

## Appendix A

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

**Product Name: Wireless weight sensor**

**Trade Mark: N/A**

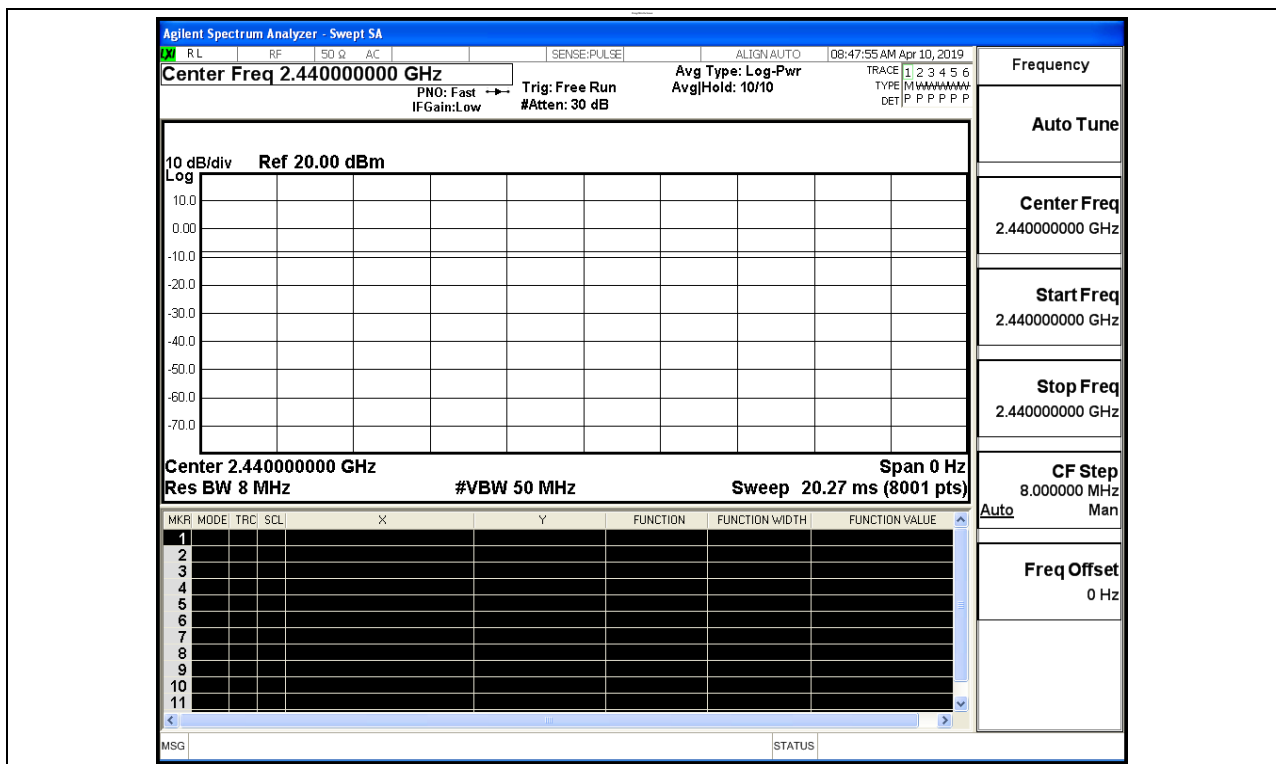
**Test Model: PW001**

#### Environmental Conditions

Temperature:	23.9 ° C
Relative Humidity:	52.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Mina.Xu
Supervised by:	Tom.Liu

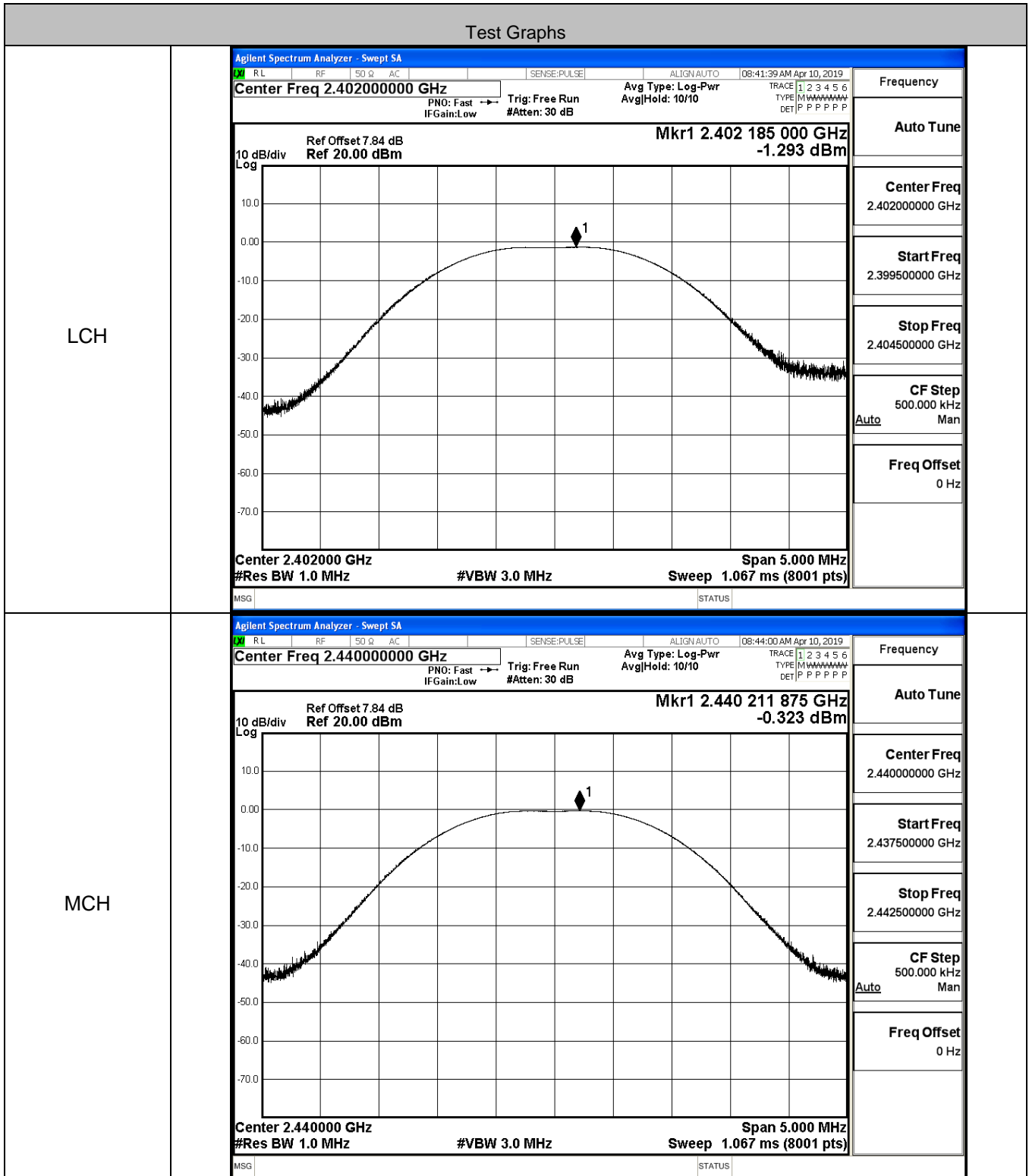
#### A.1 Duty Cycle

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

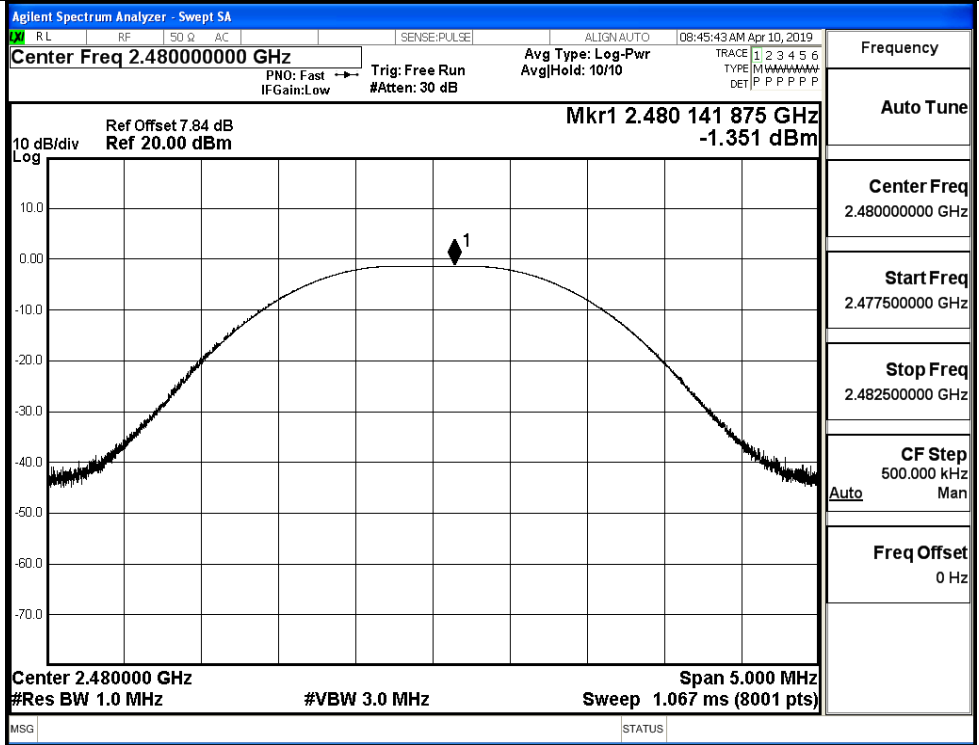


### A.2 Maximum Conducted Peak Output Power

Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	-1.293	30	PASS
BT LE	MCH	-0.323	30	PASS
BT LE	HCH	-1.351	30	PASS



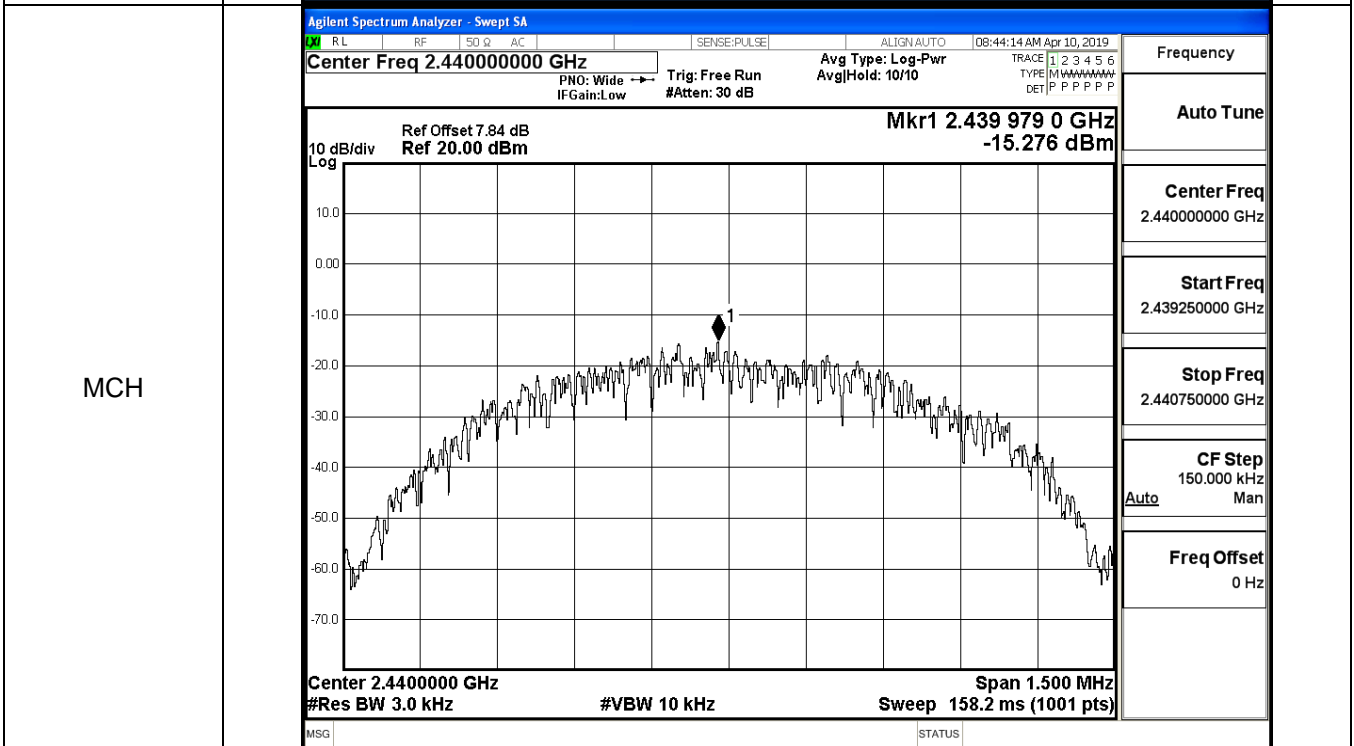
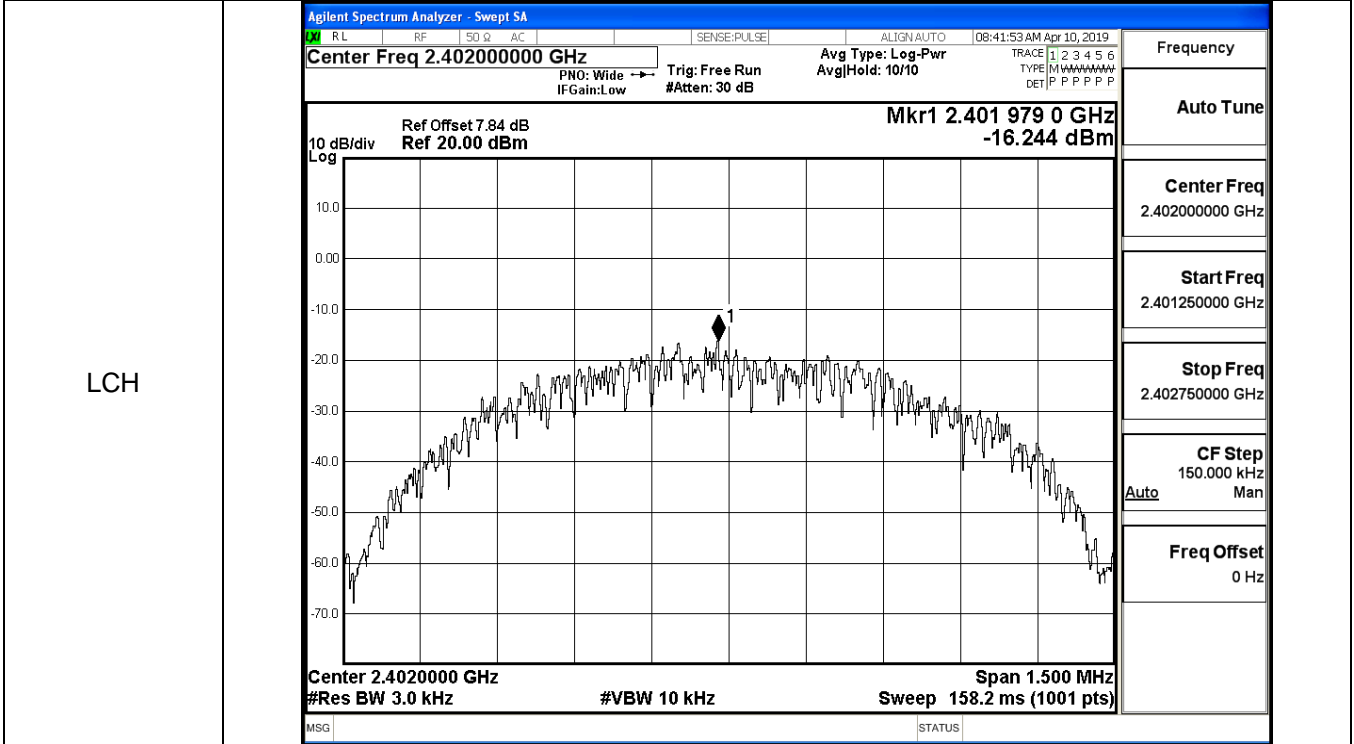
HCH



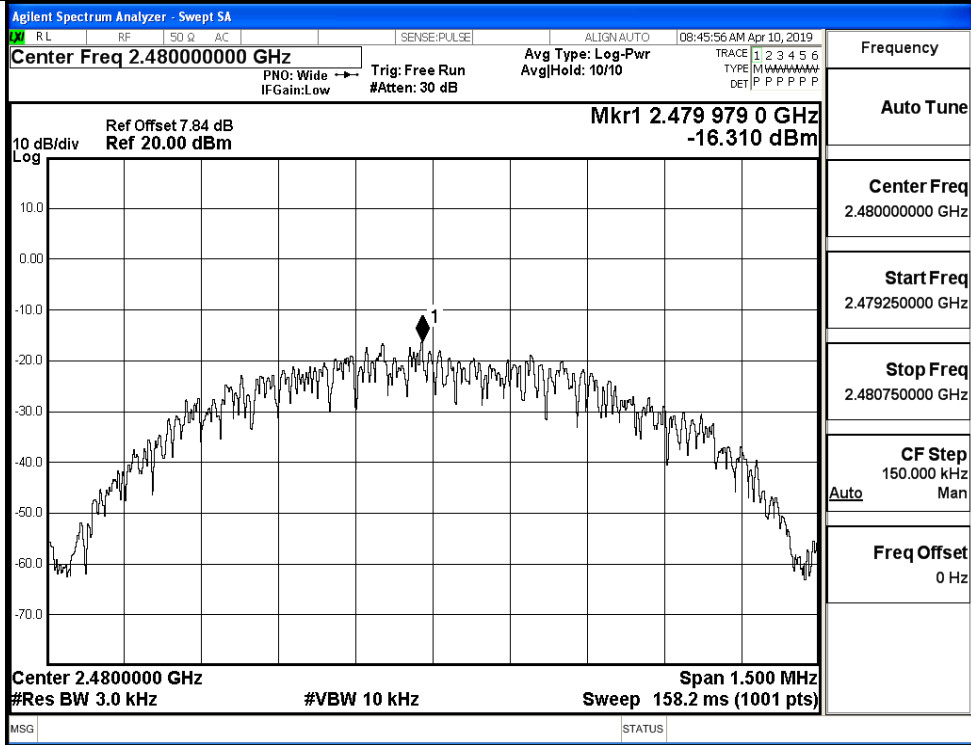
### A.3 Maximum Power Spectral Density

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-16.244	8	PASS
BT LE	MCH	-15.276	8	PASS
BT LE	HCH	-16.310	8	PASS

#### Test Graphs

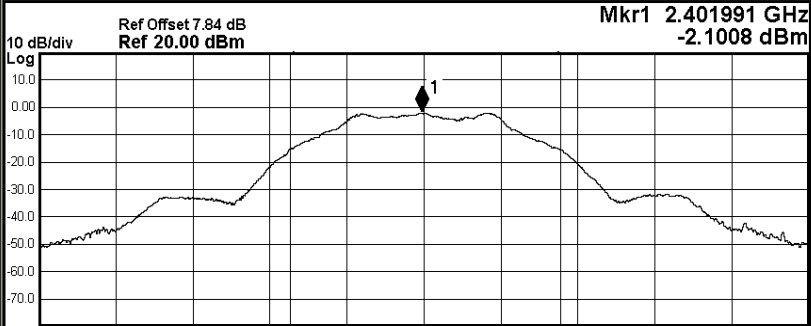
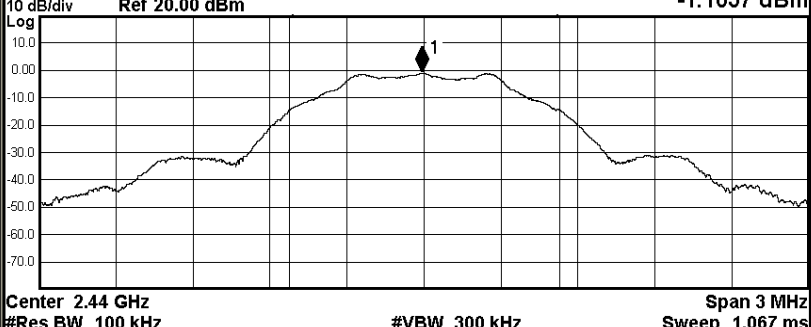


HCH



**A.4 6dB Bandwidth**

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6950	≥0.5	PASS
BT LE	MCH	0.6867	≥0.5	PASS
BT LE	HCH	0.6871	≥0.5	PASS

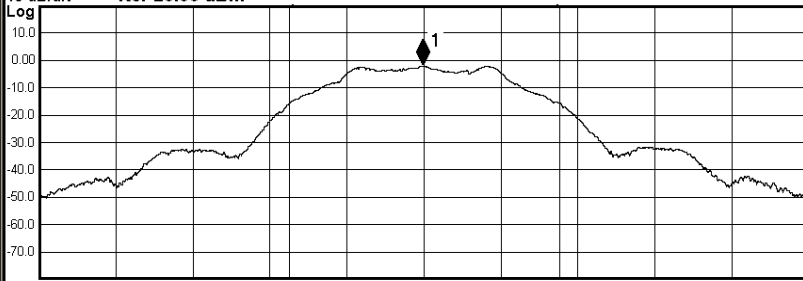
Test Graphs																																					
LCH	<div style="border: 1px solid black; padding: 5px;"> <p style="font-size: small; margin: 0;">Agilent Spectrum Analyzer - Occupied BW</p> <p style="font-size: x-small; margin: 0;">RL RF 50 Ω AC SENSE:PULSE ALIGN:AUTO 08:41:28 AM Apr 10, 2019</p> <p style="font-size: small; 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&gt;1/1</p> <p style="font-size: x-small; margin: 0;">#IFGain:Low #Atten: 30 dB Radio Device: BTS</p> <div style="border: 1px solid black; padding: 2px;"> <p style="font-size: x-small; margin: 0;">10 dB/div Ref Offset 7.84 dB Mkr1 2.401991 GHz</p> <p style="font-size: x-small; margin: 0;">Log Ref 20.00 dBm -2.1008 dBm</p>  <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; border-collapse: collapse;"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>4.99 dBm</td> </tr> <tr> <td style="text-align: center;"><b>1.0518 MHz</b></td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>6.809 kHz</td> <td>OBW Power</td> </tr> <tr> <td>x dB Bandwidth</td> <td>695.0 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> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p style="font-size: small; margin: 0;">Agilent Spectrum Analyzer - Occupied BW</p> <p style="font-size: x-small; margin: 0;">RL RF 50 Ω AC SENSE:PULSE ALIGN:AUTO 08:43:49 AM Apr 10, 2019</p> <p style="font-size: small; 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&gt;1/1</p> <p style="font-size: x-small; margin: 0;">#IFGain:Low #Atten: 30 dB Radio Device: BTS</p> <div style="border: 1px solid black; padding: 2px;"> <p style="font-size: x-small; margin: 0;">10 dB/div Ref Offset 7.84 dB Mkr1 2.4399936 GHz</p> <p style="font-size: x-small; margin: 0;">Log Ref 20.00 dBm -1.1057 dBm</p>  <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; border-collapse: collapse;"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>5.97 dBm</td> </tr> <tr> <td style="text-align: center;"><b>1.0471 MHz</b></td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>5.362 kHz</td> <td>OBW Power</td> </tr> <tr> <td>x dB Bandwidth</td> <td>686.7 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 style="font-size: x-small; margin: 0;">MSG STATUS</p> </div> </div>	Occupied Bandwidth	Total Power	4.99 dBm	<b>1.0518 MHz</b>			Transmit Freq Error	6.809 kHz	OBW Power	x dB Bandwidth	695.0 kHz	x dB			99.00 %			-6.00 dB	Occupied Bandwidth	Total Power	5.97 dBm	<b>1.0471 MHz</b>			Transmit Freq Error	5.362 kHz	OBW Power	x dB Bandwidth	686.7 kHz	x dB			99.00 %			-6.00 dB
Occupied Bandwidth	Total Power	4.99 dBm																																			
<b>1.0518 MHz</b>																																					
Transmit Freq Error	6.809 kHz	OBW Power																																			
x dB Bandwidth	695.0 kHz	x dB																																			
		99.00 %																																			
		-6.00 dB																																			
Occupied Bandwidth	Total Power	5.97 dBm																																			
<b>1.0471 MHz</b>																																					
Transmit Freq Error	5.362 kHz	OBW Power																																			
x dB Bandwidth	686.7 kHz	x dB																																			
		99.00 %																																			
		-6.00 dB																																			

HCH

Agilent Spectrum Analyzer - Occupied BW

RL	RF	50 Ω	AC	SENSE:PULSE	ALIGN:AUTO	08:45:32 AM Apr 10, 2019
Center Freq 2.480000000 GHz			Center Freq: 2.480000000 GHz		Radio Std: None	
			Trig: Free Run		AvgHold: 1/1	
#IFGain:Low			#Atten: 30 dB		Radio Device: BTS	

10 dB/div	Ref Offset 7.84 dB	Mkr1 2.4799959 GHz
Log	Ref 20.00 dBm	-2.1419 dBm



Center 2.48 GHz	#VBW 300 kHz	Span 3 MHz
#Res BW 100 kHz		Sweep 1.067 ms

Occupied Bandwidth	Total Power	4.91 dBm
<b>1.0434 MHz</b>		
Transmit Freq Error	4.972 kHz	OBW Power 99.00 %
x dB Bandwidth	687.1 kHz	x dB -6.00 dB

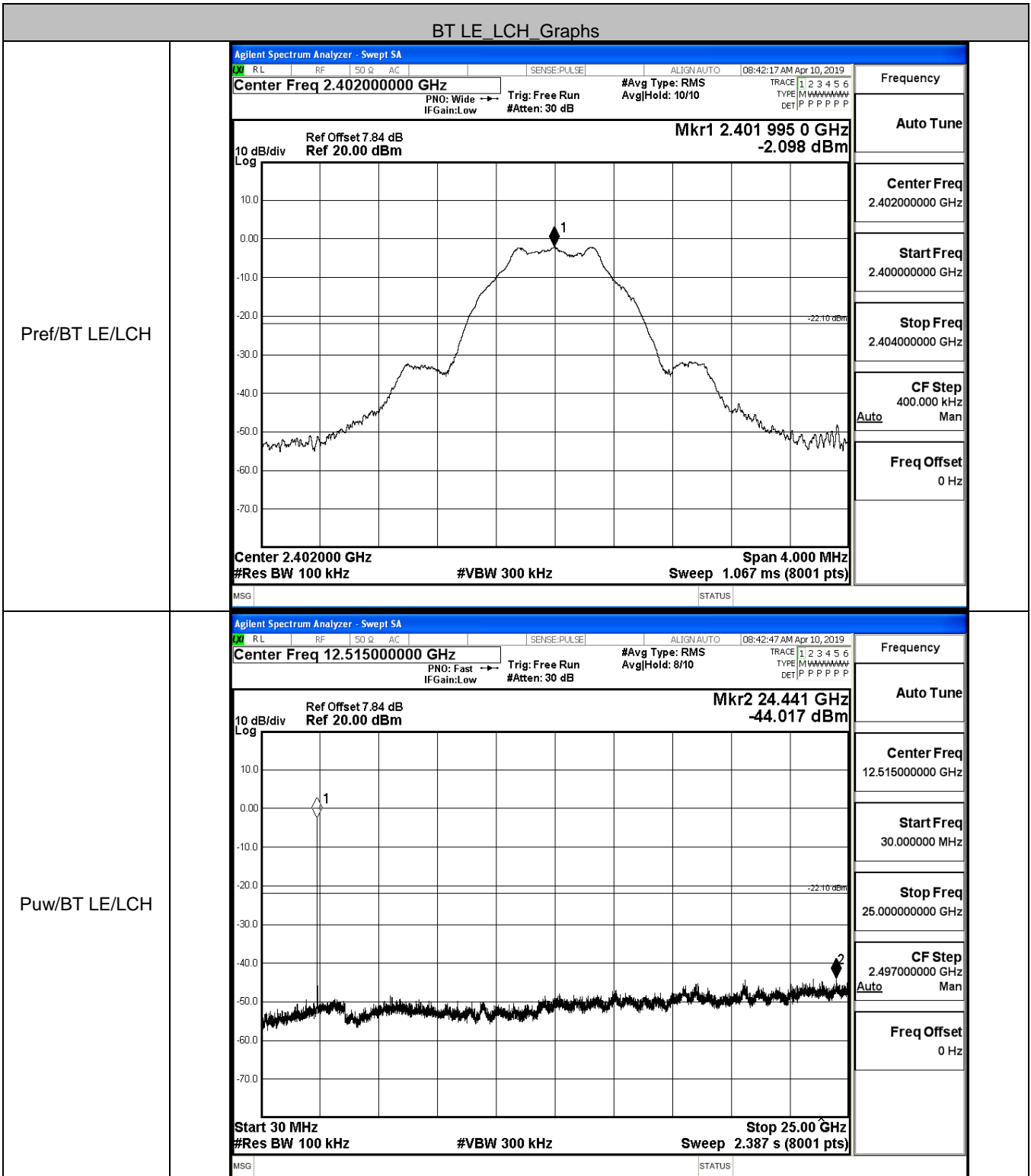
Frequency	
Center Freq	2.480000000 GHz
CF Step	300.000 kHz Auto Man
Freq Offset	0 Hz

MSG

STATUS

### A.5 RF Conducted Spurious Emissions

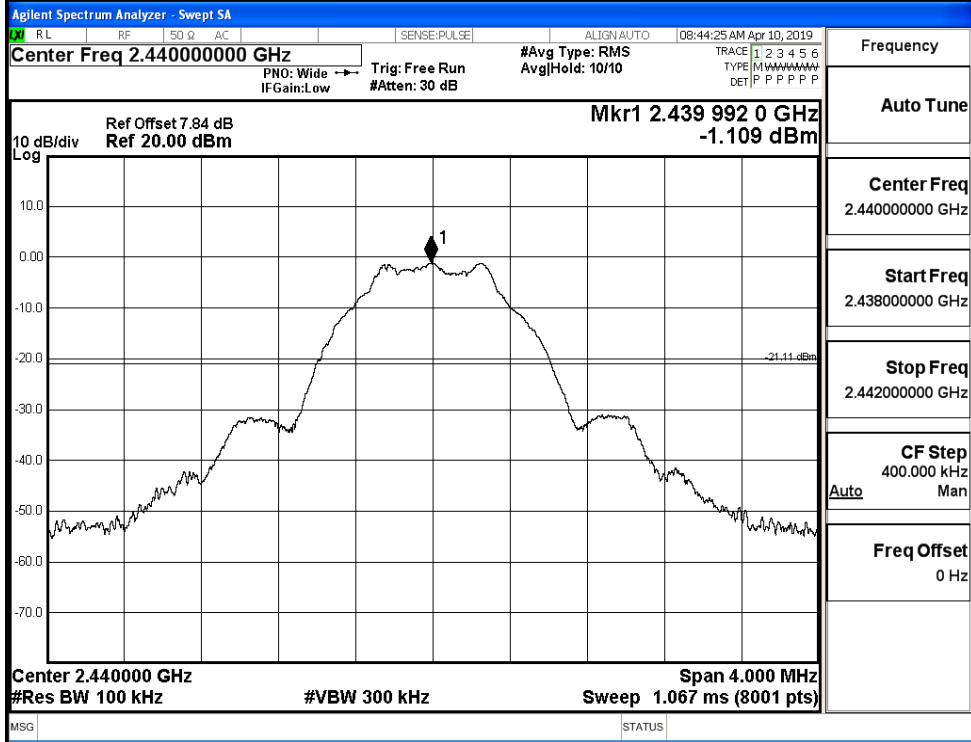
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-2.098	-44.017	-22.098	PASS
BT LE	MCH	-1.109	-38.929	-21.109	PASS
BT LE	HCH	-2.239	-44.949	-22.239	PASS



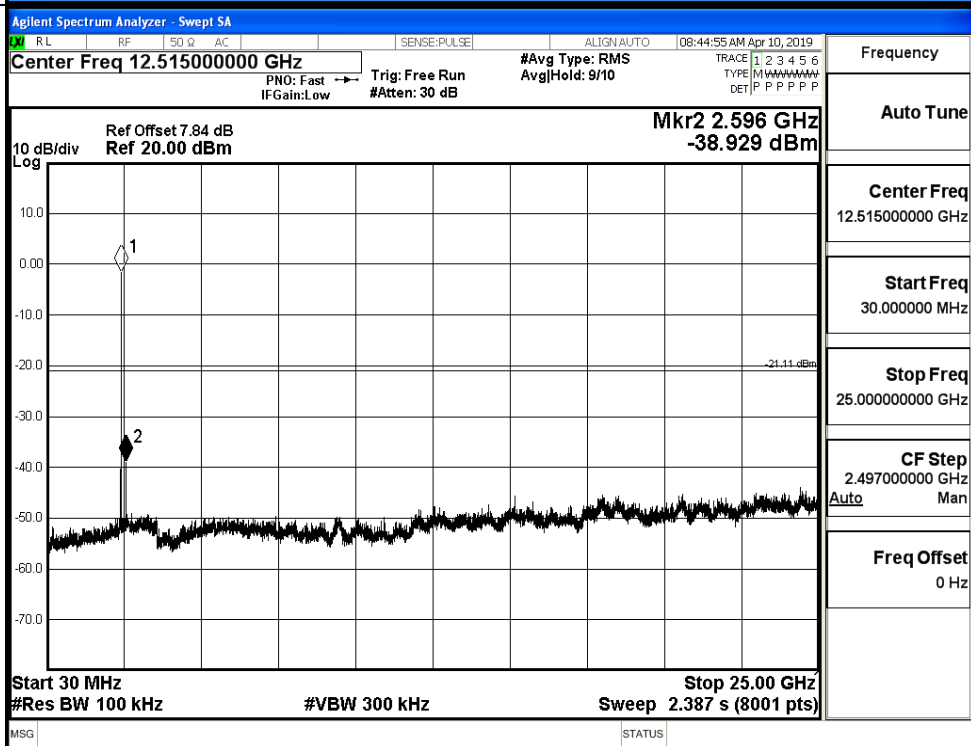


BT LE\_MCH\_Graphs

Pref/BT LE/MCH

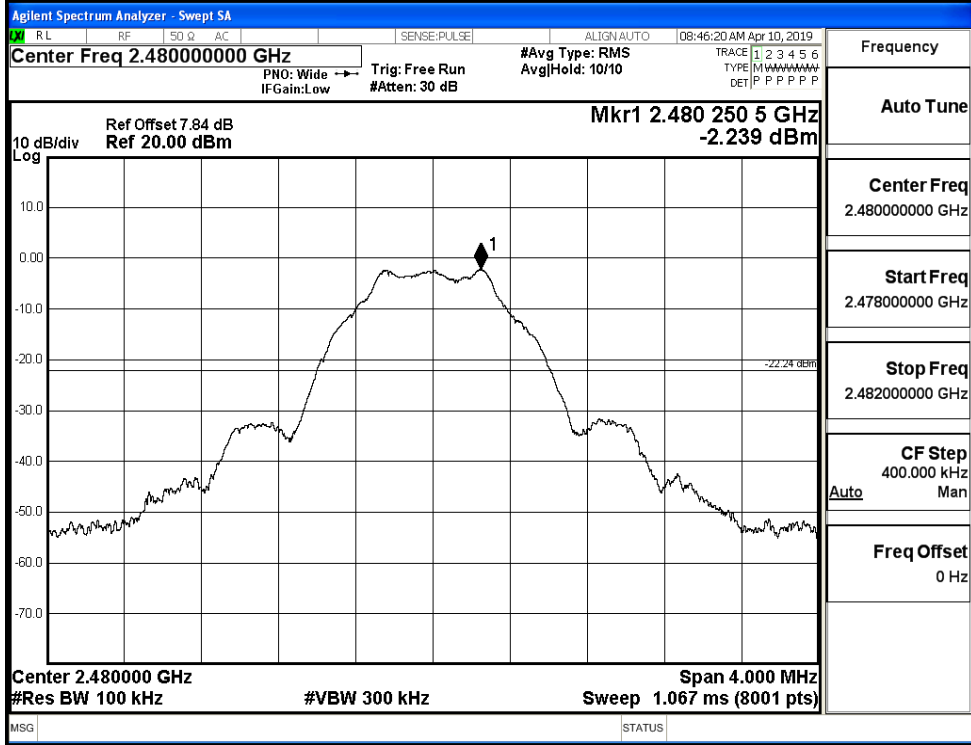


Puw/BT LE/MCH

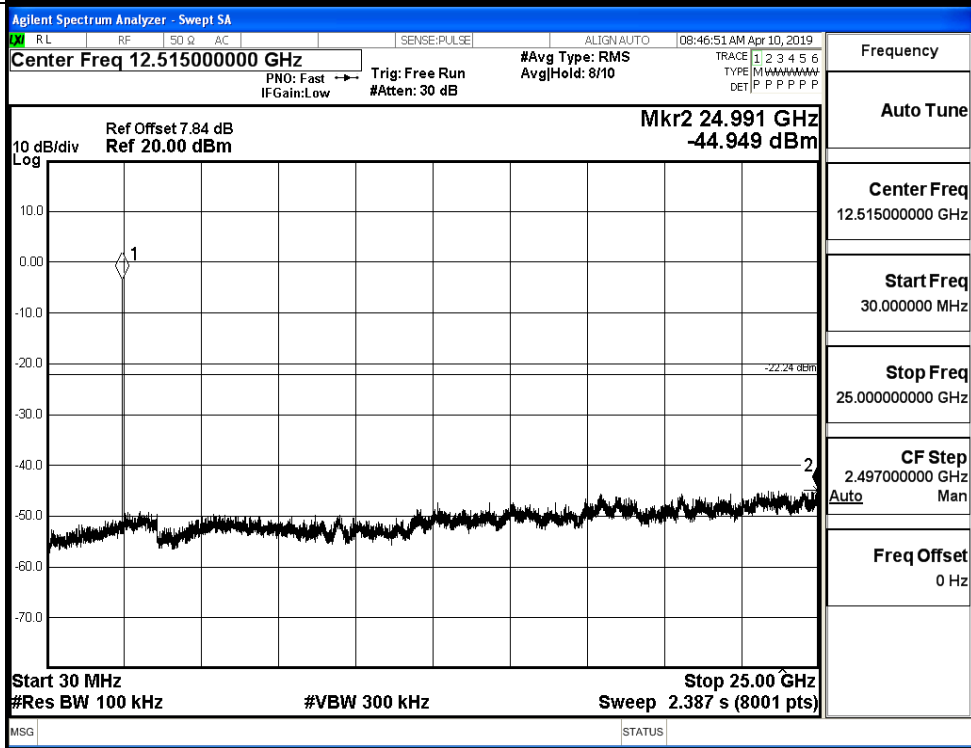


BT LE\_HCH\_Graphs

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	-1.977	-50.862	-21.98	PASS
BT LE	HCH	-1.955	-49.816	-21.96	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  
2.48900000 GHz

Start Freq  
2.47800000 GHz

Stop Freq  
2.50000000 GHz

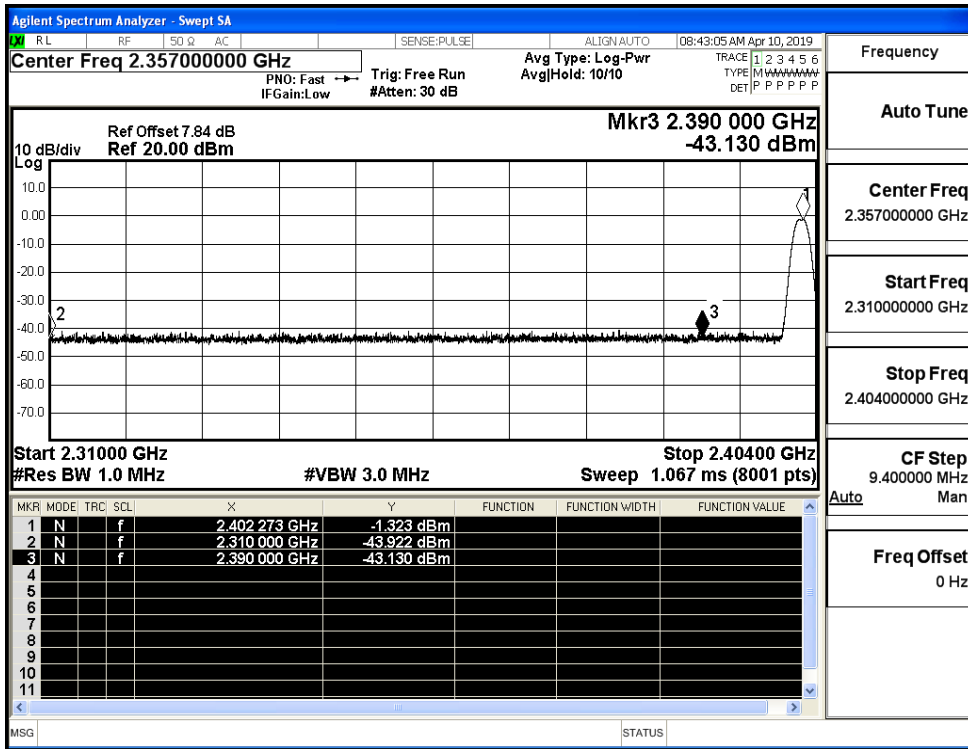
CF Step  
2.200000 MHz

Freq Offset  
0 Hz

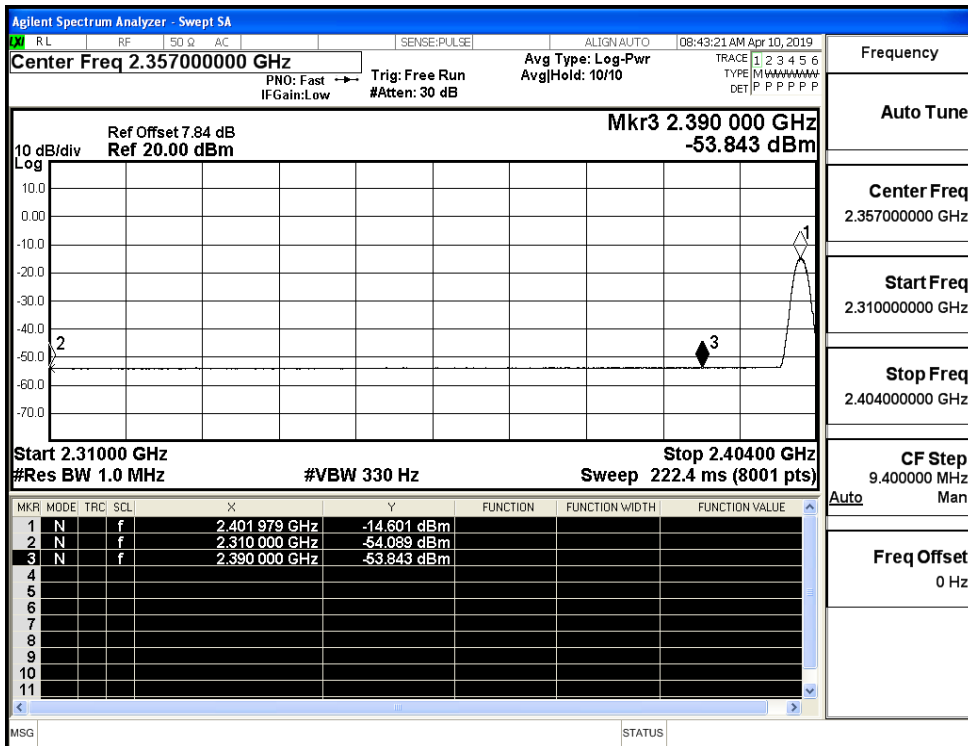
## A.7 Restrict-band band-edge measurements

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	-43.92	2.0	0	51.34	PEAK	74	PASS
		Ant1	2310.0	-54.09	2.0	0	41.17	AV	54	PASS
		Ant1	2390.0	-43.13	2.0	0	52.13	PEAK	74	PASS
		Ant1	2390.0	-53.84	2.0	0	41.41	AV	54	PASS
	2480	Ant1	2483.5	-43.52	2.0	0	51.74	PEAK	74	PASS
		Ant1	2483.5	-53.51	2.0	0	41.75	AV	54	PASS
		Ant1	2500.0	-44.64	2.0	0	50.62	PEAK	74	PASS
		Ant1	2500.0	-53.38	2.0	0	41.88	AV	54	PASS

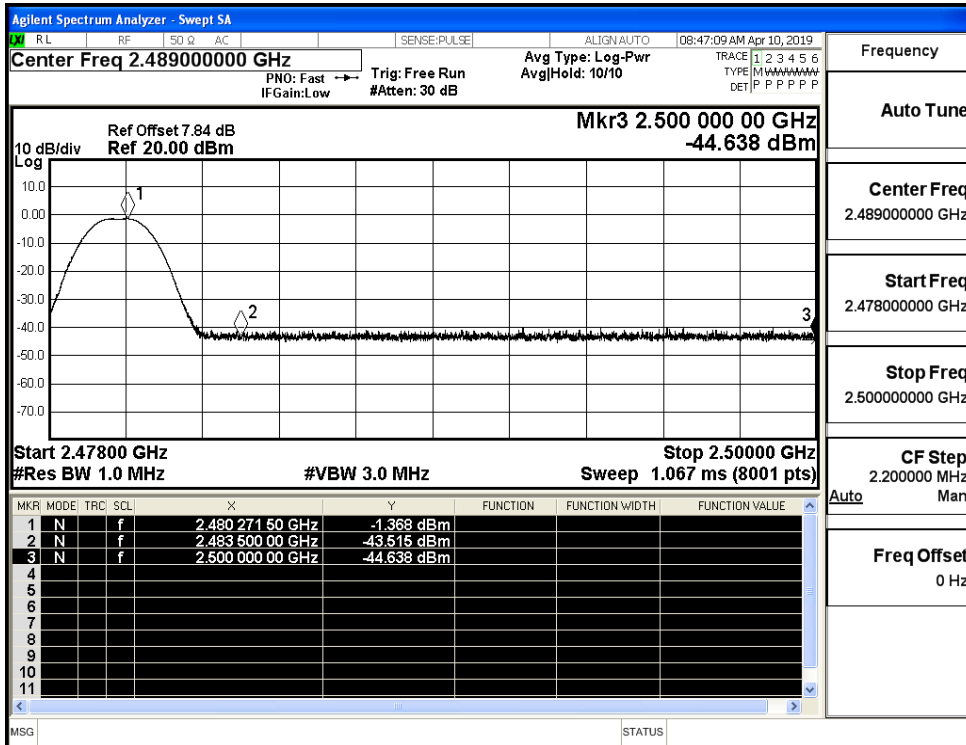
Restrict-band band-edge measurements\_BT LE\_2402\_Ant1\_PEAK



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

