

Appendix A

RF Test Data for BT V4.0 (BLE) (Conducted Measurement)

Product Name: TOUCHit Wireless active noise cancellation headphones

Trade Mark: SACKit

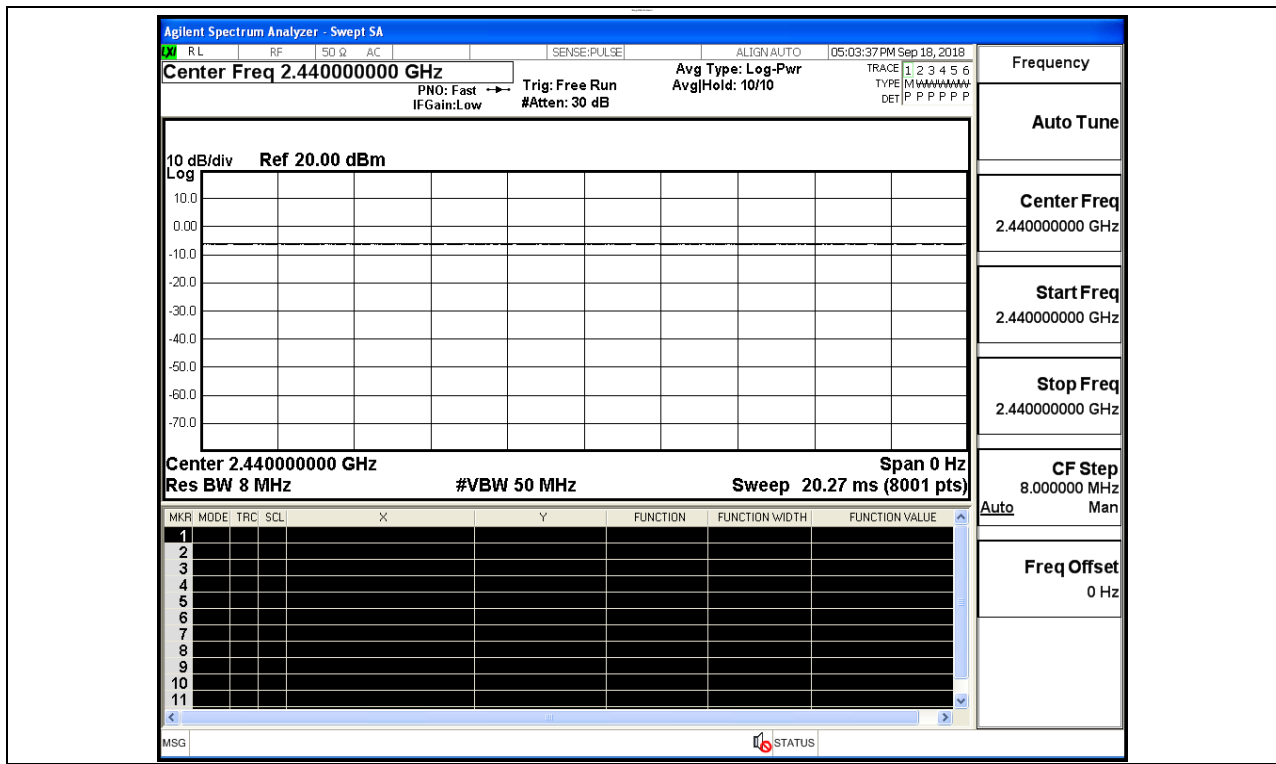
Test Model: TOUCHit

Environmental Conditions

Temperature:	24.4 ° C
Relative Humidity:	53.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond.Lu
Supervised by:	Jayden.Zhuo

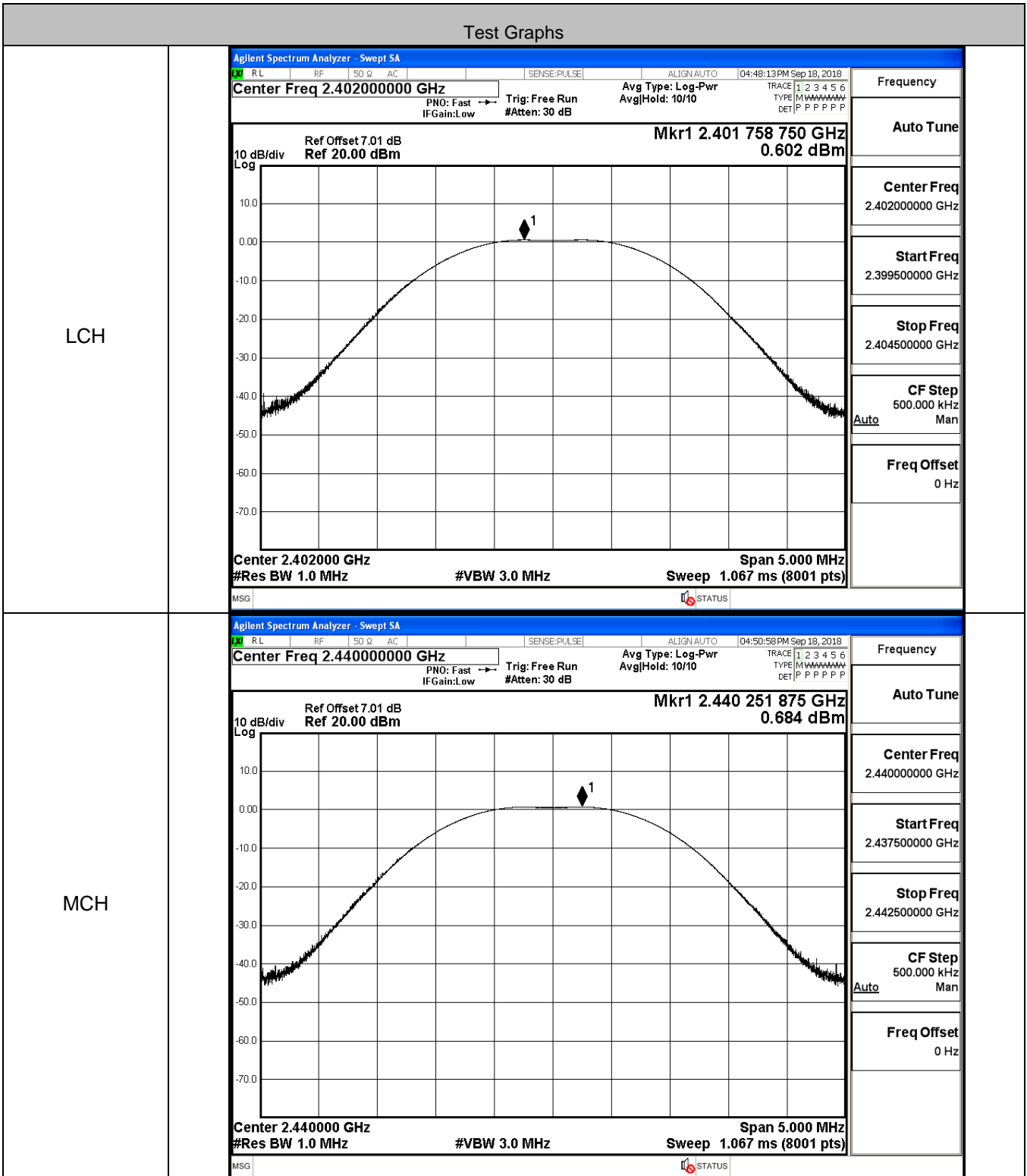
A.1 Duty Cycle

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

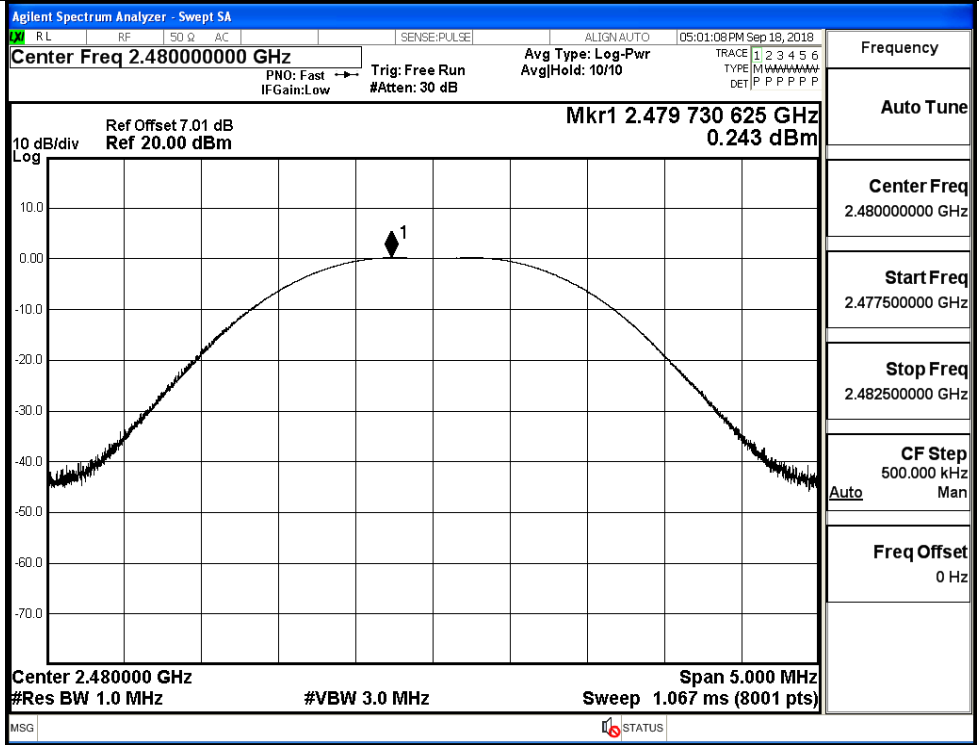


A.2 Maximum Conducted Peak Output Power

Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	0.602	30	PASS
BT LE	MCH	0.684	30	PASS
BT LE	HCH	0.243	30	PASS

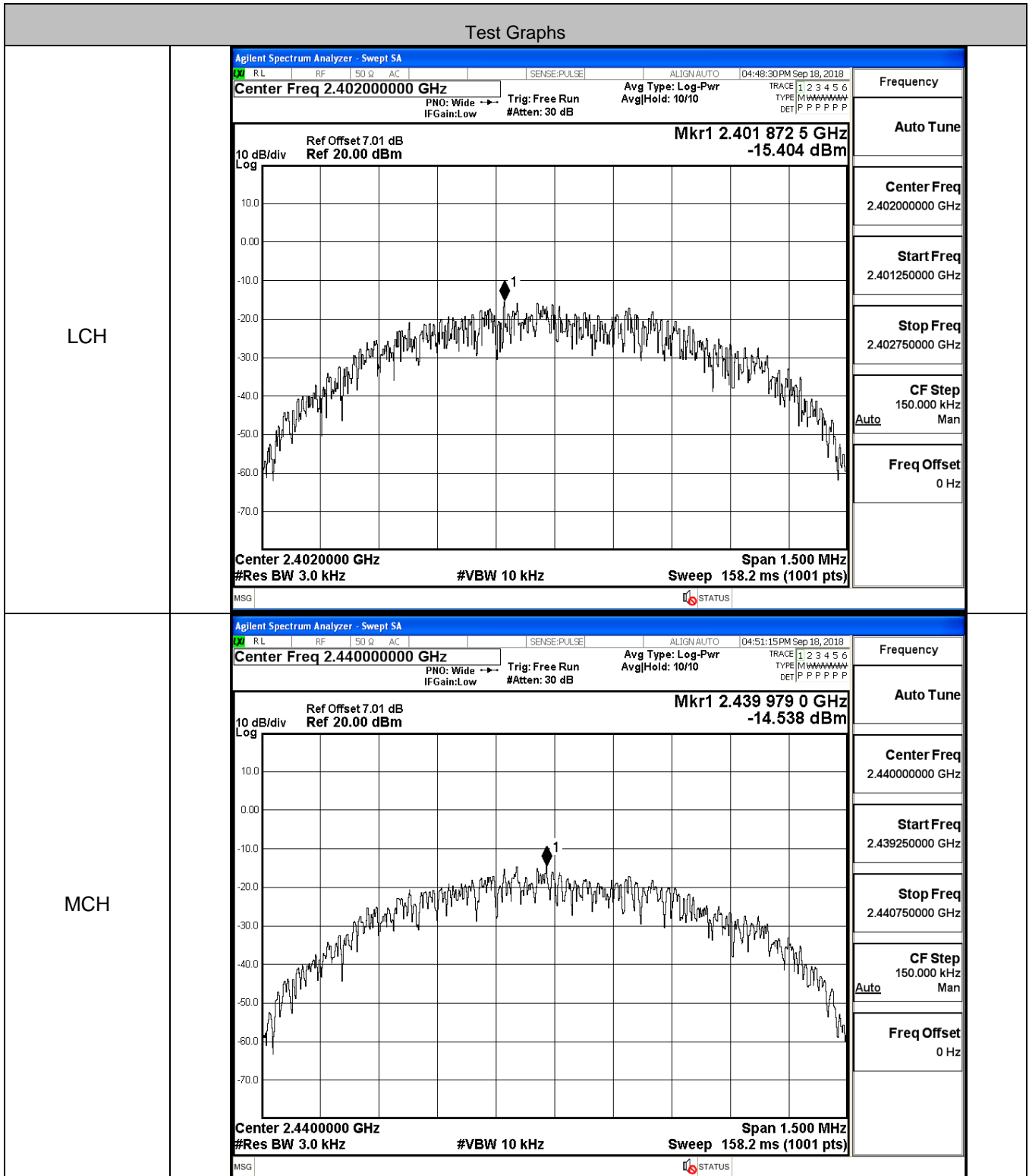


HCH



A.3 Maximum Power Spectral Density

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-15.404	8	PASS
BT LE	MCH	-14.538	8	PASS
BT LE	HCH	-14.872	8	PASS

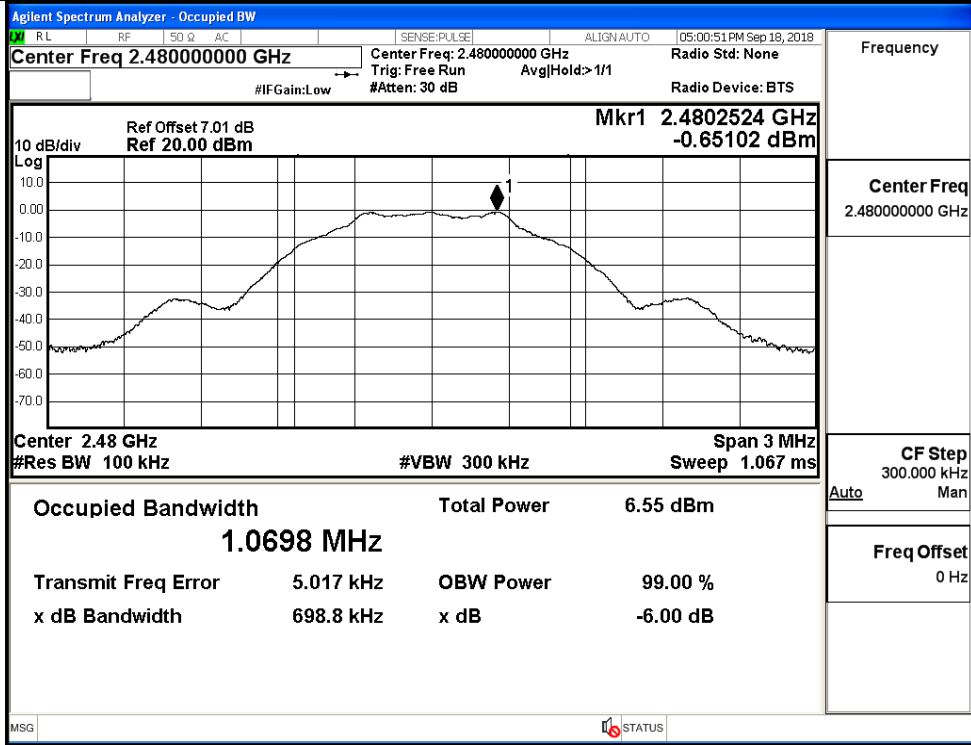


A.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.7038	≥0.5	PASS
BT LE	MCH	0.6973	≥0.5	PASS
BT LE	HCH	0.6988	≥0.5	PASS

Test Graphs																			
LCH	<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center; margin: 0;">Agilent Spectrum Analyzer - Occupied BW</p> <p style="font-size: small; margin: 0;">RL RF 50 Ω AC SENSE:PULSE ALIGN: AUTO 04:47:58 PM Sep 18, 2018</p> <p style="margin: 0;">Center Freq 2.402000000 GHz Center Freq: 2.402000000 GHz Radio Std: None Trig: Free Run AvgHold>1/1 #IFGain:Low #Atten: 30 dB Radio Device: BTS</p> <p style="margin: 0;">Center 2.402 GHz Span 3 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 1.067 ms</p> <table border="0" style="width: 100%; font-size: small;"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>6.90 dBm</td> </tr> <tr> <td style="text-align: center;">1.0704 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>5.004 kHz</td> <td>OBW Power</td> </tr> <tr> <td>x dB Bandwidth</td> <td>703.8 kHz</td> <td>x dB</td> </tr> <tr> <td></td> <td></td> <td>99.00 %</td> </tr> <tr> <td></td> <td></td> <td>-6.00 dB</td> </tr> </table> <p style="font-size: x-small; margin: 0;">MSG STATUS</p> </div>	Occupied Bandwidth	Total Power	6.90 dBm	1.0704 MHz			Transmit Freq Error	5.004 kHz	OBW Power	x dB Bandwidth	703.8 kHz	x dB			99.00 %			-6.00 dB
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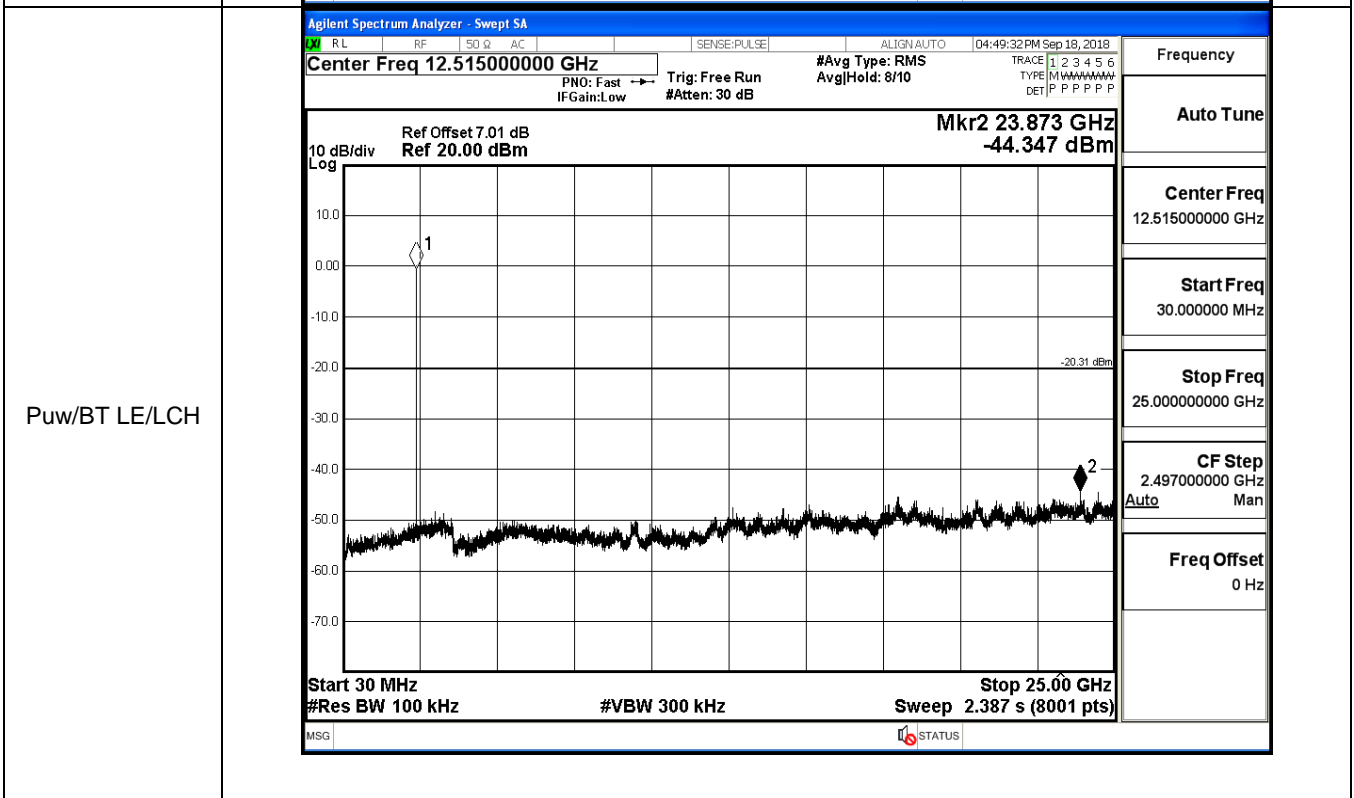
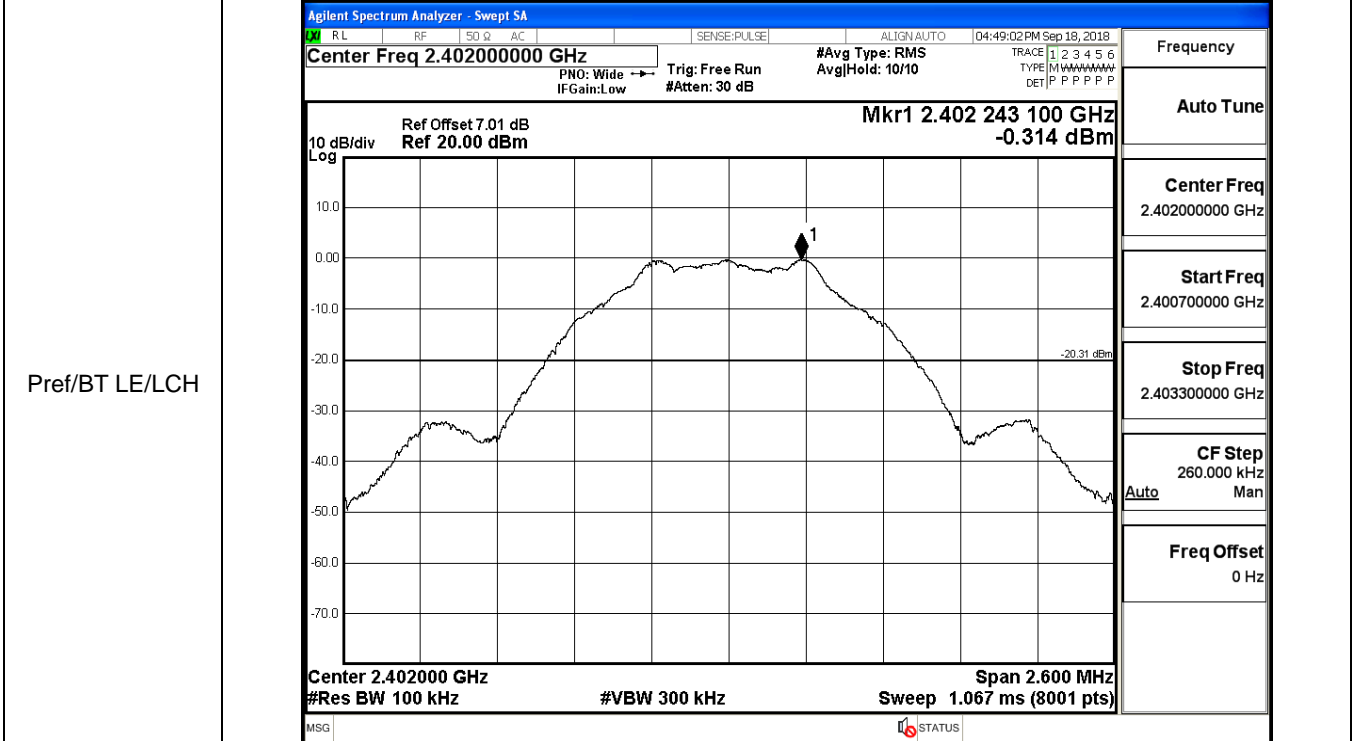
HCH



A.5 RF Conducted Spurious Emissions

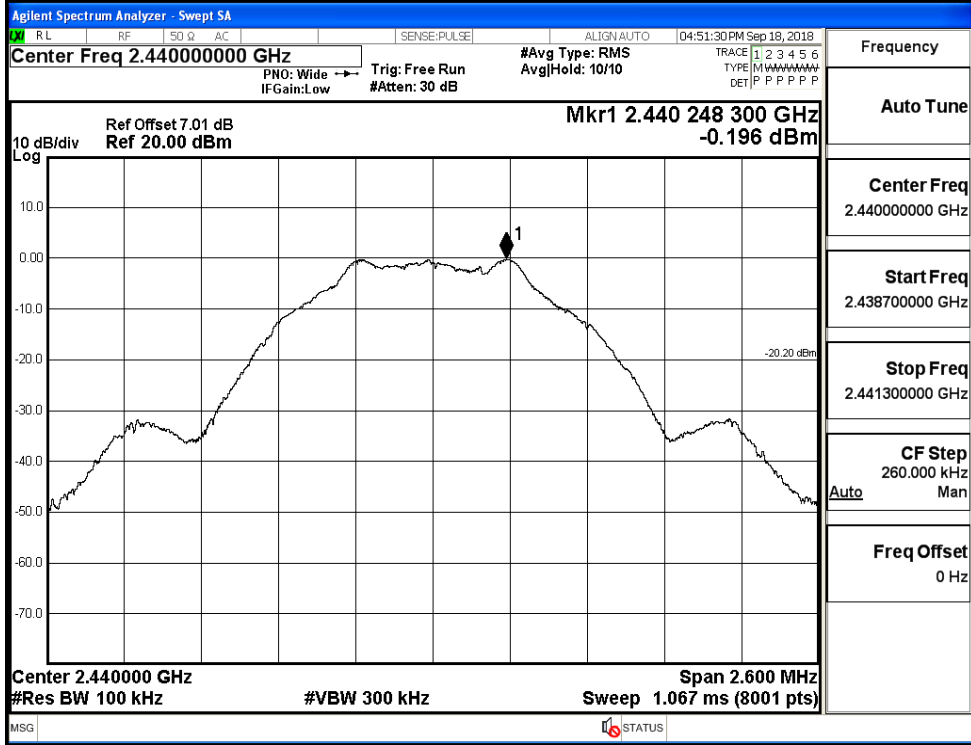
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-0.314	-44.347	-20.314	PASS
BT LE	MCH	-0.196	-44.875	-20.196	PASS
BT LE	HCH	-0.643	-45.436	-20.643	PASS

BT LE_LCH_Graphs

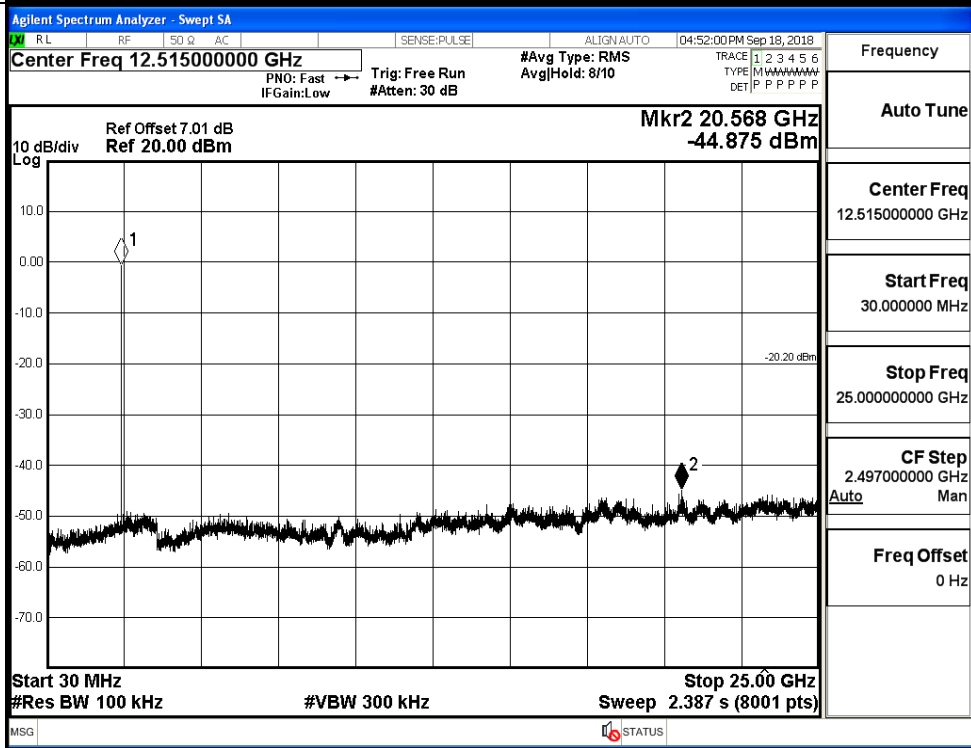


BT LE_MCH_Graphs

Pref/BT LE/MCH

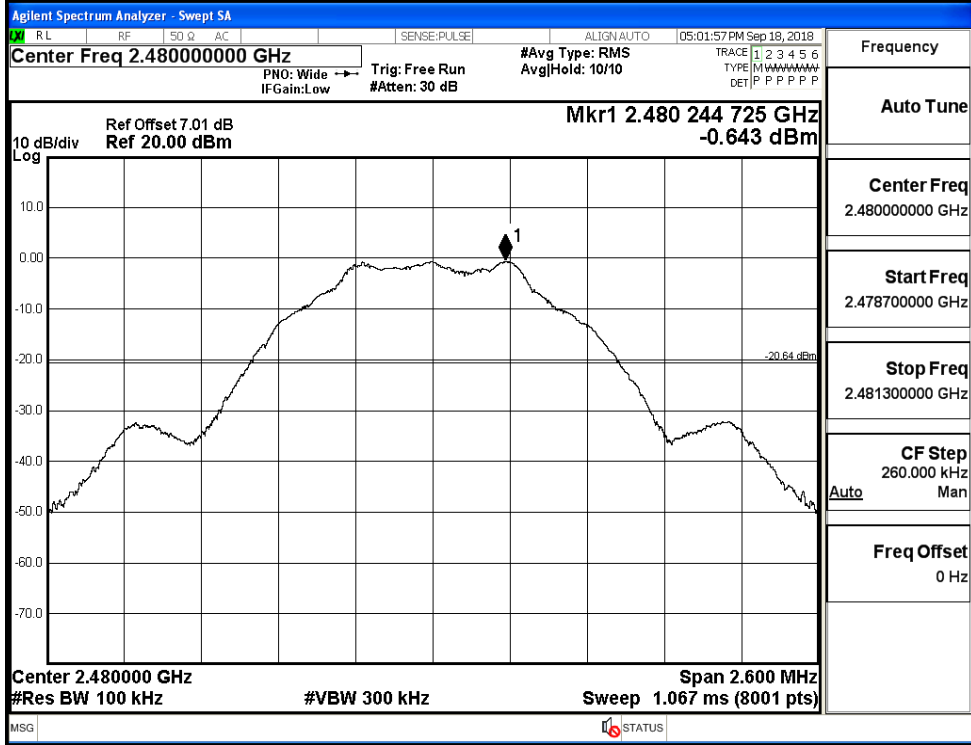


Puw/BT LE/MCH

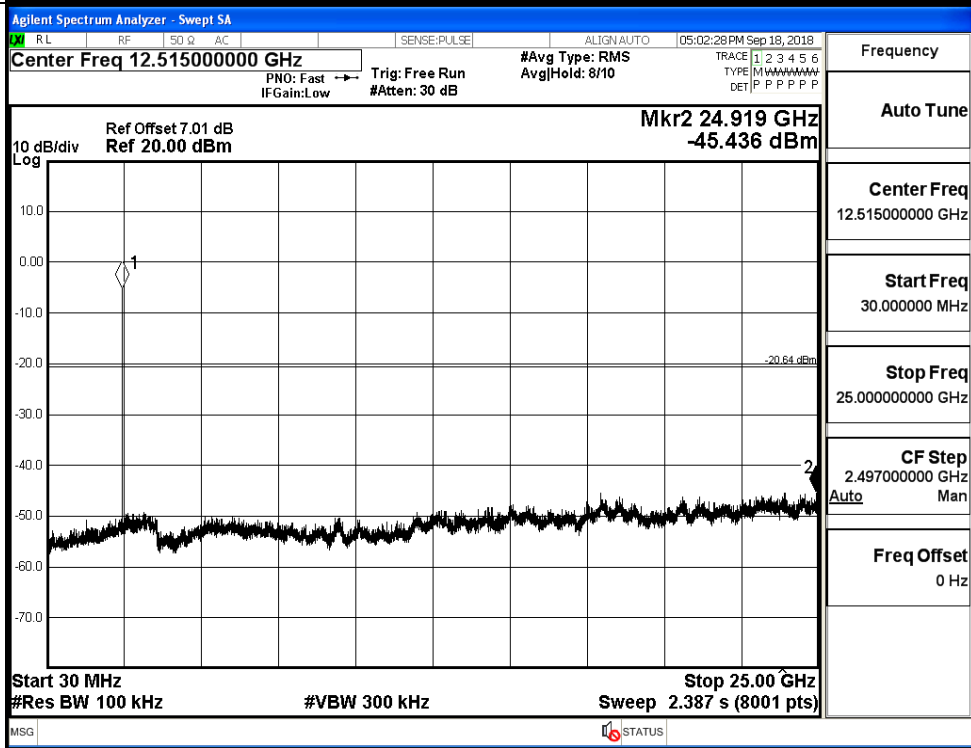


BT LE_HCH_Graphs

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	-0.137	-50.650	-20.14	PASS
BT LE	HCH	-0.448	-51.211	-20.45	PASS

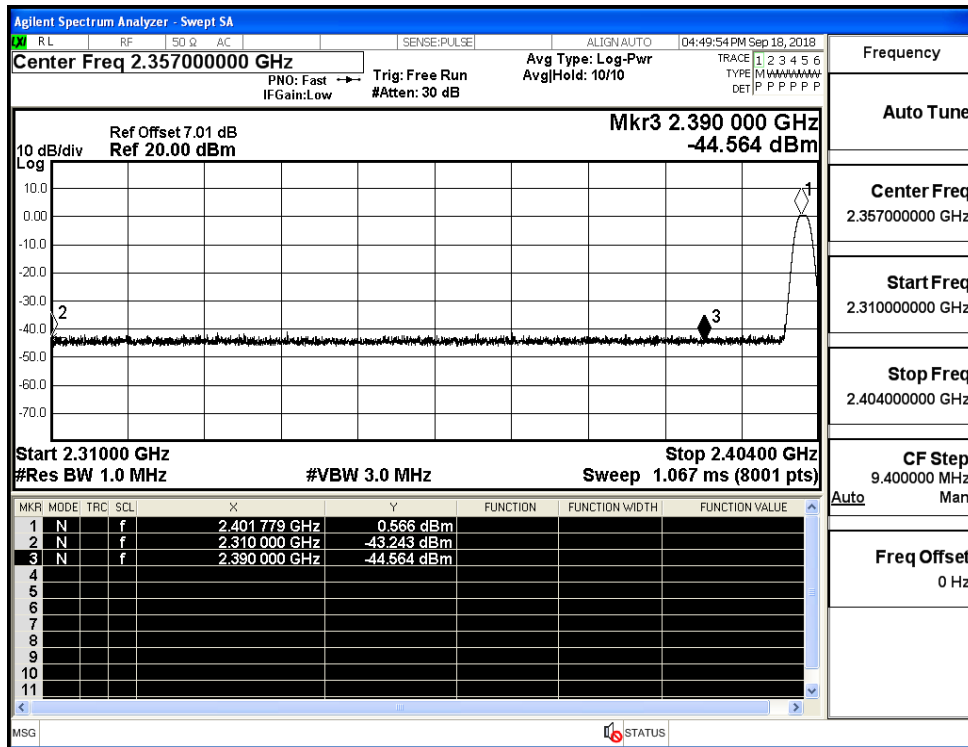
Test Graphs

LCH	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.35700000 GHz Max Spurious Level -50.650 dBm Mkr4 2.357 176 GHz 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></td><td>f</td><td>2.402 238 GHz</td><td>-0.137 dBm</td><td></td><td></td><td></td></tr> <tr><td>2</td><td>N</td><td></td><td>f</td><td>2.400 000 GHz</td><td>-53.224 dBm</td><td></td><td></td><td></td></tr> <tr><td>3</td><td>N</td><td></td><td>f</td><td>2.390 000 GHz</td><td>-53.882 dBm</td><td></td><td></td><td></td></tr> <tr><td>4</td><td>N</td><td></td><td>f</td><td>2.357 176 GHz</td><td>-50.650 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	2.402 238 GHz	-0.137 dBm				2	N		f	2.400 000 GHz	-53.224 dBm				3	N		f	2.390 000 GHz	-53.882 dBm				4	N		f	2.357 176 GHz	-50.650 dBm				Frequency Auto Tune Center Freq 2.357000000 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 Max Spurious Level -51.211 dBm Mkr4 2.492 407 25 GHz 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></td><td>f</td><td>2.479 760 00 GHz</td><td>-0.448 dBm</td><td></td><td></td><td></td></tr> <tr><td>2</td><td>N</td><td></td><td>f</td><td>2.483 500 00 GHz</td><td>-54.982 dBm</td><td></td><td></td><td></td></tr> <tr><td>3</td><td>N</td><td></td><td>f</td><td>2.500 000 00 GHz</td><td>-52.536 dBm</td><td></td><td></td><td></td></tr> <tr><td>4</td><td>N</td><td></td><td>f</td><td>2.492 407 25 GHz</td><td>-51.211 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	2.479 760 00 GHz	-0.448 dBm				2	N		f	2.483 500 00 GHz	-54.982 dBm				3	N		f	2.500 000 00 GHz	-52.536 dBm				4	N		f	2.492 407 25 GHz	-51.211 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	-43.24	2.0	0	52.01	PEAK	74	PASS
		Ant1	2310.0	-54.60	2.0	0	40.66	AV	54	PASS
		Ant1	2390.0	-44.56	2.0	0	50.69	PEAK	74	PASS
		Ant1	2390.0	-54.47	2.0	0	40.79	AV	54	PASS
	2480	Ant1	2483.5	-44.26	2.0	0	51.00	PEAK	74	PASS
		Ant1	2483.5	-54.16	2.0	0	41.10	AV	54	PASS
		Ant1	2500.0	-43.66	2.0	0	51.59	PEAK	74	PASS
		Ant1	2500.0	-54.02	2.0	0	41.24	AV	54	PASS

Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



Restrict-band band-edge measurements_BT LE_2402_Ant1_AV

