

Appendix B

RF Test Data for BT LE V5.0(DTS) (Conducted Measurement)

Product Name: Ocean Star Lamp

Trade Mark: N/A

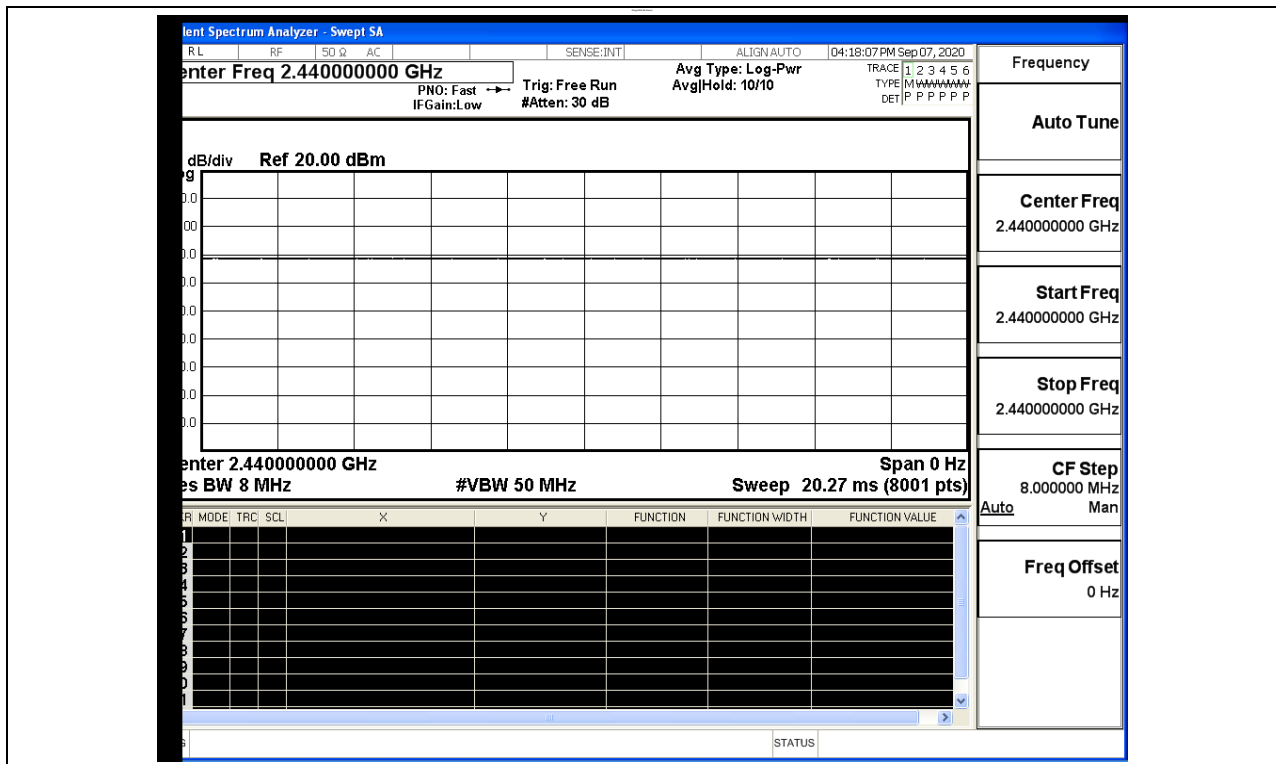
Test Model: XWG-102

Environmental Conditions

Temperature:	22.8 ° C
Relative Humidity:	53.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Jam Zheng
Supervised by:	Li Huan

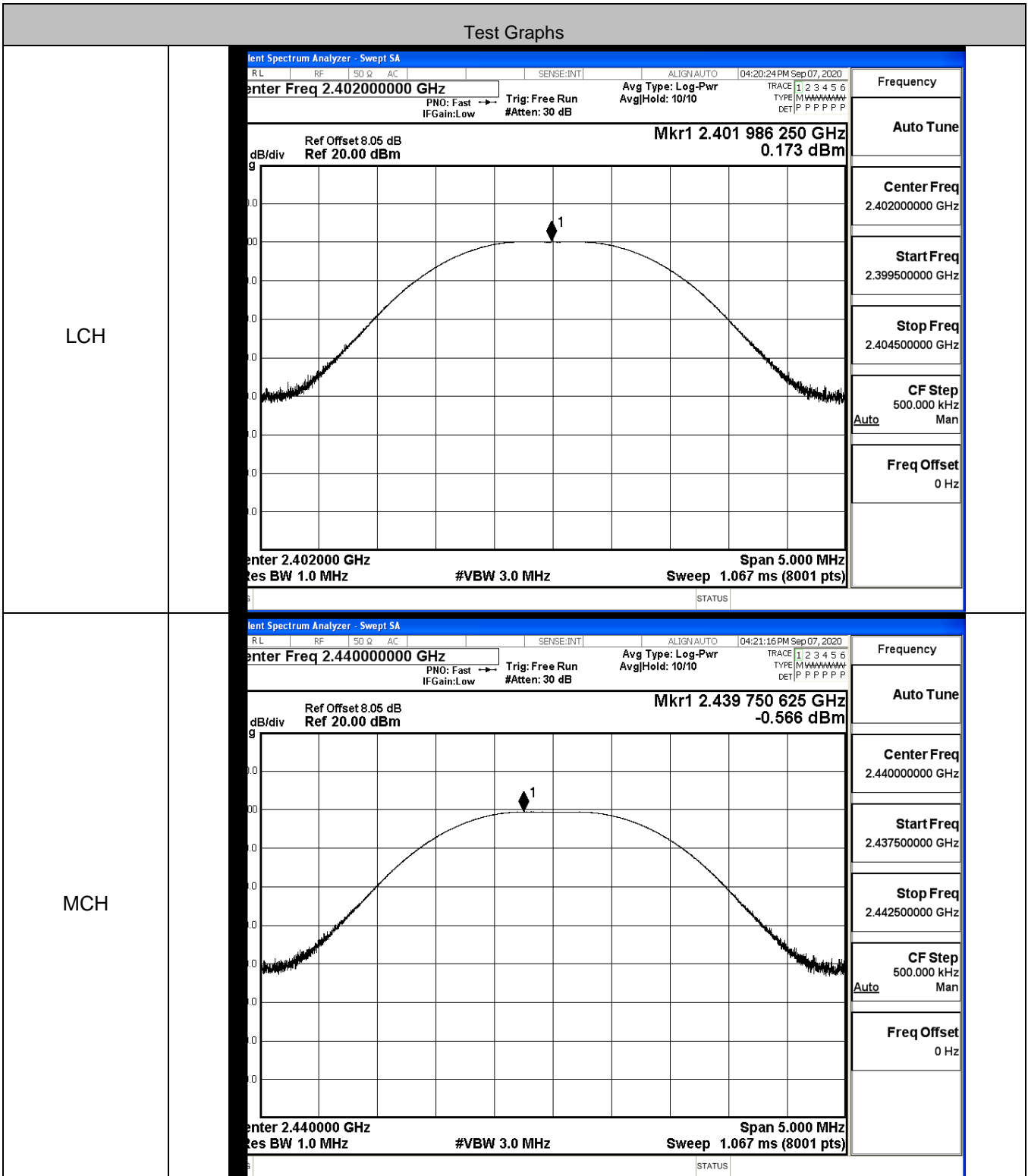
B.1 Duty Cycle

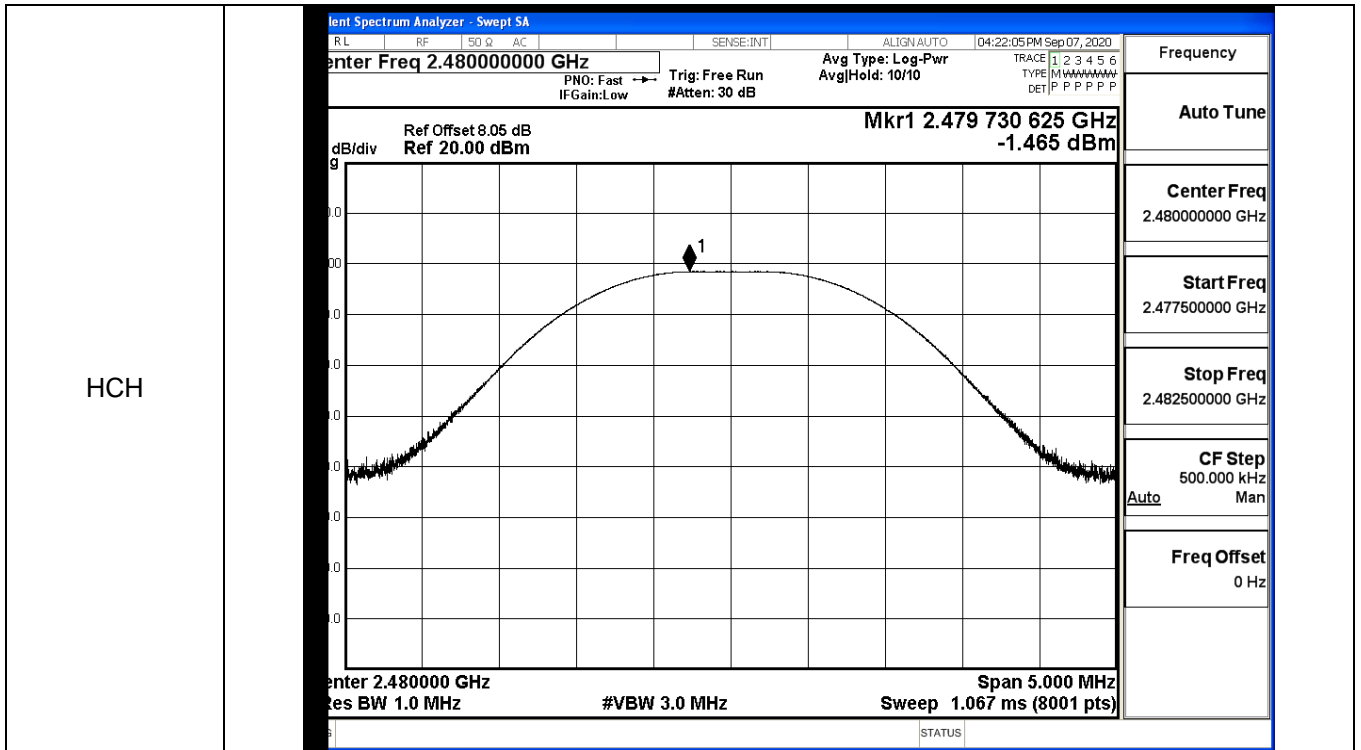
Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
BT LE	2440	Ant1	100	PASS



B.2 Maximum Conducted Peak Output Power

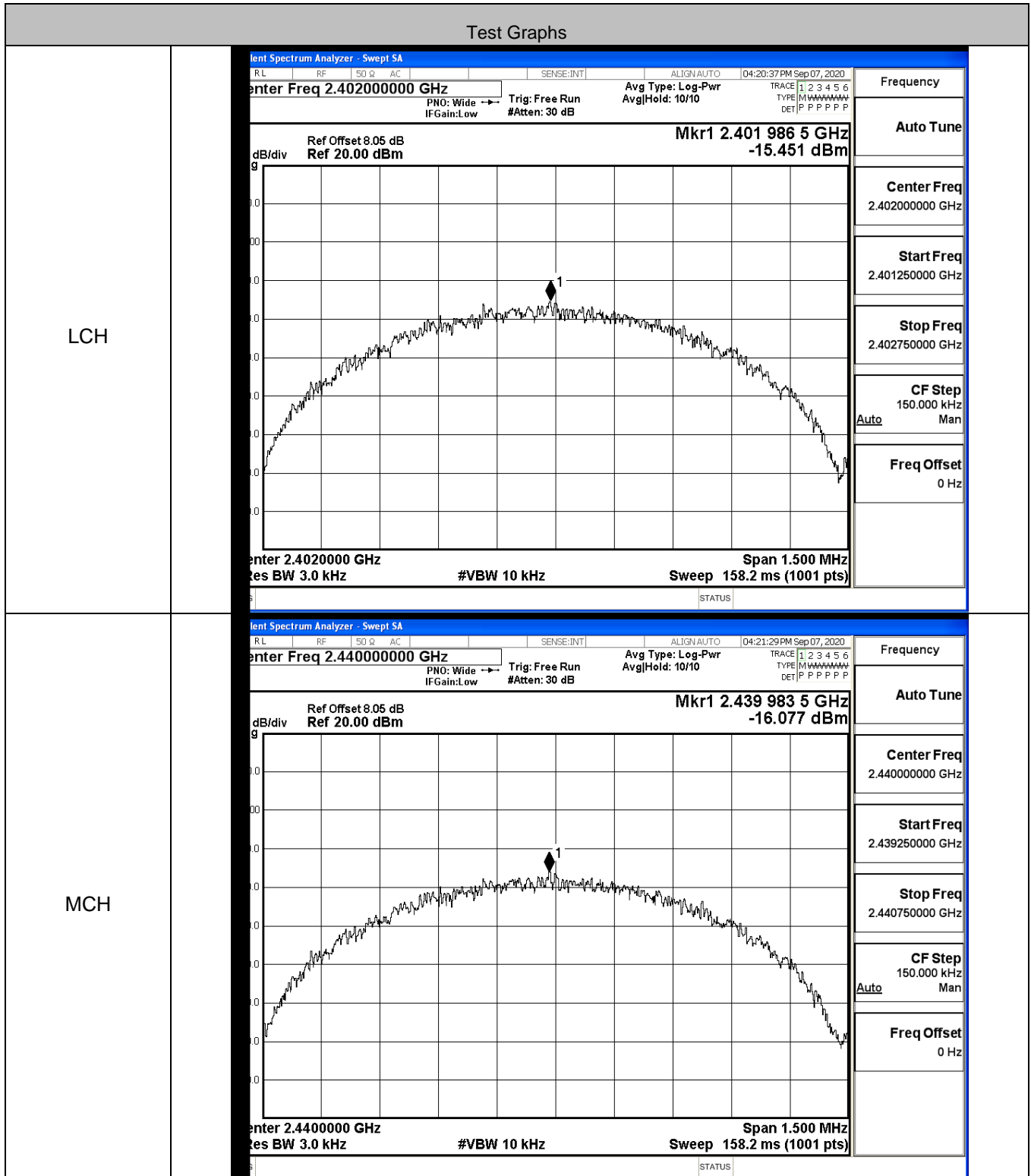
Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	0.173	30	PASS
BT LE	MCH	-0.566	30	PASS
BT LE	HCH	-1.465	30	PASS



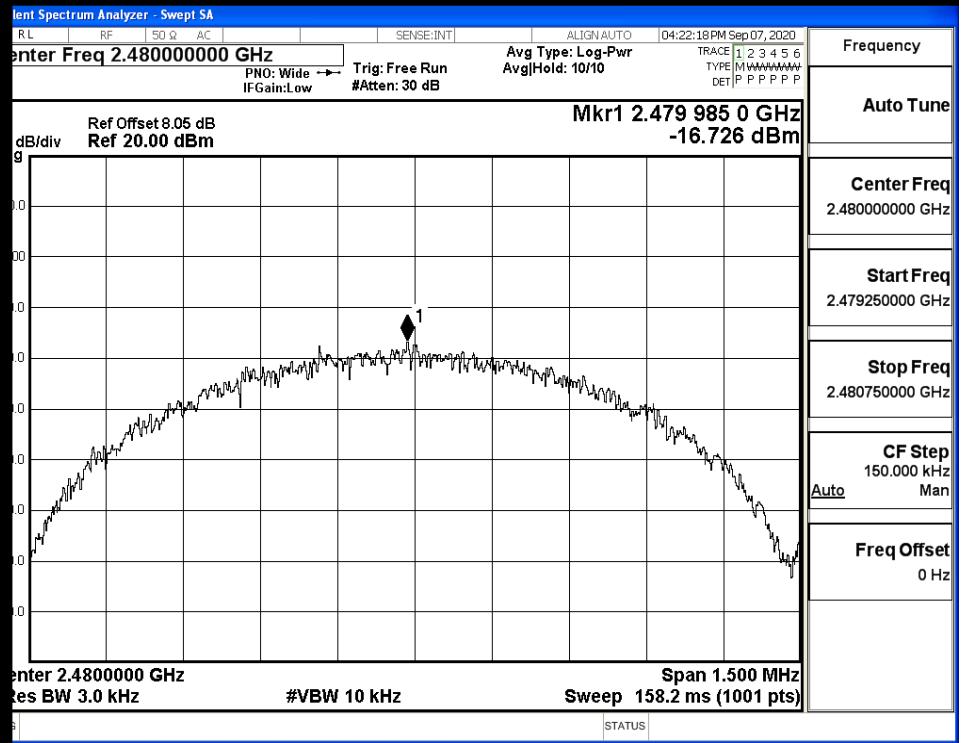


B.3 Maximum Power Spectral Density

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-15.451	8	PASS
BT LE	MCH	-16.077	8	PASS
BT LE	HCH	-16.726	8	PASS



HCH



B.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6544	≥0.5	PASS
BT LE	MCH	0.6407	≥0.5	PASS
BT LE	HCH	0.6475	≥0.5	PASS

Test Graphs

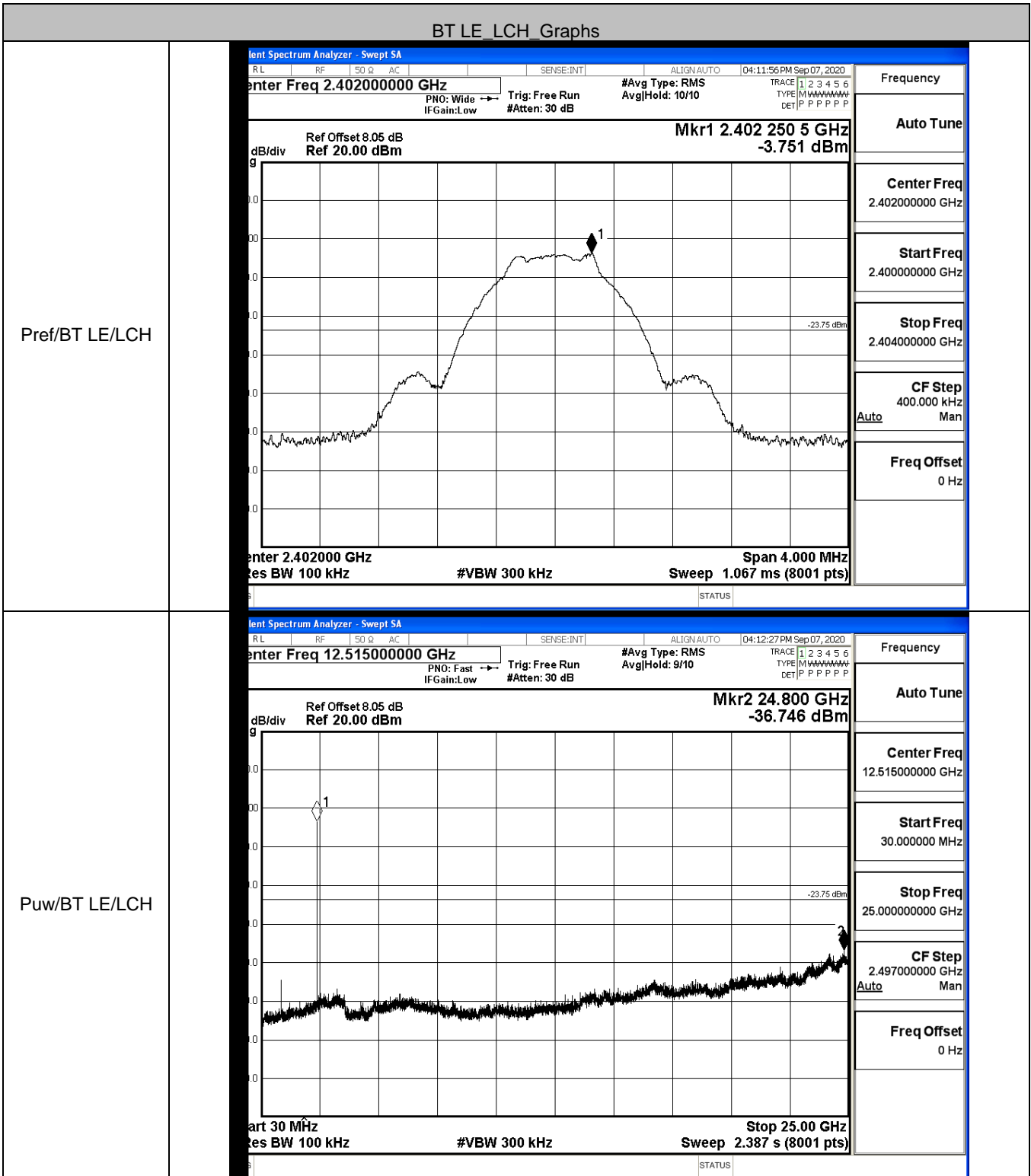
LCH	<p>Occupied Bandwidth: 1.0326 MHz Total Power: 6.23 dBm Transmit Freq Error: -14.129 kHz x dB Bandwidth: 654.4 kHz</p>	<p>Frequency: 2.402000000 GHz</p> <p>CF Step: 300.000 kHz</p> <p>Freq Offset: 0 Hz</p>
	<p>Occupied Bandwidth: 1.0339 MHz Total Power: 5.69 dBm Transmit Freq Error: -12.637 kHz x dB Bandwidth: 640.7 kHz</p>	<p>Frequency: 2.440000000 GHz</p> <p>CF Step: 300.000 kHz</p> <p>Freq Offset: 0 Hz</p>



HCH

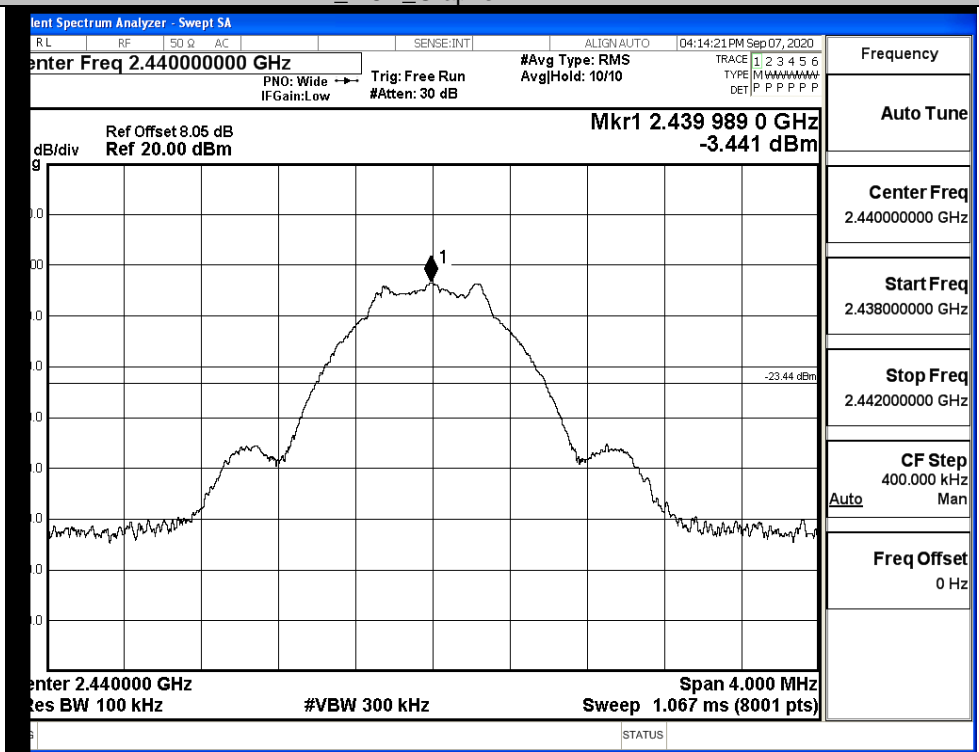
B.5 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-3.751	-36.746	-23.751	PASS
BT LE	MCH	-3.441	-36.679	-23.441	PASS
BT LE	HCH	-4.451	-36.916	-24.451	PASS

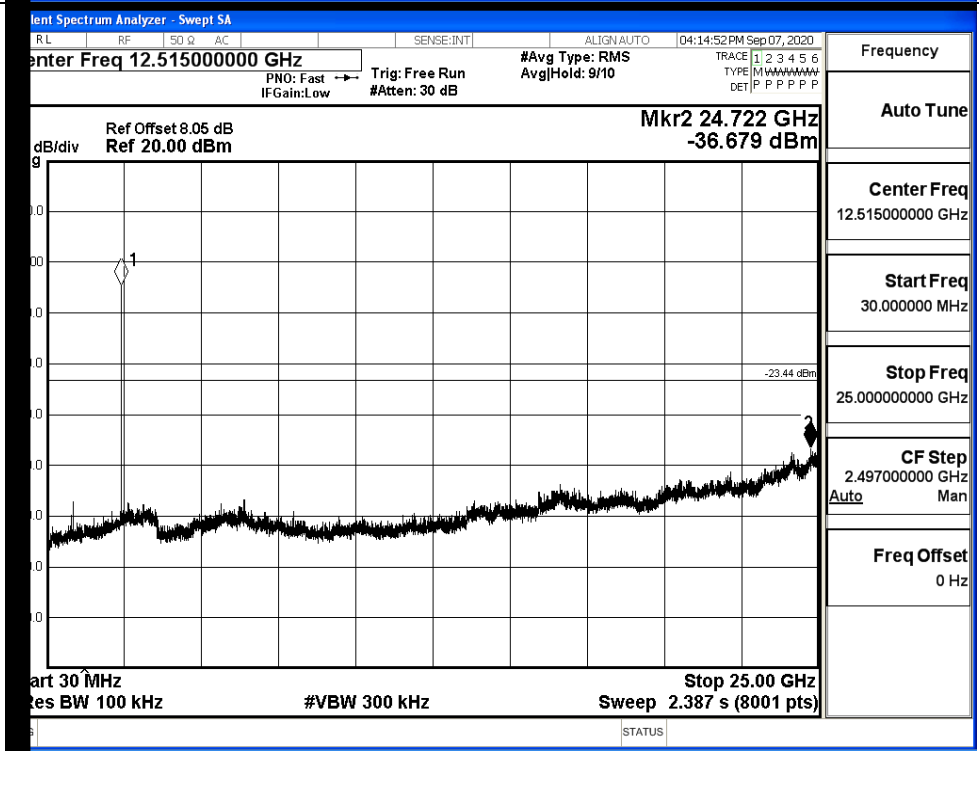


BT LE_MCH_Graphs

Pref/BT LE/MCH

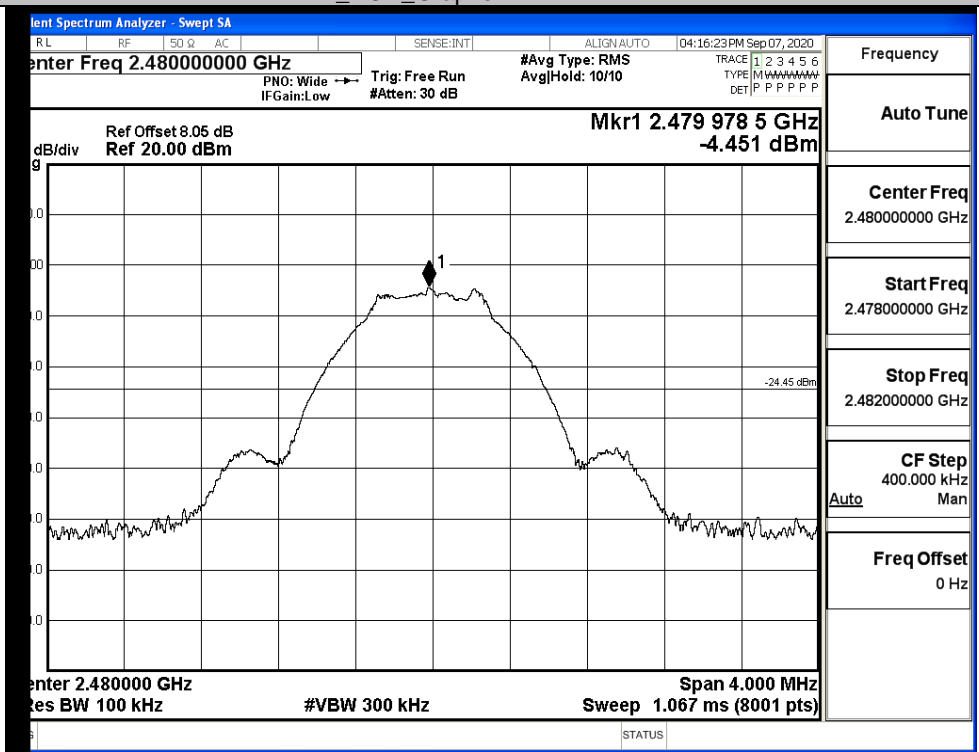


Puw/BT LE/MCH

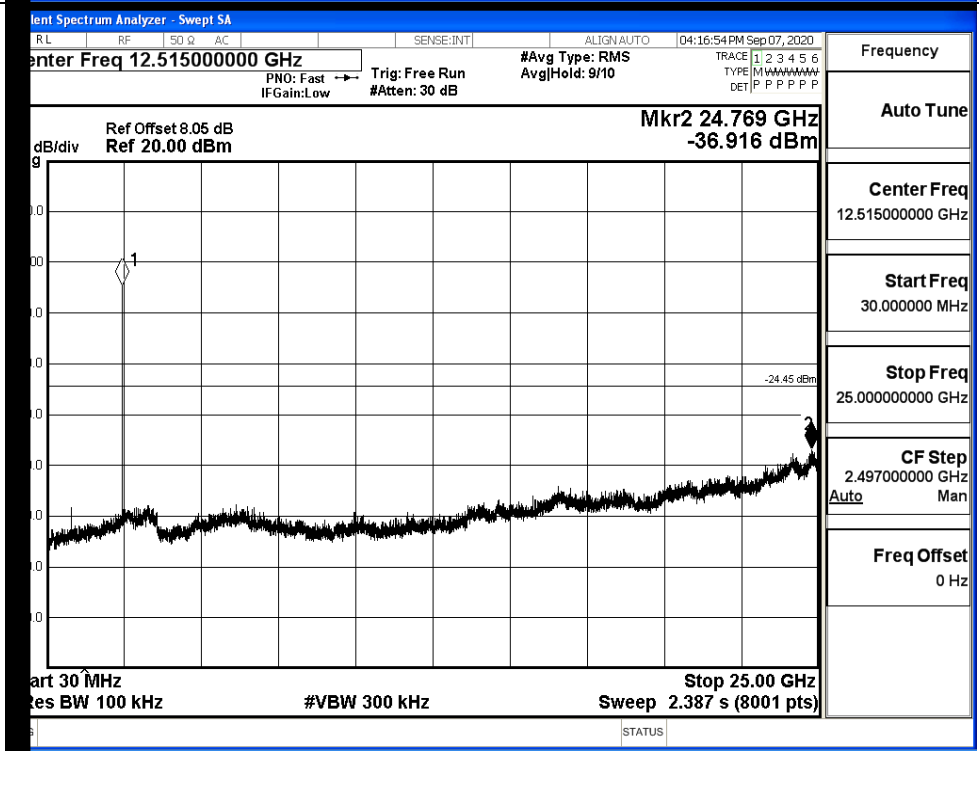


BT LE_HCH_Graphs

Pref/BT LE/HCH



Puw/BT LE/HCH



B.6 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-3.558	-49.663	-23.56	PASS
BT LE	HCH	-4.875	-49.151	-24.88	PASS

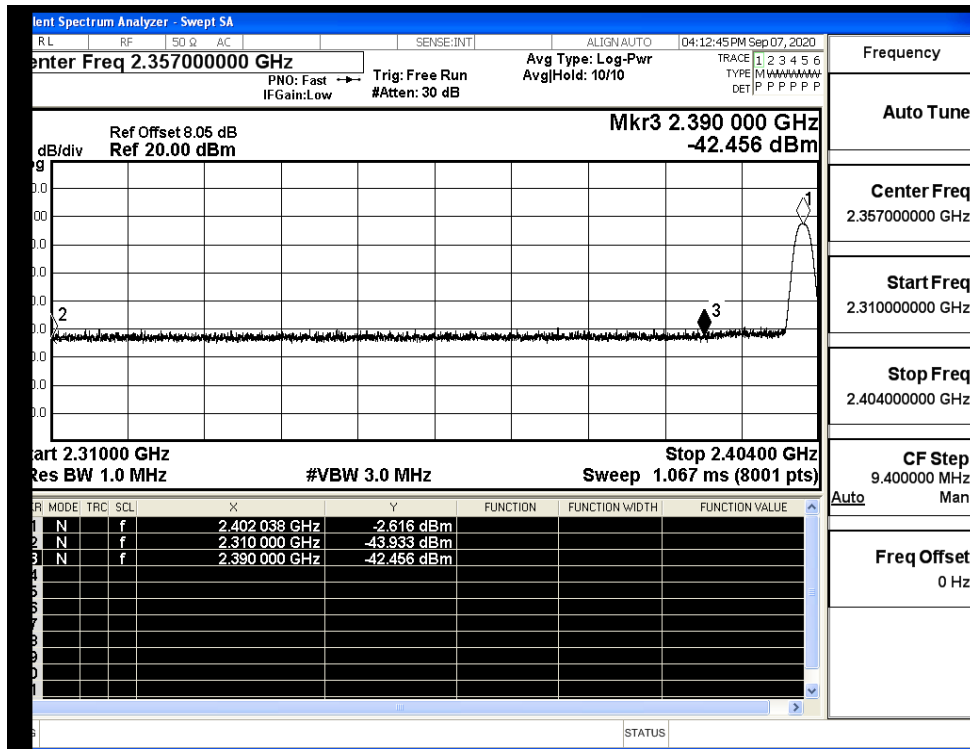
Test Graphs

LCH	<p>lent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.35700000 GHz</p> <p>Ref Offset 8.05 dB Ref 20.00 dBm</p> <p>Mkr4 2.358 551 GHz -49.663 dBm</p> <p>Start 2.31000 GHz Res BW 100 kHz #VBW 300 kHz Sweep 9.067 ms (8001 pts)</p> <table border="1"> <thead> <tr> <th>TRC</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>f</td> <td></td> <td>2.401 979 GHz</td> <td>-3.558 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>N</td> <td>f</td> <td></td> <td>2.400 000 GHz</td> <td>-51.737 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td>N</td> <td>f</td> <td></td> <td>2.390 000 GHz</td> <td>-53.493 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td>N</td> <td>f</td> <td></td> <td>2.358 551 GHz</td> <td>-49.663 dBm</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	TRC	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	f		2.401 979 GHz	-3.558 dBm				2	N	f		2.400 000 GHz	-51.737 dBm				3	N	f		2.390 000 GHz	-53.493 dBm				4	N	f		2.358 551 GHz	-49.663 dBm				<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.35700000 GHz</p> <p>Start Freq 2.310000000 GHz</p> <p>Stop Freq 2.404000000 GHz</p> <p>CF Step 9.400000 MHz</p> <p>Freq Offset 0 Hz</p>
TRC	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																																							
1	N	f		2.401 979 GHz	-3.558 dBm																																										
2	N	f		2.400 000 GHz	-51.737 dBm																																										
3	N	f		2.390 000 GHz	-53.493 dBm																																										
4	N	f		2.358 551 GHz	-49.663 dBm																																										
HCH	<p>lent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.489000000 GHz</p> <p>Ref Offset 8.05 dB Ref 20.00 dBm</p> <p>Mkr4 2.483 744 75 GHz -49.151 dBm</p> <p>Start 2.47800 GHz Res BW 100 kHz #VBW 300 kHz Sweep 2.133 ms (8001 pts)</p> <table border="1"> <thead> <tr> <th>TRC</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>f</td> <td></td> <td>2.479 982 75 GHz</td> <td>-4.875 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>N</td> <td>f</td> <td></td> <td>2.483 500 00 GHz</td> <td>-52.669 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td>N</td> <td>f</td> <td></td> <td>2.500 000 00 GHz</td> <td>-52.509 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td>N</td> <td>f</td> <td></td> <td>2.483 744 75 GHz</td> <td>-49.151 dBm</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	TRC	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	f		2.479 982 75 GHz	-4.875 dBm				2	N	f		2.483 500 00 GHz	-52.669 dBm				3	N	f		2.500 000 00 GHz	-52.509 dBm				4	N	f		2.483 744 75 GHz	-49.151 dBm				<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.489000000 GHz</p> <p>Start Freq 2.478000000 GHz</p> <p>Stop Freq 2.500000000 GHz</p> <p>CF Step 2.200000 MHz</p> <p>Freq Offset 0 Hz</p>
TRC	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																																							
1	N	f		2.479 982 75 GHz	-4.875 dBm																																										
2	N	f		2.483 500 00 GHz	-52.669 dBm																																										
3	N	f		2.500 000 00 GHz	-52.509 dBm																																										
4	N	f		2.483 744 75 GHz	-49.151 dBm																																										

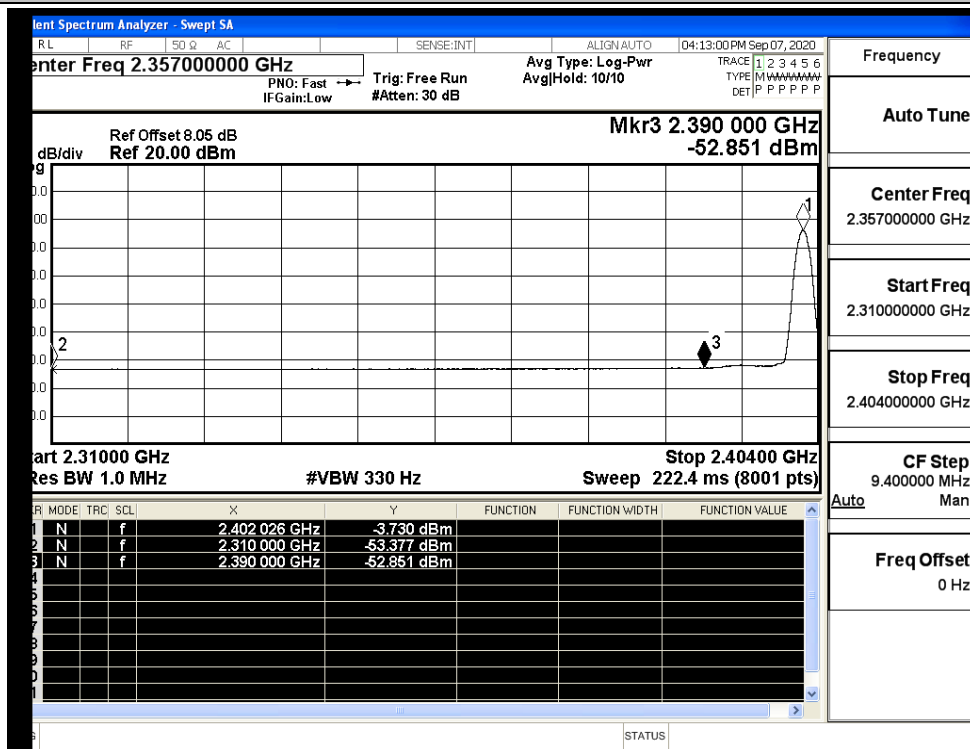
B.7 Restrict-band band-edge measurements

Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdi
BT LE	2402	Ant1	2310.0	-43.93	2.0	0	51.32	PEAK	74	PASS
		Ant1	2310.0	-53.38	2.0	0	41.88	AV	54	PASS
		Ant1	2390.0	-42.46	2.0	0	52.80	PEAK	74	PASS
		Ant1	2390.0	-52.85	2.0	0	42.41	AV	54	PASS
	2480	Ant1	2483.5	-41.88	2.0	0	53.38	PEAK	74	PASS
		Ant1	2483.5	-52.12	2.0	0	43.14	AV	54	PASS
		Ant1	2500.0	-40.41	2.0	0	54.85	PEAK	74	PASS
		Ant1	2500.0	-52.33	2.0	0	42.93	AV	54	PASS

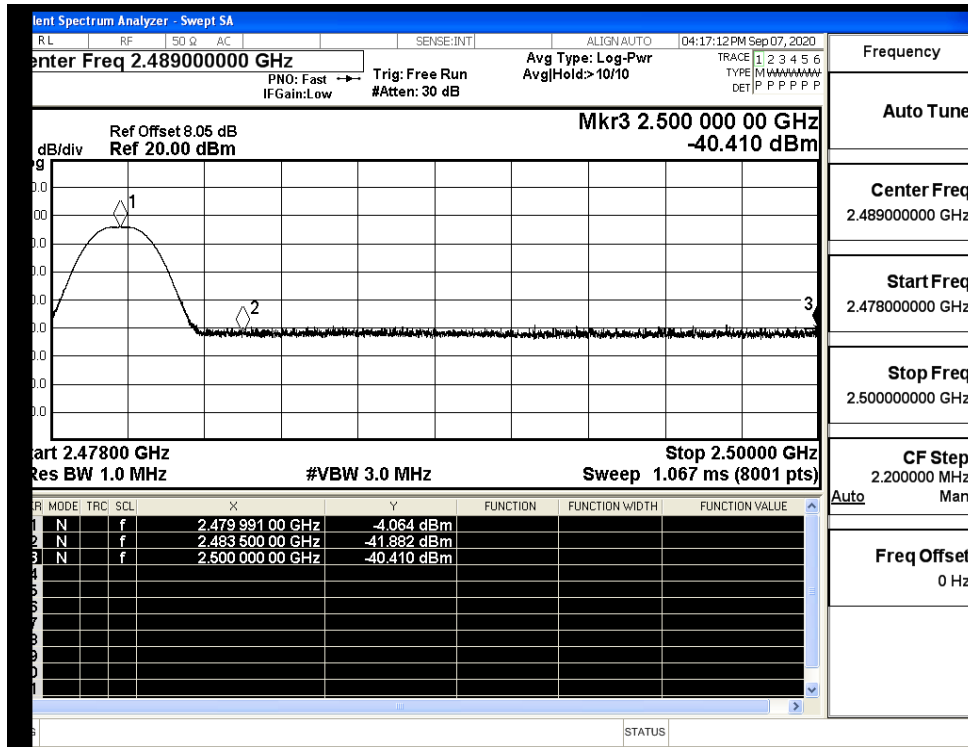
Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



Restrict-band band-edge measurements_BT LE_2402_Ant1_AV



Restrict-band band-edge measurements_BT LE_2480_Ant1_PEAK



Restrict-band band-edge measurements_BT LE_2480_Ant1_AV

