

FCC Appendix RF Test Data for LTE Band 17

FCC ID : 2AU4T-TH11

Company : Shanghai TUGE Data Technologies Co., Ltd.

EUT : MobileHub

Model Number : TH11

Report No. : CTA26071403108

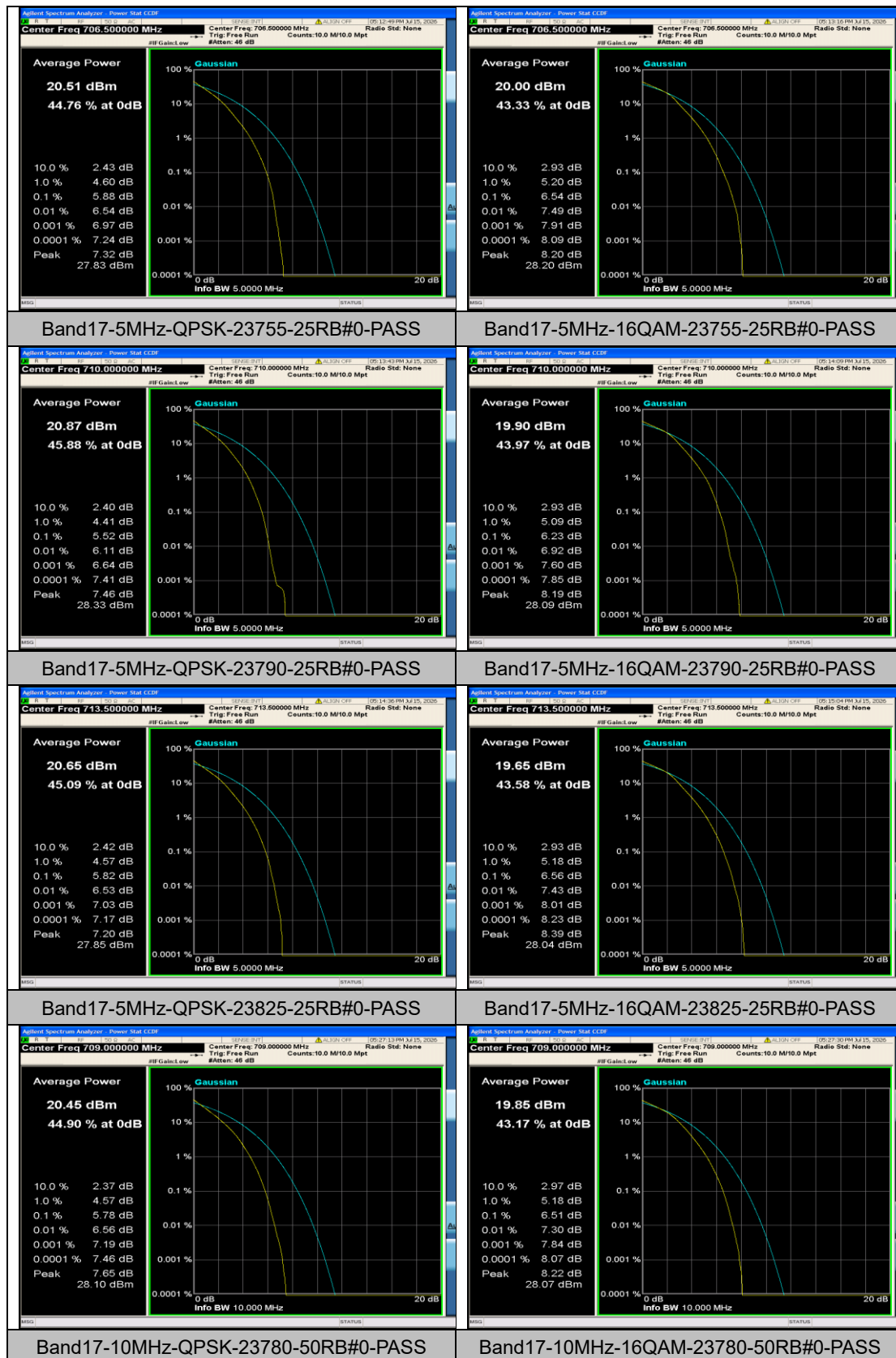
Reviewed By : Eric Wang

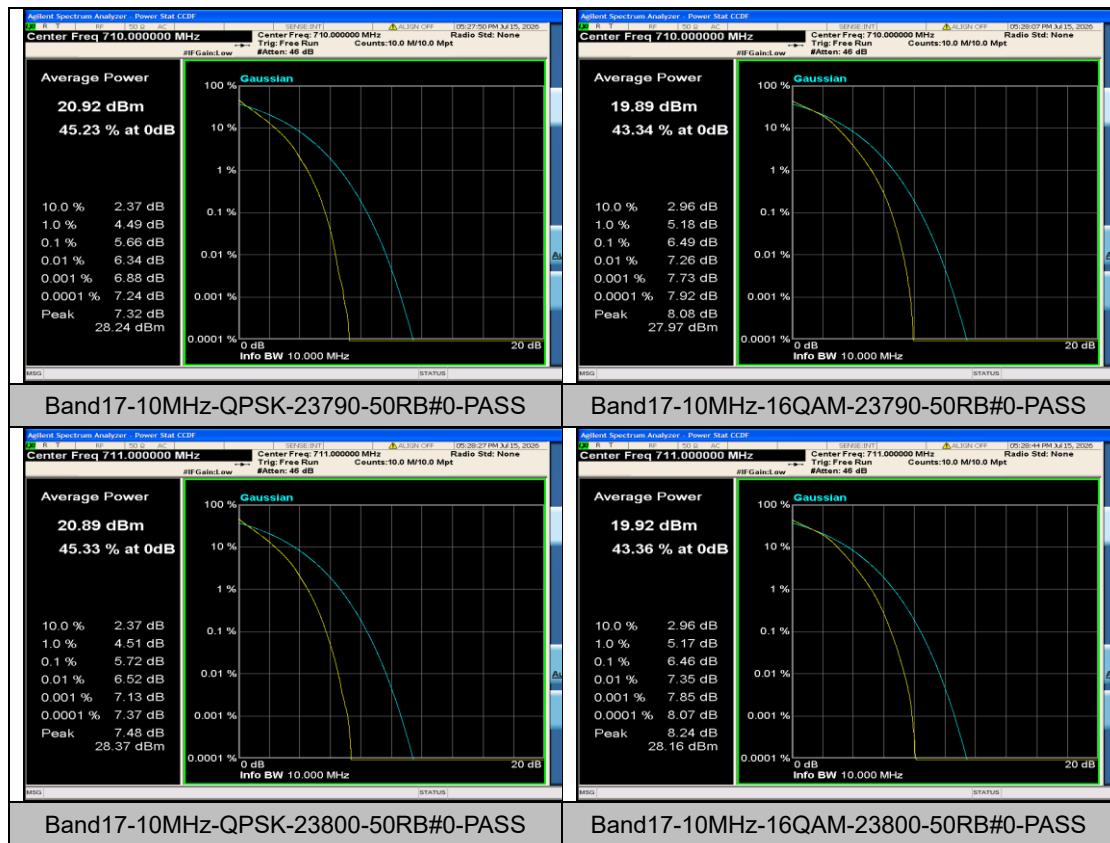
Appendix B: Peak-to-Average Ratio(CCDF)

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band17	5MHz	QPSK	23755	25RB#0	5.88	13	PASS
Band17	5MHz	16QAM	23755	25RB#0	6.54	13	PASS
Band17	5MHz	QPSK	23790	25RB#0	5.52	13	PASS
Band17	5MHz	16QAM	23790	25RB#0	6.23	13	PASS
Band17	5MHz	QPSK	23825	25RB#0	5.82	13	PASS
Band17	5MHz	16QAM	23825	25RB#0	6.56	13	PASS
Band17	10MHz	QPSK	23780	50RB#0	5.78	13	PASS
Band17	10MHz	16QAM	23780	50RB#0	6.51	13	PASS
Band17	10MHz	QPSK	23790	50RB#0	5.66	13	PASS
Band17	10MHz	16QAM	23790	50RB#0	6.49	13	PASS
Band17	10MHz	QPSK	23800	50RB#0	5.72	13	PASS
Band17	10MHz	16QAM	23800	50RB#0	6.46	13	PASS

Test Graphs



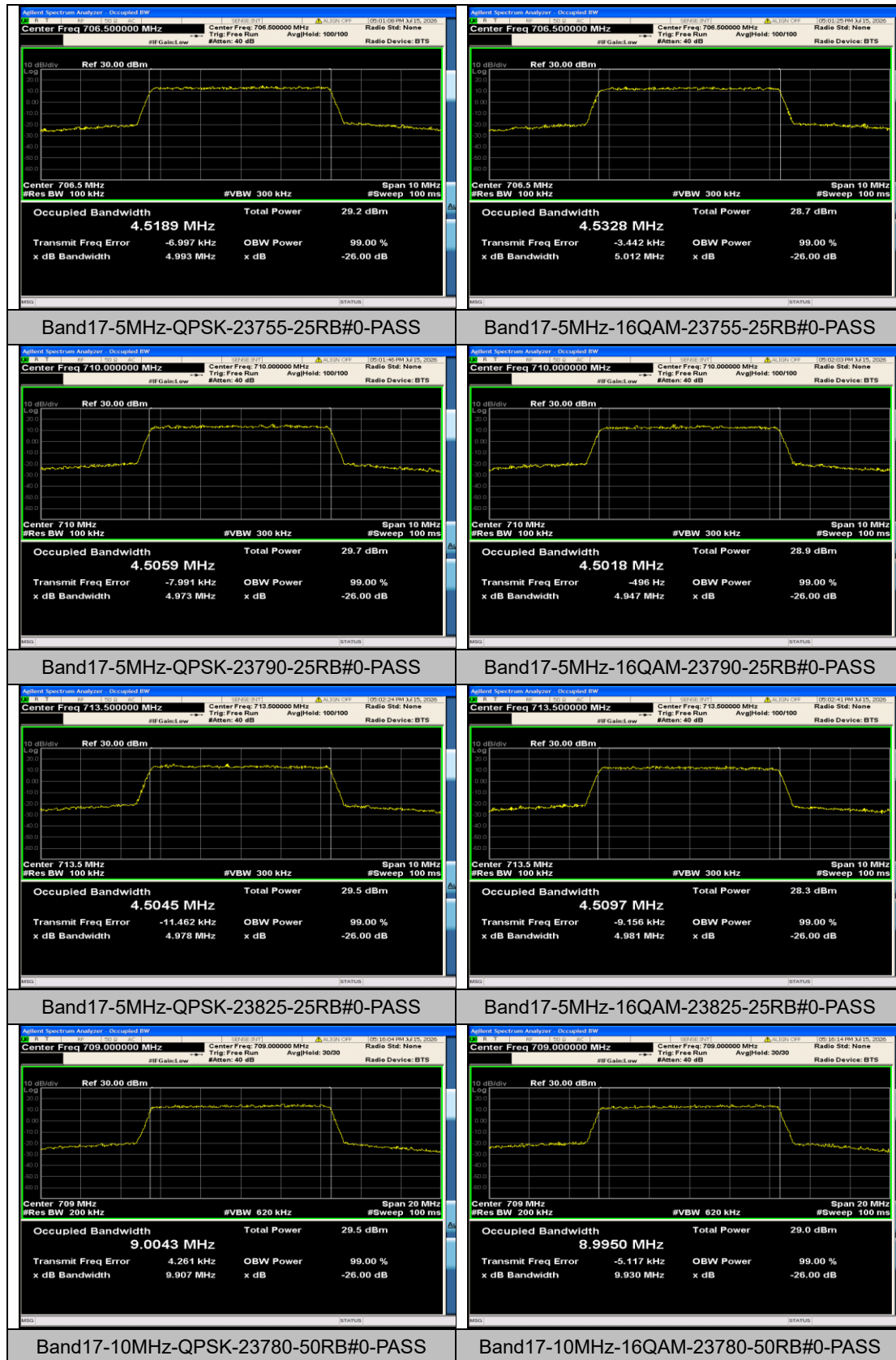


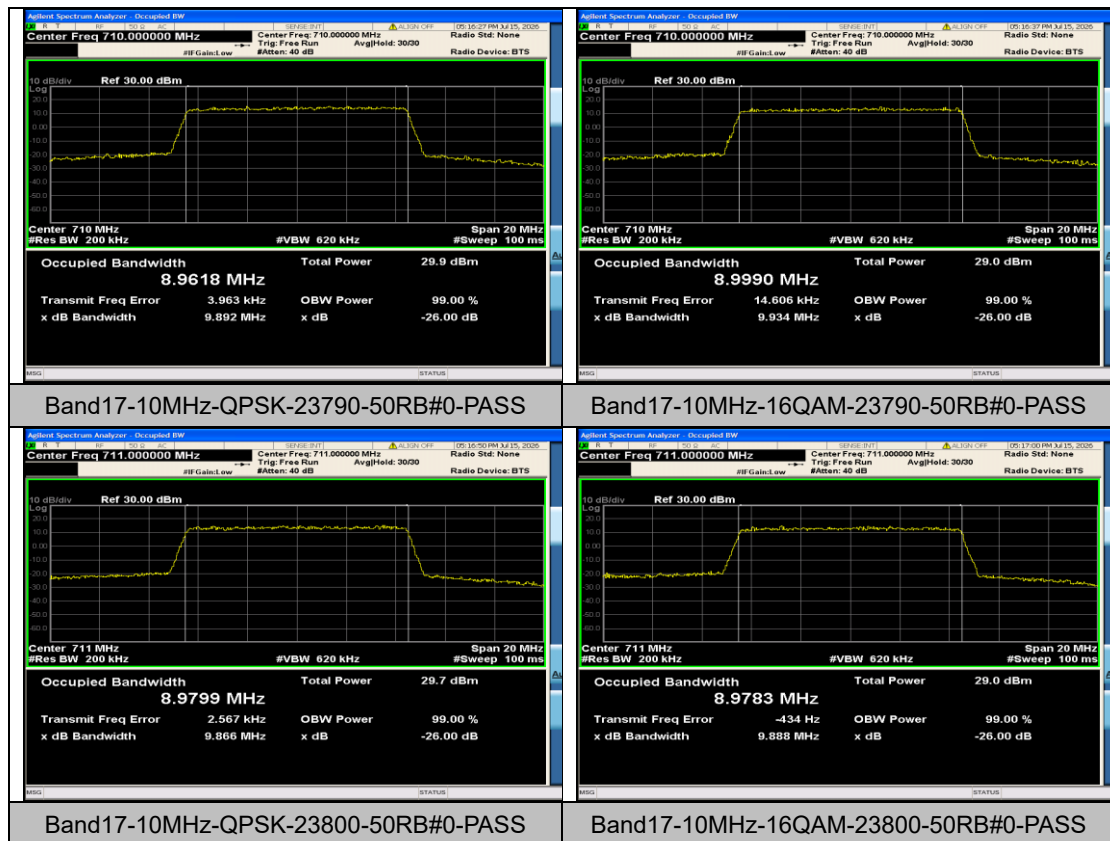
Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band17	5MHz	QPSK	23755	25RB#0	4.5189	4.993	PASS
Band17	5MHz	16QAM	23755	25RB#0	4.5328	5.012	PASS
Band17	5MHz	QPSK	23790	25RB#0	4.5059	4.973	PASS
Band17	5MHz	16QAM	23790	25RB#0	4.5018	4.947	PASS
Band17	5MHz	QPSK	23825	25RB#0	4.5045	4.978	PASS
Band17	5MHz	16QAM	23825	25RB#0	4.5097	4.981	PASS
Band17	10MHz	QPSK	23780	50RB#0	9.0043	9.907	PASS
Band17	10MHz	16QAM	23780	50RB#0	8.9950	9.930	PASS
Band17	10MHz	QPSK	23790	50RB#0	8.9618	9.892	PASS
Band17	10MHz	16QAM	23790	50RB#0	8.9990	9.934	PASS
Band17	10MHz	QPSK	23800	50RB#0	8.9799	9.866	PASS
Band17	10MHz	16QAM	23800	50RB#0	8.9783	9.888	PASS

Test Graphs



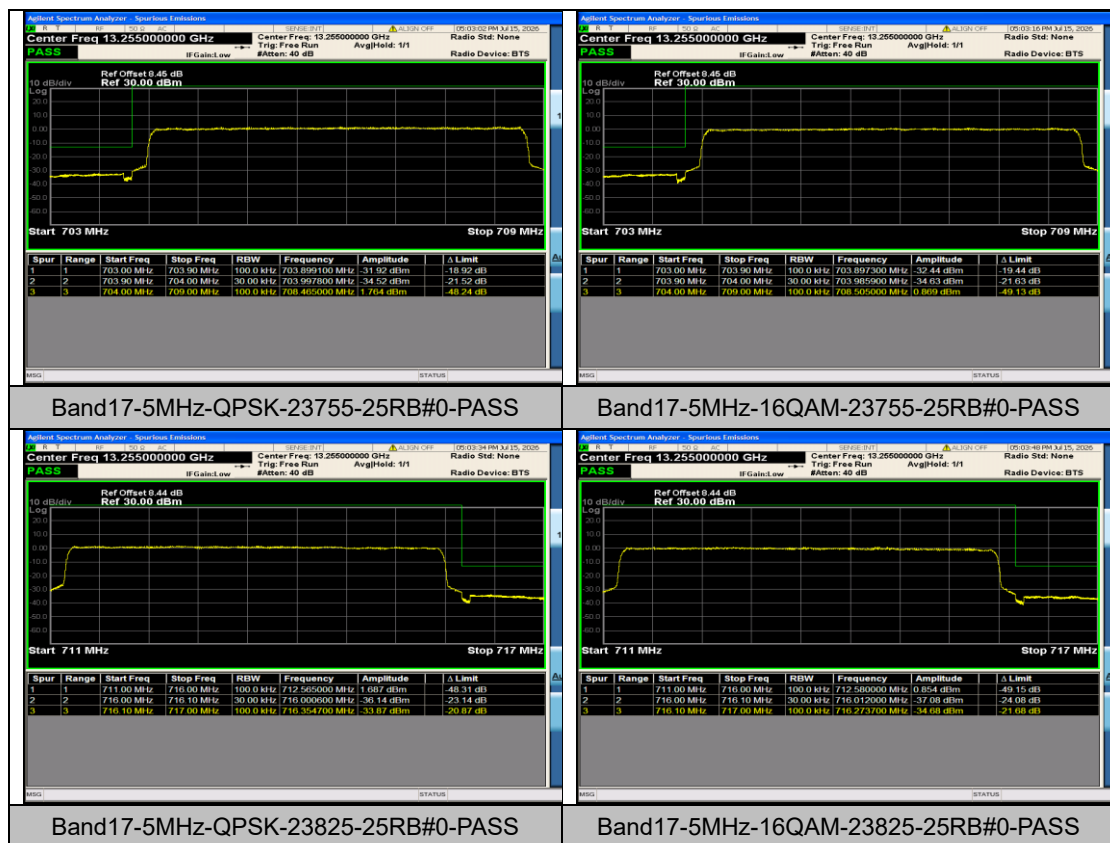


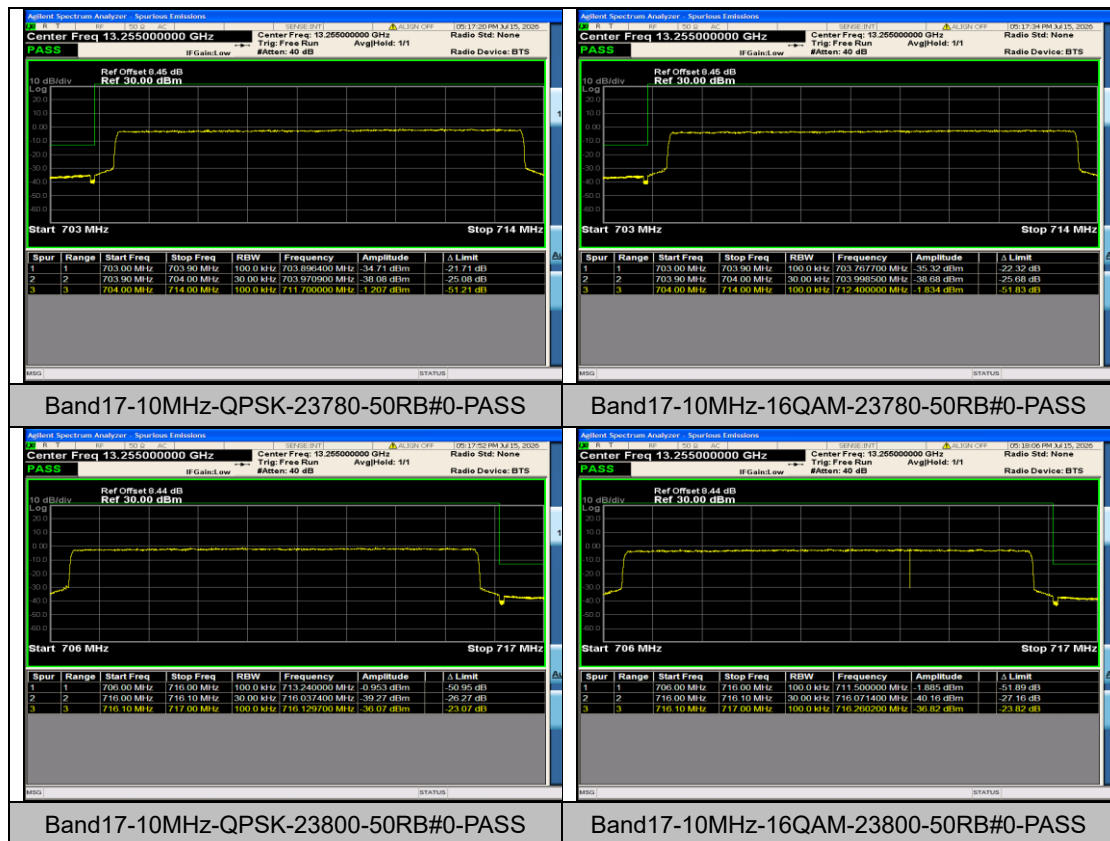
Appendix D: Band Edge

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band17	5MHz	QPSK	23755	25RB#0	-31.92	PASS
Band17	5MHz	16QAM	23755	25RB#0	-32.44	PASS
Band17	5MHz	QPSK	23825	25RB#0	-33.87	PASS
Band17	5MHz	16QAM	23825	25RB#0	-34.68	PASS
Band17	10MHz	QPSK	23780	50RB#0	-34.71	PASS
Band17	10MHz	16QAM	23780	50RB#0	-35.32	PASS
Band17	10MHz	QPSK	23800	50RB#0	-36.07	PASS
Band17	10MHz	16QAM	23800	50RB#0	-36.82	PASS

Test Graphs





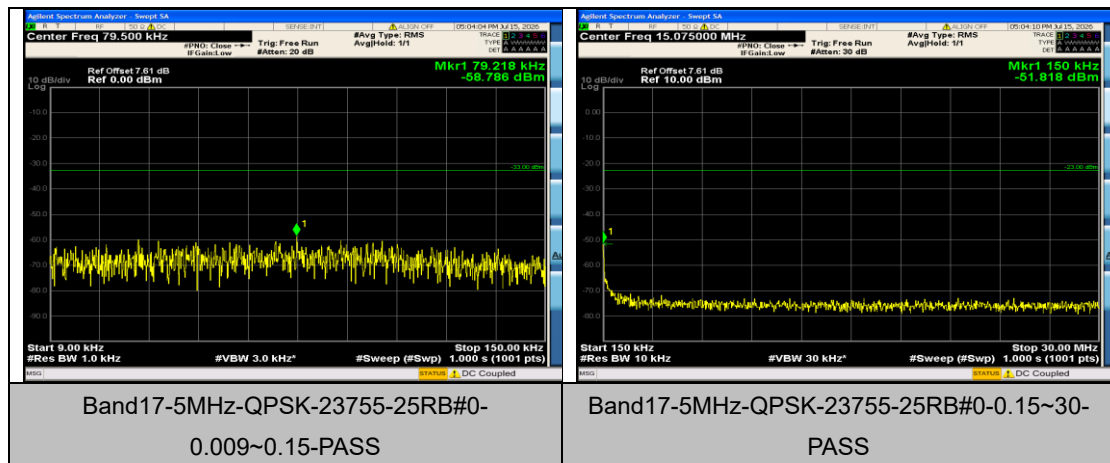
Appendix E: Conducted Spurious Emission

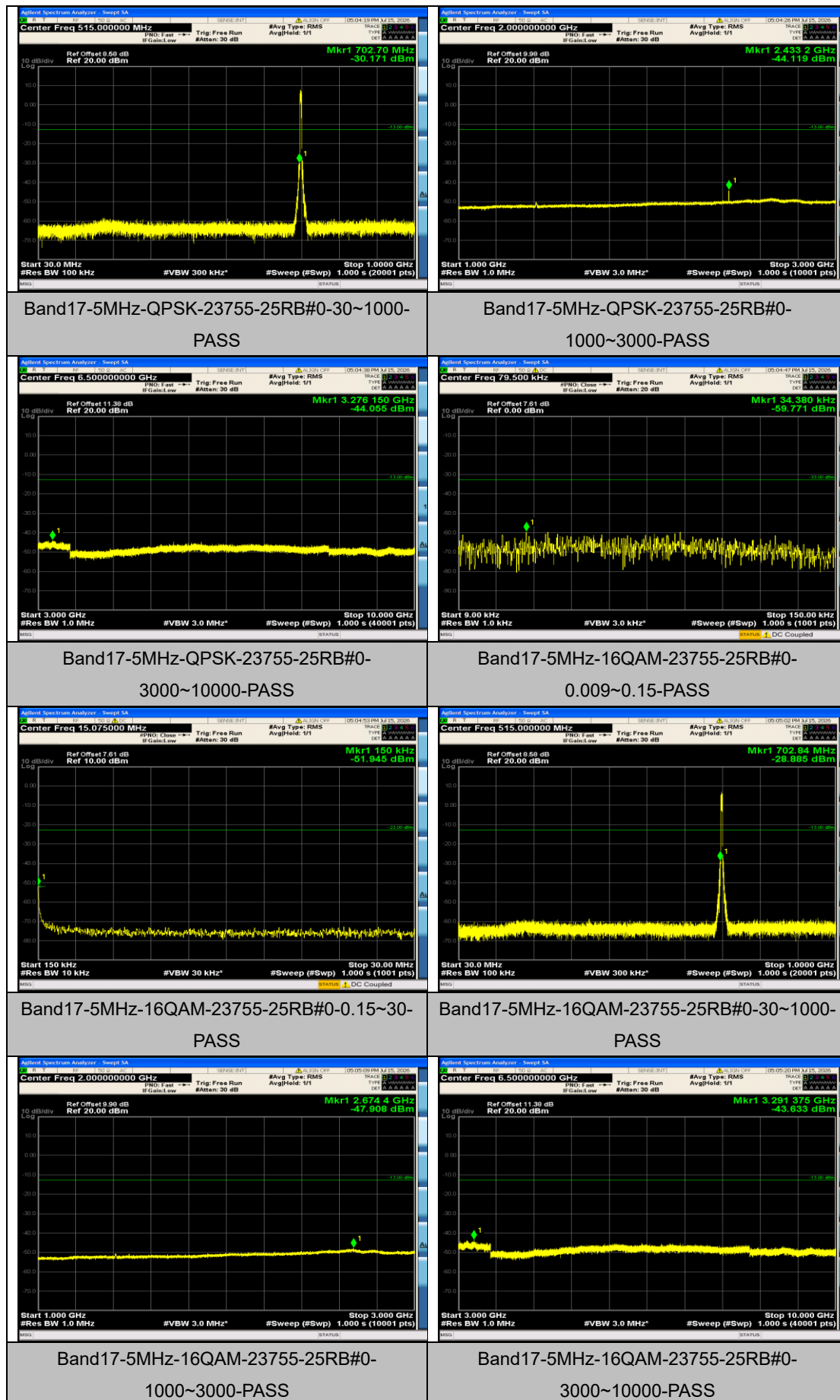
Test Result

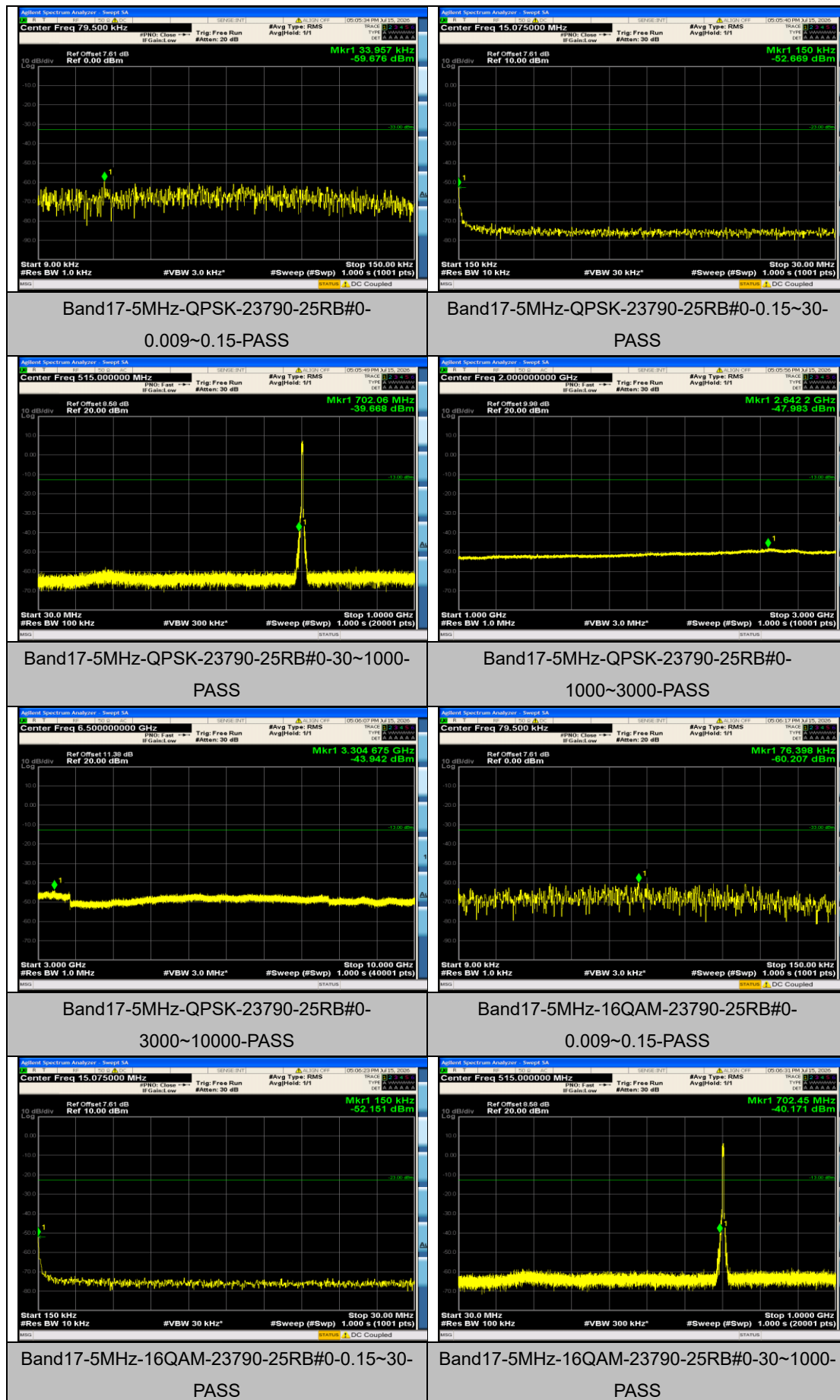
Band	Bandwidth	Modulation	Channel	RB Configuration	Frequency Range	Result (dBm)	Verdict
Band17	5MHz	QPSK	23755	25RB#0	0.009~0.15	-58.79	PASS
Band17	5MHz	QPSK	23755	25RB#0	0.15~30	-51.82	PASS
Band17	5MHz	QPSK	23755	25RB#0	30~1000	-30.17	PASS
Band17	5MHz	QPSK	23755	25RB#0	1000~3000	-44.12	PASS
Band17	5MHz	QPSK	23755	25RB#0	3000~10000	-44.06	PASS
Band17	5MHz	16QAM	23755	25RB#0	0.009~0.15	-59.77	PASS
Band17	5MHz	16QAM	23755	25RB#0	0.15~30	-51.95	PASS
Band17	5MHz	16QAM	23755	25RB#0	30~1000	-28.89	PASS
Band17	5MHz	16QAM	23755	25RB#0	1000~3000	-47.91	PASS
Band17	5MHz	16QAM	23755	25RB#0	3000~10000	-43.63	PASS
Band17	5MHz	QPSK	23790	25RB#0	0.009~0.15	-59.68	PASS
Band17	5MHz	QPSK	23790	25RB#0	0.15~30	-52.67	PASS
Band17	5MHz	QPSK	23790	25RB#0	30~1000	-39.67	PASS
Band17	5MHz	QPSK	23790	25RB#0	1000~3000	-47.98	PASS
Band17	5MHz	QPSK	23790	25RB#0	3000~10000	-43.94	PASS
Band17	5MHz	16QAM	23790	25RB#0	0.009~0.15	-60.21	PASS
Band17	5MHz	16QAM	23790	25RB#0	0.15~30	-52.15	PASS
Band17	5MHz	16QAM	23790	25RB#0	30~1000	-40.17	PASS
Band17	5MHz	16QAM	23790	25RB#0	1000~3000	-48.22	PASS
Band17	5MHz	16QAM	23790	25RB#0	3000~10000	-44.09	PASS
Band17	5MHz	QPSK	23825	25RB#0	0.009~0.15	-59.11	PASS
Band17	5MHz	QPSK	23825	25RB#0	0.15~30	-54.56	PASS
Band17	5MHz	QPSK	23825	25RB#0	30~1000	-31.92	PASS
Band17	5MHz	QPSK	23825	25RB#0	1000~3000	-47.92	PASS
Band17	5MHz	QPSK	23825	25RB#0	3000~10000	-43.85	PASS
Band17	5MHz	16QAM	23825	25RB#0	0.009~0.15	-57.60	PASS
Band17	5MHz	16QAM	23825	25RB#0	0.15~30	-52.24	PASS
Band17	5MHz	16QAM	23825	25RB#0	30~1000	-33.03	PASS
Band17	5MHz	16QAM	23825	25RB#0	1000~3000	-48.00	PASS
Band17	5MHz	16QAM	23825	25RB#0	3000~10000	-43.72	PASS
Band17	10MHz	QPSK	23780	50RB#0	0.009~0.15	-58.85	PASS
Band17	10MHz	QPSK	23780	50RB#0	0.15~30	-52.02	PASS
Band17	10MHz	QPSK	23780	50RB#0	30~1000	-31.01	PASS
Band17	10MHz	QPSK	23780	50RB#0	1000~3000	-48.07	PASS
Band17	10MHz	QPSK	23780	50RB#0	3000~10000	-43.81	PASS
Band17	10MHz	16QAM	23780	50RB#0	0.009~0.15	-58.62	PASS

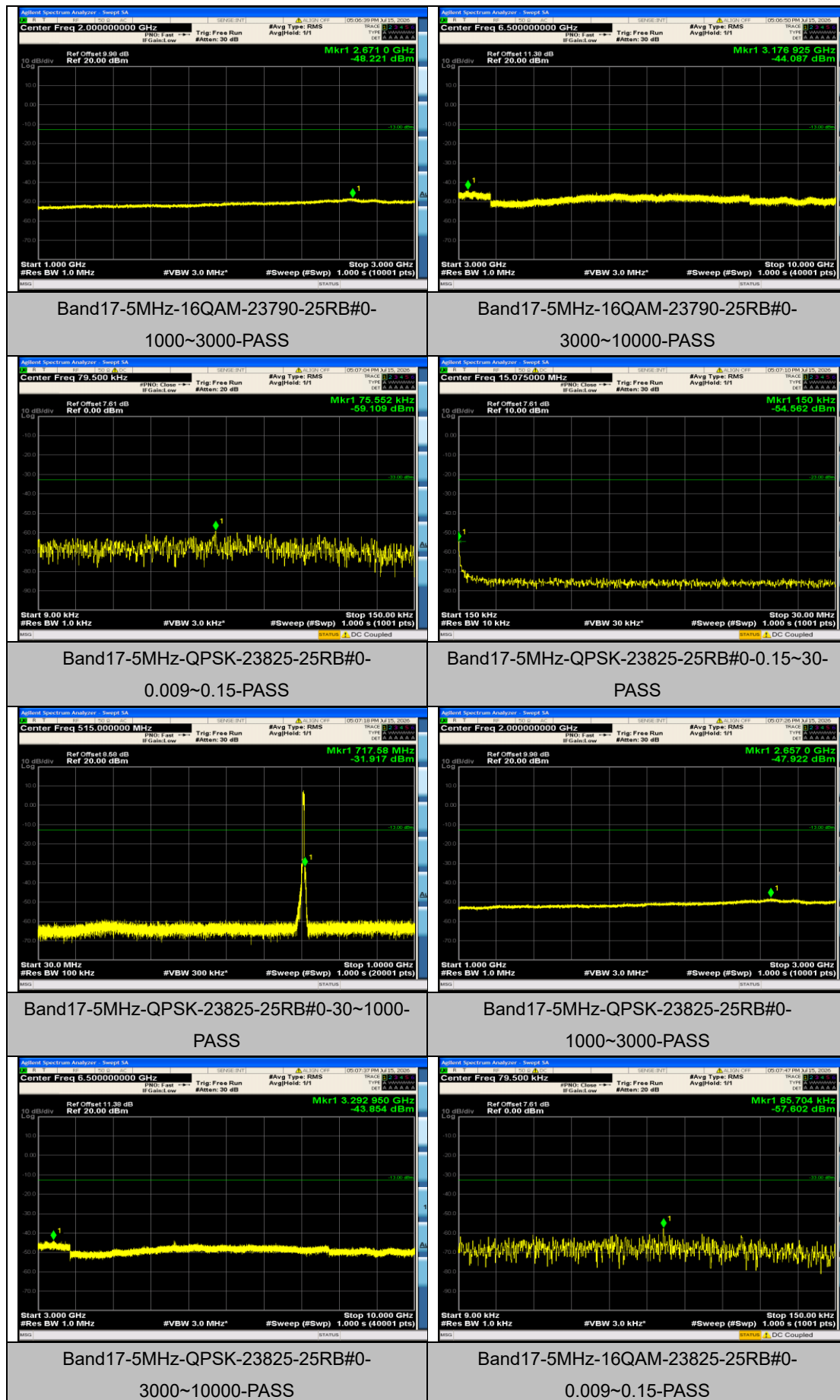
Band17	10MHz	16QAM	23780	50RB#0	0.15~30	-50.98	PASS
Band17	10MHz	16QAM	23780	50RB#0	30~1000	-30.27	PASS
Band17	10MHz	16QAM	23780	50RB#0	1000~3000	-47.83	PASS
Band17	10MHz	16QAM	23780	50RB#0	3000~10000	-44.31	PASS
Band17	10MHz	QPSK	23790	50RB#0	0.009~0.15	-58.73	PASS
Band17	10MHz	QPSK	23790	50RB#0	0.15~30	-50.24	PASS
Band17	10MHz	QPSK	23790	50RB#0	30~1000	-31.00	PASS
Band17	10MHz	QPSK	23790	50RB#0	1000~3000	-38.06	PASS
Band17	10MHz	QPSK	23790	50RB#0	3000~10000	-43.84	PASS
Band17	10MHz	16QAM	23790	50RB#0	0.009~0.15	-58.03	PASS
Band17	10MHz	16QAM	23790	50RB#0	0.15~30	-50.26	PASS
Band17	10MHz	16QAM	23790	50RB#0	30~1000	-31.24	PASS
Band17	10MHz	16QAM	23790	50RB#0	1000~3000	-47.83	PASS
Band17	10MHz	16QAM	23790	50RB#0	3000~10000	-44.12	PASS
Band17	10MHz	QPSK	23800	50RB#0	0.009~0.15	-60.18	PASS
Band17	10MHz	QPSK	23800	50RB#0	0.15~30	-51.58	PASS
Band17	10MHz	QPSK	23800	50RB#0	30~1000	-31.44	PASS
Band17	10MHz	QPSK	23800	50RB#0	1000~3000	-47.85	PASS
Band17	10MHz	QPSK	23800	50RB#0	3000~10000	-44.26	PASS
Band17	10MHz	16QAM	23800	50RB#0	0.009~0.15	-60.60	PASS
Band17	10MHz	16QAM	23800	50RB#0	0.15~30	-50.82	PASS
Band17	10MHz	16QAM	23800	50RB#0	30~1000	-31.97	PASS
Band17	10MHz	16QAM	23800	50RB#0	1000~3000	-48.14	PASS
Band17	10MHz	16QAM	23800	50RB#0	3000~10000	-43.62	PASS

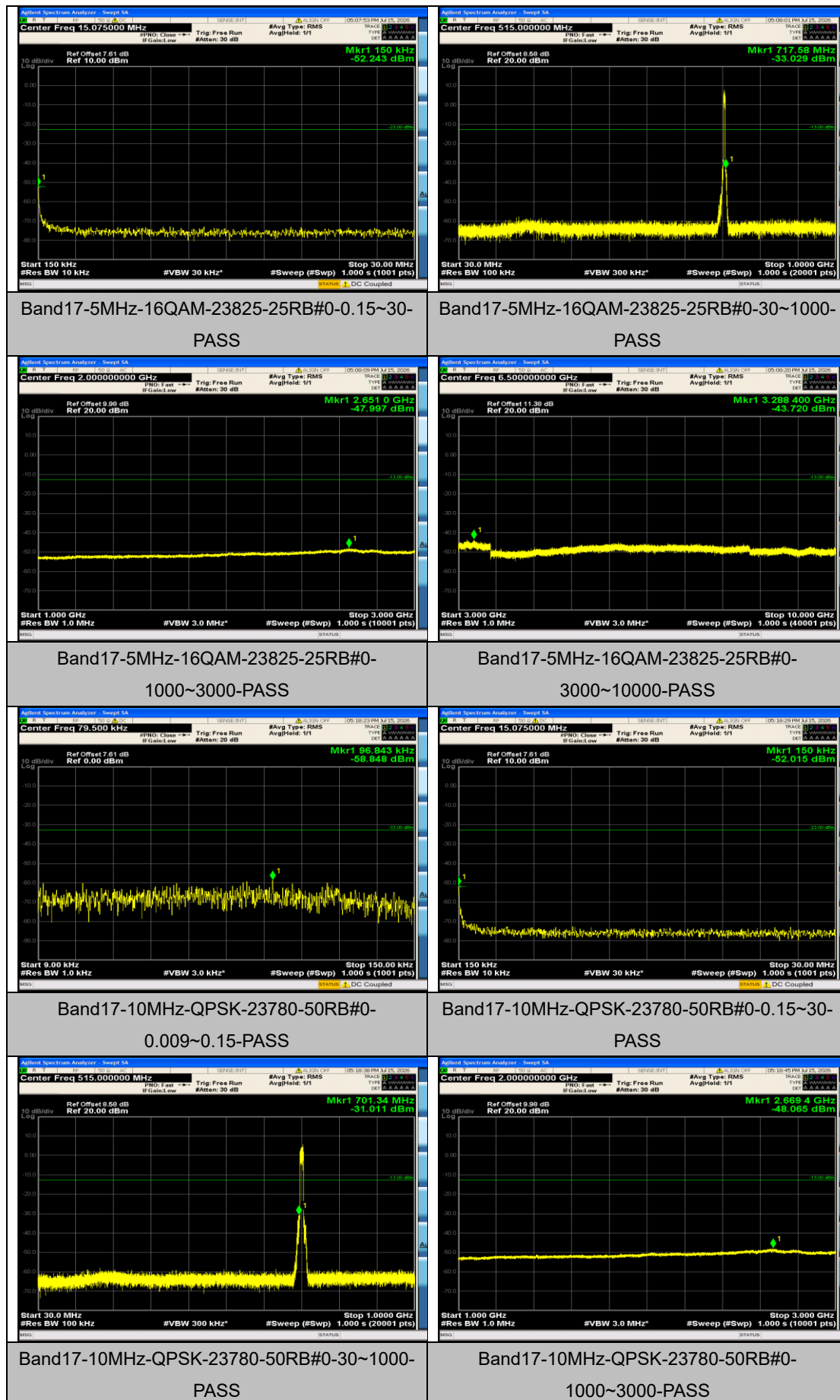
Test Graphs

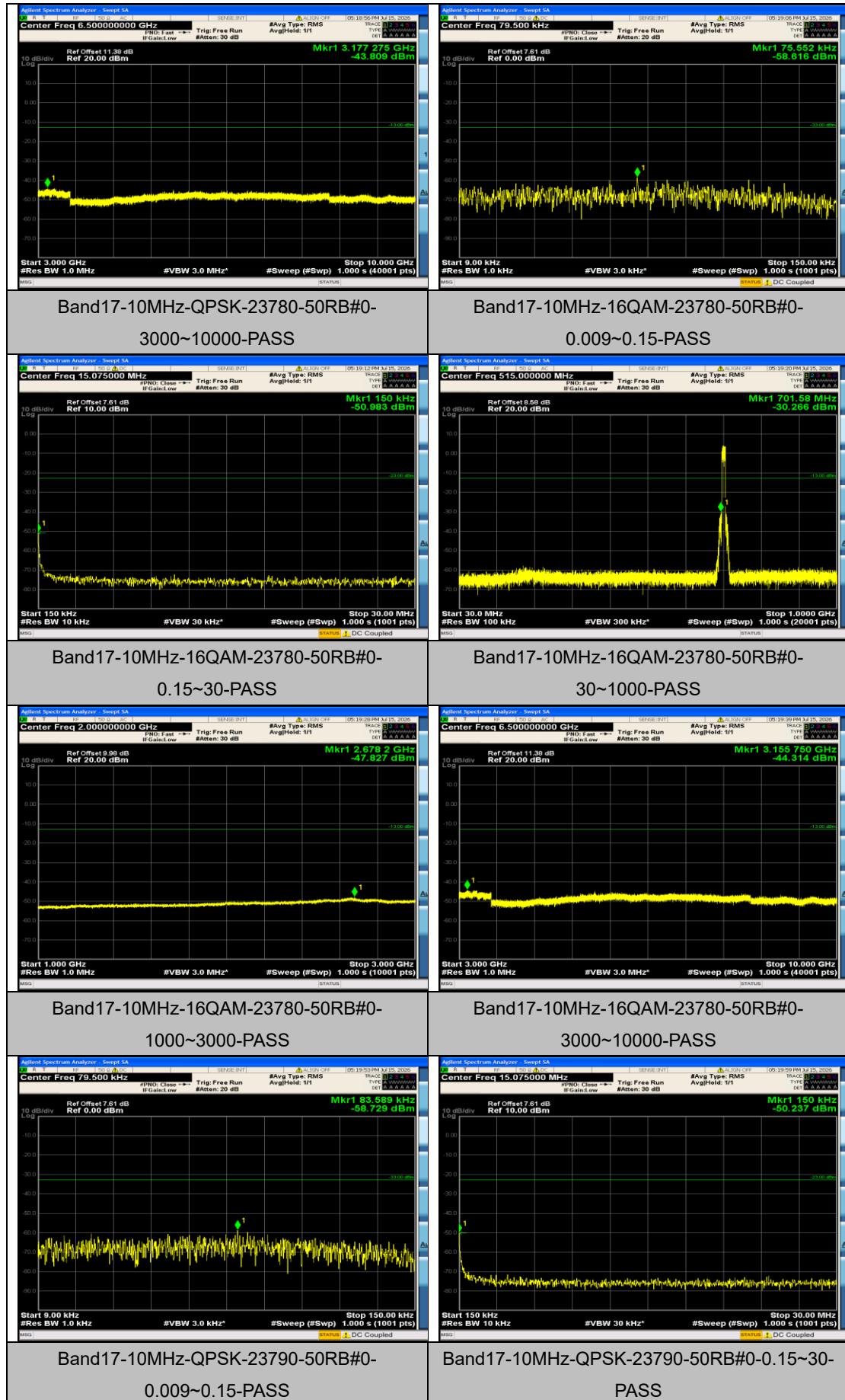


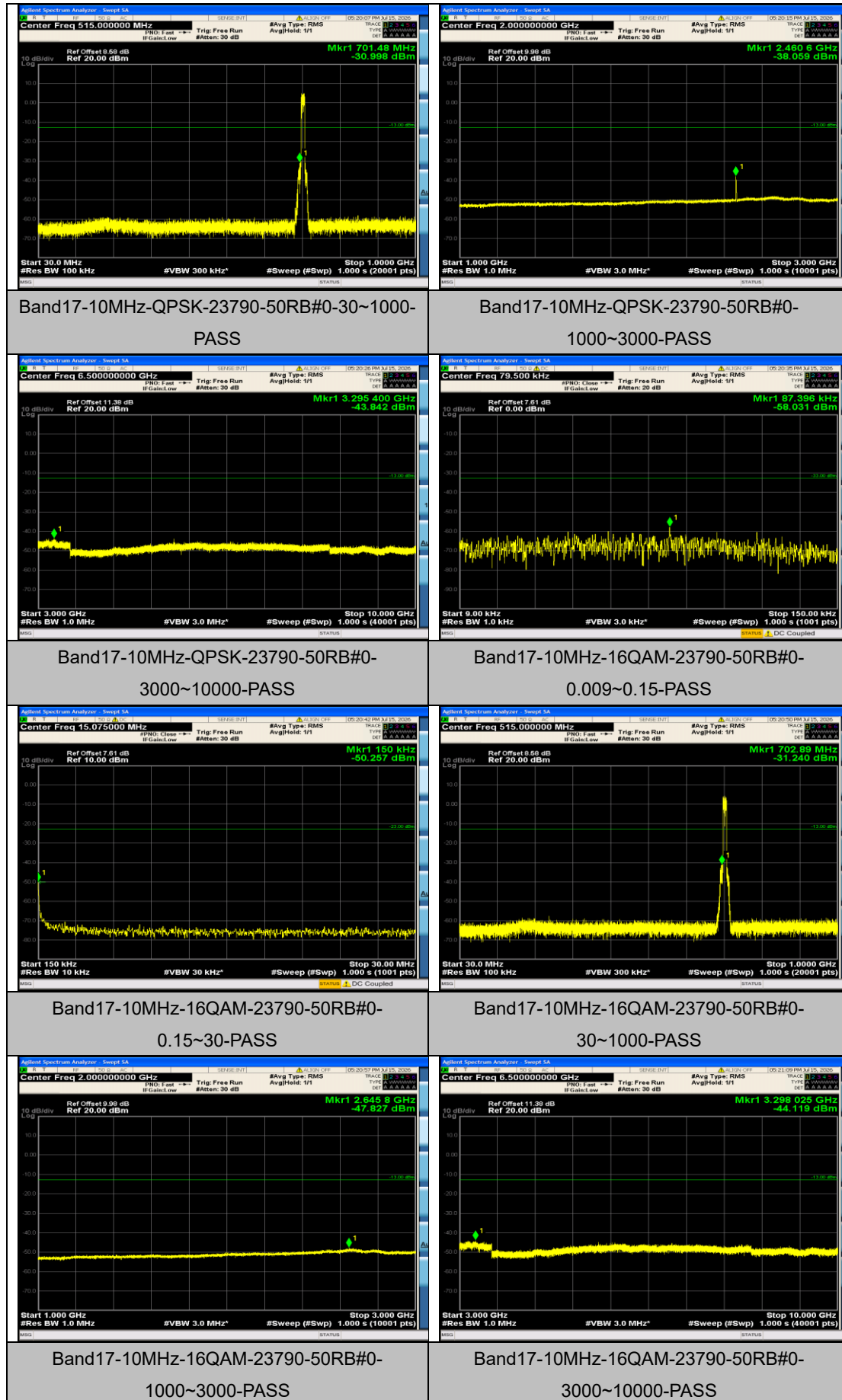


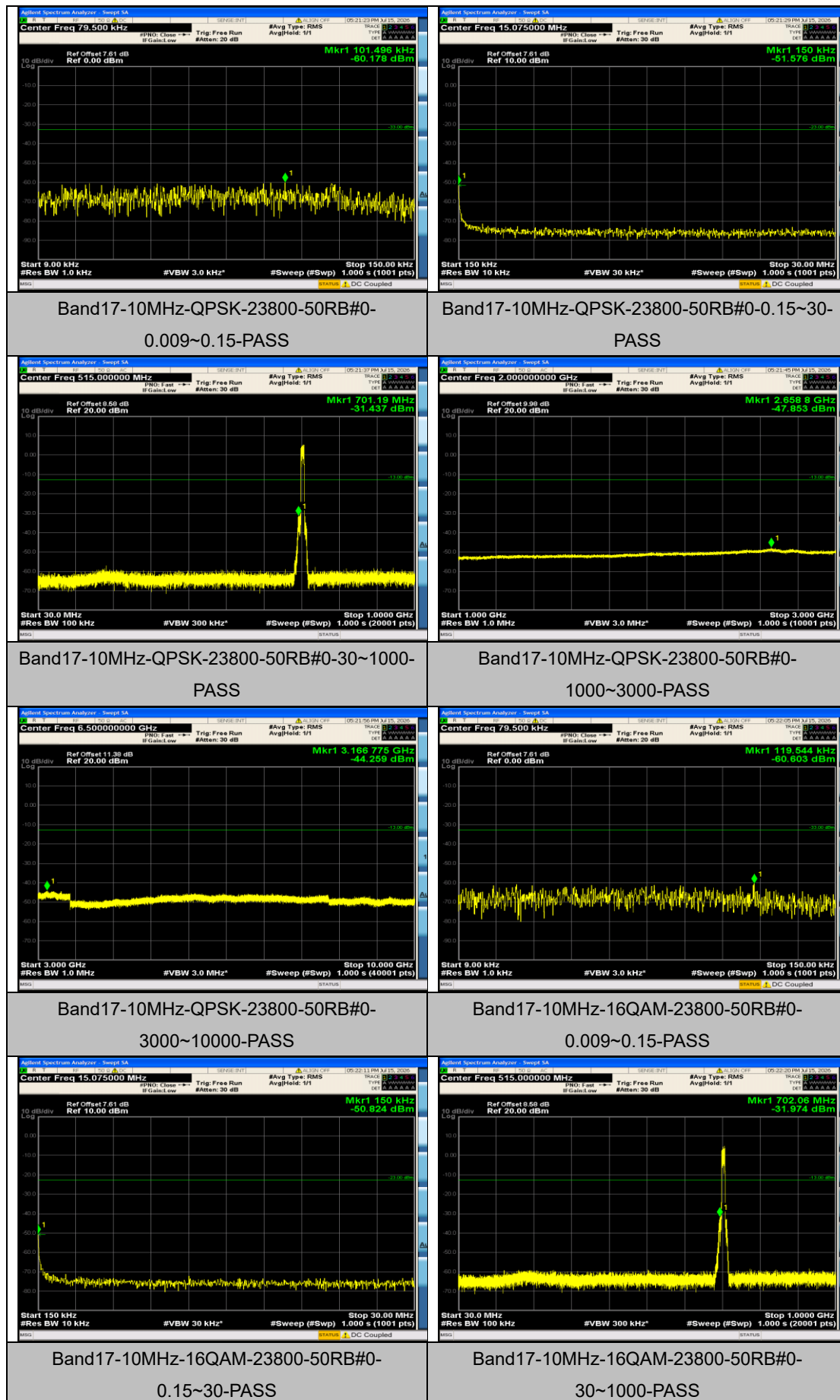


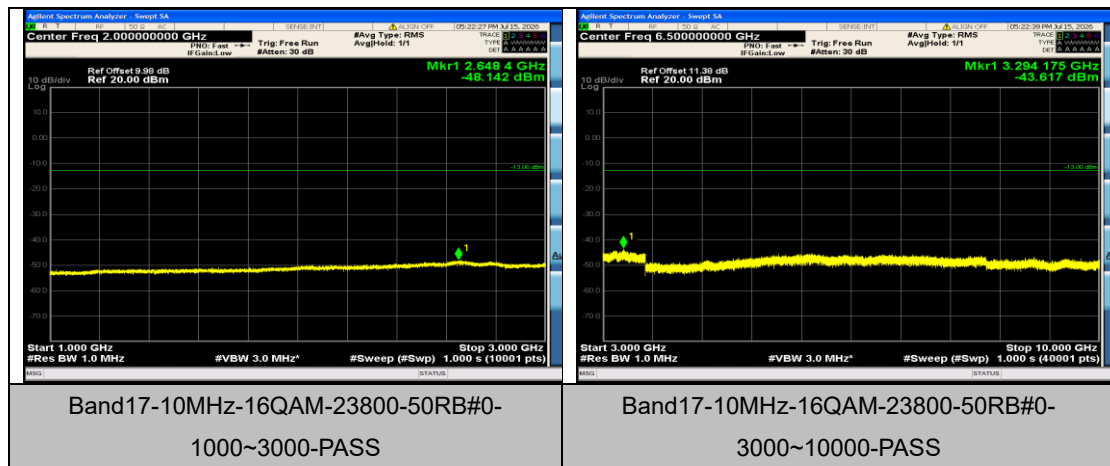












Appendix F: Frequency Stability

Test Result

Temperature										
Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band17	5MHz	QPSK	23755	25RB#0	NV	-30	-17.61	-0.024926	±2.5	PASS
Band17	5MHz	QPSK	23755	25RB#0	NV	-20	-20.23	-0.028634	±2.5	PASS
Band17	5MHz	QPSK	23755	25RB#0	NV	-10	-23.62	-0.033432	±2.5	PASS
Band17	5MHz	QPSK	23755	25RB#0	NV	0	-29.33	-0.041515	±2.5	PASS
Band17	5MHz	QPSK	23755	25RB#0	NV	10	-34.49	-0.048818	±2.5	PASS
Band17	5MHz	QPSK	23755	25RB#0	NV	20	-37.05	-0.052442	±2.5	PASS
Band17	5MHz	QPSK	23755	25RB#0	NV	30	-41.06	-0.058117	±2.5	PASS
Band17	5MHz	QPSK	23755	25RB#0	NV	40	-42.63	-0.060340	±2.5	PASS
Band17	5MHz	QPSK	23755	25RB#0	NV	50	-47.85	-0.067728	±2.5	PASS
Band17	5MHz	16QAM	23755	25RB#0	NV	-30	-8.97	-0.012696	±2.5	PASS
Band17	5MHz	16QAM	23755	25RB#0	NV	-20	-10.44	-0.014777	±2.5	PASS
Band17	5MHz	16QAM	23755	25RB#0	NV	-10	-10.33	-0.014621	±2.5	PASS
Band17	5MHz	16QAM	23755	25RB#0	NV	0	-6.58	-0.009314	±2.5	PASS
Band17	5MHz	16QAM	23755	25RB#0	NV	10	-6.35	-0.008988	±2.5	PASS
Band17	5MHz	16QAM	23755	25RB#0	NV	20	-6.64	-0.009398	±2.5	PASS
Band17	5MHz	16QAM	23755	25RB#0	NV	30	-6.64	-0.009398	±2.5	PASS
Band17	5MHz	16QAM	23755	25RB#0	NV	40	-6.92	-0.009795	±2.5	PASS
Band17	5MHz	16QAM	23755	25RB#0	NV	50	-5.85	-0.008280	±2.5	PASS
Band17	5MHz	QPSK	23790	25RB#0	NV	-30	2.35	0.003310	±2.5	PASS
Band17	5MHz	QPSK	23790	25RB#0	NV	-20	-4.86	-0.006845	±2.5	PASS
Band17	5MHz	QPSK	23790	25RB#0	NV	-10	-8.85	-0.012465	±2.5	PASS
Band17	5MHz	QPSK	23790	25RB#0	NV	0	-10.23	-0.014408	±2.5	PASS
Band17	5MHz	QPSK	23790	25RB#0	NV	10	-12.59	-0.017732	±2.5	PASS
Band17	5MHz	QPSK	23790	25RB#0	NV	20	-15.02	-0.021155	±2.5	PASS
Band17	5MHz	QPSK	23790	25RB#0	NV	30	-15.13	-0.021310	±2.5	PASS
Band17	5MHz	QPSK	23790	25RB#0	NV	40	-15.38	-0.021662	±2.5	PASS
Band17	5MHz	QPSK	23790	25RB#0	NV	50	-18.78	-0.026451	±2.5	PASS
Band17	5MHz	16QAM	23790	25RB#0	NV	-30	-17.71	-0.024944	±2.5	PASS
Band17	5MHz	16QAM	23790	25RB#0	NV	-20	-18.42	-0.025944	±2.5	PASS
Band17	5MHz	16QAM	23790	25RB#0	NV	-10	-18.50	-0.026056	±2.5	PASS
Band17	5MHz	16QAM	23790	25RB#0	NV	0	-18.11	-0.025507	±2.5	PASS
Band17	5MHz	16QAM	23790	25RB#0	NV	10	-17.27	-0.024324	±2.5	PASS
Band17	5MHz	16QAM	23790	25RB#0	NV	20	-16.16	-0.022761	±2.5	PASS
Band17	5MHz	16QAM	23790	25RB#0	NV	30	-16.91	-0.023817	±2.5	PASS
Band17	5MHz	16QAM	23790	25RB#0	NV	40	-16.48	-0.023211	±2.5	PASS

Band17	5MHz	16QAM	23790	25RB#0	NV	50	-15.26	-0.021493	±2.5	PASS
Band17	5MHz	QPSK	23825	25RB#0	NV	-30	9.57	0.013413	±2.5	PASS
Band17	5MHz	QPSK	23825	25RB#0	NV	-20	11.07	0.015515	±2.5	PASS
Band17	5MHz	QPSK	23825	25RB#0	NV	-10	9.50	0.013315	±2.5	PASS
Band17	5MHz	QPSK	23825	25RB#0	NV	0	9.20	0.012894	±2.5	PASS
Band17	5MHz	QPSK	23825	25RB#0	NV	10	6.98	0.009783	±2.5	PASS
Band17	5MHz	QPSK	23825	25RB#0	NV	20	6.85	0.009601	±2.5	PASS
Band17	5MHz	QPSK	23825	25RB#0	NV	30	5.59	0.007835	±2.5	PASS
Band17	5MHz	QPSK	23825	25RB#0	NV	40	6.42	0.008998	±2.5	PASS
Band17	5MHz	QPSK	23825	25RB#0	NV	50	8.50	0.011913	±2.5	PASS
Band17	5MHz	16QAM	23825	25RB#0	NV	-30	11.77	0.016496	±2.5	PASS
Band17	5MHz	16QAM	23825	25RB#0	NV	-20	13.49	0.018907	±2.5	PASS
Band17	5MHz	16QAM	23825	25RB#0	NV	-10	15.55	0.021794	±2.5	PASS
Band17	5MHz	16QAM	23825	25RB#0	NV	0	16.77	0.023504	±2.5	PASS
Band17	5MHz	16QAM	23825	25RB#0	NV	10	16.28	0.022817	±2.5	PASS
Band17	5MHz	16QAM	23825	25RB#0	NV	20	16.51	0.023139	±2.5	PASS
Band17	5MHz	16QAM	23825	25RB#0	NV	30	15.46	0.021668	±2.5	PASS
Band17	5MHz	16QAM	23825	25RB#0	NV	40	15.89	0.022270	±2.5	PASS
Band17	5MHz	16QAM	23825	25RB#0	NV	50	15.03	0.021065	±2.5	PASS
Band17	10MHz	QPSK	23780	50RB#0	NV	-30	2.46	0.003470	±2.5	PASS
Band17	10MHz	QPSK	23780	50RB#0	NV	-20	-3.50	-0.004937	±2.5	PASS
Band17	10MHz	QPSK	23780	50RB#0	NV	-10	-7.54	-0.010635	±2.5	PASS
Band17	10MHz	QPSK	23780	50RB#0	NV	0	-7.07	-0.009972	±2.5	PASS
Band17	10MHz	QPSK	23780	50RB#0	NV	10	-9.37	-0.013216	±2.5	PASS
Band17	10MHz	QPSK	23780	50RB#0	NV	20	-12.56	-0.017715	±2.5	PASS
Band17	10MHz	QPSK	23780	50RB#0	NV	30	-14.56	-0.020536	±2.5	PASS
Band17	10MHz	QPSK	23780	50RB#0	NV	40	-14.59	-0.020578	±2.5	PASS
Band17	10MHz	QPSK	23780	50RB#0	NV	50	-14.25	-0.020099	±2.5	PASS
Band17	10MHz	16QAM	23780	50RB#0	NV	-30	-14.63	-0.020635	±2.5	PASS
Band17	10MHz	16QAM	23780	50RB#0	NV	-20	-13.88	-0.019577	±2.5	PASS
Band17	10MHz	16QAM	23780	50RB#0	NV	-10	-14.08	-0.019859	±2.5	PASS
Band17	10MHz	16QAM	23780	50RB#0	NV	0	-15.41	-0.021735	±2.5	PASS
Band17	10MHz	16QAM	23780	50RB#0	NV	10	-14.52	-0.020480	±2.5	PASS
Band17	10MHz	16QAM	23780	50RB#0	NV	20	-14.63	-0.020635	±2.5	PASS
Band17	10MHz	16QAM	23780	50RB#0	NV	30	-14.88	-0.020987	±2.5	PASS
Band17	10MHz	16QAM	23780	50RB#0	NV	40	-15.48	-0.021834	±2.5	PASS
Band17	10MHz	16QAM	23780	50RB#0	NV	50	-17.51	-0.024697	±2.5	PASS
Band17	10MHz	QPSK	23790	50RB#0	NV	-30	6.71	0.009451	±2.5	PASS
Band17	10MHz	QPSK	23790	50RB#0	NV	-20	3.09	0.004352	±2.5	PASS
Band17	10MHz	QPSK	23790	50RB#0	NV	-10	1.37	0.001930	±2.5	PASS
Band17	10MHz	QPSK	23790	50RB#0	NV	0	-6.77	-0.009535	±2.5	PASS

Band17	10MHz	QPSK	23790	50RB#0	NV	10	-8.87	-0.012493	±2.5	PASS
Band17	10MHz	QPSK	23790	50RB#0	NV	20	-8.45	-0.011901	±2.5	PASS
Band17	10MHz	QPSK	23790	50RB#0	NV	30	-10.97	-0.015451	±2.5	PASS
Band17	10MHz	QPSK	23790	50RB#0	NV	40	-13.46	-0.018958	±2.5	PASS
Band17	10MHz	QPSK	23790	50RB#0	NV	50	-15.03	-0.021169	±2.5	PASS
Band17	10MHz	16QAM	23790	50RB#0	NV	-30	-17.98	-0.025324	±2.5	PASS
Band17	10MHz	16QAM	23790	50RB#0	NV	-20	-20.74	-0.029211	±2.5	PASS
Band17	10MHz	16QAM	23790	50RB#0	NV	-10	-18.57	-0.026155	±2.5	PASS
Band17	10MHz	16QAM	23790	50RB#0	NV	0	-17.64	-0.024845	±2.5	PASS
Band17	10MHz	16QAM	23790	50RB#0	NV	10	-16.39	-0.023085	±2.5	PASS
Band17	10MHz	16QAM	23790	50RB#0	NV	20	-15.11	-0.021282	±2.5	PASS
Band17	10MHz	16QAM	23790	50RB#0	NV	30	-16.41	-0.023113	±2.5	PASS
Band17	10MHz	16QAM	23790	50RB#0	NV	40	-16.34	-0.023014	±2.5	PASS
Band17	10MHz	16QAM	23790	50RB#0	NV	50	-17.65	-0.024859	±2.5	PASS
Band17	10MHz	QPSK	23800	50RB#0	NV	-30	2.56	0.003601	±2.5	PASS
Band17	10MHz	QPSK	23800	50RB#0	NV	-20	-2.75	-0.003868	±2.5	PASS
Band17	10MHz	QPSK	23800	50RB#0	NV	-10	-4.78	-0.006723	±2.5	PASS
Band17	10MHz	QPSK	23800	50RB#0	NV	0	-8.13	-0.011435	±2.5	PASS
Band17	10MHz	QPSK	23800	50RB#0	NV	10	-8.24	-0.011589	±2.5	PASS
Band17	10MHz	QPSK	23800	50RB#0	NV	20	-8.15	-0.011463	±2.5	PASS
Band17	10MHz	QPSK	23800	50RB#0	NV	30	-10.74	-0.015105	±2.5	PASS
Band17	10MHz	QPSK	23800	50RB#0	NV	40	-12.25	-0.017229	±2.5	PASS
Band17	10MHz	QPSK	23800	50RB#0	NV	50	-13.22	-0.018594	±2.5	PASS
Band17	10MHz	16QAM	23800	50RB#0	NV	-30	-18.27	-0.025696	±2.5	PASS
Band17	10MHz	16QAM	23800	50RB#0	NV	-20	-19.37	-0.027243	±2.5	PASS
Band17	10MHz	16QAM	23800	50RB#0	NV	-10	-18.31	-0.025752	±2.5	PASS
Band17	10MHz	16QAM	23800	50RB#0	NV	0	-16.22	-0.022813	±2.5	PASS
Band17	10MHz	16QAM	23800	50RB#0	NV	10	-13.96	-0.019634	±2.5	PASS
Band17	10MHz	16QAM	23800	50RB#0	NV	20	-13.05	-0.018354	±2.5	PASS
Band17	10MHz	16QAM	23800	50RB#0	NV	30	-13.13	-0.018467	±2.5	PASS
Band17	10MHz	16QAM	23800	50RB#0	NV	40	-13.05	-0.018354	±2.5	PASS
Band17	10MHz	16QAM	23800	50RB#0	NV	50	-14.56	-0.020478	±2.5	PASS