

Appendix B

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

Product Name: Digital Audio Player

Trade Mark: N/A

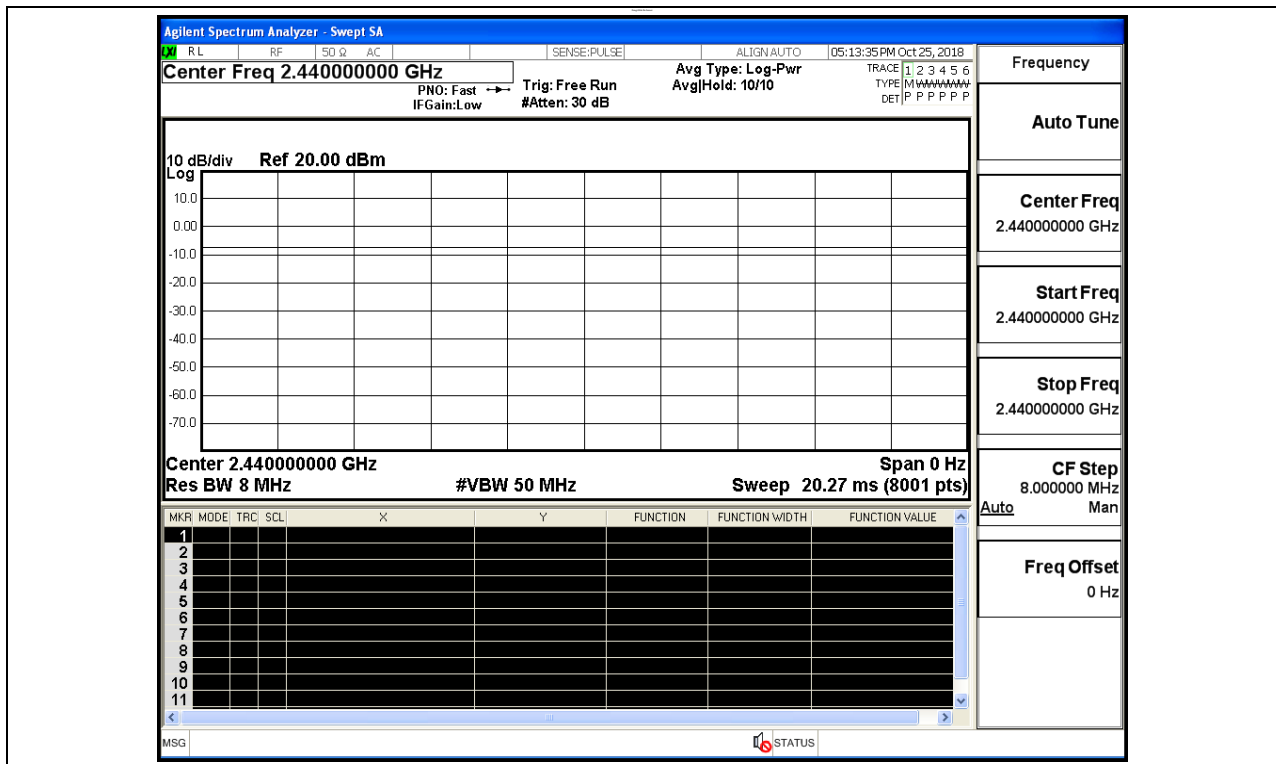
Test Model: PAW Gold Touch

Environmental Conditions

Temperature:	24.1 ° C
Relative Humidity:	53.4%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond.Lu
Supervised by:	Jayden.Zhuo

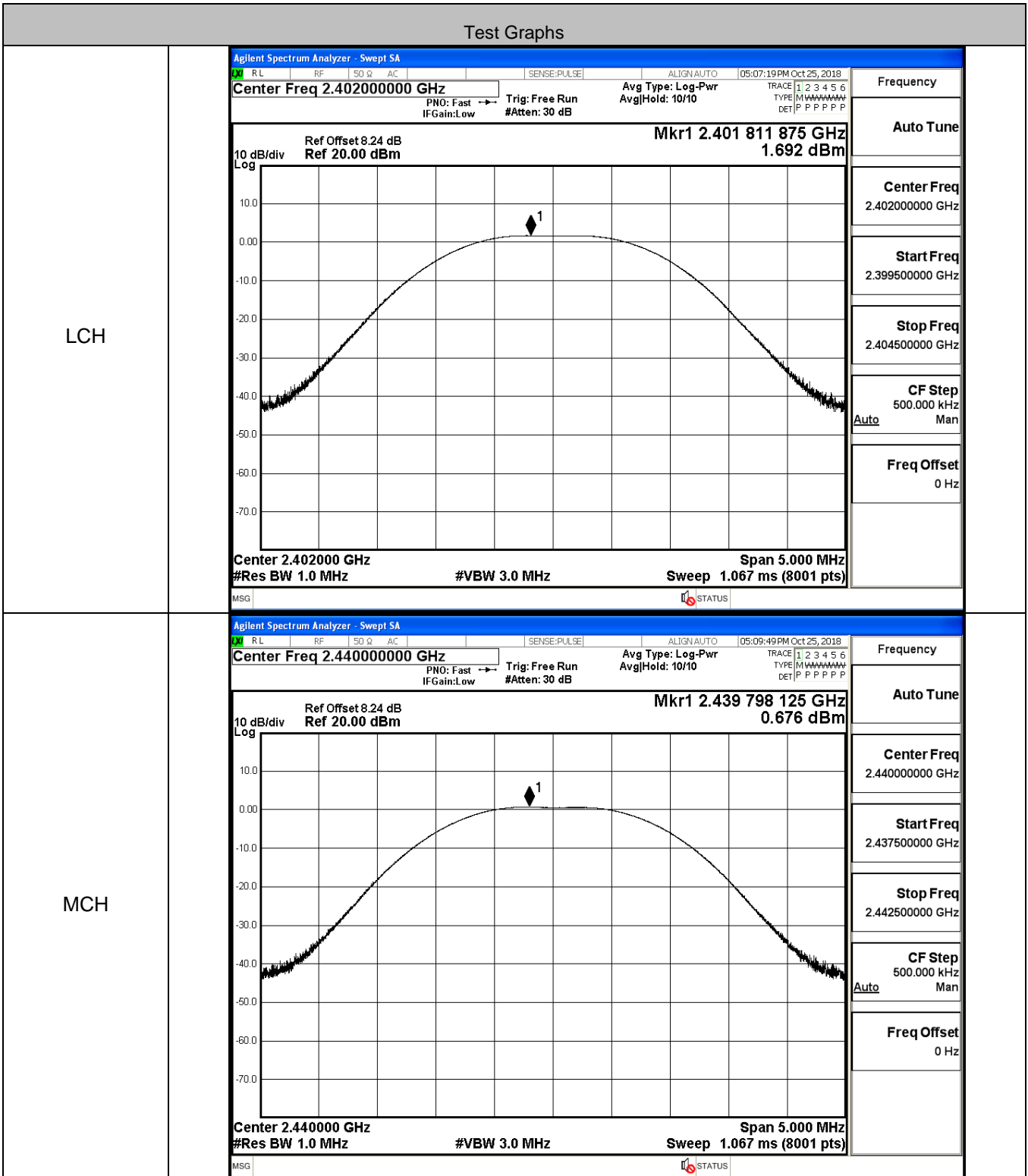
B.1 Duty Cycle

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

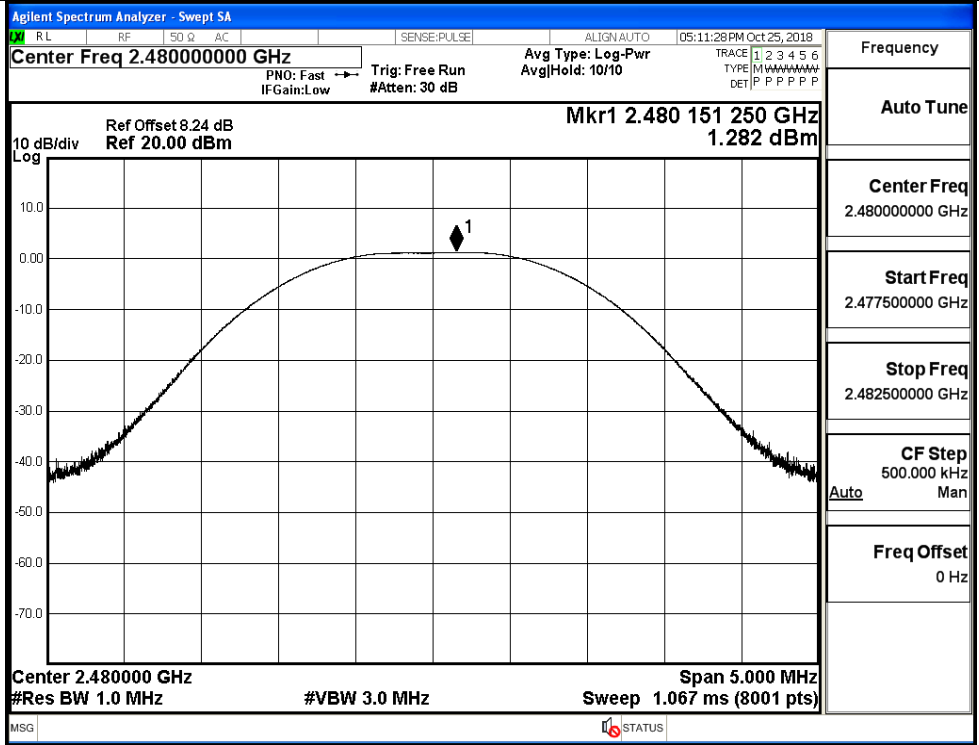


B.2 Maximum Conducted Peak Output Power

Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	1.692	30	PASS
BT LE	MCH	0.676	30	PASS
BT LE	HCH	1.282	30	PASS



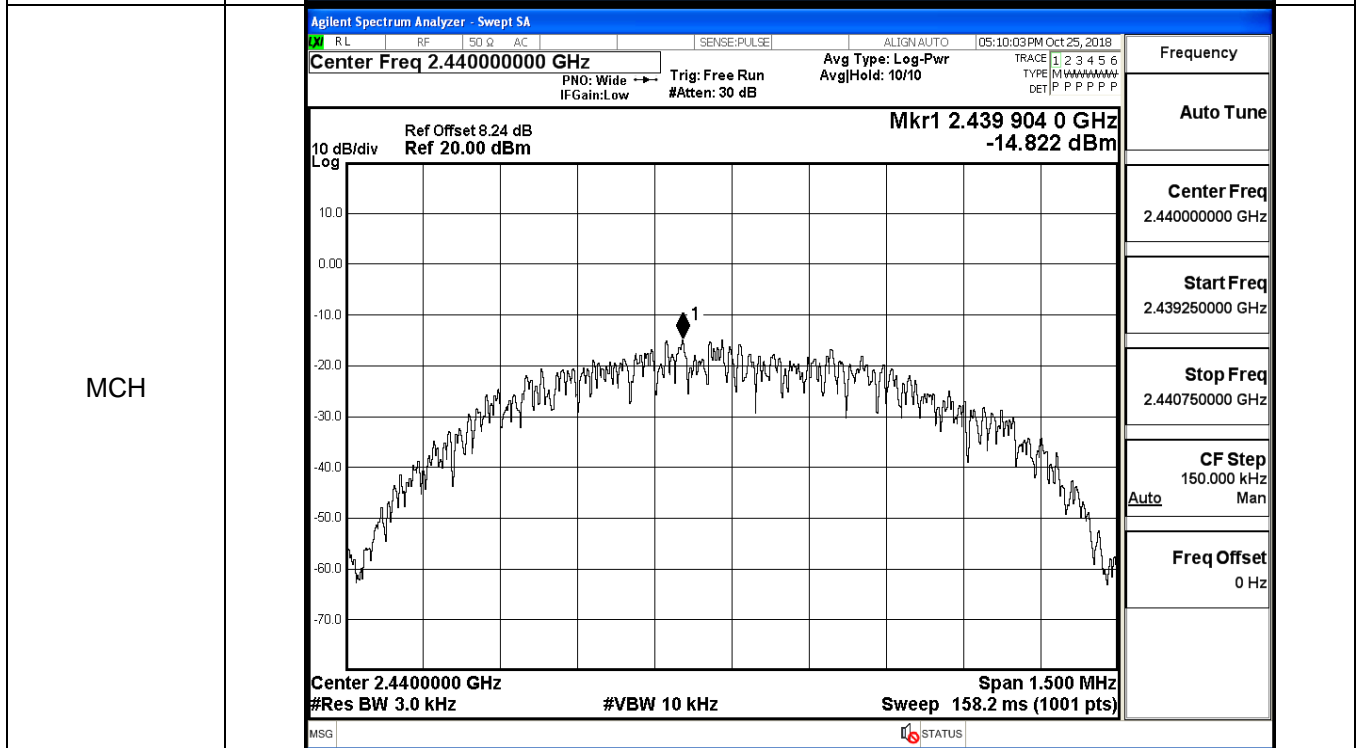
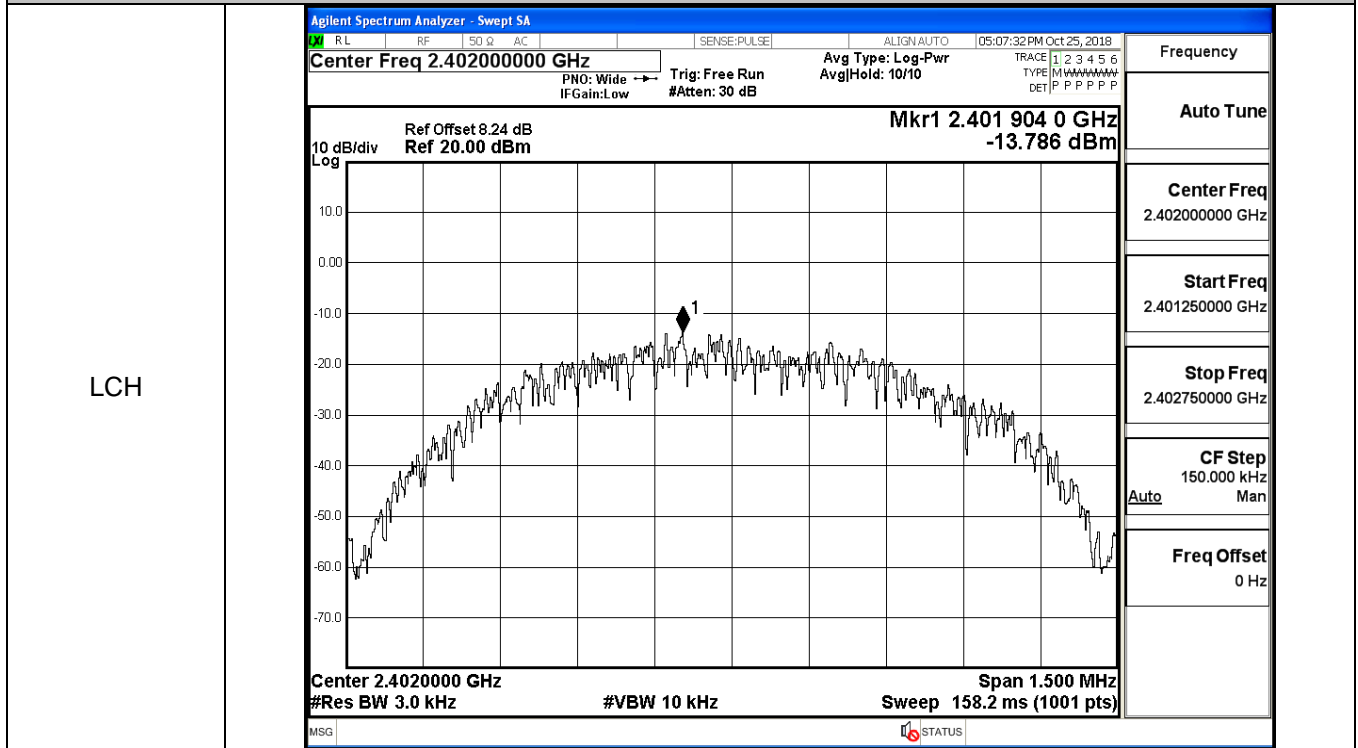
HCH



B.3 Maximum Power Spectral Density

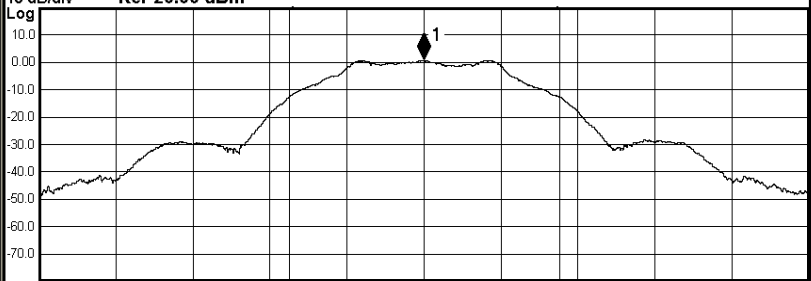
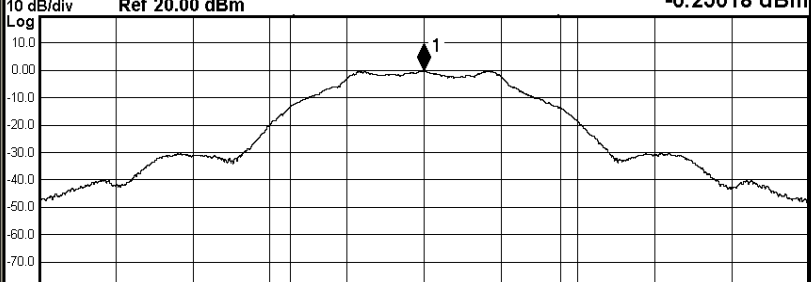
Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-13.786	8	PASS
BT LE	MCH	-14.822	8	PASS
BT LE	HCH	-14.119	8	PASS

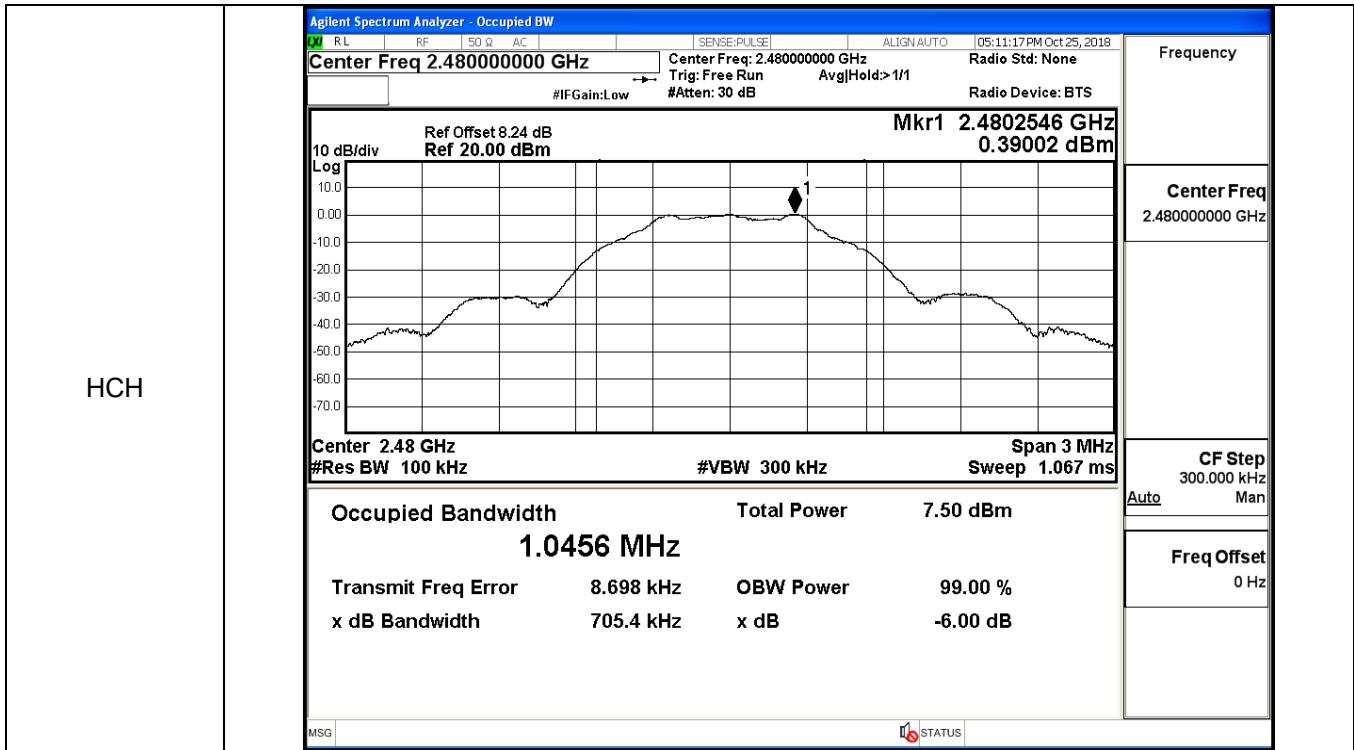
Test Graphs



B.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.7045	≥0.5	PASS
BT LE	MCH	0.7140	≥0.5	PASS
BT LE	HCH	0.7054	≥0.5	PASS

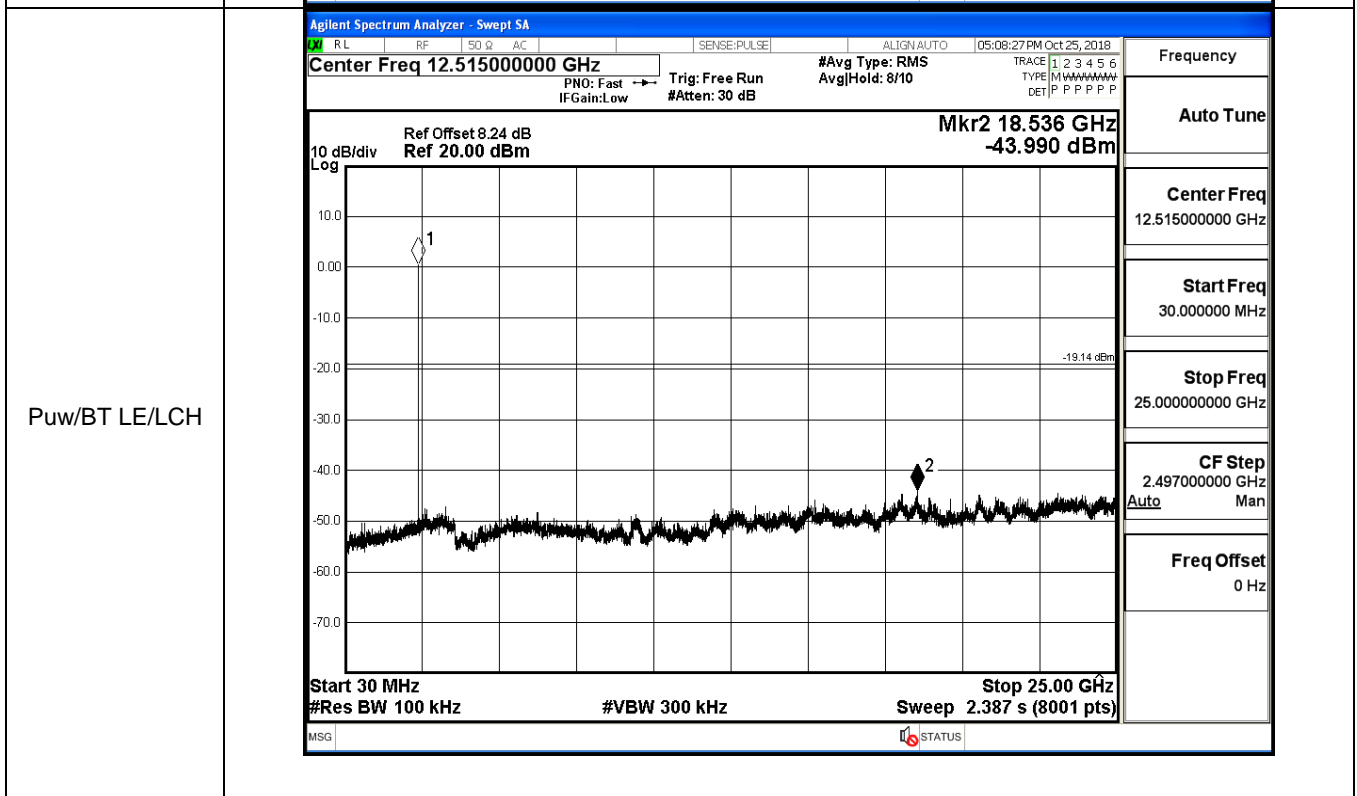
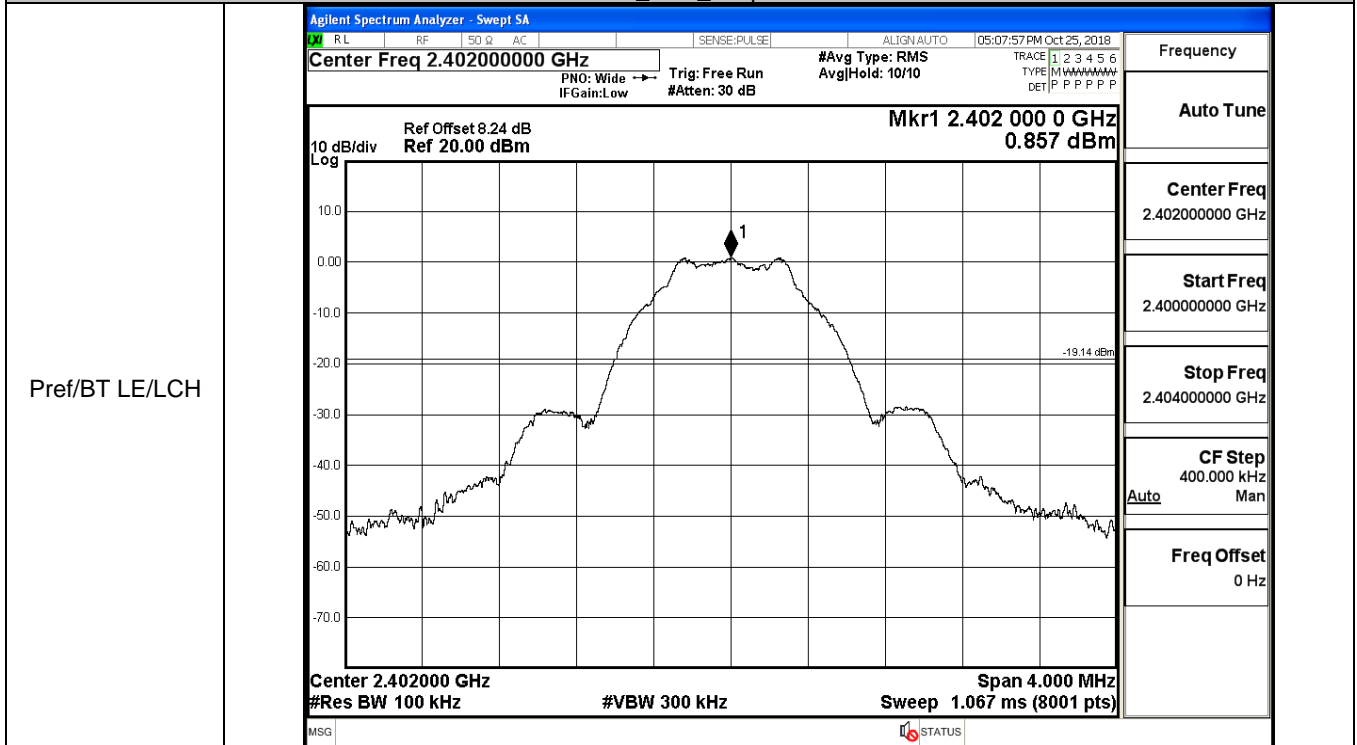
Test Graphs																	
LCH	<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center; margin: 0;">Agilent Spectrum Analyzer - Occupied BW</p> <p style="font-size: small; margin: 0;">RL RF 50 Ω AC SENSE:PULSE ALIGN:AUTO 05:07:08 PM Oct 25, 2018</p> <p style="margin: 0;">Center 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> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p style="font-size: x-small;">10 dB/div Ref Offset 8.24 dB Log Ref 20.00 dBm</p>  <p style="font-size: x-small;">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: x-small;"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td colspan="2">7.95 dBm</td> </tr> <tr> <td colspan="4" style="text-align: center;">1.0490 MHz</td> </tr> <tr> <td>Transmit Freq Error</td> <td>3.613 kHz</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>704.5 kHz</td> <td>x dB</td> <td>-6.00 dB</td> </tr> </table> </div> <div style="width: 50%; border-left: 1px solid black; padding-left: 5px;"> <p style="font-size: x-small;">Mkr1 2.4020004 GHz 0.77047 dBm</p> <p style="font-size: x-small;">Frequency Center Freq 2.402000000 GHz</p> <p style="font-size: x-small;">CF Step 300.000 kHz Auto Man</p> <p style="font-size: x-small;">Freq Offset 0 Hz</p> </div> </div> <p style="font-size: x-small; margin-top: 5px;">MSG STATUS</p> </div>	Occupied Bandwidth	Total Power	7.95 dBm		1.0490 MHz				Transmit Freq Error	3.613 kHz	OBW Power	99.00 %	x dB Bandwidth	704.5 kHz	x dB	-6.00 dB
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B.5 RF Conducted Spurious Emissions

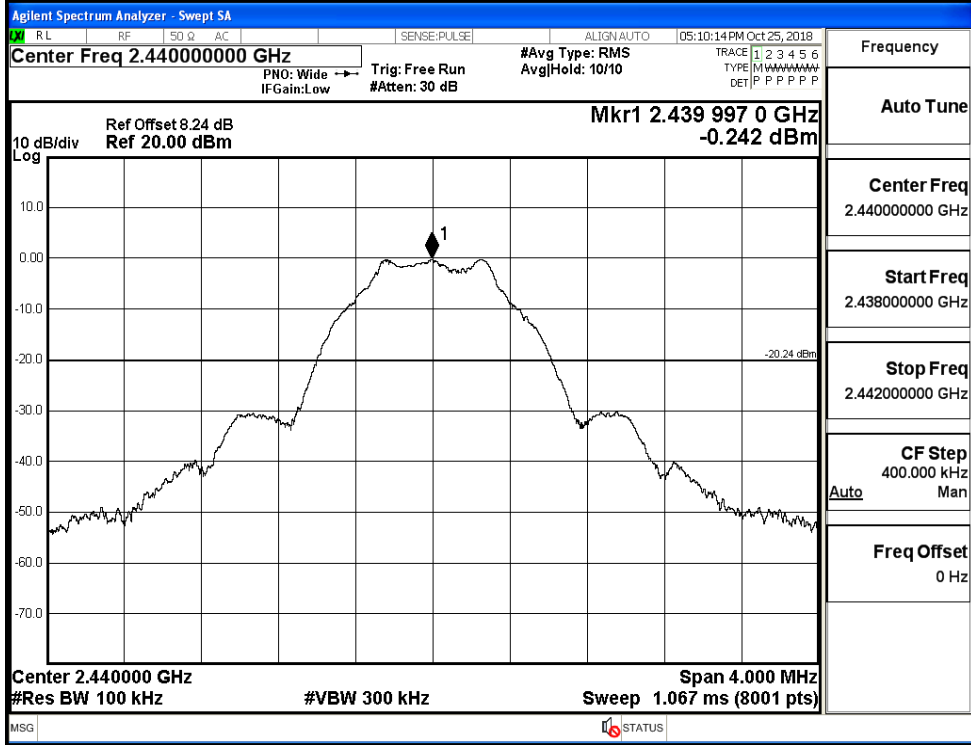
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	0.857	-43.990	-19.143	PASS
BT LE	MCH	-0.242	-27.255	-20.242	PASS
BT LE	HCH	0.416	-43.992	-19.584	PASS

BT LE_LCH_Graphs

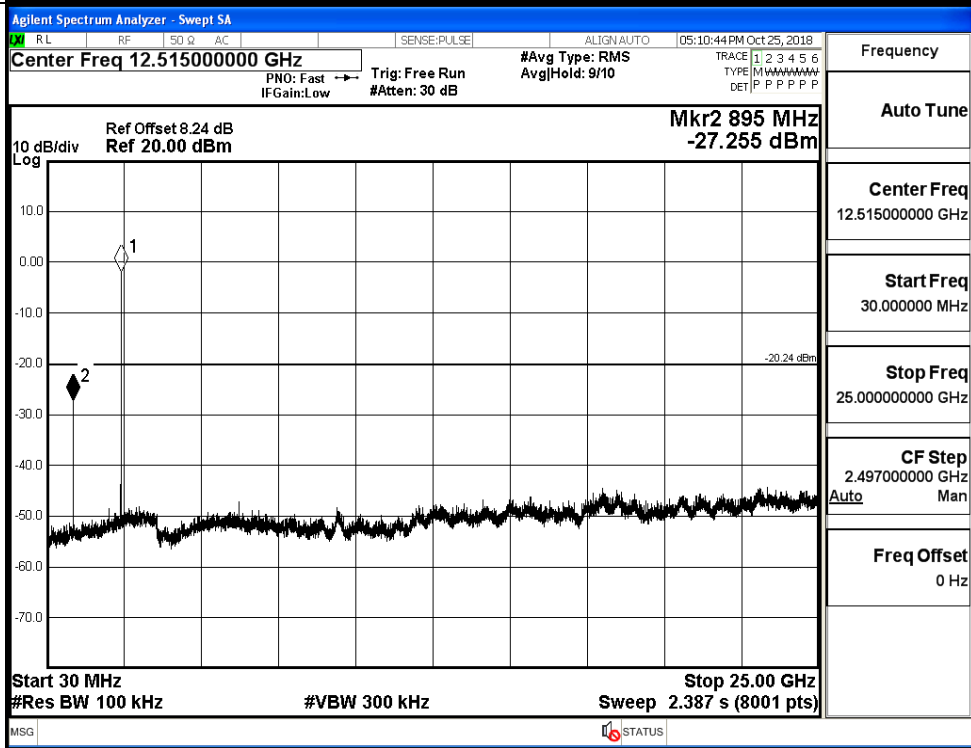


BT LE_MCH_Graphs

Pref/BT LE/MCH

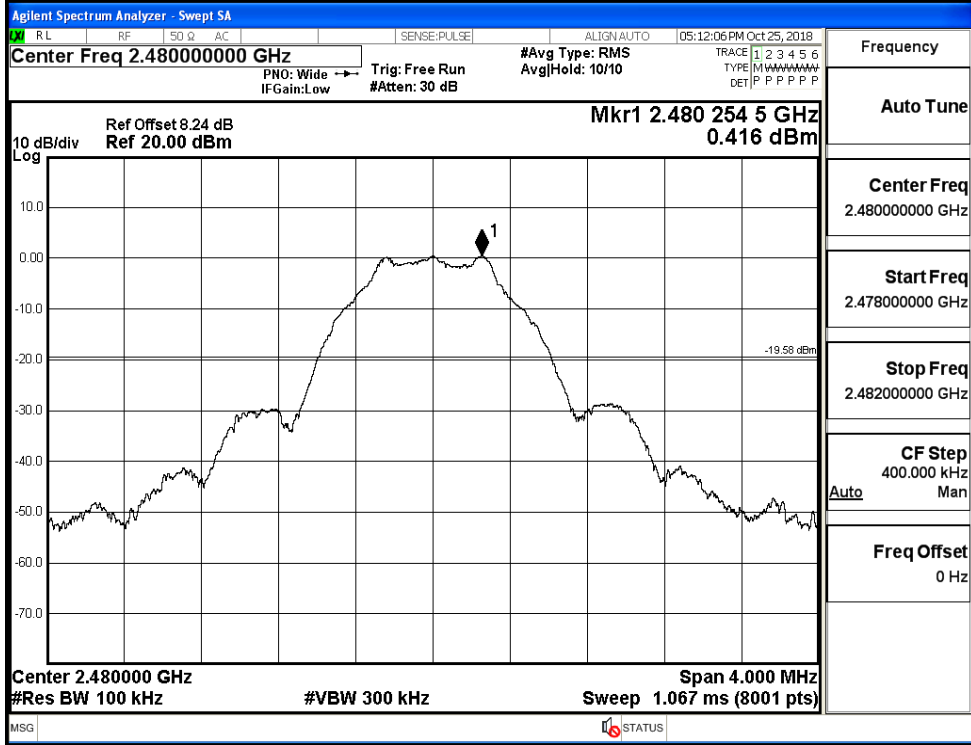


Puw/BT LE/MCH

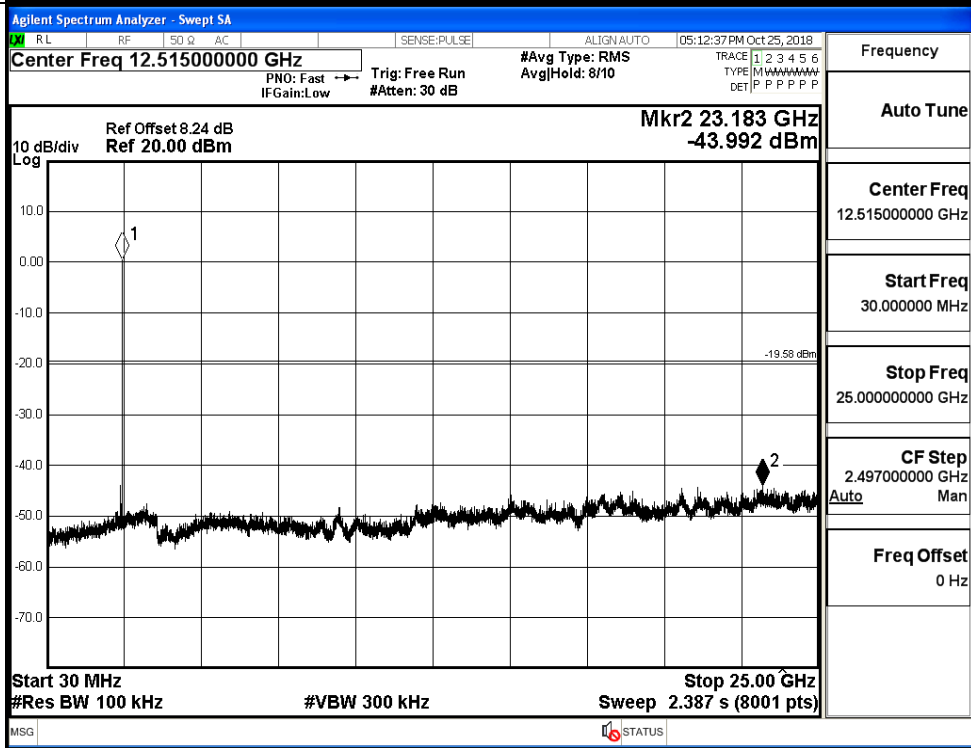


BT LE_HCH_Graphs

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	1.056	-49.838	-18.94	PASS
BT LE	HCH	0.574	-50.312	-19.43	PASS

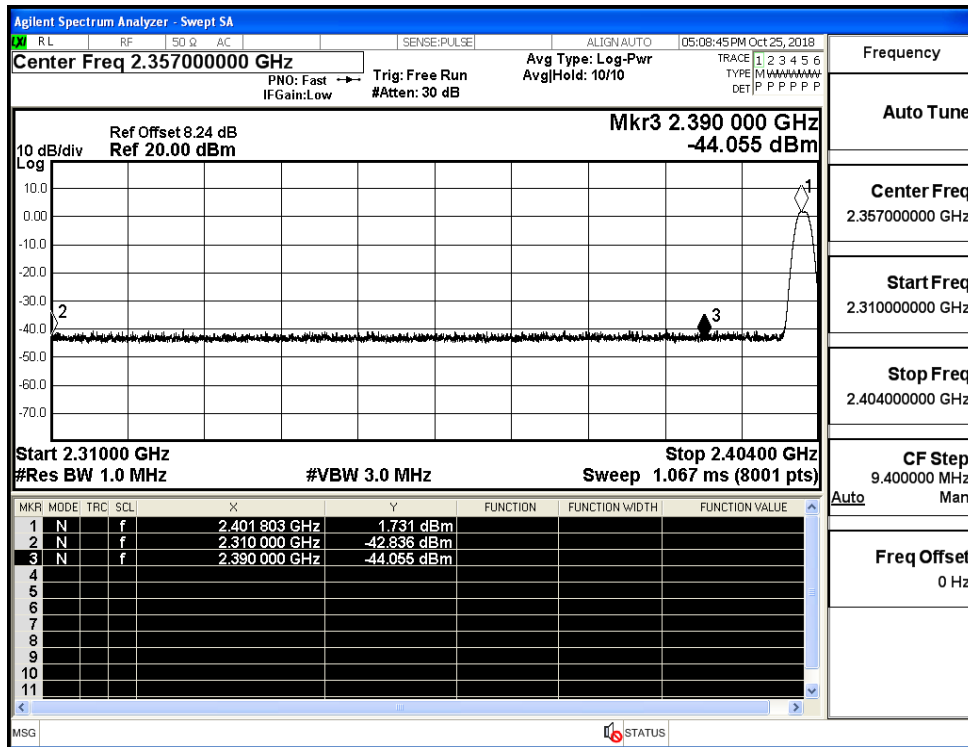
Test Graphs

LCH	<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>2.401788 GHz</td> <td>1.056 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>N</td> <td>f</td> <td></td> <td>2.400000 GHz</td> <td>-52.136 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td>N</td> <td>f</td> <td></td> <td>2.390000 GHz</td> <td>-51.934 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td>N</td> <td>f</td> <td></td> <td>2.376623 GHz</td> <td>-49.838 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		2.401788 GHz	1.056 dBm				2	N	f		2.400000 GHz	-52.136 dBm				3	N	f		2.390000 GHz	-51.934 dBm				4	N	f		2.376623 GHz	-49.838 dBm				<table border="1"> <tr><td>Frequency</td></tr> <tr><td>Auto Tune</td></tr> <tr><td>Center Freq 2.35700000 GHz</td></tr> <tr><td>Start Freq 2.31000000 GHz</td></tr> <tr><td>Stop Freq 2.40400000 GHz</td></tr> <tr><td>CF Step 9.400000 MHz</td></tr> <tr><td>Auto Man</td></tr> <tr><td>Freq Offset 0 Hz</td></tr> </table>	Frequency	Auto Tune	Center Freq 2.35700000 GHz	Start Freq 2.31000000 GHz	Stop Freq 2.40400000 GHz	CF Step 9.400000 MHz	Auto Man	Freq Offset 0 Hz
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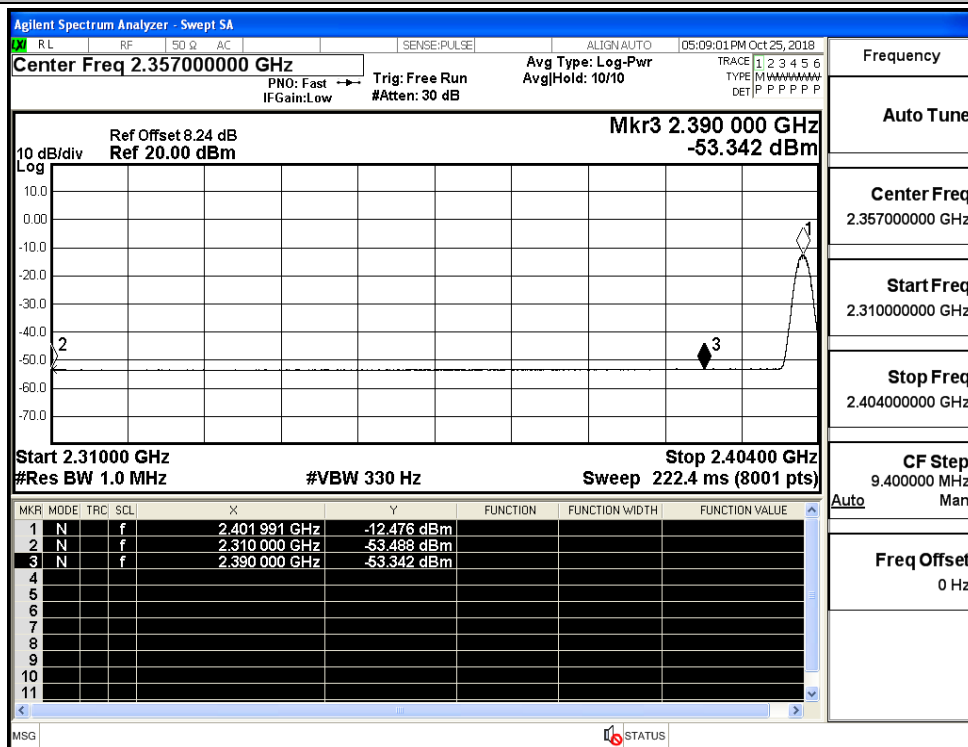
B.7 Restrict-band band-edge measurements

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	-42.84	2.0	0	52.42	PEAK	74	PASS
		Ant1	2310.0	-53.49	2.0	0	41.77	AV	54	PASS
		Ant1	2390.0	-44.06	2.0	0	51.20	PEAK	74	PASS
		Ant1	2390.0	-53.34	2.0	0	41.92	AV	54	PASS
	2480	Ant1	2483.5	-42.97	2.0	0	52.29	PEAK	74	PASS
		Ant1	2483.5	-52.88	2.0	0	42.38	AV	54	PASS
		Ant1	2500.0	-43.13	2.0	0	52.12	PEAK	74	PASS
		Ant1	2500.0	-52.80	2.0	0	42.46	AV	54	PASS

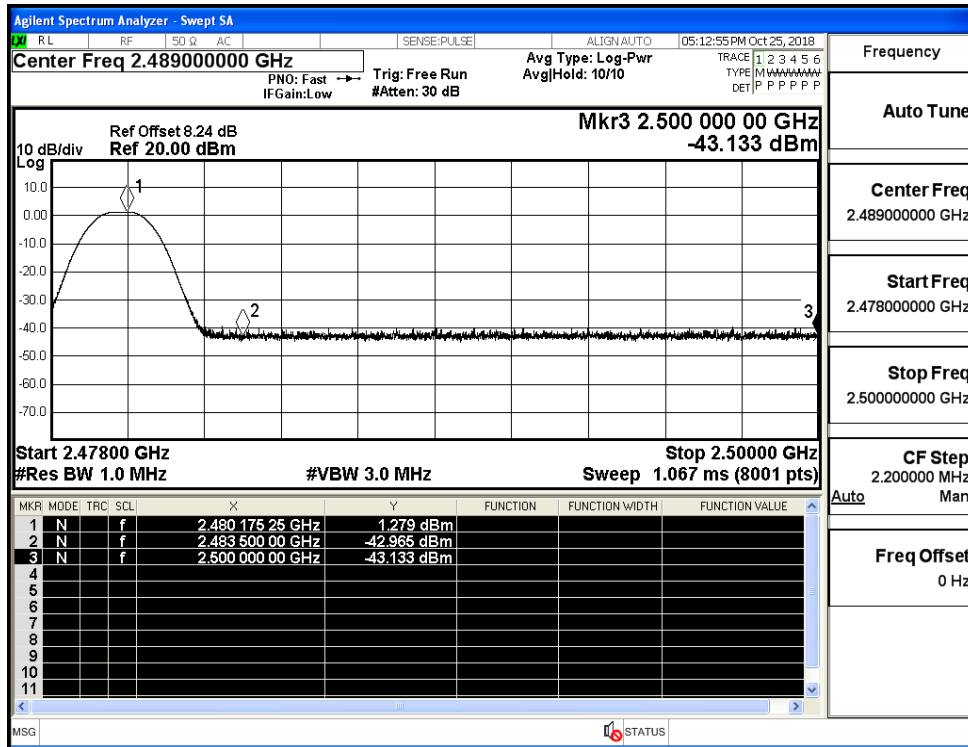
Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



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

