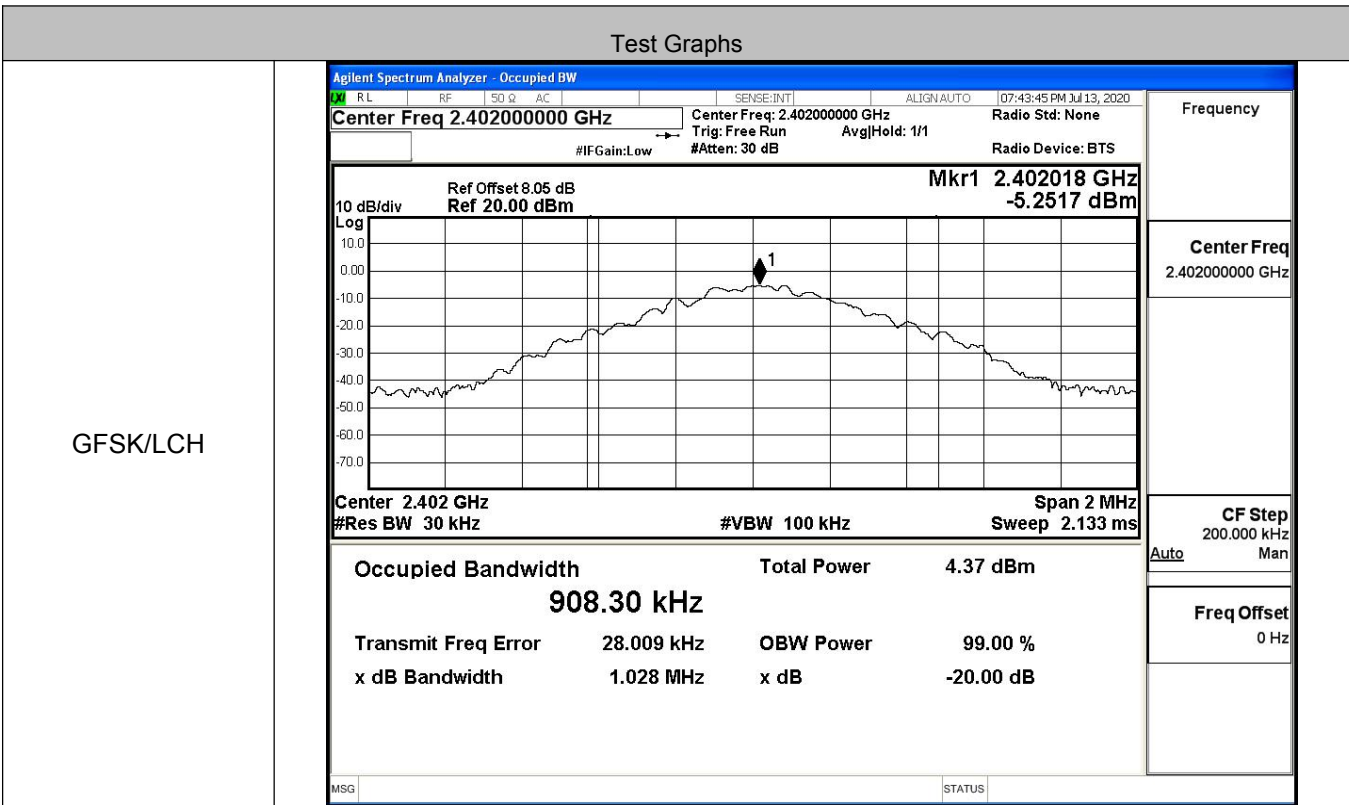
8DPSK/HCH



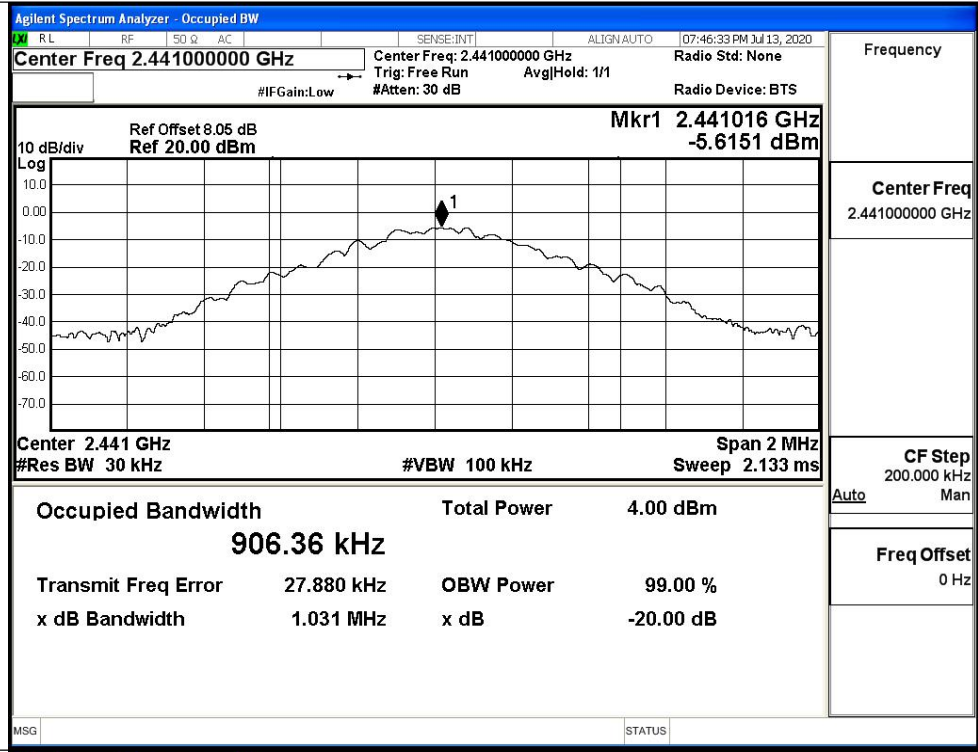
A.2 20dB Bandwidth

Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.028	Not Specified	PASS
	MCH	1.031	Not Specified	PASS
	HCH	1.033	Not Specified	PASS
π/4DQPSK	LCH	1.363	Not Specified	PASS
	MCH	1.364	Not Specified	PASS
	HCH	1.365	Not Specified	PASS
8DPSK	LCH	1.350	Not Specified	PASS
	MCH	1.349	Not Specified	PASS
	HCH	1.347	Not Specified	PASS

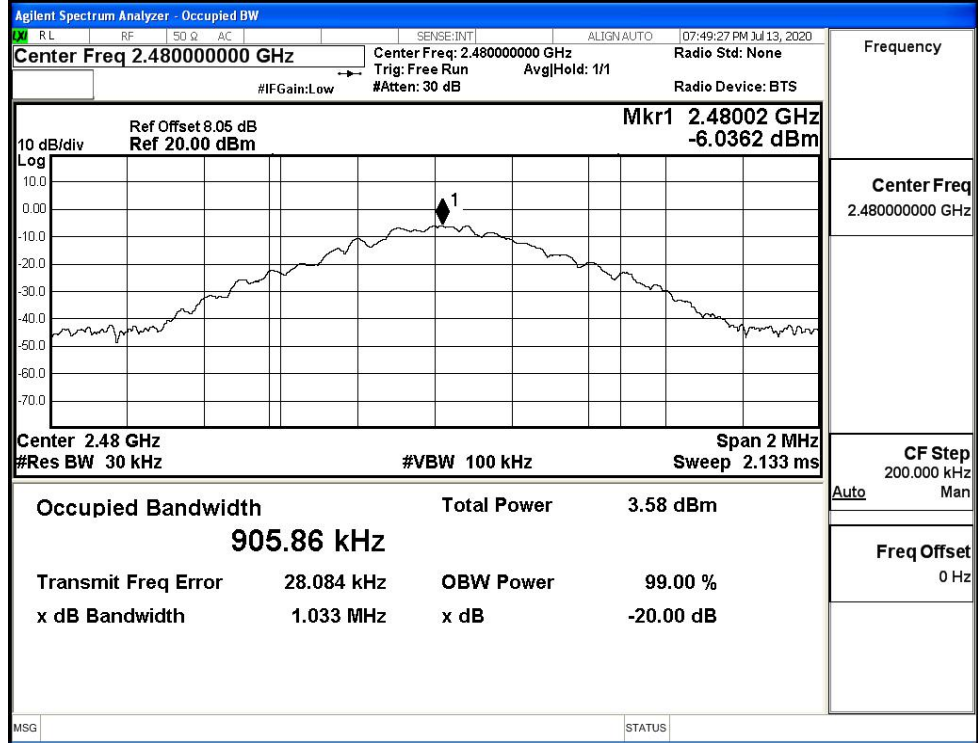
Test Graphs



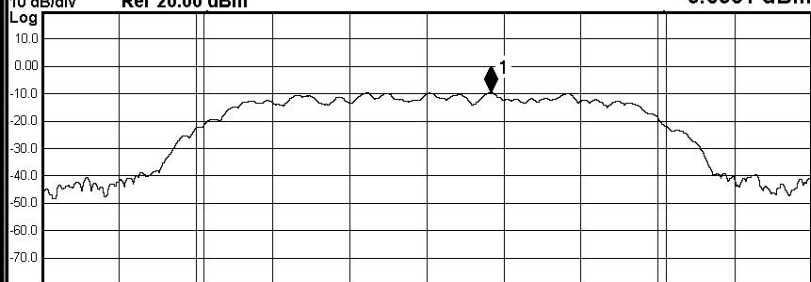
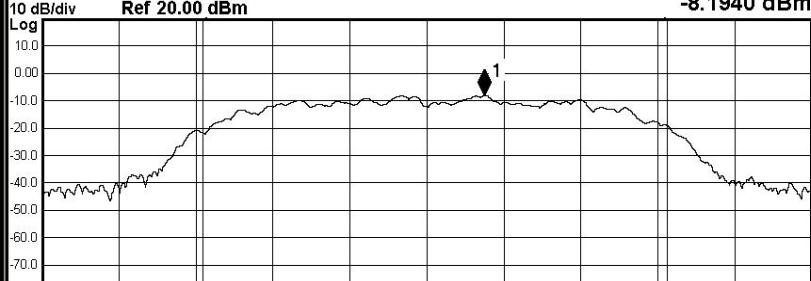
GFSK/MCH



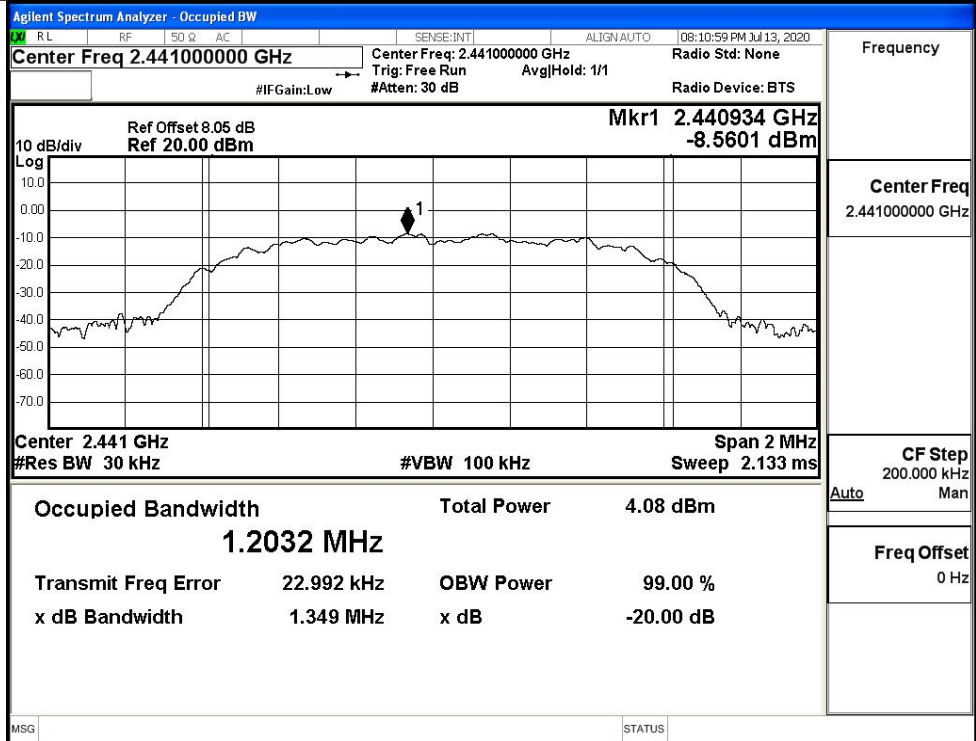
GFSK/HCH



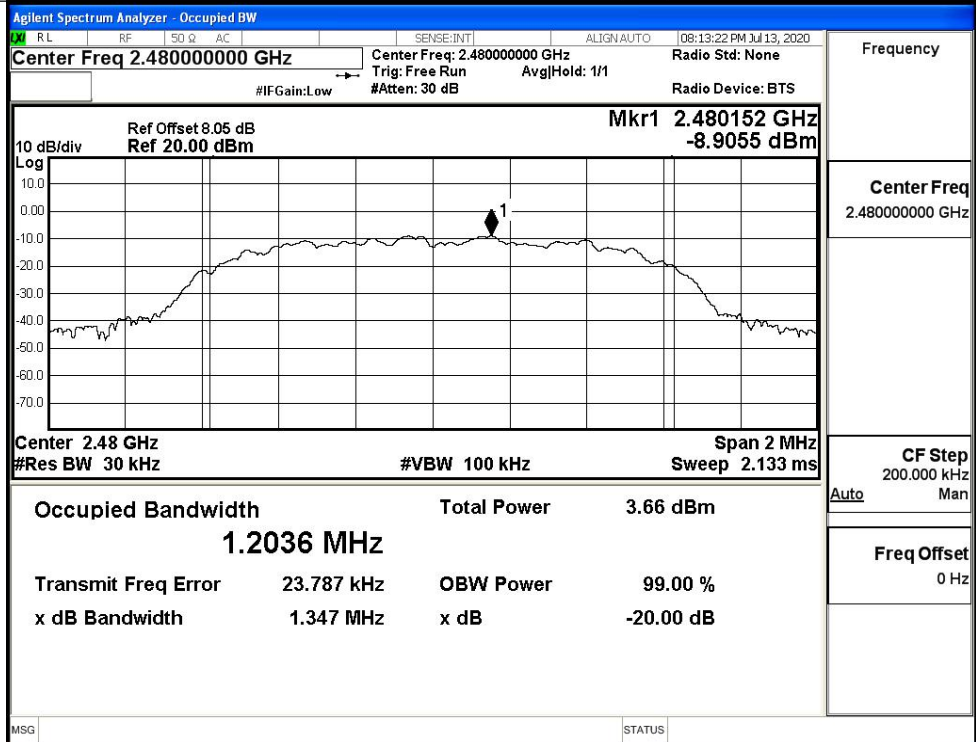
<p style="text-align: center;">π/4DQPSK/LCH</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.40200000 GHz</p> <p>Center Freq: 2.40200000 GHz Trig: Free Run Avg Hold: 1/1</p> <p>Radio Std: None Radio Device: BTS</p> <p>Ref Offset 8.05 dB Ref 20.00 dBm</p> <p>Mkr1 2.402166 GHz -8.7280 dBm</p> <p>10 dB/div Log</p> <p>Center 2.402 GHz #Res BW 30 kHz</p> <p>#VBW 100 kHz</p> <p>Span 2 MHz Sweep 2.133 ms</p> <p>Occupied Bandwidth 1.1940 MHz</p> <p>Total Power 4.22 dBm</p> <p>Transmit Freq Error 22.035 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 1.363 MHz</p> <p>x dB -20.00 dB</p>	<p>Frequency</p> <p>Center Freq 2.40200000 GHz</p> <p>CF Step 200.000 kHz</p> <p>Freq Offset 0 Hz</p>
<p style="text-align: center;">π/4DQPSK/MCH</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.44100000 GHz</p> <p>Center Freq: 2.441000000 GHz Trig: Free Run Avg Hold: 1/1</p> <p>Radio Std: None Radio Device: BTS</p> <p>Ref Offset 8.05 dB Ref 20.00 dBm</p> <p>Mkr1 2.441168 GHz -9.1646 dBm</p> <p>10 dB/div Log</p> <p>Center 2.441 GHz #Res BW 30 kHz</p> <p>#VBW 100 kHz</p> <p>Span 2 MHz Sweep 2.133 ms</p> <p>Occupied Bandwidth 1.1939 MHz</p> <p>Total Power 3.88 dBm</p> <p>Transmit Freq Error 23.103 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 1.364 MHz</p> <p>x dB -20.00 dB</p>	<p>Frequency</p> <p>Center Freq 2.441000000 GHz</p> <p>CF Step 200.000 kHz</p> <p>Freq Offset 0 Hz</p>

<p style="text-align: center;">π/4DQPSK/HCH</p>	<div style="border: 1px solid black; padding: 5px;"> <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.48000000 GHz Center Freq: 2.48000000 GHz Radio Std: None Trig: Free Run AvgHold: 1/1</p> <p>#IFGain: Low #Atten: 30 dB Radio Device: BTS</p> <hr/> <p>10 dB/div Ref Offset 8.05 dB Mkr1 2.480166 GHz Ref 20.00 dBm -9.5931 dBm</p>  <p>Center 2.48 GHz Span 2 MHz #Res BW 30 kHz #VBW 100 kHz Sweep 2.133 ms</p> <table border="0" style="width: 100%;"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>3.45 dBm</td> </tr> <tr> <td colspan="3" style="text-align: center;">1.1947 MHz</td> </tr> <tr> <td>Transmit Freq Error</td> <td>23.111 kHz</td> <td>OBW Power 99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>1.365 MHz</td> <td>x dB -20.00 dB</td> </tr> </table> <p>MSG STATUS</p> </div>	Occupied Bandwidth	Total Power	3.45 dBm	1.1947 MHz			Transmit Freq Error	23.111 kHz	OBW Power 99.00 %	x dB Bandwidth	1.365 MHz	x dB -20.00 dB	<p>Frequency</p> <p>Center Freq 2.48000000 GHz</p> <p>CF Step 200.000 kHz Auto Man</p> <p>Freq Offset 0 Hz</p>
	Occupied Bandwidth	Total Power	3.45 dBm											
1.1947 MHz														
Transmit Freq Error	23.111 kHz	OBW Power 99.00 %												
x dB Bandwidth	1.365 MHz	x dB -20.00 dB												
<p style="text-align: center;">8DPSK/LCH</p>	<div style="border: 1px solid black; padding: 5px;"> <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.40200000 GHz Center Freq: 2.40200000 GHz Radio Std: None Trig: Free Run AvgHold: 1/1</p> <p>#IFGain: Low #Atten: 30 dB Radio Device: BTS</p> <hr/> <p>10 dB/div Ref Offset 8.05 dB Mkr1 2.40215 GHz Ref 20.00 dBm -8.1940 dBm</p>  <p>Center 2.402 GHz Span 2 MHz #Res BW 30 kHz #VBW 100 kHz Sweep 2.133 ms</p> <table border="0" style="width: 100%;"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>4.44 dBm</td> </tr> <tr> <td colspan="3" style="text-align: center;">1.2037 MHz</td> </tr> <tr> <td>Transmit Freq Error</td> <td>22.478 kHz</td> <td>OBW Power 99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>1.350 MHz</td> <td>x dB -20.00 dB</td> </tr> </table> <p>MSG STATUS</p> </div>	Occupied Bandwidth	Total Power	4.44 dBm	1.2037 MHz			Transmit Freq Error	22.478 kHz	OBW Power 99.00 %	x dB Bandwidth	1.350 MHz	x dB -20.00 dB	<p>Frequency</p> <p>Center Freq 2.40200000 GHz</p> <p>CF Step 200.000 kHz Auto Man</p> <p>Freq Offset 0 Hz</p>
	Occupied Bandwidth	Total Power	4.44 dBm											
1.2037 MHz														
Transmit Freq Error	22.478 kHz	OBW Power 99.00 %												
x dB Bandwidth	1.350 MHz	x dB -20.00 dB												

8DPSK/MCH

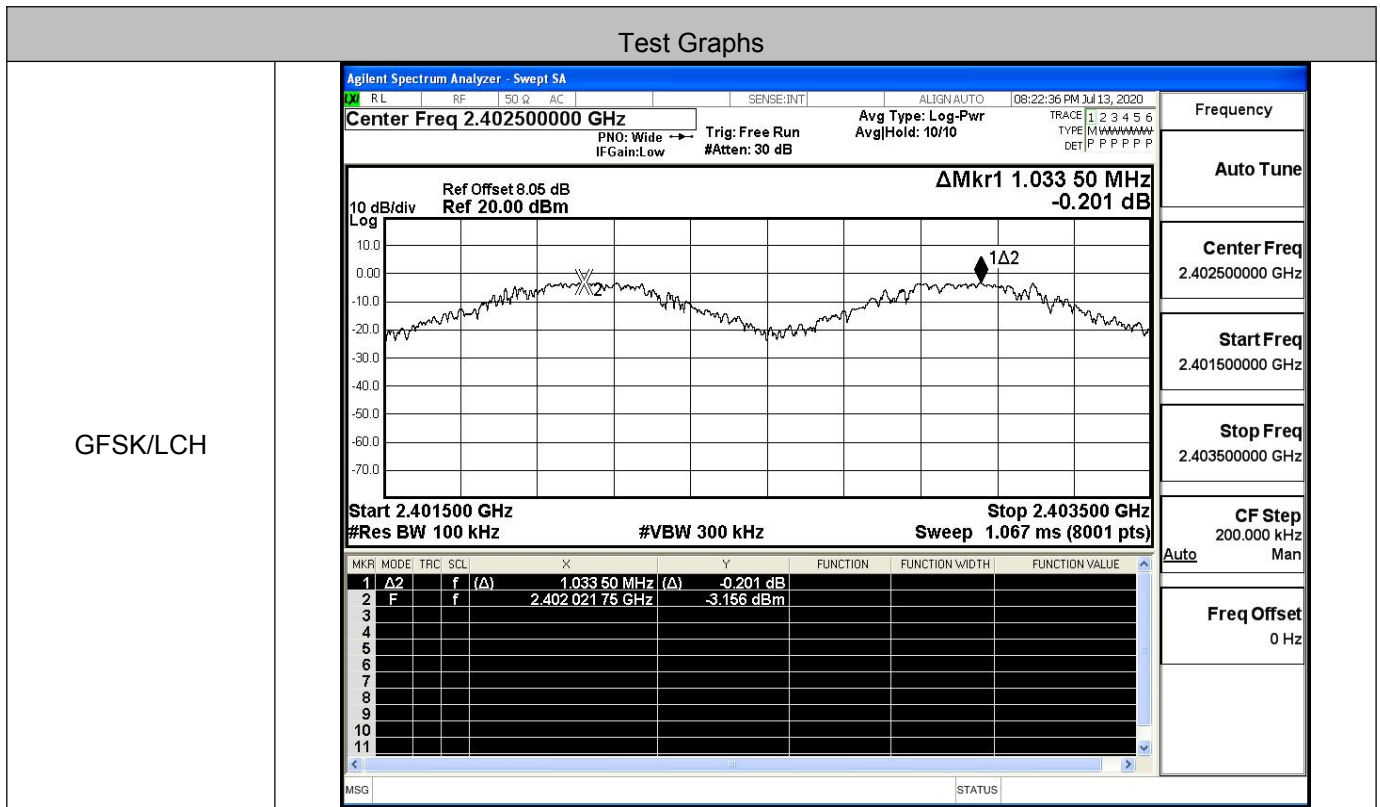


8DPSK/HCH

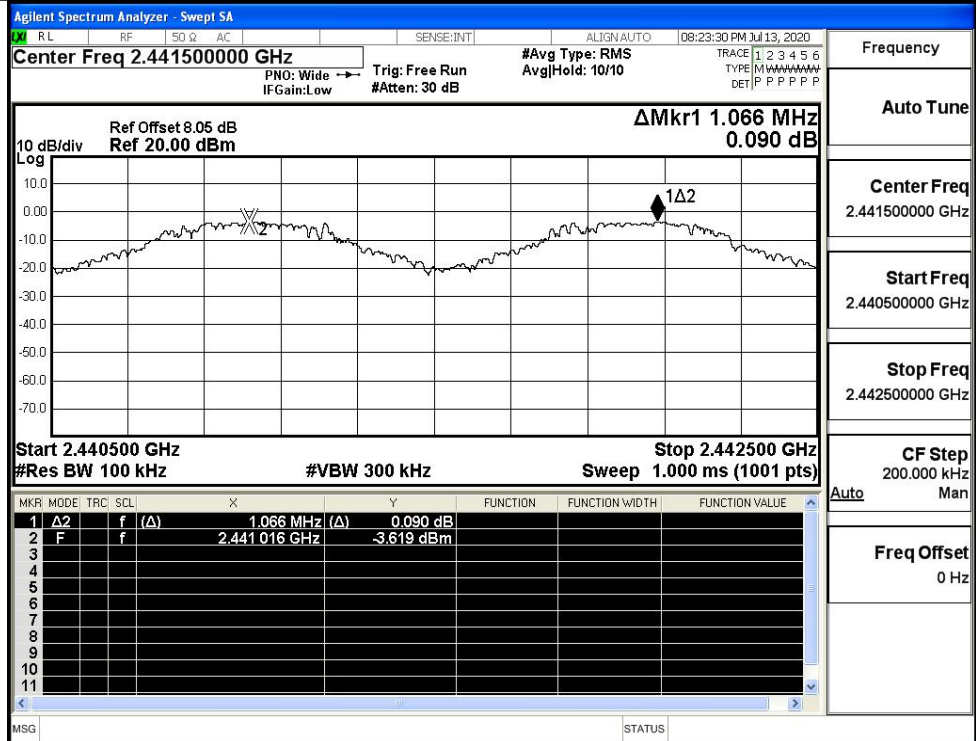


A.3 Carrier Frequency Separation

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.034	0.685	PASS
	MCH	1.066	0.687	PASS
	HCH	0.920	0.689	PASS
π/4DQPSK	LCH	1.184	0.908	PASS
	MCH	1.004	0.909	PASS
	HCH	0.994	0.910	PASS
8DPSK	LCH	1.132	0.900	PASS
	MCH	0.978	0.899	PASS
	HCH	1.002	0.898	PASS

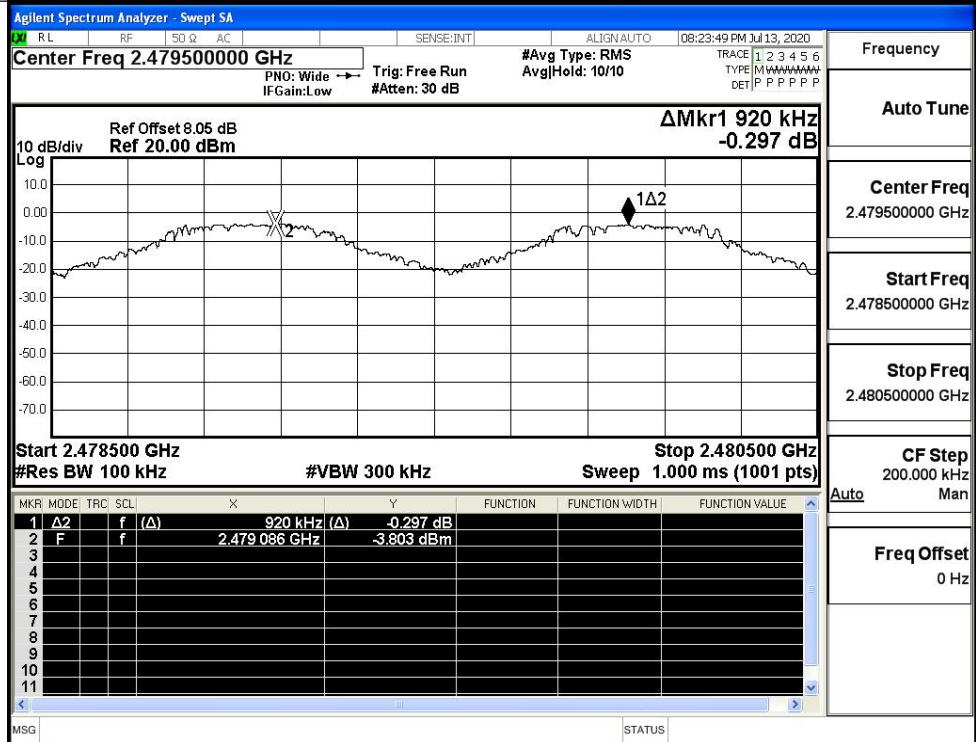


GFSK/MCH



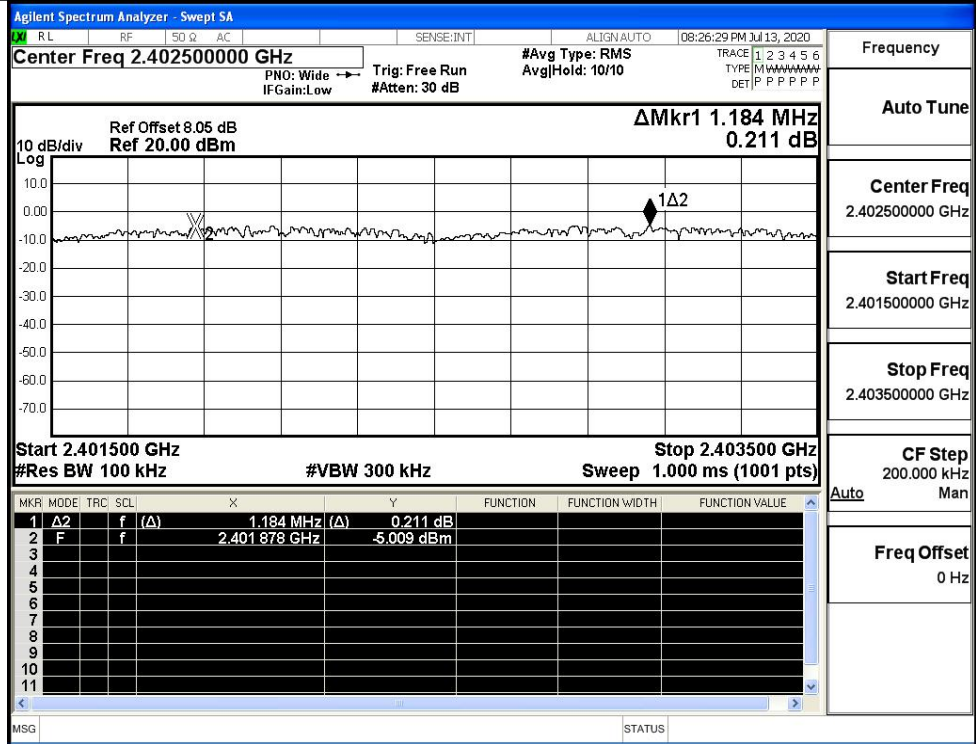
Frequency
Auto Tune
Center Freq
2.441500000 GHz
Start Freq
2.440500000 GHz
Stop Freq
2.442500000 GHz
CF Step
200.000 kHz
Auto Man
Freq Offset
0 Hz

GFSK/HCH



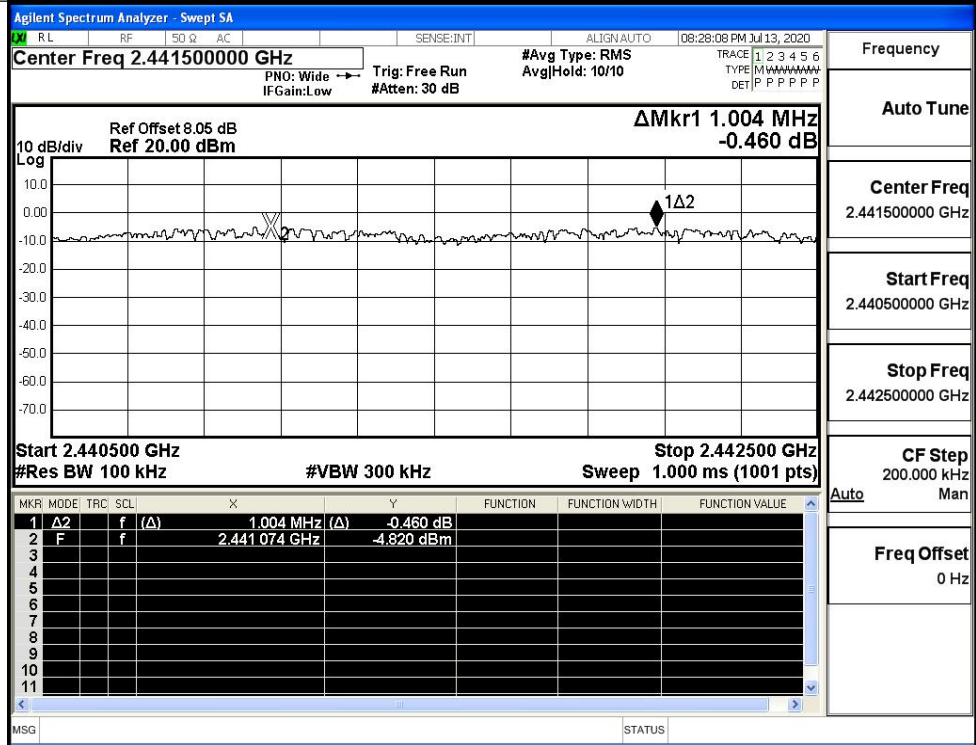
Frequency
Auto Tune
Center Freq
2.479500000 GHz
Start Freq
2.478500000 GHz
Stop Freq
2.480500000 GHz
CF Step
200.000 kHz
Auto Man
Freq Offset
0 Hz

$\pi/4$ DQPSK/LCH



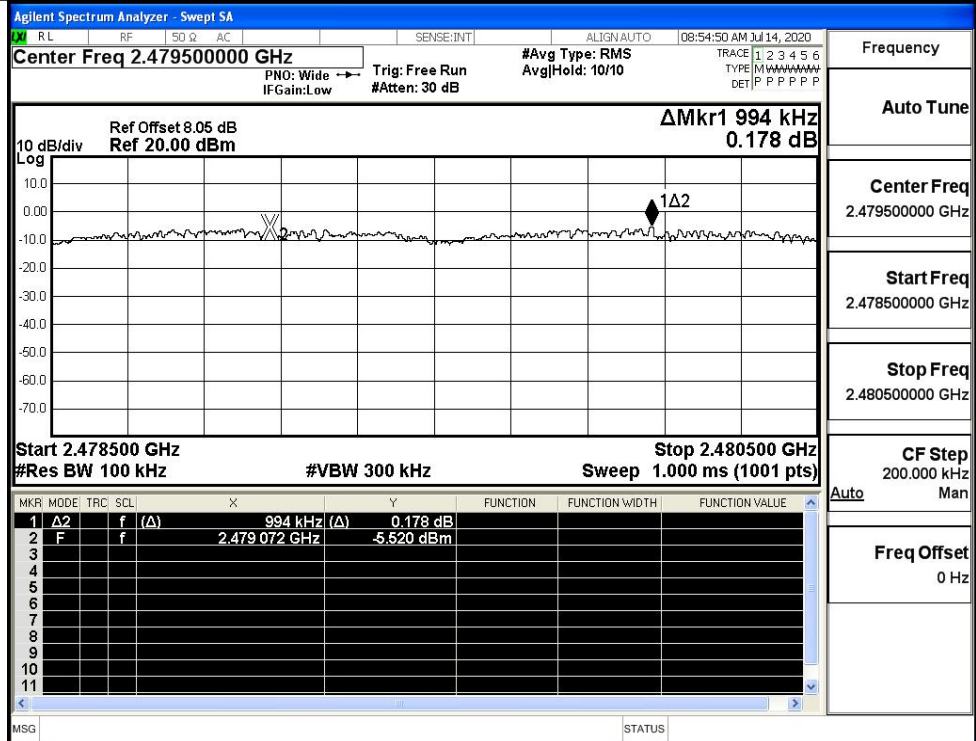
Frequency
Auto Tune
Center Freq 2.402500000 GHz
Start Freq 2.401500000 GHz
Stop Freq 2.403500000 GHz
CF Step 200.000 kHz
Auto
Freq Offset 0 Hz

$\pi/4$ DQPSK/MCH



Frequency
Auto Tune
Center Freq 2.441500000 GHz
Start Freq 2.440500000 GHz
Stop Freq 2.442500000 GHz
CF Step 200.000 kHz
Auto
Freq Offset 0 Hz

π/4DQPSK/HCH



Frequency

Auto Tune

Center Freq
2.479500000 GHz

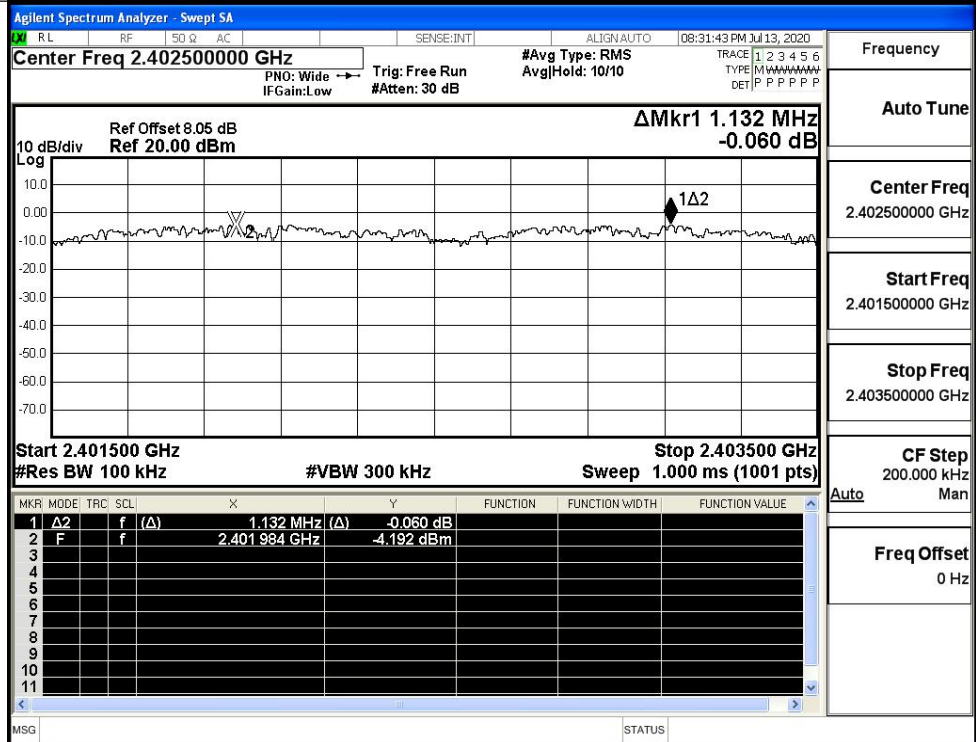
Start Freq
2.478500000 GHz

Stop Freq
2.480500000 GHz

CF Step
200.000 kHz

Freq Offset
0 Hz

8DPSK/LCH



Frequency

Auto Tune

Center Freq
2.402500000 GHz

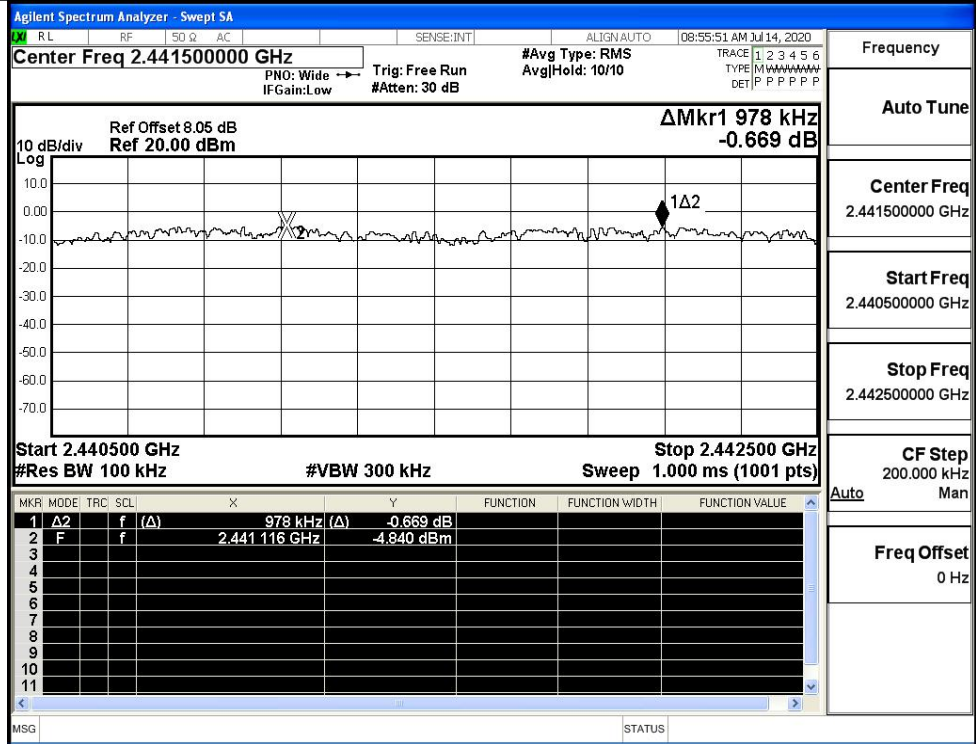
Start Freq
2.401500000 GHz

Stop Freq
2.403500000 GHz

CF Step
200.000 kHz

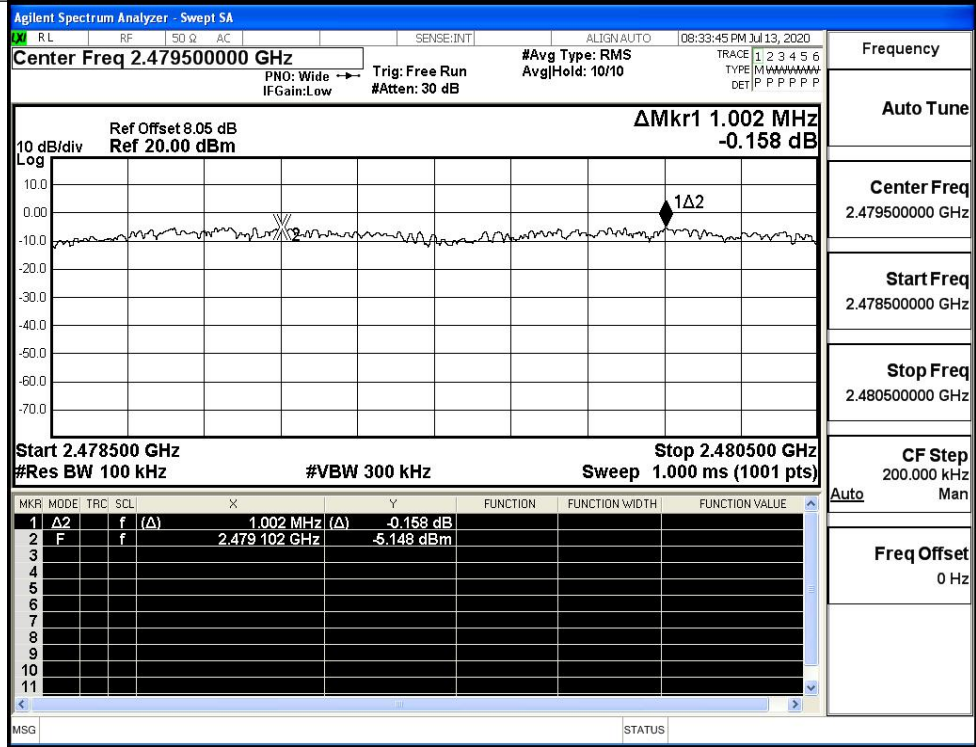
Freq Offset
0 Hz

8DPSK/MCH



Frequency
Auto Tune
Center Freq 2.441500000 GHz
Start Freq 2.440500000 GHz
Stop Freq 2.442500000 GHz
CF Step 200.000 kHz
Auto Man
Freq Offset 0 Hz

8DPSK/HCH



Frequency
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