

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	23.17	18.67	30	PASS
Band4	1.4MHz	QPSK	19957	1RB#2	23.85	19.35	30	PASS
Band4	1.4MHz	QPSK	19957	1RB#5	23.54	19.04	30	PASS
Band4	1.4MHz	QPSK	19957	6RB#0	22.48	17.98	30	PASS
Band4	1.4MHz	QPSK	20175	1RB#0	23.13	18.63	30	PASS
Band4	1.4MHz	QPSK	20175	1RB#2	23.5	19	30	PASS
Band4	1.4MHz	QPSK	20175	1RB#5	23.34	18.84	30	PASS
Band4	1.4MHz	QPSK	20175	6RB#0	22.26	17.76	30	PASS
Band4	1.4MHz	QPSK	20393	1RB#0	23.38	18.88	30	PASS
Band4	1.4MHz	QPSK	20393	1RB#2	23.22	18.72	30	PASS
Band4	1.4MHz	QPSK	20393	1RB#5	22.84	18.34	30	PASS
Band4	1.4MHz	QPSK	20393	6RB#0	22.08	17.58	30	PASS
Band4	1.4MHz	16QAM	19957	1RB#0	22.49	17.99	30	PASS
Band4	1.4MHz	16QAM	19957	1RB#2	22.25	17.75	30	PASS
Band4	1.4MHz	16QAM	19957	1RB#5	22.41	17.91	30	PASS
Band4	1.4MHz	16QAM	19957	6RB#0	21.37	16.87	30	PASS
Band4	1.4MHz	16QAM	20175	1RB#0	22.46	17.96	30	PASS
Band4	1.4MHz	16QAM	20175	1RB#2	22.38	17.88	30	PASS
Band4	1.4MHz	16QAM	20175	1RB#5	22.44	17.94	30	PASS
Band4	1.4MHz	16QAM	20175	6RB#0	21.28	16.78	30	PASS
Band4	1.4MHz	16QAM	20393	1RB#0	22.38	17.88	30	PASS
Band4	1.4MHz	16QAM	20393	1RB#2	22.6	18.1	30	PASS
Band4	1.4MHz	16QAM	20393	1RB#5	22.65	18.15	30	PASS
Band4	1.4MHz	16QAM	20393	6RB#0	21.55	17.05	30	PASS
Band4	3MHz	QPSK	19965	1RB#0	22.99	18.49	30	PASS
Band4	3MHz	QPSK	19965	1RB#8	23.26	18.76	30	PASS
Band4	3MHz	QPSK	19965	1RB#14	23.04	18.54	30	PASS
Band4	3MHz	QPSK	19965	15RB#0	22.07	17.57	30	PASS
Band4	3MHz	QPSK	20175	1RB#0	23	18.5	30	PASS
Band4	3MHz	QPSK	20175	1RB#8	23.35	18.85	30	PASS
Band4	3MHz	QPSK	20175	1RB#14	23.32	18.82	30	PASS
Band4	3MHz	QPSK	20175	15RB#0	22.1	17.6	30	PASS
Band4	3MHz	QPSK	20385	1RB#0	23.41	18.91	30	PASS
Band4	3MHz	QPSK	20385	1RB#8	22.98	18.48	30	PASS
Band4	3MHz	QPSK	20385	1RB#14	23.22	18.72	30	PASS
Band4	3MHz	QPSK	20385	15RB#0	22.06	17.56	30	PASS
Band4	3MHz	16QAM	19965	1RB#0	23.1	18.6	30	PASS

Band4	3MHz	16QAM	19965	1RB#8	22.58	18.08	30	PASS
Band4	3MHz	16QAM	19965	1RB#14	22.74	18.24	30	PASS
Band4	3MHz	16QAM	19965	15RB#0	21.69	17.19	30	PASS
Band4	3MHz	16QAM	20175	1RB#0	22.77	18.27	30	PASS
Band4	3MHz	16QAM	20175	1RB#8	22.62	18.12	30	PASS
Band4	3MHz	16QAM	20175	1RB#14	22.8	18.3	30	PASS
Band4	3MHz	16QAM	20175	15RB#0	21.63	17.13	30	PASS
Band4	3MHz	16QAM	20385	1RB#0	22.19	17.69	30	PASS
Band4	3MHz	16QAM	20385	1RB#8	22.52	18.02	30	PASS
Band4	3MHz	16QAM	20385	1RB#14	22.56	18.06	30	PASS
Band4	3MHz	16QAM	20385	15RB#0	21.79	17.29	30	PASS
Band4	5MHz	QPSK	19975	1RB#0	23.13	18.63	30	PASS
Band4	5MHz	QPSK	19975	1RB#12	23.17	18.67	30	PASS
Band4	5MHz	QPSK	19975	1RB#24	23.11	18.61	30	PASS
Band4	5MHz	QPSK	19975	25RB#0	22.12	17.62	30	PASS
Band4	5MHz	QPSK	20175	1RB#0	23.05	18.55	30	PASS
Band4	5MHz	QPSK	20175	1RB#12	23.21	18.71	30	PASS
Band4	5MHz	QPSK	20175	1RB#24	23.41	18.91	30	PASS
Band4	5MHz	QPSK	20175	25RB#0	22.12	17.62	30	PASS
Band4	5MHz	QPSK	20375	1RB#0	23.22	18.72	30	PASS
Band4	5MHz	QPSK	20375	1RB#12	23.36	18.86	30	PASS
Band4	5MHz	QPSK	20375	1RB#24	23.14	18.64	30	PASS
Band4	5MHz	QPSK	20375	25RB#0	22.58	18.08	30	PASS
Band4	5MHz	16QAM	19975	1RB#0	22.45	17.95	30	PASS
Band4	5MHz	16QAM	19975	1RB#12	21.97	17.47	30	PASS
Band4	5MHz	16QAM	19975	1RB#24	22.11	17.61	30	PASS
Band4	5MHz	16QAM	19975	25RB#0	21.45	16.95	30	PASS
Band4	5MHz	16QAM	20175	1RB#0	22.05	17.55	30	PASS
Band4	5MHz	16QAM	20175	1RB#12	22.57	18.07	30	PASS
Band4	5MHz	16QAM	20175	1RB#24	22.14	17.64	30	PASS
Band4	5MHz	16QAM	20175	25RB#0	21.87	17.37	30	PASS
Band4	5MHz	16QAM	20375	1RB#0	22.05	17.55	30	PASS
Band4	5MHz	16QAM	20375	1RB#12	22.32	17.82	30	PASS
Band4	5MHz	16QAM	20375	1RB#24	22.15	17.65	30	PASS
Band4	5MHz	16QAM	20375	25RB#0	21.78	17.28	30	PASS
Band4	10MHz	QPSK	20000	1RB#0	23.15	18.65	30	PASS
Band4	10MHz	QPSK	20000	1RB#24	23.38	18.88	30	PASS
Band4	10MHz	QPSK	20000	1RB#49	22.83	18.33	30	PASS
Band4	10MHz	QPSK	20000	50RB#0	22.15	17.65	30	PASS
Band4	10MHz	QPSK	20175	1RB#0	23.09	18.59	30	PASS
Band4	10MHz	QPSK	20175	1RB#24	23.71	19.21	30	PASS
Band4	10MHz	QPSK	20175	1RB#49	23.27	18.77	30	PASS
Band4	10MHz	QPSK	20175	50RB#0	22.23	17.73	30	PASS
Band4	10MHz	QPSK	20350	1RB#0	23.51	19.01	30	PASS
Band4	10MHz	QPSK	20350	1RB#24	23.44	18.94	30	PASS

Band4	10MHz	QPSK	20350	1RB#49	23.25	18.75	30	PASS
Band4	10MHz	QPSK	20350	50RB#0	22.46	17.96	30	PASS
Band4	10MHz	16QAM	20000	1RB#0	22.26	17.76	30	PASS
Band4	10MHz	16QAM	20000	1RB#24	22.49	17.99	30	PASS
Band4	10MHz	16QAM	20000	1RB#49	22.17	17.67	30	PASS
Band4	10MHz	16QAM	20000	27RB#0	21.51	17.01	30	PASS
Band4	10MHz	16QAM	20175	1RB#0	22.23	17.73	30	PASS
Band4	10MHz	16QAM	20175	1RB#24	22.18	17.68	30	PASS
Band4	10MHz	16QAM	20175	1RB#49	22.32	17.82	30	PASS
Band4	10MHz	16QAM	20175	27RB#0	21.3	16.8	30	PASS
Band4	10MHz	16QAM	20350	1RB#0	22.17	17.67	30	PASS
Band4	10MHz	16QAM	20350	1RB#24	22.38	17.88	30	PASS
Band4	10MHz	16QAM	20350	1RB#49	22.11	17.61	30	PASS
Band4	10MHz	16QAM	20350	27RB#0	21.5	17	30	PASS
Band4	15MHz	QPSK	20025	1RB#0	23.25	18.75	30	PASS
Band4	15MHz	QPSK	20025	1RB#38	23.25	18.75	30	PASS
Band4	15MHz	QPSK	20025	1RB#74	22.97	18.47	30	PASS
Band4	15MHz	QPSK	20025	75RB#0	22.18	17.68	30	PASS
Band4	15MHz	QPSK	20175	1RB#0	23.12	18.62	30	PASS
Band4	15MHz	QPSK	20175	1RB#38	23.41	18.91	30	PASS
Band4	15MHz	QPSK	20175	1RB#74	23.12	18.62	30	PASS
Band4	15MHz	QPSK	20175	75RB#0	22.31	17.81	30	PASS
Band4	15MHz	QPSK	20325	1RB#0	23.44	18.94	30	PASS
Band4	15MHz	QPSK	20325	1RB#38	23.46	18.96	30	PASS
Band4	15MHz	QPSK	20325	1RB#74	23.33	18.83	30	PASS
Band4	15MHz	QPSK	20325	75RB#0	22.55	18.05	30	PASS
Band4	15MHz	16QAM	20025	1RB#0	22.82	18.32	30	PASS
Band4	15MHz	16QAM	20025	1RB#38	22.42	17.92	30	PASS
Band4	15MHz	16QAM	20025	1RB#74	22.26	17.76	30	PASS
Band4	15MHz	16QAM	20025	27RB#0	21.17	16.67	30	PASS
Band4	15MHz	16QAM	20175	1RB#0	23.08	18.58	30	PASS
Band4	15MHz	16QAM	20175	1RB#38	22.19	17.69	30	PASS
Band4	15MHz	16QAM	20175	1RB#74	21.94	17.44	30	PASS
Band4	15MHz	16QAM	20175	27RB#0	21.29	16.79	30	PASS
Band4	15MHz	16QAM	20325	1RB#0	23.07	18.57	30	PASS
Band4	15MHz	16QAM	20325	1RB#38	22.61	18.11	30	PASS
Band4	15MHz	16QAM	20325	1RB#74	22.41	17.91	30	PASS
Band4	15MHz	16QAM	20325	27RB#0	21.55	17.05	30	PASS
Band4	20MHz	QPSK	20050	1RB#0	23.22	18.72	30	PASS
Band4	20MHz	QPSK	20050	1RB#49	23.08	18.58	30	PASS
Band4	20MHz	QPSK	20050	1RB#99	23.36	18.86	30	PASS
Band4	20MHz	QPSK	20050	100RB#0	22.32	17.82	30	PASS
Band4	20MHz	QPSK	20175	1RB#0	23.43	18.93	30	PASS
Band4	20MHz	QPSK	20175	1RB#49	23.72	19.22	30	PASS
Band4	20MHz	QPSK	20175	1RB#99	23.37	18.87	30	PASS

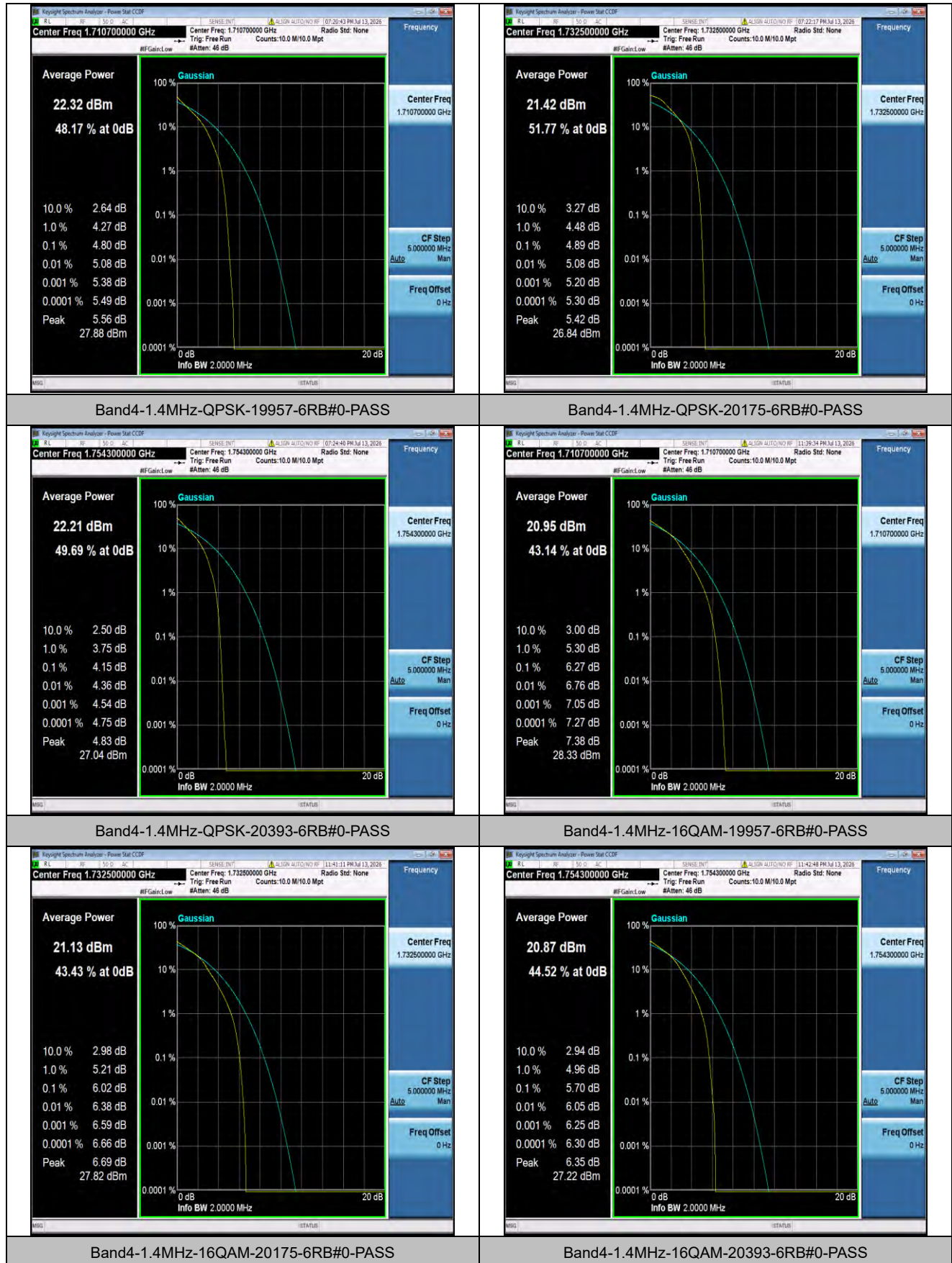
Band4	20MHz	QPSK	20175	100RB#0	22.33	17.83	30	PASS
Band4	20MHz	QPSK	20300	1RB#0	23.35	18.85	30	PASS
Band4	20MHz	QPSK	20300	1RB#49	23.69	19.19	30	PASS
Band4	20MHz	QPSK	20300	1RB#99	23.37	18.87	30	PASS
Band4	20MHz	QPSK	20300	100RB#0	22.56	18.06	30	PASS
Band4	20MHz	16QAM	20050	1RB#0	22.51	18.01	30	PASS
Band4	20MHz	16QAM	20050	1RB#49	22.17	17.67	30	PASS
Band4	20MHz	16QAM	20050	1RB#99	22.06	17.56	30	PASS
Band4	20MHz	16QAM	20050	27RB#0	21.36	16.86	30	PASS
Band4	20MHz	16QAM	20175	1RB#0	22.89	18.39	30	PASS
Band4	20MHz	16QAM	20175	1RB#49	22.3	17.8	30	PASS
Band4	20MHz	16QAM	20175	1RB#99	22.53	18.03	30	PASS
Band4	20MHz	16QAM	20175	27RB#0	21.23	16.73	30	PASS
Band4	20MHz	16QAM	20300	1RB#0	22.92	18.42	30	PASS
Band4	20MHz	16QAM	20300	1RB#49	22.5	18	30	PASS
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Band4	20MHz	16QAM	20300	27RB#0	21.39	16.89	30	PASS

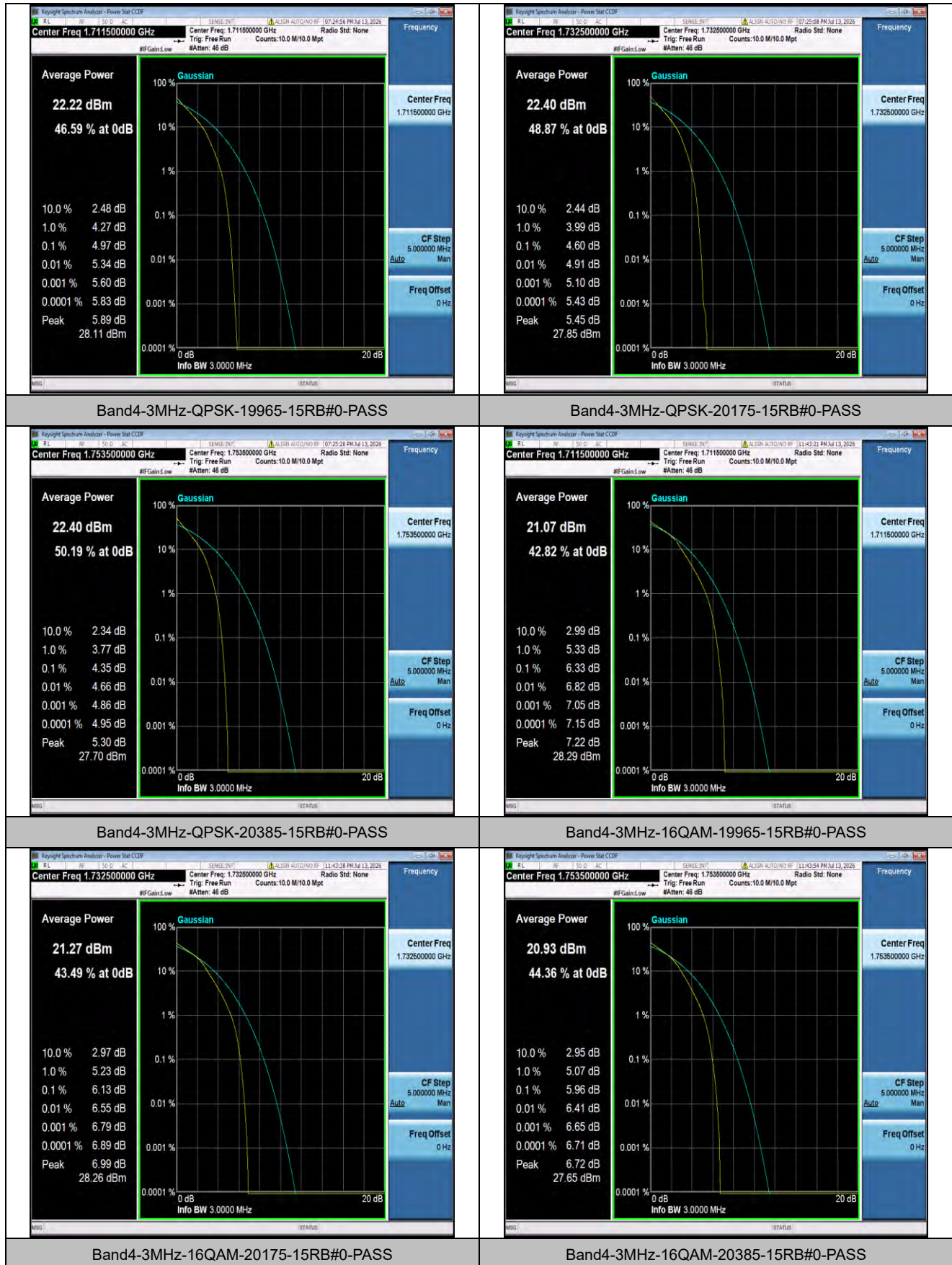
Peak-to-Average Ratio(CCDF)

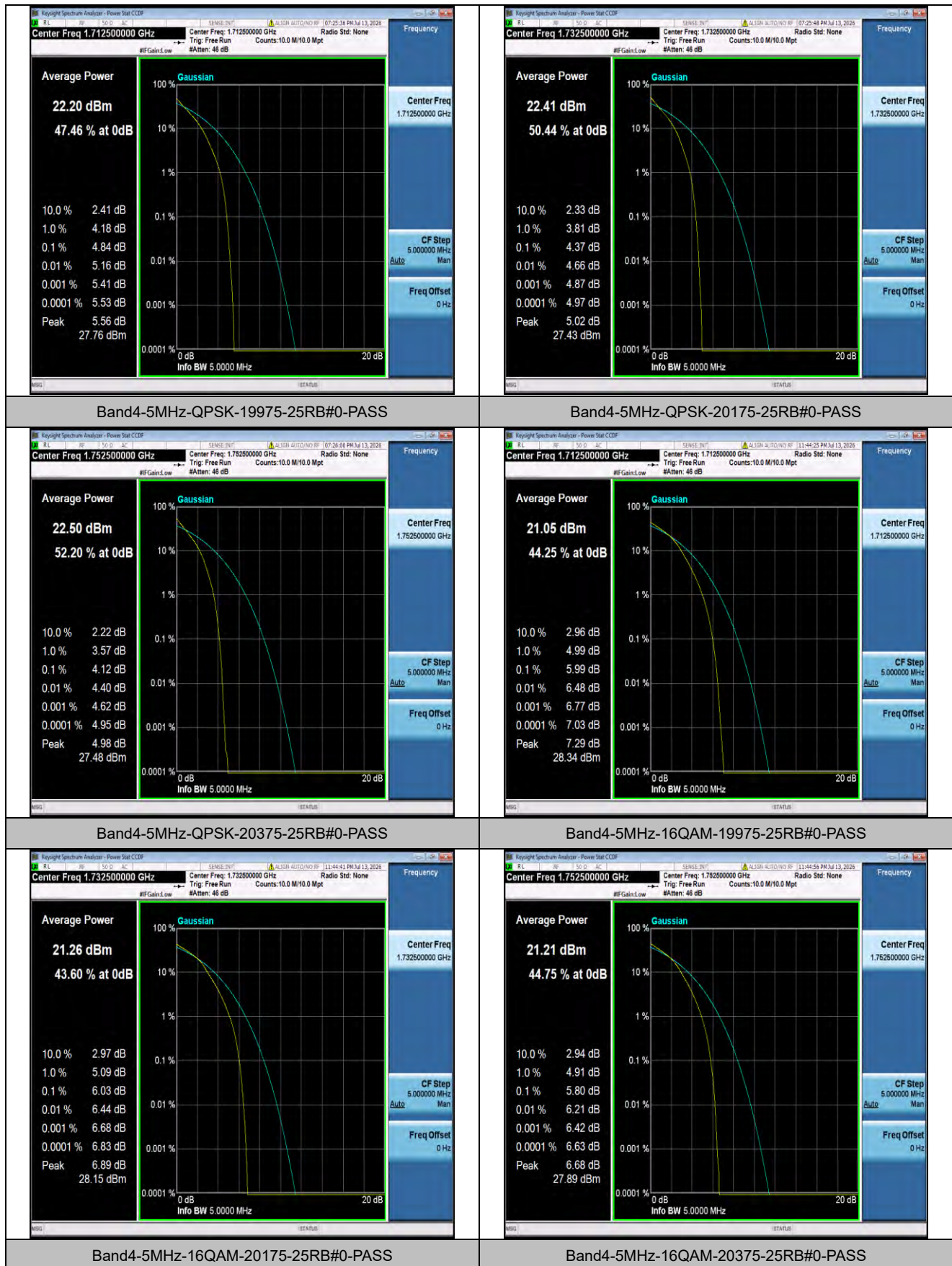
Test Result

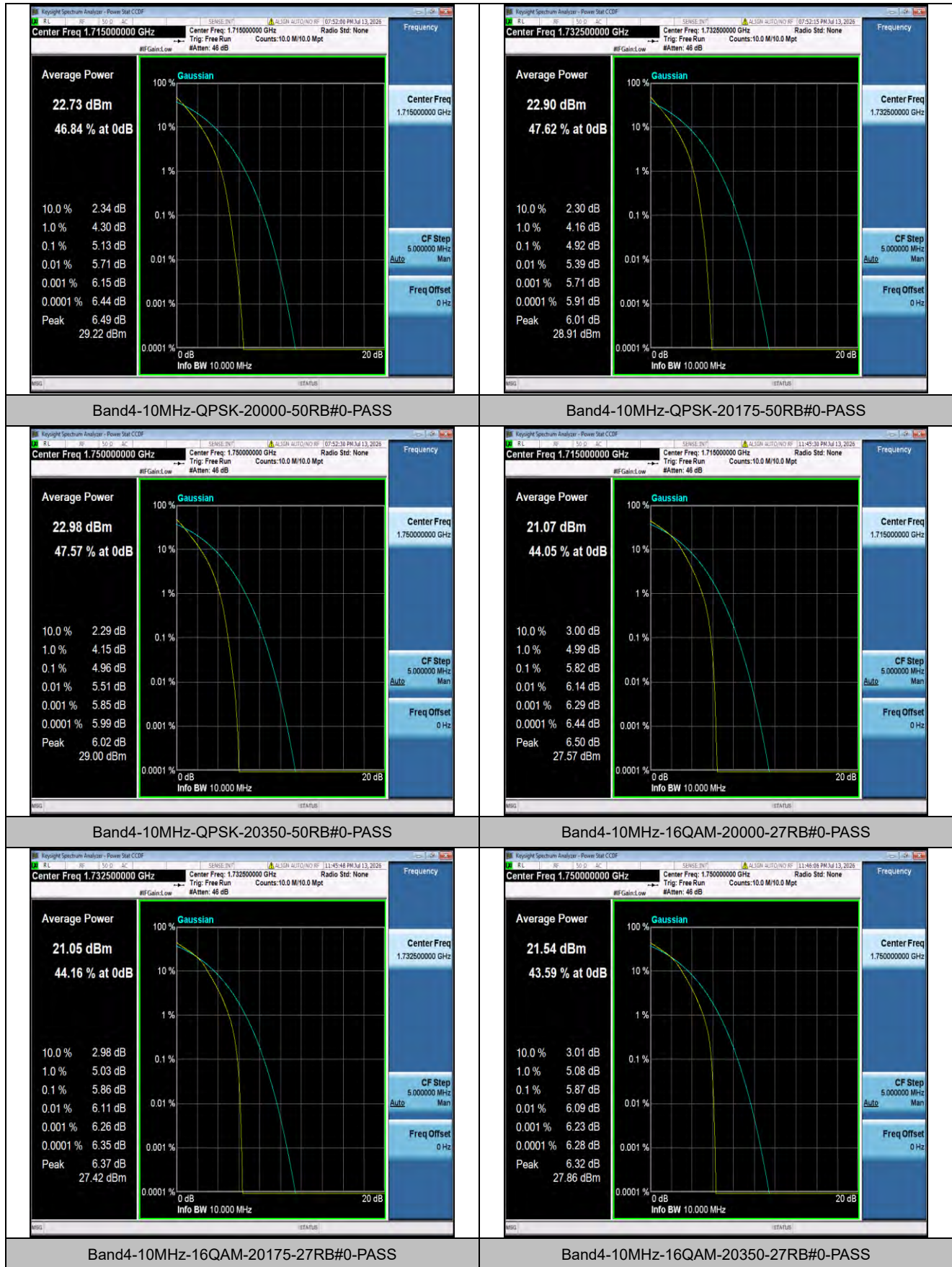
Band	Bandwidth	Modulation	Channel	RB Configuration	Result (dB)	Limit (dB)	Verdict
Band4	1.4MHz	QPSK	19957	6RB#0	4.80	13	PASS
Band4	1.4MHz	QPSK	20175	6RB#0	4.89	13	PASS
Band4	1.4MHz	QPSK	20393	6RB#0	4.15	13	PASS
Band4	1.4MHz	16QAM	19957	6RB#0	6.27	13	PASS
Band4	1.4MHz	16QAM	20175	6RB#0	6.02	13	PASS
Band4	1.4MHz	16QAM	20393	6RB#0	5.70	13	PASS
Band4	3MHz	QPSK	19965	15RB#0	4.97	13	PASS
Band4	3MHz	QPSK	20175	15RB#0	4.60	13	PASS
Band4	3MHz	QPSK	20385	15RB#0	4.35	13	PASS
Band4	3MHz	16QAM	19965	15RB#0	6.33	13	PASS
Band4	3MHz	16QAM	20175	15RB#0	6.13	13	PASS
Band4	3MHz	16QAM	20385	15RB#0	5.96	13	PASS
Band4	5MHz	QPSK	19975	25RB#0	4.84	13	PASS
Band4	5MHz	QPSK	20175	25RB#0	4.37	13	PASS
Band4	5MHz	QPSK	20375	25RB#0	4.12	13	PASS
Band4	5MHz	16QAM	19975	25RB#0	5.99	13	PASS
Band4	5MHz	16QAM	20175	25RB#0	6.03	13	PASS
Band4	5MHz	16QAM	20375	25RB#0	5.80	13	PASS
Band4	10MHz	QPSK	20000	50RB#0	5.13	13	PASS
Band4	10MHz	QPSK	20175	50RB#0	4.92	13	PASS
Band4	10MHz	QPSK	20350	50RB#0	4.96	13	PASS
Band4	10MHz	16QAM	20000	27RB#0	5.82	13	PASS
Band4	10MHz	16QAM	20175	27RB#0	5.86	13	PASS
Band4	10MHz	16QAM	20350	27RB#0	5.87	13	PASS
Band4	15MHz	QPSK	20025	75RB#0	5.03	13	PASS
Band4	15MHz	QPSK	20175	75RB#0	5.00	13	PASS
Band4	15MHz	QPSK	20325	75RB#0	5.02	13	PASS
Band4	15MHz	16QAM	20025	27RB#0	5.87	13	PASS
Band4	15MHz	16QAM	20175	27RB#0	6.17	13	PASS
Band4	15MHz	16QAM	20325	27RB#0	5.90	13	PASS
Band4	20MHz	QPSK	20050	100RB#0	4.84	13	PASS
Band4	20MHz	QPSK	20175	100RB#0	4.99	13	PASS
Band4	20MHz	QPSK	20300	100RB#0	5.11	13	PASS
Band4	20MHz	16QAM	20050	27RB#0	5.96	13	PASS
Band4	20MHz	16QAM	20175	27RB#0	6.31	13	PASS
Band4	20MHz	16QAM	20300	27RB#0	5.76	13	PASS

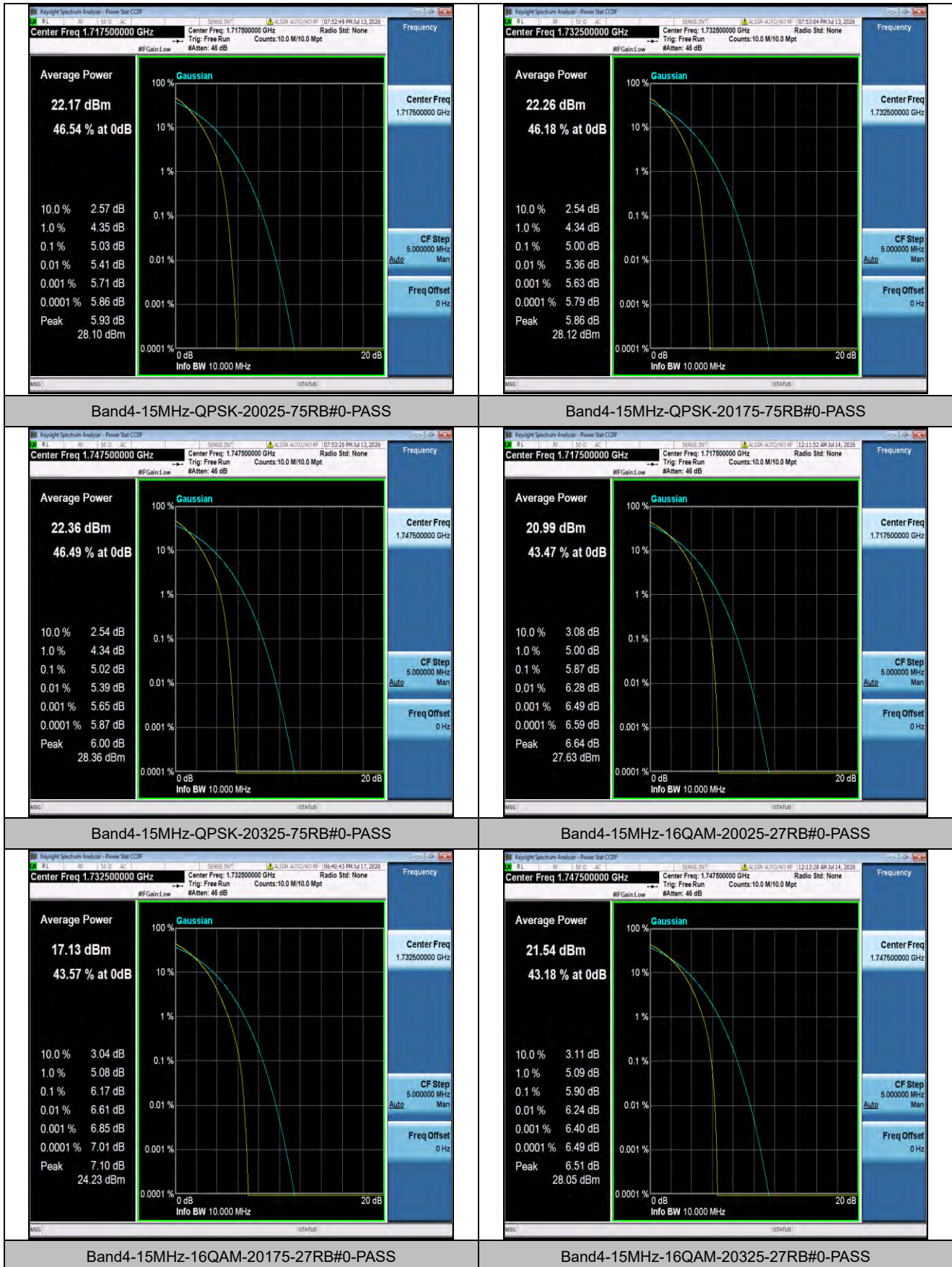
Test Graphs

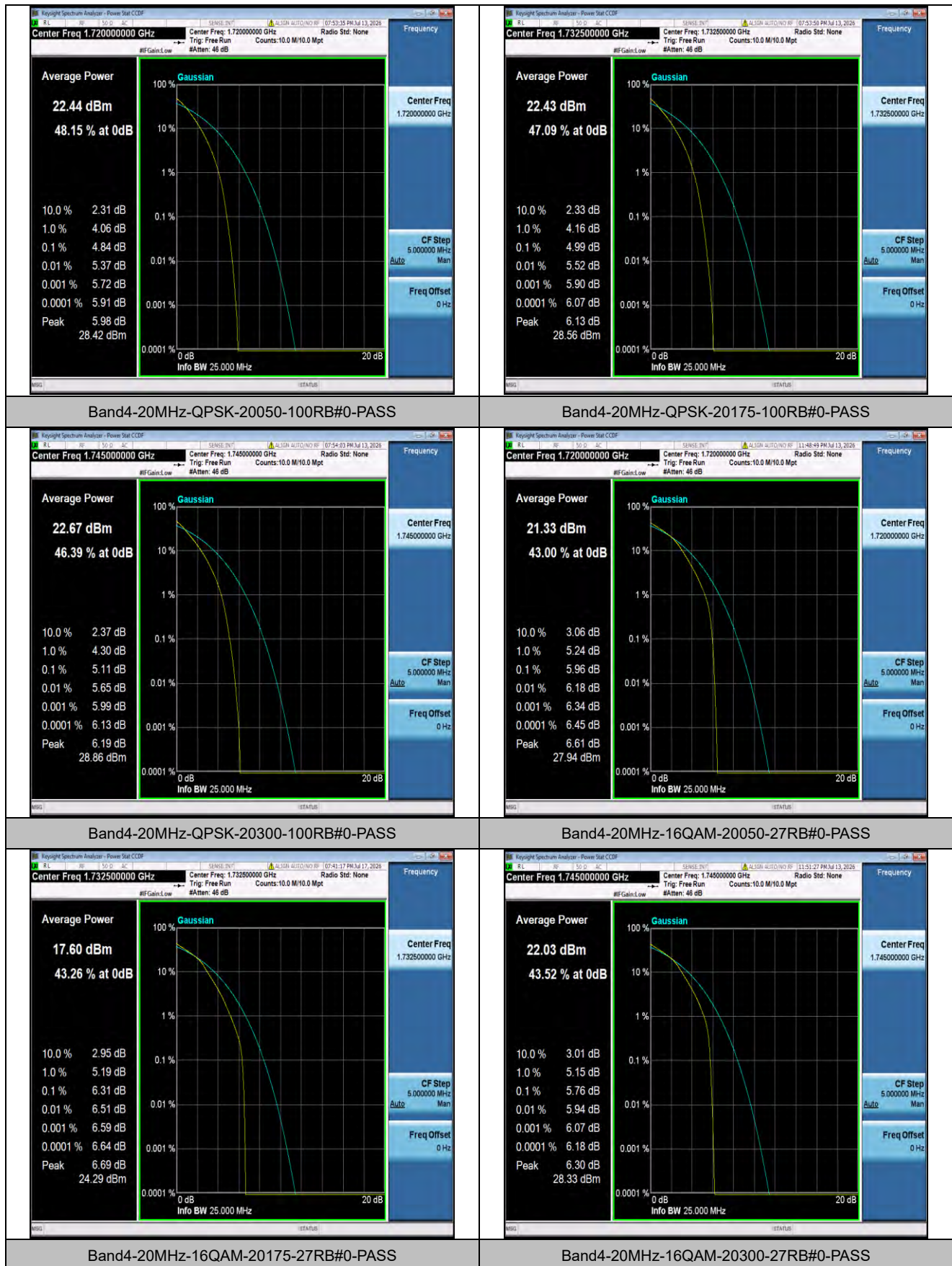












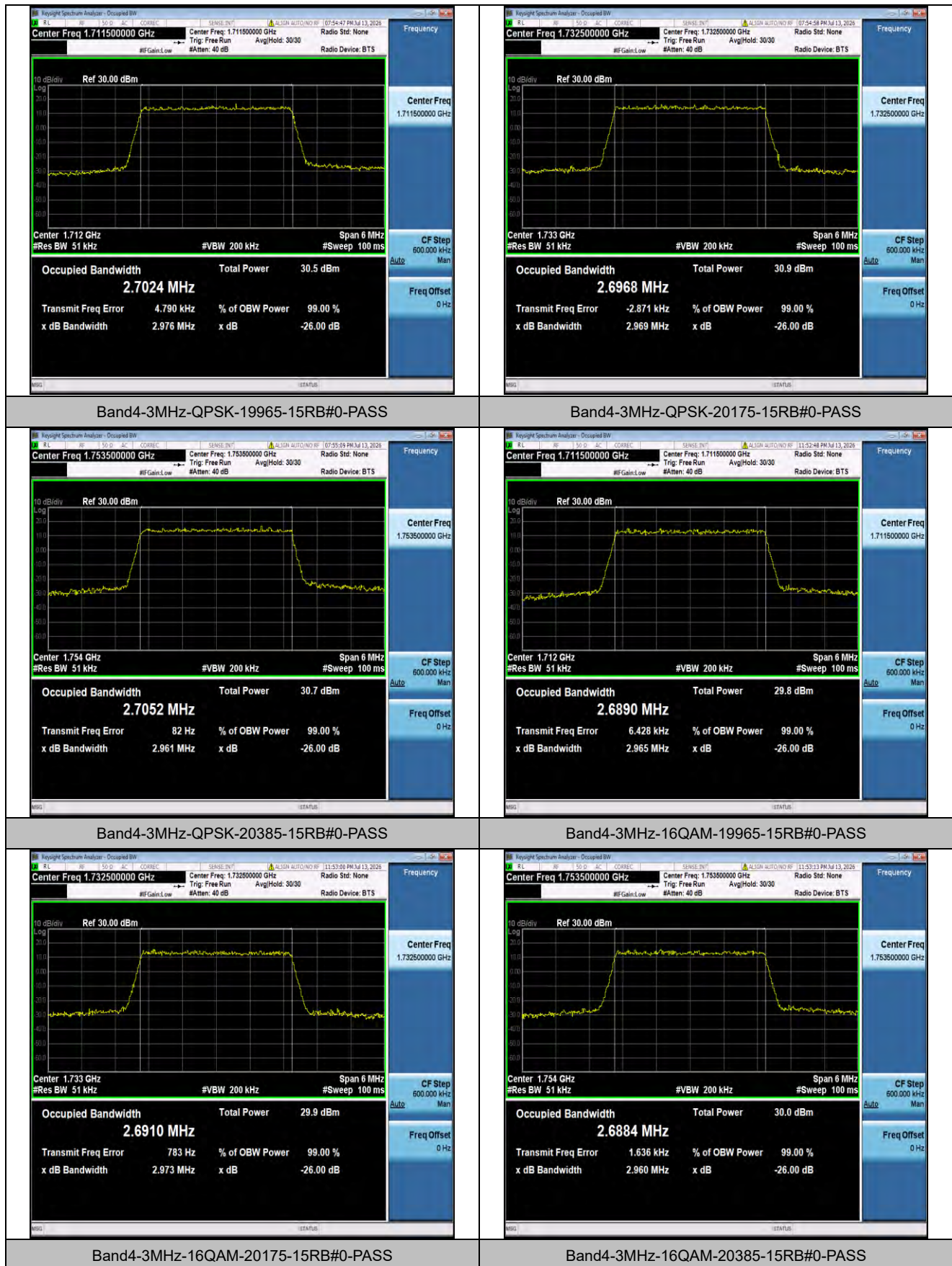
26dB Bandwidth and Occupied Bandwidth

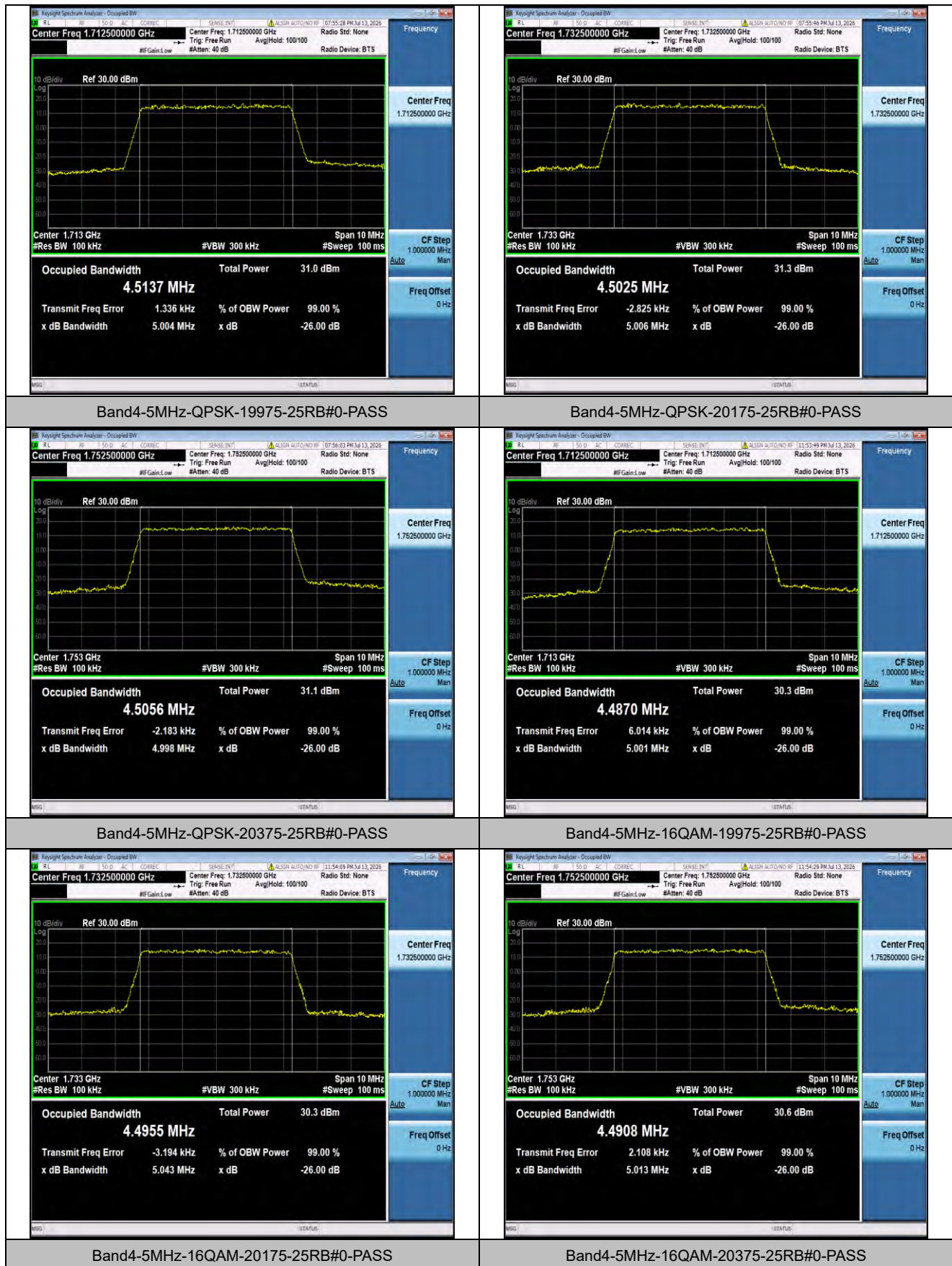
Test Result

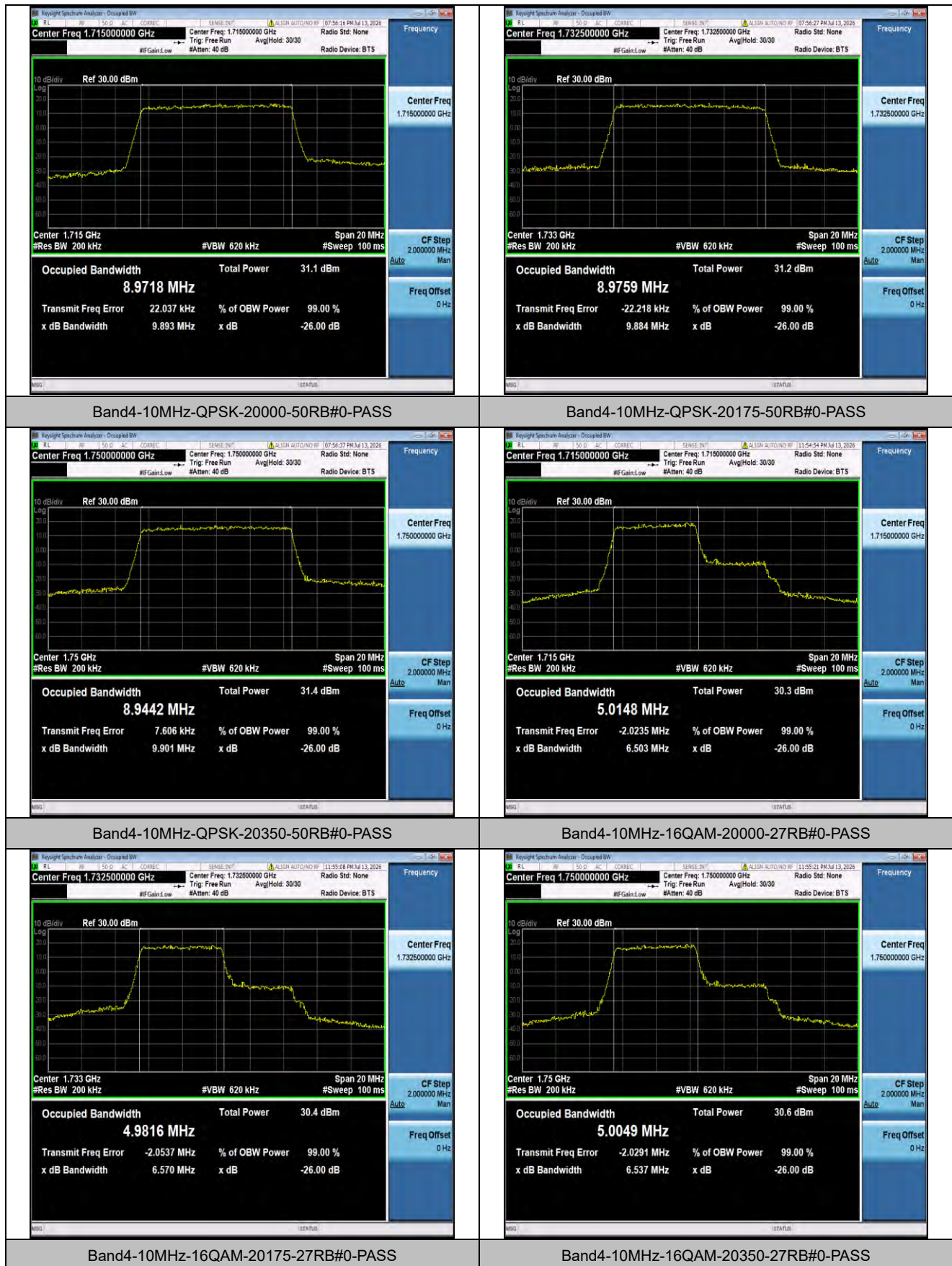
Band	Bandwidth	Modulation	Channel	RB Configuration	OBW (MHz)	26dB EBW (MHz)	Verdict
Band4	1.4MHz	QPSK	19957	6RB#0	1.0953	1.293	PASS
Band4	1.4MHz	QPSK	20175	6RB#0	1.0951	1.281	PASS
Band4	1.4MHz	QPSK	20393	6RB#0	1.1010	1.326	PASS
Band4	1.4MHz	16QAM	19957	6RB#0	1.0957	1.279	PASS
Band4	1.4MHz	16QAM	20175	6RB#0	1.0933	1.293	PASS
Band4	1.4MHz	16QAM	20393	6RB#0	1.0974	1.294	PASS
Band4	3MHz	QPSK	19965	15RB#0	2.7024	2.976	PASS
Band4	3MHz	QPSK	20175	15RB#0	2.6968	2.969	PASS
Band4	3MHz	QPSK	20385	15RB#0	2.7052	2.961	PASS
Band4	3MHz	16QAM	19965	15RB#0	2.6890	2.965	PASS
Band4	3MHz	16QAM	20175	15RB#0	2.6910	2.973	PASS
Band4	3MHz	16QAM	20385	15RB#0	2.6884	2.960	PASS
Band4	5MHz	QPSK	19975	25RB#0	4.5137	5.004	PASS
Band4	5MHz	QPSK	20175	25RB#0	4.5025	5.006	PASS
Band4	5MHz	QPSK	20375	25RB#0	4.5056	4.998	PASS
Band4	5MHz	16QAM	19975	25RB#0	4.4870	5.001	PASS
Band4	5MHz	16QAM	20175	25RB#0	4.4955	5.043	PASS
Band4	5MHz	16QAM	20375	25RB#0	4.4908	5.013	PASS
Band4	10MHz	QPSK	20000	50RB#0	8.9718	9.893	PASS
Band4	10MHz	QPSK	20175	50RB#0	8.9759	9.884	PASS
Band4	10MHz	QPSK	20350	50RB#0	8.9442	9.901	PASS
Band4	10MHz	16QAM	20000	27RB#0	5.0148	6.503	PASS
Band4	10MHz	16QAM	20175	27RB#0	4.9816	6.570	PASS
Band4	10MHz	16QAM	20350	27RB#0	5.0049	6.537	PASS
Band4	15MHz	QPSK	20025	75RB#0	13.419	14.69	PASS
Band4	15MHz	QPSK	20175	75RB#0	13.451	14.76	PASS
Band4	15MHz	QPSK	20325	75RB#0	13.395	14.64	PASS
Band4	15MHz	16QAM	20025	27RB#0	5.1099	6.078	PASS
Band4	15MHz	16QAM	20175	27RB#0	5.1401	7.293	PASS
Band4	15MHz	16QAM	20325	27RB#0	5.0979	6.053	PASS
Band4	20MHz	QPSK	20050	100RB#0	17.843	19.28	PASS
Band4	20MHz	QPSK	20175	100RB#0	17.948	19.68	PASS
Band4	20MHz	QPSK	20300	100RB#0	17.886	19.38	PASS
Band4	20MHz	16QAM	20050	27RB#0	5.2953	6.475	PASS
Band4	20MHz	16QAM	20175	27RB#0	9.4365	10.74	PASS
Band4	20MHz	16QAM	20300	27RB#0	5.3184	6.573	PASS

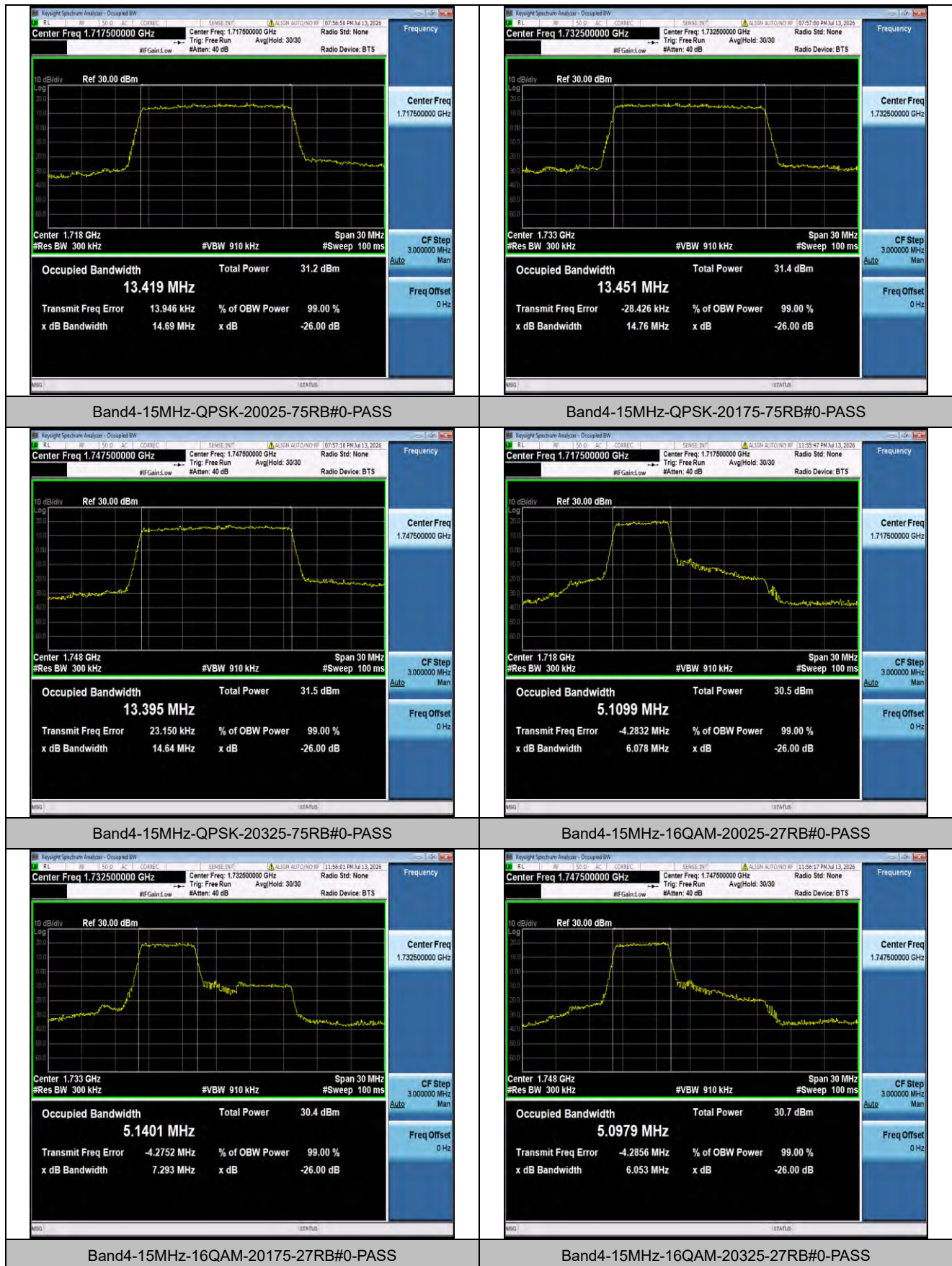
Test Graphs

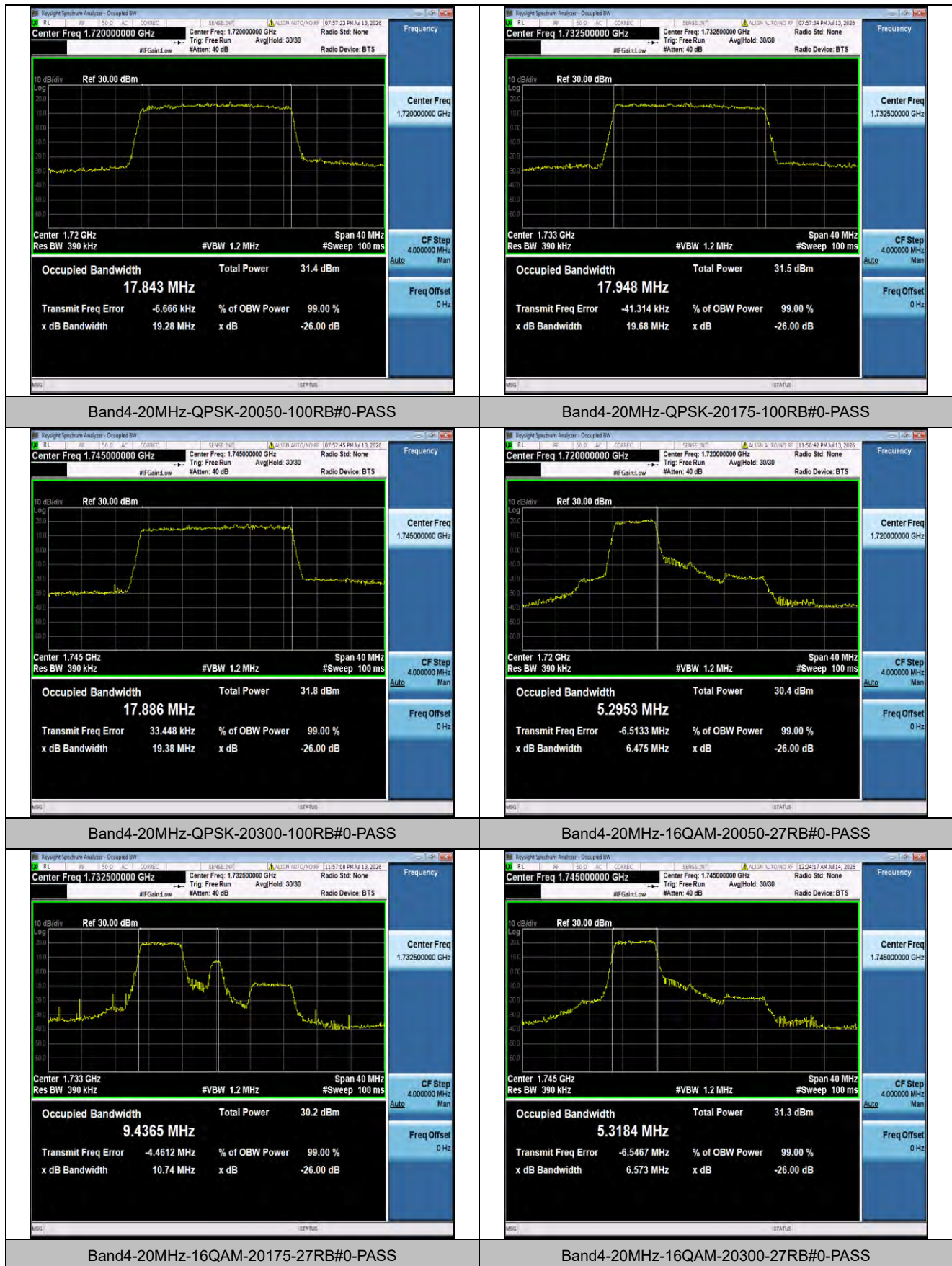






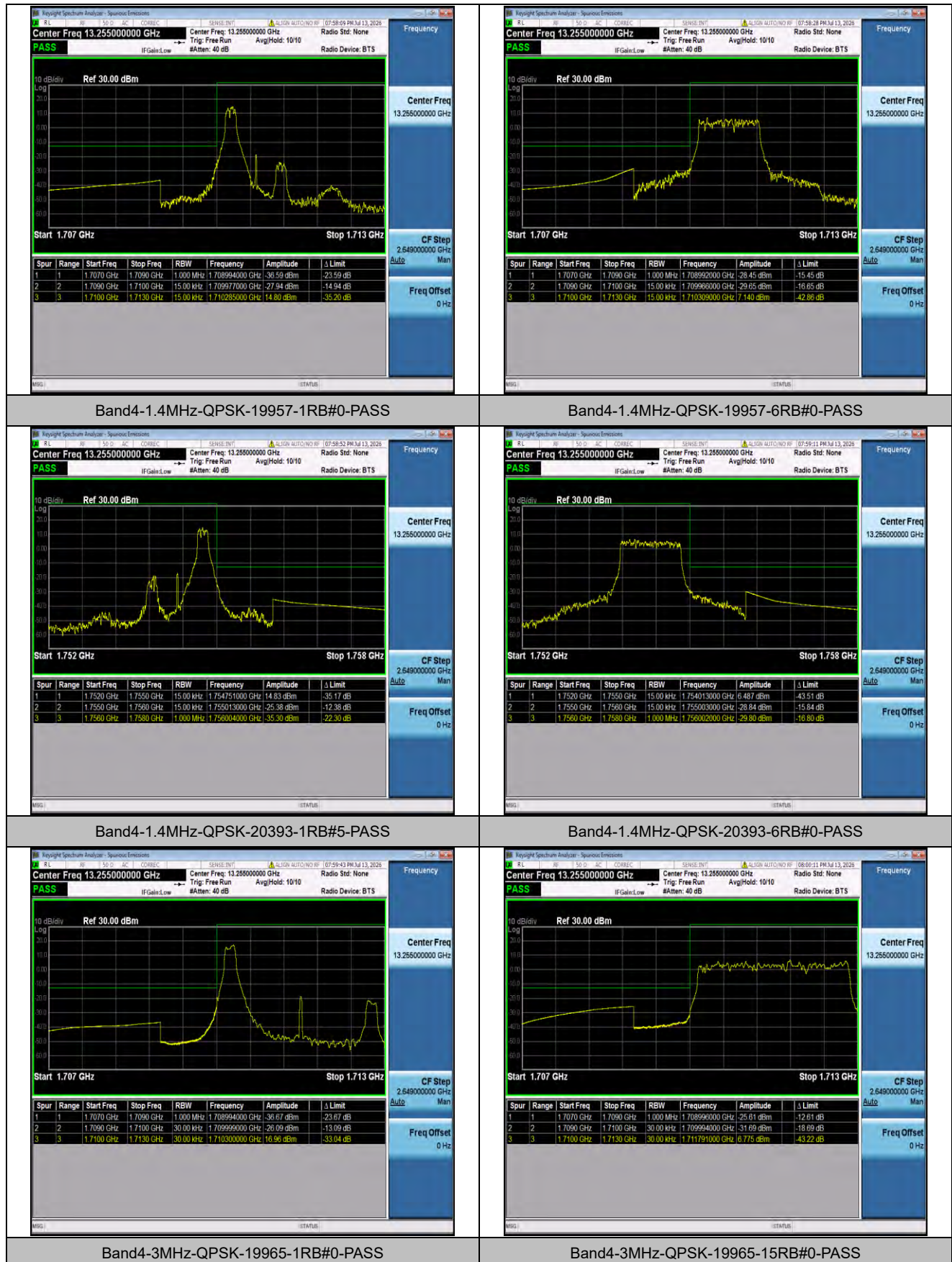


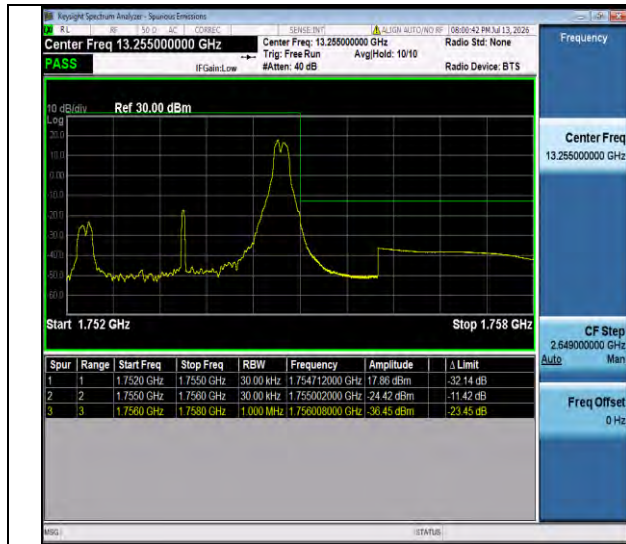




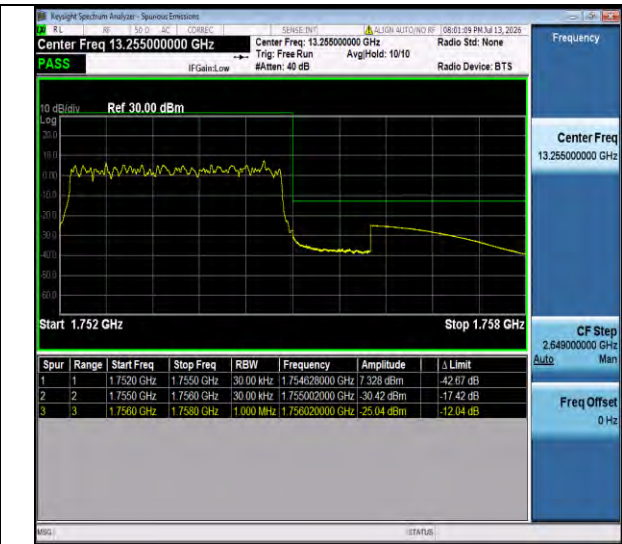
Band Edge

Test Graphs

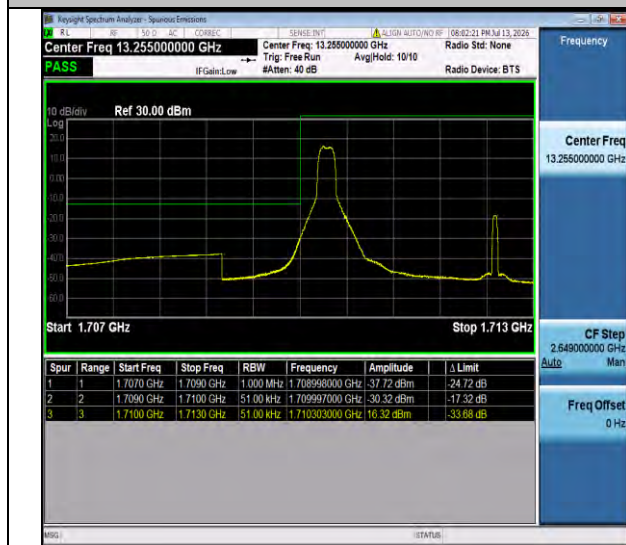




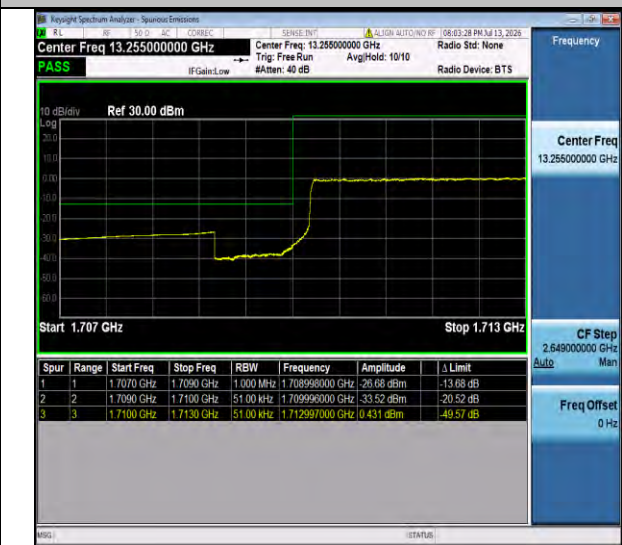
Band4-3MHz-QPSK-20385-1RB#14-PASS



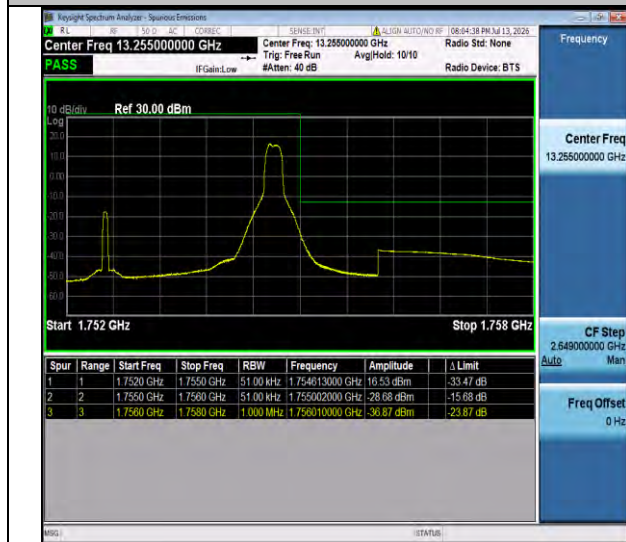
Band4-3MHz-QPSK-20385-15RB#0-PASS



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



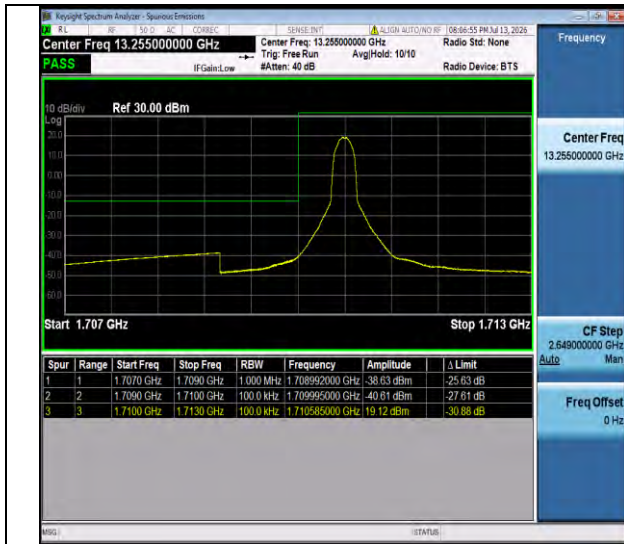
Band4-5MHz-QPSK-19975-25RB#0-PASS



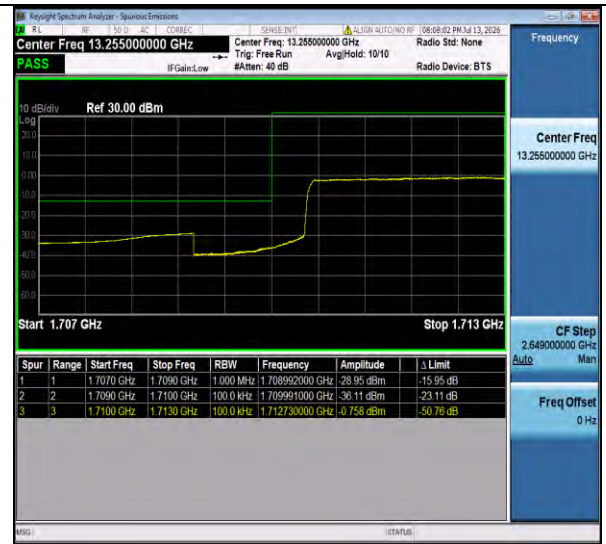
Band4-5MHz-QPSK-20375-1RB#24-PASS



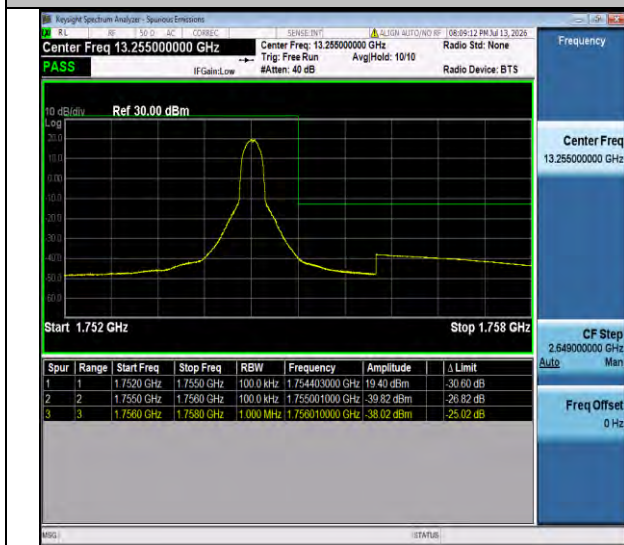
Band4-5MHz-QPSK-20375-25RB#0-PASS



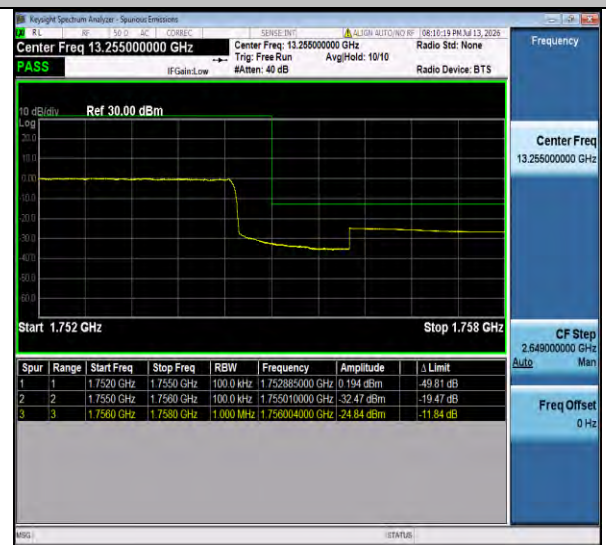
Band4-10MHz-QPSK-20000-1RB#0-PASS



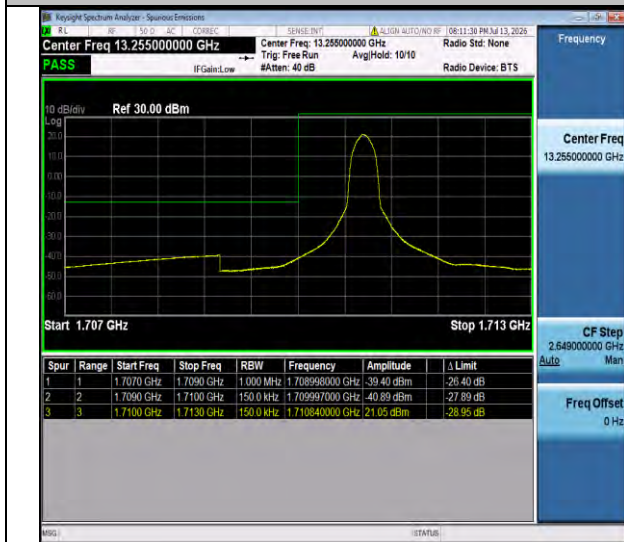
Band4-10MHz-QPSK-20000-50RB#0-PASS



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



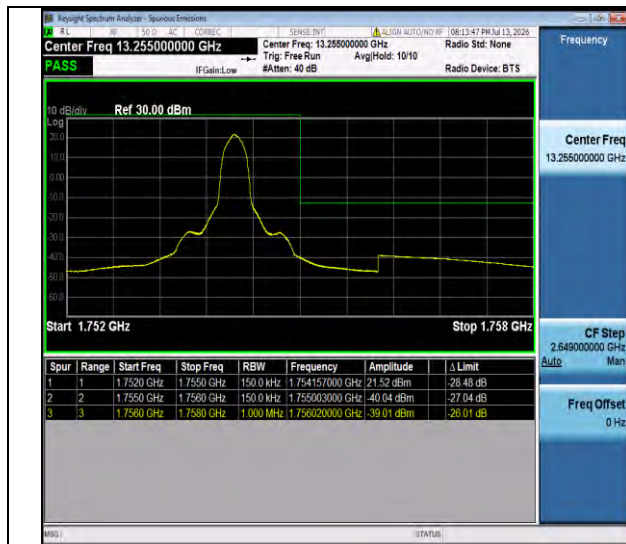
Band4-10MHz-QPSK-20350-50RB#0-PASS



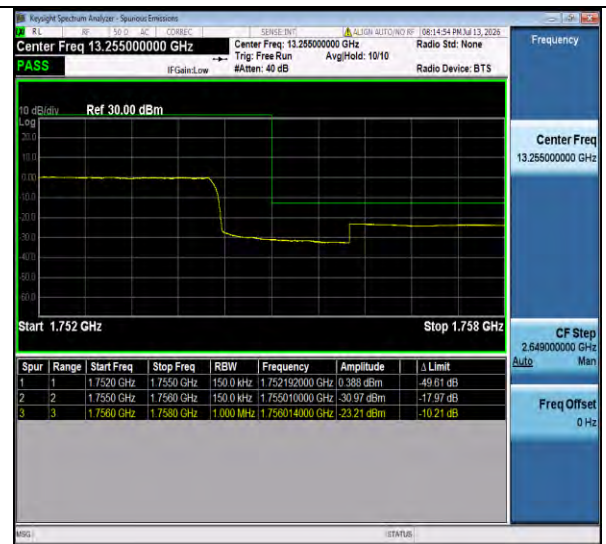
Band4-15MHz-QPSK-20025-1RB#0-PASS



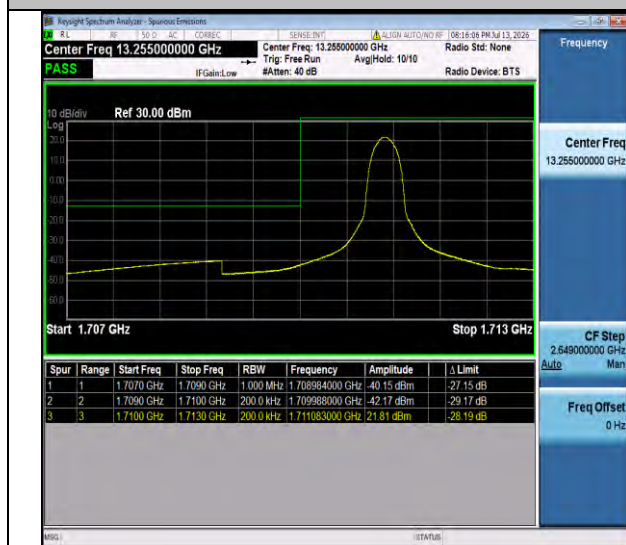
Band4-15MHz-QPSK-20025-75RB#0-PASS



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



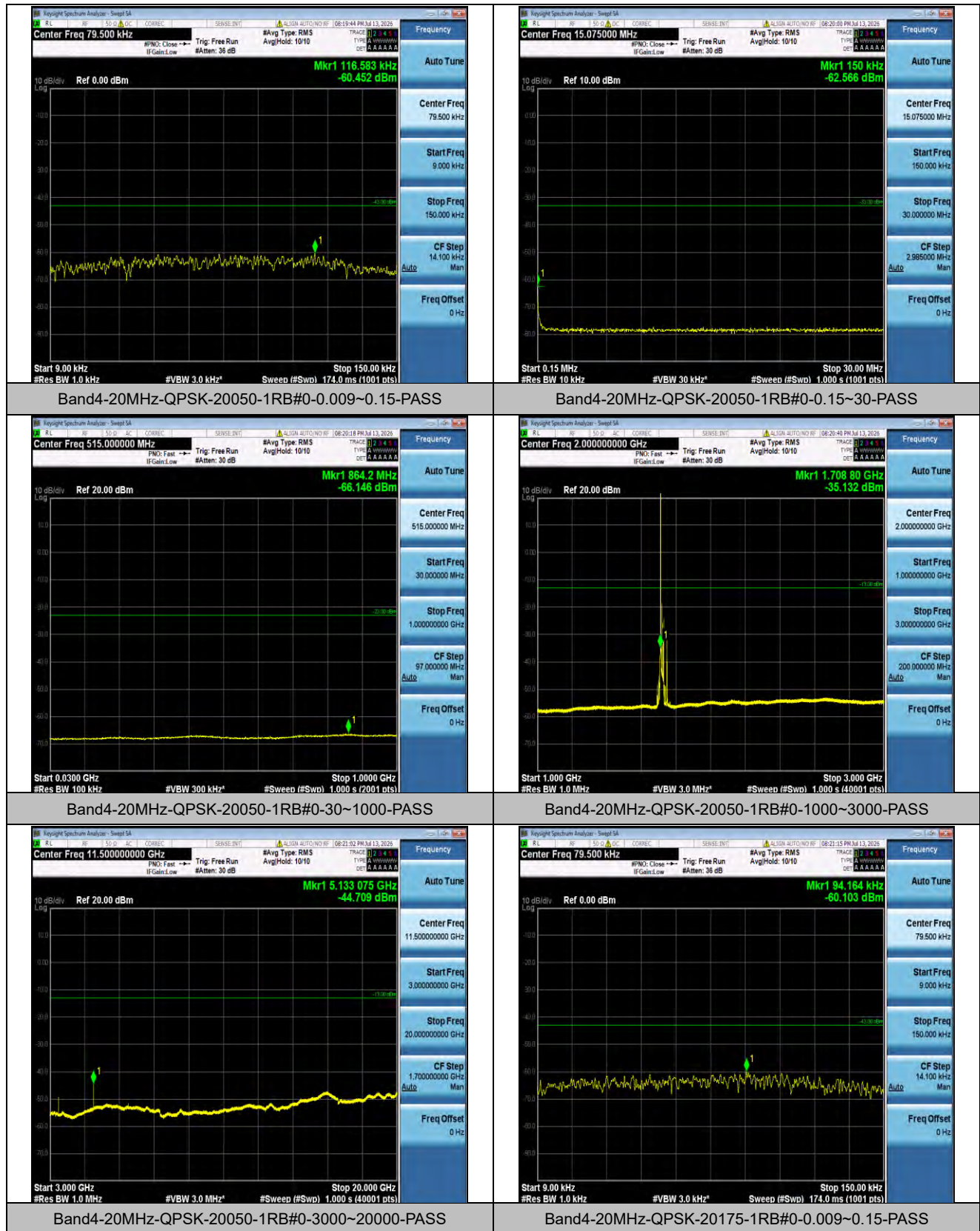
Band4-20MHz-QPSK-20300-1RB#99-PASS

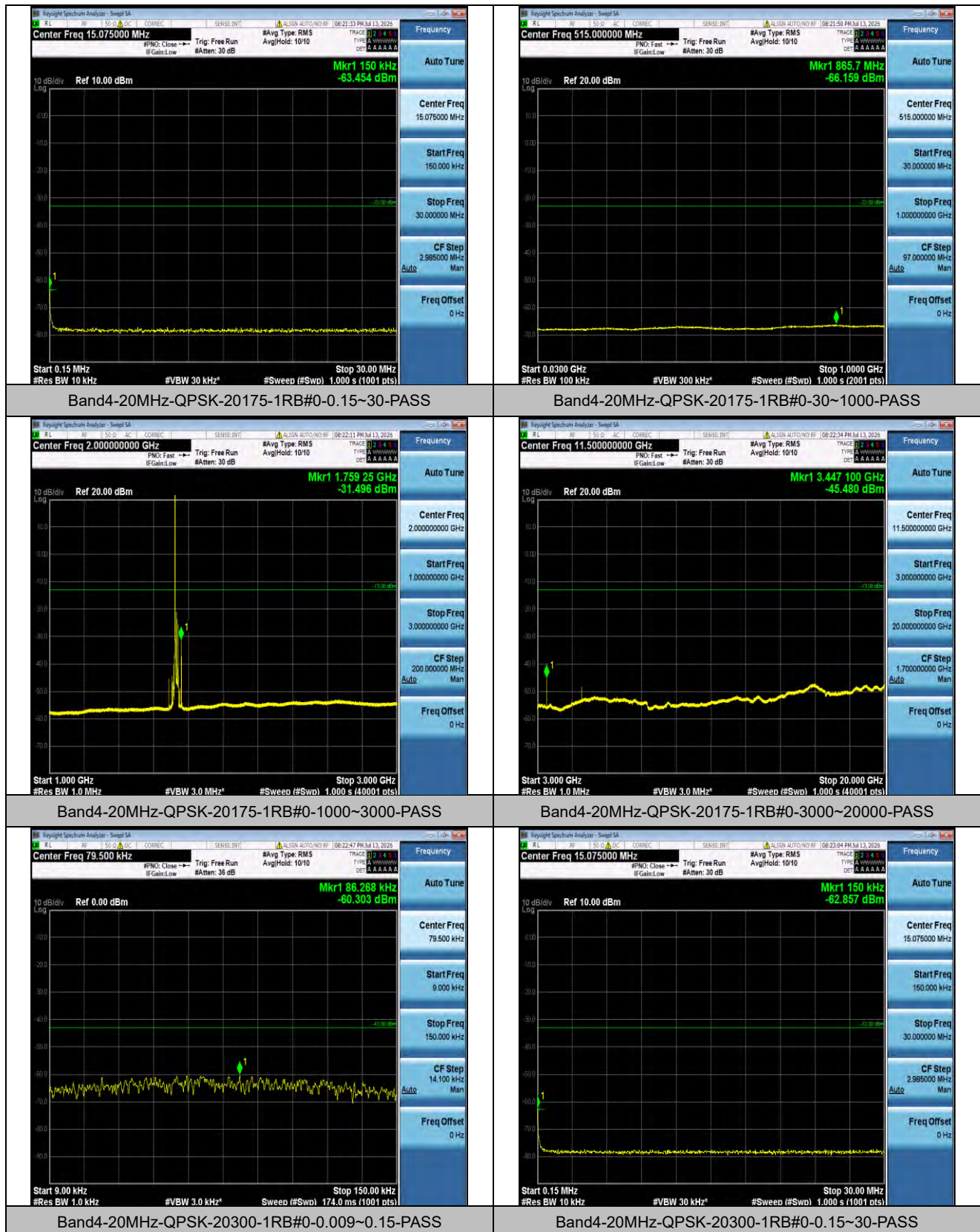


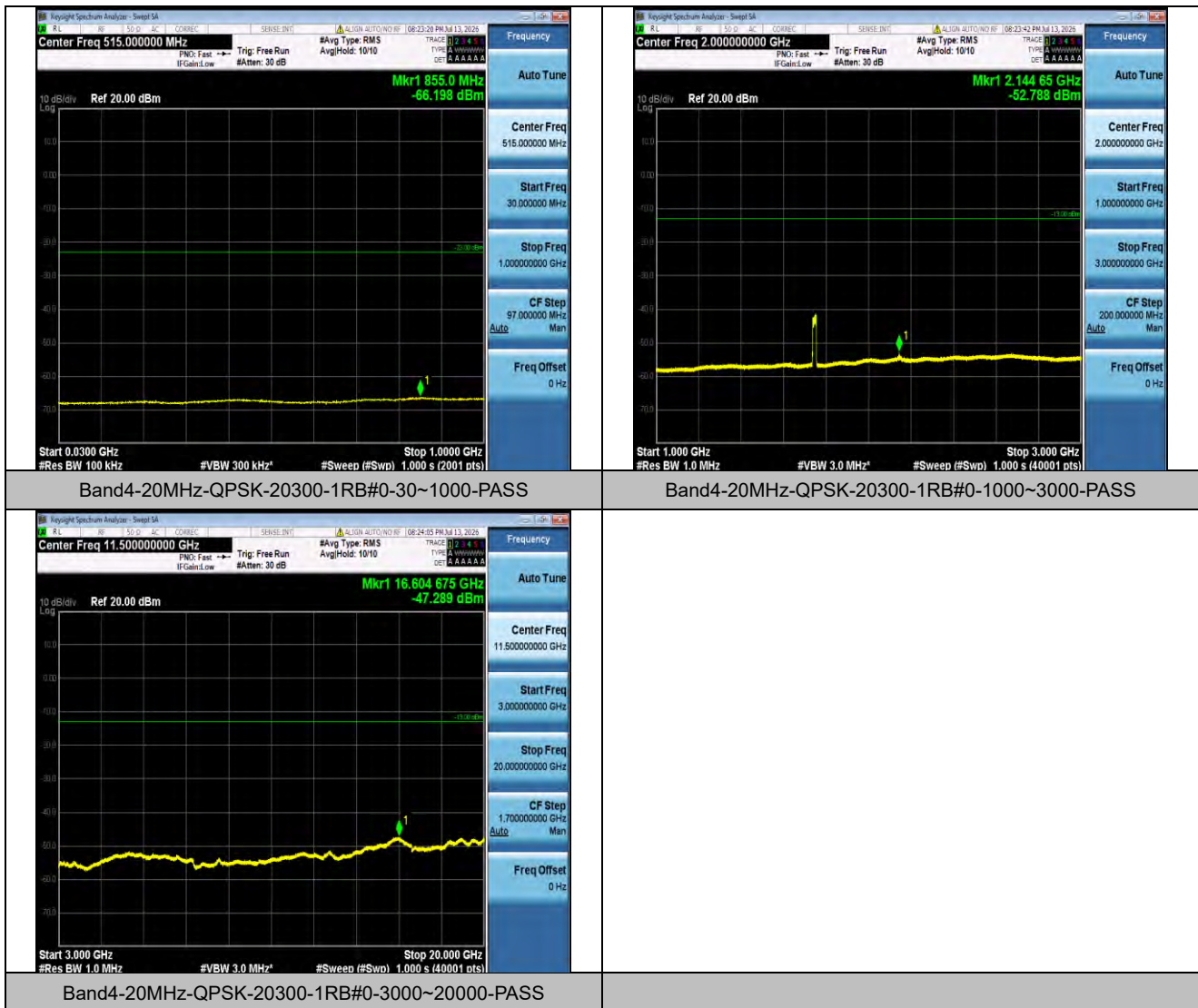
Band4-20MHz-QPSK-20300-100RB#0-PASS

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	4.20	0.002424	PASS
Band4	20MHz	QPSK	20175	100RB#0	VL	NT	4.70	0.002713	PASS
Band4	20MHz	QPSK	20175	100RB#0	VH	NT	6.48	0.003740	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	3.12	0.001801	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	-20	5.28	0.003048	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	-10	3.67	0.002118	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	0	4.77	0.002753	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	10	4.51	0.002603	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	20	4.38	0.002528	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	30	5.16	0.002978	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	40	6.20	0.003579	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	50	4.70	0.002713	PASS

~The End~