

FCC EMTC Band13 Test Data

General Description of EUT	
Product Name:	Tractive Dog 6
Test Model:	TG6A
Sample ID:	HC-C-202403-0336-01-04#
Environmental Conditions	
Temperature:	22°C-25°C
Relative Humidity:	43%-55%
Test Voltage:	DC 3.87V
Test Engineer:	Mike Yan
Note: For a more detailed features description, please refer to the report TBR-C-202403-0336-93. The report only show the worst case data.	

Contents

FCC EMTC Band13 Test Data	1
1. Conducted Output Power Data for M1	3
Test Result	3
2. Peak-to-Average Ratio(CCDF) for M1	4
Test Result	4
Test Graphs	5
3. 26dB Bandwidth and Occupied Bandwidth for M1	8
Test Result	8
Test Graphs	9
4. Band Edge for M1	11
Test Result	11
Test Graphs	11
5. Conducted Spurious Emission for M1	14
Test Result	14
Test Graphs	15
6. Frequency Stability for M1	22
Test Result	22

1. Conducted Output Power Data for M1

Test Result

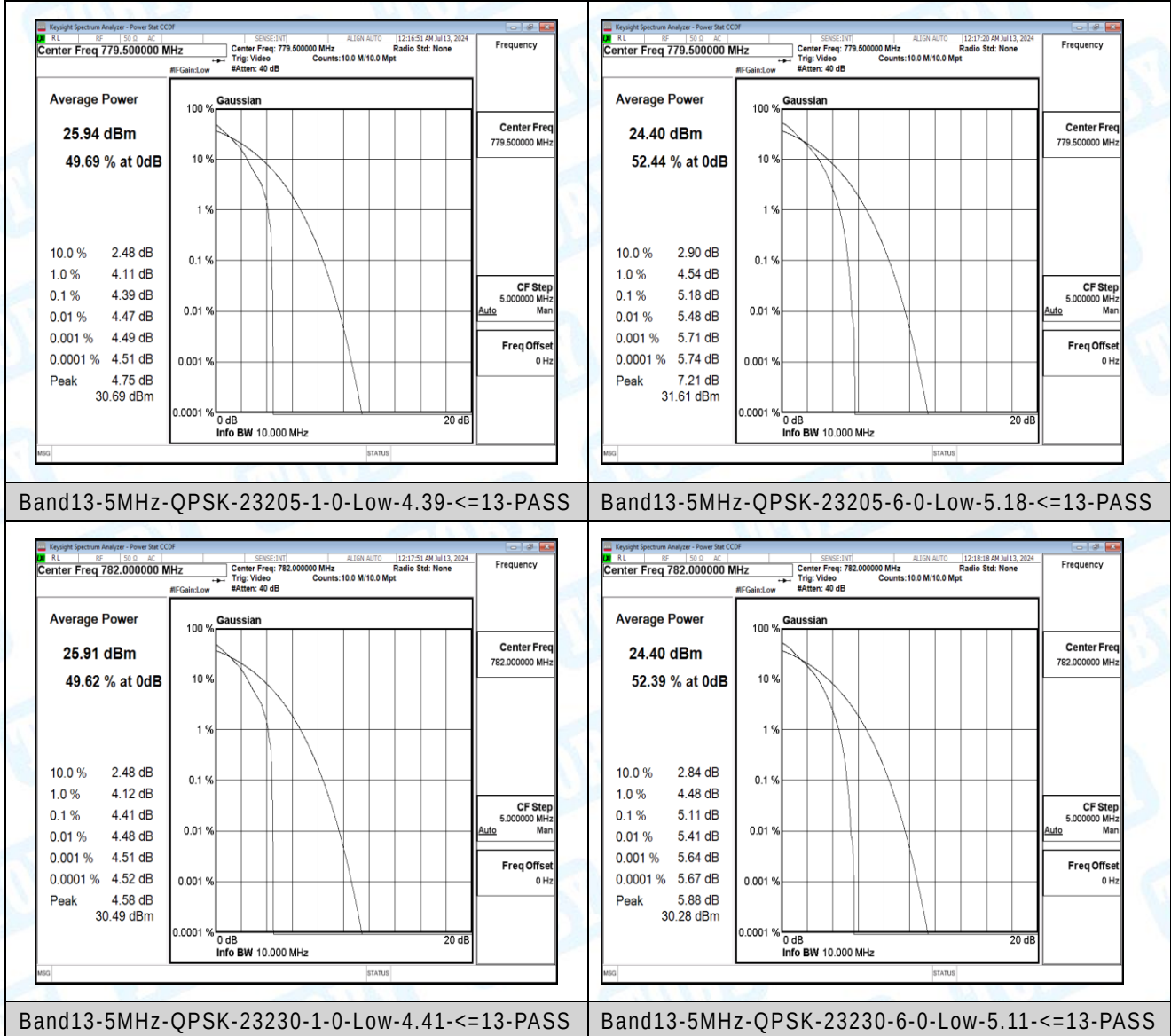
Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NBIndex	Result(dBm)	Verdict
Band13	5MHz	23205	QPSK	1	0	Low	24.01	PASS
Band13	5MHz	23205	QPSK	1	5	Low	24.01	PASS
Band13	5MHz	23205	QPSK	6	0	Low	22.99	PASS
Band13	5MHz	23230	QPSK	1	0	Low	24.04	PASS
Band13	5MHz	23230	QPSK	1	5	Low	23.93	PASS
Band13	5MHz	23230	QPSK	6	0	Low	22.94	PASS
Band13	5MHz	23255	QPSK	1	0	High	24.17	PASS
Band13	5MHz	23255	QPSK	1	5	High	24.08	PASS
Band13	5MHz	23255	QPSK	6	0	High	23.04	PASS
Band13	5MHz	23205	16QAM	1	0	Low	24.23	PASS
Band13	5MHz	23205	16QAM	1	5	Low	24.25	PASS
Band13	5MHz	23205	16QAM	6	0	Low	22.98	PASS
Band13	5MHz	23230	16QAM	1	0	Low	24.24	PASS
Band13	5MHz	23230	16QAM	1	5	Low	24.19	PASS
Band13	5MHz	23230	16QAM	6	0	Low	22.93	PASS
Band13	5MHz	23255	16QAM	1	0	High	24.45	PASS
Band13	5MHz	23255	16QAM	1	5	High	24.37	PASS
Band13	5MHz	23255	16QAM	6	0	High	23.04	PASS
Band13	10MHz	23230	QPSK	1	0	Low	24.17	PASS
Band13	10MHz	23230	QPSK	1	5	Low	24.03	PASS
Band13	10MHz	23230	QPSK	6	0	Low	22.98	PASS
Band13	10MHz	23230	16QAM	1	0	Low	24.36	PASS
Band13	10MHz	23230	16QAM	1	5	Low	24.26	PASS
Band13	10MHz	23230	16QAM	6	0	Low	23.07	PASS

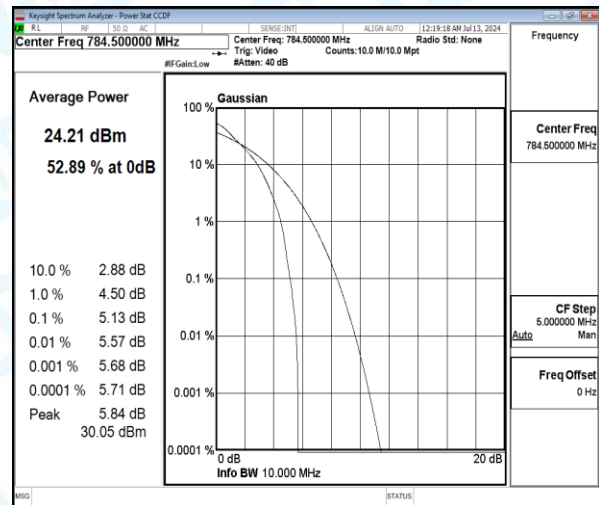
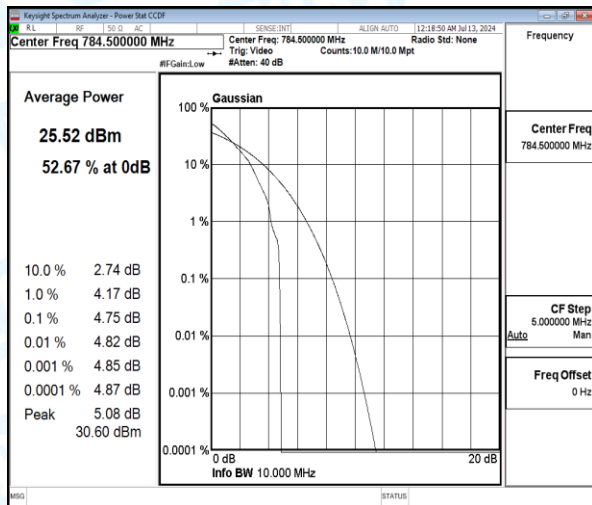
2. Peak-to-Average Ratio(CCDF) for M1

Test Result

Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NBIndex	Result(dB)	Limit(dB)	Verdict
Band13	5MHz	23205	QPSK	1	0	Low	4.39	<=13	PASS
Band13	5MHz	23205	QPSK	6	0	Low	5.18	<=13	PASS
Band13	5MHz	23230	QPSK	1	0	Low	4.41	<=13	PASS
Band13	5MHz	23230	QPSK	6	0	Low	5.11	<=13	PASS
Band13	5MHz	23255	QPSK	1	0	High	4.75	<=13	PASS
Band13	5MHz	23255	QPSK	6	0	High	5.13	<=13	PASS
Band13	5MHz	23205	16QAM	1	0	Low	6.82	<=13	PASS
Band13	5MHz	23205	16QAM	6	0	Low	5.08	<=13	PASS
Band13	5MHz	23230	16QAM	1	0	Low	6.76	<=13	PASS
Band13	5MHz	23230	16QAM	6	0	Low	4.86	<=13	PASS
Band13	5MHz	23255	16QAM	1	0	High	5.02	<=13	PASS
Band13	5MHz	23255	16QAM	6	0	High	5.19	<=13	PASS
Band13	10MHz	23230	QPSK	1	0	Low	4.72	<=13	PASS
Band13	10MHz	23230	QPSK	6	0	Low	5.01	<=13	PASS
Band13	10MHz	23230	16QAM	1	0	Low	5.54	<=13	PASS
Band13	10MHz	23230	16QAM	6	0	Low	5.00	<=13	PASS

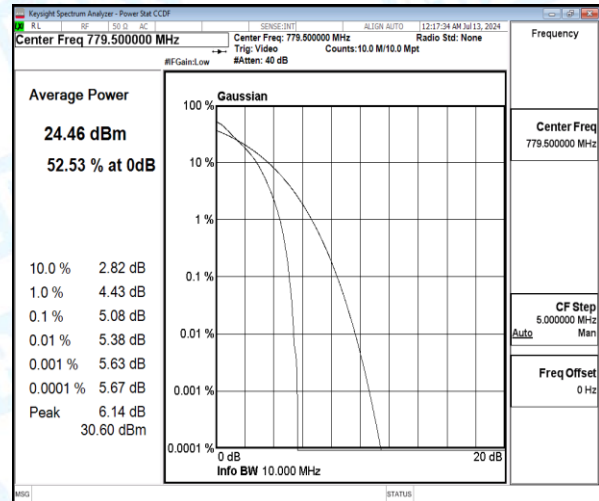
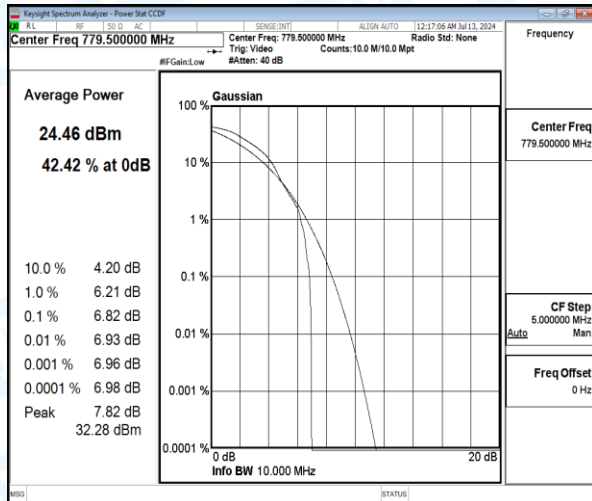
Test Graphs





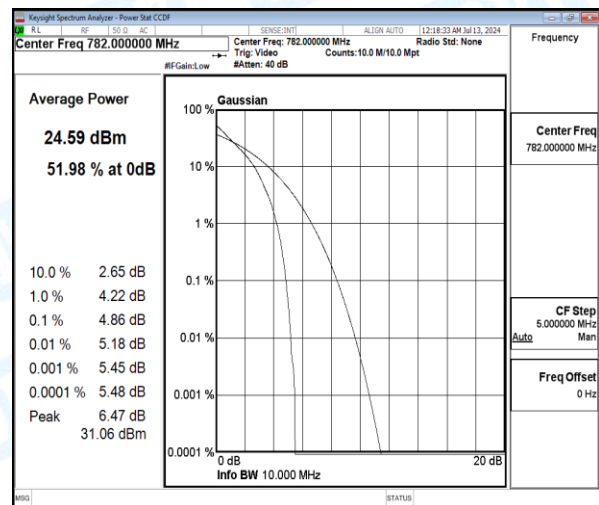
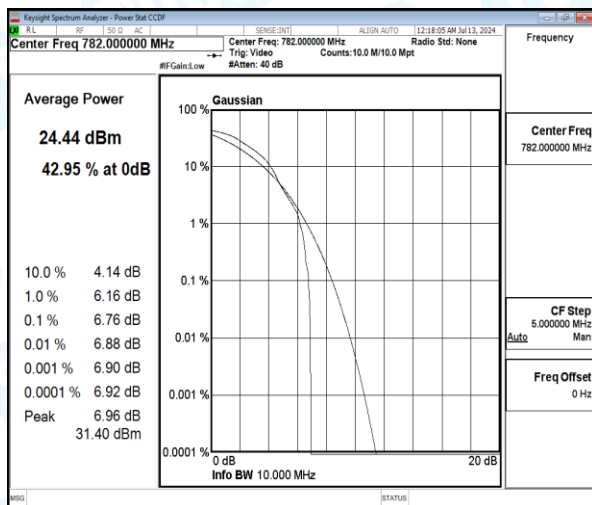
Band13-5MHz-QPSK-23255-1-0-High-4.75-<=13-PASS

Band13-5MHz-QPSK-23255-6-0-High-5.13-<=13-PASS



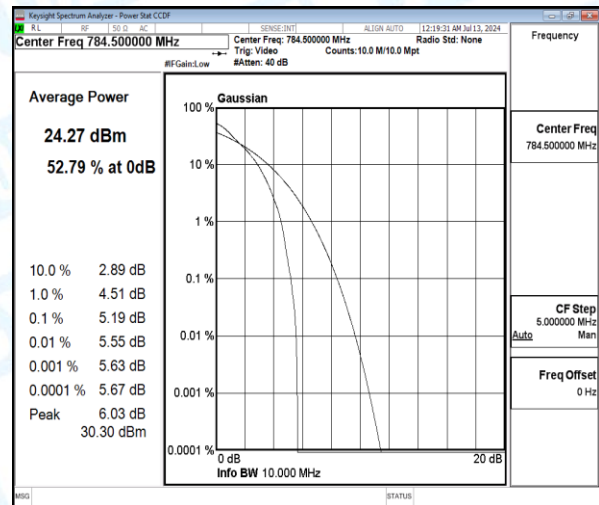
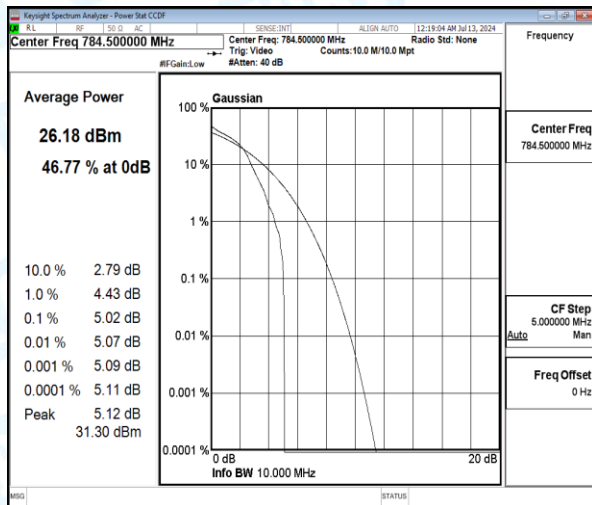
Band13-5MHz-16QAM-23205-1-0-Low-6.82-<=13-PASS

Band13-5MHz-16QAM-23205-6-0-Low-5.08-<=13-PASS



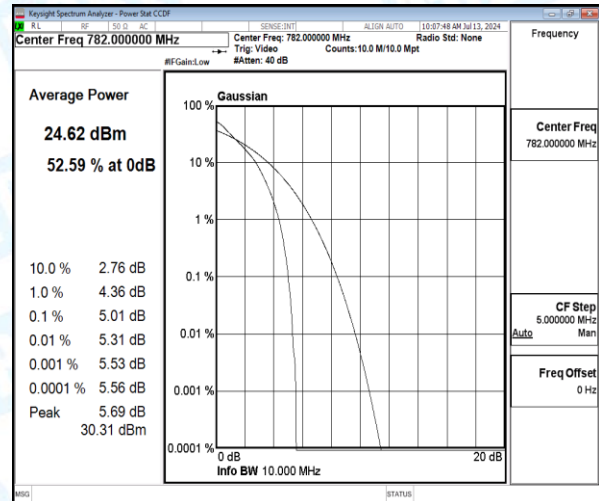
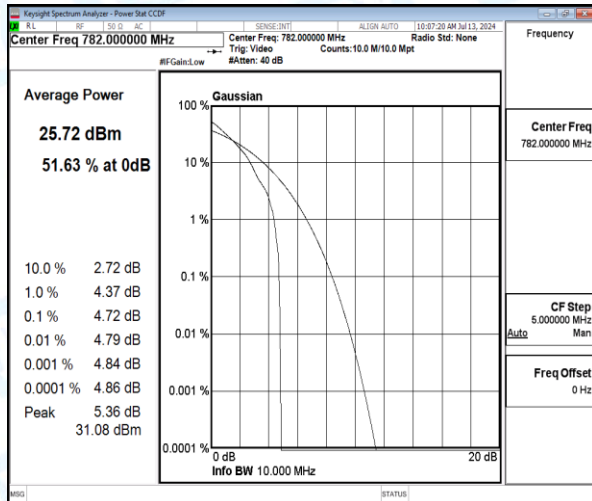
Band13-5MHz-16QAM-23230-1-0-Low-6.76-<=13-PASS

Band13-5MHz-16QAM-23230-6-0-Low-4.86-<=13-PASS



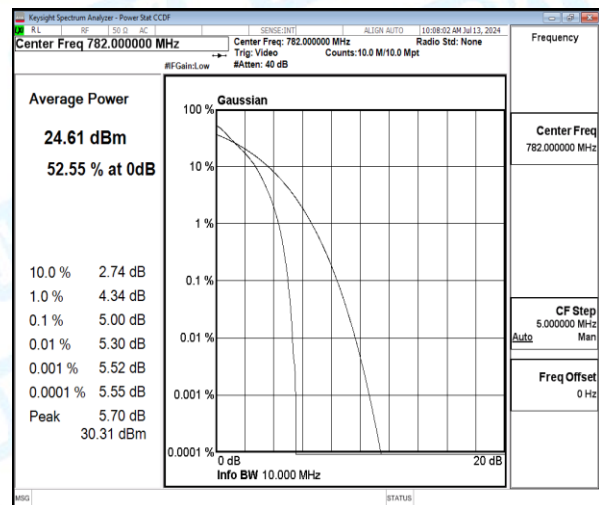
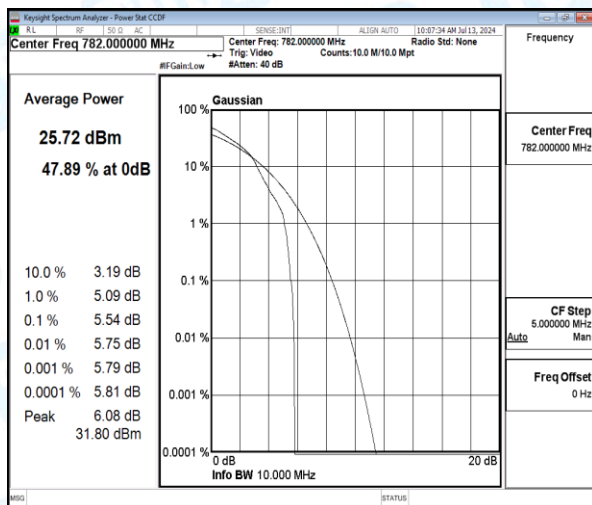
Band13-5MHz-16QAM-23255-1-0-High-5.02-<=13-PASS

Band13-5MHz-16QAM-23255-6-0-High-5.19-<=13-PASS



Band13-10MHz-QPSK-23230-1-0-Low-4.72-<=13-PASS

Band13-10MHz-QPSK-23230-6-0-Low-5.01-<=13-PASS



Band13-10MHz-16QAM-23230-1-0-Low-5.54-<=13-PASS

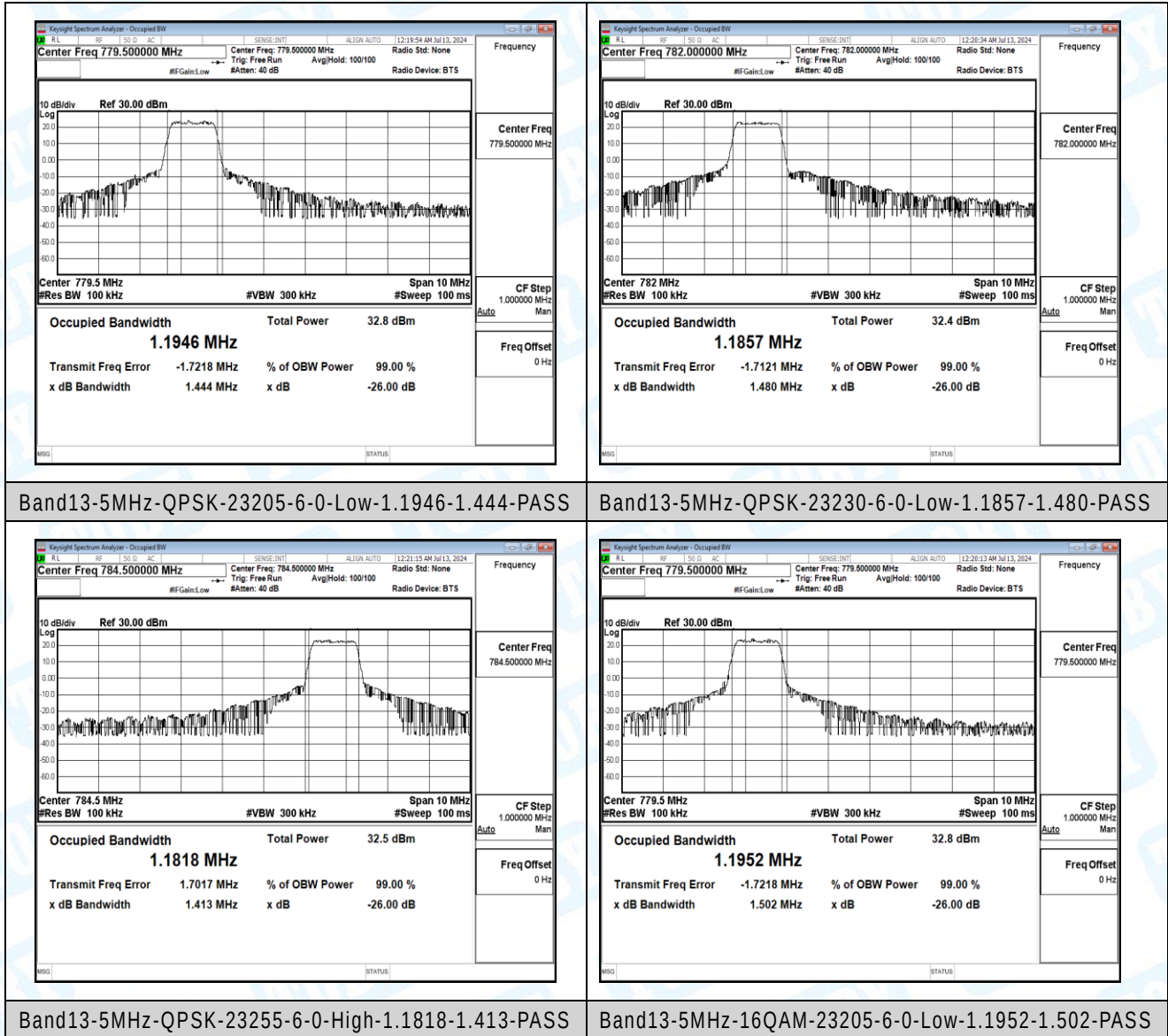
Band13-10MHz-16QAM-23230-6-0-Low-5.00-<=13-PASS

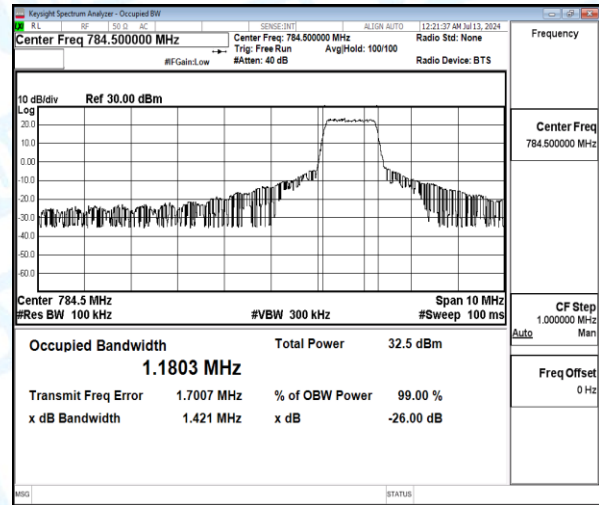
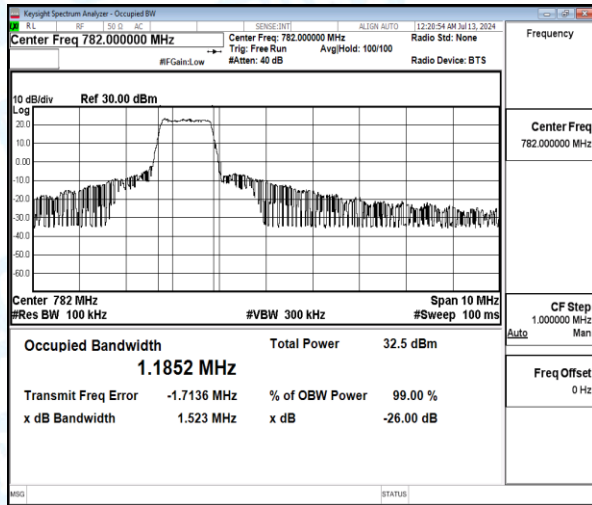
3. 26dB Bandwidth and Occupied Bandwidth for M1

Test Result

Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NB Index	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band13	5MHz	23205	QPSK	6	0	Low	1.1946	1.444	PASS
Band13	5MHz	23230	QPSK	6	0	Low	1.1857	1.480	PASS
Band13	5MHz	23255	QPSK	6	0	High	1.1818	1.413	PASS
Band13	5MHz	23205	16QAM	6	0	Low	1.1952	1.502	PASS
Band13	5MHz	23230	16QAM	6	0	Low	1.1852	1.523	PASS
Band13	5MHz	23255	16QAM	6	0	High	1.1803	1.421	PASS
Band13	10MHz	23230	QPSK	6	0	Low	1.3546	2.115	PASS
Band13	10MHz	23230	16QAM	6	0	Low	1.3554	2.049	PASS

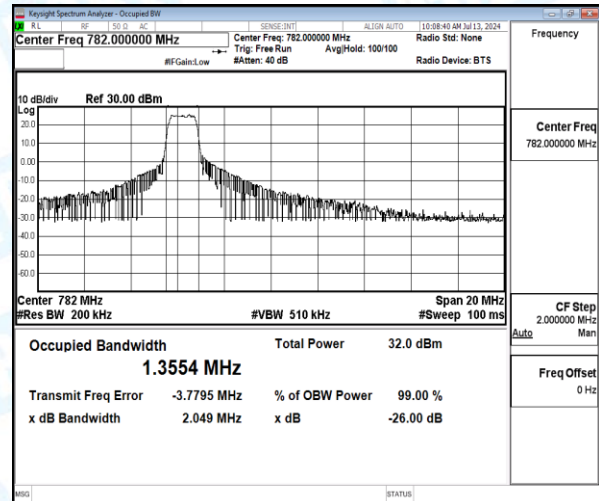
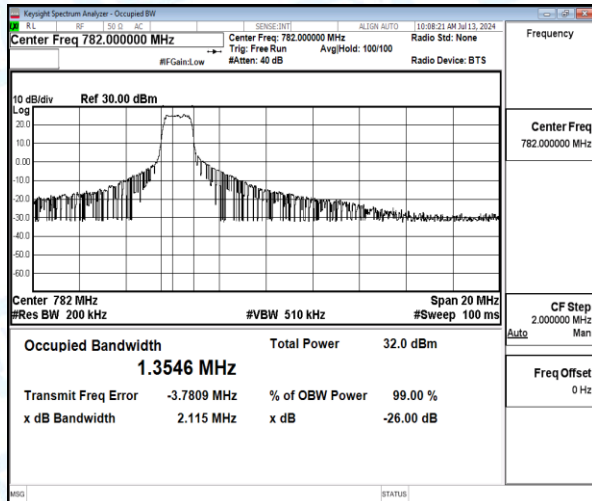
Test Graphs





Band13-5MHz-16QAM-23230-6-0-Low-1.1852-1.523-PASS

Band13-5MHz-16QAM-23255-6-0-High-1.1803-1.421-PASS



Band13-10MHz-QPSK-23230-6-0-Low-1.3546-2.115-PASS

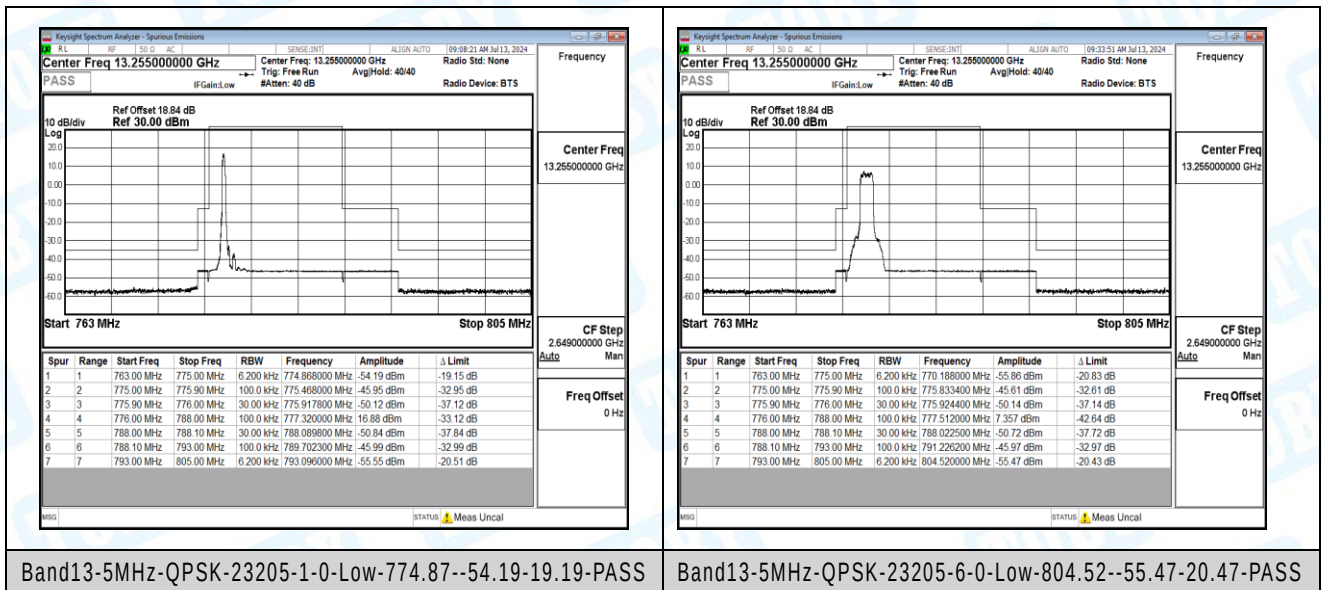
Band13-10MHz-16QAM-23230-6-0-Low-1.3554-2.049-PASS

4. Band Edge for M1

Test Result

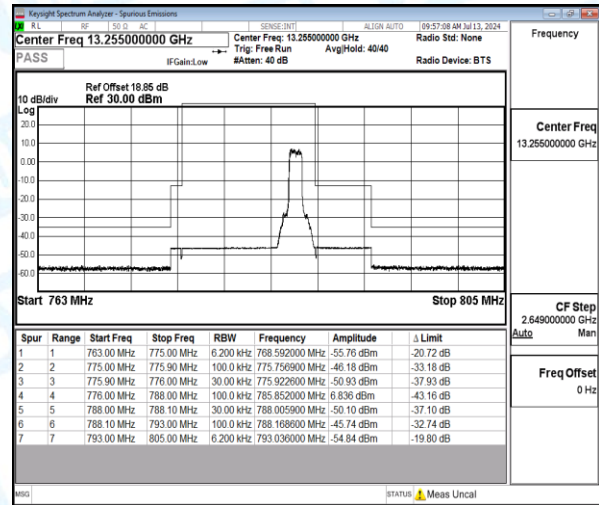
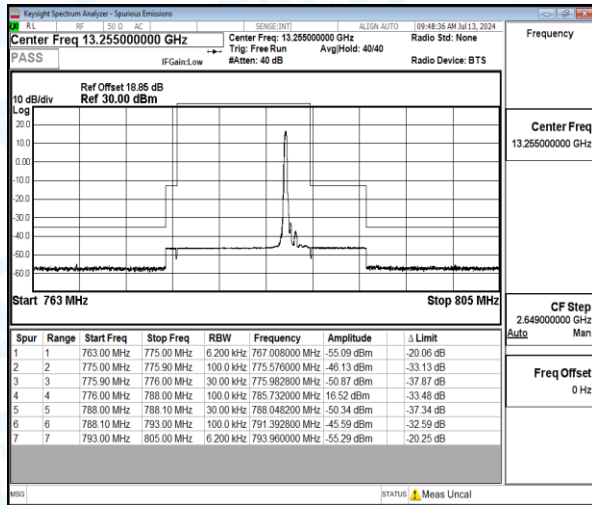
Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NB Index	Result(dBm)	Verdict
Band13	5MHz	23205	QPSK	1	0	Low	-54.19	PASS
Band13	5MHz	23205	QPSK	6	0	Low	-55.47	PASS
Band13	5MHz	23255	QPSK	1	0	High	-55.09	PASS
Band13	5MHz	23255	QPSK	6	0	High	-54.84	PASS
Band13	5MHz	23205	16QAM	1	0	Low	-55.55	PASS
Band13	5MHz	23205	16QAM	6	0	Low	-55.15	PASS
Band13	5MHz	23255	16QAM	1	0	High	-54.91	PASS
Band13	5MHz	23255	16QAM	6	0	High	-55.60	PASS
Band13	10MHz	23230	QPSK	1	0	Low	-55.35	PASS
Band13	10MHz	23230	QPSK	1	0	High	-55.64	PASS
Band13	10MHz	23230	QPSK	6	0	Low	-55.76	PASS
Band13	10MHz	23230	16QAM	1	0	Low	-55.38	PASS
Band13	10MHz	23230	16QAM	1	0	High	-55.05	PASS
Band13	10MHz	23230	16QAM	6	0	Low	-55.52	PASS

Test Graphs



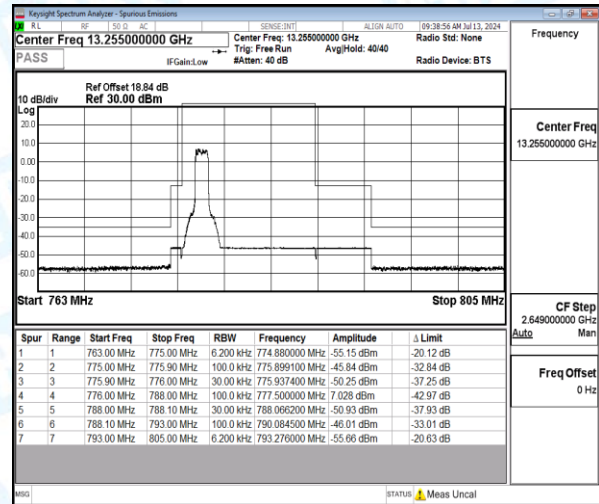
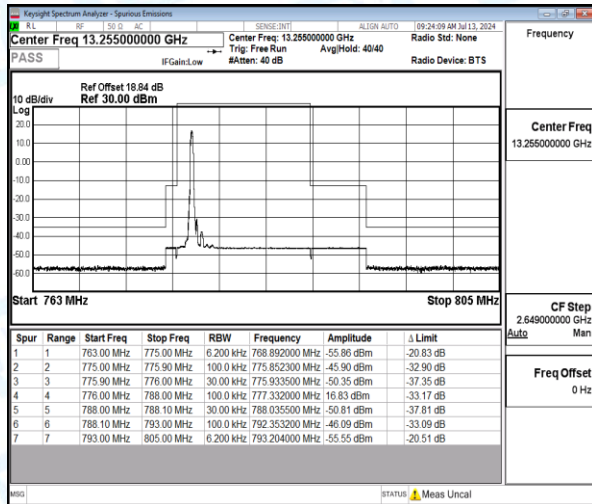
Band13-5MHz-QPSK-23205-1-0-Low-774.87--54.19-19.19-PASS

Band13-5MHz-QPSK-23205-6-0-Low-804.52--55.47-20.47-PASS



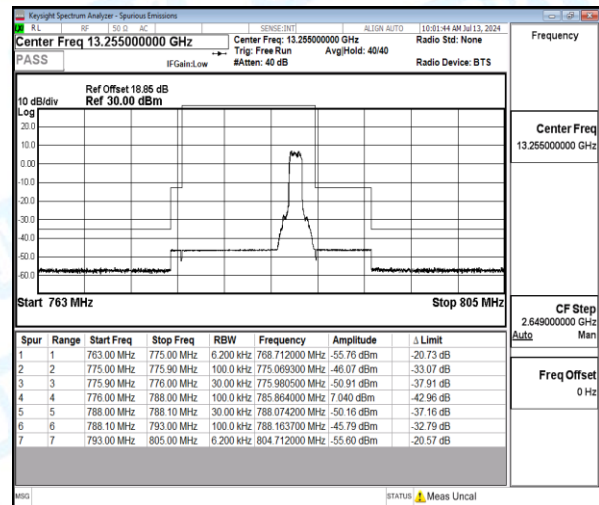
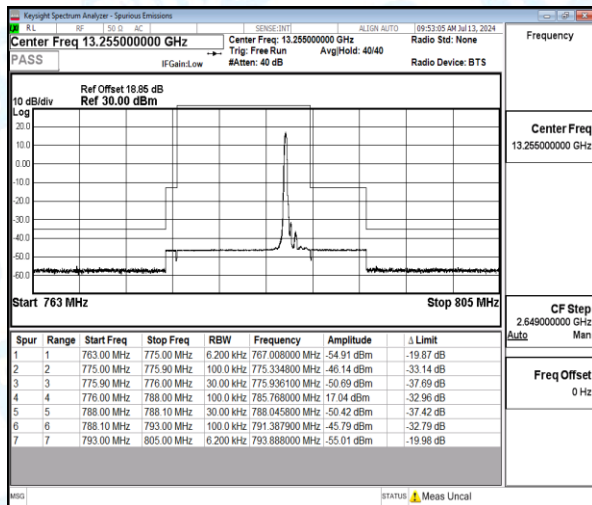
Band13-5MHz-QPSK-23255-1-0-High-767.01--55.09-20.09-PASS

Band13-5MHz-QPSK-23255-6-0-High-793.04--54.84-19.84-PASS



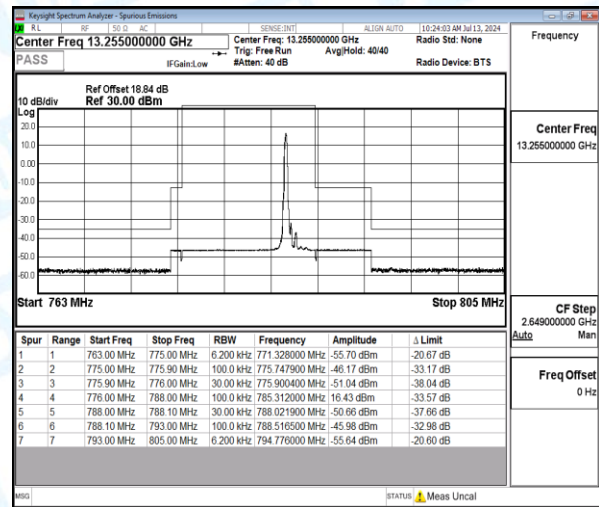
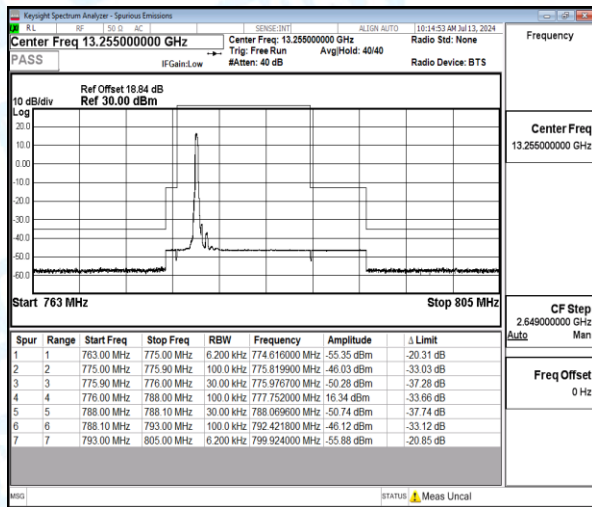
Band13-5MHz-16QAM-23205-1-0-Low-793.20--55.55-20.55-PASS

Band13-5MHz-16QAM-23205-6-0-Low-774.88--55.15-20.15-PASS



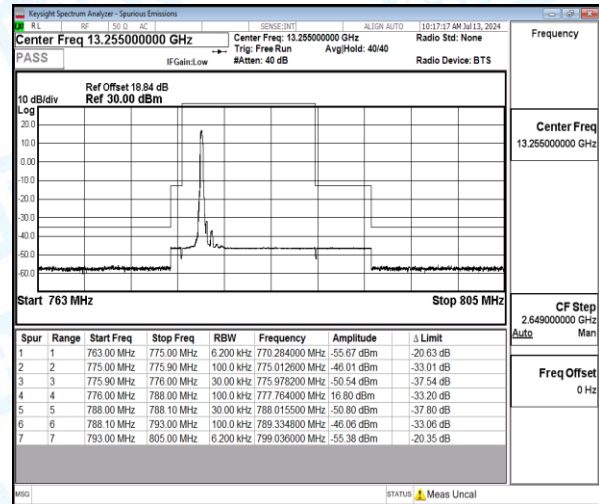
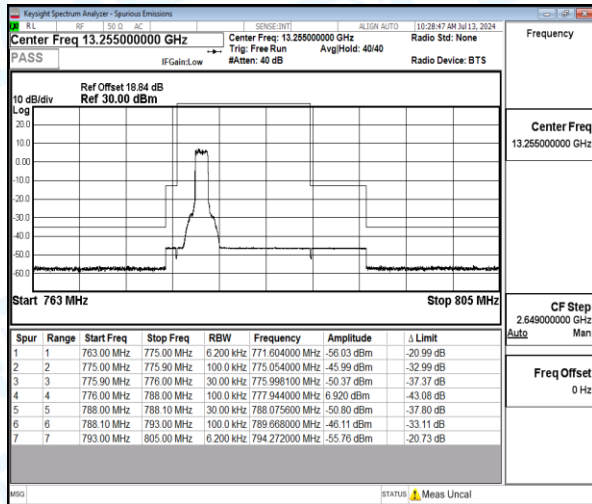
Band13-5MHz-16QAM-23255-1-0-High-767.01--54.91-19.91-PASS

Band13-5MHz-16QAM-23255-6-0-High-804.71--55.60-20.60-PASS



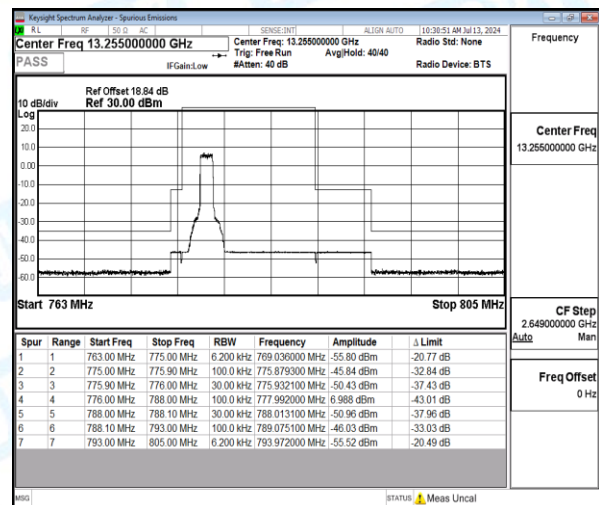
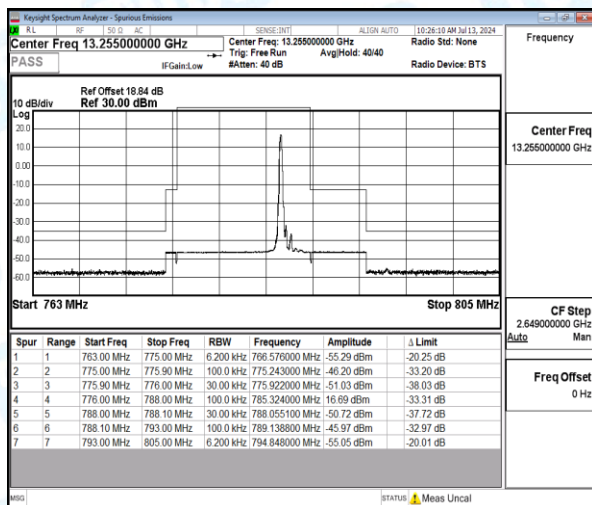
Band13-10MHz-QPSK-23230-1-0-Low-774.62--55.35-20.35-PASS

Band13-10MHz-QPSK-23230-1-0-High-794.78--55.64-20.64-PASS



Band13-10MHz-QPSK-23230-6-0-Low-794.27--55.76-20.76-PASS

Band13-10MHz-16QAM-23230-1-0-Low-799.04--55.38-20.38-PASS



Band13-10MHz-16QAM-23230-1-0-High-794.85--55.05-20.05-PASS

Band13-10MHz-16QAM-23230-6-0-Low-793.97--55.52-20.52-PASS

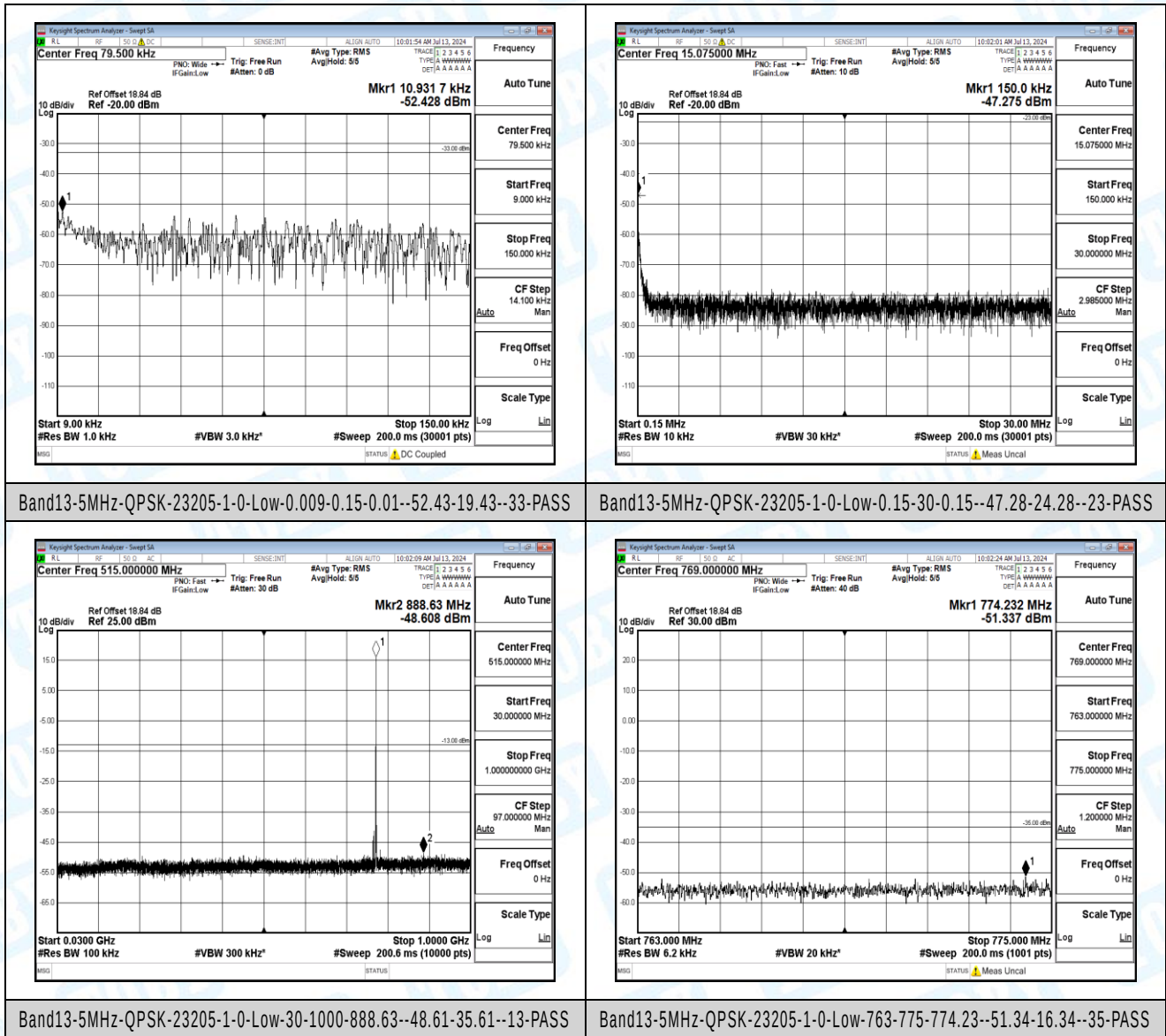
5. Conducted Spurious Emission for M1

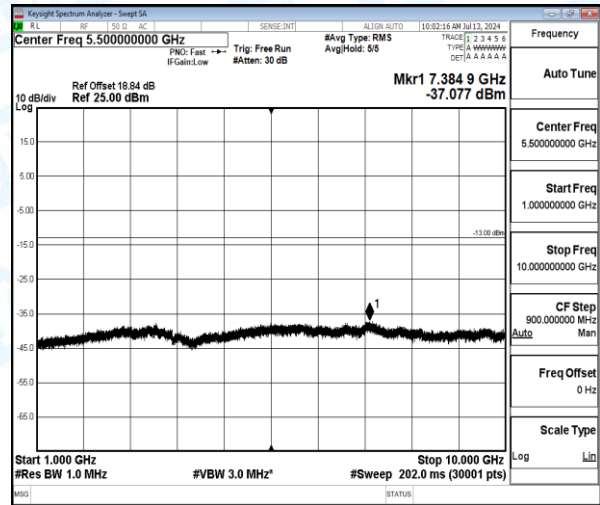
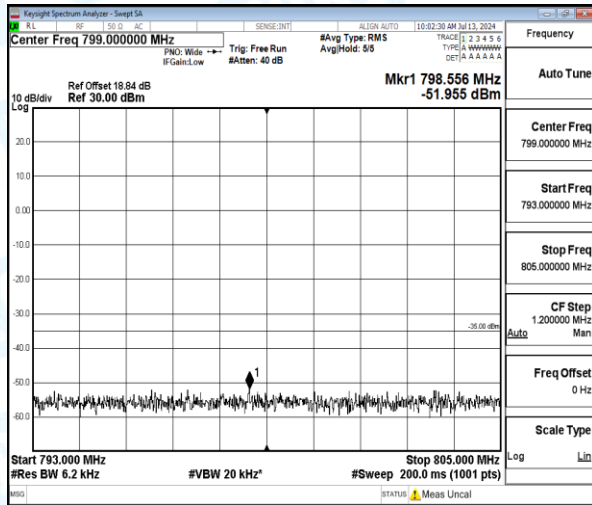
Test Result

Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NB Index	Start Freq	Stop Freq	Result (dBm)	Verdict
Band13	5MHz	23205	QPSK	1	0	Low	0.009	0.15	-52.43	PASS
Band13	5MHz	23205	QPSK	1	0	Low	0.15	30	-47.28	PASS
Band13	5MHz	23205	QPSK	1	0	Low	30	1000	-48.61	PASS
Band13	5MHz	23205	QPSK	1	0	Low	763	775	-51.34	PASS
Band13	5MHz	23205	QPSK	1	0	Low	793	805	-51.96	PASS
Band13	5MHz	23205	QPSK	1	0	Low	1000	10000	-37.08	PASS
Band13	5MHz	23230	QPSK	1	0	Low	0.009	0.15	-50.64	PASS
Band13	5MHz	23230	QPSK	1	0	Low	0.15	30	-51.2	PASS
Band13	5MHz	23230	QPSK	1	0	Low	30	1000	-49.42	PASS
Band13	5MHz	23230	QPSK	1	0	Low	763	775	-51.75	PASS
Band13	5MHz	23230	QPSK	1	0	Low	793	805	-51.69	PASS
Band13	5MHz	23230	QPSK	1	0	Low	1000	10000	-36.95	PASS
Band13	5MHz	23255	QPSK	1	0	High	0.009	0.15	-50.86	PASS
Band13	5MHz	23255	QPSK	1	0	High	0.15	30	-48.05	PASS
Band13	5MHz	23255	QPSK	1	0	High	30	1000	-48.66	PASS
Band13	5MHz	23255	QPSK	1	0	High	763	775	-51.97	PASS
Band13	5MHz	23255	QPSK	1	0	High	793	805	-52.1	PASS
Band13	5MHz	23255	QPSK	1	0	High	1000	10000	-36.93	PASS
Band13	5MHz	23205	16QAM	1	0	Low	0.009	0.15	-49.52	PASS
Band13	5MHz	23205	16QAM	1	0	Low	0.15	30	-46.16	PASS
Band13	5MHz	23205	16QAM	1	0	Low	30	1000	-48.53	PASS
Band13	5MHz	23205	16QAM	1	0	Low	763	775	-50.72	PASS
Band13	5MHz	23205	16QAM	1	0	Low	793	805	-51.86	PASS
Band13	5MHz	23205	16QAM	1	0	Low	1000	10000	-36.81	PASS
Band13	5MHz	23230	16QAM	1	0	Low	0.009	0.15	-51.37	PASS
Band13	5MHz	23230	16QAM	1	0	Low	0.15	30	-47.82	PASS
Band13	5MHz	23230	16QAM	1	0	Low	30	1000	-49.45	PASS
Band13	5MHz	23230	16QAM	1	0	Low	763	775	-51.89	PASS
Band13	5MHz	23230	16QAM	1	0	Low	793	805	-51.74	PASS
Band13	5MHz	23230	16QAM	1	0	Low	1000	10000	-36.99	PASS
Band13	5MHz	23255	16QAM	1	0	High	0.009	0.15	-47.24	PASS
Band13	5MHz	23255	16QAM	1	0	High	0.15	30	-48.76	PASS
Band13	5MHz	23255	16QAM	1	0	High	30	1000	-49.02	PASS

Band13	5MHz	23255	16QAM	1	0	High	763	775	-51.87	PASS
Band13	5MHz	23255	16QAM	1	0	High	793	805	-51.57	PASS
Band13	5MHz	23255	16QAM	1	0	High	1000	10000	-36.91	PASS

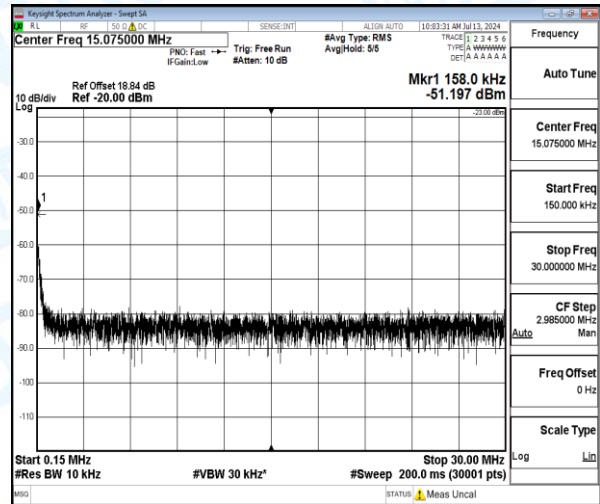
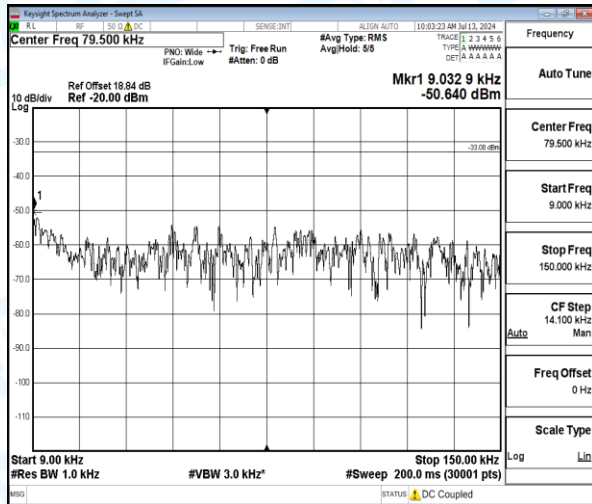
Test Graphs





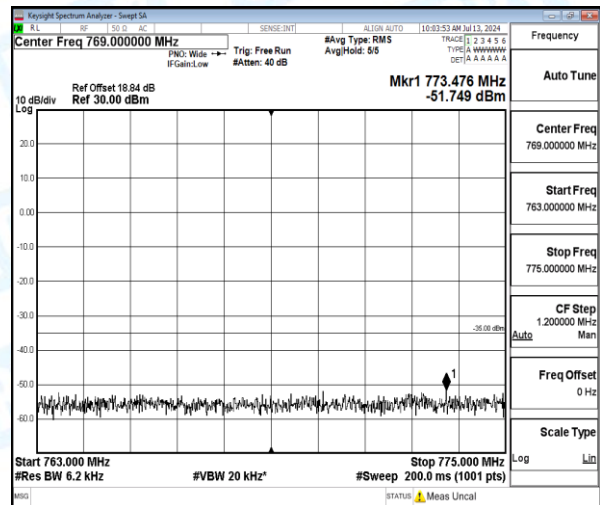
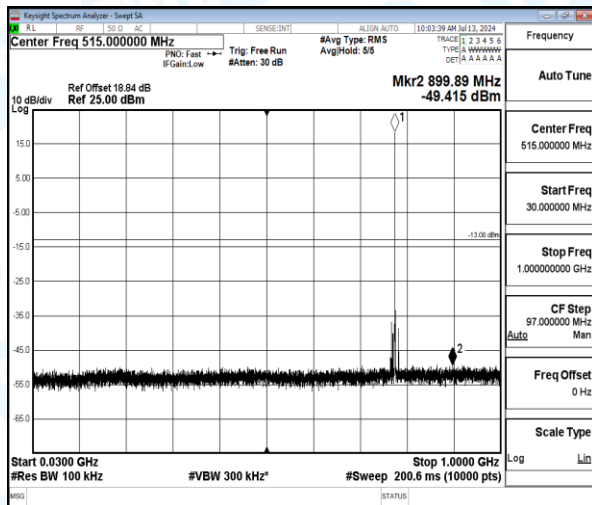
Band13-5MHz-QPSK-23205-1-0-Low-793-805-798.56--51.96-16.96--35-PASS

Band13-5MHz-QPSK-23205-1-0-Low-1000-10000-7384.9--37.08-24.08--13-PASS



Band13-5MHz-QPSK-23230-1-0-Low-0.009-0.15-0.01--50.64-17.64--33-PASS

Band13-5MHz-QPSK-23230-1-0-Low-0.15-30-0.16--51.2-28.2--23-PASS



Band13-5MHz-QPSK-23230-1-0-Low-30-1000-899.89--49.42-36.42--13-PASS

Band13-5MHz-QPSK-23230-1-0-Low-763-775-773.48--51.75-16.75--35-PASS