

Appendix B

RF Test Data for BT LE V4.2 (Conducted Measurement)

Product Name: Tablet

HYUNDAI

Trade Mark:

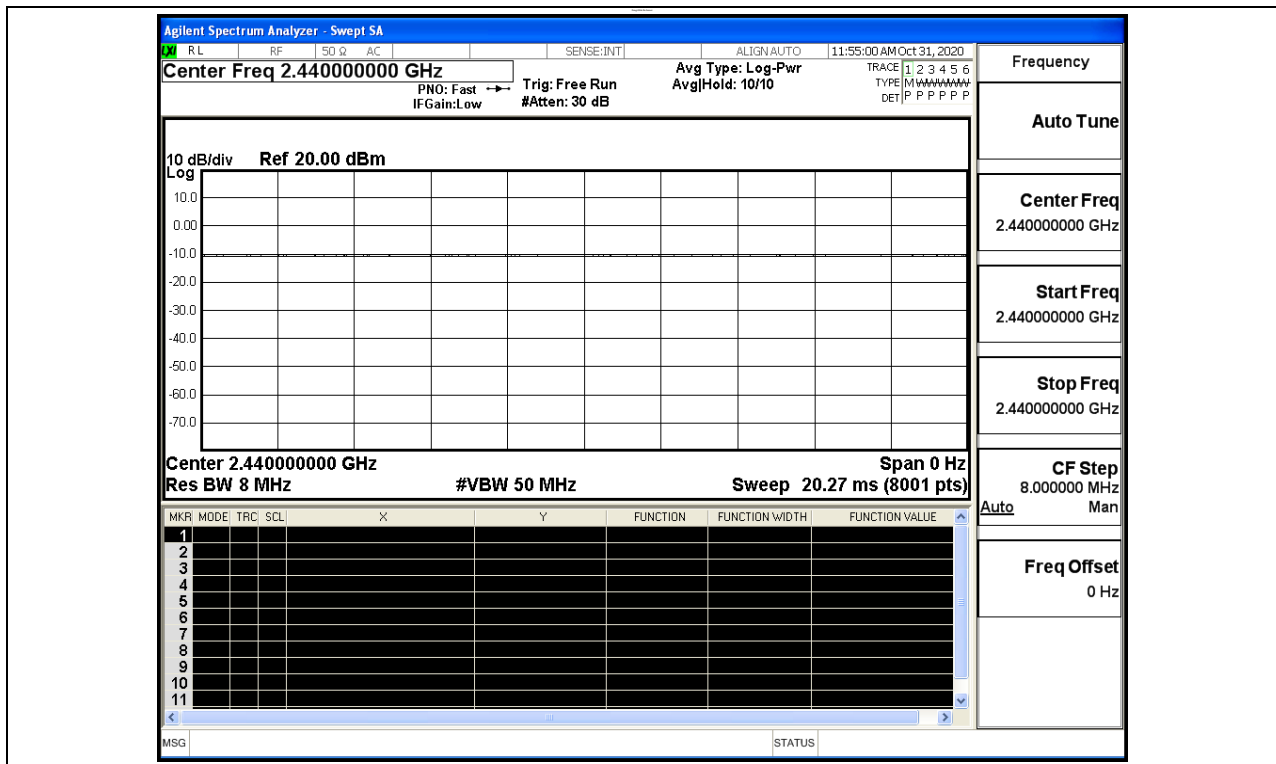
Test Model: 10LB2

Environmental Conditions

Temperature:	22.7° C
Relative Humidity:	53.4%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond Lu
Supervised by:	Li Huan

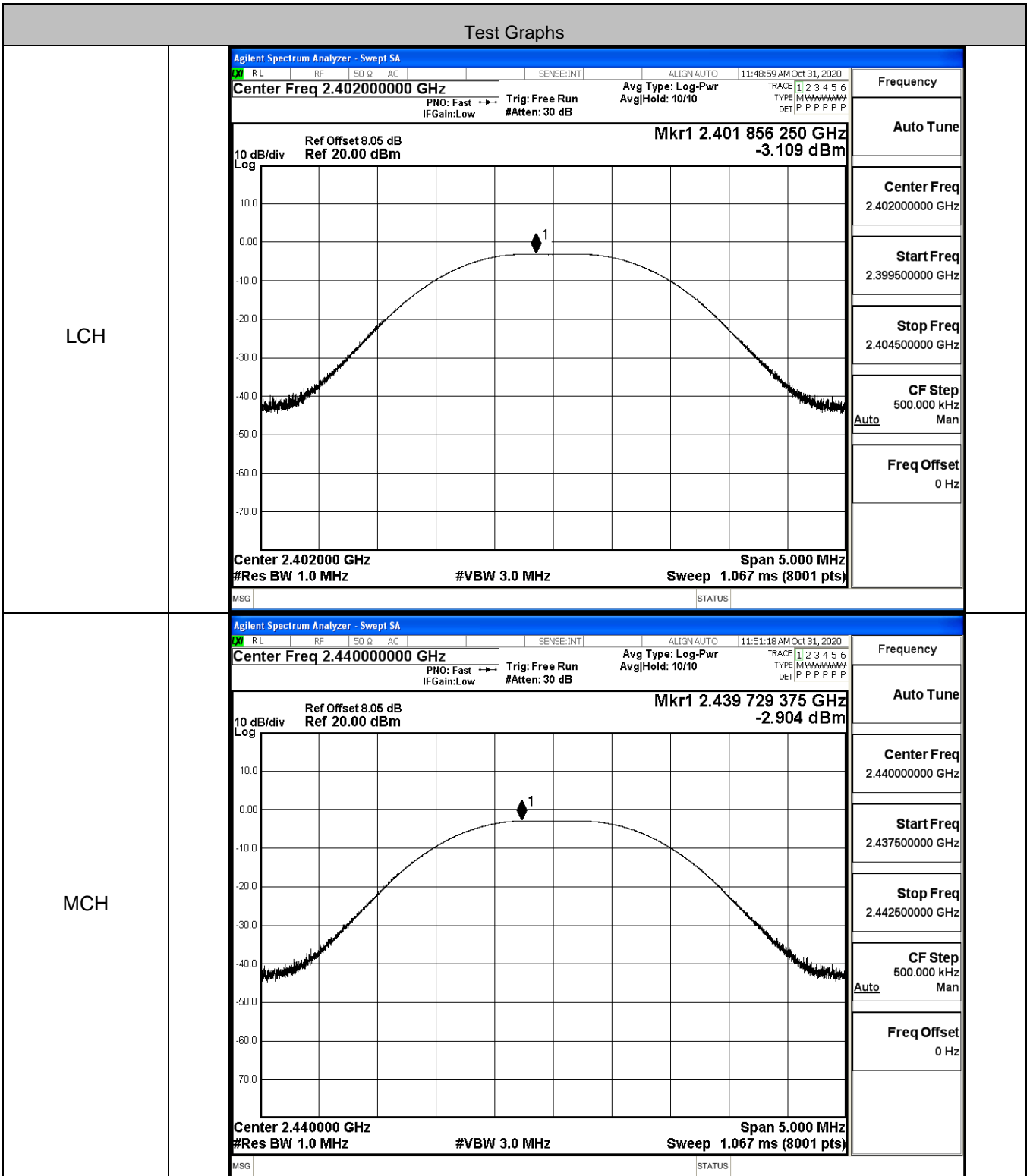
B.1 Duty Cycle

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

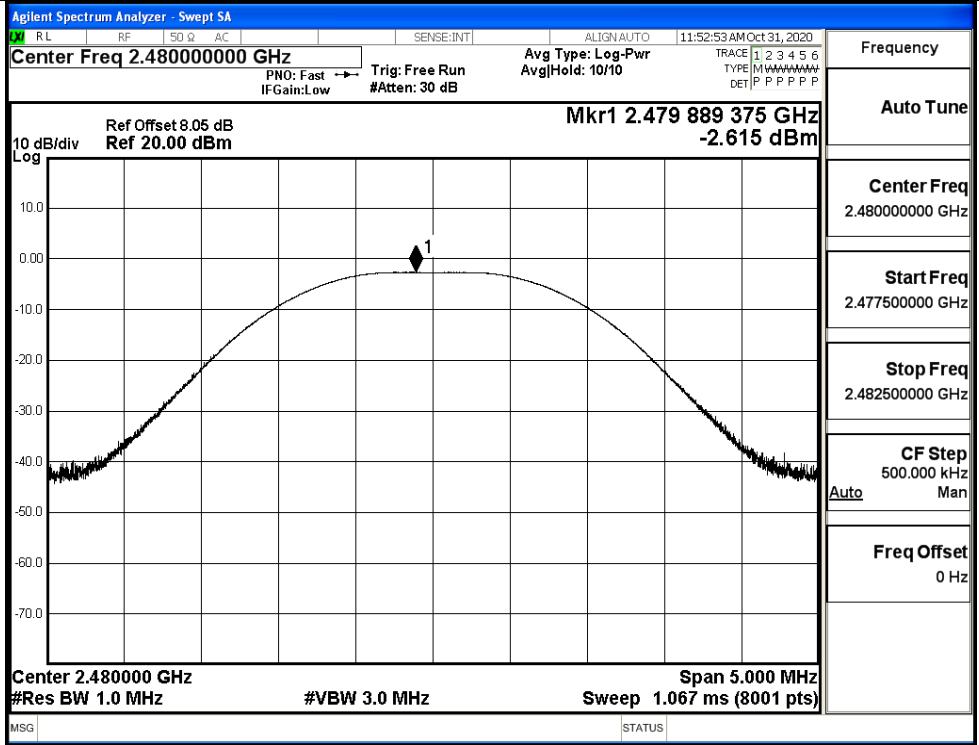


B.2 Maximum Conducted Peak Output Power

Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	-3.109	30	PASS
BT LE	MCH	-2.904	30	PASS
BT LE	HCH	-2.615	30	PASS



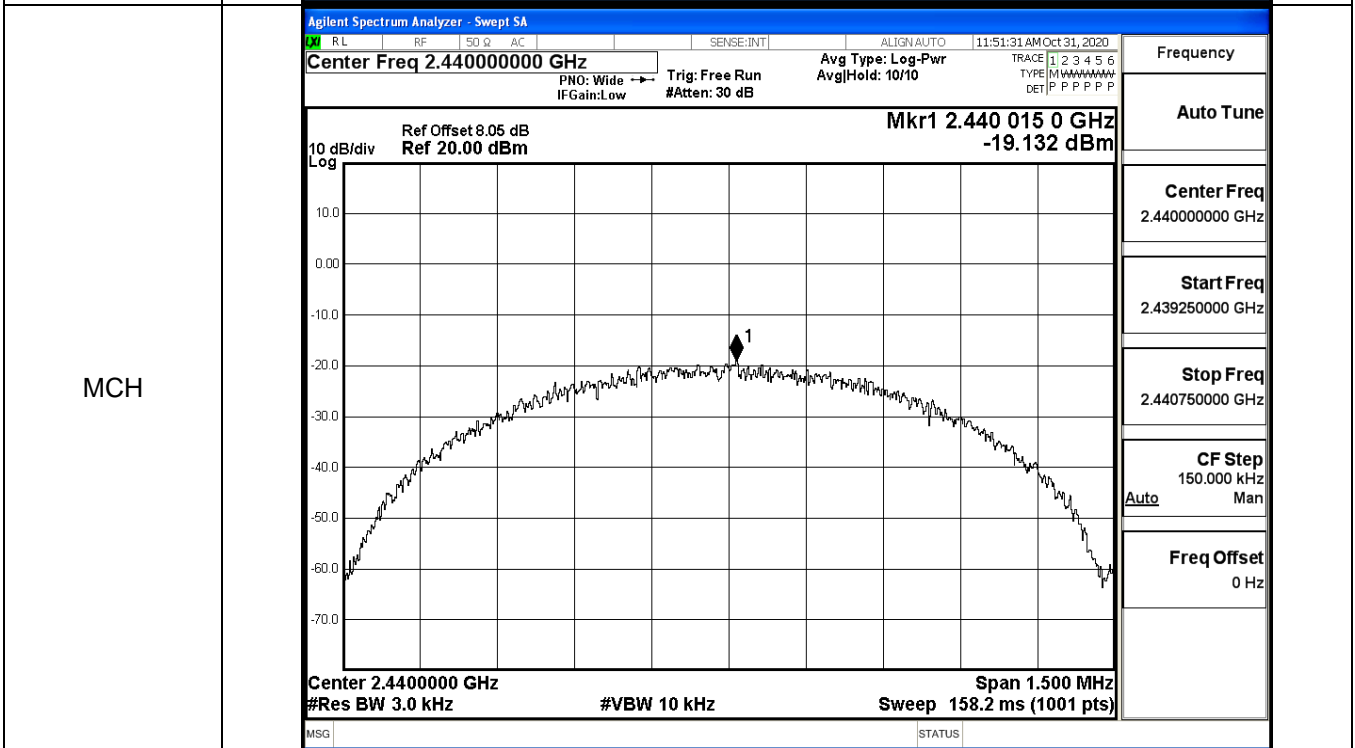
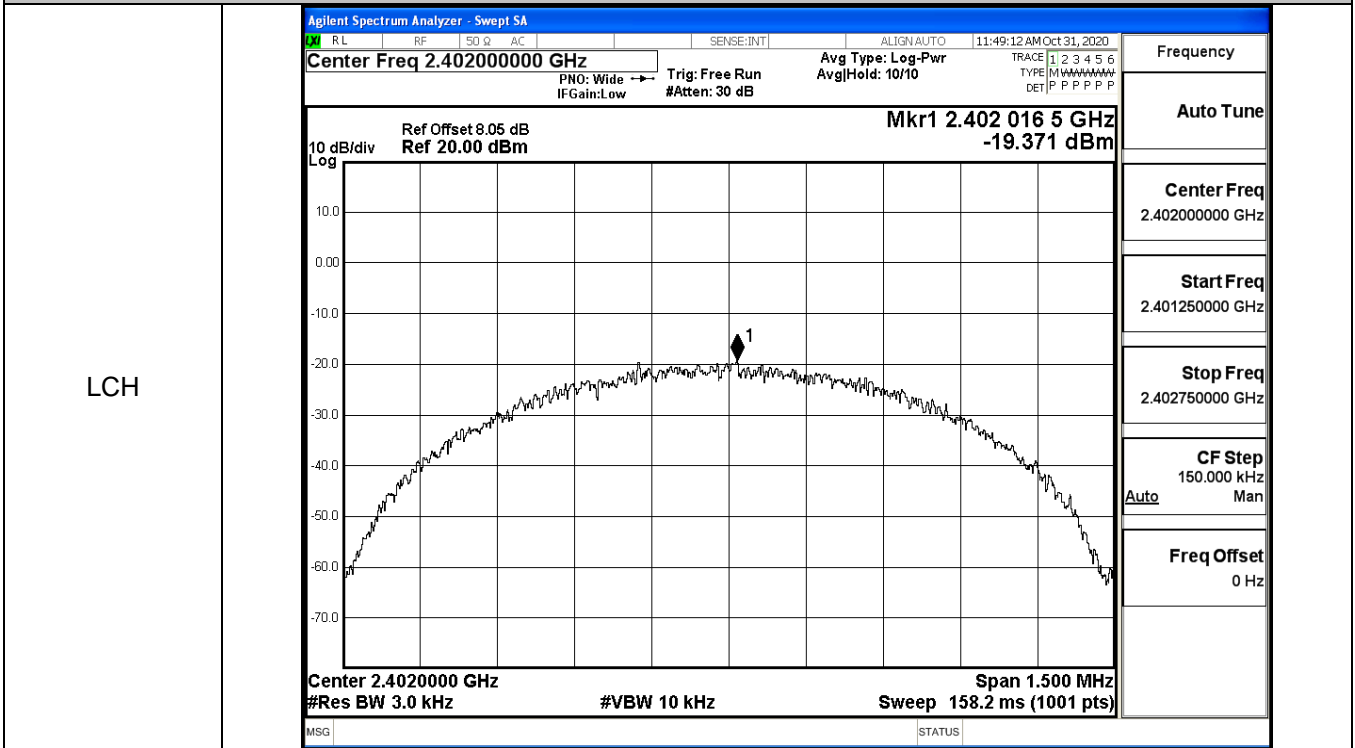
HCH



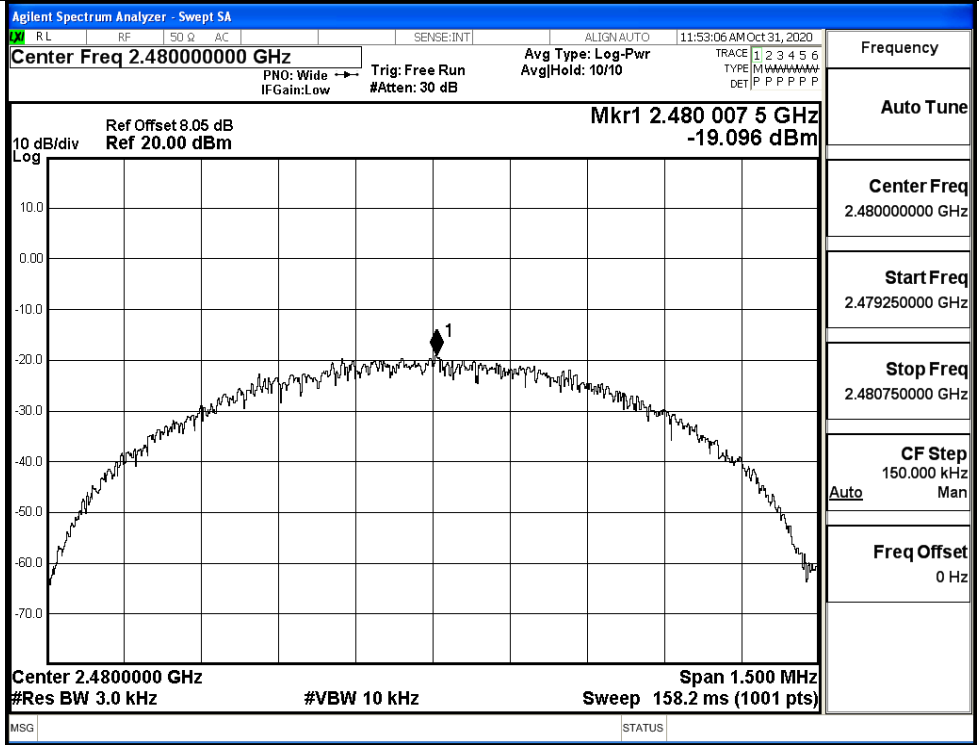
B.3 Maximum Power Spectral Density

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-19.371	8	PASS
BT LE	MCH	-19.132	8	PASS
BT LE	HCH	-19.096	8	PASS

Test Graphs



HCH



B.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6578	≥0.5	PASS
BT LE	MCH	0.6631	≥0.5	PASS
BT LE	HCH	0.6637	≥0.5	PASS

Test Graphs																
LCH	<div data-bbox="416 562 1390 1294"> <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.402000000 GHz Center Freq: 2.402000000 GHz Radio Std: None</p> <p>Trig: Free Run AvgHold: >1/1 Radio Device: BTS</p> <p>#IFGain: Low #Atten: 30 dB</p> <p>Ref Offset 8.05 dB Mkr1 2.4022408 GHz -3.3223 dBm</p> <p>Ref 20.00 dBm</p> <p>Center 2.402 GHz Span 3 MHz</p> <p>#Res BW 100 kHz #VBW 300 kHz Sweep 1.067 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>3.20 dBm</td> </tr> <tr> <td>1.0562 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>-2.707 kHz</td> <td>x dB</td> <td>-6.00 dB</td> </tr> <tr> <td>x dB Bandwidth</td> <td>657.8 kHz</td> <td></td> </tr> </table> <p>MSG STATUS</p> </div>	Occupied Bandwidth	Total Power	3.20 dBm	1.0562 MHz			Transmit Freq Error	OBW Power	99.00 %	-2.707 kHz	x dB	-6.00 dB	x dB Bandwidth	657.8 kHz	
Occupied Bandwidth	Total Power	3.20 dBm														
1.0562 MHz																
Transmit Freq Error	OBW Power	99.00 %														
-2.707 kHz	x dB	-6.00 dB														
x dB Bandwidth	657.8 kHz															
MCH	<div data-bbox="416 1308 1390 2042"> <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.440000000 GHz Center Freq: 2.440000000 GHz Radio Std: None</p> <p>Trig: Free Run AvgHold: 1/1 Radio Device: BTS</p> <p>#IFGain: Low #Atten: 30 dB</p> <p>Ref Offset 8.05 dB Mkr1 2.4402524 GHz -3.1725 dBm</p> <p>Ref 20.00 dBm</p> <p>Center 2.44 GHz Span 3 MHz</p> <p>#Res BW 100 kHz #VBW 300 kHz Sweep 1.067 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>3.46 dBm</td> </tr> <tr> <td>1.0519 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>-5.389 kHz</td> <td>x dB</td> <td>-6.00 dB</td> </tr> <tr> <td>x dB Bandwidth</td> <td>663.1 kHz</td> <td></td> </tr> </table> <p>MSG STATUS</p> </div>	Occupied Bandwidth	Total Power	3.46 dBm	1.0519 MHz			Transmit Freq Error	OBW Power	99.00 %	-5.389 kHz	x dB	-6.00 dB	x dB Bandwidth	663.1 kHz	
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1.0519 MHz																
Transmit Freq Error	OBW Power	99.00 %														
-5.389 kHz	x dB	-6.00 dB														
x dB Bandwidth	663.1 kHz															

HCH

Agilent Spectrum Analyzer - Occupied BW

RL	RF	50 Ω	AC	SENSE:INT	ALIGN:AUTO	11:52:42 AM Oct 31, 2020
Center Freq 2.480000000 GHz			Center Freq: 2.480000000 GHz		Radio Std: None	
			Trig: Free Run		AvgJHold: 1/1	
#IFGain:Low			#Atten: 30 dB		Radio Device: BTS	

10 dB/div
Log

Mkr1 2.480246 GHz
-2.7987 dBm

Center 2.48 GHz	#VBW 300 kHz	Span 3 MHz
#Res BW 100 kHz	Sweep 1.067 ms	

Occupied Bandwidth	Total Power	3.73 dBm
1.0526 MHz		
Transmit Freq Error	-2.362 kHz	OBW Power 99.00 %
x dB Bandwidth	663.7 kHz	x dB -6.00 dB

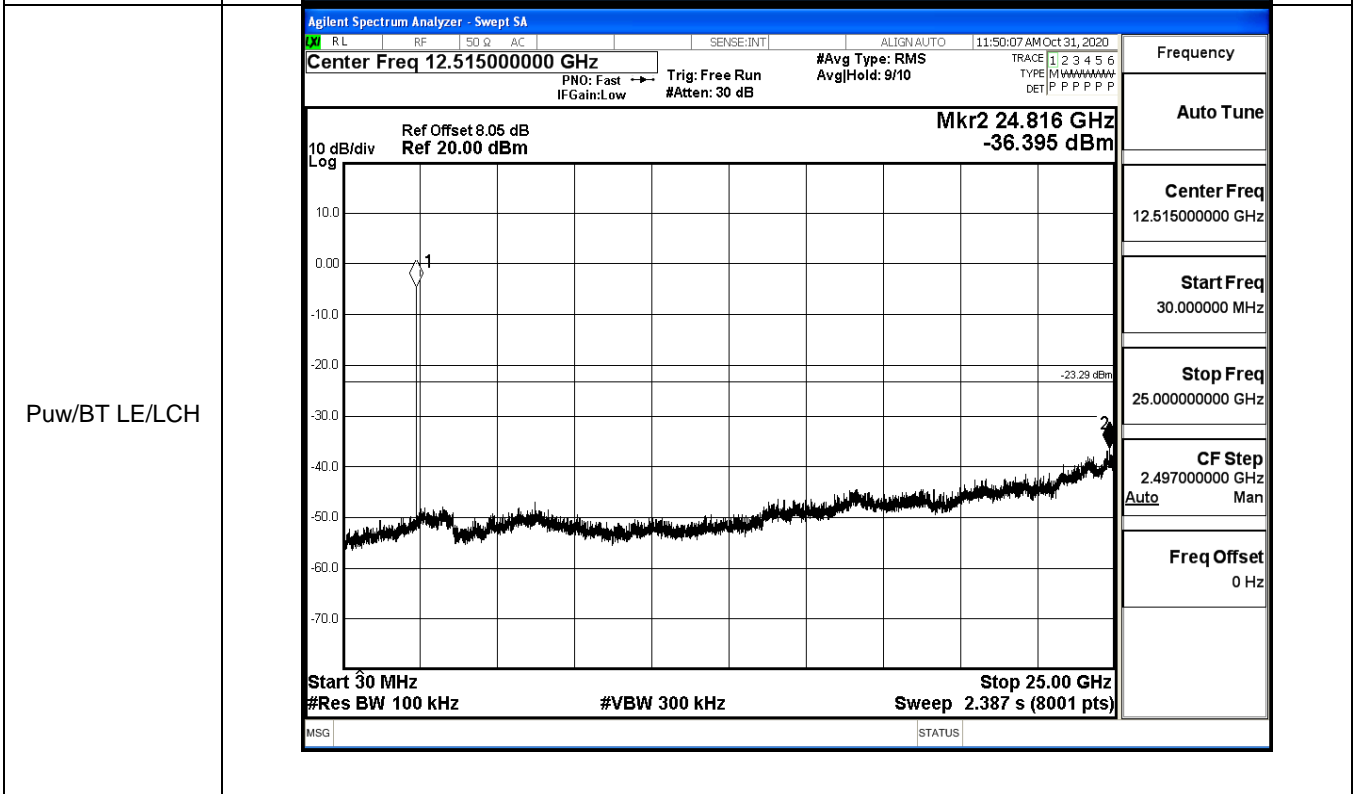
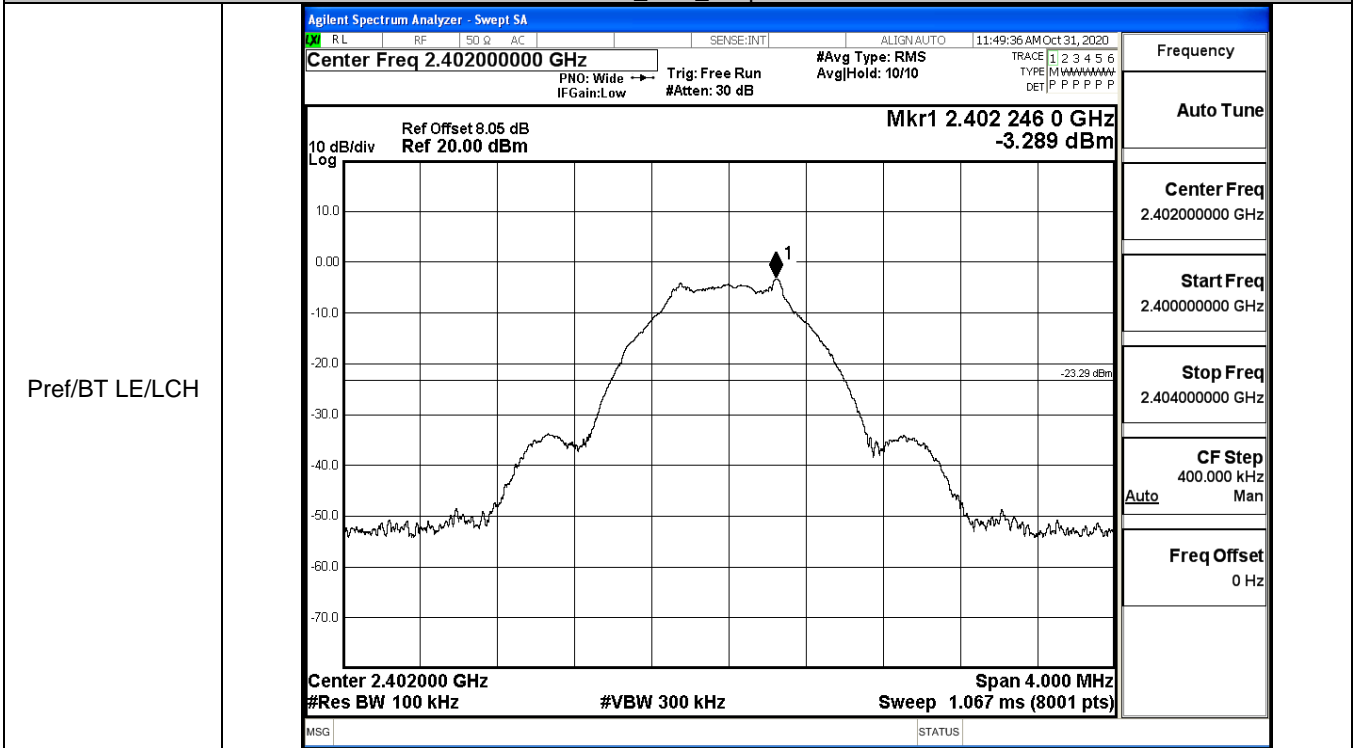
MSG
STATUS

Frequency
Center Freq 2.480000000 GHz
CF Step 300.000 kHz Auto Man
Freq Offset 0 Hz

B.5 RF Conducted Spurious Emissions

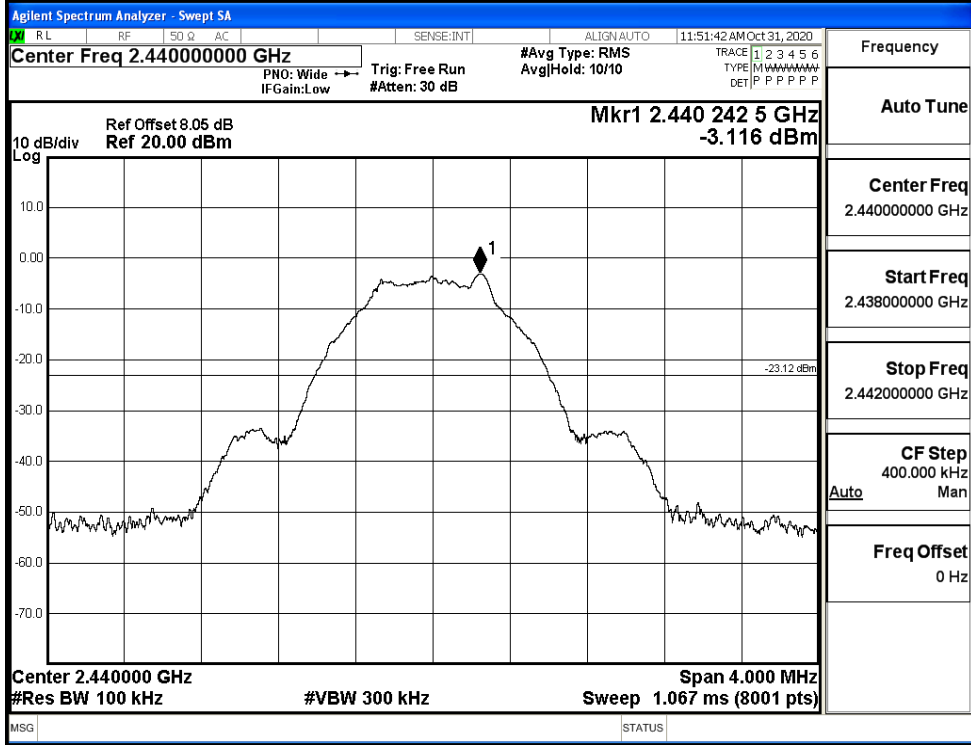
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-3.289	-36.395	-23.289	PASS
BT LE	MCH	-3.116	-37.610	-23.116	PASS
BT LE	HCH	-3.061	-37.012	-23.061	PASS

BT LE_LCH_Graphs

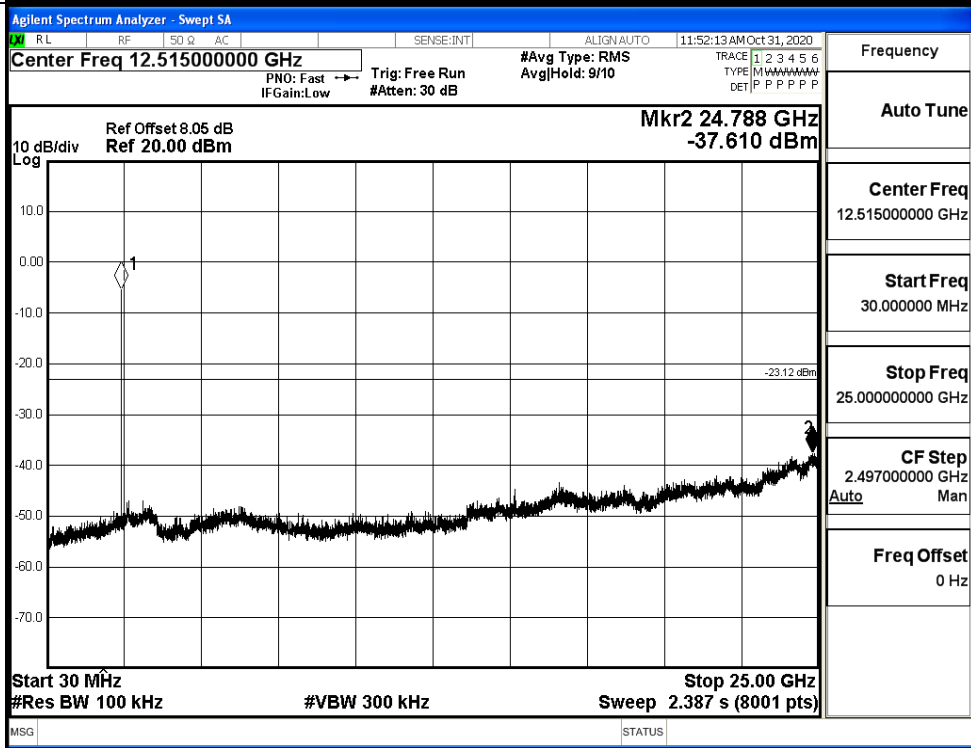


BT LE_MCH_Graphs

Pref/BT LE/MCH

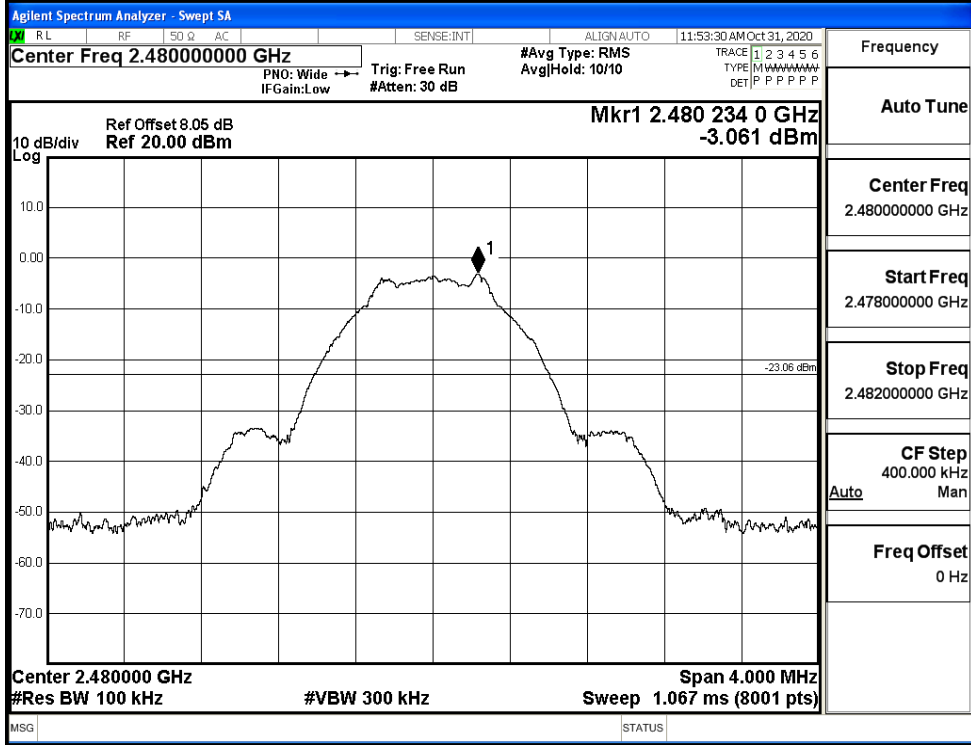


Puw/BT LE/MCH

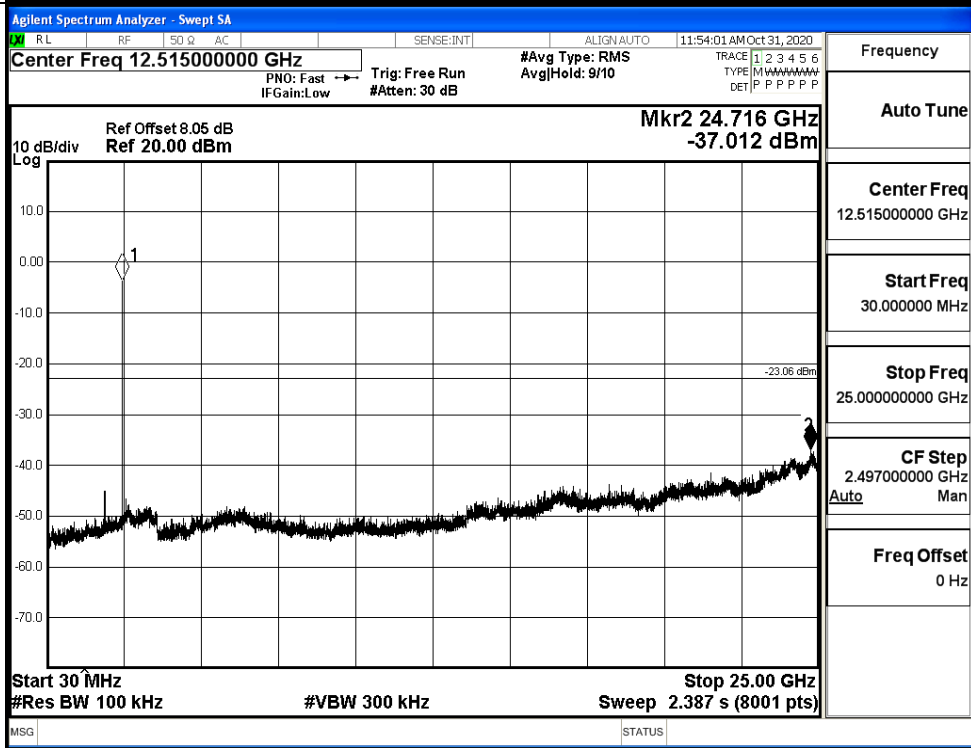


BT LE_HCH_Graphs

Pref/BT LE/HCH



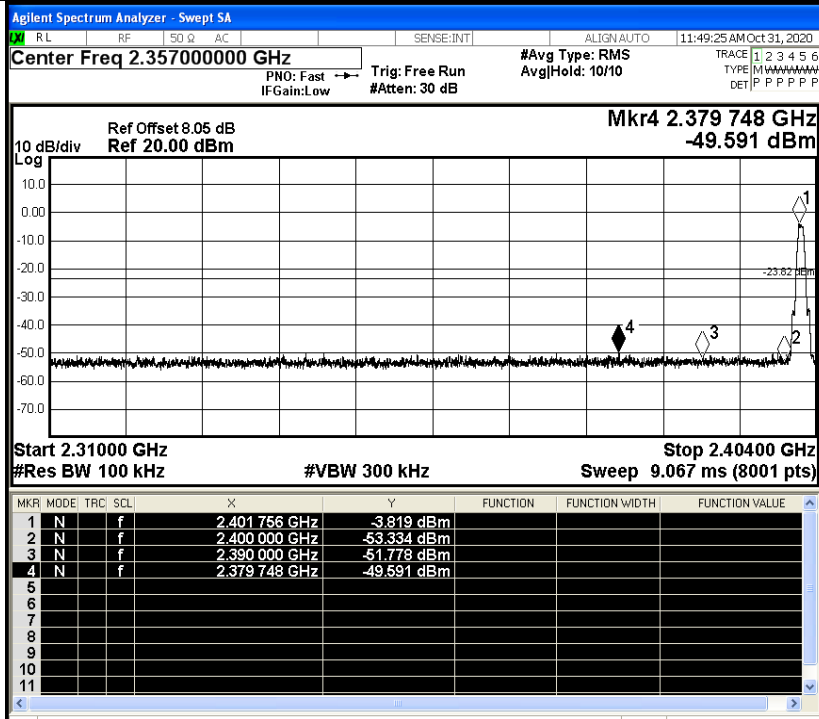
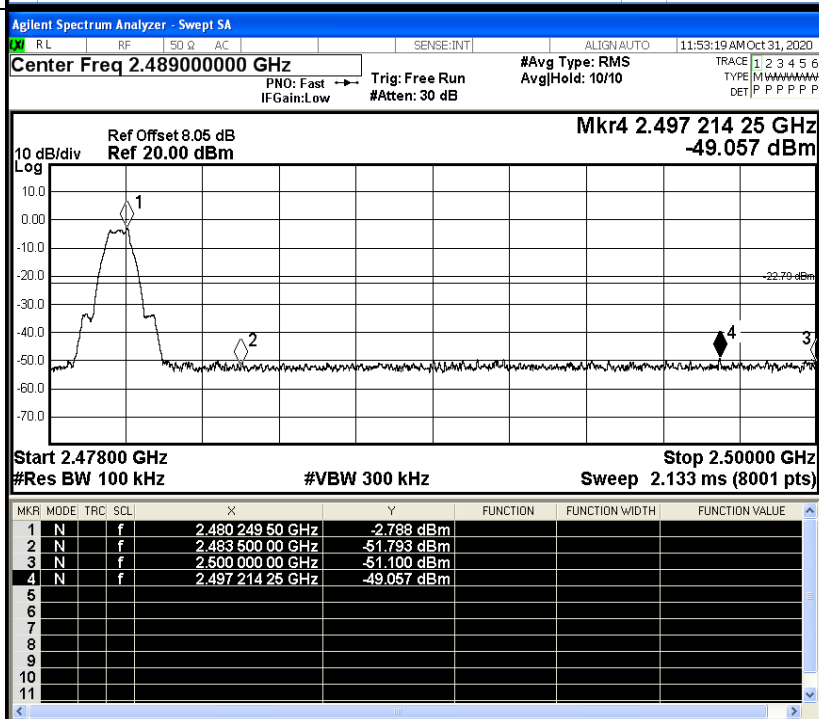
Puw/BT LE/HCH



B.6 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-3.819	-49.591	-23.82	PASS
BT LE	HCH	-2.788	-49.057	-22.79	PASS

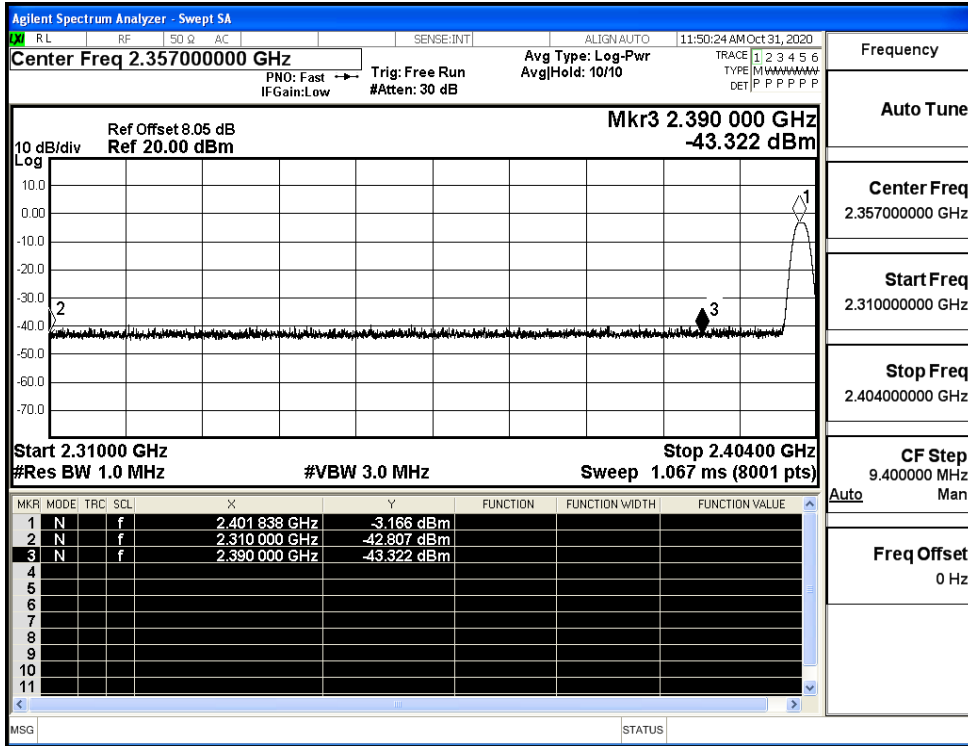
Test Graphs

LCH		<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>
HCH		<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>

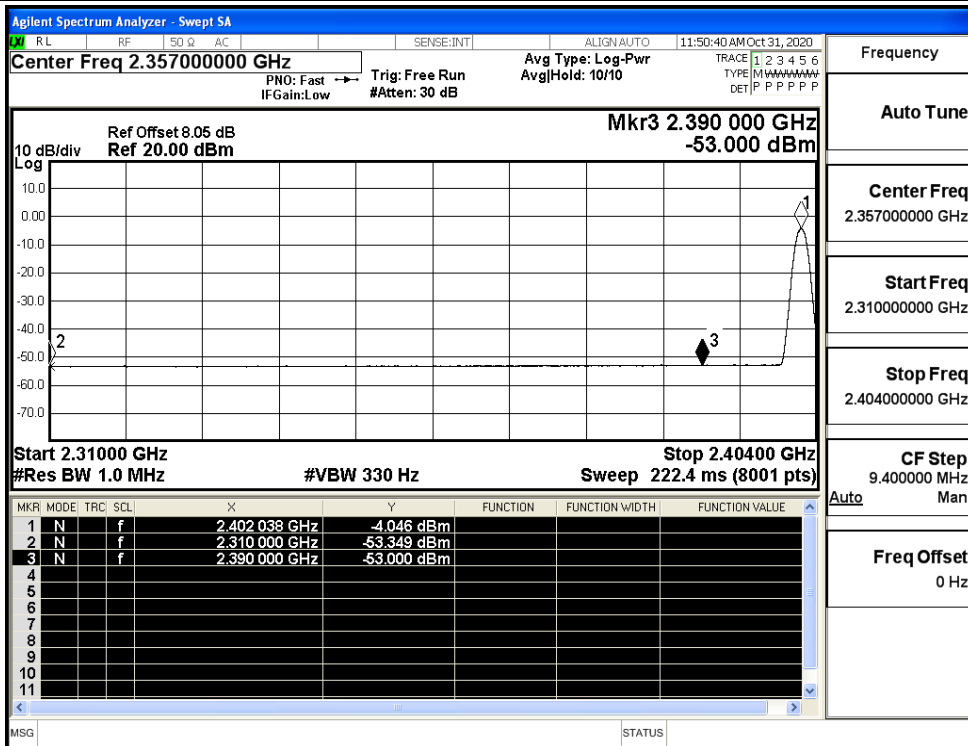
B.7 Restrict-band band-edge measurements

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	-42.81	2.0	0	52.45	PEAK	74	PASS
		Ant1	2310.0	-53.35	2.0	0	41.91	AV	54	PASS
		Ant1	2390.0	-43.32	2.0	0	51.94	PEAK	74	PASS
		Ant1	2390.0	-53.00	2.0	0	42.26	AV	54	PASS
	2480	Ant1	2483.5	-42.10	2.0	0	53.16	PEAK	74	PASS
		Ant1	2483.5	-52.45	2.0	0	42.80	AV	54	PASS
		Ant1	2500.0	-42.08	2.0	0	53.18	PEAK	74	PASS
		Ant1	2500.0	-52.28	2.0	0	42.97	AV	54	PASS

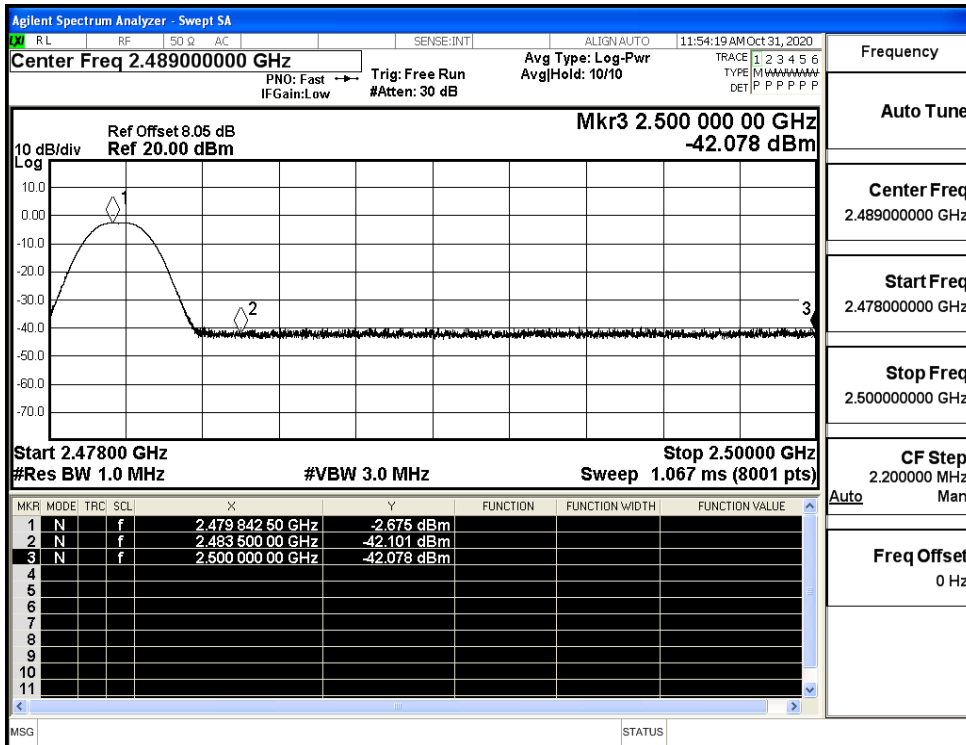
Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



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

