

Appendix B

RF Test Data for BT V4.1(BT LE) (Conducted Measurement)

Product Name: Tablet PC

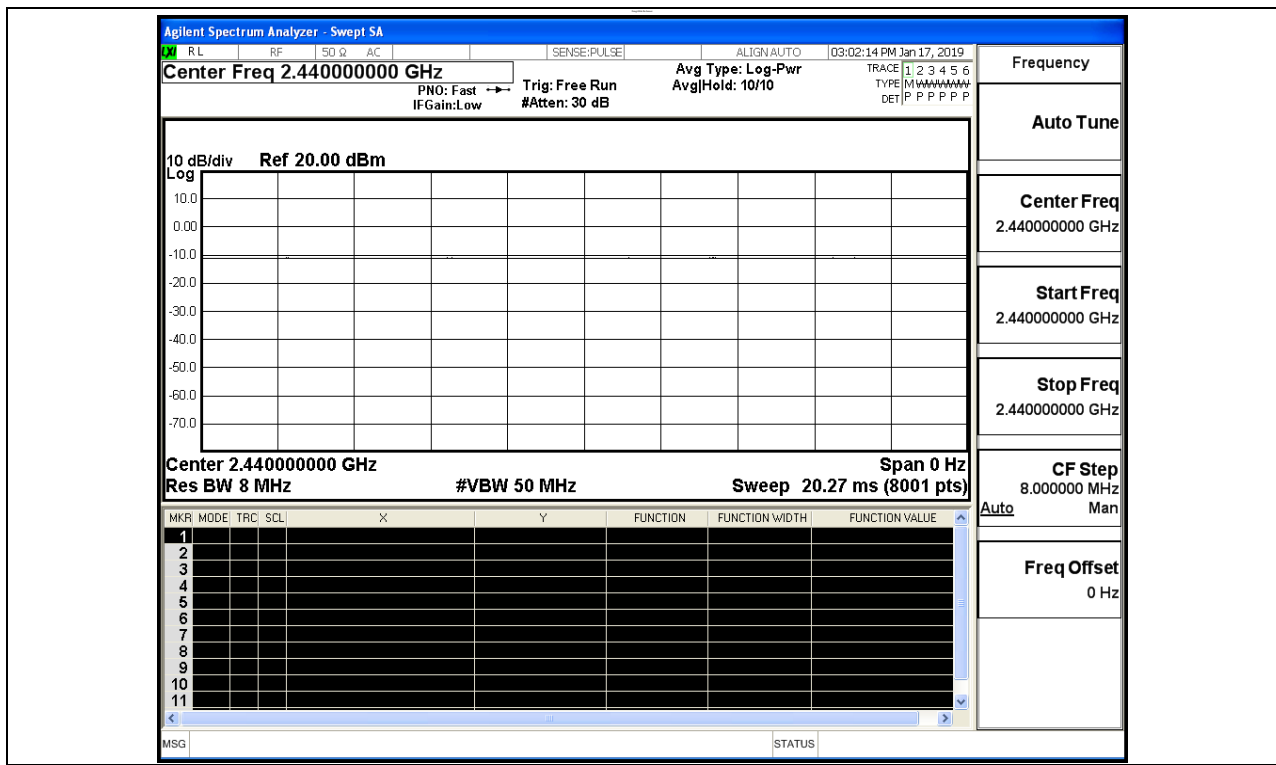
Test Model: Z1

Environmental Conditions

Temperature:	24.8 °C
Relative Humidity:	54.3%
ATM Pressure:	100.0 kPa
Test Engineer:	WANG CHUANG
Supervised by:	Jayden Zhuo

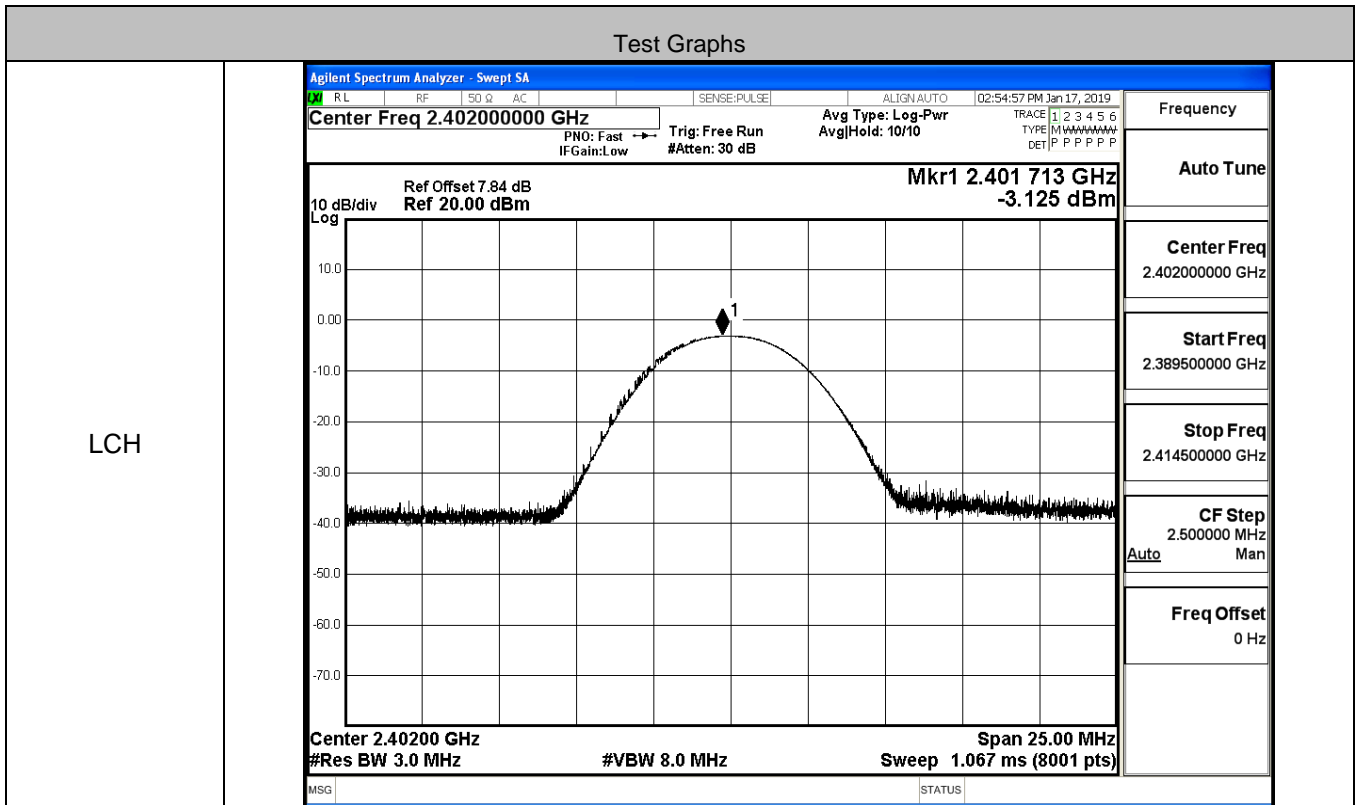
B.1 Duty Cycle

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

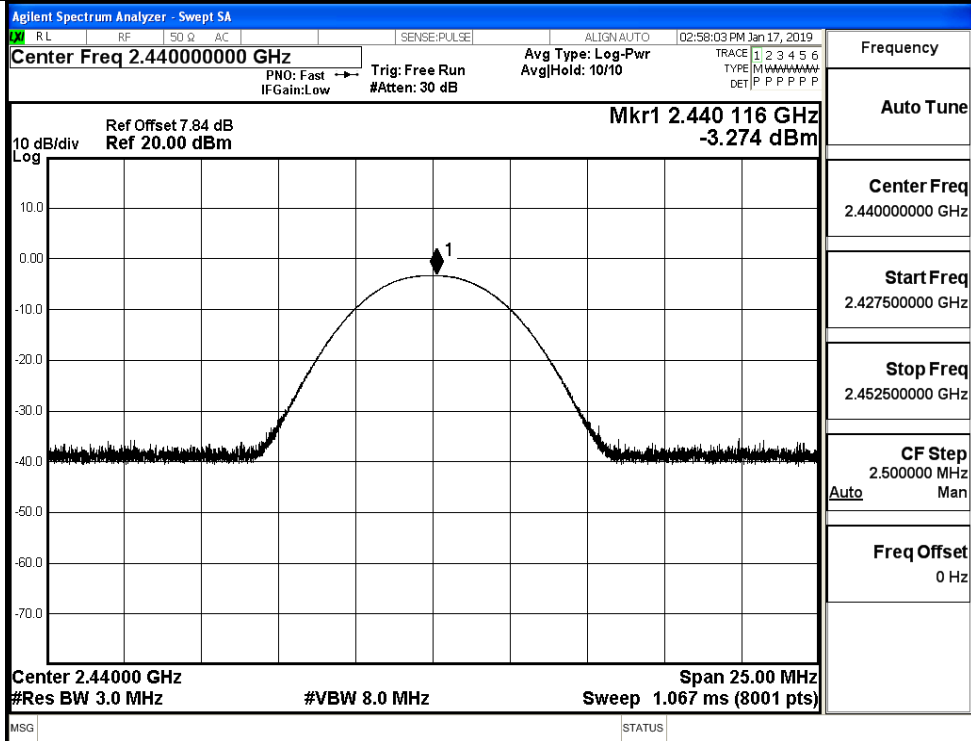


B.2 Maximum Conducted Peak Output Power

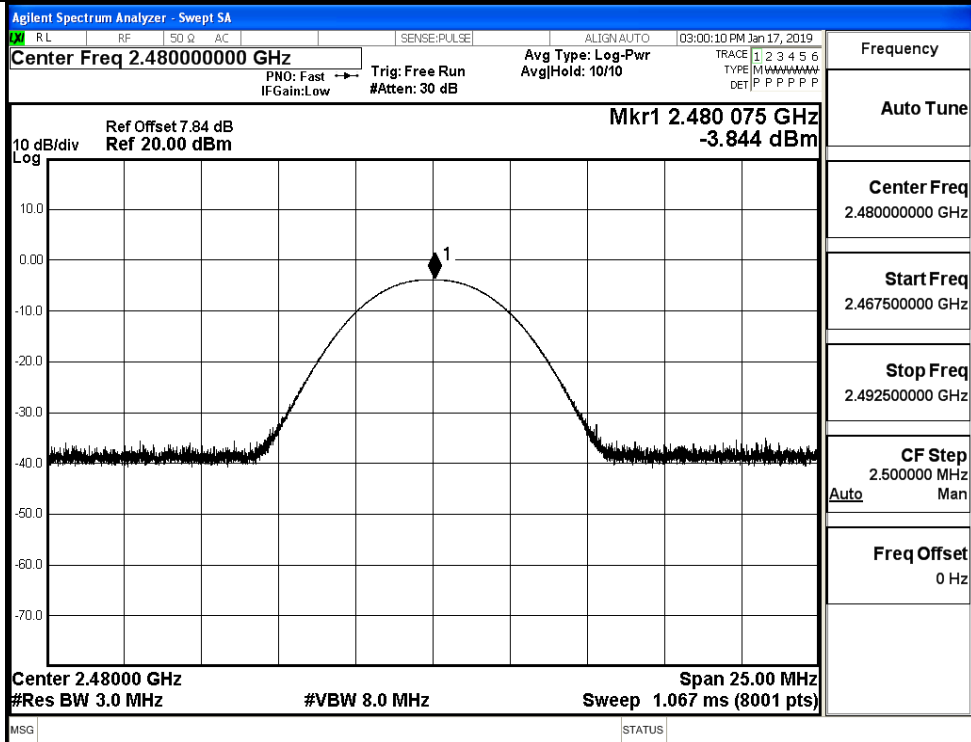
Mode	Channel	Conduct Peak Power[dBm]	Conduct Average Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	-3.125	-3.251	30	PASS
BT LE	MCH	-3.274	-3.428	30	PASS
BT LE	HCH	-3.844	-3.988	30	PASS



MCH



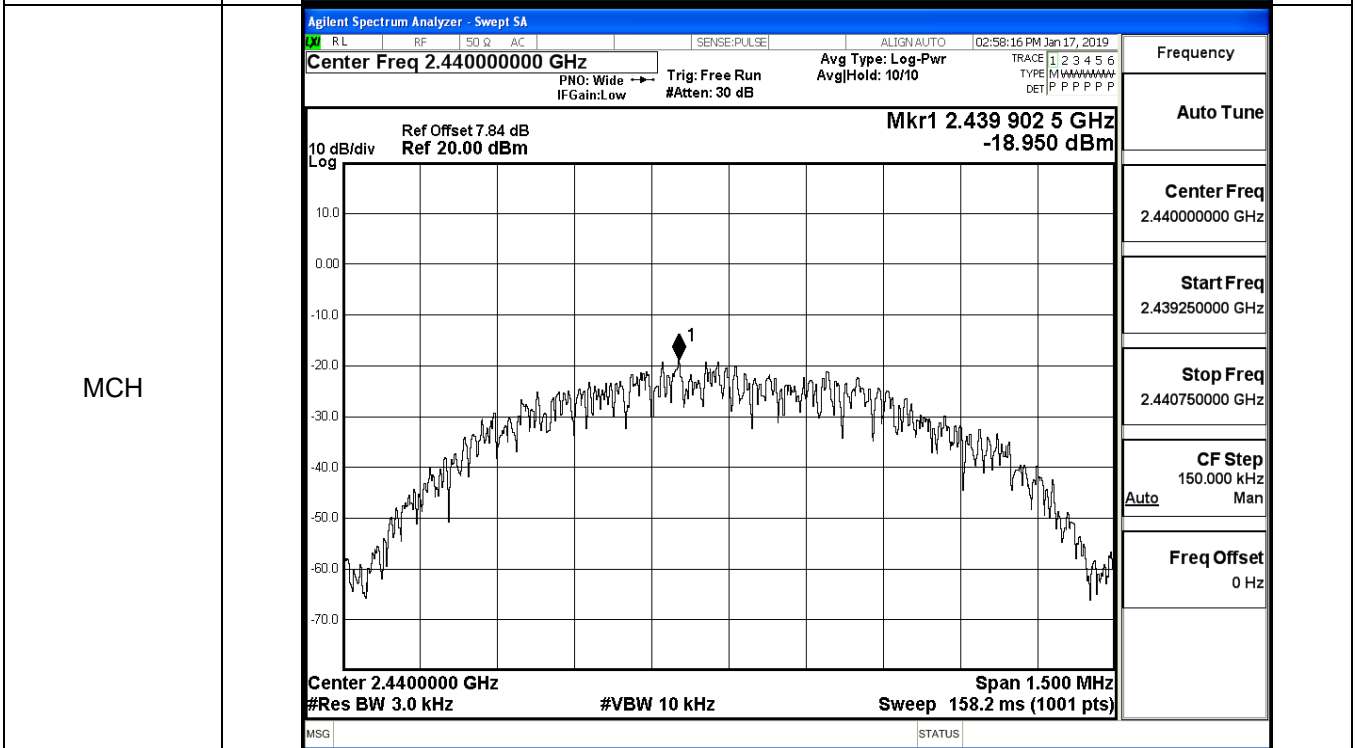
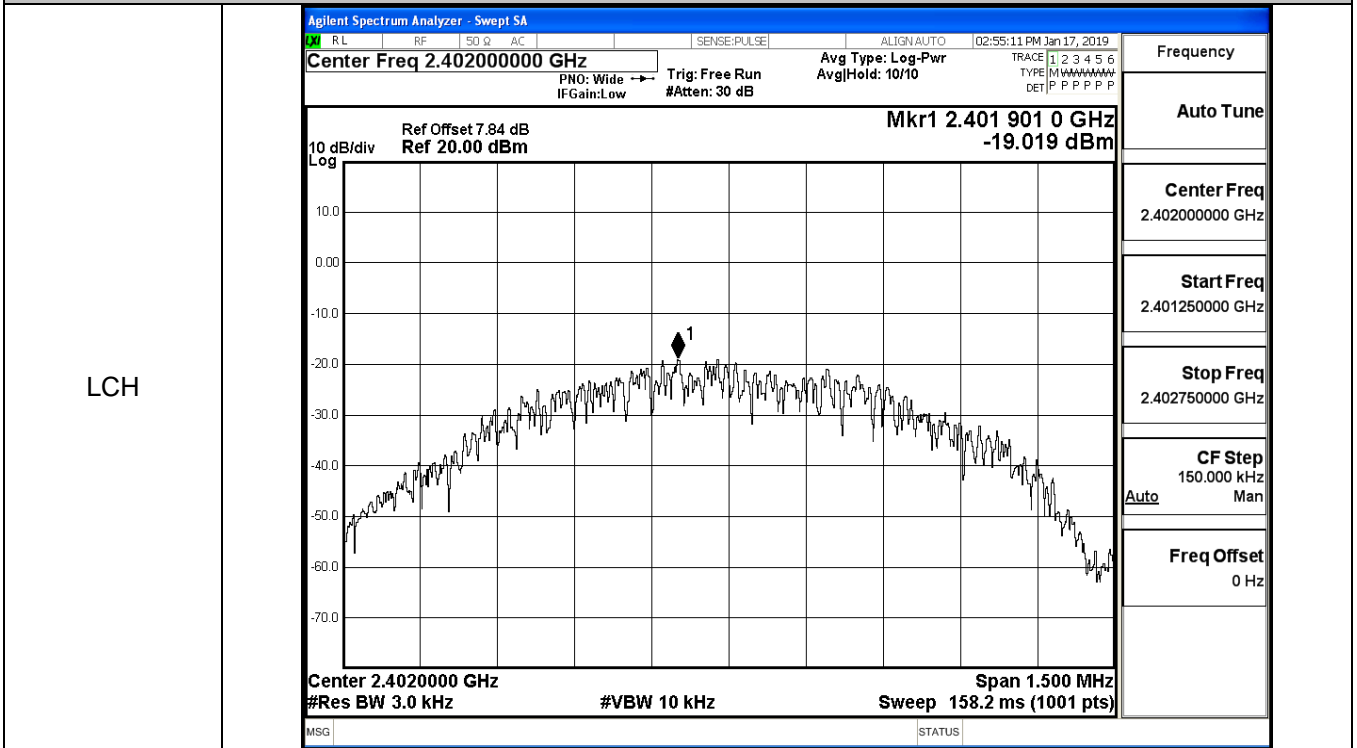
HCH



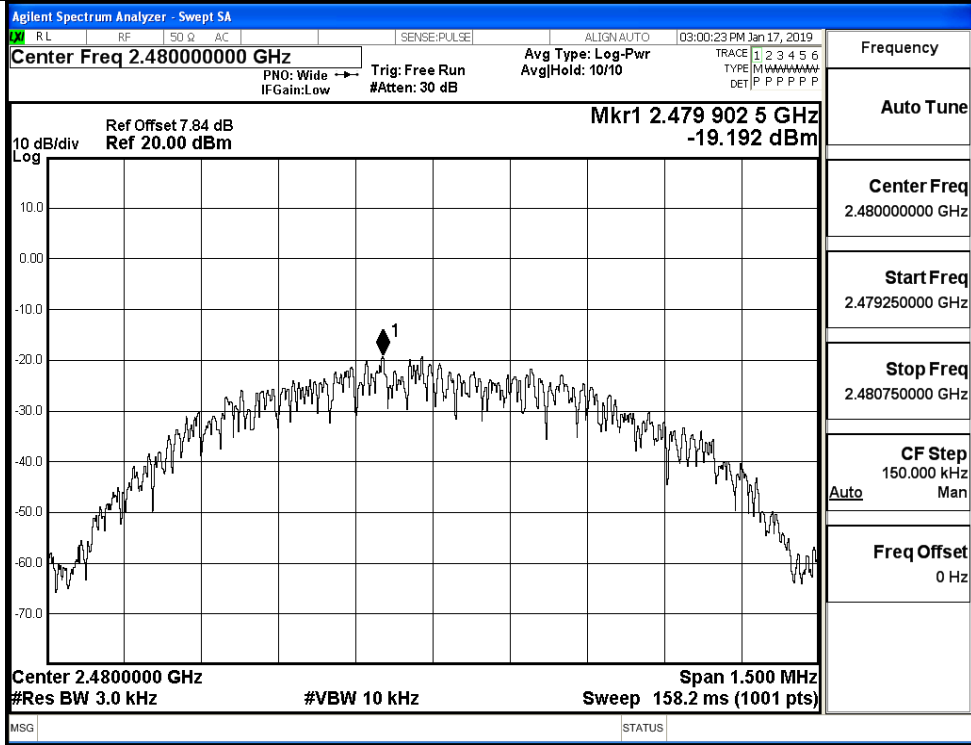
B.3 Maximum Power Spectral Density

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-19.019	8	PASS
BT LE	MCH	-18.950	8	PASS
BT LE	HCH	-19.192	8	PASS

Test Graphs



HCH

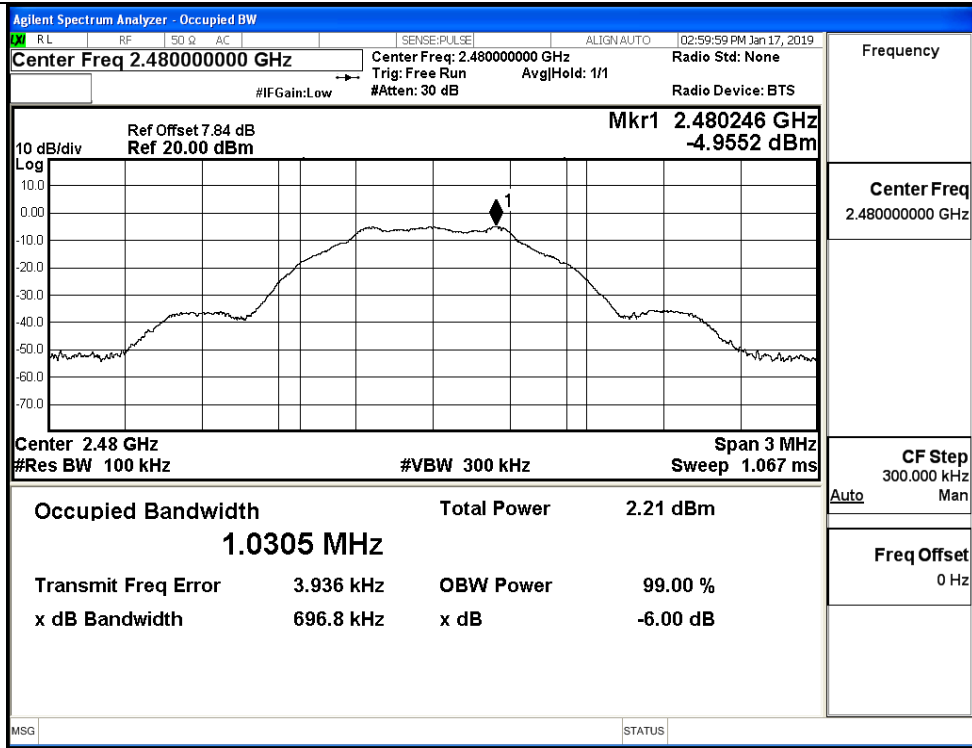


B.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6938	≥0.5	PASS
BT LE	MCH	0.6885	≥0.5	PASS
BT LE	HCH	0.6968	≥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 02:54:46 PM Jan 17, 2019</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="font-size: x-small;"> 10 dB/div Log Ref Offset 7.84 dB Ref 20.00 dBm </div> <div style="text-align: right;"> Mkr1 2.4019963 GHz -4.1941 dBm </div> </div> <div style="display: flex; justify-content: space-between; font-size: x-small;"> <div>Center 2.402 GHz #Res BW 100 kHz</div> <div>#VBW 300 kHz</div> <div>Span 3 MHz Sweep 1.067 ms</div> </div> <table style="width: 100%; font-size: x-small; margin-top: 5px;"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td colspan="2">3.04 dBm</td> </tr> <tr> <td colspan="4" style="text-align: center;">1.1752 MHz</td> </tr> <tr> <td>Transmit Freq Error</td> <td>-54.656 kHz</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>693.8 kHz</td> <td>x dB</td> <td>-6.00 dB</td> </tr> </table> <p style="font-size: x-small; margin-top: 5px;">MSG STATUS</p> </div>	Occupied Bandwidth	Total Power	3.04 dBm		1.1752 MHz				Transmit Freq Error	-54.656 kHz	OBW Power	99.00 %	x dB Bandwidth	693.8 kHz	x dB	-6.00 dB
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x dB Bandwidth	688.5 kHz	x dB	-6.00 dB														

HCH



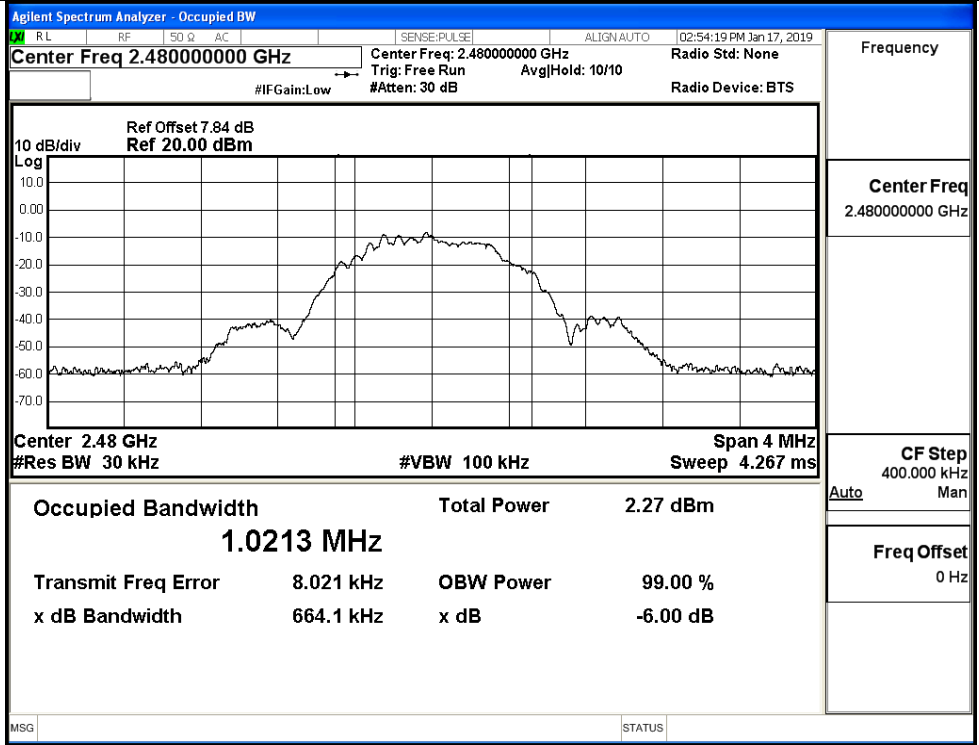
B.5 Occupied Bandwidth

Mode	Channel	Occupied Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	1.1261	≥0.5	PASS
BT LE	MCH	1.0216	≥0.5	PASS
BT LE	HCH	1.0213	≥0.5	PASS

Test Graphs

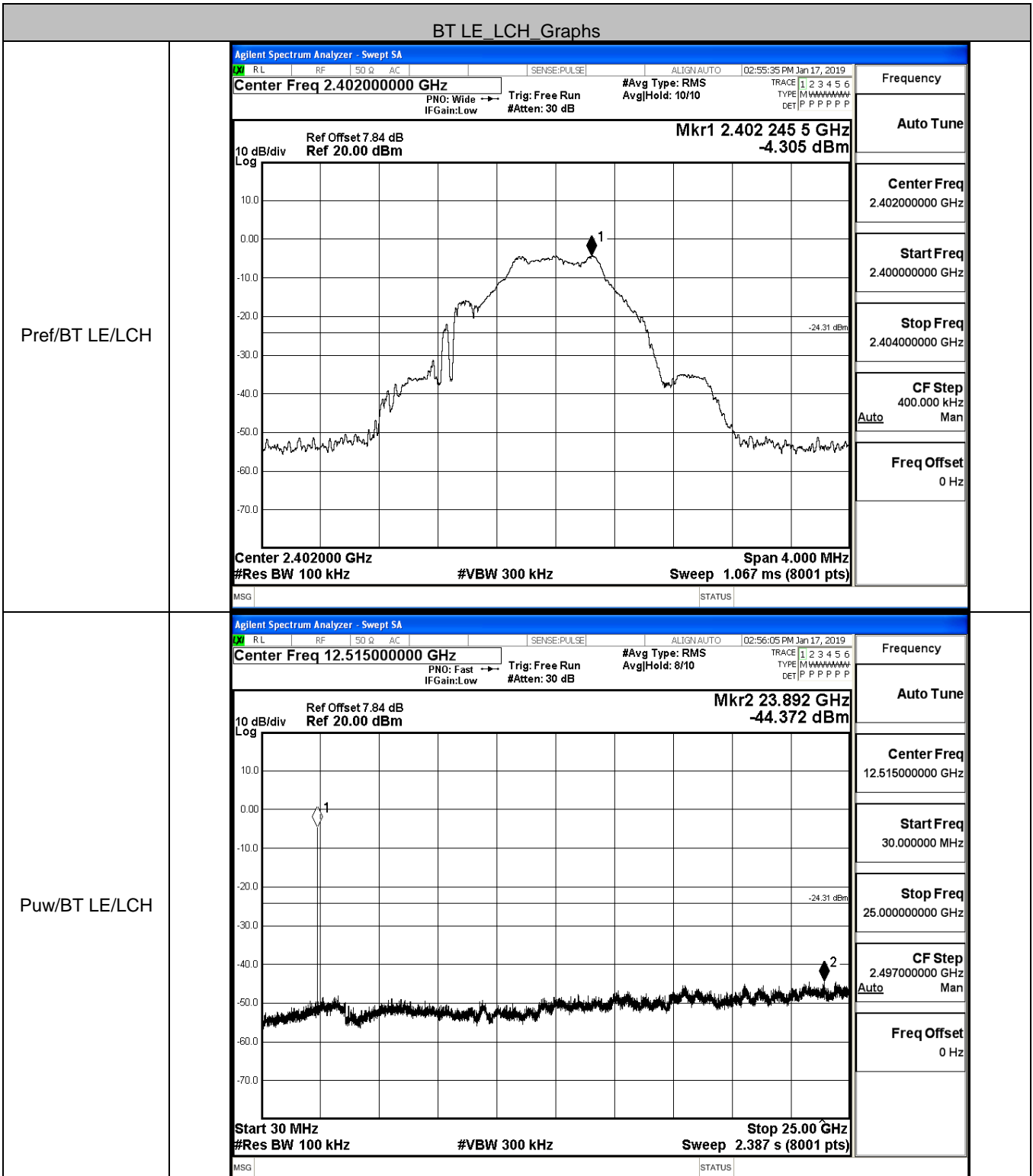
LCH	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.40200000 GHz</p> <p>Center Freq: 2.402000000 GHz Trig: Free Run #IFGain: Low #Atten: 30 dB</p> <p>Center Freq: 2.402000000 GHz Align: AUTO Radio Std: None Avg/Hold: 10/10 Radio Device: BTS</p> <p>Ref Offset 7.84 dB Ref 20.00 dBm</p> <p>Center 2.402 GHz #Res BW 30 kHz</p> <p>Span 4 MHz Sweep 4.267 ms #VBW 100 kHz</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>2.98 dBm</td> </tr> <tr> <td>1.1261 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>-39.136 kHz</td> <td>OBW Power</td> </tr> <tr> <td>x dB Bandwidth</td> <td>663.4 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>	Occupied Bandwidth	Total Power	2.98 dBm	1.1261 MHz			Transmit Freq Error	-39.136 kHz	OBW Power	x dB Bandwidth	663.4 kHz	x dB			99.00 %			-6.00 dB	<p>Frequency</p> <p>Center Freq 2.402000000 GHz</p> <p>CF Step 400.000 kHz Auto Man</p> <p>Freq Offset 0 Hz</p>
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		99.00 %																		
		-6.00 dB																		
MCH	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.44000000 GHz</p> <p>Center Freq: 2.440000000 GHz Trig: Free Run #IFGain: Low #Atten: 30 dB</p> <p>Center Freq: 2.440000000 GHz Align: AUTO Radio Std: None Avg/Hold: 10/10 Radio Device: BTS</p> <p>Ref Offset 7.84 dB Ref 20.00 dBm</p> <p>Center 2.44 GHz #Res BW 30 kHz</p> <p>Span 4 MHz Sweep 4.267 ms #VBW 100 kHz</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>2.76 dBm</td> </tr> <tr> <td>1.0216 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>8.331 kHz</td> <td>OBW Power</td> </tr> <tr> <td>x dB Bandwidth</td> <td>664.7 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>	Occupied Bandwidth	Total Power	2.76 dBm	1.0216 MHz			Transmit Freq Error	8.331 kHz	OBW Power	x dB Bandwidth	664.7 kHz	x dB			99.00 %			-6.00 dB	<p>Frequency</p> <p>Center Freq 2.440000000 GHz</p> <p>CF Step 400.000 kHz Auto Man</p> <p>Freq Offset 0 Hz</p>
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1.0216 MHz																				
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x dB Bandwidth	664.7 kHz	x dB																		
		99.00 %																		
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HCH



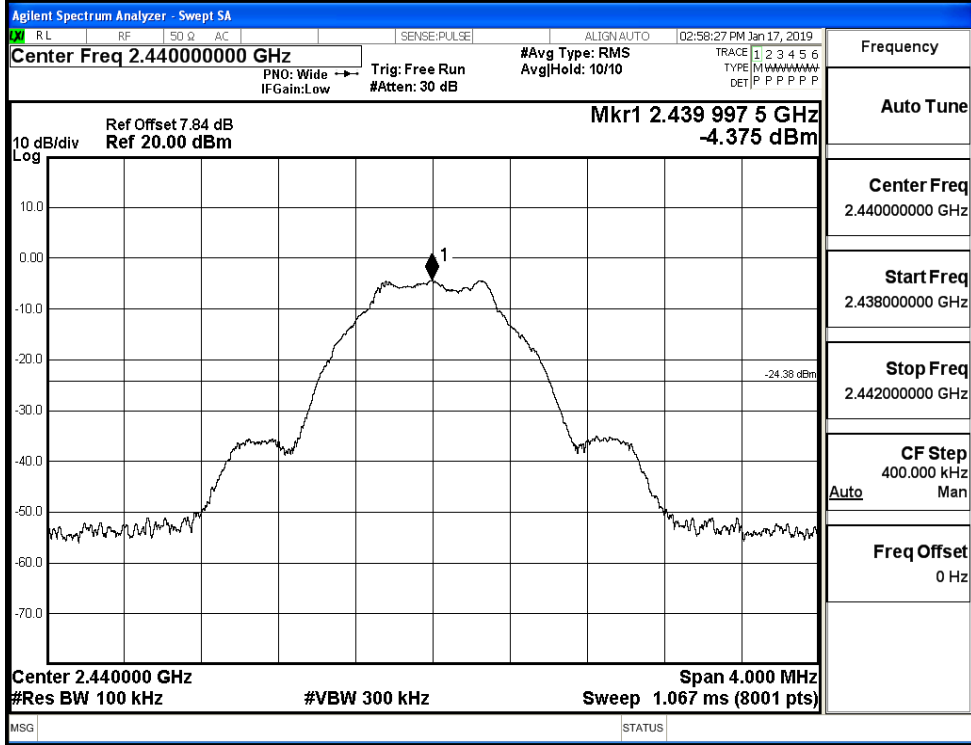
B.6 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-4.305	-44.372	-24.305	PASS
BT LE	MCH	-4.375	-44.259	-24.375	PASS
BT LE	HCH	-4.93	-44.015	-24.930	PASS

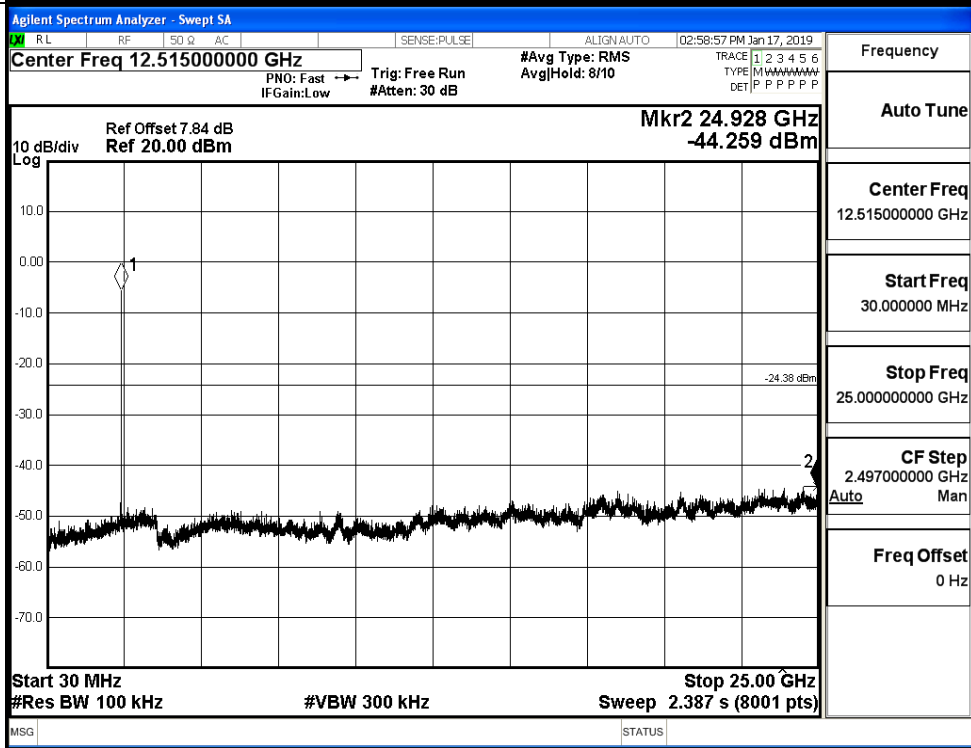


BT LE_MCH_Graphs

Pref/BT LE/MCH

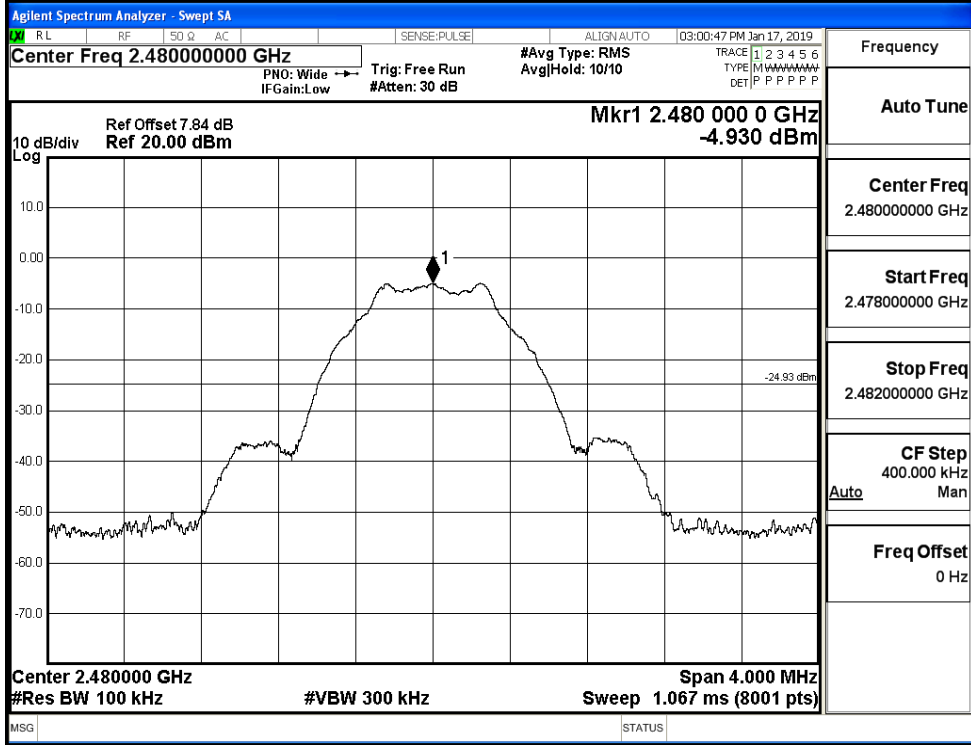


Puw/BT LE/MCH

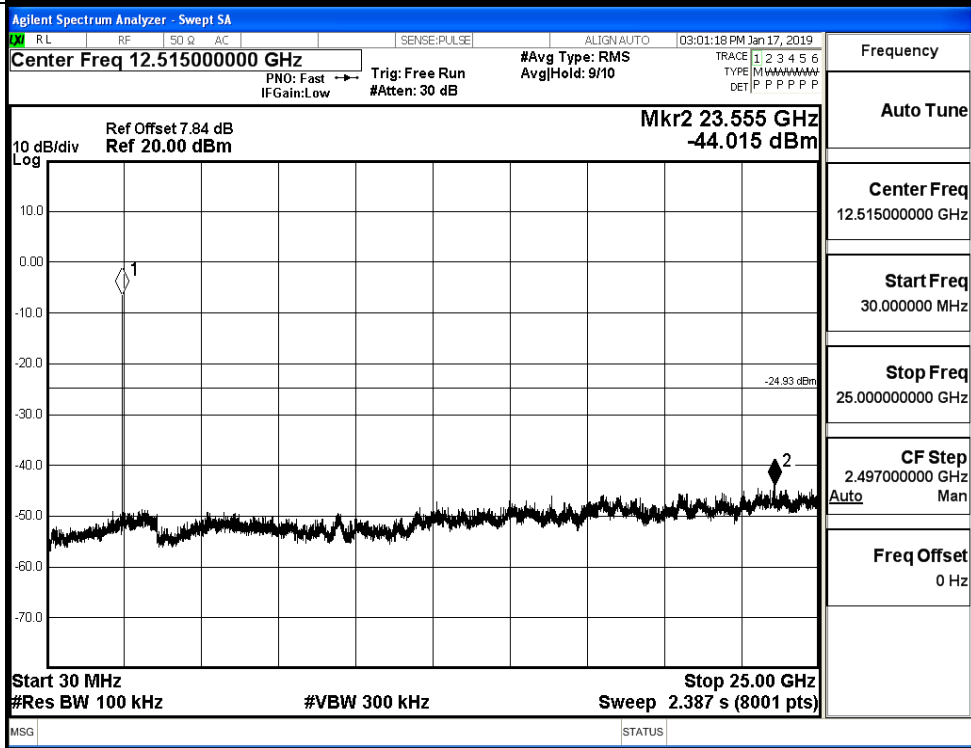


BT LE_HCH_Graphs

Pref/BT LE/HCH



Puw/BT LE/HCH



B.7 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-3.973	-50.777	-23.97	PASS
BT LE	HCH	-4.680	-50.659	-24.68	PASS

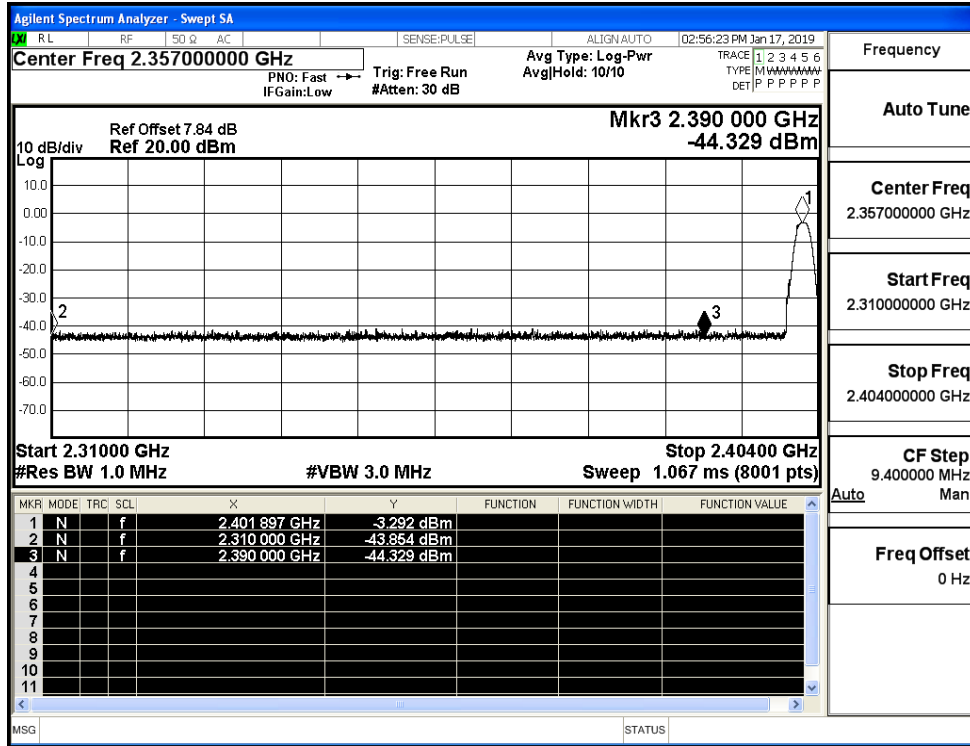
Test Graphs

LCH		<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>
		<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>

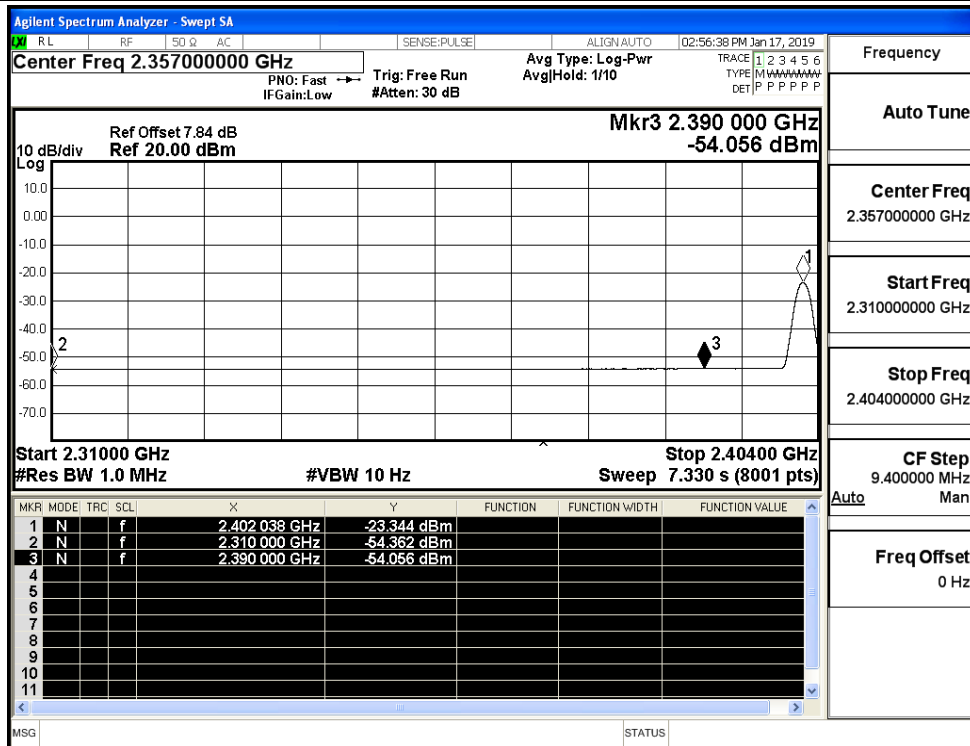
B.8 Restrict-band band-edge measurements

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	-43.85	2.0	0	51.40	PEAK	74	PASS
		Ant1	2310.0	-54.36	2.0	0	40.90	AV	54	PASS
		Ant1	2390.0	-44.33	2.0	0	50.93	PEAK	74	PASS
		Ant1	2390.0	-54.06	2.0	0	41.20	AV	54	PASS
	2480	Ant1	2483.5	-44.06	2.0	0	51.20	PEAK	74	PASS
		Ant1	2483.5	-53.89	2.0	0	41.37	AV	54	PASS
		Ant1	2500.0	-44.05	2.0	0	51.20	PEAK	74	PASS
		Ant1	2500.0	-53.74	2.0	0	41.52	AV	54	PASS

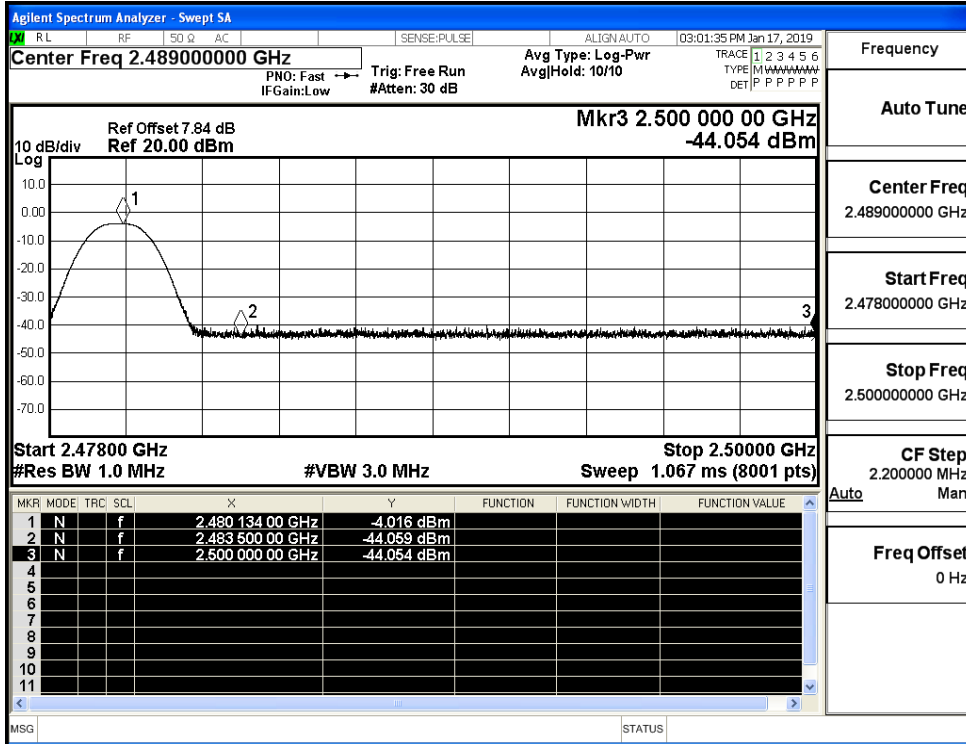
Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



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

