

Appendix A

RF Test Data for 2.4G (Conducted Measurement)

Product Name: 2.4G wireless microphone

Trade Mark: BOYA, MOVO

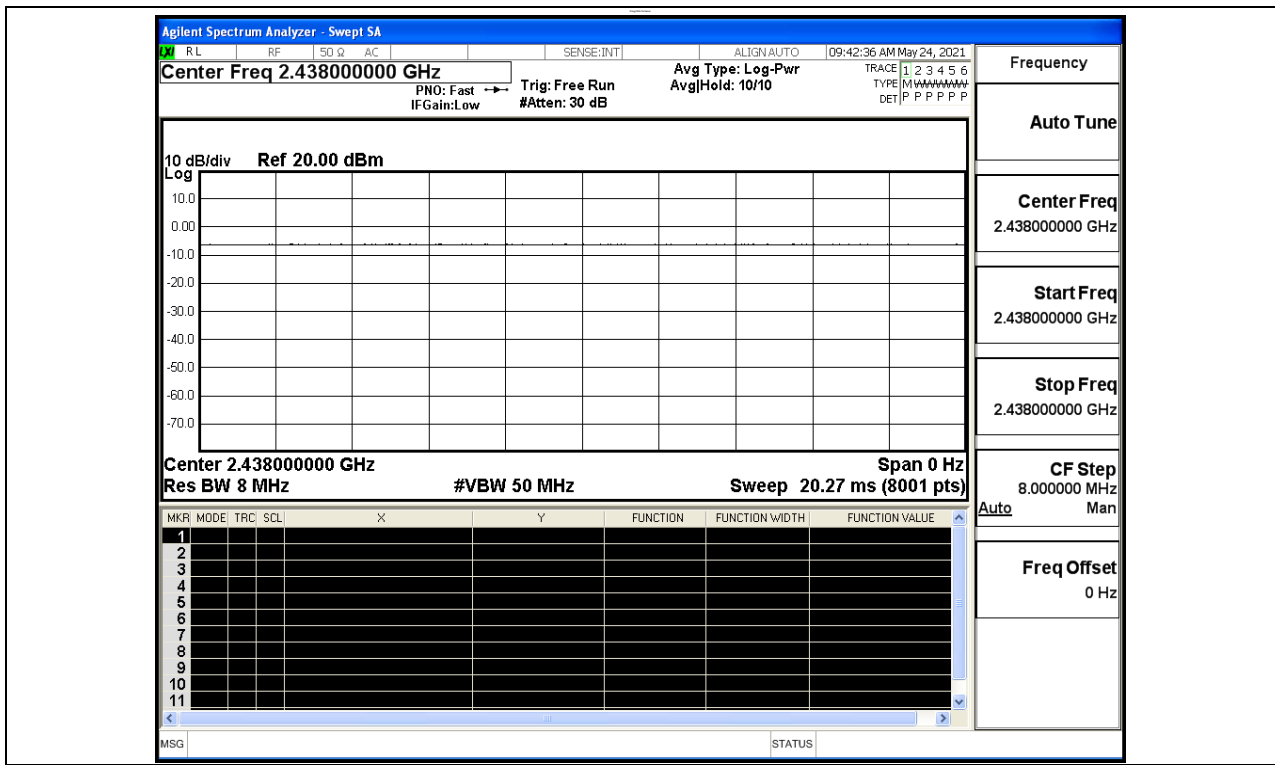
Test Model: BY-WM4 PRO RXD

Environmental Conditions

Temperature:	22.3° C
Relative Humidity:	51.5%
ATM Pressure:	100.0 kPa
Test Engineer:	Carl Fu
Supervised by:	Li Huan

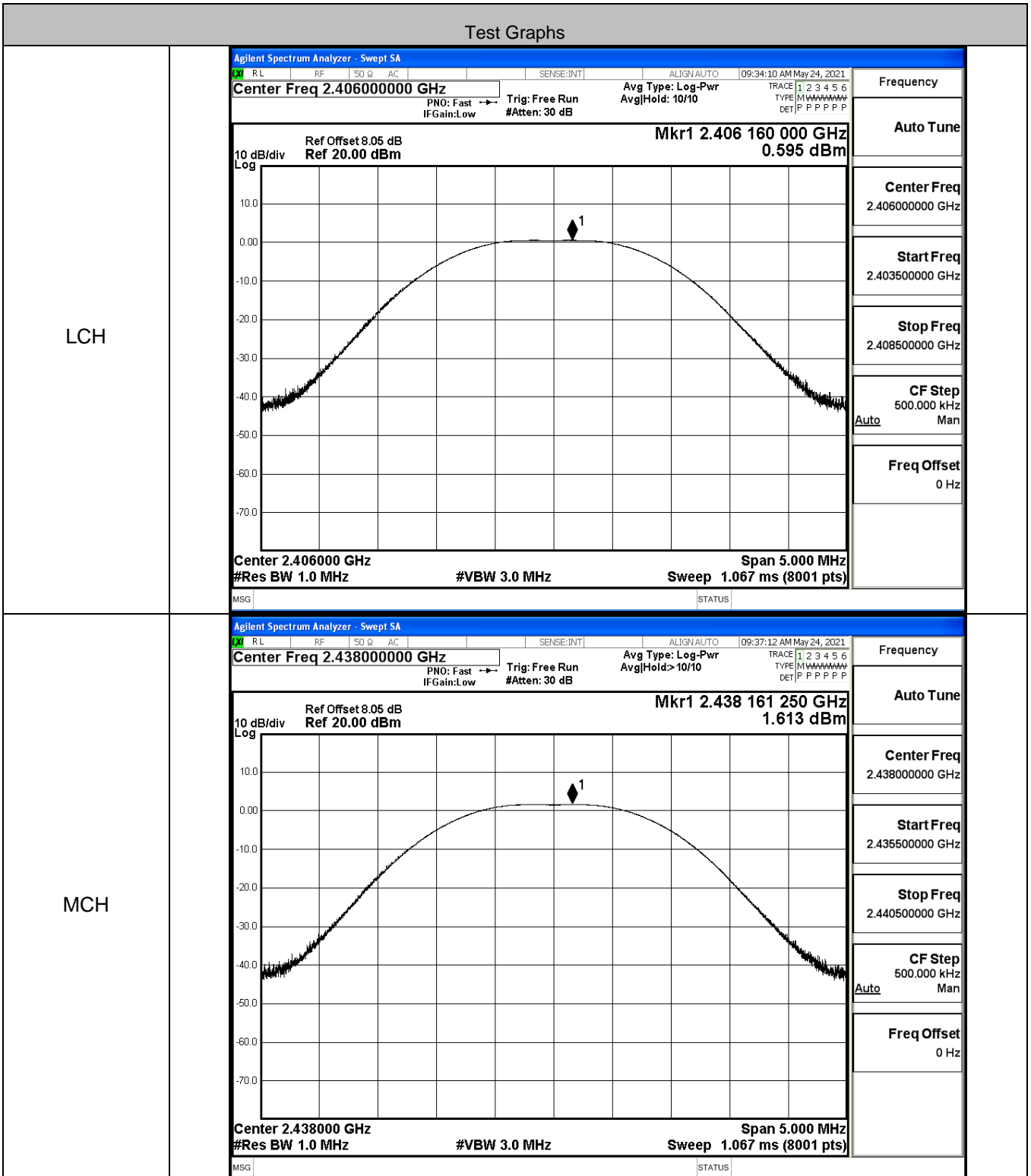
A.1 Duty Cycle

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



A.2 Maximum Conducted Peak Output Power

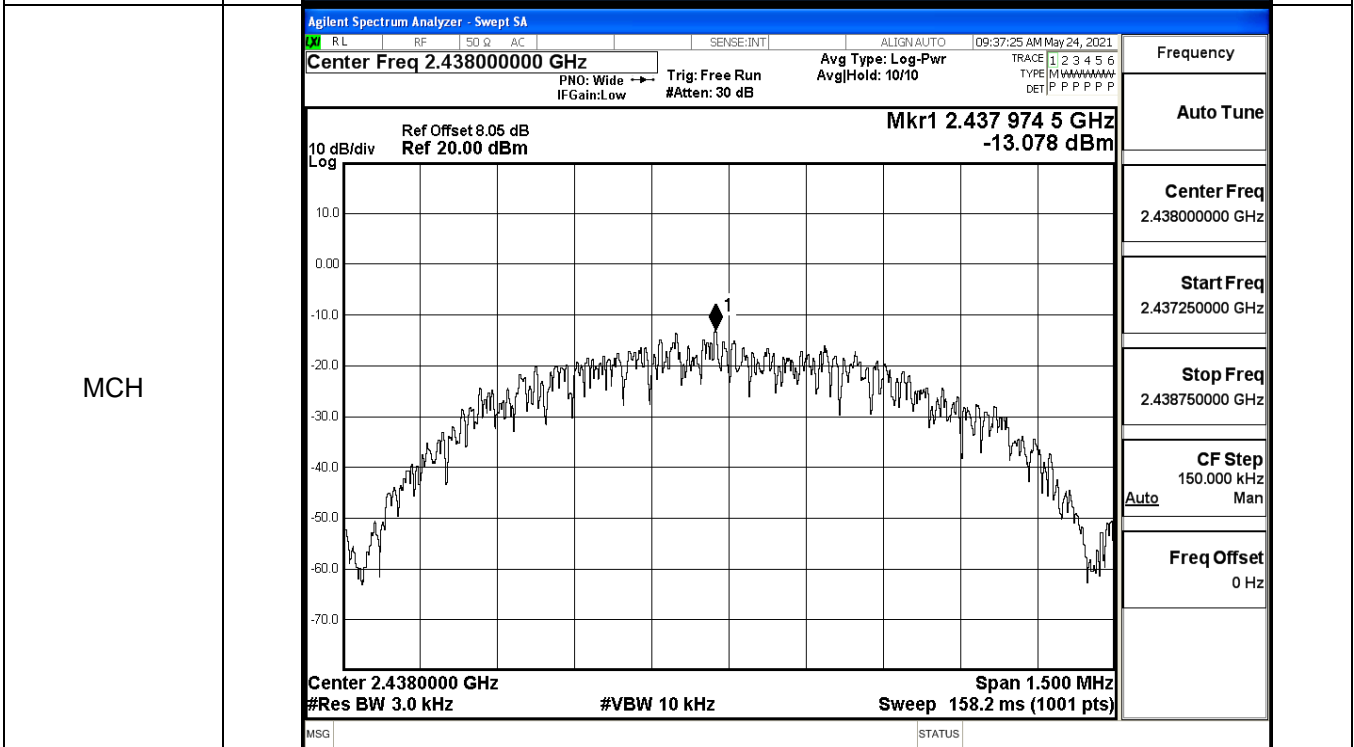
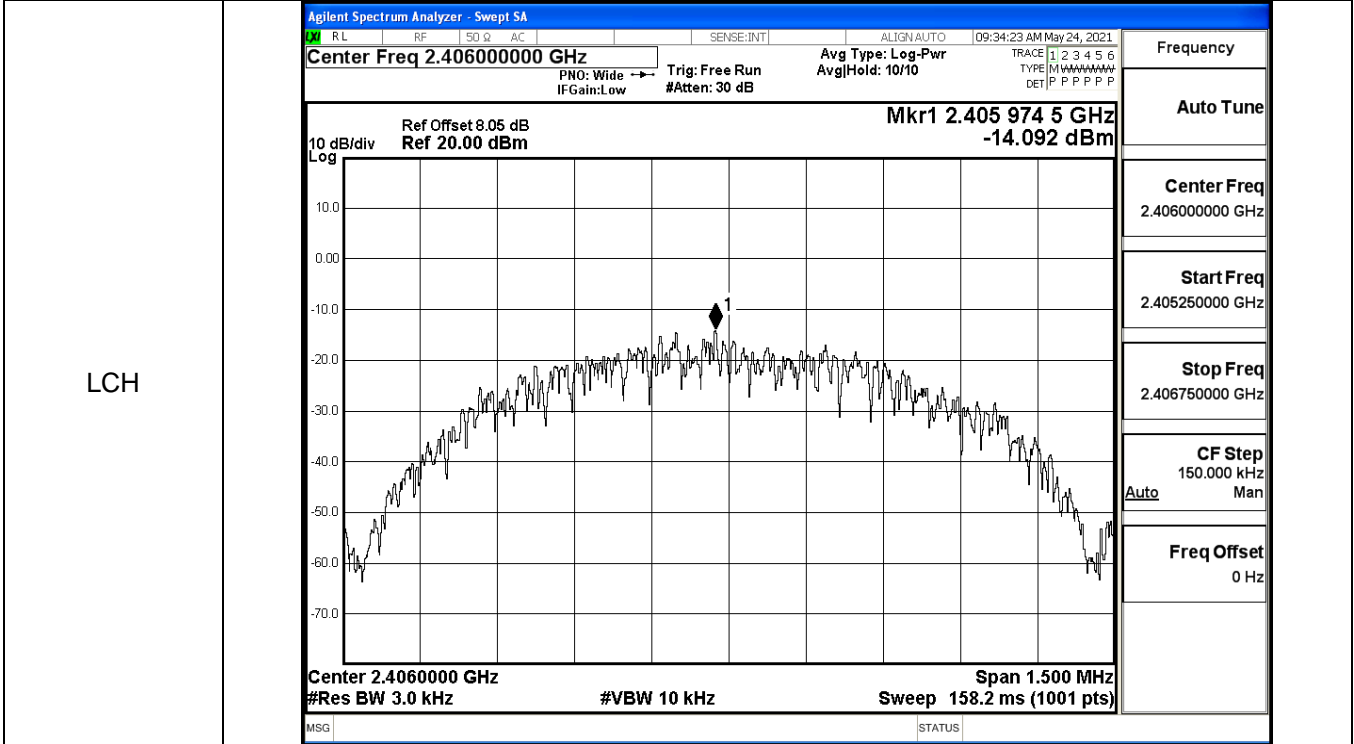
Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
GFSK	LCH	0.595	30	PASS
GFSK	MCH	1.613	30	PASS
GFSK	HCH	0.318	30	PASS



A.3 Maximum Power Spectral Density

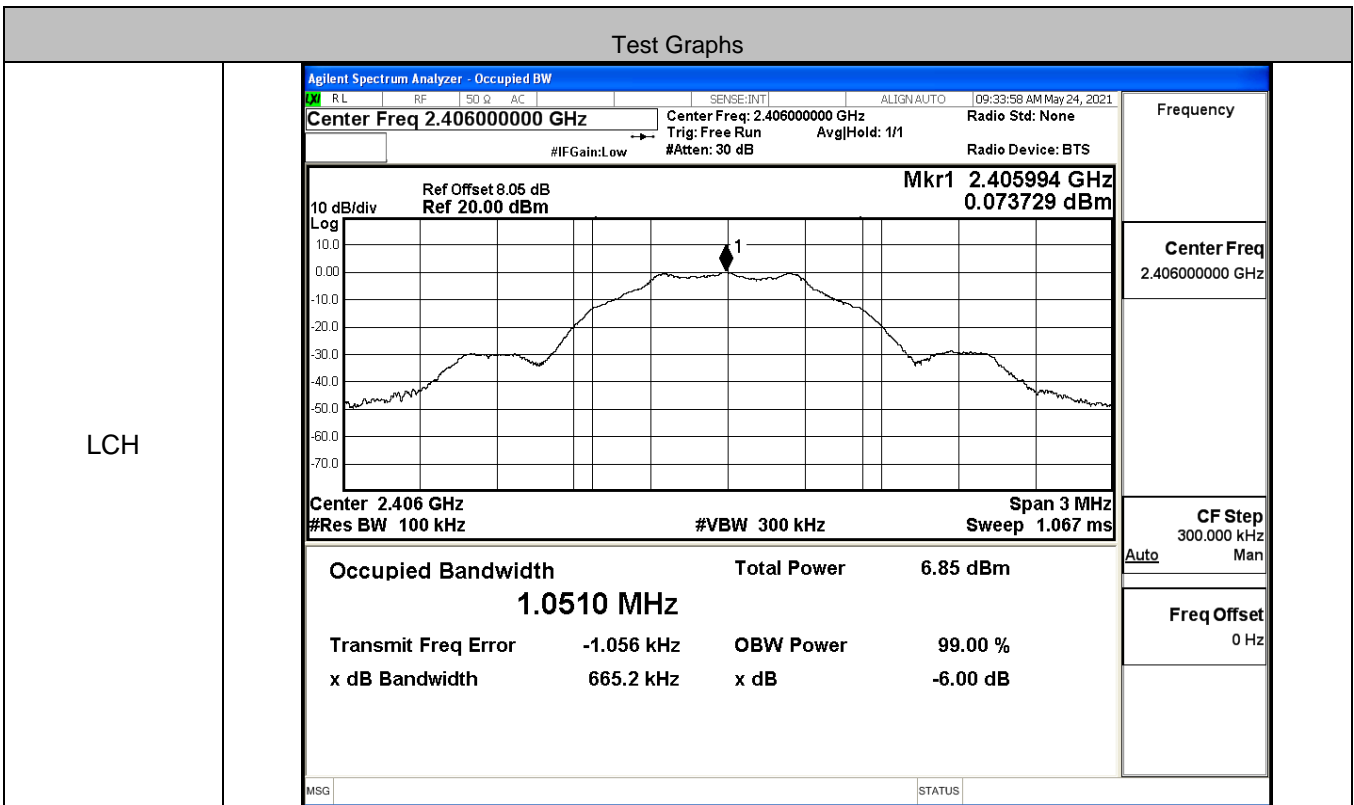
Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
GFSK	LCH	-14.092	8	PASS
GFSK	MCH	-13.078	8	PASS
GFSK	HCH	-14.356	8	PASS

Test Graphs

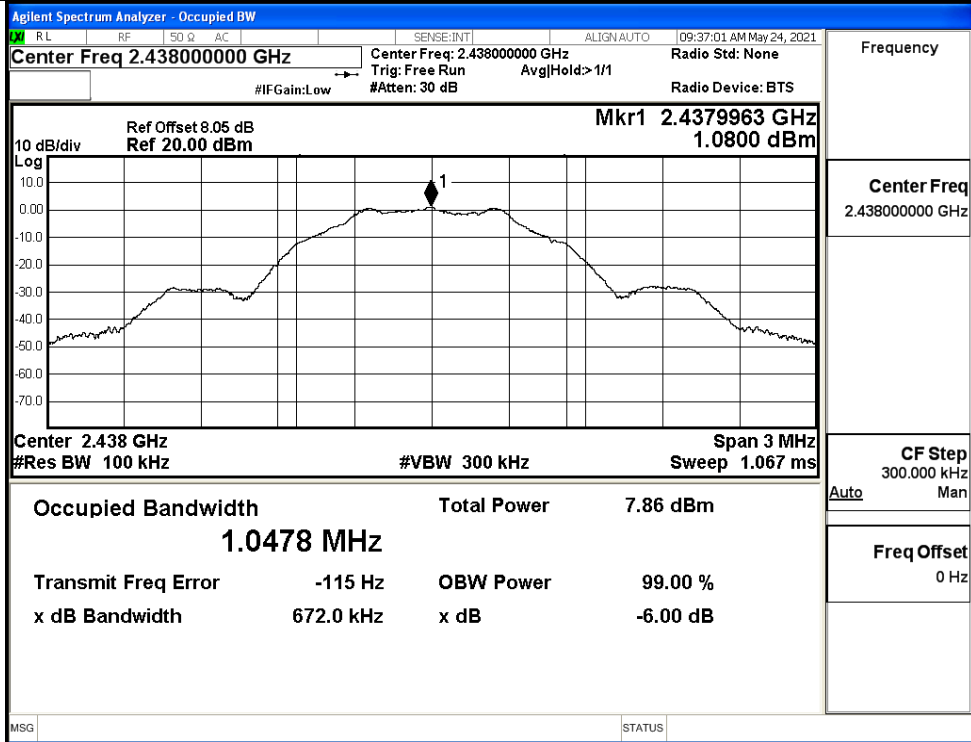


A.4 6dB Bandwidth & A.5 99% Occupied Bandwidth Measurement

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	99% Occupied Bandwidth Measurement [MHz]	Verdict
GFSK	LCH	0.6652	≥0.5	1.0510	PASS
GFSK	MCH	0.6720	≥0.5	1.0478	PASS
GFSK	HCH	0.6920	≥0.5	1.0490	PASS

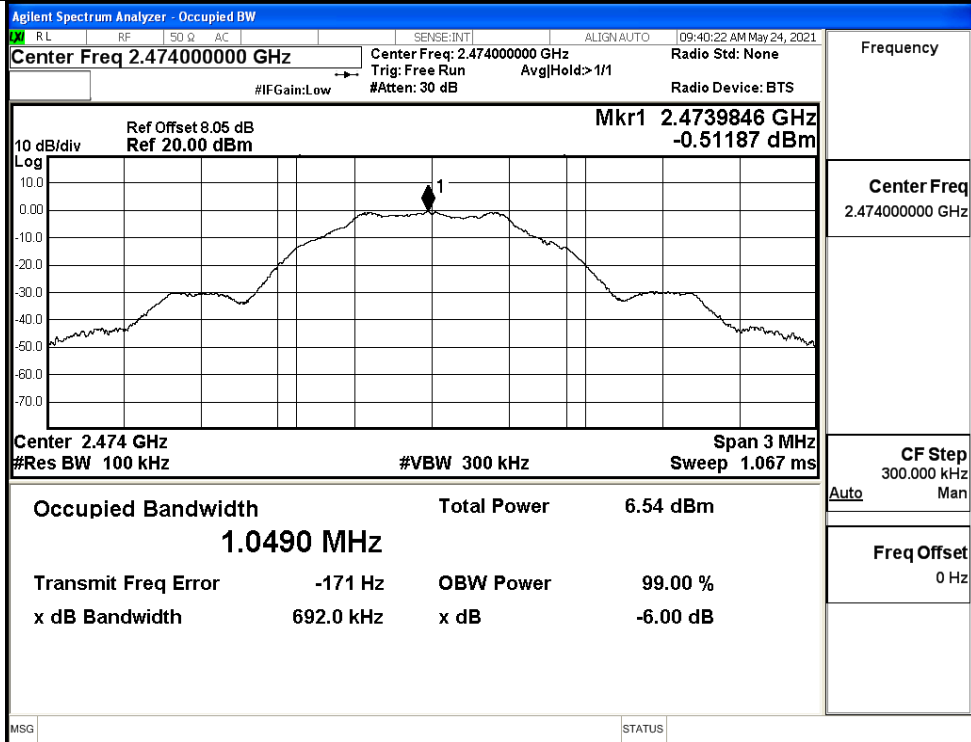


MCH



Frequency	2.43800000 GHz
Center Freq	2.43800000 GHz
CF Step	300.000 kHz
Auto	Man
Freq Offset	0 Hz

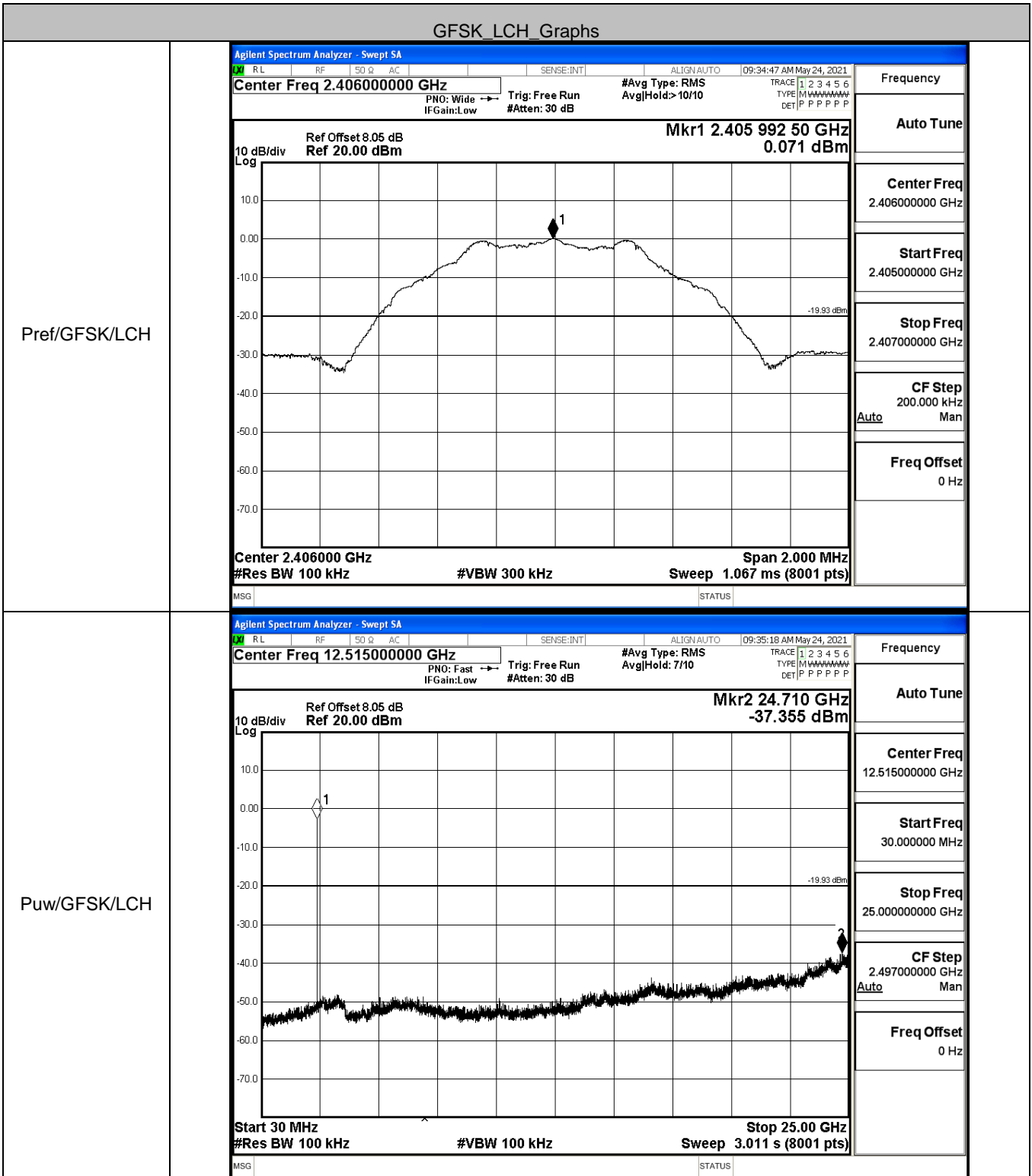
HCH



Frequency	2.47400000 GHz
Center Freq	2.47400000 GHz
CF Step	300.000 kHz
Auto	Man
Freq Offset	0 Hz

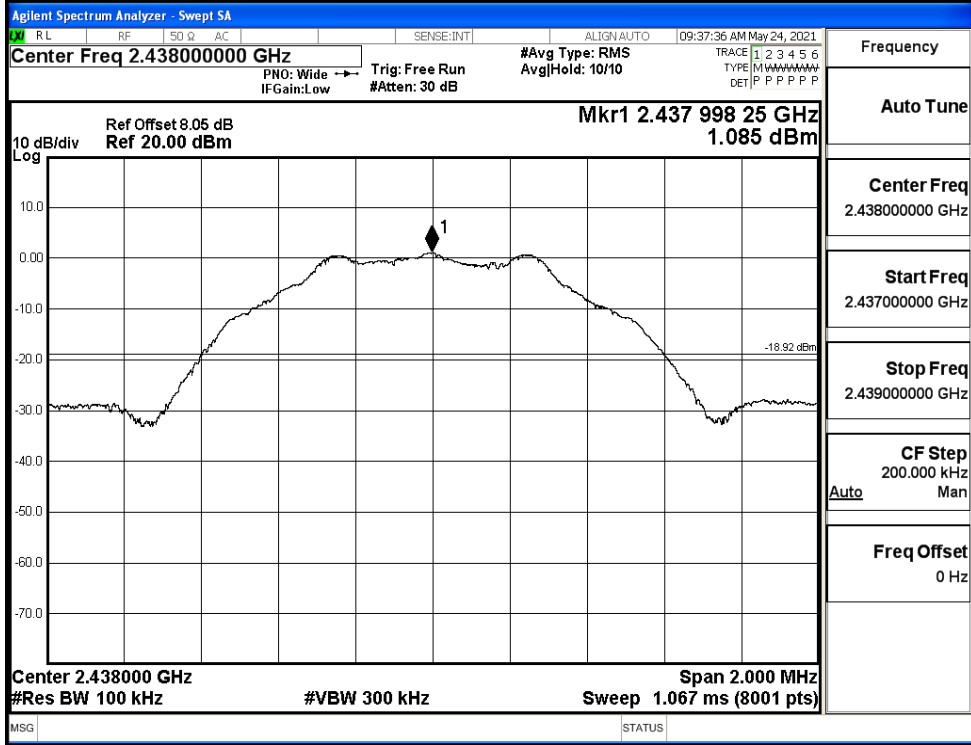
A.5 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	0.071	-37.355	-19.929	PASS
GFSK	MCH	1.085	-36.901	-18.915	PASS
GFSK	HCH	-0.222	-38.481	-20.222	PASS

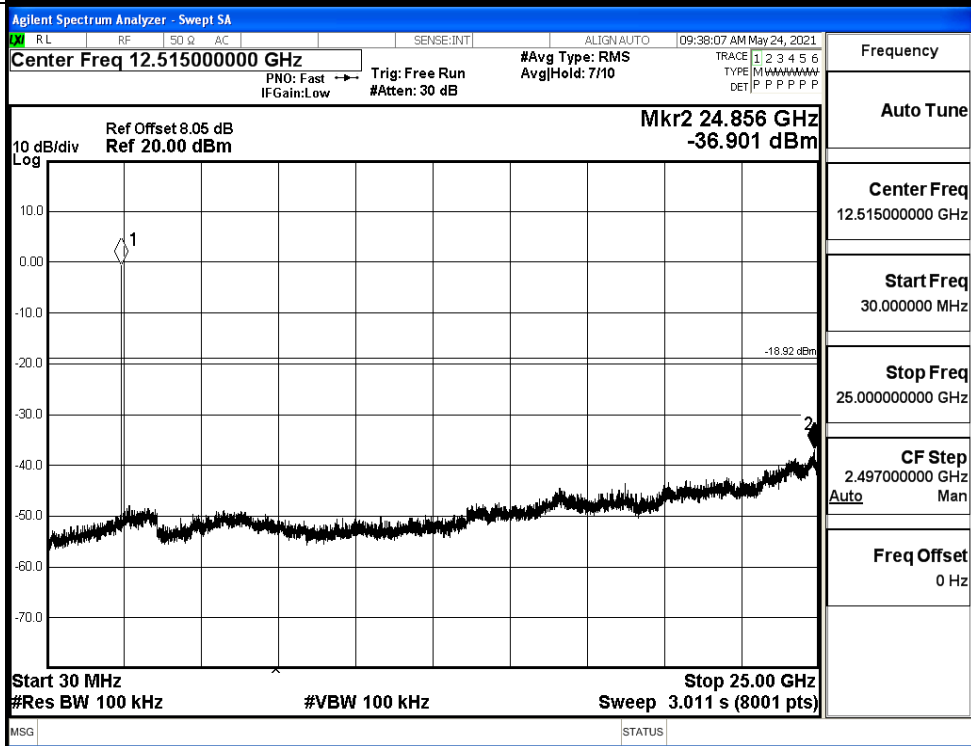


GFSK_MCH_Graphs

Pref/GFSK/MCH

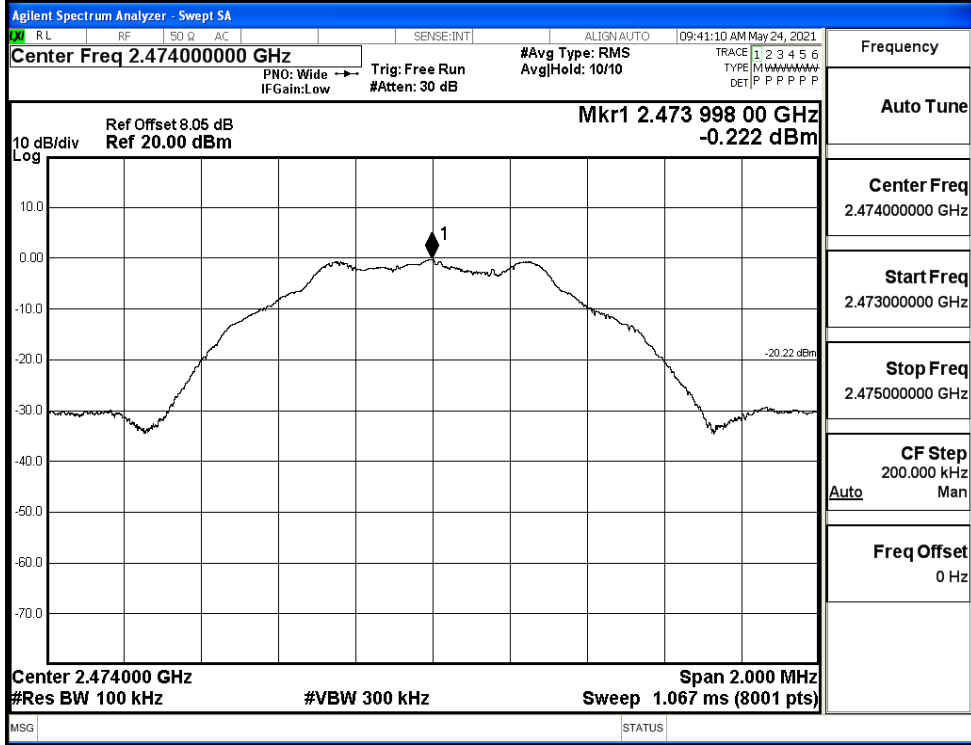


Puw/GFSK/MCH

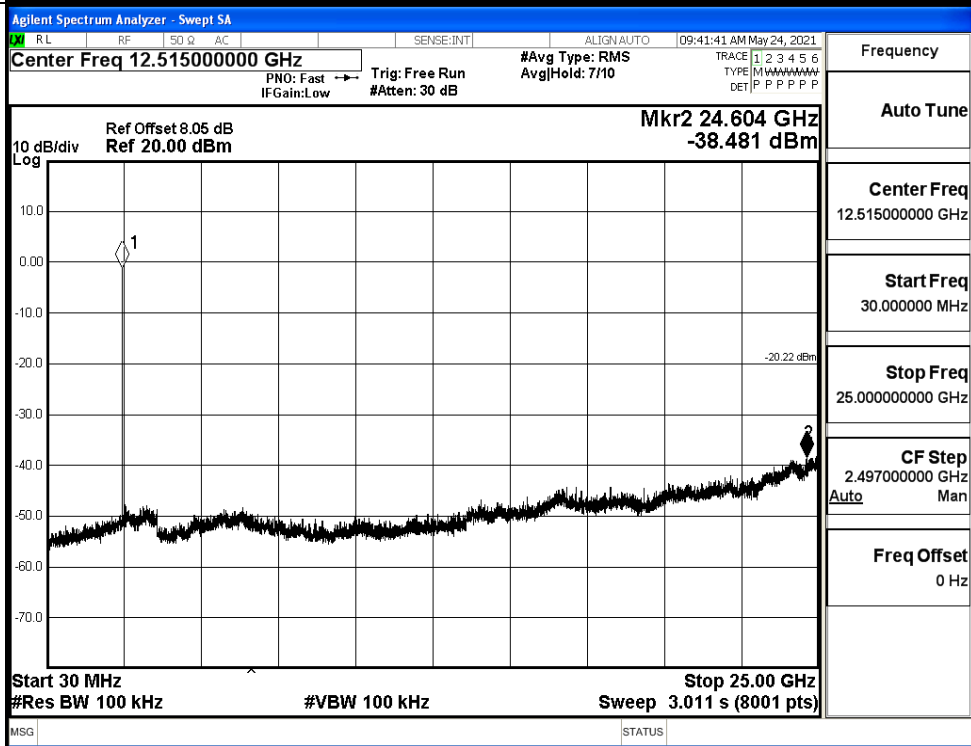


GFSK_HCH_Graphs

Pref/GFSK/HCH



Puw/GFSK/HCH



A.6 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-0.137	-49.853	-20.14	PASS
GFSK	HCH	-0.162	-49.151	-20.16	PASS

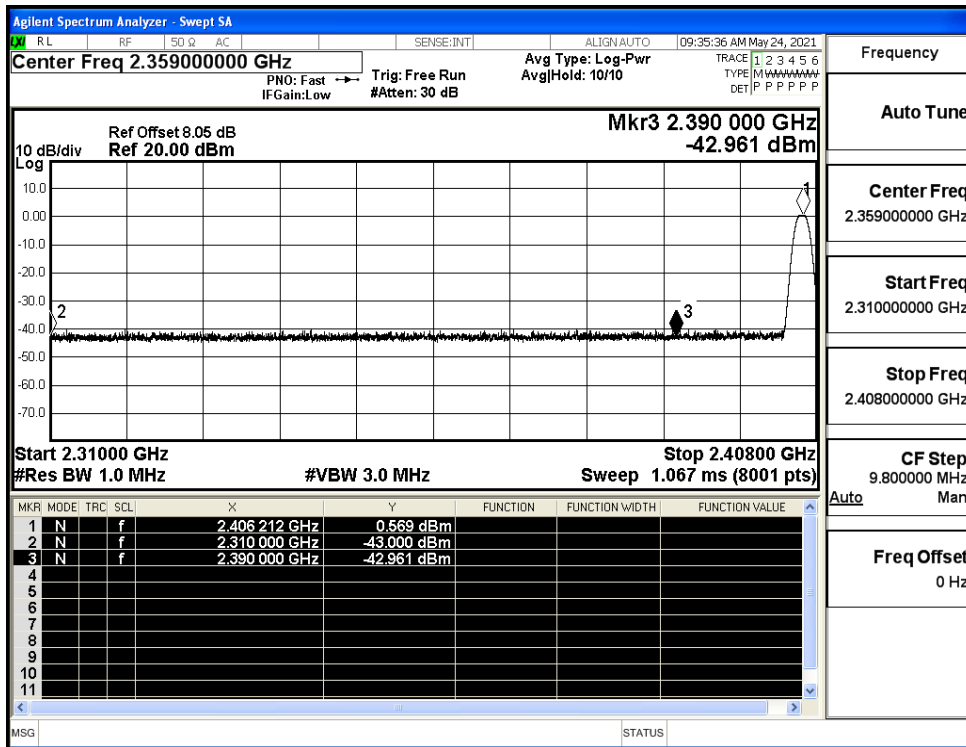
Test Graphs

LCH	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.35900000 GHz Mkr4 2.370 050 GHz -49.853 dBm Start 2.31000 GHz Stop 2.40800 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 9.600 ms (8001 pts)</p> <table border="1" style="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>2.405 758 GHz</td><td>-0.137 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>-52.290 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>-53.564 dBm</td><td></td><td></td><td></td></tr> <tr><td>4</td><td>N</td><td>f</td><td></td><td>2.370 050 GHz</td><td>-49.853 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		2.405 758 GHz	-0.137 dBm				2	N	f		2.400 000 GHz	-52.290 dBm				3	N	f		2.390 000 GHz	-53.564 dBm				4	N	f		2.370 050 GHz	-49.853 dBm				Frequency Auto Tune Center Freq 2.35900000 GHz Start Freq 2.31000000 GHz Stop Freq 2.40800000 GHz CF Step 9.800000 MHz Freq Offset 0 Hz
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HCH	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.48600000 GHz Mkr4 2.497 175 5 GHz -49.151 dBm Start 2.47200 GHz Stop 2.50000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 3.200 ms (8001 pts)</p> <table border="1" style="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>2.473 998 5 GHz</td><td>-0.162 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 0 GHz</td><td>-52.793 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 0 GHz</td><td>-51.396 dBm</td><td></td><td></td><td></td></tr> <tr><td>4</td><td>N</td><td>f</td><td></td><td>2.497 175 5 GHz</td><td>-49.151 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		2.473 998 5 GHz	-0.162 dBm				2	N	f		2.483 500 0 GHz	-52.793 dBm				3	N	f		2.500 000 0 GHz	-51.396 dBm				4	N	f		2.497 175 5 GHz	-49.151 dBm				Frequency Auto Tune Center Freq 2.48600000 GHz Start Freq 2.47200000 GHz Stop Freq 2.50000000 GHz CF Step 2.800000 MHz Freq Offset 0 Hz
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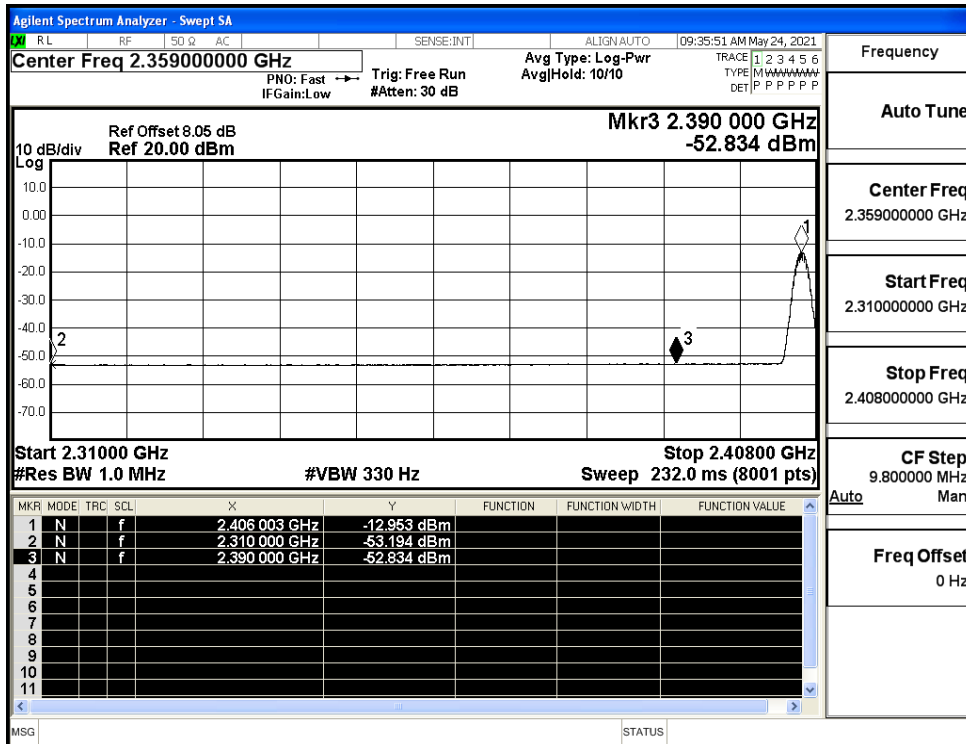
A.7 Restrict-band band-edge measurements

Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdi
GFSK	2402	Ant1	2310.0	-43.00	2.0	0	52.26	PEAK	74	PASS
		Ant1	2310.0	-53.19	2.0	0	42.06	AV	54	PASS
		Ant1	2390.0	-42.96	2.0	0	52.30	PEAK	74	PASS
		Ant1	2390.0	-52.83	2.0	0	42.42	AV	54	PASS
	2480	Ant1	2483.5	-42.30	2.0	0	52.95	PEAK	74	PASS
		Ant1	2483.5	-52.44	2.0	0	42.82	AV	54	PASS
		Ant1	2500.0	-42.03	2.0	0	53.23	PEAK	74	PASS
		Ant1	2500.0	-52.17	2.0	0	43.09	AV	54	PASS

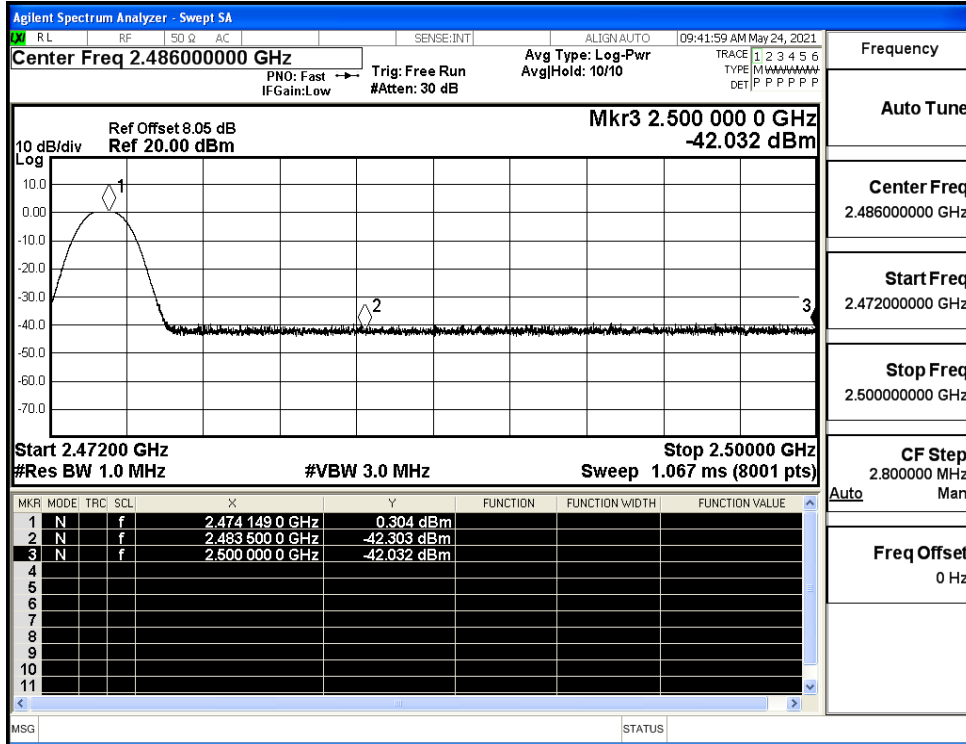
Restrict-band band-edge measurements_GFSK_2402_Ant1_PEAK



Restrict-band band-edge measurements_GFSK_2402_Ant1_AV



Restrict-band band-edge measurements_GFSK_2480_Ant1_PEAK



Restrict-band band-edge measurements_GFSK_2480_Ant1_AV

