

Appendix B

RF Test Data for BT V5.0(BDR/EDR) (Conducted Measurement)

Product Name: Bluetooth Speaker

Trade Mark: N/A

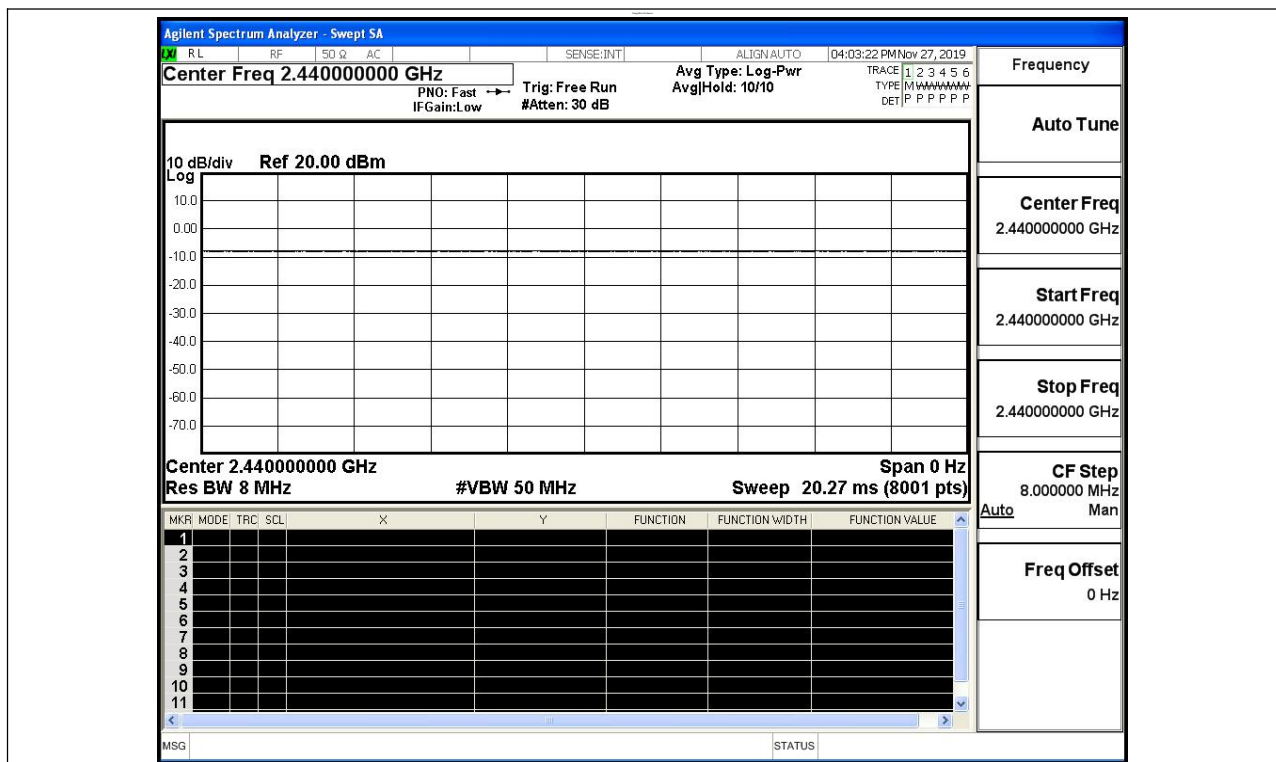
Test Model: BT-1908

Environmental Conditions

Temperature:	22.6 ° C
Relative Humidity:	53.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Zhuo Zhuo
Supervised by:	Tom.Liu

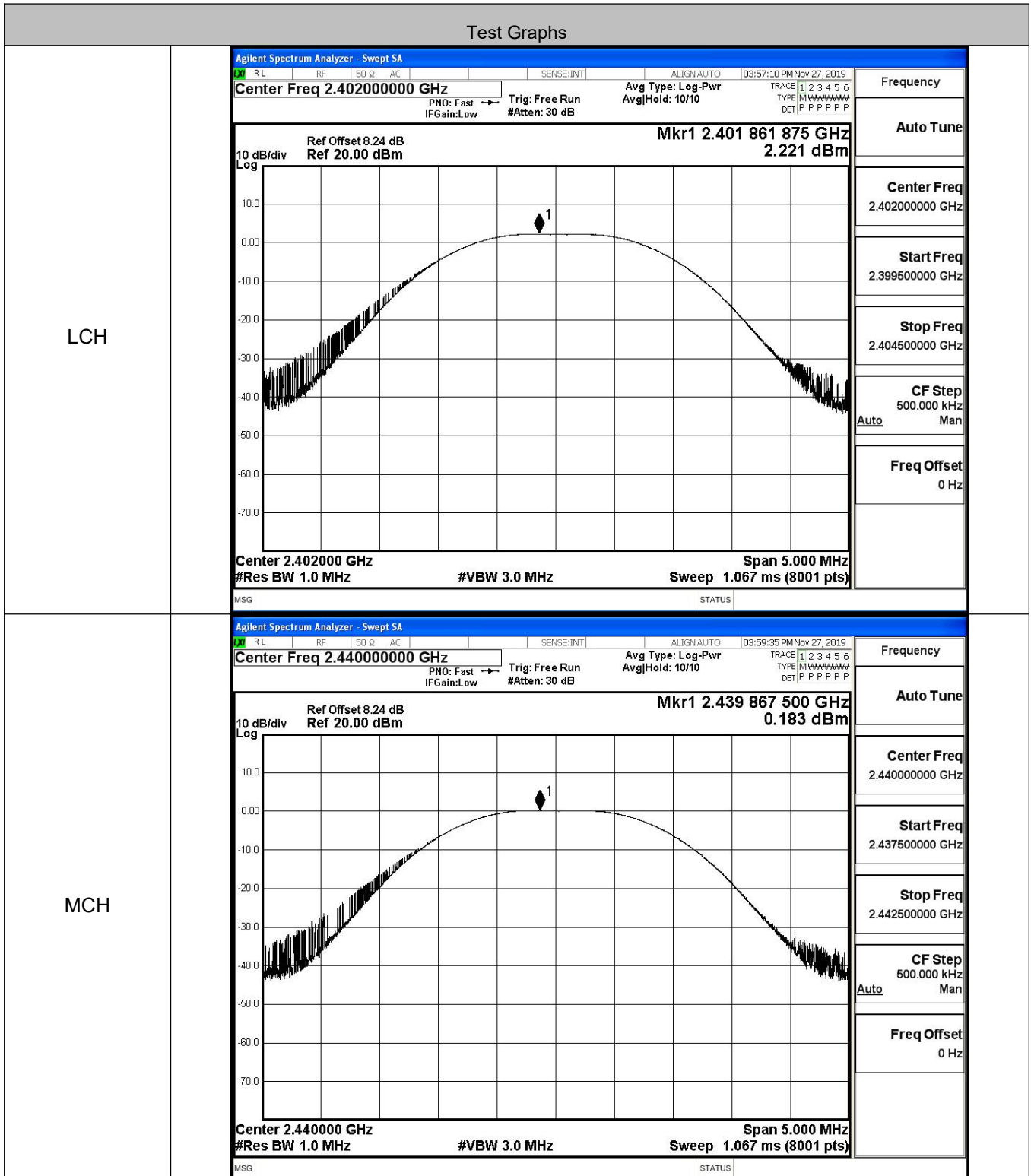
B.1 Duty Cycle

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

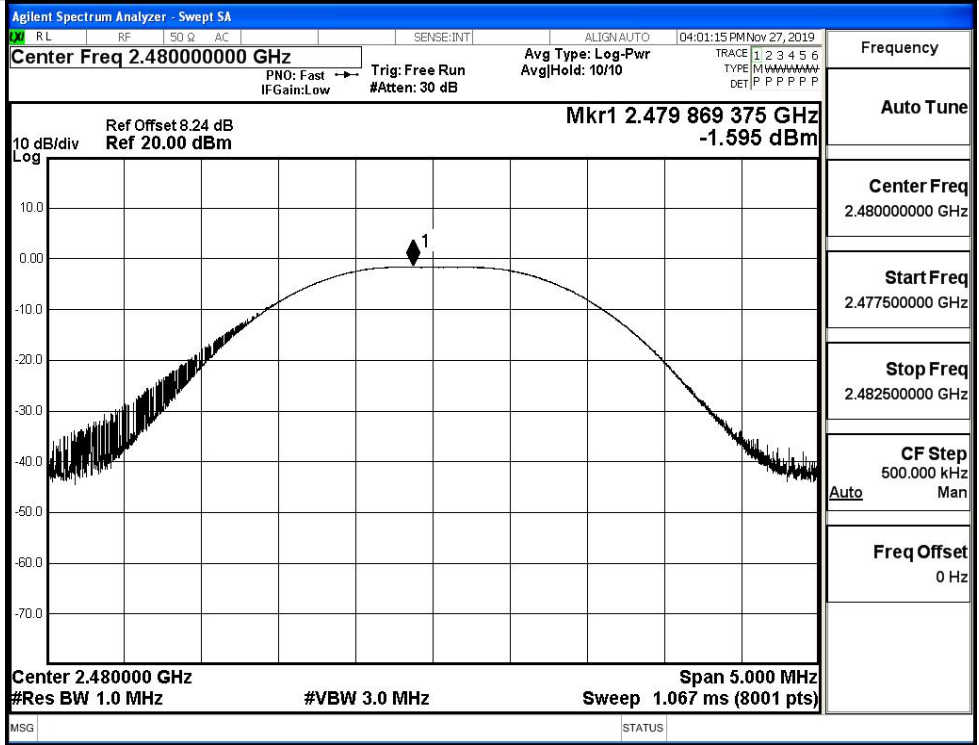


B.2 Maximum Conducted Peak Output Power

Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	2.221	30	PASS
BT LE	MCH	0.183	30	PASS
BT LE	HCH	-1.595	30	PASS



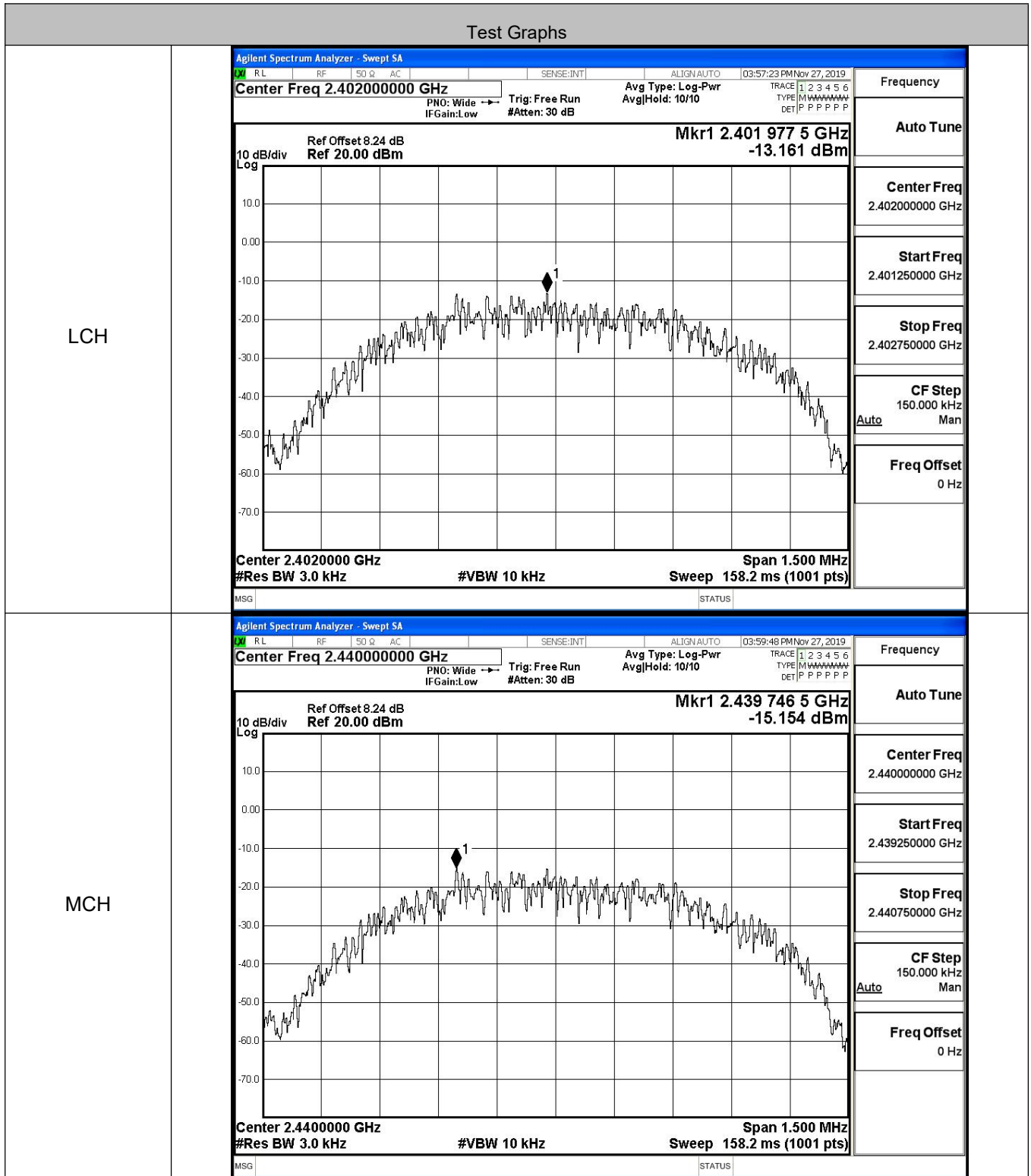
HCH



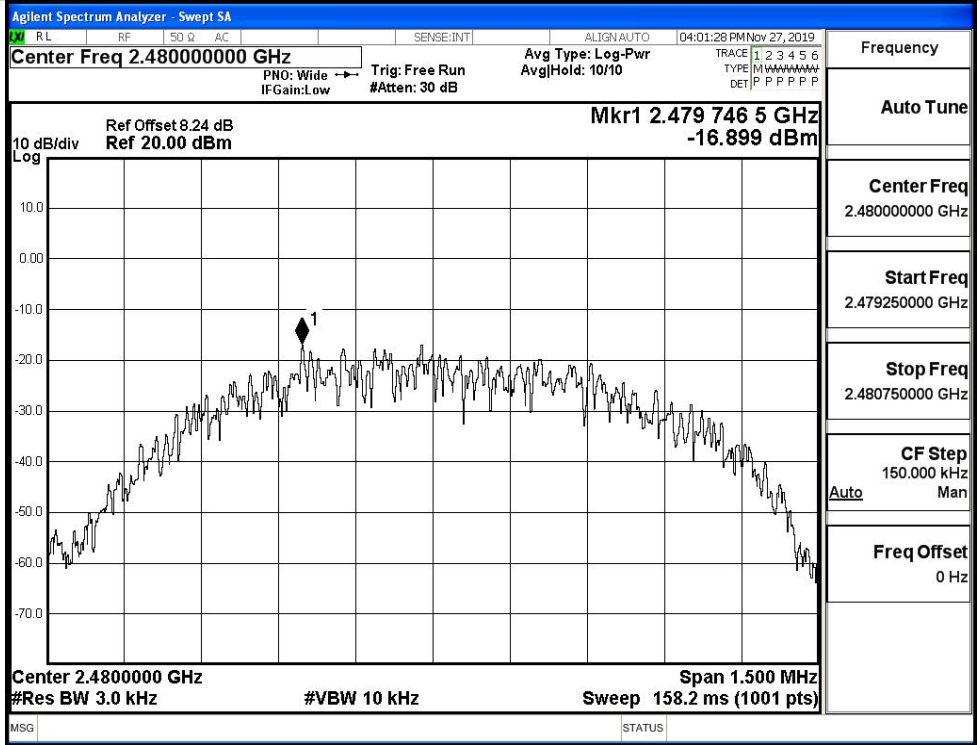
B.3 Maximum Power Spectral Density

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-13.161	8	PASS
BT LE	MCH	-15.154	8	PASS
BT LE	HCH	-16.899	8	PASS

Test Graphs



HCH

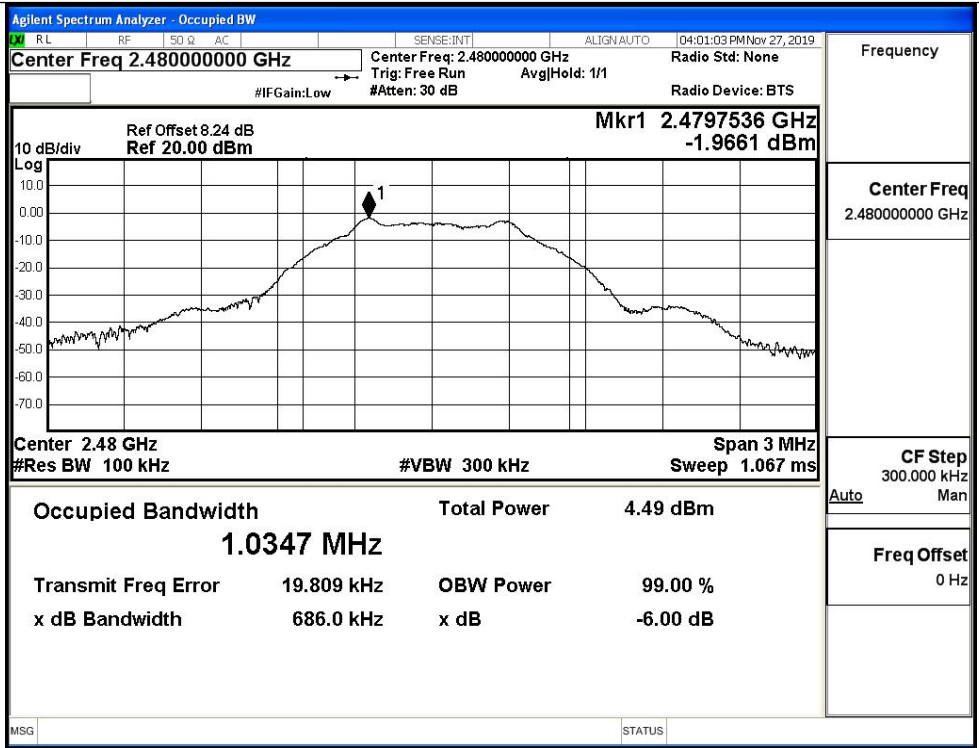


B.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6911	≥0.5	PASS
BT LE	MCH	0.6959	≥0.5	PASS
BT LE	HCH	0.6860	≥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 03:56:59 PM Nov 27, 2019</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> <div style="display: flex; justify-content: space-between;"> <div style="font-size: x-small;">10 dB/div Log</div> <div style="text-align: right;">Mkr1 2.4017514 GHz 1.8641 dBm</div> </div> <div style="display: flex; justify-content: space-between; font-size: x-small;"> <div>Center 2.402 GHz #Res BW 100 kHz</div> <div>#VBW 300 kHz</div> <div>Span 3 MHz Sweep 1.067 ms</div> </div> <table style="width: 100%; font-size: x-small; margin-top: 5px;"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td colspan="2">8.31 dBm</td> </tr> <tr> <td colspan="4" style="text-align: center;">1.0343 MHz</td> </tr> <tr> <td>Transmit Freq Error</td> <td>18.494 kHz</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>691.1 kHz</td> <td>x dB</td> <td>-6.00 dB</td> </tr> </table> <p style="font-size: x-small; margin-top: 5px;">MSG STATUS</p> </div>	Occupied Bandwidth	Total Power	8.31 dBm		1.0343 MHz				Transmit Freq Error	18.494 kHz	OBW Power	99.00 %	x dB Bandwidth	691.1 kHz	x dB	-6.00 dB
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HCH

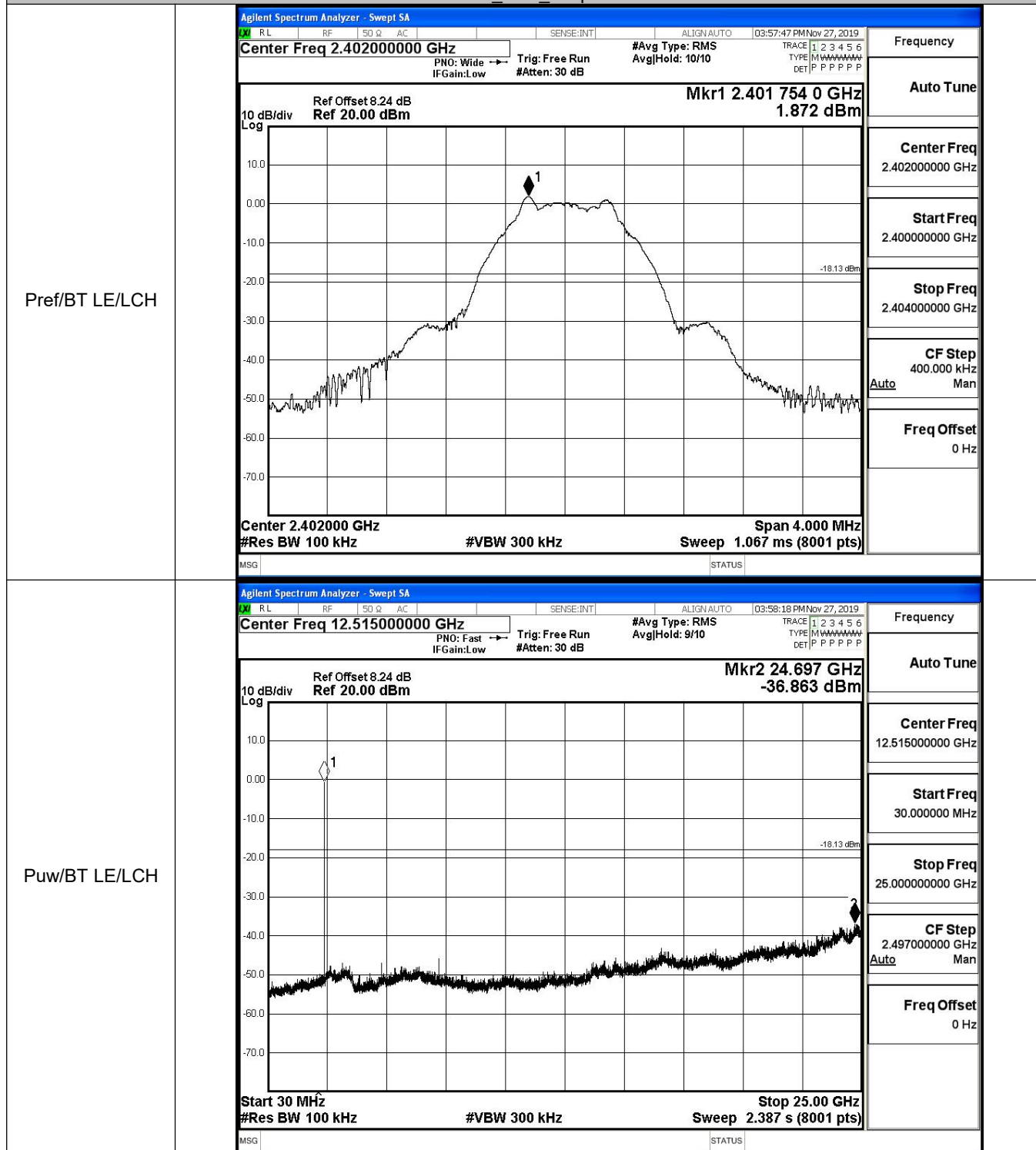


Frequency	Center Freq 2.48000000 GHz
CF Step	300.000 kHz Auto Man
Freq Offset	0 Hz

B.5 RF Conducted Spurious Emissions

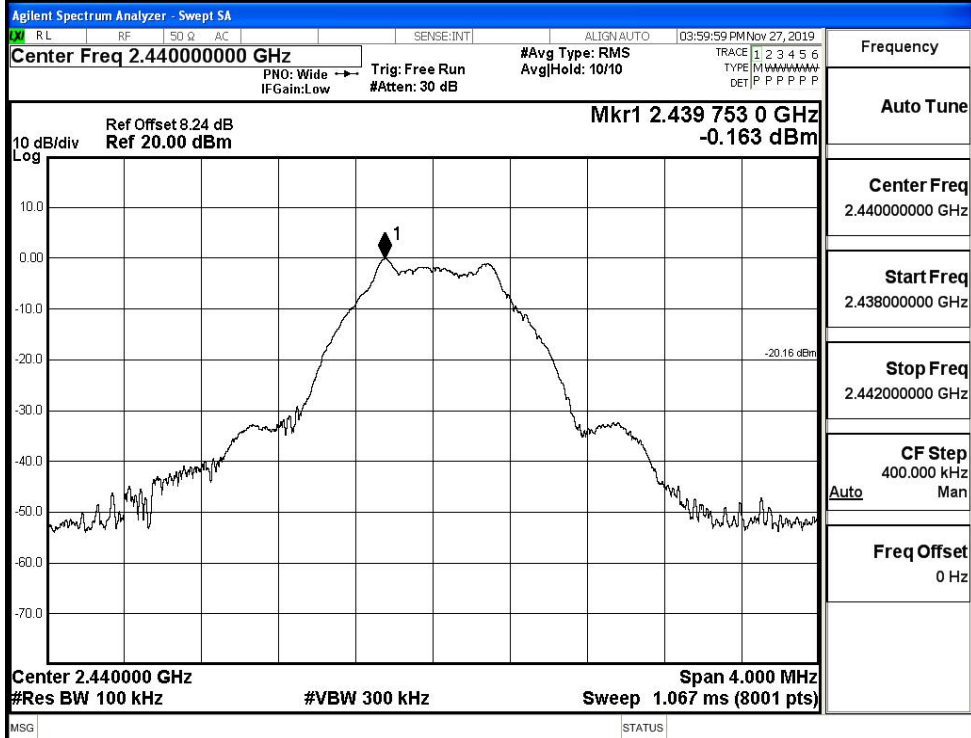
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	1.872	-36.863	-18.128	PASS
BT LE	MCH	-0.163	-36.370	-20.163	PASS
BT LE	HCH	-1.963	-36.959	-21.963	PASS

BT LE_LCH_Graphs

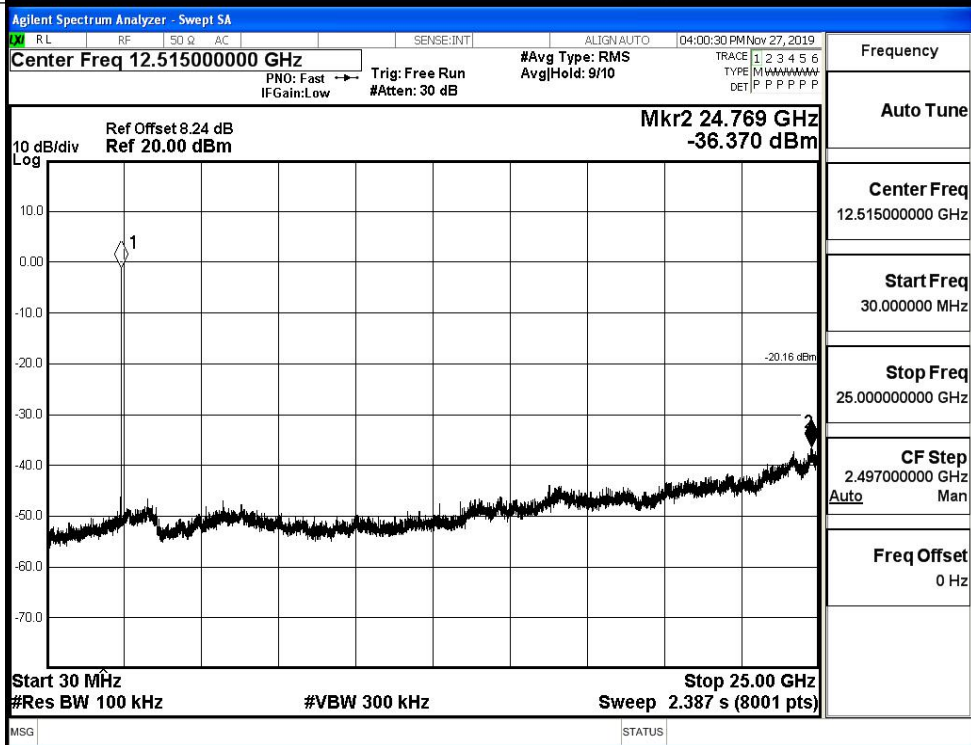


BT LE MCH Graphs

Pref/BT LE/MCH

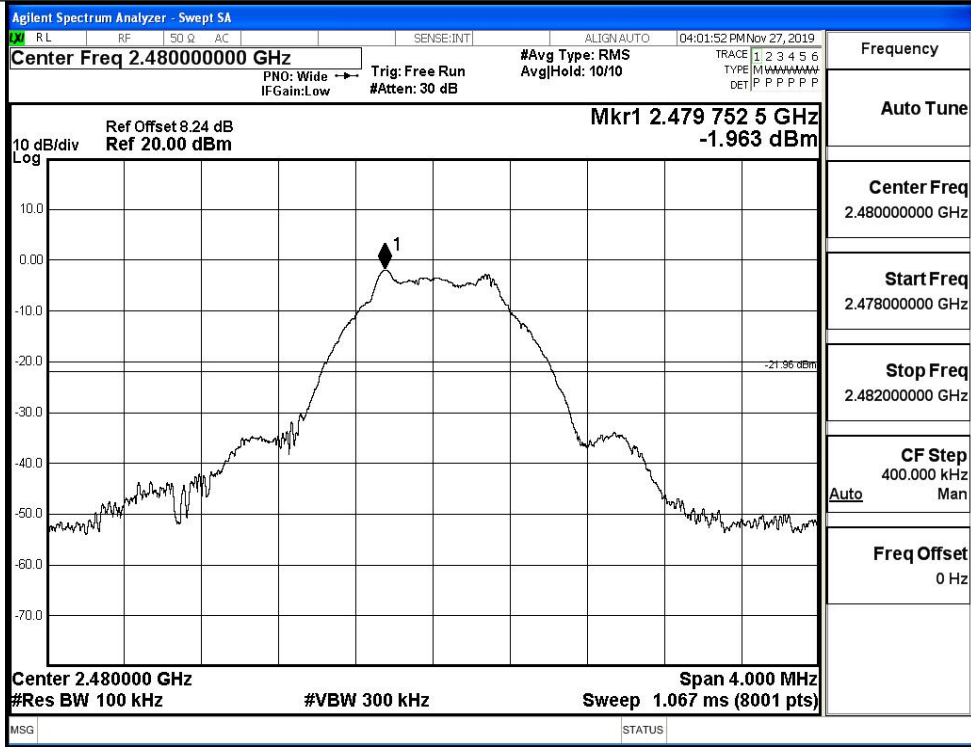


Puw/BT LE/MCH

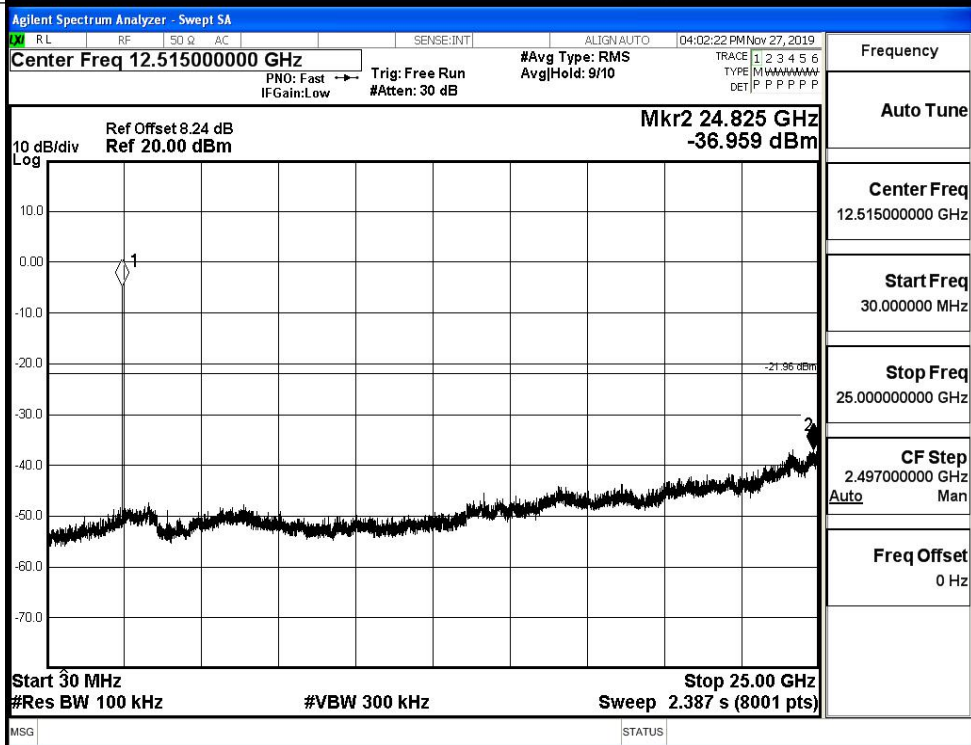


BT LE HCH Graphs

Pref/BT LE/HCH



Puw/BT LE/HCH



B.6 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	1.879	-49.420	-18.12	PASS
BT LE	HCH	-1.950	-48.717	-21.95	PASS

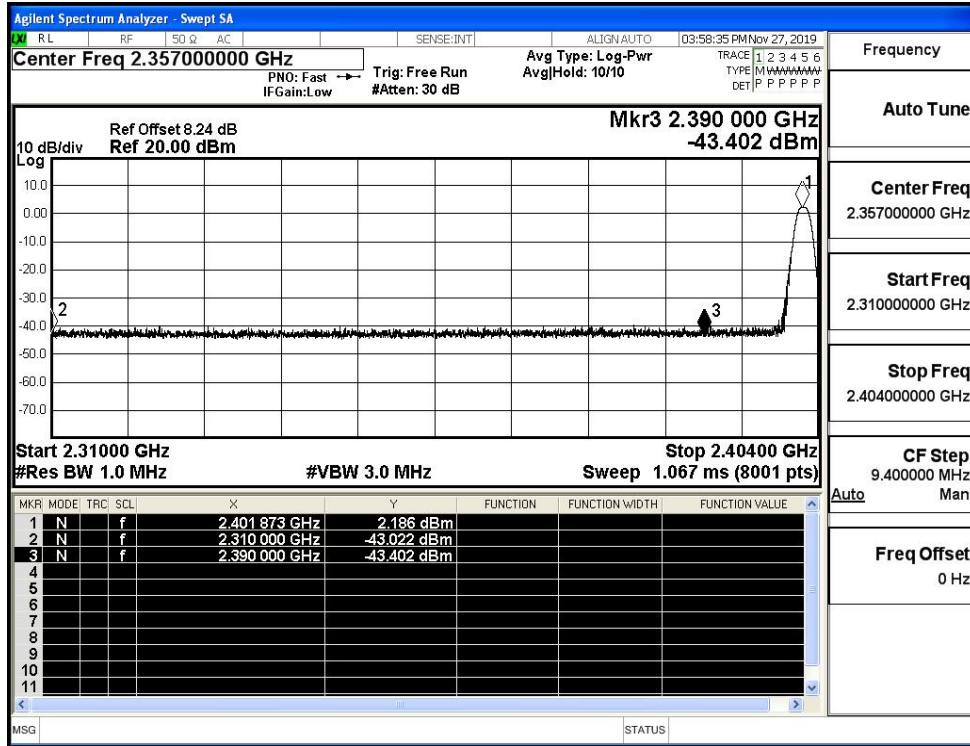
Test Graphs

LCH		<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.35700000 GHz</p> <p>Mkr4 2.327 484 GHz -49.420 dBm</p> <p>Start 2.31000 GHz #Res BW 100 kHz</p> <p>Stop 2.40400 GHz #VBW 300 kHz Sweep 9.067 ms (8001 pts)</p> <table border="1"> <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>2.401 756 GHz</td> <td>1.879 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>-51.207 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>-53.376 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td>N</td> <td>f</td> <td></td> <td>2.327 484 GHz</td> <td>-49.420 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		2.401 756 GHz	1.879 dBm				2	N	f		2.400 000 GHz	-51.207 dBm				3	N	f		2.390 000 GHz	-53.376 dBm				4	N	f		2.327 484 GHz	-49.420 dBm			
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HCH		<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.48900000 GHz</p> <p>Mkr4 2.499 535 25 GHz -48.717 dBm</p> <p>Start 2.47800 GHz #Res BW 100 kHz</p> <p>Stop 2.50000 GHz #VBW 300 kHz Sweep 2.133 ms (8001 pts)</p> <table border="1"> <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>2.479 767 25 GHz</td> <td>-1.950 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>-51.290 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>-51.903 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td>N</td> <td>f</td> <td></td> <td>2.499 535 25 GHz</td> <td>-48.717 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		2.479 767 25 GHz	-1.950 dBm				2	N	f		2.483 500 00 GHz	-51.290 dBm				3	N	f		2.500 000 00 GHz	-51.903 dBm				4	N	f		2.499 535 25 GHz	-48.717 dBm			
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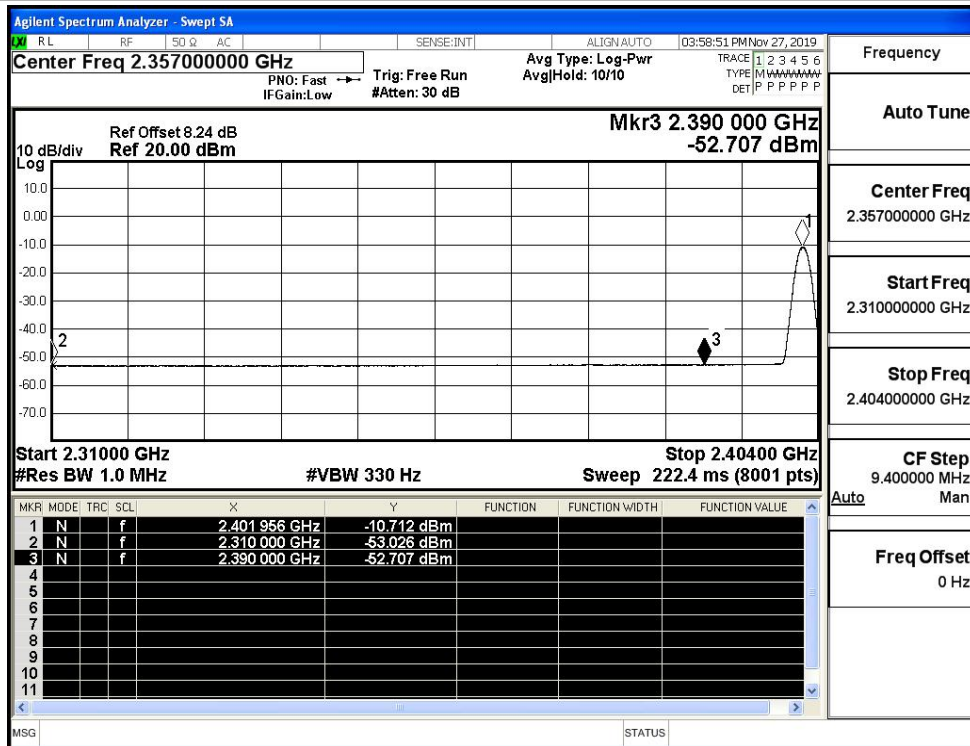
B.7 Restrict-band band-edge measurements

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	-43.02	2.0	0	52.24	PEAK	74	PASS
		Ant1	2310.0	-53.03	2.0	0	42.23	AV	54	PASS
		Ant1	2390.0	-43.40	2.0	0	51.86	PEAK	74	PASS
		Ant1	2390.0	-52.71	2.0	0	42.55	AV	54	PASS
	2480	Ant1	2483.5	-42.26	2.0	0	53.00	PEAK	74	PASS
		Ant1	2483.5	-52.26	2.0	0	43.00	AV	54	PASS
		Ant1	2500.0	-42.71	2.0	0	52.55	PEAK	74	PASS
		Ant1	2500.0	-52.14	2.0	0	43.11	AV	54	PASS

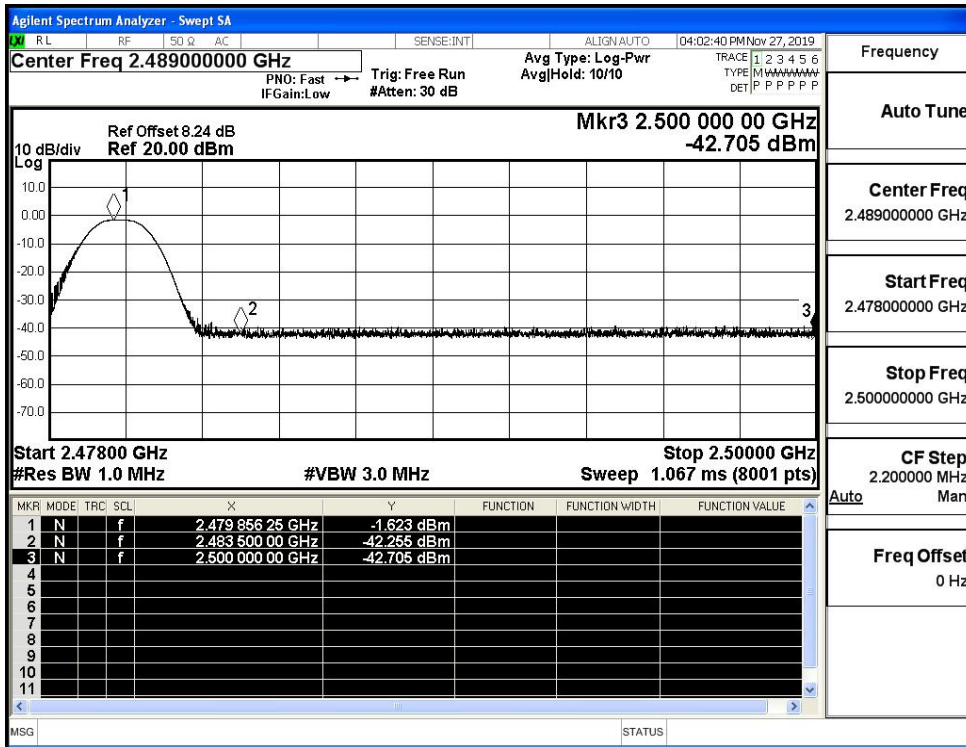
Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



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

