



Appendix A

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

Product Name: Formuler Z10 Pro

Trade Mark: FORMULER

Test Model: Z10 Pro

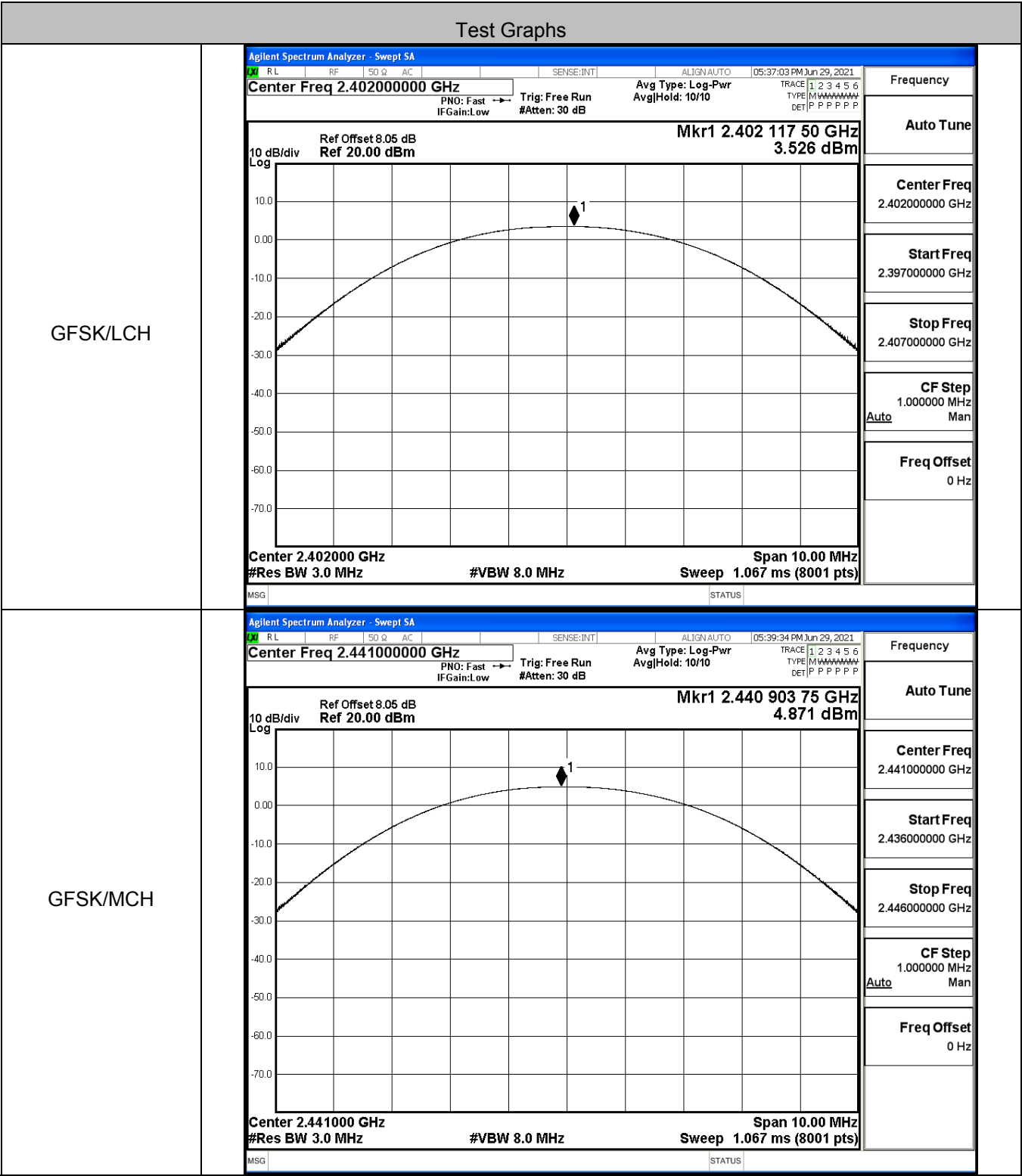
Environmental Conditions

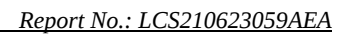
Temperature:	23.7° C
Relative Humidity:	51.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Jay Li
Supervised by:	Li Huan



A.1 Maximum Conducted Peak Output Power

Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	3.526	21	PASS
	MCH	4.871	21	PASS
	HCH	3.253	21	PASS
$\pi/4$ DQPSK	LCH	2.714	21	PASS
	MCH	4.071	21	PASS
	HCH	2.513	21	PASS
8DPSK	LCH	2.820	21	PASS
	MCH	4.215	21	PASS
	HCH	2.667	21	PASS



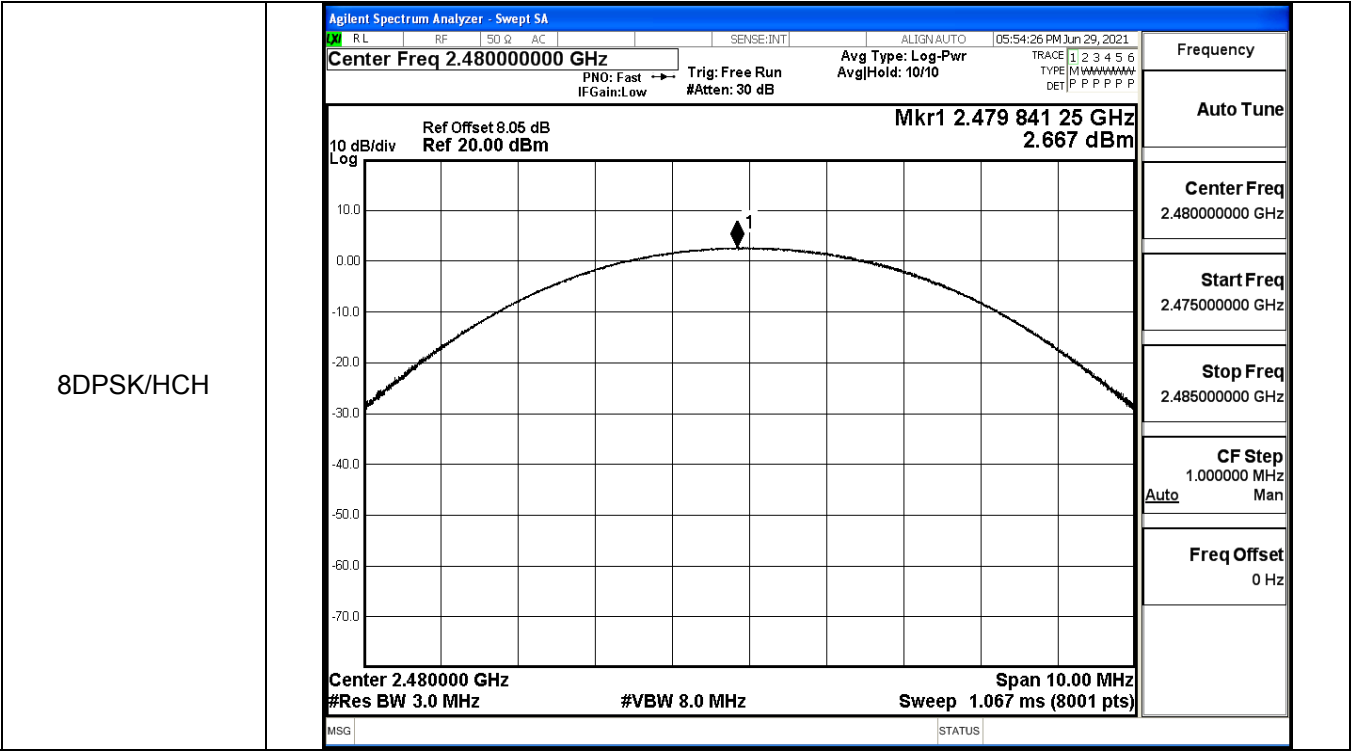
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π/4DQPSK/MCH	Agilent Spectrum Analyzer - Swept SA Center Freq 2.441000000 GHz Ref Offset 8.05 dB Ref 20.00 dBm Mkr1 2.441 060 00 GHz 4.071 dBm Center 2.441000 GHz #Res BW 3.0 MHz #VBW 8.0 MHz Span 10.00 MHz Sweep 1.067 ms (8001 pts)
π/4DQPSK/HCH	Agilent Spectrum Analyzer - Swept SA Center Freq 2.480000000 GHz Ref Offset 8.05 dB Ref 20.00 dBm Mkr1 2.479 805 00 GHz 2.513 dBm Center 2.480000 GHz #Res BW 3.0 MHz #VBW 8.0 MHz Span 10.00 MHz Sweep 1.067 ms (8001 pts)



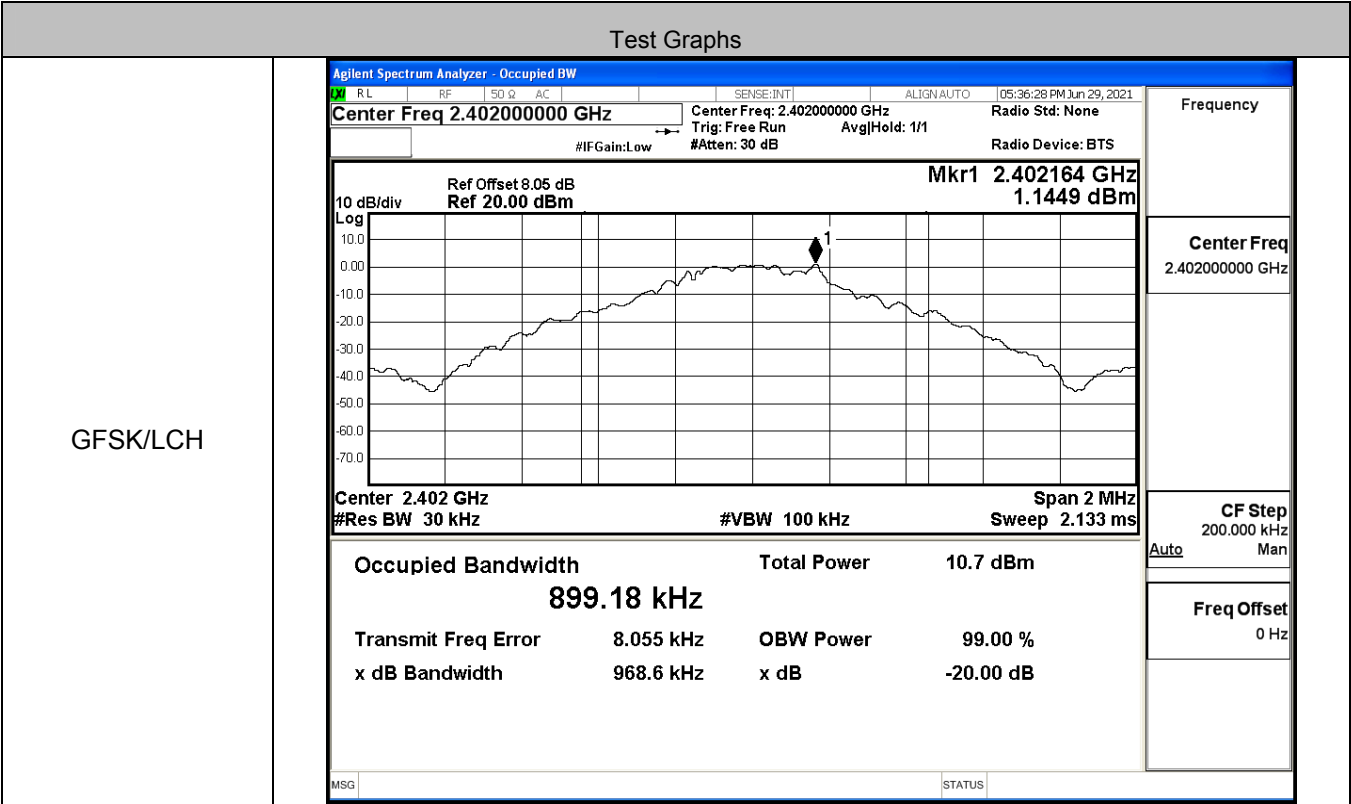
8DPSK/LCH	Agilent Spectrum Analyzer - Swept SA RL RF 50 Q AC SENSE:INT ALIGN: AUTO 05:50:24 PM Jun 29, 2021 Center Freq 2.40200000 GHz PN0: Fast IF Gain: Low Trig: Free Run #Atten: 30 dB Avg Type: Log-Pwr Avg Hold: 10/10 TRACE 1 2 3 4 5 6 TYPE M W W W W W W W DET P P P P P P Ref Offset 8.05 dB Ref 20.00 dBm Mkr1 2.401 956 25 GHz 2.820 dBm Center 2.402000 GHz #Res BW 3.0 MHz #VBW 8.0 MHz Span 10.00 MHz Sweep 1.067 ms (8001 pts) MSG STATUS Frequency Auto Tune Center Freq 2.402000000 GHz Start Freq 2.397000000 GHz Stop Freq 2.407000000 GHz CF Step 1.000000 MHz Auto Man Freq Offset 0 Hz
8DPSK/MCH	Agilent Spectrum Analyzer - Swept SA RL RF 50 Q AC SENSE:INT ALIGN: AUTO 05:52:43 PM Jun 29, 2021 Center Freq 2.441000000 GHz PN0: Fast IF Gain: Low Trig: Free Run #Atten: 30 dB Avg Type: Log-Pwr Avg Hold: 10/10 TRACE 1 2 3 4 5 6 TYPE M W W W W W W W DET P P P P P P Ref Offset 8.05 dB Ref 20.00 dBm Mkr1 2.440 997 50 GHz 4.215 dBm Center 2.441000 GHz #Res BW 3.0 MHz #VBW 8.0 MHz Span 10.00 MHz Sweep 1.067 ms (8001 pts) MSG STATUS Frequency Auto Tune Center Freq 2.441000000 GHz Start Freq 2.436000000 GHz Stop Freq 2.446000000 GHz CF Step 1.000000 MHz Auto Man Freq Offset 0 Hz





A.2 20dB Bandwidth

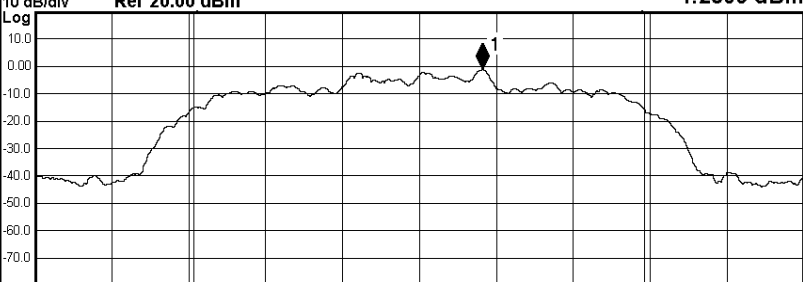
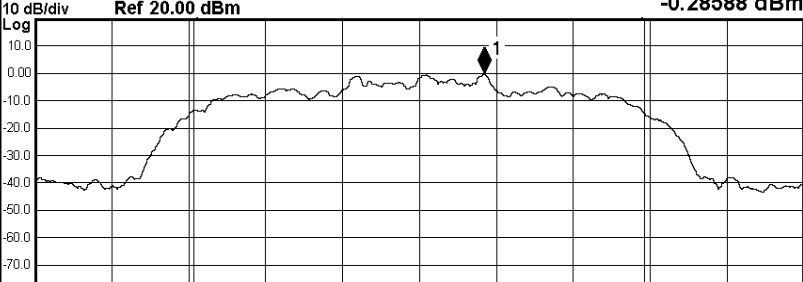
Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.9686	Not Specified	PASS
	MCH	1.035	Not Specified	PASS
	HCH	1.038	Not Specified	PASS
π /4DQPSK	LCH	1.289	Not Specified	PASS
	MCH	1.311	Not Specified	PASS
	HCH	1.289	Not Specified	PASS
8DPSK	LCH	1.294	Not Specified	PASS
	MCH	1.291	Not Specified	PASS
	HCH	1.293	Not Specified	PASS



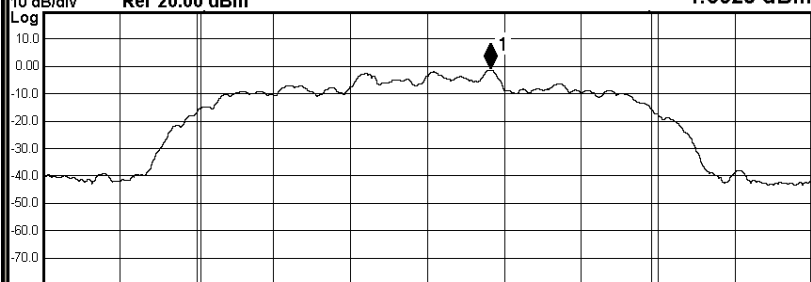
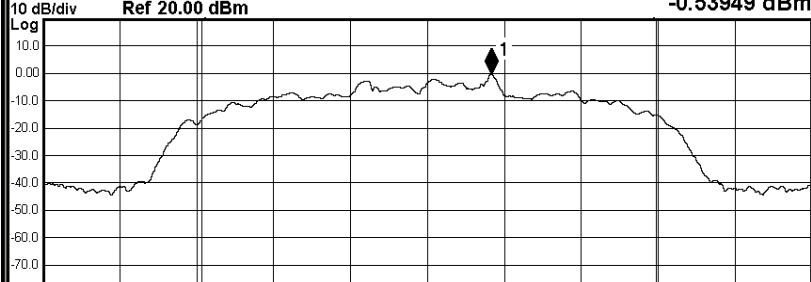


GFSK/MCH	Agilent Spectrum Analyzer - Occupied BW Center Freq 2.441000000 GHz Center Freq: 2.441000000 GHz Trig: Free Run Avg/Hold: 1/1 #IFGain: Low #Atten: 30 dB Align Auto Radio Std: None Radio Device: BTS 05:39:00 PM Jun 29, 2021 Ref Offset 8.05 dB Ref 20.00 dBm Mkr1 2.441168 GHz 2.2429 dBm 10 dB/div Log Center 2.441 GHz #Res BW 30 kHz #VBW 100 kHz Span 2 MHz Sweep 2.133 ms Occupied Bandwidth 897.63 kHz Total Power 12.2 dBm Transmit Freq Error 5.294 kHz OBW Power 99.00 % x dB Bandwidth 1.035 MHz x dB -20.00 dB MSG STATUS Frequency Center Freq 2.441000000 GHz CF Step 200.000 kHz Auto Man Freq Offset 0 Hz
GFSK/HCH	Agilent Spectrum Analyzer - Occupied BW Center Freq 2.480000000 GHz Center Freq: 2.480000000 GHz Trig: Free Run Avg/Hold: 1/1 #IFGain: Low #Atten: 30 dB Align Auto Radio Std: None Radio Device: BTS 05:40:35 PM Jun 29, 2021 Ref Offset 8.05 dB Ref 20.00 dBm Mkr1 2.479974 GHz 0.54723 dBm 10 dB/div Log Center 2.48 GHz #Res BW 30 kHz #VBW 100 kHz Span 2 MHz Sweep 2.133 ms Occupied Bandwidth 900.70 kHz Total Power 10.5 dBm Transmit Freq Error 4.433 kHz OBW Power 99.00 % x dB Bandwidth 1.038 MHz x dB -20.00 dB MSG STATUS Frequency Center Freq 2.480000000 GHz CF Step 200.000 kHz Auto Man Freq Offset 0 Hz

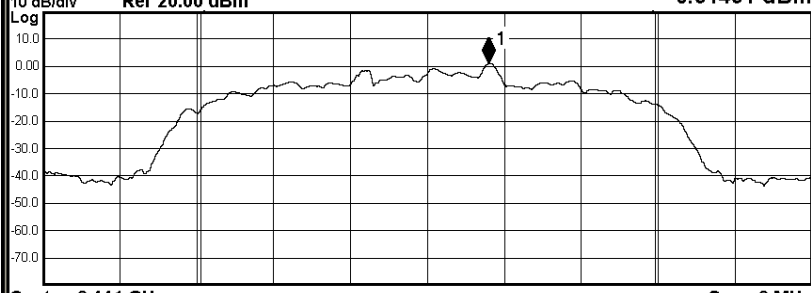
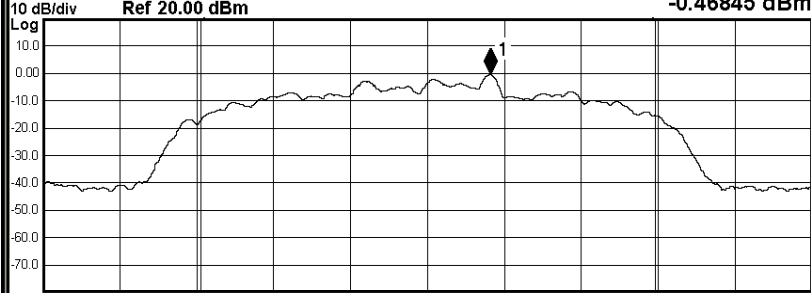


π/4DQPSK/LCH	Agilent Spectrum Analyzer - Occupied BW Center Freq 2.40200000 GHz Center Freq: 2.40200000 GHz Trig: Free Run Avg/Hold: 1/1 #IFGain: Low #Atten: 30 dB Radio Std: None Radio Device: BTS Ref Offset 8.05 dB Ref 20.00 dBm Mkr1 2.402164 GHz -1.2806 dBm  Center 2.402 GHz #Res BW 30 kHz #VBW 100 kHz Span 2 MHz Sweep 2.133 ms Occupied Bandwidth 1.1680 MHz Total Power 8.93 dBm Transmit Freq Error 1.008 kHz OBW Power 99.00 % x dB Bandwidth 1.289 MHz x dB -20.00 dB Frequency Center Freq 2.40200000 GHz CF Step 200.000 kHz Auto Man Freq Offset 0 Hz
π/4DQPSK/MCH	Agilent Spectrum Analyzer - Occupied BW Center Freq 2.44100000 GHz Center Freq: 2.44100000 GHz Trig: Free Run Avg/Hold: 1/1 #IFGain: Low #Atten: 30 dB Radio Std: None Radio Device: BTS Ref Offset 8.05 dB Ref 20.00 dBm Mkr1 2.441168 GHz -0.28588 dBm  Center 2.441 GHz #Res BW 30 kHz #VBW 100 kHz Span 2 MHz Sweep 2.133 ms Occupied Bandwidth 1.1697 MHz Total Power 10.2 dBm Transmit Freq Error -395 Hz OBW Power 99.00 % x dB Bandwidth 1.311 MHz x dB -20.00 dB Frequency Center Freq 2.44100000 GHz CF Step 200.000 kHz Auto Man Freq Offset 0 Hz



$\pi/4$DQPSK/HCH	Agilent Spectrum Analyzer - Occupied BW Center Freq 2.48000000 GHz Center Freq: 2.480000000 GHz Trig: Free Run Avg/Hold: 1/1 Radio Std: None Radio Device: BTS Ref Offset 8.05 dB Ref 20.00 dBm Mkr1 2.480164 GHz -1.3628 dBm 10 dB/div Log  Center 2.48 GHz #Res BW 30 kHz #VBW 100 kHz Span 2 MHz Sweep 2.133 ms Occupied Bandwidth 1.1668 MHz Total Power 8.83 dBm Transmit Freq Error -1.898 kHz OBW Power 99.00 % x dB Bandwidth 1.289 MHz x dB -20.00 dB Frequency Center Freq 2.480000000 GHz CF Step 200.000 kHz Auto Man Freq Offset 0 Hz
8DPSK/LCH	Agilent Spectrum Analyzer - Occupied BW Center Freq 2.40200000 GHz Center Freq: 2.402000000 GHz Trig: Free Run Avg/Hold: 1/1 Radio Std: None Radio Device: BTS Ref Offset 8.05 dB Ref 20.00 dBm Mkr1 2.402166 GHz -0.53949 dBm 10 dB/div Log  Center 2.402 GHz #Res BW 30 kHz #VBW 100 kHz Span 2 MHz Sweep 2.133 ms Occupied Bandwidth 1.1775 MHz Total Power 8.78 dBm Transmit Freq Error 4.275 kHz OBW Power 99.00 % x dB Bandwidth 1.294 MHz x dB -20.00 dB Frequency Center Freq 2.402000000 GHz CF Step 200.000 kHz Auto Man Freq Offset 0 Hz

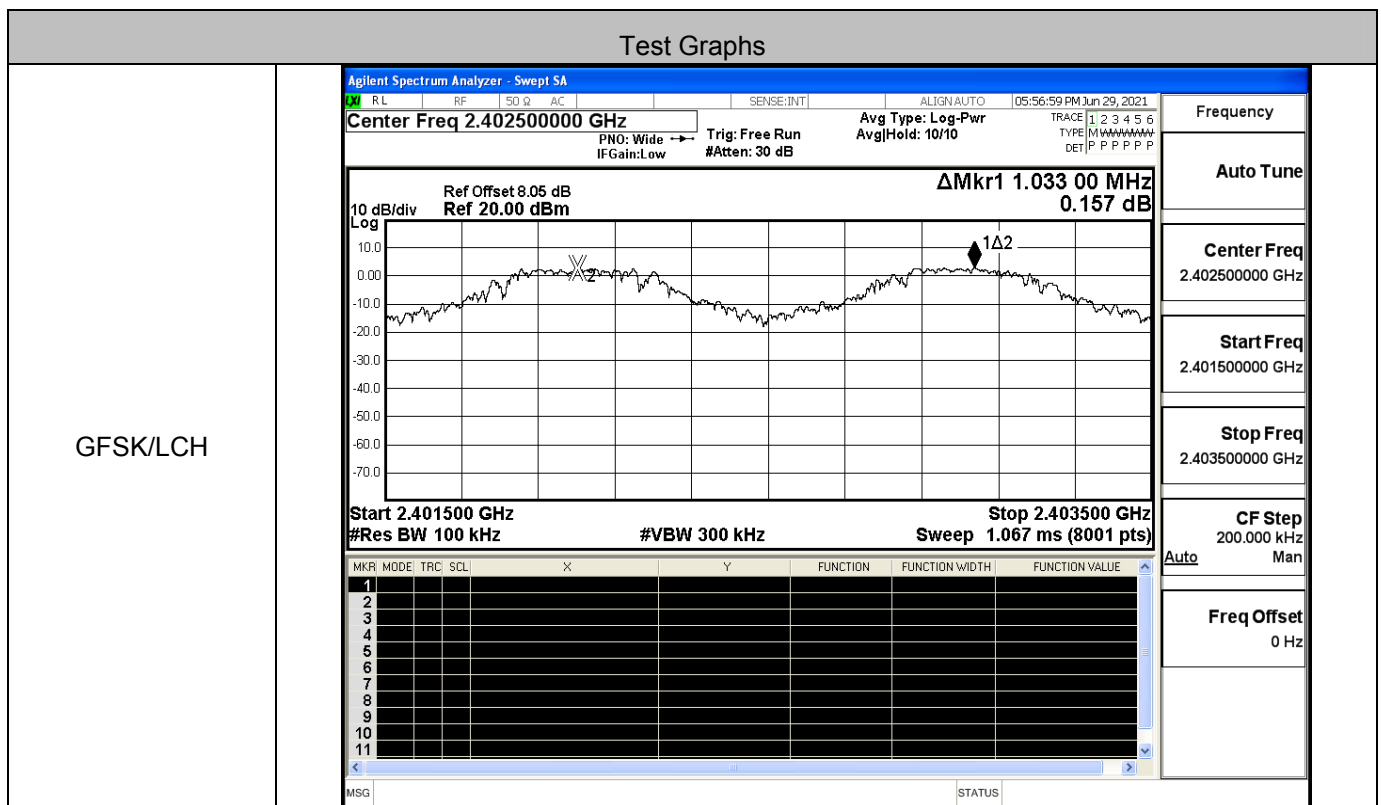


8DPSK/MCH	Agilent Spectrum Analyzer - Occupied BW Center Freq 2.441000000 GHz Center Freq: 2.441000000 GHz Trig: Free Run AvglHold: 1/1 #IFGain: Low #Atten: 30 dB Radio Std: None Radio Device: BTS Ref Offset 8.05 dB Ref 20.00 dBm Mkr1 2.44116 GHz 0.91491 dBm  Center 2.441 GHz #Res BW 30 kHz #VBW 100 kHz Span 2 MHz Sweep 2.133 ms Occupied Bandwidth 1.1760 MHz Total Power 10.2 dBm Transmit Freq Error 3.563 kHz OBW Power 99.00 % x dB Bandwidth 1.291 MHz x dB -20.00 dB Frequency Center Freq 2.441000000 GHz CF Step 200.000 kHz Auto Man Freq Offset 0 Hz
8DPSK/HCH	Agilent Spectrum Analyzer - Occupied BW Center Freq 2.480000000 GHz Center Freq: 2.480000000 GHz Trig: Free Run AvglHold: 1/1 #IFGain: Low #Atten: 30 dB Radio Std: None Radio Device: BTS Ref Offset 8.05 dB Ref 20.00 dBm Mkr1 2.480164 GHz -0.46845 dBm  Center 2.48 GHz #Res BW 30 kHz #VBW 100 kHz Span 2 MHz Sweep 2.133 ms Occupied Bandwidth 1.1774 MHz Total Power 8.80 dBm Transmit Freq Error 2.301 kHz OBW Power 99.00 % x dB Bandwidth 1.293 MHz x dB -20.00 dB Frequency Center Freq 2.480000000 GHz CF Step 200.000 kHz Auto Man Freq Offset 0 Hz



A.3 Carrier Frequency Separation

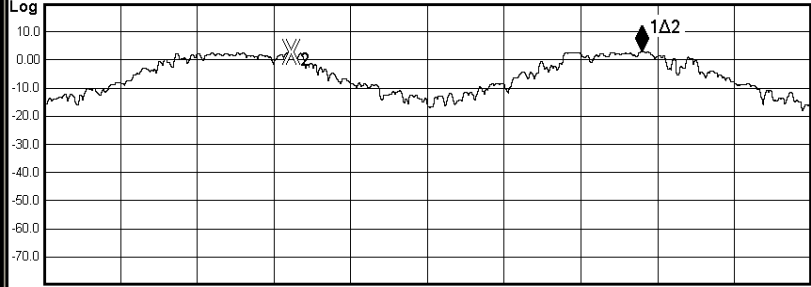
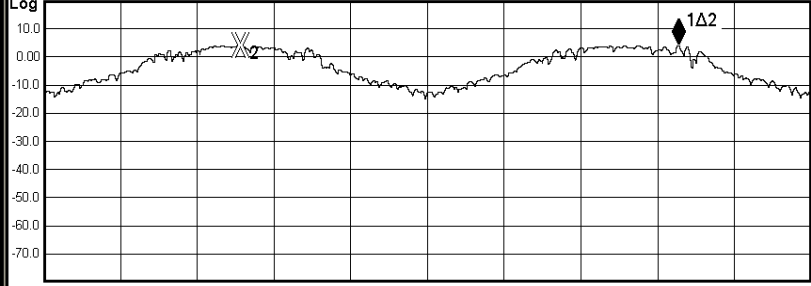
Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.033	0.692	PASS
	MCH	1.008	0.692	PASS
	HCH	0.980	0.692	PASS
$\pi/4$ DQPSK	LCH	0.916	0.874	PASS
	MCH	1.142	0.874	PASS
	HCH	1.026	0.874	PASS
8DPSK	LCH	1.010	0.863	PASS
	MCH	1.154	0.863	PASS
	HCH	1.100	0.863	PASS





GFSK/MCH	Agilent Spectrum Analyzer - Swept SA RL RF 50 Ω AC SENSE:INT ALIGN AUTO 05:57:52 PM Jun 29, 2021 Center Freq 2.441500000 GHz PNO: Wide → IF Gain: Low Trig: Free Run #Atten: 30 dB #Avg Type: RMS Avg/Hold: 10/10 TRACE 1 2 3 4 5 6 TYPE M W W W W W W W DET P P P P P P Frequency Auto Tune Center Freq 2.441500000 GHz Start Freq 2.440500000 GHz Stop Freq 2.442500000 GHz CF Step 200.000 kHz Man Freq Offset 0 Hz 10 dB/div Ref Offset 8.05 dB Ref 20.00 dBm ΔMkr1 1.008 MHz 0.011 dB Start 2.440500 GHz #Res BW 100 kHz #VBW 300 kHz Stop 2.442500 GHz Sweep 1.000 ms (1001 pts) <table><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><tr><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>6</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>8</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>9</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>10</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>11</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> MSG STATUS	MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1									2									3									4									5									6									7									8									9									10									11								
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GFSK/HCH	Agilent Spectrum Analyzer - Swept SA RL RF 50 Ω AC SENSE:INT ALIGN AUTO 05:58:10 PM Jun 29, 2021 Center Freq 2.479500000 GHz PNO: Wide → IF Gain: Low Trig: Free Run #Atten: 30 dB #Avg Type: RMS Avg/Hold: 10/10 TRACE 1 2 3 4 5 6 TYPE M W W W W W W W DET P P P P P P Frequency Auto Tune Center Freq 2.479500000 GHz Start Freq 2.478500000 GHz Stop Freq 2.480500000 GHz CF Step 200.000 kHz Man Freq Offset 0 Hz 10 dB/div Ref Offset 8.05 dB Ref 20.00 dBm ΔMkr1 980 kHz -0.200 dB Start 2.478500 GHz #Res BW 100 kHz #VBW 300 kHz Stop 2.480500 GHz Sweep 1.000 ms (1001 pts) <table><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><tr><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>6</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>8</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>9</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>10</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>11</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> MSG STATUS	MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1									2									3									4									5									6									7									8									9									10									11								
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π/4DQPSK/LCH	Agilent Spectrum Analyzer - Swept SA RL RF 50 Ω AC SENSE:INT ALIGN: AUTO 06:00:09 PM Jun 29, 2021 Center Freq 2.402500000 GHz PNO: Wide IF Gain: Low Trig: Free Run #Atten: 30 dB #Avg Type: RMS Avg Hold: 10/10 TRACE 1 2 3 4 5 6 TYPE M W W W W W W W DET P P P P P P Frequency Auto Tune Center Freq 2.402500000 GHz Start Freq 2.401500000 GHz Stop Freq 2.403500000 GHz CF Step 200.000 kHz Man Freq Offset 0 Hz 10 dB/div Ref Offset 8.05 dB Ref 20.00 dBm ΔMkr1 916 kHz 0.005 dB  Start 2.401500 GHz #Res BW 100 kHz #VBW 300 kHz Stop 2.403500 GHz Sweep 1.000 ms (1001 pts) <table><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><tr><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>6</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>8</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>9</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>10</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>11</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> MSG STATUS	MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1									2									3									4									5									6									7									8									9									10									11								
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π/4DQPSK/MCH	Agilent Spectrum Analyzer - Swept SA RL RF 50 Ω AC SENSE:INT ALIGN: AUTO 06:01:48 PM Jun 29, 2021 Center Freq 2.441500000 GHz PNO: Wide IF Gain: Low Trig: Free Run #Atten: 30 dB #Avg Type: RMS Avg Hold: 10/10 TRACE 1 2 3 4 5 6 TYPE M W W W W W W W DET P P P P P P Frequency Auto Tune Center Freq 2.441500000 GHz Start Freq 2.440500000 GHz Stop Freq 2.442500000 GHz CF Step 200.000 kHz Man Freq Offset 0 Hz 10 dB/div Ref Offset 8.05 dB Ref 20.00 dBm ΔMkr1 1.142 MHz -0.065 dB  Start 2.440500 GHz #Res BW 100 kHz #VBW 300 kHz Stop 2.442500 GHz Sweep 1.000 ms (1001 pts) <table><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><tr><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>6</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>8</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>9</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>10</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>11</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> MSG STATUS	MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1									2									3									4									5									6									7									8									9									10									11								
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π /4DQPSK/HCH	Agilent Spectrum Analyzer - Swept SA RL RF 50 Q AC SENSE:INT ALIGN AUTO 06:02:11 PM Jun 29, 2021 Center Freq 2.479500000 GHz PNO: Wide IFGain:Low Trig: Free Run #Atten: 30 dB #Avg Type: RMS AvgHold: 10/10 TRACE 1 2 3 4 5 6 TYPE M W W W W W W W DET P P P P P P Frequency Auto Tune Center Freq 2.479500000 GHz Start Freq 2.478500000 GHz Stop Freq 2.480500000 GHz CF Step 200.000 kHz Man Freq Offset 0 Hz 10 dB/div Ref Offset 8.05 dB Ref 20.00 dBm ΔMkr1 1.026 MHz -0.059 dB Start 2.478500 GHz #Res BW 100 kHz #VBW 300 kHz Stop 2.480500 GHz Sweep 1.000 ms (1001 pts) <table><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><tr><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>6</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>8</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>9</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>10</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>11</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> MSG STATUS	MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1									2									3									4									5									6									7									8									9									10									11								
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8DPSK/LCH	Agilent Spectrum Analyzer - Swept SA RL RF 50 Q AC SENSE:INT ALIGN AUTO 06:05:20 PM Jun 29, 2021 Center Freq 2.402500000 GHz PNO: Wide IFGain:Low Trig: Free Run #Atten: 30 dB #Avg Type: RMS AvgHold: 10/10 TRACE 1 2 3 4 5 6 TYPE M W W W W W W W DET P P P P P P Frequency Auto Tune Center Freq 2.402500000 GHz Start Freq 2.401500000 GHz Stop Freq 2.403500000 GHz CF Step 200.000 kHz Man Freq Offset 0 Hz 10 dB/div Ref Offset 8.05 dB Ref 20.00 dBm ΔMkr1 1.010 MHz 0.901 dB Start 2.401500 GHz #Res BW 100 kHz #VBW 300 kHz Stop 2.403500 GHz Sweep 1.000 ms (1001 pts) <table><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><tr><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>6</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>8</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>9</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>10</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>11</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> MSG STATUS	MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1									2									3									4									5									6									7									8									9									10									11								
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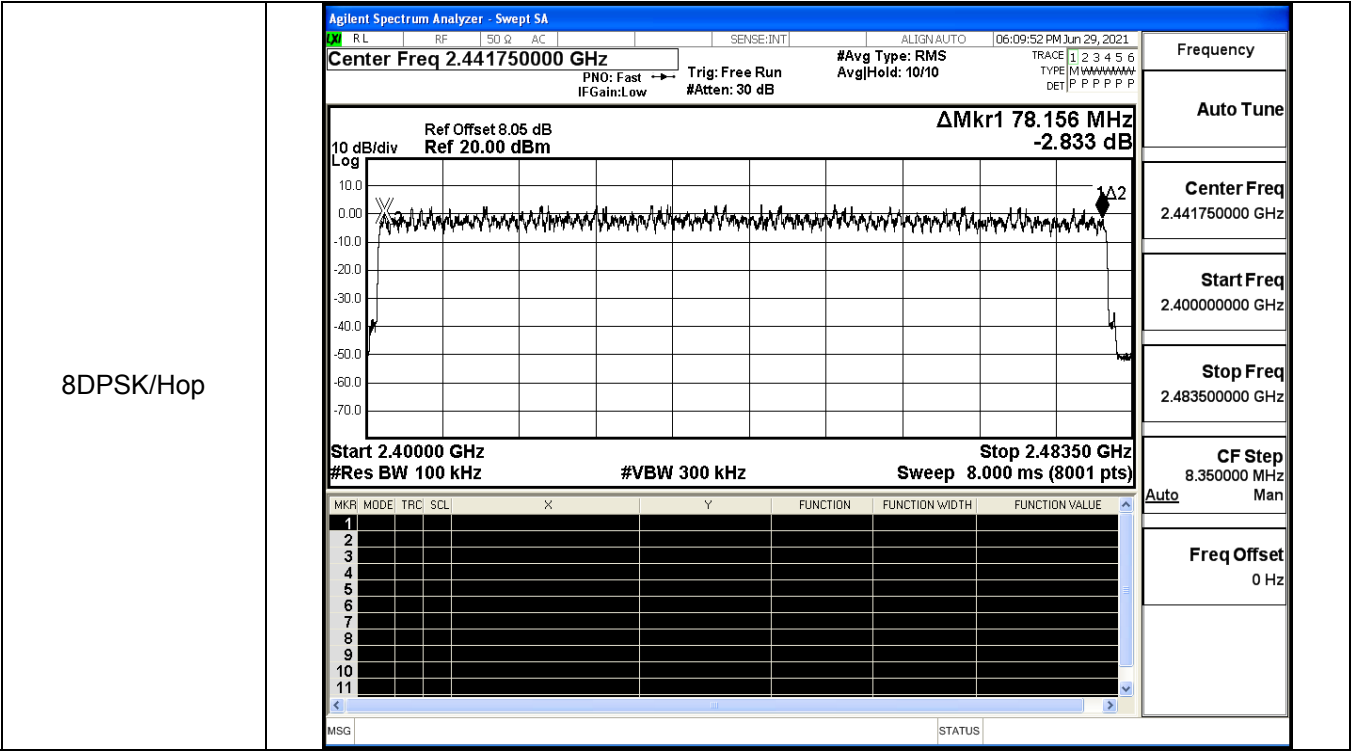
8DPSK/MCH	Agilent Spectrum Analyzer - Swept SA RL RF 50 Ω AC SENSE:INT ALIGN AUTO 06:06:59 PM Jun 29, 2021 Center Freq 2.441500000 GHz PNO: Wide IF Gain: Low Trig: Free Run #Atten: 30 dB #Avg Type: RMS Avg/Hold: 10/10 TRACE 1 2 3 4 5 6 TYPE M W W W W W W W DET P P P P P P Frequency Auto Tune Center Freq2.441500000 GHz Start Freq2.440500000 GHz Stop Freq2.442500000 GHz CF Step200.000 kHzMan Freq Offset0 Hz 10 dB/div Ref Offset 8.05 dB Ref 20.00 dBm ΔMkr1 1.154 MHz -2.447 dB Start 2.440500 GHz #Res BW 100 kHz #VBW 300 kHz Stop 2.442500 GHz Sweep 1.000 ms (1001 pts) <table><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><tr><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>6</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>8</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>9</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>10</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>11</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> MSG STATUS	MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1									2									3									4									5									6									7									8									9									10									11									
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Agilent Spectrum Analyzer - Swept SA RL RF 50 Ω AC SENSE:INT ALIGN AUTO 06:07:22 PM Jun 29, 2021 Center Freq 2.479500000 GHz PNO: Wide IF Gain: Low Trig: Free Run #Atten: 30 dB #Avg Type: RMS Avg/Hold: 10/10 TRACE 1 2 3 4 5 6 TYPE M W W W W W W W DET P P P P P P Frequency Auto Tune Center Freq2.479500000 GHz Start Freq2.478500000 GHz Stop Freq2.480500000 GHz CF Step200.000 kHzMan Freq Offset0 Hz 10 dB/div Ref Offset 8.05 dB Ref 20.00 dBm ΔMkr1 1.100 MHz 1.637 dB Start 2.478500 GHz #Res BW 100 kHz #VBW 300 kHz Stop 2.480500 GHz Sweep 1.000 ms (1001 pts) <table><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><tr><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>6</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>8</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>9</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>10</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>11</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> MSG STATUS	MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1									2									3									4									5									6									7									8									9									10									11										
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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

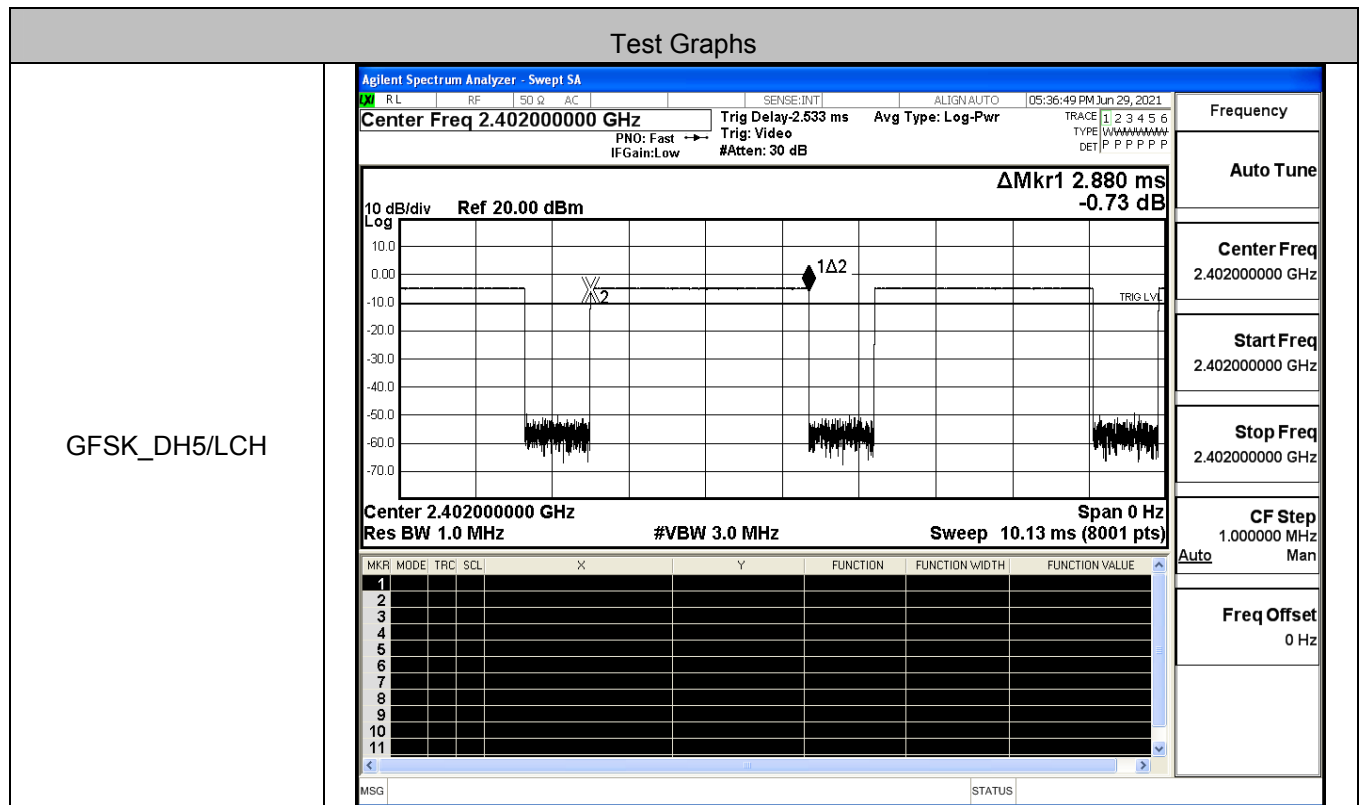
Test Graphs																																																																																																													
GFSK/Hop	Agilent Spectrum Analyzer - Swept SA Center Freq 2.441750000 GHz Ref Offset 8.05 dB Ref 20.00 dBm 10 dB/div Log Start 2.40000 GHz #Res BW 100 kHz Stop 2.48350 GHz #VBW 300 kHz Sweep 8.000 ms (8001 pts) ΔMkr1 77.937 MHz -0.294 dB <table><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><tr><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>6</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>8</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>9</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>10</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>11</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> Frequency Auto Tune Center Freq 2.441750000 GHz Start Freq 2.400000000 GHz Stop Freq 2.483500000 GHz CF Step 8.350000 MHz Man Freq Offset 0 Hz	MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1									2									3									4									5									6									7									8									9									10									11								
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π/4DQPSK/Hop	Agilent Spectrum Analyzer - Swept SA Center Freq 2.441750000 GHz Ref Offset 8.05 dB Ref 20.00 dBm 10 dB/div Log Start 2.40000 GHz #Res BW 100 kHz Stop 2.48350 GHz #VBW 300 kHz Sweep 8.000 ms (8001 pts) ΔMkr1 78.020 MHz -0.887 dB <table><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><tr><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>6</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>8</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>9</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>10</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>11</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> Frequency Auto Tune Center Freq 2.441750000 GHz Start Freq 2.400000000 GHz Stop Freq 2.483500000 GHz CF Step 8.350000 MHz Man Freq Offset 0 Hz	MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1									2									3									4									5									6									7									8									9									10									11								
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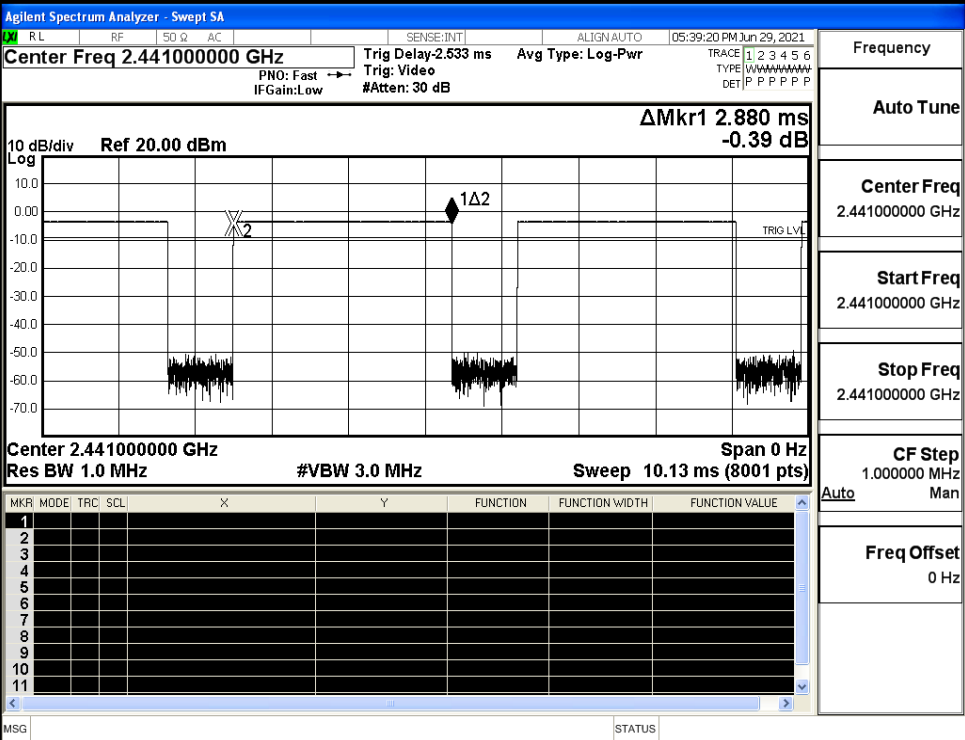
A.5 Dwell Time

Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.88	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	2.88	106.7	0.307	0.4	PASS
8DPSK	3DH5	LCH	2.88	106.7	0.308	0.4	PASS
	3DH5	MCH	2.88	106.7	0.308	0.4	PASS
	3DH5	HCH	2.88	106.7	0.308	0.4	PASS

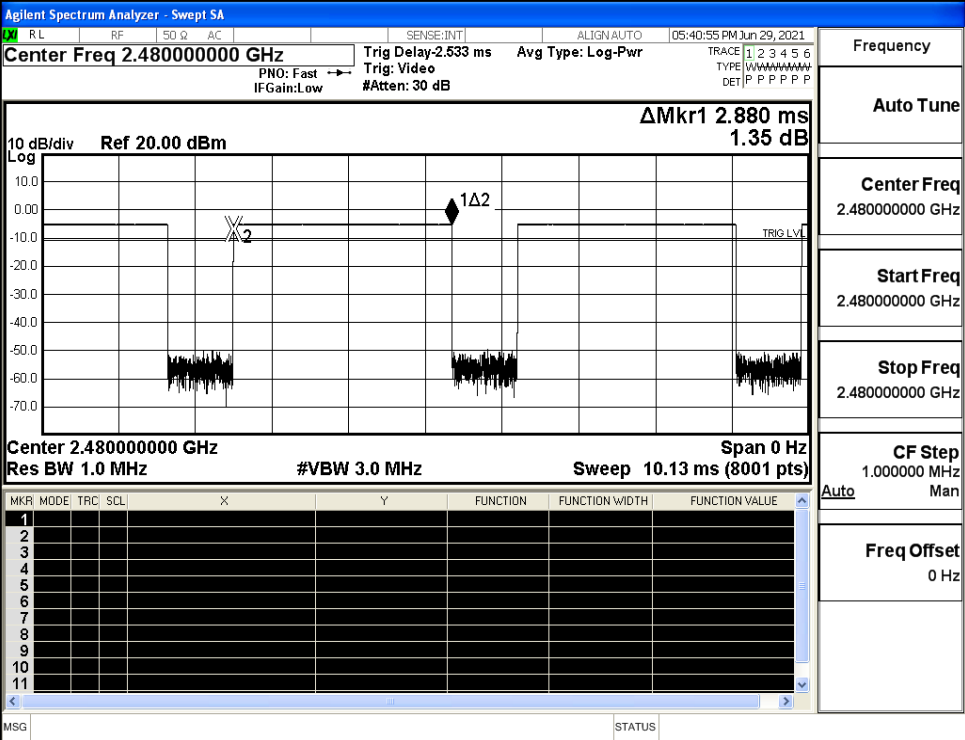


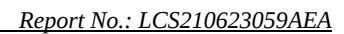


GFSK_DH5/MCH



GFSK_DH5/HCH





Agilent Spectrum Analyzer - Swept SA

RL	RF	50 Q	AC	SENSE:INT	ALIGN:AUTO	05:43:25 PM Jun 29, 2021
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Center Freq 2.402000000 GHz Trig Delay: 2.533 ms Avg Type: Log-Pwr
 PNO: Fast → Trig: Video TYPE: 1 2 3 4 5 6
 IF Gain: Low #Atten: 30 dB DET: P P P P P P

ΔMkr1 2.884 ms
-2.25 dB

10 dB/div Ref 20.00 dBm

Log

Center 2.402000000 GHz Span 0 Hz
 Res BW 1.0 MHz #VBW 3.0 MHz Sweep 10.13 ms (8001 pts)

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4								
5								
6								
7								
8								
9								
10								
11								

MSG STATUS

Frequency

Auto Tune

Center Freq
2.402000000 GHz

Start Freq
2.402000000 GHz

Stop Freq
2.402000000 GHz

CF Step
1.000000 MHz
Man

Freq Offset
0 Hz

Agilent Spectrum Analyzer - Swept SA

RL	RF	SO Q AC	SENSE:INT	ALIGN:AUTO	05:45:47 PM Jun 29, 2021
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Center Freq 2.441000000 GHz Trig Delay: 2.533 ms Avg Type: Log-Pwr
 PNO: Fast → Trig: Video TYPE: W W W W W W W W
 IF Gain: Low #Atten: 30 dB DET: P P P P P P

Frequency

Auto Tune

Center Freq
2.441000000 GHz

Start Freq
2.441000000 GHz

Stop Freq
2.441000000 GHz

CF Step
1.000000 MHz
Man

Freq Offset
0 Hz

Auto



π/4DQPSK _2DH5/HCH	Agilent Spectrum Analyzer - Swept SA RLRF50ΩACSENSE:INTALIGN AUTO05:47:22 PM Jun 29, 2021 Center Freq 2.480000000 GHzTrig Delay-2.533 msAvg Type: Log-Pwr PNO: FastIFGain:LowTrig: Video#Atten: 30 dB Frequency Auto Tune Center Freq2.480000000 GHz Start Freq2.480000000 GHz Stop Freq2.480000000 GHz CF Step1.000000 MHzAutoMan Freq Offset0 Hz 10 dB/divRef 20.00 dBm Log ΔMkr1 2.883 ms-1.40 dB Center 2.480000000 GHzRes BW 1.0 MHz#VBW 3.0 MHzSweep 10.13 ms (8001 pts)Span 0 Hz <table><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><tr><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>6</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>8</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>9</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>10</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>11</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> MSG STATUS	MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1									2									3									4									5									6									7									8									9									10									11								
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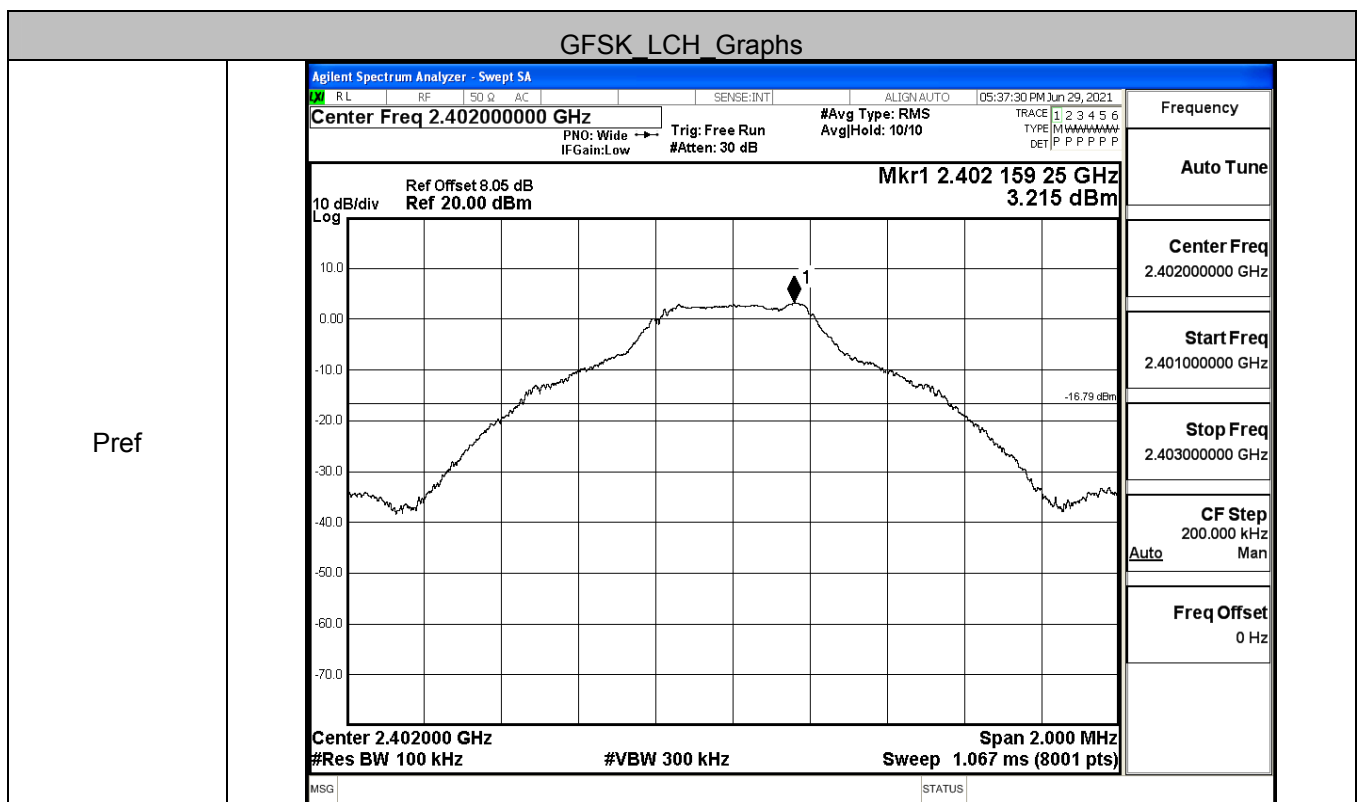


8DPSK_3DH5/MCH	Agilent Spectrum Analyzer - Swept SA RL RF 50 Q AC SENSE:INT ALIGN AUTO 05:52:30 PM Jun 29, 2021 Center Freq 2.441000000 GHz Trig Delay-2.533 ms Avg Type: Log-Pwr Trig: Video PNO: Fast IFGain:Low #Atten: 30 dB TRACE 1 2 3 4 5 6 TYPE W W W W W W W W DET P P P P P P P Frequency Auto Tune 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 10 dB/div Ref 20.00 dBm Log ΔMkr1 2.885 ms 0.07 dB 1Δ2 Center 2.441000000 GHz Res BW 1.0 MHz #VBW 3.0 MHz Sweep 10.13 ms (8001 pts) Span 0 Hz <table><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><tr><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>6</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>8</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>9</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>10</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>11</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> MSG STATUS	MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1									2									3									4									5									6									7									8									9									10									11								
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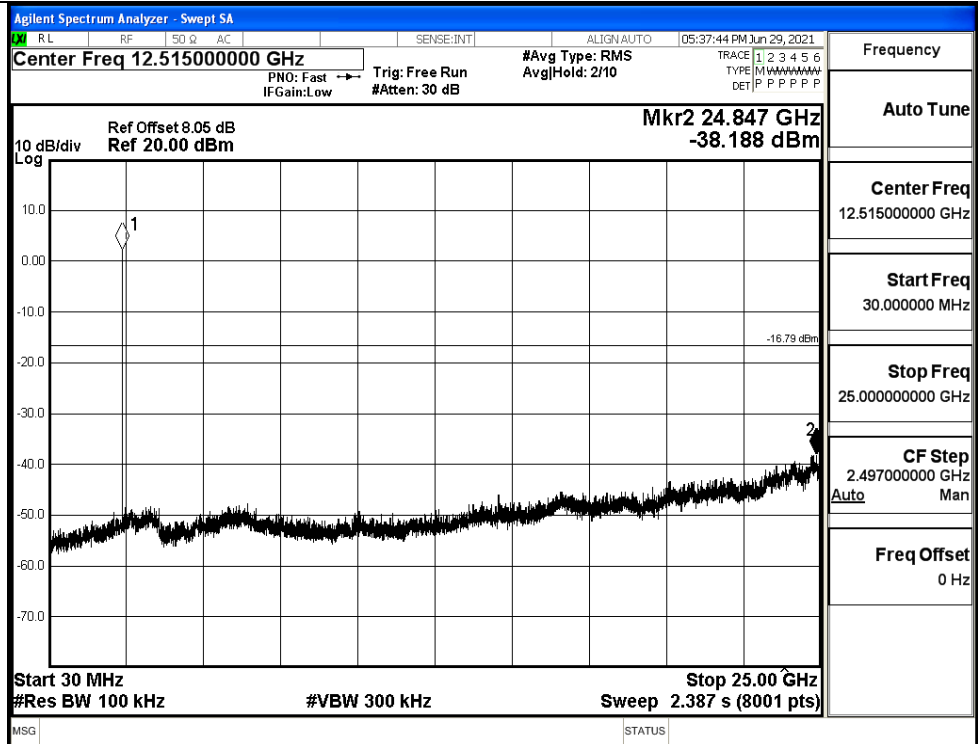
A.6 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	3.215	-38.188	-16.785	PASS
	MCH	4.569	-37.848	-15.431	PASS
	HCH	2.913	-38.175	-17.087	PASS
$\pi/4$ DQPSK	LCH	1.578	-37.502	-18.422	PASS
	MCH	2.928	-37.598	-17.072	PASS
	HCH	1.619	-38.148	-18.381	PASS
8DPSK	LCH	1.628	-37.889	-18.372	PASS
	MCH	3.099	-38.362	-16.901	PASS
	HCH	1.51	-37.845	-18.490	PASS



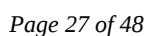


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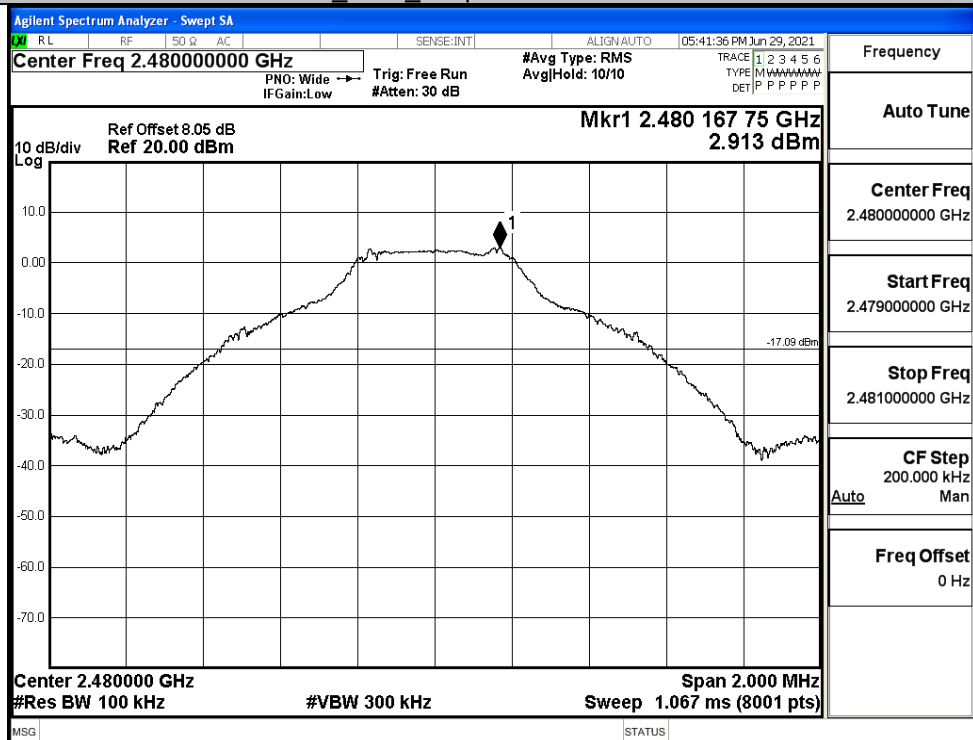
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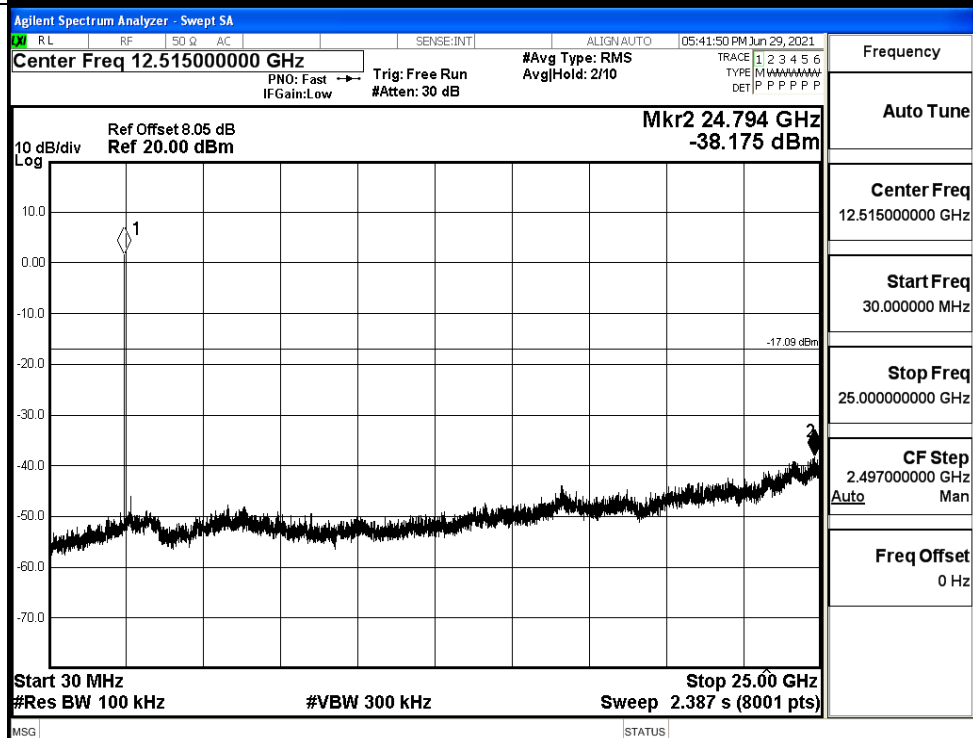


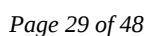
GFSK_HCH_Graphs

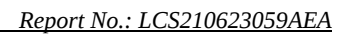
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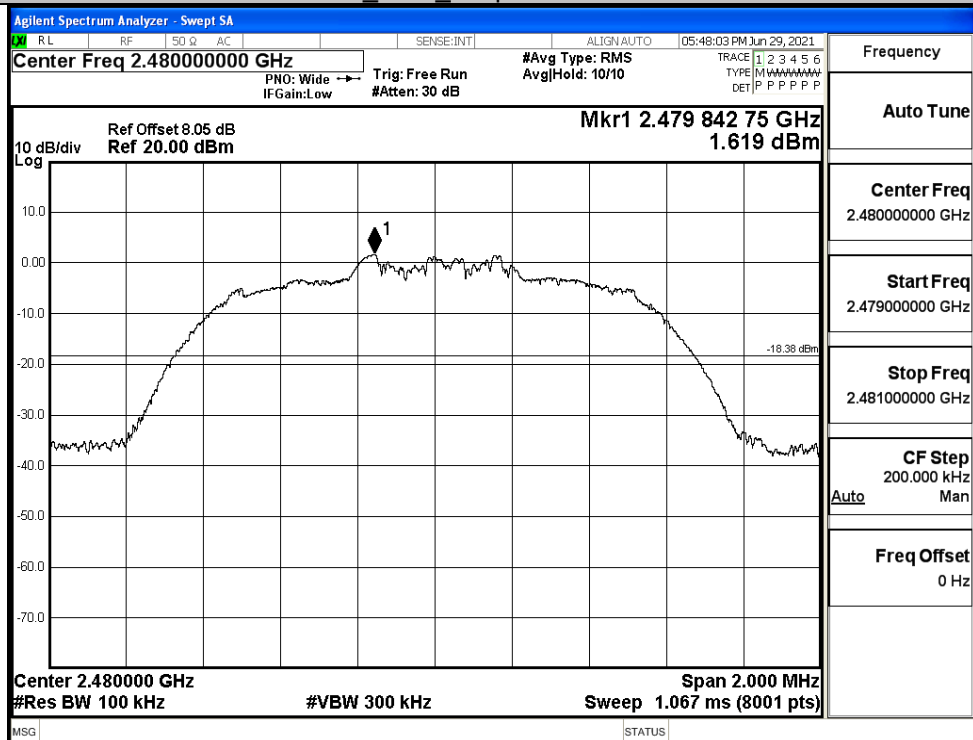




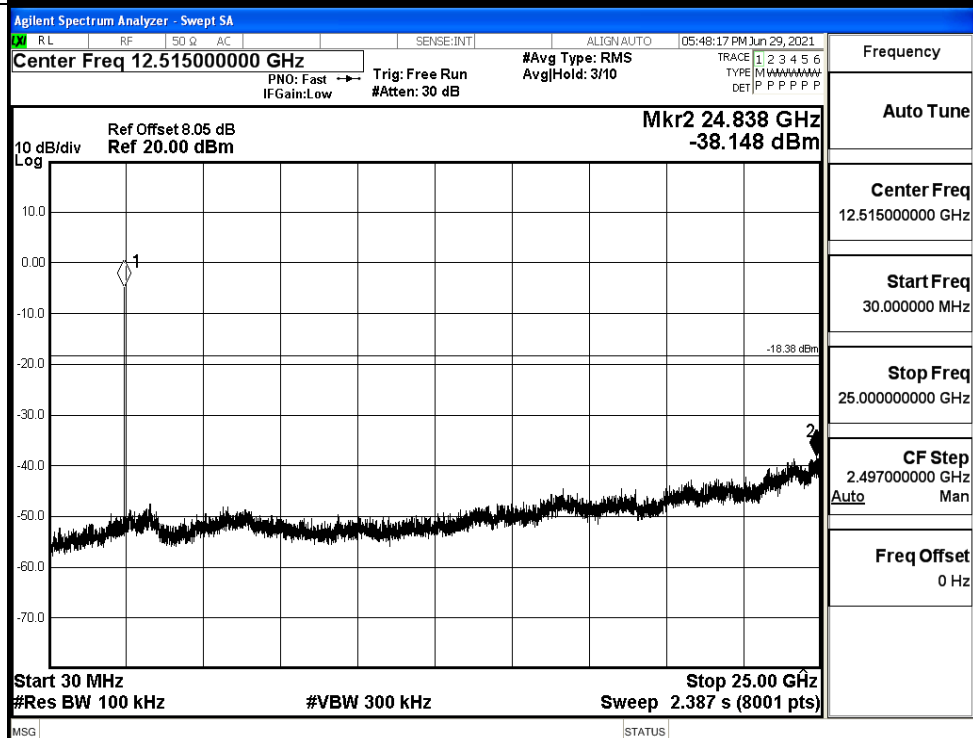


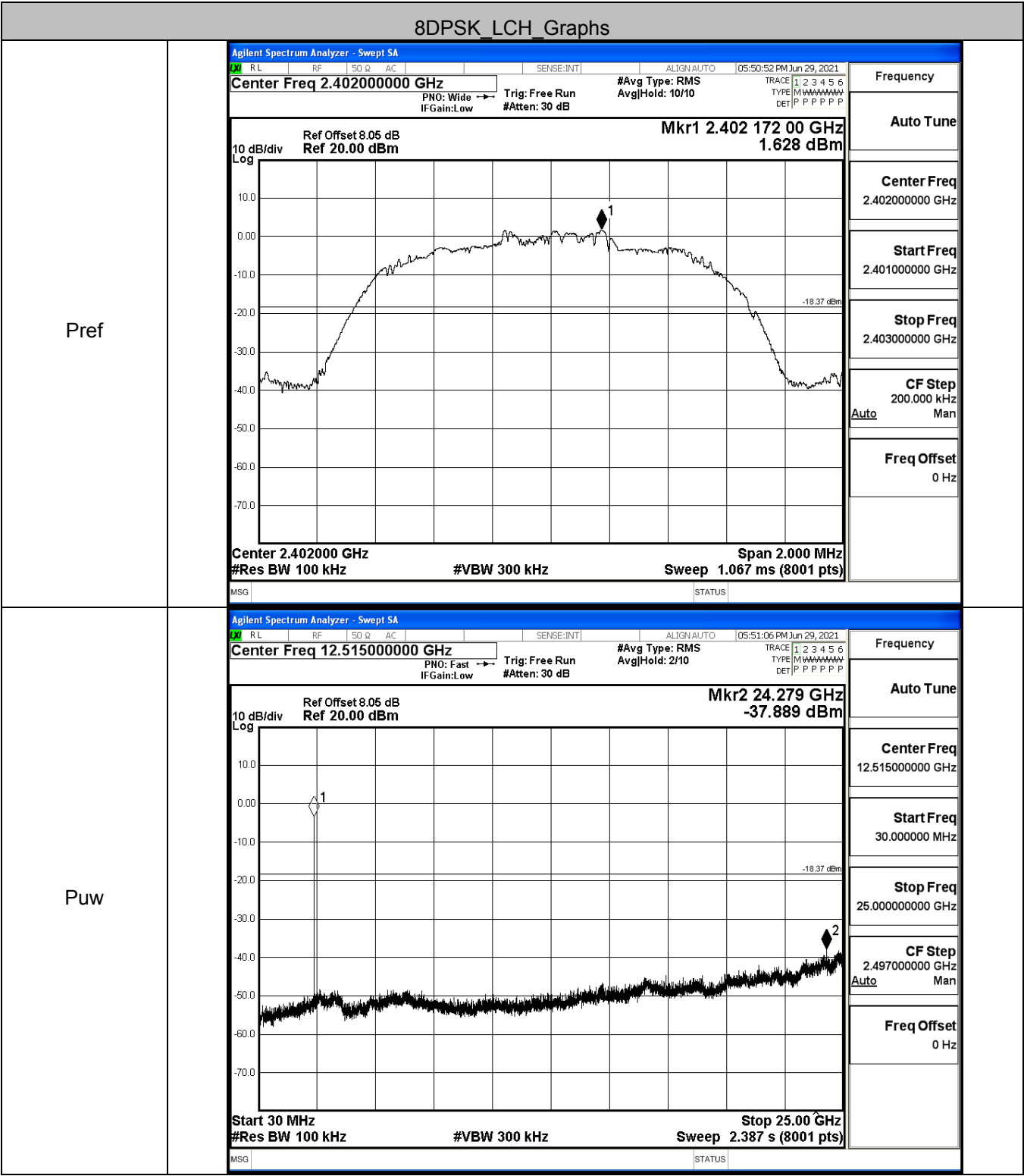
 $\pi/4$ DQPSK_HCH_Graphs

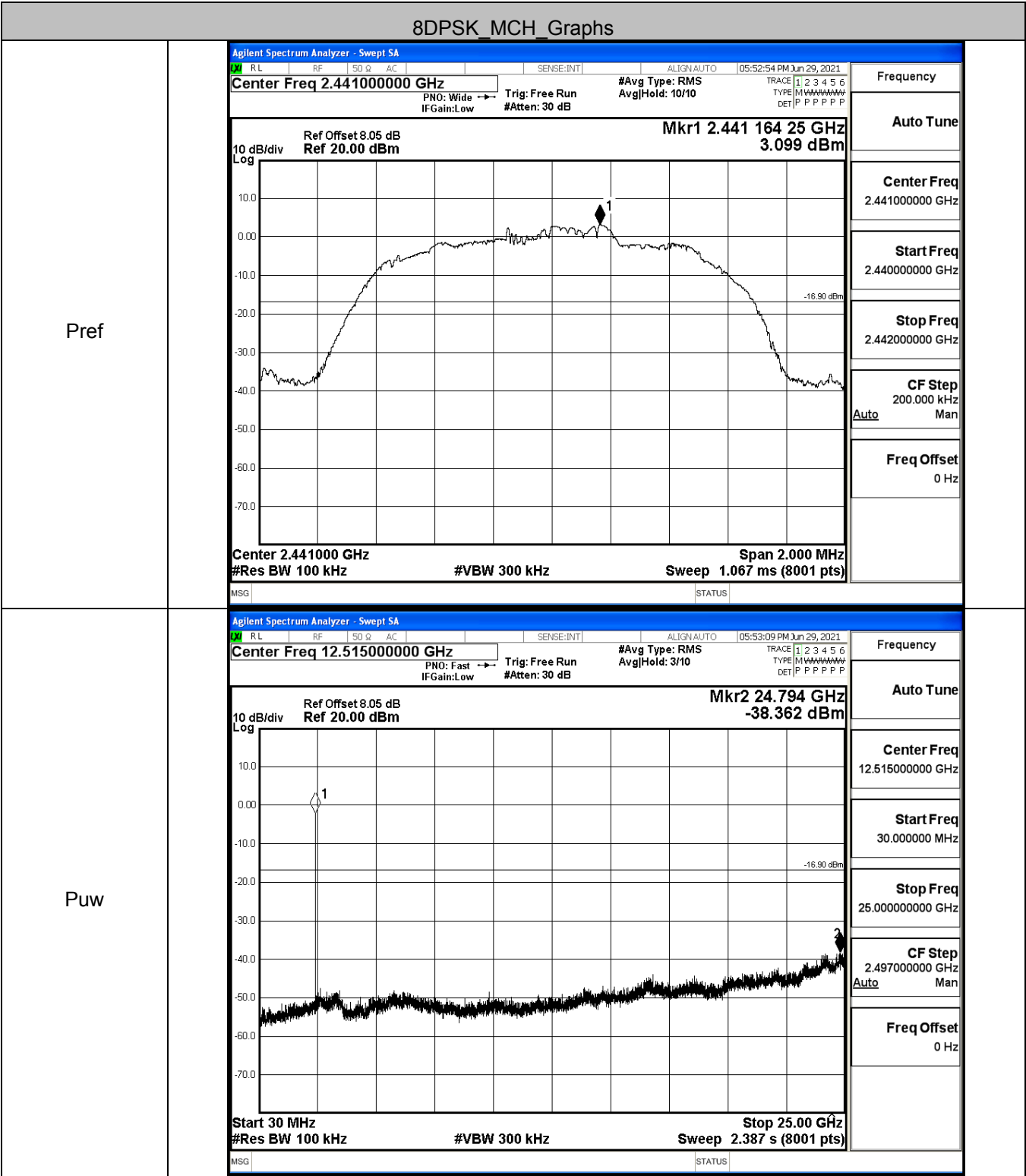
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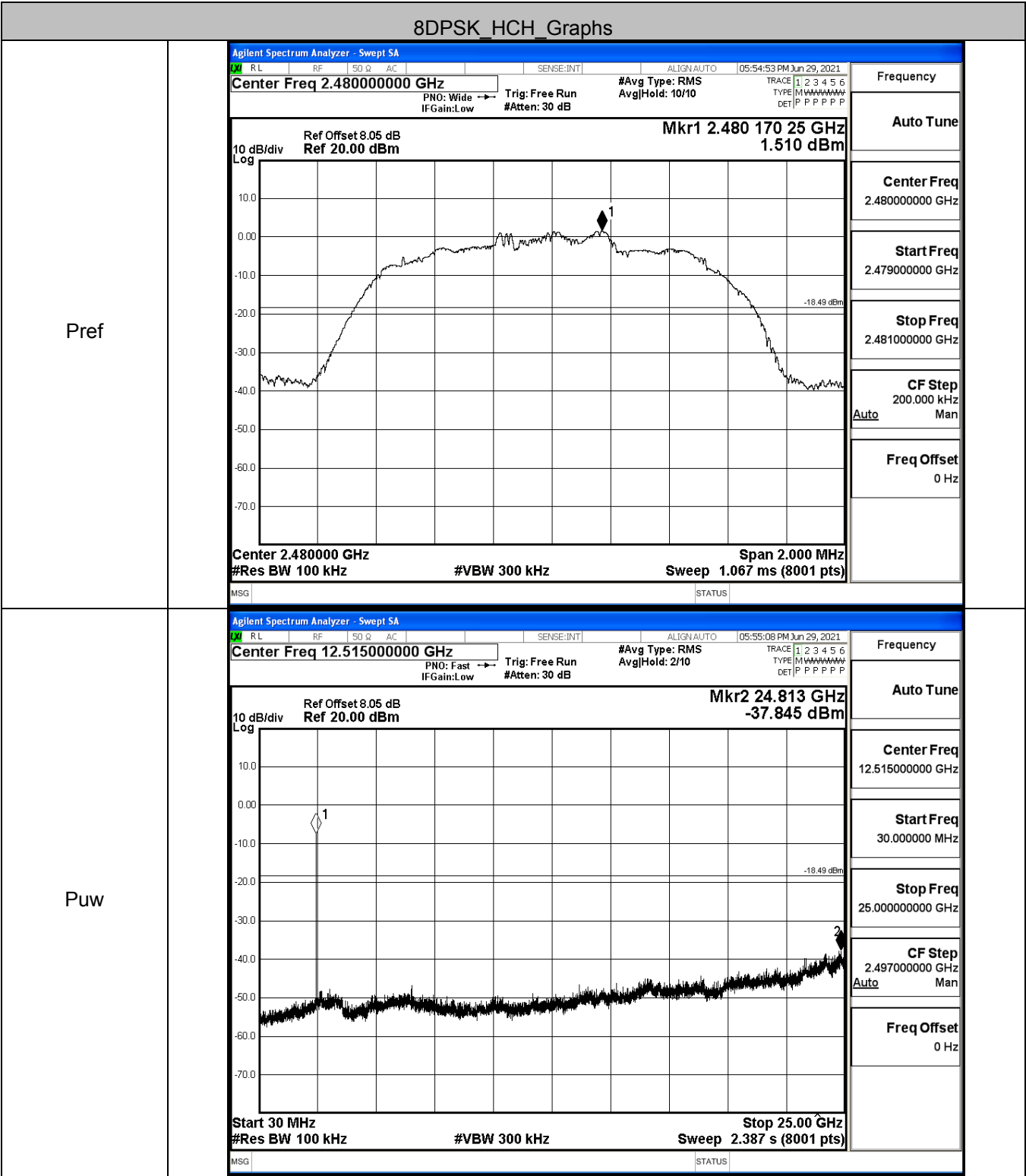


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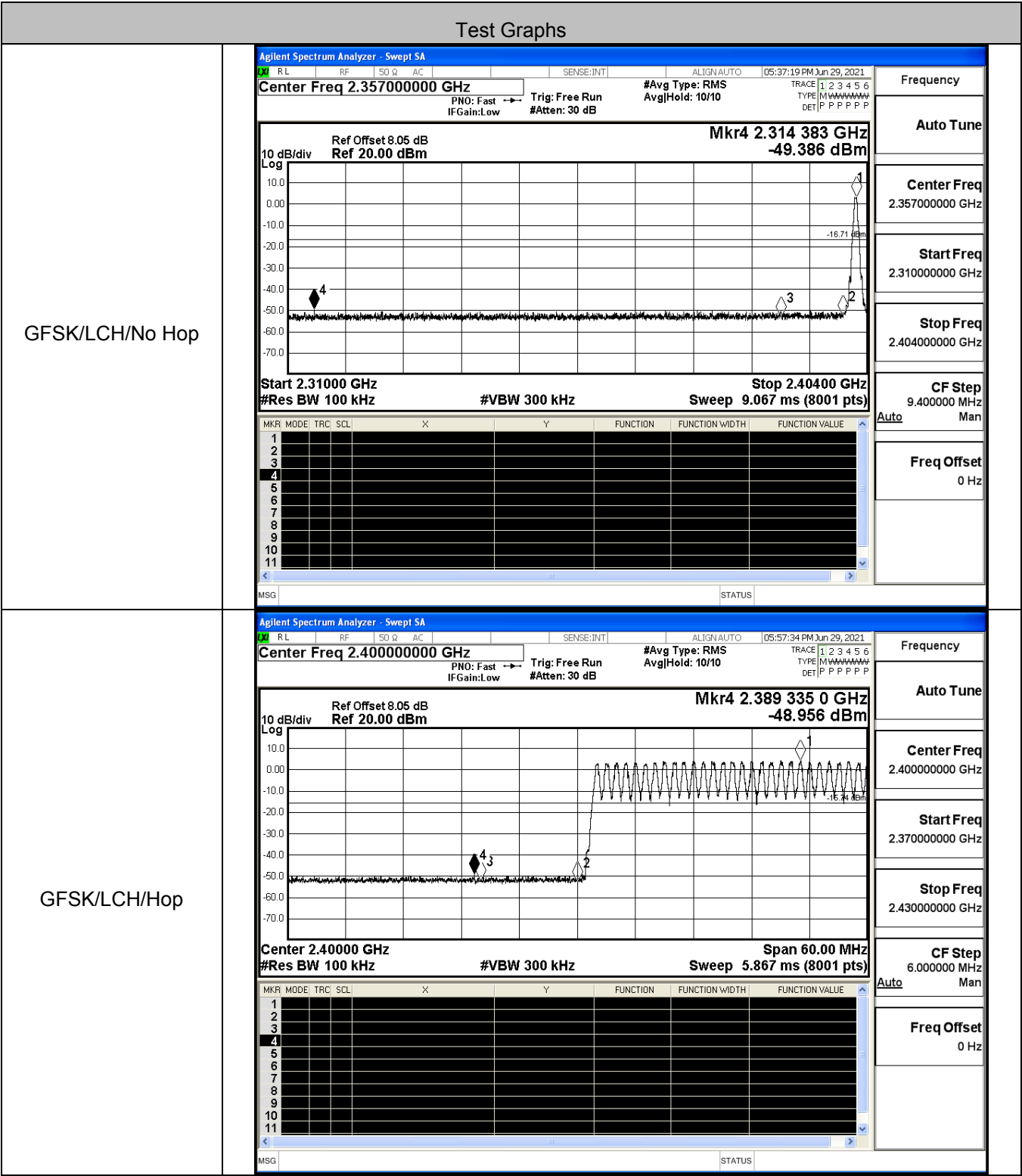






A.7 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	3.288	Off	-49.386	-16.71	PASS
			4.257	On	-48.956	-15.74	PASS
	HCH	2480	3.084	Off	-48.020	-16.92	PASS
			4.310	On	-48.754	-15.69	PASS
$\pi/4$ DQPSK	LCH	2402	0.585	Off	-49.667	-19.42	PASS
			4.227	On	-47.050	-15.77	PASS
	HCH	2480	1.655	Off	-49.266	-18.35	PASS
			4.258	On	-28.331	-15.74	PASS
8DPSK	LCH	2402	-0.786	Off	-49.521	-20.79	PASS
			2.961	On	-49.657	-17.04	PASS
	HCH	2480	1.759	Off	-49.526	-18.24	PASS
			2.881	On	-48.187	-17.12	PASS





GFSK/HCH/No Hop	Agilent Spectrum Analyzer - Swept SA RL RF 50 Ω AC SENSE:INT ALIGN:AUTO 05:41:25 PM Jun 29, 2021 Center Freq 2.489000000 GHz PN0: Fast IF Gain: Low Trig: Free Run #Atten: 30 dB #Avg Type: RMS Avg/Hold: 10/10 TRACE 1 TYPE M DET P Frequency Auto Tune Center Freq 2.489000000 GHz Start Freq 2.478000000 GHz Stop Freq 2.500000000 GHz CF Step 2.200000 MHz Freq Offset 0 Hz 10 dB/div Ref Offset 8.05 dB Ref 20.00 dBm Mkr4 2.498 619 50 GHz -48.020 dBm -16.92 dBm Start 2.47800 GHz #Res BW 100 kHz #VBW 300 kHz Stop 2.50000 GHz Sweep 2.133 ms (8001 pts) <table><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><tr><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>6</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>8</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>9</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>10</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>11</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> MSGSTATUS	MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1									2									3									4									5									6									7									8									9									10									11								
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GFSK/HCH/Hop	Agilent Spectrum Analyzer - Swept SA RL RF 50 Ω AC SENSE:INT ALIGN:AUTO 05:58:45 PM Jun 29, 2021 Center Freq 2.483500000 GHz PN0: Fast IF Gain: Low Trig: Free Run #Atten: 30 dB #Avg Type: RMS Avg/Hold: 10/10 TRACE 1 TYPE M DET P Frequency Auto Tune Center Freq 2.483500000 GHz Start Freq 2.453500000 GHz Stop Freq 2.513500000 GHz CF Step 6.000000 MHz Freq Offset 0 Hz 10 dB/div Ref Offset 8.05 dB Ref 20.00 dBm Mkr4 2.487 895 0 GHz -48.754 dBm -15.69 dBm Center 2.48350 GHz #Res BW 100 kHz #VBW 300 kHz Span 60.00 MHz Sweep 5.867 ms (8001 pts) <table><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><tr><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>6</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>8</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>9</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>10</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>11</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> MSGSTATUS	MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1									2									3									4									5									6									7									8									9									10									11								
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π/4DQPSK/LCH/No Hop	Agilent Spectrum Analyzer - Swept SA Center Freq 2.357000000 GHz Ref Offset 8.05 dB Ref 20.00 dBm 10 dB/div Log Start 2.31000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 9.067 ms (8001 pts) Mkr4 2.366 318 GHz -49.667 dBm 19.42 dBm 1 2 3 4 1 2 3 4 5 6 7 8 9 10 11 MSG STATUS Frequency Auto Tune Center Freq2.357000000 GHz Start Freq2.310000000 GHz Stop Freq2.404000000 GHz CF Step9.400000 MHz AutoMan Freq Offset0 Hz
π/4DQPSK/LCH/Hop	Agilent Spectrum Analyzer - Swept SA Center Freq 2.400000000 GHz Ref Offset 8.05 dB Ref 20.00 dBm 10 dB/div Log Center 2.40000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 5.867 ms (8001 pts) Mkr4 2.389 545 0 GHz -47.050 dBm 1 2 3 4 1 2 3 4 5 6 7 8 9 10 11 MSG STATUS Frequency Auto Tune Center Freq2.400000000 GHz Start Freq2.370000000 GHz Stop Freq2.430000000 GHz CF Step6.000000 MHz AutoMan Freq Offset0 Hz



π/4DQPSK/HCH/No Hop	Agilent Spectrum Analyzer - Swept SA Center Freq 2.489000000 GHz Ref Offset 8.05 dB Ref 20.00 dBm 10 dB/div Log Start 2.47800 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.133 ms (8001 pts) Mkr4 2.492 520 00 GHz -49.266 dBm 1 2 3 4 5 6 7 8 9 10 11 MSG STATUS
π/4DQPSK/HCH/Hop	Agilent Spectrum Analyzer - Swept SA Center Freq 2.483500000 GHz Ref Offset 8.05 dB Ref 20.00 dBm 10 dB/div Log Center 2.48350 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 5.867 ms (8001 pts) Mkr4 2.483 545 0 GHz -28.331 dBm 1 2 3 4 5 6 7 8 9 10 11 MSG STATUS



8DPSK/LCH/No Hop	Agilent Spectrum Analyzer - Swept SA Center Freq 2.357000000 GHz Ref Offset 8.05 dB Ref 20.00 dBm 10 dB/div Log Start 2.31000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 9.067 ms (8001 pts) Mkr4 2.310 094 GHz -49.521 dBm Trig: Free Run #Atten: 30 dB Frequency Auto Tune Center Freq 2.357000000 GHz Start Freq 2.310000000 GHz Stop Freq 2.404000000 GHz CF Step 9.400000 MHz Auto Man Freq Offset 0 Hz MSG STATUS
8DPSK/LCH/Hop	Agilent Spectrum Analyzer - Swept SA Center Freq 2.400000000 GHz Ref Offset 8.05 dB Ref 20.00 dBm 10 dB/div Log Center 2.40000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 5.867 ms (8001 pts) Mkr4 2.387 520 0 GHz -49.657 dBm Trig: Free Run #Atten: 30 dB Frequency Auto Tune Center Freq 2.400000000 GHz Start Freq 2.370000000 GHz Stop Freq 2.430000000 GHz CF Step 6.000000 MHz Auto Man Freq Offset 0 Hz MSG STATUS



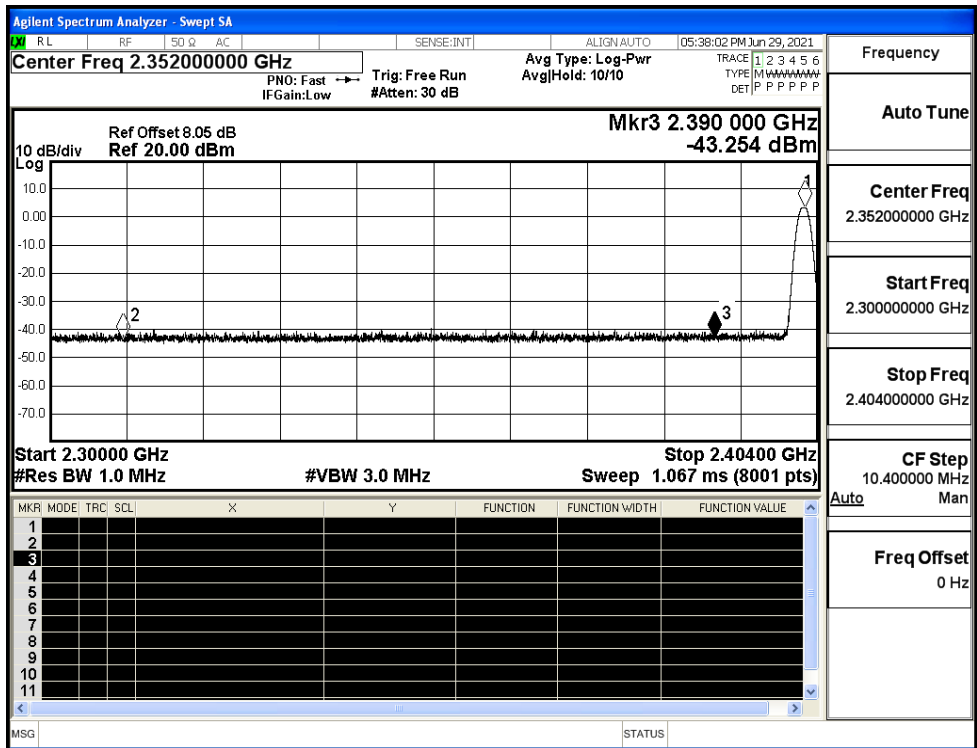
8DPSK/HCH/No Hop	Agilent Spectrum Analyzer - Swept SA Center Freq 2.489000000 GHz Ref Offset 8.05 dB Ref 20.00 dBm 10 dB/div Log 1 2 3 4 5 6 7 8 9 10 11 Start 2.47800 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.133 ms (8001 pts) Mkr4 2.493 716 25 GHz -49.526 dBm Trig: Free Run #Atten: 30 dB PN0: Fast IFGain:Low #Avg Type: RMS AvgHold: 10/10 ALIGN AUTO 05:54:42 PM Jun 29, 2021 TRACE 1 2 3 4 5 6 TYPE M W W W W W W W DET P P P P P P Frequency Auto Tune Center Freq 2.489000000 GHz Start Freq 2.478000000 GHz Stop Freq 2.500000000 GHz CF Step 2.200000 MHz Auto Man Freq Offset 0 Hz
8DPSK/HCH/Hop	Agilent Spectrum Analyzer - Swept SA Center Freq 2.483500000 GHz Ref Offset 8.05 dB Ref 20.00 dBm 10 dB/div Log 1 2 3 4 5 6 7 8 9 10 11 Center 2.48350 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 5.867 ms (8001 pts) Mkr4 2.495 672 5 GHz -48.187 dBm Trig: Free Run #Atten: 30 dB PN0: Fast IFGain:Low #Avg Type: RMS AvgHold: 10/10 ALIGN AUTO 06:08:37 PM Jun 29, 2021 TRACE 1 2 3 4 5 6 TYPE M W W W W W W W DET P P P P P P Frequency Auto Tune Center Freq 2.483500000 GHz Start Freq 2.453500000 GHz Stop Freq 2.513500000 GHz CF Step 6.000000 MHz Auto Man Freq Offset 0 Hz

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

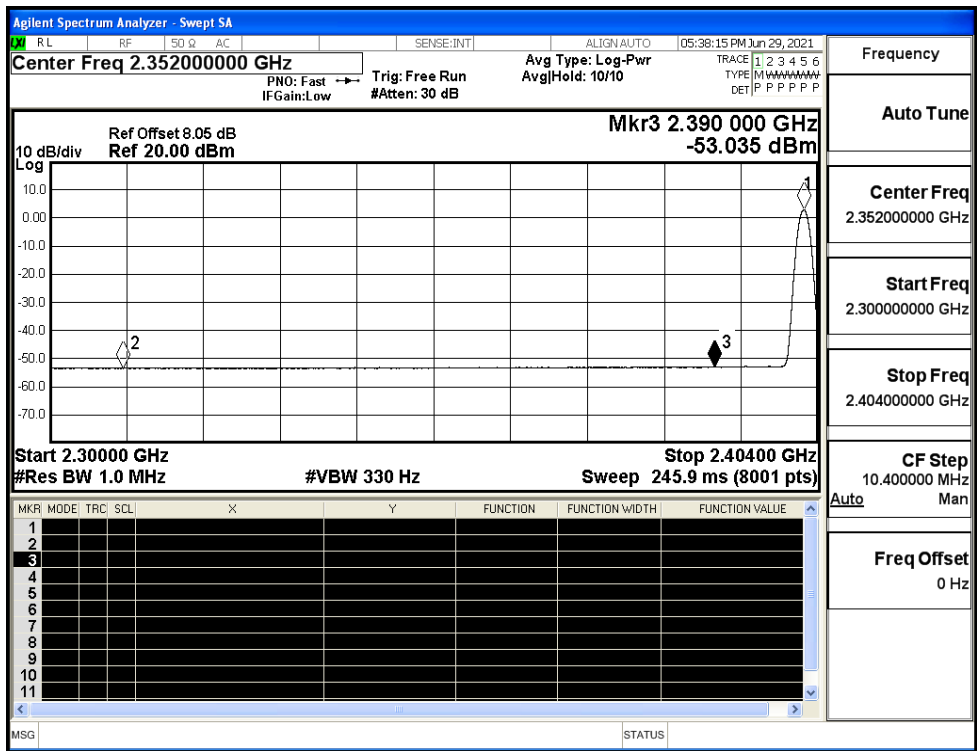
Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-43.72	2.0	0	53.51	PEAK	74	PASS
	Off	2310.0	-53.42	2.0	0	43.81	AV	54	PASS
	Off	2390.0	-43.25	2.0	0	53.98	PEAK	74	PASS
	Off	2390.0	-53.04	2.0	0	44.19	AV	54	PASS
	Off	2483.5	-42.35	2.0	0	54.88	PEAK	74	PASS
	Off	2483.5	-52.48	2.0	0	44.75	AV	54	PASS
	Off	2500.0	-41.41	2.0	0	55.82	PEAK	74	PASS
	Off	2500.0	-52.41	2.0	0	44.82	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-43.26	2.0	0	53.97	PEAK	74	PASS
	Off	2310.0	-53.46	2.0	0	43.77	AV	54	PASS
	Off	2390.0	-42.18	2.0	0	55.05	PEAK	74	PASS
	Off	2390.0	-53.06	2.0	0	44.17	AV	54	PASS
	Off	2483.5	-42.45	2.0	0	54.78	PEAK	74	PASS
	Off	2483.5	-52.35	2.0	0	44.88	AV	54	PASS
	Off	2500.0	-41.10	2.0	0	56.13	PEAK	74	PASS
	Off	2500.0	-52.36	2.0	0	44.87	AV	54	PASS
8DPSK	Off	2310.0	-43.82	2.0	0	53.41	PEAK	74	PASS
	Off	2310.0	-53.46	2.0	0	43.77	AV	54	PASS
	Off	2390.0	-43.61	2.0	0	53.62	PEAK	74	PASS
	Off	2390.0	-52.88	2.0	0	44.35	AV	54	PASS
	Off	2483.5	-41.94	2.0	0	55.29	PEAK	74	PASS
	Off	2483.5	-52.35	2.0	0	44.88	AV	54	PASS
	Off	2500.0	-42.10	2.0	0	55.13	PEAK	74	PASS
	Off	2500.0	-52.42	2.0	0	44.81	AV	54	PASS



Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (Low Channel)

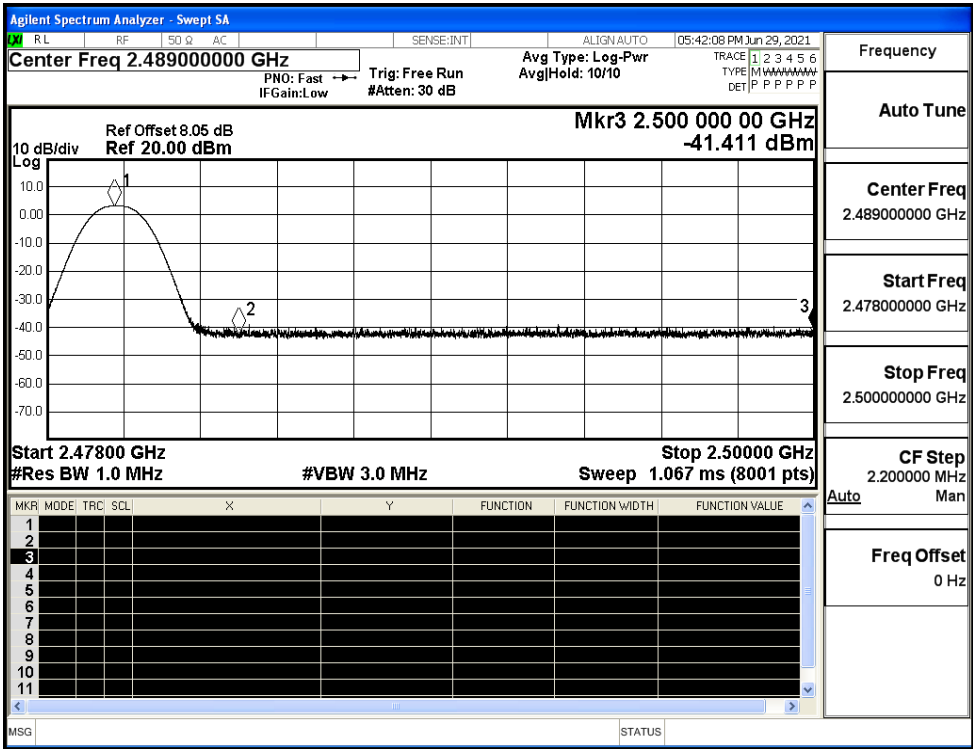


Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (Low Channel)

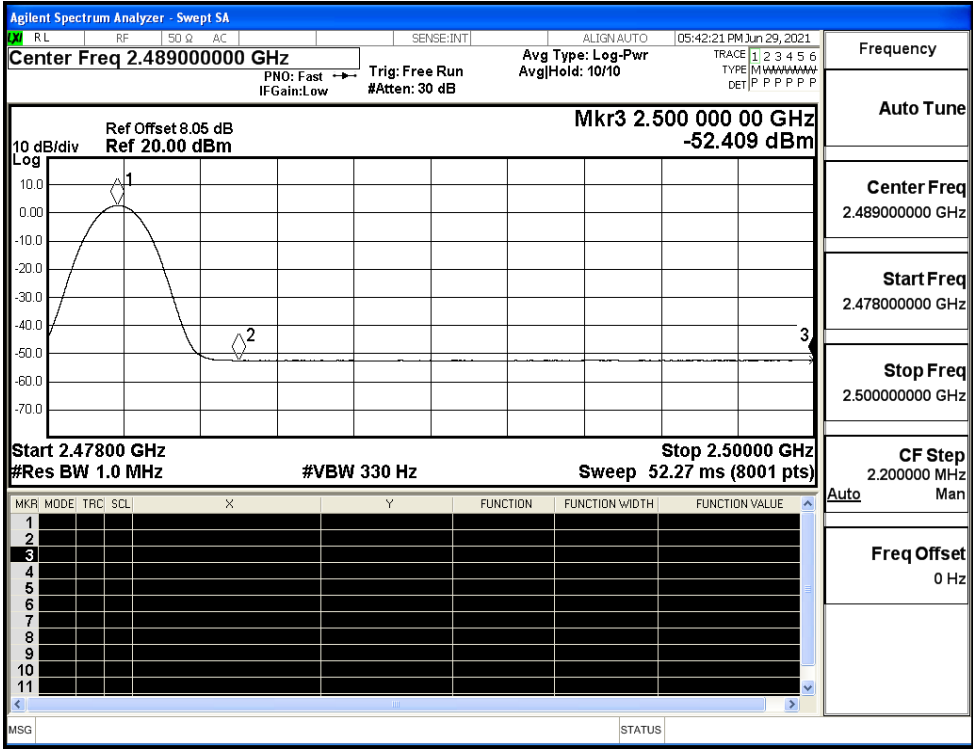




Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (High Channel)

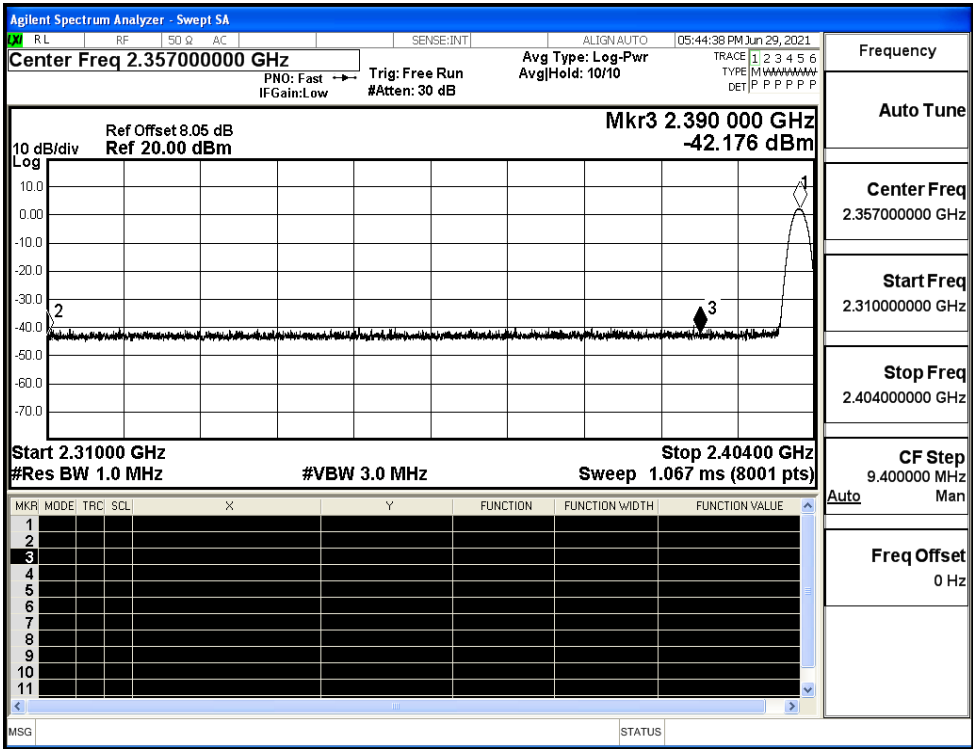


Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (High Channel)

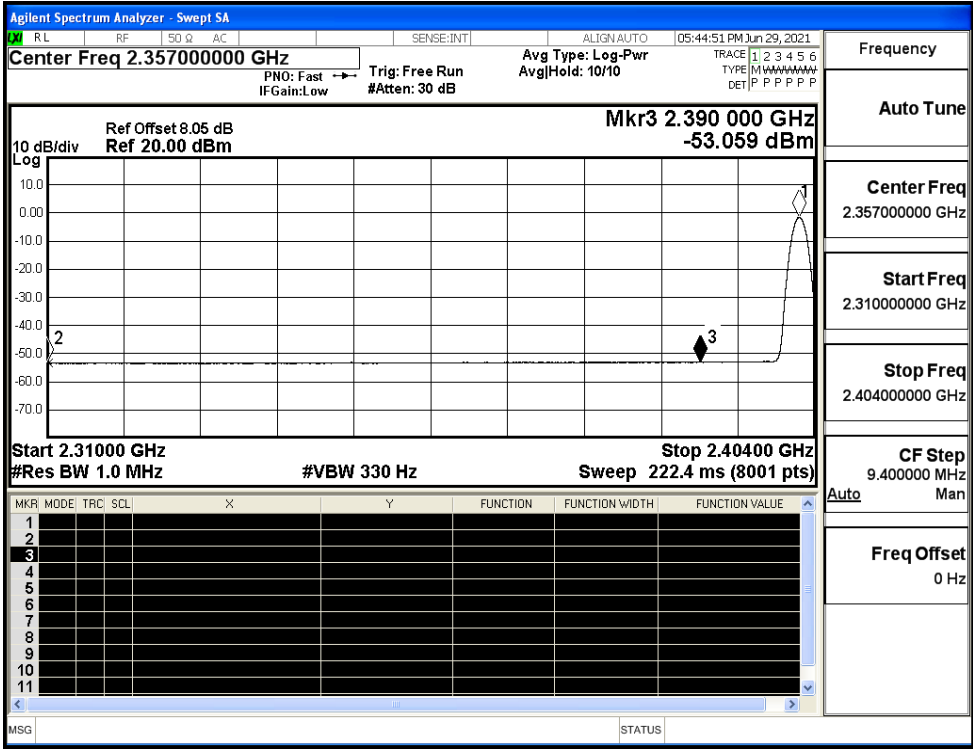




Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_PEAK (Low Channel)

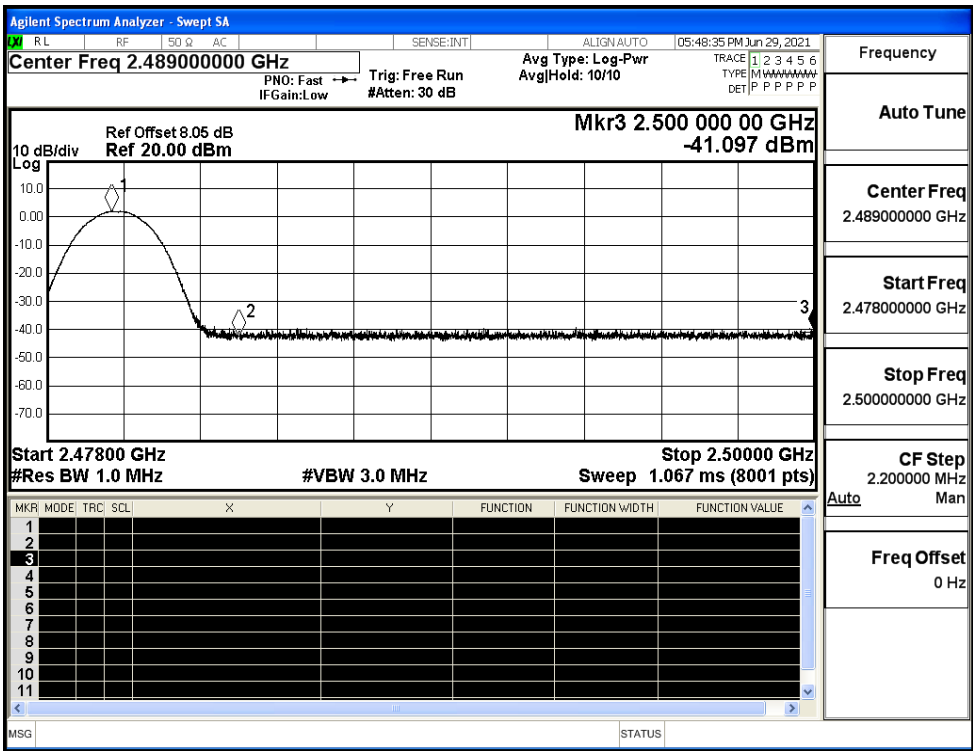


Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_Average (Low Channel)

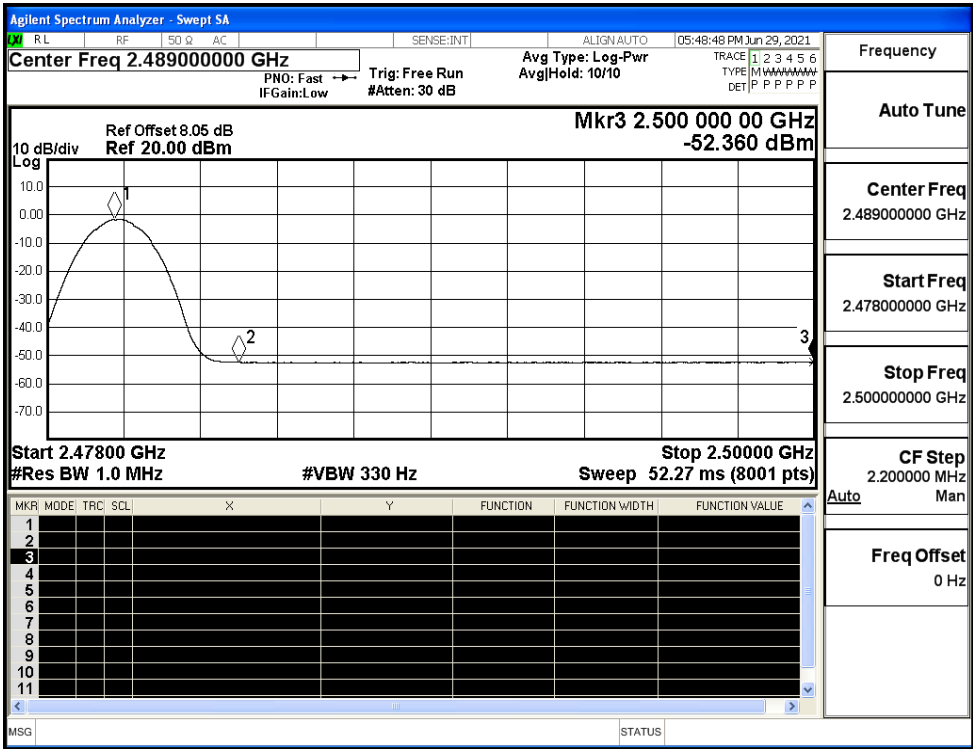




Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_PEAK (High Channel)

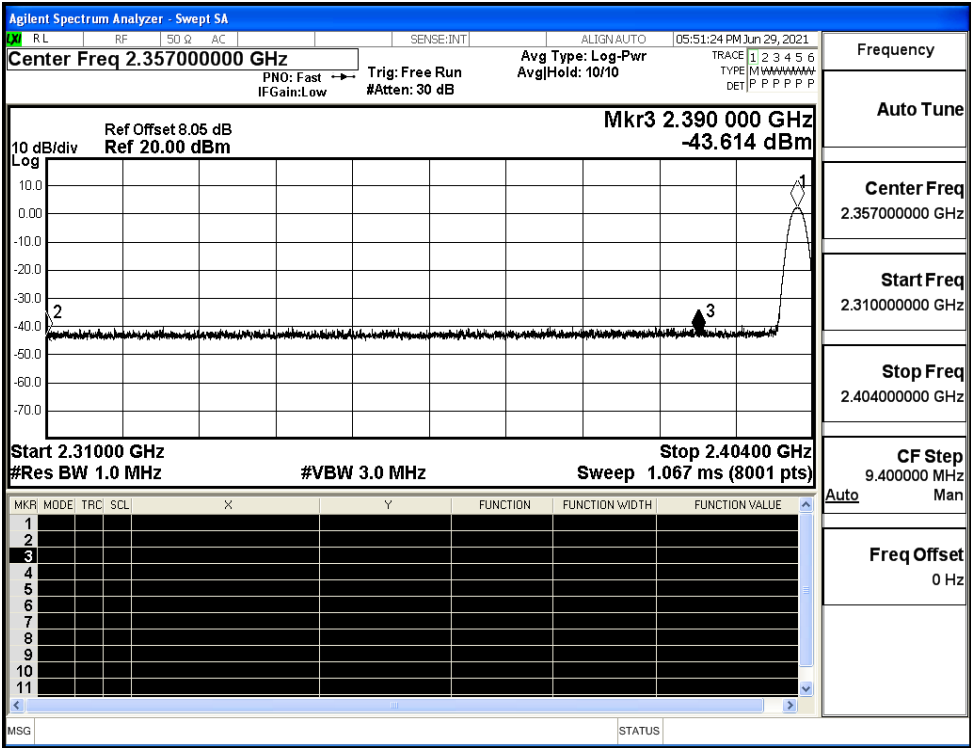


Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_Average (High Channel)

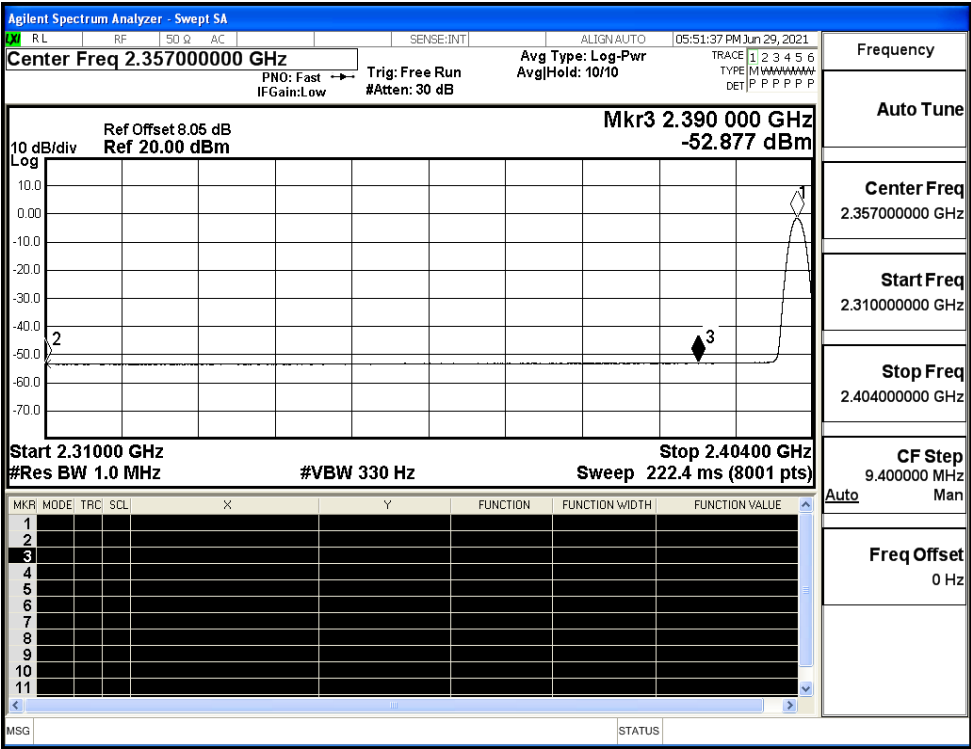




Restrict-band band-edge measurements_Hopping Off_8DPSK_PEAK (Low Channel)

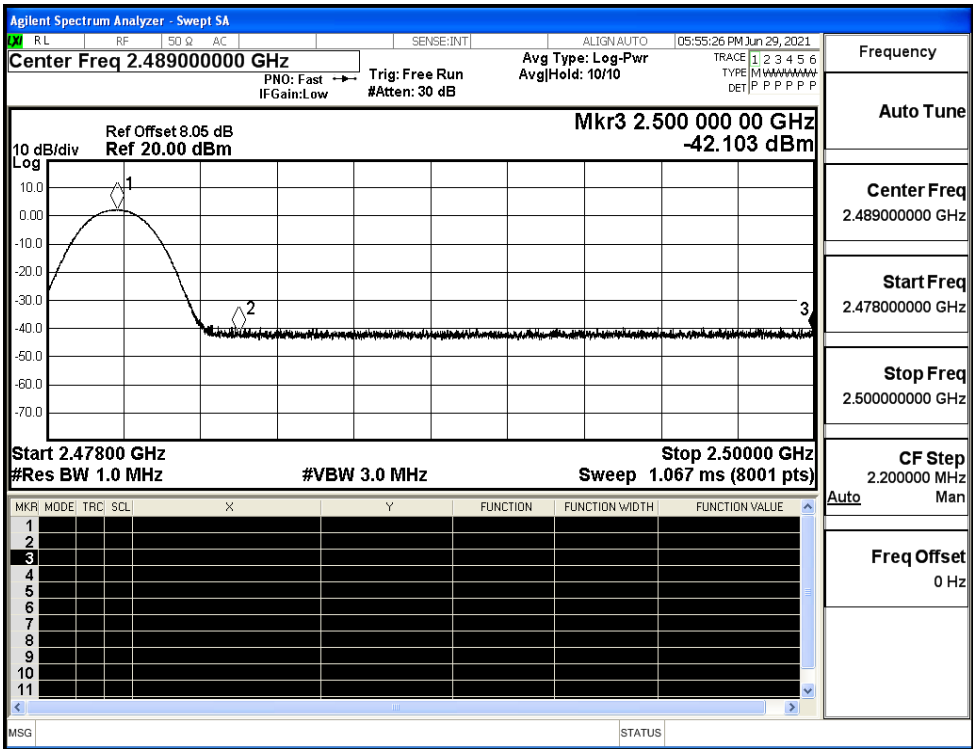


Restrict-band band-edge measurements_Hopping Off_8DPSK_Average (Low Channel)





Restrict-band band-edge measurements_Hopping Off_8DPSK_PEAK (High Channel)



Restrict-band band-edge measurements_Hopping Off_8DPSK_Average (High Channel)

