

FCC Appendix RF Test Data for LTE Band 12

FCC ID : 2AU4T-TH11

Company : Shanghai TUGE Data Technologies Co., Ltd.

EUT : MobileHub

Model Number : TH11

Report No. : CTA26071403106

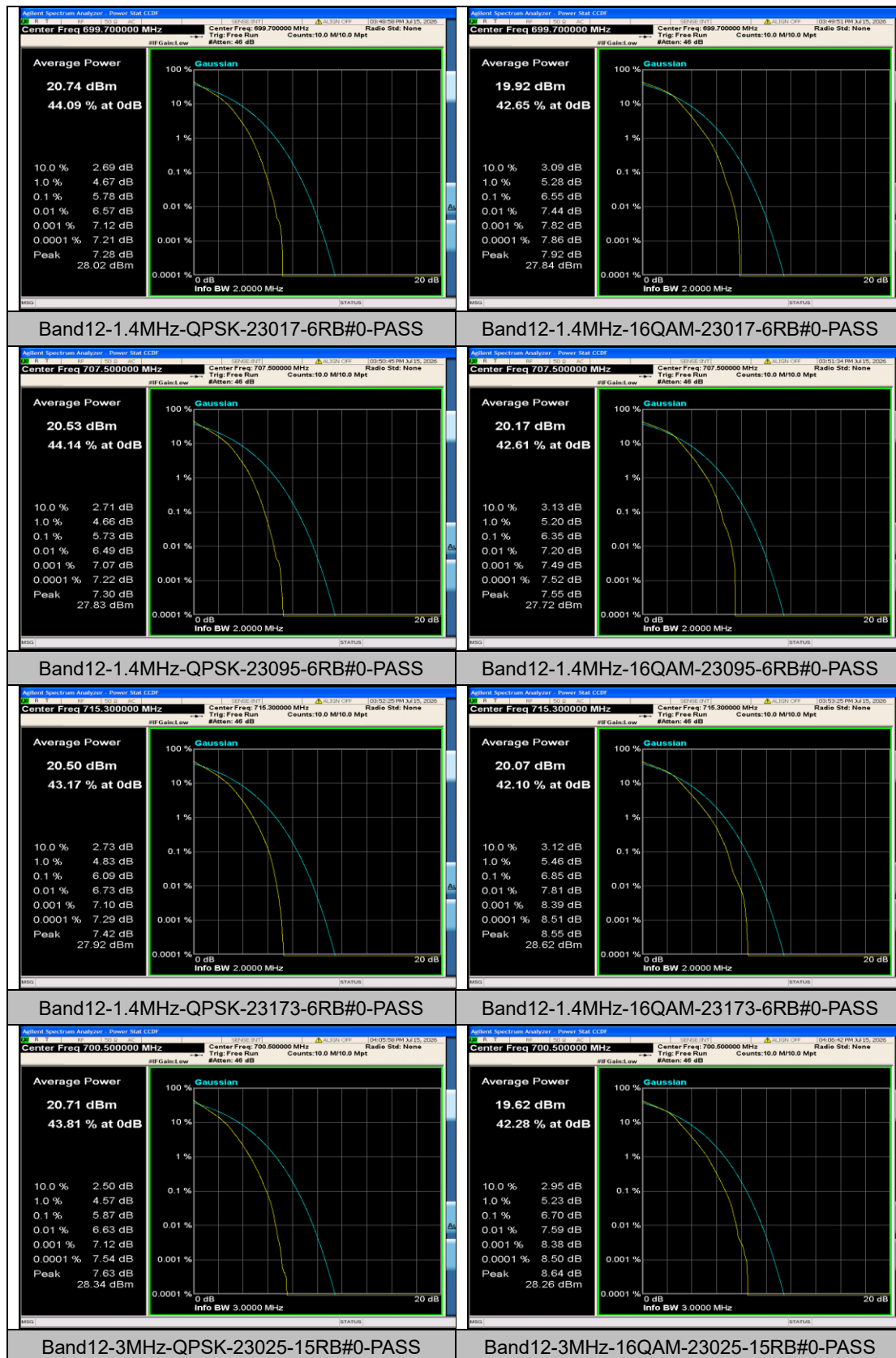
Reviewed By : Eric Wang

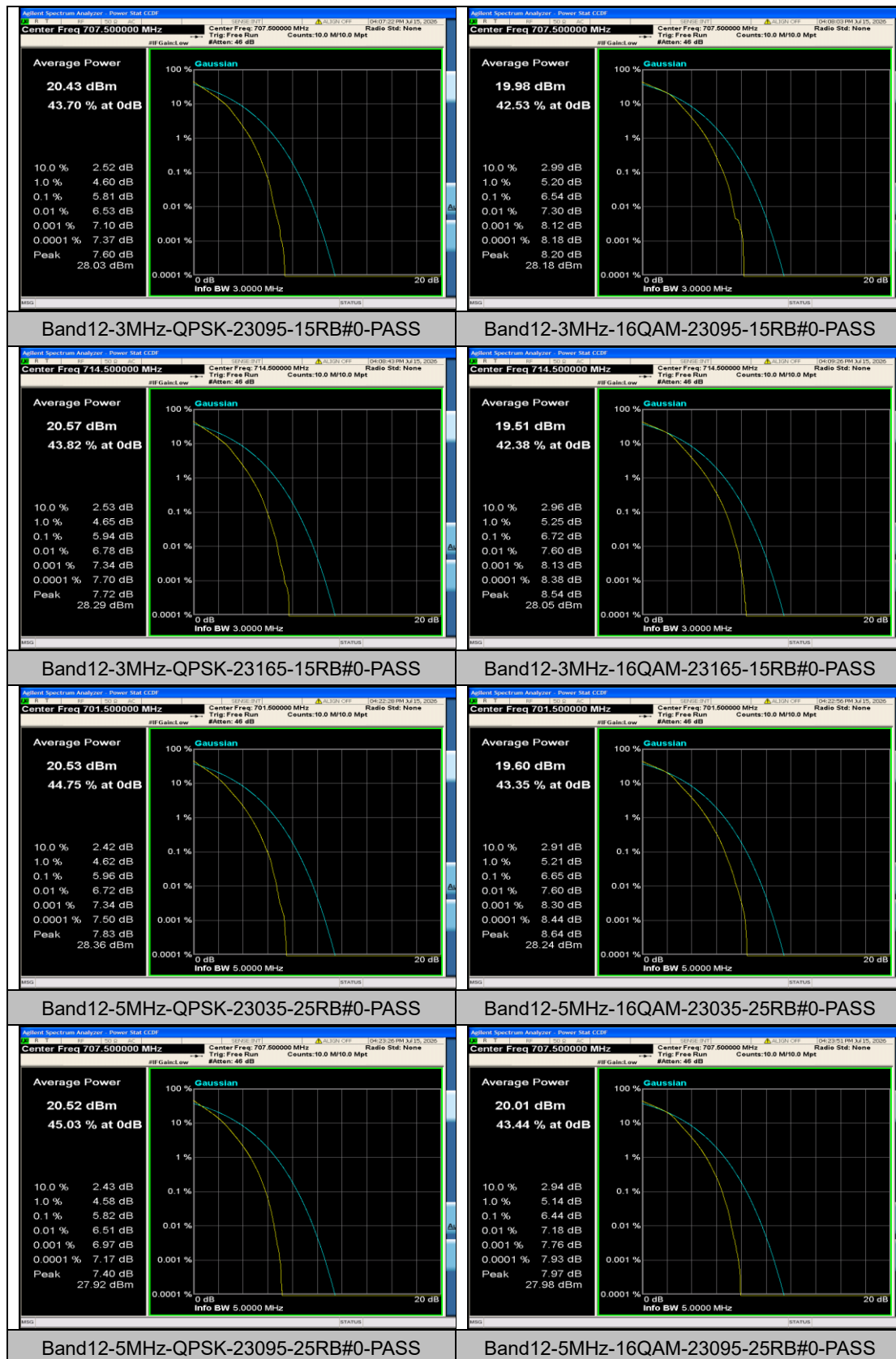
Appendix B: Peak-to-Average Ratio(CCDF)

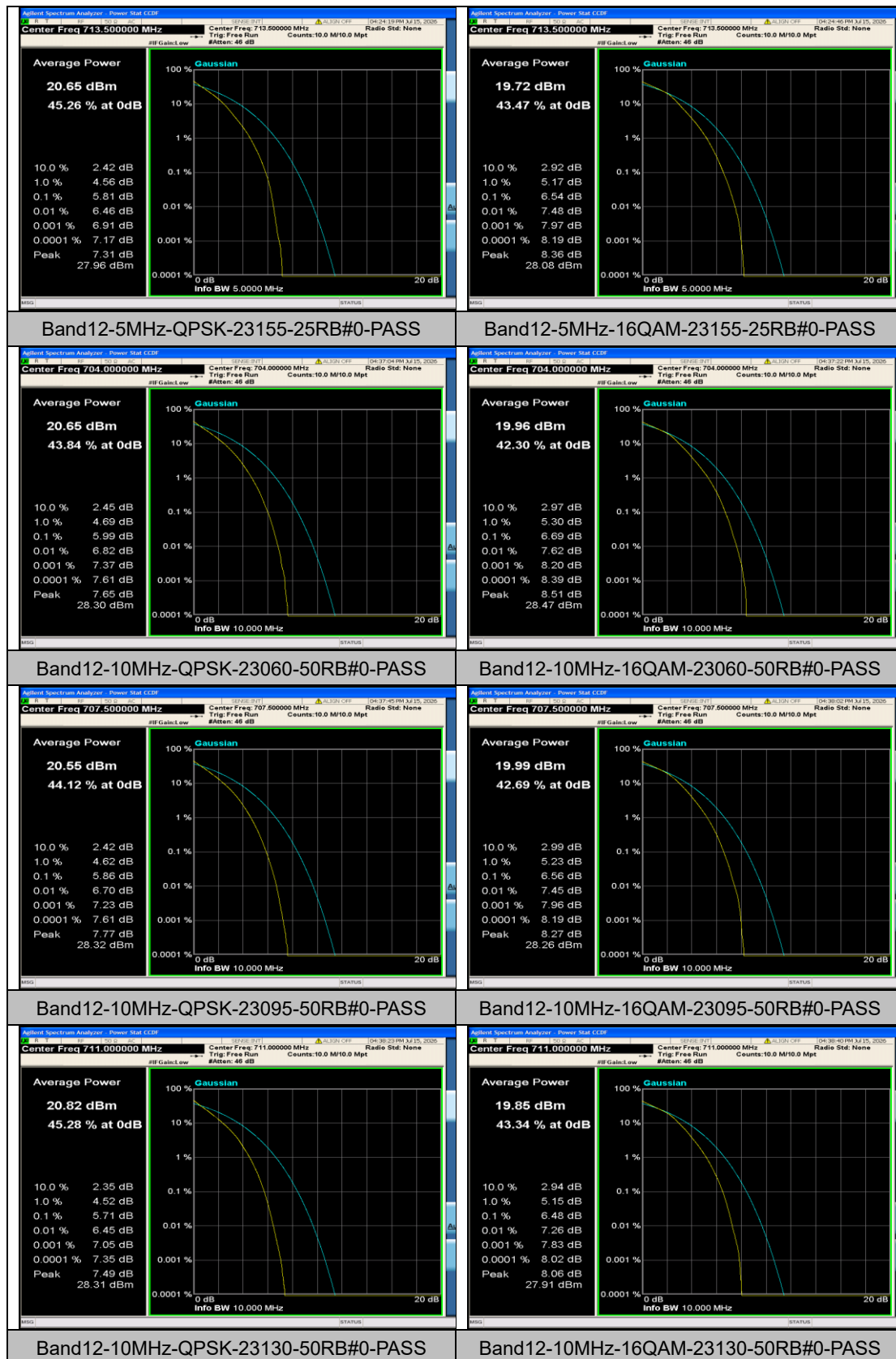
Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band12	1.4MHz	QPSK	23017	6RB#0	5.78	13	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	6.55	13	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	5.73	13	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	6.35	13	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	6.09	13	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	6.85	13	PASS
Band12	3MHz	QPSK	23025	15RB#0	5.87	13	PASS
Band12	3MHz	16QAM	23025	15RB#0	6.70	13	PASS
Band12	3MHz	QPSK	23095	15RB#0	5.81	13	PASS
Band12	3MHz	16QAM	23095	15RB#0	6.54	13	PASS
Band12	3MHz	QPSK	23165	15RB#0	5.94	13	PASS
Band12	3MHz	16QAM	23165	15RB#0	6.72	13	PASS
Band12	5MHz	QPSK	23035	25RB#0	5.96	13	PASS
Band12	5MHz	16QAM	23035	25RB#0	6.65	13	PASS
Band12	5MHz	QPSK	23095	25RB#0	5.82	13	PASS
Band12	5MHz	16QAM	23095	25RB#0	6.44	13	PASS
Band12	5MHz	QPSK	23155	25RB#0	5.81	13	PASS
Band12	5MHz	16QAM	23155	25RB#0	6.54	13	PASS
Band12	10MHz	QPSK	23060	50RB#0	5.99	13	PASS
Band12	10MHz	16QAM	23060	50RB#0	6.69	13	PASS
Band12	10MHz	QPSK	23095	50RB#0	5.86	13	PASS
Band12	10MHz	16QAM	23095	50RB#0	6.56	13	PASS
Band12	10MHz	QPSK	23130	50RB#0	5.71	13	PASS
Band12	10MHz	16QAM	23130	50RB#0	6.48	13	PASS

Test Graphs





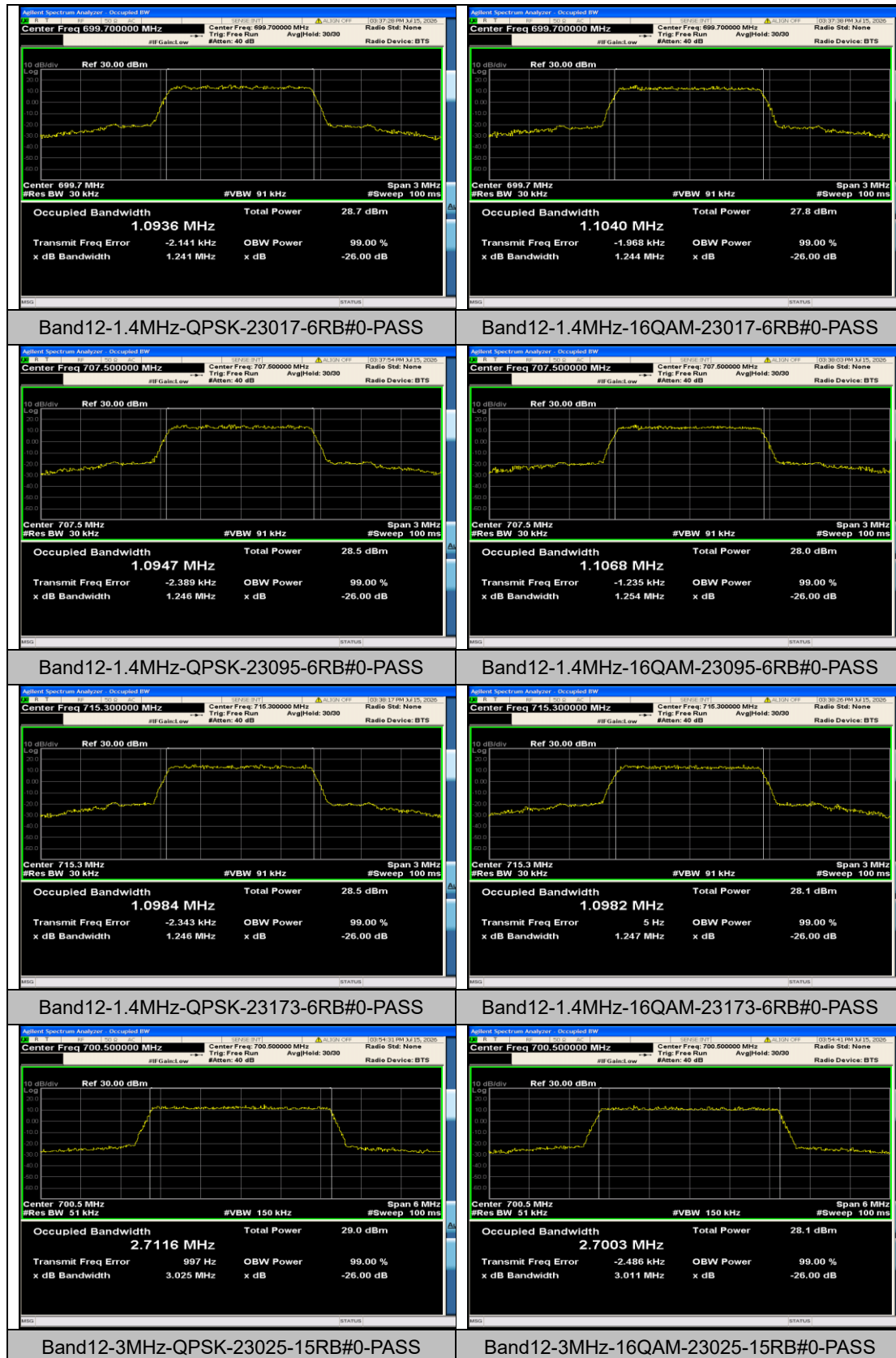


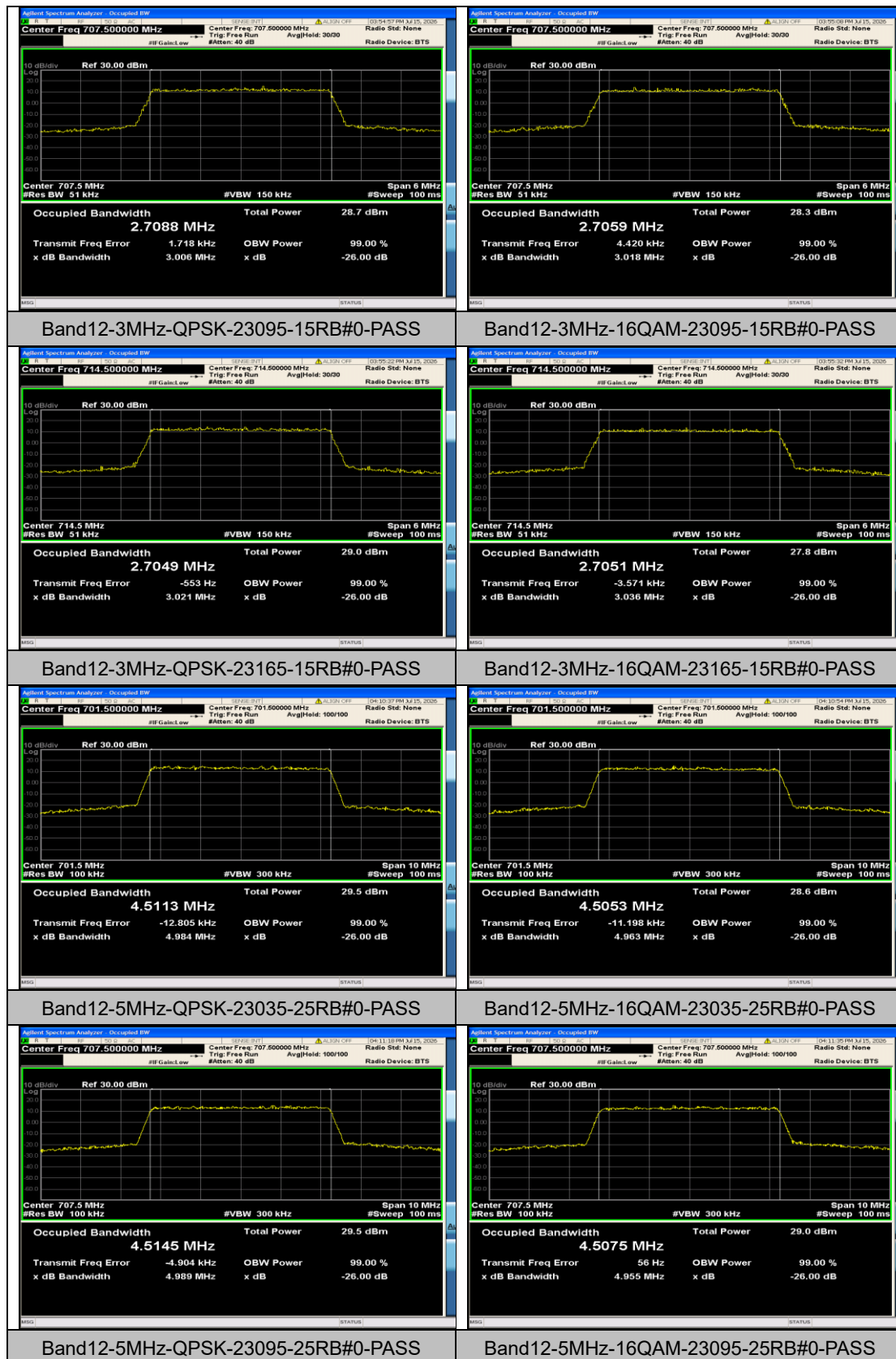
Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band12	1.4MHz	QPSK	23017	6RB#0	1.0936	1.241	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	1.1040	1.244	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	1.0947	1.246	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	1.1068	1.254	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	1.0984	1.246	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	1.0982	1.247	PASS
Band12	3MHz	QPSK	23025	15RB#0	2.7116	3.025	PASS
Band12	3MHz	16QAM	23025	15RB#0	2.7003	3.011	PASS
Band12	3MHz	QPSK	23095	15RB#0	2.7088	3.006	PASS
Band12	3MHz	16QAM	23095	15RB#0	2.7059	3.018	PASS
Band12	3MHz	QPSK	23165	15RB#0	2.7049	3.021	PASS
Band12	3MHz	16QAM	23165	15RB#0	2.7051	3.036	PASS
Band12	5MHz	QPSK	23035	25RB#0	4.5113	4.984	PASS
Band12	5MHz	16QAM	23035	25RB#0	4.5053	4.963	PASS
Band12	5MHz	QPSK	23095	25RB#0	4.5145	4.989	PASS
Band12	5MHz	16QAM	23095	25RB#0	4.5075	4.955	PASS
Band12	5MHz	QPSK	23155	25RB#0	4.5073	4.969	PASS
Band12	5MHz	16QAM	23155	25RB#0	4.5121	4.981	PASS
Band12	10MHz	QPSK	23060	50RB#0	9.0125	9.902	PASS
Band12	10MHz	16QAM	23060	50RB#0	9.0083	9.942	PASS
Band12	10MHz	QPSK	23095	50RB#0	8.9960	9.865	PASS
Band12	10MHz	16QAM	23095	50RB#0	8.9980	9.938	PASS
Band12	10MHz	QPSK	23130	50RB#0	8.9890	9.904	PASS
Band12	10MHz	16QAM	23130	50RB#0	8.9836	9.899	PASS

Test Graphs





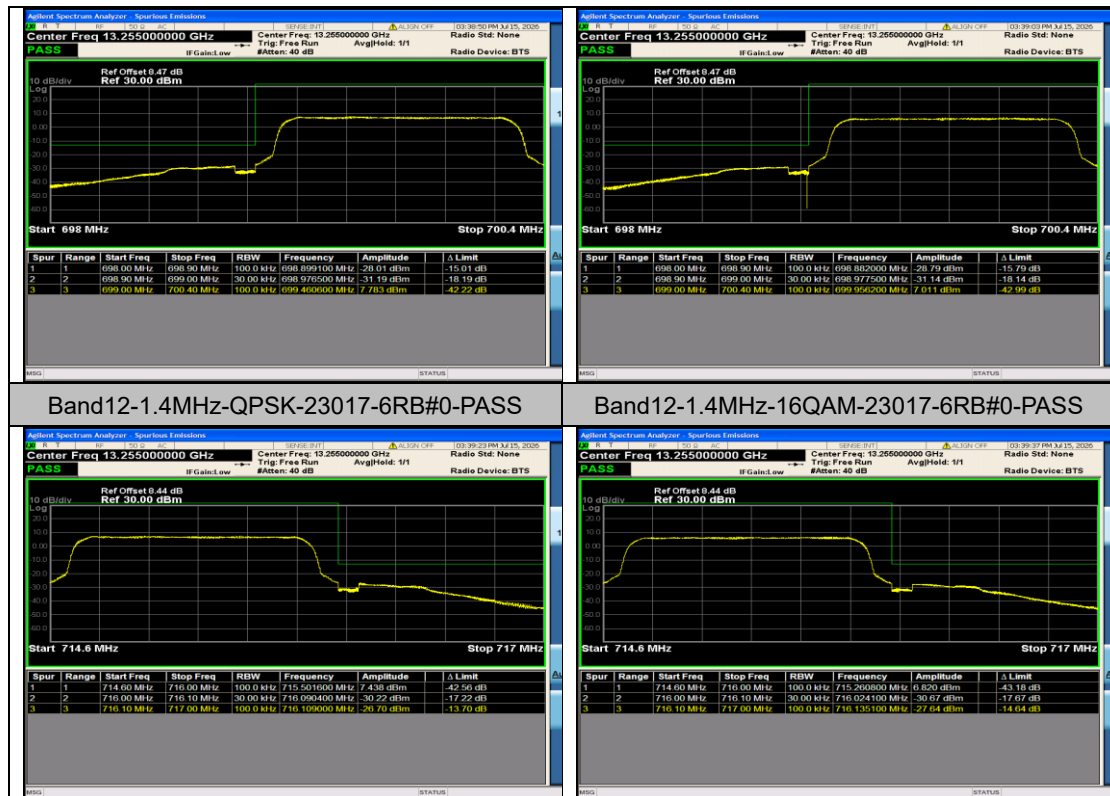


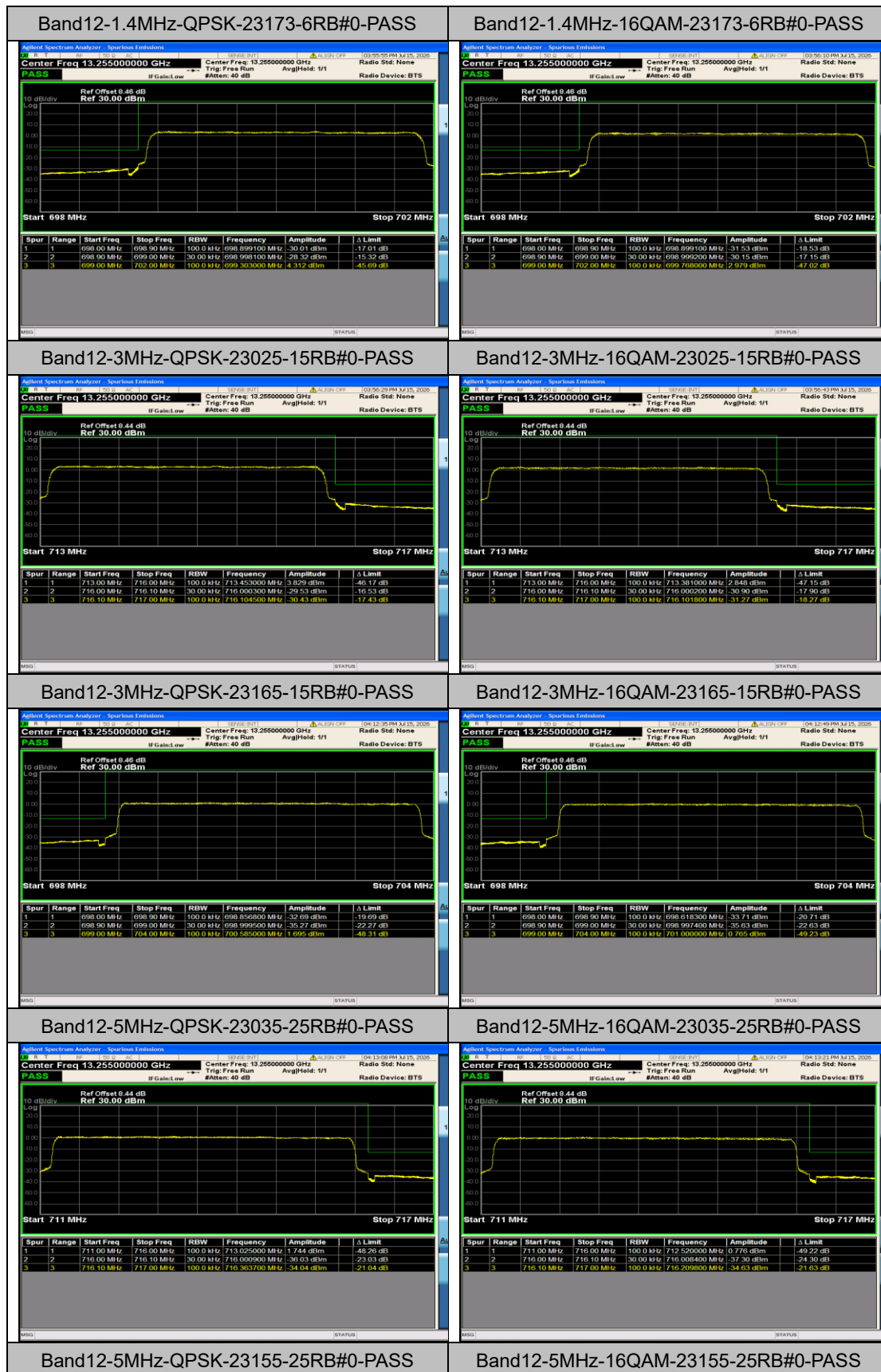
Appendix D: Band Edge

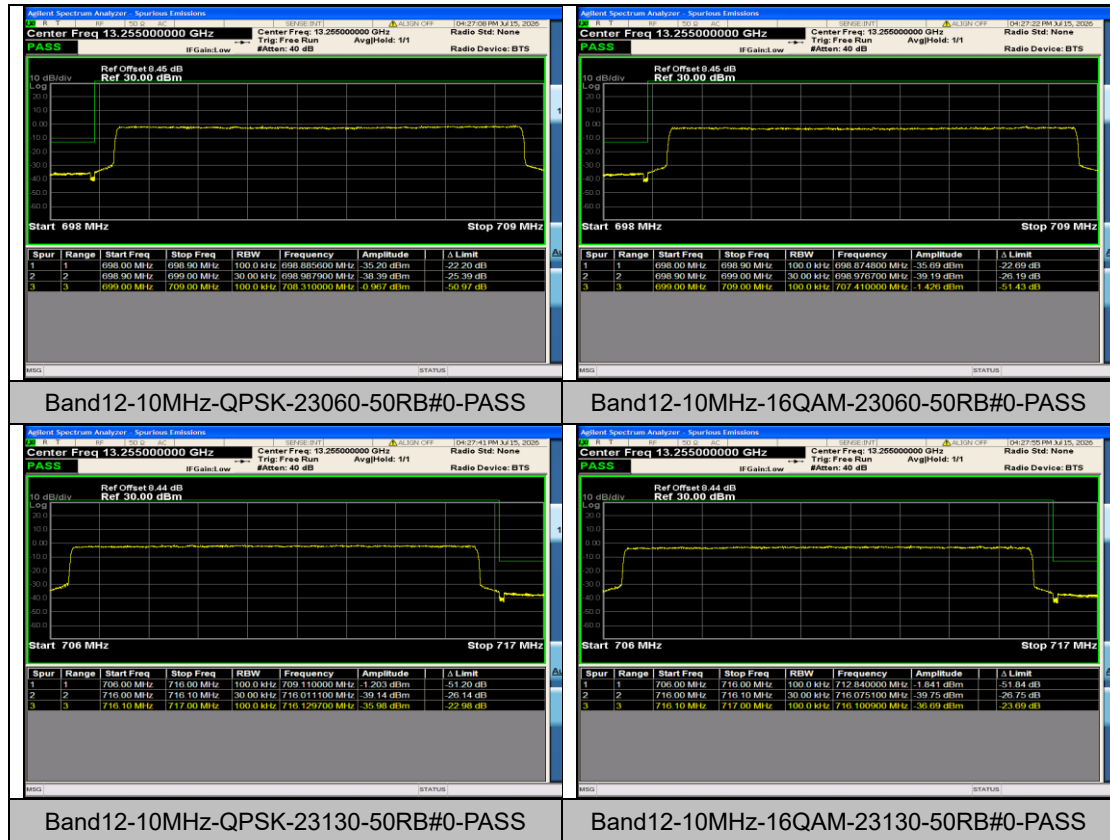
Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band12	1.4MHz	QPSK	23017	6RB#0	-28.01	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	-28.79	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	-26.70	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	-27.64	PASS
Band12	3MHz	QPSK	23025	15RB#0	-28.32	PASS
Band12	3MHz	16QAM	23025	15RB#0	-30.15	PASS
Band12	3MHz	QPSK	23165	15RB#0	-29.53	PASS
Band12	3MHz	16QAM	23165	15RB#0	-30.90	PASS
Band12	5MHz	QPSK	23035	25RB#0	-32.69	PASS
Band12	5MHz	16QAM	23035	25RB#0	-33.71	PASS
Band12	5MHz	QPSK	23155	25RB#0	-34.04	PASS
Band12	5MHz	16QAM	23155	25RB#0	-34.63	PASS
Band12	10MHz	QPSK	23060	50RB#0	-35.20	PASS
Band12	10MHz	16QAM	23060	50RB#0	-35.69	PASS
Band12	10MHz	QPSK	23130	50RB#0	-35.98	PASS
Band12	10MHz	16QAM	23130	50RB#0	-36.69	PASS

Test Graphs







Appendix E: Conducted Spurious Emission

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Frequency Range	Result (dBm)	Verdict
Band12	1.4MHz	QPSK	23017	6RB#0	0.009~0.15	-59.18	PASS
Band12	1.4MHz	QPSK	23017	6RB#0	0.15~30	-51.56	PASS
Band12	1.4MHz	QPSK	23017	6RB#0	30~1000	-34.92	PASS
Band12	1.4MHz	QPSK	23017	6RB#0	1000~3000	-42.24	PASS
Band12	1.4MHz	QPSK	23017	6RB#0	3000~10000	-43.98	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	0.009~0.15	-59.16	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	0.15~30	-52.01	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	30~1000	-39.39	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	1000~3000	-44.96	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	3000~10000	-44.07	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	0.009~0.15	-59.94	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	0.15~30	-50.18	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	30~1000	-57.80	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	1000~3000	-46.55	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	3000~10000	-44.12	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	0.009~0.15	-58.88	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	0.15~30	-51.26	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	30~1000	-58.30	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	1000~3000	-48.11	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	3000~10000	-43.44	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	0.009~0.15	-60.11	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	0.15~30	-52.33	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	30~1000	-41.94	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	1000~3000	-44.17	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	3000~10000	-44.21	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	0.009~0.15	-59.50	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	0.15~30	-51.46	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	30~1000	-40.55	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	1000~3000	-48.25	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	3000~10000	-43.94	PASS
Band12	3MHz	QPSK	23025	15RB#0	0.009~0.15	-58.49	PASS
Band12	3MHz	QPSK	23025	15RB#0	0.15~30	-52.08	PASS
Band12	3MHz	QPSK	23025	15RB#0	30~1000	-31.24	PASS
Band12	3MHz	QPSK	23025	15RB#0	1000~3000	-45.59	PASS
Band12	3MHz	QPSK	23025	15RB#0	3000~10000	-44.04	PASS
Band12	3MHz	16QAM	23025	15RB#0	0.009~0.15	-59.25	PASS

Band12	3MHz	16QAM	23025	15RB#0	0.15~30	-49.65	PASS
Band12	3MHz	16QAM	23025	15RB#0	30~1000	-30.90	PASS
Band12	3MHz	16QAM	23025	15RB#0	1000~3000	-47.87	PASS
Band12	3MHz	16QAM	23025	15RB#0	3000~10000	-43.71	PASS
Band12	3MHz	QPSK	23095	15RB#0	0.009~0.15	-59.71	PASS
Band12	3MHz	QPSK	23095	15RB#0	0.15~30	-49.69	PASS
Band12	3MHz	QPSK	23095	15RB#0	30~1000	-53.94	PASS
Band12	3MHz	QPSK	23095	15RB#0	1000~3000	-47.96	PASS
Band12	3MHz	QPSK	23095	15RB#0	3000~10000	-44.23	PASS
Band12	3MHz	16QAM	23095	15RB#0	0.009~0.15	-59.55	PASS
Band12	3MHz	16QAM	23095	15RB#0	0.15~30	-52.11	PASS
Band12	3MHz	16QAM	23095	15RB#0	30~1000	-54.53	PASS
Band12	3MHz	16QAM	23095	15RB#0	1000~3000	-48.04	PASS
Band12	3MHz	16QAM	23095	15RB#0	3000~10000	-44.30	PASS
Band12	3MHz	QPSK	23165	15RB#0	0.009~0.15	-58.91	PASS
Band12	3MHz	QPSK	23165	15RB#0	0.15~30	-52.25	PASS
Band12	3MHz	QPSK	23165	15RB#0	30~1000	-29.74	PASS
Band12	3MHz	QPSK	23165	15RB#0	1000~3000	-46.12	PASS
Band12	3MHz	QPSK	23165	15RB#0	3000~10000	-43.85	PASS
Band12	3MHz	16QAM	23165	15RB#0	0.009~0.15	-59.90	PASS
Band12	3MHz	16QAM	23165	15RB#0	0.15~30	-53.66	PASS
Band12	3MHz	16QAM	23165	15RB#0	30~1000	-30.10	PASS
Band12	3MHz	16QAM	23165	15RB#0	1000~3000	-47.84	PASS
Band12	3MHz	16QAM	23165	15RB#0	3000~10000	-44.39	PASS
Band12	5MHz	QPSK	23035	25RB#0	0.009~0.15	-60.31	PASS
Band12	5MHz	QPSK	23035	25RB#0	0.15~30	-51.33	PASS
Band12	5MHz	QPSK	23035	25RB#0	30~1000	-29.61	PASS
Band12	5MHz	QPSK	23035	25RB#0	1000~3000	-47.93	PASS
Band12	5MHz	QPSK	23035	25RB#0	3000~10000	-43.73	PASS
Band12	5MHz	16QAM	23035	25RB#0	0.009~0.15	-60.09	PASS
Band12	5MHz	16QAM	23035	25RB#0	0.15~30	-50.98	PASS
Band12	5MHz	16QAM	23035	25RB#0	30~1000	-31.63	PASS
Band12	5MHz	16QAM	23035	25RB#0	1000~3000	-48.10	PASS
Band12	5MHz	16QAM	23035	25RB#0	3000~10000	-43.70	PASS
Band12	5MHz	QPSK	23095	25RB#0	0.009~0.15	-58.36	PASS
Band12	5MHz	QPSK	23095	25RB#0	0.15~30	-51.52	PASS
Band12	5MHz	QPSK	23095	25RB#0	30~1000	-46.65	PASS
Band12	5MHz	QPSK	23095	25RB#0	1000~3000	-48.28	PASS
Band12	5MHz	QPSK	23095	25RB#0	3000~10000	-43.95	PASS
Band12	5MHz	16QAM	23095	25RB#0	0.009~0.15	-58.99	PASS
Band12	5MHz	16QAM	23095	25RB#0	0.15~30	-52.41	PASS
Band12	5MHz	16QAM	23095	25RB#0	30~1000	-45.46	PASS
Band12	5MHz	16QAM	23095	25RB#0	1000~3000	-47.92	PASS

Band12	5MHz	16QAM	23095	25RB#0	3000~10000	-43.93	PASS
Band12	5MHz	QPSK	23155	25RB#0	0.009~0.15	-59.98	PASS
Band12	5MHz	QPSK	23155	25RB#0	0.15~30	-52.18	PASS
Band12	5MHz	QPSK	23155	25RB#0	30~1000	-31.02	PASS
Band12	5MHz	QPSK	23155	25RB#0	1000~3000	-45.77	PASS
Band12	5MHz	QPSK	23155	25RB#0	3000~10000	-42.70	PASS
Band12	5MHz	16QAM	23155	25RB#0	0.009~0.15	-59.32	PASS
Band12	5MHz	16QAM	23155	25RB#0	0.15~30	-52.12	PASS
Band12	5MHz	16QAM	23155	25RB#0	30~1000	-31.68	PASS
Band12	5MHz	16QAM	23155	25RB#0	1000~3000	-48.15	PASS
Band12	5MHz	16QAM	23155	25RB#0	3000~10000	-44.15	PASS
Band12	10MHz	QPSK	23060	50RB#0	0.009~0.15	-59.85	PASS
Band12	10MHz	QPSK	23060	50RB#0	0.15~30	-52.31	PASS
Band12	10MHz	QPSK	23060	50RB#0	30~1000	-31.58	PASS
Band12	10MHz	QPSK	23060	50RB#0	1000~3000	-47.98	PASS
Band12	10MHz	QPSK	23060	50RB#0	3000~10000	-43.55	PASS
Band12	10MHz	16QAM	23060	50RB#0	0.009~0.15	-59.68	PASS
Band12	10MHz	16QAM	23060	50RB#0	0.15~30	-52.51	PASS
Band12	10MHz	16QAM	23060	50RB#0	30~1000	-31.91	PASS
Band12	10MHz	16QAM	23060	50RB#0	1000~3000	-48.04	PASS
Band12	10MHz	16QAM	23060	50RB#0	3000~10000	-44.07	PASS
Band12	10MHz	QPSK	23095	50RB#0	0.009~0.15	-58.05	PASS
Band12	10MHz	QPSK	23095	50RB#0	0.15~30	-52.31	PASS
Band12	10MHz	QPSK	23095	50RB#0	30~1000	-33.05	PASS
Band12	10MHz	QPSK	23095	50RB#0	1000~3000	-48.19	PASS
Band12	10MHz	QPSK	23095	50RB#0	3000~10000	-43.88	PASS
Band12	10MHz	16QAM	23095	50RB#0	0.009~0.15	-58.23	PASS
Band12	10MHz	16QAM	23095	50RB#0	0.15~30	-51.04	PASS
Band12	10MHz	16QAM	23095	50RB#0	30~1000	-35.21	PASS
Band12	10MHz	16QAM	23095	50RB#0	1000~3000	-48.05	PASS
Band12	10MHz	16QAM	23095	50RB#0	3000~10000	-43.72	PASS
Band12	10MHz	QPSK	23130	50RB#0	0.009~0.15	-59.09	PASS
Band12	10MHz	QPSK	23130	50RB#0	0.15~30	-50.05	PASS
Band12	10MHz	QPSK	23130	50RB#0	30~1000	-33.13	PASS
Band12	10MHz	QPSK	23130	50RB#0	1000~3000	-48.22	PASS
Band12	10MHz	QPSK	23130	50RB#0	3000~10000	-44.07	PASS
Band12	10MHz	16QAM	23130	50RB#0	0.009~0.15	-59.24	PASS
Band12	10MHz	16QAM	23130	50RB#0	0.15~30	-51.44	PASS
Band12	10MHz	16QAM	23130	50RB#0	30~1000	-33.56	PASS
Band12	10MHz	16QAM	23130	50RB#0	1000~3000	-47.97	PASS
Band12	10MHz	16QAM	23130	50RB#0	3000~10000	-43.90	PASS

Test Graphs

