

Appendix A

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

Product Name: Computer with bluetooth

Trade Mark: N/A

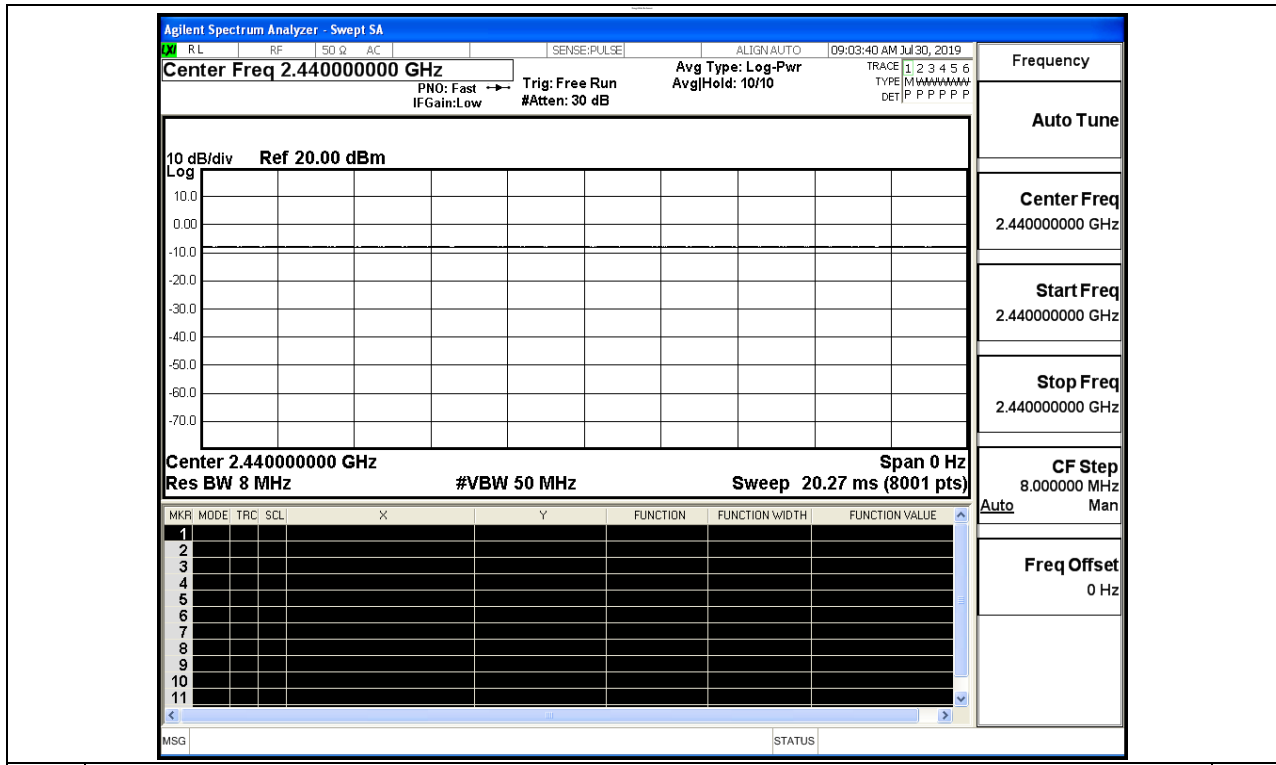
Test Model: JJD2627-TXXXA

Environmental Conditions

Temperature:	24.9°C
Relative Humidity:	54.2 %
ATM Pressure:	100.0 kPa
Test Engineer:	SCENT HU
Supervised by:	Wang.Chuang

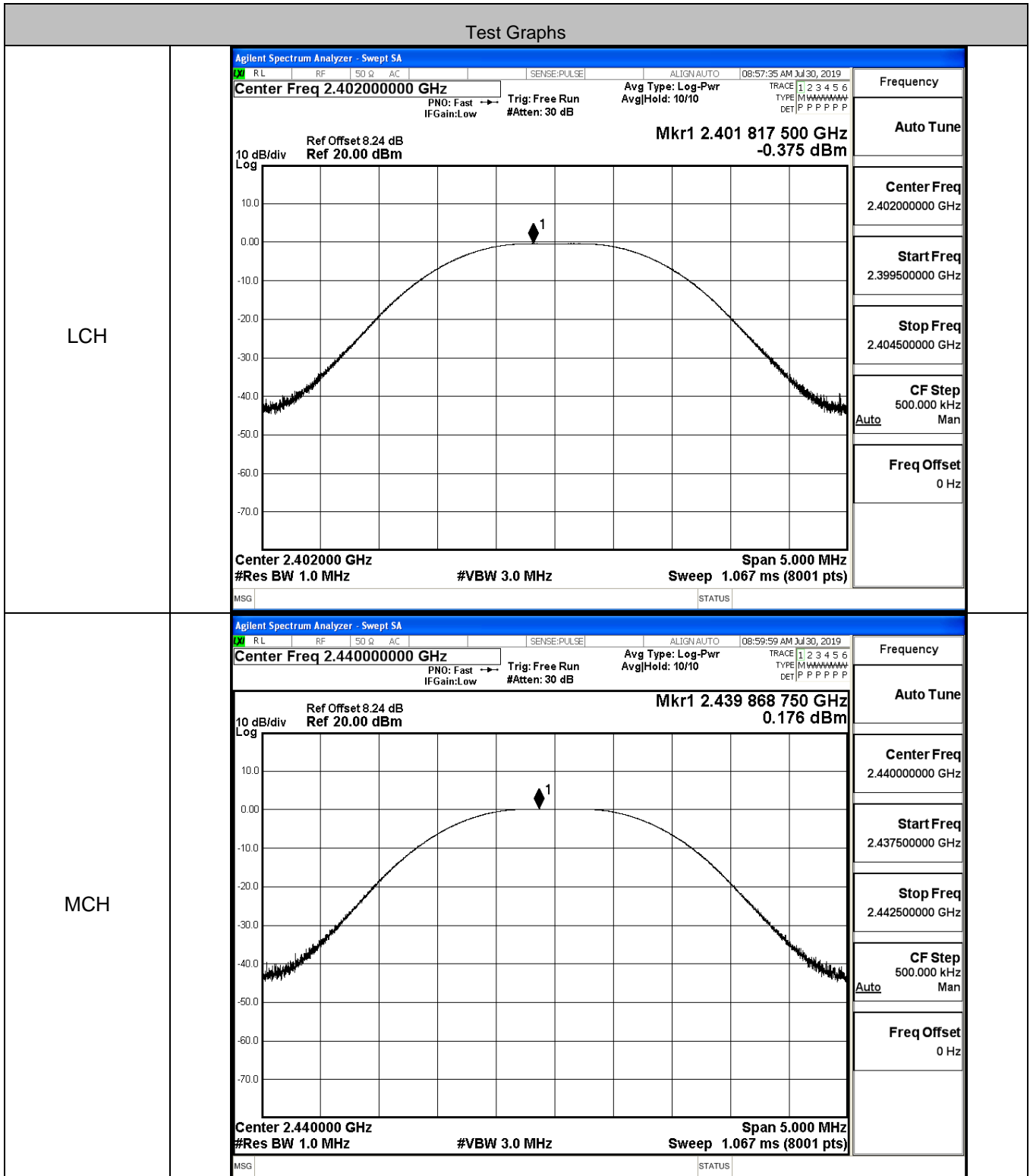
B.1 Duty Cycle

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

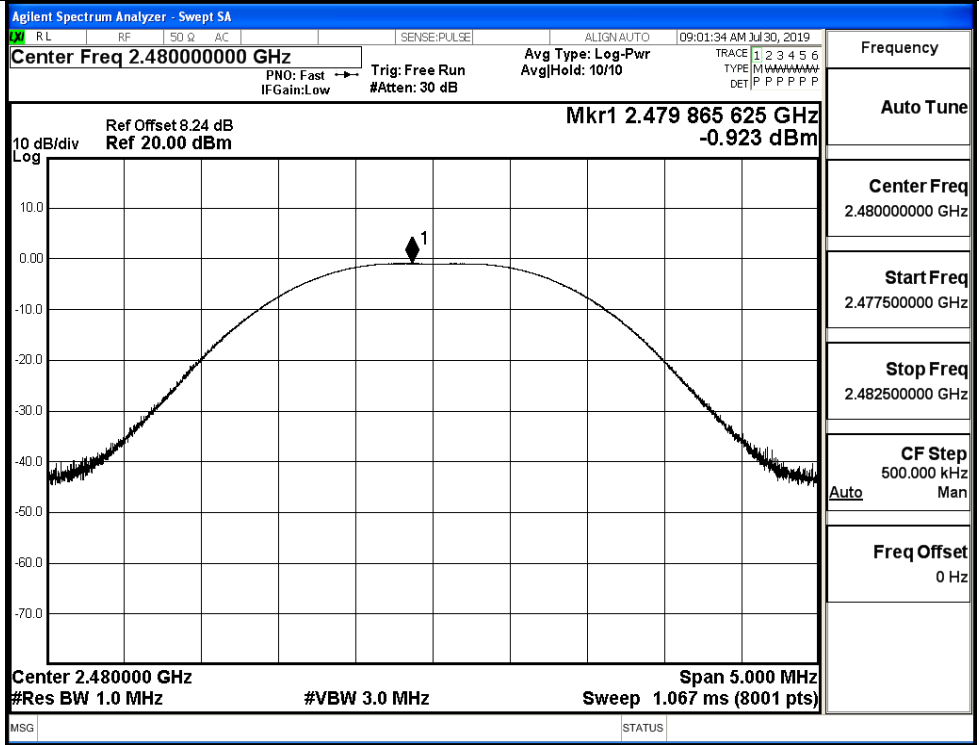


B.2 Maximum Conducted Peak Output Power

Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	-0.375	30	PASS
BT LE	MCH	0.176	30	PASS
BT LE	HCH	-0.923	30	PASS



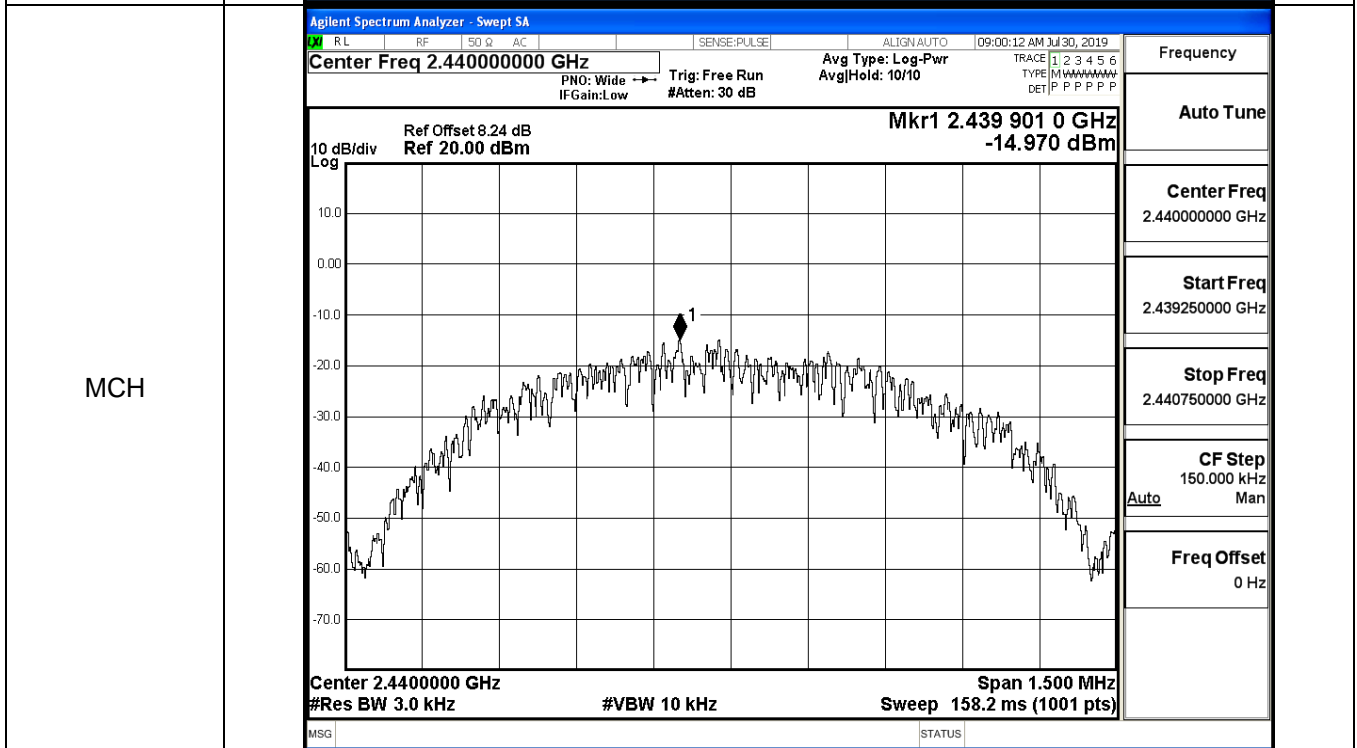
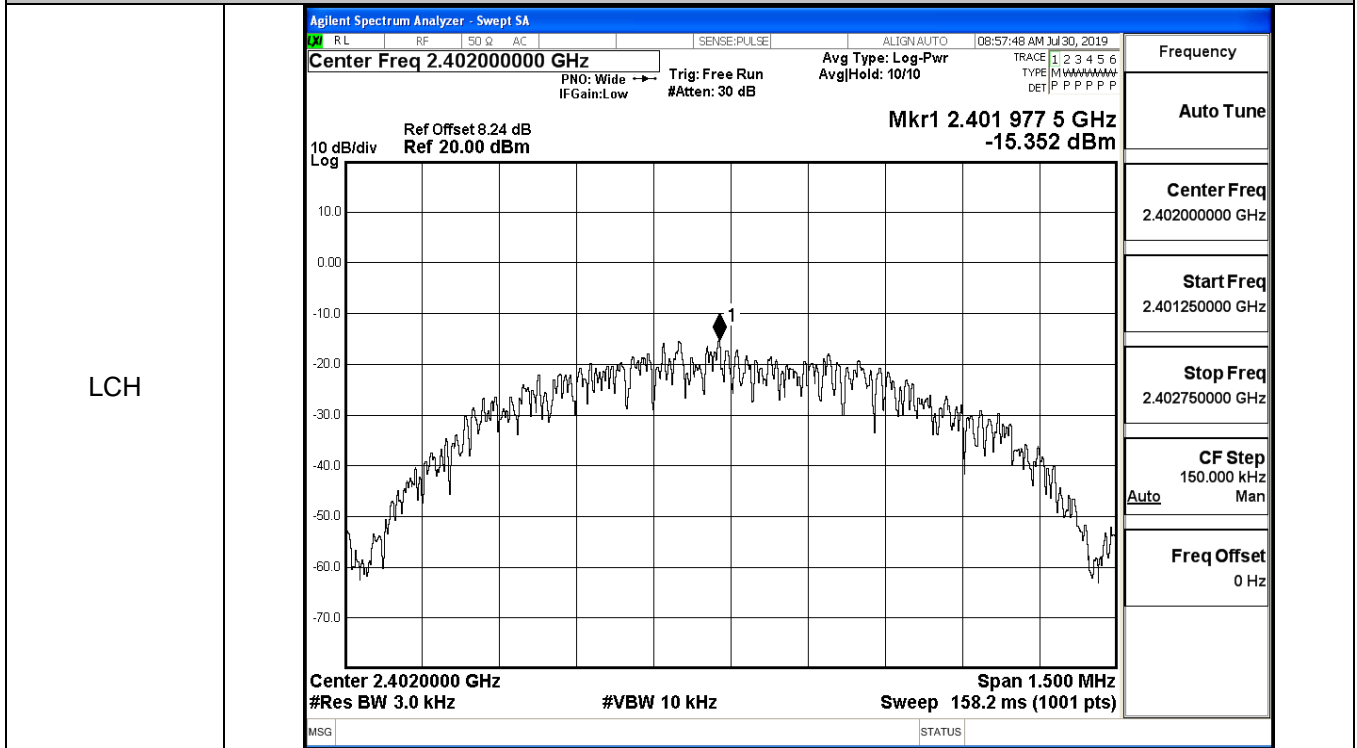
HCH



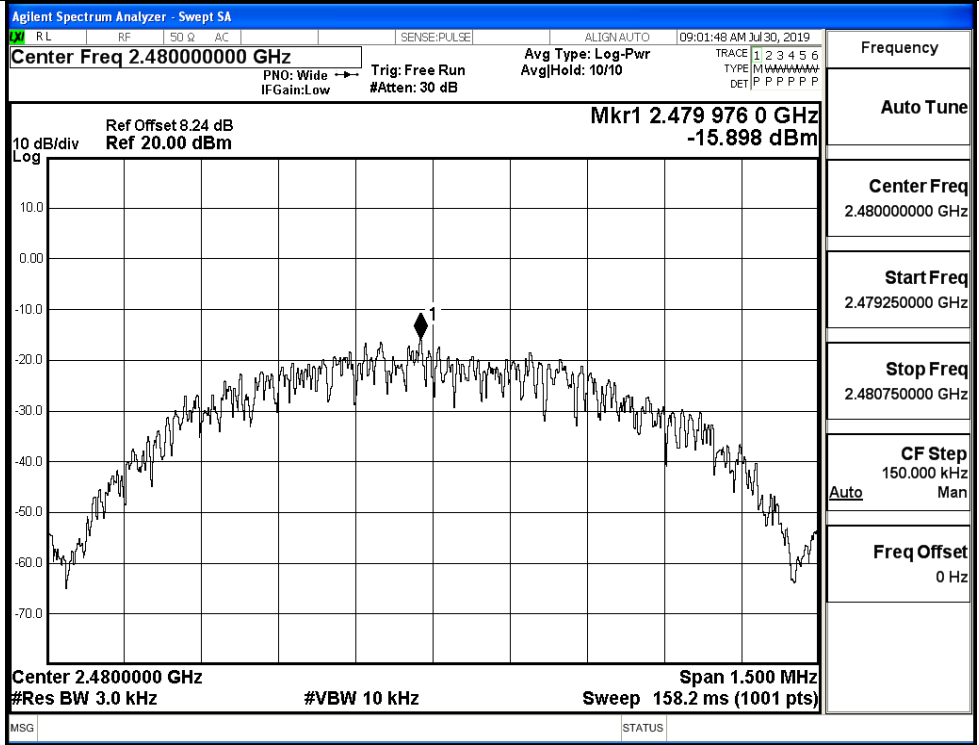
B.3 Maximum Power Spectral Density

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-15.352	8	PASS
BT LE	MCH	-14.970	8	PASS
BT LE	HCH	-15.898	8	PASS

Test Graphs

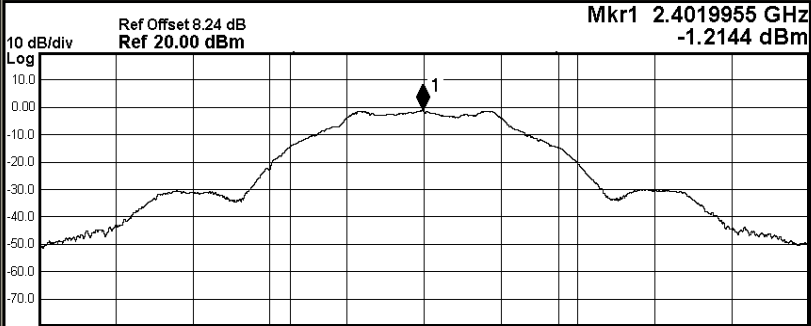
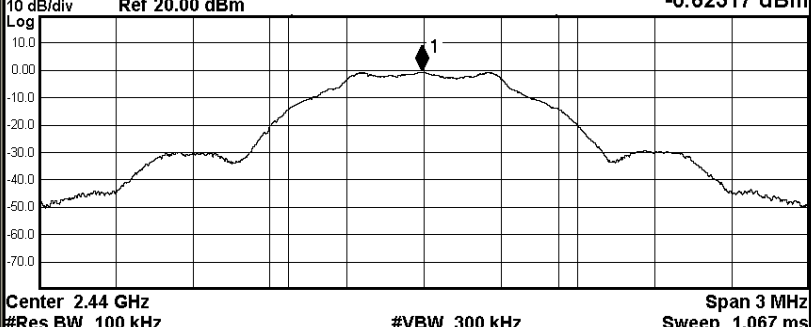


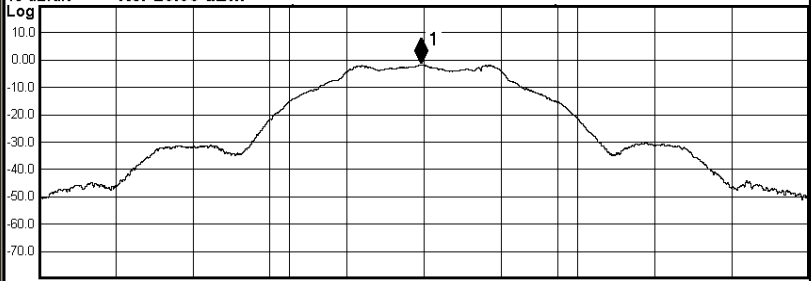
HCH



B.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6995	≥0.5	PASS
BT LE	MCH	0.6820	≥0.5	PASS
BT LE	HCH	0.6949	≥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 08:57:24 AM Jul 30, 2019</p> <p style="margin: 0;">Center Freq 2.402000000 GHz Center Freq: 2.402000000 GHz Radio Std: None</p> <p style="font-size: x-small; margin: 0;">Trig: Free Run AvgHold>1/1 #IFGain:Low #Atten: 30 dB Radio Device: BTS</p> <div style="border: 1px solid black; padding: 2px; margin: 5px 0;"> <p style="font-size: x-small; margin: 0;">10 dB/div Ref Offset 8.24 dB Mkr1 2.4019955 GHz</p> <p style="font-size: x-small; margin: 0;">Log Ref 20.00 dBm -1.2144 dBm</p>  </div> <p style="font-size: x-small; margin: 0;">Center 2.402 GHz Span 3 MHz</p> <p style="font-size: x-small; margin: 0;">#Res BW 100 kHz #VBW 300 kHz Sweep 1.067 ms</p> <table style="width: 100%; font-size: x-small; margin: 5px 0;"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>5.87 dBm</td> </tr> <tr> <td style="text-align: center;">1.0466 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>2.554 kHz</td> <td>OBW Power 99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>699.5 kHz</td> <td>x dB -6.00 dB</td> </tr> </table> <p style="font-size: x-small; margin: 0;">MSG STATUS</p> </div>	Occupied Bandwidth	Total Power	5.87 dBm	1.0466 MHz			Transmit Freq Error	2.554 kHz	OBW Power 99.00 %	x dB Bandwidth	699.5 kHz	x dB -6.00 dB
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1.0466 MHz													
Transmit Freq Error	2.554 kHz	OBW Power 99.00 %											
x dB Bandwidth	699.5 kHz	x dB -6.00 dB											
MCH	<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 08:59:47 AM Jul 30, 2019</p> <p style="margin: 0;">Center Freq 2.440000000 GHz Center Freq: 2.440000000 GHz Radio Std: None</p> <p style="font-size: x-small; margin: 0;">Trig: Free Run AvgHold>1/1 #IFGain:Low #Atten: 30 dB Radio Device: BTS</p> <div style="border: 1px solid black; padding: 2px; margin: 5px 0;"> <p style="font-size: x-small; margin: 0;">10 dB/div Ref Offset 8.24 dB Mkr1 2.4399929 GHz</p> <p style="font-size: x-small; margin: 0;">Log Ref 20.00 dBm -0.62317 dBm</p>  </div> <p style="font-size: x-small; margin: 0;">Center 2.44 GHz Span 3 MHz</p> <p style="font-size: x-small; margin: 0;">#Res BW 100 kHz #VBW 300 kHz Sweep 1.067 ms</p> <table style="width: 100%; font-size: x-small; margin: 5px 0;"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>6.47 dBm</td> </tr> <tr> <td style="text-align: center;">1.0433 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>1.686 kHz</td> <td>OBW Power 99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>682.0 kHz</td> <td>x dB -6.00 dB</td> </tr> </table> <p style="font-size: x-small; margin: 0;">MSG STATUS</p> </div>	Occupied Bandwidth	Total Power	6.47 dBm	1.0433 MHz			Transmit Freq Error	1.686 kHz	OBW Power 99.00 %	x dB Bandwidth	682.0 kHz	x dB -6.00 dB
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1.0433 MHz													
Transmit Freq Error	1.686 kHz	OBW Power 99.00 %											
x dB Bandwidth	682.0 kHz	x dB -6.00 dB											

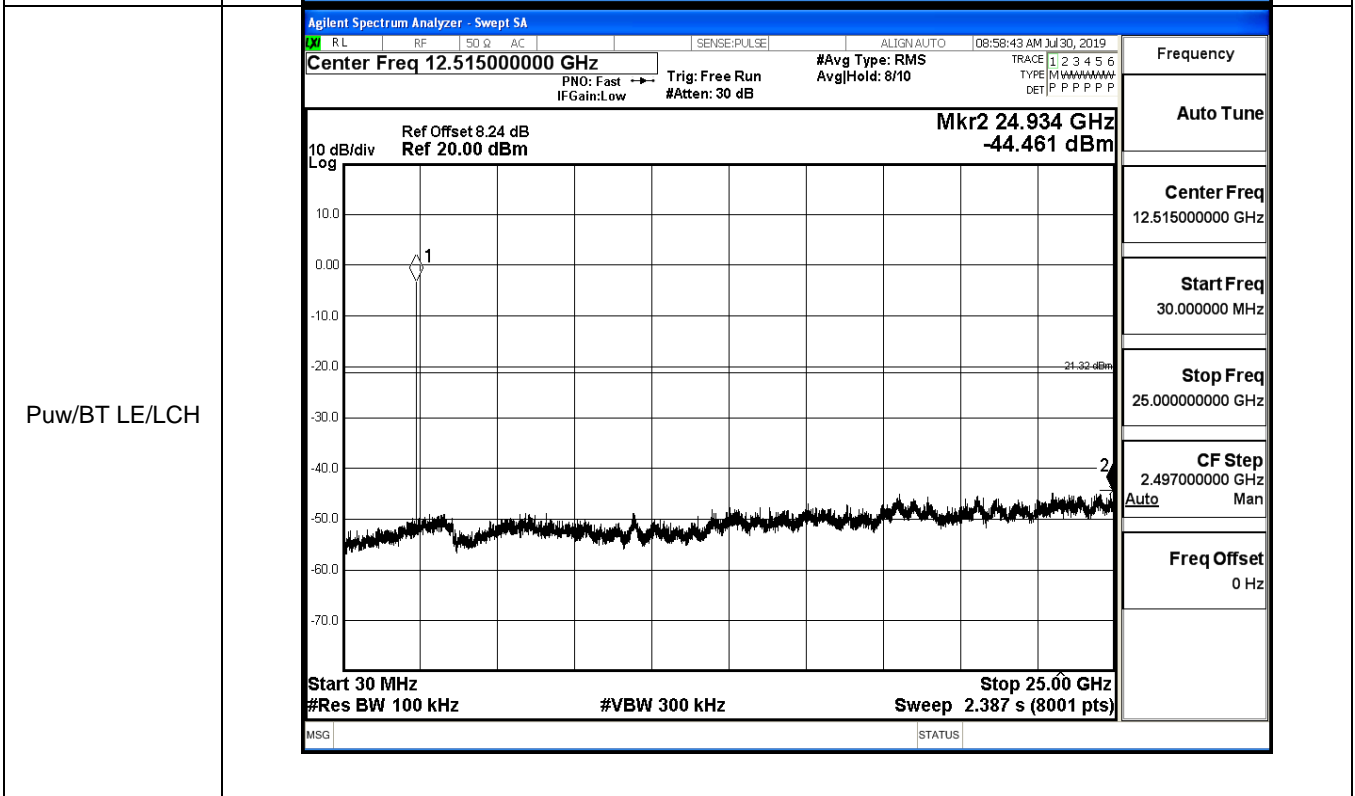
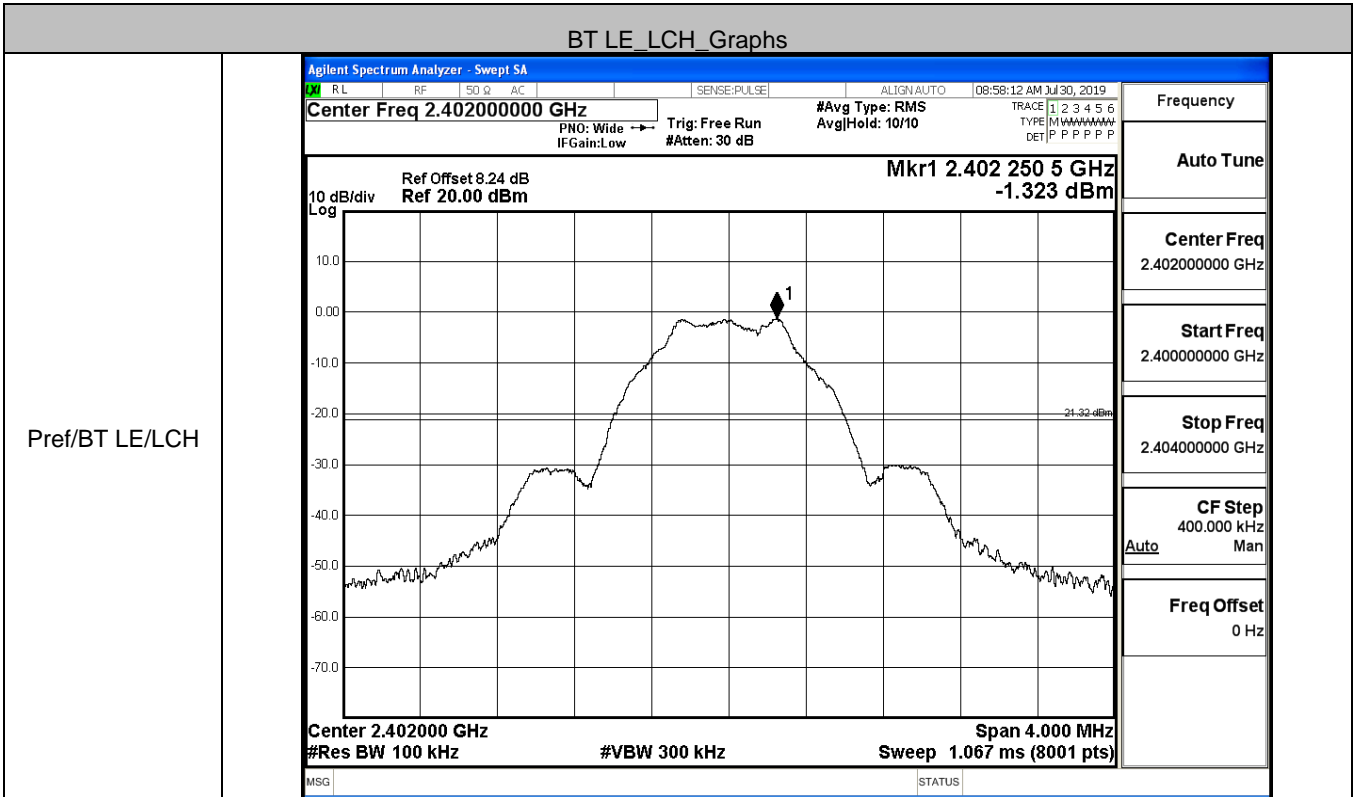
HCH	Agilent Spectrum Analyzer - Occupied BW	
	RL RF 50 Ω AC SENSE:PULSE ALIGN:AUTO 09:01:23 AM Jul 30, 2019	Center Freq: 2.480000000 GHz
	Center Freq: 2.480000000 GHz Trig: Free Run AvgHold: 1/1 #IFGain:Low #Atten: 30 dB	Radio Std: None Radio Device: BTS
	Ref Offset 8.24 dB Ref 20.00 dBm	Mkr1 2.4799903 GHz -1.7594 dBm
		
Center 2.48 GHz #Res BW 100 kHz #VBW 300 kHz Span 3 MHz Sweep 1.067 ms		
Occupied Bandwidth 1.0410 MHz		
Total Power 5.32 dBm		
Transmit Freq Error 1.208 kHz OBW Power 99.00 %		
x dB Bandwidth 694.9 kHz x dB -6.00 dB		
MSG	STATUS	

Frequency	2.480000000 GHz
Center Freq	2.480000000 GHz
CF Step	300.000 kHz Auto Man
Freq Offset	0 Hz

B.5 RF Conducted Spurious Emissions

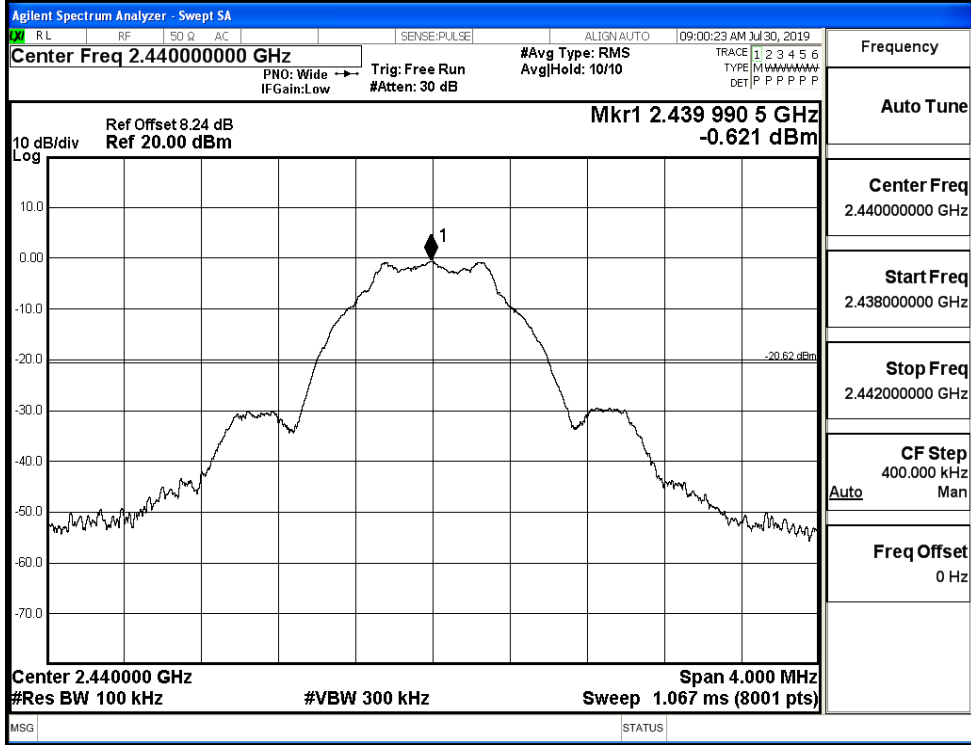
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-1.323	-44.461	-21.323	PASS
BT LE	MCH	-0.621	-44.279	-20.621	PASS
BT LE	HCH	-1.88	-44.464	-21.880	PASS

BT LE_LCH_Graphs

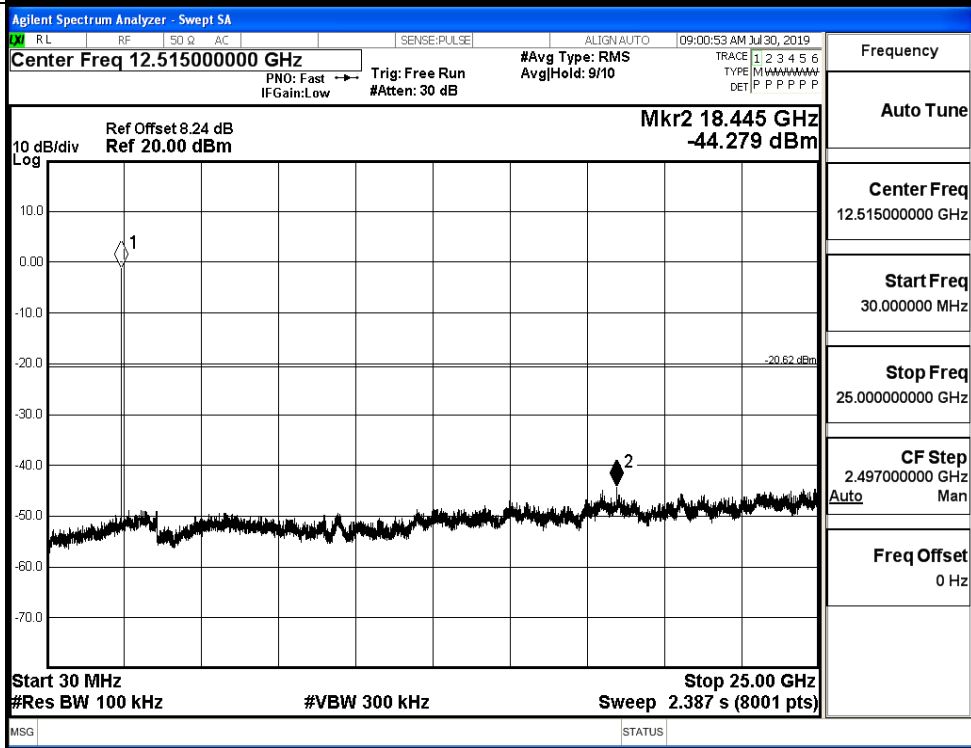


BT LE_MCH_Graphs

Pref/BT LE/MCH

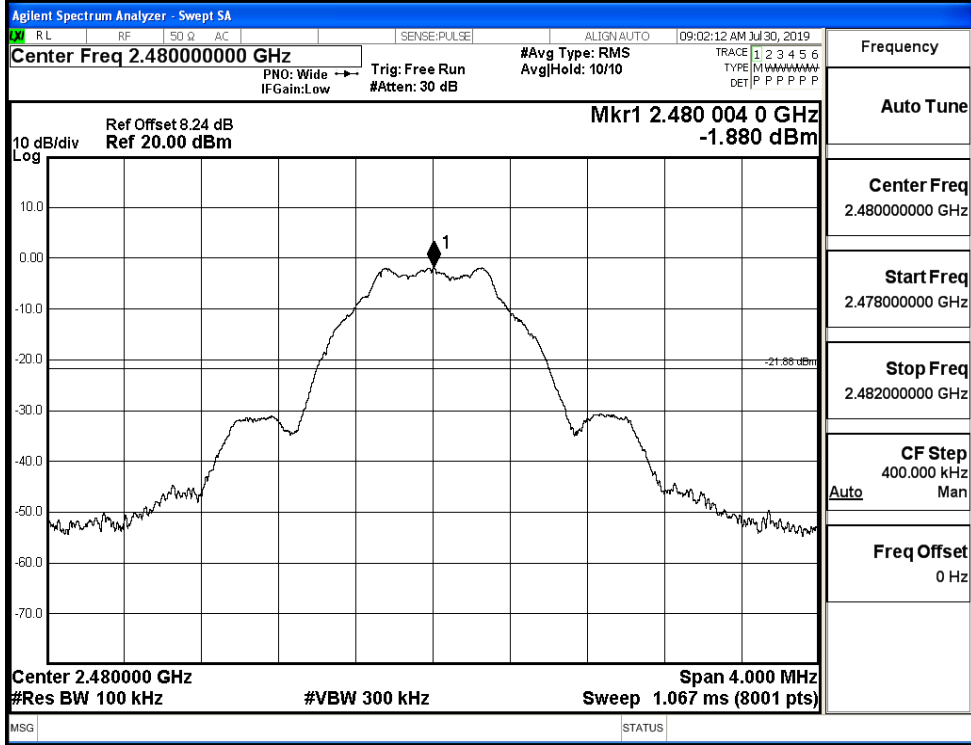


Puw/BT LE/MCH

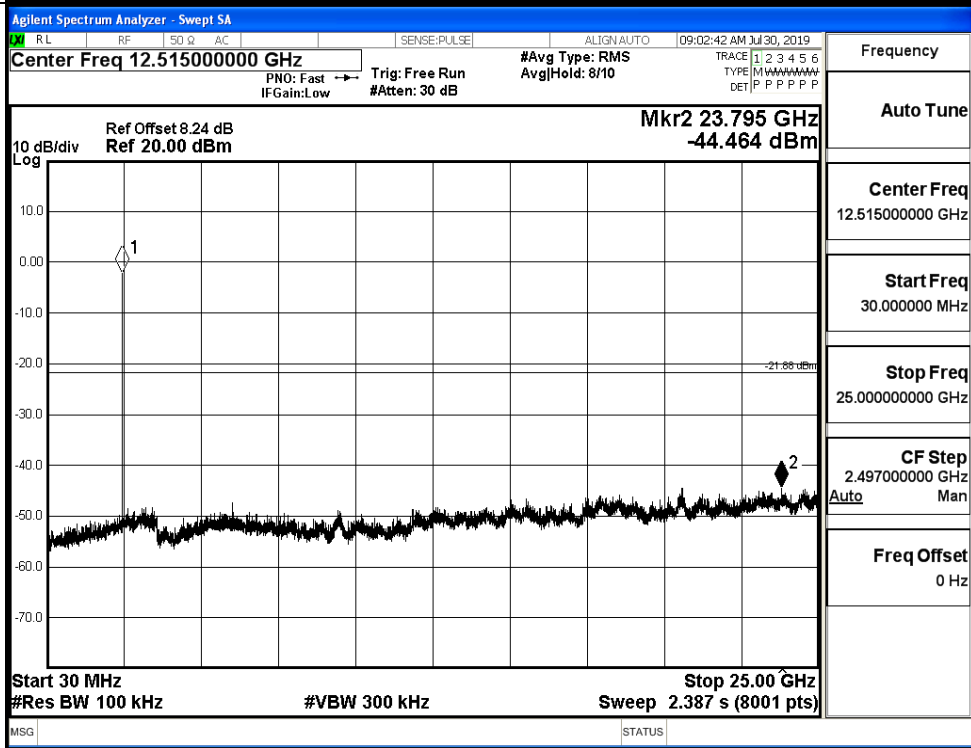


BT LE_HCH_Graphs

Pref/BT LE/HCH



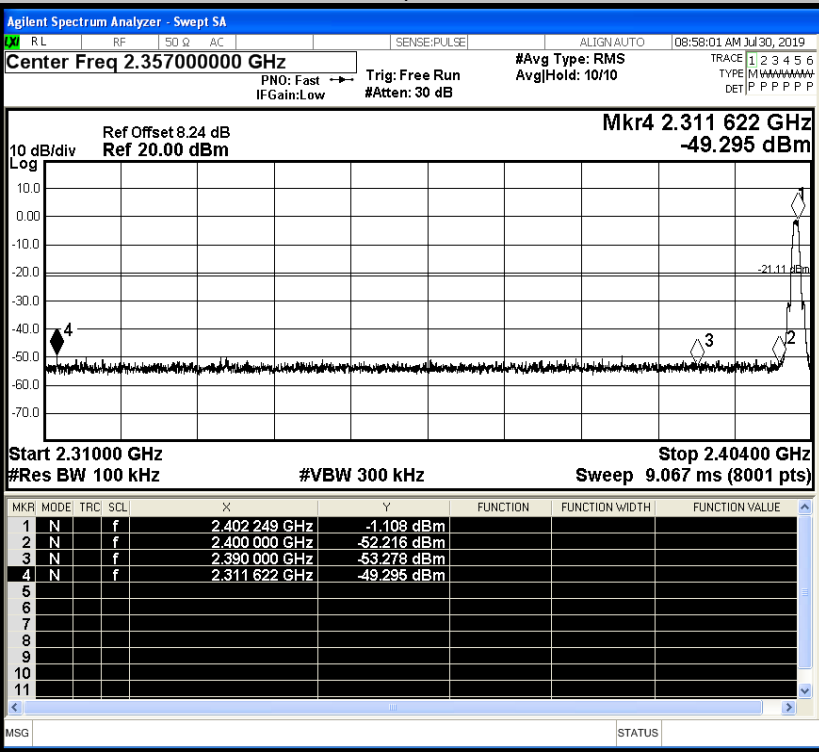
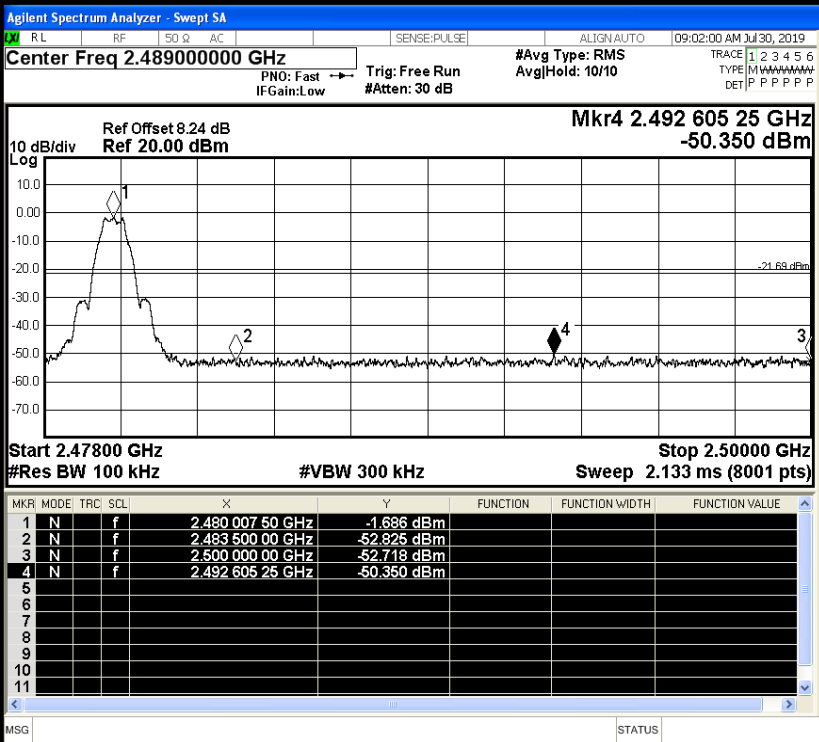
Puw/BT LE/HCH



B.6 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-1.108	-49.295	-21.11	PASS
BT LE	HCH	-1.686	-50.350	-21.69	PASS

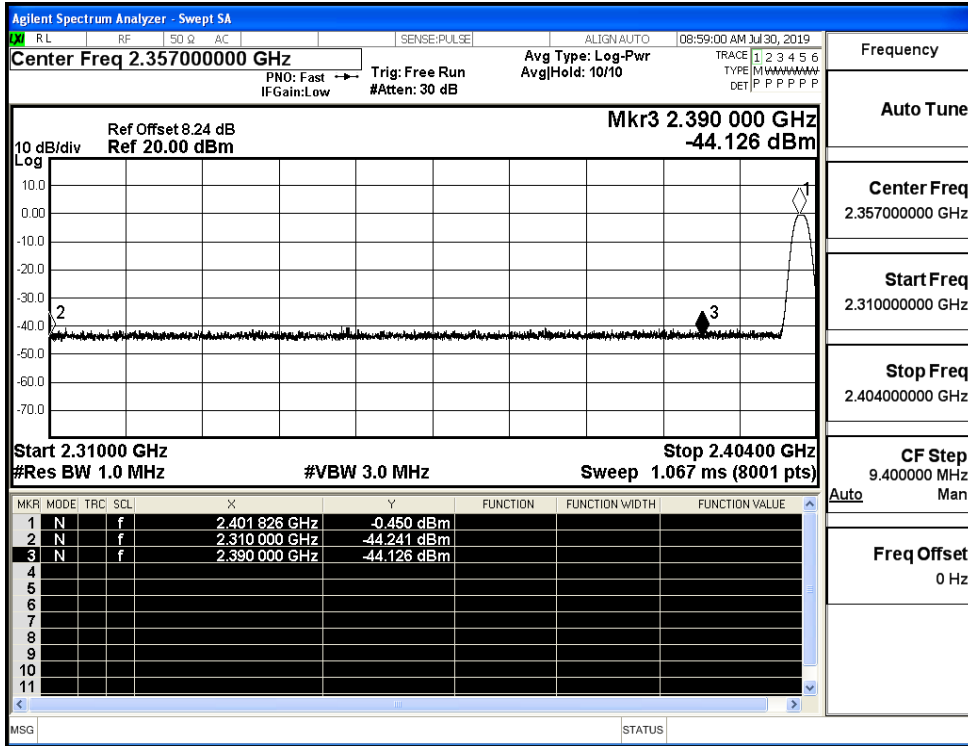
Test Graphs

LCH		<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.35700000 GHz</p> <p>Mkr4 2.311 622 GHz -49.295 dBm</p> <p>Frequency: 2.35700000 GHz</p> <p>Auto Tune</p> <p>Center Freq: 2.31000000 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>
HCH		<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.48900000 GHz</p> <p>Mkr4 2.492 605 25 GHz -50.350 dBm</p> <p>Frequency: 2.48900000 GHz</p> <p>Auto Tune</p> <p>Center Freq: 2.47800000 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>

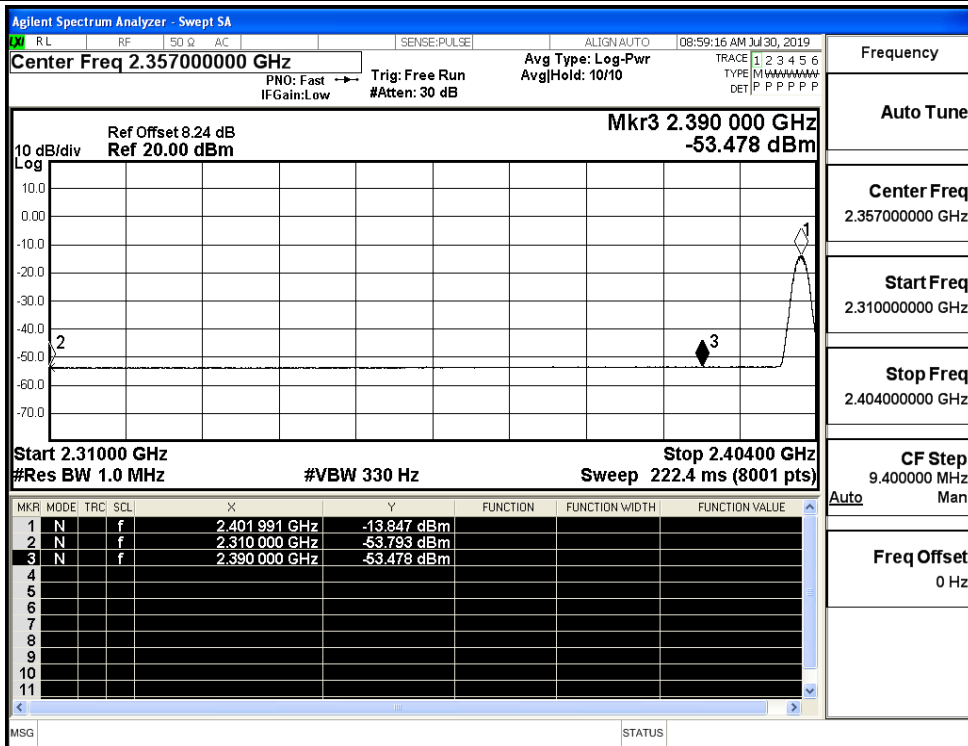
B.7 Restrict-band band-edge measurements

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	-44.24	2.0	0	51.02	PEAK	74	PASS
		Ant1	2310.0	-53.79	2.0	0	41.46	AV	54	PASS
		Ant1	2390.0	-44.13	2.0	0	51.13	PEAK	74	PASS
		Ant1	2390.0	-53.48	2.0	0	41.78	AV	54	PASS
	2480	Ant1	2483.5	-42.84	2.0	0	52.42	PEAK	74	PASS
		Ant1	2483.5	-53.23	2.0	0	42.02	AV	54	PASS
		Ant1	2500.0	-43.66	2.0	0	51.60	PEAK	74	PASS
		Ant1	2500.0	-53.05	2.0	0	42.21	AV	54	PASS

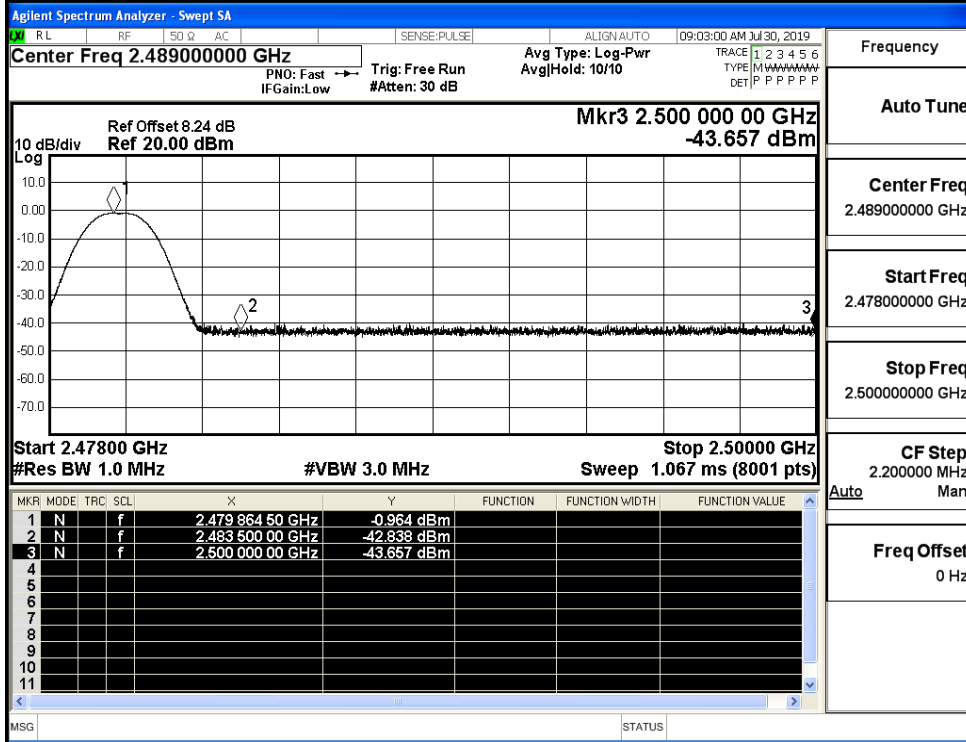
Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



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

