

APPENDIX A GSM RF TEST DATA

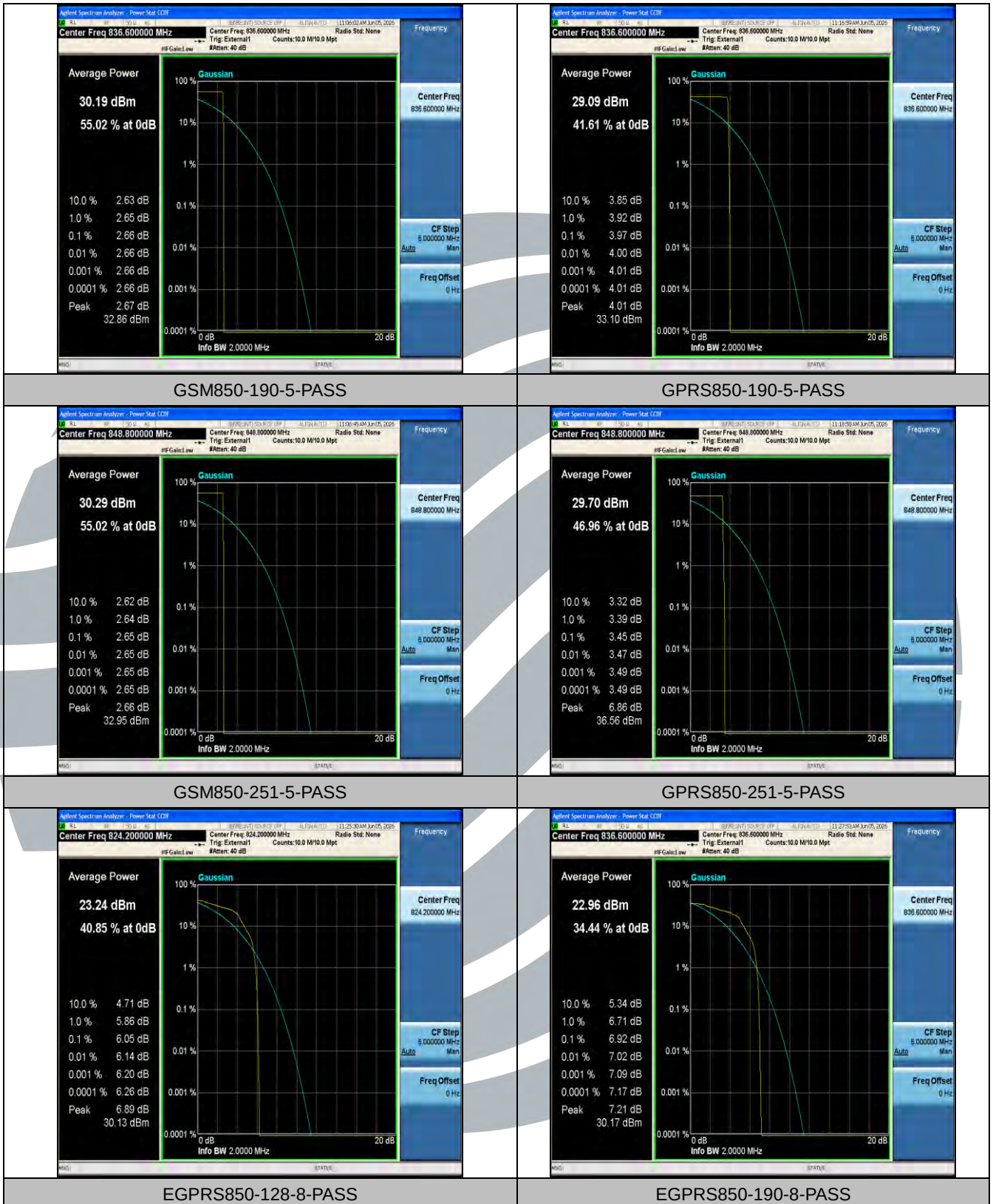
A.1 PEAK-TO-AVERAGE RATIO(CCDF)

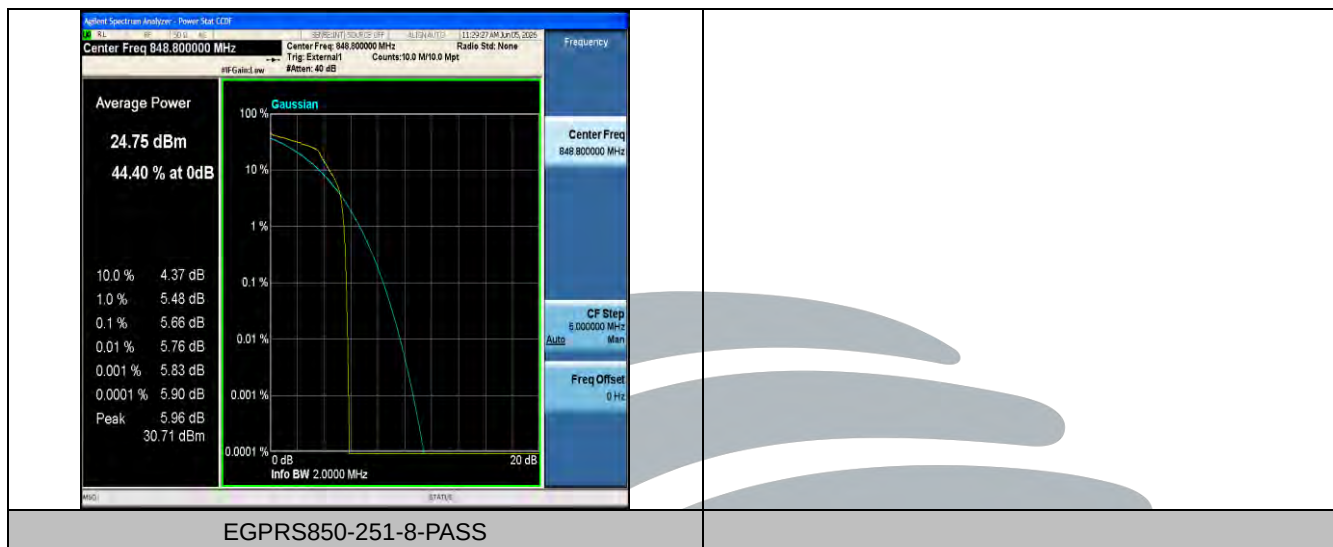
Test Result

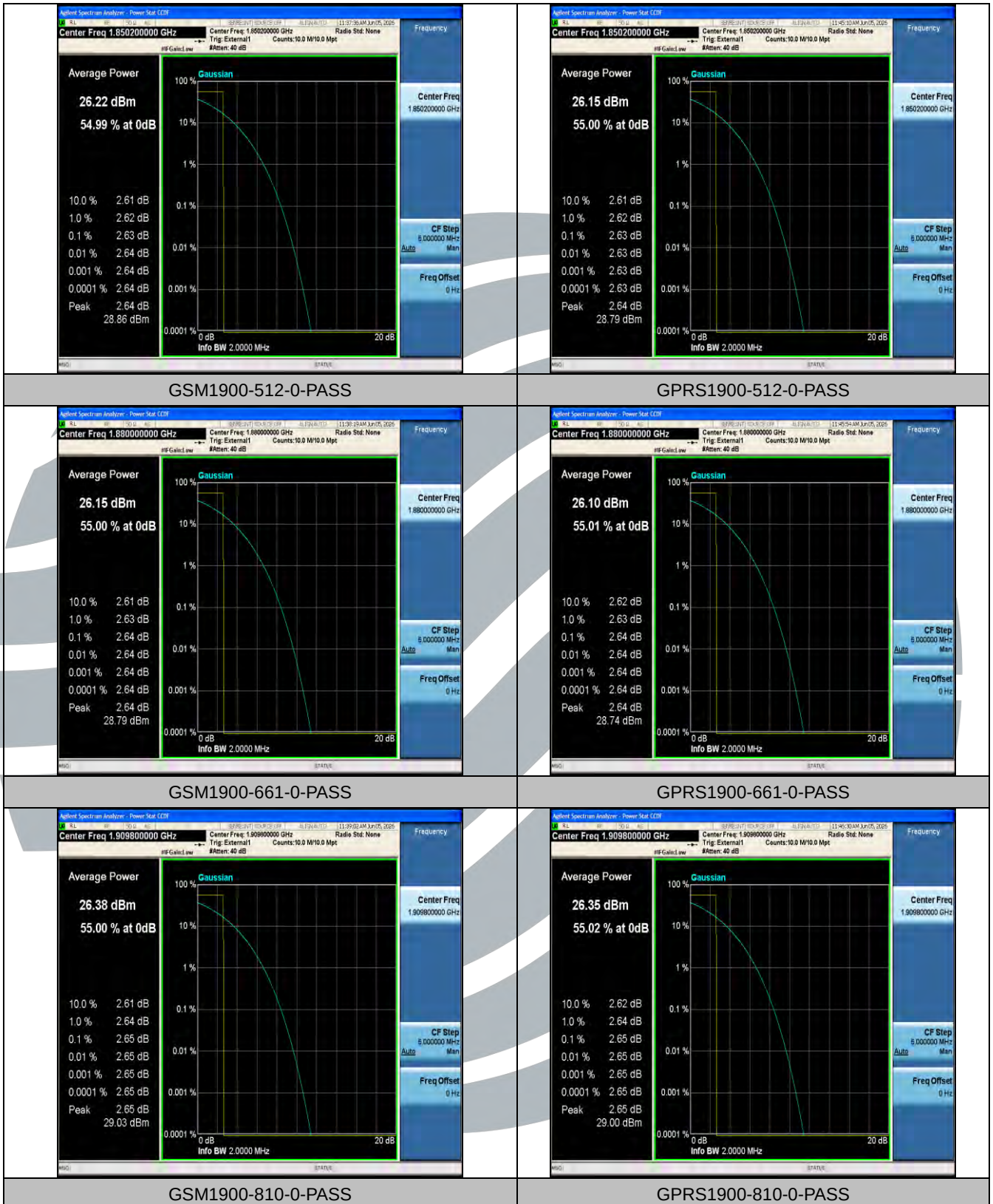
Band	Channel	Result (dB)	Limit (dB)	Verdict
GSM850	128	2.68	13	PASS
GPRS850	128	3.41	13	PASS
GSM850	190	2.66	13	PASS
GPRS850	190	3.97	13	PASS
GSM850	251	2.65	13	PASS
GPRS850	251	3.45	13	PASS
EGPRS850	128	6.05	13	PASS
EGPRS850	190	6.92	13	PASS
EGPRS850	251	5.66	13	PASS
GSM1900	512	2.63	13	PASS
GPRS1900	512	2.63	13	PASS
GSM1900	661	2.64	13	PASS
GPRS1900	661	2.64	13	PASS
GSM1900	810	2.65	13	PASS
GPRS1900	810	2.65	13	PASS
EGPRS1900	512	6.04	13	PASS
EGPRS1900	661	5.91	13	PASS
EGPRS1900	810	5.97	13	PASS

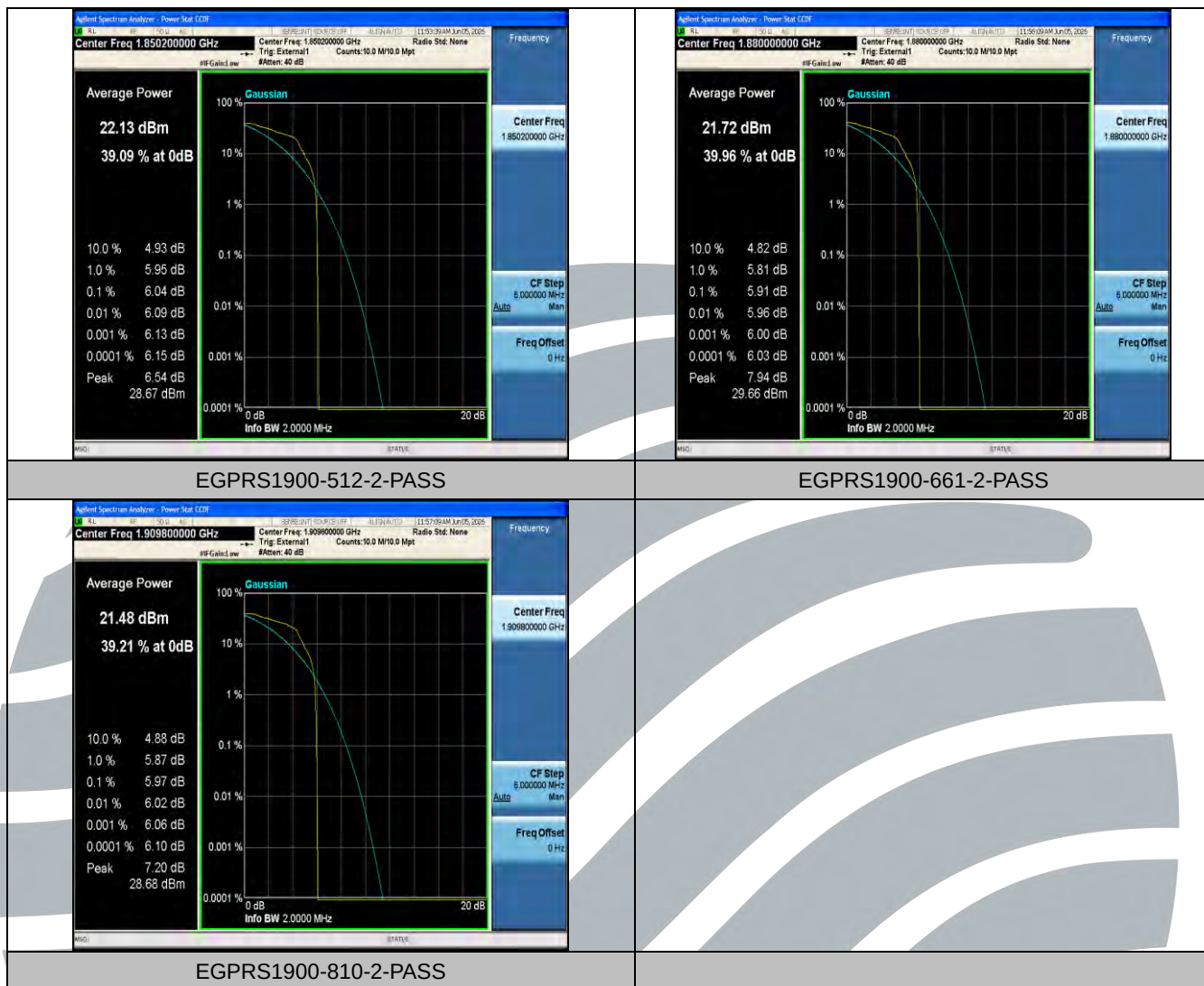
Test Graphs









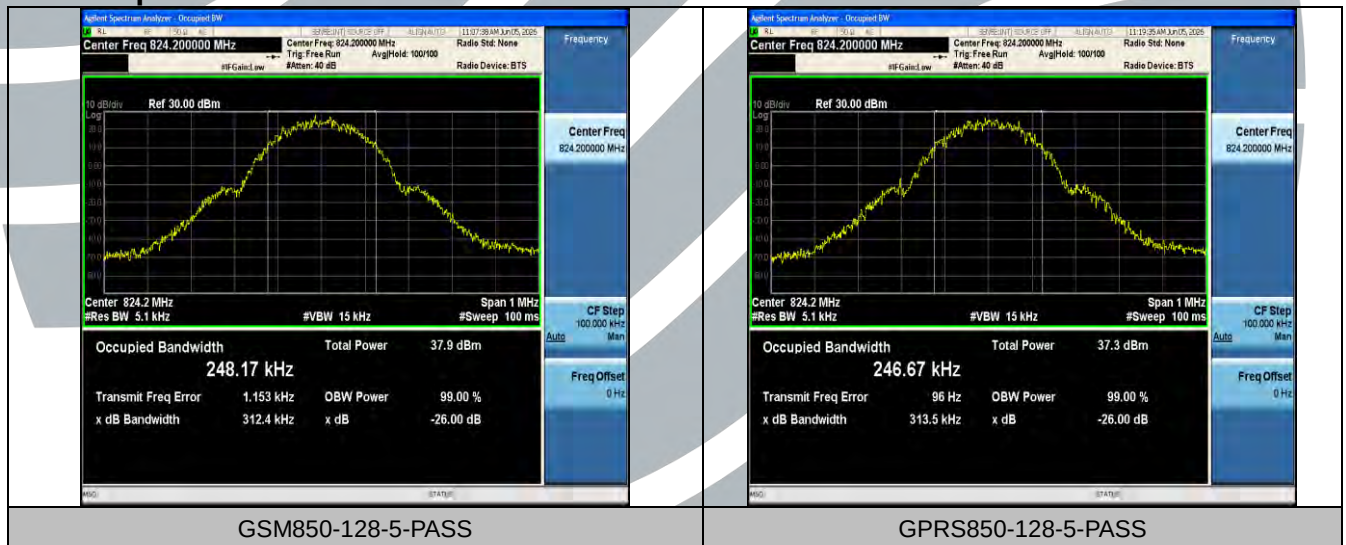


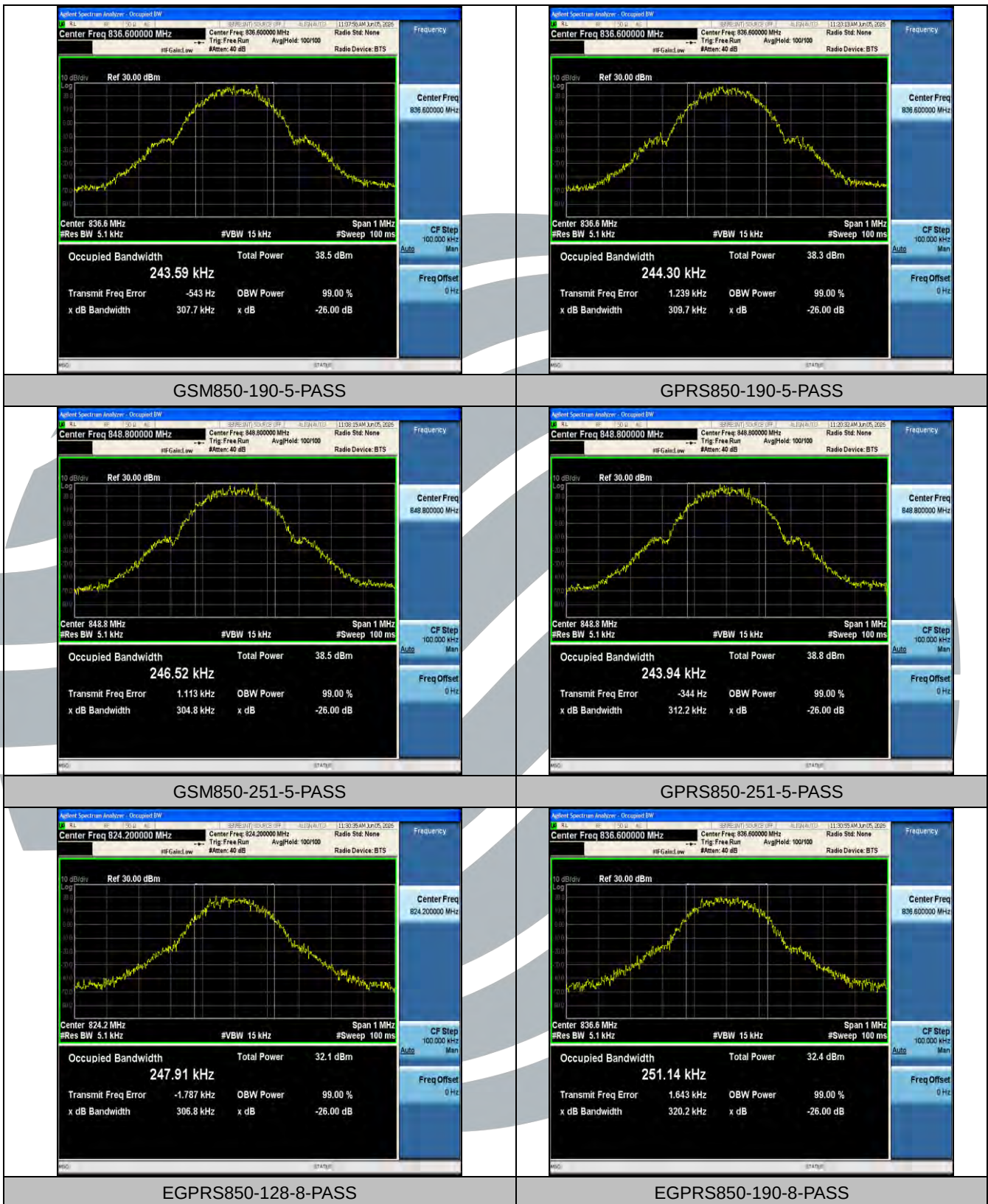
A.2 26DB BANDWIDTH AND OCCUPIED BANDWIDTH

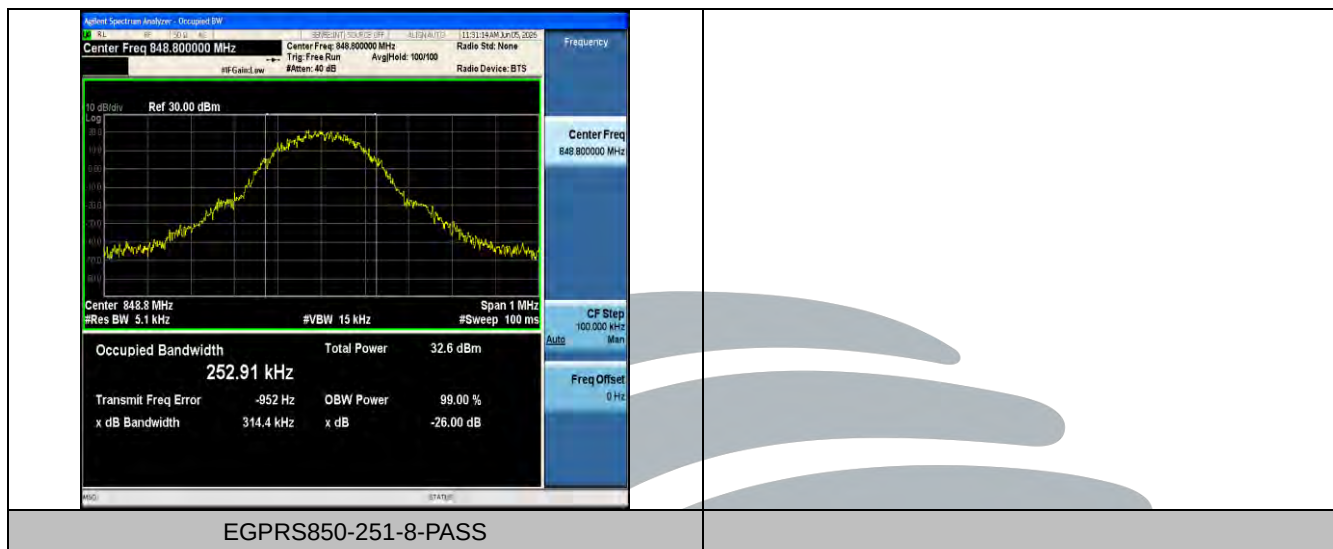
Test Result

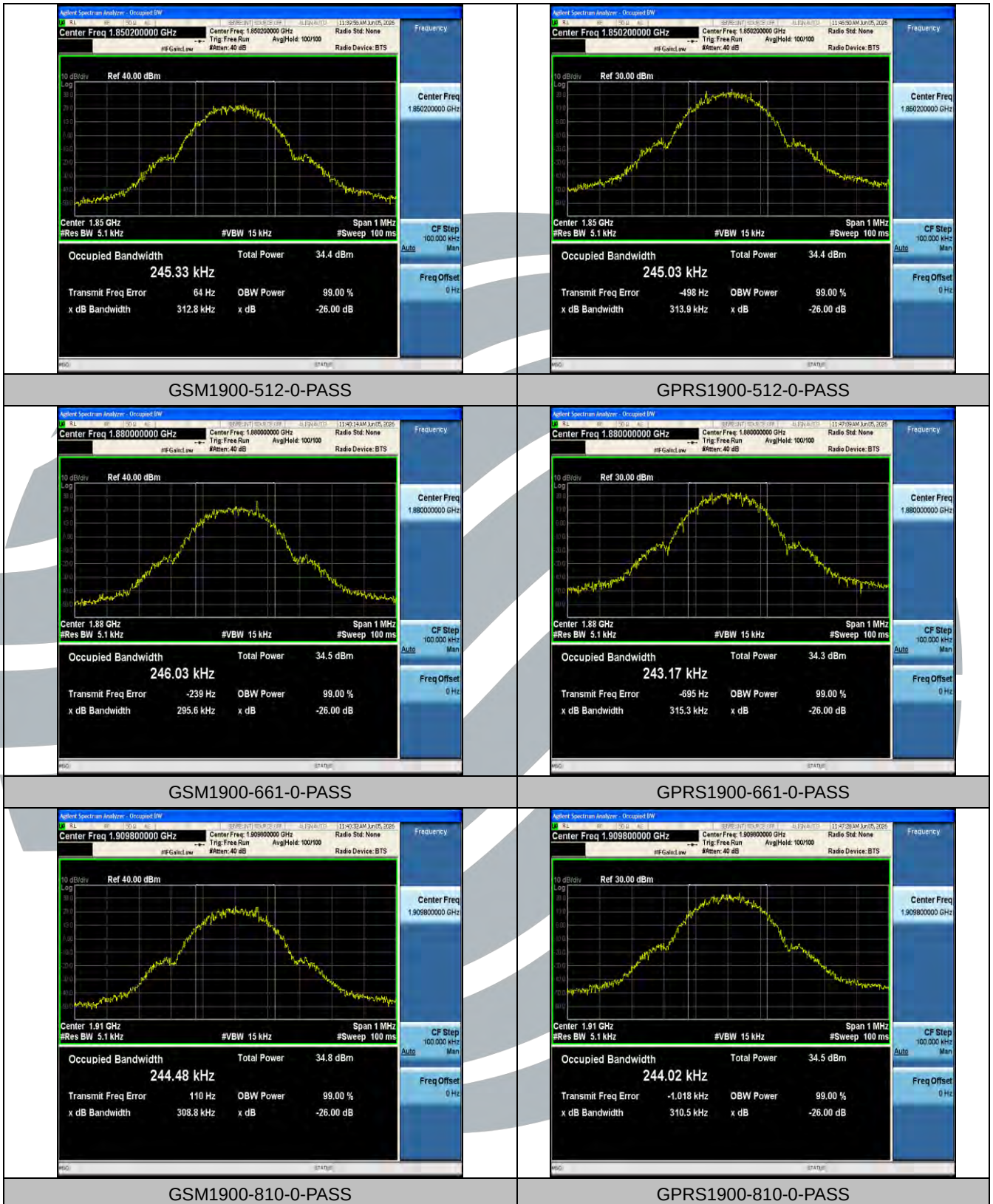
Band	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
GSM850	128	0.24817	0.3124	---	PASS
GPRS850	128	0.24667	0.3135	---	PASS
GSM850	190	0.24359	0.3077	---	PASS
GPRS850	190	0.24430	0.3097	---	PASS
GSM850	251	0.24652	0.3048	---	PASS
GPRS850	251	0.24394	0.3122	---	PASS
EGPRS850	128	0.24791	0.3068	---	PASS
EGPRS850	190	0.25114	0.3202	---	PASS
EGPRS850	251	0.25291	0.3144	---	PASS
GSM1900	512	0.24533	0.3128	---	PASS
GPRS1900	512	0.24503	0.3139	---	PASS
GSM1900	661	0.24603	0.2956	---	PASS
GPRS1900	661	0.24317	0.3153	---	PASS
GSM1900	810	0.24448	0.3088	---	PASS
GPRS1900	810	0.24402	0.3105	---	PASS
EGPRS1900	512	0.25052	0.3043	---	PASS
EGPRS1900	661	0.24863	0.3220	---	PASS
EGPRS1900	810	0.25251	0.3117	---	PASS

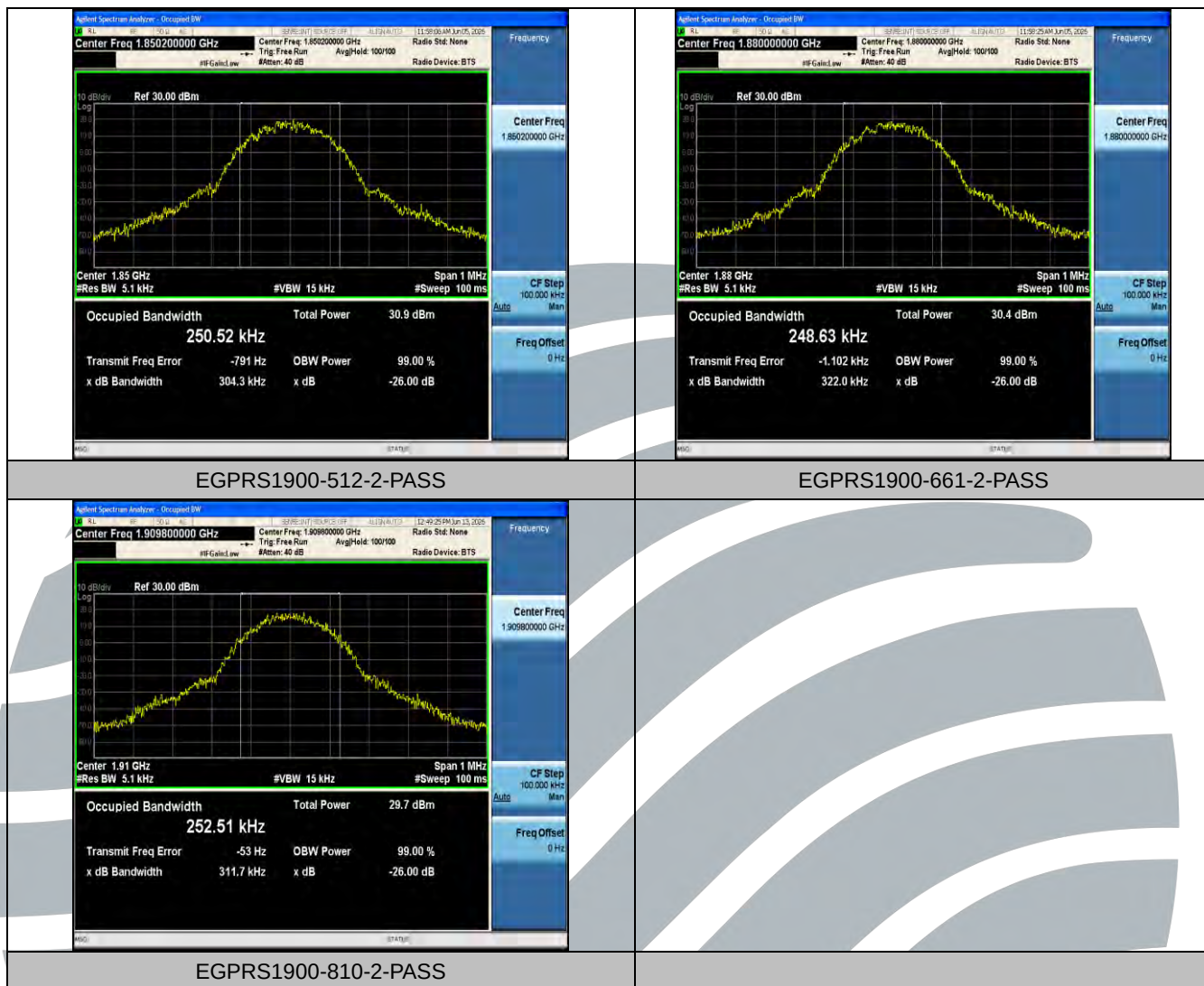
Test Graphs









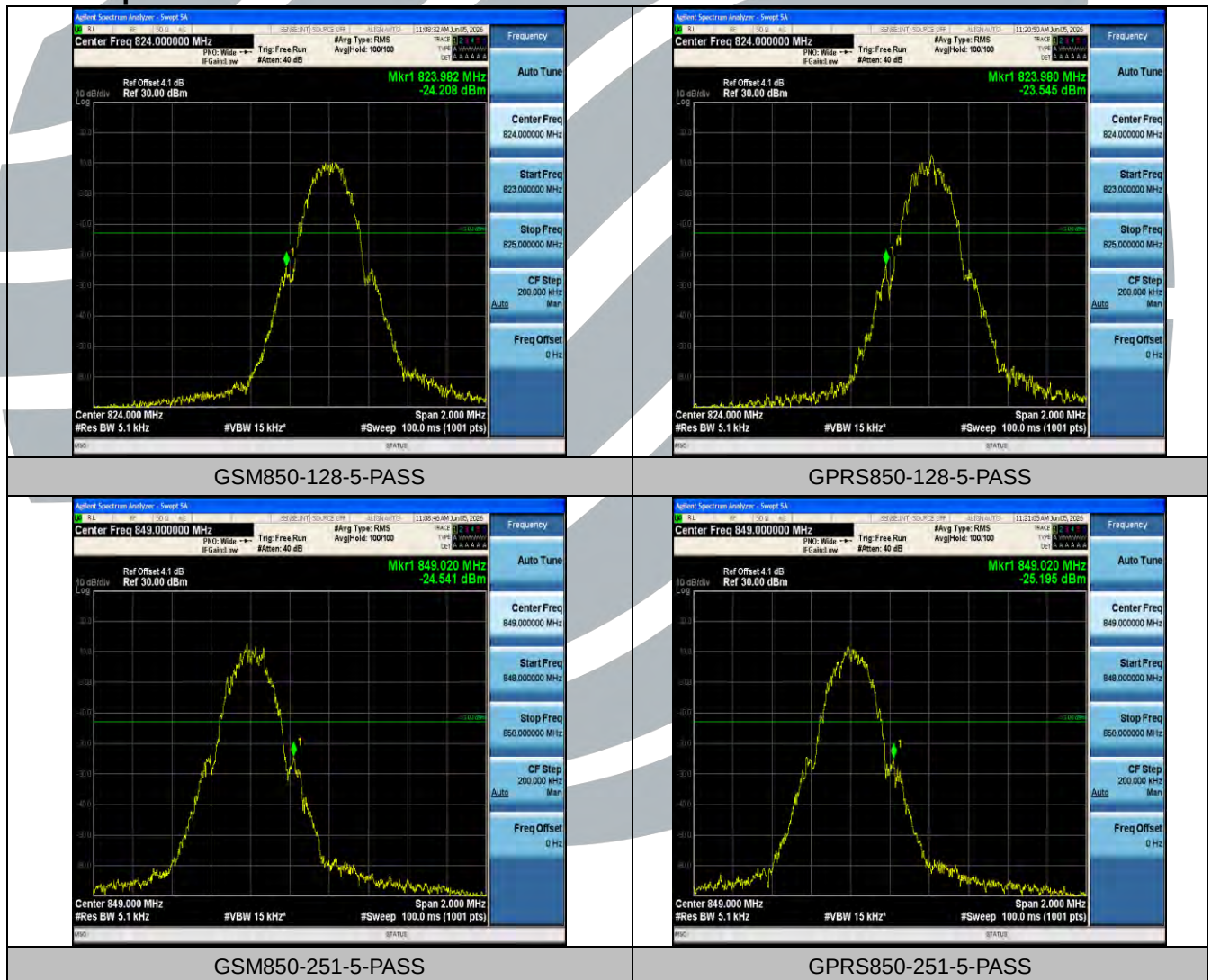


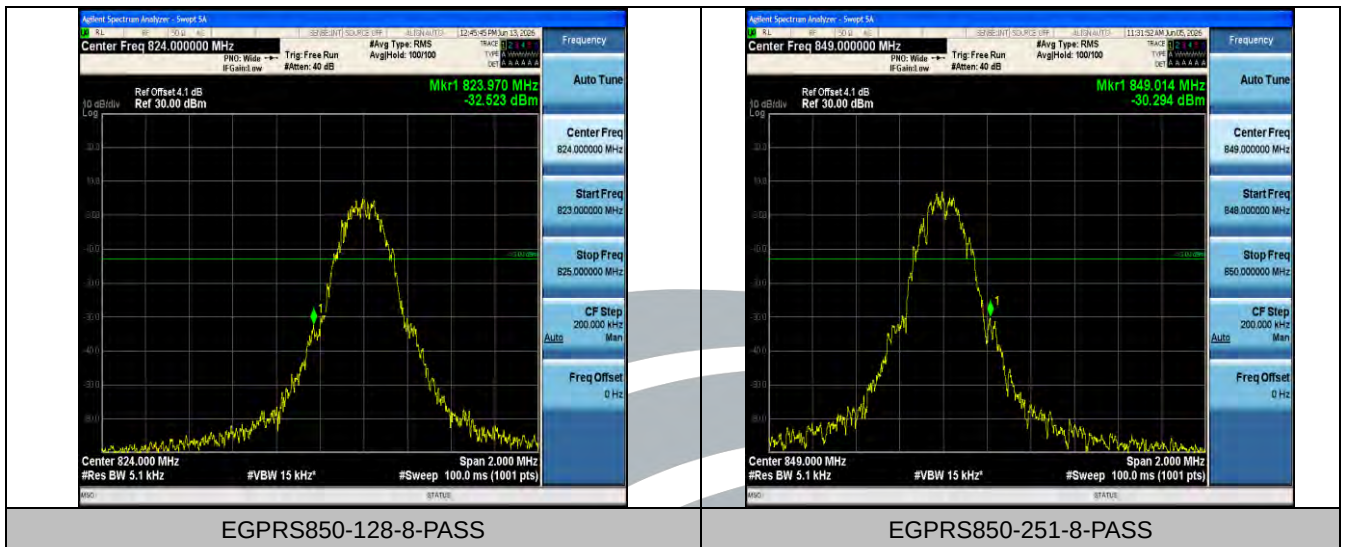
A.3 BAND EDGE

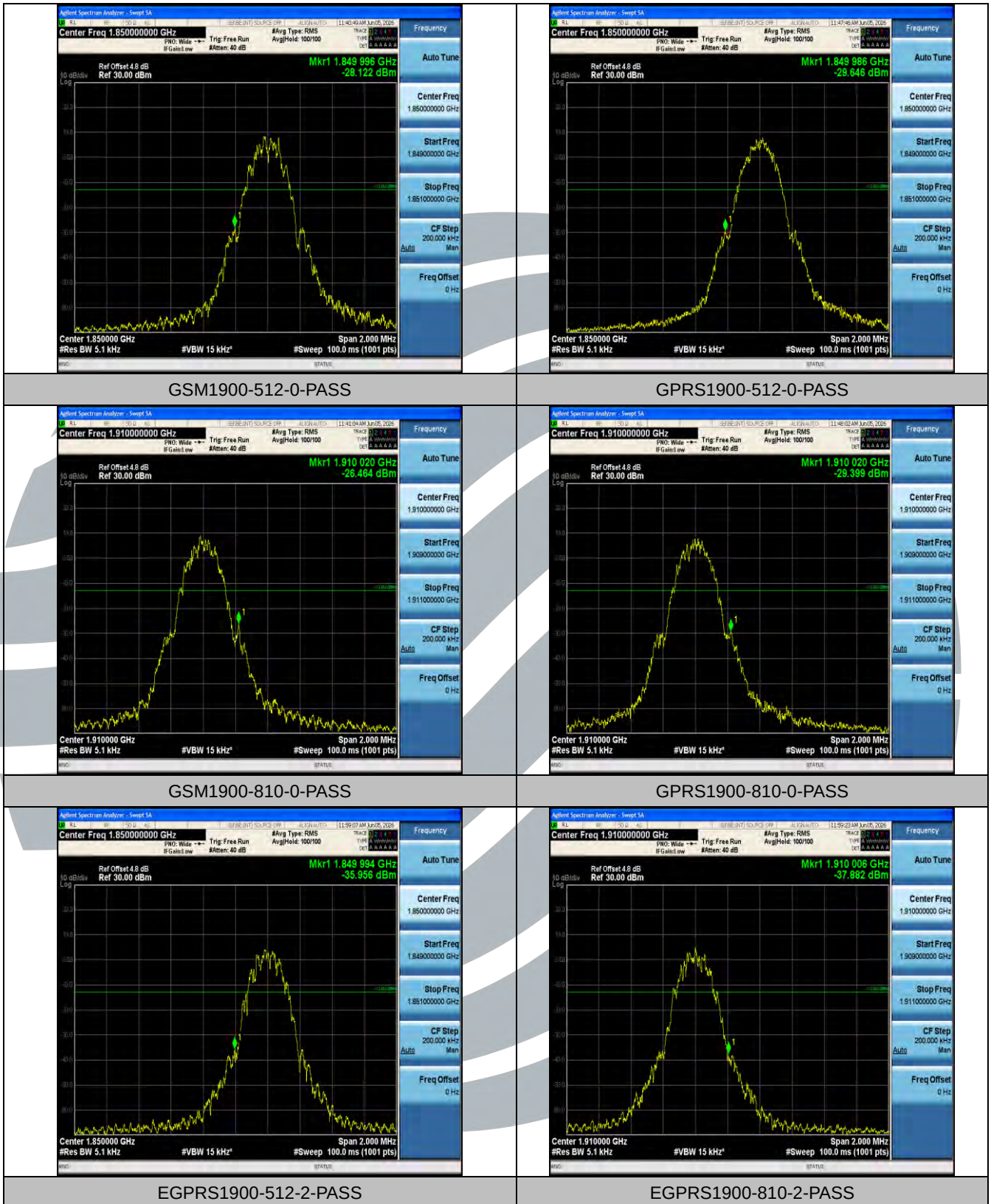
Test Result

Band	Channel	Freq (MHz)	Result (dBm)	Limit(dBm)	Verdict
GSM850	128	823.98	-24.21	-13	PASS
GPRS850	128	823.98	-23.55	-13	PASS
GSM850	251	849.02	-24.54	-13	PASS
GPRS850	251	849.02	-25.20	-13	PASS
EGPRS850	128	823.97	-32.52	-13	PASS
EGPRS850	251	849.01	-30.29	-13	PASS
GSM1900	512	1850.00	-28.12	-13	PASS
GPRS1900	512	1849.99	-29.65	-13	PASS
GSM1900	810	1910.02	-26.46	-13	PASS
GPRS1900	810	1910.02	-29.40	-13	PASS
EGPRS1900	512	1849.99	-35.96	-13	PASS
EGPRS1900	810	1910.01	-37.88	-13	PASS

Test Graphs





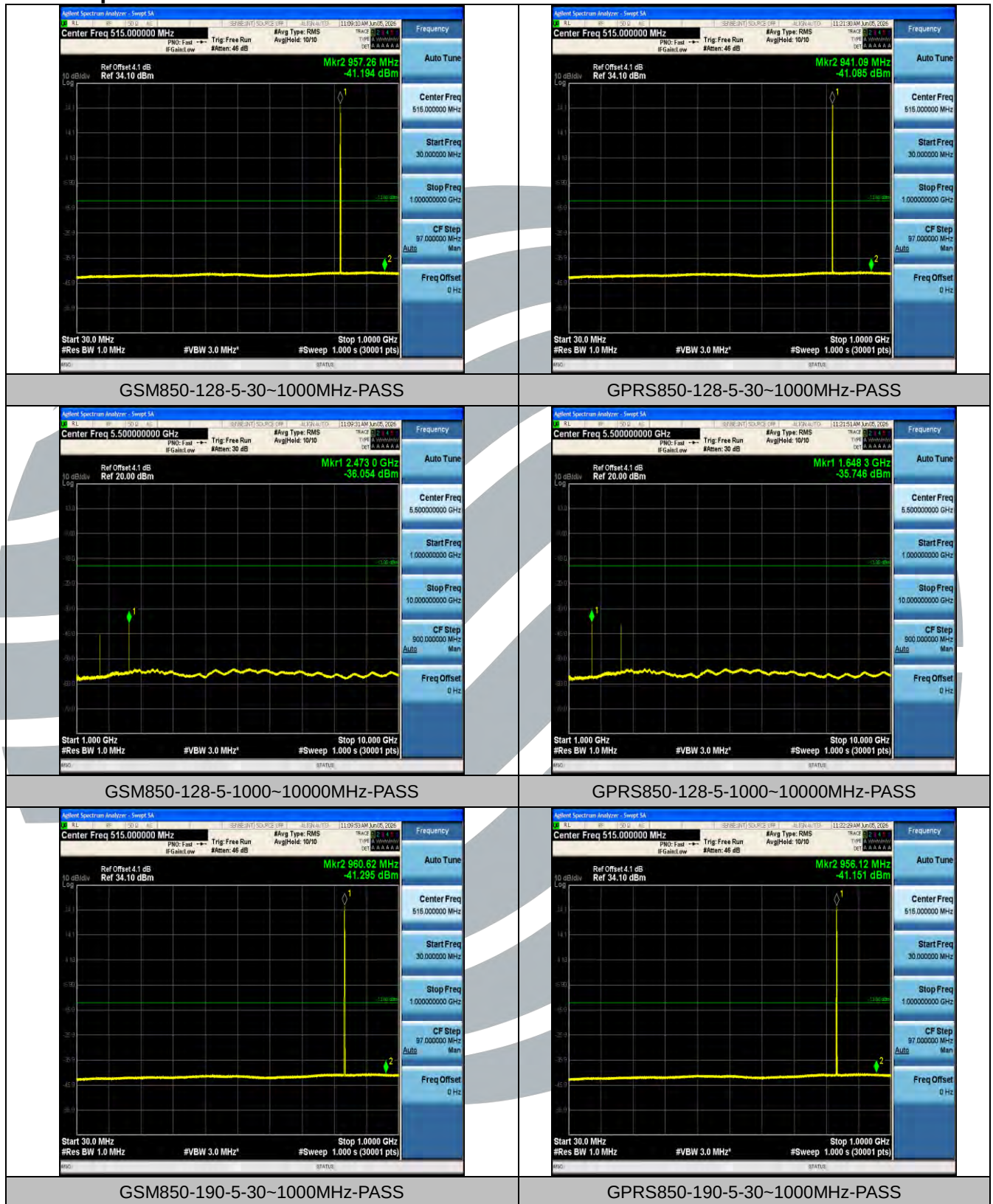


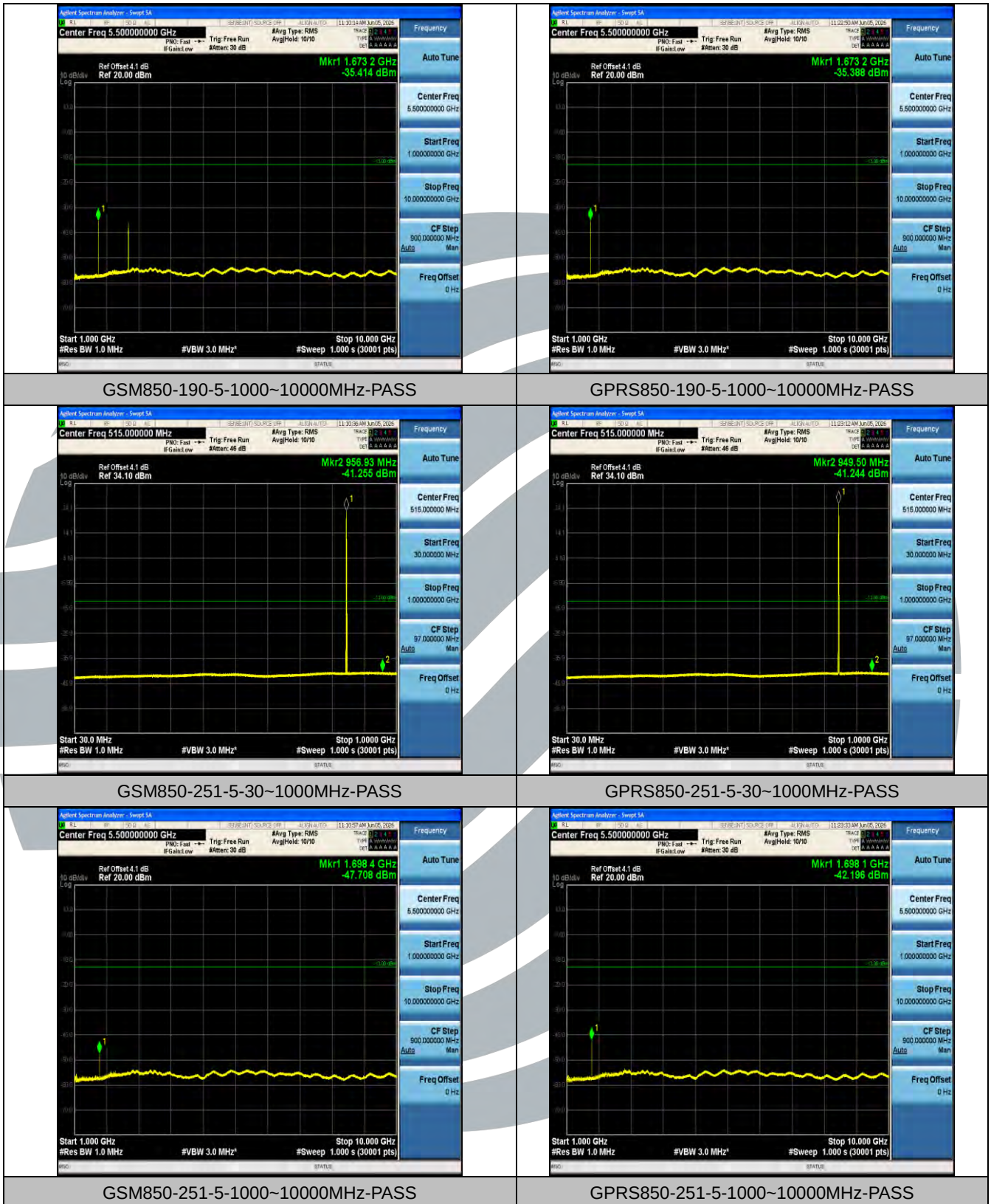
A.4 CONDUCTED SPURIOUS EMISSION

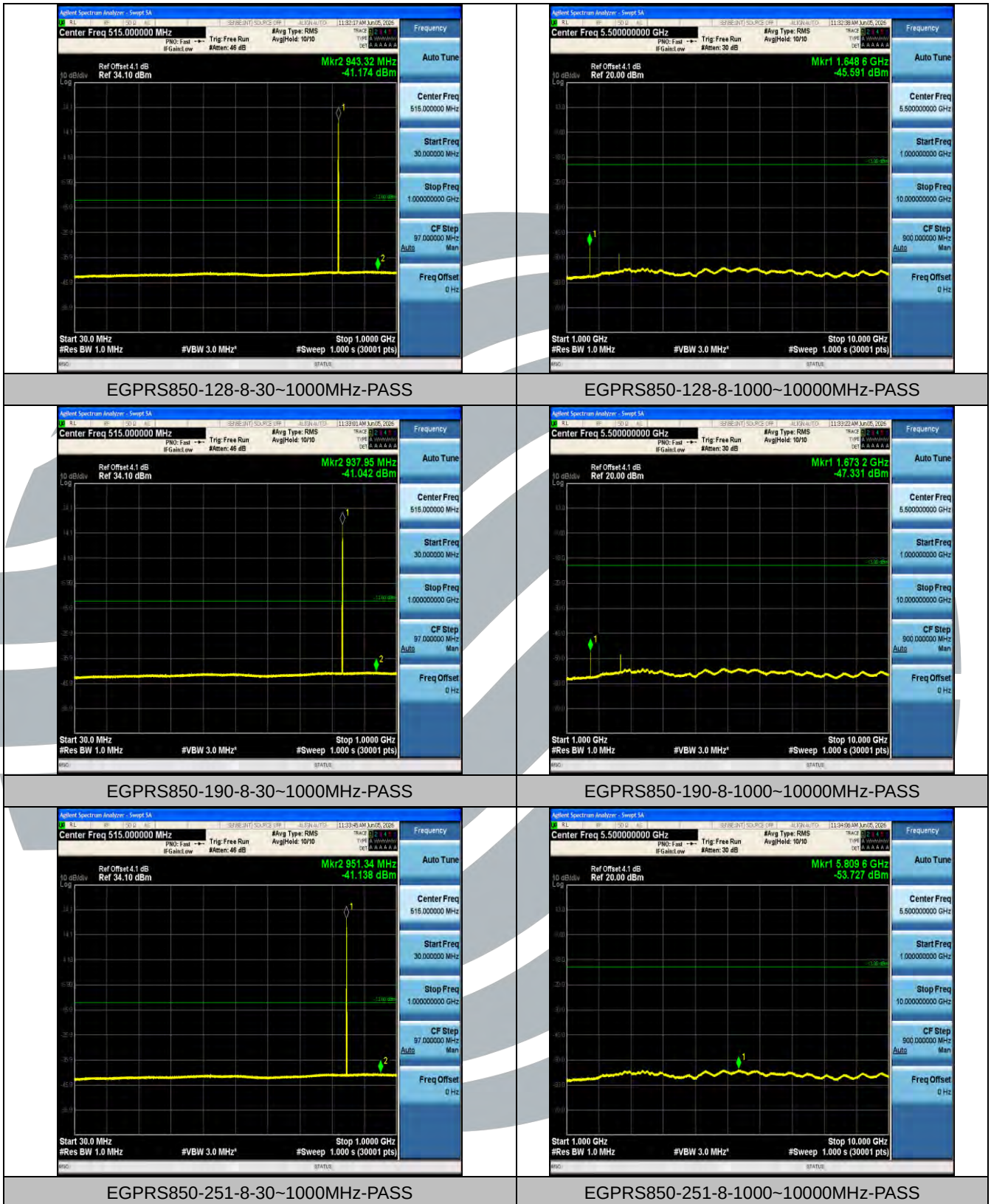
Test Result

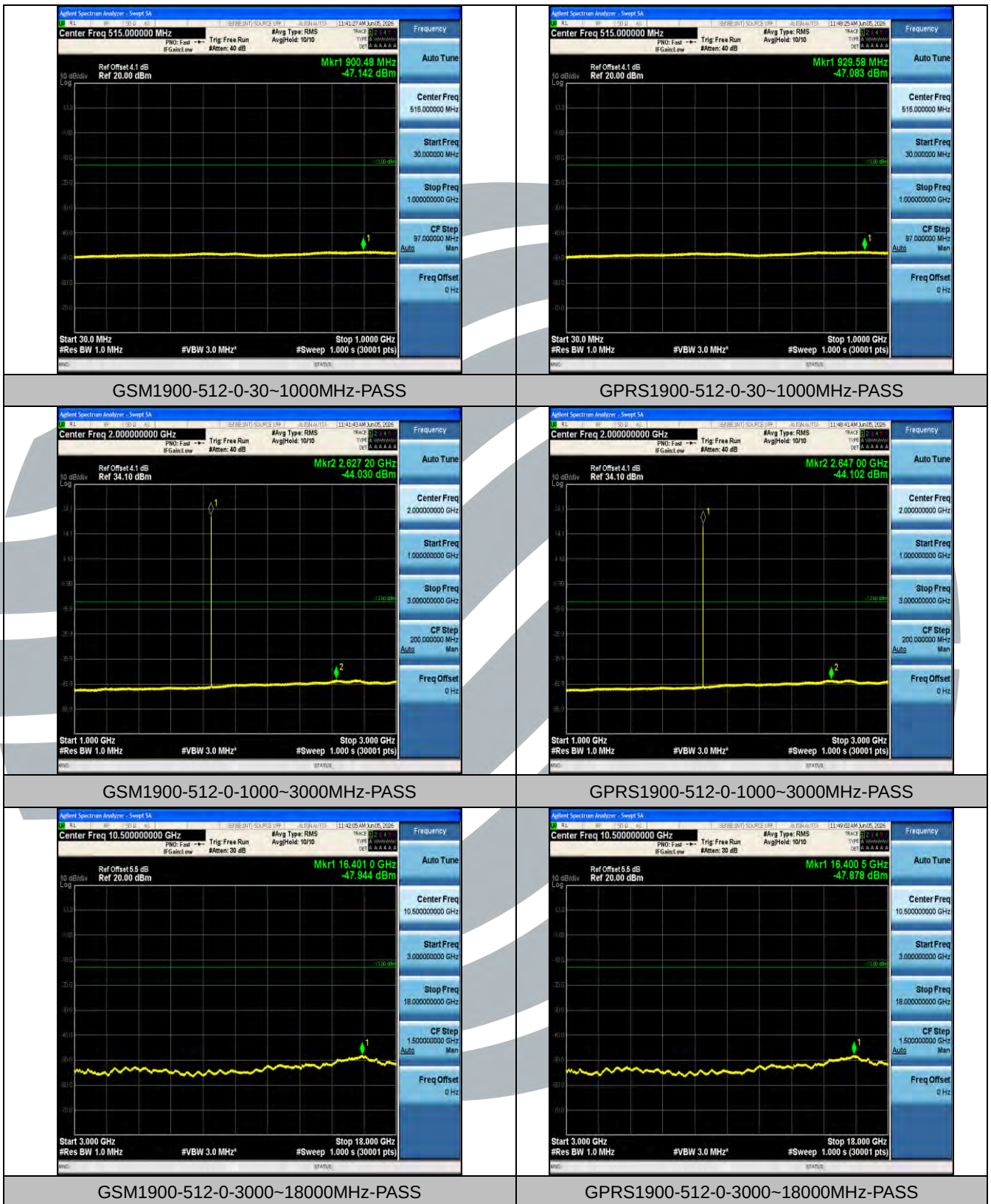
Band	Channel	Frequency Range	Max. Freq. (MHz)	Result (dBm)	Limit (dBm)	Verdict
GSM850	128	30~1000MHz	957.26	-41.19	-13	PASS
GPRS850	128	30~1000MHz	941.09	-41.09	-13	PASS
GSM850	128	1000~10000MHz	2473	-36.05	-13	PASS
GPRS850	128	1000~10000MHz	1648.3	-35.75	-13	PASS
GSM850	190	30~1000MHz	960.62	-41.3	-13	PASS
GPRS850	190	30~1000MHz	956.12	-41.15	-13	PASS
GSM850	190	1000~10000MHz	1673.2	-35.41	-13	PASS
GPRS850	190	1000~10000MHz	1673.2	-35.39	-13	PASS
GSM850	251	30~1000MHz	956.93	-41.26	-13	PASS
GPRS850	251	30~1000MHz	949.5	-41.24	-13	PASS
GSM850	251	1000~10000MHz	1698.4	-47.71	-13	PASS
GPRS850	251	1000~10000MHz	1698.1	-42.2	-13	PASS
EGPRS850	128	30~1000MHz	943.32	-41.17	-13	PASS
EGPRS850	128	1000~10000MHz	1648.6	-45.59	-13	PASS
EGPRS850	190	30~1000MHz	937.95	-41.04	-13	PASS
EGPRS850	190	1000~10000MHz	1673.2	-47.33	-13	PASS
EGPRS850	251	30~1000MHz	951.34	-41.14	-13	PASS
EGPRS850	251	1000~10000MHz	5809.6	-53.73	-13	PASS
GSM1900	512	30~1000MHz	900.48	-47.14	-13	PASS
GPRS1900	512	30~1000MHz	929.58	-47.08	-13	PASS
GSM1900	512	1000~3000MHz	2627.2	-44.03	-13	PASS
GPRS1900	512	1000~3000MHz	2647	-44.1	-13	PASS
GSM1900	512	3000~18000MHz	16401	-47.94	-13	PASS
GPRS1900	512	3000~18000MHz	16400.5	-47.88	-13	PASS
GSM1900	661	30~1000MHz	908.92	-47.13	-13	PASS
GPRS1900	661	30~1000MHz	914.58	-47.02	-13	PASS
GSM1900	661	1000~3000MHz	2637.6	-44.09	-13	PASS
GPRS1900	661	1000~3000MHz	2646.13	-43.93	-13	PASS
GSM1900	661	3000~18000MHz	16375	-47.94	-13	PASS
GPRS1900	661	3000~18000MHz	16430.5	-47.98	-13	PASS
GSM1900	810	30~1000MHz	934.33	-47.19	-13	PASS
GPRS1900	810	30~1000MHz	939.15	-47.19	-13	PASS
GSM1900	810	1000~3000MHz	2752.33	-44.01	-13	PASS
GPRS1900	810	1000~3000MHz	2762.07	-43.97	-13	PASS
GSM1900	810	3000~18000MHz	16384.5	-48	-13	PASS
GPRS1900	810	3000~18000MHz	16405.5	-47.89	-13	PASS
EGPRS1900	512	30~1000MHz	910.57	-47.06	-13	PASS
EGPRS1900	512	1000~3000MHz	2635.8	-44	-13	PASS
EGPRS1900	512	3000~18000MHz	16390	-48.03	-13	PASS
EGPRS1900	661	30~1000MHz	909.92	-47.04	-13	PASS
EGPRS1900	661	1000~3000MHz	2739.73	-44.13	-13	PASS
EGPRS1900	661	3000~18000MHz	16392.5	-47.95	-13	PASS
EGPRS1900	810	30~1000MHz	915.71	-47.1	-13	PASS
EGPRS1900	810	1000~3000MHz	2624.4	-43.99	-13	PASS
EGPRS1900	810	3000~18000MHz	16394.5	-47.97	-13	PASS

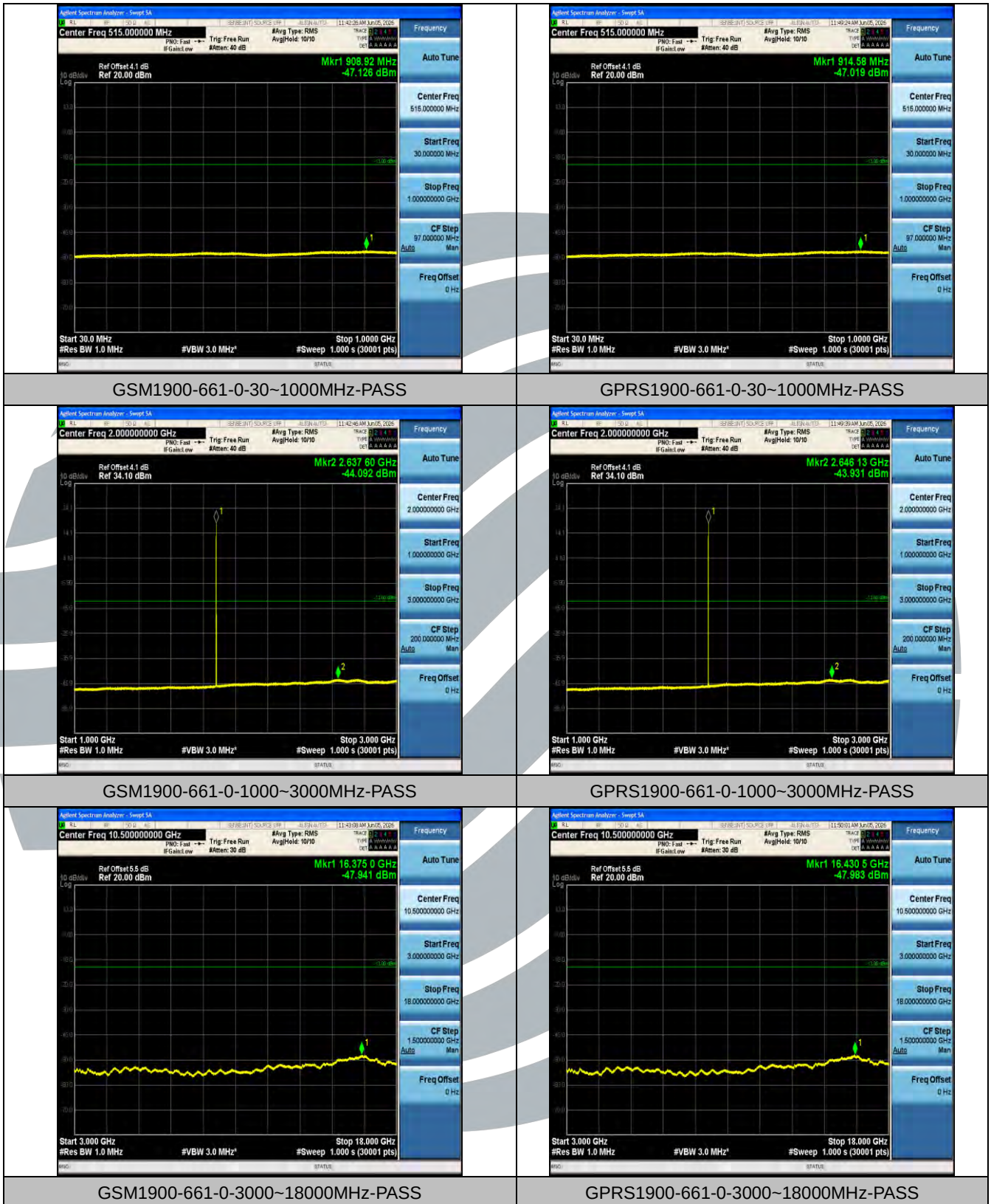
Test Graphs

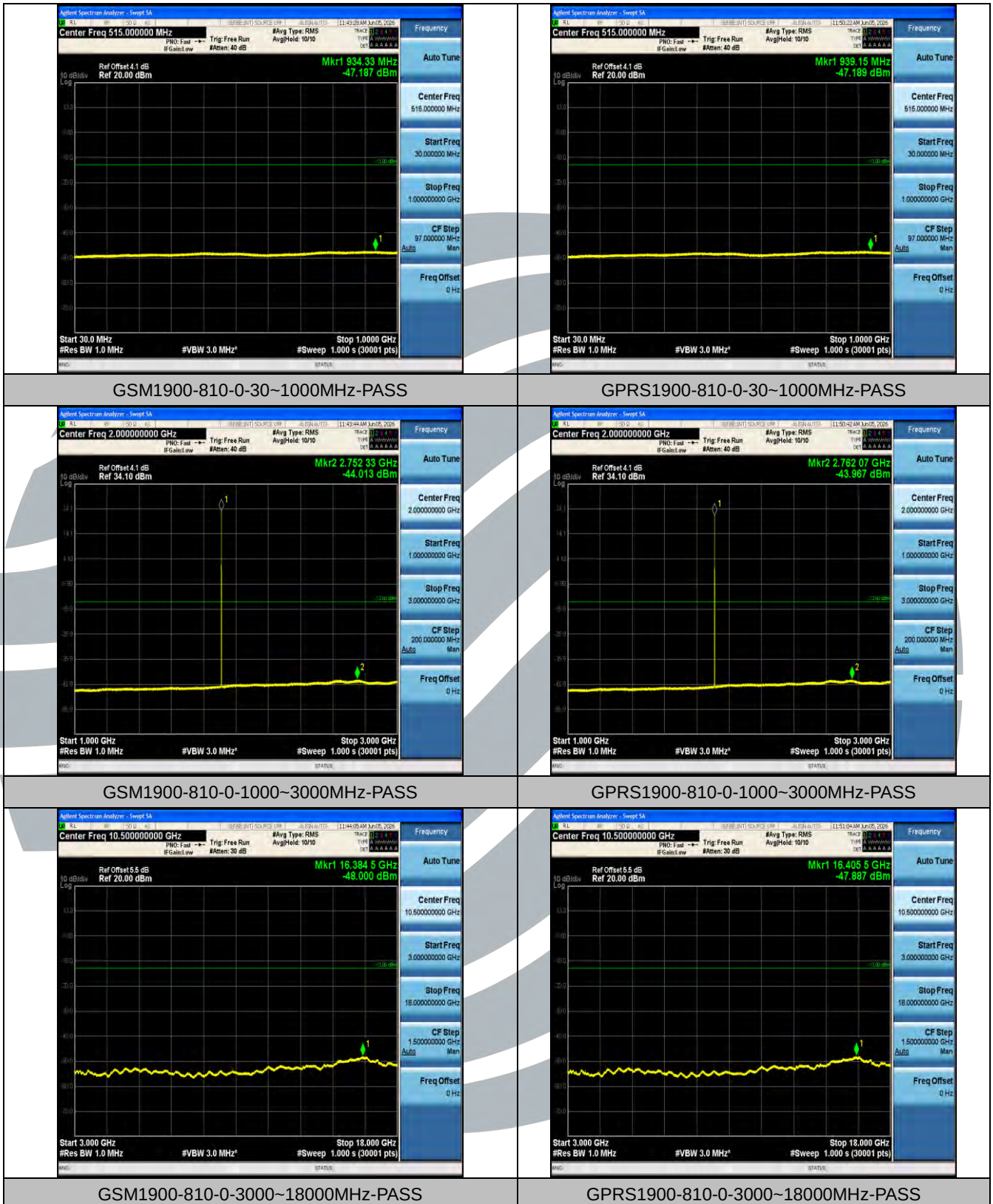


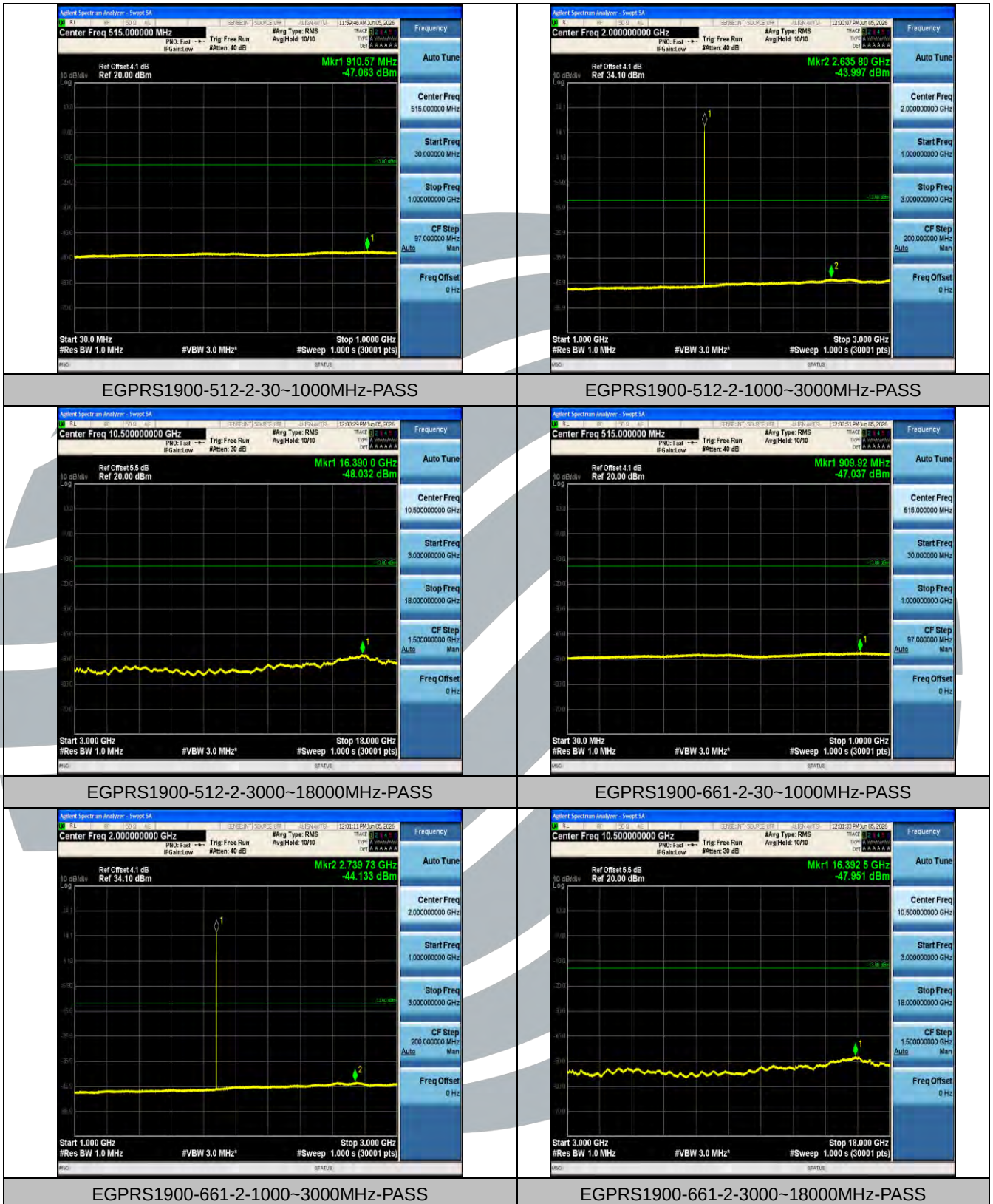


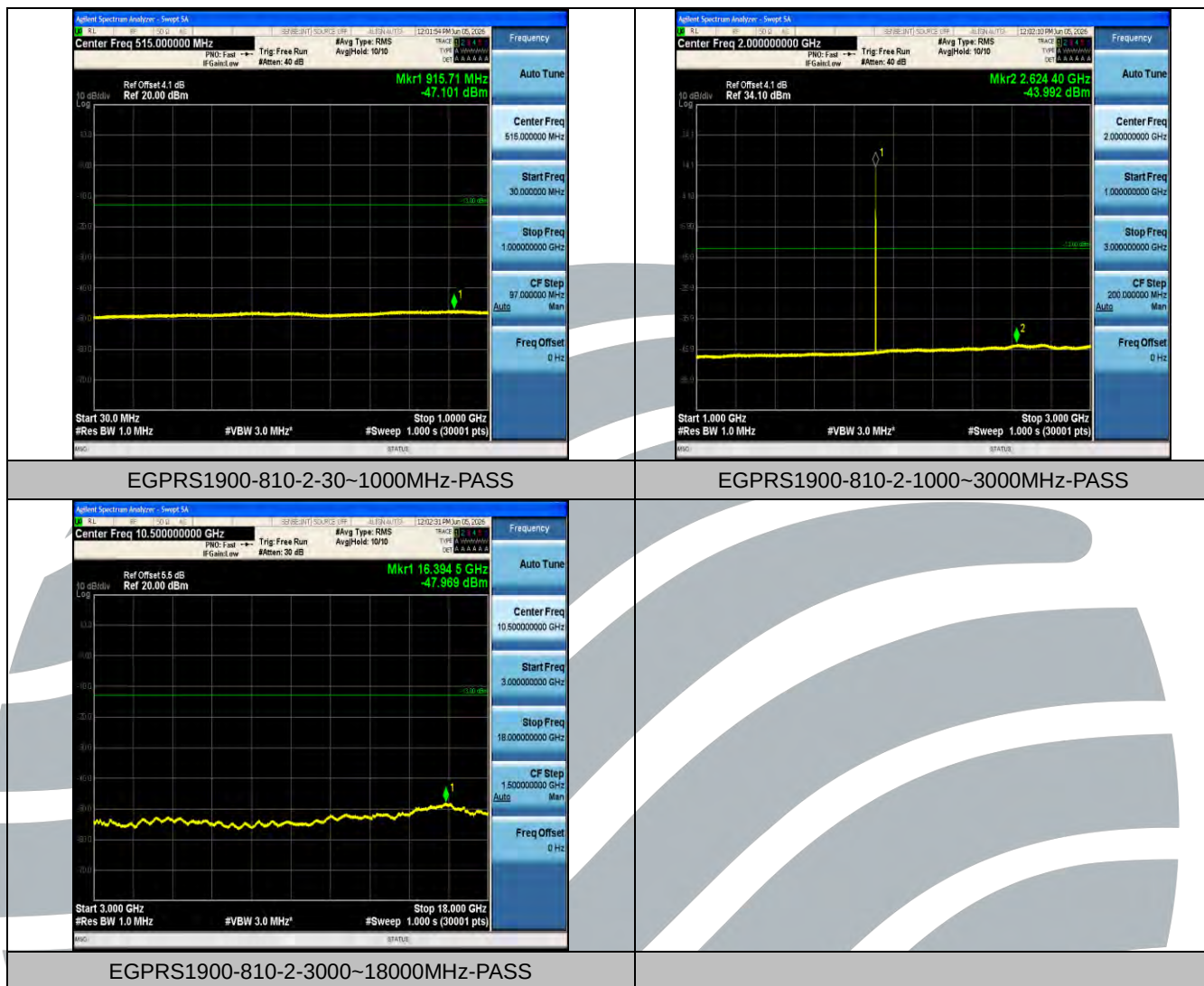












A.5 FREQUENCY STABILITY

Test Result

Voltage							
Band	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
GSM850	190	VN	NT	-9.20	-0.010997	±2.5	PASS
GSM850	190	VL	NT	-10.36	-0.012383	±2.5	PASS
GSM850	190	VH	NT	-10.01	-0.011965	±2.5	PASS
EGPRS850	190	VN	NT	-23.28	-0.027827	±2.5	PASS
EGPRS850	190	VL	NT	-23.41	-0.027982	±2.5	PASS
EGPRS850	190	VH	NT	-21.24	-0.025388	±2.5	PASS

Temperature							
Band	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
GSM850	190	NV	-30	-11.40	-0.013627	±2.5	PASS
GSM850	190	NV	-20	-7.52	-0.008989	±2.5	PASS
GSM850	190	NV	-10	-9.46	-0.011308	±2.5	PASS
GSM850	190	NV	0	-10.91	-0.013041	±2.5	PASS
GSM850	190	NV	10	-6.97	-0.008331	±2.5	PASS
GSM850	190	NV	20	-10.14	-0.012120	±2.5	PASS
GSM850	190	NV	30	-7.39	-0.008833	±2.5	PASS
GSM850	190	NV	40	-6.91	-0.008260	±2.5	PASS
GSM850	190	NV	50	-8.46	-0.010112	±2.5	PASS
EGPRS850	190	NV	-30	-17.08	-0.020416	±2.5	PASS
EGPRS850	190	NV	-20	-20.86	-0.024934	±2.5	PASS
EGPRS850	190	NV	-10	-22.21	-0.026548	±2.5	PASS
EGPRS850	190	NV	0	-17.47	-0.020882	±2.5	PASS
EGPRS850	190	NV	10	-19.44	-0.023237	±2.5	PASS
EGPRS850	190	NV	20	-20.05	-0.023966	±2.5	PASS
EGPRS850	190	NV	30	-19.44	-0.023237	±2.5	PASS
EGPRS850	190	NV	40	-20.53	-0.024540	±2.5	PASS
EGPRS850	190	NV	50	-22.24	-0.026584	±2.5	PASS

Voltage							
Band	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
GSM1900	661	VN	NT	-2.62	-0.001394	±2.5	PASS
GSM1900	661	VL	NT	-3.52	-0.001872	±2.5	PASS
GSM1900	661	VH	NT	-1.87	-0.000995	±2.5	PASS
EGPRS1900	661	VN	NT	-15.50	-0.008245	±2.5	PASS
EGPRS1900	661	VL	NT	-18.73	-0.009963	±2.5	PASS
EGPRS1900	661	VH	NT	-15.82	-0.008415	±2.5	PASS

Temperature							
Band	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
GSM1900	661	NV	-30	-4.33	-0.002303	±2.5	PASS
GSM1900	661	NV	-20	-3.33	-0.001771	±2.5	PASS
GSM1900	661	NV	-10	-4.75	-0.002527	±2.5	PASS
GSM1900	661	NV	0	-4.91	-0.002612	±2.5	PASS
GSM1900	661	NV	10	-3.00	-0.001596	±2.5	PASS
GSM1900	661	NV	20	-3.13	-0.001665	±2.5	PASS
GSM1900	661	NV	30	-1.84	-0.000979	±2.5	PASS
GSM1900	661	NV	40	-3.49	-0.001856	±2.5	PASS
GSM1900	661	NV	50	-3.91	-0.002080	±2.5	PASS
EGPRS1900	661	NV	-30	-14.82	-0.007883	±2.5	PASS
EGPRS1900	661	NV	-20	-15.69	-0.008346	±2.5	PASS
EGPRS1900	661	NV	-10	-15.46	-0.008223	±2.5	PASS
EGPRS1900	661	NV	0	-16.95	-0.009016	±2.5	PASS
EGPRS1900	661	NV	10	-18.11	-0.009633	±2.5	PASS
EGPRS1900	661	NV	20	-14.75	-0.007846	±2.5	PASS
EGPRS1900	661	NV	30	-19.47	-0.010356	±2.5	PASS
EGPRS1900	661	NV	40	-14.43	-0.007676	±2.5	PASS
EGPRS1900	661	NV	50	-12.66	-0.006734	±2.5	PASS