

## Dwell Time

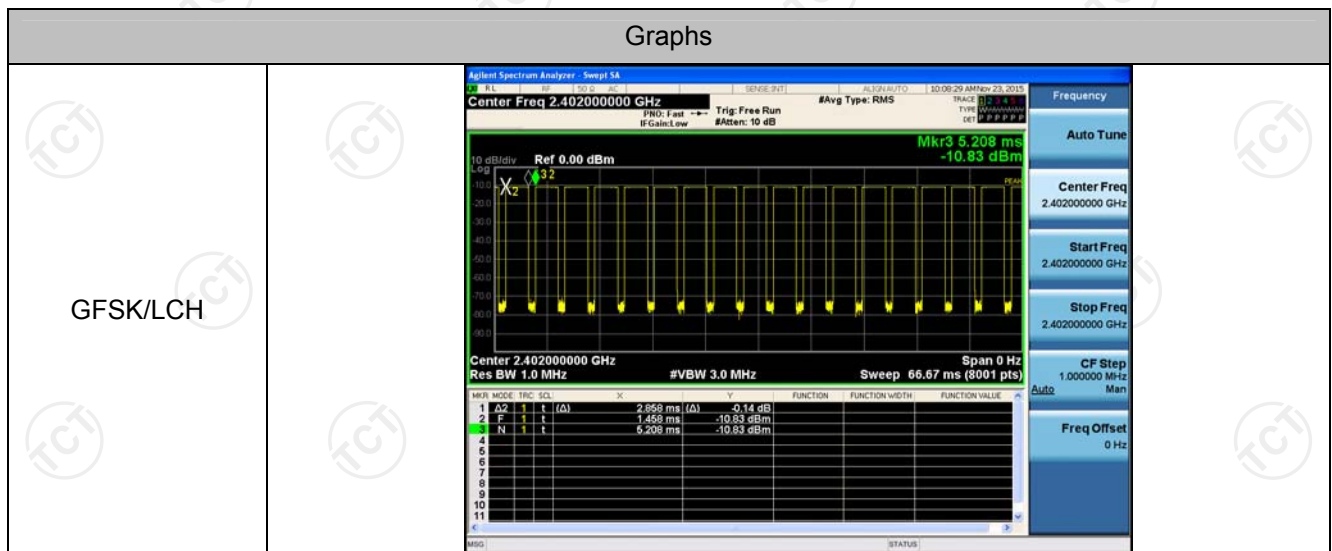
### Result Table

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  $1600/6 = 266.67 [\text{ch} \cdot \text{hop}/\text{s}]$
- The hops per second on one channel:  $266.67 [\text{ch} \cdot \text{hops}/\text{s}] / 79 [\text{ch}] = 3.38 [\text{hop}/\text{s}]$ ;
- The total hops for all channels within the dwell time calculation duration:  $3.38 [\text{hop}/\text{s}] \times 31.6[s \cdot \text{ch}] = 106.67 [\text{hop} \cdot \text{ch}]$ ;
- The dwell time for all channels hopping:  $106.67 [\text{hop} \cdot \text{ch}] \times \text{Burst Width} [\text{ms}/\text{hop}/\text{ch}]$ .

Mode	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Duty Cycle [%]	Verdict
GFSK	LCH	2.858	106.7	0.305	76.22	PASS
GFSK	MCH	2.858	106.7	0.305	76.22	PASS
GFSK	HCH	2.858	106.7	0.305	76.22	PASS
$\pi/4$ DQPSK	LCH	2.867	106.7	0.306	76.44	PASS
$\pi/4$ DQPSK	MCH	2.858	106.7	0.305	76.22	PASS
$\pi/4$ DQPSK	HCH	2.867	106.7	0.306	76.44	PASS
8DPSK	LCH	2.867	106.7	0.306	76.44	PASS
8DPSK	MCH	2.867	106.7	0.306	76.44	PASS
8DPSK	HCH	2.867	106.7	0.306	76.44	PASS

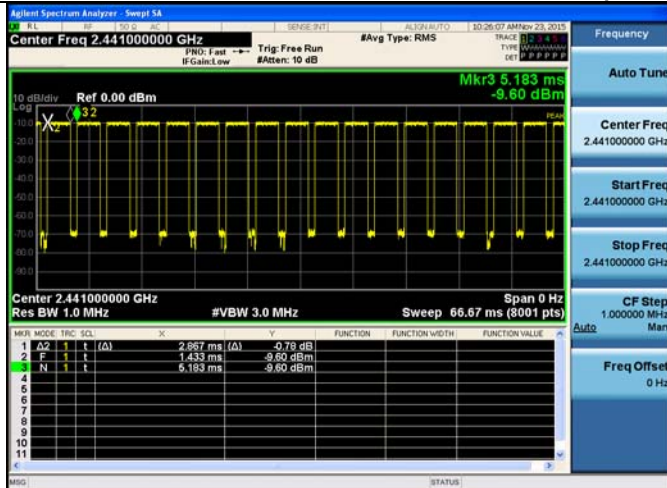
### Test Graph



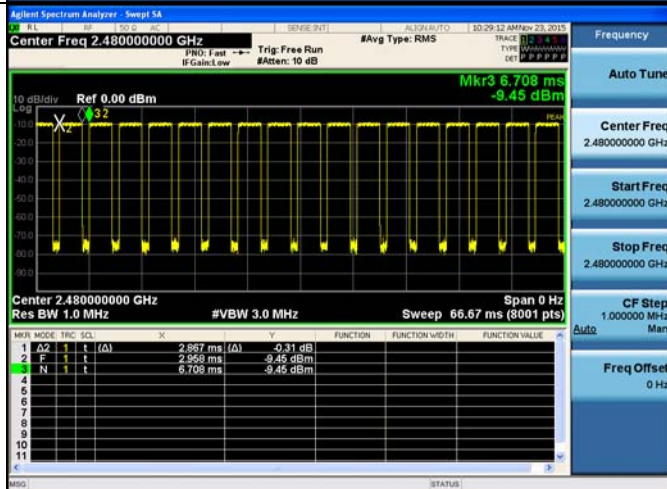
<p>GFSK/MCH</p>		<p>Frequency: 2.441000000 GHz</p> <p>Auto Tune</p> <p>Center Freq: 2.441000000 GHz</p> <p>Start Freq: 2.441000000 GHz</p> <p>Stop Freq: 2.441000000 GHz</p> <p>CF Step: 1.000000 MHz</p> <p>Freq Offset: 0 Hz</p>
<p>GFSK/HCH</p>		<p>Frequency: 2.480000000 GHz</p> <p>Auto Tune</p> <p>Center Freq: 2.441000000 GHz</p> <p>Start Freq: 2.441000000 GHz</p> <p>Stop Freq: 2.441000000 GHz</p> <p>CF Step: 1.000000 MHz</p> <p>Freq Offset: 0 Hz</p>
<p><math>\pi</math>/4DQPSK/LCH</p>		<p>Frequency: 2.402000000 GHz</p> <p>Auto Tune</p> <p>Center Freq: 2.402000000 GHz</p> <p>Start Freq: 2.402000000 GHz</p> <p>Stop Freq: 2.402000000 GHz</p> <p>CF Step: 1.000000 MHz</p> <p>Freq Offset: 0 Hz</p>

<p><math>\pi/4</math>DQPSK/MCH</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><math>\pi/4</math>DQPSK/HCH</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>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



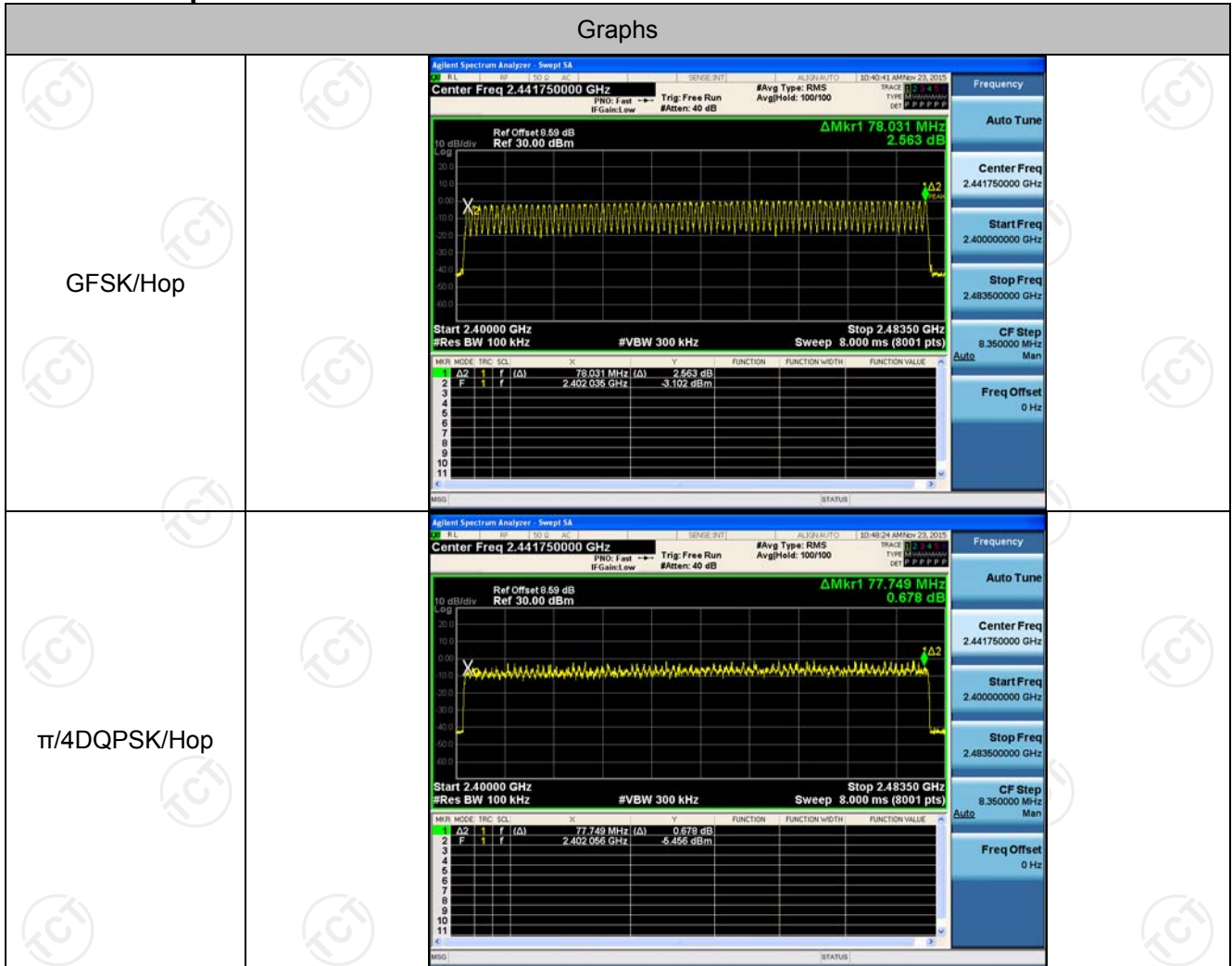


## Hopping Channel Number

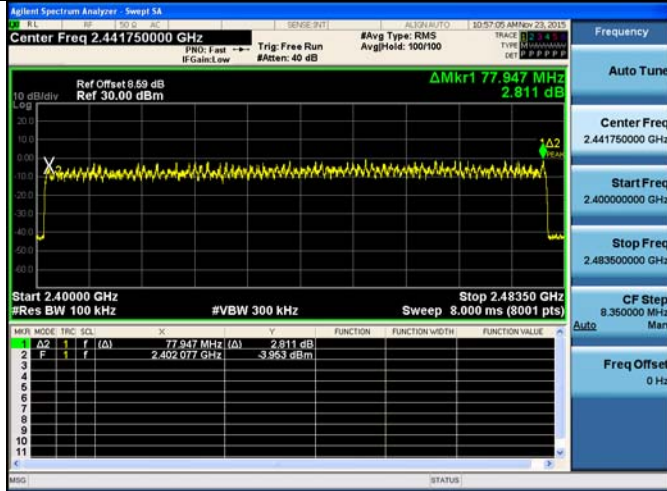
### Result Table

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	-1.829	PASS
GFSK	MCH	-1.510	PASS
GFSK	HCH	0.266	PASS
$\pi/4$ DQPSK	LCH	-2.184	PASS
$\pi/4$ DQPSK	MCH	-0.235	PASS
$\pi/4$ DQPSK	HCH	0.114	PASS
8DPSK	LCH	-1.876	PASS
8DPSK	MCH	0.034	PASS
8DPSK	HCH	0.236	PASS

### Test Graph



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



<p>TT/4DQPSK/HCH</p>	 <p>Agilent Spectrum Analyzer - Sweep 5A</p> <p>Center Freq 2.48000000 GHz</p> <p>Ref Offset 8.49 dB Ref 30.00 dBm</p> <p>Mkr1 2.480 140 625 GHz 0.114 dBm</p> <p>Center 2.480000 GHz #Res BW 3.0 MHz #VBW 8.0 MHz Span 5.000 MHz Sweep 1.067 ms (8001 pts)</p>
<p>8DPSK/LCH</p>	 <p>Agilent Spectrum Analyzer - Sweep 5A</p> <p>Center Freq 2.40200000 GHz</p> <p>Ref Offset 8.58 dB Ref 30.00 dBm</p> <p>Mkr1 2.402 110 000 GHz -1.876 dBm</p> <p>Center 2.402000 GHz #Res BW 3.0 MHz #VBW 8.0 MHz Span 5.000 MHz Sweep 1.067 ms (8001 pts)</p>
<p>8DPSK/MCH</p>	 <p>Agilent Spectrum Analyzer - Sweep 5A</p> <p>Center Freq 2.44100000 GHz</p> <p>Ref Offset 8.49 dB Ref 30.00 dBm</p> <p>Mkr1 2.440 894 375 GHz 0.034 dBm</p> <p>Center 2.441000 GHz #Res BW 3.0 MHz #VBW 8.0 MHz Span 5.000 MHz Sweep 1.067 ms (8001 pts)</p>

8DPSK/HCH

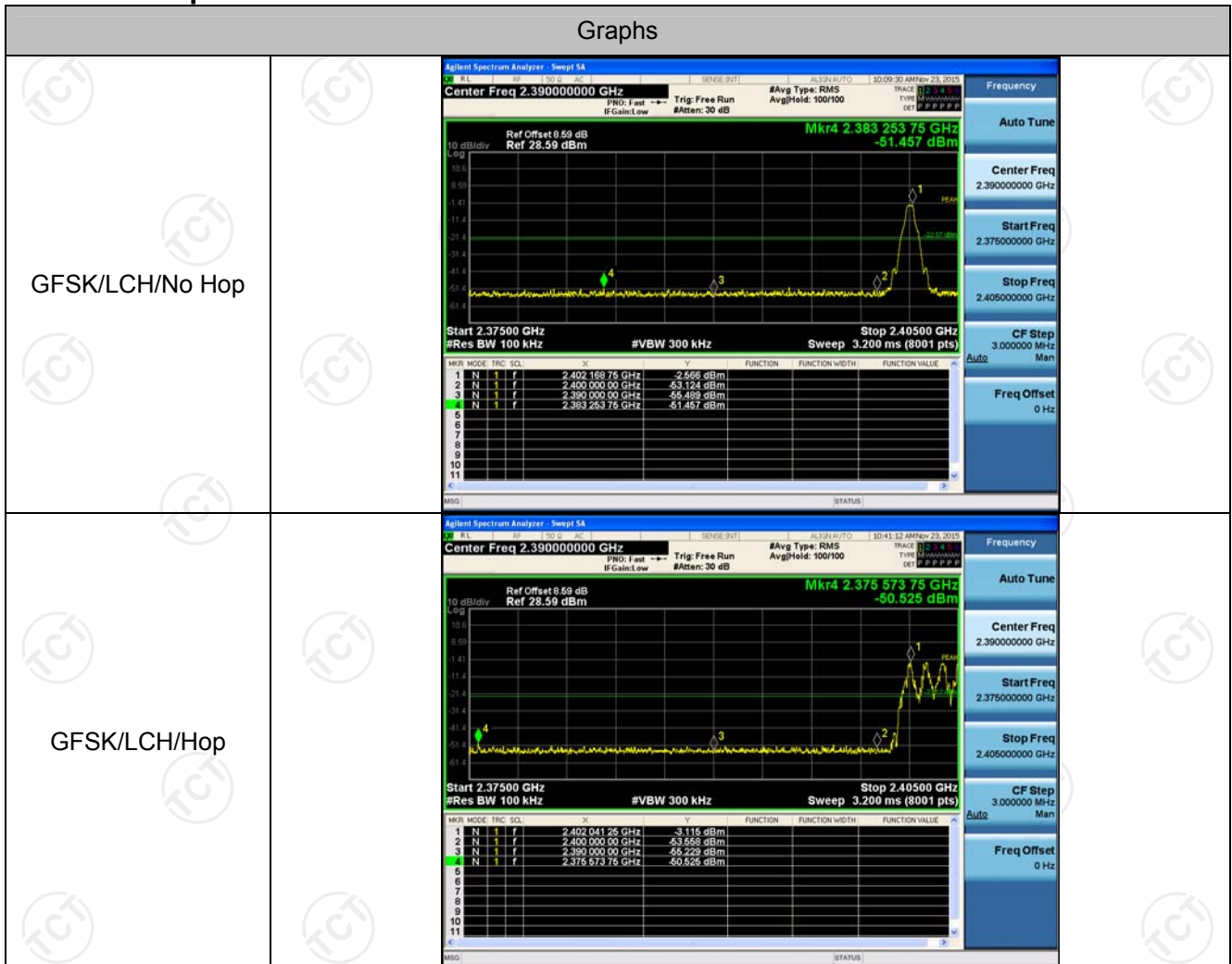


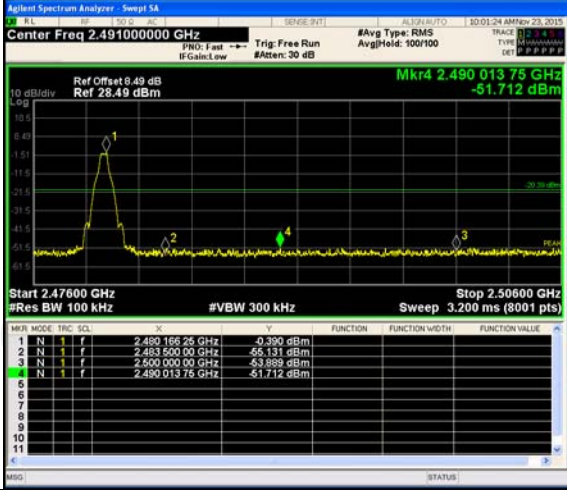
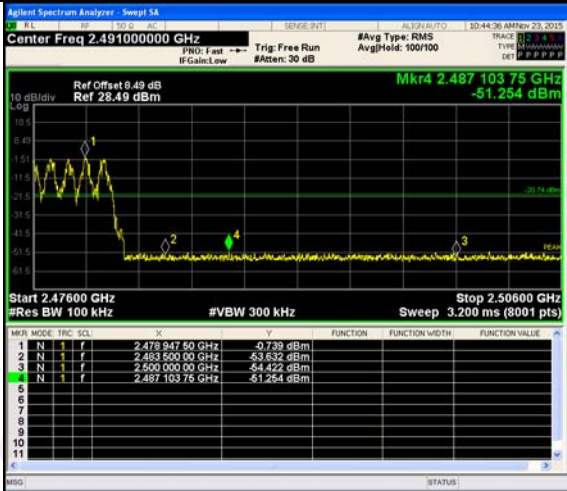
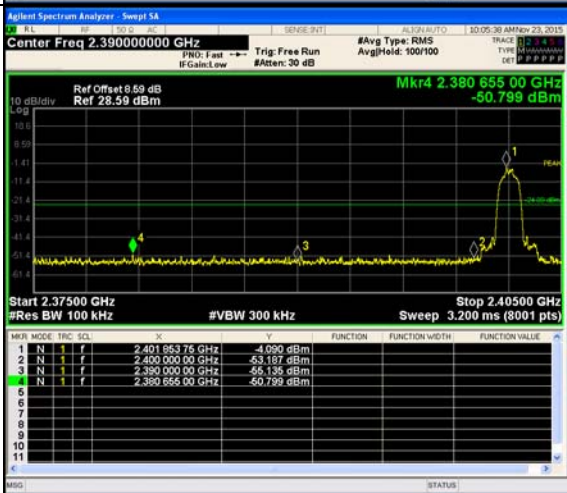
## Band-edge for RF Conducted Emissions

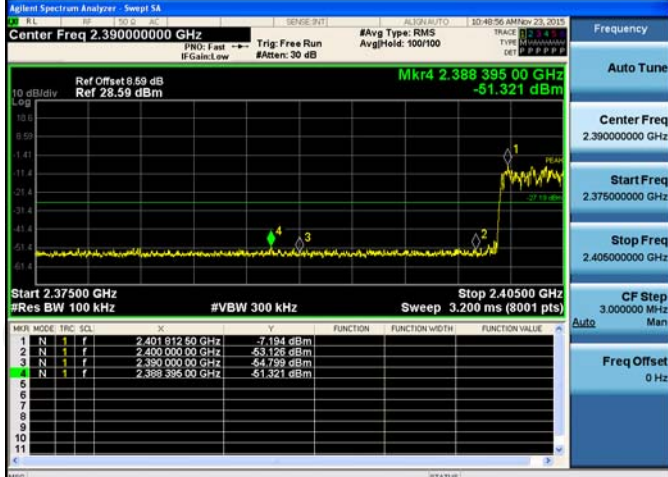
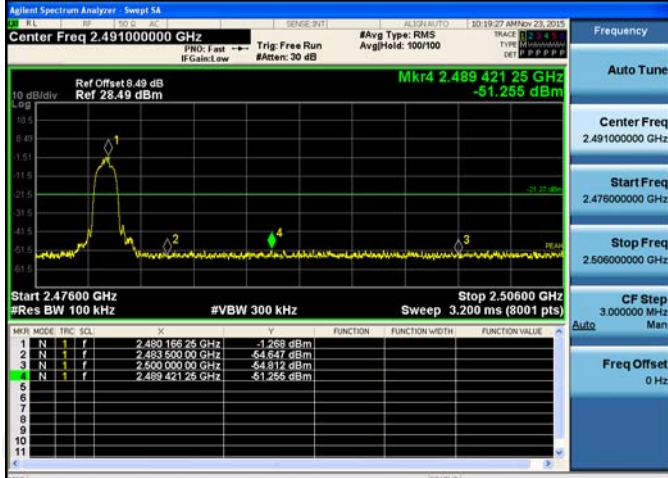
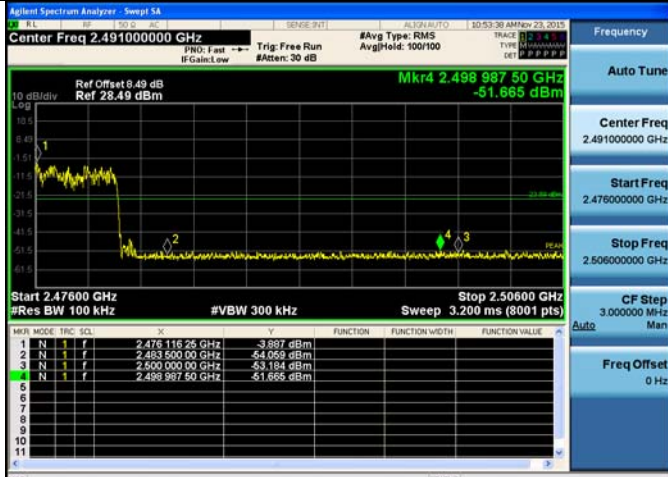
Result Table

Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	-2.566	Off	-51.457	-22.57	PASS
			-3.115	On	-50.525	-23.12	PASS
GFSK	HCH	2480	-0.390	Off	-51.712	-20.39	PASS
			-0.739	On	-51.254	-20.74	PASS
$\pi/4$ DQPSK	LCH	2402	-4.090	Off	-50.799	-24.09	PASS
			-7.194	On	-51.321	-27.19	PASS
$\pi/4$ DQPSK	HCH	2480	-1.268	Off	-51.255	-21.27	PASS
			-3.887	On	-51.665	-23.89	PASS
8DPSK	LCH	2402	-3.409	Off	-51.610	-23.41	PASS
			-7.933	On	-51.271	-27.93	PASS
8DPSK	HCH	2480	-1.242	Off	-50.379	-21.24	PASS
			-5.264	On	-50.426	-25.26	PASS

Test Graph

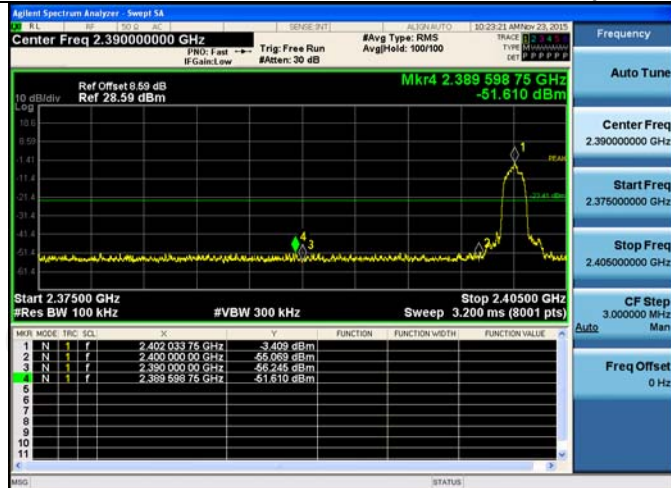


<p>GFSK/HCH/No Hop</p>	 <table border="1" data-bbox="608 517 1177 651"> <thead> <tr> <th>MNR</th> <th>MODE</th> <th>TRC</th> <th>SCL</th> <th>X</th> <th>Y</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>1</td> <td>f</td> <td>2.48016626 GHz</td> <td>-0.390 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>N</td> <td>1</td> <td>f</td> <td>2.48350000 GHz</td> <td>-55.131 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td>N</td> <td>1</td> <td>f</td> <td>2.50000000 GHz</td> <td>-53.889 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td>N</td> <td>1</td> <td>f</td> <td>2.49001375 GHz</td> <td>-51.712 dBm</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	MNR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	2.48016626 GHz	-0.390 dBm				2	N	1	f	2.48350000 GHz	-55.131 dBm				3	N	1	f	2.50000000 GHz	-53.889 dBm				4	N	1	f	2.49001375 GHz	-51.712 dBm			
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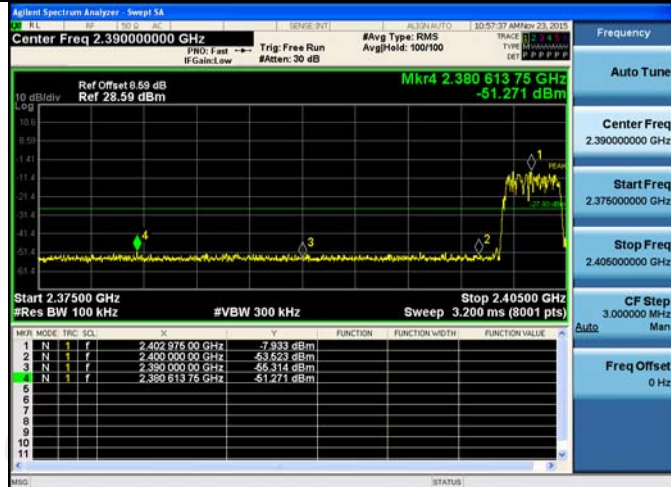
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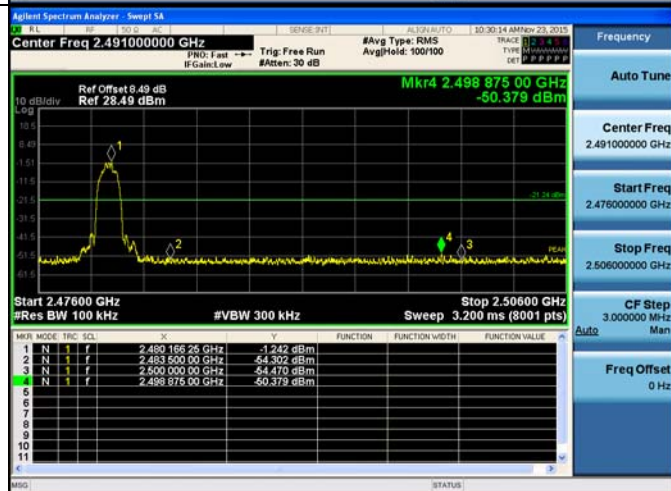
8DPSK/LCH/No Hop



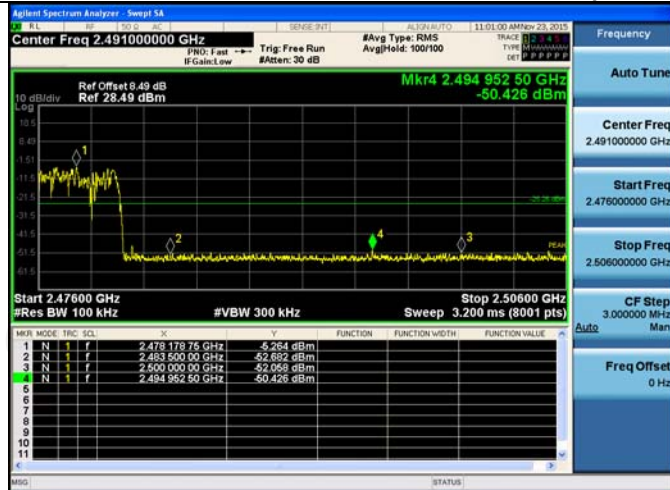
8DPSK/LCH/Hop



8DPSK/HCH/No Hop



8DPSK/HCH/Hop

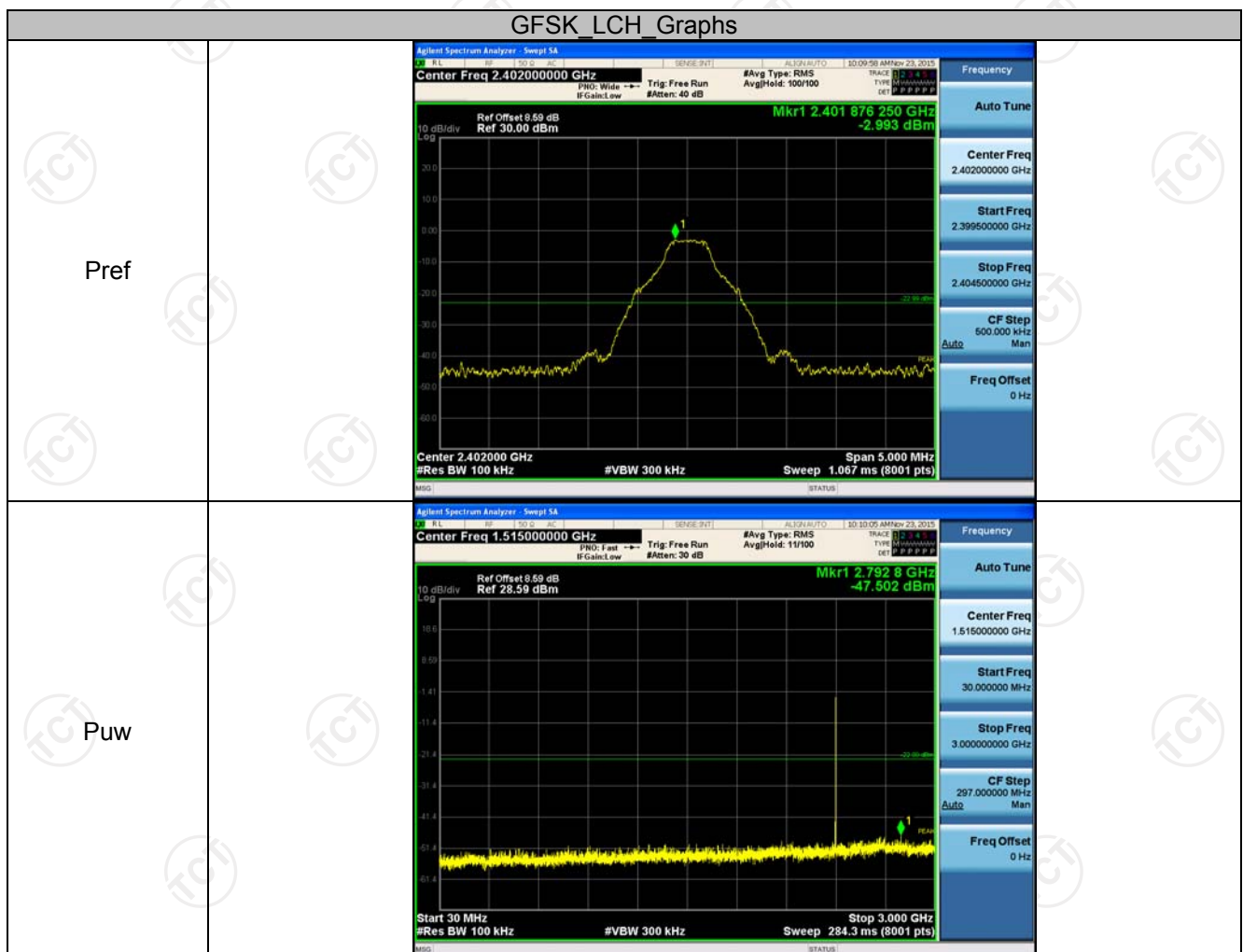


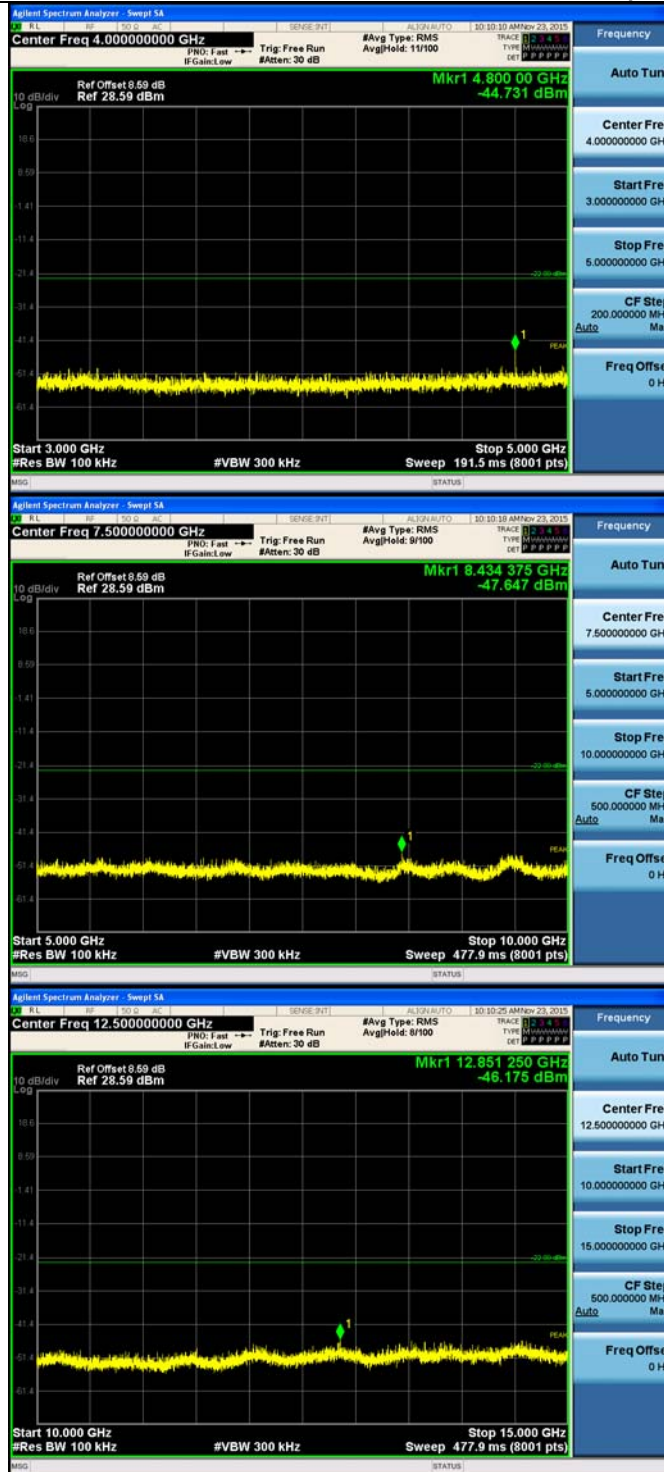
## RF Conducted Spurious Emissions

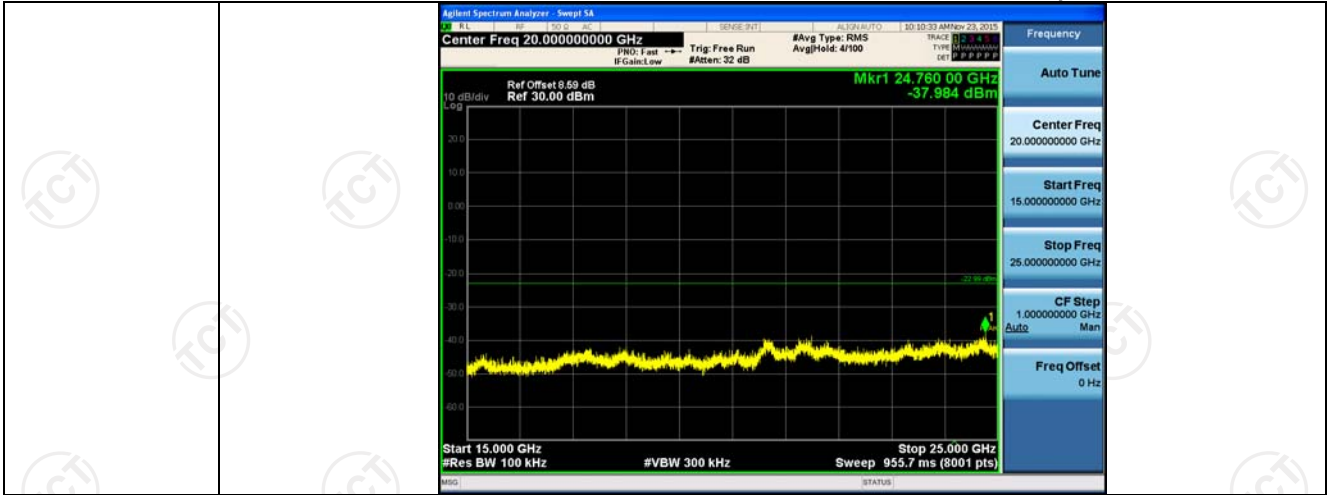
### Result Table

Mode	Channel	Pref [dBm]	Puw[dBm]	Verdict
GFSK	LCH	-2.993	<Limit	PASS
GFSK	MCH	-0.938	<Limit	PASS
GFSK	HCH	-0.677	<Limit	PASS
$\pi/4$ DQPSK	LCH	-4.225	<Limit	PASS
$\pi/4$ DQPSK	MCH	-1.76	<Limit	PASS
$\pi/4$ DQPSK	HCH	-1.77	<Limit	PASS
8DPSK	LCH	-3.824	<Limit	PASS
8DPSK	MCH	-1.527	<Limit	PASS
8DPSK	HCH	-1.31	<Limit	PASS

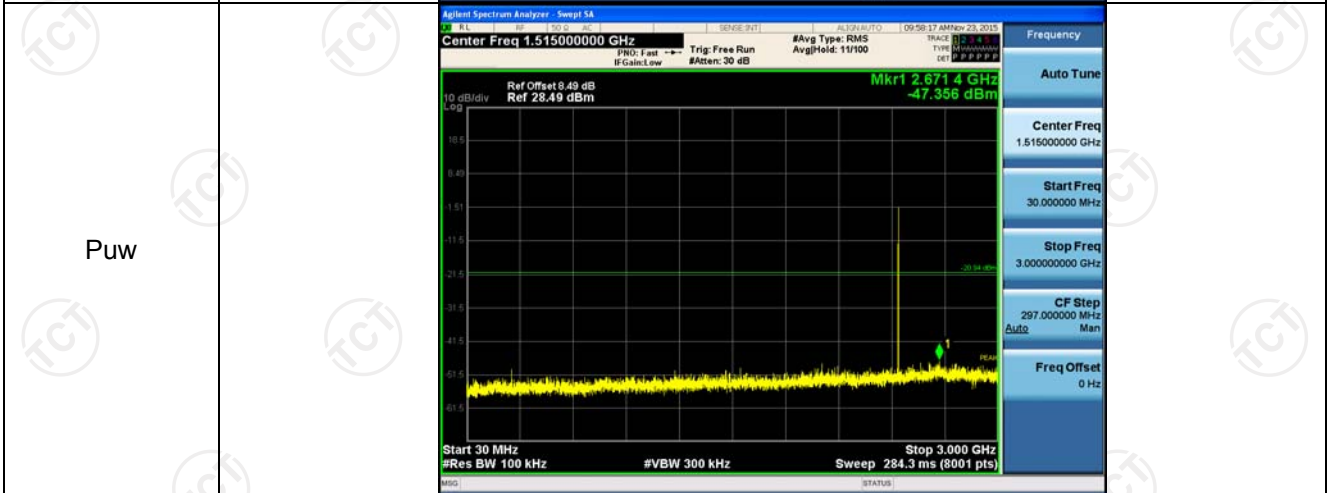
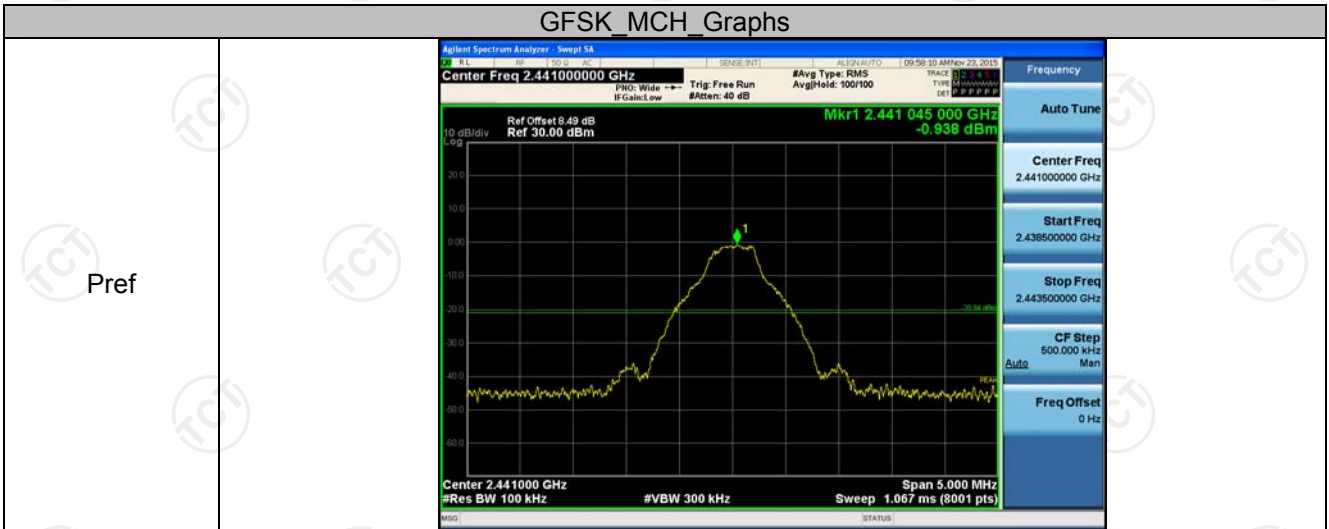
### Test Graph



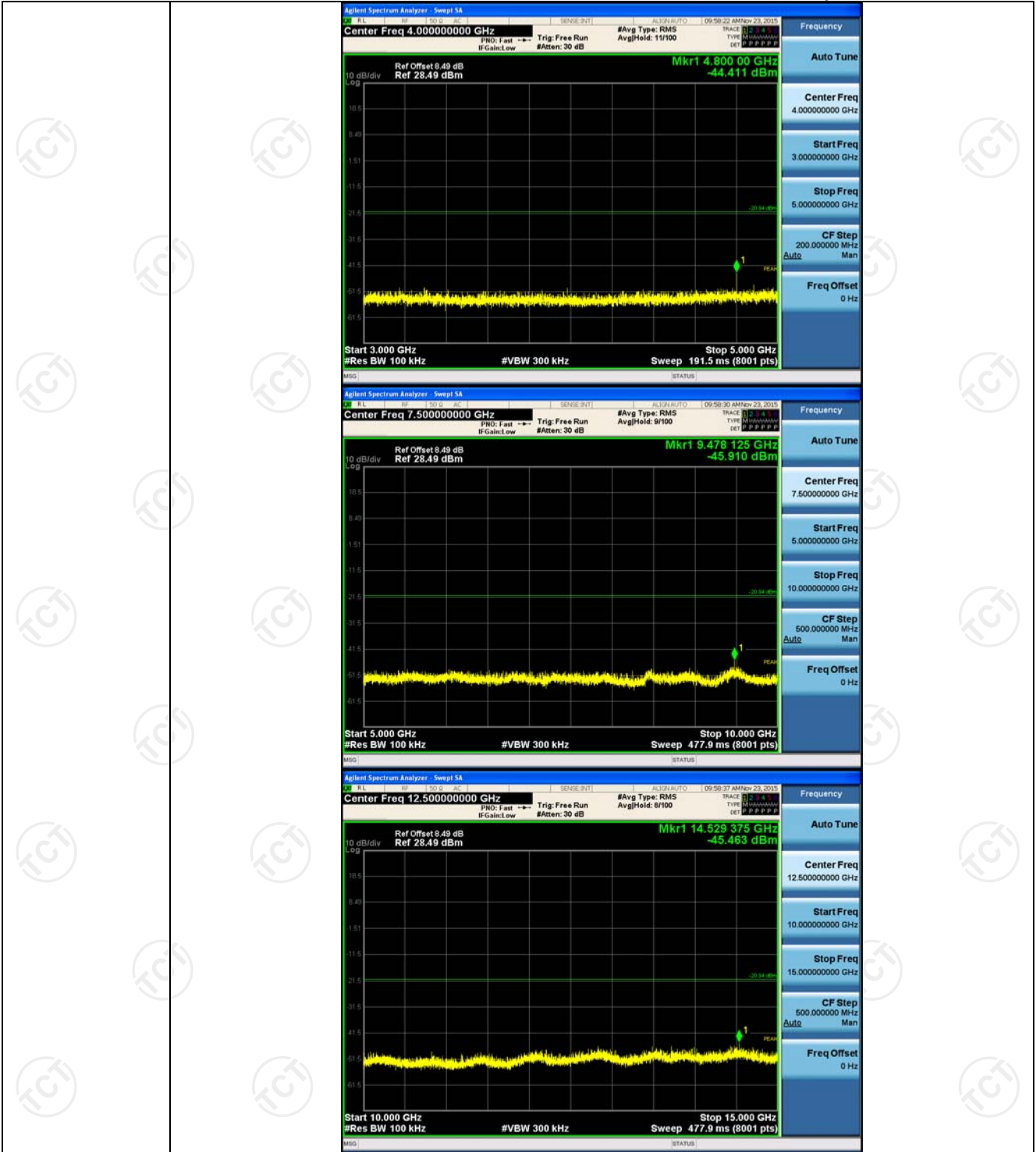


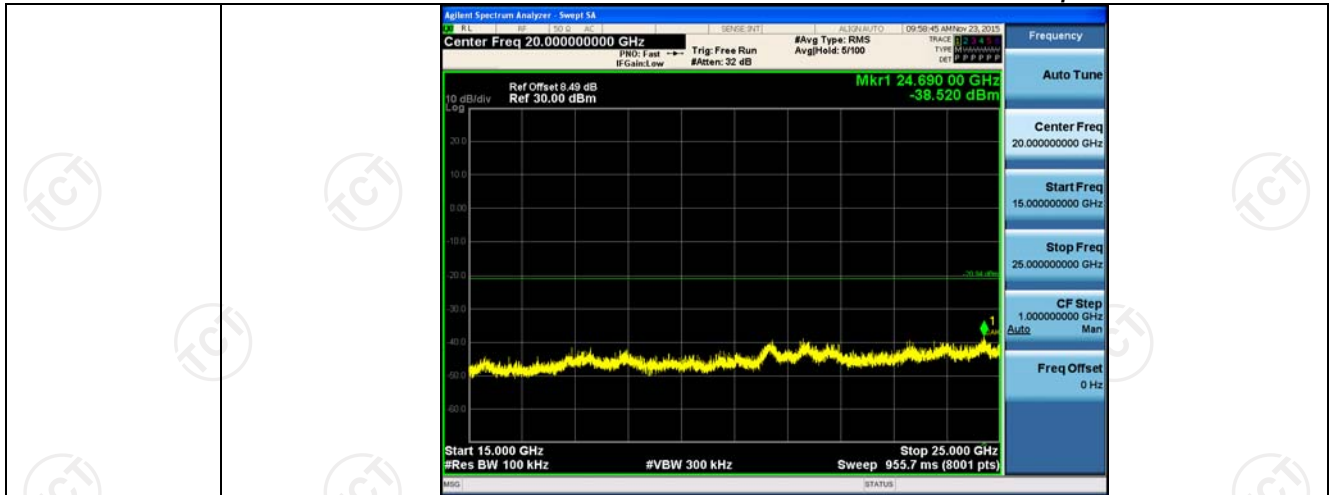


## GFSK MCH Graphs

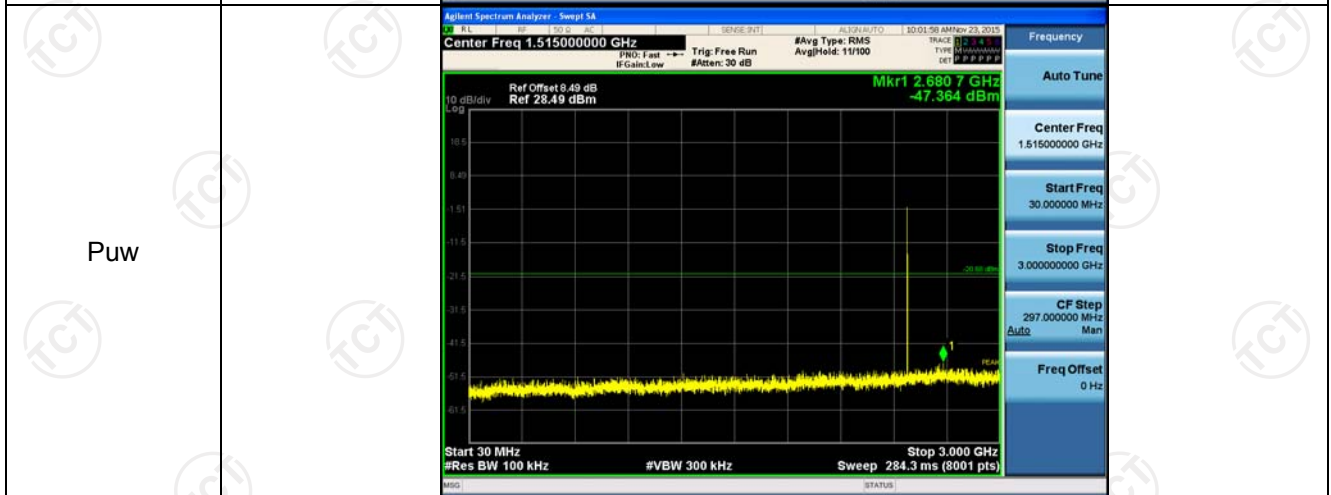
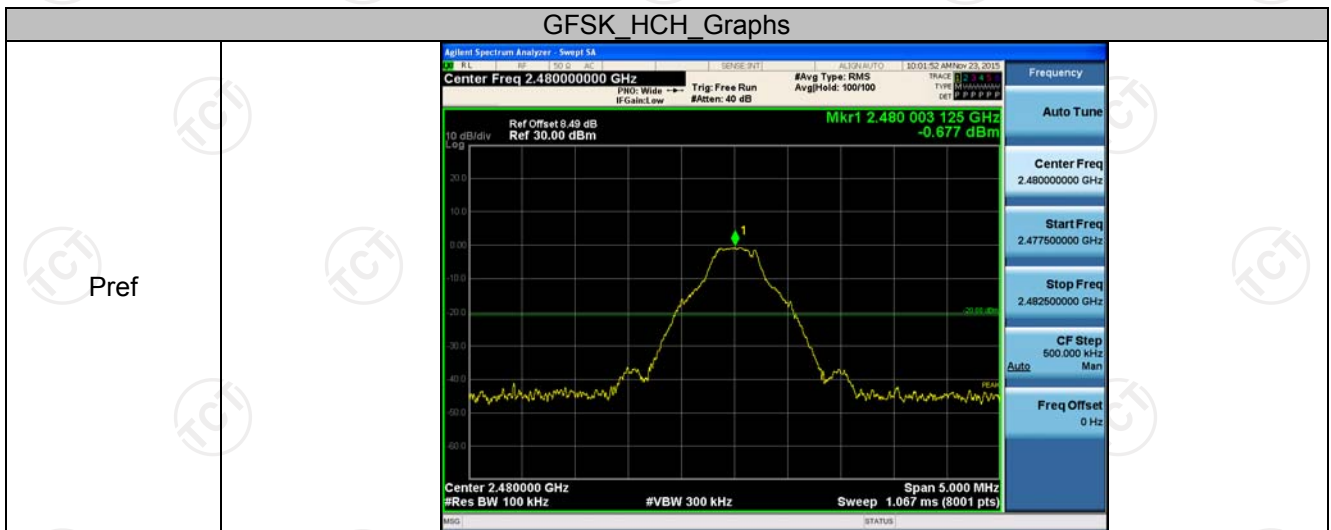


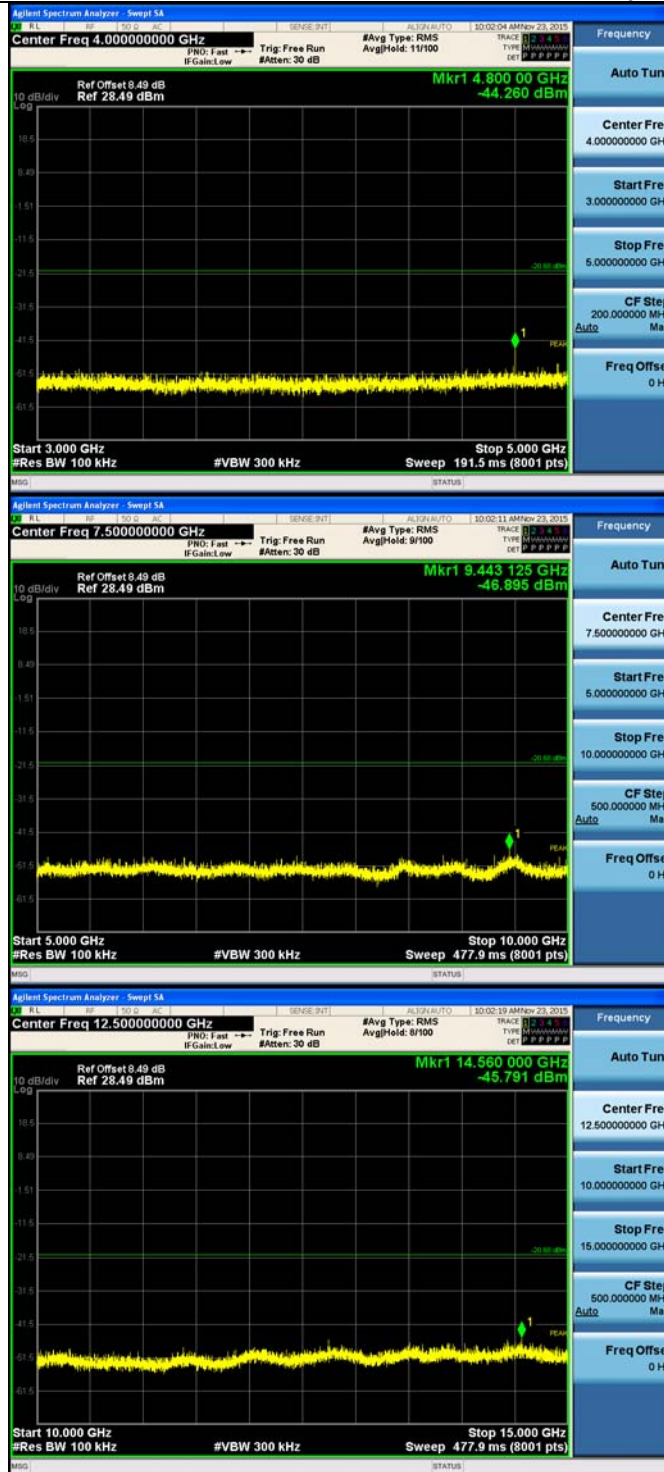


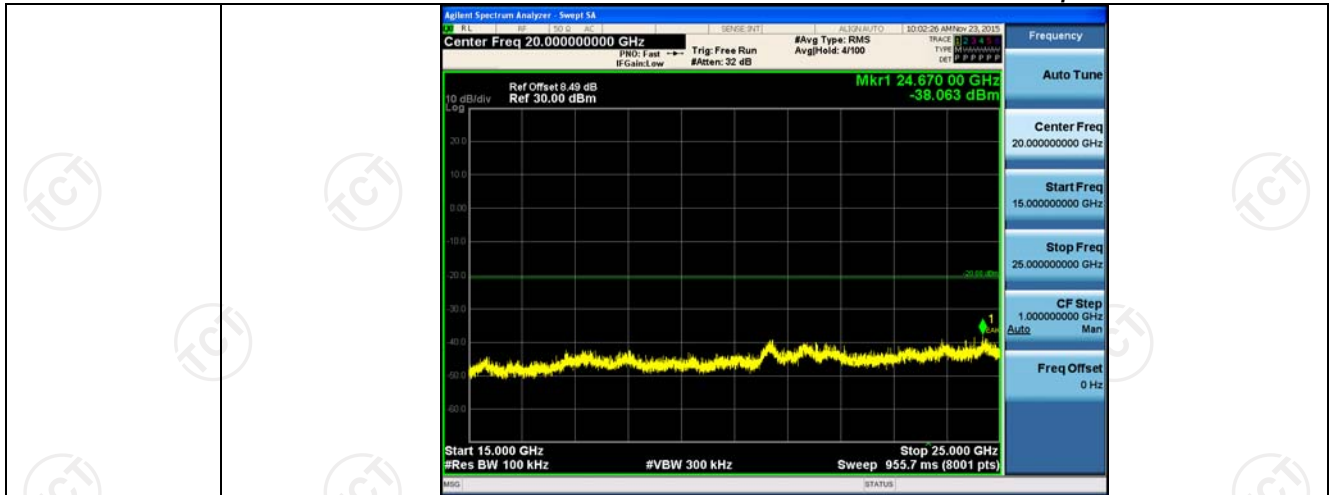




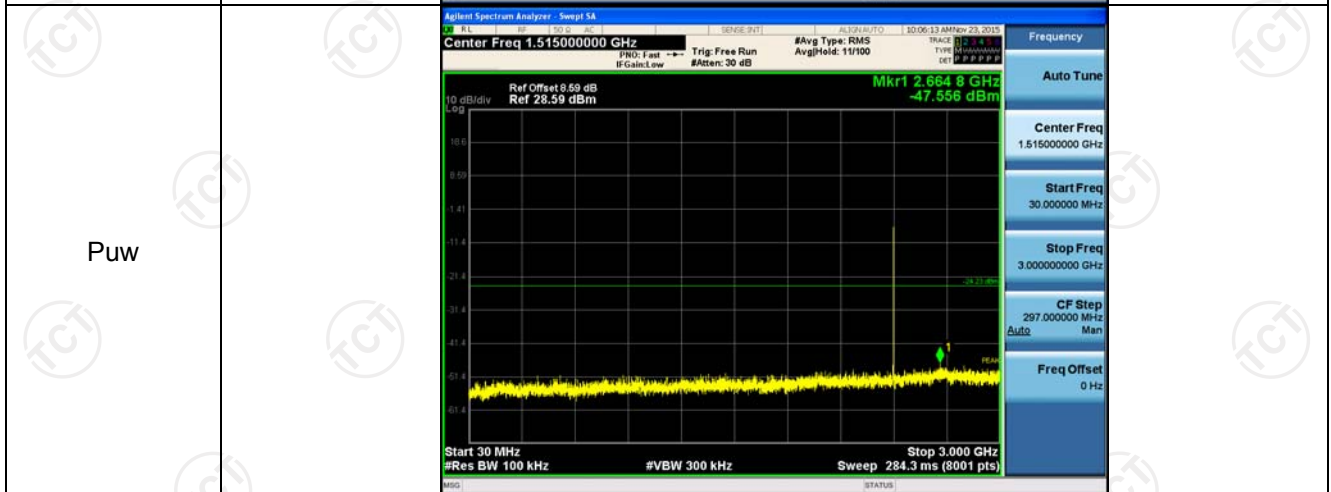
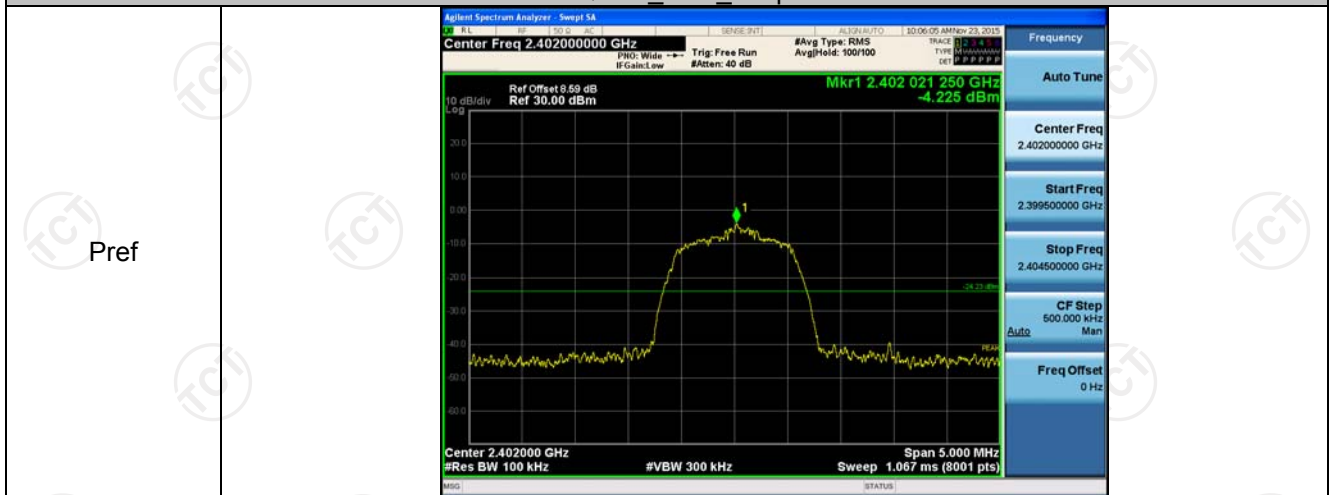
## GFSK HCH Graphs

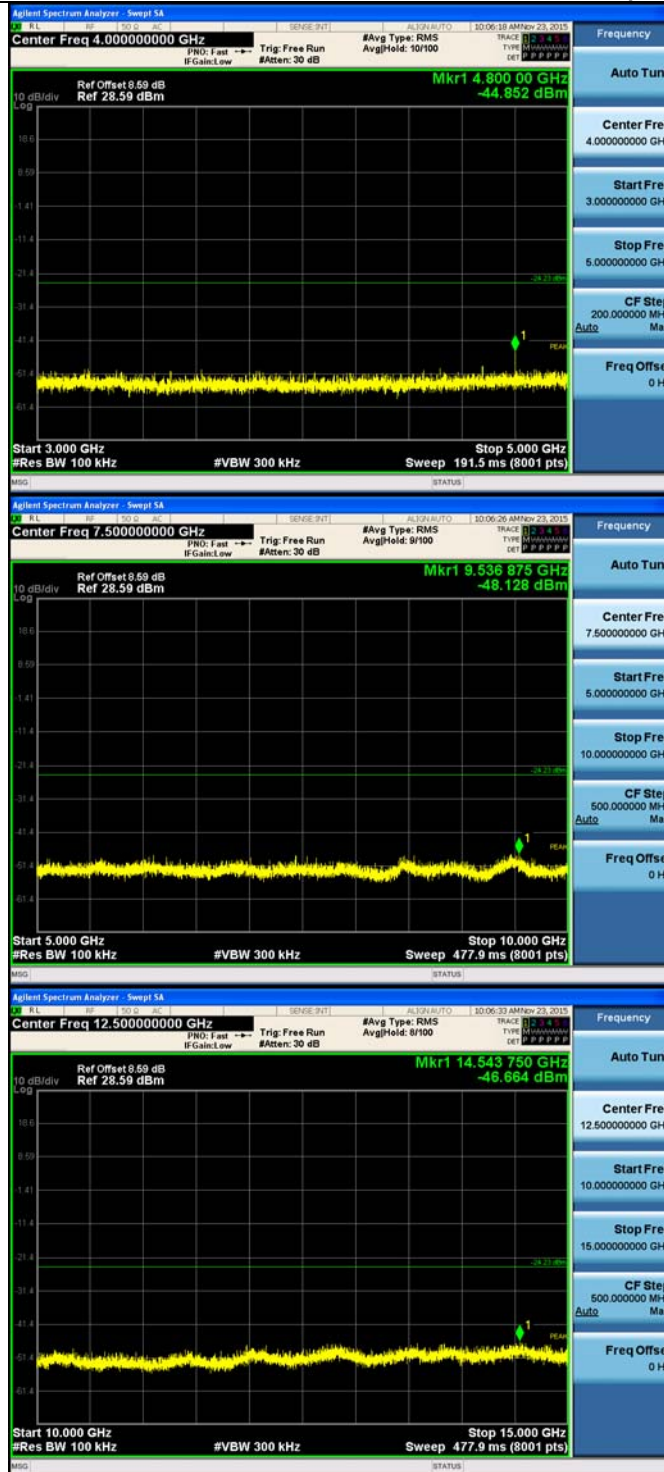




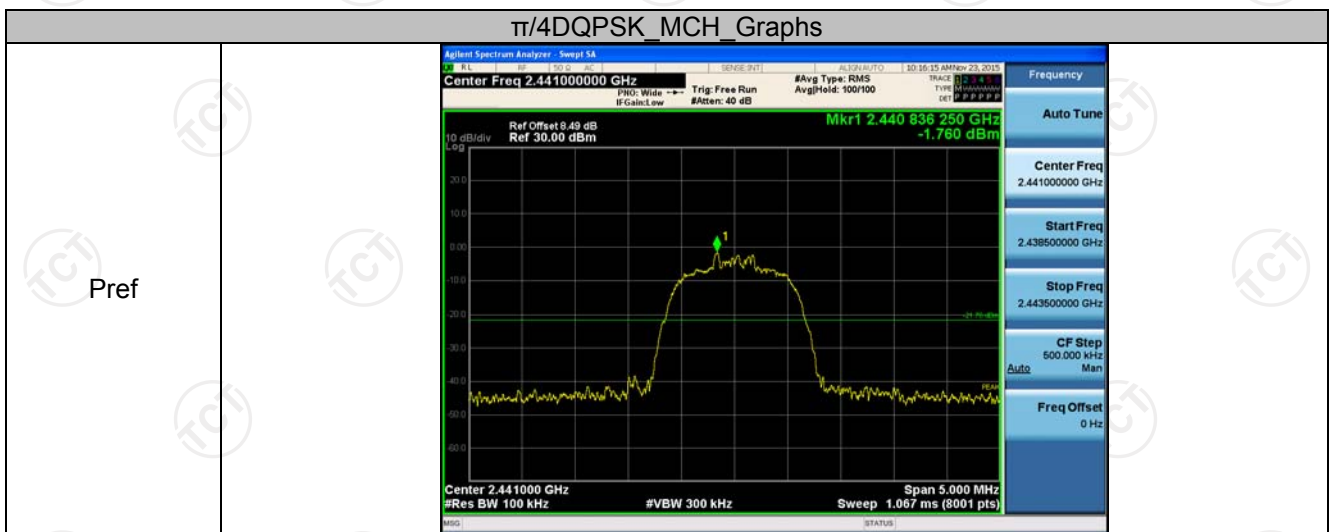
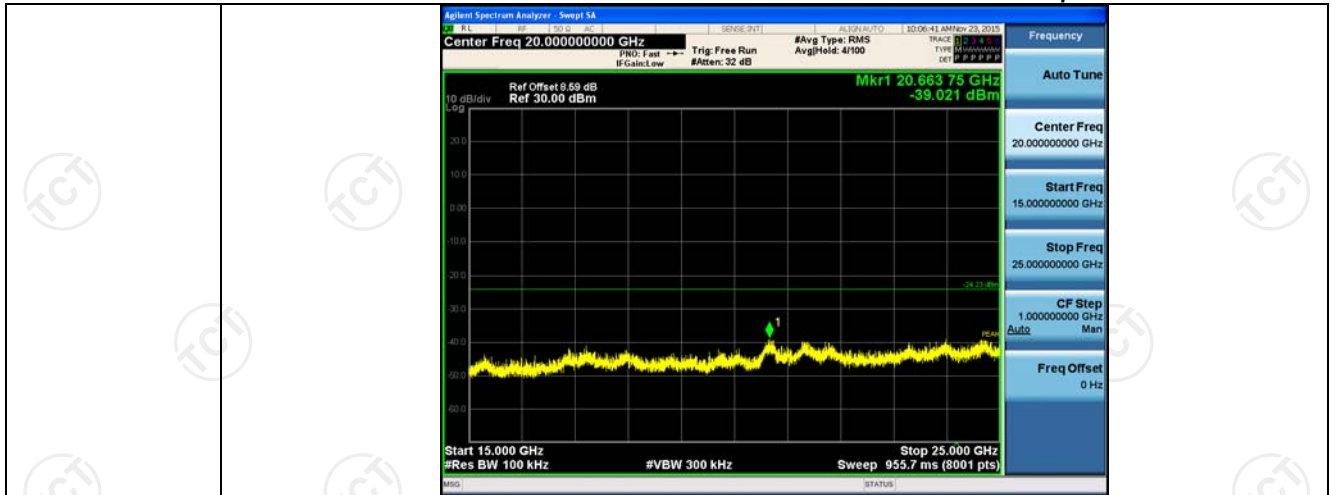


## $\pi/4$ DQPSK LCH Graphs

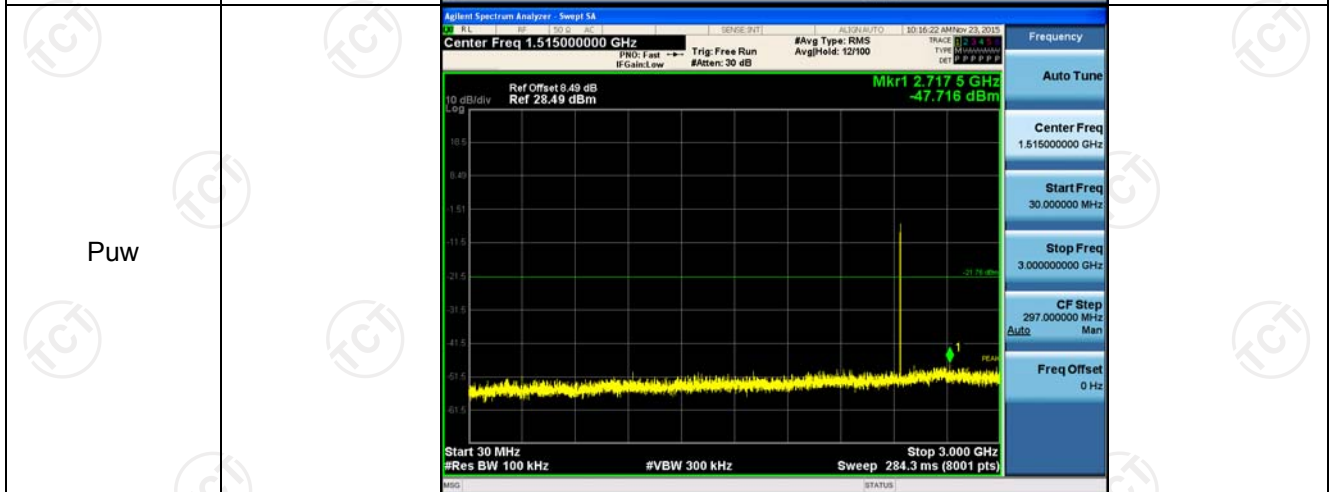




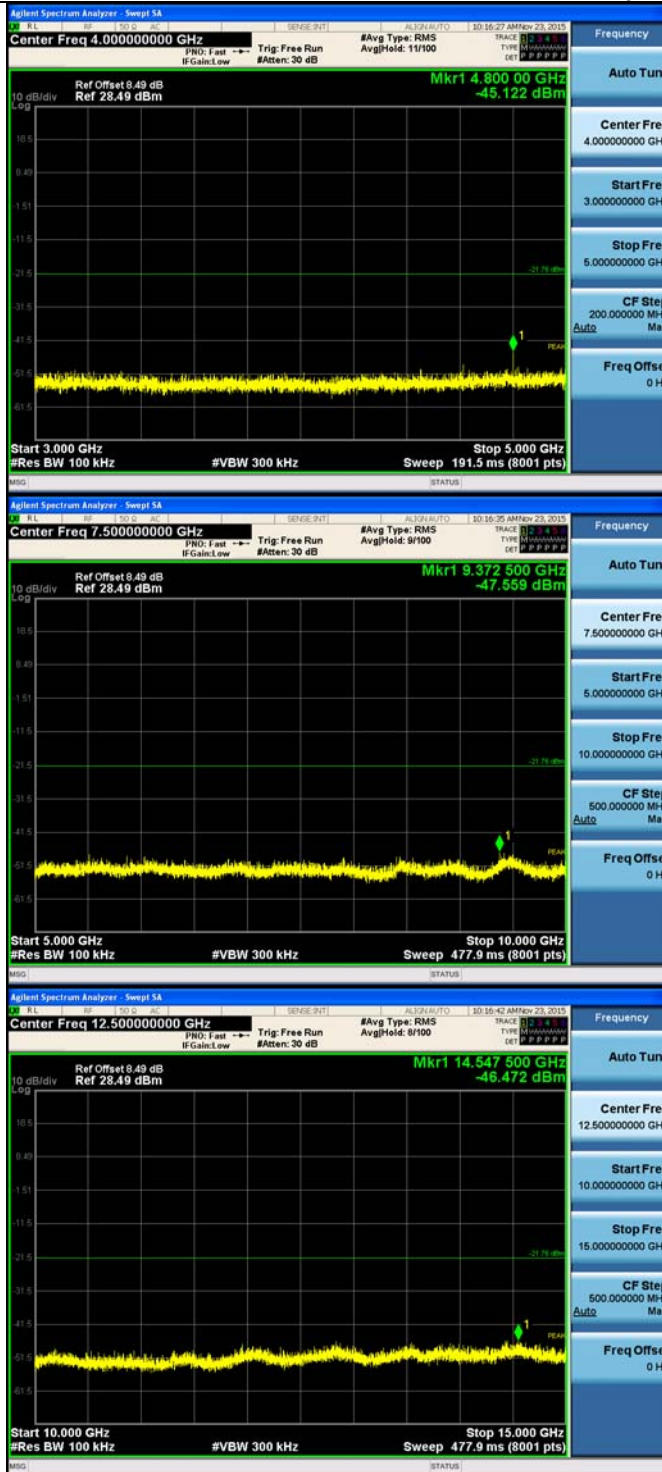


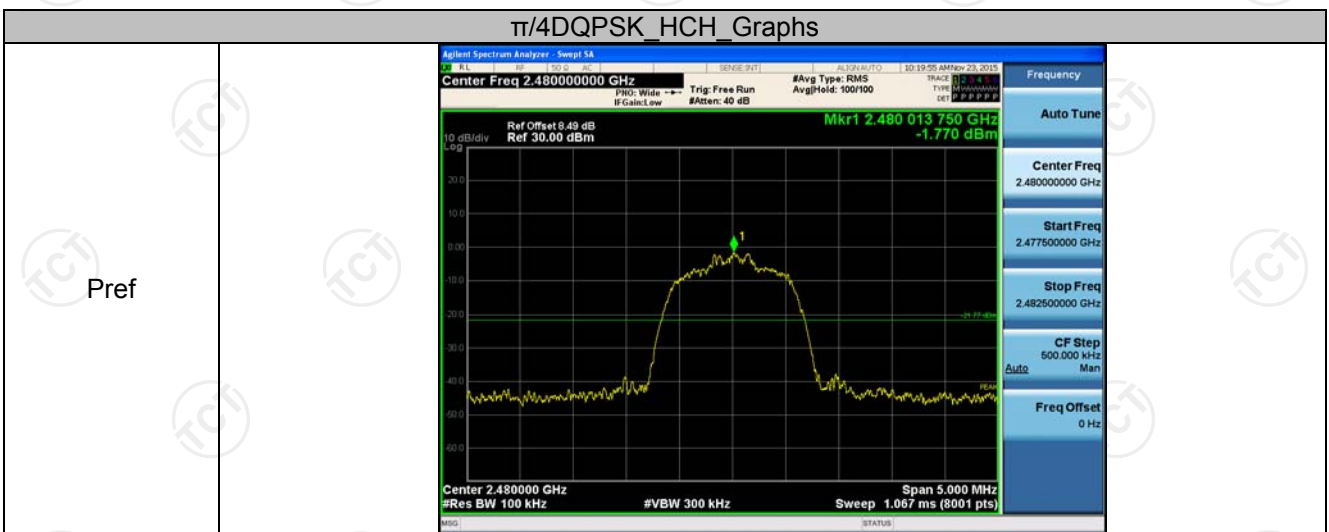
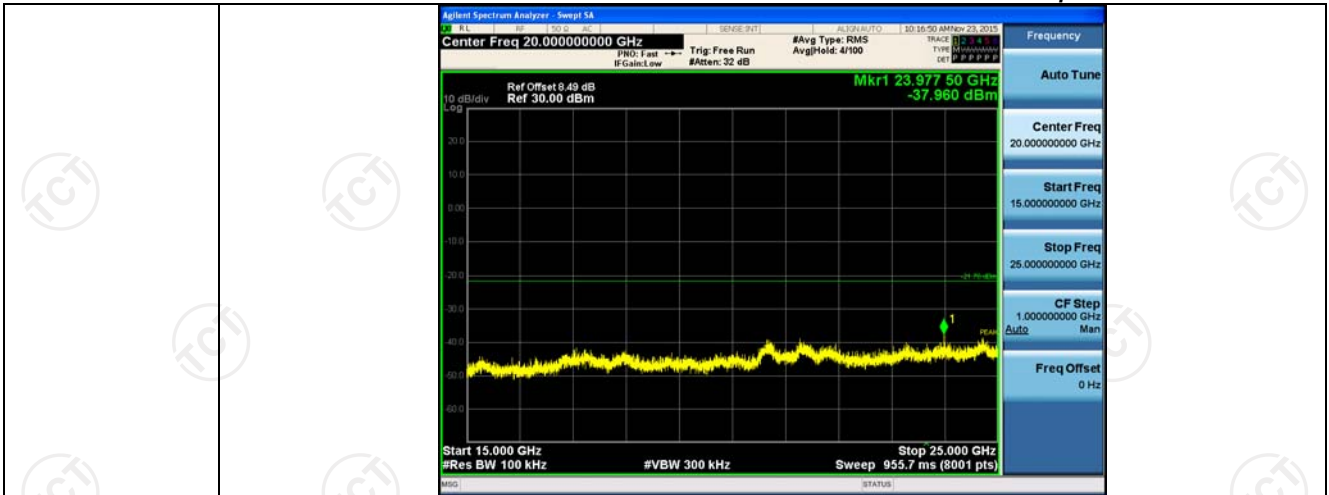


Pref

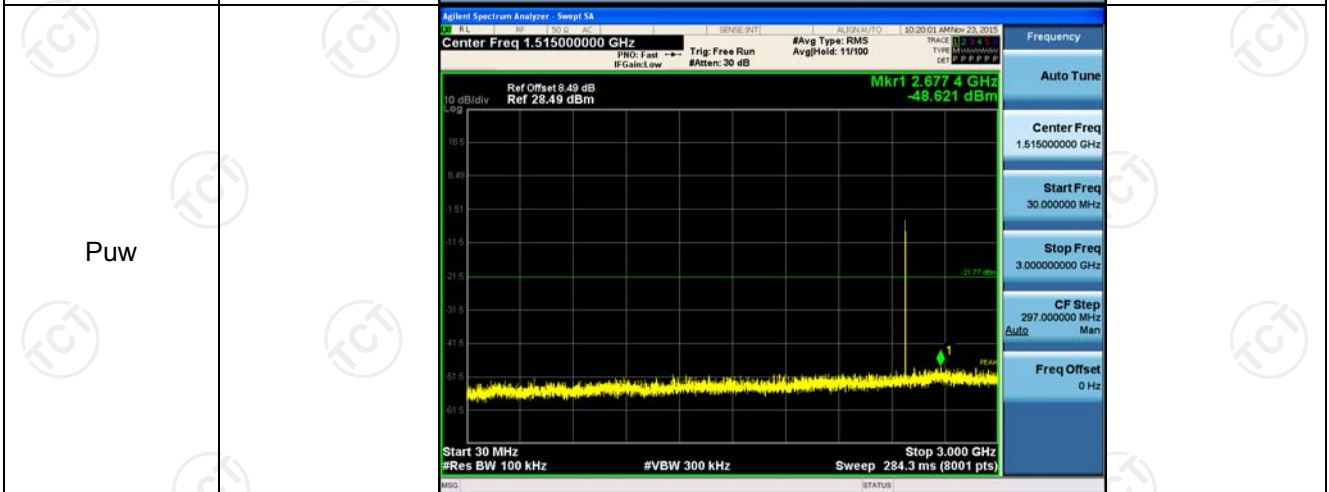


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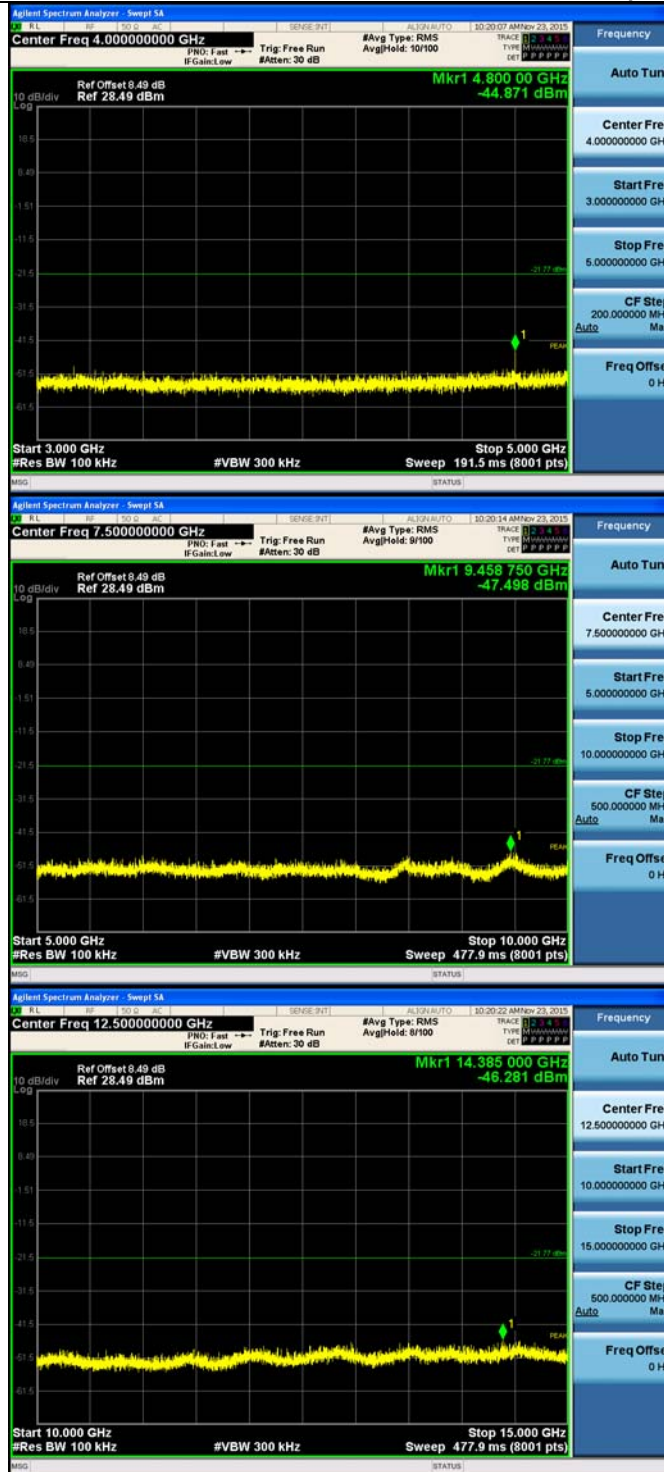


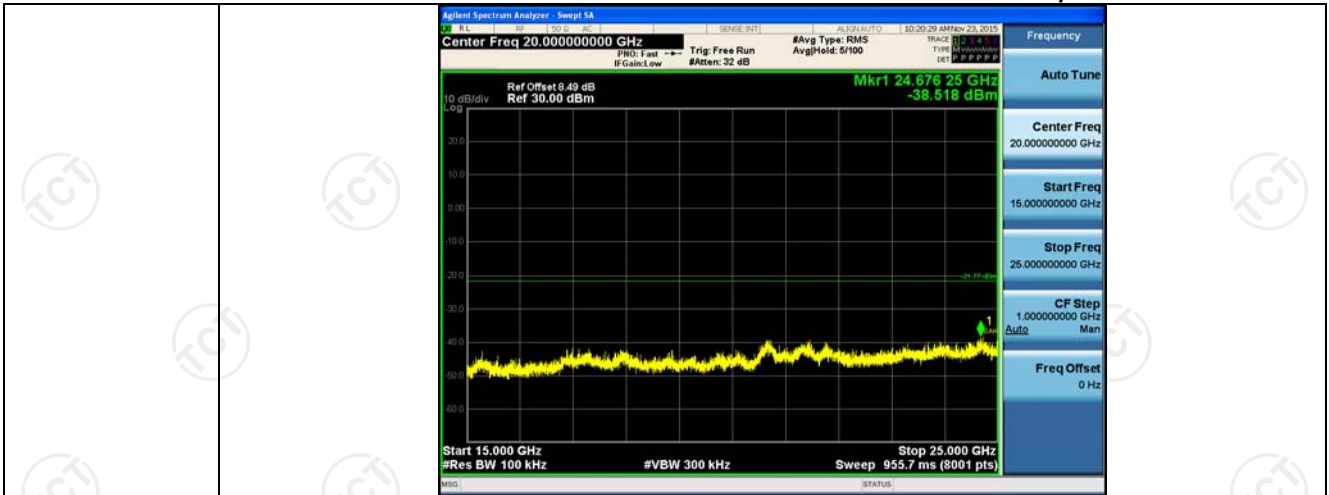


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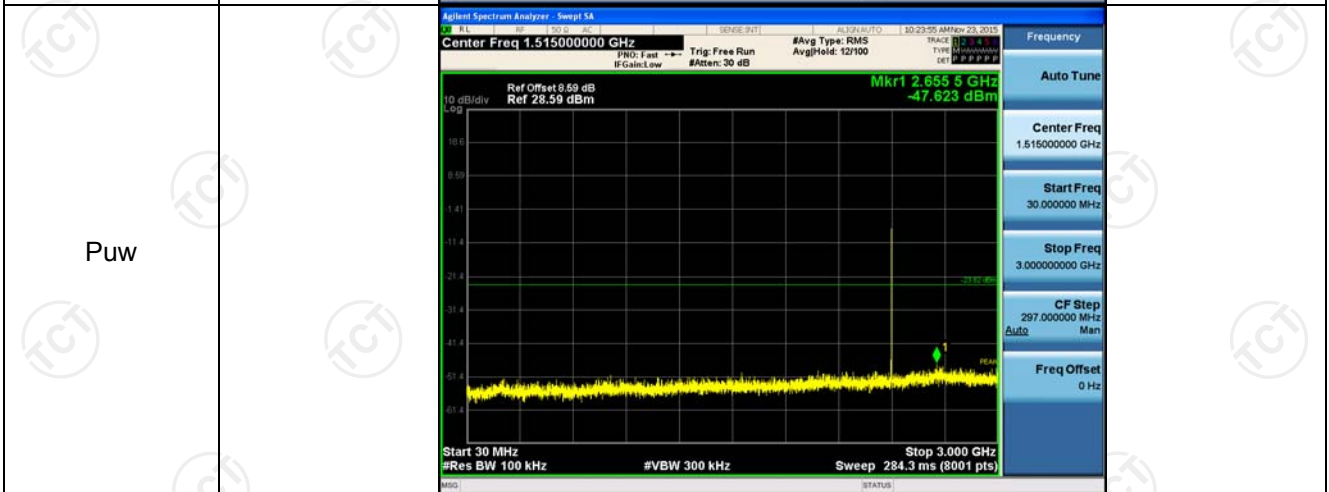
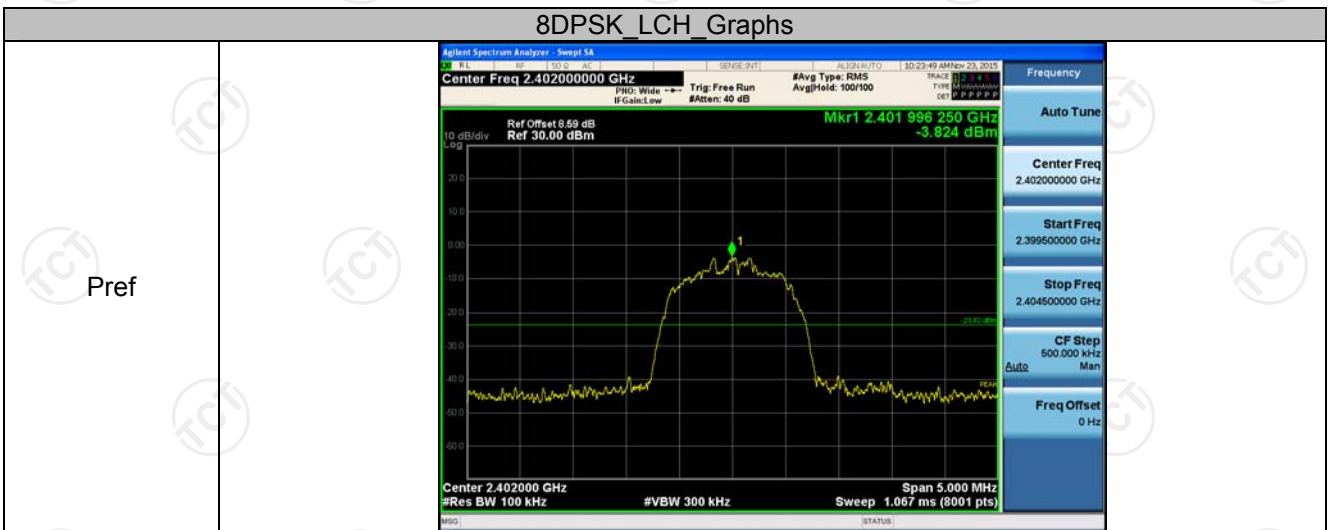


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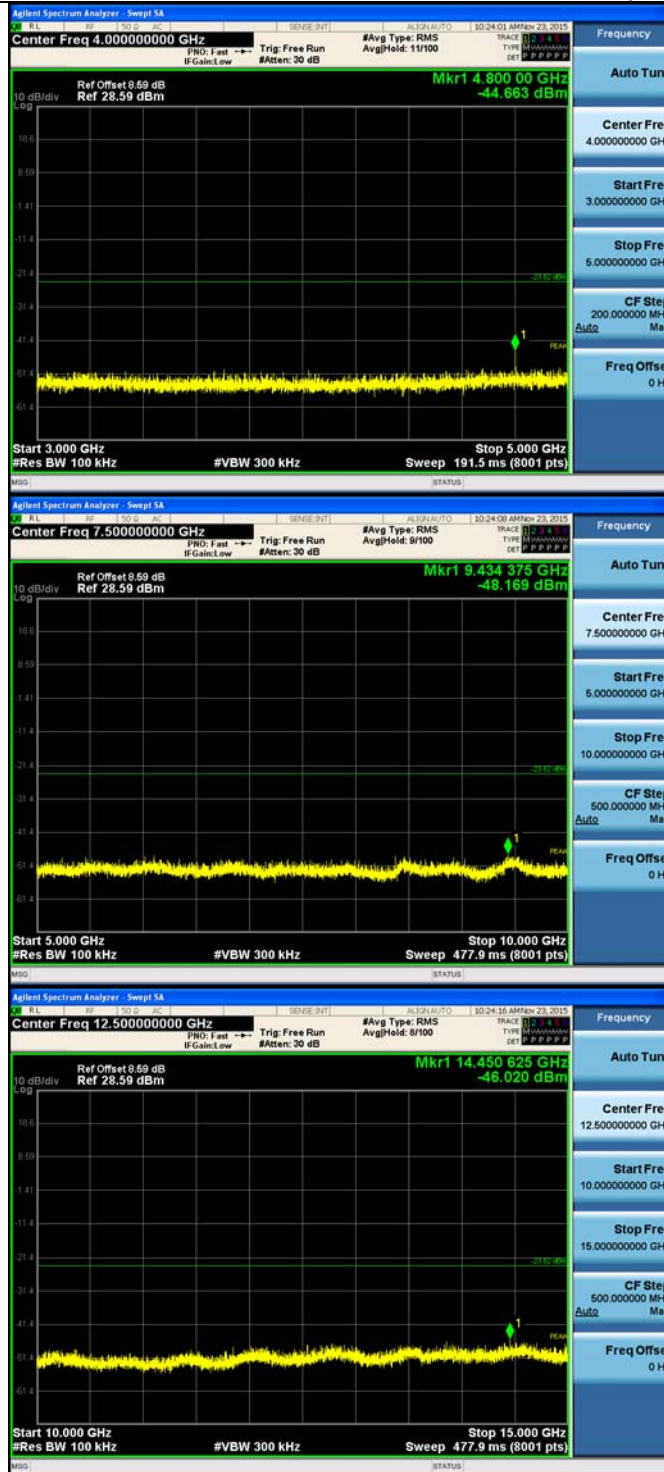




## 8DPSK LCH Graphs

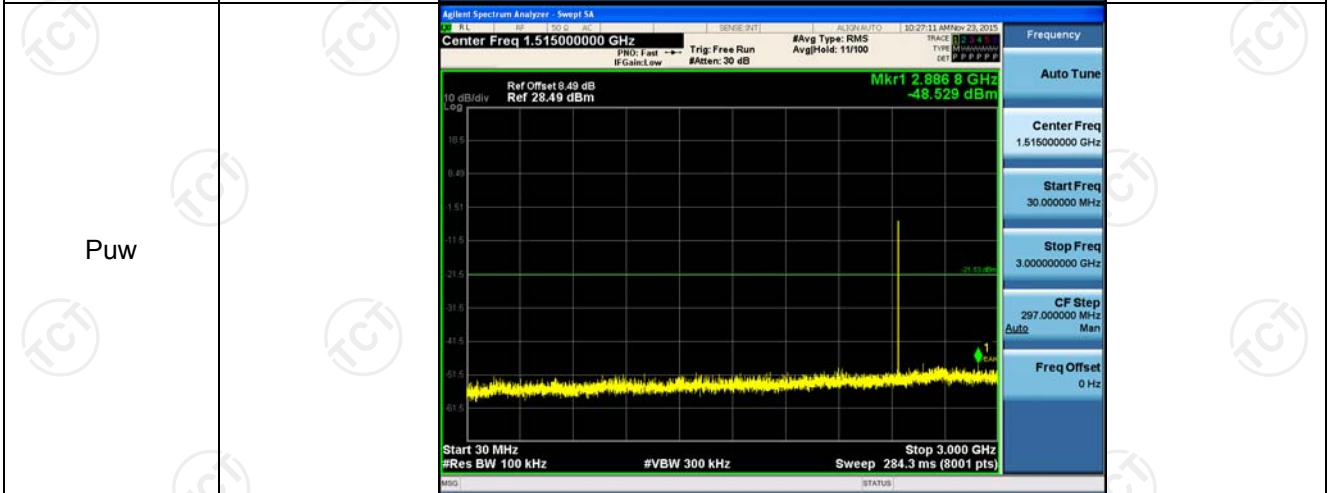
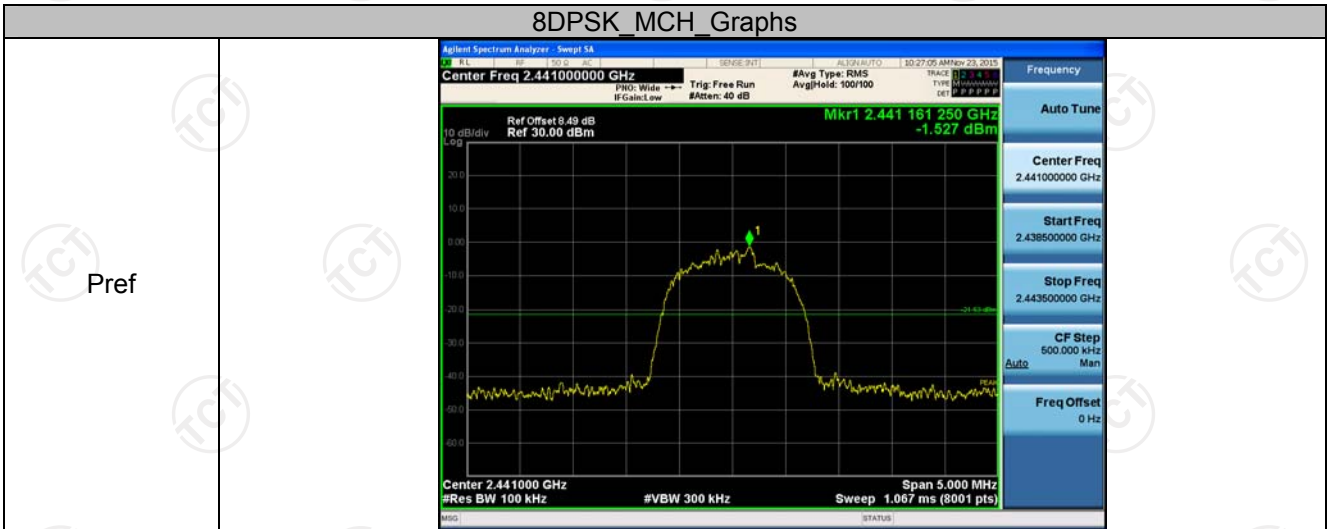


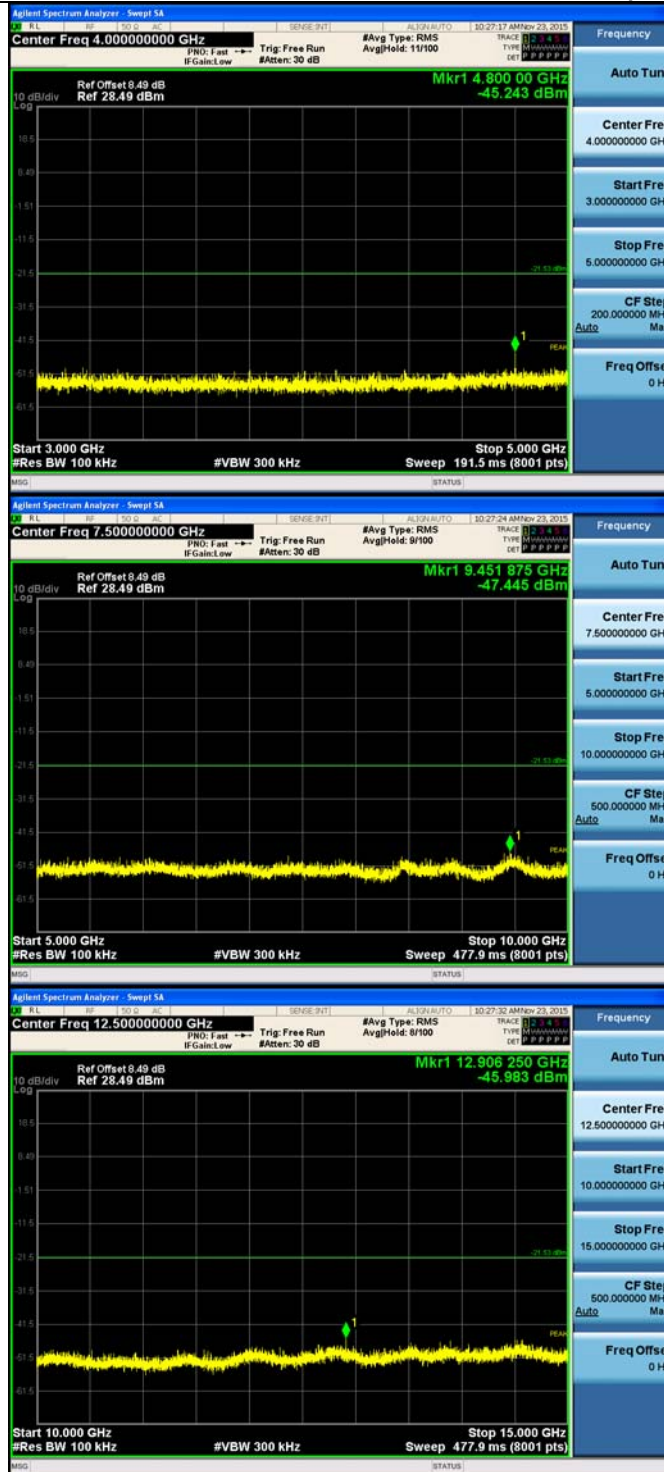


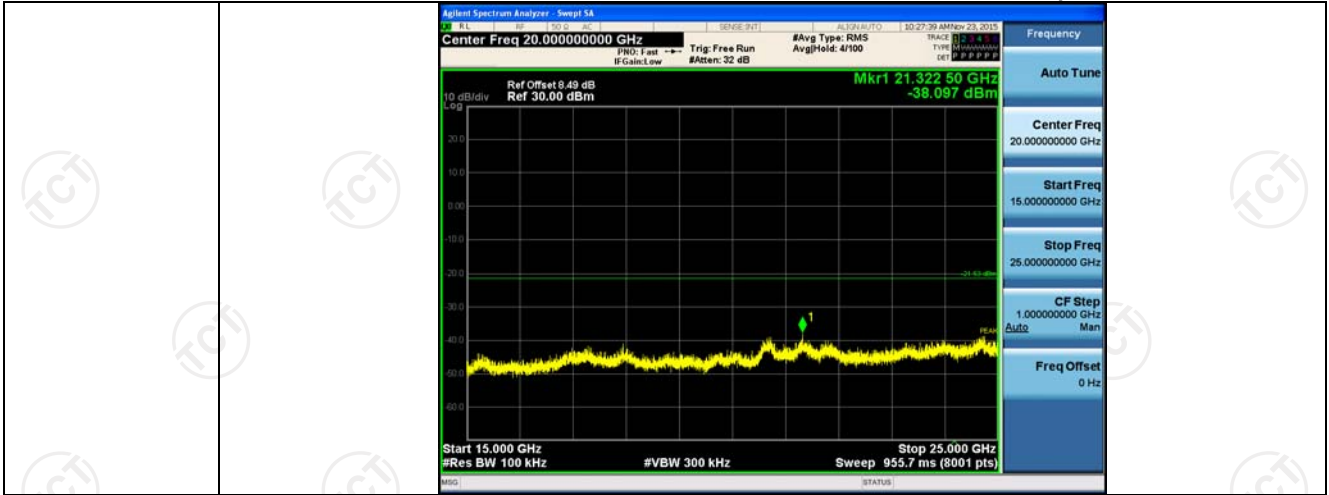




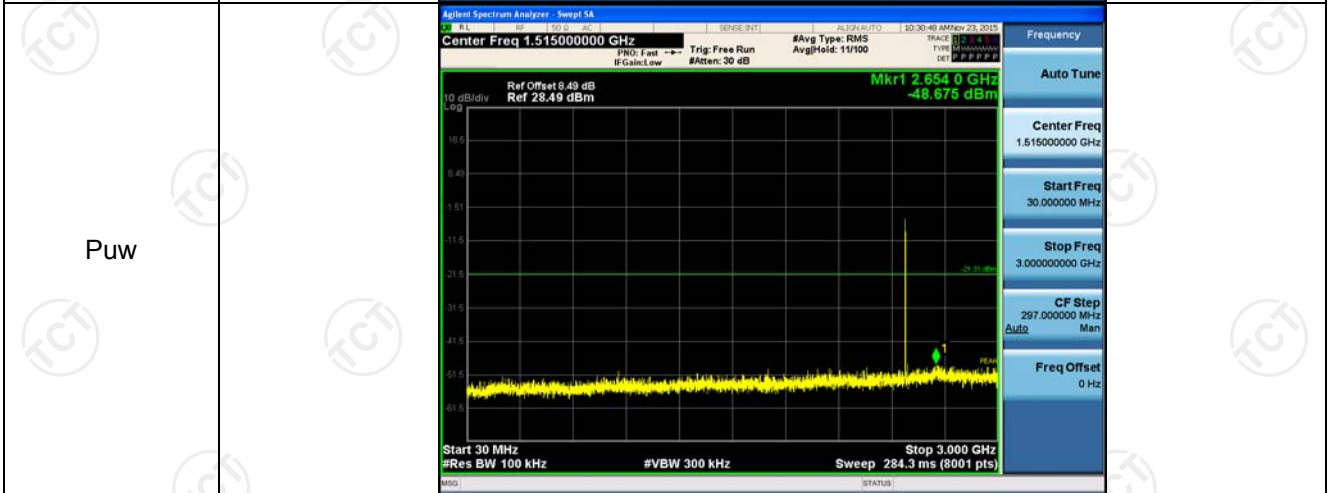
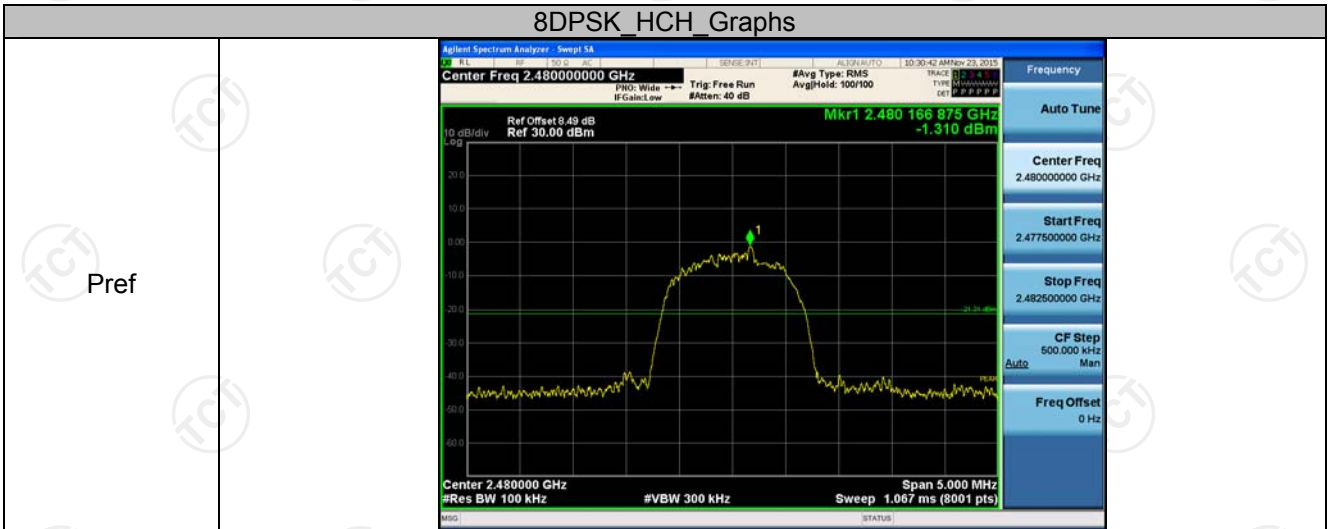
## 8DPSK MCH Graphs

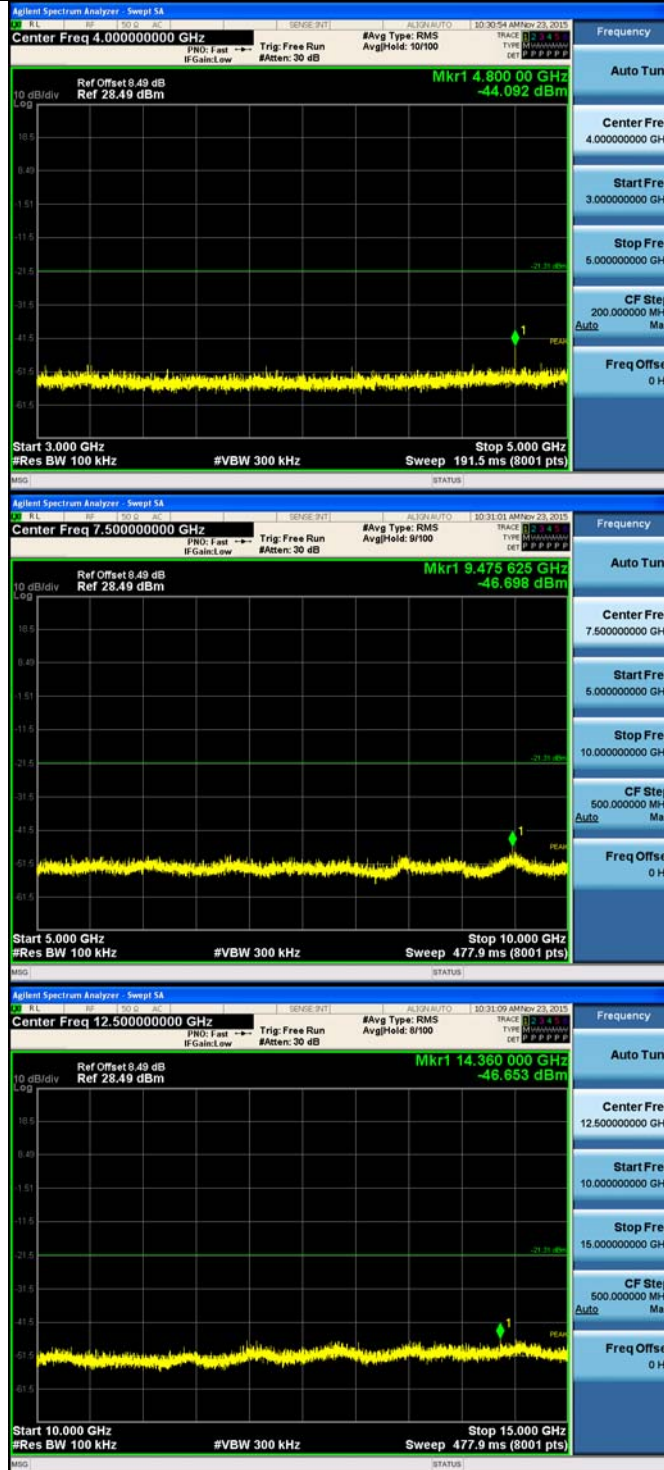




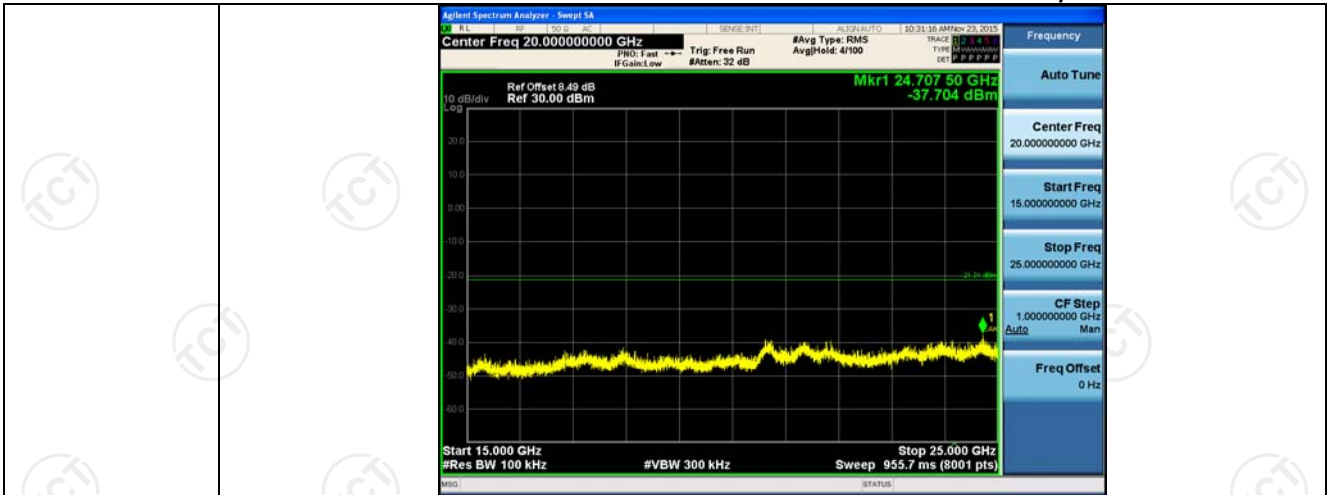


## 8DPSK HCH Graphs









\*\*\*\*\*END OF REPORT\*\*\*\*\*

## Appendix B: Photographs of Test Setup

Refer to test report TCT151117E022

## Appendix C: Photographs of EUT

Refer to test report TCT151117E022

