

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	23.32	24.43	34.77	PASS
Band12	1.4MHz	QPSK	23017	1RB#2	23.06	24.17	34.77	PASS
Band12	1.4MHz	QPSK	23017	1RB#5	22.73	23.84	34.77	PASS
Band12	1.4MHz	QPSK	23017	6RB#0	21.93	23.04	34.77	PASS
Band12	1.4MHz	16QAM	23017	1RB#0	22.32	23.43	34.77	PASS
Band12	1.4MHz	16QAM	23017	1RB#2	22.08	23.19	34.77	PASS
Band12	1.4MHz	16QAM	23017	1RB#5	22	23.11	34.77	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	21.07	22.18	34.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#0	23.53	24.64	34.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#2	23.51	24.62	34.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#5	23.39	24.5	34.77	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	22.55	23.66	34.77	PASS
Band12	1.4MHz	16QAM	23095	1RB#0	22.56	23.67	34.77	PASS
Band12	1.4MHz	16QAM	23095	1RB#2	22.49	23.6	34.77	PASS
Band12	1.4MHz	16QAM	23095	1RB#5	22.32	23.43	34.77	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	21.57	22.68	34.77	PASS
Band12	1.4MHz	QPSK	23173	1RB#0	23.57	24.68	34.77	PASS
Band12	1.4MHz	QPSK	23173	1RB#2	23.39	24.5	34.77	PASS
Band12	1.4MHz	QPSK	23173	1RB#5	23.17	24.28	34.77	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	22.44	23.55	34.77	PASS
Band12	1.4MHz	16QAM	23173	1RB#0	22.44	23.55	34.77	PASS
Band12	1.4MHz	16QAM	23173	1RB#2	22.67	23.78	34.77	PASS
Band12	1.4MHz	16QAM	23173	1RB#5	22.37	23.48	34.77	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	21.59	22.7	34.77	PASS
Band12	3MHz	QPSK	23025	1RB#0	23.02	24.13	34.77	PASS
Band12	3MHz	QPSK	23025	1RB#8	22.5	23.61	34.77	PASS
Band12	3MHz	QPSK	23025	1RB#14	22.36	23.47	34.77	PASS
Band12	3MHz	QPSK	23025	15RB#0	21.65	22.76	34.77	PASS
Band12	3MHz	16QAM	23025	1RB#0	22.14	23.25	34.77	PASS
Band12	3MHz	16QAM	23025	1RB#8	21.94	23.05	34.77	PASS
Band12	3MHz	16QAM	23025	1RB#14	21.66	22.77	34.77	PASS
Band12	3MHz	16QAM	23025	15RB#0	20.85	21.96	34.77	PASS
Band12	3MHz	QPSK	23095	1RB#0	23.62	24.73	34.77	PASS
Band12	3MHz	QPSK	23095	1RB#8	23.51	24.62	34.77	PASS
Band12	3MHz	QPSK	23095	1RB#14	22.86	23.97	34.77	PASS
Band12	3MHz	QPSK	23095	15RB#0	22.46	23.57	34.77	PASS

Band12	3MHz	16QAM	23095	1RB#0	22.77	23.88	34.77	PASS
Band12	3MHz	16QAM	23095	1RB#8	22.85	23.96	34.77	PASS
Band12	3MHz	16QAM	23095	1RB#14	22.07	23.18	34.77	PASS
Band12	3MHz	16QAM	23095	15RB#0	21.47	22.58	34.77	PASS
Band12	3MHz	QPSK	23165	1RB#0	22.85	23.96	34.77	PASS
Band12	3MHz	QPSK	23165	1RB#8	23.39	24.5	34.77	PASS
Band12	3MHz	QPSK	23165	1RB#14	22.94	24.05	34.77	PASS
Band12	3MHz	QPSK	23165	15RB#0	22.29	23.4	34.77	PASS
Band12	3MHz	16QAM	23165	1RB#0	22	23.11	34.77	PASS
Band12	3MHz	16QAM	23165	1RB#8	22.69	23.8	34.77	PASS
Band12	3MHz	16QAM	23165	1RB#14	22.24	23.35	34.77	PASS
Band12	3MHz	16QAM	23165	15RB#0	21.4	22.51	34.77	PASS
Band12	5MHz	QPSK	23035	1RB#0	23.39	24.5	34.77	PASS
Band12	5MHz	QPSK	23035	1RB#12	22.46	23.57	34.77	PASS
Band12	5MHz	QPSK	23035	1RB#24	23.24	24.35	34.77	PASS
Band12	5MHz	QPSK	23035	25RB#0	21.83	22.94	34.77	PASS
Band12	5MHz	16QAM	23035	1RB#0	22.22	23.33	34.77	PASS
Band12	5MHz	16QAM	23035	1RB#12	21.62	22.73	34.77	PASS
Band12	5MHz	16QAM	23035	1RB#24	22.56	23.67	34.77	PASS
Band12	5MHz	16QAM	23035	25RB#0	20.96	22.07	34.77	PASS
Band12	5MHz	QPSK	23095	1RB#0	23.67	24.78	34.77	PASS
Band12	5MHz	QPSK	23095	1RB#12	23.48	24.59	34.77	PASS
Band12	5MHz	QPSK	23095	1RB#24	22.79	23.9	34.77	PASS
Band12	5MHz	QPSK	23095	25RB#0	22.46	23.57	34.77	PASS
Band12	5MHz	16QAM	23095	1RB#0	22.8	23.91	34.77	PASS
Band12	5MHz	16QAM	23095	1RB#12	22.37	23.48	34.77	PASS
Band12	5MHz	16QAM	23095	1RB#24	21.69	22.8	34.77	PASS
Band12	5MHz	16QAM	23095	25RB#0	21.45	22.56	34.77	PASS
Band12	5MHz	QPSK	23155	1RB#0	22.78	23.89	34.77	PASS
Band12	5MHz	QPSK	23155	1RB#12	23.09	24.2	34.77	PASS
Band12	5MHz	QPSK	23155	1RB#24	23.26	24.37	34.77	PASS
Band12	5MHz	QPSK	23155	25RB#0	22.14	23.25	34.77	PASS
Band12	5MHz	16QAM	23155	1RB#0	21.59	22.7	34.77	PASS
Band12	5MHz	16QAM	23155	1RB#12	21.87	22.98	34.77	PASS
Band12	5MHz	16QAM	23155	1RB#24	22.23	23.34	34.77	PASS
Band12	5MHz	16QAM	23155	25RB#0	21.31	22.42	34.77	PASS
Band12	10MHz	QPSK	23060	1RB#0	23.32	24.43	34.77	PASS
Band12	10MHz	QPSK	23060	1RB#24	23.32	24.43	34.77	PASS
Band12	10MHz	QPSK	23060	1RB#49	23.34	24.45	34.77	PASS
Band12	10MHz	QPSK	23060	50RB#0	22.43	23.54	34.77	PASS
Band12	10MHz	16QAM	23060	1RB#0	22.4	23.51	34.77	PASS
Band12	10MHz	16QAM	23060	1RB#24	22.49	23.6	34.77	PASS
Band12	10MHz	16QAM	23060	1RB#49	22.74	23.85	34.77	PASS
Band12	10MHz	16QAM	23060	27RB#0	21.22	22.33	34.77	PASS

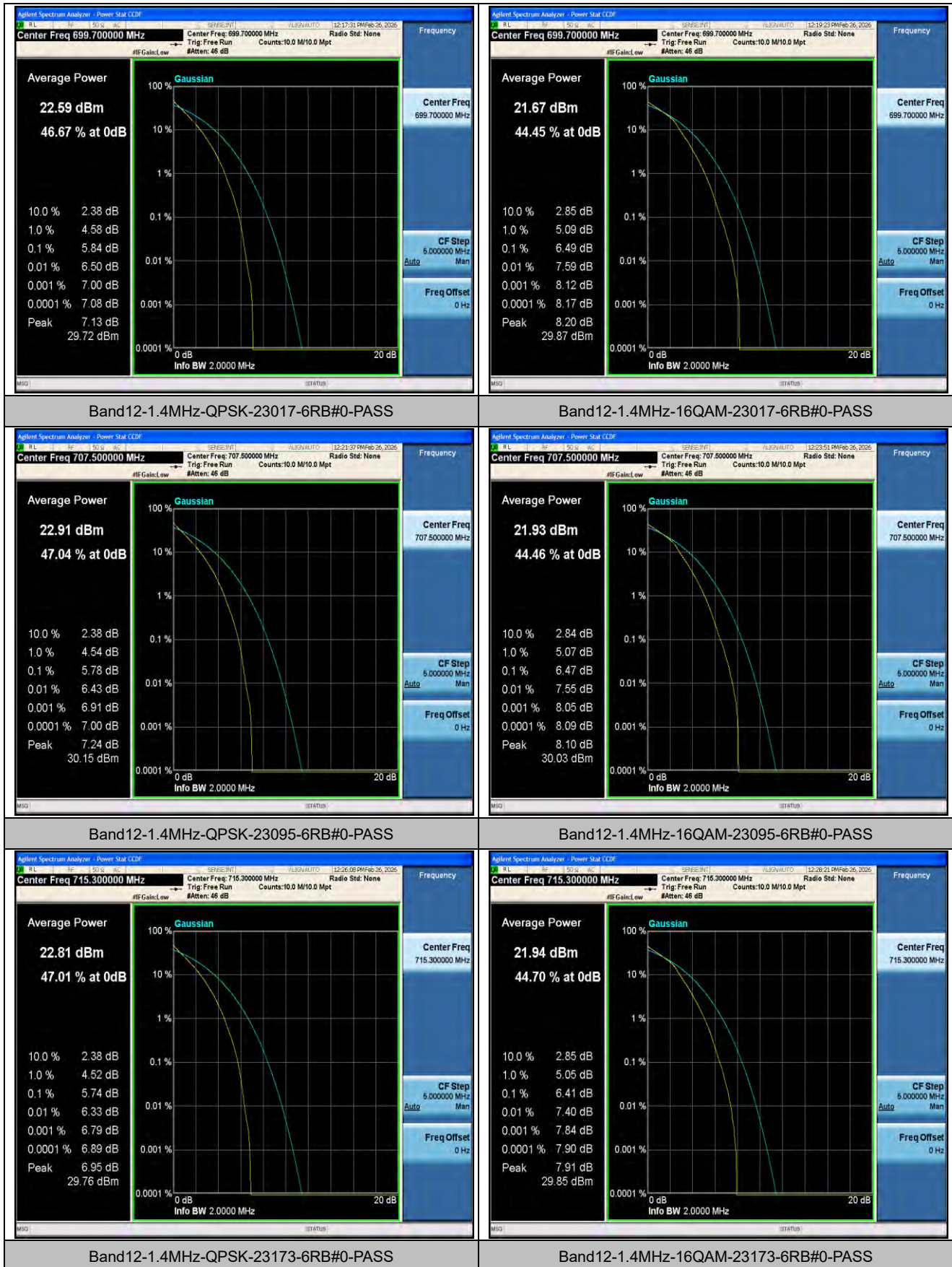
Band12	10MHz	QPSK	23095	1RB#0	23.13	24.24	34.77	PASS
Band12	10MHz	QPSK	23095	1RB#24	23.67	24.78	34.77	PASS
Band12	10MHz	QPSK	23095	1RB#49	22.78	23.89	34.77	PASS
Band12	10MHz	QPSK	23095	50RB#0	22.36	23.47	34.77	PASS
Band12	10MHz	16QAM	23095	1RB#0	22.29	23.4	34.77	PASS
Band12	10MHz	16QAM	23095	1RB#24	22.59	23.7	34.77	PASS
Band12	10MHz	16QAM	23095	1RB#49	21.61	22.72	34.77	PASS
Band12	10MHz	16QAM	23095	27RB#0	21.72	22.83	34.77	PASS
Band12	10MHz	QPSK	23130	1RB#0	23.82	24.93	34.77	PASS
Band12	10MHz	QPSK	23130	1RB#24	22.75	23.86	34.77	PASS
Band12	10MHz	QPSK	23130	1RB#49	23.59	24.7	34.77	PASS
Band12	10MHz	QPSK	23130	50RB#0	22.29	23.4	34.77	PASS
Band12	10MHz	16QAM	23130	1RB#0	22.76	23.87	34.77	PASS
Band12	10MHz	16QAM	23130	1RB#24	21.98	23.09	34.77	PASS
Band12	10MHz	16QAM	23130	1RB#49	22.75	23.86	34.77	PASS
Band12	10MHz	16QAM	23130	27RB#0	21.58	22.69	34.77	PASS

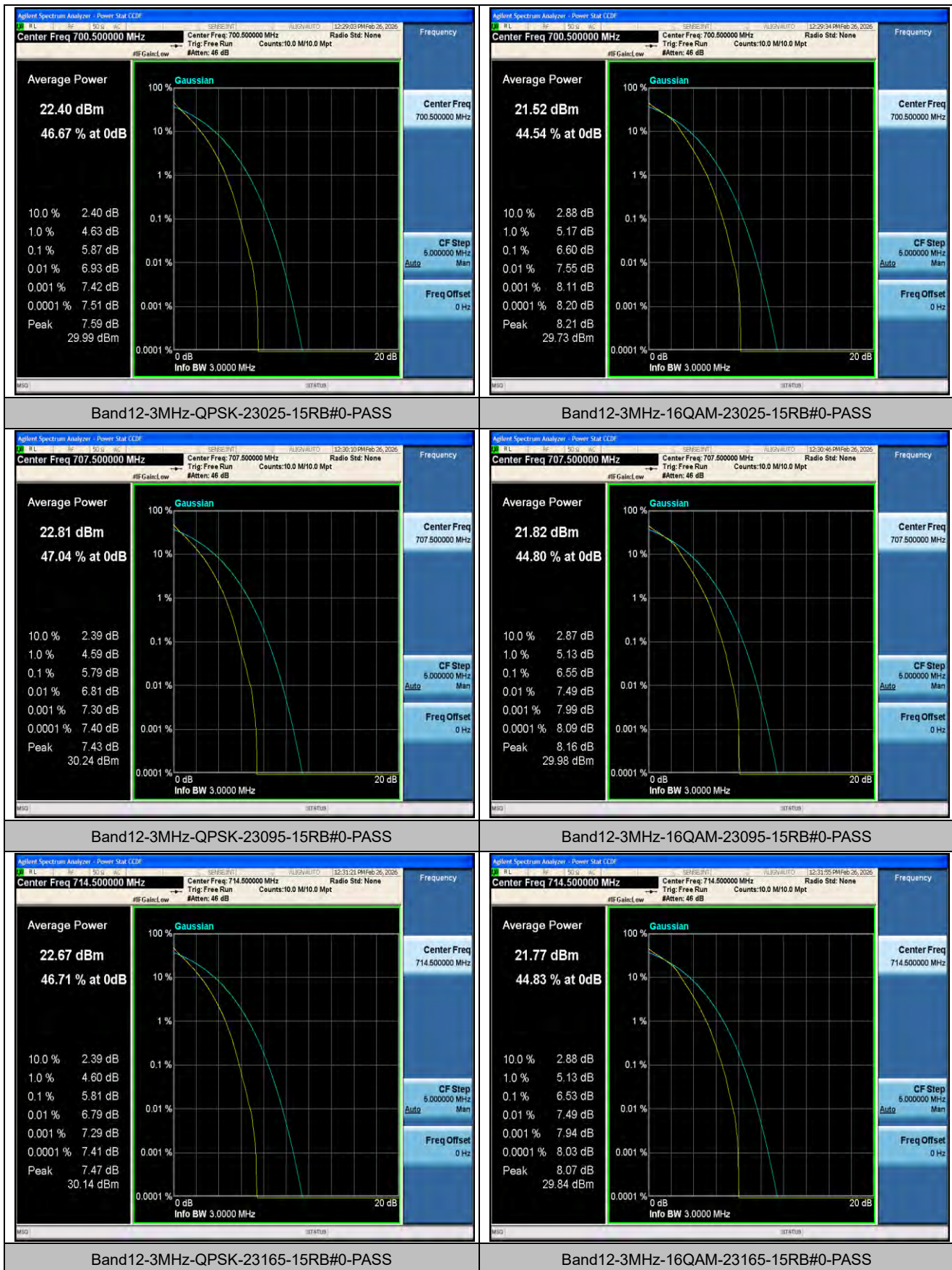
Peak-to-Average Ratio(CCDF)

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result (dB)	Limit (dB)	Verdict
Band12	1.4MHz	QPSK	23017	6RB#0	5.84	13	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	6.49	13	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	5.78	13	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	6.47	13	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	5.74	13	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	6.41	13	PASS
Band12	3MHz	QPSK	23025	15RB#0	5.87	13	PASS
Band12	3MHz	16QAM	23025	15RB#0	6.60	13	PASS
Band12	3MHz	QPSK	23095	15RB#0	5.79	13	PASS
Band12	3MHz	16QAM	23095	15RB#0	6.55	13	PASS
Band12	3MHz	QPSK	23165	15RB#0	5.81	13	PASS
Band12	3MHz	16QAM	23165	15RB#0	6.53	13	PASS
Band12	5MHz	QPSK	23035	25RB#0	5.84	13	PASS
Band12	5MHz	16QAM	23035	25RB#0	6.35	13	PASS
Band12	5MHz	QPSK	23095	25RB#0	5.72	13	PASS
Band12	5MHz	16QAM	23095	25RB#0	6.27	13	PASS
Band12	5MHz	QPSK	23155	25RB#0	5.78	13	PASS
Band12	5MHz	16QAM	23155	25RB#0	6.32	13	PASS
Band12	10MHz	QPSK	23060	50RB#0	5.80	13	PASS
Band12	10MHz	16QAM	23060	27RB#0	6.46	13	PASS
Band12	10MHz	QPSK	23095	50RB#0	5.67	13	PASS
Band12	10MHz	16QAM	23095	27RB#0	6.39	13	PASS
Band12	10MHz	QPSK	23130	50RB#0	5.82	13	PASS
Band12	10MHz	16QAM	23130	27RB#0	6.38	13	PASS

Test Graphs







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



Band12-5MHz-16QAM-23035-25RB#0-PASS



Band12-5MHz-QPSK-23095-25RB#0-PASS



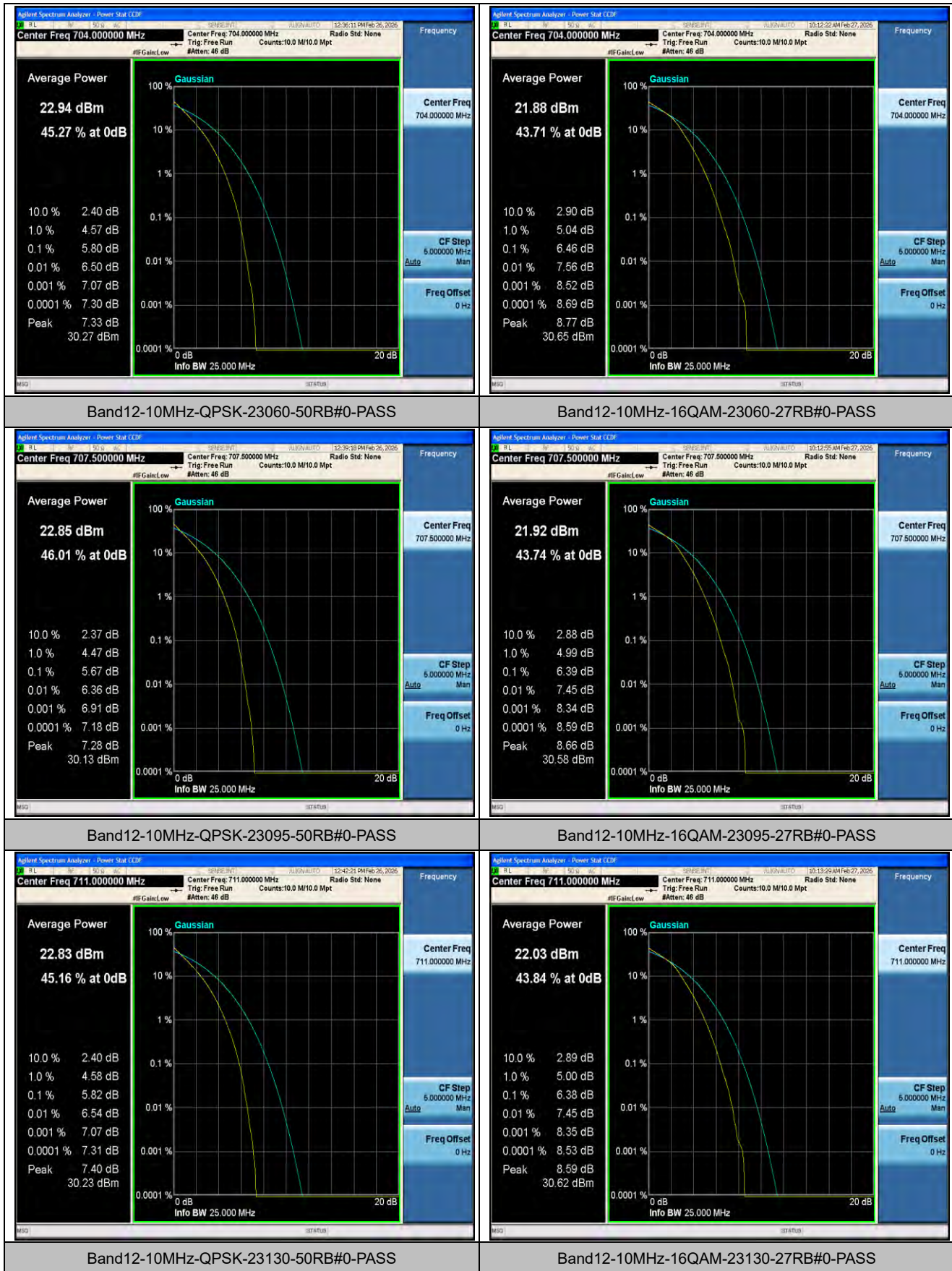
Band12-5MHz-16QAM-23095-25RB#0-PASS



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



Band12-5MHz-16QAM-23155-25RB#0-PASS



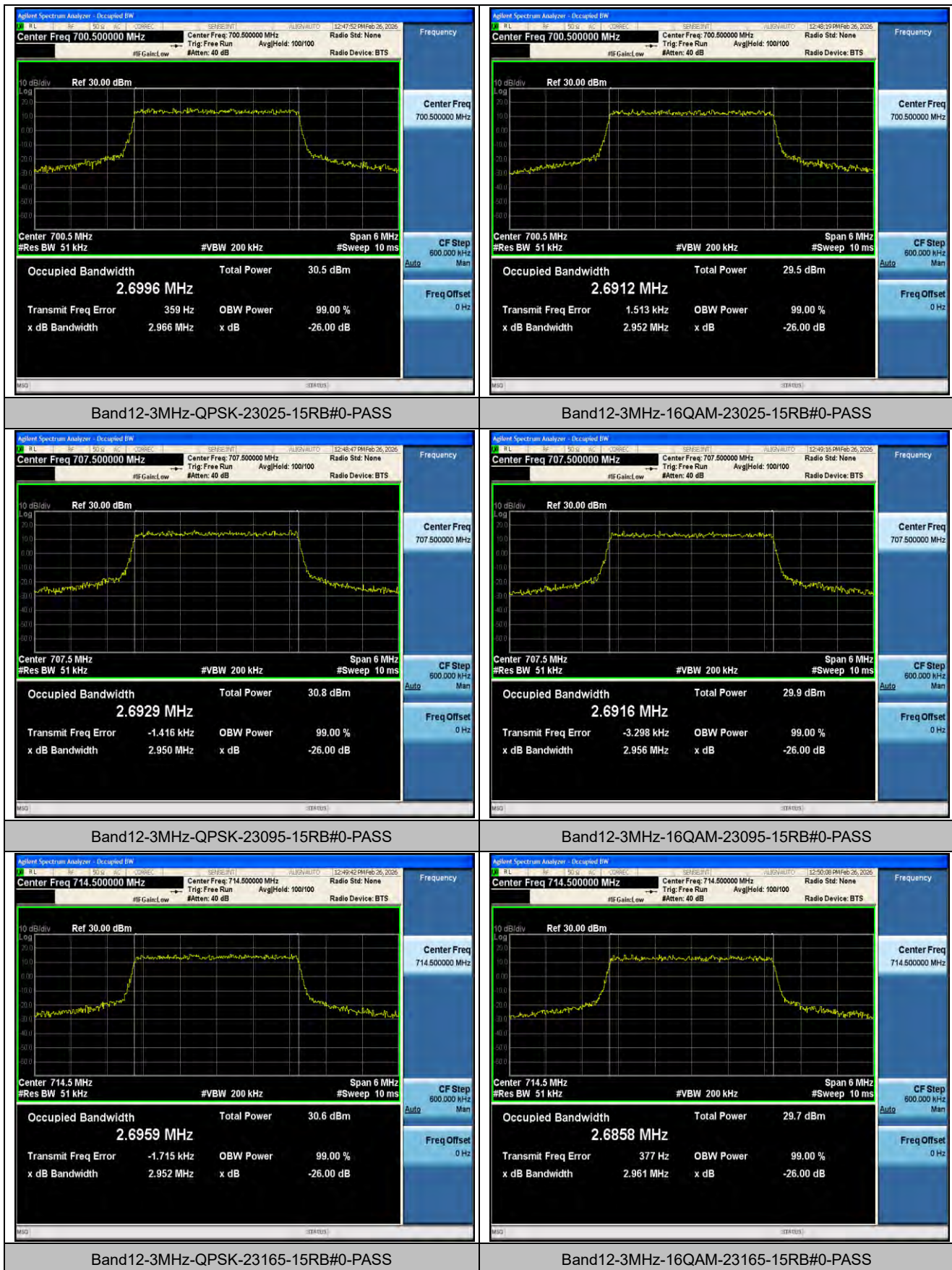
26dB Bandwidth and Occupied Bandwidth

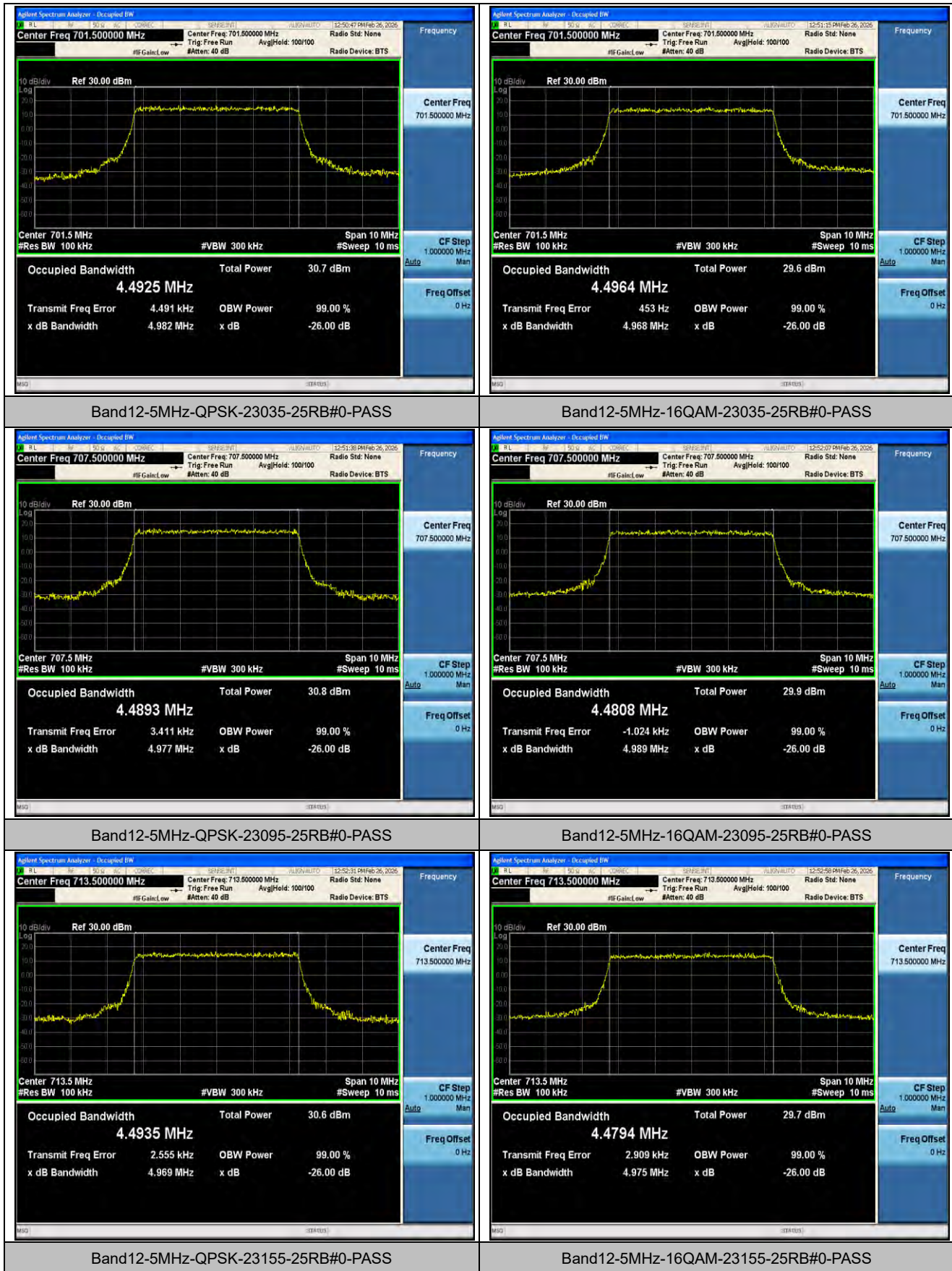
Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	OBW (MHz)	26dB EBW (MHz)	Verdict
Band12	1.4MHz	QPSK	23017	6RB#0	1.0909	1.287	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	1.0939	1.280	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	1.0904	1.290	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	1.0924	1.294	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	1.0906	1.285	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	1.0921	1.295	PASS
Band12	3MHz	QPSK	23025	15RB#0	2.6996	2.966	PASS
Band12	3MHz	16QAM	23025	15RB#0	2.6912	2.952	PASS
Band12	3MHz	QPSK	23095	15RB#0	2.6929	2.950	PASS
Band12	3MHz	16QAM	23095	15RB#0	2.6916	2.956	PASS
Band12	3MHz	QPSK	23165	15RB#0	2.6959	2.952	PASS
Band12	3MHz	16QAM	23165	15RB#0	2.6858	2.961	PASS
Band12	5MHz	QPSK	23035	25RB#0	4.4925	4.982	PASS
Band12	5MHz	16QAM	23035	25RB#0	4.4964	4.968	PASS
Band12	5MHz	QPSK	23095	25RB#0	4.4893	4.977	PASS
Band12	5MHz	16QAM	23095	25RB#0	4.4808	4.989	PASS
Band12	5MHz	QPSK	23155	25RB#0	4.4935	4.969	PASS
Band12	5MHz	16QAM	23155	25RB#0	4.4794	4.975	PASS
Band12	10MHz	QPSK	23060	50RB#0	8.9812	10.18	PASS
Band12	10MHz	16QAM	23060	27RB#0	4.9960	6.275	PASS
Band12	10MHz	QPSK	23095	50RB#0	8.9718	10.01	PASS
Band12	10MHz	16QAM	23095	27RB#0	4.9919	6.077	PASS
Band12	10MHz	QPSK	23130	50RB#0	8.9925	10.00	PASS
Band12	10MHz	16QAM	23130	27RB#0	4.9743	6.059	PASS

Test Graphs









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



Band12-10MHz-16QAM-23060-27RB#0-PASS



Band12-10MHz-QPSK-23095-50RB#0-PASS



Band12-10MHz-16QAM-23095-27RB#0-PASS



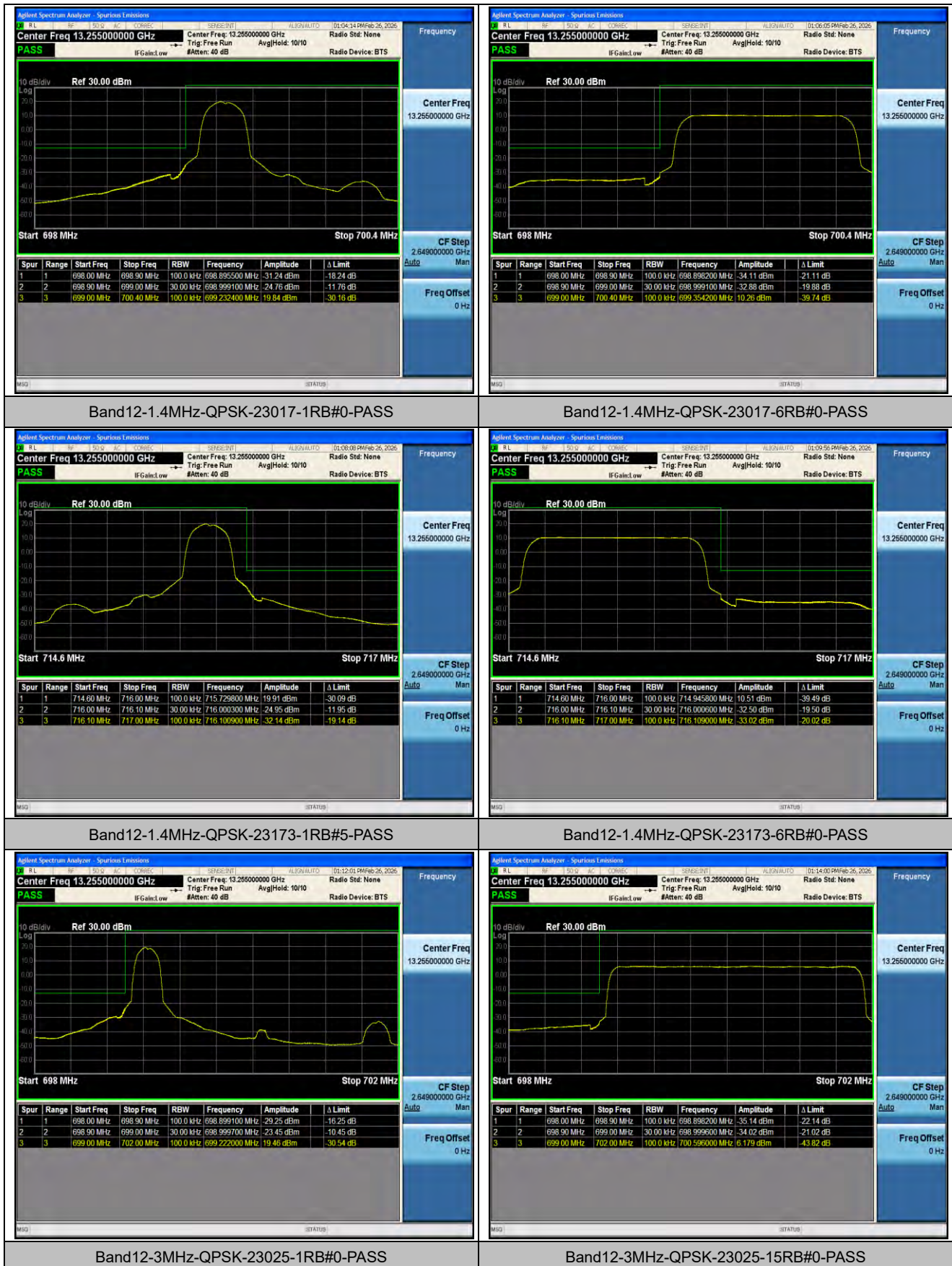
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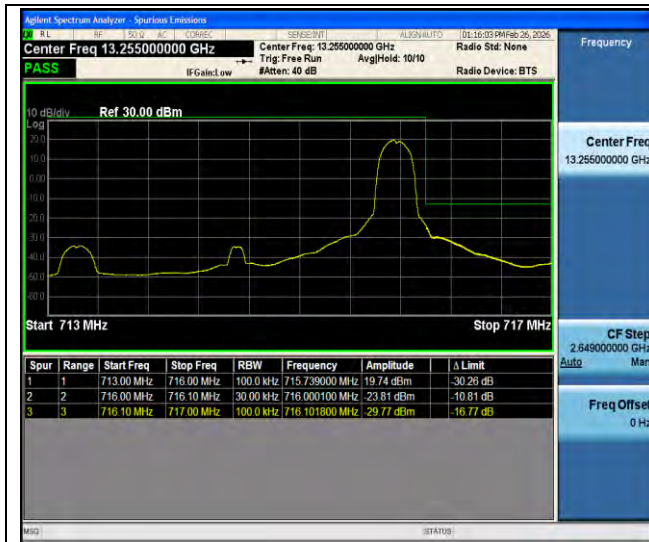


Band12-10MHz-16QAM-23130-27RB#0-PASS

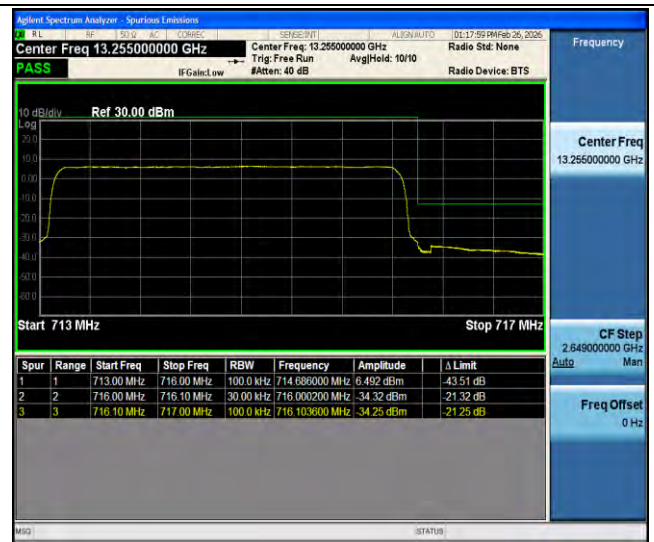
Band Edge

Test Graphs

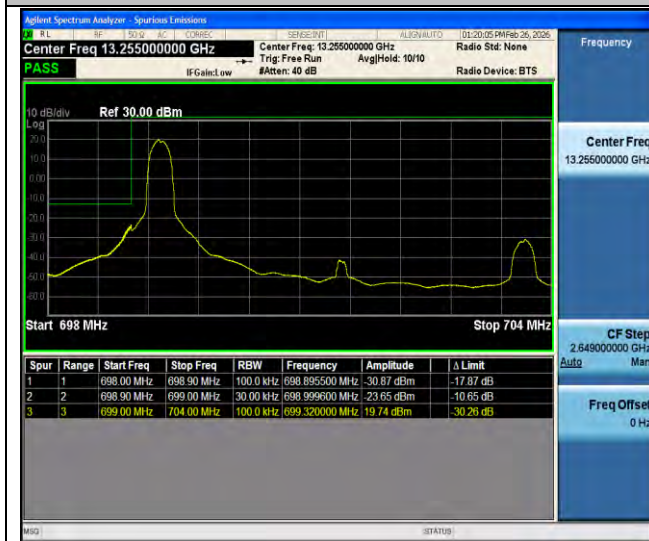




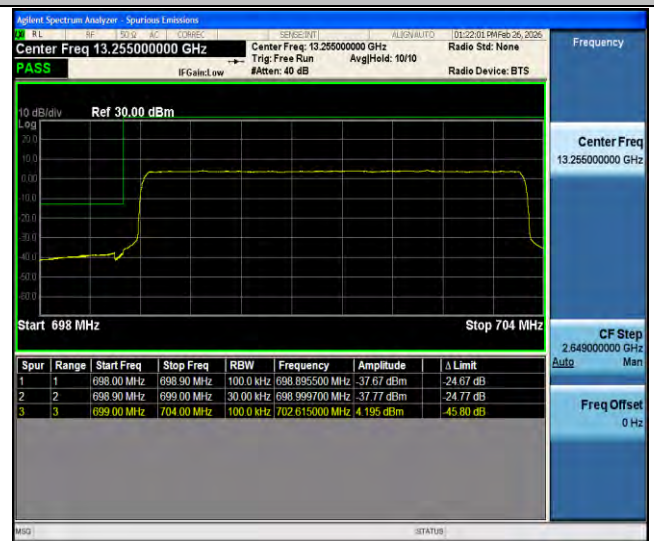
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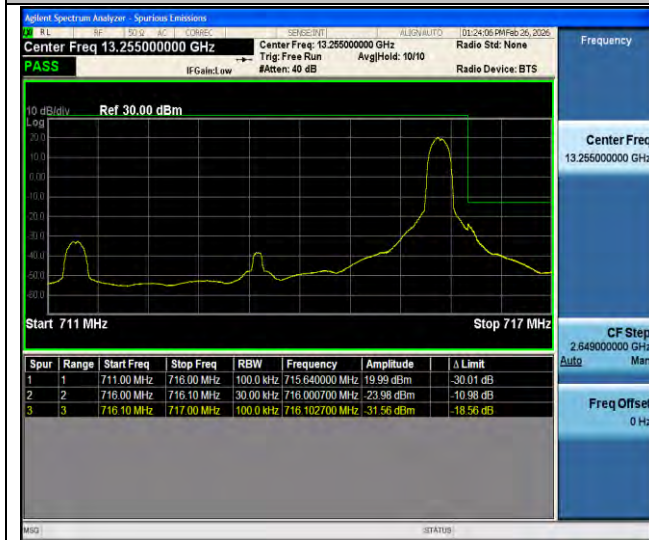
Band12-3MHz-QPSK-23165-15RB#0-PASS



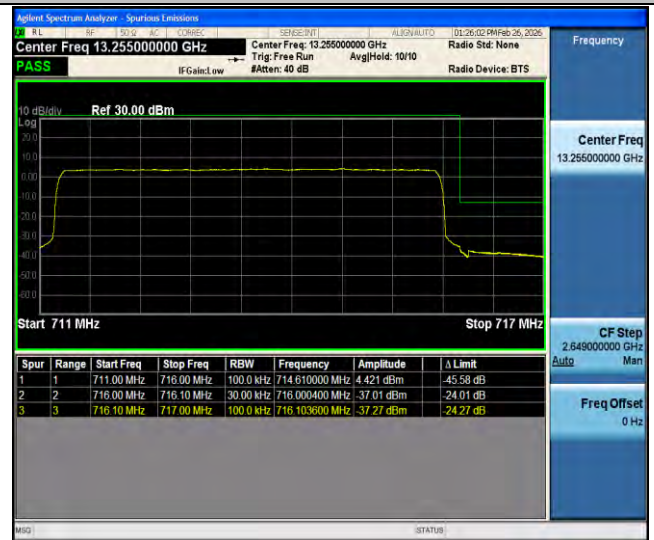
Band12-5MHz-QPSK-23035-1RB#0-PASS



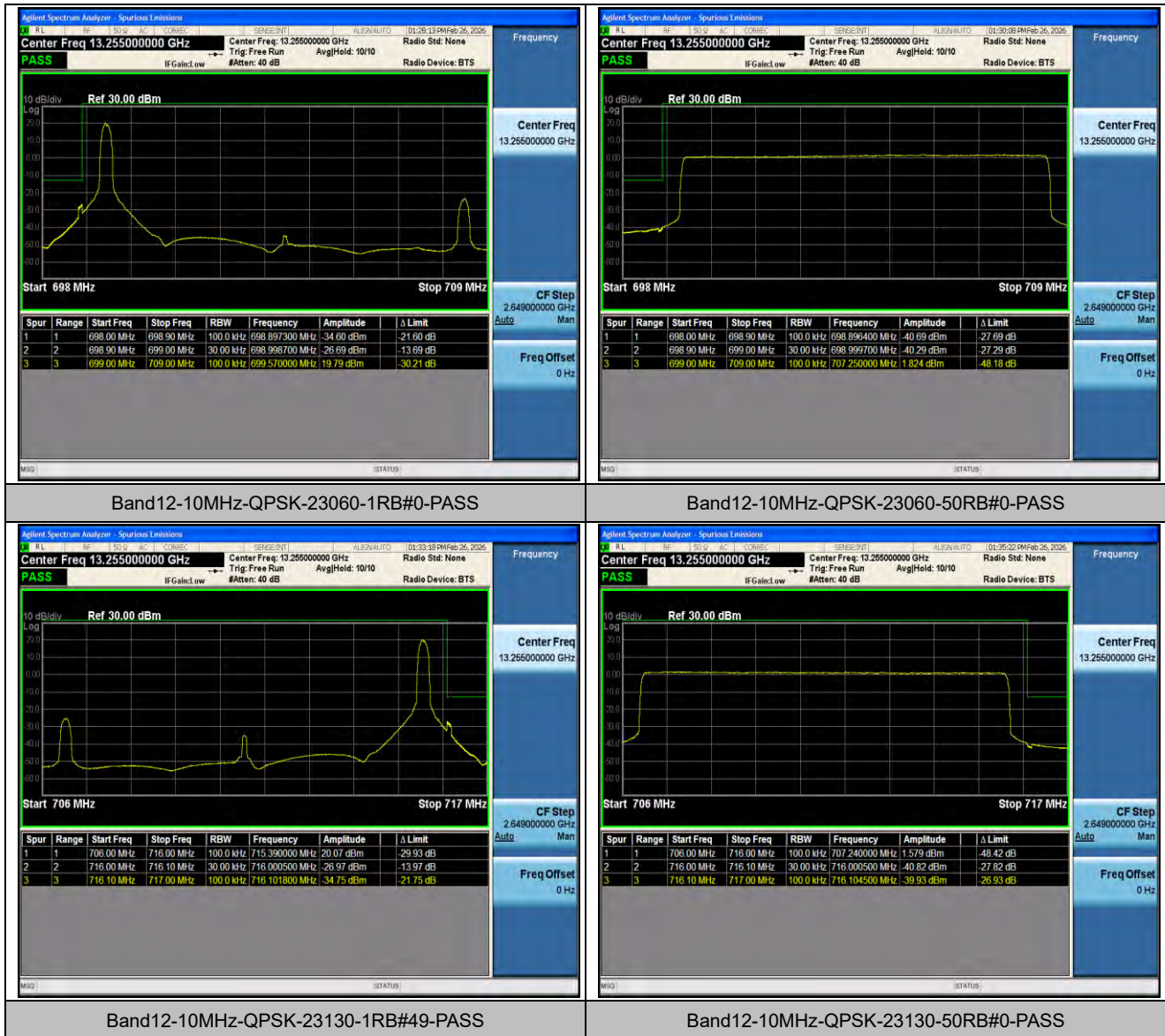
Band12-5MHz-QPSK-23035-25RB#0-PASS



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

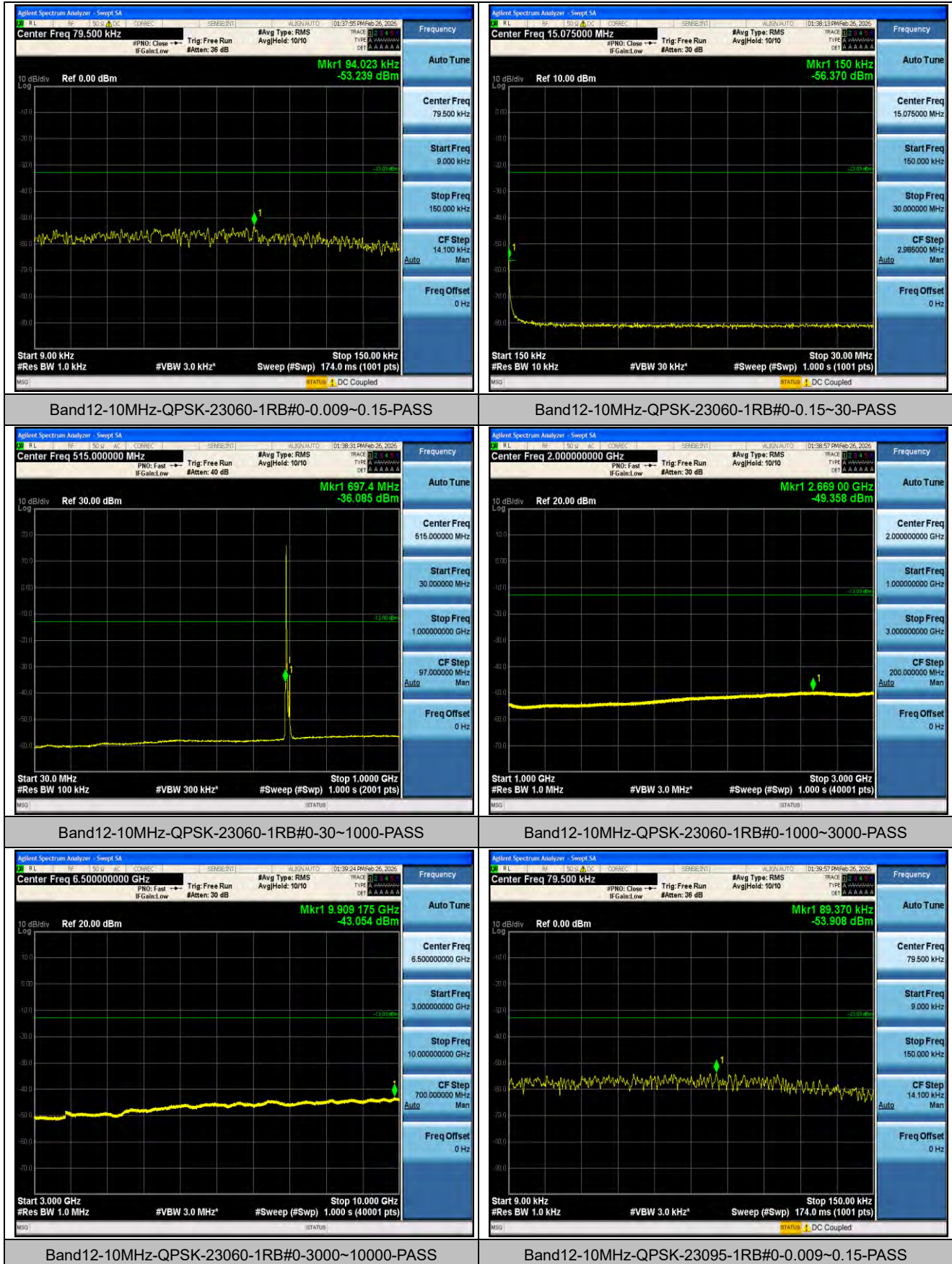


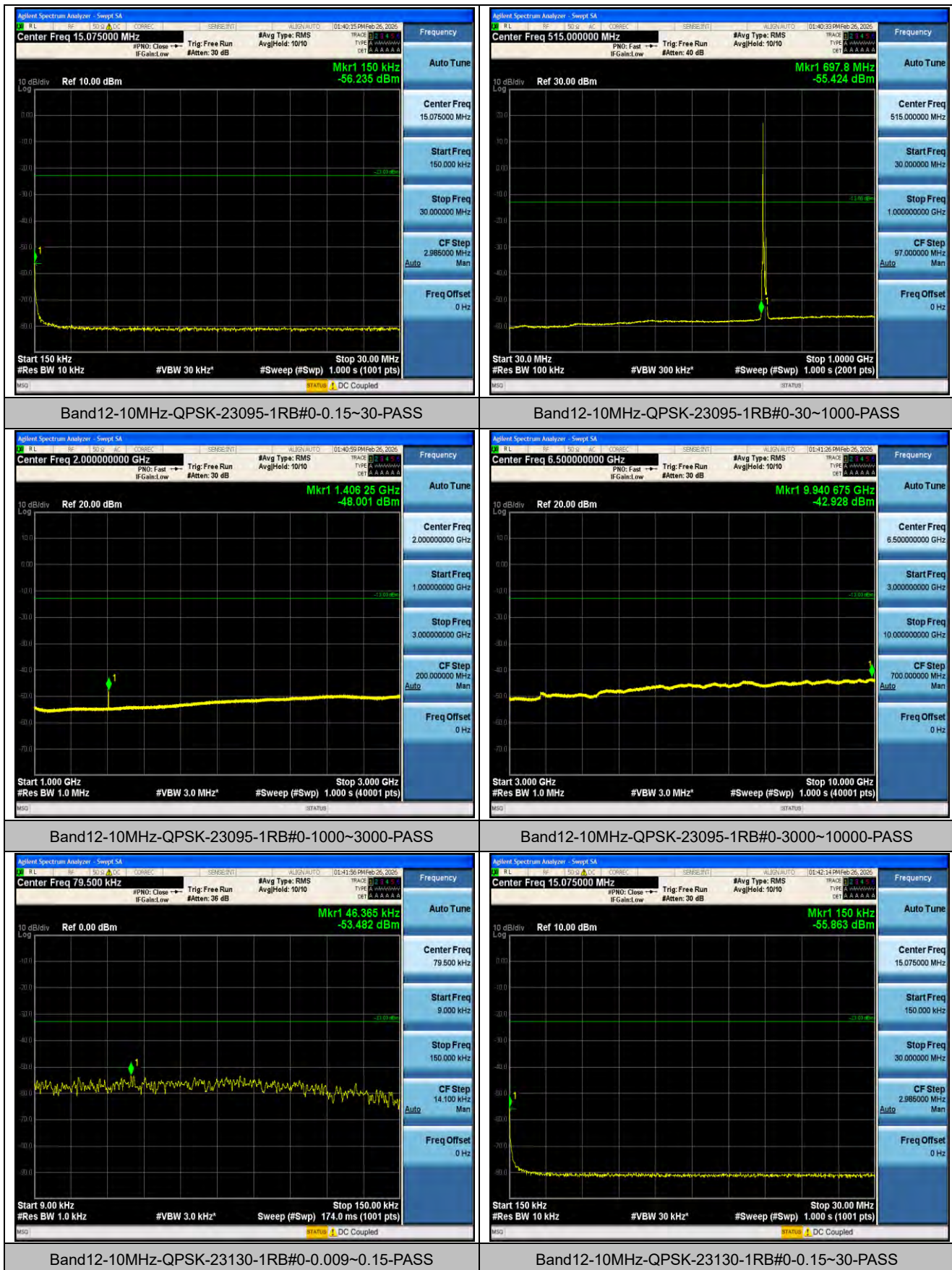
Band12-5MHz-QPSK-23155-25RB#0-PASS

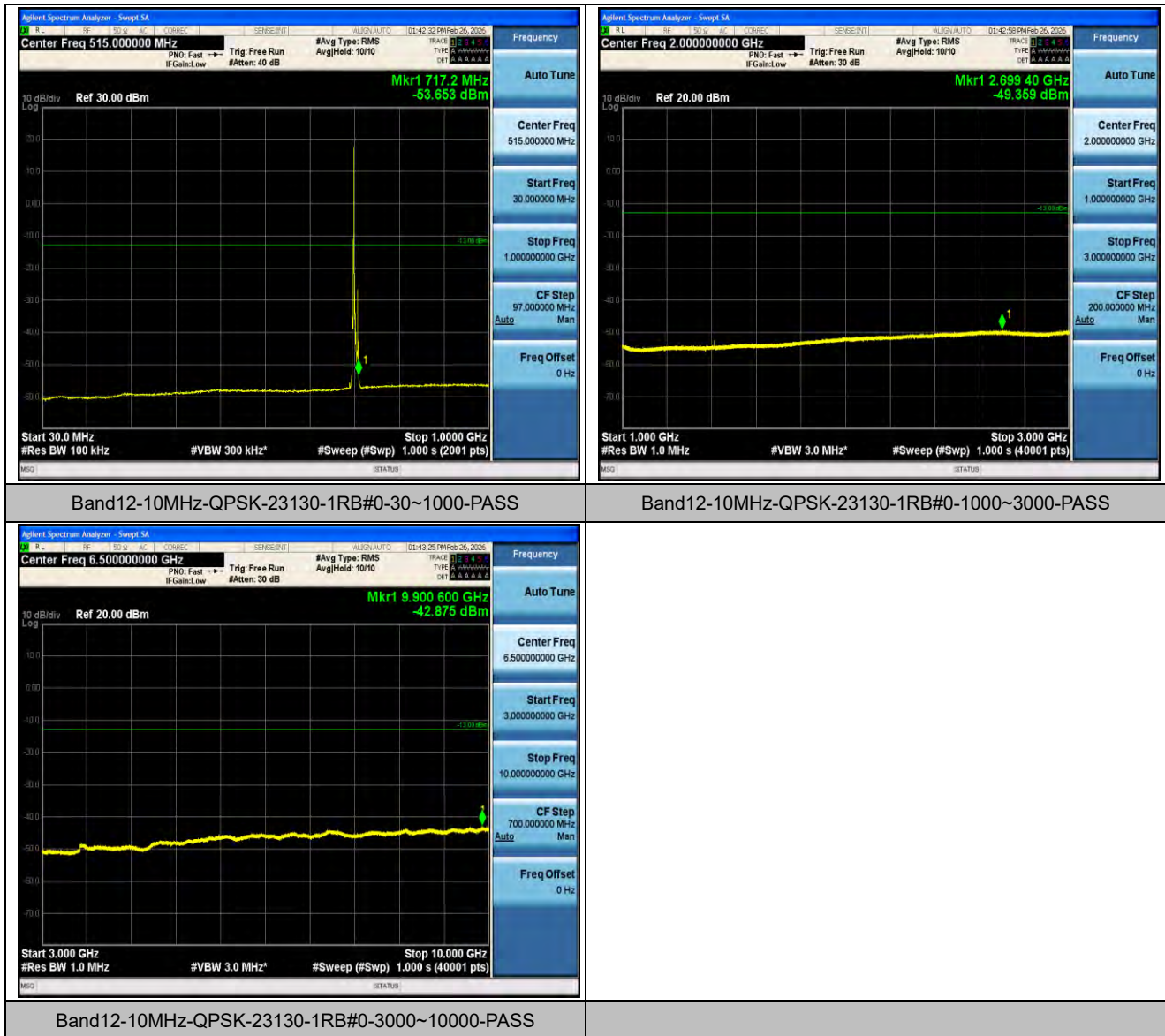


Conducted Spurious Emission

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	50RB#0	VN	NT	-1.10	-0.001555	PASS
Band12	10MHz	QPSK	23095	50RB#0	VL	NT	-2.40	-0.003392	PASS
Band12	10MHz	QPSK	23095	50RB#0	VH	NT	-1.20	-0.001696	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	-0.60	-0.000848	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	-20	-0.30	-0.000424	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	-10	-0.20	-0.000283	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	0	-0.90	-0.001272	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	10	0.20	0.000283	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	20	0.90	0.001272	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	30	0.50	0.000707	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	40	0.00	0.000000	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	50	0.10	0.000141	PASS

~The End~