



8DPSK/HCH

Dwell Time

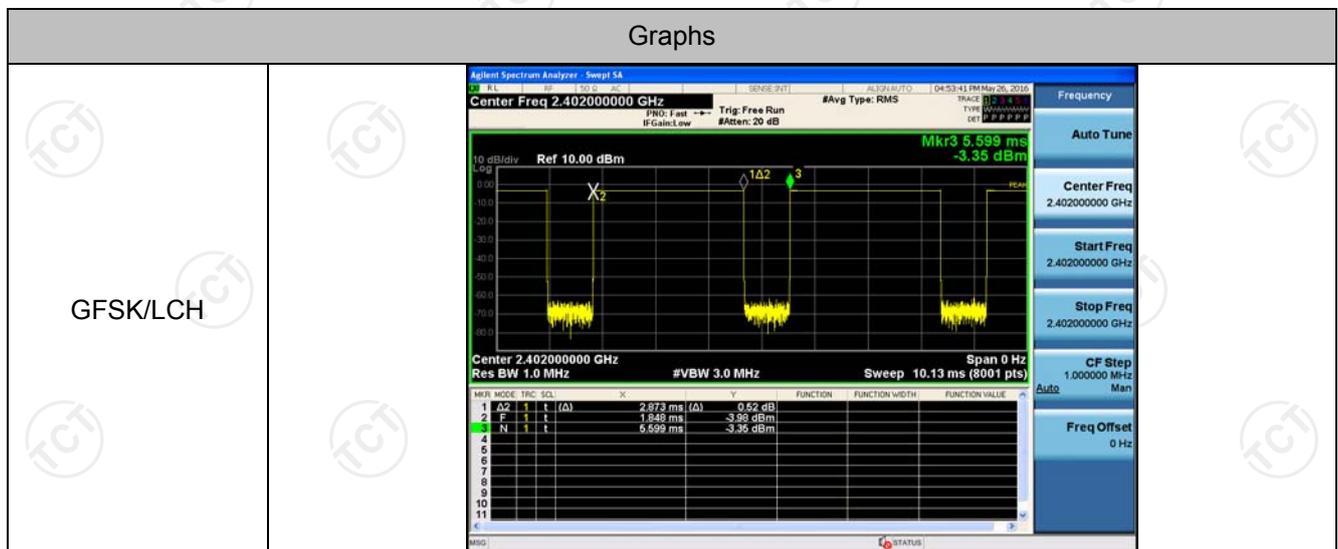
Result Table

The Dwell Time=Burst Width*Total Hops. The detailed calculations are showed as follows:

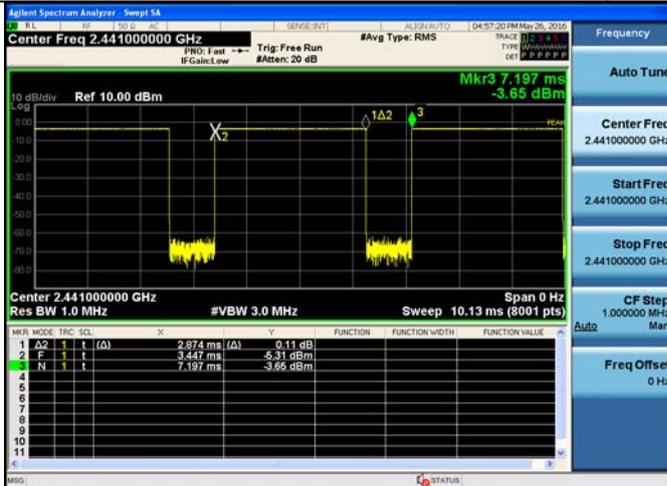
- The duration for dwell time calculation: $0.4[s] \times \text{hopping number} = 0.4[s] \times 79[\text{ch}] = 31.6[s \cdot \text{ch}]$;
- The burst width [ms/hop/ch], which is directly measured, refers to the duration on one channel hop.
- The hops per second for all channels: The selected EUT Conf uses a slot type of 5-Tx&1-Rx and a hopping rate of 1600 [ch*hop/s] for all channels. So the final hopping rate for all channels is $1600/6 = 266.67 [\text{ch} \cdot \text{hop/s}]$
- The hops per second on one channel: $266.67 [\text{ch} \cdot \text{hops/s}] / 79 [\text{ch}] = 3.38 [\text{hop/s}]$;
- The total hops for all channels within the dwell time calculation duration: $3.38 [\text{hop/s}] \times 31.6[s \cdot \text{ch}] = 106.67 [\text{hop} \cdot \text{ch}]$;
- The dwell time for all channels hopping: $106.67 [\text{hop} \cdot \text{ch}] \times \text{Burst Width} [\text{ms/hop/ch}]$.

Mode	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Duty Cycle [%]	Verdict
GFSK	LCH	2.873	106.7	0.307	76.60	PASS
GFSK	MCH	2.874	106.7	0.307	76.63	PASS
GFSK	HCH	2.873	106.7	0.307	76.62	PASS
$\pi/4$ DQPSK	LCH	2.877	106.7	0.307	76.70	PASS
$\pi/4$ DQPSK	MCH	2.877	106.7	0.307	76.70	PASS
$\pi/4$ DQPSK	HCH	2.877	106.7	0.307	76.72	PASS
8DPSK	LCH	2.878	106.7	0.307	76.76	PASS
8DPSK	MCH	2.879	106.7	0.307	76.76	PASS
8DPSK	HCH	2.878	106.7	0.307	76.76	PASS

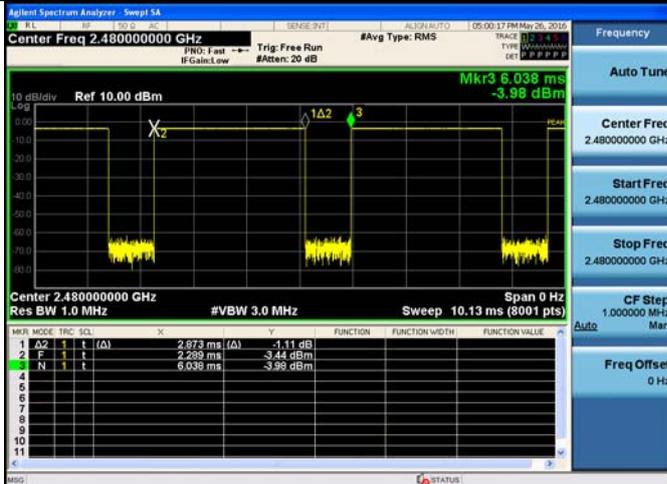
Test Graph



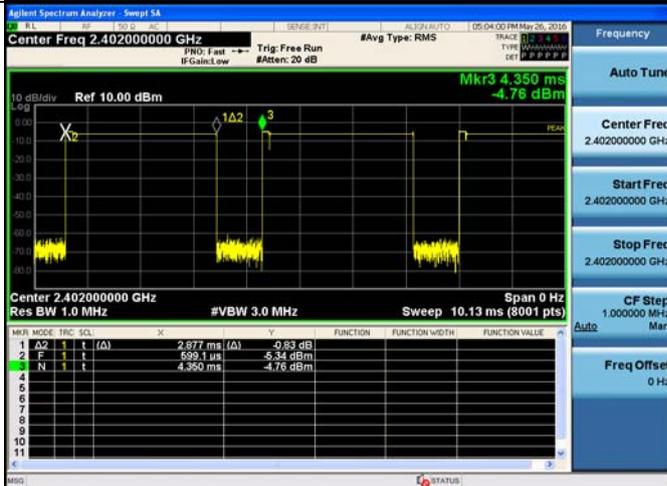
GFSK/MCH



GFSK/HCH

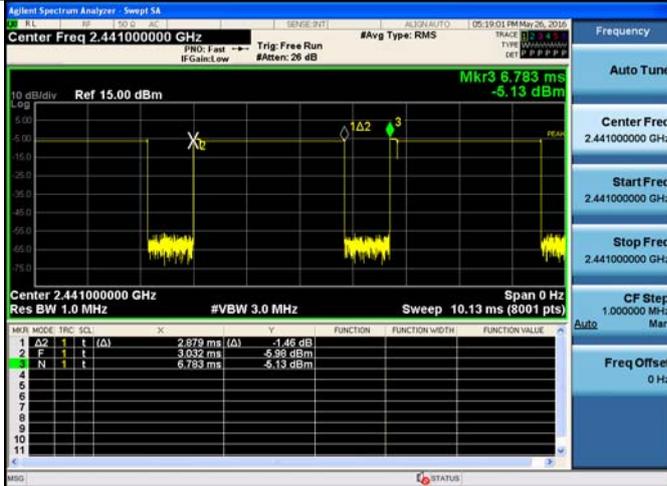


π /4DQPSK/LCH

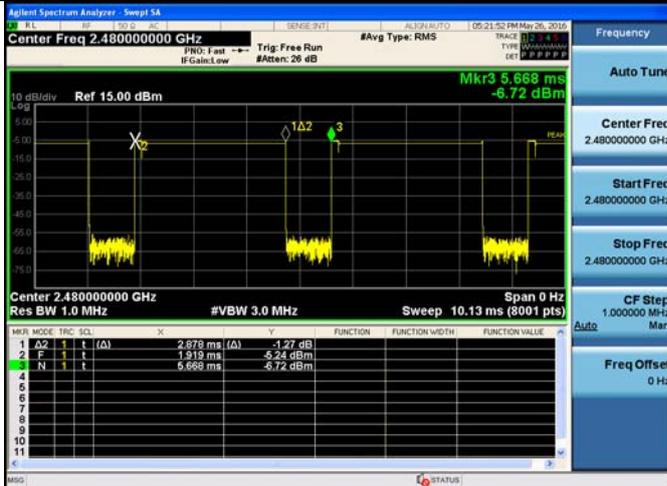


<p>$\pi/4$DQPSK/MCH</p>	<p>Agilent Spectrum Analyzer - Sweep 5A Center Freq 2.441000000 GHz Ref 15.00 dBm Mkr3 4.992 ms -5.10 dBm Center 2.441000000 GHz Res BW 1.0 MHz #VBW 3.0 MHz Sweep 10.13 ms MNR MODE TRG SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE 1 A2 1 t (Δ) 2.877 ms (Δ) -0.89 dB 2 F 1 t 1.231 ms -5.70 dBm 3 N 1 t 4.992 ms -5.10 dBm</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</p>
<p>$\pi/4$DQPSK/HCH</p>	<p>Agilent Spectrum Analyzer - Sweep 5A Center Freq 2.480000000 GHz Ref 15.00 dBm Mkr3 6.493 ms -6.74 dBm Center 2.480000000 GHz Res BW 1.0 MHz #VBW 3.0 MHz Sweep 10.13 ms (8001 pts) MNR MODE TRG SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE 1 A2 1 t (Δ) 2.877 ms (Δ) -2.43 dB 2 F 1 t 2.233 ms -5.24 dBm 3 N 1 t 6.493 ms -6.74 dBm</p>	<p>Frequency Auto Tune Center Freq 2.480000000 GHz Start Freq 2.480000000 GHz Stop Freq 2.480000000 GHz CF Step 1.000000 MHz Man Freq Offset 0 Hz</p>
<p>8DPSK/LCH</p>	<p>Agilent Spectrum Analyzer - Sweep 5A Center Freq 2.402000000 GHz Ref 15.00 dBm Mkr3 4.127 ms -5.69 dBm Center 2.402000000 GHz Res BW 1.0 MHz #VBW 3.0 MHz Sweep 10.13 ms (8001 pts) MNR MODE TRG SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE 1 A2 1 t (Δ) 2.870 ms (Δ) -1.12 dB 2 F 1 t 2.275 μs -4.81 dBm 3 N 1 t 4.127 ms -5.69 dBm</p>	<p>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</p>

8DPSK/MCH



8DPSK/HCH

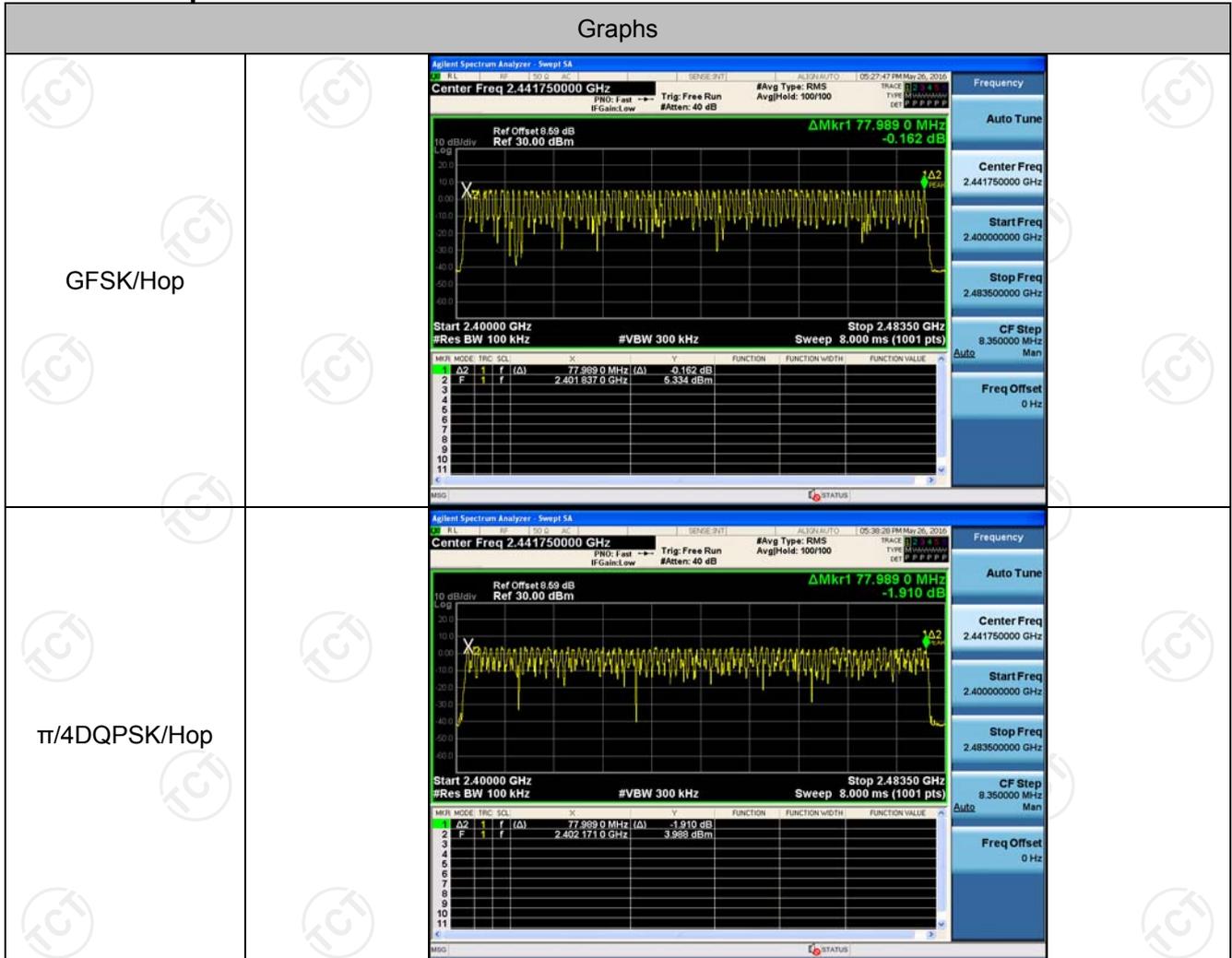


Hopping Channel Number

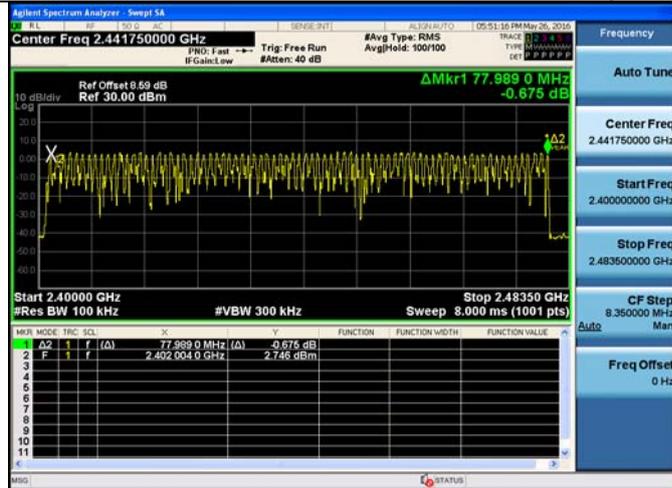
Result Table

Mode	Channel.	Number of Hopping Channel	Verdict
GFSK	Hop	79	PASS
$\pi/4$ DQPSK	Hop	79	PASS
8DPSK	Hop	79	PASS

Test Graph



8DPSK/Hop



Conducted Peak Output Power

Result Table

Mode	Channel.	Maximum Peak Output Power [dBm]	Verdict
GFSK	LCH	5.733	PASS
GFSK	MCH	5.462	PASS
GFSK	HCH	5.527	PASS
$\pi/4$ DQPSK	LCH	4.526	PASS
$\pi/4$ DQPSK	MCH	4.167	PASS
$\pi/4$ DQPSK	HCH	4.089	PASS
8DPSK	LCH	4.521	PASS
8DPSK	MCH	4.175	PASS
8DPSK	HCH	4.068	PASS

Test Graph



<p>GFSK/HCH</p>	
<p>$\pi/4$DQPSK/LCH</p>	
<p>$\pi/4$DQPSK/MCH</p>	

<p>TT/4DQPSK/HCH</p>	
<p>8DPSK/LCH</p>	
<p>8DPSK/MCH</p>	



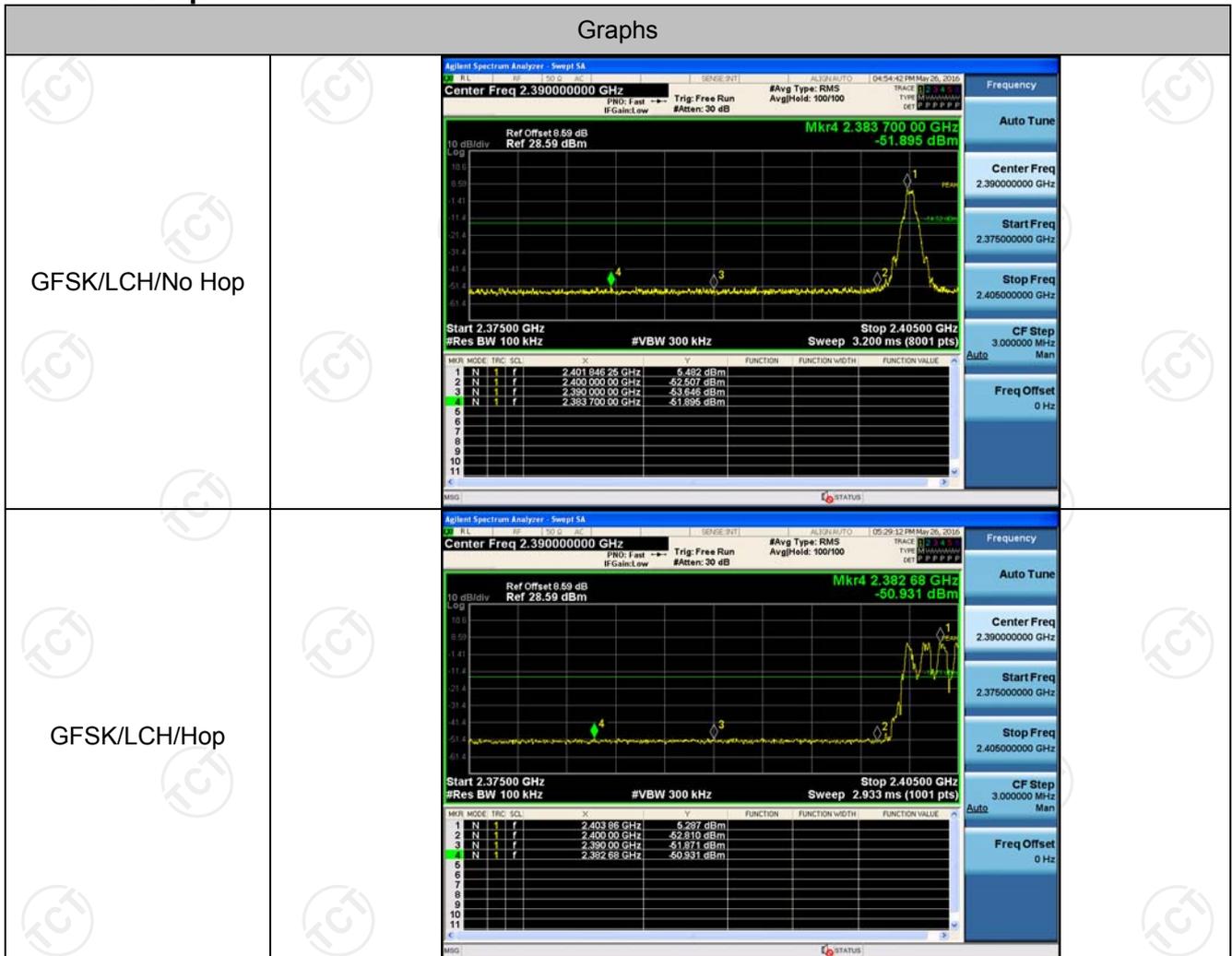
8DPSK/HCH

Band-edge for RF Conducted Emissions

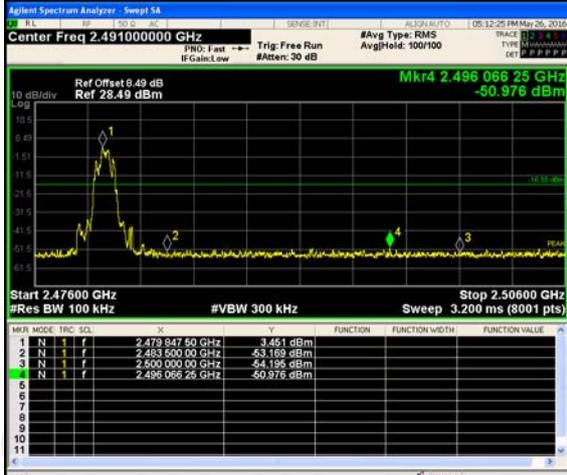
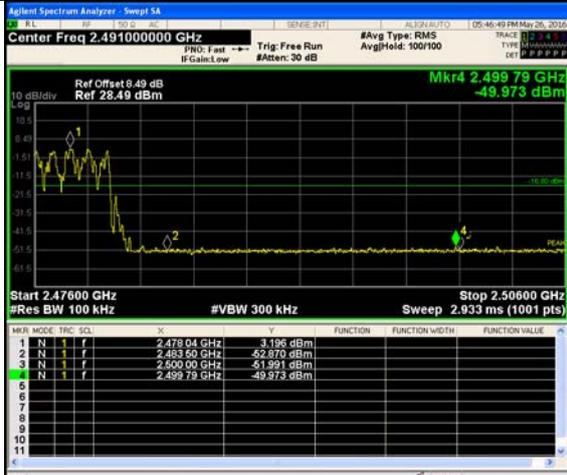
Result Table

Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	5.482	Off	-51.895	-14.52	PASS
			5.287	On	-50.931	-14.71	PASS
GFSK	HCH	2480	5.208	Off	-51.067	-14.79	PASS
			5.011	On	-51.342	-14.99	PASS
$\pi/4$ DQPSK	LCH	2402	3.494	Off	-50.776	-16.51	PASS
			3.177	On	-50.892	-16.82	PASS
$\pi/4$ DQPSK	HCH	2480	3.451	Off	-50.976	-16.55	PASS
			3.196	On	-49.973	-16.8	PASS
8DPSK	LCH	2402	3.834	Off	-51.313	-16.17	PASS
			3.624	On	-50.534	-16.38	PASS
8DPSK	HCH	2480	2.363	Off	-51.405	-17.64	PASS
			2.636	On	-50.550	-17.36	PASS

Test Graph



<p>GFSK/HCH/No Hop</p>	
<p>GFSK/HCH/Hop</p>	
<p>$\pi/4$DQPSK/LCH/No Hop</p>	

<p>$\pi/4$DQPSK/LCH/Hop</p>	 <table border="1" data-bbox="606 515 1173 649"> <thead> <tr> <th>MNR</th> <th>MODE</th> <th>TRIG</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>N</td> <td>1</td> <td>f</td> <td>2.404 01 GHz</td> <td>-3.177 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>N</td> <td>1</td> <td>f</td> <td>2.400 00 GHz</td> <td>-31.687 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td>N</td> <td>1</td> <td>f</td> <td>2.398 00 GHz</td> <td>-52.230 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td>N</td> <td>1</td> <td>f</td> <td>2.398 05 GHz</td> <td>-50.892 dBm</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	MNR	MODE	TRIG	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	2.404 01 GHz	-3.177 dBm				2	N	1	f	2.400 00 GHz	-31.687 dBm				3	N	1	f	2.398 00 GHz	-52.230 dBm				4	N	1	f	2.398 05 GHz	-50.892 dBm			
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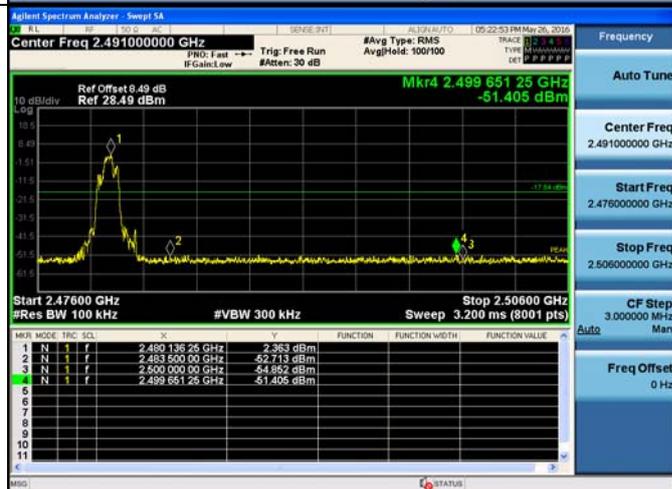
8DPSK/LCH/No Hop



8DPSK/LCH/Hop



8DPSK/HCH/No Hop



8DPSK/HCH/Hop

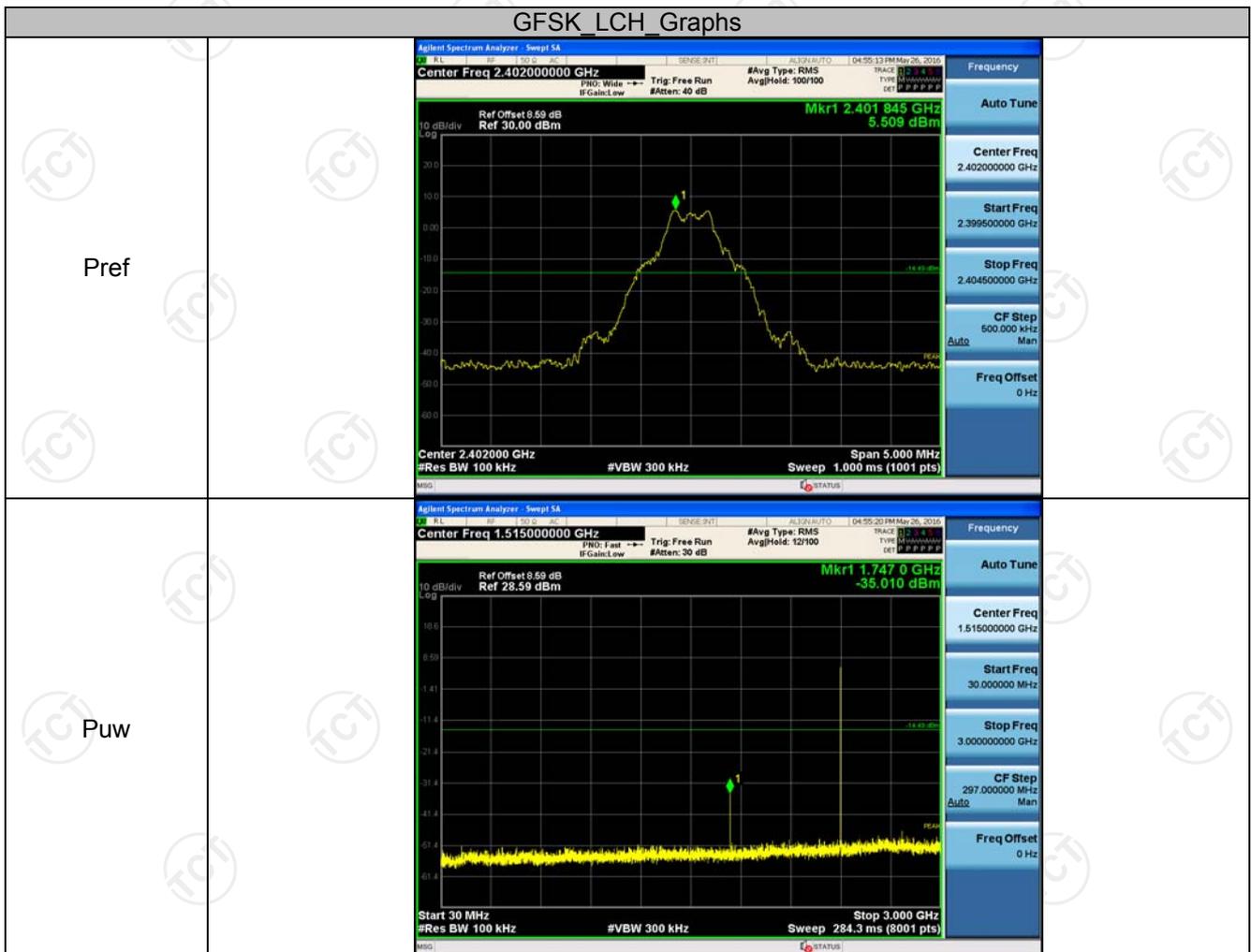


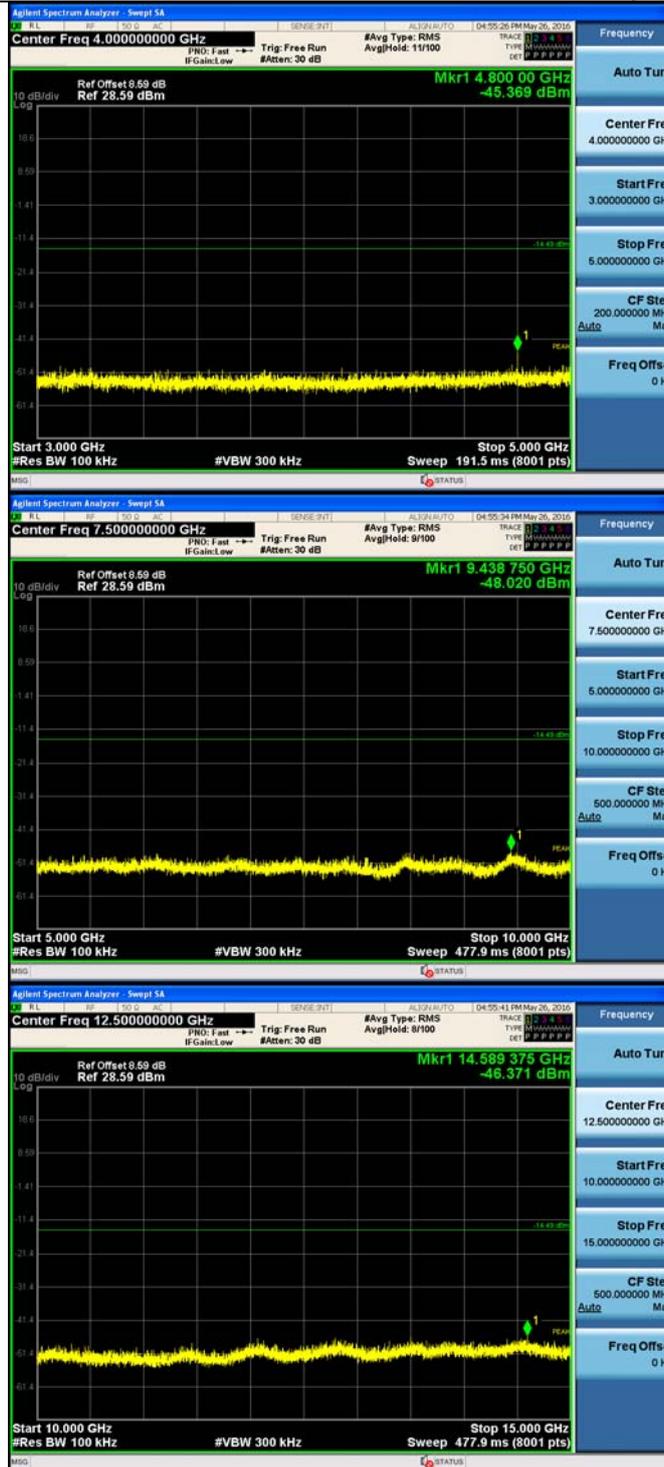
RF Conducted Spurious Emissions

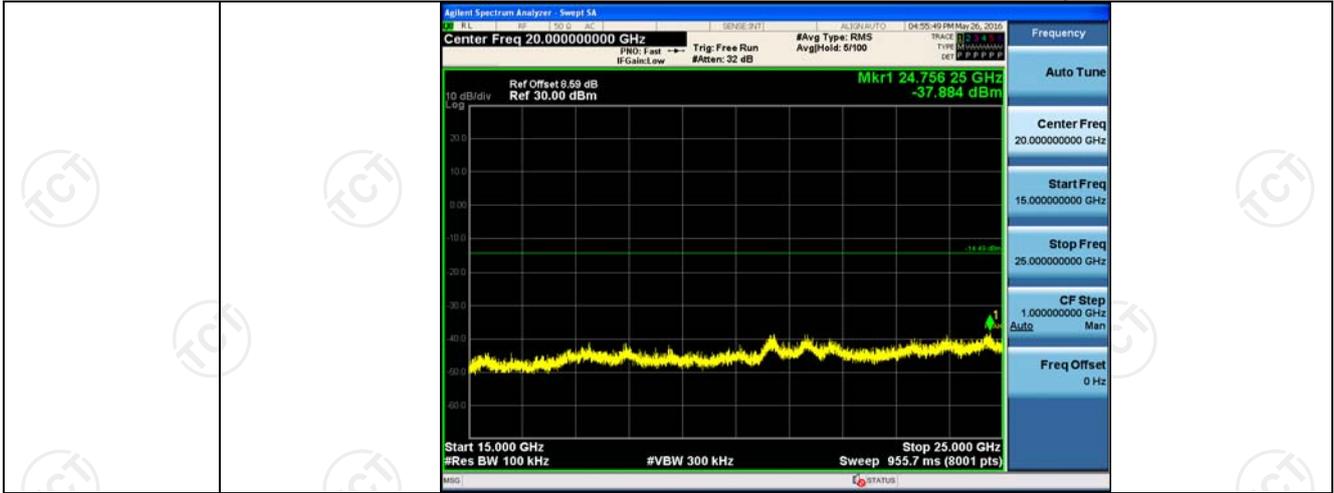
Result Table

Mode	Channel	Pref [dBm]	Puw[dBm]	Verdict
GFSK	LCH	5.509	<Limit	PASS
GFSK	MCH	5.217	<Limit	PASS
GFSK	HCH	5.243	<Limit	PASS
π /4DQPSK	LCH	3.883	<Limit	PASS
π /4DQPSK	MCH	3.552	<Limit	PASS
π /4DQPSK	HCH	3.427	<Limit	PASS
8DPSK	LCH	3.907	<Limit	PASS
8DPSK	MCH	3.573	<Limit	PASS
8DPSK	HCH	2.754	<Limit	PASS

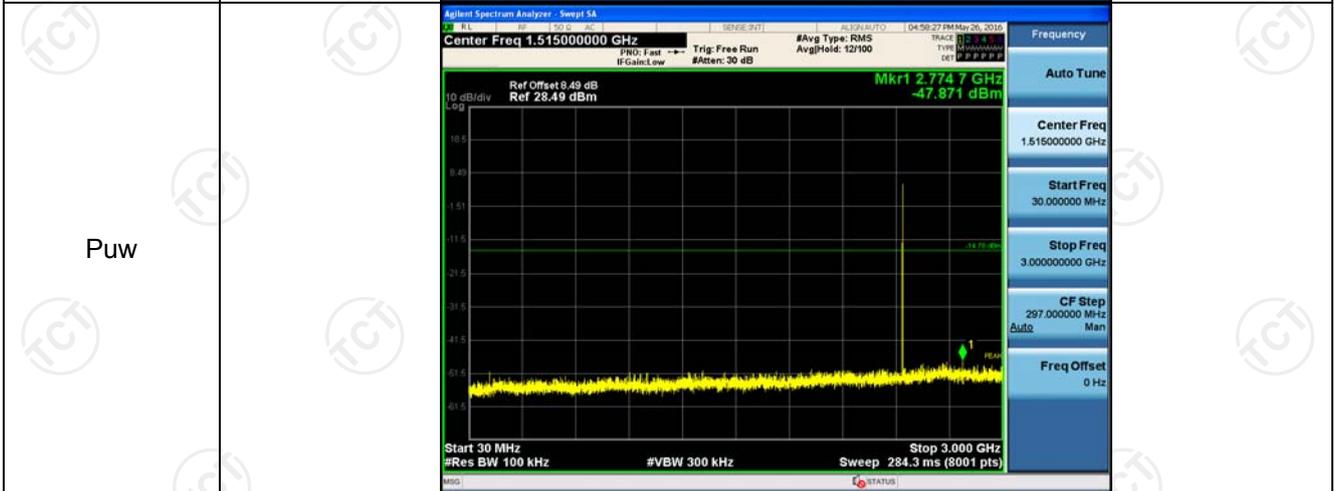
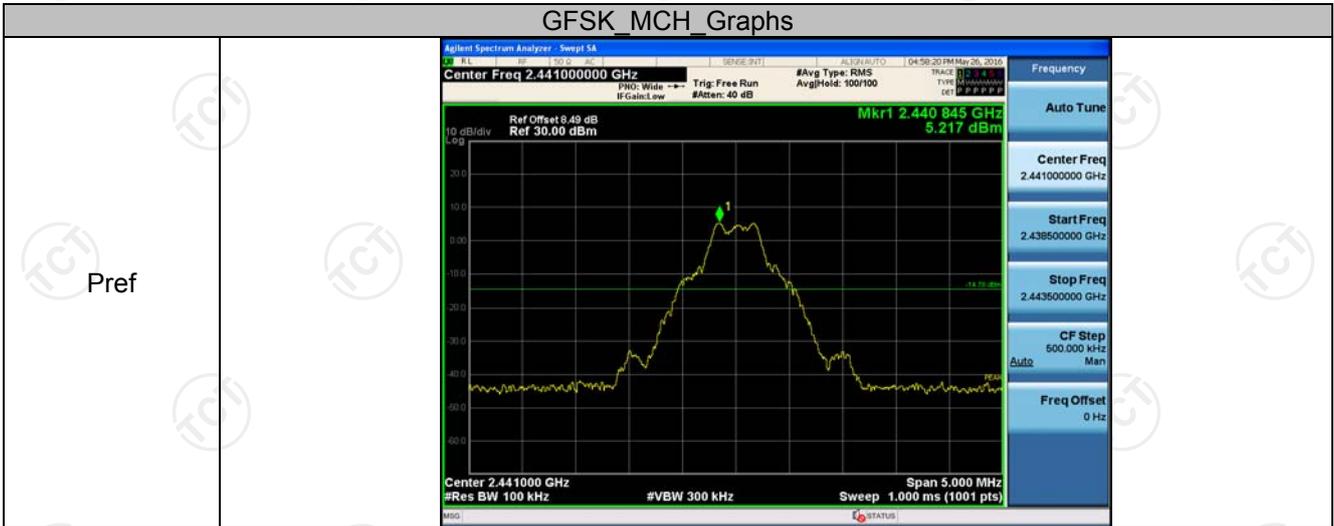
Test Graph

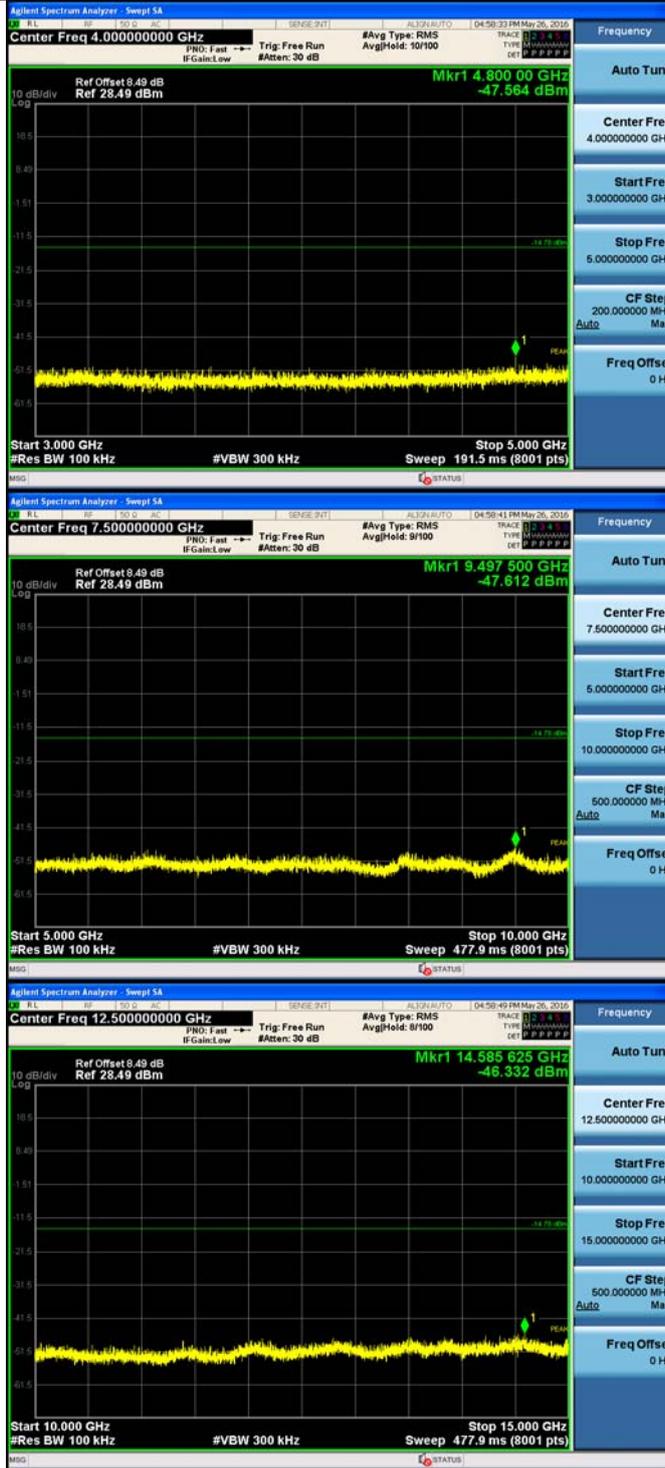


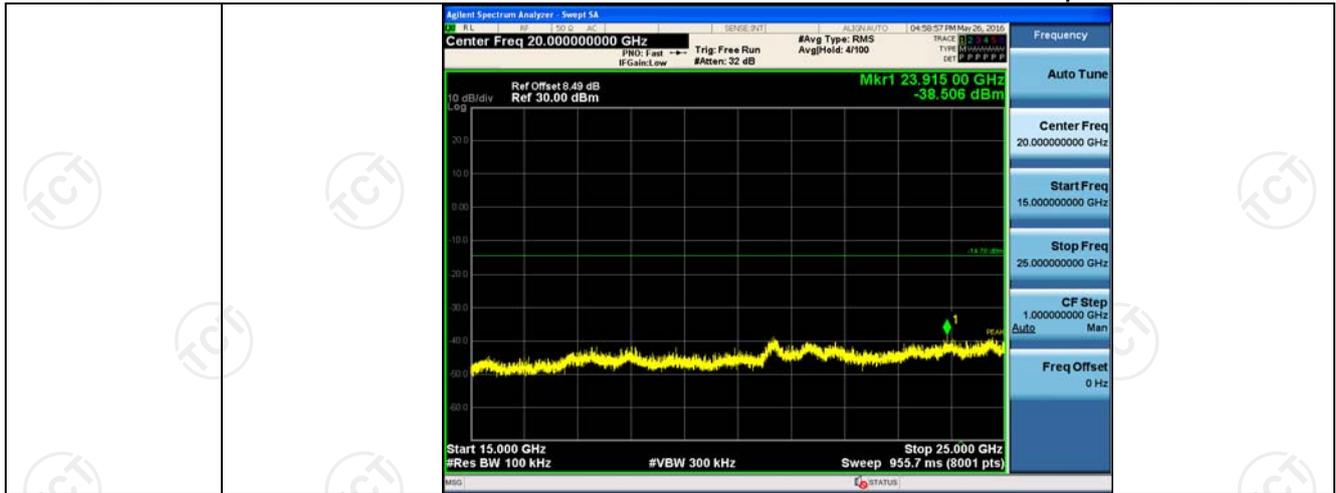




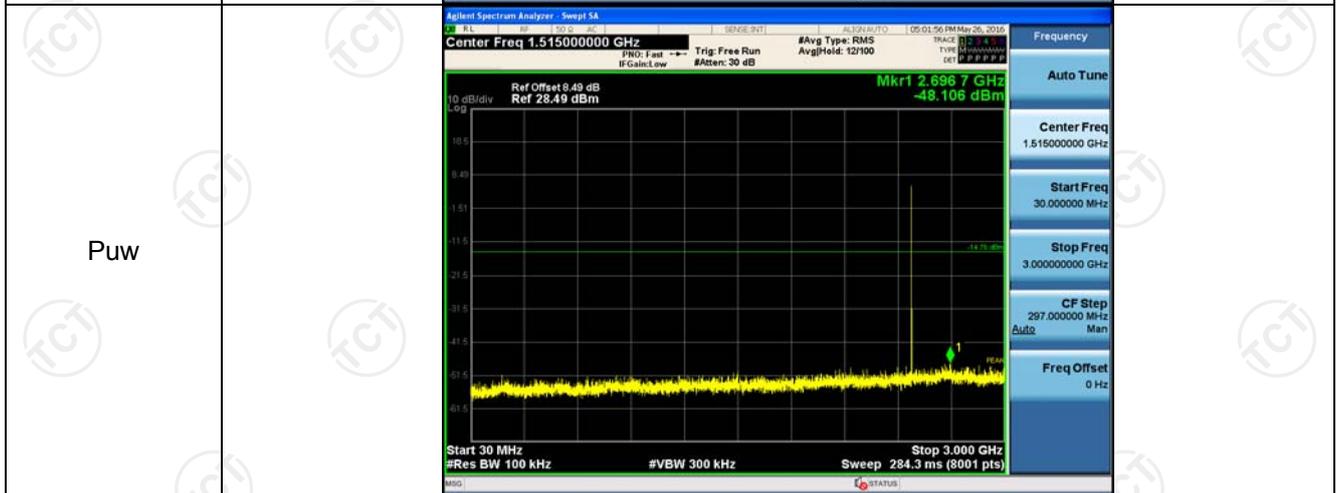
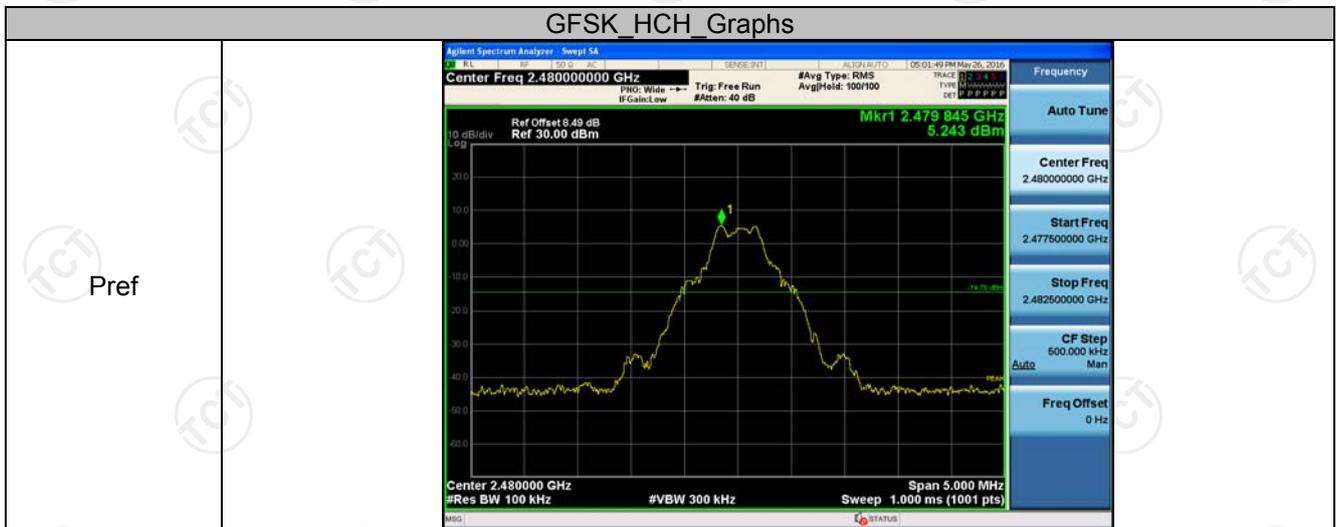
GFSK MCH Graphs

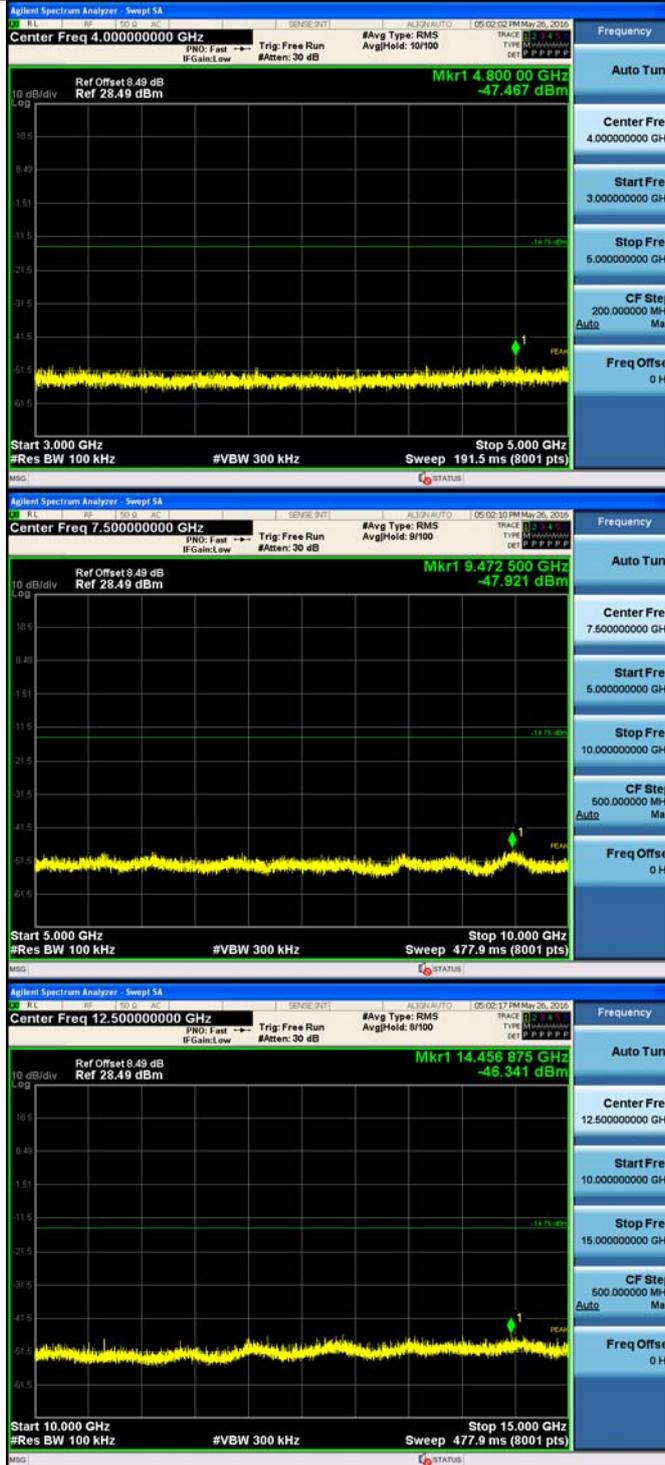


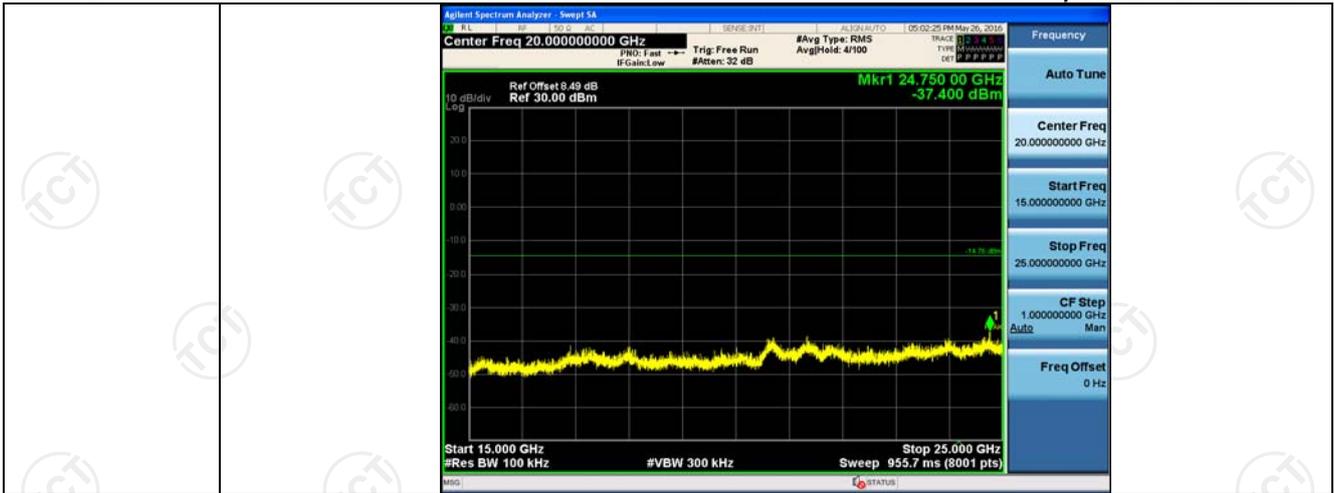




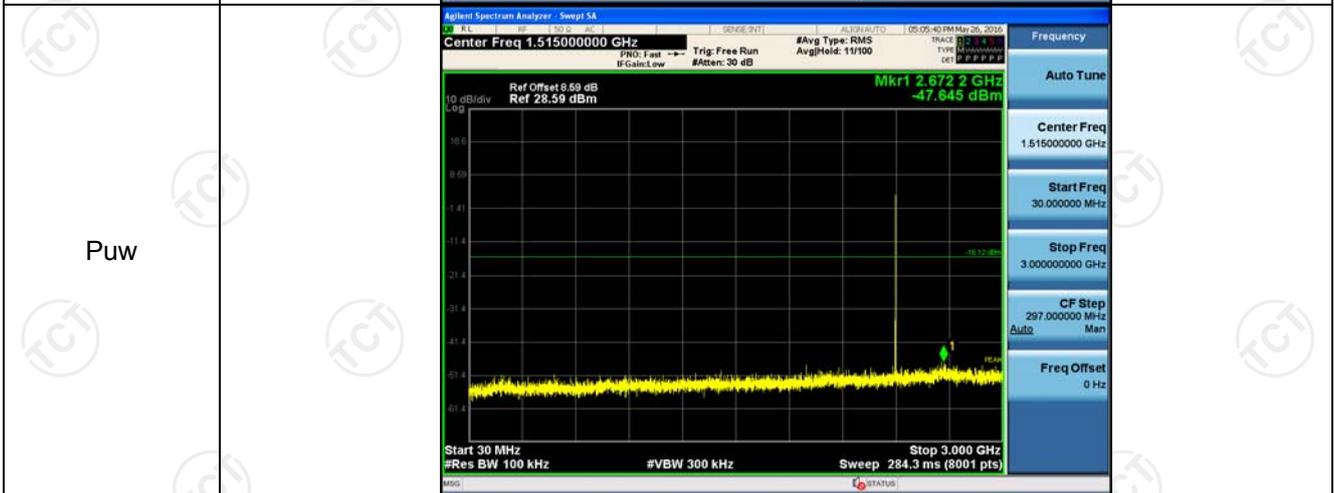
GFSK HCH Graphs

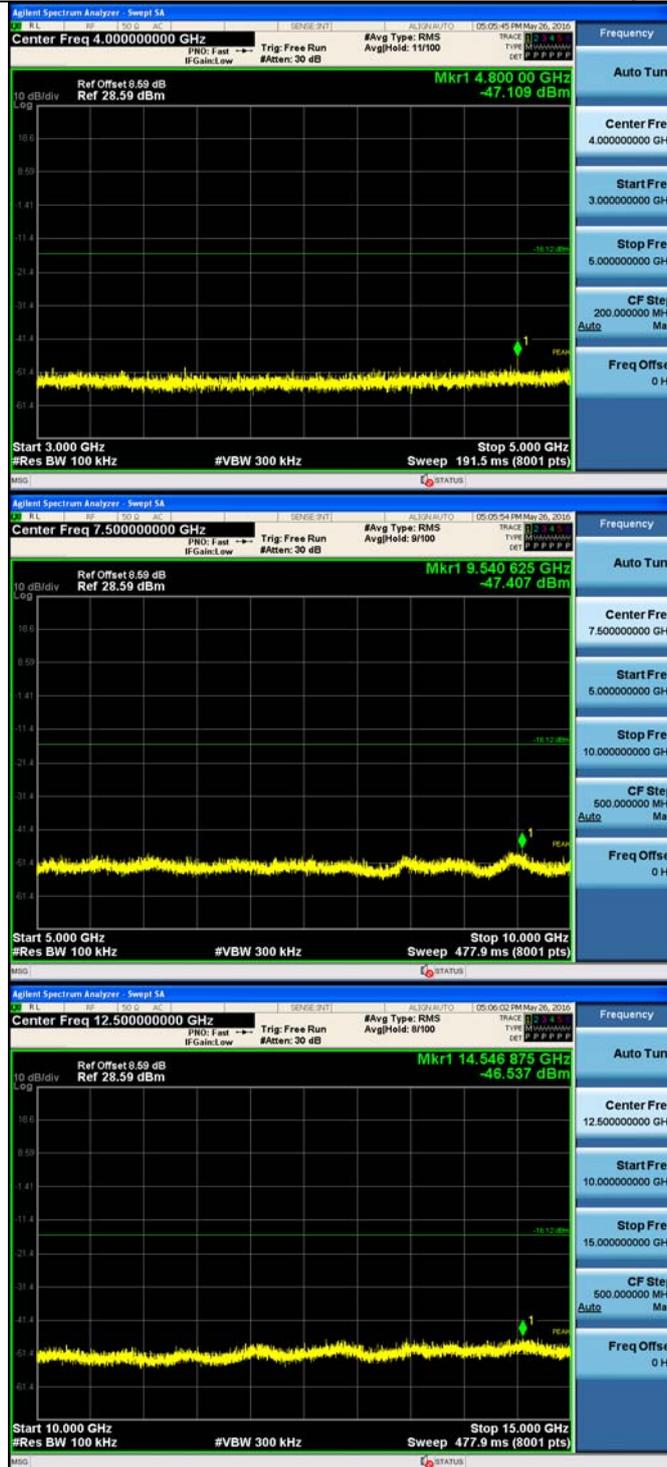


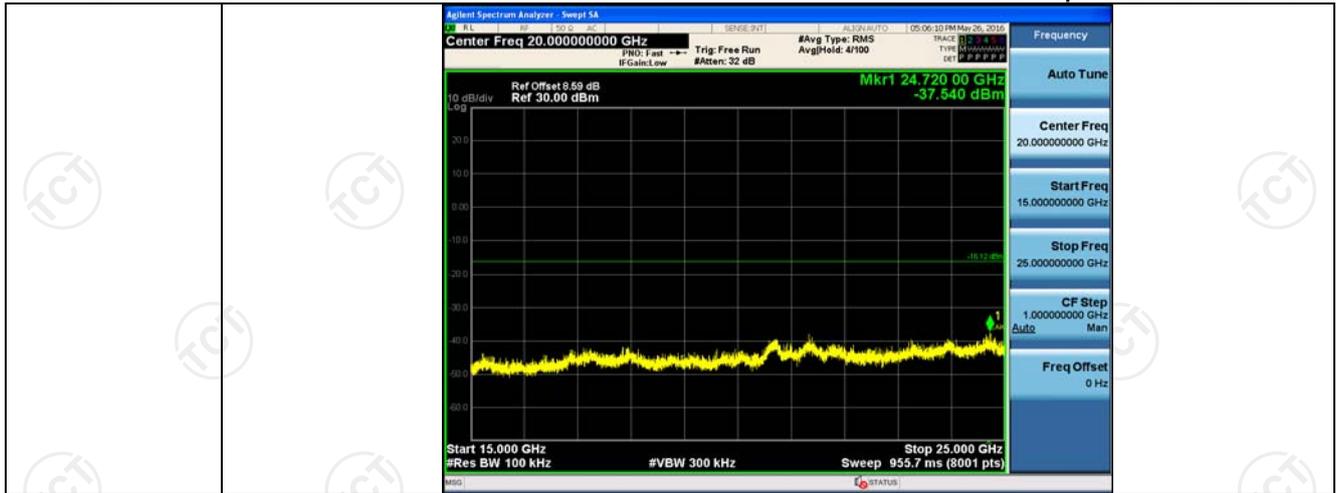




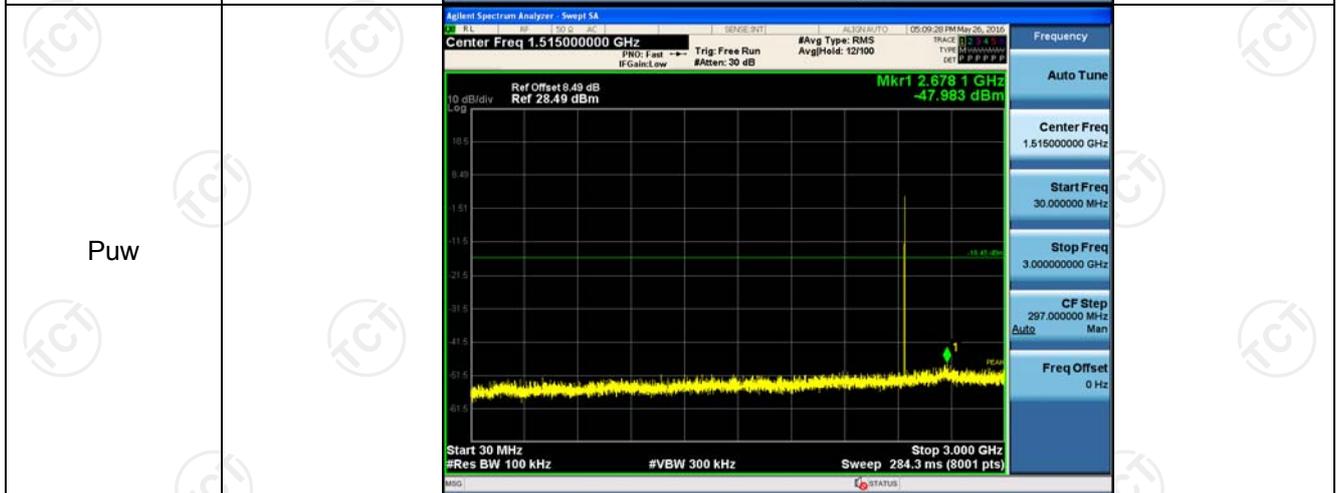
$\pi/4$ DQPSK LCH Graphs

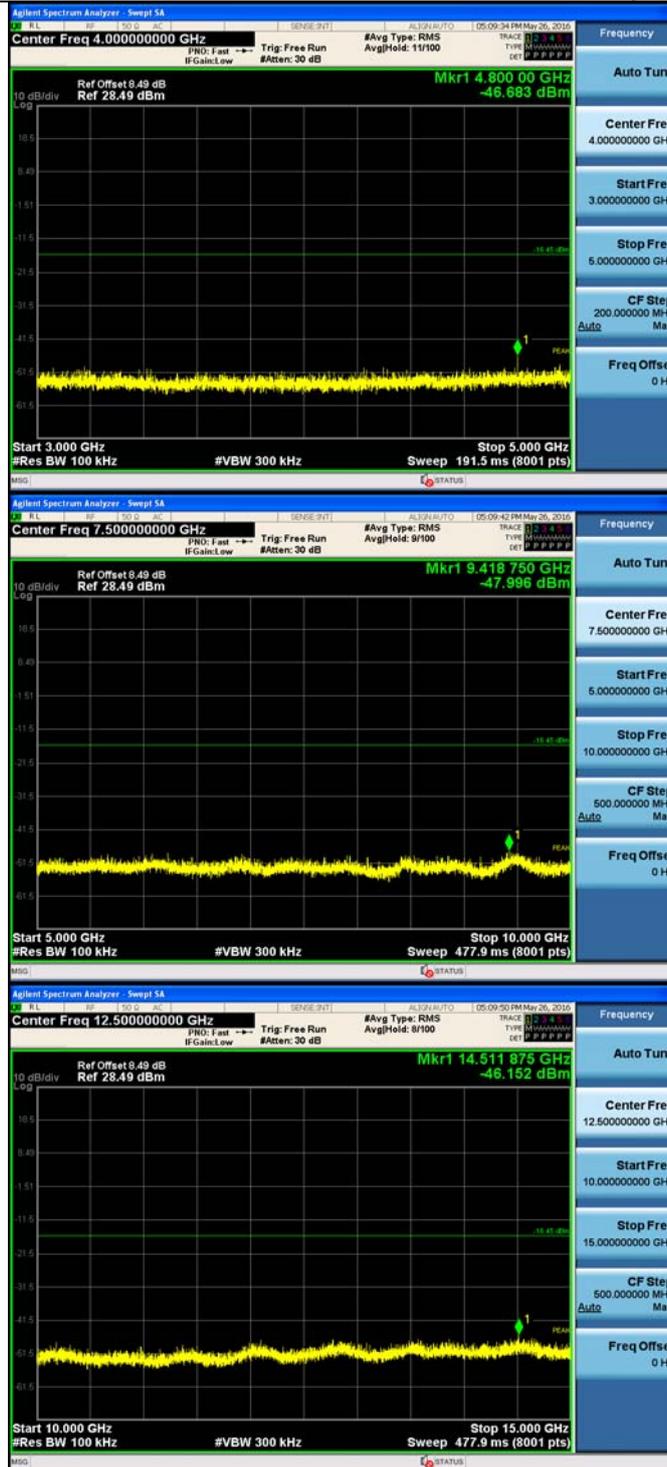


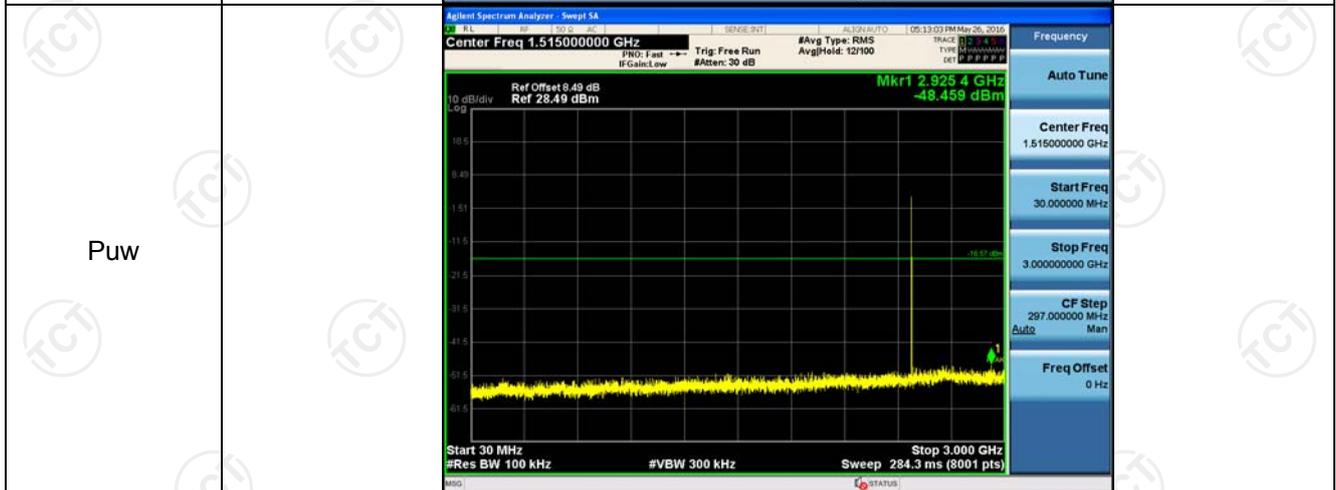
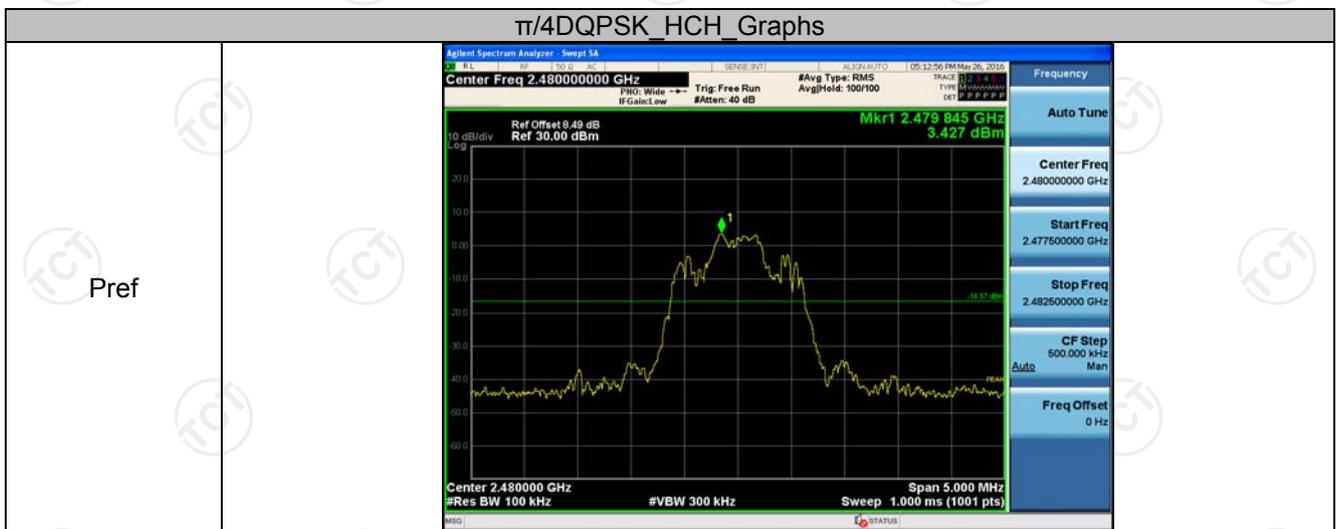
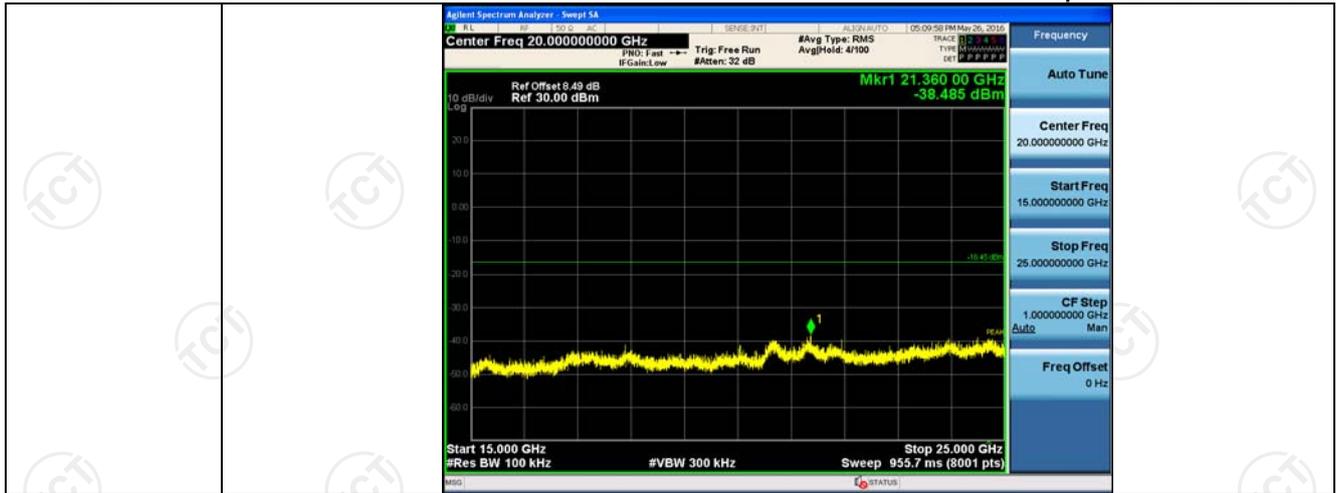


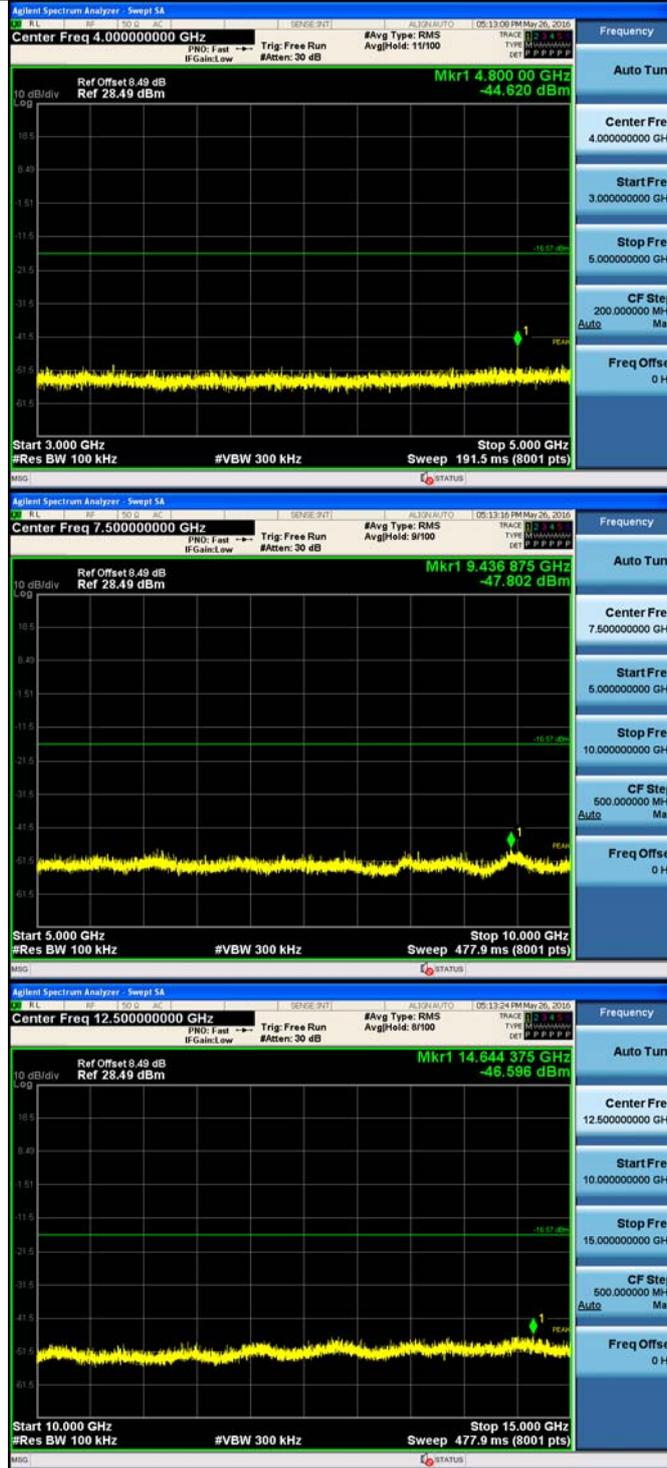


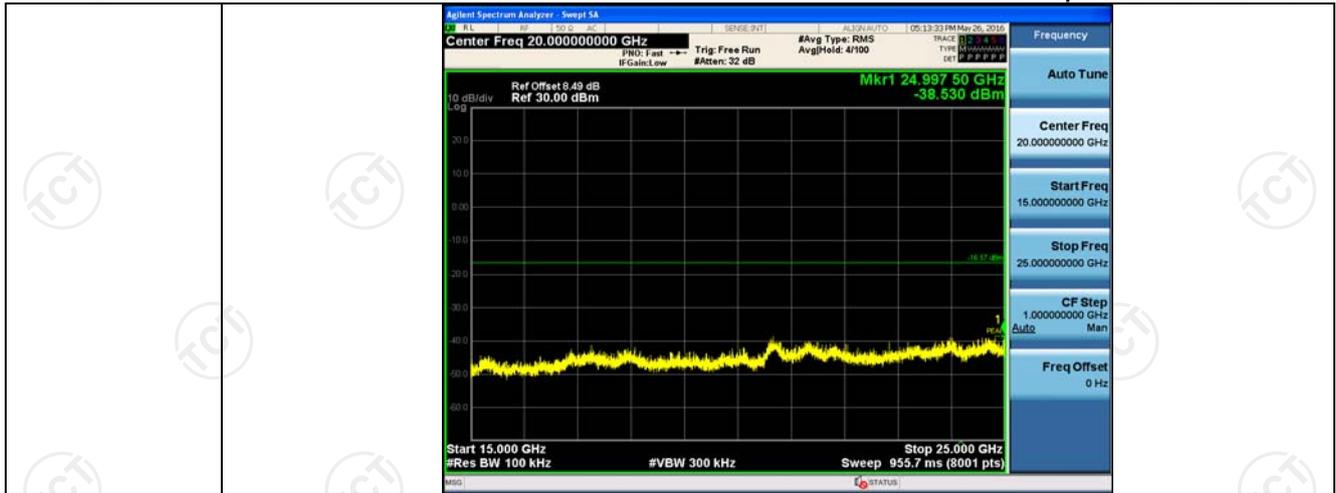
$\pi/4$ DQPSK_MCH_Graphs



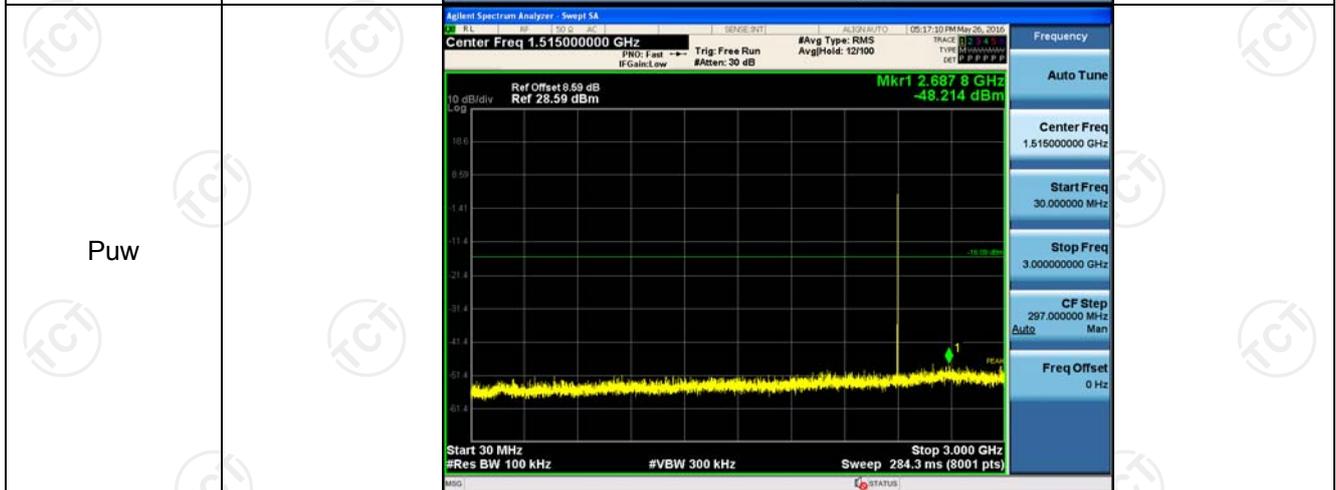


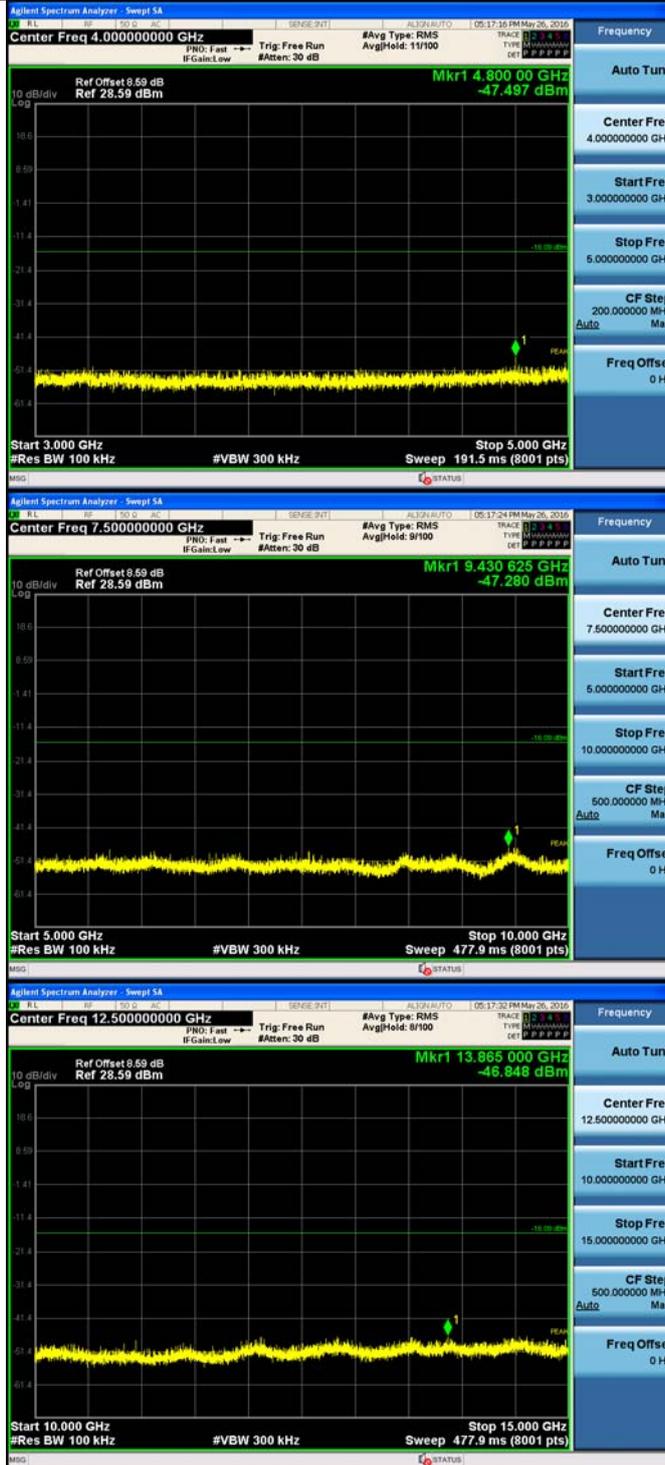


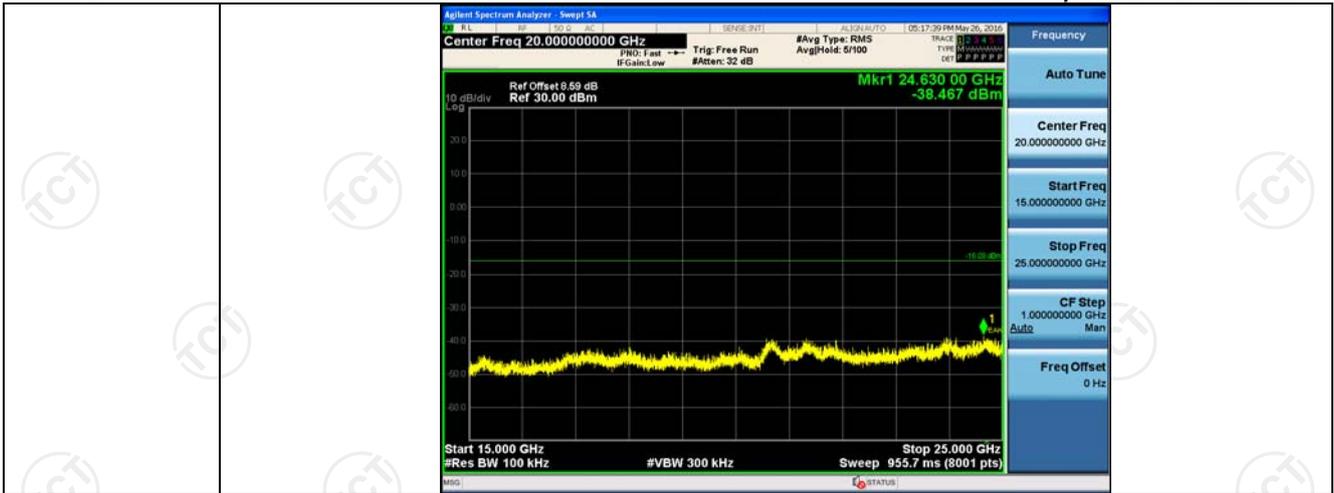




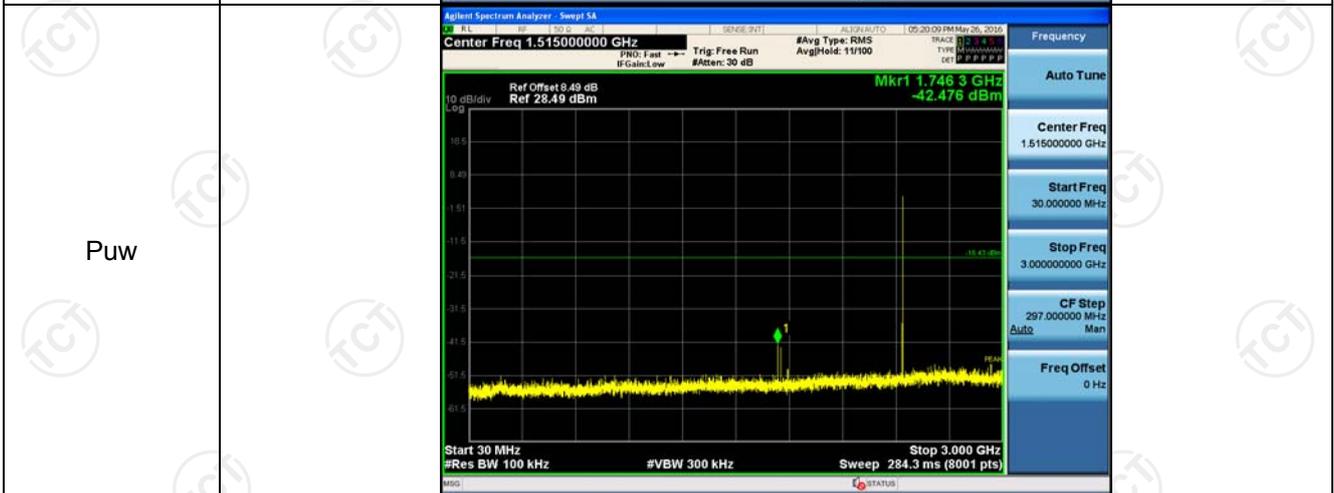
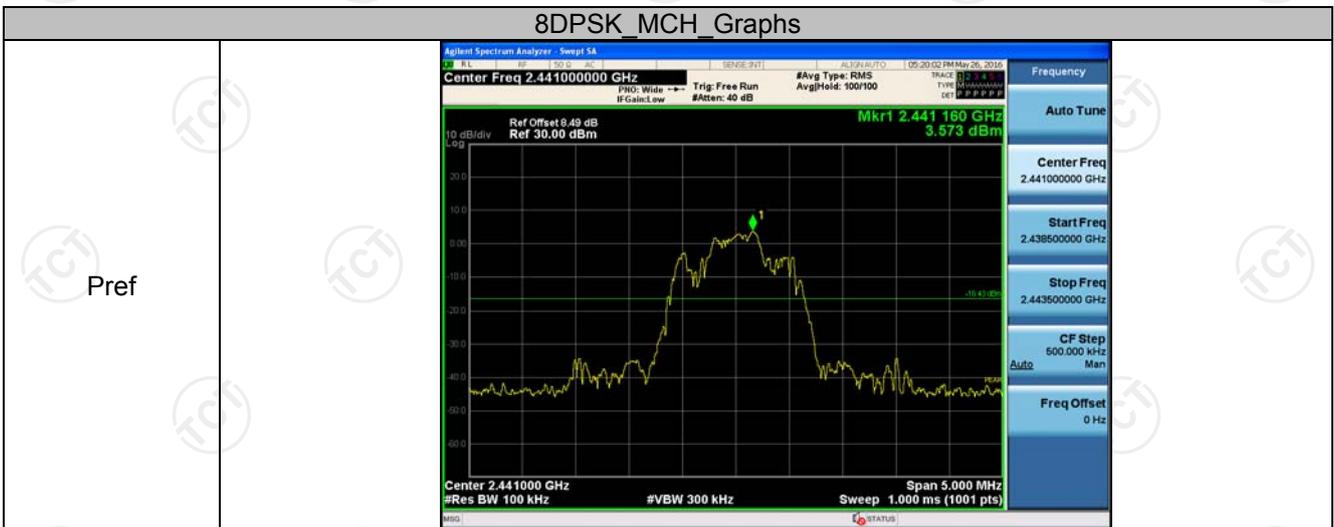
8DPSK LCH Graphs

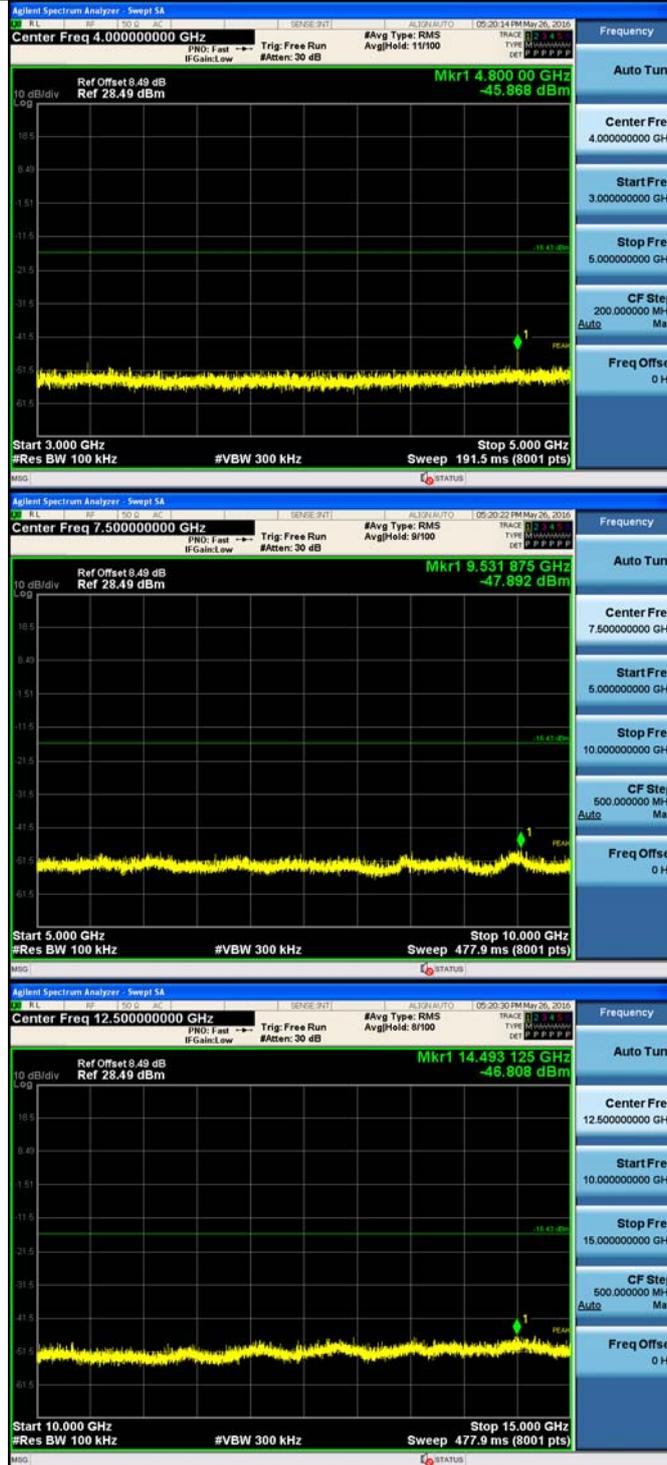


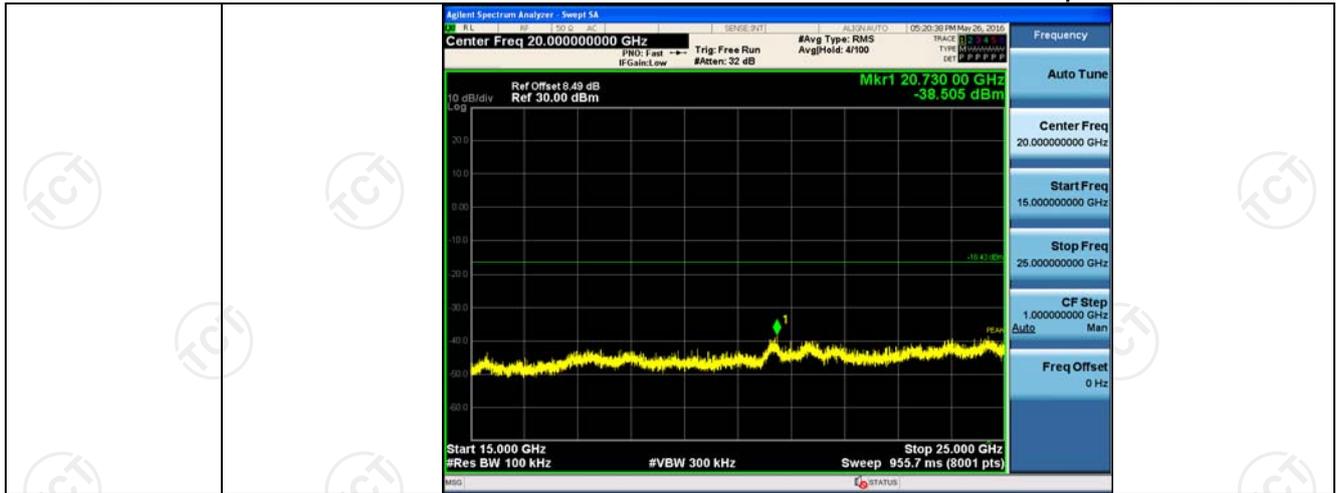




8DPSK MCH Graphs







8DPSK HCH Graphs

