

Appendix for LTE Band 7

Product Name: 5G Indoor CPE

Model No: TITAN 5000

Appendix A: Average Power Output Data

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band7	5MHz	QPSK	20775	1RB#0	22.18	PASS
Band7	5MHz	16QAM	20775	1RB#0	21.17	PASS
Band7	5MHz	QPSK	20775	1RB#12	22.18	PASS
Band7	5MHz	16QAM	20775	1RB#12	21.20	PASS
Band7	5MHz	QPSK	20775	1RB#24	22.17	PASS
Band7	5MHz	16QAM	20775	1RB#24	21.15	PASS
Band7	5MHz	QPSK	20775	12RB#0	21.18	PASS
Band7	5MHz	16QAM	20775	12RB#0	20.14	PASS
Band7	5MHz	QPSK	20775	12RB#6	21.21	PASS
Band7	5MHz	16QAM	20775	12RB#6	20.26	PASS
Band7	5MHz	QPSK	20775	12RB#13	21.25	PASS
Band7	5MHz	16QAM	20775	12RB#13	20.15	PASS
Band7	5MHz	QPSK	20775	25RB#0	21.18	PASS
Band7	5MHz	16QAM	20775	25RB#0	20.20	PASS
Band7	5MHz	QPSK	21100	1RB#0	22.47	PASS
Band7	5MHz	16QAM	21100	1RB#0	21.34	PASS
Band7	5MHz	QPSK	21100	1RB#12	22.55	PASS
Band7	5MHz	16QAM	21100	1RB#12	21.64	PASS
Band7	5MHz	QPSK	21100	1RB#24	22.49	PASS
Band7	5MHz	16QAM	21100	1RB#24	21.55	PASS
Band7	5MHz	QPSK	21100	12RB#0	21.46	PASS
Band7	5MHz	16QAM	21100	12RB#0	20.34	PASS
Band7	5MHz	QPSK	21100	12RB#6	21.47	PASS
Band7	5MHz	16QAM	21100	12RB#6	20.55	PASS
Band7	5MHz	QPSK	21100	12RB#13	21.57	PASS
Band7	5MHz	16QAM	21100	12RB#13	20.55	PASS
Band7	5MHz	QPSK	21100	25RB#0	21.53	PASS
Band7	5MHz	16QAM	21100	25RB#0	20.45	PASS
Band7	5MHz	QPSK	21425	1RB#0	22.57	PASS
Band7	5MHz	16QAM	21425	1RB#0	21.52	PASS
Band7	5MHz	QPSK	21425	1RB#12	22.58	PASS
Band7	5MHz	16QAM	21425	1RB#12	21.66	PASS
Band7	5MHz	QPSK	21425	1RB#24	22.49	PASS
Band7	5MHz	16QAM	21425	1RB#24	21.47	PASS
Band7	5MHz	QPSK	21425	12RB#0	21.64	PASS

Band7	5MHz	16QAM	21425	12RB#0	20.60	PASS
Band7	5MHz	QPSK	21425	12RB#6	21.64	PASS
Band7	5MHz	16QAM	21425	12RB#6	20.65	PASS
Band7	5MHz	QPSK	21425	12RB#13	21.60	PASS
Band7	5MHz	16QAM	21425	12RB#13	20.63	PASS
Band7	5MHz	QPSK	21425	25RB#0	21.63	PASS
Band7	5MHz	16QAM	21425	25RB#0	20.65	PASS
Band7	10MHz	QPSK	20800	1RB#0	22.06	PASS
Band7	10MHz	16QAM	20800	1RB#0	21.14	PASS
Band7	10MHz	QPSK	20800	1RB#24	22.23	PASS
Band7	10MHz	16QAM	20800	1RB#24	21.25	PASS
Band7	10MHz	QPSK	20800	1RB#49	22.19	PASS
Band7	10MHz	16QAM	20800	1RB#49	21.05	PASS
Band7	10MHz	QPSK	20800	25RB#0	21.24	PASS
Band7	10MHz	16QAM	20800	25RB#0	20.21	PASS
Band7	10MHz	QPSK	20800	25RB#12	21.24	PASS
Band7	10MHz	16QAM	20800	25RB#12	20.22	PASS
Band7	10MHz	QPSK	20800	25RB#25	21.27	PASS
Band7	10MHz	16QAM	20800	25RB#25	20.26	PASS
Band7	10MHz	QPSK	20800	50RB#0	21.24	PASS
Band7	10MHz	16QAM	20800	50RB#0	20.21	PASS
Band7	10MHz	QPSK	21100	1RB#0	22.41	PASS
Band7	10MHz	16QAM	21100	1RB#0	21.32	PASS
Band7	10MHz	QPSK	21100	1RB#24	22.53	PASS
Band7	10MHz	16QAM	21100	1RB#24	21.35	PASS
Band7	10MHz	QPSK	21100	1RB#49	22.46	PASS
Band7	10MHz	16QAM	21100	1RB#49	21.31	PASS
Band7	10MHz	QPSK	21100	25RB#0	21.46	PASS
Band7	10MHz	16QAM	21100	25RB#0	20.50	PASS
Band7	10MHz	QPSK	21100	25RB#12	21.47	PASS
Band7	10MHz	16QAM	21100	25RB#12	20.44	PASS
Band7	10MHz	QPSK	21100	25RB#25	21.44	PASS
Band7	10MHz	16QAM	21100	25RB#25	20.43	PASS
Band7	10MHz	QPSK	21100	50RB#0	21.43	PASS
Band7	10MHz	16QAM	21100	50RB#0	20.43	PASS
Band7	10MHz	QPSK	21400	1RB#0	22.58	PASS
Band7	10MHz	16QAM	21400	1RB#0	21.60	PASS
Band7	10MHz	QPSK	21400	1RB#24	22.57	PASS
Band7	10MHz	16QAM	21400	1RB#24	21.62	PASS
Band7	10MHz	QPSK	21400	1RB#49	22.49	PASS
Band7	10MHz	16QAM	21400	1RB#49	21.43	PASS
Band7	10MHz	QPSK	21400	25RB#0	21.67	PASS

Band7	10MHz	16QAM	21400	25RB#0	20.63	PASS
Band7	10MHz	QPSK	21400	25RB#12	21.64	PASS
Band7	10MHz	16QAM	21400	25RB#12	20.67	PASS
Band7	10MHz	QPSK	21400	25RB#25	21.59	PASS
Band7	10MHz	16QAM	21400	25RB#25	20.63	PASS
Band7	10MHz	QPSK	21400	50RB#0	21.64	PASS
Band7	10MHz	16QAM	21400	50RB#0	20.63	PASS
Band7	15MHz	QPSK	20825	1RB#0	21.93	PASS
Band7	15MHz	16QAM	20825	1RB#0	21.13	PASS
Band7	15MHz	QPSK	20825	1RB#38	22.00	PASS
Band7	15MHz	16QAM	20825	1RB#38	21.12	PASS
Band7	15MHz	QPSK	20825	1RB#74	22.08	PASS
Band7	15MHz	16QAM	20825	1RB#74	21.04	PASS
Band7	15MHz	QPSK	20825	38RB#0	21.10	PASS
Band7	15MHz	16QAM	20825	38RB#0	21.11	PASS
Band7	15MHz	QPSK	20825	38RB#18	21.12	PASS
Band7	15MHz	16QAM	20825	38RB#18	21.10	PASS
Band7	15MHz	QPSK	20825	38RB#37	21.10	PASS
Band7	15MHz	16QAM	20825	38RB#37	21.13	PASS
Band7	15MHz	QPSK	20825	75RB#0	21.11	PASS
Band7	15MHz	16QAM	20825	75RB#0	20.12	PASS
Band7	15MHz	QPSK	21100	1RB#0	22.31	PASS
Band7	15MHz	16QAM	21100	1RB#0	21.27	PASS
Band7	15MHz	QPSK	21100	1RB#38	22.34	PASS
Band7	15MHz	16QAM	21100	1RB#38	21.14	PASS
Band7	15MHz	QPSK	21100	1RB#74	22.29	PASS
Band7	15MHz	16QAM	21100	1RB#74	21.25	PASS
Band7	15MHz	QPSK	21100	38RB#0	21.35	PASS
Band7	15MHz	16QAM	21100	38RB#0	21.32	PASS
Band7	15MHz	QPSK	21100	38RB#18	21.34	PASS
Band7	15MHz	16QAM	21100	38RB#18	21.29	PASS
Band7	15MHz	QPSK	21100	38RB#37	21.32	PASS
Band7	15MHz	16QAM	21100	38RB#37	21.32	PASS
Band7	15MHz	QPSK	21100	75RB#0	21.33	PASS
Band7	15MHz	16QAM	21100	75RB#0	20.34	PASS
Band7	15MHz	QPSK	21375	1RB#0	22.50	PASS
Band7	15MHz	16QAM	21375	1RB#0	21.48	PASS
Band7	15MHz	QPSK	21375	1RB#38	22.36	PASS
Band7	15MHz	16QAM	21375	1RB#38	21.44	PASS
Band7	15MHz	QPSK	21375	1RB#74	22.15	PASS
Band7	15MHz	16QAM	21375	1RB#74	21.33	PASS
Band7	15MHz	QPSK	21375	38RB#0	21.46	PASS

Band7	15MHz	16QAM	21375	38RB#0	21.47	PASS
Band7	15MHz	QPSK	21375	38RB#18	21.43	PASS
Band7	15MHz	16QAM	21375	38RB#18	21.47	PASS
Band7	15MHz	QPSK	21375	38RB#37	21.44	PASS
Band7	15MHz	16QAM	21375	38RB#37	21.47	PASS
Band7	15MHz	QPSK	21375	75RB#0	21.49	PASS
Band7	15MHz	16QAM	21375	75RB#0	20.46	PASS
Band7	20MHz	QPSK	20850	1RB#0	21.99	PASS
Band7	20MHz	16QAM	20850	1RB#0	20.96	PASS
Band7	20MHz	QPSK	20850	1RB#49	22.03	PASS
Band7	20MHz	16QAM	20850	1RB#49	21.20	PASS
Band7	20MHz	QPSK	20850	1RB#99	22.16	PASS
Band7	20MHz	16QAM	20850	1RB#99	21.22	PASS
Band7	20MHz	QPSK	20850	50RB#0	21.02	PASS
Band7	20MHz	16QAM	20850	50RB#0	20.06	PASS
Band7	20MHz	QPSK	20850	50RB#25	21.04	PASS
Band7	20MHz	16QAM	20850	50RB#25	20.04	PASS
Band7	20MHz	QPSK	20850	50RB#50	21.20	PASS
Band7	20MHz	16QAM	20850	50RB#50	20.21	PASS
Band7	20MHz	QPSK	20850	100RB#0	21.15	PASS
Band7	20MHz	16QAM	20850	100RB#0	20.16	PASS
Band7	20MHz	QPSK	21100	1RB#0	22.28	PASS
Band7	20MHz	16QAM	21100	1RB#0	21.37	PASS
Band7	20MHz	QPSK	21100	1RB#49	22.22	PASS
Band7	20MHz	16QAM	21100	1RB#49	21.36	PASS
Band7	20MHz	QPSK	21100	1RB#99	22.22	PASS
Band7	20MHz	16QAM	21100	1RB#99	21.51	PASS
Band7	20MHz	QPSK	21100	50RB#0	21.35	PASS
Band7	20MHz	16QAM	21100	50RB#0	20.31	PASS
Band7	20MHz	QPSK	21100	50RB#25	21.35	PASS
Band7	20MHz	16QAM	21100	50RB#25	20.33	PASS
Band7	20MHz	QPSK	21100	50RB#50	21.34	PASS
Band7	20MHz	16QAM	21100	50RB#50	20.27	PASS
Band7	20MHz	QPSK	21100	100RB#0	21.33	PASS
Band7	20MHz	16QAM	21100	100RB#0	20.32	PASS
Band7	20MHz	QPSK	21350	1RB#0	22.48	PASS
Band7	20MHz	16QAM	21350	1RB#0	21.47	PASS
Band7	20MHz	QPSK	21350	1RB#49	22.46	PASS
Band7	20MHz	16QAM	21350	1RB#49	21.50	PASS
Band7	20MHz	QPSK	21350	1RB#99	22.20	PASS
Band7	20MHz	16QAM	21350	1RB#99	21.19	PASS
Band7	20MHz	QPSK	21350	50RB#0	21.52	PASS

Band7	20MHz	16QAM	21350	50RB#0	20.57	PASS
Band7	20MHz	QPSK	21350	50RB#25	21.53	PASS
Band7	20MHz	16QAM	21350	50RB#25	20.54	PASS
Band7	20MHz	QPSK	21350	50RB#50	21.48	PASS
Band7	20MHz	16QAM	21350	50RB#50	20.41	PASS
Band7	20MHz	QPSK	21350	100RB#0	21.50	PASS
Band7	20MHz	16QAM	21350	100RB#0	20.50	PASS

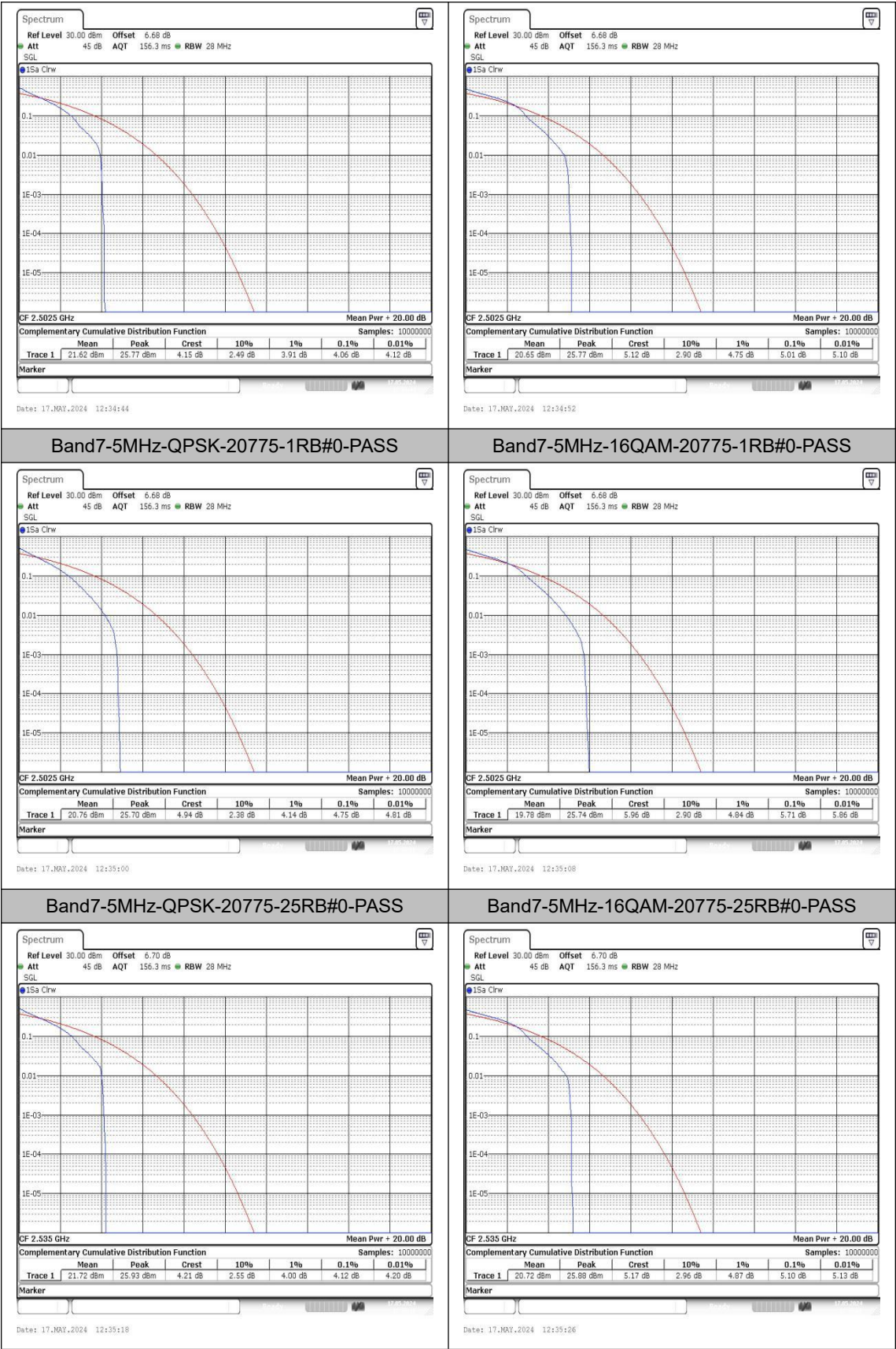
Appendix B: Peak-to-Average Ratio(CCDF)

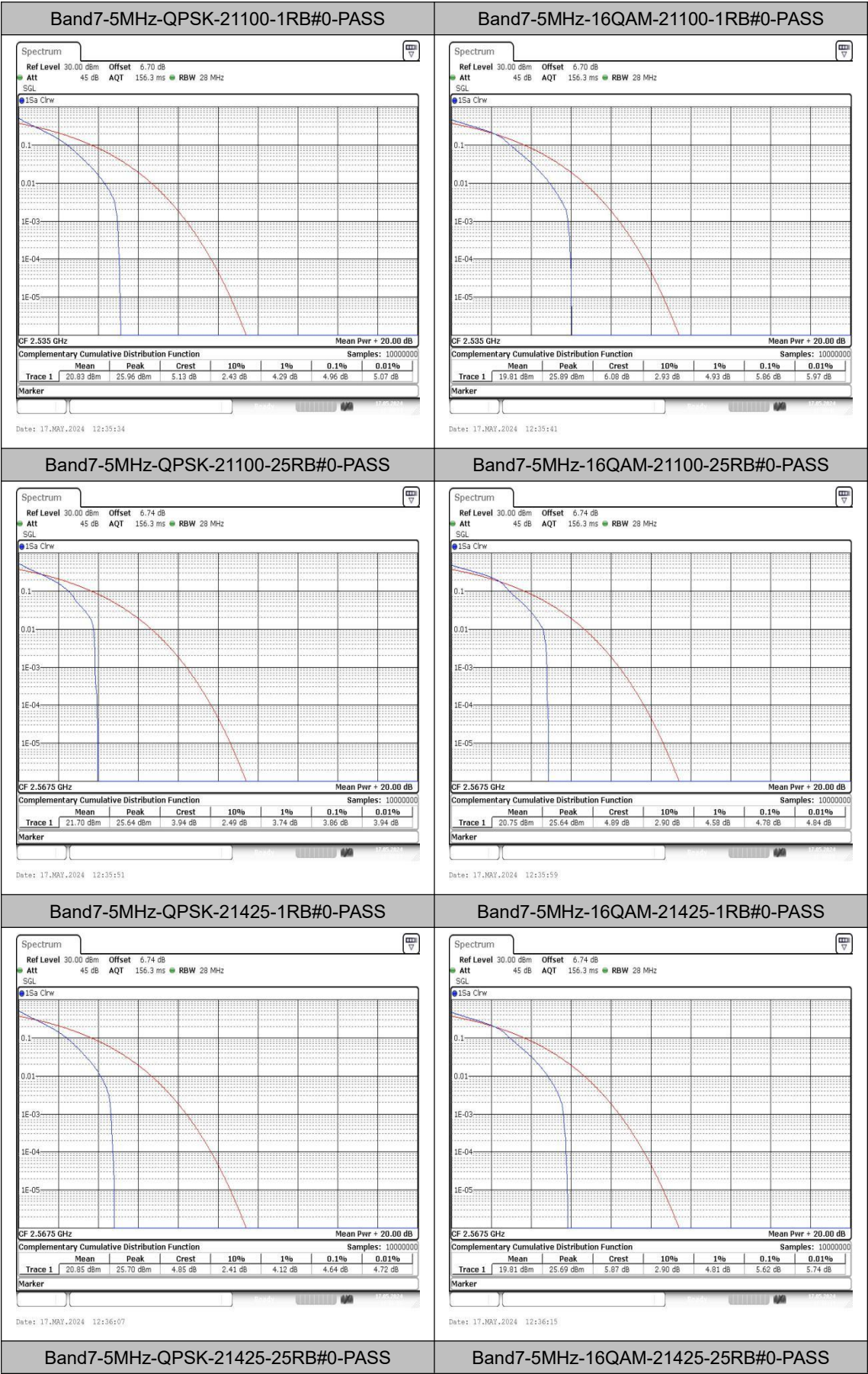
Test Result

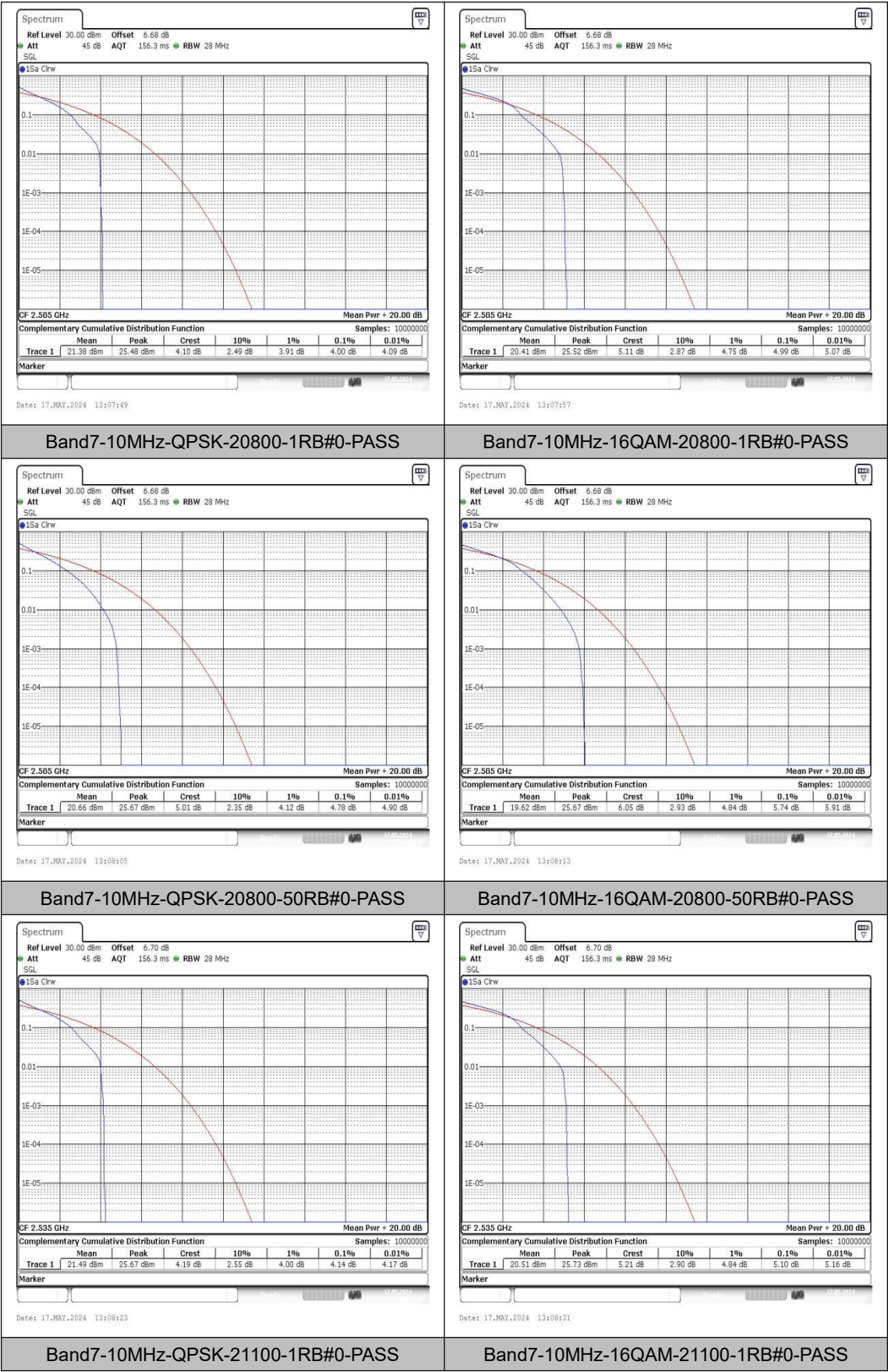
Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band7	5MHz	QPSK	20775	1RB#0	4.06	13	PASS
Band7	5MHz	16QAM	20775	1RB#0	5.01	13	PASS
Band7	5MHz	QPSK	20775	25RB#0	4.75	13	PASS
Band7	5MHz	16QAM	20775	25RB#0	5.71	13	PASS
Band7	5MHz	QPSK	21100	1RB#0	4.12	13	PASS
Band7	5MHz	16QAM	21100	1RB#0	5.10	13	PASS
Band7	5MHz	QPSK	21100	25RB#0	4.96	13	PASS
Band7	5MHz	16QAM	21100	25RB#0	5.86	13	PASS
Band7	5MHz	QPSK	21425	1RB#0	3.86	13	PASS
Band7	5MHz	16QAM	21425	1RB#0	4.78	13	PASS
Band7	5MHz	QPSK	21425	25RB#0	4.64	13	PASS
Band7	5MHz	16QAM	21425	25RB#0	5.62	13	PASS
Band7	10MHz	QPSK	20800	1RB#0	4.00	13	PASS
Band7	10MHz	16QAM	20800	1RB#0	4.99	13	PASS
Band7	10MHz	QPSK	20800	50RB#0	4.78	13	PASS
Band7	10MHz	16QAM	20800	50RB#0	5.74	13	PASS
Band7	10MHz	QPSK	21100	1RB#0	4.14	13	PASS
Band7	10MHz	16QAM	21100	1RB#0	5.10	13	PASS
Band7	10MHz	QPSK	21100	50RB#0	4.90	13	PASS
Band7	10MHz	16QAM	21100	50RB#0	5.86	13	PASS
Band7	10MHz	QPSK	21400	1RB#0	4.00	13	PASS
Band7	10MHz	16QAM	21400	1RB#0	4.99	13	PASS
Band7	10MHz	QPSK	21400	50RB#0	4.78	13	PASS
Band7	10MHz	16QAM	21400	50RB#0	5.71	13	PASS
Band7	15MHz	QPSK	20825	1RB#0	4.06	13	PASS
Band7	15MHz	16QAM	20825	1RB#0	5.04	13	PASS
Band7	15MHz	QPSK	20825	75RB#0	4.96	13	PASS
Band7	15MHz	16QAM	20825	75RB#0	5.86	13	PASS
Band7	15MHz	QPSK	21100	1RB#0	4.20	13	PASS
Band7	15MHz	16QAM	21100	1RB#0	5.13	13	PASS
Band7	15MHz	QPSK	21100	75RB#0	5.13	13	PASS
Band7	15MHz	16QAM	21100	75RB#0	6.03	13	PASS
Band7	15MHz	QPSK	21375	1RB#0	4.12	13	PASS
Band7	15MHz	16QAM	21375	1RB#0	5.10	13	PASS
Band7	15MHz	QPSK	21375	75RB#0	4.99	13	PASS

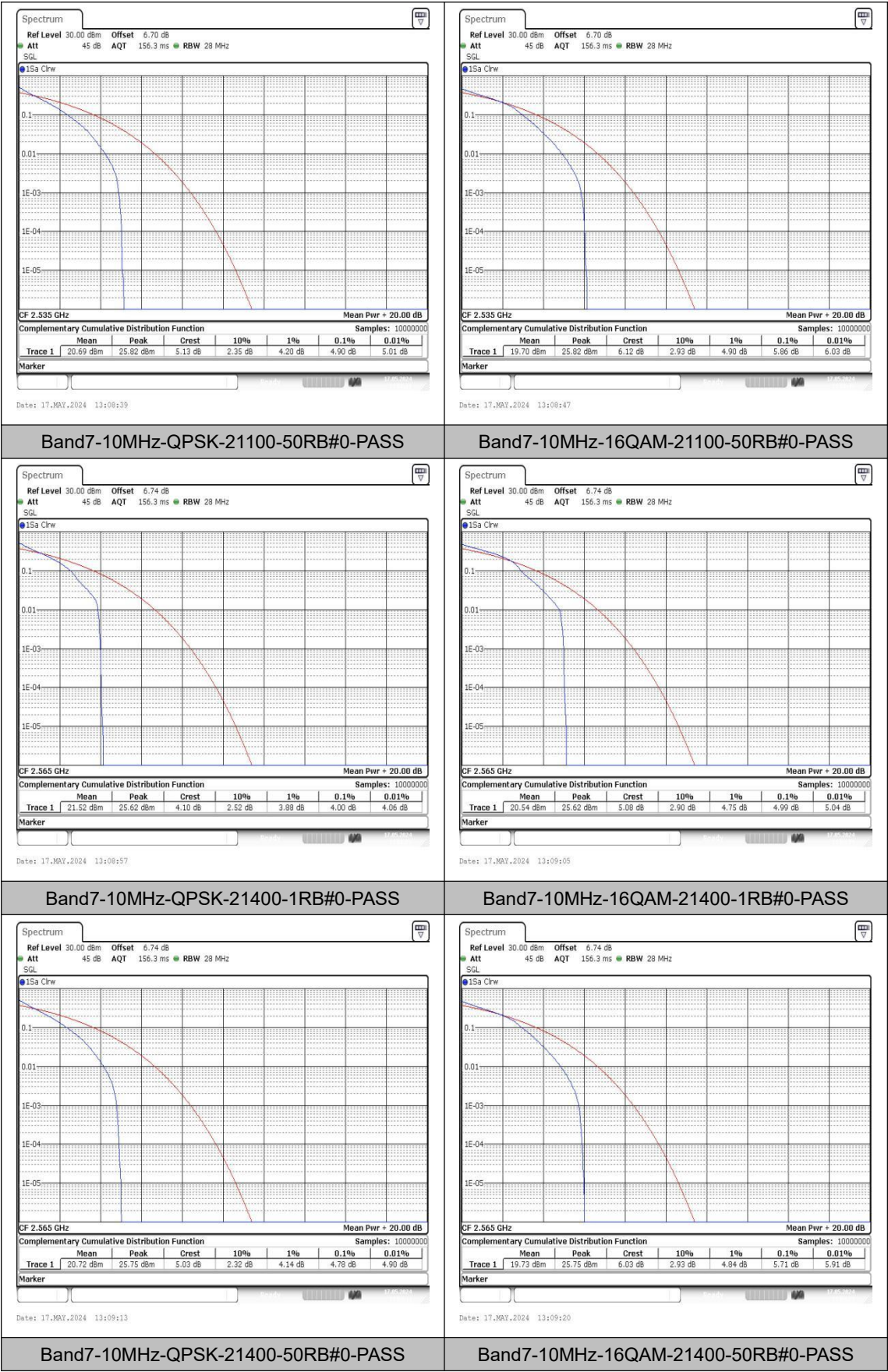
Band7	15MHz	16QAM	21375	75RB#0	5.88	13	PASS
Band7	20MHz	QPSK	20850	1RB#0	4.61	13	PASS
Band7	20MHz	16QAM	20850	1RB#0	5.01	13	PASS
Band7	20MHz	QPSK	20850	100RB#0	4.93	13	PASS
Band7	20MHz	16QAM	20850	100RB#0	5.88	13	PASS
Band7	20MHz	QPSK	21100	1RB#0	4.26	13	PASS
Band7	20MHz	16QAM	21100	1RB#0	5.30	13	PASS
Band7	20MHz	QPSK	21100	100RB#0	5.01	13	PASS
Band7	20MHz	16QAM	21100	100RB#0	6.00	13	PASS
Band7	20MHz	QPSK	21350	1RB#0	4.17	13	PASS
Band7	20MHz	16QAM	21350	1RB#0	5.01	13	PASS
Band7	20MHz	QPSK	21350	100RB#0	4.93	13	PASS
Band7	20MHz	16QAM	21350	100RB#0	5.88	13	PASS

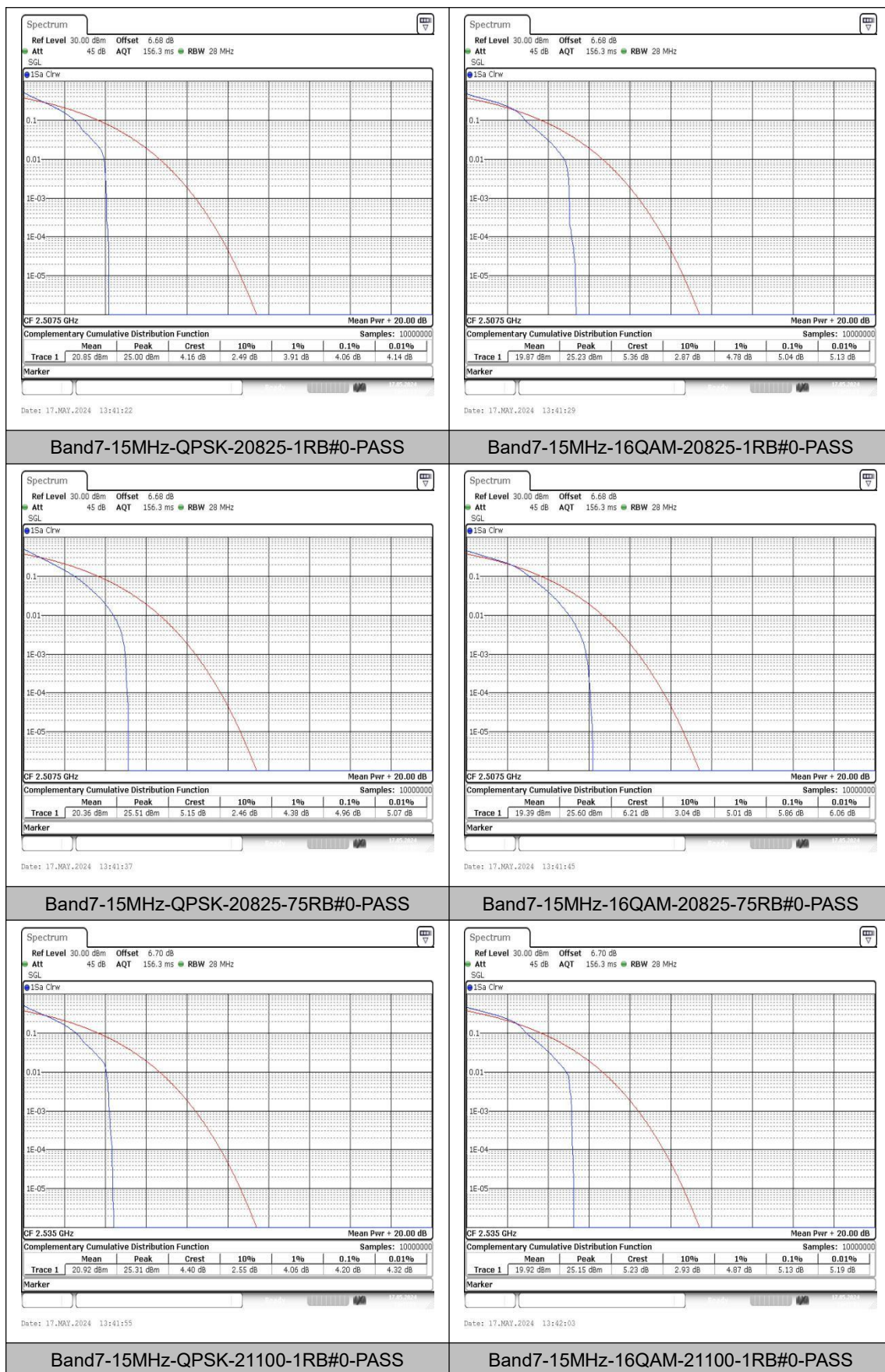
Test Graphs

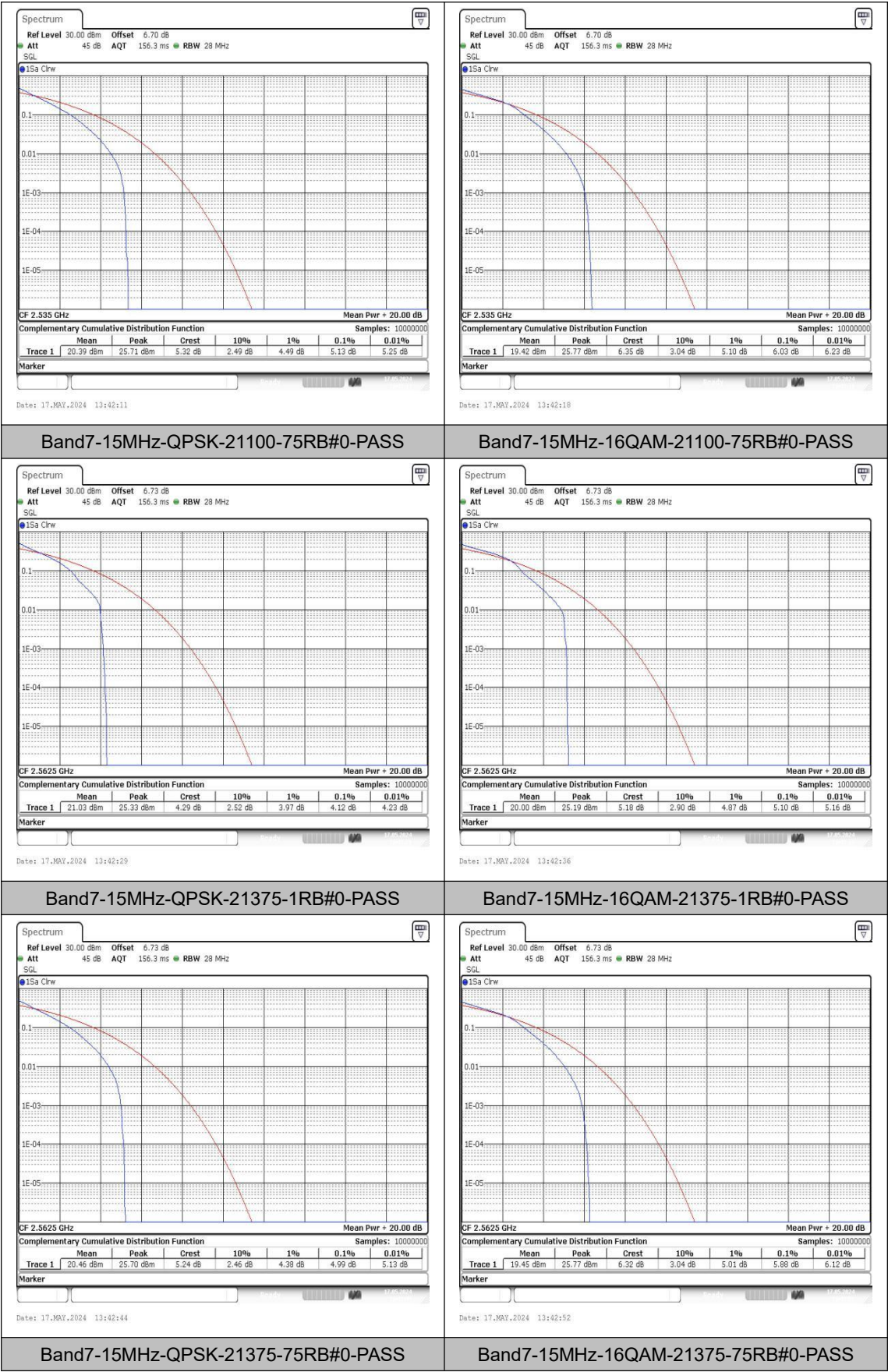


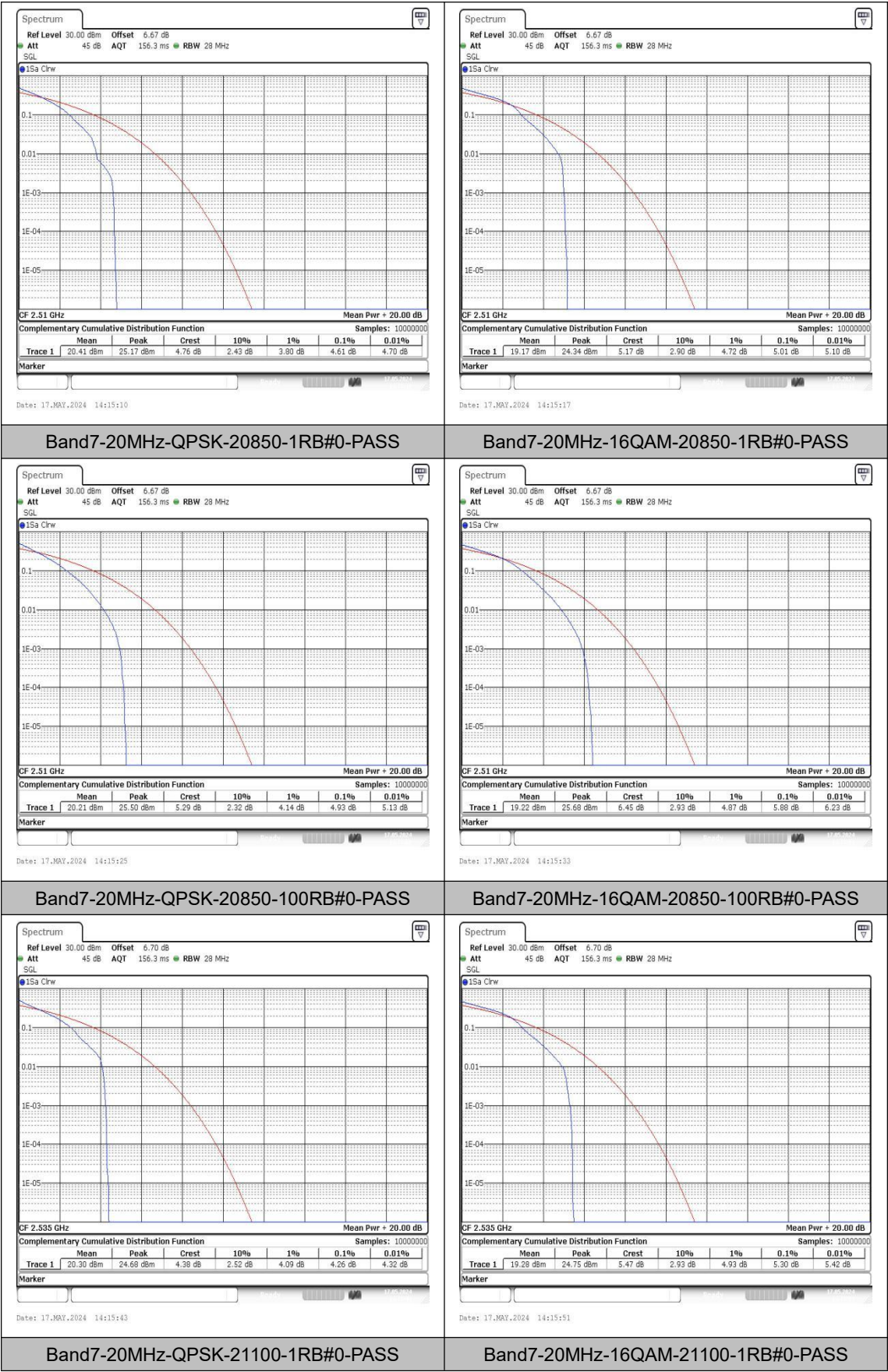


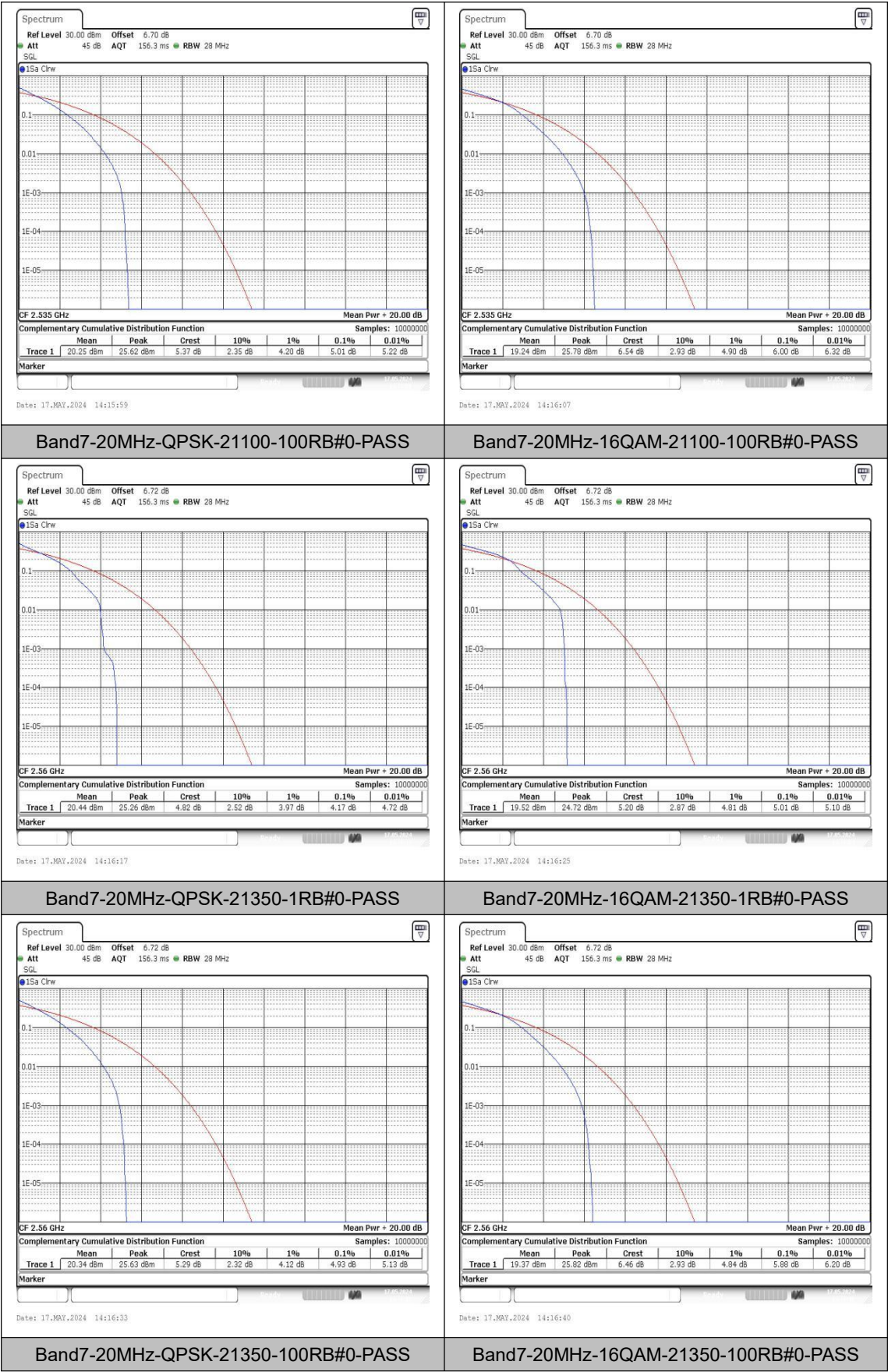












Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band7	5MHz	QPSK	20775	25RB#0	4.515	5.22	PASS
Band7	5MHz	16QAM	20775	25RB#0	4.525	5.19	PASS
Band7	5MHz	QPSK	21100	25RB#0	4.515	5.21	PASS
Band7	5MHz	16QAM	21100	25RB#0	4.505	5.19	PASS
Band7	5MHz	QPSK	21425	25RB#0	4.535	5.23	PASS
Band7	5MHz	16QAM	21425	25RB#0	4.525	5.22	PASS
Band7	10MHz	QPSK	20800	50RB#0	9.018	10.13	PASS
Band7	10MHz	16QAM	20800	50RB#0	9.018	10.07	PASS
Band7	10MHz	QPSK	21100	50RB#0	8.985	10.10	PASS
Band7	10MHz	16QAM	21100	50RB#0	8.985	10.10	PASS
Band7	10MHz	QPSK	21400	50RB#0	9.052	10.27	PASS
Band7	10MHz	16QAM	21400	50RB#0	8.985	10.07	PASS
Band7	15MHz	QPSK	20825	75RB#0	13.478	14.95	PASS
Band7	15MHz	16QAM	20825	75RB#0	13.527	15.15	PASS
Band7	15MHz	QPSK	21100	75RB#0	13.478	15.00	PASS
Band7	15MHz	16QAM	21100	75RB#0	13.478	15.10	PASS
Band7	15MHz	QPSK	21375	75RB#0	13.478	15.05	PASS
Band7	15MHz	16QAM	21375	75RB#0	13.478	15.05	PASS
Band7	20MHz	QPSK	20850	100RB#0	18.037	20.07	PASS
Band7	20MHz	16QAM	20850	100RB#0	18.037	20.27	PASS
Band7	20MHz	QPSK	21100	100RB#0	17.97	20.07	PASS
Band7	20MHz	16QAM	21100	100RB#0	18.037	20.07	PASS
Band7	20MHz	QPSK	21350	100RB#0	18.037	20.00	PASS
Band7	20MHz	16QAM	21350	100RB#0	17.97	20.20	PASS

Test Graphs

