

Appendix B

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

Product Name: LTE GSM/WCDMA Smartphone

Trade Mark: DOOGEE

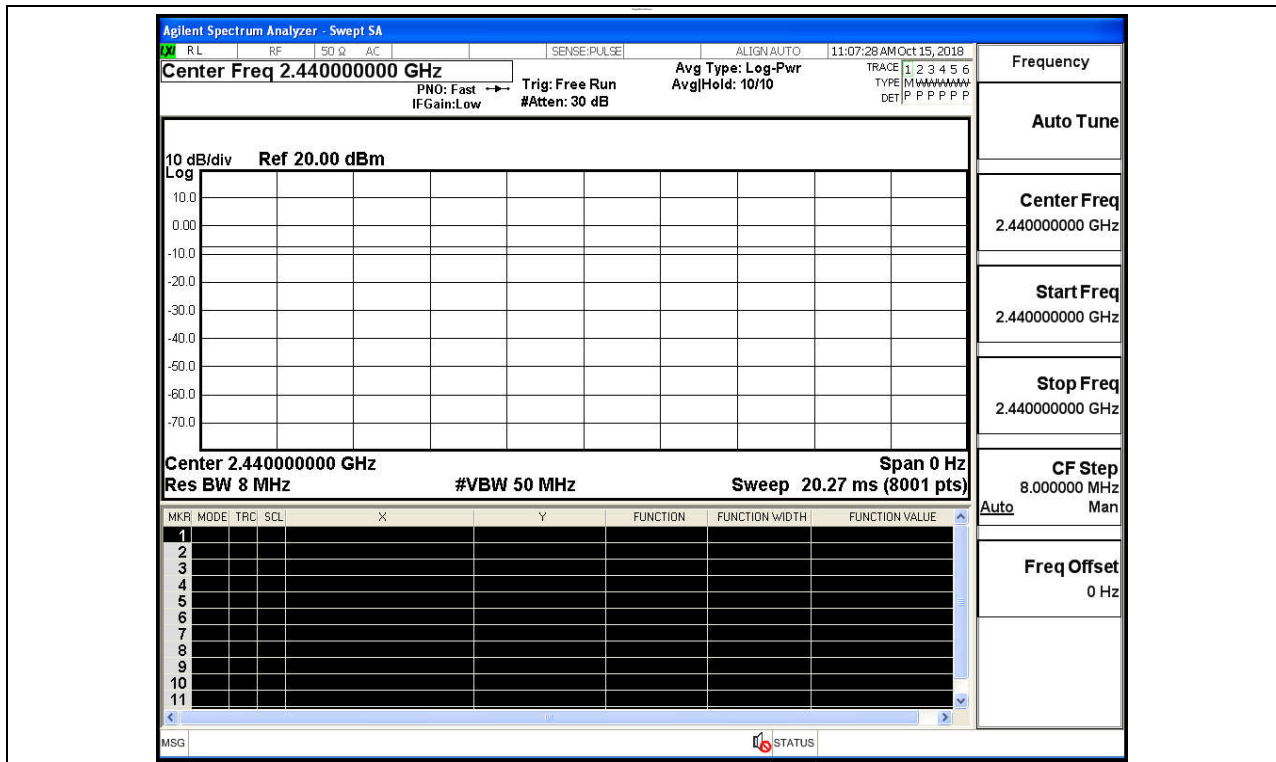
Test Model: X60L

Environmental Conditions

Temperature:	23.5 ° C
Relative Humidity:	53.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Tom.Liu
Supervised by:	Jayden.Zhuo

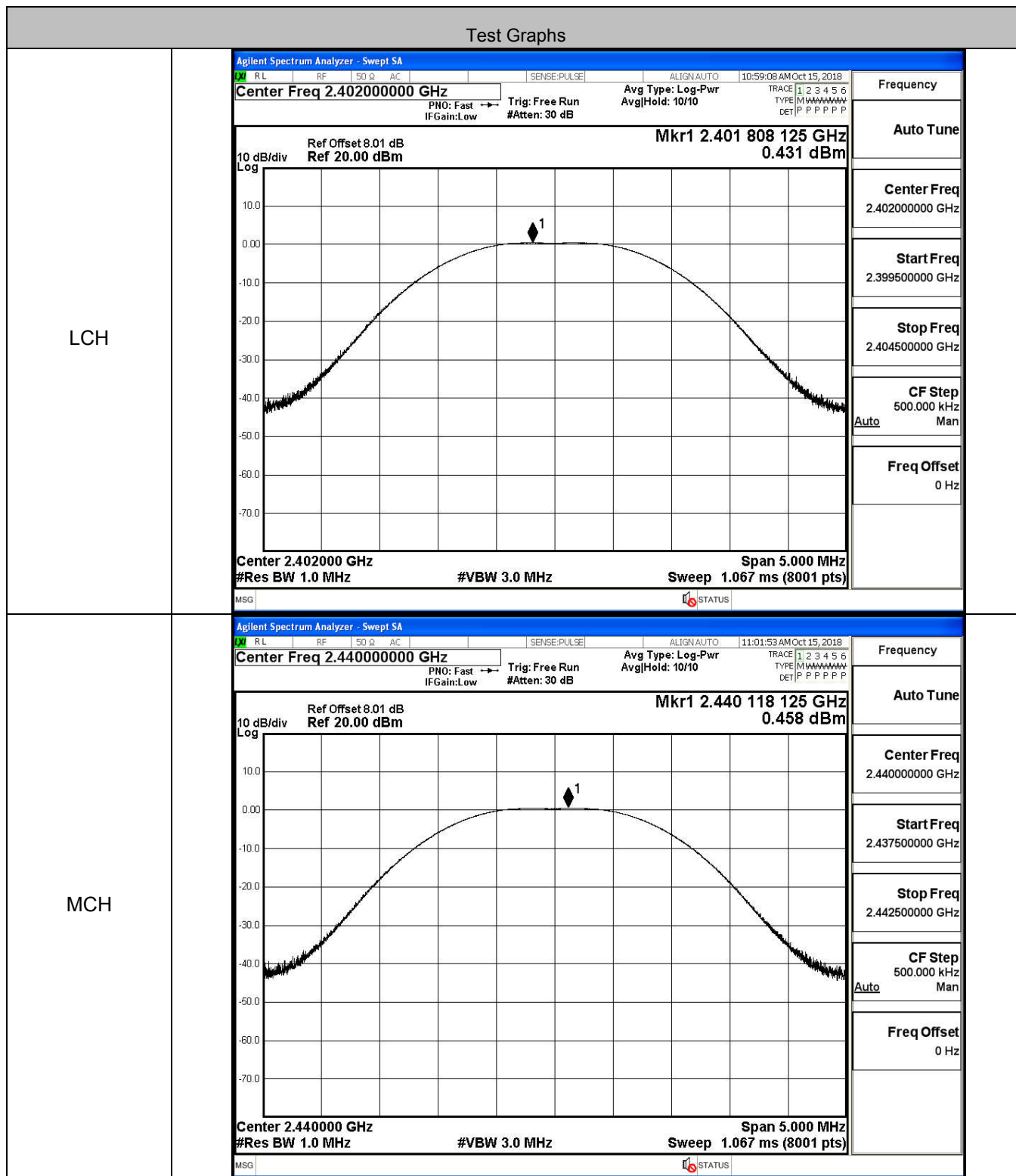
B.1 Duty Cycle

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

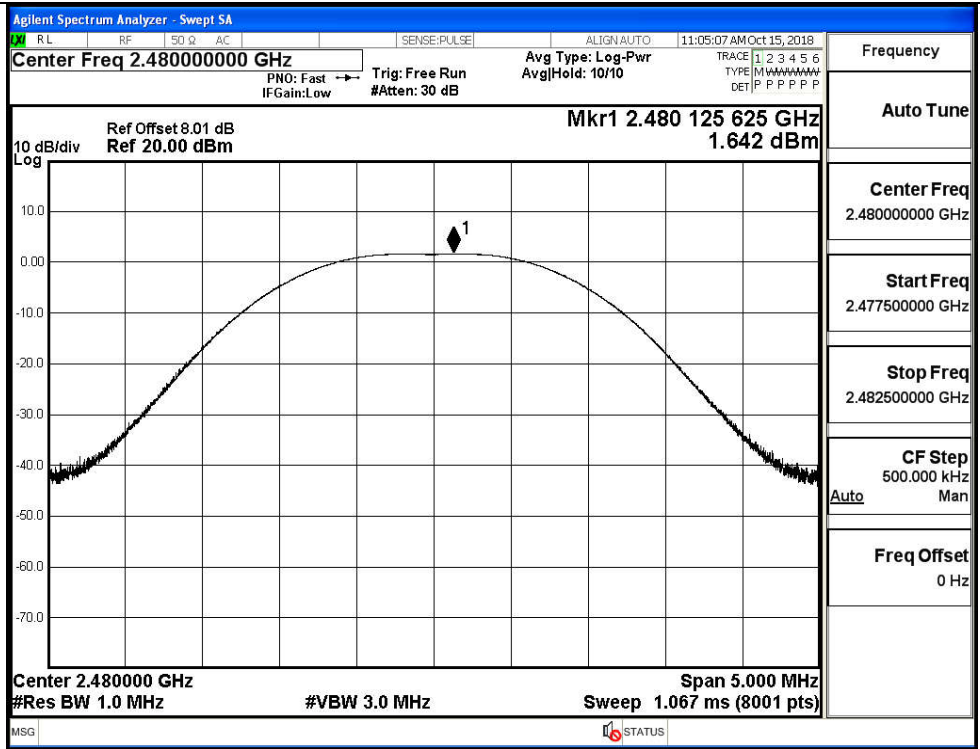


B.2 Maximum Conducted Peak Output Power

Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	0.431	30	PASS
BT LE	MCH	0.458	30	PASS
BT LE	HCH	1.642	30	PASS



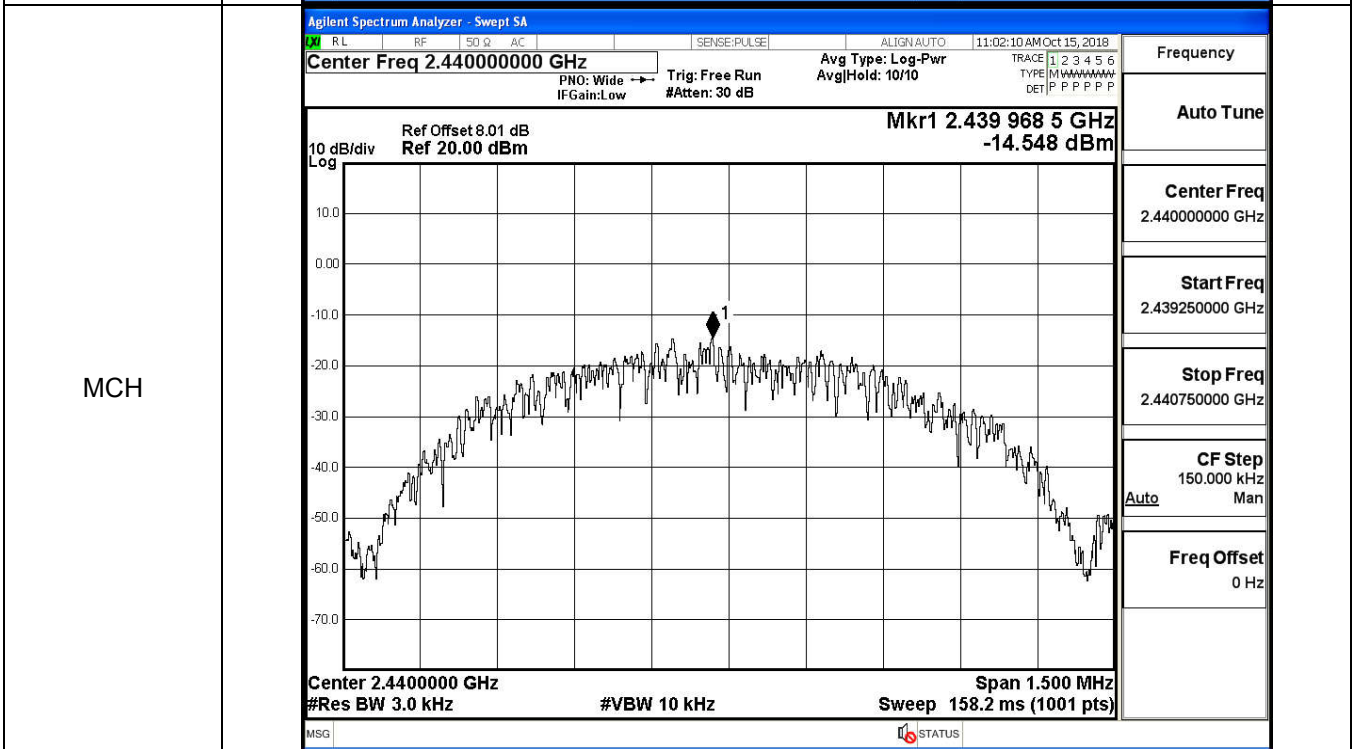
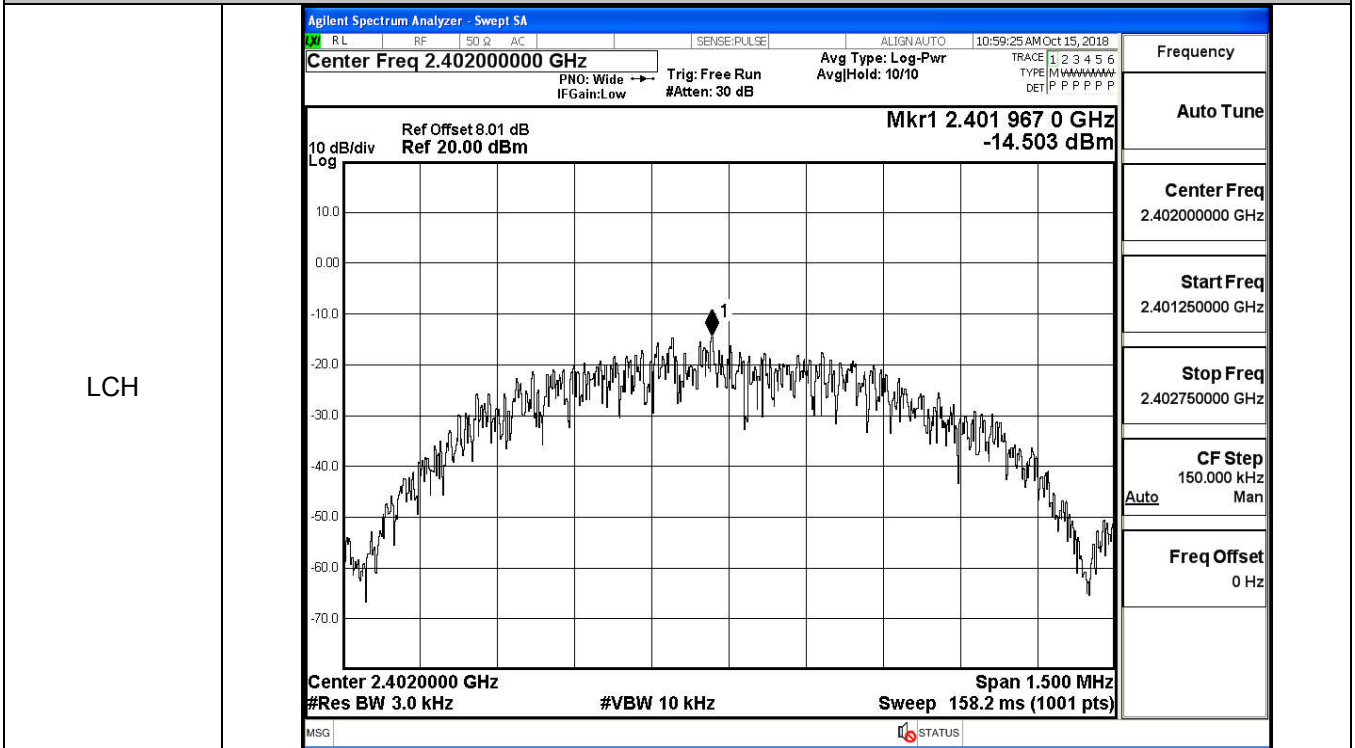
HCH



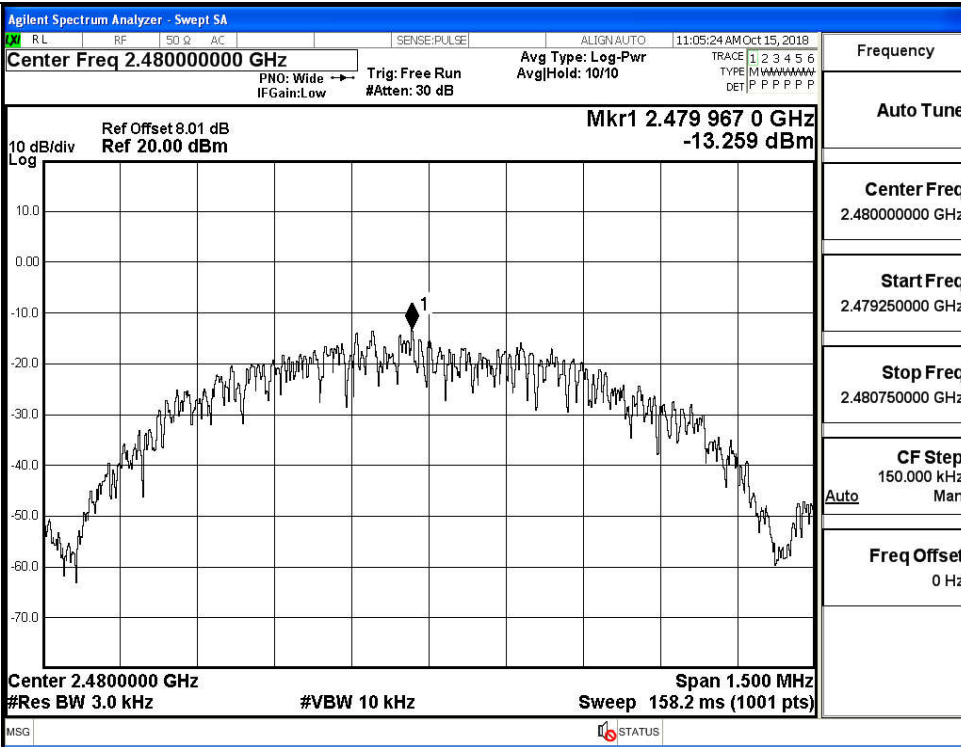
B.3 Maximum Power Spectral Density

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-14.503	8	PASS
BT LE	MCH	-14.548	8	PASS
BT LE	HCH	-13.259	8	PASS

Test Graphs



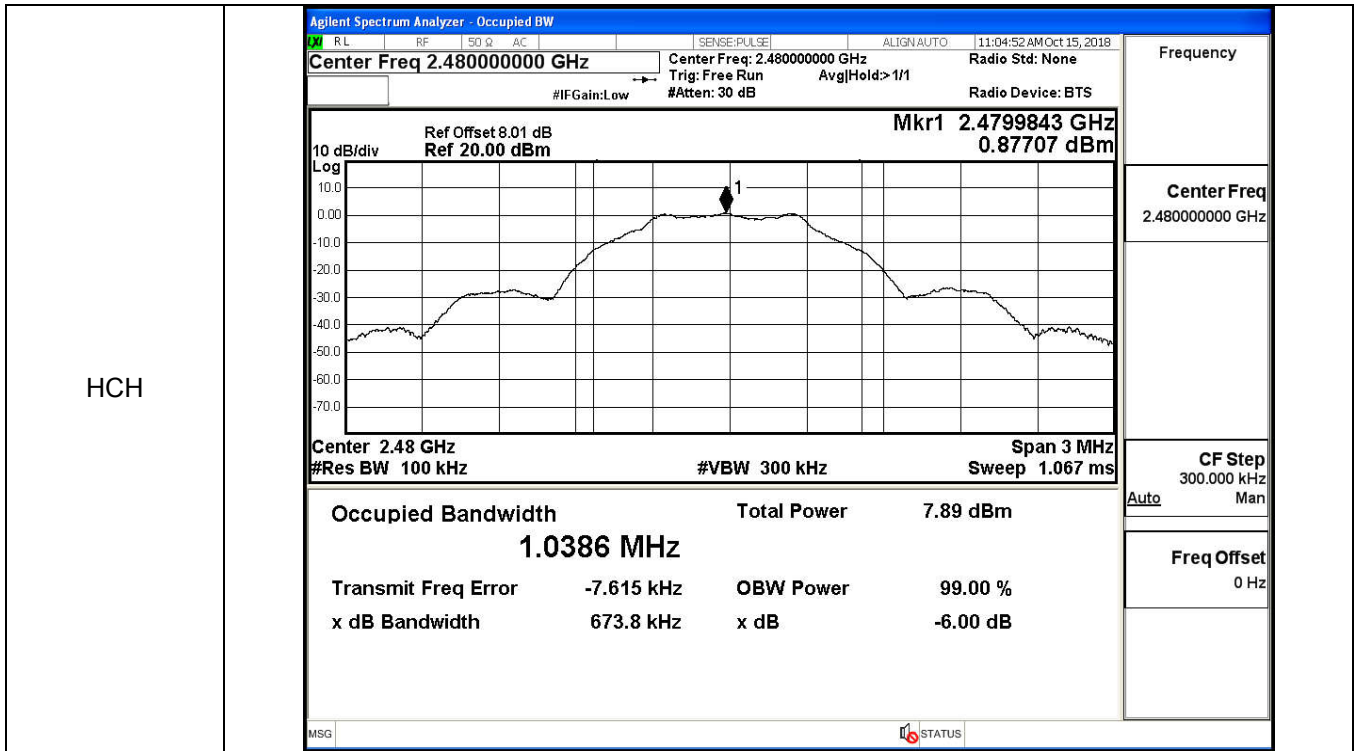
HCH



B.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6869	≥0.5	PASS
BT LE	MCH	0.6882	≥0.5	PASS
BT LE	HCH	0.6738	≥0.5	PASS

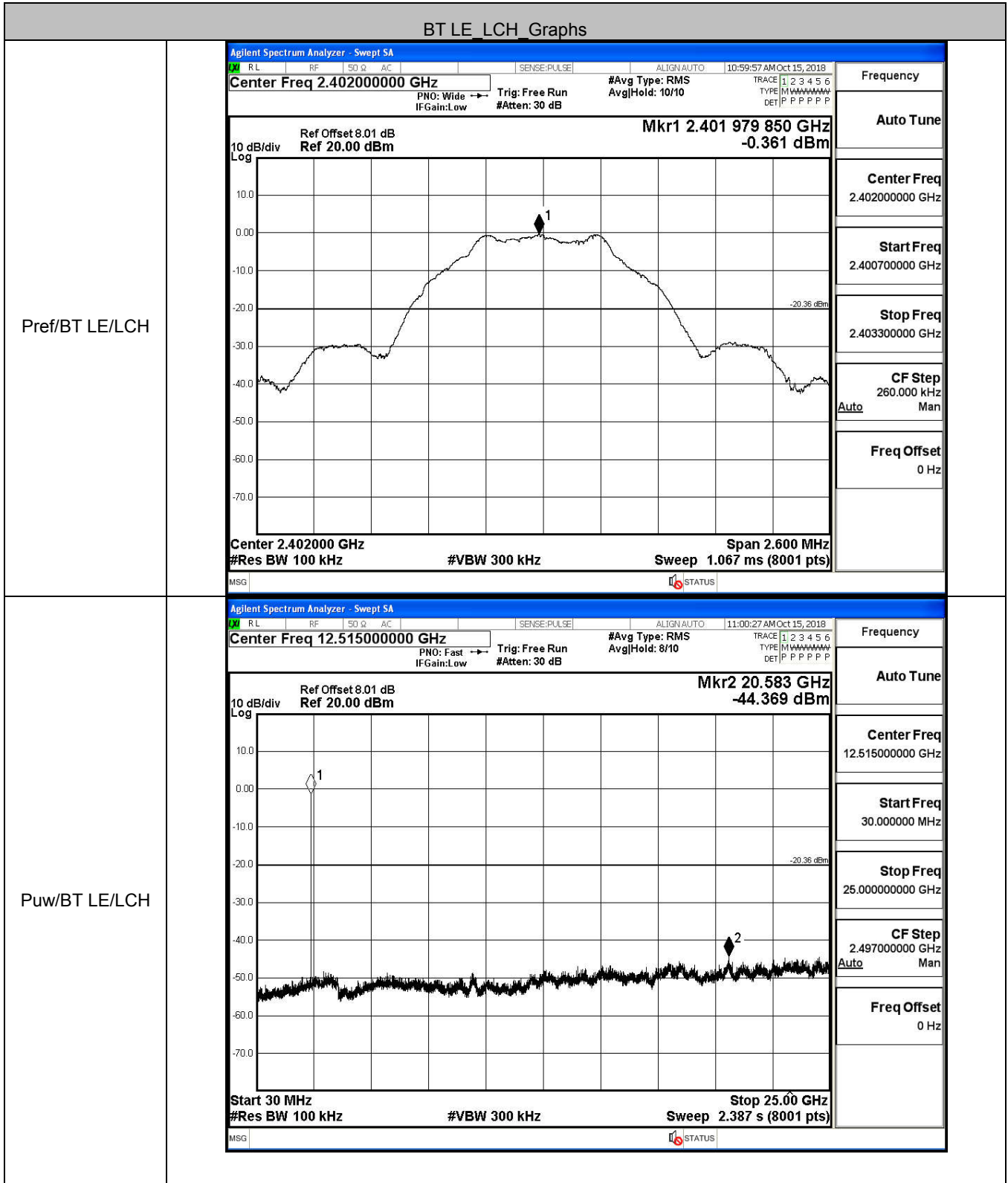
Test Graphs																			
LCH	<div data-bbox="416 562 1390 1294"> <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.40200000 GHz Center Freq: 2.402000000 GHz Radio Std: None</p> <p>Trig: Free Run AvgHold> 1/1 Radio Device: BTS</p> <p>#IFGain:Low #Atten: 30 dB</p> <p>Ref Offset 8.01 dB Mkr1 2.4019809 GHz</p> <p>Ref 20.00 dBm -0.34563 dBm</p> <p>Center 2.402 GHz Span 3 MHz</p> <p>#Res BW 100 kHz #VBW 300 kHz Sweep 1.067 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>6.73 dBm</td> </tr> <tr> <td>1.0419 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>-6.737 kHz</td> <td>x dB</td> <td>-6.00 dB</td> </tr> <tr> <td>x dB Bandwidth</td> <td></td> <td></td> </tr> <tr> <td>686.9 kHz</td> <td></td> <td></td> </tr> </table> <p>MSG STATUS</p> </div>	Occupied Bandwidth	Total Power	6.73 dBm	1.0419 MHz			Transmit Freq Error	OBW Power	99.00 %	-6.737 kHz	x dB	-6.00 dB	x dB Bandwidth			686.9 kHz		
Occupied Bandwidth	Total Power	6.73 dBm																	
1.0419 MHz																			
Transmit Freq Error	OBW Power	99.00 %																	
-6.737 kHz	x dB	-6.00 dB																	
x dB Bandwidth																			
686.9 kHz																			
MCH	<div data-bbox="416 1305 1390 2042"> <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 Radio Device: BTS</p> <p>#IFGain:Low #Atten: 30 dB</p> <p>Ref Offset 8.01 dB Mkr1 2.4399846 GHz</p> <p>Ref 20.00 dBm -0.30432 dBm</p> <p>Center 2.44 GHz Span 3 MHz</p> <p>#Res BW 100 kHz #VBW 300 kHz Sweep 1.067 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>6.74 dBm</td> </tr> <tr> <td>1.0370 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>-7.390 kHz</td> <td>x dB</td> <td>-6.00 dB</td> </tr> <tr> <td>x dB Bandwidth</td> <td></td> <td></td> </tr> <tr> <td>688.2 kHz</td> <td></td> <td></td> </tr> </table> <p>MSG STATUS</p> </div>	Occupied Bandwidth	Total Power	6.74 dBm	1.0370 MHz			Transmit Freq Error	OBW Power	99.00 %	-7.390 kHz	x dB	-6.00 dB	x dB Bandwidth			688.2 kHz		
Occupied Bandwidth	Total Power	6.74 dBm																	
1.0370 MHz																			
Transmit Freq Error	OBW Power	99.00 %																	
-7.390 kHz	x dB	-6.00 dB																	
x dB Bandwidth																			
688.2 kHz																			



B.5 RF Conducted Spurious Emissions

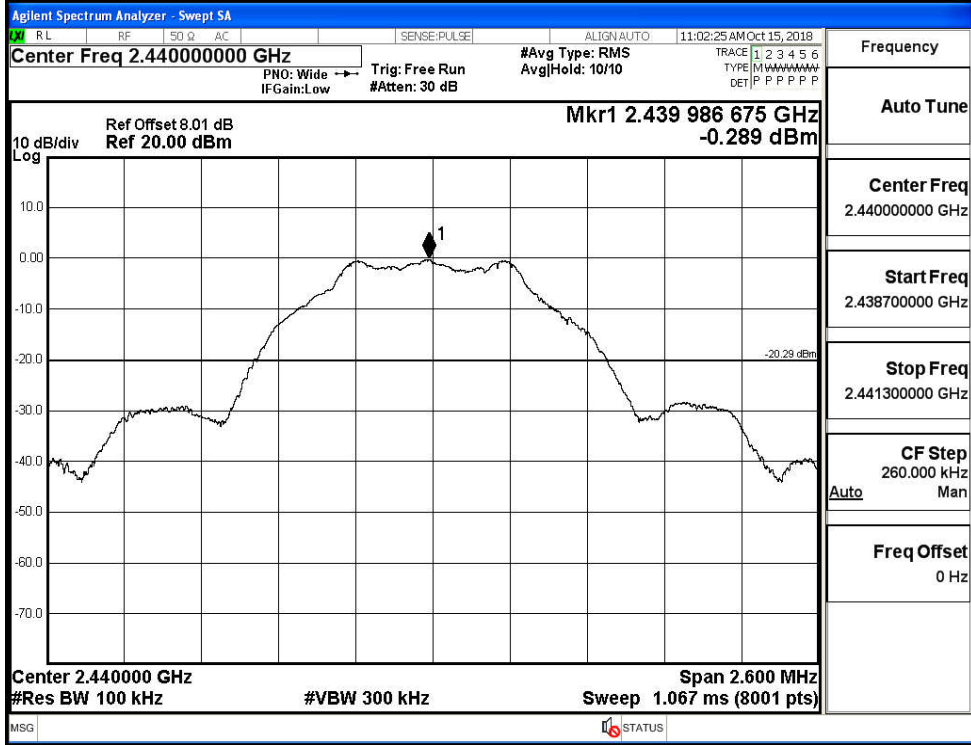
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-0.361	-44.369	-20.361	PASS
BT LE	MCH	-0.289	-43.905	-20.289	PASS
BT LE	HCH	0.89	-44.406	-19.110	PASS

BT LE_LCH_Graphs

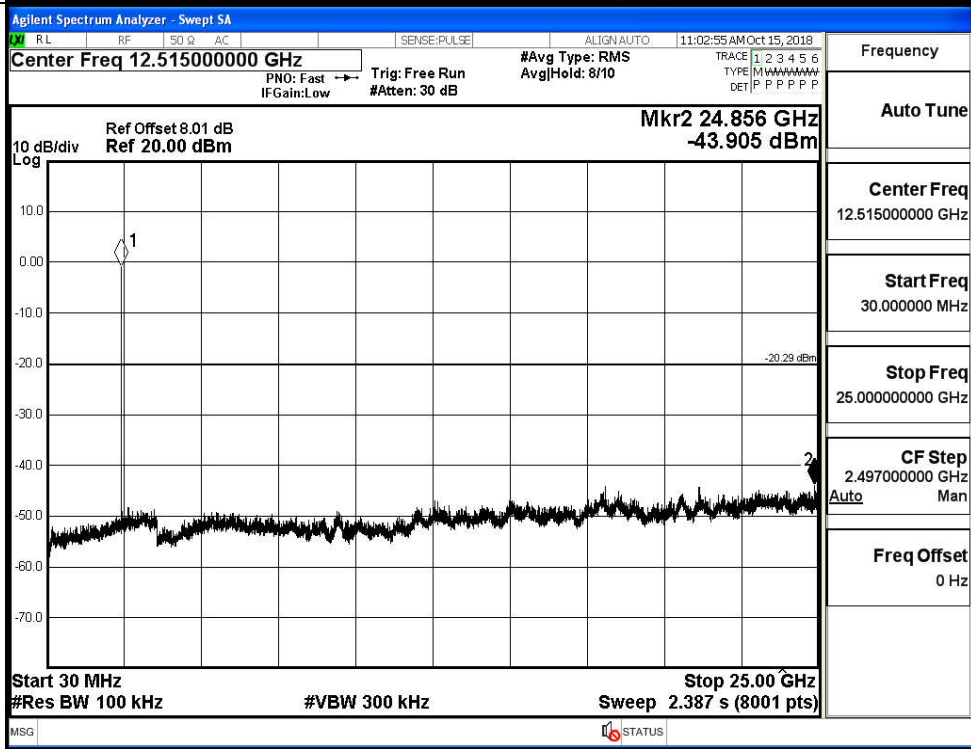


BT LE MCH Graphs

Pref/BT LE/MCH

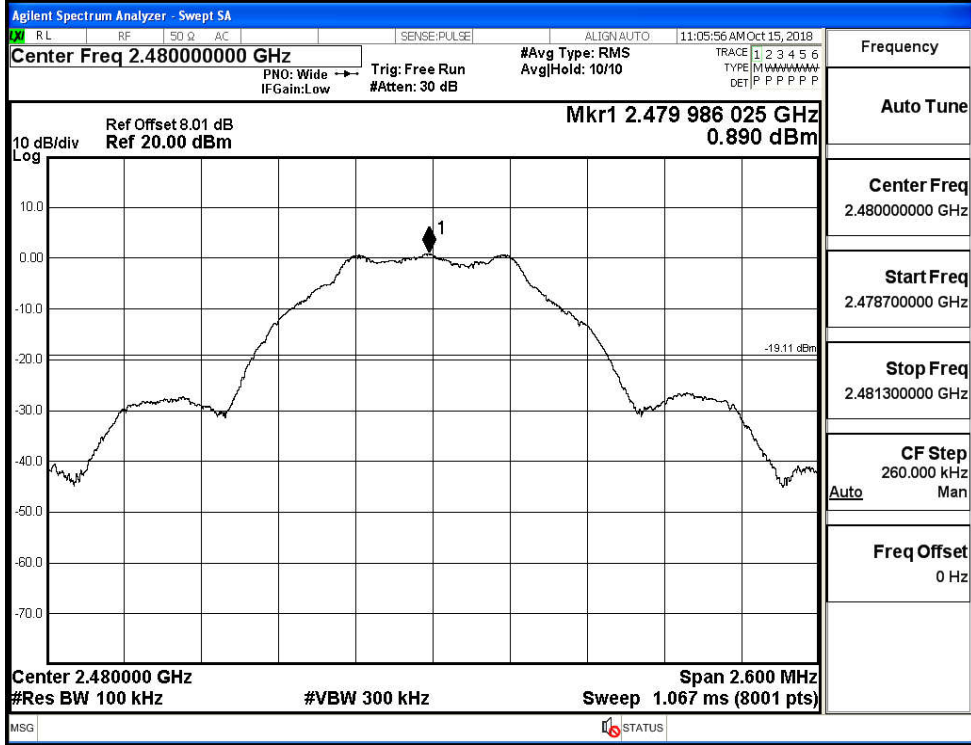


Puw/BT LE/MCH

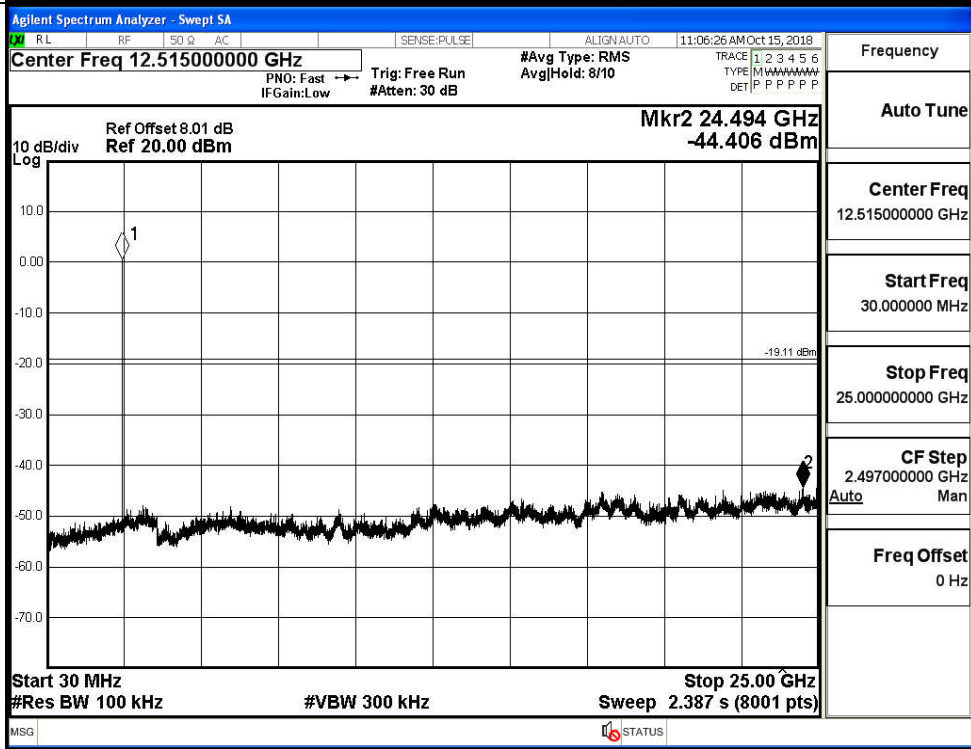


BT LE HCH Graphs

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	-0.099	-50.383	-20.1	PASS
BT LE	HCH	0.900	-49.317	-19.1	PASS

Test Graphs

LCH

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N		f	2.401991 GHz	-0.099 dBm			
2	N		f	2.400000 GHz	-53.925 dBm			
3	N		f	2.390000 GHz	-53.056 dBm			
4	N		f	2.370313 GHz	-50.383 dBm			
5								
6								
7								
8								
9								
10								
11								

Frequency

Auto Tune

Center Freq
2.357000000 GHz

Start Freq
2.310000000 GHz

Stop Freq
2.404000000 GHz

CF Step
9.400000 MHz

Freq Offset
0 Hz

HCH

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N		f	2.48000200 GHz	0.900 dBm			
2	N		f	2.48350000 GHz	-53.103 dBm			
3	N		f	2.50000000 GHz	-53.547 dBm			
4	N		f	2.49402975 GHz	-49.317 dBm			
5								
6								
7								
8								
9								
10								
11								

Frequency

Auto Tune

Center Freq
2.489000000 GHz

Start Freq
2.478000000 GHz

Stop Freq
2.500000000 GHz

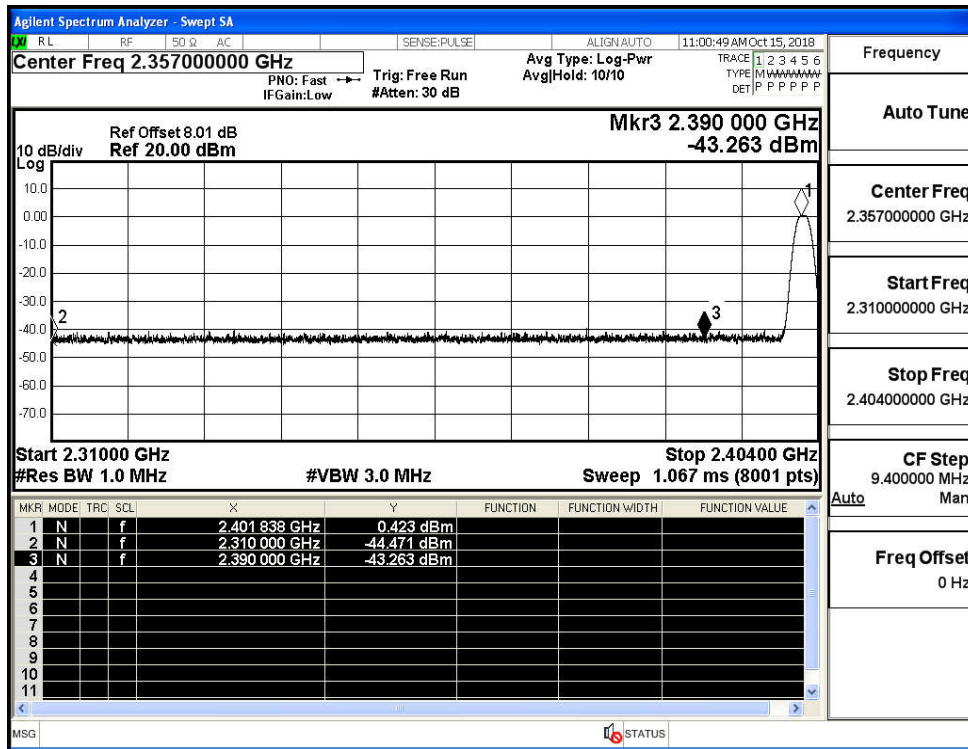
CF Step
2.200000 MHz

Freq Offset
0 Hz

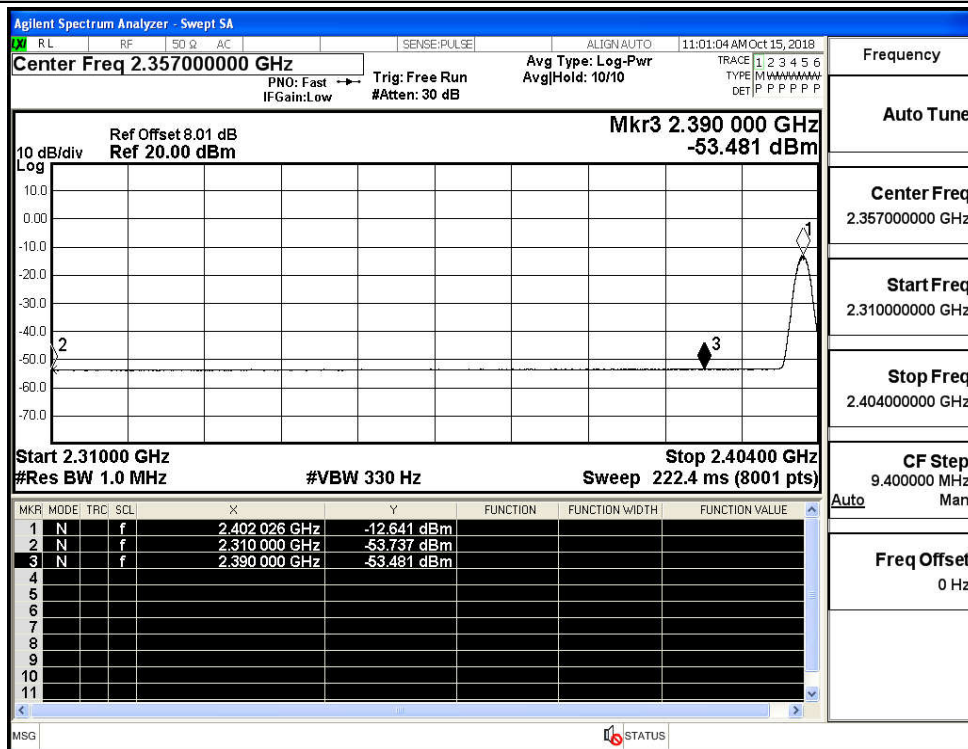
B.7 Restrict-band band-edge measurements

Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
BT LE	2402	Ant1	2310.0	-44.47	2.0	0	52.76	PEAK	74	PASS
		Ant1	2310.0	-53.74	2.0	0	43.49	AV	54	PASS
		Ant1	2390.0	-43.26	2.0	0	53.97	PEAK	74	PASS
		Ant1	2390.0	-53.48	2.0	0	43.75	AV	54	PASS
	2480	Ant1	2483.5	-42.99	2.0	0	54.24	PEAK	74	PASS
		Ant1	2483.5	-53.11	2.0	0	44.12	AV	54	PASS
		Ant1	2500.0	-42.52	2.0	0	54.71	PEAK	74	PASS
		Ant1	2500.0	-53.03	2.0	0	44.20	AV	54	PASS

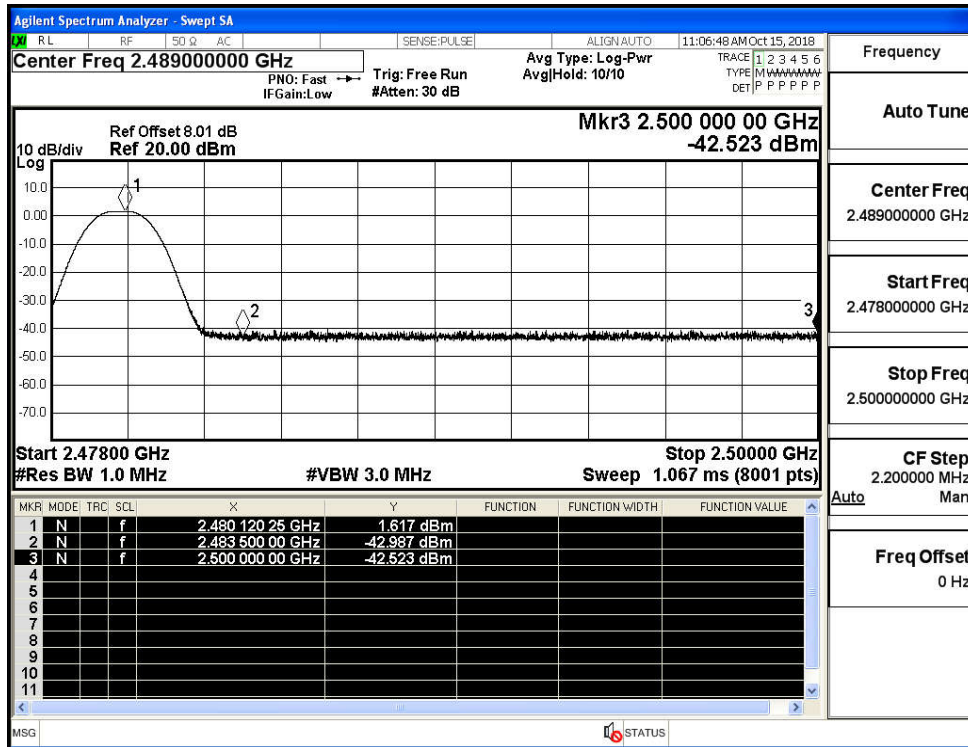
Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



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

