

FCC Appendix RF Test Data for LTE Band 7

FCC ID : 2BYEV-HELIXX

Company : SHENZHEN DANFOO TECHNOLOGY CO.,LTD.

EUT : Smart Bee Box

Model Number : HELIX X

Report No. : CTA26071300505

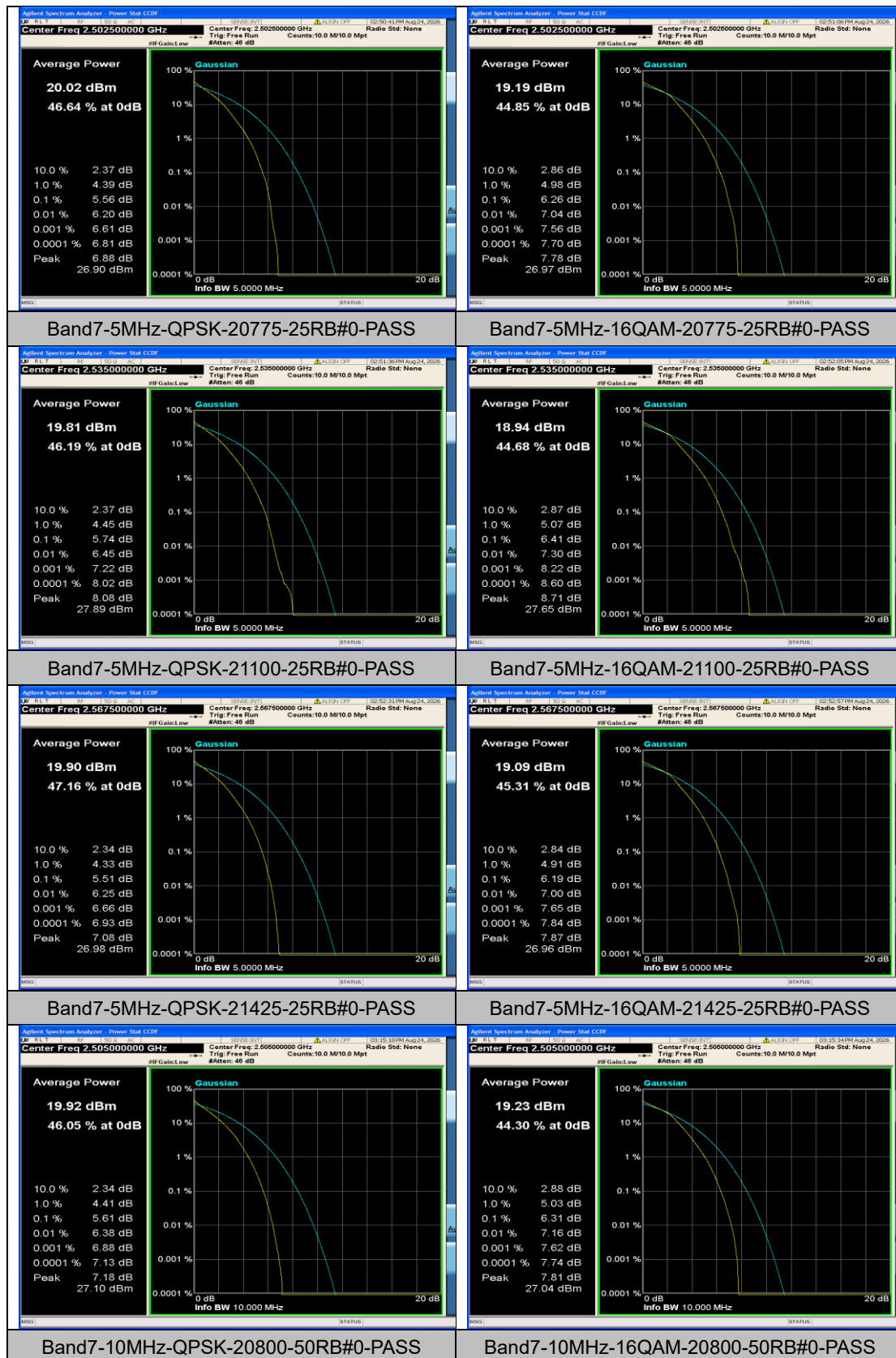
Reviewed By : Eric Wang

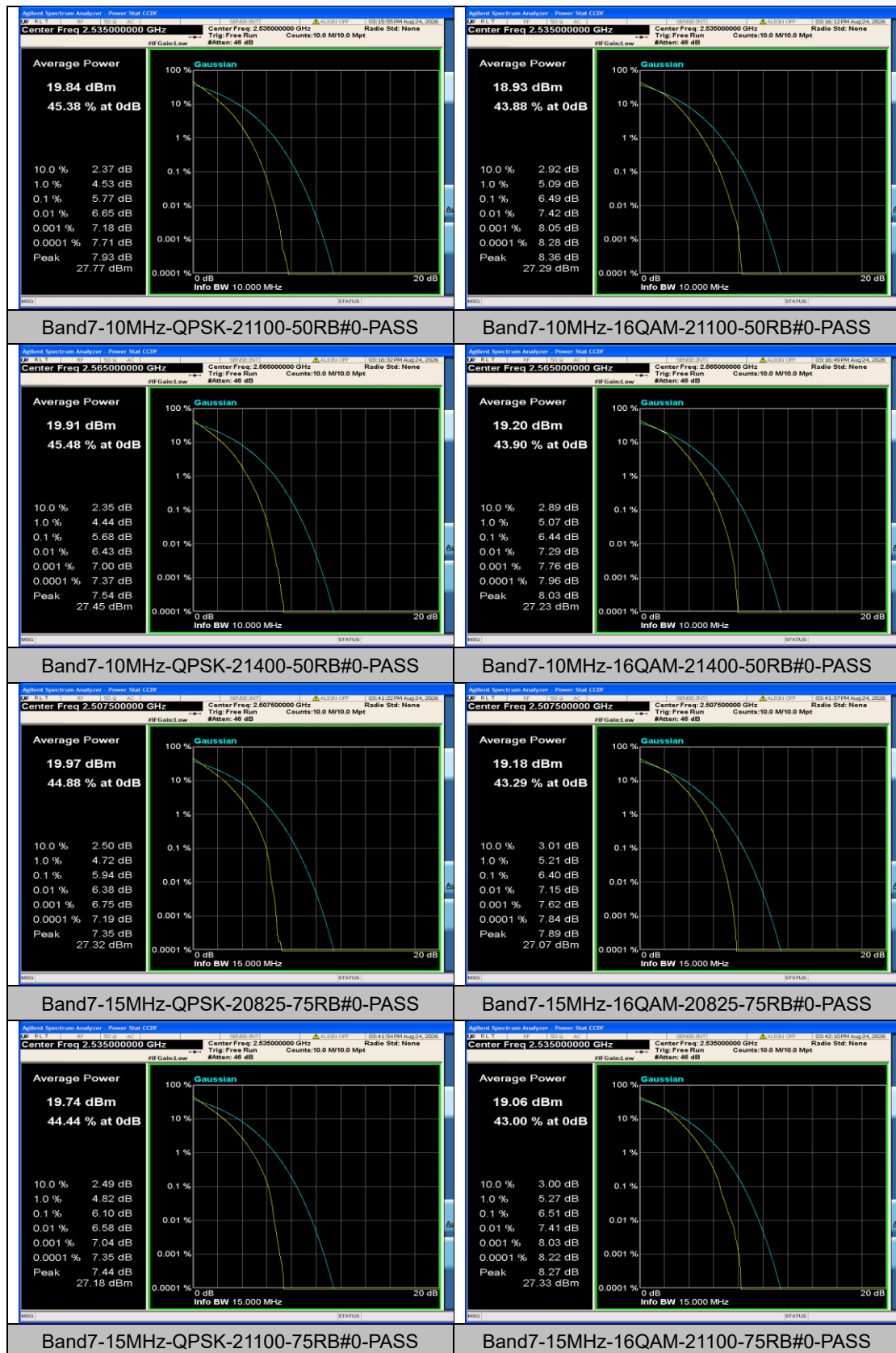
Appendix B: Peak-to-Average Ratio(CCDF)

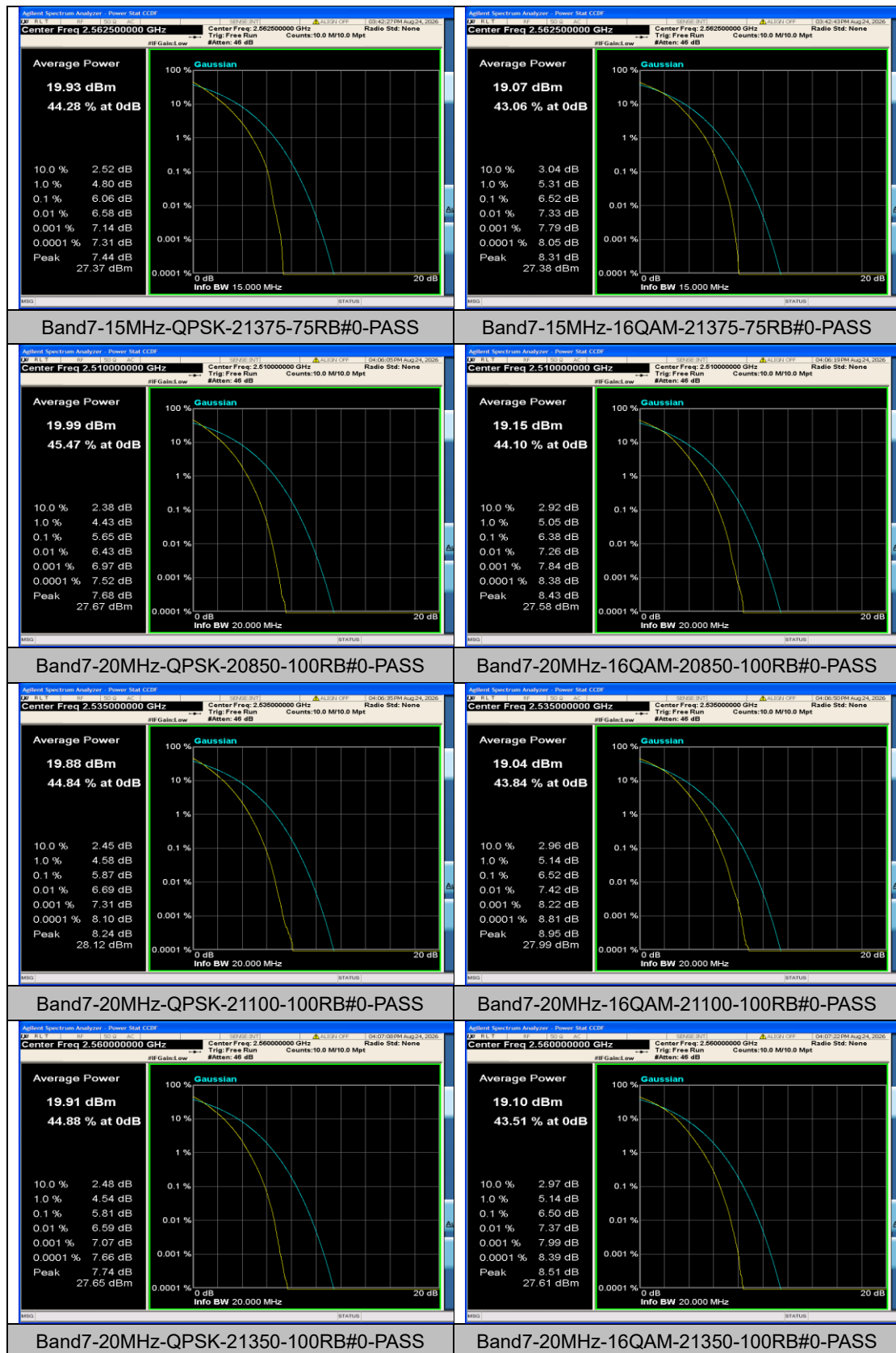
Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band7	5MHz	QPSK	20775	25RB#0	5.56	13	PASS
Band7	5MHz	16QAM	20775	25RB#0	6.26	13	PASS
Band7	5MHz	QPSK	21100	25RB#0	5.74	13	PASS
Band7	5MHz	16QAM	21100	25RB#0	6.41	13	PASS
Band7	5MHz	QPSK	21425	25RB#0	5.51	13	PASS
Band7	5MHz	16QAM	21425	25RB#0	6.19	13	PASS
Band7	10MHz	QPSK	20800	50RB#0	5.61	13	PASS
Band7	10MHz	16QAM	20800	50RB#0	6.31	13	PASS
Band7	10MHz	QPSK	21100	50RB#0	5.77	13	PASS
Band7	10MHz	16QAM	21100	50RB#0	6.49	13	PASS
Band7	10MHz	QPSK	21400	50RB#0	5.68	13	PASS
Band7	10MHz	16QAM	21400	50RB#0	6.44	13	PASS
Band7	15MHz	QPSK	20825	75RB#0	5.94	13	PASS
Band7	15MHz	16QAM	20825	75RB#0	6.40	13	PASS
Band7	15MHz	QPSK	21100	75RB#0	6.10	13	PASS
Band7	15MHz	16QAM	21100	75RB#0	6.51	13	PASS
Band7	15MHz	QPSK	21375	75RB#0	6.06	13	PASS
Band7	15MHz	16QAM	21375	75RB#0	6.52	13	PASS
Band7	20MHz	QPSK	20850	100RB#0	5.65	13	PASS
Band7	20MHz	16QAM	20850	100RB#0	6.38	13	PASS
Band7	20MHz	QPSK	21100	100RB#0	5.87	13	PASS
Band7	20MHz	16QAM	21100	100RB#0	6.52	13	PASS
Band7	20MHz	QPSK	21350	100RB#0	5.81	13	PASS
Band7	20MHz	16QAM	21350	100RB#0	6.50	13	PASS

Test Graphs





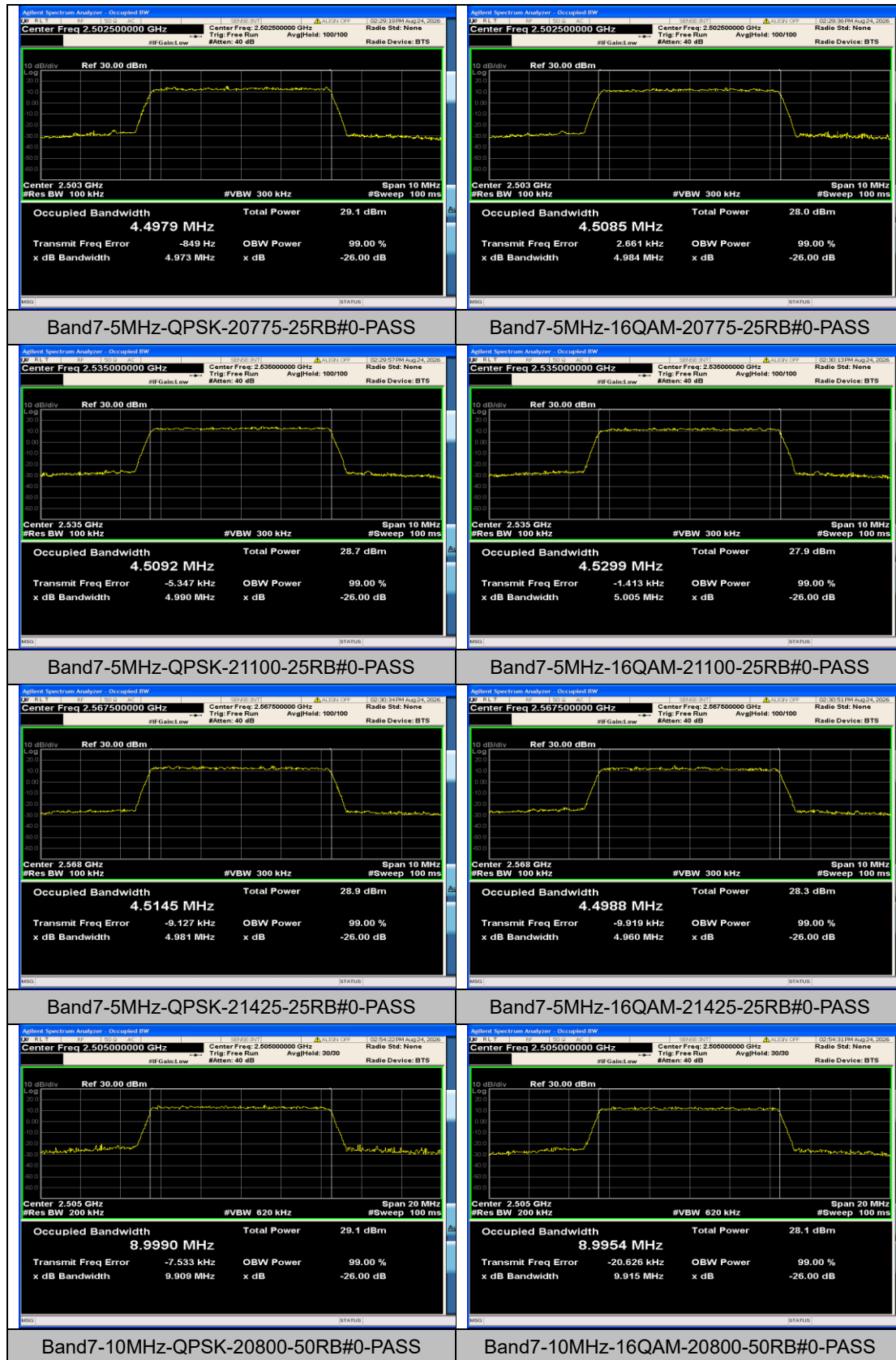


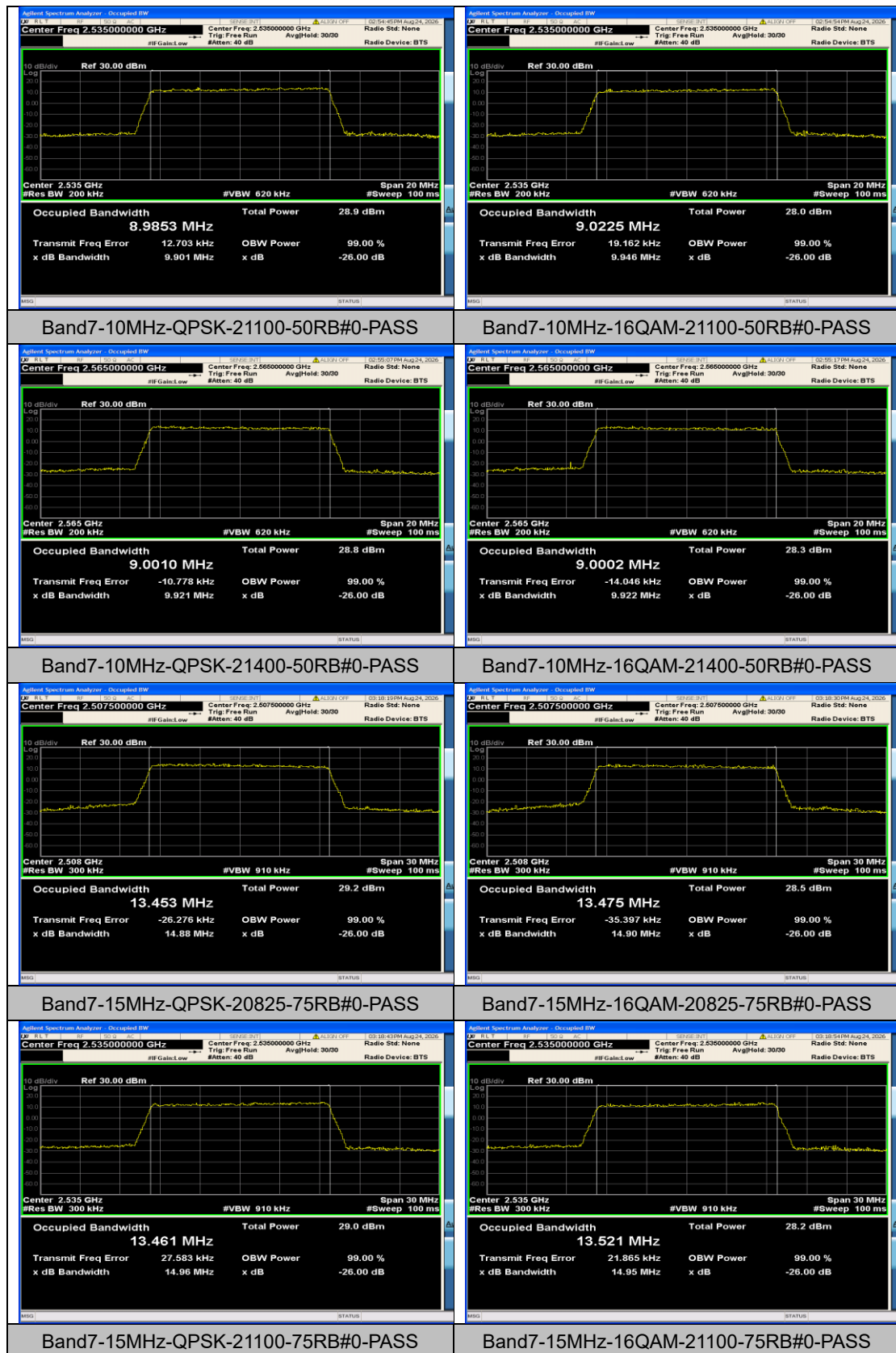
Appendix C: 26dB Bandwidth and Occupied Bandwidth

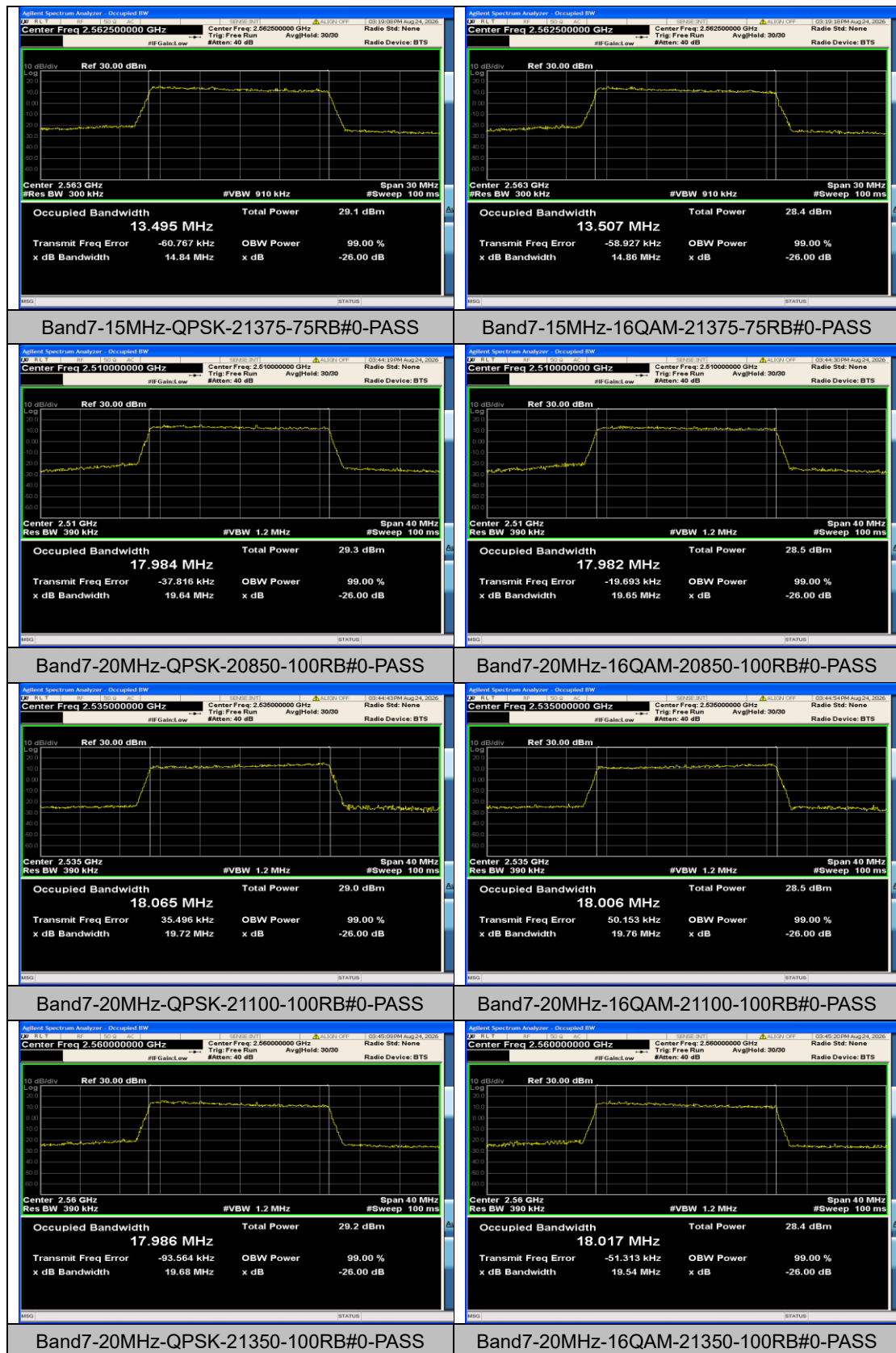
Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band7	5MHz	QPSK	20775	25RB#0	4.4979	4.973	PASS
Band7	5MHz	16QAM	20775	25RB#0	4.5085	4.984	PASS
Band7	5MHz	QPSK	21100	25RB#0	4.5092	4.990	PASS
Band7	5MHz	16QAM	21100	25RB#0	4.5299	5.005	PASS
Band7	5MHz	QPSK	21425	25RB#0	4.5145	4.981	PASS
Band7	5MHz	16QAM	21425	25RB#0	4.4988	4.960	PASS
Band7	10MHz	QPSK	20800	50RB#0	8.9990	9.909	PASS
Band7	10MHz	16QAM	20800	50RB#0	8.9954	9.915	PASS
Band7	10MHz	QPSK	21100	50RB#0	8.9853	9.901	PASS
Band7	10MHz	16QAM	21100	50RB#0	9.0225	9.946	PASS
Band7	10MHz	QPSK	21400	50RB#0	9.0010	9.921	PASS
Band7	10MHz	16QAM	21400	50RB#0	9.0002	9.922	PASS
Band7	15MHz	QPSK	20825	75RB#0	13.453	14.88	PASS
Band7	15MHz	16QAM	20825	75RB#0	13.475	14.90	PASS
Band7	15MHz	QPSK	21100	75RB#0	13.461	14.96	PASS
Band7	15MHz	16QAM	21100	75RB#0	13.521	14.95	PASS
Band7	15MHz	QPSK	21375	75RB#0	13.495	14.84	PASS
Band7	15MHz	16QAM	21375	75RB#0	13.507	14.86	PASS
Band7	20MHz	QPSK	20850	100RB#0	17.984	19.64	PASS
Band7	20MHz	16QAM	20850	100RB#0	17.982	19.65	PASS
Band7	20MHz	QPSK	21100	100RB#0	18.065	19.72	PASS
Band7	20MHz	16QAM	21100	100RB#0	18.006	19.76	PASS
Band7	20MHz	QPSK	21350	100RB#0	17.986	19.68	PASS
Band7	20MHz	16QAM	21350	100RB#0	18.017	19.54	PASS

Test Graphs





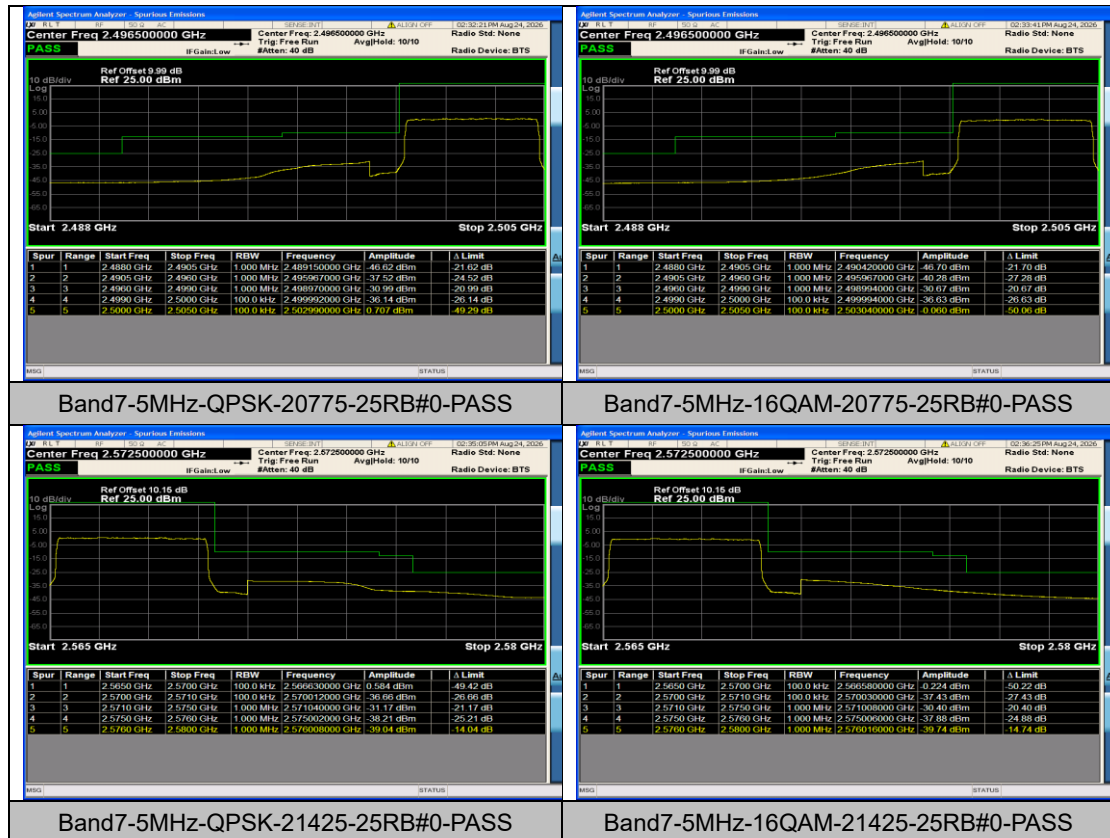


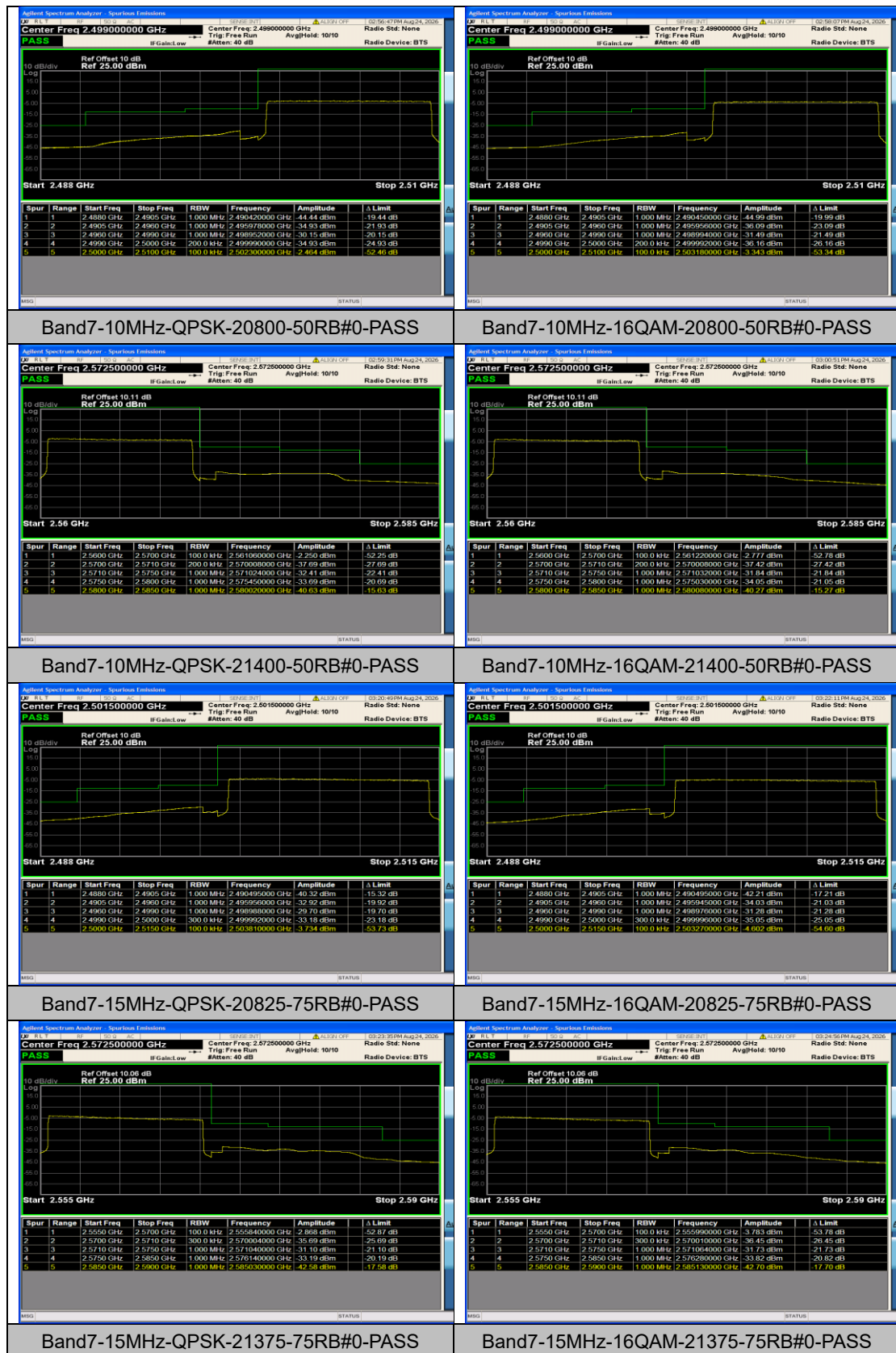
Appendix D: Band Edge

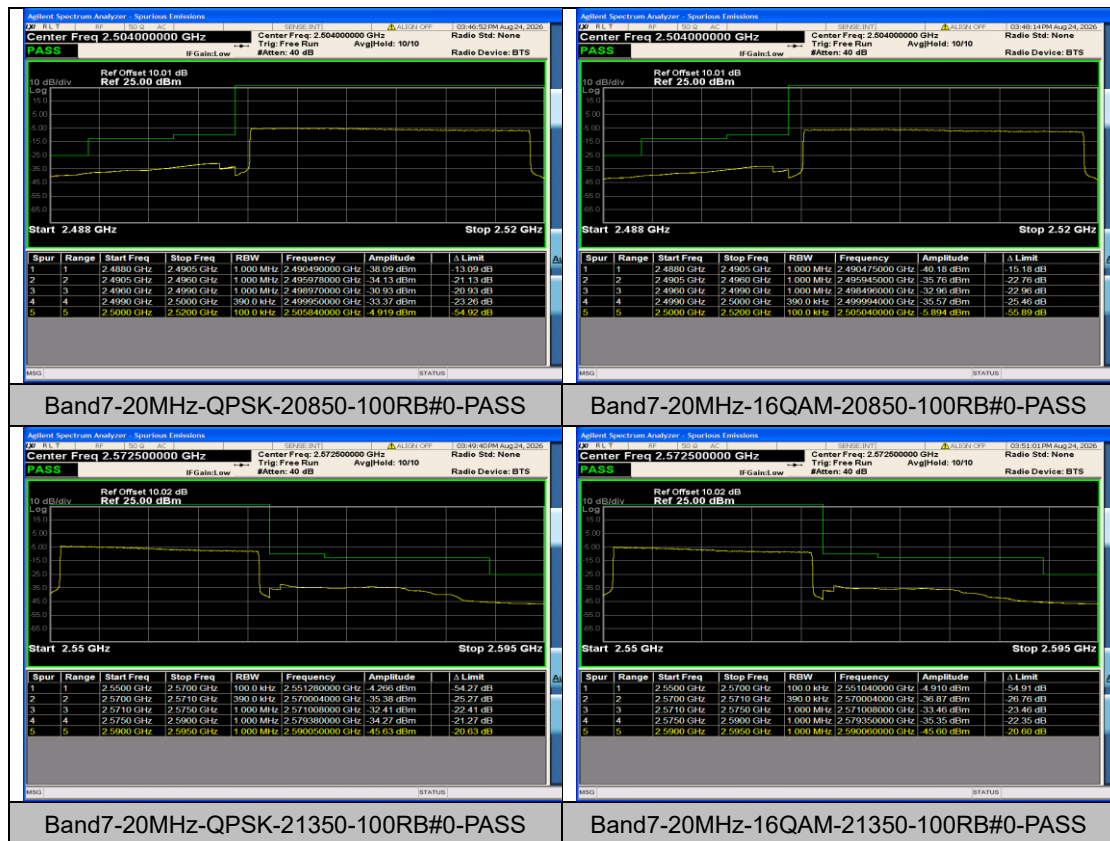
Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band7	5MHz	QPSK	20775	25RB#0	-30.99	PASS
Band7	5MHz	16QAM	20775	25RB#0	-30.67	PASS
Band7	5MHz	QPSK	21425	25RB#0	-39.04	PASS
Band7	5MHz	16QAM	21425	25RB#0	-39.74	PASS
Band7	10MHz	QPSK	20800	50RB#0	-44.44	PASS
Band7	10MHz	16QAM	20800	50RB#0	-44.99	PASS
Band7	10MHz	QPSK	21400	50RB#0	-40.63	PASS
Band7	10MHz	16QAM	21400	50RB#0	-40.27	PASS
Band7	15MHz	QPSK	20825	75RB#0	-40.32	PASS
Band7	15MHz	16QAM	20825	75RB#0	-42.21	PASS
Band7	15MHz	QPSK	21375	75RB#0	-42.58	PASS
Band7	15MHz	16QAM	21375	75RB#0	-42.70	PASS
Band7	20MHz	QPSK	20850	100RB#0	-38.09	PASS
Band7	20MHz	16QAM	20850	100RB#0	-40.18	PASS
Band7	20MHz	QPSK	21350	100RB#0	-45.63	PASS
Band7	20MHz	16QAM	21350	100RB#0	-45.60	PASS

Test Graphs







Appendix E: Conducted Spurious Emission

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Frequency Range	Result (dBm)	Verdict
Band7	5MHz	QPSK	20775	25RB#0	0.009~0.15	-68.46	PASS
Band7	5MHz	QPSK	20775	25RB#0	0.15~30	-63.48	PASS
Band7	5MHz	QPSK	20775	25RB#0	30~1000	-57.04	PASS
Band7	5MHz	QPSK	20775	25RB#0	1000~3000	-47.58	PASS
Band7	5MHz	QPSK	20775	25RB#0	3000~18000	-38.35	PASS
Band7	5MHz	QPSK	20775	25RB#0	18000~26000	-31.81	PASS
Band7	5MHz	16QAM	20775	25RB#0	0.009~0.15	-67.69	PASS
Band7	5MHz	16QAM	20775	25RB#0	0.15~30	-59.99	PASS
Band7	5MHz	16QAM	20775	25RB#0	30~1000	-58.33	PASS
Band7	5MHz	16QAM	20775	25RB#0	1000~3000	-47.66	PASS
Band7	5MHz	16QAM	20775	25RB#0	3000~18000	-38.24	PASS
Band7	5MHz	16QAM	20775	25RB#0	18000~26000	-31.68	PASS
Band7	5MHz	QPSK	21100	25RB#0	0.009~0.15	-69.02	PASS
Band7	5MHz	QPSK	21100	25RB#0	0.15~30	-60.58	PASS
Band7	5MHz	QPSK	21100	25RB#0	30~1000	-57.22	PASS
Band7	5MHz	QPSK	21100	25RB#0	1000~3000	-47.74	PASS
Band7	5MHz	QPSK	21100	25RB#0	3000~18000	-37.53	PASS
Band7	5MHz	QPSK	21100	25RB#0	18000~26000	-31.79	PASS
Band7	5MHz	16QAM	21100	25RB#0	0.009~0.15	-68.09	PASS
Band7	5MHz	16QAM	21100	25RB#0	0.15~30	-63.32	PASS
Band7	5MHz	16QAM	21100	25RB#0	30~1000	-58.57	PASS
Band7	5MHz	16QAM	21100	25RB#0	1000~3000	-47.98	PASS
Band7	5MHz	16QAM	21100	25RB#0	3000~18000	-37.82	PASS
Band7	5MHz	16QAM	21100	25RB#0	18000~26000	-31.67	PASS
Band7	5MHz	QPSK	21425	25RB#0	0.009~0.15	-69.04	PASS
Band7	5MHz	QPSK	21425	25RB#0	0.15~30	-61.98	PASS
Band7	5MHz	QPSK	21425	25RB#0	30~1000	-57.97	PASS
Band7	5MHz	QPSK	21425	25RB#0	1000~3000	-41.63	PASS
Band7	5MHz	QPSK	21425	25RB#0	3000~18000	-38.41	PASS
Band7	5MHz	QPSK	21425	25RB#0	18000~26000	-31.54	PASS
Band7	5MHz	16QAM	21425	25RB#0	0.009~0.15	-69.12	PASS
Band7	5MHz	16QAM	21425	25RB#0	0.15~30	-59.87	PASS
Band7	5MHz	16QAM	21425	25RB#0	30~1000	-57.45	PASS
Band7	5MHz	16QAM	21425	25RB#0	1000~3000	-43.49	PASS
Band7	5MHz	16QAM	21425	25RB#0	3000~18000	-38.56	PASS
Band7	5MHz	16QAM	21425	25RB#0	18000~26000	-31.99	PASS

Band7	10MHz	QPSK	20800	50RB#0	0.009~0.15	-69.88	PASS
Band7	10MHz	QPSK	20800	50RB#0	0.15~30	-61.40	PASS
Band7	10MHz	QPSK	20800	50RB#0	30~1000	-57.62	PASS
Band7	10MHz	QPSK	20800	50RB#0	1000~3000	-46.58	PASS
Band7	10MHz	QPSK	20800	50RB#0	3000~18000	-38.22	PASS
Band7	10MHz	QPSK	20800	50RB#0	18000~26000	-31.80	PASS
Band7	10MHz	16QAM	20800	50RB#0	0.009~0.15	-69.09	PASS
Band7	10MHz	16QAM	20800	50RB#0	0.15~30	-60.03	PASS
Band7	10MHz	16QAM	20800	50RB#0	30~1000	-57.71	PASS
Band7	10MHz	16QAM	20800	50RB#0	1000~3000	-47.93	PASS
Band7	10MHz	16QAM	20800	50RB#0	3000~18000	-37.89	PASS
Band7	10MHz	16QAM	20800	50RB#0	18000~26000	-31.74	PASS
Band7	10MHz	QPSK	21100	50RB#0	0.009~0.15	-69.77	PASS
Band7	10MHz	QPSK	21100	50RB#0	0.15~30	-60.54	PASS
Band7	10MHz	QPSK	21100	50RB#0	30~1000	-57.44	PASS
Band7	10MHz	QPSK	21100	50RB#0	1000~3000	-47.79	PASS
Band7	10MHz	QPSK	21100	50RB#0	3000~18000	-38.23	PASS
Band7	10MHz	QPSK	21100	50RB#0	18000~26000	-31.98	PASS
Band7	10MHz	16QAM	21100	50RB#0	0.009~0.15	-70.07	PASS
Band7	10MHz	16QAM	21100	50RB#0	0.15~30	-60.87	PASS
Band7	10MHz	16QAM	21100	50RB#0	30~1000	-58.59	PASS
Band7	10MHz	16QAM	21100	50RB#0	1000~3000	-47.66	PASS
Band7	10MHz	16QAM	21100	50RB#0	3000~18000	-38.38	PASS
Band7	10MHz	16QAM	21100	50RB#0	18000~26000	-31.73	PASS
Band7	10MHz	QPSK	21400	50RB#0	0.009~0.15	-68.01	PASS
Band7	10MHz	QPSK	21400	50RB#0	0.15~30	-59.60	PASS
Band7	10MHz	QPSK	21400	50RB#0	30~1000	-57.04	PASS
Band7	10MHz	QPSK	21400	50RB#0	1000~3000	-41.92	PASS
Band7	10MHz	QPSK	21400	50RB#0	3000~18000	-38.20	PASS
Band7	10MHz	QPSK	21400	50RB#0	18000~26000	-31.66	PASS
Band7	10MHz	16QAM	21400	50RB#0	0.009~0.15	-66.97	PASS
Band7	10MHz	16QAM	21400	50RB#0	0.15~30	-59.88	PASS
Band7	10MHz	16QAM	21400	50RB#0	30~1000	-57.31	PASS
Band7	10MHz	16QAM	21400	50RB#0	1000~3000	-44.47	PASS
Band7	10MHz	16QAM	21400	50RB#0	3000~18000	-37.78	PASS
Band7	10MHz	16QAM	21400	50RB#0	18000~26000	-31.67	PASS
Band7	15MHz	QPSK	20825	75RB#0	0.009~0.15	-69.83	PASS
Band7	15MHz	QPSK	20825	75RB#0	0.15~30	-62.58	PASS
Band7	15MHz	QPSK	20825	75RB#0	30~1000	-57.98	PASS
Band7	15MHz	QPSK	20825	75RB#0	1000~3000	-46.50	PASS
Band7	15MHz	QPSK	20825	75RB#0	3000~18000	-37.67	PASS
Band7	15MHz	QPSK	20825	75RB#0	18000~26000	-31.61	PASS
Band7	15MHz	16QAM	20825	75RB#0	0.009~0.15	-68.03	PASS

Band7	15MHz	16QAM	20825	75RB#0	0.15~30	-61.40	PASS
Band7	15MHz	16QAM	20825	75RB#0	30~1000	-57.70	PASS
Band7	15MHz	16QAM	20825	75RB#0	1000~3000	-47.89	PASS
Band7	15MHz	16QAM	20825	75RB#0	3000~18000	-38.04	PASS
Band7	15MHz	16QAM	20825	75RB#0	18000~26000	-31.06	PASS
Band7	15MHz	QPSK	21100	75RB#0	0.009~0.15	-69.84	PASS
Band7	15MHz	QPSK	21100	75RB#0	0.15~30	-58.59	PASS
Band7	15MHz	QPSK	21100	75RB#0	30~1000	-57.18	PASS
Band7	15MHz	QPSK	21100	75RB#0	1000~3000	-48.00	PASS
Band7	15MHz	QPSK	21100	75RB#0	3000~18000	-38.10	PASS
Band7	15MHz	QPSK	21100	75RB#0	18000~26000	-31.80	PASS
Band7	15MHz	16QAM	21100	75RB#0	0.009~0.15	-70.48	PASS
Band7	15MHz	16QAM	21100	75RB#0	0.15~30	-60.95	PASS
Band7	15MHz	16QAM	21100	75RB#0	30~1000	-57.90	PASS
Band7	15MHz	16QAM	21100	75RB#0	1000~3000	-48.10	PASS
Band7	15MHz	16QAM	21100	75RB#0	3000~18000	-37.78	PASS
Band7	15MHz	16QAM	21100	75RB#0	18000~26000	-31.87	PASS
Band7	15MHz	QPSK	21375	75RB#0	0.009~0.15	-67.74	PASS
Band7	15MHz	QPSK	21375	75RB#0	0.15~30	-59.72	PASS
Band7	15MHz	QPSK	21375	75RB#0	30~1000	-57.99	PASS
Band7	15MHz	QPSK	21375	75RB#0	1000~3000	-46.31	PASS
Band7	15MHz	QPSK	21375	75RB#0	3000~18000	-38.14	PASS
Band7	15MHz	QPSK	21375	75RB#0	18000~26000	-31.82	PASS
Band7	15MHz	16QAM	21375	75RB#0	0.009~0.15	-68.38	PASS
Band7	15MHz	16QAM	21375	75RB#0	0.15~30	-61.08	PASS
Band7	15MHz	16QAM	21375	75RB#0	30~1000	-57.81	PASS
Band7	15MHz	16QAM	21375	75RB#0	1000~3000	-47.21	PASS
Band7	15MHz	16QAM	21375	75RB#0	3000~18000	-37.84	PASS
Band7	15MHz	16QAM	21375	75RB#0	18000~26000	-31.73	PASS
Band7	20MHz	QPSK	20850	100RB#0	0.009~0.15	-68.54	PASS
Band7	20MHz	QPSK	20850	100RB#0	0.15~30	-60.52	PASS
Band7	20MHz	QPSK	20850	100RB#0	30~1000	-57.89	PASS
Band7	20MHz	QPSK	20850	100RB#0	1000~3000	-47.78	PASS
Band7	20MHz	QPSK	20850	100RB#0	3000~18000	-37.64	PASS
Band7	20MHz	QPSK	20850	100RB#0	18000~26000	-31.81	PASS
Band7	20MHz	16QAM	20850	100RB#0	0.009~0.15	-69.61	PASS
Band7	20MHz	16QAM	20850	100RB#0	0.15~30	-62.45	PASS
Band7	20MHz	16QAM	20850	100RB#0	30~1000	-58.00	PASS
Band7	20MHz	16QAM	20850	100RB#0	1000~3000	-47.86	PASS
Band7	20MHz	16QAM	20850	100RB#0	3000~18000	-37.90	PASS
Band7	20MHz	16QAM	20850	100RB#0	18000~26000	-31.62	PASS
Band7	20MHz	QPSK	21100	100RB#0	0.009~0.15	-67.48	PASS
Band7	20MHz	QPSK	21100	100RB#0	0.15~30	-60.66	PASS

Band7	20MHz	QPSK	21100	100RB#0	30~1000	-57.57	PASS
Band7	20MHz	QPSK	21100	100RB#0	1000~3000	-44.38	PASS
Band7	20MHz	QPSK	21100	100RB#0	3000~18000	-37.96	PASS
Band7	20MHz	QPSK	21100	100RB#0	18000~26000	-31.69	PASS
Band7	20MHz	16QAM	21100	100RB#0	0.009~0.15	-68.10	PASS
Band7	20MHz	16QAM	21100	100RB#0	0.15~30	-62.08	PASS
Band7	20MHz	16QAM	21100	100RB#0	30~1000	-58.45	PASS
Band7	20MHz	16QAM	21100	100RB#0	1000~3000	-46.93	PASS
Band7	20MHz	16QAM	21100	100RB#0	3000~18000	-37.71	PASS
Band7	20MHz	16QAM	21100	100RB#0	18000~26000	-31.68	PASS
Band7	20MHz	QPSK	21350	100RB#0	0.009~0.15	-68.65	PASS
Band7	20MHz	QPSK	21350	100RB#0	0.15~30	-62.51	PASS
Band7	20MHz	QPSK	21350	100RB#0	30~1000	-58.01	PASS
Band7	20MHz	QPSK	21350	100RB#0	1000~3000	-47.91	PASS
Band7	20MHz	QPSK	21350	100RB#0	3000~18000	-37.48	PASS
Band7	20MHz	QPSK	21350	100RB#0	18000~26000	-31.91	PASS
Band7	20MHz	16QAM	21350	100RB#0	0.009~0.15	-68.63	PASS
Band7	20MHz	16QAM	21350	100RB#0	0.15~30	-59.80	PASS
Band7	20MHz	16QAM	21350	100RB#0	30~1000	-57.76	PASS
Band7	20MHz	16QAM	21350	100RB#0	1000~3000	-47.66	PASS
Band7	20MHz	16QAM	21350	100RB#0	3000~18000	-38.11	PASS
Band7	20MHz	16QAM	21350	100RB#0	18000~26000	-31.76	PASS

Test Graphs

