

## Appendix A

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

Product Name: Smart bracelet

Trade Mark: N/A

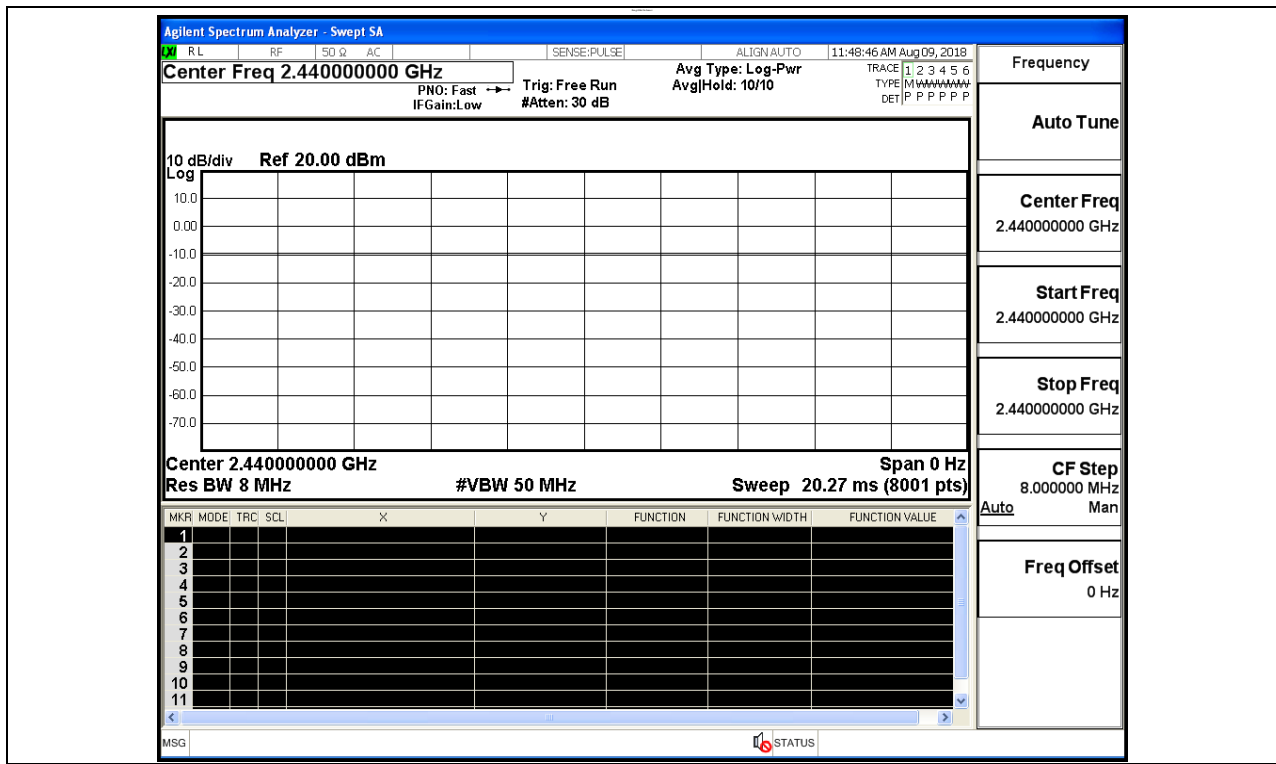
Test Model: H107

#### Environmental Conditions

Temperature:	24.3 ° C
Relative Humidity:	53.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond.Lu
Supervised by:	Jayden.Zhuo

#### A.1 Duty Cycle

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

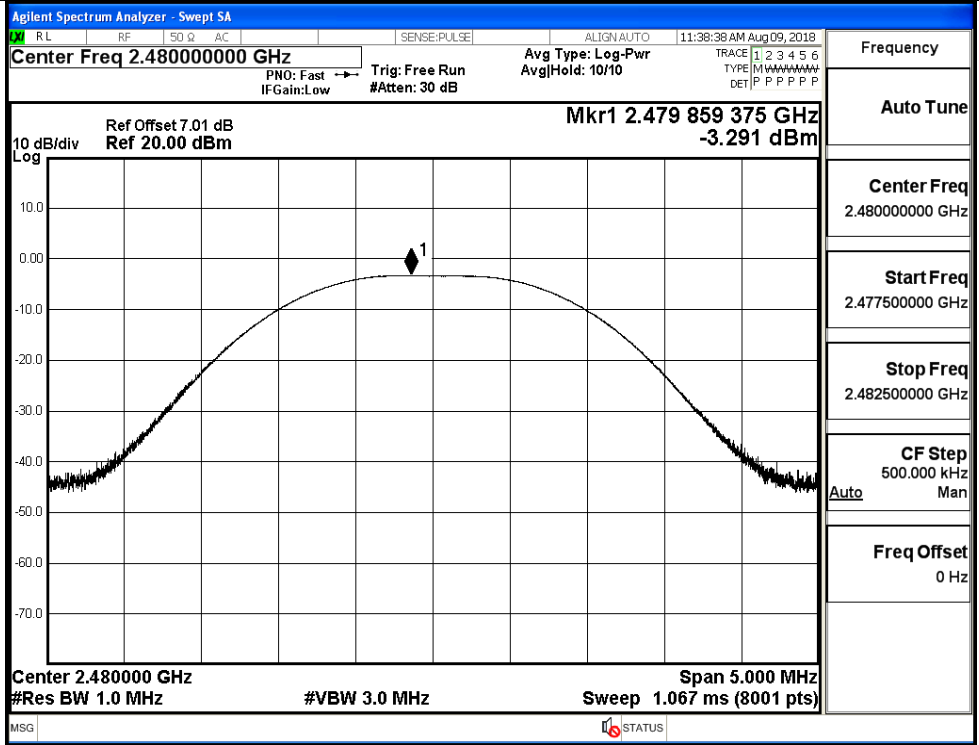


### A.2 Maximum Conducted Peak Output Power

Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	-2.409	30	PASS
BT LE	MCH	-2.606	30	PASS
BT LE	HCH	-3.291	30	PASS

Test Graphs	
LCH	<div style="border: 1px solid black; padding: 5px;"> <p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.40200000 GHz</p> <p>Mkr1 2.402 217 500 GHz -2.409 dBm</p> <p>Center 2.402000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Span 5.000 MHz Sweep 1.067 ms (8001 pts)</p> </div>
MCH	<div style="border: 1px solid black; padding: 5px;"> <p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.44000000 GHz</p> <p>Mkr1 2.439 829 375 GHz -2.606 dBm</p> <p>Center 2.440000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Span 5.000 MHz Sweep 1.067 ms (8001 pts)</p> </div>

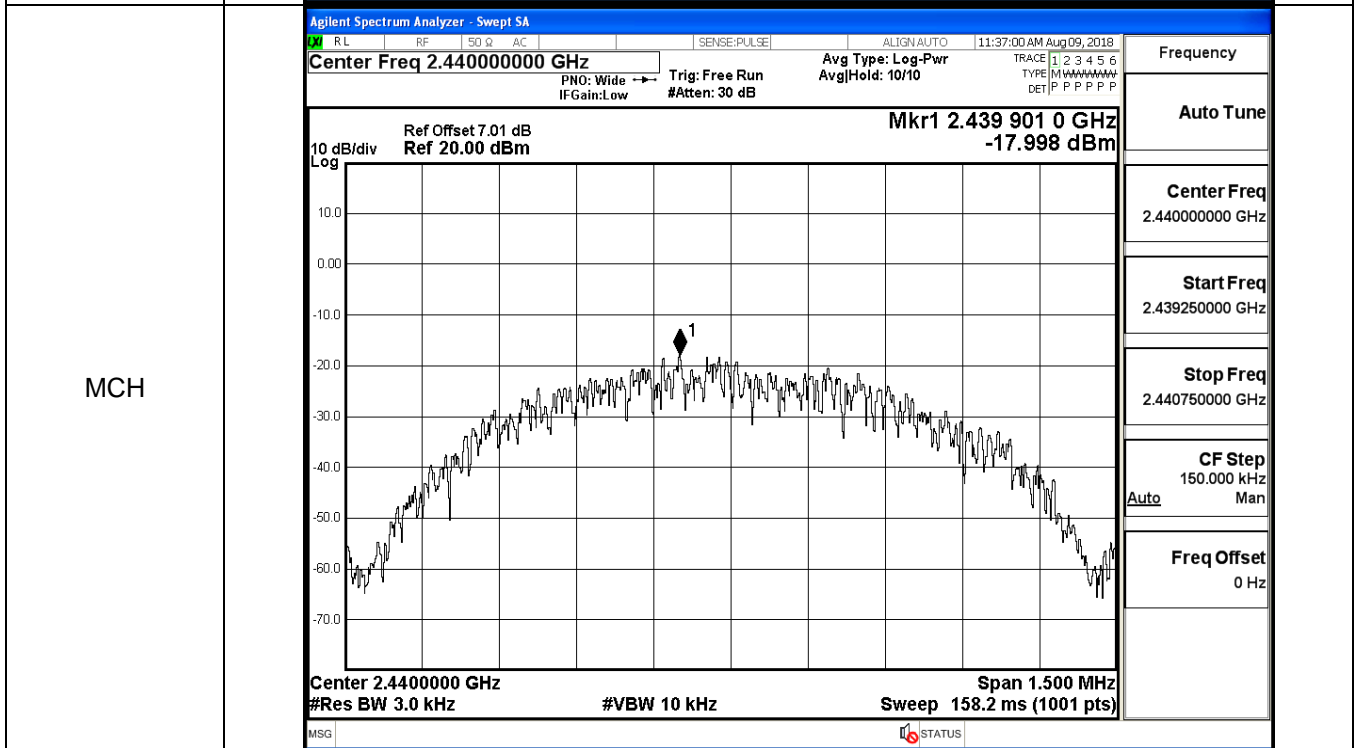
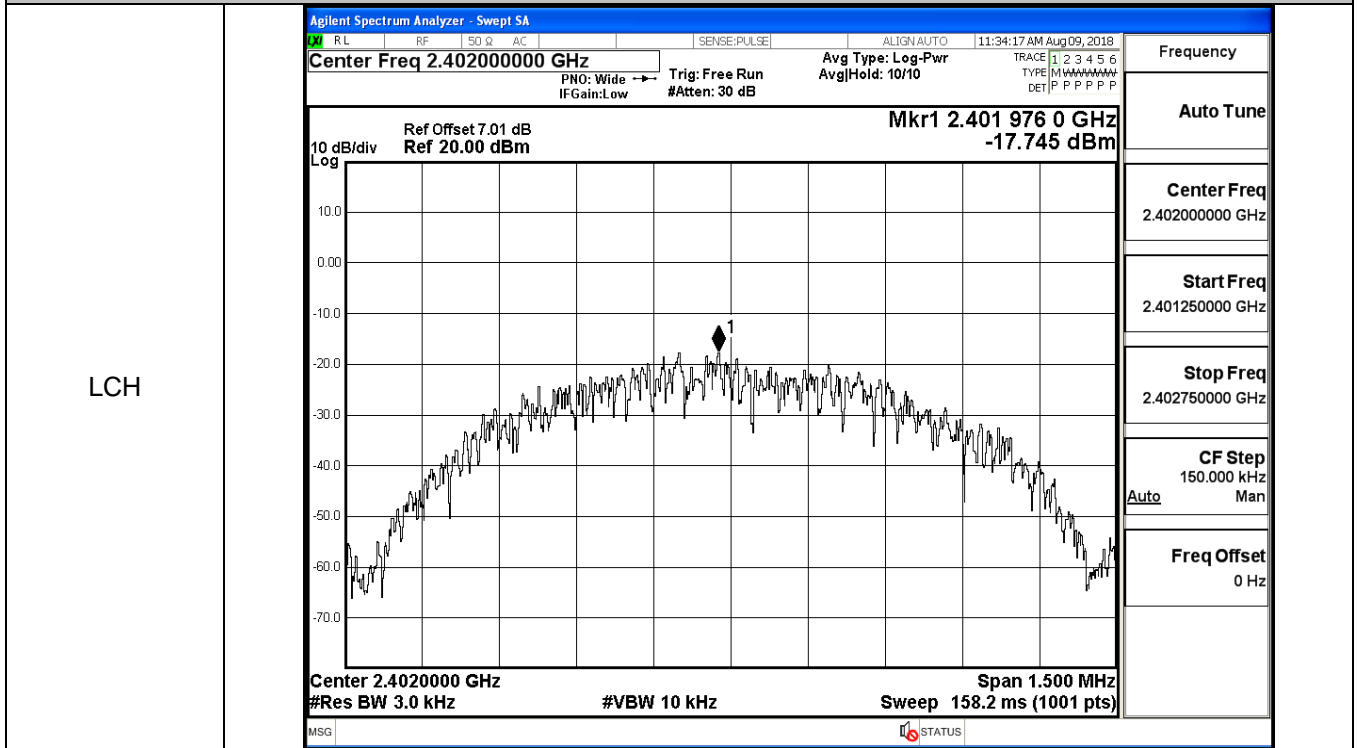
HCH



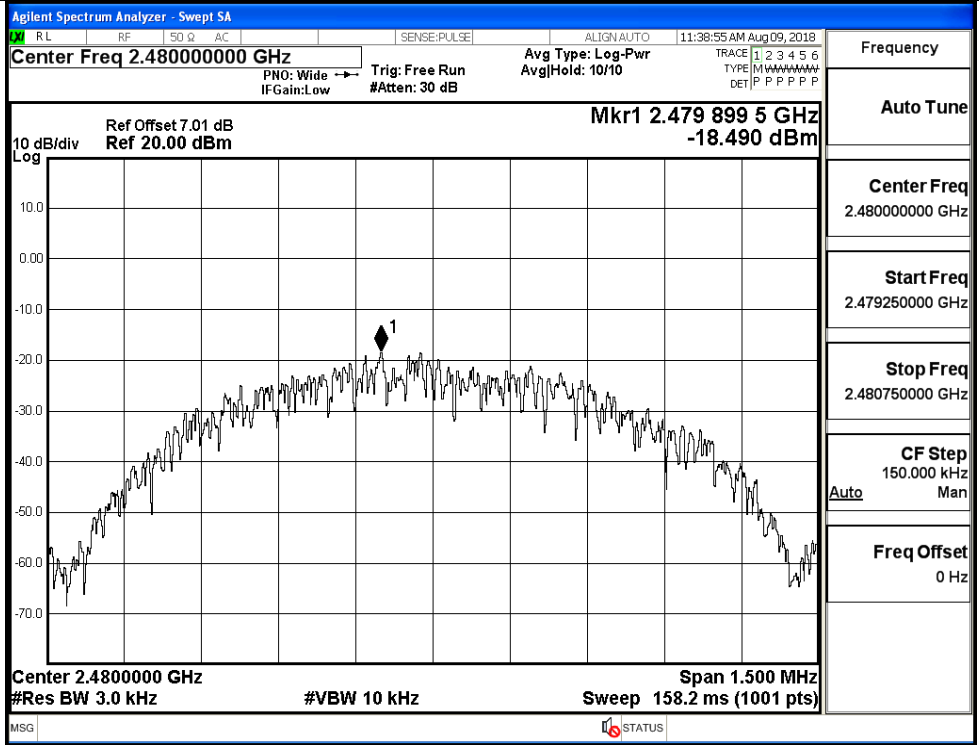
### A.3 Maximum Power Spectral Density

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-17.745	8	PASS
BT LE	MCH	-17.998	8	PASS
BT LE	HCH	-18.490	8	PASS

#### Test Graphs

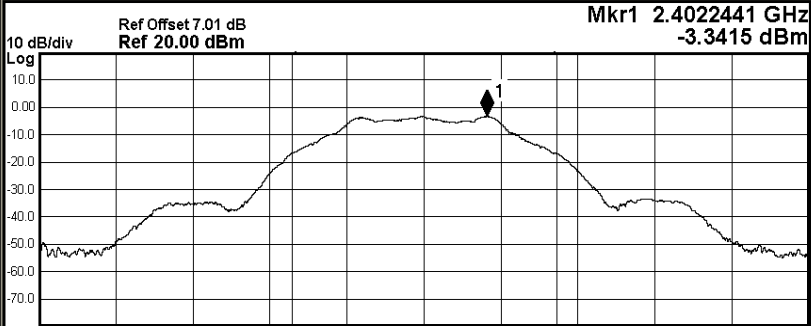
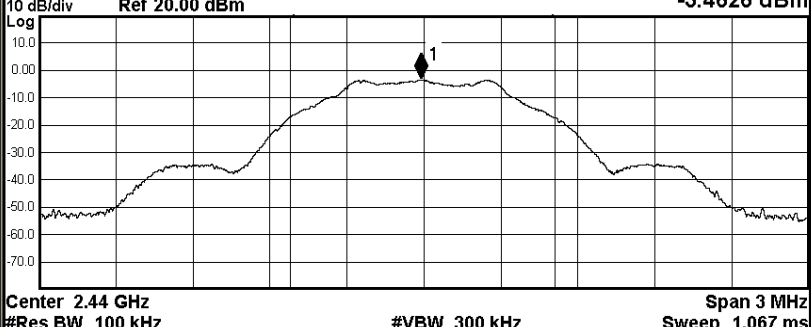


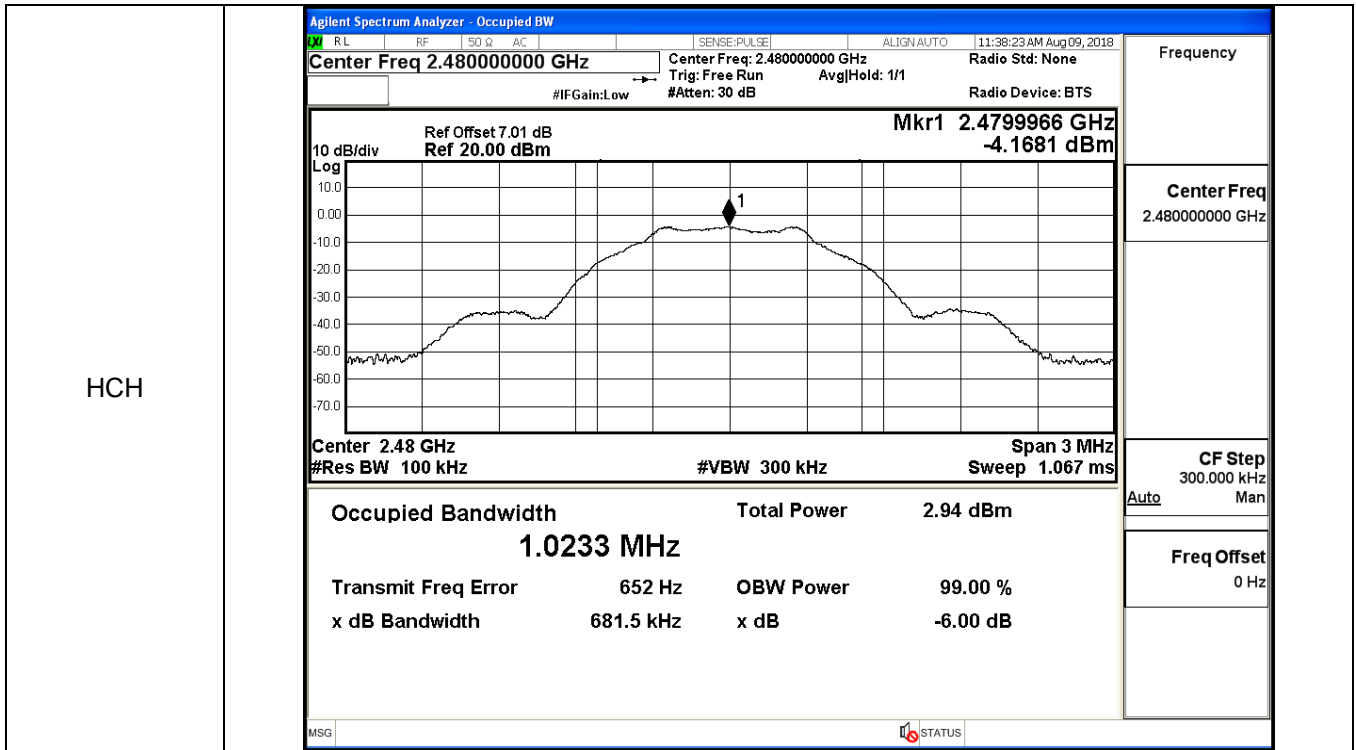
HCH



**A.4 6dB Bandwidth**

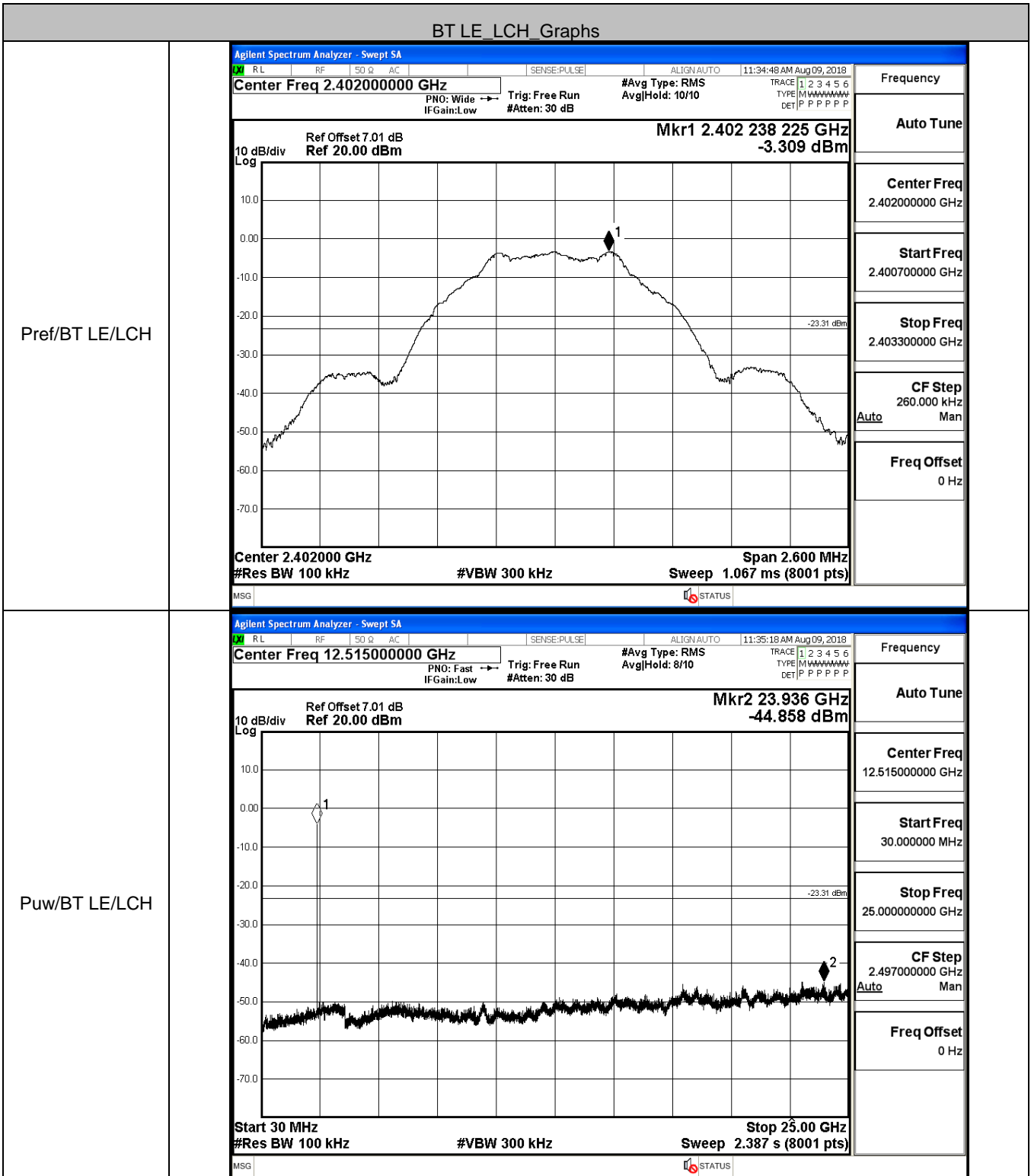
Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6683	≥0.5	PASS
BT LE	MCH	0.6835	≥0.5	PASS
BT LE	HCH	0.6815	≥0.5	PASS

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 11:33:45 AM Aug 09, 2018</p> <p style="margin: 0;">Center Freq 2.402000000 GHz Center Freq: 2.402000000 GHz Radio Std: None</p> <p style="margin: 0;">Trig: Free Run AvgHold: 1/1</p> <p style="margin: 0;">#IFGain:Low #Atten: 30 dB Radio Device: BTS</p> <div style="border: 1px solid black; padding: 2px; margin: 5px 0;"> <p style="font-size: small; margin: 0;">10 dB/div Ref Offset 7.01 dB Mkr1 2.4022441 GHz</p> <p style="font-size: small; margin: 0;">Log Ref 20.00 dBm -3.3415 dBm</p>  </div> <p style="font-size: small; margin: 0;">Center 2.402 GHz Span 3 MHz</p> <p style="font-size: small; margin: 0;">#Res BW 100 kHz #VBW 300 kHz Sweep 1.067 ms</p> <table style="width: 100%; font-size: small; margin: 5px 0;"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>3.75 dBm</td> </tr> <tr> <td style="text-align: center;"><b>1.0264 MHz</b></td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>4.729 kHz</td> <td>OBW Power</td> </tr> <tr> <td>x dB Bandwidth</td> <td>668.3 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 style="font-size: x-small; margin: 0;">MSG STATUS</p> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <table style="width: 100%; font-size: x-small;"> <tr> <td style="width: 50%;">Frequency</td> <td style="text-align: center;">2.402000000 GHz</td> </tr> <tr> <td>Center Freq</td> <td style="text-align: center;">2.402000000 GHz</td> </tr> <tr> <td>CF Step</td> <td style="text-align: center;">300.000 kHz</td> </tr> <tr> <td>Auto</td> <td style="text-align: center;">Man</td> </tr> <tr> <td>Freq Offset</td> <td style="text-align: center;">0 Hz</td> </tr> </table> </div>	Occupied Bandwidth	Total Power	3.75 dBm	<b>1.0264 MHz</b>			Transmit Freq Error	4.729 kHz	OBW Power	x dB Bandwidth	668.3 kHz	x dB			99.00 %			-6.00 dB	Frequency	2.402000000 GHz	Center Freq	2.402000000 GHz	CF Step	300.000 kHz	Auto	Man	Freq Offset	0 Hz
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Auto	Man																												
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### A.5 RF Conducted Spurious Emissions

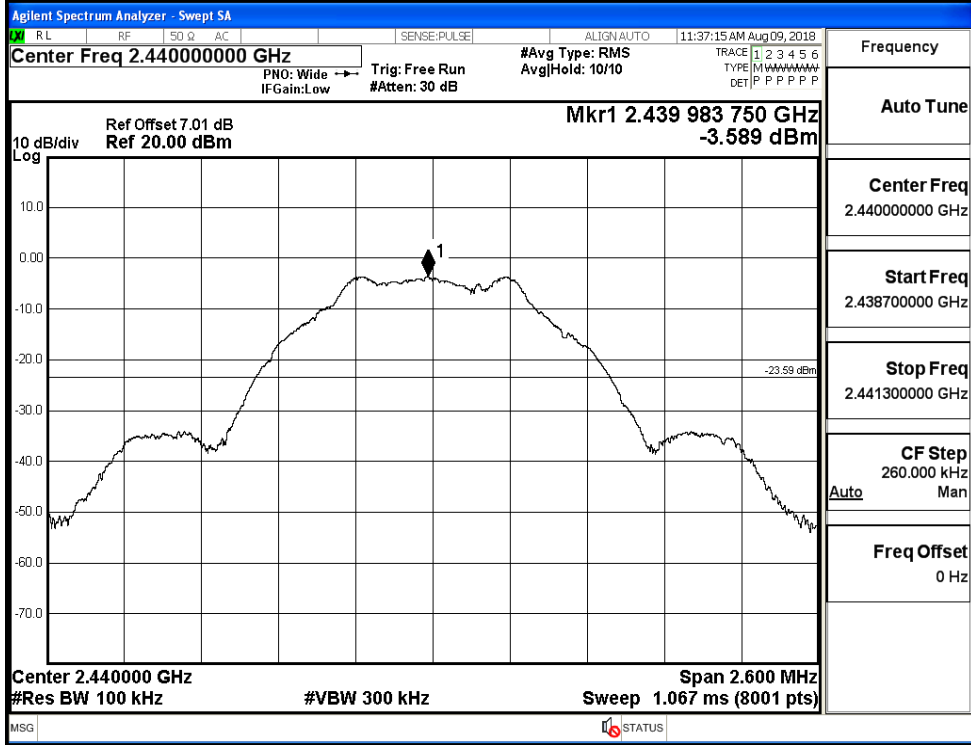
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-3.309	-44.858	-23.309	PASS
BT LE	MCH	-3.589	-45.055	-23.589	PASS
BT LE	HCH	-4.119	-44.911	-24.119	PASS



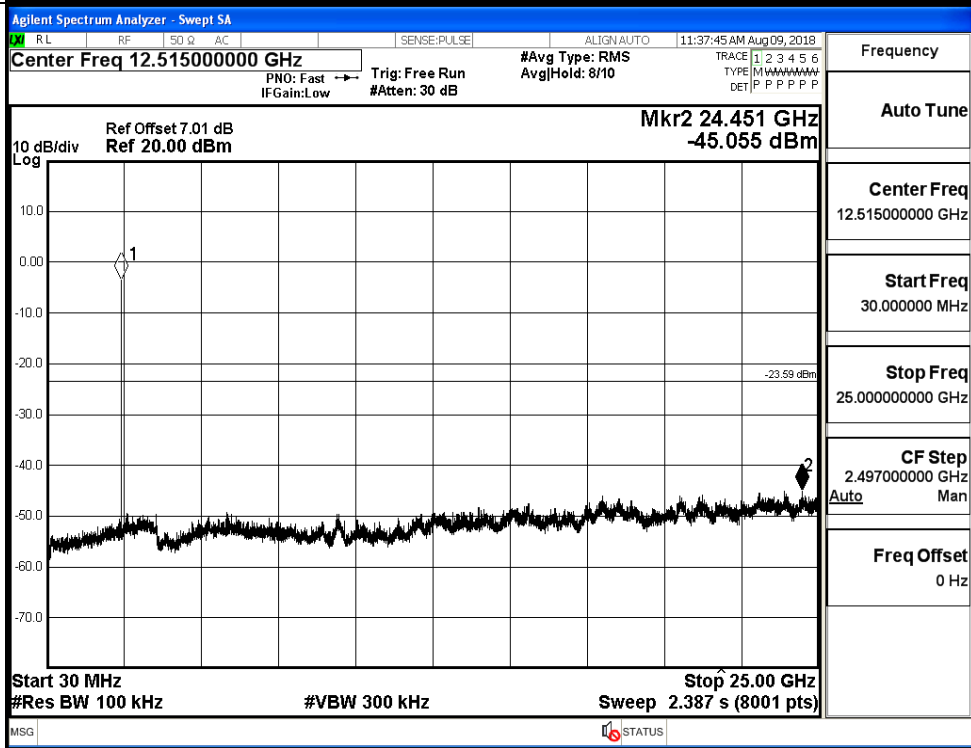


BT LE\_MCH\_Graphs

Pref/BT LE/MCH

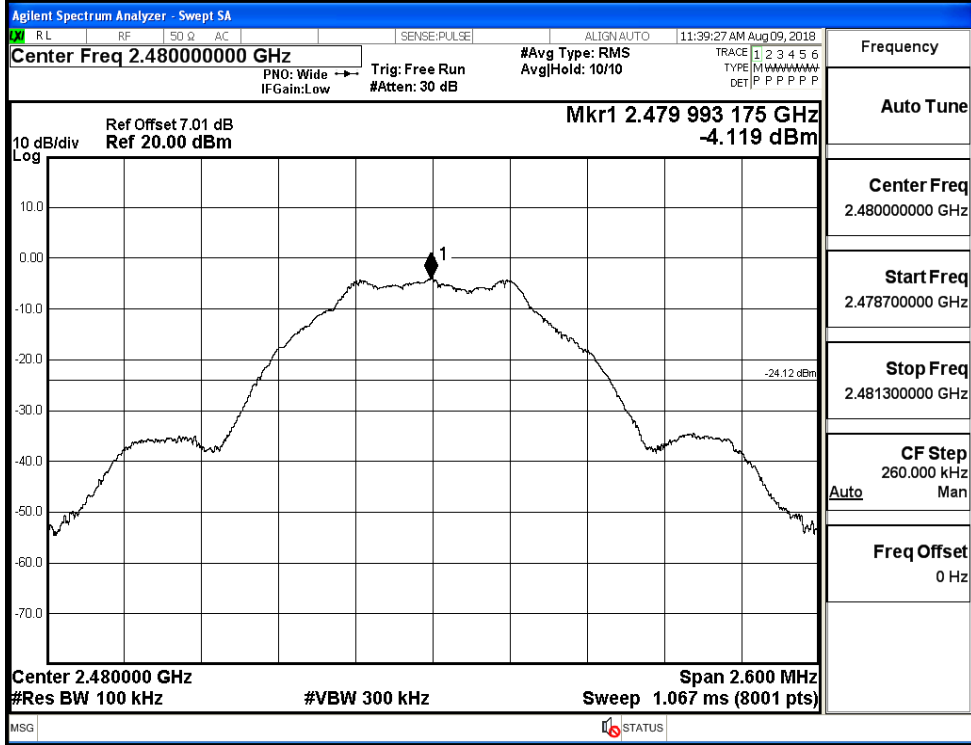


Puw/BT LE/MCH

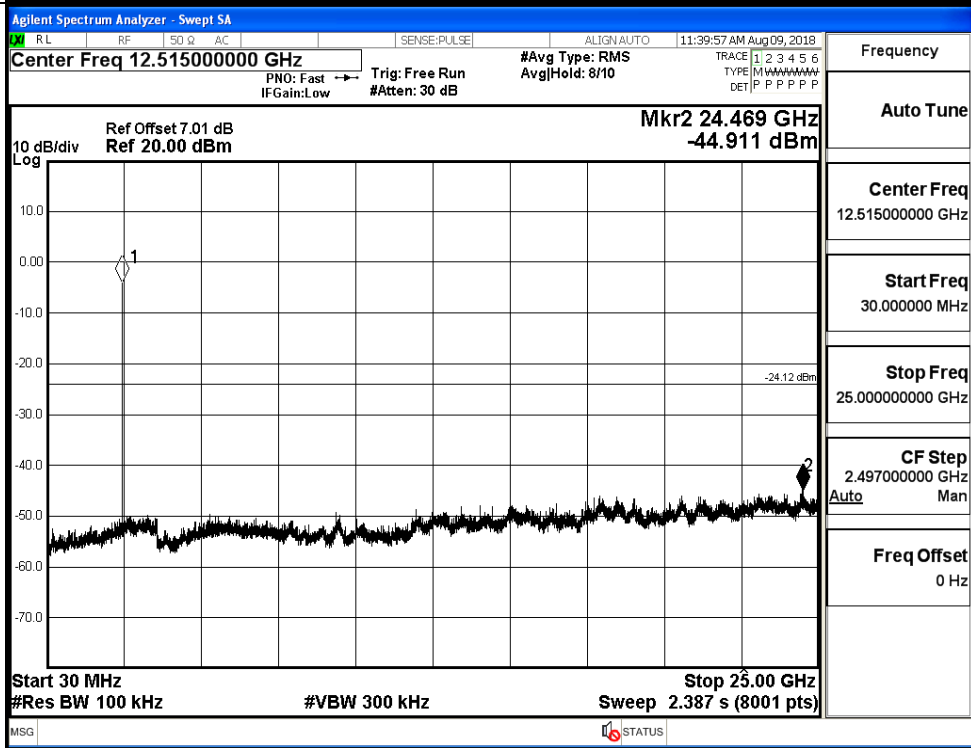


BT LE\_HCH\_Graphs

Pref/BT LE/HCH



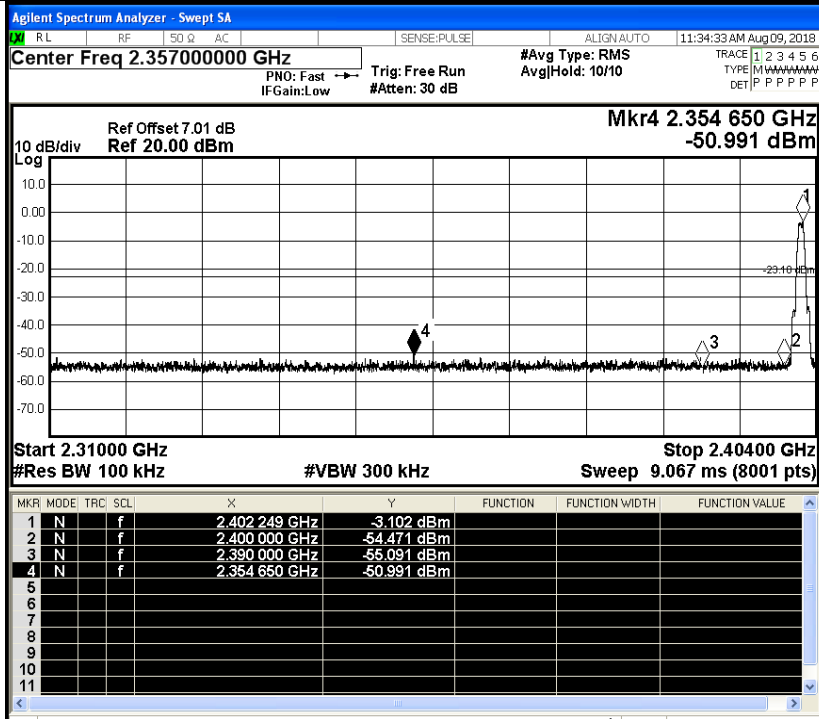
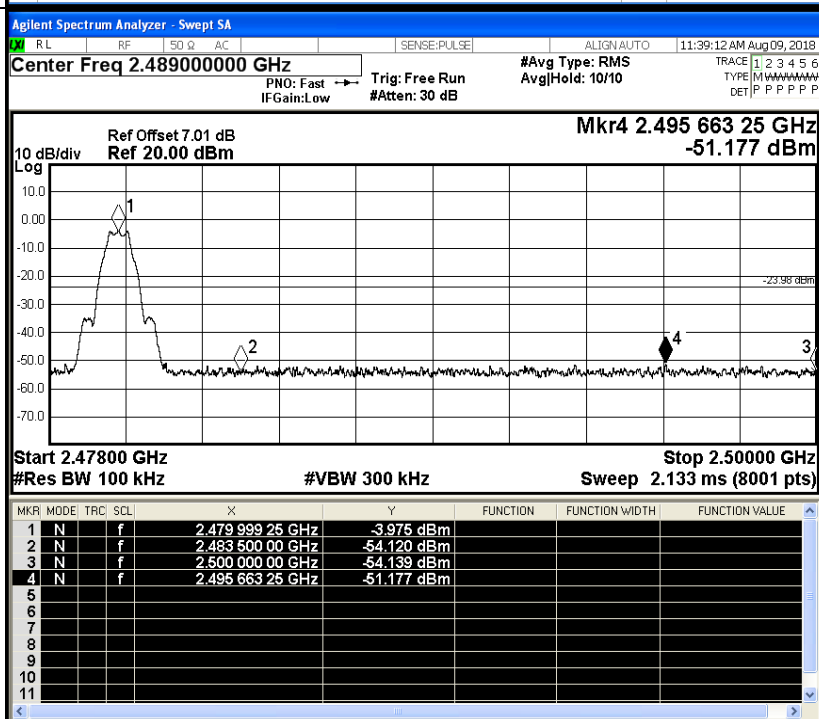
Puw/BT LE/HCH



### A.6 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-3.102	-50.991	-23.1	PASS
BT LE	HCH	-3.975	-23.98	PASS	

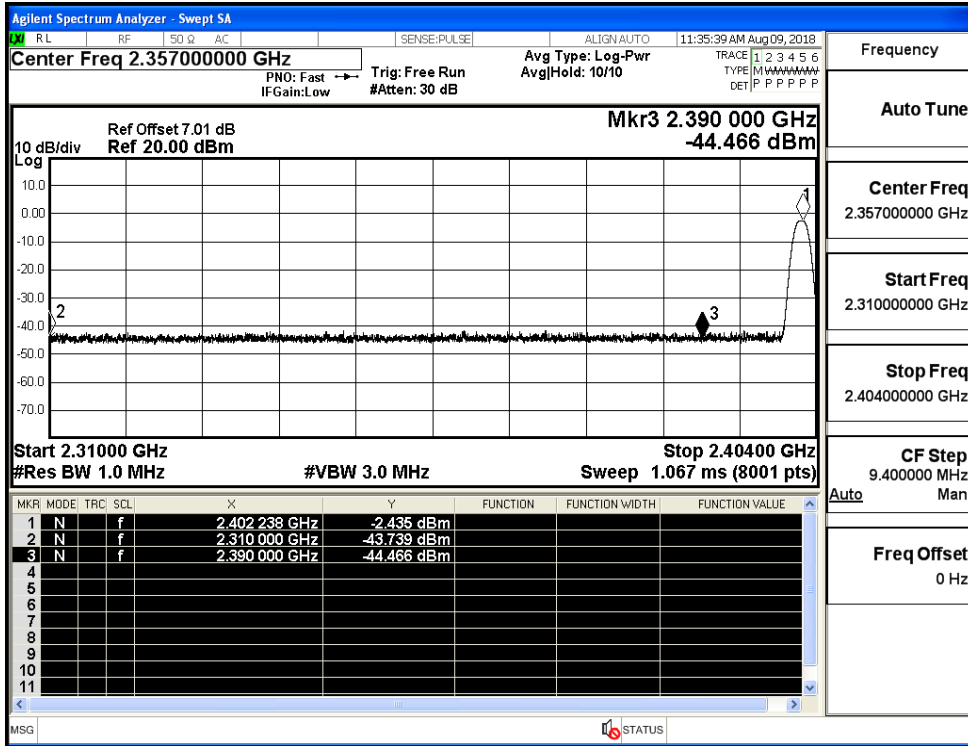
Test Graphs

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>

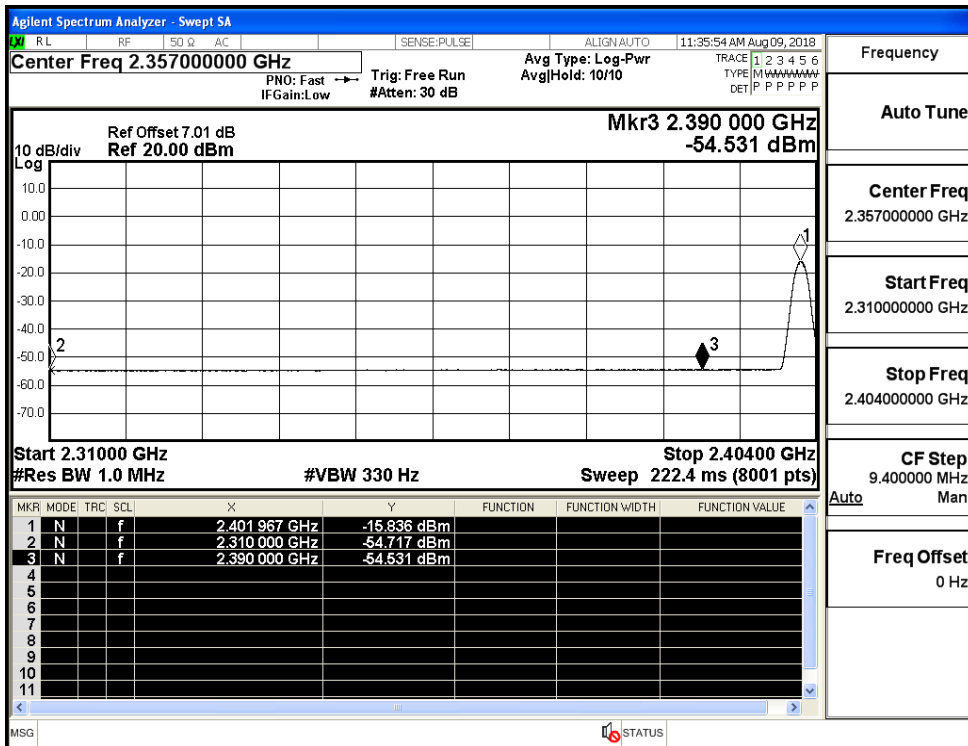
**B.7 Restrict-band band-edge measurements**

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	-43.74	2.0	0	51.52	PEAK	74	PASS
		Ant1	2310.0	-54.72	2.0	0	40.54	AV	54	PASS
		Ant1	2390.0	-44.47	2.0	0	50.79	PEAK	74	PASS
		Ant1	2390.0	-54.53	2.0	0	40.73	AV	54	PASS
	2480	Ant1	2483.5	-42.39	2.0	0	52.86	PEAK	74	PASS
		Ant1	2483.5	-54.30	2.0	0	40.96	AV	54	PASS
		Ant1	2500.0	-44.35	2.0	0	50.91	PEAK	74	PASS
		Ant1	2500.0	-54.17	2.0	0	41.09	AV	54	PASS

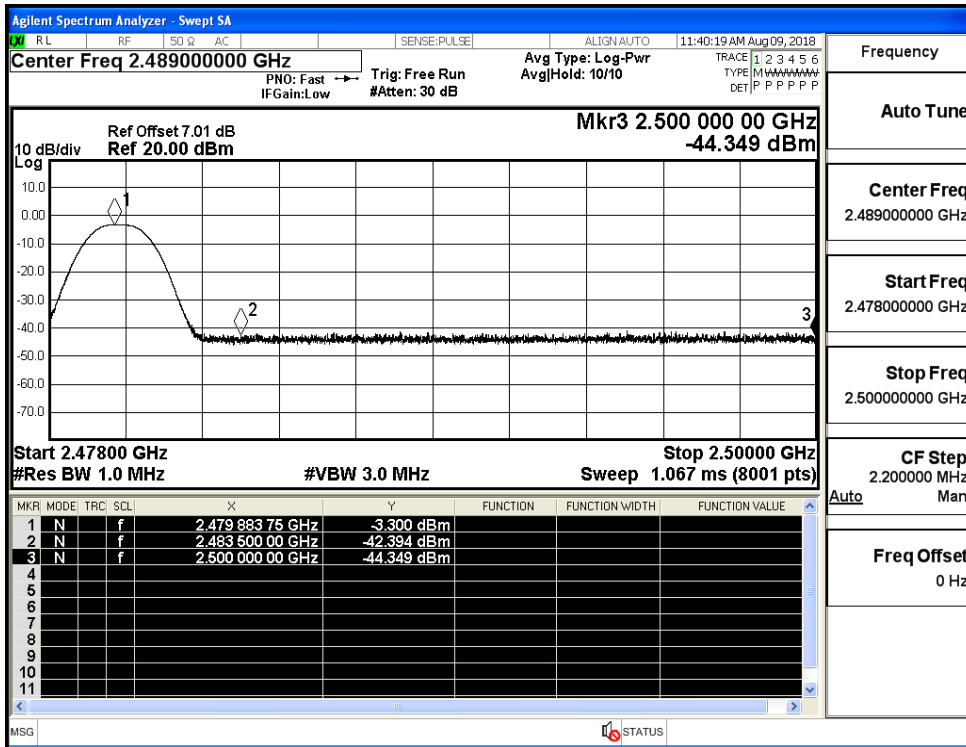
Restrict-band band-edge measurements\_BT LE\_2402\_Ant1\_PEAK



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

