

Appendix C

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

Product Name: Smart Phone

Trade Mark: HYUNDAI

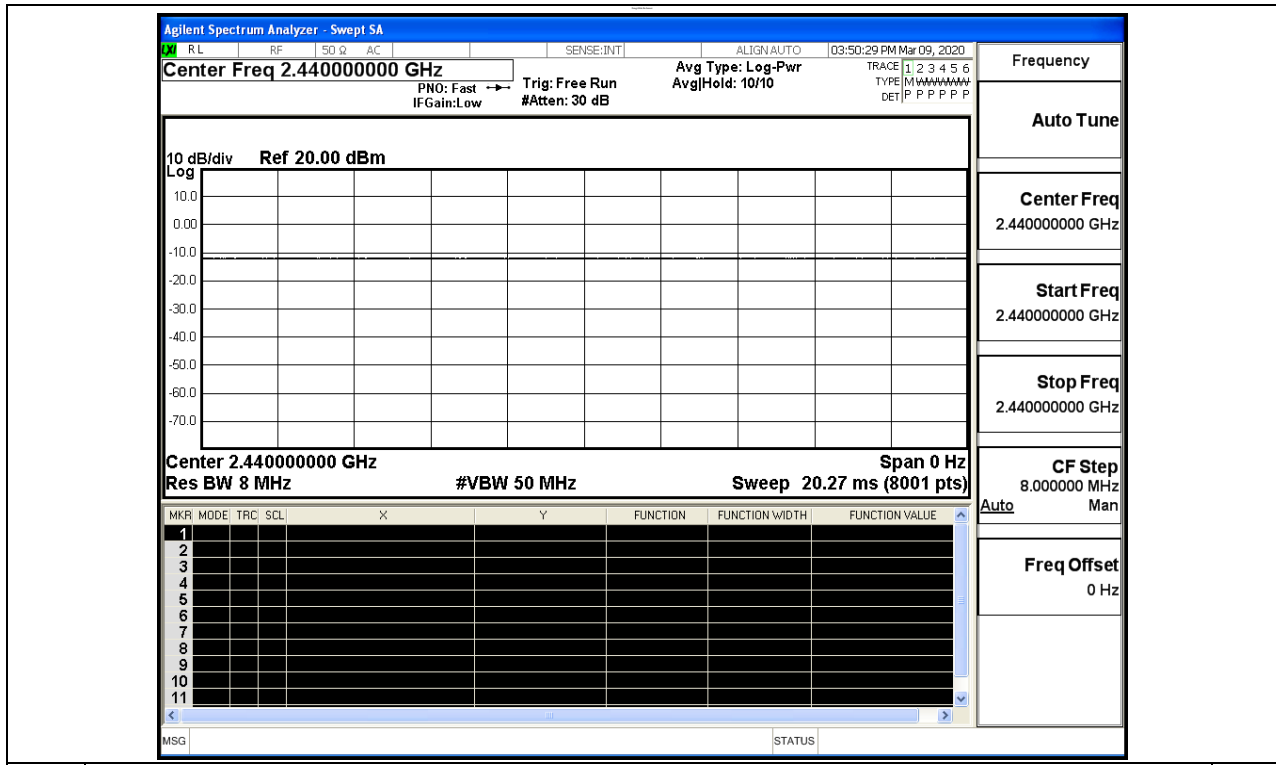
Test Model: Eternity P7

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	50%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond.Lu
Supervised by:	Tom.Liu

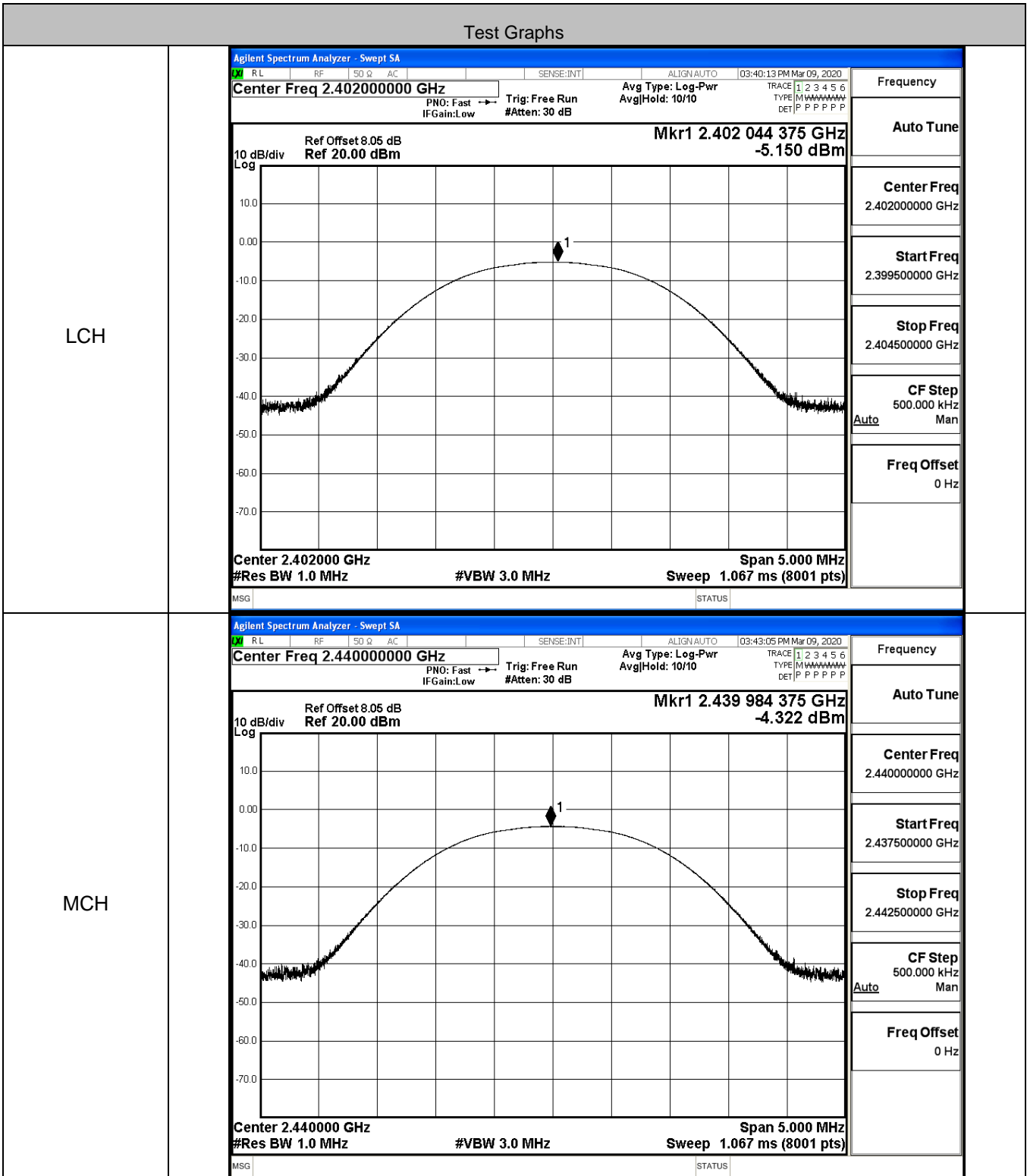
C.1 Duty Cycle

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

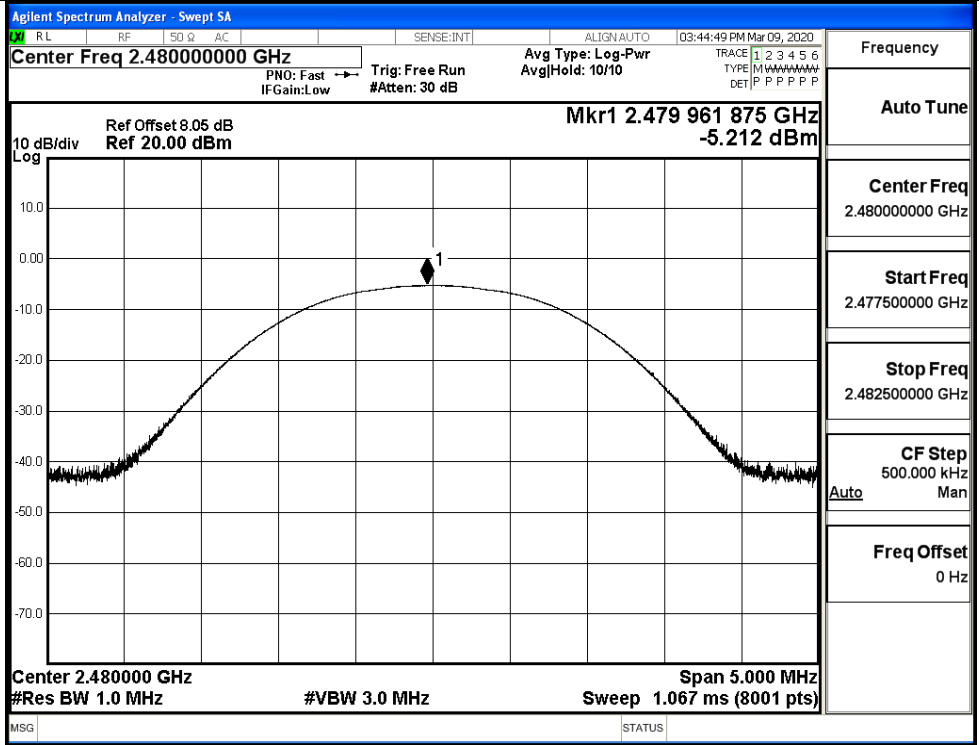


C.2 Maximum Conducted Peak Output Power

Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	-5.15	30	PASS
BT LE	MCH	-4.322	30	PASS
BT LE	HCH	-5.212	30	PASS



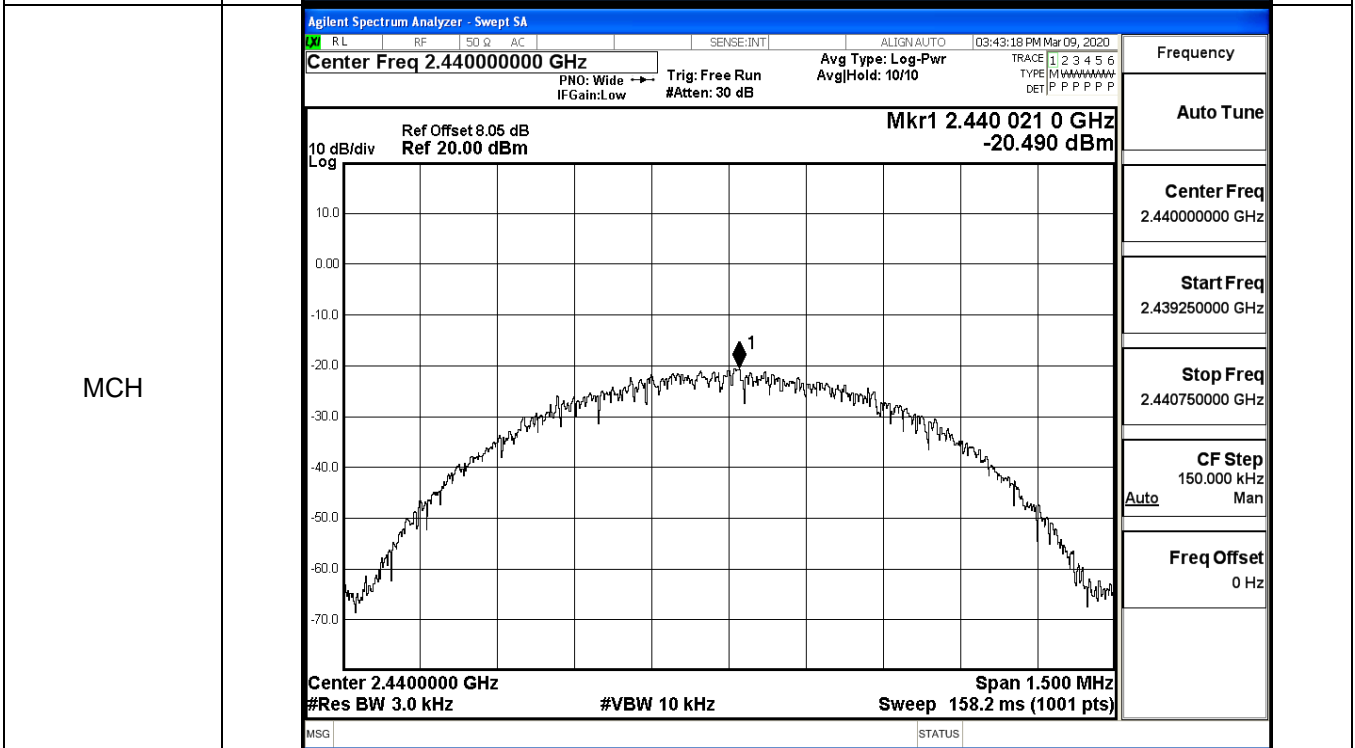
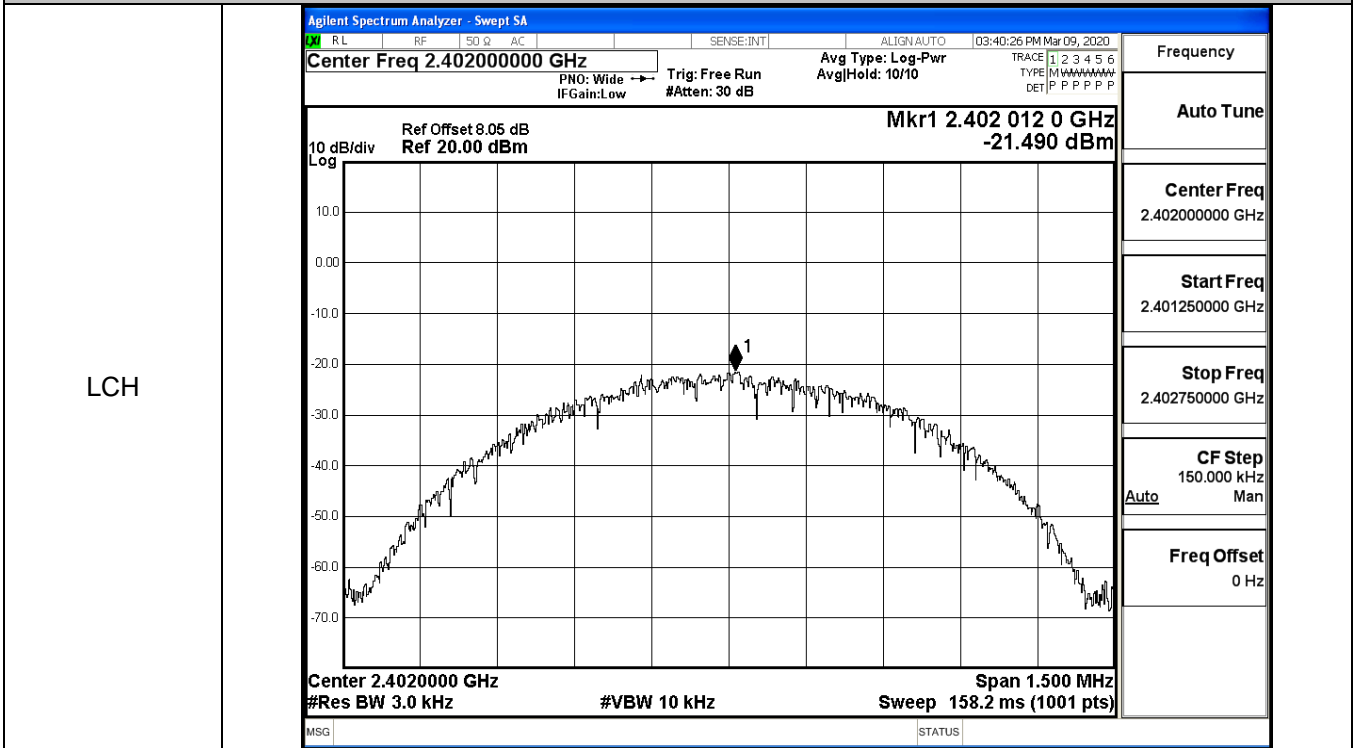
HCH



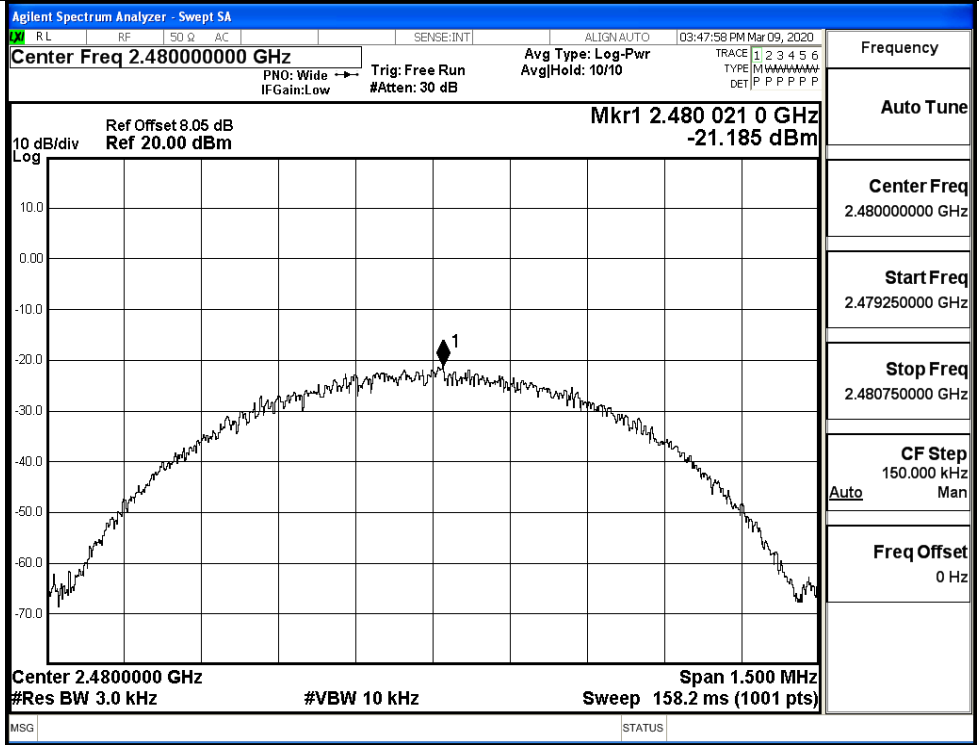
C.3 Maximum Power Spectral Density

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-21.490	8	PASS
BT LE	MCH	-20.490	8	PASS
BT LE	HCH	-21.185	8	PASS

Test Graphs



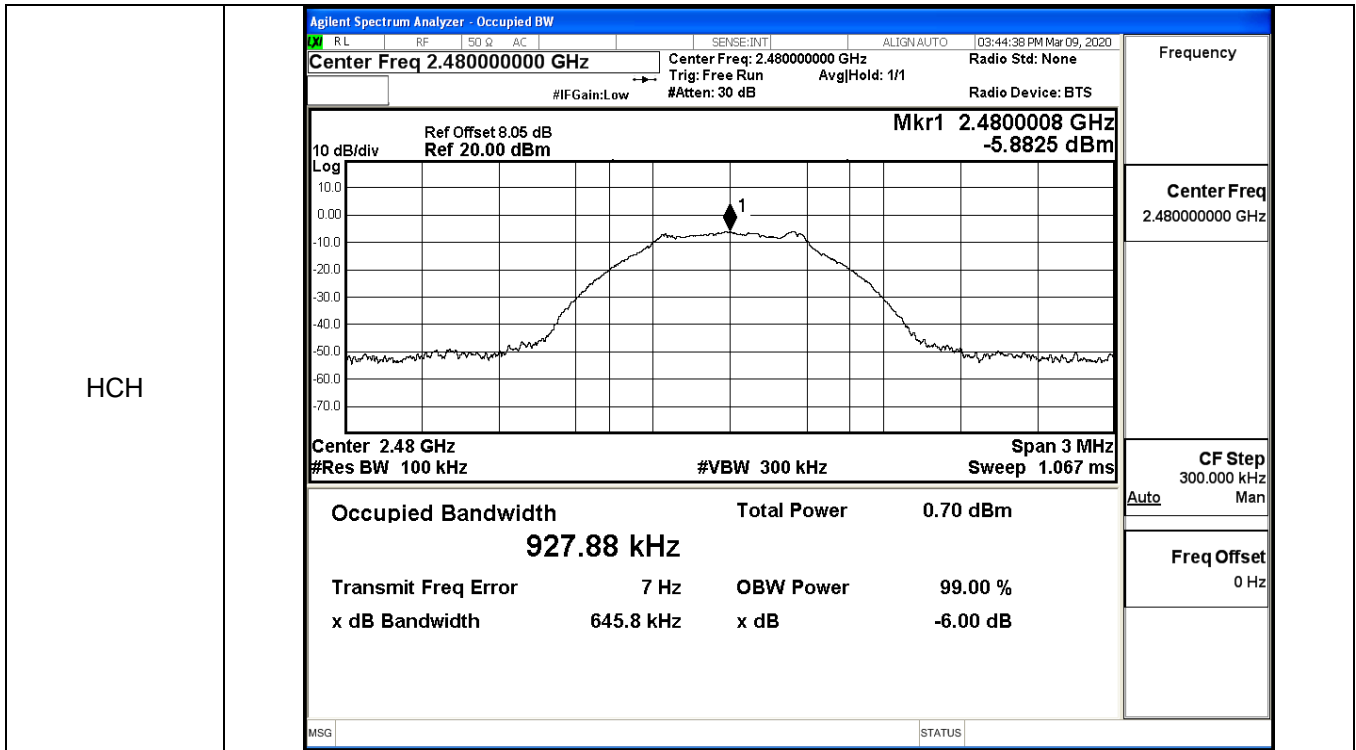
HCH



C.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6474	≥0.5	PASS
BT LE	MCH	0.6474	≥0.5	PASS
BT LE	HCH	0.6458	≥0.5	PASS

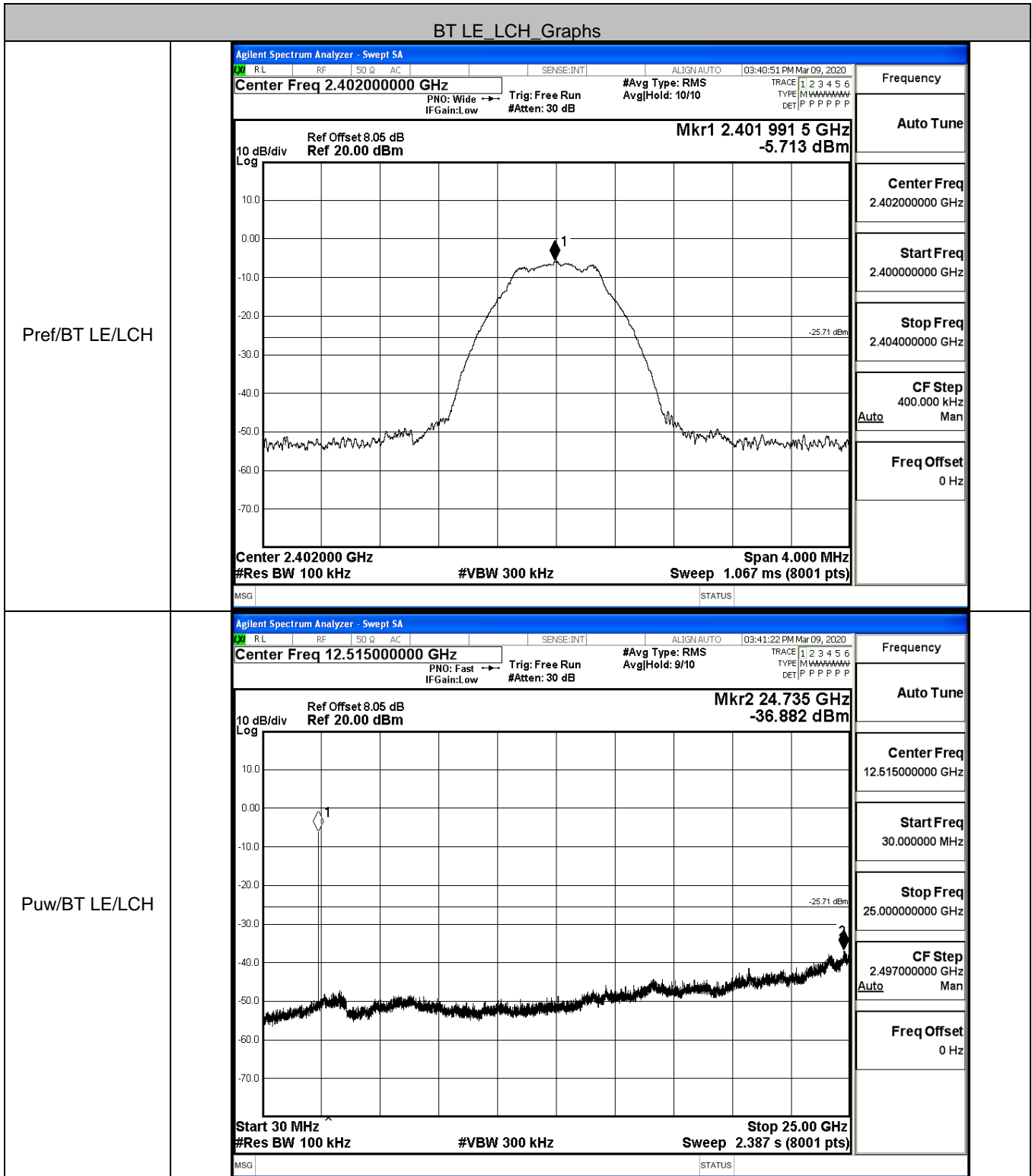
Test Graphs																			
LCH	<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center; margin: 0;">Agilent Spectrum Analyzer - Occupied BW</p> <p style="font-size: small; margin: 0;">RL RF 50 Ω AC SENSE:INT ALIGN:AUTO 03:40:02 PM Mar 09, 2020</p> <p style="margin: 0;">Center Freq 2.402000000 GHz Center Freq: 2.402000000 GHz Radio Std: None Trig: Free Run AvgHold: 1/1 #IFGain:Low #Atten: 30 dB Radio Device: BTS</p> <div style="display: flex; justify-content: space-between;"> <div style="font-size: x-small;"> 10 dB/div Log Ref Offset 8.05 dB Ref 20.00 dBm </div> <div style="text-align: right;"> Mkr1 2.4020053 GHz -5.9121 dBm </div> </div> <div style="display: flex; justify-content: space-between; font-size: x-small;"> <div>Center 2.402 GHz #Res BW 100 kHz</div> <div>#VBW 300 kHz</div> <div>Span 3 MHz Sweep 1.067 ms</div> </div> <table style="width: 100%; font-size: x-small; margin-top: 5px;"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>0.83 dBm</td> </tr> <tr> <td style="text-align: center;">929.79 kHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>-743 Hz</td> <td>OBW Power</td> </tr> <tr> <td>x dB Bandwidth</td> <td>647.4 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> <p style="font-size: x-small; margin-top: 5px;">MSG STATUS</p> </div>	Occupied Bandwidth	Total Power	0.83 dBm	929.79 kHz			Transmit Freq Error	-743 Hz	OBW Power	x dB Bandwidth	647.4 kHz	x dB			99.00 %			-6.00 dB
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HCH

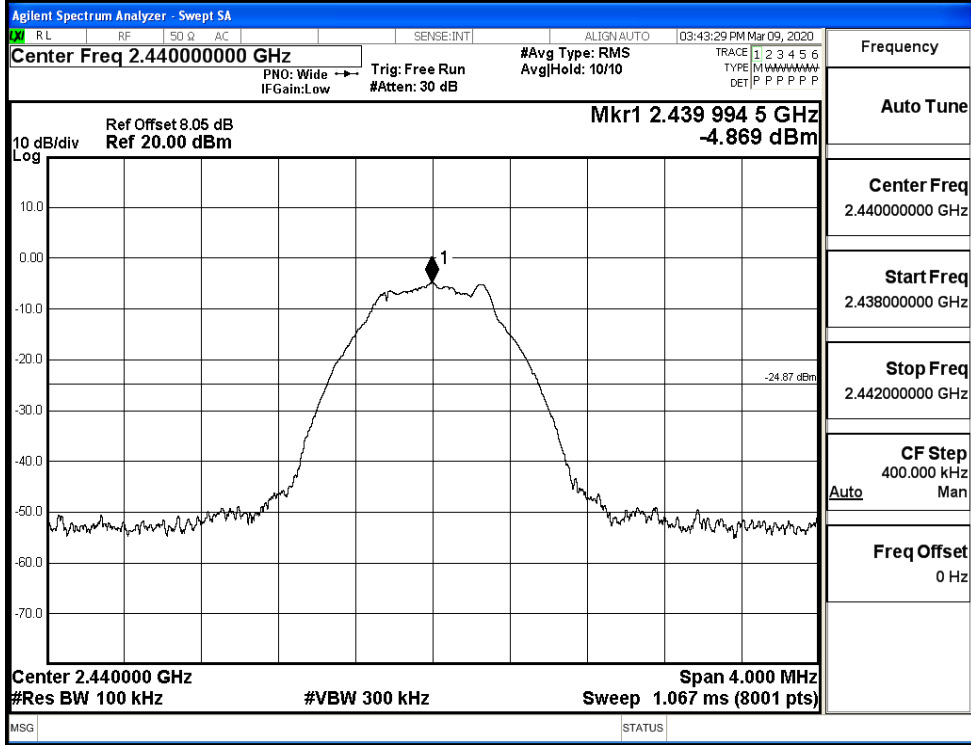
C.5 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-5.713	-36.882	-25.713	PASS
BT LE	MCH	-4.869	-37.214	-24.869	PASS
BT LE	HCH	-6.204	-37.095	-26.204	PASS

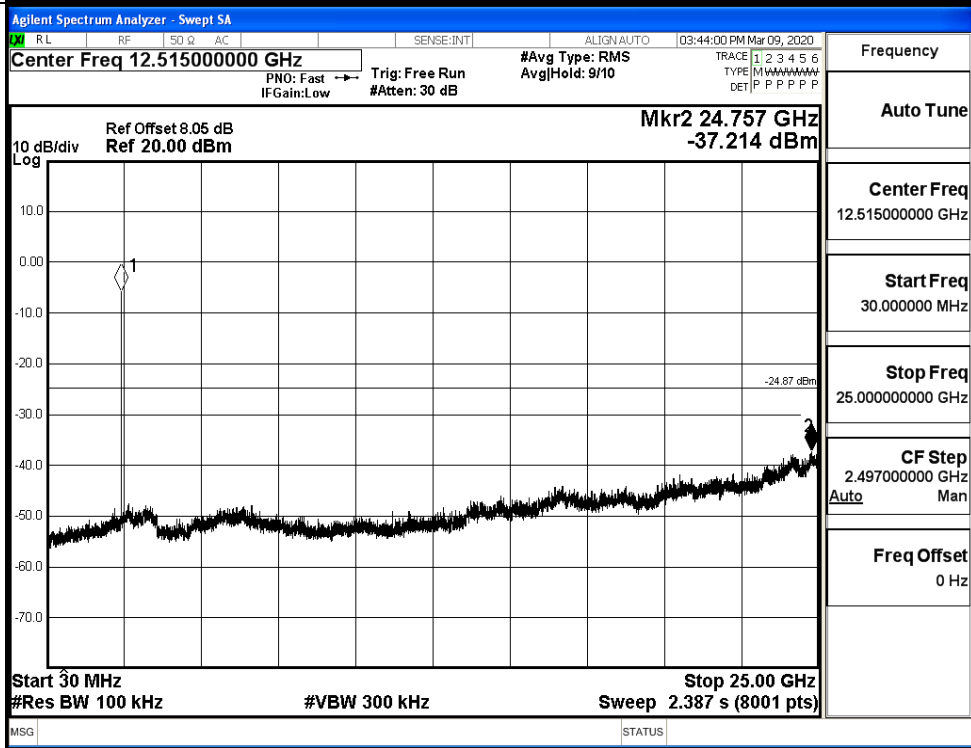


BT LE_MCH_Graphs

Pref/BT LE/MCH

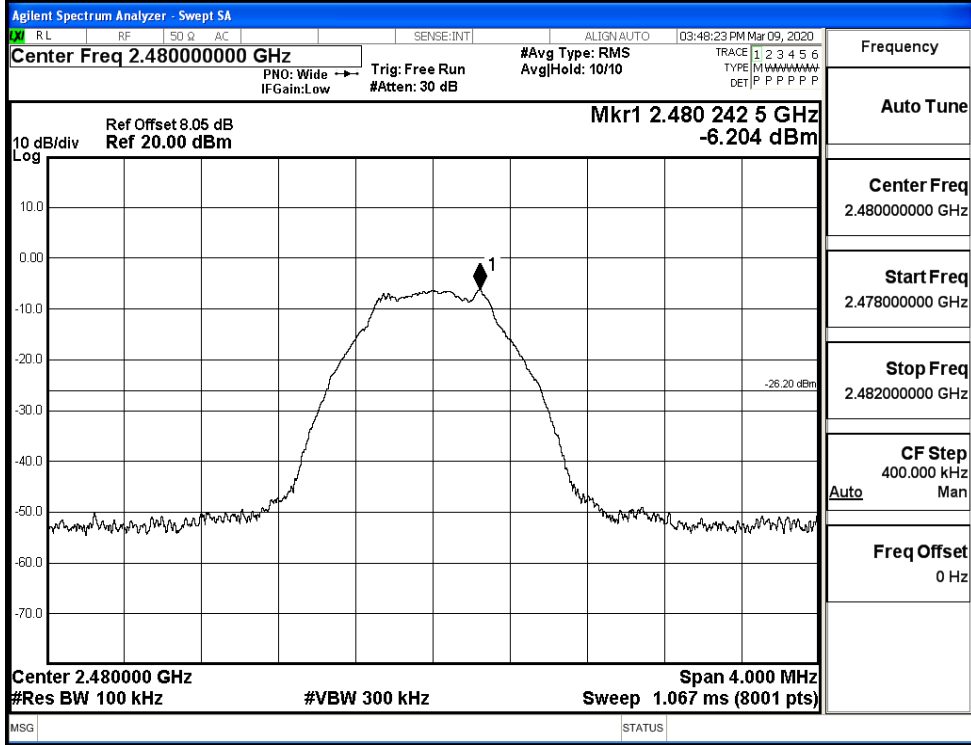


Puw/BT LE/MCH

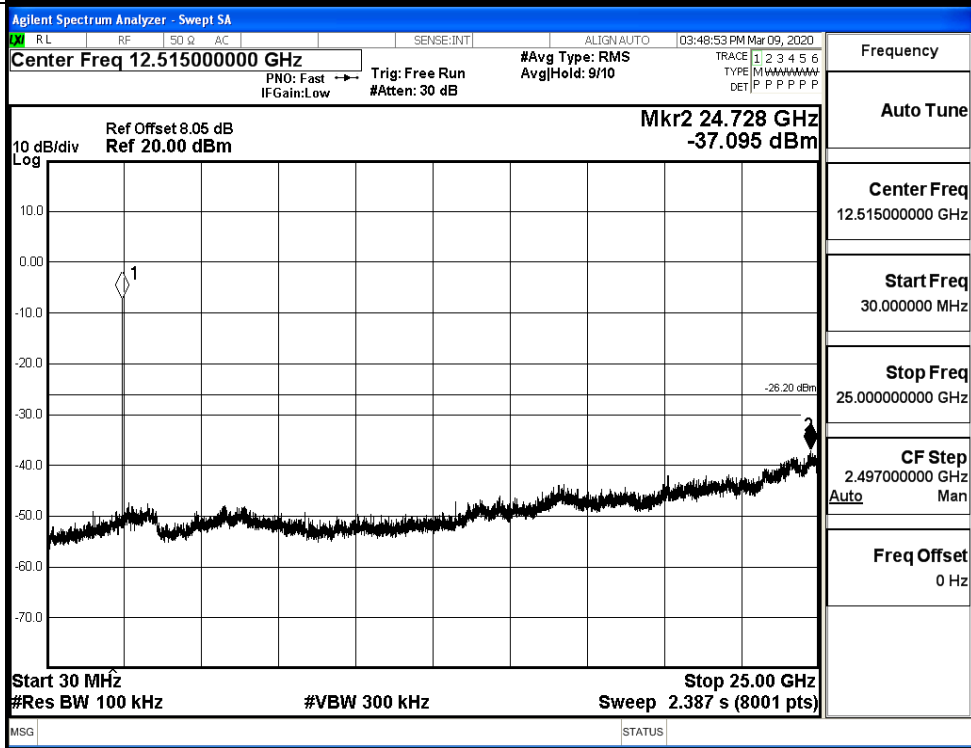


BT LE_HCH_Graphs

Pref/BT LE/HCH



Puw/BT LE/HCH



C.6 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-5.759	-49.497	-25.76	PASS
BT LE	HCH	-5.602	-47.905	-25.6	PASS

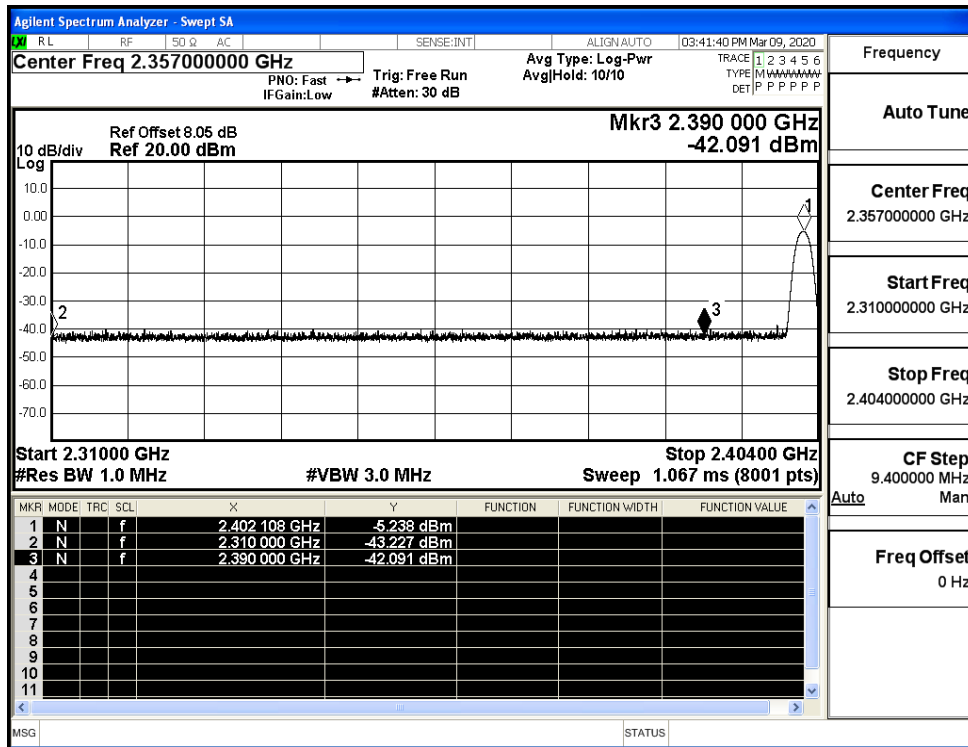
Test Graphs

LCH	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.35700000 GHz Ref Offset 8.05 dB, Ref 20.00 dBm Mkr4 2.332 854 GHz, -49.497 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>2.402 003 GHz</td><td>-5.759 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>-52.508 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>-54.982 dBm</td><td></td><td></td><td></td></tr> <tr><td>4</td><td>N</td><td>f</td><td></td><td>2.332 854 GHz</td><td>-49.497 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		2.402 003 GHz	-5.759 dBm				2	N	f		2.400 000 GHz	-52.508 dBm				3	N	f		2.390 000 GHz	-54.982 dBm				4	N	f		2.332 854 GHz	-49.497 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 2.479 734 00 GHz, -47.905 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>2.479 996 50 GHz</td><td>-5.602 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>-53.438 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>-52.181 dBm</td><td></td><td></td><td></td></tr> <tr><td>4</td><td>N</td><td>f</td><td></td><td>2.497 734 00 GHz</td><td>-47.905 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		2.479 996 50 GHz	-5.602 dBm				2	N	f		2.483 500 00 GHz	-53.438 dBm				3	N	f		2.500 000 00 GHz	-52.181 dBm				4	N	f		2.497 734 00 GHz	-47.905 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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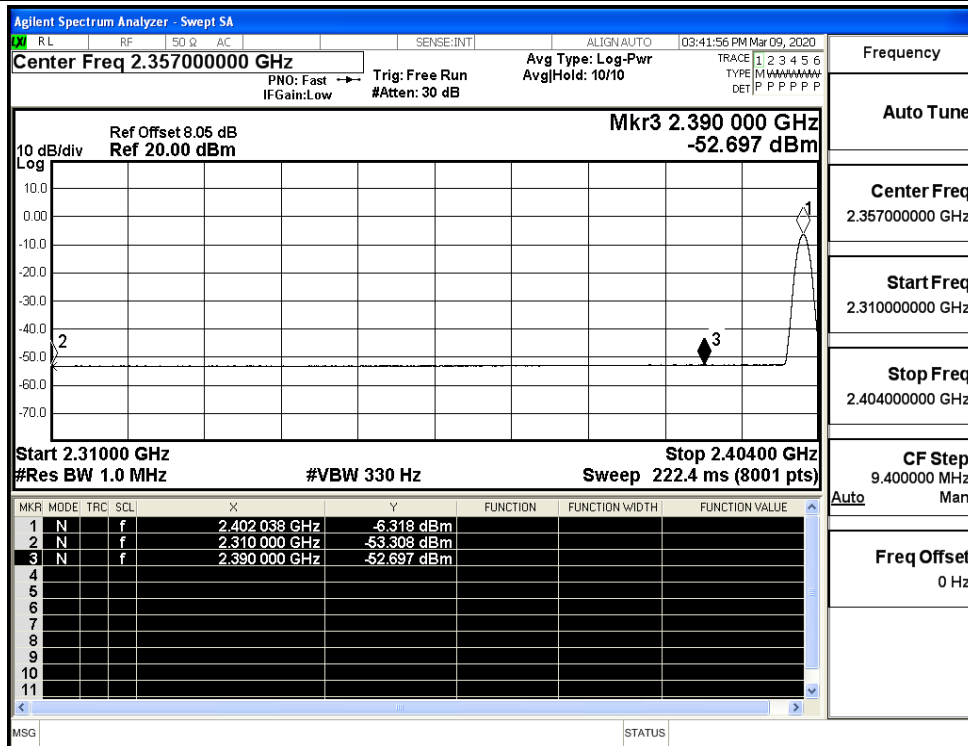
C.7 Restrict-band band-edge measurements

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	-43.23	2.0	0	54.00	PEAK	74	PASS
		Ant1	2310.0	-53.31	2.0	0	43.92	AV	54	PASS
		Ant1	2390.0	-42.09	2.0	0	55.14	PEAK	74	PASS
		Ant1	2390.0	-52.70	2.0	0	44.53	AV	54	PASS
	2480	Ant1	2483.5	-42.24	2.0	0	54.99	PEAK	74	PASS
		Ant1	2483.5	-52.41	2.0	0	44.82	AV	54	PASS
		Ant1	2500.0	-42.18	2.0	0	55.05	PEAK	74	PASS
		Ant1	2500.0	-52.22	2.0	0	45.01	AV	54	PASS

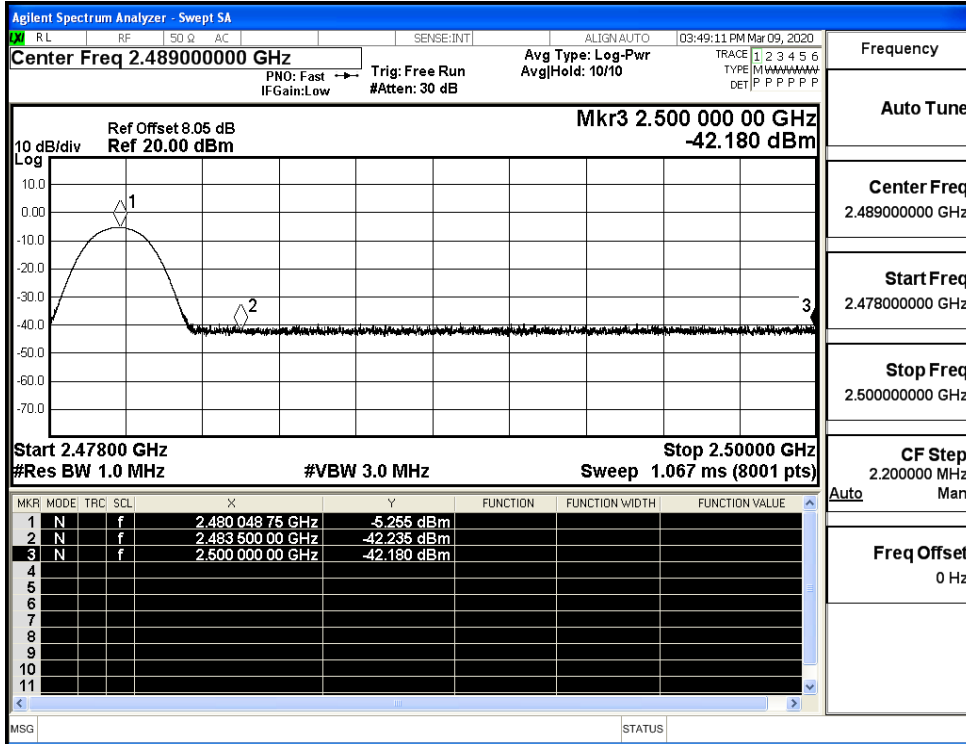
Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



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

