

## Appendix B

### RF Test Data for BT LE V4.2 (Conducted Measurement)

Product Name: Carrier Air Monitor

Trade Mark: N/A

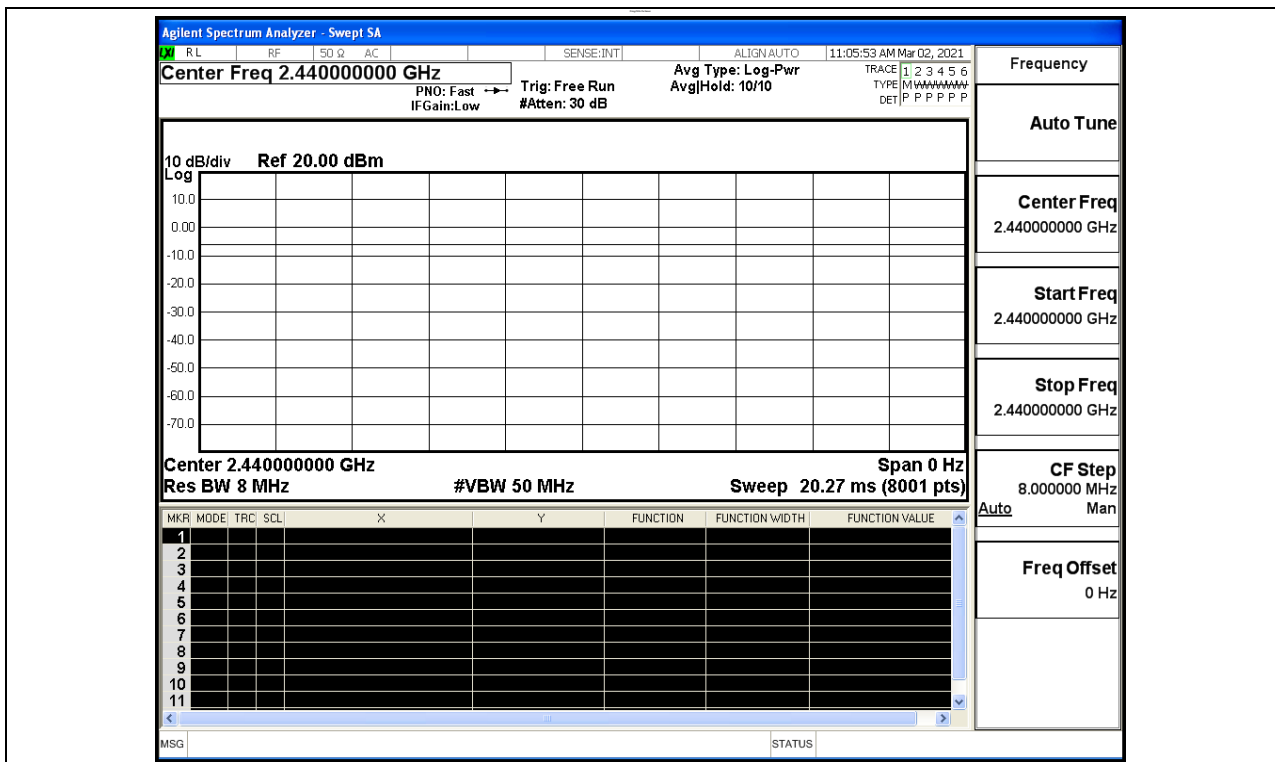
Test Model: IEQCCWWRT01

#### Environmental Conditions

Temperature:	22.5° C
Relative Humidity:	53.8%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond Lu
Supervised by:	Li Huan

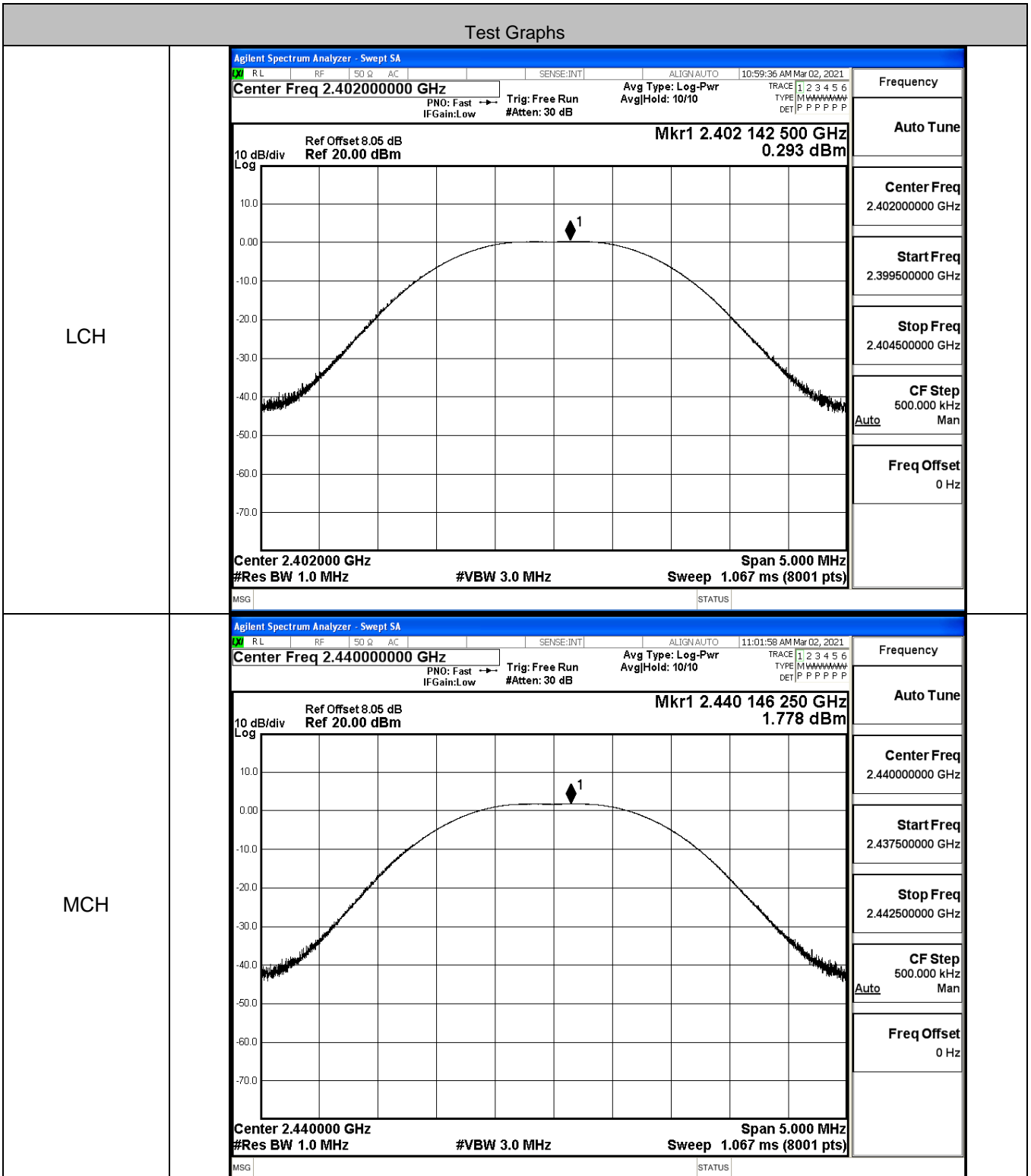
#### B.1 Duty Cycle

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

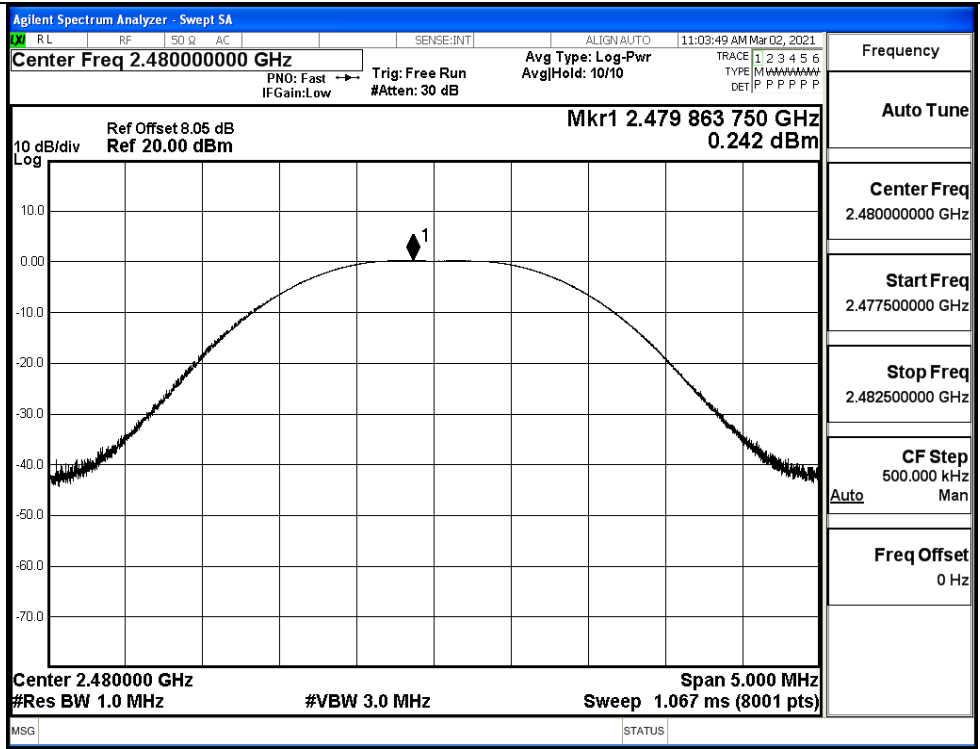


### B.2 Maximum Conducted Peak Output Power

Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	0.293	30	PASS
BT LE	MCH	1.778	30	PASS
BT LE	HCH	0.242	30	PASS

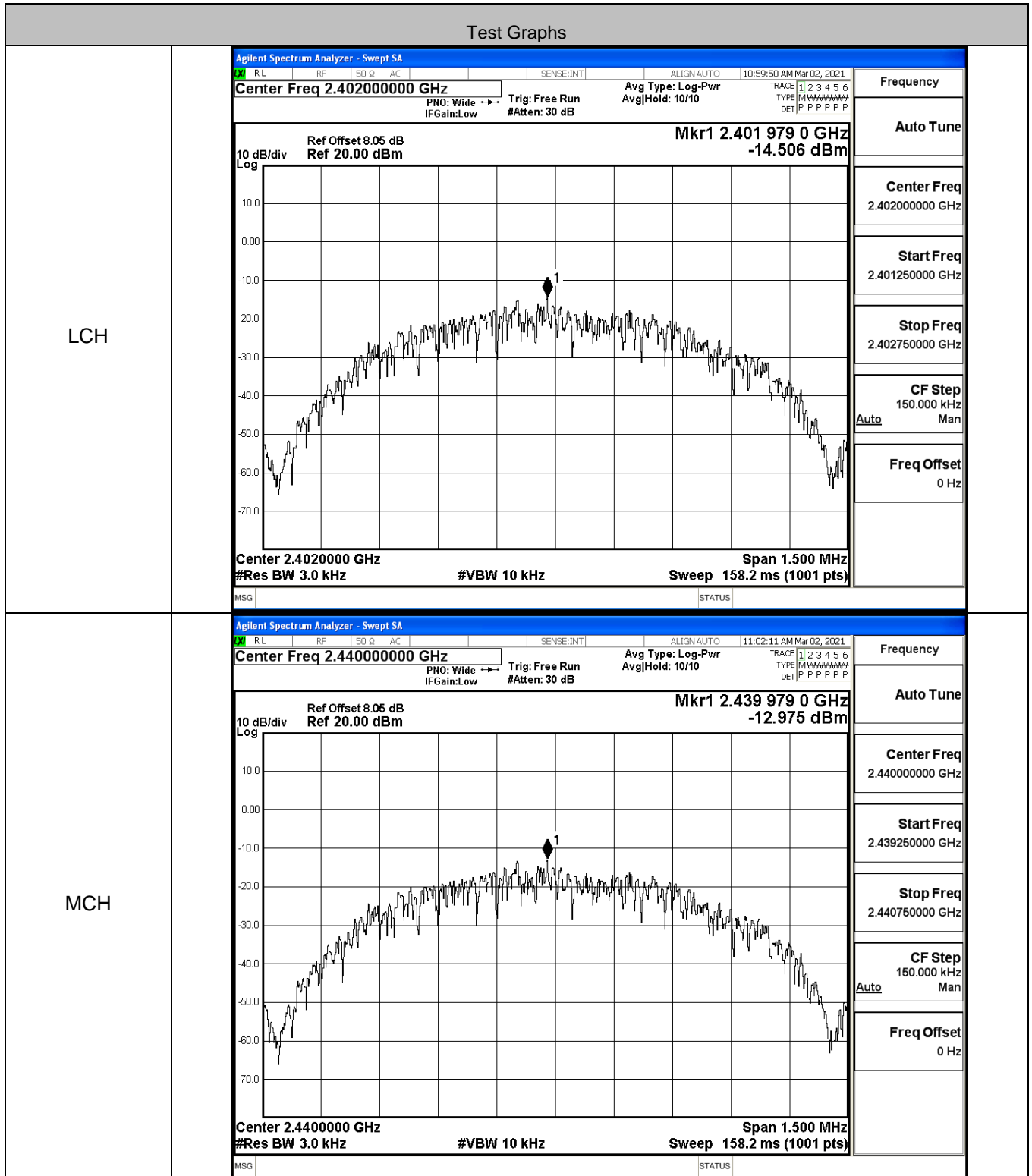


HCH

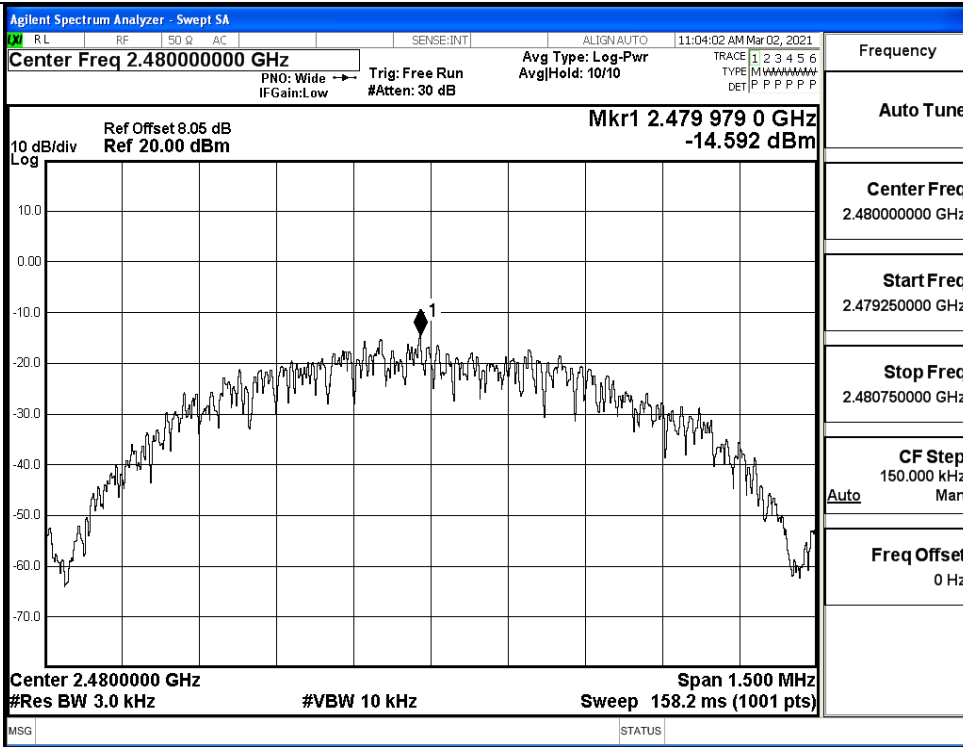


### B.3 Maximum Power Spectral Density

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-14.506	8	PASS
BT LE	MCH	-12.975	8	PASS
BT LE	HCH	-14.592	8	PASS



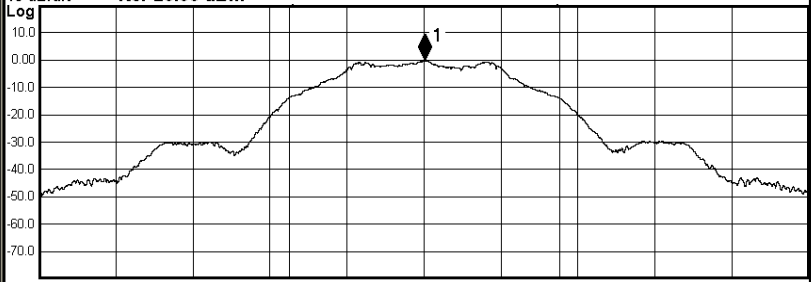
HCH



**B.4 6dB Bandwidth**

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6699	≥0.5	PASS
BT LE	MCH	0.6596	≥0.5	PASS
BT LE	HCH	0.6697	≥0.5	PASS

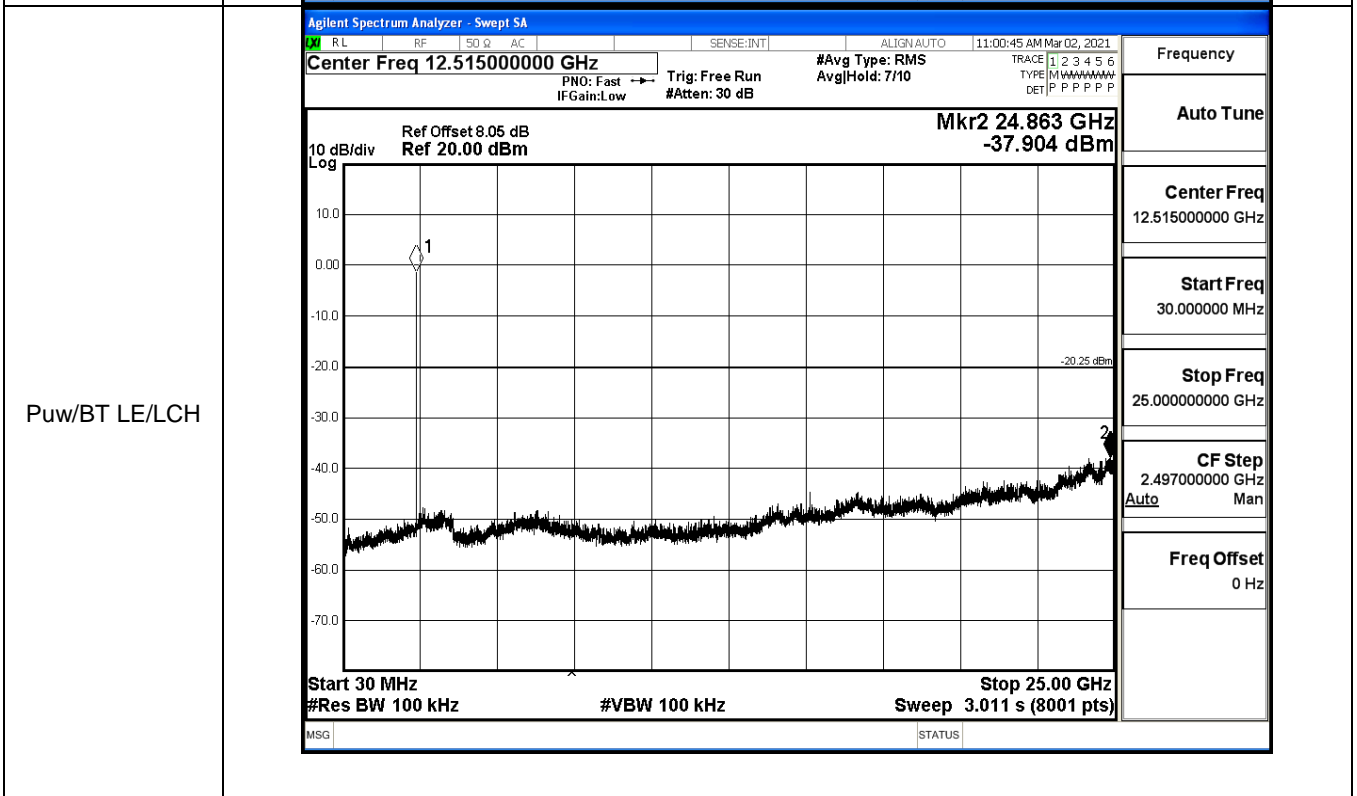
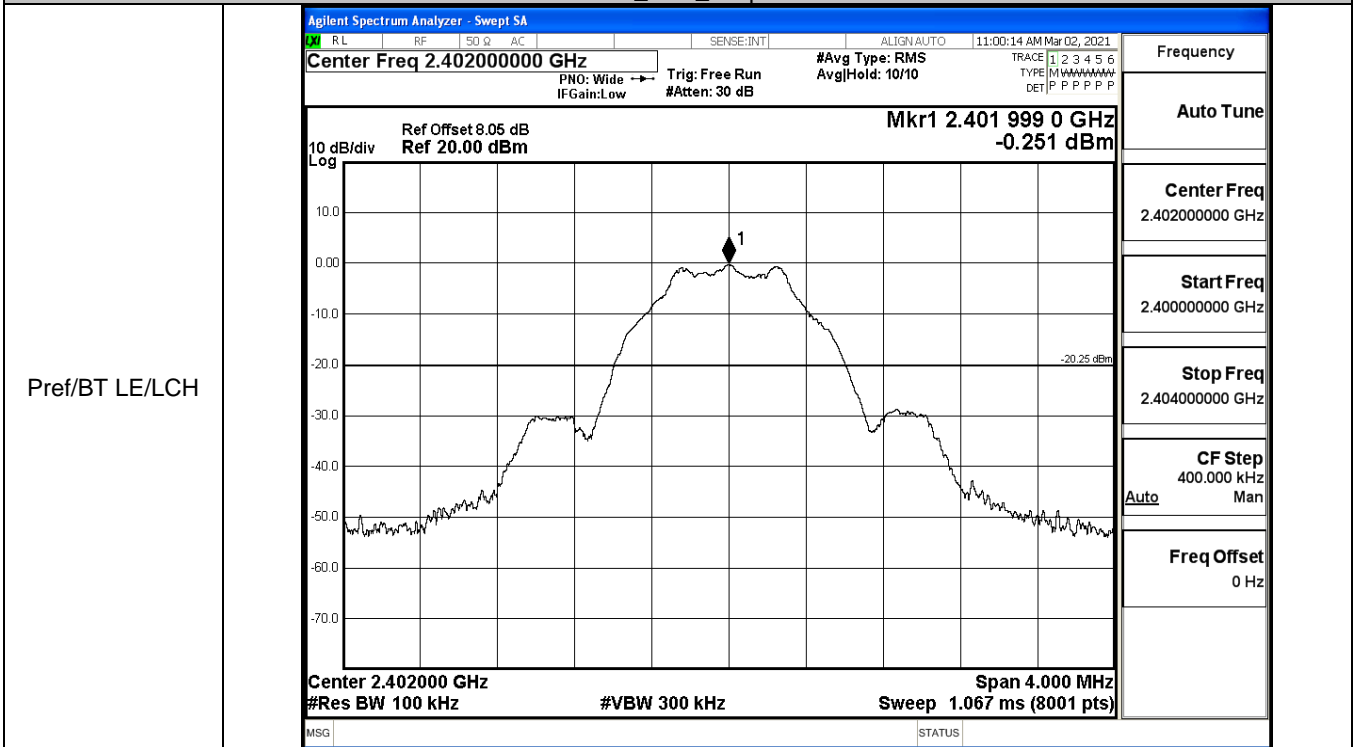
Test Graphs														
LCH	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.40200000 GHz    Center Freq: 2.402000000 GHz    Radio Std: None                      Trig: Free Run    AvgJHold: 1/1                      #IFGain:Low    #Atten: 30 dB    Radio Device: BTS</p> <p>Ref Offset 8.05 dB    Mkr1 2.402041 GHz                      Ref 20.00 dBm    -0.26549 dBm</p> <p>Center 2.402 GHz    Span 3 MHz                      #Res BW 100 kHz    #VBW 300 kHz    Sweep 1.067 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>6.49 dBm</td> </tr> <tr> <td><b>1.0496 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>MSG    STATUS</p>	Occupied Bandwidth	Total Power	6.49 dBm	<b>1.0496 MHz</b>			Transmit Freq Error	OBW Power	99.00 %	x dB Bandwidth	x dB	-6.00 dB	<p>Frequency</p> <p>Center Freq 2.402000000 GHz</p> <p>CF Step 300.000 kHz Auto    Man</p> <p>Freq Offset 0 Hz</p>
	Occupied Bandwidth	Total Power	6.49 dBm											
<b>1.0496 MHz</b>														
Transmit Freq Error	OBW Power	99.00 %												
x dB Bandwidth	x dB	-6.00 dB												
MCH	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.44000000 GHz    Center Freq: 2.440000000 GHz    Radio Std: None                      Trig: Free Run    AvgJHold: 1/1                      #IFGain:Low    #Atten: 30 dB    Radio Device: BTS</p> <p>Ref Offset 8.05 dB    Mkr1 2.4399989 GHz                      Ref 20.00 dBm    1.2579 dBm</p> <p>Center 2.44 GHz    Span 3 MHz                      #Res BW 100 kHz    #VBW 300 kHz    Sweep 1.067 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>8.02 dBm</td> </tr> <tr> <td><b>1.0486 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>MSG    STATUS</p>	Occupied Bandwidth	Total Power	8.02 dBm	<b>1.0486 MHz</b>			Transmit Freq Error	OBW Power	99.00 %	x dB Bandwidth	x dB	-6.00 dB	<p>Frequency</p> <p>Center Freq 2.440000000 GHz</p> <p>CF Step 300.000 kHz Auto    Man</p> <p>Freq Offset 0 Hz</p>
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<b>1.0486 MHz</b>														
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x dB Bandwidth	x dB	-6.00 dB												

HCH	Agilent Spectrum Analyzer - Occupied BW			RL	RF	50 Ω	AC	SENSE:INT	ALIGN:AUTO	11:03:38 AM Mar 02, 2021
	Center Freq 2.480000000 GHz			Center Freq: 2.480000000 GHz			Radio Std: None			Frequency
				Trig: Free Run			AvgJHold: 1/1			
				#IFGain:Low			#Atten: 30 dB			Radio Device: BTS
			Ref Offset 8.05 dB			Mkr1 2.4800019 GHz				
			Ref 20.00 dBm			-0.28060 dBm				
			 <p>10 dB/div Log -70.0 to 10.0</p>			<b>Center Freq</b> 2.480000000 GHz				
			Center 2.48 GHz			Span 3 MHz			CF Step	
			#Res BW 100 kHz			#VBW 300 kHz			300.000 kHz	
						Sweep 1.067 ms			Man	
			<b>Occupied Bandwidth</b> <span style="font-size: 1.2em; font-weight: bold;">1.0488 MHz</span>			<b>Total Power</b> 6.47 dBm			<b>Freq Offset</b> 0 Hz	
			Transmit Freq Error 2.799 kHz			OBW Power 99.00 %				
			x dB Bandwidth 669.7 kHz			x dB -6.00 dB				
			MSG			STATUS				

### B.5 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-0.251	-37.904	-20.251	PASS
BT LE	MCH	1.267	-38.266	-18.733	PASS
BT LE	HCH	-0.342	-37.571	-20.342	PASS

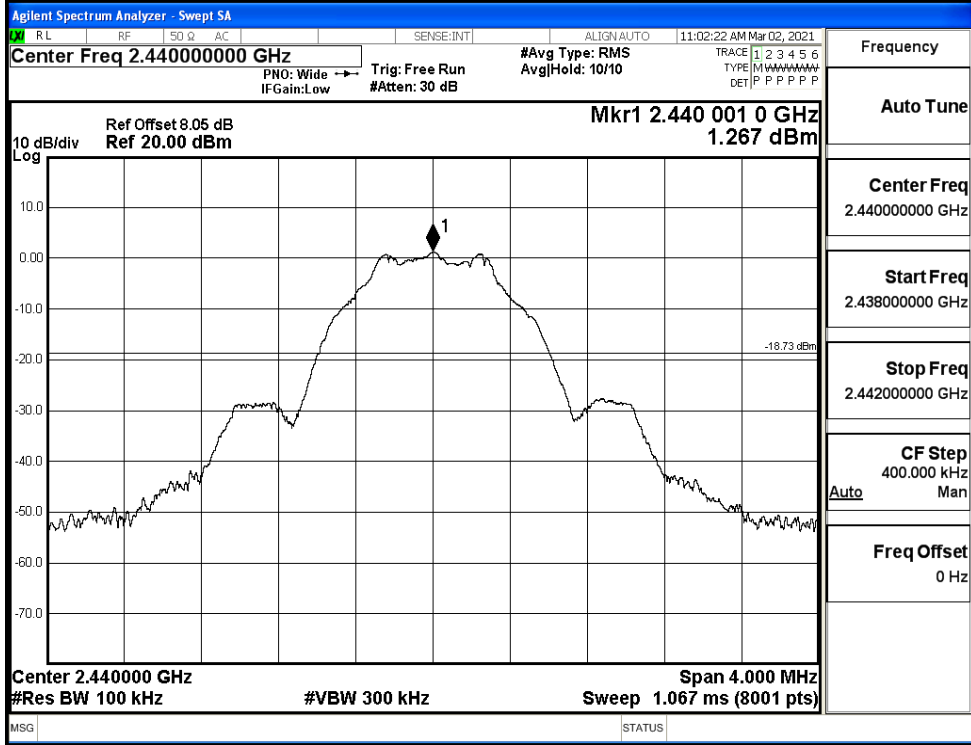
BT LE\_LCH\_Graphs



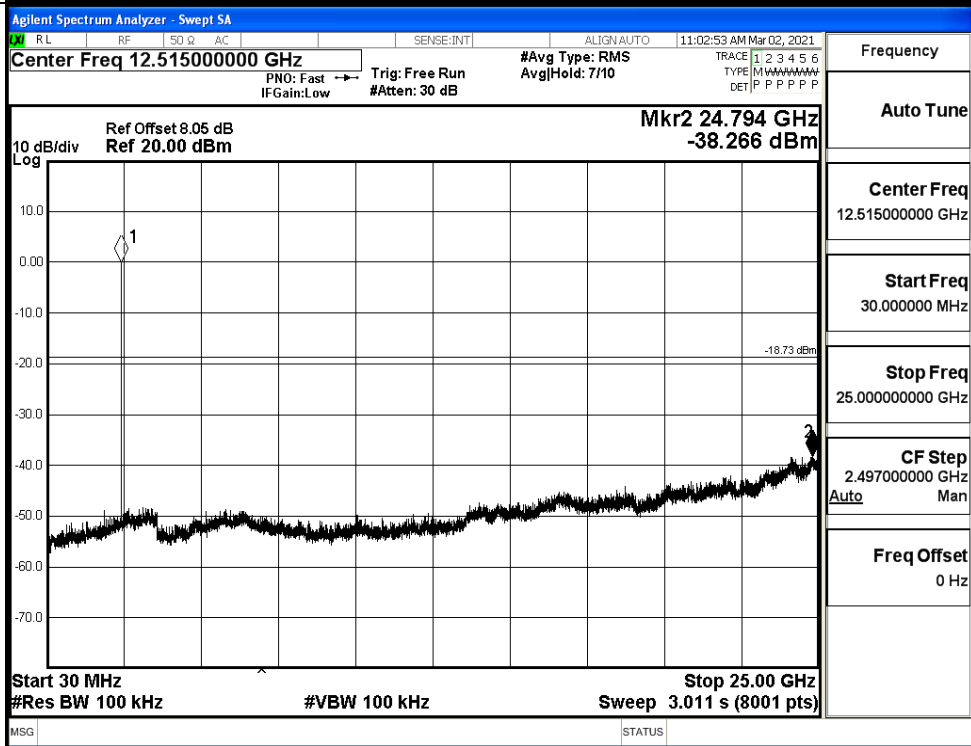


BT LE\_MCH\_Graphs

Pref/BT LE/MCH

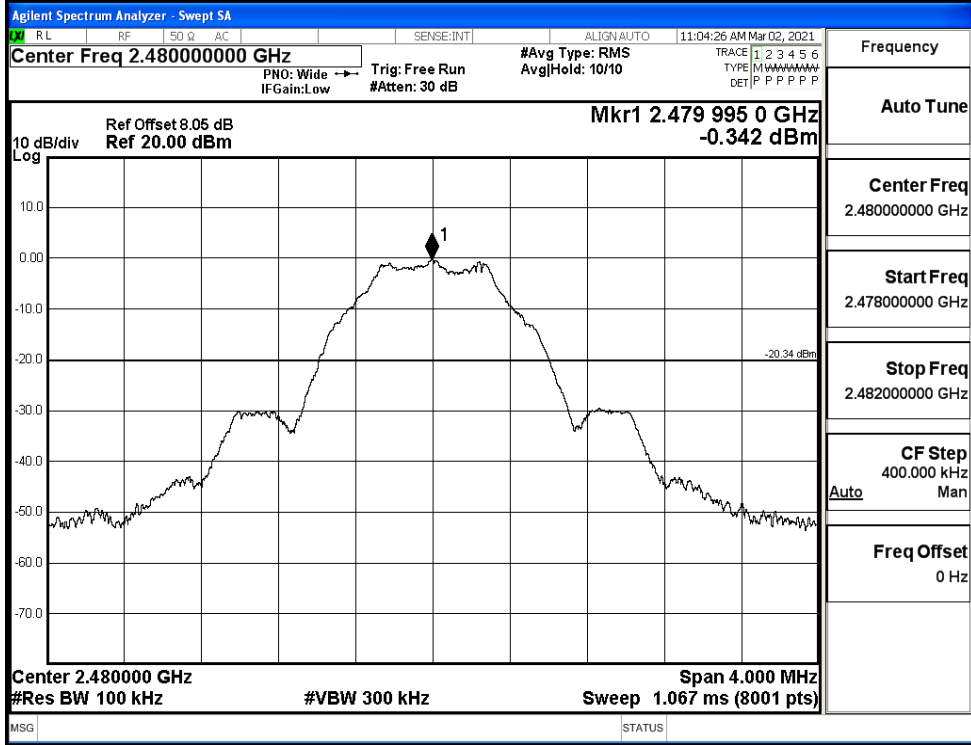


Puw/BT LE/MCH

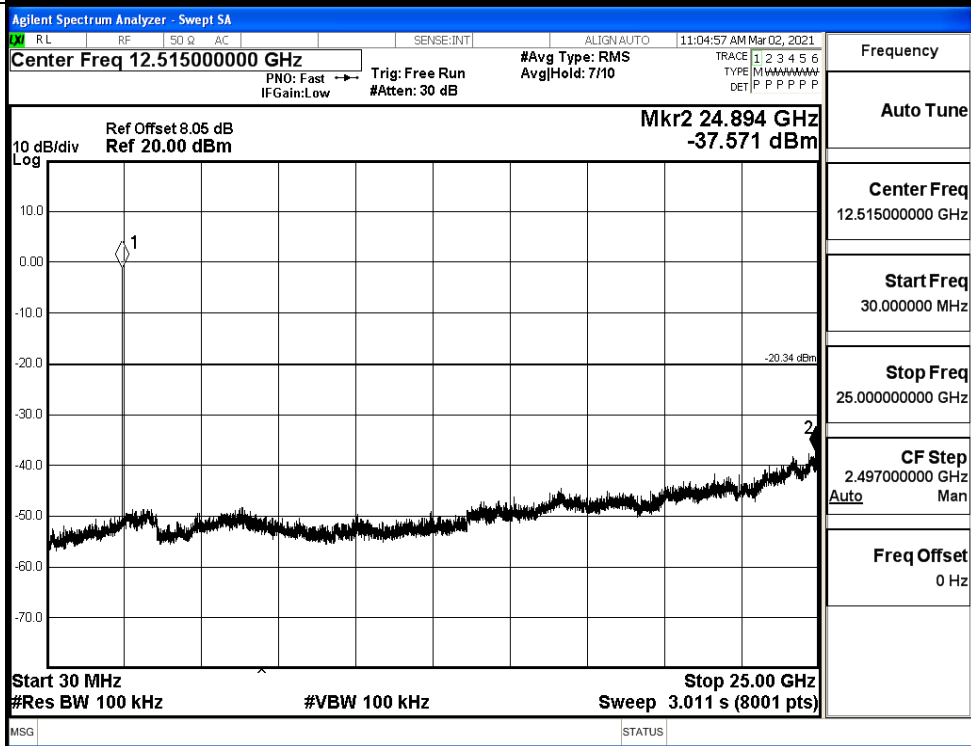


BT LE\_HCH\_Graphs

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	-0.493	-49.605	-20.49	PASS
BT LE	HCH	-0.205	-49.576	-20.21	PASS

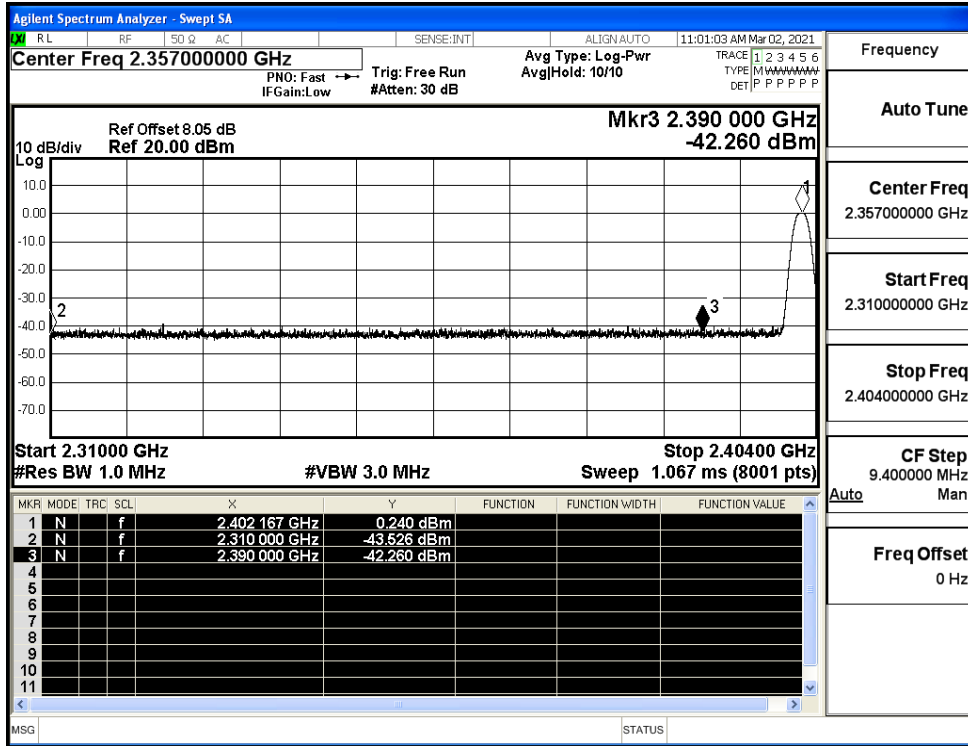
Test Graphs

LCH	<p>Agilent Spectrum Analyzer - Swept SA                  Center Freq 2.35700000 GHz                  Ref Offset 8.05 dB, Ref 20.00 dBm                  Mkr4 2.336 485 GHz -49.605 dBm                  Start 2.31000 GHz, Stop 2.40400 GHz                  #Res BW 100 kHz, #VBW 300 kHz, Sweep 9.067 ms (8001 pts)</p> <table border="1" style="font-size: small;"> <thead> <tr> <th>MKR</th> <th>MODE</th> <th>TRC</th> <th>SCL</th> <th>X</th> <th>Y</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr><td>1</td><td>N</td><td>f</td><td></td><td>2.402 014 GHz</td><td>-0.493 dBm</td><td></td><td></td><td></td></tr> <tr><td>2</td><td>N</td><td>f</td><td></td><td>2.400 000 GHz</td><td>-52.919 dBm</td><td></td><td></td><td></td></tr> <tr><td>3</td><td>N</td><td>f</td><td></td><td>2.390 000 GHz</td><td>-54.850 dBm</td><td></td><td></td><td></td></tr> <tr><td>4</td><td>N</td><td>f</td><td></td><td>2.336 485 GHz</td><td>-49.605 dBm</td><td></td><td></td><td></td></tr> </tbody> </table>	MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	f		2.402 014 GHz	-0.493 dBm				2	N	f		2.400 000 GHz	-52.919 dBm				3	N	f		2.390 000 GHz	-54.850 dBm				4	N	f		2.336 485 GHz	-49.605 dBm				Frequency Auto Tune Center Freq 2.35700000 GHz Start Freq 2.310000000 GHz Stop Freq 2.404000000 GHz CF Step 9.400000 MHz Freq Offset 0 Hz
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HCH	<p>Agilent Spectrum Analyzer - Swept SA                  Center Freq 2.48900000 GHz                  Ref Offset 8.05 dB, Ref 20.00 dBm                  Mkr4 2.489 268 50 GHz -49.576 dBm                  Start 2.47800 GHz, Stop 2.50000 GHz                  #Res BW 100 kHz, #VBW 300 kHz, Sweep 2.133 ms (8001 pts)</p> <table border="1" style="font-size: small;"> <thead> <tr> <th>MKR</th> <th>MODE</th> <th>TRC</th> <th>SCL</th> <th>X</th> <th>Y</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr><td>1</td><td>N</td><td>f</td><td></td><td>2.480 004 75 GHz</td><td>-0.205 dBm</td><td></td><td></td><td></td></tr> <tr><td>2</td><td>N</td><td>f</td><td></td><td>2.483 500 00 GHz</td><td>-51.654 dBm</td><td></td><td></td><td></td></tr> <tr><td>3</td><td>N</td><td>f</td><td></td><td>2.500 000 00 GHz</td><td>-52.157 dBm</td><td></td><td></td><td></td></tr> <tr><td>4</td><td>N</td><td>f</td><td></td><td>2.489 268 50 GHz</td><td>-49.576 dBm</td><td></td><td></td><td></td></tr> </tbody> </table>	MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	f		2.480 004 75 GHz	-0.205 dBm				2	N	f		2.483 500 00 GHz	-51.654 dBm				3	N	f		2.500 000 00 GHz	-52.157 dBm				4	N	f		2.489 268 50 GHz	-49.576 dBm				Frequency Auto Tune Center Freq 2.48900000 GHz Start Freq 2.478000000 GHz Stop Freq 2.500000000 GHz CF Step 2.200000 MHz Freq Offset 0 Hz
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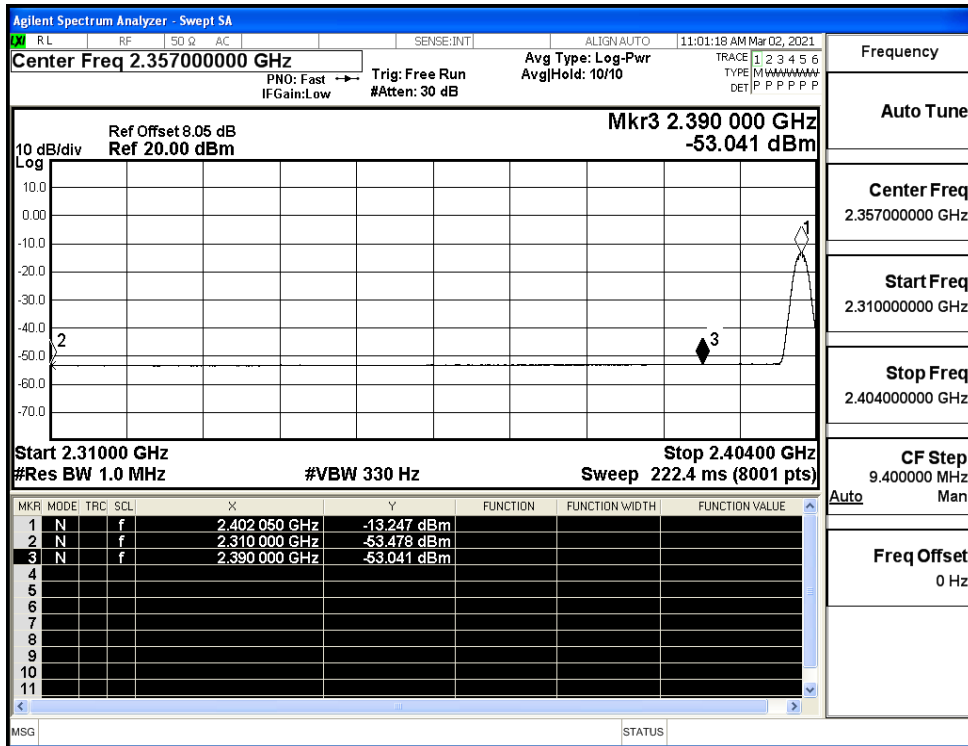
### B.7 Restrict-band band-edge measurements

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	-43.53	2.0	0	51.73	PEAK	74	PASS
		Ant1	2310.0	-53.48	2.0	0	41.78	AV	54	PASS
		Ant1	2390.0	-42.26	2.0	0	53.00	PEAK	74	PASS
		Ant1	2390.0	-53.04	2.0	0	42.22	AV	54	PASS
	2480	Ant1	2483.5	-42.65	2.0	0	52.61	PEAK	74	PASS
		Ant1	2483.5	-52.34	2.0	0	42.92	AV	54	PASS
		Ant1	2500.0	-43.36	2.0	0	51.90	PEAK	74	PASS
		Ant1	2500.0	-52.16	2.0	0	43.09	AV	54	PASS

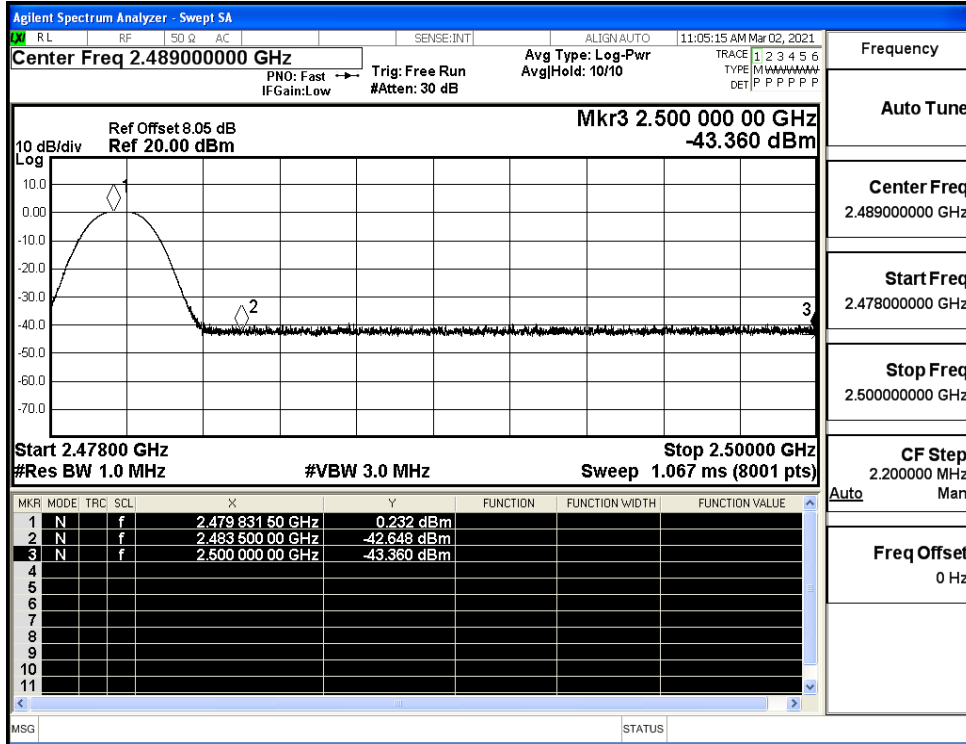
Restrict-band band-edge measurements\_BT LE\_2402\_Ant1\_PEAK



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

