

## Appendix A

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

Product Name: Advancer AD10

Trade Mark: XTOOL

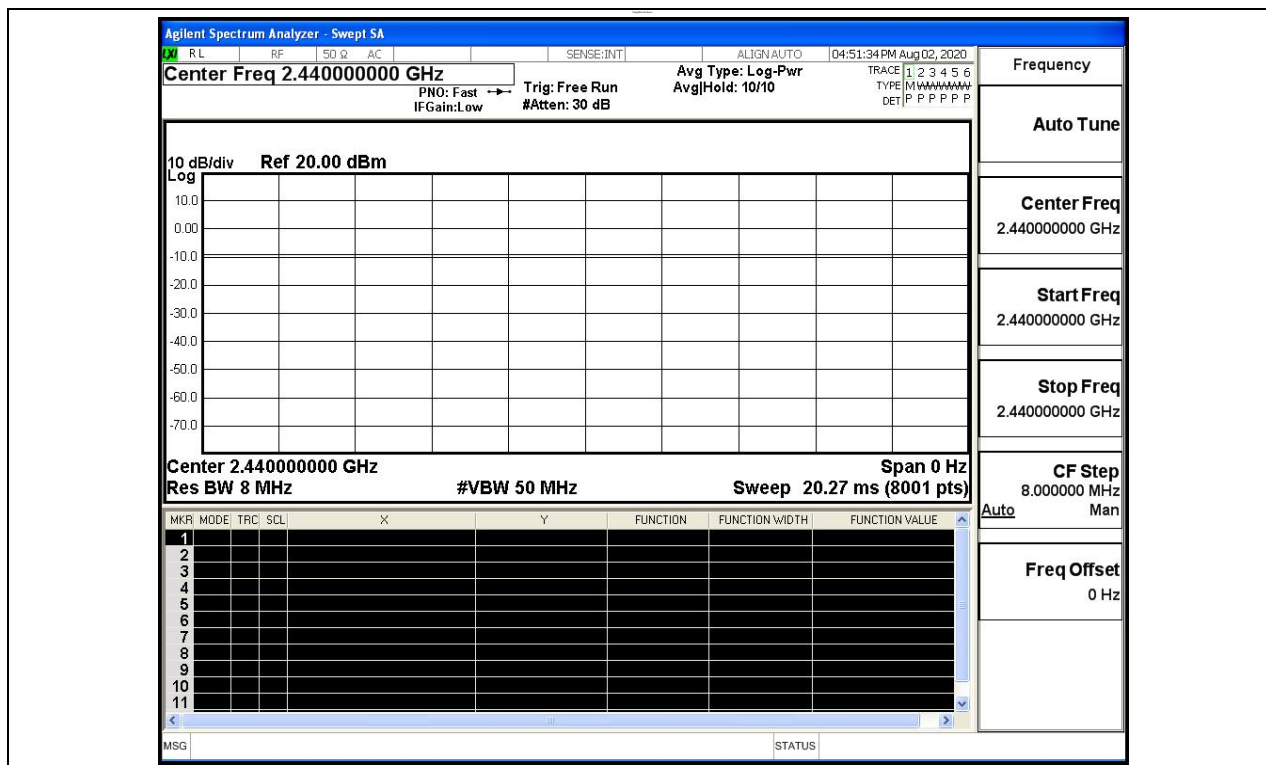
Test Model: AD10

#### Environmental Conditions

Temperature:	22.5 ° C
Relative Humidity:	53.4%
ATM Pressure:	100.0 kPa
Test Engineer:	Jay Li
Supervised by:	Li Huan

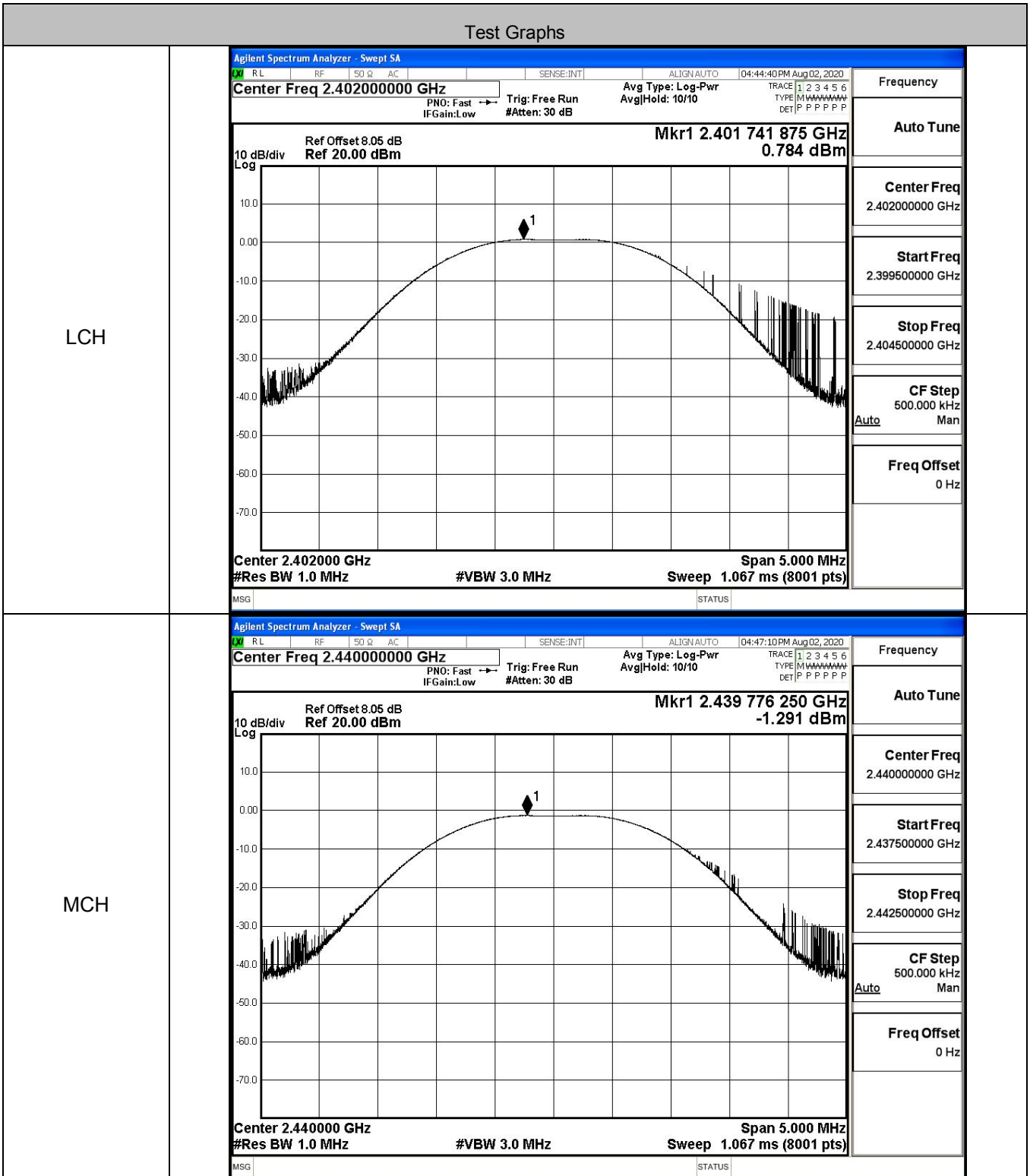
#### A.1 Duty Cycle

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	0.784	30	PASS
BT LE	MCH	-1.291	30	PASS
BT LE	HCH	-3.822	30	PASS

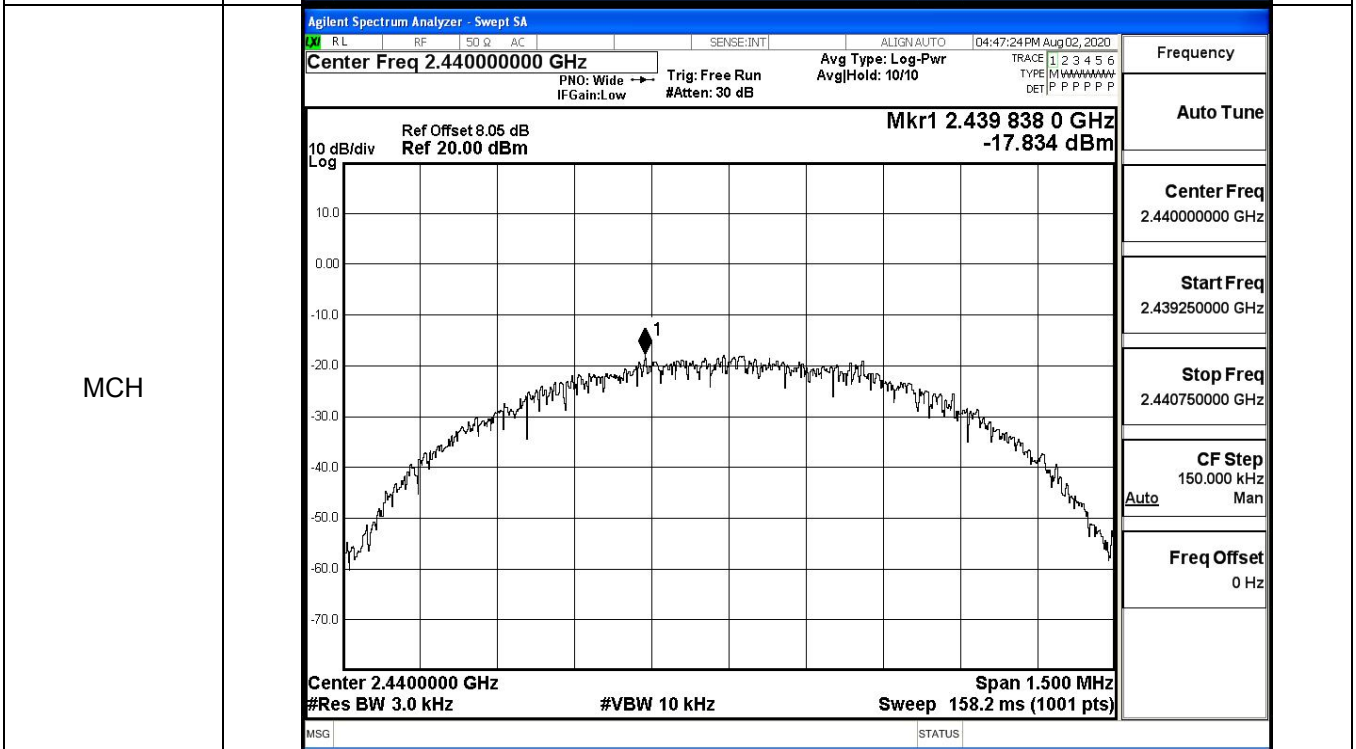
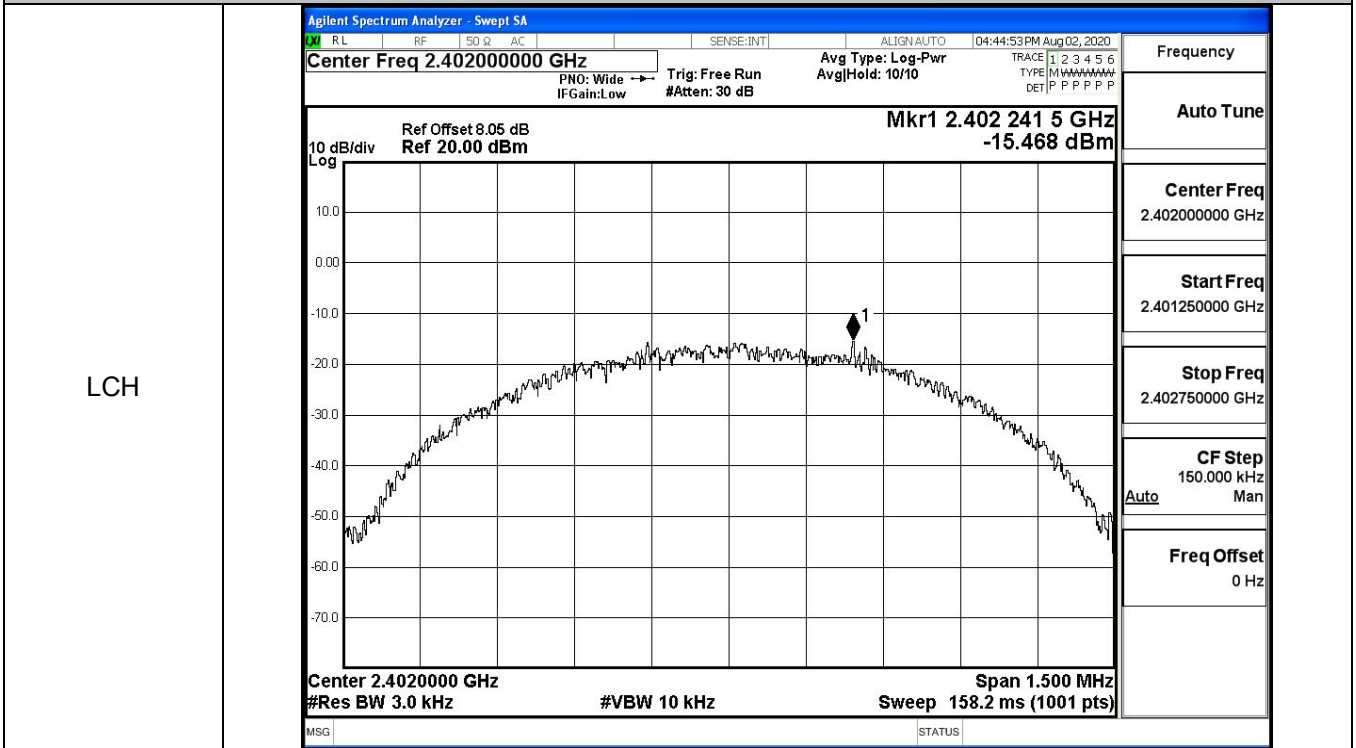




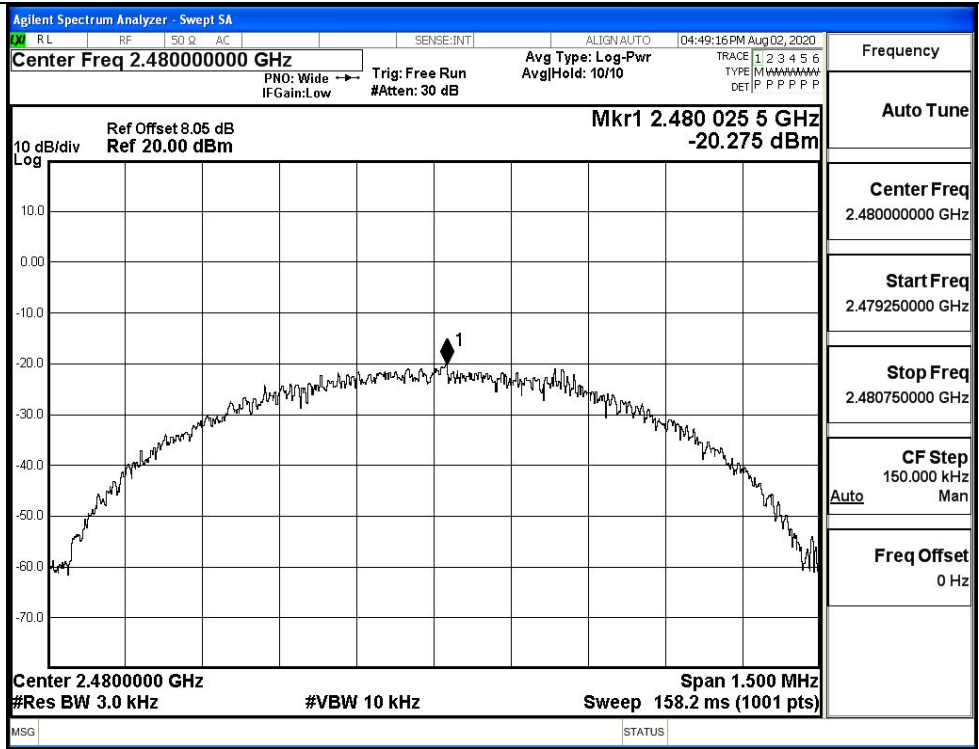
### A.3 Maximum Power Spectral Density

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-15.468	8	PASS
BT LE	MCH	-17.834	8	PASS
BT LE	HCH	-20.275	8	PASS

#### Test Graphs



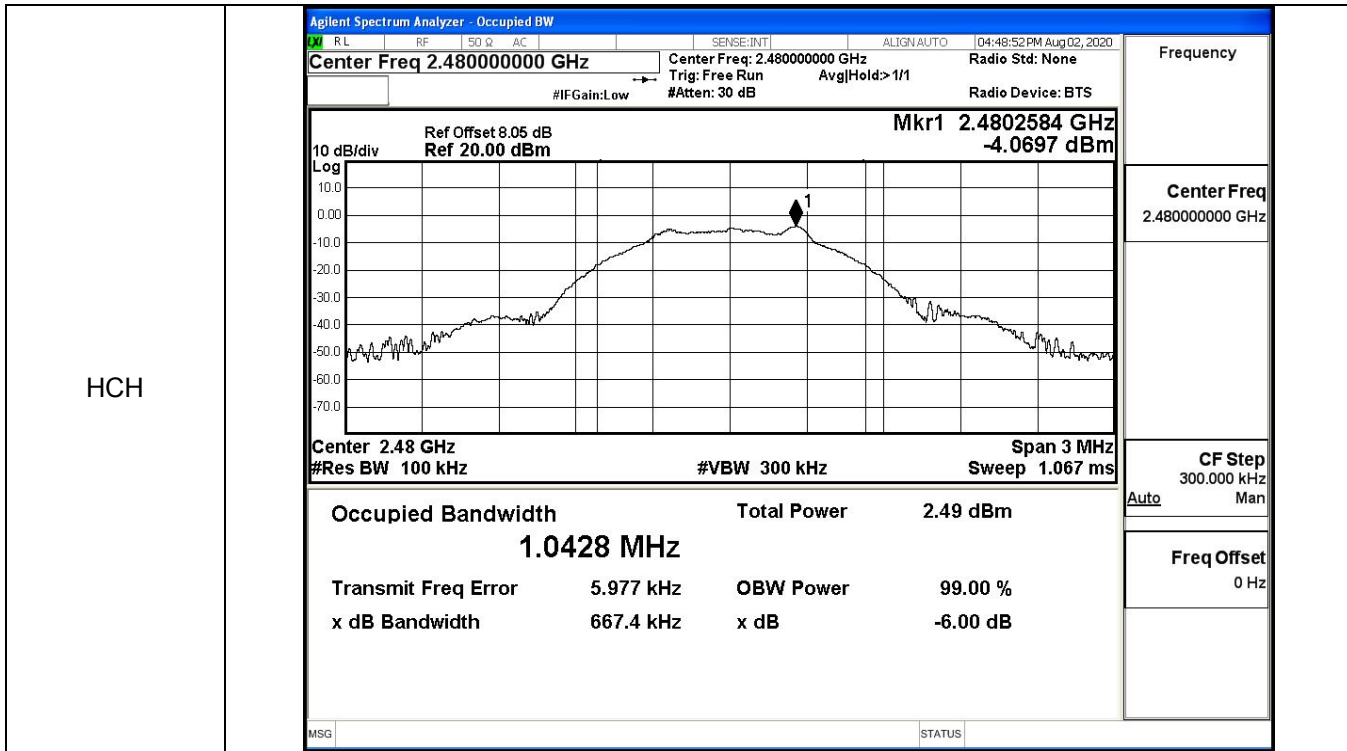
HCH



**A.4 6dB Bandwidth**

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6655	≥0.5	PASS
BT LE	MCH	0.6612	≥0.5	PASS
BT LE	HCH	0.6674	≥0.5	PASS

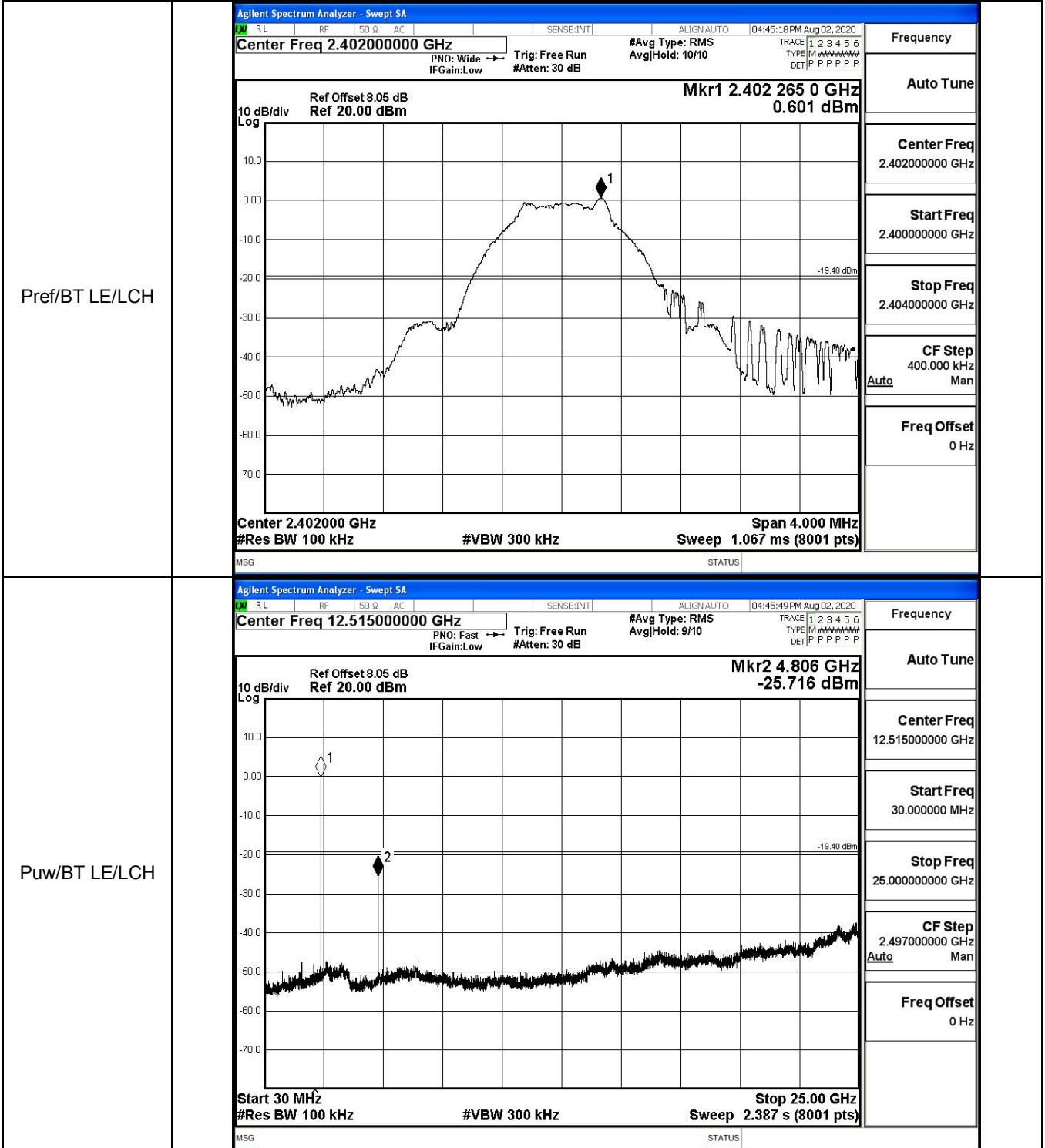
Test Graphs																																					
LCH	<div style="border: 1px solid black; padding: 5px;"> <p style="font-size: small; margin: 0;">Agilent Spectrum Analyzer - Occupied BW</p> <p style="font-size: x-small; margin: 0;">RL RF 50 Ω AC SENSE:INT ALIGN:AUTO 04:44:29 PM Aug 02, 2020</p> <p style="font-size: small; margin: 0;">Center Freq 2.402000000 GHz Center Freq: 2.402000000 GHz Radio Std: None</p> <p style="font-size: x-small; margin: 0;">Trig: Free Run AvgHld: 1/1 #IFGain:Low #Atten: 30 dB Radio Device: BTS</p> <div style="border: 1px solid black; padding: 2px;"> <p style="font-size: x-small; margin: 0;">10 dB/div Ref Offset 8.05 dB Mkr1 2.4022595 GHz</p> <p style="font-size: x-small; margin: 0;">Log Ref 20.00 dBm 0.67896 dBm</p> <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>Occupied Bandwidth</td> <td>Total Power</td> <td>7.28 dBm</td> </tr> <tr> <td style="text-align: center;"><b>1.0638 MHz</b></td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>18.135 kHz</td> <td>OBW Power</td> </tr> <tr> <td>x dB Bandwidth</td> <td>665.5 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: 0;">MSG STATUS</p> </div> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <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:INT ALIGN:AUTO 04:46:59 PM Aug 02, 2020</p> <p style="font-size: small; margin: 0;">Center Freq 2.440000000 GHz Center Freq: 2.440000000 GHz Radio Std: None</p> <p style="font-size: x-small; margin: 0;">Trig: Free Run AvgHld: &gt;1/1 #IFGain:Low #Atten: 30 dB Radio Device: BTS</p> <div style="border: 1px solid black; padding: 2px;"> <p style="font-size: x-small; margin: 0;">10 dB/div Ref Offset 8.05 dB Mkr1 2.4402569 GHz</p> <p style="font-size: x-small; margin: 0;">Log Ref 20.00 dBm -1.3779 dBm</p> <p style="font-size: x-small; margin: 0;">Center 2.44 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>Occupied Bandwidth</td> <td>Total Power</td> <td>5.16 dBm</td> </tr> <tr> <td style="text-align: center;"><b>1.0491 MHz</b></td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>10.886 kHz</td> <td>OBW Power</td> </tr> <tr> <td>x dB Bandwidth</td> <td>661.2 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: 0;">MSG STATUS</p> </div> </div>	Occupied Bandwidth	Total Power	7.28 dBm	<b>1.0638 MHz</b>			Transmit Freq Error	18.135 kHz	OBW Power	x dB Bandwidth	665.5 kHz	x dB			99.00 %			-6.00 dB	Occupied Bandwidth	Total Power	5.16 dBm	<b>1.0491 MHz</b>			Transmit Freq Error	10.886 kHz	OBW Power	x dB Bandwidth	661.2 kHz	x dB			99.00 %			-6.00 dB
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		-6.00 dB																																			



### A.5 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	0.601	-25.716	-19.399	PASS
BT LE	MCH	-1.468	-23.060	-21.468	PASS
BT LE	HCH	-4.22	-28.834	-24.220	PASS

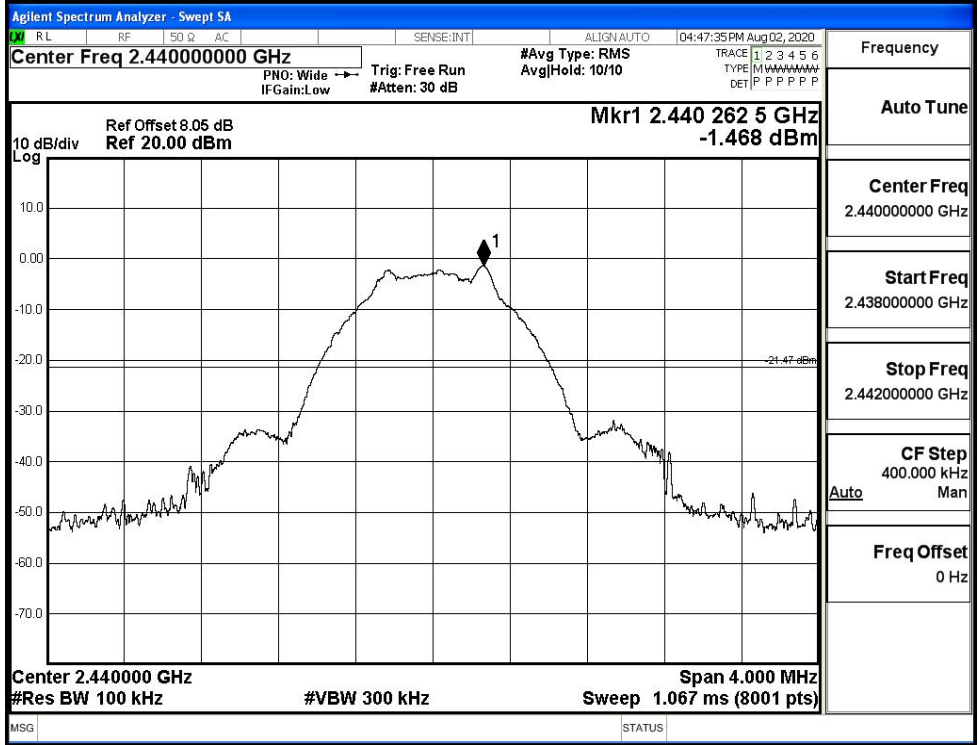
BT LE\_LCH Graphs



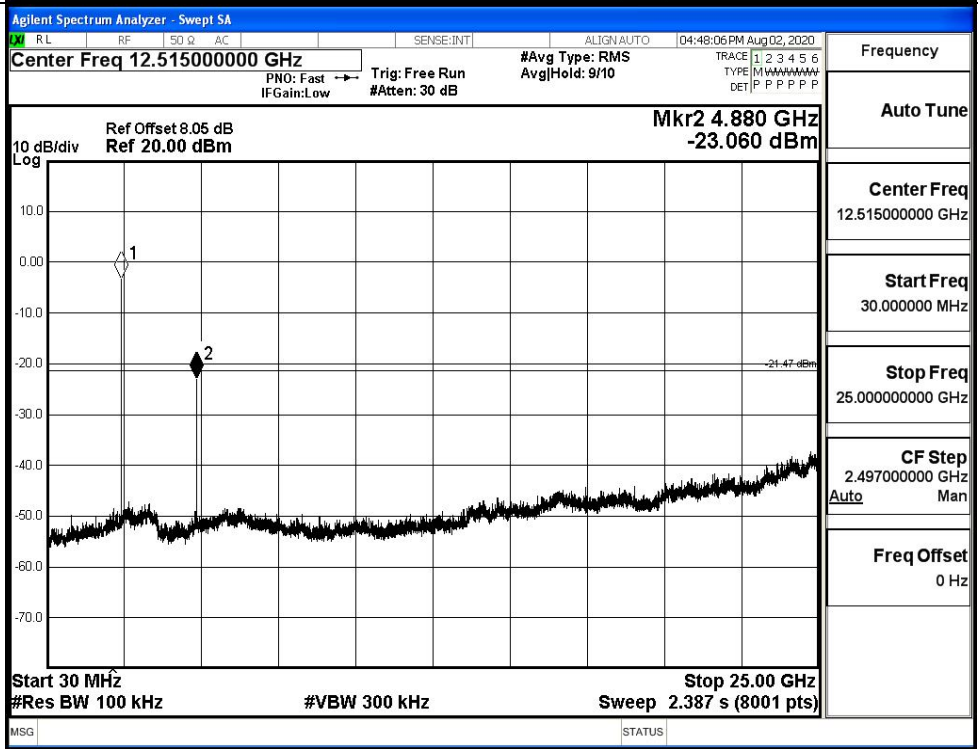


BT LE MCH Graphs

Pref/BT LE/MCH

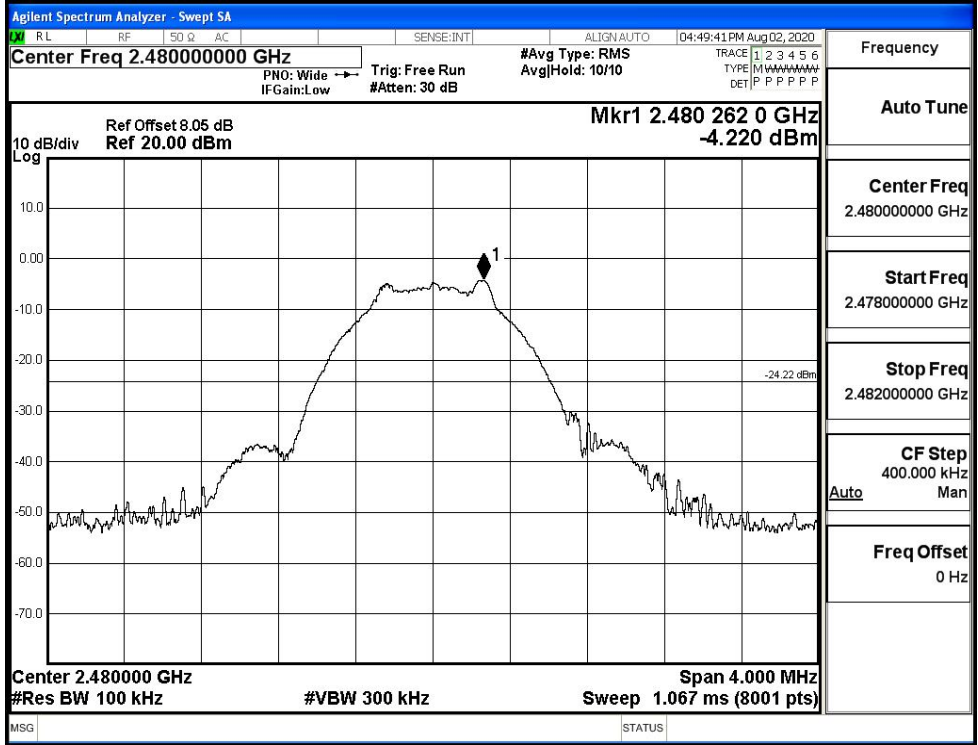


Puw/BT LE/MCH

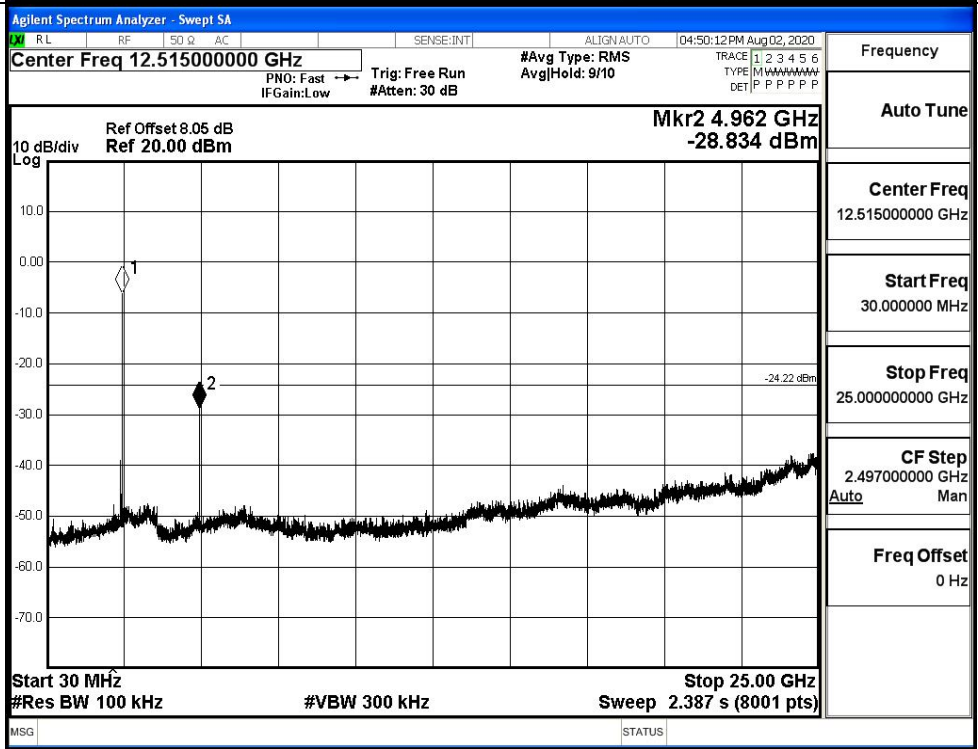


BT LE HCH Graphs

Pref/BT LE/HCH



Puw/BT LE/HCH

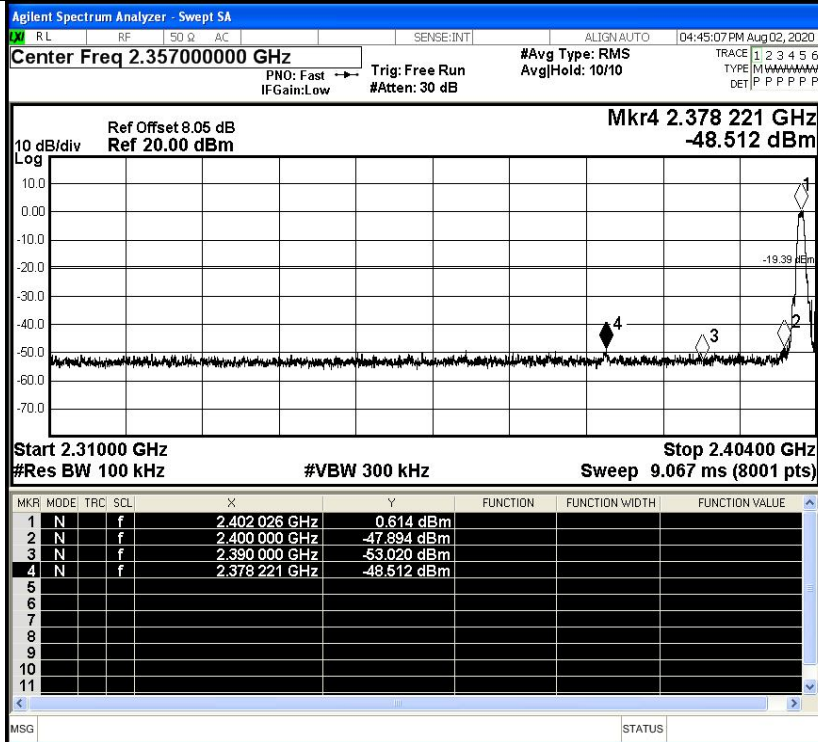


A.6 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	0.614	-48.512	-19.39	PASS
BT LE	HCH	-4.022	-49.330	-24.02	PASS

**Test Graphs**

LCH



Frequency

Auto Tune

Center Freq  
2.35700000 GHz

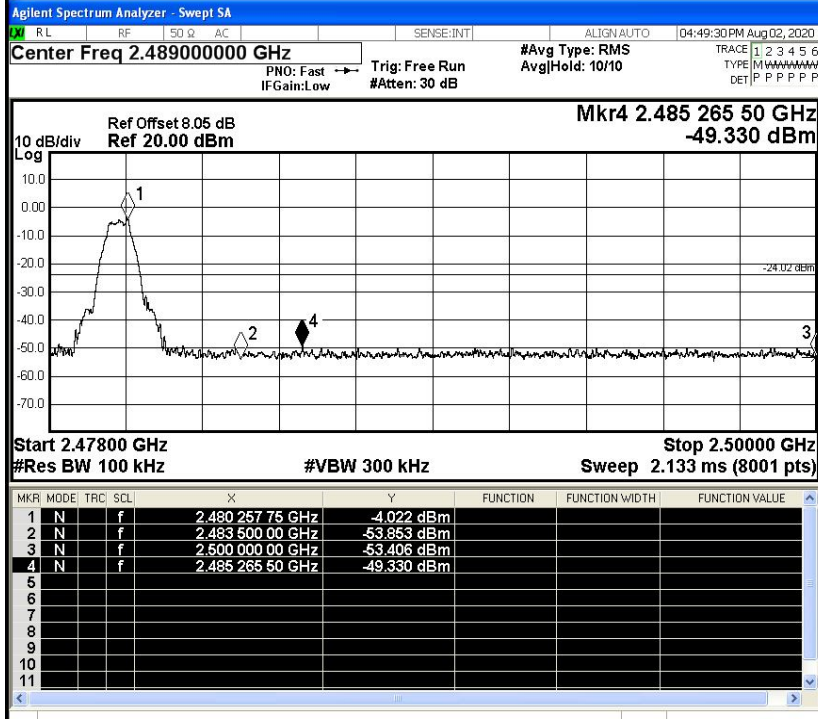
Start Freq  
2.31000000 GHz

Stop Freq  
2.40400000 GHz

CF Step  
9.400000 MHz

Freq Offset  
0 Hz

HCH



Frequency

Auto Tune

Center Freq  
2.48900000 GHz

Start Freq  
2.47800000 GHz

Stop Freq  
2.50000000 GHz

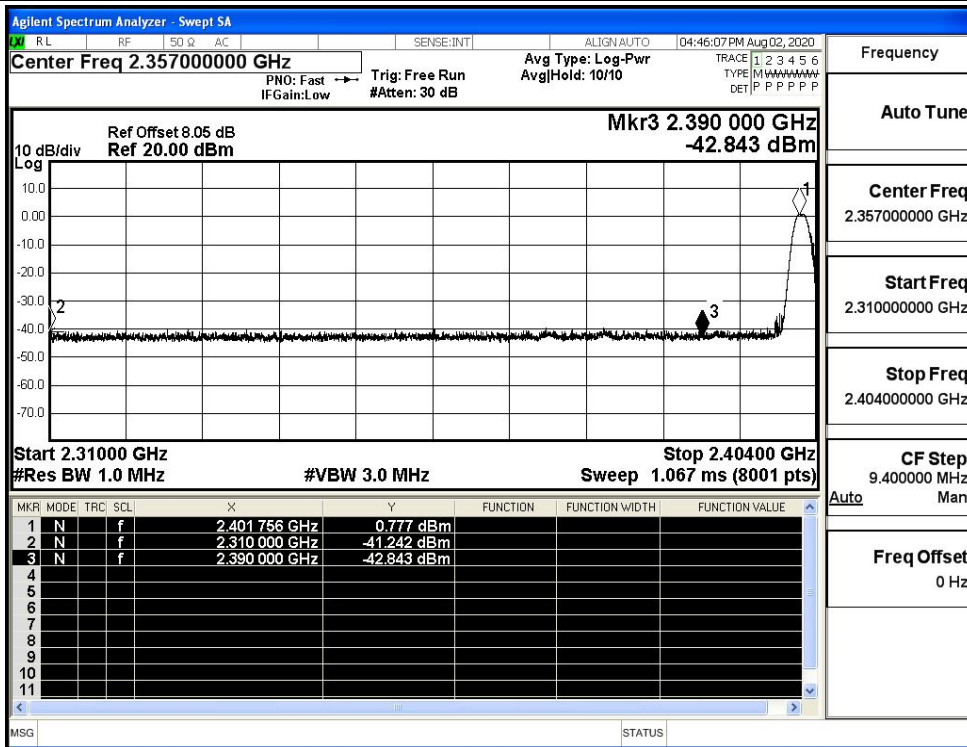
CF Step  
2.200000 MHz

Freq Offset  
0 Hz

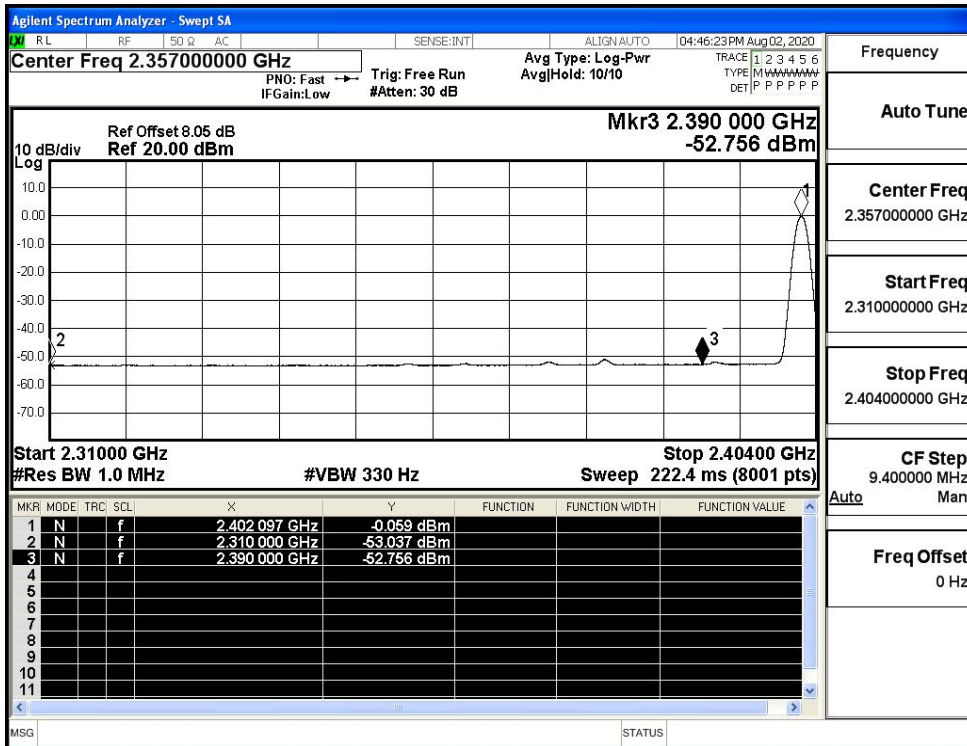
## A.7 Restrict-band band-edge measurements

Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdi
BT LE	2402	Ant1	2310.0	-41.24	2.0	0	54.02	PEAK	74	PASS
		Ant1	2310.0	-53.04	2.0	0	42.22	AV	54	PASS
		Ant1	2390.0	-42.84	2.0	0	52.41	PEAK	74	PASS
		Ant1	2390.0	-52.76	2.0	0	42.50	AV	54	PASS
	2480	Ant1	2483.5	-41.98	2.0	0	53.28	PEAK	74	PASS
		Ant1	2483.5	-52.37	2.0	0	42.88	AV	54	PASS
		Ant1	2500.0	-41.97	2.0	0	53.29	PEAK	74	PASS
		Ant1	2500.0	-52.25	2.0	0	43.01	AV	54	PASS

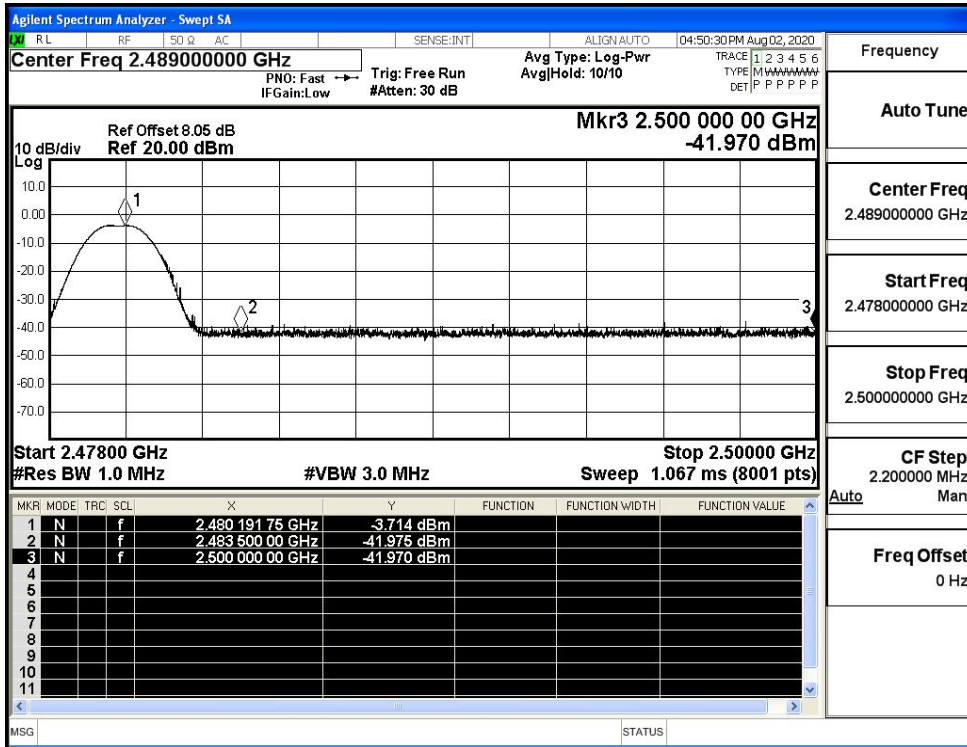
Restrict-band band-edge measurements\_BT LE\_2402\_Ant1\_PEAK



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

