

## Appendix B

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

Product Name: Keypad

Trade Mark: BOSMA

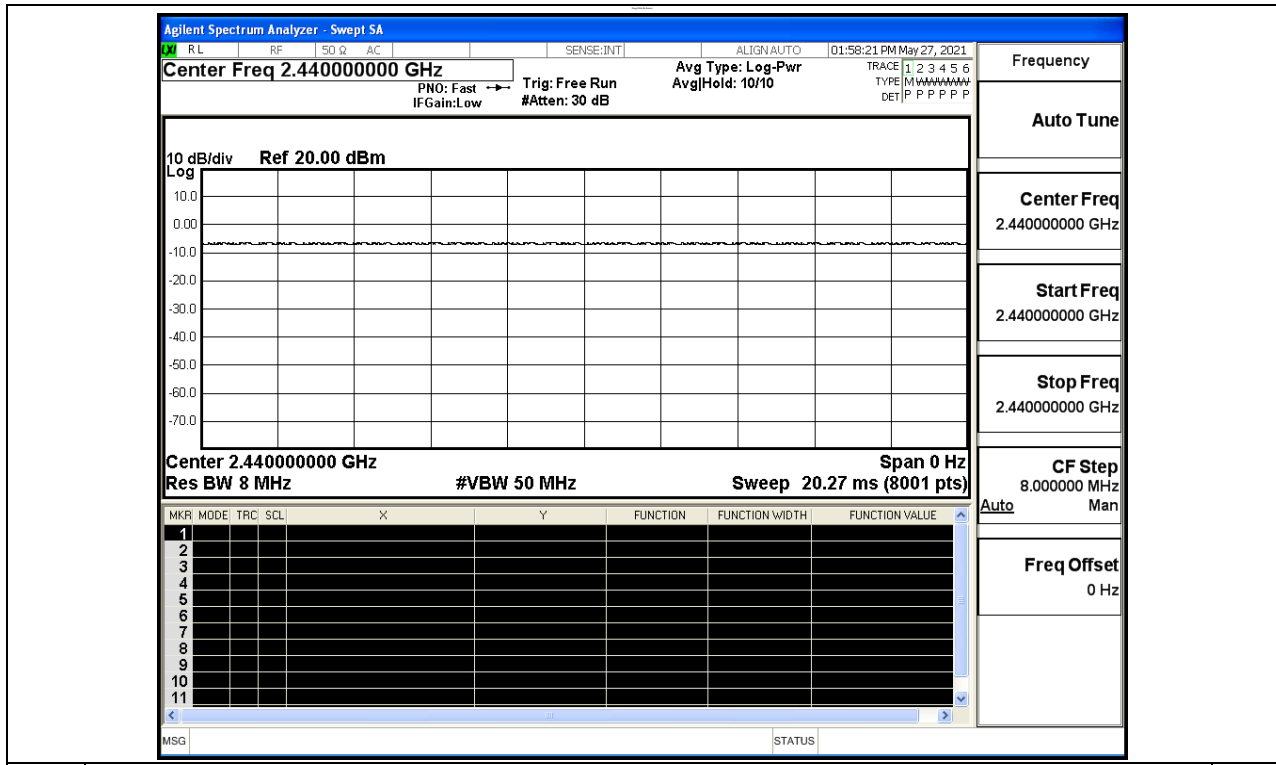
Test Model: KEYPAD

#### Environmental Conditions

Temperature:	25 ° C
Relative Humidity:	50%
ATM Pressure:	100.0 kPa
Test Engineer:	Kay Hu
Supervised by:	Li Huan

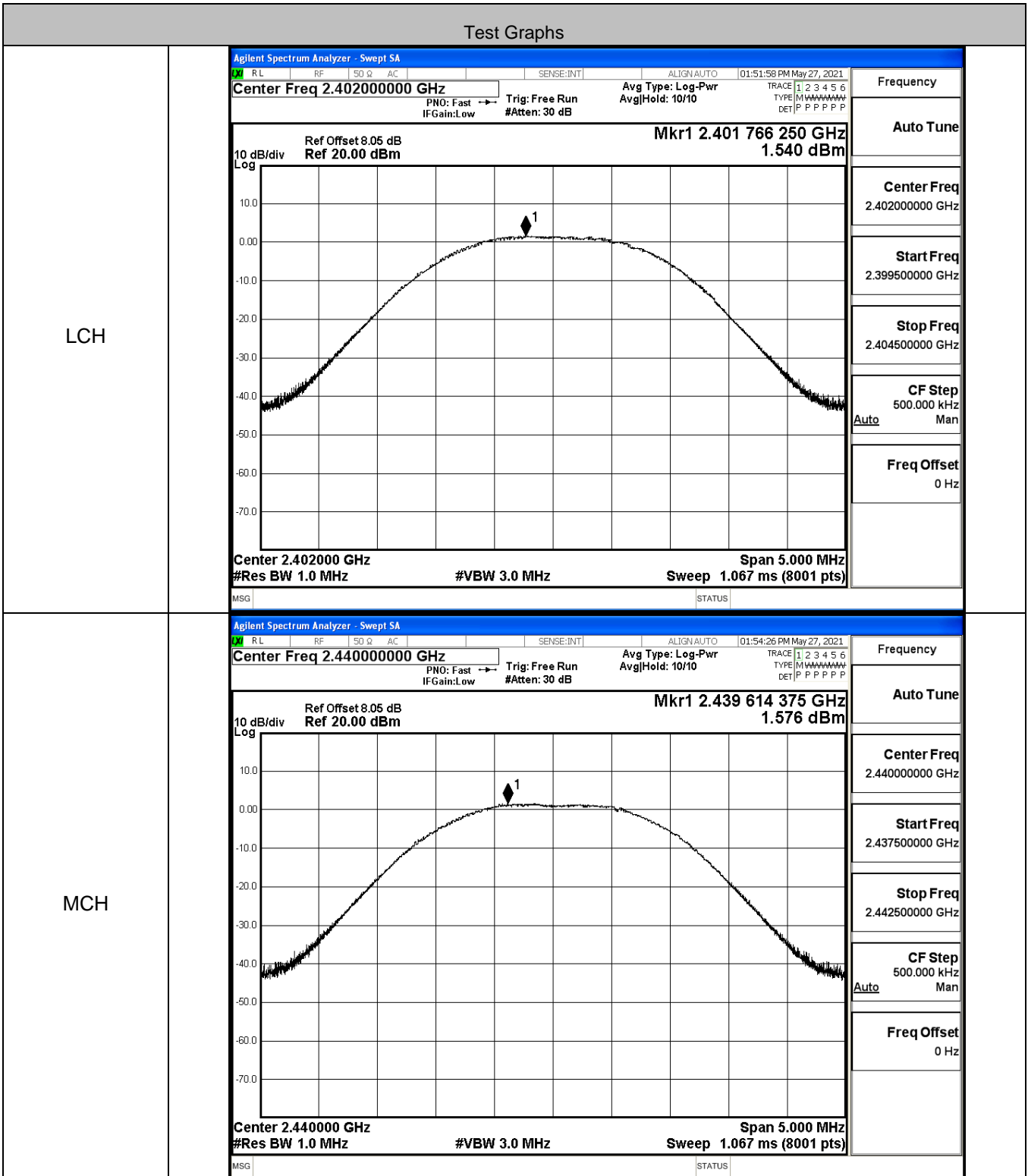
#### A.1 Duty Cycle

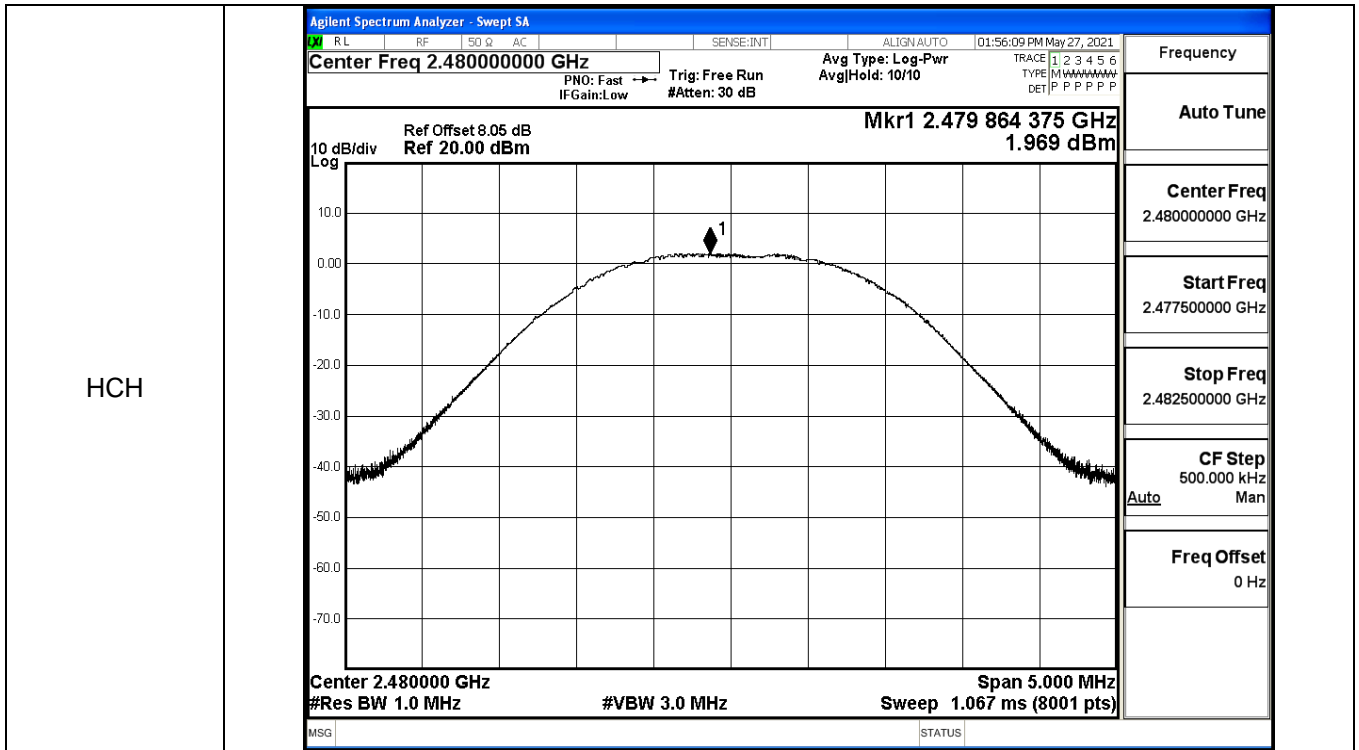
Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
BT LE	2440	Ant1	100	PASS



### A.2 Maximum Conducted Peak Output Power

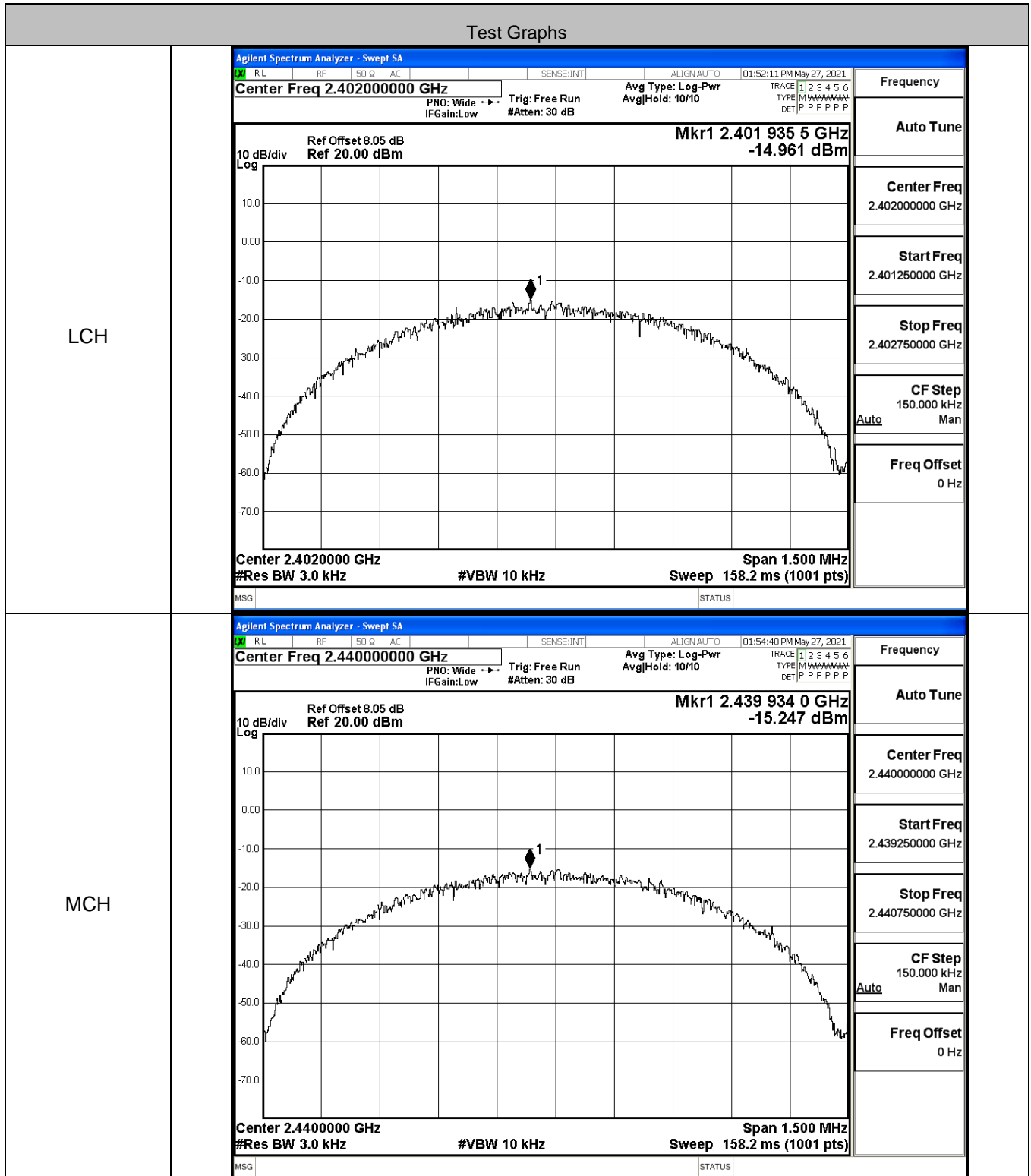
Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	1.54	30	PASS
BT LE	MCH	1.576	30	PASS
BT LE	HCH	1.969	30	PASS



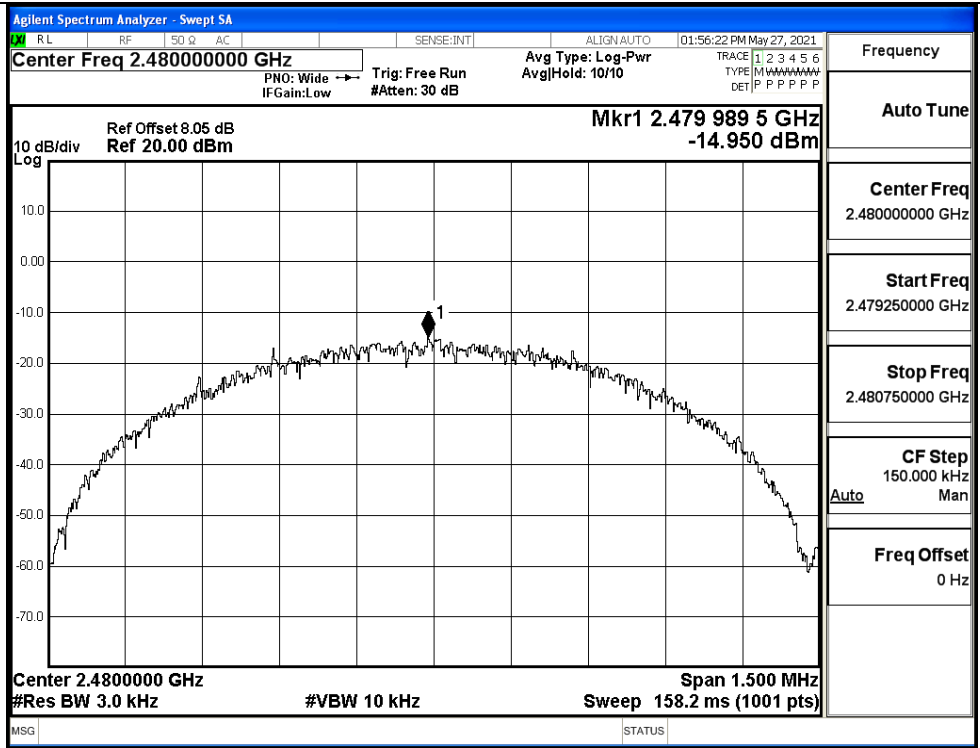


### A.3 Maximum Power Spectral Density

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-14.961	8	PASS
BT LE	MCH	-15.247	8	PASS
BT LE	HCH	-14.950	8	PASS



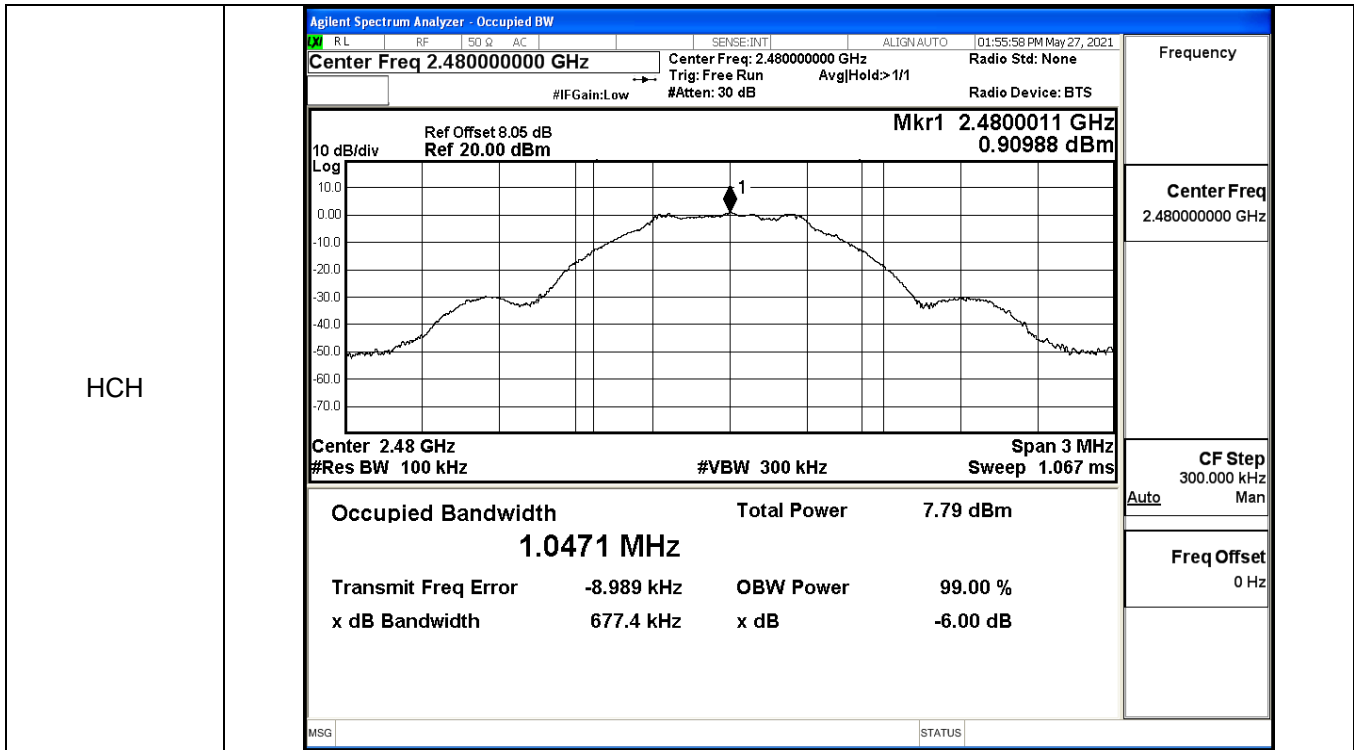
HCH



**A.4 6dB Bandwidth**

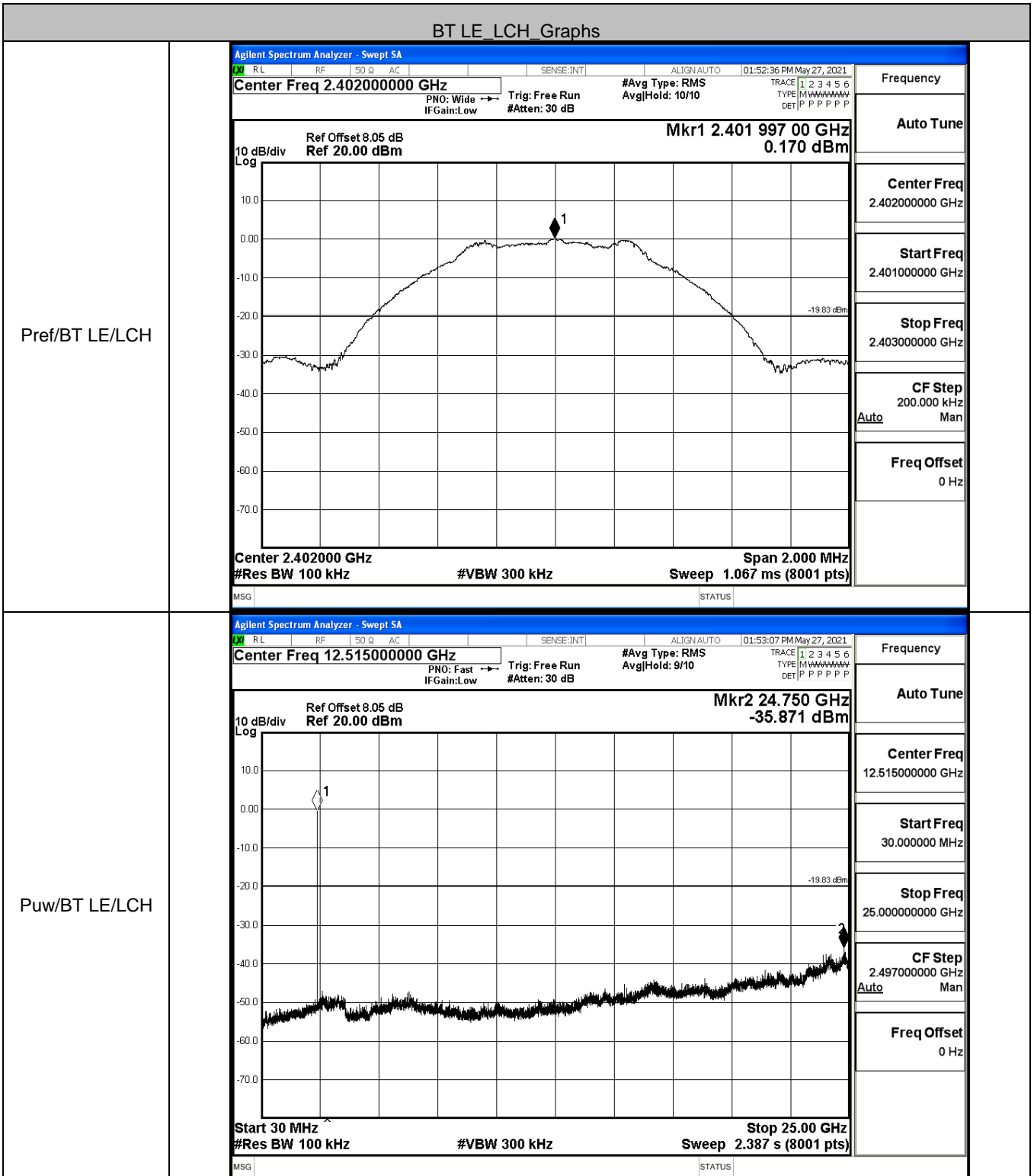
Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.7127	≥0.5	PASS
BT LE	MCH	0.6865	≥0.5	PASS
BT LE	HCH	0.6774	≥0.5	PASS

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 01:51:47 PM May 27, 2021</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="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 2.402234 GHz                          -0.14872 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">7.01 dBm</td> </tr> <tr> <td colspan="4" style="text-align: center;"><b>1.0493 MHz</b></td> </tr> <tr> <td>Transmit Freq Error</td> <td>-9.999 kHz</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>712.7 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	7.01 dBm		<b>1.0493 MHz</b>				Transmit Freq Error	-9.999 kHz	OBW Power	99.00 %	x dB Bandwidth	712.7 kHz	x dB	-6.00 dB
Occupied Bandwidth	Total Power	7.01 dBm															
<b>1.0493 MHz</b>																	
Transmit Freq Error	-9.999 kHz	OBW Power	99.00 %														
x dB Bandwidth	712.7 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 01:54:16 PM May 27, 2021</p> <p style="margin: 0;">Center Freq 2.440000000 GHz Center Freq: 2.440000000 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 2.4399888 GHz                          0.13791 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">7.15 dBm</td> </tr> <tr> <td colspan="4" style="text-align: center;"><b>1.0487 MHz</b></td> </tr> <tr> <td>Transmit Freq Error</td> <td>-8.470 kHz</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>686.5 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	7.15 dBm		<b>1.0487 MHz</b>				Transmit Freq Error	-8.470 kHz	OBW Power	99.00 %	x dB Bandwidth	686.5 kHz	x dB	-6.00 dB
Occupied Bandwidth	Total Power	7.15 dBm															
<b>1.0487 MHz</b>																	
Transmit Freq Error	-8.470 kHz	OBW Power	99.00 %														
x dB Bandwidth	686.5 kHz	x dB	-6.00 dB														



### A.5 RF Conducted Spurious Emissions

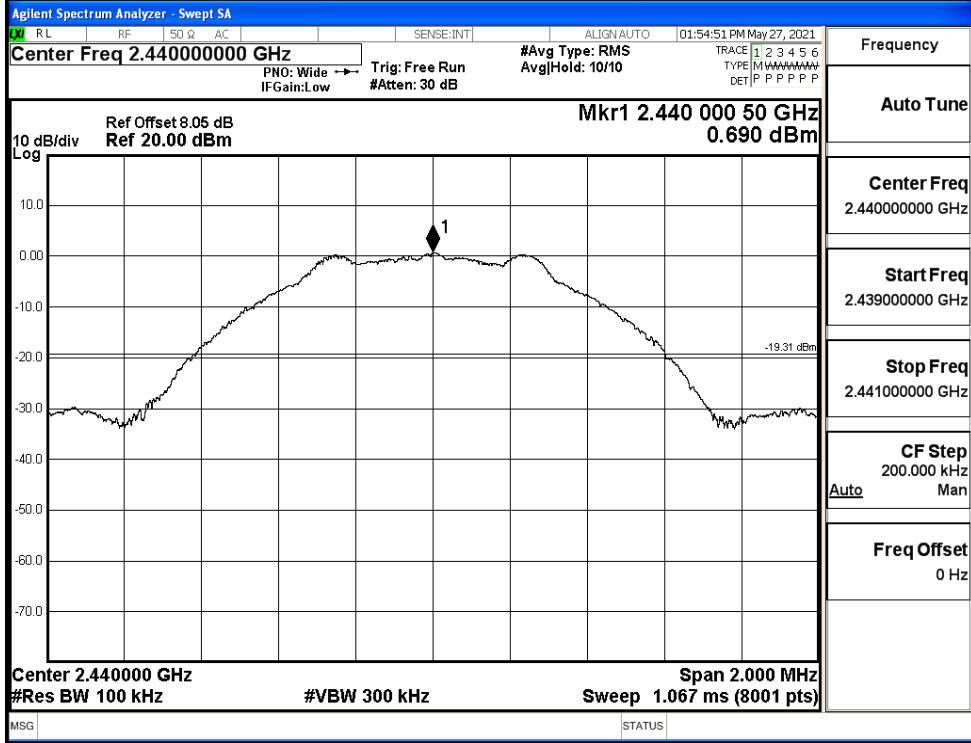
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	0.17	-35.871	-19.830	PASS
BT LE	MCH	0.69	-36.547	-19.310	PASS
BT LE	HCH	0.78	-37.862	-19.220	PASS



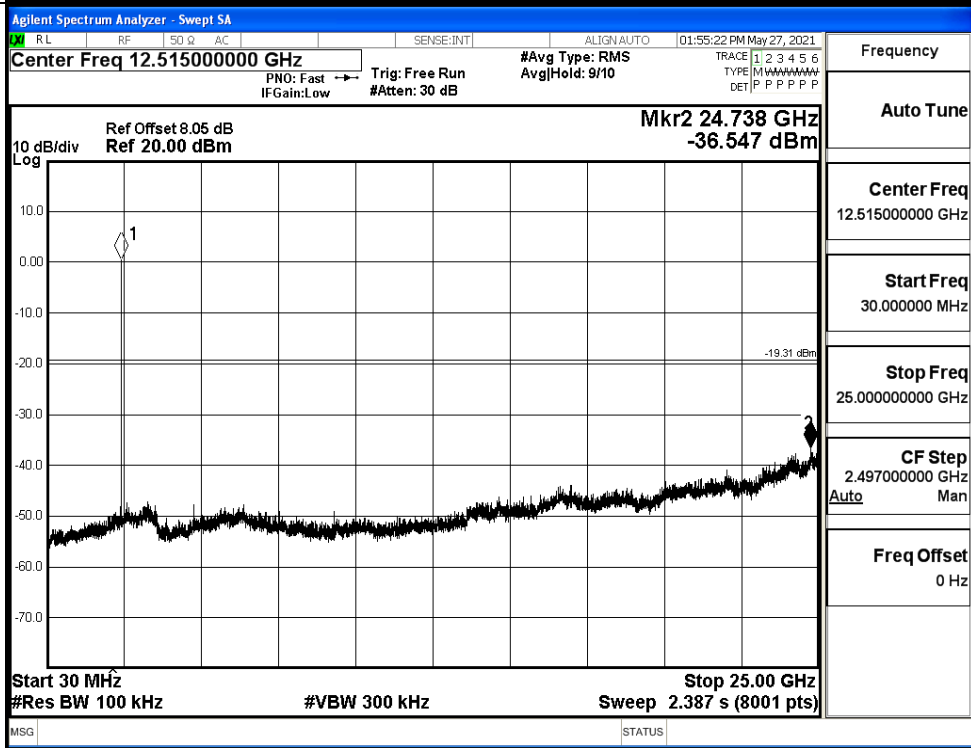


BT LE\_MCH\_Graphs

Pref/BT LE/MCH

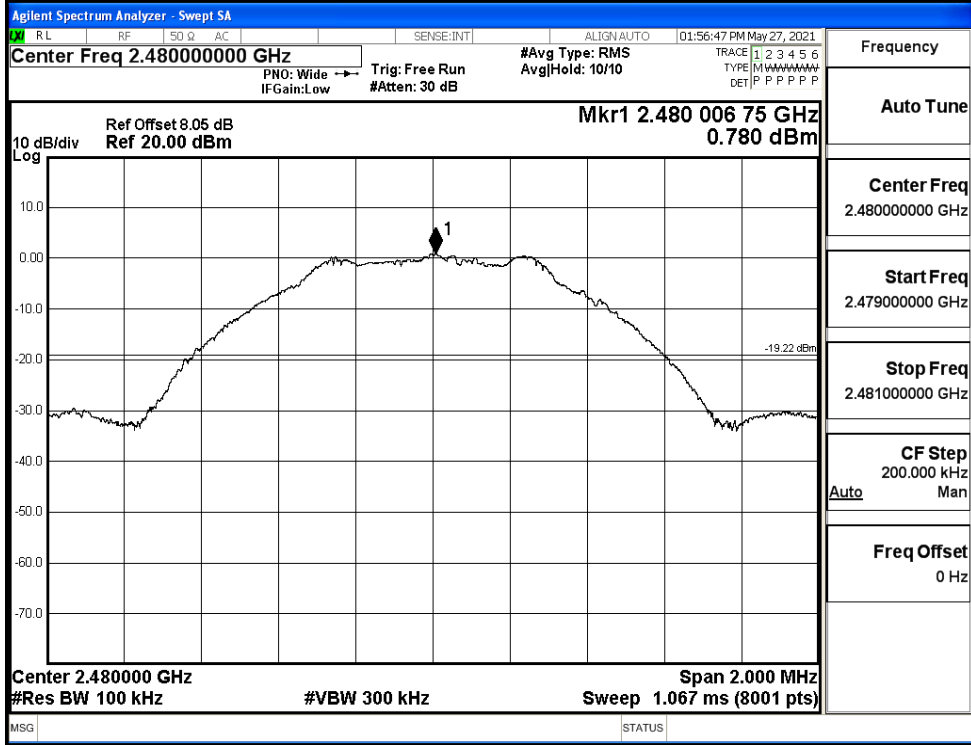


Puw/BT LE/MCH

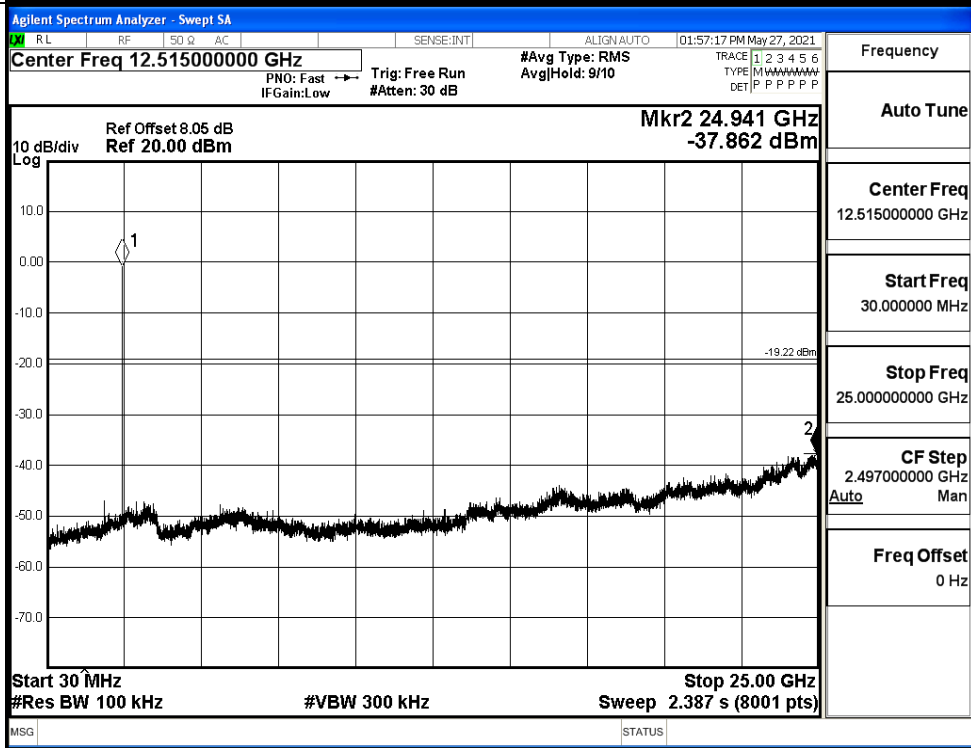


BT LE\_HCH\_Graphs

Pref/BT LE/HCH



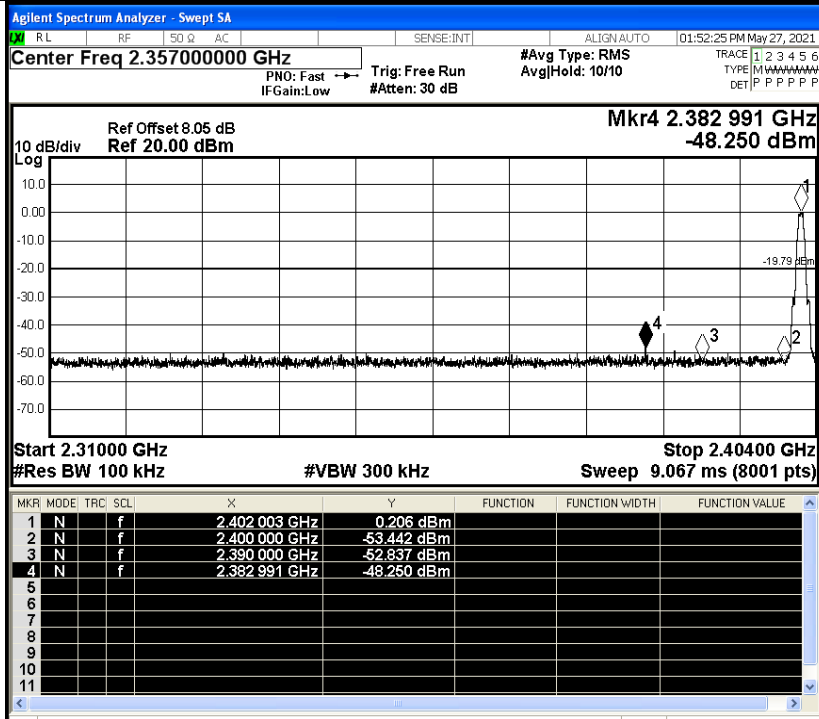
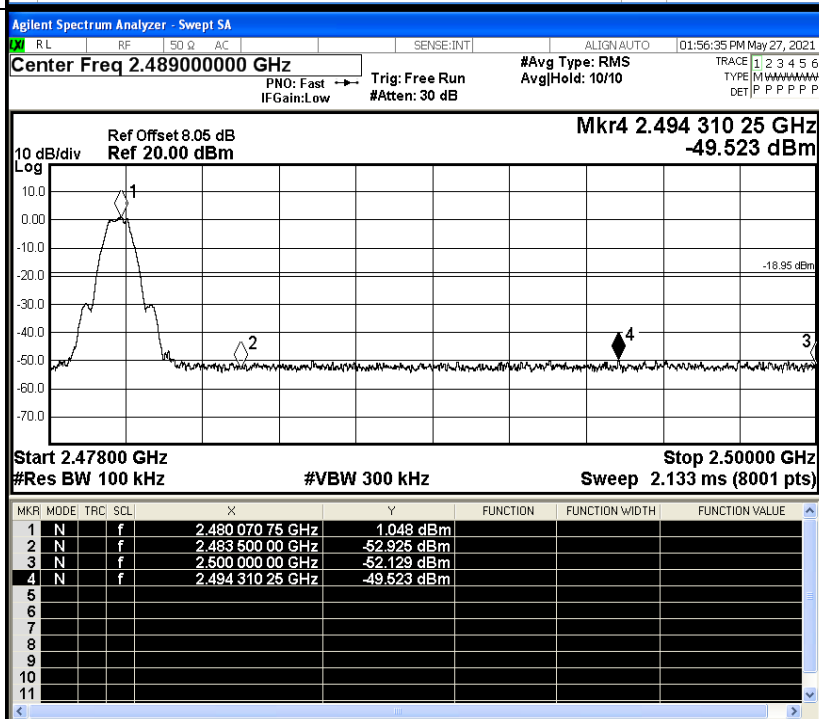
Puw/BT LE/HCH



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

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	0.206	-48.250	-19.79	PASS
BT LE	HCH	1.048	-49.523	-18.95	PASS

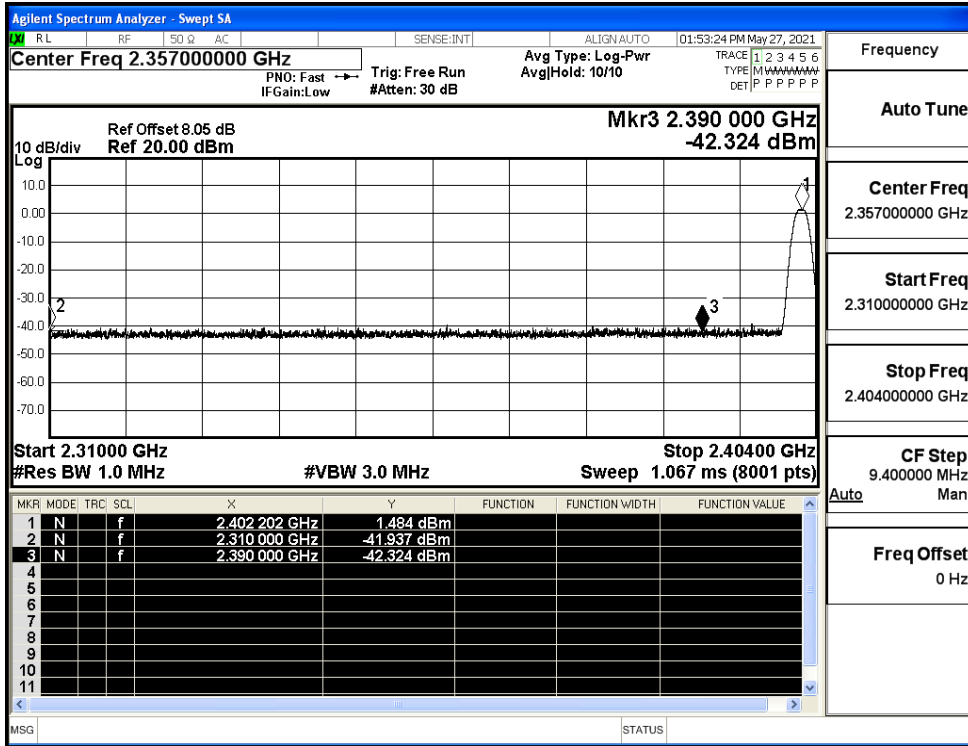
Test Graphs

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>

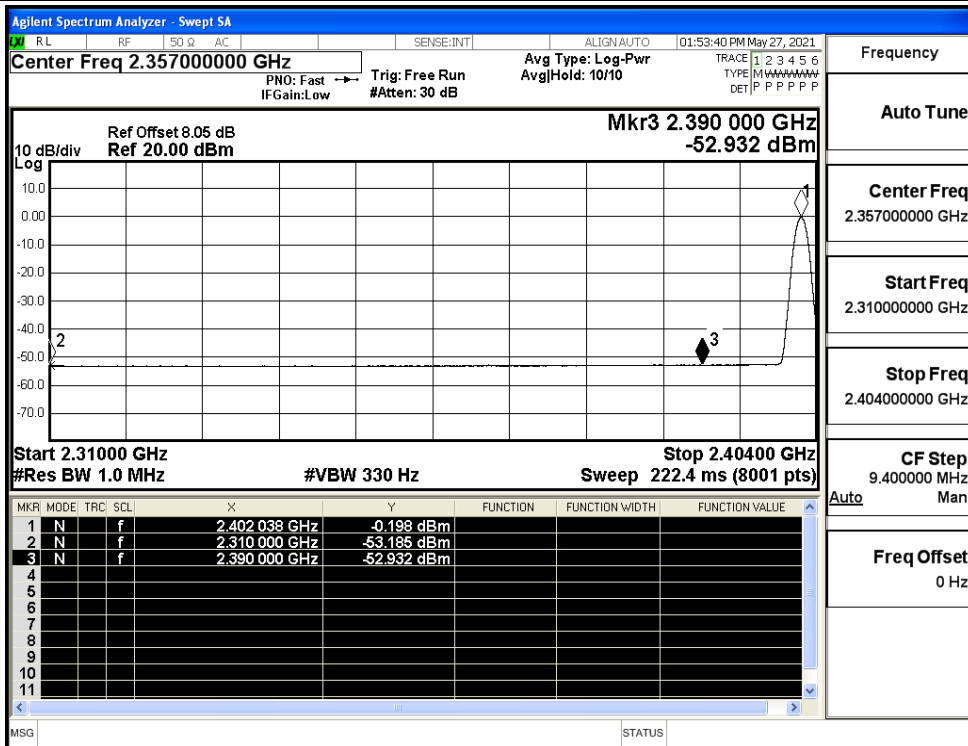
## A.7 Restrict-band band-edge measurements

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	-41.94	2.0	0	55.32	PEAK	74	PASS
		Ant1	2310.0	-53.19	2.0	0	44.07	AV	54	PASS
		Ant1	2390.0	-42.32	2.0	0	54.94	PEAK	74	PASS
		Ant1	2390.0	-52.93	2.0	0	44.33	AV	54	PASS
	2480	Ant1	2483.5	-42.17	2.0	0	55.09	PEAK	74	PASS
		Ant1	2483.5	-52.21	2.0	0	45.05	AV	54	PASS
		Ant1	2500.0	-43.36	2.0	0	53.9	PEAK	74	PASS
		Ant1	2500.0	-52.21	2.0	0	45.05	AV	54	PASS

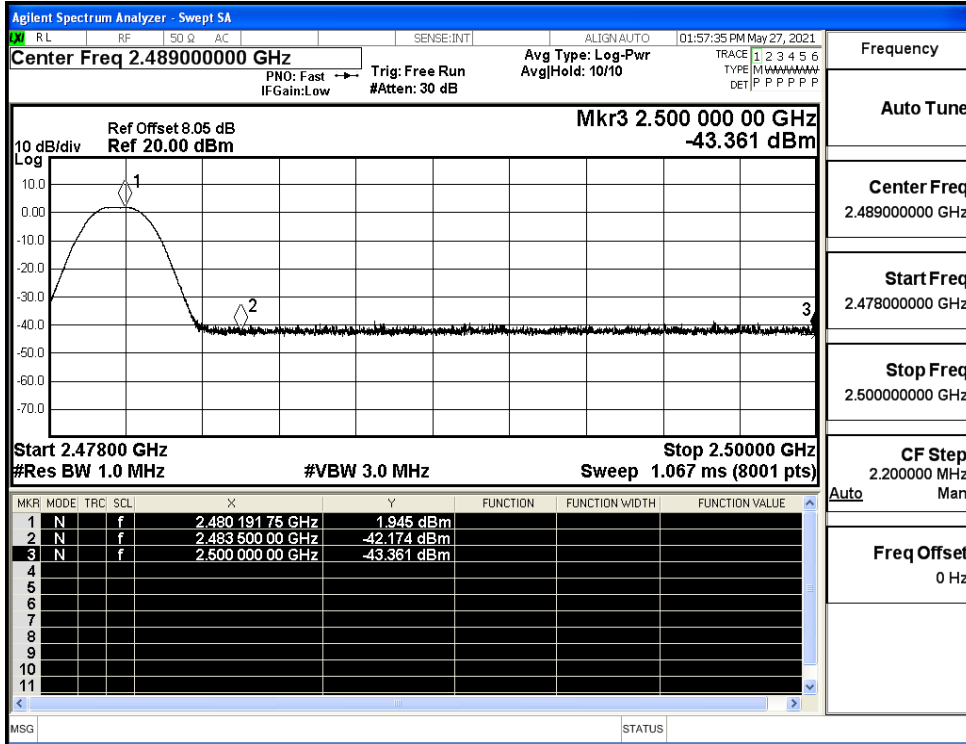
Restrict-band band-edge measurements\_BT LE\_2402\_Ant1\_PEAK



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

