

Appendix A: Effective (Isotropic) Radiated Power Output Data

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
Band13	5MHz	QPSK	23205	1RB#0	23.28	22.83	34.77	PASS
Band13	5MHz	QPSK	23205	1RB#12	23.42	22.97	34.77	PASS
Band13	5MHz	QPSK	23205	1RB#24	23.28	22.83	34.77	PASS
Band13	5MHz	QPSK	23205	12RB#0	22.29	21.84	34.77	PASS
Band13	5MHz	QPSK	23205	12RB#6	22.32	21.87	34.77	PASS
Band13	5MHz	QPSK	23205	12RB#11	22.33	21.88	34.77	PASS
Band13	5MHz	QPSK	23205	25RB#0	22.38	21.93	34.77	PASS
Band13	5MHz	QPSK	23230	1RB#0	23.42	22.97	34.77	PASS
Band13	5MHz	QPSK	23230	1RB#12	23.51	23.06	34.77	PASS
Band13	5MHz	QPSK	23230	1RB#24	23.42	22.97	34.77	PASS
Band13	5MHz	QPSK	23230	12RB#0	22.47	22.02	34.77	PASS
Band13	5MHz	QPSK	23230	12RB#6	22.41	21.96	34.77	PASS
Band13	5MHz	QPSK	23230	12RB#11	22.39	21.94	34.77	PASS
Band13	5MHz	QPSK	23230	25RB#0	22.48	22.03	34.77	PASS
Band13	5MHz	QPSK	23255	1RB#0	23.42	22.97	34.77	PASS
Band13	5MHz	QPSK	23255	1RB#12	23.54	23.09	34.77	PASS
Band13	5MHz	QPSK	23255	1RB#24	23.49	23.04	34.77	PASS
Band13	5MHz	QPSK	23255	12RB#0	22.50	22.05	34.77	PASS
Band13	5MHz	QPSK	23255	12RB#6	22.45	22	34.77	PASS
Band13	5MHz	QPSK	23255	12RB#11	22.49	22.04	34.77	PASS
Band13	5MHz	QPSK	23255	25RB#0	22.49	22.04	34.77	PASS
Band13	5MHz	16QAM	23205	1RB#0	22.35	21.9	34.77	PASS
Band13	5MHz	16QAM	23205	1RB#12	22.40	21.95	34.77	PASS
Band13	5MHz	16QAM	23205	1RB#24	22.31	21.86	34.77	PASS
Band13	5MHz	16QAM	23205	12RB#0	21.30	20.85	34.77	PASS
Band13	5MHz	16QAM	23205	12RB#6	21.34	20.89	34.77	PASS
Band13	5MHz	16QAM	23205	12RB#11	21.36	20.91	34.77	PASS
Band13	5MHz	16QAM	23205	25RB#0	21.43	20.98	34.77	PASS
Band13	5MHz	16QAM	23230	1RB#0	22.41	21.96	34.77	PASS
Band13	5MHz	16QAM	23230	1RB#12	22.52	22.07	34.77	PASS
Band13	5MHz	16QAM	23230	1RB#24	22.44	21.99	34.77	PASS
Band13	5MHz	16QAM	23230	12RB#0	21.43	20.98	34.77	PASS
Band13	5MHz	16QAM	23230	12RB#6	21.39	20.94	34.77	PASS
Band13	5MHz	16QAM	23230	12RB#11	21.42	20.97	34.77	PASS
Band13	5MHz	16QAM	23230	25RB#0	21.51	21.06	34.77	PASS

Band13	5MHz	16QAM	23255	1RB#0	22.58	22.13	34.77	PASS
Band13	5MHz	16QAM	23255	1RB#12	22.75	22.3	34.77	PASS
Band13	5MHz	16QAM	23255	1RB#24	22.73	22.28	34.77	PASS
Band13	5MHz	16QAM	23255	12RB#0	21.51	21.06	34.77	PASS
Band13	5MHz	16QAM	23255	12RB#6	21.49	21.04	34.77	PASS
Band13	5MHz	16QAM	23255	12RB#11	21.49	21.04	34.77	PASS
Band13	5MHz	16QAM	23255	25RB#0	21.47	21.02	34.77	PASS
Band13	10MHz	QPSK	23230	1RB#0	23.42	22.97	34.77	PASS
Band13	10MHz	QPSK	23230	1RB#24	23.49	23.04	34.77	PASS
Band13	10MHz	QPSK	23230	1RB#49	23.54	23.09	34.77	PASS
Band13	10MHz	QPSK	23230	25RB#0	22.45	22	34.77	PASS
Band13	10MHz	QPSK	23230	25RB#12	22.41	21.96	34.77	PASS
Band13	10MHz	QPSK	23230	25RB#24	22.40	21.95	34.77	PASS
Band13	10MHz	QPSK	23230	50RB#0	22.47	22.02	34.77	PASS
Band13	10MHz	16QAM	23230	1RB#0	22.64	22.19	34.77	PASS
Band13	10MHz	16QAM	23230	1RB#24	22.61	22.16	34.77	PASS
Band13	10MHz	16QAM	23230	1RB#49	22.74	22.29	34.77	PASS
Band13	10MHz	16QAM	23230	25RB#0	21.44	20.99	34.77	PASS
Band13	10MHz	16QAM	23230	25RB#12	21.44	20.99	34.77	PASS
Band13	10MHz	16QAM	23230	25RB#24	21.44	20.99	34.77	PASS
Band13	10MHz	16QAM	23230	50RB#0	21.40	20.95	34.77	PASS

Remark: ERP (dBm) = EIRP (dBm) - 2.15 (dB). (For Band 13)

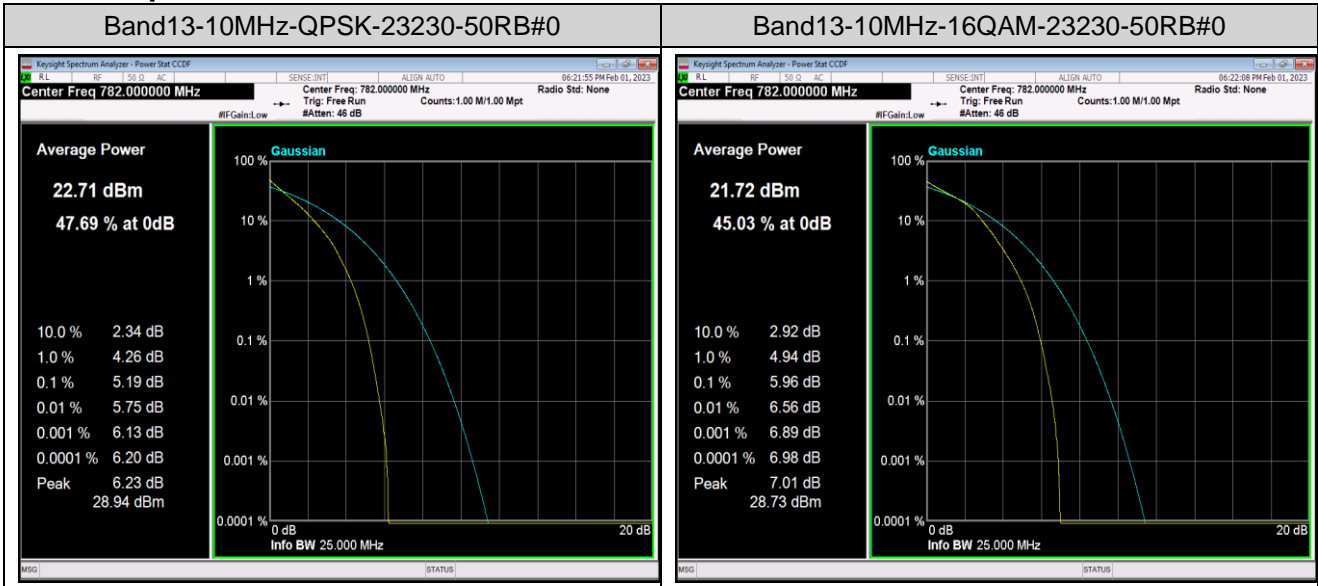
Appendix B: Peak-to-Average Ratio(CCDF)

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band13	10MHz	QPSK	23230	50RB#0	5.19	13	PASS
Band13	10MHz	16QAM	23230	50RB#0	5.96	13	PASS

Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.

Test Graphs

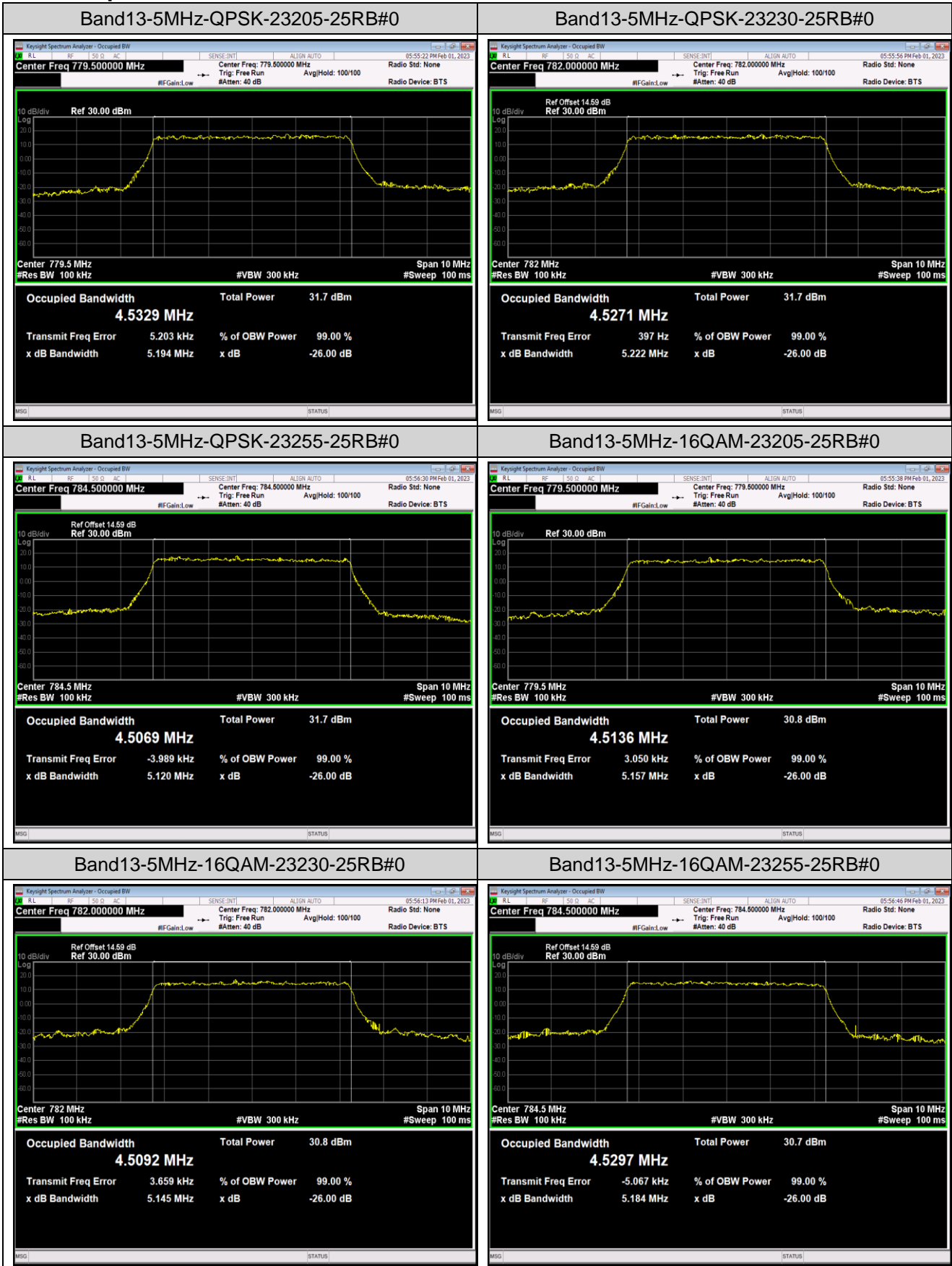


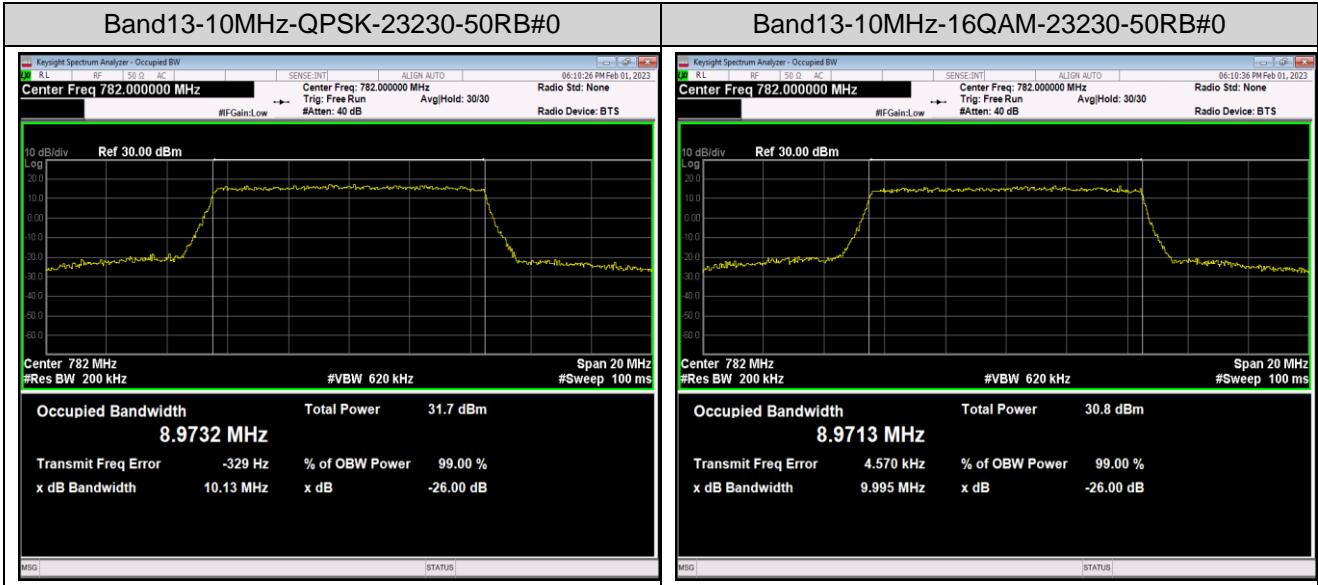
Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band13	5MHz	QPSK	23205	25RB#0	4.5329	5.194	PASS
Band13	5MHz	QPSK	23230	25RB#0	4.5271	5.222	PASS
Band13	5MHz	QPSK	23255	25RB#0	4.5069	5.120	PASS
Band13	5MHz	16QAM	23205	25RB#0	4.5136	5.157	PASS
Band13	5MHz	16QAM	23230	25RB#0	4.5092	5.145	PASS
Band13	5MHz	16QAM	23255	25RB#0	4.5297	5.184	PASS
Band13	10MHz	QPSK	23230	50RB#0	8.9732	10.13	PASS
Band13	10MHz	16QAM	23230	50RB#0	8.9713	9.995	PASS

Test Graphs





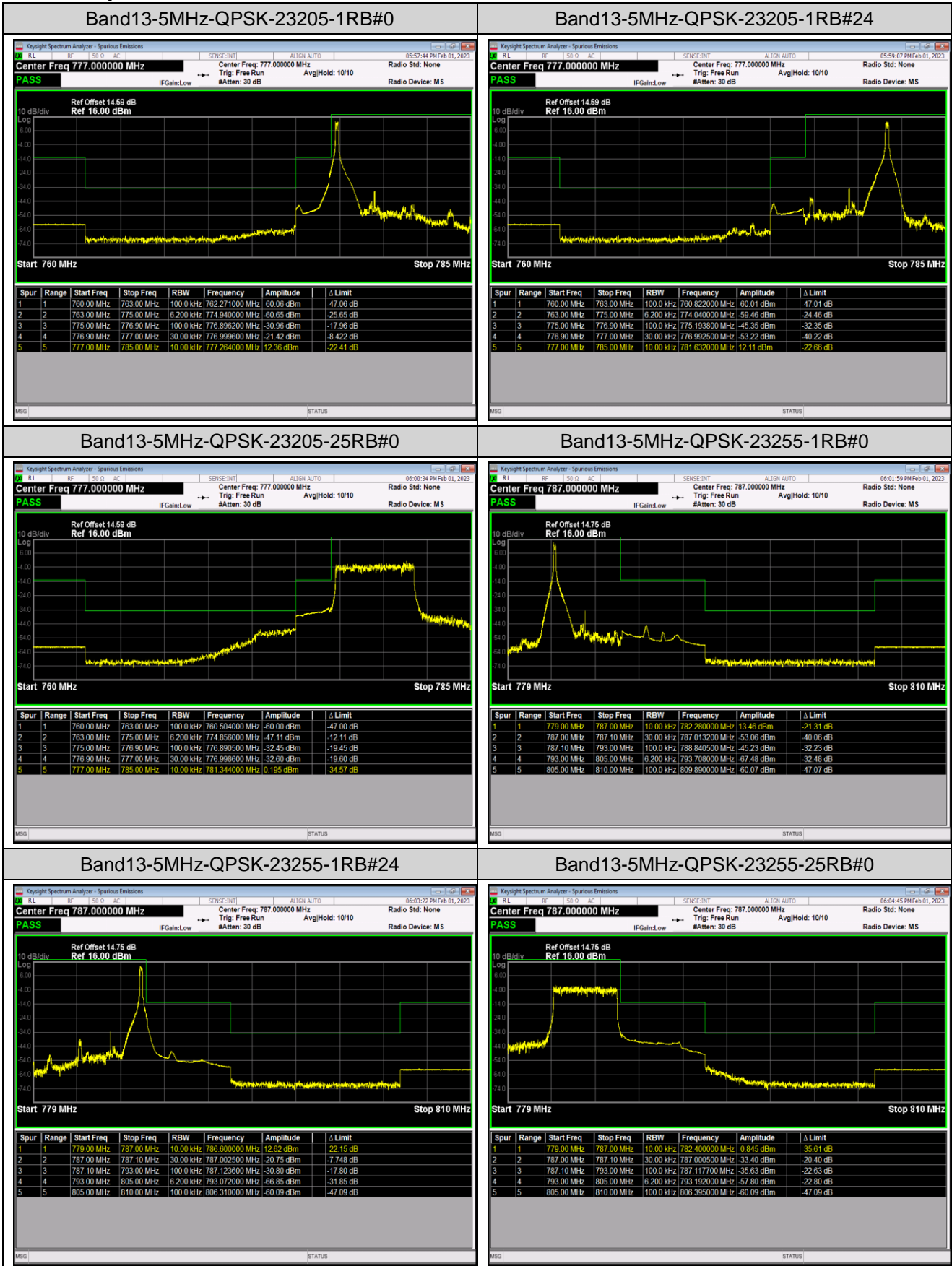
Appendix D: Band Edge

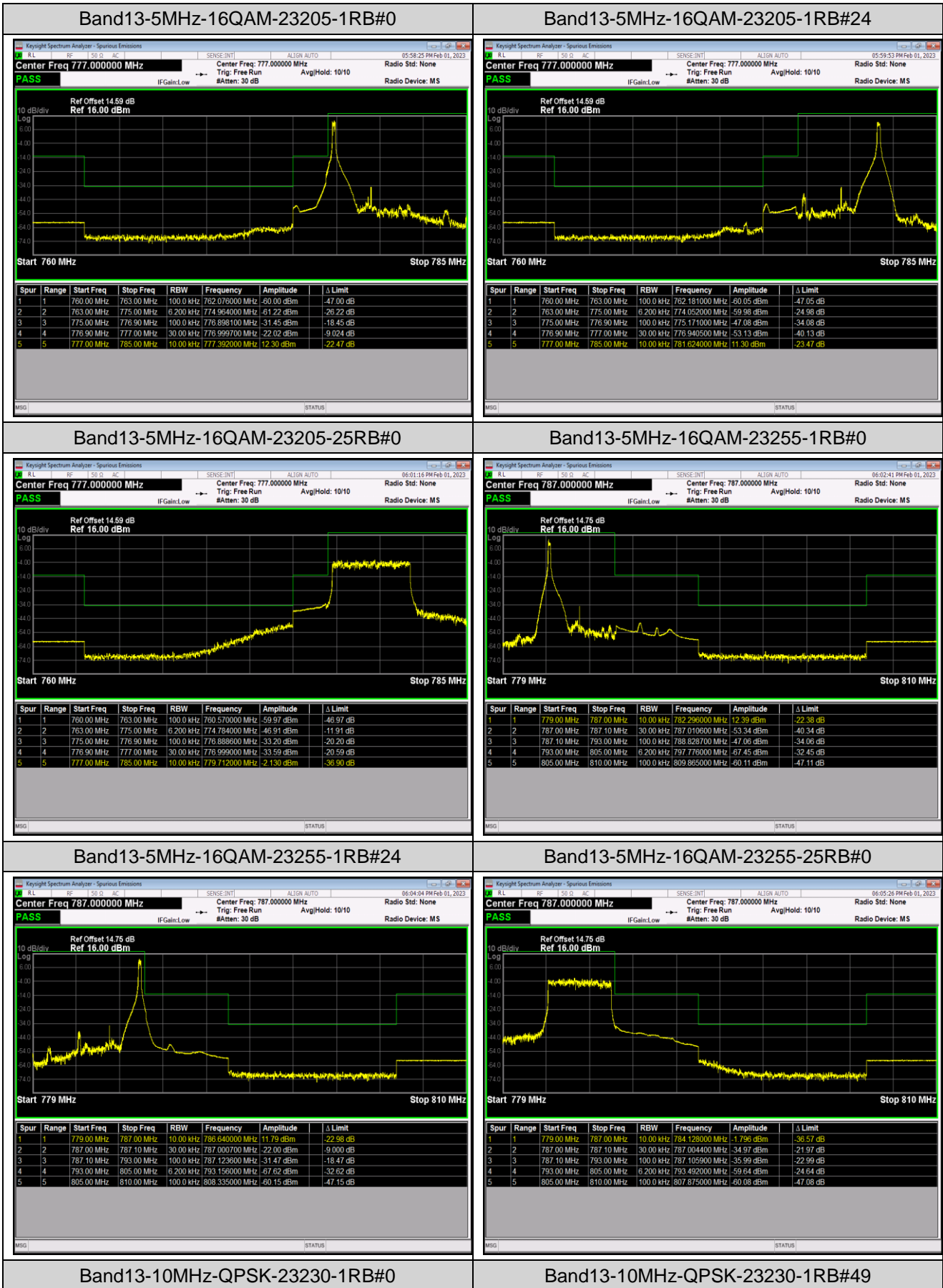
Test Result (worst case)

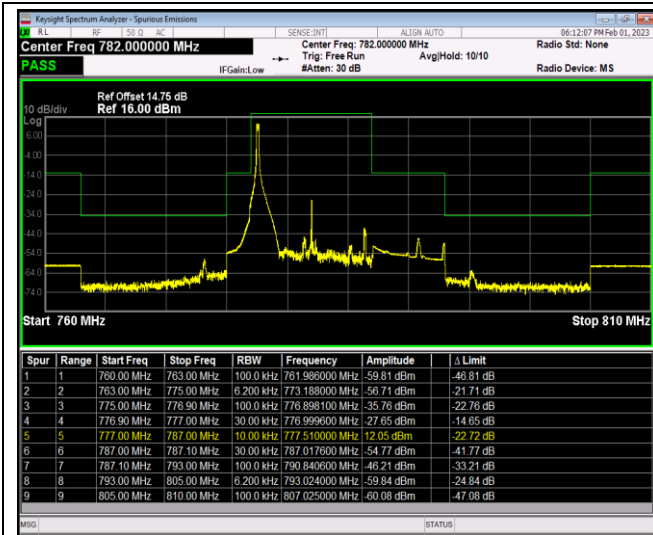
Band	Bandwidth	Modulation	Channel	RB Config.	Result (dBm)	Verdict
Band13	5MHz	QPSK	23205	1RB#0	-60.06,-60.65,-30.96,-21.42	PASS
Band13	5MHz	QPSK	23205	1RB#24	-60.01,-59.46,-45.35,-53.22	PASS
Band13	5MHz	QPSK	23205	25RB#0	-60.00,-47.11,-32.45,-32.60	PASS
Band13	5MHz	QPSK	23255	1RB#0	-53.06,-45.23,-67.48,-60.07	PASS
Band13	5MHz	QPSK	23255	1RB#24	-20.75,-30.80,-66.85,-60.09	PASS
Band13	5MHz	QPSK	23255	25RB#0	-33.40,-35.63,-57.80,-60.09	PASS
Band13	5MHz	16QAM	23205	1RB#0	-60.00,-61.22,-31.45,-22.02	PASS
Band13	5MHz	16QAM	23205	1RB#24	-60.05,-59.98,-47.08,-53.13	PASS
Band13	5MHz	16QAM	23205	25RB#0	-59.97,-46.91,-33.20,-33.59	PASS
Band13	5MHz	16QAM	23255	1RB#0	-53.34,-47.06,-67.45,-60.11	PASS
Band13	5MHz	16QAM	23255	1RB#24	-22.00,-31.47,-67.62,-60.15	PASS
Band13	5MHz	16QAM	23255	25RB#0	-34.97,-35.99,-59.64,-60.08	PASS
Band13	10MHz	QPSK	23230	1RB#0	-59.81,-56.71,-35.76,-27.65,-5 4.77,-46.21,-59.84,-60.08	PASS
Band13	10MHz	QPSK	23230	1RB#49	-59.88,-56.37,-49.97,-54.33,-2 7.60,-35.94,-64.80,-59.87	PASS
Band13	10MHz	QPSK	23230	50RB#0	-59.84,-45.58,-34.53,-37.64,-3 9.24,-37.03,-51.73,-60.10	PASS
Band13	10MHz	16QAM	23230	1RB#0	-59.85,-58.48,-37.23,-28.44,-5 4.88,-47.78,-60.00,-60.12	PASS
Band13	10MHz	16QAM	23230	1RB#49	-59.90,-58.49,-50.27,-54.53,-2 7.19,-36.49,-65.64,-60.12	PASS
Band13	10MHz	16QAM	23230	50RB#0	-59.88,-46.82,-35.83,-38.94,-4 0.08,-37.70,-53.09,-60.11	PASS

Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.

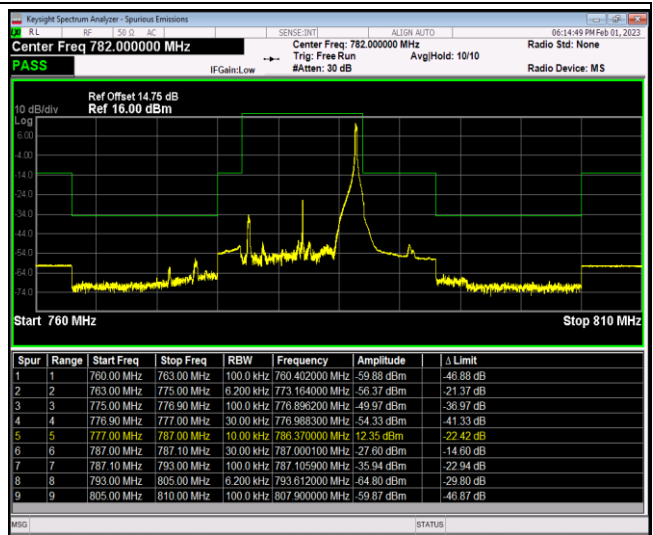
Test Graphs



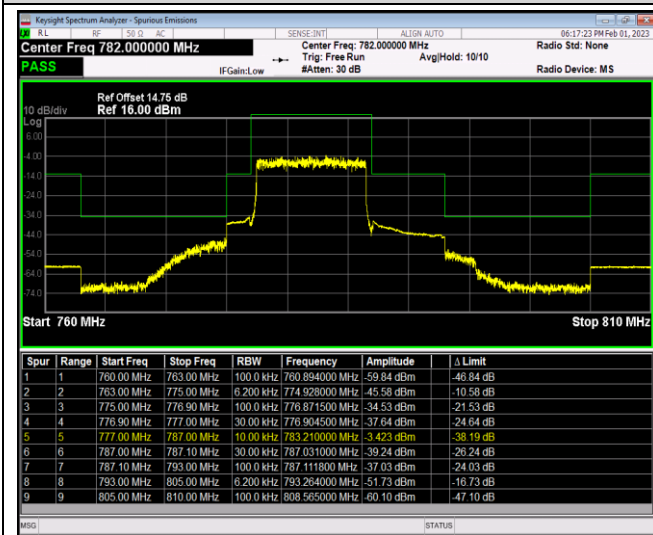




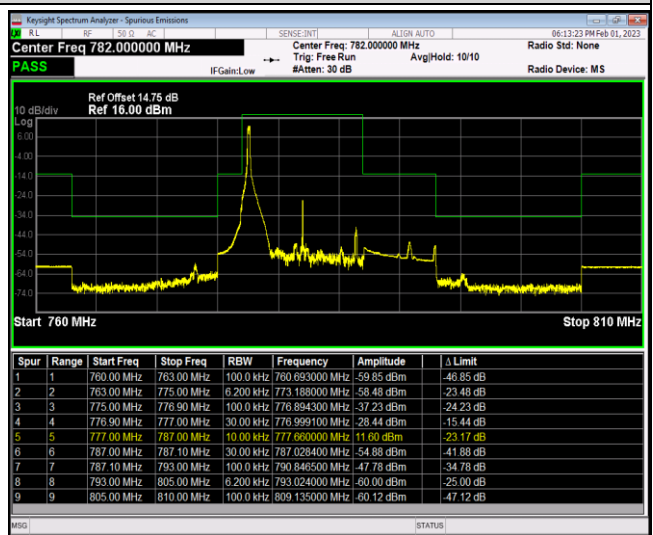
Band13-10MHz-QPSK-23230-50RB#0



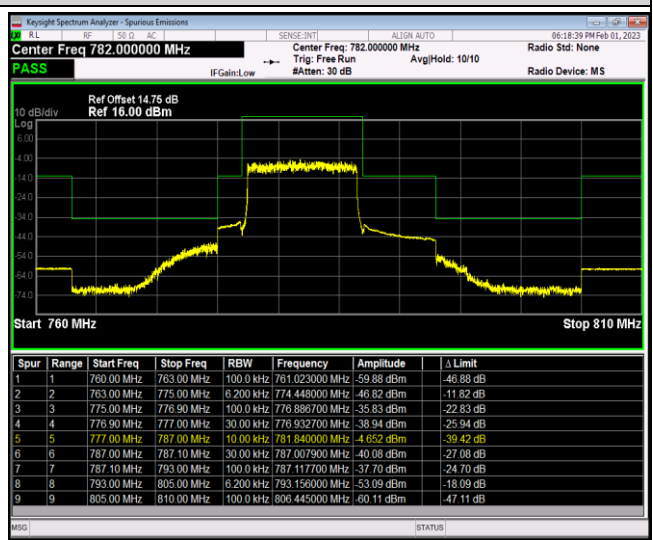
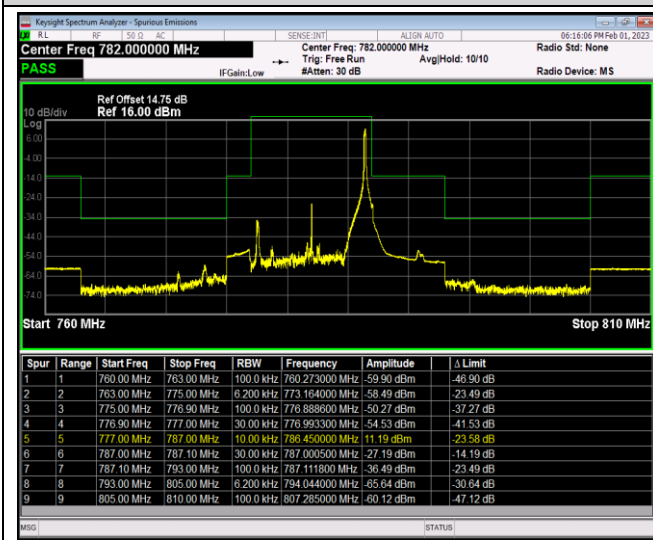
Band13-10MHz-16QAM-23230-1RB#0



Band13-10MHz-16QAM-23230-1RB#49



Band13-10MHz-16QAM-23230-50RB#0



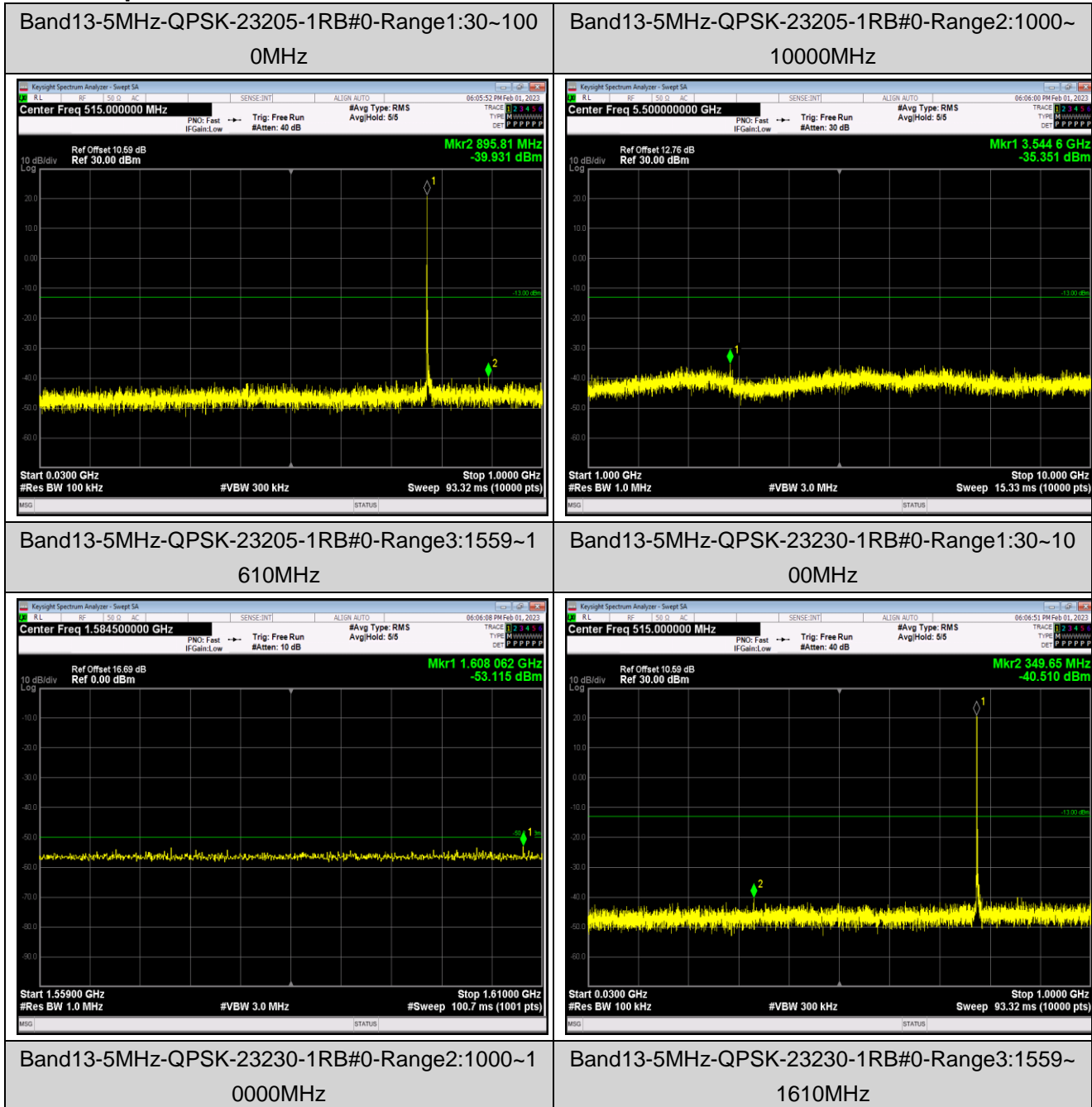
Appendix E: Conducted Spurious Emission

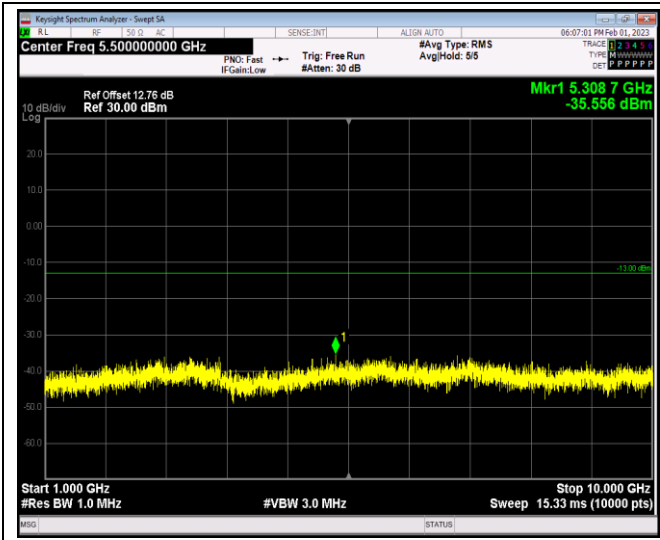
Test Result (worst case)

Band	Bandwidth	Modulation	Channel	RB Configuration	Frequency Range	Result (dBm)	Verdict
Band13	5MHz	QPSK	23205	1RB#0	Range1:30~1000MHz	-39.93	PASS
Band13	5MHz	QPSK	23205	1RB#0	Range2:1000~10000MHz	-35.35	PASS
Band13	5MHz	QPSK	23205	1RB#0	Range3:1559~1610MHz	-53.12	PASS
Band13	5MHz	QPSK	23230	1RB#0	Range1:30~1000MHz	-40.51	PASS
Band13	5MHz	QPSK	23230	1RB#0	Range2:1000~10000MHz	-35.56	PASS
Band13	5MHz	QPSK	23230	1RB#0	Range3:1559~1610MHz	-53.85	PASS
Band13	5MHz	QPSK	23255	1RB#0	Range1:30~1000MHz	-40.13	PASS
Band13	5MHz	QPSK	23255	1RB#0	Range2:1000~10000MHz	-35.24	PASS
Band13	5MHz	QPSK	23255	1RB#0	Range3:1559~1610MHz	-53.29	PASS
Band13	5MHz	16QAM	23205	1RB#0	Range1:30~1000MHz	-40.66	PASS
Band13	5MHz	16QAM	23205	1RB#0	Range2:1000~10000MHz	-35.52	PASS
Band13	5MHz	16QAM	23205	1RB#0	Range3:1559~1610MHz	-53.9	PASS
Band13	5MHz	16QAM	23230	1RB#0	Range1:30~1000MHz	-39.65	PASS
Band13	5MHz	16QAM	23230	1RB#0	Range2:1000~10000MHz	-34.99	PASS
Band13	5MHz	16QAM	23230	1RB#0	Range3:1559~1610MHz	-53.43	PASS
Band13	5MHz	16QAM	23255	1RB#0	Range1:30~1000MHz	-40.3	PASS
Band13	5MHz	16QAM	23255	1RB#0	Range2:1000~10000MHz	-35.59	PASS
Band13	5MHz	16QAM	23255	1RB#0	Range3:1559~1610MHz	-53.04	PASS
Band13	10MHz	QPSK	23230	1RB#0	Range1:30~1000MHz	-40.71	PASS
Band13	10MHz	QPSK	23230	1RB#0	Range2:1000~10000MHz	-34.92	PASS
Band13	10MHz	QPSK	23230	1RB#0	Range3:1559~1610MHz	-53.96	PASS
Band13	10MHz	16QAM	23230	1RB#0	Range1:30~1000MHz	-40.56	PASS
Band13	10MHz	16QAM	23230	1RB#0	Range2:1000~10000MHz	-35.35	PASS
Band13	10MHz	16QAM	23230	1RB#0	Range3:1559~1610MHz	-53.75	PASS

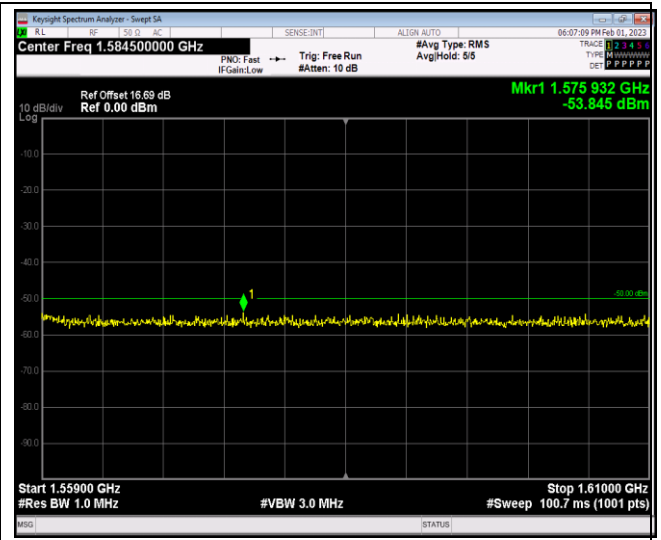
Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.

Test Graphs

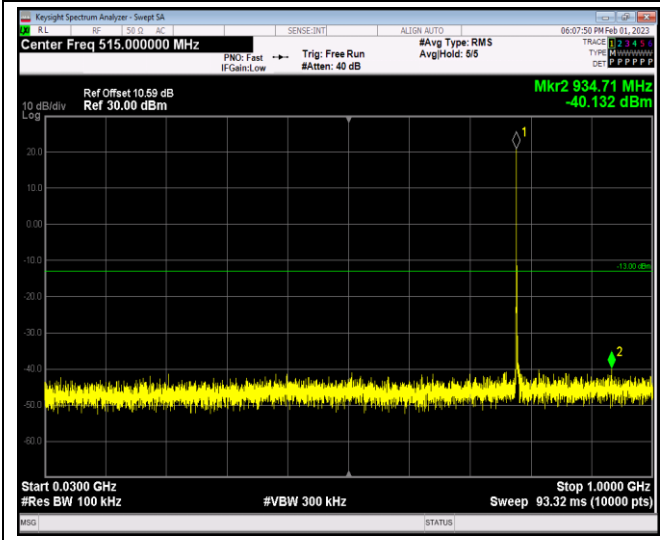




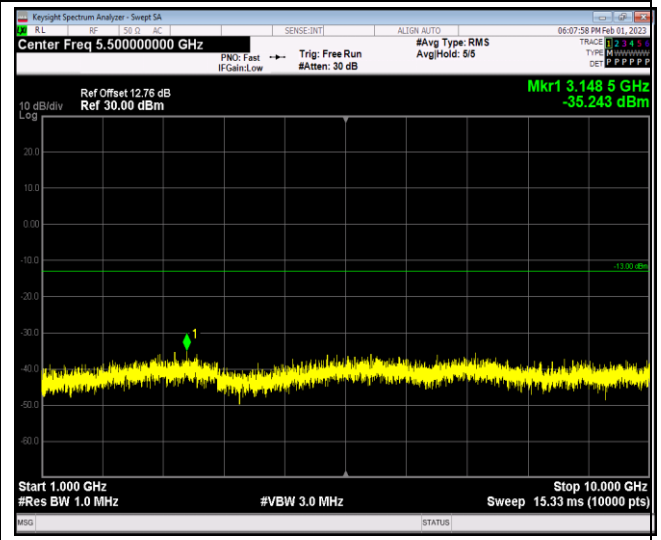
Band13-5MHz-QPSK-23255-1RB#0-Range1:30~100
0MHz



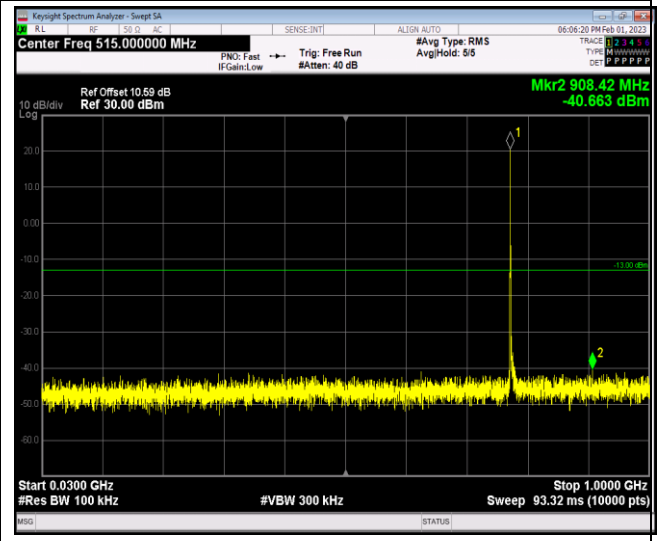
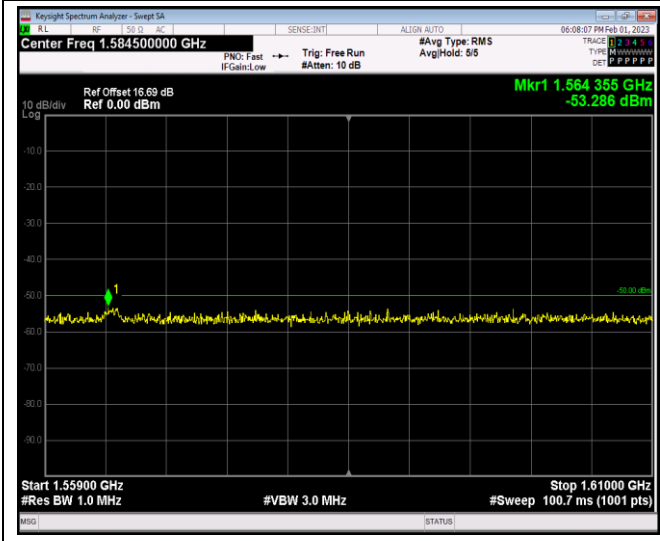
Band13-5MHz-QPSK-23255-1RB#0-Range2:1000~
10000MHz

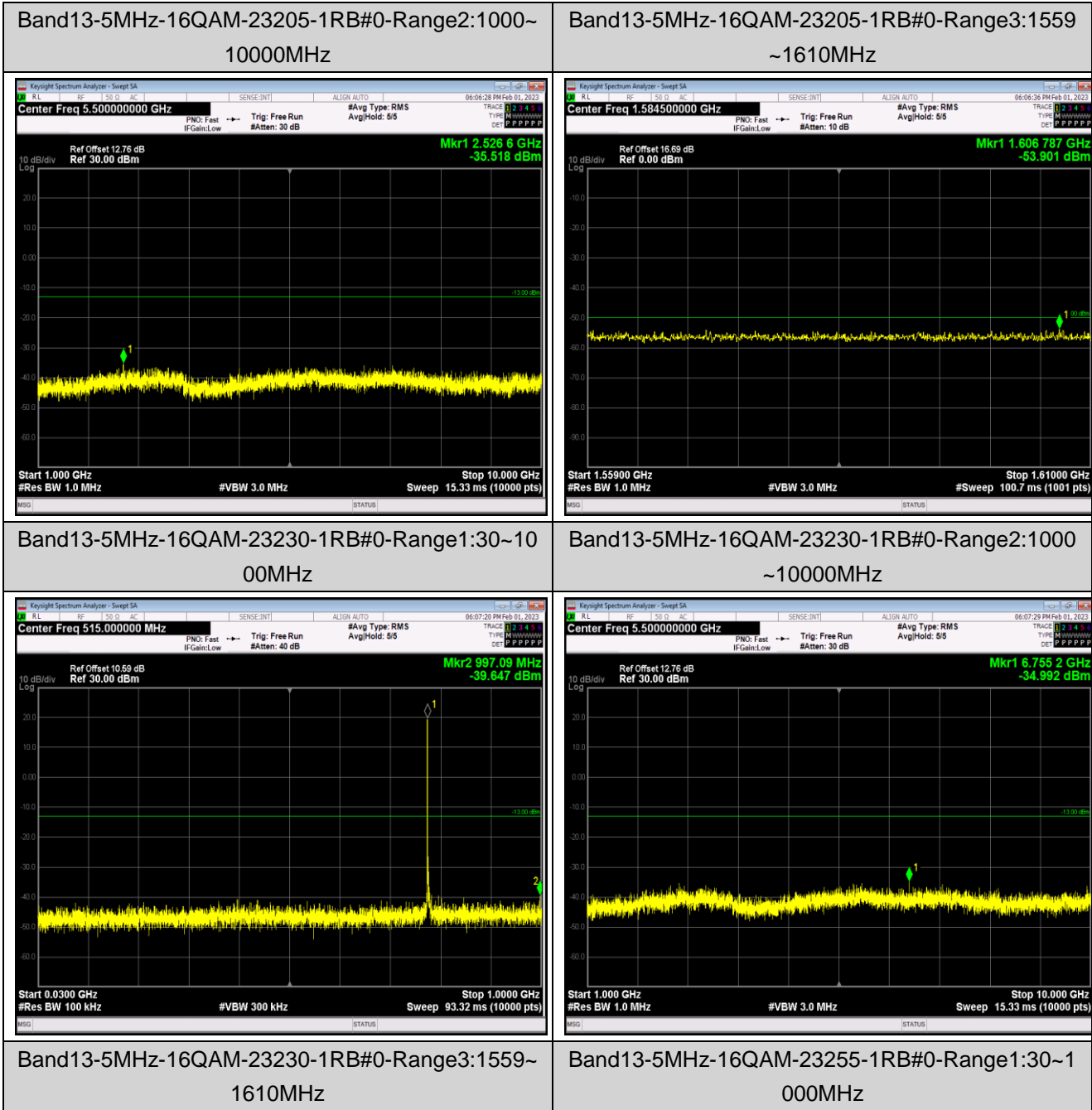


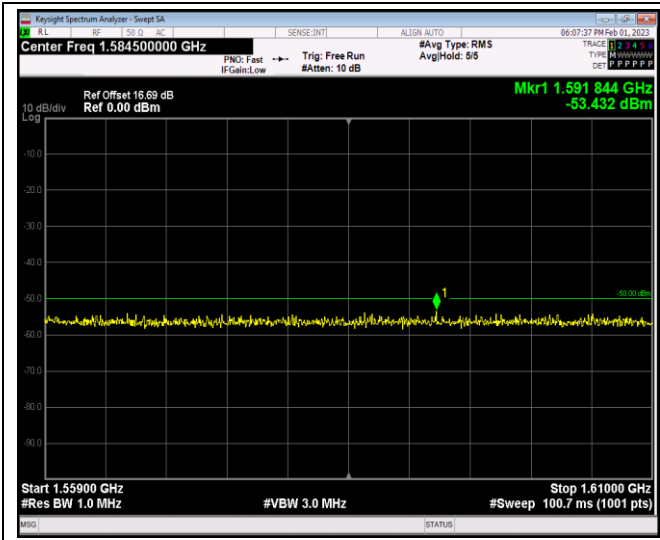
Band13-5MHz-QPSK-23255-1RB#0-Range3:1559~1
610MHz



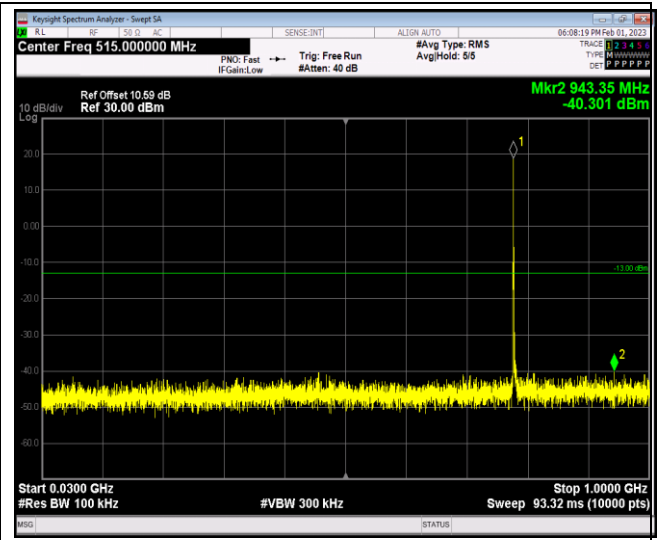
Band13-5MHz-16QAM-23205-1RB#0-Range1:30~1
000MHz



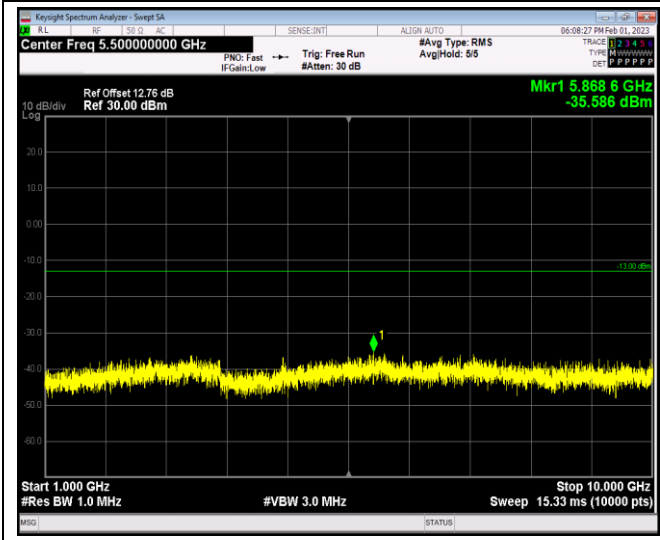




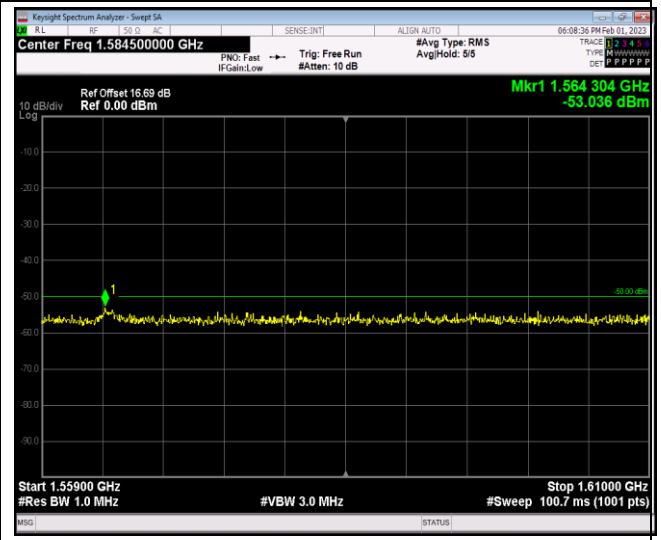
Band13-5MHz-16QAM-23255-1RB#0-Range2:1000~10000MHz



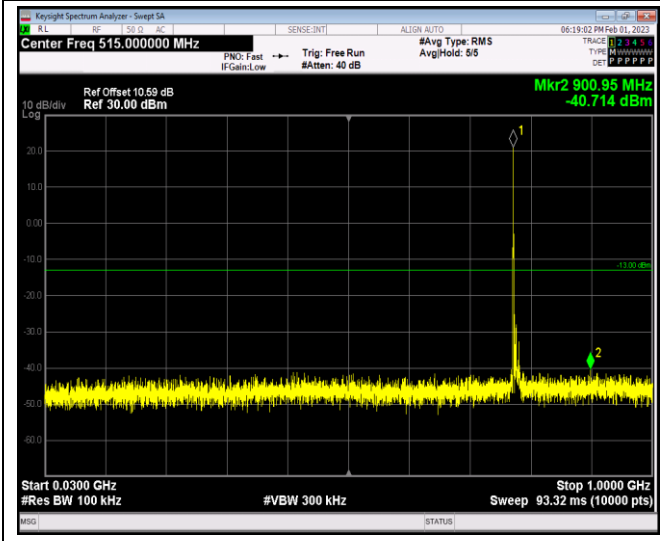
Band13-5MHz-16QAM-23255-1RB#0-Range3:1559~1610MHz



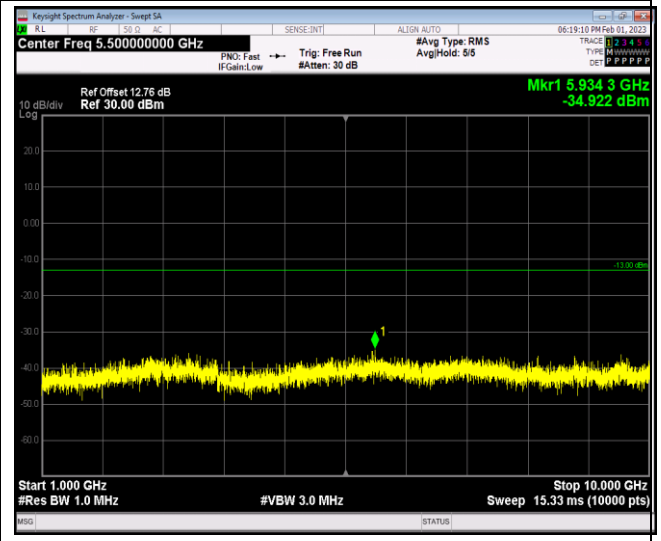
Band13-10MHz-QPSK-23230-1RB#0-Range1:30~1000MHz



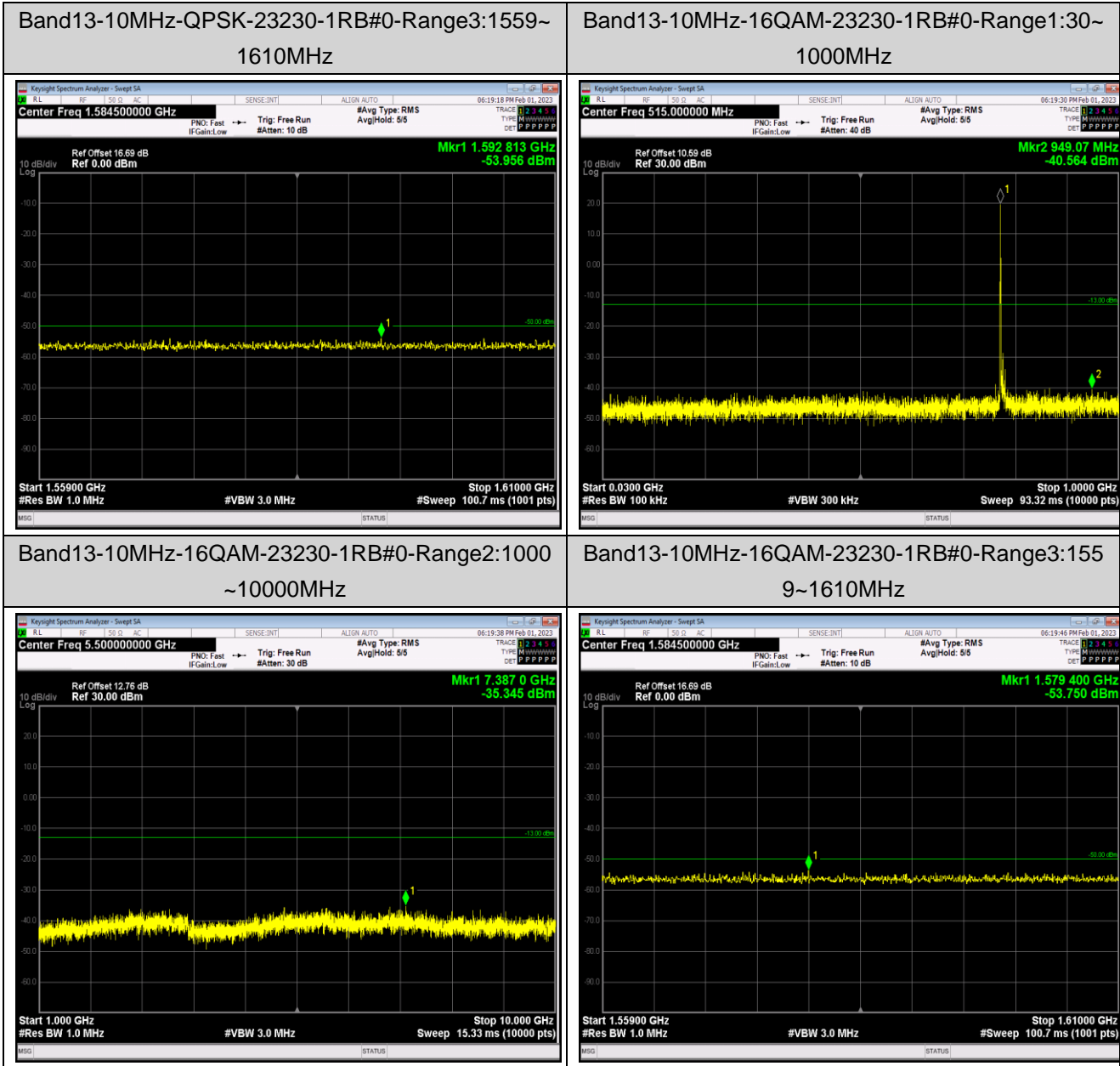
Band13-10MHz-QPSK-23230-1RB#0-Range2:1000~10000MHz



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Project No.: JYTSZR2301027



Appendix F: Frequency Stability

Test Result

LTE Band 13 part:

Reference Frequency: LTE Band 13(10MHz) Middle channel=23230 Frequency=782.0MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.85	-30	-9.44	-0.012072	Within authorized band for Band 13	Pass
	-20	-7.50	-0.009591		
	-10	-10.93	-0.013977		
	0	-11.84	-0.015141		
	10	-7.35	-0.009399		
	20	-3.85	-0.004923		
	30	-14.42	-0.018440		
	40	-10.00	-0.012788		
	50	-12.30	-0.015729		
16QAM					
3.85	-30	-10.31	-0.013184	Within authorized band for Band 13	Pass
	-20	-11.64	-0.014885		
	-10	-4.42	-0.005652		
	0	-11.86	-0.015166		
	10	-13.29	-0.016995		
	20	-6.85	-0.008760		
	30	-10.39	-0.013286		
	40	-7.15	-0.009143		
	50	-3.88	-0.004962		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.45	-9.47	-0.012110	Within authorized band for Band 13	Pass
	3.85	-12.80	-0.016368		
	4.35	-8.60	-0.010997		
16QAM					
25	3.45	-6.52	-0.008338	Within authorized band for Band 13	Pass
	3.85	-10.26	-0.013120		
	4.35	-11.52	-0.014731		

Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.

Appendix G: Modulation Characteristics

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result	Verdict
Band13	10MHz	QPSK	23230	50RB#0	PASS	PASS
Band13	10MHz	16QAM	23230	50RB#0	PASS	PASS
Band13	10MHz	64QAM	23230	50RB#0	PASS	PASS

Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.

Test Graphs

