

FCC LTE-Cat M1 Band13 Test Data

General Description of EUT	
Product Name:	Elevate Telematic Unit
Test Model:	p5
Environmental Conditions	
Temperature:	25℃
Relative Humidity:	55%
Test Voltage:	DC 3.7V
Test Engineer:	Yan zhen ming
Note: For a more detailed features description, please refer to the report TBR-C-202307-0089-21 . The report only show the worst case data.	

Contents

FCC LTE-Cat M1 Band13 Test Data..... 1

1. Conducted Power Output 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 Graphs12

5. Conducted Spurious Emission for M1..... 15

 Test Result..... 15

 Test Graphs16

6. Frequency Stability for M1..... 23

 Test Result..... 23

1. Conducted Power Output Data for M1

Test Result

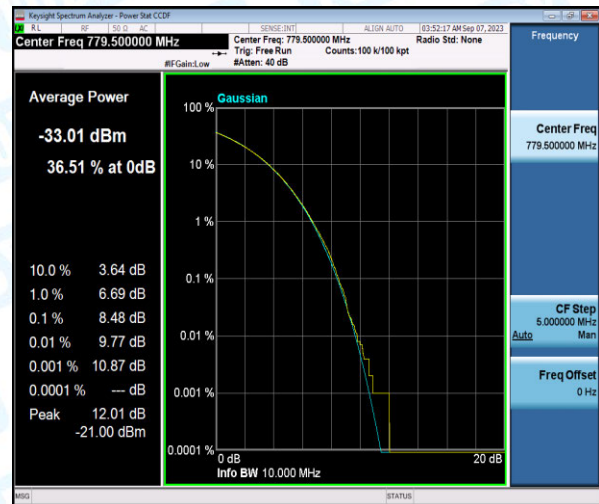
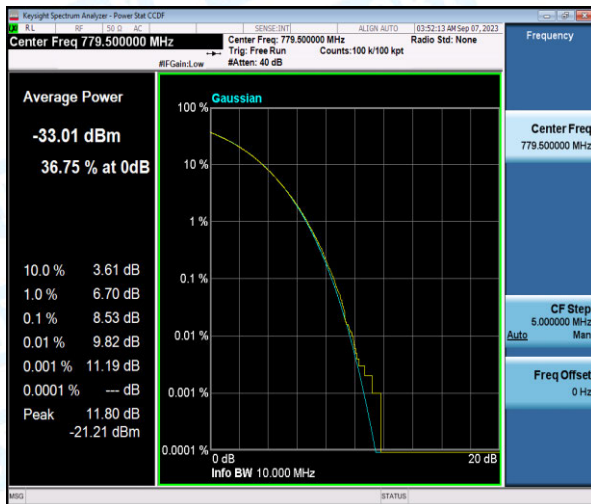
Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NBIndex	Result (dBm)	Limit	Verdict
Band13	5MHz	QPSK	23205	1	0	Low	19.43	34.8	PASS
Band13	5MHz	QPSK	23205	1	5	Low	19.43	34.8	PASS
Band13	5MHz	QPSK	23205	6	0	Low	19.40	34.8	PASS
Band13	5MHz	QPSK	23230	1	0	Low	19.29	34.8	PASS
Band13	5MHz	QPSK	23230	1	5	Low	19.25	34.8	PASS
Band13	5MHz	QPSK	23230	6	0	Low	19.22	34.8	PASS
Band13	5MHz	QPSK	23255	1	0	High	19.21	34.8	PASS
Band13	5MHz	QPSK	23255	1	5	High	19.21	34.8	PASS
Band13	5MHz	QPSK	23255	6	0	High	19.13	34.8	PASS
Band13	5MHz	16QAM	23205	1	0	Low	18.61	34.8	PASS
Band13	5MHz	16QAM	23205	1	5	Low	18.52	34.8	PASS
Band13	5MHz	16QAM	23205	6	0	Low	19.38	34.8	PASS
Band13	5MHz	16QAM	23230	1	0	Low	18.46	34.8	PASS
Band13	5MHz	16QAM	23230	1	5	Low	18.36	34.8	PASS
Band13	5MHz	16QAM	23230	6	0	Low	19.22	34.8	PASS
Band13	5MHz	16QAM	23255	1	0	High	18.26	34.8	PASS
Band13	5MHz	16QAM	23255	1	5	High	18.37	34.8	PASS
Band13	5MHz	16QAM	23255	6	0	High	19.13	34.8	PASS
Band13	10MHz	QPSK	23230	1	0	Low	22.89	34.8	PASS
Band13	10MHz	QPSK	23230	1	5	Low	22.92	34.8	PASS
Band13	10MHz	QPSK	23230	6	0	Low	22.85	34.8	PASS
Band13	10MHz	16QAM	23230	1	0	Low	22.08	34.8	PASS
Band13	10MHz	16QAM	23230	1	5	Low	22.10	34.8	PASS
Band13	10MHz	16QAM	23230	6	0	Low	22.85	34.8	PASS

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

Test Result

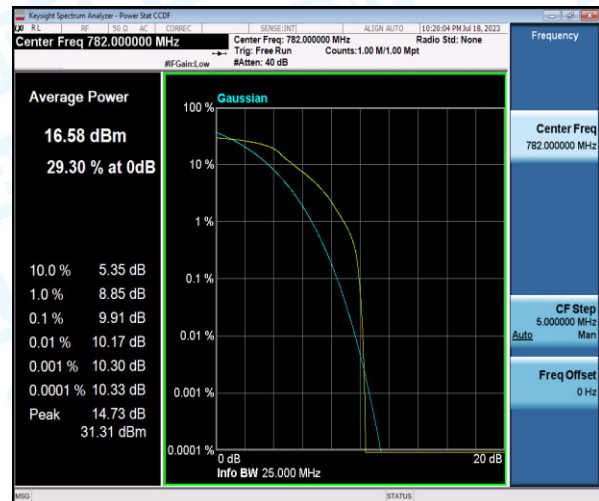
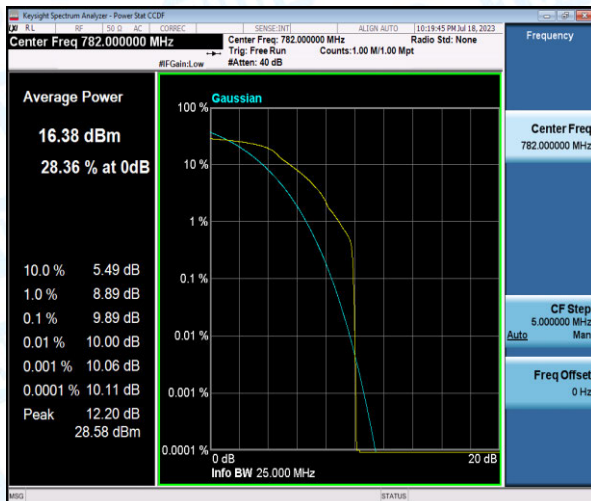
Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NBIndex	Result(dB)	Limit(dB)	Verdict
Band13	5MHz	23205	QPSK	1	0	Low	8.53	<=13	PASS
Band13	5MHz	23205	QPSK	6	0	Low	8.48	<=13	PASS
Band13	5MHz	23230	QPSK	1	0	Low	9.89	<=13	PASS
Band13	5MHz	23230	QPSK	6	0	Low	9.91	<=13	PASS
Band13	5MHz	23255	QPSK	1	0	High	11.52	<=13	PASS
Band13	5MHz	23255	QPSK	6	0	High	10.33	<=13	PASS
Band13	5MHz	23205	16QAM	1	0	Low	8.48	<=13	PASS
Band13	5MHz	23205	16QAM	6	0	Low	8.48	<=13	PASS
Band13	5MHz	23230	16QAM	1	0	Low	12.02	<=13	PASS
Band13	5MHz	23230	16QAM	6	0	Low	9.62	<=13	PASS
Band13	5MHz	23255	16QAM	1	0	High	12.66	<=13	PASS
Band13	5MHz	23255	16QAM	6	0	High	10.70	<=13	PASS
Band13	10MHz	23230	QPSK	1	0	Low	10.04	<=13	PASS
Band13	10MHz	23230	QPSK	6	0	Low	9.66	<=13	PASS
Band13	10MHz	23230	16QAM	1	0	Low	11.34	<=13	PASS
Band13	10MHz	23230	16QAM	6	0	Low	11.17	<=13	PASS

Test Graphs



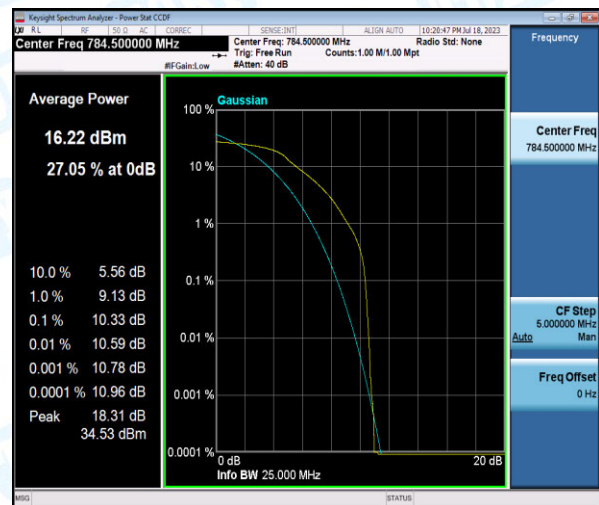
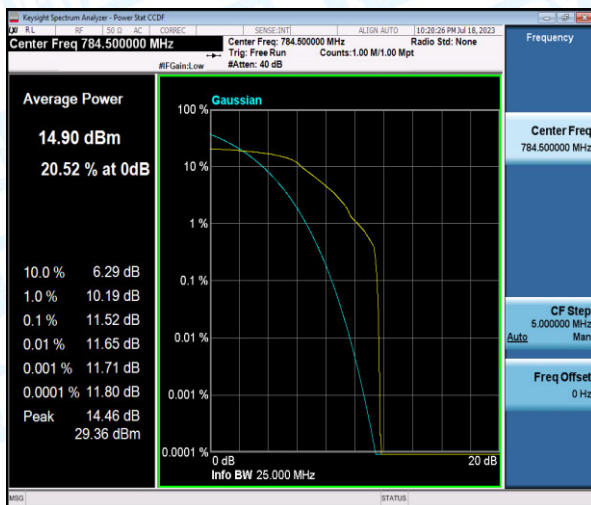
Band13-5MHz-QPSK-23205-1-0-Low-8.53-<=13-PASS

Band13-5MHz-QPSK-23205-6-0-Low-8.48-<=13-PASS



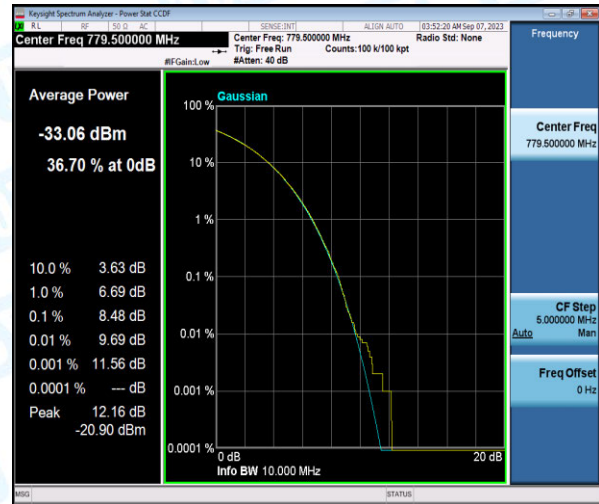
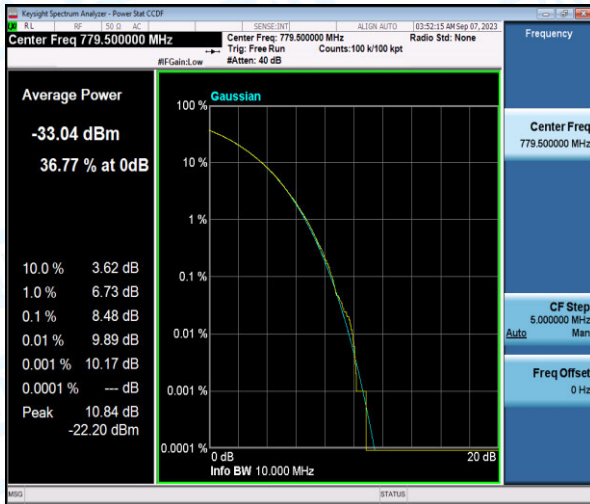
Band13-5MHz-QPSK-23230-1-0-Low-9.89-<=13-PASS

Band13-5MHz-QPSK-23230-6-0-Low-9.91-<=13-PASS



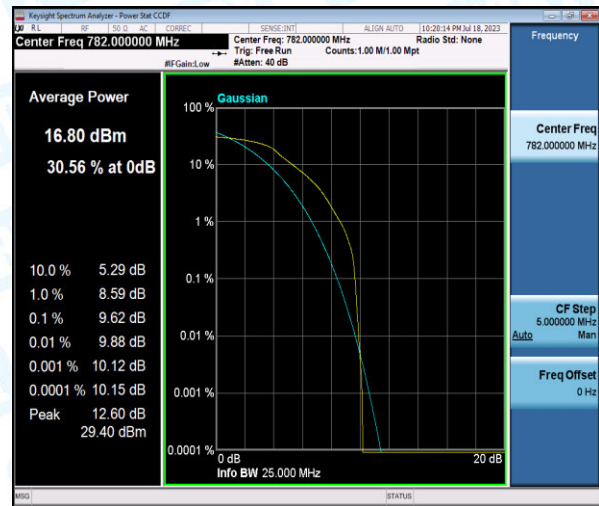
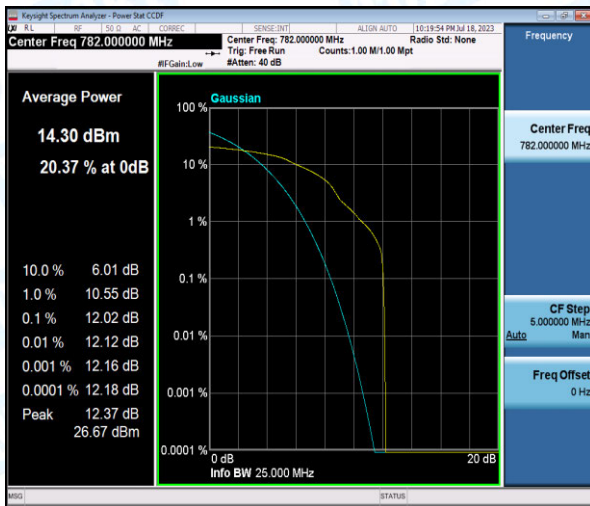
Band13-5MHz-QPSK-23255-1-0-High-11.52-<=13-PASS

Band13-5MHz-QPSK-23255-6-0-High-10.33-<=13-PASS



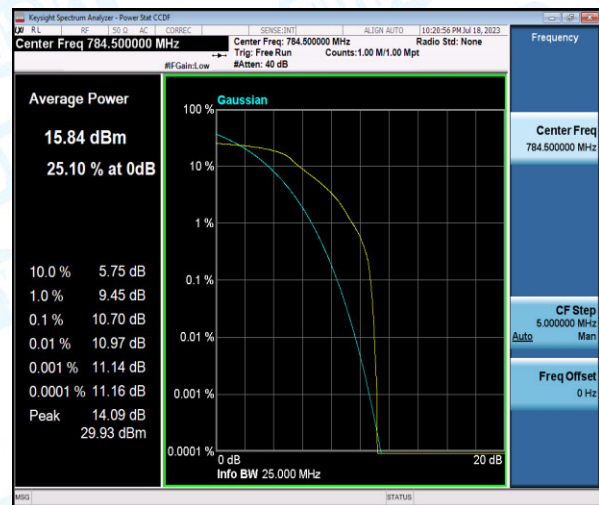
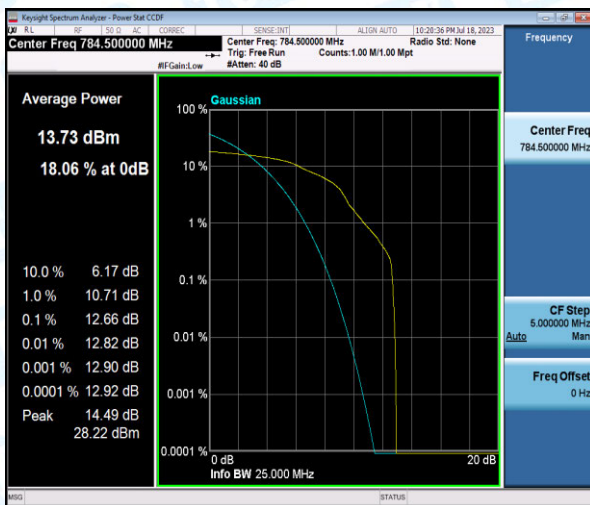
Band13-5MHz-16QAM-23205-1-0-Low-8.48-<=13-PASS

Band13-5MHz-16QAM-23205-6-0-Low-8.48-<=13-PASS



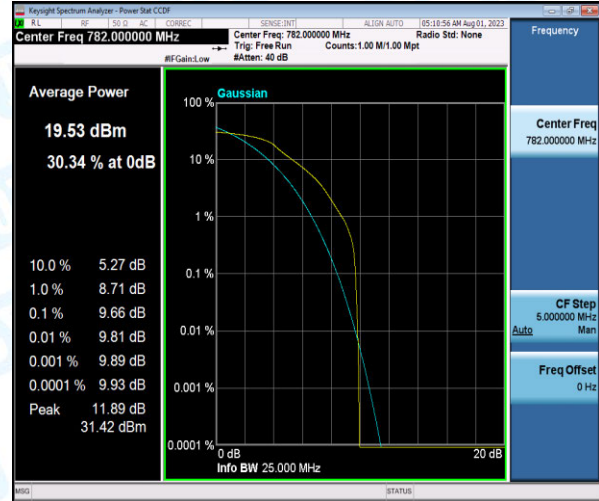
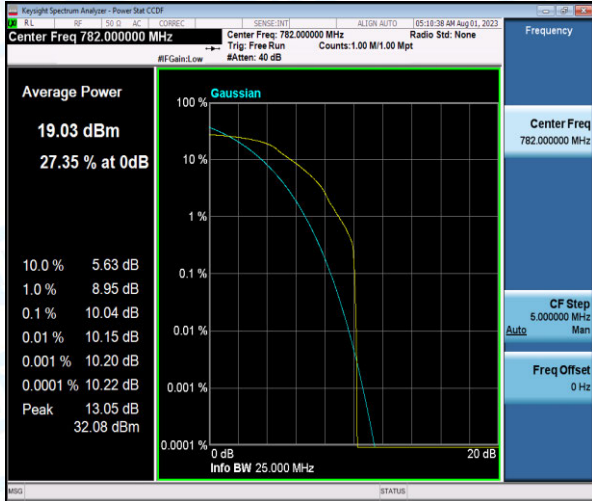
Band13-5MHz-16QAM-23230-1-0-Low-12.02-<=13-PASS

Band13-5MHz-16QAM-23230-6-0-Low-9.62-<=13-PASS



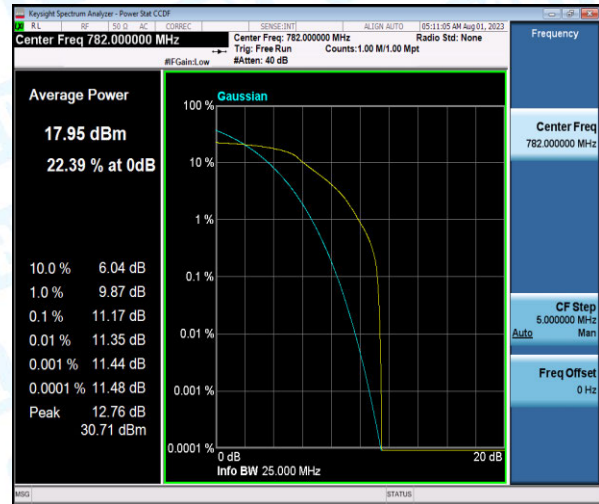
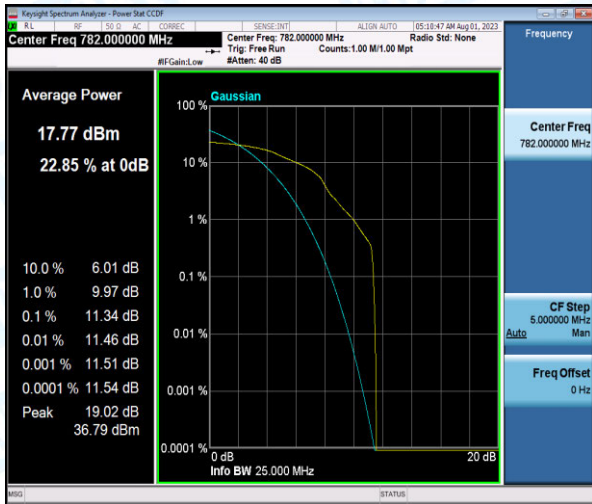
Band13-5MHz-16QAM-23255-1-0-High-12.66-<=13-PASS

Band13-5MHz-16QAM-23255-6-0-High-10.70-<=13-PASS



Band13-10MHz-QPSK-23230-1-0-Low-10.04-<=13-PASS

Band13-10MHz-QPSK-23230-6-0-Low-9.66-<=13-PASS



Band13-10MHz-16QAM-23230-1-0-Low-11.34-<=13-PASS

Band13-10MHz-16QAM-23230-6-0-Low-11.17-<=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	1.2708	2.514	PASS
Band13	5MHz	23230	QPSK	6	0	Low	1.2838	2.637	PASS
Band13	5MHz	23255	QPSK	6	0	High	1.2764	2.831	PASS
Band13	5MHz	23205	16QAM	6	0	Low	1.2852	2.303	PASS
Band13	5MHz	23230	16QAM	6	0	Low	1.2570	2.436	PASS
Band13	5MHz	23255	16QAM	6	0	High	1.2776	2.606	PASS
Band13	10MHz	23230	QPSK	6	0	Low	1.7985	3.701	PASS
Band13	10MHz	23230	16QAM	6	0	Low	1.7496	3.668	PASS

Test Graphs



Band13-5MHz-QPSK-23205-6-0-Low-1.2708-2.514-PASS

Band13-5MHz-QPSK-23230-6-0-Low-1.2838-2.637-PASS



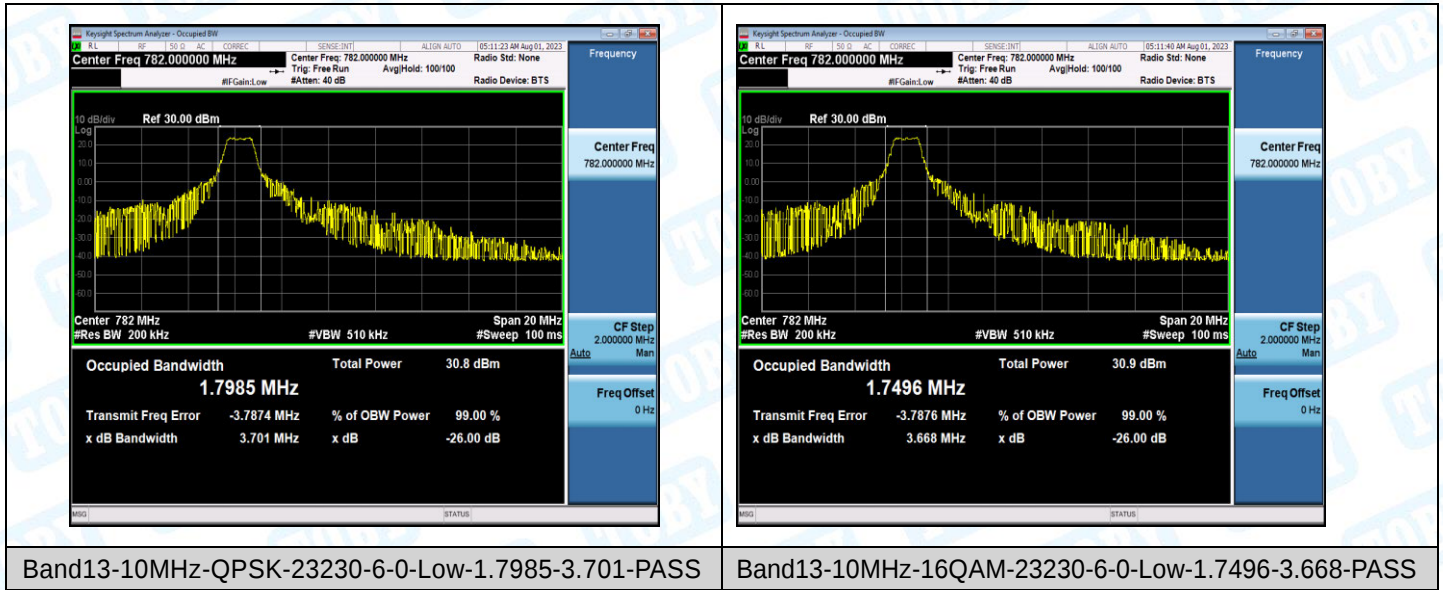
Band13-5MHz-QPSK-23255-6-0-High-1.2764-2.831-PASS

Band13-5MHz-16QAM-23205-6-0-Low-1.2852-2.303-PASS



Band13-5MHz-16QAM-23230-6-0-Low-1.2570-2.436-PASS

Band13-5MHz-16QAM-23255-6-0-High-1.2776-2.606-PASS

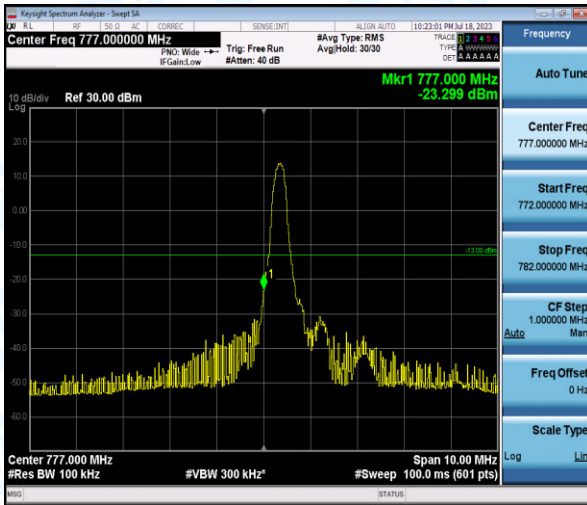


4. Band Edge for M1

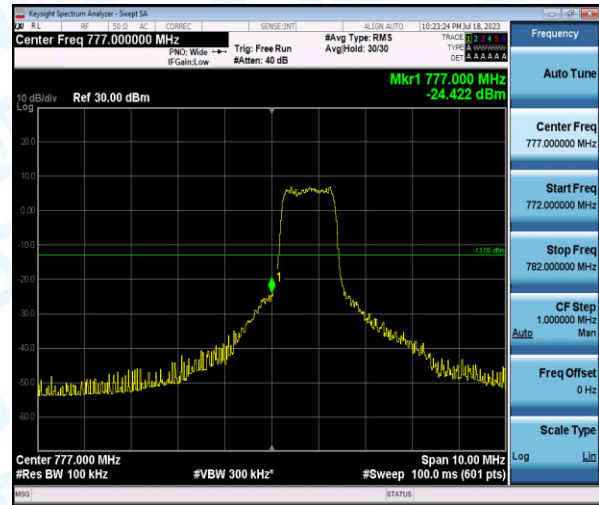
Test Result

Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NB Index	Result(dBm)	Verdict
Band13	5MHz	23205	QPSK	1	0	Low	-23.30	PASS
Band13	5MHz	23205	QPSK	6	0	Low	-24.42	PASS
Band13	5MHz	23255	QPSK	1	0	High	-35.20	PASS
Band13	5MHz	23255	QPSK	6	0	High	-25.04	PASS
Band13	5MHz	23205	16QAM	1	0	Low	-25.10	PASS
Band13	5MHz	23205	16QAM	6	0	Low	-23.53	PASS
Band13	5MHz	23255	16QAM	1	0	High	-35.73	PASS
Band13	5MHz	23255	16QAM	6	0	High	-24.25	PASS
Band13	10MHz	23230	QPSK	1	0	Low	-27.49	PASS
Band13	10MHz	23230	QPSK	1	0	High	-31.76	PASS
Band13	10MHz	23230	QPSK	6	0	Low	-50.11	PASS
Band13	10MHz	23230	16QAM	1	0	Low	-28.02	PASS
Band13	10MHz	23230	16QAM	1	0	High	-33.10	PASS
Band13	10MHz	23230	16QAM	6	0	Low	-50.14	PASS

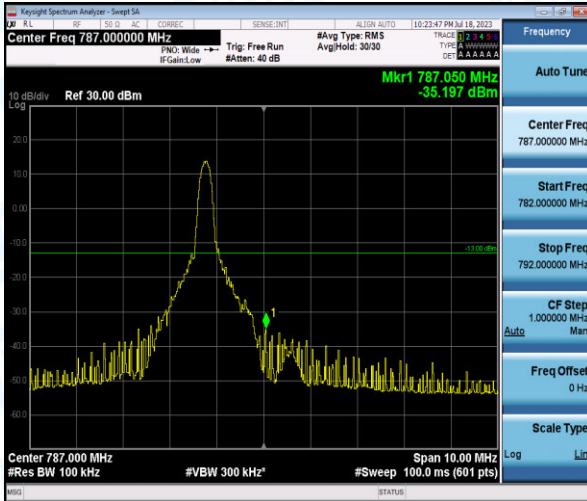
Test Graphs



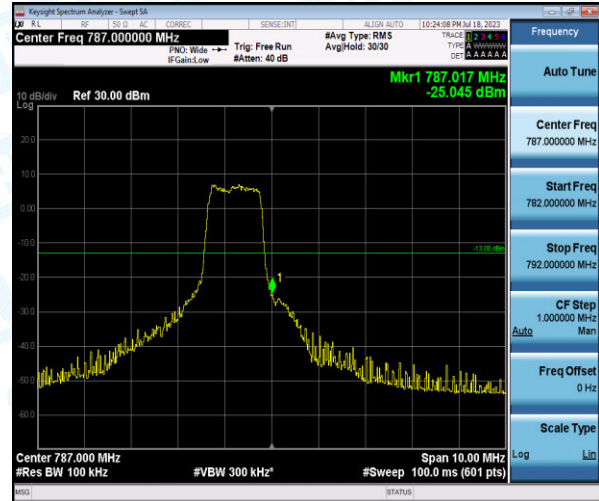
Band13-5MHz-QPSK-23205-1-0-Low--23.30-PASS



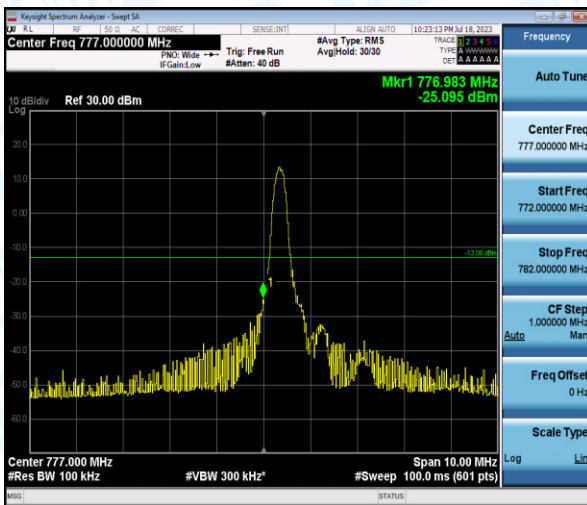
Band13-5MHz-QPSK-23205-6-0-Low--24.42-PASS



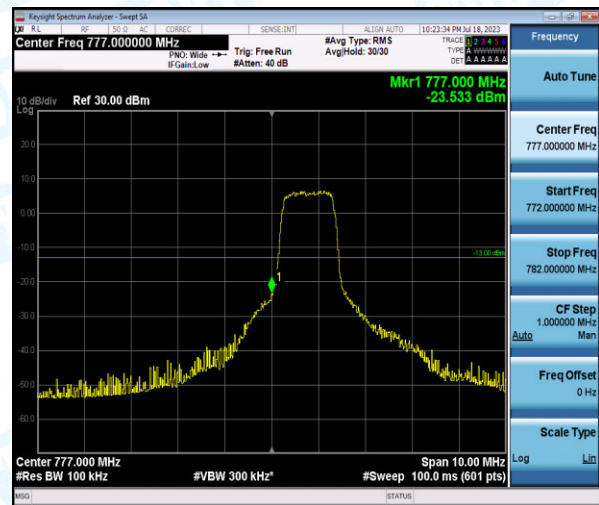
Band13-5MHz-QPSK-23255-1-0-High--35.20-PASS



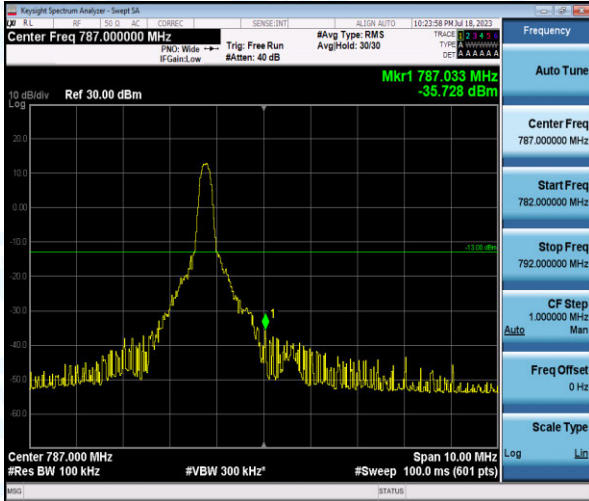
Band13-5MHz-QPSK-23255-6-0-High--25.04-PASS



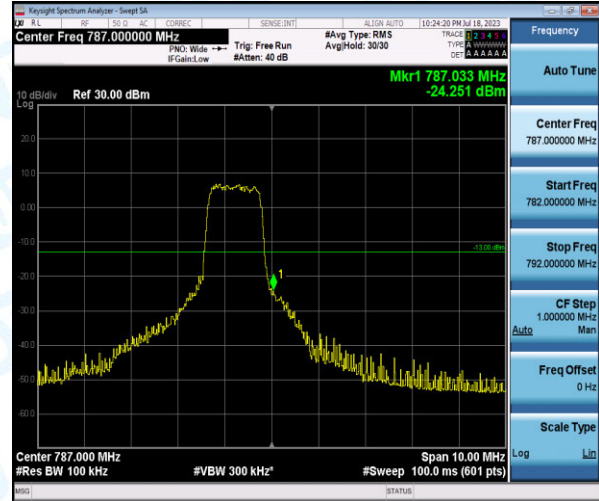
Band13-5MHz-16QAM-23205-1-0-Low--25.10-PASS



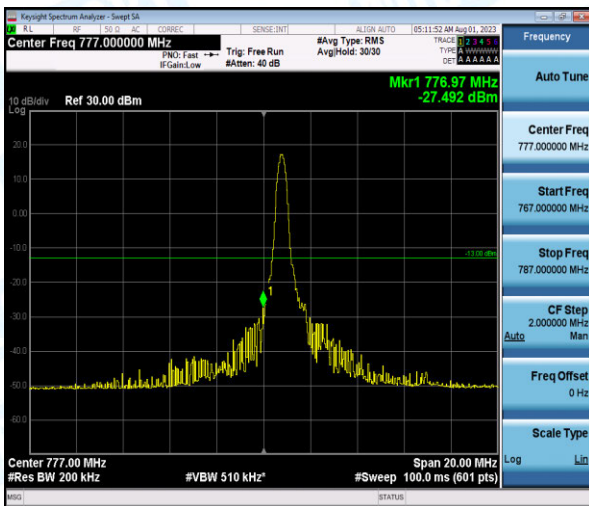
Band13-5MHz-16QAM-23205-6-0-Low--23.53-PASS



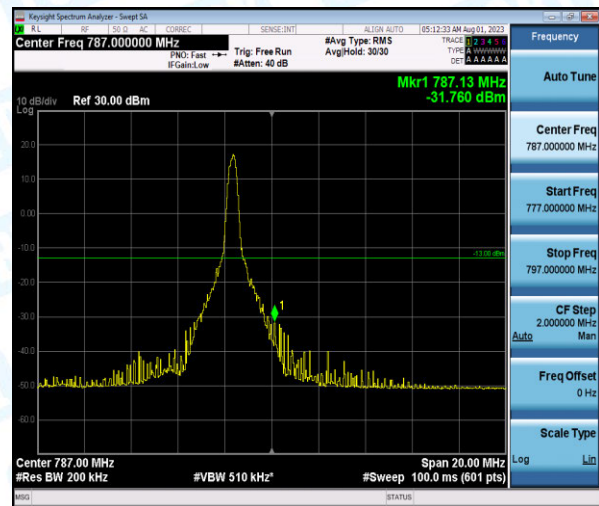
Band13-5MHz-16QAM-23255-1-0-High--35.73-PASS



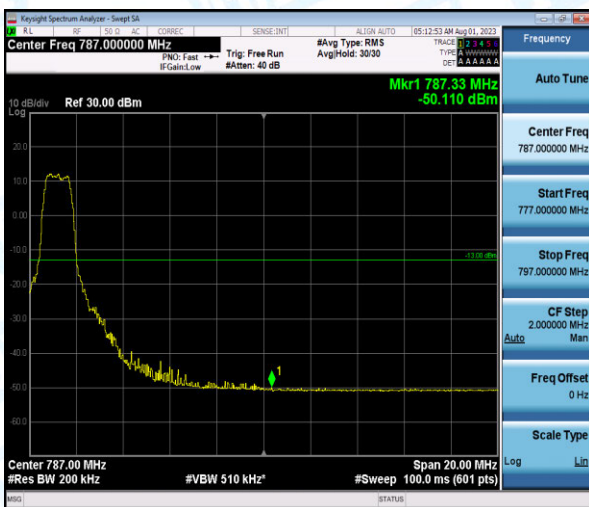
Band13-5MHz-16QAM-23255-6-0-High--24.25-PASS



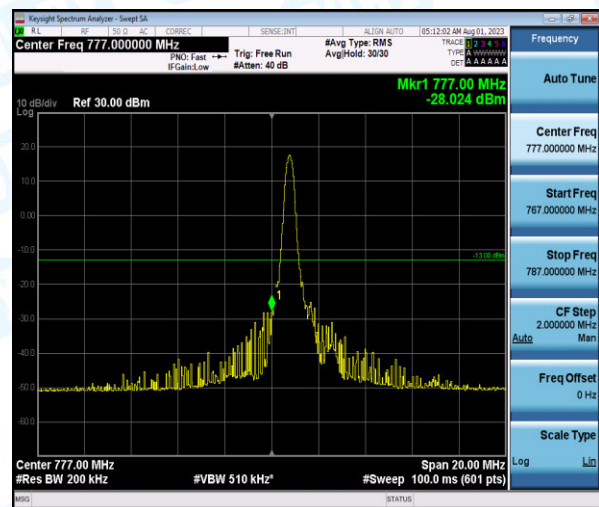
Band13-10MHz-QPSK-23230-1-0-Low--27.49-PASS



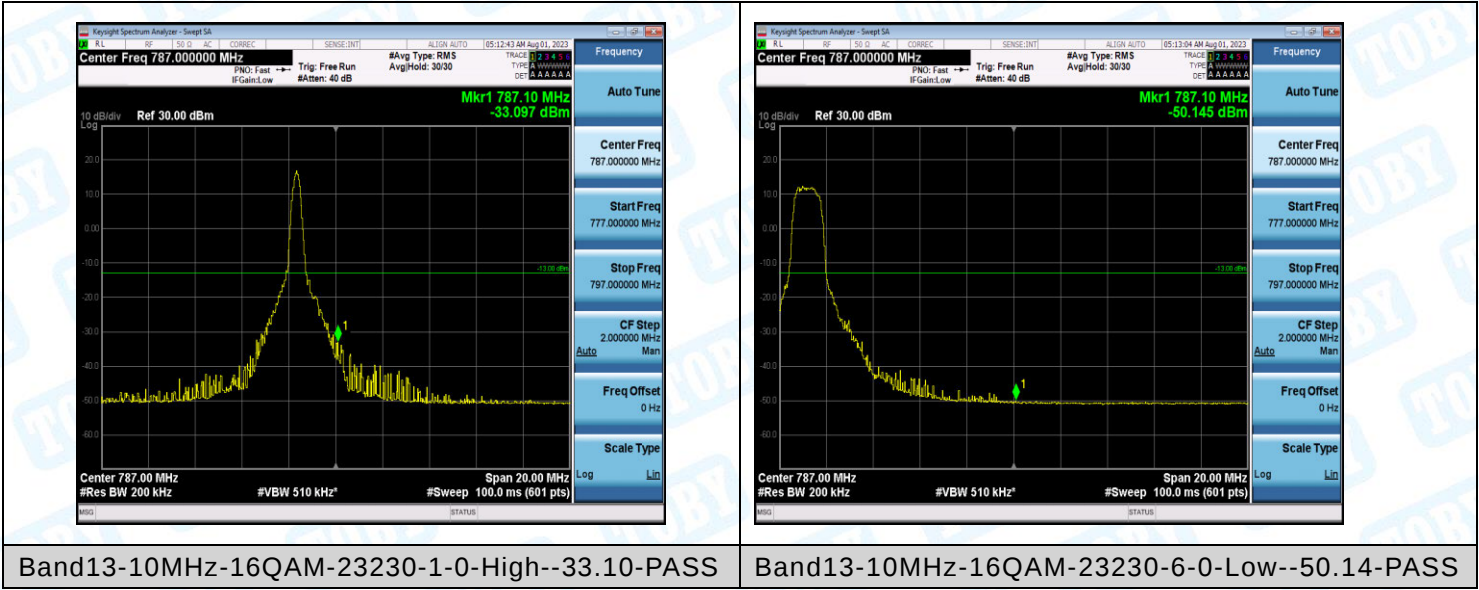
Band13-10MHz-QPSK-23230-1-0-High--31.76-PASS



Band13-10MHz-QPSK-23230-6-0-Low--50.11-PASS



Band13-10MHz-16QAM-23230-1-0-Low--28.02-PASS

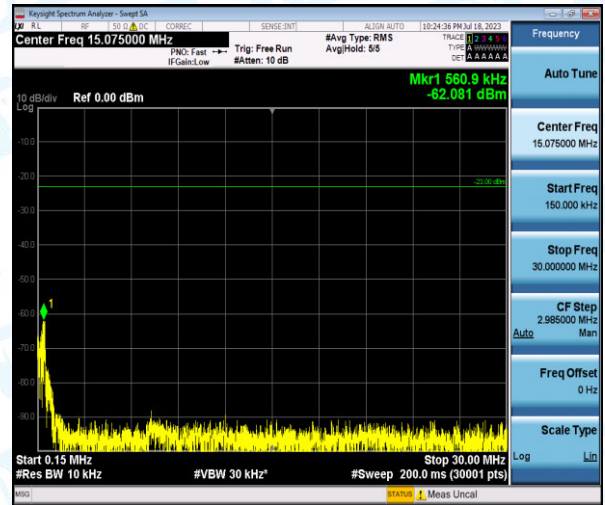
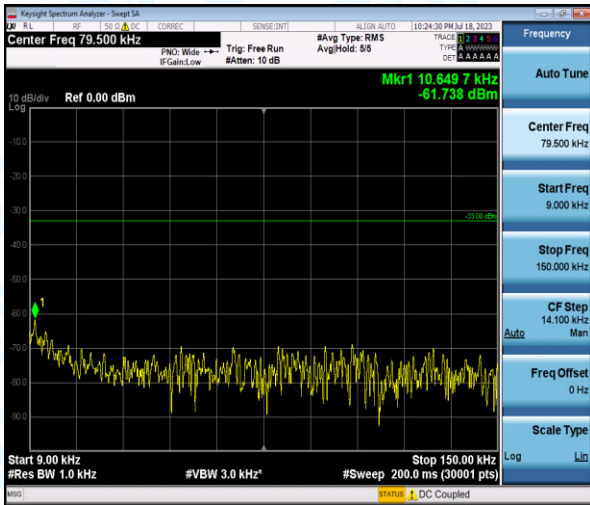


5. Conducted Spurious Emission for M1

Test Result

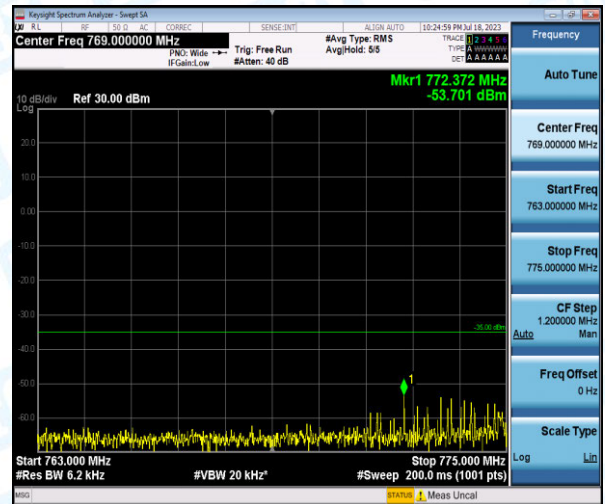
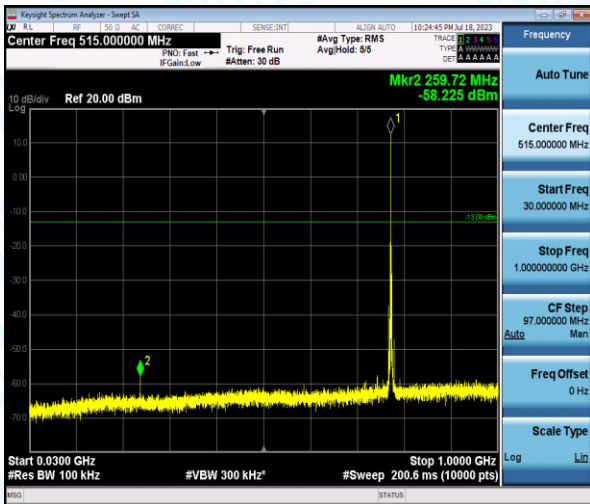
Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NB Index	Start Freq	Stop Freq	Result (dBm)	Verdict
Band13	5MHz	23205	QPSK	1	0	Low	0.009	0.15	-61.74	PASS
Band13	5MHz	23205	QPSK	1	0	Low	0.15	30	-62.08	PASS
Band13	5MHz	23205	QPSK	1	0	Low	30	1000	-58.23	PASS
Band13	5MHz	23205	QPSK	1	0	Low	763	775	-53.7	PASS
Band13	5MHz	23205	QPSK	1	0	Low	793	805	-62.51	PASS
Band13	5MHz	23205	QPSK	1	0	Low	1000	10000	-38.79	PASS
Band13	5MHz	23205	QPSK	1	0	Low	1559	1610	-72.96	PASS
Band13	5MHz	23230	QPSK	1	0	Low	0.009	0.15	-58.86	PASS
Band13	5MHz	23230	QPSK	1	0	Low	0.15	30	-65.04	PASS
Band13	5MHz	23230	QPSK	1	0	Low	30	1000	-59.61	PASS
Band13	5MHz	23230	QPSK	1	0	Low	763	775	-62.65	PASS
Band13	5MHz	23230	QPSK	1	0	Low	793	805	-62.21	PASS
Band13	5MHz	23230	QPSK	1	0	Low	1000	10000	-47.63	PASS
Band13	5MHz	23255	QPSK	1	0	High	0.009	0.15	-57.56	PASS
Band13	5MHz	23255	QPSK	1	0	High	0.15	30	-65.51	PASS
Band13	5MHz	23255	QPSK	1	0	High	30	1000	-59.38	PASS
Band13	5MHz	23255	QPSK	1	0	High	763	775	-62.82	PASS
Band13	5MHz	23255	QPSK	1	0	High	793	805	-62.68	PASS
Band13	5MHz	23255	QPSK	1	0	High	1000	10000	-47.43	PASS
Band13	5MHz	23205	16QAM	1	0	Low	0.009	0.15	-60.95	PASS
Band13	5MHz	23205	16QAM	1	0	Low	0.15	30	-62.93	PASS
Band13	5MHz	23205	16QAM	1	0	Low	30	1000	-58.93	PASS
Band13	5MHz	23205	16QAM	1	0	Low	763	775	-51.9	PASS
Band13	5MHz	23205	16QAM	1	0	Low	793	805	-62.46	PASS
Band13	5MHz	23205	16QAM	1	0	Low	1000	10000	-39.21	PASS
Band13	5MHz	23205	16QAM	1	0	Low	1559	1610	-72.98	PASS
Band13	5MHz	23230	16QAM	1	0	Low	0.009	0.15	-57.99	PASS
Band13	5MHz	23230	16QAM	1	0	Low	0.15	30	-61.76	PASS
Band13	5MHz	23230	16QAM	1	0	Low	30	1000	-59.56	PASS
Band13	5MHz	23230	16QAM	1	0	Low	763	775	-62.92	PASS
Band13	5MHz	23230	16QAM	1	0	Low	793	805	-62.42	PASS
Band13	5MHz	23230	16QAM	1	0	Low	1000	10000	-47.04	PASS
Band13	5MHz	23255	16QAM	1	0	High	0.009	0.15	-57.39	PASS
Band13	5MHz	23255	16QAM	1	0	High	0.15	30	-61.61	PASS
Band13	5MHz	23255	16QAM	1	0	High	30	1000	-59.25	PASS
Band13	5MHz	23255	16QAM	1	0	High	763	775	-62.56	PASS
Band13	5MHz	23255	16QAM	1	0	High	793	805	-63.02	PASS
Band13	5MHz	23255	16QAM	1	0	High	1000	10000	-47.55	PASS

Test Graphs



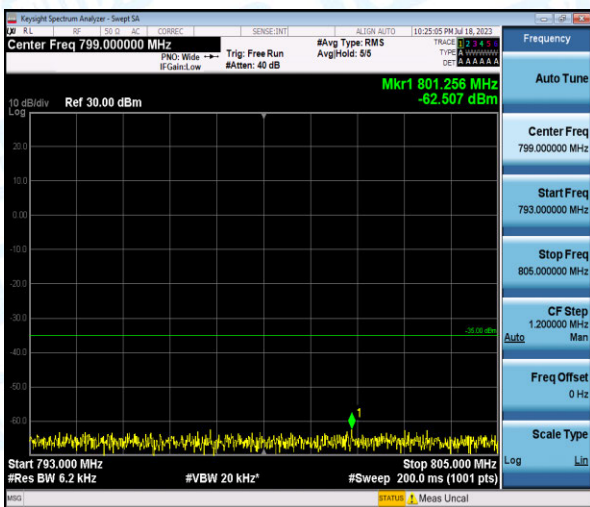
Band13-5MHz-QPSK-23205-1-0-Low-0.009-0.15--61.74-PASS

Band13-5MHz-QPSK-23205-1-0-Low-0.15-30--62.08-PASS



Band13-5MHz-QPSK-23205-1-0-Low-30-1000--58.23-PASS

Band13-5MHz-QPSK-23205-1-0-Low-763-775--53.7-PASS



Band13-5MHz-QPSK-23205-1-0-Low-793-805--62.51-PASS

Band13-5MHz-QPSK-23205-1-0-Low-1000-10000--38.79-PASS