

Appendix B

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

Product Name: GSM/WCDMA Smartphone

Trade Mark: DOOGEE

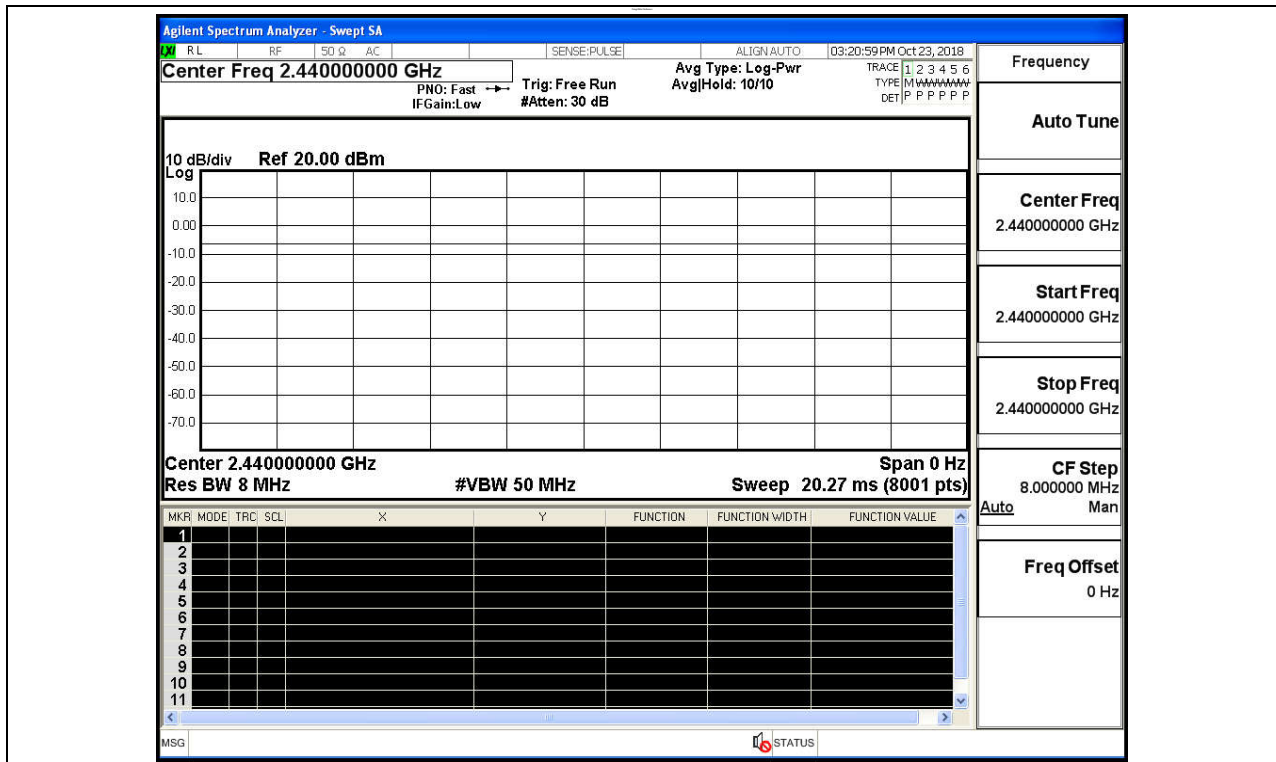
Test Model: X50

Environmental Conditions

Temperature:	24.6 ° C
Relative Humidity:	52.3%
ATM Pressure:	100.0 kPa
Test Engineer:	WangChuang
Supervised by:	Jayden.Zhuo

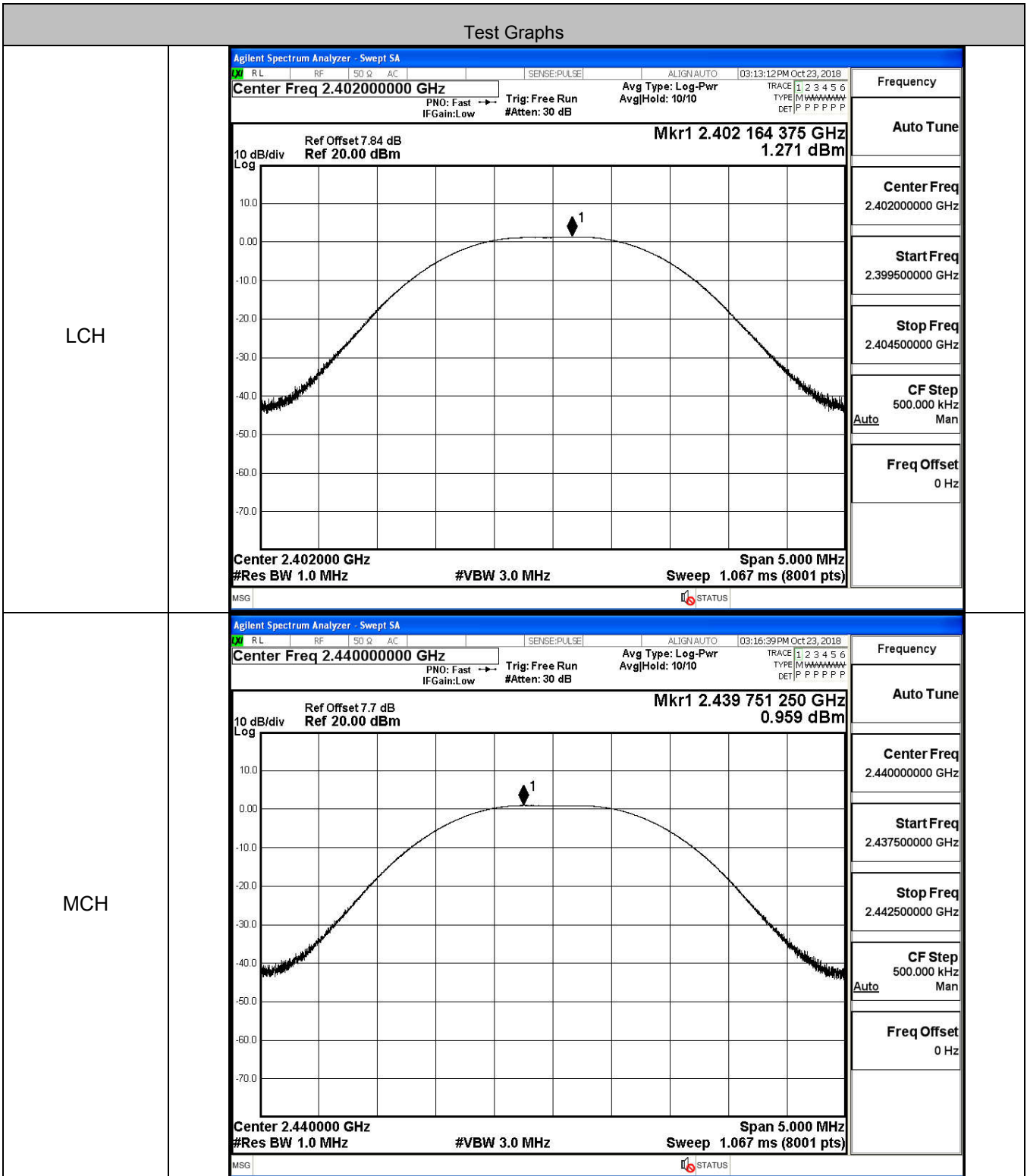
B.1 Duty Cycle

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



B.2 Maximum Conducted Peak Output Power

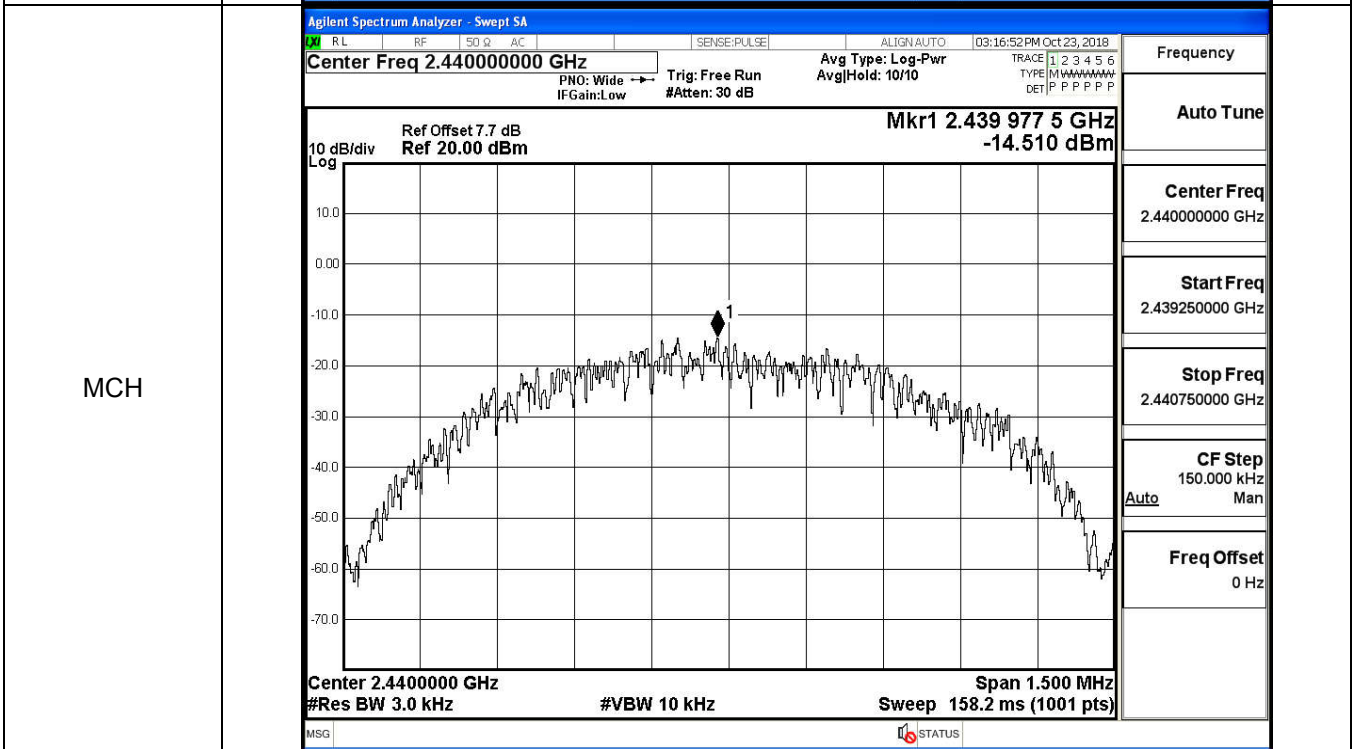
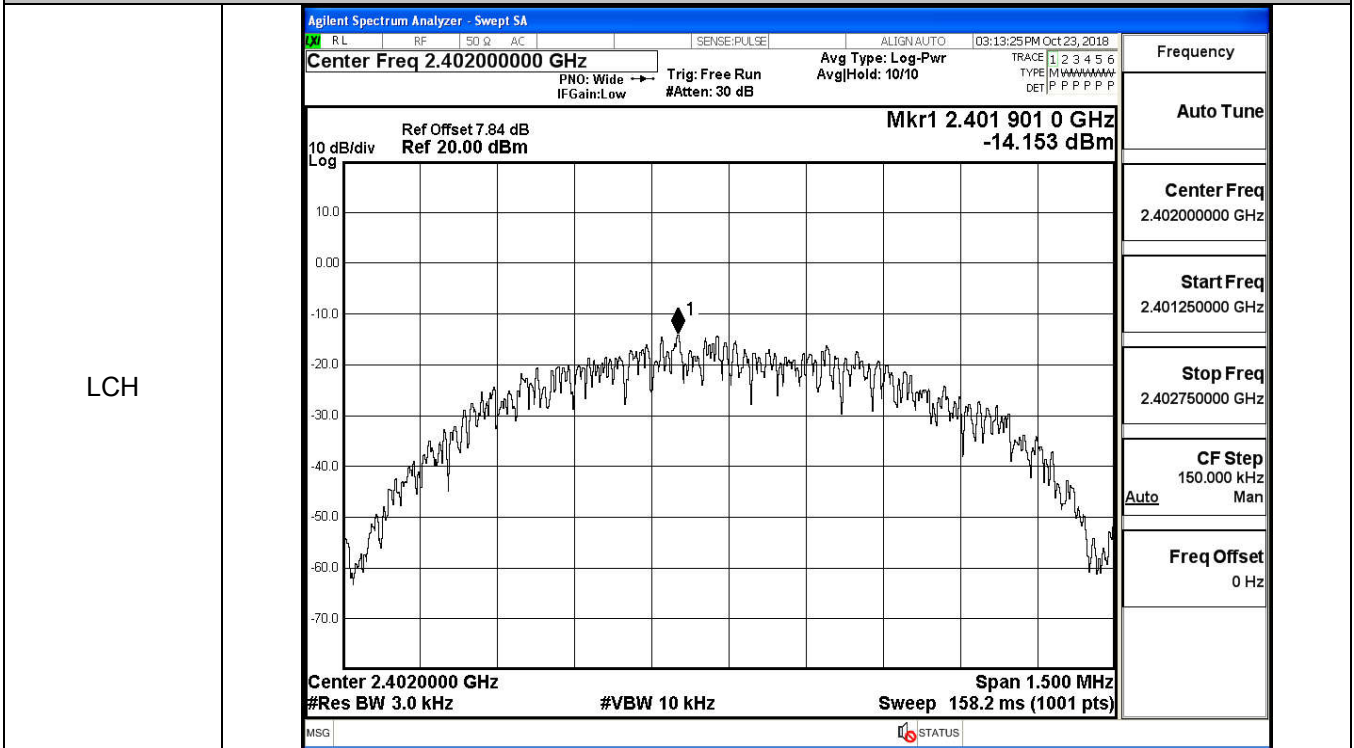
Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	1.271	30	PASS
BT LE	MCH	0.959	30	PASS
BT LE	HCH	1.5	30	PASS



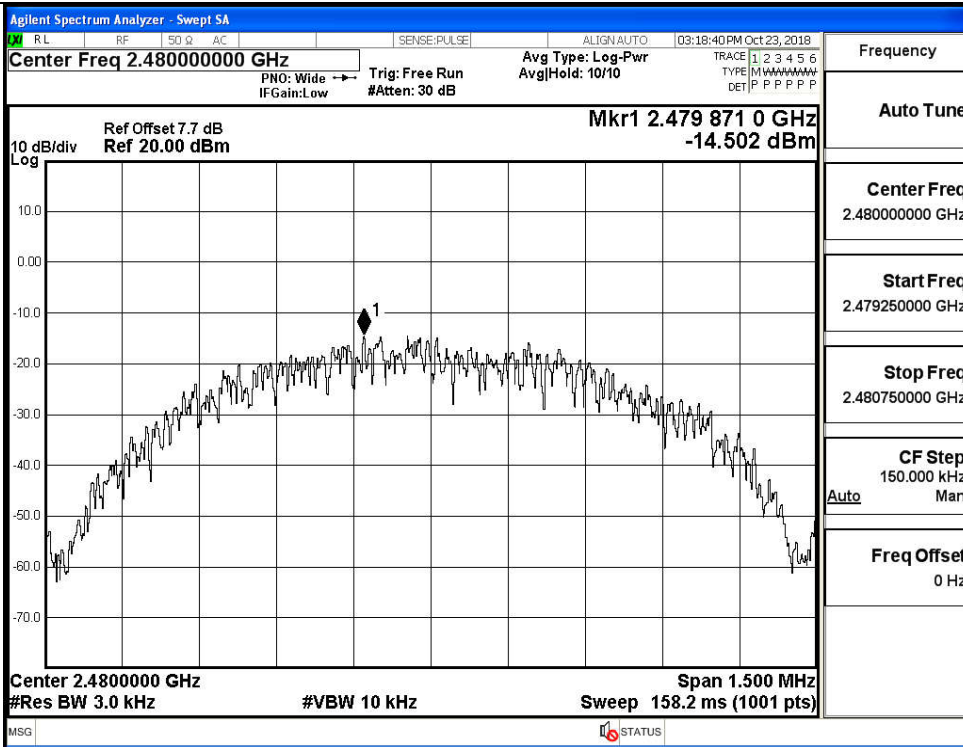
B.3 Maximum Power Spectral Density

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-14.153	8	PASS
BT LE	MCH	-14.510	8	PASS
BT LE	HCH	-14.502	8	PASS

Test Graphs



HCH

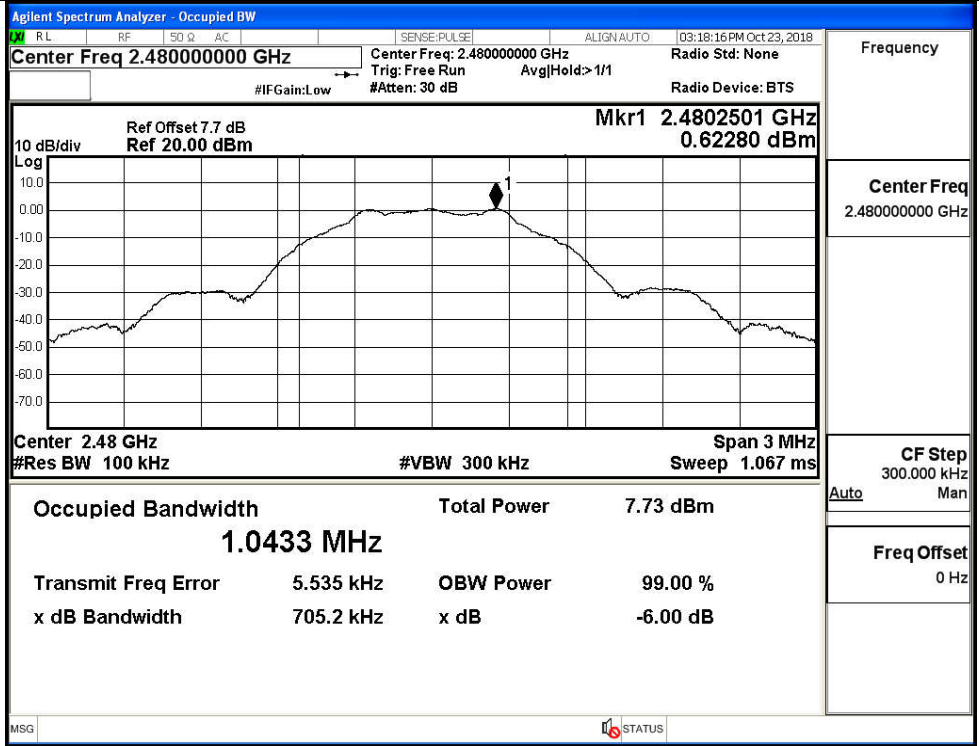


B.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.7021	≥0.5	PASS
BT LE	MCH	0.7054	≥0.5	PASS
BT LE	HCH	0.7052	≥0.5	PASS

Test Graphs																			
LCH	<div style="border: 1px solid black; padding: 5px;"> <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.402000000 GHz Center Freq: 2.402000000 GHz Radio Std: None</p> <p>Trig: Free Run Avg/Hold: 1/1 Radio Device: BTS</p> <p>#IFGain: Low #Atten: 30 dB</p> <p>Ref Offset 7.84 dB Ref 20.00 dBm Mkr1 2.4022513 GHz 0.34691 dBm</p> <p>Center 2.402 GHz #Res BW 100 kHz #VBW 300 kHz Span 3 MHz Sweep 1.067 ms</p> <table border="0"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>7.49 dBm</td> </tr> <tr> <td>1.0474 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>4.455 kHz</td> <td>OBW Power</td> </tr> <tr> <td>x dB Bandwidth</td> <td>702.1 kHz</td> <td>x dB</td> </tr> <tr> <td></td> <td></td> <td>99.00 %</td> </tr> <tr> <td></td> <td></td> <td>-6.00 dB</td> </tr> </table> <p>MSG STATUS</p> </div>	Occupied Bandwidth	Total Power	7.49 dBm	1.0474 MHz			Transmit Freq Error	4.455 kHz	OBW Power	x dB Bandwidth	702.1 kHz	x dB			99.00 %			-6.00 dB
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x dB Bandwidth	702.1 kHz	x dB																	
		99.00 %																	
		-6.00 dB																	
MCH	<div style="border: 1px solid black; padding: 5px;"> <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.440000000 GHz Center Freq: 2.440000000 GHz Radio Std: None</p> <p>Trig: Free Run Avg/Hold: 1/1 Radio Device: BTS</p> <p>#IFGain: Low #Atten: 30 dB</p> <p>Ref Offset 7.7 dB Ref 20.00 dBm Mkr1 2.439997 GHz 0.059522 dBm</p> <p>Center 2.44 GHz #Res BW 100 kHz #VBW 300 kHz Span 3 MHz Sweep 1.067 ms</p> <table border="0"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>7.22 dBm</td> </tr> <tr> <td>1.0502 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>1.839 kHz</td> <td>OBW Power</td> </tr> <tr> <td>x dB Bandwidth</td> <td>705.4 kHz</td> <td>x dB</td> </tr> <tr> <td></td> <td></td> <td>99.00 %</td> </tr> <tr> <td></td> <td></td> <td>-6.00 dB</td> </tr> </table> <p>MSG STATUS</p> </div>	Occupied Bandwidth	Total Power	7.22 dBm	1.0502 MHz			Transmit Freq Error	1.839 kHz	OBW Power	x dB Bandwidth	705.4 kHz	x dB			99.00 %			-6.00 dB
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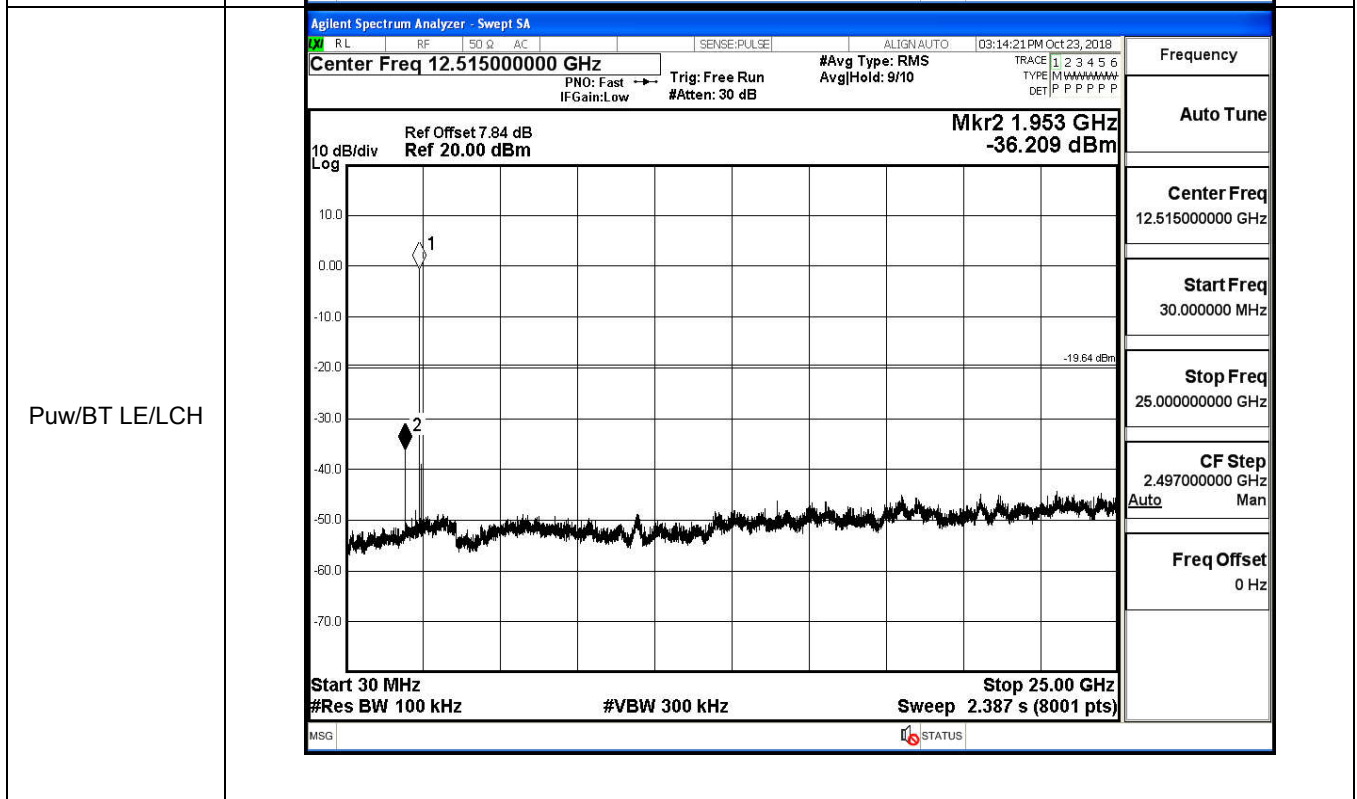
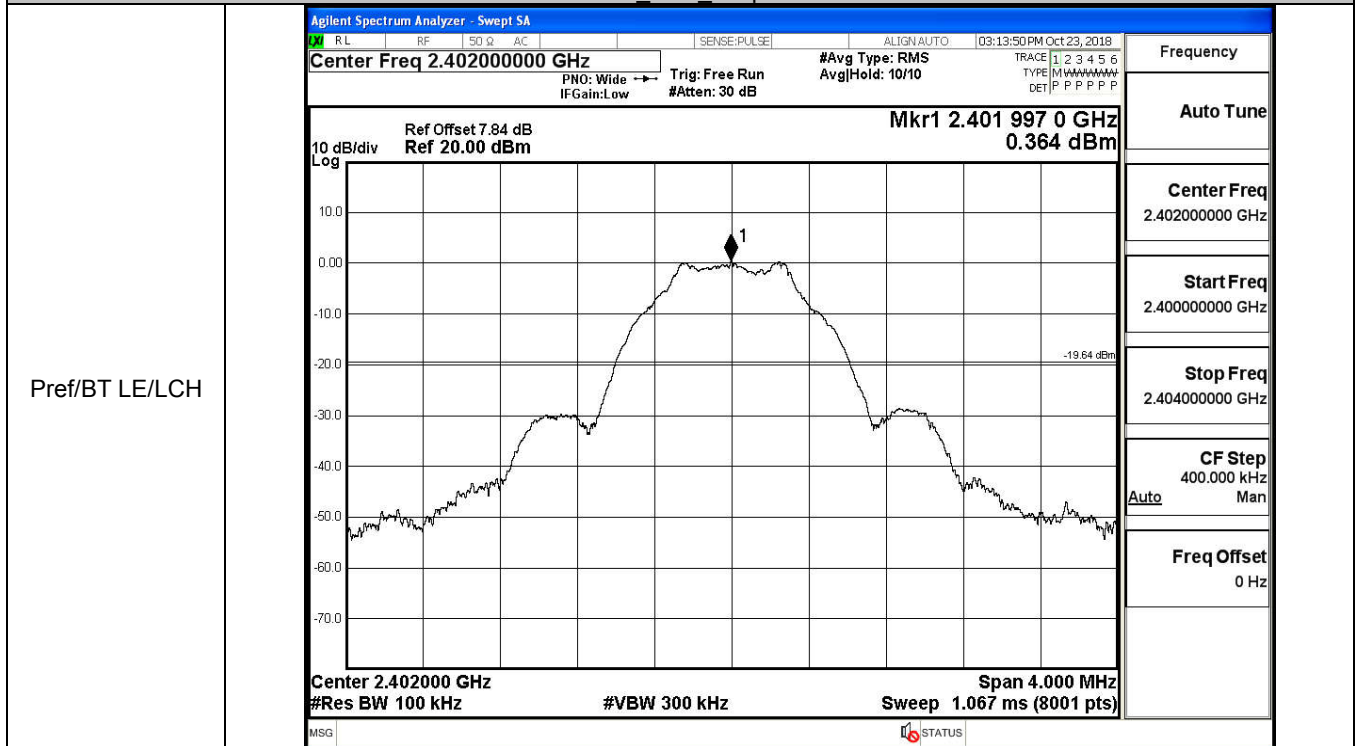
HCH



B.5 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	0.364	-36.209	-19.636	PASS
BT LE	MCH	0.051	-44.382	-19.949	PASS
BT LE	HCH	0.614	-44.304	-19.386	PASS

BT LE LCH Graphs

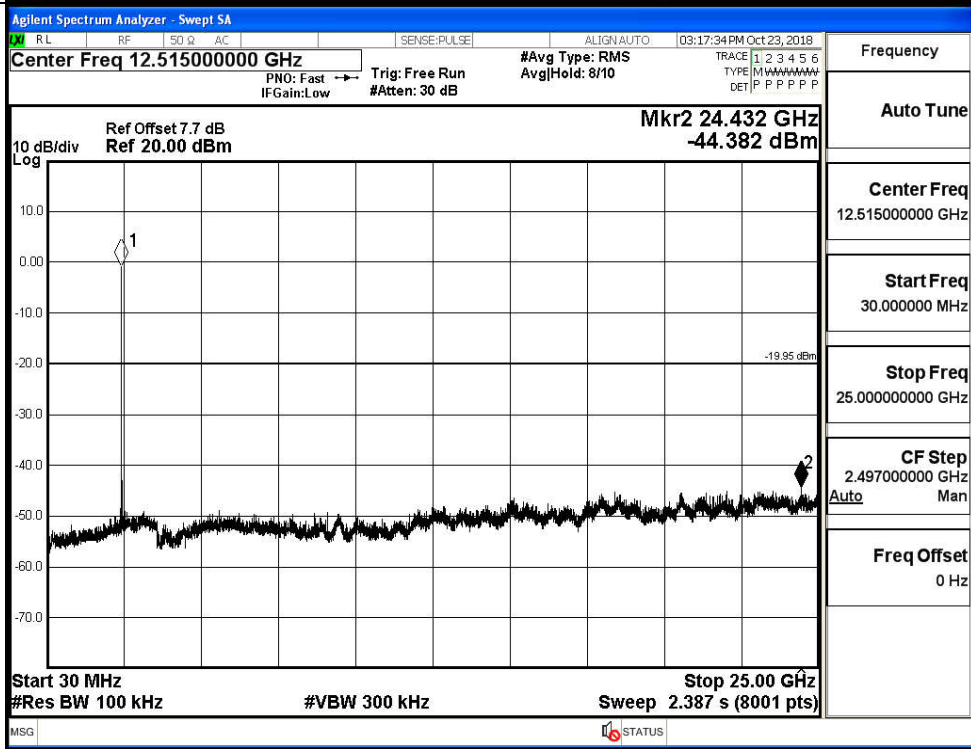


BT LE MCH Graphs

Pref/BT LE/MCH

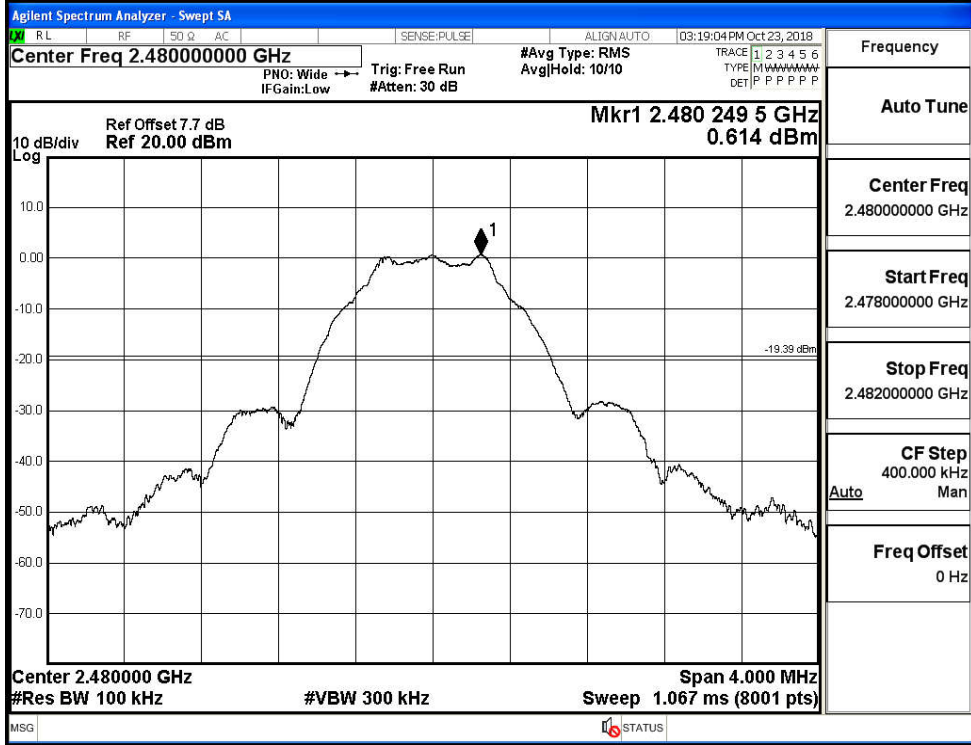


Puw/BT LE/MCH

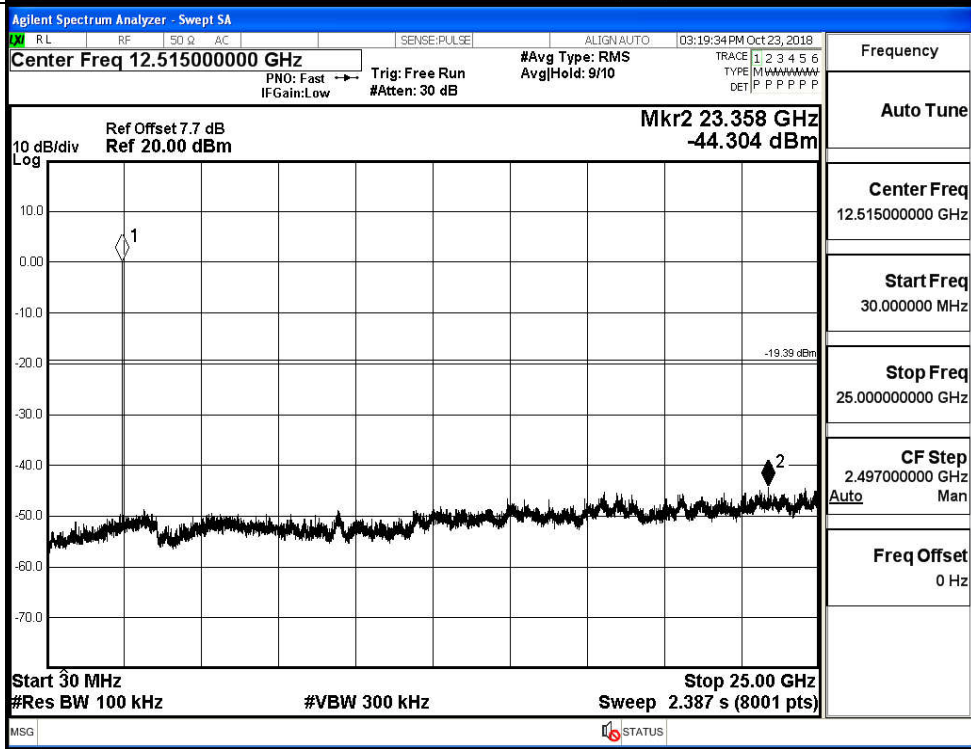


BT LE HCH Graphs

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	0.532	-50.655	-19.47	PASS
BT LE	HCH	0.770	-49.988	-19.23	PASS

Test Graphs

LCH

Frequency

Auto Tune

Center Freq
2.35700000 GHz

Start Freq
2.31000000 GHz

Stop Freq
2.40400000 GHz

CF Step
9.400000 MHz

Freq Offset
0 Hz

HCH

Frequency

Auto Tune

Center Freq
2.489000000 GHz

Start Freq
2.478000000 GHz

Stop Freq
2.500000000 GHz

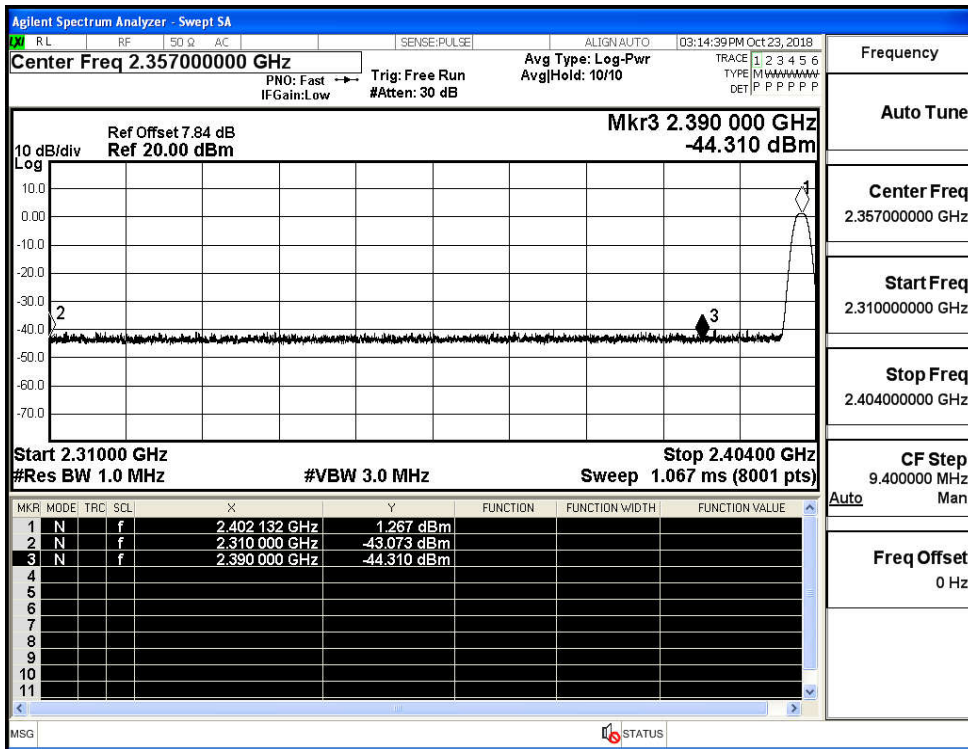
CF Step
2.200000 MHz

Freq Offset
0 Hz

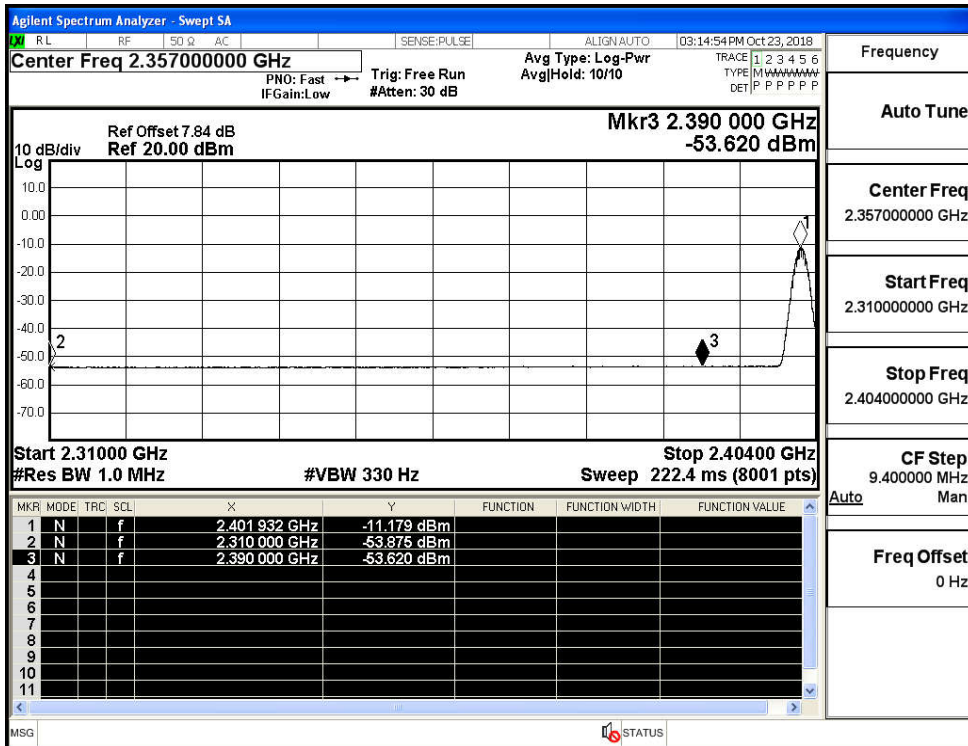
B.7 Restrict-band band-edge measurements

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	-43.07	2.0	0	54.16	PEAK	74	PASS
		Ant1	2310.0	-53.88	2.0	0	43.35	AV	54	PASS
		Ant1	2390.0	-44.31	2.0	0	52.92	PEAK	74	PASS
		Ant1	2390.0	-53.62	2.0	0	43.61	AV	54	PASS
	2480	Ant1	2483.5	-42.79	2.0	0	54.44	PEAK	74	PASS
		Ant1	2483.5	-53.41	2.0	0	43.82	AV	54	PASS
		Ant1	2500.0	-43.54	2.0	0	53.69	PEAK	74	PASS
		Ant1	2500.0	-53.39	2.0	0	43.84	AV	54	PASS

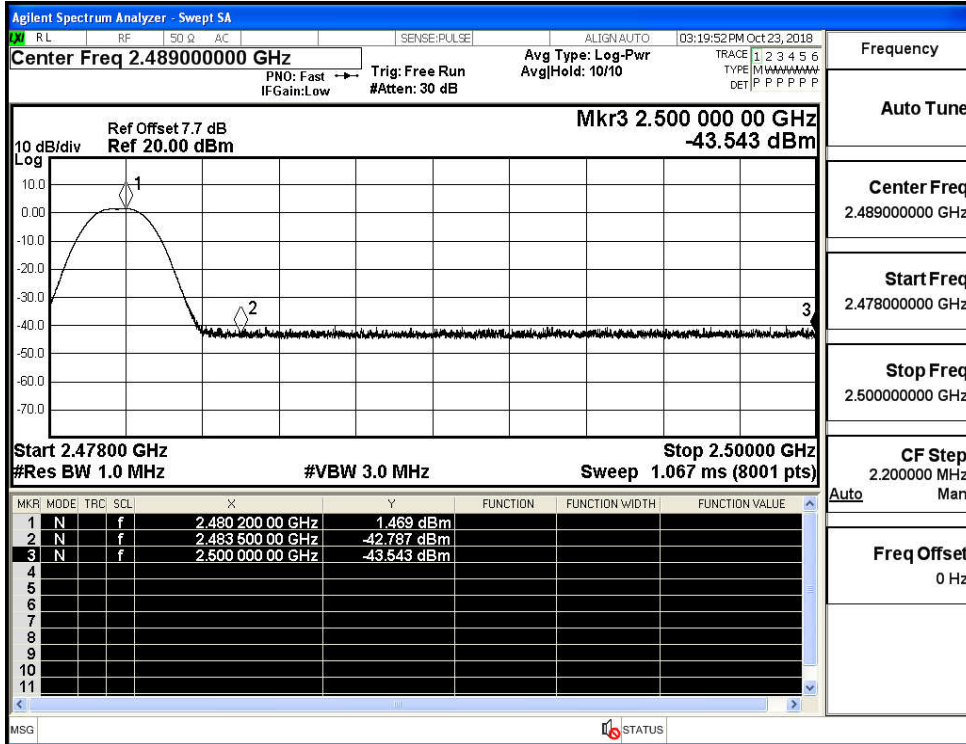
Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



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

