

FCC Appendix RF Test Data for LTE Band 41

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

EUT : Rechargeable Tracker

Model Number : M501N

FCC ID : 2BTQO-M501N

Report No. : CTA25111402508

Reviewed By : Eric Wang

Appendix A: Conducted Power Output Data

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band41	5MHz	QPSK	39675	1RB#0	23.53	PASS
Band41	5MHz	QPSK	39675	1RB#12	23.60	PASS
Band41	5MHz	QPSK	39675	1RB#24	23.89	PASS
Band41	5MHz	QPSK	39675	12RB#0	22.66	PASS
Band41	5MHz	QPSK	39675	12RB#6	22.66	PASS
Band41	5MHz	QPSK	39675	12RB#13	22.77	PASS
Band41	5MHz	QPSK	39675	25RB#0	22.69	PASS
Band41	5MHz	QPSK	40620	1RB#0	23.91	PASS
Band41	5MHz	QPSK	40620	1RB#12	24.09	PASS
Band41	5MHz	QPSK	40620	1RB#24	24.03	PASS
Band41	5MHz	QPSK	40620	12RB#0	23.29	PASS
Band41	5MHz	QPSK	40620	12RB#6	23.30	PASS
Band41	5MHz	QPSK	40620	12RB#13	23.19	PASS
Band41	5MHz	QPSK	40620	25RB#0	23.20	PASS
Band41	5MHz	QPSK	41565	1RB#0	23.57	PASS
Band41	5MHz	QPSK	41565	1RB#12	23.61	PASS
Band41	5MHz	QPSK	41565	1RB#24	23.53	PASS
Band41	5MHz	QPSK	41565	12RB#0	22.80	PASS
Band41	5MHz	QPSK	41565	12RB#6	22.71	PASS
Band41	5MHz	QPSK	41565	12RB#13	22.67	PASS
Band41	5MHz	QPSK	41565	25RB#0	22.70	PASS
Band41	5MHz	16QAM	39675	1RB#0	23.30	PASS
Band41	5MHz	16QAM	39675	1RB#12	23.06	PASS
Band41	5MHz	16QAM	39675	1RB#24	23.26	PASS
Band41	5MHz	16QAM	39675	12RB#0	21.57	PASS
Band41	5MHz	16QAM	39675	12RB#6	21.56	PASS
Band41	5MHz	16QAM	39675	12RB#13	21.47	PASS
Band41	5MHz	16QAM	39675	25RB#0	21.68	PASS
Band41	5MHz	16QAM	40620	1RB#0	23.53	PASS
Band41	5MHz	16QAM	40620	1RB#12	23.49	PASS
Band41	5MHz	16QAM	40620	1RB#24	23.31	PASS
Band41	5MHz	16QAM	40620	12RB#0	22.23	PASS
Band41	5MHz	16QAM	40620	12RB#6	22.24	PASS
Band41	5MHz	16QAM	40620	12RB#13	22.21	PASS
Band41	5MHz	16QAM	40620	25RB#0	22.35	PASS
Band41	5MHz	16QAM	41565	1RB#0	23.07	PASS
Band41	5MHz	16QAM	41565	1RB#12	23.09	PASS

Band41	5MHz	16QAM	41565	1RB#24	22.91	PASS
Band41	5MHz	16QAM	41565	12RB#0	21.77	PASS
Band41	5MHz	16QAM	41565	12RB#6	21.76	PASS
Band41	5MHz	16QAM	41565	12RB#13	21.69	PASS
Band41	5MHz	16QAM	41565	25RB#0	21.77	PASS
Band41	10MHz	QPSK	39700	1RB#0	23.64	PASS
Band41	10MHz	QPSK	39700	1RB#24	23.57	PASS
Band41	10MHz	QPSK	39700	1RB#49	23.83	PASS
Band41	10MHz	QPSK	39700	25RB#0	22.68	PASS
Band41	10MHz	QPSK	39700	25RB#12	22.68	PASS
Band41	10MHz	QPSK	39700	25RB#25	22.82	PASS
Band41	10MHz	QPSK	39700	50RB#0	22.74	PASS
Band41	10MHz	QPSK	40620	1RB#0	24.10	PASS
Band41	10MHz	QPSK	40620	1RB#24	24.20	PASS
Band41	10MHz	QPSK	40620	1RB#49	24.31	PASS
Band41	10MHz	QPSK	40620	25RB#0	23.09	PASS
Band41	10MHz	QPSK	40620	25RB#12	23.32	PASS
Band41	10MHz	QPSK	40620	25RB#25	23.13	PASS
Band41	10MHz	QPSK	40620	50RB#0	23.29	PASS
Band41	10MHz	QPSK	41540	1RB#0	23.73	PASS
Band41	10MHz	QPSK	41540	1RB#24	23.65	PASS
Band41	10MHz	QPSK	41540	1RB#49	23.71	PASS
Band41	10MHz	QPSK	41540	25RB#0	22.93	PASS
Band41	10MHz	QPSK	41540	25RB#12	22.86	PASS
Band41	10MHz	QPSK	41540	25RB#25	22.90	PASS
Band41	10MHz	QPSK	41540	50RB#0	22.81	PASS
Band41	10MHz	16QAM	39700	1RB#0	22.87	PASS
Band41	10MHz	16QAM	39700	1RB#24	22.65	PASS
Band41	10MHz	16QAM	39700	1RB#49	22.89	PASS
Band41	10MHz	16QAM	39700	25RB#0	21.67	PASS
Band41	10MHz	16QAM	39700	25RB#12	21.61	PASS
Band41	10MHz	16QAM	39700	25RB#25	21.72	PASS
Band41	10MHz	16QAM	40620	1RB#0	22.82	PASS
Band41	10MHz	16QAM	40620	1RB#24	23.66	PASS
Band41	10MHz	16QAM	40620	1RB#49	23.49	PASS
Band41	10MHz	16QAM	40620	25RB#0	22.28	PASS
Band41	10MHz	16QAM	40620	25RB#12	22.35	PASS
Band41	10MHz	16QAM	40620	25RB#25	22.24	PASS
Band41	10MHz	16QAM	41540	1RB#0	23.10	PASS
Band41	10MHz	16QAM	41540	1RB#24	22.99	PASS
Band41	10MHz	16QAM	41540	1RB#49	22.98	PASS
Band41	10MHz	16QAM	41540	25RB#0	21.78	PASS
Band41	10MHz	16QAM	41540	25RB#12	21.79	PASS

Band41	10MHz	16QAM	41540	25RB#25	21.74	PASS
Band41	15MHz	QPSK	39725	1RB#0	23.45	PASS
Band41	15MHz	QPSK	39725	1RB#38	23.53	PASS
Band41	15MHz	QPSK	39725	1RB#74	23.69	PASS
Band41	15MHz	QPSK	39725	38RB#0	22.61	PASS
Band41	15MHz	QPSK	39725	38RB#18	22.61	PASS
Band41	15MHz	QPSK	39725	38RB#37	22.63	PASS
Band41	15MHz	QPSK	39725	75RB#0	22.61	PASS
Band41	15MHz	QPSK	40620	1RB#0	24.09	PASS
Band41	15MHz	QPSK	40620	1RB#38	24.07	PASS
Band41	15MHz	QPSK	40620	1RB#74	24.14	PASS
Band41	15MHz	QPSK	40620	38RB#0	23.12	PASS
Band41	15MHz	QPSK	40620	38RB#18	23.18	PASS
Band41	15MHz	QPSK	40620	38RB#37	23.24	PASS
Band41	15MHz	QPSK	40620	75RB#0	23.07	PASS
Band41	15MHz	QPSK	41515	1RB#0	23.92	PASS
Band41	15MHz	QPSK	41515	1RB#38	23.67	PASS
Band41	15MHz	QPSK	41515	1RB#74	23.76	PASS
Band41	15MHz	QPSK	41515	38RB#0	22.89	PASS
Band41	15MHz	QPSK	41515	38RB#18	22.89	PASS
Band41	15MHz	QPSK	41515	38RB#37	22.89	PASS
Band41	15MHz	QPSK	41515	75RB#0	22.89	PASS
Band41	15MHz	16QAM	39725	1RB#0	22.76	PASS
Band41	15MHz	16QAM	39725	1RB#38	22.51	PASS
Band41	15MHz	16QAM	39725	1RB#74	22.65	PASS
Band41	15MHz	16QAM	39725	38RB#0	22.61	PASS
Band41	15MHz	16QAM	39725	38RB#18	22.62	PASS
Band41	15MHz	16QAM	39725	38RB#37	22.63	PASS
Band41	15MHz	16QAM	40620	1RB#0	22.98	PASS
Band41	15MHz	16QAM	40620	1RB#38	23.10	PASS
Band41	15MHz	16QAM	40620	1RB#74	23.17	PASS
Band41	15MHz	16QAM	40620	38RB#0	23.31	PASS
Band41	15MHz	16QAM	40620	38RB#18	23.18	PASS
Band41	15MHz	16QAM	40620	38RB#37	23.30	PASS
Band41	15MHz	16QAM	41515	1RB#0	22.74	PASS
Band41	15MHz	16QAM	41515	1RB#38	22.82	PASS
Band41	15MHz	16QAM	41515	1RB#74	22.76	PASS
Band41	15MHz	16QAM	41515	38RB#0	22.90	PASS
Band41	15MHz	16QAM	41515	38RB#18	22.89	PASS
Band41	15MHz	16QAM	41515	38RB#37	22.89	PASS
Band41	20MHz	QPSK	39750	1RB#0	23.43	PASS
Band41	20MHz	QPSK	39750	1RB#49	24.09	PASS
Band41	20MHz	QPSK	39750	1RB#99	23.77	PASS

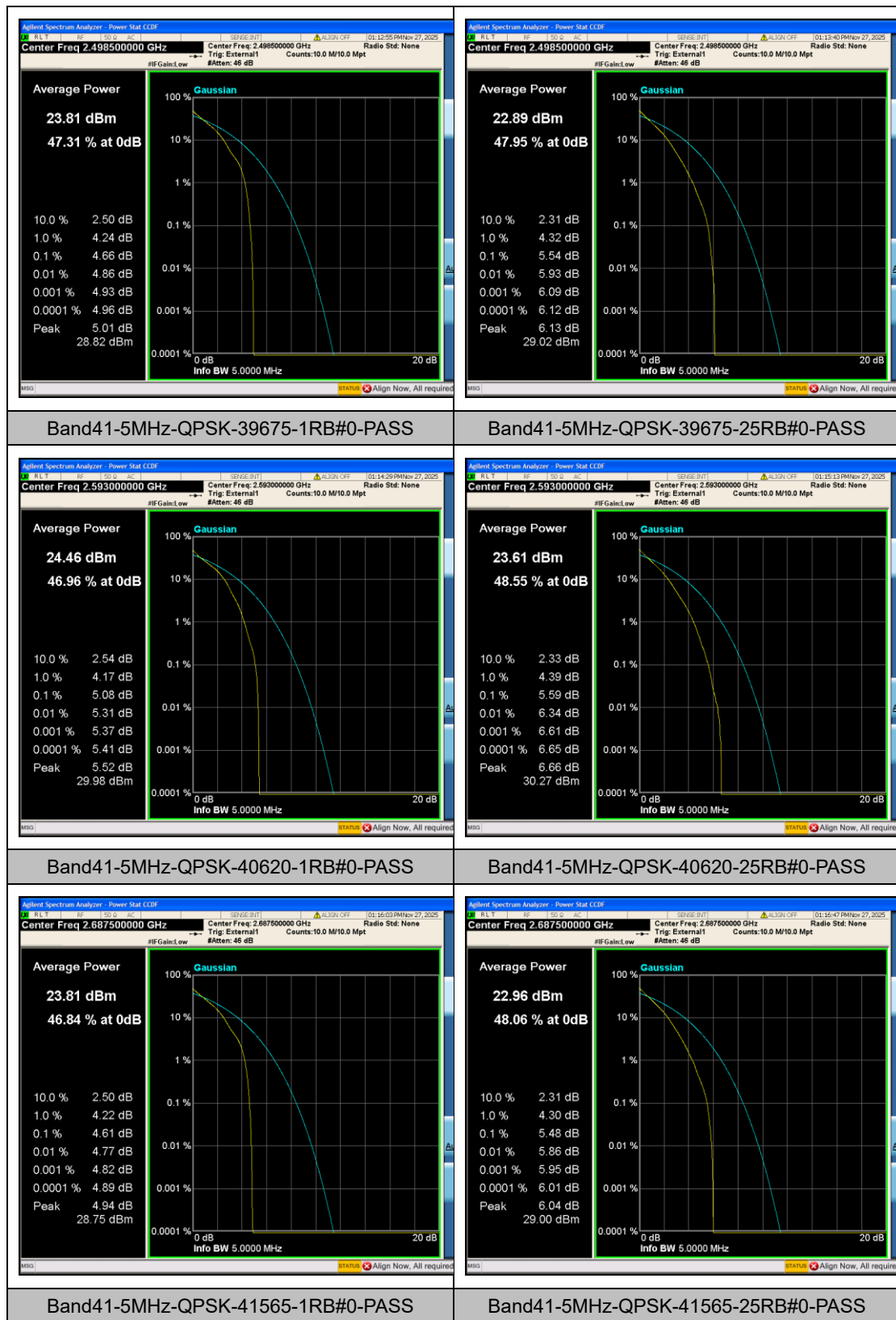
Band41	20MHz	QPSK	39750	50RB#0	22.74	PASS
Band41	20MHz	QPSK	39750	50RB#25	22.49	PASS
Band41	20MHz	QPSK	39750	50RB#50	22.74	PASS
Band41	20MHz	QPSK	39750	100RB#0	22.61	PASS
Band41	20MHz	QPSK	40620	1RB#0	24.11	PASS
Band41	20MHz	QPSK	40620	1RB#49	24.32	PASS
Band41	20MHz	QPSK	40620	1RB#99	24.05	PASS
Band41	20MHz	QPSK	40620	50RB#0	23.10	PASS
Band41	20MHz	QPSK	40620	50RB#25	23.18	PASS
Band41	20MHz	QPSK	40620	50RB#50	23.19	PASS
Band41	20MHz	QPSK	40620	100RB#0	23.22	PASS
Band41	20MHz	QPSK	41490	1RB#0	24.23	PASS
Band41	20MHz	QPSK	41490	1RB#49	24.19	PASS
Band41	20MHz	QPSK	41490	1RB#99	23.62	PASS
Band41	20MHz	QPSK	41490	50RB#0	22.98	PASS
Band41	20MHz	QPSK	41490	50RB#25	23.00	PASS
Band41	20MHz	QPSK	41490	50RB#50	22.87	PASS
Band41	20MHz	QPSK	41490	100RB#0	22.93	PASS
Band41	20MHz	16QAM	39750	1RB#0	23.04	PASS
Band41	20MHz	16QAM	39750	1RB#49	23.54	PASS
Band41	20MHz	16QAM	39750	1RB#99	23.28	PASS
Band41	20MHz	16QAM	40620	1RB#0	23.33	PASS
Band41	20MHz	16QAM	40620	1RB#49	23.34	PASS
Band41	20MHz	16QAM	40620	1RB#99	23.15	PASS
Band41	20MHz	16QAM	41490	1RB#0	23.71	PASS
Band41	20MHz	16QAM	41490	1RB#49	23.73	PASS
Band41	20MHz	16QAM	41490	1RB#99	23.33	PASS

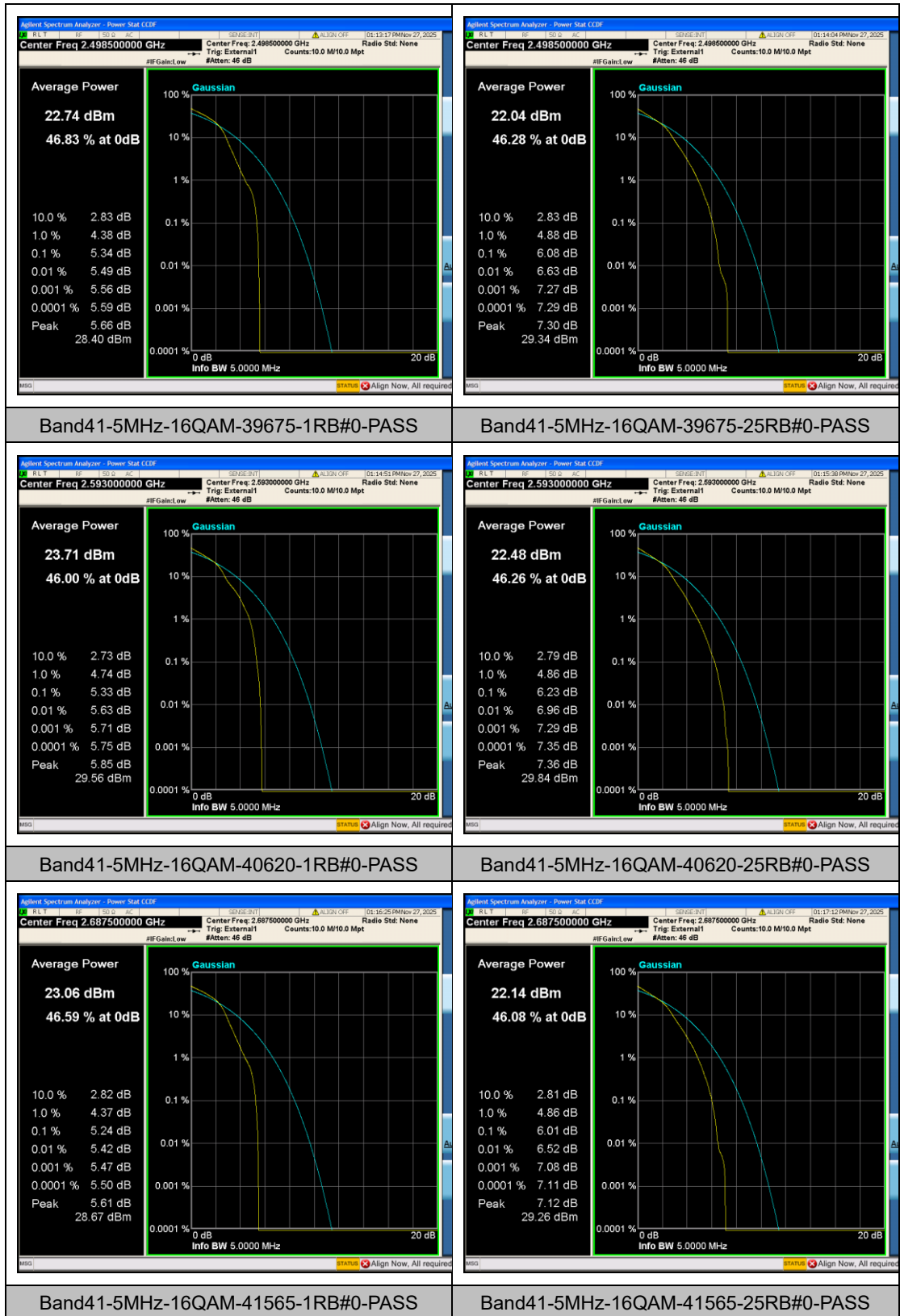
Appendix B: Peak-to-Average Ratio(CCDF)

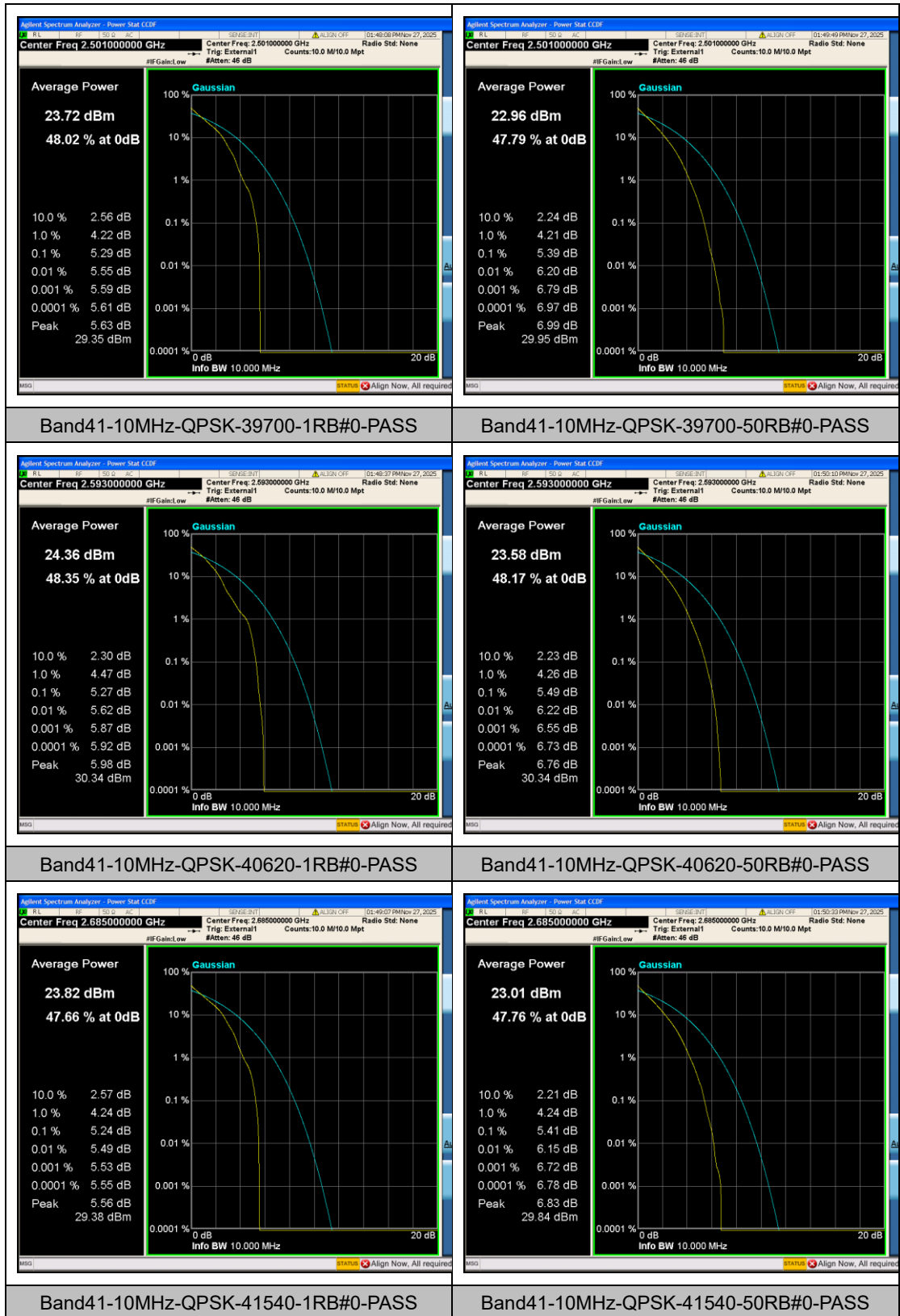
Test Result

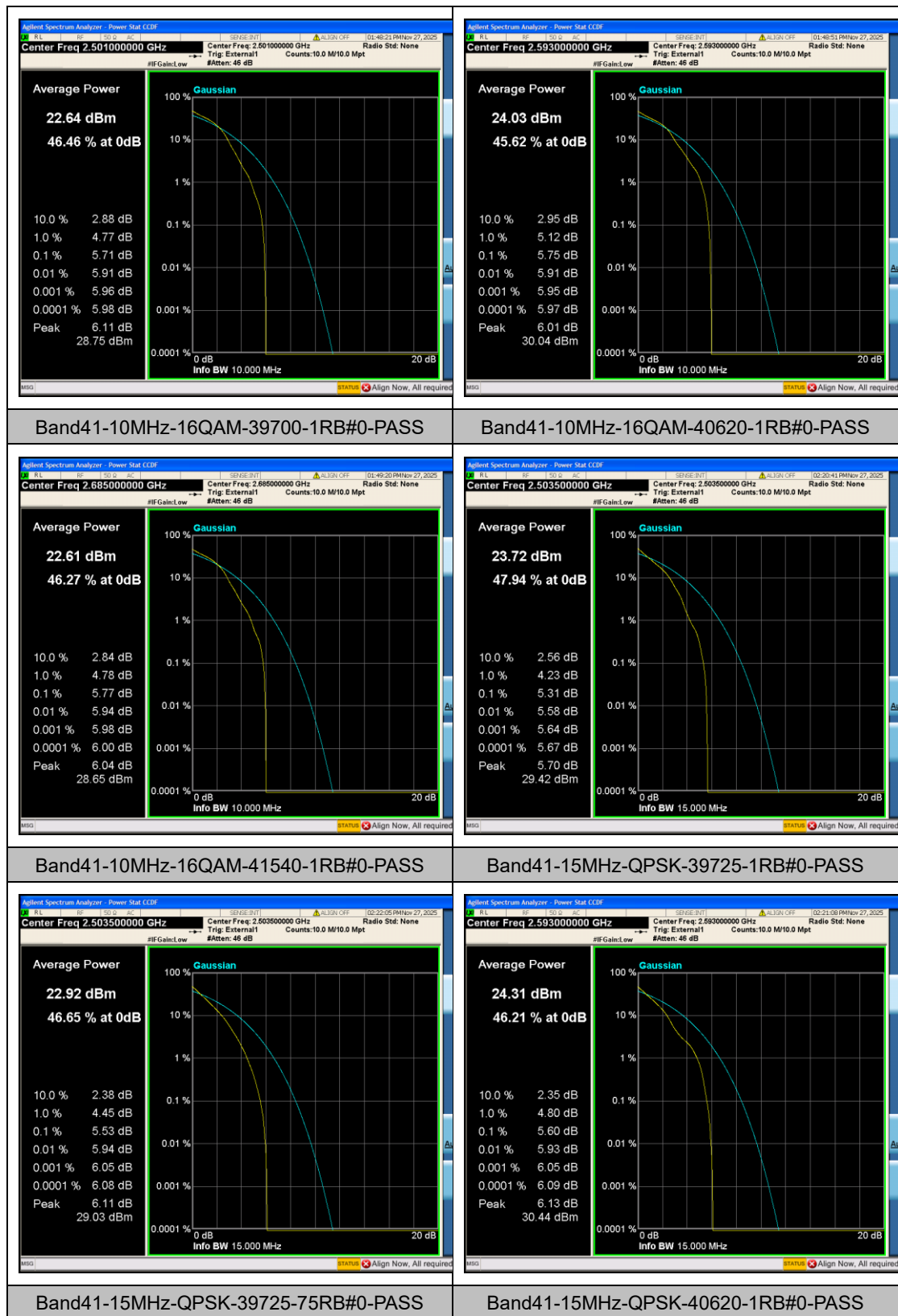
Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band41	5MHz	QPSK	39675	1RB#0	4.66	13	PASS
Band41	5MHz	QPSK	39675	25RB#0	5.54	13	PASS
Band41	5MHz	QPSK	40620	1RB#0	5.08	13	PASS
Band41	5MHz	QPSK	40620	25RB#0	5.59	13	PASS
Band41	5MHz	QPSK	41565	1RB#0	4.61	13	PASS
Band41	5MHz	QPSK	41565	25RB#0	5.48	13	PASS
Band41	5MHz	16QAM	39675	1RB#0	5.34	13	PASS
Band41	5MHz	16QAM	39675	25RB#0	6.08	13	PASS
Band41	5MHz	16QAM	40620	1RB#0	5.33	13	PASS
Band41	5MHz	16QAM	40620	25RB#0	6.23	13	PASS
Band41	5MHz	16QAM	41565	1RB#0	5.24	13	PASS
Band41	5MHz	16QAM	41565	25RB#0	6.01	13	PASS
Band41	10MHz	QPSK	39700	1RB#0	5.29	13	PASS
Band41	10MHz	QPSK	39700	50RB#0	5.39	13	PASS
Band41	10MHz	QPSK	40620	1RB#0	5.27	13	PASS
Band41	10MHz	QPSK	40620	50RB#0	5.49	13	PASS
Band41	10MHz	QPSK	41540	1RB#0	5.24	13	PASS
Band41	10MHz	QPSK	41540	50RB#0	5.41	13	PASS
Band41	10MHz	16QAM	39700	1RB#0	5.71	13	PASS
Band41	10MHz	16QAM	40620	1RB#0	5.75	13	PASS
Band41	10MHz	16QAM	41540	1RB#0	5.77	13	PASS
Band41	15MHz	QPSK	39725	1RB#0	5.31	13	PASS
Band41	15MHz	QPSK	39725	75RB#0	5.53	13	PASS
Band41	15MHz	QPSK	40620	1RB#0	5.60	13	PASS
Band41	15MHz	QPSK	40620	75RB#0	5.71	13	PASS
Band41	15MHz	QPSK	41515	1RB#0	5.28	13	PASS
Band41	15MHz	QPSK	41515	75RB#0	5.65	13	PASS
Band41	15MHz	16QAM	39725	1RB#0	5.71	13	PASS
Band41	15MHz	16QAM	40620	1RB#0	5.82	13	PASS
Band41	15MHz	16QAM	41515	1RB#0	5.73	13	PASS
Band41	20MHz	QPSK	39750	1RB#0	4.66	13	PASS
Band41	20MHz	QPSK	39750	100RB#0	5.11	13	PASS
Band41	20MHz	QPSK	40620	1RB#0	5.21	13	PASS
Band41	20MHz	QPSK	40620	100RB#0	5.37	13	PASS
Band41	20MHz	QPSK	41490	1RB#0	4.66	13	PASS
Band41	20MHz	QPSK	41490	100RB#0	5.25	13	PASS

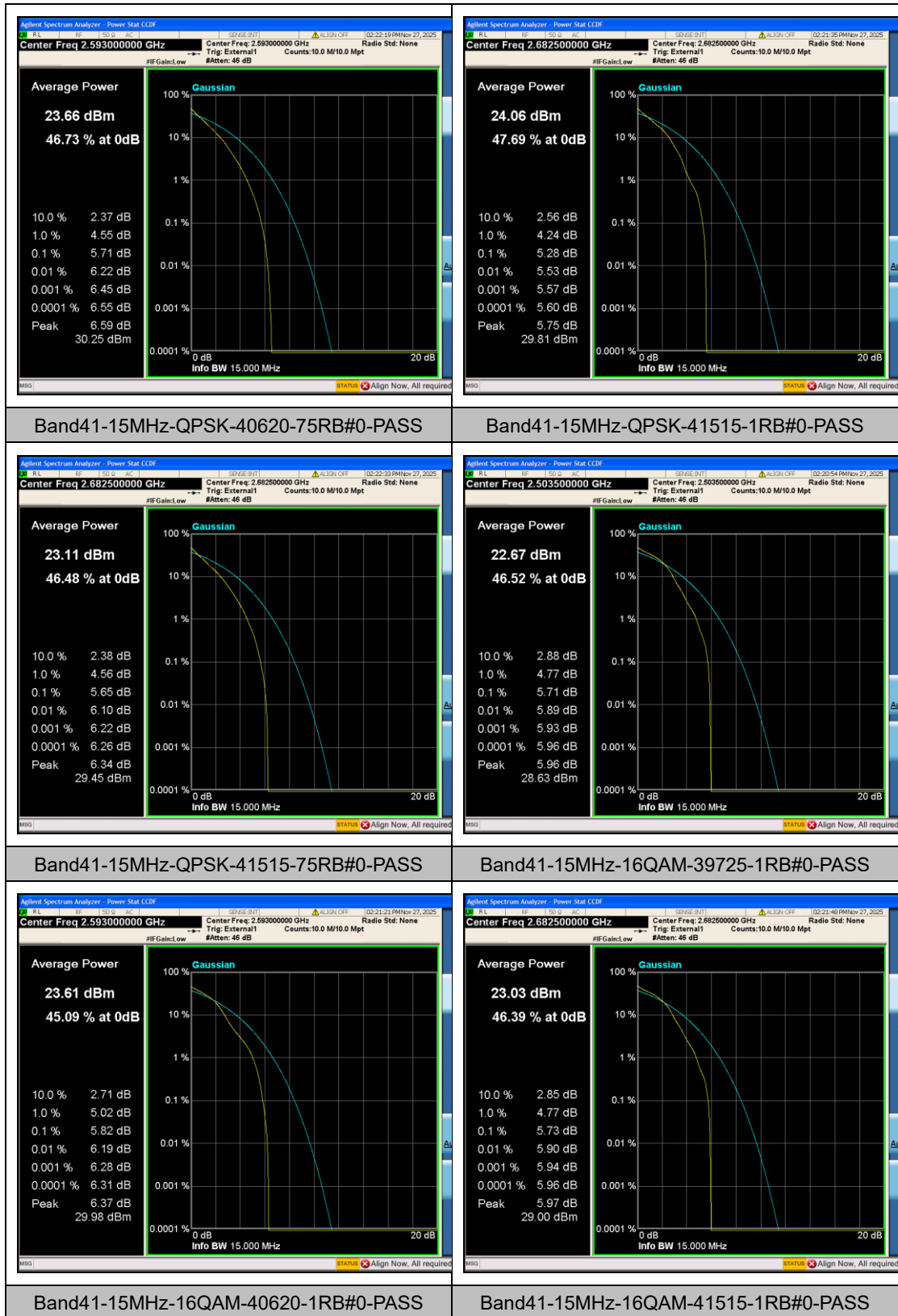
Test Graphs

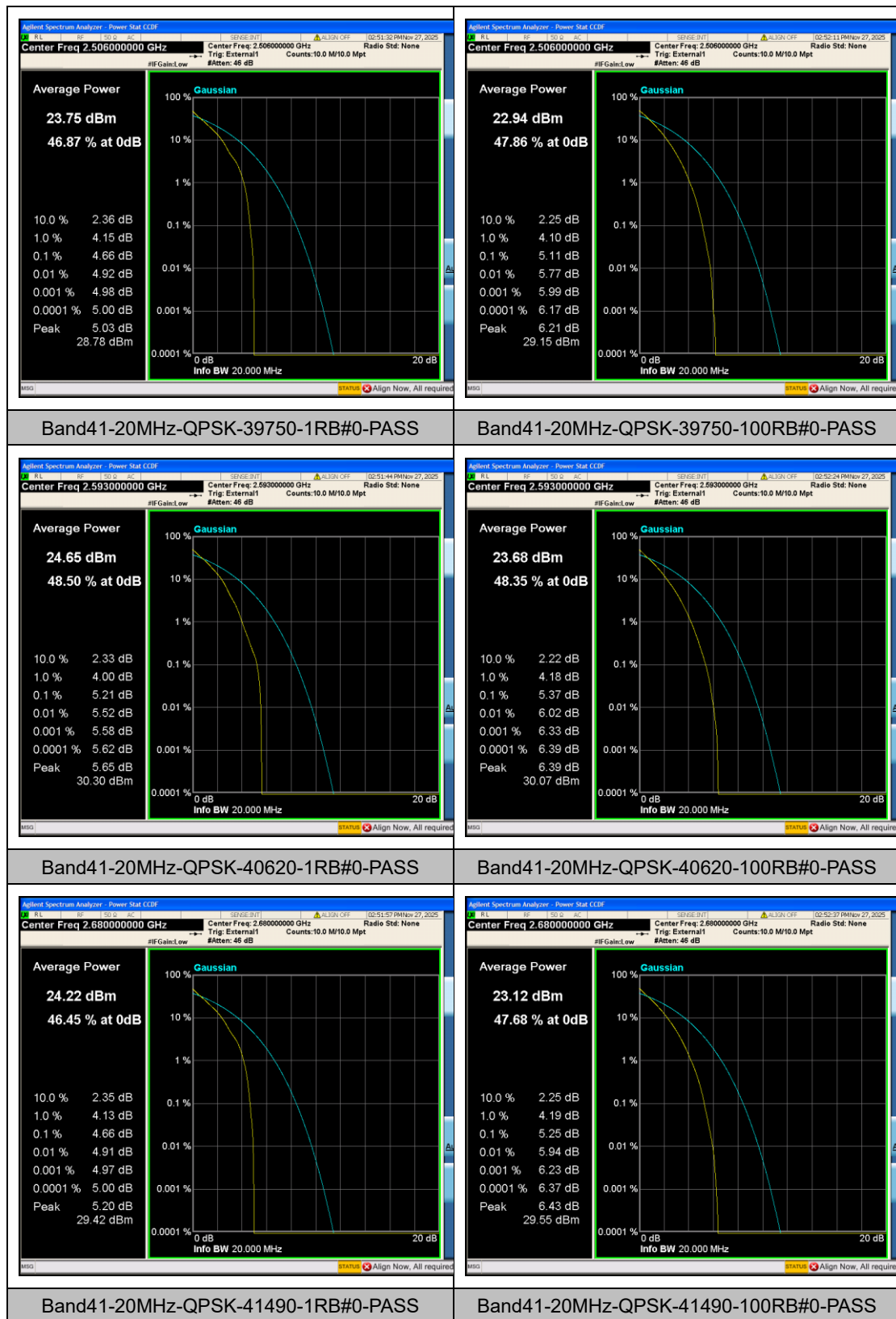










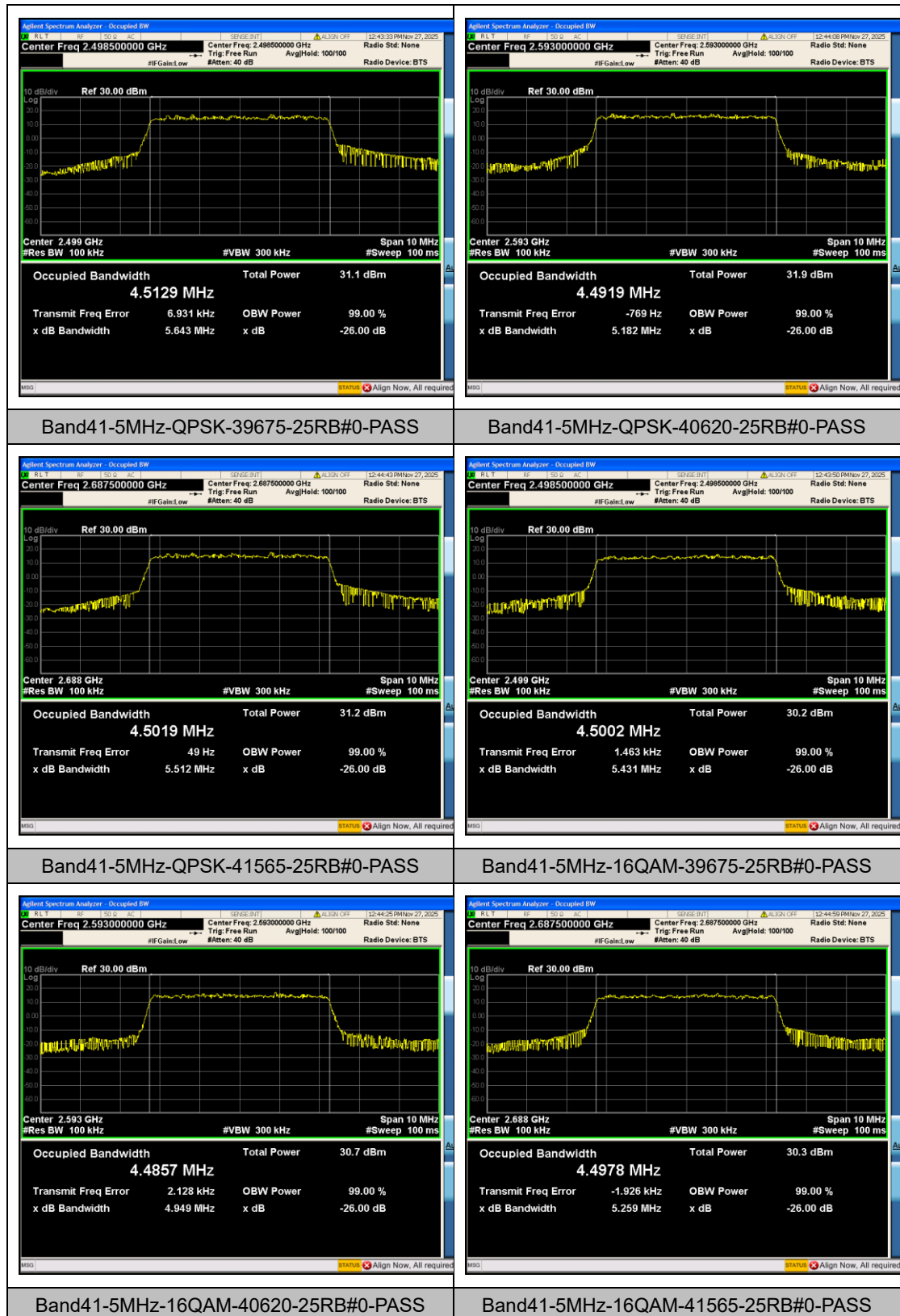


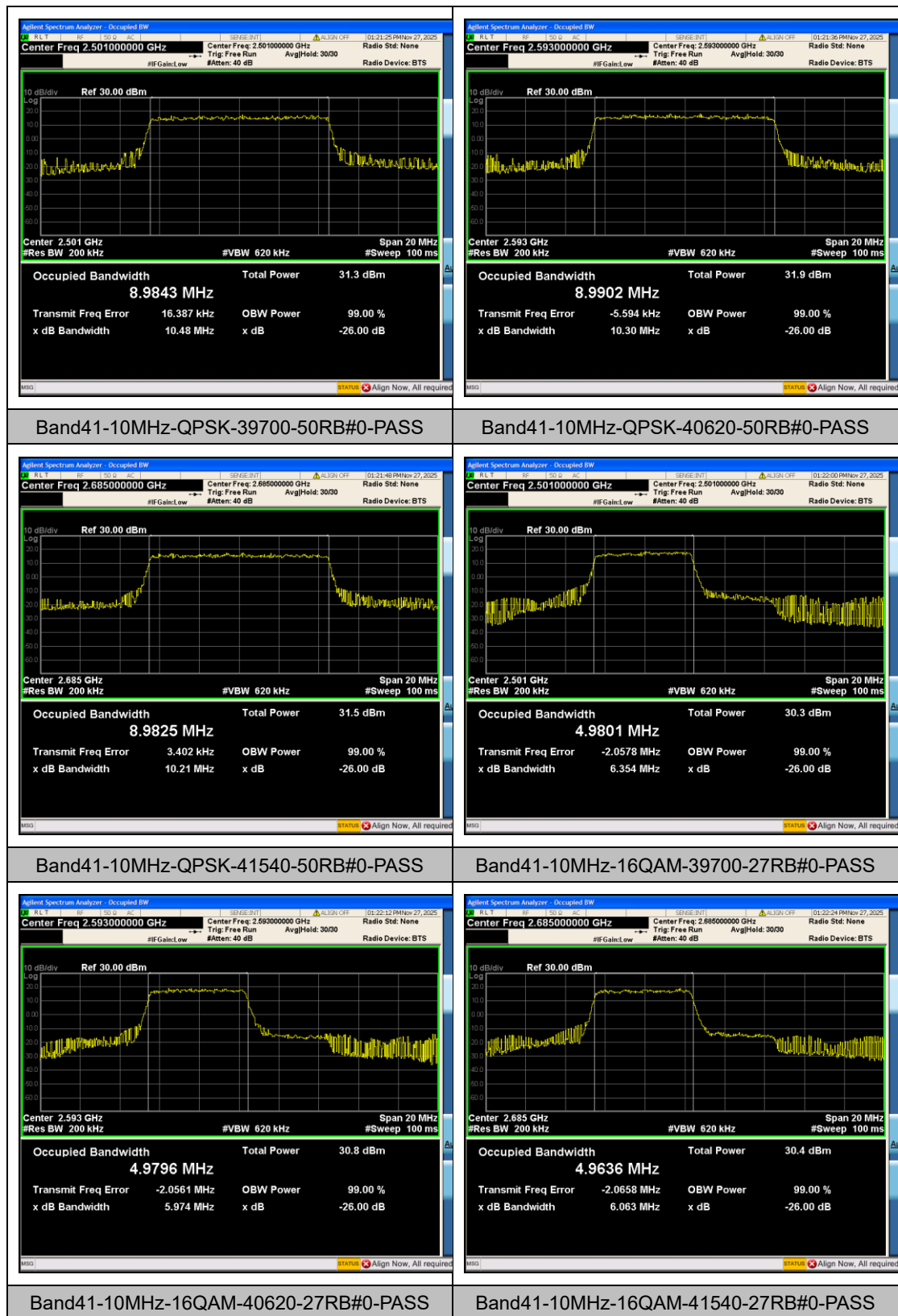
Appendix C: 26dB Bandwidth and Occupied Bandwidth

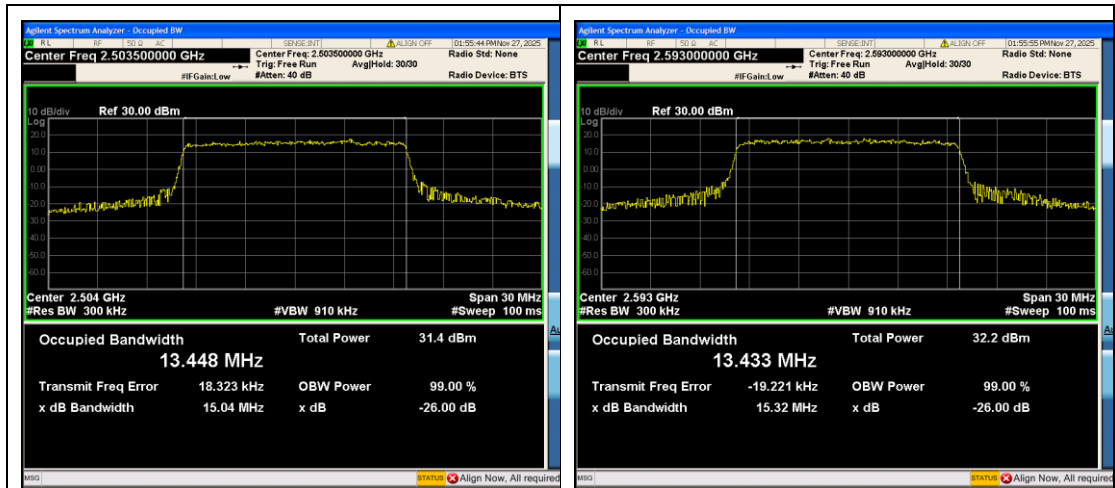
Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band41	5MHz	QPSK	39675	25RB#0	4.5129	5.643	PASS
Band41	5MHz	QPSK	40620	25RB#0	4.4919	5.182	PASS
Band41	5MHz	QPSK	41565	25RB#0	4.5019	5.512	PASS
Band41	5MHz	16QAM	39675	25RB#0	4.5002	5.431	PASS
Band41	5MHz	16QAM	40620	25RB#0	4.4857	4.949	PASS
Band41	5MHz	16QAM	41565	25RB#0	4.4978	5.259	PASS
Band41	10MHz	QPSK	39700	50RB#0	8.9843	10.48	PASS
Band41	10MHz	QPSK	40620	50RB#0	8.9902	10.30	PASS
Band41	10MHz	QPSK	41540	50RB#0	8.9825	10.21	PASS
Band41	10MHz	16QAM	39700	27RB#0	4.9801	6.354	PASS
Band41	10MHz	16QAM	40620	27RB#0	4.9796	5.974	PASS
Band41	10MHz	16QAM	41540	27RB#0	4.9636	6.063	PASS
Band41	15MHz	QPSK	39725	75RB#0	13.448	15.04	PASS
Band41	15MHz	QPSK	40620	75RB#0	13.433	15.32	PASS
Band41	15MHz	QPSK	41515	75RB#0	13.456	14.88	PASS
Band41	15MHz	16QAM	39725	27RB#0	5.0787	6.168	PASS
Band41	15MHz	16QAM	40620	27RB#0	5.1088	6.258	PASS
Band41	15MHz	16QAM	41515	27RB#0	5.0747	6.162	PASS
Band41	20MHz	QPSK	39750	100RB#0	17.954	20.20	PASS
Band41	20MHz	QPSK	40620	100RB#0	17.917	20.25	PASS
Band41	20MHz	QPSK	41490	100RB#0	17.943	19.72	PASS
Band41	20MHz	16QAM	39750	27RB#0	5.2858	7.431	PASS
Band41	20MHz	16QAM	40620	27RB#0	5.2665	7.221	PASS
Band41	20MHz	16QAM	41490	27RB#0	5.2578	7.386	PASS

Test Graphs







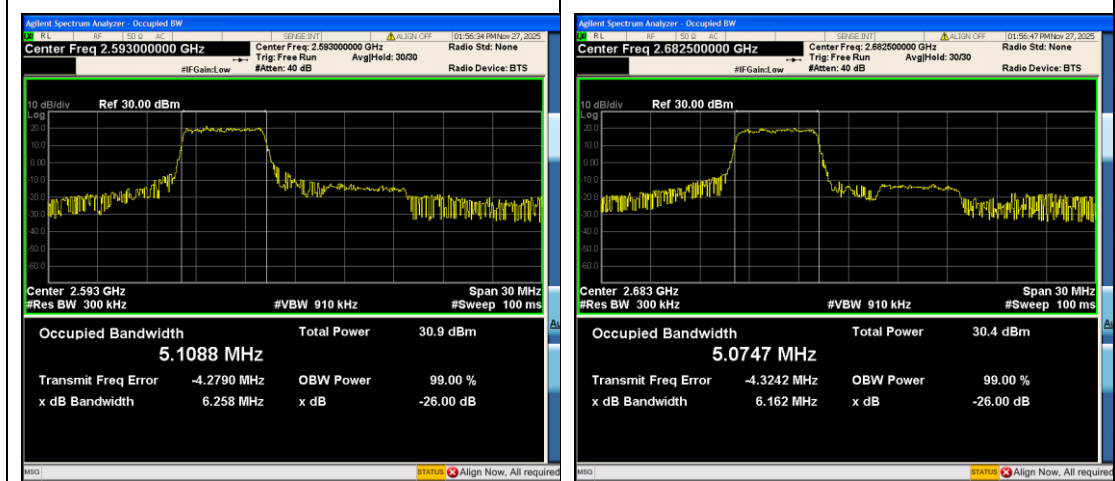
Band41-15MHz-QPSK-39725-75RB#0-PASS

Band41-15MHz-QPSK-40620-75RB#0-PASS



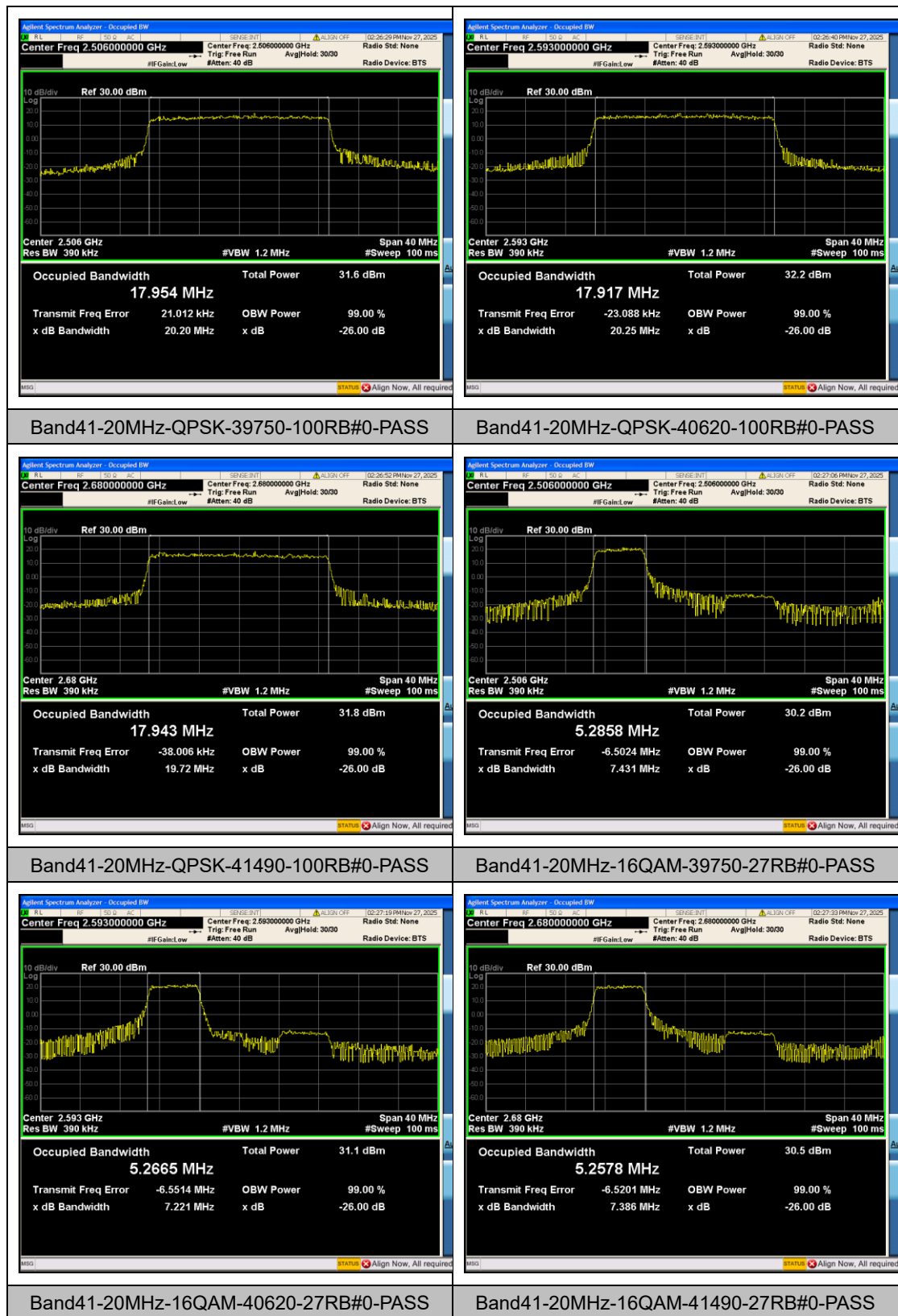
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Band41-15MHz-16QAM-39725-27RB#0-PASS



Band41-15MHz-16QAM-40620-27RB#0-PASS

Band41-15MHz-16QAM-41515-27RB#0-PASS



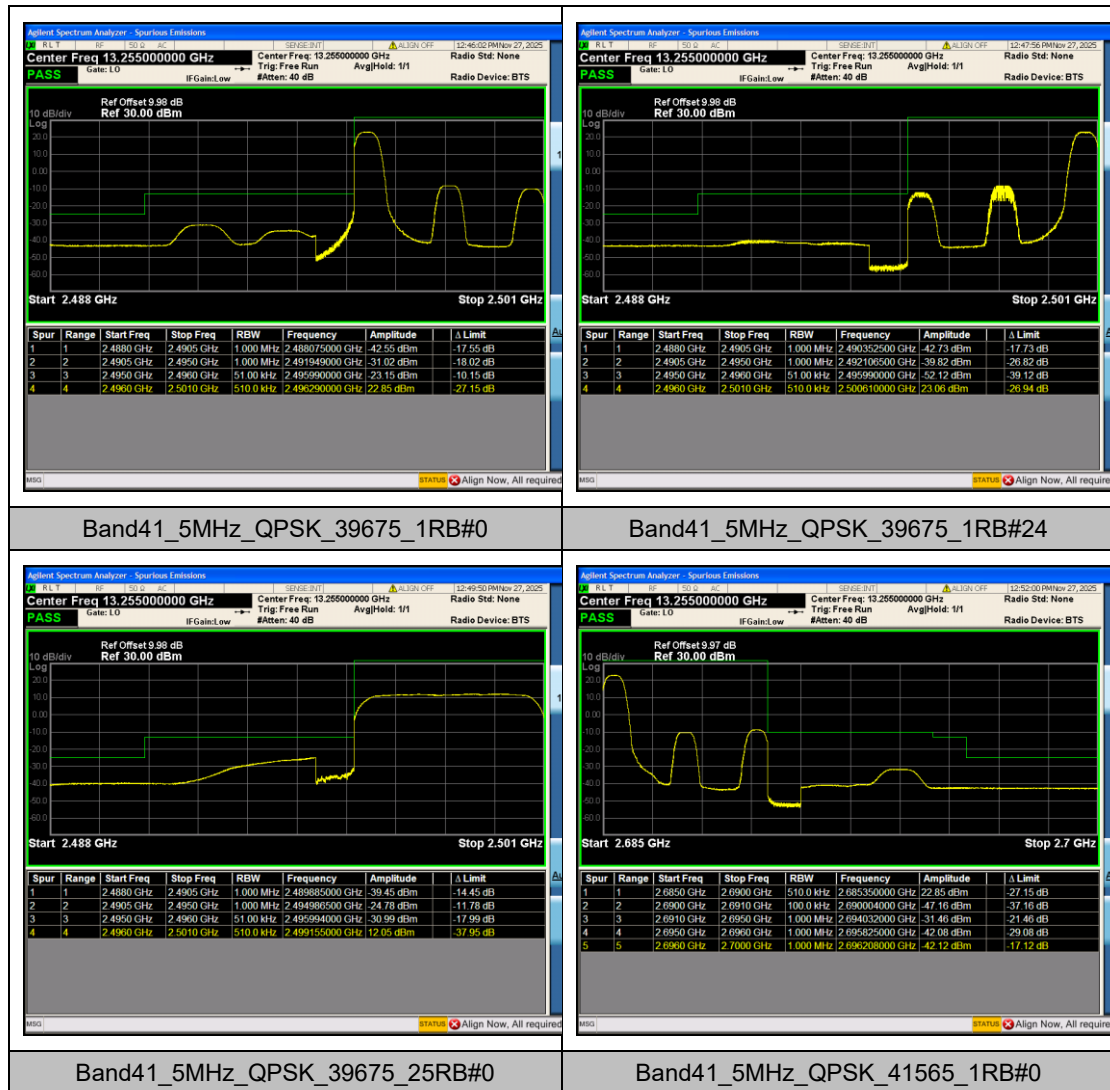
Appendix D: Band Edge

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band41	5MHz	QPSK	39675	1RB#0	-23.15	PASS
Band41	5MHz	QPSK	39675	1RB#24	-42.73	PASS
Band41	5MHz	QPSK	39675	25RB#0	-24.78	PASS
Band41	5MHz	QPSK	41565	1RB#0	-42.12	PASS
Band41	5MHz	QPSK	41565	1RB#24	-19.31	PASS
Band41	5MHz	QPSK	41565	25RB#0	-33.74	PASS
Band41	5MHz	16QAM	39675	1RB#0	-24.29	PASS
Band41	5MHz	16QAM	39675	1RB#24	-42.75	PASS
Band41	5MHz	16QAM	39675	25RB#0	-26.09	PASS
Band41	5MHz	16QAM	41565	1RB#0	-42.18	PASS
Band41	5MHz	16QAM	41565	1RB#24	-20.48	PASS
Band41	5MHz	16QAM	41565	25RB#0	-34.75	PASS
Band41	10MHz	QPSK	39700	1RB#0	-31.82	PASS
Band41	10MHz	QPSK	39700	1RB#49	-36.99	PASS
Band41	10MHz	QPSK	39700	50RB#0	-31.01	PASS
Band41	10MHz	QPSK	41540	1RB#0	-42.36	PASS
Band41	10MHz	QPSK	41540	1RB#49	-42.33	PASS
Band41	10MHz	QPSK	41540	50RB#0	-36.07	PASS
Band41	10MHz	16QAM	39700	1RB#0	-33.69	PASS
Band41	10MHz	16QAM	39700	1RB#49	-38.53	PASS
Band41	10MHz	16QAM	41540	1RB#0	-42.28	PASS
Band41	10MHz	16QAM	41540	1RB#49	-42.30	PASS
Band41	15MHz	QPSK	39725	1RB#0	-34.16	PASS
Band41	15MHz	QPSK	39725	1RB#74	-42.33	PASS
Band41	15MHz	QPSK	39725	75RB#0	-29.28	PASS
Band41	15MHz	QPSK	41515	1RB#0	-42.46	PASS
Band41	15MHz	QPSK	41515	1RB#74	-42.51	PASS
Band41	15MHz	QPSK	41515	75RB#0	-37.29	PASS
Band41	15MHz	16QAM	39725	1RB#0	-35.37	PASS
Band41	15MHz	16QAM	39725	1RB#74	-42.35	PASS
Band41	15MHz	16QAM	41515	1RB#0	-42.46	PASS
Band41	15MHz	16QAM	41515	1RB#74	-42.49	PASS
Band41	20MHz	QPSK	39750	1RB#0	-34.88	PASS
Band41	20MHz	QPSK	39750	1RB#99	-42.32	PASS
Band41	20MHz	QPSK	39750	100RB#0	-31.43	PASS
Band41	20MHz	QPSK	41490	1RB#0	-42.55	PASS
Band41	20MHz	QPSK	41490	1RB#99	-42.53	PASS

Band41	20MHz	QPSK	41490	100RB#0	-39.24	PASS
Band41	20MHz	16QAM	39750	1RB#0	-35.59	PASS
Band41	20MHz	16QAM	39750	1RB#99	-42.10	PASS
Band41	20MHz	16QAM	41490	1RB#0	-42.55	PASS
Band41	20MHz	16QAM	41490	1RB#99	-42.62	PASS

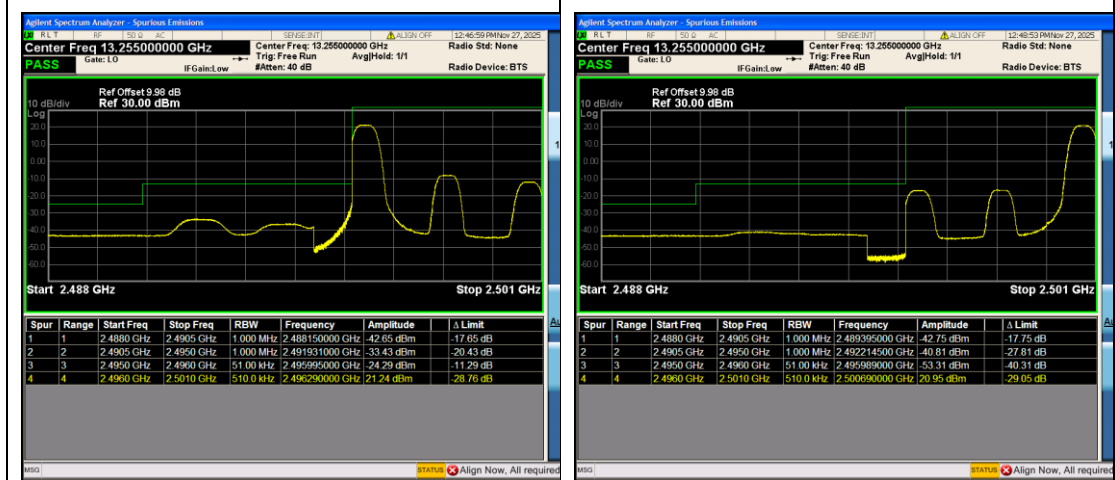
Test Graphs





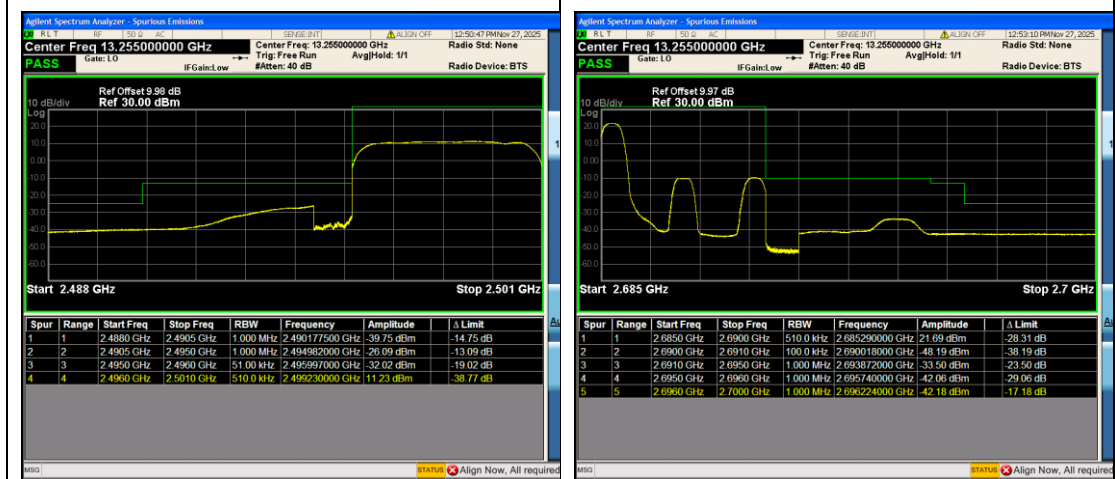
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Band41_5MHz_QPSK_41565_25RB#0



Band41_5MHz_16QAM_39675_1RB#0

Band41_5MHz_16QAM_39675_1RB#24



Band41_5MHz_16QAM_39675_25RB#0

Band41_5MHz_16QAM_41565_1RB#0