

## Appendix B

### RF Test Data for BT V4.1(BDR/EDR) (Conducted Measurement)

Product Name: Bluetooth Headset

Trade Mark: N/A

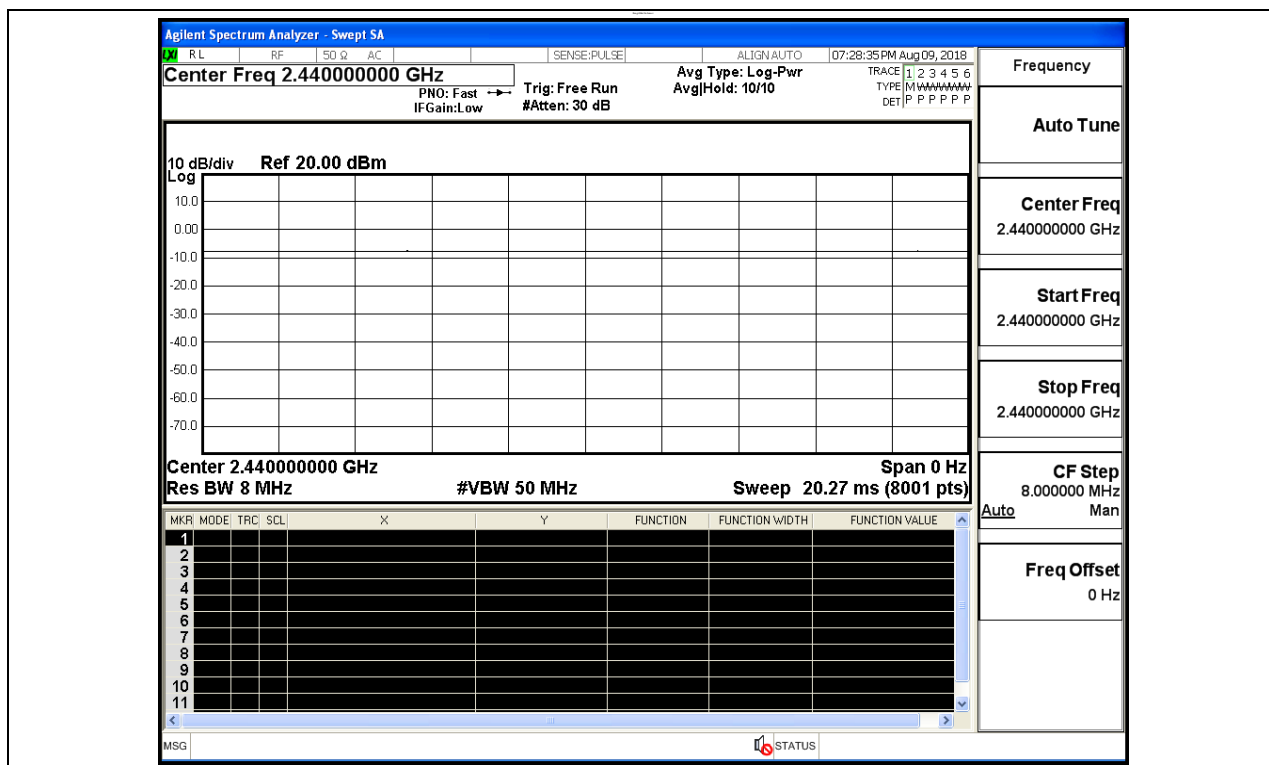
Test Model: TX-90

#### Environmental Conditions

Temperature:	24.2° C
Relative Humidity:	53.8%
ATM Pressure:	100.0 kPa
Test Engineer:	Mina.Xu
Supervised by:	Jayden.Zhuo

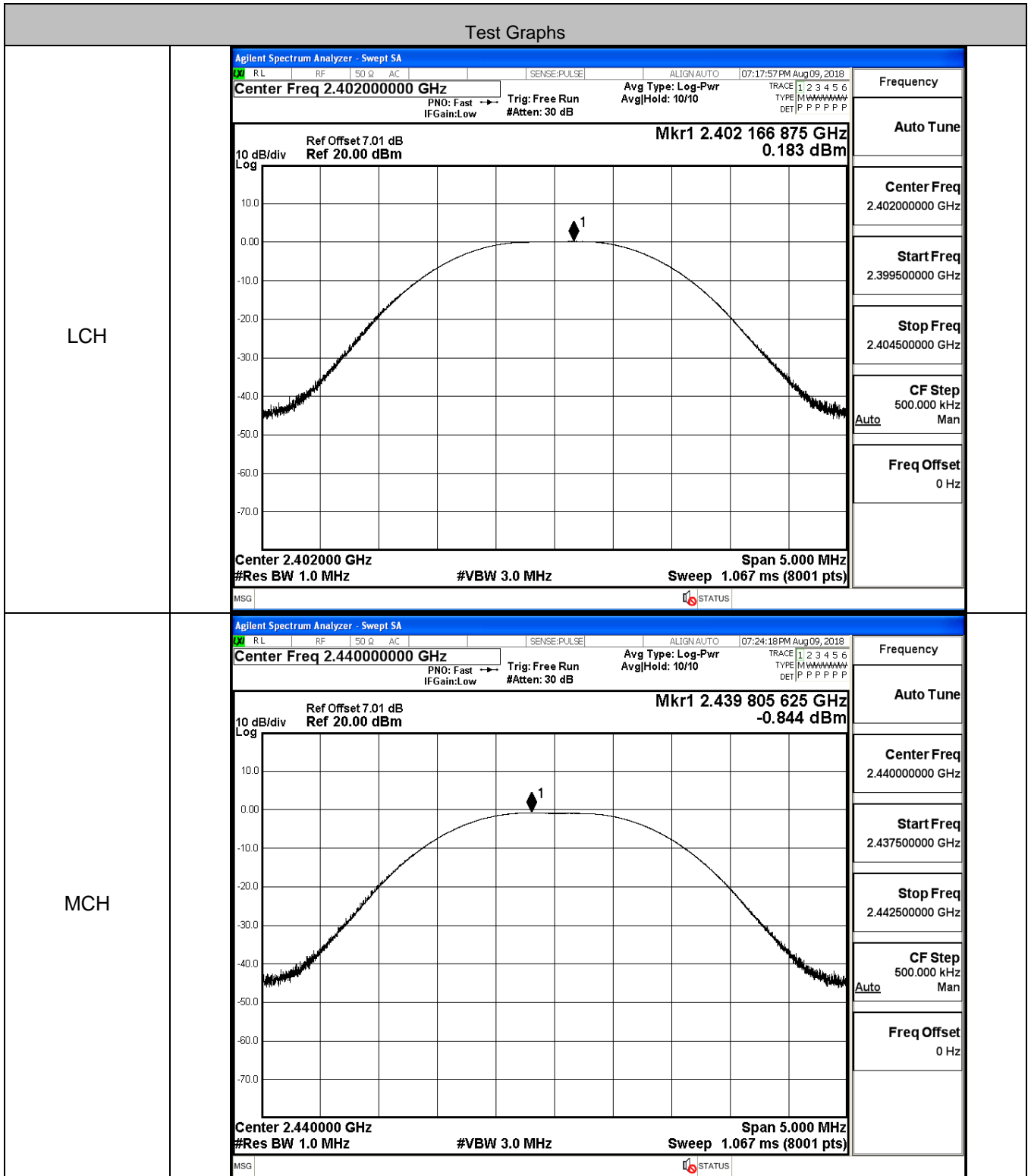
#### B.1 Duty Cycle

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

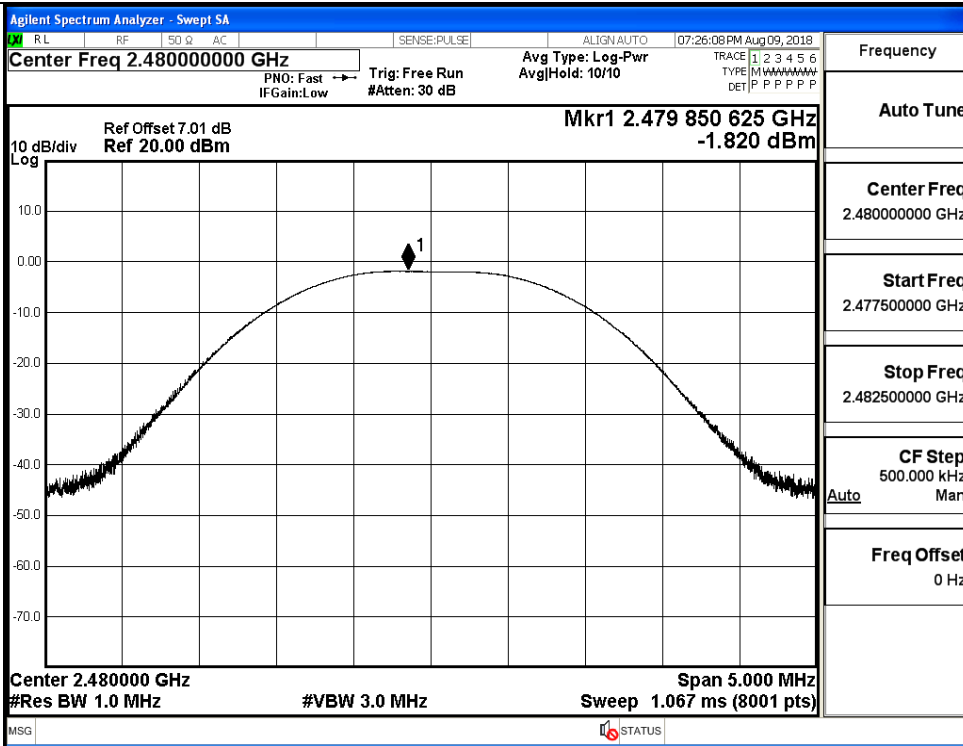


### B.2 Maximum Conducted Peak Output Power

Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	0.183	30	PASS
BT LE	MCH	-0.844	30	PASS
BT LE	HCH	-1.820	30	PASS

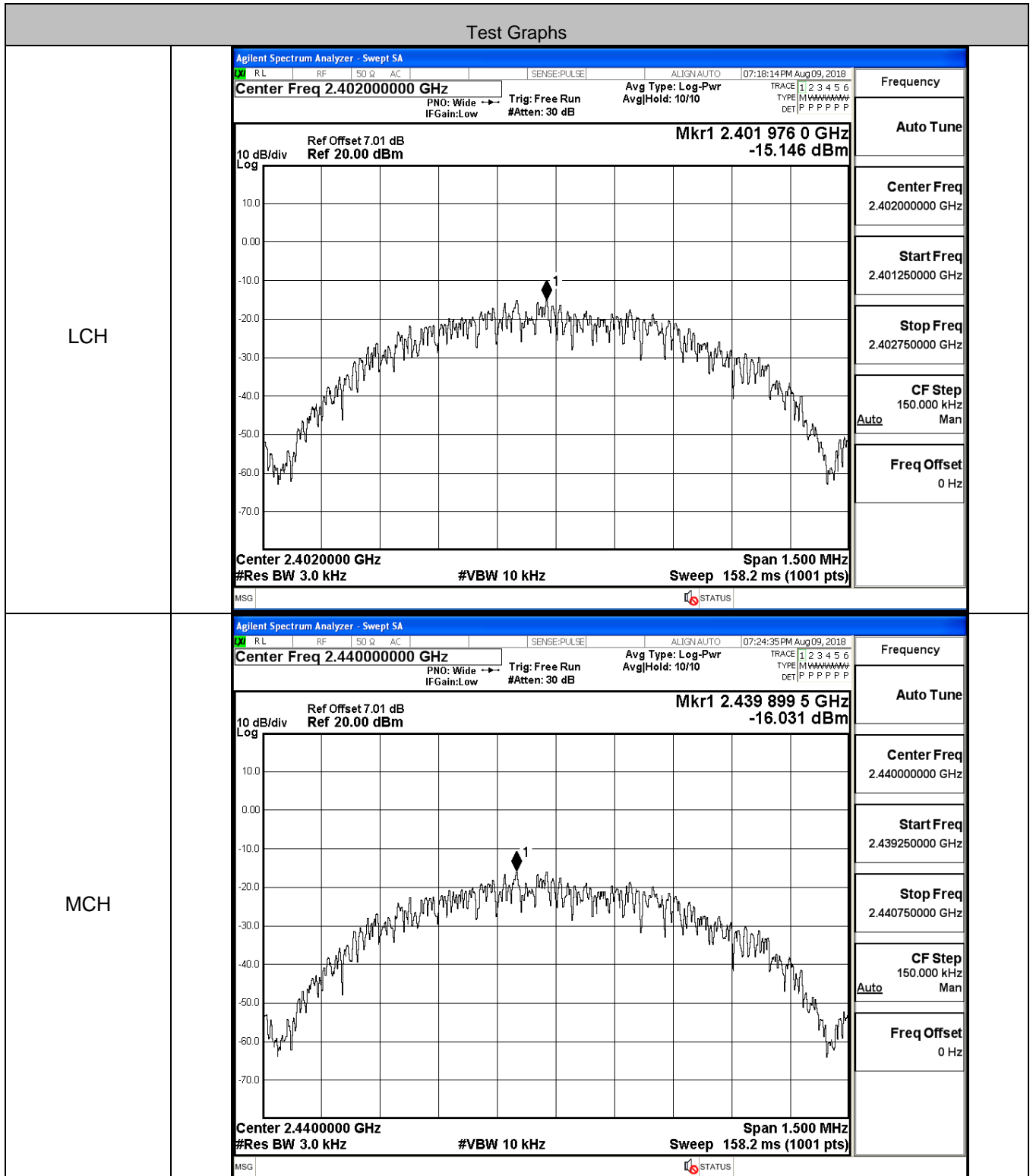


HCH

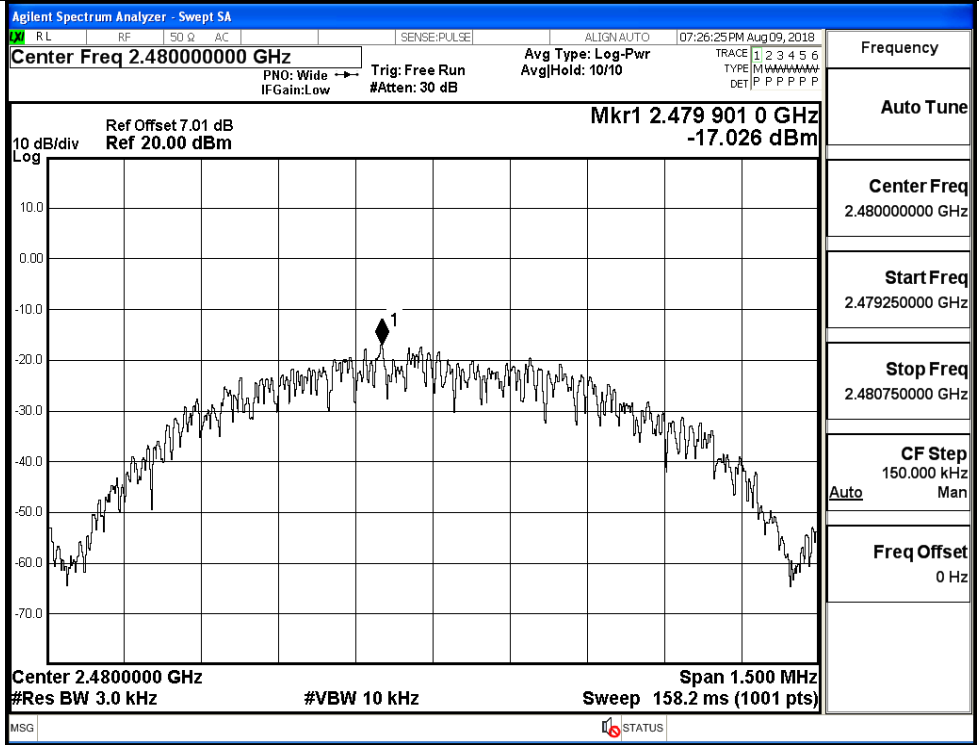


### B.3 Maximum Power Spectral Density

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-15.146	8	PASS
BT LE	MCH	-16.031	8	PASS
BT LE	HCH	-17.026	8	PASS

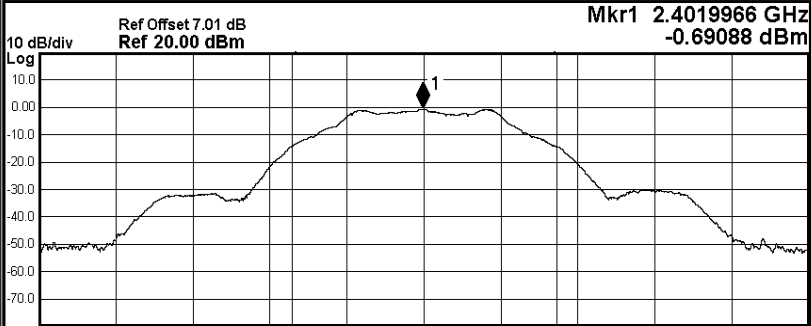
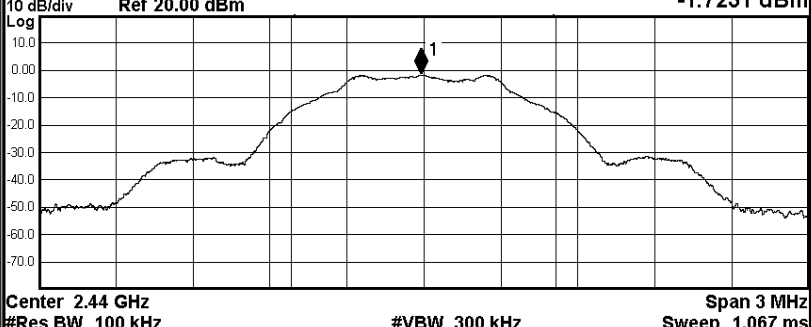


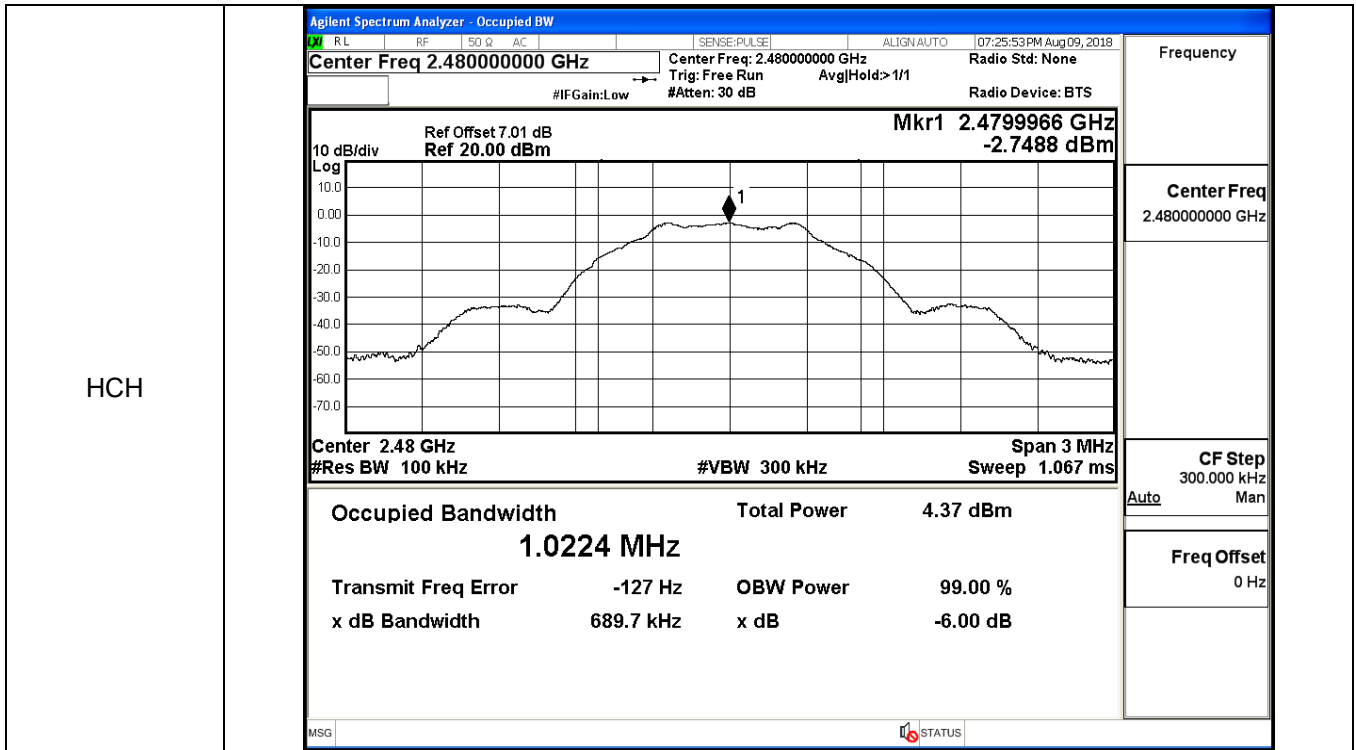
HCH



**B.4 6dB Bandwidth**

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6799	≥0.5	PASS
BT LE	MCH	0.6866	≥0.5	PASS
BT LE	HCH	0.6897	≥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 07:17:41 PM Aug 09, 2018</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;"> <p style="font-size: x-small; margin: 0;">10 dB/div Ref Offset 7.01 dB Mkr1 2.4019966 GHz</p> <p style="font-size: x-small; margin: 0;">Log Ref 20.00 dBm -0.69088 dBm</p>  <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: 33%;">Occupied Bandwidth</td> <td style="width: 33%;">Total Power</td> <td style="width: 33%;">6.41 dBm</td> </tr> <tr> <td style="text-align: center;"><b>1.0246 MHz</b></td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>4.588 kHz</td> <td>OBW Power</td> </tr> <tr> <td>x dB Bandwidth</td> <td>679.9 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> </div> <p style="font-size: x-small; margin: 0;">MSG STATUS</p> </div>	Occupied Bandwidth	Total Power	6.41 dBm	<b>1.0246 MHz</b>			Transmit Freq Error	4.588 kHz	OBW Power	x dB Bandwidth	679.9 kHz	x dB			99.00 %			-6.00 dB
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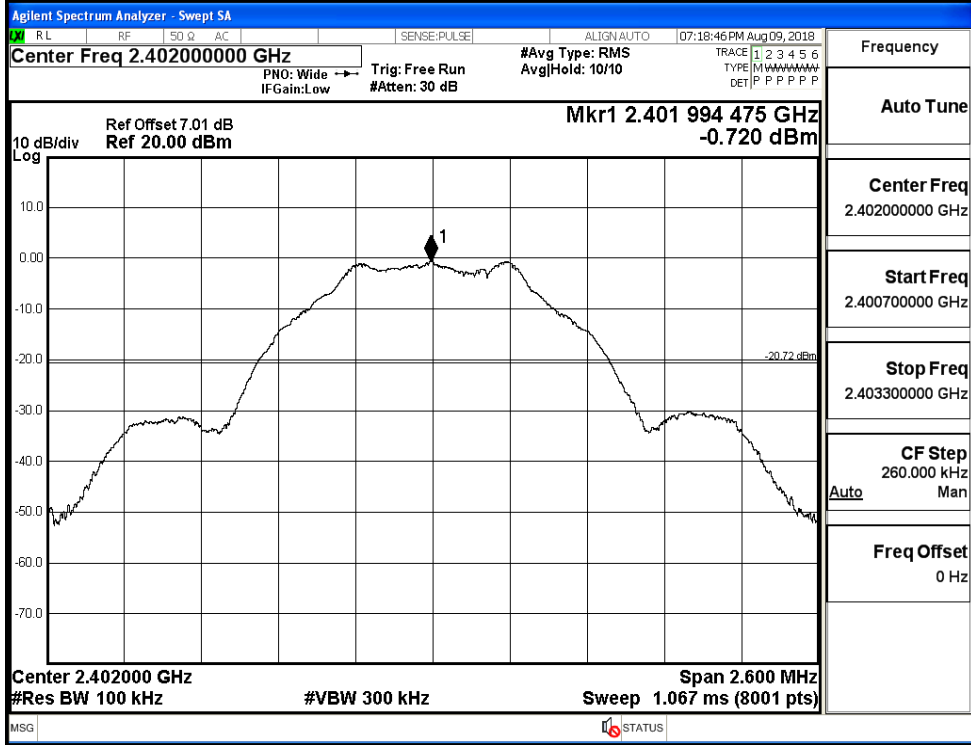
**B.5 RF Conducted Spurious Emissions**

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-0.72	-45.613	-20.720	PASS
BT LE	MCH	-1.717	-45.815	-21.717	PASS
BT LE	HCH	-2.677	-45.479	-22.677	PASS

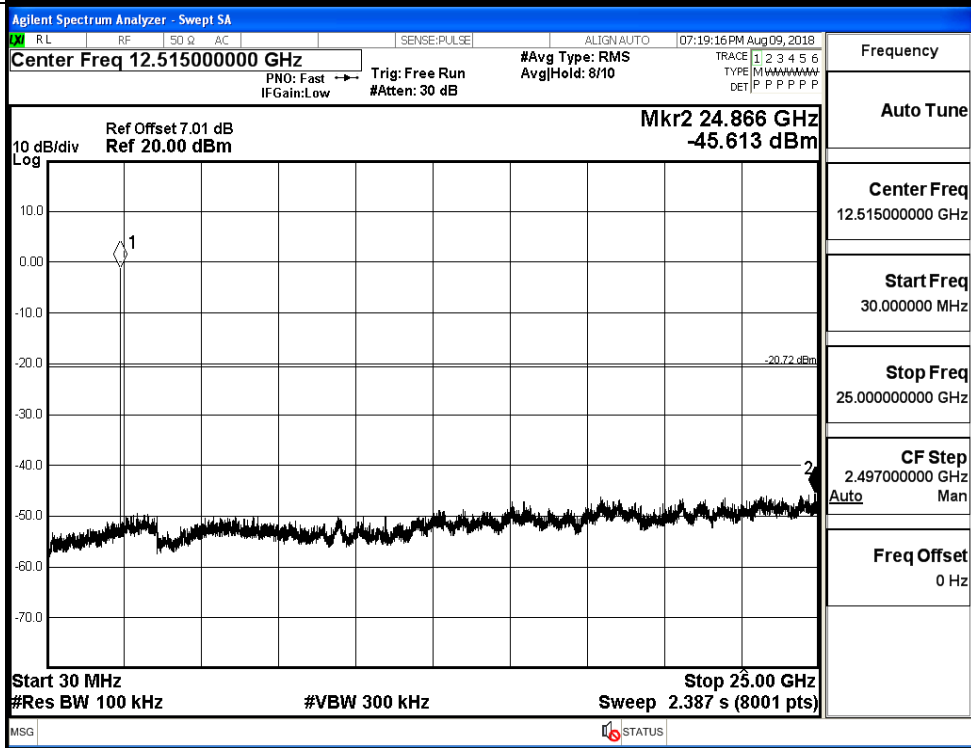


BT LE\_LCH\_Graphs

Pref/BT LE/LCH

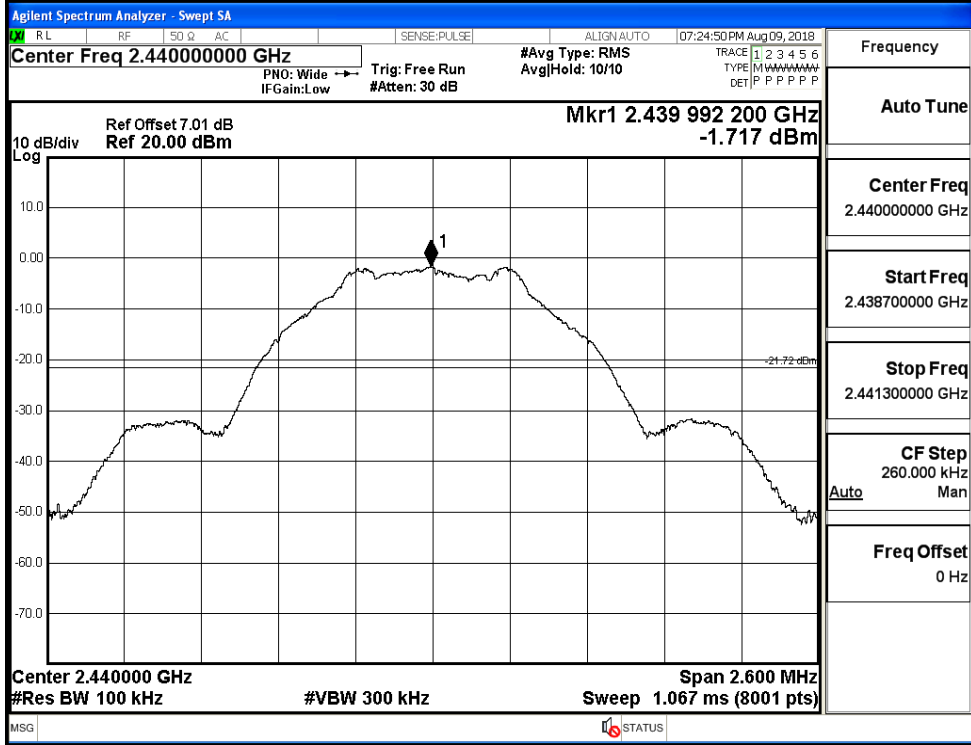


Puw/BT LE/LCH

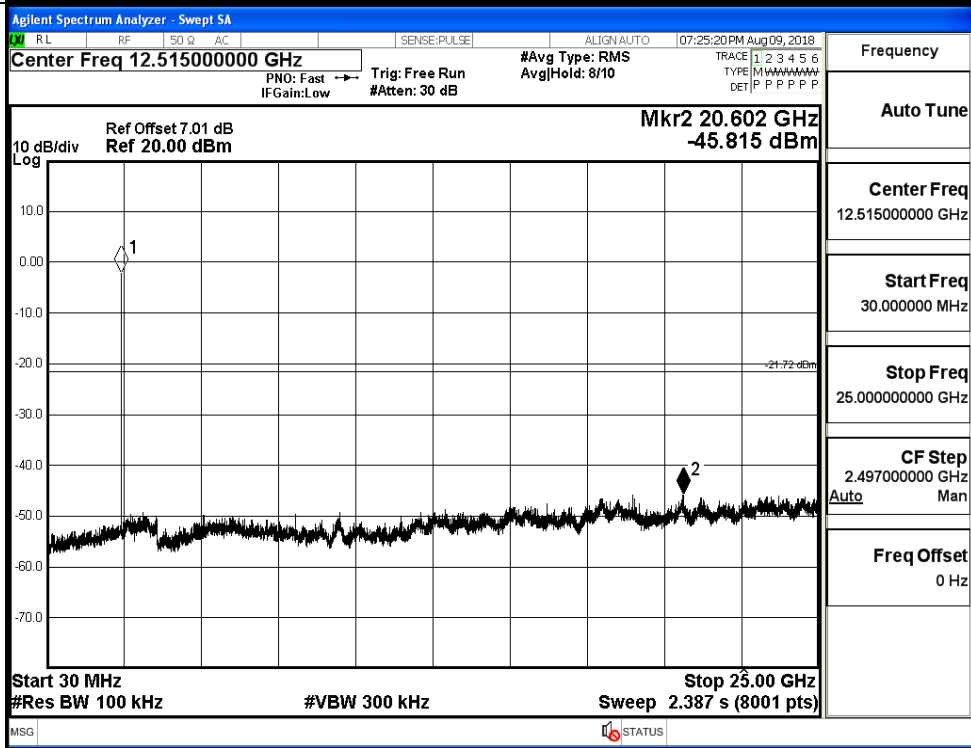


BT LE\_MCH\_Graphs

Pref/BT LE/MCH

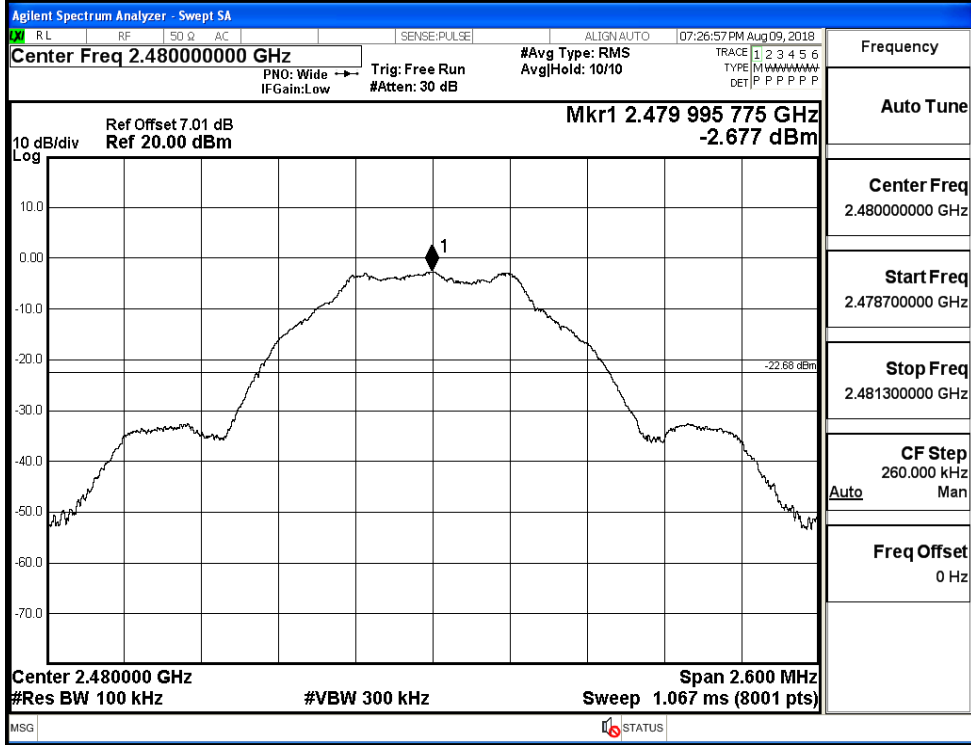


Puw/BT LE/MCH

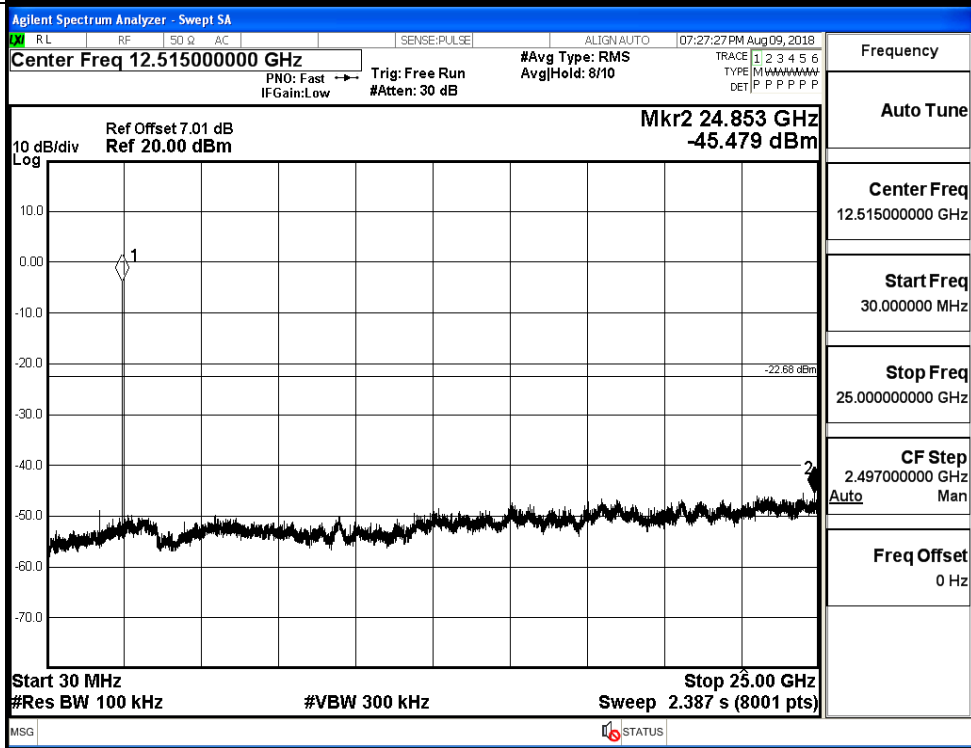


BT LE\_HCH\_Graphs

Pref/BT LE/HCH



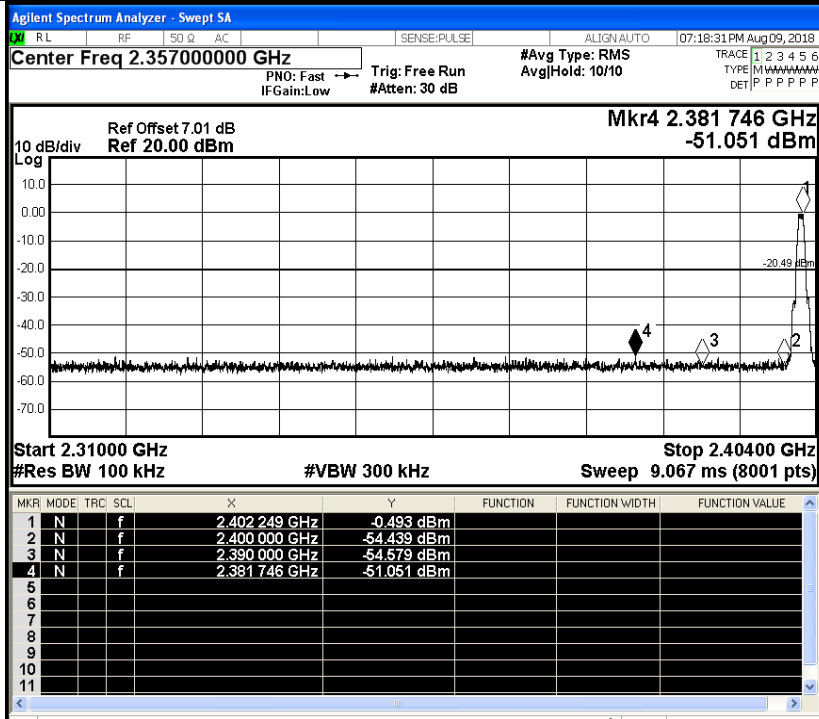
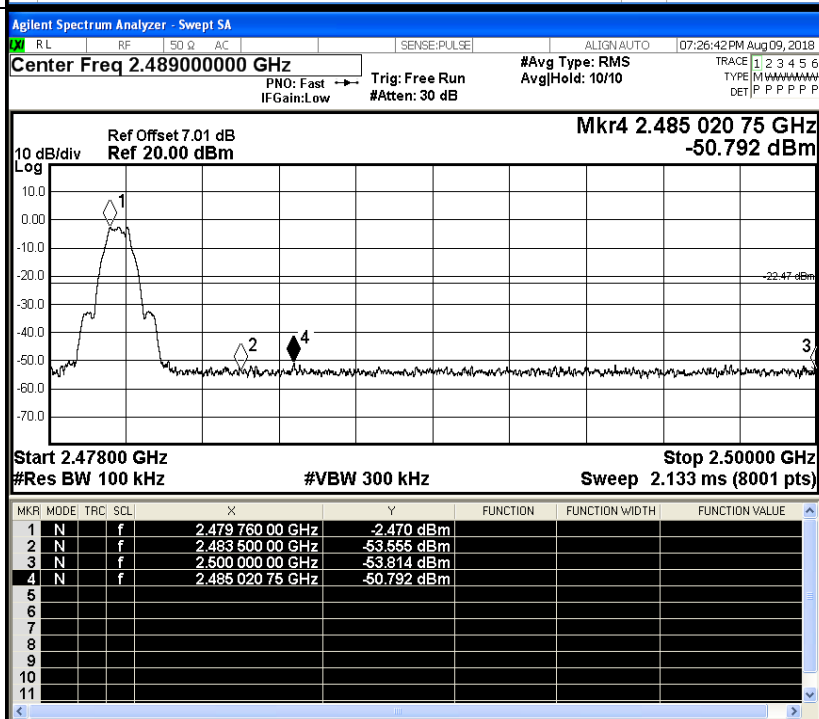
Puw/BT LE/HCH



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

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-0.493	-51.051	-20.49	PASS
BT LE	HCH	-2.470	-50.792	-22.47	PASS

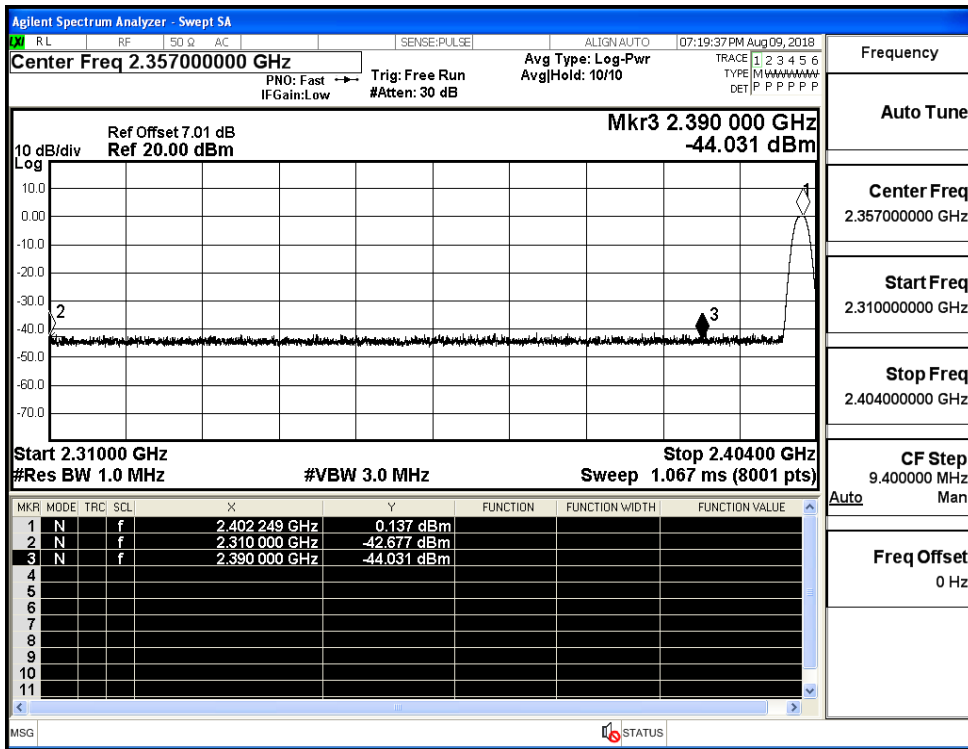
Test Graphs

LCH	 <p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.35700000 GHz Mkr4 2.381 746 GHz -51.051 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>2.402 249 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>-54.439 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>-54.579 dBm</td><td></td><td></td><td></td></tr> <tr><td>4</td><td>N</td><td>f</td><td></td><td>2.381 746 GHz</td><td>-51.051 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		2.402 249 GHz	-0.493 dBm				2	N	f		2.400 000 GHz	-54.439 dBm				3	N	f		2.390 000 GHz	-54.579 dBm				4	N	f		2.381 746 GHz	-51.051 dBm				<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>
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4	N	f		2.381 746 GHz	-51.051 dBm																																										
HCH	 <p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.48900000 GHz Mkr4 2.485 020 75 GHz -50.792 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>2.479 760 00 GHz</td><td>-2.470 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>-53.555 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>-53.814 dBm</td><td></td><td></td><td></td></tr> <tr><td>4</td><td>N</td><td>f</td><td></td><td>2.485 020 75 GHz</td><td>-50.792 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		2.479 760 00 GHz	-2.470 dBm				2	N	f		2.483 500 00 GHz	-53.555 dBm				3	N	f		2.500 000 00 GHz	-53.814 dBm				4	N	f		2.485 020 75 GHz	-50.792 dBm				<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>
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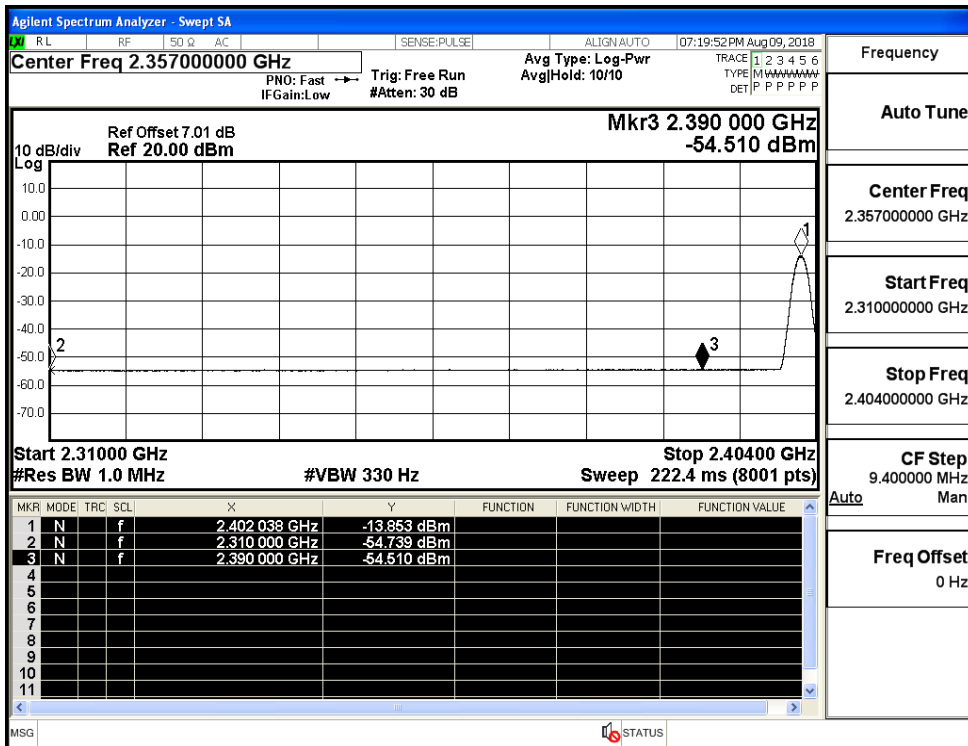
## B.7 Restrict-band band-edge measurements

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	-42.68	2.0	0	54.58	PEAK	74	PASS
		Ant1	2310.0	-54.74	2.0	0	42.52	AV	54	PASS
		Ant1	2390.0	-44.03	2.0	0	53.23	PEAK	74	PASS
		Ant1	2390.0	-54.51	2.0	0	42.75	AV	54	PASS
	2480	Ant1	2483.5	-44.42	2.0	0	52.84	PEAK	74	PASS
		Ant1	2483.5	-54.00	2.0	0	43.26	AV	54	PASS
		Ant1	2500.0	-42.81	2.0	0	54.45	PEAK	74	PASS
		Ant1	2500.0	-54.06	2.0	0	43.19	AV	54	PASS

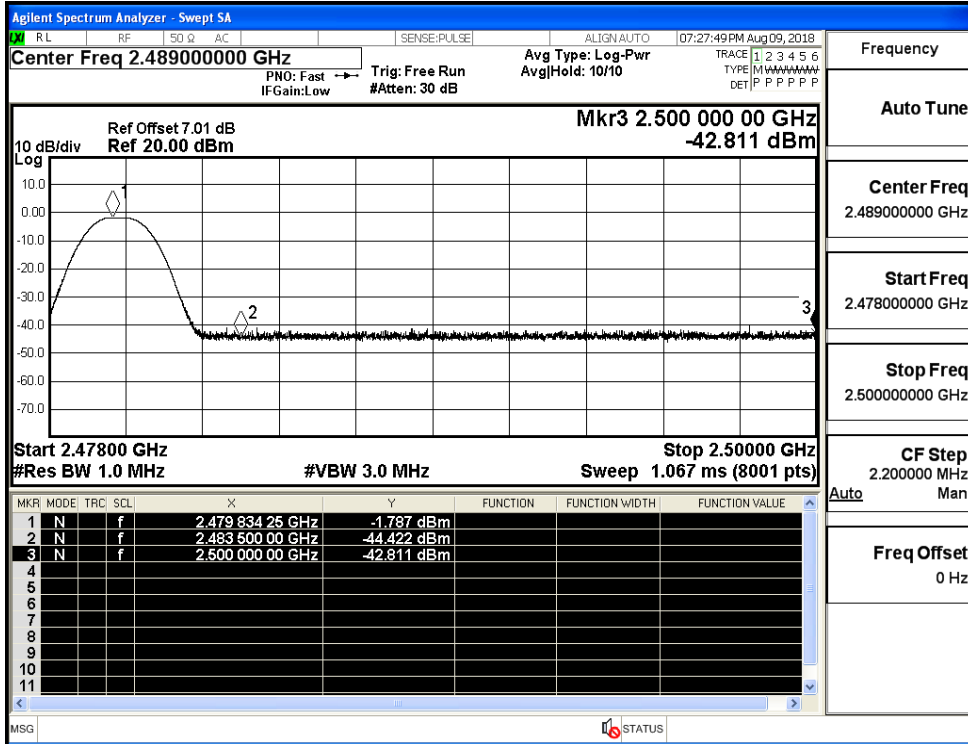
Restrict-band band-edge measurements\_BT LE\_2402\_Ant1\_PEAK



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

