

Appendix A

RF Test Data for 2.4G (Conducted Measurement)

Product Name: 2.4GHz Wireless Conference Microphone

Trade Mark: BOYA

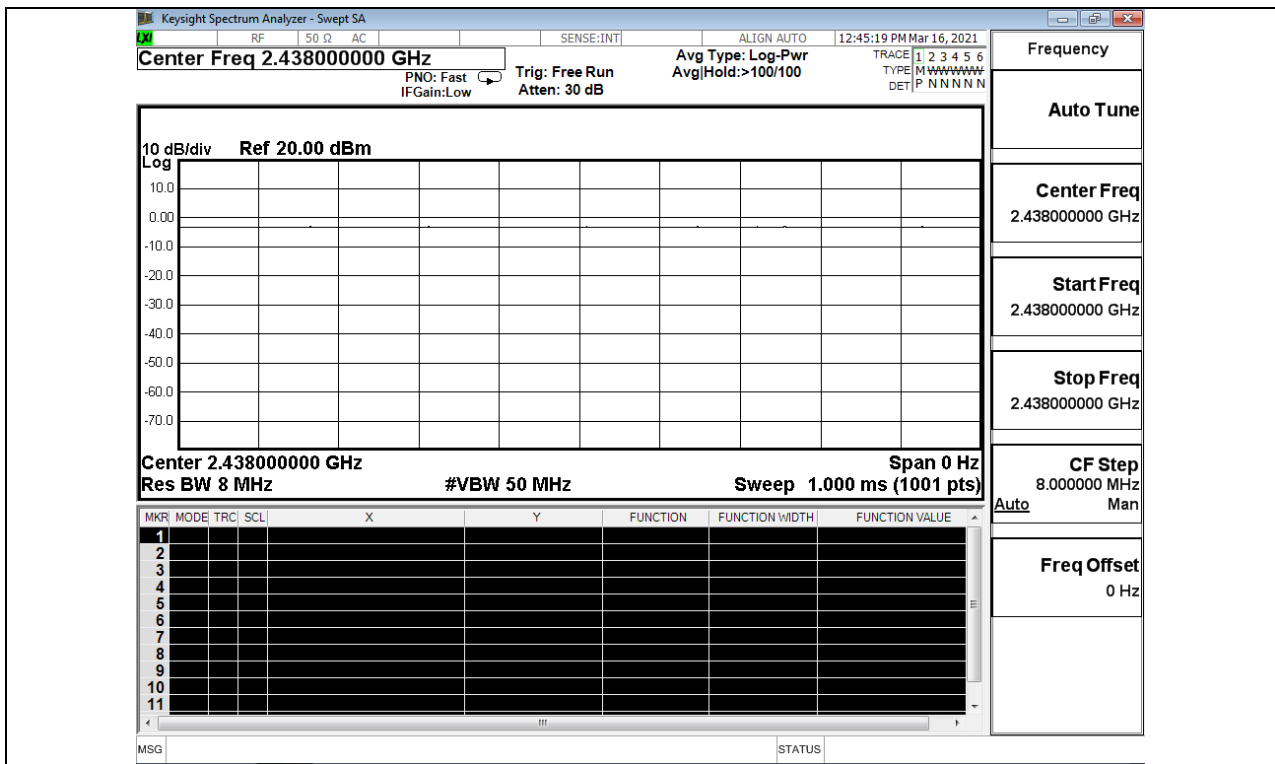
Test Model: BY-BMW700

Environmental Conditions

Temperature:	24.2° C
Relative Humidity:	57.7%
ATM Pressure:	100.0 kPa
Test Engineer:	Carl Fu
Supervised by:	Li Huan

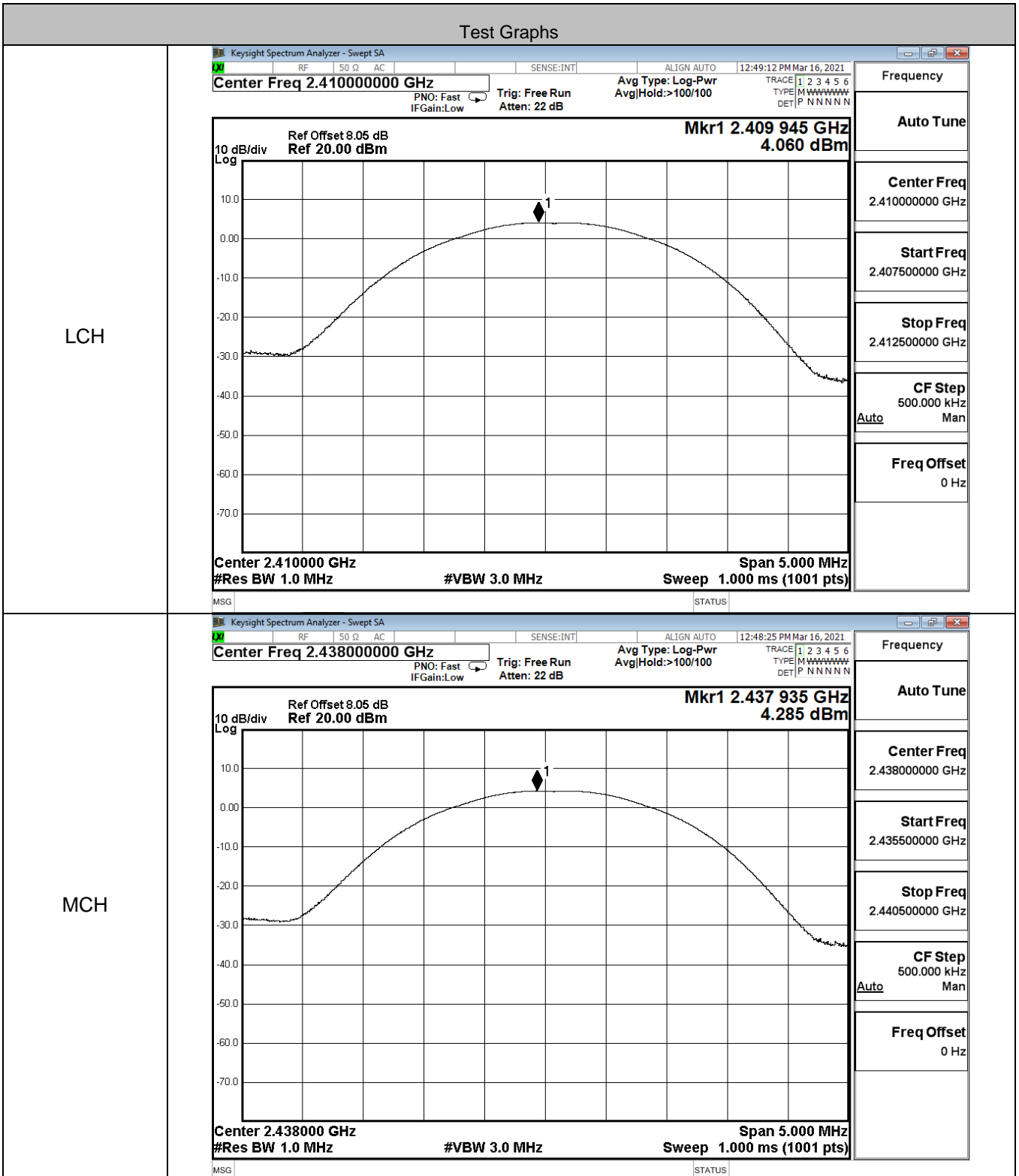
A.1 Duty Cycle

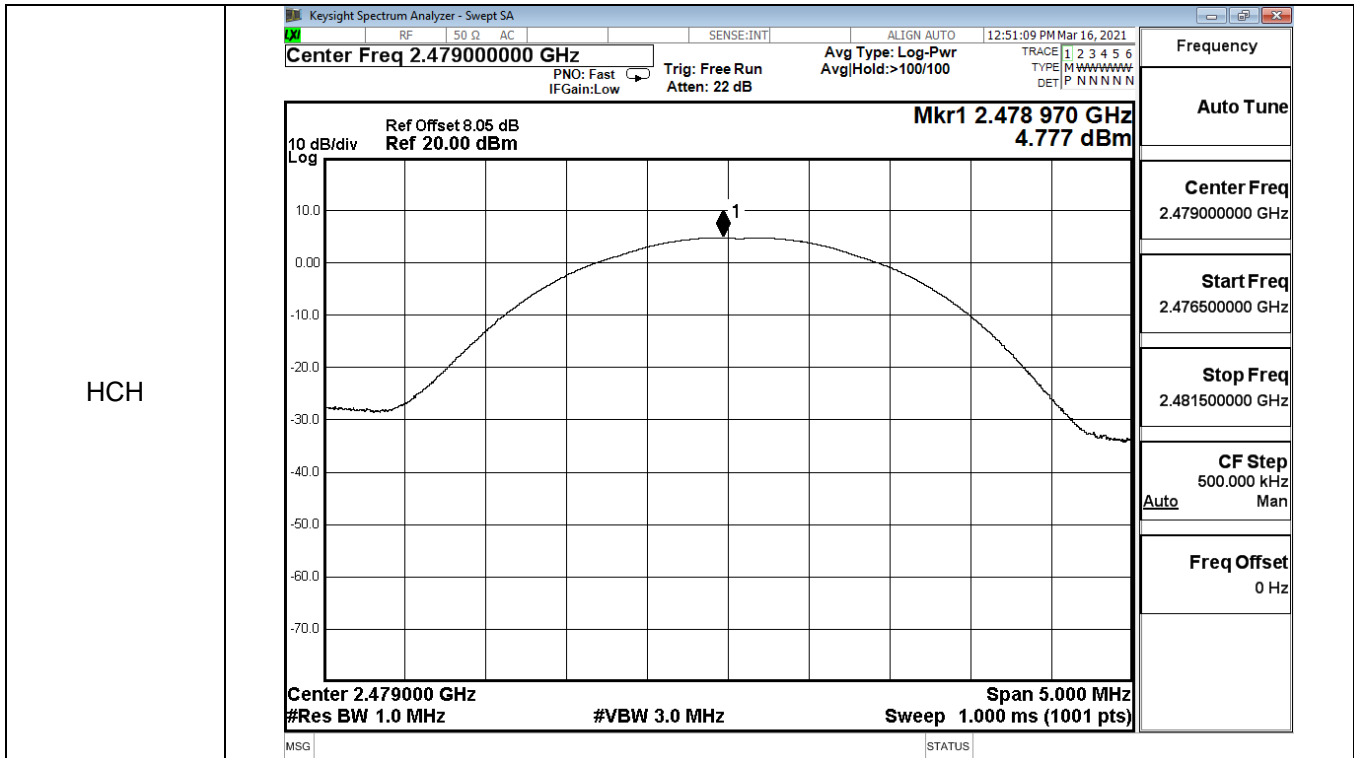
Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
2.4G	2438	Ant1	100	PASS



A.2 Maximum Conducted Peak Output Power

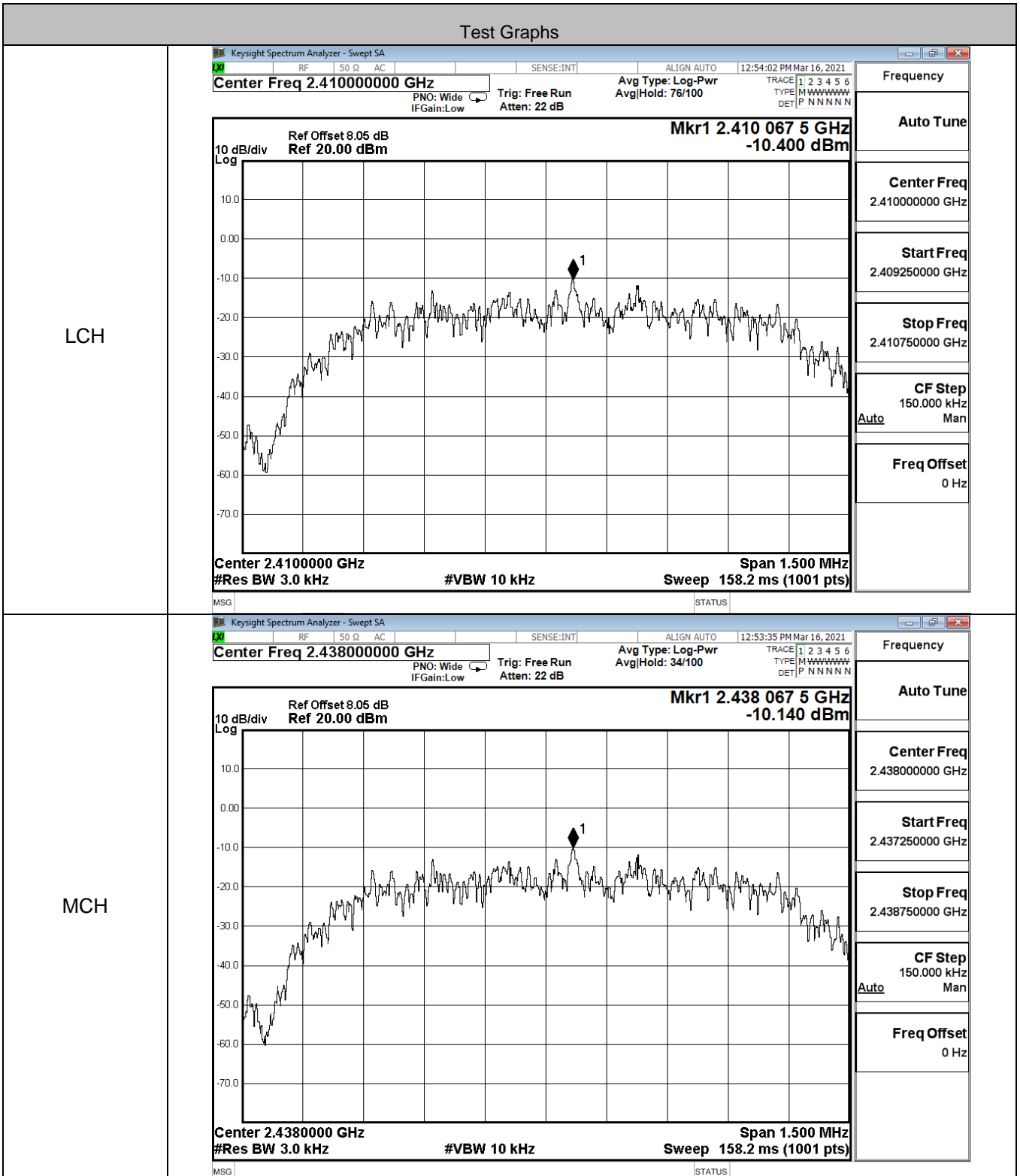
Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
2.4G	LCH	4.060	30	PASS
2.4G	MCH	4.285	30	PASS
2.4G	HCH	4.777	30	PASS

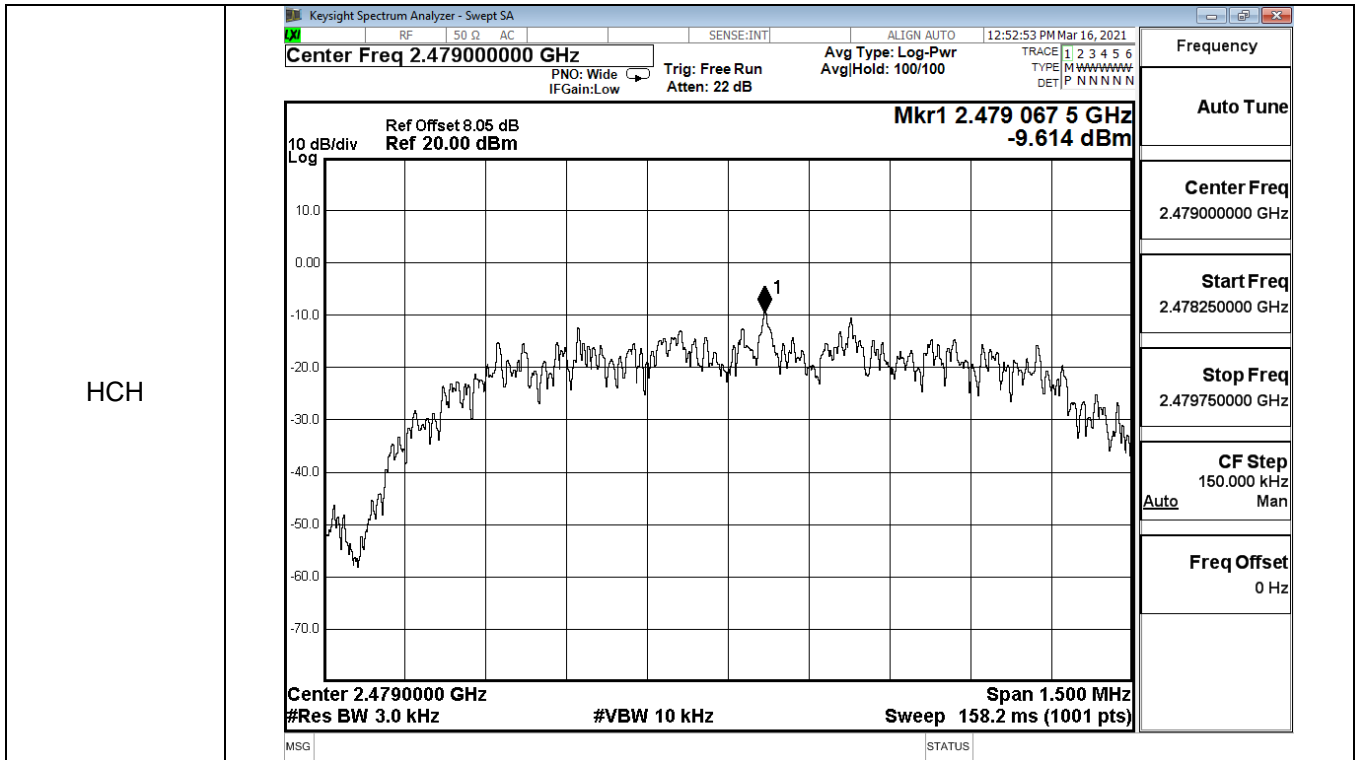




A.3 Maximum Power Spectral Density

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
2.4G	LCH	-10.400	8	PASS
2.4G	MCH	-10.140	8	PASS
2.4G	HCH	-9.614	8	PASS





A.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
2.4G	LCH	0.8553	≥0.5	PASS
2.4G	MCH	0.8555	≥0.5	PASS
2.4G	HCH	0.8489	≥0.5	PASS

Test Graphs

LCH

Center Freq 2.41000000 GHz
Center Freq: 2.410000000 GHz
Trig: Free Run Avg|Hold:>10/10
#IFGain:Low #Atten: 10 dB
Radio Device: BTS

Ref Offset 8.05 dB
Ref 20.00 dBm
Mkr1 2.410228 GHz
3.2423 dBm

Center 2.41 GHz
#Res BW 100 kHz #VBW 300 kHz Span 3 MHz Sweep 1 ms

Occupied Bandwidth	Total Power	10.2 dBm
1.1939 MHz		
Transmit Freq Error	64.459 kHz	OBW Power
x dB Bandwidth	855.3 kHz	x dB
		99.00 %
		-6.00 dB

Frequency

Center Freq
2.41000000 GHz

CF Step
300.000 kHz
Auto Man

Freq Offset
0 Hz

MCH

Center Freq 2.43800000 GHz
Center Freq: 2.438000000 GHz
Trig: Free Run Avg|Hold:>10/10
#IFGain:Low #Atten: 10 dB
Radio Device: BTS

Ref Offset 8.05 dB
Ref 20.00 dBm
Mkr1 2.438231 GHz
3.4429 dBm

Center 2.438 GHz
#Res BW 100 kHz #VBW 300 kHz Span 3 MHz Sweep 1 ms

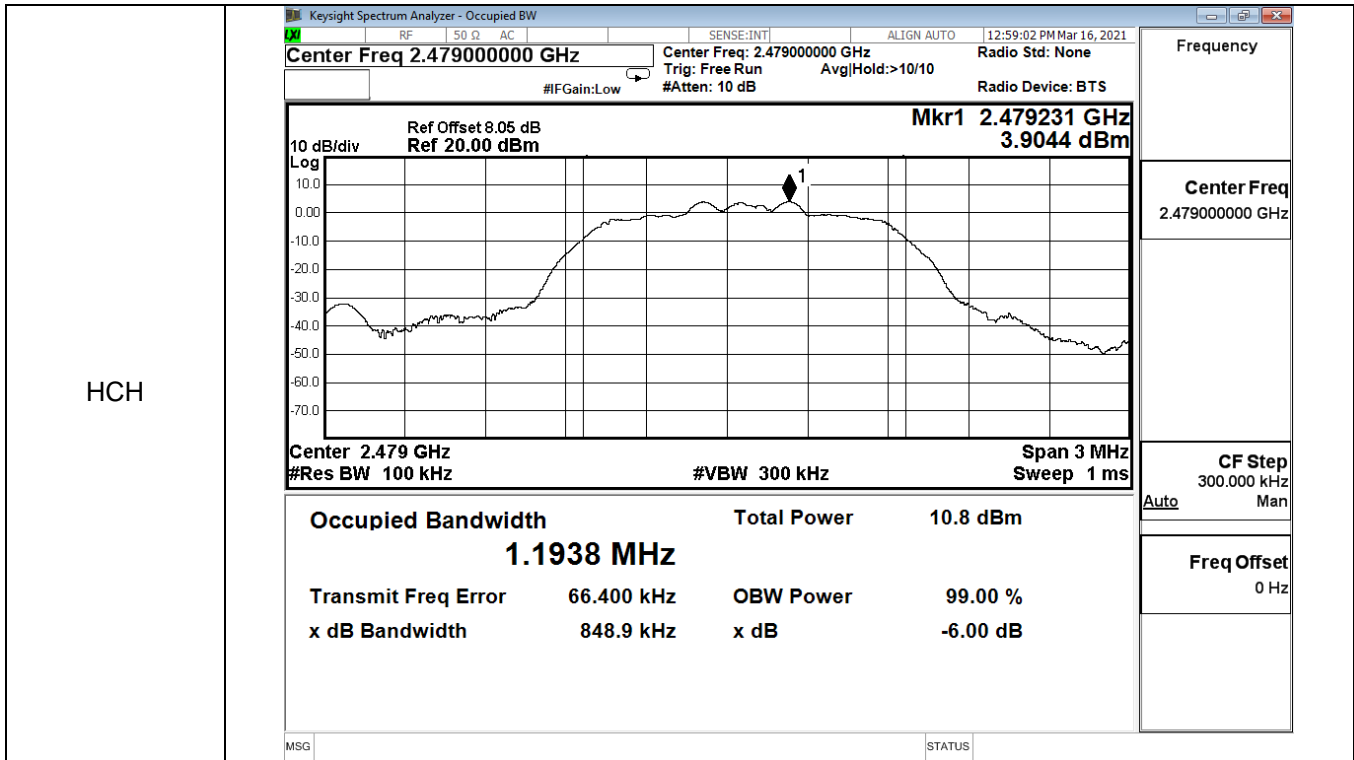
Occupied Bandwidth	Total Power	10.4 dBm
1.1940 MHz		
Transmit Freq Error	64.964 kHz	OBW Power
x dB Bandwidth	855.5 kHz	x dB
		99.00 %
		-6.00 dB

Frequency

Center Freq
2.43800000 GHz

CF Step
300.000 kHz
Auto Man

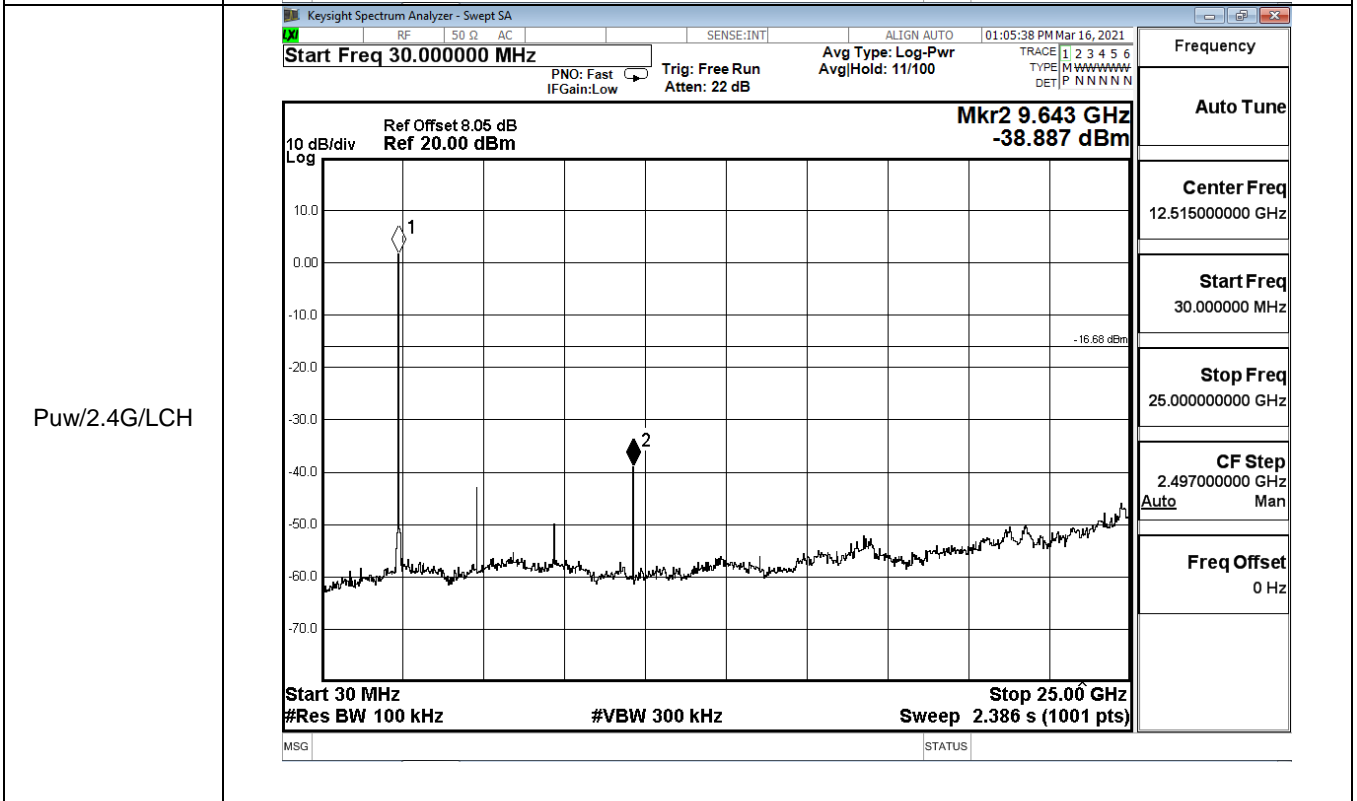
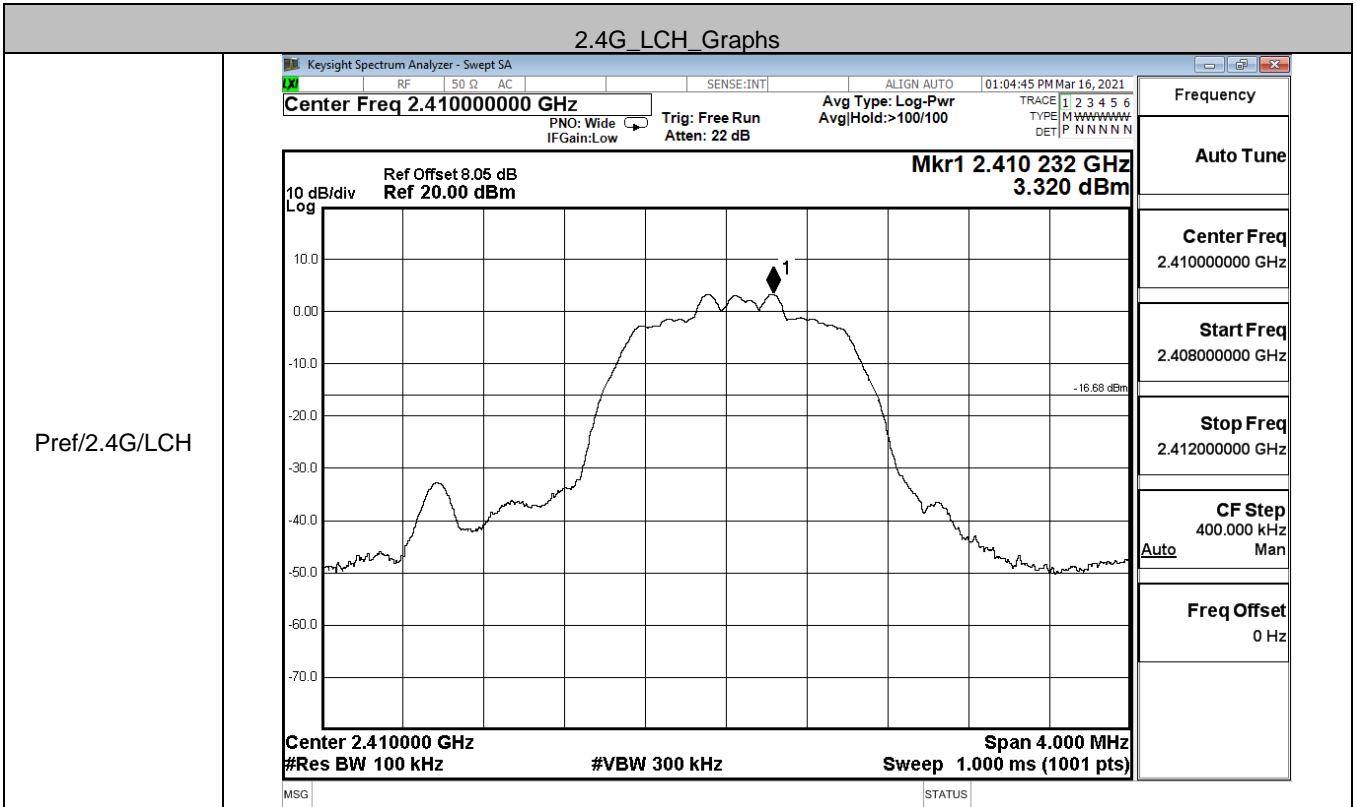
Freq Offset
0 Hz



A.5 RF Conducted Spurious Emissions

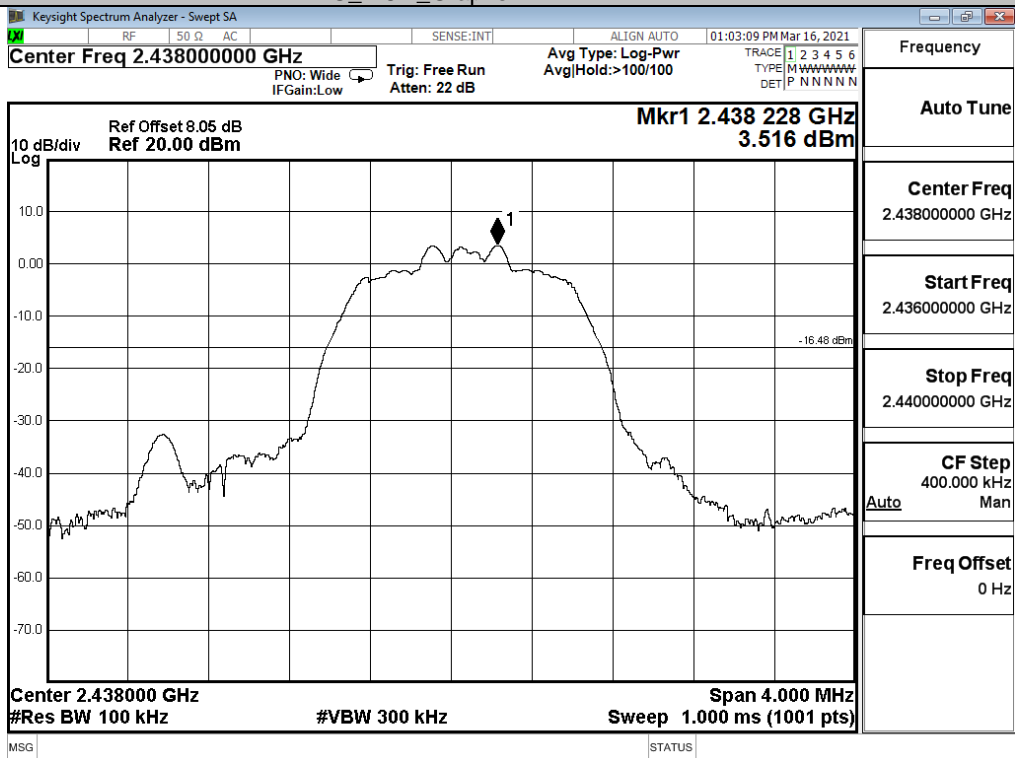
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
2.4G	LCH	3.320	-38.887	-16.68	PASS
2.4G	MCH	3.518	-38.446	-16.48	PASS
2.4G	HCH	2.632	-38.081	-17.37	PASS

2.4G_LCH_Graphs

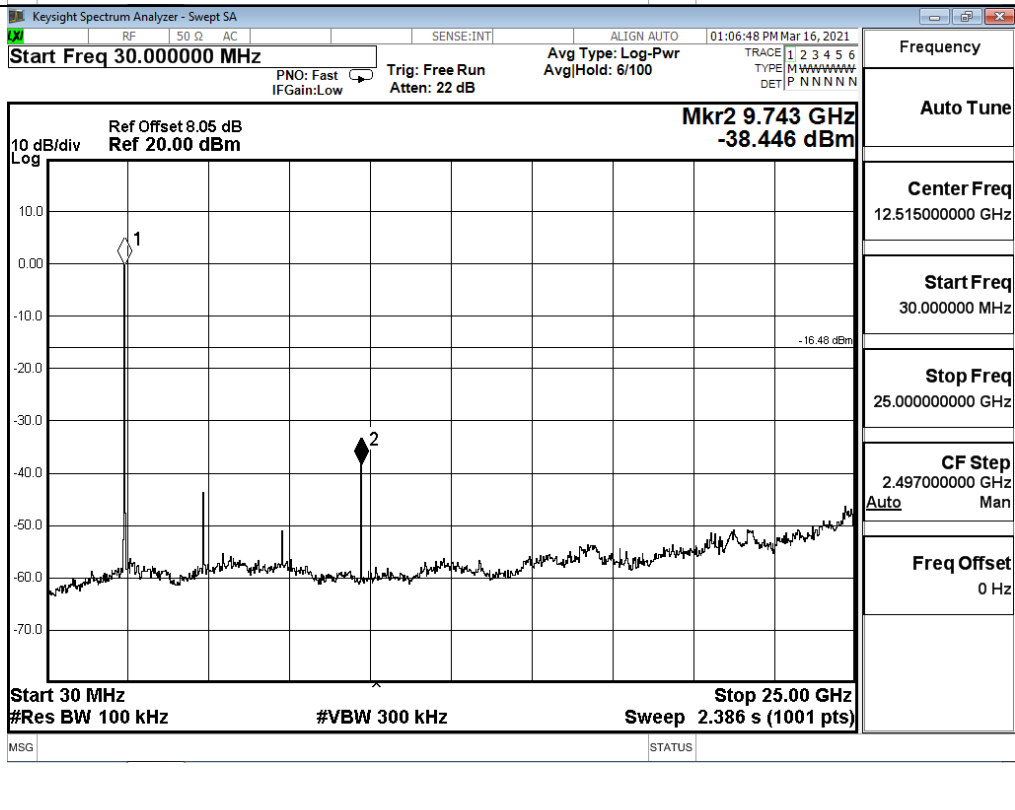


2.4G_MCH_Graphs

Pref/2.4G/MCH



Puw/2.4G/MCH



2.4G_HCH_Graphs

<p>Pref/2.4G/HCH</p>		<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.47900000 GHz</p> <p>Start Freq 2.478000000 GHz</p> <p>Stop Freq 2.480000000 GHz</p> <p>CF Step 200.000 kHz Auto Man</p> <p>Freq Offset 0 Hz</p>
<p>Puw/2.4G/HCH</p>		<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 12.51500000 GHz</p> <p>Start Freq 30.000000 MHz</p> <p>Stop Freq 25.00000000 GHz</p> <p>CF Step 2.497000000 GHz Auto Man</p> <p>Freq Offset 0 Hz</p>

A.6 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
2.4G	LCH	3.739	-40.060	-16.26	PASS
2.4G	HCH	2.716	-39.179	-17.28	PASS

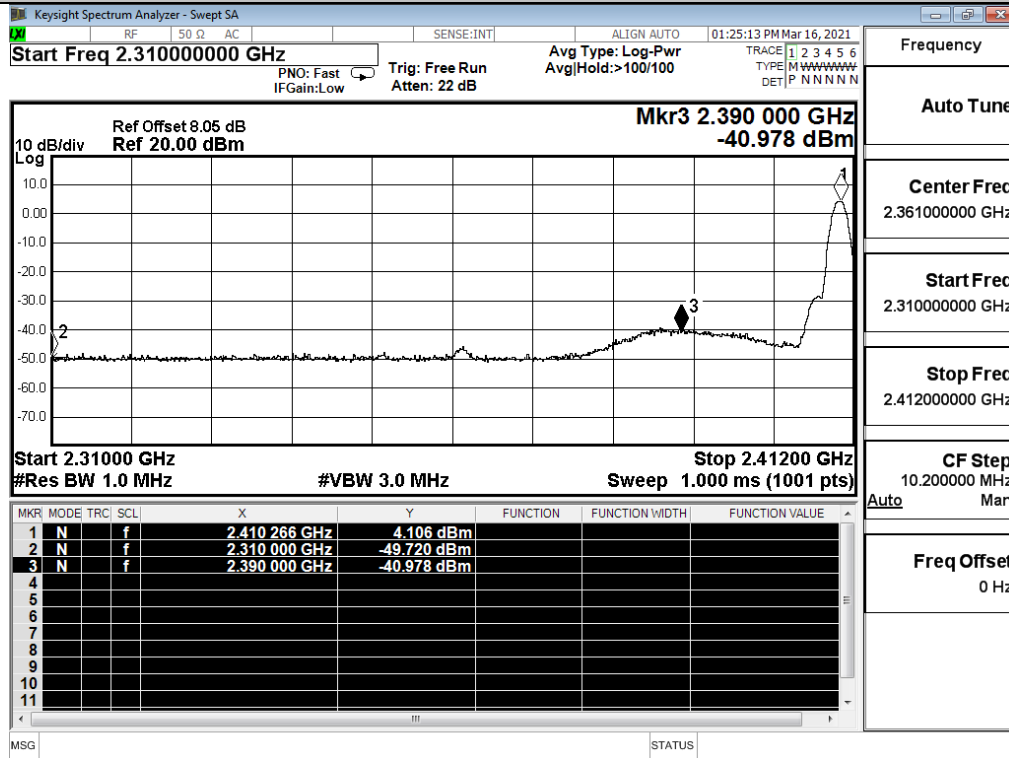
Test Graphs

LCH	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.365000000 GHz PNO: Fast IFGain:Low Trig: Free Run #Atten: 40 dB Avg Type: Log-Pwr AvgHold: 10/10 Ref Offset 8.05 dB Ref 30.00 dBm Mkr4 2.340 264 GHz -40.060 dBm 10 dB/div Log Start 2.31000 GHz Stop 2.42000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10.67 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>2.409 853 GHz</td><td>3.739 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>-43.785 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>-43.470 dBm</td><td></td><td></td><td></td></tr> <tr><td>4</td><td>N</td><td>f</td><td></td><td>2.340 264 GHz</td><td>-40.060 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		2.409 853 GHz	3.739 dBm				2	N	f		2.400 000 GHz	-43.785 dBm				3	N	f		2.390 000 GHz	-43.470 dBm				4	N	f		2.340 264 GHz	-40.060 dBm				Frequency Auto Tune Center Freq 2.365000000 GHz Start Freq 2.310000000 GHz Stop Freq 2.420000000 GHz CF Step 11.000000 MHz Auto Man Freq Offset 0 Hz
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4	N	f		2.340 264 GHz	-40.060 dBm																																										
HCH	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.485000000 GHz PNO: Fast IFGain:Low Trig: Free Run #Atten: 40 dB Avg Type: Log-Pwr AvgHold: 10/10 Ref Offset 8.05 dB Ref 30.00 dBm Mkr4 2.488 217 50 GHz -39.179 dBm 10 dB/div Log Start 2.47000 GHz Stop 2.50000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 3.200 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>2.478 846 25 GHz</td><td>2.716 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>-43.157 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>-42.443 dBm</td><td></td><td></td><td></td></tr> <tr><td>4</td><td>N</td><td>f</td><td></td><td>2.488 217 50 GHz</td><td>-39.179 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		2.478 846 25 GHz	2.716 dBm				2	N	f		2.483 500 00 GHz	-43.157 dBm				3	N	f		2.500 000 00 GHz	-42.443 dBm				4	N	f		2.488 217 50 GHz	-39.179 dBm				Frequency Auto Tune Center Freq 2.485000000 GHz Start Freq 2.470000000 GHz Stop Freq 2.500000000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz
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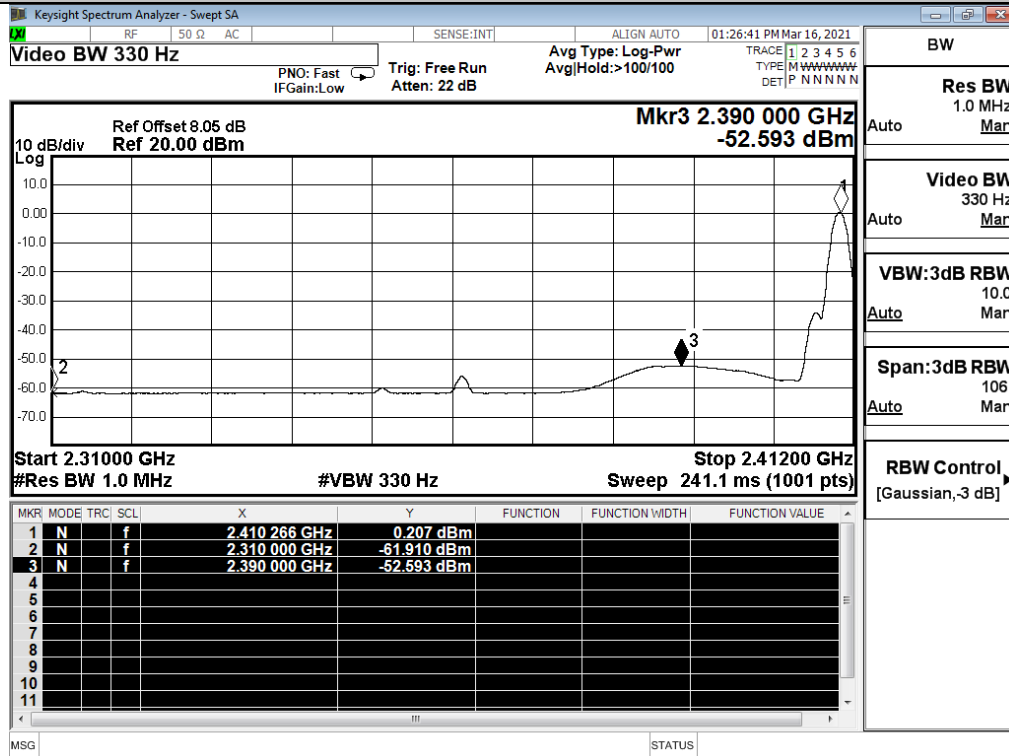
A.7 Restrict-band band-edge measurements

Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdi
2.4G	2410	Ant1	2310.0	-49.72	2.0	0	47.51	PEAK	74	PASS
		Ant1	2310.0	-61.91	2.0	0	35.32	AV	54	PASS
		Ant1	2390.0	-40.98	2.0	0	56.25	PEAK	74	PASS
		Ant1	2390.0	-52.93	2.0	0	44.30	AV	54	PASS
	2479	Ant1	2483.5	-41.37	2.0	0	55.86	PEAK	74	PASS
		Ant1	2483.5	-53.15	2.0	0	44.08	AV	54	PASS
		Ant1	2500.0	-40.52	2.0	0	56.71	PEAK	74	PASS
		Ant1	2500.0	-52.21	2.0	0	45.02	AV	54	PASS

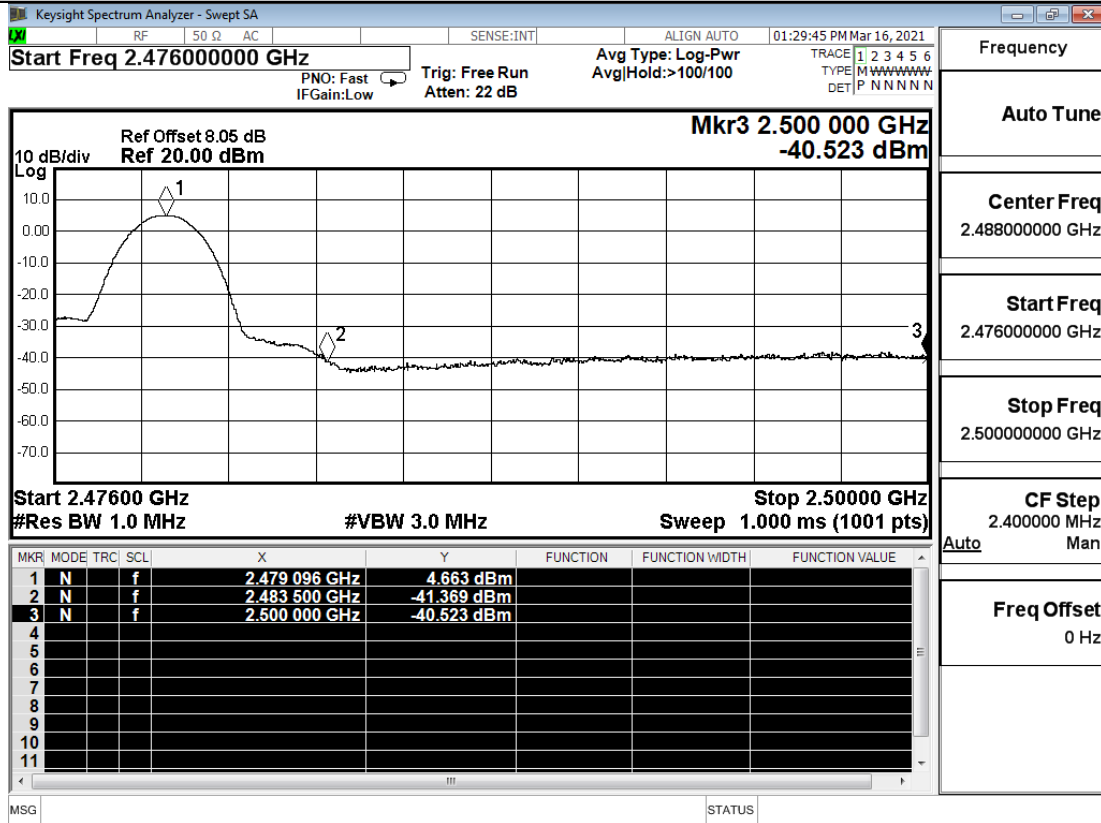
Restrict-band band-edge measurements_2.4G_2410_Ant1_PEAK



Restrict-band band-edge measurements_2.4G_2410_Ant1_AV



Restrict-band band-edge measurements_2.4G_2479_Ant1_PEAK



Restrict-band band-edge measurements_2.4G_2479_Ant1_AV

