

## Appendix B

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

Product Name: True wireless stereo

Trade Mark: ABKO

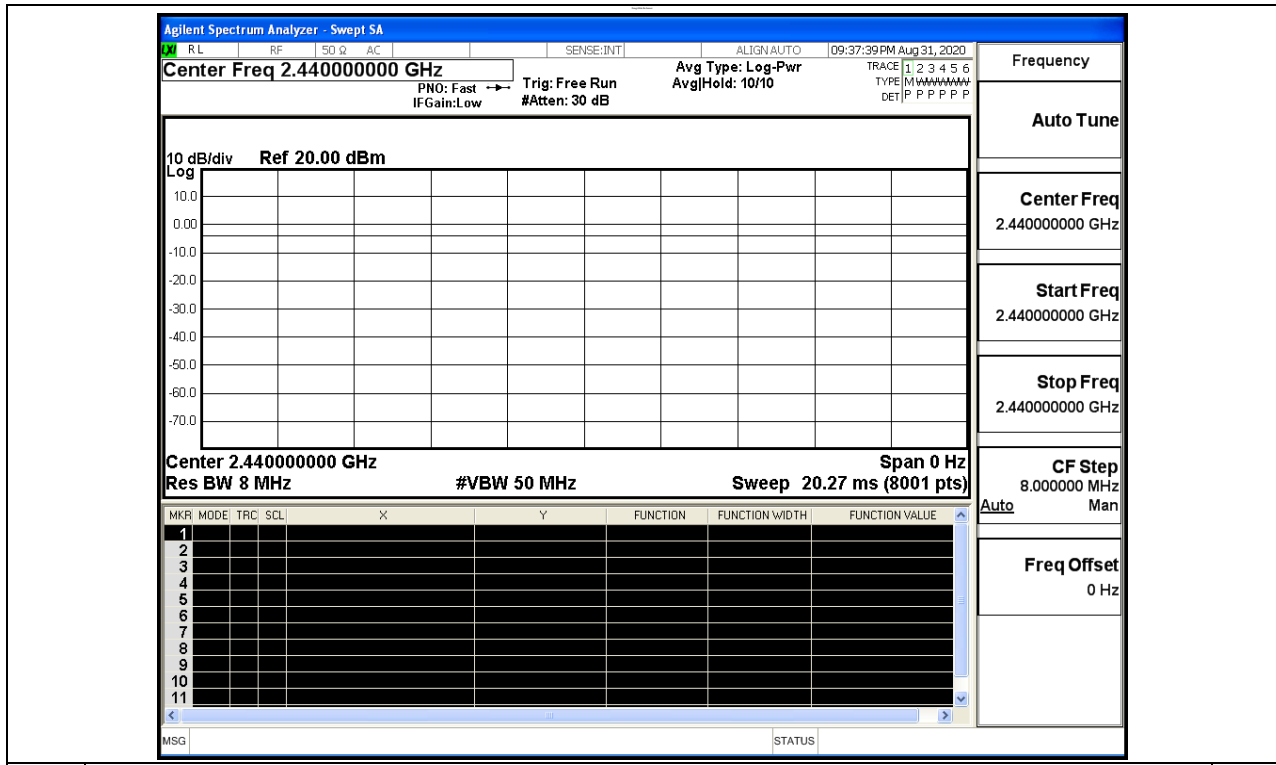
Test Model: E10

#### Environmental Conditions

Temperature:	23.6 ° C
Relative Humidity:	54.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Carl Fu
Supervised by:	Li Huan

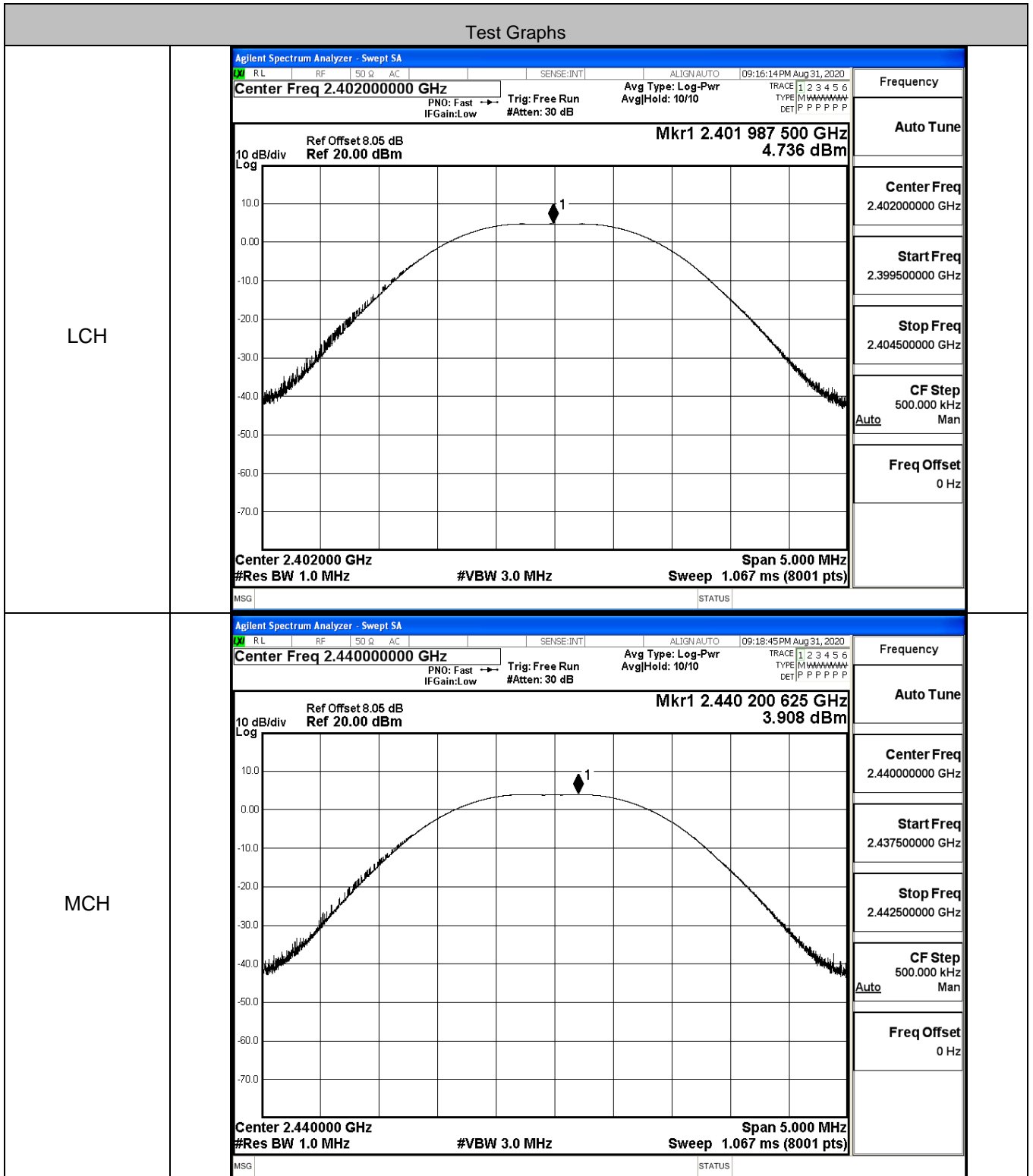
#### B.1 Duty Cycle

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	4.736	30	PASS
BT LE	MCH	3.908	30	PASS
BT LE	HCH	4.411	30	PASS

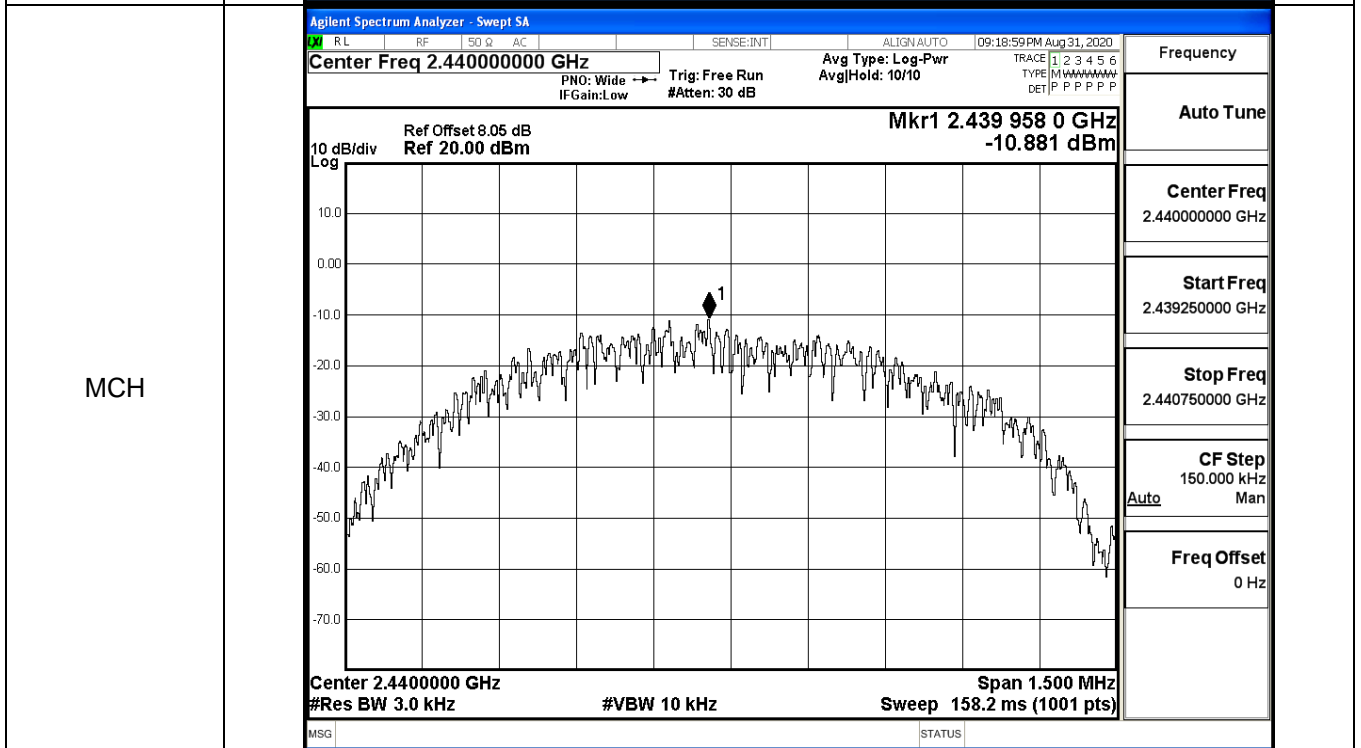
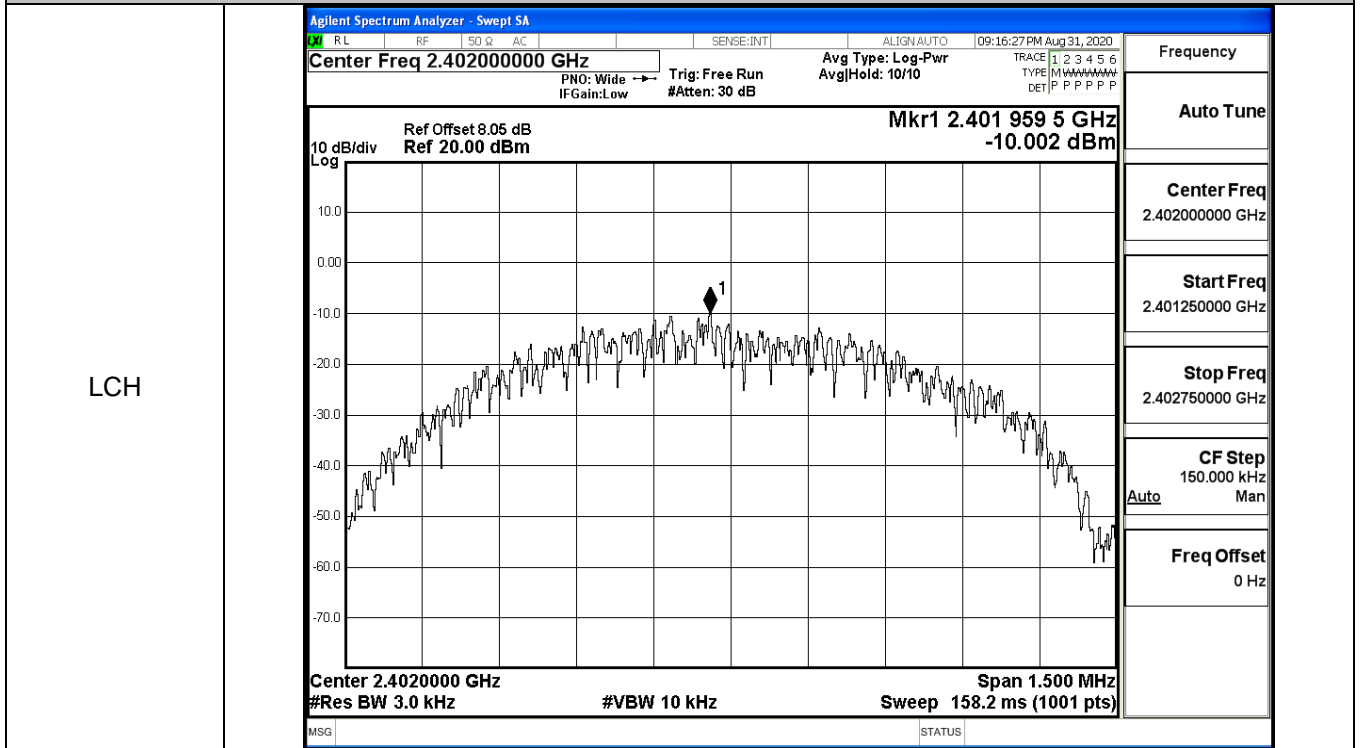




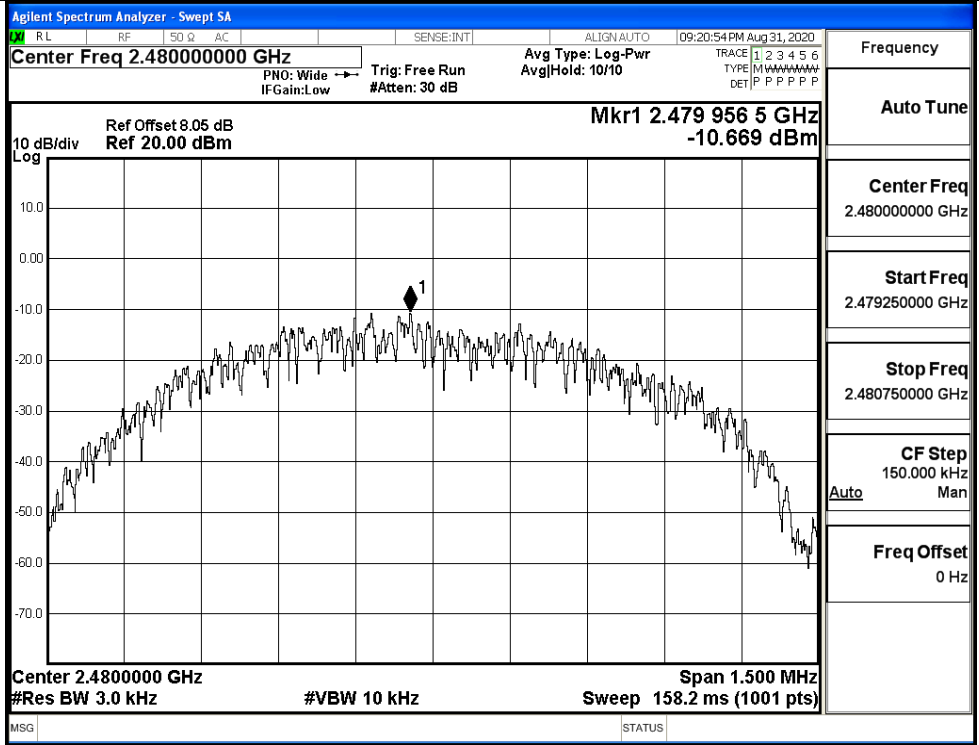
### B.3 Maximum Power Spectral Density

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-10.002	8	PASS
BT LE	MCH	-10.881	8	PASS
BT LE	HCH	-10.669	8	PASS

#### Test Graphs

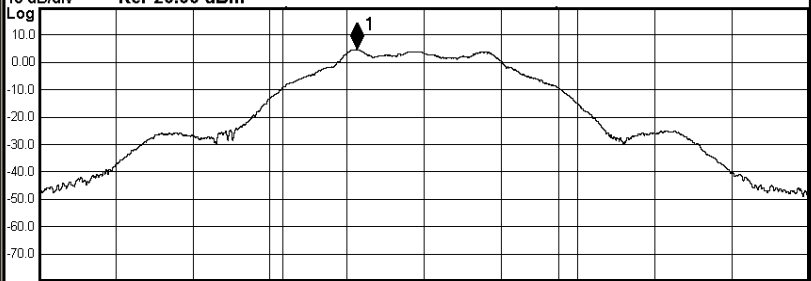
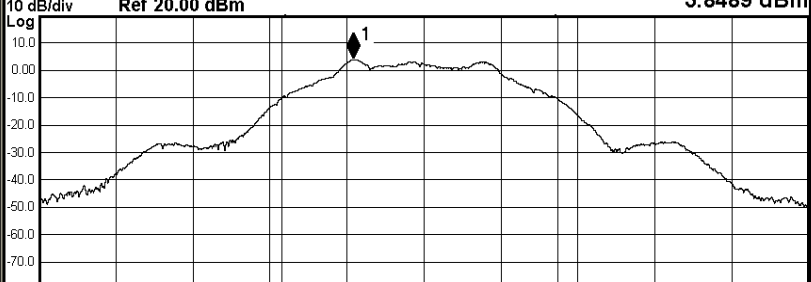


HCH



**B.4 6dB Bandwidth**

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6627	≥0.5	PASS
BT LE	MCH	0.6614	≥0.5	PASS
BT LE	HCH	0.6650	≥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:INT ALIGN:AUTO 09:16:03 PM Aug 31, 2020</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: 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 8.05 dB Mkr1 2.4017379 GHz</p> <p style="font-size: x-small; margin: 0;">Log Ref 20.00 dBm 4.6881 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; border-collapse: collapse;"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>11.2 dBm</td> </tr> <tr> <td style="text-align: center;"><b>1.0708 MHz</b></td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>x dB Bandwidth</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	11.2 dBm	<b>1.0708 MHz</b>			Transmit Freq Error	OBW Power	99.00 %	x dB Bandwidth	x dB	-6.00 dB
Occupied Bandwidth	Total Power	11.2 dBm											
<b>1.0708 MHz</b>													
Transmit Freq Error	OBW Power	99.00 %											
x dB Bandwidth	x dB	-6.00 dB											
MCH	<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:INT ALIGN:AUTO 09:18:34 PM Aug 31, 2020</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 8.05 dB Mkr1 2.4397263 GHz</p> <p style="font-size: x-small; margin: 0;">Log Ref 20.00 dBm 3.8489 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; border-collapse: collapse;"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>10.3 dBm</td> </tr> <tr> <td style="text-align: center;"><b>1.0727 MHz</b></td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>x dB Bandwidth</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	10.3 dBm	<b>1.0727 MHz</b>			Transmit Freq Error	OBW Power	99.00 %	x dB Bandwidth	x dB	-6.00 dB
Occupied Bandwidth	Total Power	10.3 dBm											
<b>1.0727 MHz</b>													
Transmit Freq Error	OBW Power	99.00 %											
x dB Bandwidth	x dB	-6.00 dB											

HCH

Agilent Spectrum Analyzer - Occupied BW

<input type="checkbox"/> RL	<input type="checkbox"/> RF	<input type="checkbox"/> 50 Ω	<input type="checkbox"/> AC	<input type="checkbox"/> SENSE:INT	<input type="checkbox"/> ALIGN:AUTO	<input type="checkbox"/> 09:20:29 PM Aug 31, 2020
<b>Center Freq 2.480000000 GHz</b>				Center Freq: 2.480000000 GHz	Radio Std: None	Frequency
				Trig: Free Run	AvgHold>1/1	
				#IFGain:Low	#Atten: 30 dB	Radio Device: BTS

Mkr1 2.4797278 GHz  
4.3769 dBm

10 dB/div  
Log  
-70.0  
-60.0  
-50.0  
-40.0  
-30.0  
-20.0  
-10.0  
0.0  
10.0

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

<b>Occupied Bandwidth</b>		<b>Total Power</b>	<b>10.9 dBm</b>
<b>1.0732 MHz</b>			
<b>Transmit Freq Error</b>	<b>-16.332 kHz</b>	<b>OBW Power</b>	<b>99.00 %</b>
<b>x dB Bandwidth</b>	<b>665.0 kHz</b>	<b>x dB</b>	<b>-6.00 dB</b>

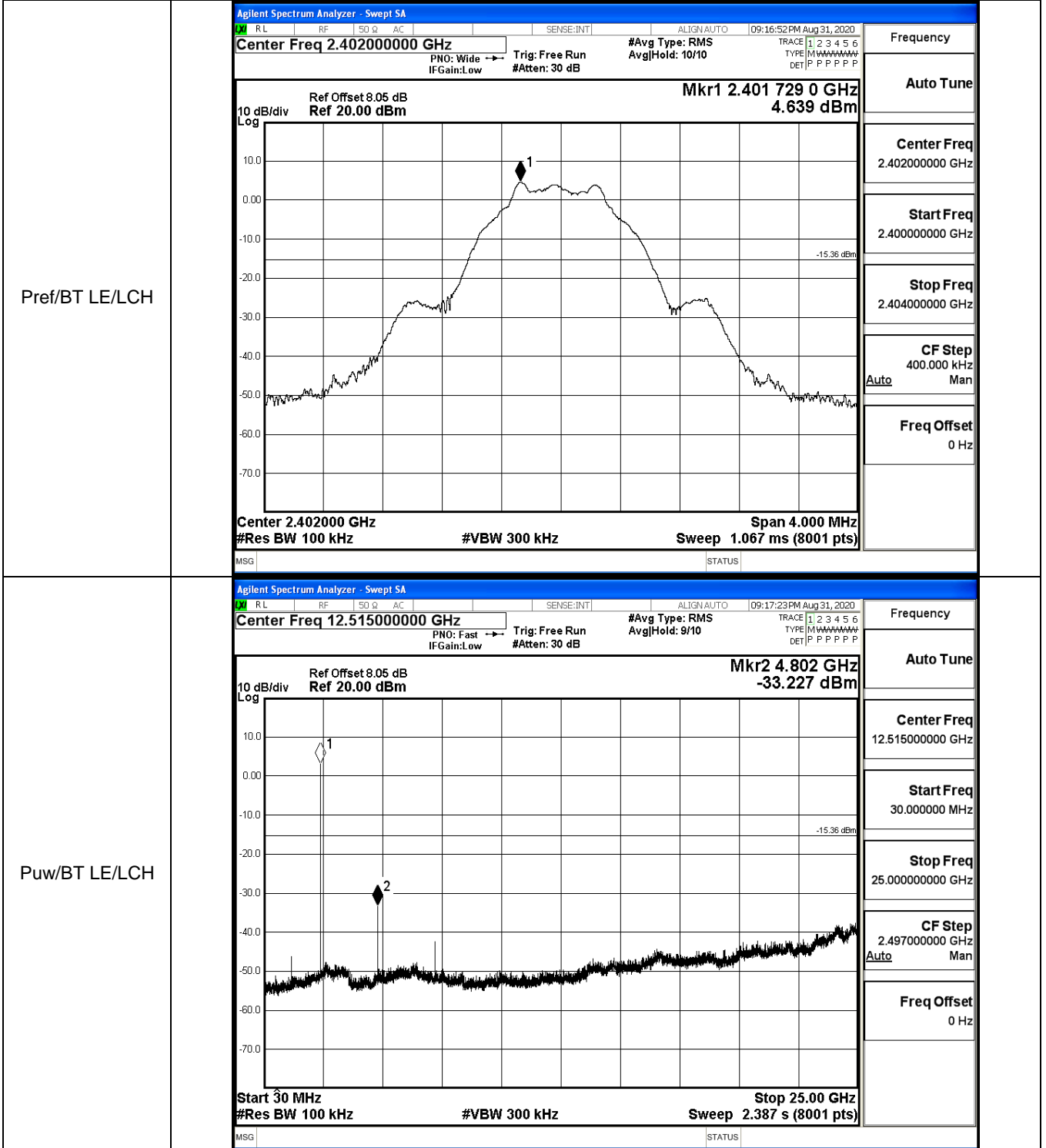
MSG
STATUS

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	4.639	-33.227	-15.361	PASS
BT LE	MCH	3.856	-34.315	-16.144	PASS
BT LE	HCH	4.34	-33.701	-15.660	PASS

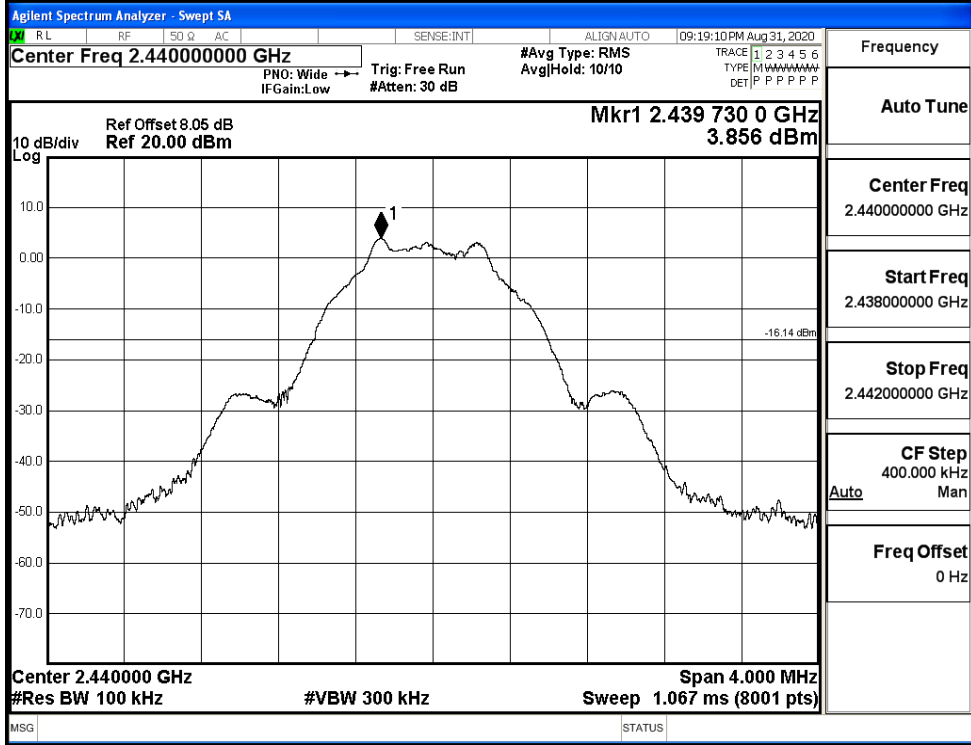
BT LE\_LCH\_Graphs



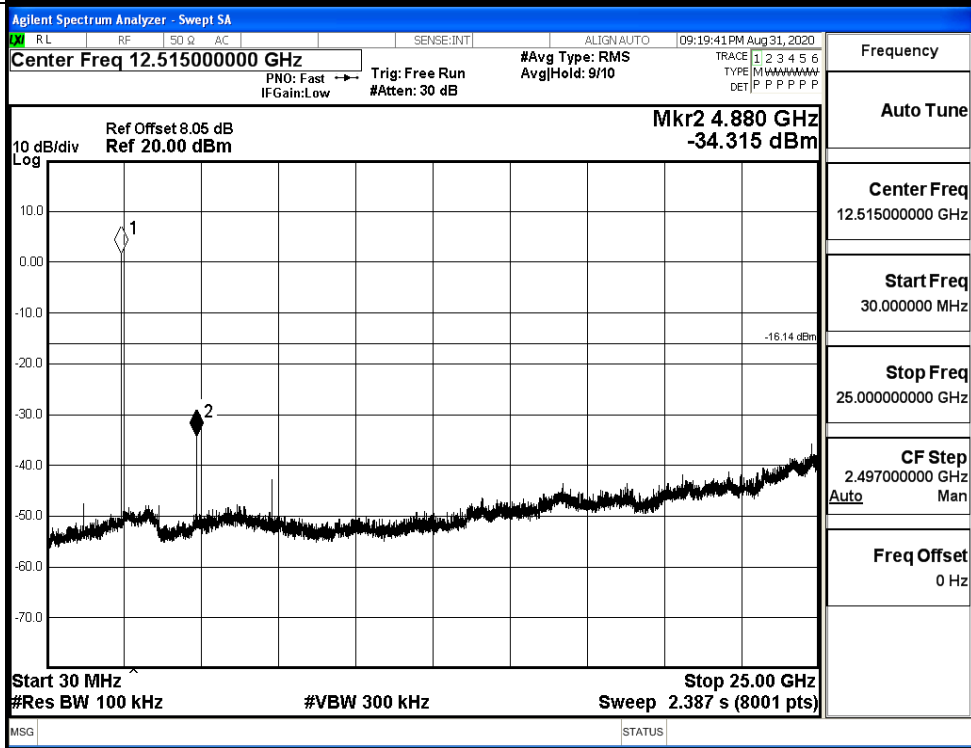


BT LE\_MCH\_Graphs

Pref/BT LE/MCH

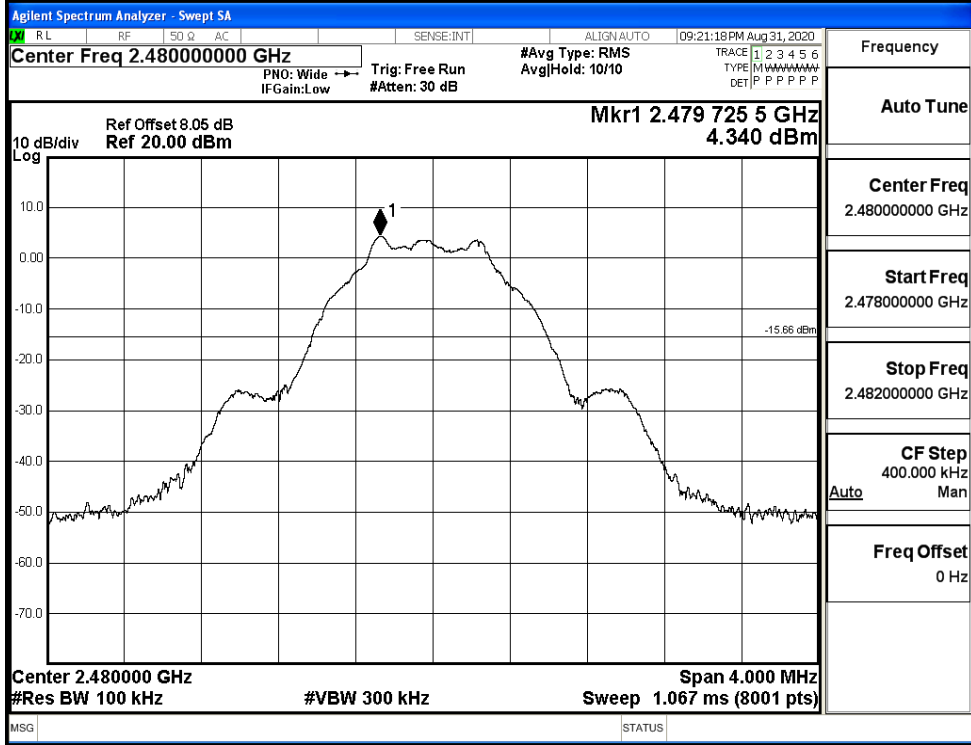


Puw/BT LE/MCH

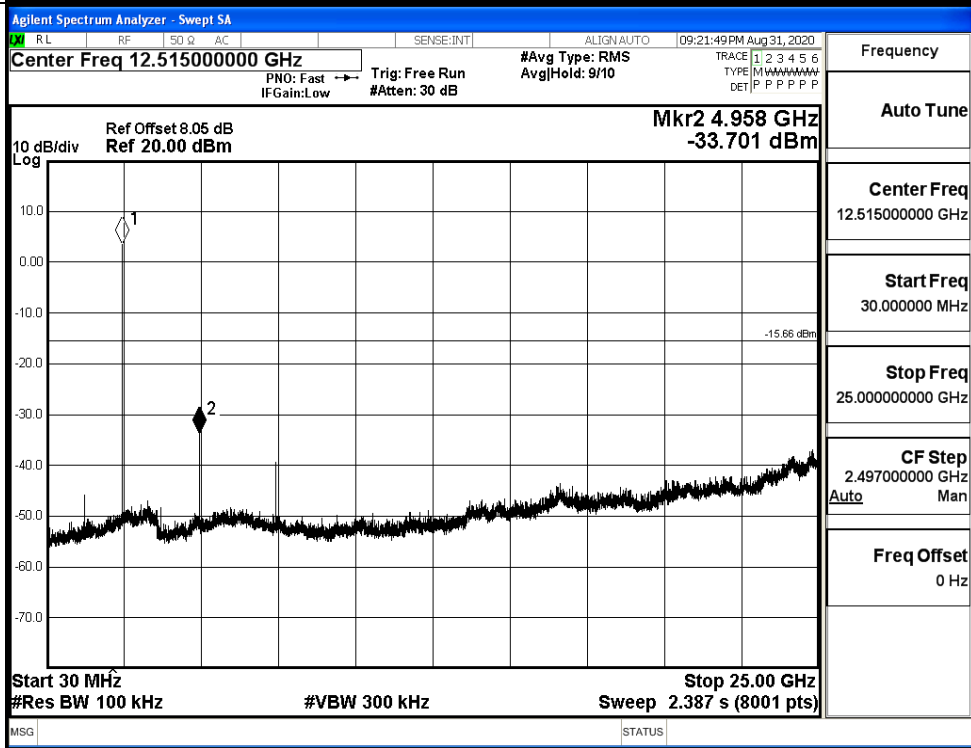


BT LE\_HCH\_Graphs

Pref/BT LE/HCH



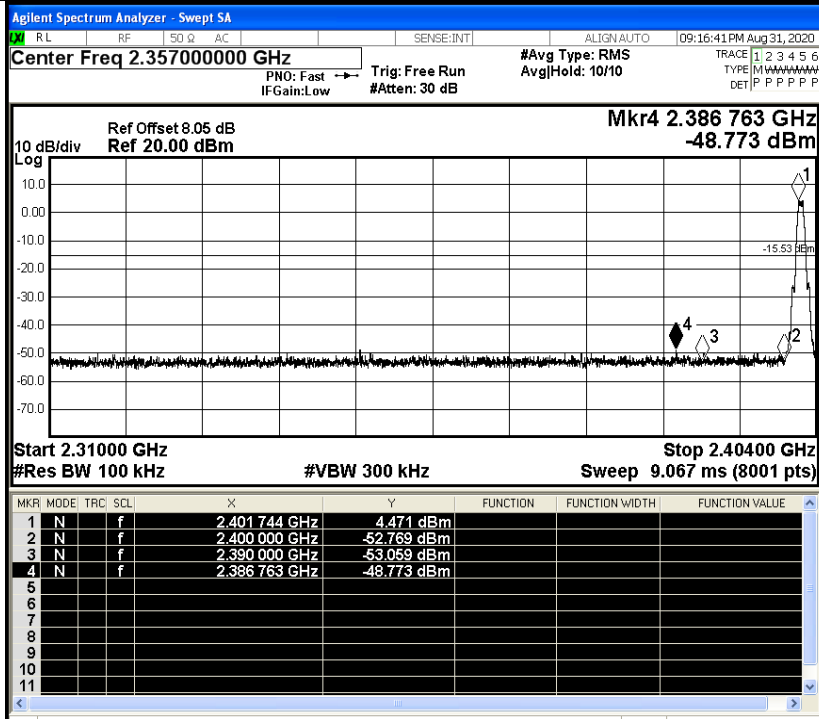
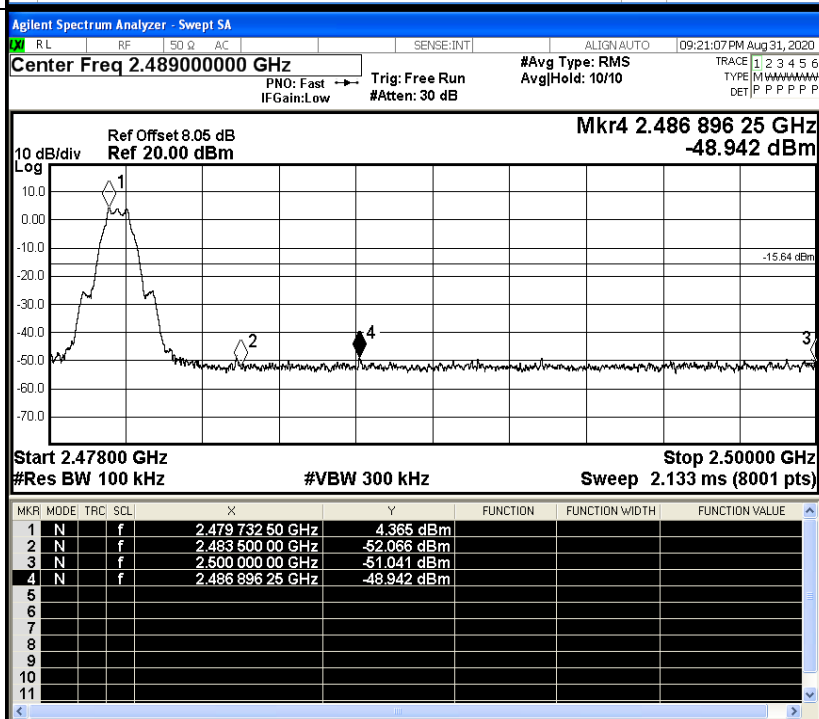
Puw/BT LE/HCH



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

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	4.471	-48.773	-15.53	PASS
BT LE	HCH	4.365	-48.942	-15.64	PASS

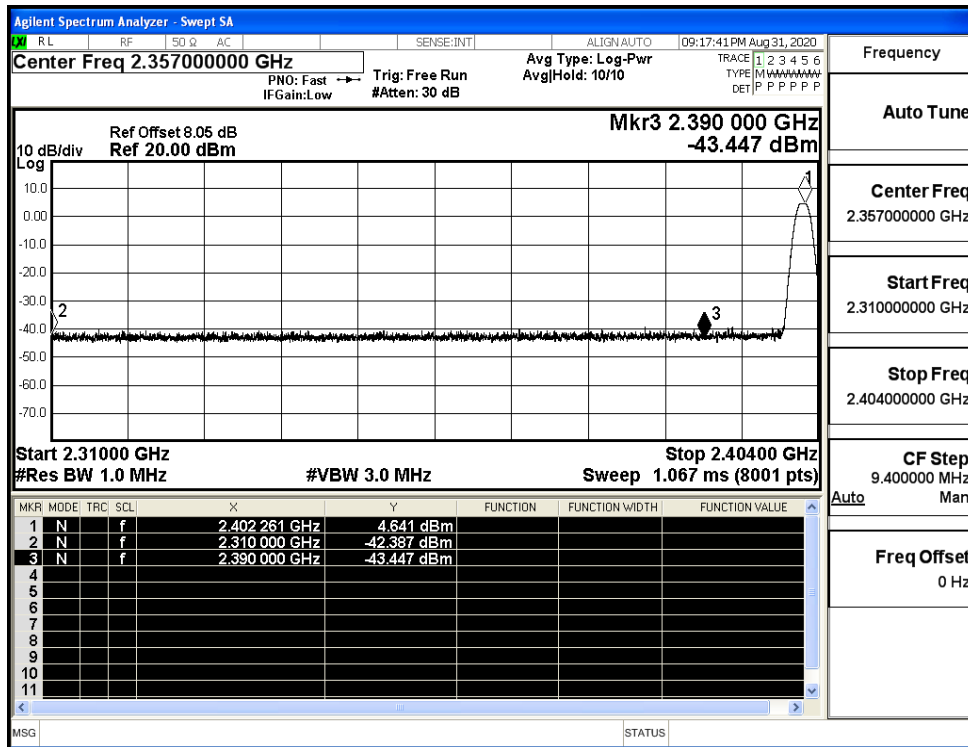
Test Graphs

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>

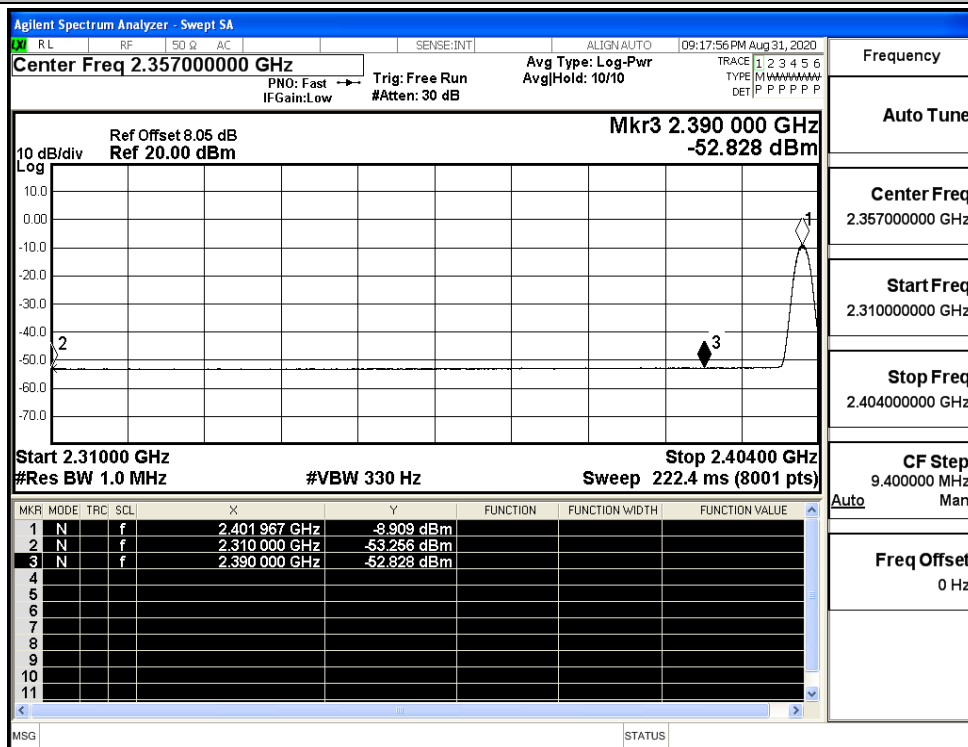
**B.7 Restrict-band band-edge measurements**

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	-42.39	2.0	0	52.87	PEAK	74	PASS
		Ant1	2310.0	-53.26	2.0	0	42.00	AV	54	PASS
		Ant1	2390.0	-43.45	2.0	0	51.81	PEAK	74	PASS
		Ant1	2390.0	-52.83	2.0	0	42.43	AV	54	PASS
	2480	Ant1	2483.5	-41.62	2.0	0	53.64	PEAK	74	PASS
		Ant1	2483.5	-52.26	2.0	0	43.00	AV	54	PASS
		Ant1	2500.0	-41.84	2.0	0	53.42	PEAK	74	PASS
		Ant1	2500.0	-52.26	2.0	0	43.00	AV	54	PASS

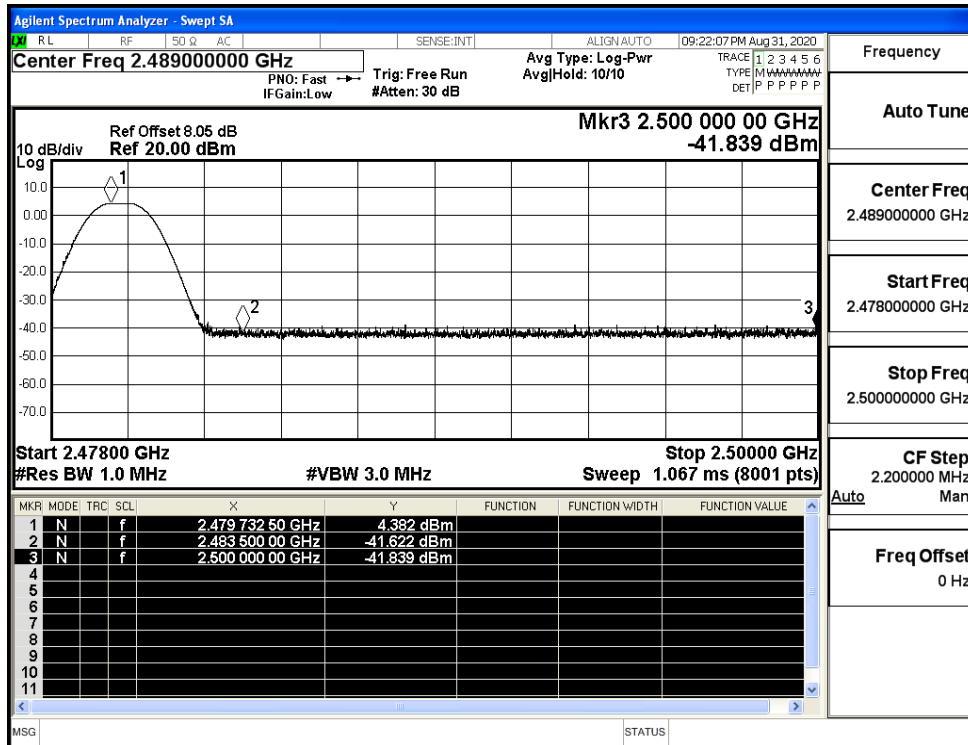
Restrict-band band-edge measurements\_BT LE\_2402\_Ant1\_PEAK



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

