

Appendix A

RF Test Data for BT LE V4.2(DTS) (Conducted Measurement)

Product Name: LEGENDS GAMEPAD

Trade Mark: N/A

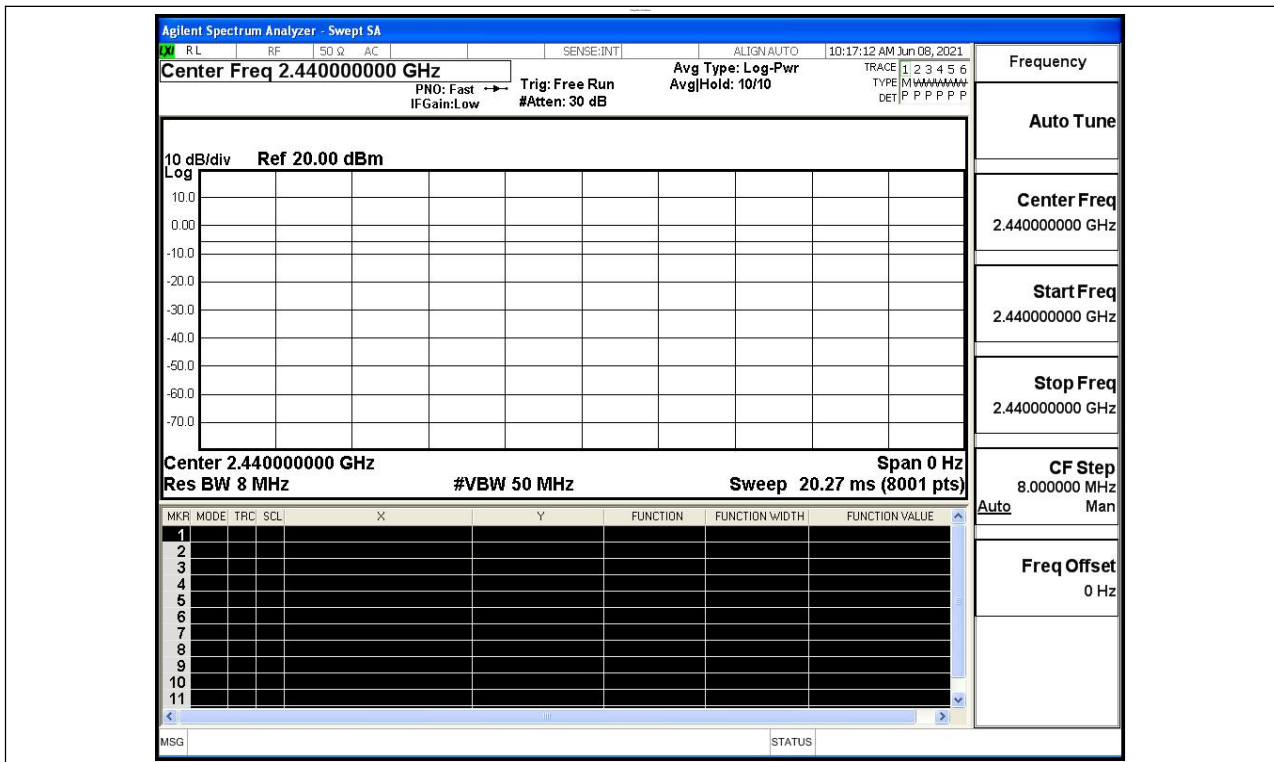
Test Model: HA2808

Environmental Conditions

Temperature:	23.1 ° C
Relative Humidity:	54.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Jay Li
Supervised by:	Li Huan

A.1 Duty Cycle

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

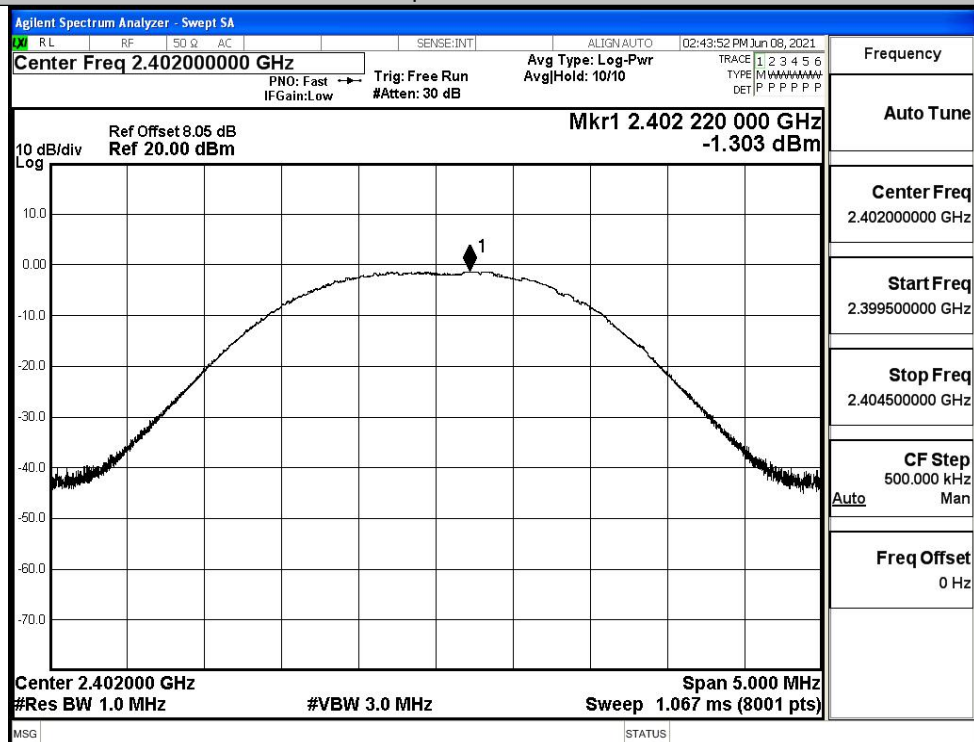


A.2 Maximum Conducted Peak Output Power

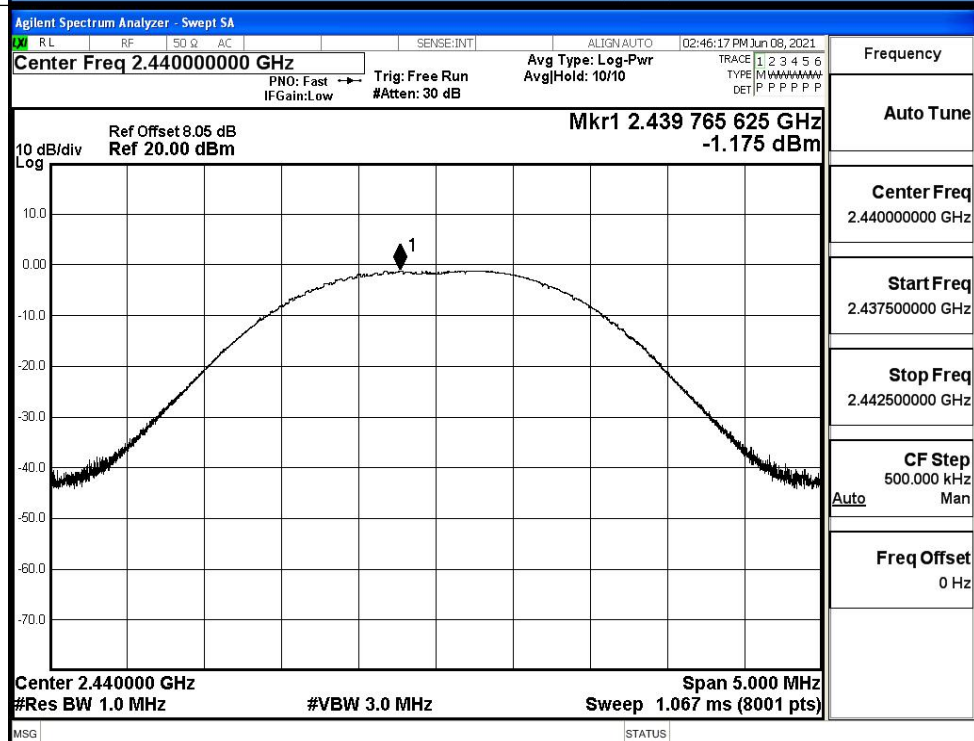
Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	-1.303	30	PASS
BT LE	MCH	-1.175	30	PASS
BT LE	HCH	-0.769	30	PASS

Test Graphs

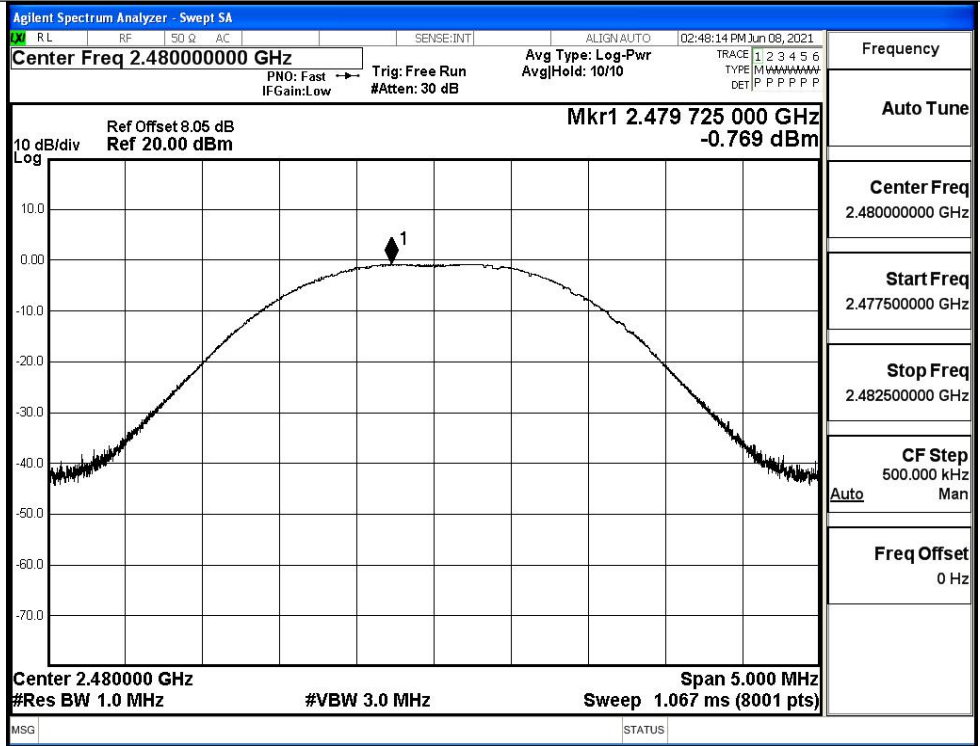
LCH



MCH



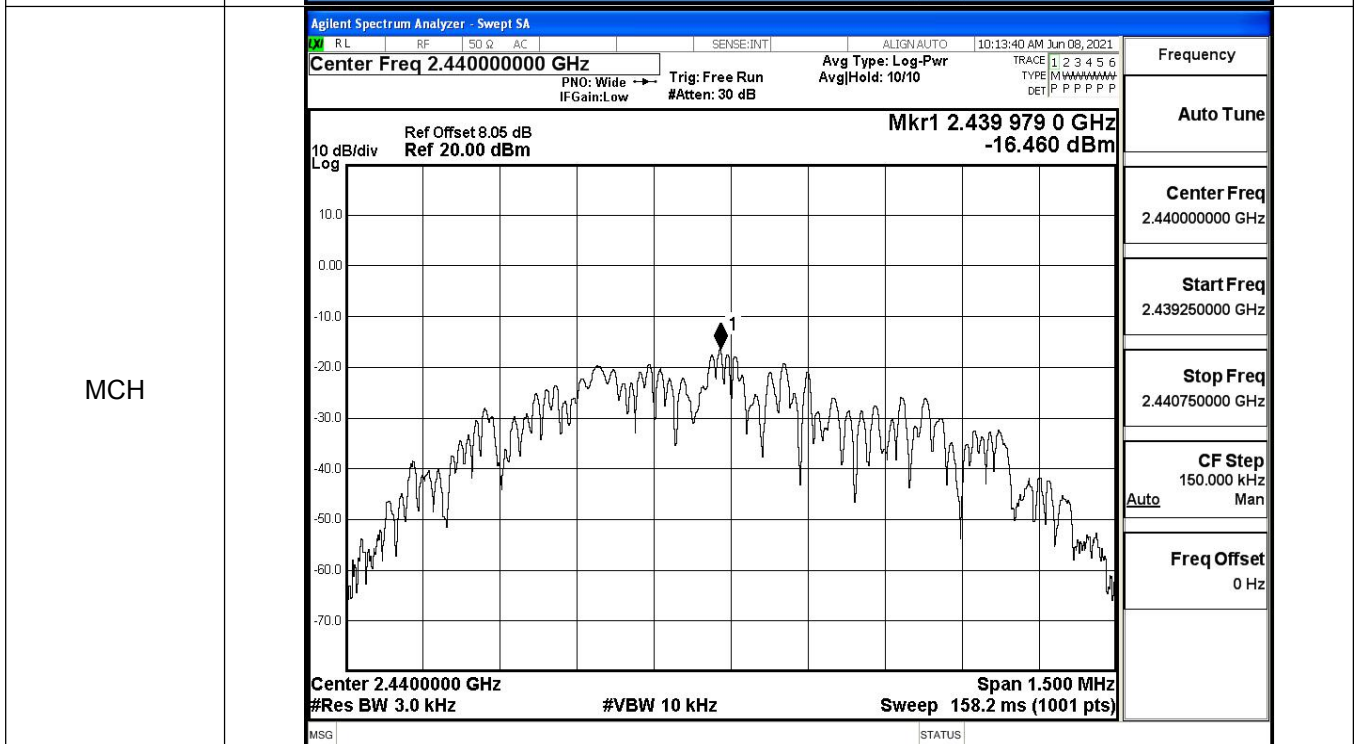
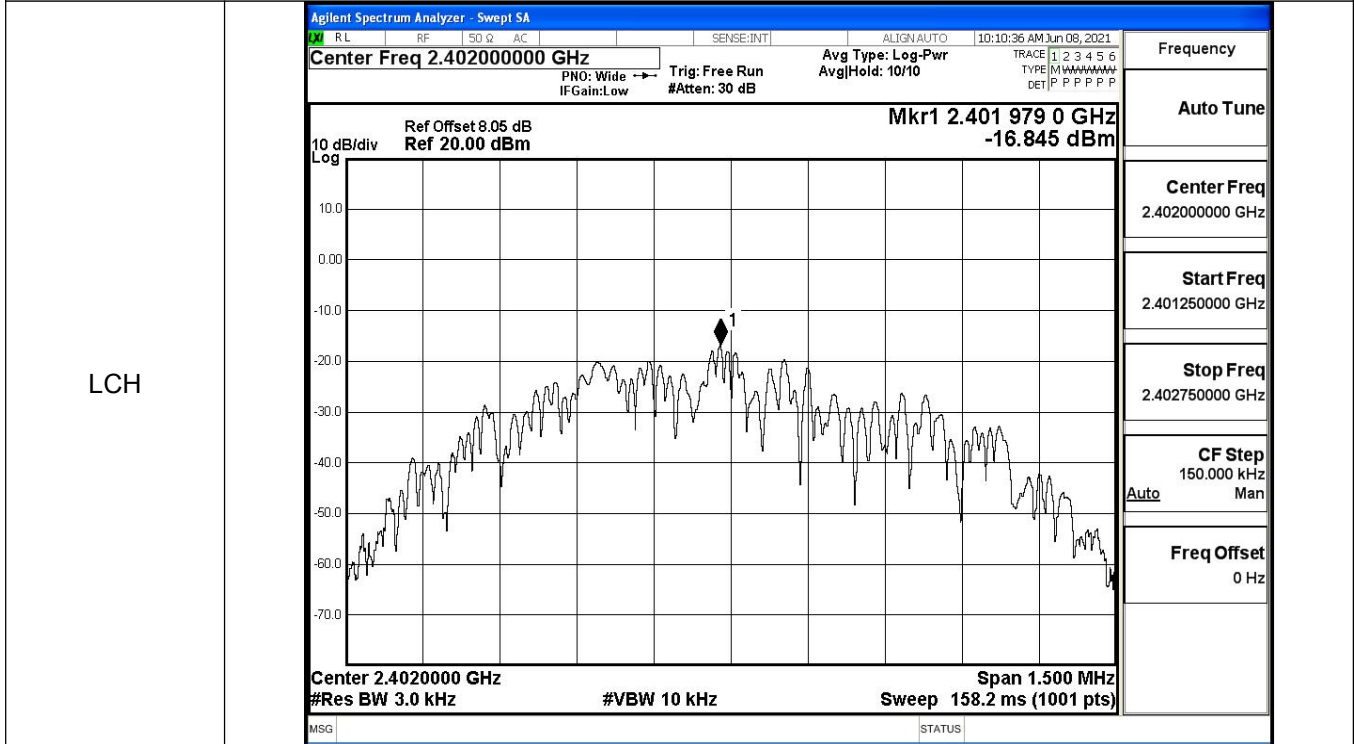
HCH

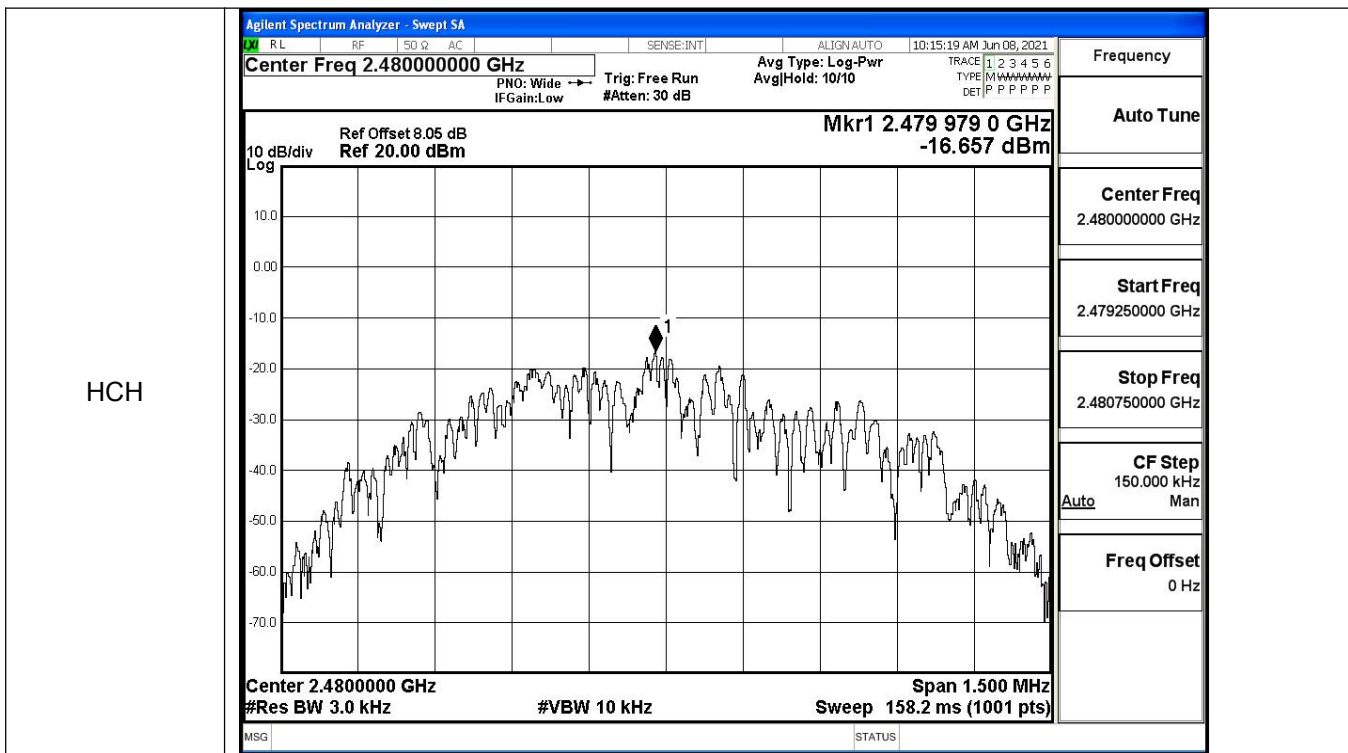


A.3 Maximum Power Spectral Density

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-16.845	8	PASS
BT LE	MCH	-16.460	8	PASS
BT LE	HCH	-16.657	8	PASS

Test Graphs





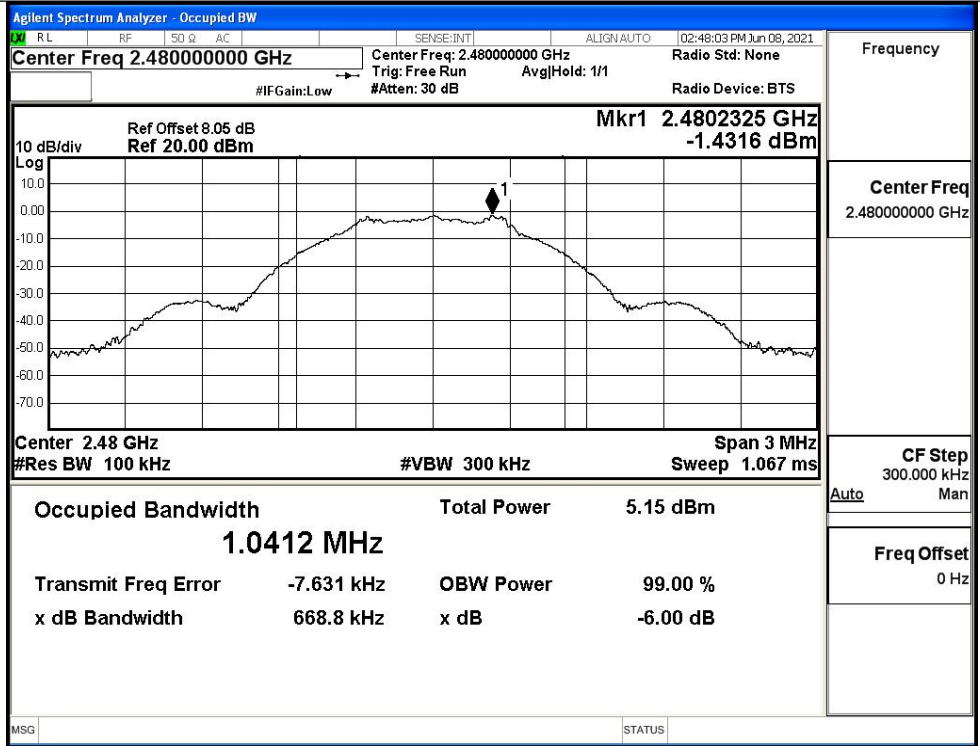
A.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6553	≥0.5	PASS
BT LE	MCH	0.6686	≥0.5	PASS
BT LE	HCH	0.6688	≥0.5	PASS

Test Graphs

LCH	<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 2.40200000 GHz Center Freq: 2.40200000 GHz Trig: Free Run AvgHold: 1/1 Radio Std: None Radio Device: BTS #IFGain: Low #Atten: 30 dB</p> <p>Ref Offset 8.05 dB Ref 20.00 dBm Mkr1 2.4022381 GHz -1.5087 dBm</p> <p>10 dB/div Log</p> <p>Center 2.402 GHz #Res BW 100 kHz #VBW 300 kHz Span 3 MHz Sweep 1.067 ms</p> <p>Occupied Bandwidth 1.0399 MHz Total Power 4.71 dBm</p> <p>Transmit Freq Error -4.638 kHz OBW Power 99.00 % x dB Bandwidth 655.3 kHz x dB -6.00 dB</p>	Frequency Center Freq 2.40200000 GHz CF Step 300.000 kHz Auto Man Freq Offset 0 Hz
	<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 2.44000000 GHz Center Freq: 2.44000000 GHz Trig: Free Run AvgHold: >1/1 Radio Std: None Radio Device: BTS #IFGain: Low #Atten: 30 dB</p> <p>Ref Offset 8.05 dB Ref 20.00 dBm Mkr1 2.4400008 GHz -2.0810 dBm</p> <p>10 dB/div Log</p> <p>Center 2.44 GHz #Res BW 100 kHz #VBW 300 kHz Span 3 MHz Sweep 1.067 ms</p> <p>Occupied Bandwidth 1.0456 MHz Total Power 4.63 dBm</p> <p>Transmit Freq Error -7.863 kHz OBW Power 99.00 % x dB Bandwidth 668.6 kHz x dB -6.00 dB</p>	Frequency Center Freq 2.44000000 GHz CF Step 300.000 kHz Auto Man Freq Offset 0 Hz

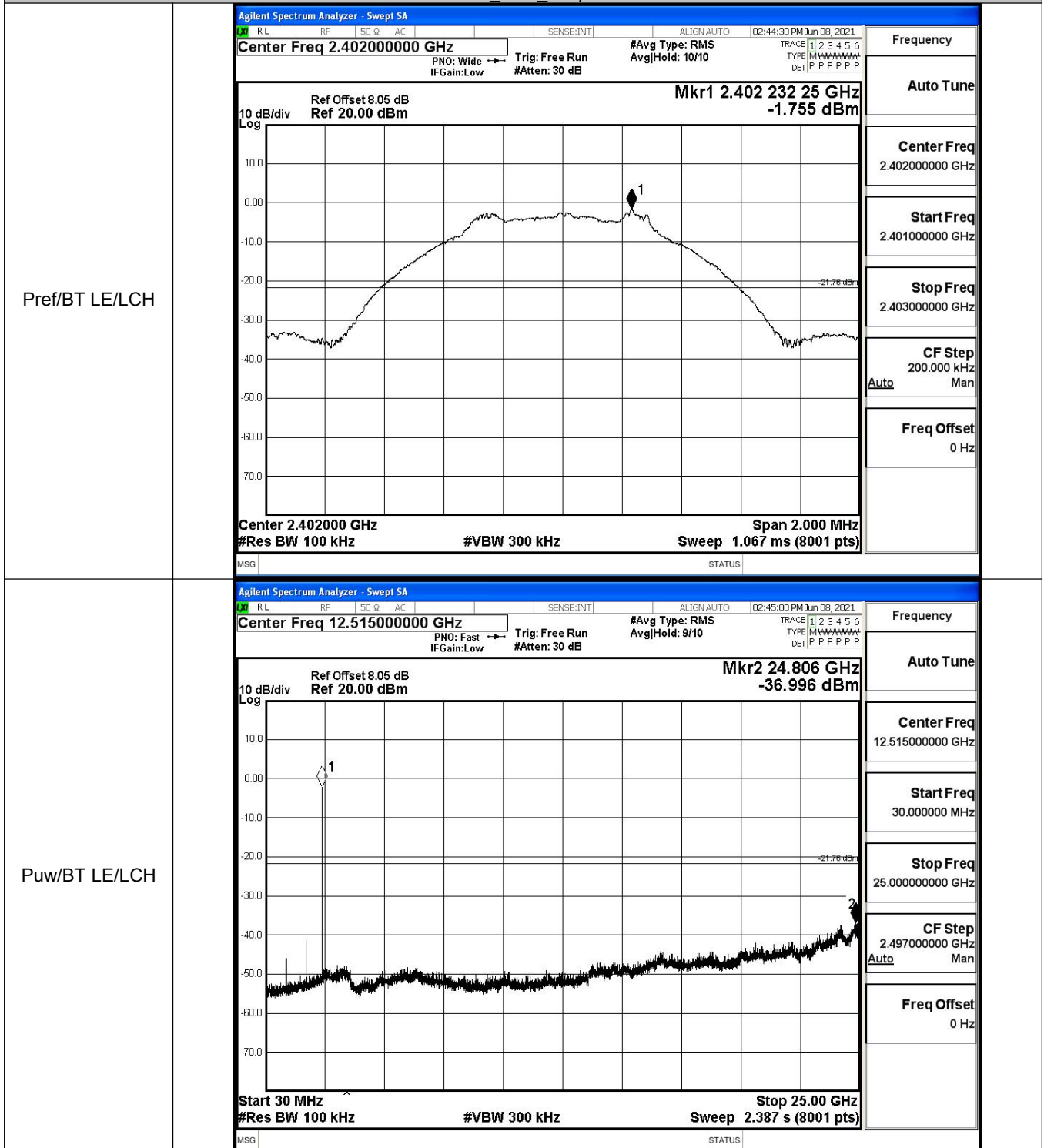
HCH



A.5 RF Conducted Spurious Emissions

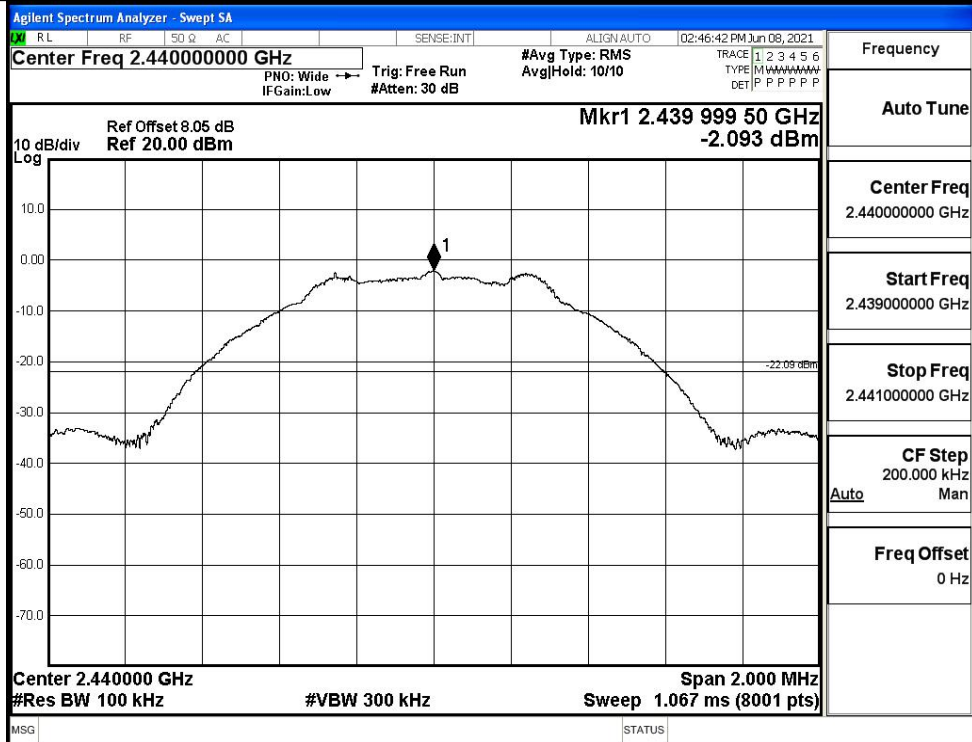
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-1.755	-36.996	-21.755	PASS
BT LE	MCH	-2.093	-37.548	-22.093	PASS
BT LE	HCH	-1.382	-35.941	-21.382	PASS

BT LE_LCH_Graphs

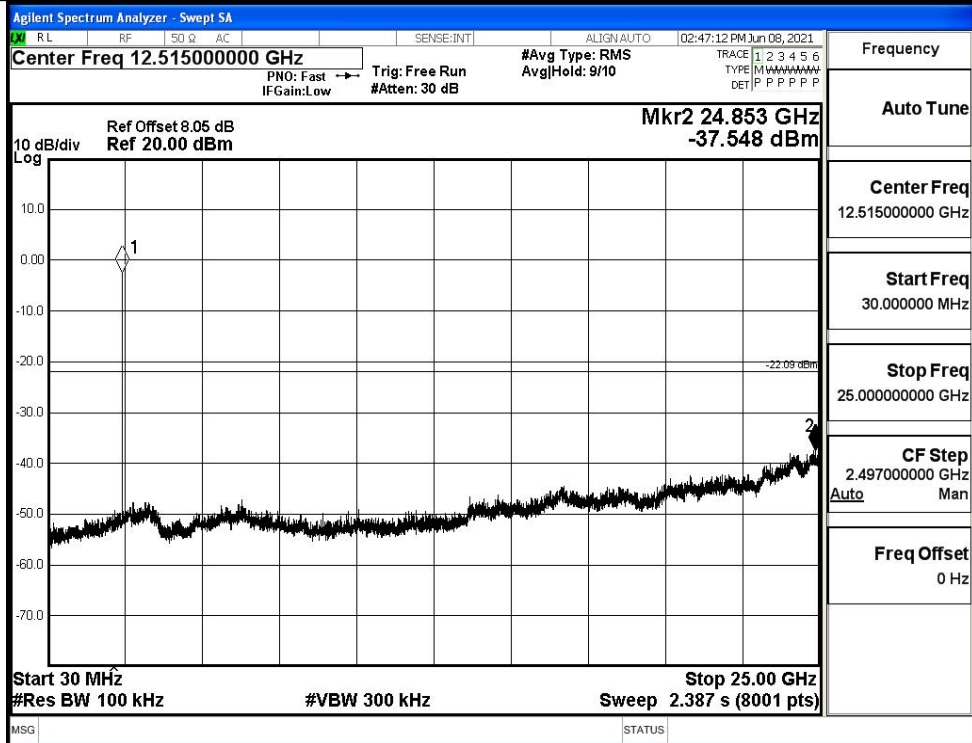


BT LE MCH Graphs

Pref/BT LE/MCH

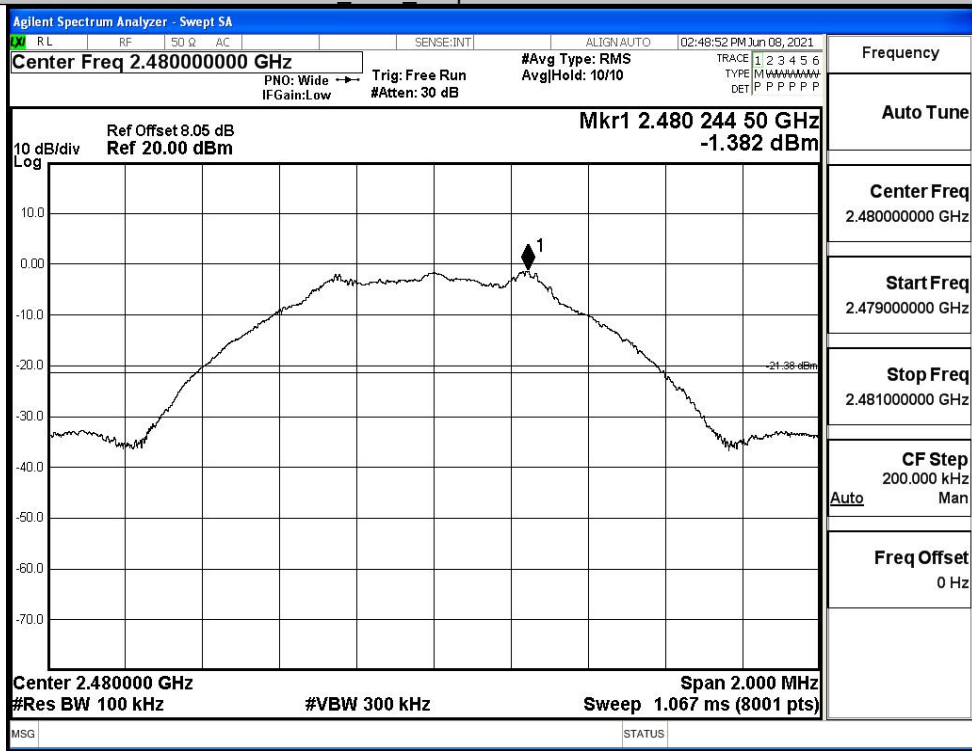


Puw/BT LE/MCH

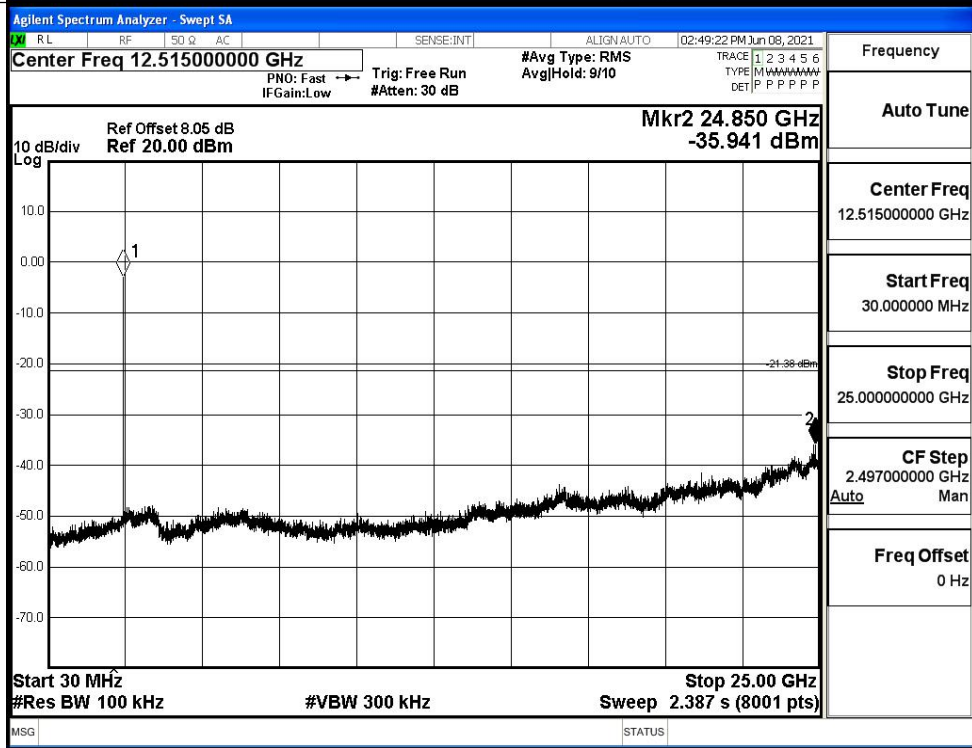


BT LE HCH Graphs

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	-2.704	-49.749	-22.7	PASS
BT LE	HCH	-1.165	-49.221	-21.17	PASS

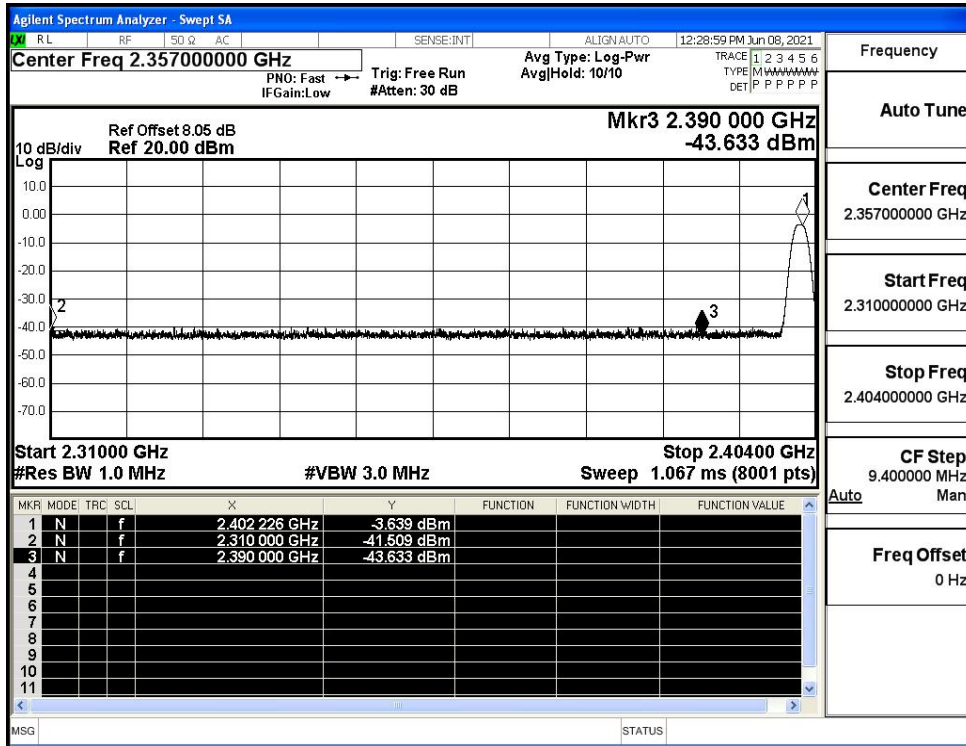
Test Graphs

LCH	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.357000000 GHz PNO: Fast IFGain:Low Trig: Free Run #Atten: 30 dB #Avg Type: RMS AvgHold: 10/10 Mkr4 2.353 322 GHz -49.749 dBm Ref Offset 8.05 dB Ref 20.00 dBm 10 dB/div Log Start 2.31000 GHz #Res BW 100 kHz #VBW 300 kHz Stop 2.40400 GHz Sweep 9.067 ms (8001 pts) <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>1</td><td>f</td><td>2.402 238 GHz</td><td>-2.704 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>-53.138 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>-52.730 dBm</td><td></td><td></td><td></td></tr> <tr><td>4</td><td>N</td><td>1</td><td>f</td><td>2.353 322 GHz</td><td>-49.749 dBm</td><td></td><td></td><td></td></tr> </tbody> </table></p>	MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	2.402 238 GHz	-2.704 dBm				2	N	1	f	2.400 000 GHz	-53.138 dBm				3	N	1	f	2.390 000 GHz	-52.730 dBm				4	N	1	f	2.353 322 GHz	-49.749 dBm				Frequency Auto Tune Center Freq 2.357000000 GHz Start Freq 2.310000000 GHz Stop Freq 2.404000000 GHz CF Step 9.400000 MHz Auto Man Freq Offset 0 Hz
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HCH	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.489000000 GHz PNO: Fast IFGain:Low Trig: Free Run #Atten: 30 dB #Avg Type: RMS AvgHold: 10/10 Mkr4 2.483 989 50 GHz -49.221 dBm Ref Offset 8.05 dB Ref 20.00 dBm 10 dB/div Log Start 2.47800 GHz #Res BW 100 kHz #VBW 300 kHz Stop 2.50000 GHz Sweep 2.133 ms (8001 pts) <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>1</td><td>f</td><td>2.480 241 25 GHz</td><td>-1.165 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>-51.394 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>-51.079 dBm</td><td></td><td></td><td></td></tr> <tr><td>4</td><td>N</td><td>1</td><td>f</td><td>2.483 989 50 GHz</td><td>-49.221 dBm</td><td></td><td></td><td></td></tr> </tbody> </table></p>	MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	2.480 241 25 GHz	-1.165 dBm				2	N	1	f	2.483 500 00 GHz	-51.394 dBm				3	N	1	f	2.500 000 00 GHz	-51.079 dBm				4	N	1	f	2.483 989 50 GHz	-49.221 dBm				Frequency Auto Tune Center Freq 2.489000000 GHz Start Freq 2.478000000 GHz Stop Freq 2.500000000 GHz CF Step 2.200000 MHz Auto Man Freq Offset 0 Hz
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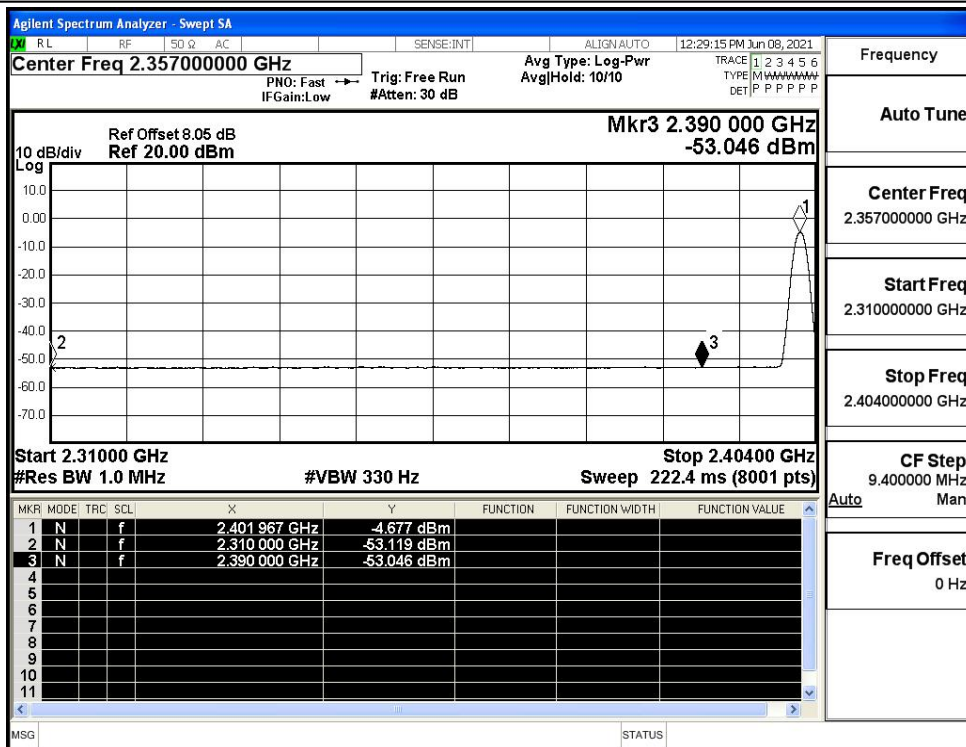
A.7 Restrict-band band-edge measurements

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	-41.51	2.0	0	55.72	PEAK	74	PASS
		Ant1	2310.0	-53.12	2.0	0	44.11	AV	54	PASS
		Ant1	2390.0	-43.63	2.0	0	53.60	PEAK	74	PASS
		Ant1	2390.0	-53.05	2.0	0	44.18	AV	54	PASS
	2480	Ant1	2483.5	-43.64	2.0	0	53.59	PEAK	74	PASS
		Ant1	2483.5	-52.53	2.0	0	44.70	AV	54	PASS
		Ant1	2500.0	-40.30	2.0	0	56.93	PEAK	74	PASS
		Ant1	2500.0	-52.41	2.0	0	44.82	AV	54	PASS

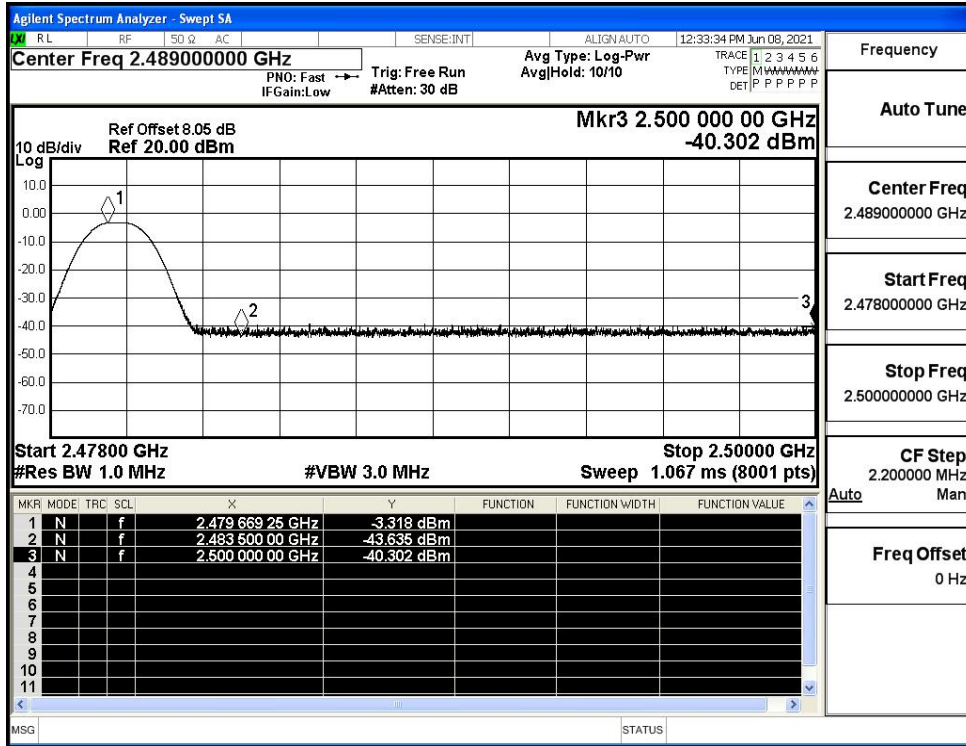
Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



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

