

Appendix A

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

Product Name: Flush Receptacle with Integral Class 2 Power Unit and wireless remote control

Trade Mark: N/A

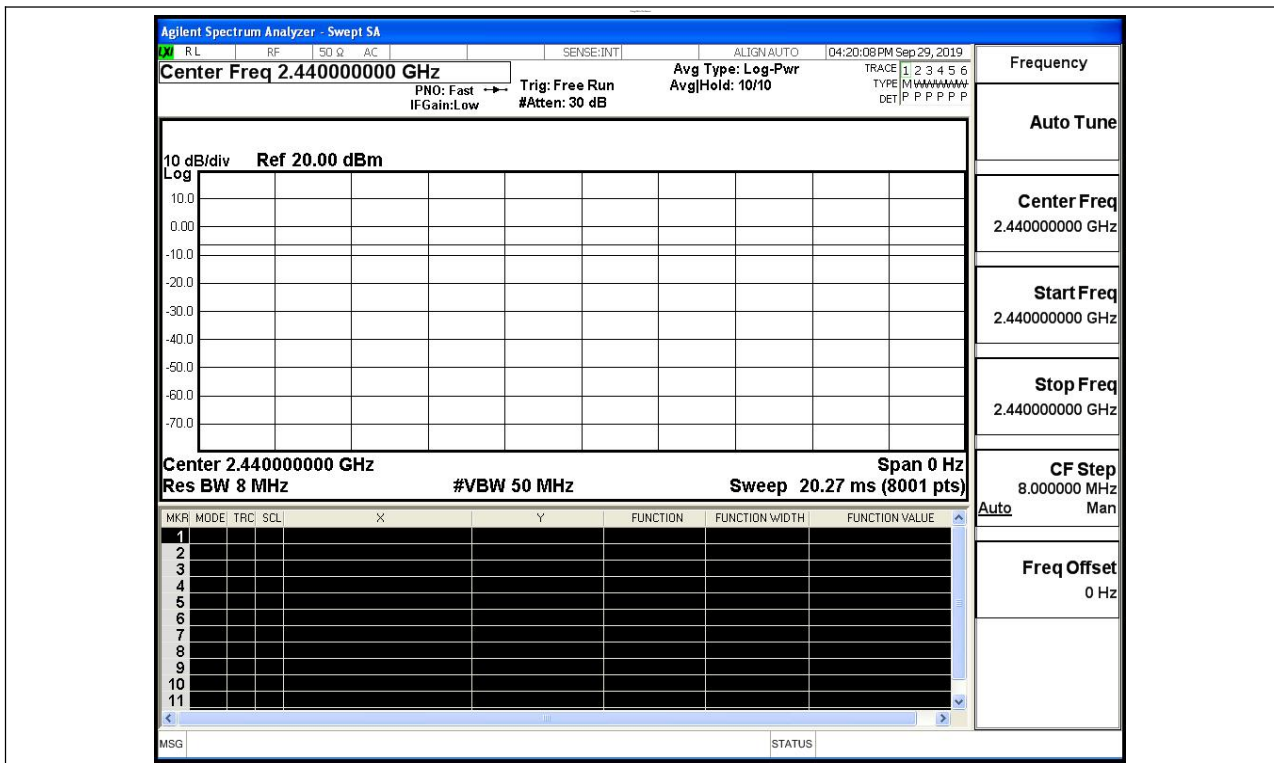
Test Model: 6B8008

Environmental Conditions

Temperature:	22.9 ° C
Relative Humidity:	53.8%
ATM Pressure:	100.0 kPa
Test Engineer:	SCOUT WU
Supervised by:	Wang.Chuang

A.1 Duty Cycle

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



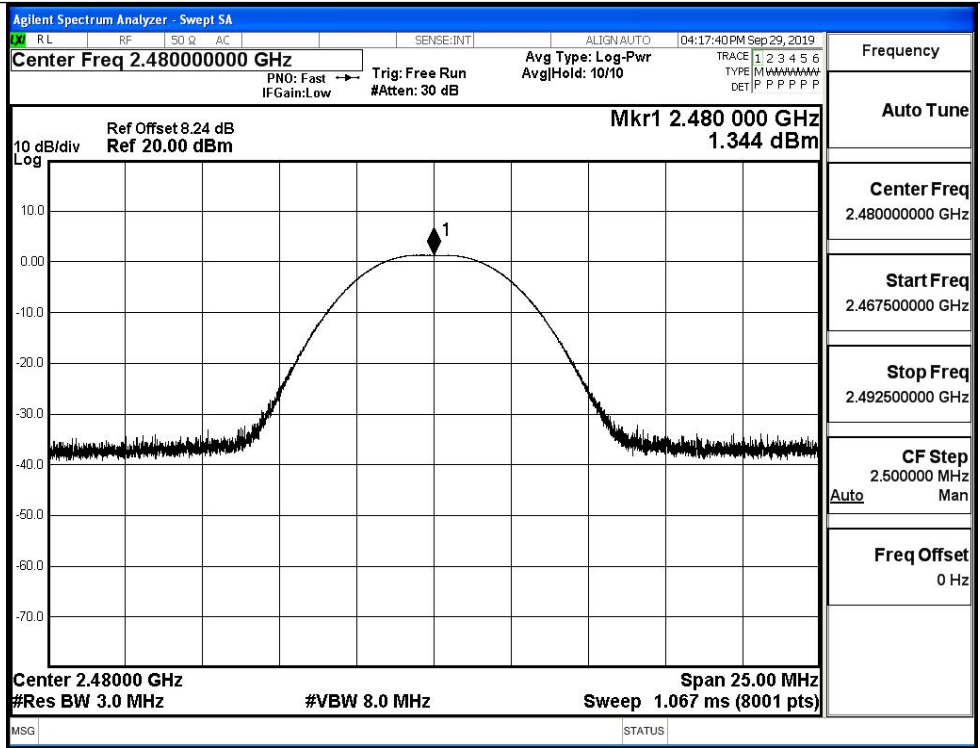
A.2 Maximum Conducted Peak Output Power

Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	2.066	30	PASS
BT LE	MCH	1.825	30	PASS
BT LE	HCH	1.344	30	PASS

Test Graphs

LCH	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.40200000 GHz Mkr1 2.401 681 GHz 2.066 dBm Ref Offset 8.24 dB Ref 20.00 dBm 10 dB/div Log Center 2.40200 GHz #Res BW 3.0 MHz #VBW 8.0 MHz Span 25.00 MHz Sweep 1.067 ms (8001 pts)</p>	Frequency Auto Tune Center Freq 2.402000000 GHz Start Freq 2.389500000 GHz Stop Freq 2.414500000 GHz CF Step 2.500000 MHz Auto Man Freq Offset 0 Hz
	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.44000000 GHz Mkr1 2.439 869 GHz 1.825 dBm Ref Offset 8.24 dB Ref 20.00 dBm 10 dB/div Log Center 2.44000 GHz #Res BW 3.0 MHz #VBW 8.0 MHz Span 25.00 MHz Sweep 1.067 ms (8001 pts)</p>	Frequency Auto Tune Center Freq 2.440000000 GHz Start Freq 2.427500000 GHz Stop Freq 2.452500000 GHz CF Step 2.500000 MHz Auto Man Freq Offset 0 Hz

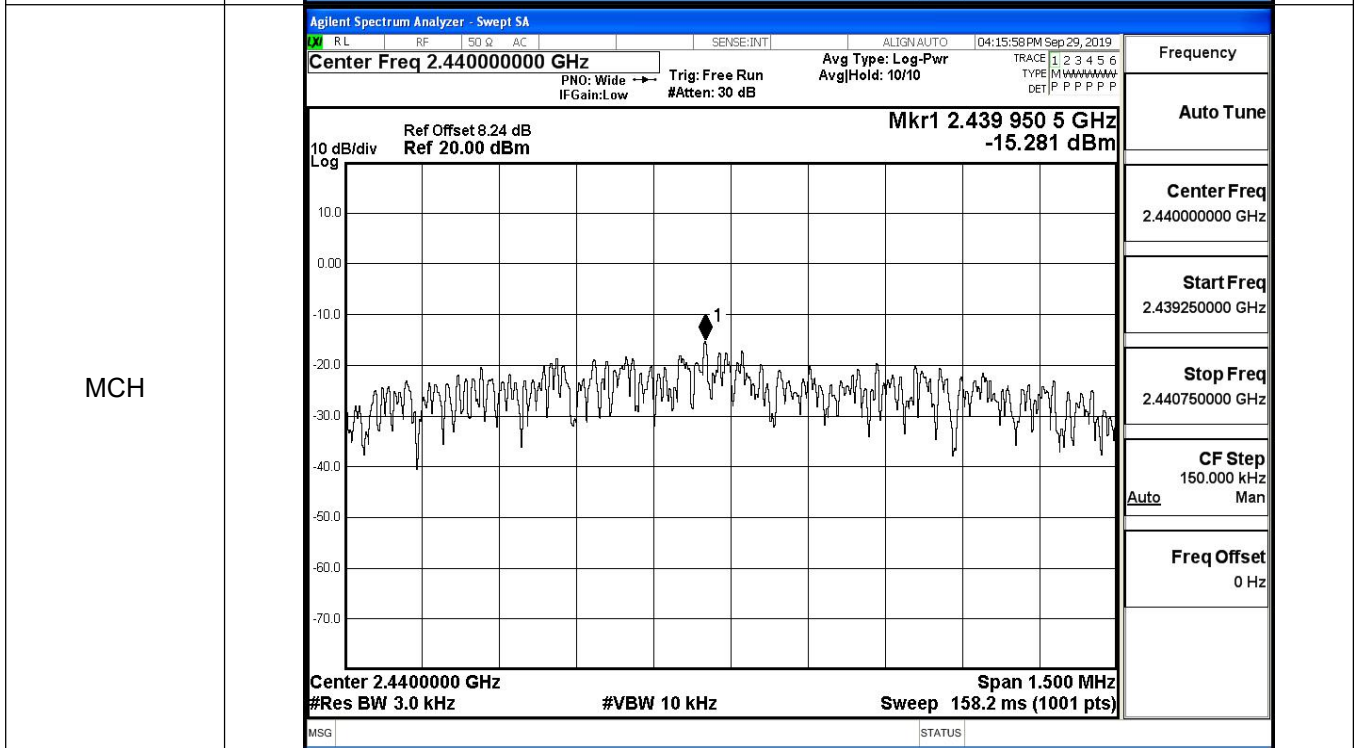
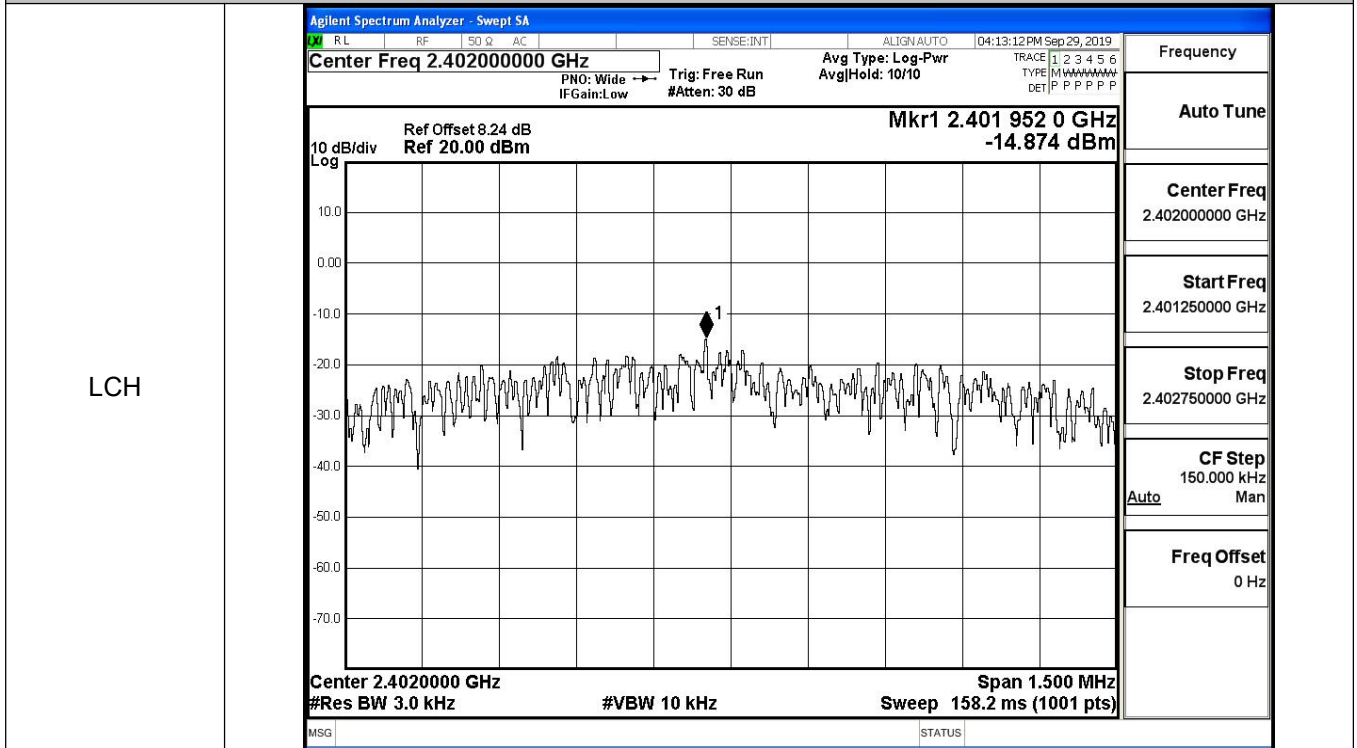
HCH



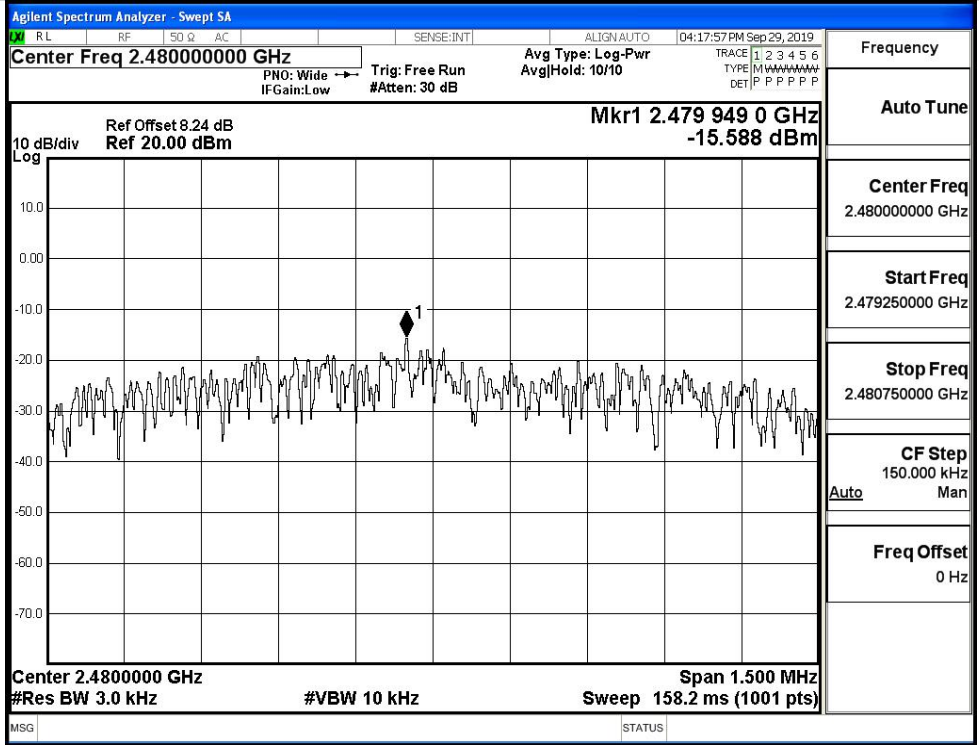
A.3 Maximum Power Spectral Density

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-14.874	8	PASS
BT LE	MCH	-15.281	8	PASS
BT LE	HCH	-15.588	8	PASS

Test Graphs



HCH



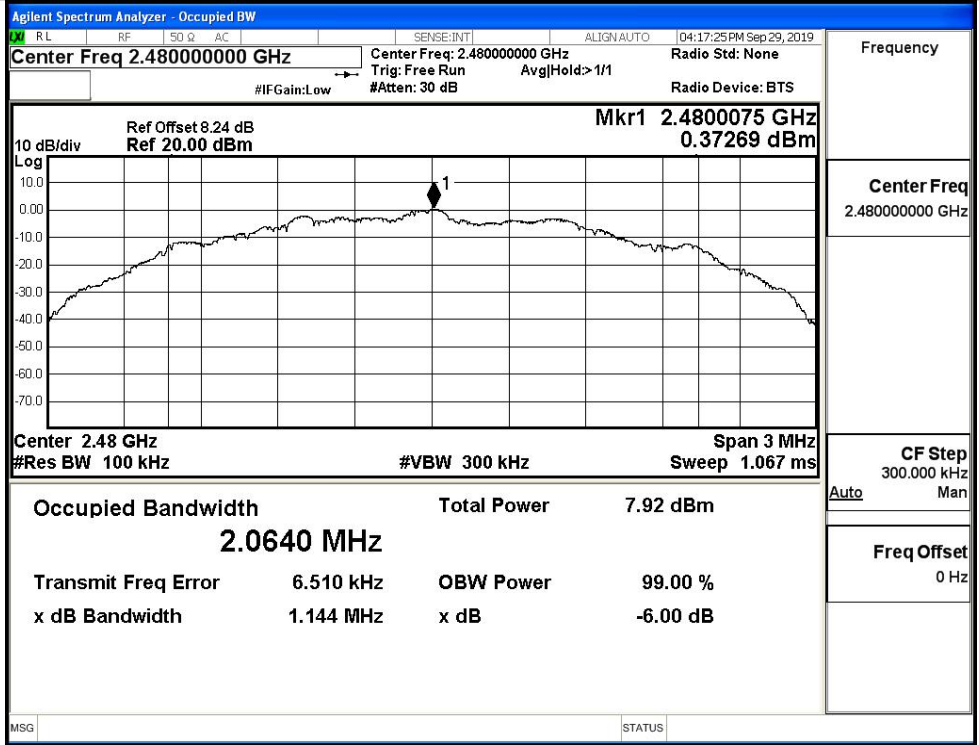
A.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	1.162	≥0.5	PASS
BT LE	MCH	1.138	≥0.5	PASS
BT LE	HCH	1.144	≥0.5	PASS

Test Graphs

LCH	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.40200000 GHz Center Freq: 2.402000000 GHz Radio Std: None</p> <p>Trig: Free Run AvgHold> 1/1</p> <p>#IFGain:Low #Atten: 30 dB Radio Device: BTS</p> <p>Ref Offset 8.24 dB Ref 20.00 dBm Mkr1 2.4020143 GHz 1.1294 dBm</p> <p>Center 2.402 GHz #Res BW 100 kHz #VBW 300 kHz Span 3 MHz Sweep 1.067 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>8.61 dBm</td> </tr> <tr> <td>2.0570 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>7.669 kHz</td> <td>OBW Power</td> </tr> <tr> <td>x dB Bandwidth</td> <td>1.162 MHz</td> <td>x dB</td> </tr> <tr> <td></td> <td></td> <td>-6.00 dB</td> </tr> </table> <p>MSG STATUS</p>	Occupied Bandwidth	Total Power	8.61 dBm	2.0570 MHz			Transmit Freq Error	7.669 kHz	OBW Power	x dB Bandwidth	1.162 MHz	x dB			-6.00 dB	<p>Frequency</p> <p>Center Freq 2.40200000 GHz</p> <p>CF Step 300.000 kHz Auto Man</p> <p>Freq Offset 0 Hz</p>
	Occupied Bandwidth	Total Power	8.61 dBm														
2.0570 MHz																	
Transmit Freq Error	7.669 kHz	OBW Power															
x dB Bandwidth	1.162 MHz	x dB															
		-6.00 dB															
MCH	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.44000000 GHz Center Freq: 2.440000000 GHz Radio Std: None</p> <p>Trig: Free Run AvgHold> 1/1</p> <p>#IFGain:Low #Atten: 30 dB Radio Device: BTS</p> <p>Ref Offset 8.24 dB Ref 20.00 dBm Mkr1 2.4400075 GHz 0.86954 dBm</p> <p>Center 2.44 GHz #Res BW 100 kHz #VBW 300 kHz Span 3 MHz Sweep 1.067 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>8.37 dBm</td> </tr> <tr> <td>2.0647 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>4.592 kHz</td> <td>OBW Power</td> </tr> <tr> <td>x dB Bandwidth</td> <td>1.138 MHz</td> <td>x dB</td> </tr> <tr> <td></td> <td></td> <td>-6.00 dB</td> </tr> </table> <p>MSG STATUS</p>	Occupied Bandwidth	Total Power	8.37 dBm	2.0647 MHz			Transmit Freq Error	4.592 kHz	OBW Power	x dB Bandwidth	1.138 MHz	x dB			-6.00 dB	<p>Frequency</p> <p>Center Freq 2.44000000 GHz</p> <p>CF Step 300.000 kHz Auto Man</p> <p>Freq Offset 0 Hz</p>
	Occupied Bandwidth	Total Power	8.37 dBm														
2.0647 MHz																	
Transmit Freq Error	4.592 kHz	OBW Power															
x dB Bandwidth	1.138 MHz	x dB															
		-6.00 dB															

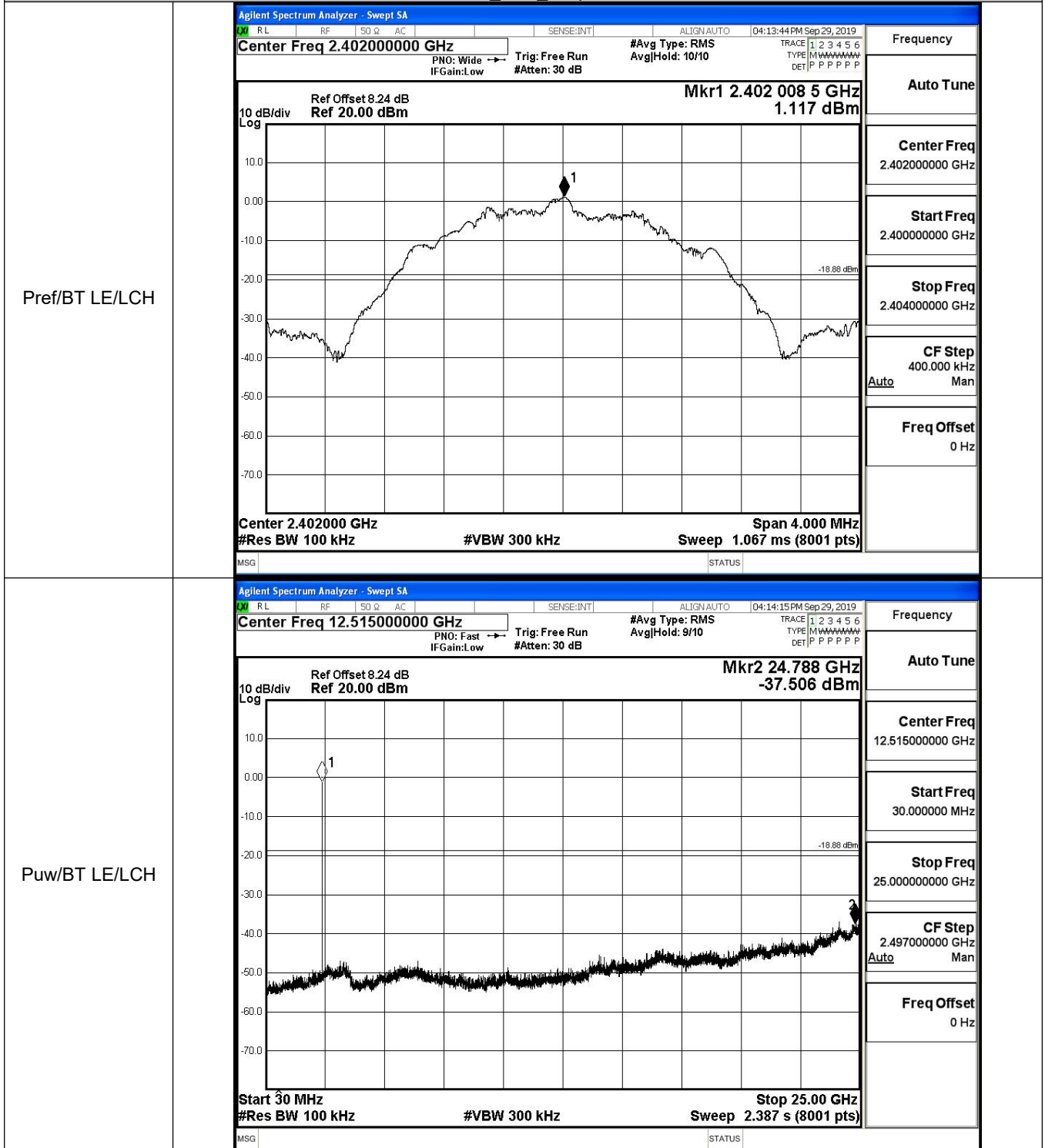
HCH



A.5 RF Conducted Spurious Emissions

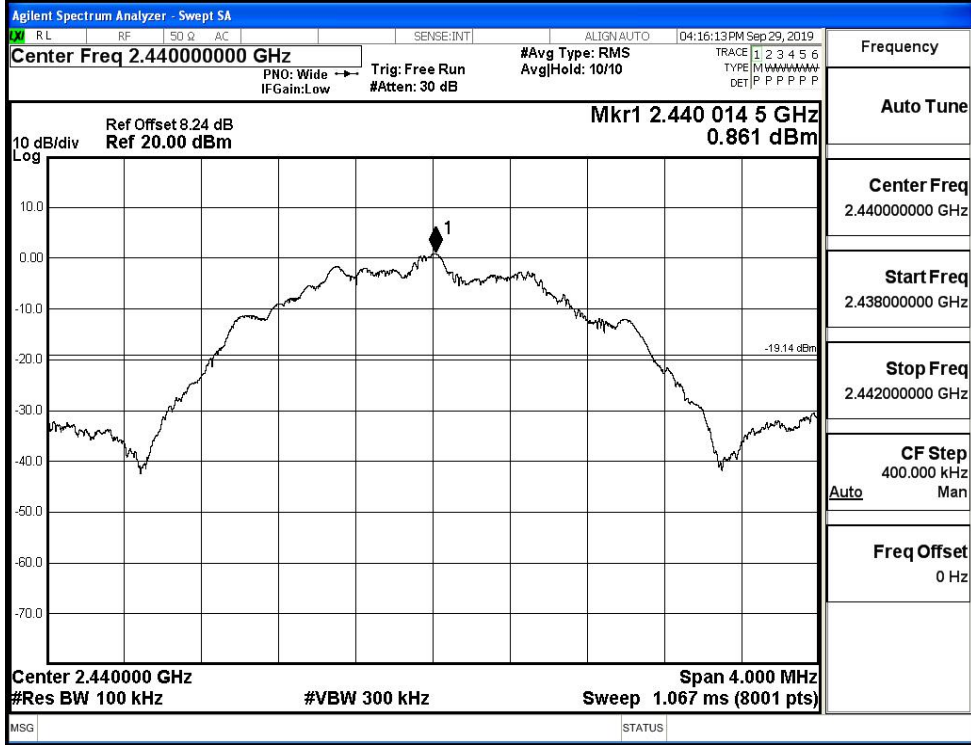
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	1.117	-37.506	-18.883	PASS
BT LE	MCH	0.861	-36.341	-19.139	PASS
BT LE	HCH	0.335	-37.606	-19.665	PASS

BT LE_LCH_Graphs

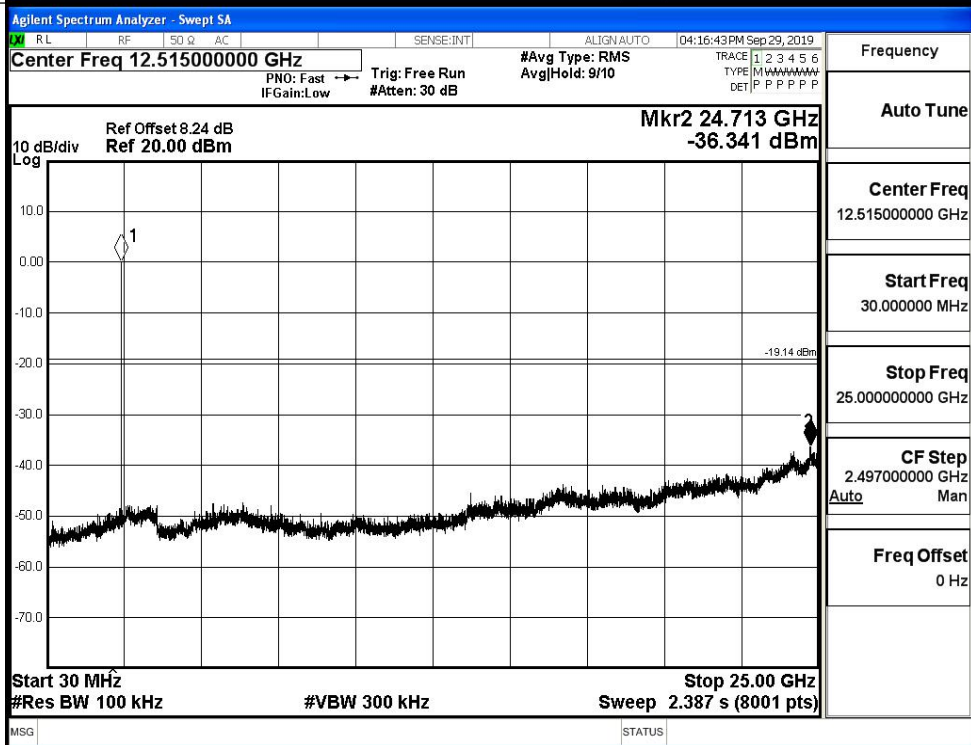


BT LE MCH Graphs

Pref/BT LE/MCH

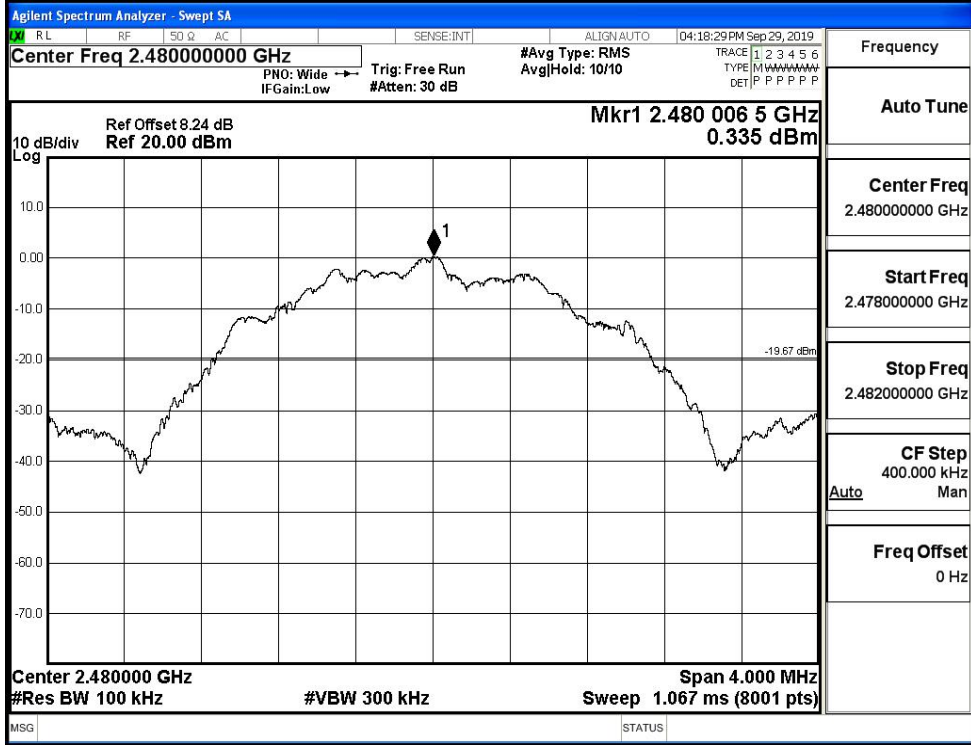


Puw/BT LE/MCH

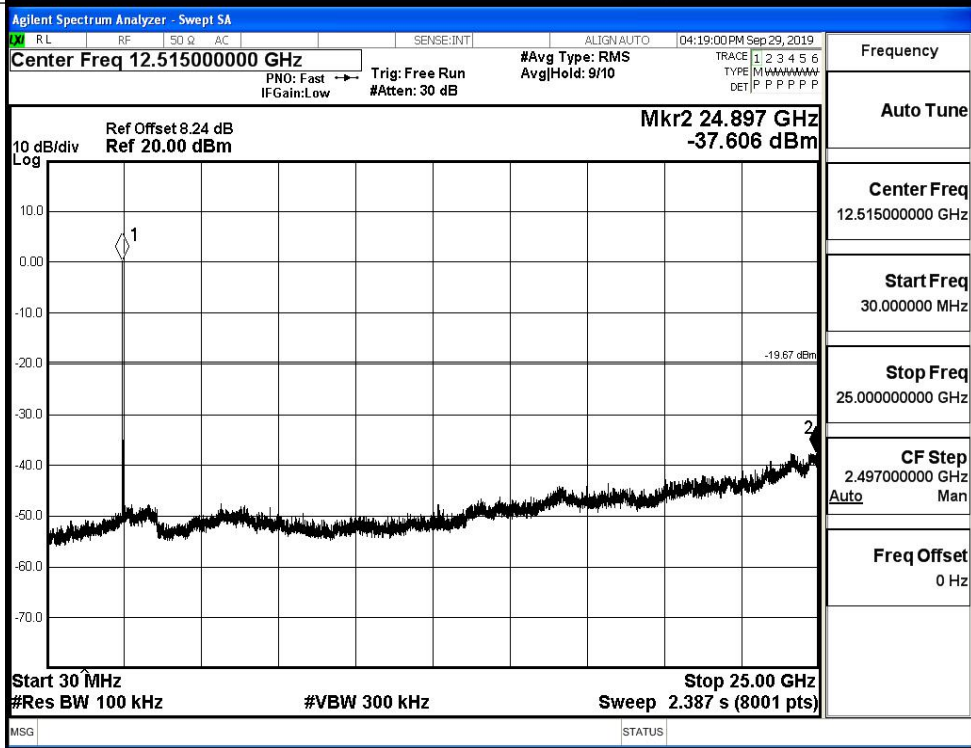


BT LE HCH Graphs

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	0.759	-49.586	-19.24	PASS
BT LE	HCH	0.389	-46.713	-19.61	PASS

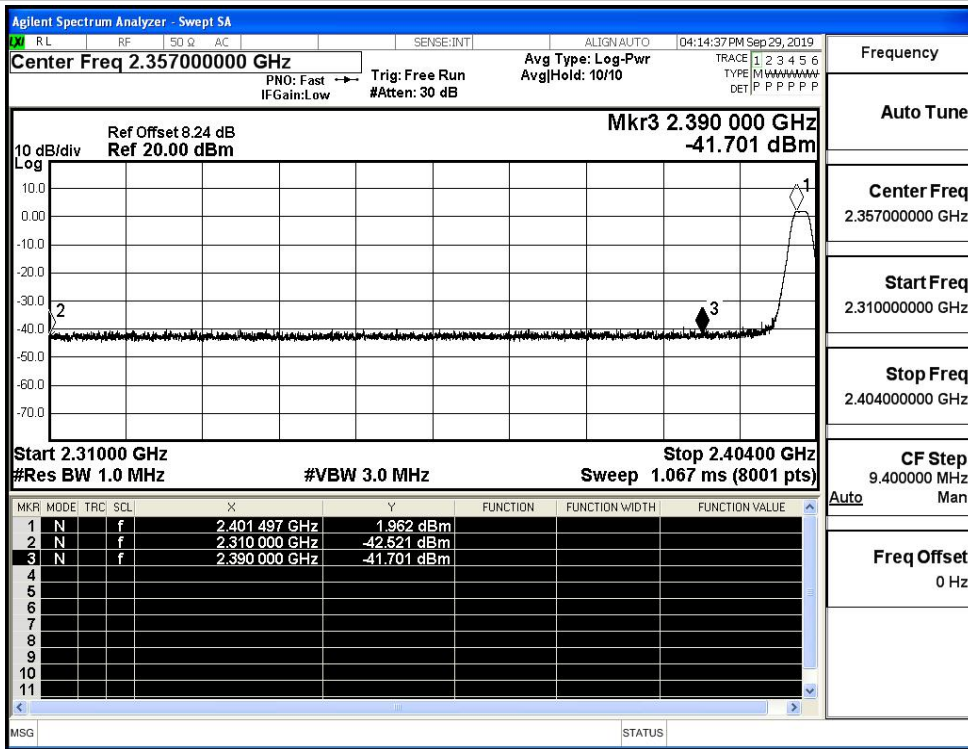
Test Graphs

LCH	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.35700000 GHz Ref Offset 8.24 dB Ref 20.00 dBm Mkr4 2.353 240 GHz -49.586 dBm Start 2.31000 GHz #Res BW 100 kHz #VBW 300 kHz Stop 2.40400 GHz 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>2.401 932 GHz</td><td>0.759 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>-32.694 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>-54.600 dBm</td><td></td><td></td><td></td></tr> <tr><td>4</td><td>N</td><td>f</td><td></td><td>2.353 240 GHz</td><td>-49.586 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		2.401 932 GHz	0.759 dBm				2	N	f		2.400 000 GHz	-32.694 dBm				3	N	f		2.390 000 GHz	-54.600 dBm				4	N	f		2.353 240 GHz	-49.586 dBm				<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.35700000 GHz</p> <p>Start Freq 2.31000000 GHz</p> <p>Stop Freq 2.40400000 GHz</p> <p>CF Step 9.400000 MHz</p> <p>Freq Offset 0 Hz</p>
	MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																																						
1	N	f		2.401 932 GHz	0.759 dBm																																										
2	N	f		2.400 000 GHz	-32.694 dBm																																										
3	N	f		2.390 000 GHz	-54.600 dBm																																										
4	N	f		2.353 240 GHz	-49.586 dBm																																										
HCH	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.48900000 GHz Ref Offset 8.24 dB Ref 20.00 dBm Mkr4 2.483 538 50 GHz -46.713 dBm Start 2.47800 GHz #Res BW 100 kHz #VBW 300 kHz Stop 2.50000 GHz 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>2.479 949 75 GHz</td><td>0.389 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>-48.500 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>-53.123 dBm</td><td></td><td></td><td></td></tr> <tr><td>4</td><td>N</td><td>f</td><td></td><td>2.483 538 50 GHz</td><td>-46.713 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		2.479 949 75 GHz	0.389 dBm				2	N	f		2.483 500 00 GHz	-48.500 dBm				3	N	f		2.500 000 00 GHz	-53.123 dBm				4	N	f		2.483 538 50 GHz	-46.713 dBm				<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.48900000 GHz</p> <p>Start Freq 2.47800000 GHz</p> <p>Stop Freq 2.50000000 GHz</p> <p>CF Step 2.200000 MHz</p> <p>Freq Offset 0 Hz</p>
	MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																																						
1	N	f		2.479 949 75 GHz	0.389 dBm																																										
2	N	f		2.483 500 00 GHz	-48.500 dBm																																										
3	N	f		2.500 000 00 GHz	-53.123 dBm																																										
4	N	f		2.483 538 50 GHz	-46.713 dBm																																										

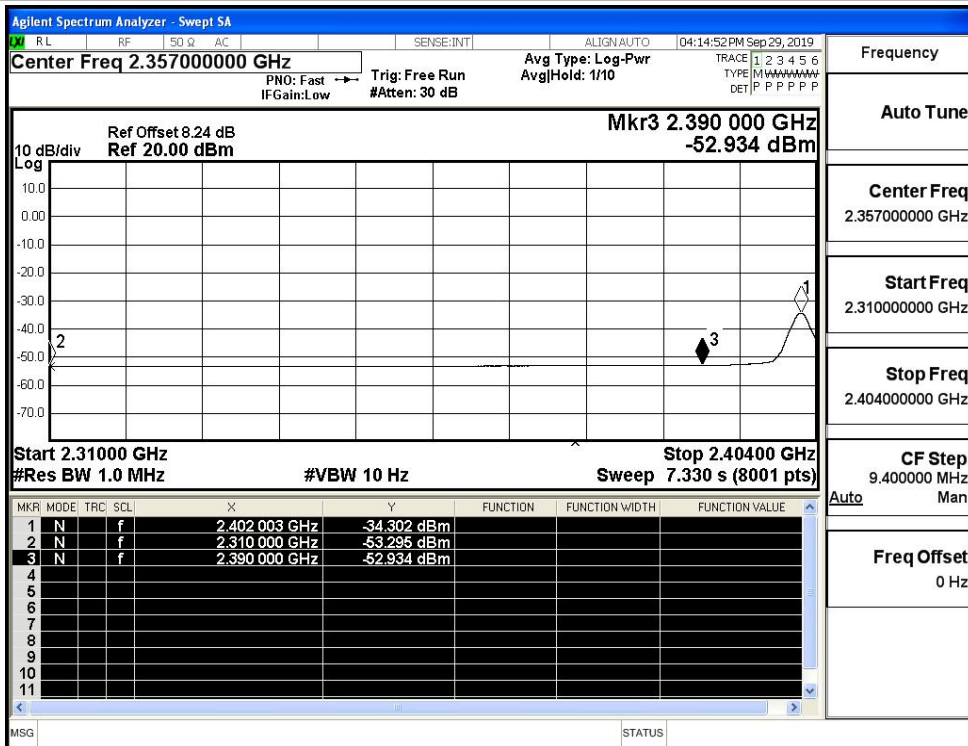
A.7 Restrict-band band-edge measurements

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	-42.52	0	0	52.74	PEAK	74	PASS
		Ant1	2310.0	-53.30	0	0	41.96	AV	54	PASS
		Ant1	2390.0	-41.70	0	0	53.56	PEAK	74	PASS
		Ant1	2390.0	-52.93	0	0	42.32	AV	54	PASS
	2480	Ant1	2483.5	-40.03	0	0	55.23	PEAK	74	PASS
		Ant1	2483.5	-51.03	0	0	44.22	AV	54	PASS
		Ant1	2500.0	-40.90	0	0	54.36	PEAK	74	PASS
		Ant1	2500.0	-52.30	0	0	42.96	AV	54	PASS

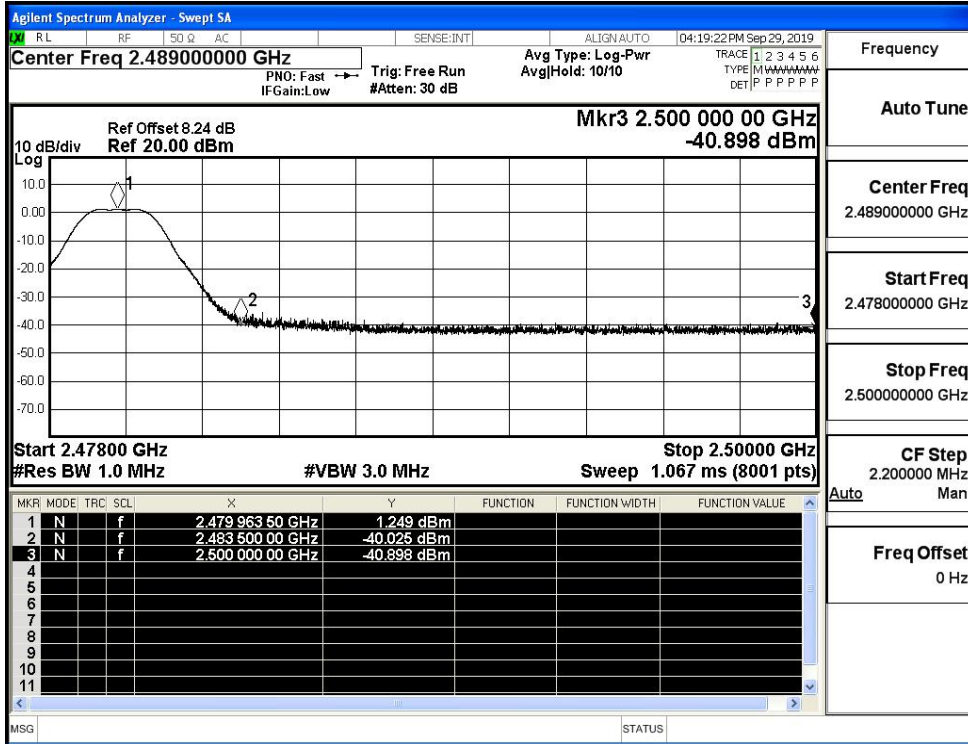
Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



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

