

## Appendix A

### RF Test Data for BT LE V5.0 (Conducted Measurement)

Product Name: Smart Watch

Trade Mark: N/A

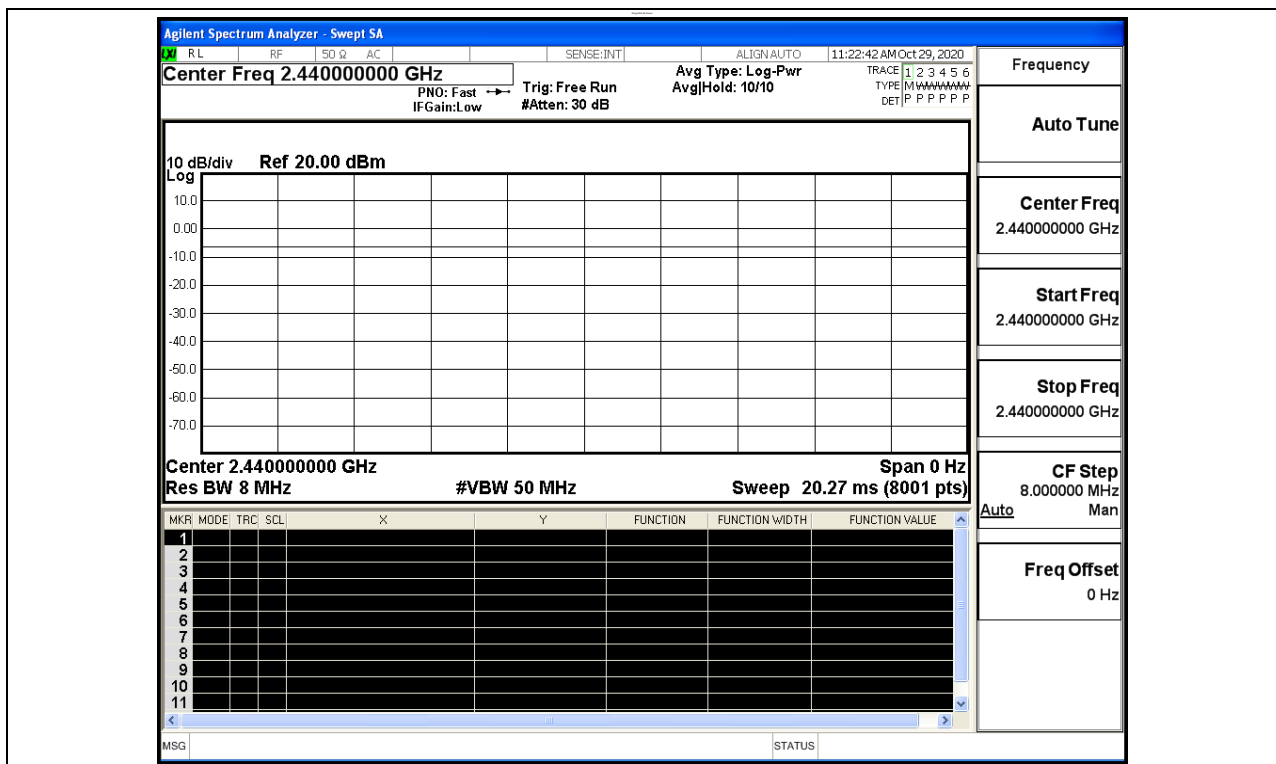
Test Model: TS03

#### Environmental Conditions

Temperature:	24.6° C
Relative Humidity:	54.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Jenny Wu
Supervised by:	Li Huan

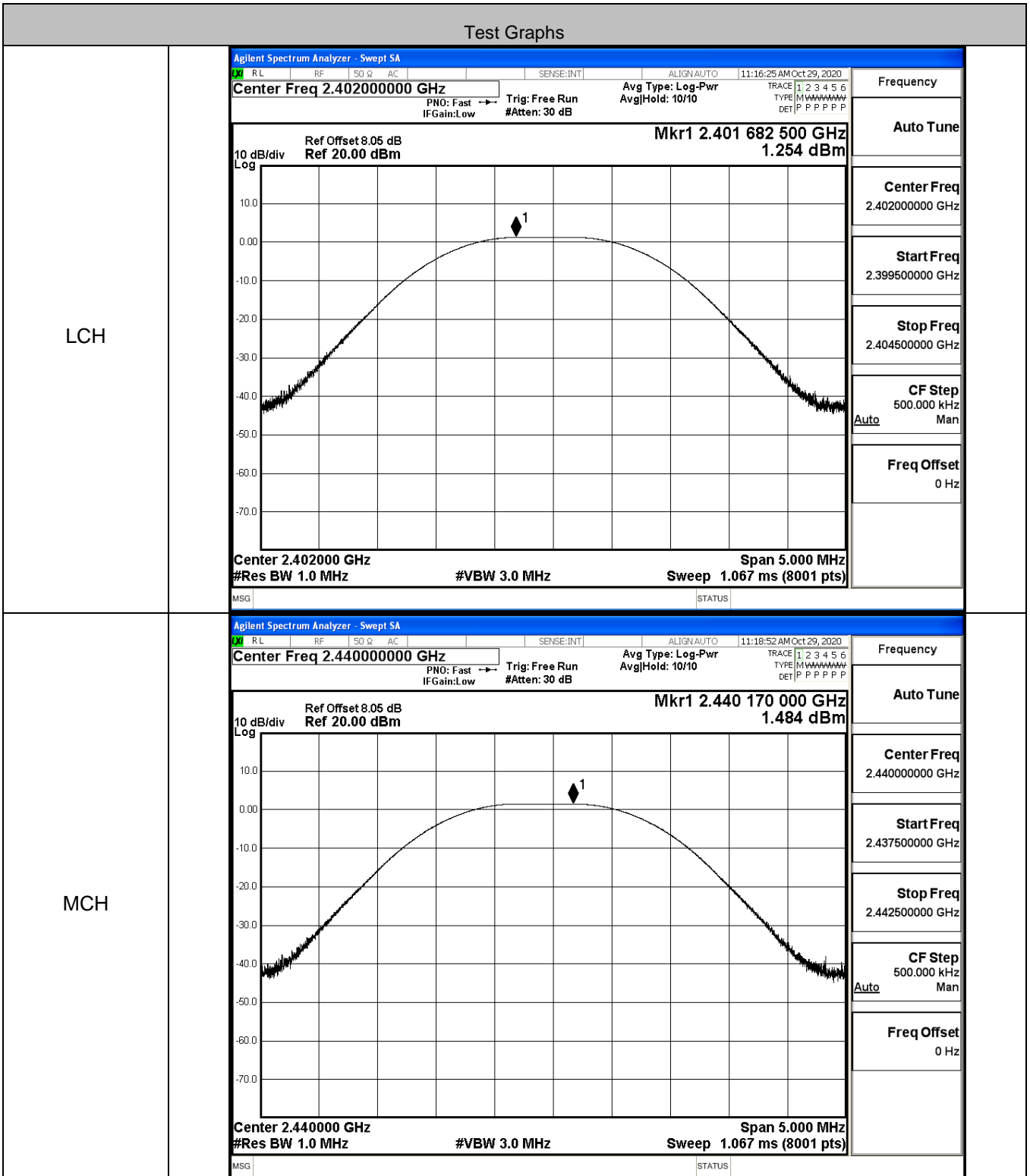
#### A.1 Duty Cycle

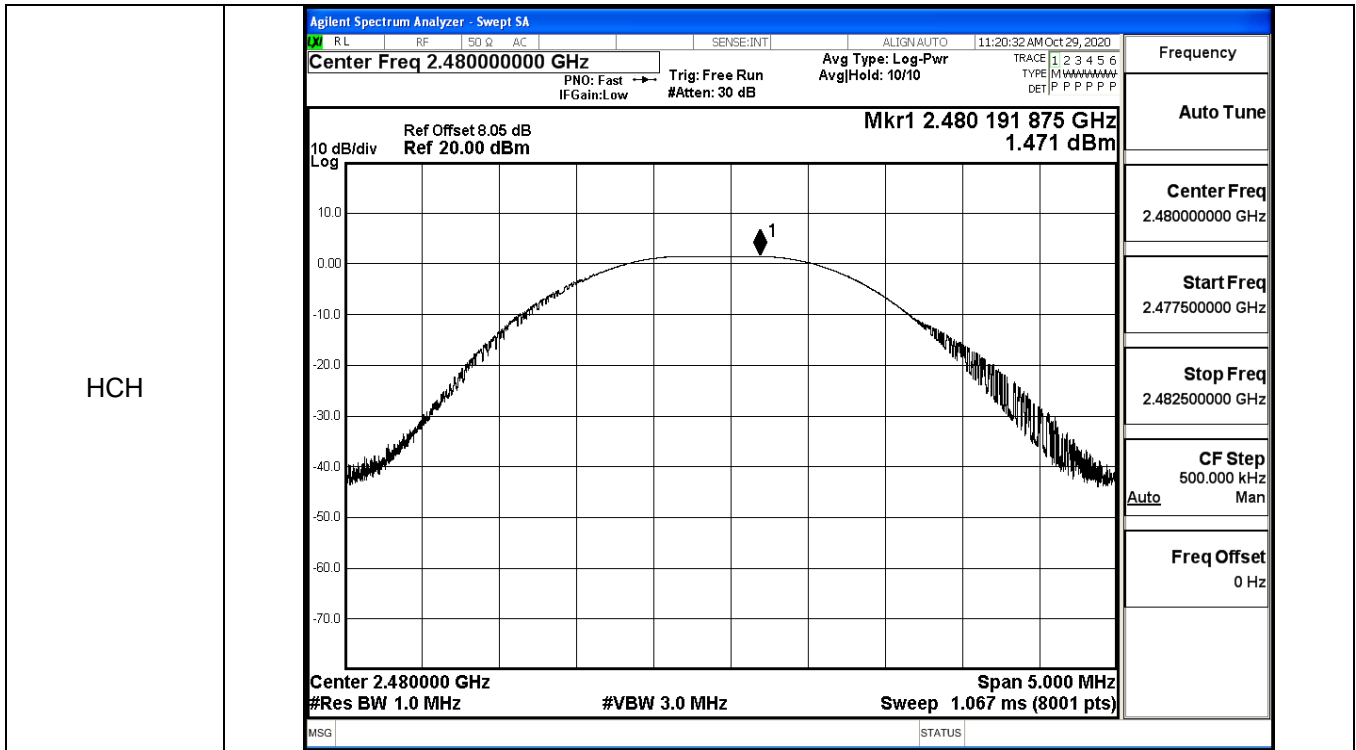
Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
BT LE	2440	Ant1	100	PASS



### A.2 Maximum Conducted Peak Output Power

Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	1.254	30	PASS
BT LE	MCH	1.484	30	PASS
BT LE	HCH	1.471	30	PASS

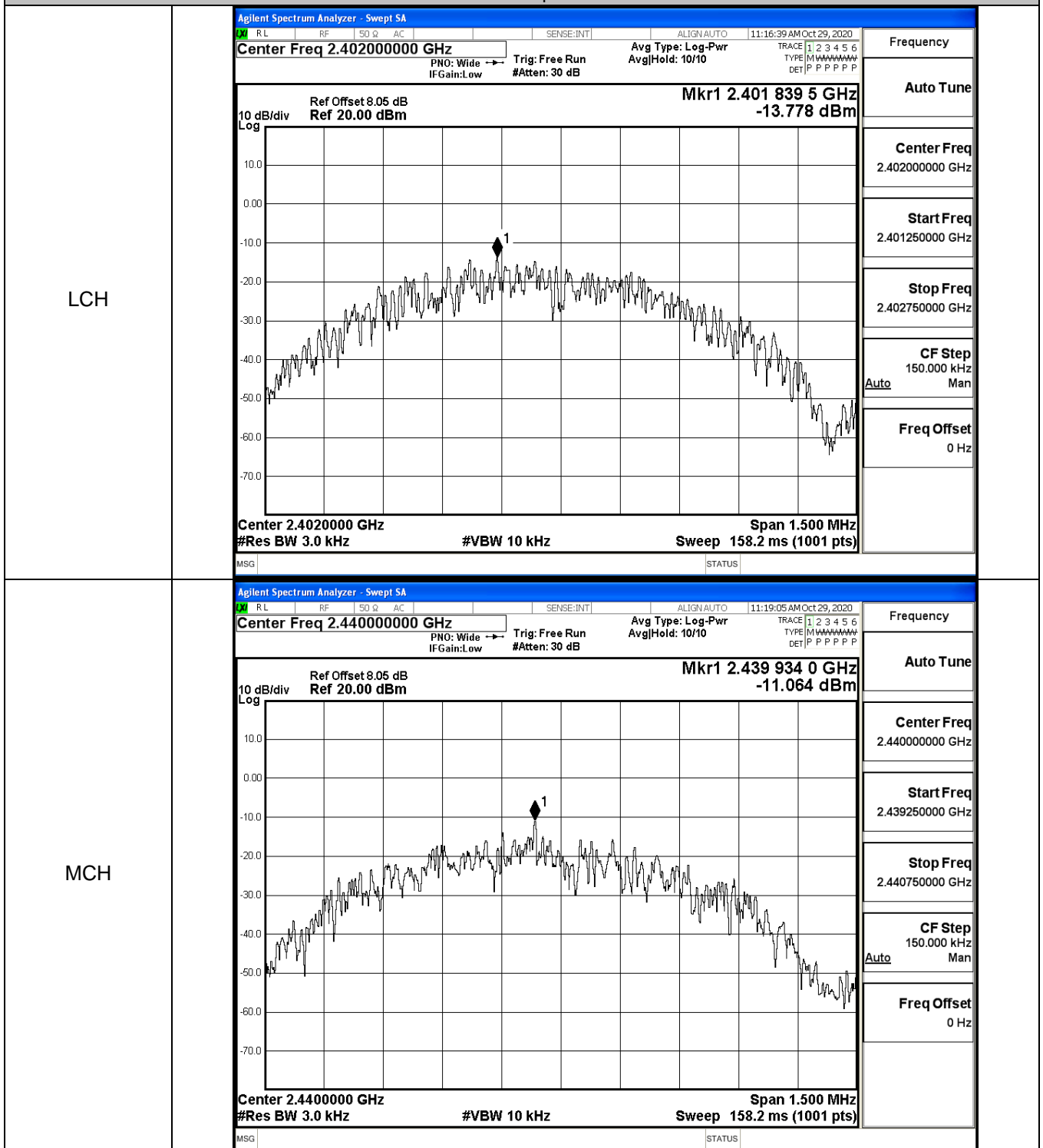




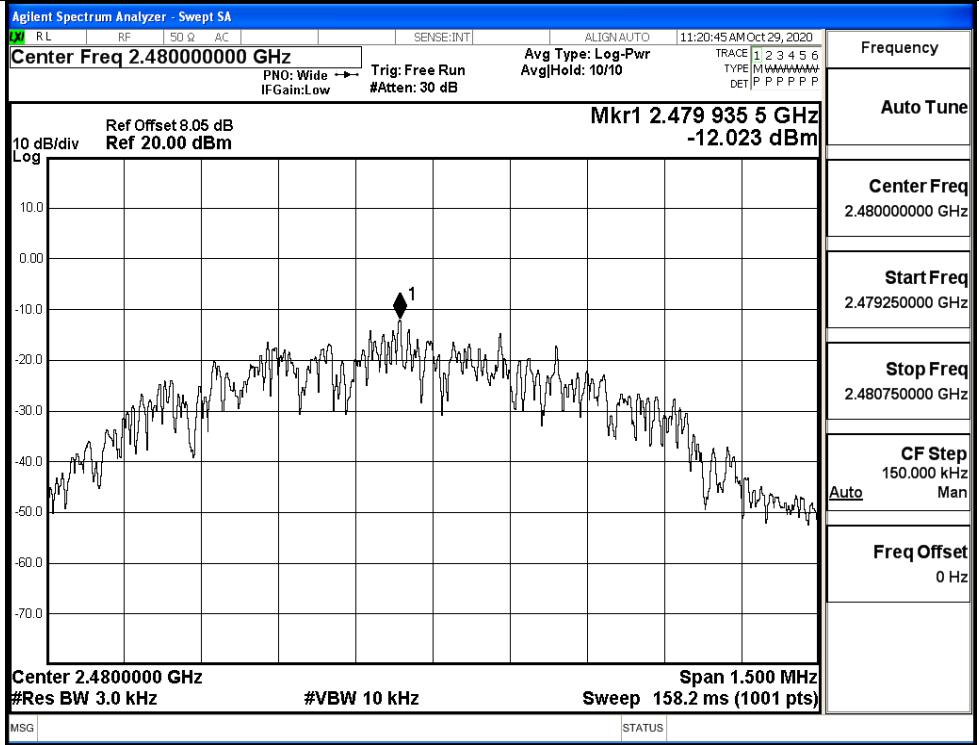
### A.3 Maximum Power Spectral Density

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-13.778	8	PASS
BT LE	MCH	-11.064	8	PASS
BT LE	HCH	-12.023	8	PASS

#### Test Graphs



HCH



**A.4 6dB Bandwidth**

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6474	≥0.5	PASS
BT LE	MCH	0.6486	≥0.5	PASS
BT LE	HCH	0.7009	≥0.5	PASS

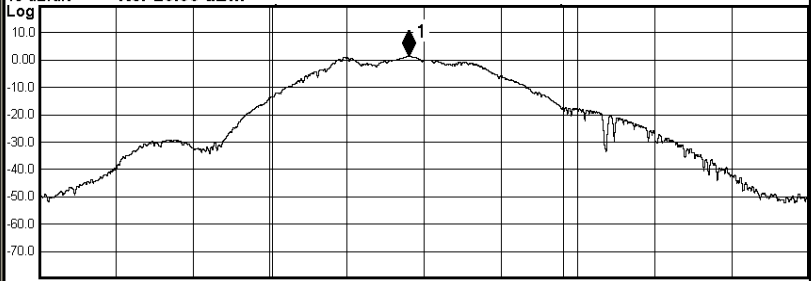
Test Graphs																	
LCH	<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center; margin: 0;">Agilent Spectrum Analyzer - Occupied BW</p> <p style="font-size: small; margin: 0;">RL RF 50 Ω AC SENSE:INT ALIGN:AUTO 11:16:14 AM Oct 29, 2020</p> <p style="margin: 0;">Center Freq: 2.402000000 GHz Center Freq: 2.402000000 GHz Radio Std: None                      Trig: Free Run AvgHold: &gt;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 8.05 dB                          Ref 20.00 dBm                     </div> <div style="text-align: right;">                         Mkr1 2.4019239 GHz                          0.96412 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">7.68 dBm</td> </tr> <tr> <td colspan="4" style="text-align: center;"><b>1.0489 MHz</b></td> </tr> <tr> <td>Transmit Freq Error</td> <td>-56.828 kHz</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>647.4 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	7.68 dBm		<b>1.0489 MHz</b>				Transmit Freq Error	-56.828 kHz	OBW Power	99.00 %	x dB Bandwidth	647.4 kHz	x dB	-6.00 dB
Occupied Bandwidth	Total Power	7.68 dBm															
<b>1.0489 MHz</b>																	
Transmit Freq Error	-56.828 kHz	OBW Power	99.00 %														
x dB Bandwidth	647.4 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:INT ALIGN:AUTO 11:18:41 AM Oct 29, 2020</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="display: flex; justify-content: space-between;"> <div style="font-size: x-small;">                         10 dB/div                          Log                          Ref Offset 8.05 dB                          Ref 20.00 dBm                     </div> <div style="text-align: right;">                         Mkr1 2.4399389 GHz                          1.2702 dBm                     </div> </div> <div style="display: flex; justify-content: space-between; font-size: x-small;"> <div>Center 2.44 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">7.58 dBm</td> </tr> <tr> <td colspan="4" style="text-align: center;"><b>1.0575 MHz</b></td> </tr> <tr> <td>Transmit Freq Error</td> <td>-52.923 kHz</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>648.6 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	7.58 dBm		<b>1.0575 MHz</b>				Transmit Freq Error	-52.923 kHz	OBW Power	99.00 %	x dB Bandwidth	648.6 kHz	x dB	-6.00 dB
Occupied Bandwidth	Total Power	7.58 dBm															
<b>1.0575 MHz</b>																	
Transmit Freq Error	-52.923 kHz	OBW Power	99.00 %														
x dB Bandwidth	648.6 kHz	x dB	-6.00 dB														

HCH

Agilent Spectrum Analyzer - Occupied BW

RL	RF	50 Ω	AC	SENSE:INT	ALIGN:AUTO	11:20:21 AM Oct 29, 2020
<b>Center Freq 2.480000000 GHz</b>				Center Freq: 2.480000000 GHz	Radio Std: None	Frequency
				Trig: Free Run	AvgJHold: 1/1	Center Freq 2.480000000 GHz
				#IFGain:Low	#Atten: 30 dB	Radio Device: BTS

10 dB/div	Ref Offset 8.05 dB	<b>Mkr1 2.4799423 GHz</b>
Log	Ref 20.00 dBm	<b>1.2371 dBm</b>



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

Occupied Bandwidth	Total Power	7.78 dBm
<b>1.1319 MHz</b>		
Transmit Freq Error	-22.310 kHz	OBW Power
x dB Bandwidth	700.9 kHz	x dB
		99.00 %
		-6.00 dB

CF Step	300.000 kHz
Auto	Man
Freq Offset	0 Hz

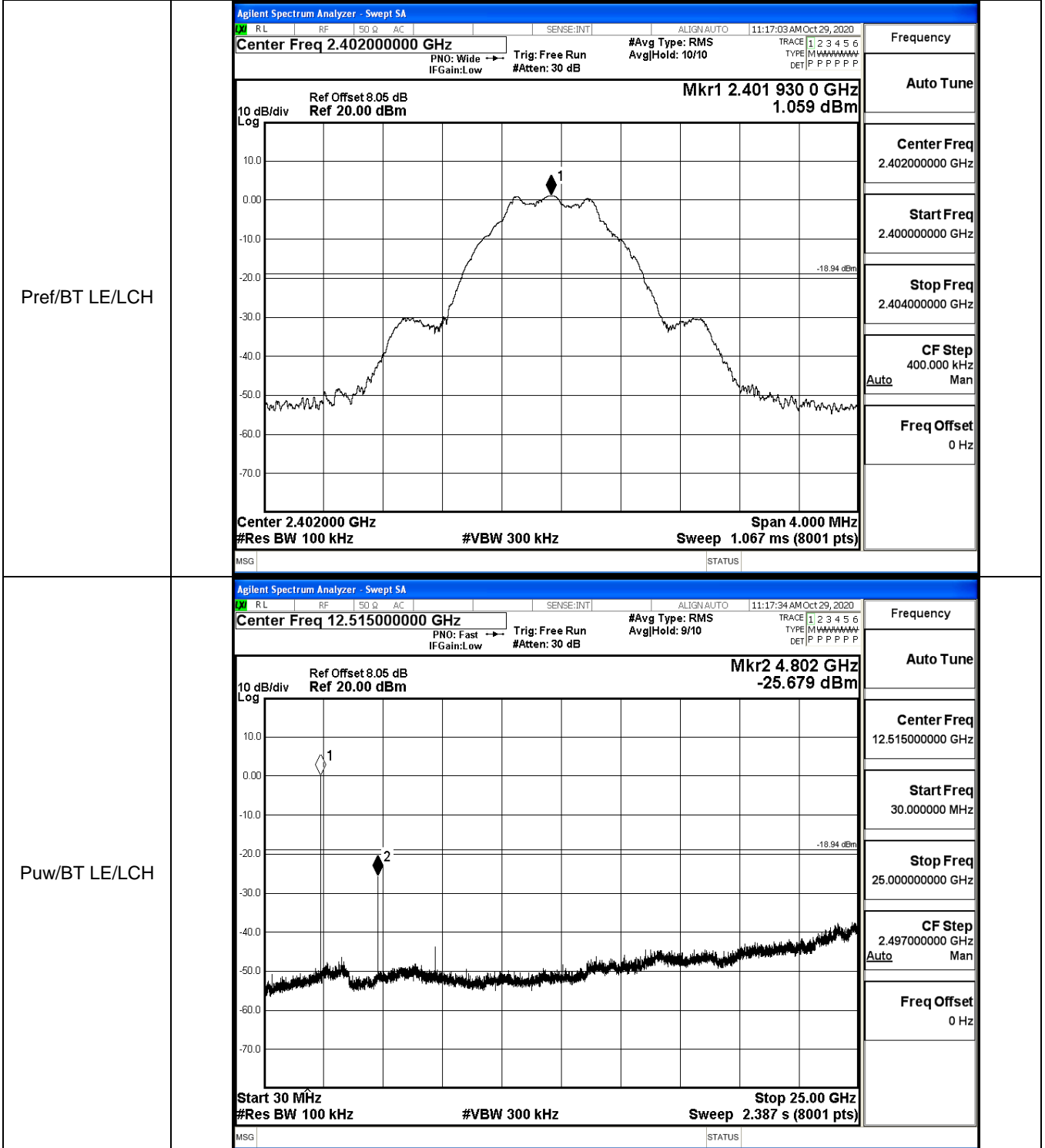
MSG

STATUS

### A.5 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	1.059	-25.679	-18.941	PASS
BT LE	MCH	1.309	-26.072	-18.691	PASS
BT LE	HCH	1.25	-24.851	-18.750	PASS

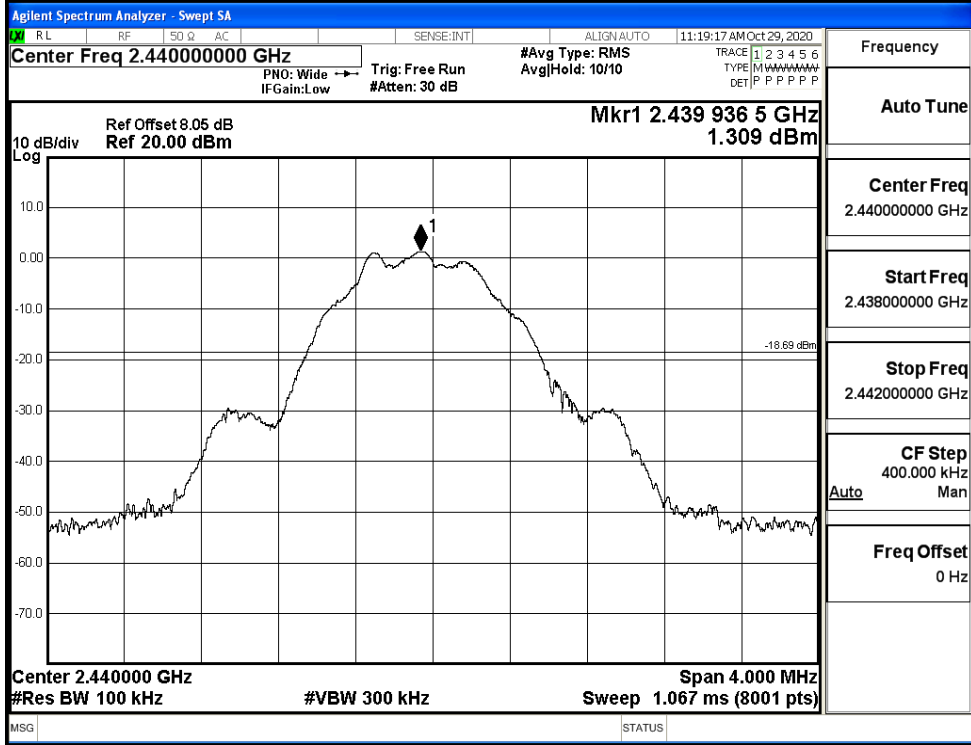
BT LE\_LCH\_Graphs



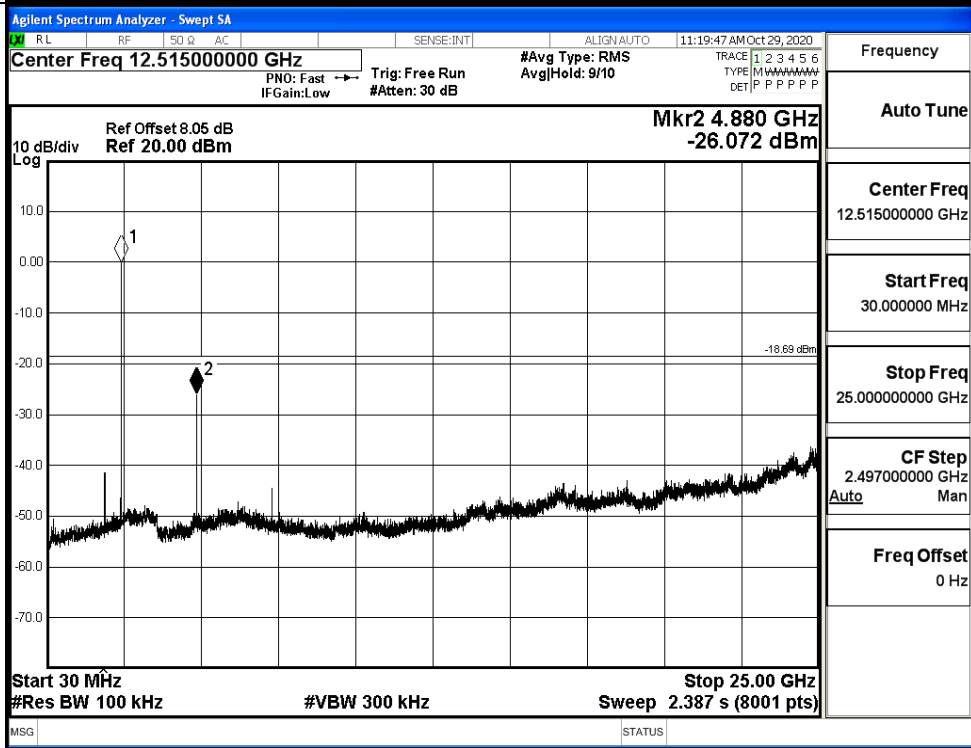


BT LE\_MCH\_Graphs

Pref/BT LE/MCH

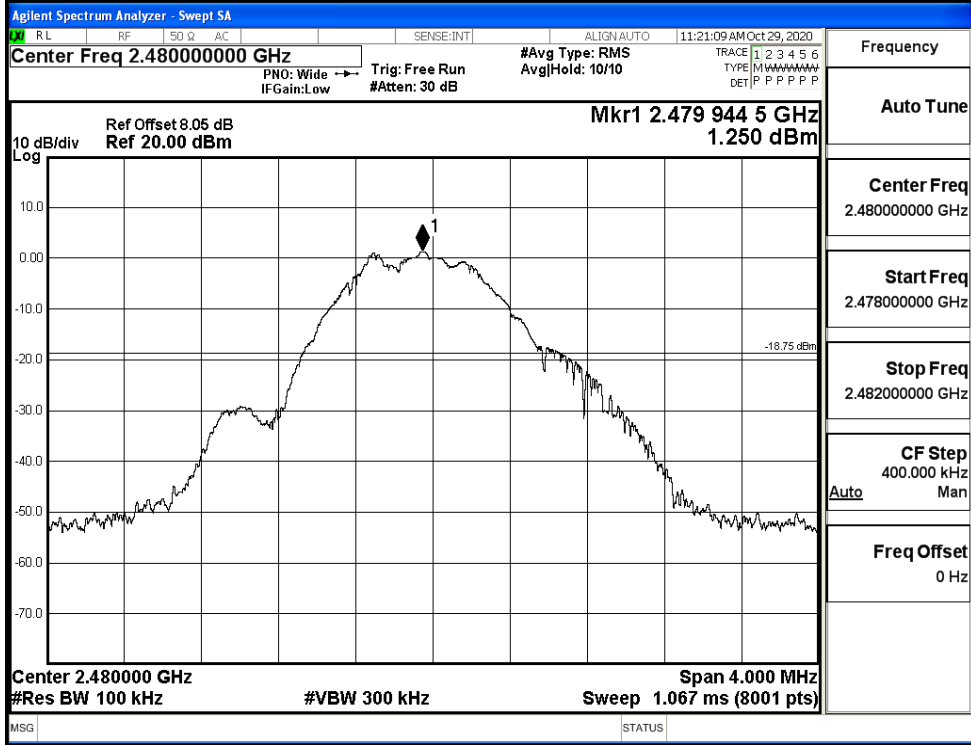


Puw/BT LE/MCH

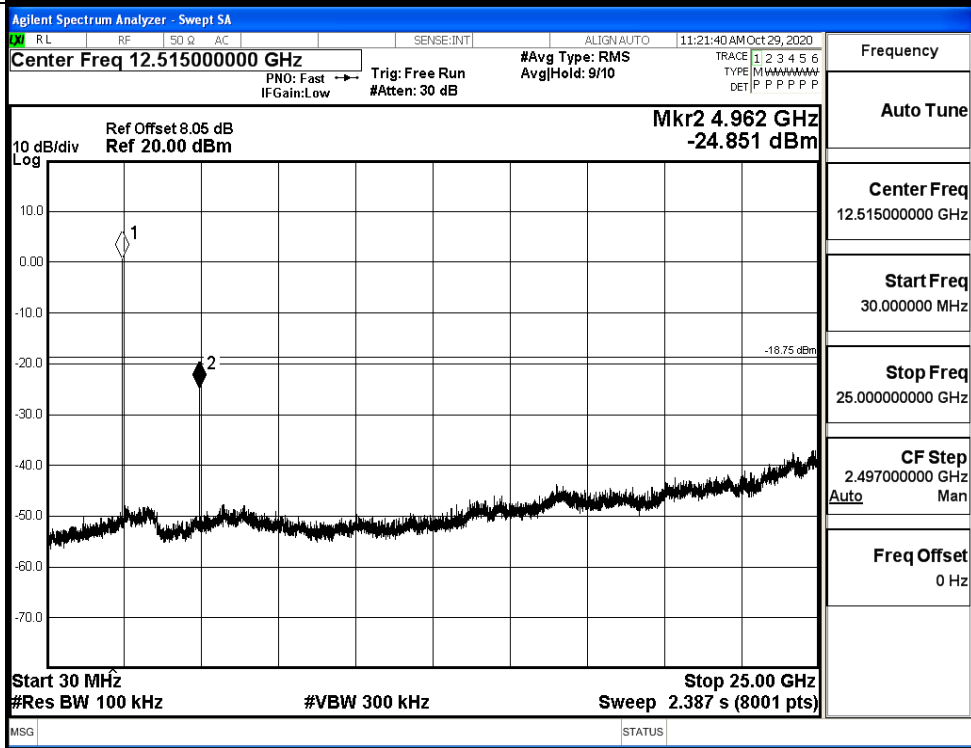


BT LE\_HCH\_Graphs

Pref/BT LE/HCH



Puw/BT LE/HCH

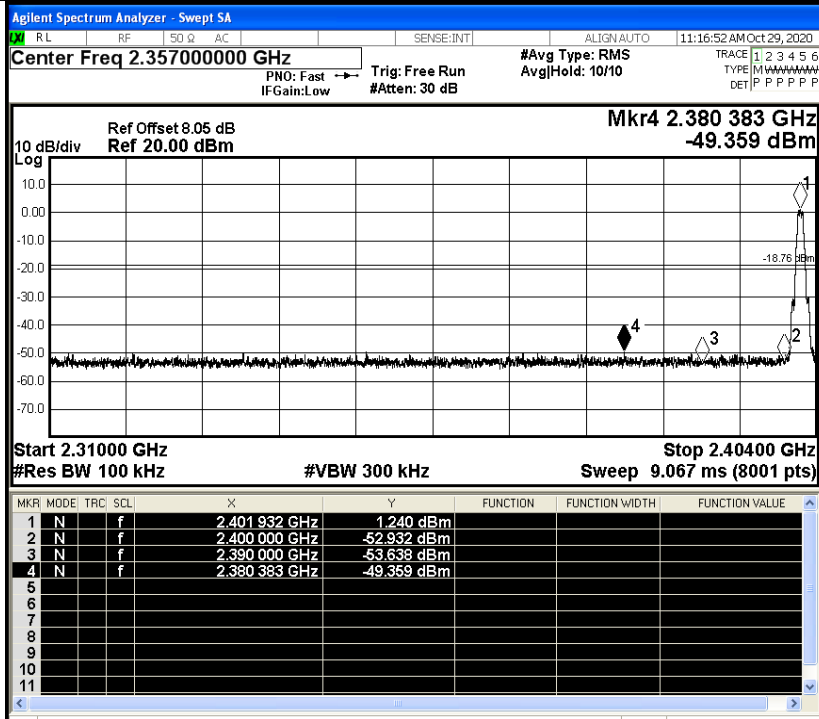


### A.6 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	1.240	-49.359	-18.76	PASS
BT LE	HCH	1.412	-49.316	-18.59	PASS

Test Graphs

LCH



Frequency

Auto Tune

Center Freq  
2.35700000 GHz

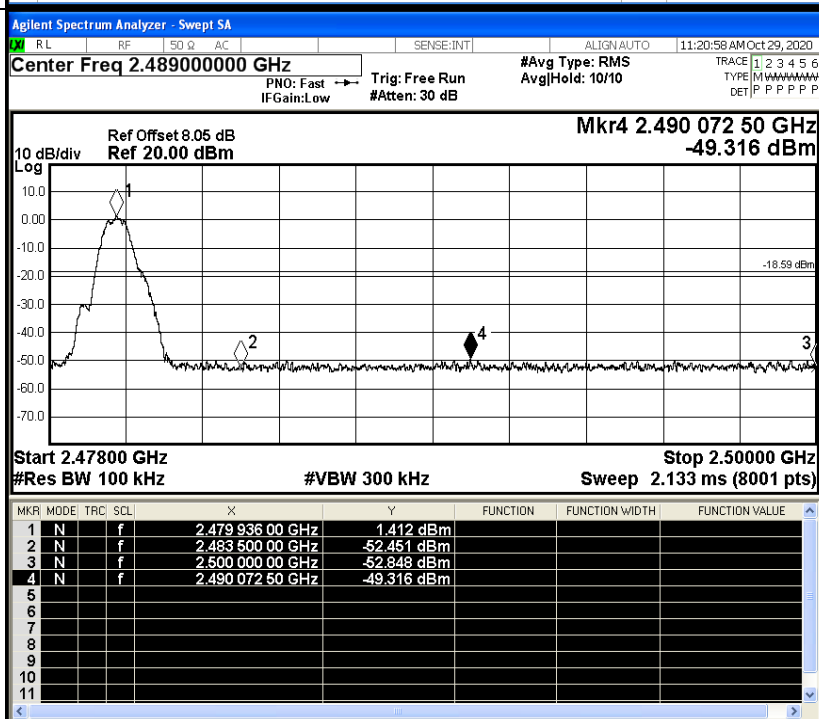
Start Freq  
2.31000000 GHz

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

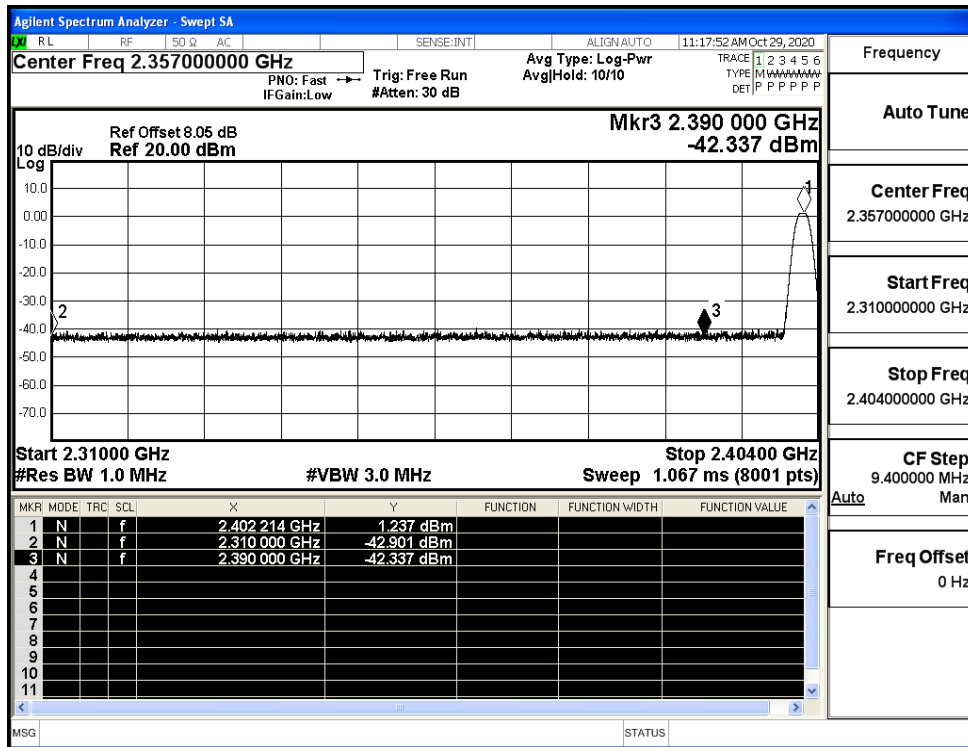
CF Step  
2.200000 MHz

Freq Offset  
0 Hz

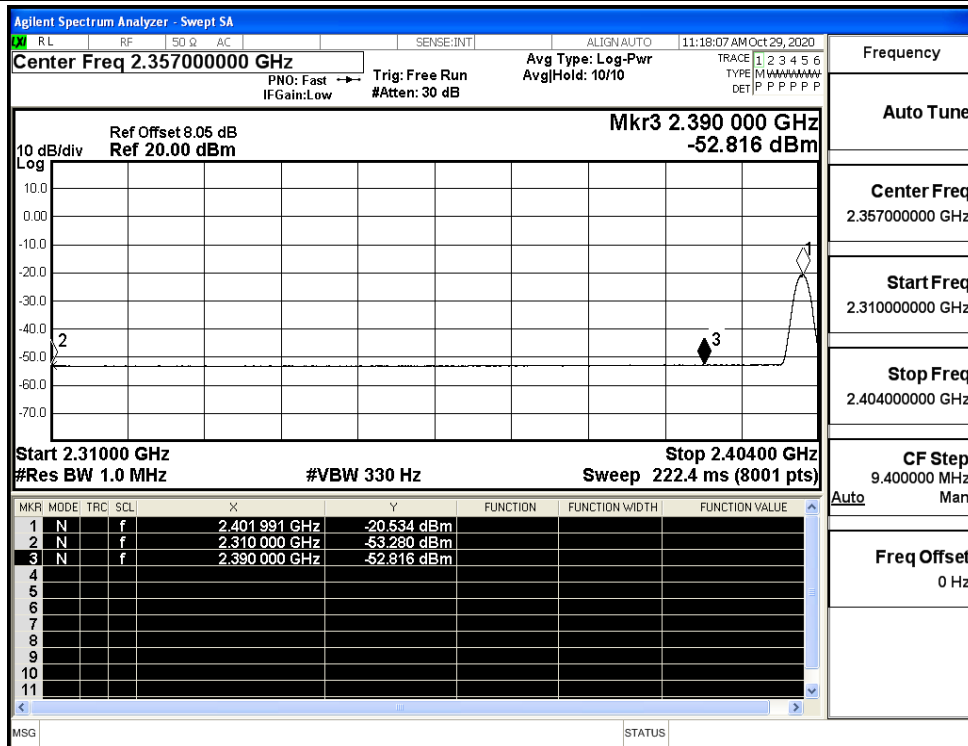
## A.7 Restrict-band band-edge measurements

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	-42.90	2.0	0	52.36	PEAK	74	PASS
		Ant1	2310.0	-53.28	2.0	0	41.98	AV	54	PASS
		Ant1	2390.0	-42.34	2.0	0	52.92	PEAK	74	PASS
		Ant1	2390.0	-52.82	2.0	0	42.44	AV	54	PASS
	2480	Ant1	2483.5	-42.60	2.0	0	52.65	PEAK	74	PASS
		Ant1	2483.5	-52.41	2.0	0	42.85	AV	54	PASS
		Ant1	2500.0	-42.90	2.0	0	52.36	PEAK	74	PASS
		Ant1	2500.0	-52.29	2.0	0	42.97	AV	54	PASS

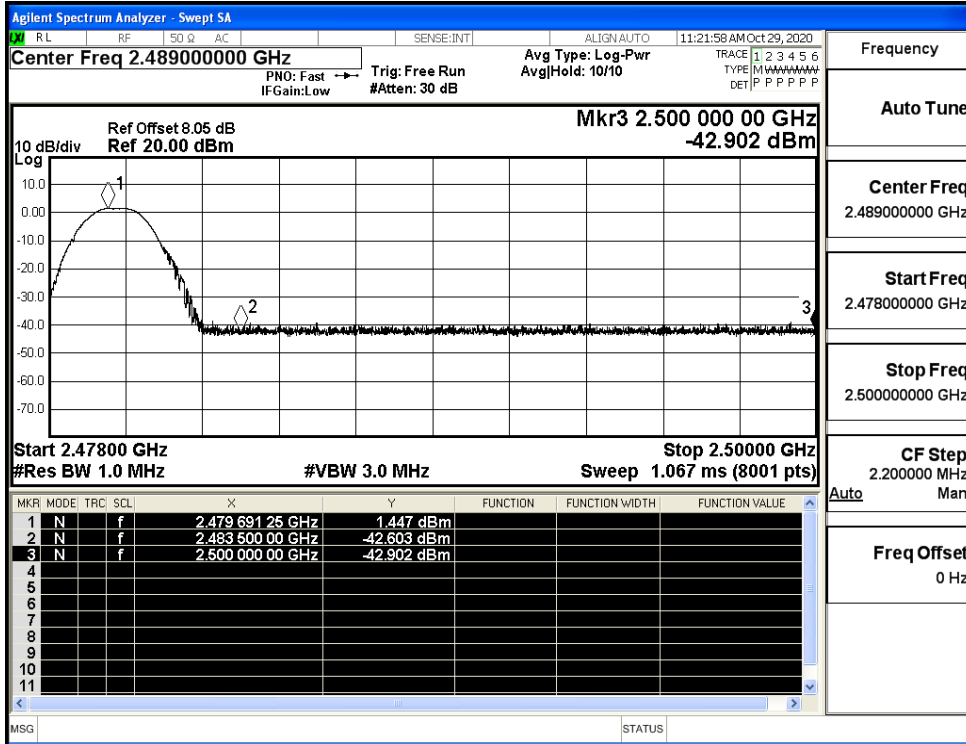
Restrict-band band-edge measurements\_BT LE\_2402\_Ant1\_PEAK



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

