

Appendix-A LTE Band 4

Effective (Isotropic) Radiated Power Output Data

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result (dBm)	EIRP (dBm)	Limit (dBm)	Verdict
Band4	1.4MHz	QPSK	19957	1RB#0	23.22	24.42	30.00	PASS
Band4	1.4MHz	QPSK	19957	1RB#2	23.39	24.59	30.00	PASS
Band4	1.4MHz	QPSK	19957	1RB#5	23.24	24.44	30.00	PASS
Band4	1.4MHz	QPSK	19957	6RB#0	22.31	23.51	30.00	PASS
Band4	1.4MHz	16QAM	19957	1RB#0	22.71	23.91	30.00	PASS
Band4	1.4MHz	16QAM	19957	1RB#2	22.85	24.05	30.00	PASS
Band4	1.4MHz	16QAM	19957	1RB#5	22.65	23.85	30.00	PASS
Band4	1.4MHz	16QAM	19957	6RB#0	21.48	22.68	30.00	PASS
Band4	1.4MHz	QPSK	20175	1RB#0	23.5	24.7	30.00	PASS
Band4	1.4MHz	QPSK	20175	1RB#2	23.52	24.72	30.00	PASS
Band4	1.4MHz	QPSK	20175	1RB#5	23.43	24.63	30.00	PASS
Band4	1.4MHz	QPSK	20175	6RB#0	22.48	23.68	30.00	PASS
Band4	1.4MHz	16QAM	20175	1RB#0	22.93	24.13	30.00	PASS
Band4	1.4MHz	16QAM	20175	1RB#2	22.98	24.18	30.00	PASS
Band4	1.4MHz	16QAM	20175	1RB#5	23.04	24.24	30.00	PASS
Band4	1.4MHz	16QAM	20175	6RB#0	21.69	22.89	30.00	PASS
Band4	1.4MHz	QPSK	20393	1RB#0	23.27	24.47	30.00	PASS
Band4	1.4MHz	QPSK	20393	1RB#2	23.37	24.57	30.00	PASS
Band4	1.4MHz	QPSK	20393	1RB#5	23.25	24.45	30.00	PASS
Band4	1.4MHz	QPSK	20393	6RB#0	22.29	23.49	30.00	PASS
Band4	1.4MHz	16QAM	20393	1RB#0	22.62	23.82	30.00	PASS
Band4	1.4MHz	16QAM	20393	1RB#2	22.78	23.98	30.00	PASS
Band4	1.4MHz	16QAM	20393	1RB#5	22.85	24.05	30.00	PASS
Band4	1.4MHz	16QAM	20393	6RB#0	21.52	22.72	30.00	PASS
Band4	3MHz	QPSK	19965	1RB#0	23.31	24.51	30.00	PASS
Band4	3MHz	QPSK	19965	1RB#8	23.36	24.56	30.00	PASS
Band4	3MHz	QPSK	19965	1RB#14	23.25	24.45	30.00	PASS
Band4	3MHz	QPSK	19965	15RB#0	22.32	23.52	30.00	PASS
Band4	3MHz	16QAM	19965	1RB#0	22.75	23.95	30.00	PASS
Band4	3MHz	16QAM	19965	1RB#8	22.87	24.07	30.00	PASS
Band4	3MHz	16QAM	19965	1RB#14	22.64	23.84	30.00	PASS
Band4	3MHz	16QAM	19965	15RB#0	21.48	22.68	30.00	PASS
Band4	3MHz	QPSK	20175	1RB#0	23.51	24.71	30.00	PASS
Band4	3MHz	QPSK	20175	1RB#8	23.51	24.71	30.00	PASS
Band4	3MHz	QPSK	20175	1RB#14	23.45	24.65	30.00	PASS
Band4	3MHz	QPSK	20175	15RB#0	22.54	23.74	30.00	PASS
Band4	3MHz	16QAM	20175	1RB#0	22.82	24.02	30.00	PASS

Band4	3MHz	16QAM	20175	1RB#8	23.09	24.29	30.00	PASS
Band4	3MHz	16QAM	20175	1RB#14	23.04	24.24	30.00	PASS
Band4	3MHz	16QAM	20175	15RB#0	21.62	22.82	30.00	PASS
Band4	3MHz	QPSK	20385	1RB#0	23.34	24.54	30.00	PASS
Band4	3MHz	QPSK	20385	1RB#8	23.34	24.54	30.00	PASS
Band4	3MHz	QPSK	20385	1RB#14	23.39	24.59	30.00	PASS
Band4	3MHz	QPSK	20385	15RB#0	22.34	23.54	30.00	PASS
Band4	3MHz	16QAM	20385	1RB#0	22.82	24.02	30.00	PASS
Band4	3MHz	16QAM	20385	1RB#8	22.96	24.16	30.00	PASS
Band4	3MHz	16QAM	20385	1RB#14	22.78	23.98	30.00	PASS
Band4	3MHz	16QAM	20385	15RB#0	21.53	22.73	30.00	PASS
Band4	5MHz	QPSK	19975	1RB#0	23.33	24.53	30.00	PASS
Band4	5MHz	QPSK	19975	1RB#12	23.34	24.54	30.00	PASS
Band4	5MHz	QPSK	19975	1RB#24	23.39	24.59	30.00	PASS
Band4	5MHz	QPSK	19975	25RB#0	22.36	23.56	30.00	PASS
Band4	5MHz	16QAM	19975	1RB#0	22.69	23.89	30.00	PASS
Band4	5MHz	16QAM	19975	1RB#12	22.85	24.05	30.00	PASS
Band4	5MHz	16QAM	19975	1RB#24	22.84	24.04	30.00	PASS
Band4	5MHz	16QAM	19975	25RB#0	21.49	22.69	30.00	PASS
Band4	5MHz	QPSK	20175	1RB#0	23.54	24.74	30.00	PASS
Band4	5MHz	QPSK	20175	1RB#12	23.46	24.66	30.00	PASS
Band4	5MHz	QPSK	20175	1RB#24	23.52	24.72	30.00	PASS
Band4	5MHz	QPSK	20175	25RB#0	22.47	23.67	30.00	PASS
Band4	5MHz	16QAM	20175	1RB#0	23.01	24.21	30.00	PASS
Band4	5MHz	16QAM	20175	1RB#12	23.02	24.22	30.00	PASS
Band4	5MHz	16QAM	20175	1RB#24	22.93	24.13	30.00	PASS
Band4	5MHz	16QAM	20175	25RB#0	21.67	22.87	30.00	PASS
Band4	5MHz	QPSK	20375	1RB#0	23.38	24.58	30.00	PASS
Band4	5MHz	QPSK	20375	1RB#12	23.44	24.64	30.00	PASS
Band4	5MHz	QPSK	20375	1RB#24	23.4	24.6	30.00	PASS
Band4	5MHz	QPSK	20375	25RB#0	22.36	23.56	30.00	PASS
Band4	5MHz	16QAM	20375	1RB#0	22.91	24.11	30.00	PASS
Band4	5MHz	16QAM	20375	1RB#12	22.76	23.96	30.00	PASS
Band4	5MHz	16QAM	20375	1RB#24	22.36	23.56	30.00	PASS
Band4	5MHz	16QAM	20375	25RB#0	21.56	22.76	30.00	PASS
Band4	10MHz	QPSK	20000	1RB#0	23.42	24.62	30.00	PASS
Band4	10MHz	QPSK	20000	1RB#24	23.42	24.62	30.00	PASS
Band4	10MHz	QPSK	20000	1RB#49	23.47	24.67	30.00	PASS
Band4	10MHz	QPSK	20000	50RB#0	22.54	23.74	30.00	PASS
Band4	10MHz	16QAM	20000	1RB#0	22.72	23.92	30.00	PASS
Band4	10MHz	16QAM	20000	1RB#24	22.81	24.01	30.00	PASS
Band4	10MHz	16QAM	20000	1RB#49	22.91	24.11	30.00	PASS
Band4	10MHz	16QAM	20000	50RB#0	21.57	22.77	30.00	PASS
Band4	10MHz	QPSK	20175	1RB#0	23.52	24.72	30.00	PASS
Band4	10MHz	QPSK	20175	1RB#24	23.56	24.76	30.00	PASS

Band4	10MHz	QPSK	20175	1RB#49	23.42	24.62	30.00	PASS
Band4	10MHz	QPSK	20175	50RB#0	22.5	23.7	30.00	PASS
Band4	10MHz	16QAM	20175	1RB#0	23.11	24.31	30.00	PASS
Band4	10MHz	16QAM	20175	1RB#24	22.64	23.84	30.00	PASS
Band4	10MHz	16QAM	20175	1RB#49	22.53	23.73	30.00	PASS
Band4	10MHz	16QAM	20175	50RB#0	21.65	22.85	30.00	PASS
Band4	10MHz	QPSK	20350	1RB#0	23.46	24.66	30.00	PASS
Band4	10MHz	QPSK	20350	1RB#24	23.37	24.57	30.00	PASS
Band4	10MHz	QPSK	20350	1RB#49	23.4	24.6	30.00	PASS
Band4	10MHz	QPSK	20350	50RB#0	22.38	23.58	30.00	PASS
Band4	10MHz	16QAM	20350	1RB#0	22.84	24.04	30.00	PASS
Band4	10MHz	16QAM	20350	1RB#24	22.85	24.05	30.00	PASS
Band4	10MHz	16QAM	20350	1RB#49	22.6	23.8	30.00	PASS
Band4	10MHz	16QAM	20350	50RB#0	21.45	22.65	30.00	PASS
Band4	15MHz	QPSK	20025	1RB#0	23.34	24.54	30.00	PASS
Band4	15MHz	QPSK	20025	1RB#38	23.51	24.71	30.00	PASS
Band4	15MHz	QPSK	20025	1RB#74	23.44	24.64	30.00	PASS
Band4	15MHz	QPSK	20025	75RB#0	22.52	23.72	30.00	PASS
Band4	15MHz	16QAM	20025	1RB#0	22.8	24	30.00	PASS
Band4	15MHz	16QAM	20025	1RB#38	22.71	23.91	30.00	PASS
Band4	15MHz	16QAM	20025	1RB#74	23	24.2	30.00	PASS
Band4	15MHz	16QAM	20025	75RB#0	21.64	22.84	30.00	PASS
Band4	15MHz	QPSK	20175	1RB#0	23.48	24.68	30.00	PASS
Band4	15MHz	QPSK	20175	1RB#38	23.53	24.73	30.00	PASS
Band4	15MHz	QPSK	20175	1RB#74	23.45	24.65	30.00	PASS
Band4	15MHz	QPSK	20175	75RB#0	22.54	23.74	30.00	PASS
Band4	15MHz	16QAM	20175	1RB#0	22.65	23.85	30.00	PASS
Band4	15MHz	16QAM	20175	1RB#38	22.91	24.11	30.00	PASS
Band4	15MHz	16QAM	20175	1RB#74	22.79	23.99	30.00	PASS
Band4	15MHz	16QAM	20175	75RB#0	21.64	22.84	30.00	PASS
Band4	15MHz	QPSK	20325	1RB#0	23.39	24.59	30.00	PASS
Band4	15MHz	QPSK	20325	1RB#38	23.37	24.57	30.00	PASS
Band4	15MHz	QPSK	20325	1RB#74	23.25	24.45	30.00	PASS
Band4	15MHz	QPSK	20325	75RB#0	22.34	23.54	30.00	PASS
Band4	15MHz	16QAM	20325	1RB#0	22.57	23.77	30.00	PASS
Band4	15MHz	16QAM	20325	1RB#38	22.43	23.63	30.00	PASS
Band4	15MHz	16QAM	20325	1RB#74	22.55	23.75	30.00	PASS
Band4	15MHz	16QAM	20325	75RB#0	21.46	22.66	30.00	PASS
Band4	20MHz	QPSK	20050	1RB#0	23.3	24.5	30.00	PASS
Band4	20MHz	QPSK	20050	1RB#49	23.47	24.67	30.00	PASS
Band4	20MHz	QPSK	20050	1RB#99	23.56	24.76	30.00	PASS
Band4	20MHz	QPSK	20050	100RB#0	22.44	23.64	30.00	PASS
Band4	20MHz	16QAM	20050	1RB#0	22.49	23.69	30.00	PASS
Band4	20MHz	16QAM	20050	1RB#49	22.87	24.07	30.00	PASS
Band4	20MHz	16QAM	20050	1RB#99	22.91	24.11	30.00	PASS

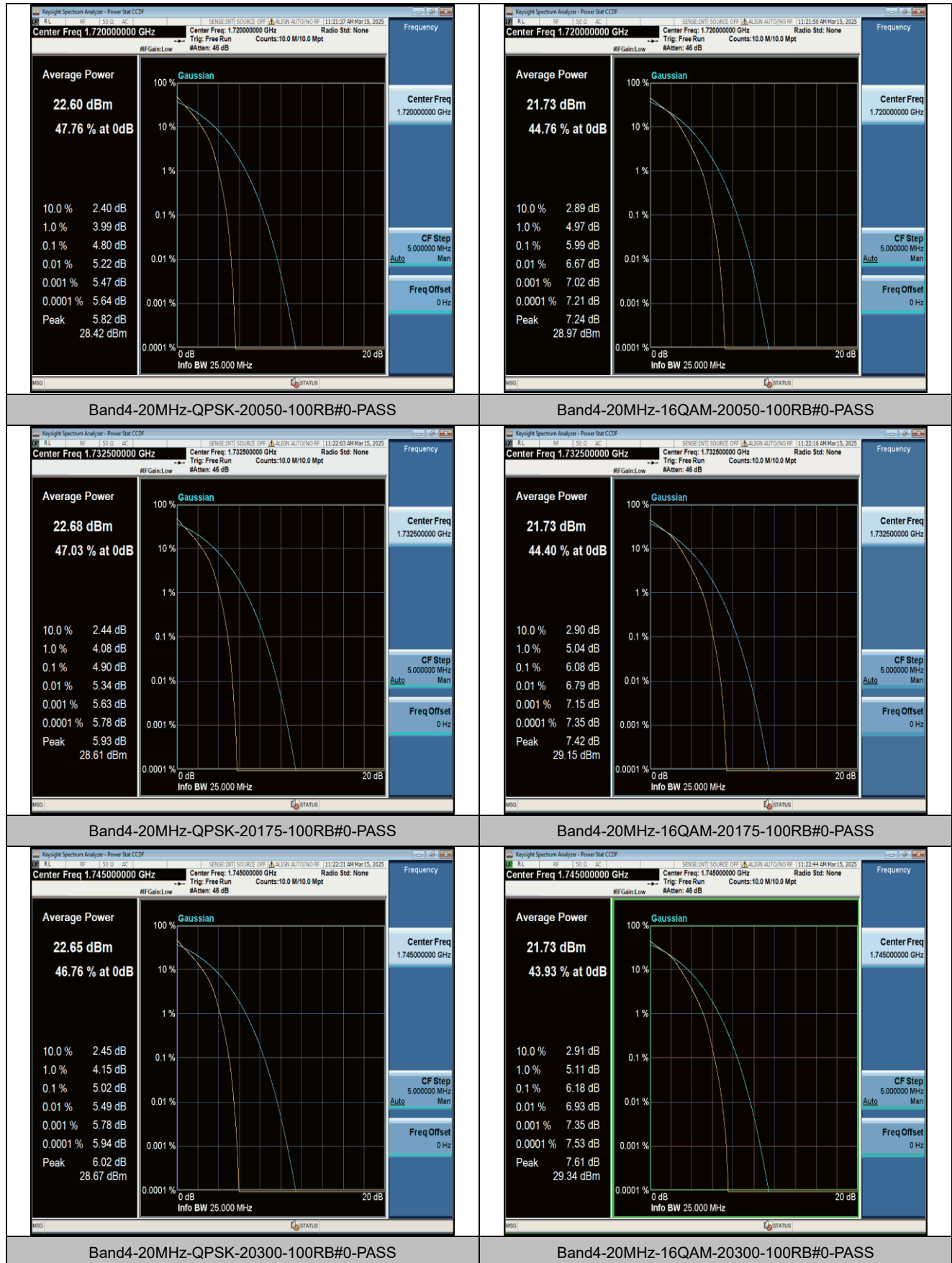
Band4	20MHz	16QAM	20050	100RB#0	21.57	22.77	30.00	PASS
Band4	20MHz	QPSK	20175	1RB#0	23.41	24.61	30.00	PASS
Band4	20MHz	QPSK	20175	1RB#49	23.51	24.71	30.00	PASS
Band4	20MHz	QPSK	20175	1RB#99	23.41	24.61	30.00	PASS
Band4	20MHz	QPSK	20175	100RB#0	22.54	23.74	30.00	PASS
Band4	20MHz	16QAM	20175	1RB#0	22.74	23.94	30.00	PASS
Band4	20MHz	16QAM	20175	1RB#49	23.01	24.21	30.00	PASS
Band4	20MHz	16QAM	20175	1RB#99	22.94	24.14	30.00	PASS
Band4	20MHz	16QAM	20175	100RB#0	21.57	22.77	30.00	PASS
Band4	20MHz	QPSK	20300	1RB#0	23.42	24.62	30.00	PASS
Band4	20MHz	QPSK	20300	1RB#49	23.28	24.48	30.00	PASS
Band4	20MHz	QPSK	20300	1RB#99	23.32	24.52	30.00	PASS
Band4	20MHz	QPSK	20300	100RB#0	22.31	23.51	30.00	PASS
Band4	20MHz	16QAM	20300	1RB#0	22.83	24.03	30.00	PASS
Band4	20MHz	16QAM	20300	1RB#49	22.73	23.93	30.00	PASS
Band4	20MHz	16QAM	20300	1RB#99	22.72	23.92	30.00	PASS
Band4	20MHz	16QAM	20300	100RB#0	21.48	22.68	30.00	PASS

Peak-to-Average Ratio(CCDF)

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result (dB)	Limit (dB)	Verdict
Band4	20MHz	QPSK	20050	100RB#0	4.80	13	PASS
Band4	20MHz	16QAM	20050	100RB#0	5.99	13	PASS
Band4	20MHz	QPSK	20175	100RB#0	4.90	13	PASS
Band4	20MHz	16QAM	20175	100RB#0	6.08	13	PASS
Band4	20MHz	QPSK	20300	100RB#0	5.02	13	PASS
Band4	20MHz	16QAM	20300	100RB#0	6.18	13	PASS

Test Graphs

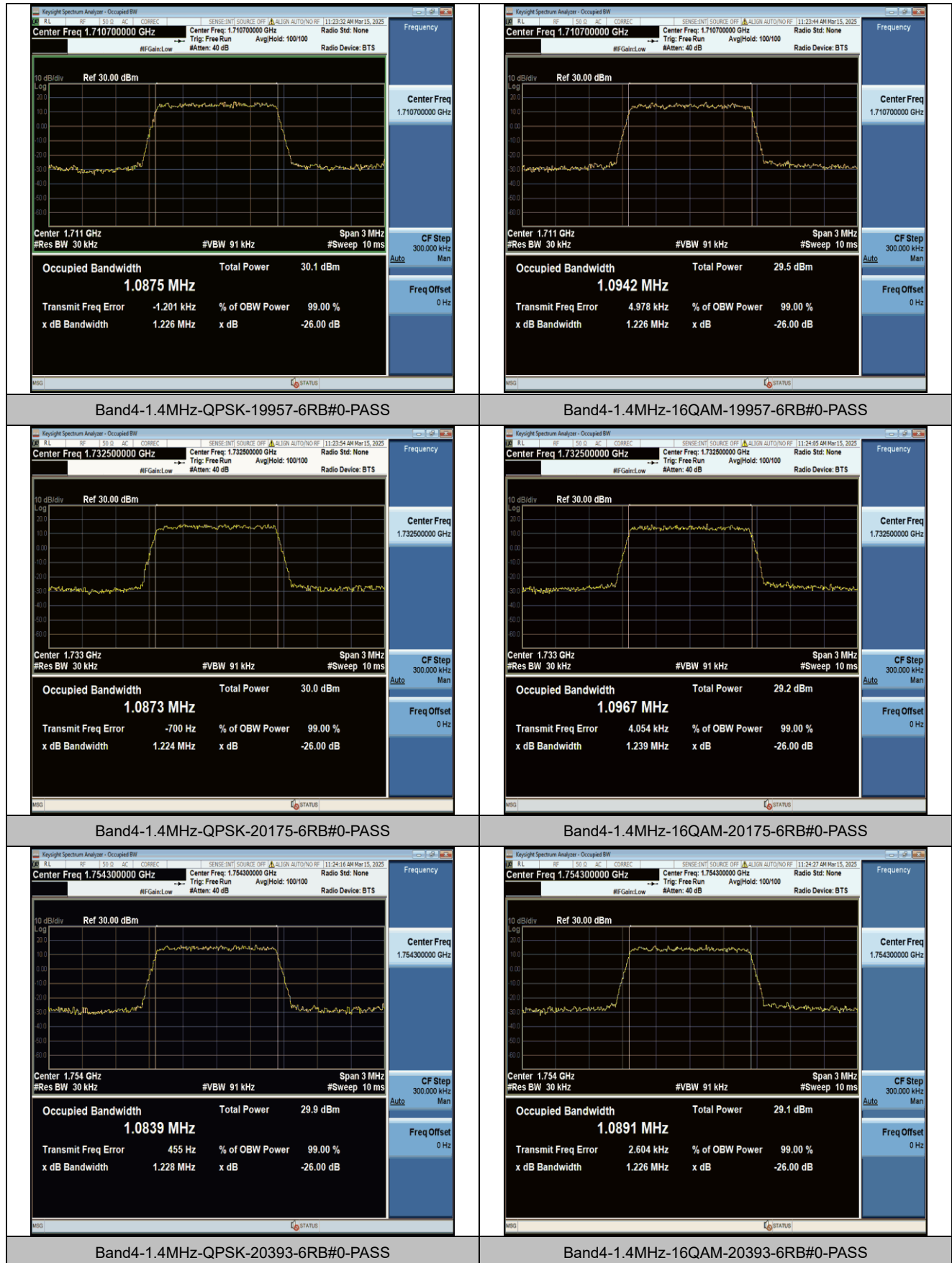


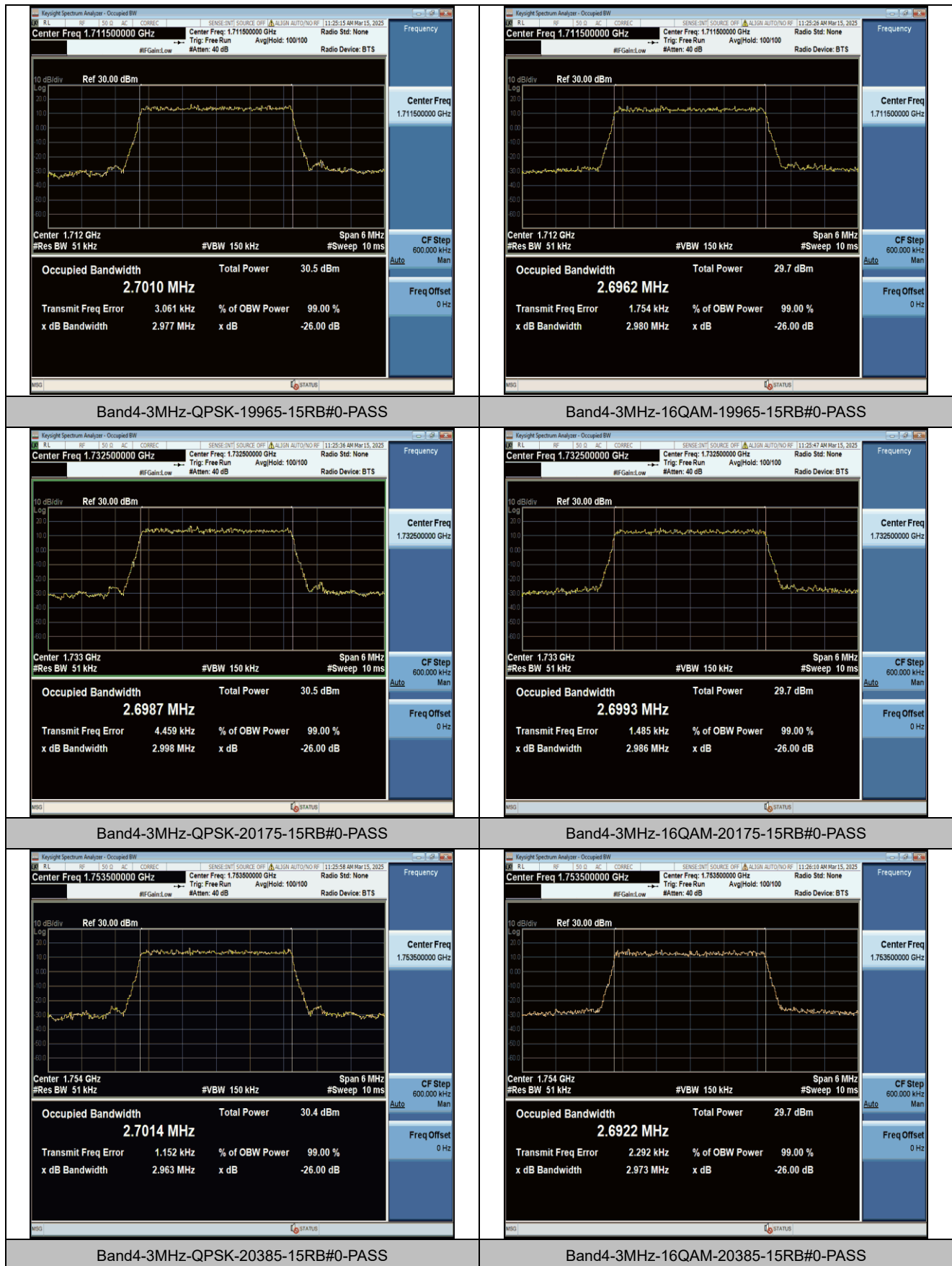
26dB Bandwidth and Occupied Bandwidth

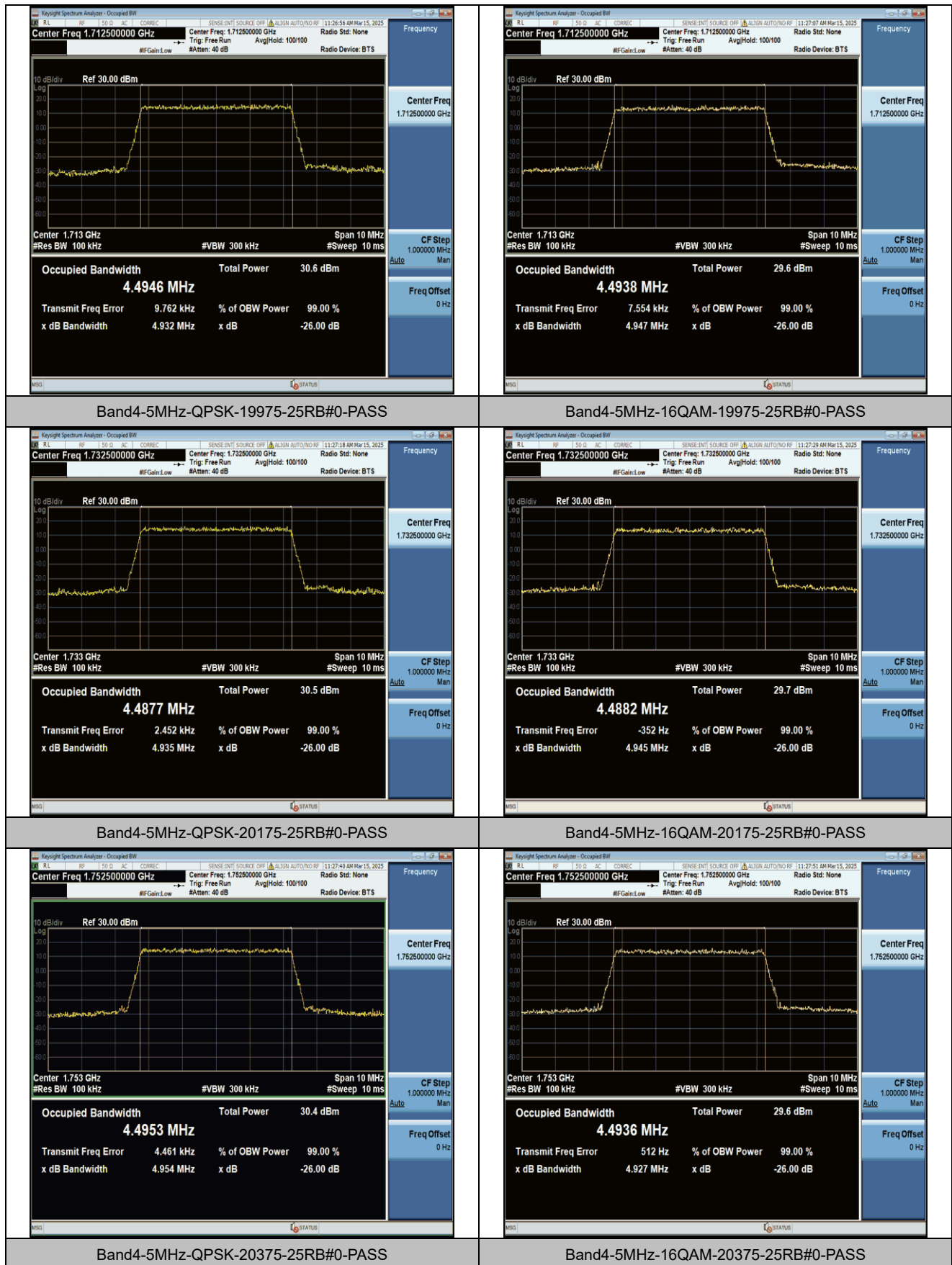
Test Result

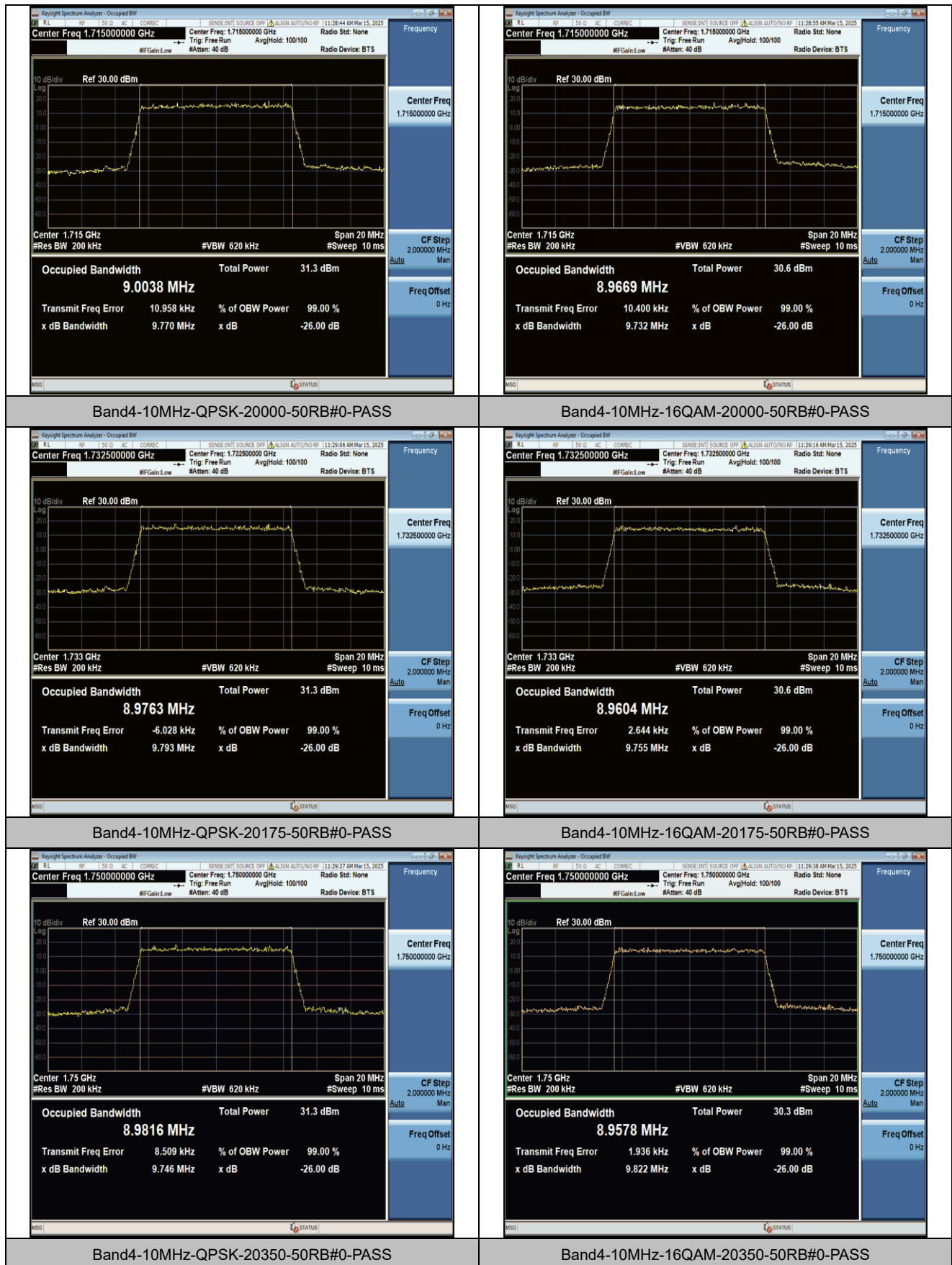
Band	Bandwidth	Modulation	Channel	RB Configuration	OBW (MHz)	26dB EBW (MHz)	Verdict
Band4	1.4MHz	QPSK	19957	6RB#0	1.0875	1.226	PASS
Band4	1.4MHz	16QAM	19957	6RB#0	1.0942	1.226	PASS
Band4	1.4MHz	QPSK	20175	6RB#0	1.0873	1.224	PASS
Band4	1.4MHz	16QAM	20175	6RB#0	1.0967	1.239	PASS
Band4	1.4MHz	QPSK	20393	6RB#0	1.0839	1.228	PASS
Band4	1.4MHz	16QAM	20393	6RB#0	1.0891	1.226	PASS
Band4	3MHz	QPSK	19965	15RB#0	2.7010	2.977	PASS
Band4	3MHz	16QAM	19965	15RB#0	2.6962	2.980	PASS
Band4	3MHz	QPSK	20175	15RB#0	2.6987	2.998	PASS
Band4	3MHz	16QAM	20175	15RB#0	2.6993	2.986	PASS
Band4	3MHz	QPSK	20385	15RB#0	2.7014	2.963	PASS
Band4	3MHz	16QAM	20385	15RB#0	2.6922	2.973	PASS
Band4	5MHz	QPSK	19975	25RB#0	4.4946	4.932	PASS
Band4	5MHz	16QAM	19975	25RB#0	4.4938	4.947	PASS
Band4	5MHz	QPSK	20175	25RB#0	4.4877	4.935	PASS
Band4	5MHz	16QAM	20175	25RB#0	4.4882	4.945	PASS
Band4	5MHz	QPSK	20375	25RB#0	4.4953	4.954	PASS
Band4	5MHz	16QAM	20375	25RB#0	4.4936	4.927	PASS
Band4	10MHz	QPSK	20000	50RB#0	9.0038	9.770	PASS
Band4	10MHz	16QAM	20000	50RB#0	8.9669	9.732	PASS
Band4	10MHz	QPSK	20175	50RB#0	8.9763	9.793	PASS
Band4	10MHz	16QAM	20175	50RB#0	8.9604	9.755	PASS
Band4	10MHz	QPSK	20350	50RB#0	8.9816	9.746	PASS
Band4	10MHz	16QAM	20350	50RB#0	8.9578	9.822	PASS
Band4	15MHz	QPSK	20025	75RB#0	13.456	14.75	PASS
Band4	15MHz	16QAM	20025	75RB#0	13.430	14.64	PASS
Band4	15MHz	QPSK	20175	75RB#0	13.469	14.66	PASS
Band4	15MHz	16QAM	20175	75RB#0	13.456	14.59	PASS
Band4	15MHz	QPSK	20325	75RB#0	13.498	14.70	PASS
Band4	15MHz	16QAM	20325	75RB#0	13.454	14.69	PASS
Band4	20MHz	QPSK	20050	100RB#0	17.939	19.52	PASS
Band4	20MHz	16QAM	20050	100RB#0	17.892	19.48	PASS
Band4	20MHz	QPSK	20175	100RB#0	17.940	19.72	PASS
Band4	20MHz	16QAM	20175	100RB#0	17.908	19.47	PASS
Band4	20MHz	QPSK	20300	100RB#0	17.924	19.63	PASS
Band4	20MHz	16QAM	20300	100RB#0	17.954	19.46	PASS

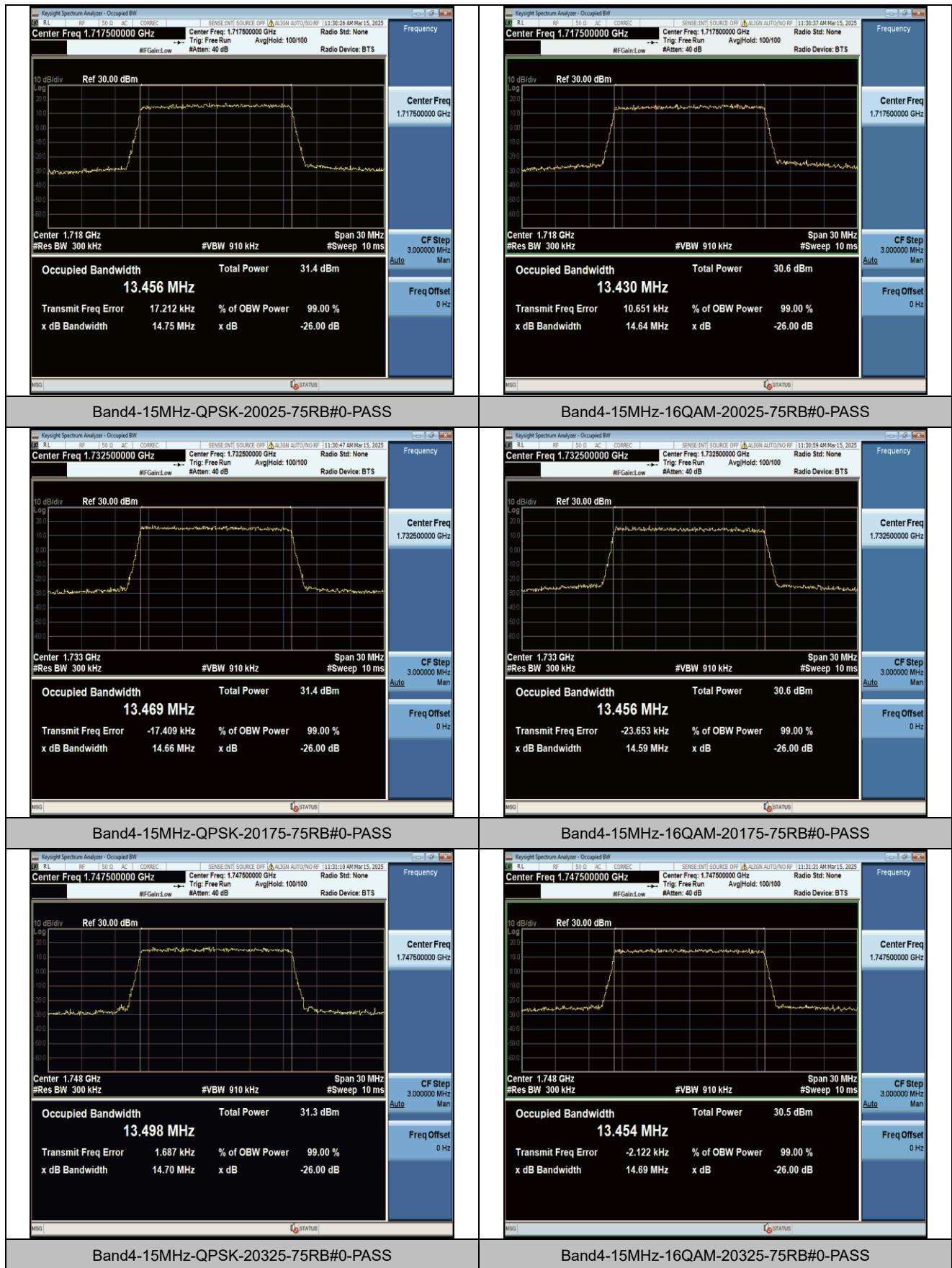
Test Graphs

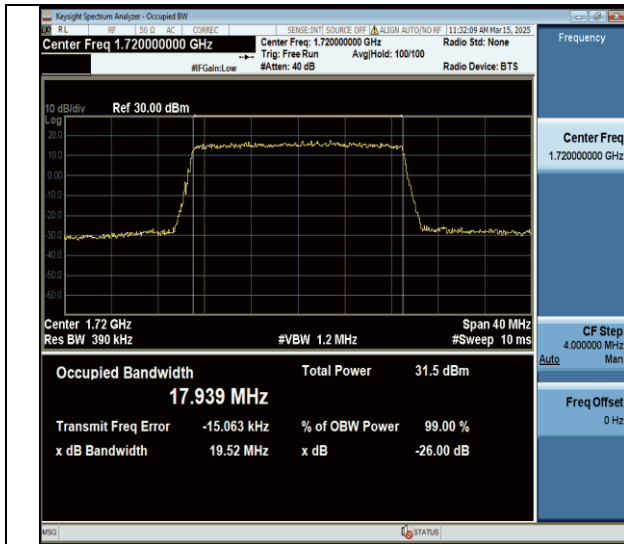




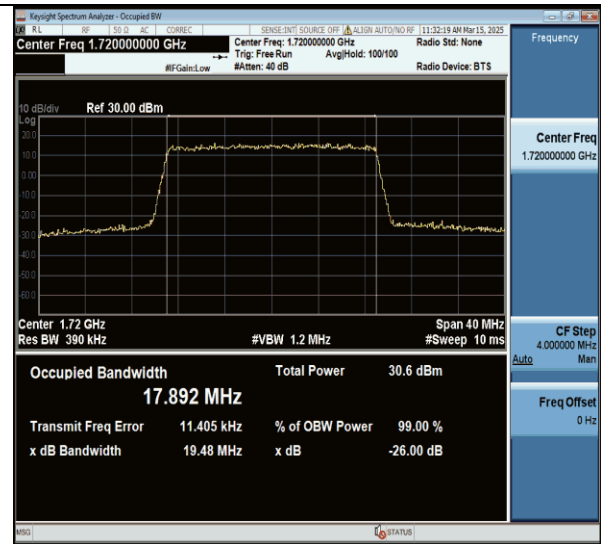




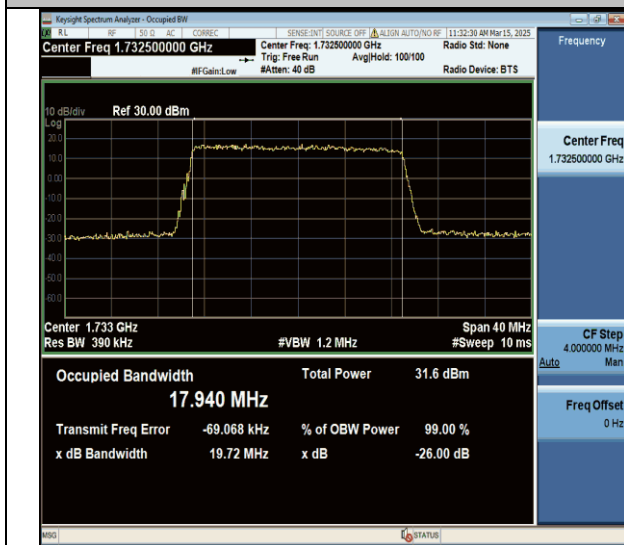




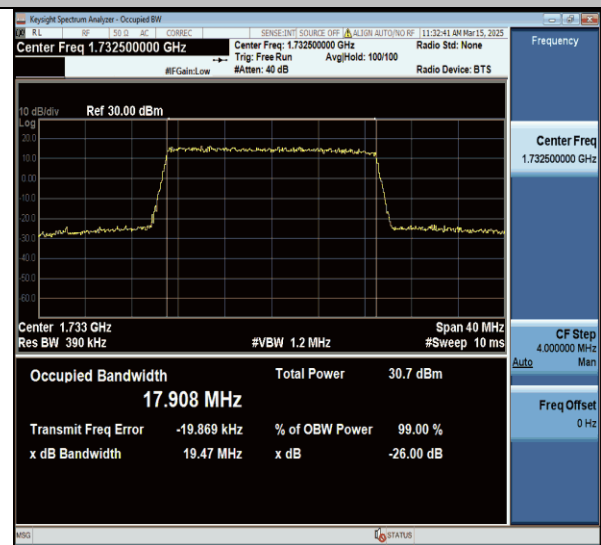
Band4-20MHz-QPSK-20050-100RB#0-PASS



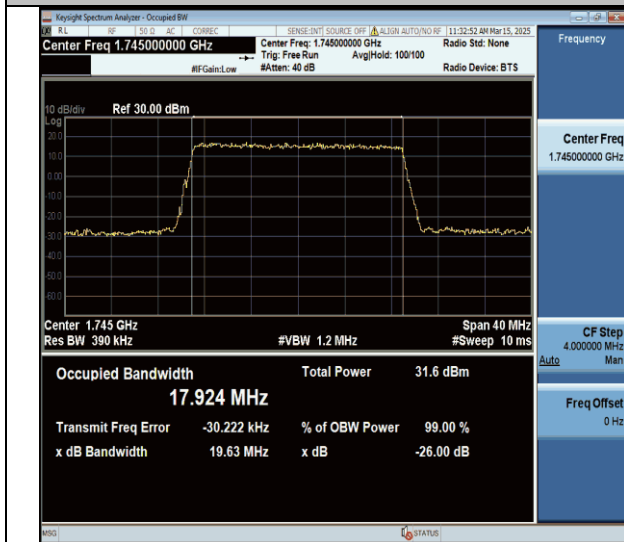
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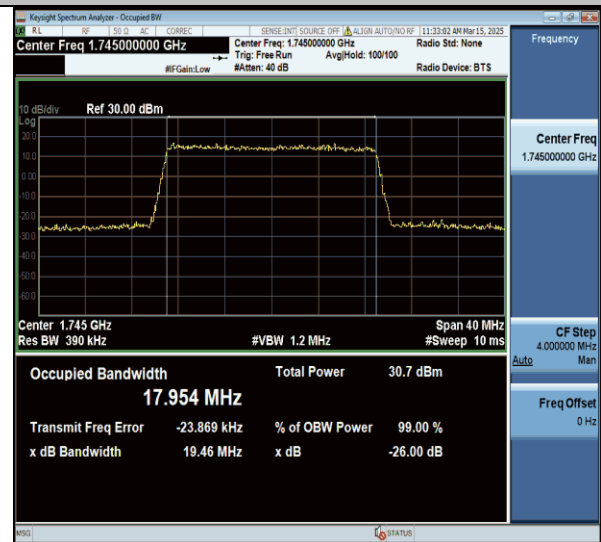
Band4-20MHz-QPSK-20175-100RB#0-PASS



Band4-20MHz-16QAM-20175-100RB#0-PASS



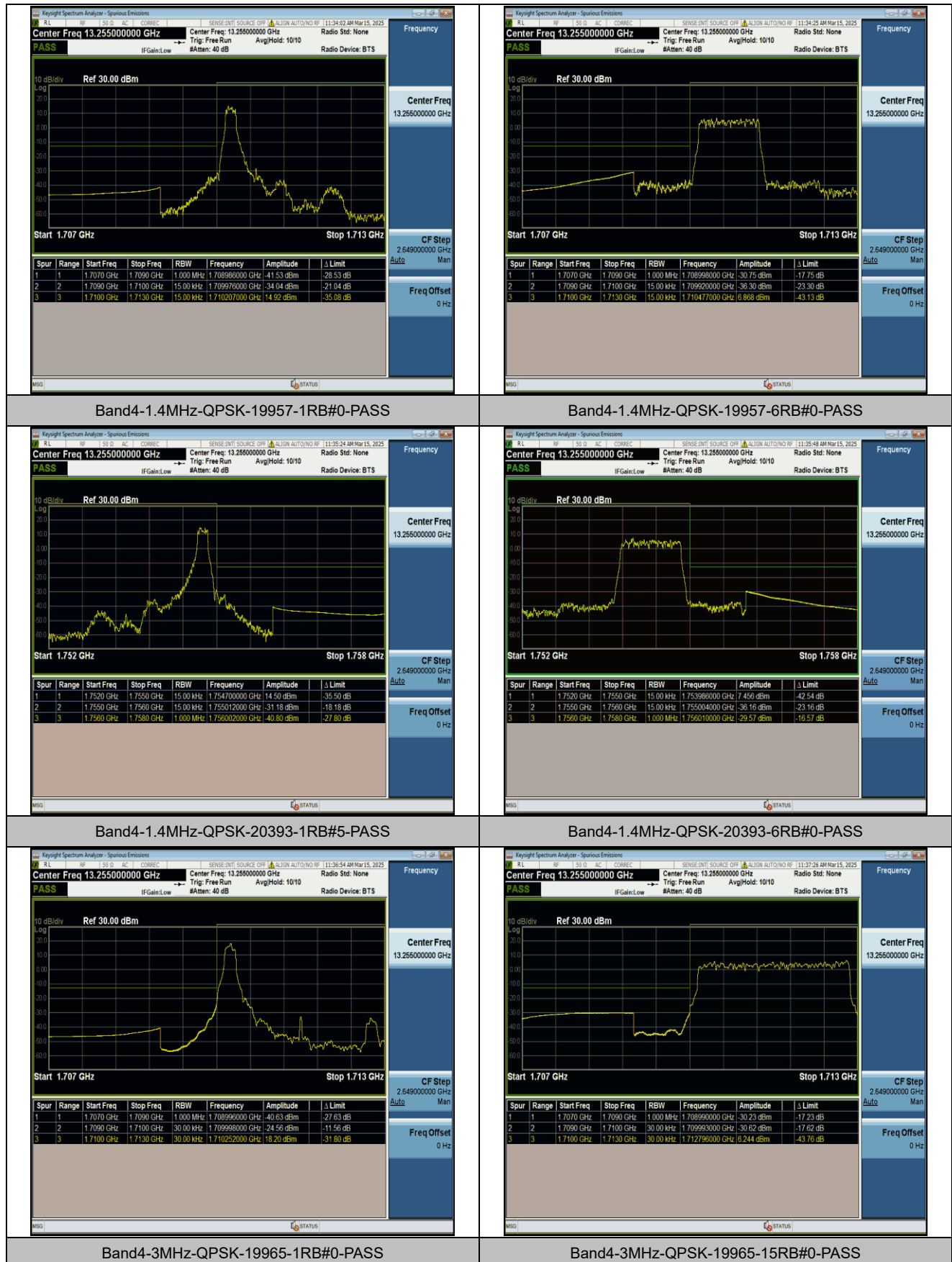
Band4-20MHz-QPSK-20300-100RB#0-PASS



Band4-20MHz-16QAM-20300-100RB#0-PASS

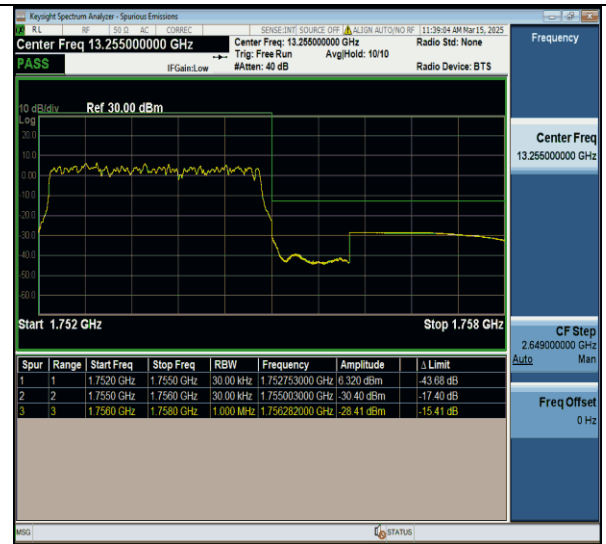
Band Edge

Test Graphs

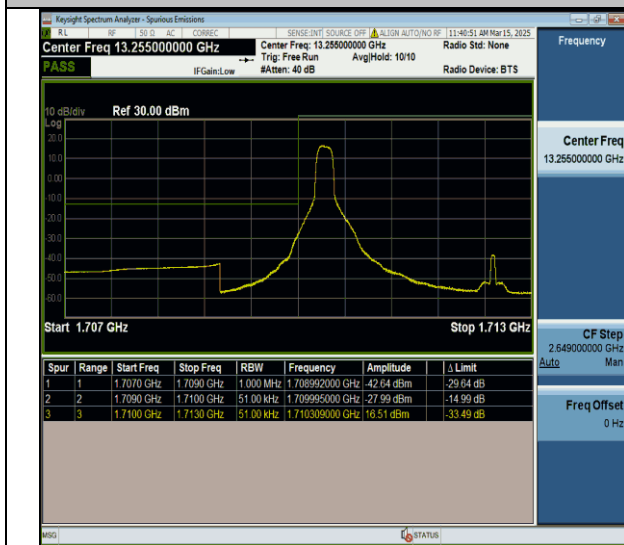




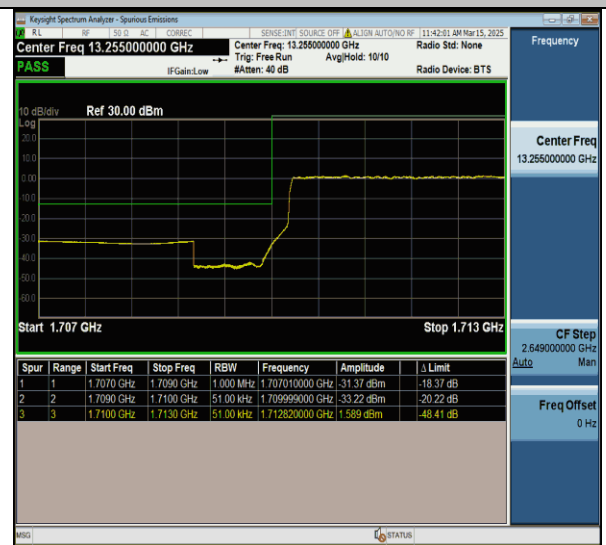
Band4-3MHz-QPSK-20385-1RB#14-PASS



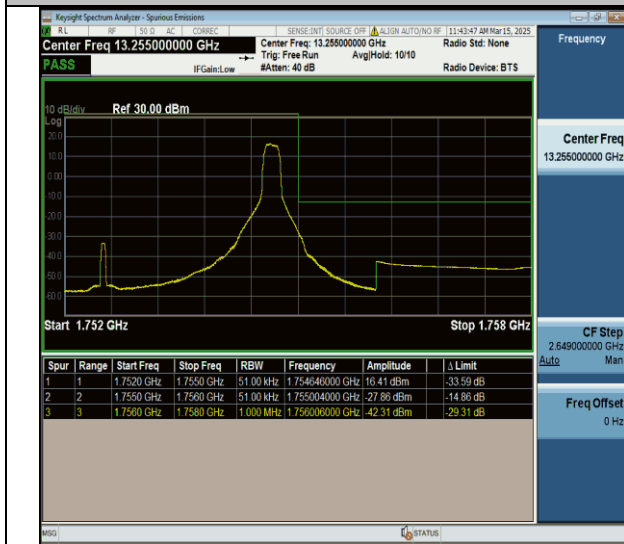
Band4-3MHz-QPSK-20385-15RB#0-PASS



Band4-5MHz-QPSK-19975-1RB#0-PASS



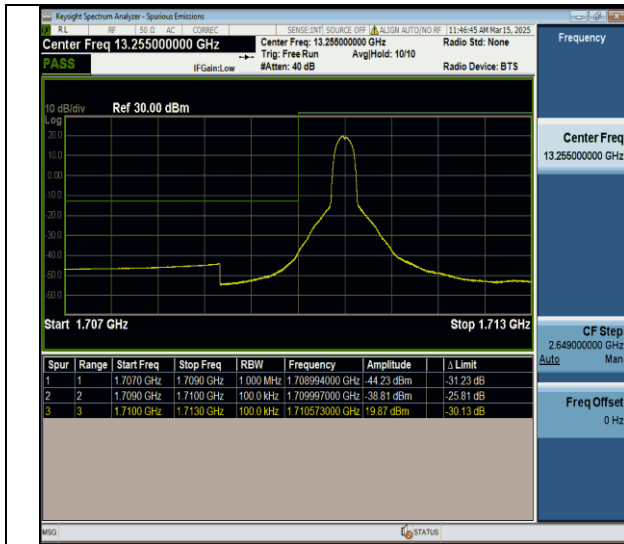
Band4-5MHz-QPSK-19975-25RB#0-PASS



Band4-5MHz-QPSK-20375-1RB#24-PASS



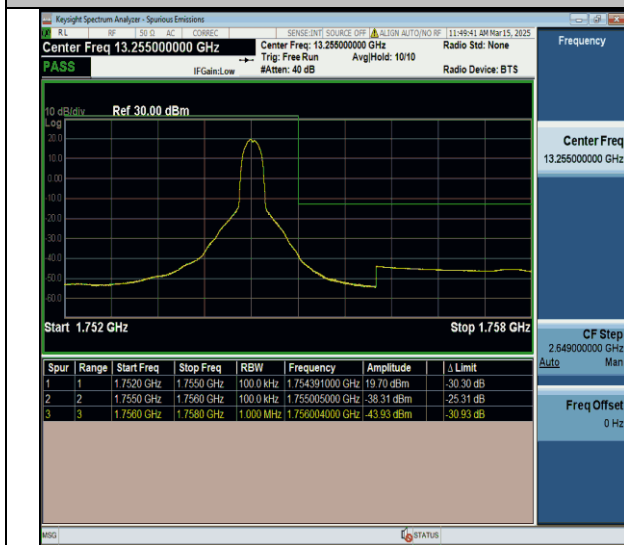
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Band4-10MHz-QPSK-20000-1RB#0-PASS



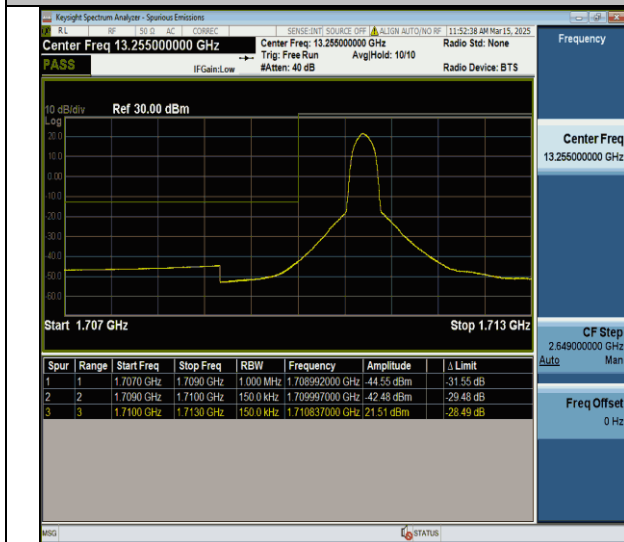
Band4-10MHz-QPSK-20000-50RB#0-PASS



Band4-10MHz-QPSK-20350-1RB#49-PASS



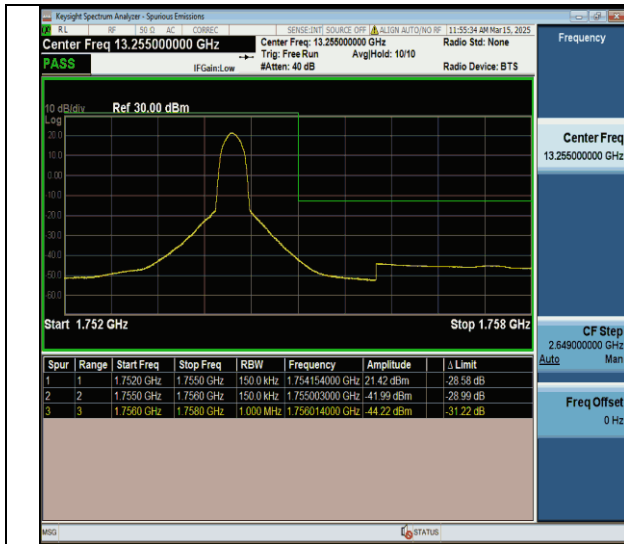
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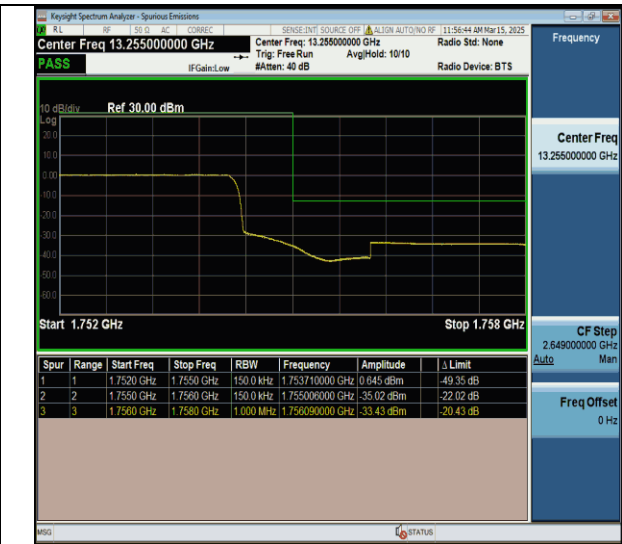
Band4-15MHz-QPSK-20025-1RB#0-PASS



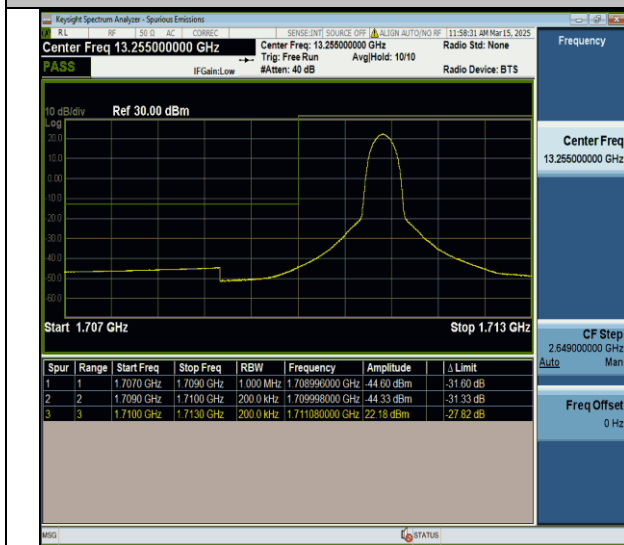
Band4-15MHz-QPSK-20025-75RB#0-PASS



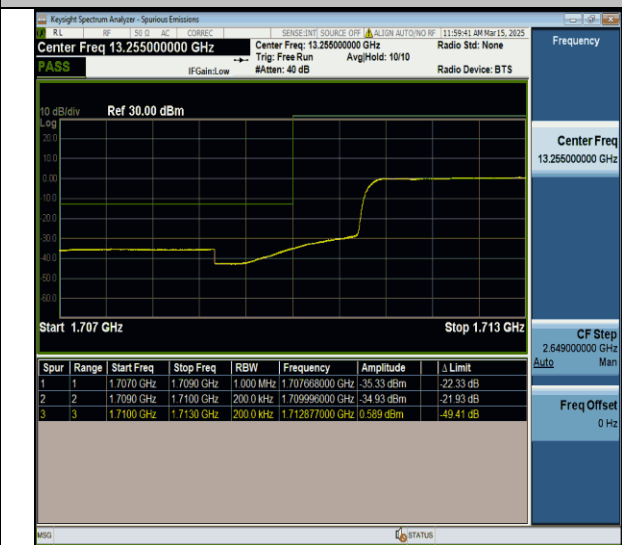
Band4-15MHz-QPSK-20325-1RB#74-PASS



Band4-15MHz-QPSK-20325-75RB#0-PASS



Band4-20MHz-QPSK-20050-1RB#0-PASS



Band4-20MHz-QPSK-20050-100RB#0-PASS



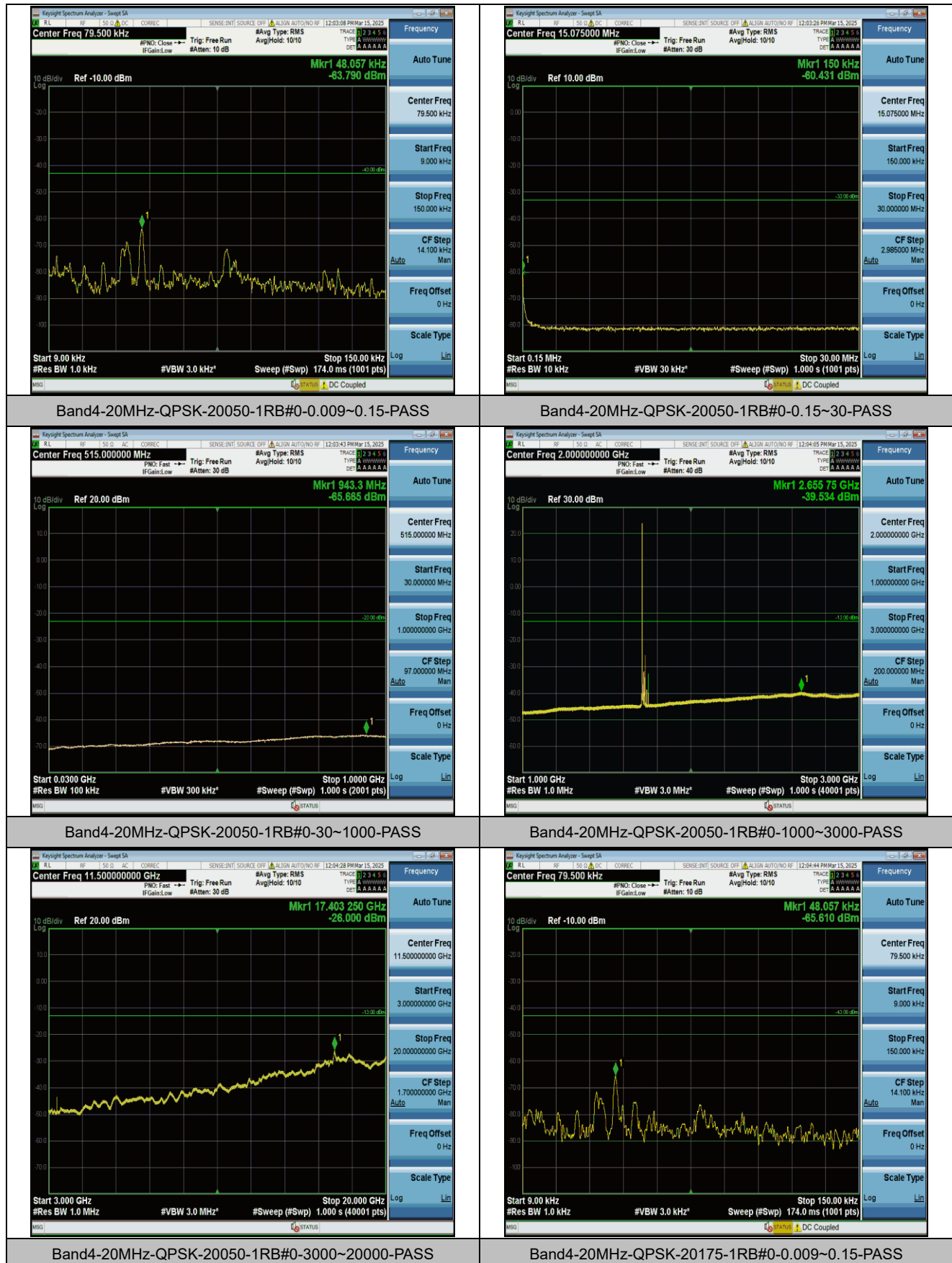
Band4-20MHz-QPSK-20300-1RB#99-PASS

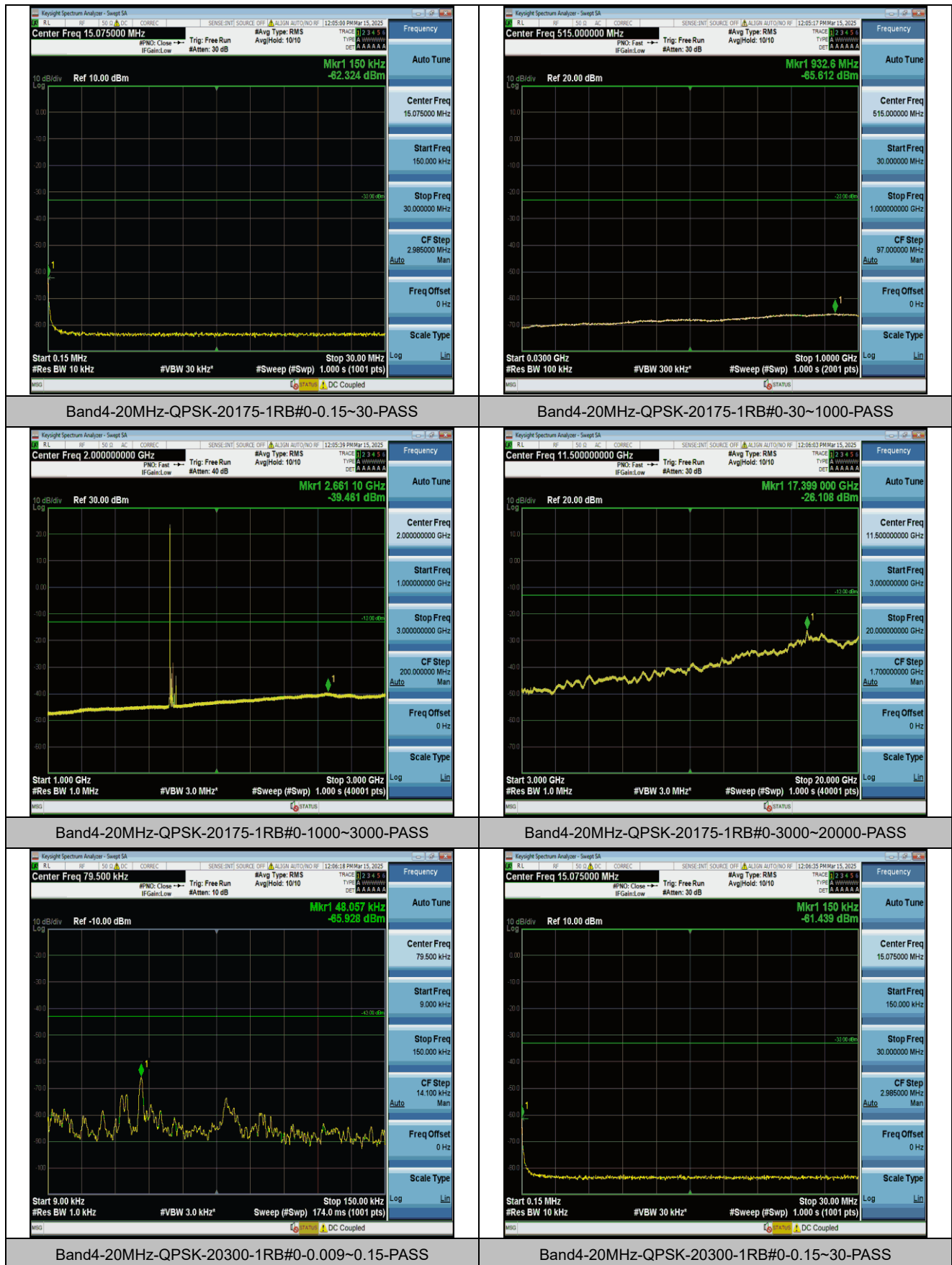


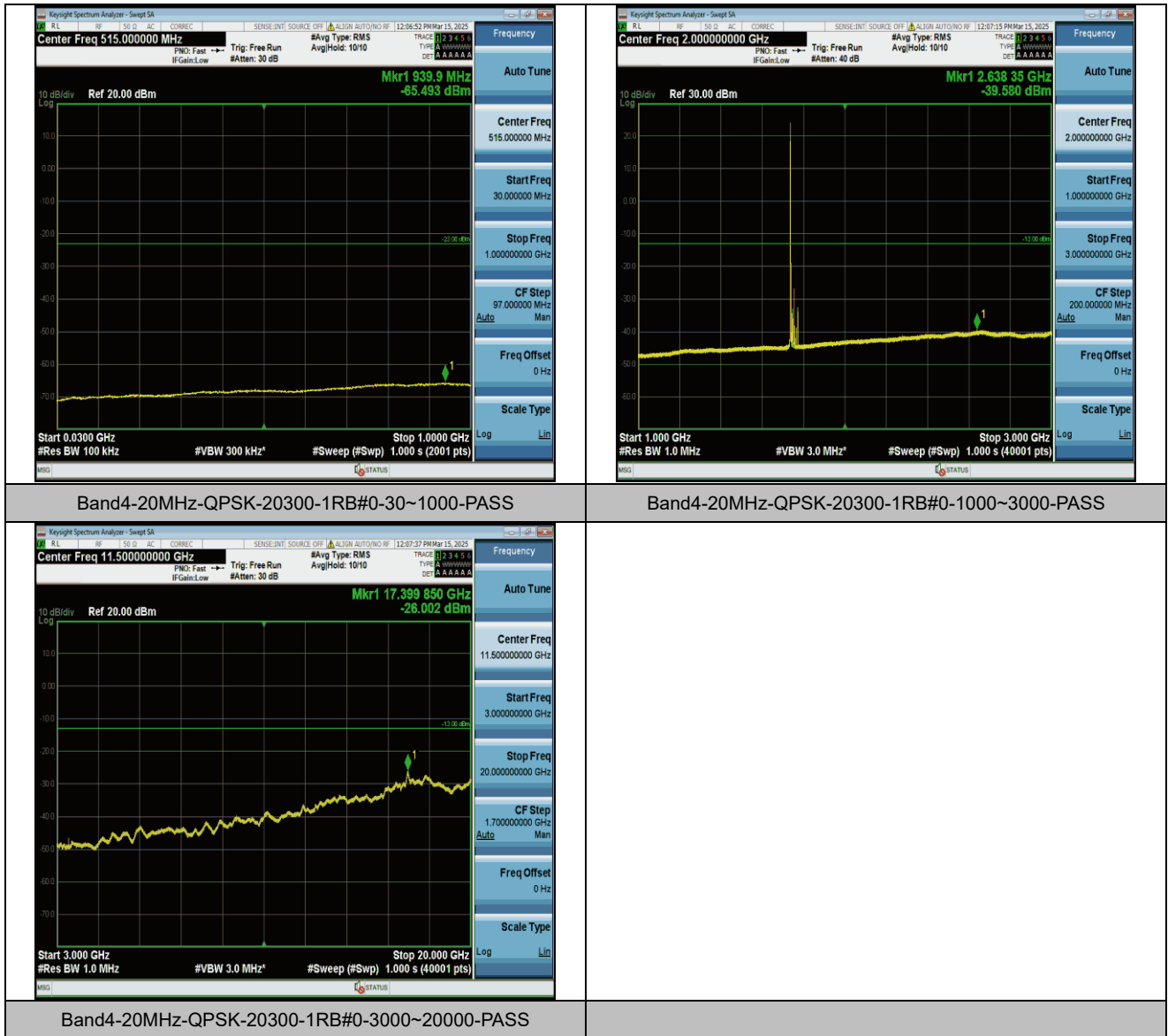
Band4-20MHz-QPSK-20300-100RB#0-PASS

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
Band4	20MHz	QPSK	20175	100RB#0	VN	NT	12.50	0.007215	PASS
Band4	20MHz	QPSK	20175	100RB#0	VL	NT	-3.10	-0.001789	PASS
Band4	20MHz	QPSK	20175	100RB#0	VH	NT	7.20	0.004156	PASS

Temperature									
Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Verdict
Band4	20MHz	QPSK	20175	100RB#0	NV	-30	-1.80	-0.001039	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	-20	5.30	0.003059	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	-10	0.50	0.000289	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	0	3.30	0.001905	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	10	3.90	0.002251	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	20	-4.30	-0.002482	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	30	7.60	0.004387	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	40	9.40	0.005426	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	50	-5.00	-0.002886	PASS

~The End~