

## Appendix B

### RF Test Data for BT V4.1(BLE) (Conducted Measurement)

**Product Name: TRANSFORM WIRELESS - Active Performance On-Ear Headphones with Bluetooth**

**Trade Mark: SOUL**

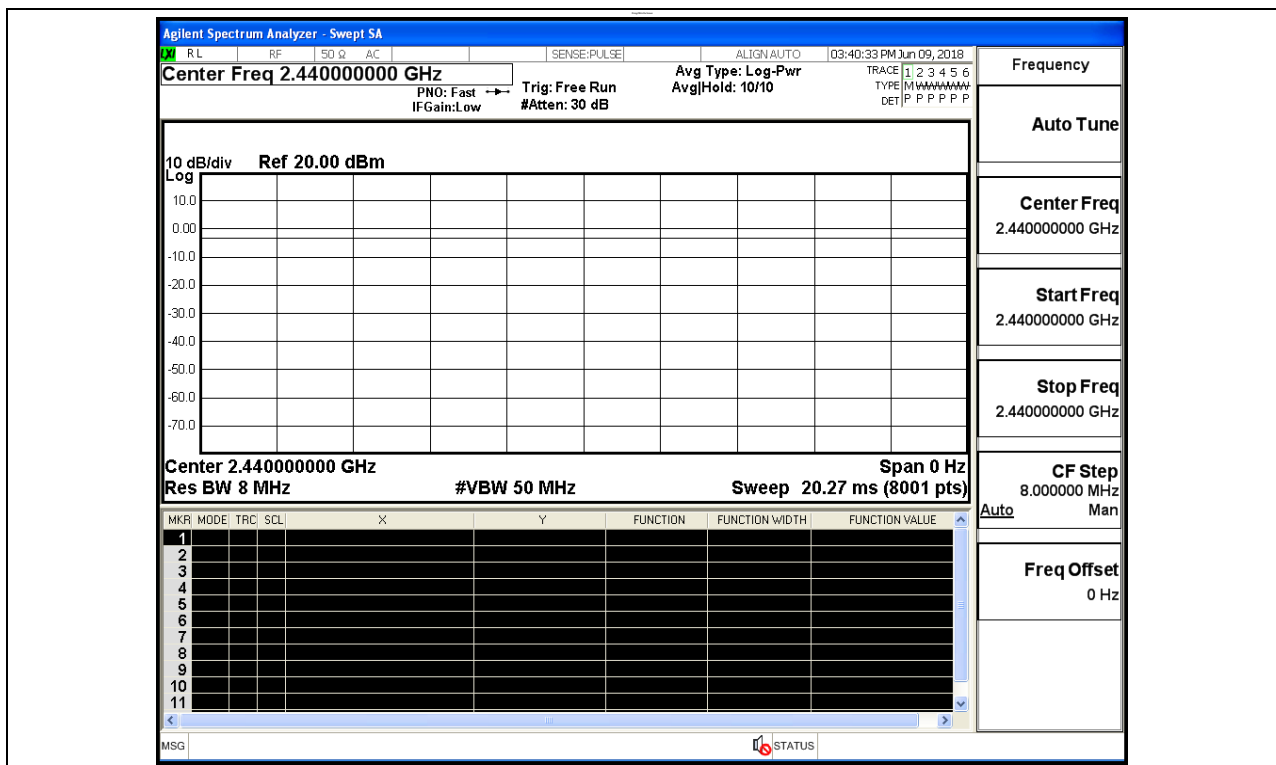
**Test Model: ST32**

#### Environmental Conditions

Temperature:	22.5 ° C
Relative Humidity:	54.7%
ATM Pressure:	100.0 kPa
Test Engineer:	Tom.Liu
Supervised by:	Jayden.Zhuo

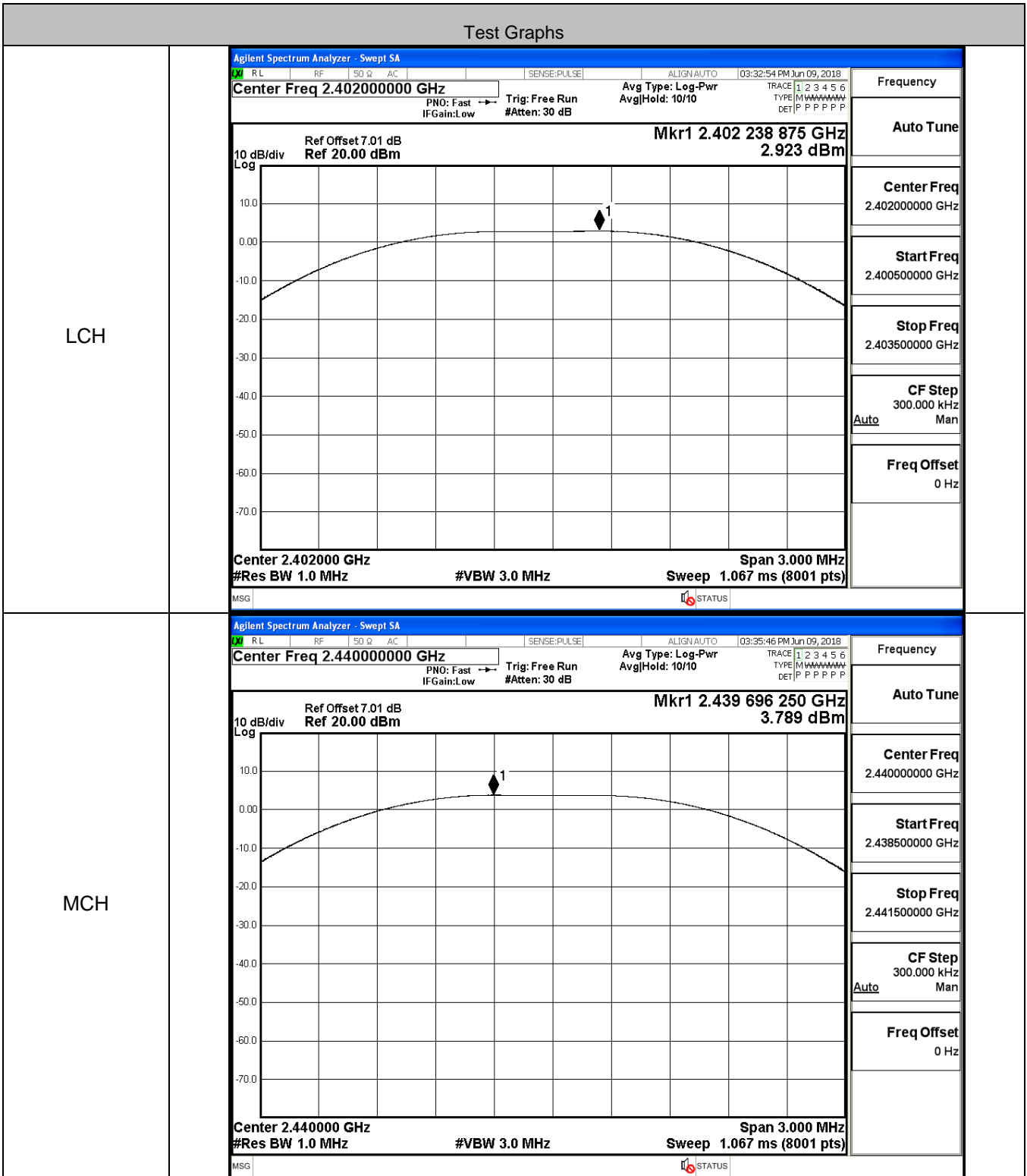
#### B.1 Duty Cycle

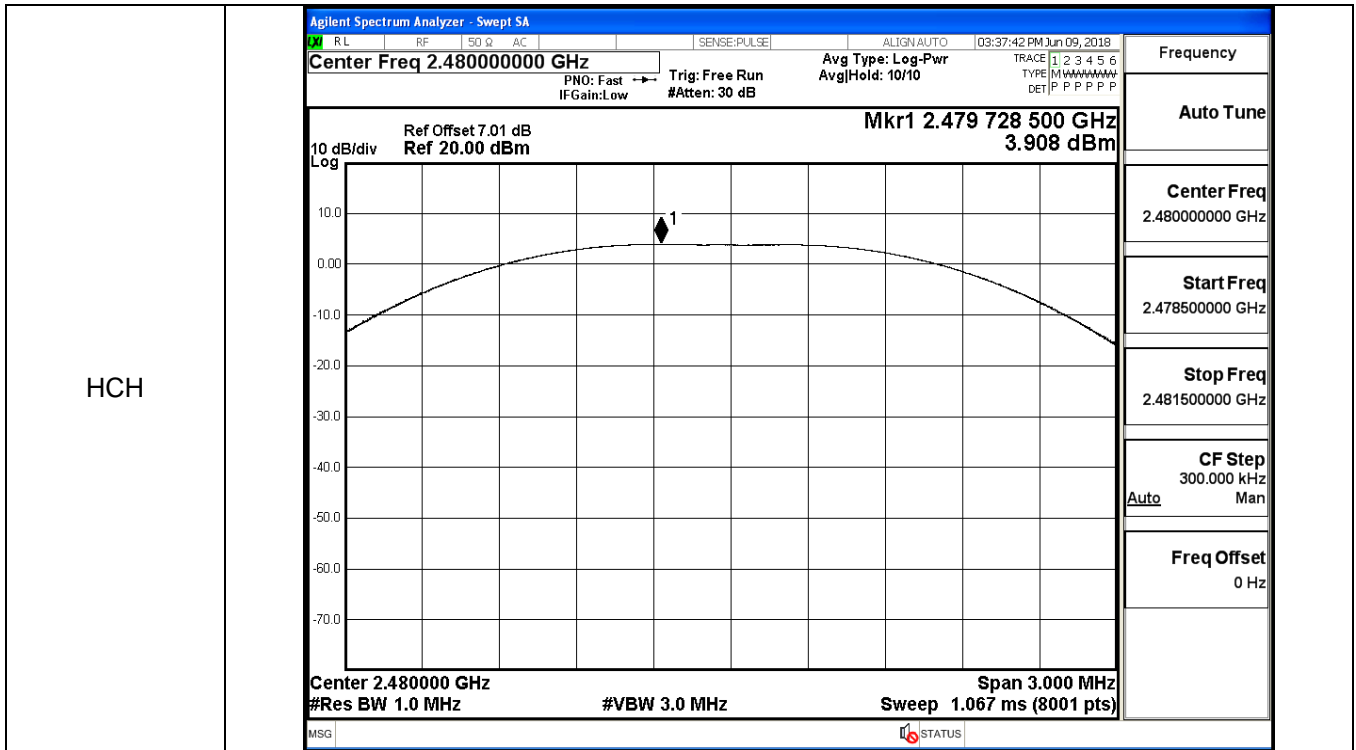
Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
BT LE	2440	Ant1	100	PASS



### B.2 Maximum Conducted Peak Output Power

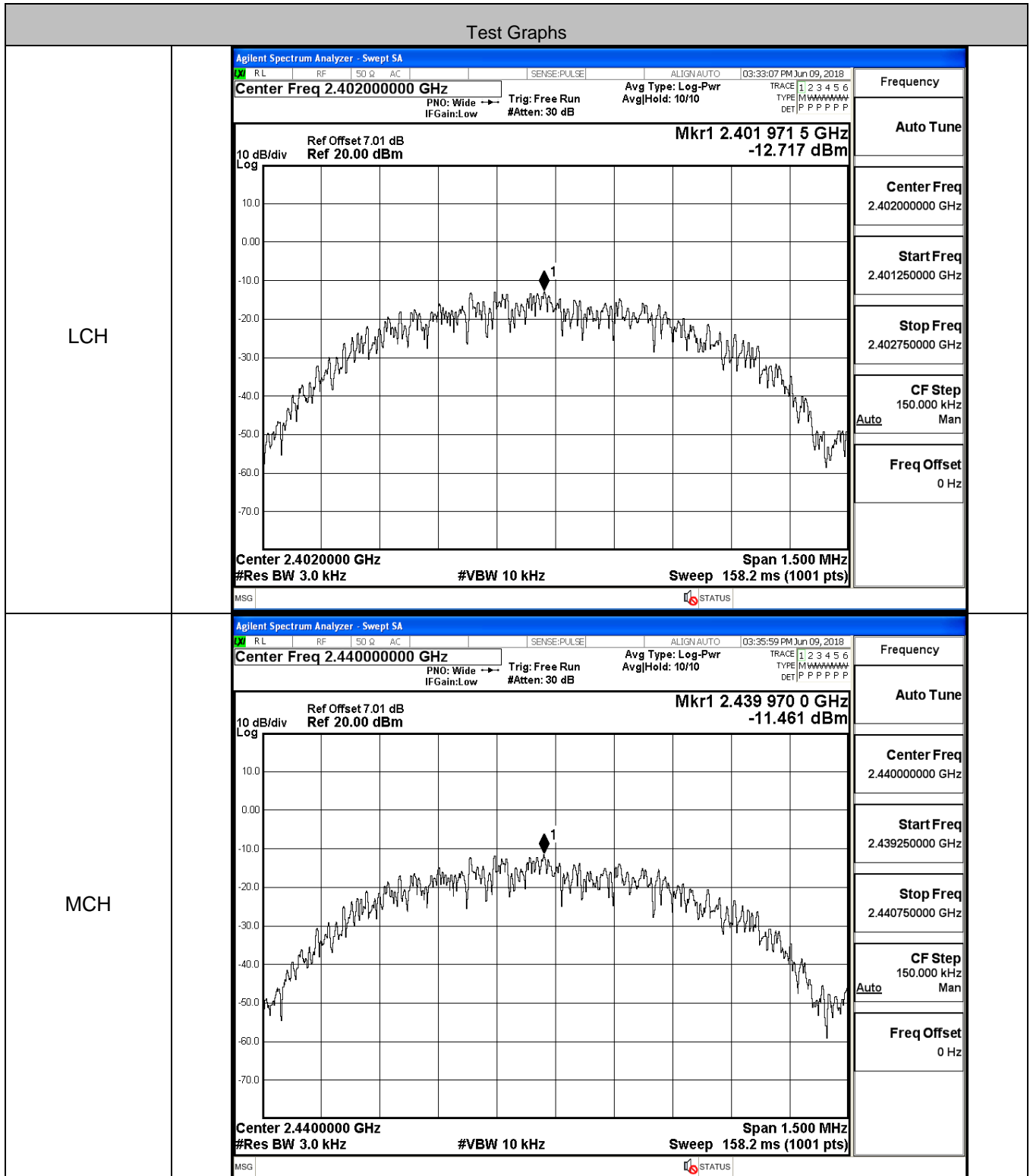
Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	2.923	30	PASS
BT LE	MCH	3.789	30	PASS
BT LE	HCH	3.908	30	PASS



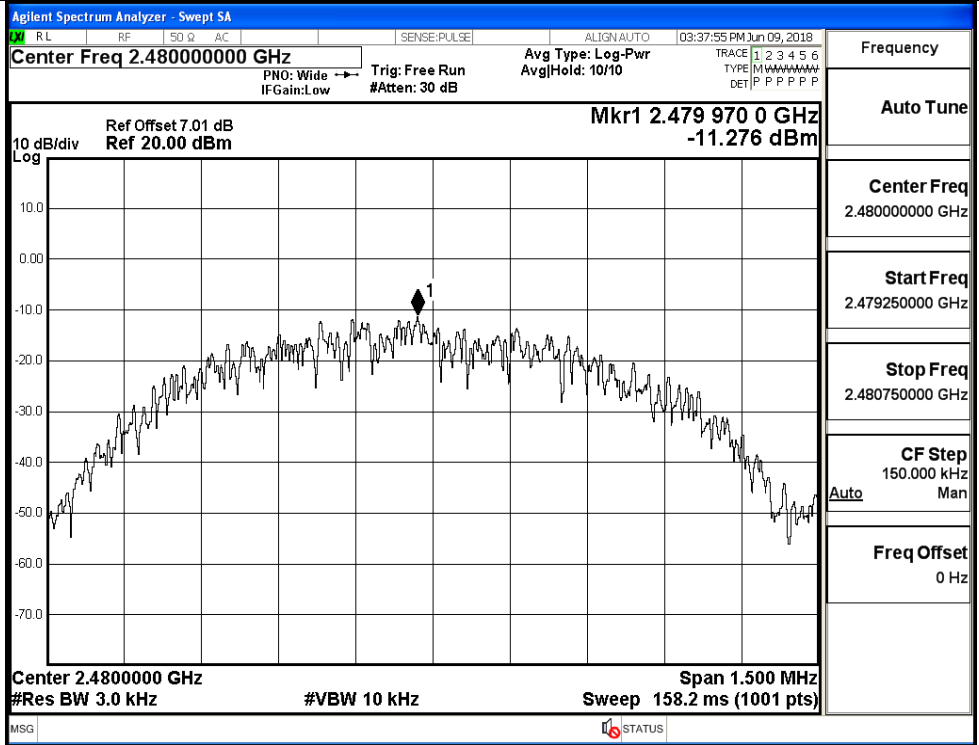


### B.3 Maximum Power Spectral Density

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-12.717	8	PASS
BT LE	MCH	-11.461	8	PASS
BT LE	HCH	-11.276	8	PASS

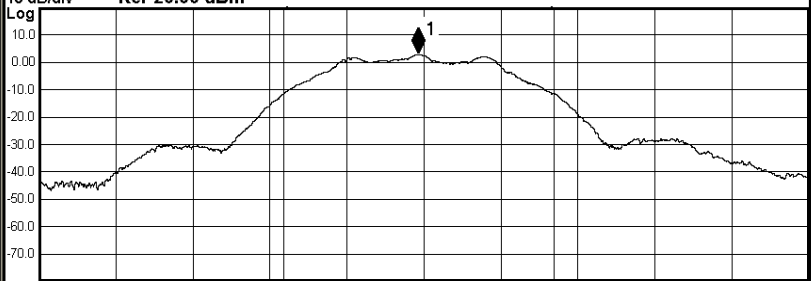
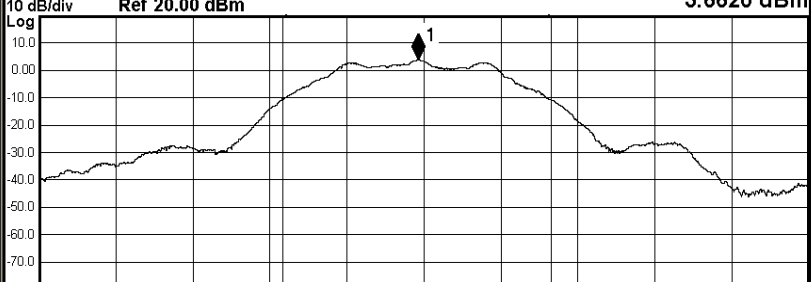


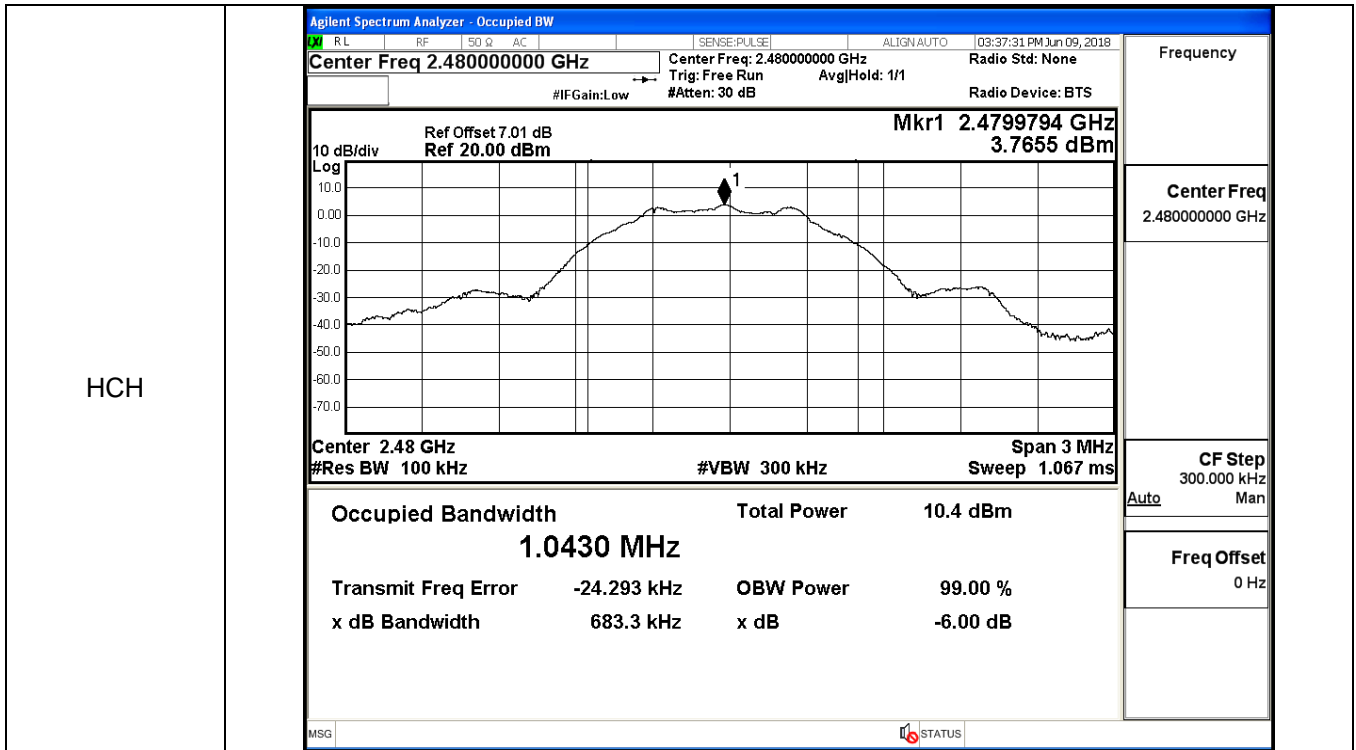
HCH



**B.4 6dB Bandwidth**

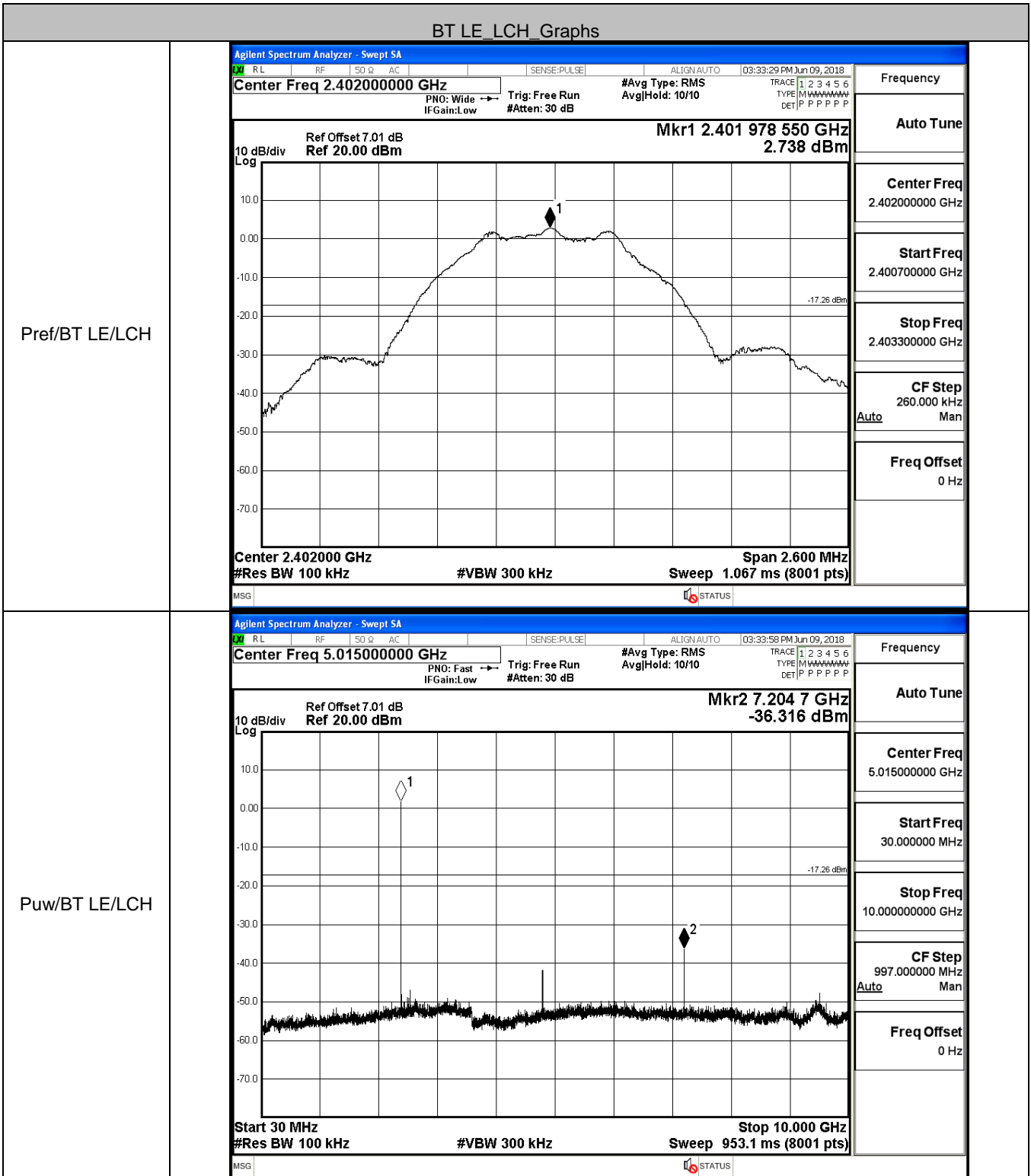
Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6862	≥0.5	PASS
BT LE	MCH	0.6841	≥0.5	PASS
BT LE	HCH	0.6833	≥0.5	PASS

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:PULSE ALIGN:AUTO 03:32:43 PM Jun 09, 2018</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 7.01 dB Mkr1 2.4019771 GHz</p> <p style="font-size: x-small; margin: 0;">Log Ref 20.00 dBm 2.7702 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>9.35 dBm</td> </tr> <tr> <td style="text-align: center;"><b>1.0448 MHz</b></td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>-17.389 kHz</td> <td>OBW Power</td> </tr> <tr> <td>x dB Bandwidth</td> <td>686.2 kHz</td> <td>x dB</td> </tr> <tr> <td></td> <td></td> <td>99.00 %</td> </tr> <tr> <td></td> <td></td> <td>-6.00 dB</td> </tr> </table> <p style="font-size: x-small; margin: 0;">MSG STATUS</p> </div>	Occupied Bandwidth	Total Power	9.35 dBm	<b>1.0448 MHz</b>			Transmit Freq Error	-17.389 kHz	OBW Power	x dB Bandwidth	686.2 kHz	x dB			99.00 %			-6.00 dB
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x dB Bandwidth	684.1 kHz	x dB																	
		99.00 %																	
		-6.00 dB																	



### B.5 RF Conducted Spurious Emissions

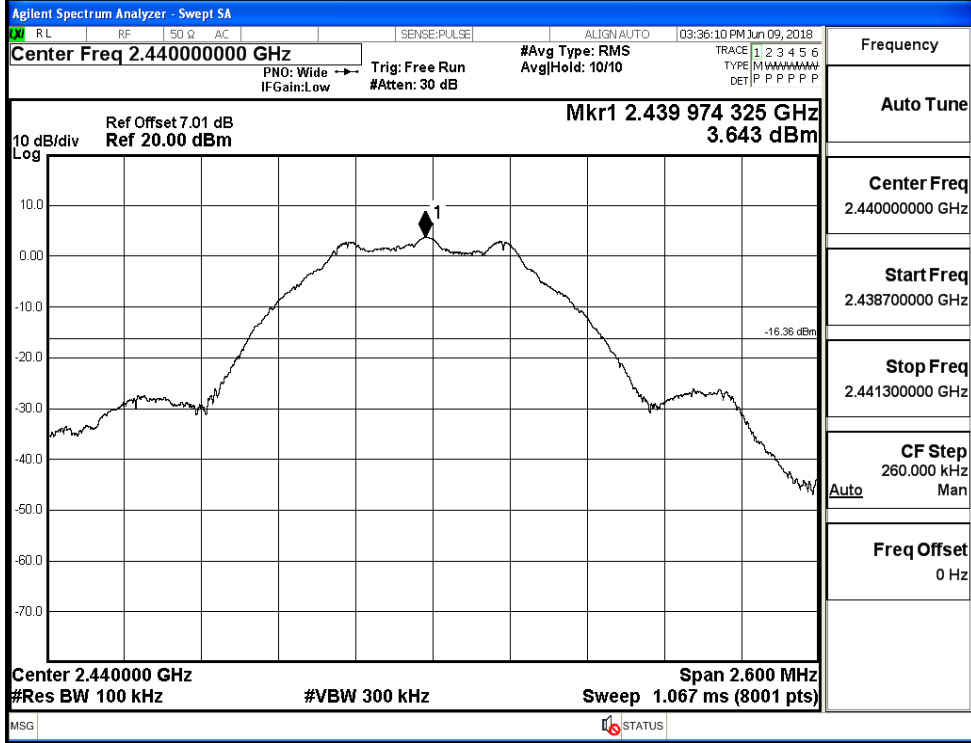
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	2.738	-36.316	-17.262	PASS
BT LE	MCH	3.643	-27.756	-16.357	PASS
BT LE	HCH	3.771	-30.091	-16.229	PASS



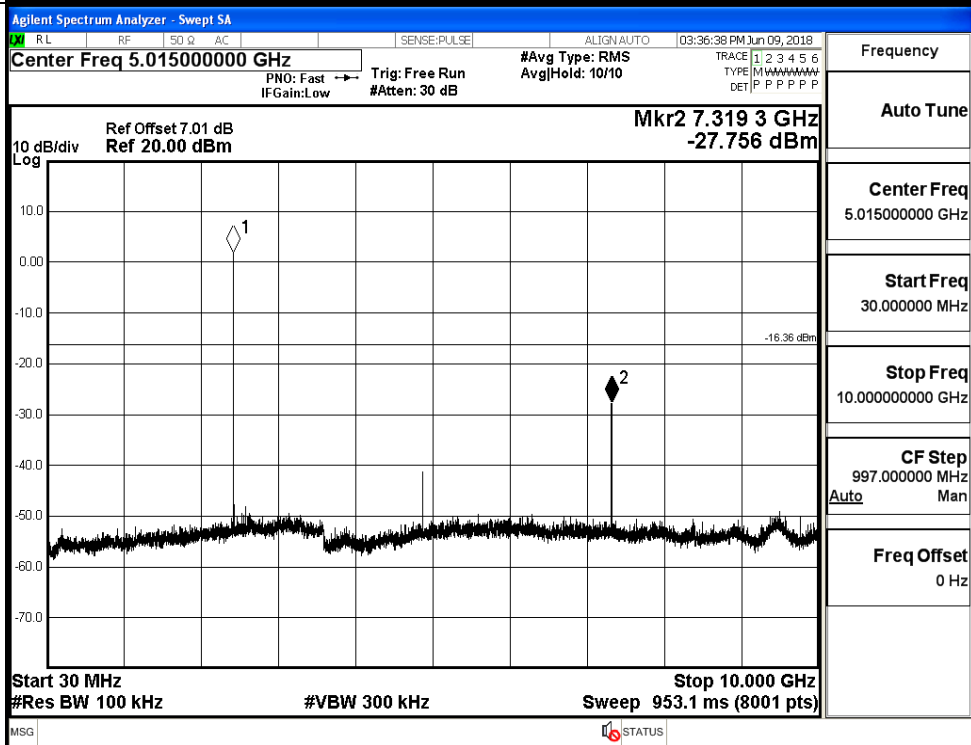


BT LE\_MCH\_Graphs

Pref/BT LE/MCH

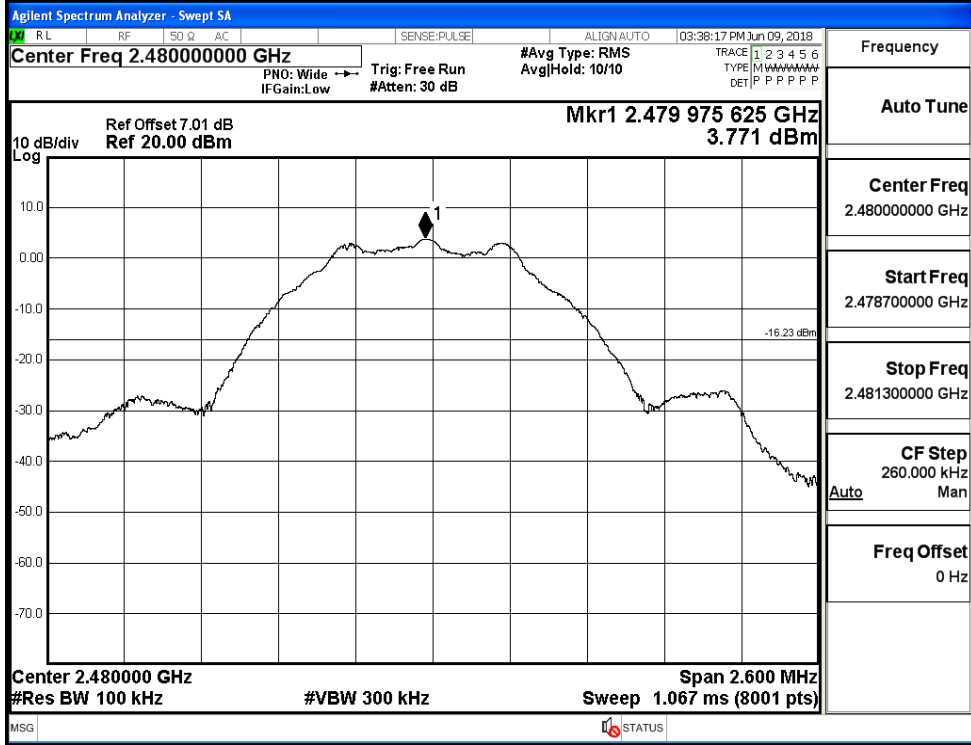


Puw/BT LE/MCH

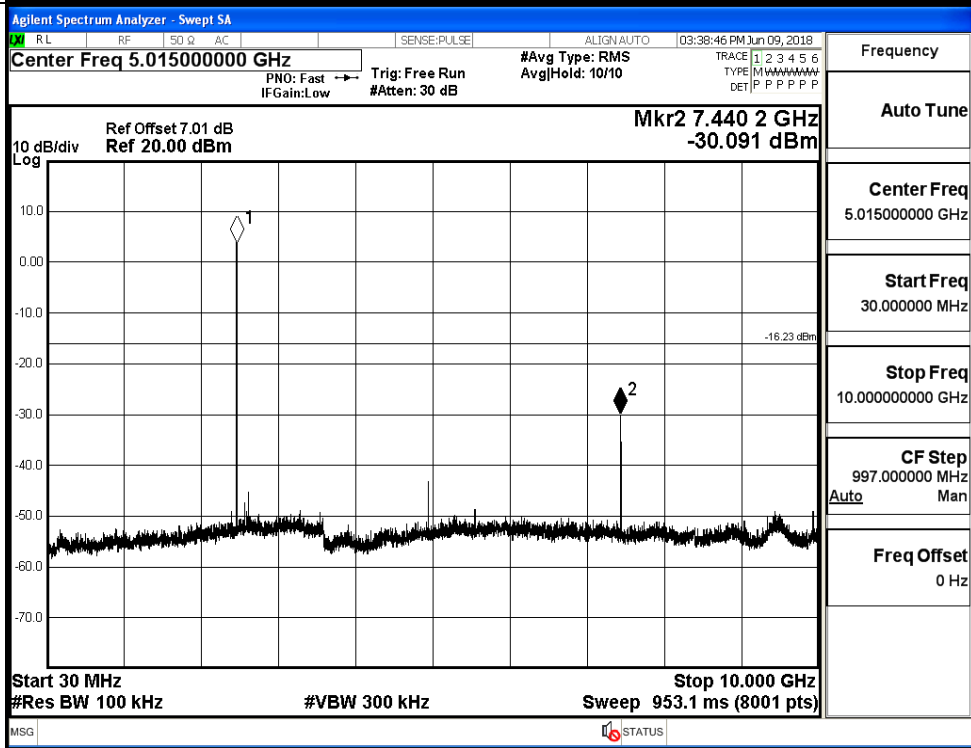


BT LE\_HCH\_Graphs

Pref/BT LE/HCH



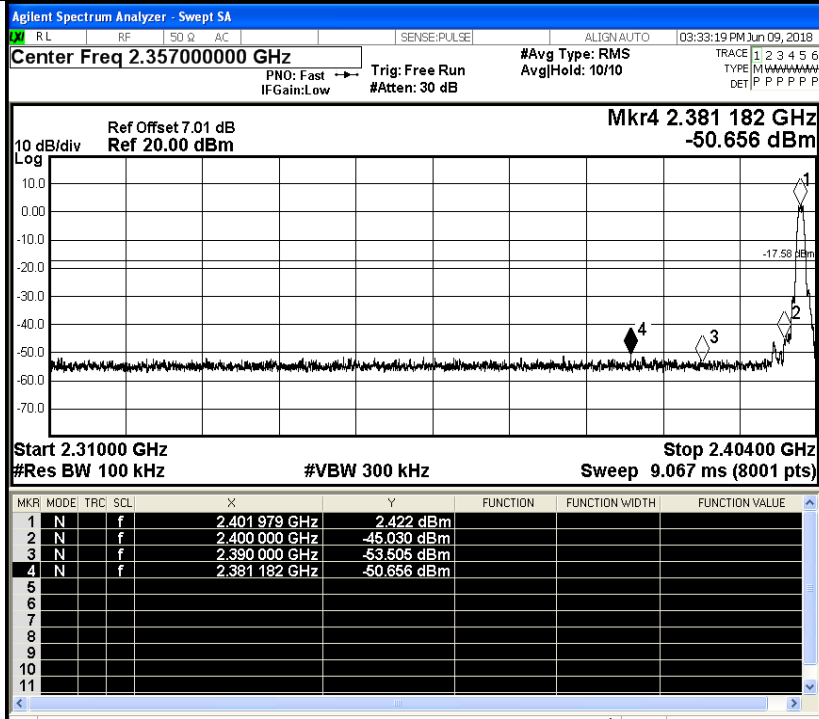
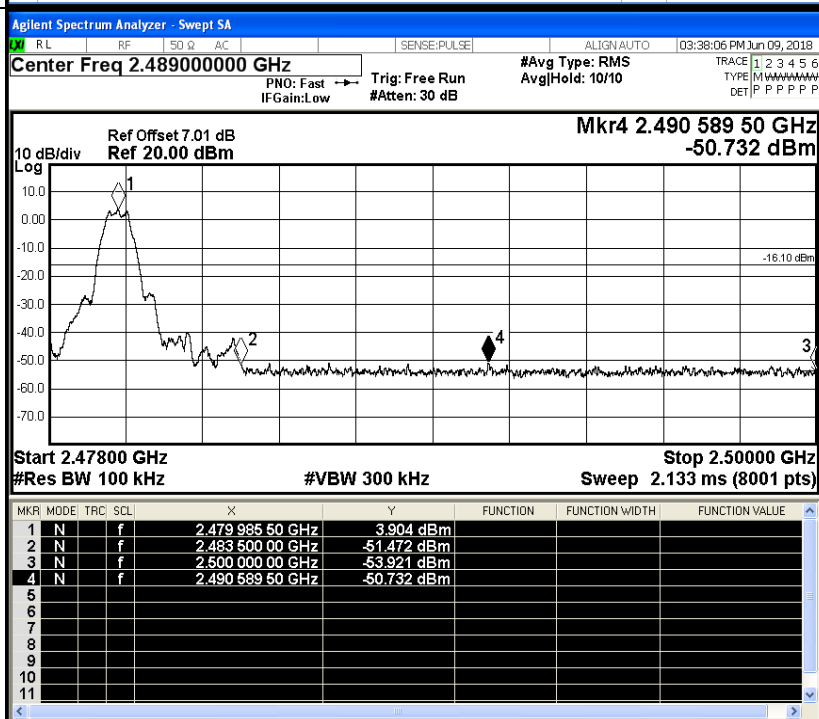
Puw/BT LE/HCH



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

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	2.422	-50.656	-17.58	PASS
BT LE	HCH	3.904	-50.732	-16.1	PASS

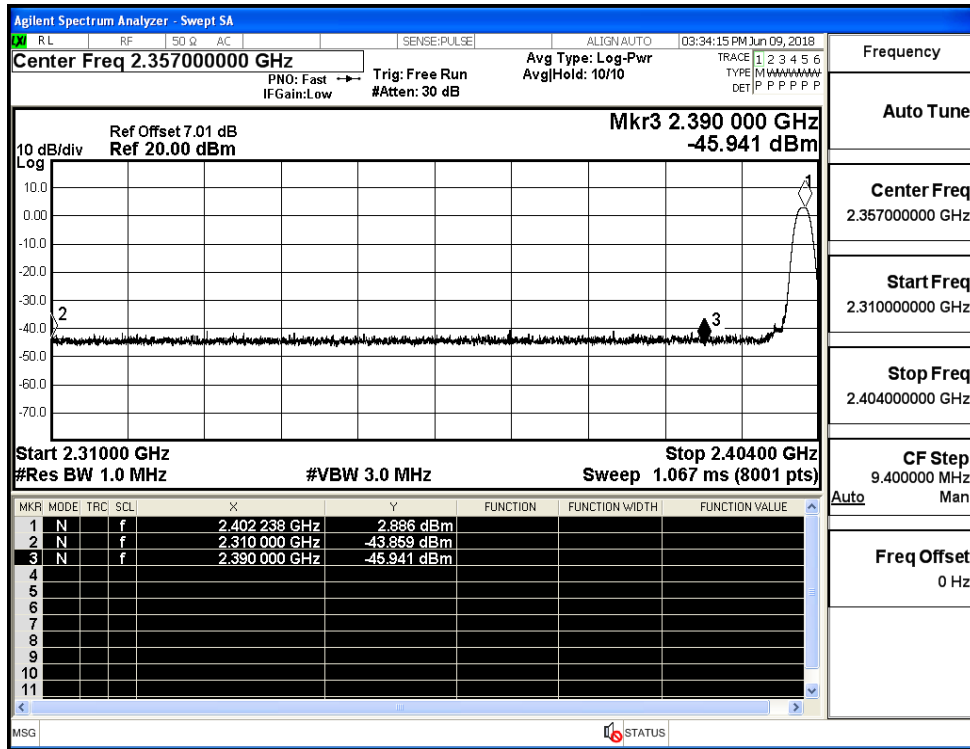
Test Graphs

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>

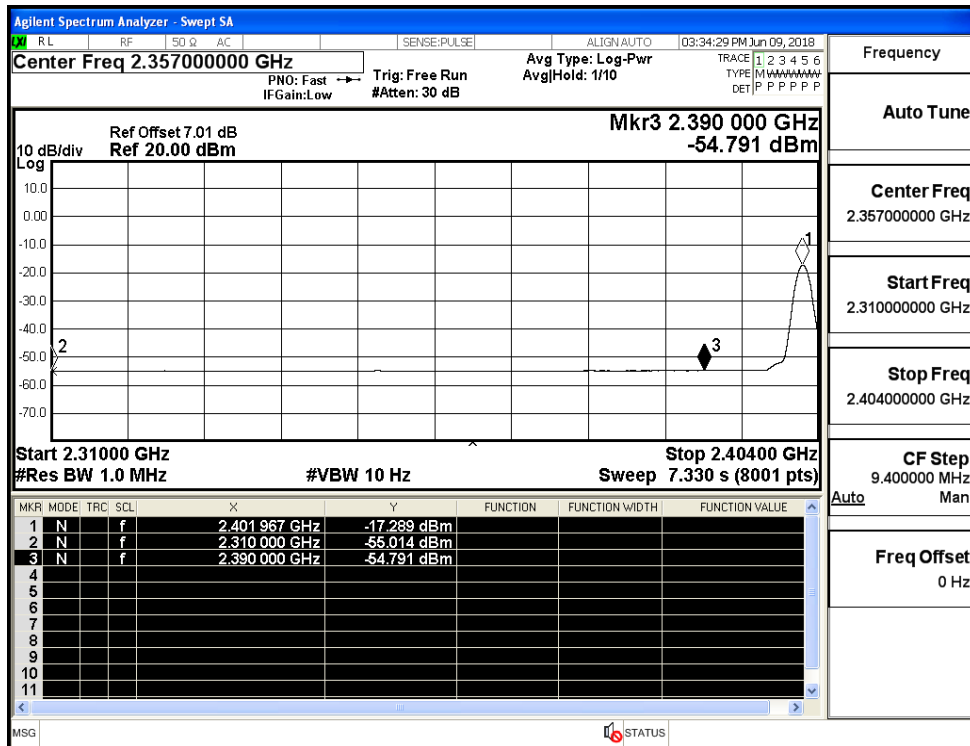
## B.7 Restrict-band band-edge measurements

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	-43.86	2.0	0	51.40	PEAK	74	PASS
		Ant1	2310.0	-55.01	2.0	0	40.24	AV	54	PASS
		Ant1	2390.0	-45.94	2.0	0	49.32	PEAK	74	PASS
		Ant1	2390.0	-54.79	2.0	0	40.47	AV	54	PASS
	2480	Ant1	2483.5	-38.49	2.0	0	56.76	PEAK	74	PASS
		Ant1	2483.5	-51.71	2.0	0	43.55	AV	54	PASS
		Ant1	2500.0	-43.01	2.0	0	52.24	PEAK	74	PASS
		Ant1	2500.0	-54.42	2.0	0	40.84	AV	54	PASS

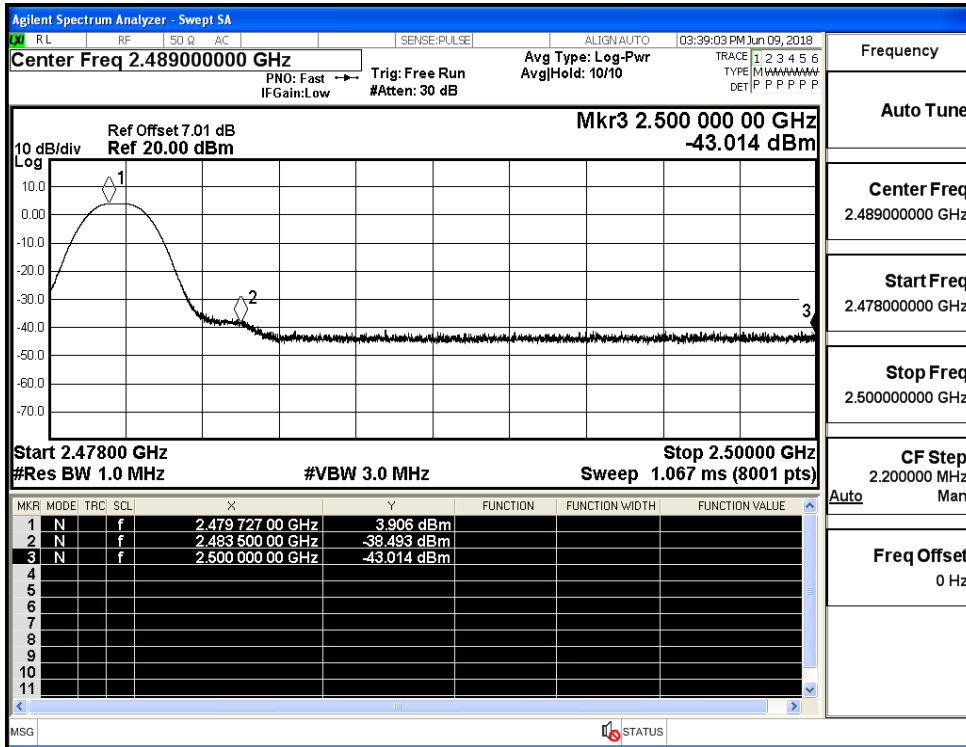
Restrict-band band-edge measurements\_BT LE\_2402\_Ant1\_PEAK



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

