

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	23.15	20.5	34.77	PASS
Band12	1.4MHz	QPSK	23017	1RB#2	23.25	20.6	34.77	PASS
Band12	1.4MHz	QPSK	23017	1RB#5	23.14	20.49	34.77	PASS
Band12	1.4MHz	QPSK	23017	6RB#0	22.18	19.53	34.77	PASS
Band12	1.4MHz	16QAM	23017	1RB#0	22.6	19.95	34.77	PASS
Band12	1.4MHz	16QAM	23017	1RB#2	22.56	19.91	34.77	PASS
Band12	1.4MHz	16QAM	23017	1RB#5	22.51	19.86	34.77	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	21.39	18.74	34.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#0	23.2	20.55	34.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#2	23.33	20.68	34.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#5	23.17	20.52	34.77	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	22.33	19.68	34.77	PASS
Band12	1.4MHz	16QAM	23095	1RB#0	22.39	19.74	34.77	PASS
Band12	1.4MHz	16QAM	23095	1RB#2	22.53	19.88	34.77	PASS
Band12	1.4MHz	16QAM	23095	1RB#5	22.35	19.7	34.77	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	21.43	18.78	34.77	PASS
Band12	1.4MHz	QPSK	23173	1RB#0	22.97	20.32	34.77	PASS
Band12	1.4MHz	QPSK	23173	1RB#2	23.05	20.4	34.77	PASS
Band12	1.4MHz	QPSK	23173	1RB#5	23.02	20.37	34.77	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	22.12	19.47	34.77	PASS
Band12	1.4MHz	16QAM	23173	1RB#0	22.42	19.77	34.77	PASS
Band12	1.4MHz	16QAM	23173	1RB#2	22.51	19.86	34.77	PASS
Band12	1.4MHz	16QAM	23173	1RB#5	22.5	19.85	34.77	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	21.31	18.66	34.77	PASS
Band12	3MHz	QPSK	23025	1RB#0	23.17	20.52	34.77	PASS
Band12	3MHz	QPSK	23025	1RB#8	23.22	20.57	34.77	PASS
Band12	3MHz	QPSK	23025	1RB#14	23.18	20.53	34.77	PASS
Band12	3MHz	QPSK	23025	15RB#0	22.29	19.64	34.77	PASS
Band12	3MHz	16QAM	23025	1RB#0	22.71	20.06	34.77	PASS
Band12	3MHz	16QAM	23025	1RB#8	22.84	20.19	34.77	PASS
Band12	3MHz	16QAM	23025	1RB#14	22.6	19.95	34.77	PASS
Band12	3MHz	16QAM	23025	15RB#0	21.29	18.64	34.77	PASS
Band12	3MHz	QPSK	23095	1RB#0	23.32	20.67	34.77	PASS
Band12	3MHz	QPSK	23095	1RB#8	23.26	20.61	34.77	PASS
Band12	3MHz	QPSK	23095	1RB#14	23.29	20.64	34.77	PASS
Band12	3MHz	QPSK	23095	15RB#0	22.33	19.68	34.77	PASS
Band12	3MHz	16QAM	23095	1RB#0	22.84	20.19	34.77	PASS

Band12	3MHz	16QAM	23095	1RB#8	22.74	20.09	34.77	PASS
Band12	3MHz	16QAM	23095	1RB#14	22.78	20.13	34.77	PASS
Band12	3MHz	16QAM	23095	15RB#0	21.38	18.73	34.77	PASS
Band12	3MHz	QPSK	23165	1RB#0	23.13	20.48	34.77	PASS
Band12	3MHz	QPSK	23165	1RB#8	23.18	20.53	34.77	PASS
Band12	3MHz	QPSK	23165	1RB#14	23.13	20.48	34.77	PASS
Band12	3MHz	QPSK	23165	15RB#0	22.18	19.53	34.77	PASS
Band12	3MHz	16QAM	23165	1RB#0	22.41	19.76	34.77	PASS
Band12	3MHz	16QAM	23165	1RB#8	22.41	19.76	34.77	PASS
Band12	3MHz	16QAM	23165	1RB#14	22.32	19.67	34.77	PASS
Band12	3MHz	16QAM	23165	15RB#0	21.2	18.55	34.77	PASS
Band12	5MHz	QPSK	23035	1RB#0	23.21	20.56	34.77	PASS
Band12	5MHz	QPSK	23035	1RB#12	23.25	20.6	34.77	PASS
Band12	5MHz	QPSK	23035	1RB#24	23.27	20.62	34.77	PASS
Band12	5MHz	QPSK	23035	25RB#0	22.36	19.71	34.77	PASS
Band12	5MHz	16QAM	23035	1RB#0	22.57	19.92	34.77	PASS
Band12	5MHz	16QAM	23035	1RB#12	22.73	20.08	34.77	PASS
Band12	5MHz	16QAM	23035	1RB#24	22.72	20.07	34.77	PASS
Band12	5MHz	16QAM	23035	25RB#0	21.46	18.81	34.77	PASS
Band12	5MHz	QPSK	23095	1RB#0	23.32	20.67	34.77	PASS
Band12	5MHz	QPSK	23095	1RB#12	23.3	20.65	34.77	PASS
Band12	5MHz	QPSK	23095	1RB#24	23.27	20.62	34.77	PASS
Band12	5MHz	QPSK	23095	25RB#0	22.34	19.69	34.77	PASS
Band12	5MHz	16QAM	23095	1RB#0	22.75	20.1	34.77	PASS
Band12	5MHz	16QAM	23095	1RB#12	22.68	20.03	34.77	PASS
Band12	5MHz	16QAM	23095	1RB#24	22.53	19.88	34.77	PASS
Band12	5MHz	16QAM	23095	25RB#0	21.37	18.72	34.77	PASS
Band12	5MHz	QPSK	23155	1RB#0	23.18	20.53	34.77	PASS
Band12	5MHz	QPSK	23155	1RB#12	23.17	20.52	34.77	PASS
Band12	5MHz	QPSK	23155	1RB#24	23.1	20.45	34.77	PASS
Band12	5MHz	QPSK	23155	25RB#0	22.23	19.58	34.77	PASS
Band12	5MHz	16QAM	23155	1RB#0	22.67	20.02	34.77	PASS
Band12	5MHz	16QAM	23155	1RB#12	22.57	19.92	34.77	PASS
Band12	5MHz	16QAM	23155	1RB#24	22.61	19.96	34.77	PASS
Band12	5MHz	16QAM	23155	25RB#0	21.29	18.64	34.77	PASS
Band12	10MHz	QPSK	23060	1RB#0	23.21	20.56	34.77	PASS
Band12	10MHz	QPSK	23060	1RB#24	23.29	20.64	34.77	PASS
Band12	10MHz	QPSK	23060	1RB#49	23.27	20.62	34.77	PASS
Band12	10MHz	QPSK	23060	50RB#0	22.3	19.65	34.77	PASS
Band12	10MHz	16QAM	23060	1RB#0	22.76	20.11	34.77	PASS
Band12	10MHz	16QAM	23060	1RB#24	22.52	19.87	34.77	PASS
Band12	10MHz	16QAM	23060	1RB#49	22.41	19.76	34.77	PASS
Band12	10MHz	16QAM	23060	50RB#0	21.4	18.75	34.77	PASS
Band12	10MHz	QPSK	23095	1RB#0	23.26	20.61	34.77	PASS
Band12	10MHz	QPSK	23095	1RB#24	23.27	20.62	34.77	PASS

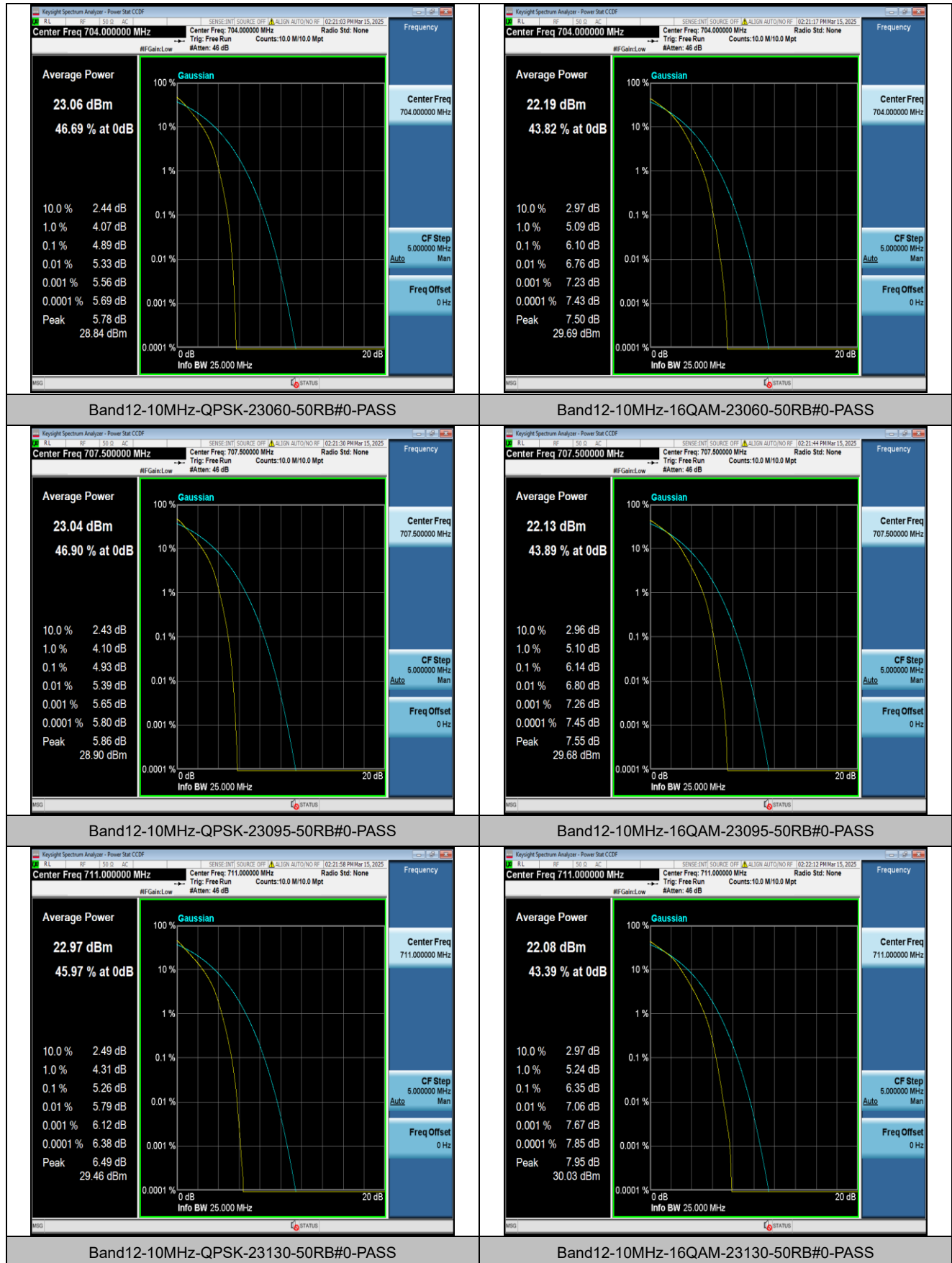
Band12	10MHz	QPSK	23095	1RB#49	23.19	20.54	34.77	PASS
Band12	10MHz	QPSK	23095	50RB#0	22.32	19.67	34.77	PASS
Band12	10MHz	16QAM	23095	1RB#0	22.44	19.79	34.77	PASS
Band12	10MHz	16QAM	23095	1RB#24	22.48	19.83	34.77	PASS
Band12	10MHz	16QAM	23095	1RB#49	22.62	19.97	34.77	PASS
Band12	10MHz	16QAM	23095	50RB#0	21.38	18.73	34.77	PASS
Band12	10MHz	QPSK	23130	1RB#0	23.29	20.64	34.77	PASS
Band12	10MHz	QPSK	23130	1RB#24	23.23	20.58	34.77	PASS
Band12	10MHz	QPSK	23130	1RB#49	23.1	20.45	34.77	PASS
Band12	10MHz	QPSK	23130	50RB#0	22.28	19.63	34.77	PASS
Band12	10MHz	16QAM	23130	1RB#0	22.75	20.1	34.77	PASS
Band12	10MHz	16QAM	23130	1RB#24	22.57	19.92	34.77	PASS
Band12	10MHz	16QAM	23130	1RB#49	22.48	19.83	34.77	PASS
Band12	10MHz	16QAM	23130	50RB#0	21.32	18.67	34.77	PASS

Peak-to-Average Ratio(CCDF)

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result (dB)	Limit (dB)	Verdict
Band12	10MHz	QPSK	23060	50RB#0	4.89	13	PASS
Band12	10MHz	16QAM	23060	50RB#0	6.10	13	PASS
Band12	10MHz	QPSK	23095	50RB#0	4.93	13	PASS
Band12	10MHz	16QAM	23095	50RB#0	6.14	13	PASS
Band12	10MHz	QPSK	23130	50RB#0	5.26	13	PASS
Band12	10MHz	16QAM	23130	50RB#0	6.35	13	PASS

Test Graphs

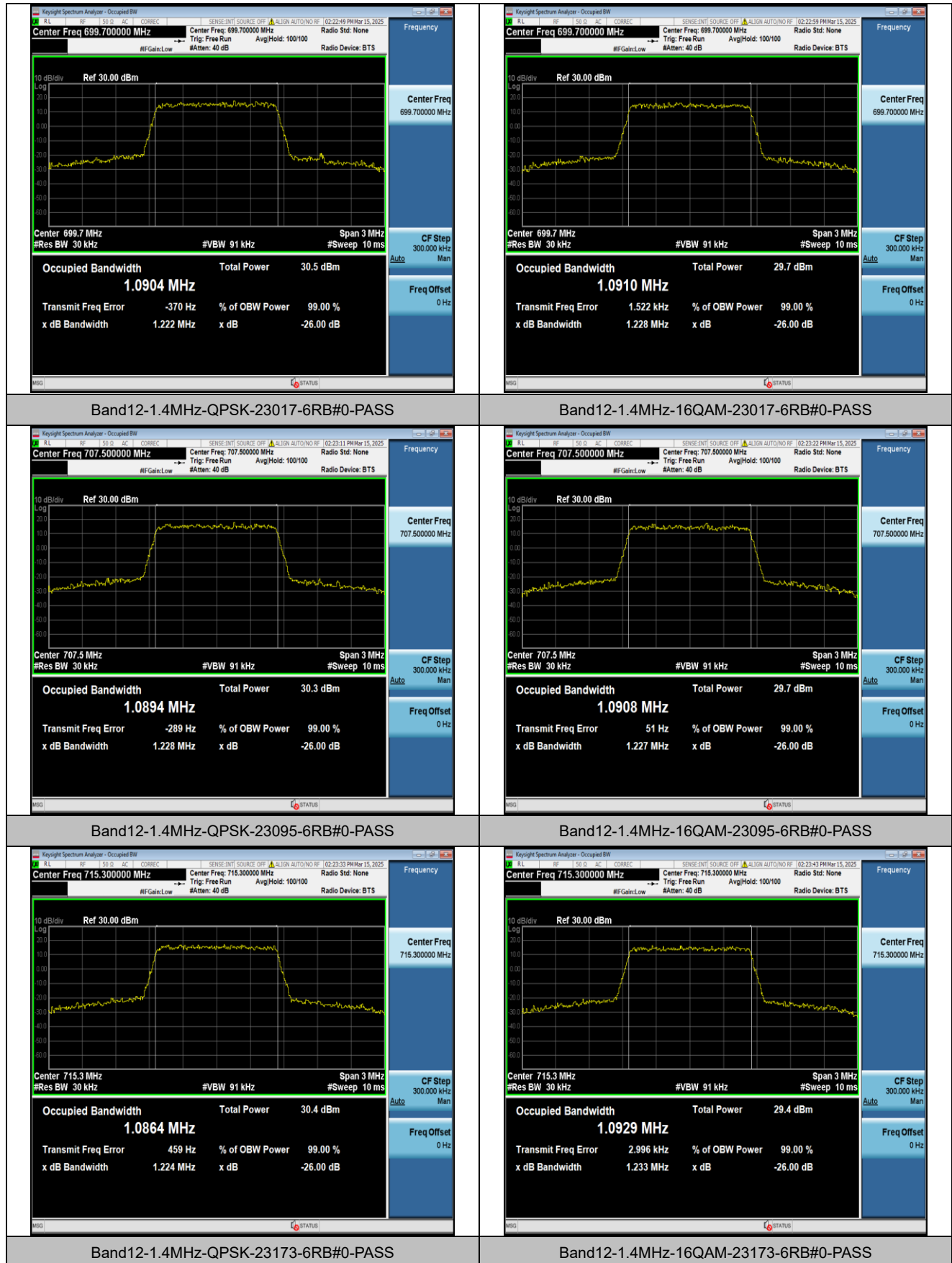


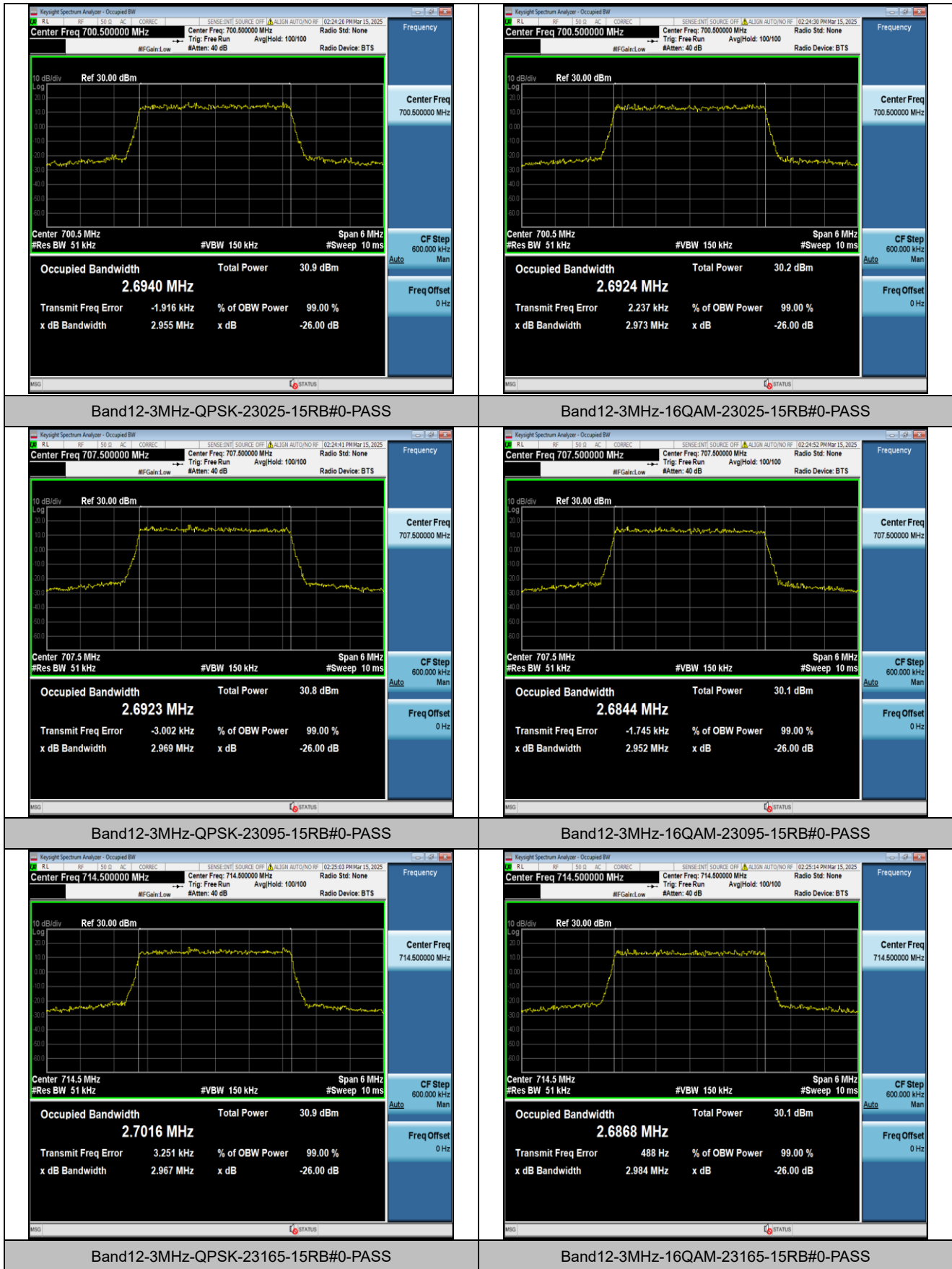
26dB Bandwidth and Occupied Bandwidth

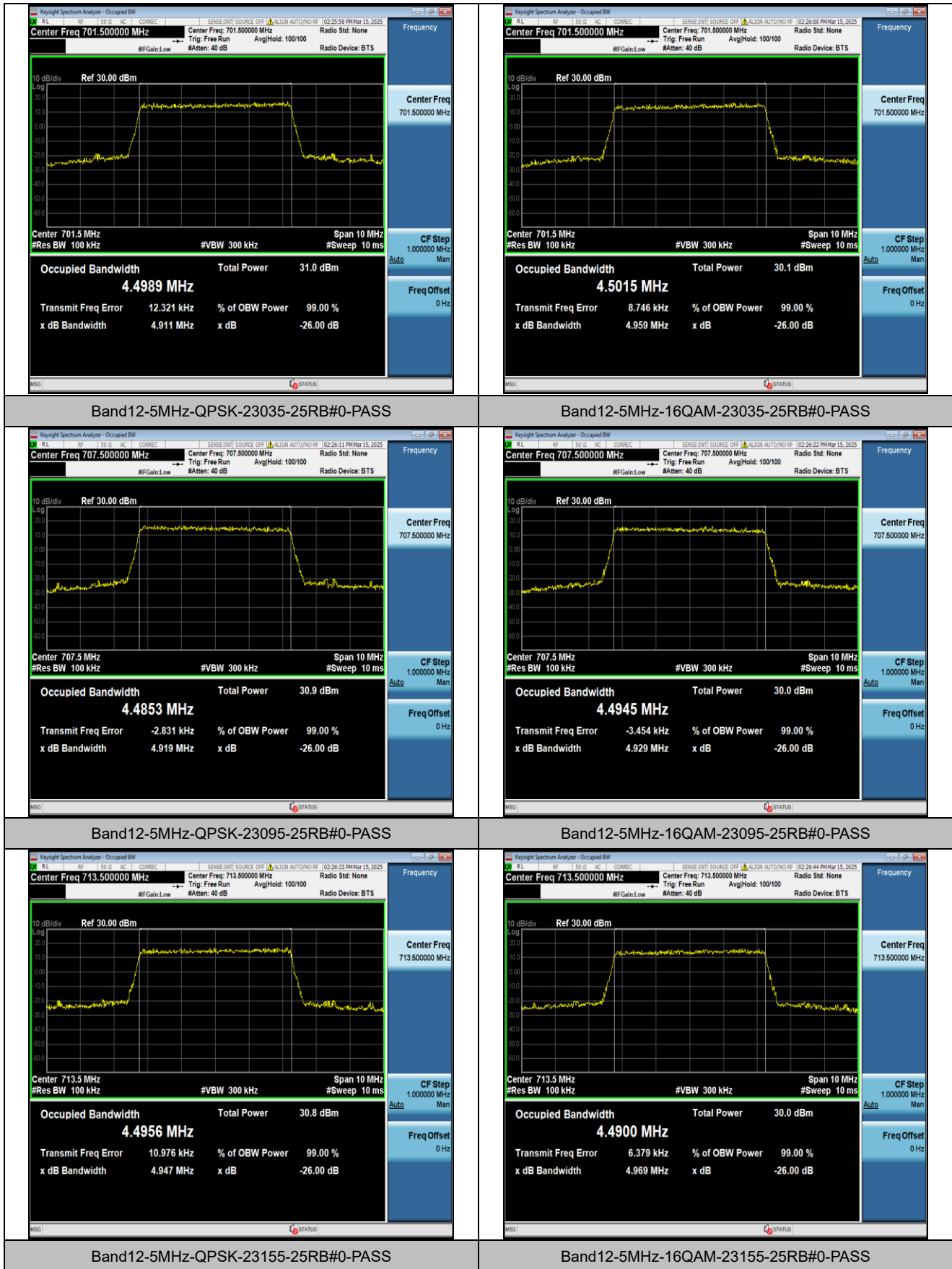
Test Result

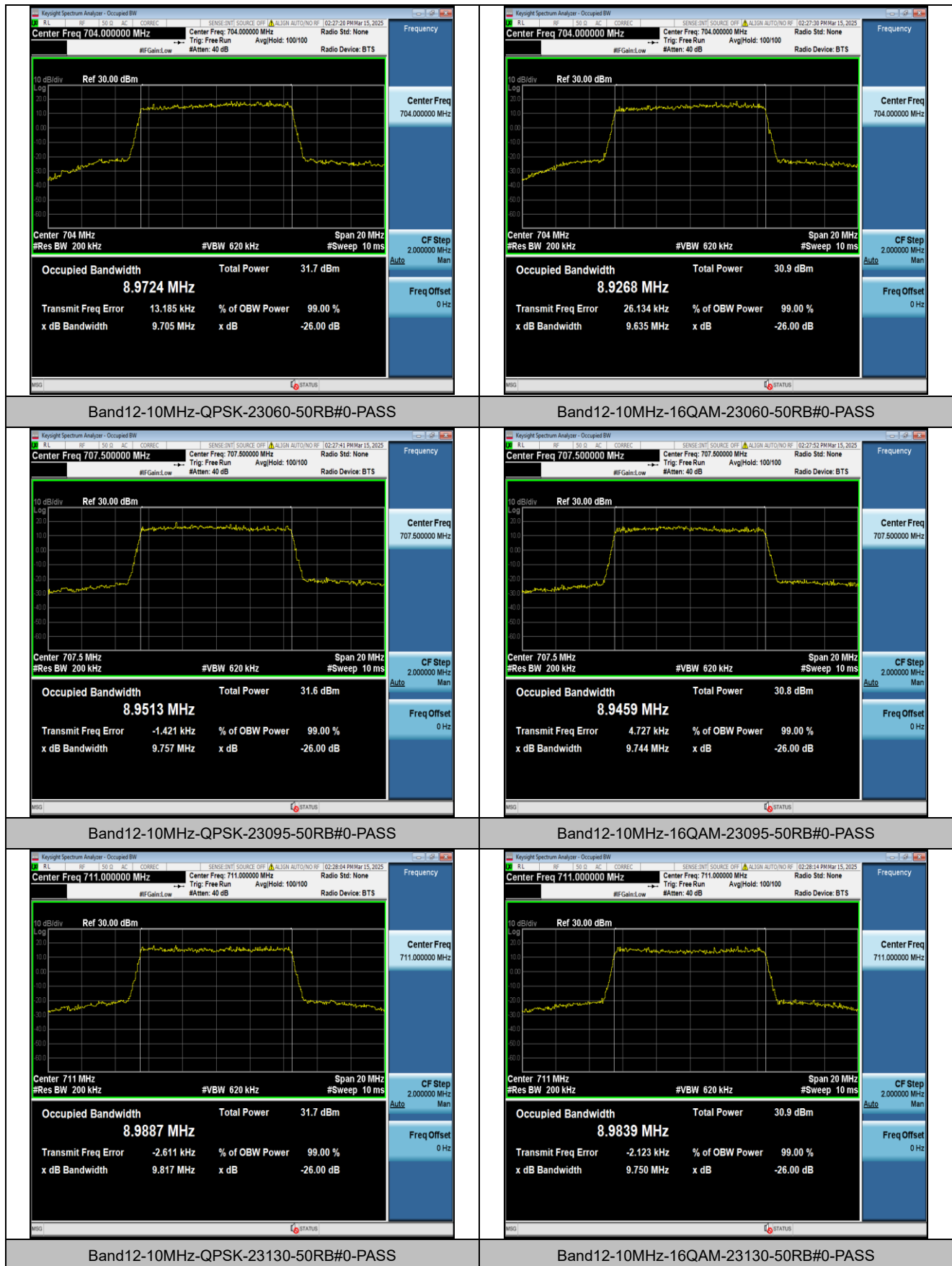
Band	Bandwidth	Modulation	Channel	RB Configuration	OBW (MHz)	26dB EBW (MHz)	Verdict
Band12	1.4MHz	QPSK	23017	6RB#0	1.0904	1.222	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	1.0910	1.228	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	1.0894	1.228	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	1.0908	1.227	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	1.0864	1.224	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	1.0929	1.233	PASS
Band12	3MHz	QPSK	23025	15RB#0	2.6940	2.955	PASS
Band12	3MHz	16QAM	23025	15RB#0	2.6924	2.973	PASS
Band12	3MHz	QPSK	23095	15RB#0	2.6923	2.969	PASS
Band12	3MHz	16QAM	23095	15RB#0	2.6844	2.952	PASS
Band12	3MHz	QPSK	23165	15RB#0	2.7016	2.967	PASS
Band12	3MHz	16QAM	23165	15RB#0	2.6868	2.984	PASS
Band12	5MHz	QPSK	23035	25RB#0	4.4989	4.911	PASS
Band12	5MHz	16QAM	23035	25RB#0	4.5015	4.959	PASS
Band12	5MHz	QPSK	23095	25RB#0	4.4853	4.919	PASS
Band12	5MHz	16QAM	23095	25RB#0	4.4945	4.929	PASS
Band12	5MHz	QPSK	23155	25RB#0	4.4956	4.947	PASS
Band12	5MHz	16QAM	23155	25RB#0	4.4900	4.969	PASS
Band12	10MHz	QPSK	23060	50RB#0	8.9724	9.705	PASS
Band12	10MHz	16QAM	23060	50RB#0	8.9268	9.635	PASS
Band12	10MHz	QPSK	23095	50RB#0	8.9513	9.757	PASS
Band12	10MHz	16QAM	23095	50RB#0	8.9459	9.744	PASS
Band12	10MHz	QPSK	23130	50RB#0	8.9887	9.817	PASS
Band12	10MHz	16QAM	23130	50RB#0	8.9839	9.750	PASS

Test Graphs



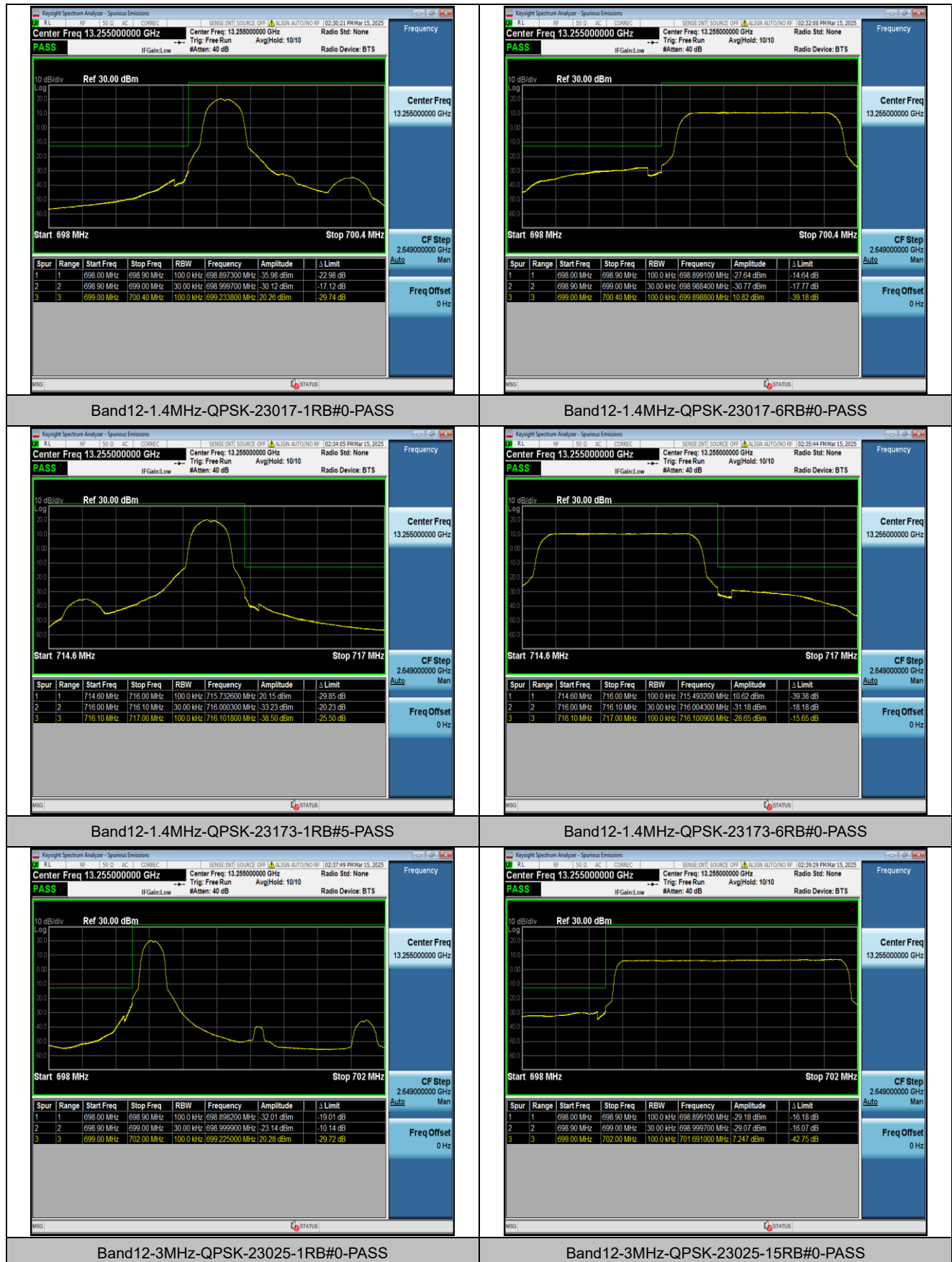


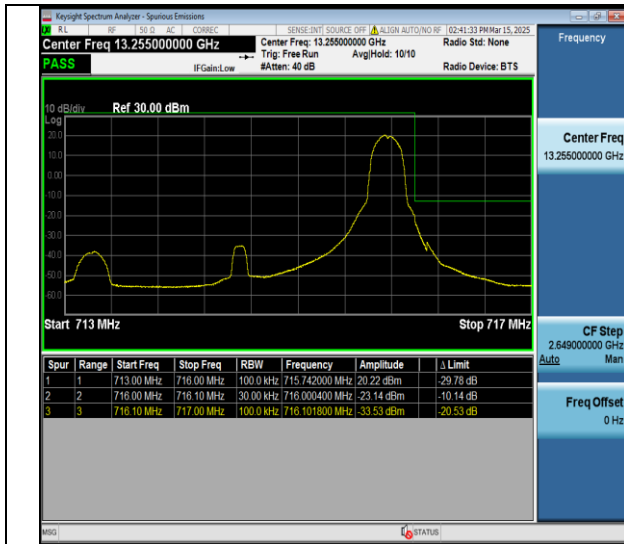




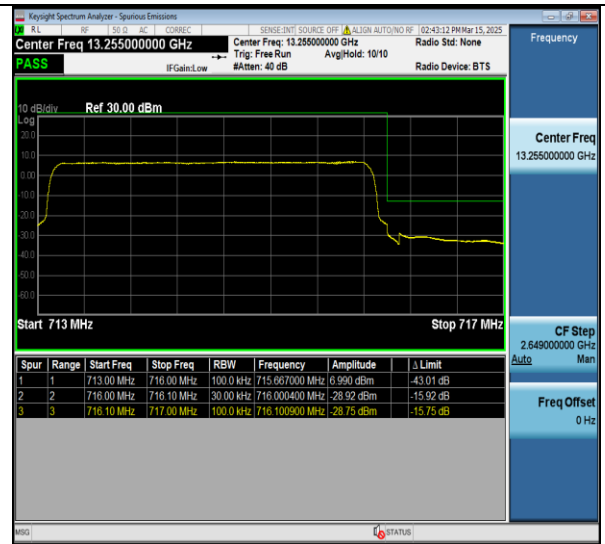
Band Edge

Test Graphs

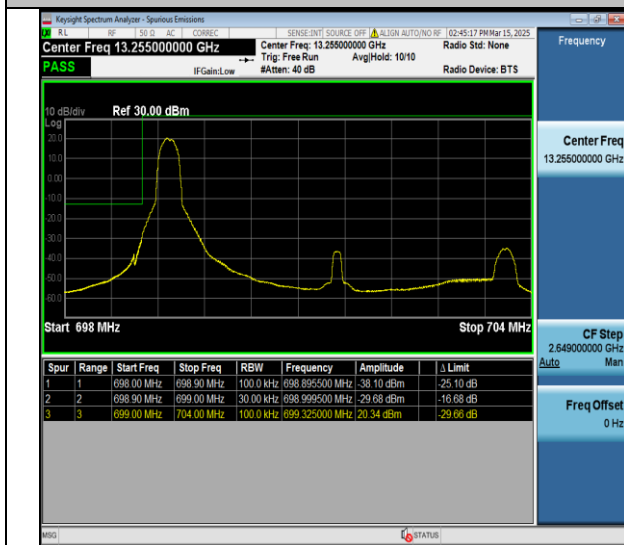




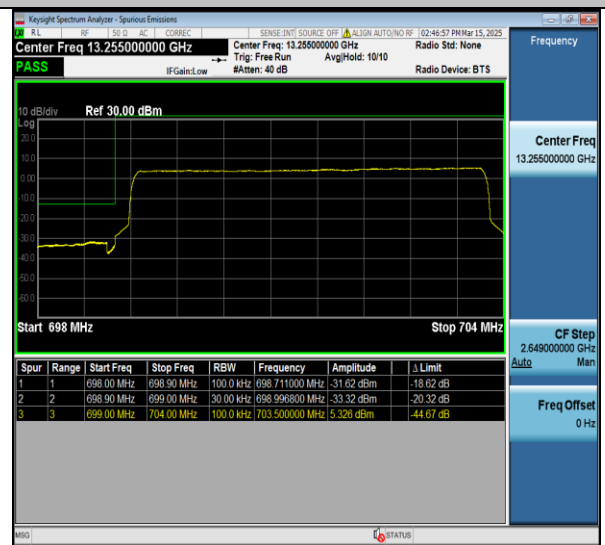
Band12-3MHz-QPSK-23165-1RB#14-PASS



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



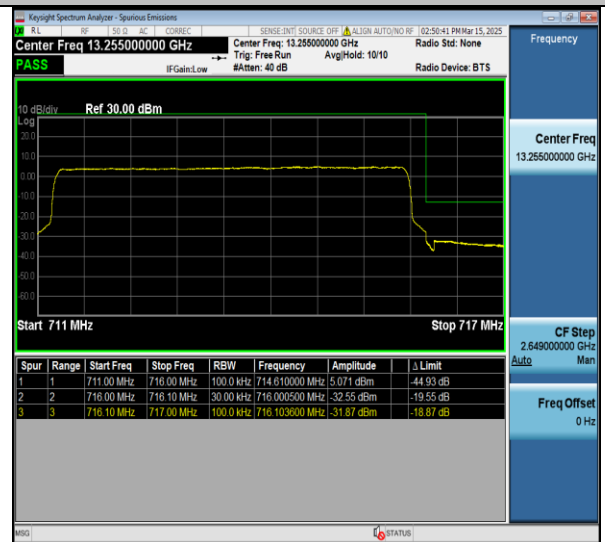
Band12-5MHz-QPSK-23035-1RB#0-PASS



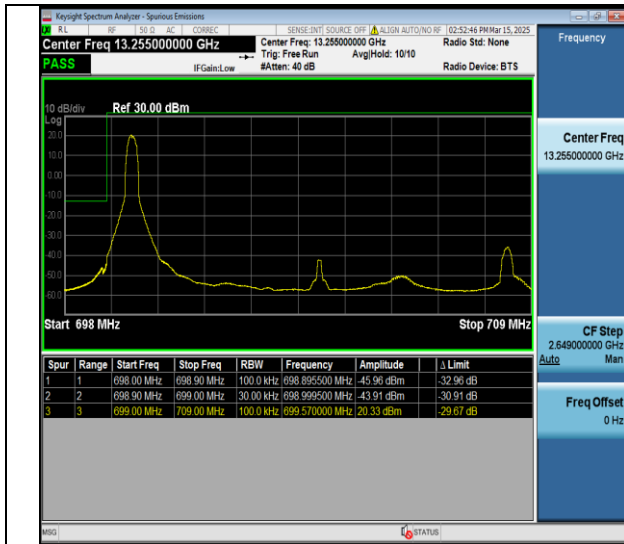
Band12-5MHz-QPSK-23035-25RB#0-PASS



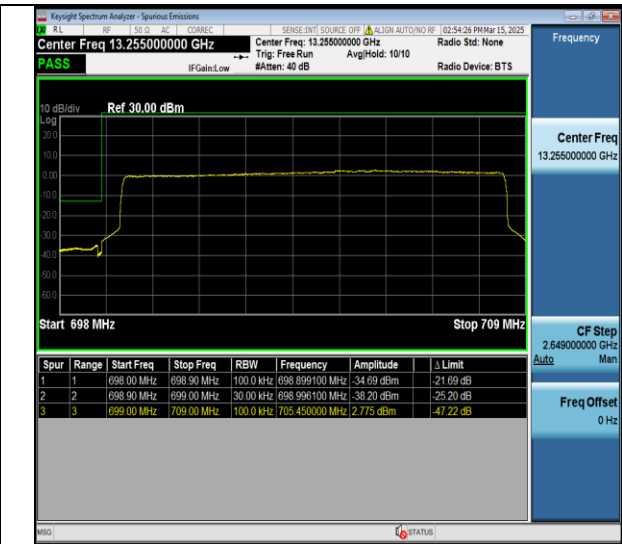
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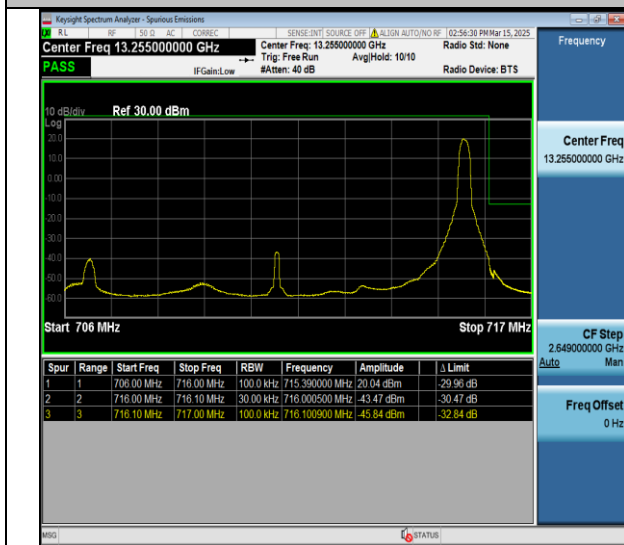
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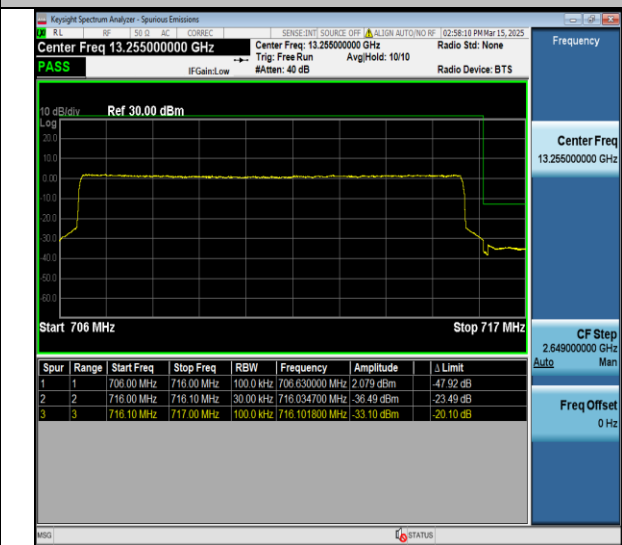
Band12-10MHz-QPSK-23060-1RB#0-PASS



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



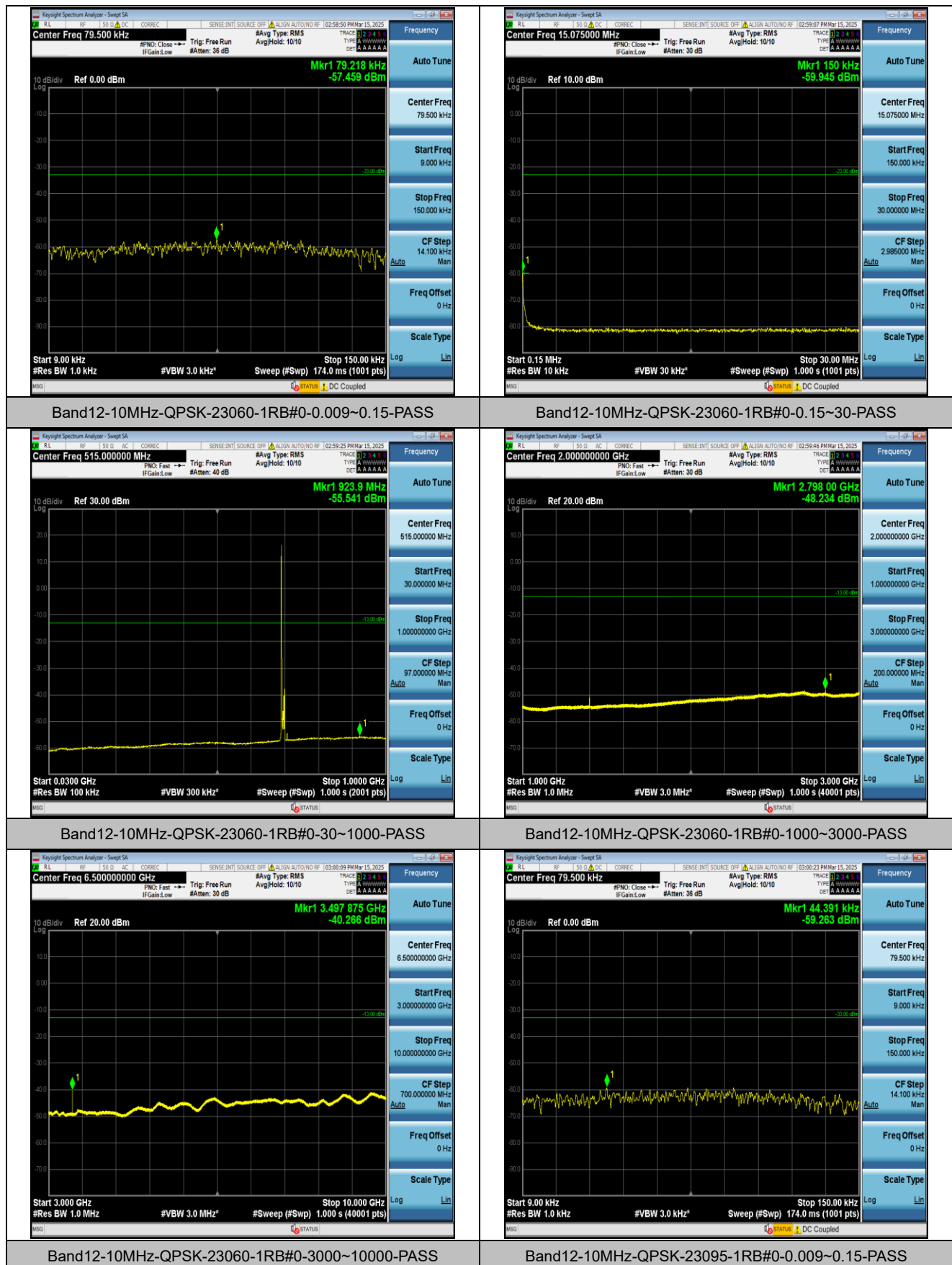
Band12-10MHz-QPSK-23130-1RB#49-PASS

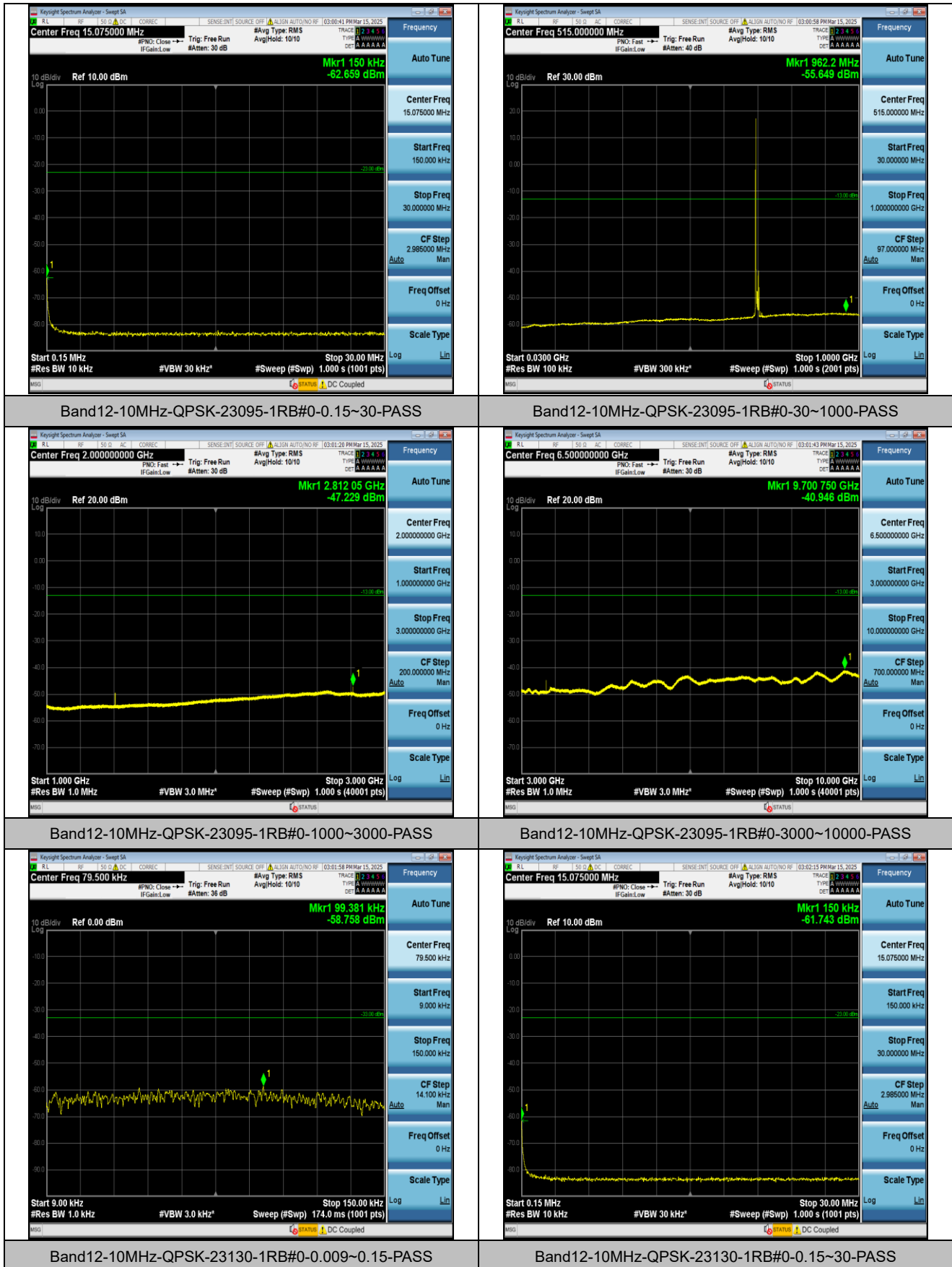


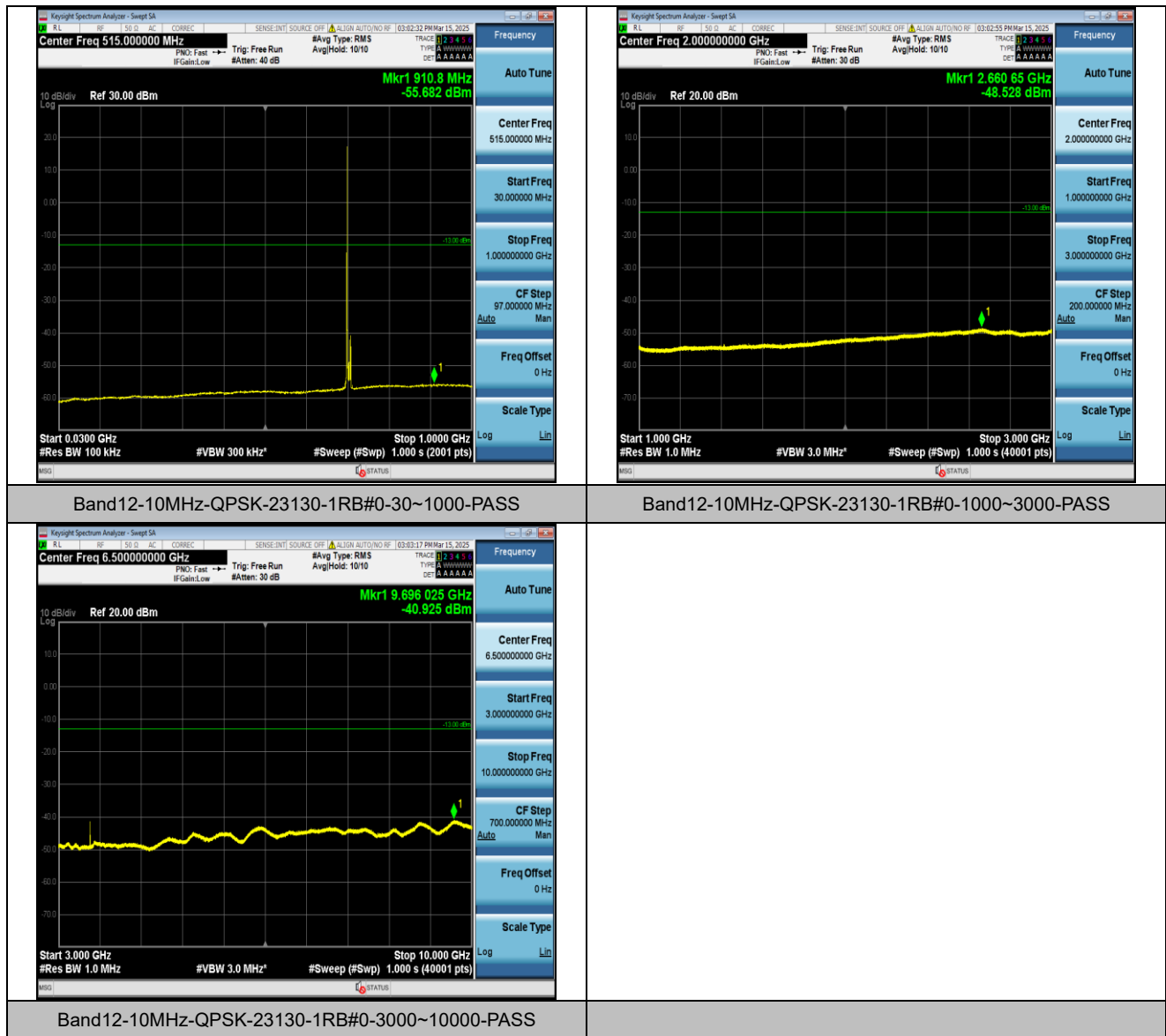
Band12-10MHz-QPSK-23130-50RB#0-PASS

Conducted Spurious Emission

Test Graphs







Frequency Stability

Test Result

Voltage									
Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Verdict
Band12	10MHz	QPSK	23095	100RB#0	VN	NT	-7.00	-0.009894	PASS
Band12	10MHz	QPSK	23095	100RB#0	VL	NT	2.30	0.003251	PASS
Band12	10MHz	QPSK	23095	100RB#0	VH	NT	-1.50	-0.002120	PASS

Temperature									
Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Verdict
Band12	10MHz	QPSK	23095	100RB#0	NV	-30	-0.60	-0.000848	PASS
Band12	10MHz	QPSK	23095	100RB#0	NV	-20	-6.10	-0.008622	PASS
Band12	10MHz	QPSK	23095	100RB#0	NV	-10	0.80	0.001131	PASS
Band12	10MHz	QPSK	23095	100RB#0	NV	0	-2.80	-0.003958	PASS
Band12	10MHz	QPSK	23095	100RB#0	NV	10	-1.70	-0.002403	PASS
Band12	10MHz	QPSK	23095	100RB#0	NV	20	0.00	0.000000	PASS
Band12	10MHz	QPSK	23095	100RB#0	NV	30	-0.80	-0.001131	PASS
Band12	10MHz	QPSK	23095	100RB#0	NV	40	-0.10	-0.000141	PASS
Band12	10MHz	QPSK	23095	100RB#0	NV	50	0.50	0.000707	PASS

~The End~