

Appendix A

RF Test Data for BT 4.0 (BDR/EDR) (Conducted Measurement)

Product Name: Wireless Phone Charging Gimbal

Trade Mark: MOZA

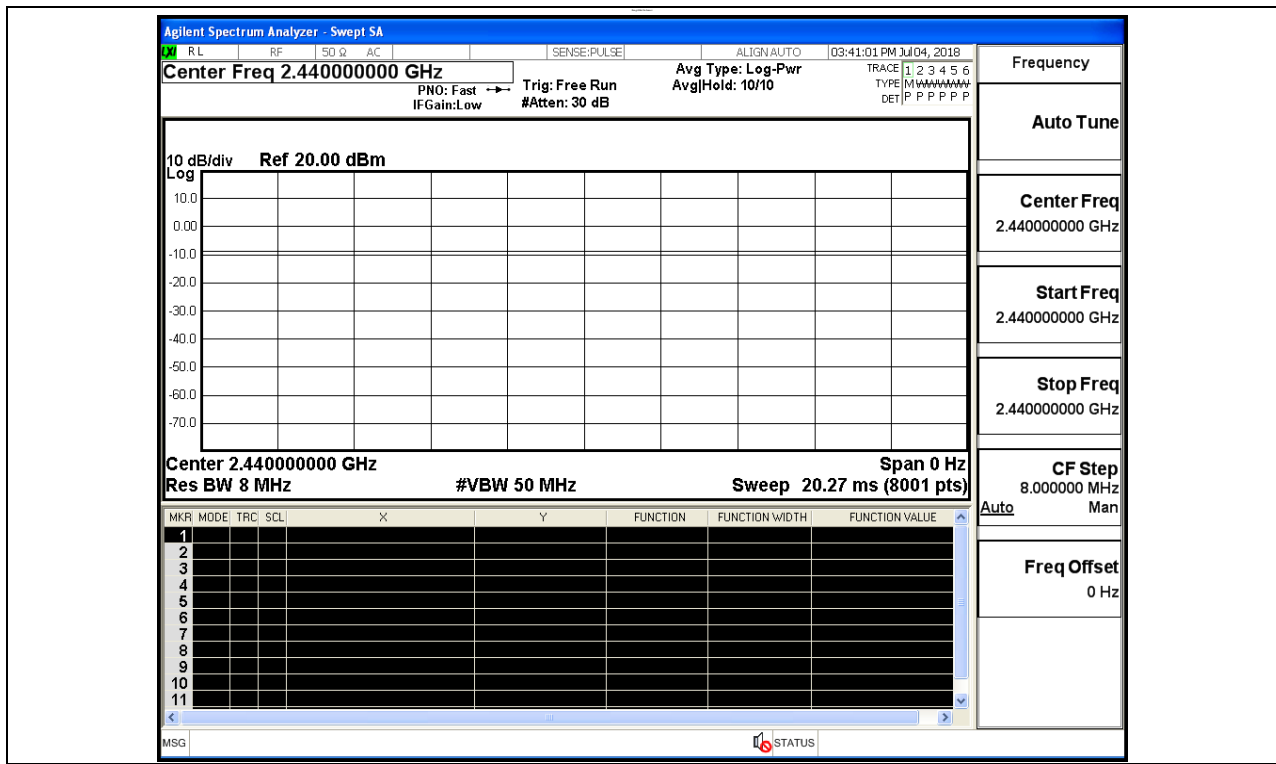
Test Model: Mini-MI

Environmental Conditions

Temperature:	24.3 ° C
Relative Humidity:	53.5%
ATM Pressure:	100.0 kPa
Test Engineer:	Ryan.Hu
Supervised by:	Jayden.Zhuo

A.1 Duty Cycle

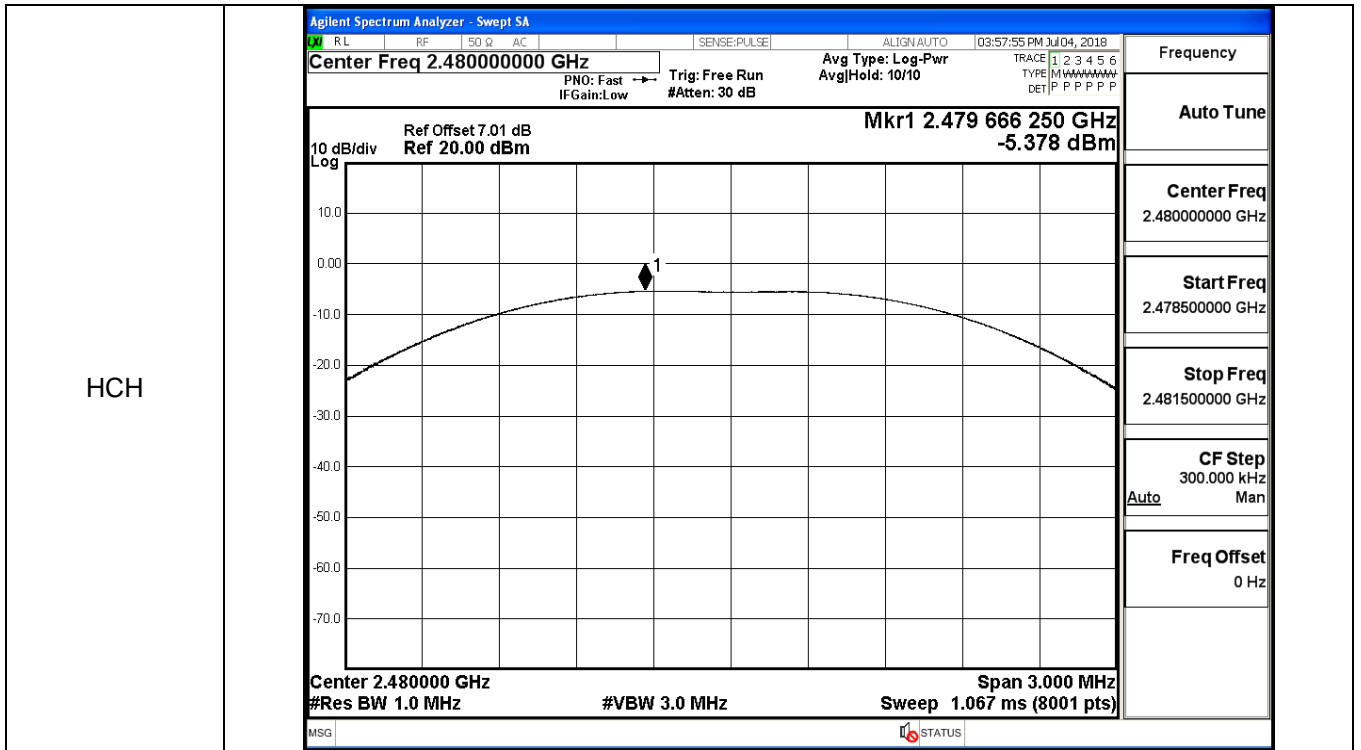
Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
BT LE	2440	Ant1	100	PASS



A.2 Maximum Conducted Peak Output Power

Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	-5.687	30	PASS
BT LE	MCH	-4.793	30	PASS
BT LE	HCH	-5.378	30	PASS

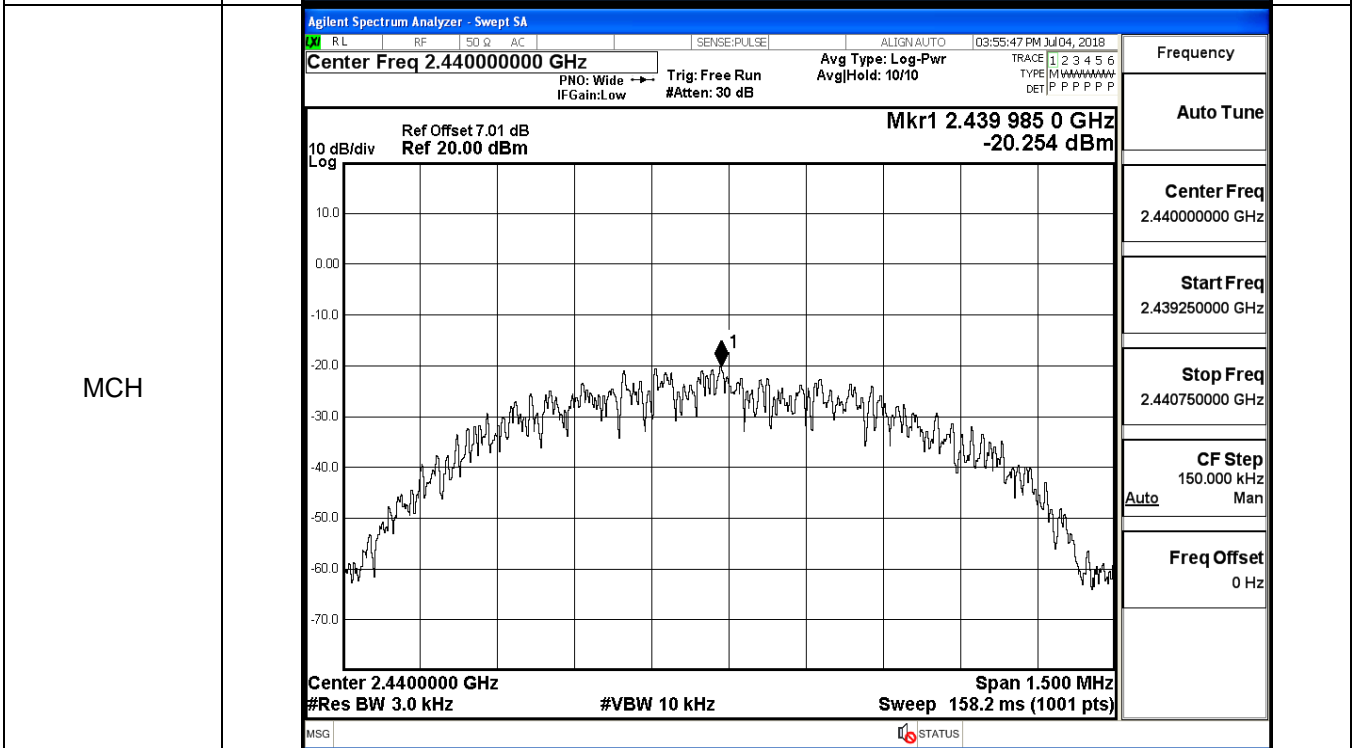
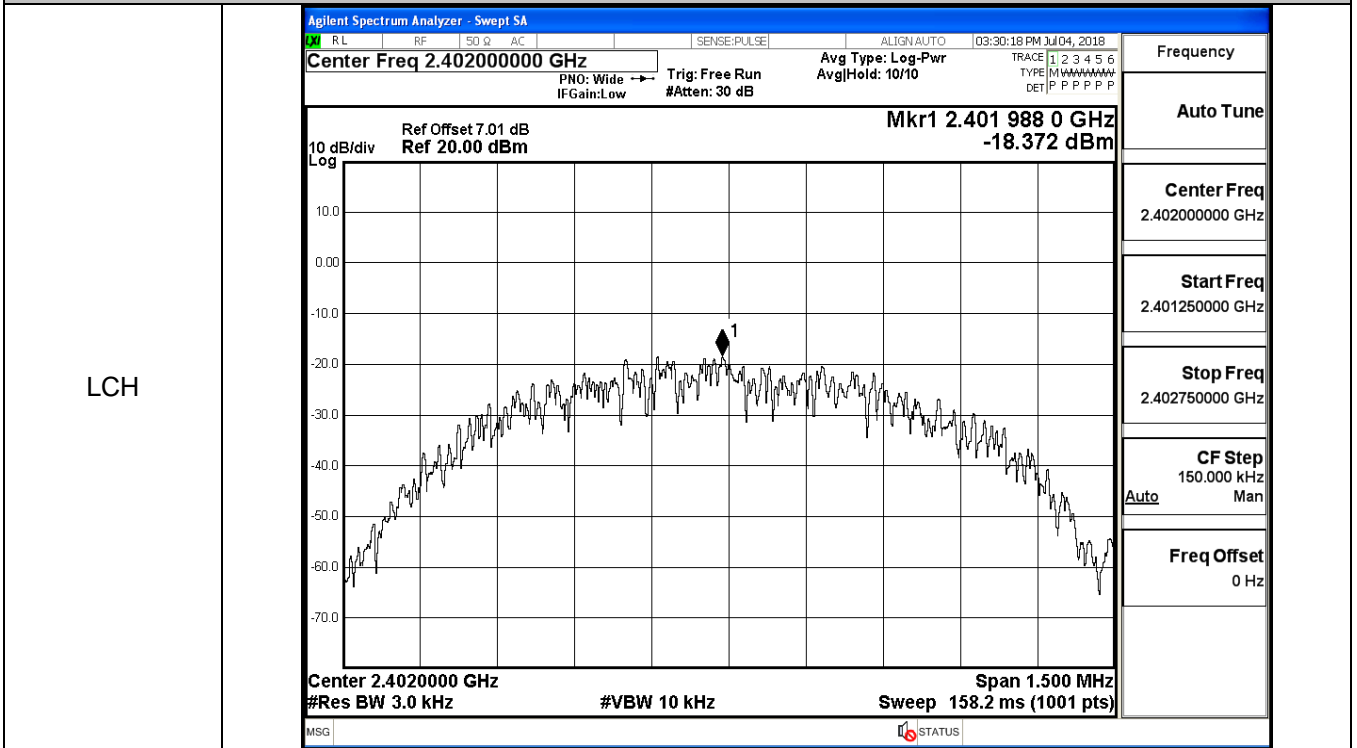
Test Graphs									
LCH	<div style="border: 1px solid black; padding: 5px;"> <p style="font-size: small; margin: 0;">Agilent Spectrum Analyzer - Swept SA</p> <p style="font-size: x-small; margin: 0;">RL RF 50 Ω AC SENSE:PULSE ALIGN:AUTO 03:54:55 PM Jul 04, 2018</p> <p style="font-size: small; margin: 0;">Center Freq 2.40200000 GHz Avg Type: Log-Pwr TRACE 1 2 3 4 5 6</p> <p style="font-size: x-small; margin: 0;">PNO: Fast Trig: Free Run AvgHold: 10/10 TYPE M W M M M M M M</p> <p style="font-size: x-small; margin: 0;">IFGain: Low #Atten: 30 dB DET P P P P P P</p> <div style="display: flex; justify-content: space-between; font-size: small;"> Ref Offset 7.01 dB Mkr1 2.402 222 375 GHz </div> <div style="display: flex; justify-content: space-between; font-size: small;"> Ref 20.00 dBm -5.687 dBm </div> <div style="display: flex; justify-content: space-between; font-size: x-small; margin-top: 10px;"> Center 2.402000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Sweep 1.067 ms (8001 pts) </div> <p style="font-size: x-small; margin: 0;">MSG STATUS</p> </div> <table border="1" style="width: 100%; border-collapse: collapse; font-size: x-small;"> <tr><td>Frequency</td></tr> <tr><td>Auto Tune</td></tr> <tr><td>Center Freq 2.402000000 GHz</td></tr> <tr><td>Start Freq 2.400500000 GHz</td></tr> <tr><td>Stop Freq 2.403500000 GHz</td></tr> <tr><td>CF Step 300.000 kHz</td></tr> <tr><td>Auto Man</td></tr> <tr><td>Freq Offset 0 Hz</td></tr> </table>	Frequency	Auto Tune	Center Freq 2.402000000 GHz	Start Freq 2.400500000 GHz	Stop Freq 2.403500000 GHz	CF Step 300.000 kHz	Auto Man	Freq Offset 0 Hz
Frequency									
Auto Tune									
Center Freq 2.402000000 GHz									
Start Freq 2.400500000 GHz									
Stop Freq 2.403500000 GHz									
CF Step 300.000 kHz									
Auto Man									
Freq Offset 0 Hz									
MCH	<div style="border: 1px solid black; padding: 5px;"> <p style="font-size: small; margin: 0;">Agilent Spectrum Analyzer - Swept SA</p> <p style="font-size: x-small; margin: 0;">RL RF 50 Ω AC SENSE:PULSE ALIGN:AUTO 03:56:15 PM Jul 04, 2018</p> <p style="font-size: small; margin: 0;">Center Freq 2.44000000 GHz Avg Type: Log-Pwr TRACE 1 2 3 4 5 6</p> <p style="font-size: x-small; margin: 0;">PNO: Fast Trig: Free Run AvgHold: >10/10 TYPE M W M M M M M M</p> <p style="font-size: x-small; margin: 0;">IFGain: Low #Atten: 30 dB DET P P P P P P</p> <div style="display: flex; justify-content: space-between; font-size: small;"> Ref Offset 7.01 dB Mkr1 2.439 676 750 GHz </div> <div style="display: flex; justify-content: space-between; font-size: small;"> Ref 20.00 dBm -4.793 dBm </div> <div style="display: flex; justify-content: space-between; font-size: x-small; margin-top: 10px;"> Center 2.440000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Sweep 1.067 ms (8001 pts) </div> <p style="font-size: x-small; margin: 0;">MSG STATUS</p> </div> <table border="1" style="width: 100%; border-collapse: collapse; font-size: x-small;"> <tr><td>Frequency</td></tr> <tr><td>Auto Tune</td></tr> <tr><td>Center Freq 2.440000000 GHz</td></tr> <tr><td>Start Freq 2.438500000 GHz</td></tr> <tr><td>Stop Freq 2.441500000 GHz</td></tr> <tr><td>CF Step 300.000 kHz</td></tr> <tr><td>Auto Man</td></tr> <tr><td>Freq Offset 0 Hz</td></tr> </table>	Frequency	Auto Tune	Center Freq 2.440000000 GHz	Start Freq 2.438500000 GHz	Stop Freq 2.441500000 GHz	CF Step 300.000 kHz	Auto Man	Freq Offset 0 Hz
Frequency									
Auto Tune									
Center Freq 2.440000000 GHz									
Start Freq 2.438500000 GHz									
Stop Freq 2.441500000 GHz									
CF Step 300.000 kHz									
Auto Man									
Freq Offset 0 Hz									



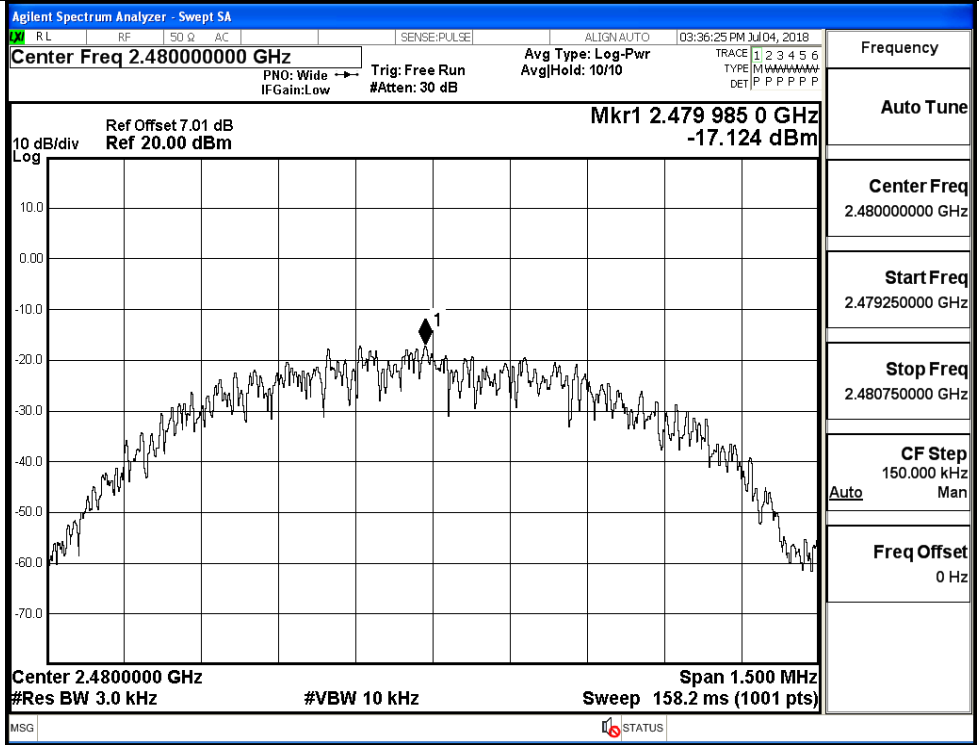
A.3 Maximum Power Spectral Density

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-18.372	8	PASS
BT LE	MCH	-20.254	8	PASS
BT LE	HCH	-17.124	8	PASS

Test Graphs



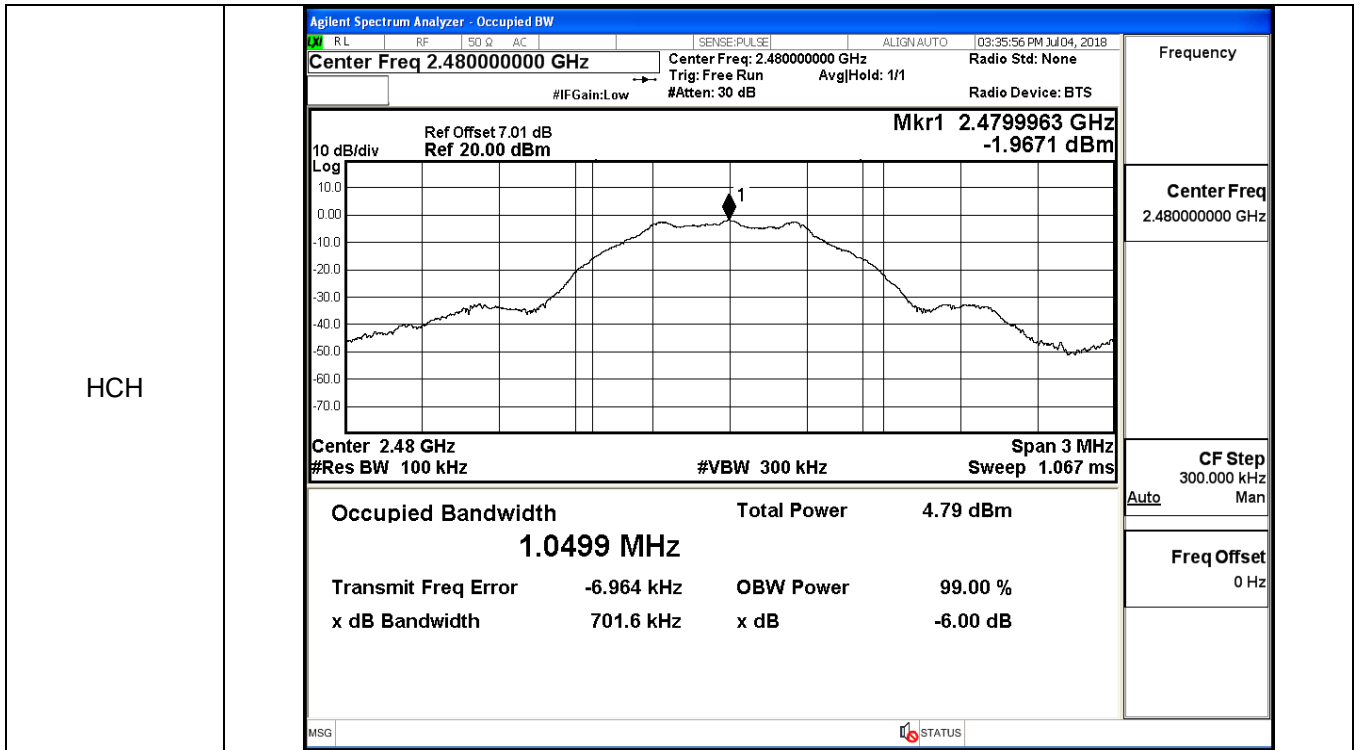
HCH



A.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.7009	≥0.5	PASS
BT LE	MCH	0.7036	≥0.5	PASS
BT LE	HCH	0.7016	≥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 03:29:48 PM Jul 04, 2018</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="border: 1px solid black; padding: 2px;"> <p style="text-align: right; margin: 0;">Mkr1 2.4019948 GHz -3.1020 dBm</p> </div> <p style="font-size: small; margin: 0;">Center 2.402 GHz Span 3 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 1.067 ms</p> <table style="width: 100%; font-size: small; border-collapse: collapse;"> <tr> <td style="width: 50%;">Occupied Bandwidth</td> <td style="width: 50%;">Total Power</td> <td colspan="2">3.63 dBm</td> </tr> <tr> <td colspan="4" style="text-align: center;">1.0432 MHz</td> </tr> <tr> <td>Transmit Freq Error</td> <td>1.964 kHz</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>700.9 kHz</td> <td>x dB</td> <td>-6.00 dB</td> </tr> </table> <p style="font-size: x-small; margin: 0;">MSG STATUS</p> </div>	Occupied Bandwidth	Total Power	3.63 dBm		1.0432 MHz				Transmit Freq Error	1.964 kHz	OBW Power	99.00 %	x dB Bandwidth	700.9 kHz	x dB	-6.00 dB
Occupied Bandwidth	Total Power	3.63 dBm															
1.0432 MHz																	
Transmit Freq Error	1.964 kHz	OBW Power	99.00 %														
x dB Bandwidth	700.9 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 03:32:43 PM Jul 04, 2018</p> <p style="margin: 0;">Center Freq 2.440000000 GHz Center Freq: 2.440000000 GHz Radio Std: None Trig: Free Run AvgHold: 1/1 #IFGain: Low #Atten: 30 dB Radio Device: BTS</p> <div style="border: 1px solid black; padding: 2px;"> <p style="text-align: right; margin: 0;">Mkr1 2.4399978 GHz -2.3321 dBm</p> </div> <p style="font-size: small; margin: 0;">Center 2.44 GHz Span 3 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 1.067 ms</p> <table style="width: 100%; font-size: small; border-collapse: collapse;"> <tr> <td style="width: 50%;">Occupied Bandwidth</td> <td style="width: 50%;">Total Power</td> <td colspan="2">4.46 dBm</td> </tr> <tr> <td colspan="4" style="text-align: center;">1.0470 MHz</td> </tr> <tr> <td>Transmit Freq Error</td> <td>-6.444 kHz</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>703.6 kHz</td> <td>x dB</td> <td>-6.00 dB</td> </tr> </table> <p style="font-size: x-small; margin: 0;">MSG STATUS</p> </div>	Occupied Bandwidth	Total Power	4.46 dBm		1.0470 MHz				Transmit Freq Error	-6.444 kHz	OBW Power	99.00 %	x dB Bandwidth	703.6 kHz	x dB	-6.00 dB
Occupied Bandwidth	Total Power	4.46 dBm															
1.0470 MHz																	
Transmit Freq Error	-6.444 kHz	OBW Power	99.00 %														
x dB Bandwidth	703.6 kHz	x dB	-6.00 dB														

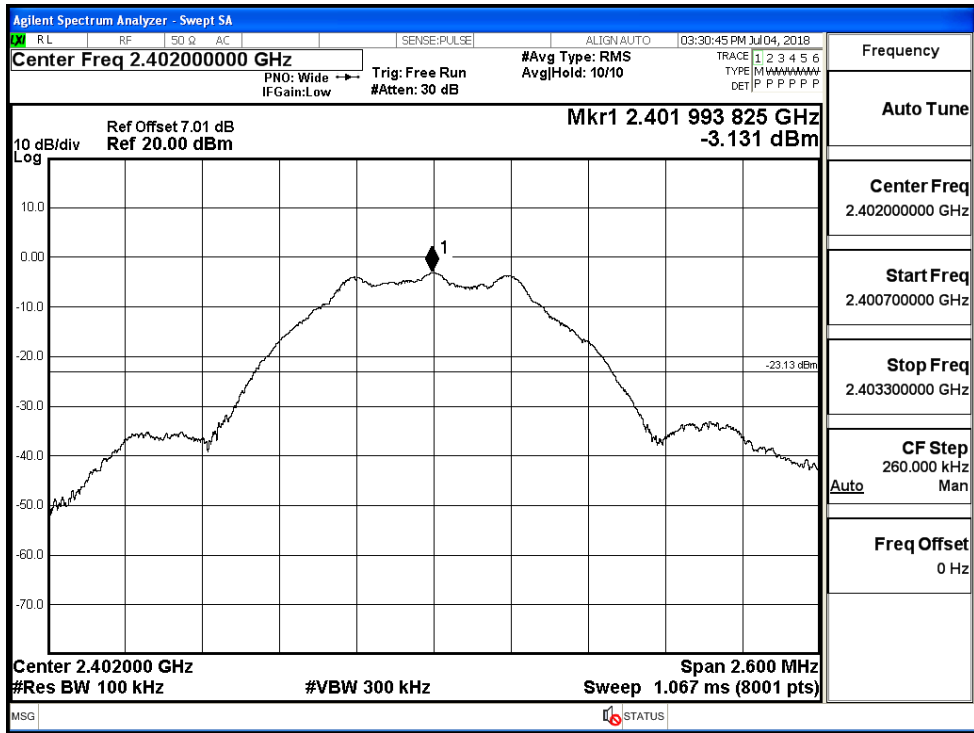


A.5 RF Conducted Spurious Emissions

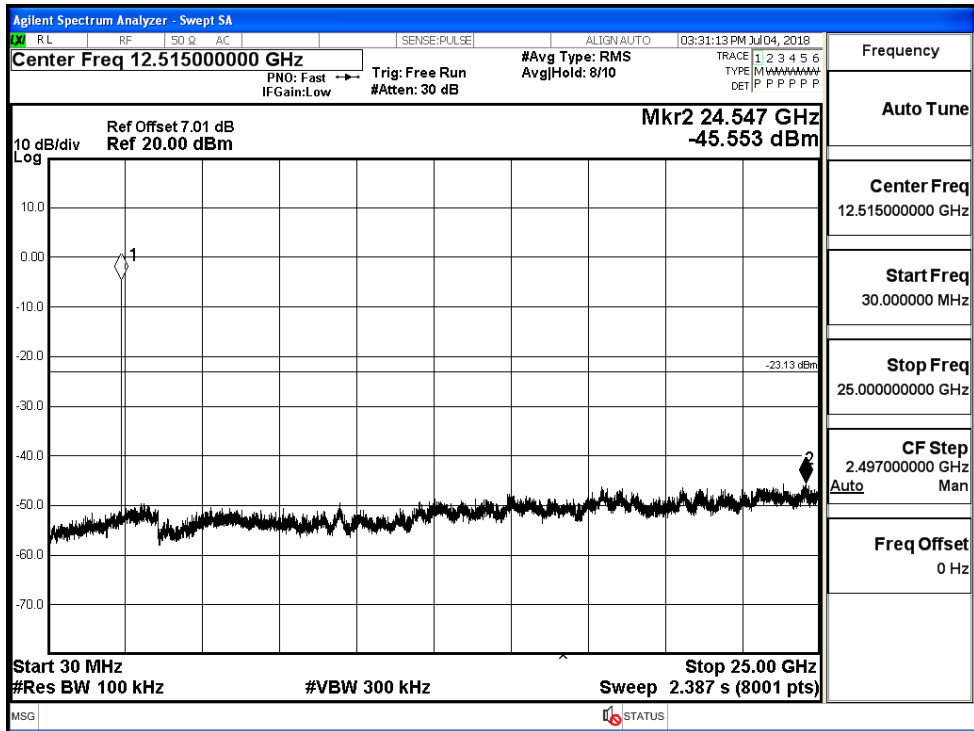
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-3.131	-45.553	-23.131	PASS
BT LE	MCH	-2.351	-45.637	-22.351	PASS
BT LE	HCH	-1.979	-45.010	-21.979	PASS

BT LE_LCH_Graphs

Pref/BT LE/LCH

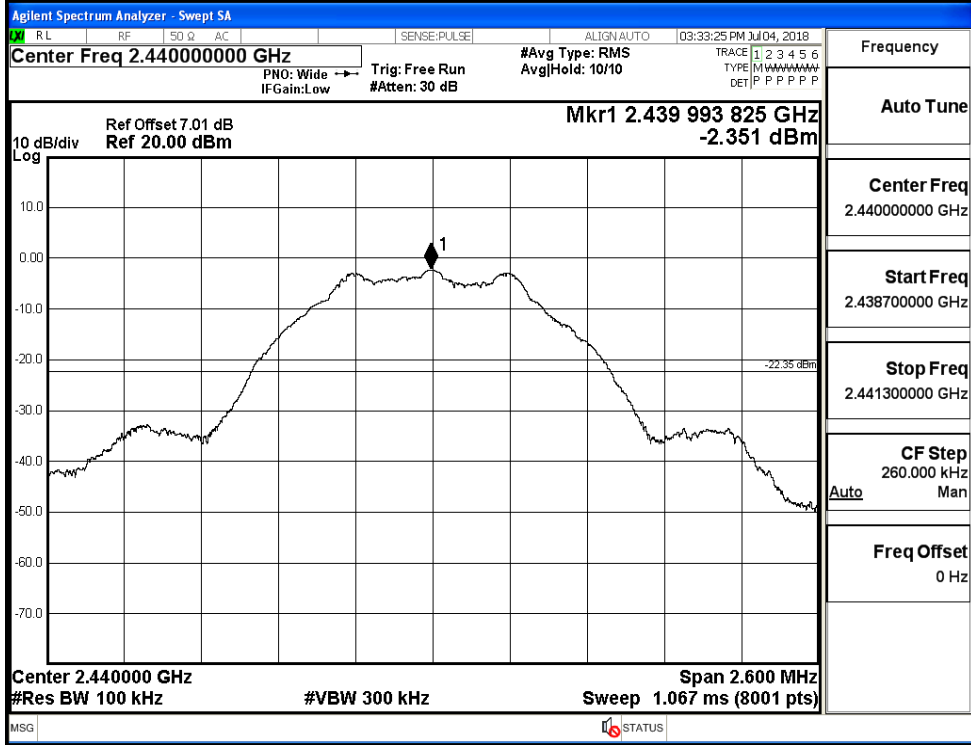


Puw/BT LE/LCH

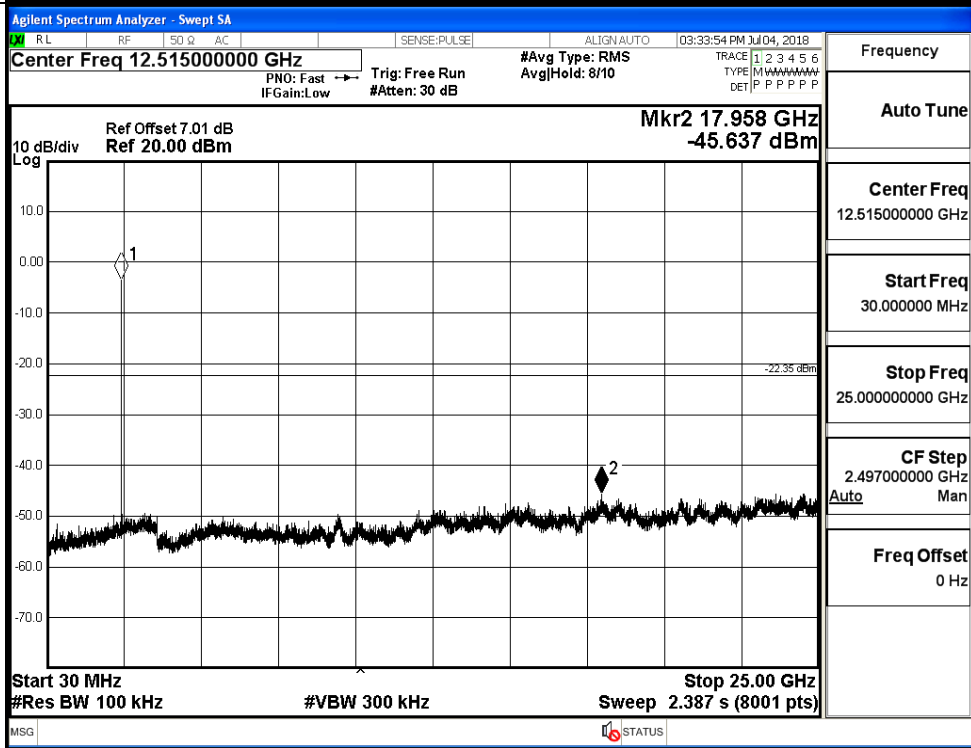


BT LE_MCH_Graphs

Pref/BT LE/MCH

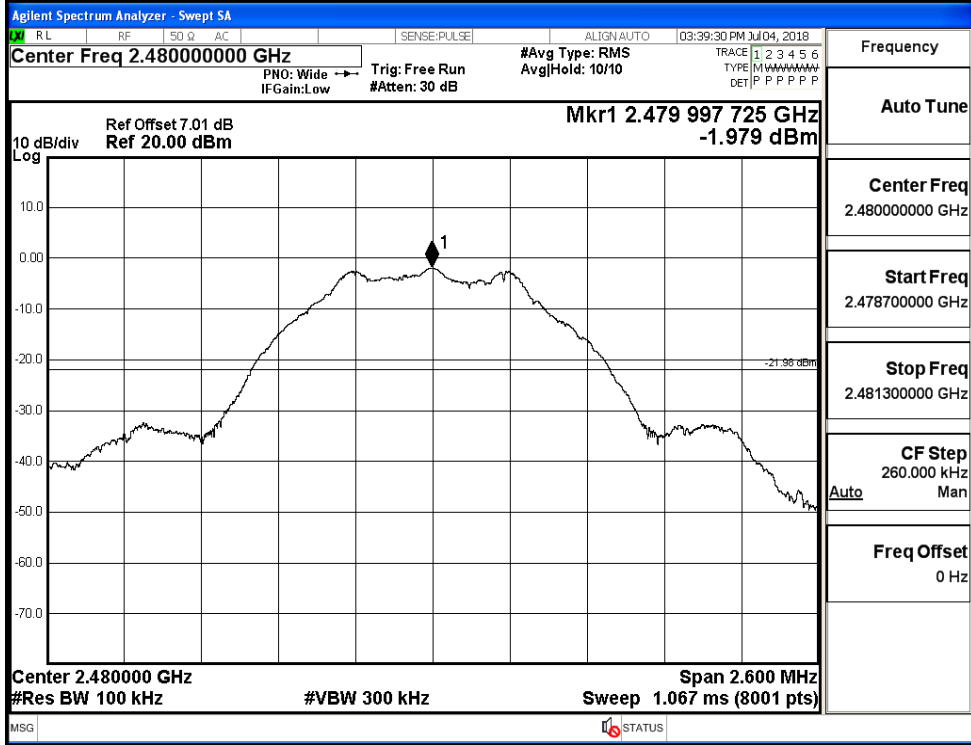


Puw/BT LE/MCH

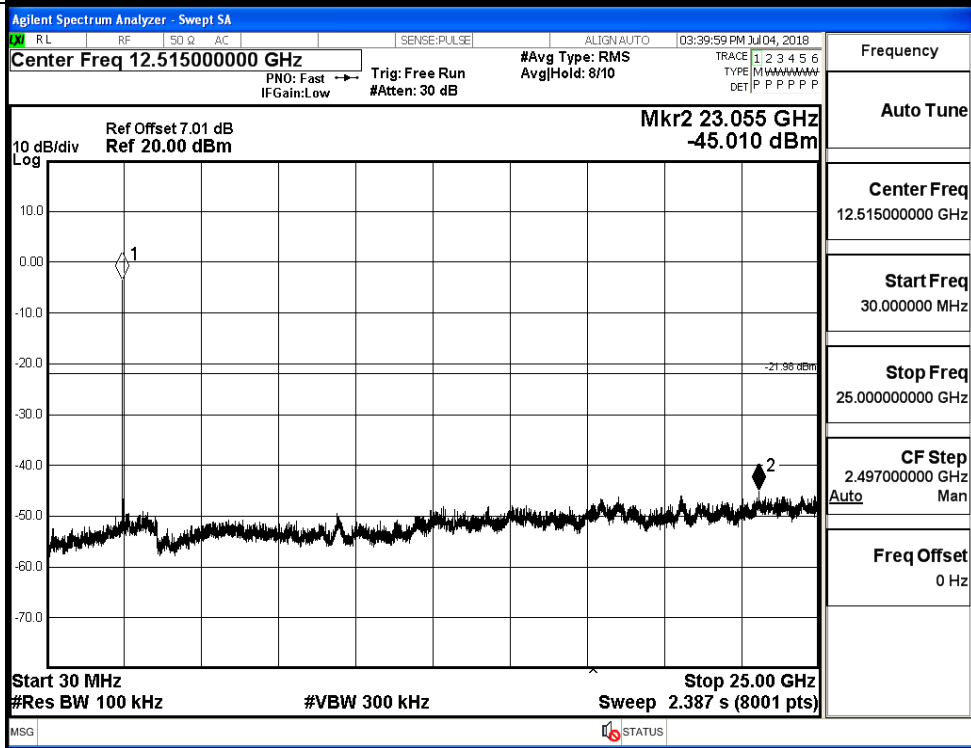


BT LE_HCH_Graphs

Pref/BT LE/HCH



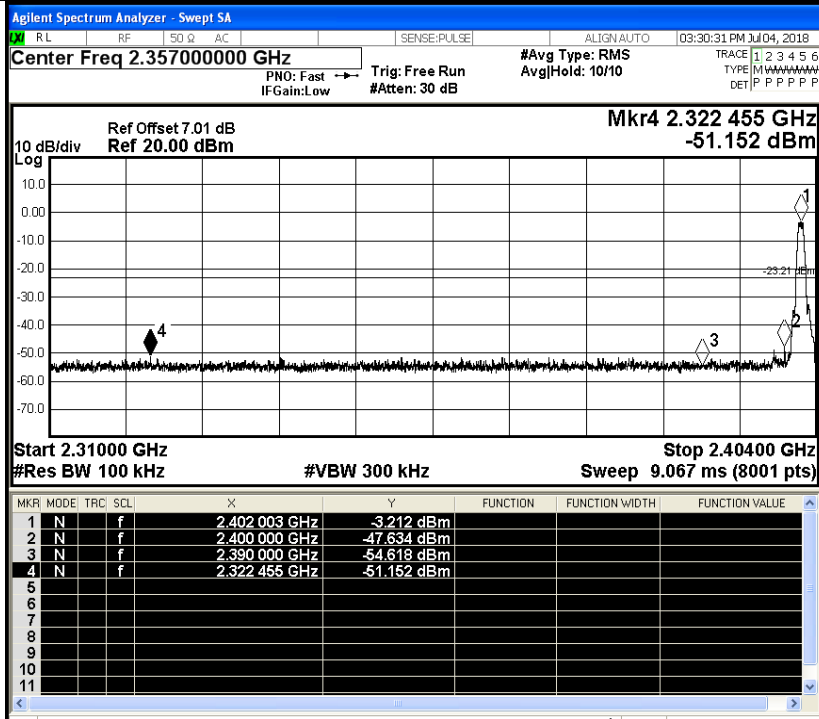
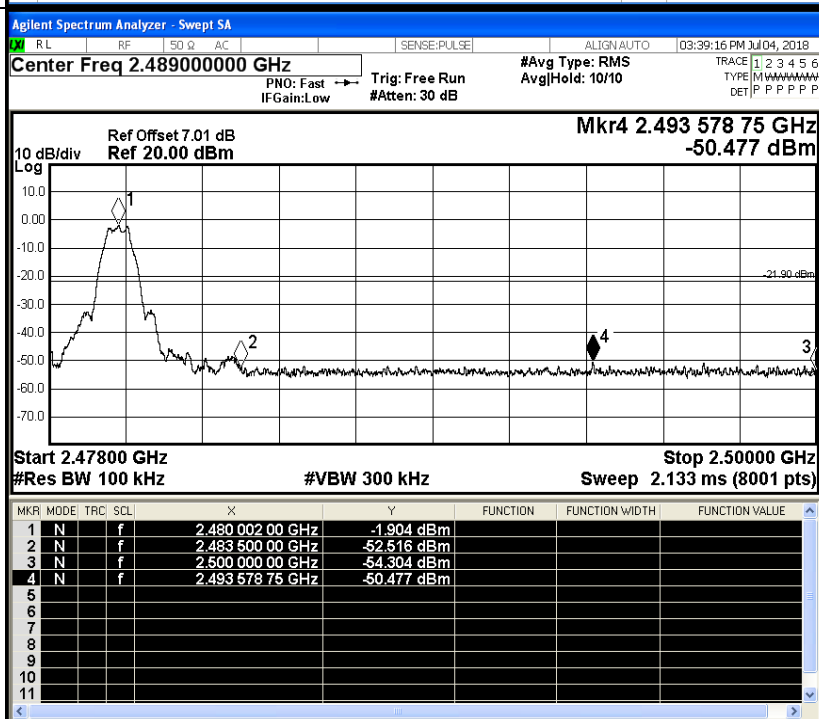
Puw/BT LE/HCH



A.6 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-3.212	-51.152	-23.21	PASS
BT LE	HCH	-1.904	-50.477	-21.9	PASS

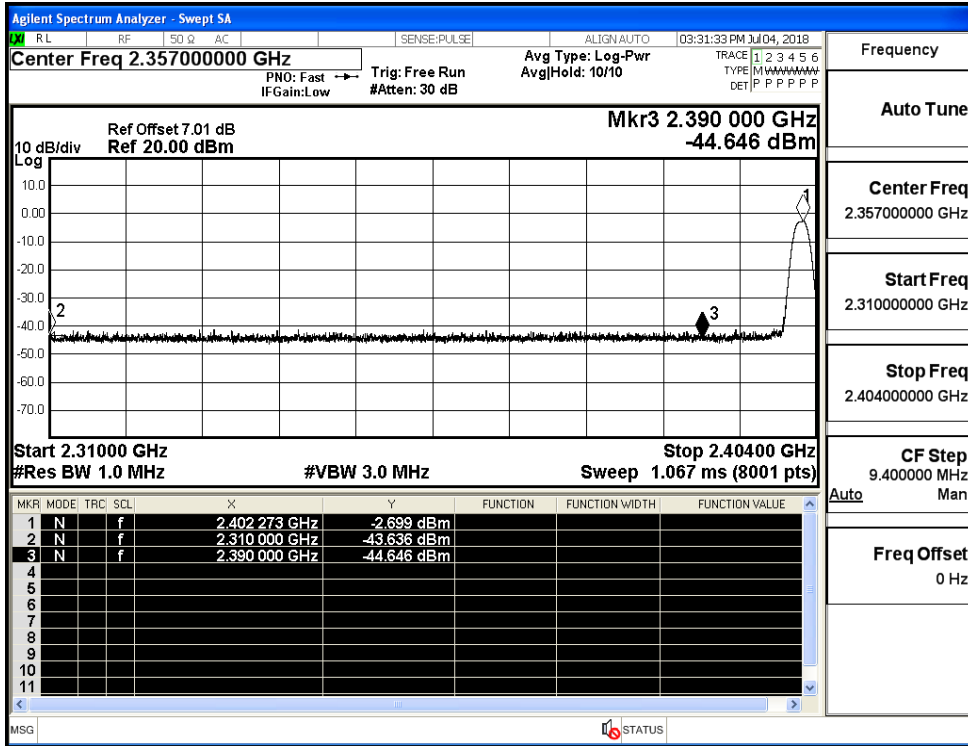
Test Graphs

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>
HCH		<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>

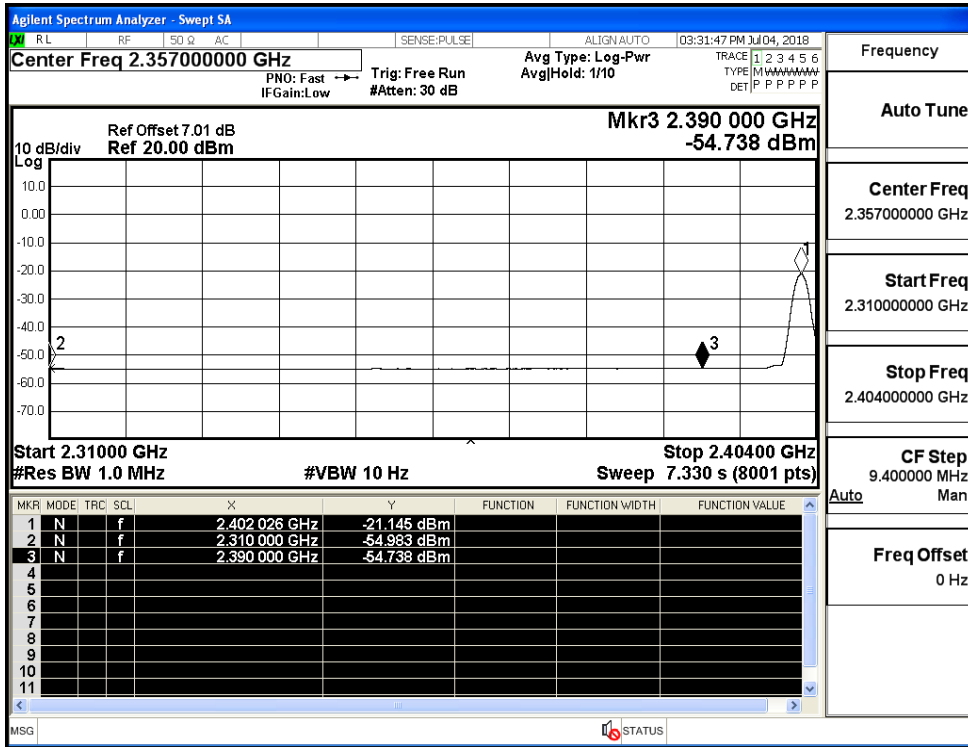
A.7 Restrict-band band-edge measurements

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	-43.64	2.66	0	54.28	PEAK	74	PASS
		Ant1	2310.0	-54.98	2.66	0	42.94	AV	54	PASS
		Ant1	2390.0	-44.65	2.66	0	53.27	PEAK	74	PASS
		Ant1	2390.0	-54.74	2.66	0	43.18	AV	54	PASS
	2480	Ant1	2483.5	-40.53	2.66	0	57.39	PEAK	74	PASS
		Ant1	2483.5	-53.25	2.66	0	44.67	AV	54	PASS
		Ant1	2500.0	-43.44	2.66	0	54.48	PEAK	74	PASS
		Ant1	2500.0	-54.31	2.66	0	43.61	AV	54	PASS

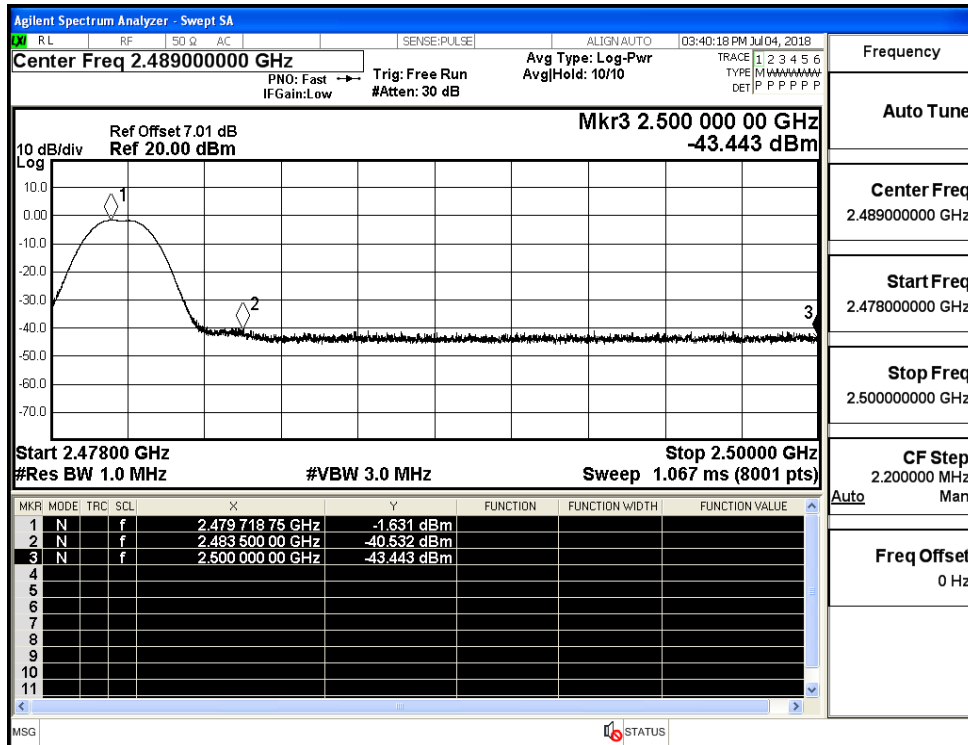
Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



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

