

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	22.86	25.86	30	PASS
Band4	1.4MHz	QPSK	19957	1RB#2	23.23	26.23	30	PASS
Band4	1.4MHz	QPSK	19957	1RB#5	23.26	26.26	30	PASS
Band4	1.4MHz	QPSK	19957	6RB#0	22.56	25.56	30	PASS
Band4	1.4MHz	16QAM	19957	1RB#0	21.55	24.55	30	PASS
Band4	1.4MHz	16QAM	19957	1RB#2	22.23	25.23	30	PASS
Band4	1.4MHz	16QAM	19957	1RB#5	22.15	25.15	30	PASS
Band4	1.4MHz	16QAM	19957	6RB#0	21.3	24.3	30	PASS
Band4	1.4MHz	QPSK	20175	1RB#0	23.61	26.61	30	PASS
Band4	1.4MHz	QPSK	20175	1RB#2	23.66	26.66	30	PASS
Band4	1.4MHz	QPSK	20175	1RB#5	23.53	26.53	30	PASS
Band4	1.4MHz	QPSK	20175	6RB#0	22.94	25.94	30	PASS
Band4	1.4MHz	16QAM	20175	1RB#0	22.04	25.04	30	PASS
Band4	1.4MHz	16QAM	20175	1RB#2	22.32	25.32	30	PASS
Band4	1.4MHz	16QAM	20175	1RB#5	22.44	25.44	30	PASS
Band4	1.4MHz	16QAM	20175	6RB#0	21.73	24.73	30	PASS
Band4	1.4MHz	QPSK	20393	1RB#0	23.42	26.42	30	PASS
Band4	1.4MHz	QPSK	20393	1RB#2	23.42	26.42	30	PASS
Band4	1.4MHz	QPSK	20393	1RB#5	23.36	26.36	30	PASS
Band4	1.4MHz	QPSK	20393	6RB#0	22.54	25.54	30	PASS
Band4	1.4MHz	16QAM	20393	1RB#0	21.79	24.79	30	PASS
Band4	1.4MHz	16QAM	20393	1RB#2	22.09	25.09	30	PASS
Band4	1.4MHz	16QAM	20393	1RB#5	22.07	25.07	30	PASS
Band4	1.4MHz	16QAM	20393	6RB#0	21.5	24.5	30	PASS
Band4	3MHz	QPSK	19965	1RB#0	22.81	25.81	30	PASS
Band4	3MHz	QPSK	19965	1RB#8	23.24	26.24	30	PASS
Band4	3MHz	QPSK	19965	1RB#14	23.04	26.04	30	PASS
Band4	3MHz	QPSK	19965	15RB#0	22.46	25.46	30	PASS
Band4	3MHz	16QAM	19965	1RB#0	21.59	24.59	30	PASS
Band4	3MHz	16QAM	19965	1RB#8	21.89	24.89	30	PASS
Band4	3MHz	16QAM	19965	1RB#14	22.1	25.1	30	PASS
Band4	3MHz	16QAM	19965	15RB#0	21.35	24.35	30	PASS
Band4	3MHz	QPSK	20175	1RB#0	23.41	26.41	30	PASS
Band4	3MHz	QPSK	20175	1RB#8	23.72	26.72	30	PASS
Band4	3MHz	QPSK	20175	1RB#14	23.51	26.51	30	PASS
Band4	3MHz	QPSK	20175	15RB#0	22.89	25.89	30	PASS

Band4	3MHz	16QAM	20175	1RB#0	22.13	25.13	30	PASS
Band4	3MHz	16QAM	20175	1RB#8	22.42	25.42	30	PASS
Band4	3MHz	16QAM	20175	1RB#14	22.39	25.39	30	PASS
Band4	3MHz	16QAM	20175	15RB#0	21.66	24.66	30	PASS
Band4	3MHz	QPSK	20385	1RB#0	23.39	26.39	30	PASS
Band4	3MHz	QPSK	20385	1RB#8	23.6	26.6	30	PASS
Band4	3MHz	QPSK	20385	1RB#14	23.36	26.36	30	PASS
Band4	3MHz	QPSK	20385	15RB#0	22.69	25.69	30	PASS
Band4	3MHz	16QAM	20385	1RB#0	21.96	24.96	30	PASS
Band4	3MHz	16QAM	20385	1RB#8	22.12	25.12	30	PASS
Band4	3MHz	16QAM	20385	1RB#14	22.43	25.43	30	PASS
Band4	3MHz	16QAM	20385	15RB#0	21.56	24.56	30	PASS
Band4	5MHz	QPSK	19975	1RB#0	23.22	26.22	30	PASS
Band4	5MHz	QPSK	19975	1RB#12	23.4	26.4	30	PASS
Band4	5MHz	QPSK	19975	1RB#24	23.52	26.52	30	PASS
Band4	5MHz	QPSK	19975	25RB#0	22.72	25.72	30	PASS
Band4	5MHz	16QAM	19975	1RB#0	22.15	25.15	30	PASS
Band4	5MHz	16QAM	19975	1RB#12	22.3	25.3	30	PASS
Band4	5MHz	16QAM	19975	1RB#24	22.58	25.58	30	PASS
Band4	5MHz	16QAM	19975	25RB#0	21.55	24.55	30	PASS
Band4	5MHz	QPSK	20175	1RB#0	23.8	26.8	30	PASS
Band4	5MHz	QPSK	20175	1RB#12	23.73	26.73	30	PASS
Band4	5MHz	QPSK	20175	1RB#24	23.74	26.74	30	PASS
Band4	5MHz	QPSK	20175	25RB#0	23	26	30	PASS
Band4	5MHz	16QAM	20175	1RB#0	22.21	25.21	30	PASS
Band4	5MHz	16QAM	20175	1RB#12	22.18	25.18	30	PASS
Band4	5MHz	16QAM	20175	1RB#24	22.96	25.96	30	PASS
Band4	5MHz	16QAM	20175	25RB#0	21.95	24.95	30	PASS
Band4	5MHz	QPSK	20375	1RB#0	23.77	26.77	30	PASS
Band4	5MHz	QPSK	20375	1RB#12	23.58	26.58	30	PASS
Band4	5MHz	QPSK	20375	1RB#24	23.72	26.72	30	PASS
Band4	5MHz	QPSK	20375	25RB#0	22.86	25.86	30	PASS
Band4	5MHz	16QAM	20375	1RB#0	22.35	25.35	30	PASS
Band4	5MHz	16QAM	20375	1RB#12	22.03	25.03	30	PASS
Band4	5MHz	16QAM	20375	1RB#24	22.71	25.71	30	PASS
Band4	5MHz	16QAM	20375	25RB#0	21.82	24.82	30	PASS
Band4	10MHz	QPSK	20000	1RB#0	23.31	26.31	30	PASS
Band4	10MHz	QPSK	20000	1RB#24	23.37	26.37	30	PASS
Band4	10MHz	QPSK	20000	1RB#49	23.74	26.74	30	PASS
Band4	10MHz	QPSK	20000	50RB#0	22.8	25.8	30	PASS
Band4	10MHz	16QAM	20000	1RB#0	22.43	25.43	30	PASS
Band4	10MHz	16QAM	20000	1RB#24	22.5	25.5	30	PASS
Band4	10MHz	16QAM	20000	1RB#49	22.82	25.82	30	PASS
Band4	10MHz	16QAM	20000	27RB#0	21.68	24.68	30	PASS
Band4	10MHz	QPSK	20175	1RB#0	23.68	26.68	30	PASS

Band4	10MHz	QPSK	20175	1RB#24	23.71	26.71	30	PASS
Band4	10MHz	QPSK	20175	1RB#49	23.76	26.76	30	PASS
Band4	10MHz	QPSK	20175	50RB#0	23.02	26.02	30	PASS
Band4	10MHz	16QAM	20175	1RB#0	22.14	25.14	30	PASS
Band4	10MHz	16QAM	20175	1RB#24	22.24	25.24	30	PASS
Band4	10MHz	16QAM	20175	1RB#49	22.98	25.98	30	PASS
Band4	10MHz	16QAM	20175	27RB#0	21.84	24.84	30	PASS
Band4	10MHz	QPSK	20350	1RB#0	23.78	26.78	30	PASS
Band4	10MHz	QPSK	20350	1RB#24	23.59	26.59	30	PASS
Band4	10MHz	QPSK	20350	1RB#49	23.65	26.65	30	PASS
Band4	10MHz	QPSK	20350	50RB#0	22.95	25.95	30	PASS
Band4	10MHz	16QAM	20350	1RB#0	22.06	25.06	30	PASS
Band4	10MHz	16QAM	20350	1RB#24	22.28	25.28	30	PASS
Band4	10MHz	16QAM	20350	1RB#49	22.68	25.68	30	PASS
Band4	10MHz	16QAM	20350	27RB#0	21.73	24.73	30	PASS
Band4	15MHz	QPSK	20025	1RB#0	23.16	26.16	30	PASS
Band4	15MHz	QPSK	20025	1RB#38	23.44	26.44	30	PASS
Band4	15MHz	QPSK	20025	1RB#74	23.62	26.62	30	PASS
Band4	15MHz	QPSK	20025	75RB#0	22.75	25.75	30	PASS
Band4	15MHz	16QAM	20025	1RB#0	21.84	24.84	30	PASS
Band4	15MHz	16QAM	20025	1RB#38	22.46	25.46	30	PASS
Band4	15MHz	16QAM	20025	1RB#74	22.56	25.56	30	PASS
Band4	15MHz	16QAM	20025	27RB#0	21.7	24.7	30	PASS
Band4	15MHz	QPSK	20175	1RB#0	23.74	26.74	30	PASS
Band4	15MHz	QPSK	20175	1RB#38	23.71	26.71	30	PASS
Band4	15MHz	QPSK	20175	1RB#74	23.6	26.6	30	PASS
Band4	15MHz	QPSK	20175	75RB#0	23.02	26.02	30	PASS
Band4	15MHz	16QAM	20175	1RB#0	22.14	25.14	30	PASS
Band4	15MHz	16QAM	20175	1RB#38	22.3	25.3	30	PASS
Band4	15MHz	16QAM	20175	1RB#74	22.48	25.48	30	PASS
Band4	15MHz	16QAM	20175	27RB#0	21.86	24.86	30	PASS
Band4	15MHz	QPSK	20325	1RB#0	23.64	26.64	30	PASS
Band4	15MHz	QPSK	20325	1RB#38	23.66	26.66	30	PASS
Band4	15MHz	QPSK	20325	1RB#74	23.6	26.6	30	PASS
Band4	15MHz	QPSK	20325	75RB#0	22.9	25.9	30	PASS
Band4	15MHz	16QAM	20325	1RB#0	21.97	24.97	30	PASS
Band4	15MHz	16QAM	20325	1RB#38	22.28	25.28	30	PASS
Band4	15MHz	16QAM	20325	1RB#74	22.43	25.43	30	PASS
Band4	15MHz	16QAM	20325	27RB#0	21.69	24.69	30	PASS
Band4	20MHz	QPSK	20050	1RB#0	23.46	26.46	30	PASS
Band4	20MHz	QPSK	20050	1RB#49	23.51	26.51	30	PASS
Band4	20MHz	QPSK	20050	1RB#99	23.59	26.59	30	PASS
Band4	20MHz	QPSK	20050	100RB#0	23.02	26.02	30	PASS
Band4	20MHz	16QAM	20050	1RB#0	22.3	25.3	30	PASS
Band4	20MHz	16QAM	20050	1RB#49	22.48	25.48	30	PASS

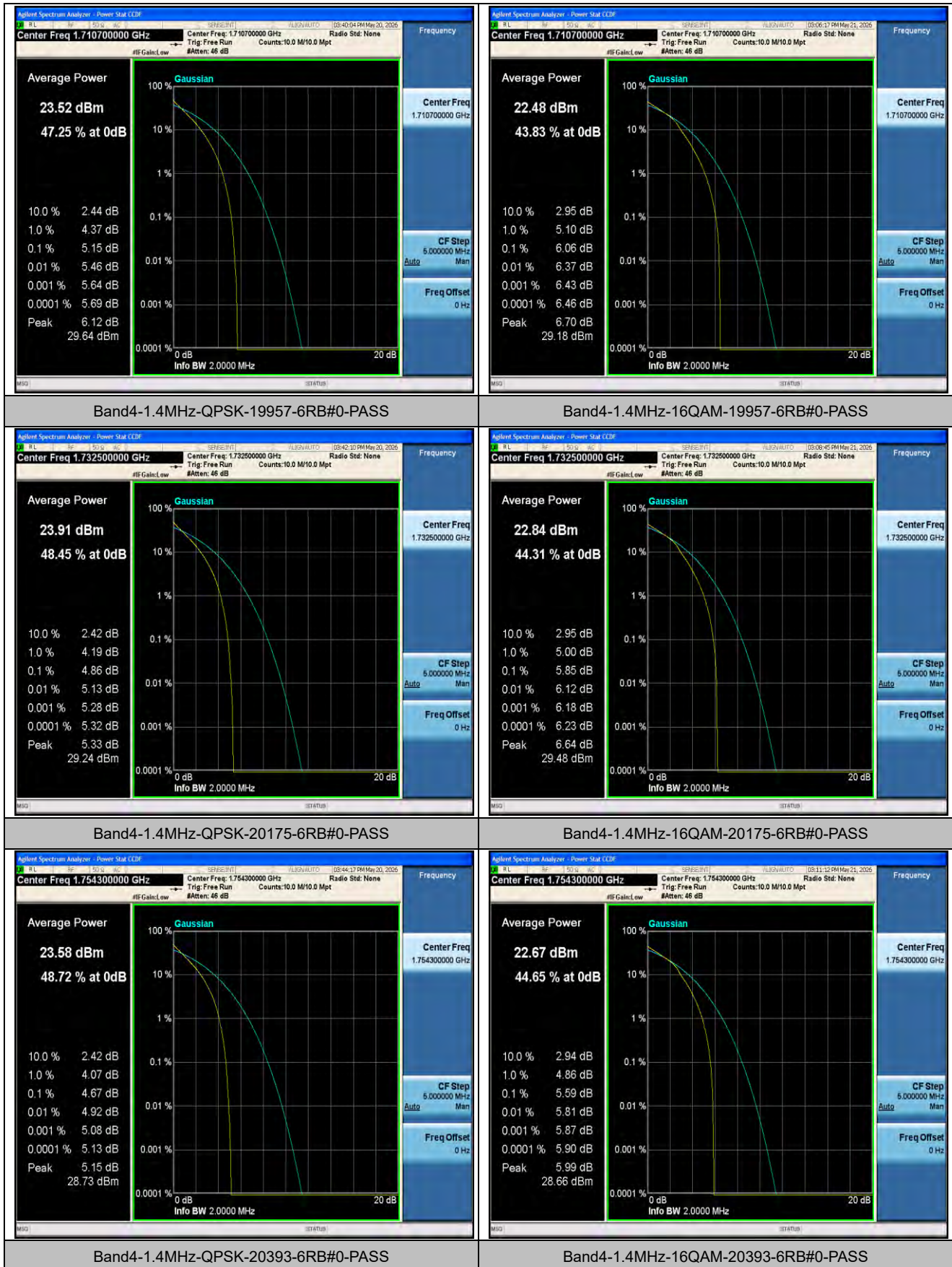
Band4	20MHz	16QAM	20050	1RB#99	22.77	25.77	30	PASS
Band4	20MHz	16QAM	20050	27RB#0	21.78	24.78	30	PASS
Band4	20MHz	QPSK	20175	1RB#0	23.89	26.89	30	PASS
Band4	20MHz	QPSK	20175	1RB#49	23.75	26.75	30	PASS
Band4	20MHz	QPSK	20175	1RB#99	23.74	26.74	30	PASS
Band4	20MHz	QPSK	20175	100RB#0	23.06	26.06	30	PASS
Band4	20MHz	16QAM	20175	1RB#0	22.17	25.17	30	PASS
Band4	20MHz	16QAM	20175	1RB#49	22.25	25.25	30	PASS
Band4	20MHz	16QAM	20175	1RB#99	22.55	25.55	30	PASS
Band4	20MHz	16QAM	20175	27RB#0	21.98	24.98	30	PASS
Band4	20MHz	QPSK	20300	1RB#0	23.87	26.87	30	PASS
Band4	20MHz	QPSK	20300	1RB#49	23.55	26.55	30	PASS
Band4	20MHz	QPSK	20300	1RB#99	23.55	26.55	30	PASS
Band4	20MHz	QPSK	20300	100RB#0	23	26	30	PASS
Band4	20MHz	16QAM	20300	1RB#0	22.23	25.23	30	PASS
Band4	20MHz	16QAM	20300	1RB#49	22.27	25.27	30	PASS
Band4	20MHz	16QAM	20300	1RB#99	22.56	25.56	30	PASS
Band4	20MHz	16QAM	20300	27RB#0	21.87	24.87	30	PASS

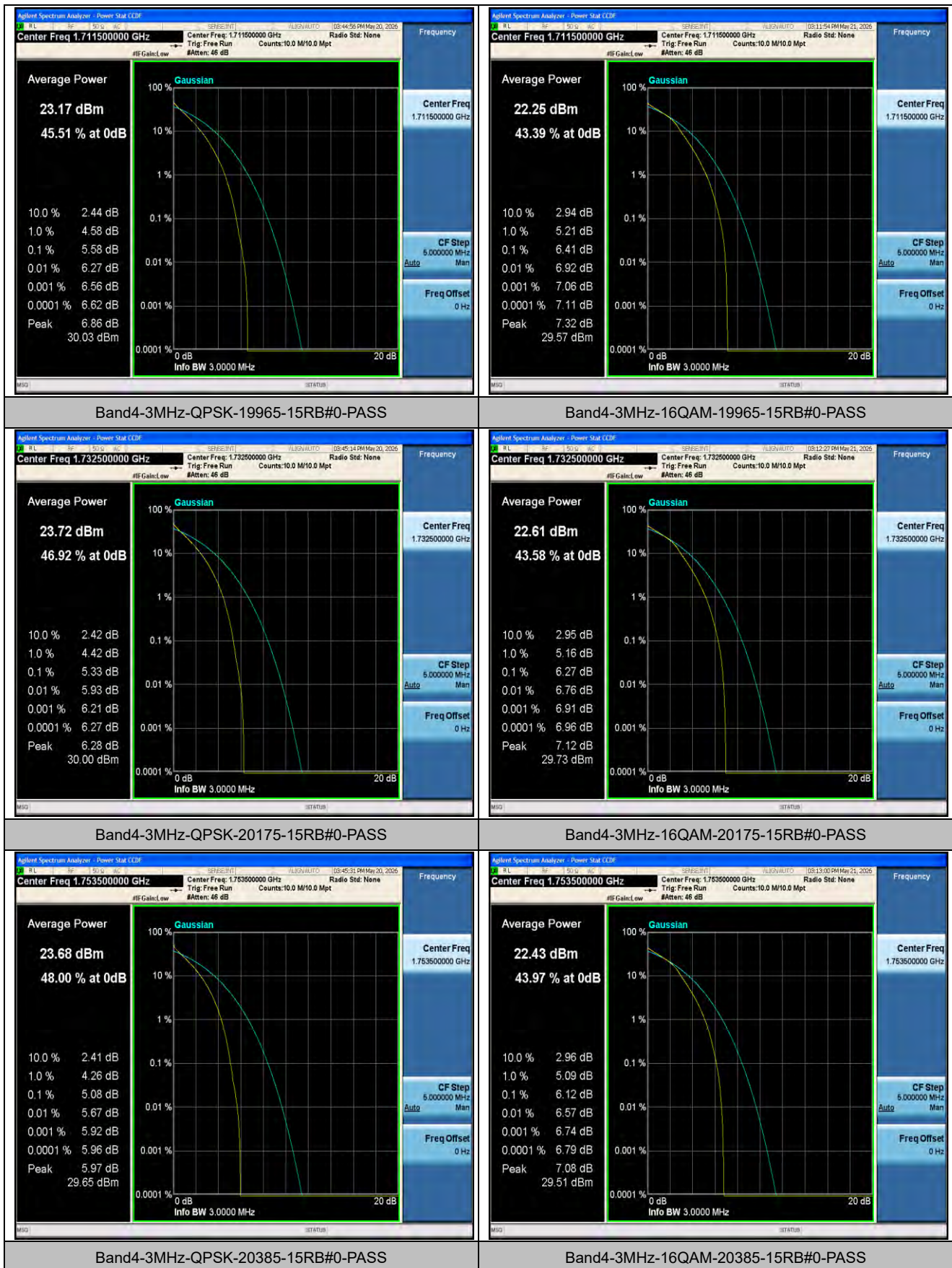
Peak-to-Average Ratio(CCDF)

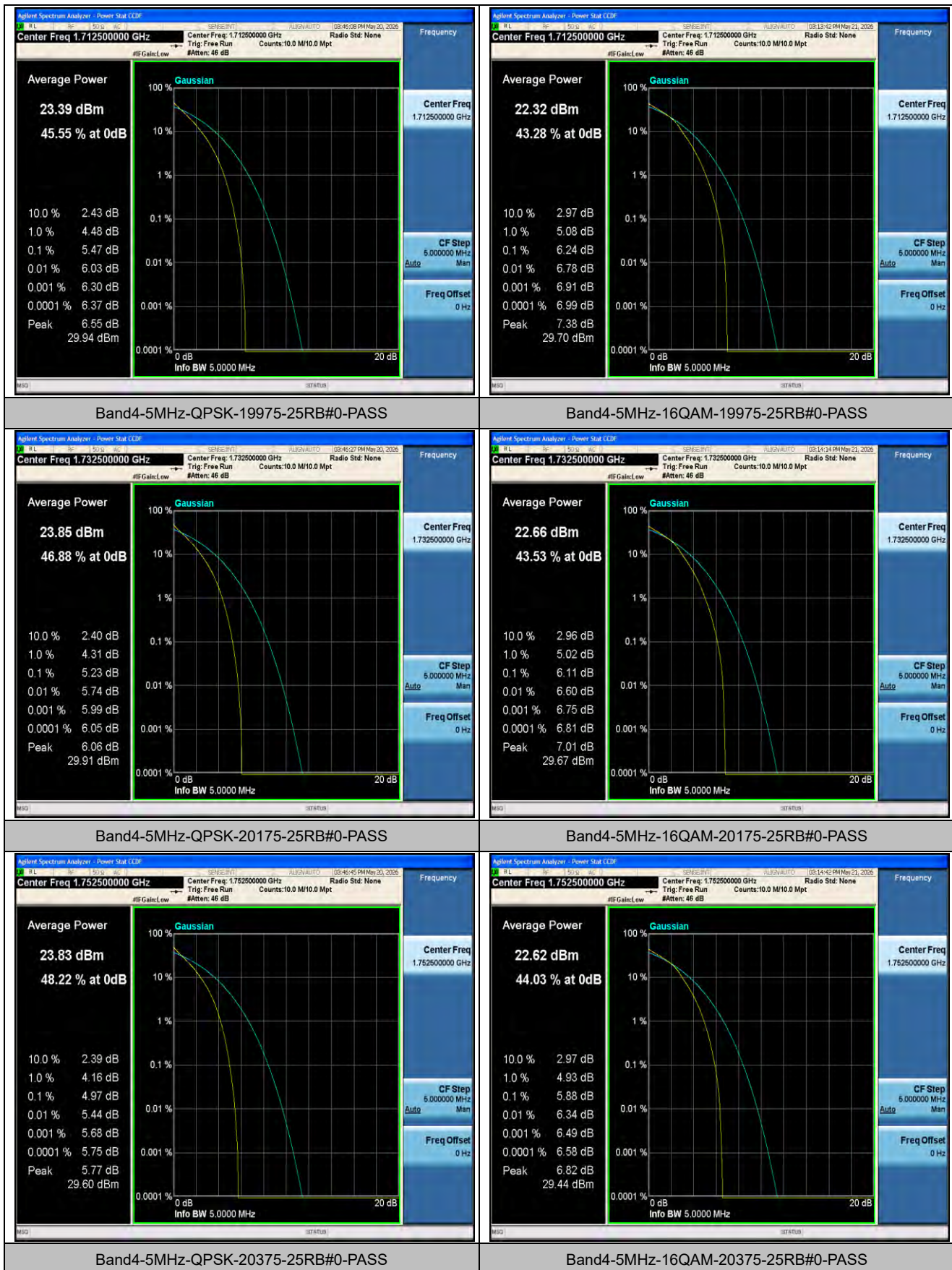
Test Result

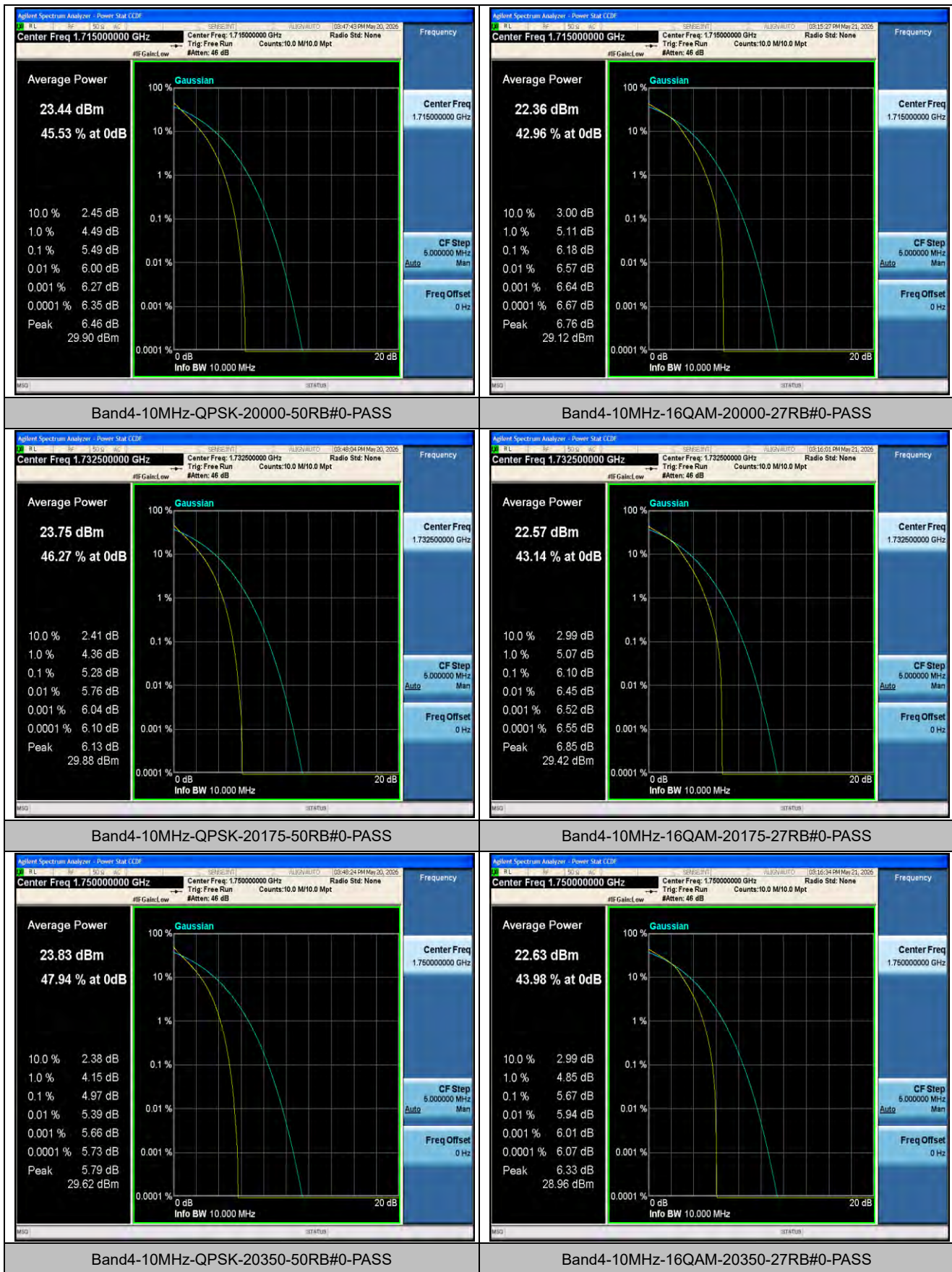
Band	Bandwidth	Modulation	Channel	RB Configuration	Result (dB)	Limit (dB)	Verdict
Band4	1.4MHz	QPSK	19957	6RB#0	5.15	13	PASS
Band4	1.4MHz	16QAM	19957	6RB#0	6.06	13	PASS
Band4	1.4MHz	QPSK	20175	6RB#0	4.86	13	PASS
Band4	1.4MHz	16QAM	20175	6RB#0	5.85	13	PASS
Band4	1.4MHz	QPSK	20393	6RB#0	4.67	13	PASS
Band4	1.4MHz	16QAM	20393	6RB#0	5.59	13	PASS
Band4	3MHz	QPSK	19965	15RB#0	5.58	13	PASS
Band4	3MHz	16QAM	19965	15RB#0	6.41	13	PASS
Band4	3MHz	QPSK	20175	15RB#0	5.33	13	PASS
Band4	3MHz	16QAM	20175	15RB#0	6.27	13	PASS
Band4	3MHz	QPSK	20385	15RB#0	5.08	13	PASS
Band4	3MHz	16QAM	20385	15RB#0	6.12	13	PASS
Band4	5MHz	QPSK	19975	25RB#0	5.47	13	PASS
Band4	5MHz	16QAM	19975	25RB#0	6.24	13	PASS
Band4	5MHz	QPSK	20175	25RB#0	5.23	13	PASS
Band4	5MHz	16QAM	20175	25RB#0	6.11	13	PASS
Band4	5MHz	QPSK	20375	25RB#0	4.97	13	PASS
Band4	5MHz	16QAM	20375	25RB#0	5.88	13	PASS
Band4	10MHz	QPSK	20000	50RB#0	5.49	13	PASS
Band4	10MHz	16QAM	20000	27RB#0	6.18	13	PASS
Band4	10MHz	QPSK	20175	50RB#0	5.28	13	PASS
Band4	10MHz	16QAM	20175	27RB#0	6.10	13	PASS
Band4	10MHz	QPSK	20350	50RB#0	4.97	13	PASS
Band4	10MHz	16QAM	20350	27RB#0	5.67	13	PASS
Band4	15MHz	QPSK	20025	75RB#0	5.07	13	PASS
Band4	15MHz	16QAM	20025	27RB#0	6.09	13	PASS
Band4	15MHz	QPSK	20175	75RB#0	5.00	13	PASS
Band4	15MHz	16QAM	20175	27RB#0	6.09	13	PASS
Band4	15MHz	QPSK	20325	75RB#0	4.79	13	PASS
Band4	15MHz	16QAM	20325	27RB#0	5.77	13	PASS
Band4	20MHz	QPSK	20050	100RB#0	5.23	13	PASS
Band4	20MHz	16QAM	20050	27RB#0	6.11	13	PASS
Band4	20MHz	QPSK	20175	100RB#0	5.12	13	PASS
Band4	20MHz	16QAM	20175	27RB#0	6.13	13	PASS
Band4	20MHz	QPSK	20300	100RB#0	4.84	13	PASS
Band4	20MHz	16QAM	20300	27RB#0	5.57	13	PASS

Test Graphs



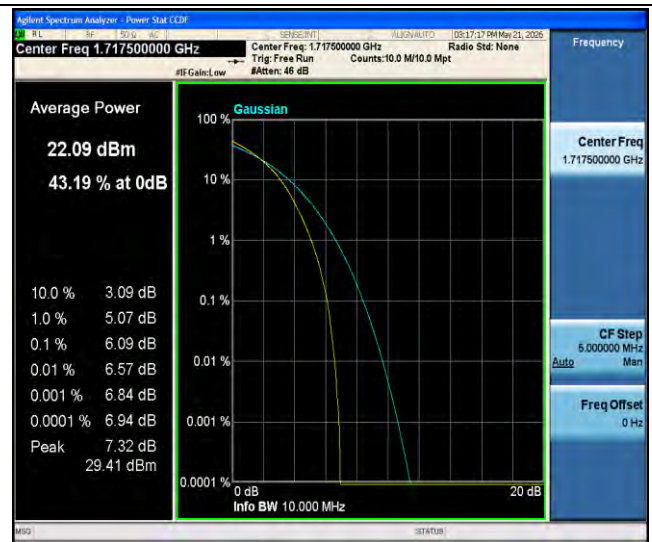








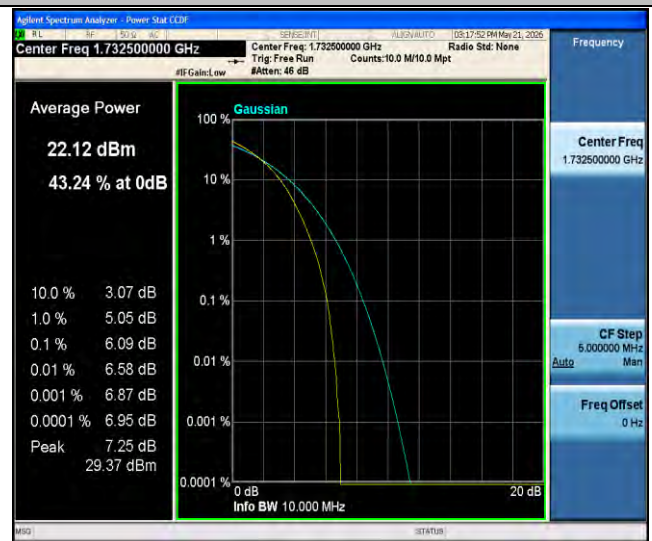
Band4-15MHz-QPSK-20025-75RB#0-PASS



Band4-15MHz-16QAM-20025-27RB#0-PASS



Band4-15MHz-QPSK-20175-75RB#0-PASS



Band4-15MHz-16QAM-20175-27RB#0-PASS



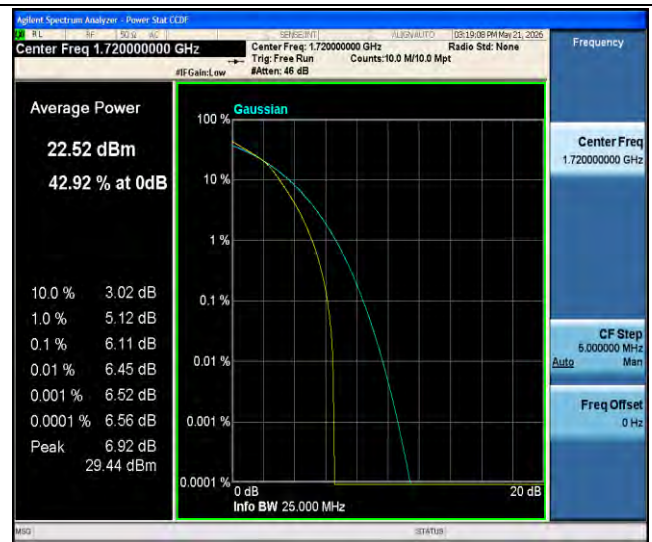
Band4-15MHz-QPSK-20325-75RB#0-PASS



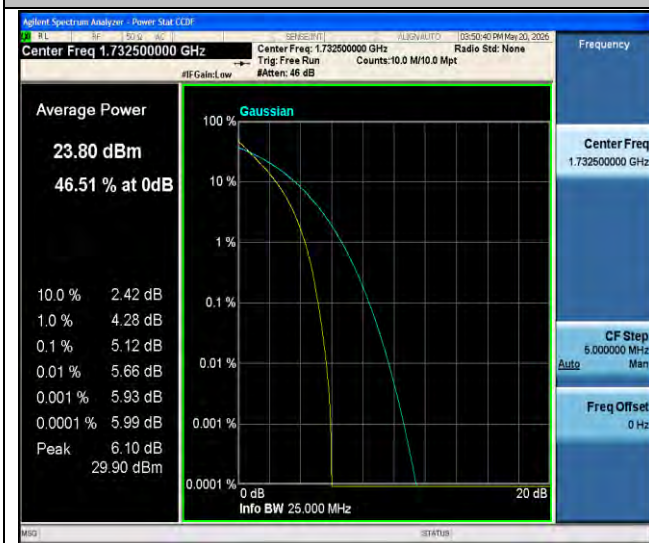
Band4-15MHz-16QAM-20325-27RB#0-PASS



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



Band4-20MHz-16QAM-20050-27RB#0-PASS



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



Band4-20MHz-16QAM-20175-27RB#0-PASS



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



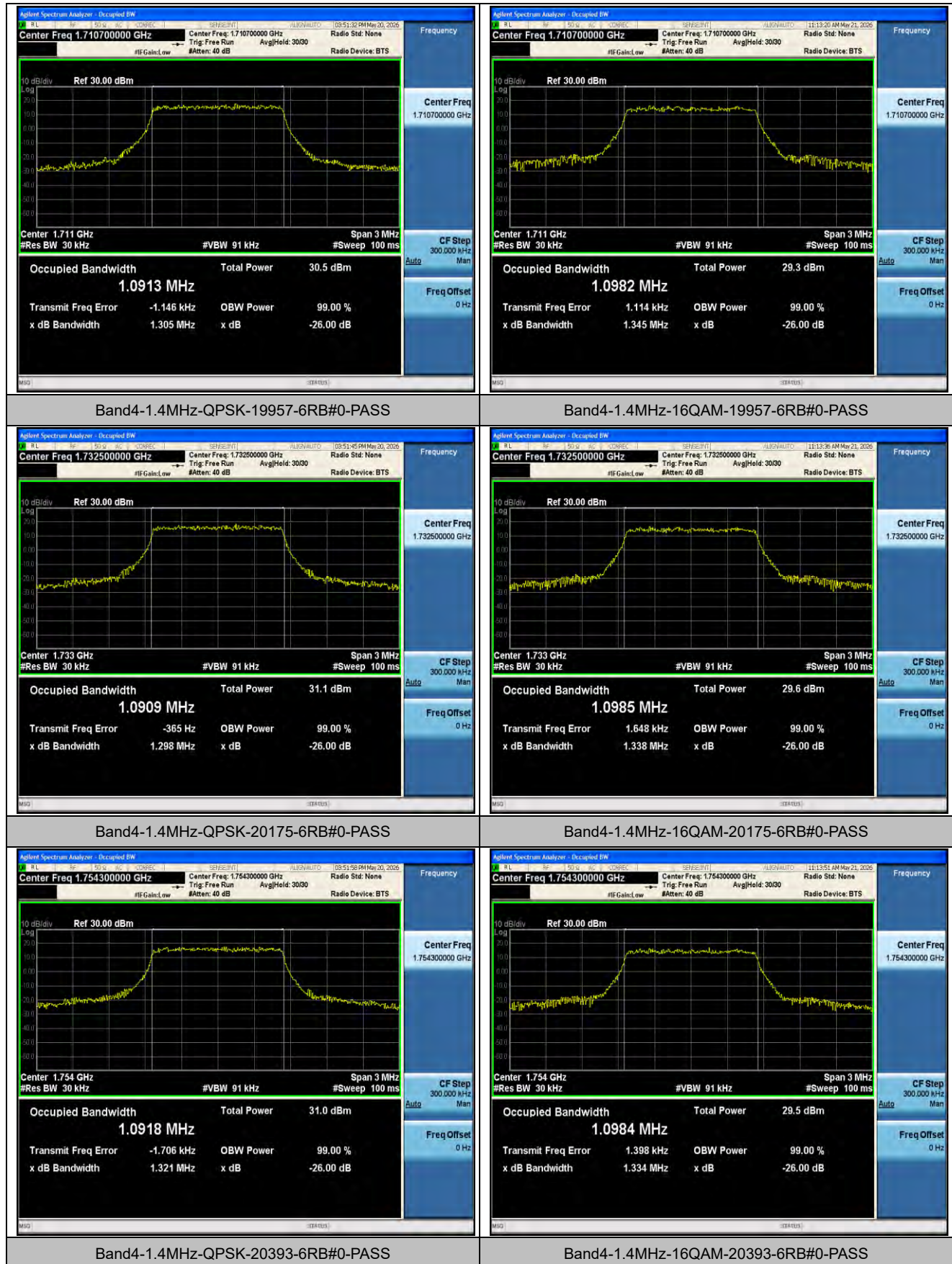
Band4-20MHz-16QAM-20300-27RB#0-PASS

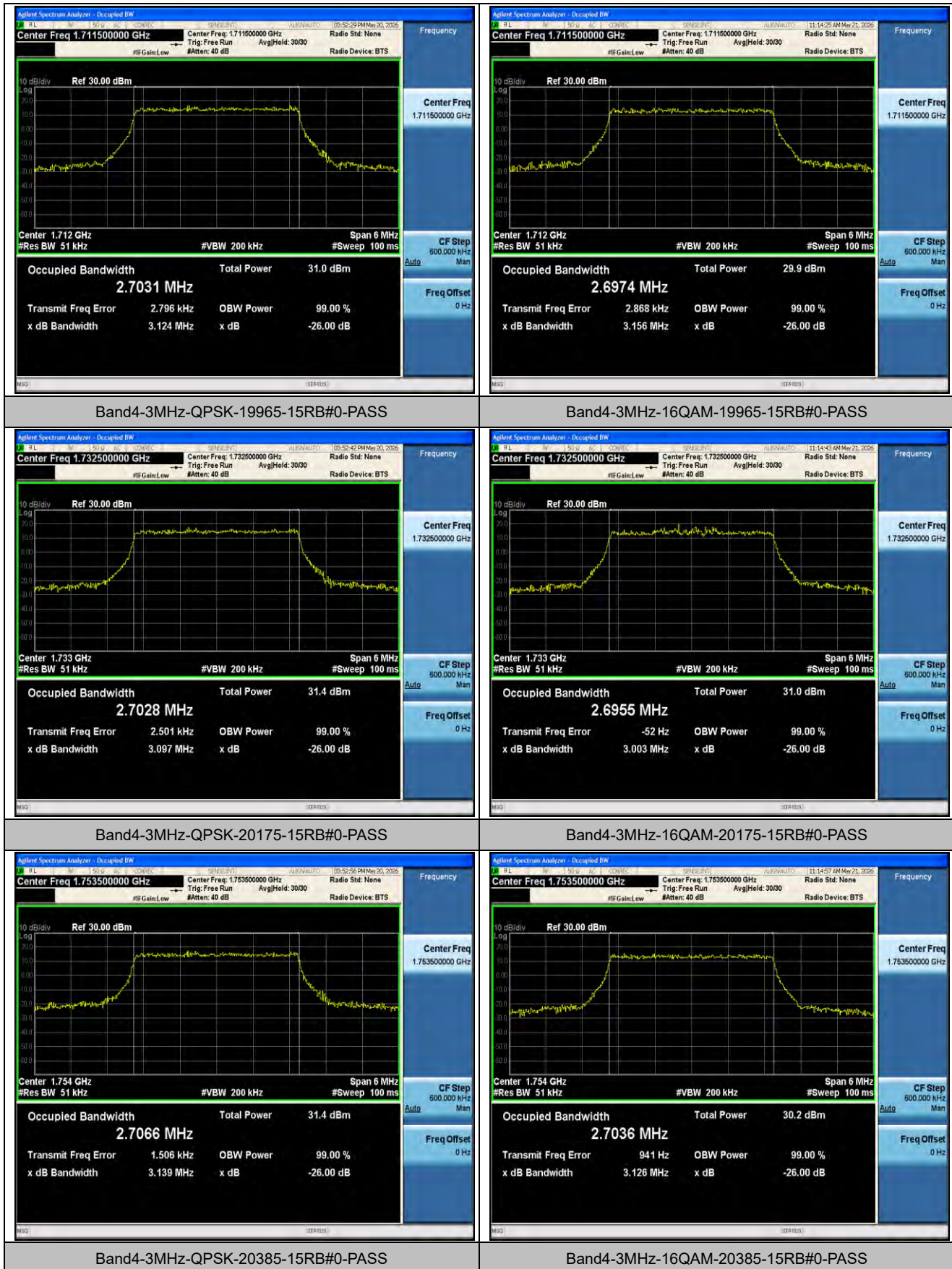
26dB Bandwidth and Occupied Bandwidth

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	OBW (MHz)	26dB EBW (MHz)	Verdict
Band4	1.4MHz	QPSK	19957	6RB#0	1.0913	1.305	PASS
Band4	1.4MHz	16QAM	19957	6RB#0	1.0982	1.345	PASS
Band4	1.4MHz	QPSK	20175	6RB#0	1.0909	1.298	PASS
Band4	1.4MHz	16QAM	20175	6RB#0	1.0985	1.338	PASS
Band4	1.4MHz	QPSK	20393	6RB#0	1.0918	1.321	PASS
Band4	1.4MHz	16QAM	20393	6RB#0	1.0984	1.334	PASS
Band4	3MHz	QPSK	19965	15RB#0	2.7031	3.124	PASS
Band4	3MHz	16QAM	19965	15RB#0	2.6974	3.156	PASS
Band4	3MHz	QPSK	20175	15RB#0	2.7028	3.097	PASS
Band4	3MHz	16QAM	20175	15RB#0	2.6955	3.003	PASS
Band4	3MHz	QPSK	20385	15RB#0	2.7066	3.139	PASS
Band4	3MHz	16QAM	20385	15RB#0	2.7036	3.126	PASS
Band4	5MHz	QPSK	19975	25RB#0	4.5116	5.532	PASS
Band4	5MHz	16QAM	19975	25RB#0	4.5163	5.537	PASS
Band4	5MHz	QPSK	20175	25RB#0	4.5095	5.576	PASS
Band4	5MHz	16QAM	20175	25RB#0	4.5111	5.308	PASS
Band4	5MHz	QPSK	20375	25RB#0	4.5151	5.613	PASS
Band4	5MHz	16QAM	20375	25RB#0	4.5105	4.911	PASS
Band4	10MHz	QPSK	20000	50RB#0	9.0118	10.35	PASS
Band4	10MHz	16QAM	20000	27RB#0	5.0189	6.436	PASS
Band4	10MHz	QPSK	20175	50RB#0	9.0204	10.45	PASS
Band4	10MHz	16QAM	20175	27RB#0	5.0253	6.485	PASS
Band4	10MHz	QPSK	20350	50RB#0	9.0143	10.40	PASS
Band4	10MHz	16QAM	20350	27RB#0	5.1576	5.816	PASS
Band4	15MHz	QPSK	20025	75RB#0	13.495	15.76	PASS
Band4	15MHz	16QAM	20025	27RB#0	5.3830	7.814	PASS
Band4	15MHz	QPSK	20175	75RB#0	13.510	15.79	PASS
Band4	15MHz	16QAM	20175	27RB#0	5.3904	7.863	PASS
Band4	15MHz	QPSK	20325	75RB#0	13.500	15.74	PASS
Band4	15MHz	16QAM	20325	27RB#0	5.3862	7.851	PASS
Band4	20MHz	QPSK	20050	100RB#0	17.939	20.43	PASS
Band4	20MHz	16QAM	20050	27RB#0	5.5547	7.995	PASS
Band4	20MHz	QPSK	20175	100RB#0	18.021	20.60	PASS
Band4	20MHz	16QAM	20175	27RB#0	5.4893	7.735	PASS
Band4	20MHz	QPSK	20300	100RB#0	17.995	20.52	PASS
Band4	20MHz	16QAM	20300	27RB#0	5.5217	8.103	PASS

Test Graphs

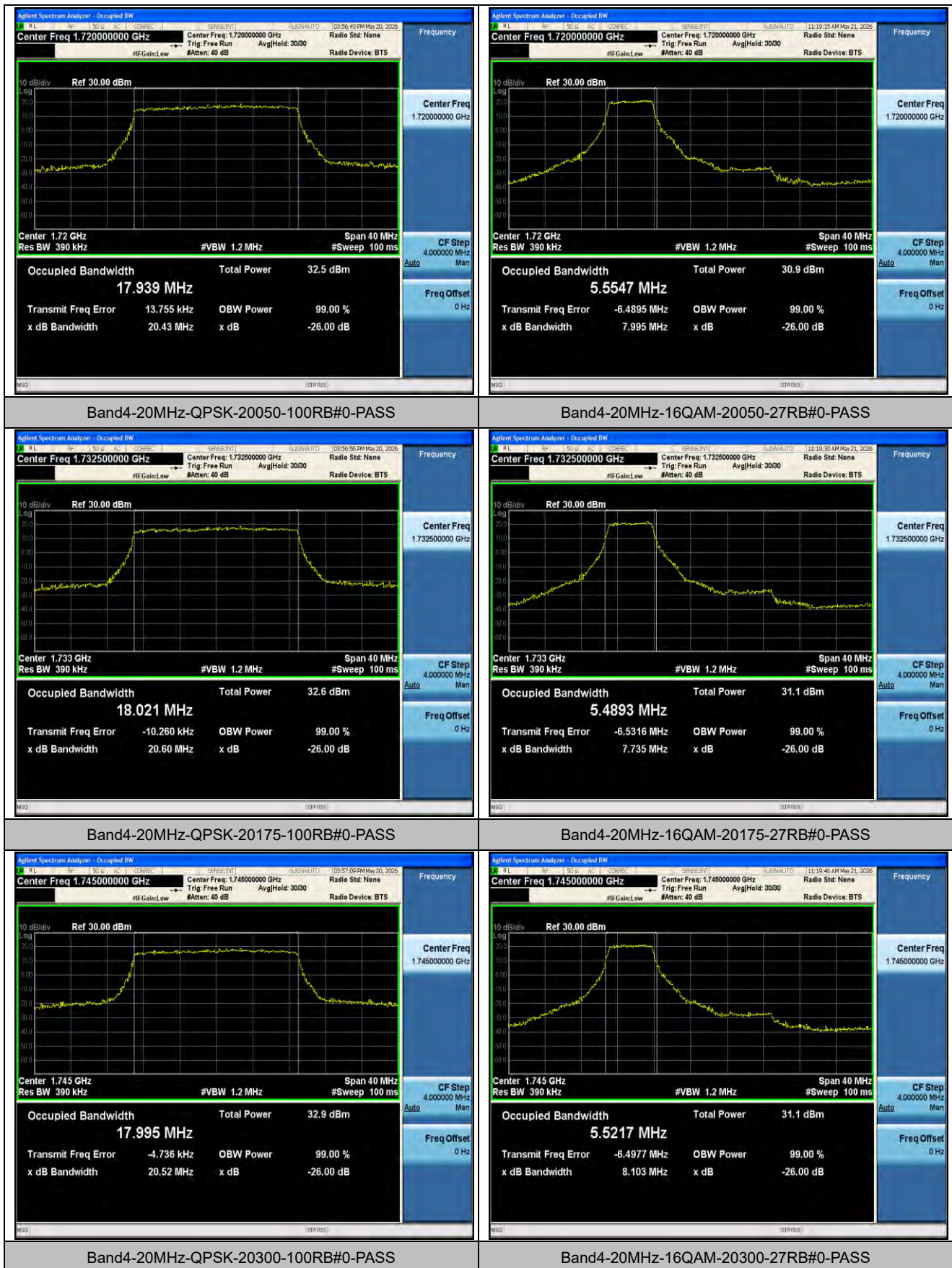






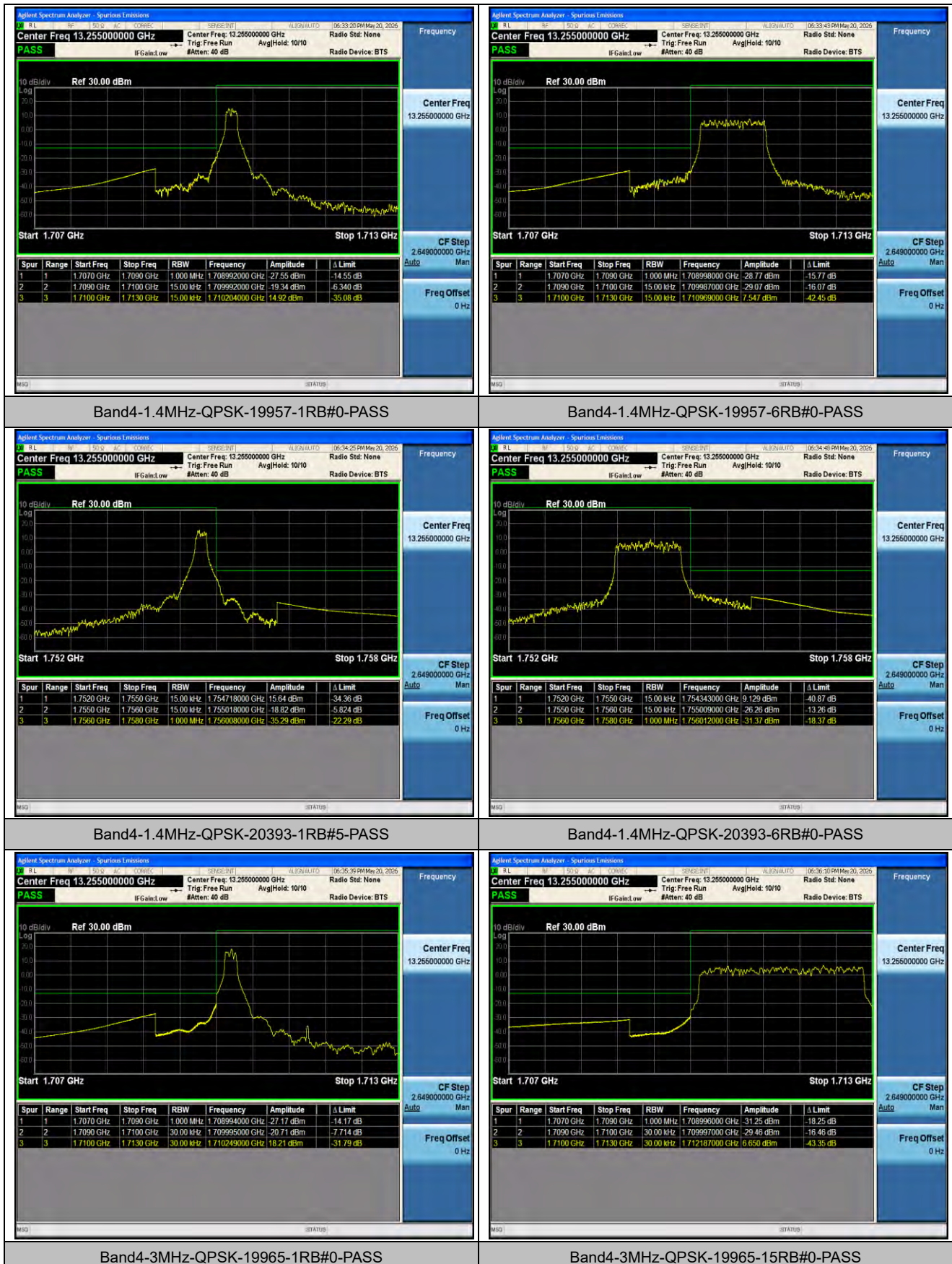






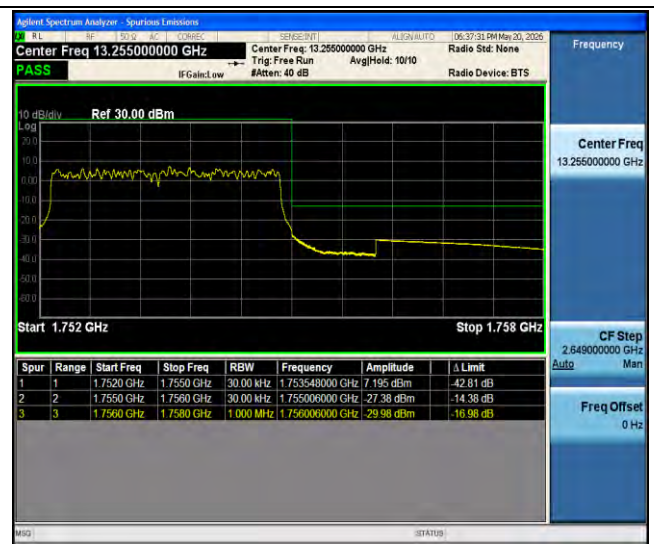
Band Edge

Test Graphs

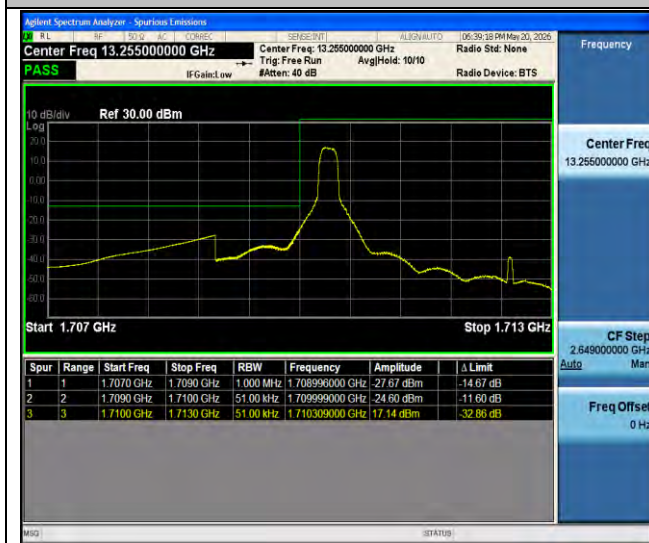




Band4-3MHz-QPSK-20385-1RB#14-PASS



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



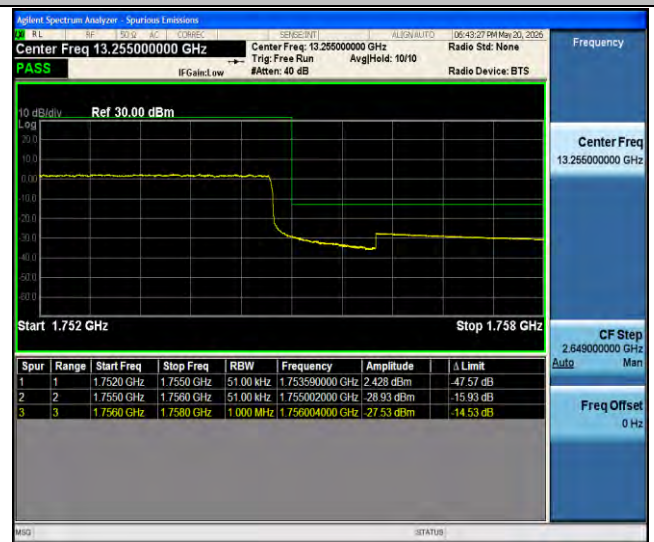
Band4-5MHz-QPSK-19975-1RB#0-PASS



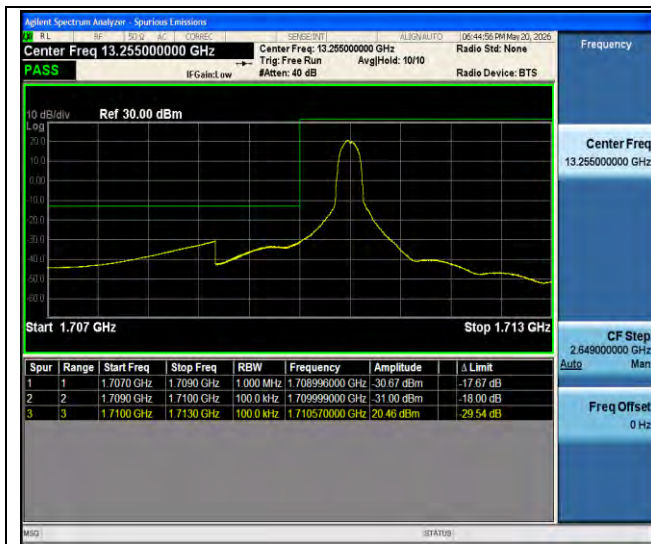
Band4-5MHz-QPSK-19975-25RB#0-PASS



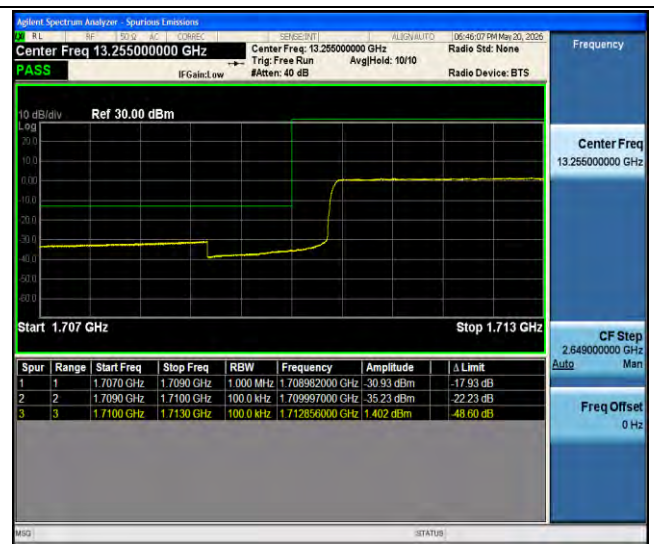
Band4-5MHz-QPSK-20375-1RB#24-PASS



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



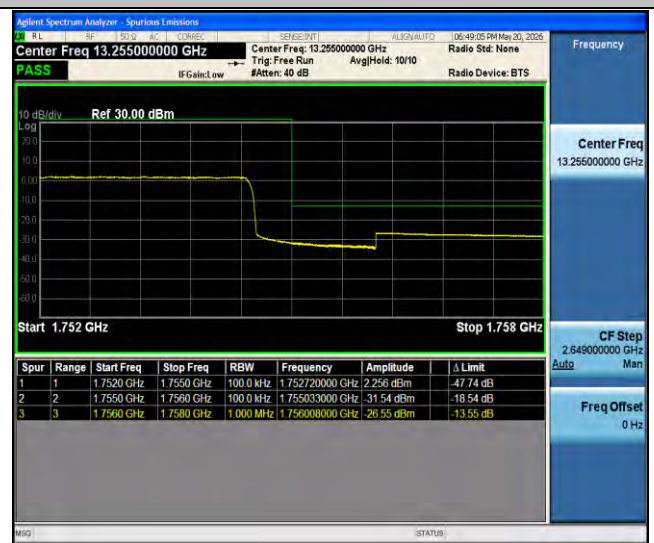
Band4-10MHz-QPSK-20000-1RB#0-PASS



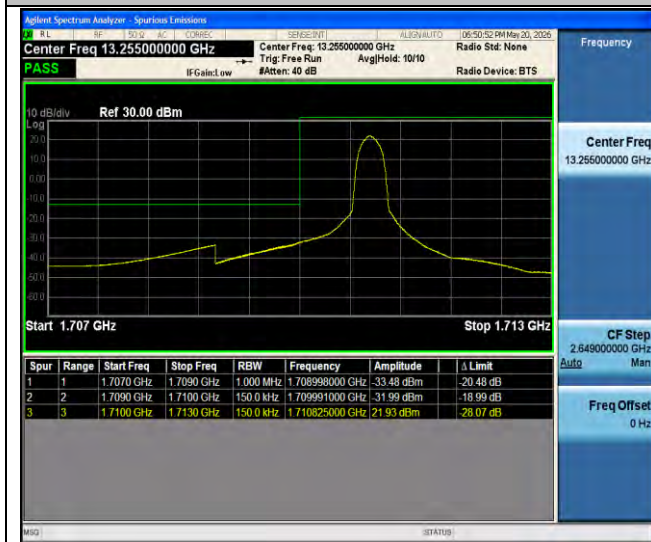
Band4-10MHz-QPSK-20000-50RB#0-PASS



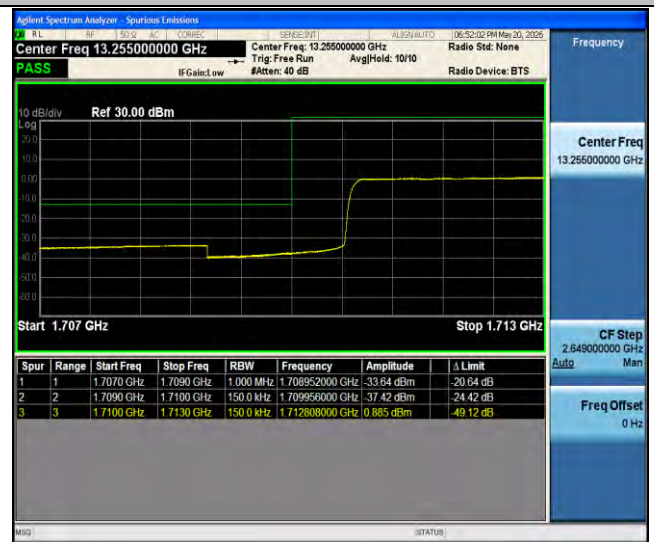
Band4-10MHz-QPSK-20350-1RB#49-PASS



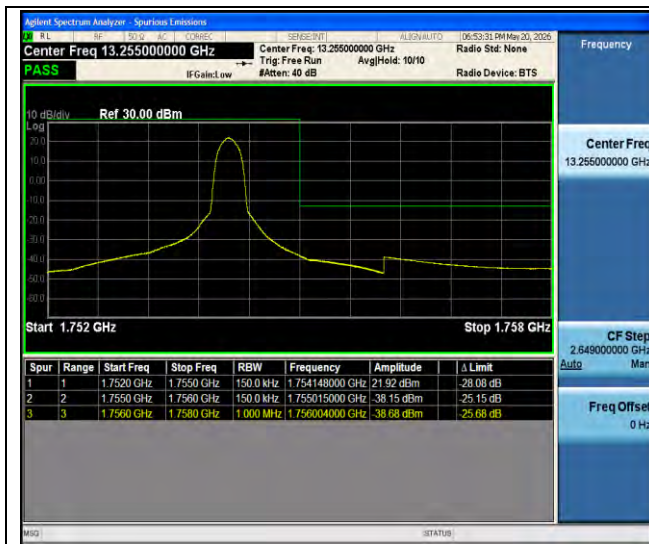
Band4-10MHz-QPSK-20350-50RB#0-PASS



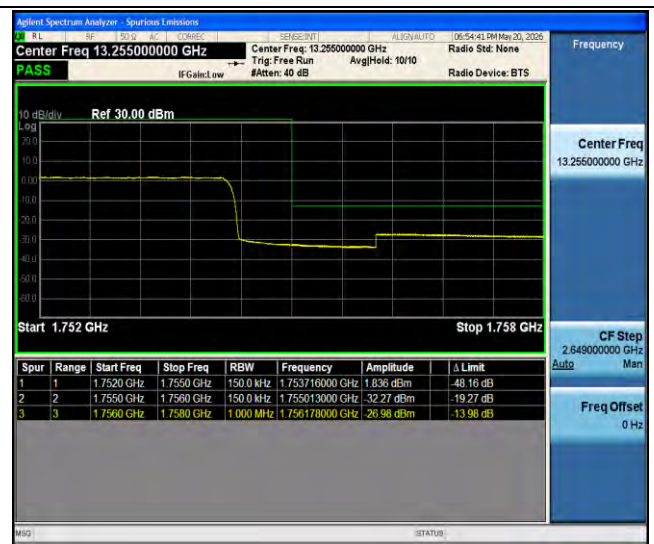
Band4-15MHz-QPSK-20025-1RB#0-PASS



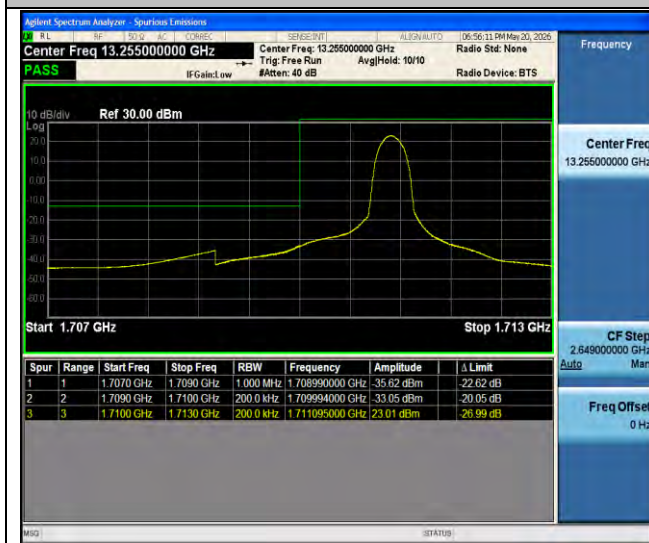
Band4-15MHz-QPSK-20025-75RB#0-PASS



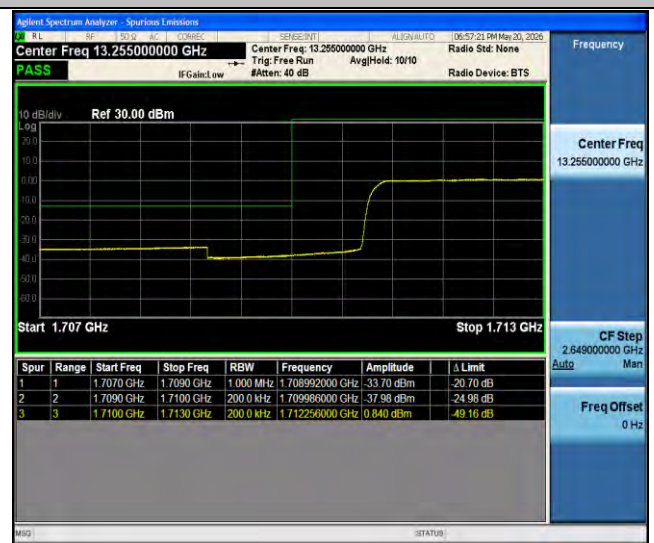
Band4-15MHz-QPSK-20325-1RB#74-PASS



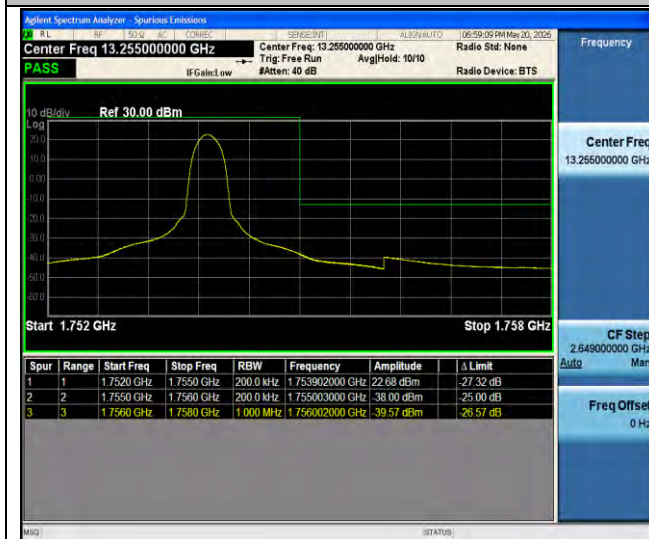
Band4-15MHz-QPSK-20325-75RB#0-PASS



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



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



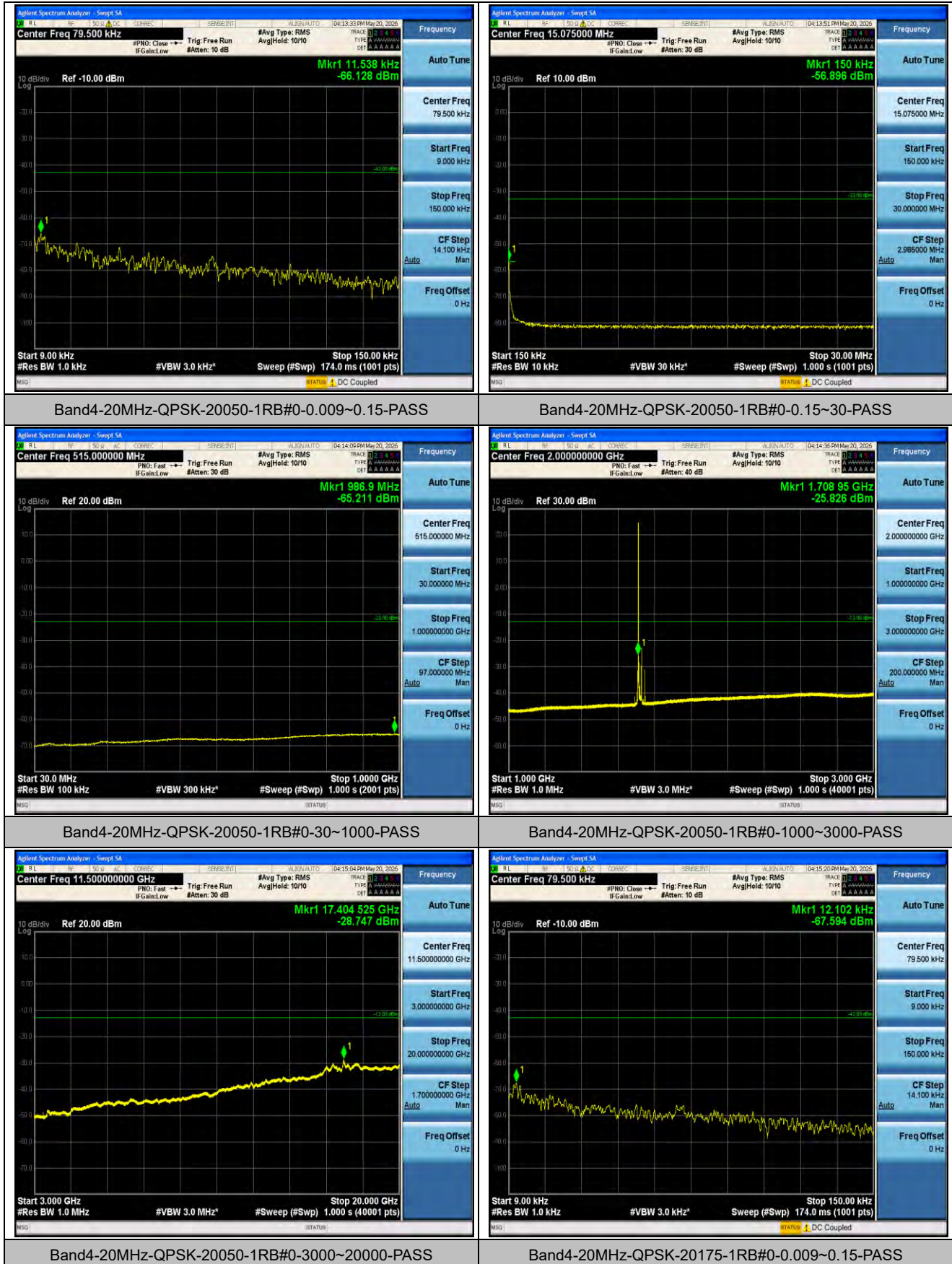
Band4-20MHz-QPSK-20300-1RB#99-PASS



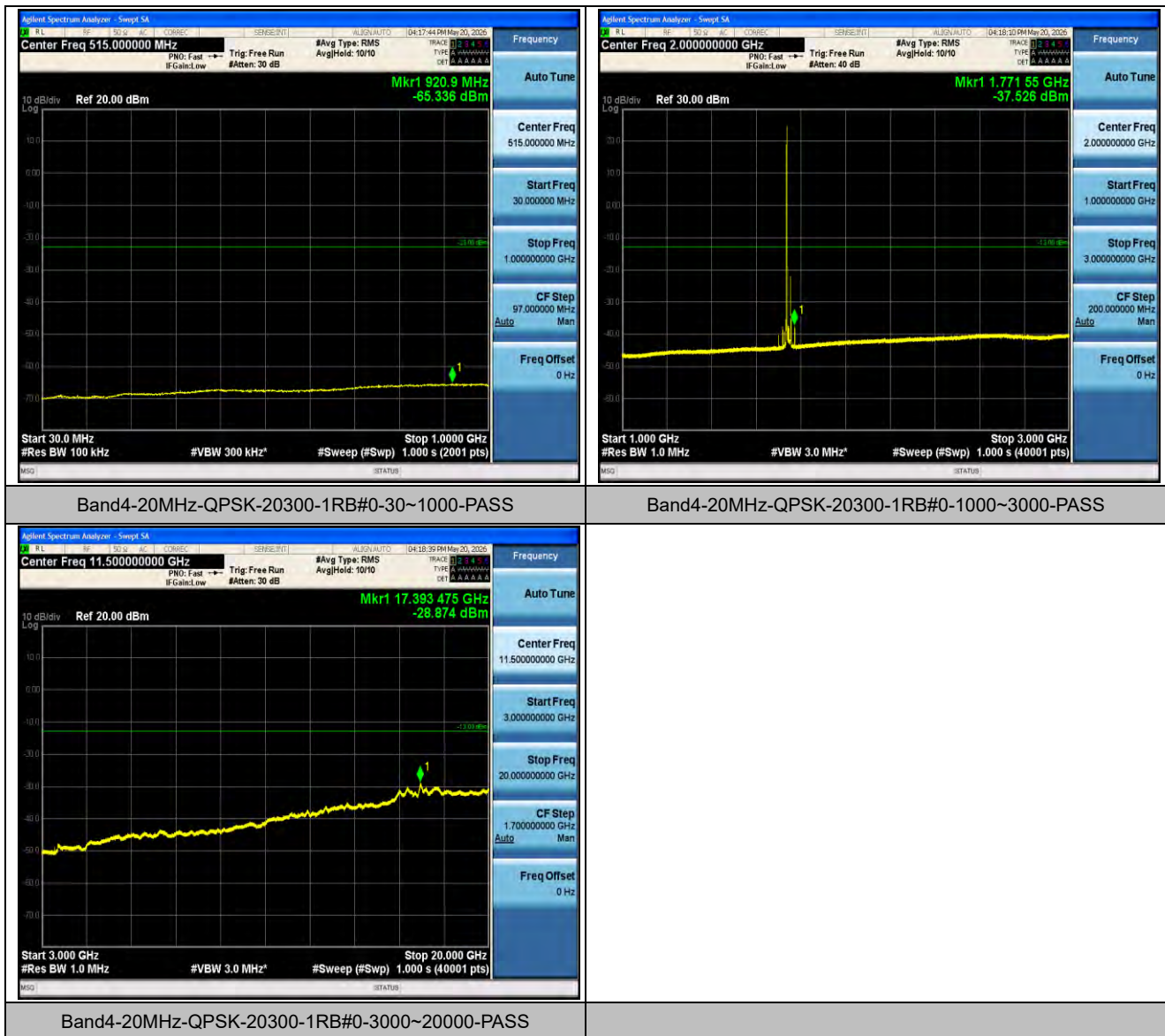
Band4-20MHz-QPSK-20300-100RB#0-PASS

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	-4.30	-0.002482	PASS
Band4	20MHz	QPSK	20175	100RB#0	VL	NT	-1.80	-0.001039	PASS
Band4	20MHz	QPSK	20175	100RB#0	VH	NT	-2.40	-0.001385	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	-1.10	-0.000635	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	-10	-0.10	-0.000058	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	0	-2.50	-0.001443	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	10	-4.40	-0.002540	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	20	-0.90	-0.000519	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	30	0.80	0.000462	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	40	1.00	0.000577	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	50	1.80	0.001039	PASS

~The End~