

Appendix-A LTE Band 12

Effective (Isotropic) Radiated Power Output Data

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result (dBm)	ERP (dBm)	Limit (dBm)	Verdict
Band12	1.4MHz	QPSK	23017	1RB#0	23.94	23.79	34.77	PASS
Band12	1.4MHz	QPSK	23017	1RB#2	24.18	24.03	34.77	PASS
Band12	1.4MHz	QPSK	23017	1RB#5	24.34	24.19	34.77	PASS
Band12	1.4MHz	QPSK	23017	6RB#0	23.31	23.16	34.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#0	23.96	23.81	34.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#2	23.87	23.72	34.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#5	23.82	23.67	34.77	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	23.07	22.92	34.77	PASS
Band12	1.4MHz	QPSK	23173	1RB#0	23.85	23.7	34.77	PASS
Band12	1.4MHz	QPSK	23173	1RB#2	23.87	23.72	34.77	PASS
Band12	1.4MHz	QPSK	23173	1RB#5	23.87	23.72	34.77	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	23.15	23	34.77	PASS
Band12	1.4MHz	16QAM	23017	1RB#0	23.04	22.89	34.77	PASS
Band12	1.4MHz	16QAM	23017	1RB#2	23.16	23.01	34.77	PASS
Band12	1.4MHz	16QAM	23017	1RB#5	23.48	23.33	34.77	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	22.3	22.15	34.77	PASS
Band12	1.4MHz	16QAM	23095	1RB#0	23.04	22.89	34.77	PASS
Band12	1.4MHz	16QAM	23095	1RB#2	23.36	23.21	34.77	PASS
Band12	1.4MHz	16QAM	23095	1RB#5	22.89	22.74	34.77	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	22.09	21.94	34.77	PASS
Band12	1.4MHz	16QAM	23173	1RB#0	22.87	22.72	34.77	PASS
Band12	1.4MHz	16QAM	23173	1RB#2	22.73	22.58	34.77	PASS
Band12	1.4MHz	16QAM	23173	1RB#5	22.97	22.82	34.77	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	22.23	22.08	34.77	PASS
Band12	3MHz	QPSK	23025	1RB#0	23.52	23.37	34.77	PASS
Band12	3MHz	QPSK	23025	1RB#8	24.12	23.97	34.77	PASS
Band12	3MHz	QPSK	23025	1RB#14	24.01	23.86	34.77	PASS
Band12	3MHz	QPSK	23025	15RB#0	23.2	23.05	34.77	PASS
Band12	3MHz	QPSK	23095	1RB#0	23.88	23.73	34.77	PASS
Band12	3MHz	QPSK	23095	1RB#8	23.9	23.75	34.77	PASS
Band12	3MHz	QPSK	23095	1RB#14	23.88	23.73	34.77	PASS
Band12	3MHz	QPSK	23095	15RB#0	23.05	22.9	34.77	PASS
Band12	3MHz	QPSK	23165	1RB#0	23.69	23.54	34.77	PASS
Band12	3MHz	QPSK	23165	1RB#8	24.04	23.89	34.77	PASS
Band12	3MHz	QPSK	23165	1RB#14	23.76	23.61	34.77	PASS
Band12	3MHz	QPSK	23165	15RB#0	23.01	22.86	34.77	PASS
Band12	3MHz	16QAM	23025	1RB#0	22.84	22.69	34.77	PASS

Band12	3MHz	16QAM	23025	1RB#8	23.18	23.03	34.77	PASS
Band12	3MHz	16QAM	23025	1RB#14	23.4	23.25	34.77	PASS
Band12	3MHz	16QAM	23025	15RB#0	22.29	22.14	34.77	PASS
Band12	3MHz	16QAM	23095	1RB#0	22.9	22.75	34.77	PASS
Band12	3MHz	16QAM	23095	1RB#8	23.29	23.14	34.77	PASS
Band12	3MHz	16QAM	23095	1RB#14	23	22.85	34.77	PASS
Band12	3MHz	16QAM	23095	15RB#0	22.13	21.98	34.77	PASS
Band12	3MHz	16QAM	23165	1RB#0	22.81	22.66	34.77	PASS
Band12	3MHz	16QAM	23165	1RB#8	22.8	22.65	34.77	PASS
Band12	3MHz	16QAM	23165	1RB#14	22.87	22.72	34.77	PASS
Band12	3MHz	16QAM	23165	15RB#0	22.06	21.91	34.77	PASS
Band12	5MHz	QPSK	23035	1RB#0	24.05	23.9	34.77	PASS
Band12	5MHz	QPSK	23035	1RB#12	24.38	24.23	34.77	PASS
Band12	5MHz	QPSK	23035	1RB#24	24.36	24.21	34.77	PASS
Band12	5MHz	QPSK	23035	25RB#0	23.54	23.39	34.77	PASS
Band12	5MHz	QPSK	23095	1RB#0	24.3	24.15	34.77	PASS
Band12	5MHz	QPSK	23095	1RB#12	24.08	23.93	34.77	PASS
Band12	5MHz	QPSK	23095	1RB#24	24.47	24.32	34.77	PASS
Band12	5MHz	QPSK	23095	25RB#0	23.34	23.19	34.77	PASS
Band12	5MHz	QPSK	23155	1RB#0	24.4	24.25	34.77	PASS
Band12	5MHz	QPSK	23155	1RB#12	24.33	24.18	34.77	PASS
Band12	5MHz	QPSK	23155	1RB#24	24.5	24.35	34.77	PASS
Band12	5MHz	QPSK	23155	25RB#0	23.42	23.27	34.77	PASS
Band12	5MHz	16QAM	23035	1RB#0	22.98	22.83	34.77	PASS
Band12	5MHz	16QAM	23035	1RB#12	23.3	23.15	34.77	PASS
Band12	5MHz	16QAM	23035	1RB#24	23.2	23.05	34.77	PASS
Band12	5MHz	16QAM	23035	25RB#0	22.55	22.4	34.77	PASS
Band12	5MHz	16QAM	23095	1RB#0	23.65	23.5	34.77	PASS
Band12	5MHz	16QAM	23095	1RB#12	23.37	23.22	34.77	PASS
Band12	5MHz	16QAM	23095	1RB#24	23.6	23.45	34.77	PASS
Band12	5MHz	16QAM	23095	25RB#0	22.42	22.27	34.77	PASS
Band12	5MHz	16QAM	23155	1RB#0	23.39	23.24	34.77	PASS
Band12	5MHz	16QAM	23155	1RB#12	23.2	23.05	34.77	PASS
Band12	5MHz	16QAM	23155	1RB#24	23.55	23.4	34.77	PASS
Band12	5MHz	16QAM	23155	25RB#0	22.67	22.52	34.77	PASS
Band12	10MHz	QPSK	23060	1RB#0	24.3	24.15	34.77	PASS
Band12	10MHz	QPSK	23060	1RB#24	24.38	24.23	34.77	PASS
Band12	10MHz	QPSK	23060	1RB#49	24.72	24.57	34.77	PASS
Band12	10MHz	QPSK	23060	50RB#0	23.62	23.47	34.77	PASS
Band12	10MHz	QPSK	23095	1RB#0	24.28	24.13	34.77	PASS
Band12	10MHz	QPSK	23095	1RB#24	23.93	23.78	34.77	PASS
Band12	10MHz	QPSK	23095	1RB#49	24.02	23.87	34.77	PASS
Band12	10MHz	QPSK	23095	50RB#0	23.22	23.07	34.77	PASS
Band12	10MHz	QPSK	23130	1RB#0	24.55	24.4	34.77	PASS
Band12	10MHz	QPSK	23130	1RB#24	23.91	23.76	34.77	PASS

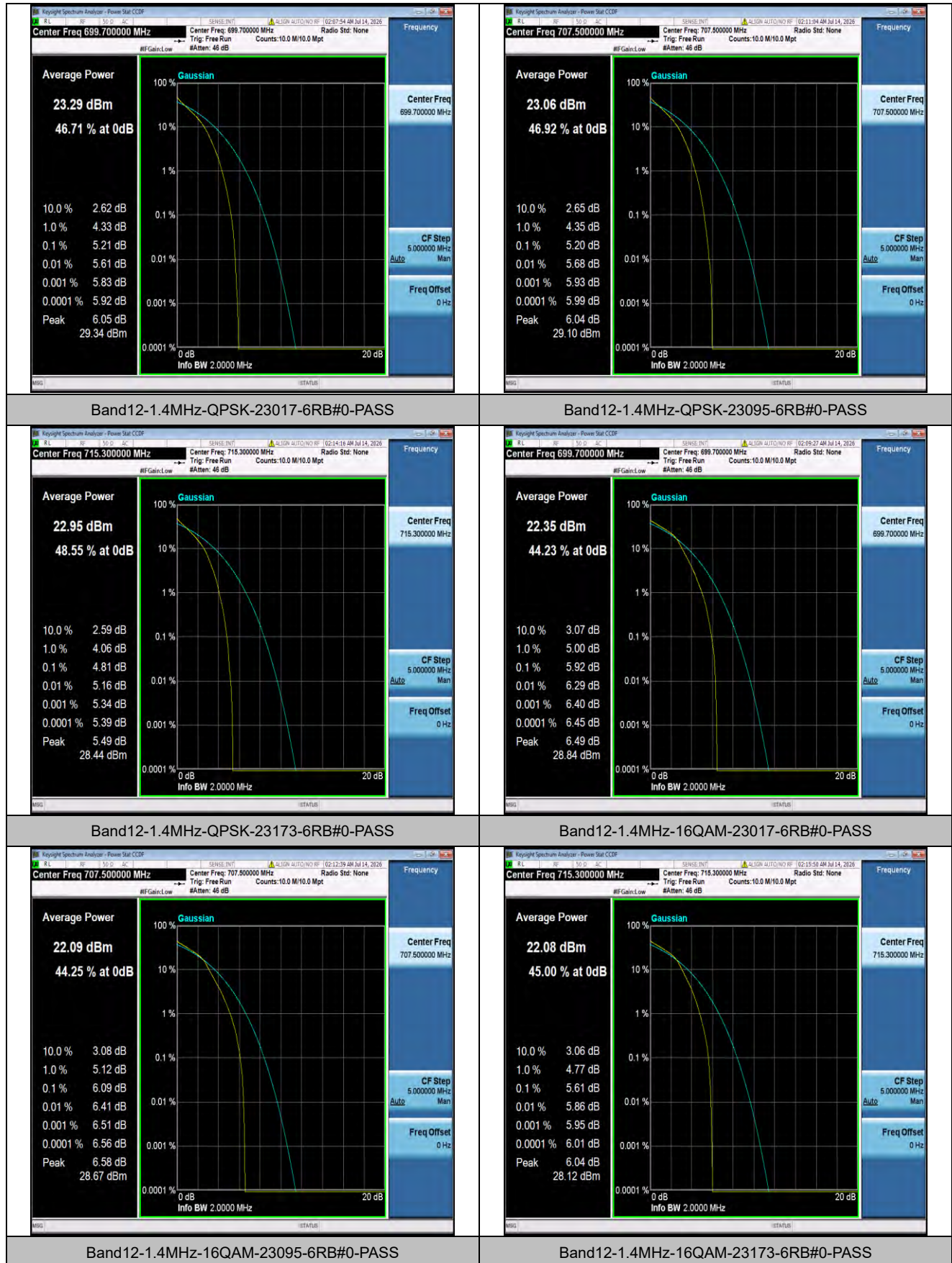
Band12	10MHz	QPSK	23130	1RB#49	24.43	24.28	34.77	PASS
Band12	10MHz	QPSK	23130	50RB#0	23.47	23.32	34.77	PASS
Band12	10MHz	16QAM	23060	1RB#0	22.85	22.7	34.77	PASS
Band12	10MHz	16QAM	23060	1RB#24	22.67	22.52	34.77	PASS
Band12	10MHz	16QAM	23060	1RB#49	23.2	23.05	34.77	PASS
Band12	10MHz	16QAM	23060	27RB#0	22.33	22.18	34.77	PASS
Band12	10MHz	16QAM	23095	1RB#0	23	22.85	34.77	PASS
Band12	10MHz	16QAM	23095	1RB#24	23.39	23.24	34.77	PASS
Band12	10MHz	16QAM	23095	1RB#49	22.95	22.8	34.77	PASS
Band12	10MHz	16QAM	23095	27RB#0	22.31	22.16	34.77	PASS
Band12	10MHz	16QAM	23130	1RB#0	23.61	23.46	34.77	PASS
Band12	10MHz	16QAM	23130	1RB#24	22.85	22.7	34.77	PASS
Band12	10MHz	16QAM	23130	1RB#49	23.44	23.29	34.77	PASS
Band12	10MHz	16QAM	23130	27RB#0	22.48	22.33	34.77	PASS

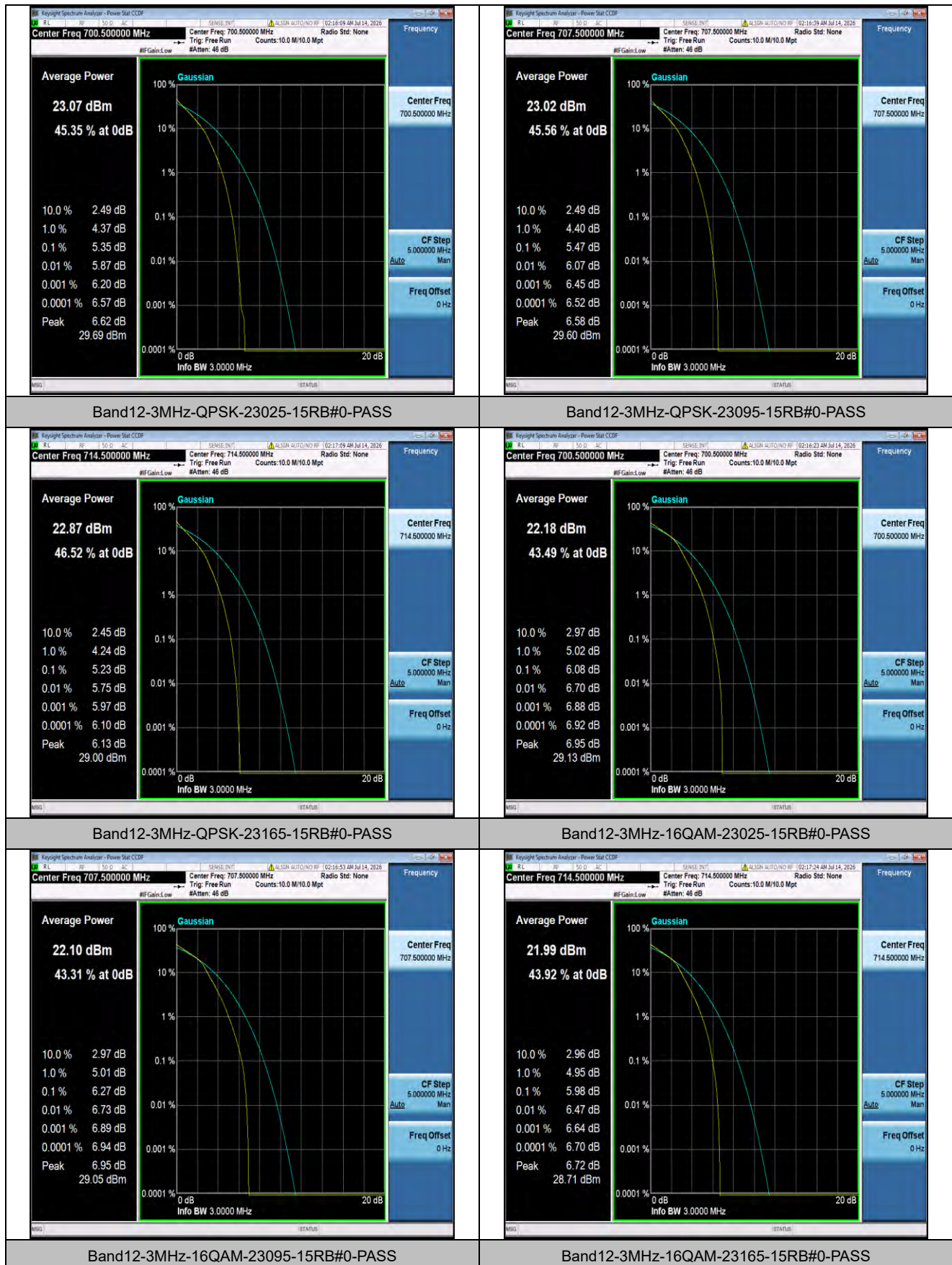
Peak-to-Average Ratio(CCDF)

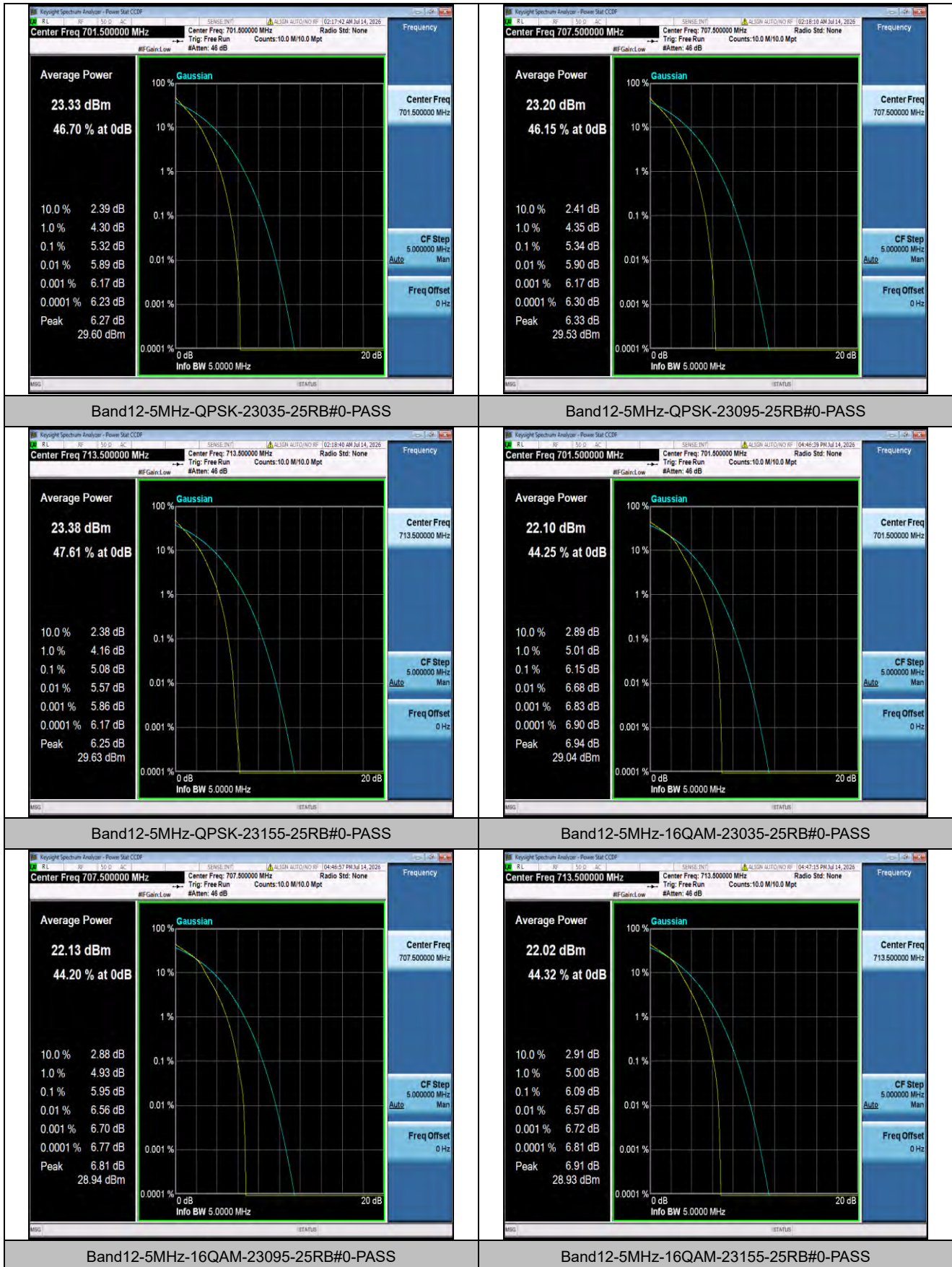
Test Result

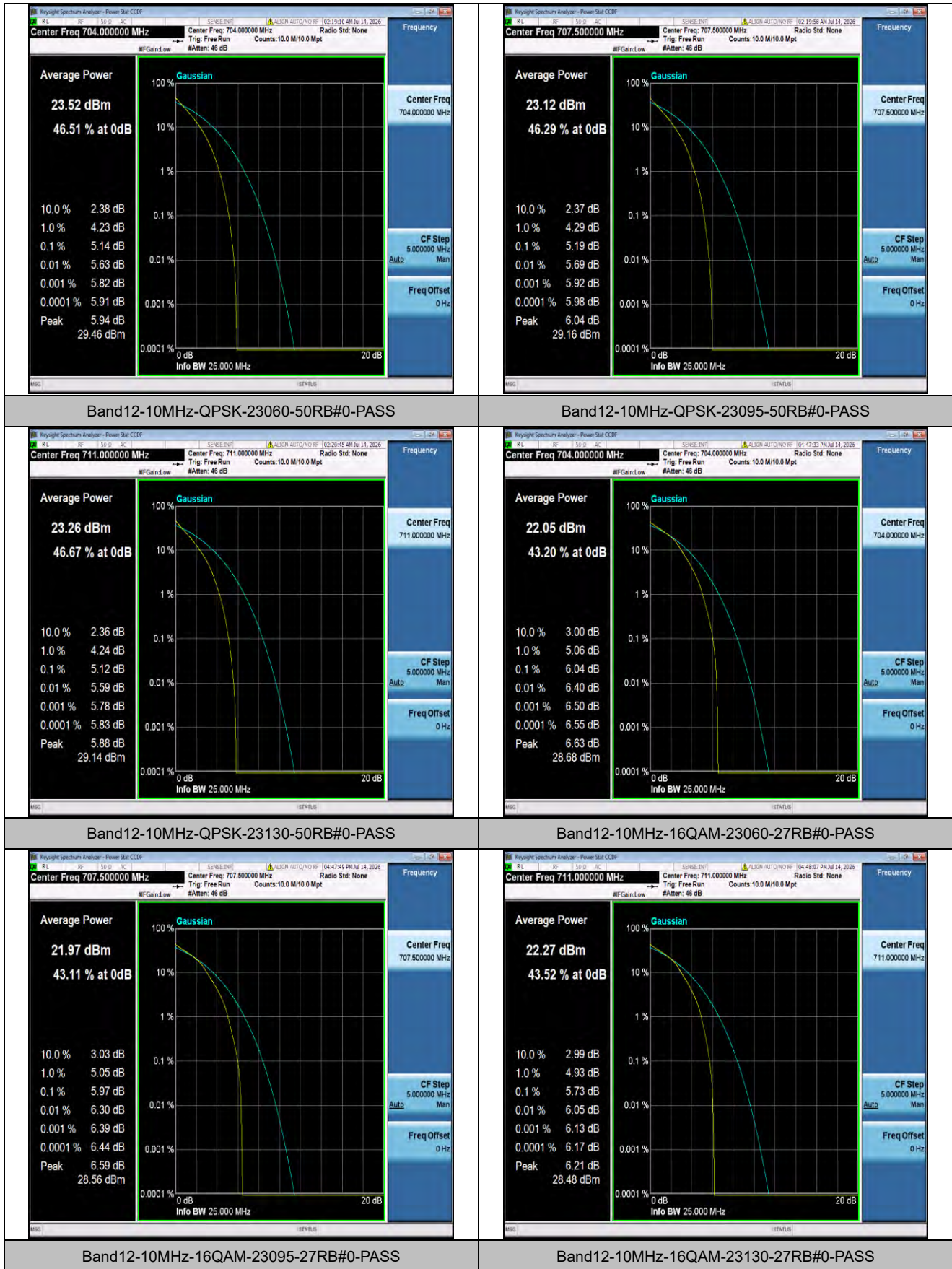
Band	Bandwidth	Modulation	Channel	RB Configuration	Result (dB)	Limit (dB)	Verdict
Band12	1.4MHz	QPSK	23017	6RB#0	5.21	13	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	5.20	13	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	4.81	13	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	5.92	13	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	6.09	13	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	5.61	13	PASS
Band12	3MHz	QPSK	23025	15RB#0	5.35	13	PASS
Band12	3MHz	QPSK	23095	15RB#0	5.47	13	PASS
Band12	3MHz	QPSK	23165	15RB#0	5.23	13	PASS
Band12	3MHz	16QAM	23025	15RB#0	6.08	13	PASS
Band12	3MHz	16QAM	23095	15RB#0	6.27	13	PASS
Band12	3MHz	16QAM	23165	15RB#0	5.98	13	PASS
Band12	5MHz	QPSK	23035	25RB#0	5.32	13	PASS
Band12	5MHz	QPSK	23095	25RB#0	5.34	13	PASS
Band12	5MHz	QPSK	23155	25RB#0	5.08	13	PASS
Band12	5MHz	16QAM	23035	25RB#0	6.15	13	PASS
Band12	5MHz	16QAM	23095	25RB#0	5.95	13	PASS
Band12	5MHz	16QAM	23155	25RB#0	6.09	13	PASS
Band12	10MHz	QPSK	23060	50RB#0	5.14	13	PASS
Band12	10MHz	QPSK	23095	50RB#0	5.19	13	PASS
Band12	10MHz	QPSK	23130	50RB#0	5.12	13	PASS
Band12	10MHz	16QAM	23060	27RB#0	6.04	13	PASS
Band12	10MHz	16QAM	23095	27RB#0	5.97	13	PASS
Band12	10MHz	16QAM	23130	27RB#0	5.73	13	PASS

Test Graphs







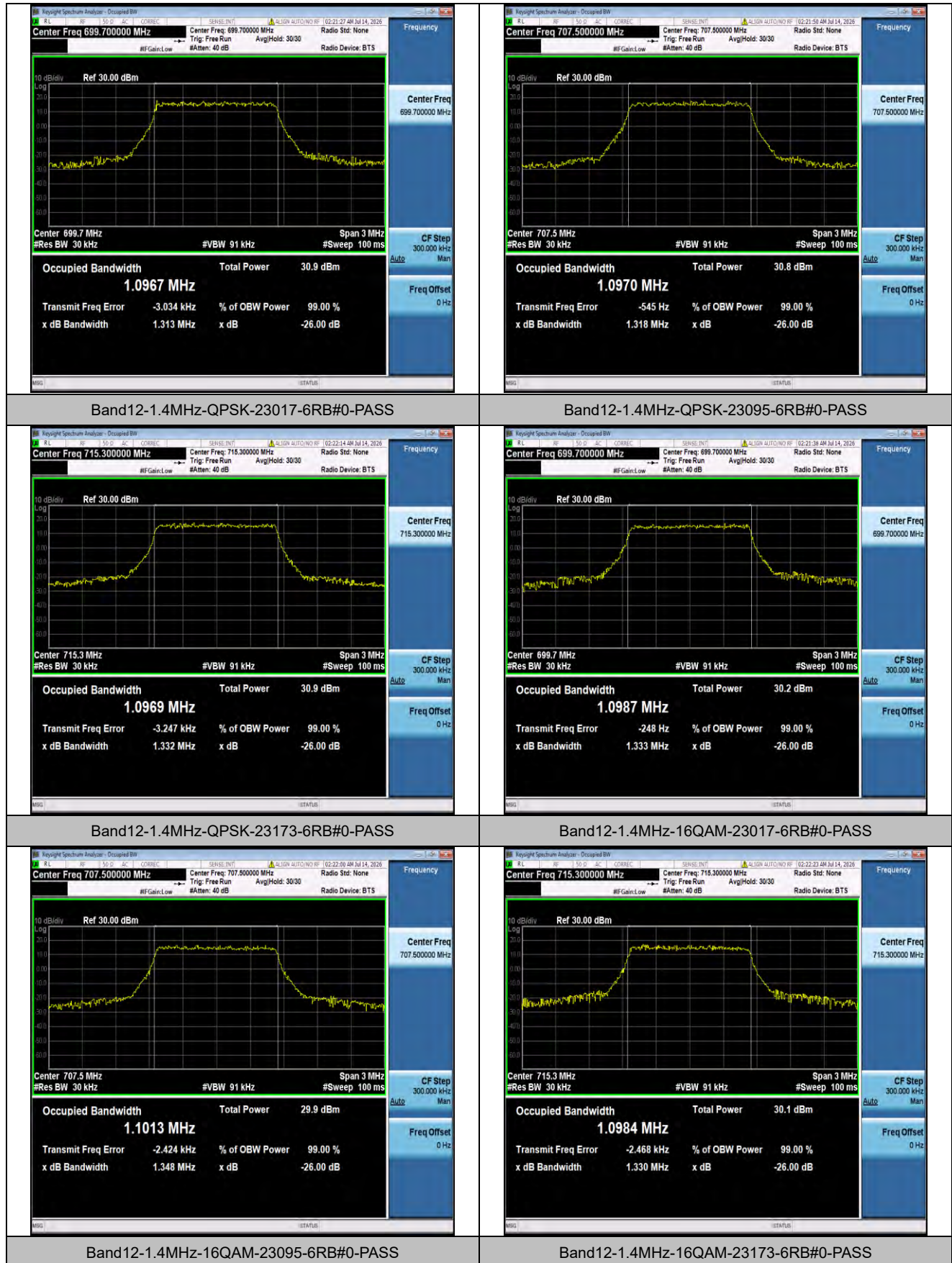


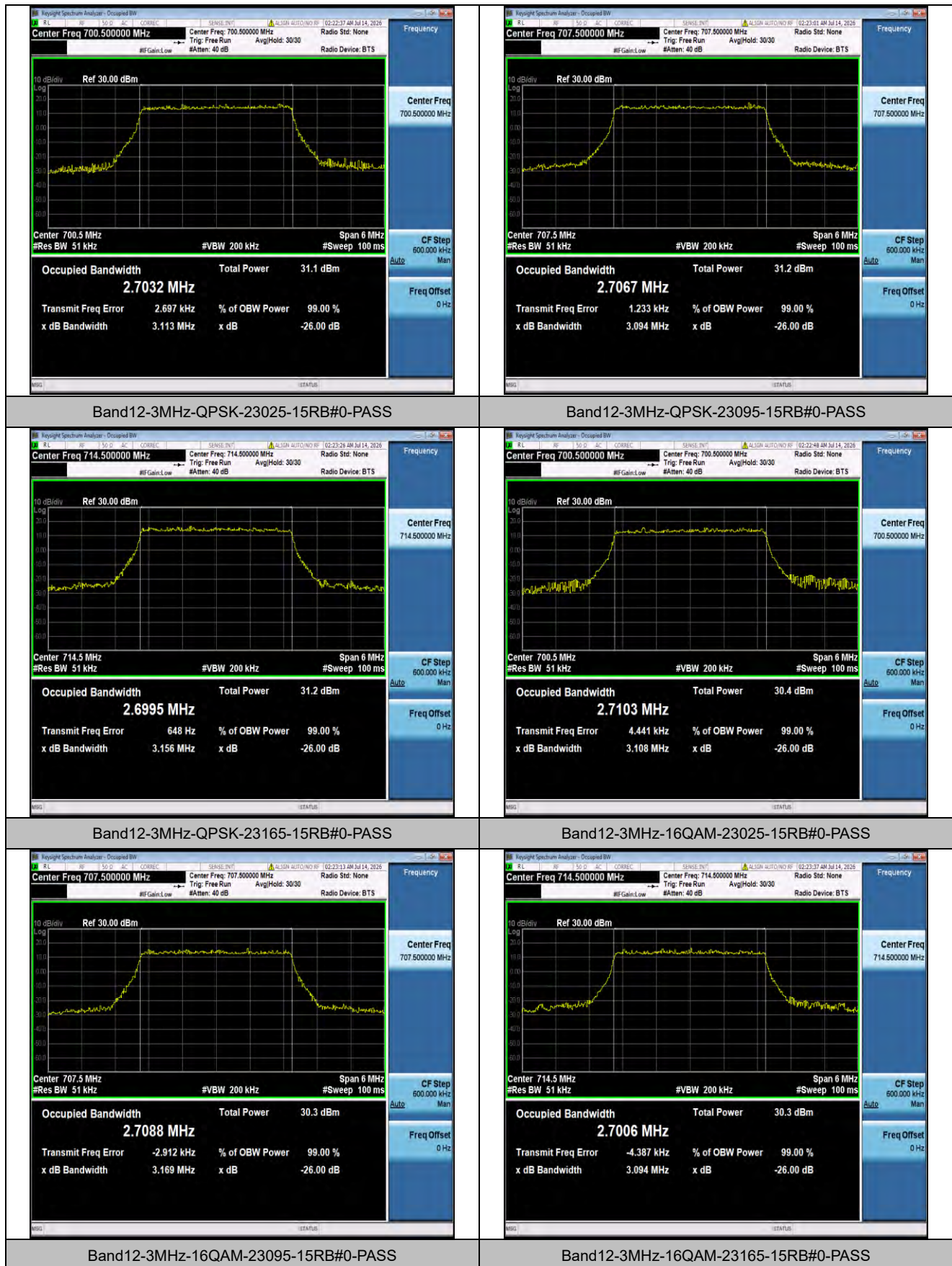
26dB Bandwidth and Occupied Bandwidth

Test Result

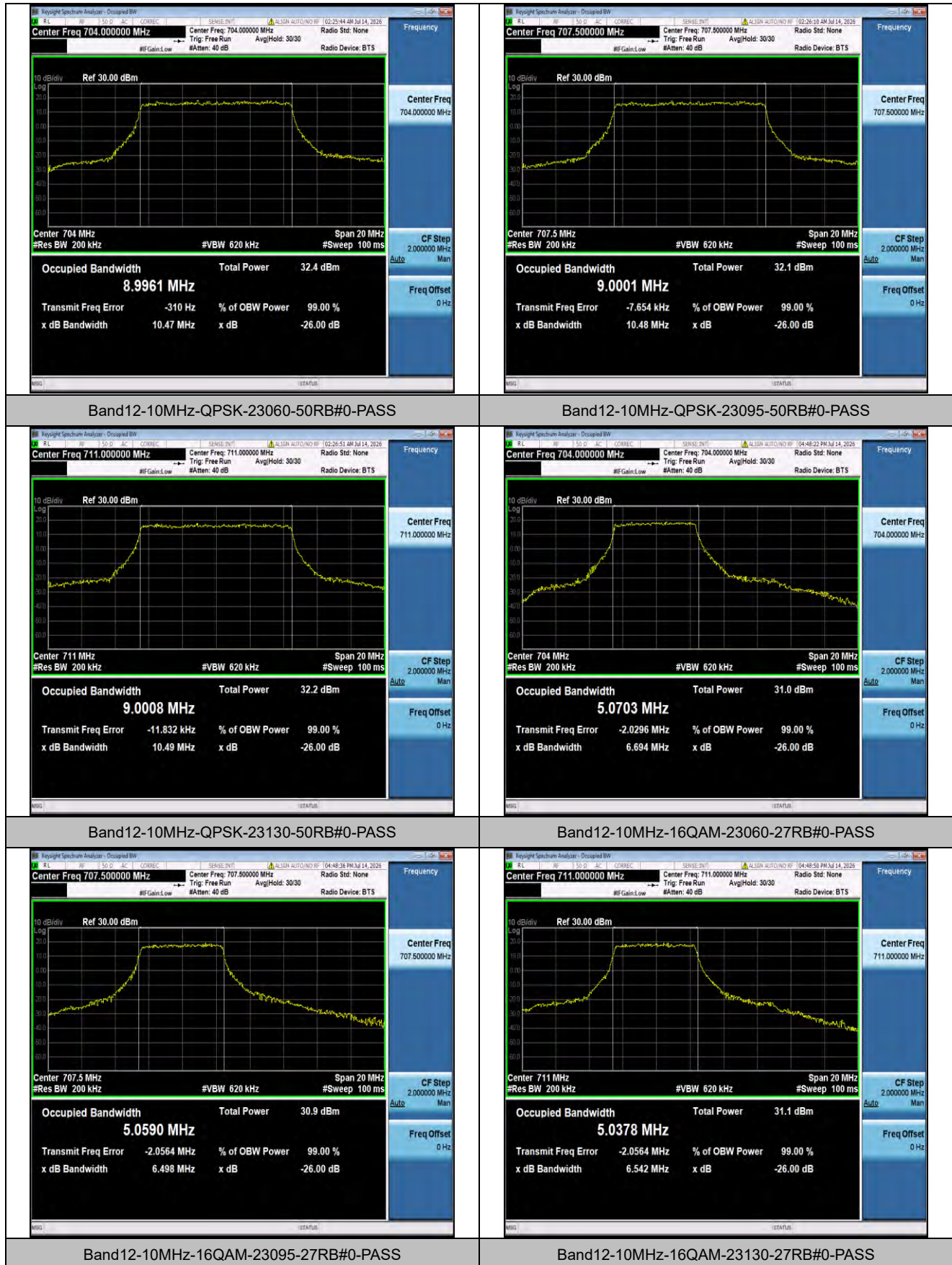
Band	Bandwidth	Modulation	Channel	RB Configuration	OBW (MHz)	26dB EBW (MHz)	Verdict
Band12	1.4MHz	QPSK	23017	6RB#0	1.0967	1.313	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	1.0970	1.318	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	1.0969	1.332	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	1.0987	1.333	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	1.1013	1.348	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	1.0984	1.330	PASS
Band12	3MHz	QPSK	23025	15RB#0	2.7032	3.113	PASS
Band12	3MHz	QPSK	23095	15RB#0	2.7067	3.094	PASS
Band12	3MHz	QPSK	23165	15RB#0	2.6995	3.156	PASS
Band12	3MHz	16QAM	23025	15RB#0	2.7103	3.108	PASS
Band12	3MHz	16QAM	23095	15RB#0	2.7088	3.169	PASS
Band12	3MHz	16QAM	23165	15RB#0	2.7006	3.094	PASS
Band12	5MHz	QPSK	23035	25RB#0	4.5366	5.563	PASS
Band12	5MHz	QPSK	23095	25RB#0	4.5295	5.497	PASS
Band12	5MHz	QPSK	23155	25RB#0	4.5318	5.584	PASS
Band12	5MHz	16QAM	23035	25RB#0	4.5292	5.593	PASS
Band12	5MHz	16QAM	23095	25RB#0	4.5326	5.532	PASS
Band12	5MHz	16QAM	23155	25RB#0	4.5383	5.548	PASS
Band12	10MHz	QPSK	23060	50RB#0	8.9961	10.47	PASS
Band12	10MHz	QPSK	23095	50RB#0	9.0001	10.48	PASS
Band12	10MHz	QPSK	23130	50RB#0	9.0008	10.49	PASS
Band12	10MHz	16QAM	23060	27RB#0	5.0703	6.694	PASS
Band12	10MHz	16QAM	23095	27RB#0	5.0590	6.498	PASS
Band12	10MHz	16QAM	23130	27RB#0	5.0378	6.542	PASS

Test Graphs



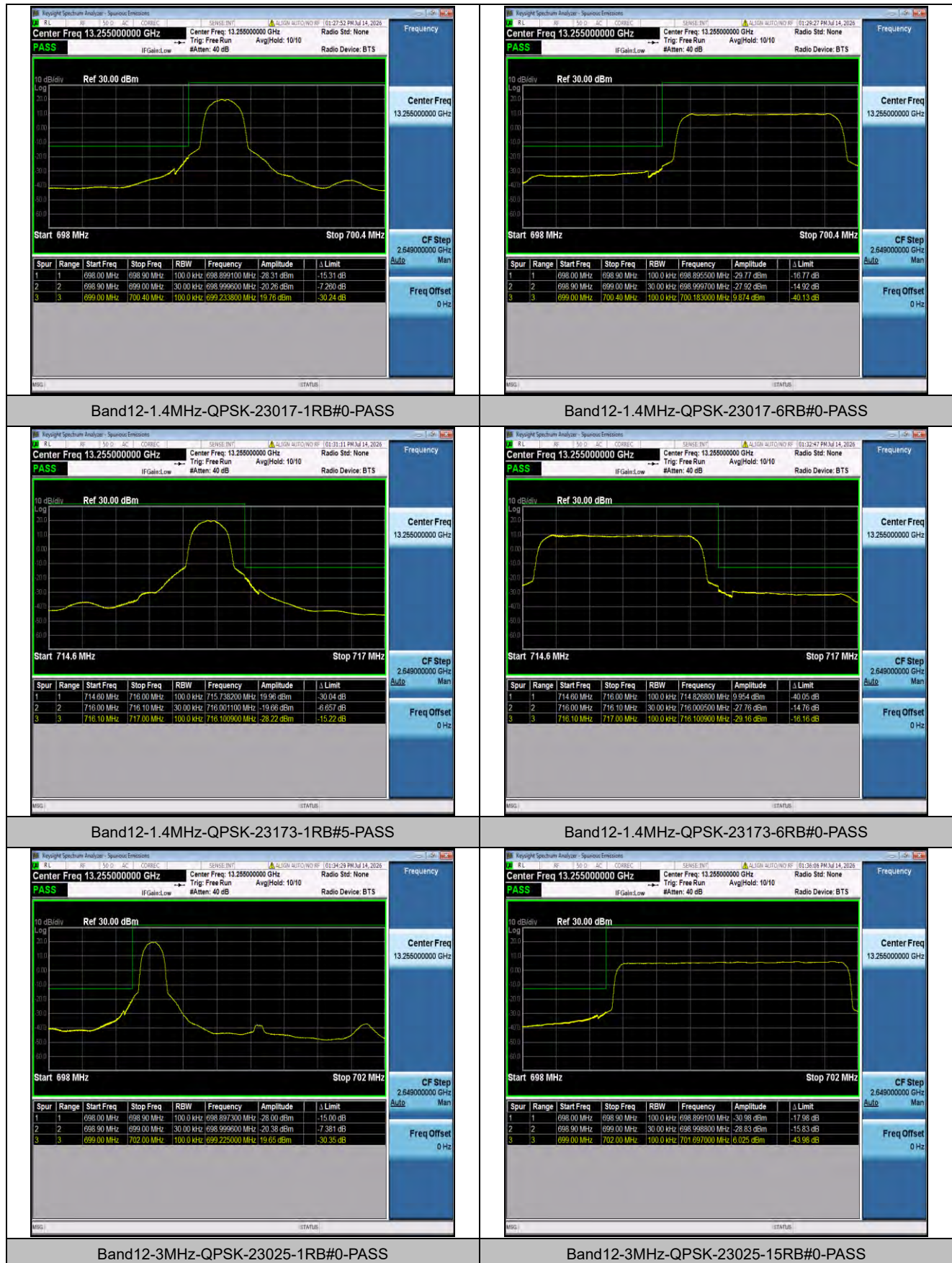


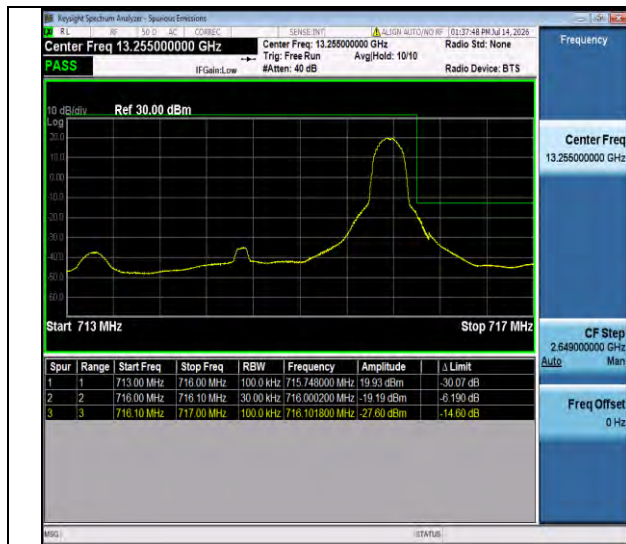




Band Edge

Test Graphs





Band12-3MHz-QPSK-23165-1RB#14-PASS



Band12-3MHz-QPSK-23165-15RB#0-PASS



Band12-5MHz-QPSK-23035-1RB#0-PASS



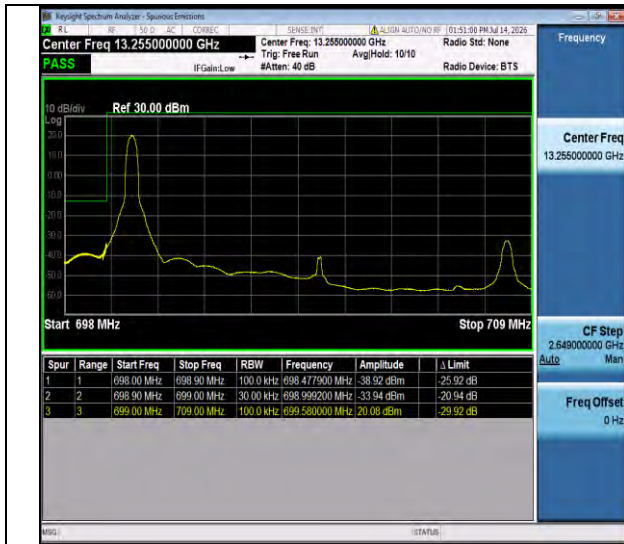
Band12-5MHz-QPSK-23035-25RB#0-PASS



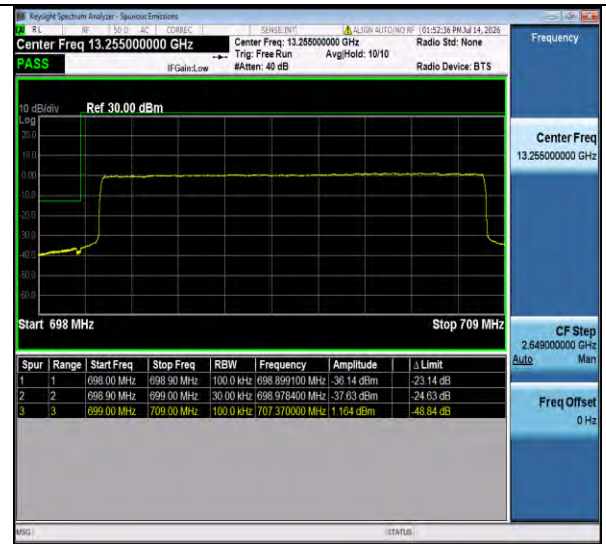
Band12-5MHz-QPSK-23155-1RB#24-PASS



Band12-5MHz-QPSK-23155-25RB#0-PASS



Band12-10MHz-QPSK-23060-1RB#0-PASS



Band12-10MHz-QPSK-23060-50RB#0-PASS



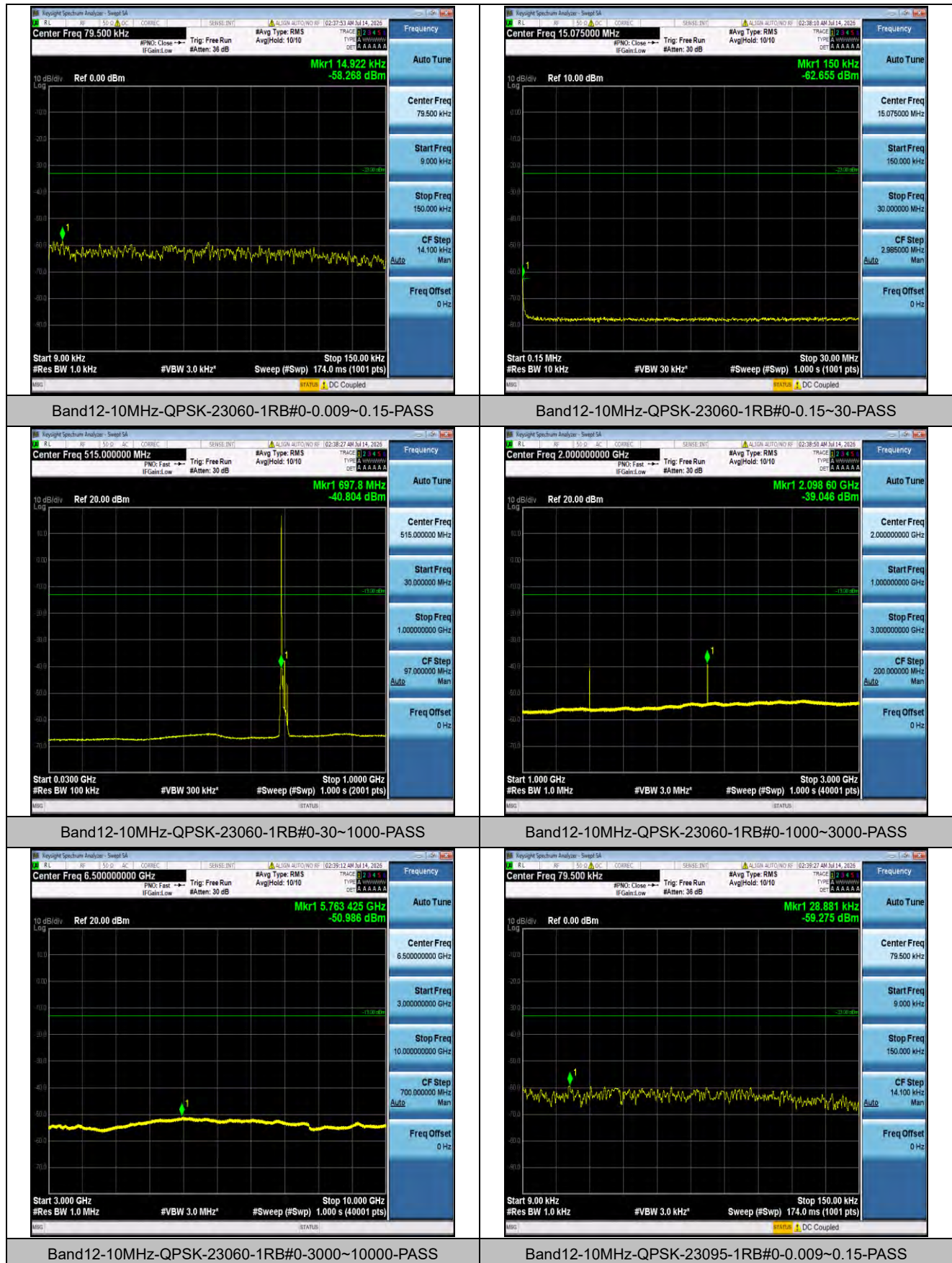
Band12-10MHz-QPSK-23130-1RB#49-PASS

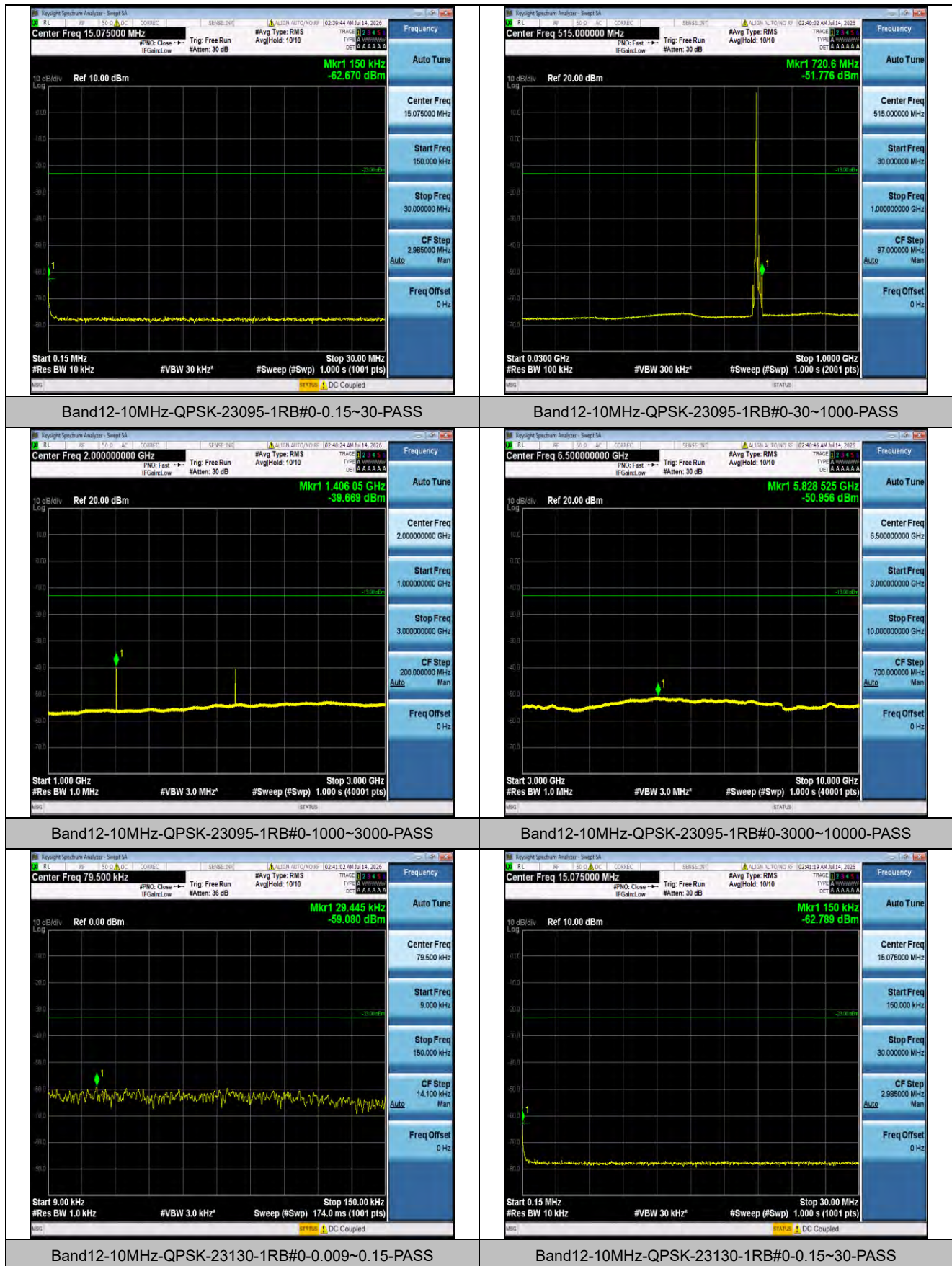


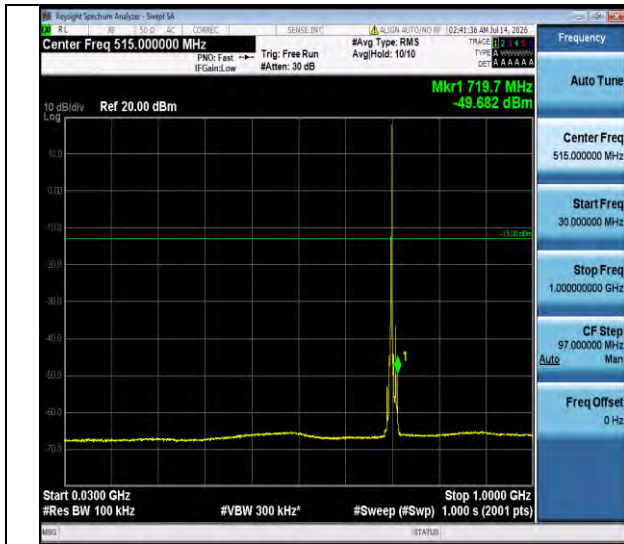
Band12-10MHz-QPSK-23130-50RB#0-PASS

Conducted Spurious Emission

Test Graphs







Band12-10MHz-QPSK-23130-1RB#0-30~1000-PASS



Band12-10MHz-QPSK-23130-1RB#0-1000~3000-PASS



Band12-10MHz-QPSK-23130-1RB#0-3000~10000-PASS

Frequency Stability

Test Result

Voltage									
Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Verdict
Band12	10MHz	QPSK	23095	50RB#0	VN	NT	-6.16	-0.008707	PASS
Band12	10MHz	QPSK	23095	50RB#0	VL	NT	-6.52	-0.009216	PASS
Band12	10MHz	QPSK	23095	50RB#0	VH	NT	-3.94	-0.005569	PASS

Temperature									
Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Verdict
Band12	10MHz	QPSK	23095	50RB#0	NV	-30	-5.01	-0.007081	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	-20	-4.21	-0.005951	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	-10	-3.70	-0.005230	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	0	-3.85	-0.005442	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	10	-3.35	-0.004735	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	20	-4.42	-0.006247	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	30	-3.11	-0.004396	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	40	-3.68	-0.005201	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	50	-3.97	-0.005611	PASS

~The End~