

FCC Appendix RF Test Data for LTE Band 5

Company: : Shenzhen Tuqiang IoT Technology Co., Ltd.

EUT : Rechargeable Tracker

Model Number : M501N

FCC ID : 2BTQO-M501N

Report No. : CTA25111402503

Reviewed By : Eric Wang

Appendix A: Conducted Power Output Data

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band5	1.4MHz	QPSK	20407	1RB#0	21.06	PASS
Band5	1.4MHz	QPSK	20407	1RB#2	24.11	PASS
Band5	1.4MHz	QPSK	20407	1RB#5	24.00	PASS
Band5	1.4MHz	QPSK	20407	3RB#0	24.11	PASS
Band5	1.4MHz	QPSK	20407	3RB#1	21.14	PASS
Band5	1.4MHz	QPSK	20407	3RB#3	20.85	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	20.13	PASS
Band5	1.4MHz	QPSK	20525	1RB#0	20.29	PASS
Band5	1.4MHz	QPSK	20525	1RB#2	20.19	PASS
Band5	1.4MHz	QPSK	20525	1RB#5	20.25	PASS
Band5	1.4MHz	QPSK	20525	3RB#0	20.29	PASS
Band5	1.4MHz	QPSK	20525	3RB#1	20.29	PASS
Band5	1.4MHz	QPSK	20525	3RB#3	20.23	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	23.35	PASS
Band5	1.4MHz	QPSK	20643	1RB#0	23.88	PASS
Band5	1.4MHz	QPSK	20643	1RB#2	24.06	PASS
Band5	1.4MHz	QPSK	20643	1RB#5	23.82	PASS
Band5	1.4MHz	QPSK	20643	3RB#0	24.13	PASS
Band5	1.4MHz	QPSK	20643	3RB#1	24.13	PASS
Band5	1.4MHz	QPSK	20643	3RB#3	24.11	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	23.01	PASS
Band5	1.4MHz	16QAM	20407	1RB#0	23.58	PASS
Band5	1.4MHz	16QAM	20407	1RB#2	23.61	PASS
Band5	1.4MHz	16QAM	20407	1RB#5	23.37	PASS
Band5	1.4MHz	16QAM	20407	3RB#0	19.82	PASS
Band5	1.4MHz	16QAM	20407	3RB#1	19.95	PASS
Band5	1.4MHz	16QAM	20407	3RB#3	19.63	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	19.15	PASS
Band5	1.4MHz	16QAM	20525	1RB#0	19.26	PASS
Band5	1.4MHz	16QAM	20525	1RB#2	19.75	PASS
Band5	1.4MHz	16QAM	20525	1RB#5	19.20	PASS
Band5	1.4MHz	16QAM	20525	3RB#0	18.85	PASS
Band5	1.4MHz	16QAM	20525	3RB#1	19.16	PASS
Band5	1.4MHz	16QAM	20525	3RB#3	22.87	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	22.35	PASS
Band5	1.4MHz	16QAM	20643	1RB#0	22.92	PASS
Band5	1.4MHz	16QAM	20643	1RB#2	22.98	PASS

Band5	1.4MHz	16QAM	20643	1RB#5	23.00	PASS
Band5	1.4MHz	16QAM	20643	3RB#0	23.07	PASS
Band5	1.4MHz	16QAM	20643	3RB#1	23.17	PASS
Band5	1.4MHz	16QAM	20643	3RB#3	23.06	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	21.94	PASS
Band5	3MHz	QPSK	20415	1RB#0	23.78	PASS
Band5	3MHz	QPSK	20415	1RB#8	24.39	PASS
Band5	3MHz	QPSK	20415	1RB#14	24.10	PASS
Band5	3MHz	QPSK	20415	8RB#0	23.30	PASS
Band5	3MHz	QPSK	20415	8RB#4	23.22	PASS
Band5	3MHz	QPSK	20415	8RB#7	23.21	PASS
Band5	3MHz	QPSK	20415	15RB#0	23.21	PASS
Band5	3MHz	QPSK	20525	1RB#0	24.26	PASS
Band5	3MHz	QPSK	20525	1RB#8	24.24	PASS
Band5	3MHz	QPSK	20525	1RB#14	24.35	PASS
Band5	3MHz	QPSK	20525	8RB#0	23.47	PASS
Band5	3MHz	QPSK	20525	8RB#4	23.44	PASS
Band5	3MHz	QPSK	20525	8RB#7	23.38	PASS
Band5	3MHz	QPSK	20525	15RB#0	23.51	PASS
Band5	3MHz	QPSK	20635	1RB#0	24.05	PASS
Band5	3MHz	QPSK	20635	1RB#8	24.01	PASS
Band5	3MHz	QPSK	20635	1RB#14	24.17	PASS
Band5	3MHz	QPSK	20635	8RB#0	23.28	PASS
Band5	3MHz	QPSK	20635	8RB#4	23.30	PASS
Band5	3MHz	QPSK	20635	8RB#7	23.28	PASS
Band5	3MHz	QPSK	20635	15RB#0	23.24	PASS
Band5	3MHz	16QAM	20415	1RB#0	23.24	PASS
Band5	3MHz	16QAM	20415	1RB#8	22.95	PASS
Band5	3MHz	16QAM	20415	1RB#14	23.14	PASS
Band5	3MHz	16QAM	20415	8RB#0	22.35	PASS
Band5	3MHz	16QAM	20415	8RB#4	21.98	PASS
Band5	3MHz	16QAM	20415	8RB#7	22.43	PASS
Band5	3MHz	16QAM	20415	15RB#0	22.43	PASS
Band5	3MHz	16QAM	20525	1RB#0	23.10	PASS
Band5	3MHz	16QAM	20525	1RB#8	23.45	PASS
Band5	3MHz	16QAM	20525	1RB#14	23.60	PASS
Band5	3MHz	16QAM	20525	8RB#0	22.29	PASS
Band5	3MHz	16QAM	20525	8RB#4	22.24	PASS
Band5	3MHz	16QAM	20525	8RB#7	22.23	PASS
Band5	3MHz	16QAM	20525	15RB#0	22.34	PASS
Band5	3MHz	16QAM	20635	1RB#0	23.52	PASS
Band5	3MHz	16QAM	20635	1RB#8	23.52	PASS
Band5	3MHz	16QAM	20635	1RB#14	23.02	PASS

Band5	3MHz	16QAM	20635	8RB#0	22.32	PASS
Band5	3MHz	16QAM	20635	8RB#4	22.33	PASS
Band5	3MHz	16QAM	20635	8RB#7	22.37	PASS
Band5	3MHz	16QAM	20635	15RB#0	22.48	PASS
Band5	5MHz	QPSK	20425	1RB#0	24.26	PASS
Band5	5MHz	QPSK	20425	1RB#12	24.37	PASS
Band5	5MHz	QPSK	20425	1RB#24	24.35	PASS
Band5	5MHz	QPSK	20425	12RB#0	23.33	PASS
Band5	5MHz	QPSK	20425	12RB#6	23.33	PASS
Band5	5MHz	QPSK	20425	12RB#13	23.28	PASS
Band5	5MHz	QPSK	20425	25RB#0	23.25	PASS
Band5	5MHz	QPSK	20525	1RB#0	24.31	PASS
Band5	5MHz	QPSK	20525	1RB#12	24.45	PASS
Band5	5MHz	QPSK	20525	1RB#24	24.45	PASS
Band5	5MHz	QPSK	20525	12RB#0	23.49	PASS
Band5	5MHz	QPSK	20525	12RB#6	23.41	PASS
Band5	5MHz	QPSK	20525	12RB#13	23.48	PASS
Band5	5MHz	QPSK	20525	25RB#0	23.42	PASS
Band5	5MHz	QPSK	20625	1RB#0	24.37	PASS
Band5	5MHz	QPSK	20625	1RB#12	24.07	PASS
Band5	5MHz	QPSK	20625	1RB#24	24.01	PASS
Band5	5MHz	QPSK	20625	12RB#0	23.45	PASS
Band5	5MHz	QPSK	20625	12RB#6	23.46	PASS
Band5	5MHz	QPSK	20625	12RB#13	23.23	PASS
Band5	5MHz	QPSK	20625	25RB#0	23.37	PASS
Band5	5MHz	16QAM	20425	1RB#0	23.16	PASS
Band5	5MHz	16QAM	20425	1RB#12	23.22	PASS
Band5	5MHz	16QAM	20425	1RB#24	23.24	PASS
Band5	5MHz	16QAM	20425	12RB#0	22.23	PASS
Band5	5MHz	16QAM	20425	12RB#6	22.22	PASS
Band5	5MHz	16QAM	20425	12RB#13	22.27	PASS
Band5	5MHz	16QAM	20425	25RB#0	22.27	PASS
Band5	5MHz	16QAM	20525	1RB#0	23.06	PASS
Band5	5MHz	16QAM	20525	1RB#12	23.36	PASS
Band5	5MHz	16QAM	20525	1RB#24	23.04	PASS
Band5	5MHz	16QAM	20525	12RB#0	22.48	PASS
Band5	5MHz	16QAM	20525	12RB#6	22.61	PASS
Band5	5MHz	16QAM	20525	12RB#13	22.67	PASS
Band5	5MHz	16QAM	20525	25RB#0	22.37	PASS
Band5	5MHz	16QAM	20625	1RB#0	23.08	PASS
Band5	5MHz	16QAM	20625	1RB#12	23.68	PASS
Band5	5MHz	16QAM	20625	1RB#24	22.88	PASS
Band5	5MHz	16QAM	20625	12RB#0	22.14	PASS

Band5	5MHz	16QAM	20625	12RB#6	22.33	PASS
Band5	5MHz	16QAM	20625	12RB#13	22.30	PASS
Band5	5MHz	16QAM	20625	25RB#0	22.43	PASS
Band5	10MHz	QPSK	20450	1RB#0	24.02	PASS
Band5	10MHz	QPSK	20450	1RB#24	24.13	PASS
Band5	10MHz	QPSK	20450	1RB#49	24.38	PASS
Band5	10MHz	QPSK	20450	25RB#0	23.42	PASS
Band5	10MHz	QPSK	20450	25RB#12	23.40	PASS
Band5	10MHz	QPSK	20450	25RB#25	23.42	PASS
Band5	10MHz	QPSK	20450	50RB#0	23.39	PASS
Band5	10MHz	QPSK	20525	1RB#0	24.18	PASS
Band5	10MHz	QPSK	20525	1RB#24	24.50	PASS
Band5	10MHz	QPSK	20525	1RB#49	24.39	PASS
Band5	10MHz	QPSK	20525	25RB#0	23.55	PASS
Band5	10MHz	QPSK	20525	25RB#12	23.56	PASS
Band5	10MHz	QPSK	20525	25RB#25	23.62	PASS
Band5	10MHz	QPSK	20525	50RB#0	23.47	PASS
Band5	10MHz	QPSK	20600	1RB#0	24.53	PASS
Band5	10MHz	QPSK	20600	1RB#24	24.62	PASS
Band5	10MHz	QPSK	20600	1RB#49	24.20	PASS
Band5	10MHz	QPSK	20600	25RB#0	23.62	PASS
Band5	10MHz	QPSK	20600	25RB#12	23.56	PASS
Band5	10MHz	QPSK	20600	25RB#25	23.43	PASS
Band5	10MHz	QPSK	20600	50RB#0	23.42	PASS
Band5	10MHz	16QAM	20450	1RB#0	23.31	PASS
Band5	10MHz	16QAM	20450	1RB#24	23.37	PASS
Band5	10MHz	16QAM	20450	1RB#49	23.33	PASS
Band5	10MHz	16QAM	20450	25RB#0	22.10	PASS
Band5	10MHz	16QAM	20450	25RB#12	22.19	PASS
Band5	10MHz	16QAM	20450	25RB#25	22.34	PASS
Band5	10MHz	16QAM	20525	1RB#0	23.12	PASS
Band5	10MHz	16QAM	20525	1RB#24	23.55	PASS
Band5	10MHz	16QAM	20525	1RB#49	23.66	PASS
Band5	10MHz	16QAM	20525	25RB#0	22.49	PASS
Band5	10MHz	16QAM	20525	25RB#12	22.49	PASS
Band5	10MHz	16QAM	20525	25RB#25	22.58	PASS
Band5	10MHz	16QAM	20600	1RB#0	23.96	PASS
Band5	10MHz	16QAM	20600	1RB#24	24.08	PASS
Band5	10MHz	16QAM	20600	1RB#49	23.74	PASS
Band5	10MHz	16QAM	20600	25RB#0	22.40	PASS
Band5	10MHz	16QAM	20600	25RB#12	22.68	PASS
Band5	10MHz	16QAM	20600	25RB#25	22.57	PASS

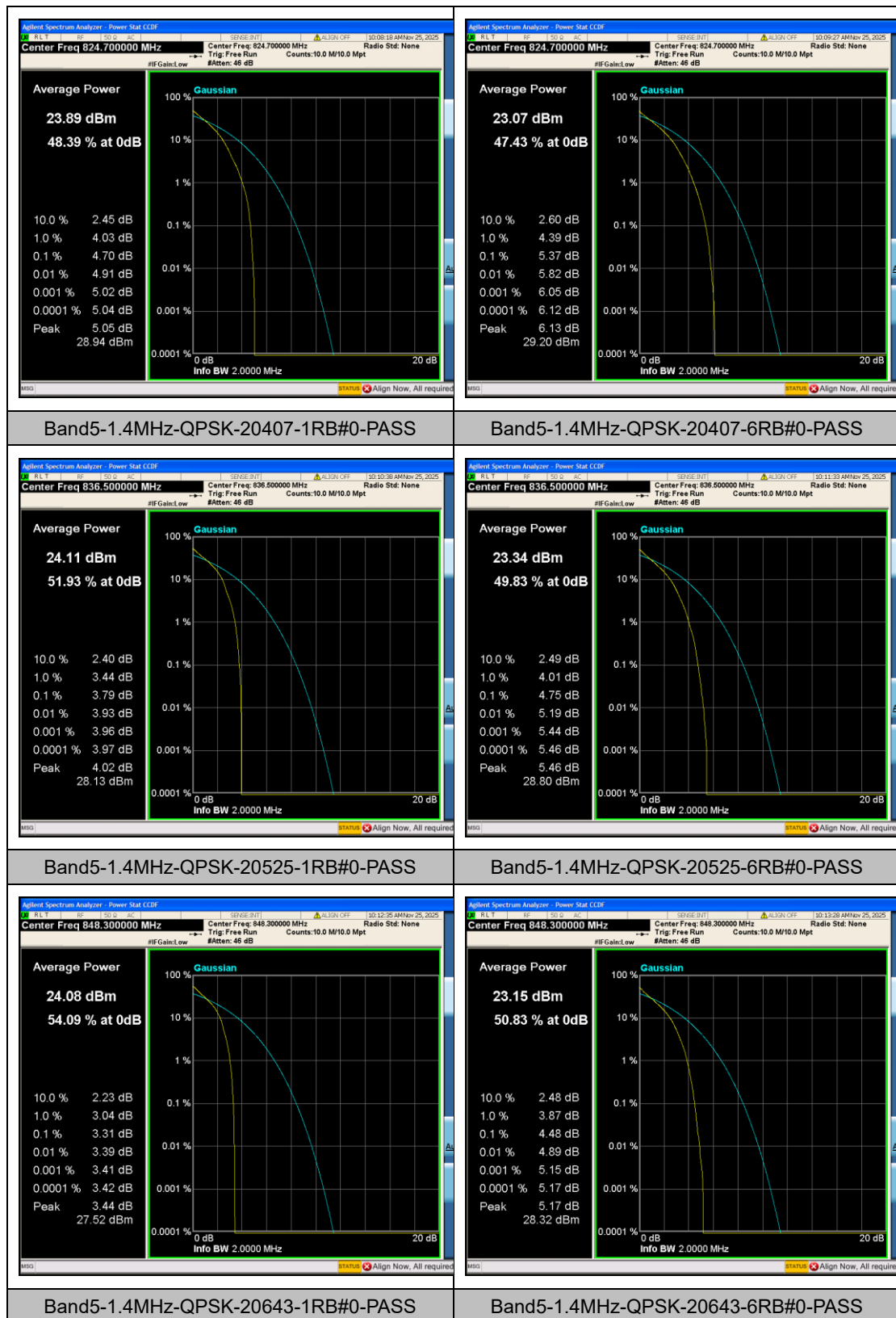
Appendix B: Peak-to-Average Ratio(CCDF)

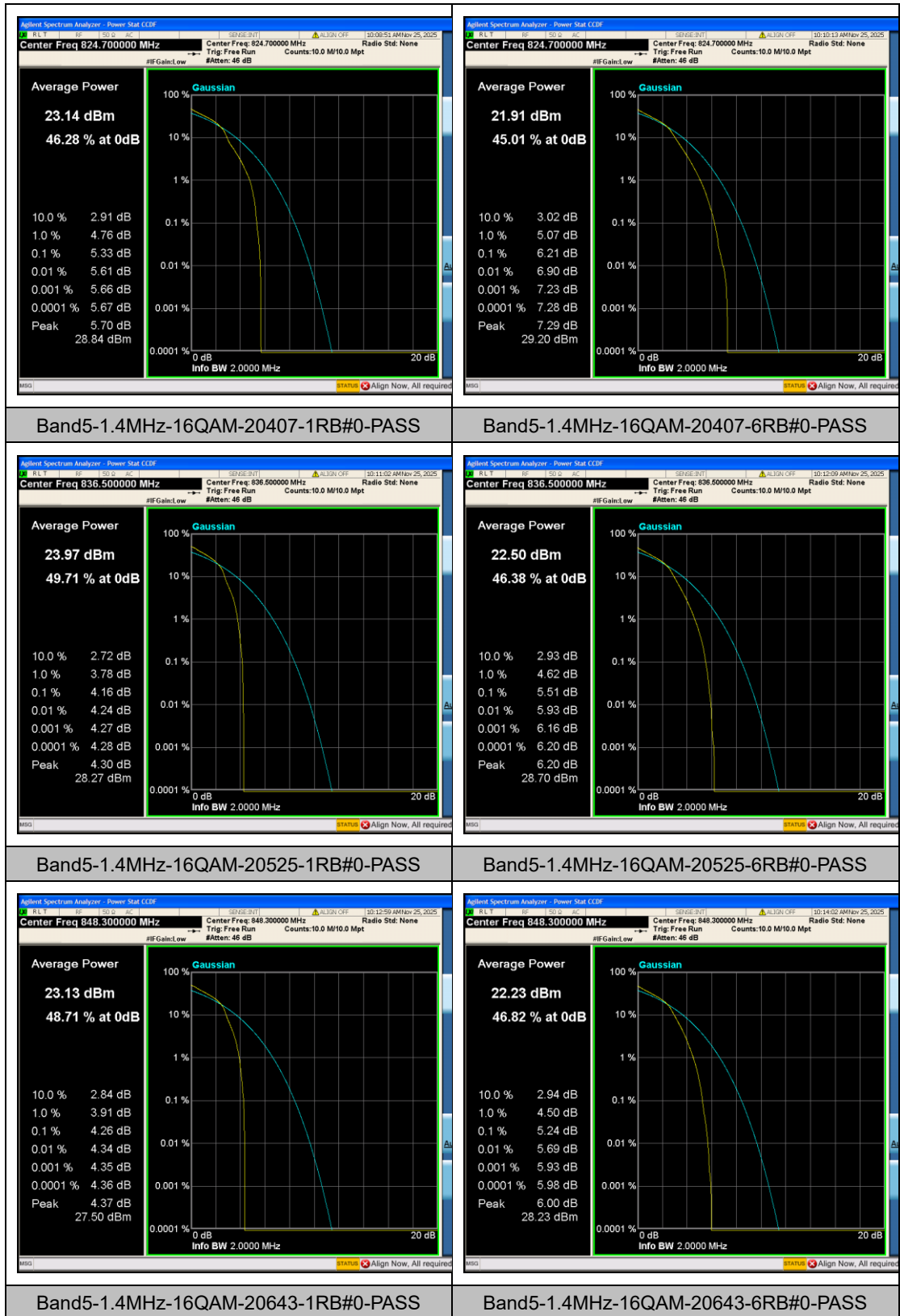
Test Result

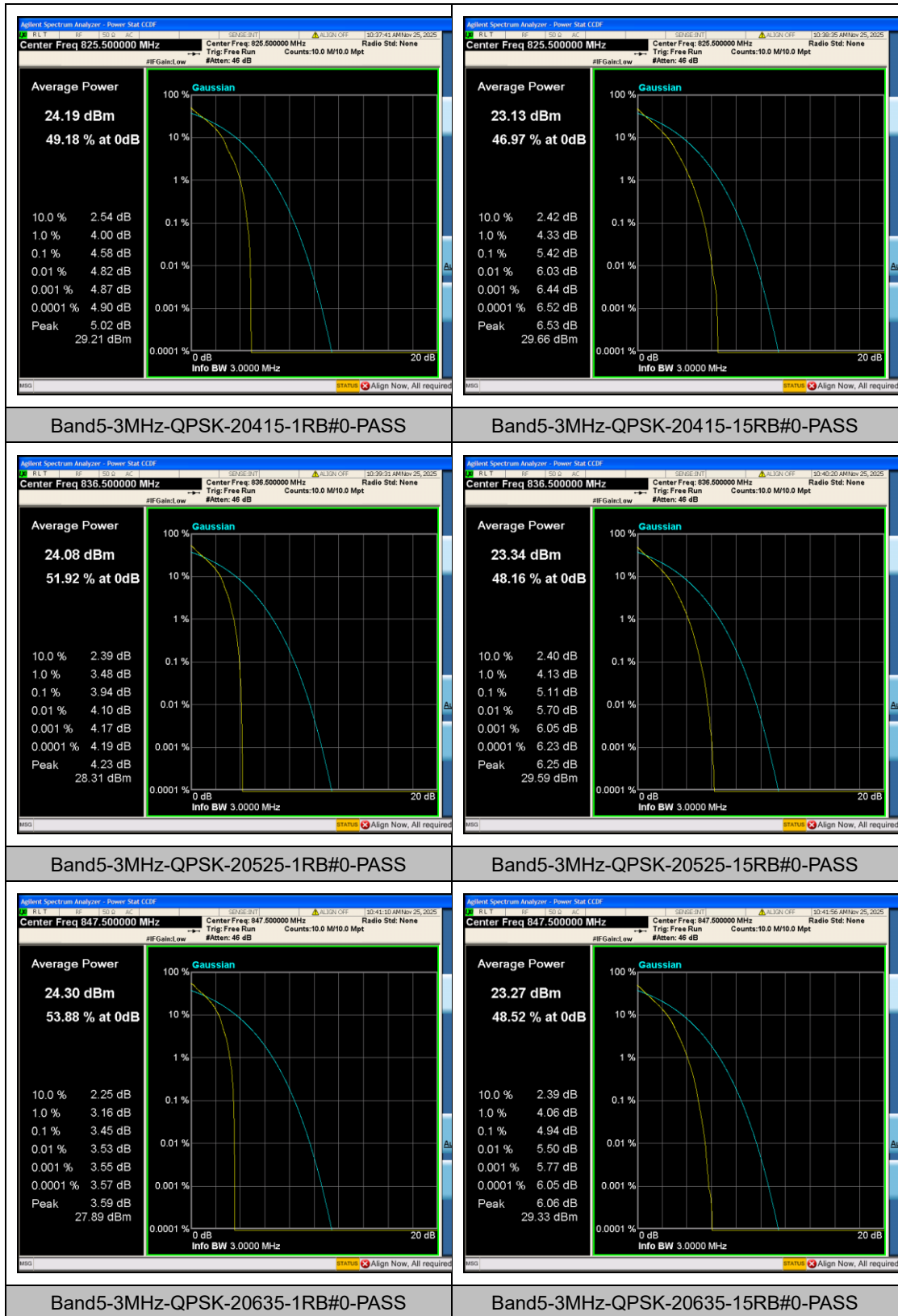
Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band5	1.4MHz	QPSK	20407	1RB#0	4.70	13	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	5.37	13	PASS
Band5	1.4MHz	QPSK	20525	1RB#0	3.79	13	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	4.75	13	PASS
Band5	1.4MHz	QPSK	20643	1RB#0	3.31	13	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	4.48	13	PASS
Band5	1.4MHz	16QAM	20407	1RB#0	5.33	13	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	6.21	13	PASS
Band5	1.4MHz	16QAM	20525	1RB#0	4.16	13	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	5.51	13	PASS
Band5	1.4MHz	16QAM	20643	1RB#0	4.26	13	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	5.24	13	PASS
Band5	3MHz	QPSK	20415	1RB#0	4.58	13	PASS
Band5	3MHz	QPSK	20415	15RB#0	5.42	13	PASS
Band5	3MHz	QPSK	20525	1RB#0	3.94	13	PASS
Band5	3MHz	QPSK	20525	15RB#0	5.11	13	PASS
Band5	3MHz	QPSK	20635	1RB#0	3.45	13	PASS
Band5	3MHz	QPSK	20635	15RB#0	4.94	13	PASS
Band5	3MHz	16QAM	20415	1RB#0	5.47	13	PASS
Band5	3MHz	16QAM	20415	15RB#0	6.23	13	PASS
Band5	3MHz	16QAM	20525	1RB#0	4.68	13	PASS
Band5	3MHz	16QAM	20525	15RB#0	5.85	13	PASS
Band5	3MHz	16QAM	20635	1RB#0	4.27	13	PASS
Band5	3MHz	16QAM	20635	15RB#0	5.69	13	PASS
Band5	5MHz	QPSK	20425	1RB#0	4.73	13	PASS
Band5	5MHz	QPSK	20425	25RB#0	5.43	13	PASS
Band5	5MHz	QPSK	20525	1RB#0	3.81	13	PASS
Band5	5MHz	QPSK	20525	25RB#0	5.06	13	PASS
Band5	5MHz	QPSK	20625	1RB#0	4.03	13	PASS
Band5	5MHz	QPSK	20625	25RB#0	4.97	13	PASS
Band5	5MHz	16QAM	20425	1RB#0	5.30	13	PASS
Band5	5MHz	16QAM	20425	25RB#0	6.14	13	PASS
Band5	5MHz	16QAM	20525	1RB#0	4.53	13	PASS
Band5	5MHz	16QAM	20525	25RB#0	5.76	13	PASS
Band5	5MHz	16QAM	20625	1RB#0	4.90	13	PASS
Band5	5MHz	16QAM	20625	25RB#0	5.74	13	PASS
Band5	10MHz	QPSK	20450	1RB#0	4.67	13	PASS

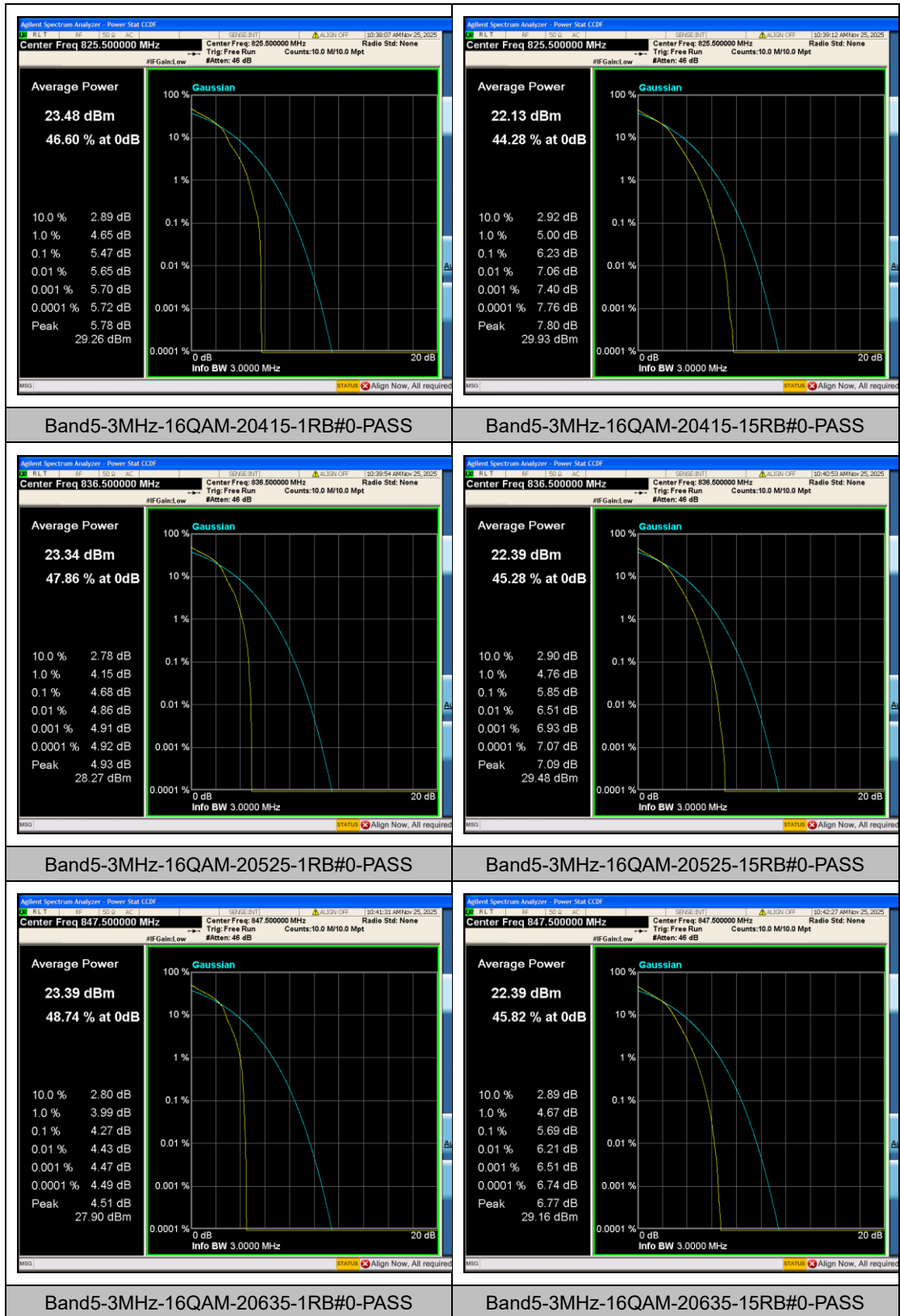
Band5	10MHz	QPSK	20450	50RB#0	5.22	13	PASS
Band5	10MHz	QPSK	20525	1RB#0	3.84	13	PASS
Band5	10MHz	QPSK	20525	50RB#0	5.00	13	PASS
Band5	10MHz	QPSK	20600	1RB#0	3.99	13	PASS
Band5	10MHz	QPSK	20600	50RB#0	5.02	13	PASS
Band5	10MHz	16QAM	20450	1RB#0	5.41	13	PASS
Band5	10MHz	16QAM	20525	1RB#0	4.21	13	PASS
Band5	10MHz	16QAM	20600	1RB#0	4.76	13	PASS

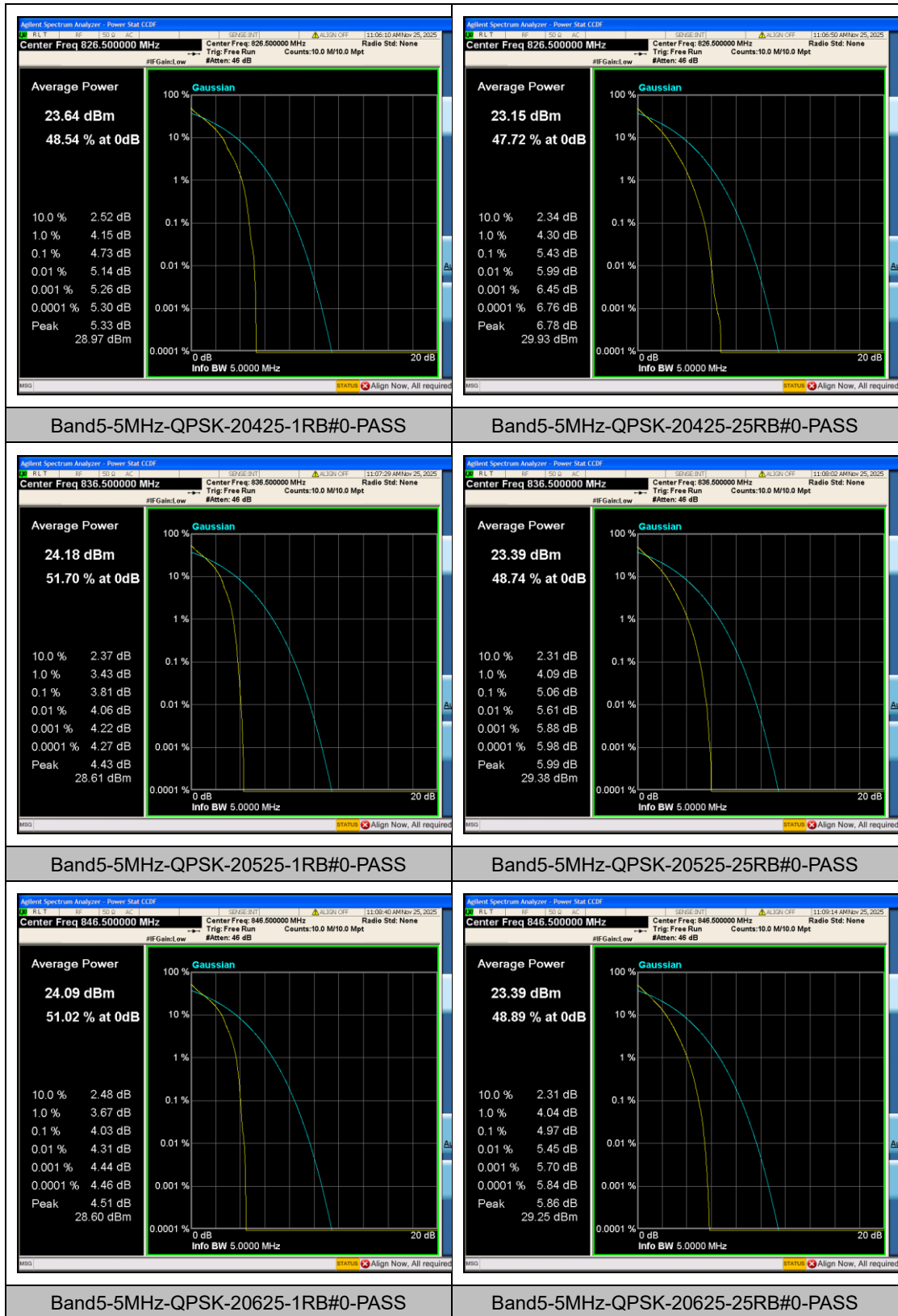
Test Graphs

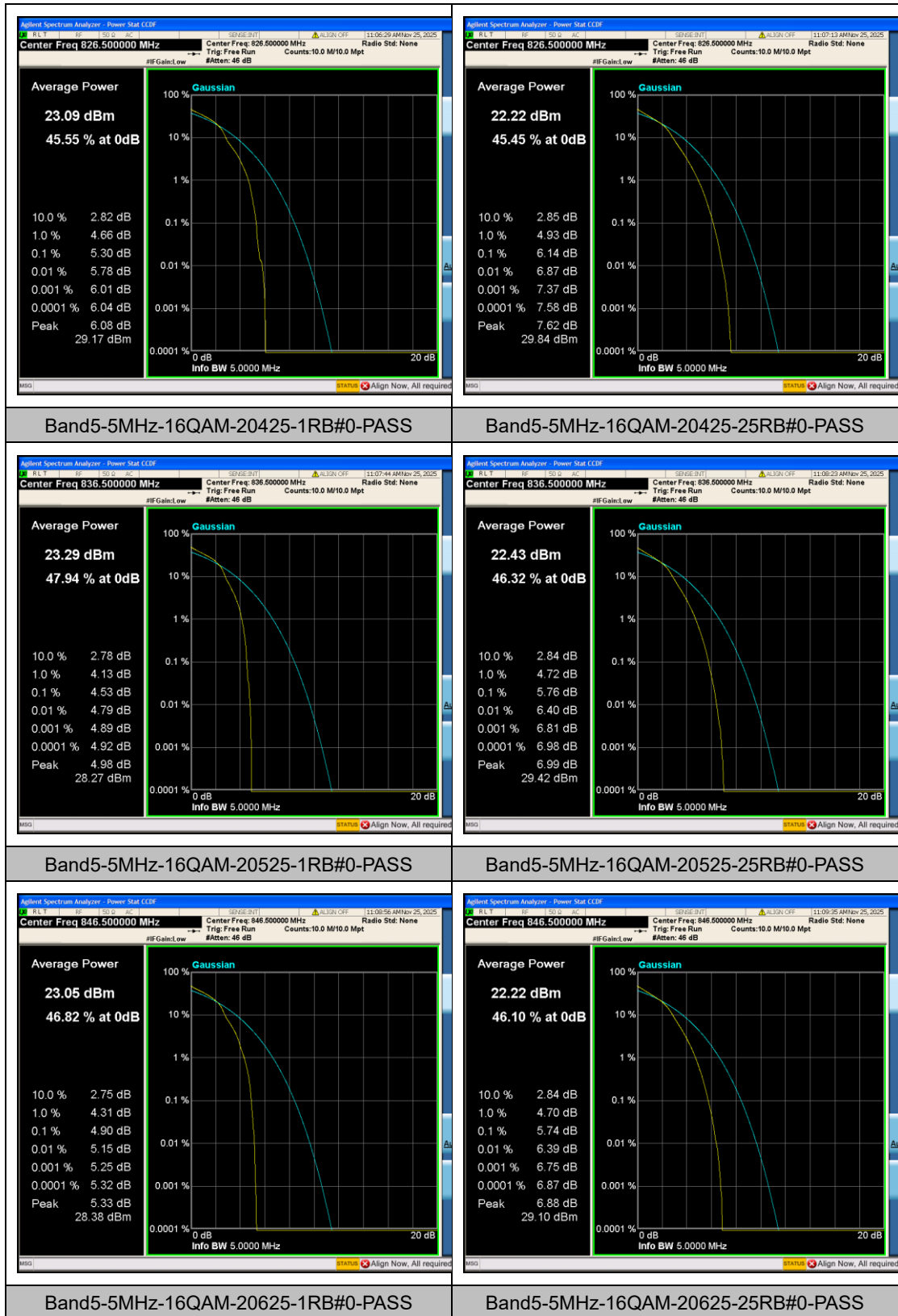


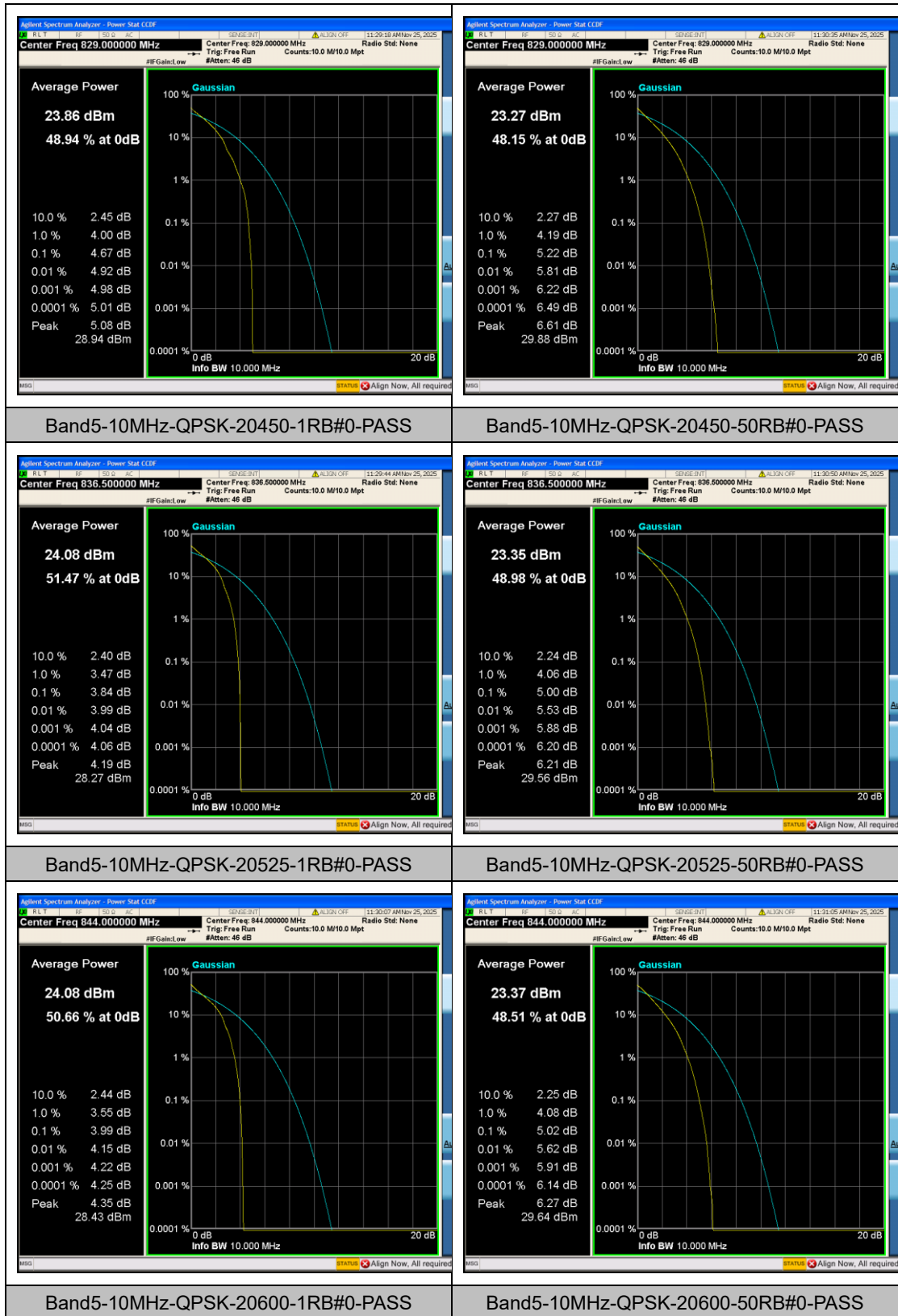


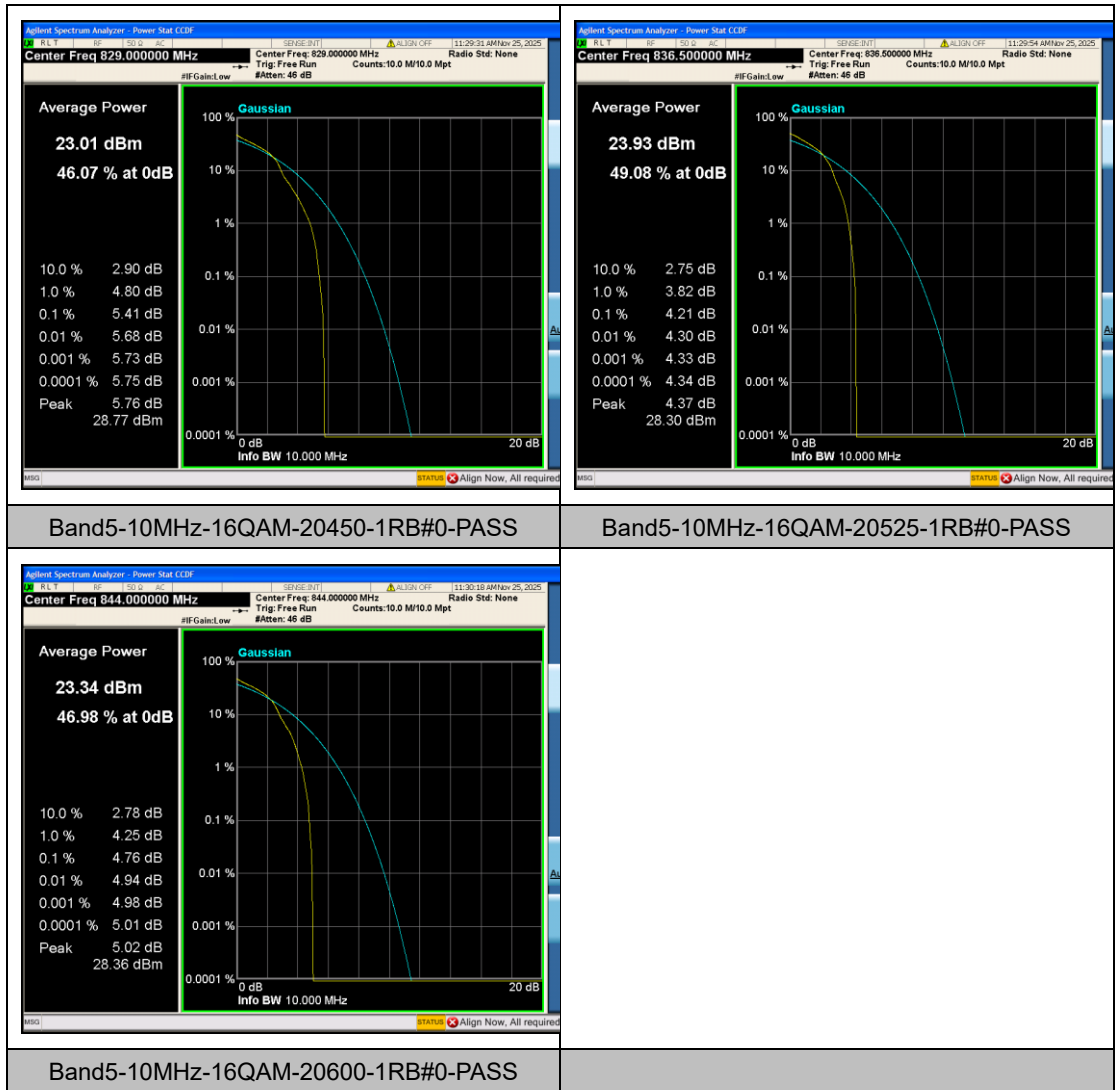










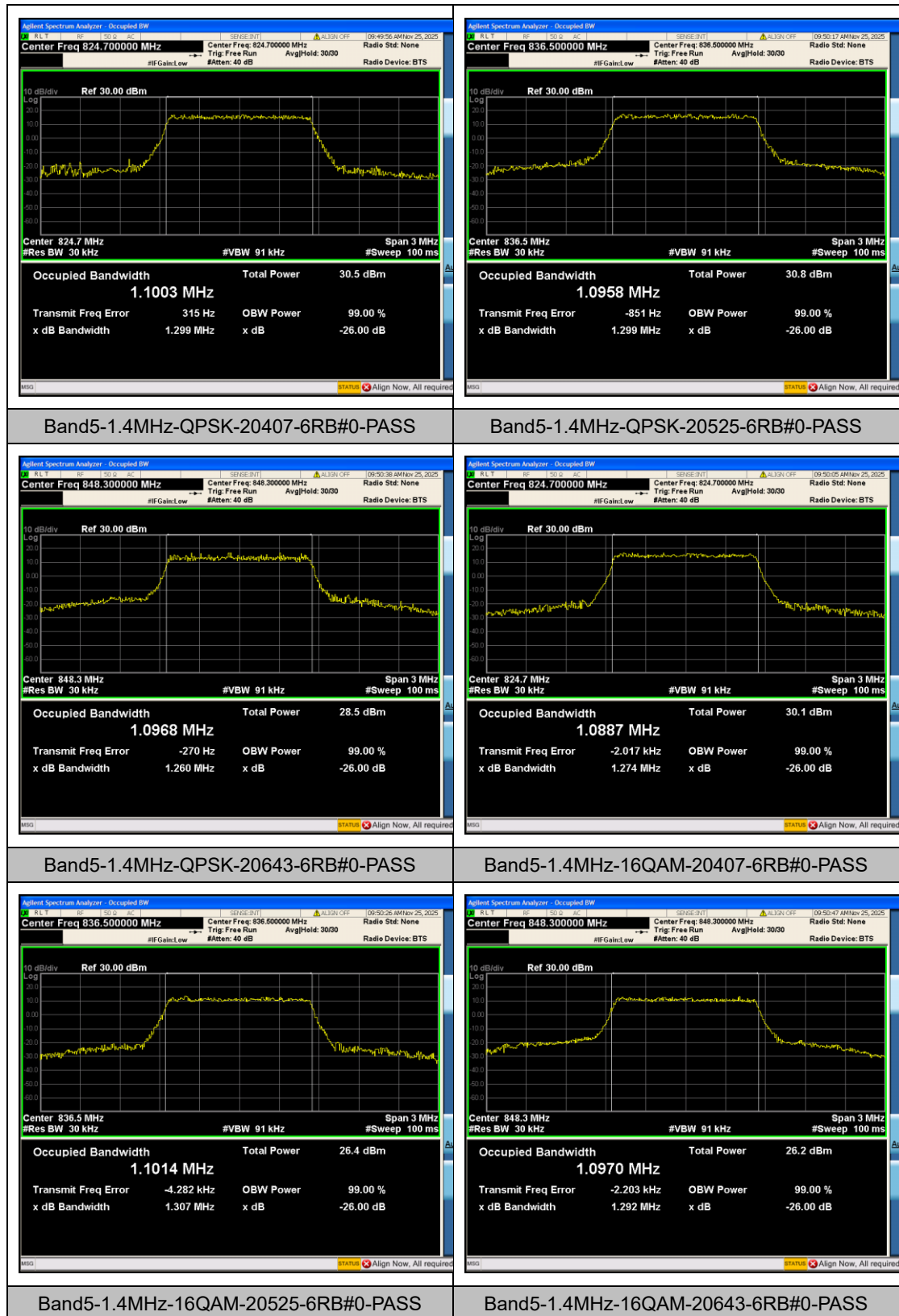


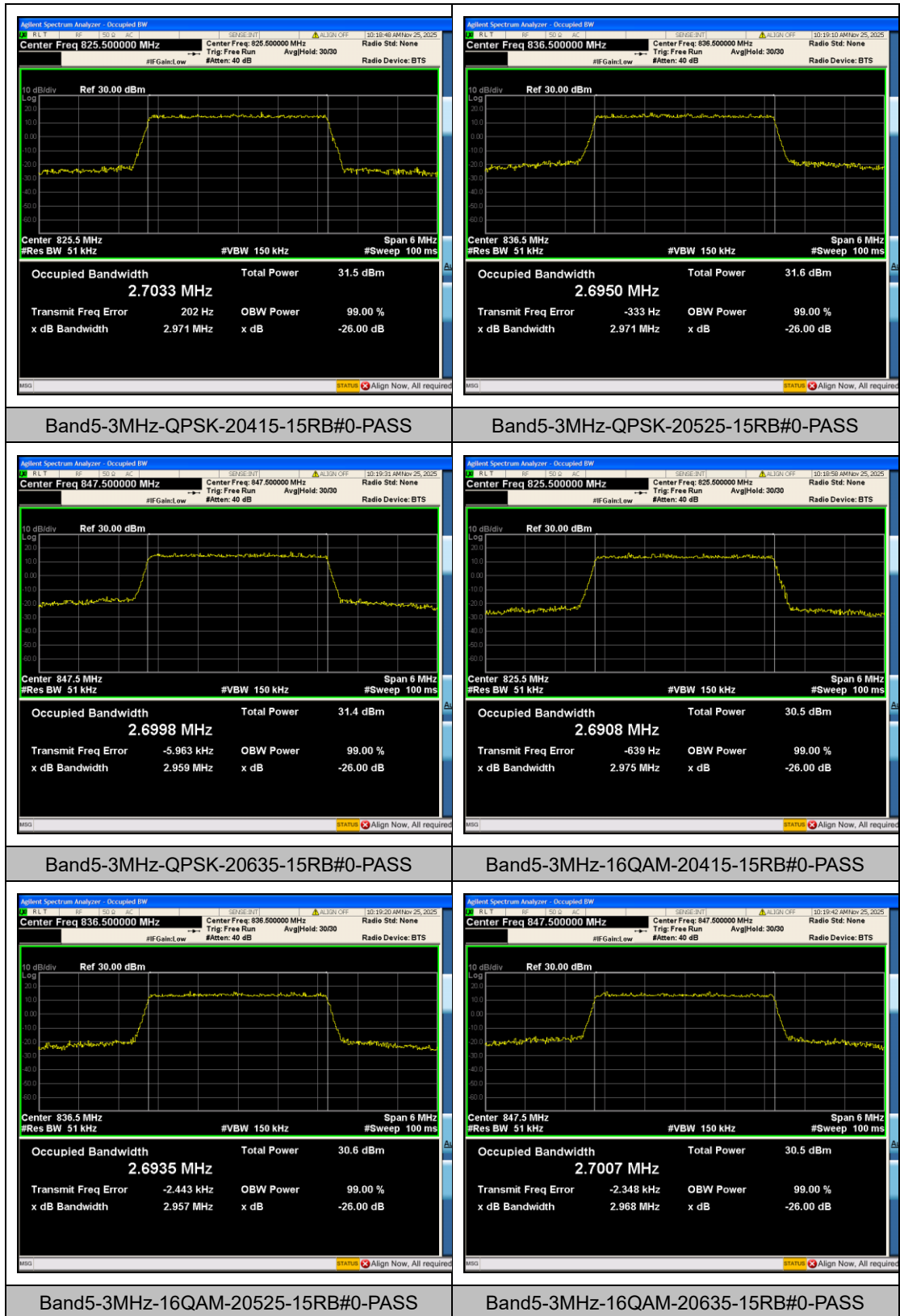
Appendix C: 26dB Bandwidth and Occupied Bandwidth

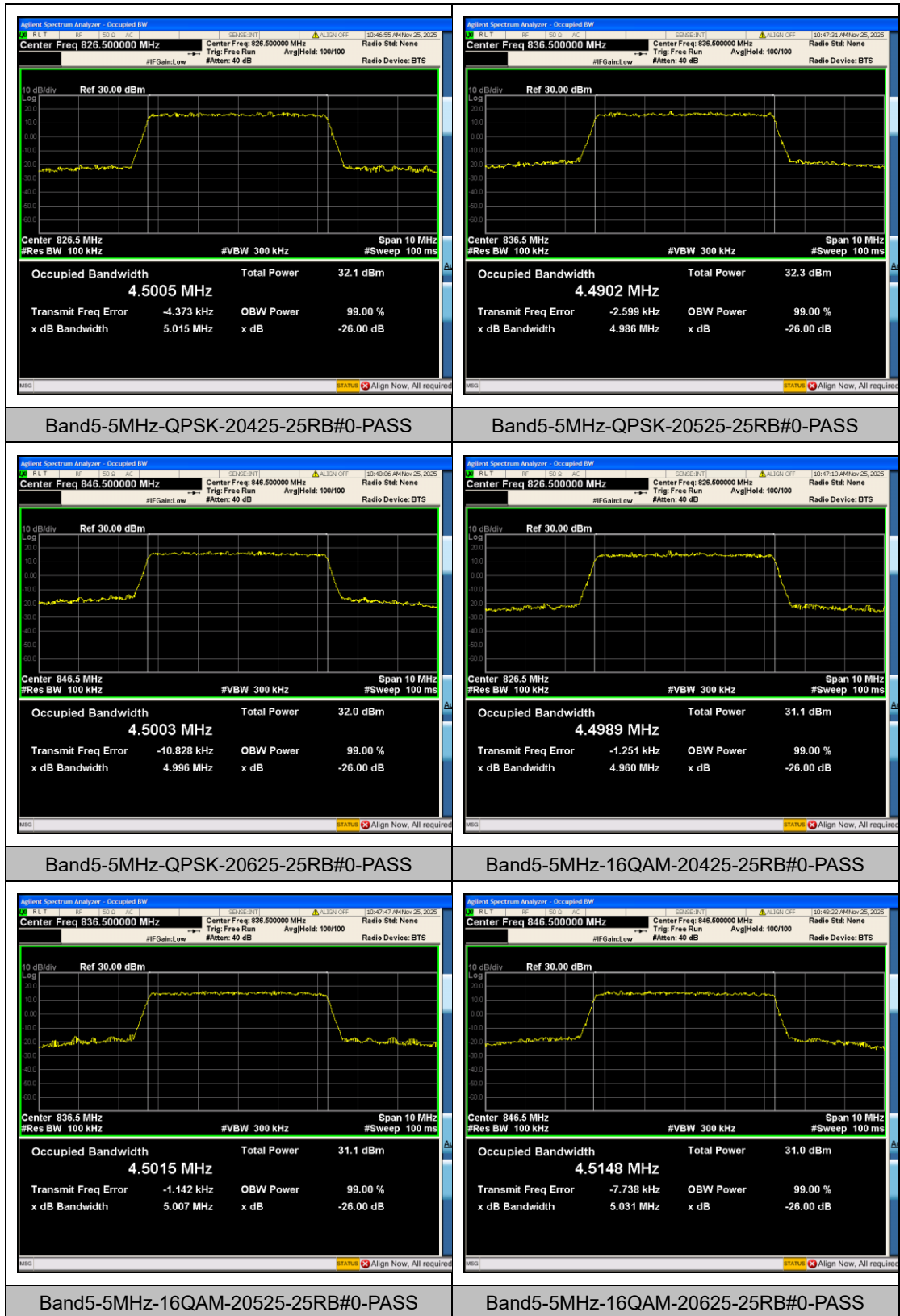
Test Result

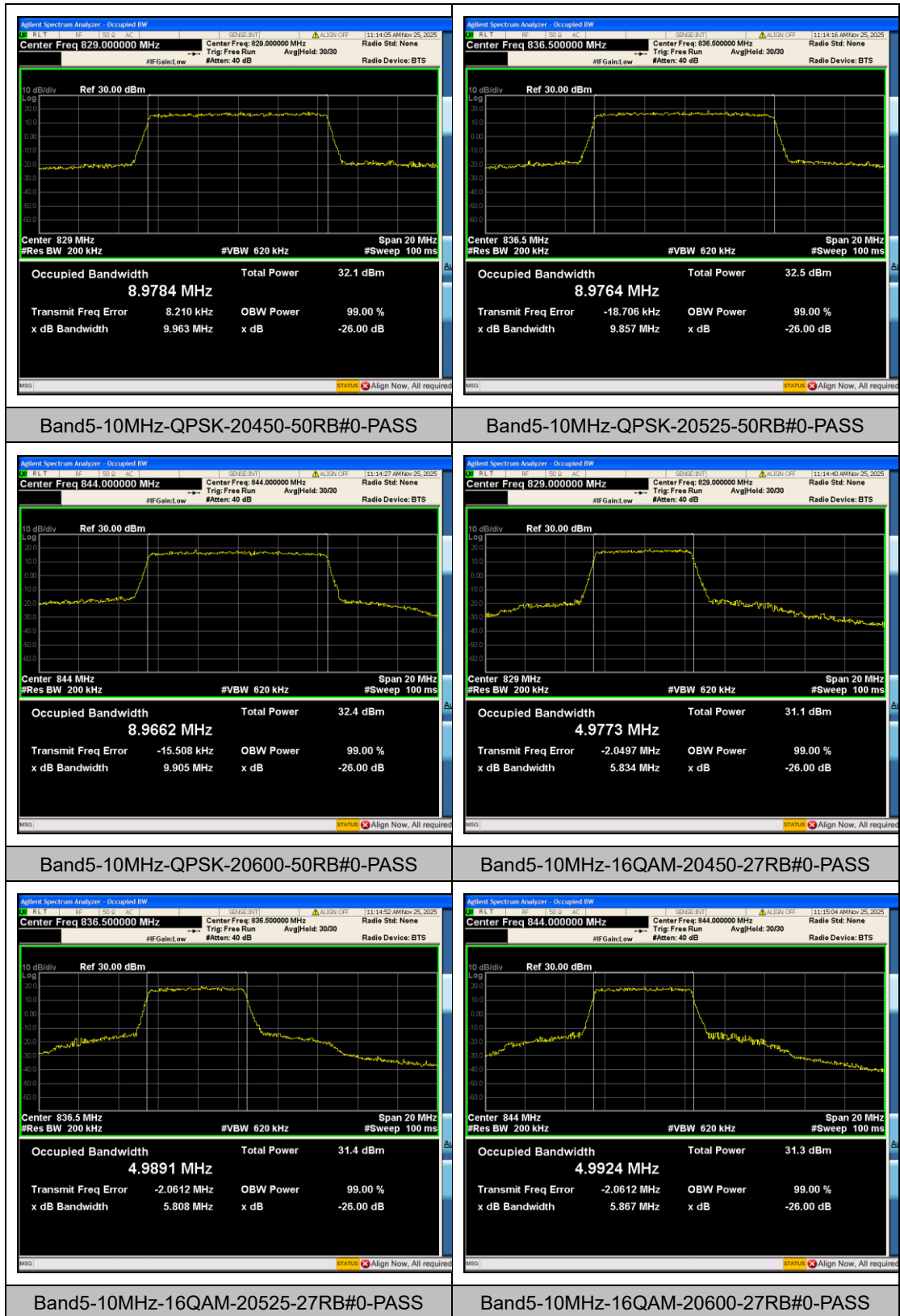
Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band5	1.4MHz	QPSK	20407	6RB#0	1.1003	1.299	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	1.0958	1.299	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	1.0968	1.260	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	1.0887	1.274	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	1.1014	1.307	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	1.0970	1.292	PASS
Band5	3MHz	QPSK	20415	15RB#0	2.7033	2.971	PASS
Band5	3MHz	QPSK	20525	15RB#0	2.6950	2.971	PASS
Band5	3MHz	QPSK	20635	15RB#0	2.6998	2.959	PASS
Band5	3MHz	16QAM	20415	15RB#0	2.6908	2.975	PASS
Band5	3MHz	16QAM	20525	15RB#0	2.6935	2.957	PASS
Band5	3MHz	16QAM	20635	15RB#0	2.7007	2.968	PASS
Band5	5MHz	QPSK	20425	25RB#0	4.5005	5.015	PASS
Band5	5MHz	QPSK	20525	25RB#0	4.4902	4.986	PASS
Band5	5MHz	QPSK	20625	25RB#0	4.5003	4.996	PASS
Band5	5MHz	16QAM	20425	25RB#0	4.4989	4.960	PASS
Band5	5MHz	16QAM	20525	25RB#0	4.5015	5.007	PASS
Band5	5MHz	16QAM	20625	25RB#0	4.5148	5.031	PASS
Band5	10MHz	QPSK	20450	50RB#0	8.9784	9.963	PASS
Band5	10MHz	QPSK	20525	50RB#0	8.9764	9.857	PASS
Band5	10MHz	QPSK	20600	50RB#0	8.9662	9.905	PASS
Band5	10MHz	16QAM	20450	27RB#0	4.9773	5.834	PASS
Band5	10MHz	16QAM	20525	27RB#0	4.9891	5.808	PASS
Band5	10MHz	16QAM	20600	27RB#0	4.9924	5.867	PASS

Test Graphs









Appendix D: Band Edge

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band5	1.4MHz	QPSK	20407	1RB#0	-33.88	PASS
Band5	1.4MHz	QPSK	20407	1RB#5	-47.84	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	-29.62	PASS
Band5	1.4MHz	QPSK	20643	1RB#0	-42.95	PASS
Band5	1.4MHz	QPSK	20643	1RB#5	-27.26	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	-23.30	PASS
Band5	1.4MHz	16QAM	20407	1RB#0	-26.23	PASS
Band5	1.4MHz	16QAM	20407	1RB#5	-46.52	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	-30.51	PASS
Band5	1.4MHz	16QAM	20643	1RB#0	-43.21	PASS
Band5	1.4MHz	16QAM	20643	1RB#5	-28.29	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	-27.35	PASS
Band5	3MHz	QPSK	20415	1RB#0	-23.46	PASS
Band5	3MHz	QPSK	20415	1RB#14	-42.61	PASS
Band5	3MHz	QPSK	20415	15RB#0	-30.05	PASS
Band5	3MHz	QPSK	20635	1RB#0	-43.76	PASS
Band5	3MHz	QPSK	20635	1RB#14	-21.37	PASS
Band5	3MHz	QPSK	20635	15RB#0	-28.81	PASS
Band5	3MHz	16QAM	20415	1RB#0	-25.36	PASS
Band5	3MHz	16QAM	20415	1RB#14	-43.43	PASS
Band5	3MHz	16QAM	20415	15RB#0	-32.27	PASS
Band5	3MHz	16QAM	20635	1RB#0	-44.41	PASS
Band5	3MHz	16QAM	20635	1RB#14	-24.30	PASS
Band5	3MHz	16QAM	20635	15RB#0	-30.59	PASS
Band5	5MHz	QPSK	20425	1RB#0	-28.48	PASS
Band5	5MHz	QPSK	20425	1RB#24	-51.83	PASS
Band5	5MHz	QPSK	20425	25RB#0	-32.74	PASS
Band5	5MHz	QPSK	20625	1RB#0	-51.92	PASS
Band5	5MHz	QPSK	20625	1RB#24	-28.63	PASS
Band5	5MHz	QPSK	20625	25RB#0	-30.31	PASS
Band5	5MHz	16QAM	20425	1RB#0	-29.97	PASS
Band5	5MHz	16QAM	20425	1RB#24	-51.75	PASS
Band5	5MHz	16QAM	20425	25RB#0	-33.80	PASS
Band5	5MHz	16QAM	20625	1RB#0	-51.92	PASS
Band5	5MHz	16QAM	20625	1RB#24	-29.75	PASS
Band5	5MHz	16QAM	20625	25RB#0	-31.52	PASS
Band5	10MHz	QPSK	20450	1RB#0	-39.44	PASS

Band5	10MHz	QPSK	20450	1RB#49	-54.47	PASS
Band5	10MHz	QPSK	20450	50RB#0	-34.97	PASS
Band5	10MHz	QPSK	20600	1RB#0	-54.89	PASS
Band5	10MHz	QPSK	20600	1RB#49	-38.28	PASS
Band5	10MHz	QPSK	20600	50RB#0	-34.11	PASS
Band5	10MHz	16QAM	20450	1RB#0	-40.24	PASS
Band5	10MHz	16QAM	20450	1RB#49	-54.91	PASS
Band5	10MHz	16QAM	20600	1RB#0	-55.23	PASS
Band5	10MHz	16QAM	20600	1RB#49	-39.80	PASS

Test Graphs

