

Appendix A

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

Product Name: Action Camera

Trade Mark: N/A

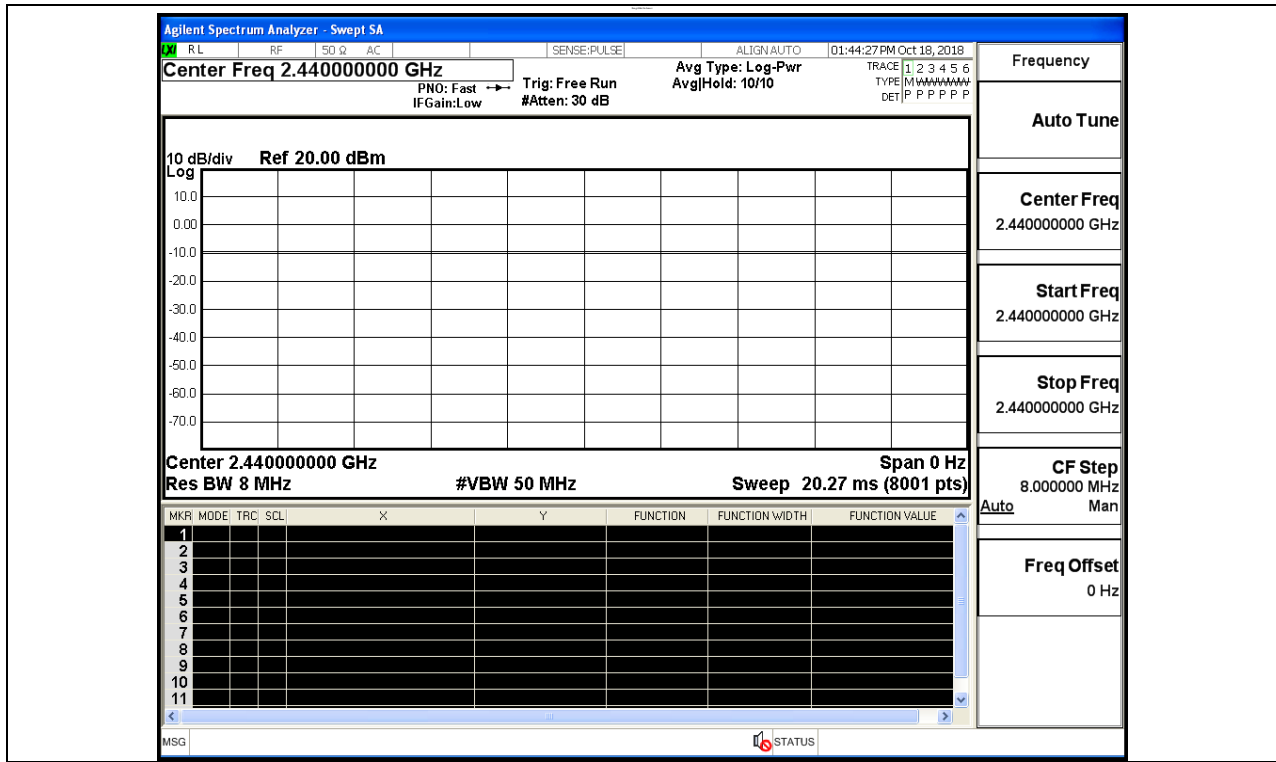
Test Model: SC-100

Environmental Conditions

Temperature:	23.6 ° C
Relative Humidity:	52.7%
ATM Pressure:	100.0 kPa
Test Engineer:	Mina.Xu
Supervised by:	Jayden.Zhuo

A.1 Duty Cycle

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

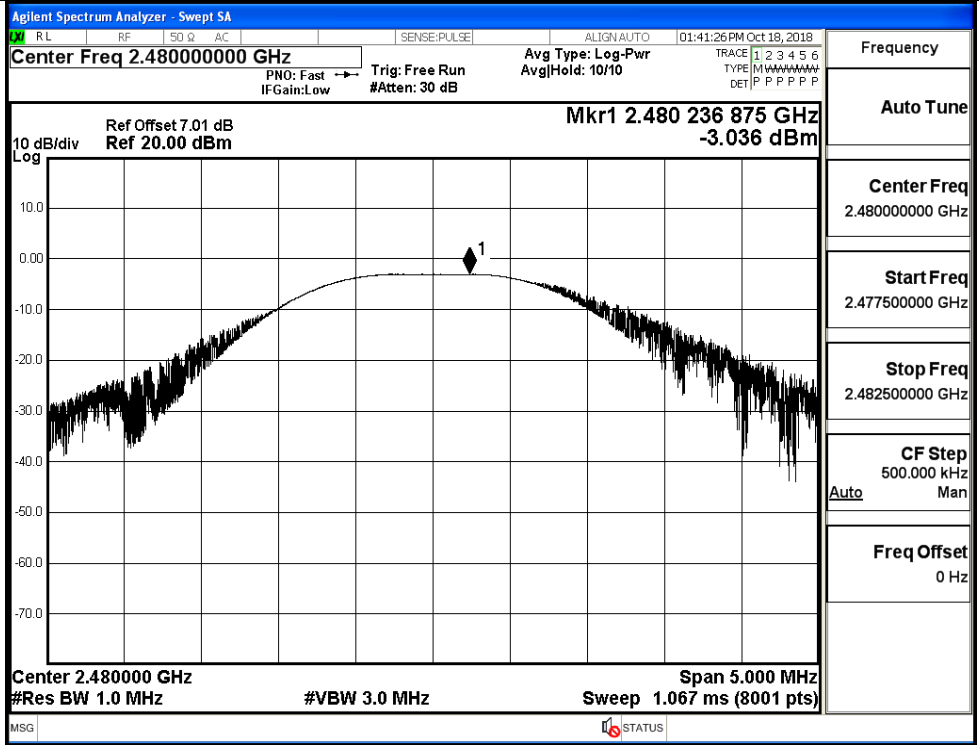


A.2 Maximum Conducted Peak Output Power

Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	-2.313	30	PASS
BT LE	MCH	-2.567	30	PASS
BT LE	HCH	-3.036	30	PASS

Test Graphs	
LCH	<div style="border: 1px solid black; padding: 5px;"> <p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.40200000 GHz</p> <p>Mkr1 2.402 259 375 GHz -2.313 dBm</p> <p>Center 2.402000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Span 5.000 MHz Sweep 1.067 ms (8001 pts)</p> </div>
MCH	<div style="border: 1px solid black; padding: 5px;"> <p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.44000000 GHz</p> <p>Mkr1 2.440 254 375 GHz -2.567 dBm</p> <p>Center 2.440000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Span 5.000 MHz Sweep 1.067 ms (8001 pts)</p> </div>

HCH



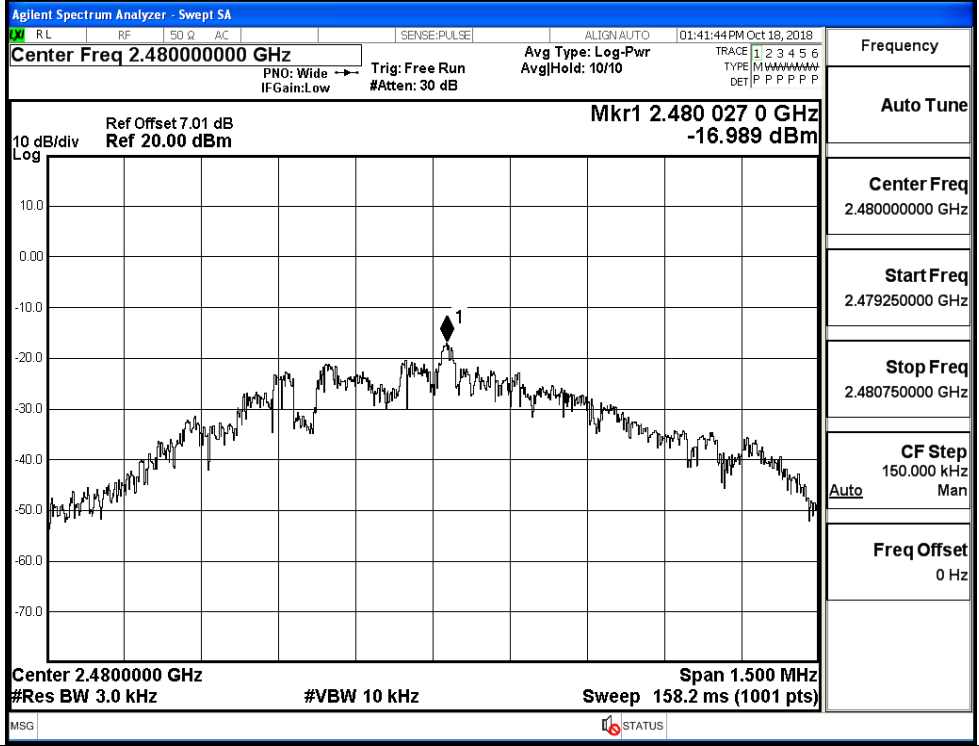
A.3 Maximum Power Spectral Density

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-14.041	8	PASS
BT LE	MCH	-16.203	8	PASS
BT LE	HCH	-16.989	8	PASS

Test Graphs



HCH



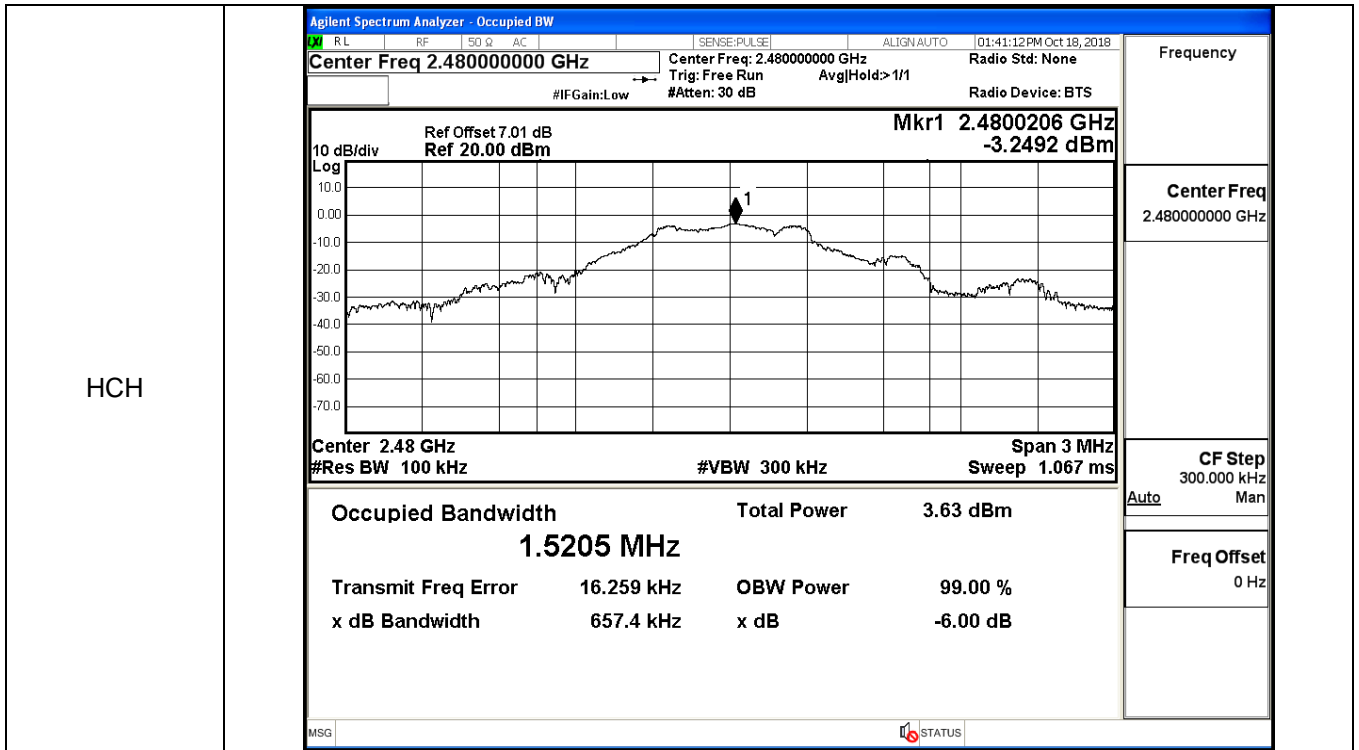
A.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6638	≥0.5	PASS
BT LE	MCH	0.6700	≥0.5	PASS
BT LE	HCH	0.6574	≥0.5	PASS

Test Graphs

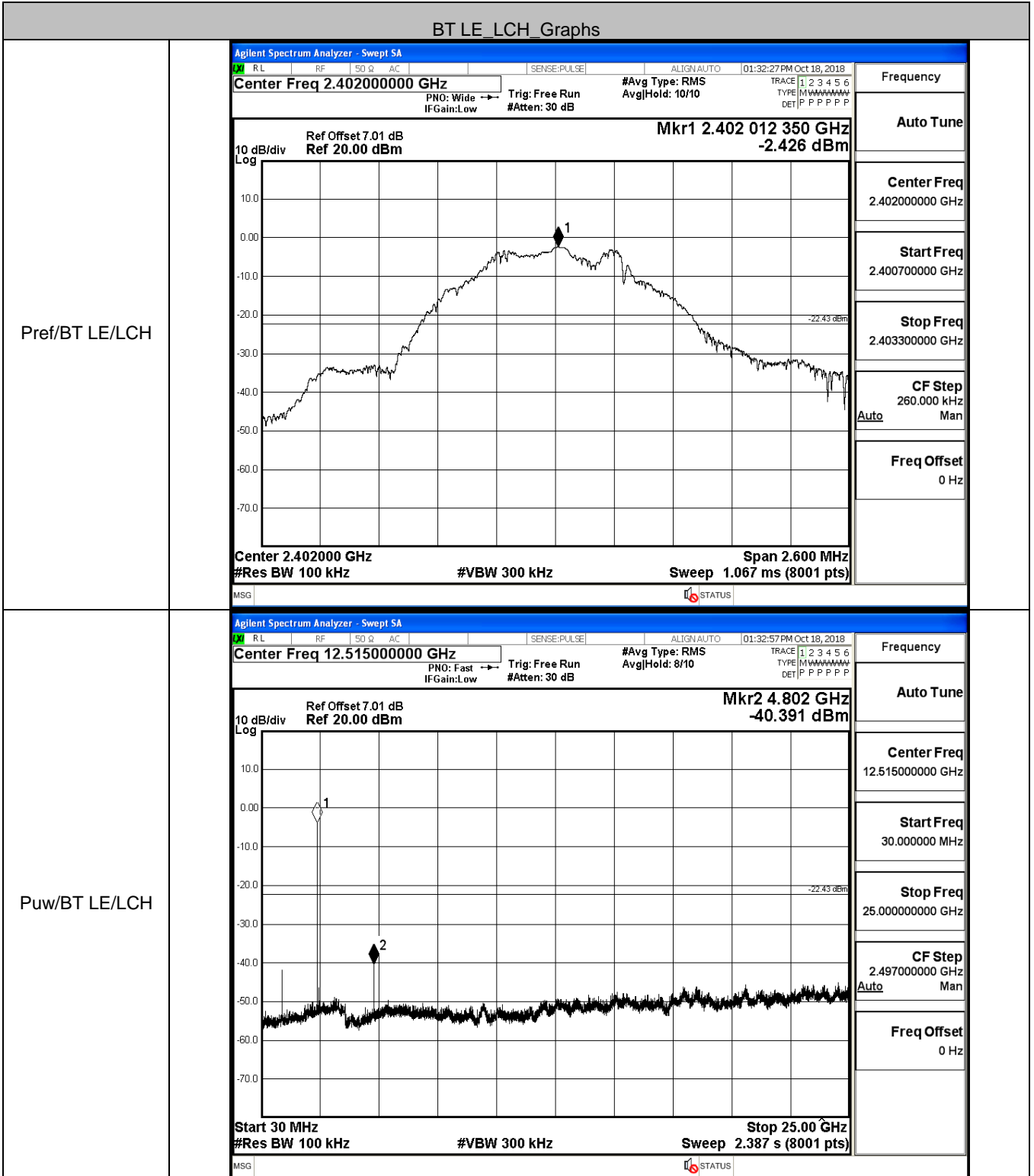
LCH	<p style="font-size: small; margin: 0;">Agilent Spectrum Analyzer - Occupied BW</p> <p style="font-size: x-small; margin: 0;">RL RF 50 Ω AC SENSE:PULSE ALIGN:AUTO 01:31:25 PM Oct 18, 2018</p> <p style="font-size: small; margin: 0;">Center Freq 2.40200000 GHz Center Freq: 2.40200000 GHz Radio Std: 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>	Frequency																	
		Center Freq 2.40200000 GHz																	
	<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>	CF Step 300.000 kHz Auto Man																	
	<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%;">4.04 dBm</td> </tr> <tr> <td style="text-align: center;">1.0889 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>20.894 kHz</td> <td>OBW Power</td> </tr> <tr> <td>x dB Bandwidth</td> <td>663.8 kHz</td> <td>x dB</td> </tr> <tr> <td></td> <td></td> <td style="text-align: right;">99.00 %</td> </tr> <tr> <td></td> <td></td> <td style="text-align: right;">-6.00 dB</td> </tr> </table>	Occupied Bandwidth	Total Power	4.04 dBm	1.0889 MHz			Transmit Freq Error	20.894 kHz	OBW Power	x dB Bandwidth	663.8 kHz	x dB			99.00 %			-6.00 dB
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MCH	<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 01:34:12 PM Oct 18, 2018</p> <p style="font-size: small; margin: 0;">Center Freq 2.44000000 GHz Center Freq: 2.44000000 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>	Frequency																	
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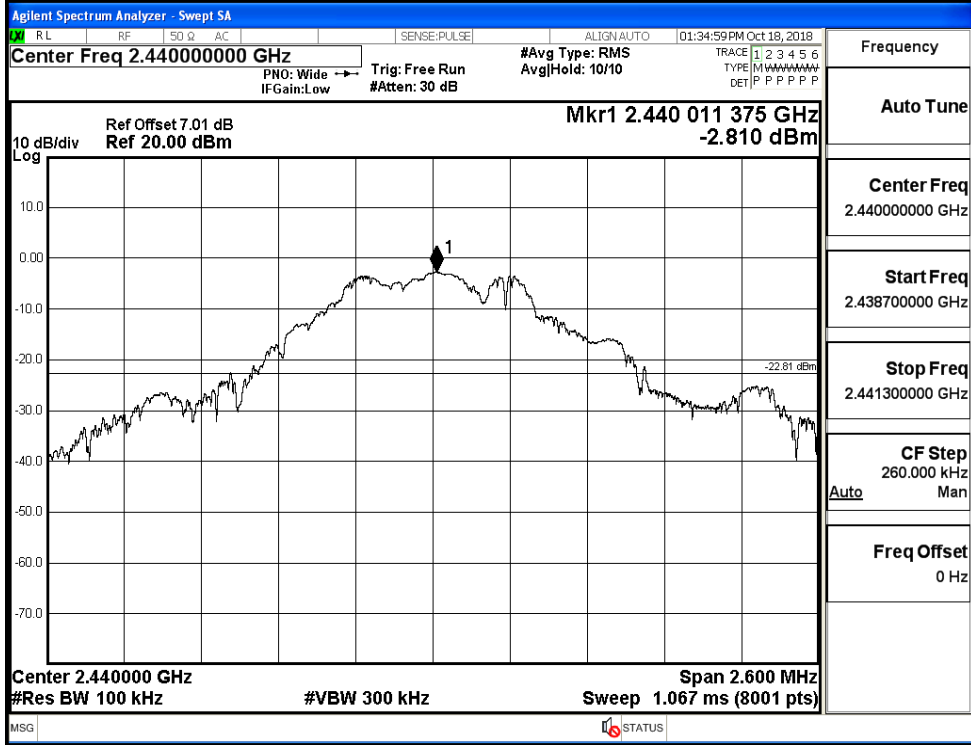
A.5 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-2.426	-40.391	-22.426	PASS
BT LE	MCH	-2.81	-39.371	-22.810	PASS
BT LE	HCH	-3.267	-38.963	-23.267	PASS

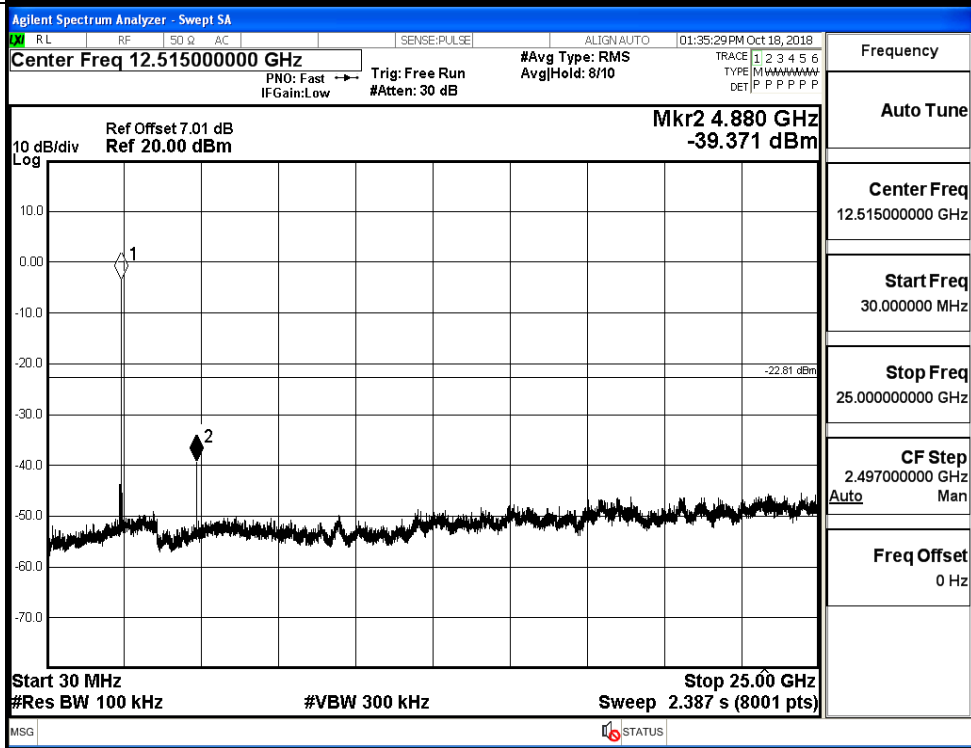


BT LE_MCH_Graphs

Pref/BT LE/MCH

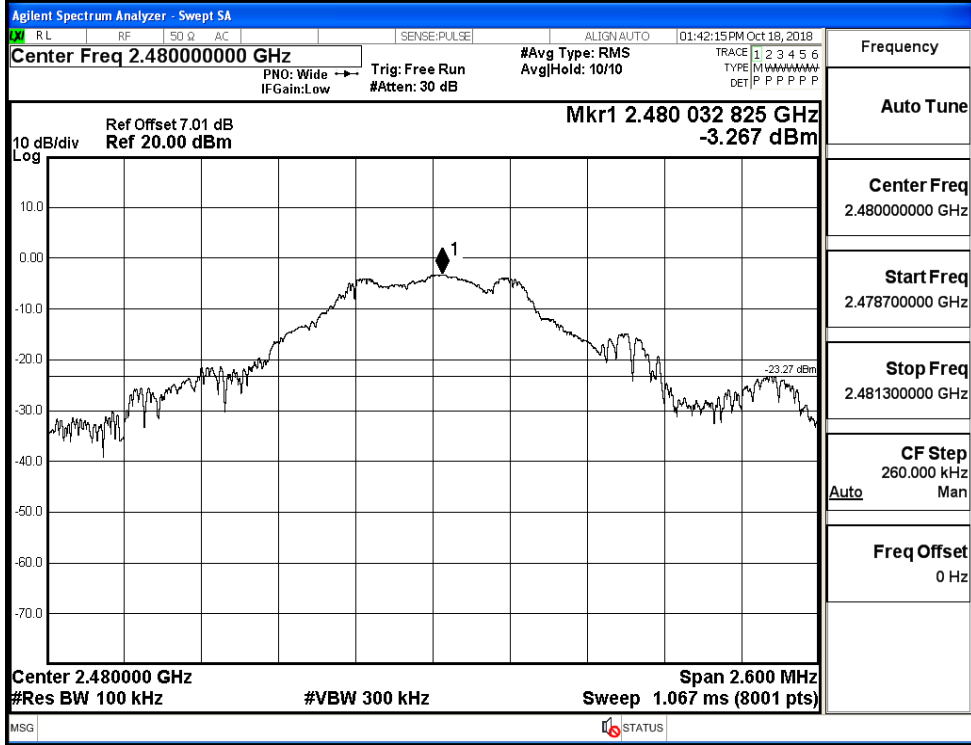


Puw/BT LE/MCH

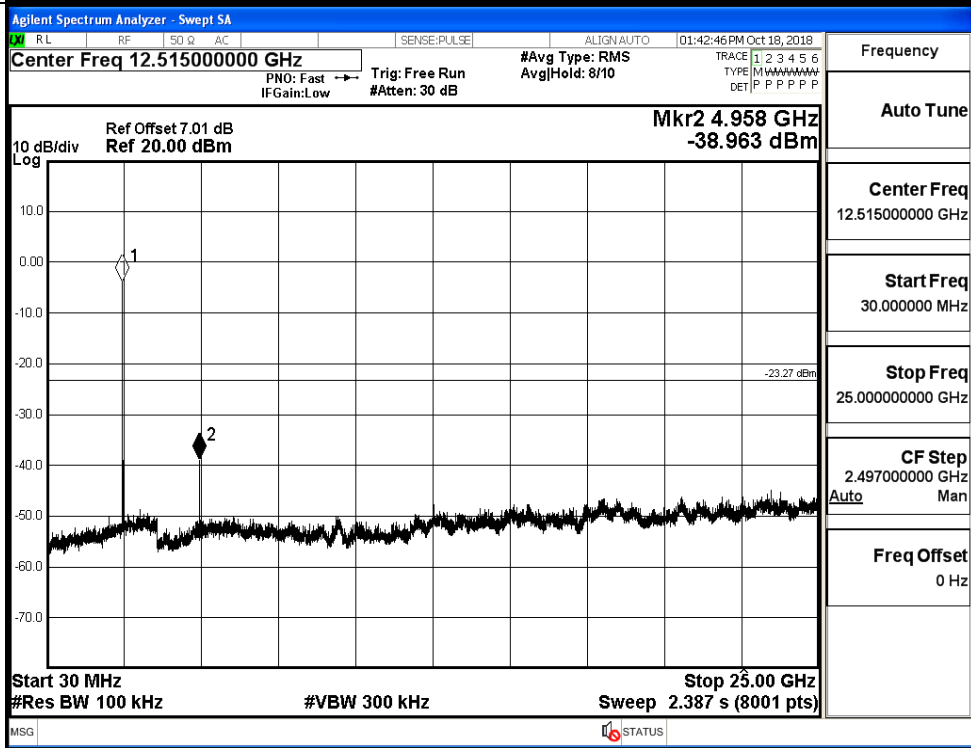


BT LE_HCH_Graphs

Pref/BT LE/HCH



Puw/BT LE/HCH



A.6 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-2.274	-42.290	-22.27	PASS
BT LE	HCH	-3.009	-38.649	-23.01	PASS

Test Graphs

LCH

Agilent Spectrum Analyzer - Swept SA
 Center Freq 2.35700000 GHz
 #Avg Type: RMS
 AvgHold: 10/10
 Mkr4 2.330 410 GHz
 -42.290 dBm
 Start 2.31000 GHz
 Stop 2.40400 GHz
 #Res BW 100 kHz
 #VBW 300 kHz
 Sweep 9.067 ms (8001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	f		2.402 026 GHz	-2.274 dBm			
2	N	f		2.400 000 GHz	-44.915 dBm			
3	N	f		2.390 000 GHz	-54.655 dBm			
4	N	f		2.330 410 GHz	-42.290 dBm			

Frequency

Auto Tune

Center Freq
2.35700000 GHz

Start Freq
2.31000000 GHz

Stop Freq
2.40400000 GHz

CF Step
9.400000 MHz

Freq Offset
0 Hz

HCH

Agilent Spectrum Analyzer - Swept SA
 Center Freq 2.48900000 GHz
 #Avg Type: RMS
 AvgHold: 10/10
 Mkr4 2.493 218 50 GHz
 -38.649 dBm
 Start 2.47800 GHz
 Stop 2.50000 GHz
 #Res BW 100 kHz
 #VBW 300 kHz
 Sweep 2.133 ms (8001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	f		2.480 026 75 GHz	-3.009 dBm			
2	N	f		2.483 500 00 GHz	-49.094 dBm			
3	N	f		2.500 000 00 GHz	-53.458 dBm			
4	N	f		2.493 218 50 GHz	-38.649 dBm			

Frequency

Auto Tune

Center Freq
2.48900000 GHz

Start Freq
2.47800000 GHz

Stop Freq
2.50000000 GHz

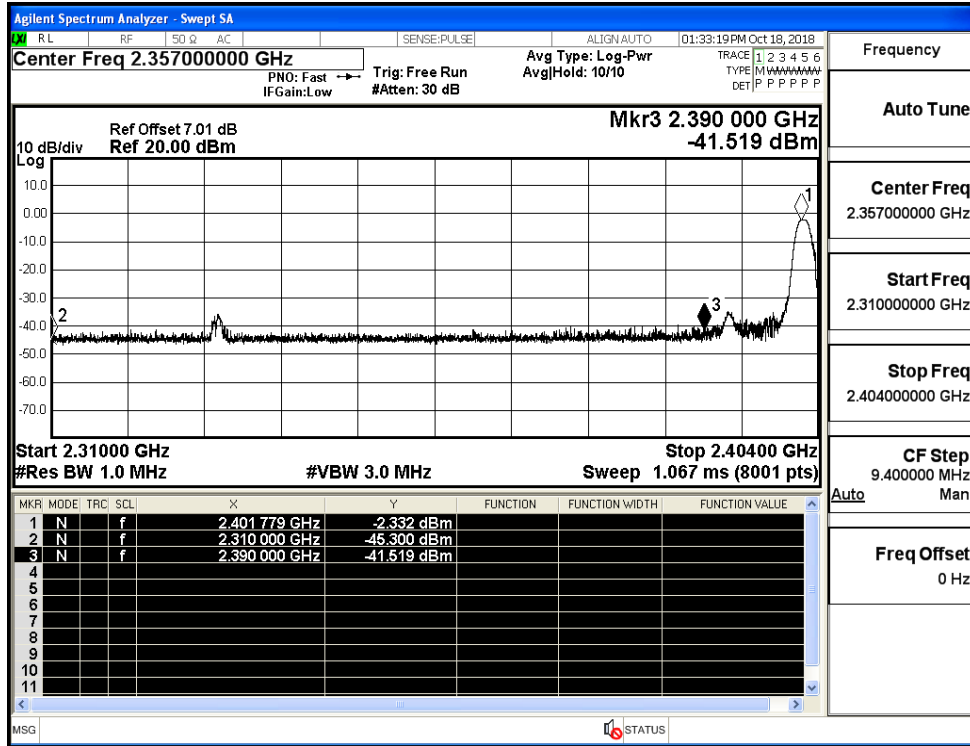
CF Step
2.200000 MHz

Freq Offset
0 Hz

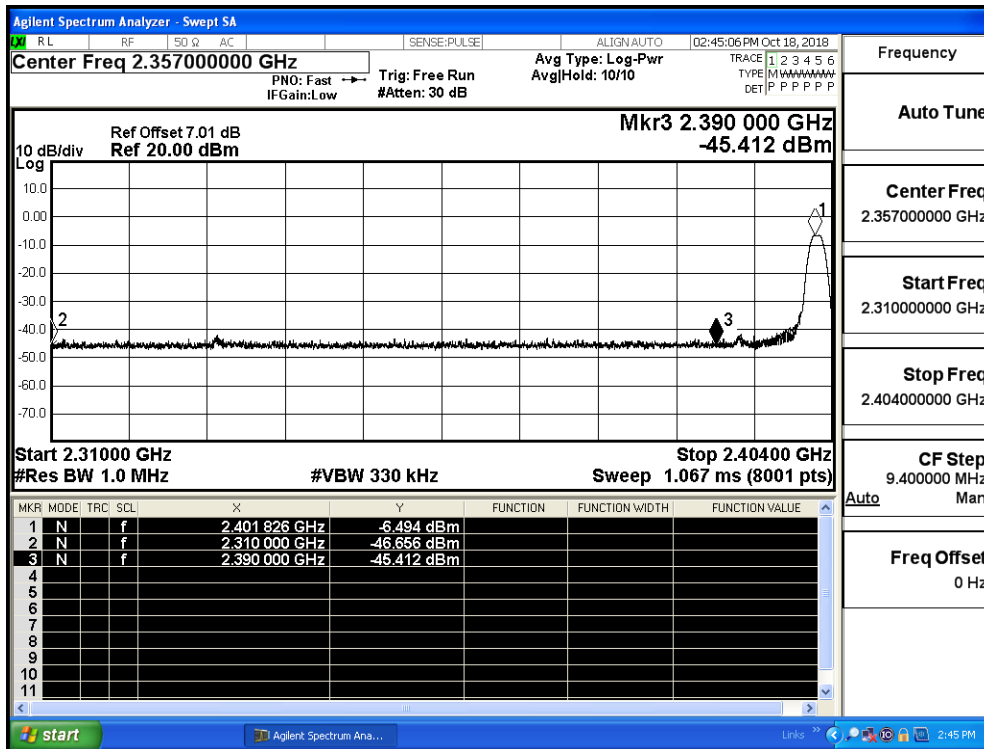
A.7 Restrict-band band-edge measurements

Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
BT LE	2402	Ant1	2310.0	-45.30	2.41	0	52.34	PEAK	74	PASS
		Ant1	2310.0	-46.66	2.41	0	50.98	AV	54	PASS
		Ant1	2390.0	-41.52	2.41	0	56.12	PEAK	74	PASS
		Ant1	2390.0	-45.41	2.41	0	52.23	AV	54	PASS
	2480	Ant1	2483.5	-33.28	2.41	0	64.36	PEAK	74	PASS
		Ant1	2483.5	-45.33	2.41	0	52.31	AV	54	PASS
		Ant1	2500.0	-42.72	2.41	0	54.92	PEAK	74	PASS
		Ant1	2500.0	-45.75	2.41	0	51.89	AV	54	PASS

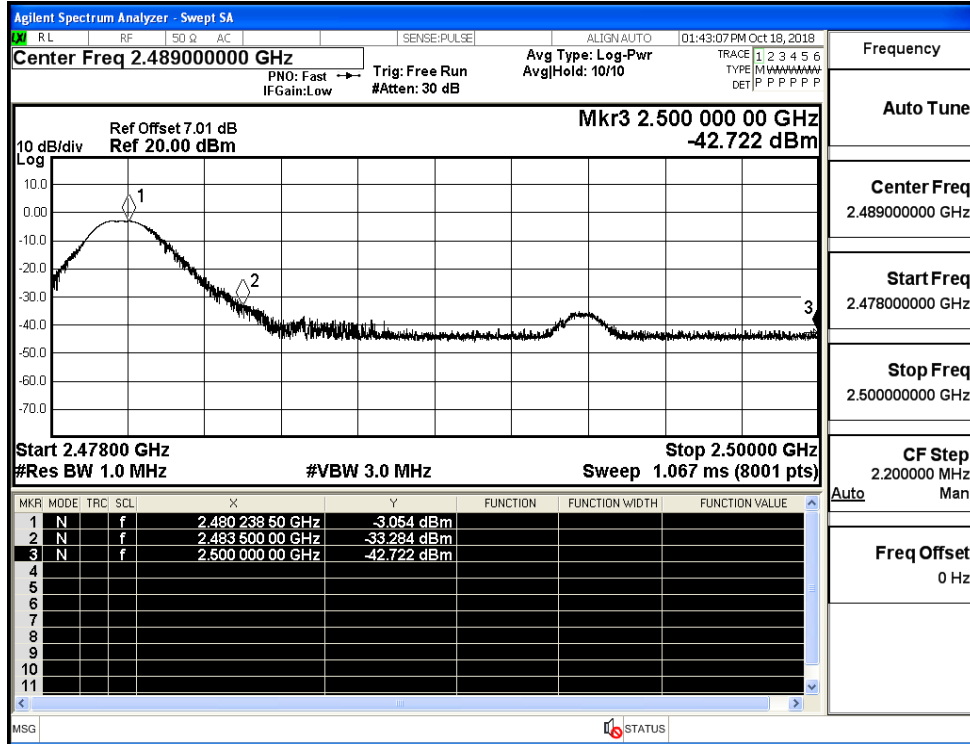
Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



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

