

## Appendix B

### RF Test Data for BT V5.0(BDR/EDR) (Conducted Measurement)

#### Product Name: Trolley Rechargeable Speaker

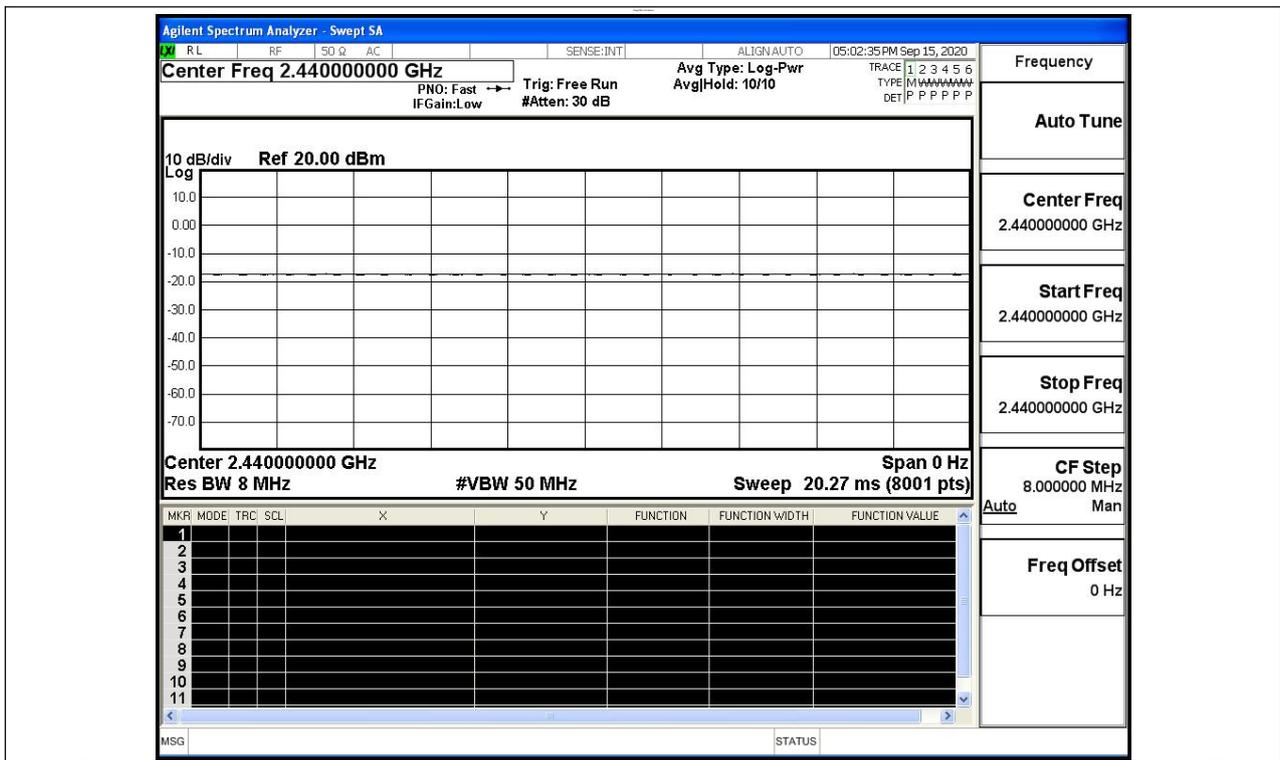
Trade Mark:   
 Test Model: PT 1243

#### Environmental Conditions

Temperature:	22.6° C
Relative Humidity:	53.4%
ATM Pressure:	100.0 kPa
Test Engineer:	Jay Li
Supervised by:	Li Huan

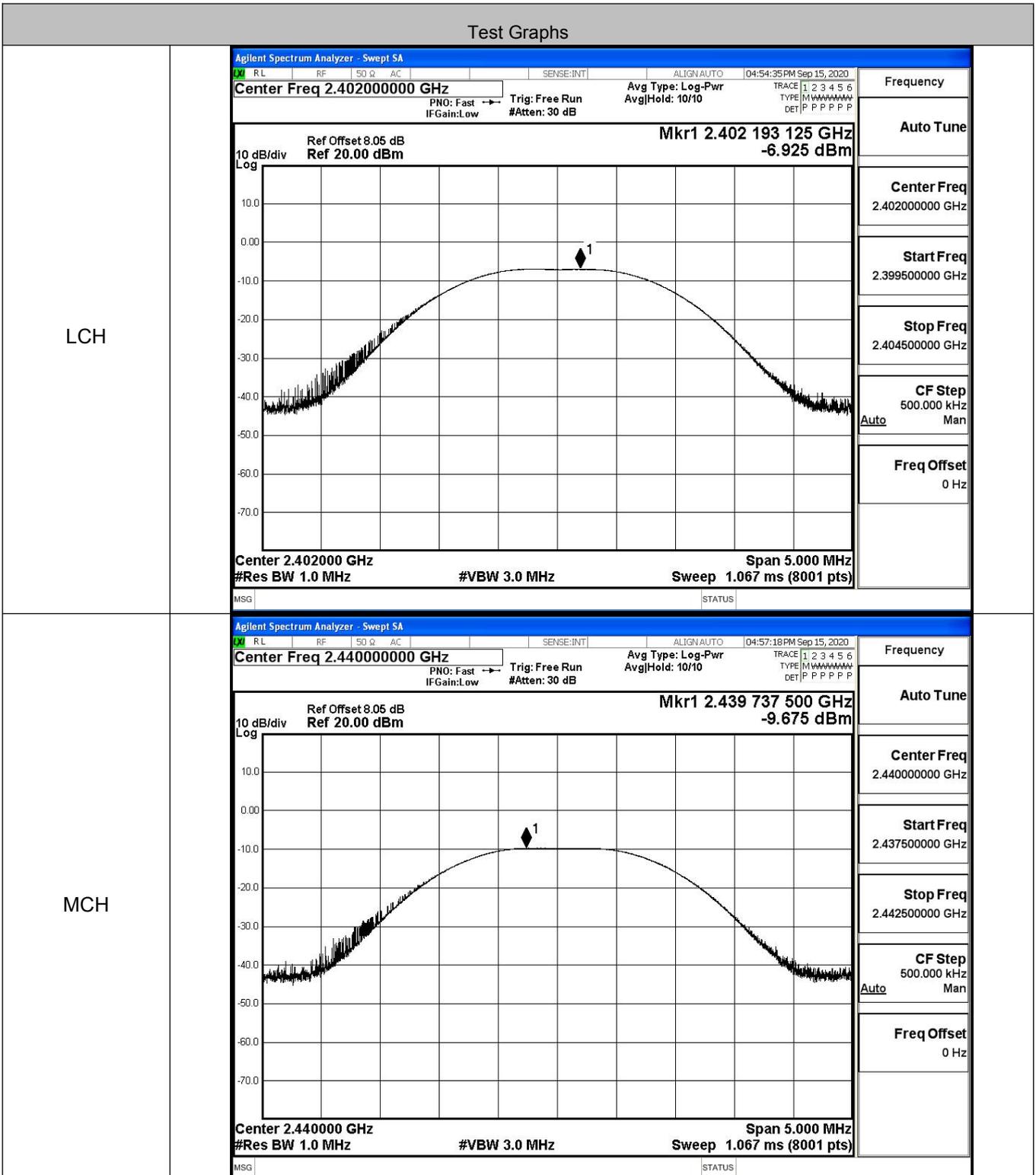
#### B.1 Duty Cycle

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	-6.925	30	PASS
BT LE	MCH	-9.675	30	PASS
BT LE	HCH	-11.891	30	PASS

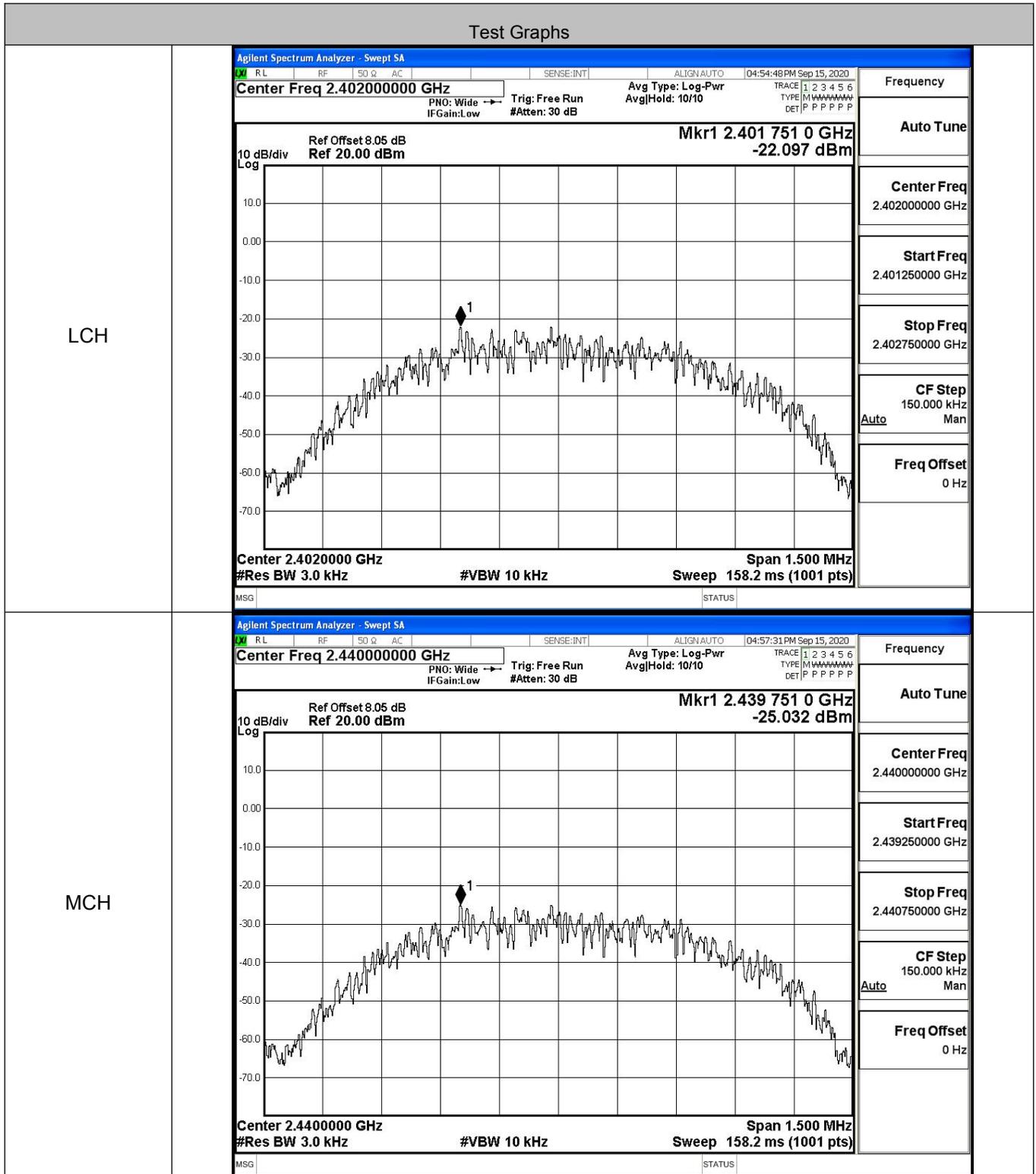




### B.3 Maximum Power Spectral Density

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-22.097	8	PASS
BT LE	MCH	-25.032	8	PASS
BT LE	HCH	-27.154	8	PASS

#### Test Graphs





**B.4 6dB Bandwidth**

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6863	≥0.5	PASS
BT LE	MCH	0.6885	≥0.5	PASS
BT LE	HCH	0.6922	≥0.5	PASS

Test Graphs

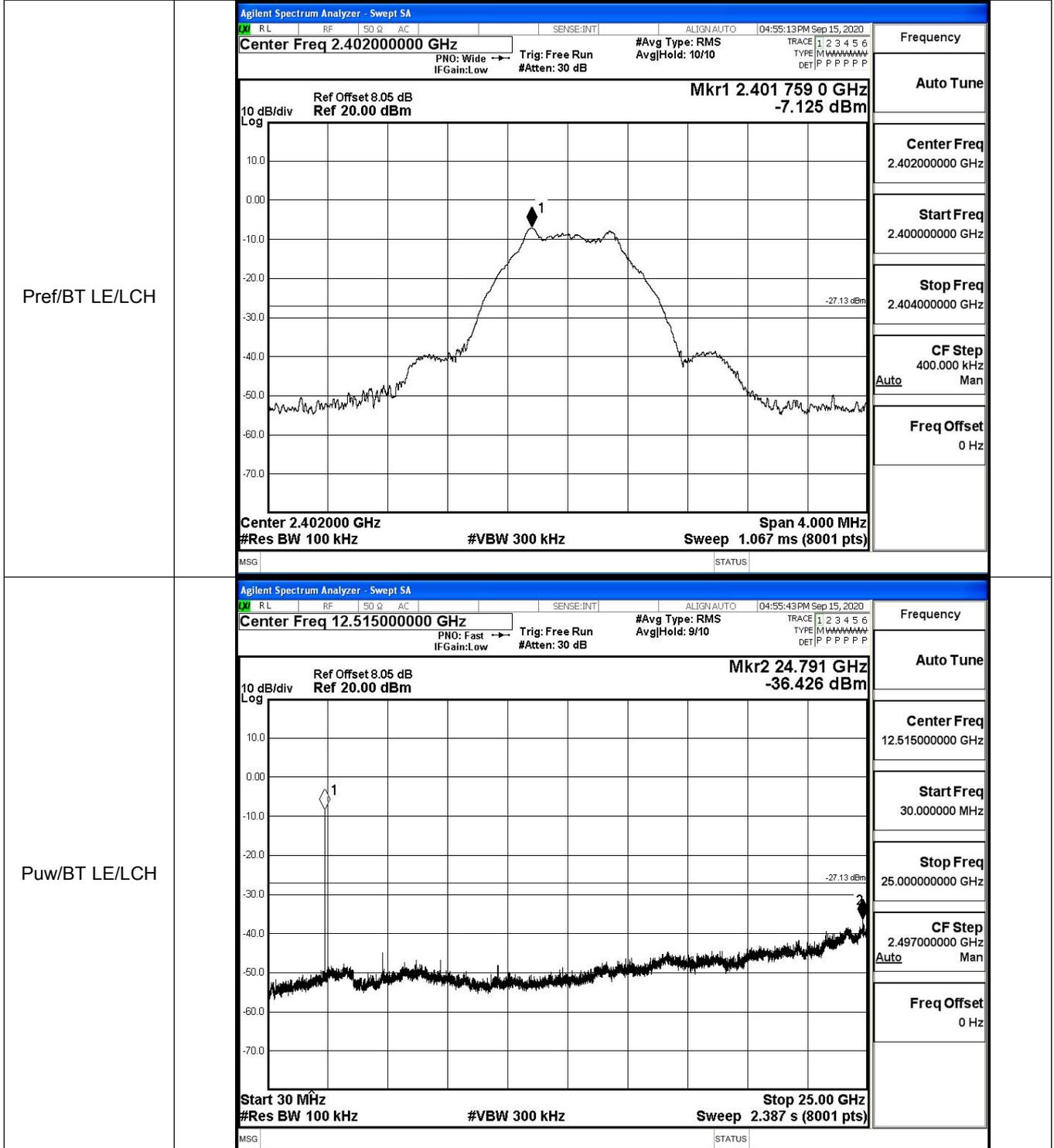
LCH	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.40200000 GHz    Center Freq: 2.402000000 GHz    Radio Std: None</p> <p>Trig: Free Run    AvgHold: &gt;1/1</p> <p>#IFGain: Low    #Atten: 30 dB    Radio Device: BTS</p> <p>Ref Offset 8.05 dB    Mkr1 2.4017574 GHz Ref 20.00 dBm    -7.1267 dBm</p> <p>Center 2.402 GHz    Span 3 MHz #Res BW 100 kHz    #VBW 300 kHz    Sweep 1.067 ms</p> <p><b>Occupied Bandwidth</b>    Total Power    -0.67 dBm <b>1.0347 MHz</b></p> <p>Transmit Freq Error    23.196 kHz    OBW Power    99.00 % x dB Bandwidth    686.3 kHz    x dB    -6.00 dB</p> <p>MSG    STATUS</p>	<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>
	MCH	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.44000000 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    Mkr1 2.4397563 GHz Ref 20.00 dBm    -9.9142 dBm</p> <p>Center 2.44 GHz    Span 3 MHz #Res BW 100 kHz    #VBW 300 kHz    Sweep 1.067 ms</p> <p><b>Occupied Bandwidth</b>    Total Power    -3.47 dBm <b>1.0375 MHz</b></p> <p>Transmit Freq Error    24.019 kHz    OBW Power    99.00 % x dB Bandwidth    688.5 kHz    x dB    -6.00 dB</p> <p>MSG    STATUS</p>



### B.5 RF Conducted Spurious Emissions

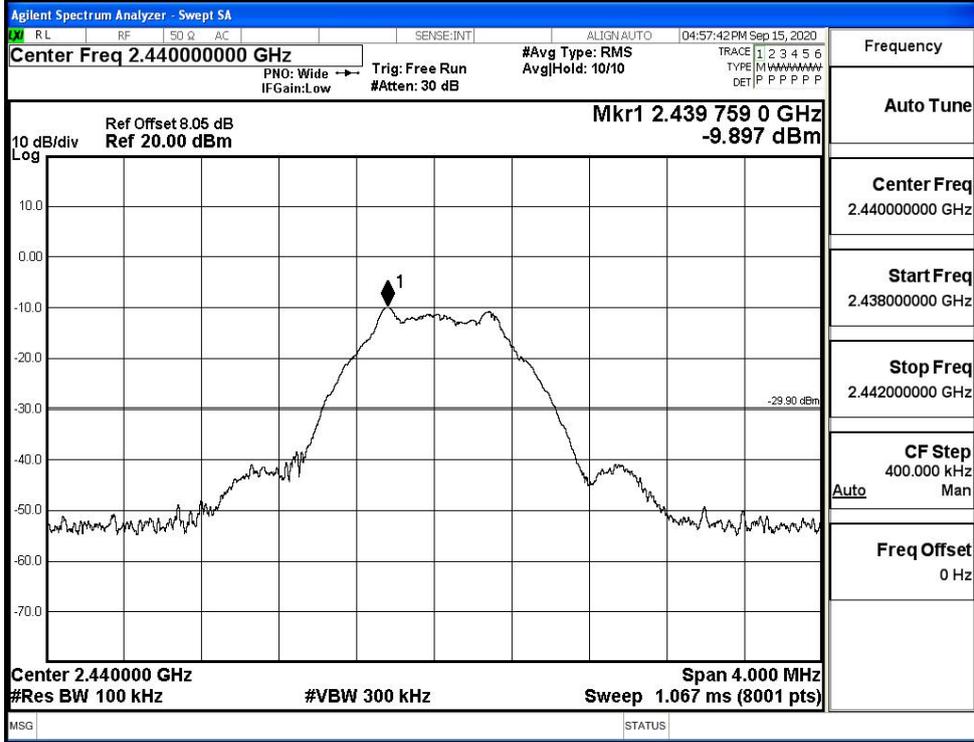
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-7.125	-36.426	-27.125	PASS
BT LE	MCH	-9.897	-37.748	-29.897	PASS
BT LE	HCH	-12.366	-36.232	-32.366	PASS

BT LE\_LCH\_Graphs

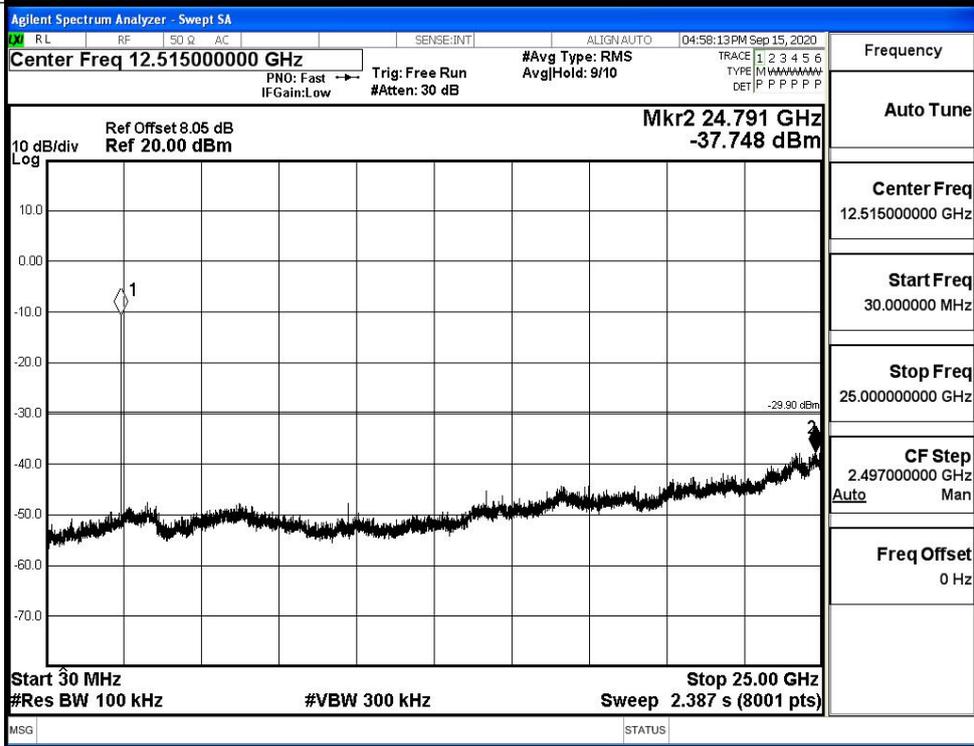


BT LE MCH Graphs

Pref/BT LE/MCH

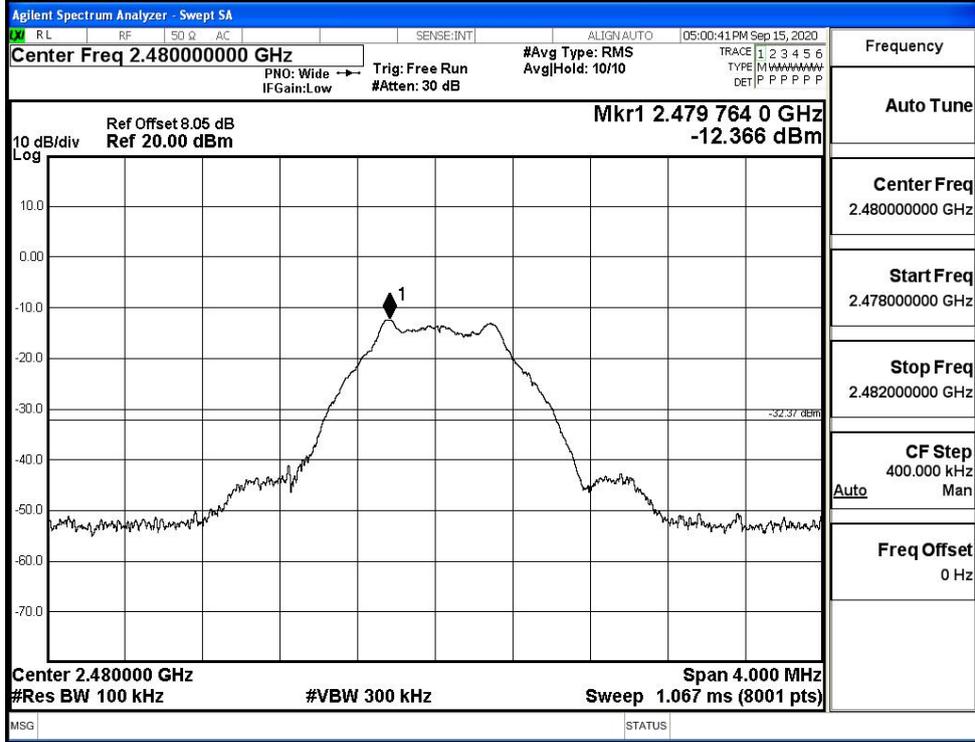


Puw/BT LE/MCH

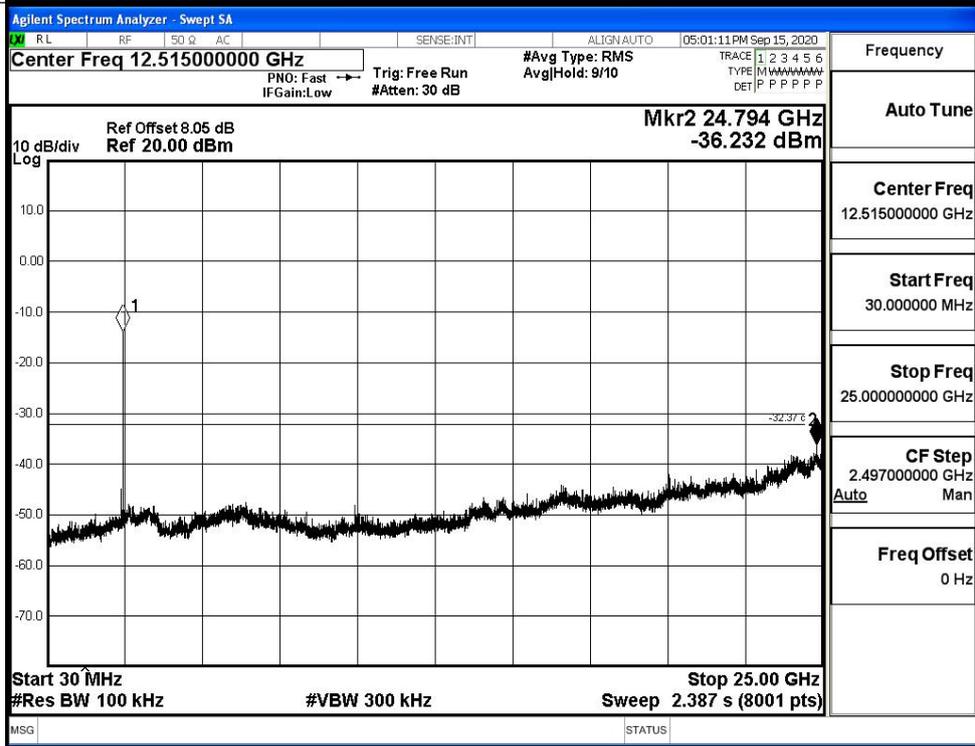


BT LE HCH Graphs

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	-7.104	-48.472	-27.1	PASS
BT LE	HCH	-12.243	-49.024	-32.24	PASS

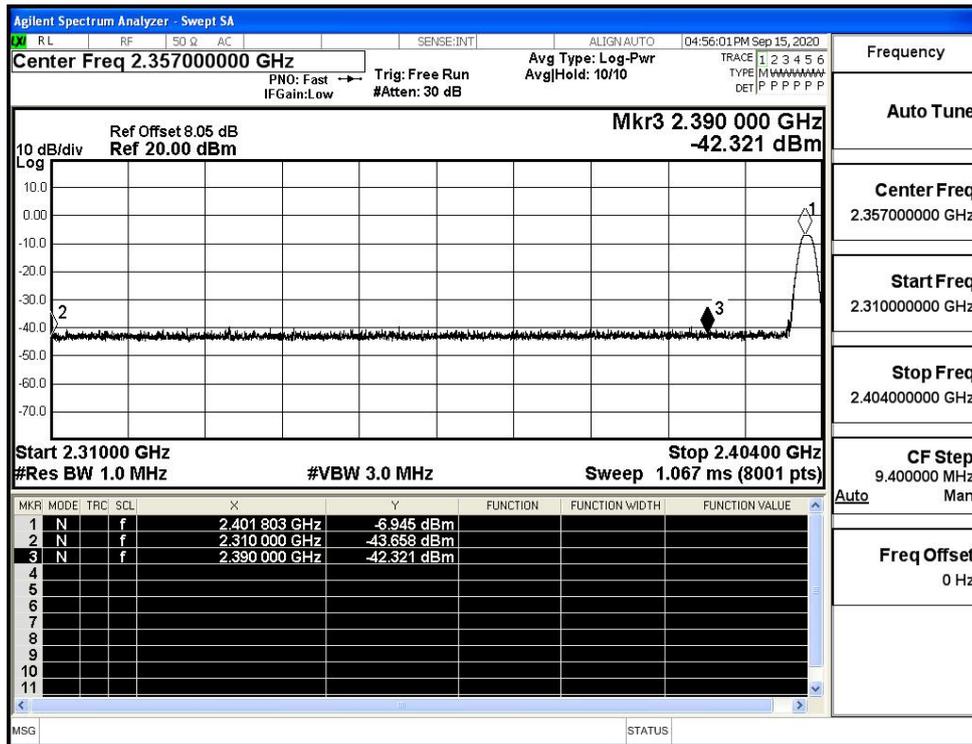
#### Test Graphs

LCH	<p>Agilent Spectrum Analyzer - Swept SA                  Center Freq 2.35700000 GHz                  Ref Offset 8.05 dB                  Ref 20.00 dBm                  Mkr4 2.349 950 GHz                  -48.472 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"> <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>2.401 788 GHz</td><td>-7.104 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>-53.184 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>-52.747 dBm</td><td></td><td></td><td></td></tr> <tr><td>4</td><td>N</td><td>f</td><td></td><td>2.349 950 GHz</td><td>-48.472 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		2.401 788 GHz	-7.104 dBm				2	N	f		2.400 000 GHz	-53.184 dBm				3	N	f		2.390 000 GHz	-52.747 dBm				4	N	f		2.349 950 GHz	-48.472 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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HCH	<p>Agilent Spectrum Analyzer - Swept SA                  Center Freq 2.48900000 GHz                  Ref Offset 8.05 dB                  Ref 20.00 dBm                  Mkr4 2.487 108 00 GHz                  -49.024 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"> <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>2.479 765 50 GHz</td><td>-12.243 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>-52.713 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>-52.539 dBm</td><td></td><td></td><td></td></tr> <tr><td>4</td><td>N</td><td>f</td><td></td><td>2.487 108 00 GHz</td><td>-49.024 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		2.479 765 50 GHz	-12.243 dBm				2	N	f		2.483 500 00 GHz	-52.713 dBm				3	N	f		2.500 000 00 GHz	-52.539 dBm				4	N	f		2.487 108 00 GHz	-49.024 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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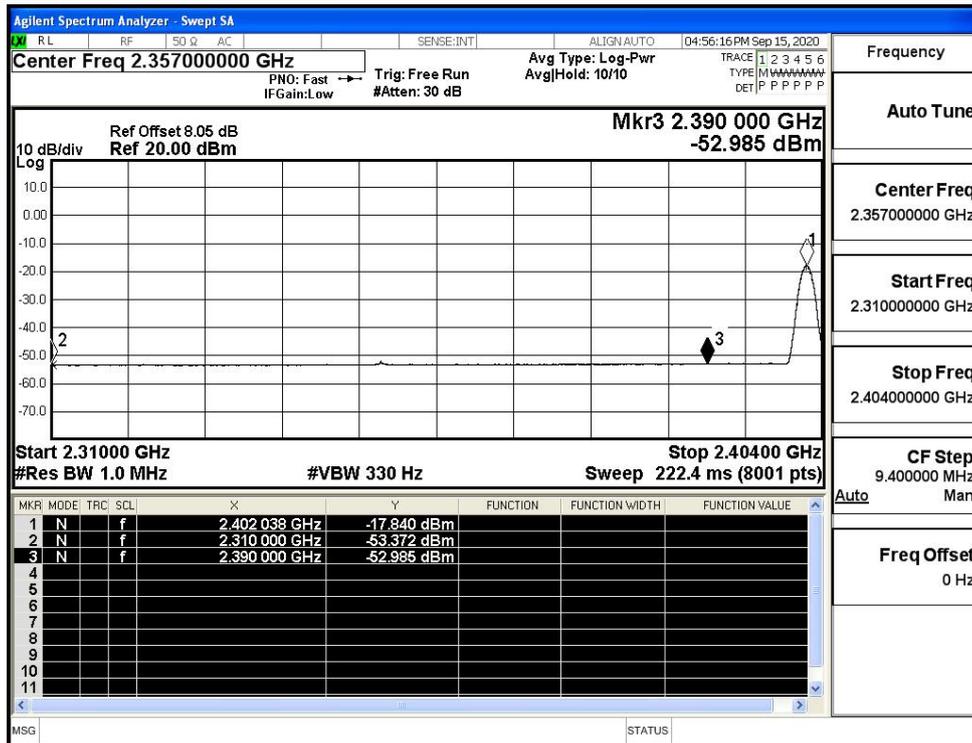
**B.7 Restrict-band band-edge measurements**

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	-43.66	2.0	0	53.57	PEAK	74	PASS
		Ant1	2310.0	-53.37	2.0	0	43.86	AV	54	PASS
		Ant1	2390.0	-42.32	2.0	0	54.91	PEAK	74	PASS
		Ant1	2390.0	-52.99	2.0	0	44.24	AV	54	PASS
	2480	Ant1	2483.5	-41.25	2.0	0	55.98	PEAK	74	PASS
		Ant1	2483.5	-52.52	2.0	0	44.71	AV	54	PASS
		Ant1	2500.0	-41.82	2.0	0	55.41	PEAK	74	PASS
		Ant1	2500.0	-52.37	2.0	0	44.86	AV	54	PASS

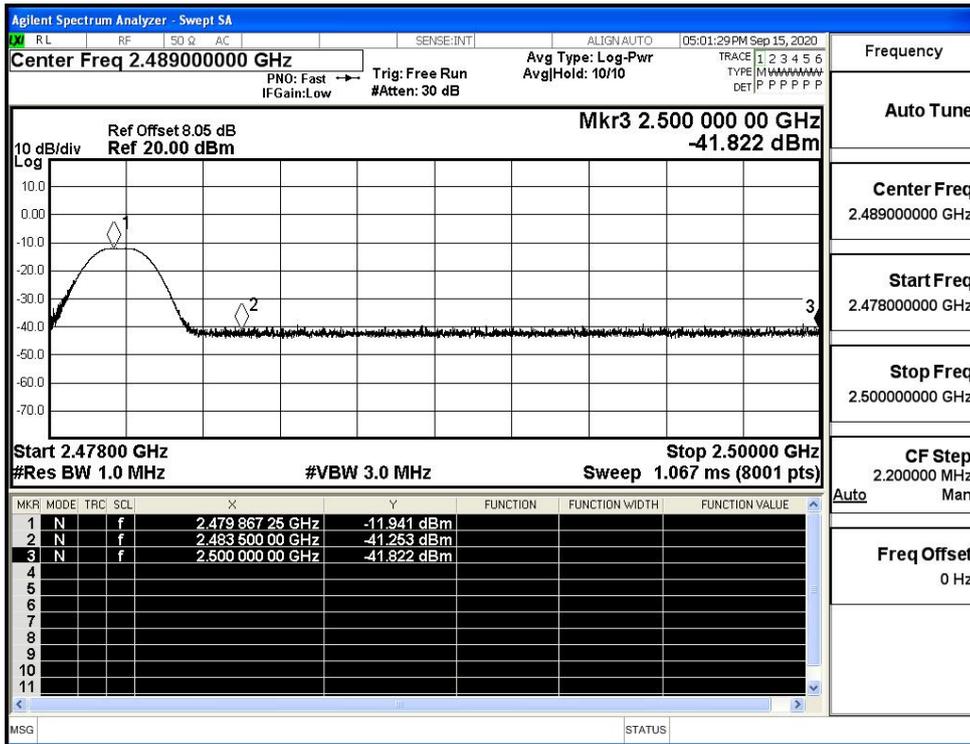
Restrict-band band-edge measurements\_BT LE\_2402\_Ant1\_PEAK



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

