

Appendix B

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

Product Name: LTE GSM/WCDMA Smartphone

Trade Mark: DOOGEE

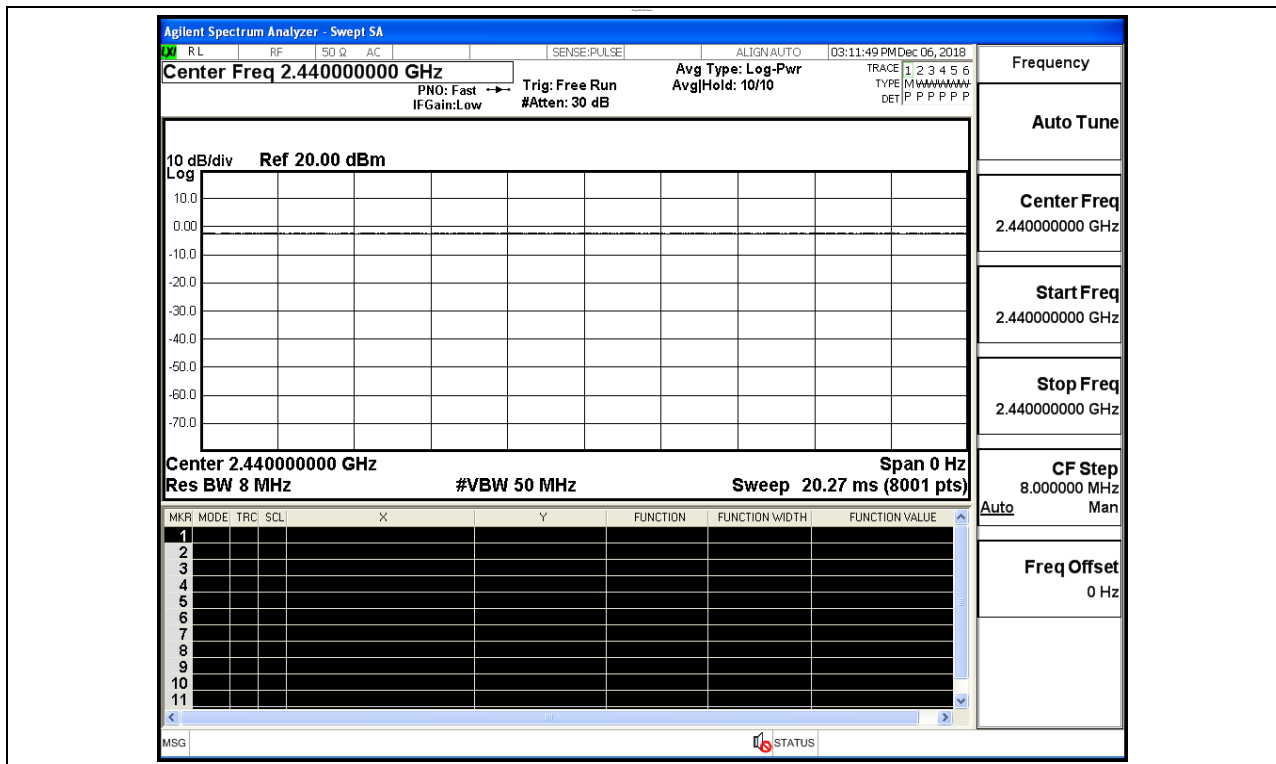
Test Model: S70 Lite

Environmental Conditions

Temperature:	22.8 ° C
Relative Humidity:	53.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Mina.Xu
Supervised by:	Jayden.Zhuo

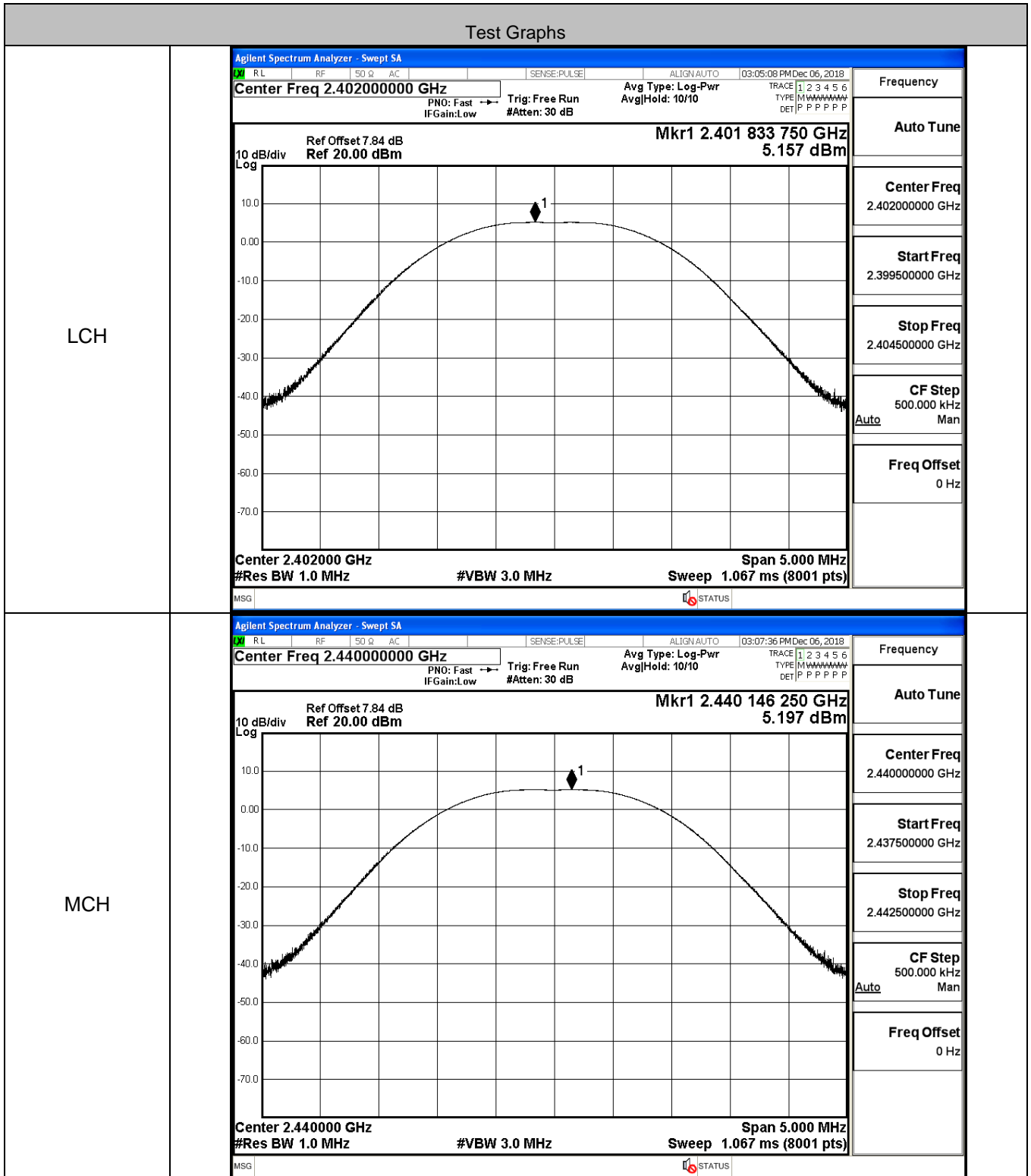
B.1 Duty Cycle

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

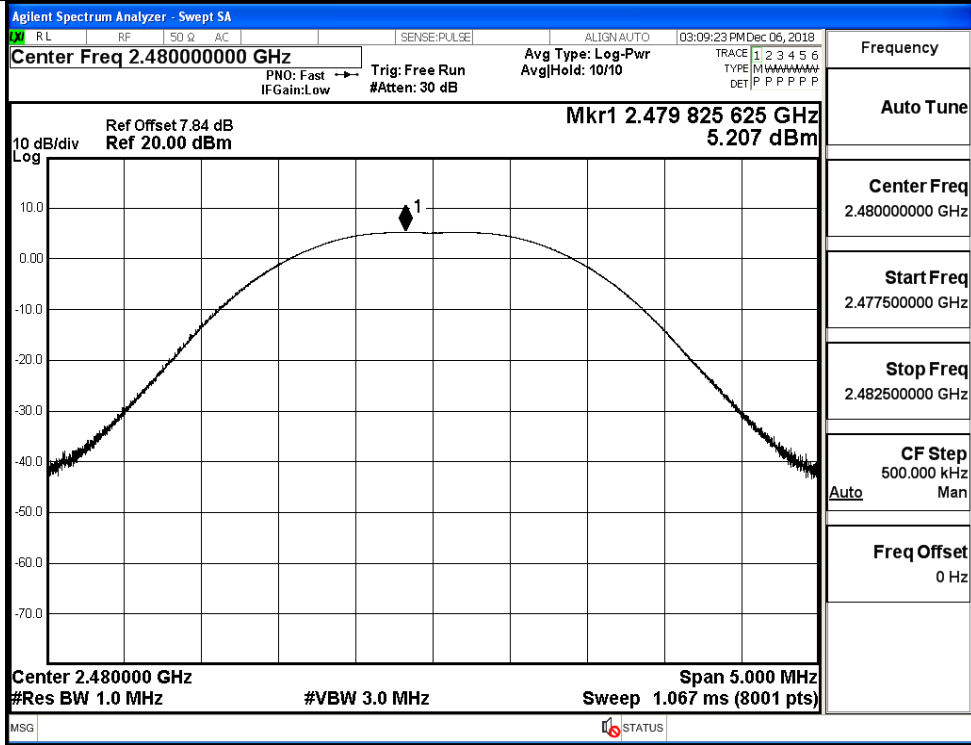


B.2 Maximum Conducted Peak Output Power

Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	5.157	30	PASS
BT LE	MCH	5.197	30	PASS
BT LE	HCH	5.207	30	PASS



HCH

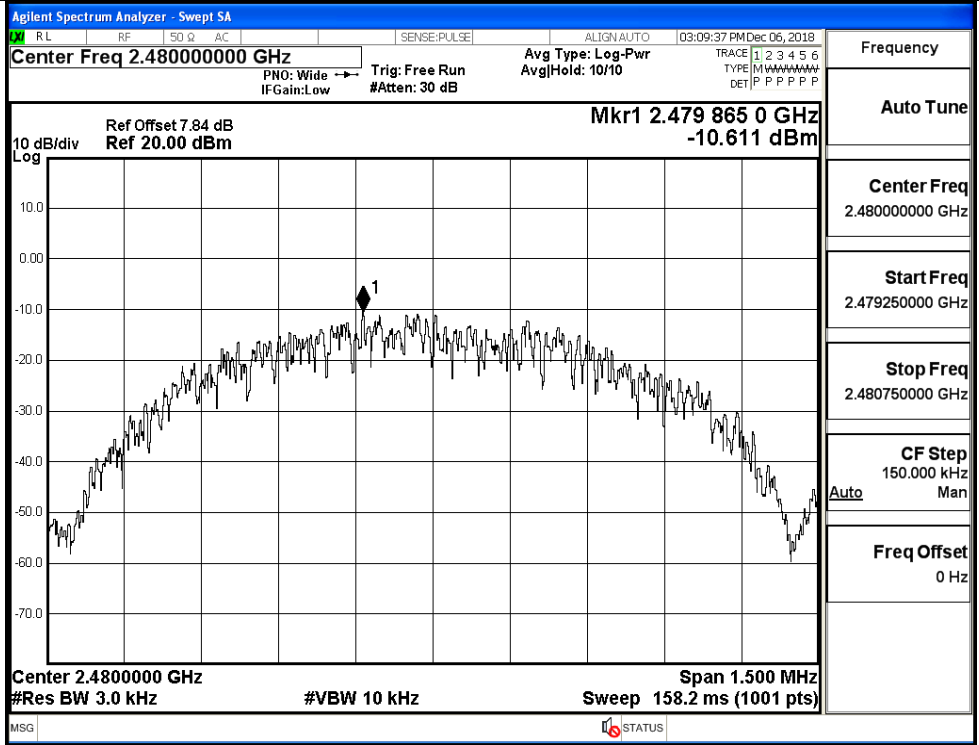


B.3 Maximum Power Spectral Density

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-9.827	8	PASS
BT LE	MCH	-9.884	8	PASS
BT LE	HCH	-10.611	8	PASS

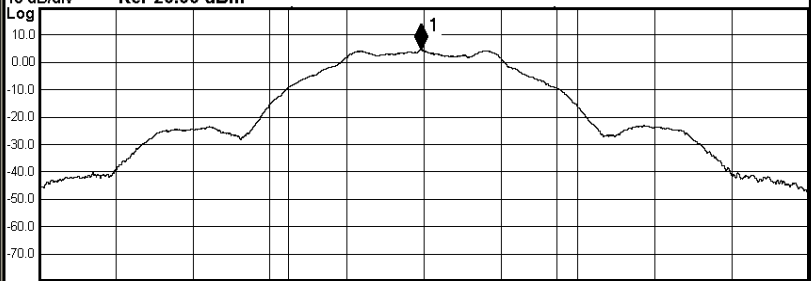
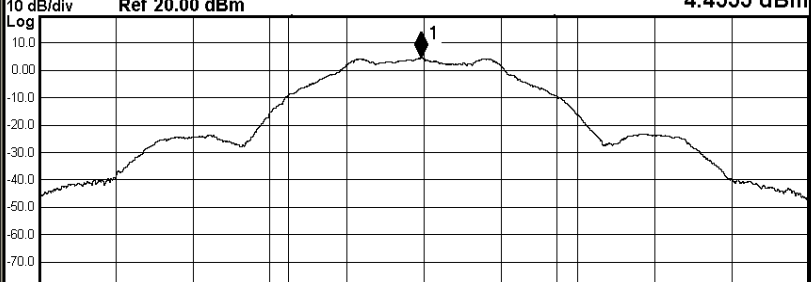
Test Graphs	
LCH	<div style="border: 1px solid black; padding: 5px;"> <p style="font-size: small; margin: 0;">Agilent Spectrum Analyzer - Swept SA</p> <p style="font-size: x-small; margin: 0;">RL RF 50 Ω AC SENSE:PULSE ALIGN:AUTO 03:05:22 PM Dec 06, 2018</p> <p style="font-size: small; margin: 0;">Center Freq 2.40200000 GHz Avg Type: Log-Pwr TRACE 1 2 3 4 5 6</p> <p style="font-size: x-small; margin: 0;">PNO: Wide → Trig: Free Run AvgHold: 10/10 TYPE M W W W W W W W</p> <p style="font-size: x-small; margin: 0;">IFGain:Low #Atten: 30 dB DET P P P P P P</p> <div style="display: flex; justify-content: space-between; font-size: small;"> Ref Offset 7.84 dB Mkr1 2.401 971 5 GHz </div> <div style="display: flex; justify-content: space-between; font-size: small;"> Ref 20.00 dBm -9.827 dBm </div> <div style="display: flex; justify-content: space-between; font-size: small; margin-top: 10px;"> Center 2.4020000 GHz Span 1.500 MHz </div> <div style="display: flex; justify-content: space-between; font-size: x-small; margin-top: 5px;"> #Res BW 3.0 kHz #VBW 10 kHz Sweep 158.2 ms (1001 pts) </div> <p style="font-size: x-small; margin-top: 5px;">MSG STATUS</p> </div>
MCH	<div style="border: 1px solid black; padding: 5px;"> <p style="font-size: small; margin: 0;">Agilent Spectrum Analyzer - Swept SA</p> <p style="font-size: x-small; margin: 0;">RL RF 50 Ω AC SENSE:PULSE ALIGN:AUTO 03:07:49 PM Dec 06, 2018</p> <p style="font-size: small; margin: 0;">Center Freq 2.44000000 GHz Avg Type: Log-Pwr TRACE 1 2 3 4 5 6</p> <p style="font-size: x-small; margin: 0;">PNO: Wide → Trig: Free Run AvgHold: 10/10 TYPE M W W W W W W W</p> <p style="font-size: x-small; margin: 0;">IFGain:Low #Atten: 30 dB DET P P P P P P</p> <div style="display: flex; justify-content: space-between; font-size: small;"> Ref Offset 7.84 dB Mkr1 2.439 971 5 GHz </div> <div style="display: flex; justify-content: space-between; font-size: small;"> Ref 20.00 dBm -9.884 dBm </div> <div style="display: flex; justify-content: space-between; font-size: small; margin-top: 10px;"> Center 2.4400000 GHz Span 1.500 MHz </div> <div style="display: flex; justify-content: space-between; font-size: x-small; margin-top: 5px;"> #Res BW 3.0 kHz #VBW 10 kHz Sweep 158.2 ms (1001 pts) </div> <p style="font-size: x-small; margin-top: 5px;">MSG STATUS</p> </div>

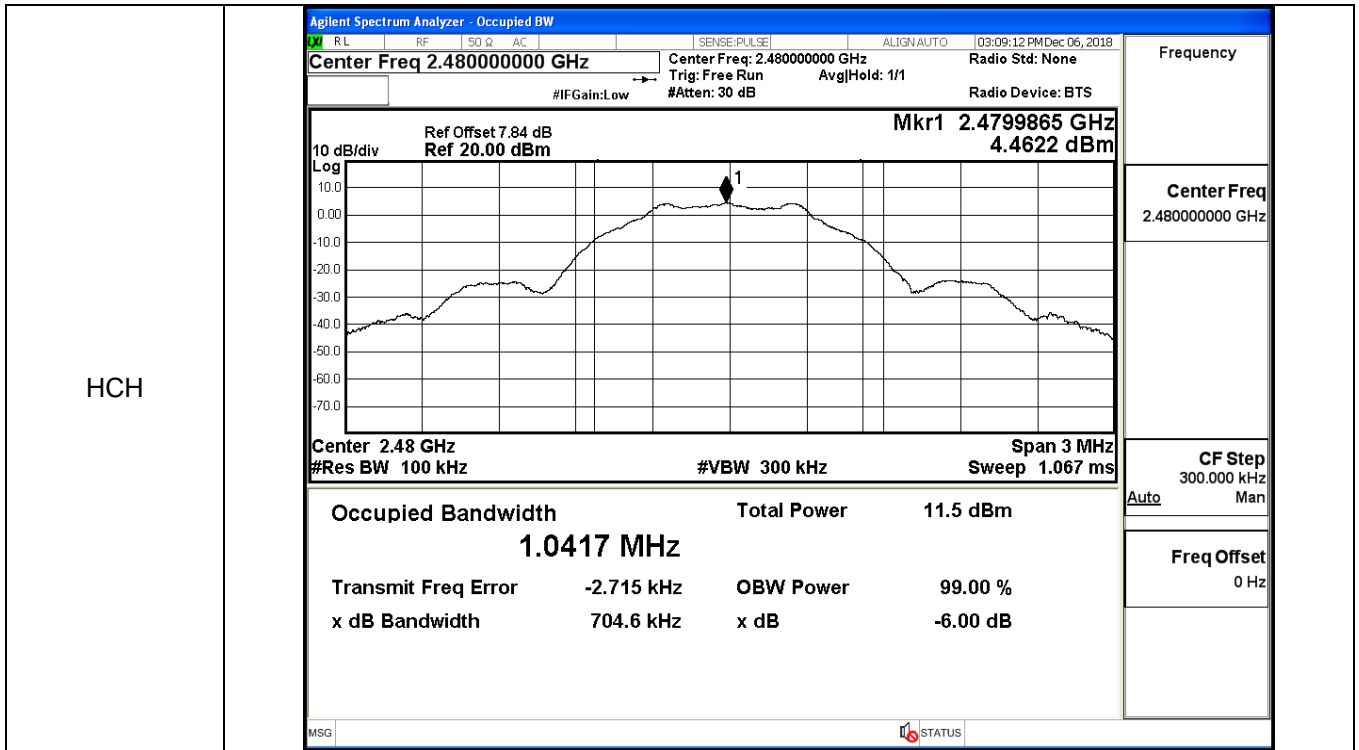
HCH



B.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6833	≥0.5	PASS
BT LE	MCH	0.6796	≥0.5	PASS
BT LE	HCH	0.7046	≥0.5	PASS

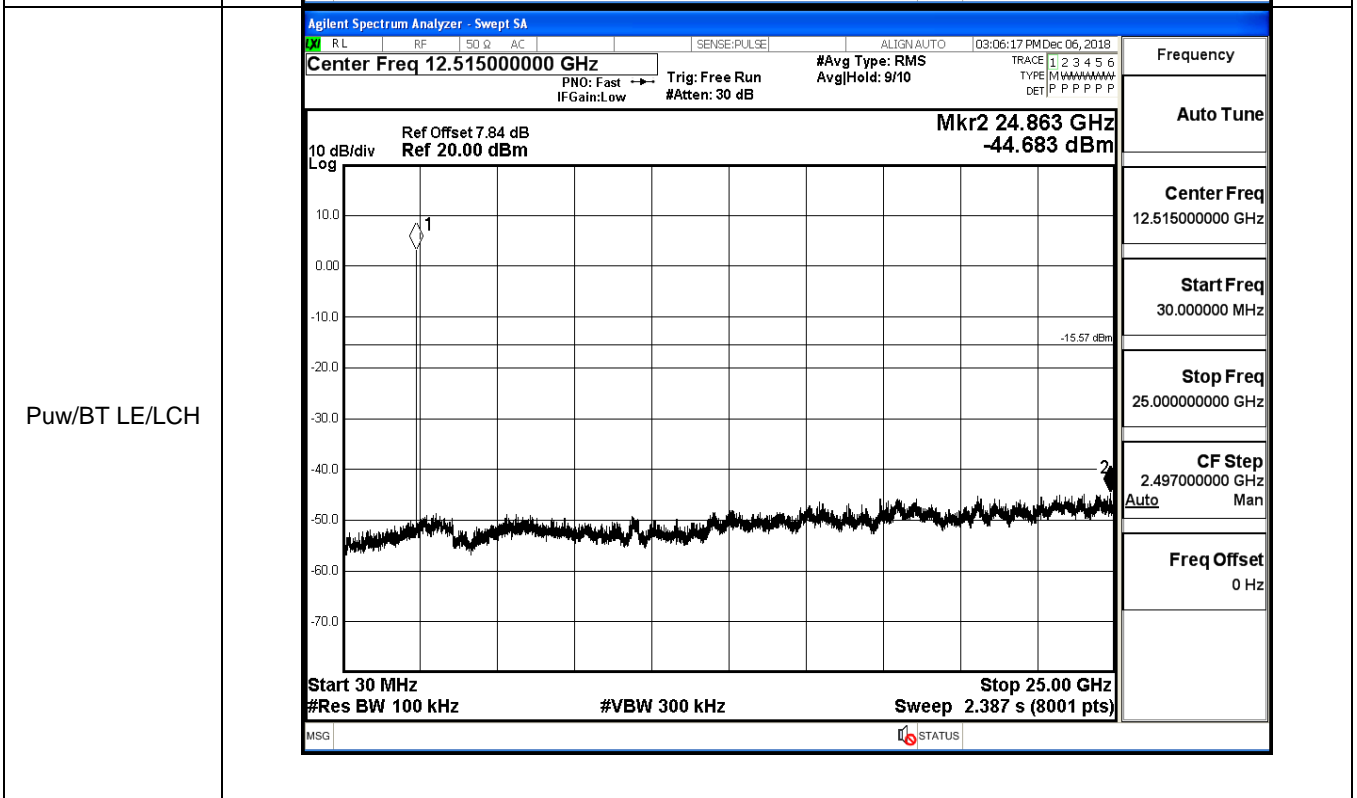
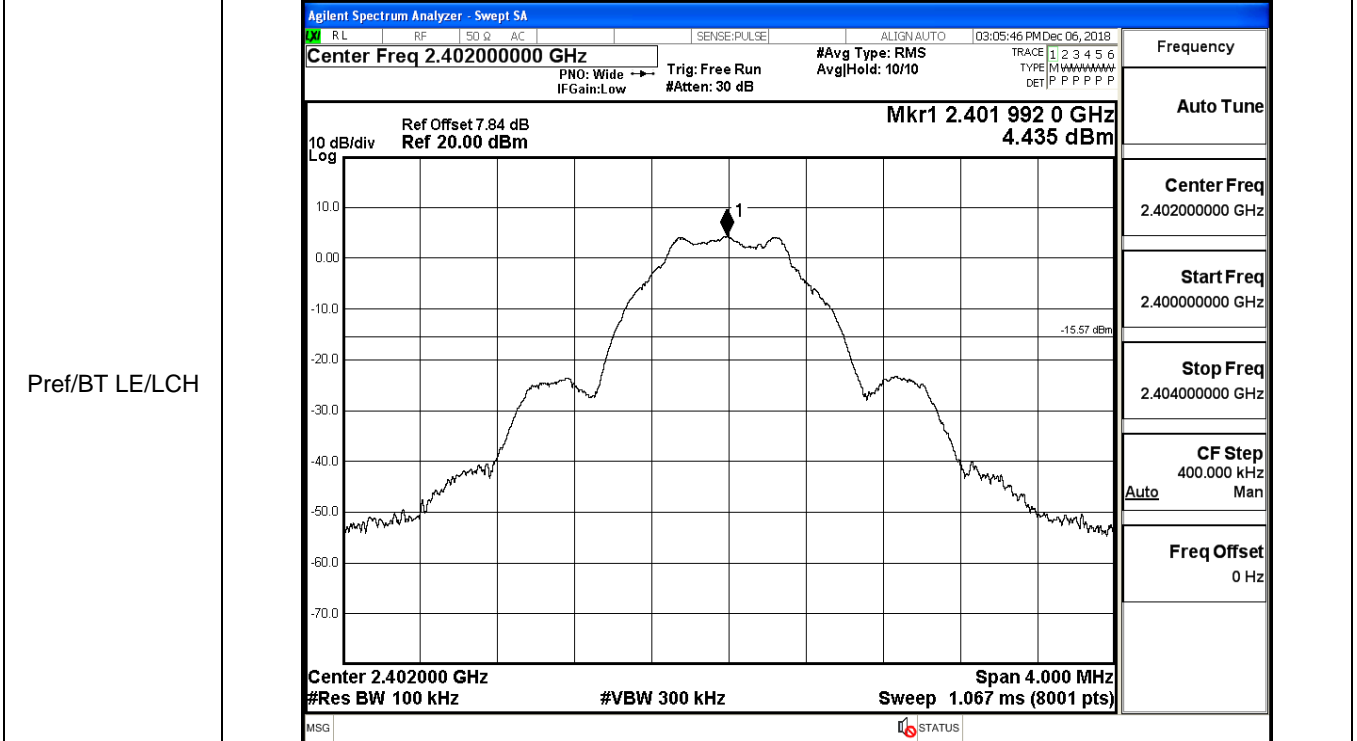
Test Graphs													
LCH	<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center; margin: 0;">Agilent Spectrum Analyzer - Occupied BW</p> <p style="font-size: small; margin: 0;">RL RF 50 Ω AC SENSE:PULSE ALIGN:AUTO 03:04:57 PM Dec 06, 2018</p> <p style="margin: 0;">Center Freq 2.402000000 GHz Center Freq: 2.402000000 GHz Radio Std: None</p> <p style="margin: 0;">Trig: Free Run AvgHold: 1/1 Radio Device: BTS</p> <p style="margin: 0;">#IFGain:Low #Atten: 30 dB</p> <div style="border: 1px solid black; padding: 2px; margin: 5px 0;"> <p style="font-size: x-small; margin: 0;">10 dB/div Ref Offset 7.84 dB Mkr1 2.4019873 GHz</p> <p style="font-size: x-small; margin: 0;">Log Ref 20.00 dBm 4.4281 dBm</p>  </div> <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%;">11.4 dBm</td> </tr> <tr> <td style="text-align: center;">1.0410 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>x dB</td> <td>-6.00 dB</td> </tr> </table> <p style="font-size: x-small; margin: 0;">MSG STATUS</p> </div>	Occupied Bandwidth	Total Power	11.4 dBm	1.0410 MHz			Transmit Freq Error	OBW Power	99.00 %	x dB Bandwidth	x dB	-6.00 dB
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B.5 RF Conducted Spurious Emissions

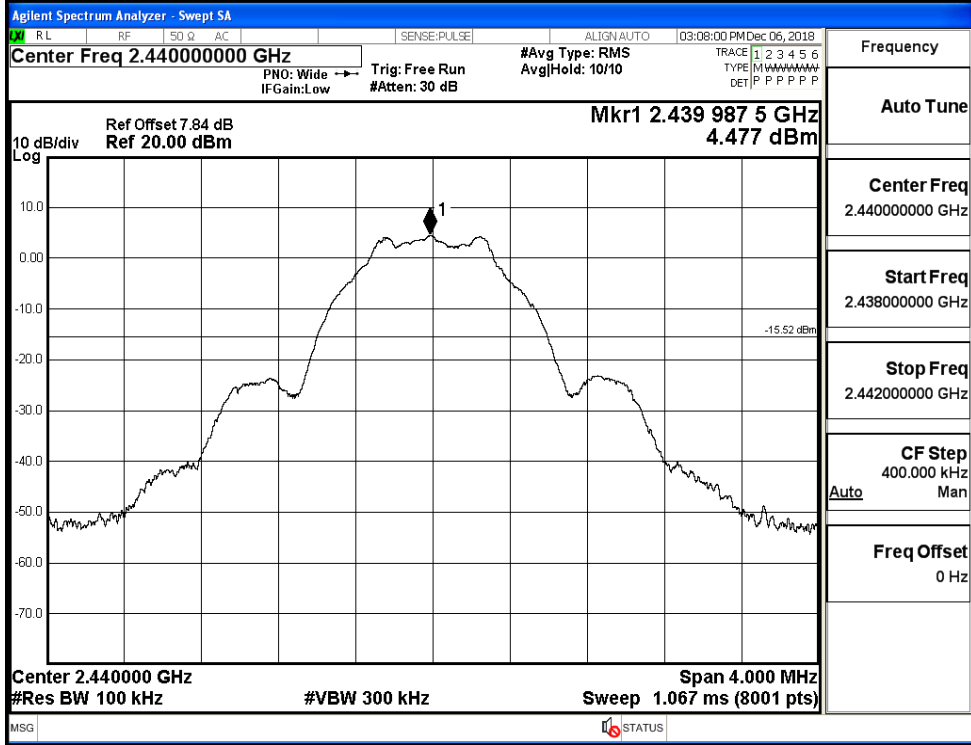
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	4.435	-44.683	-15.565	PASS
BT LE	MCH	4.477	-44.692	-15.523	PASS
BT LE	HCH	4.476	-43.930	-15.524	PASS

BT LE_LCH_Graphs

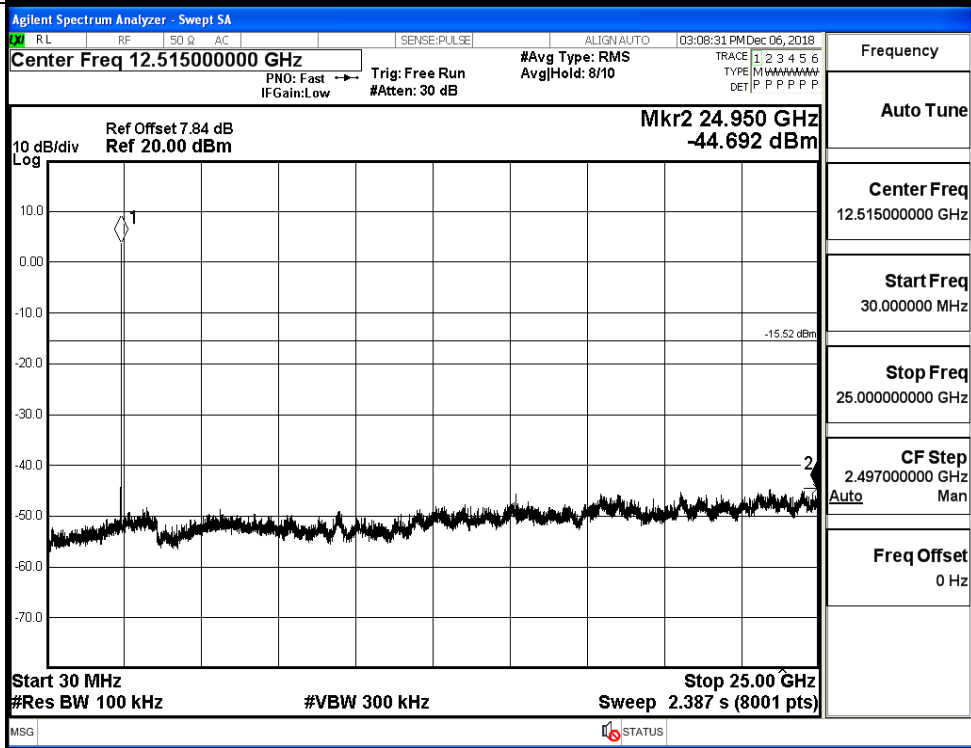


BT LE_MCH_Graphs

Pref/BT LE/MCH

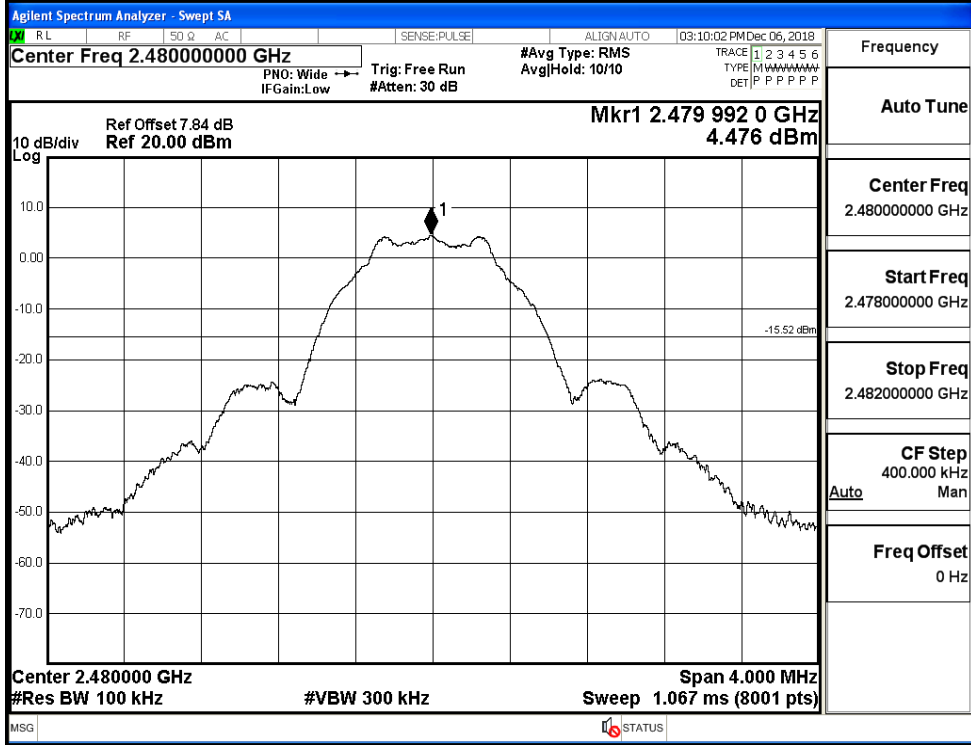


Puw/BT LE/MCH

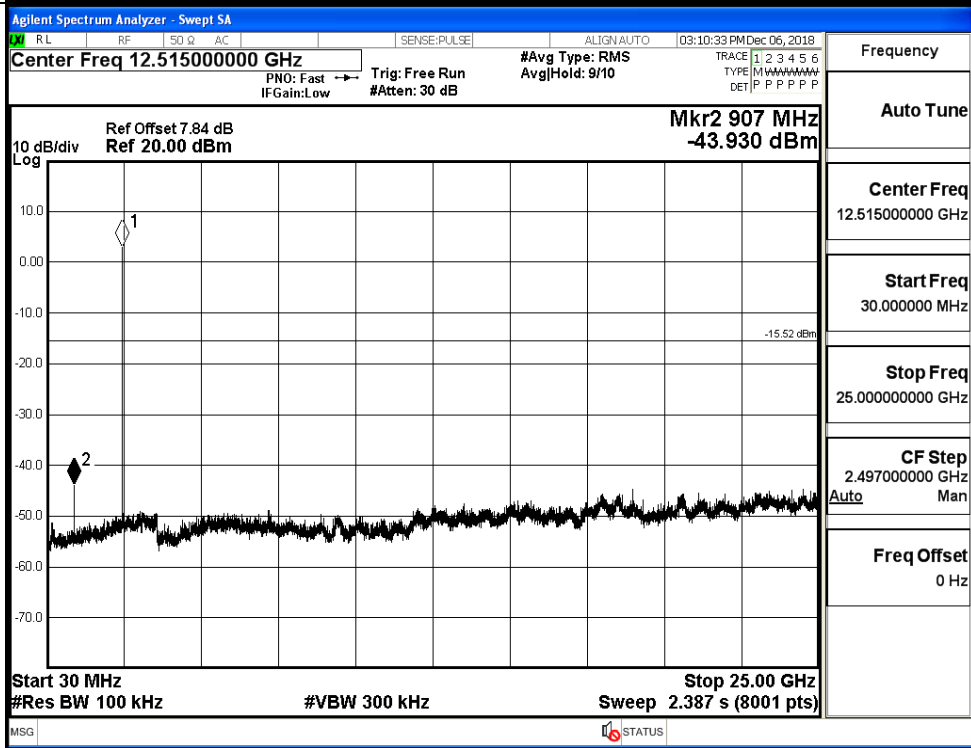


BT LE_HCH_Graphs

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	4.407	-50.210	-15.59	PASS
BT LE	HCH	4.689	-49.477	-15.31	PASS

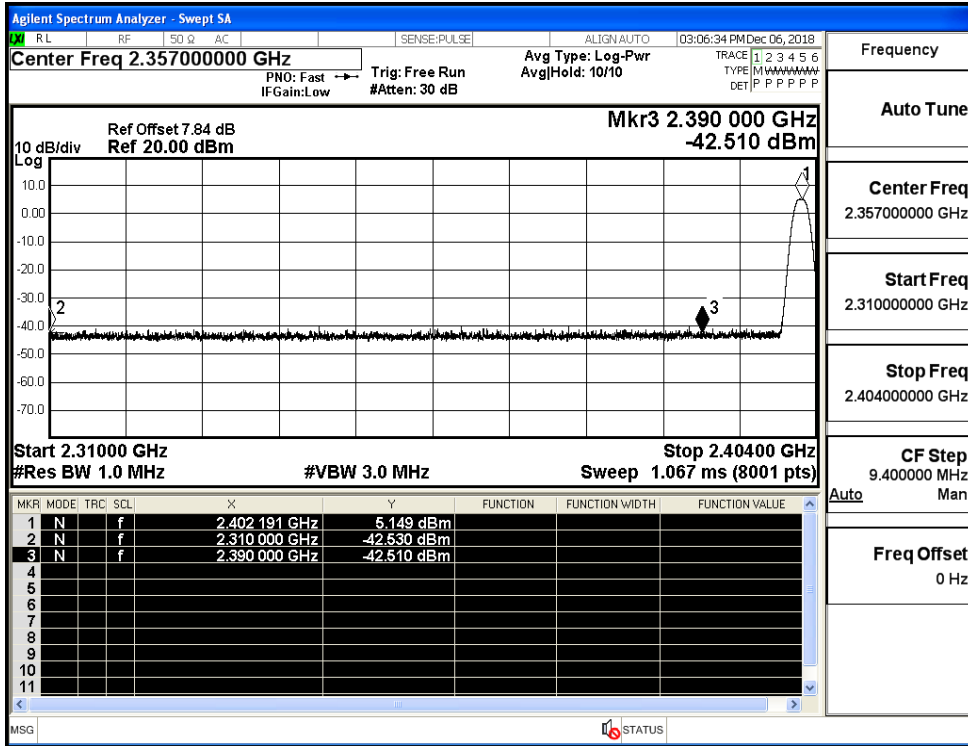
Test Graphs

LCH	<table border="1" style="width: 100%; border-collapse: collapse; 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>2.401 756 GHz</td><td>4.407 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>-53.464 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>-53.632 dBm</td><td></td><td></td><td></td></tr> <tr><td>4</td><td>N</td><td>f</td><td></td><td>2.344 956 GHz</td><td>-50.210 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		2.401 756 GHz	4.407 dBm				2	N	f		2.400 000 GHz	-53.464 dBm				3	N	f		2.390 000 GHz	-53.632 dBm				4	N	f		2.344 956 GHz	-50.210 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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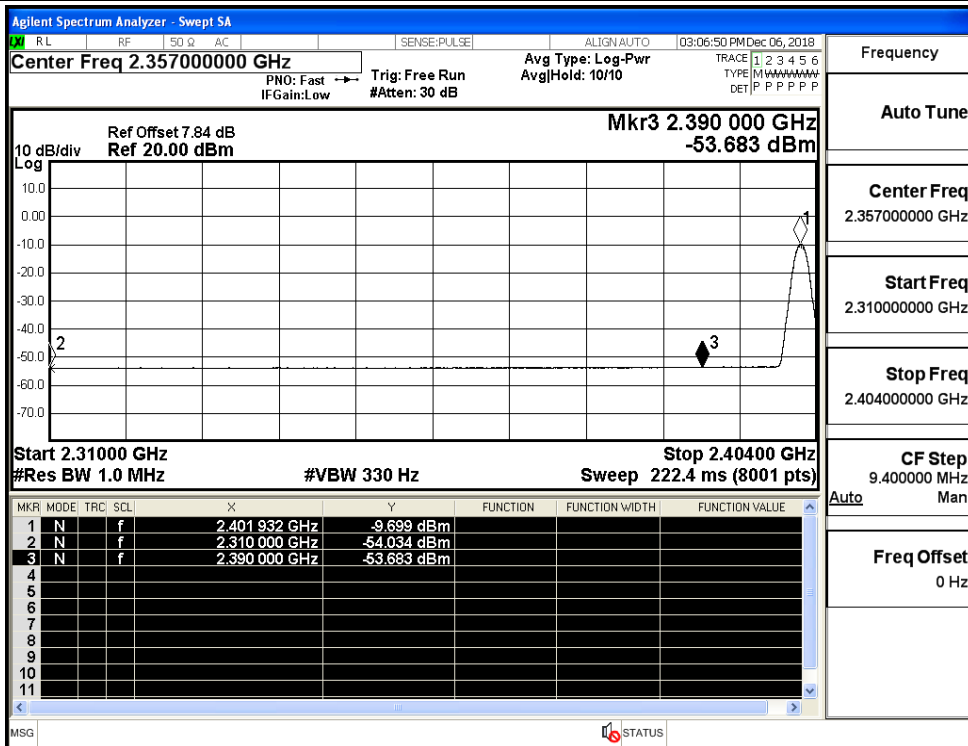
B.7 Restrict-band band-edge measurements

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	-42.53	2.0	0	54.73	PEAK	74	PASS
		Ant1	2310.0	-54.03	2.0	0	43.22	AV	54	PASS
		Ant1	2390.0	-42.51	2.0	0	54.75	PEAK	74	PASS
		Ant1	2390.0	-53.68	2.0	0	43.57	AV	54	PASS
	2480	Ant1	2483.5	-43.88	2.0	0	53.38	PEAK	74	PASS
		Ant1	2483.5	-53.22	2.0	0	44.04	AV	54	PASS
		Ant1	2500.0	-43.06	2.0	0	54.20	PEAK	74	PASS
		Ant1	2500.0	-53.24	2.0	0	44.02	AV	54	PASS

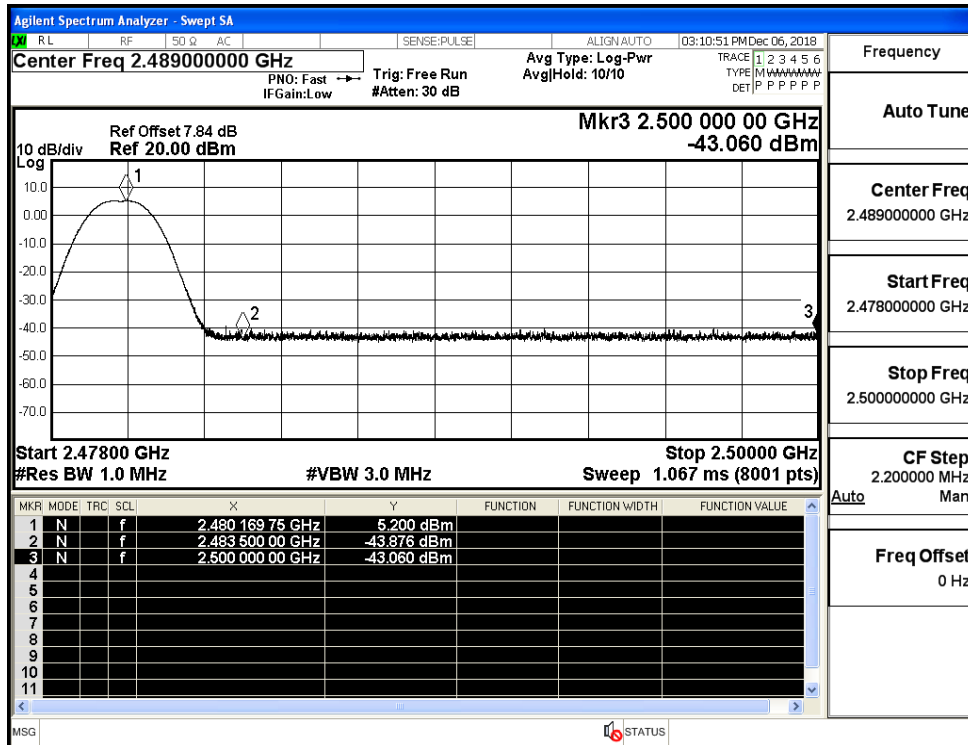
Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



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

