

Dwell Time

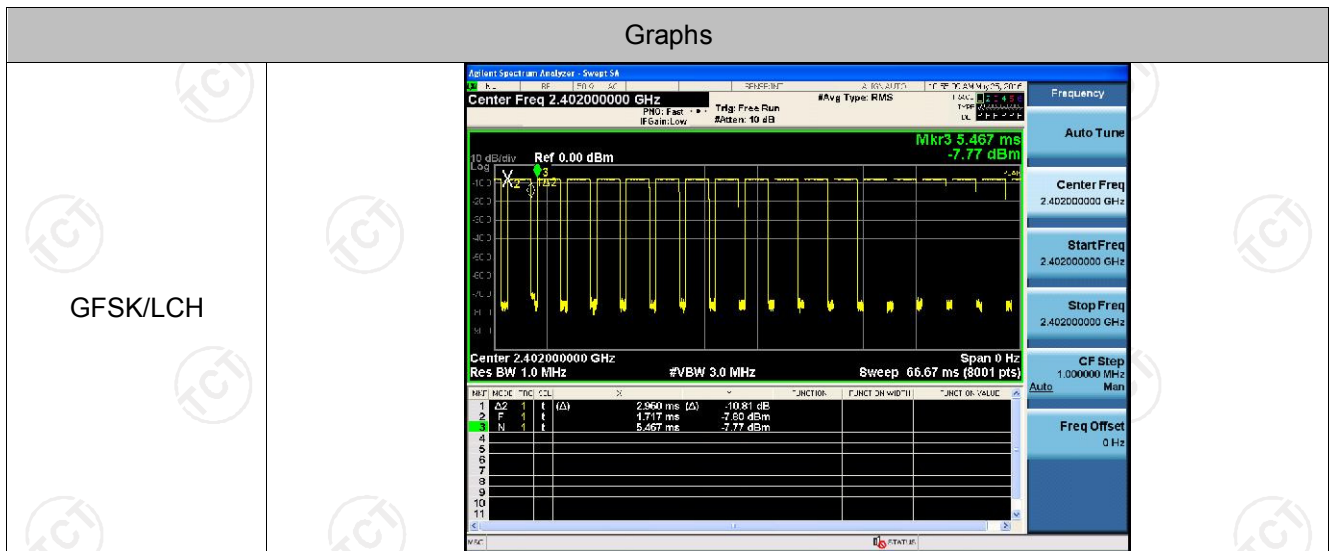
Result Table

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

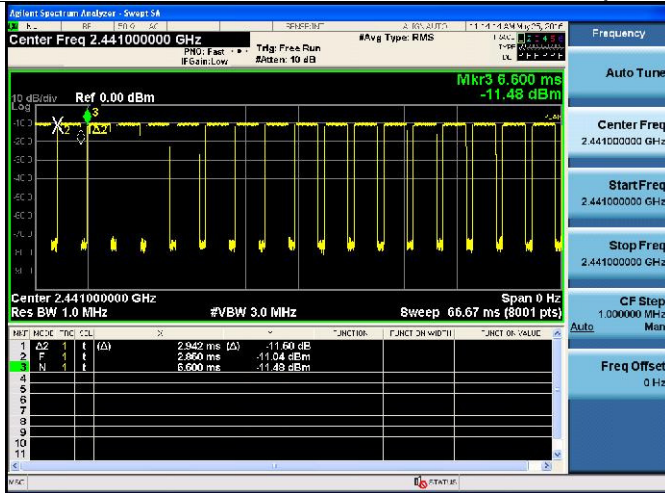
- The duration for dwell time calculation: $0.4[s] \times \text{hopping number} = 0.4[s] \times 79[\text{ch}] = 31.6[s \cdot \text{ch}]$;
- The burst width [ms/hop/ch], which is directly measured, refers to the duration on one channel hop.
- The hops per second for all channels: The selected EUT Conf 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	2.95	106.7	0.315	78.67	PASS
GFSK	MCH	2.95	106.7	0.315	78.67	PASS
GFSK	HCH	2.95	106.7	0.315	78.67	PASS
$\pi/4$ DQPSK	LCH	2.933	106.7	0.313	78.22	PASS
$\pi/4$ DQPSK	MCH	2.942	106.7	0.314	78.44	PASS
$\pi/4$ DQPSK	HCH	2.933	106.7	0.313	78.22	PASS

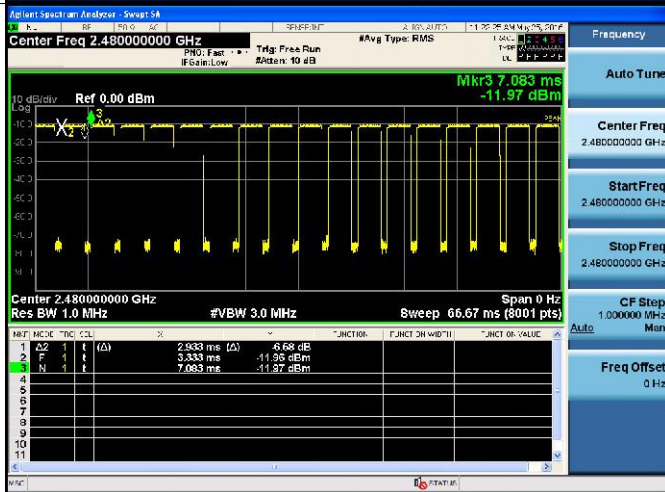
Test Graph



$\pi/4$ DQPSK/MCH



$\pi/4$ DQPSK/HCH

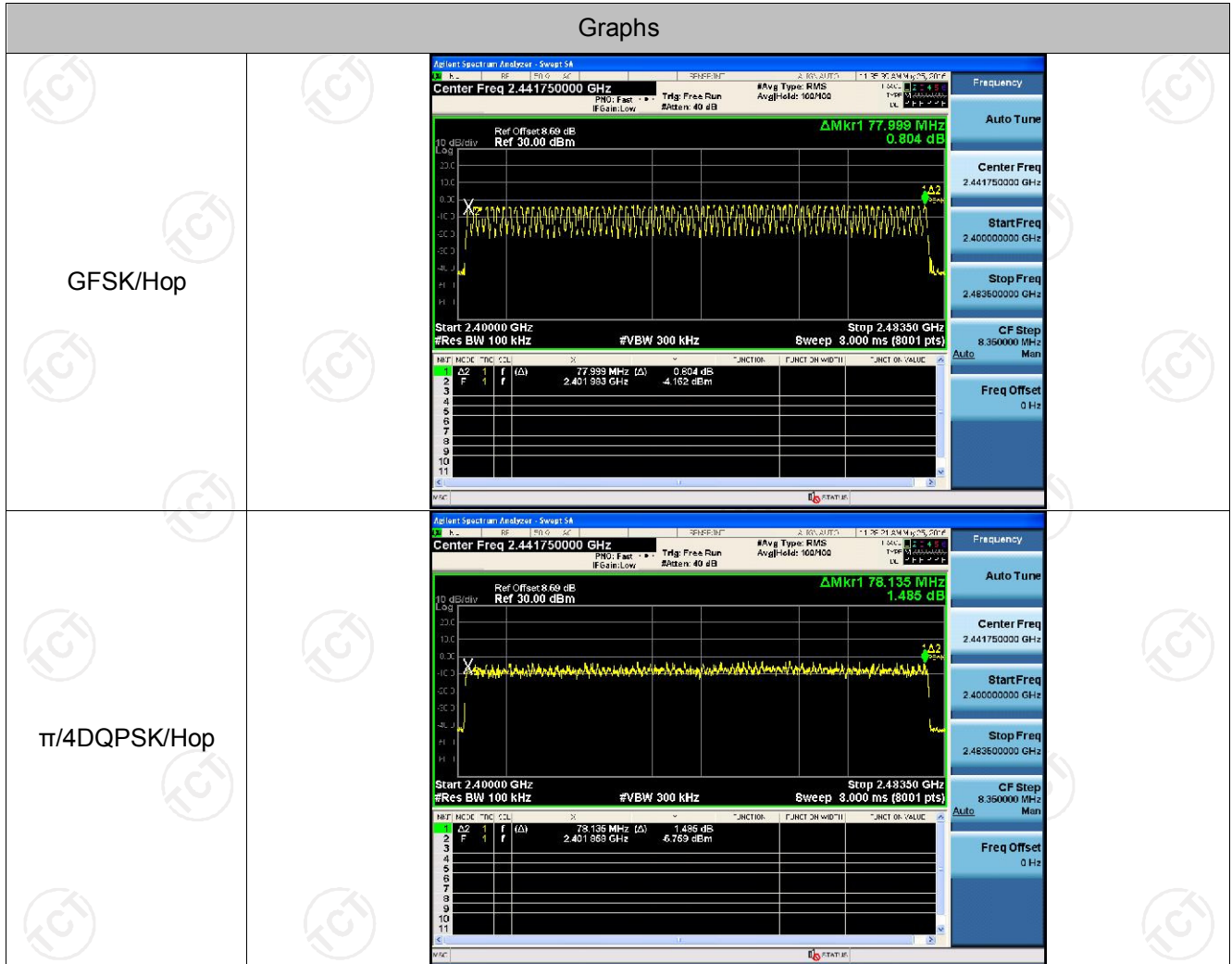


Hopping Channel Number

Result Table

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

Test Graph





Conducted Peak Output Power

Result Table

Mode	Channel.	Maximum Peak Output Power [dBm]	Verdict
GFSK	LCH	1.024	PASS
GFSK	MCH	0.764	PASS
GFSK	HCH	-2.713	PASS
$\pi/4$ DQPSK	LCH	-1.083	PASS
$\pi/4$ DQPSK	MCH	-0.548	PASS
$\pi/4$ DQPSK	HCH	-0.740	PASS

Test Graph



<p>GFSK/HCH</p>	 <p>Agilent Spectrum Analyzer - Sweet 5A Center Freq 2.48000000 GHz Ref Offset 3.49 dB Ref 30.00 dBm Mkr1 2.480 153 750 GHz -2.713 dBm Span 5.000 MHz #Res BW 3.0 MHz #VBW 8.0 MHz Sweep 1.067 ms (8001 pts)</p>
<p>$\pi/4$DQPSK/LCH</p>	 <p>Agilent Spectrum Analyzer - Sweet 5A Center Freq 2.40200000 GHz Ref Offset 3.53 dB Ref 30.00 dBm Mkr1 2.401 993 750 GHz -1.083 dBm Span 5.000 MHz #Res BW 3.0 MHz #VBW 8.0 MHz Sweep 1.067 ms (8001 pts)</p>
<p>$\pi/4$DQPSK/MCH</p>	 <p>Agilent Spectrum Analyzer - Sweet 5A Center Freq 2.44100000 GHz Ref Offset 3.43 dB Ref 30.00 dBm Mkr1 2.440 957 500 GHz -0.548 dBm Span 5.000 MHz #Res BW 3.0 MHz #VBW 8.0 MHz Sweep 1.067 ms (8001 pts)</p>

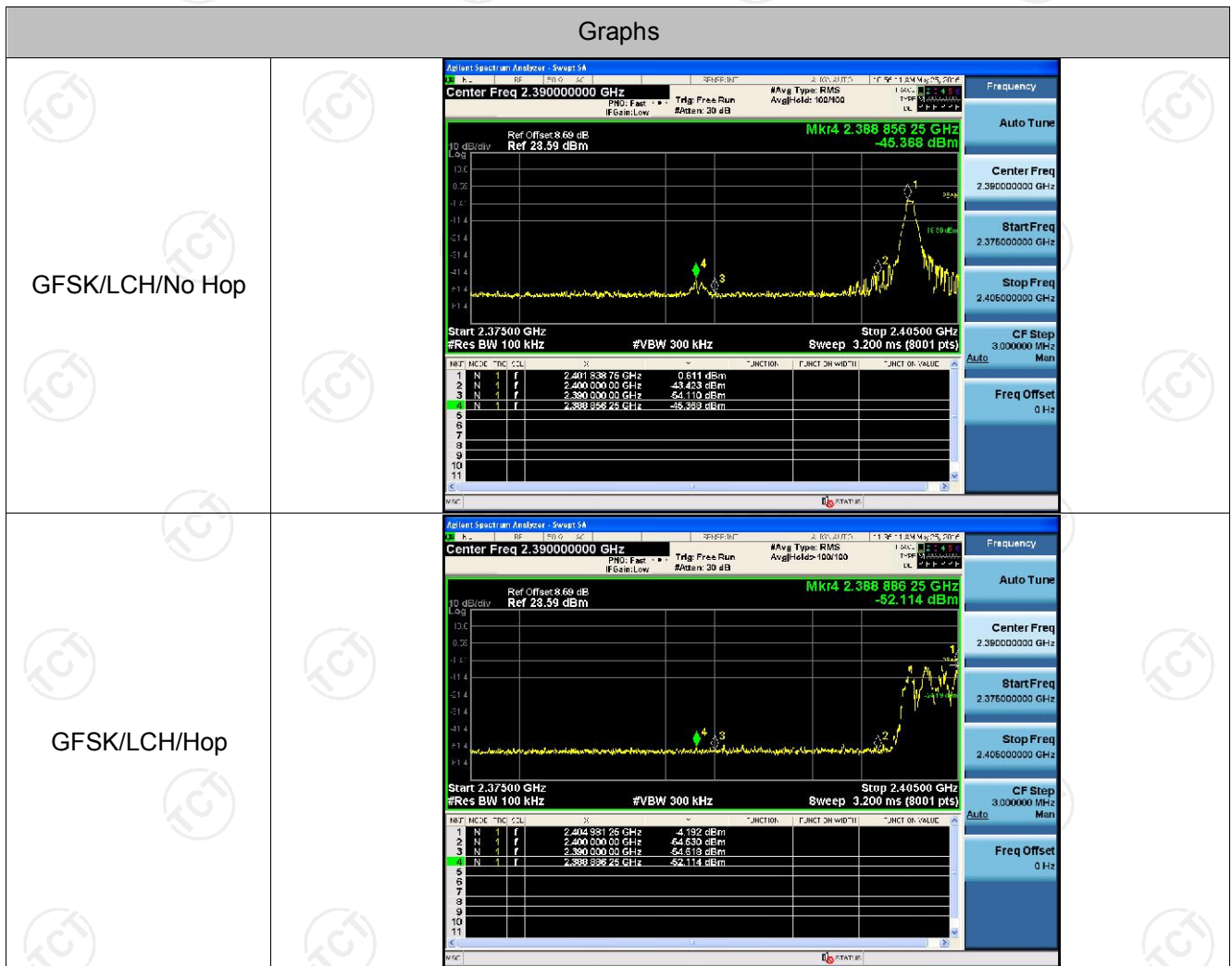


Band-edge for RF Conducted Emissions

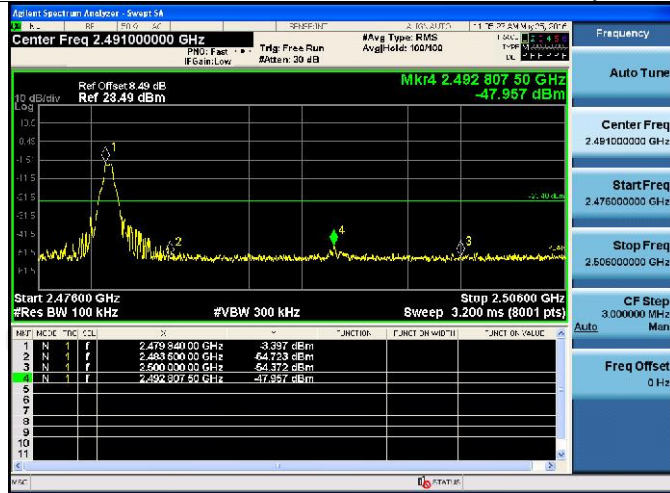
Result Table

Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	0.611	Off	-45.368	-19.39	PASS
			-4.192	On	-52.114	-24.19	PASS
GFSK	HCH	2480	-3.397	Off	-47.957	-23.4	PASS
			-3.405	On	-50.596	-23.41	PASS
π /4DQPSK	LCH	2402	-4.053	Off	-46.617	-24.05	PASS
			-3.822	On	-52.029	-23.82	PASS
π /4DQPSK	HCH	2480	-3.241	Off	-45.293	-23.24	PASS
			-4.946	On	-51.415	-24.95	PASS

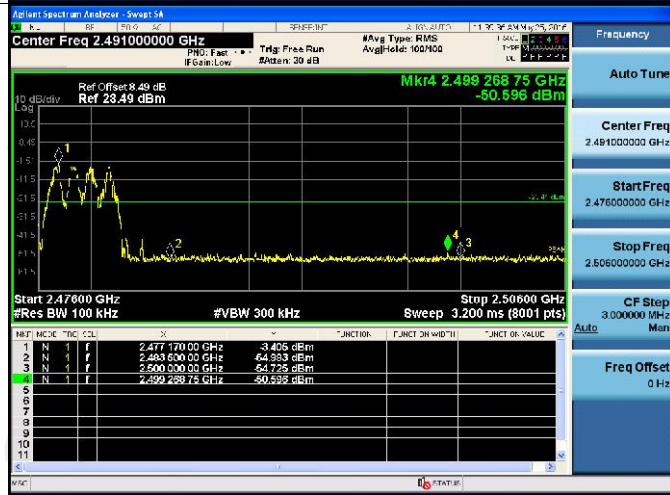
Test Graph



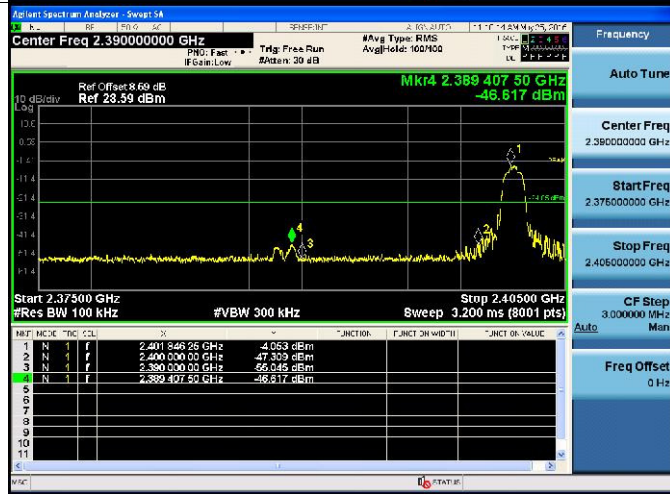
GFSK/HCH/No Hop



GFSK/HCH/Hop



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



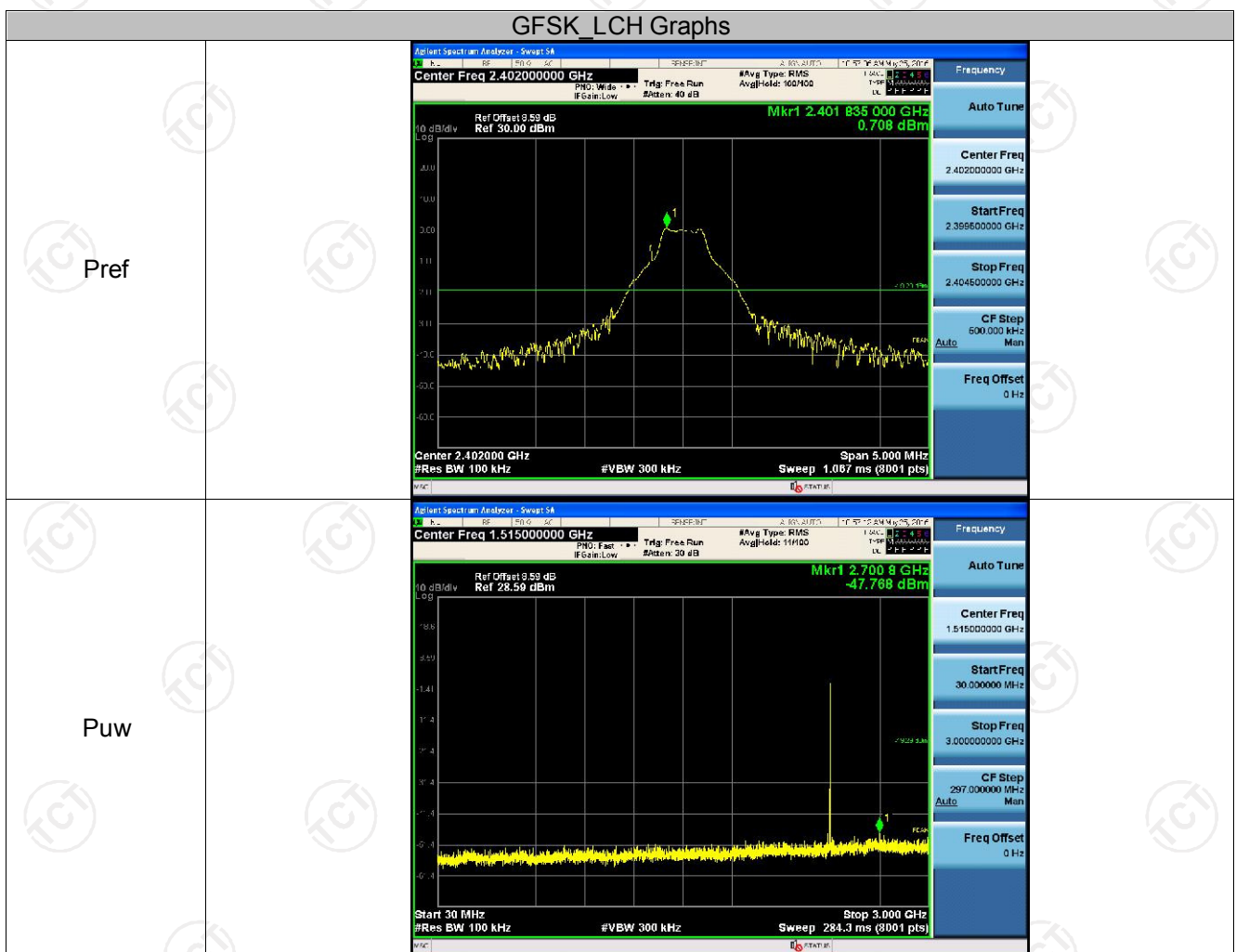
<p>$\pi/4$DQPSK/LCH/Hop</p>	<p>Agilent Spectrum Analyzer - Sweet 5A</p> <p>Center Freq 2.390000000 GHz</p> <p>Ref Offset: 8.69 dB Ref: 23.93 dBm</p> <p>Mkr4 2.38526000 GHz -52.029 dBm</p> <p>Start 2.37500 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 3.200 ms (8001 pts)</p> <table border="1"> <thead> <tr> <th>MKT</th> <th>MODE</th> <th>THD</th> <th>CLL</th> <th>F</th> <th>P</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>2.40453876 GHz</td><td>-3.922 dBm</td><td></td><td></td><td></td></tr> <tr><td>2</td><td>N</td><td>1</td><td>f</td><td>2.40000000 GHz</td><td>-44.205 dBm</td><td></td><td></td><td></td></tr> <tr><td>3</td><td>N</td><td>1</td><td>f</td><td>2.39000000 GHz</td><td>-52.029 dBm</td><td></td><td></td><td></td></tr> <tr><td>4</td><td>N</td><td>1</td><td>f</td><td>2.38526000 GHz</td><td>-52.029 dBm</td><td></td><td></td><td></td></tr> </tbody> </table>	MKT	MODE	THD	CLL	F	P	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	2.40453876 GHz	-3.922 dBm				2	N	1	f	2.40000000 GHz	-44.205 dBm				3	N	1	f	2.39000000 GHz	-52.029 dBm				4	N	1	f	2.38526000 GHz	-52.029 dBm			
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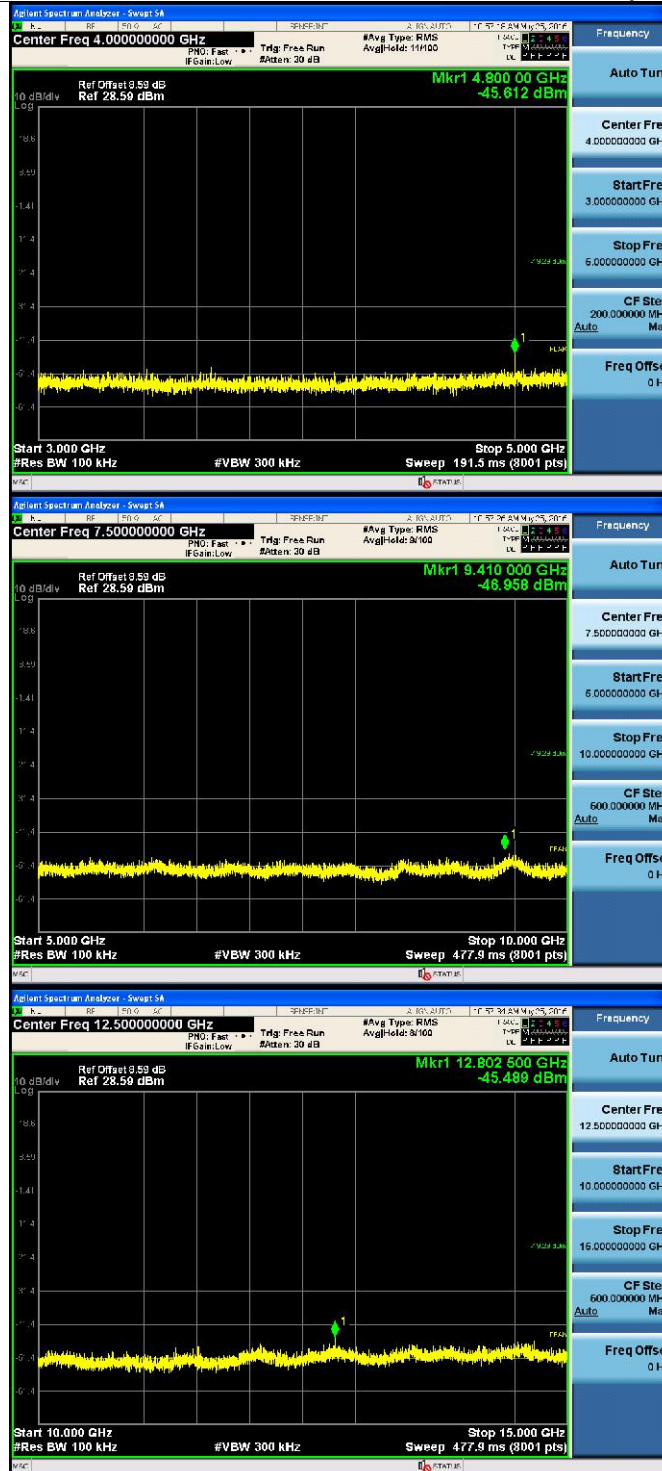
RF Conducted Spurious Emissions

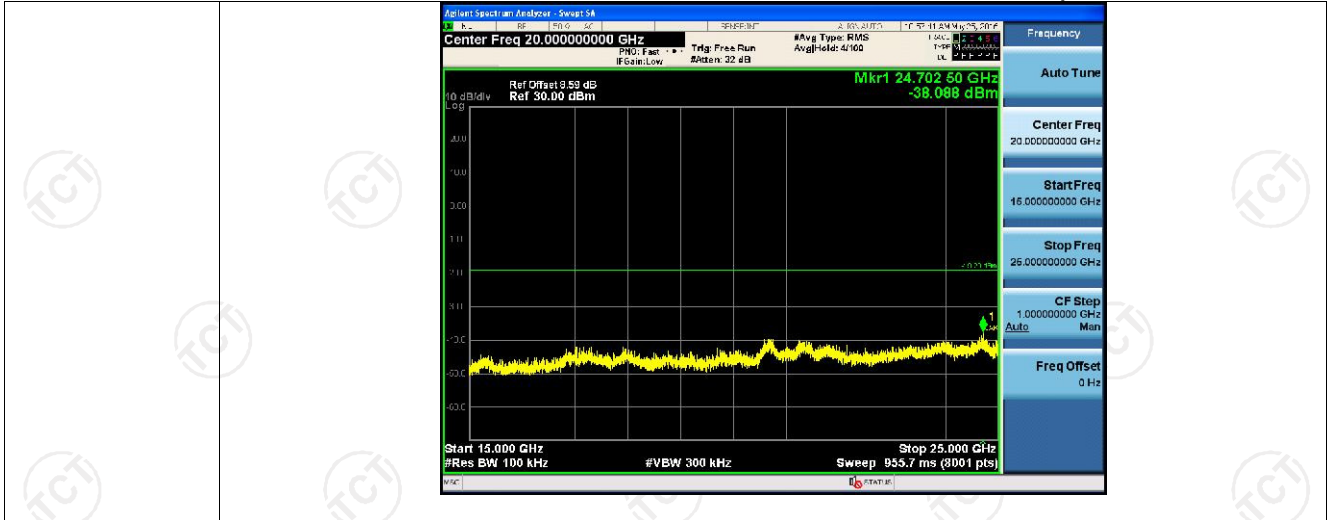
Result Table

Mode	Channel	Pref [dBm]	Puw[dBm]	Verdict
GFSK	LCH	0.708	<Limit	PASS
GFSK	MCH	-2.944	<Limit	PASS
GFSK	HCH	-3.329	<Limit	PASS
$\pi/4$ DQPSK	LCH	-3.615	<Limit	PASS
$\pi/4$ DQPSK	MCH	-2.97	<Limit	PASS
$\pi/4$ DQPSK	HCH	-3.212	<Limit	PASS

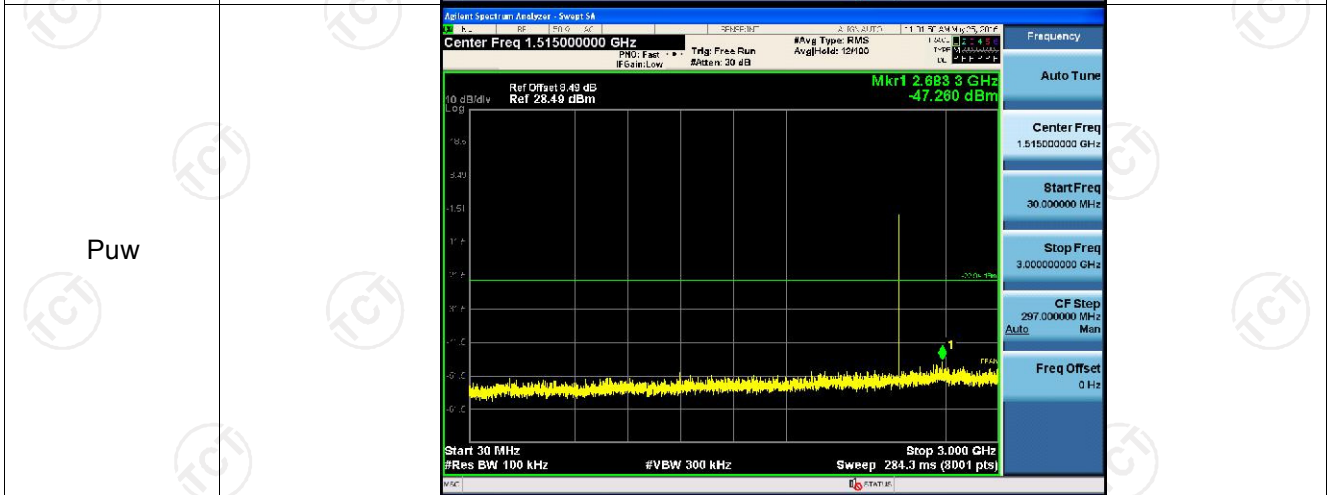
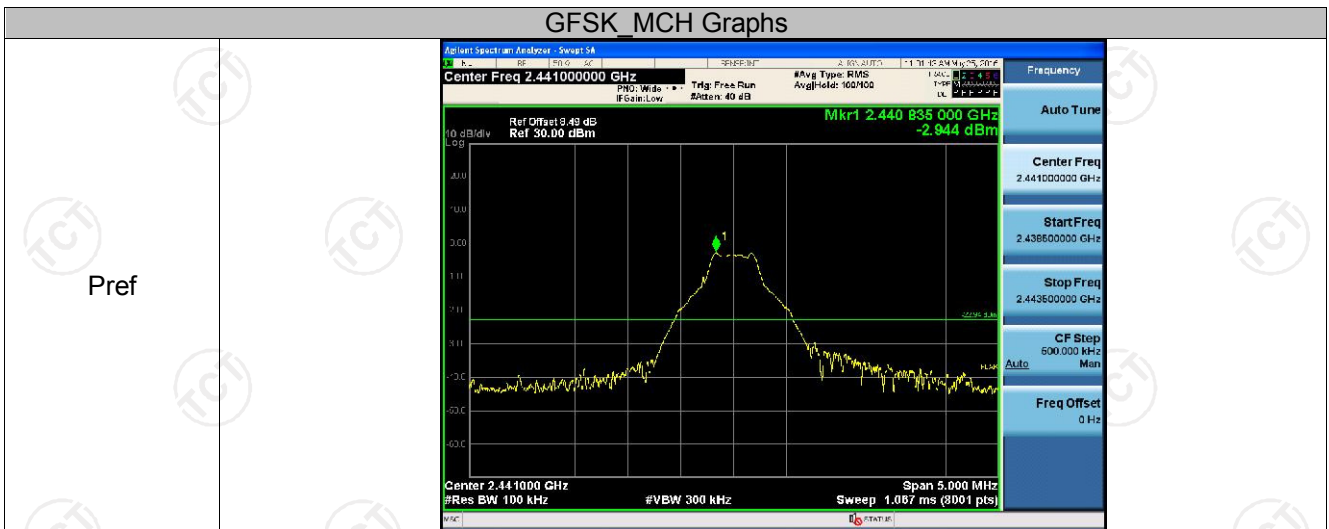
Test Graph



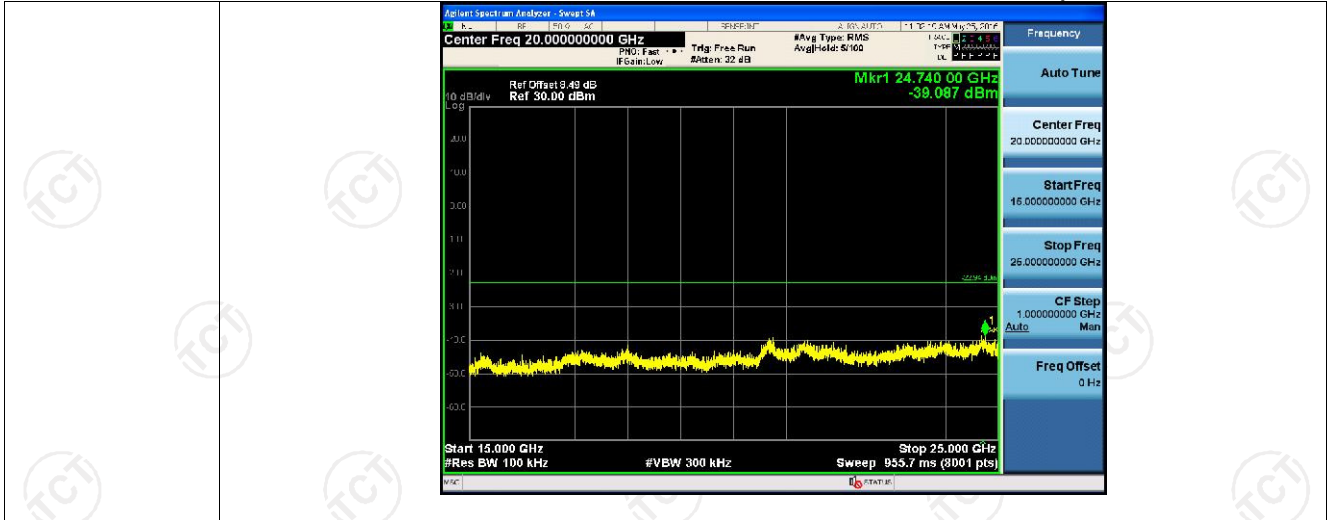




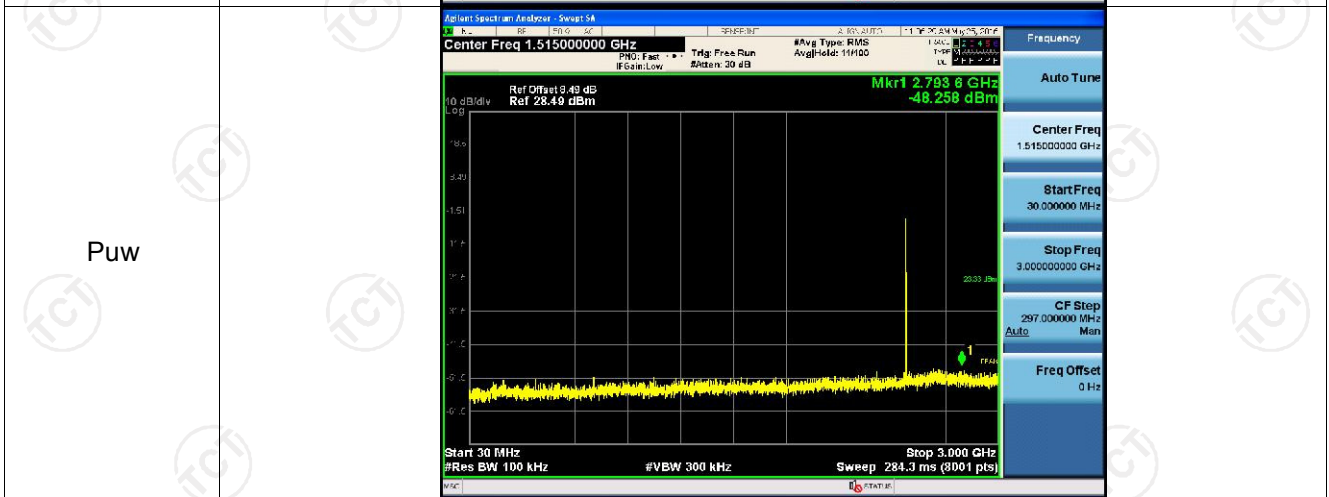
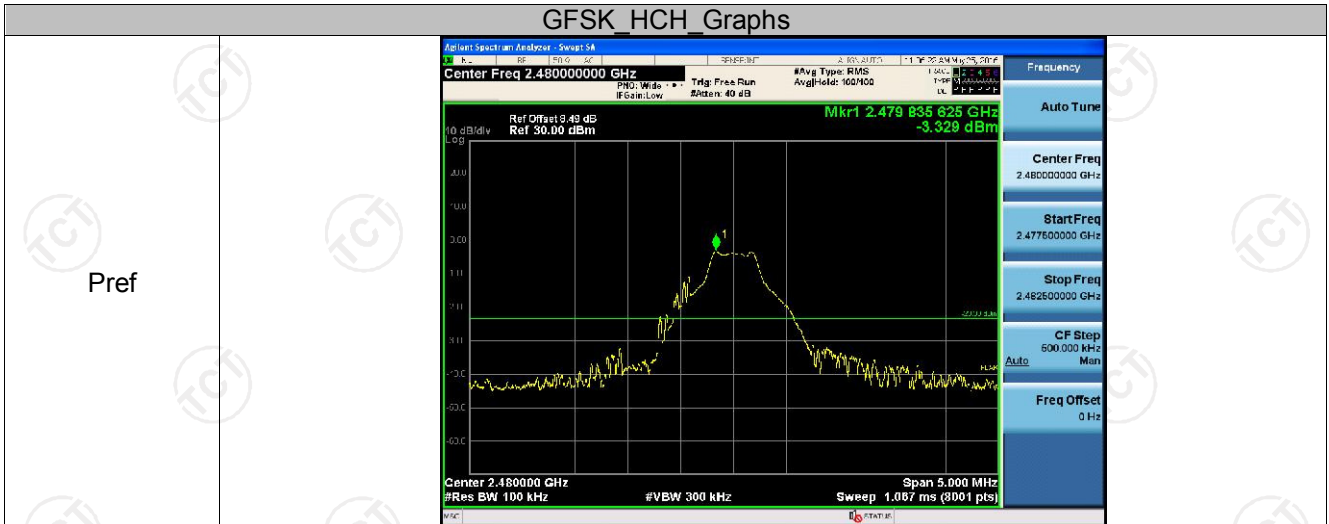
GFSK_MCH Graphs

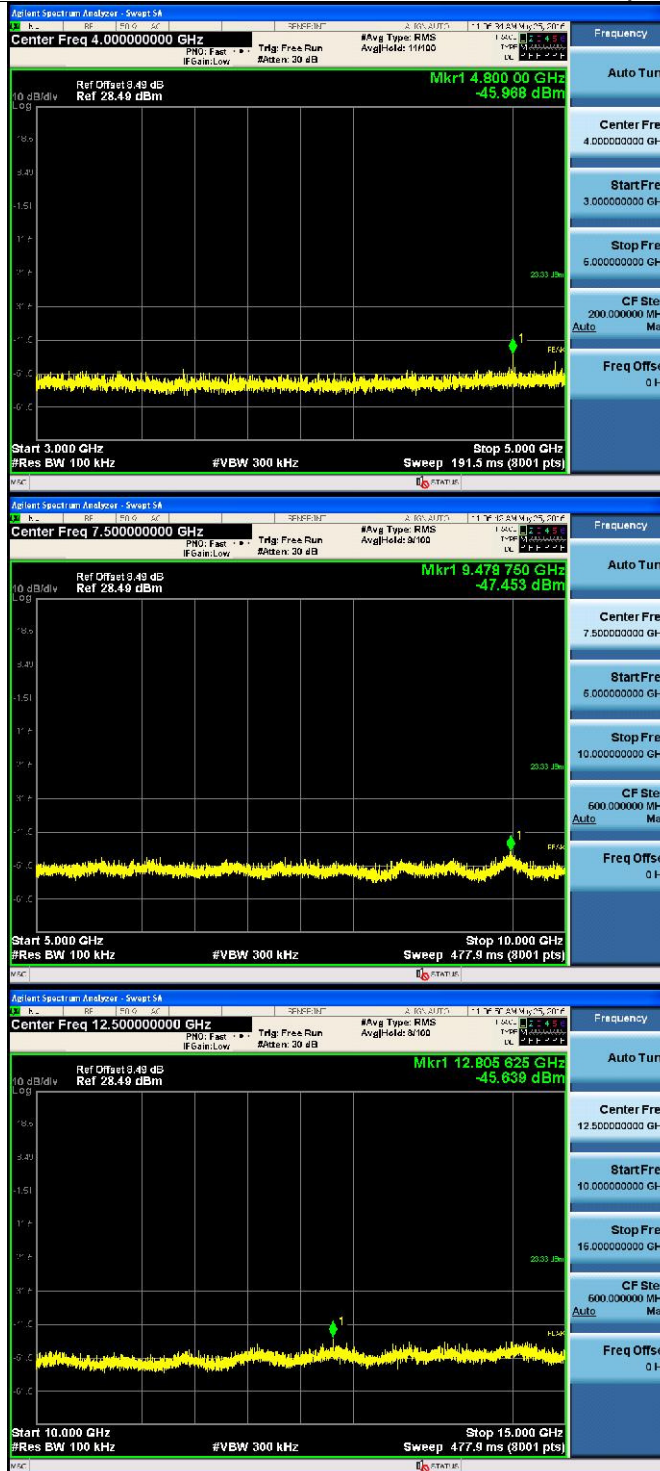


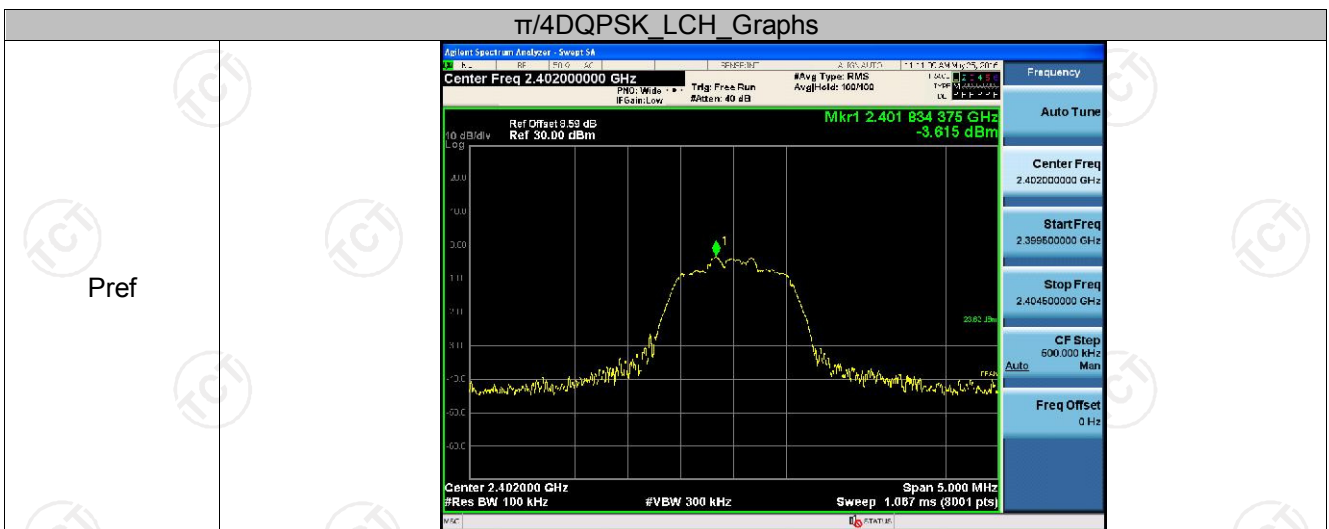
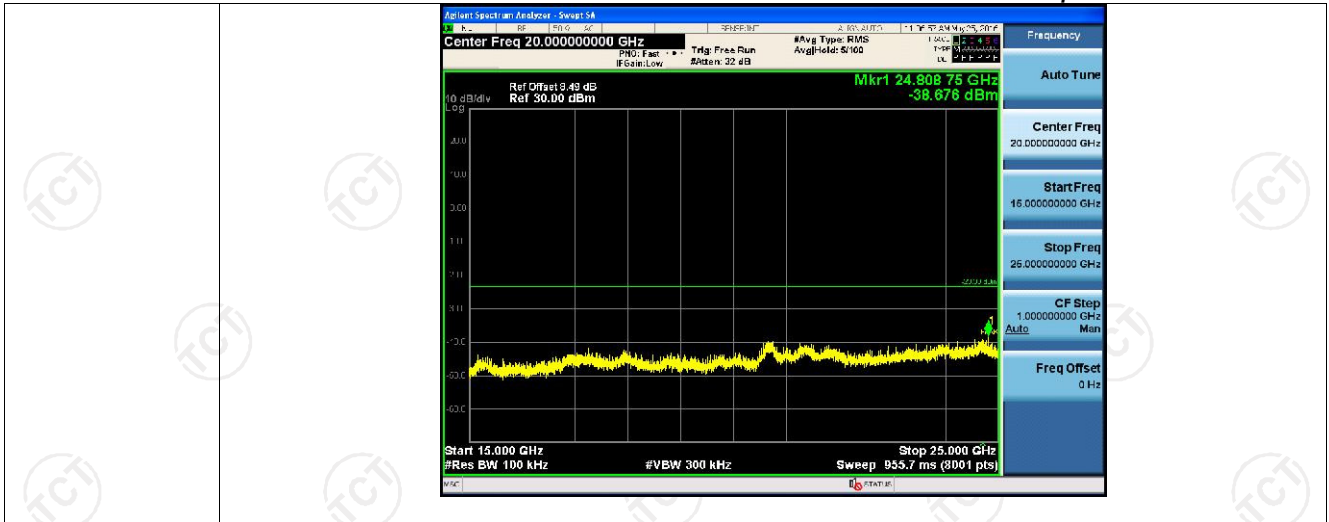




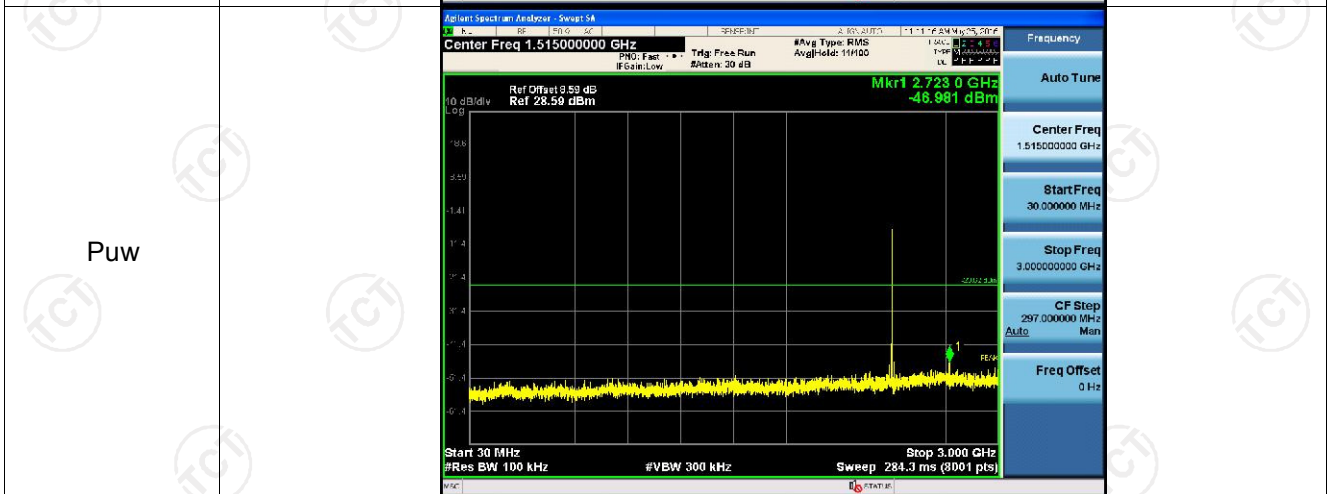
GFSK HCH Graphs



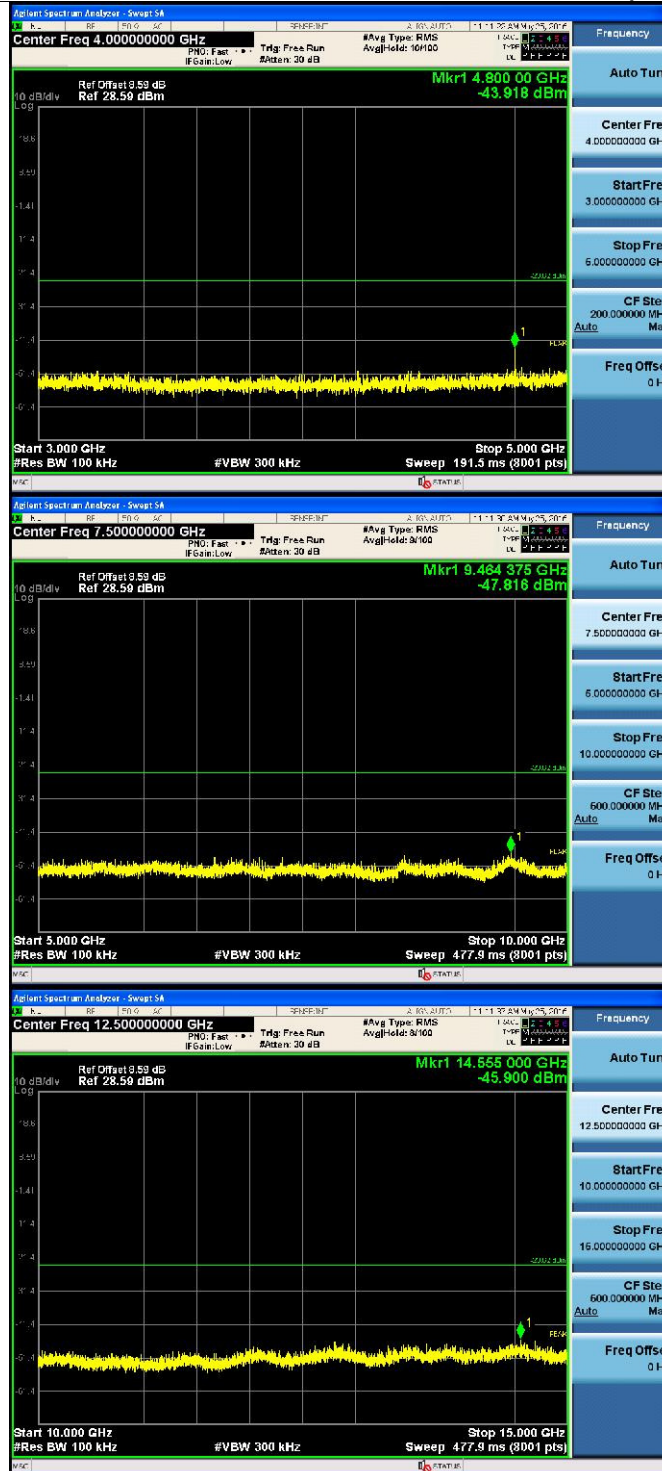


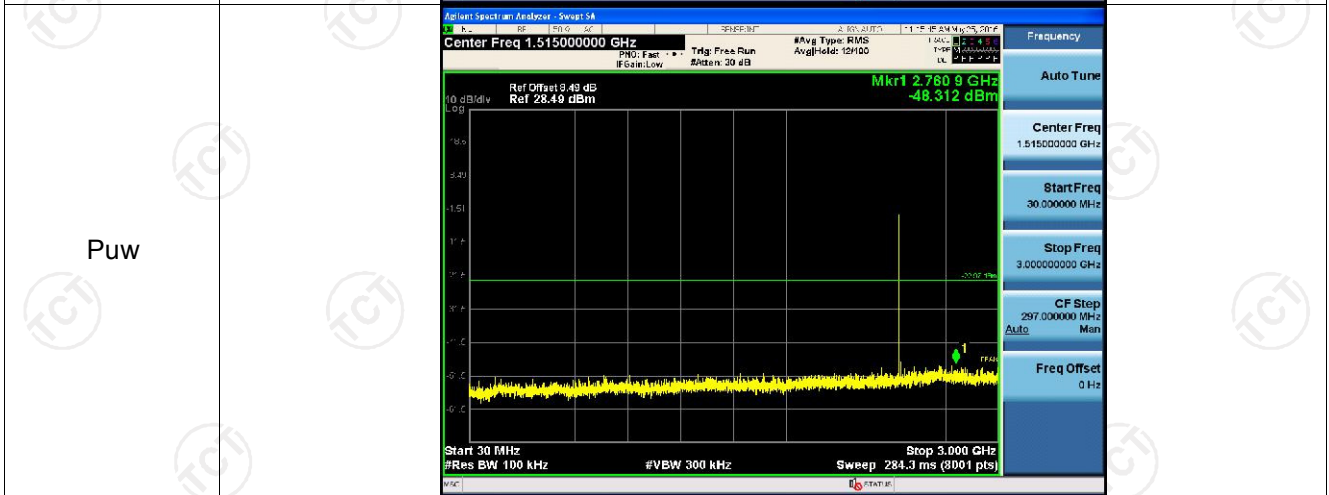
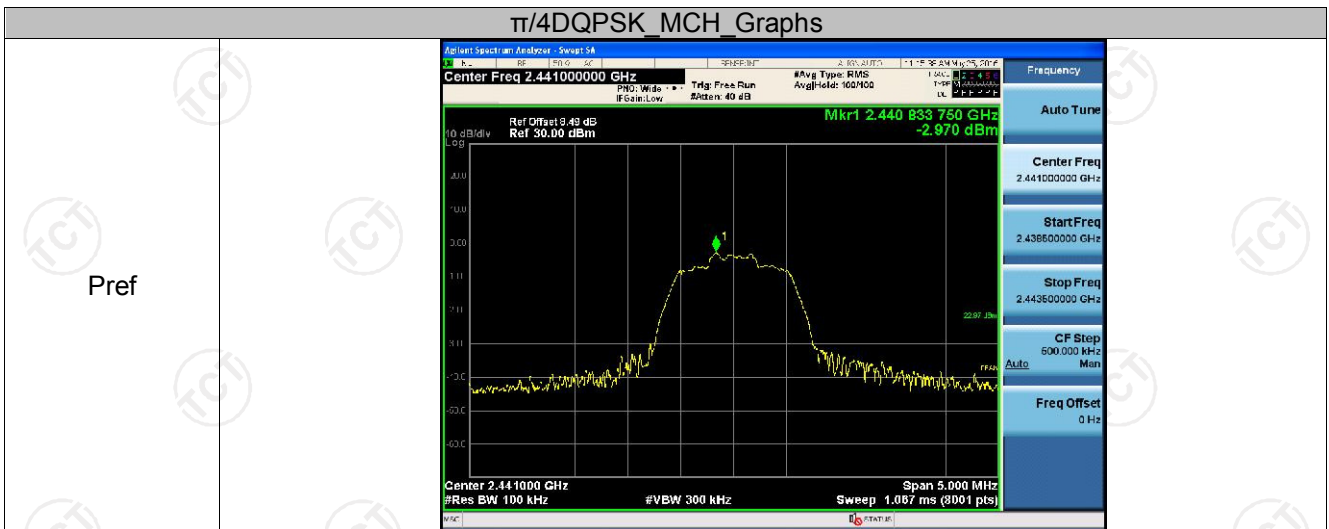
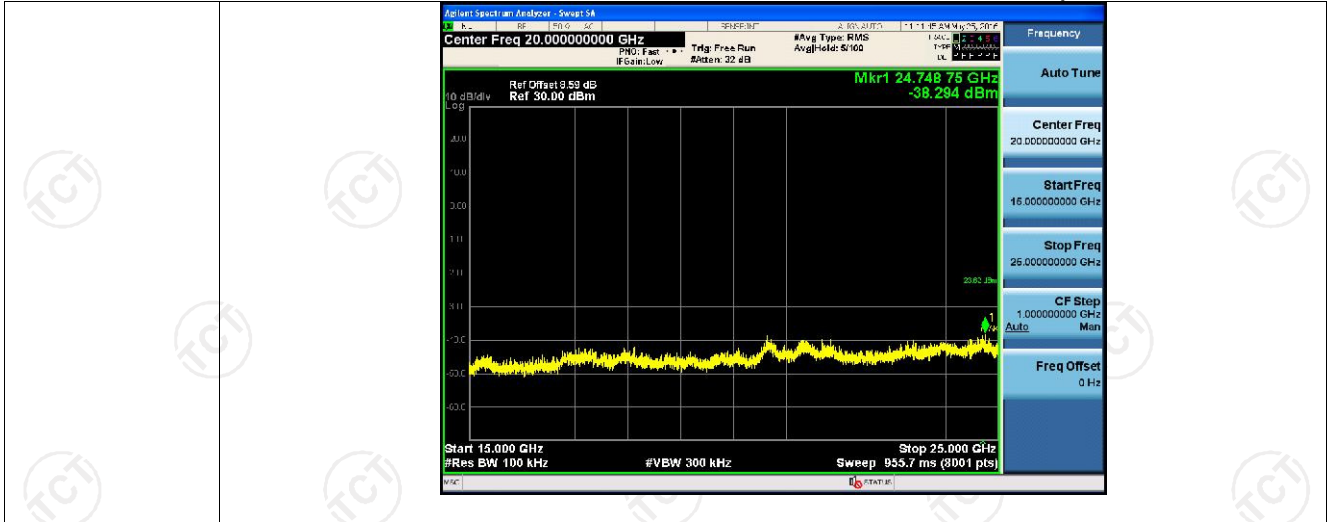


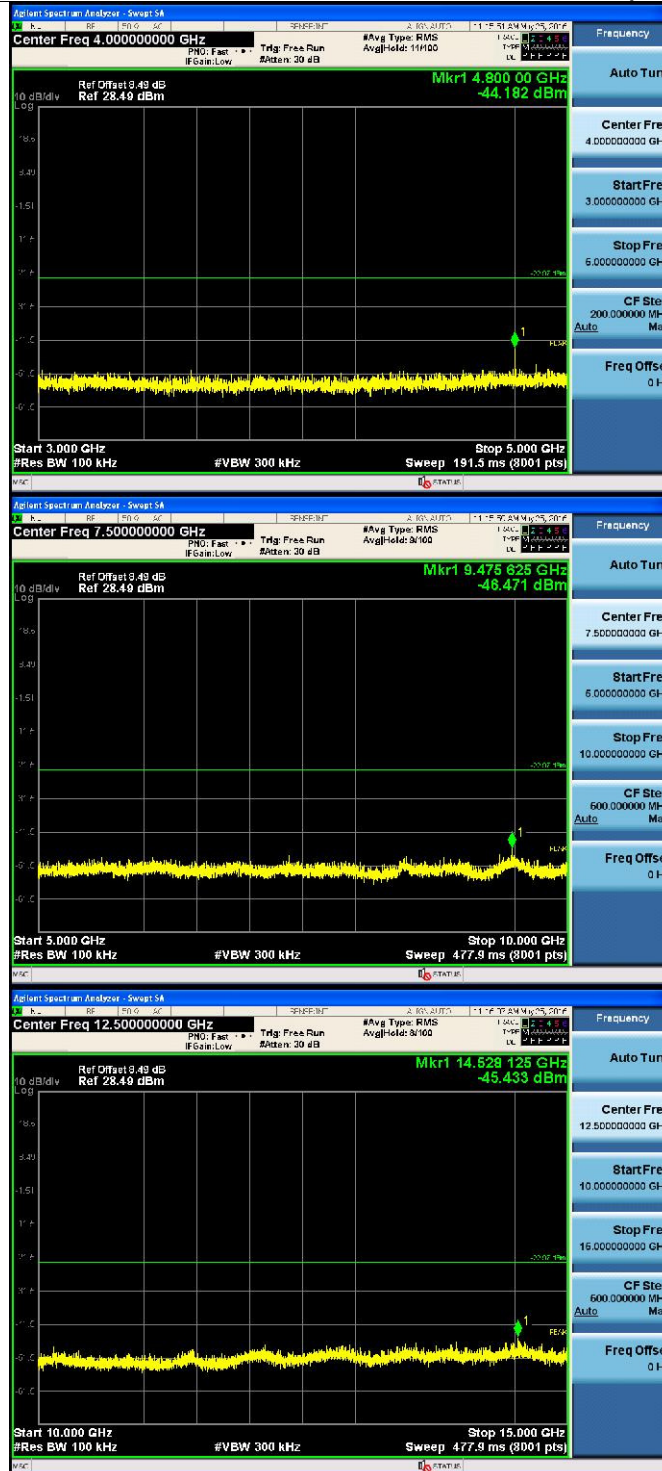
Pref

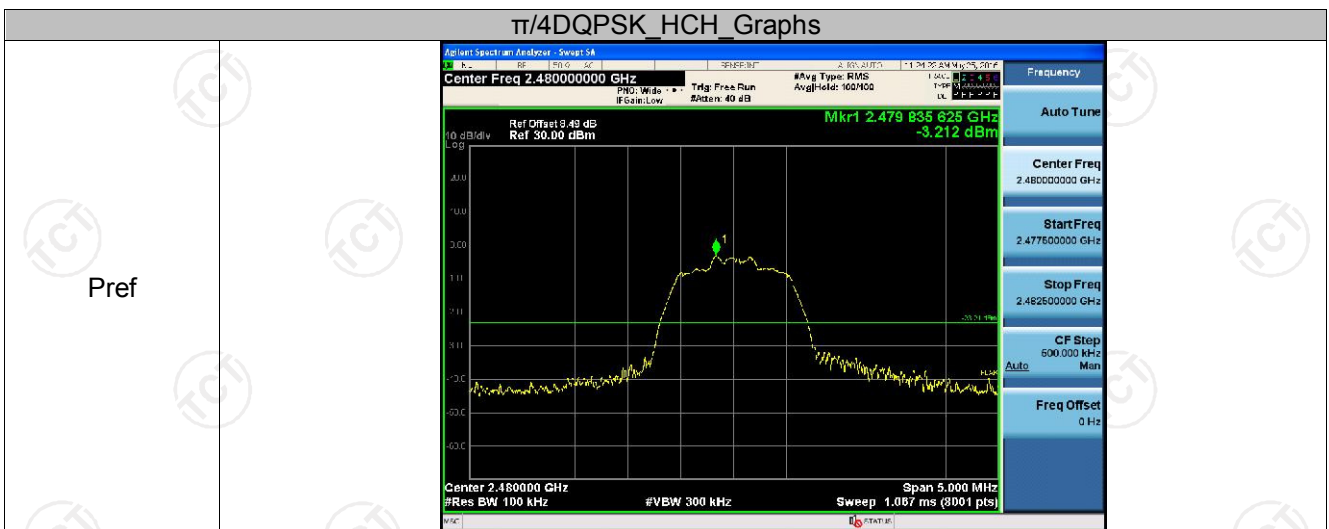
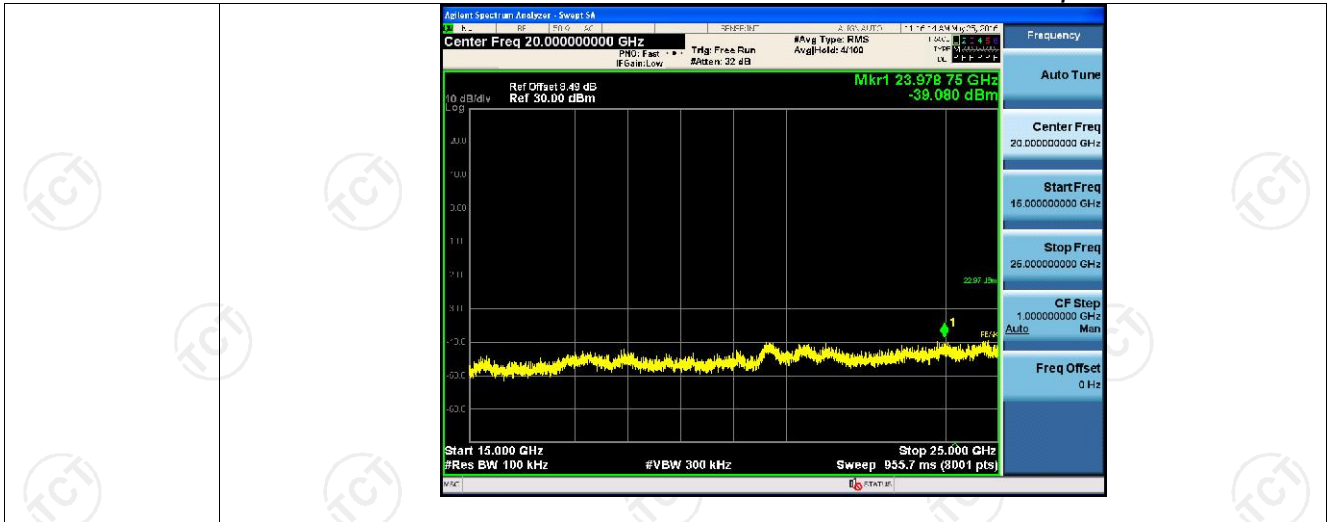


Puw

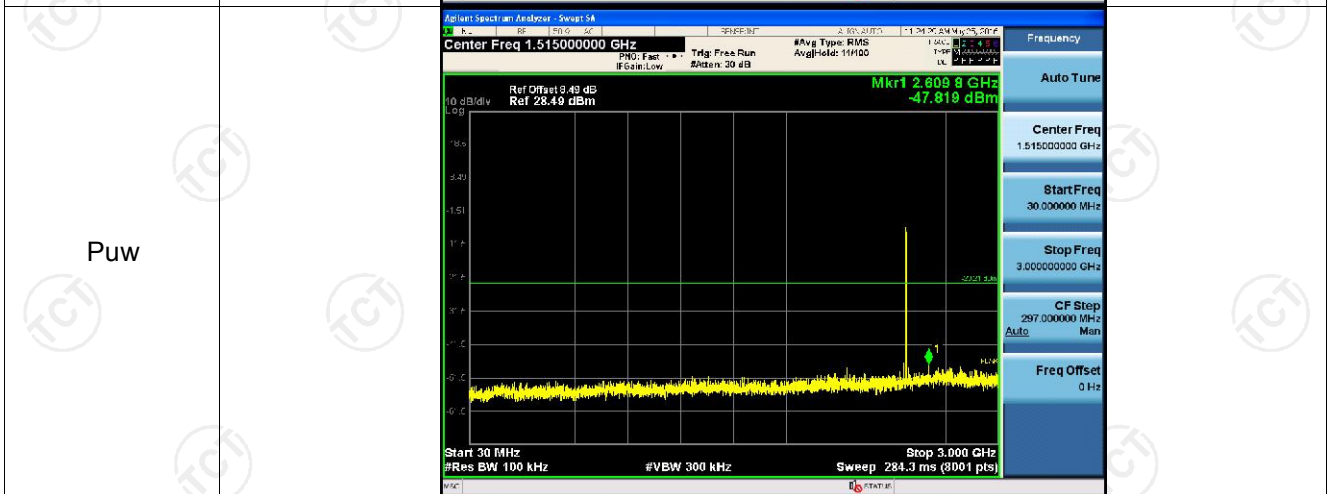








Pref



Puw

