

Appendix A

RF Test Data for BT LE (Conducted Measurement)

Product Name: Smart candle lamp

Trade Mark: N/A

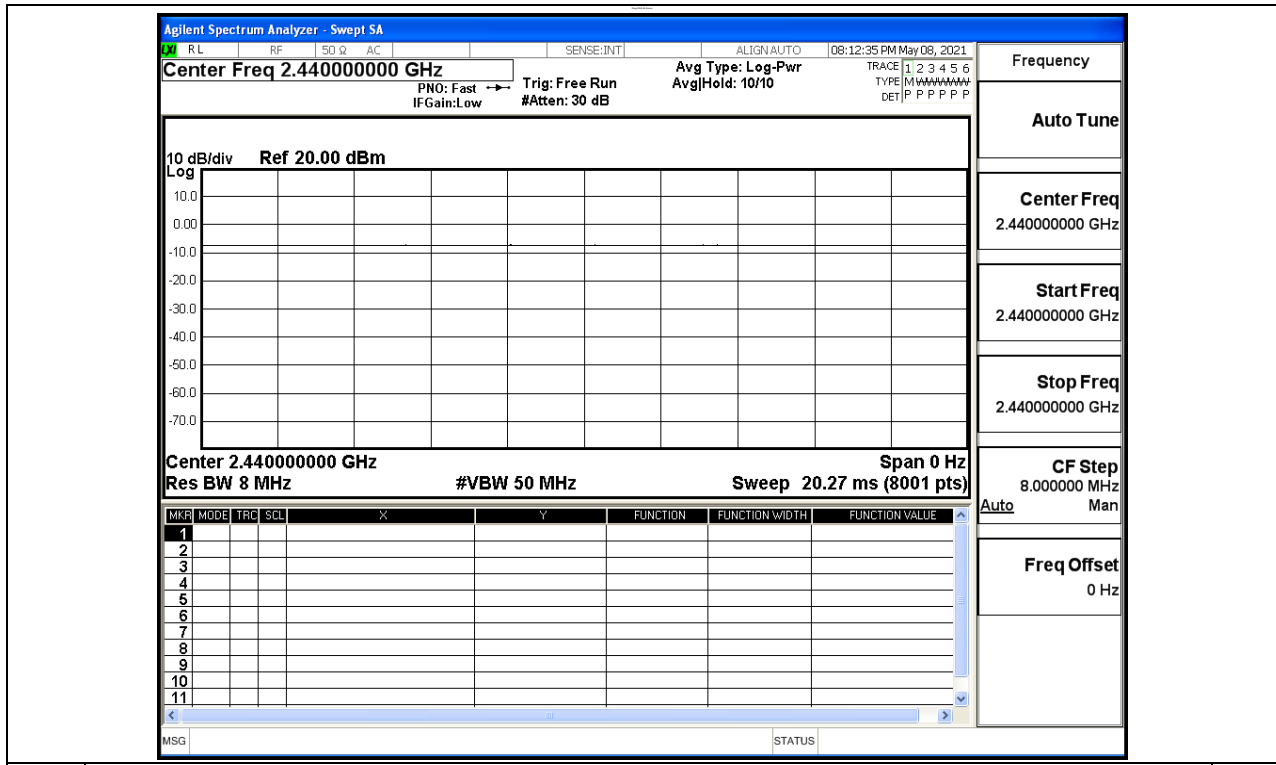
Test Model: C37

Environmental Conditions

Temperature:	25 ° C
Relative Humidity:	50%
ATM Pressure:	100.0 kPa
Test Engineer:	Carl Fu
Supervised by:	Li Huan

A.1 Duty Cycle

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



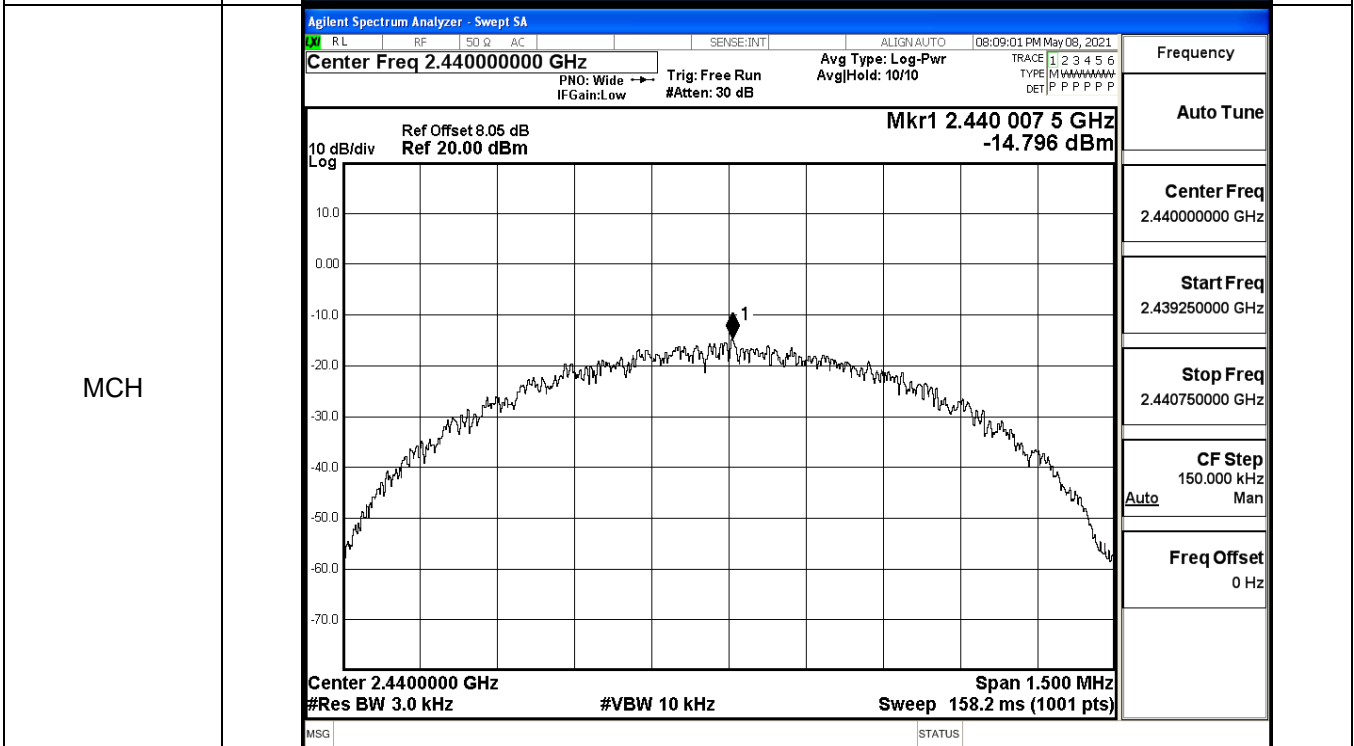
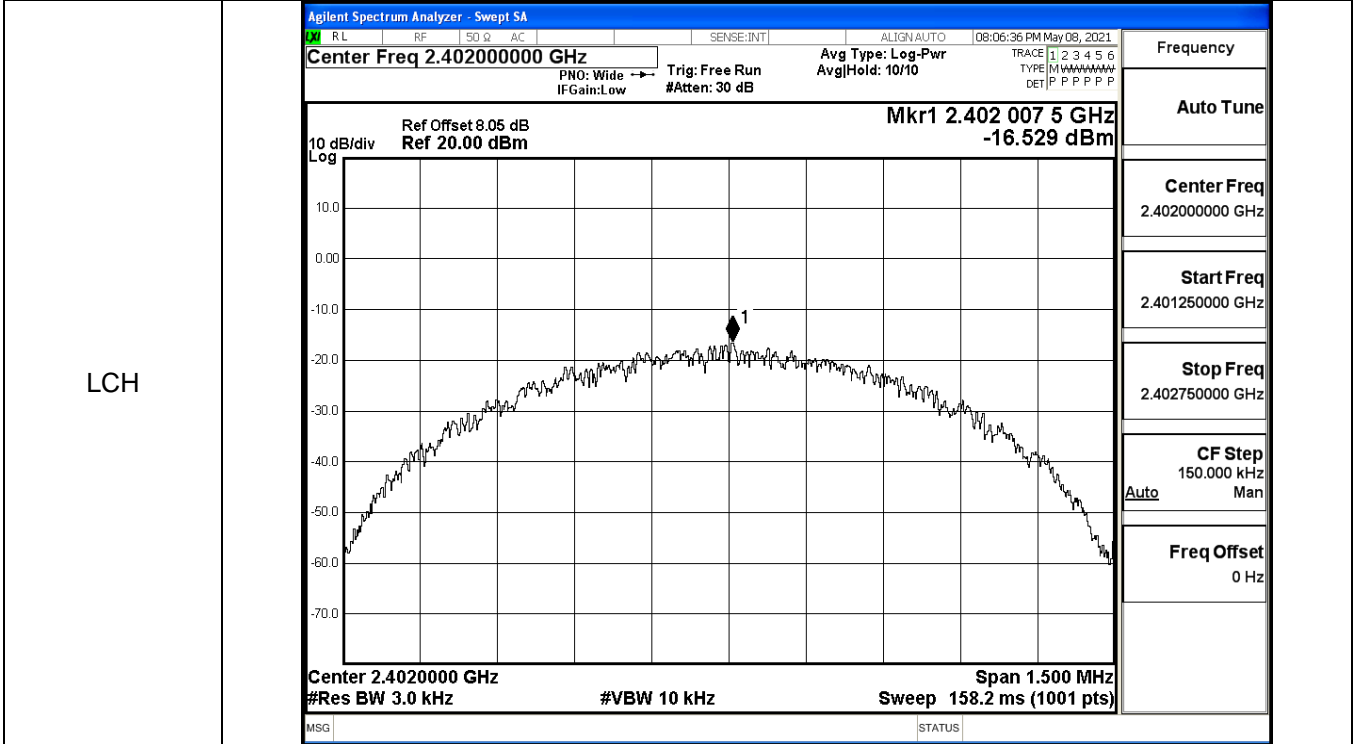
A.2 Maximum Conducted Peak Output Power

Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	-1.054	30	PASS
BT LE	MCH	0.609	30	PASS
BT LE	HCH	1.482	30	PASS

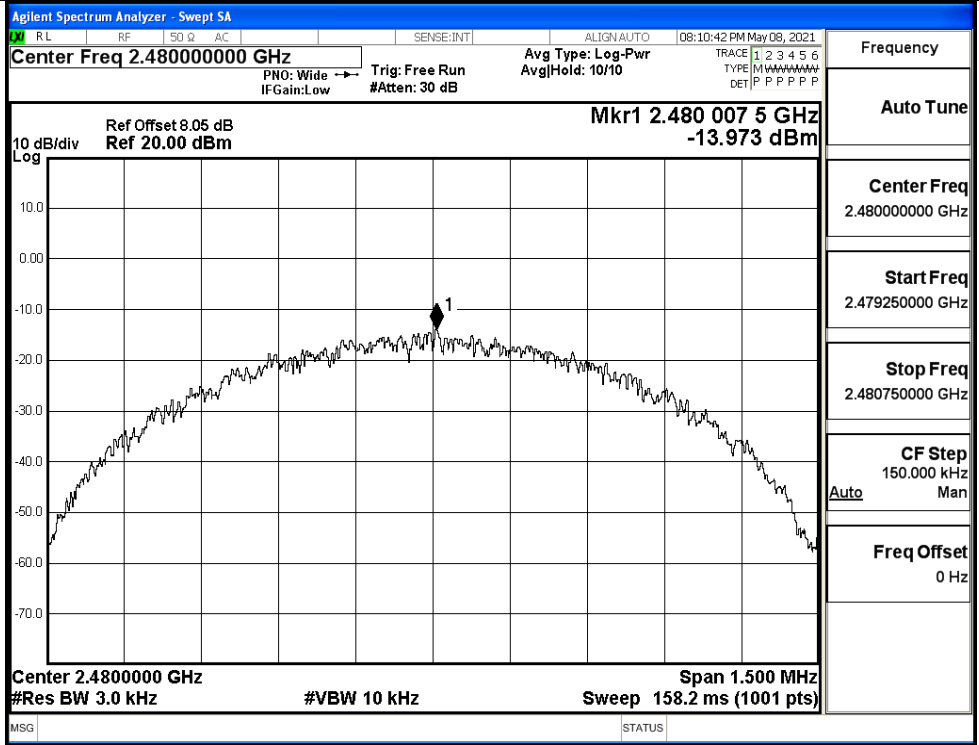
A.3 Maximum Power Spectral Density

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-16.529	8	PASS
BT LE	MCH	-14.796	8	PASS
BT LE	HCH	-13.973	8	PASS

Test Graphs



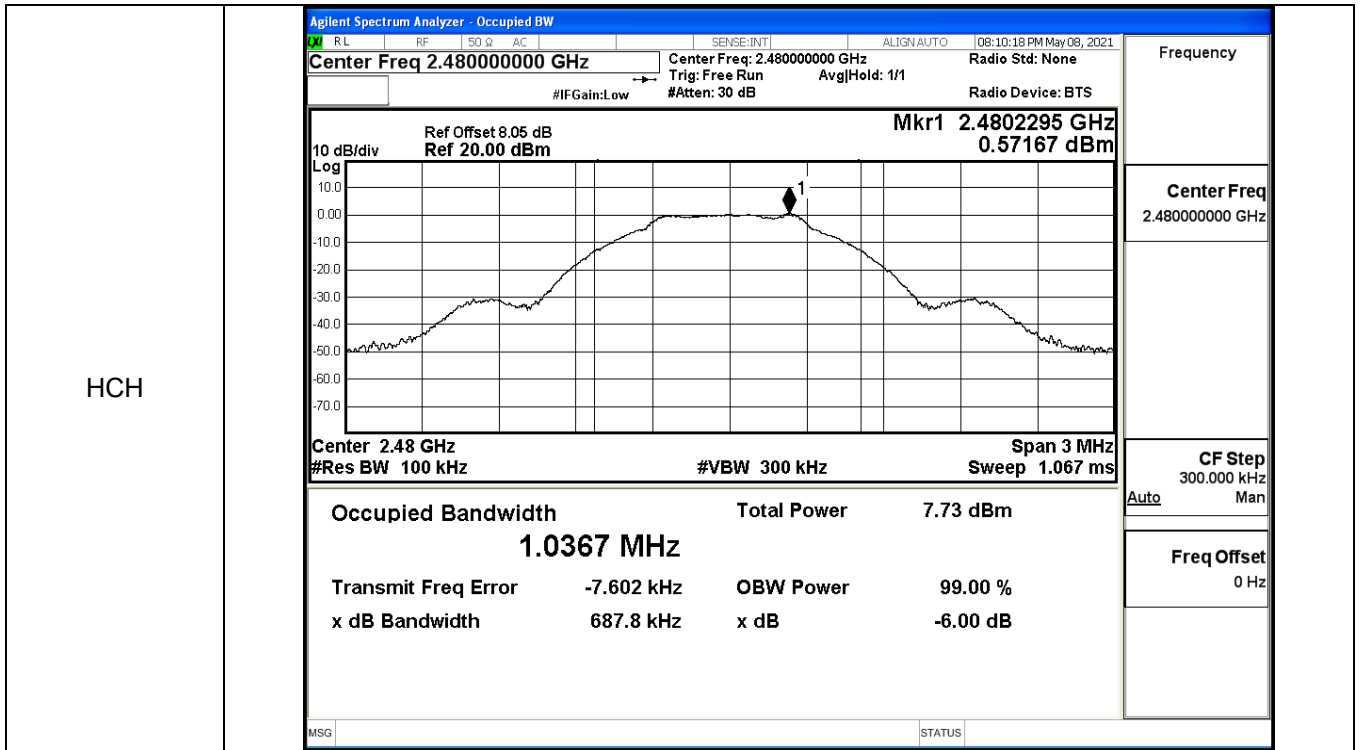
HCH



A.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6842	≥0.5	PASS
BT LE	MCH	0.6988	≥0.5	PASS
BT LE	HCH	0.6878	≥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:INT ALIGN:AUTO 08:06:12 PM May 08, 2021</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>5.22 dBm</td> </tr> <tr> <td style="text-align: center;">1.0347 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>x dB</td> <td>-6.00 dB</td> </tr> </table> <p style="font-size: x-small; margin: 0;">MSG STATUS</p> </div>	Occupied Bandwidth	Total Power	5.22 dBm	1.0347 MHz			Transmit Freq Error	OBW Power	99.00 %	x dB Bandwidth	x dB	-6.00 dB
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A.5 RF Conducted Spurious Emissions

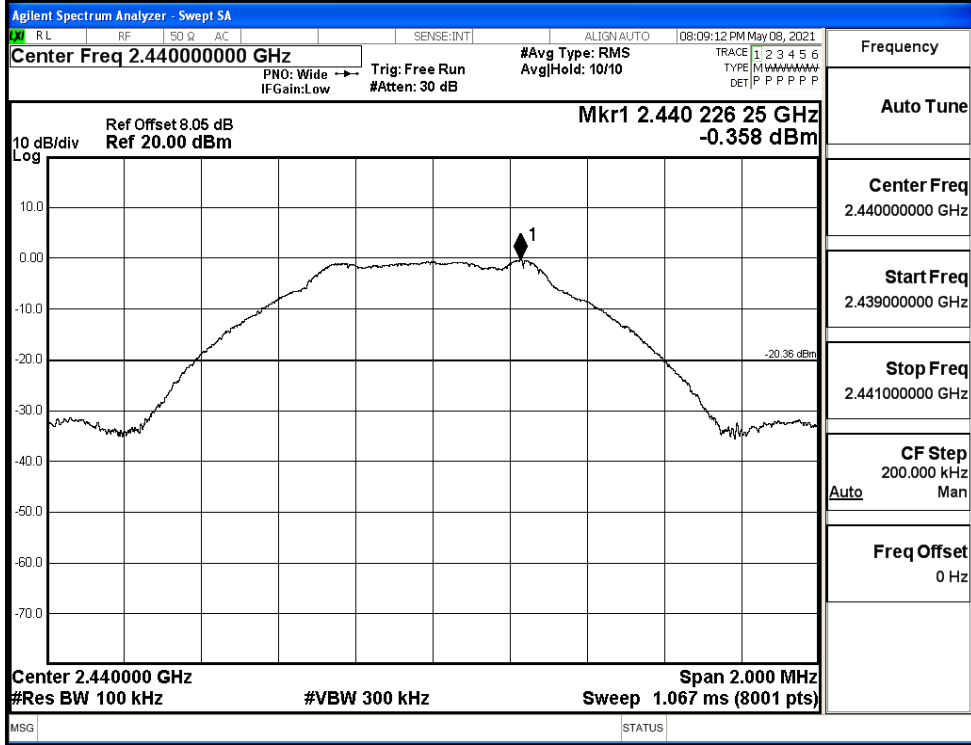
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-1.995	-37.649	-21.995	PASS
BT LE	MCH	-0.358	-37.730	-20.358	PASS
BT LE	HCH	0.522	-37.275	-19.478	PASS

BT LE_LCH_Graphs

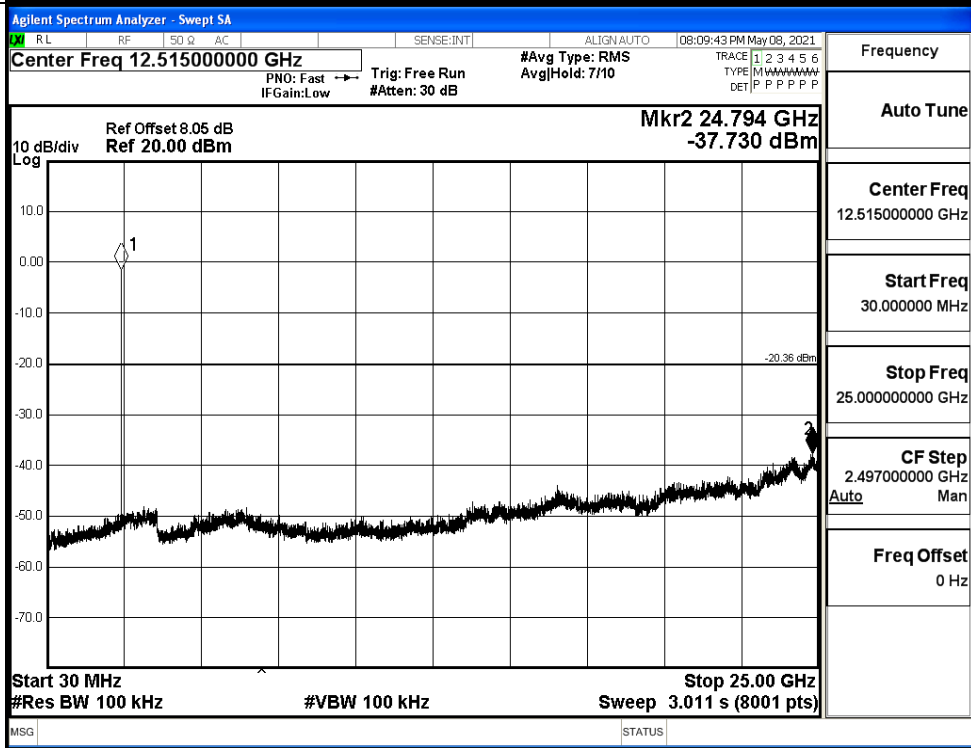
<p>Pref/BT LE/LCH</p>		<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.40200000 GHz</p> <p>Mkr1 2.402 227 50 GHz -1.995 dBm</p> <p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.402000000 GHz</p> <p>Start Freq 2.401000000 GHz</p> <p>Stop Freq 2.403000000 GHz</p> <p>CF Step 200.000 kHz Auto Man</p> <p>Freq Offset 0 Hz</p>
<p>Puw/BT LE/LCH</p>		<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 12.51500000 GHz</p> <p>Mkr2 24.738 GHz -37.649 dBm</p> <p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 12.515000000 GHz</p> <p>Start Freq 30.0000000 MHz</p> <p>Stop Freq 25.000000000 GHz</p> <p>CF Step 2.497000000 GHz Auto Man</p> <p>Freq Offset 0 Hz</p>

BT LE_MCH_Graphs

Pref/BT LE/MCH

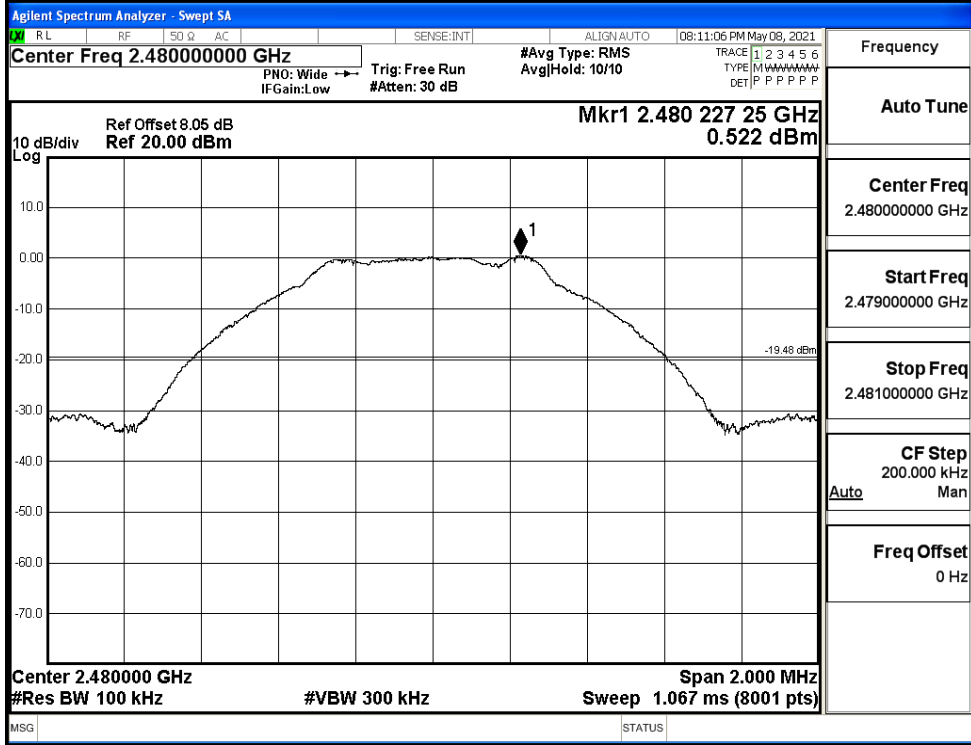


Puw/BT LE/MCH

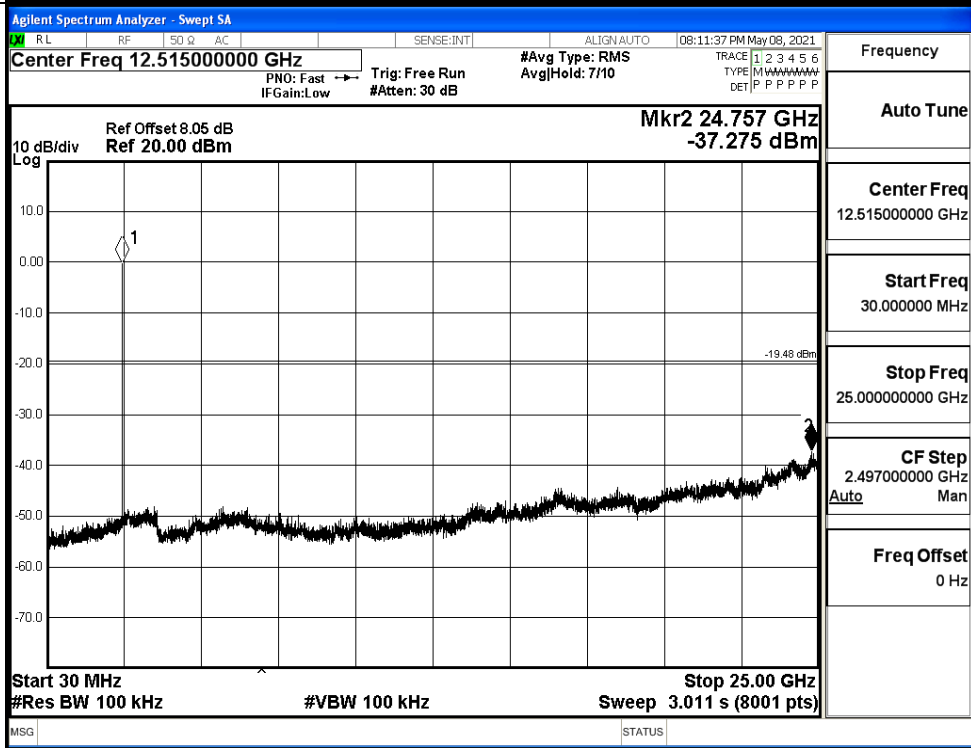


BT LE_HCH_Graphs

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	-2.008	-49.692	-22.01	PASS
BT LE	HCH	0.787	-48.918	-19.21	PASS

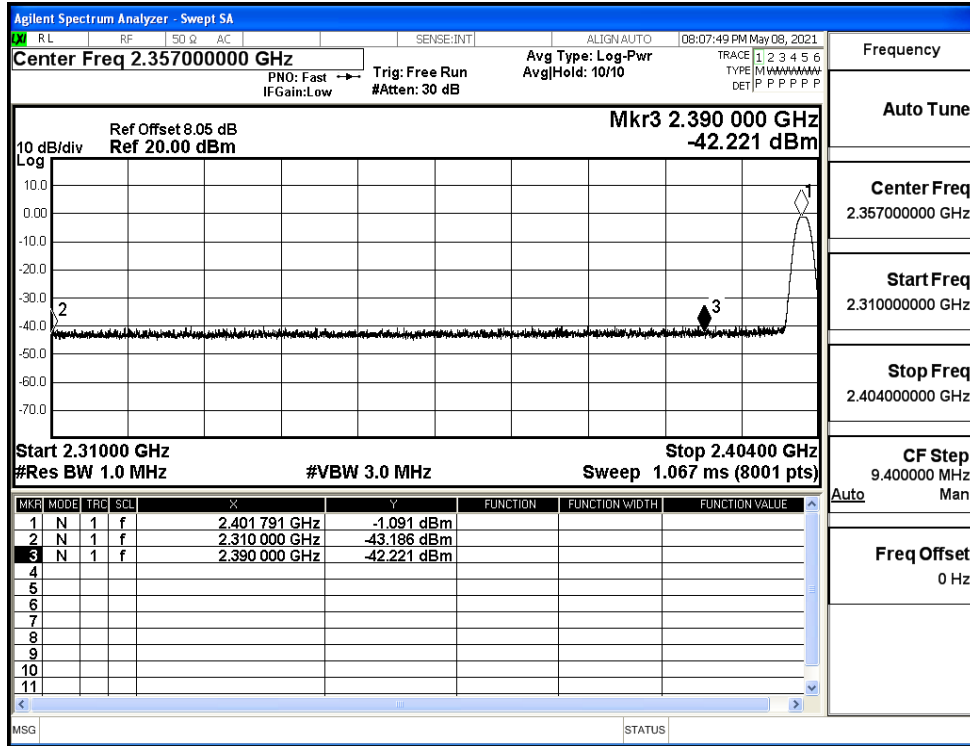
Test Graphs

LCH	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.35700000 GHz Mkr4 2.388 819 GHz -49.692 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>1</td><td>f</td><td>2.401 979 GHz</td><td>-2.008 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 GHz</td><td>-50.948 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 GHz</td><td>-53.197 dBm</td><td></td><td></td><td></td></tr> <tr><td>4</td><td>N</td><td>1</td><td>f</td><td>2.388 819 GHz</td><td>-49.692 dBm</td><td></td><td></td><td></td></tr> </tbody> </table>	MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	2.401 979 GHz	-2.008 dBm				2	N	1	f	2.400 000 GHz	-50.948 dBm				3	N	1	f	2.390 000 GHz	-53.197 dBm				4	N	1	f	2.388 819 GHz	-49.692 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 Mkr4 2.495 044 50 GHz -48.918 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>1</td><td>f</td><td>2.480 227 50 GHz</td><td>0.787 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>-49.583 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>-50.636 dBm</td><td></td><td></td><td></td></tr> <tr><td>4</td><td>N</td><td>1</td><td>f</td><td>2.495 044 50 GHz</td><td>-48.918 dBm</td><td></td><td></td><td></td></tr> </tbody> </table>	MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	2.480 227 50 GHz	0.787 dBm				2	N	1	f	2.483 500 00 GHz	-49.583 dBm				3	N	1	f	2.500 000 00 GHz	-50.636 dBm				4	N	1	f	2.495 044 50 GHz	-48.918 dBm				Frequency Auto Tune Center Freq 2.48900000 GHz Start Freq 2.478000000 GHz Stop Freq 2.500000000 GHz CF Step 2.200000 MHz Freq Offset 0 Hz
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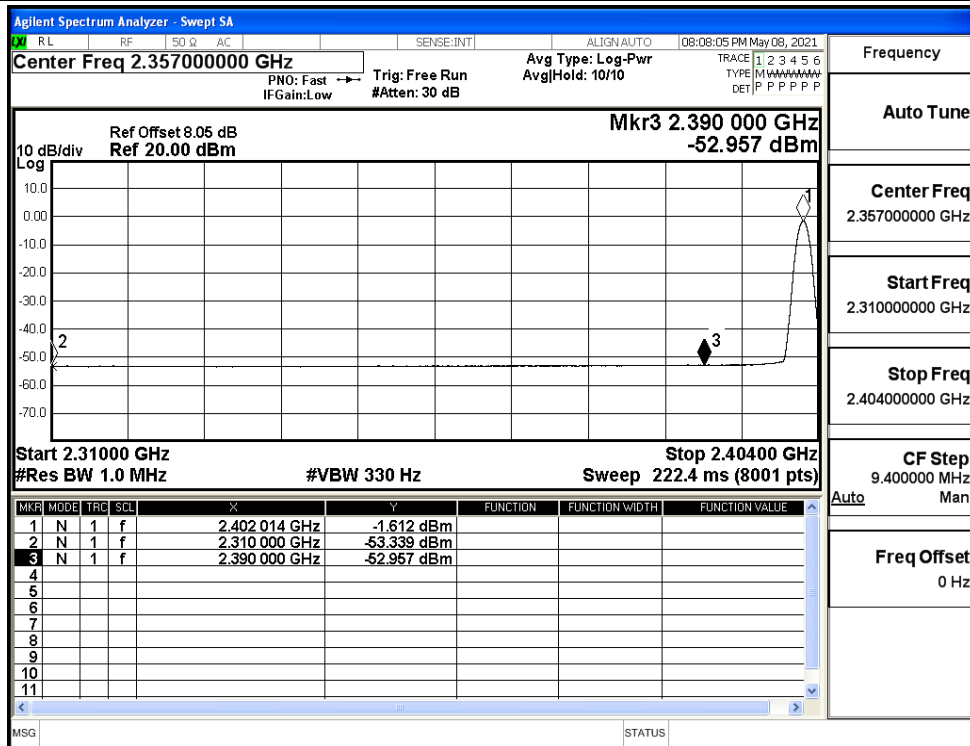
A.7 Restrict-band band-edge measurements

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	-43.19	4.6	0	56.64	PEAK	74	PASS
		Ant1	2310.0	-53.34	4.6	0	46.49	AV	54	PASS
		Ant1	2390.0	-42.22	4.6	0	57.61	PEAK	74	PASS
		Ant1	2390.0	-52.96	4.6	0	46.87	AV	54	PASS
	2480	Ant1	2483.5	-39.47	4.6	0	60.36	PEAK	74	PASS
		Ant1	2483.5	-51.23	4.6	0	48.60	AV	54	PASS
		Ant1	2500.0	-41.72	4.6	0	58.11	PEAK	74	PASS
		Ant1	2500.0	-52.25	4.6	0	47.58	AV	54	PASS

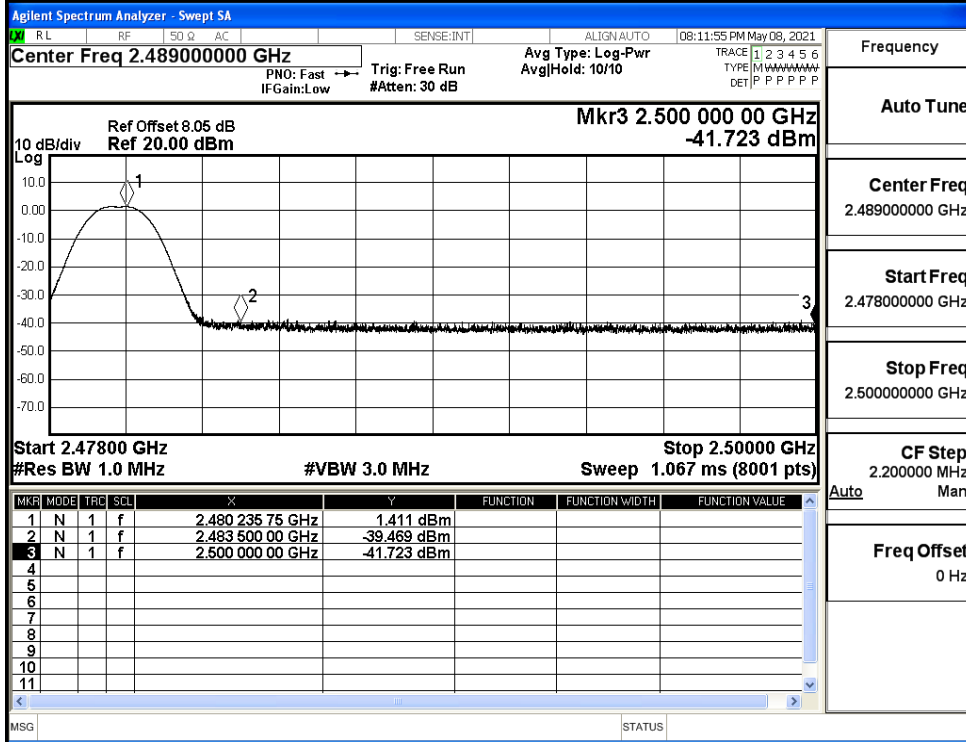
Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



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

