

Appendix B

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

Product Name: Wireless Stereo Earbuds

Trade Mark: ABKO

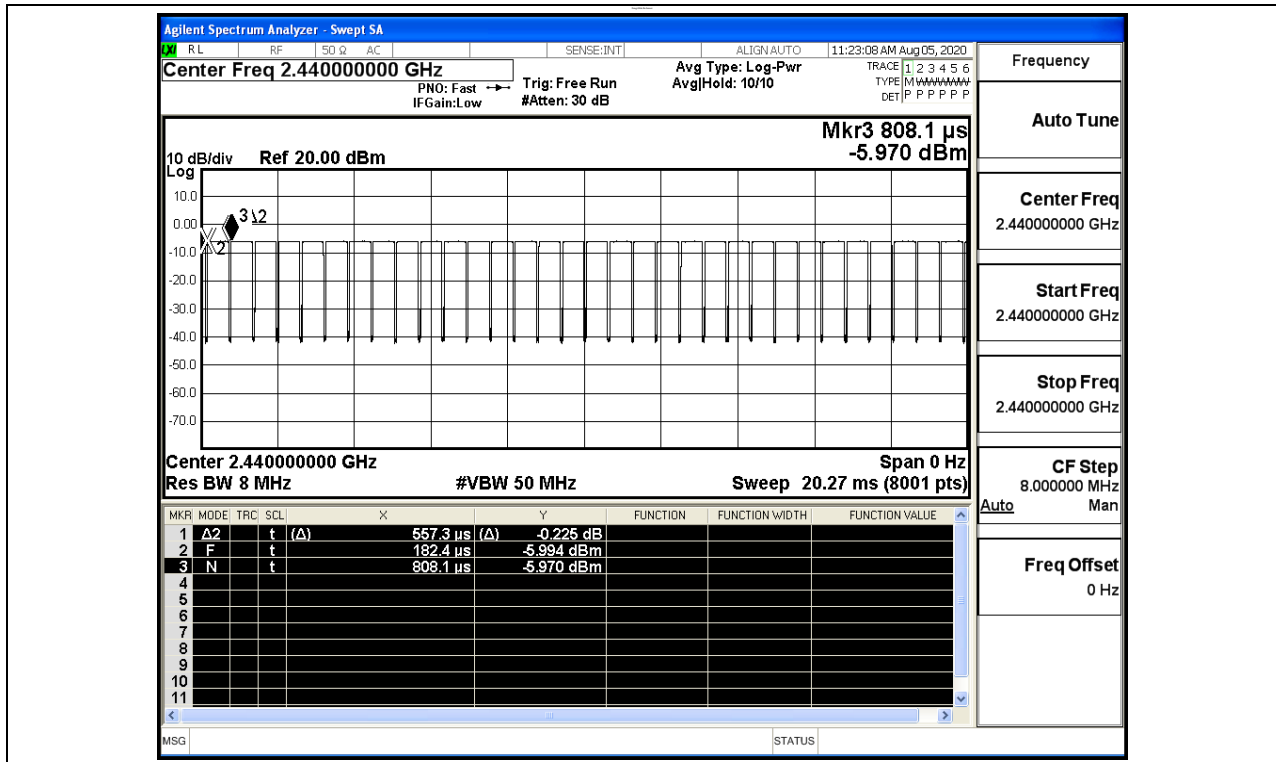
Test Model: EC10

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	50%
ATM Pressure:	100.0 kPa
Test Engineer:	Li Huan
Supervised by:	Li Huan

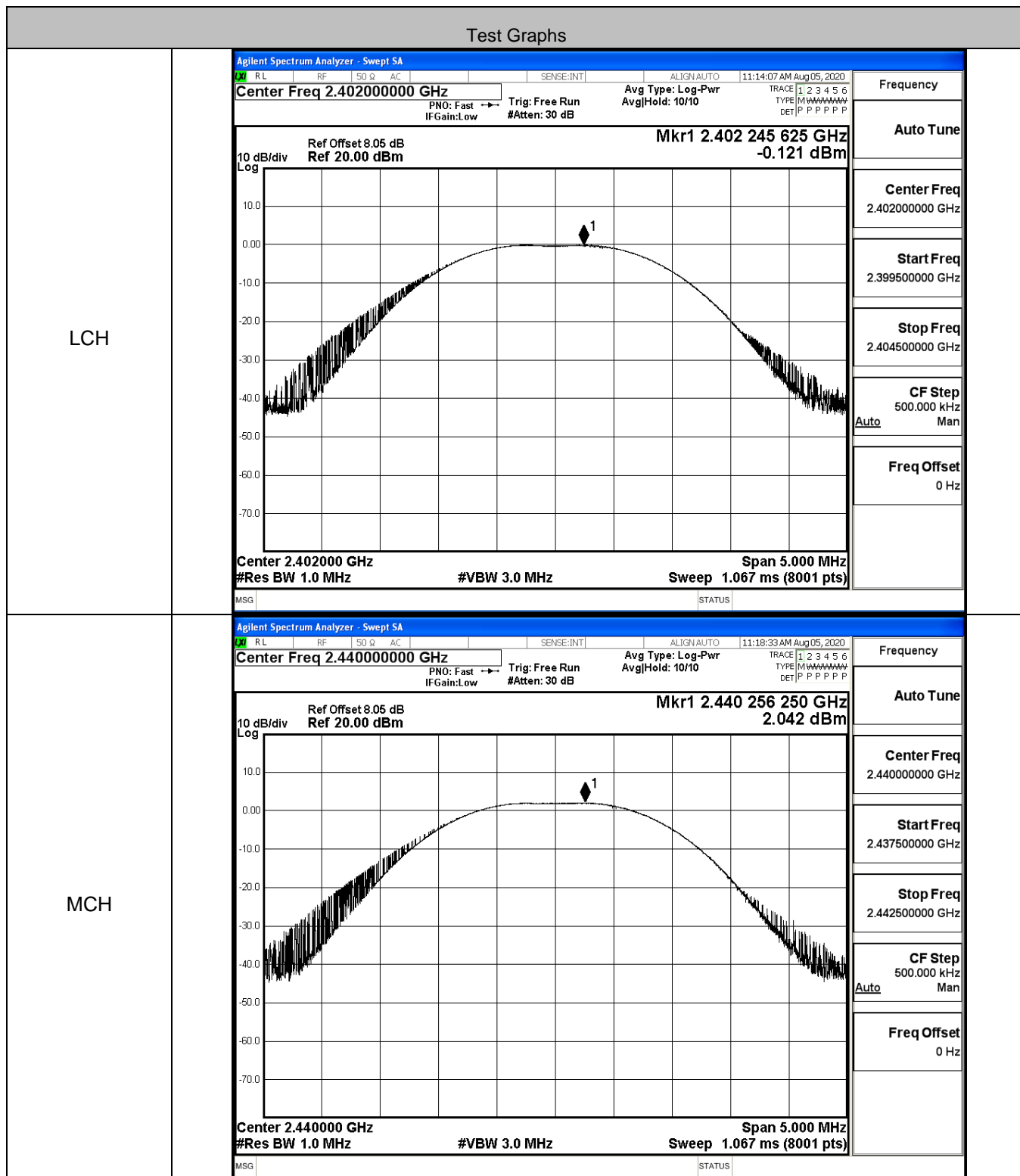
B.1 Duty Cycle

Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
BT LE	2440	Ant1	89.07	PASS



B.2 Maximum Conducted Peak Output Power

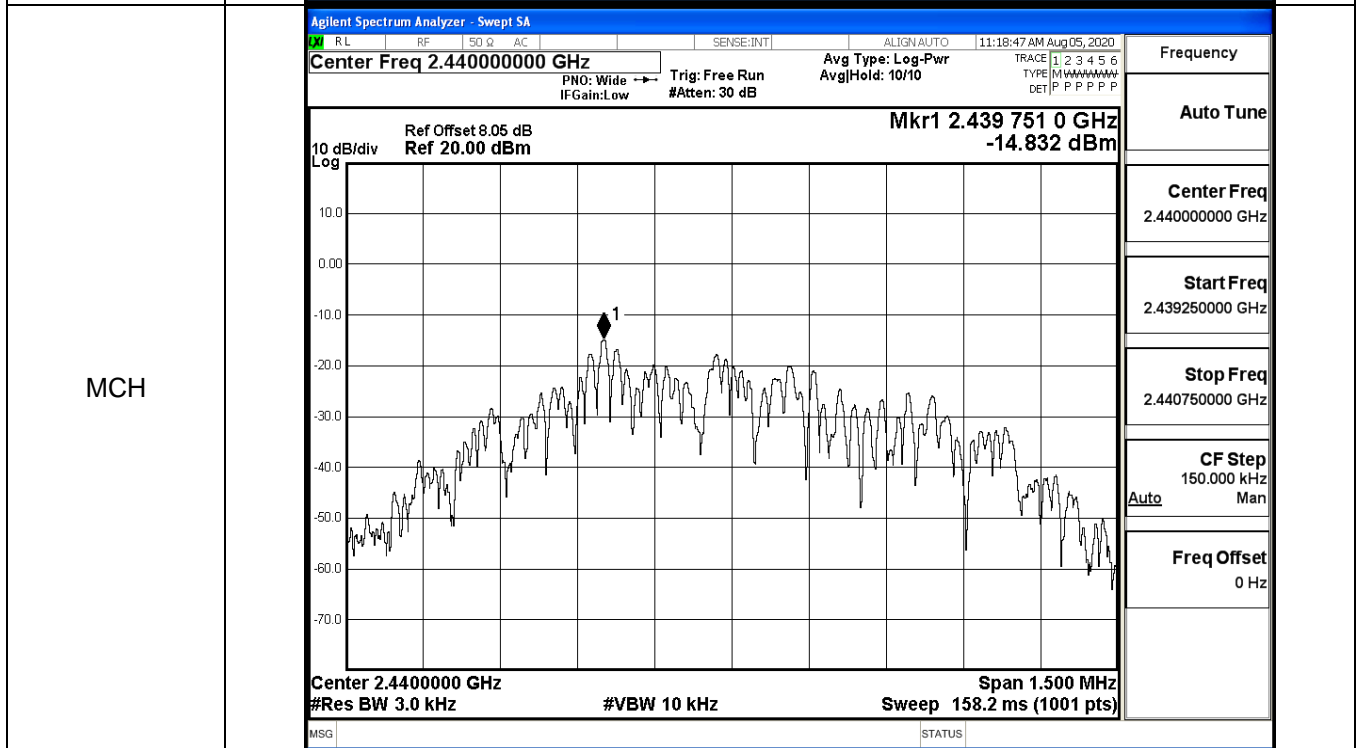
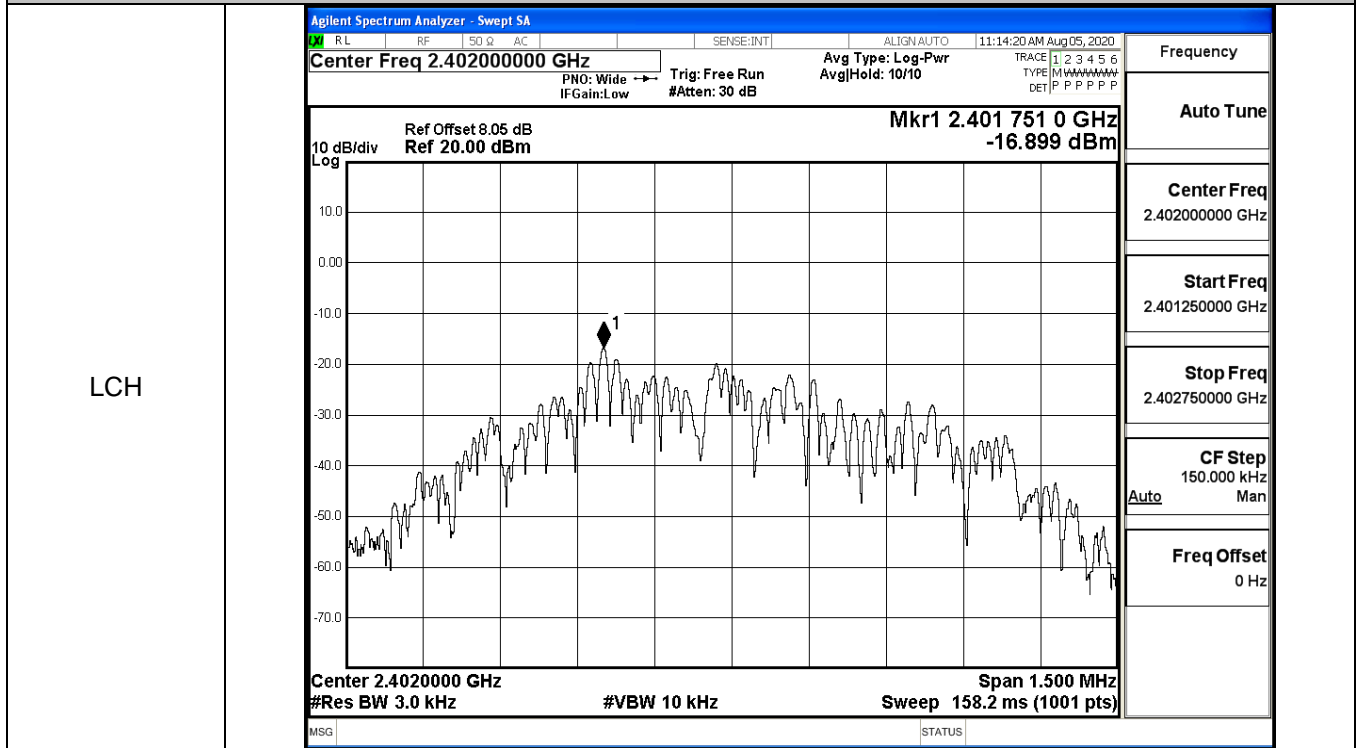
Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	-0.121	30	PASS
BT LE	MCH	2.042	30	PASS
BT LE	HCH	1.233	30	PASS



B.3 Maximum Power Spectral Density

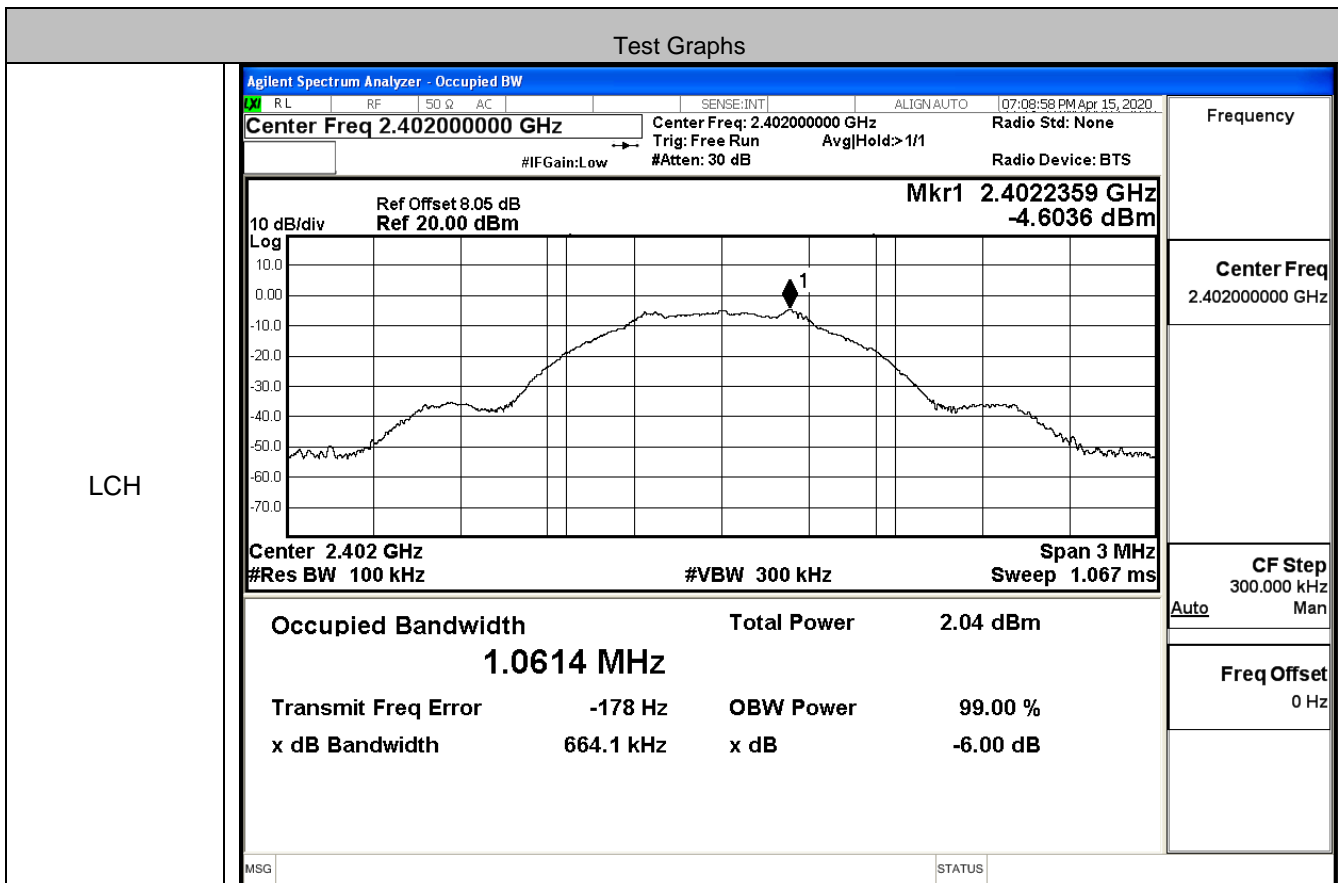
Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-16.899	8	PASS
BT LE	MCH	-14.832	8	PASS
BT LE	HCH	-15.548	8	PASS

Test Graphs



B.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6641	≥0.5	PASS
BT LE	MCH	0.6669	≥0.5	PASS
BT LE	HCH	0.6657	≥0.5	PASS



Agilent Spectrum Analyzer - Occupied BW
11:18:22 AM Aug 05, 2020

Center Freq 2.44000000 GHz
Center Freq: 2.44000000 GHz
Radio Std: None

#IFGain: Low
Trig: Free Run
Avg/Hold: 1/1

#Atten: 30 dB
Radio Device: BTS

Ref Offset 8.05 dB
Mkr1 2.440254 GHz

Ref 20.00 dBm
-4.7625 dBm

Center 2.44 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 3 MHz

Sweep 1.067 ms

Occupied Bandwidth	Total Power	1.86 dBm
1.0574 MHz		
Transmit Freq Error	-4.203 kHz	OBW Power
x dB Bandwidth	666.9 kHz	x dB
		99.00 %
		-6.00 dB

MSG
STATUS

Agilent Spectrum Analyzer - Occupied BW
11:20:53 AM Aug 05, 2020

Center Freq 2.48000000 GHz
Center Freq: 2.48000000 GHz
Radio Std: None

#IFGain: Low
Trig: Free Run
Avg/Hold: 1/1

#Atten: 30 dB
Radio Device: BTS

Ref Offset 8.05 dB
Mkr1 2.480254 GHz

Ref 20.00 dBm
-6.0218 dBm

Center 2.48 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 3 MHz

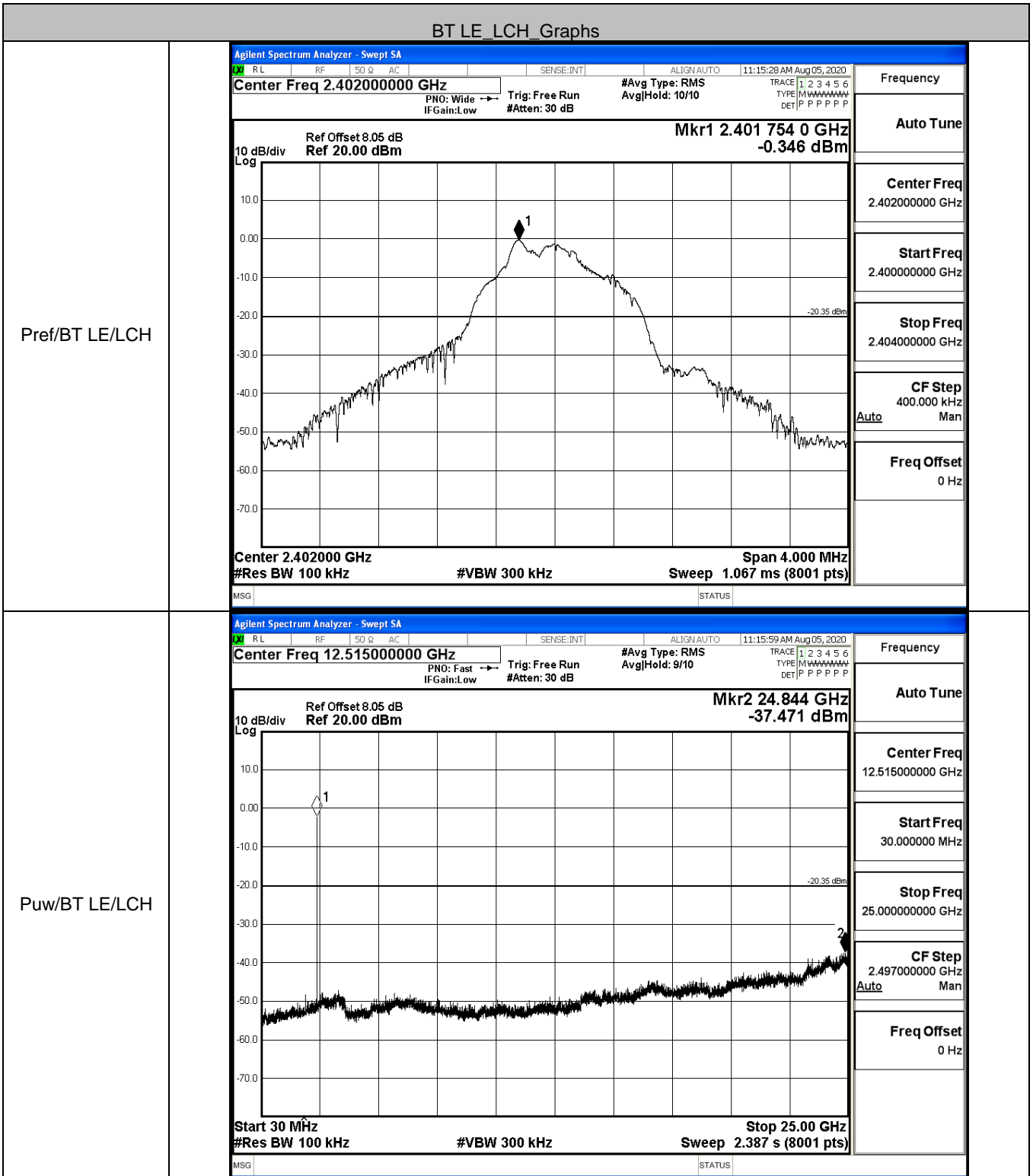
Sweep 1.067 ms

Occupied Bandwidth	Total Power	0.60 dBm
1.0583 MHz		
Transmit Freq Error	-1.126 kHz	OBW Power
x dB Bandwidth	665.7 kHz	x dB
		99.00 %
		-6.00 dB

MSG
STATUS

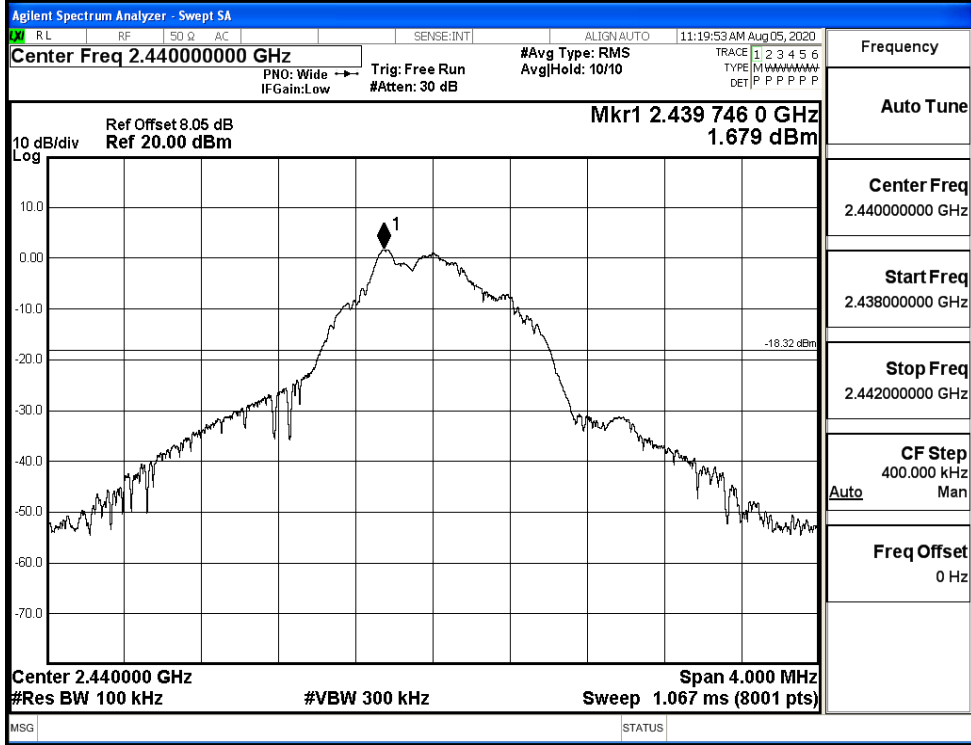
B.5 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-0.346	-37.471	-20.346	PASS
BT LE	MCH	1.679	-36.393	-18.321	PASS
BT LE	HCH	1.120	-37.616	-18.880	PASS

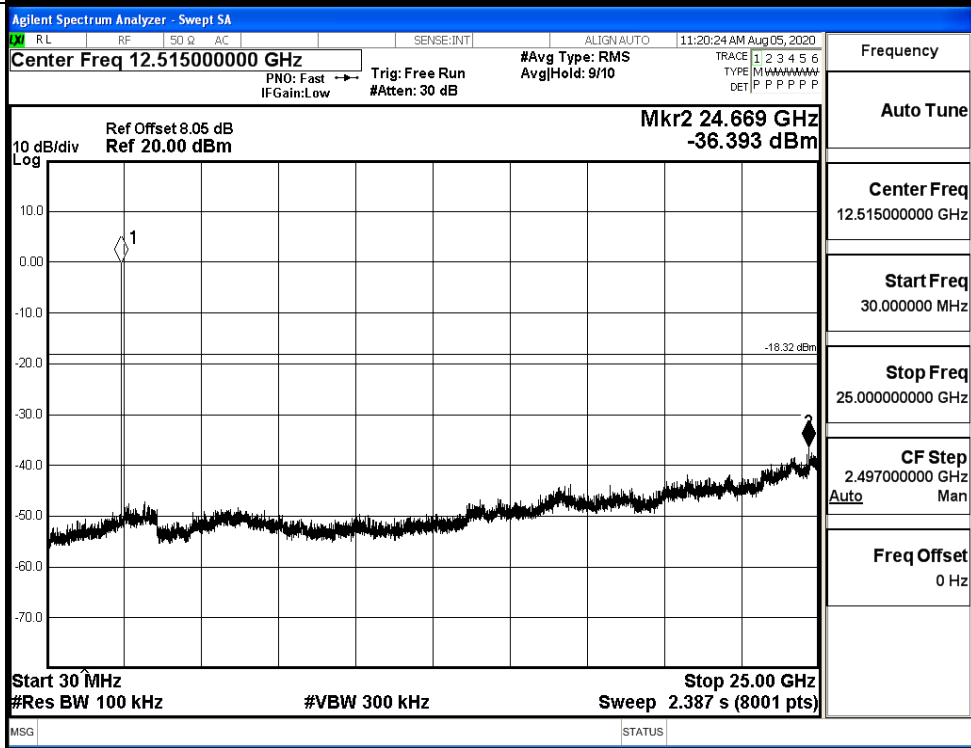


BT LE_MCH_Graphs

Pref/BT LE/MCH

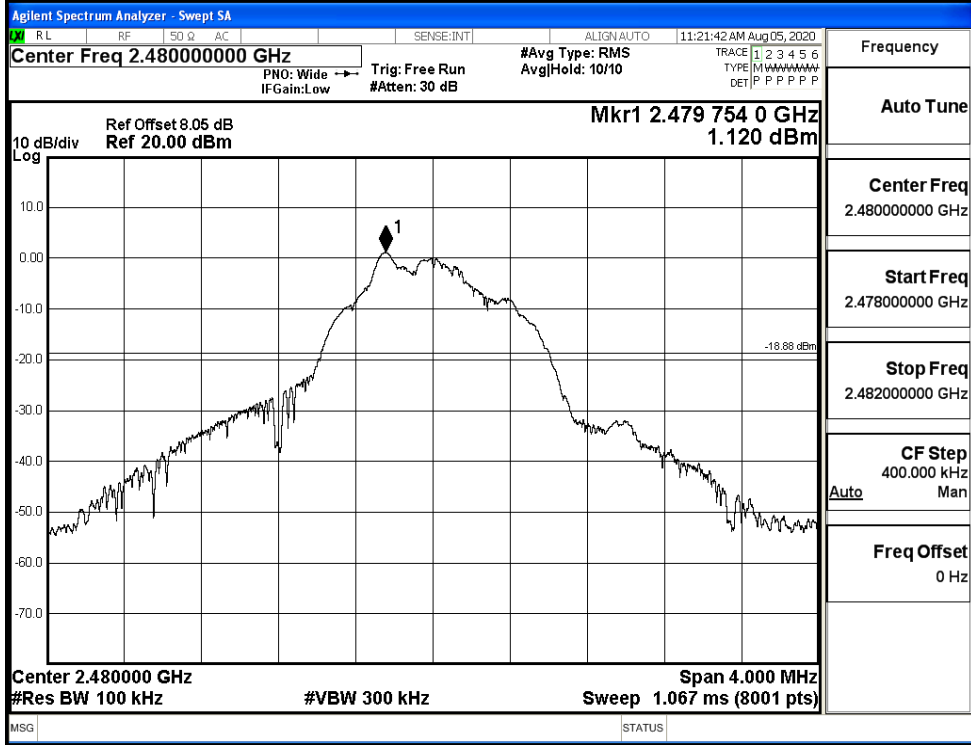


Puw/BT LE/MCH

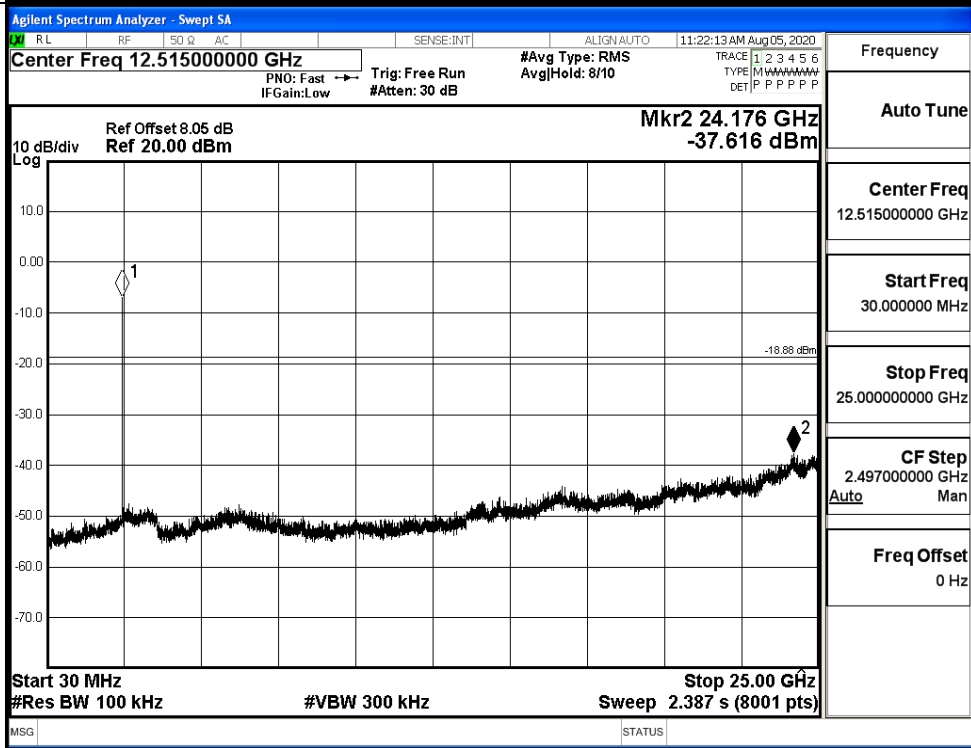


BT LE_HCH_Graphs

Pref/BT LE/HCH



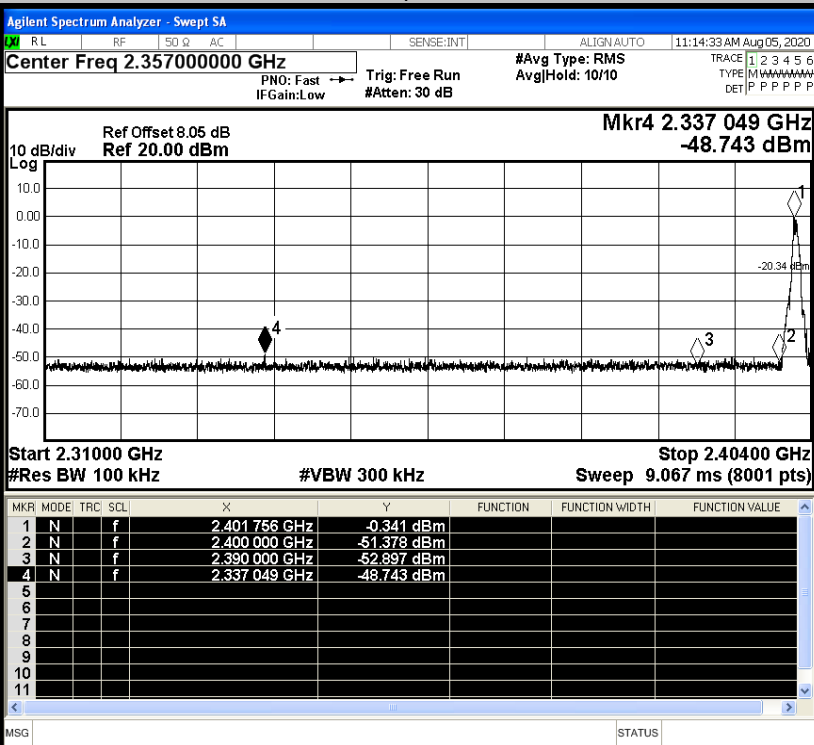
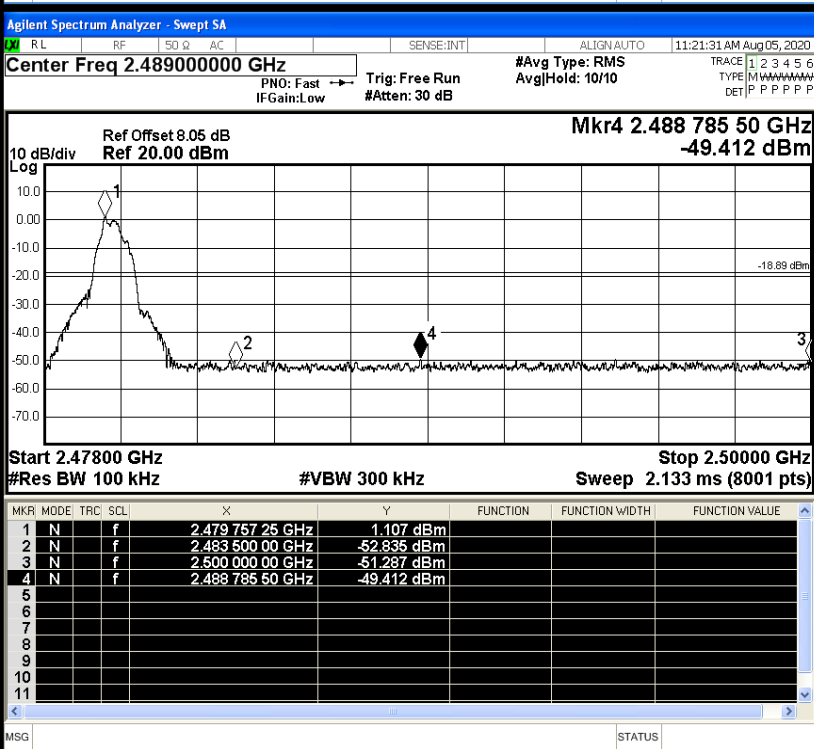
Puw/BT LE/HCH



B.6 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-0.341	-48.743	-20.34	PASS
BT LE	HCH	1.107	-49.412	-18.89	PASS

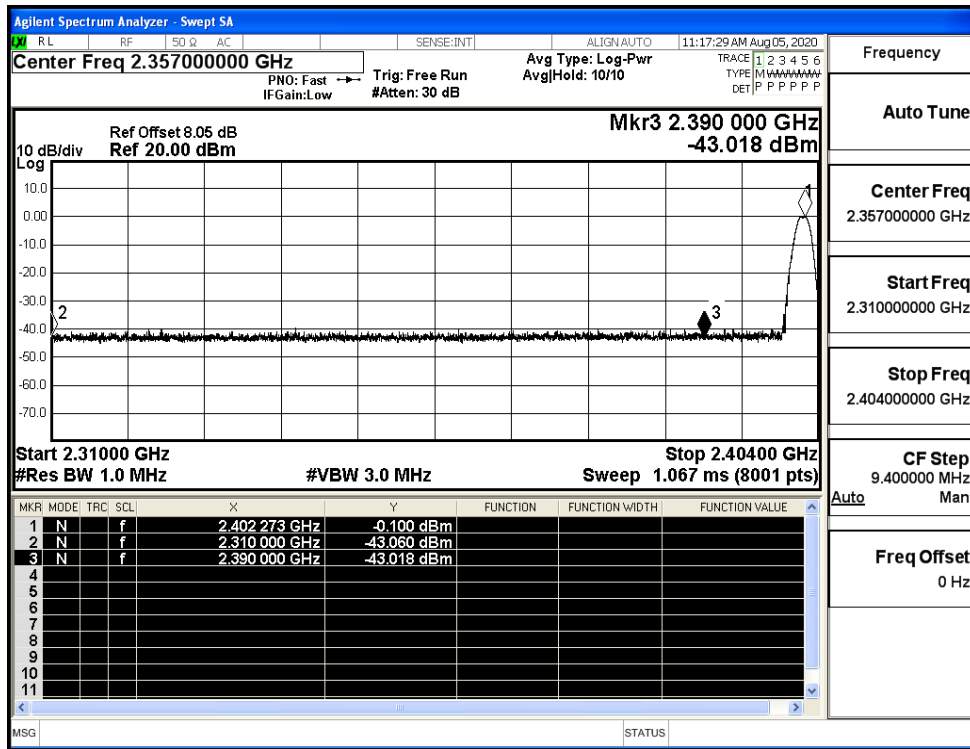
Test Graphs

LCH	 <p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.35700000 GHz Mkr4 2.337 049 GHz -48.743 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>2.401756 GHz</td><td>-0.341 dBm</td><td></td><td></td><td></td></tr> <tr><td>2</td><td>N</td><td>f</td><td></td><td>2.400000 GHz</td><td>-51.378 dBm</td><td></td><td></td><td></td></tr> <tr><td>3</td><td>N</td><td>f</td><td></td><td>2.390000 GHz</td><td>-52.897 dBm</td><td></td><td></td><td></td></tr> <tr><td>4</td><td>N</td><td>f</td><td></td><td>2.337049 GHz</td><td>-48.743 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		2.401756 GHz	-0.341 dBm				2	N	f		2.400000 GHz	-51.378 dBm				3	N	f		2.390000 GHz	-52.897 dBm				4	N	f		2.337049 GHz	-48.743 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 Mkr4 2.488 785 50 GHz -49.412 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>2.47976725 GHz</td><td>1.107 dBm</td><td></td><td></td><td></td></tr> <tr><td>2</td><td>N</td><td>f</td><td></td><td>2.48350000 GHz</td><td>-52.835 dBm</td><td></td><td></td><td></td></tr> <tr><td>3</td><td>N</td><td>f</td><td></td><td>2.50000000 GHz</td><td>-51.287 dBm</td><td></td><td></td><td></td></tr> <tr><td>4</td><td>N</td><td>f</td><td></td><td>2.48878550 GHz</td><td>-49.412 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		2.47976725 GHz	1.107 dBm				2	N	f		2.48350000 GHz	-52.835 dBm				3	N	f		2.50000000 GHz	-51.287 dBm				4	N	f		2.48878550 GHz	-49.412 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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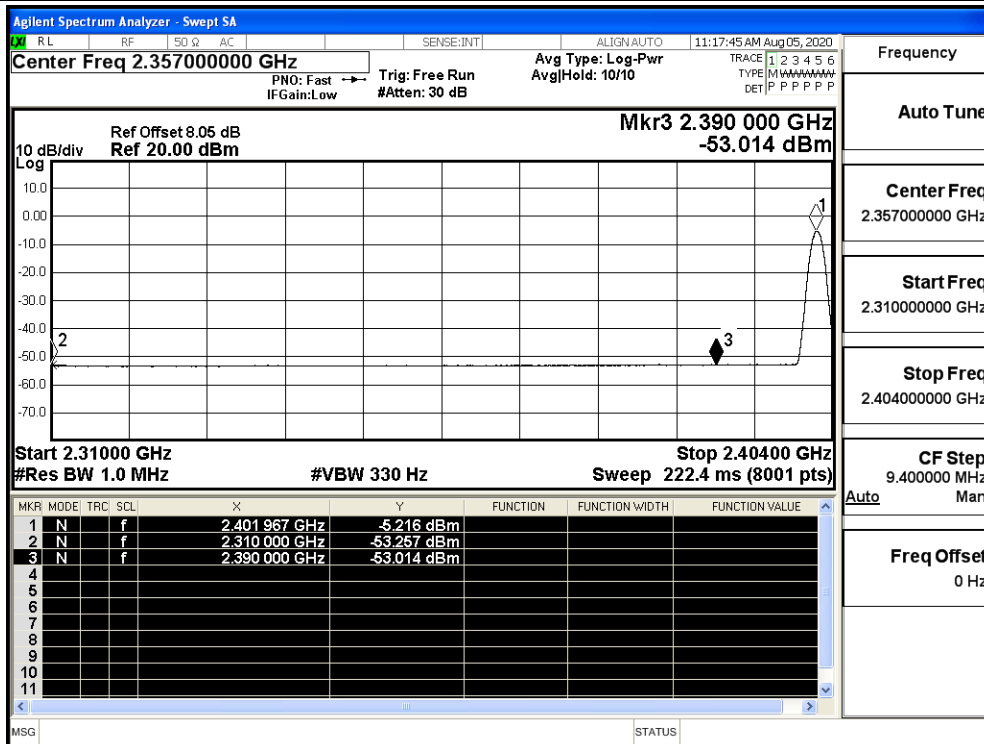
B.7 Restrict-band band-edge measurements

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	-43.06	2.0	0	54.17	PEAK	74	PASS
		Ant1	2310.0	-53.26	2.0	0	43.97	AV	54	PASS
		Ant1	2390.0	-43.02	2.0	0	54.21	PEAK	74	PASS
		Ant1	2390.0	-53.01	2.0	0	44.22	AV	54	PASS
	2480	Ant1	2483.5	-42.54	2.0	0	54.69	PEAK	74	PASS
		Ant1	2483.5	-52.40	2.0	0	44.83	AV	54	PASS
		Ant1	2500.0	-42.29	2.0	0	54.94	PEAK	74	PASS
		Ant1	2500.0	-52.23	2.0	0	45.00	AV	54	PASS

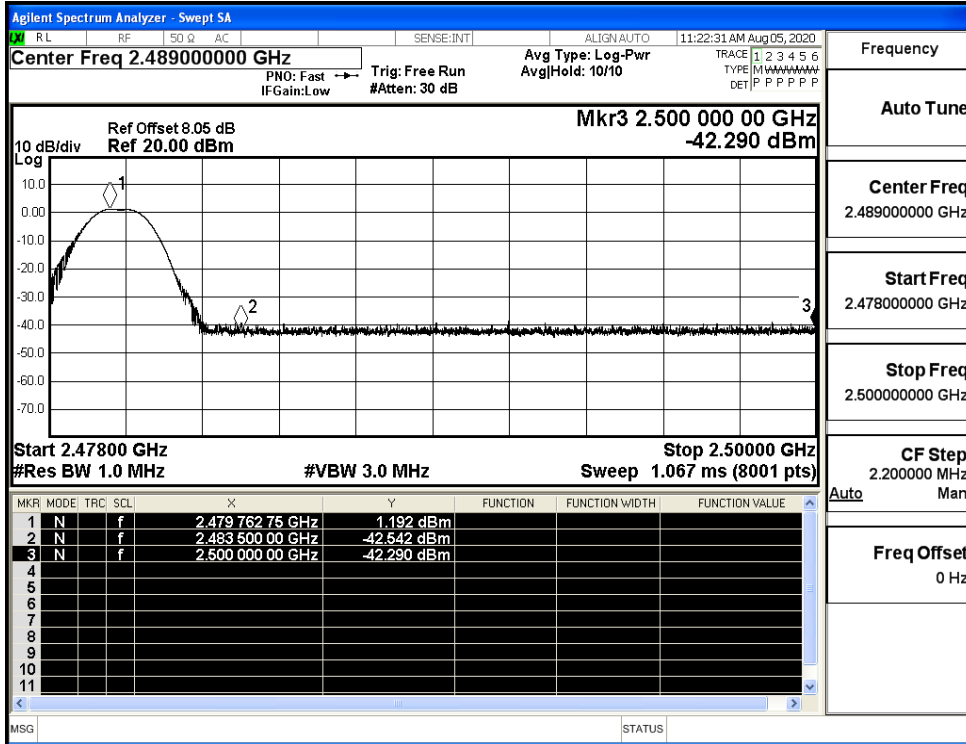
Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



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

