

## Appendix B

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

Product Name: USB Bluetooth Adapter

Trade Mark: XFANIC

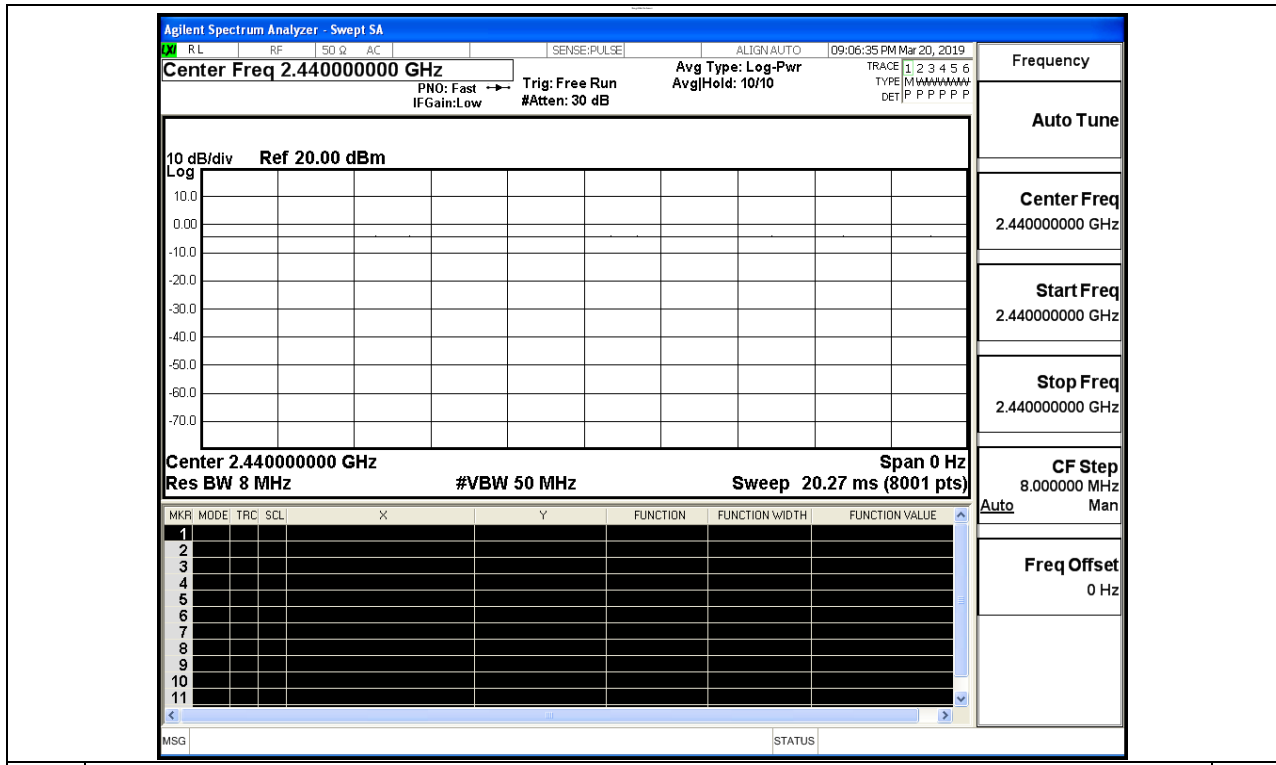
Test Model: XF-B9001

#### Environmental Conditions

Temperature:	22.8 ° C
Relative Humidity:	53.9%
ATM Pressure:	100.0 kPa
Test Engineer:	David.Luo
Supervised by:	Tom.Liu

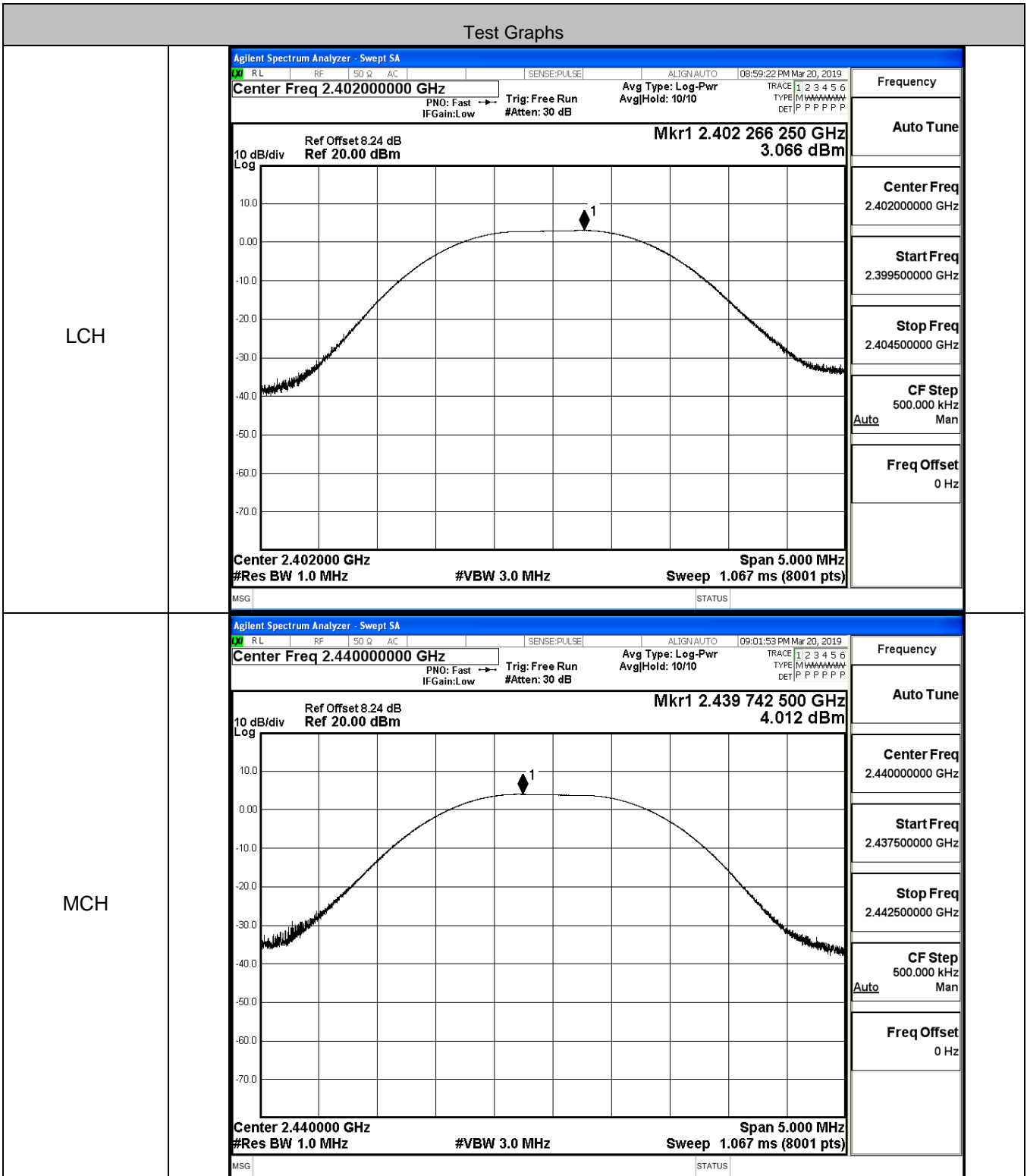
#### B.1 Duty Cycle

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

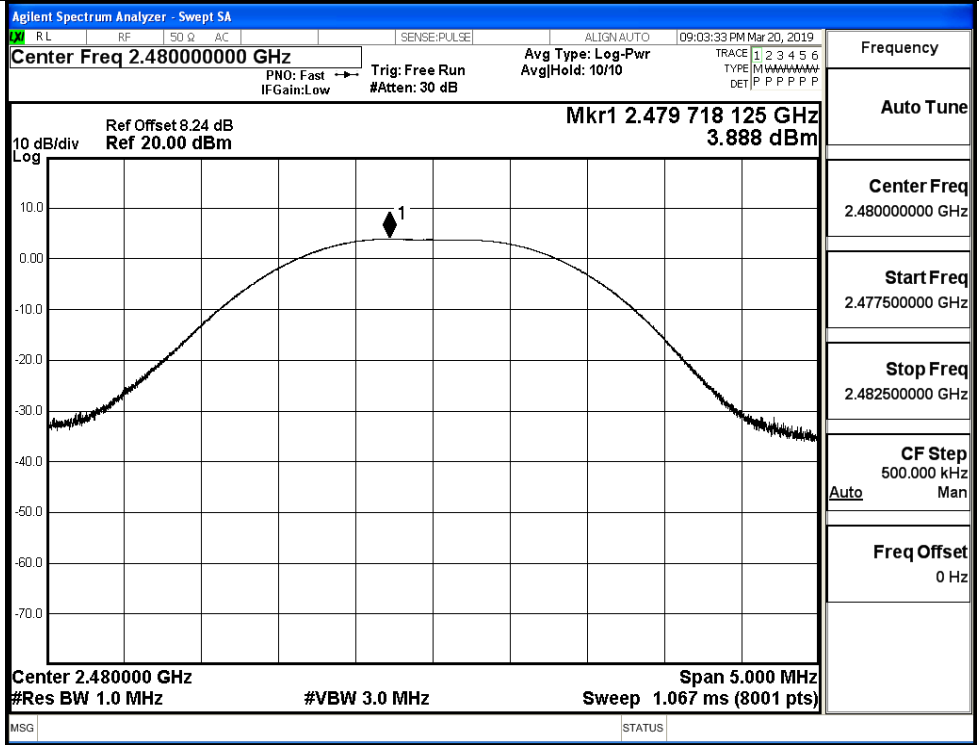


### B.2 Maximum Conducted Peak Output Power

Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	3.066	30	PASS
BT LE	MCH	4.012	30	PASS
BT LE	HCH	3.888	30	PASS

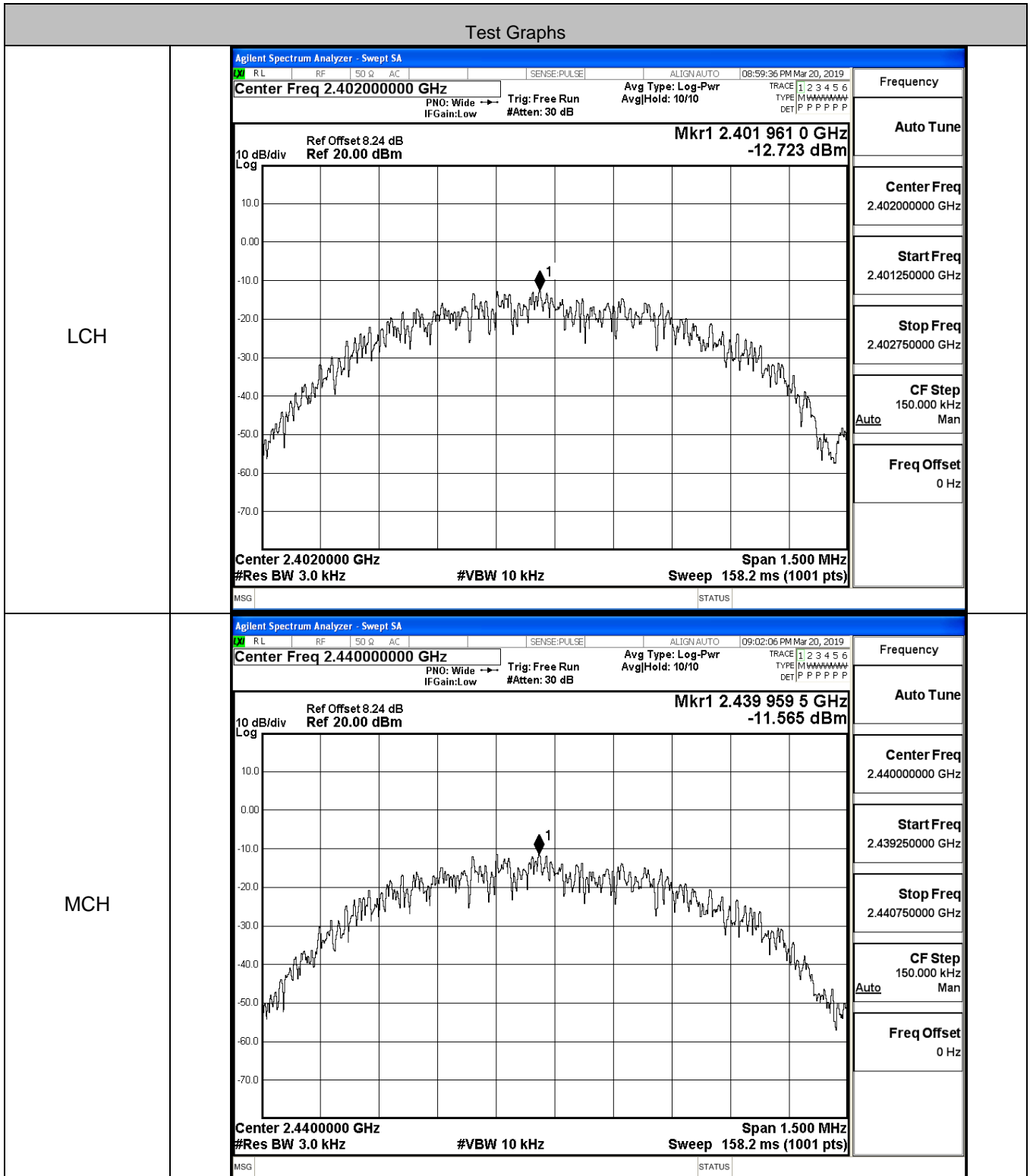


HCH

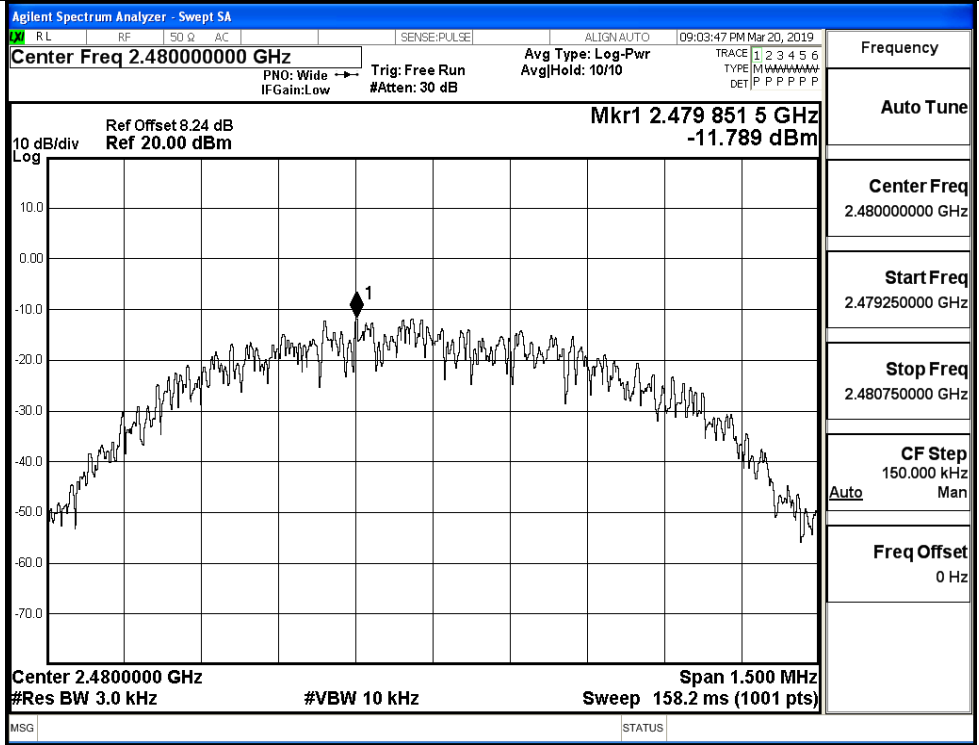


### B.3 Maximum Power Spectral Density

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-12.723	8	PASS
BT LE	MCH	-11.565	8	PASS
BT LE	HCH	-11.789	8	PASS

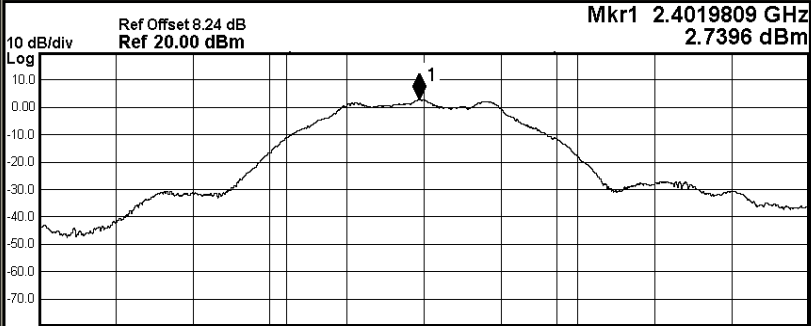
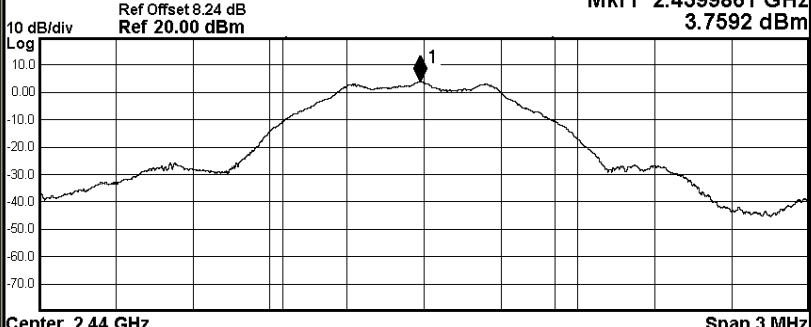


HCH



**B.4 6dB Bandwidth**

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6928	≥0.5	PASS
BT LE	MCH	0.6944	≥0.5	PASS
BT LE	HCH	0.6916	≥0.5	PASS

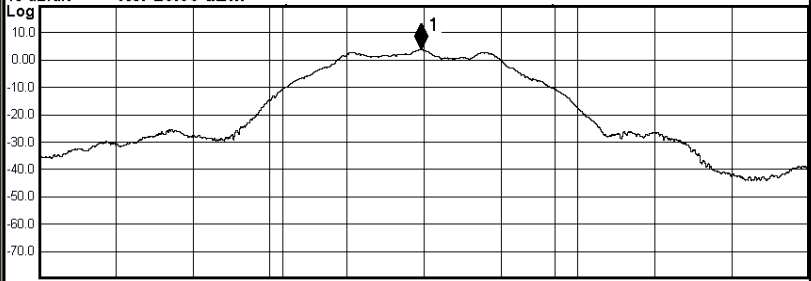
Test Graphs													
LCH	<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center; margin: 0;">Agilent Spectrum Analyzer - Occupied BW</p> <p style="font-size: small; margin: 0;">RL RF 50 Ω AC SENSE:PULSE ALIGN:AUTO 08:59:10 PM Mar 20, 2019</p> <p style="margin: 0;">Center Freq 2.402000000 GHz Center Freq: 2.402000000 GHz Radio Std: None</p> <p style="margin: 0;">Trig: Free Run AvgHold&gt;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: x-small; margin: 0;">10 dB/div Ref Offset 8.24 dB Mkr1 2.4019809 GHz</p> <p style="font-size: x-small; margin: 0;">Log Ref 20.00 dBm 2.7396 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 style="width: 50%;">Occupied Bandwidth</td> <td style="width: 50%;">Total Power</td> <td style="width: 50%;">9.37 dBm</td> </tr> <tr> <td style="text-align: center;"><b>1.0482 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	9.37 dBm	<b>1.0482 MHz</b>			Transmit Freq Error	OBW Power	99.00 %	x dB Bandwidth	x dB	-6.00 dB
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<b>1.0482 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="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 09:01:42 PM Mar 20, 2019</p> <p style="margin: 0;">Center Freq 2.440000000 GHz Center Freq: 2.440000000 GHz Radio Std: None</p> <p style="margin: 0;">Trig: Free Run AvgHold&gt;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: x-small; margin: 0;">10 dB/div Ref Offset 8.24 dB Mkr1 2.4399861 GHz</p> <p style="font-size: x-small; margin: 0;">Log Ref 20.00 dBm 3.7592 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 style="width: 50%;">Occupied Bandwidth</td> <td style="width: 50%;">Total Power</td> <td style="width: 50%;">10.4 dBm</td> </tr> <tr> <td style="text-align: center;"><b>1.0527 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	10.4 dBm	<b>1.0527 MHz</b>			Transmit Freq Error	OBW Power	99.00 %	x dB Bandwidth	x dB	-6.00 dB
Occupied Bandwidth	Total Power	10.4 dBm											
<b>1.0527 MHz</b>													
Transmit Freq Error	OBW Power	99.00 %											
x dB Bandwidth	x dB	-6.00 dB											

HCH

Agilent Spectrum Analyzer - Occupied BW

RL	RF	50 Ω	AC	SENSE:PULSE	ALIGN:AUTO	09:03:22 PM Mar 20, 2019
<b>Center Freq 2.480000000 GHz</b>			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 8.24 dB	<b>Mkr1 2.479988 GHz</b>
Log	Ref 20.00 dBm	<b>3.6727 dBm</b>



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

<b>Occupied Bandwidth</b>	<b>Total Power</b>	<b>10.3 dBm</b>
<b>1.0561 MHz</b>		
Transmit Freq Error	-18.039 kHz	OBW Power
x dB Bandwidth	691.6 kHz	x dB
		99.00 %
		-6.00 dB

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

MSG

STATUS

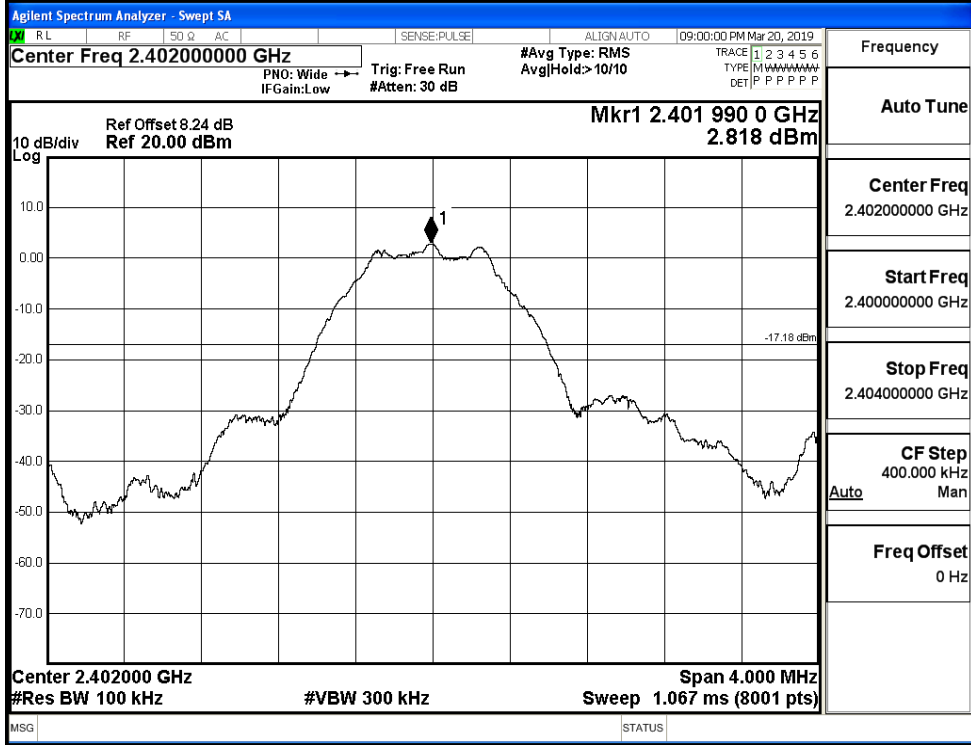
### B.5 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	2.818	-42.147	-17.182	PASS
BT LE	MCH	3.777	-39.011	-16.223	PASS
BT LE	HCH	3.67	-34.136	-16.330	PASS

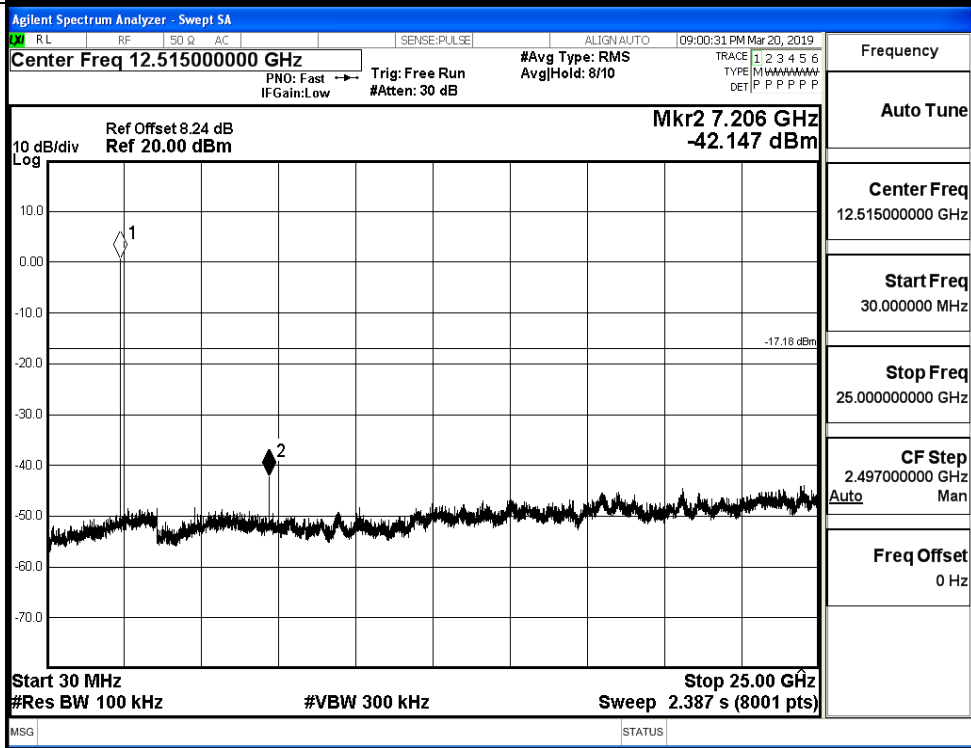


BT LE\_LCH\_Graphs

Pref/BT LE/LCH

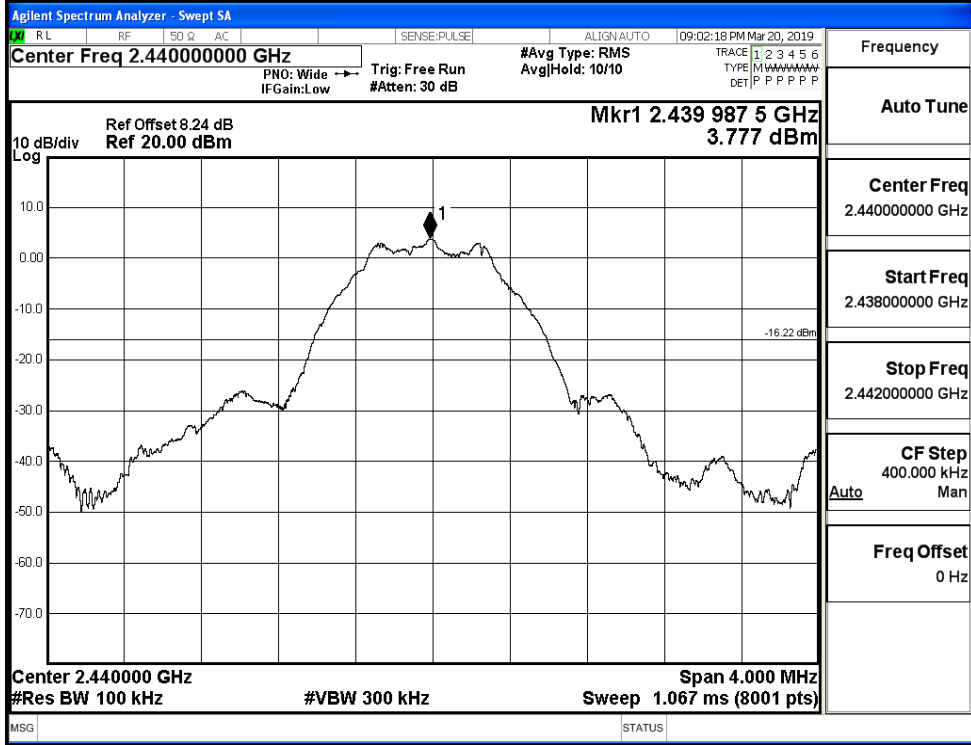


Puw/BT LE/LCH

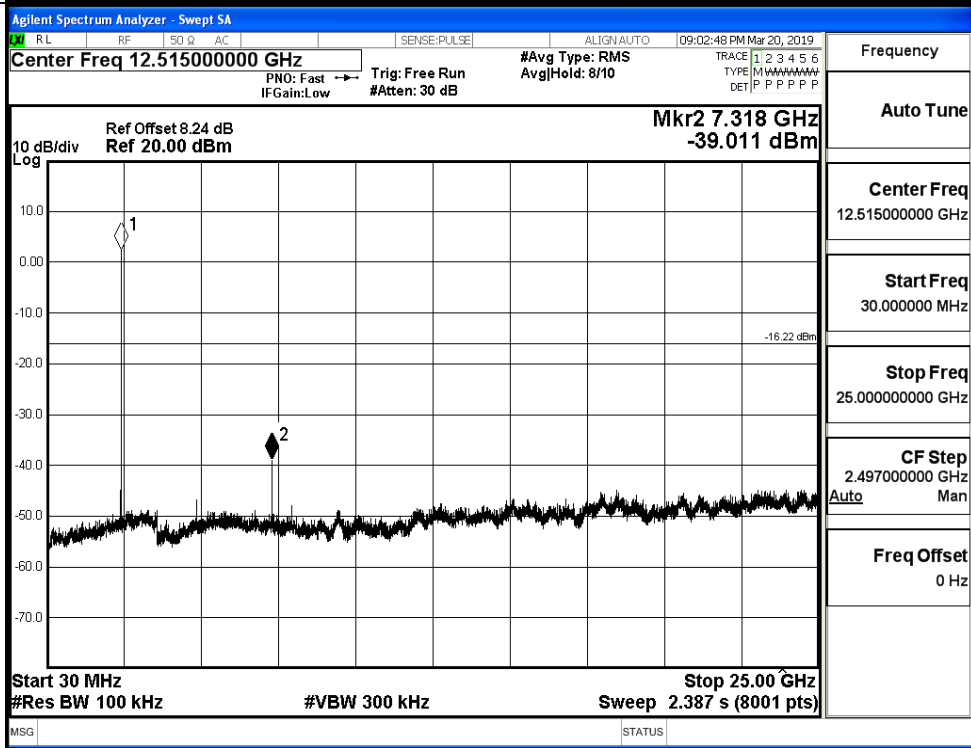


BT LE\_MCH\_Graphs

Pref/BT LE/MCH

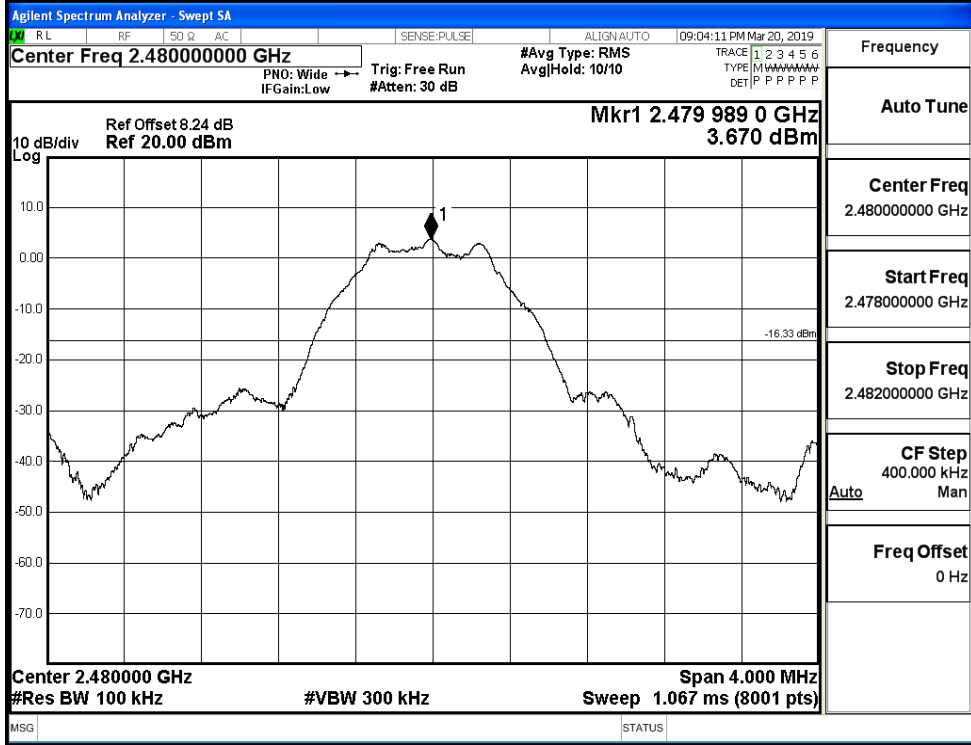


Puw/BT LE/MCH

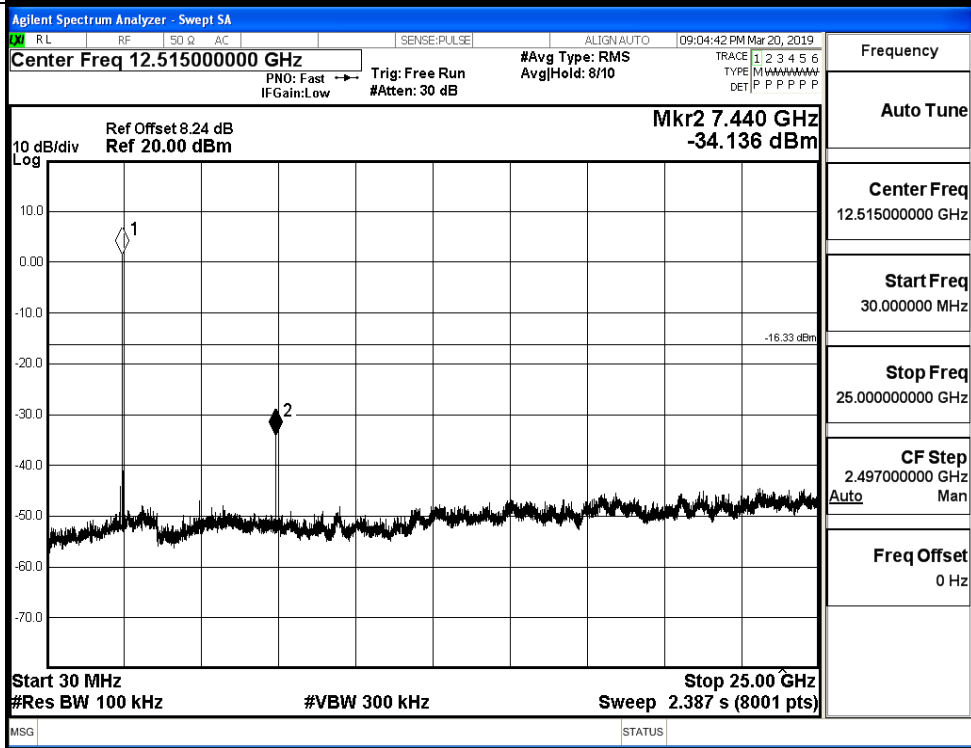


BT LE\_HCH\_Graphs

Pref/BT LE/HCH



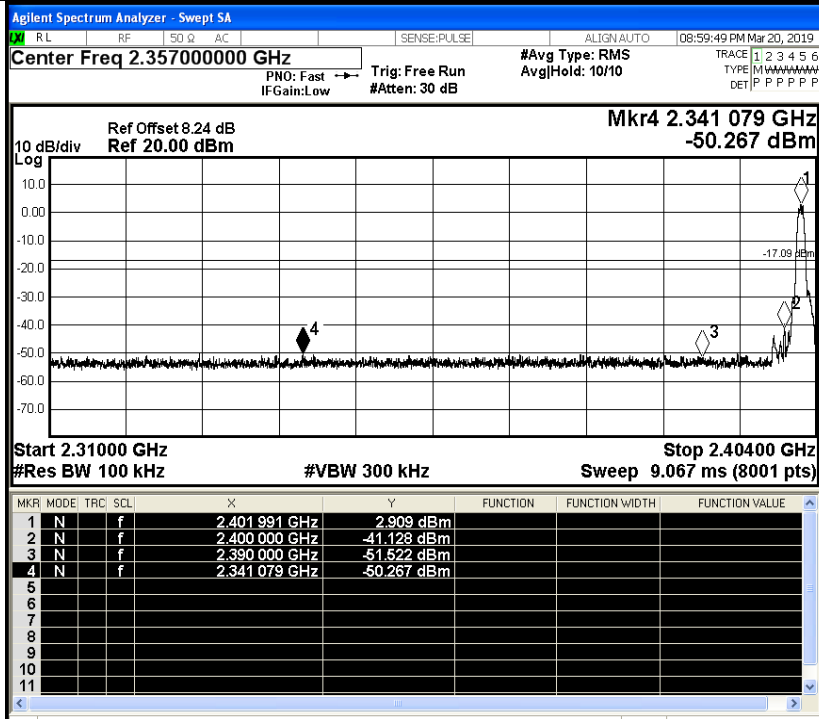
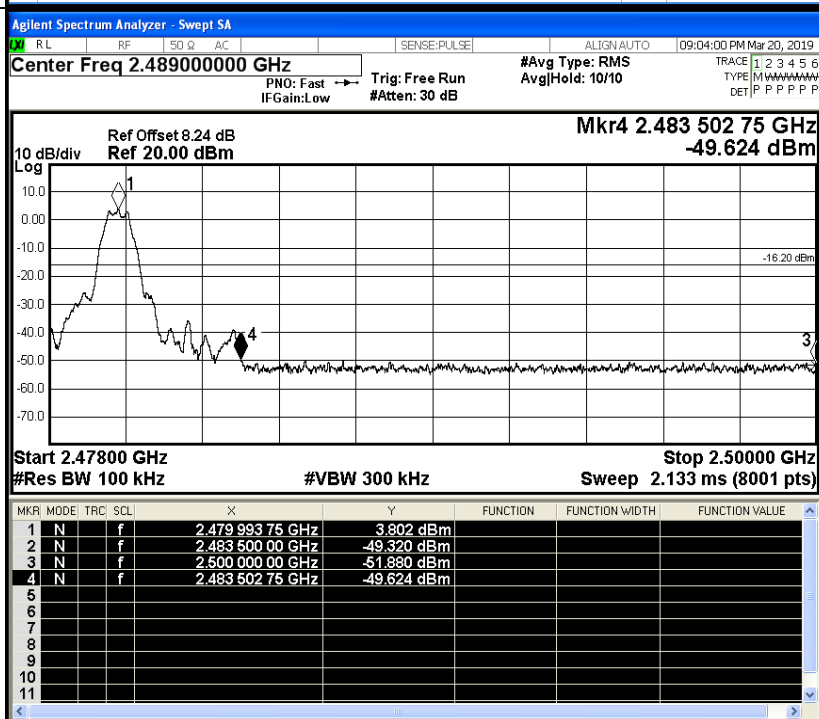
Puw/BT LE/HCH



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

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	2.909	-50.267	-17.09	PASS
BT LE	HCH	3.802	-49.624	-16.2	PASS

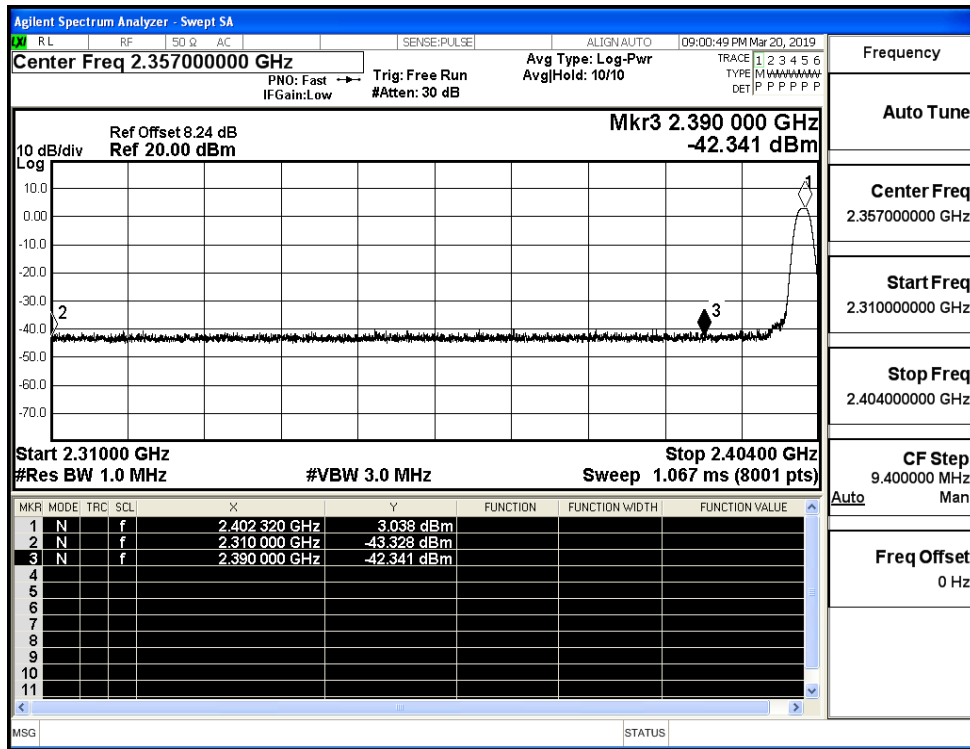
Test Graphs

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>

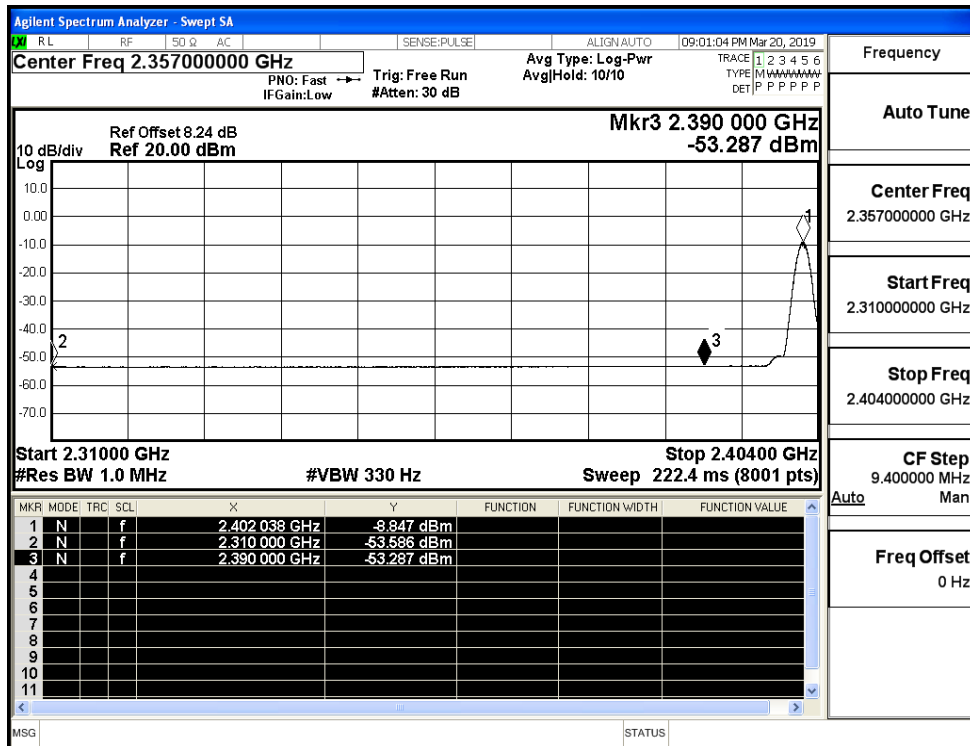
### B.7 Restrict-band band-edge measurements

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	-43.33	2.0	0	51.93	PEAK	74	PASS
		Ant1	2310.0	-53.59	2.0	0	41.67	AV	54	PASS
		Ant1	2390.0	-42.34	2.0	0	52.92	PEAK	74	PASS
		Ant1	2390.0	-53.29	2.0	0	41.97	AV	54	PASS
	2480	Ant1	2483.5	-35.79	2.0	0	59.47	PEAK	74	PASS
		Ant1	2483.5	-49.10	2.0	0	46.16	AV	54	PASS
		Ant1	2500.0	-41.99	2.0	0	53.27	PEAK	74	PASS
		Ant1	2500.0	-52.96	2.0	0	42.30	AV	54	PASS

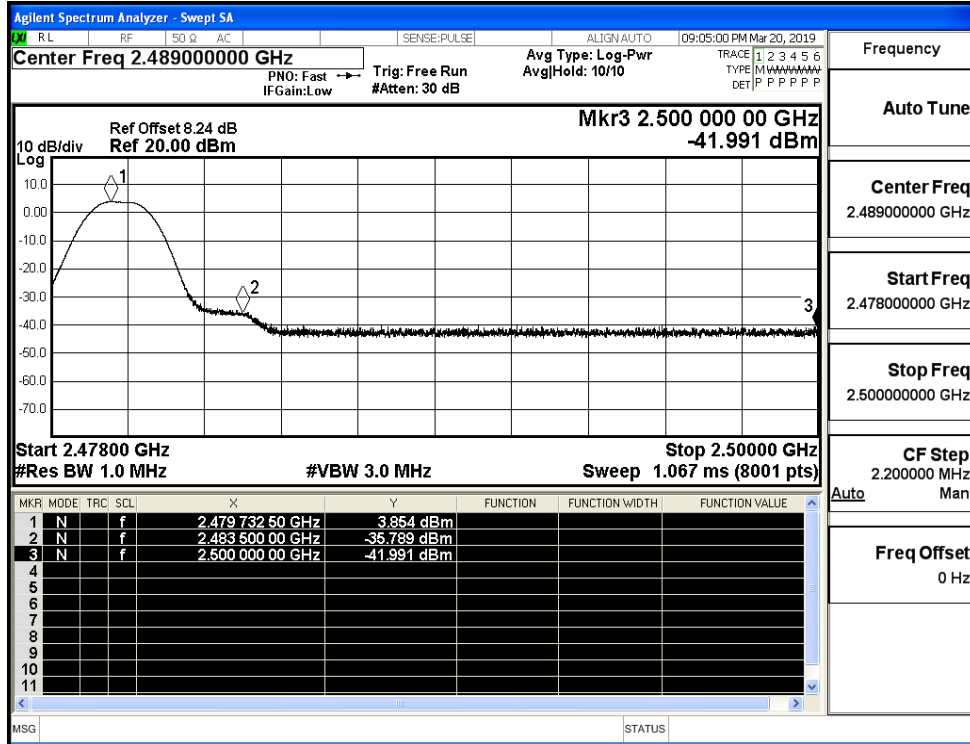
Restrict-band band-edge measurements\_BT LE\_2402\_Ant1\_PEAK



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

