

8DPSK/HCH



Dwell Time

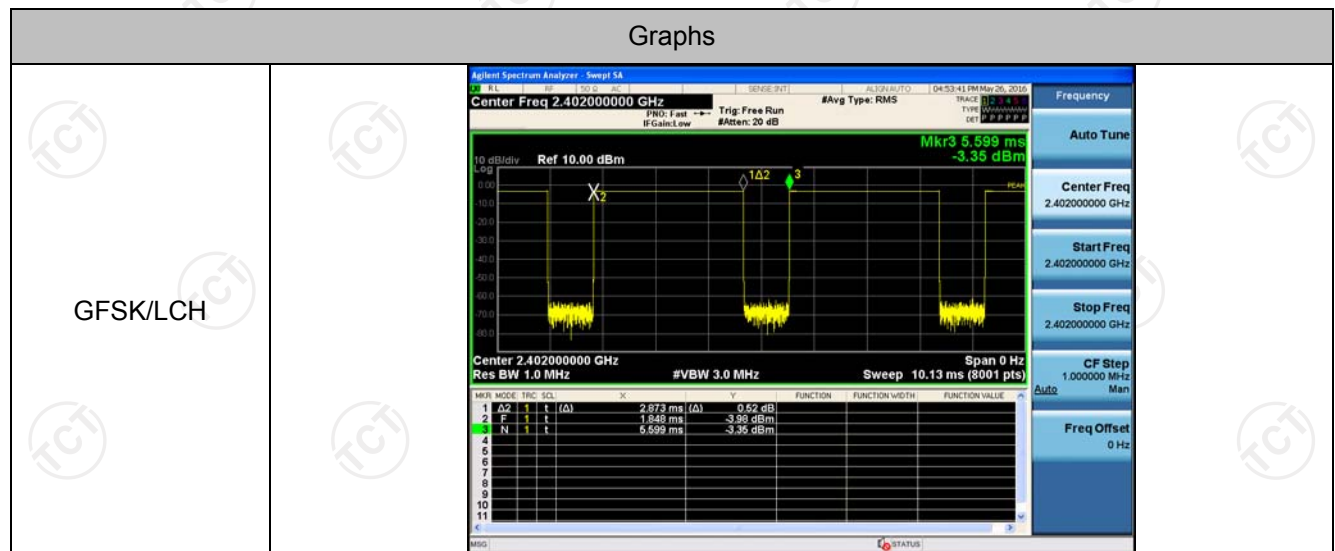
Result Table

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

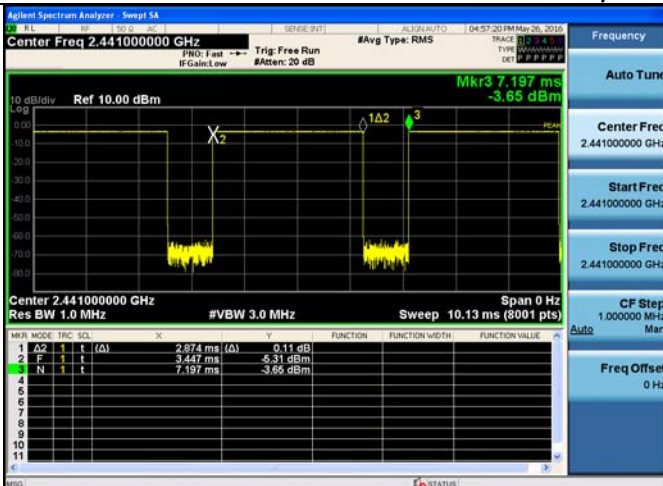
- The duration for dwell time calculation: $0.4[s] \times \text{hopping number} = 0.4[s] \times 79[\text{ch}] = 31.6[s \cdot \text{ch}]$;
- The burst width [ms/hop/ch], which is directly measured, refers to the duration on one channel hop.
- The hops per second for all channels: The selected EUT Conf 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

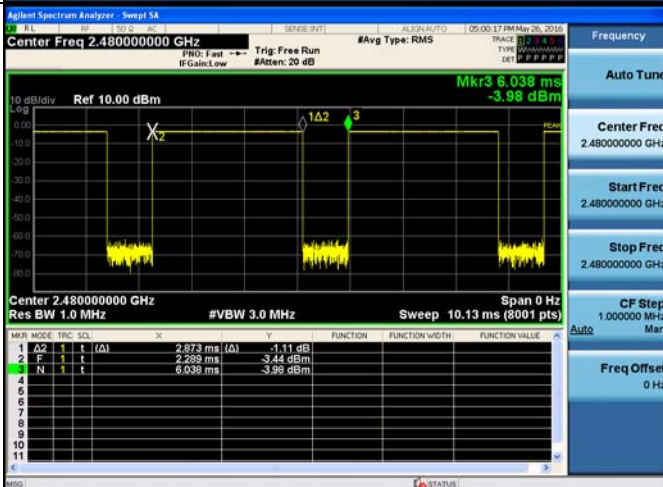
Test Graph



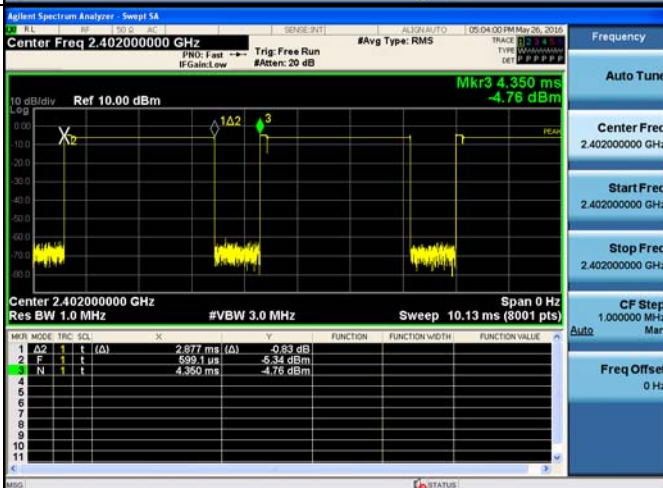
GFSK/MCH



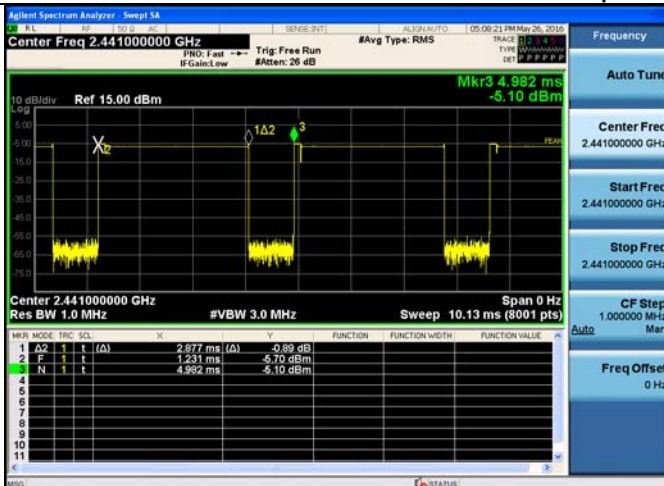
GFSK/HCH



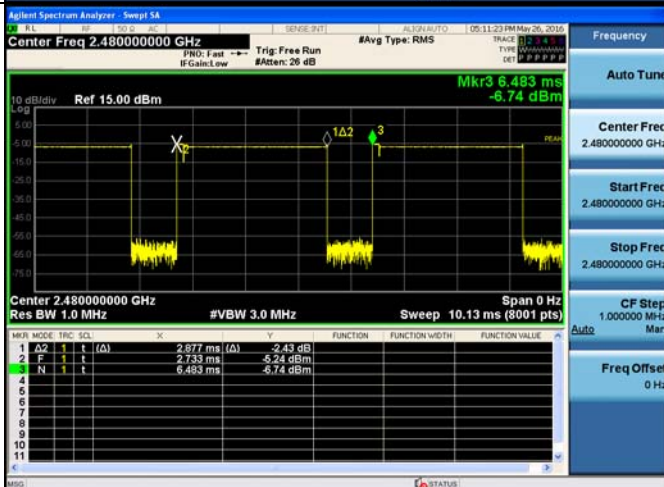
$\pi/4$ DQPSK/LCH



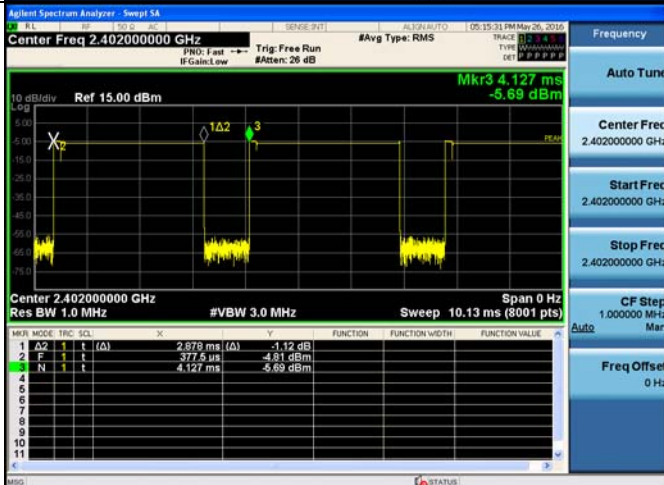
$\pi/4$ DQPSK/MCH



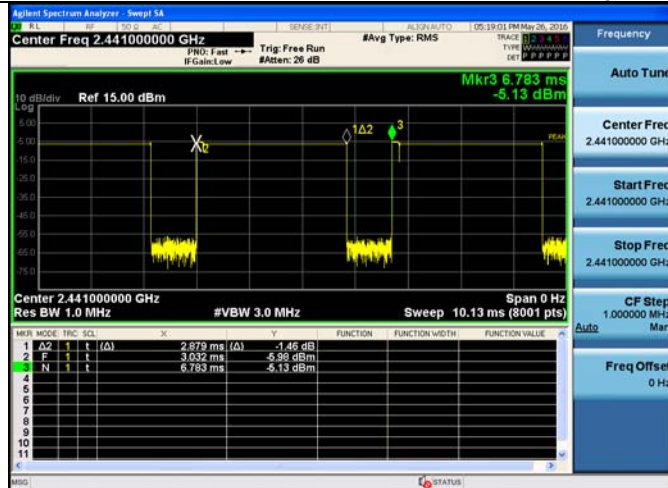
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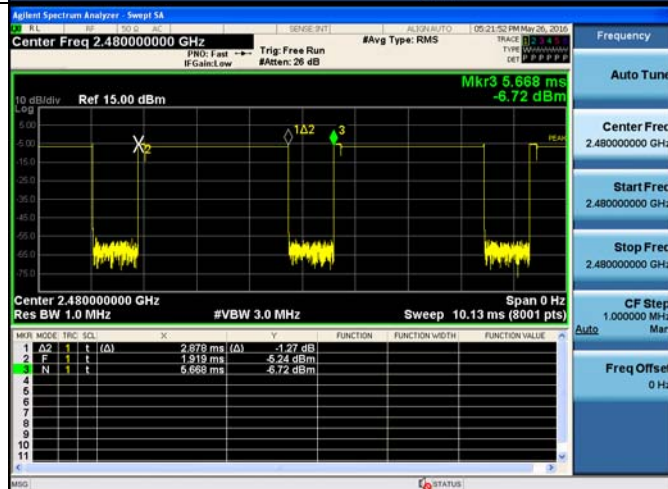
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

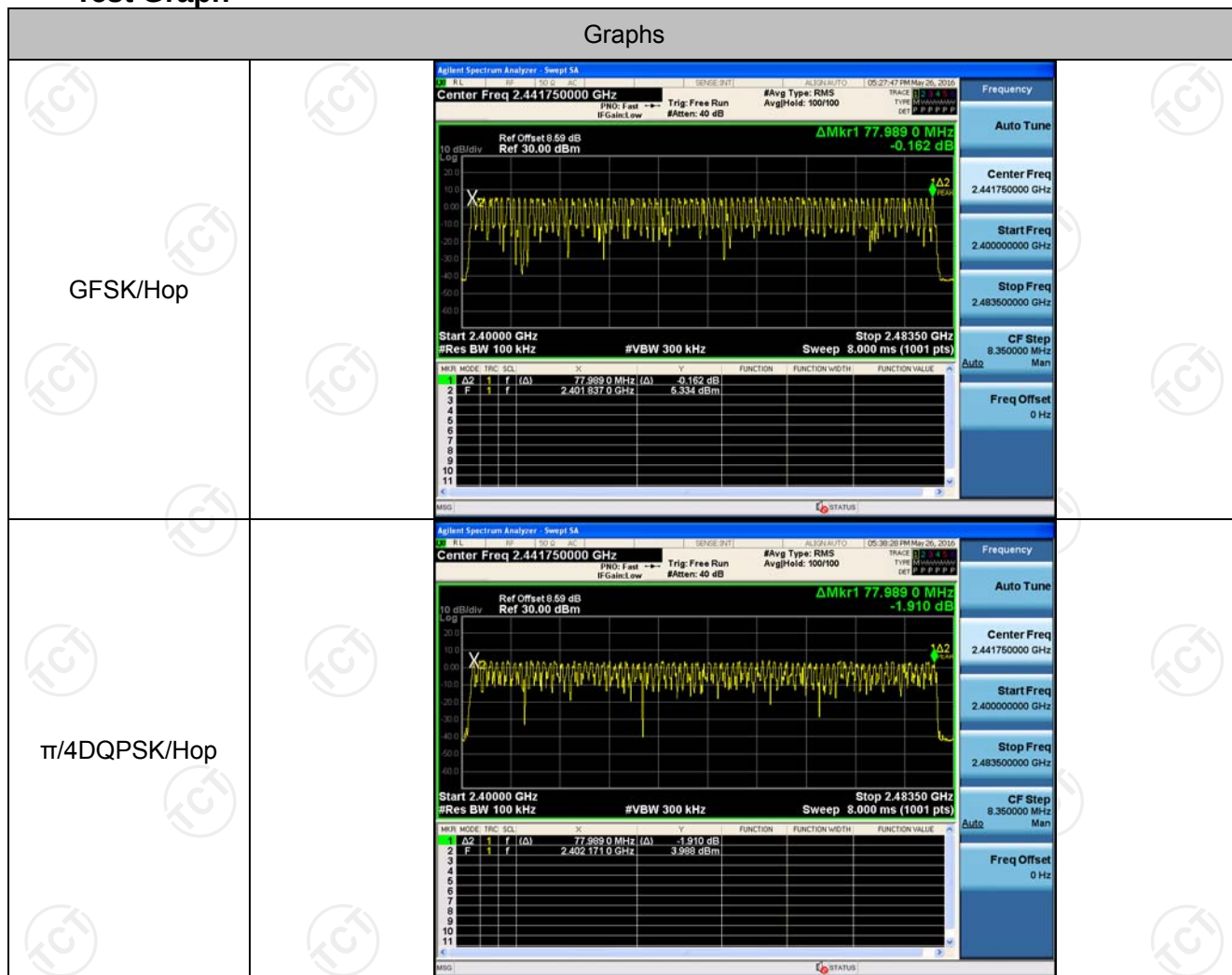


Hopping Channel Number

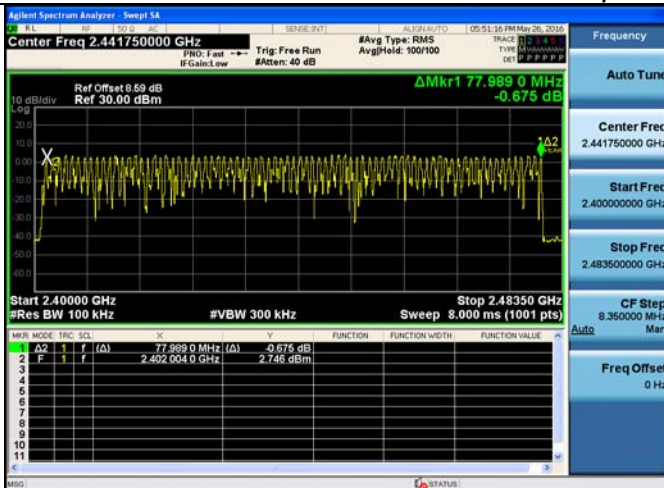
Result Table

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



GFSK/HCH



$\pi/4$ DQPSK/LCH



$\pi/4$ DQPSK/MCH



π/4DQPSK/HCH



8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

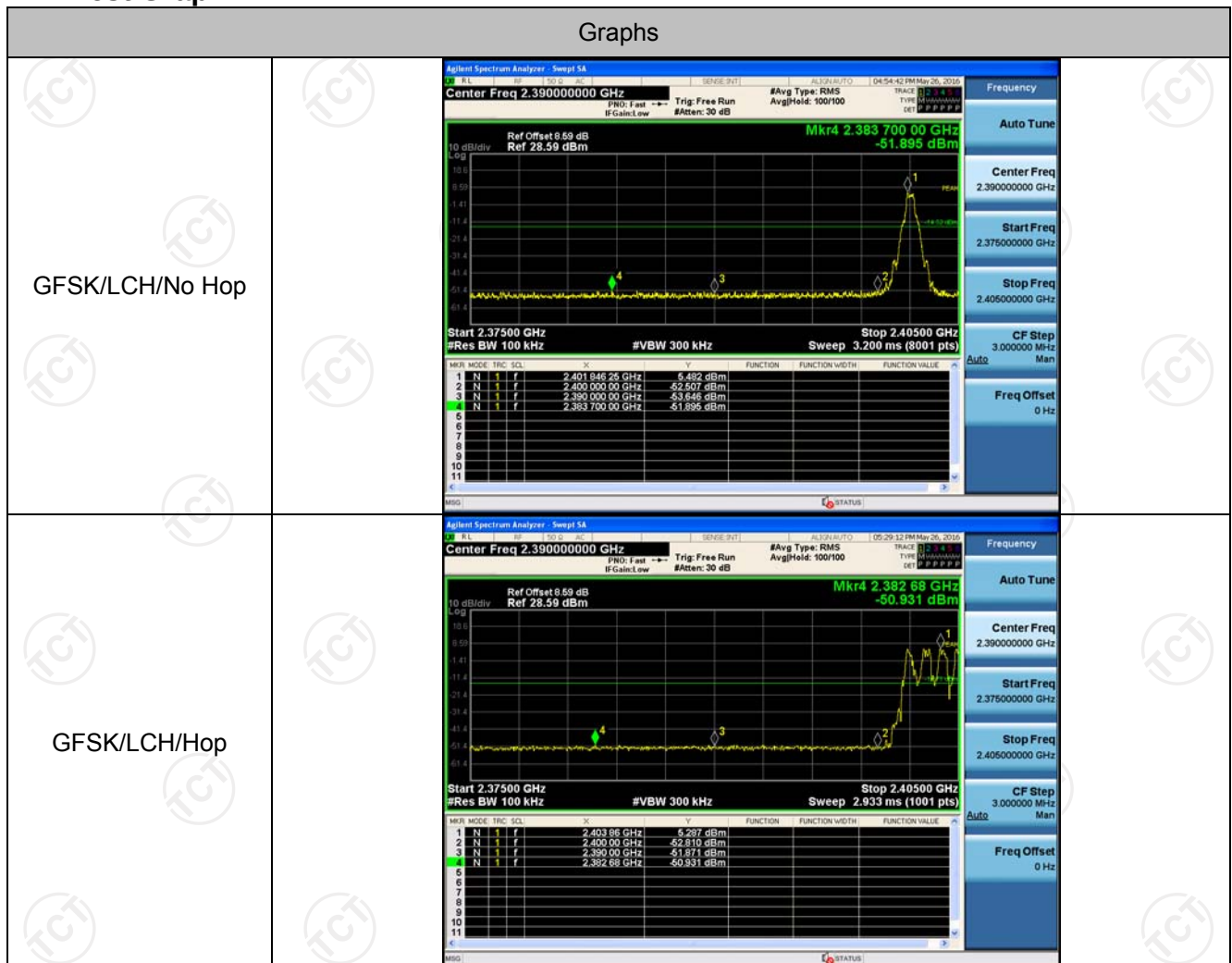


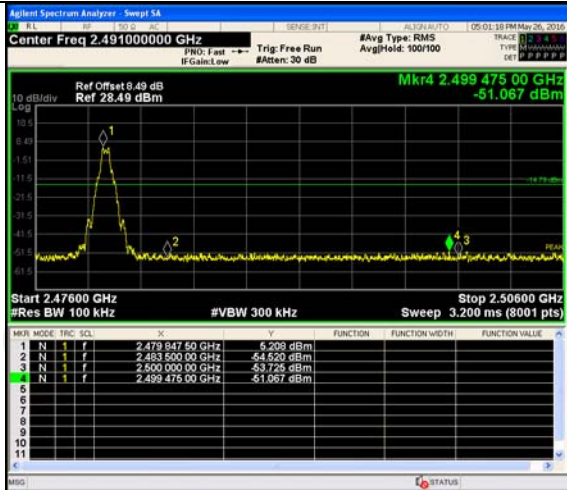
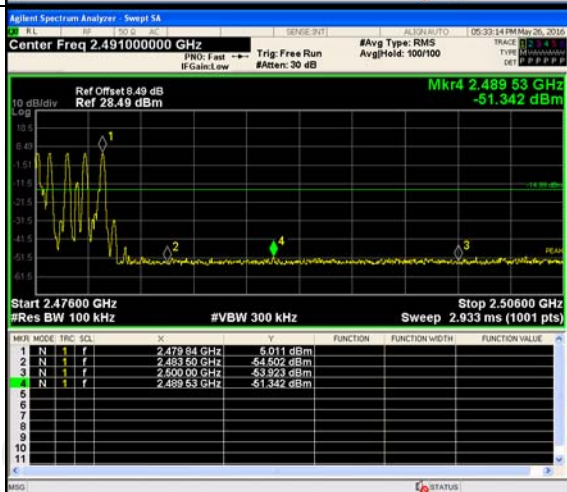
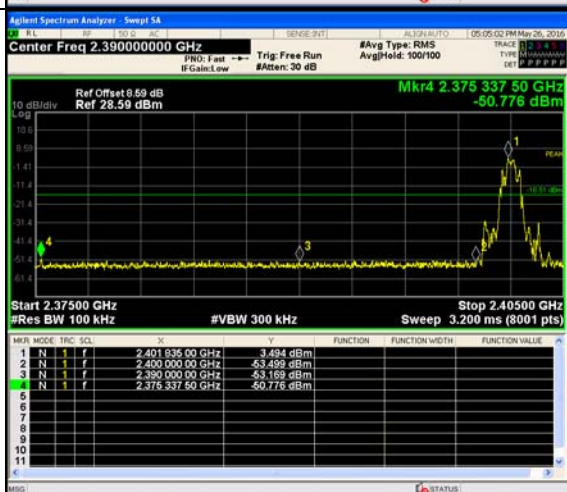
Band-edge for RF Conducted Emissions

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

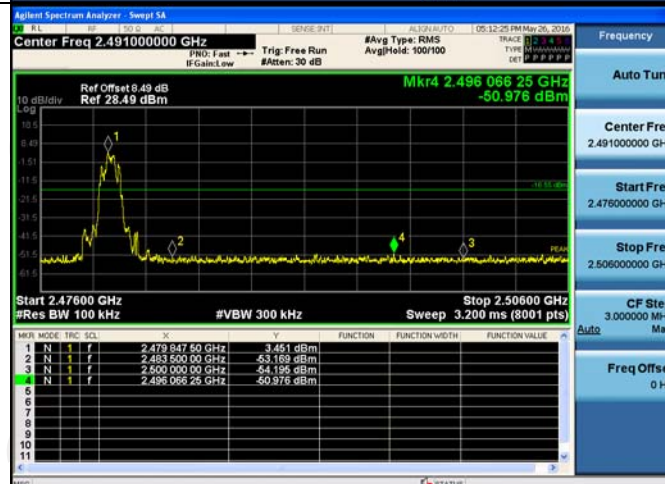


GFSK/HCH/No Hop	 Agilent Spectrum Analyzer - Sweep SA Center Freq 2.491000000 GHz Ref Offset 8.49 dB Ref 28.49 dBm Mkr4 2.499 475 00 GHz -51.067 dBm Start 2.47600 GHz #Res BW 100 kHz #VBW 300 kHz Stop 2.50600 GHz Sweep 3.200 ms (8001 pts) <table><tr><th>MNR</th><th>MODE</th><th>TRIG</th><th>SCL</th><th>F</th><th>X</th><th>Y</th><th>FUNCTION</th><th>FUNCTION WIDTH</th><th>FUNCTION VALUE</th></tr><tr><td>1</td><td>N</td><td>1</td><td>f</td><td></td><td>2.479 847 50 GHz</td><td>5.208 dBm</td><td></td><td></td><td></td></tr><tr><td>2</td><td>N</td><td>1</td><td>f</td><td></td><td>2.483 500 00 GHz</td><td>-54.520 dBm</td><td></td><td></td><td></td></tr><tr><td>3</td><td>N</td><td>1</td><td>f</td><td></td><td>2.500 000 00 GHz</td><td>-53.726 dBm</td><td></td><td></td><td></td></tr><tr><td>4</td><td>N</td><td>1</td><td>f</td><td></td><td>2.499 475 00 GHz</td><td>-51.067 dBm</td><td></td><td></td><td></td></tr></table>	MNR	MODE	TRIG	SCL	F	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f		2.479 847 50 GHz	5.208 dBm				2	N	1	f		2.483 500 00 GHz	-54.520 dBm				3	N	1	f		2.500 000 00 GHz	-53.726 dBm				4	N	1	f		2.499 475 00 GHz	-51.067 dBm			
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$\pi/4$ DQPSK/LCH/No Hop	 Agilent Spectrum Analyzer - Sweep SA Center Freq 2.390000000 GHz Ref Offset 8.59 dB Ref 28.59 dBm Mkr4 2.375 337 50 GHz -50.776 dBm Start 2.37500 GHz #Res BW 100 kHz #VBW 300 kHz Stop 2.40500 GHz Sweep 3.200 ms (8001 pts) <table><tr><th>MNR</th><th>MODE</th><th>TRIG</th><th>SCL</th><th>F</th><th>X</th><th>Y</th><th>FUNCTION</th><th>FUNCTION WIDTH</th><th>FUNCTION VALUE</th></tr><tr><td>1</td><td>N</td><td>1</td><td>f</td><td></td><td>2.401 935 00 GHz</td><td>3.494 dBm</td><td></td><td></td><td></td></tr><tr><td>2</td><td>N</td><td>1</td><td>f</td><td></td><td>2.400 000 00 GHz</td><td>-53.499 dBm</td><td></td><td></td><td></td></tr><tr><td>3</td><td>N</td><td>1</td><td>f</td><td></td><td>2.390 000 00 GHz</td><td>-53.169 dBm</td><td></td><td></td><td></td></tr><tr><td>4</td><td>N</td><td>1</td><td>f</td><td></td><td>2.375 337 50 GHz</td><td>-50.776 dBm</td><td></td><td></td><td></td></tr></table>	MNR	MODE	TRIG	SCL	F	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f		2.401 935 00 GHz	3.494 dBm				2	N	1	f		2.400 000 00 GHz	-53.499 dBm				3	N	1	f		2.390 000 00 GHz	-53.169 dBm				4	N	1	f		2.375 337 50 GHz	-50.776 dBm			
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$\pi/4$ DQPSK/LCH/Hop



$\pi/4$ DQPSK/HCH/No Hop



$\pi/4$ DQPSK/HCH/Hop



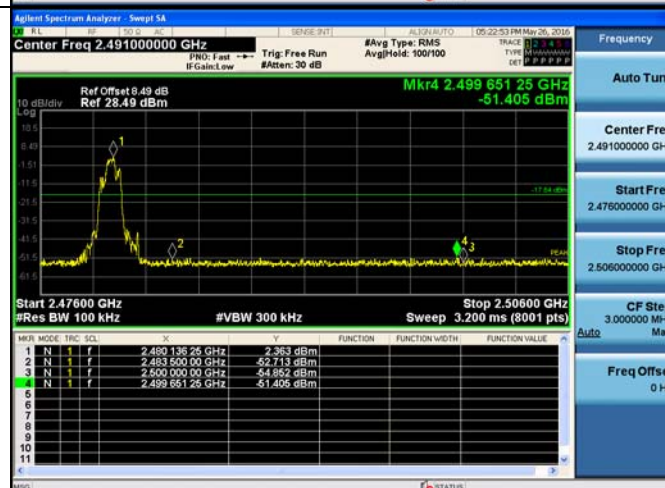
8DPSK/LCH/No Hop



8DPSK/LCH/Hop



8DPSK/HCH/No Hop



8DPSK/HCH/Hop

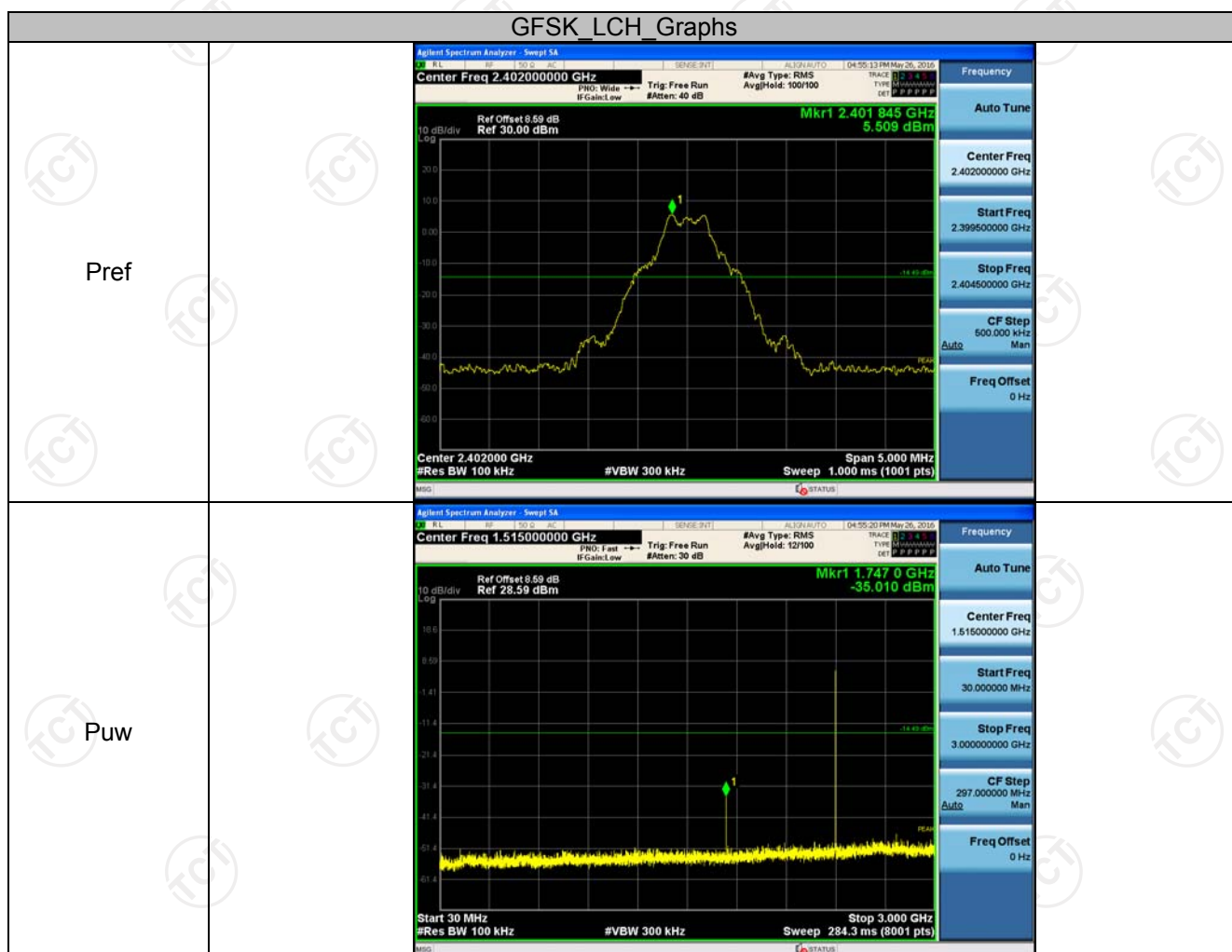


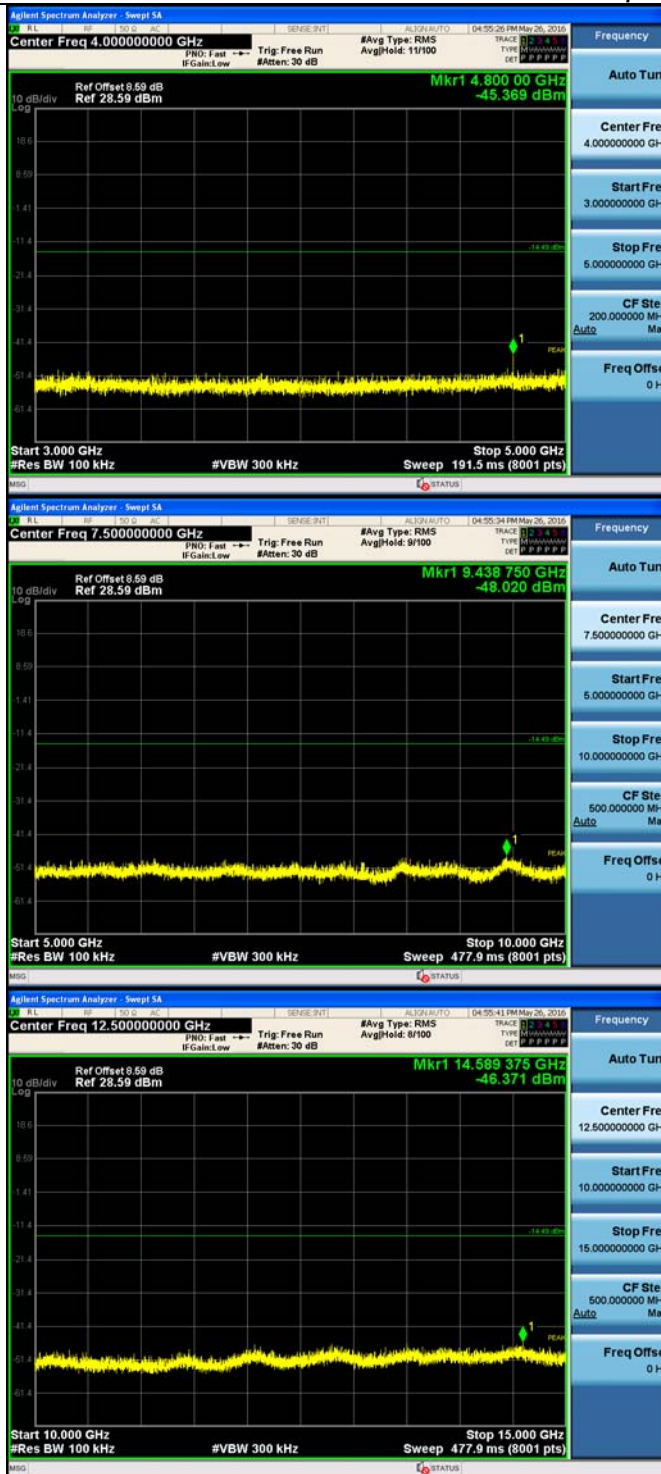
RF Conducted Spurious Emissions

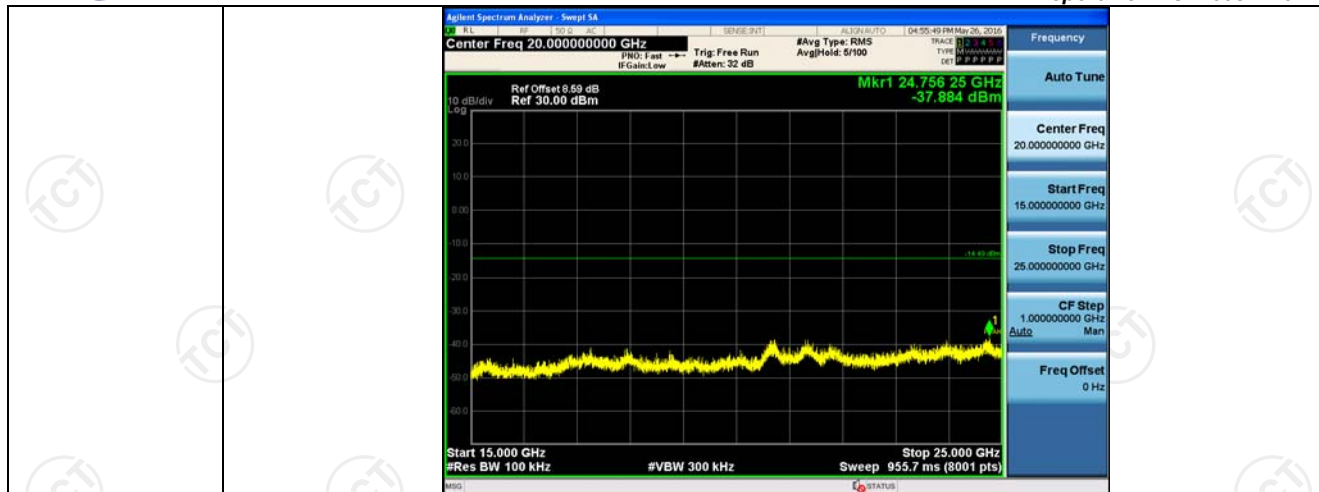
Result Table

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

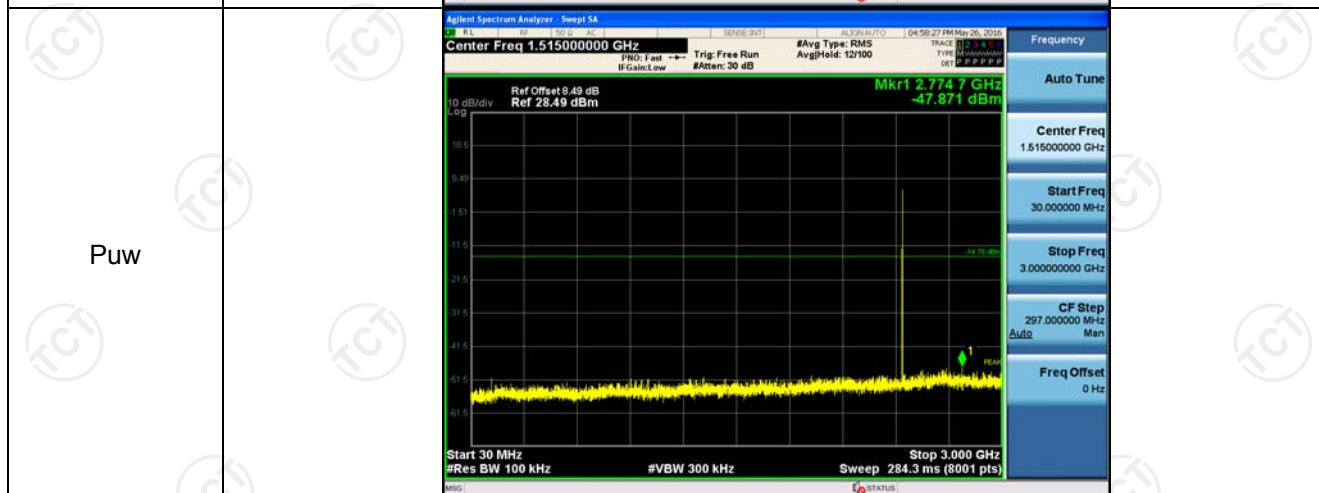
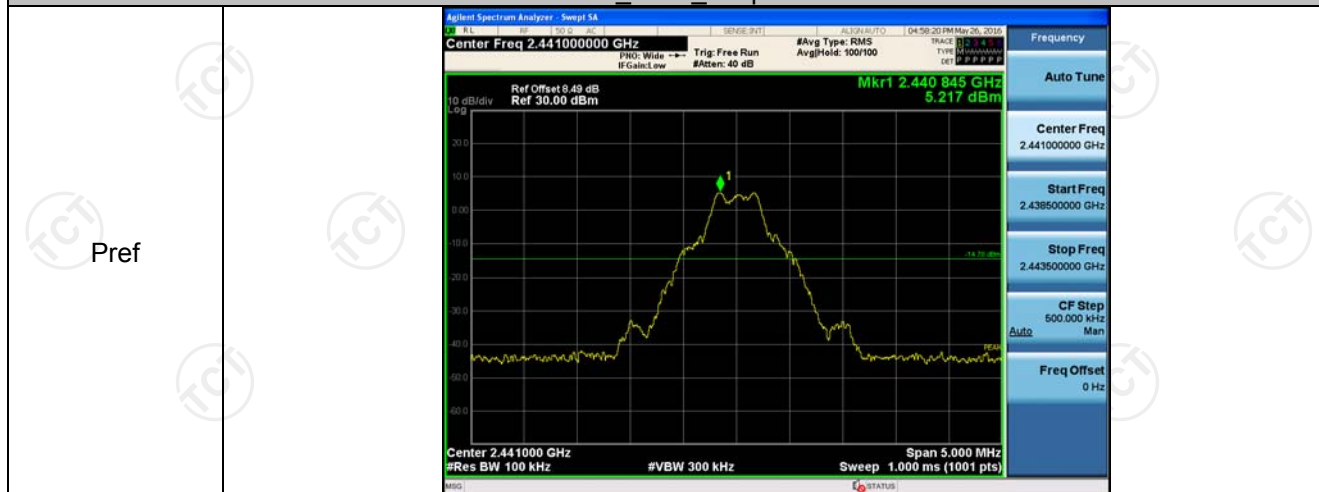
Test Graph

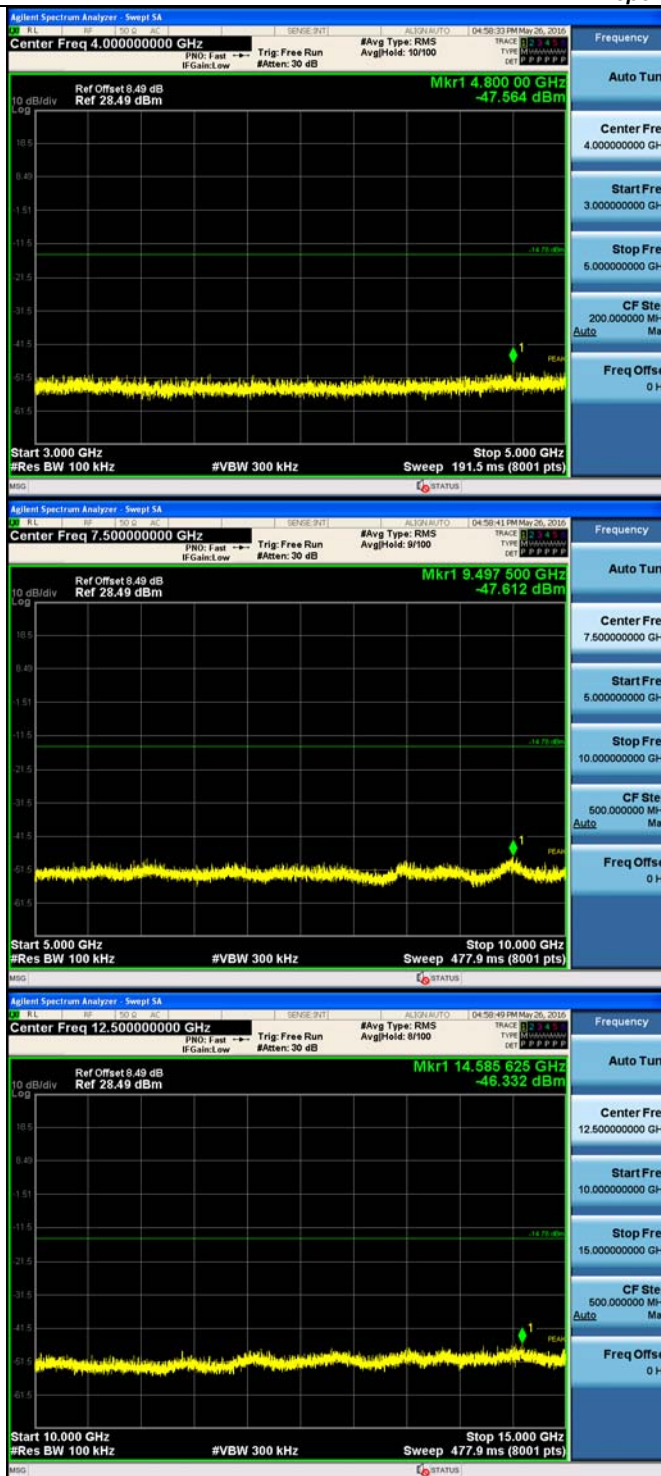


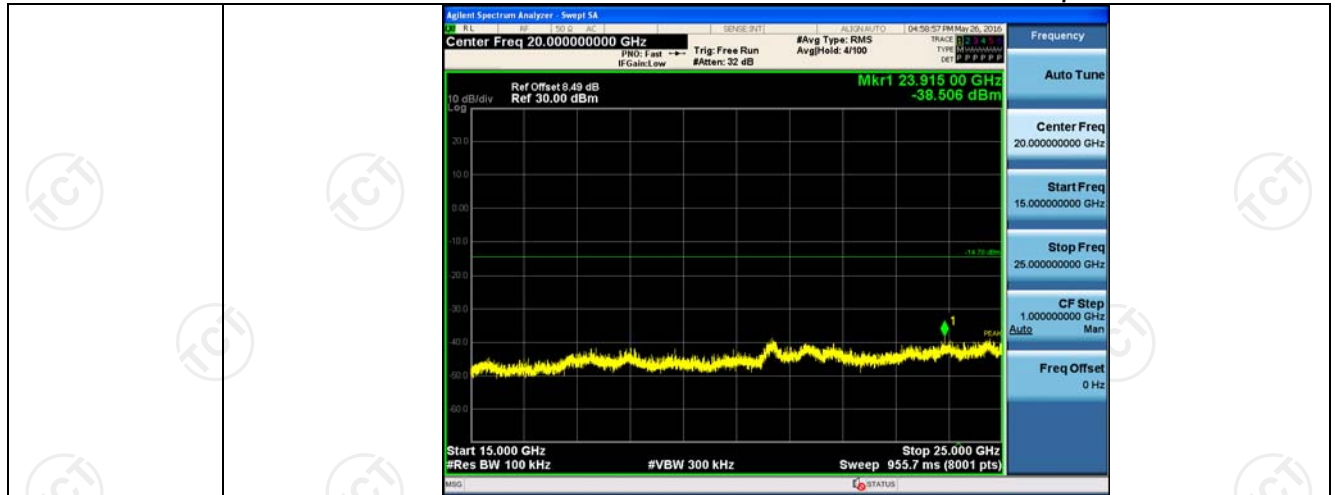




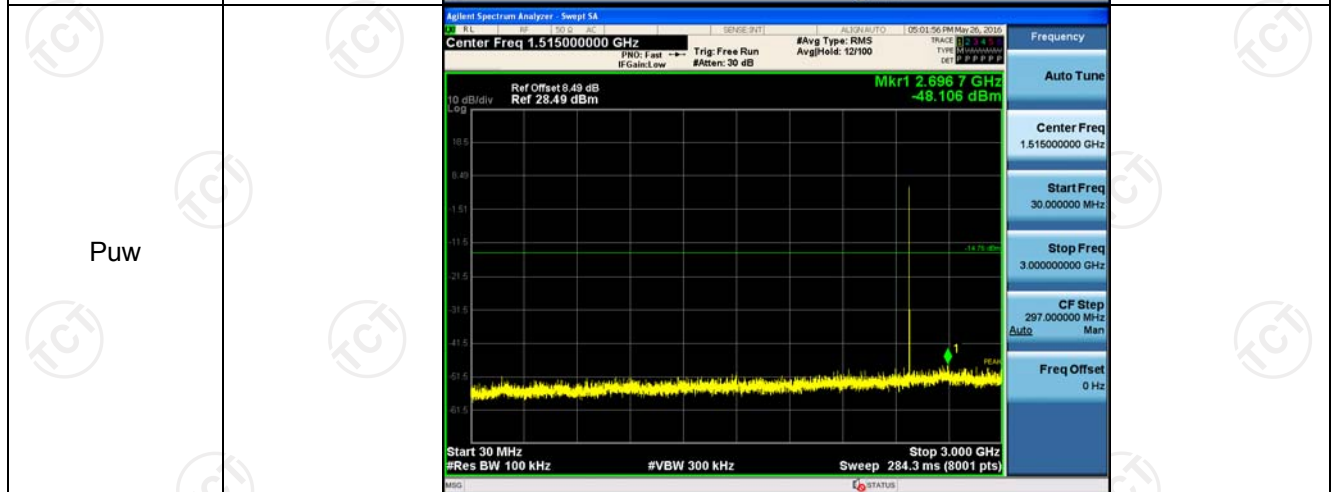
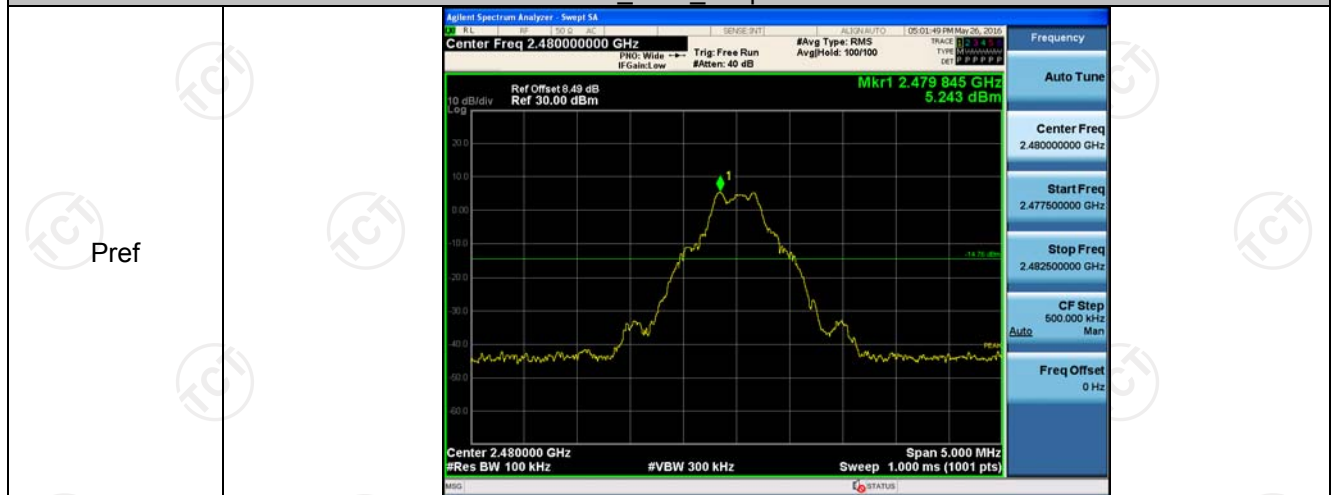
GFSK MCH_Graphs

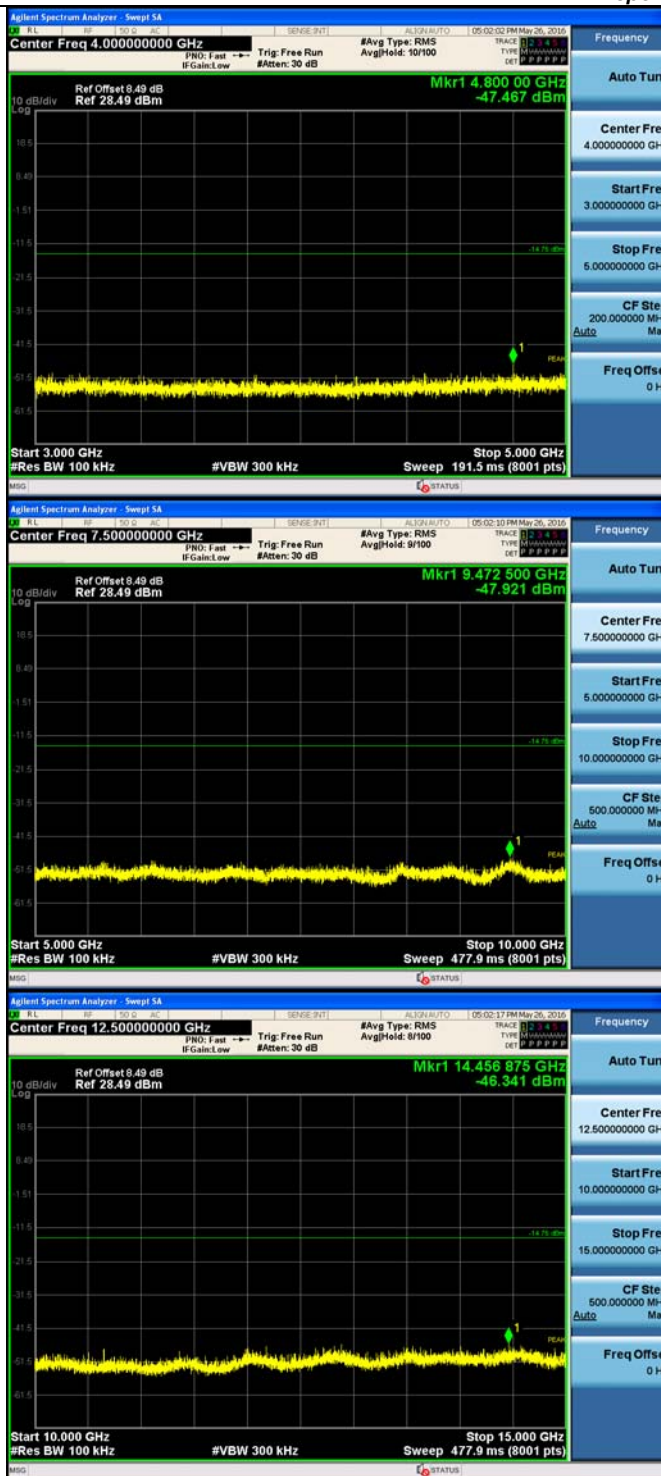


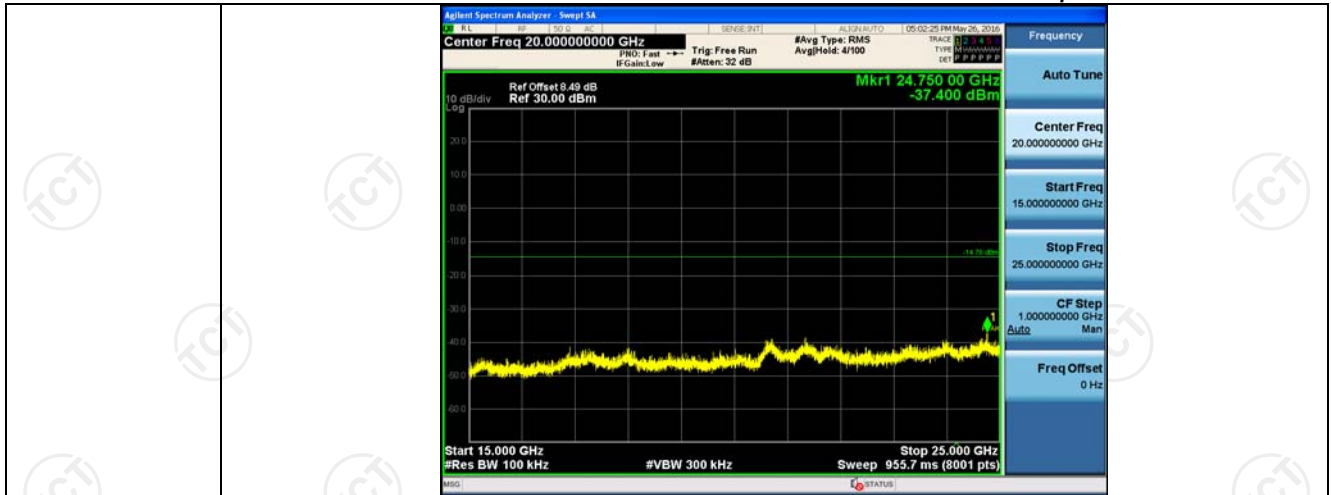




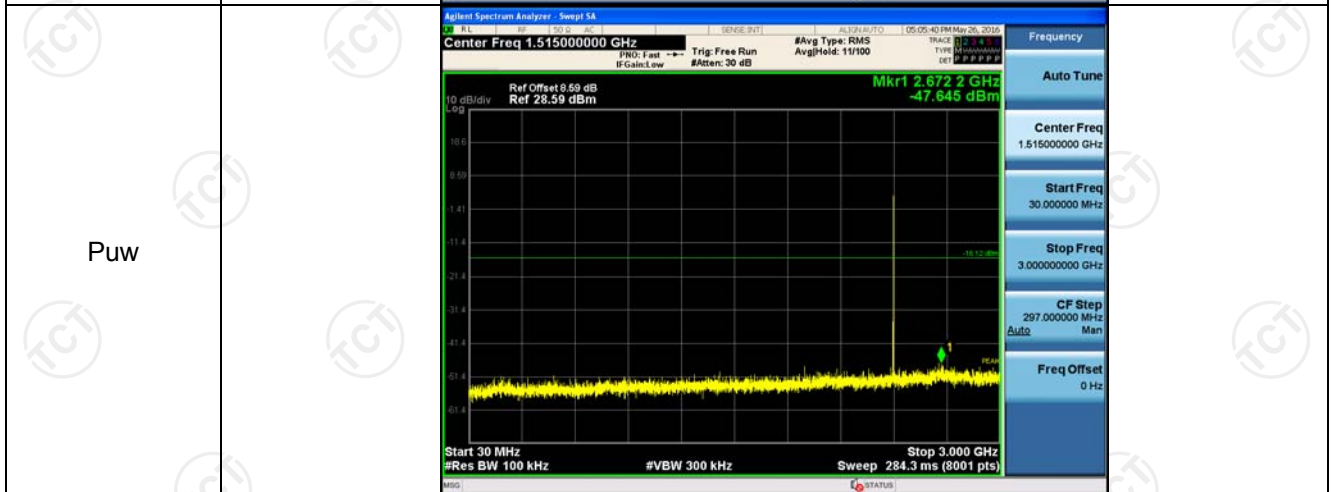
GFSK HCH_Graphs

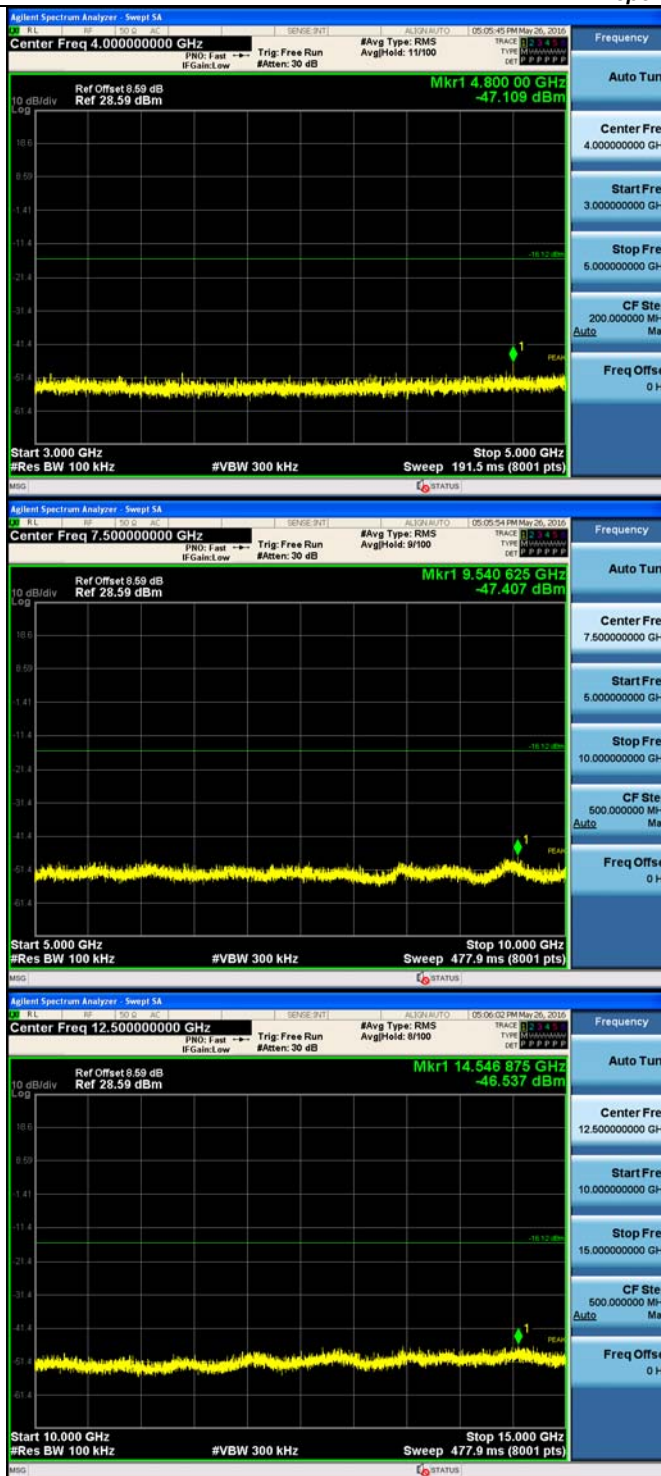


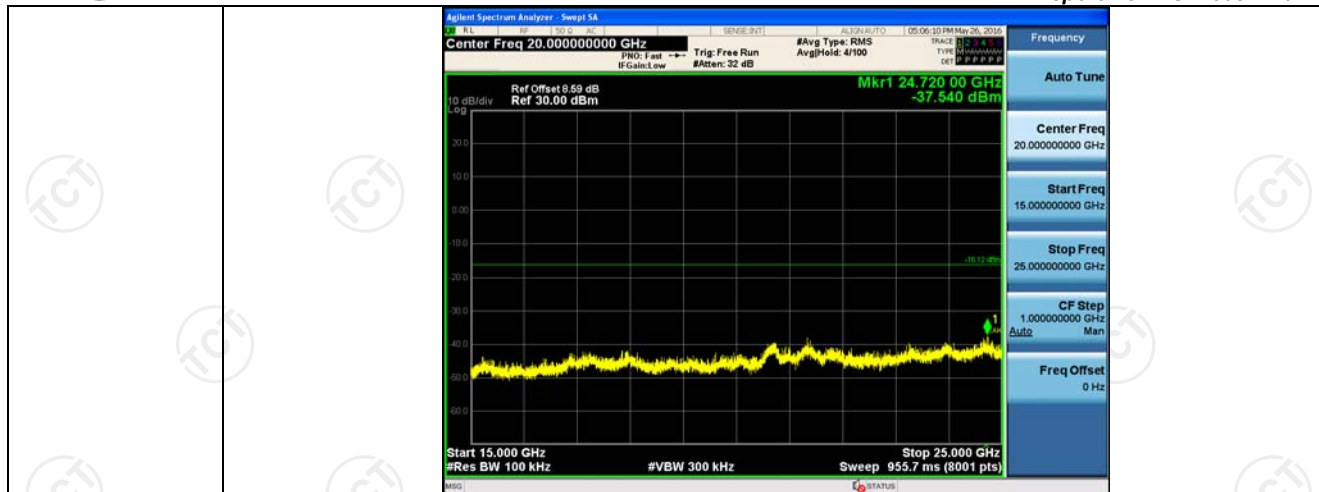




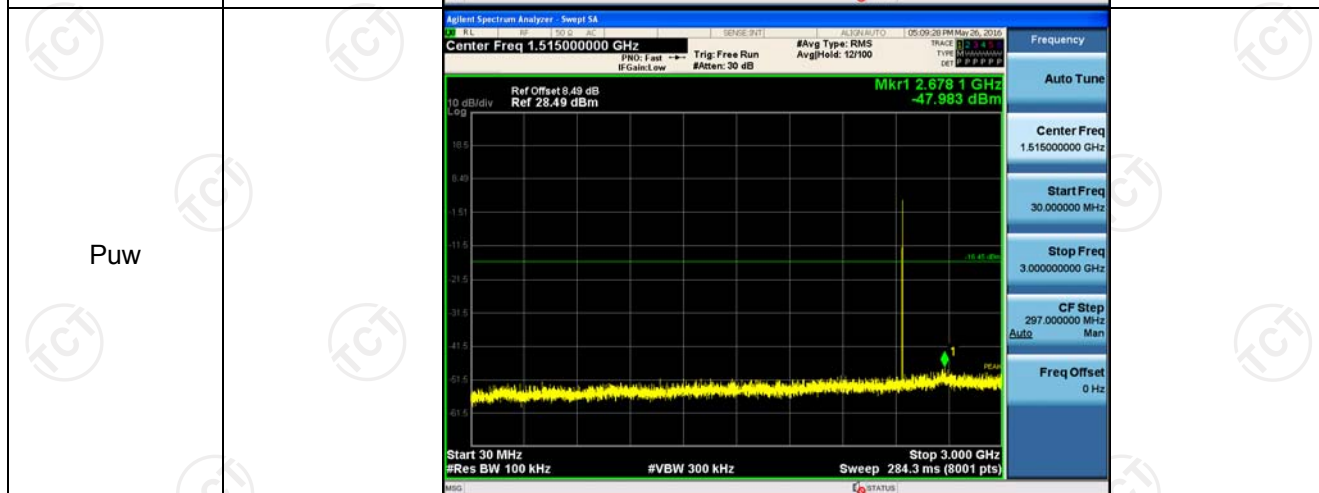
$\pi/4$ DQPSK LCH_Graphs

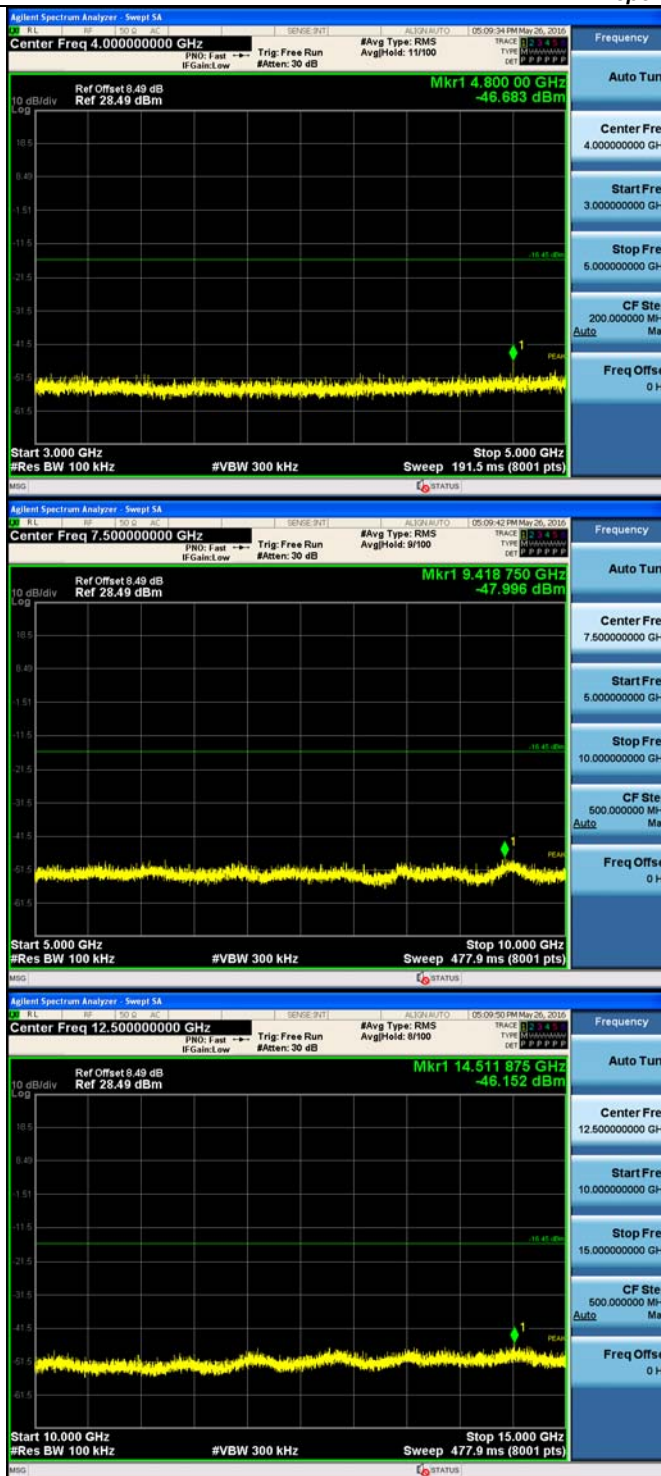


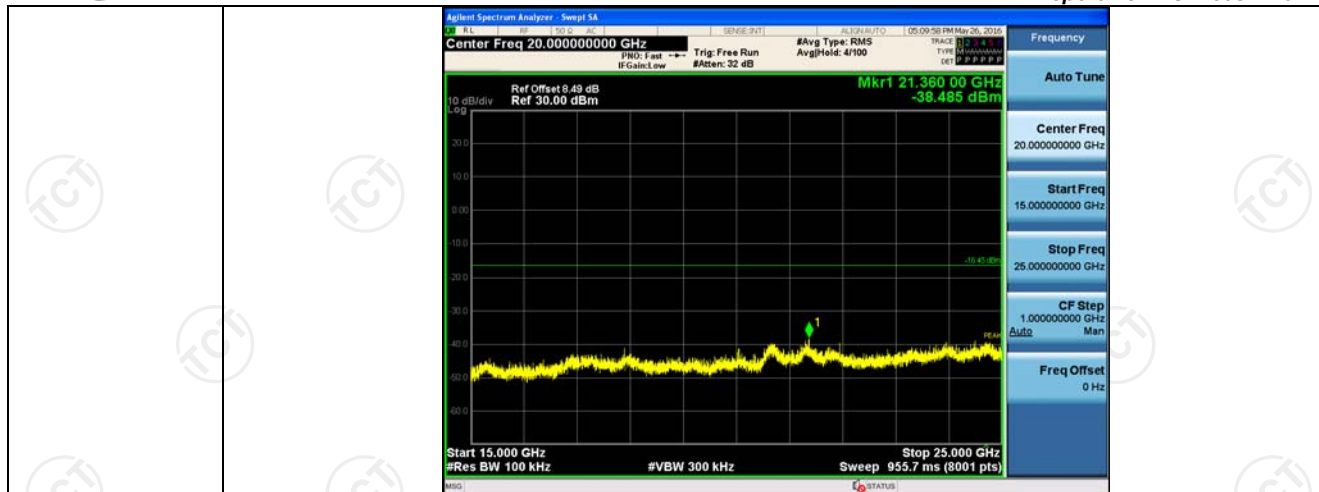




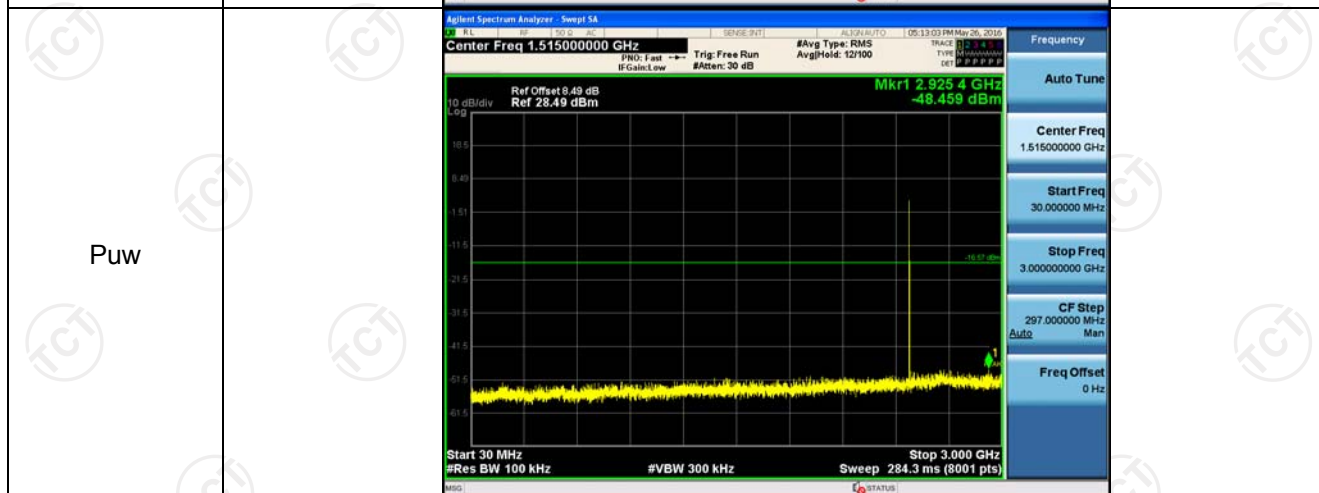
$\pi/4$ DQPSK_MCH_Graphs

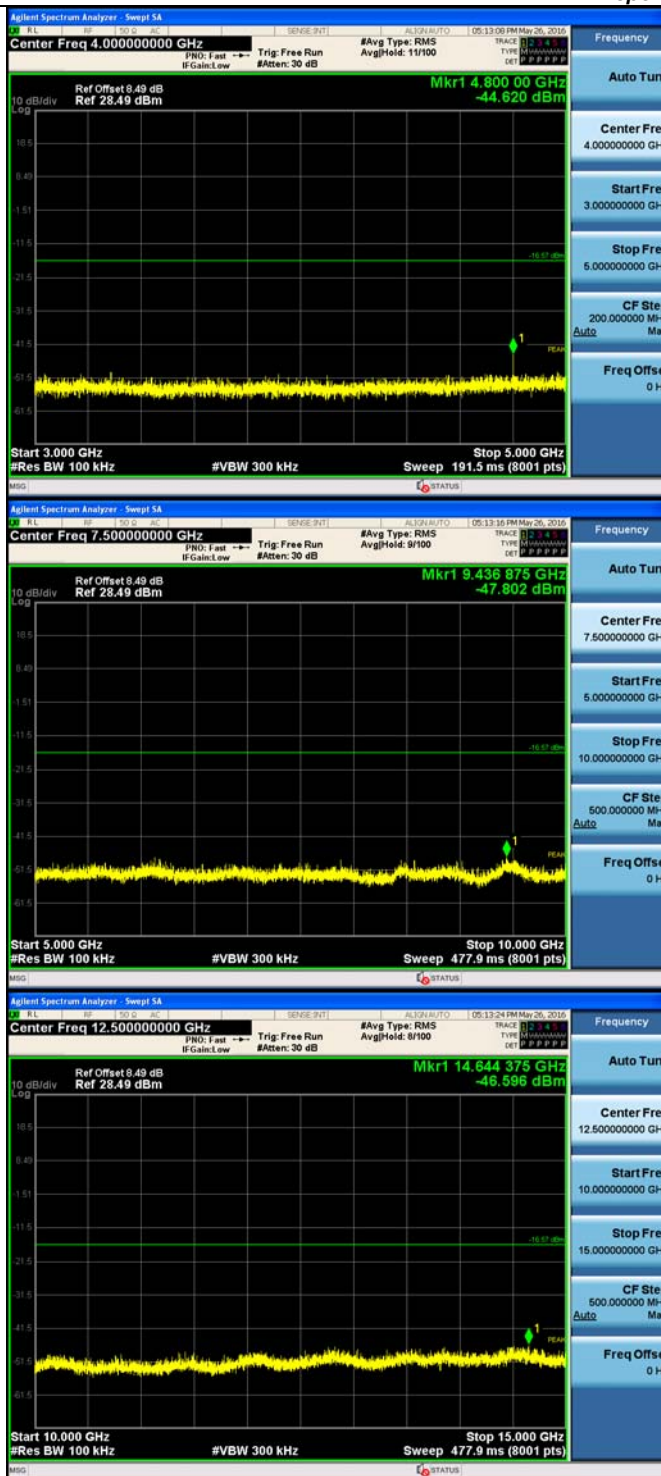


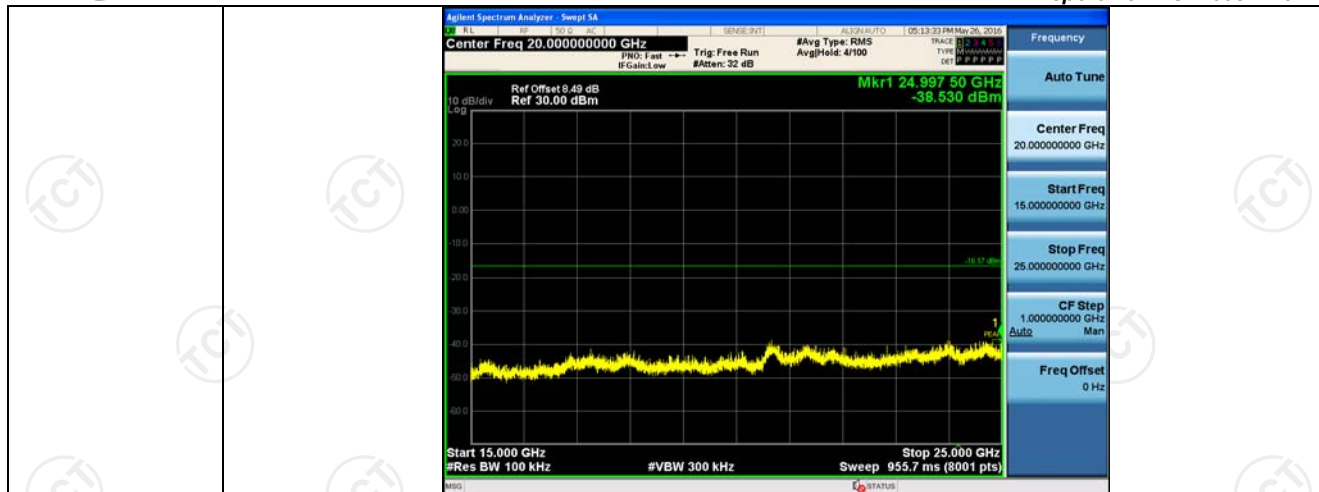




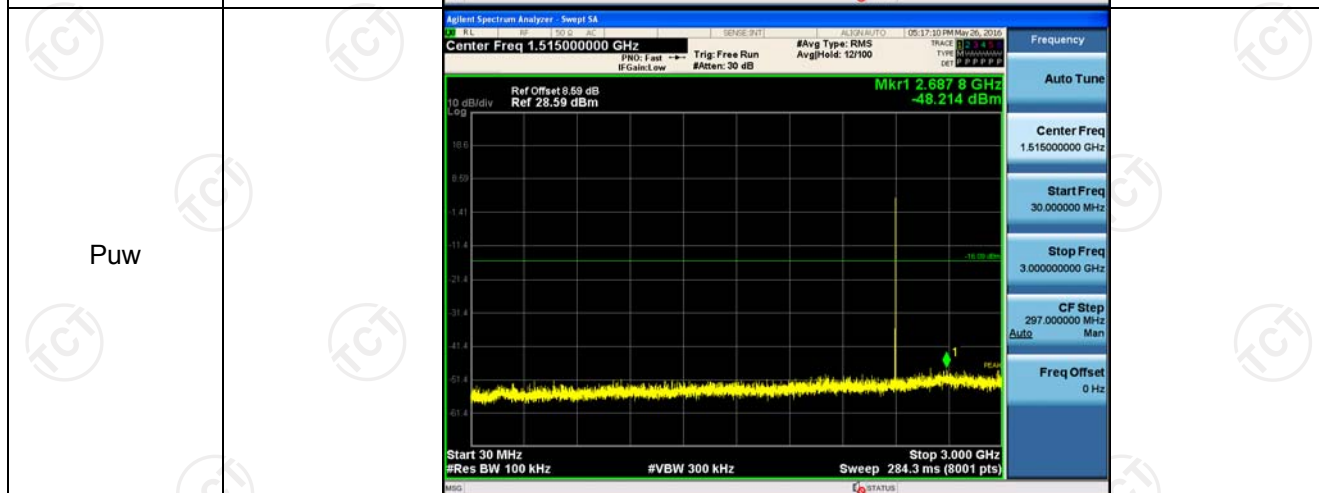
$\pi/4$ DQPSK_HCH_Graphs

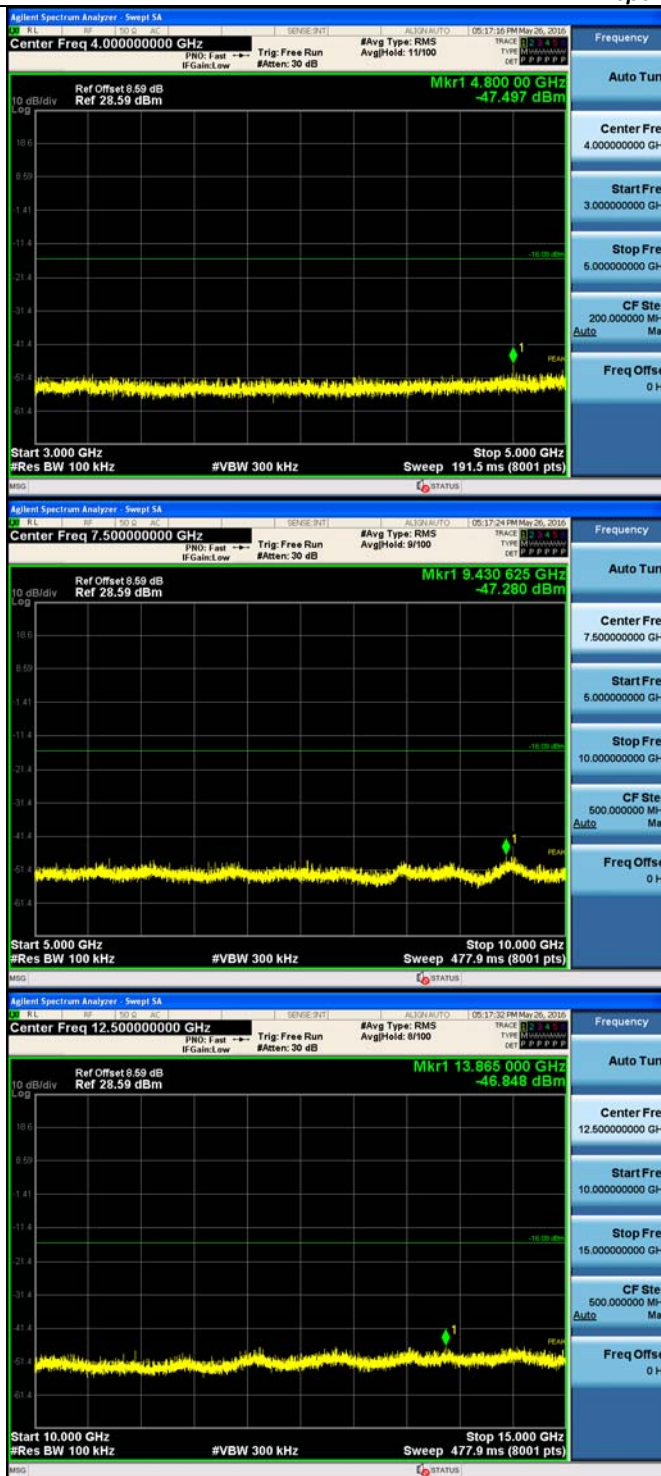


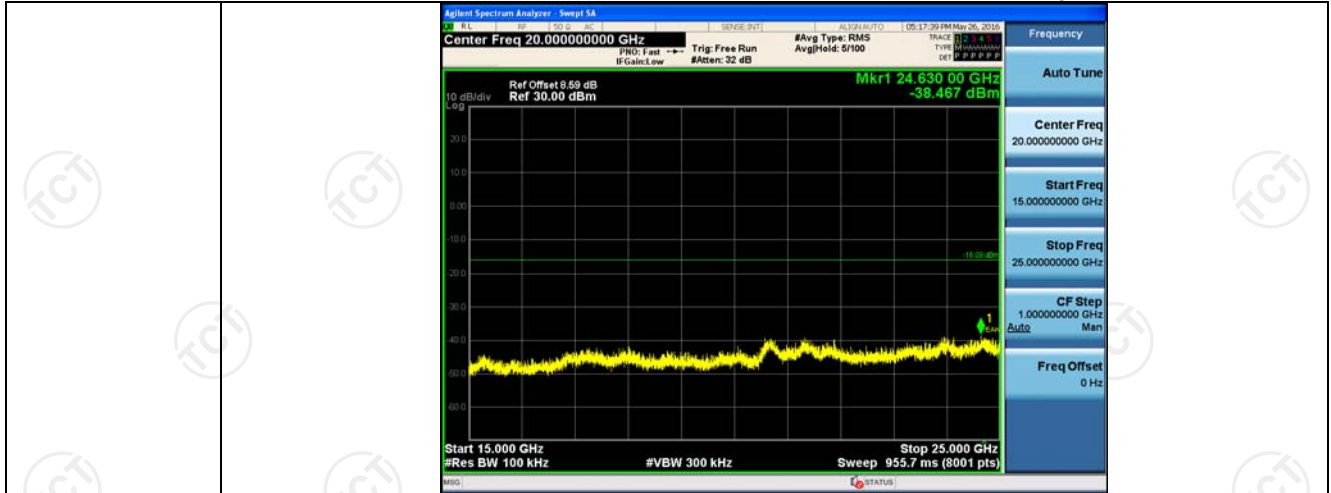




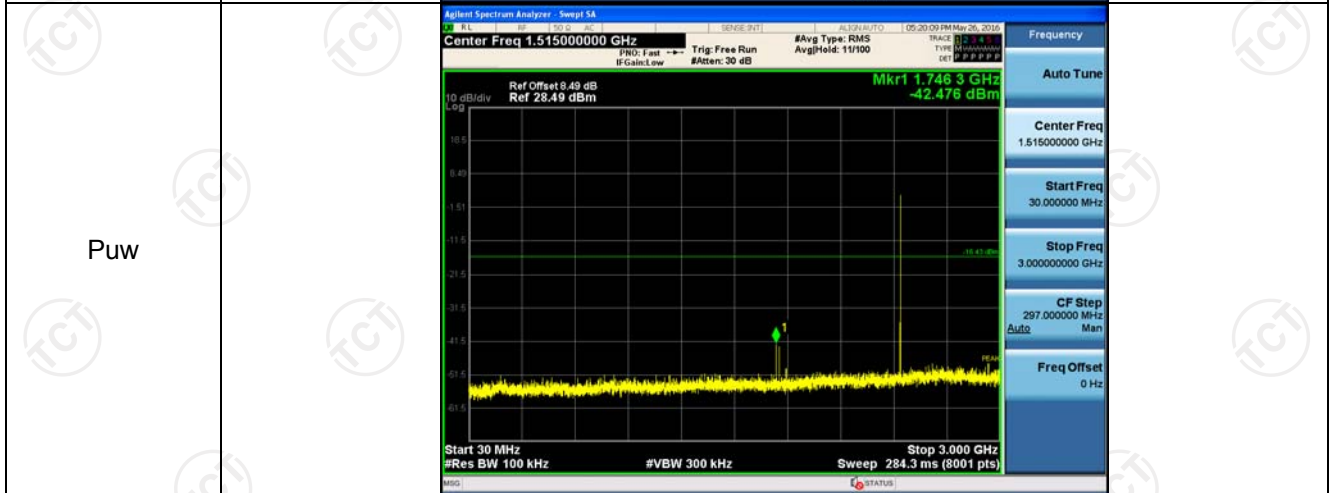
8DPSK_LCH_Graphs

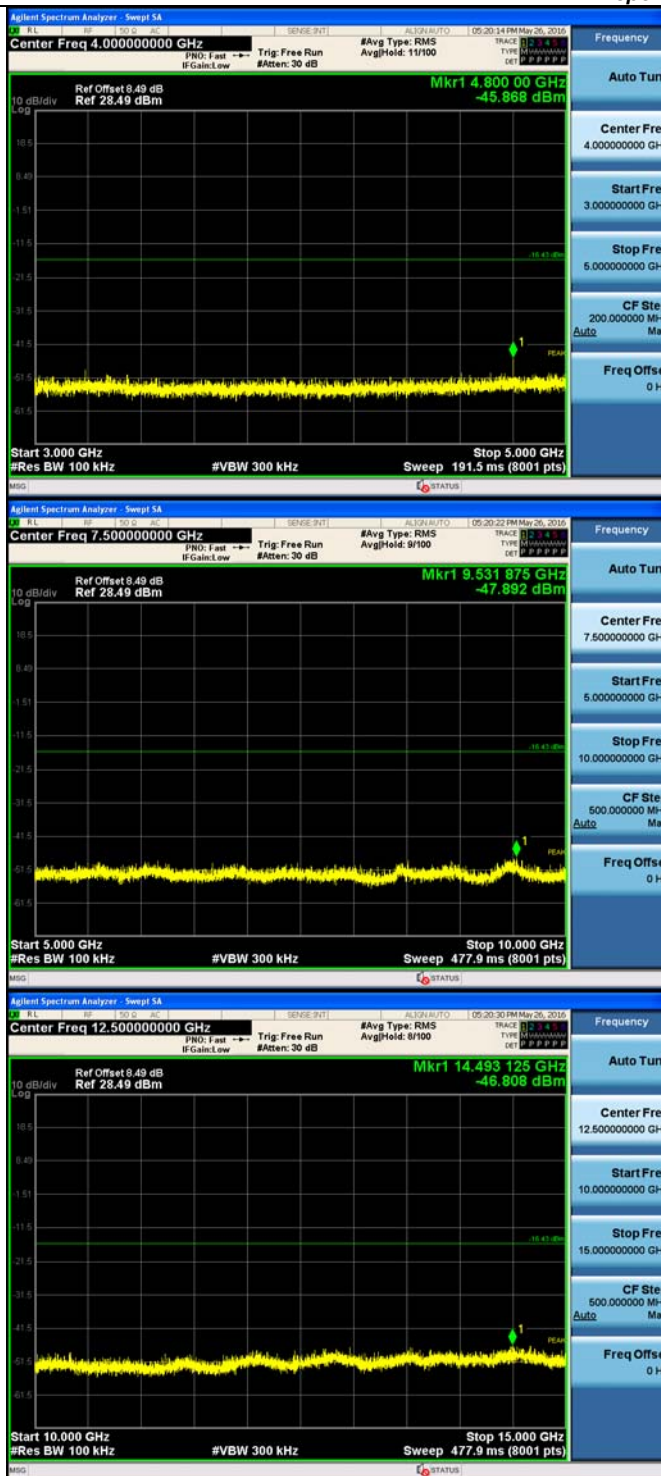


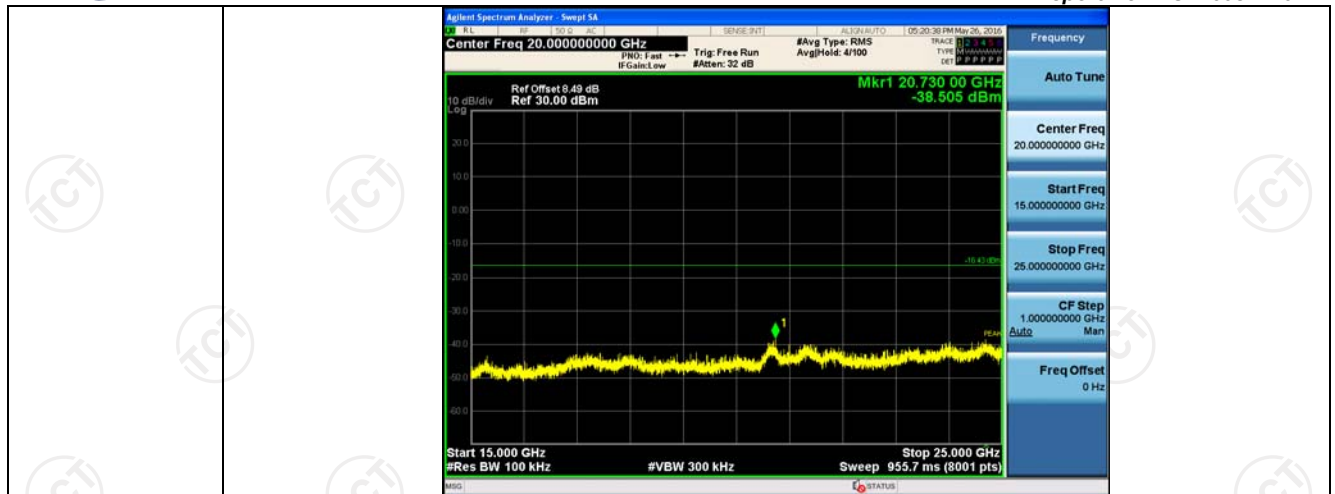




8DPSK_MCH_Graphs



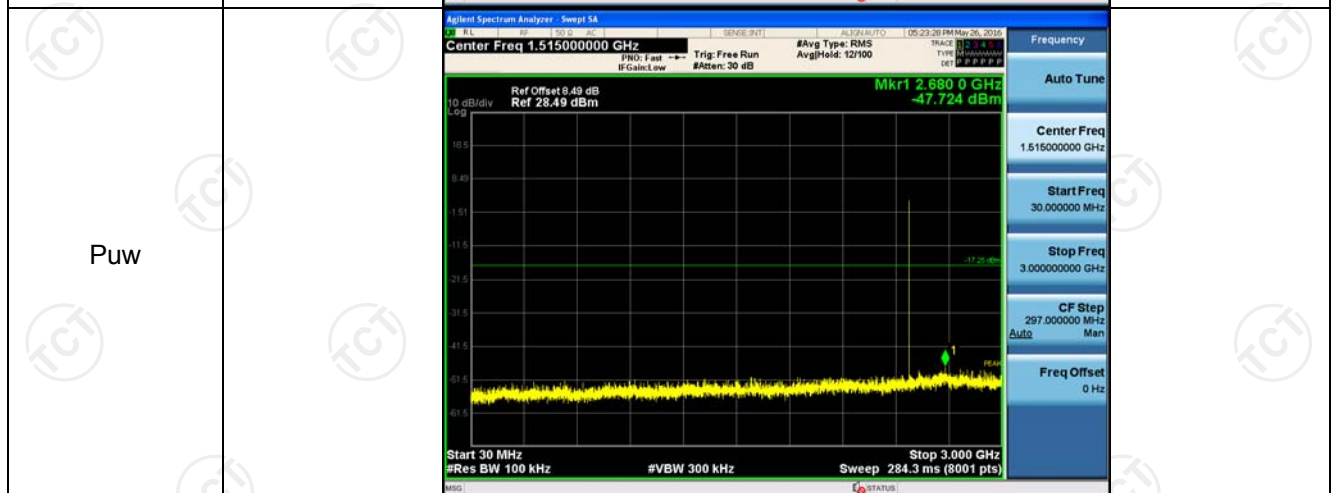




8DPSK_HCH Graphs



Pref



Puw

