

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	23.16	24.36	30.00	PASS
Band4	1.4MHz	QPSK	19957	1RB#2	23.08	24.28	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	22.37	23.57	30.00	PASS
Band4	1.4MHz	16QAM	19957	1RB#2	22.32	23.52	30.00	PASS
Band4	1.4MHz	16QAM	19957	1RB#5	22.01	23.21	30.00	PASS
Band4	1.4MHz	16QAM	19957	6RB#0	21.21	22.41	30.00	PASS
Band4	1.4MHz	QPSK	20175	1RB#0	23.13	24.33	30.00	PASS
Band4	1.4MHz	QPSK	20175	1RB#2	23.24	24.44	30.00	PASS
Band4	1.4MHz	QPSK	20175	1RB#5	23.22	24.42	30.00	PASS
Band4	1.4MHz	QPSK	20175	6RB#0	22.43	23.63	30.00	PASS
Band4	1.4MHz	16QAM	20175	1RB#0	22.28	23.48	30.00	PASS
Band4	1.4MHz	16QAM	20175	1RB#2	22.56	23.76	30.00	PASS
Band4	1.4MHz	16QAM	20175	1RB#5	22.51	23.71	30.00	PASS
Band4	1.4MHz	16QAM	20175	6RB#0	21.23	22.43	30.00	PASS
Band4	1.4MHz	QPSK	20393	1RB#0	23.18	24.38	30.00	PASS
Band4	1.4MHz	QPSK	20393	1RB#2	23.29	24.49	30.00	PASS
Band4	1.4MHz	QPSK	20393	1RB#5	23.16	24.36	30.00	PASS
Band4	1.4MHz	QPSK	20393	6RB#0	22.48	23.68	30.00	PASS
Band4	1.4MHz	16QAM	20393	1RB#0	22.33	23.53	30.00	PASS
Band4	1.4MHz	16QAM	20393	1RB#2	22.41	23.61	30.00	PASS
Band4	1.4MHz	16QAM	20393	1RB#5	22.65	23.85	30.00	PASS
Band4	1.4MHz	16QAM	20393	6RB#0	21.7	22.9	30.00	PASS
Band4	3MHz	QPSK	19965	1RB#0	23.07	24.27	30.00	PASS
Band4	3MHz	QPSK	19965	1RB#8	23.14	24.34	30.00	PASS
Band4	3MHz	QPSK	19965	1RB#14	23.15	24.35	30.00	PASS
Band4	3MHz	QPSK	19965	15RB#0	22.26	23.46	30.00	PASS
Band4	3MHz	16QAM	19965	1RB#0	22.56	23.76	30.00	PASS
Band4	3MHz	16QAM	19965	1RB#8	22.84	24.04	30.00	PASS
Band4	3MHz	16QAM	19965	1RB#14	22.17	23.37	30.00	PASS
Band4	3MHz	16QAM	19965	15RB#0	21.35	22.55	30.00	PASS
Band4	3MHz	QPSK	20175	1RB#0	23.08	24.28	30.00	PASS
Band4	3MHz	QPSK	20175	1RB#8	23.29	24.49	30.00	PASS
Band4	3MHz	QPSK	20175	1RB#14	23.24	24.44	30.00	PASS
Band4	3MHz	QPSK	20175	15RB#0	22.47	23.67	30.00	PASS
Band4	3MHz	16QAM	20175	1RB#0	22.61	23.81	30.00	PASS

Band4	3MHz	16QAM	20175	1RB#8	22.28	23.48	30.00	PASS
Band4	3MHz	16QAM	20175	1RB#14	22.36	23.56	30.00	PASS
Band4	3MHz	16QAM	20175	15RB#0	21.42	22.62	30.00	PASS
Band4	3MHz	QPSK	20385	1RB#0	23.09	24.29	30.00	PASS
Band4	3MHz	QPSK	20385	1RB#8	23.03	24.23	30.00	PASS
Band4	3MHz	QPSK	20385	1RB#14	23.33	24.53	30.00	PASS
Band4	3MHz	QPSK	20385	15RB#0	22.56	23.76	30.00	PASS
Band4	3MHz	16QAM	20385	1RB#0	22.05	23.25	30.00	PASS
Band4	3MHz	16QAM	20385	1RB#8	22.48	23.68	30.00	PASS
Band4	3MHz	16QAM	20385	1RB#14	22.57	23.77	30.00	PASS
Band4	3MHz	16QAM	20385	15RB#0	21.57	22.77	30.00	PASS
Band4	5MHz	QPSK	19975	1RB#0	23.04	24.24	30.00	PASS
Band4	5MHz	QPSK	19975	1RB#12	23.12	24.32	30.00	PASS
Band4	5MHz	QPSK	19975	1RB#24	23.27	24.47	30.00	PASS
Band4	5MHz	QPSK	19975	25RB#0	22.41	23.61	30.00	PASS
Band4	5MHz	16QAM	19975	1RB#0	22.04	23.24	30.00	PASS
Band4	5MHz	16QAM	19975	1RB#12	22.41	23.61	30.00	PASS
Band4	5MHz	16QAM	19975	1RB#24	22.31	23.51	30.00	PASS
Band4	5MHz	16QAM	19975	25RB#0	21.3	22.5	30.00	PASS
Band4	5MHz	QPSK	20175	1RB#0	23.17	24.37	30.00	PASS
Band4	5MHz	QPSK	20175	1RB#12	23.35	24.55	30.00	PASS
Band4	5MHz	QPSK	20175	1RB#24	23.26	24.46	30.00	PASS
Band4	5MHz	QPSK	20175	25RB#0	22.46	23.66	30.00	PASS
Band4	5MHz	16QAM	20175	1RB#0	22.45	23.65	30.00	PASS
Band4	5MHz	16QAM	20175	1RB#12	22.53	23.73	30.00	PASS
Band4	5MHz	16QAM	20175	1RB#24	22.58	23.78	30.00	PASS
Band4	5MHz	16QAM	20175	25RB#0	21.47	22.67	30.00	PASS
Band4	5MHz	QPSK	20375	1RB#0	23.21	24.41	30.00	PASS
Band4	5MHz	QPSK	20375	1RB#12	23.66	24.86	30.00	PASS
Band4	5MHz	QPSK	20375	1RB#24	23.28	24.48	30.00	PASS
Band4	5MHz	QPSK	20375	25RB#0	22.44	23.64	30.00	PASS
Band4	5MHz	16QAM	20375	1RB#0	22.55	23.75	30.00	PASS
Band4	5MHz	16QAM	20375	1RB#12	22.85	24.05	30.00	PASS
Band4	5MHz	16QAM	20375	1RB#24	22.71	23.91	30.00	PASS
Band4	5MHz	16QAM	20375	25RB#0	21.64	22.84	30.00	PASS
Band4	10MHz	QPSK	20000	1RB#0	23.14	24.34	30.00	PASS
Band4	10MHz	QPSK	20000	1RB#24	23.22	24.42	30.00	PASS
Band4	10MHz	QPSK	20000	1RB#49	23.19	24.39	30.00	PASS
Band4	10MHz	QPSK	20000	50RB#0	22.31	23.51	30.00	PASS
Band4	10MHz	16QAM	20000	1RB#0	22.32	23.52	30.00	PASS
Band4	10MHz	16QAM	20000	1RB#24	22.24	23.44	30.00	PASS
Band4	10MHz	16QAM	20000	1RB#49	22.19	23.39	30.00	PASS
Band4	10MHz	16QAM	20000	50RB#0	21.37	22.57	30.00	PASS
Band4	10MHz	QPSK	20175	1RB#0	23.02	24.22	30.00	PASS
Band4	10MHz	QPSK	20175	1RB#24	23.04	24.24	30.00	PASS

Band4	10MHz	QPSK	20175	1RB#49	23.26	24.46	30.00	PASS
Band4	10MHz	QPSK	20175	50RB#0	22.36	23.56	30.00	PASS
Band4	10MHz	16QAM	20175	1RB#0	22.15	23.35	30.00	PASS
Band4	10MHz	16QAM	20175	1RB#24	22.57	23.77	30.00	PASS
Band4	10MHz	16QAM	20175	1RB#49	22.32	23.52	30.00	PASS
Band4	10MHz	16QAM	20175	50RB#0	21.25	22.45	30.00	PASS
Band4	10MHz	QPSK	20350	1RB#0	23.05	24.25	30.00	PASS
Band4	10MHz	QPSK	20350	1RB#24	23.52	24.72	30.00	PASS
Band4	10MHz	QPSK	20350	1RB#49	23.43	24.63	30.00	PASS
Band4	10MHz	QPSK	20350	50RB#0	22.52	23.72	30.00	PASS
Band4	10MHz	16QAM	20350	1RB#0	22.14	23.34	30.00	PASS
Band4	10MHz	16QAM	20350	1RB#24	22.33	23.53	30.00	PASS
Band4	10MHz	16QAM	20350	1RB#49	22.85	24.05	30.00	PASS
Band4	10MHz	16QAM	20350	50RB#0	21.44	22.64	30.00	PASS
Band4	15MHz	QPSK	20025	1RB#0	23.22	24.42	30.00	PASS
Band4	15MHz	QPSK	20025	1RB#38	23.29	24.49	30.00	PASS
Band4	15MHz	QPSK	20025	1RB#74	23.05	24.25	30.00	PASS
Band4	15MHz	QPSK	20025	75RB#0	22.42	23.62	30.00	PASS
Band4	15MHz	16QAM	20025	1RB#0	22.17	23.37	30.00	PASS
Band4	15MHz	16QAM	20025	1RB#38	22.16	23.36	30.00	PASS
Band4	15MHz	16QAM	20025	1RB#74	22.42	23.62	30.00	PASS
Band4	15MHz	16QAM	20025	75RB#0	21.37	22.57	30.00	PASS
Band4	15MHz	QPSK	20175	1RB#0	23.11	24.31	30.00	PASS
Band4	15MHz	QPSK	20175	1RB#38	23.31	24.51	30.00	PASS
Band4	15MHz	QPSK	20175	1RB#74	23.11	24.31	30.00	PASS
Band4	15MHz	QPSK	20175	75RB#0	22.39	23.59	30.00	PASS
Band4	15MHz	16QAM	20175	1RB#0	22.51	23.71	30.00	PASS
Band4	15MHz	16QAM	20175	1RB#38	22.26	23.46	30.00	PASS
Band4	15MHz	16QAM	20175	1RB#74	22.28	23.48	30.00	PASS
Band4	15MHz	16QAM	20175	75RB#0	21.29	22.49	30.00	PASS
Band4	15MHz	QPSK	20325	1RB#0	23.19	24.39	30.00	PASS
Band4	15MHz	QPSK	20325	1RB#38	23.16	24.36	30.00	PASS
Band4	15MHz	QPSK	20325	1RB#74	23.26	24.46	30.00	PASS
Band4	15MHz	QPSK	20325	75RB#0	22.37	23.57	30.00	PASS
Band4	15MHz	16QAM	20325	1RB#0	22.74	23.94	30.00	PASS
Band4	15MHz	16QAM	20325	1RB#38	22.24	23.44	30.00	PASS
Band4	15MHz	16QAM	20325	1RB#74	22.74	23.94	30.00	PASS
Band4	15MHz	16QAM	20325	75RB#0	21.49	22.69	30.00	PASS
Band4	20MHz	QPSK	20050	1RB#0	23.08	24.28	30.00	PASS
Band4	20MHz	QPSK	20050	1RB#49	23.14	24.34	30.00	PASS
Band4	20MHz	QPSK	20050	1RB#99	23.01	24.21	30.00	PASS
Band4	20MHz	QPSK	20050	100RB#0	22.35	23.55	30.00	PASS
Band4	20MHz	16QAM	20050	1RB#0	22.01	23.21	30.00	PASS
Band4	20MHz	16QAM	20050	1RB#49	22.24	23.44	30.00	PASS
Band4	20MHz	16QAM	20050	1RB#99	22.32	23.52	30.00	PASS

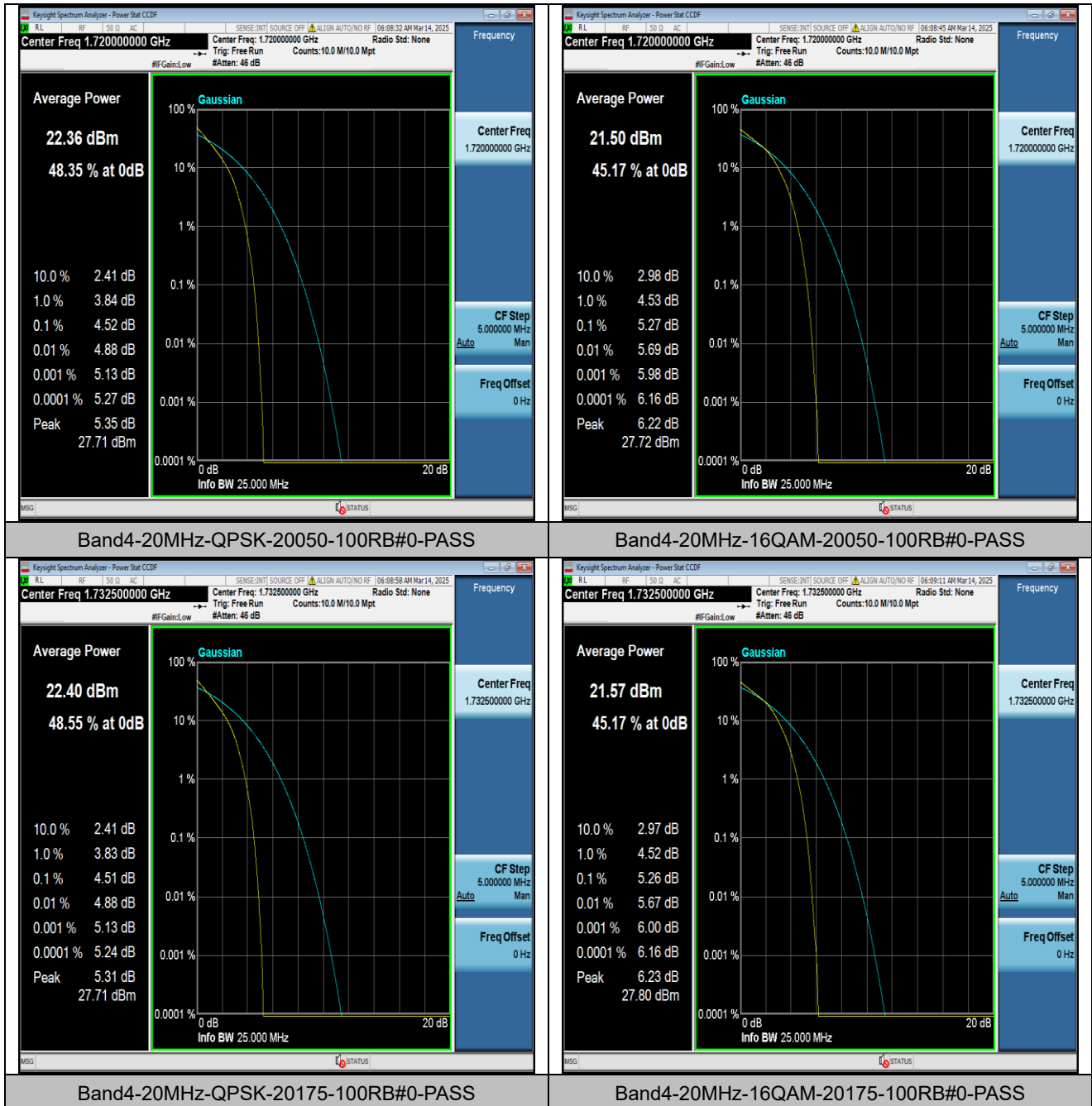
Band4	20MHz	16QAM	20050	100RB#0	21.41	22.61	30.00	PASS
Band4	20MHz	QPSK	20175	1RB#0	23.27	24.47	30.00	PASS
Band4	20MHz	QPSK	20175	1RB#49	23.43	24.63	30.00	PASS
Band4	20MHz	QPSK	20175	1RB#99	23.15	24.35	30.00	PASS
Band4	20MHz	QPSK	20175	100RB#0	22.42	23.62	30.00	PASS
Band4	20MHz	16QAM	20175	1RB#0	22.54	23.74	30.00	PASS
Band4	20MHz	16QAM	20175	1RB#49	22.8	24	30.00	PASS
Band4	20MHz	16QAM	20175	1RB#99	22.39	23.59	30.00	PASS
Band4	20MHz	16QAM	20175	100RB#0	21.47	22.67	30.00	PASS
Band4	20MHz	QPSK	20300	1RB#0	23.14	24.34	30.00	PASS
Band4	20MHz	QPSK	20300	1RB#49	23.36	24.56	30.00	PASS
Band4	20MHz	QPSK	20300	1RB#99	23.27	24.47	30.00	PASS
Band4	20MHz	QPSK	20300	100RB#0	22.43	23.63	30.00	PASS
Band4	20MHz	16QAM	20300	1RB#0	22.65	23.85	30.00	PASS
Band4	20MHz	16QAM	20300	1RB#49	22.23	23.43	30.00	PASS
Band4	20MHz	16QAM	20300	1RB#99	22.41	23.61	30.00	PASS
Band4	20MHz	16QAM	20300	100RB#0	21.37	22.57	30.00	PASS

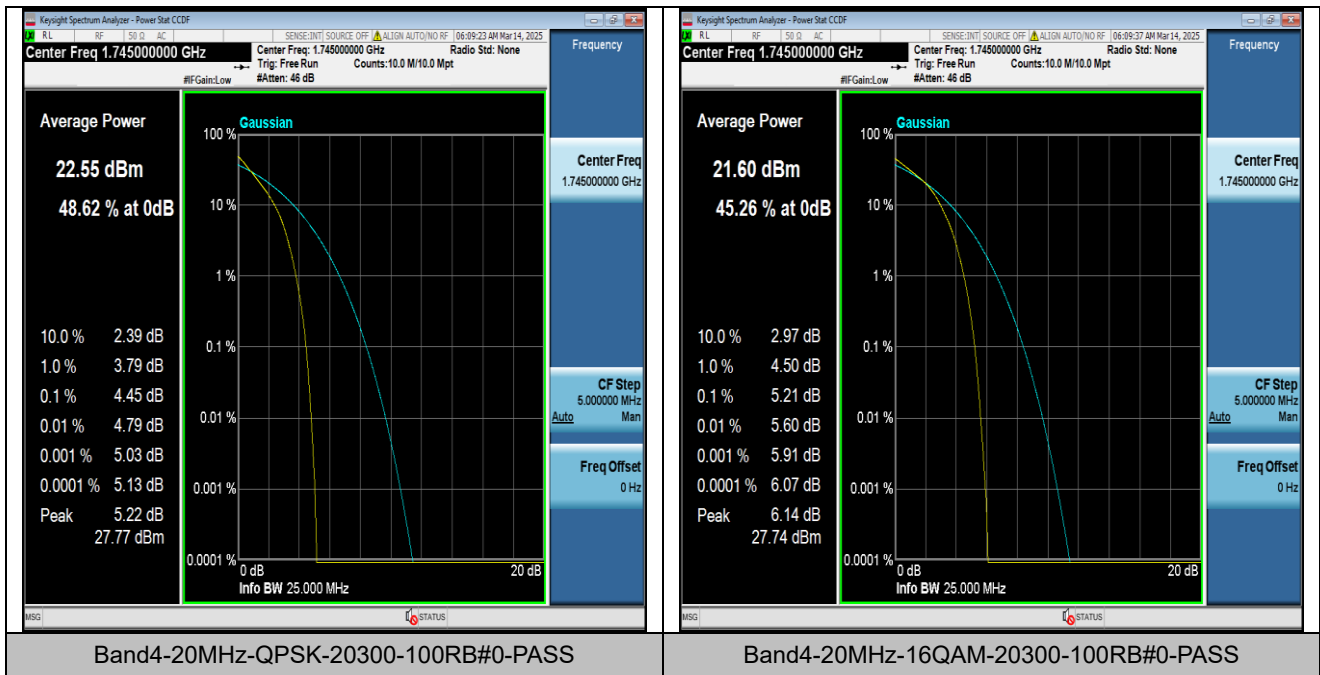
Peak-to-Average Ratio(CCDF)

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result (dB)	Limit (dB)	Verdict
Band4	20MHz	QPSK	20050	100RB#0	4.52	13	PASS
Band4	20MHz	16QAM	20050	100RB#0	5.27	13	PASS
Band4	20MHz	QPSK	20175	100RB#0	4.51	13	PASS
Band4	20MHz	16QAM	20175	100RB#0	5.26	13	PASS
Band4	20MHz	QPSK	20300	100RB#0	4.45	13	PASS
Band4	20MHz	16QAM	20300	100RB#0	5.21	13	PASS

Test Graphs



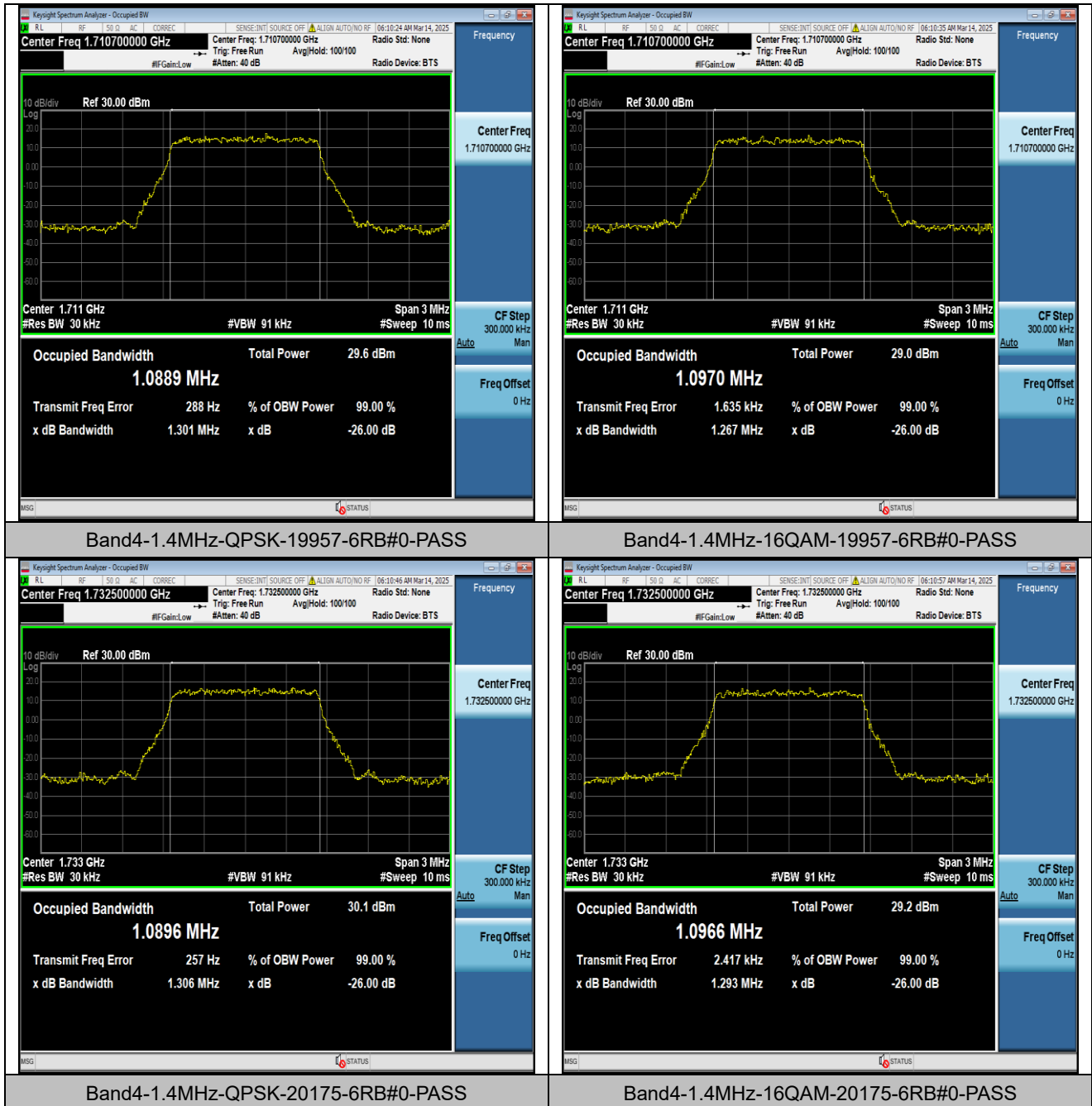


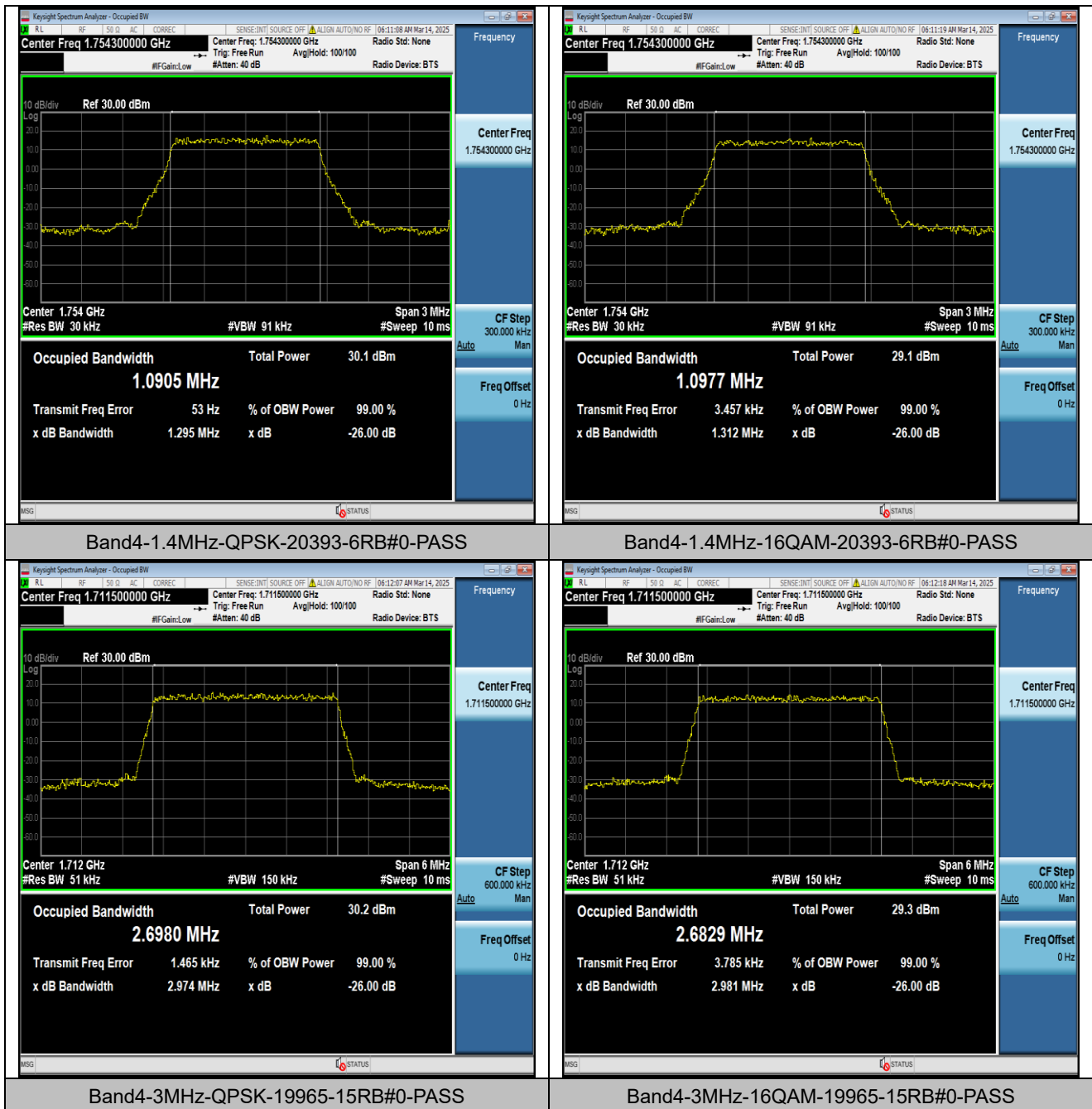
26dB Bandwidth and Occupied Bandwidth

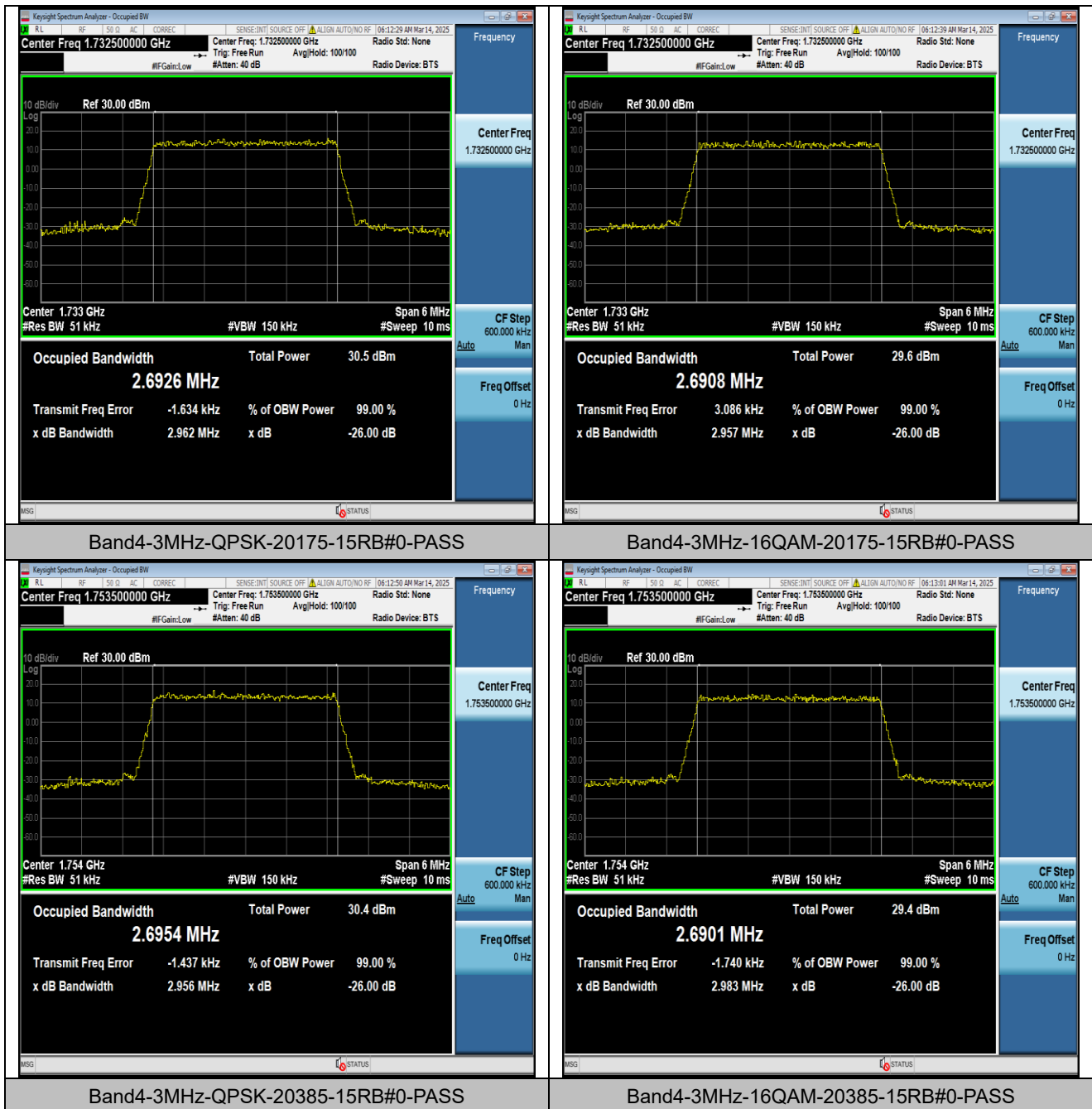
Test Result

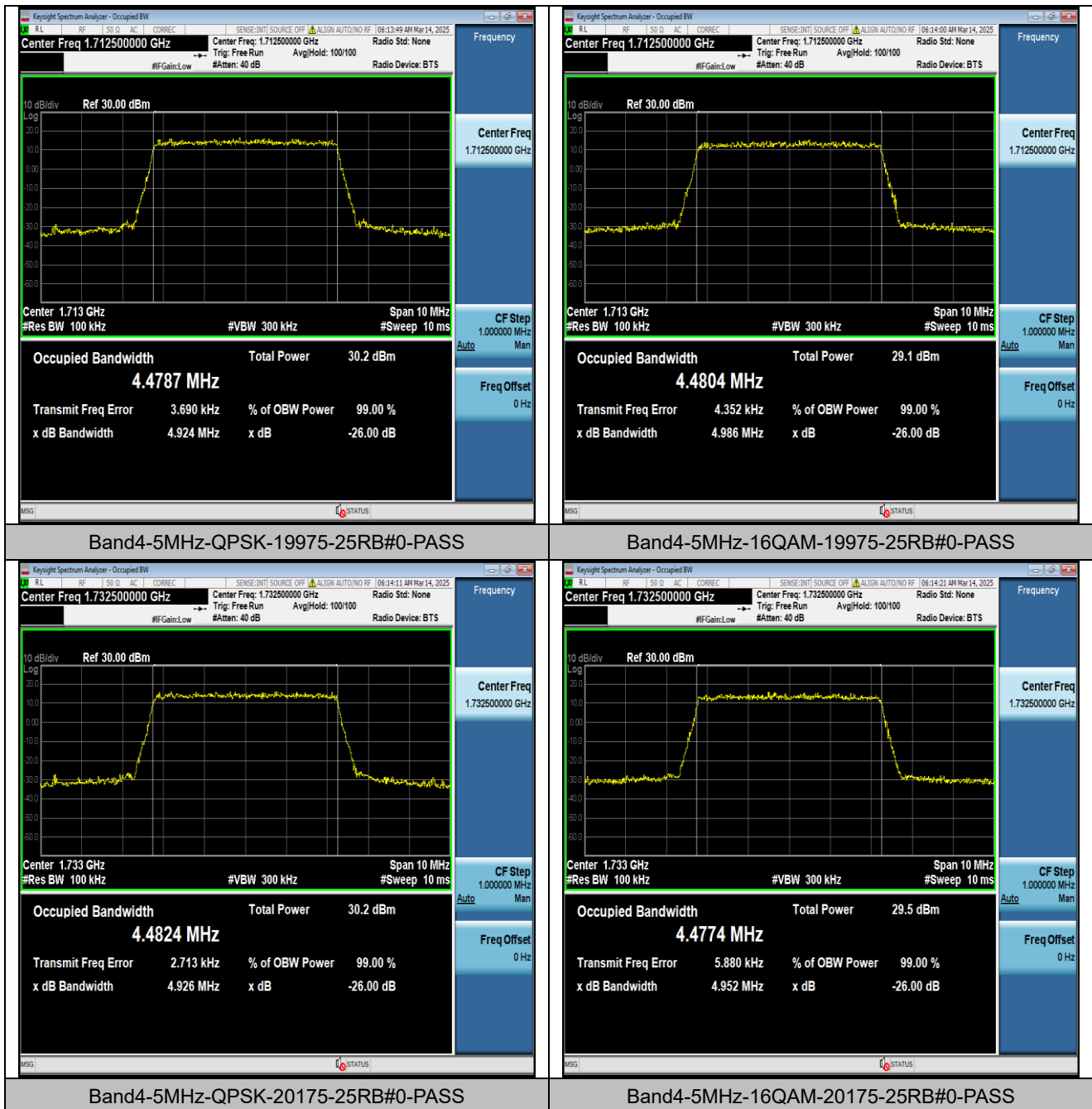
Band	Bandwidth	Modulation	Channel	RB Configuration	OBW (MHz)	26dB EBW (MHz)	Verdict
Band4	1.4MHz	QPSK	19957	6RB#0	1.0889	1.301	PASS
Band4	1.4MHz	16QAM	19957	6RB#0	1.0970	1.267	PASS
Band4	1.4MHz	QPSK	20175	6RB#0	1.0896	1.306	PASS
Band4	1.4MHz	16QAM	20175	6RB#0	1.0966	1.293	PASS
Band4	1.4MHz	QPSK	20393	6RB#0	1.0905	1.295	PASS
Band4	1.4MHz	16QAM	20393	6RB#0	1.0977	1.312	PASS
Band4	3MHz	QPSK	19965	15RB#0	2.6980	2.974	PASS
Band4	3MHz	16QAM	19965	15RB#0	2.6829	2.981	PASS
Band4	3MHz	QPSK	20175	15RB#0	2.6926	2.962	PASS
Band4	3MHz	16QAM	20175	15RB#0	2.6908	2.957	PASS
Band4	3MHz	QPSK	20385	15RB#0	2.6954	2.956	PASS
Band4	3MHz	16QAM	20385	15RB#0	2.6901	2.983	PASS
Band4	5MHz	QPSK	19975	25RB#0	4.4787	4.924	PASS
Band4	5MHz	16QAM	19975	25RB#0	4.4804	4.986	PASS
Band4	5MHz	QPSK	20175	25RB#0	4.4824	4.926	PASS
Band4	5MHz	16QAM	20175	25RB#0	4.4774	4.952	PASS
Band4	5MHz	QPSK	20375	25RB#0	4.4910	4.951	PASS
Band4	5MHz	16QAM	20375	25RB#0	4.4898	4.961	PASS
Band4	10MHz	QPSK	20000	50RB#0	8.9595	9.809	PASS
Band4	10MHz	16QAM	20000	50RB#0	8.9495	9.869	PASS
Band4	10MHz	QPSK	20175	50RB#0	8.9426	9.925	PASS
Band4	10MHz	16QAM	20175	50RB#0	8.9321	9.822	PASS
Band4	10MHz	QPSK	20350	50RB#0	8.9541	9.851	PASS
Band4	10MHz	16QAM	20350	50RB#0	8.9466	9.753	PASS
Band4	15MHz	QPSK	20025	75RB#0	13.431	14.62	PASS
Band4	15MHz	16QAM	20025	75RB#0	13.406	14.61	PASS
Band4	15MHz	QPSK	20175	75RB#0	13.450	14.64	PASS
Band4	15MHz	16QAM	20175	75RB#0	13.418	14.74	PASS
Band4	15MHz	QPSK	20325	75RB#0	13.413	14.65	PASS
Band4	15MHz	16QAM	20325	75RB#0	13.414	14.60	PASS
Band4	20MHz	QPSK	20050	100RB#0	17.971	19.48	PASS
Band4	20MHz	16QAM	20050	100RB#0	17.913	19.52	PASS
Band4	20MHz	QPSK	20175	100RB#0	17.952	19.42	PASS
Band4	20MHz	16QAM	20175	100RB#0	17.863	19.44	PASS
Band4	20MHz	QPSK	20300	100RB#0	17.919	19.38	PASS
Band4	20MHz	16QAM	20300	100RB#0	17.870	19.48	PASS

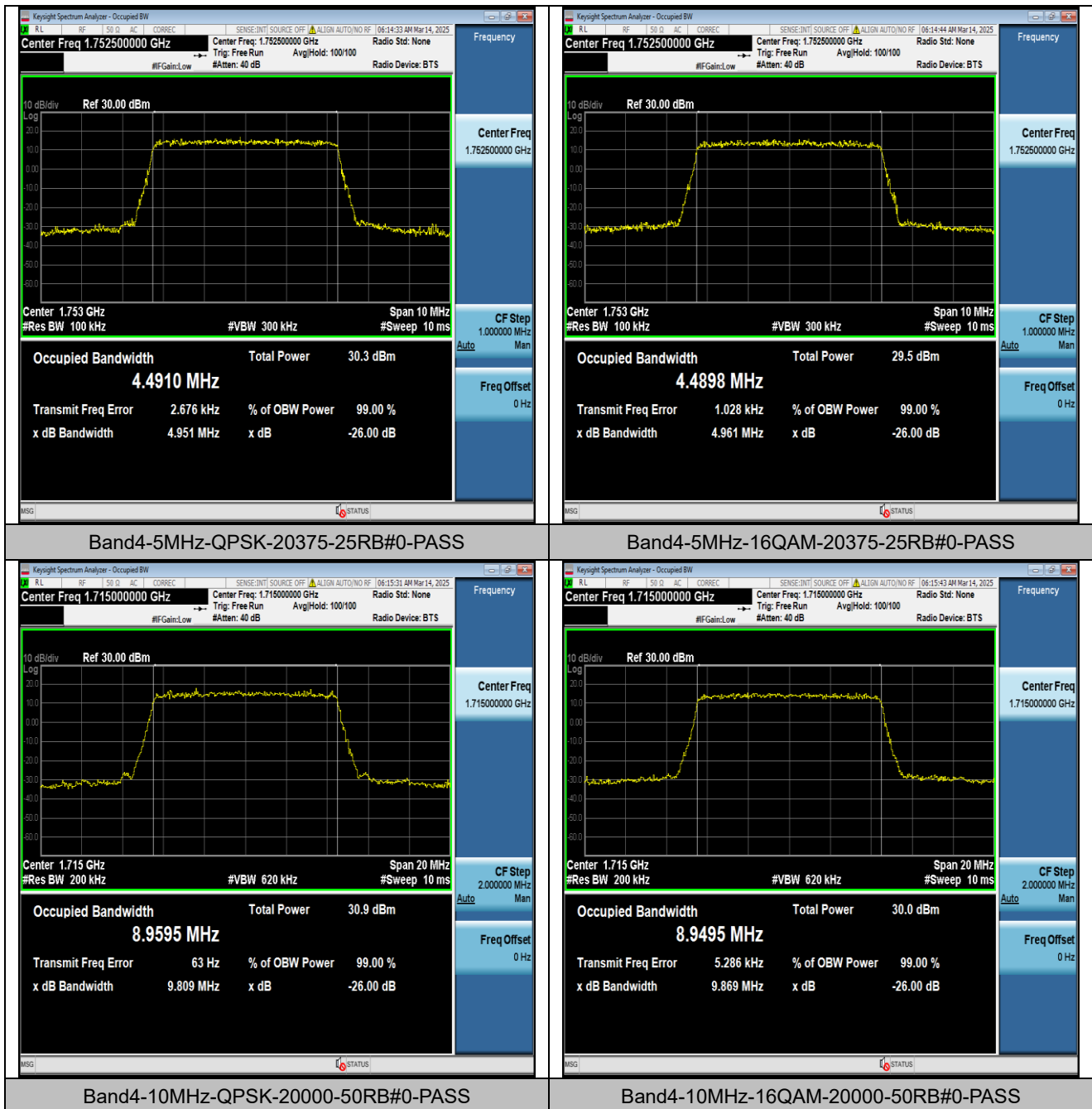
Test Graphs

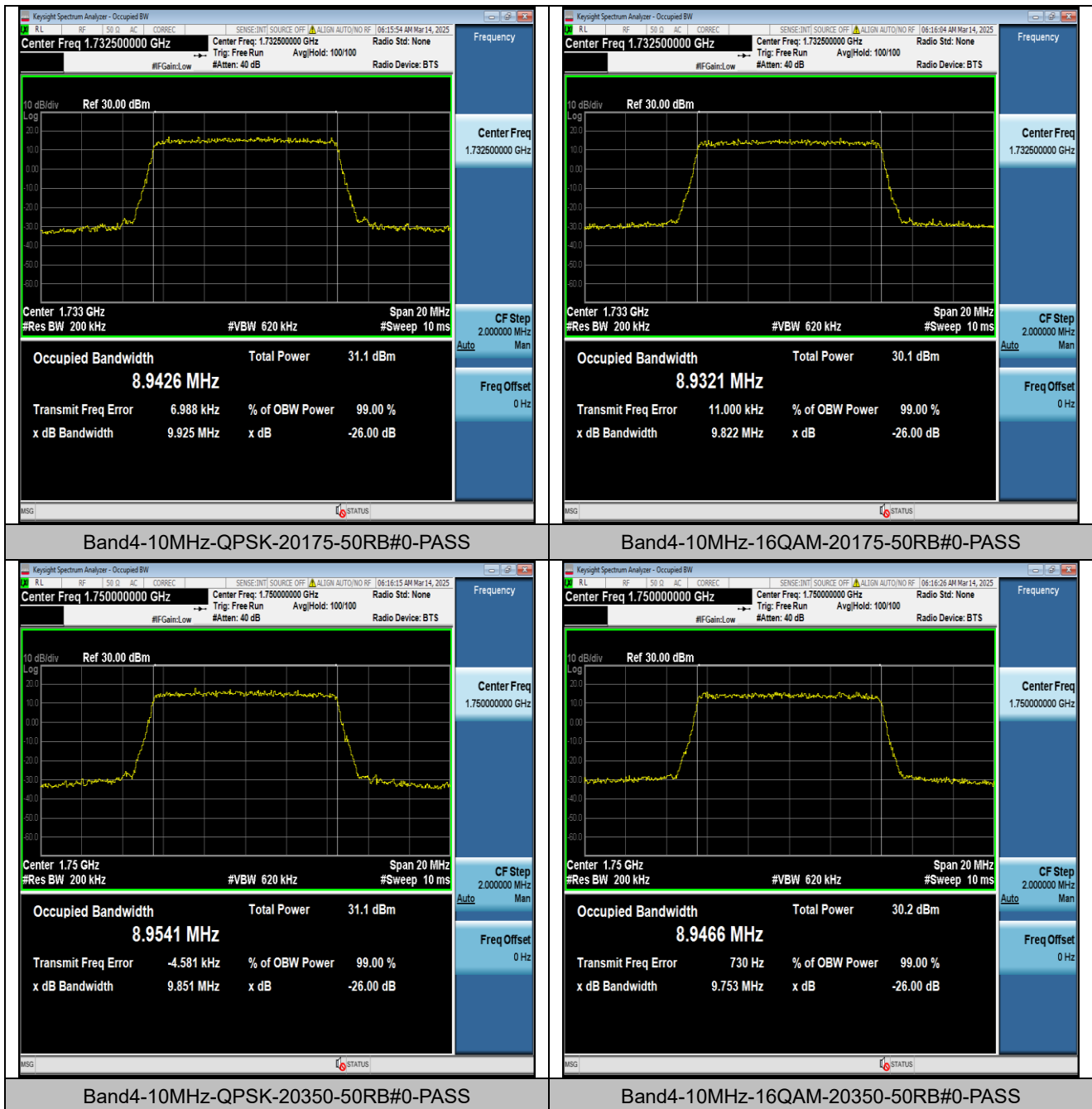


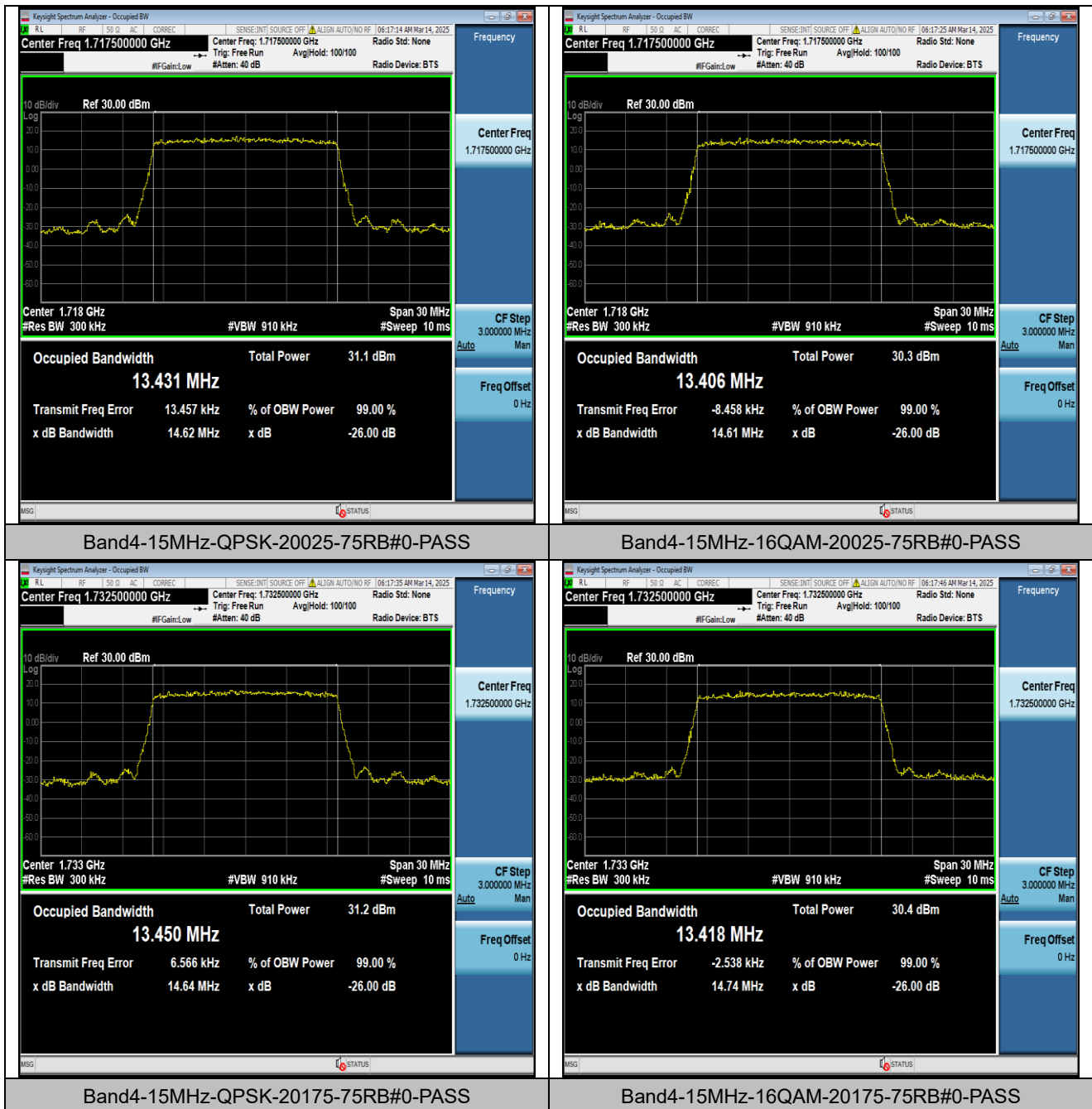


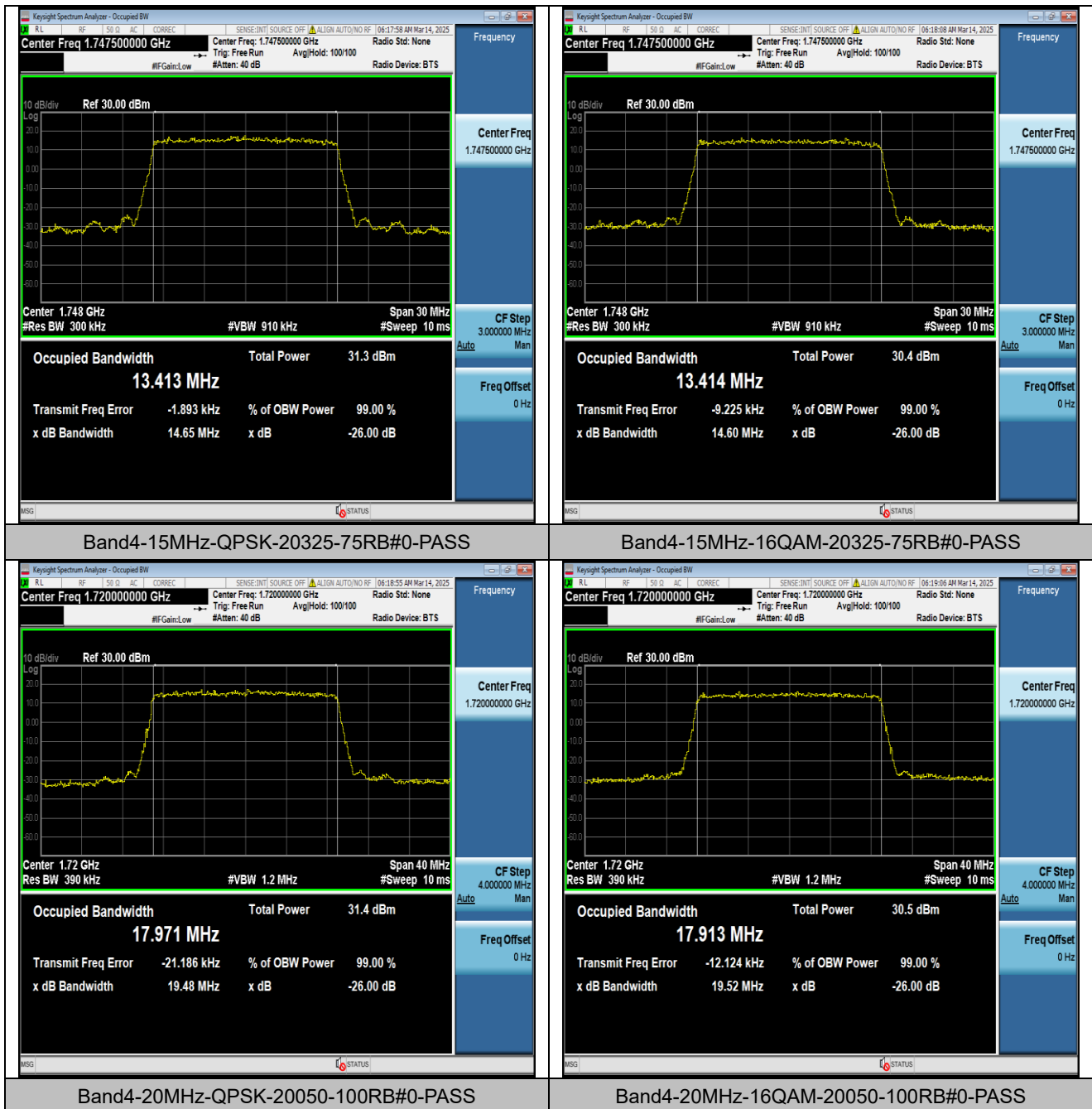


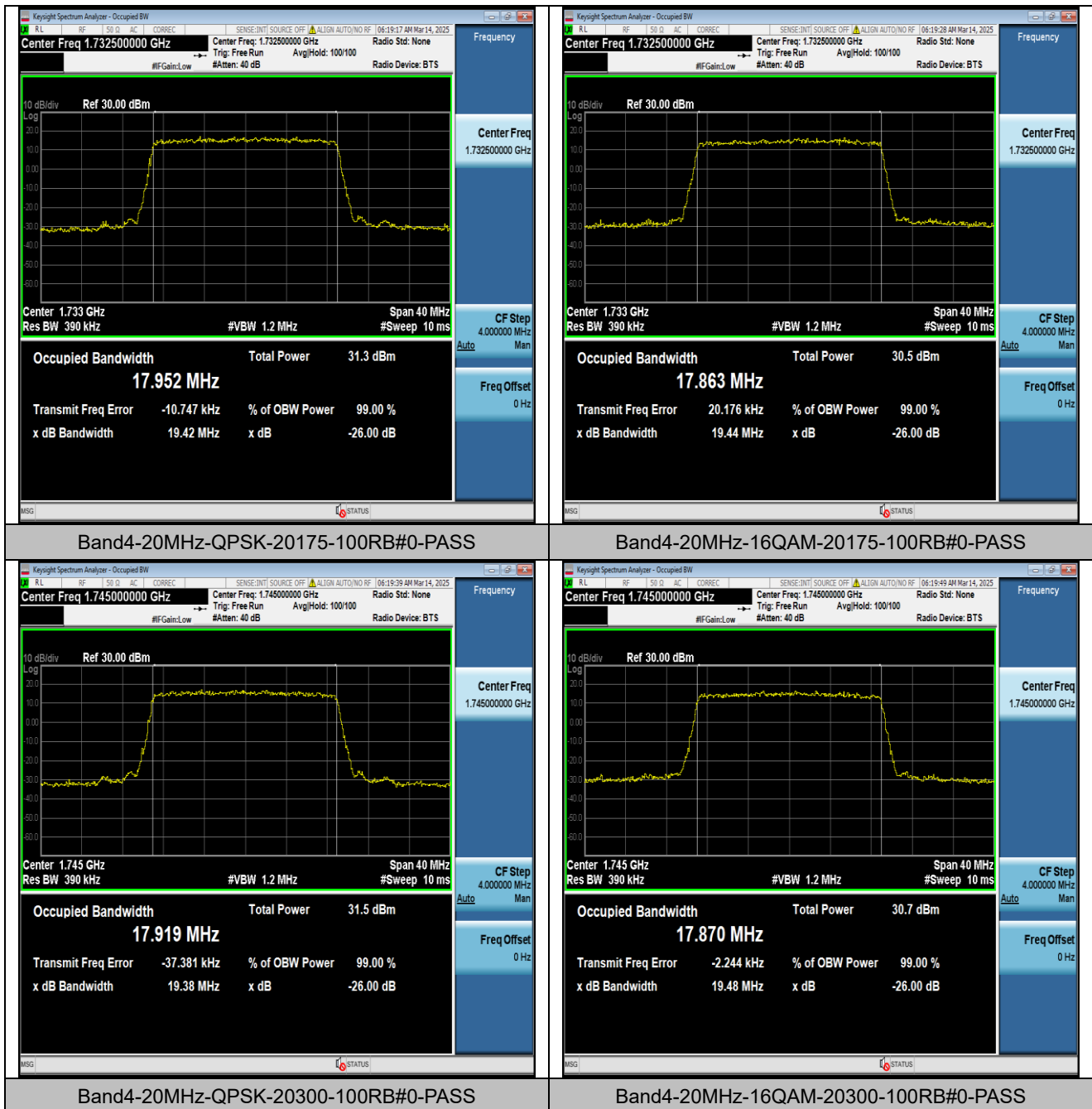






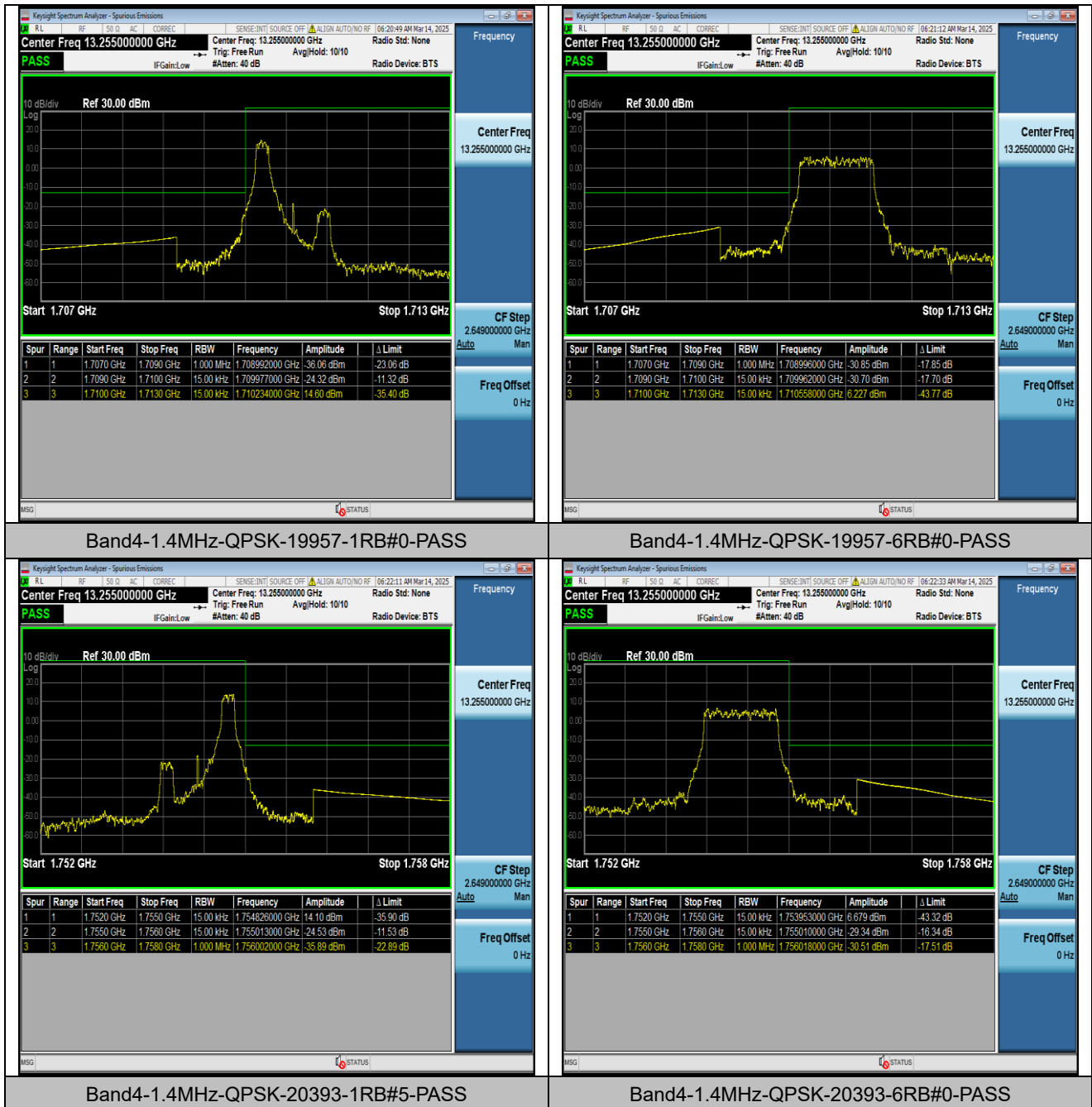


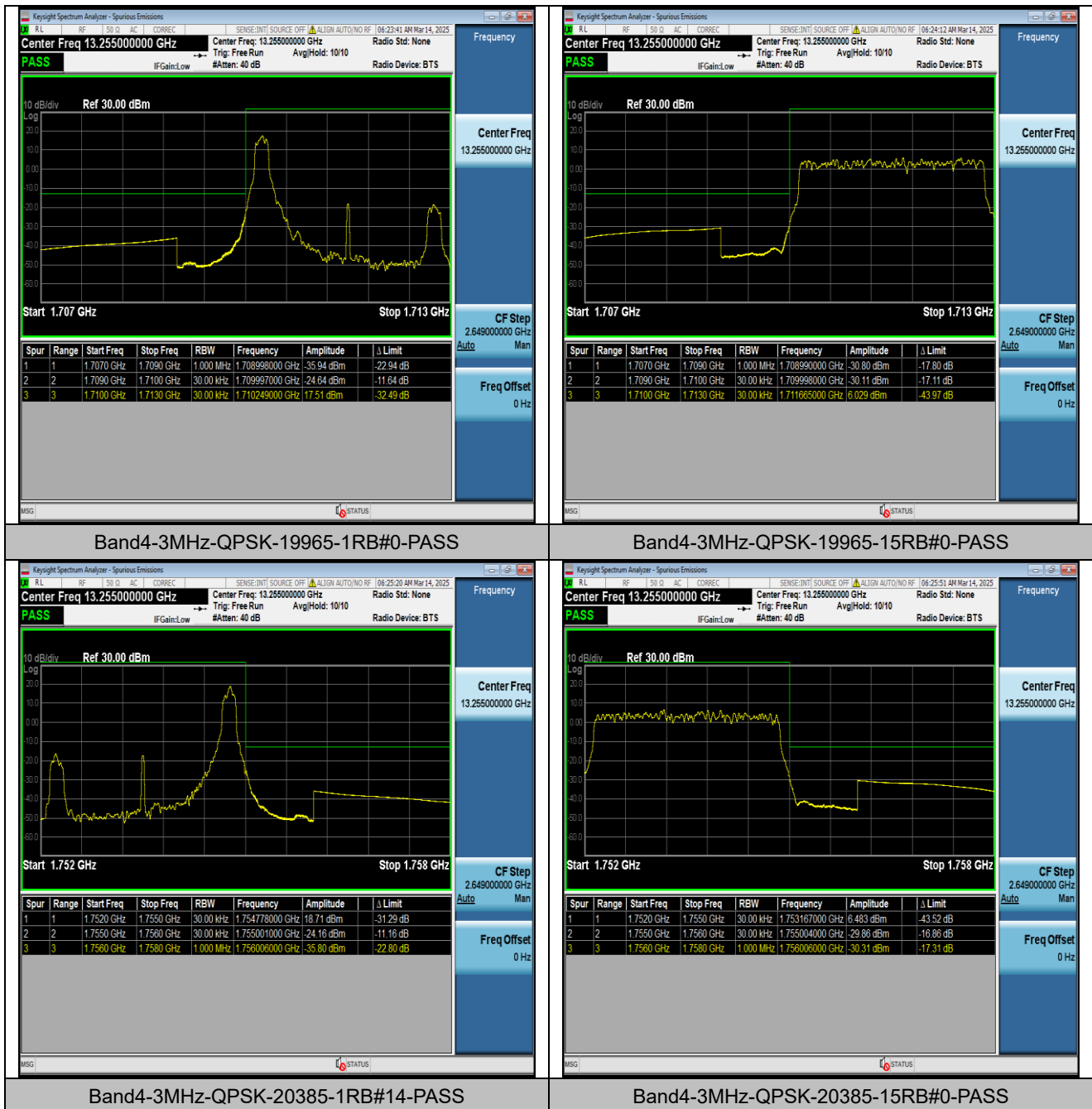


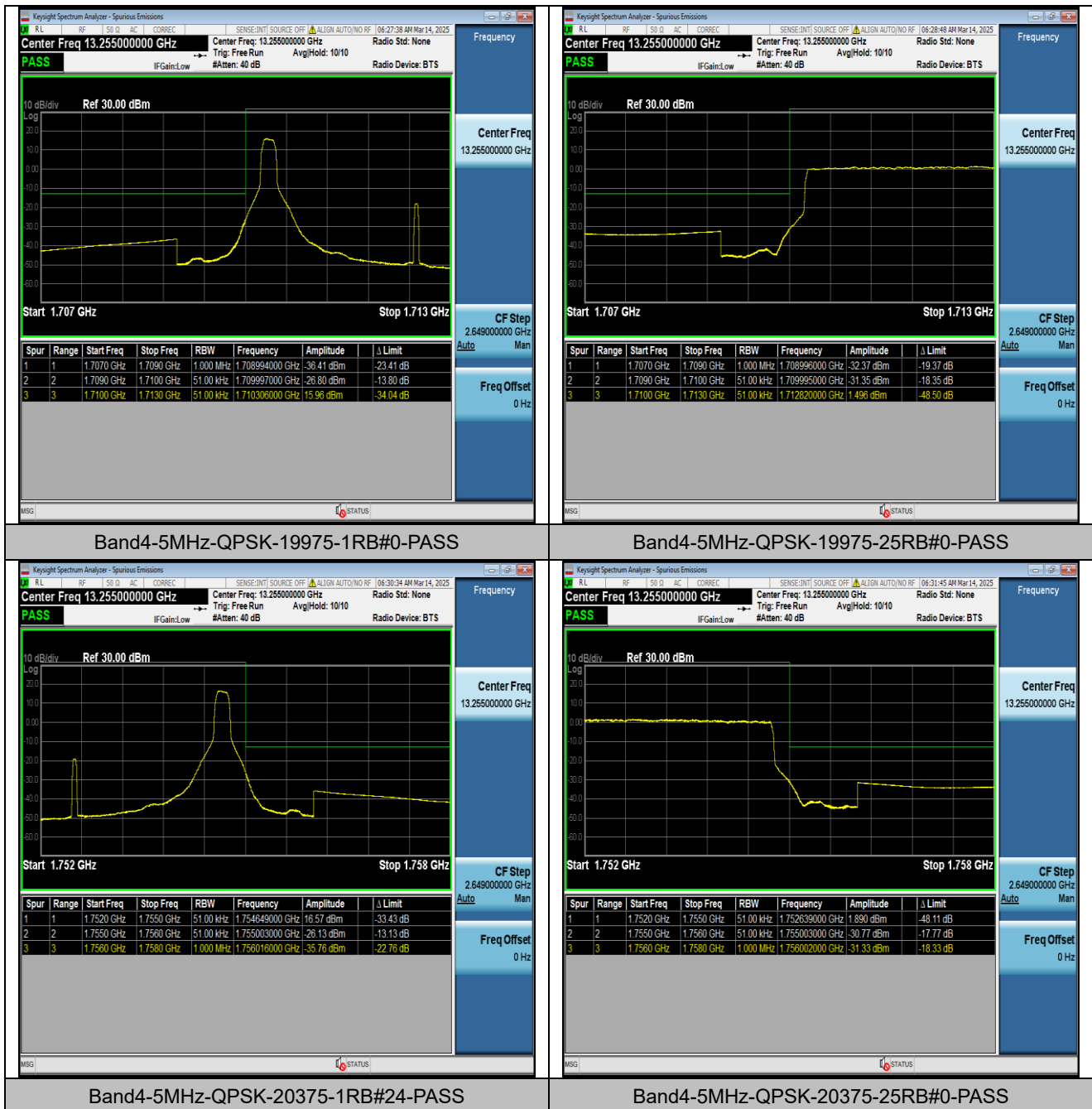


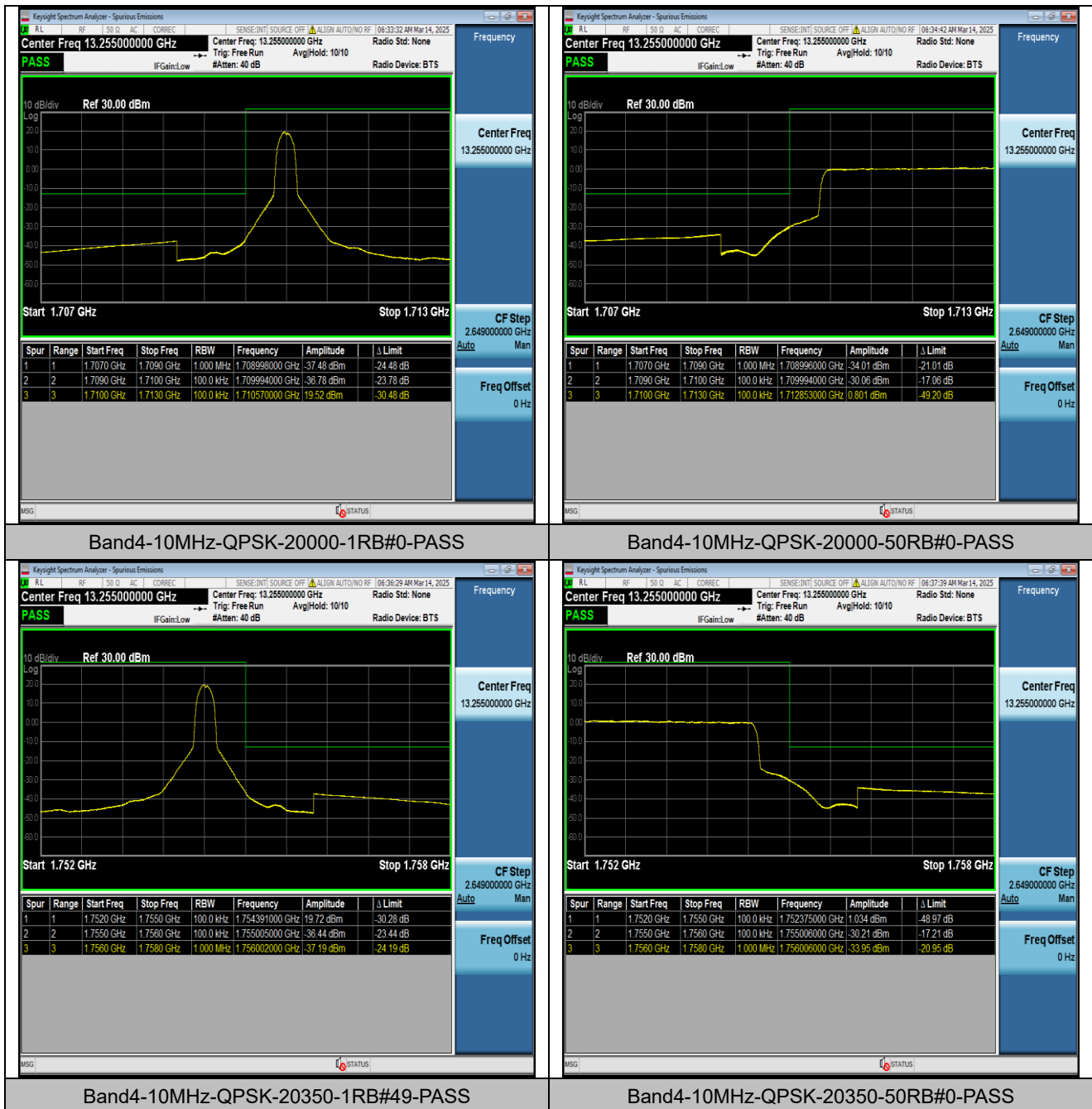
Band Edge

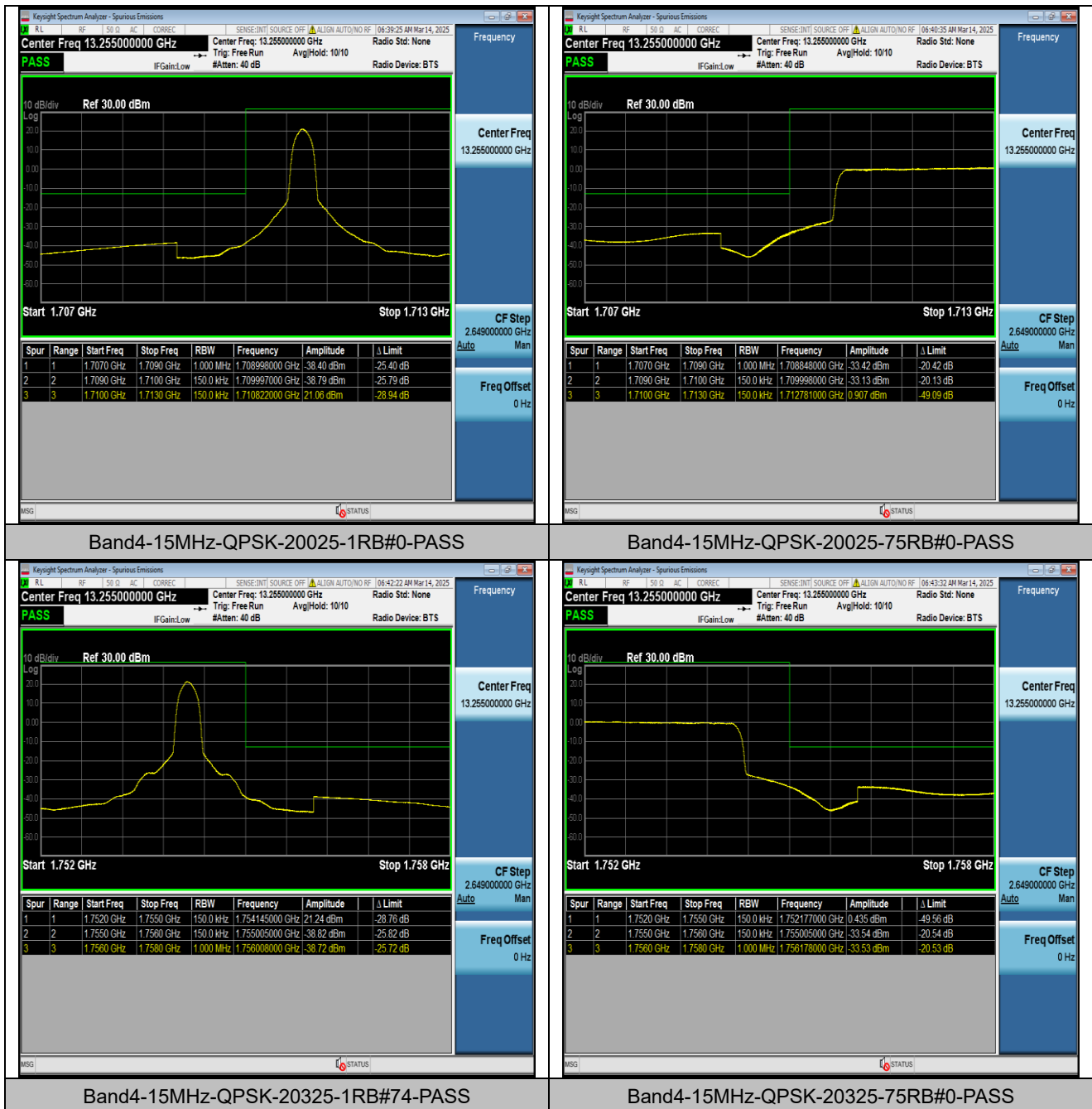
Test Graphs

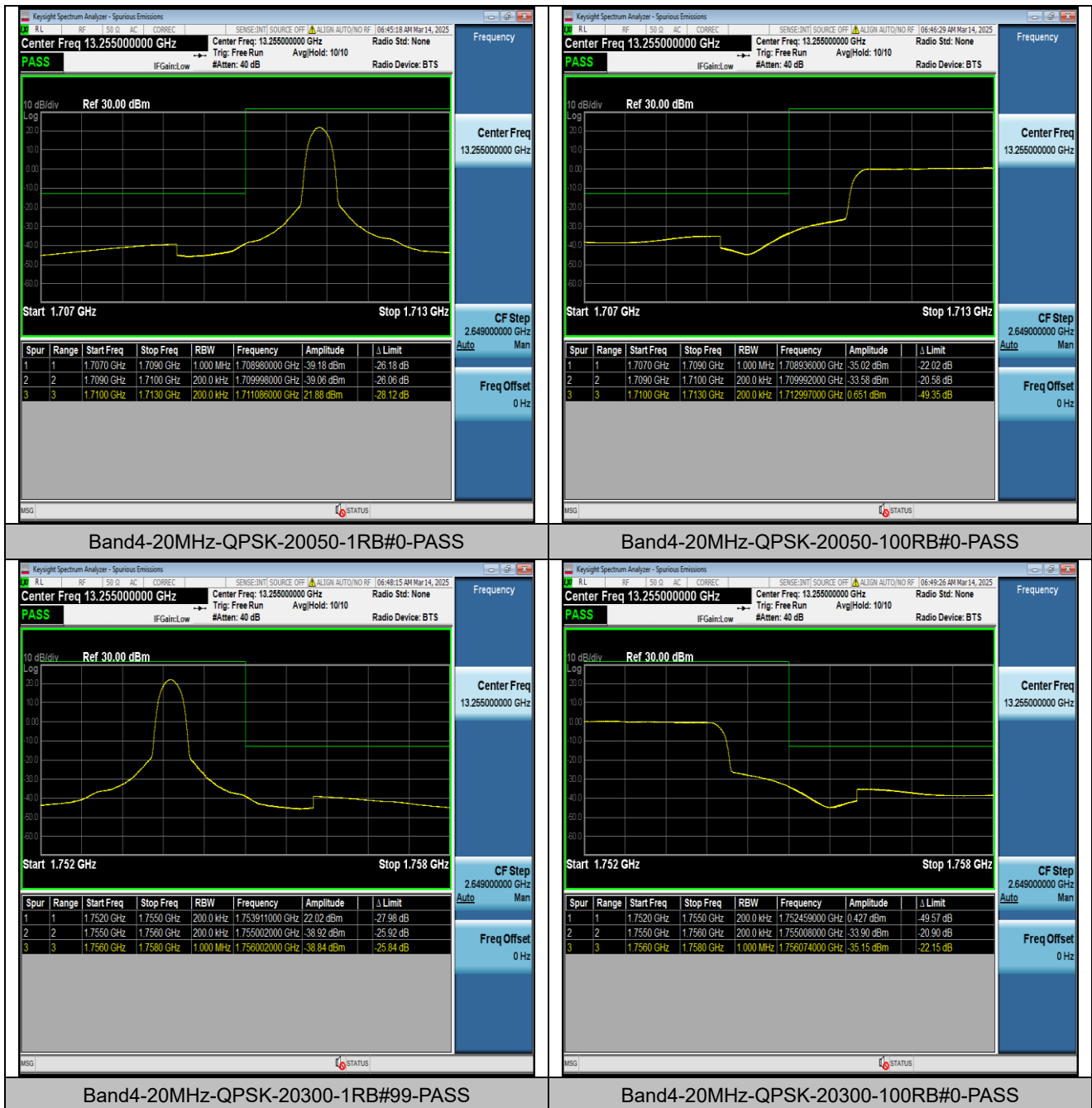






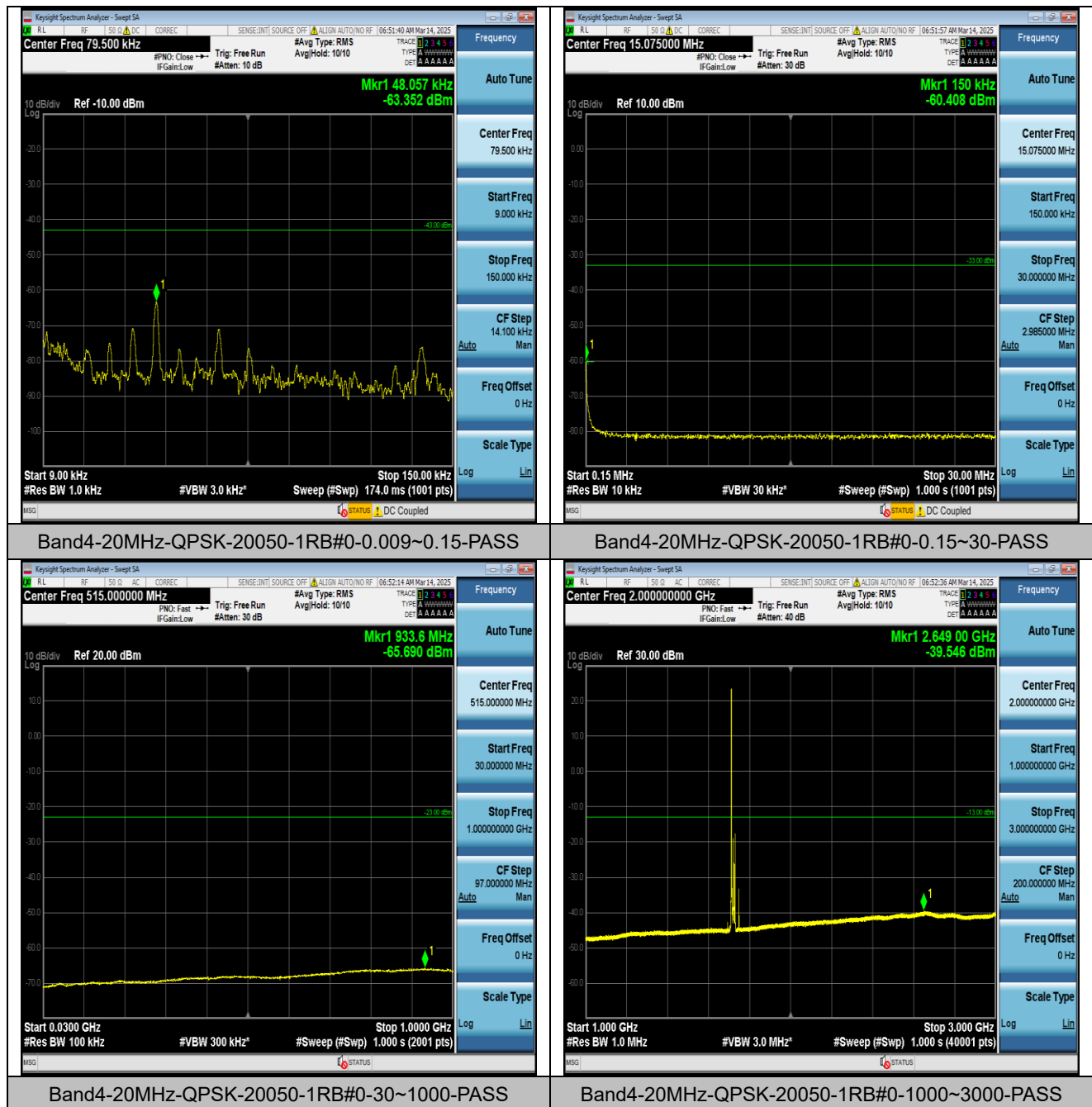


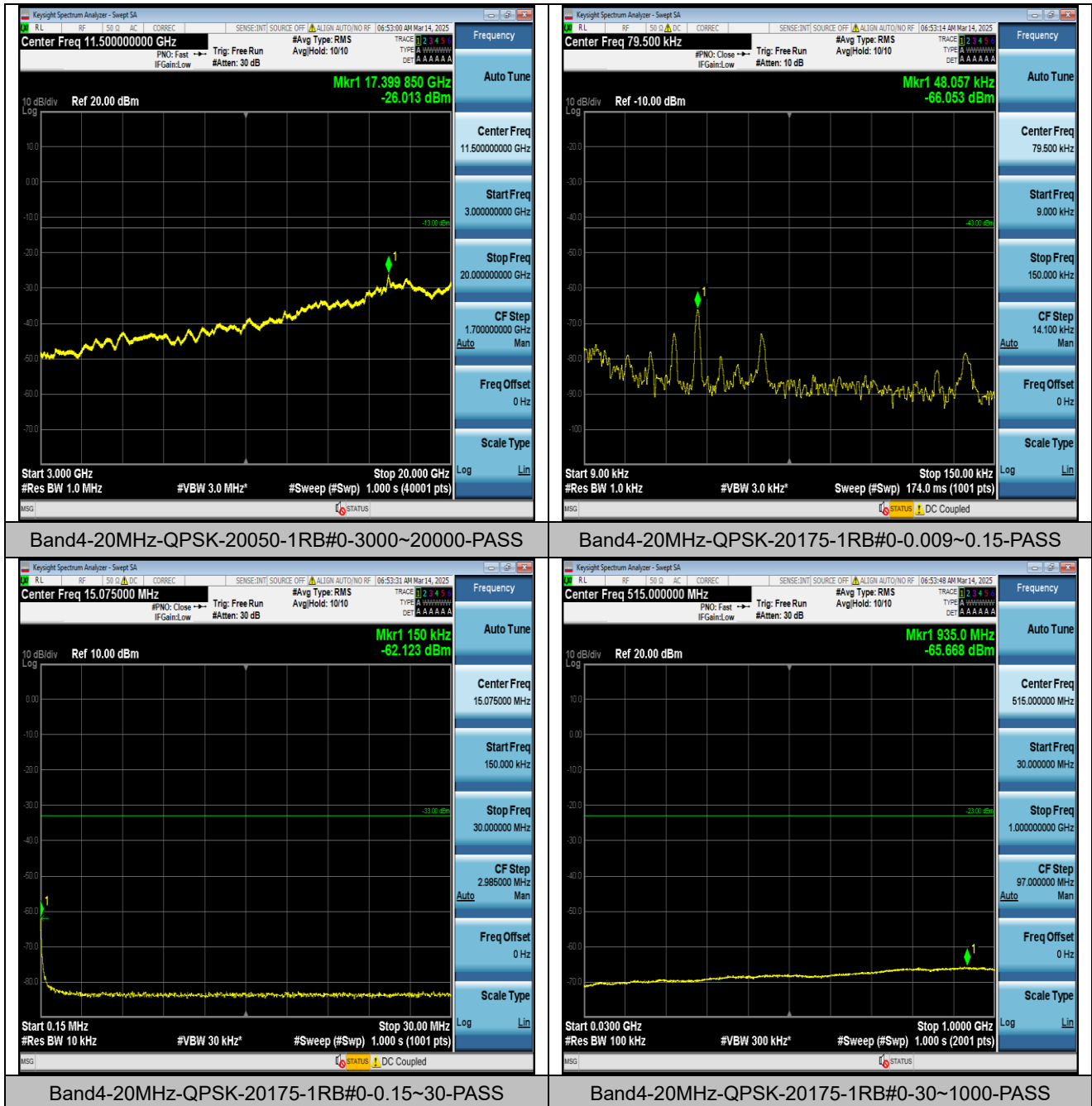


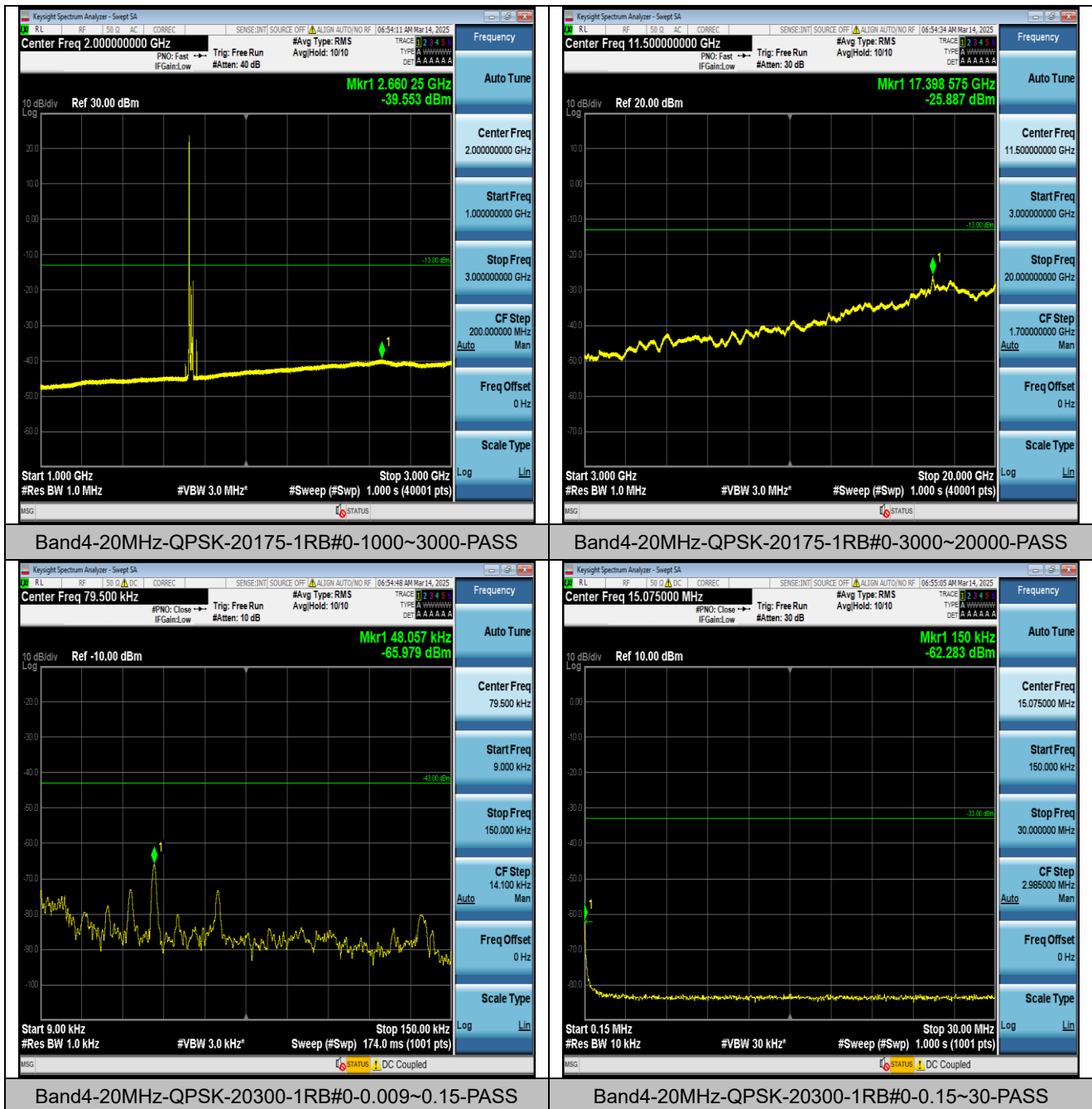


Conducted Spurious Emission

Test Graphs

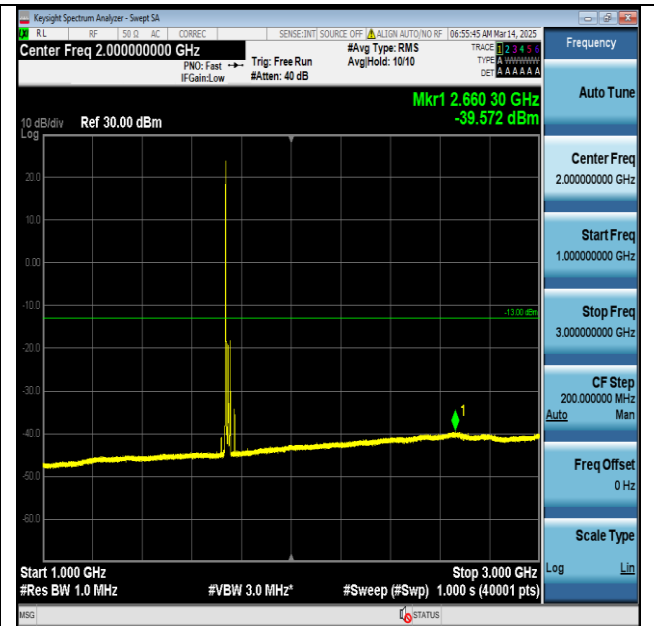








Band4-20MHz-QPSK-20300-1RB#0-30~1000-PASS



Band4-20MHz-QPSK-20300-1RB#0-1000~3000-PASS



Band4-20MHz-QPSK-20300-1RB#0-3000~20000-PASS

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	2.00	0.001154	PASS
Band4	20MHz	QPSK	20175	100RB#0	VL	NT	1.20	0.000693	PASS
Band4	20MHz	QPSK	20175	100RB#0	VH	NT	0.40	0.000231	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	0.20	0.000115	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	-20	0.10	0.000058	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	-10	1.40	0.000808	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	0	1.00	0.000577	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	10	0.70	0.000404	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	20	0.30	0.000173	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	30	0.20	0.000115	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	40	0.80	0.000462	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	50	0.60	0.000346	PASS

~The End~