

Appendix for LTE Band 17

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
Band17	5MHz	QPSK	23755	1RB#0	22.61	PASS
Band17	5MHz	16QAM	23755	1RB#0	21.66	PASS
Band17	5MHz	QPSK	23755	1RB#12	22.66	PASS
Band17	5MHz	16QAM	23755	1RB#12	21.56	PASS
Band17	5MHz	QPSK	23755	1RB#24	22.58	PASS
Band17	5MHz	16QAM	23755	1RB#24	21.58	PASS
Band17	5MHz	QPSK	23755	12RB#0	21.71	PASS
Band17	5MHz	16QAM	23755	12RB#0	20.59	PASS
Band17	5MHz	QPSK	23755	12RB#6	21.68	PASS
Band17	5MHz	16QAM	23755	12RB#6	20.65	PASS
Band17	5MHz	QPSK	23755	12RB#13	21.64	PASS
Band17	5MHz	16QAM	23755	12RB#13	20.60	PASS
Band17	5MHz	QPSK	23755	25RB#0	21.68	PASS
Band17	5MHz	16QAM	23755	25RB#0	20.69	PASS
Band17	5MHz	QPSK	23790	1RB#0	22.58	PASS
Band17	5MHz	16QAM	23790	1RB#0	21.86	PASS
Band17	5MHz	QPSK	23790	1RB#12	22.70	PASS
Band17	5MHz	16QAM	23790	1RB#12	21.69	PASS
Band17	5MHz	QPSK	23790	1RB#24	22.61	PASS
Band17	5MHz	16QAM	23790	1RB#24	21.85	PASS
Band17	5MHz	QPSK	23790	12RB#0	21.55	PASS
Band17	5MHz	16QAM	23790	12RB#0	20.63	PASS
Band17	5MHz	QPSK	23790	12RB#6	21.56	PASS
Band17	5MHz	16QAM	23790	12RB#6	20.46	PASS
Band17	5MHz	QPSK	23790	12RB#13	21.62	PASS
Band17	5MHz	16QAM	23790	12RB#13	20.55	PASS
Band17	5MHz	QPSK	23790	25RB#0	21.62	PASS
Band17	5MHz	16QAM	23790	25RB#0	20.62	PASS
Band17	5MHz	QPSK	23825	1RB#0	22.67	PASS
Band17	5MHz	16QAM	23825	1RB#0	21.67	PASS
Band17	5MHz	QPSK	23825	1RB#12	22.73	PASS
Band17	5MHz	16QAM	23825	1RB#12	21.79	PASS
Band17	5MHz	QPSK	23825	1RB#24	22.62	PASS
Band17	5MHz	16QAM	23825	1RB#24	21.51	PASS
Band17	5MHz	QPSK	23825	12RB#0	21.63	PASS

Band17	5MHz	16QAM	23825	12RB#0	20.56	PASS
Band17	5MHz	QPSK	23825	12RB#6	21.65	PASS
Band17	5MHz	16QAM	23825	12RB#6	20.59	PASS
Band17	5MHz	QPSK	23825	12RB#13	21.67	PASS
Band17	5MHz	16QAM	23825	12RB#13	20.75	PASS
Band17	5MHz	QPSK	23825	25RB#0	21.64	PASS
Band17	5MHz	16QAM	23825	25RB#0	20.68	PASS
Band17	10MHz	QPSK	23780	1RB#0	22.65	PASS
Band17	10MHz	16QAM	23780	1RB#0	21.70	PASS
Band17	10MHz	QPSK	23780	1RB#24	22.58	PASS
Band17	10MHz	16QAM	23780	1RB#24	21.70	PASS
Band17	10MHz	QPSK	23780	1RB#49	22.60	PASS
Band17	10MHz	16QAM	23780	1RB#49	21.44	PASS
Band17	10MHz	QPSK	23780	25RB#0	21.59	PASS
Band17	10MHz	16QAM	23780	25RB#0	20.60	PASS
Band17	10MHz	QPSK	23780	25RB#12	21.59	PASS
Band17	10MHz	16QAM	23780	25RB#12	20.68	PASS
Band17	10MHz	QPSK	23780	25RB#25	21.65	PASS
Band17	10MHz	16QAM	23780	25RB#25	20.71	PASS
Band17	10MHz	QPSK	23780	50RB#0	21.70	PASS
Band17	10MHz	16QAM	23780	50RB#0	20.72	PASS
Band17	10MHz	QPSK	23790	1RB#0	22.62	PASS
Band17	10MHz	16QAM	23790	1RB#0	21.61	PASS
Band17	10MHz	QPSK	23790	1RB#24	22.65	PASS
Band17	10MHz	16QAM	23790	1RB#24	21.80	PASS
Band17	10MHz	QPSK	23790	1RB#49	22.57	PASS
Band17	10MHz	16QAM	23790	1RB#49	21.57	PASS
Band17	10MHz	QPSK	23790	25RB#0	21.58	PASS
Band17	10MHz	16QAM	23790	25RB#0	20.64	PASS
Band17	10MHz	QPSK	23790	25RB#12	21.59	PASS
Band17	10MHz	16QAM	23790	25RB#12	20.58	PASS
Band17	10MHz	QPSK	23790	25RB#25	21.62	PASS
Band17	10MHz	16QAM	23790	25RB#25	20.67	PASS
Band17	10MHz	QPSK	23790	50RB#0	21.68	PASS
Band17	10MHz	16QAM	23790	50RB#0	20.66	PASS
Band17	10MHz	QPSK	23800	1RB#0	22.67	PASS
Band17	10MHz	16QAM	23800	1RB#0	21.61	PASS
Band17	10MHz	QPSK	23800	1RB#24	22.72	PASS
Band17	10MHz	16QAM	23800	1RB#24	21.65	PASS
Band17	10MHz	QPSK	23800	1RB#49	22.60	PASS
Band17	10MHz	16QAM	23800	1RB#49	21.51	PASS
Band17	10MHz	QPSK	23800	25RB#0	21.58	PASS

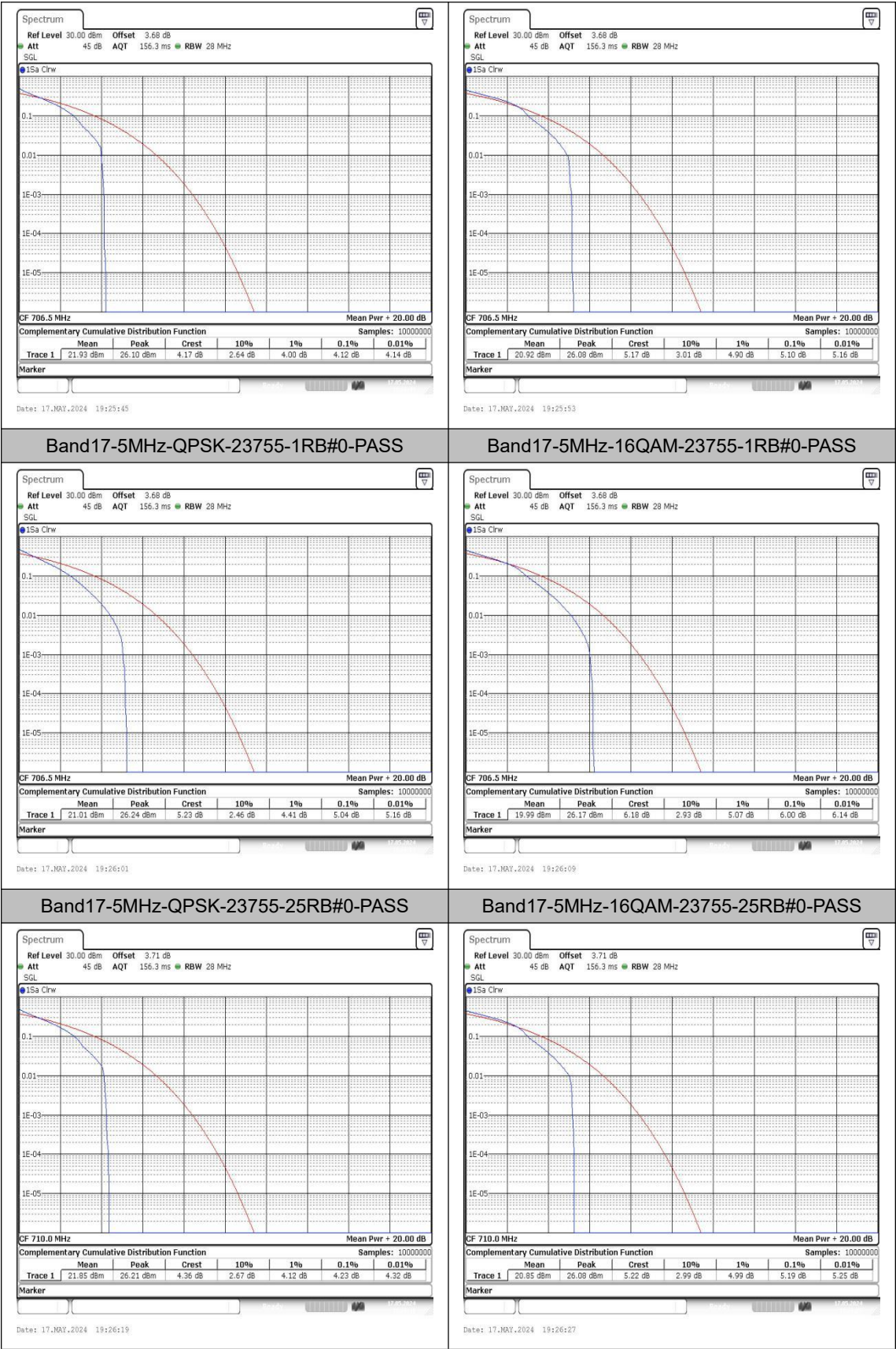
Band17	10MHz	16QAM	23800	25RB#0	20.65	PASS
Band17	10MHz	QPSK	23800	25RB#12	21.63	PASS
Band17	10MHz	16QAM	23800	25RB#12	20.66	PASS
Band17	10MHz	QPSK	23800	25RB#25	21.66	PASS
Band17	10MHz	16QAM	23800	25RB#25	20.66	PASS
Band17	10MHz	QPSK	23800	50RB#0	21.67	PASS
Band17	10MHz	16QAM	23800	50RB#0	20.65	PASS

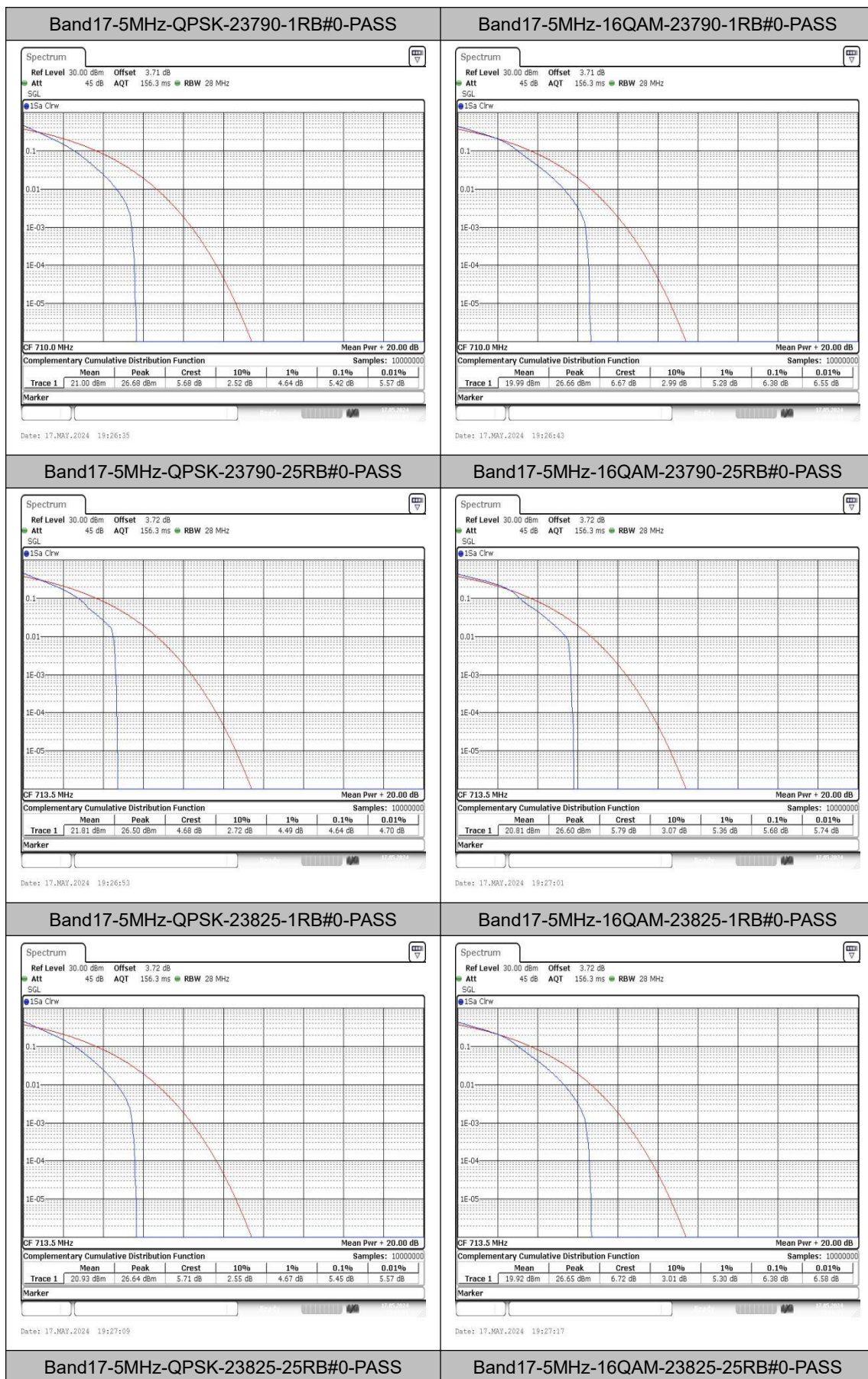
Appendix B: Peak-to-Average Ratio(CCDF)

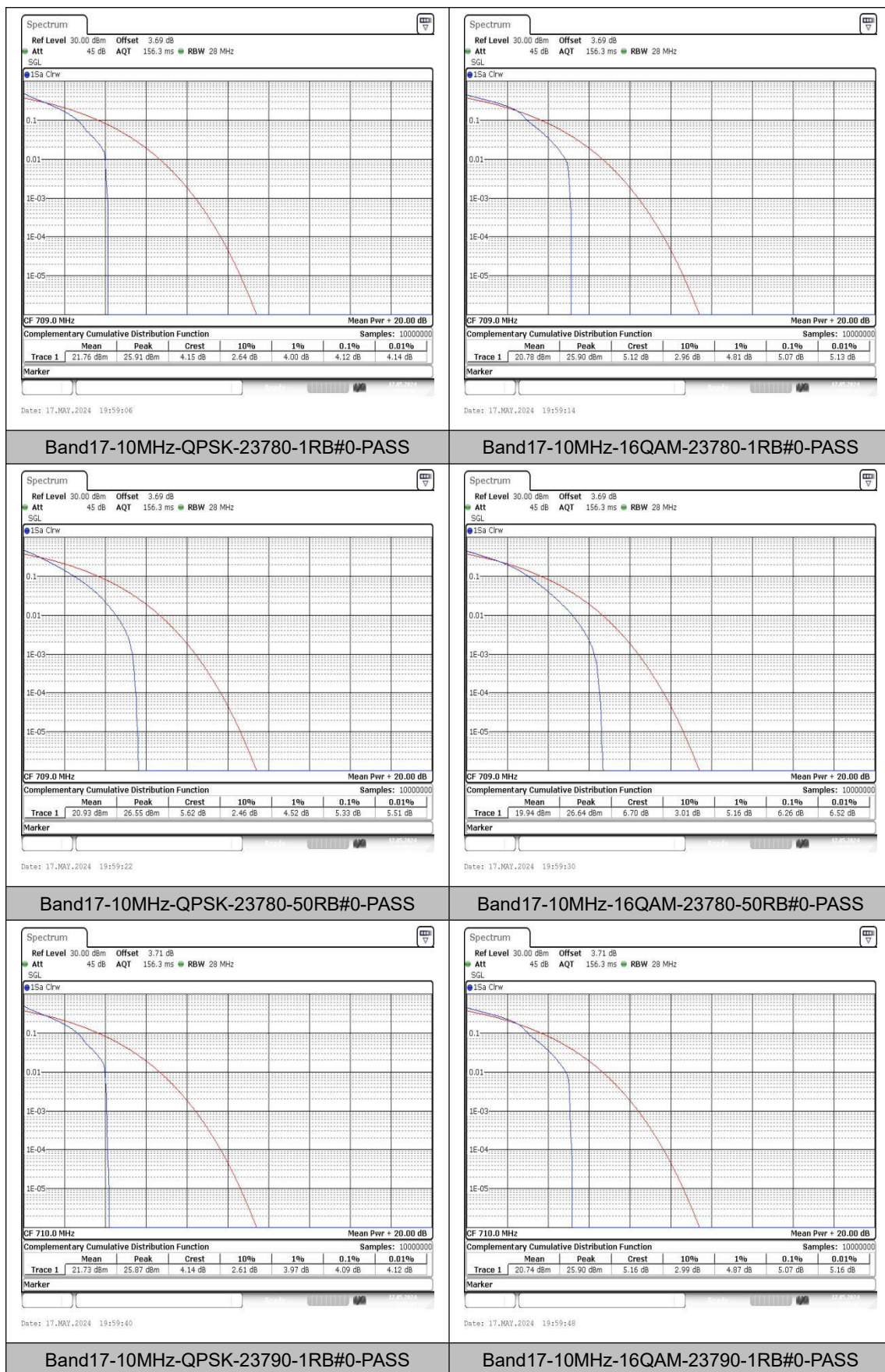
Test Result

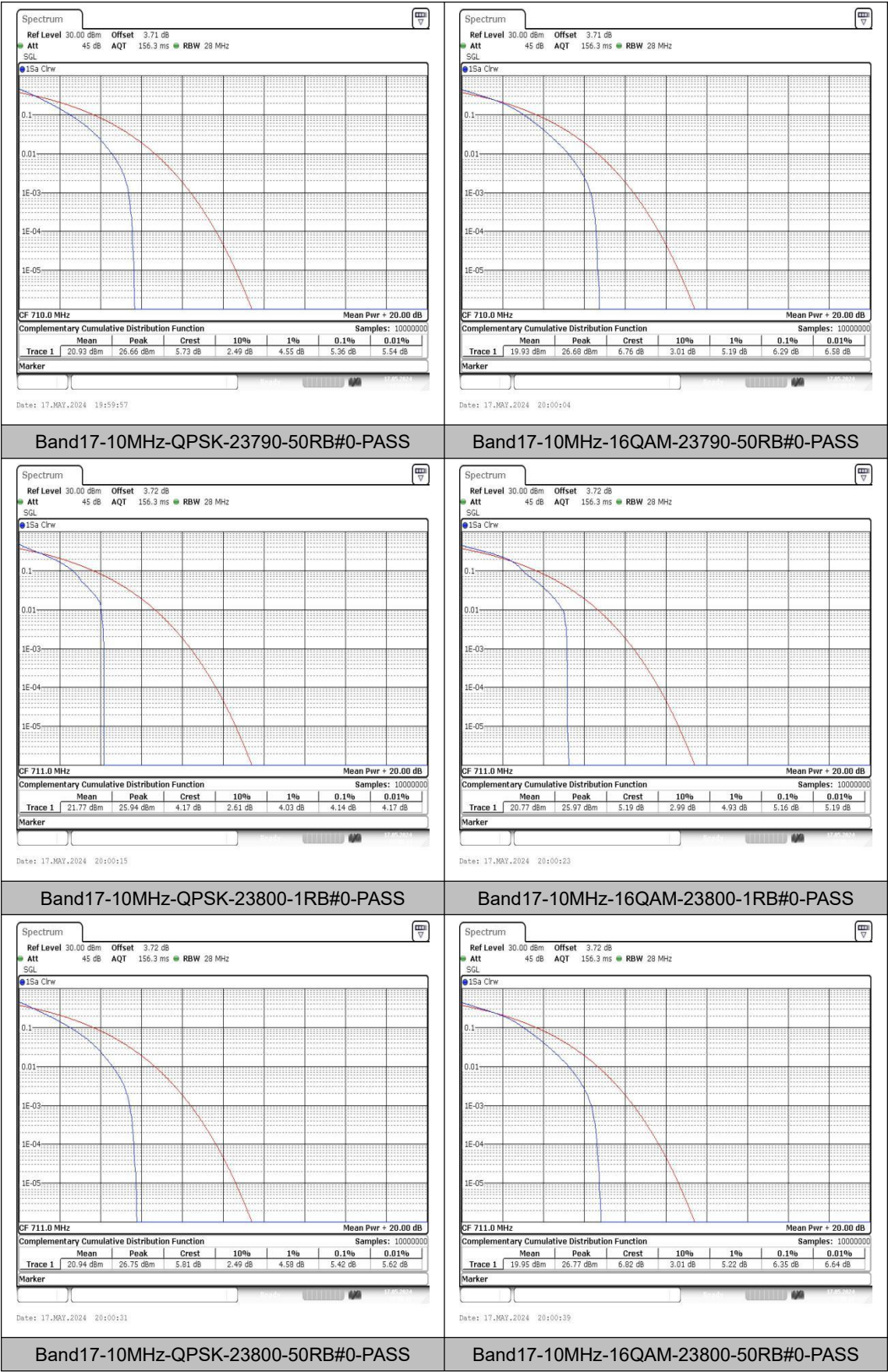
Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band17	5MHz	QPSK	23755	1RB#0	4.12	13	PASS
Band17	5MHz	16QAM	23755	1RB#0	5.10	13	PASS
Band17	5MHz	QPSK	23755	25RB#0	5.04	13	PASS
Band17	5MHz	16QAM	23755	25RB#0	6.00	13	PASS
Band17	5MHz	QPSK	23790	1RB#0	4.23	13	PASS
Band17	5MHz	16QAM	23790	1RB#0	5.19	13	PASS
Band17	5MHz	QPSK	23790	25RB#0	5.42	13	PASS
Band17	5MHz	16QAM	23790	25RB#0	6.38	13	PASS
Band17	5MHz	QPSK	23825	1RB#0	4.64	13	PASS
Band17	5MHz	16QAM	23825	1RB#0	5.68	13	PASS
Band17	5MHz	QPSK	23825	25RB#0	5.45	13	PASS
Band17	5MHz	16QAM	23825	25RB#0	6.38	13	PASS
Band17	10MHz	QPSK	23780	1RB#0	4.12	13	PASS
Band17	10MHz	16QAM	23780	1RB#0	5.07	13	PASS
Band17	10MHz	QPSK	23780	50RB#0	5.33	13	PASS
Band17	10MHz	16QAM	23780	50RB#0	6.26	13	PASS
Band17	10MHz	QPSK	23790	1RB#0	4.09	13	PASS
Band17	10MHz	16QAM	23790	1RB#0	5.07	13	PASS
Band17	10MHz	QPSK	23790	50RB#0	5.36	13	PASS
Band17	10MHz	16QAM	23790	50RB#0	6.29	13	PASS
Band17	10MHz	QPSK	23800	1RB#0	4.14	13	PASS
Band17	10MHz	16QAM	23800	1RB#0	5.16	13	PASS
Band17	10MHz	QPSK	23800	50RB#0	5.42	13	PASS
Band17	10MHz	16QAM	23800	50RB#0	6.35	13	PASS

Test Graphs







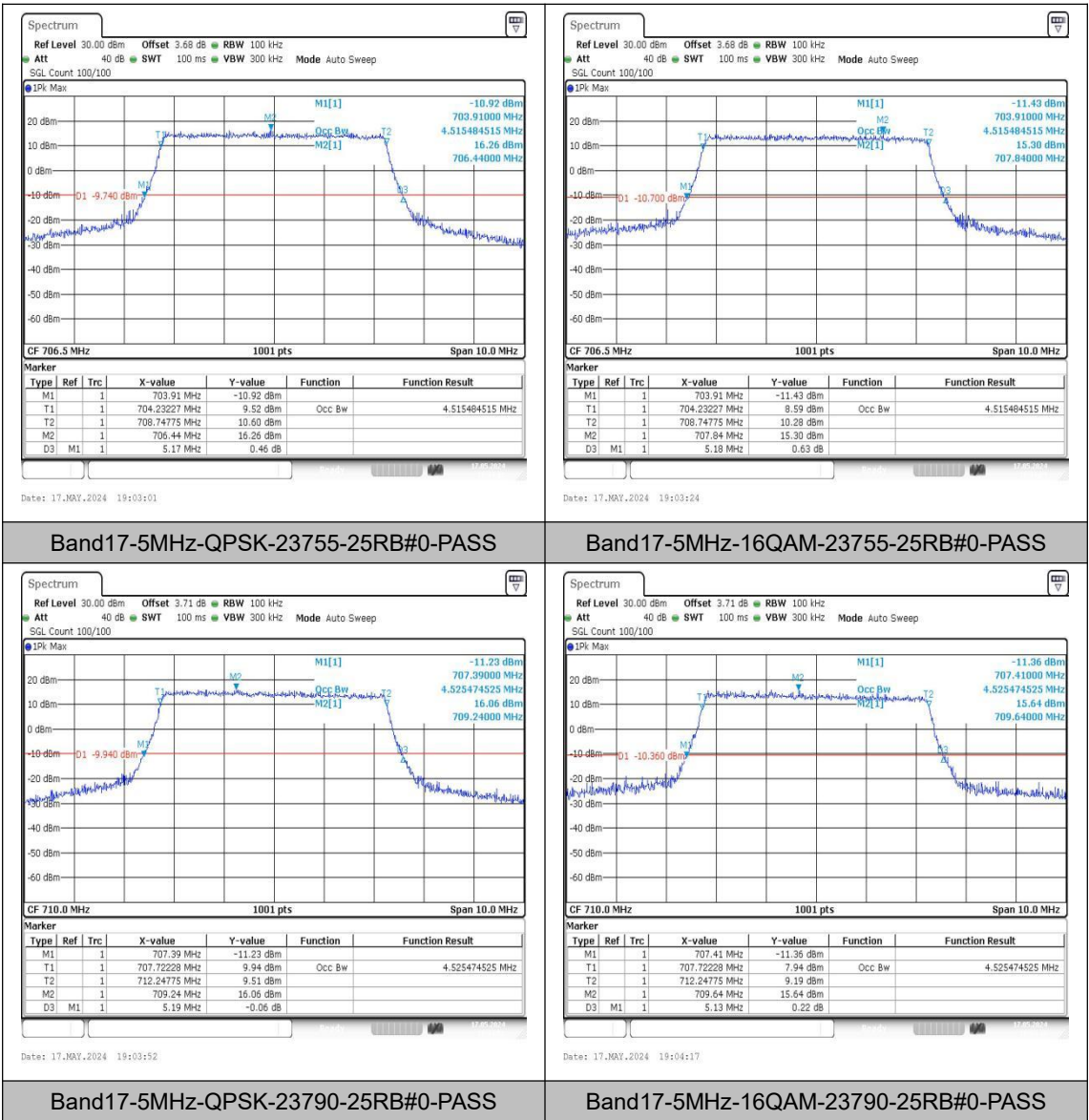


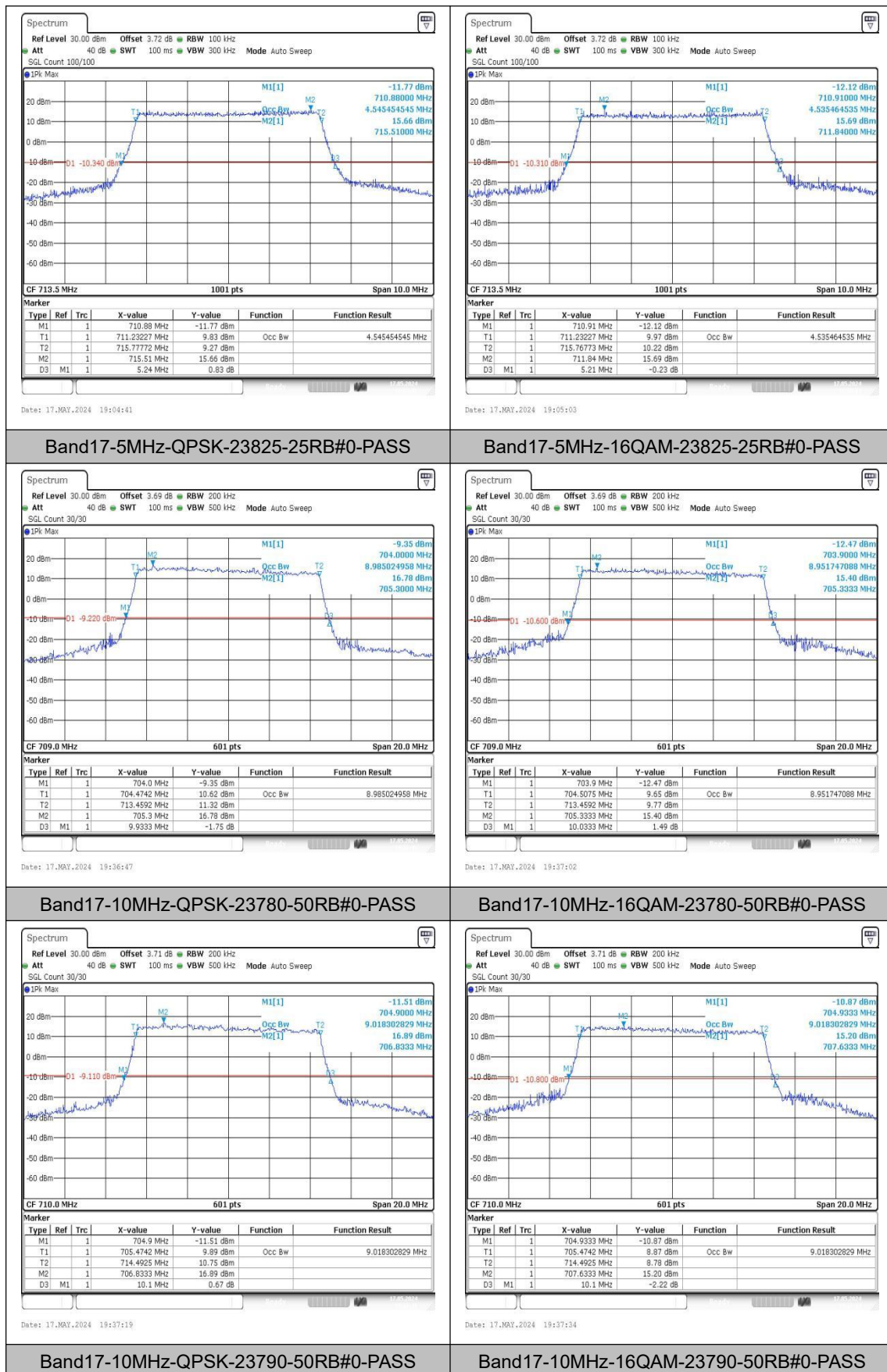
Appendix C: 26dB Bandwidth and Occupied Bandwidth

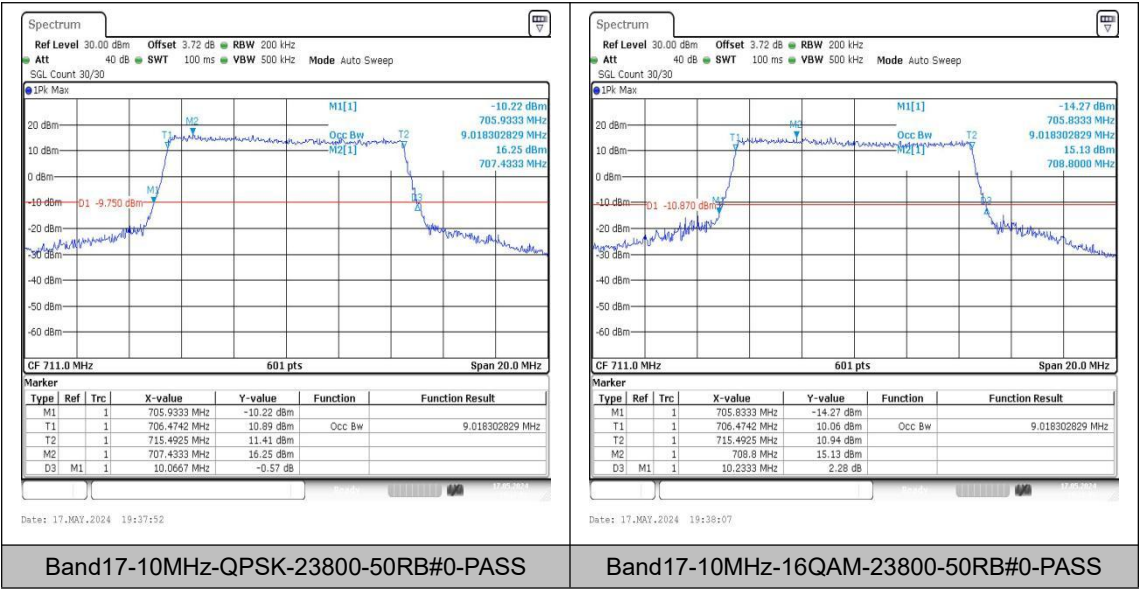
Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band17	5MHz	QPSK	23755	25RB#0	4.515	5.17	PASS
Band17	5MHz	16QAM	23755	25RB#0	4.515	5.18	PASS
Band17	5MHz	QPSK	23790	25RB#0	4.525	5.19	PASS
Band17	5MHz	16QAM	23790	25RB#0	4.525	5.13	PASS
Band17	5MHz	QPSK	23825	25RB#0	4.545	5.24	PASS
Band17	5MHz	16QAM	23825	25RB#0	4.535	5.21	PASS
Band17	10MHz	QPSK	23780	50RB#0	8.985	9.93	PASS
Band17	10MHz	16QAM	23780	50RB#0	8.952	10.03	PASS
Band17	10MHz	QPSK	23790	50RB#0	9.018	10.10	PASS
Band17	10MHz	16QAM	23790	50RB#0	9.018	10.10	PASS
Band17	10MHz	QPSK	23800	50RB#0	9.018	10.07	PASS
Band17	10MHz	16QAM	23800	50RB#0	9.018	10.23	PASS

Test Graphs





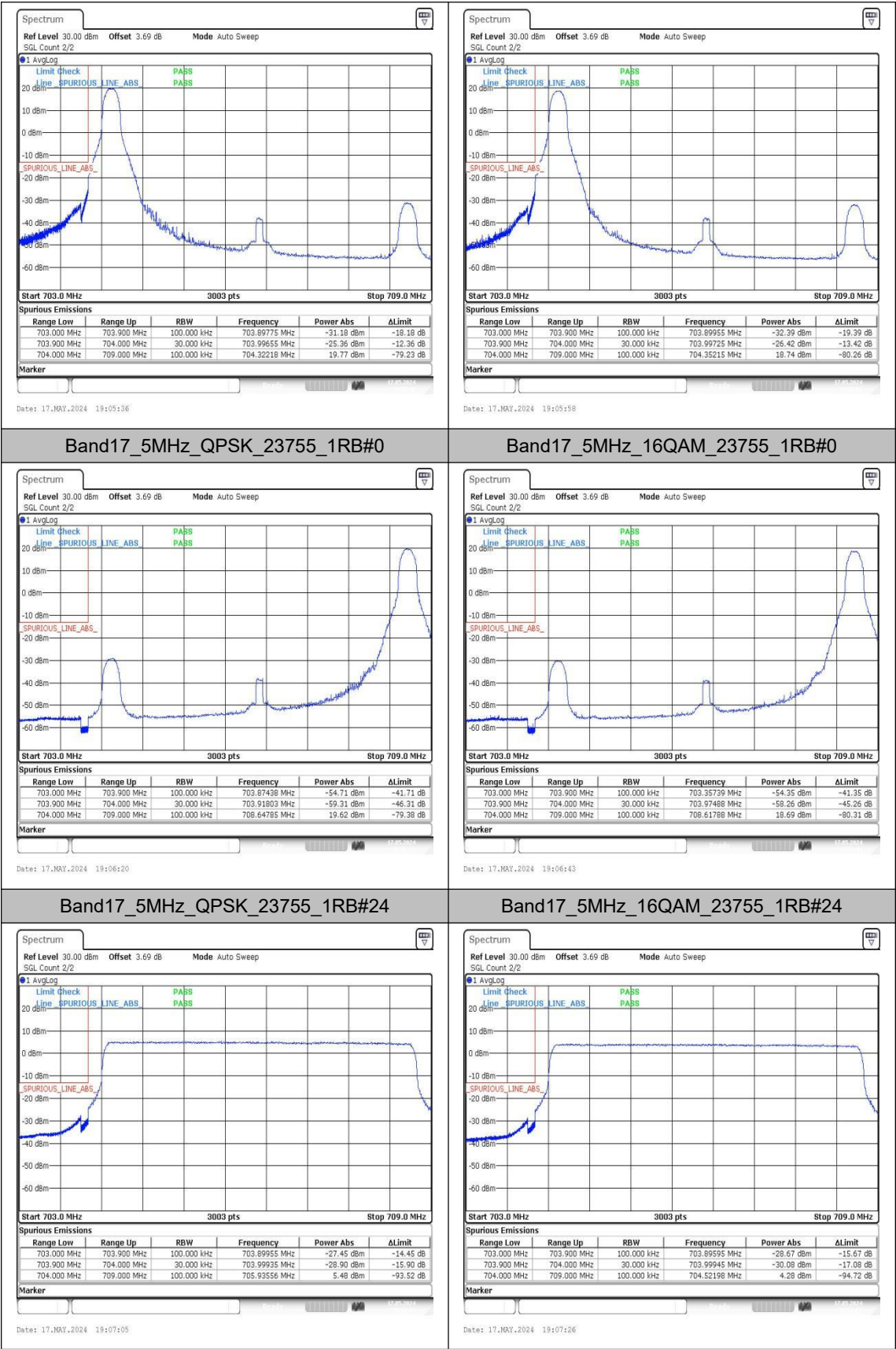


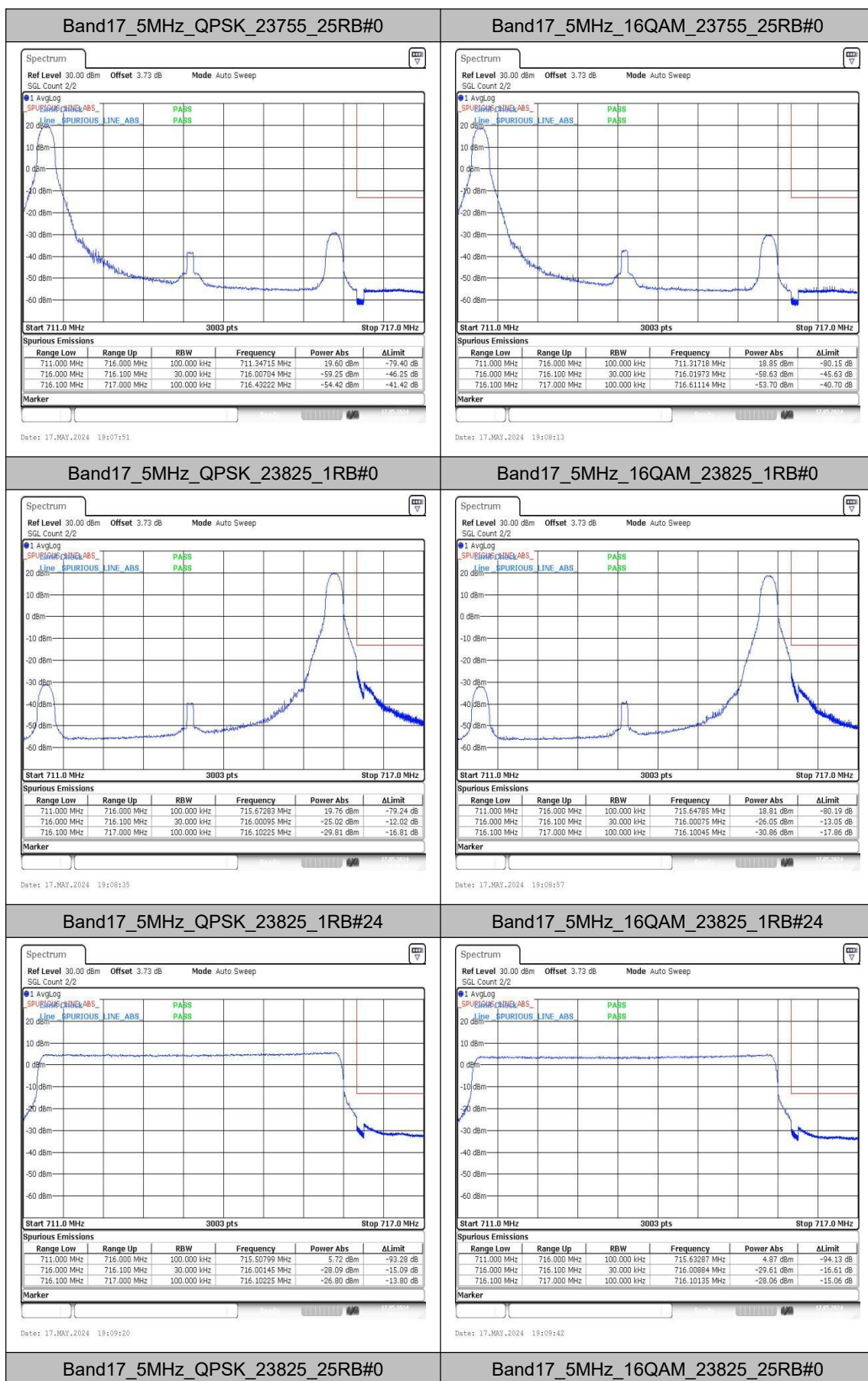
Appendix D: Band Edge

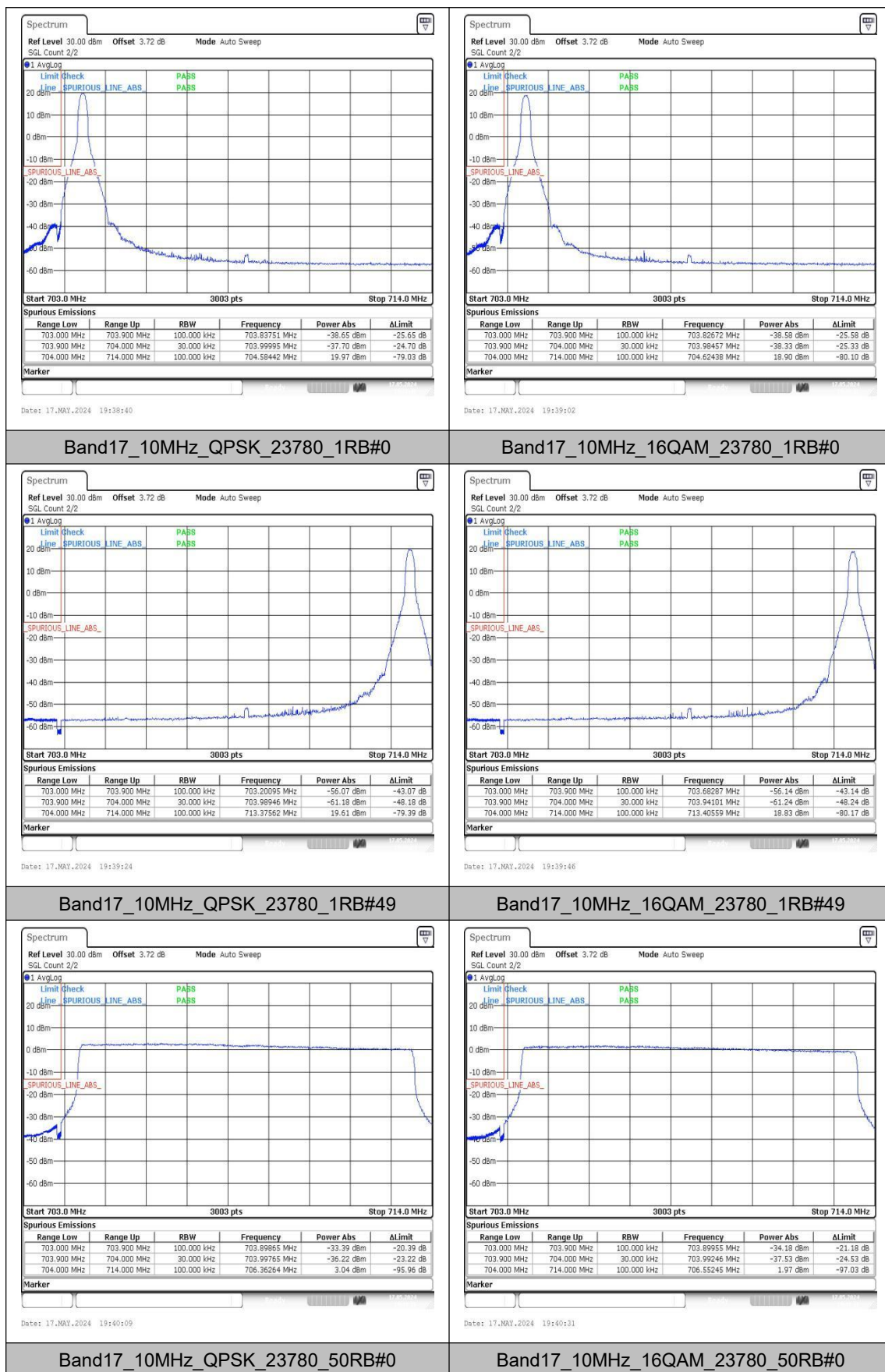
Test Result

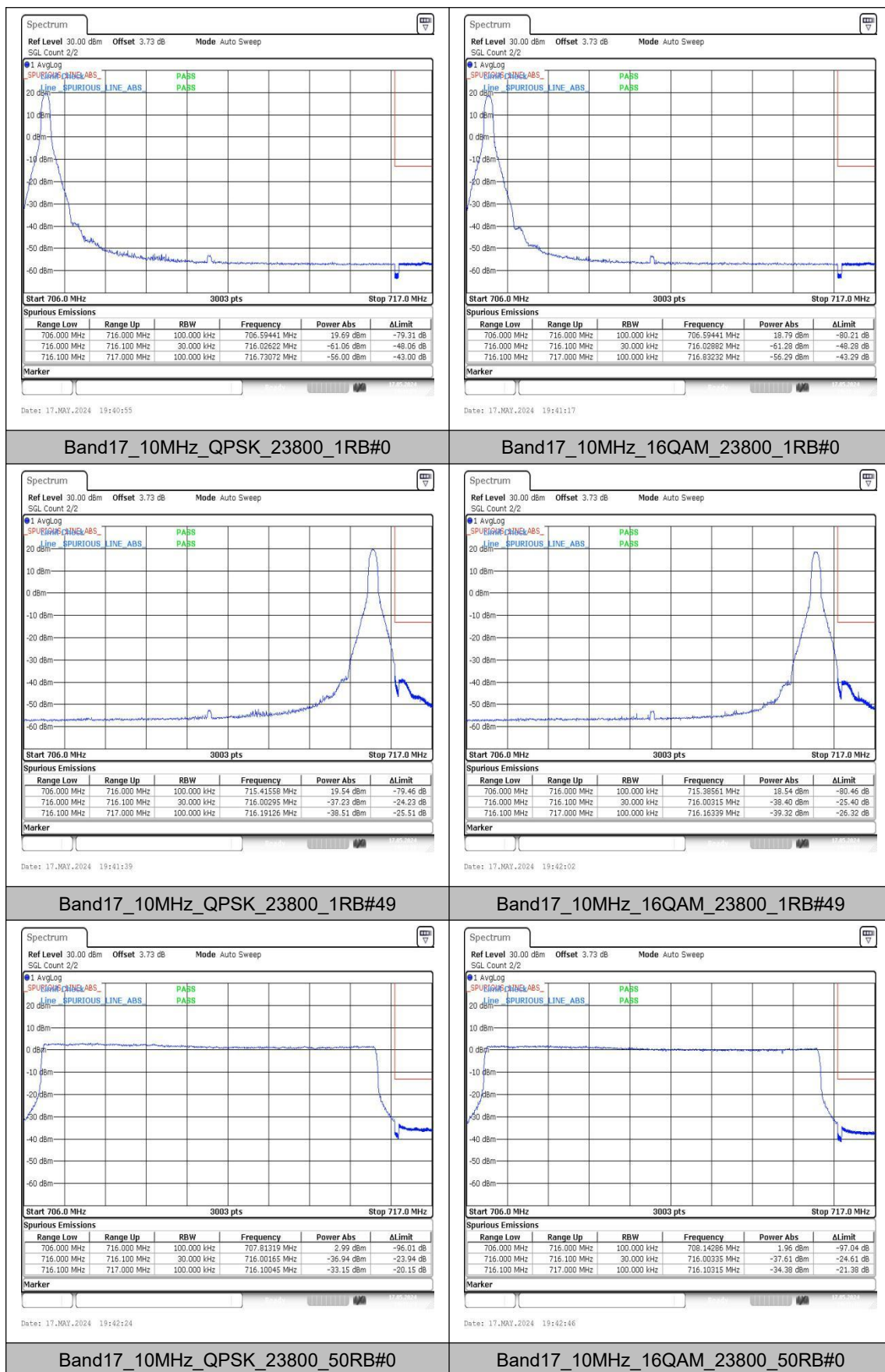
Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band17	5MHz	QPSK	23755	1RB#0	-25.36	PASS
Band17	5MHz	16QAM	23755	1RB#0	-26.42	PASS
Band17	5MHz	QPSK	23755	1RB#24	-54.71	PASS
Band17	5MHz	16QAM	23755	1RB#24	-54.35	PASS
Band17	5MHz	QPSK	23755	25RB#0	-27.45	PASS
Band17	5MHz	16QAM	23755	25RB#0	-28.67	PASS
Band17	5MHz	QPSK	23825	1RB#0	-54.42	PASS
Band17	5MHz	16QAM	23825	1RB#0	-53.70	PASS
Band17	5MHz	QPSK	23825	1RB#24	-25.02	PASS
Band17	5MHz	16QAM	23825	1RB#24	-26.05	PASS
Band17	5MHz	QPSK	23825	25RB#0	-26.80	PASS
Band17	5MHz	16QAM	23825	25RB#0	-28.06	PASS
Band17	10MHz	QPSK	23780	1RB#0	-37.70	PASS
Band17	10MHz	16QAM	23780	1RB#0	-38.33	PASS
Band17	10MHz	QPSK	23780	1RB#49	-56.07	PASS
Band17	10MHz	16QAM	23780	1RB#49	-56.14	PASS
Band17	10MHz	QPSK	23780	50RB#0	-33.39	PASS
Band17	10MHz	16QAM	23780	50RB#0	-34.18	PASS
Band17	10MHz	QPSK	23800	1RB#0	-56.00	PASS
Band17	10MHz	16QAM	23800	1RB#0	-56.29	PASS
Band17	10MHz	QPSK	23800	1RB#49	-37.23	PASS
Band17	10MHz	16QAM	23800	1RB#49	-38.40	PASS
Band17	10MHz	QPSK	23800	50RB#0	-33.15	PASS
Band17	10MHz	16QAM	23800	50RB#0	-34.38	PASS

Test Graphs









Appendix E: Conducted Spurious Emission

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Frequency Range	Result (dBm)	Verdict
Band17	5MHz	QPSK	23755	1RB#0	0.009~0.15	-71.41	PASS
Band17	5MHz	QPSK	23755	1RB#0	0.15~30	-75.83	PASS
Band17	5MHz	QPSK	23755	1RB#0	30~1000	-64.05	PASS
Band17	5MHz	QPSK	23755	1RB#0	1000~3000	-50.18	PASS
Band17	5MHz	QPSK	23755	1RB#0	3000~10000	-39.20	PASS
Band17	5MHz	16QAM	23755	1RB#0	0.009~0.15	-72.93	PASS
Band17	5MHz	16QAM	23755	1RB#0	0.15~30	-75.01	PASS
Band17	5MHz	16QAM	23755	1RB#0	30~1000	-64.44	PASS
Band17	5MHz	16QAM	23755	1RB#0	1000~3000	-50.16	PASS
Band17	5MHz	16QAM	23755	1RB#0	3000~10000	-39.27	PASS
Band17	5MHz	QPSK	23790	1RB#0	0.009~0.15	-70.64	PASS
Band17	5MHz	QPSK	23790	1RB#0	0.15~30	-75.68	PASS
Band17	5MHz	QPSK	23790	1RB#0	30~1000	-64.51	PASS
Band17	5MHz	QPSK	23790	1RB#0	1000~3000	-45.85	PASS
Band17	5MHz	QPSK	23790	1RB#0	3000~10000	-39.12	PASS
Band17	5MHz	16QAM	23790	1RB#0	0.009~0.15	-72.32	PASS
Band17	5MHz	16QAM	23790	1RB#0	0.15~30	-74.89	PASS
Band17	5MHz	16QAM	23790	1RB#0	30~1000	-64.28	PASS
Band17	5MHz	16QAM	23790	1RB#0	1000~3000	-50.21	PASS
Band17	5MHz	16QAM	23790	1RB#0	3000~10000	-39.28	PASS
Band17	5MHz	QPSK	23825	1RB#0	0.009~0.15	-73.61	PASS
Band17	5MHz	QPSK	23825	1RB#0	0.15~30	-74.33	PASS
Band17	5MHz	QPSK	23825	1RB#0	30~1000	-64.36	PASS
Band17	5MHz	QPSK	23825	1RB#0	1000~3000	-50.23	PASS
Band17	5MHz	QPSK	23825	1RB#0	3000~10000	-39.27	PASS
Band17	5MHz	16QAM	23825	1RB#0	0.009~0.15	-72.16	PASS
Band17	5MHz	16QAM	23825	1RB#0	0.15~30	-76.01	PASS
Band17	5MHz	16QAM	23825	1RB#0	30~1000	-63.89	PASS
Band17	5MHz	16QAM	23825	1RB#0	1000~3000	-50.17	PASS
Band17	5MHz	16QAM	23825	1RB#0	3000~10000	-39.32	PASS
Band17	10MHz	QPSK	23780	1RB#0	0.009~0.15	-70.85	PASS
Band17	10MHz	QPSK	23780	1RB#0	0.15~30	-75.17	PASS
Band17	10MHz	QPSK	23780	1RB#0	30~1000	-64.64	PASS
Band17	10MHz	QPSK	23780	1RB#0	1000~3000	-50.12	PASS
Band17	10MHz	QPSK	23780	1RB#0	3000~10000	-39.24	PASS

Band17	10MHz	16QAM	23780	1RB#0	0.009~0.15	-72.13	PASS
Band17	10MHz	16QAM	23780	1RB#0	0.15~30	-76.07	PASS
Band17	10MHz	16QAM	23780	1RB#0	30~1000	-64.75	PASS
Band17	10MHz	16QAM	23780	1RB#0	1000~3000	-26.78	PASS
Band17	10MHz	16QAM	23780	1RB#0	3000~10000	-39.20	PASS
Band17	10MHz	QPSK	23790	1RB#0	0.009~0.15	-73.81	PASS
Band17	10MHz	QPSK	23790	1RB#0	0.15~30	-75.60	PASS
Band17	10MHz	QPSK	23790	1RB#0	30~1000	-65.01	PASS
Band17	10MHz	QPSK	23790	1RB#0	1000~3000	-50.27	PASS
Band17	10MHz	QPSK	23790	1RB#0	3000~10000	-39.21	PASS
Band17	10MHz	16QAM	23790	1RB#0	0.009~0.15	-73.48	PASS
Band17	10MHz	16QAM	23790	1RB#0	0.15~30	-76.35	PASS
Band17	10MHz	16QAM	23790	1RB#0	30~1000	-64.65	PASS
Band17	10MHz	16QAM	23790	1RB#0	1000~3000	-50.21	PASS
Band17	10MHz	16QAM	23790	1RB#0	3000~10000	-39.19	PASS
Band17	10MHz	QPSK	23800	1RB#0	0.009~0.15	-71.77	PASS
Band17	10MHz	QPSK	23800	1RB#0	0.15~30	-75.41	PASS
Band17	10MHz	QPSK	23800	1RB#0	30~1000	-64.79	PASS
Band17	10MHz	QPSK	23800	1RB#0	1000~3000	-50.14	PASS
Band17	10MHz	QPSK	23800	1RB#0	3000~10000	-39.23	PASS
Band17	10MHz	16QAM	23800	1RB#0	0.009~0.15	-71.32	PASS
Band17	10MHz	16QAM	23800	1RB#0	0.15~30	-75.20	PASS
Band17	10MHz	16QAM	23800	1RB#0	30~1000	-64.67	PASS
Band17	10MHz	16QAM	23800	1RB#0	1000~3000	-50.23	PASS
Band17	10MHz	16QAM	23800	1RB#0	3000~10000	-39.21	PASS

Test Graphs

