

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	23.03	24.23	30.00	PASS
Band4	1.4MHz	QPSK	19957	1RB#2	23.13	24.33	30.00	PASS
Band4	1.4MHz	QPSK	19957	1RB#5	23.22	24.42	30.00	PASS
Band4	1.4MHz	QPSK	19957	6RB#0	22.4	23.6	30.00	PASS
Band4	1.4MHz	16QAM	19957	1RB#0	22.23	23.43	30.00	PASS
Band4	1.4MHz	16QAM	19957	1RB#2	22.46	23.66	30.00	PASS
Band4	1.4MHz	16QAM	19957	1RB#5	22.34	23.54	30.00	PASS
Band4	1.4MHz	16QAM	19957	6RB#0	21.22	22.42	30.00	PASS
Band4	1.4MHz	QPSK	20175	1RB#0	23.39	24.59	30.00	PASS
Band4	1.4MHz	QPSK	20175	1RB#2	23.44	24.64	30.00	PASS
Band4	1.4MHz	QPSK	20175	1RB#5	23.45	24.65	30.00	PASS
Band4	1.4MHz	QPSK	20175	6RB#0	22.56	23.76	30.00	PASS
Band4	1.4MHz	16QAM	20175	1RB#0	22.67	23.87	30.00	PASS
Band4	1.4MHz	16QAM	20175	1RB#2	22.6	23.8	30.00	PASS
Band4	1.4MHz	16QAM	20175	1RB#5	22.6	23.8	30.00	PASS
Band4	1.4MHz	16QAM	20175	6RB#0	21.58	22.78	30.00	PASS
Band4	1.4MHz	QPSK	20393	1RB#0	23.53	24.73	30.00	PASS
Band4	1.4MHz	QPSK	20393	1RB#2	23.51	24.71	30.00	PASS
Band4	1.4MHz	QPSK	20393	1RB#5	23.71	24.91	30.00	PASS
Band4	1.4MHz	QPSK	20393	6RB#0	22.55	23.75	30.00	PASS
Band4	1.4MHz	16QAM	20393	1RB#0	22.31	23.51	30.00	PASS
Band4	1.4MHz	16QAM	20393	1RB#2	22.54	23.74	30.00	PASS
Band4	1.4MHz	16QAM	20393	1RB#5	22.71	23.91	30.00	PASS
Band4	1.4MHz	16QAM	20393	6RB#0	21.67	22.87	30.00	PASS
Band4	3MHz	QPSK	19965	1RB#0	23.21	24.41	30.00	PASS
Band4	3MHz	QPSK	19965	1RB#8	23.3	24.5	30.00	PASS
Band4	3MHz	QPSK	19965	1RB#14	23.4	24.6	30.00	PASS
Band4	3MHz	QPSK	19965	15RB#0	22.57	23.77	30.00	PASS
Band4	3MHz	16QAM	19965	1RB#0	22.2	23.4	30.00	PASS
Band4	3MHz	16QAM	19965	1RB#8	22.45	23.65	30.00	PASS
Band4	3MHz	16QAM	19965	1RB#14	22.31	23.51	30.00	PASS
Band4	3MHz	16QAM	19965	15RB#0	21.53	22.73	30.00	PASS
Band4	3MHz	QPSK	20175	1RB#0	23.73	24.93	30.00	PASS
Band4	3MHz	QPSK	20175	1RB#8	23.71	24.91	30.00	PASS
Band4	3MHz	QPSK	20175	1RB#14	23.55	24.75	30.00	PASS
Band4	3MHz	QPSK	20175	15RB#0	22.63	23.83	30.00	PASS
Band4	3MHz	16QAM	20175	1RB#0	22.33	23.53	30.00	PASS

Band4	3MHz	16QAM	20175	1RB#8	22.38	23.58	30.00	PASS
Band4	3MHz	16QAM	20175	1RB#14	22.42	23.62	30.00	PASS
Band4	3MHz	16QAM	20175	15RB#0	21.62	22.82	30.00	PASS
Band4	3MHz	QPSK	20385	1RB#0	23.47	24.67	30.00	PASS
Band4	3MHz	QPSK	20385	1RB#8	23.31	24.51	30.00	PASS
Band4	3MHz	QPSK	20385	1RB#14	23.62	24.82	30.00	PASS
Band4	3MHz	QPSK	20385	15RB#0	22.63	23.83	30.00	PASS
Band4	3MHz	16QAM	20385	1RB#0	22.31	23.51	30.00	PASS
Band4	3MHz	16QAM	20385	1RB#8	22.29	23.49	30.00	PASS
Band4	3MHz	16QAM	20385	1RB#14	22.39	23.59	30.00	PASS
Band4	3MHz	16QAM	20385	15RB#0	21.66	22.86	30.00	PASS
Band4	5MHz	QPSK	19975	1RB#0	23.19	24.39	30.00	PASS
Band4	5MHz	QPSK	19975	1RB#12	23.46	24.66	30.00	PASS
Band4	5MHz	QPSK	19975	1RB#24	23.3	24.5	30.00	PASS
Band4	5MHz	QPSK	19975	25RB#0	22.59	23.79	30.00	PASS
Band4	5MHz	16QAM	19975	1RB#0	22.24	23.44	30.00	PASS
Band4	5MHz	16QAM	19975	1RB#12	22.57	23.77	30.00	PASS
Band4	5MHz	16QAM	19975	1RB#24	22.46	23.66	30.00	PASS
Band4	5MHz	16QAM	19975	25RB#0	21.55	22.75	30.00	PASS
Band4	5MHz	QPSK	20175	1RB#0	23.42	24.62	30.00	PASS
Band4	5MHz	QPSK	20175	1RB#12	23.78	24.98	30.00	PASS
Band4	5MHz	QPSK	20175	1RB#24	23.47	24.67	30.00	PASS
Band4	5MHz	QPSK	20175	25RB#0	22.63	23.83	30.00	PASS
Band4	5MHz	16QAM	20175	1RB#0	22.64	23.84	30.00	PASS
Band4	5MHz	16QAM	20175	1RB#12	22.81	24.01	30.00	PASS
Band4	5MHz	16QAM	20175	1RB#24	22.3	23.5	30.00	PASS
Band4	5MHz	16QAM	20175	25RB#0	21.81	23.01	30.00	PASS
Band4	5MHz	QPSK	20375	1RB#0	23.23	24.43	30.00	PASS
Band4	5MHz	QPSK	20375	1RB#12	23.84	25.04	30.00	PASS
Band4	5MHz	QPSK	20375	1RB#24	23.69	24.89	30.00	PASS
Band4	5MHz	QPSK	20375	25RB#0	22.5	23.7	30.00	PASS
Band4	5MHz	16QAM	20375	1RB#0	22.32	23.52	30.00	PASS
Band4	5MHz	16QAM	20375	1RB#12	22.8	24	30.00	PASS
Band4	5MHz	16QAM	20375	1RB#24	22.47	23.67	30.00	PASS
Band4	5MHz	16QAM	20375	25RB#0	21.39	22.59	30.00	PASS
Band4	10MHz	QPSK	20000	1RB#0	23.33	24.53	30.00	PASS
Band4	10MHz	QPSK	20000	1RB#24	23.59	24.79	30.00	PASS
Band4	10MHz	QPSK	20000	1RB#49	23.49	24.69	30.00	PASS
Band4	10MHz	QPSK	20000	50RB#0	22.64	23.84	30.00	PASS
Band4	10MHz	16QAM	20000	1RB#0	22.8	24	30.00	PASS
Band4	10MHz	16QAM	20000	1RB#24	22.65	23.85	30.00	PASS
Band4	10MHz	16QAM	20000	1RB#49	22.58	23.78	30.00	PASS
Band4	10MHz	16QAM	20000	50RB#0	21.6	22.8	30.00	PASS
Band4	10MHz	QPSK	20175	1RB#0	23.42	24.62	30.00	PASS
Band4	10MHz	QPSK	20175	1RB#24	23.49	24.69	30.00	PASS

Band4	10MHz	QPSK	20175	1RB#49	23.44	24.64	30.00	PASS
Band4	10MHz	QPSK	20175	50RB#0	22.58	23.78	30.00	PASS
Band4	10MHz	16QAM	20175	1RB#0	22.35	23.55	30.00	PASS
Band4	10MHz	16QAM	20175	1RB#24	22.59	23.79	30.00	PASS
Band4	10MHz	16QAM	20175	1RB#49	22.89	24.09	30.00	PASS
Band4	10MHz	16QAM	20175	50RB#0	21.67	22.87	30.00	PASS
Band4	10MHz	QPSK	20350	1RB#0	23.58	24.78	30.00	PASS
Band4	10MHz	QPSK	20350	1RB#24	23.59	24.79	30.00	PASS
Band4	10MHz	QPSK	20350	1RB#49	23.66	24.86	30.00	PASS
Band4	10MHz	QPSK	20350	50RB#0	22.53	23.73	30.00	PASS
Band4	10MHz	16QAM	20350	1RB#0	22.78	23.98	30.00	PASS
Band4	10MHz	16QAM	20350	1RB#24	22.39	23.59	30.00	PASS
Band4	10MHz	16QAM	20350	1RB#49	22.77	23.97	30.00	PASS
Band4	10MHz	16QAM	20350	50RB#0	21.59	22.79	30.00	PASS
Band4	15MHz	QPSK	20025	1RB#0	23.25	24.45	30.00	PASS
Band4	15MHz	QPSK	20025	1RB#38	23.37	24.57	30.00	PASS
Band4	15MHz	QPSK	20025	1RB#74	23.41	24.61	30.00	PASS
Band4	15MHz	QPSK	20025	75RB#0	22.59	23.79	30.00	PASS
Band4	15MHz	16QAM	20025	1RB#0	22.59	23.79	30.00	PASS
Band4	15MHz	16QAM	20025	1RB#38	22.24	23.44	30.00	PASS
Band4	15MHz	16QAM	20025	1RB#74	22.44	23.64	30.00	PASS
Band4	15MHz	16QAM	20025	75RB#0	21.52	22.72	30.00	PASS
Band4	15MHz	QPSK	20175	1RB#0	23.41	24.61	30.00	PASS
Band4	15MHz	QPSK	20175	1RB#38	23.47	24.67	30.00	PASS
Band4	15MHz	QPSK	20175	1RB#74	23.36	24.56	30.00	PASS
Band4	15MHz	QPSK	20175	75RB#0	22.67	23.87	30.00	PASS
Band4	15MHz	16QAM	20175	1RB#0	22.28	23.48	30.00	PASS
Band4	15MHz	16QAM	20175	1RB#38	22.42	23.62	30.00	PASS
Band4	15MHz	16QAM	20175	1RB#74	22.61	23.81	30.00	PASS
Band4	15MHz	16QAM	20175	75RB#0	21.73	22.93	30.00	PASS
Band4	15MHz	QPSK	20325	1RB#0	23.48	24.68	30.00	PASS
Band4	15MHz	QPSK	20325	1RB#38	23.66	24.86	30.00	PASS
Band4	15MHz	QPSK	20325	1RB#74	23.47	24.67	30.00	PASS
Band4	15MHz	QPSK	20325	75RB#0	22.49	23.69	30.00	PASS
Band4	15MHz	16QAM	20325	1RB#0	22.64	23.84	30.00	PASS
Band4	15MHz	16QAM	20325	1RB#38	22.38	23.58	30.00	PASS
Band4	15MHz	16QAM	20325	1RB#74	22.67	23.87	30.00	PASS
Band4	15MHz	16QAM	20325	75RB#0	21.53	22.73	30.00	PASS
Band4	20MHz	QPSK	20050	1RB#0	23.28	24.48	30.00	PASS
Band4	20MHz	QPSK	20050	1RB#49	23.44	24.64	30.00	PASS
Band4	20MHz	QPSK	20050	1RB#99	23.49	24.69	30.00	PASS
Band4	20MHz	QPSK	20050	100RB#0	22.64	23.84	30.00	PASS
Band4	20MHz	16QAM	20050	1RB#0	22.38	23.58	30.00	PASS
Band4	20MHz	16QAM	20050	1RB#49	22.61	23.81	30.00	PASS
Band4	20MHz	16QAM	20050	1RB#99	22.51	23.71	30.00	PASS

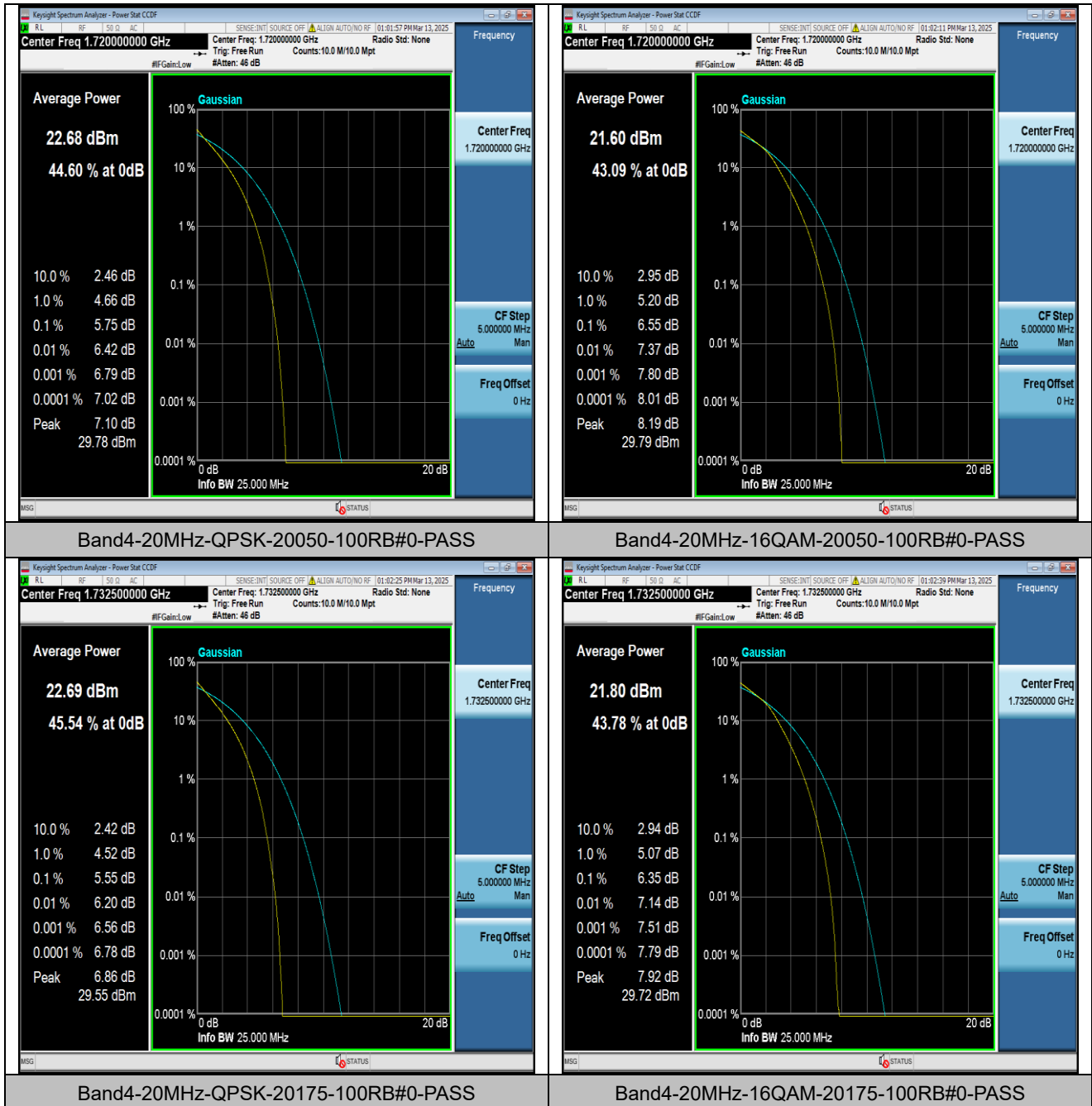
Band4	20MHz	16QAM	20050	100RB#0	21.68	22.88	30.00	PASS
Band4	20MHz	QPSK	20175	1RB#0	23.39	24.59	30.00	PASS
Band4	20MHz	QPSK	20175	1RB#49	23.62	24.82	30.00	PASS
Band4	20MHz	QPSK	20175	1RB#99	23.4	24.6	30.00	PASS
Band4	20MHz	QPSK	20175	100RB#0	22.69	23.89	30.00	PASS
Band4	20MHz	16QAM	20175	1RB#0	22.25	23.45	30.00	PASS
Band4	20MHz	16QAM	20175	1RB#49	22.47	23.67	30.00	PASS
Band4	20MHz	16QAM	20175	1RB#99	22.48	23.68	30.00	PASS
Band4	20MHz	16QAM	20175	100RB#0	21.75	22.95	30.00	PASS
Band4	20MHz	QPSK	20300	1RB#0	23.65	24.85	30.00	PASS
Band4	20MHz	QPSK	20300	1RB#49	23.47	24.67	30.00	PASS
Band4	20MHz	QPSK	20300	1RB#99	23.55	24.75	30.00	PASS
Band4	20MHz	QPSK	20300	100RB#0	22.63	23.83	30.00	PASS
Band4	20MHz	16QAM	20300	1RB#0	22.69	23.89	30.00	PASS
Band4	20MHz	16QAM	20300	1RB#49	22.36	23.56	30.00	PASS
Band4	20MHz	16QAM	20300	1RB#99	22.8	24	30.00	PASS
Band4	20MHz	16QAM	20300	100RB#0	21.69	22.89	30.00	PASS

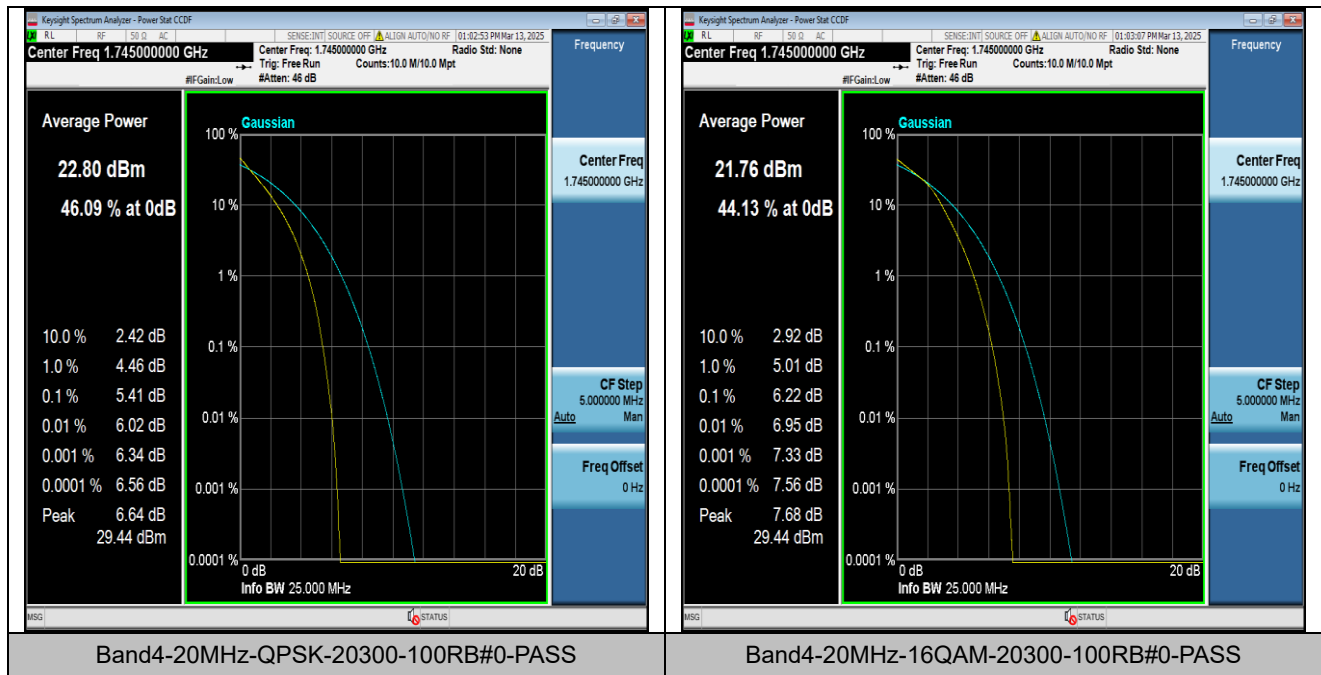
Peak-to-Average Ratio(CCDF)

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result (dB)	Limit (dB)	Verdict
Band4	20MHz	QPSK	20050	100RB#0	5.75	13	PASS
Band4	20MHz	16QAM	20050	100RB#0	6.55	13	PASS
Band4	20MHz	QPSK	20175	100RB#0	5.55	13	PASS
Band4	20MHz	16QAM	20175	100RB#0	6.35	13	PASS
Band4	20MHz	QPSK	20300	100RB#0	5.41	13	PASS
Band4	20MHz	16QAM	20300	100RB#0	6.22	13	PASS

Test Graphs



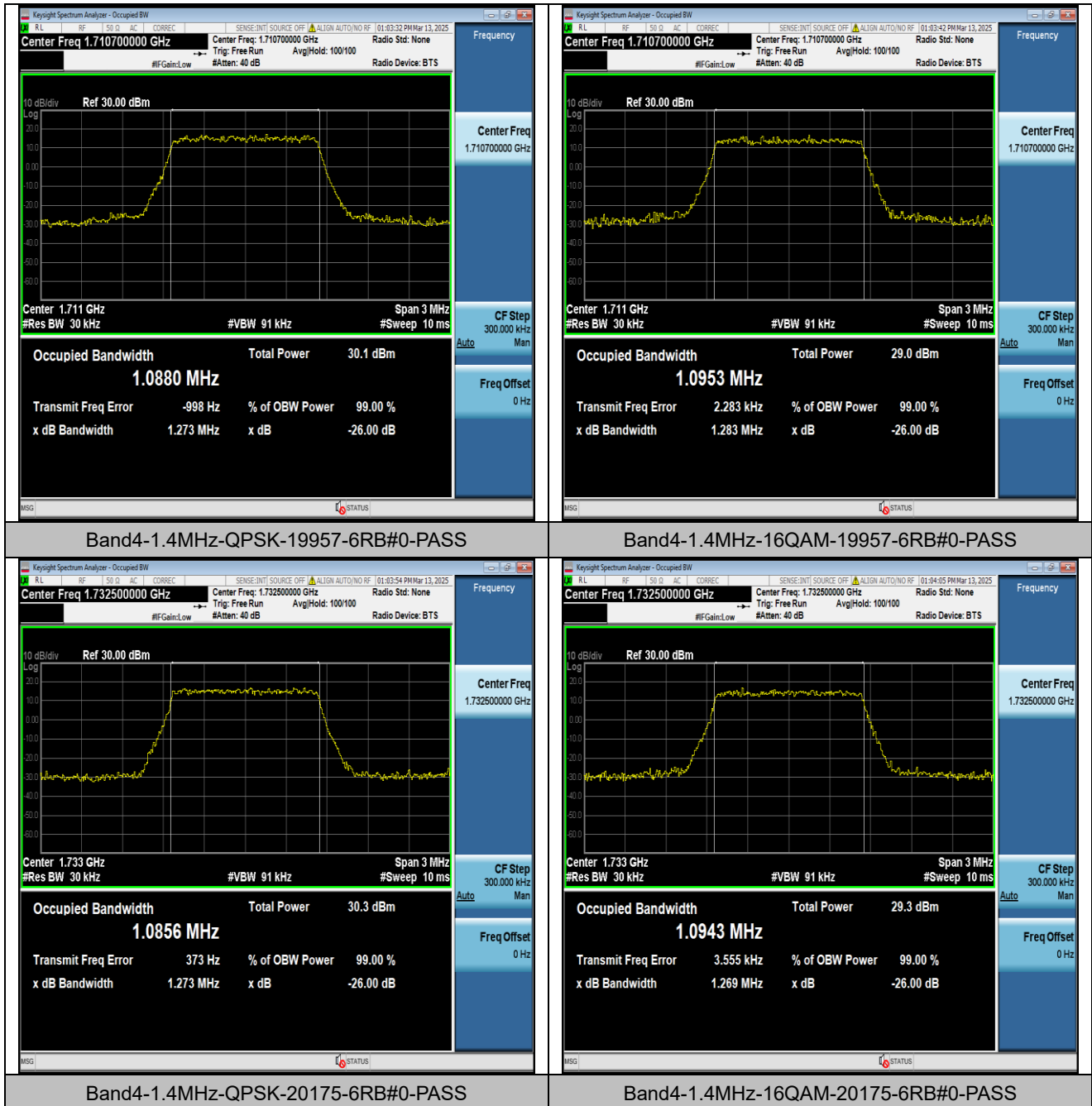


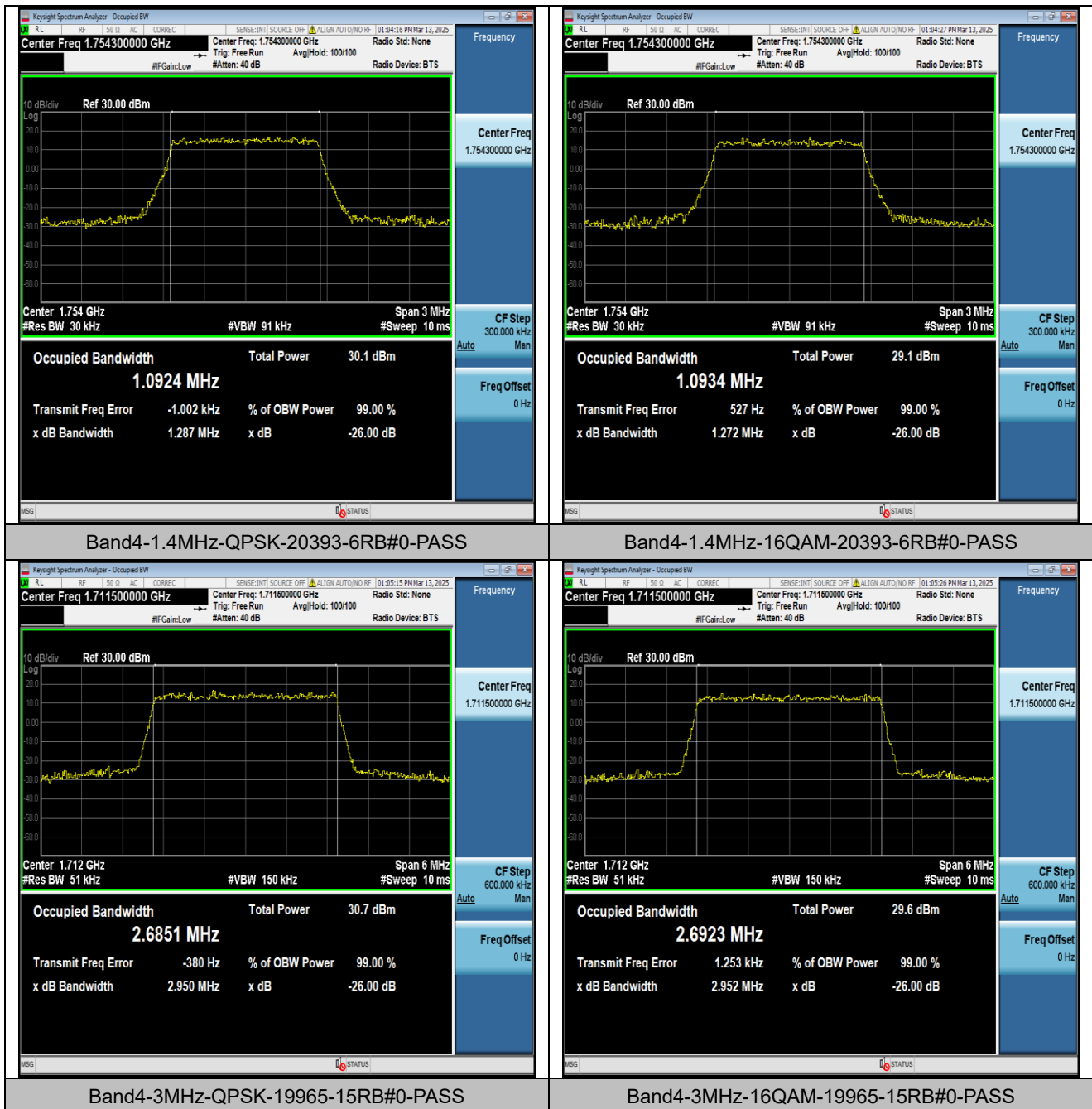
26dB Bandwidth and Occupied Bandwidth

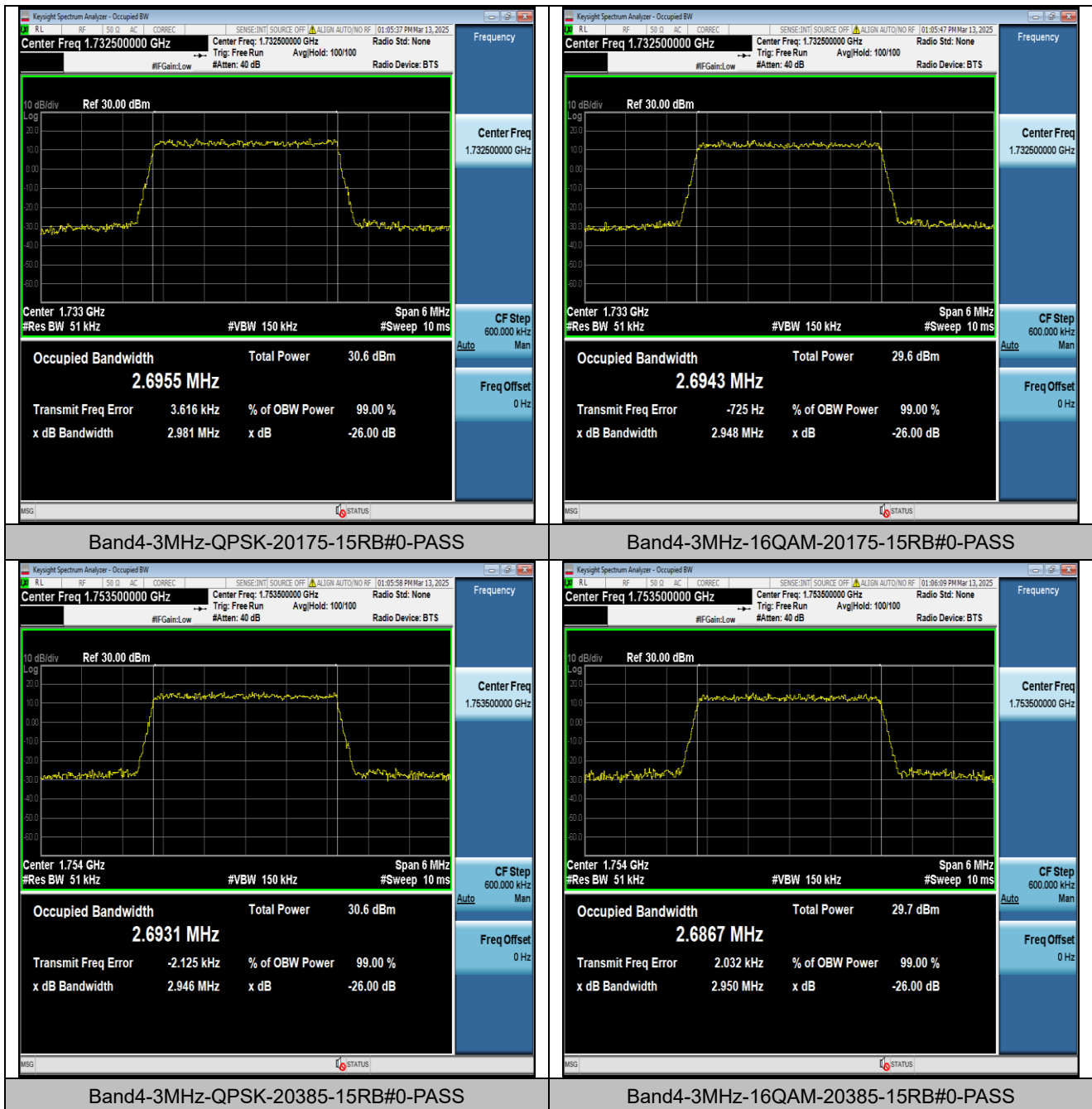
Test Result

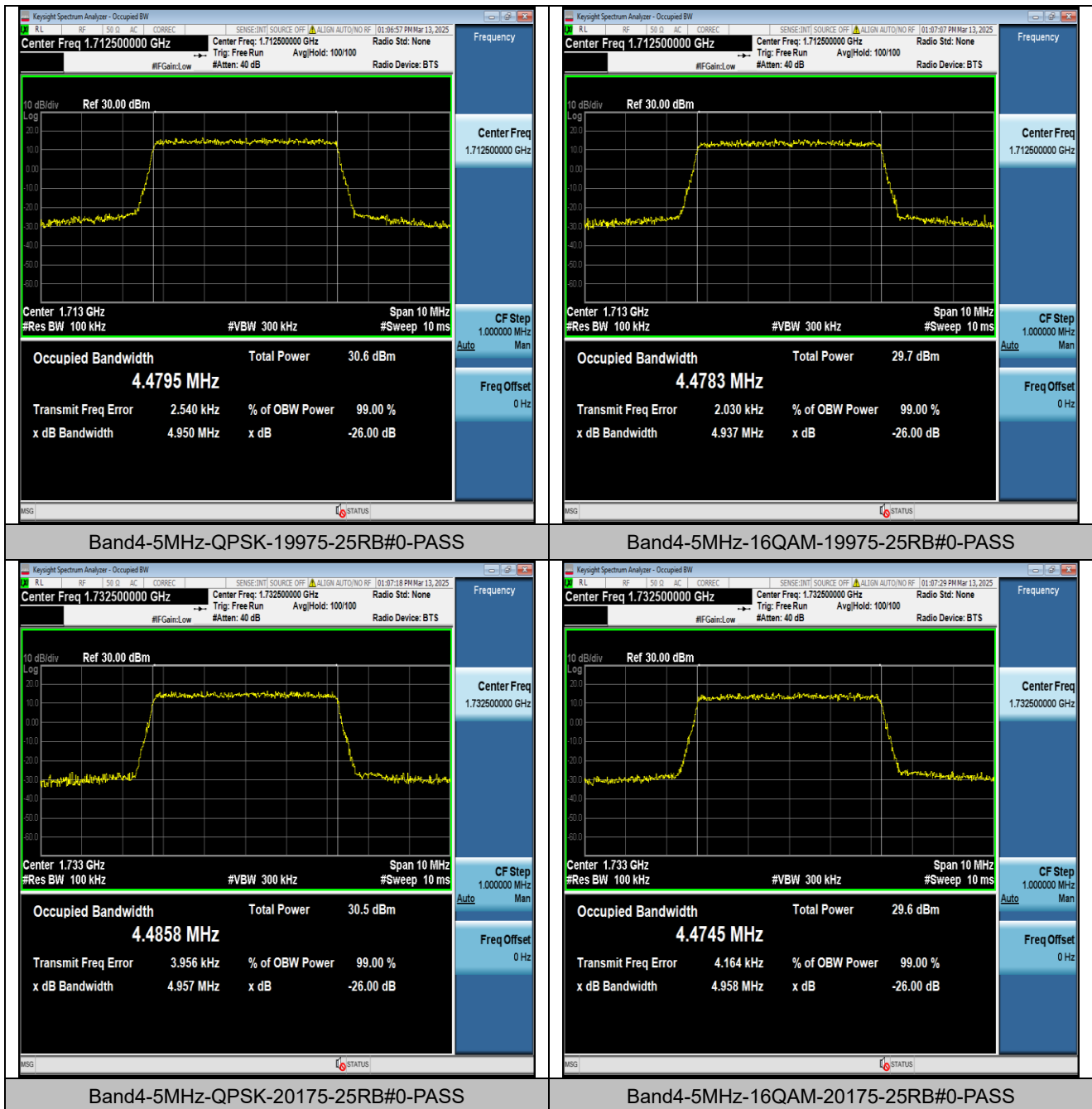
Band	Bandwidth	Modulation	Channel	RB Configuration	OBW (MHz)	26dB EBW (MHz)	Verdict
Band4	1.4MHz	QPSK	19957	6RB#0	1.0880	1.273	PASS
Band4	1.4MHz	16QAM	19957	6RB#0	1.0953	1.283	PASS
Band4	1.4MHz	QPSK	20175	6RB#0	1.0856	1.273	PASS
Band4	1.4MHz	16QAM	20175	6RB#0	1.0943	1.269	PASS
Band4	1.4MHz	QPSK	20393	6RB#0	1.0924	1.287	PASS
Band4	1.4MHz	16QAM	20393	6RB#0	1.0934	1.272	PASS
Band4	3MHz	QPSK	19965	15RB#0	2.6851	2.950	PASS
Band4	3MHz	16QAM	19965	15RB#0	2.6923	2.952	PASS
Band4	3MHz	QPSK	20175	15RB#0	2.6955	2.981	PASS
Band4	3MHz	16QAM	20175	15RB#0	2.6943	2.948	PASS
Band4	3MHz	QPSK	20385	15RB#0	2.6931	2.946	PASS
Band4	3MHz	16QAM	20385	15RB#0	2.6867	2.950	PASS
Band4	5MHz	QPSK	19975	25RB#0	4.4795	4.950	PASS
Band4	5MHz	16QAM	19975	25RB#0	4.4783	4.937	PASS
Band4	5MHz	QPSK	20175	25RB#0	4.4858	4.957	PASS
Band4	5MHz	16QAM	20175	25RB#0	4.4745	4.958	PASS
Band4	5MHz	QPSK	20375	25RB#0	4.4821	4.941	PASS
Band4	5MHz	16QAM	20375	25RB#0	4.4798	4.985	PASS
Band4	10MHz	QPSK	20000	50RB#0	8.9526	9.786	PASS
Band4	10MHz	16QAM	20000	50RB#0	8.9403	9.746	PASS
Band4	10MHz	QPSK	20175	50RB#0	8.9452	9.813	PASS
Band4	10MHz	16QAM	20175	50RB#0	8.9424	9.779	PASS
Band4	10MHz	QPSK	20350	50RB#0	8.9875	9.769	PASS
Band4	10MHz	16QAM	20350	50RB#0	8.9277	9.847	PASS
Band4	15MHz	QPSK	20025	75RB#0	13.465	14.71	PASS
Band4	15MHz	16QAM	20025	75RB#0	13.427	14.64	PASS
Band4	15MHz	QPSK	20175	75RB#0	13.416	14.52	PASS
Band4	15MHz	16QAM	20175	75RB#0	13.378	14.62	PASS
Band4	15MHz	QPSK	20325	75RB#0	13.413	14.57	PASS
Band4	15MHz	16QAM	20325	75RB#0	13.415	14.65	PASS
Band4	20MHz	QPSK	20050	100RB#0	17.884	19.37	PASS
Band4	20MHz	16QAM	20050	100RB#0	17.914	19.48	PASS
Band4	20MHz	QPSK	20175	100RB#0	17.906	19.54	PASS
Band4	20MHz	16QAM	20175	100RB#0	17.876	19.49	PASS
Band4	20MHz	QPSK	20300	100RB#0	17.954	19.43	PASS
Band4	20MHz	16QAM	20300	100RB#0	17.921	19.41	PASS

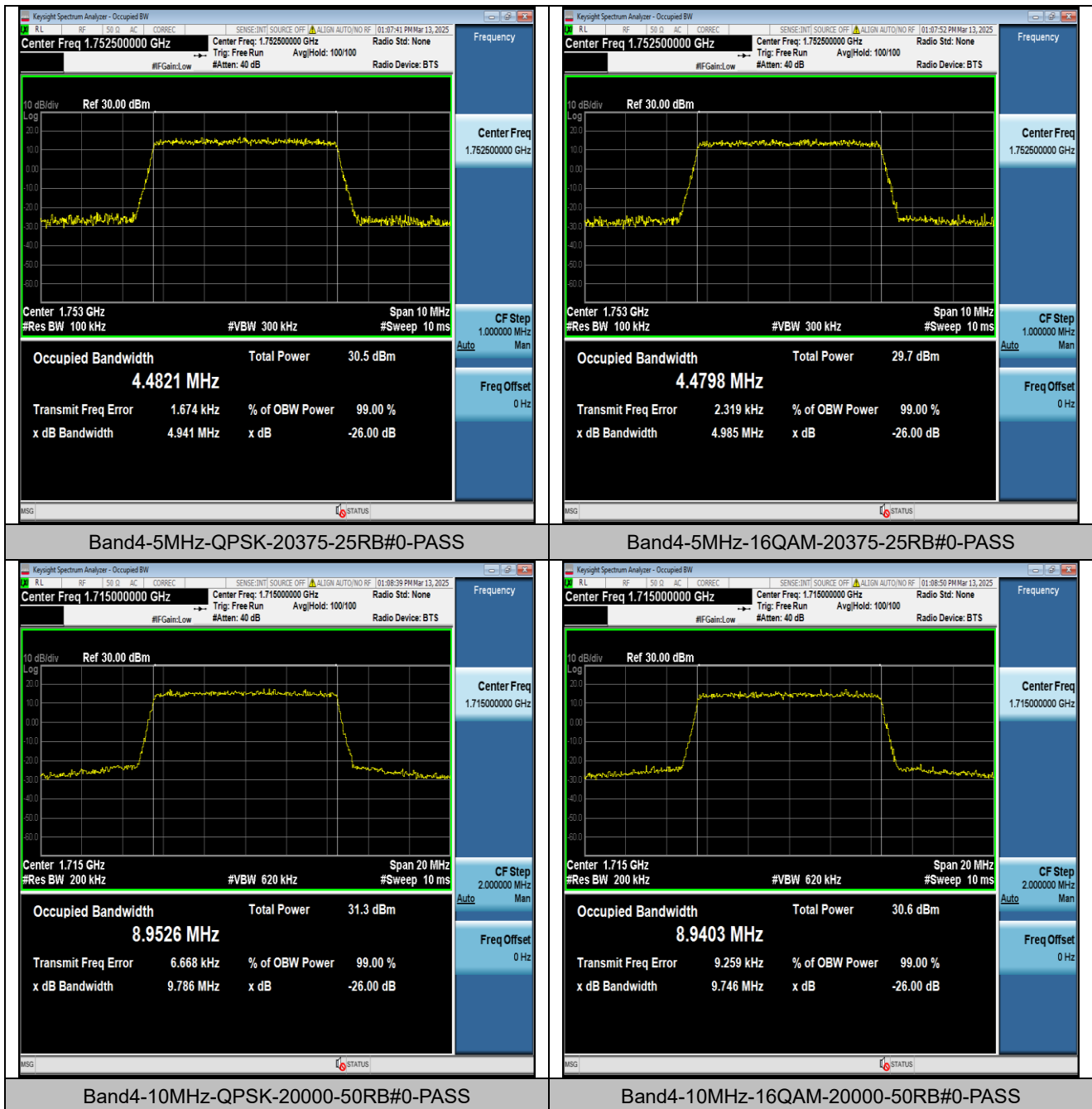
Test Graphs

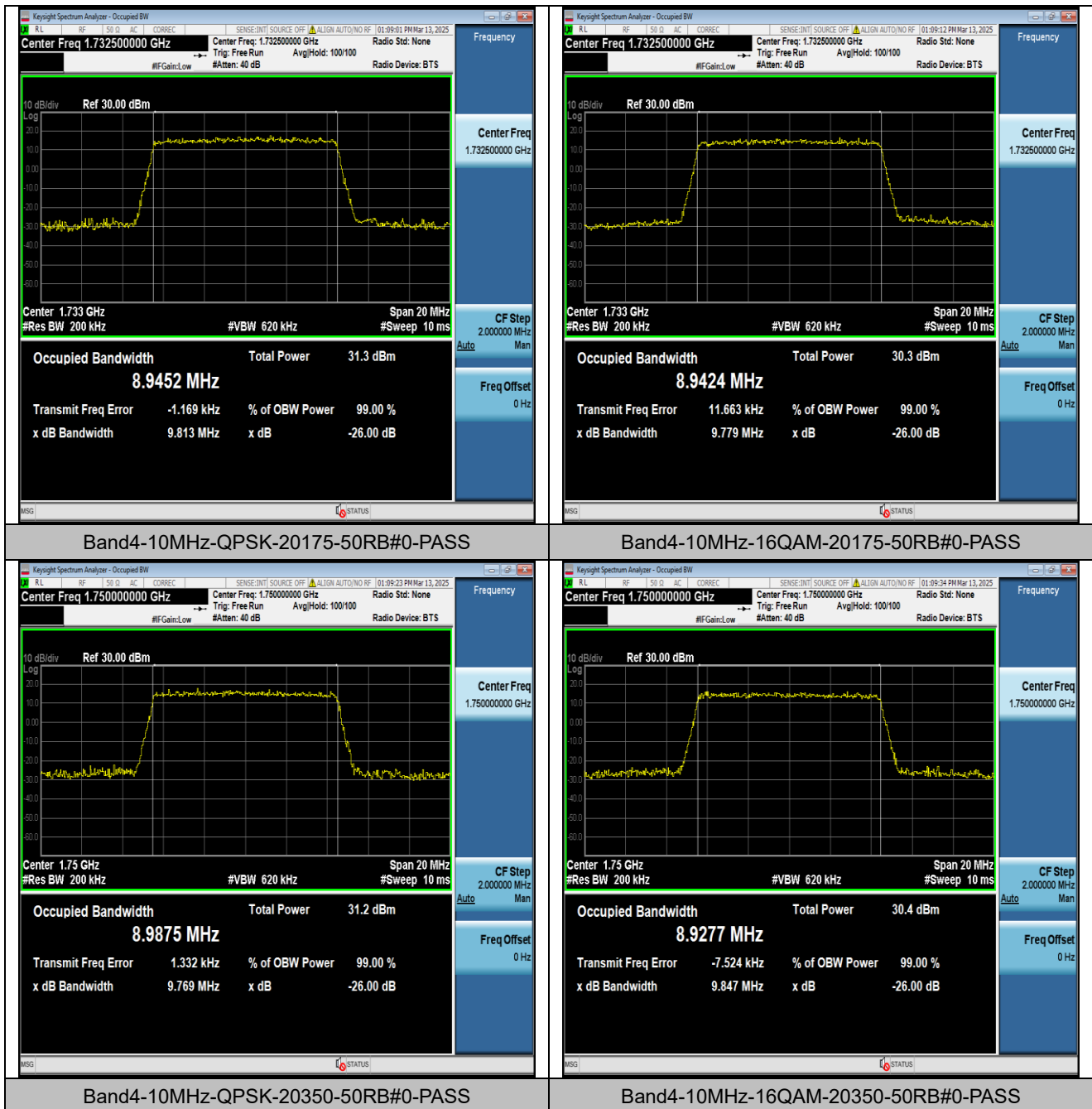


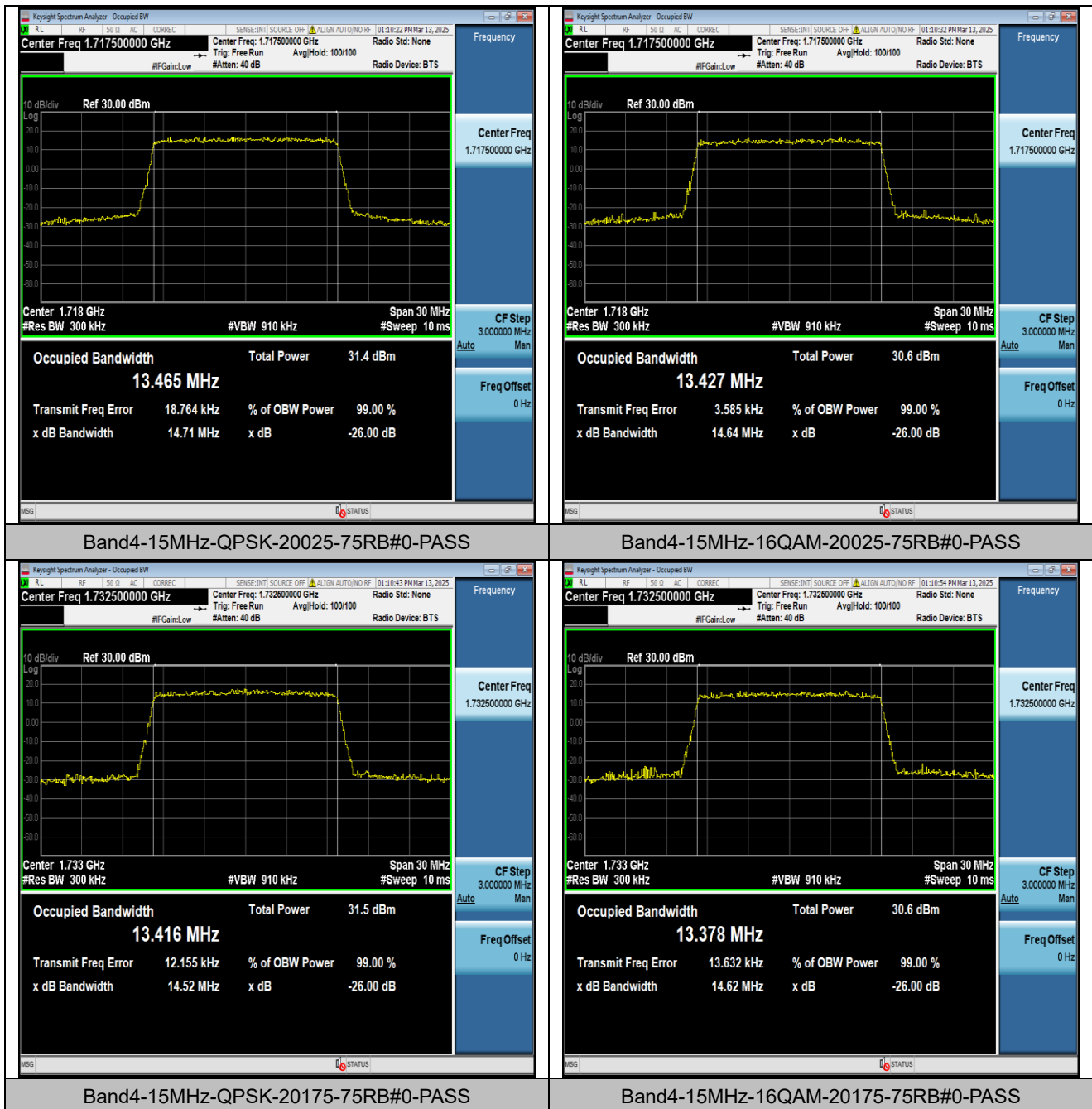


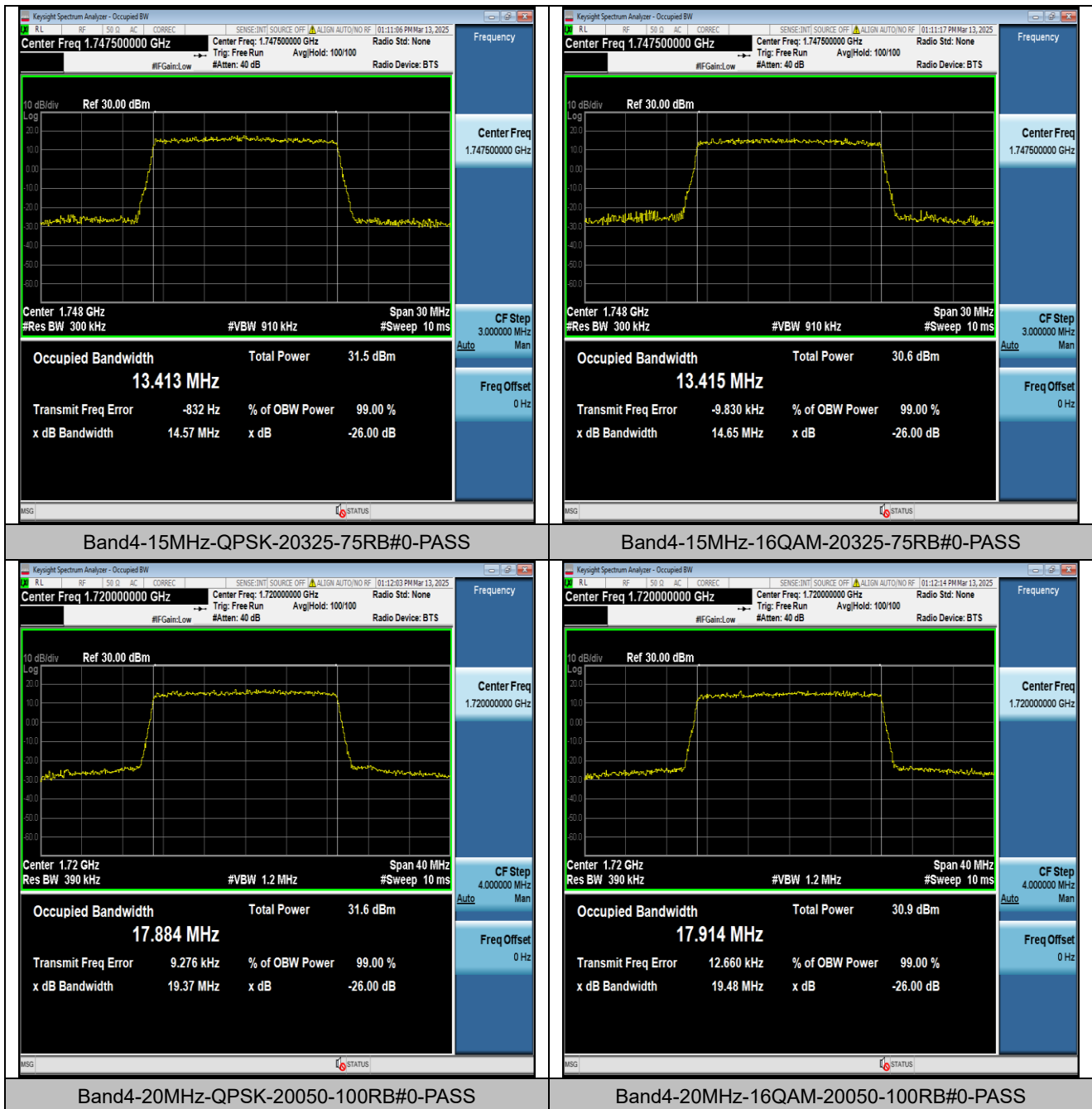


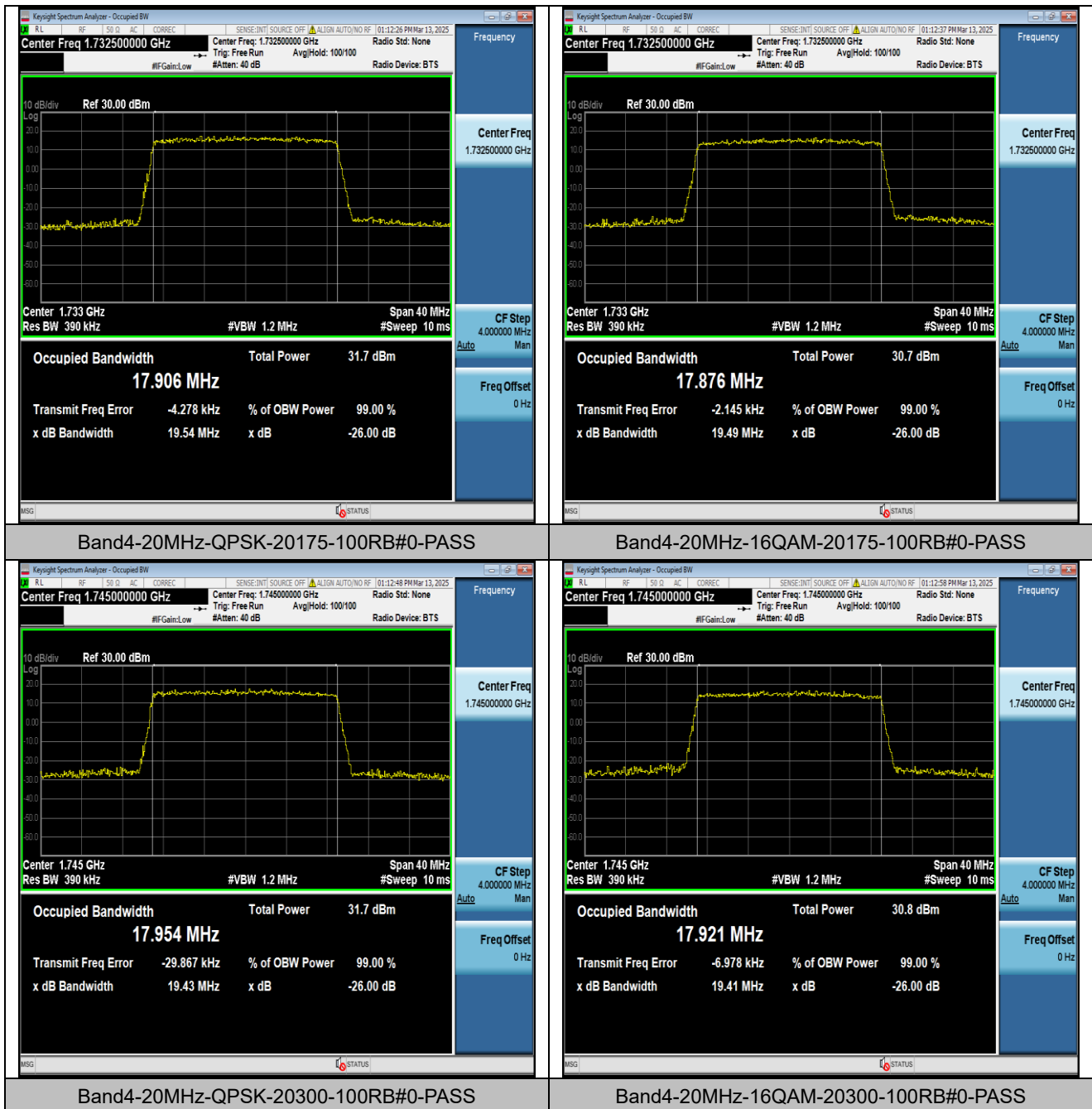






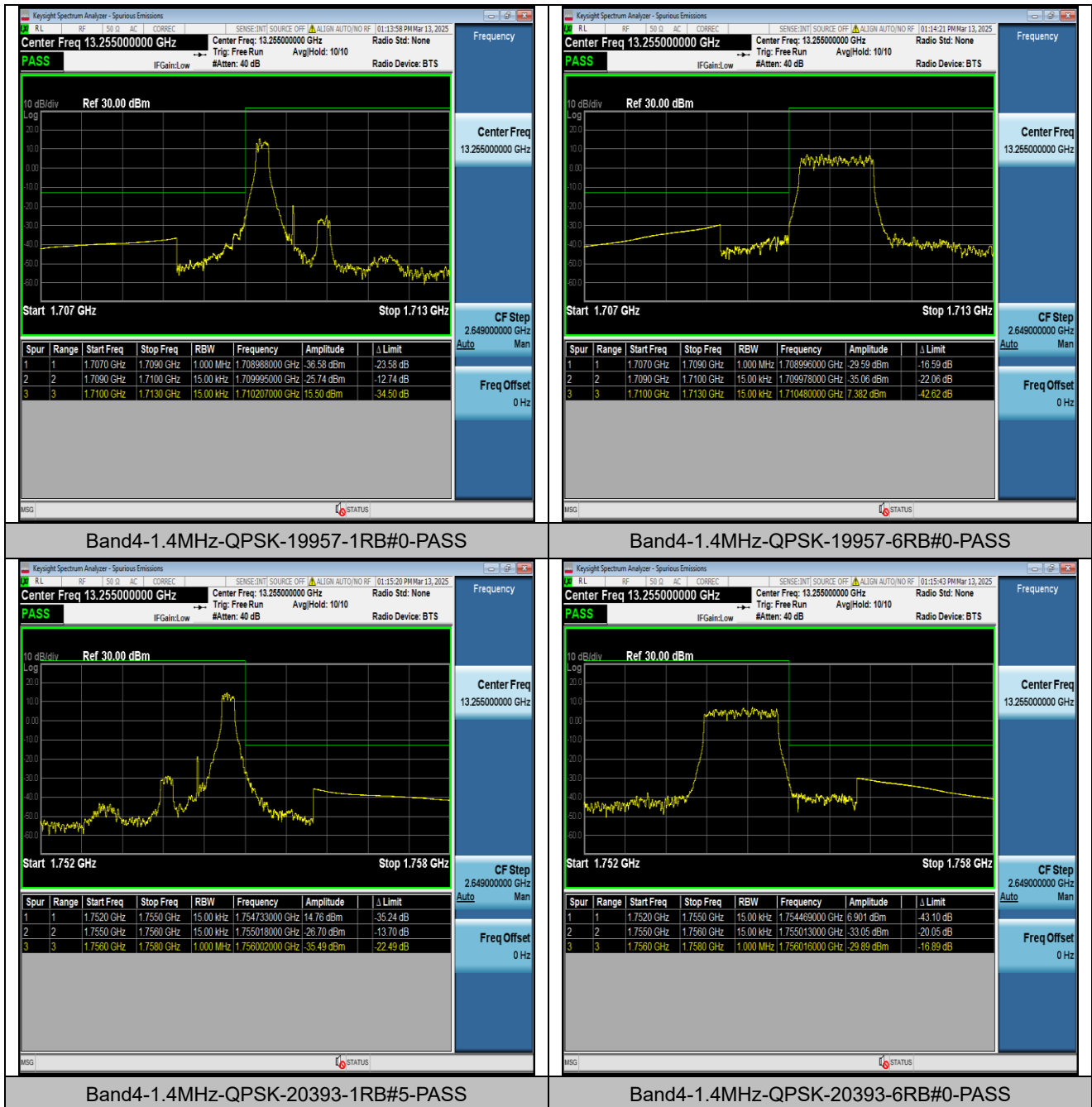


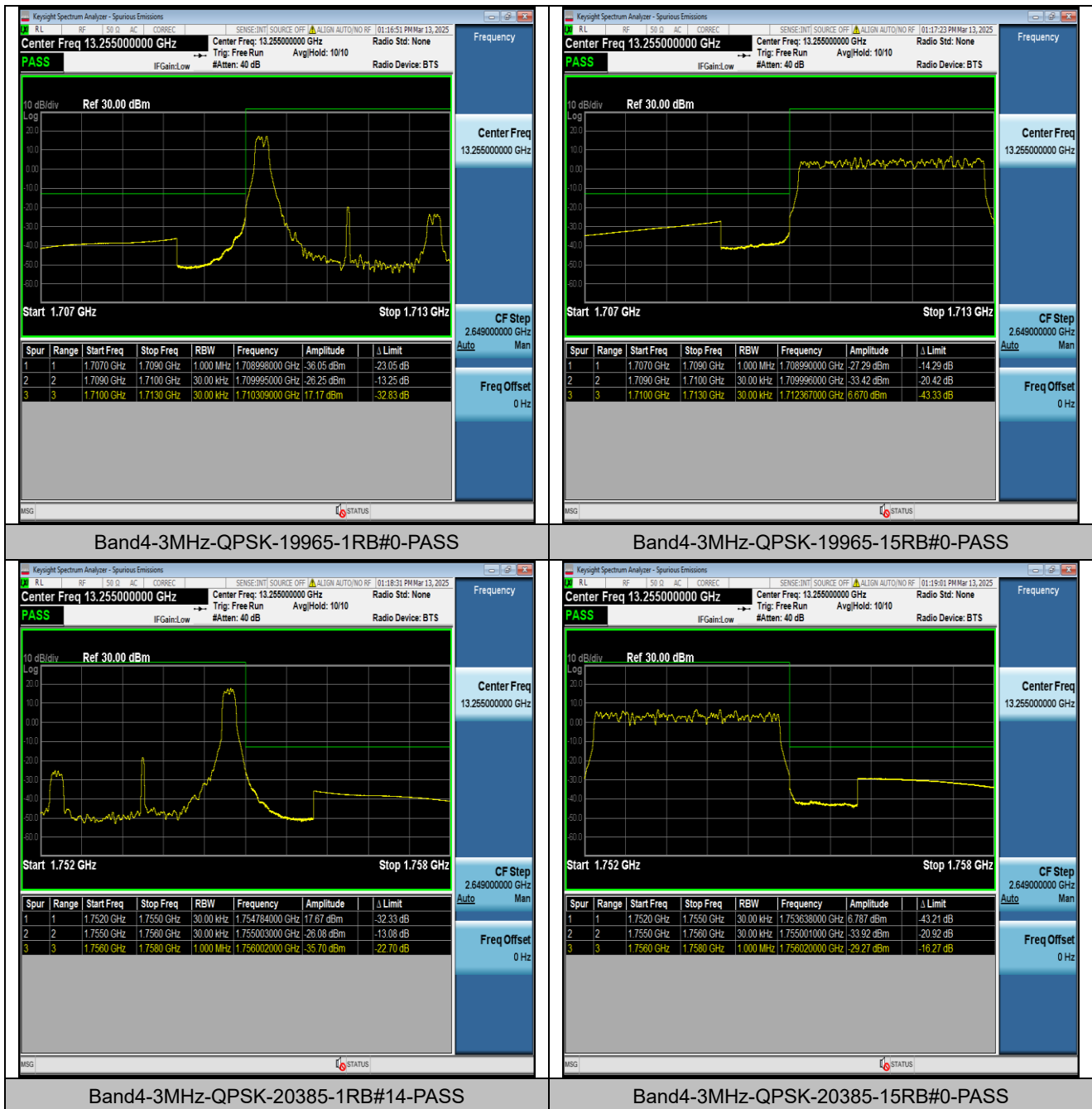


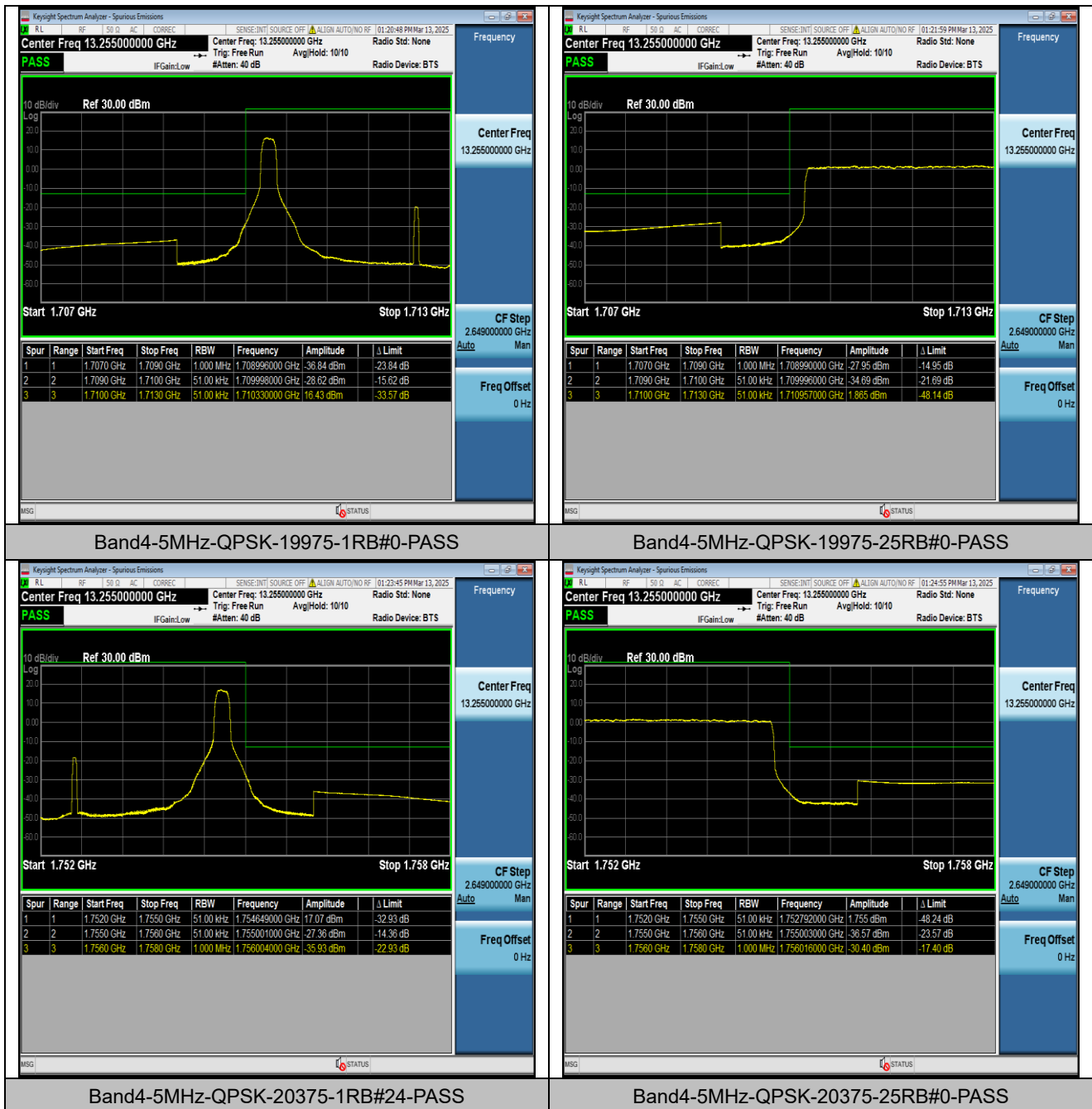


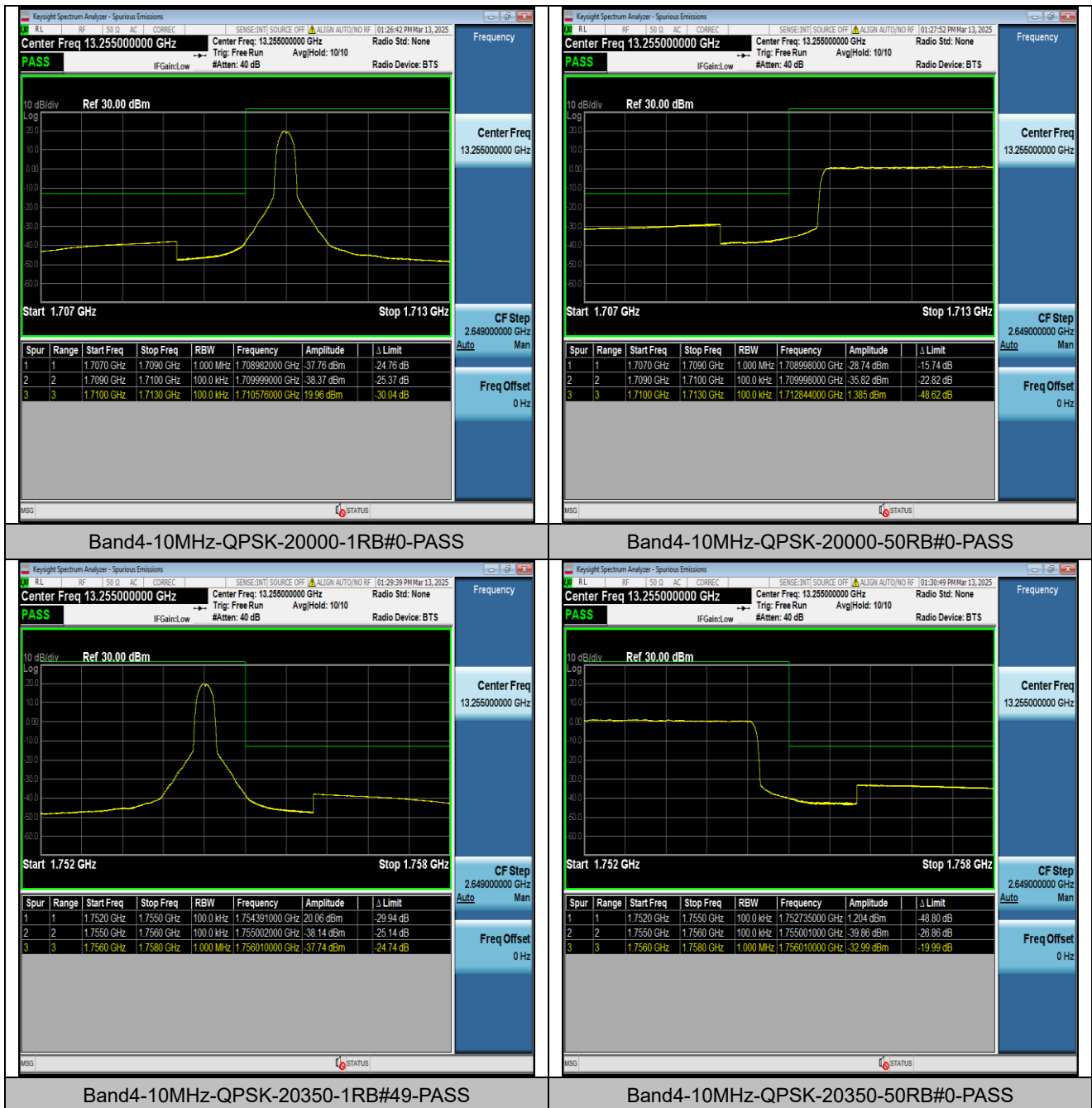
Band Edge

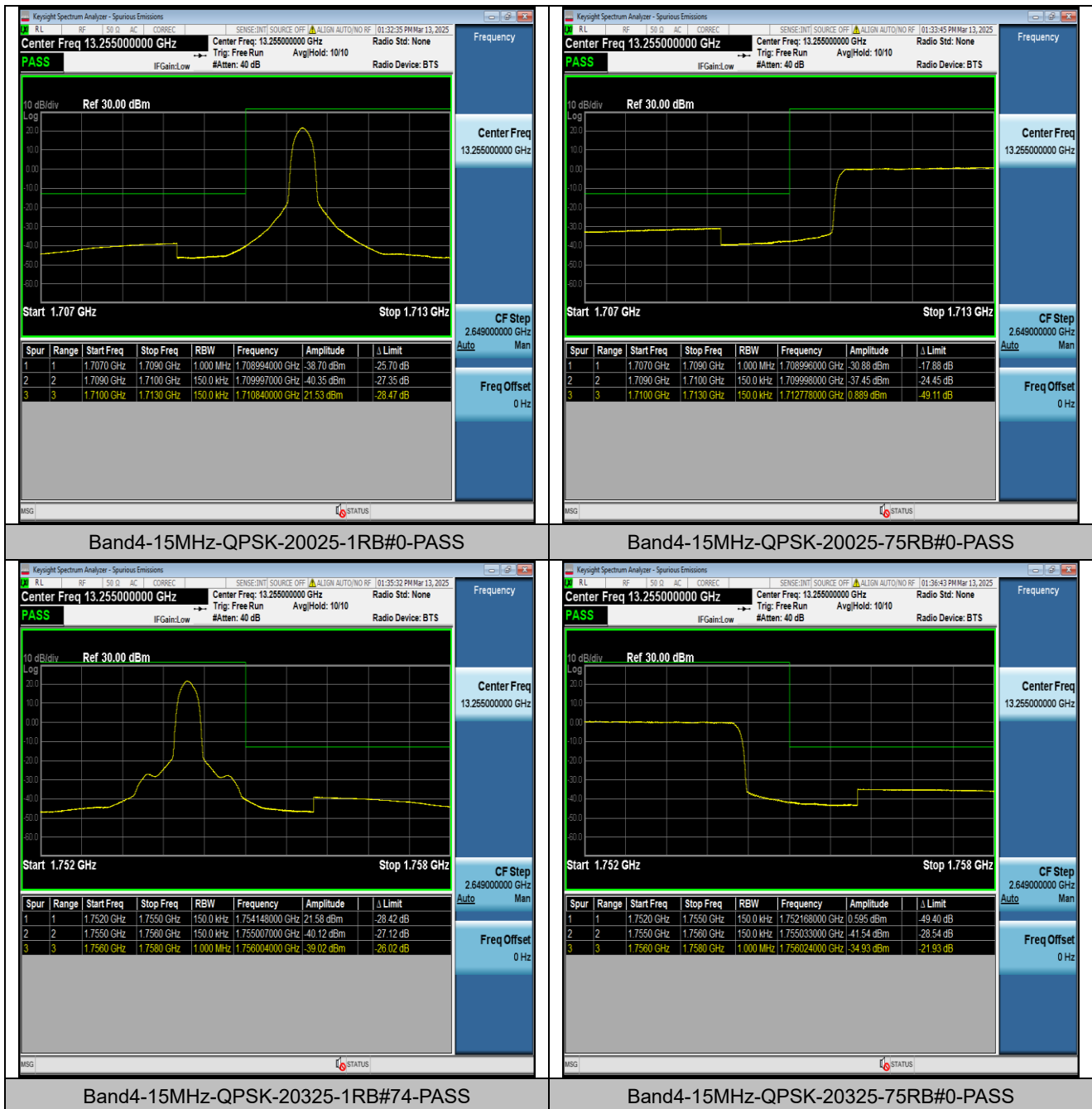
Test Graphs

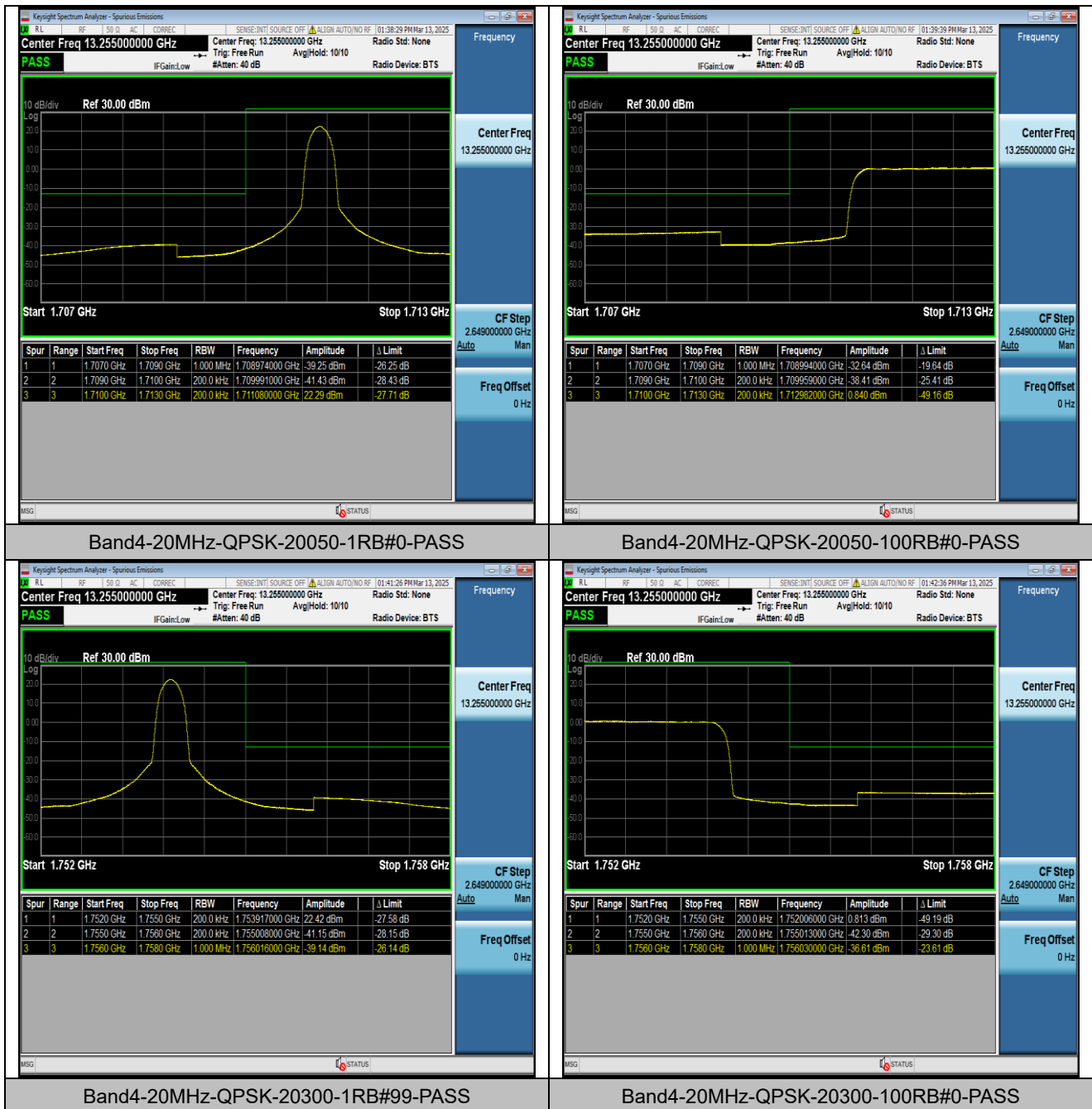






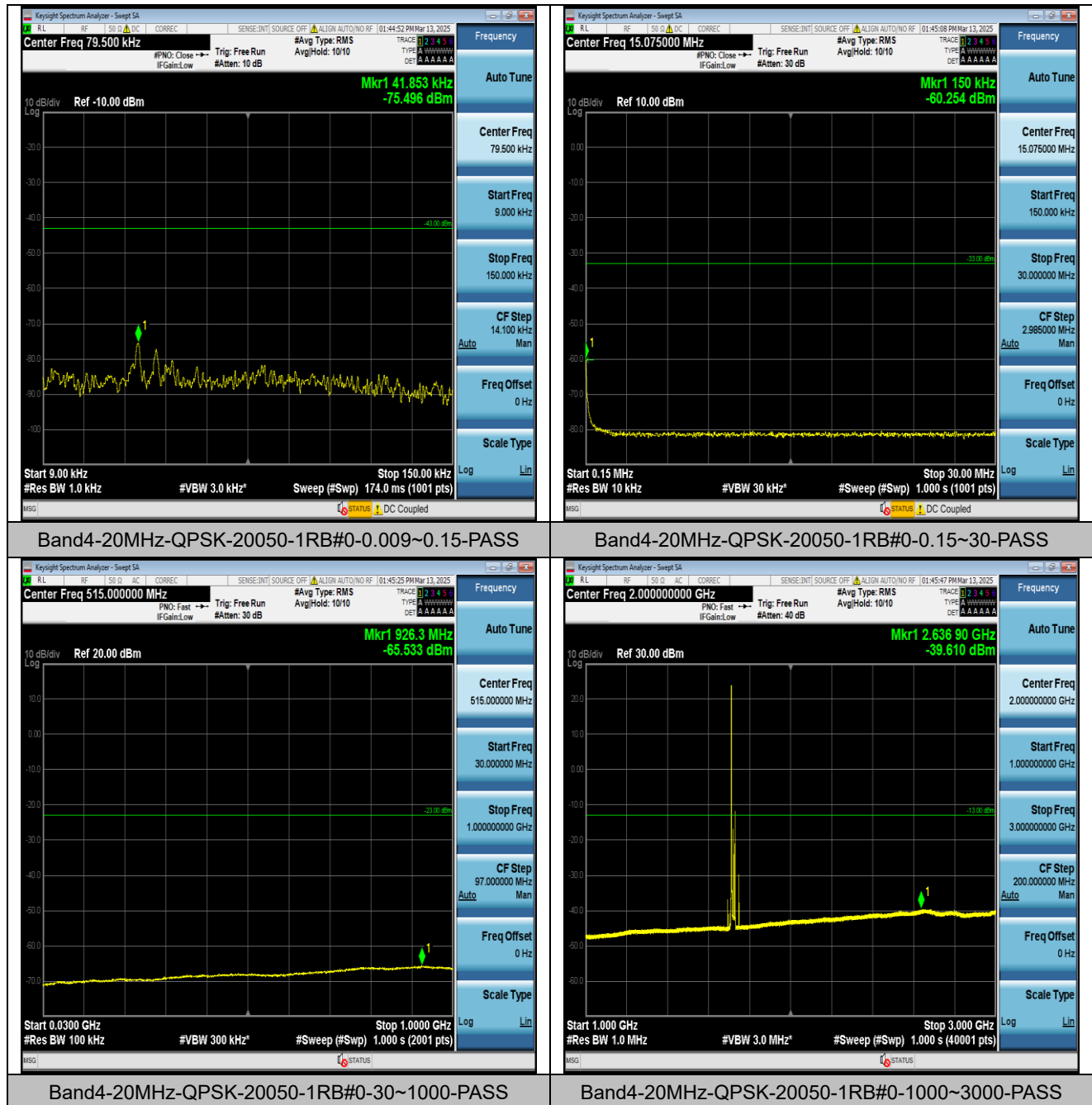


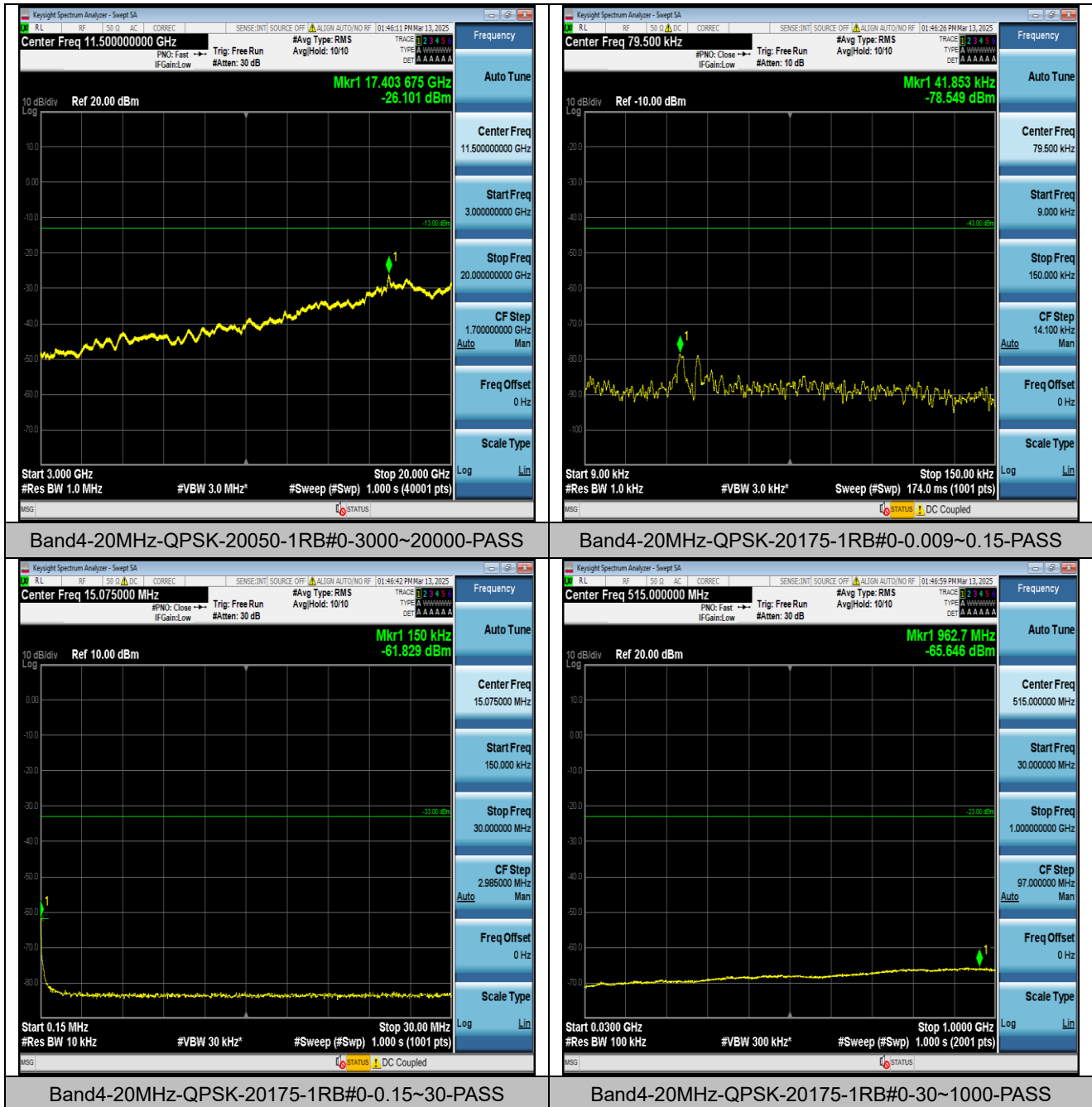


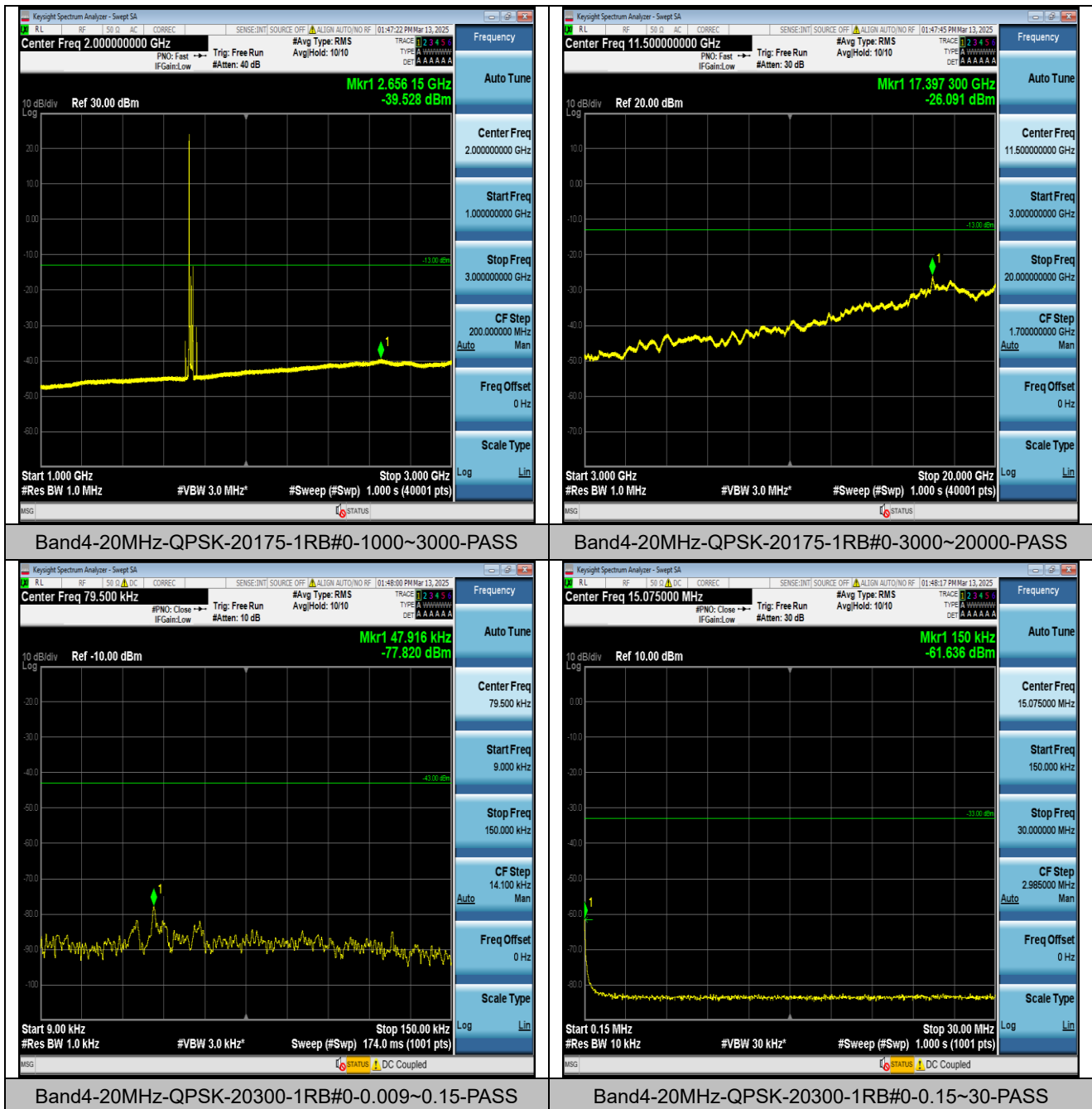


Conducted Spurious Emission

Test Graphs

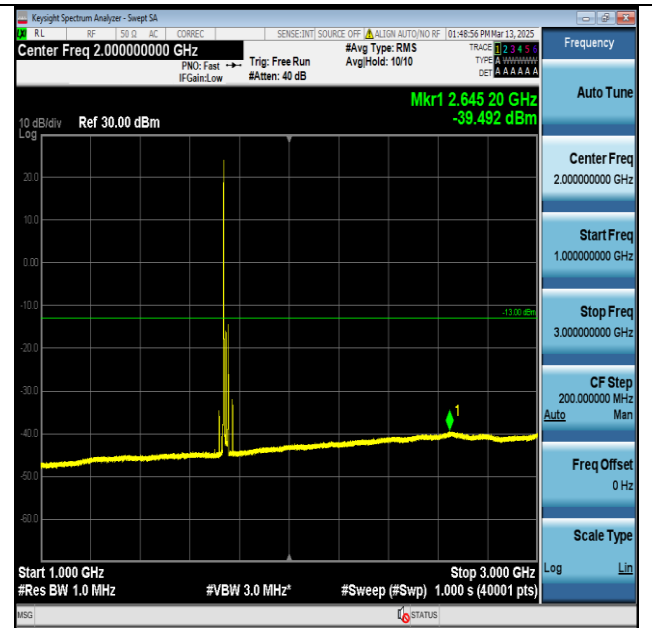








Band4-20MHz-QPSK-20300-1RB#0-30~1000-PASS



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	-2.80	-0.001616	PASS
Band4	20MHz	QPSK	20175	100RB#0	VL	NT	0.20	0.000115	PASS
Band4	20MHz	QPSK	20175	100RB#0	VH	NT	1.10	0.000635	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	0.10	0.000058	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	-20	1.00	0.000577	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	-10	1.90	0.001097	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	0	0.10	0.000058	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	10	1.30	0.000750	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	20	0.20	0.000115	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	30	1.70	0.000981	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	40	0.50	0.000289	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	50	2.20	0.001270	PASS

~The End~