

Appendix A

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

Product Name: Smart Watch

Trade Mark: N/A

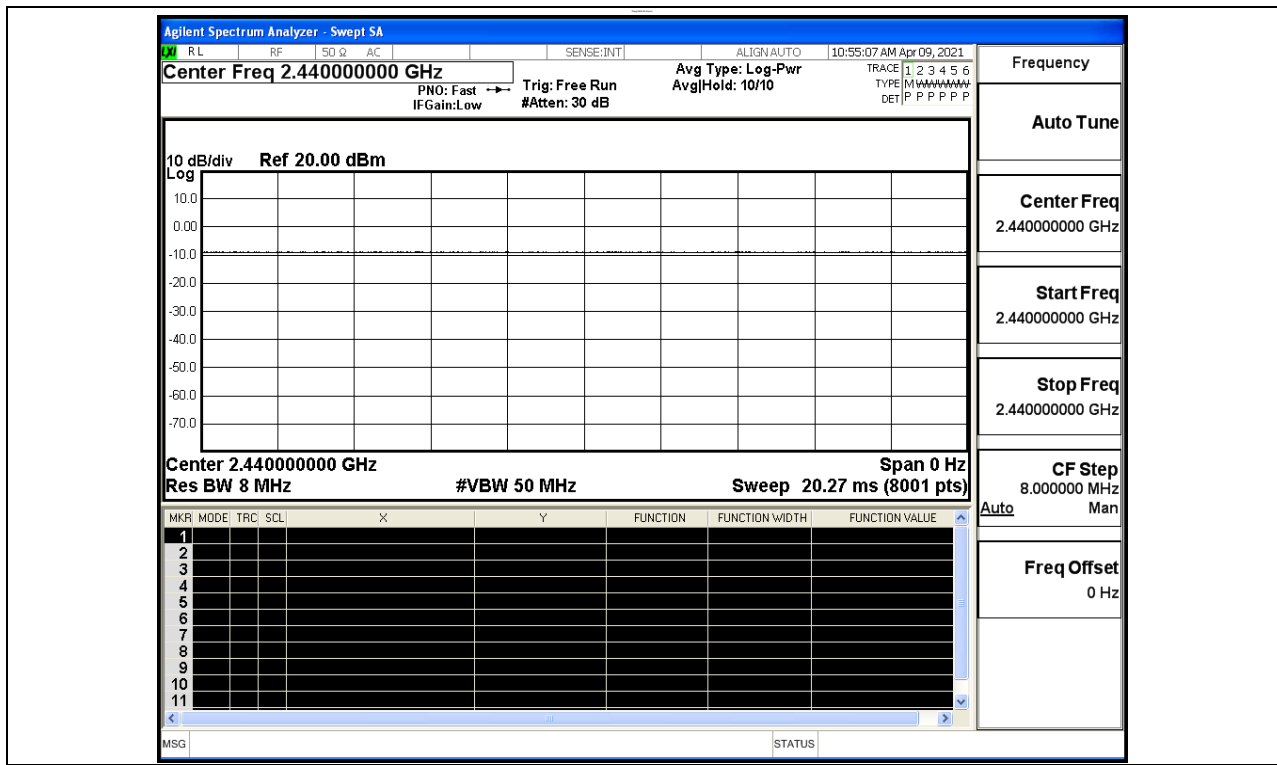
Test Model: TS17

Environmental Conditions

Temperature:	24.2 ° C
Relative Humidity:	54.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Jay Li
Supervised by:	Li Huan

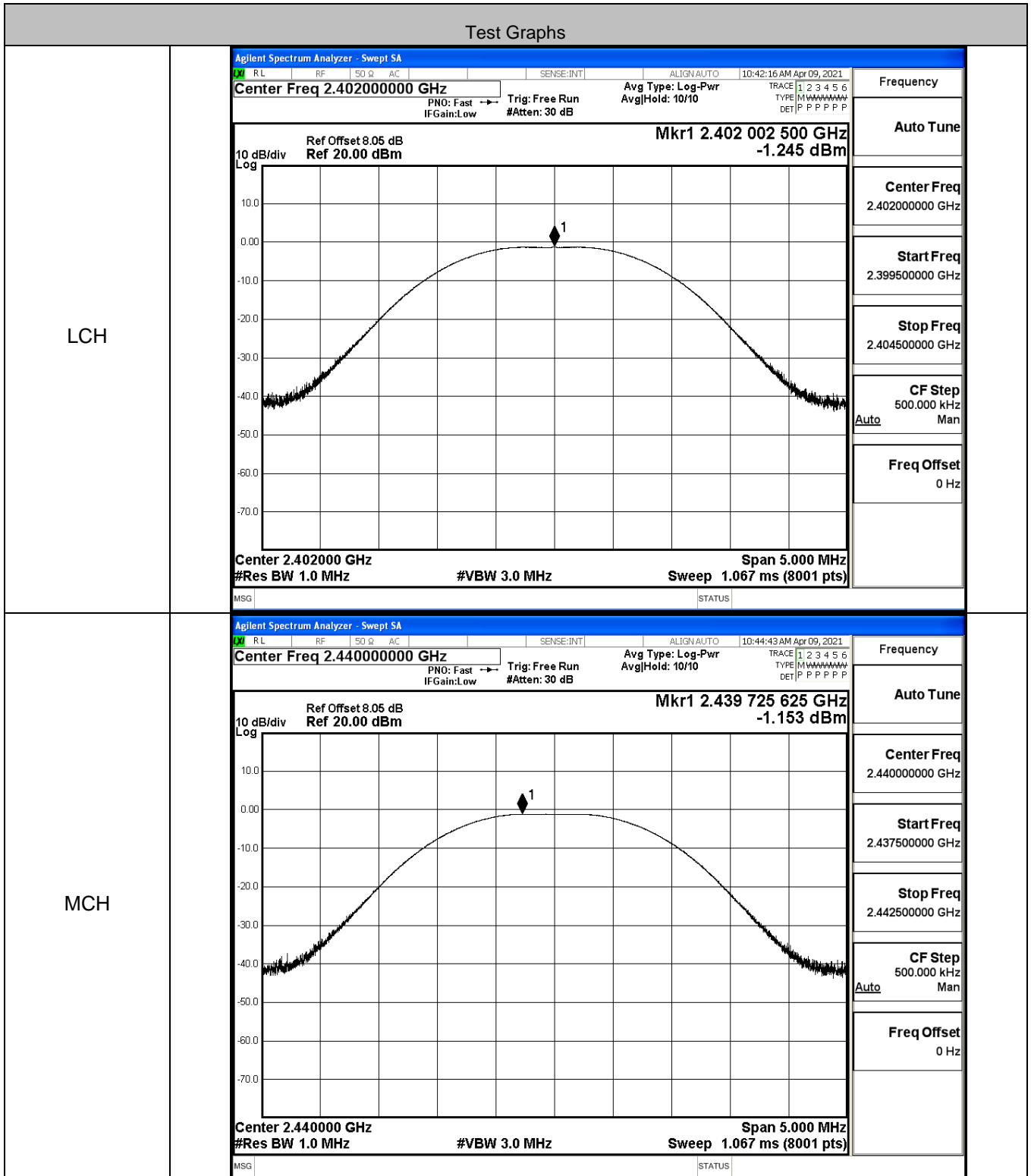
A.1 Duty Cycle

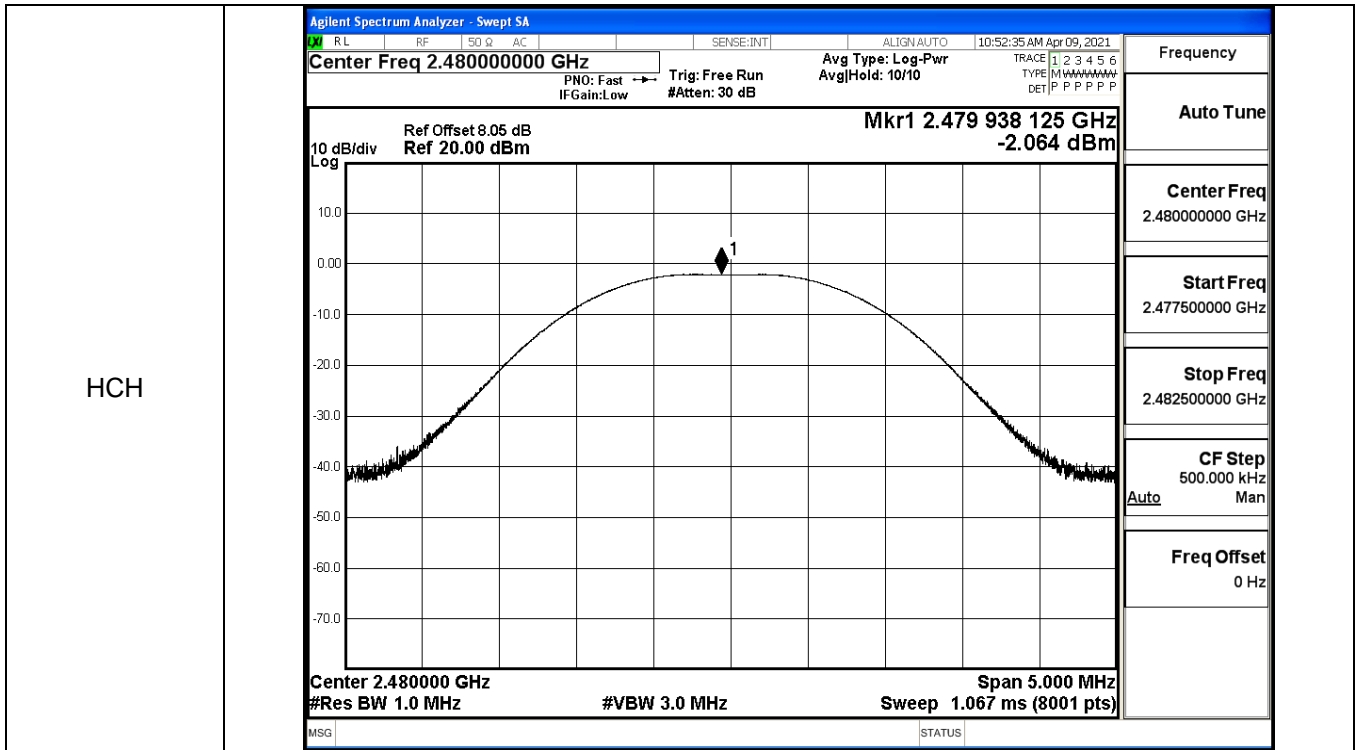
Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
BT LE	2440	Ant1	100	PASS



A.2 Maximum Conducted Peak Output Power

Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	-1.245	30	PASS
BT LE	MCH	-1.153	30	PASS
BT LE	HCH	-2.064	30	PASS

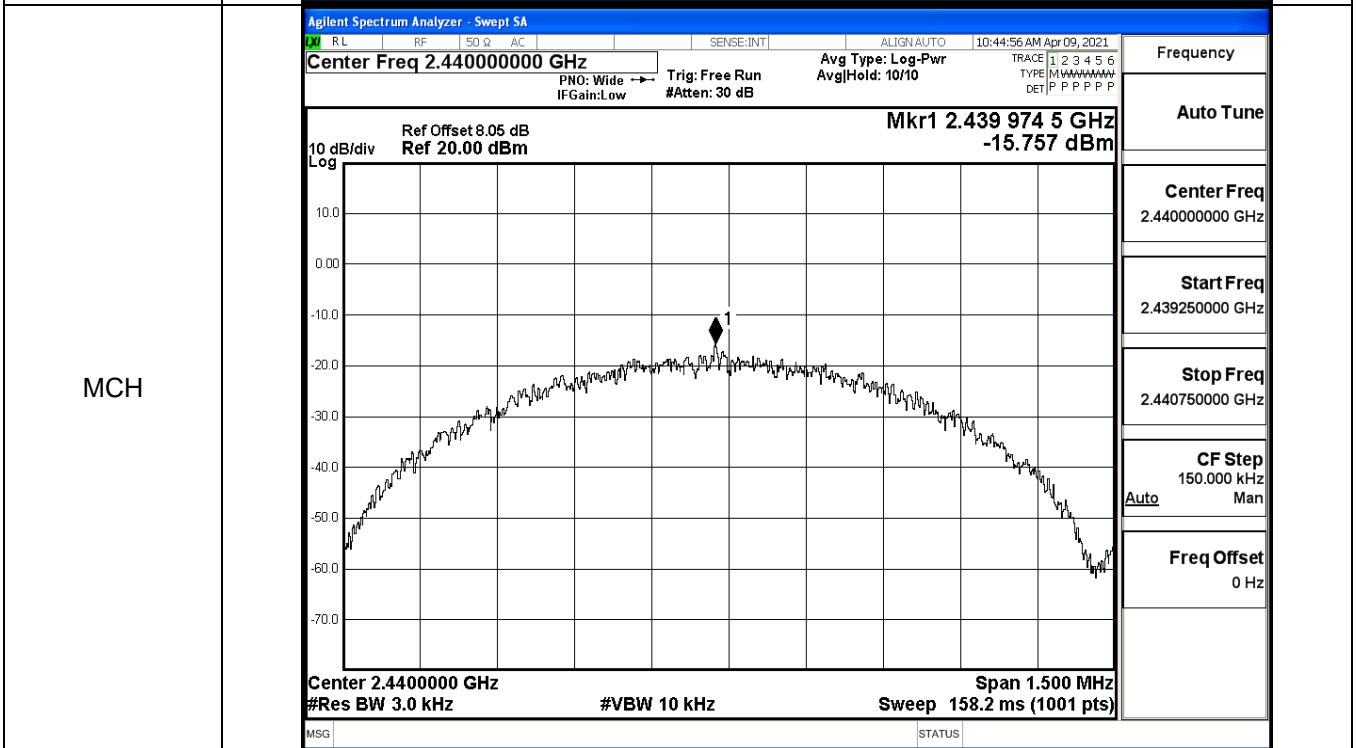
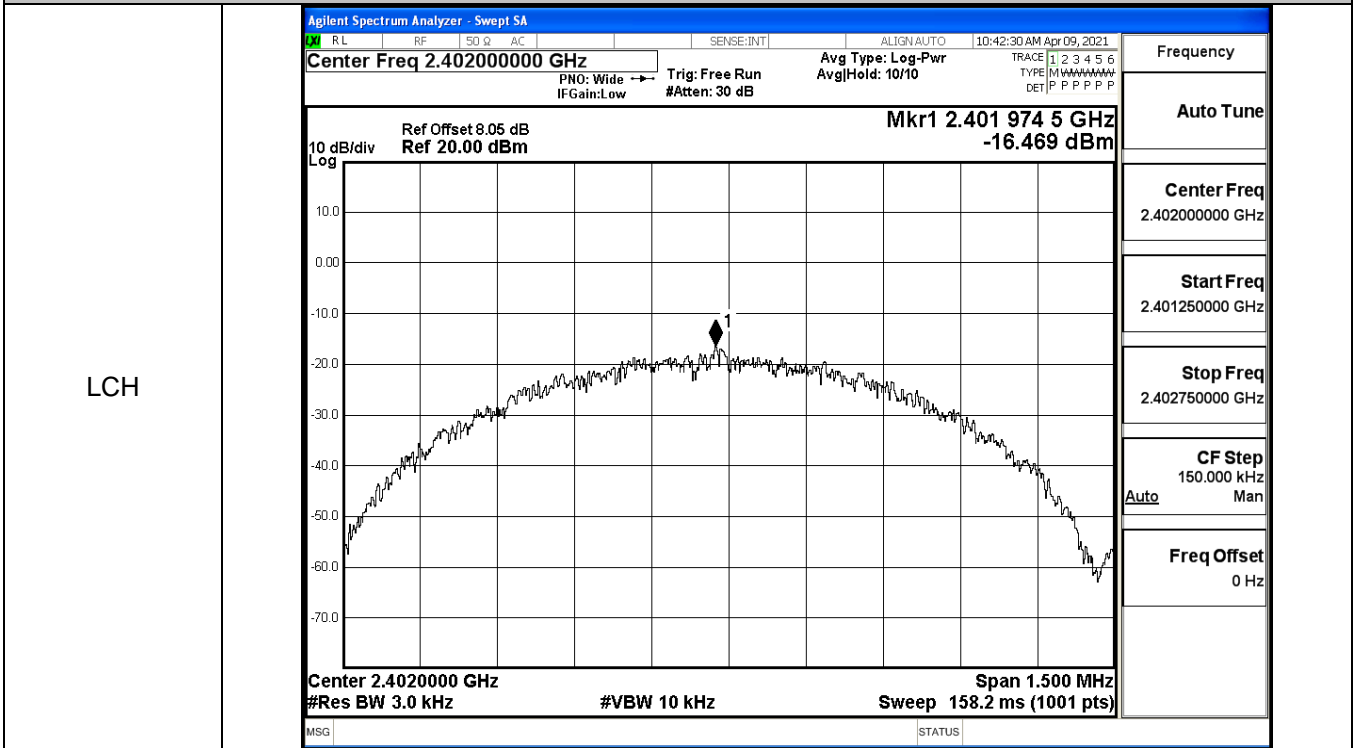




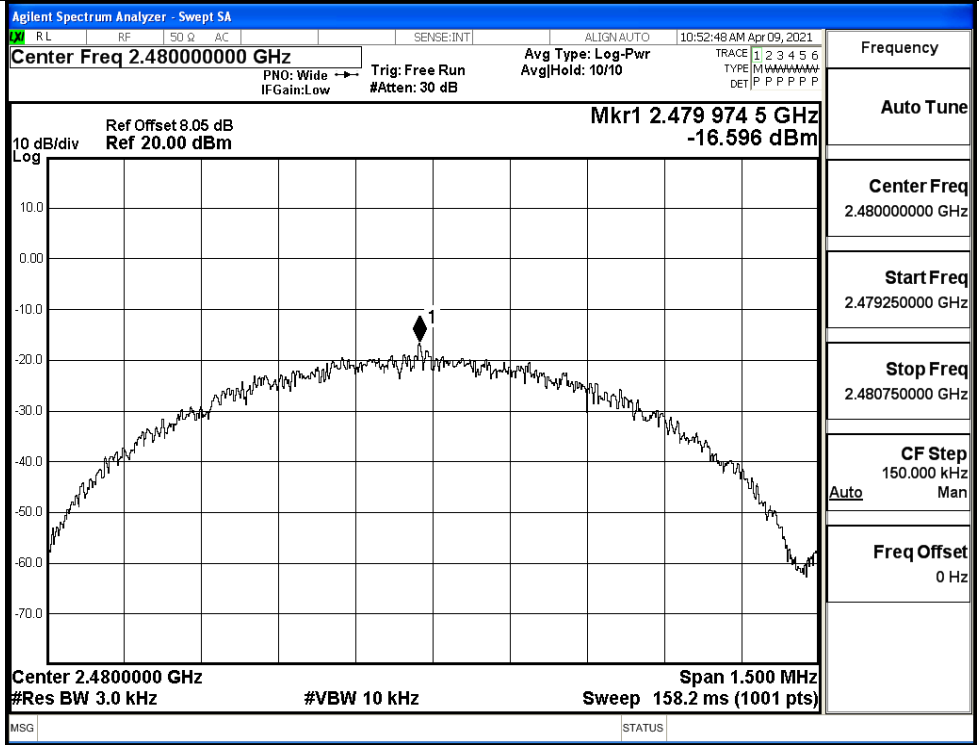
A.3 Maximum Power Spectral Density

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-16.469	8	PASS
BT LE	MCH	-15.757	8	PASS
BT LE	HCH	-16.596	8	PASS

Test Graphs



HCH



A.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6528	≥0.5	PASS
BT LE	MCH	0.6530	≥0.5	PASS
BT LE	HCH	0.6472	≥0.5	PASS

Test Graphs

LCH	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.402000000 GHz Center Freq: 2.402000000 GHz Radio Std: None</p> <p>Trig: Free Run AvgHold: 1/1</p> <p>#IFGain:Low #Atten: 30 dB Radio Device: BTS</p> <p>Ref Offset 8.05 dB Ref 20.00 dBm Mkr1 2.4019606 GHz -1.8647 dBm</p> <p>Center 2.402 GHz Span 3 MHz</p> <p>#Res BW 100 kHz #VBW 300 kHz Sweep 1.067 ms</p> <table border="0"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>4.74 dBm</td> </tr> <tr> <td>1.0304 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>-25.456 kHz</td> <td>OBW Power</td> </tr> <tr> <td>x dB Bandwidth</td> <td>652.8 kHz</td> <td>x dB</td> </tr> <tr> <td></td> <td></td> <td>-6.00 dB</td> </tr> </table> <p>MSG STATUS</p>	Occupied Bandwidth	Total Power	4.74 dBm	1.0304 MHz			Transmit Freq Error	-25.456 kHz	OBW Power	x dB Bandwidth	652.8 kHz	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	4.74 dBm														
1.0304 MHz																	
Transmit Freq Error	-25.456 kHz	OBW Power															
x dB Bandwidth	652.8 kHz	x dB															
		-6.00 dB															
MCH	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.440000000 GHz Center Freq: 2.440000000 GHz Radio Std: None</p> <p>Trig: Free Run AvgHold: 1/1</p> <p>#IFGain:Low #Atten: 30 dB Radio Device: BTS</p> <p>Ref Offset 8.05 dB Ref 20.00 dBm Mkr1 2.4402123 GHz -1.6662 dBm</p> <p>Center 2.44 GHz Span 3 MHz</p> <p>#Res BW 100 kHz #VBW 300 kHz Sweep 1.067 ms</p> <table border="0"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>4.87 dBm</td> </tr> <tr> <td>1.0322 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>-26.752 kHz</td> <td>OBW Power</td> </tr> <tr> <td>x dB Bandwidth</td> <td>653.0 kHz</td> <td>x dB</td> </tr> <tr> <td></td> <td></td> <td>-6.00 dB</td> </tr> </table> <p>MSG STATUS</p>	Occupied Bandwidth	Total Power	4.87 dBm	1.0322 MHz			Transmit Freq Error	-26.752 kHz	OBW Power	x dB Bandwidth	653.0 kHz	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>
	Occupied Bandwidth	Total Power	4.87 dBm														
1.0322 MHz																	
Transmit Freq Error	-26.752 kHz	OBW Power															
x dB Bandwidth	653.0 kHz	x dB															
		-6.00 dB															

A.6 RF Conducted Spurious Emissions

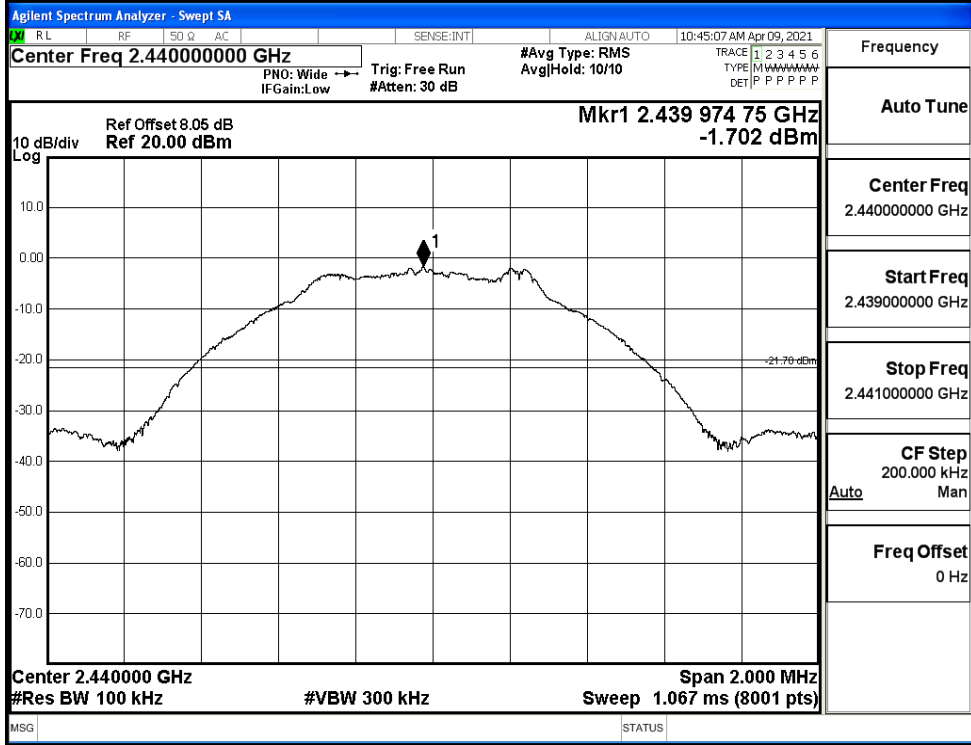
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-1.714	-37.617	-21.714	PASS
BT LE	MCH	-1.702	-36.711	-21.702	PASS
BT LE	HCH	-2.602	-37.281	-22.602	PASS

BT LE_LCH_Graphs

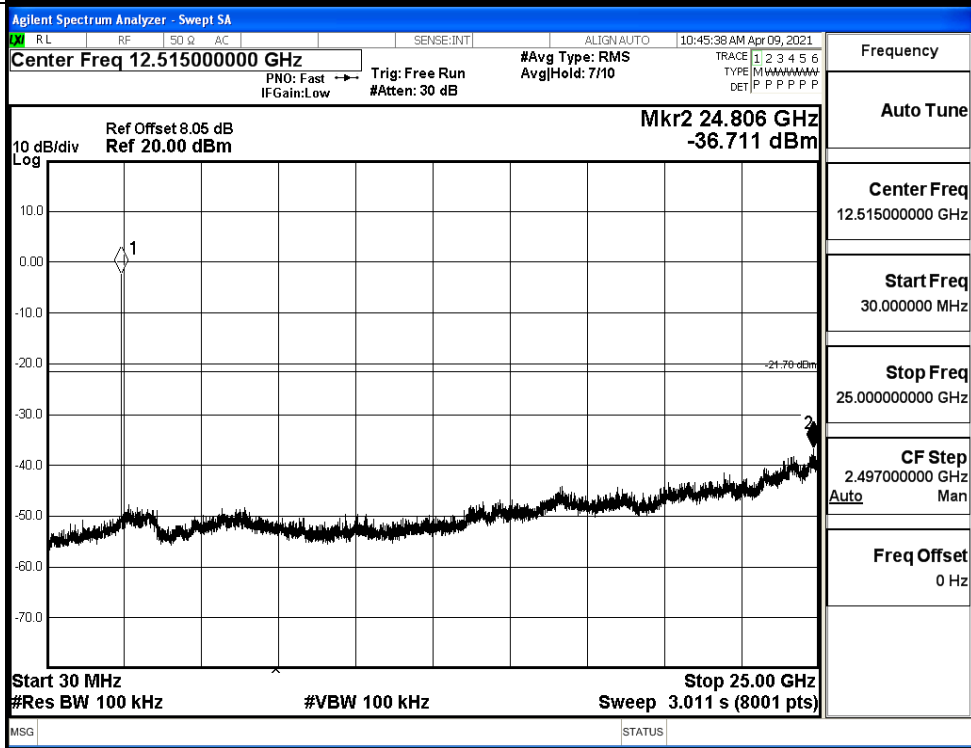
<p>Pref/BT LE/LCH</p>		<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.402000000 GHz</p> <p>Start Freq 2.401000000 GHz</p> <p>Stop Freq 2.403000000 GHz</p> <p>CF Step 200.000 kHz Auto Man</p> <p>Freq Offset 0 Hz</p>
<p>Puw/BT LE/LCH</p>		<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 12.515000000 GHz</p> <p>Start Freq 30.000000 MHz</p> <p>Stop Freq 25.000000000 GHz</p> <p>CF Step 2.497000000 GHz Auto Man</p> <p>Freq Offset 0 Hz</p>

BT LE_MCH_Graphs

Pref/BT LE/MCH

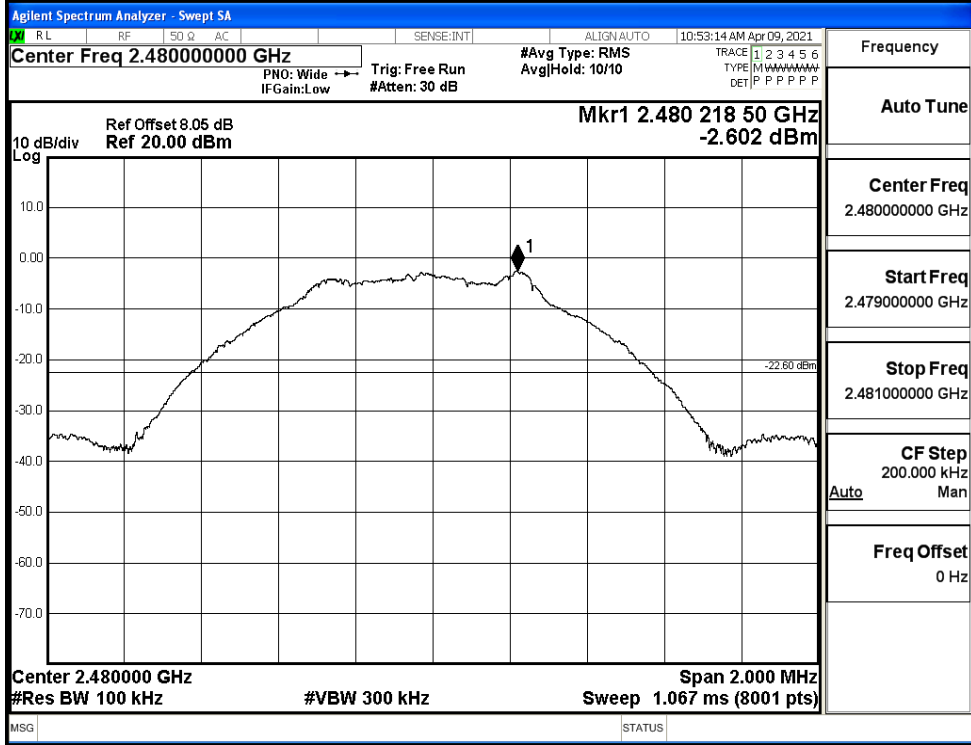


Puw/BT LE/MCH

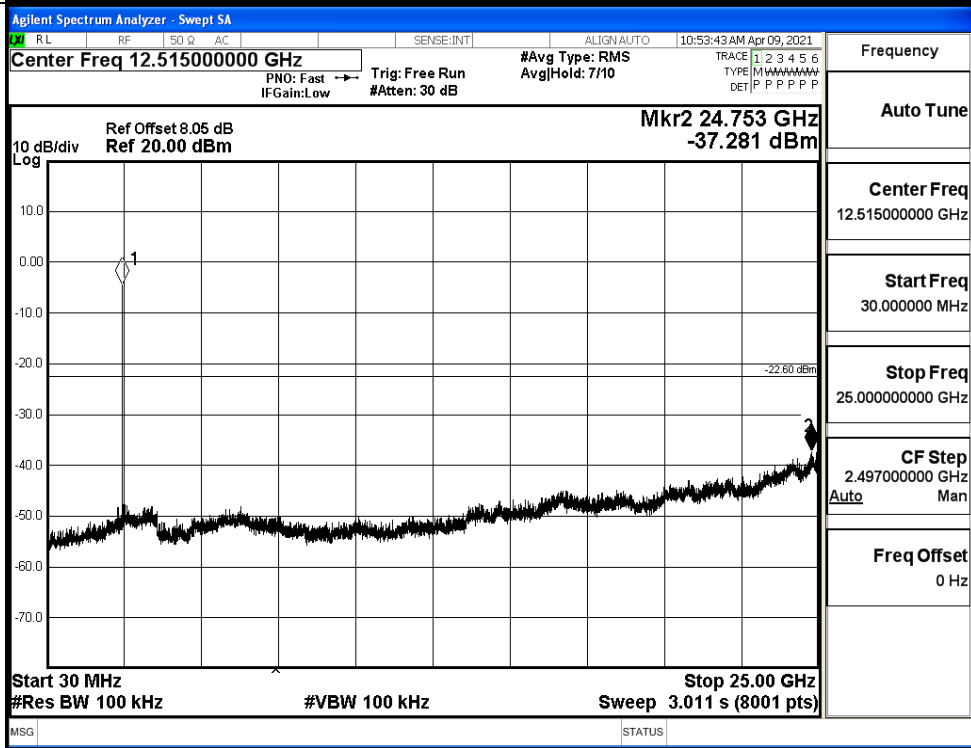


BT LE_HCH_Graphs

Pref/BT LE/HCH



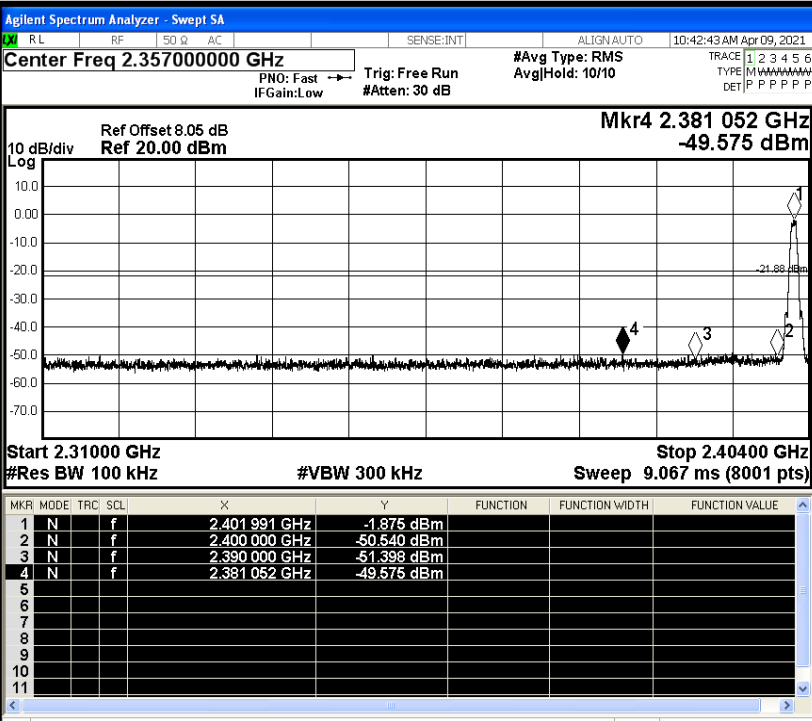
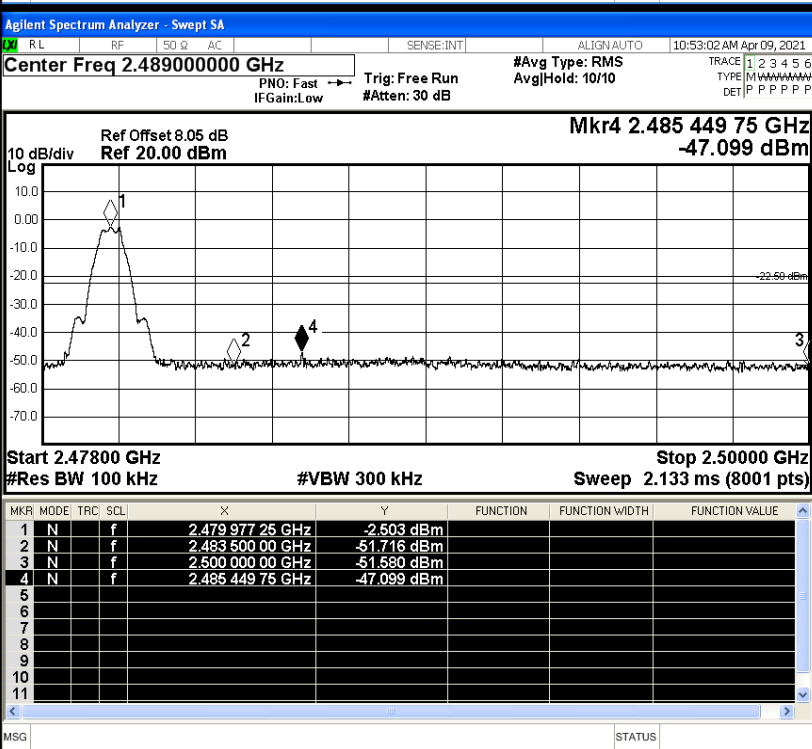
Puw/BT LE/HCH



A.7 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-1.875	-49.575	-21.88	PASS
BT LE	HCH	-2.503	-47.099	-22.5	PASS

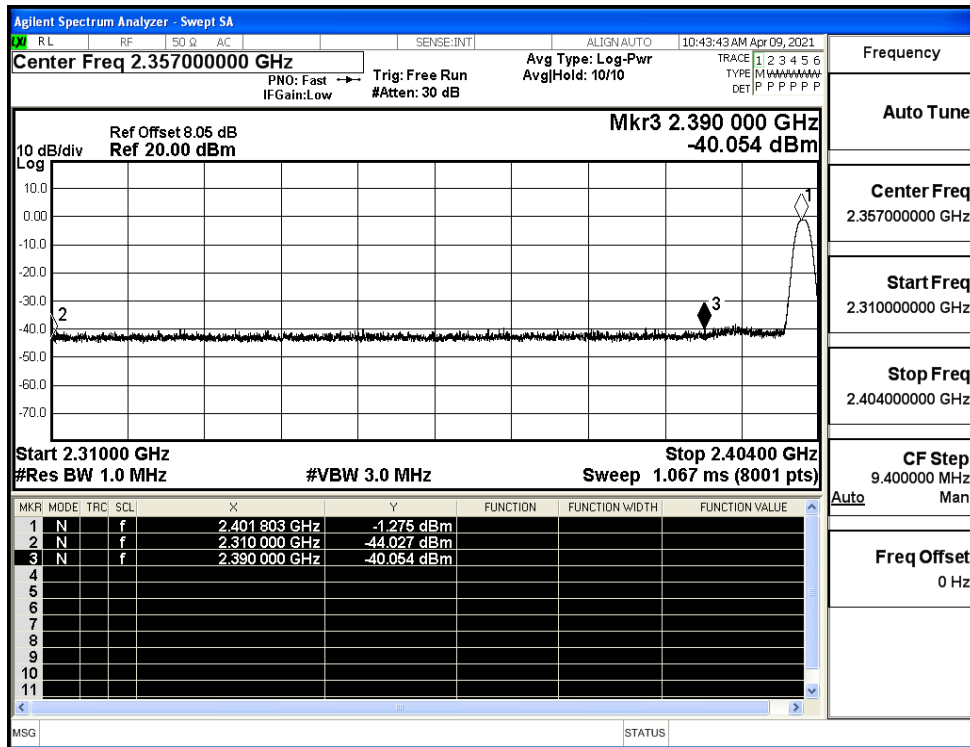
Test Graphs

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>
		<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>

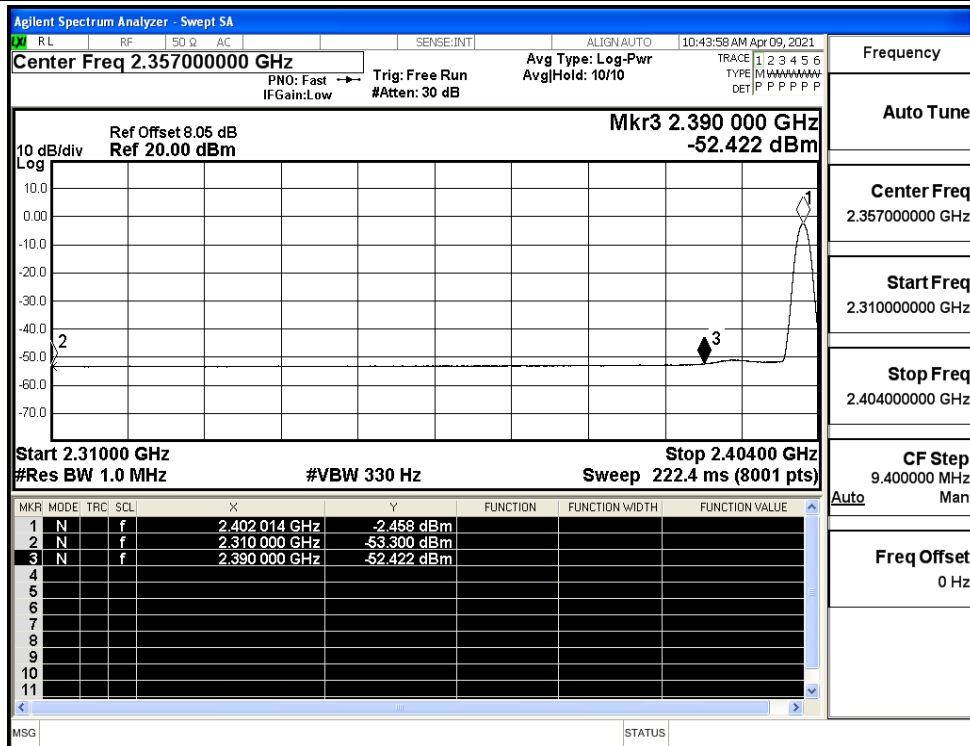
A.8 Restrict-band band-edge measurements

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	-44.03	2.0	0	53.23	PEAK	74	PASS
		Ant1	2310.0	-53.30	2.0	0	43.96	AV	54	PASS
		Ant1	2390.0	-40.05	2.0	0	57.21	PEAK	74	PASS
		Ant1	2390.0	-52.42	2.0	0	44.84	AV	54	PASS
	2480	Ant1	2483.5	-41.06	2.0	0	56.2	PEAK	74	PASS
		Ant1	2483.5	-51.50	2.0	0	45.76	AV	54	PASS
		Ant1	2500.0	-42.73	2.0	0	54.53	PEAK	74	PASS
		Ant1	2500.0	-52.26	2.0	0	45.00	AV	54	PASS

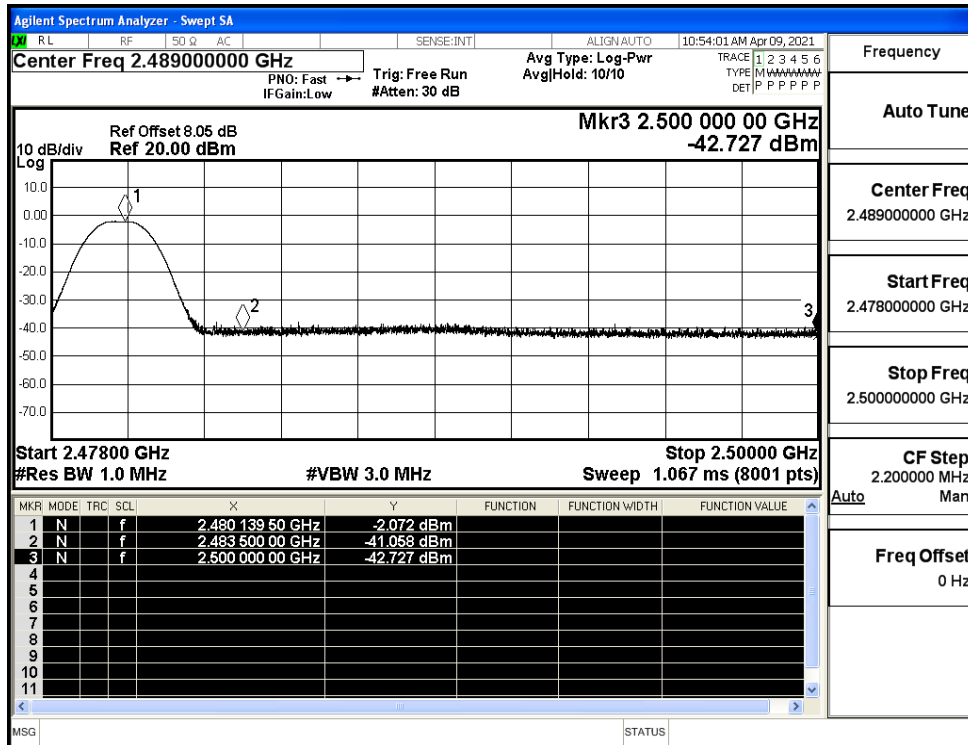
Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



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

