

Appendix-B 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	23.19	25.19	30.00	PASS
Band4	1.4MHz	QPSK	19957	1RB#2	23.52	25.52	30.00	PASS
Band4	1.4MHz	QPSK	19957	1RB#5	23.34	25.34	30.00	PASS
Band4	1.4MHz	QPSK	19957	6RB#0	22.5	24.5	30.00	PASS
Band4	1.4MHz	16QAM	19957	1RB#0	22.49	24.49	30.00	PASS
Band4	1.4MHz	16QAM	19957	1RB#2	22.42	24.42	30.00	PASS
Band4	1.4MHz	16QAM	19957	1RB#5	22.39	24.39	30.00	PASS
Band4	1.4MHz	16QAM	19957	6RB#0	21.71	23.71	30.00	PASS
Band4	1.4MHz	QPSK	20175	1RB#0	23.56	25.56	30.00	PASS
Band4	1.4MHz	QPSK	20175	1RB#2	23.71	25.71	30.00	PASS
Band4	1.4MHz	QPSK	20175	1RB#5	23.47	25.47	30.00	PASS
Band4	1.4MHz	QPSK	20175	6RB#0	22.84	24.84	30.00	PASS
Band4	1.4MHz	16QAM	20175	1RB#0	22.51	24.51	30.00	PASS
Band4	1.4MHz	16QAM	20175	1RB#2	22.84	24.84	30.00	PASS
Band4	1.4MHz	16QAM	20175	1RB#5	22.41	24.41	30.00	PASS
Band4	1.4MHz	16QAM	20175	6RB#0	21.83	23.83	30.00	PASS
Band4	1.4MHz	QPSK	20393	1RB#0	23.6	25.6	30.00	PASS
Band4	1.4MHz	QPSK	20393	1RB#2	23.8	25.8	30.00	PASS
Band4	1.4MHz	QPSK	20393	1RB#5	23.66	25.66	30.00	PASS
Band4	1.4MHz	QPSK	20393	6RB#0	22.88	24.88	30.00	PASS
Band4	1.4MHz	16QAM	20393	1RB#0	22.52	24.52	30.00	PASS
Band4	1.4MHz	16QAM	20393	1RB#2	22.84	24.84	30.00	PASS
Band4	1.4MHz	16QAM	20393	1RB#5	22.76	24.76	30.00	PASS
Band4	1.4MHz	16QAM	20393	6RB#0	21.78	23.78	30.00	PASS
Band4	3MHz	QPSK	19965	1RB#0	23.24	25.24	30.00	PASS
Band4	3MHz	QPSK	19965	1RB#8	23.51	25.51	30.00	PASS
Band4	3MHz	QPSK	19965	1RB#14	23.58	25.58	30.00	PASS
Band4	3MHz	QPSK	19965	15RB#0	22.66	24.66	30.00	PASS
Band4	3MHz	16QAM	19965	1RB#0	22.36	24.36	30.00	PASS
Band4	3MHz	16QAM	19965	1RB#8	22.42	24.42	30.00	PASS
Band4	3MHz	16QAM	19965	1RB#14	22.69	24.69	30.00	PASS
Band4	3MHz	16QAM	19965	15RB#0	21.74	23.74	30.00	PASS
Band4	3MHz	QPSK	20175	1RB#0	23.77	25.77	30.00	PASS
Band4	3MHz	QPSK	20175	1RB#8	23.48	25.48	30.00	PASS
Band4	3MHz	QPSK	20175	1RB#14	23.65	25.65	30.00	PASS

Band4	3MHz	QPSK	20175	15RB#0	22.64	24.64	30.00	PASS
Band4	3MHz	16QAM	20175	1RB#0	22.63	24.63	30.00	PASS
Band4	3MHz	16QAM	20175	1RB#8	22.33	24.33	30.00	PASS
Band4	3MHz	16QAM	20175	1RB#14	22.53	24.53	30.00	PASS
Band4	3MHz	16QAM	20175	15RB#0	21.7	23.7	30.00	PASS
Band4	3MHz	QPSK	20385	1RB#0	23.6	25.6	30.00	PASS
Band4	3MHz	QPSK	20385	1RB#8	23.43	25.43	30.00	PASS
Band4	3MHz	QPSK	20385	1RB#14	23.55	25.55	30.00	PASS
Band4	3MHz	QPSK	20385	15RB#0	22.72	24.72	30.00	PASS
Band4	3MHz	16QAM	20385	1RB#0	22.61	24.61	30.00	PASS
Band4	3MHz	16QAM	20385	1RB#8	22.53	24.53	30.00	PASS
Band4	3MHz	16QAM	20385	1RB#14	22.53	24.53	30.00	PASS
Band4	3MHz	16QAM	20385	15RB#0	21.62	23.62	30.00	PASS
Band4	5MHz	QPSK	19975	1RB#0	23.45	25.45	30.00	PASS
Band4	5MHz	QPSK	19975	1RB#12	23.77	25.77	30.00	PASS
Band4	5MHz	QPSK	19975	1RB#24	23.69	25.69	30.00	PASS
Band4	5MHz	QPSK	19975	25RB#0	22.79	24.79	30.00	PASS
Band4	5MHz	16QAM	19975	1RB#0	22.3	24.3	30.00	PASS
Band4	5MHz	16QAM	19975	1RB#12	22.79	24.79	30.00	PASS
Band4	5MHz	16QAM	19975	1RB#24	22.63	24.63	30.00	PASS
Band4	5MHz	16QAM	19975	25RB#0	21.86	23.86	30.00	PASS
Band4	5MHz	QPSK	20175	1RB#0	23.64	25.64	30.00	PASS
Band4	5MHz	QPSK	20175	1RB#12	23.51	25.51	30.00	PASS
Band4	5MHz	QPSK	20175	1RB#24	23.64	25.64	30.00	PASS
Band4	5MHz	QPSK	20175	25RB#0	22.75	24.75	30.00	PASS
Band4	5MHz	16QAM	20175	1RB#0	22.47	24.47	30.00	PASS
Band4	5MHz	16QAM	20175	1RB#12	22.46	24.46	30.00	PASS
Band4	5MHz	16QAM	20175	1RB#24	22.52	24.52	30.00	PASS
Band4	5MHz	16QAM	20175	25RB#0	21.73	23.73	30.00	PASS
Band4	5MHz	QPSK	20375	1RB#0	23.69	25.69	30.00	PASS
Band4	5MHz	QPSK	20375	1RB#12	23.62	25.62	30.00	PASS
Band4	5MHz	QPSK	20375	1RB#24	23.59	25.59	30.00	PASS
Band4	5MHz	QPSK	20375	25RB#0	22.72	24.72	30.00	PASS
Band4	5MHz	16QAM	20375	1RB#0	22.29	24.29	30.00	PASS
Band4	5MHz	16QAM	20375	1RB#12	22.54	24.54	30.00	PASS
Band4	5MHz	16QAM	20375	1RB#24	22.81	24.81	30.00	PASS
Band4	5MHz	16QAM	20375	25RB#0	21.61	23.61	30.00	PASS
Band4	10MHz	QPSK	20000	1RB#0	23.46	25.46	30.00	PASS
Band4	10MHz	QPSK	20000	1RB#24	23.94	25.94	30.00	PASS
Band4	10MHz	QPSK	20000	1RB#49	23.66	25.66	30.00	PASS
Band4	10MHz	QPSK	20000	50RB#0	22.87	24.87	30.00	PASS
Band4	10MHz	16QAM	20000	1RB#0	22.4	24.4	30.00	PASS
Band4	10MHz	16QAM	20000	1RB#24	22.64	24.64	30.00	PASS
Band4	10MHz	16QAM	20000	1RB#49	22.54	24.54	30.00	PASS

Band4	10MHz	16QAM	20000	50RB#0	21.77	23.77	30.00	PASS
Band4	10MHz	QPSK	20175	1RB#0	23.69	25.69	30.00	PASS
Band4	10MHz	QPSK	20175	1RB#24	23.72	25.72	30.00	PASS
Band4	10MHz	QPSK	20175	1RB#49	23.33	25.33	30.00	PASS
Band4	10MHz	QPSK	20175	50RB#0	22.6	24.6	30.00	PASS
Band4	10MHz	16QAM	20175	1RB#0	22.52	24.52	30.00	PASS
Band4	10MHz	16QAM	20175	1RB#24	22.53	24.53	30.00	PASS
Band4	10MHz	16QAM	20175	1RB#49	22.51	24.51	30.00	PASS
Band4	10MHz	16QAM	20175	50RB#0	21.68	23.68	30.00	PASS
Band4	10MHz	QPSK	20350	1RB#0	23.26	25.26	30.00	PASS
Band4	10MHz	QPSK	20350	1RB#24	23.75	25.75	30.00	PASS
Band4	10MHz	QPSK	20350	1RB#49	23.71	25.71	30.00	PASS
Band4	10MHz	QPSK	20350	50RB#0	22.66	24.66	30.00	PASS
Band4	10MHz	16QAM	20350	1RB#0	22.25	24.25	30.00	PASS
Band4	10MHz	16QAM	20350	1RB#24	22.57	24.57	30.00	PASS
Band4	10MHz	16QAM	20350	1RB#49	22.83	24.83	30.00	PASS
Band4	10MHz	16QAM	20350	50RB#0	21.65	23.65	30.00	PASS
Band4	15MHz	QPSK	20025	1RB#0	23.6	25.6	30.00	PASS
Band4	15MHz	QPSK	20025	1RB#38	23.98	25.98	30.00	PASS
Band4	15MHz	QPSK	20025	1RB#74	23.83	25.83	30.00	PASS
Band4	15MHz	QPSK	20025	75RB#0	22.7	24.7	30.00	PASS
Band4	15MHz	16QAM	20025	1RB#0	22.77	24.77	30.00	PASS
Band4	15MHz	16QAM	20025	1RB#38	22.76	24.76	30.00	PASS
Band4	15MHz	16QAM	20025	1RB#74	22.68	24.68	30.00	PASS
Band4	15MHz	16QAM	20025	75RB#0	21.87	23.87	30.00	PASS
Band4	15MHz	QPSK	20175	1RB#0	23.59	25.59	30.00	PASS
Band4	15MHz	QPSK	20175	1RB#38	23.25	25.25	30.00	PASS
Band4	15MHz	QPSK	20175	1RB#74	23.4	25.4	30.00	PASS
Band4	15MHz	QPSK	20175	75RB#0	22.66	24.66	30.00	PASS
Band4	15MHz	16QAM	20175	1RB#0	22.28	24.28	30.00	PASS
Band4	15MHz	16QAM	20175	1RB#38	22.46	24.46	30.00	PASS
Band4	15MHz	16QAM	20175	1RB#74	22.44	24.44	30.00	PASS
Band4	15MHz	16QAM	20175	75RB#0	21.72	23.72	30.00	PASS
Band4	15MHz	QPSK	20325	1RB#0	23.41	25.41	30.00	PASS
Band4	15MHz	QPSK	20325	1RB#38	23.48	25.48	30.00	PASS
Band4	15MHz	QPSK	20325	1RB#74	23.54	25.54	30.00	PASS
Band4	15MHz	QPSK	20325	75RB#0	22.53	24.53	30.00	PASS
Band4	15MHz	16QAM	20325	1RB#0	22.53	24.53	30.00	PASS
Band4	15MHz	16QAM	20325	1RB#38	22.51	24.51	30.00	PASS
Band4	15MHz	16QAM	20325	1RB#74	22.51	24.51	30.00	PASS
Band4	15MHz	16QAM	20325	75RB#0	21.52	23.52	30.00	PASS
Band4	20MHz	QPSK	20050	1RB#0	23.36	25.36	30.00	PASS
Band4	20MHz	QPSK	20050	1RB#49	23.79	25.79	30.00	PASS
Band4	20MHz	QPSK	20050	1RB#99	23.71	25.71	30.00	PASS

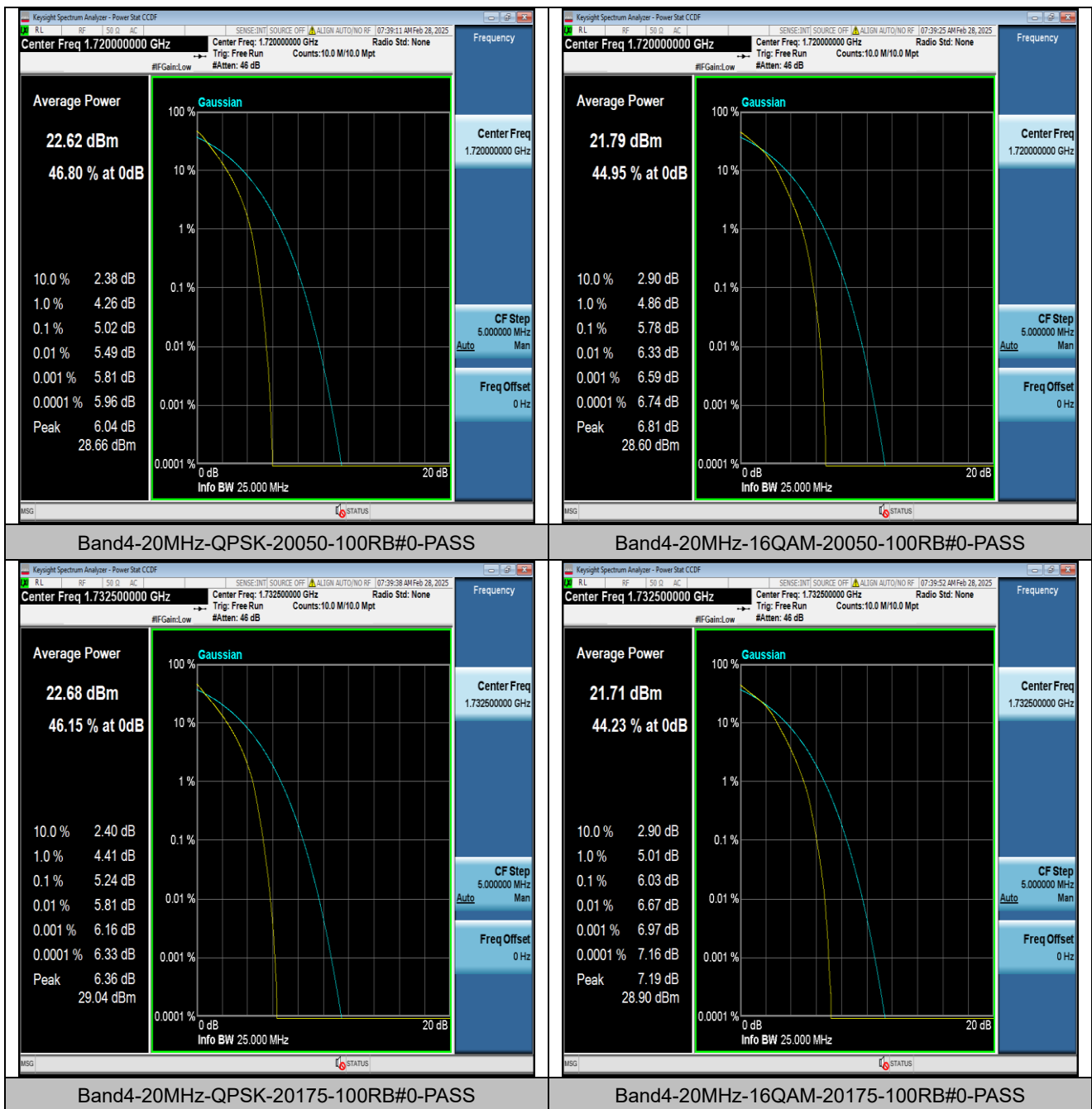
Band4	20MHz	QPSK	20050	100RB#0	22.78	24.78	30.00	PASS
Band4	20MHz	16QAM	20050	1RB#0	22.39	24.39	30.00	PASS
Band4	20MHz	16QAM	20050	1RB#49	22.74	24.74	30.00	PASS
Band4	20MHz	16QAM	20050	1RB#99	22.5	24.5	30.00	PASS
Band4	20MHz	16QAM	20050	100RB#0	21.74	23.74	30.00	PASS
Band4	20MHz	QPSK	20175	1RB#0	23.61	25.61	30.00	PASS
Band4	20MHz	QPSK	20175	1RB#49	23.58	25.58	30.00	PASS
Band4	20MHz	QPSK	20175	1RB#99	23.27	25.27	30.00	PASS
Band4	20MHz	QPSK	20175	100RB#0	22.59	24.59	30.00	PASS
Band4	20MHz	16QAM	20175	1RB#0	22.74	24.74	30.00	PASS
Band4	20MHz	16QAM	20175	1RB#49	22.67	24.67	30.00	PASS
Band4	20MHz	16QAM	20175	1RB#99	22.57	24.57	30.00	PASS
Band4	20MHz	16QAM	20175	100RB#0	21.73	23.73	30.00	PASS
Band4	20MHz	QPSK	20300	1RB#0	23.31	25.31	30.00	PASS
Band4	20MHz	QPSK	20300	1RB#49	23.61	25.61	30.00	PASS
Band4	20MHz	QPSK	20300	1RB#99	23.53	25.53	30.00	PASS
Band4	20MHz	QPSK	20300	100RB#0	22.63	24.63	30.00	PASS
Band4	20MHz	16QAM	20300	1RB#0	22.45	24.45	30.00	PASS
Band4	20MHz	16QAM	20300	1RB#49	22.38	24.38	30.00	PASS
Band4	20MHz	16QAM	20300	1RB#99	22.43	24.43	30.00	PASS
Band4	20MHz	16QAM	20300	100RB#0	21.57	23.57	30.00	PASS

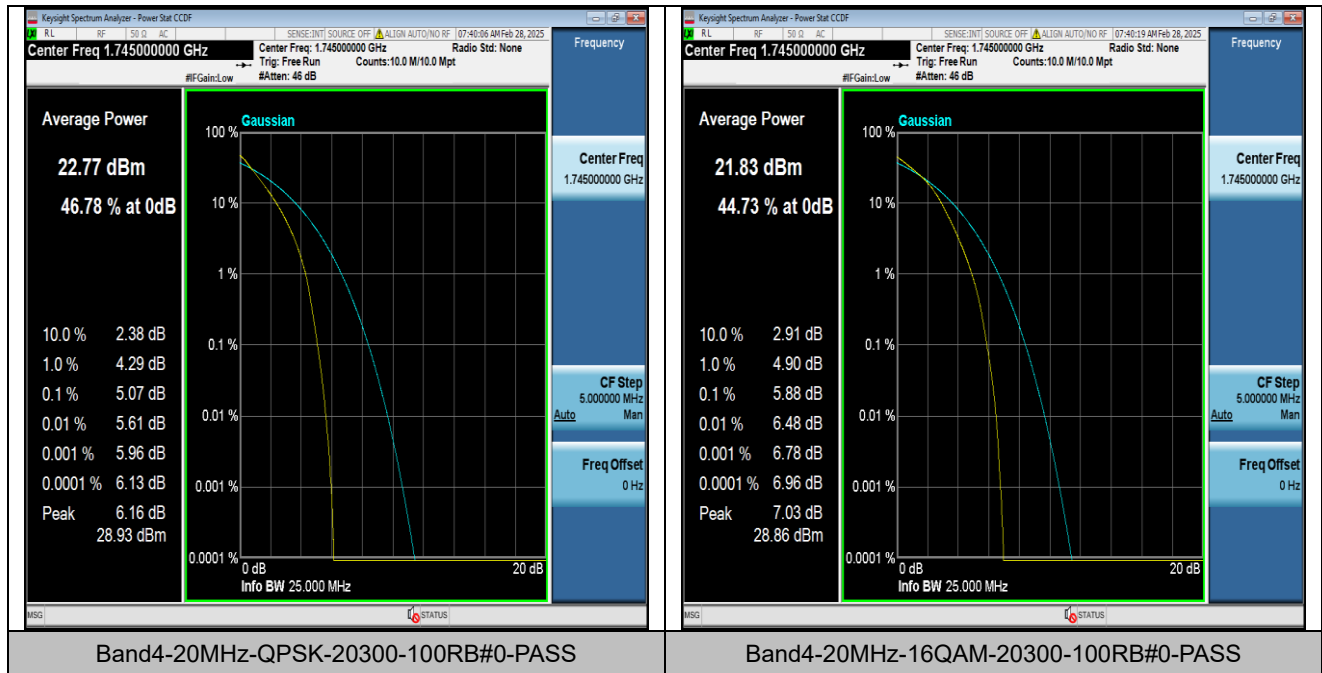
Peak-to-Average Ratio(CCDF)

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result (dB)	Limit (dB)	Verdict
Band4	20MHz	QPSK	20050	100RB#0	5.02	13	PASS
Band4	20MHz	16QAM	20050	100RB#0	5.78	13	PASS
Band4	20MHz	QPSK	20175	100RB#0	5.24	13	PASS
Band4	20MHz	16QAM	20175	100RB#0	6.03	13	PASS
Band4	20MHz	QPSK	20300	100RB#0	5.07	13	PASS
Band4	20MHz	16QAM	20300	100RB#0	5.88	13	PASS

Test Graphs



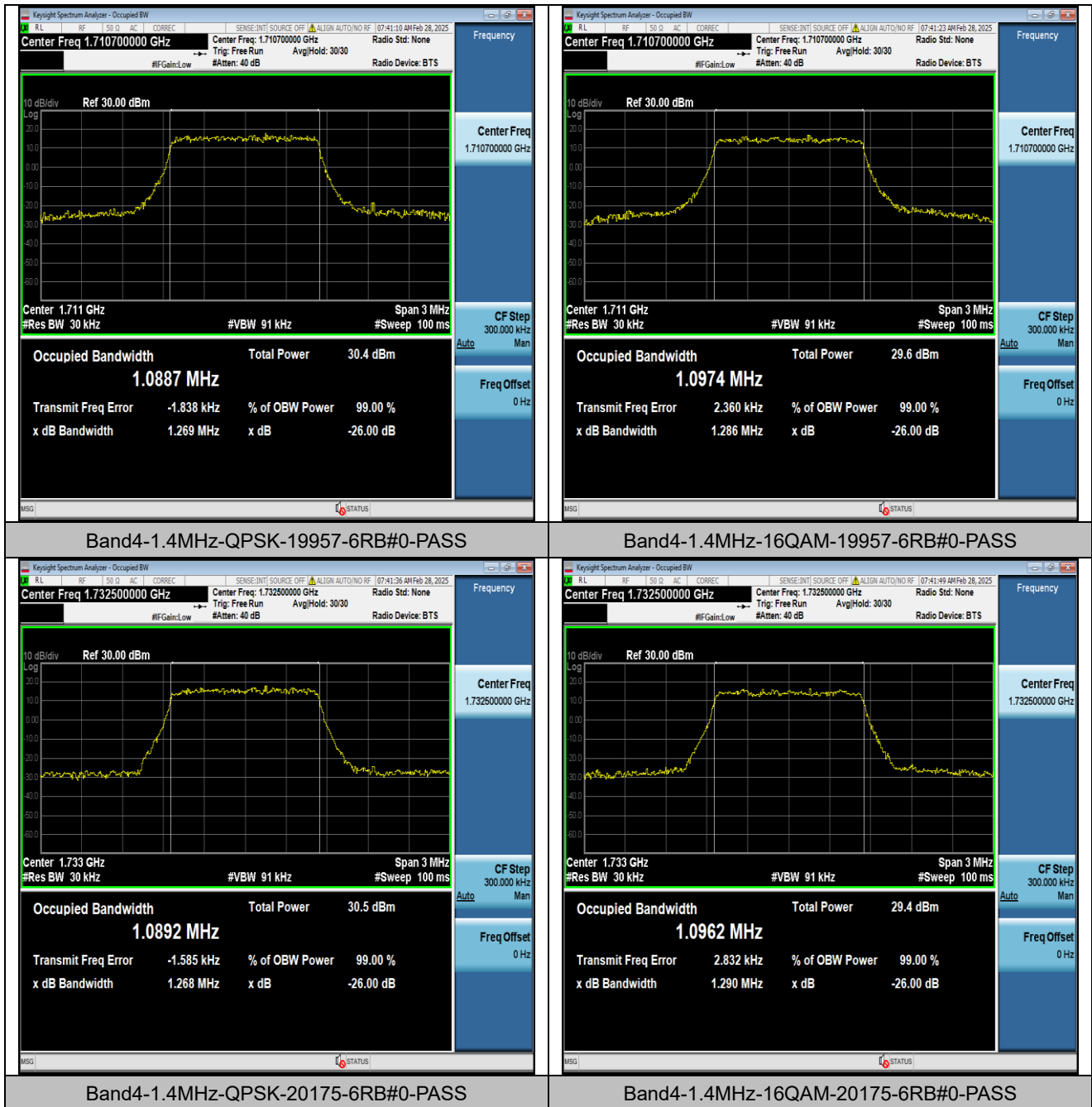


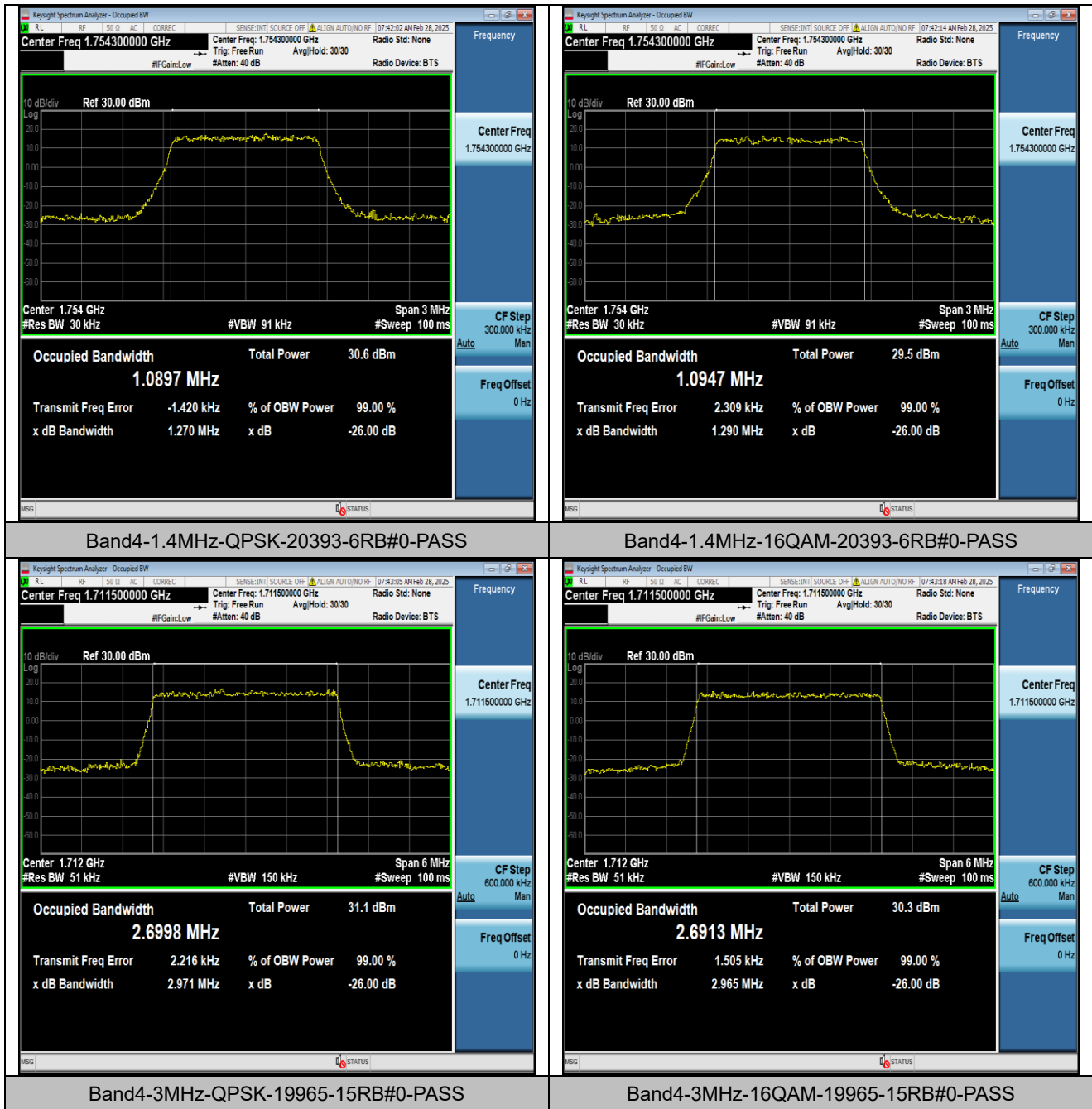
26dB Bandwidth and Occupied Bandwidth

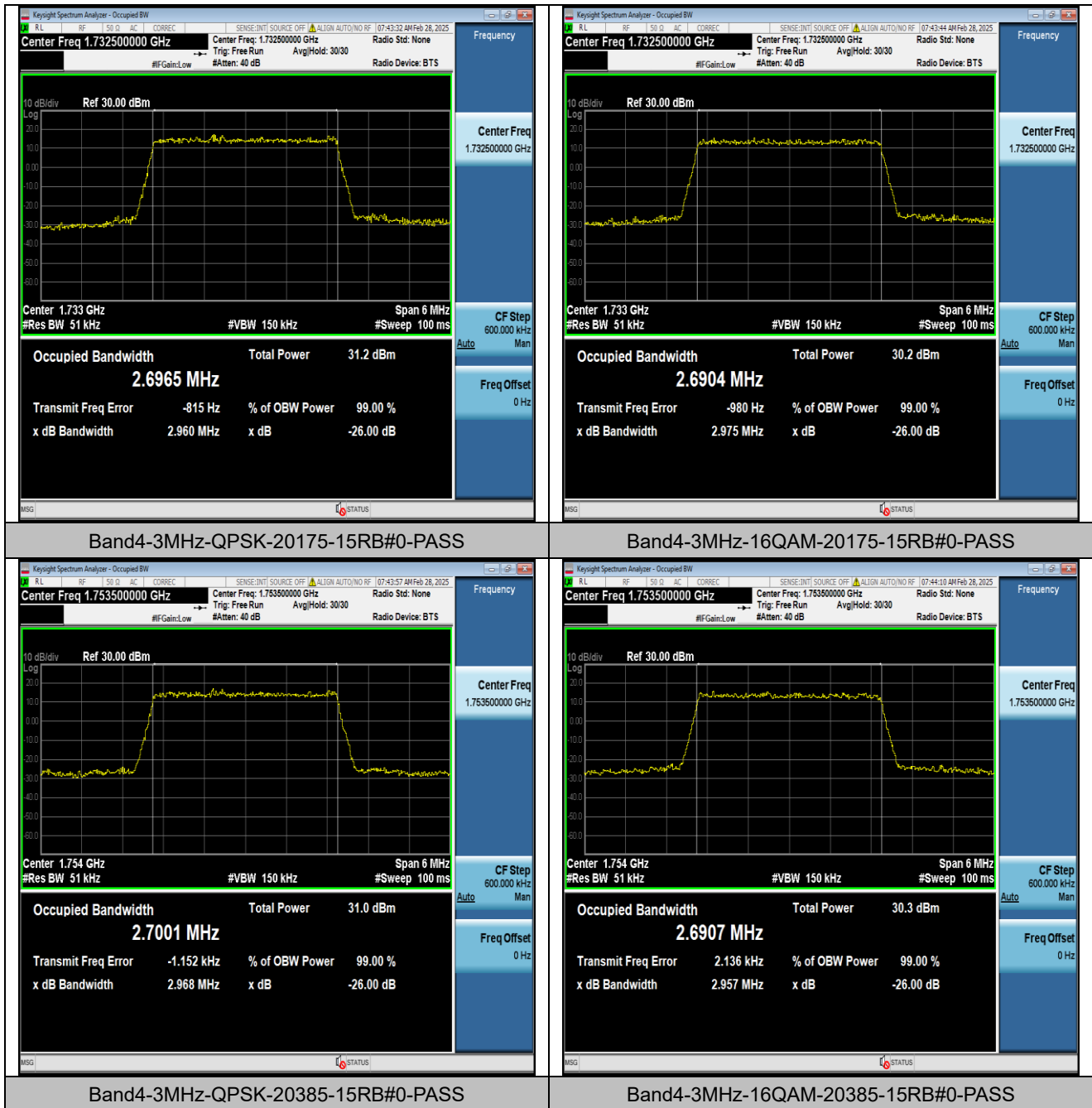
Test Result

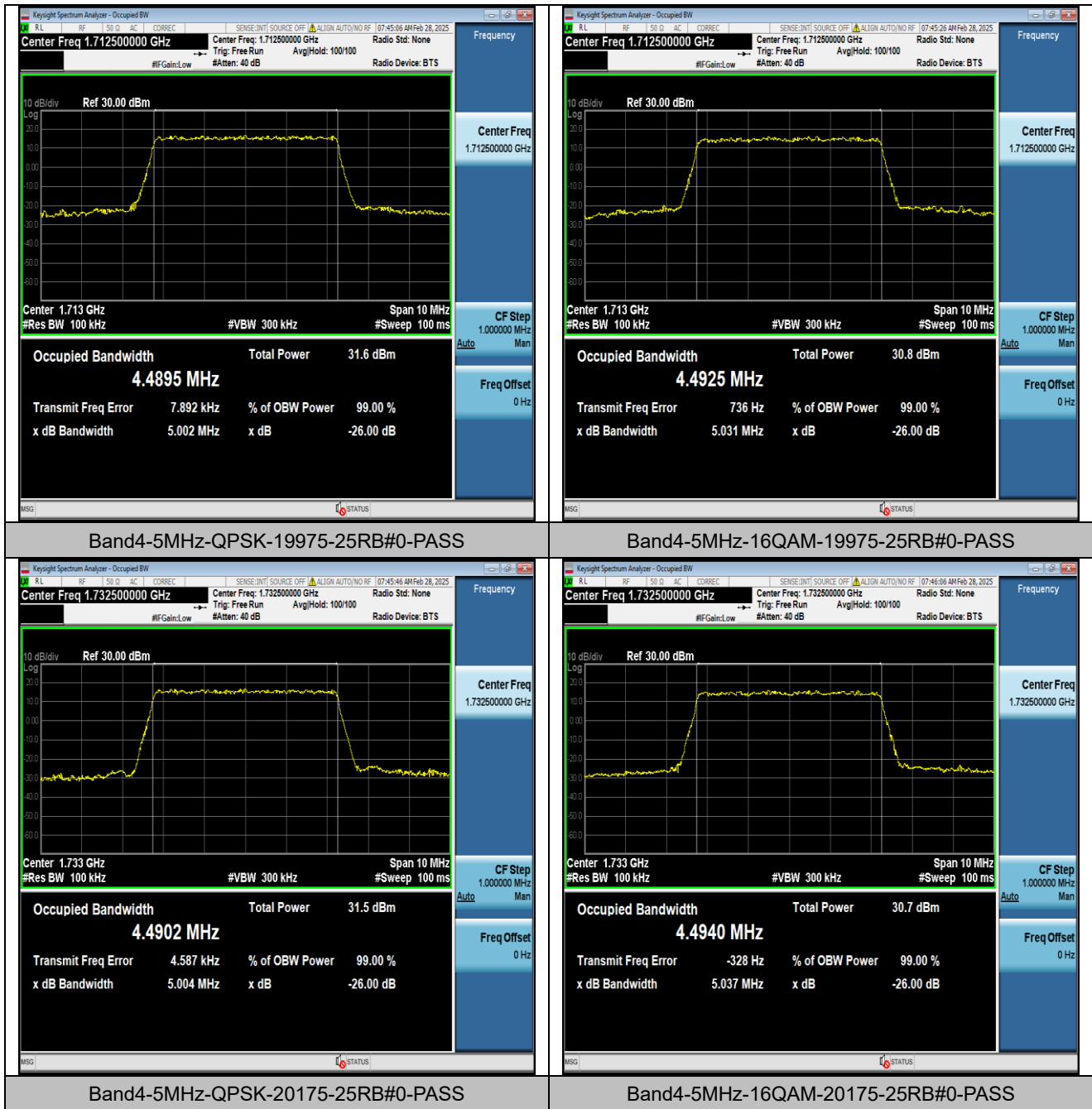
Band	Bandwidth	Modulation	Channel	RB Configuration	OBW (MHz)	26dB EBW (MHz)	Verdict
Band4	1.4MHz	QPSK	19957	6RB#0	1.0887	1.269	PASS
Band4	1.4MHz	16QAM	19957	6RB#0	1.0974	1.286	PASS
Band4	1.4MHz	QPSK	20175	6RB#0	1.0892	1.268	PASS
Band4	1.4MHz	16QAM	20175	6RB#0	1.0962	1.290	PASS
Band4	1.4MHz	QPSK	20393	6RB#0	1.0897	1.270	PASS
Band4	1.4MHz	16QAM	20393	6RB#0	1.0947	1.290	PASS
Band4	3MHz	QPSK	19965	15RB#0	2.6998	2.971	PASS
Band4	3MHz	16QAM	19965	15RB#0	2.6913	2.965	PASS
Band4	3MHz	QPSK	20175	15RB#0	2.6965	2.960	PASS
Band4	3MHz	16QAM	20175	15RB#0	2.6904	2.975	PASS
Band4	3MHz	QPSK	20385	15RB#0	2.7001	2.968	PASS
Band4	3MHz	16QAM	20385	15RB#0	2.6907	2.957	PASS
Band4	5MHz	QPSK	19975	25RB#0	4.4895	5.002	PASS
Band4	5MHz	16QAM	19975	25RB#0	4.4925	5.031	PASS
Band4	5MHz	QPSK	20175	25RB#0	4.4902	5.004	PASS
Band4	5MHz	16QAM	20175	25RB#0	4.4940	5.037	PASS
Band4	5MHz	QPSK	20375	25RB#0	4.4897	5.008	PASS
Band4	5MHz	16QAM	20375	25RB#0	4.4943	5.017	PASS
Band4	10MHz	QPSK	20000	50RB#0	8.9571	9.888	PASS
Band4	10MHz	16QAM	20000	50RB#0	8.9359	9.855	PASS
Band4	10MHz	QPSK	20175	50RB#0	8.9725	9.828	PASS
Band4	10MHz	16QAM	20175	50RB#0	8.9422	9.795	PASS
Band4	10MHz	QPSK	20350	50RB#0	8.9771	9.817	PASS
Band4	10MHz	16QAM	20350	50RB#0	8.9337	9.829	PASS
Band4	15MHz	QPSK	20025	75RB#0	13.424	14.64	PASS
Band4	15MHz	16QAM	20025	75RB#0	13.405	14.77	PASS
Band4	15MHz	QPSK	20175	75RB#0	13.462	14.70	PASS
Band4	15MHz	16QAM	20175	75RB#0	13.427	14.66	PASS
Band4	15MHz	QPSK	20325	75RB#0	13.430	14.73	PASS
Band4	15MHz	16QAM	20325	75RB#0	13.412	14.71	PASS
Band4	20MHz	QPSK	20050	100RB#0	17.911	19.54	PASS
Band4	20MHz	16QAM	20050	100RB#0	17.901	19.41	PASS
Band4	20MHz	QPSK	20175	100RB#0	17.940	19.62	PASS
Band4	20MHz	16QAM	20175	100RB#0	17.919	19.47	PASS
Band4	20MHz	QPSK	20300	100RB#0	17.906	19.56	PASS
Band4	20MHz	16QAM	20300	100RB#0	17.889	19.44	PASS

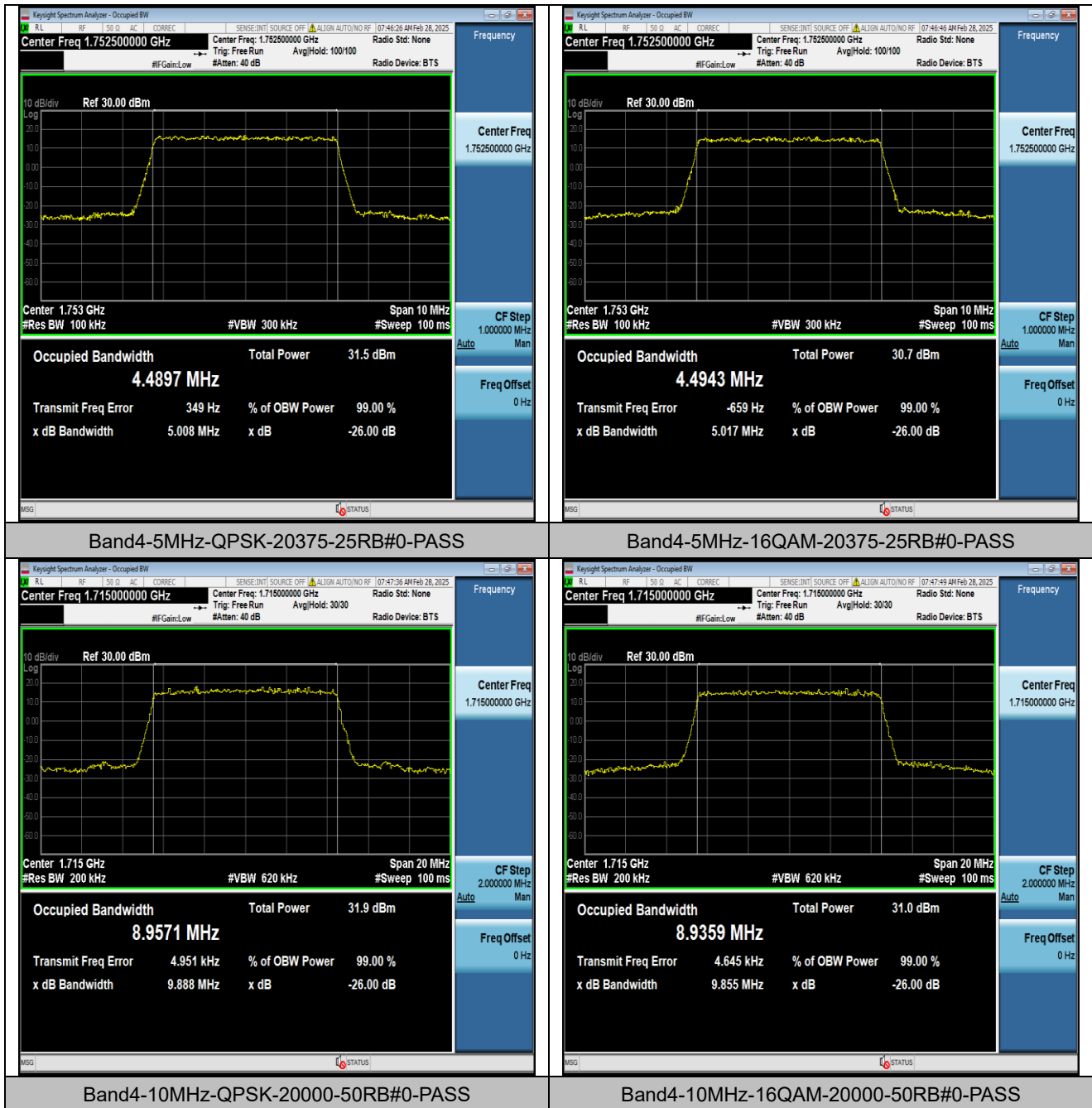
Test Graphs

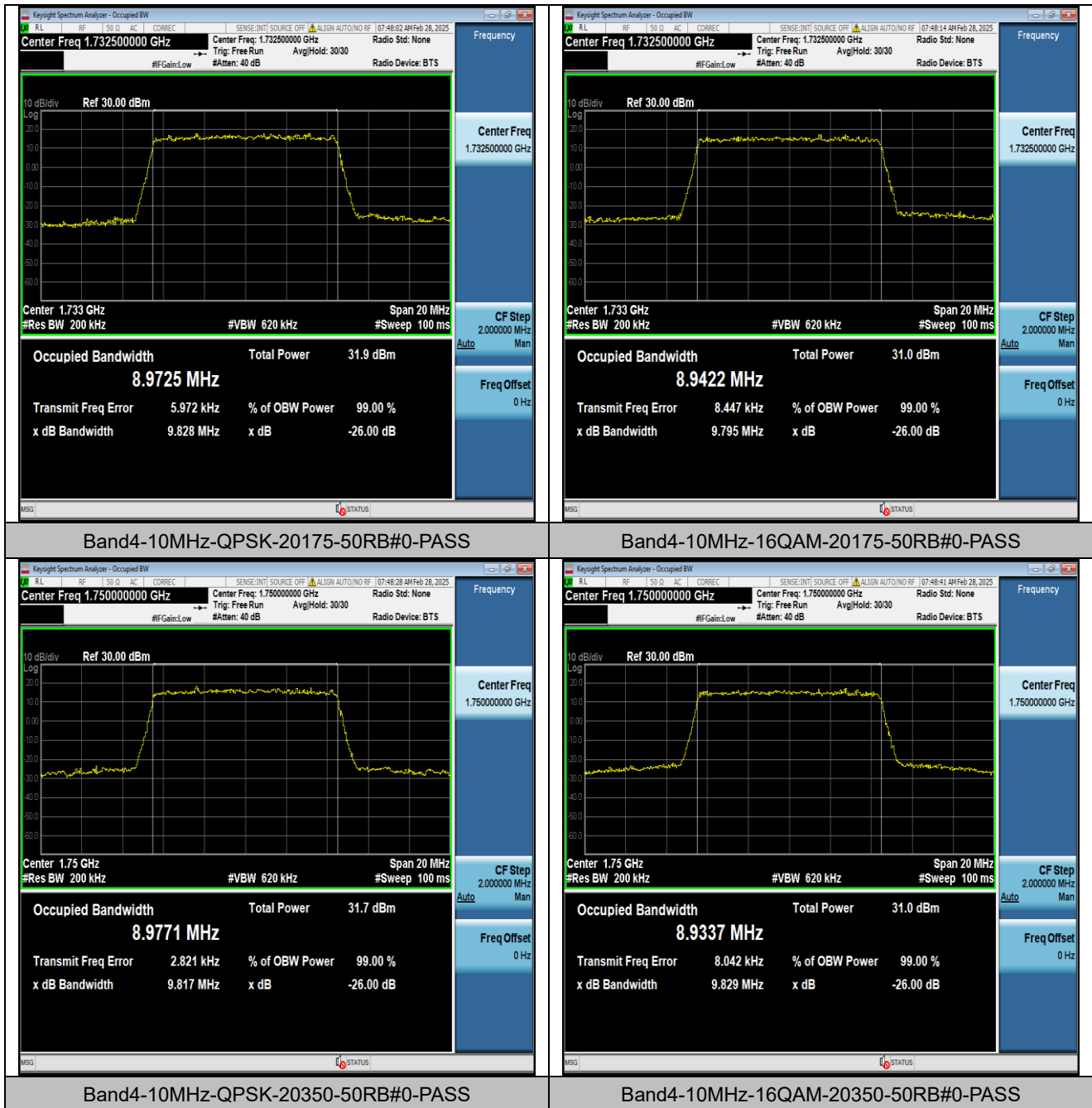


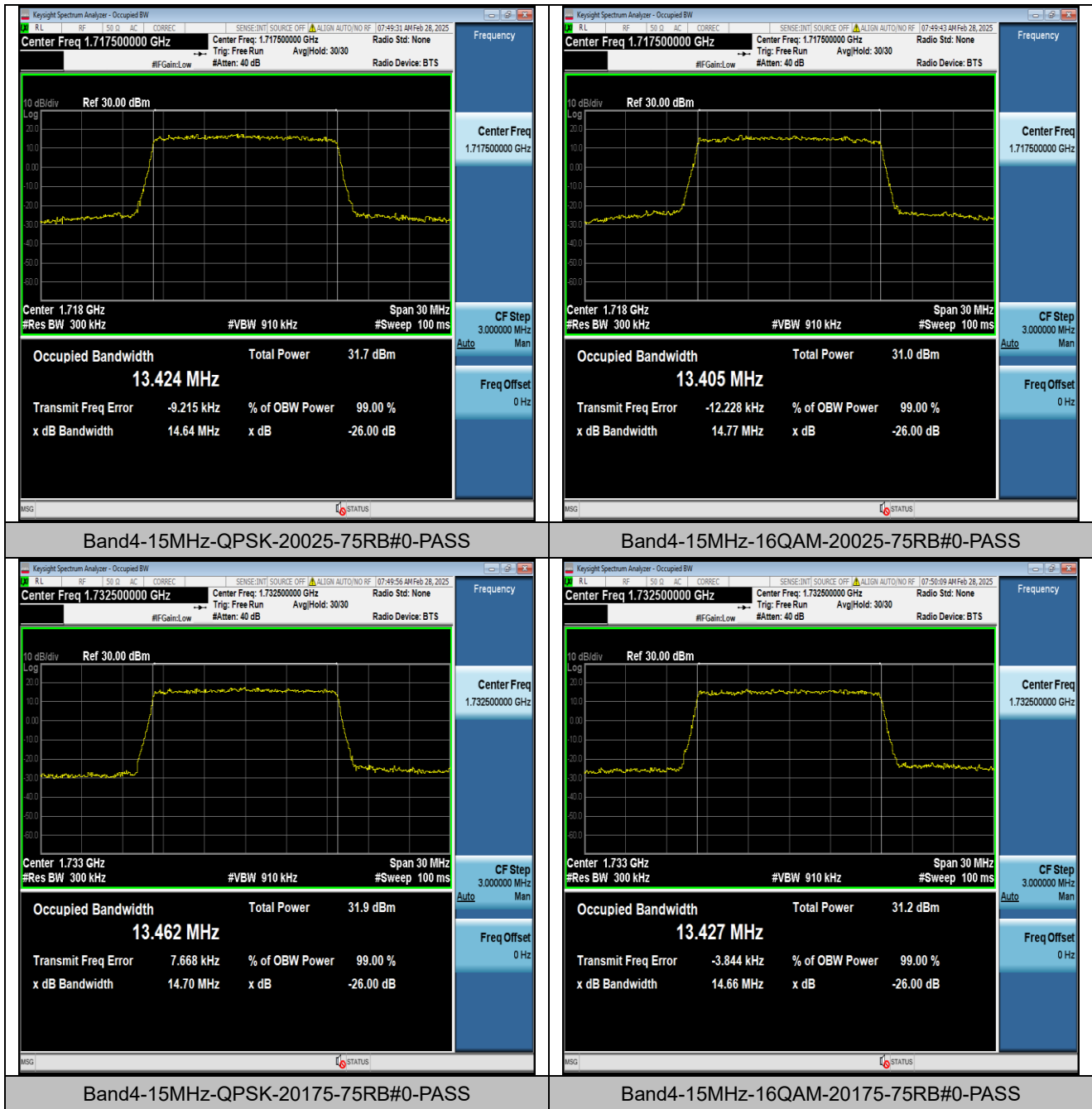


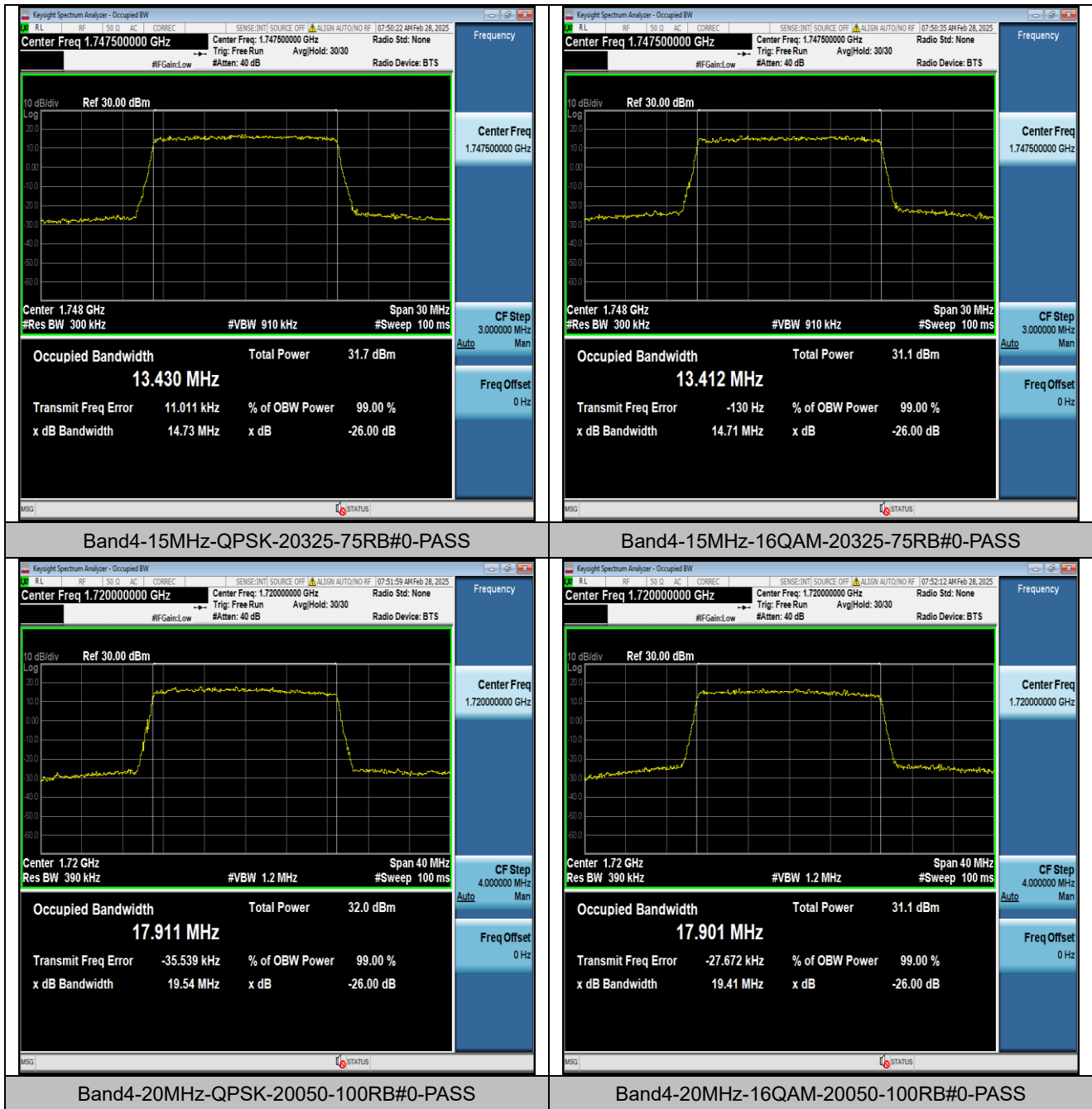


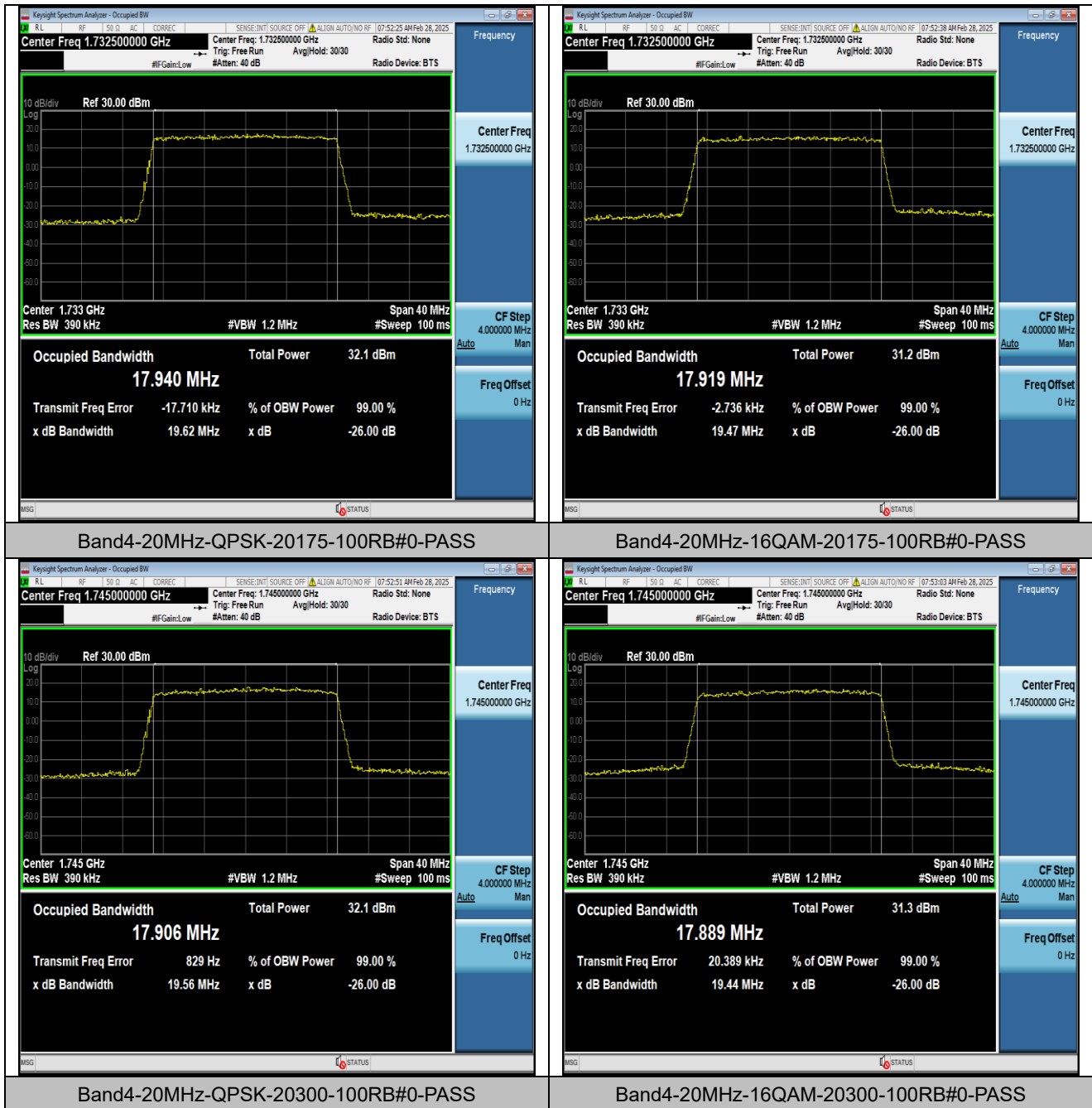






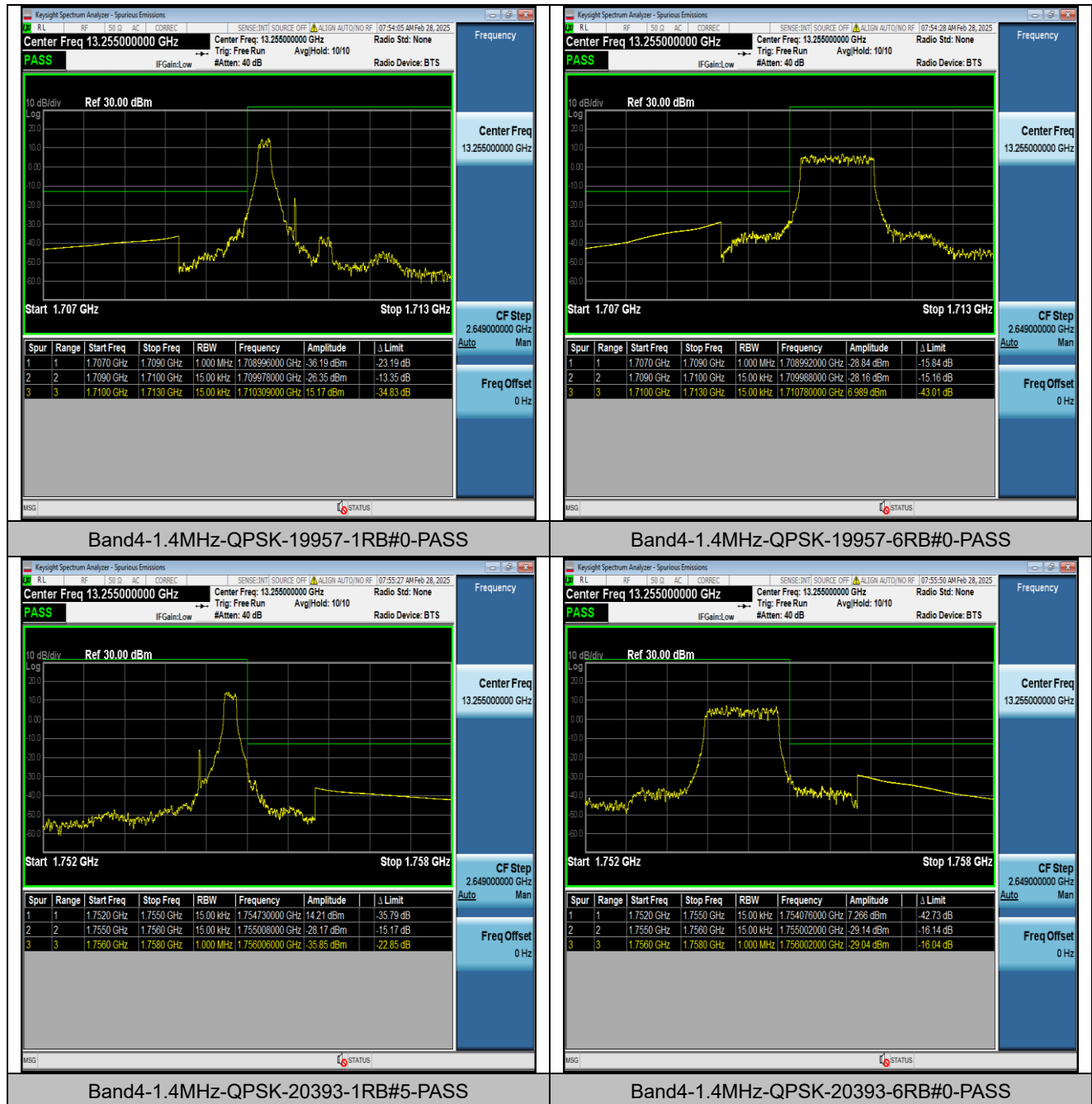


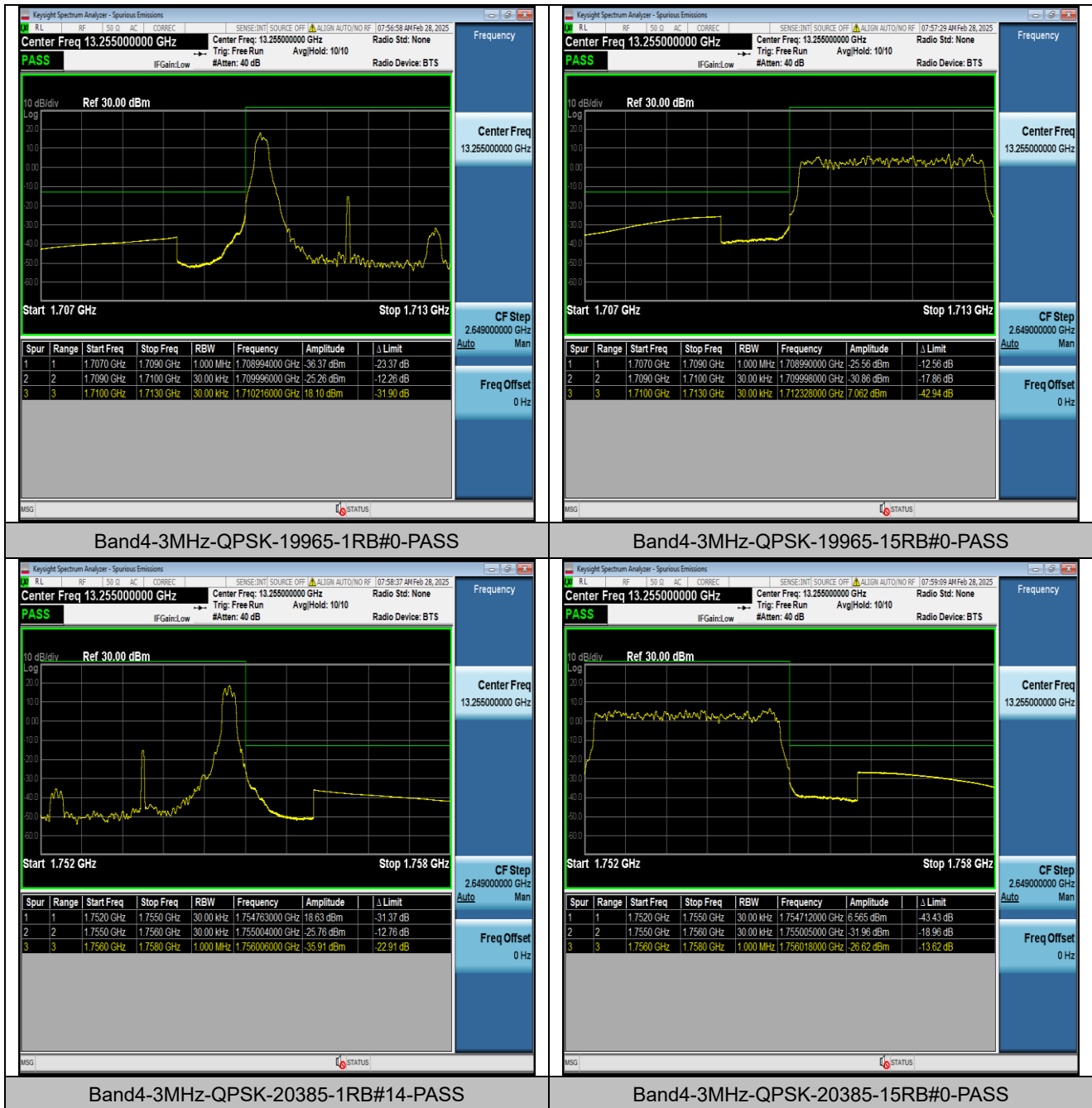


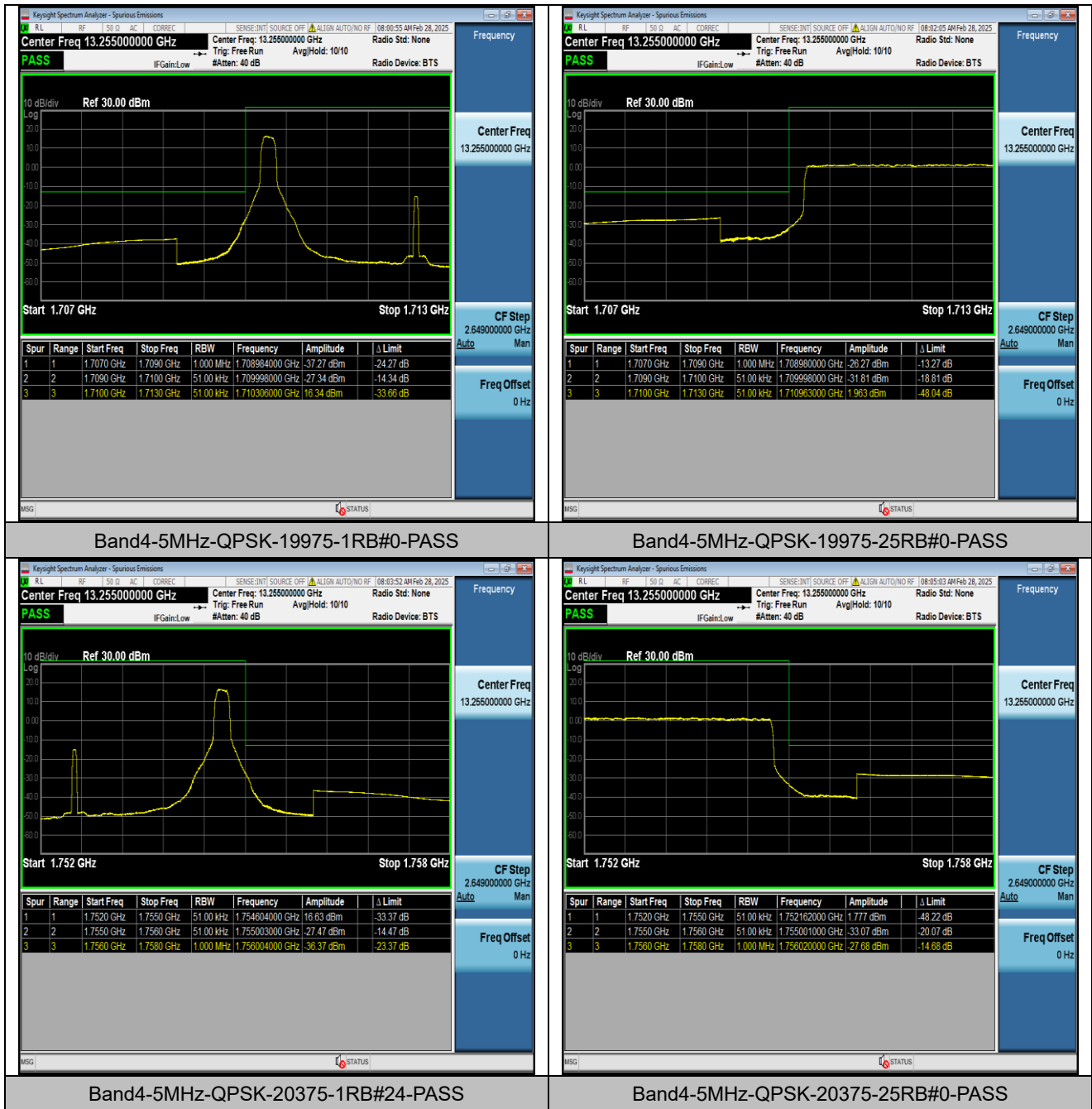


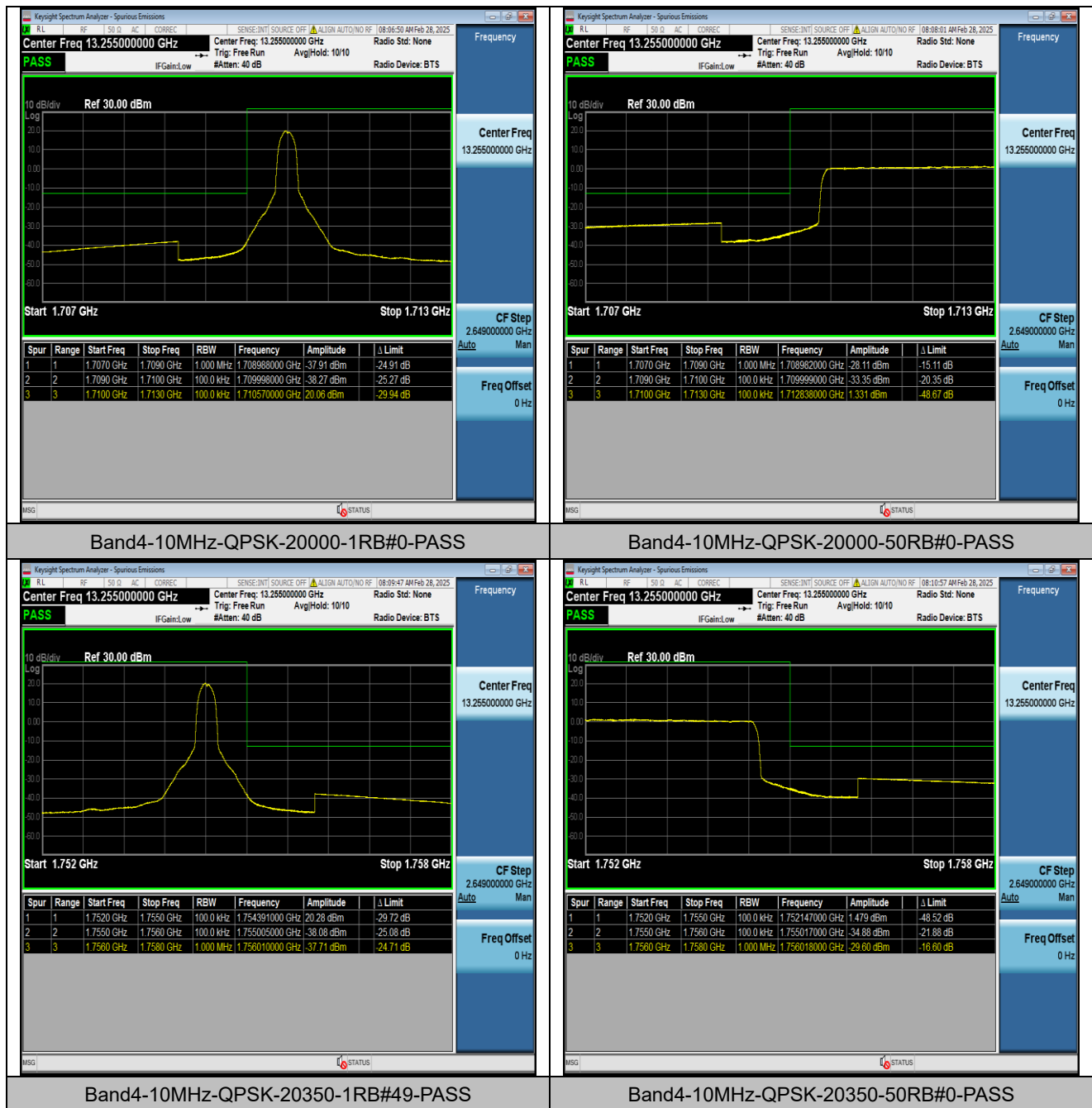
Band Edge

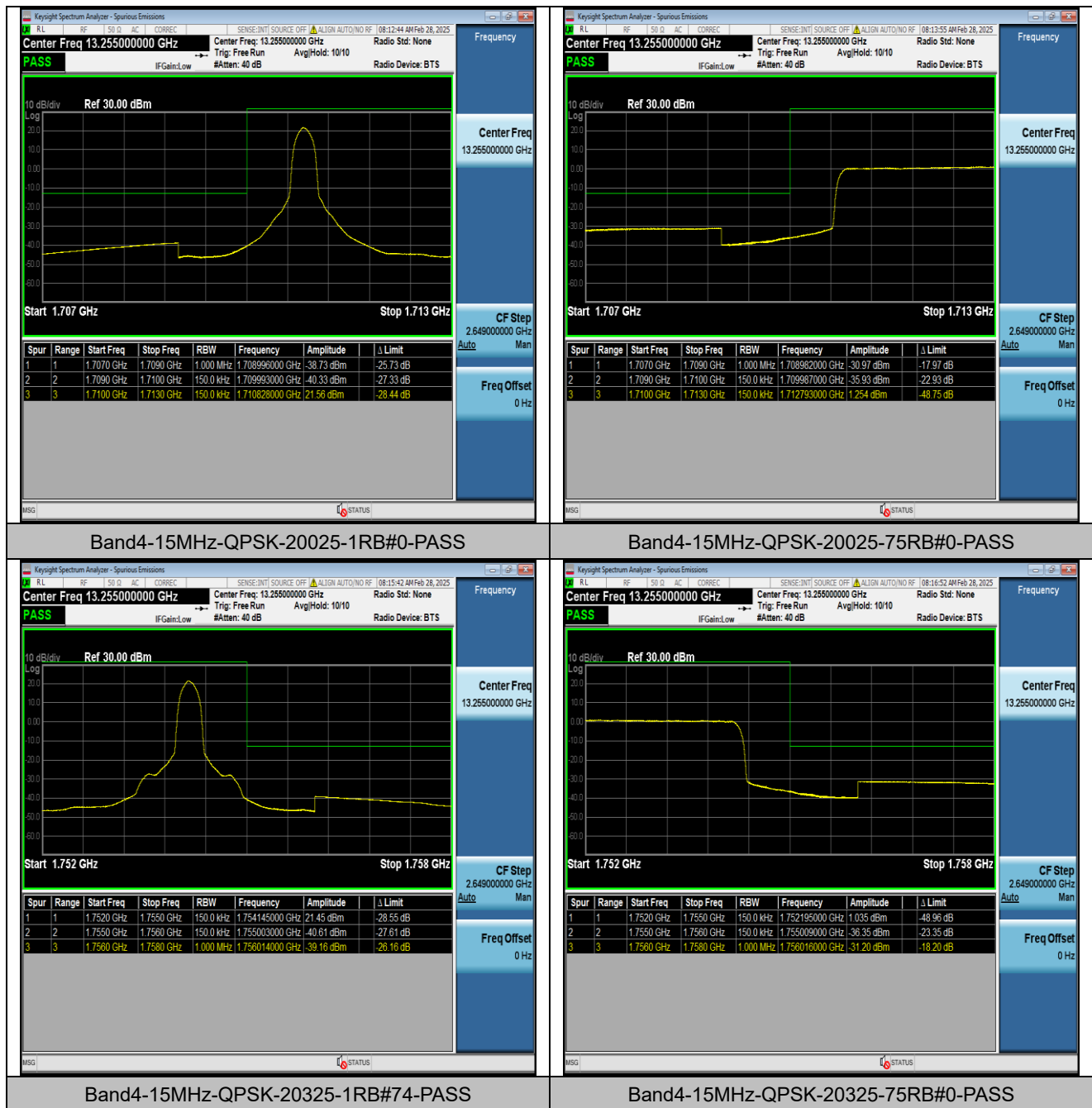
Test Graphs

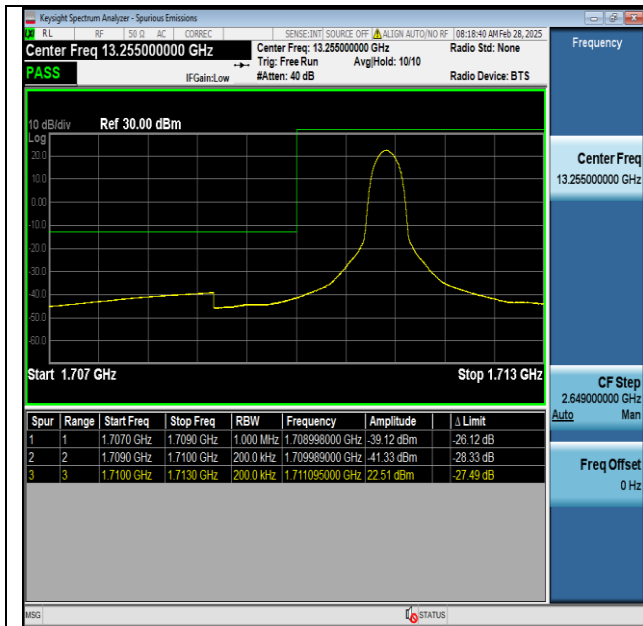




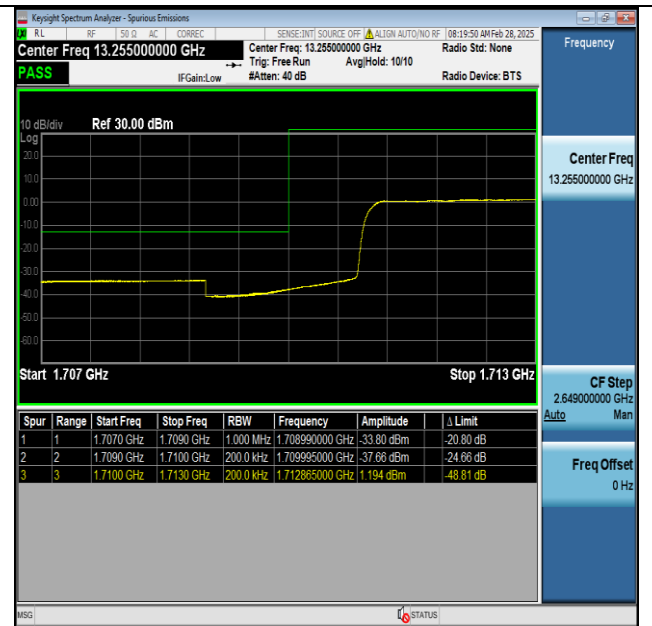




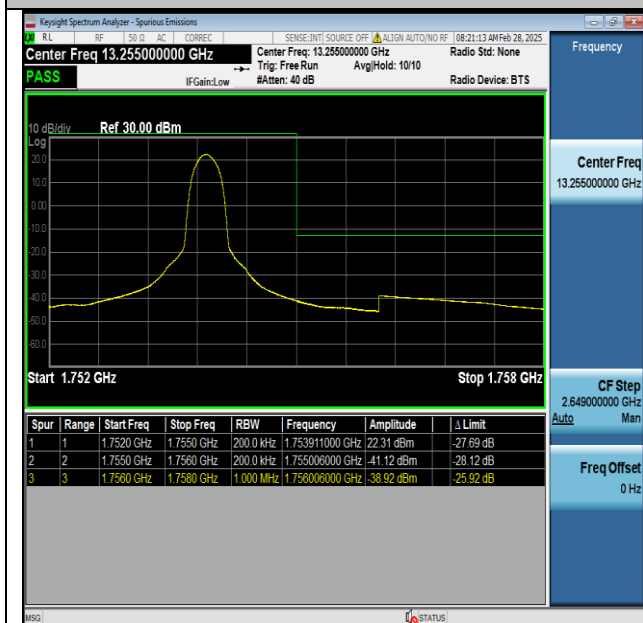




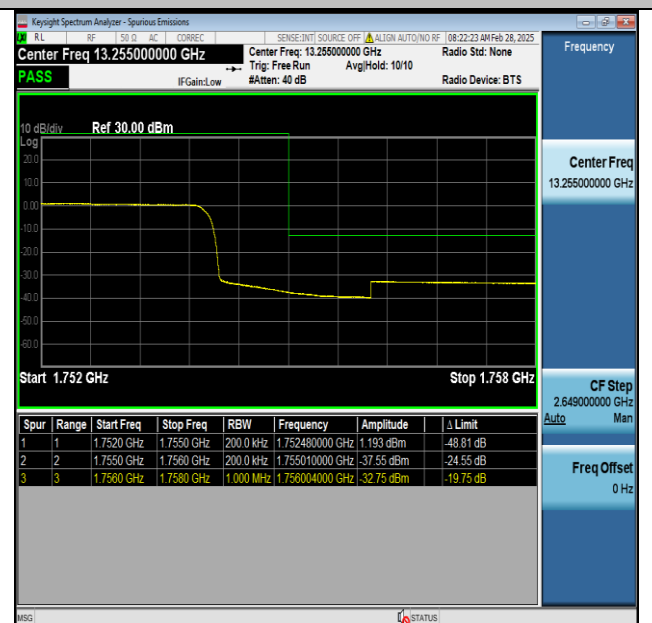
Band4-20MHz-QPSK-20050-1RB#0-PASS



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



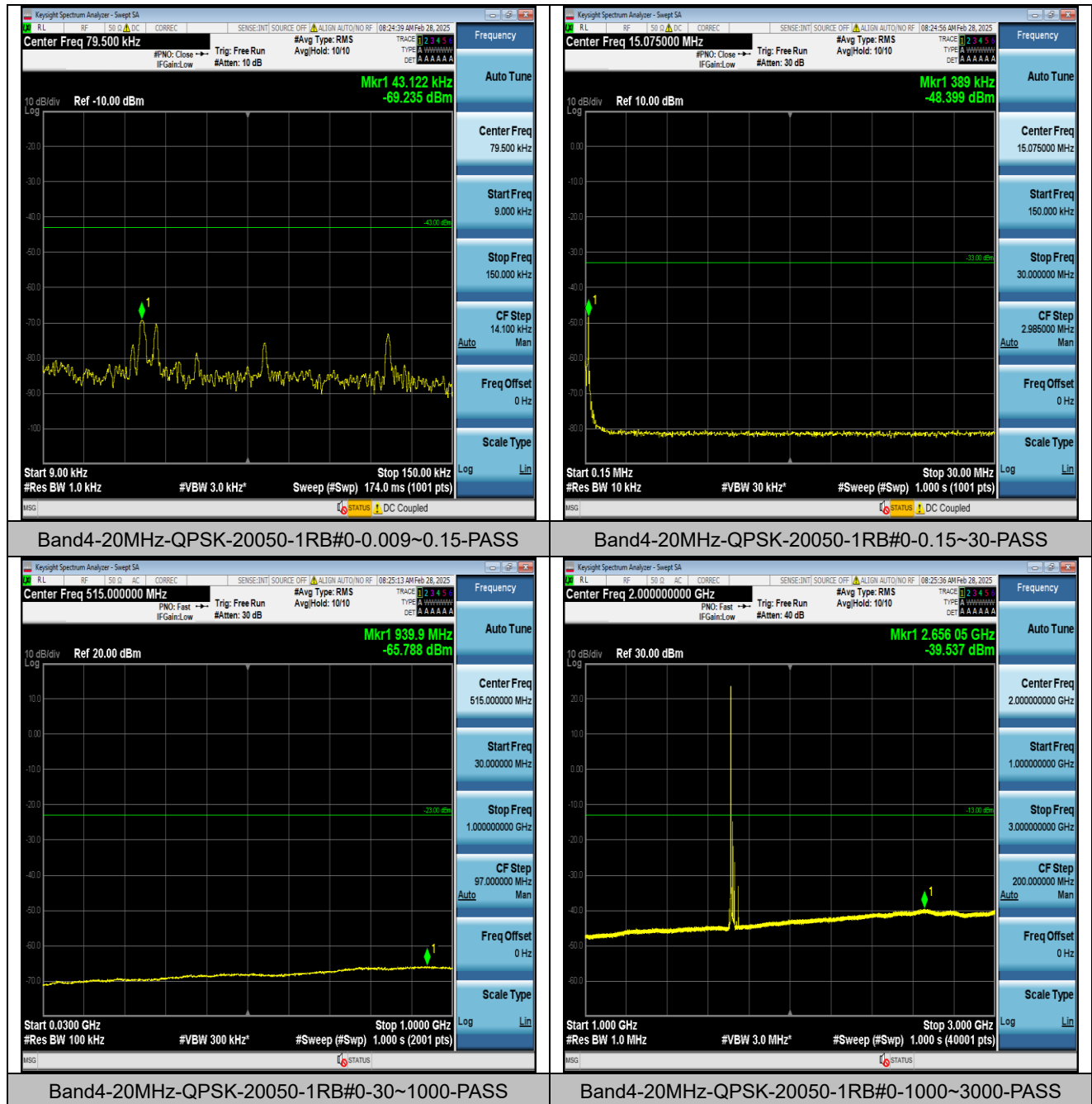
Band4-20MHz-QPSK-20300-1RB#99-PASS

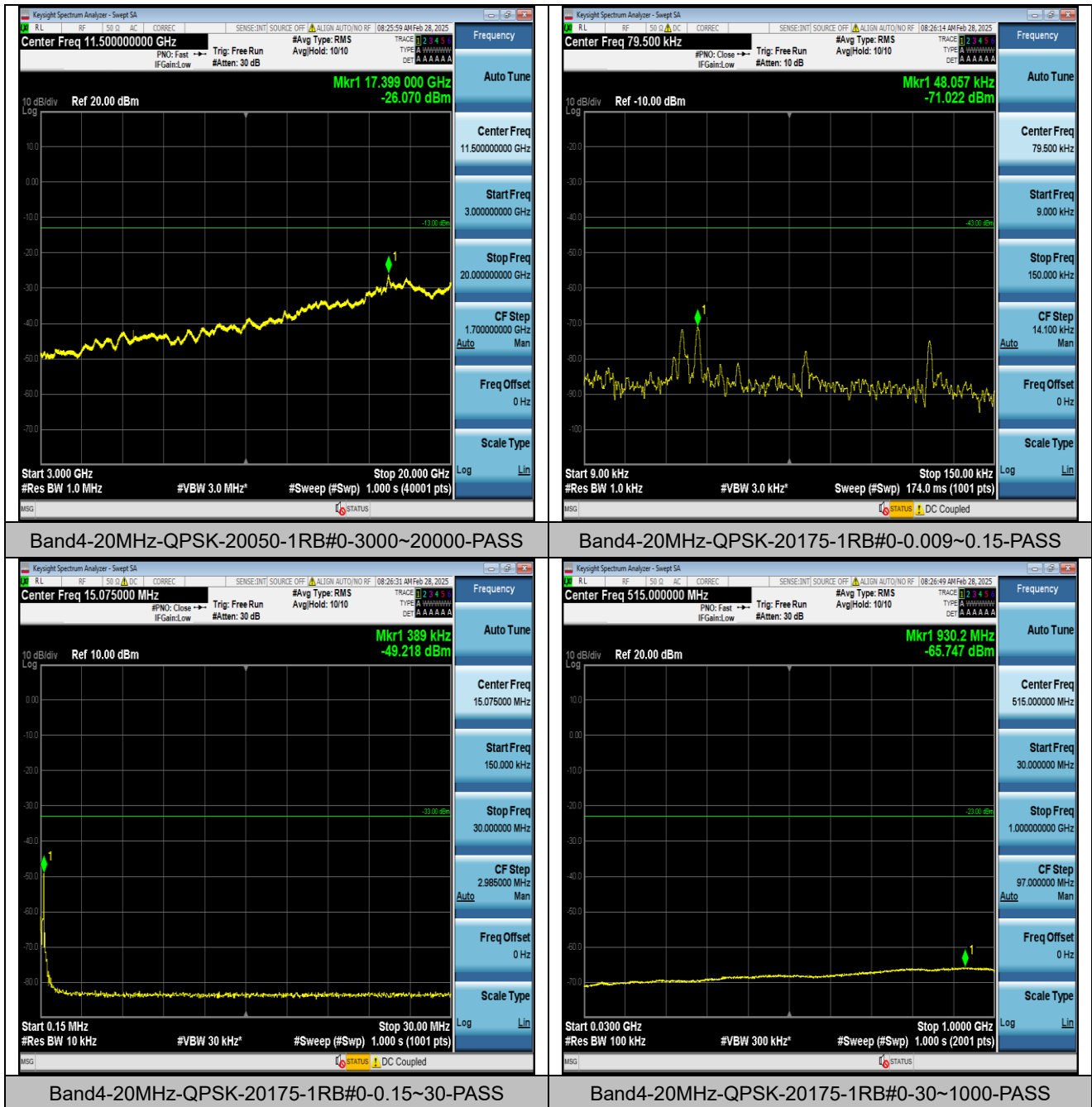


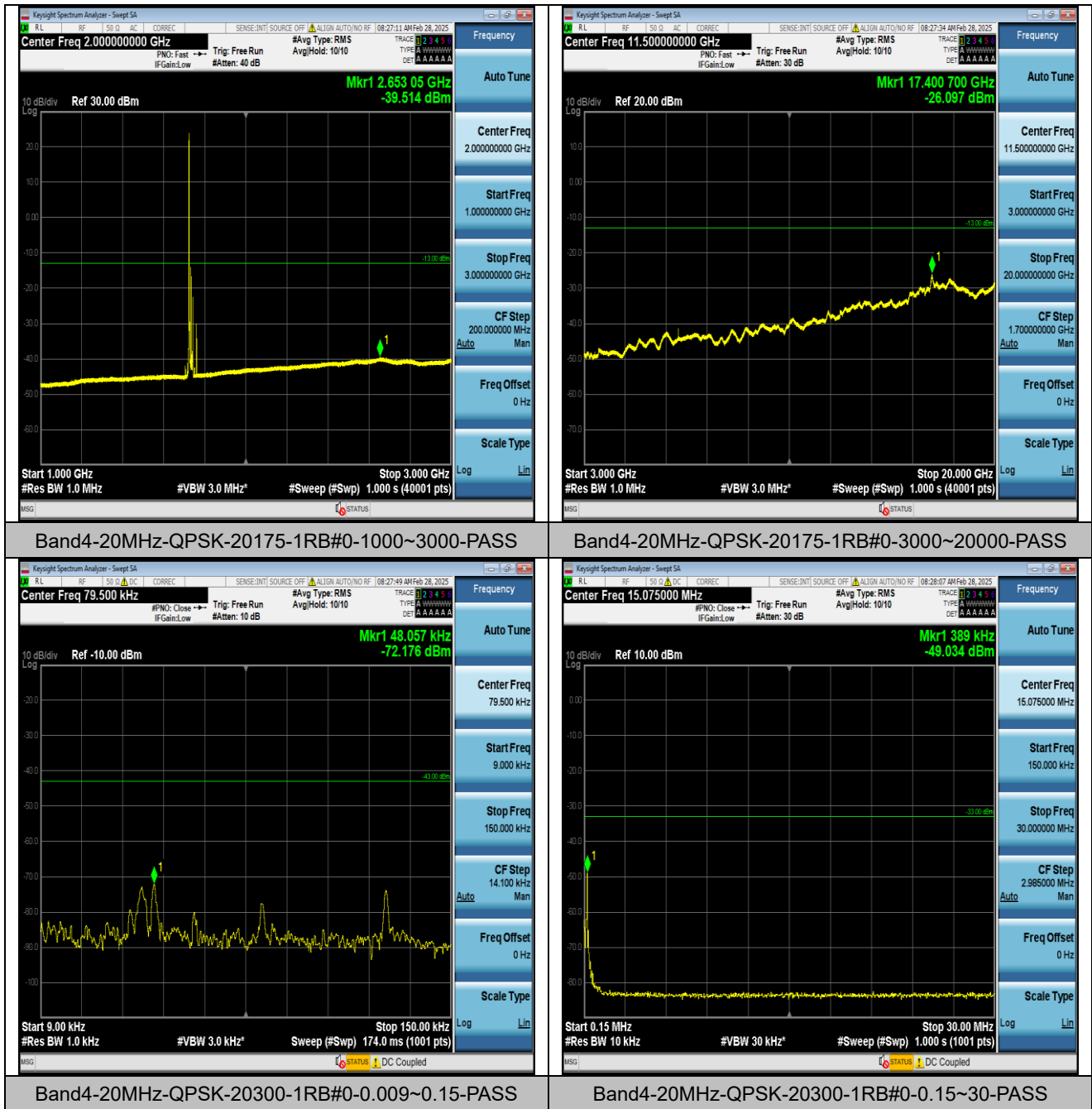
Band4-20MHz-QPSK-20300-100RB#0-PASS

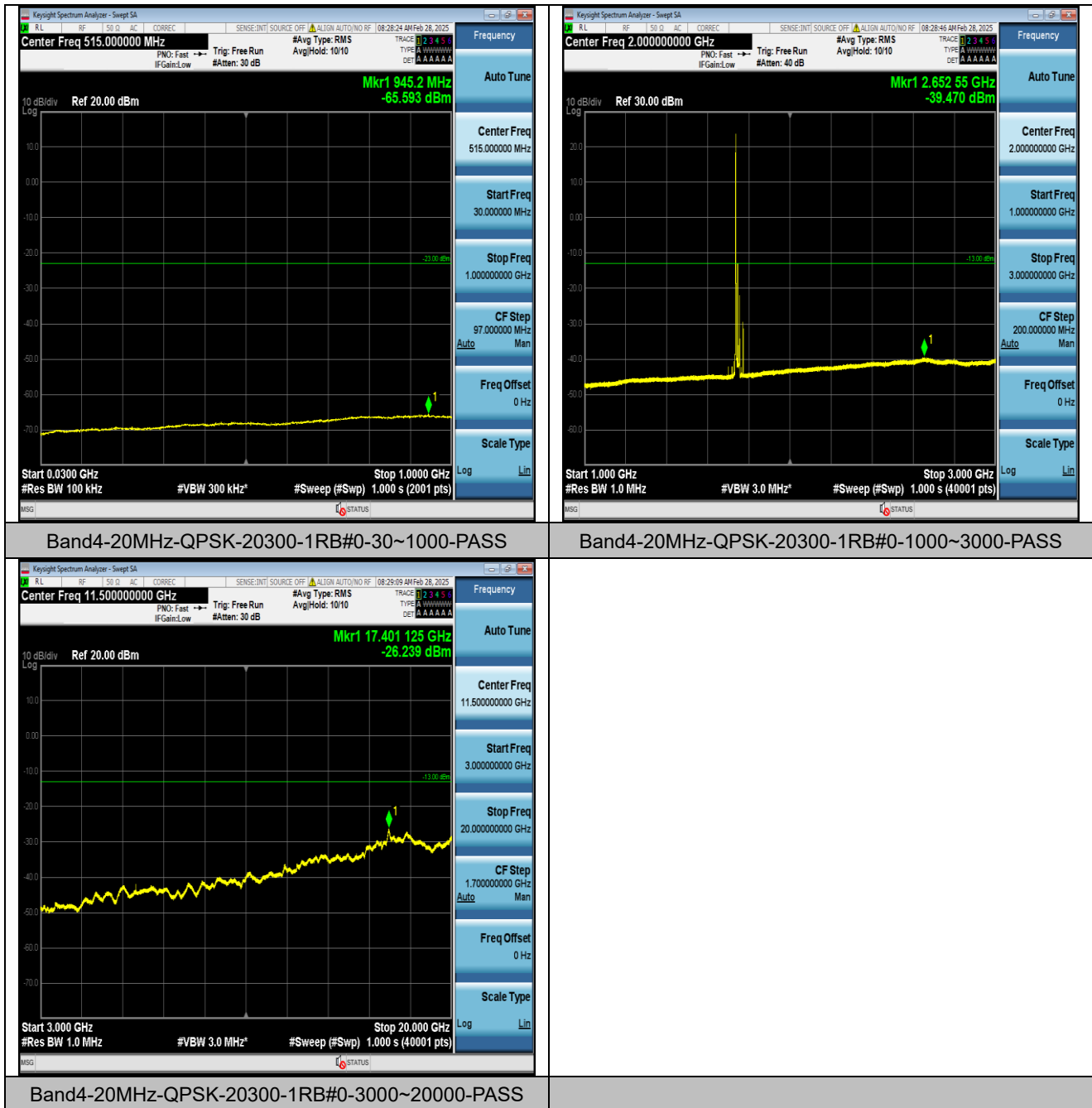
Conducted Spurious Emission

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	0.70	0.000404	PASS
Band4	20MHz	QPSK	20175	100RB#0	VL	NT	-1.20	-0.000693	PASS
Band4	20MHz	QPSK	20175	100RB#0	VH	NT	-0.80	-0.000462	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	-0.70	-0.000404	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	-20	1.50	0.000866	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	-10	-0.10	-0.000058	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	0	-1.00	-0.000577	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	10	0.20	0.000115	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	20	-0.20	-0.000115	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	30	0.10	0.000058	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	40	0.90	0.000519	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	50	1.20	0.000693	PASS

~The End~