

## Appendix B

### RF Test Data for BT V4.2(BDR/EDR) (Conducted Measurement)

**Product Name: TITAN 7130**

**Trade Mark: TITAN**

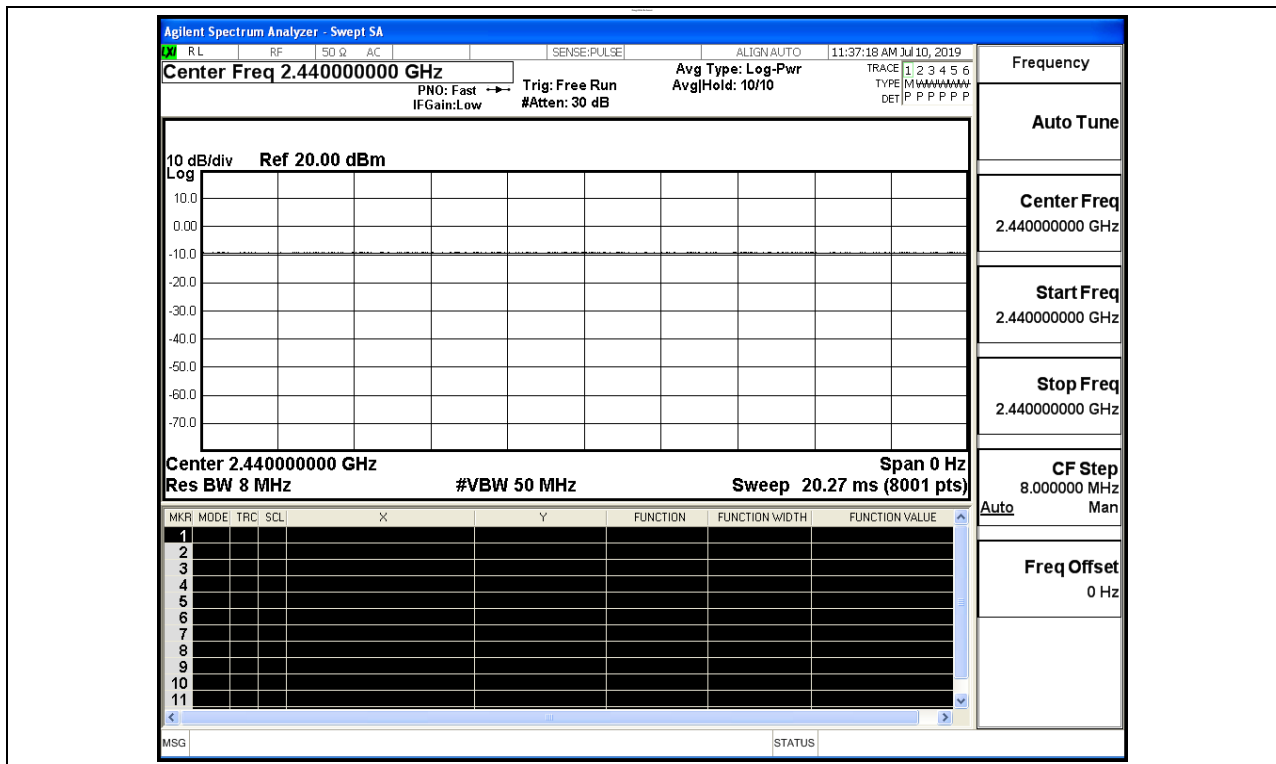
**Test Model: 7130PL01**

#### Environmental Conditions

Temperature:	24.3 ° C
Relative Humidity:	52.8%
ATM Pressure:	100.0 kPa
Test Engineer:	JERRY.ZENG
Supervised by:	Wang.Chuang

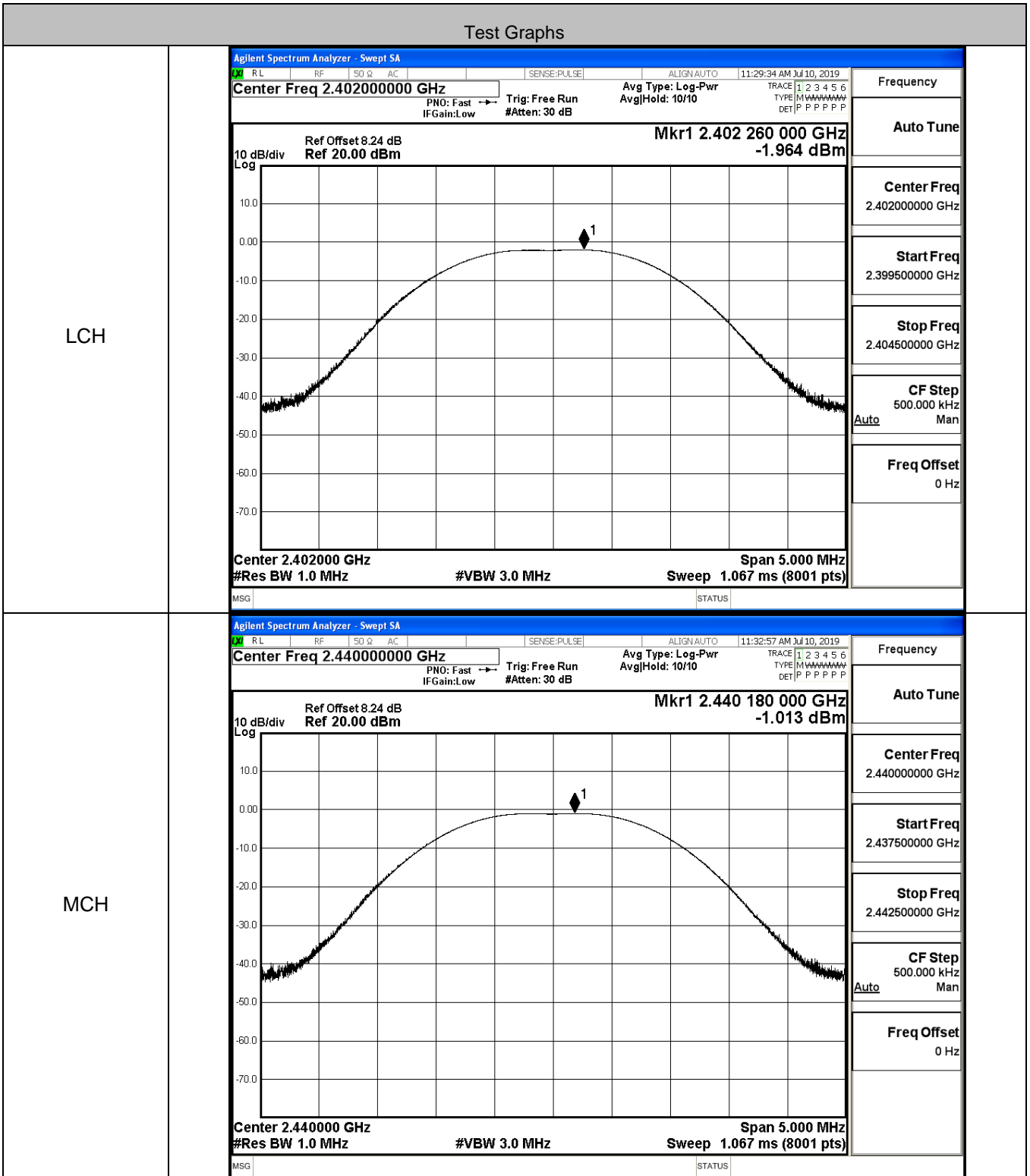
#### B.1 Duty Cycle

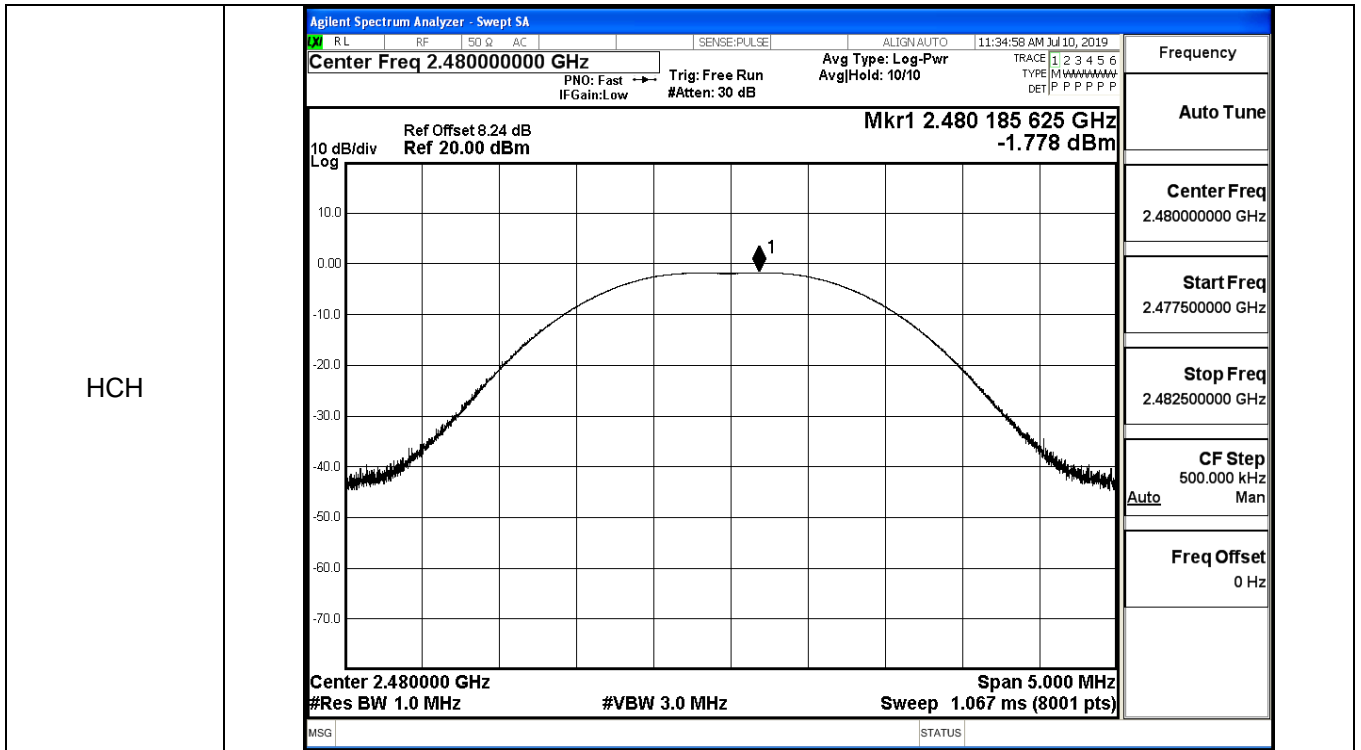
Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
BT LE	2440	Ant1	100	PASS



**B.2 Maximum Conducted Peak Output Power**

Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	-1.964	30	PASS
BT LE	MCH	-1.013	30	PASS
BT LE	HCH	-1.778	30	PASS

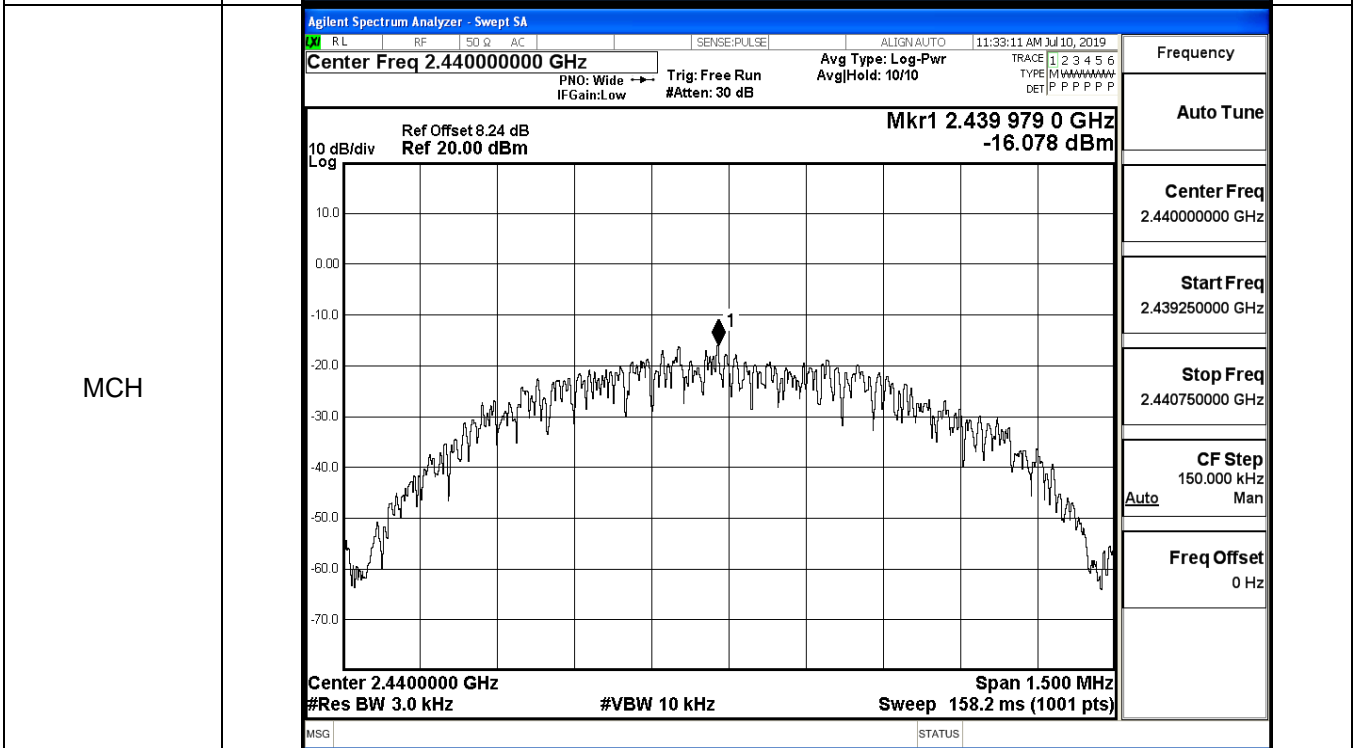
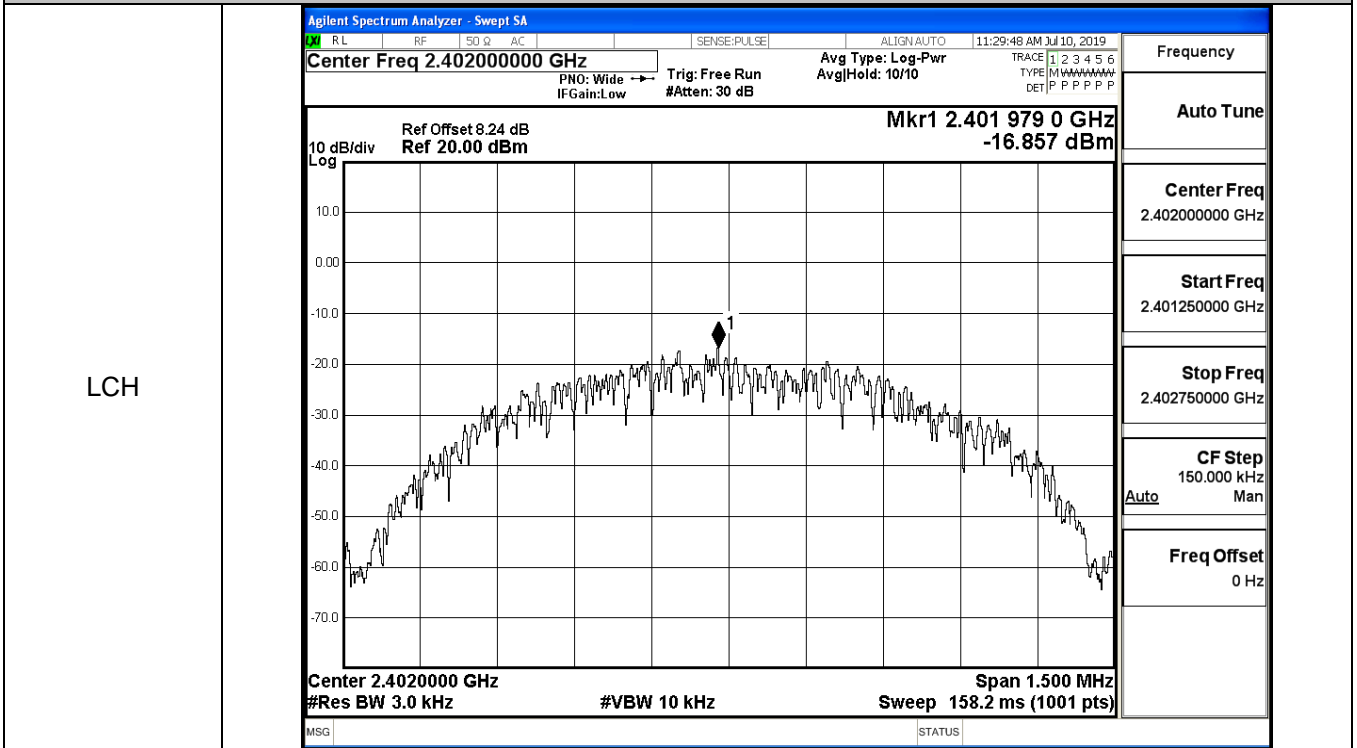




**B.3 Maximum Power Spectral Density**

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-16.857	8	PASS
BT LE	MCH	-16.078	8	PASS
BT LE	HCH	-16.664	8	PASS

**Test Graphs**

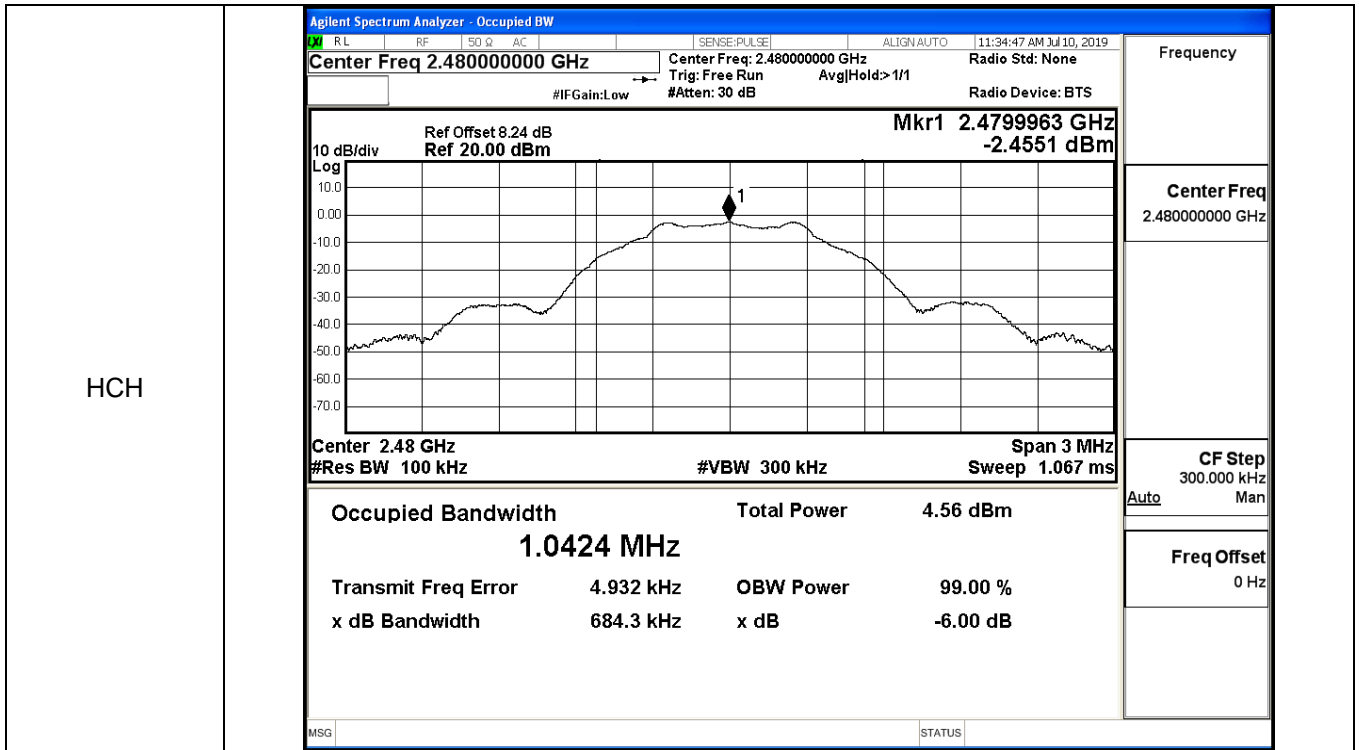




**B.4 6dB Bandwidth**

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6888	≥0.5	PASS
BT LE	MCH	0.6878	≥0.5	PASS
BT LE	HCH	0.6843	≥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 11:29:23 AM Jul 10, 2019</p> <p style="margin: 0;">Center Freq 2.402000000 GHz Center Freq: 2.402000000 GHz Radio Std: None                      Trig: Free Run AvgHold&gt; 1/1                      #IFGain:Low #Atten: 30 dB Radio Device: BTS</p> <div style="border: 1px solid black; padding: 2px;"> <p style="text-align: right; margin: 0;">Mkr1 2.4019918 GHz -2.6099 dBm</p> </div> <p style="font-size: small; margin: 0;">Center 2.402 GHz Span 3 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 1.067 ms</p> <table style="width: 100%; border-collapse: collapse; font-size: small;"> <tr> <td style="width: 50%;">Occupied Bandwidth</td> <td style="width: 50%;">Total Power</td> <td colspan="2">4.50 dBm</td> </tr> <tr> <td colspan="4" style="text-align: center;"><b>1.0488 MHz</b></td> </tr> <tr> <td>Transmit Freq Error</td> <td>6.807 kHz</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>688.8 kHz</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	4.50 dBm		<b>1.0488 MHz</b>				Transmit Freq Error	6.807 kHz	OBW Power	99.00 %	x dB Bandwidth	688.8 kHz	x dB	-6.00 dB
Occupied Bandwidth	Total Power	4.50 dBm															
<b>1.0488 MHz</b>																	
Transmit Freq Error	6.807 kHz	OBW Power	99.00 %														
x dB Bandwidth	688.8 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:PULSE ALIGN:AUTO 11:32:46 AM Jul 10, 2019</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="border: 1px solid black; padding: 2px;"> <p style="text-align: right; margin: 0;">Mkr1 2.4399985 GHz -1.8011 dBm</p> </div> <p style="font-size: small; margin: 0;">Center 2.44 GHz Span 3 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 1.067 ms</p> <table style="width: 100%; border-collapse: collapse; font-size: small;"> <tr> <td style="width: 50%;">Occupied Bandwidth</td> <td style="width: 50%;">Total Power</td> <td colspan="2">5.27 dBm</td> </tr> <tr> <td colspan="4" style="text-align: center;"><b>1.0466 MHz</b></td> </tr> <tr> <td>Transmit Freq Error</td> <td>5.224 kHz</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>687.8 kHz</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	5.27 dBm		<b>1.0466 MHz</b>				Transmit Freq Error	5.224 kHz	OBW Power	99.00 %	x dB Bandwidth	687.8 kHz	x dB	-6.00 dB
Occupied Bandwidth	Total Power	5.27 dBm															
<b>1.0466 MHz</b>																	
Transmit Freq Error	5.224 kHz	OBW Power	99.00 %														
x dB Bandwidth	687.8 kHz	x dB	-6.00 dB														



**B.5 RF Conducted Spurious Emissions**

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-2.877	-43.728	-22.877	PASS
BT LE	MCH	-1.781	-43.691	-21.781	PASS
BT LE	HCH	-2.578	-34.196	-22.578	PASS

**BT LE\_LCH\_Graphs**

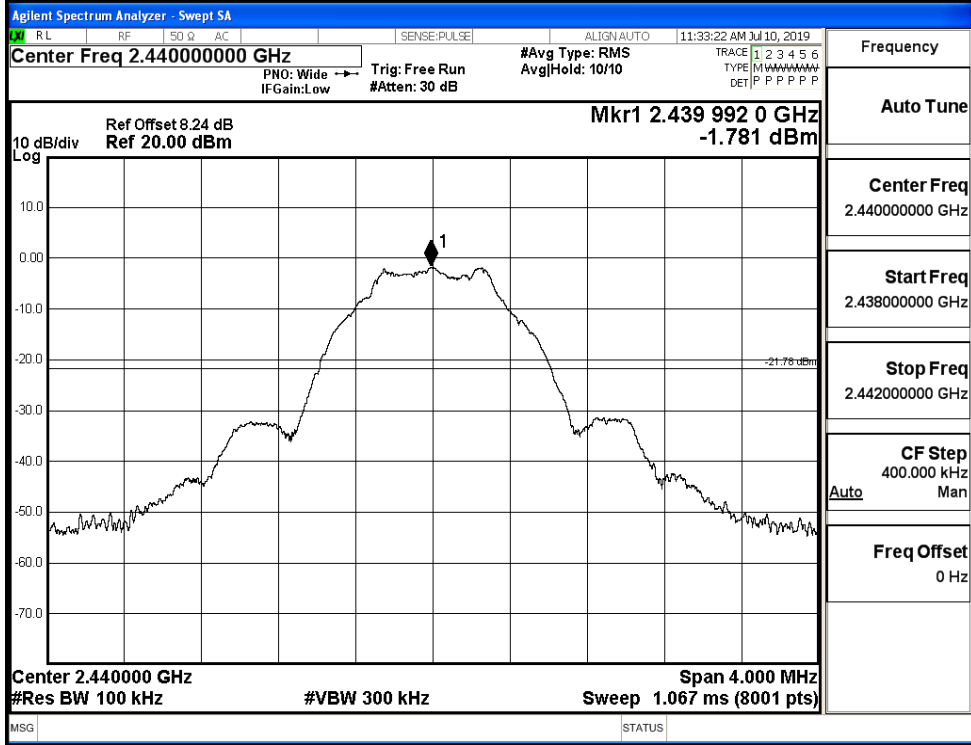
	Agilent Spectrum Analyzer - Swept SA	Parameters
Pref/BT LE/LCH		<p>Center Freq 2.40200000 GHz</p> <p>Mkr1 2.402 251 0 GHz -2.877 dBm</p> <p>Ref Offset 8.24 dB Ref 20.00 dBm</p> <p>10 dB/div Log</p> <p>Center 2.402000 GHz      Span 4.000 MHz #Res BW 100 kHz      #VBW 300 kHz      Sweep 1.067 ms (8001 pts)</p>
	<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.402000000 GHz</p> <p>Start Freq 2.400000000 GHz</p> <p>Stop Freq 2.404000000 GHz</p> <p>CF Step 400.000 kHz Man</p> <p>Freq Offset 0 Hz</p>	
Puw/BT LE/LCH		<p>Center Freq 12.51500000 GHz</p> <p>Mkr2 24.800 GHz -43.728 dBm</p> <p>Ref Offset 8.24 dB Ref 20.00 dBm</p> <p>10 dB/div Log</p> <p>Start 30 MHz      Stop 25.00 GHz #Res BW 100 kHz      #VBW 300 kHz      Sweep 2.387 s (8001 pts)</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 Man</p> <p>Freq Offset 0 Hz</p>	



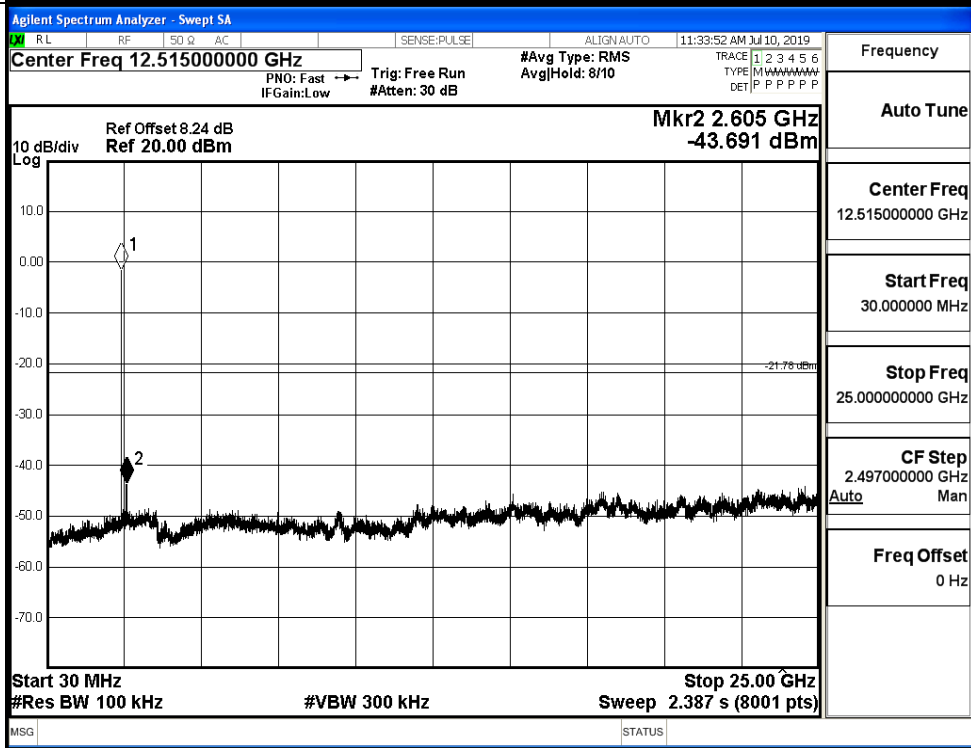
--	--

BT LE\_MCH\_Graphs

Pref/BT LE/MCH

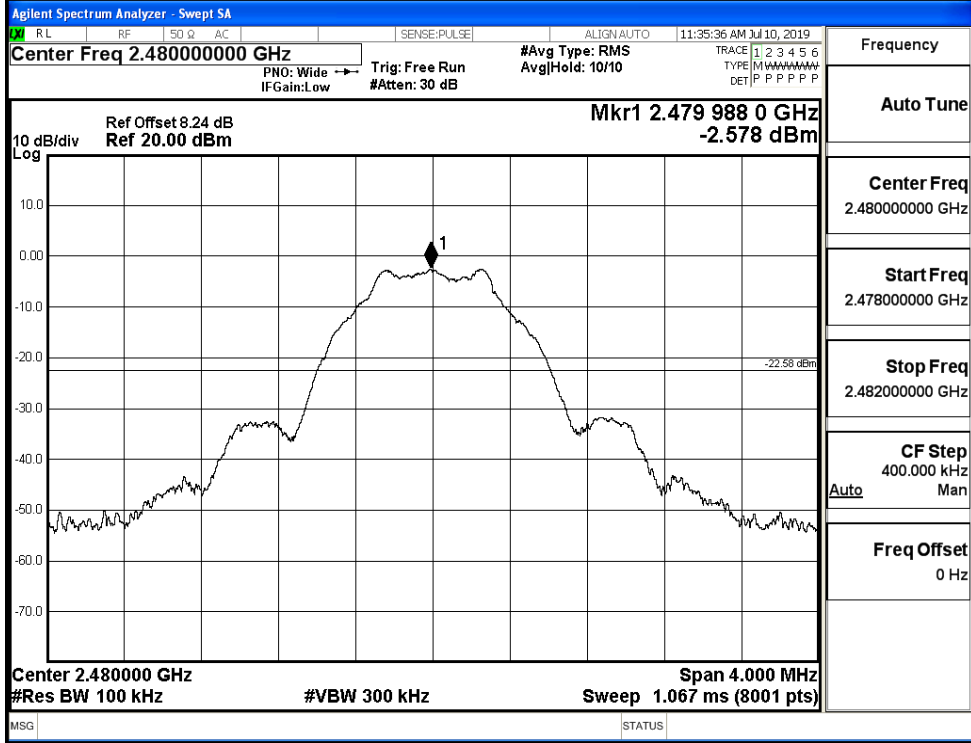


Puw/BT LE/MCH

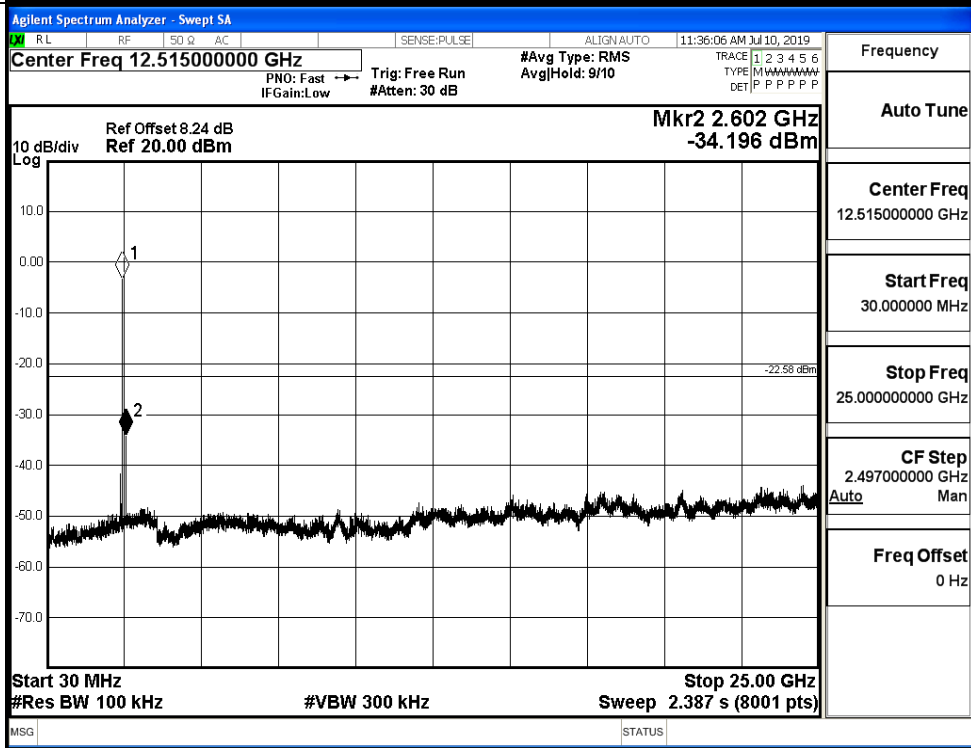


BT LE\_HCH\_Graphs

Pref/BT LE/HCH



Puw/BT LE/HCH



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

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-2.655	-49.876	-22.66	PASS
BT LE	HCH	-2.300	-49.944	-22.3	PASS

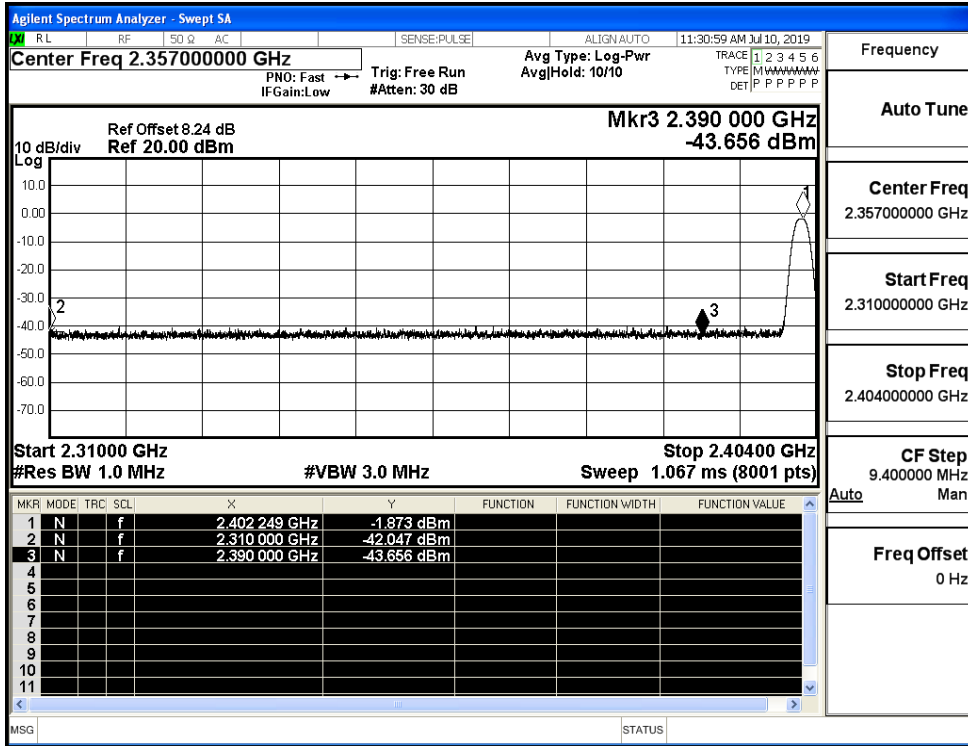
#### Test Graphs

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>

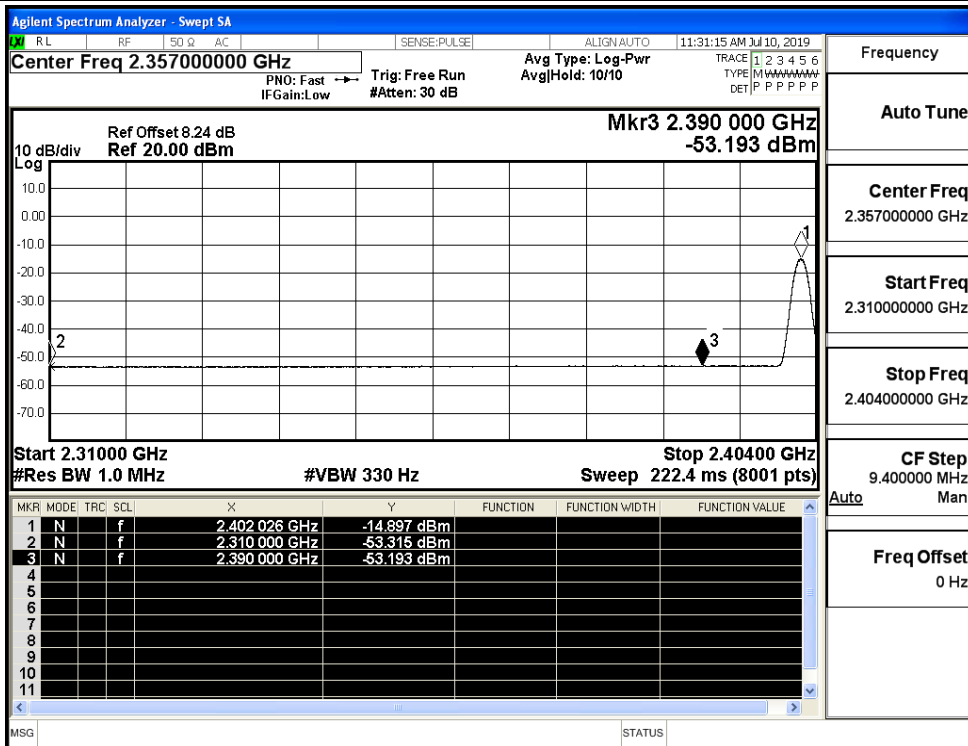
## B.7 Restrict-band band-edge measurements

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	-42.05	2.0	0	53.21	PEAK	74	PASS
		Ant1	2310.0	-53.32	2.0	0	41.94	AV	54	PASS
		Ant1	2390.0	-43.66	2.0	0	51.60	PEAK	74	PASS
		Ant1	2390.0	-53.19	2.0	0	42.06	AV	54	PASS
	2480	Ant1	2483.5	-42.92	2.0	0	52.34	PEAK	74	PASS
		Ant1	2483.5	-52.86	2.0	0	42.40	AV	54	PASS
		Ant1	2500.0	-39.01	2.0	0	56.25	PEAK	74	PASS
		Ant1	2500.0	-52.75	2.0	0	42.51	AV	54	PASS

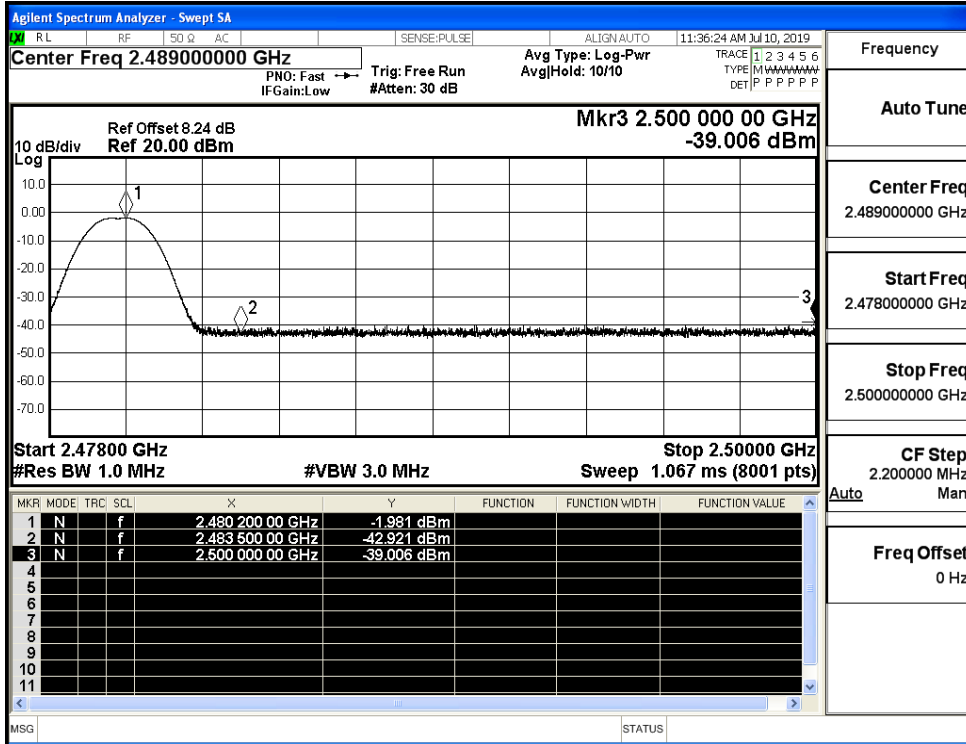
Restrict-band band-edge measurements\_BT LE\_2402\_Ant1\_PEAK



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

