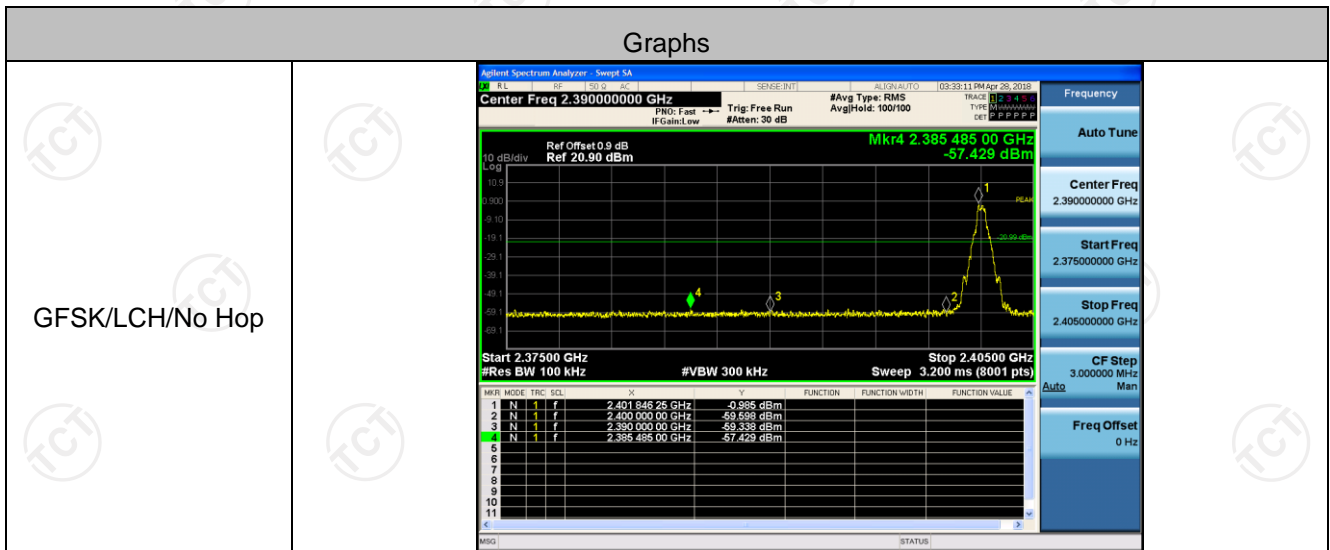


## Band-edge for RF Conducted Emissions

### Result Table

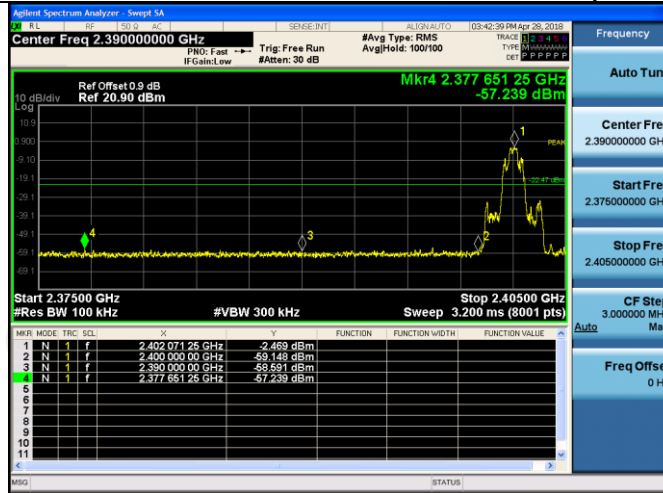
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	-0.985	Off	-57.429	-20.99	PASS
			-0.256	On	-57.179	-20.26	PASS
GFSK	HCH	2480	-0.246	Off	-56.795	-20.25	PASS
			-0.274	On	-56.187	-20.27	PASS
$\pi$ /4DQPSK	LCH	2402	-2.469	Off	-57.239	-22.47	PASS
			-1.620	On	-57.189	-21.62	PASS
$\pi$ /4DQPSK	HCH	2480	-1.410	Off	-56.154	-21.41	PASS
			-1.974	On	-56.503	-21.97	PASS

### Test Graph

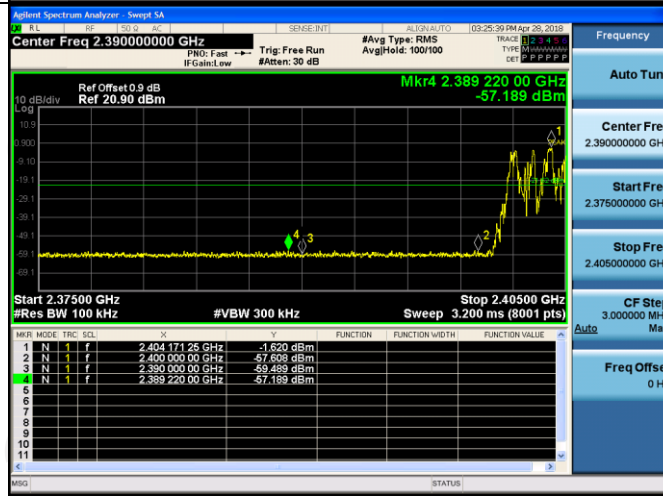


<p>GFSK/LCH/Hop</p>		<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.390000000 GHz Ref Offset 0.9 dB Ref 20.90 dBm Mkr4 2.376 426 00 GHz -57.179 dBm Start 2.37500 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 3.200 ms (8001 pts)</p> <table border="1"> <thead> <tr> <th>MNR</th> <th>MODE</th> <th>TRIG</th> <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>2.404 846 26 GHz</td><td>-0.266 dBm</td><td></td><td></td><td></td></tr> <tr><td>2</td><td>N</td><td>1</td><td>f</td><td>2.400 000 00 GHz</td><td>-50.424 dBm</td><td></td><td></td><td></td></tr> <tr><td>3</td><td>N</td><td>1</td><td>f</td><td>2.390 000 00 GHz</td><td>-59.937 dBm</td><td></td><td></td><td></td></tr> <tr><td>4</td><td>N</td><td>1</td><td>f</td><td>2.376 426 00 GHz</td><td>-57.179 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	2.404 846 26 GHz	-0.266 dBm				2	N	1	f	2.400 000 00 GHz	-50.424 dBm				3	N	1	f	2.390 000 00 GHz	-59.937 dBm				4	N	1	f	2.376 426 00 GHz	-57.179 dBm				<p>Frequency Auto Tune Center Freq 2.390000000 GHz Start Freq 2.375000000 GHz Stop Freq 2.405000000 GHz CF Step 3.000000 MHz Man Freq Offset 0 Hz</p>
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<p>GFSK/HCH/No Hop</p>		<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.491000000 GHz Ref Offset 0.9 dB Ref 20.90 dBm Mkr4 2.496 763 75 GHz -56.795 dBm Start 2.47600 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 3.200 ms (8001 pts)</p> <table border="1"> <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>2.479 843 76 GHz</td><td>-0.246 dBm</td><td></td><td></td><td></td></tr> <tr><td>2</td><td>N</td><td>1</td><td>f</td><td>2.483 500 00 GHz</td><td>-59.206 dBm</td><td></td><td></td><td></td></tr> <tr><td>3</td><td>N</td><td>1</td><td>f</td><td>2.500 000 00 GHz</td><td>-60.095 dBm</td><td></td><td></td><td></td></tr> <tr><td>4</td><td>N</td><td>1</td><td>f</td><td>2.496 763 75 GHz</td><td>-56.795 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	2.479 843 76 GHz	-0.246 dBm				2	N	1	f	2.483 500 00 GHz	-59.206 dBm				3	N	1	f	2.500 000 00 GHz	-60.095 dBm				4	N	1	f	2.496 763 75 GHz	-56.795 dBm				<p>Frequency Auto Tune Center Freq 2.491000000 GHz Start Freq 2.476000000 GHz Stop Freq 2.506000000 GHz CF Step 3.000000 MHz Man Freq Offset 0 Hz</p>
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<p>GFSK/HCH/Hop</p>		<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.491000000 GHz Ref Offset 0.9 dB Ref 20.90 dBm Mkr4 2.485 877 50 GHz -56.187 dBm Start 2.47600 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 3.200 ms (8001 pts)</p> <table border="1"> <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>2.479 843 76 GHz</td><td>-0.274 dBm</td><td></td><td></td><td></td></tr> <tr><td>2</td><td>N</td><td>1</td><td>f</td><td>2.483 500 00 GHz</td><td>-58.463 dBm</td><td></td><td></td><td></td></tr> <tr><td>3</td><td>N</td><td>1</td><td>f</td><td>2.500 000 00 GHz</td><td>-58.913 dBm</td><td></td><td></td><td></td></tr> <tr><td>4</td><td>N</td><td>1</td><td>f</td><td>2.485 877 50 GHz</td><td>-56.187 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	2.479 843 76 GHz	-0.274 dBm				2	N	1	f	2.483 500 00 GHz	-58.463 dBm				3	N	1	f	2.500 000 00 GHz	-58.913 dBm				4	N	1	f	2.485 877 50 GHz	-56.187 dBm				<p>Frequency Auto Tune Center Freq 2.491000000 GHz Start Freq 2.476000000 GHz Stop Freq 2.506000000 GHz CF Step 3.000000 MHz Man Freq Offset 0 Hz</p>
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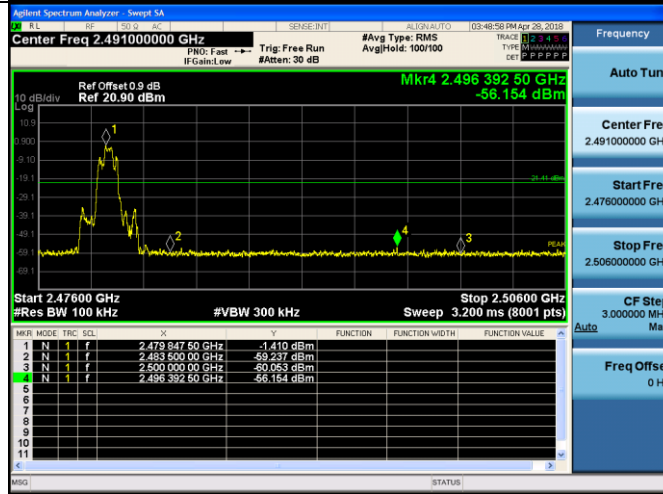
$\pi/4$ DQPSK/LCH/No  
Hop



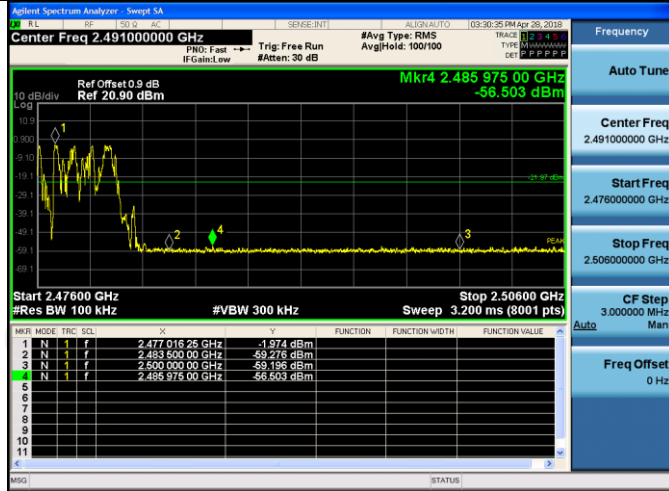
$\pi/4$ DQPSK/LCH/Hop



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



π/4DQPSK/HCH/Hop

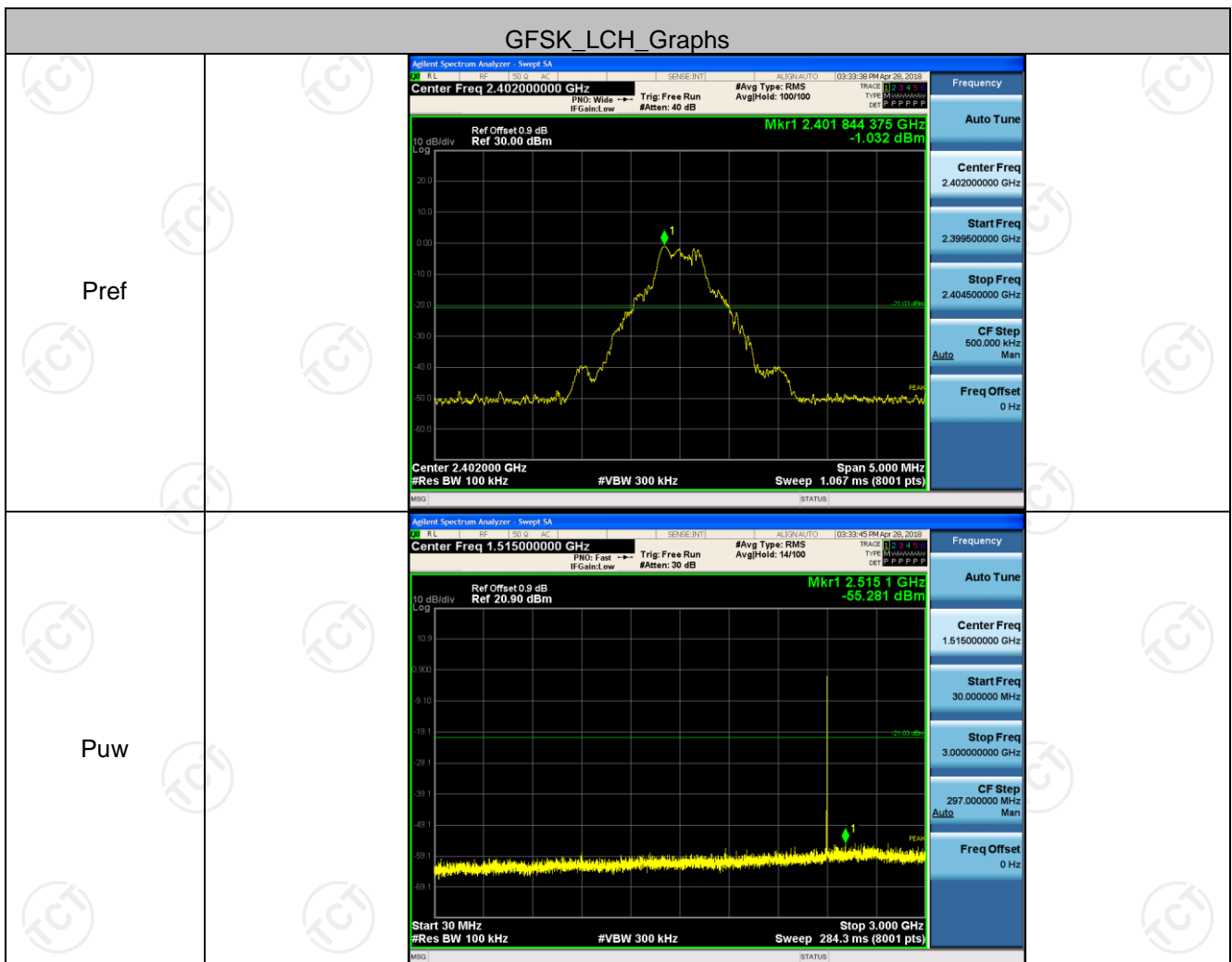


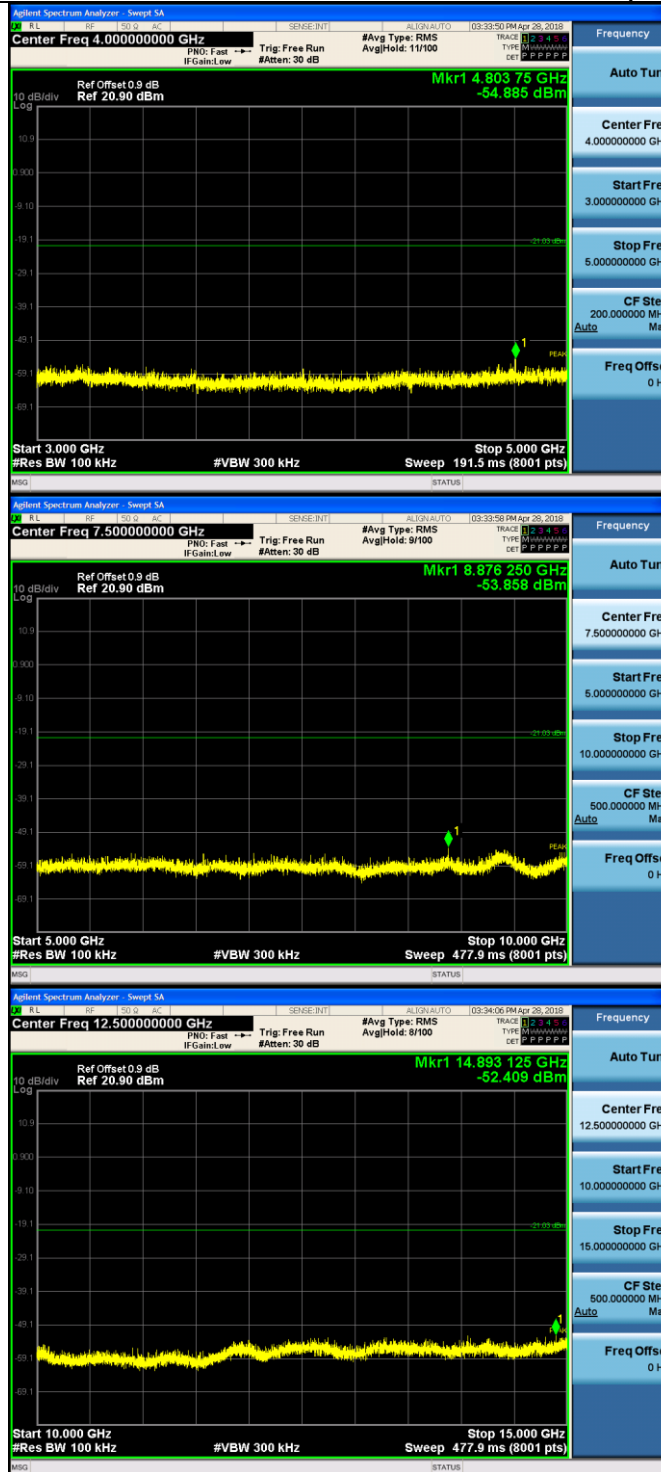
## RF Conducted Spurious Emissions

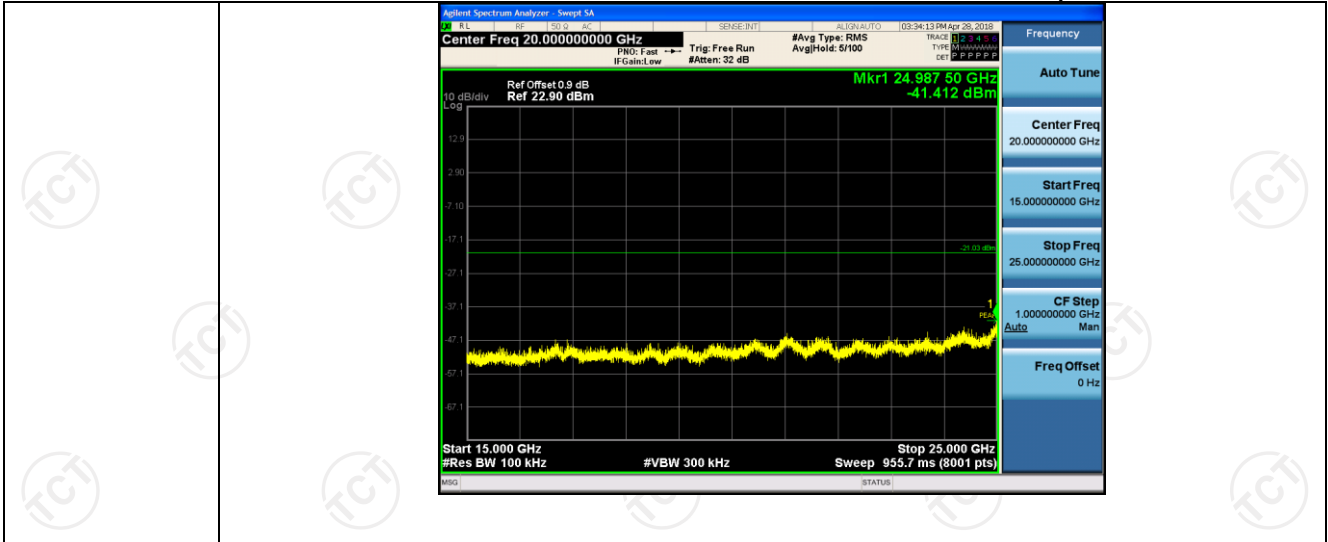
### Result Table

Mode	Channel	Pref [dBm]	Puw [dBm]	Verdict
GFSK	LCH	-1.032	<Limit	PASS
GFSK	MCH	0.932	<Limit	PASS
GFSK	HCH	-0.277	<Limit	PASS
$\pi/4$ DQPSK	LCH	-2.218	<Limit	PASS
$\pi/4$ DQPSK	MCH	-0.159	<Limit	PASS
$\pi/4$ DQPSK	HCH	-1.636	<Limit	PASS

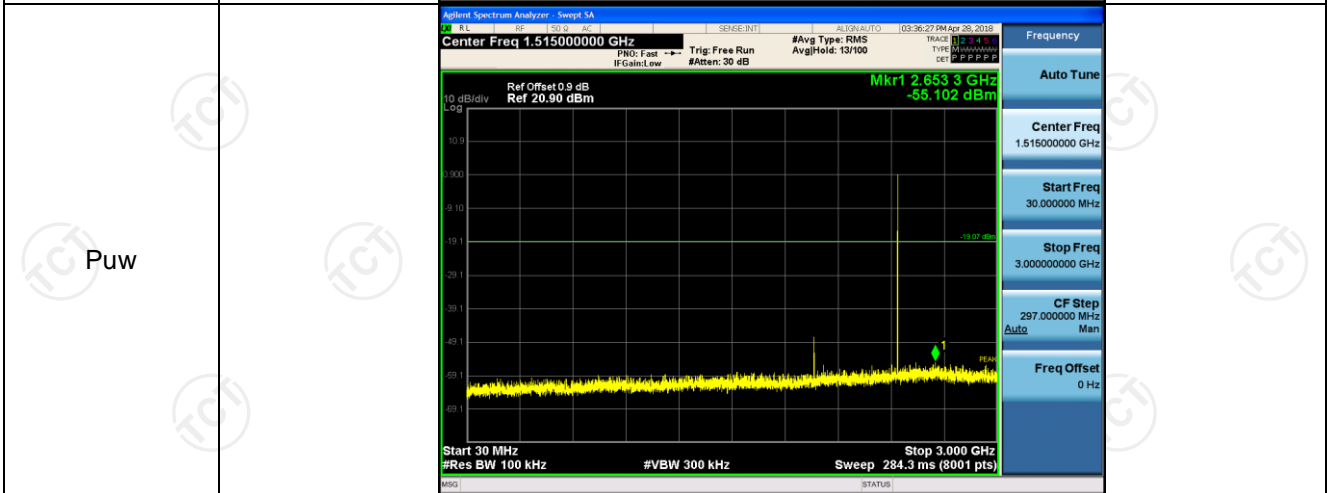
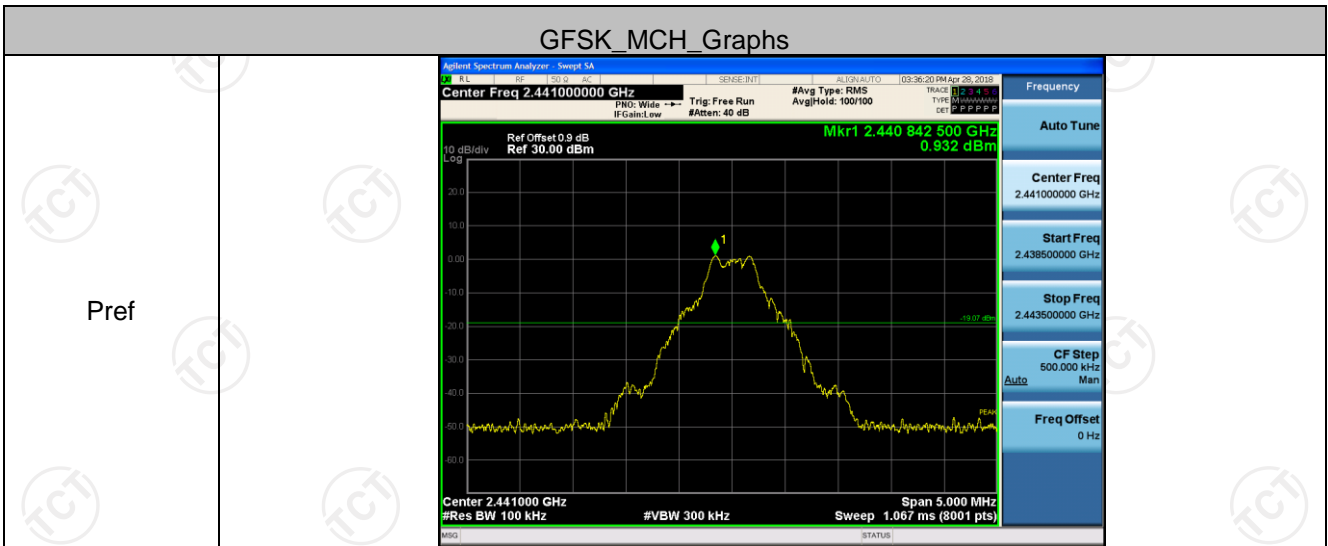
### Test Graph



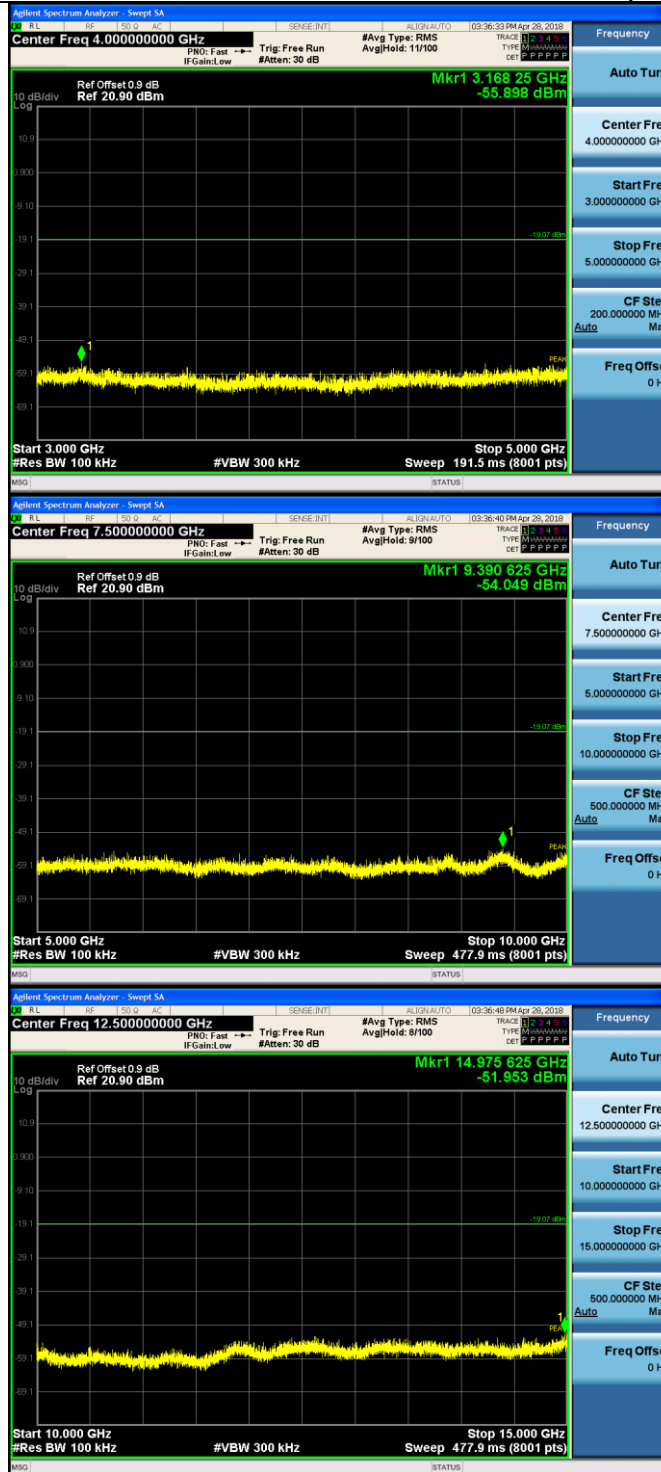


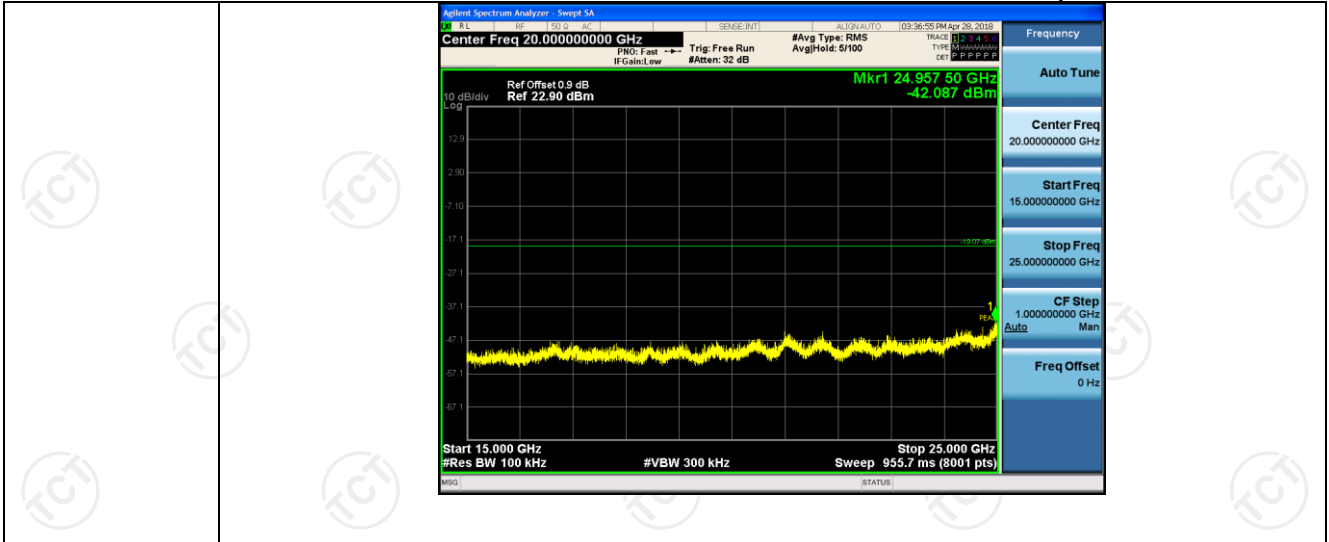


## GFSK\_MCH\_Graphs

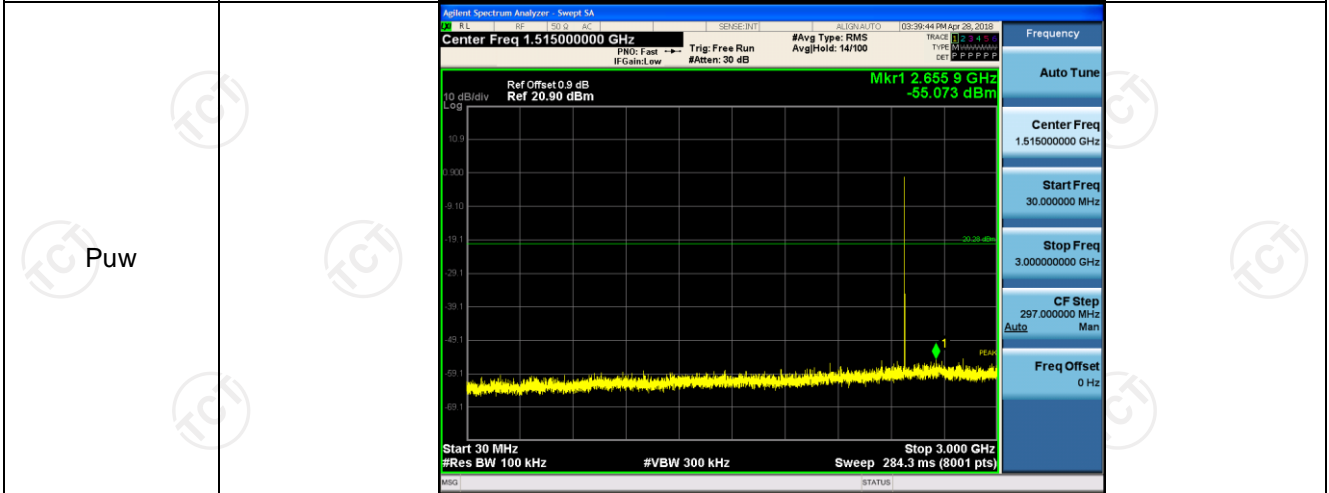
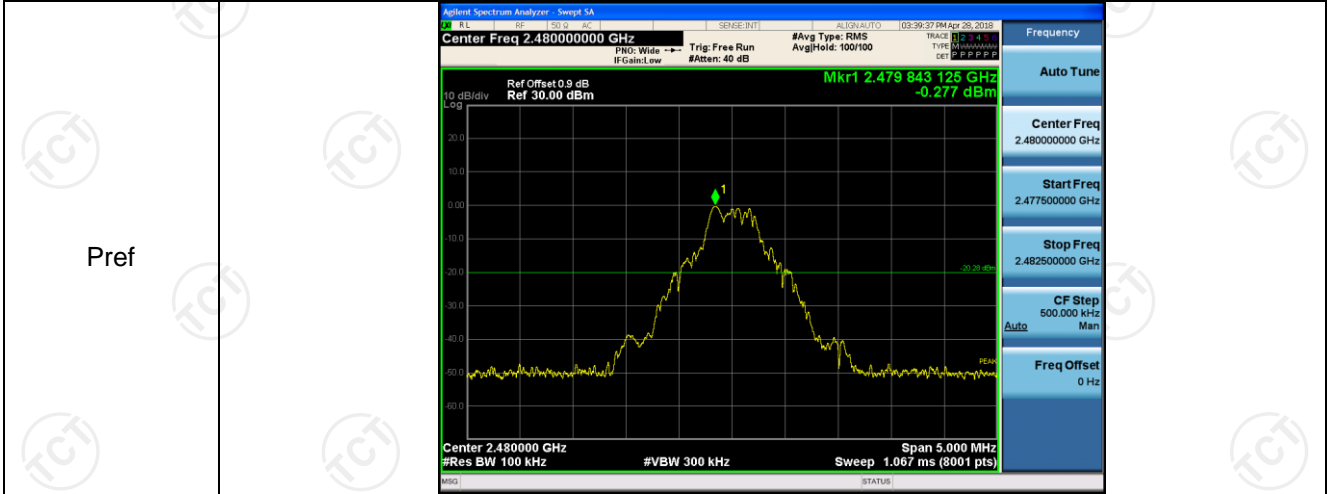


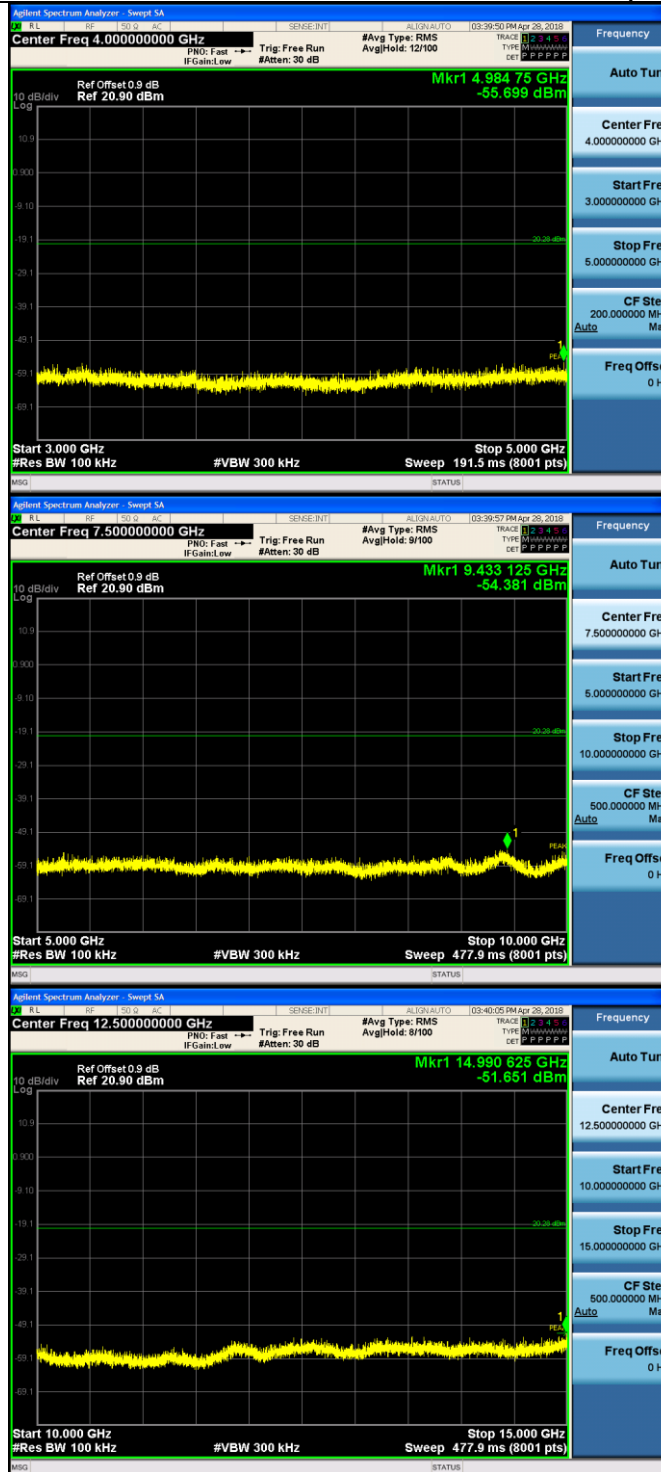


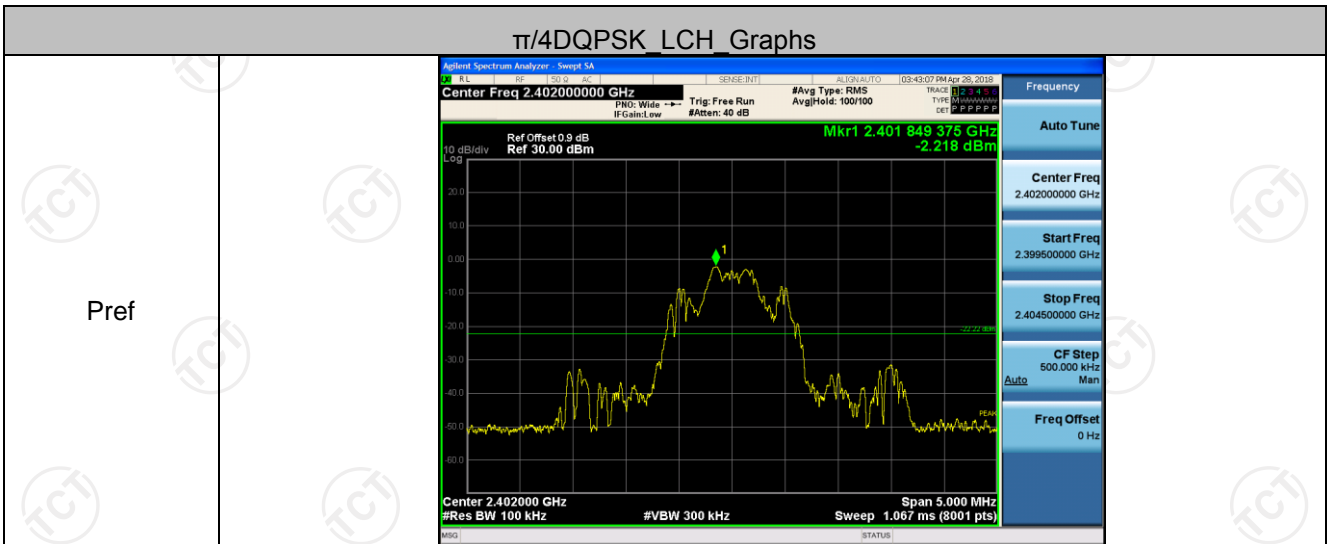
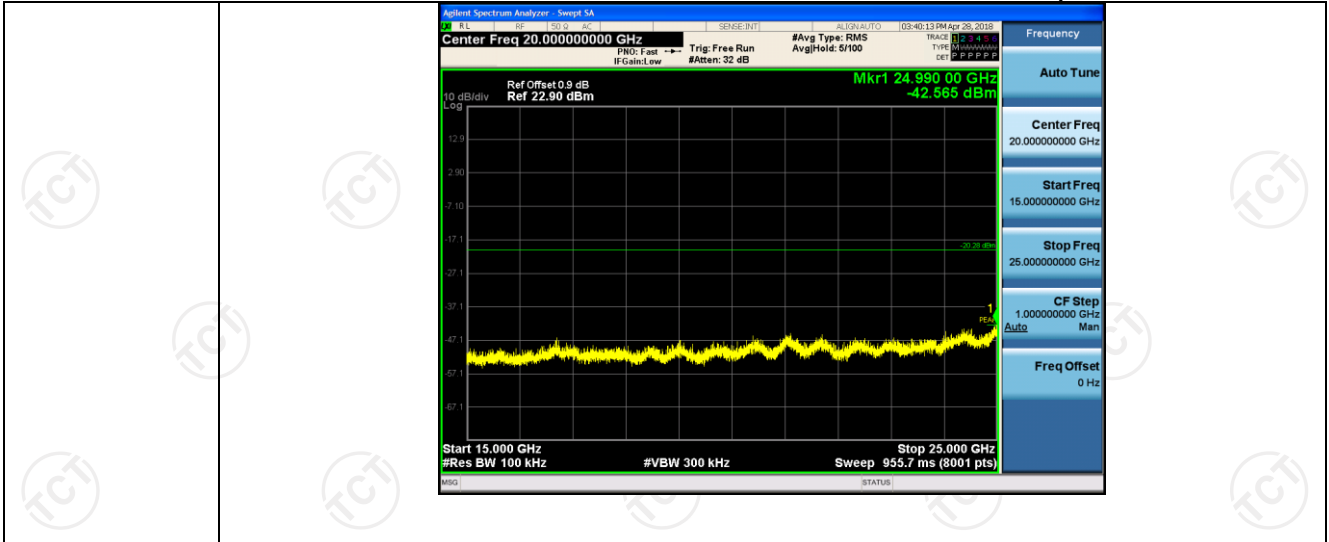




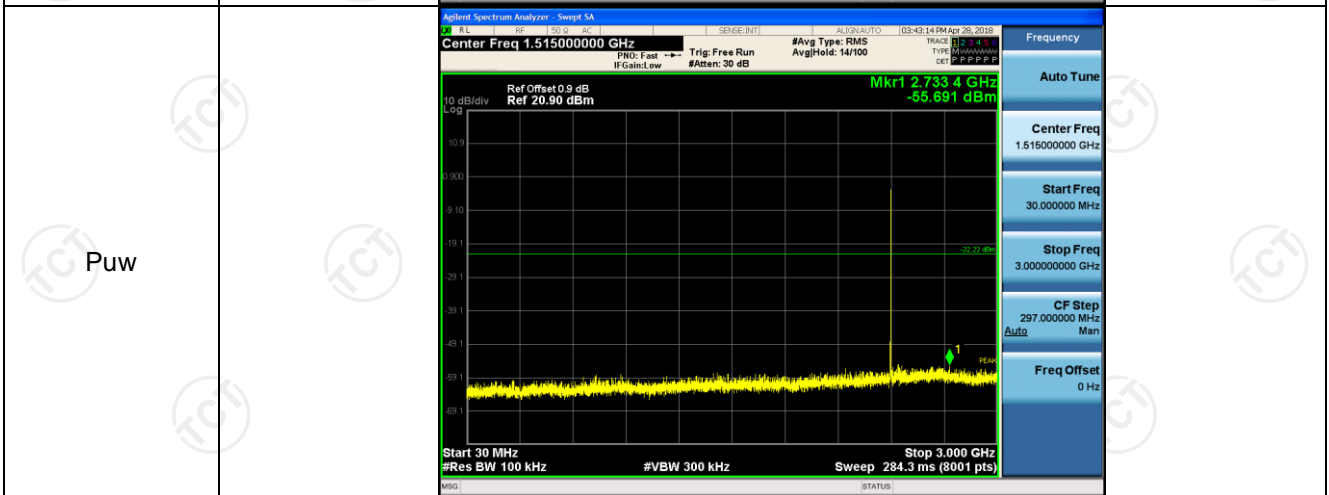
## GFSK\_HCH\_Graphs



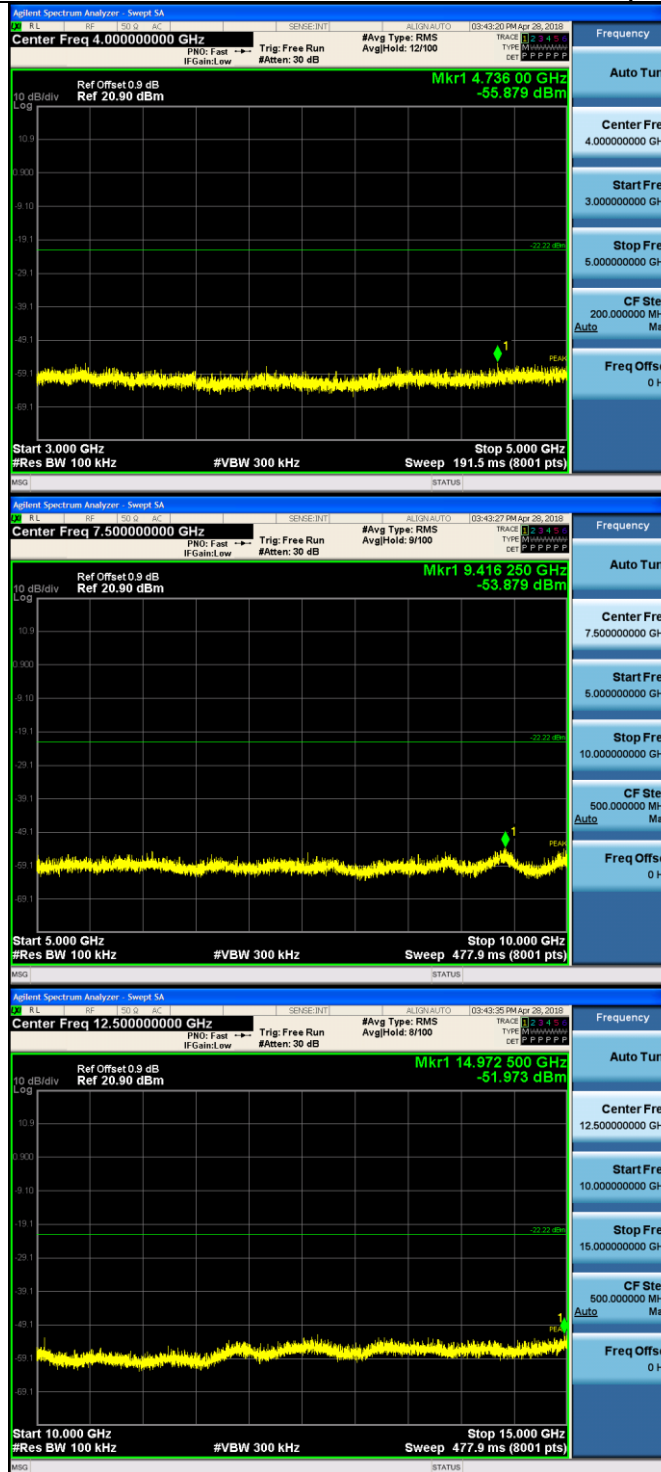


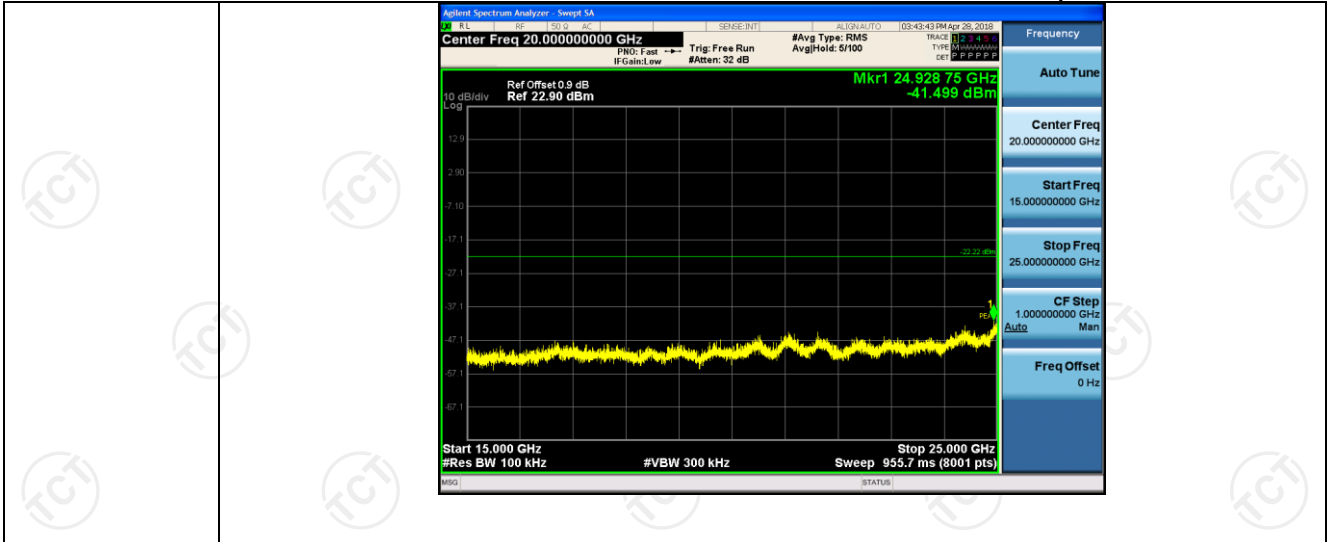


Pref

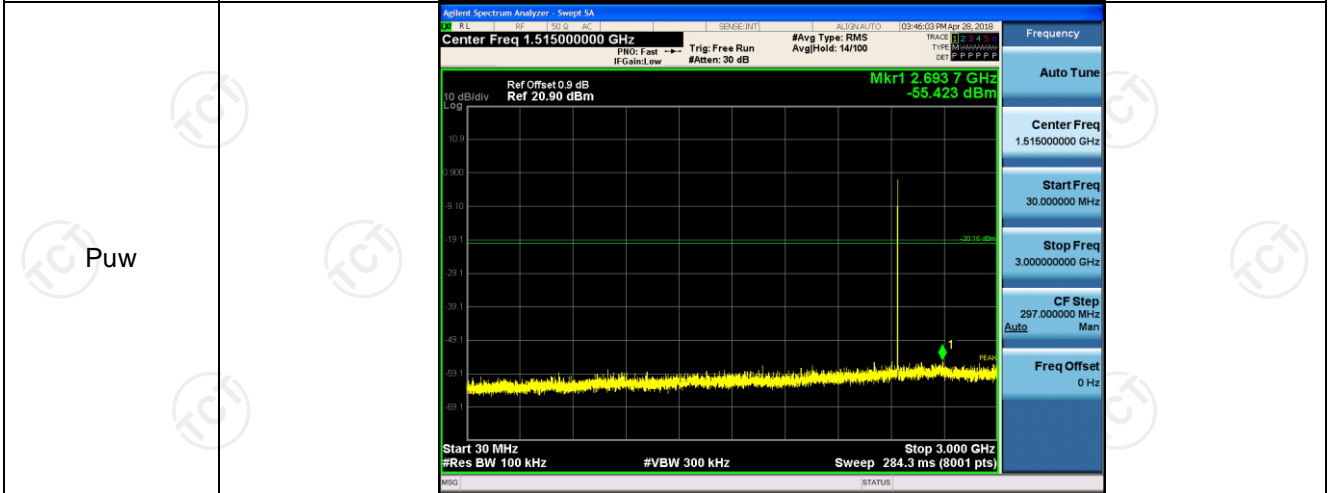
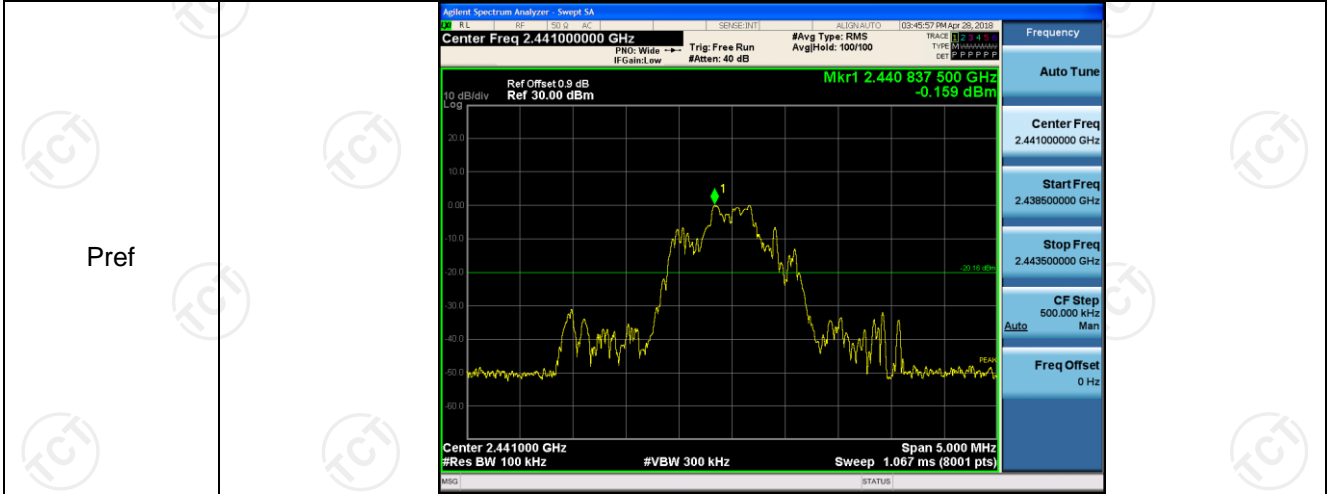


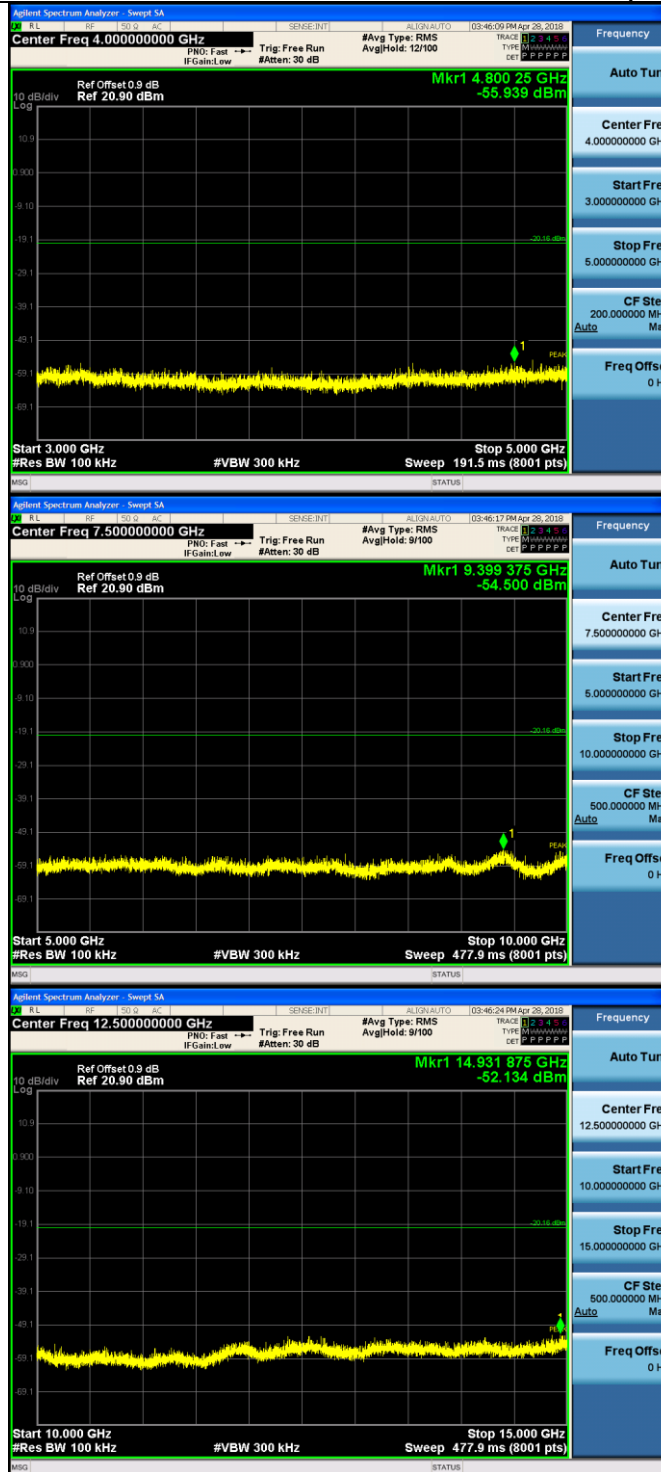
Puw

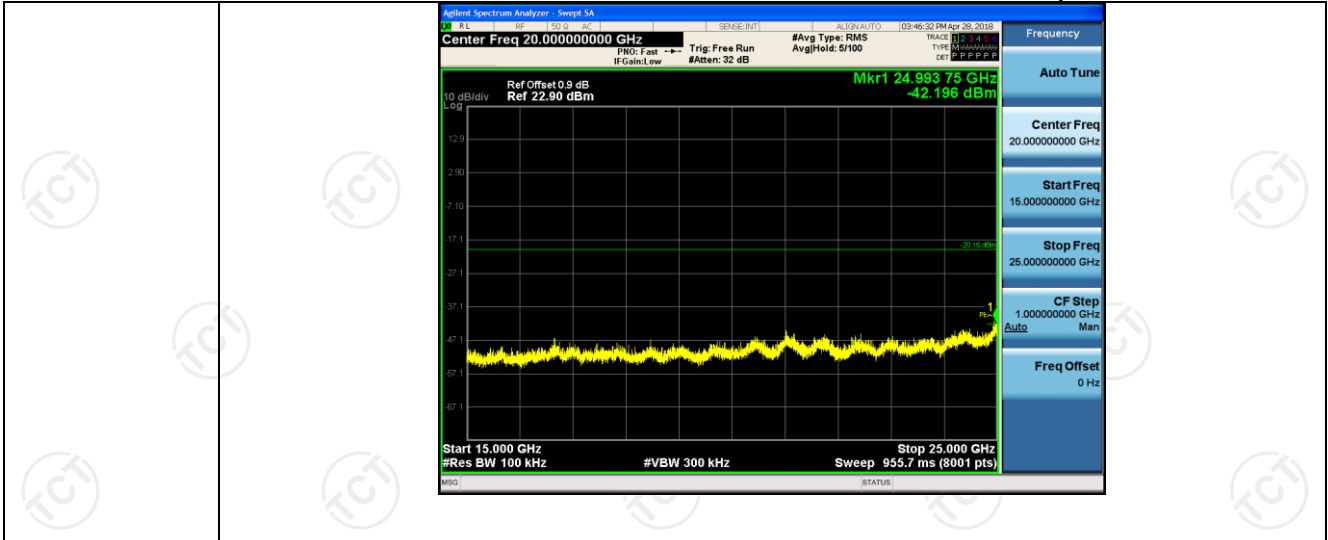




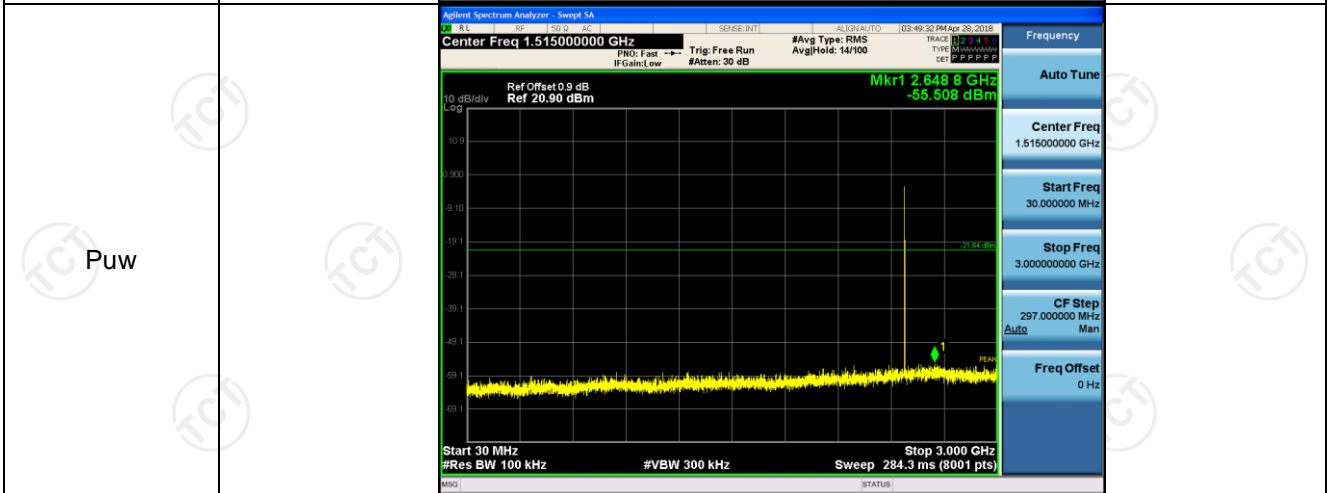
## $\pi/4$ DQPSK MCH Graphs



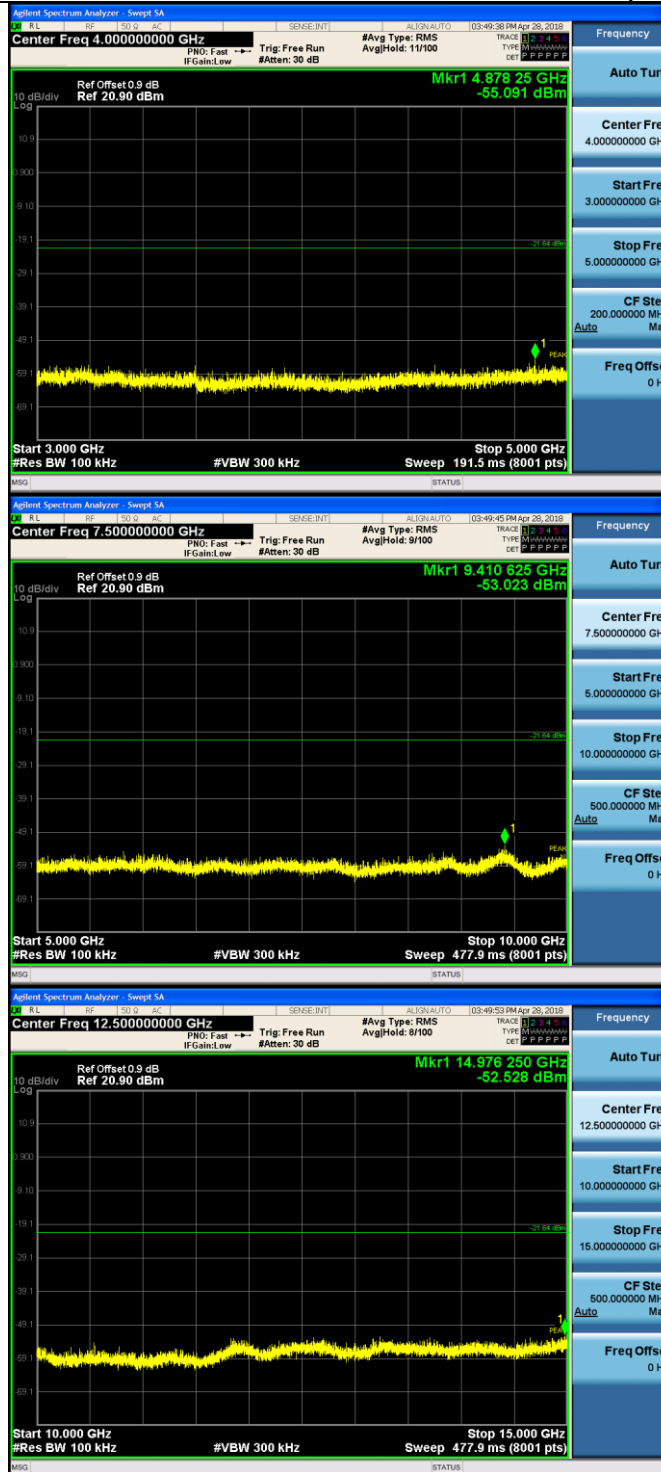


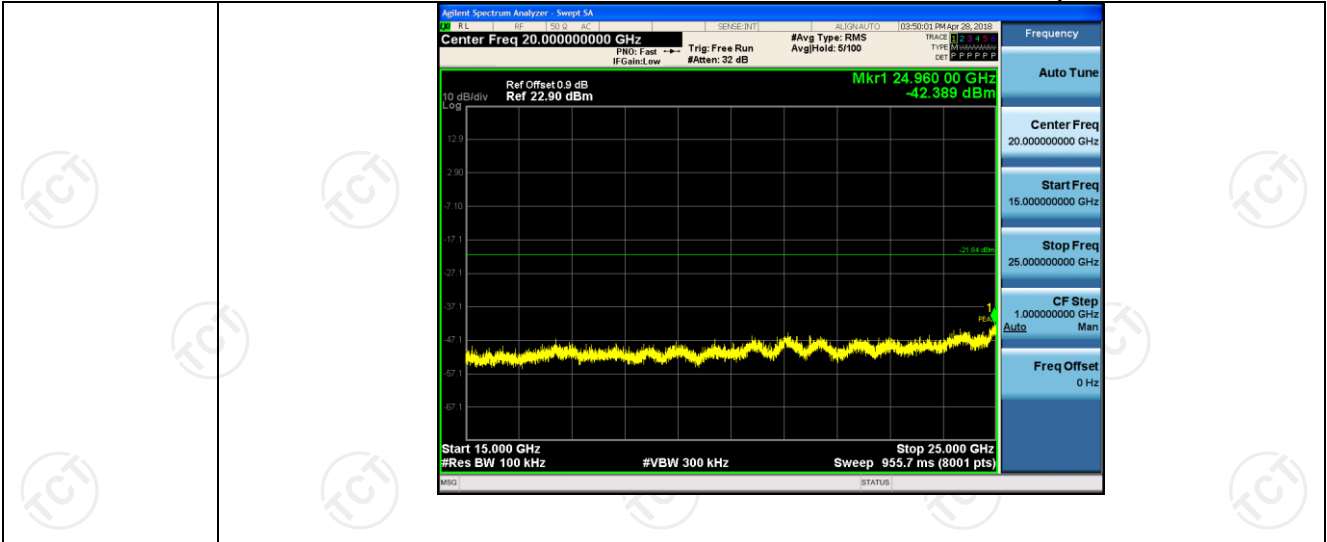


## $\pi/4$ DQPSK HCH Graphs







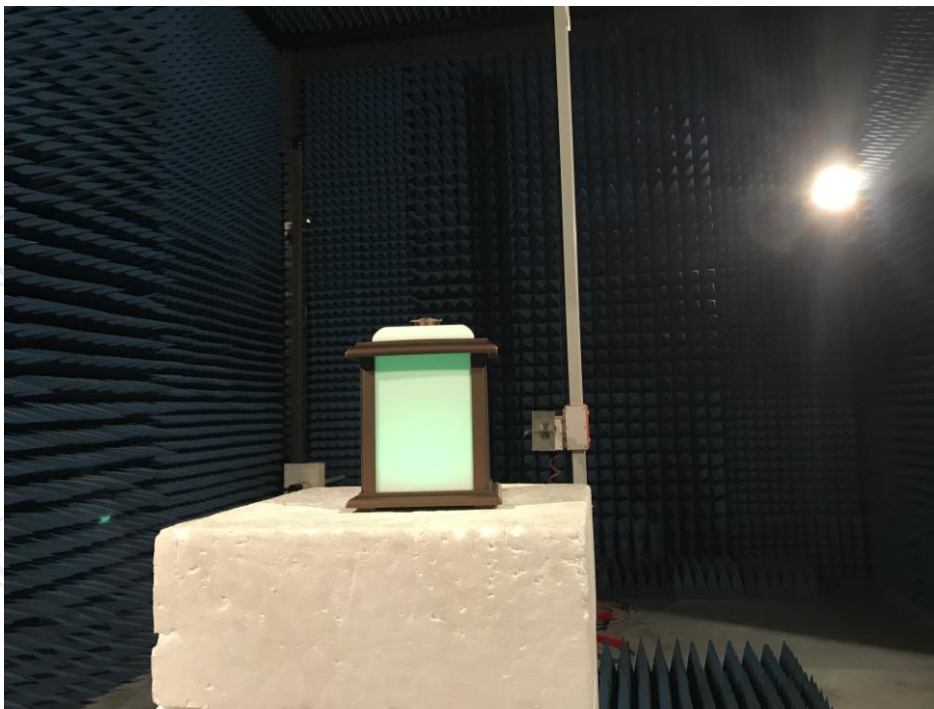
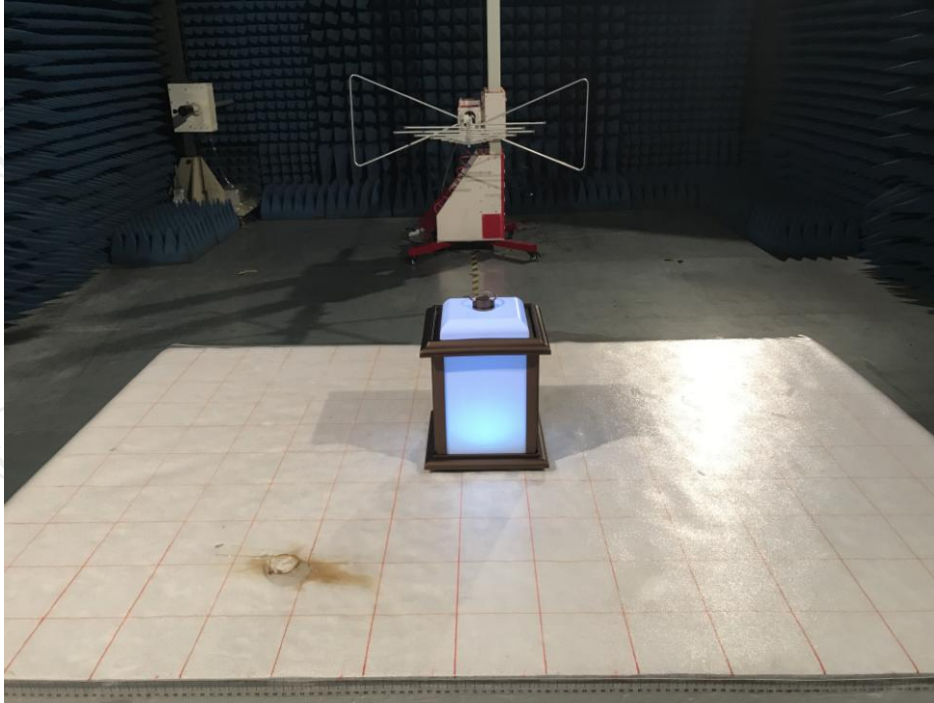


## Appendix B: Photographs of Test Setup

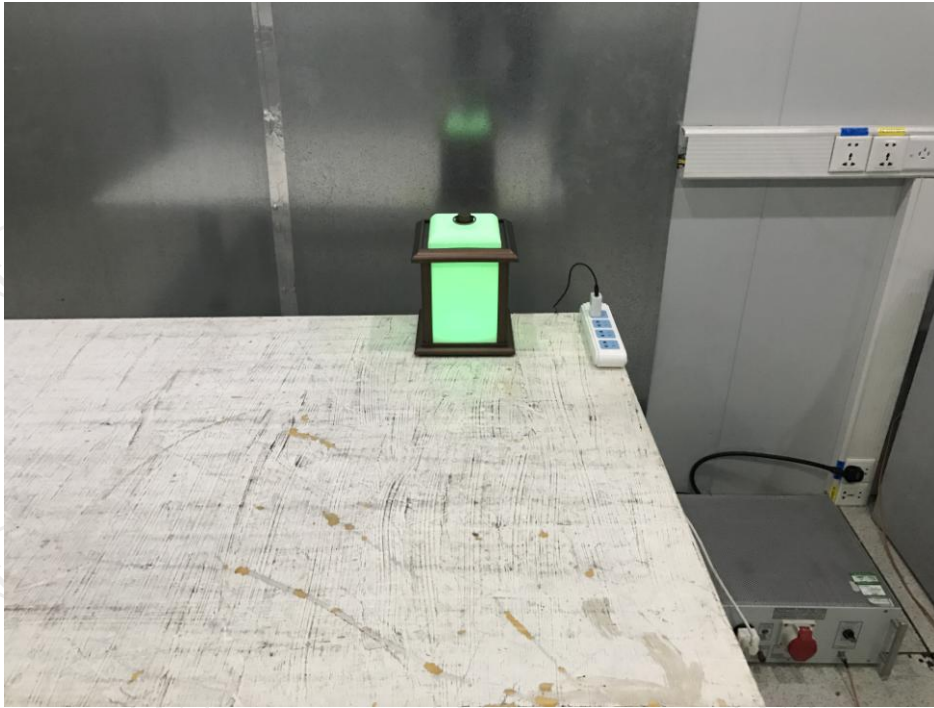
Product: Bluetooth speaker

Model: PBT643

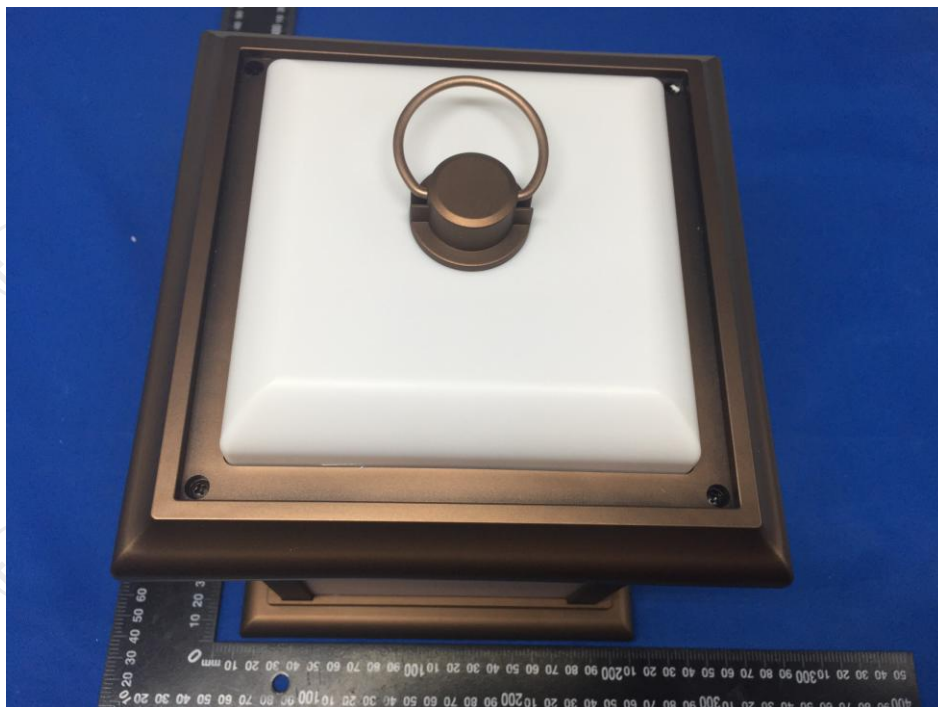
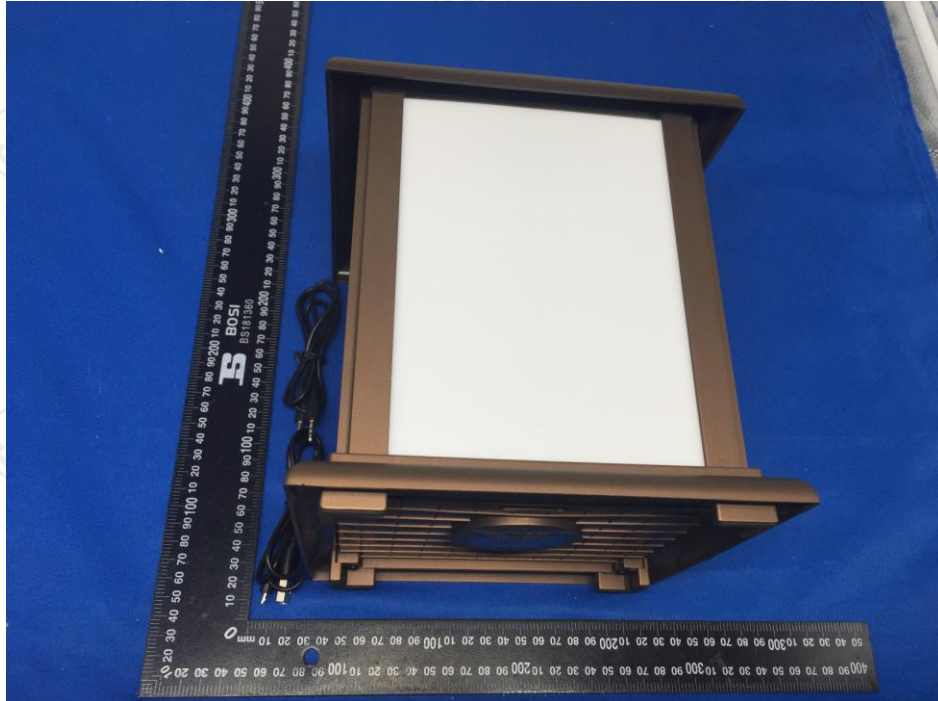
Radiated Emission

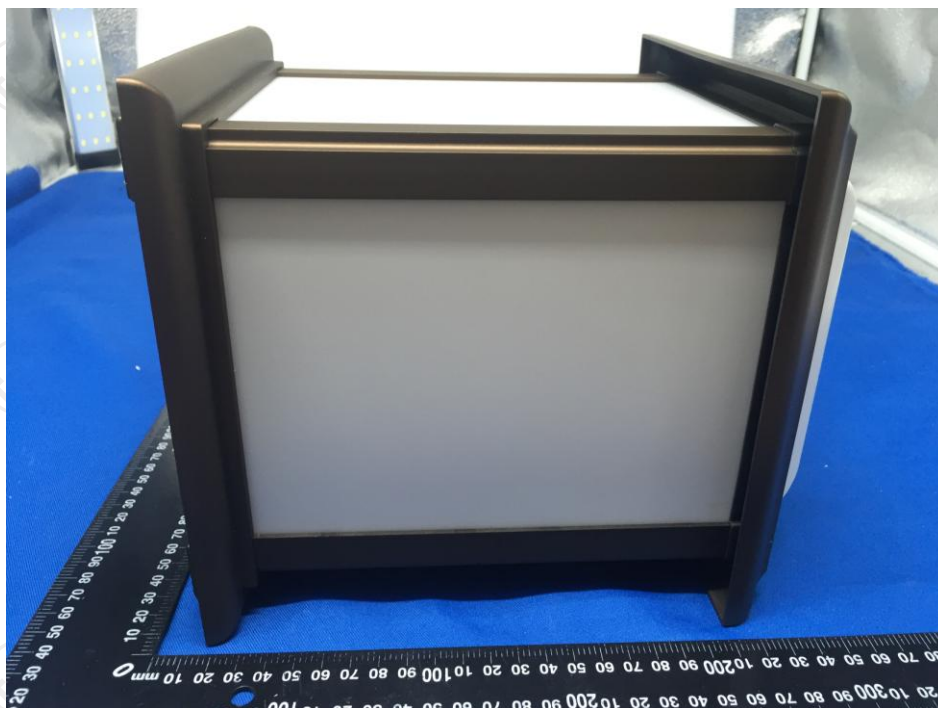
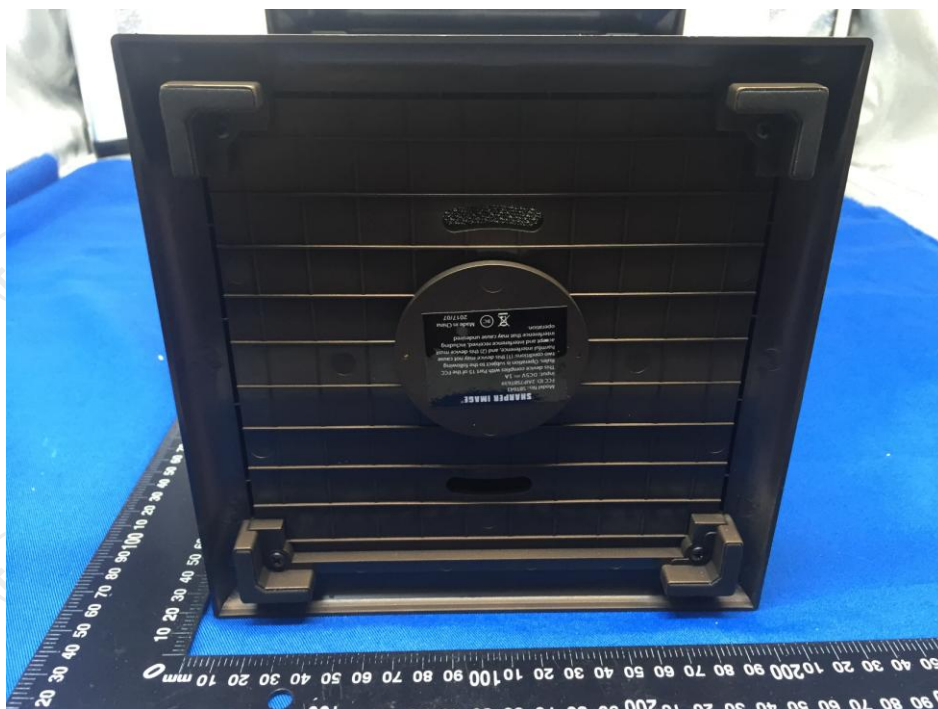


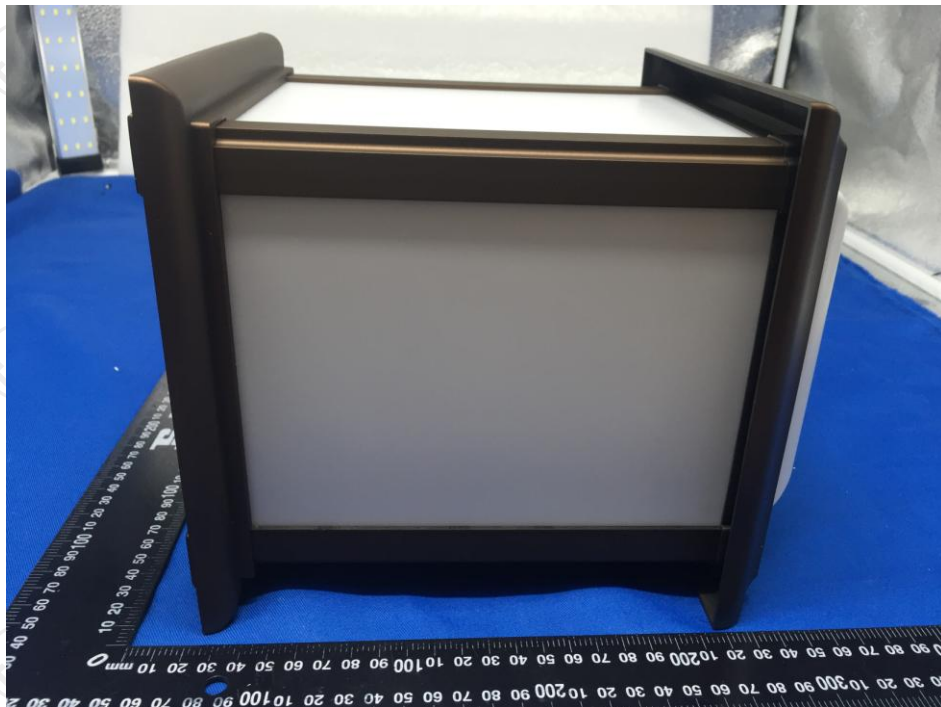
CE



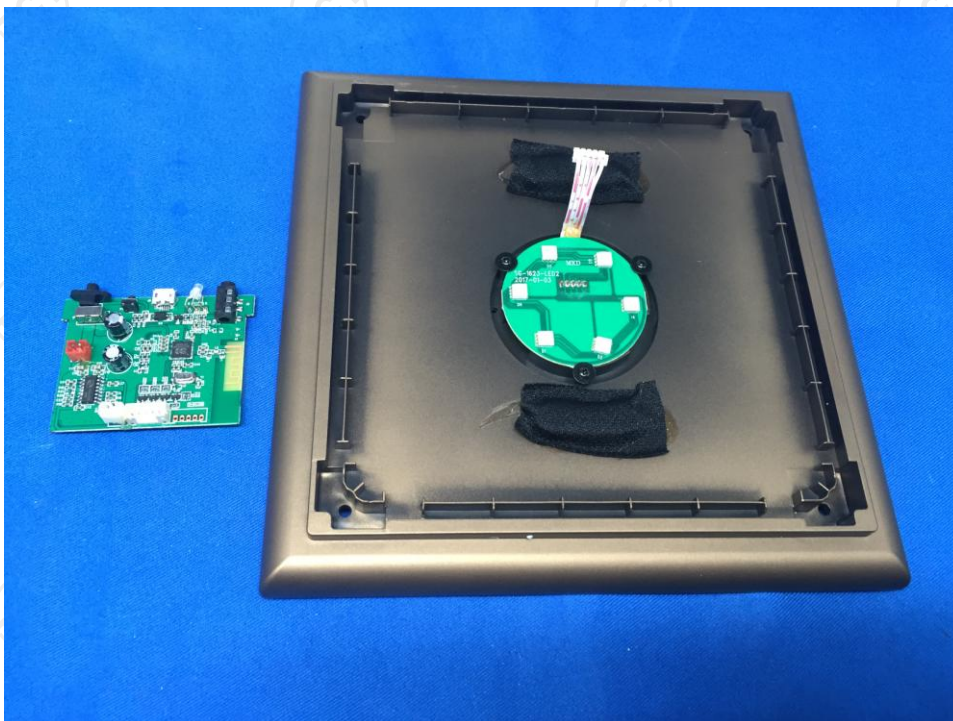
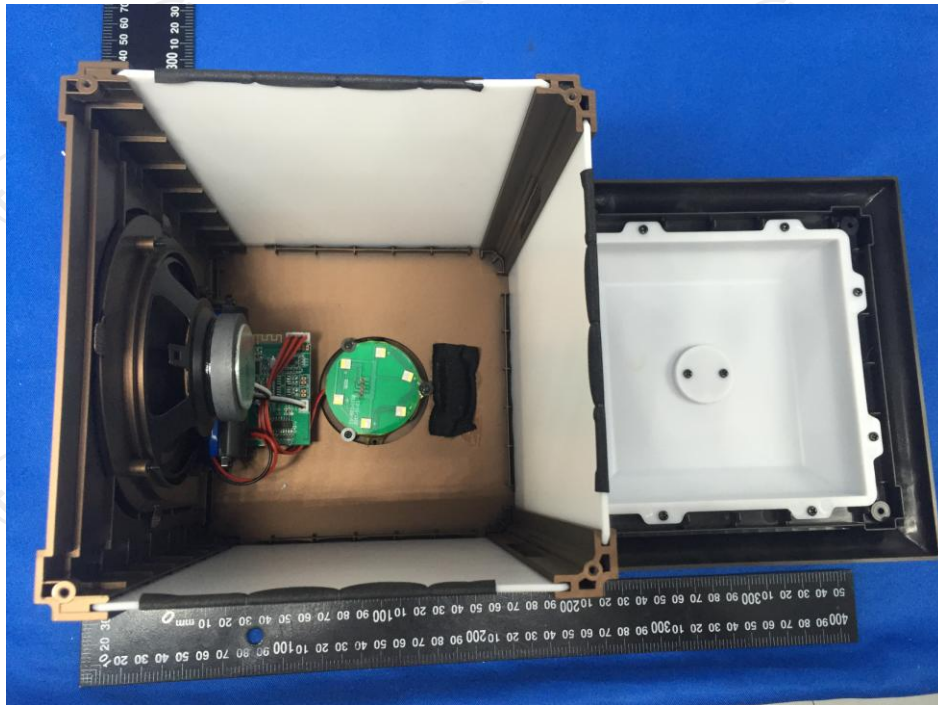
**Appendix C: Photographs of EUT**  
**Product: Bluetooth speaker**  
**Model: PBT643**  
**External Photos**



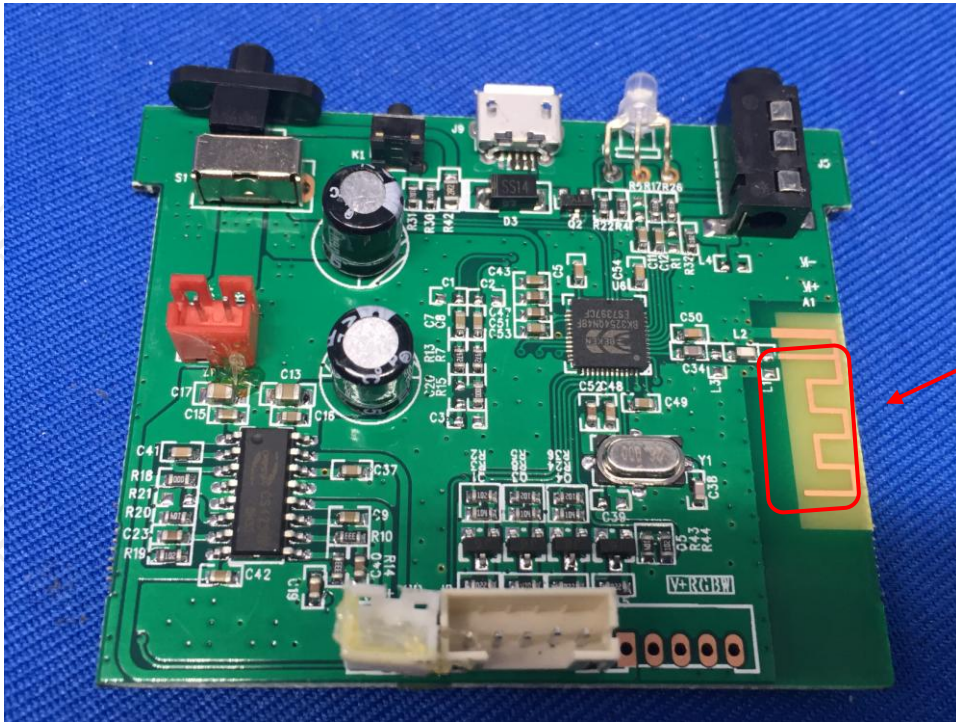




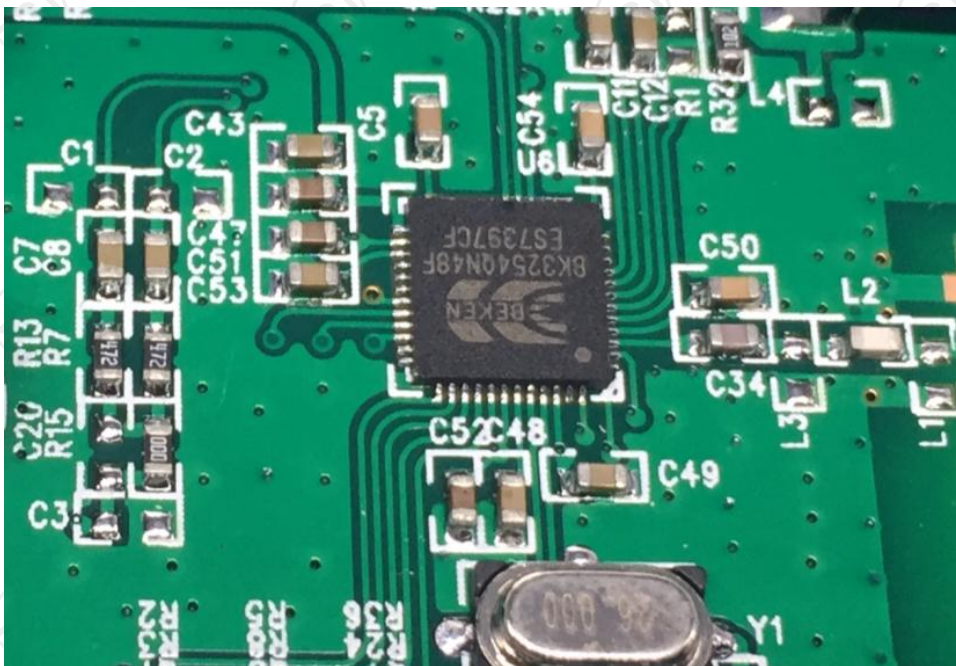
**Product: Bluetooth speaker**  
**Model: PBT643**  
**Internal Photos**

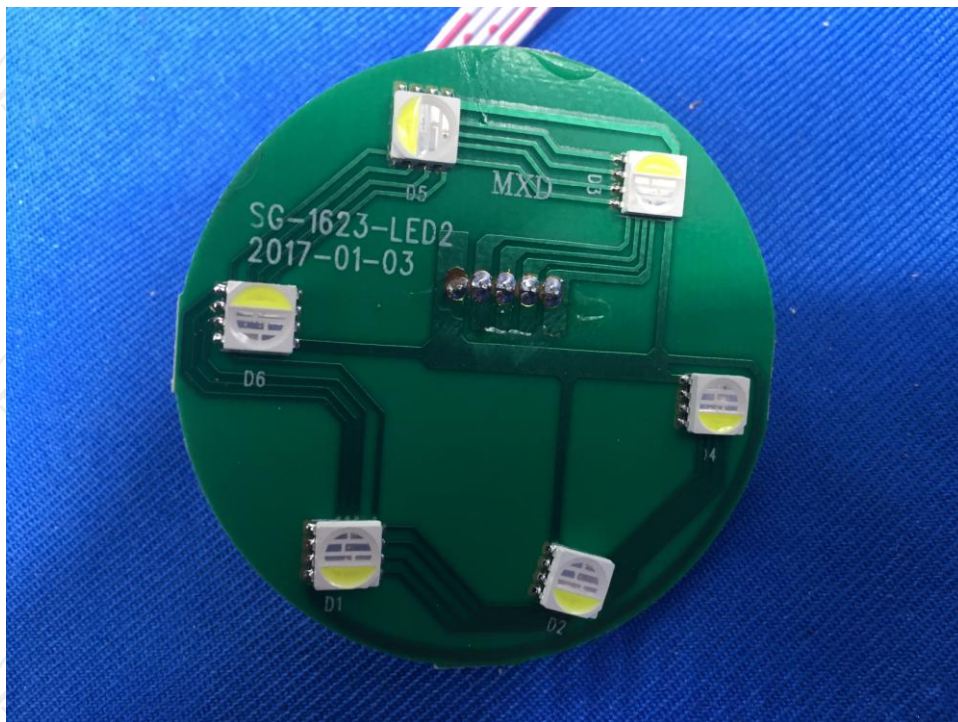
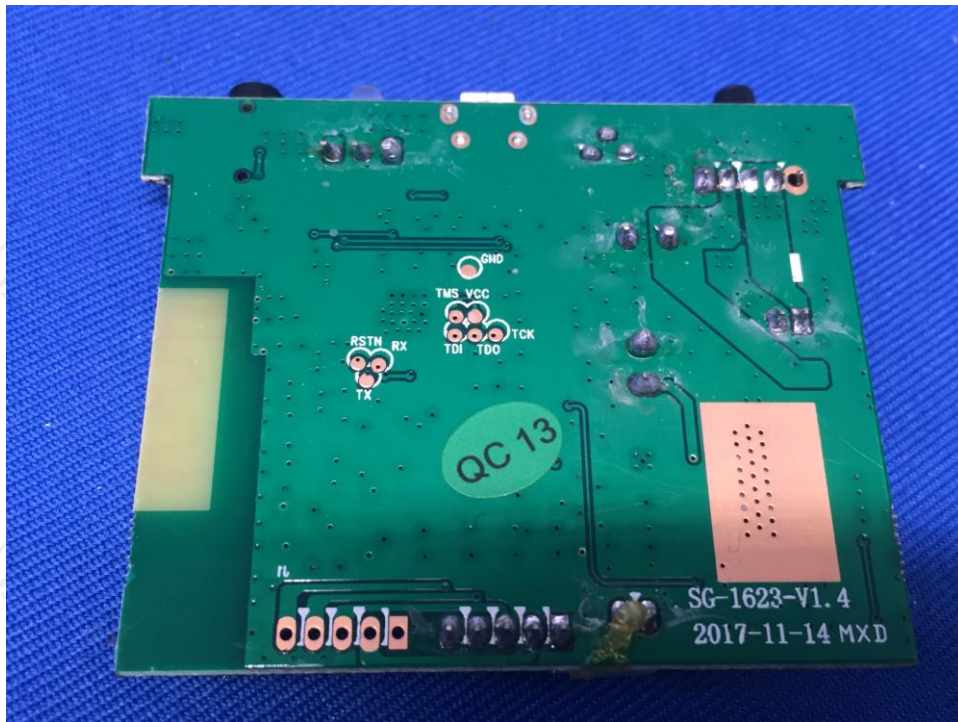


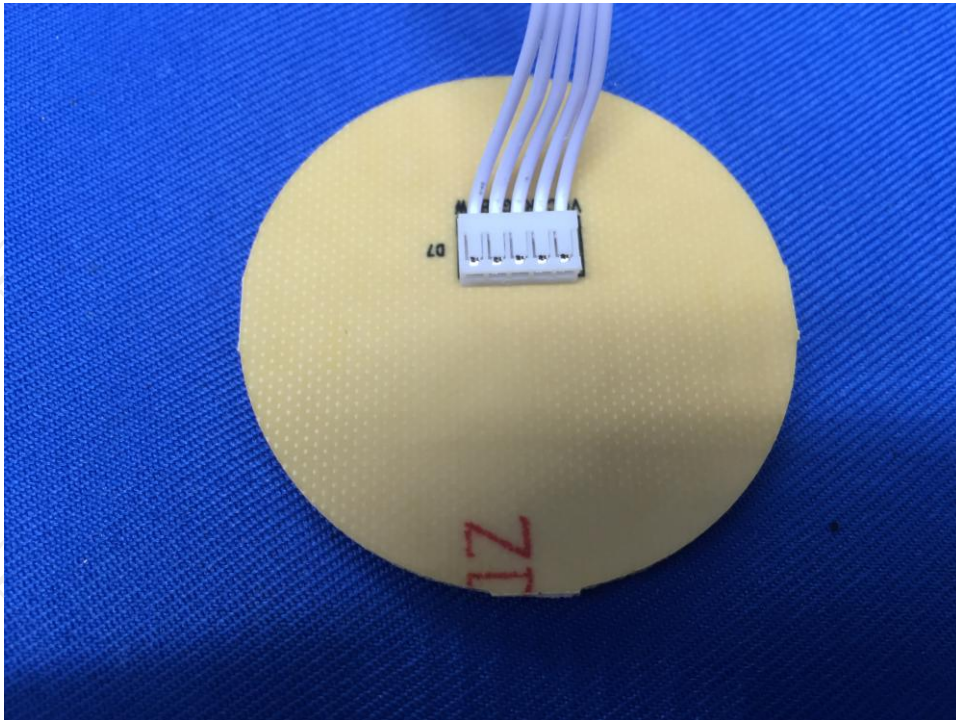




Antenna







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