

Appendix A

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

Product Name: Bluetooth Capacitive Active Stylus

Trade Mark: Renaisser

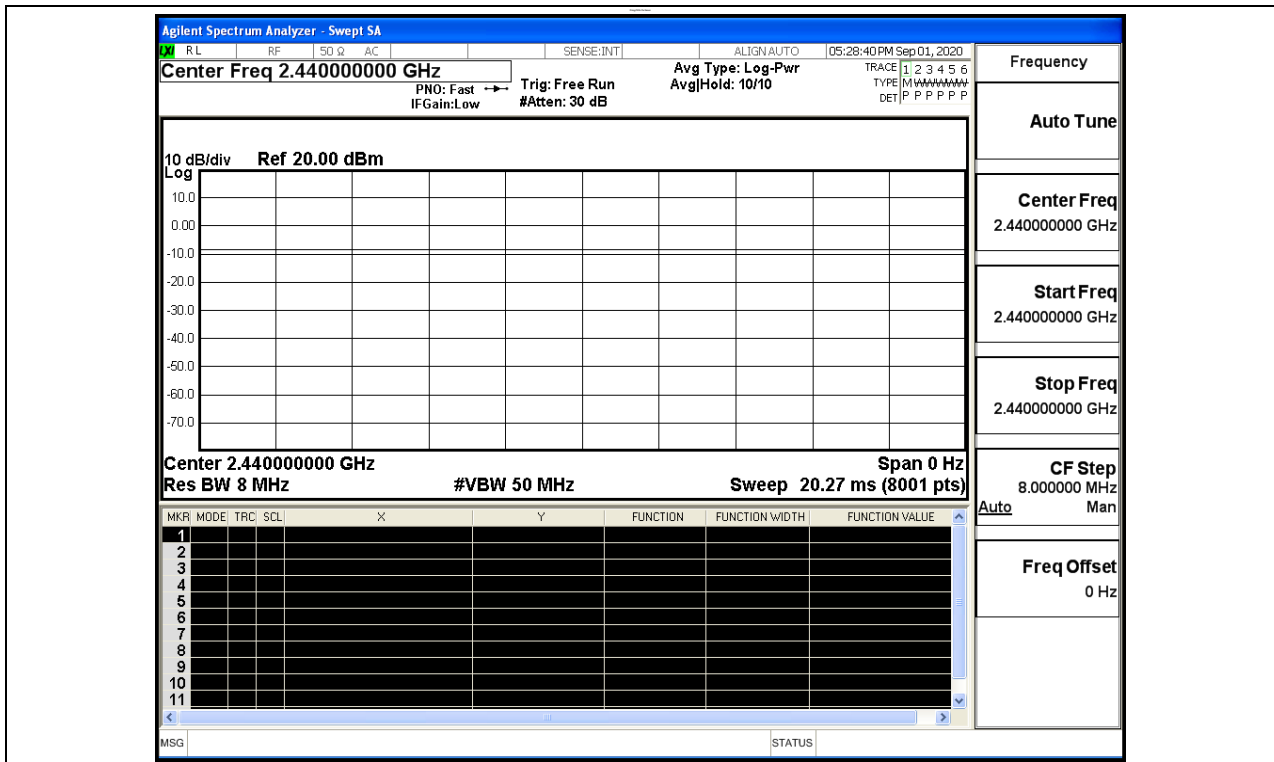
Test Model: C582

Environmental Conditions

Temperature:	22.5 ° C
Relative Humidity:	53.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Jay Li
Supervised by:	Li Huan

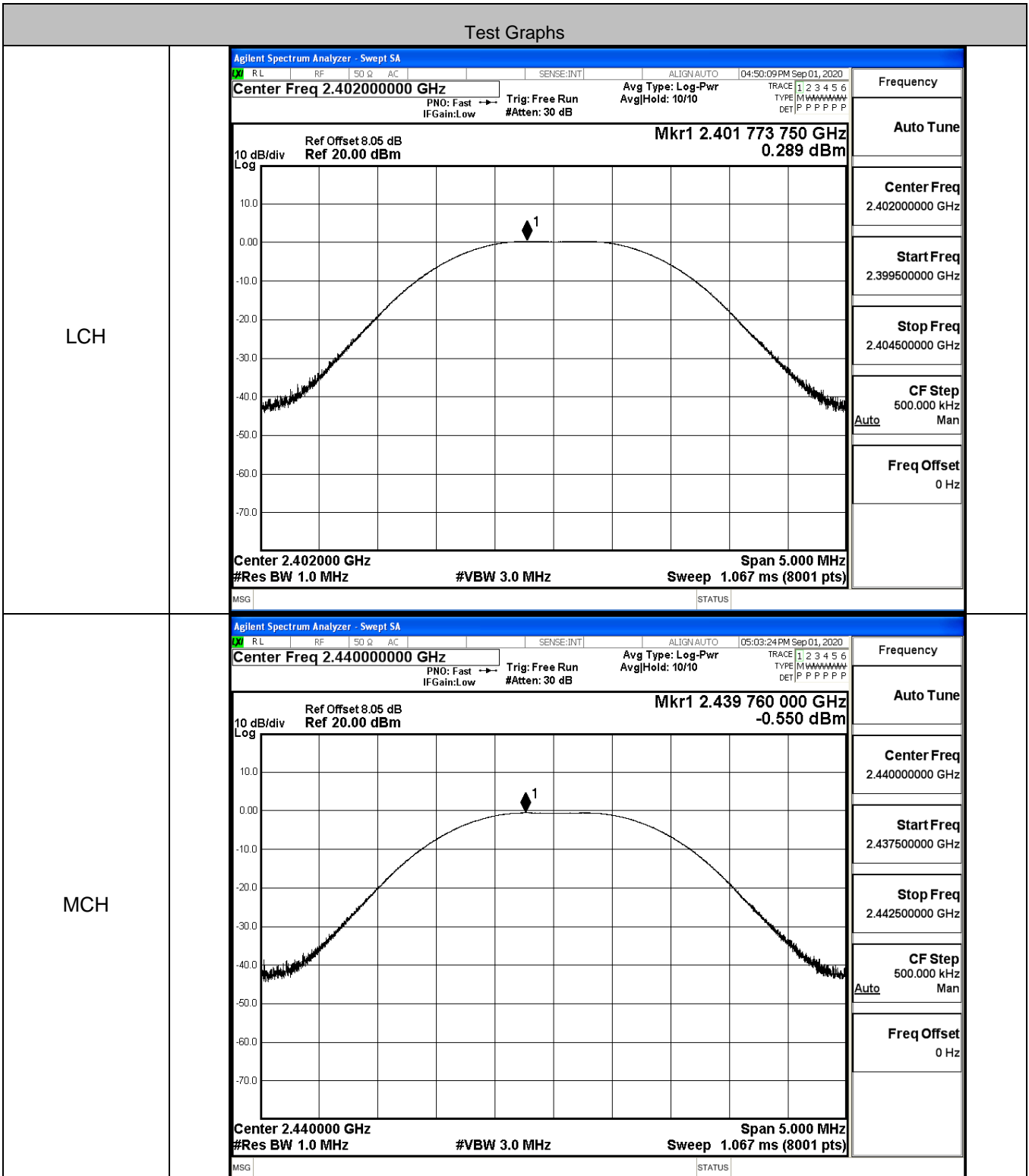
A.1 Duty Cycle

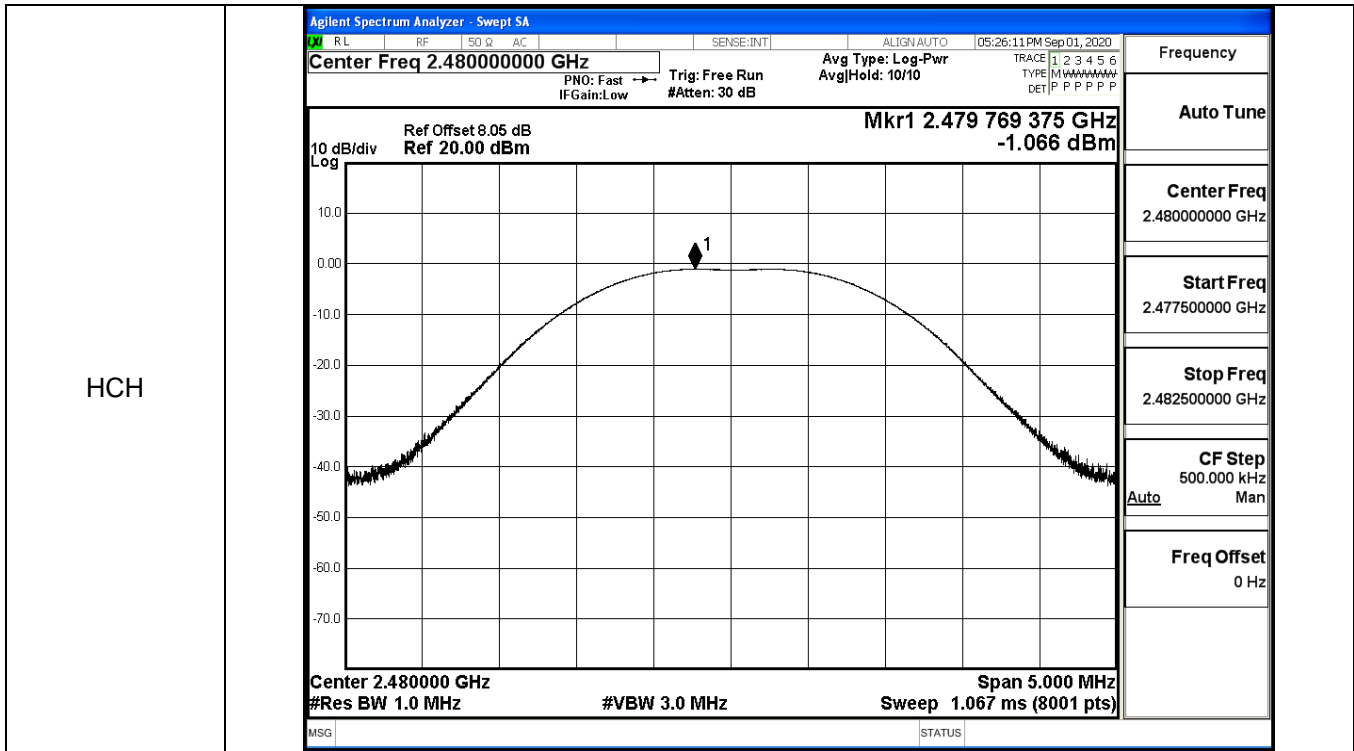
Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
BT LE	2440	Ant1	100	PASS



A.2 Maximum Conducted Peak Output Power

Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	0.289	30	PASS
BT LE	MCH	-0.550	30	PASS
BT LE	HCH	-1.066	30	PASS

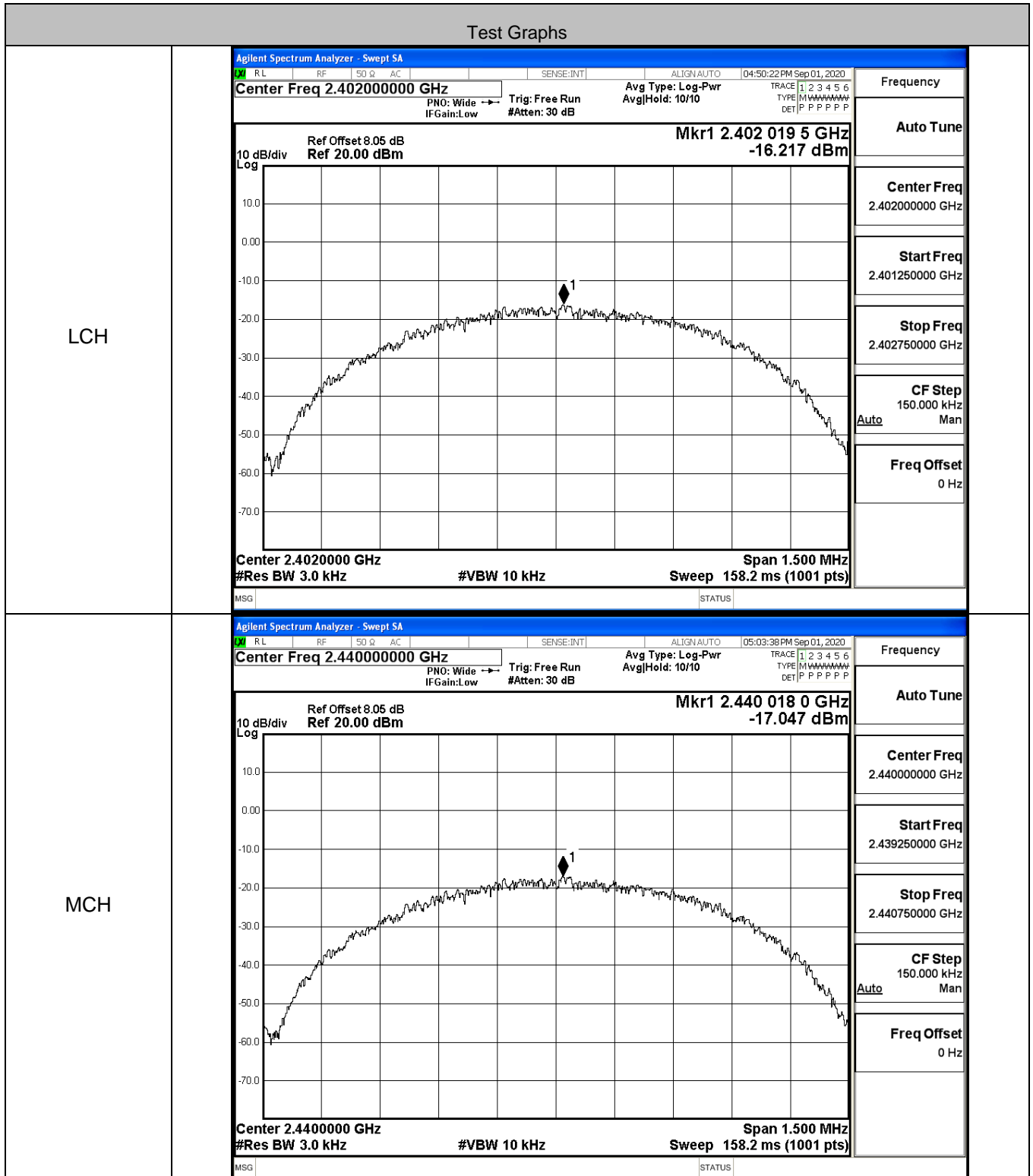




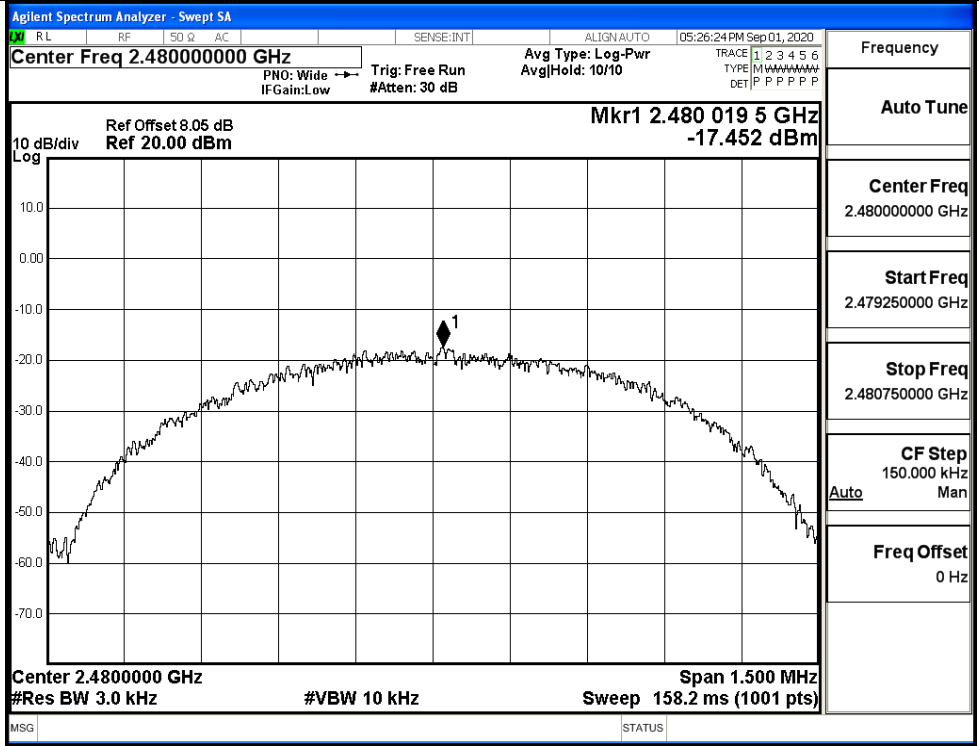
A.3 Maximum Power Spectral Density

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-16.217	8	PASS
BT LE	MCH	-17.047	8	PASS
BT LE	HCH	-17.452	8	PASS

Test Graphs



HCH

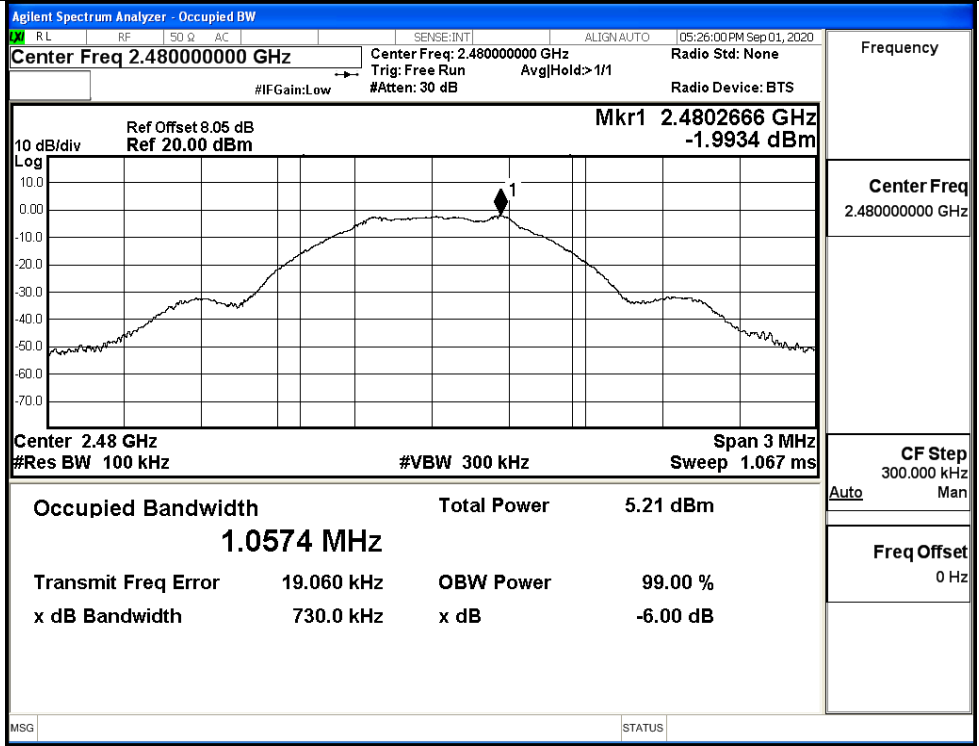


A.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.7328	≥0.5	PASS
BT LE	MCH	0.7206	≥0.5	PASS
BT LE	HCH	0.7300	≥0.5	PASS

Test Graphs																			
LCH	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.402000000 GHz Center Freq: 2.402000000 GHz Radio Std: None</p> <p>Trig: Free Run Avg/Hold: 1/1 Radio Device: BTS</p> <p>#IFGain:Low #Atten: 30 dB</p> <p>Ref Offset 8.05 dB Mkr1 2.4022584 GHz Ref 20.00 dBm 0.61534 dBm</p> <p>Center 2.402 GHz Span 3 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 1.067 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>7.84 dBm</td> </tr> <tr> <td>1.0525 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>19.053 kHz</td> <td>x dB</td> <td>-6.00 dB</td> </tr> <tr> <td>x dB Bandwidth</td> <td></td> <td></td> </tr> <tr> <td>732.8 kHz</td> <td></td> <td></td> </tr> </table> <p>MSG STATUS</p>	Occupied Bandwidth	Total Power	7.84 dBm	1.0525 MHz			Transmit Freq Error	OBW Power	99.00 %	19.053 kHz	x dB	-6.00 dB	x dB Bandwidth			732.8 kHz		
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MCH	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.440000000 GHz Center Freq: 2.440000000 GHz Radio Std: None</p> <p>Trig: Free Run Avg/Hold: 1/1 Radio Device: BTS</p> <p>#IFGain:Low #Atten: 30 dB</p> <p>Ref Offset 8.05 dB Mkr1 2.4402591 GHz Ref 20.00 dBm -1.4531 dBm</p> <p>Center 2.44 GHz Span 3 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 1.067 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>5.73 dBm</td> </tr> <tr> <td>1.0471 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>17.709 kHz</td> <td>x dB</td> <td>-6.00 dB</td> </tr> <tr> <td>x dB Bandwidth</td> <td></td> <td></td> </tr> <tr> <td>720.6 kHz</td> <td></td> <td></td> </tr> </table> <p>MSG STATUS</p>	Occupied Bandwidth	Total Power	5.73 dBm	1.0471 MHz			Transmit Freq Error	OBW Power	99.00 %	17.709 kHz	x dB	-6.00 dB	x dB Bandwidth			720.6 kHz		
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HCH

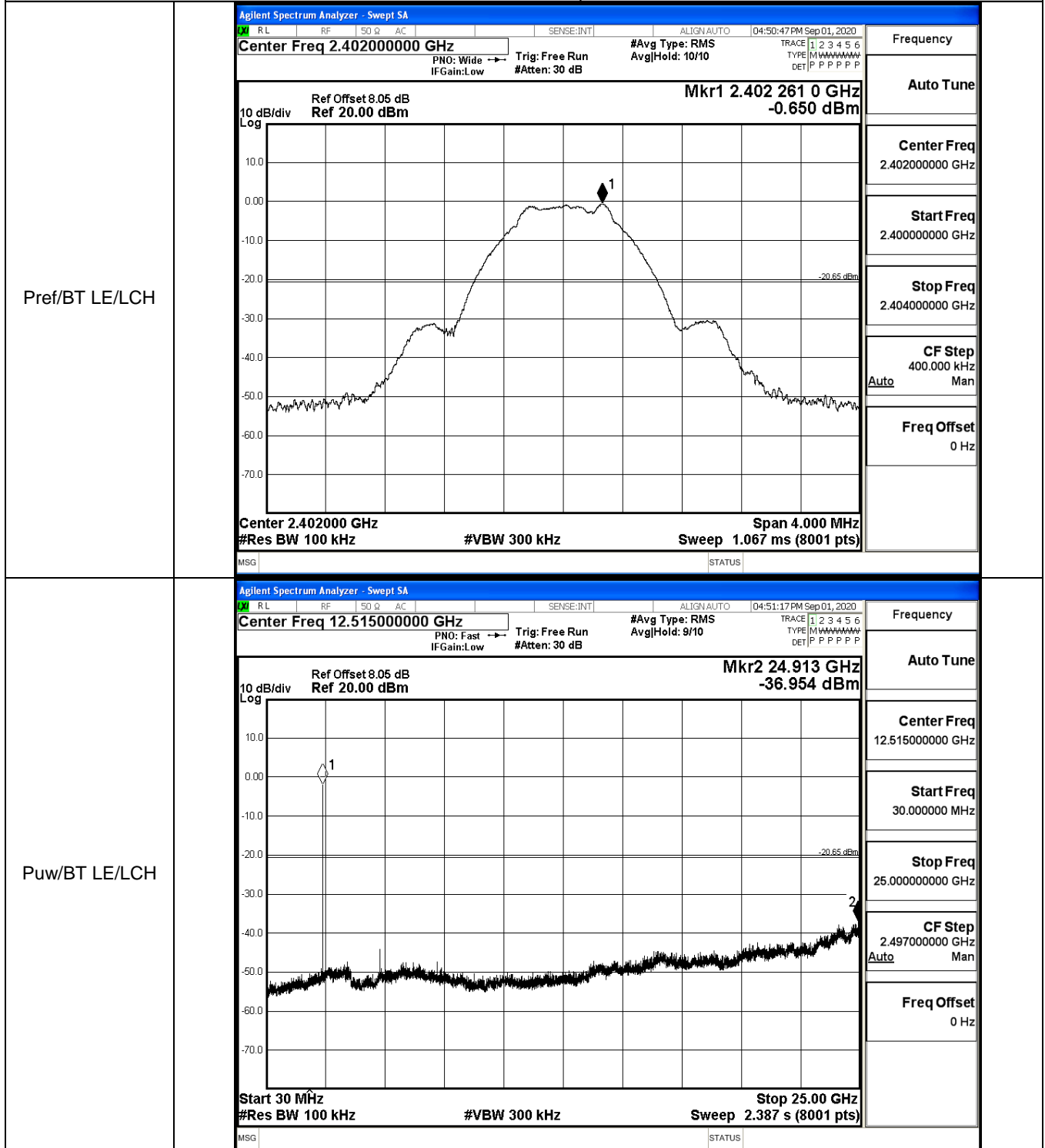


Frequency	Center Freq 2.48000000 GHz
CF Step	300.000 kHz Auto Man
Freq Offset	0 Hz

B.5 RF Conducted Spurious Emissions

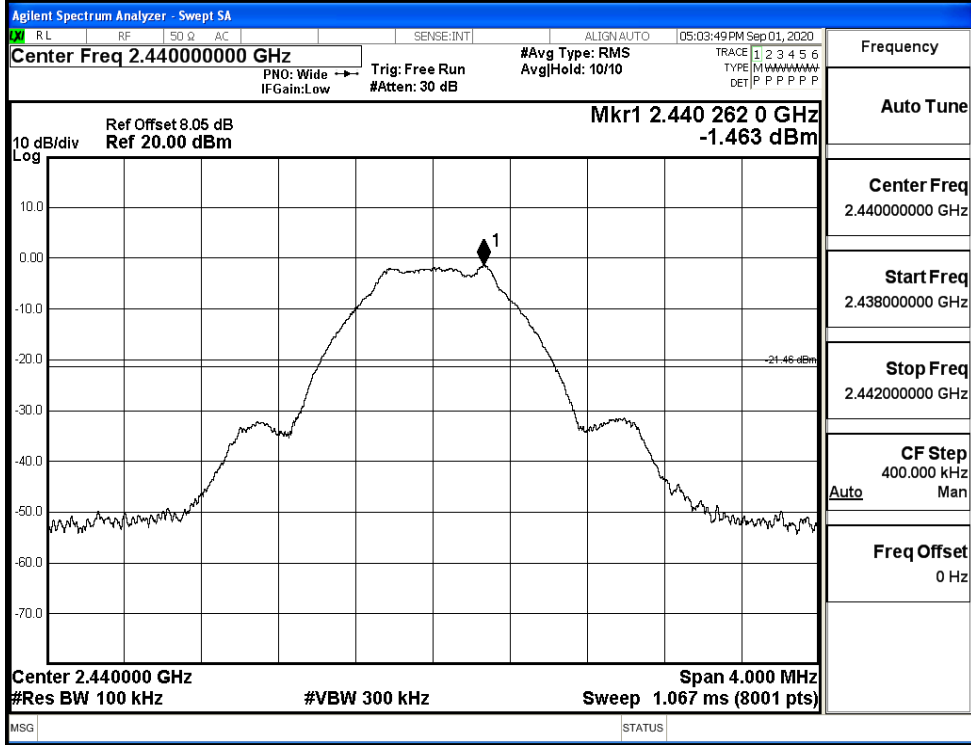
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-0.65	-36.954	-20.650	PASS
BT LE	MCH	-1.463	-36.299	-21.463	PASS
BT LE	HCH	-1.957	-37.708	-21.957	PASS

BT LE_LCH_Graphs

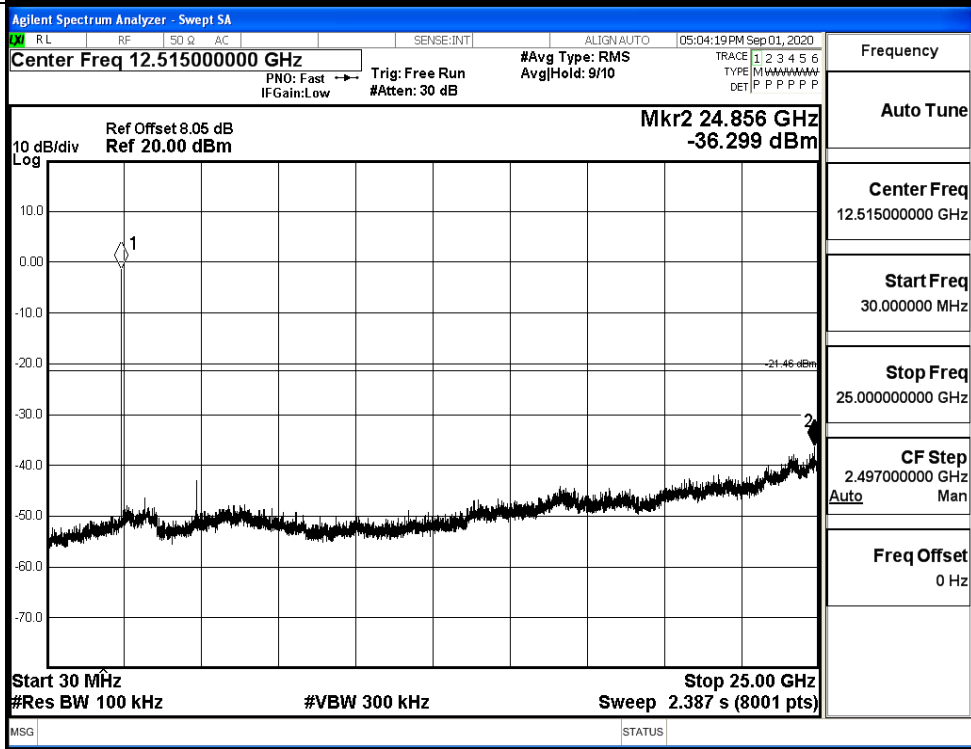


BT LE_MCH_Graphs

Pref/BT LE/MCH

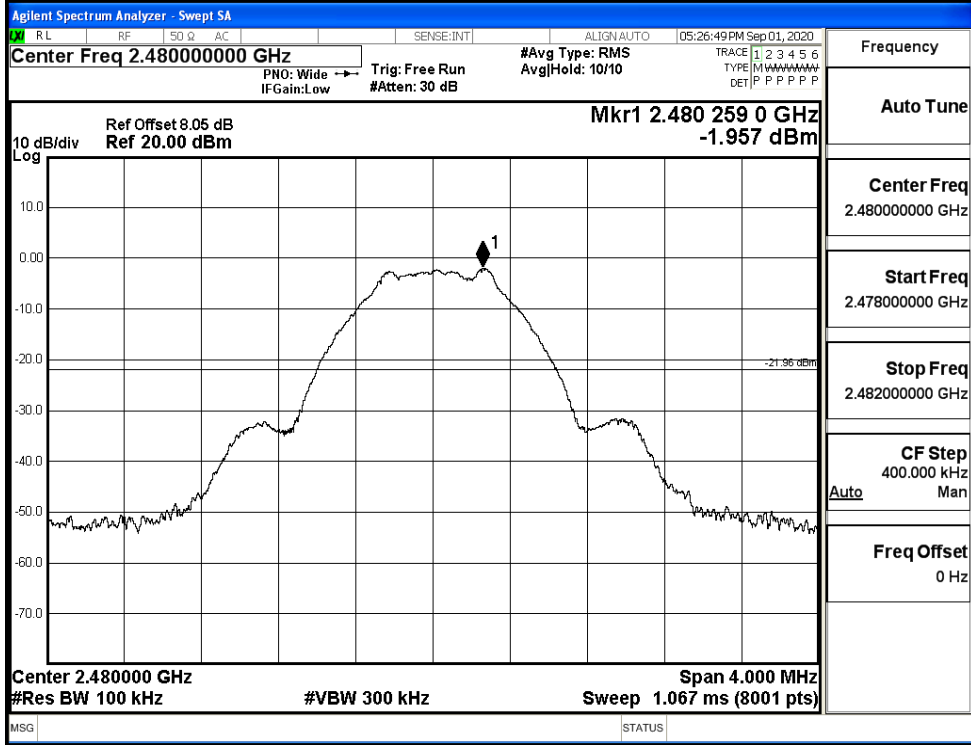


Puw/BT LE/MCH

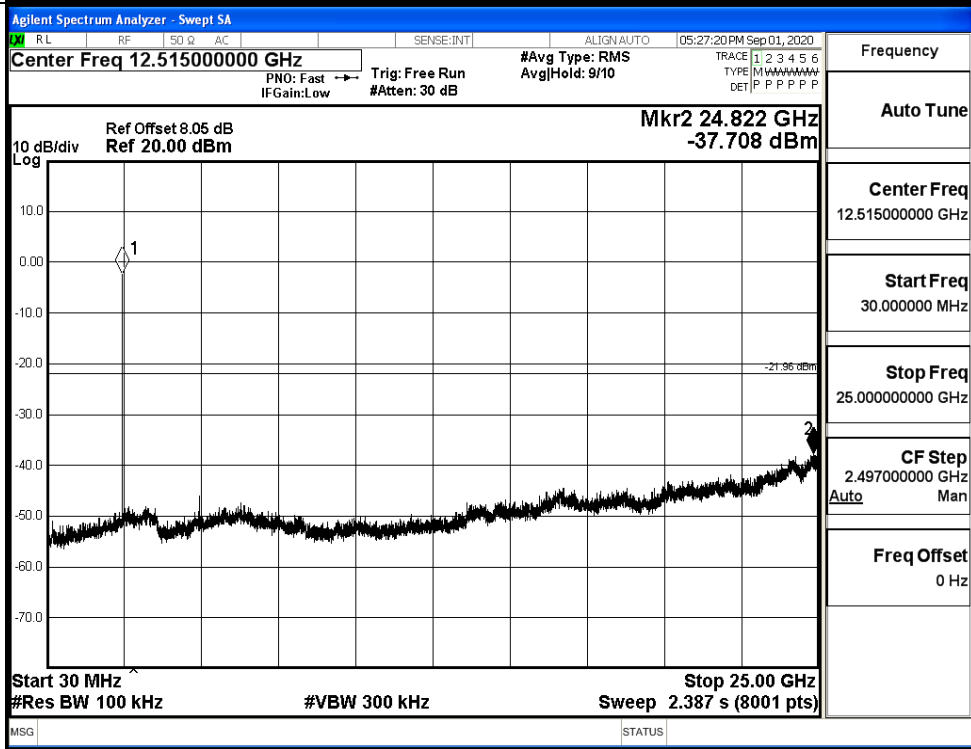


BT LE_HCH_Graphs

Pref/BT LE/HCH



Puw/BT LE/HCH



A.6 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-0.458	-49.813	-20.46	PASS
BT LE	HCH	-1.812	-49.084	-21.81	PASS

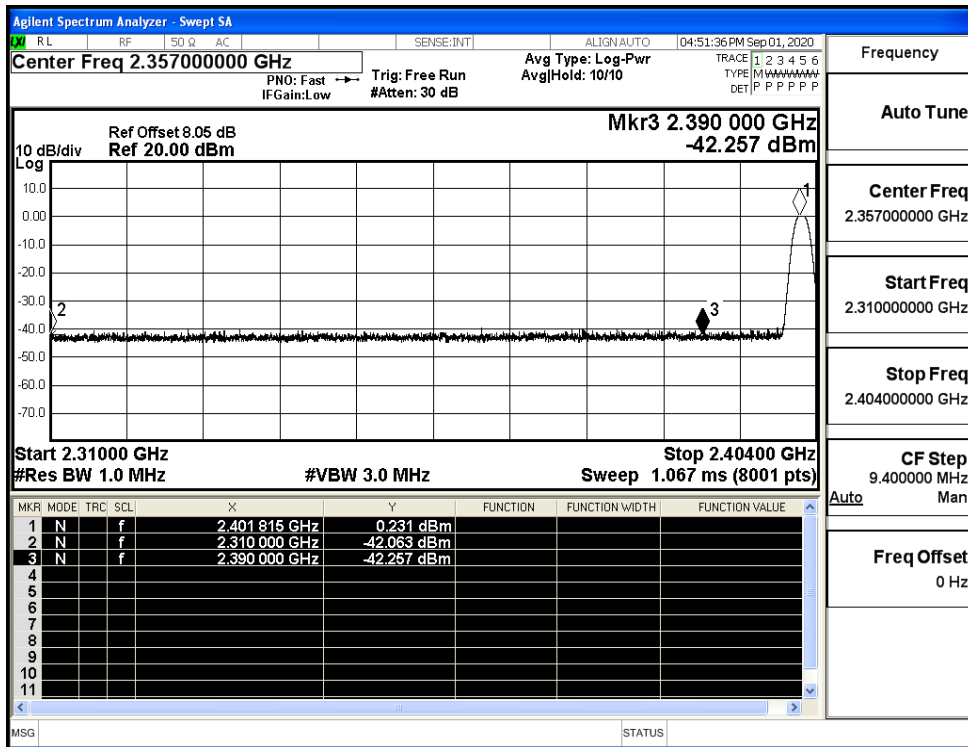
Test Graphs

LCH	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.35700000 GHz Ref Offset 8.05 dB, Ref 20.00 dBm Mkr4 2.381 381 GHz -49.813 dBm Start 2.31000 GHz, Stop 2.40400 GHz #Res BW 100 kHz, #VBW 300 kHz, Sweep 9.067 ms (8001 pts)</p> <table border="1" style="font-size: small;"> <thead> <tr> <th>MKR</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>2.402 261 GHz</td><td>-0.458 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>-52.303 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>-53.030 dBm</td><td></td><td></td><td></td></tr> <tr><td>4</td><td>N</td><td>f</td><td></td><td>2.381 381 GHz</td><td>-49.813 dBm</td><td></td><td></td><td></td></tr> </tbody> </table>	MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	f		2.402 261 GHz	-0.458 dBm				2	N	f		2.400 000 GHz	-52.303 dBm				3	N	f		2.390 000 GHz	-53.030 dBm				4	N	f		2.381 381 GHz	-49.813 dBm				Frequency Auto Tune Center Freq 2.35700000 GHz Start Freq 2.310000000 GHz Stop Freq 2.404000000 GHz CF Step 9.400000 MHz Freq Offset 0 Hz
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HCH	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.48900000 GHz Ref Offset 8.05 dB, Ref 20.00 dBm Mkr4 2.495 740 25 GHz -49.084 dBm Start 2.47800 GHz, Stop 2.50000 GHz #Res BW 100 kHz, #VBW 300 kHz, Sweep 2.133 ms (8001 pts)</p> <table border="1" style="font-size: small;"> <thead> <tr> <th>MKR</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>2.480 268 75 GHz</td><td>-1.812 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>-51.895 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>-51.419 dBm</td><td></td><td></td><td></td></tr> <tr><td>4</td><td>N</td><td>f</td><td></td><td>2.495 740 25 GHz</td><td>-49.084 dBm</td><td></td><td></td><td></td></tr> </tbody> </table>	MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	f		2.480 268 75 GHz	-1.812 dBm				2	N	f		2.483 500 00 GHz	-51.895 dBm				3	N	f		2.500 000 00 GHz	-51.419 dBm				4	N	f		2.495 740 25 GHz	-49.084 dBm				Frequency Auto Tune Center Freq 2.489000000 GHz Start Freq 2.478000000 GHz Stop Freq 2.500000000 GHz CF Step 2.200000 MHz Freq Offset 0 Hz
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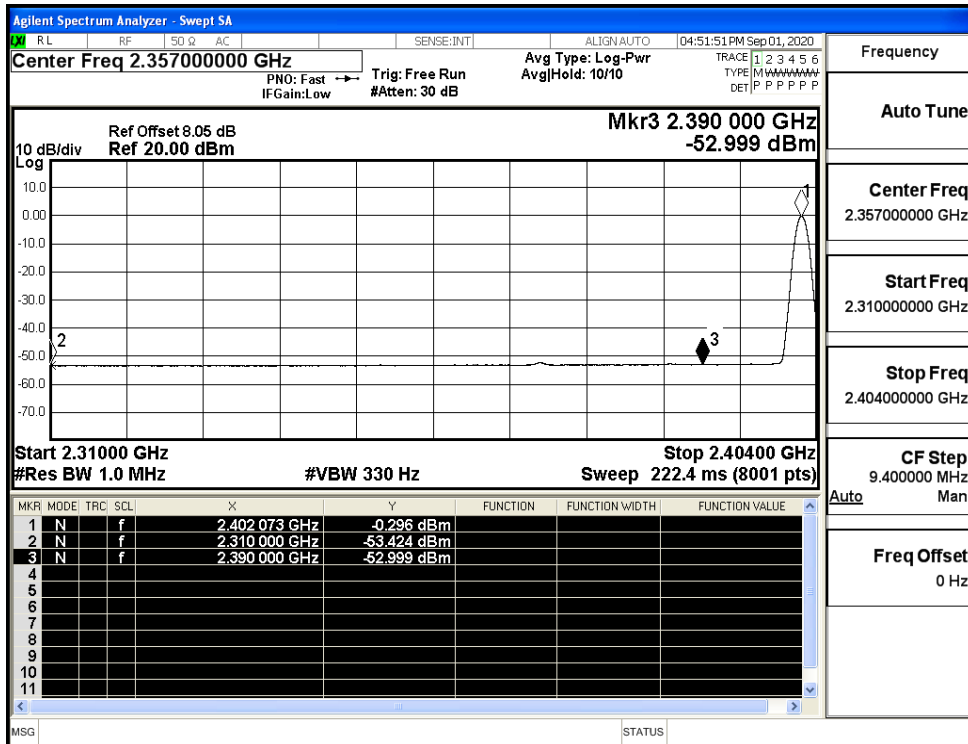
A.7 Restrict-band band-edge measurements

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	-42.06	2.0	0	55.17	PEAK	74	PASS
		Ant1	2310.0	-53.42	2.0	0	43.81	AV	54	PASS
		Ant1	2390.0	-42.26	2.0	0	54.97	PEAK	74	PASS
		Ant1	2390.0	-53.00	2.0	0	44.23	AV	54	PASS
	2480	Ant1	2483.5	-43.38	2.0	0	53.85	PEAK	74	PASS
		Ant1	2483.5	-52.42	2.0	0	44.81	AV	54	PASS
		Ant1	2500.0	-41.71	2.0	0	55.52	PEAK	74	PASS
		Ant1	2500.0	-52.34	2.0	0	44.89	AV	54	PASS

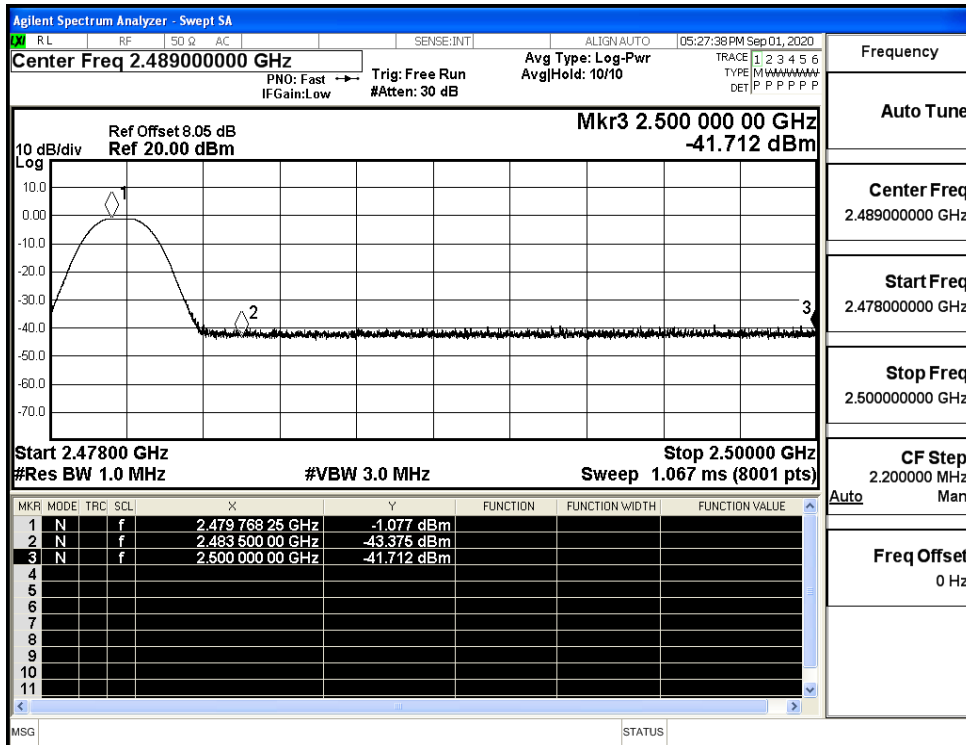
Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



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

