

Appendix A: Effective (Isotropic) Radiated Power Output Data

Test Result

Band	Channel	Power(dBm)	Unflip ERP/EIRP(dBm)	Flip ERP/EIRP(dBm)	Limit(dBm)	Verdict
GSM850	128	32.59	23.41	18.66	38.45	PASS
GSM850	190	32.51	23.33	18.58	38.45	PASS
GSM850	251	32.41	23.23	18.48	38.45	PASS
GSM1900	512	29.45	29.15	23.32	33.00	PASS
GSM1900	661	29.41	29.11	23.28	33.00	PASS
GSM1900	810	29.21	28.91	23.08	33.00	PASS

Band	Channel	Up Slot Num	Power(dBm)	Unflip ERP/EIRP(dBm)	Flip ERP/EIRP(dBm)	Limit(dBm)	Verdict
GPRS850	128	1	32.51	23.33	18.58	38.45	PASS
GPRS850	128	2	31.79	22.61	17.86	38.45	PASS
GPRS850	128	3	30.08	20.9	16.15	38.45	PASS
GPRS850	128	4	29.43	20.25	15.5	38.45	PASS
GPRS850	190	1	32.40	23.22	18.47	38.45	PASS
GPRS850	190	2	31.69	22.51	17.76	38.45	PASS
GPRS850	190	3	29.96	20.78	16.03	38.45	PASS
GPRS850	190	4	28.93	19.75	15	38.45	PASS
GPRS850	251	1	32.31	23.13	18.38	38.45	PASS
GPRS850	251	2	31.60	22.42	17.67	38.45	PASS
GPRS850	251	3	29.86	20.68	15.93	38.45	PASS
GPRS850	251	4	28.81	19.63	14.88	38.45	PASS
GPRS1900	512	1	29.42	29.12	23.29	33.00	PASS
GPRS1900	512	2	28.68	28.38	22.55	33.00	PASS
GPRS1900	512	3	26.83	26.53	20.7	33.00	PASS
GPRS1900	512	4	25.79	25.49	19.66	33.00	PASS
GPRS1900	661	1	29.38	29.08	23.25	33.00	PASS
GPRS1900	661	2	28.67	28.37	22.54	33.00	PASS
GPRS1900	661	3	26.85	26.55	20.72	33.00	PASS
GPRS1900	661	4	25.81	25.51	19.68	33.00	PASS
GPRS1900	810	1	29.17	28.87	23.04	33.00	PASS
GPRS1900	810	2	28.47	28.17	22.34	33.00	PASS
GPRS1900	810	3	26.69	26.39	20.56	33.00	PASS
GPRS1900	810	4	25.67	25.37	19.54	33.00	PASS

Band	Channel	Up Slot Num	Power(dBm)	Unflip ERP/EIRP(dBm)	Flip ERP/EIRP(dBm)	Limit(dBm)	Verdict
EGPRS850	128	1	27.17	17.99	13.24	38.45	PASS
EGPRS850	128	2	26.12	16.94	12.19	38.45	PASS
EGPRS850	128	3	23.94	14.76	10.01	38.45	PASS
EGPRS850	128	4	22.79	13.61	8.86	38.45	PASS
EGPRS850	190	1	27.07	17.89	13.14	38.45	PASS
EGPRS850	190	2	26.02	16.84	12.09	38.45	PASS
EGPRS850	190	3	23.87	14.69	9.94	38.45	PASS
EGPRS850	190	4	22.76	13.58	8.83	38.45	PASS
EGPRS850	251	1	27.08	17.9	13.15	38.45	PASS
EGPRS850	251	2	26.03	16.85	12.1	38.45	PASS
EGPRS850	251	3	23.87	14.69	9.94	38.45	PASS
EGPRS850	251	4	22.82	13.64	8.89	38.45	PASS
EGPRS1900	512	1	25.86	25.56	19.73	33.00	PASS
EGPRS1900	512	2	24.74	24.44	18.61	33.00	PASS
EGPRS1900	512	3	22.48	22.18	16.35	33.00	PASS
EGPRS1900	512	4	21.26	20.96	15.13	33.00	PASS
EGPRS1900	661	1	25.53	25.23	19.4	33.00	PASS
EGPRS1900	661	2	24.47	24.17	18.34	33.00	PASS
EGPRS1900	661	3	22.26	21.96	16.13	33.00	PASS
EGPRS1900	661	4	21.07	20.77	14.94	33.00	PASS
EGPRS1900	810	1	25.94	25.64	19.81	33.00	PASS
EGPRS1900	810	2	24.91	24.61	18.78	33.00	PASS
EGPRS1900	810	3	22.69	22.39	16.56	33.00	PASS
EGPRS1900	810	4	21.52	21.22	15.39	33.00	PASS

Remark: EIRP (dBm) = Conducted power (dBm) + Antenna Gain (dBi). (For GSM1900)

ERP (dBm) = EIRP (dBm) - 2.15 (dB). (For GSM850)

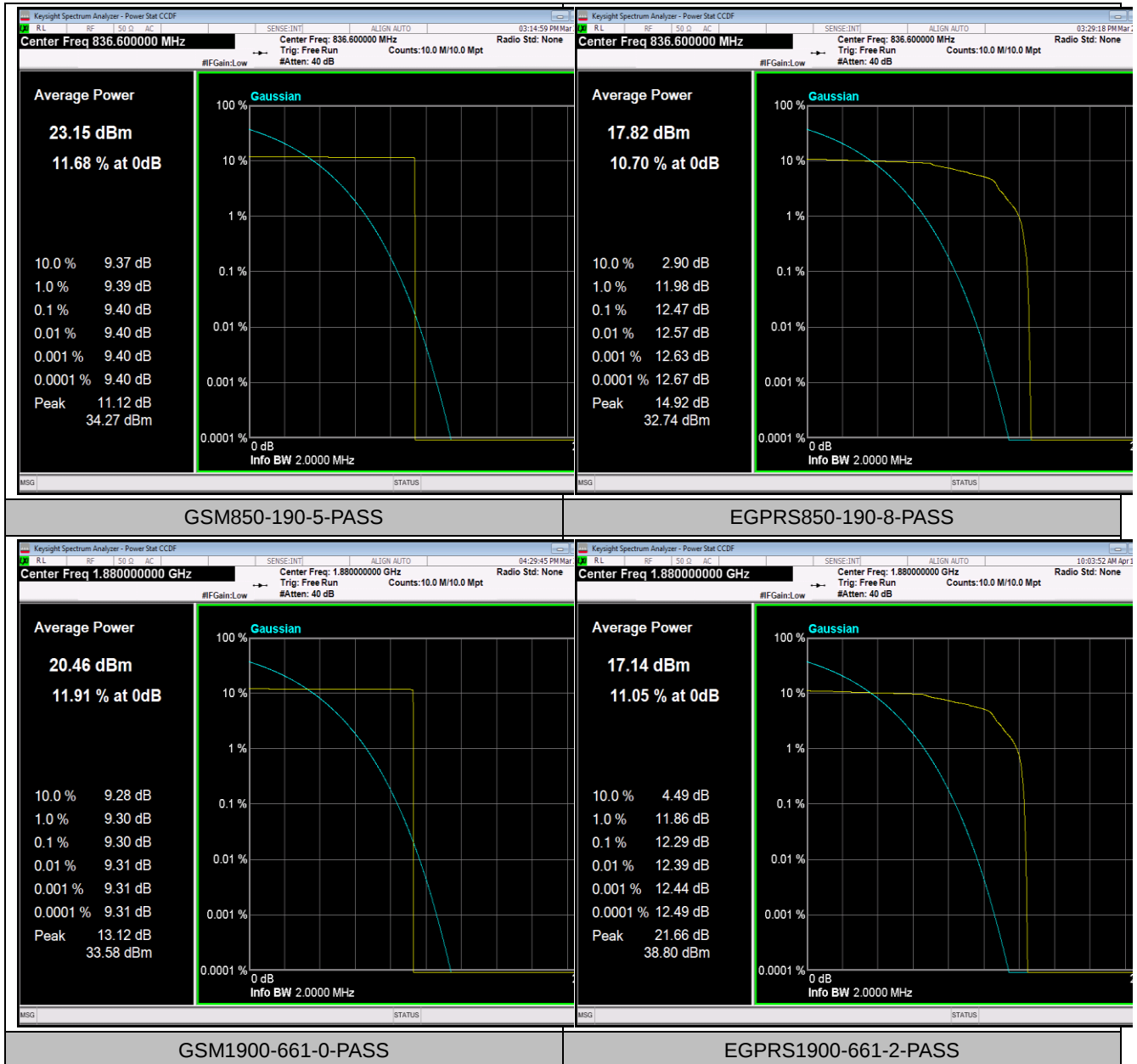
Appendix B: Peak-to-Average Ratio(CCDF)

Test Result

Band	Channel	Result(dB)	Limit(dB)	Verdict
GSM850	190	9.40	13	PASS
EGPRS850	190	12.47	13	PASS
GSM1900	661	9.30	13	PASS
EGPRS1900	661	12.29	13	PASS

Remark: All channel and all modulation had been tested, but only the worst case data displayed in this report.

Test Graphs

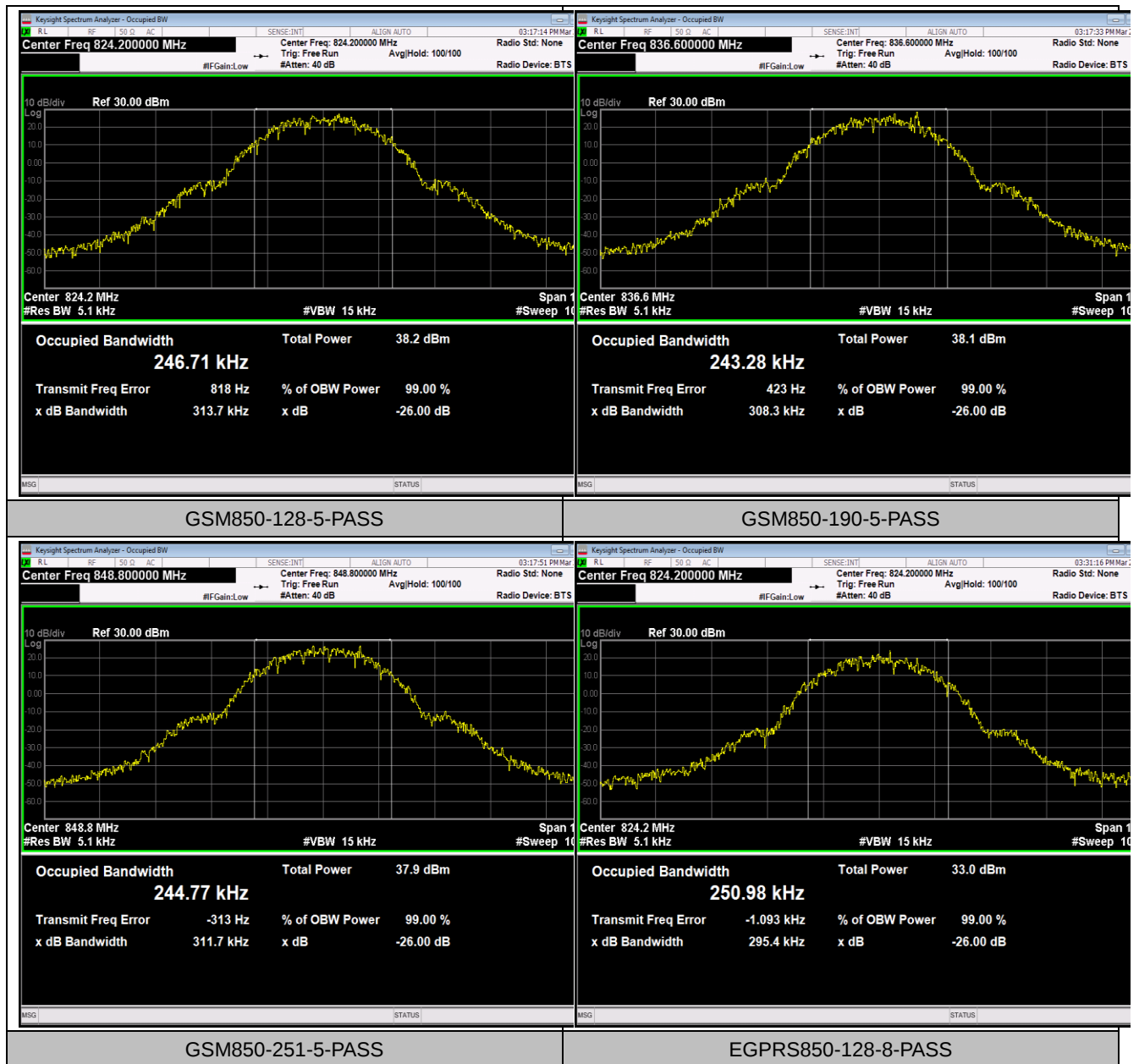


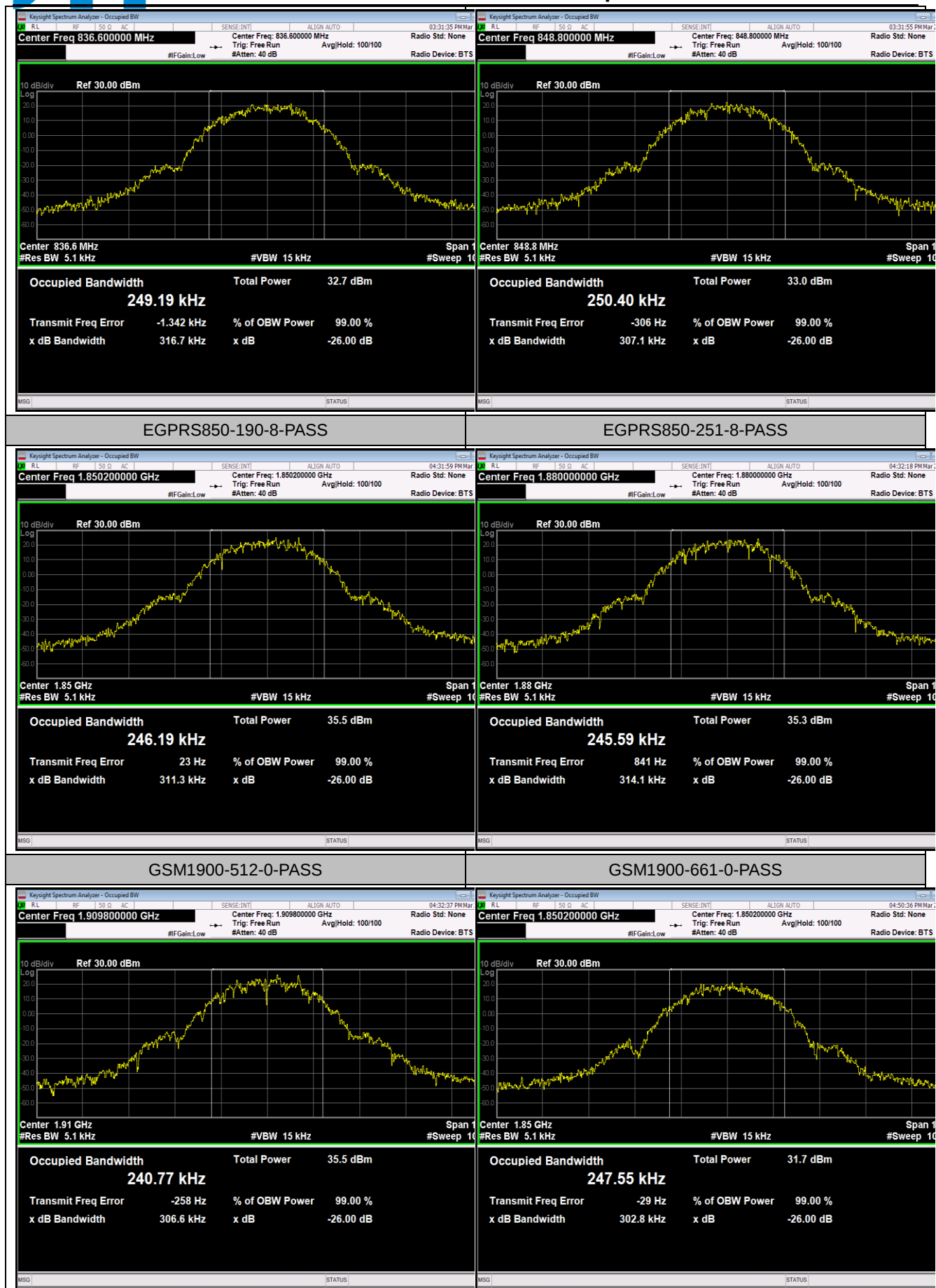
Appendix C: 26dB Bandwidth and Occupied Bandwidth

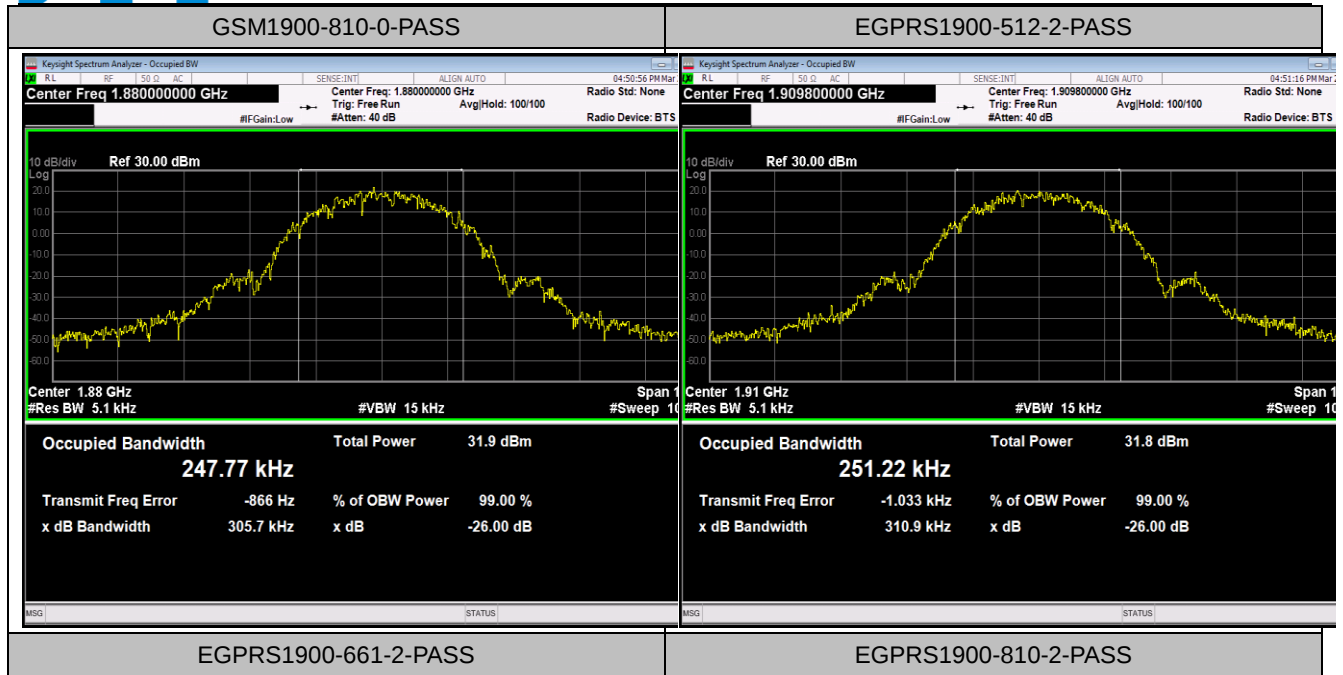
Test Result

Band	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
GSM850	128	0.24671	0.3137	---	PASS
GSM850	190	0.24328	0.3083	---	PASS
GSM850	251	0.24477	0.3117	---	PASS
EGPRS850	128	0.25098	0.2954	---	PASS
EGPRS850	190	0.24919	0.3167	---	PASS
EGPRS850	251	0.25040	0.3071	---	PASS
GSM1900	512	0.24619	0.3113	---	PASS
GSM1900	661	0.24559	0.3141	---	PASS
GSM1900	810	0.24077	0.3066	---	PASS
EGPRS1900	512	0.24755	0.3028	---	PASS
EGPRS1900	661	0.24777	0.3057	---	PASS
EGPRS1900	810	0.25122	0.3109	---	PASS

Test Graphs





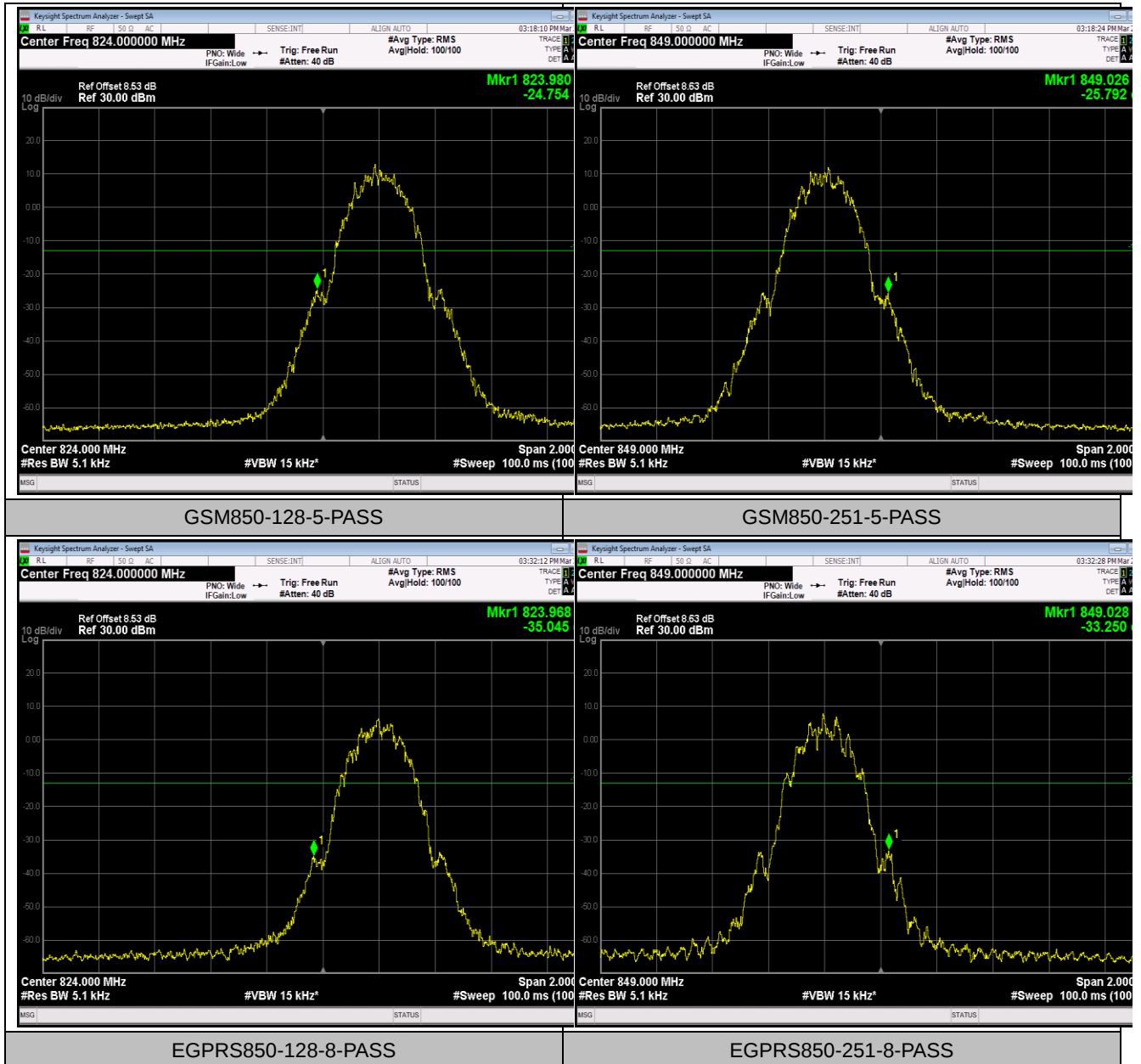


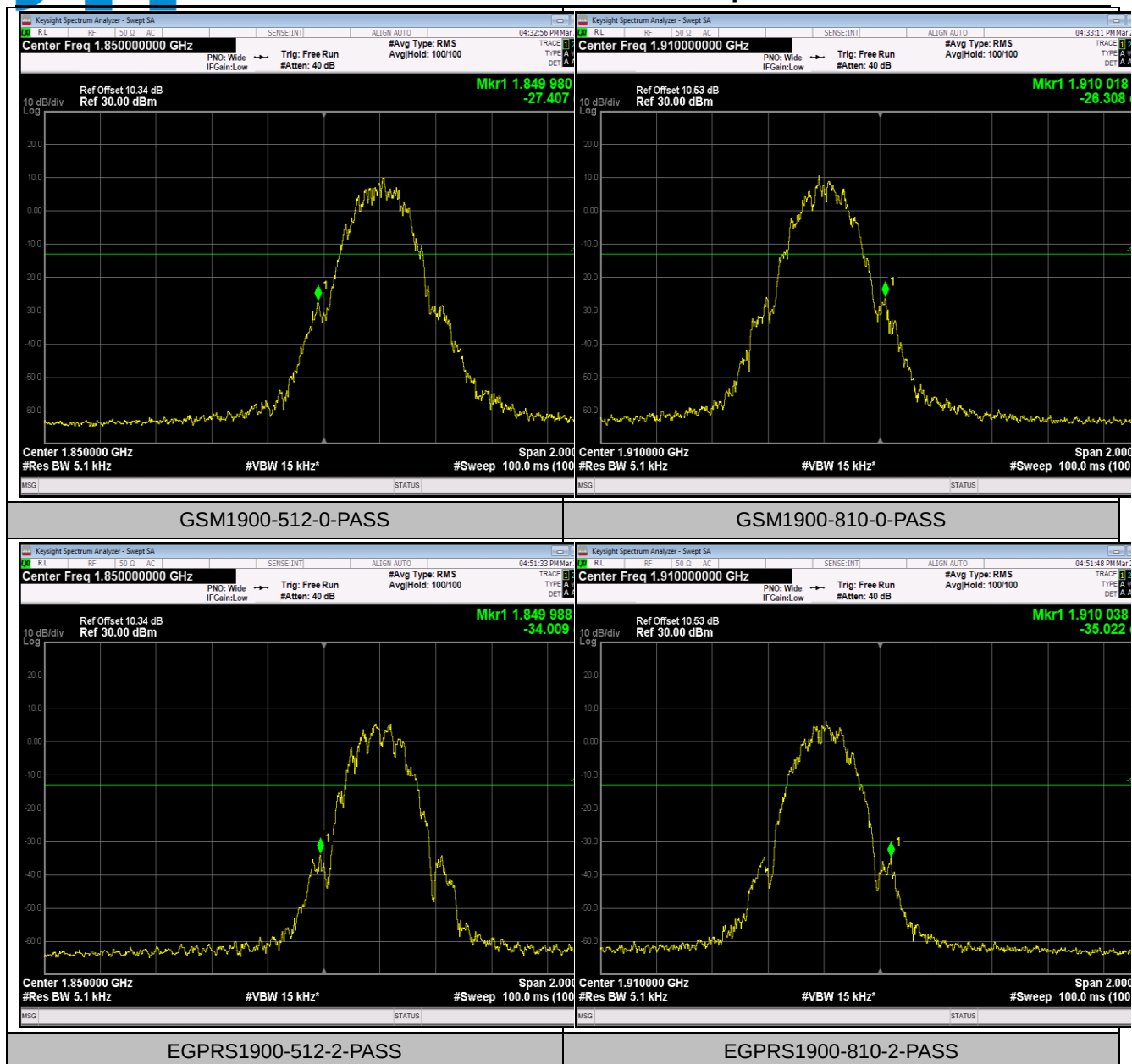
Appendix D: Band Edge

Test Result

Band	Channel	Freq (MHz)	Result (dBm)	Limit(dBm)	Verdict
GSM850	128	823.98	-24.75	-13	PASS
GSM850	251	849.03	-25.79	-13	PASS
EGPRS850	128	823.97	-35.04	-13	PASS
EGPRS850	251	849.03	-33.25	-13	PASS
GSM1900	512	1849.98	-27.41	-13	PASS
GSM1900	810	1910.02	-26.31	-13	PASS
EGPRS1900	512	1849.99	-34.01	-13	PASS
EGPRS1900	810	1910.04	-35.02	-13	PASS

Test Graphs





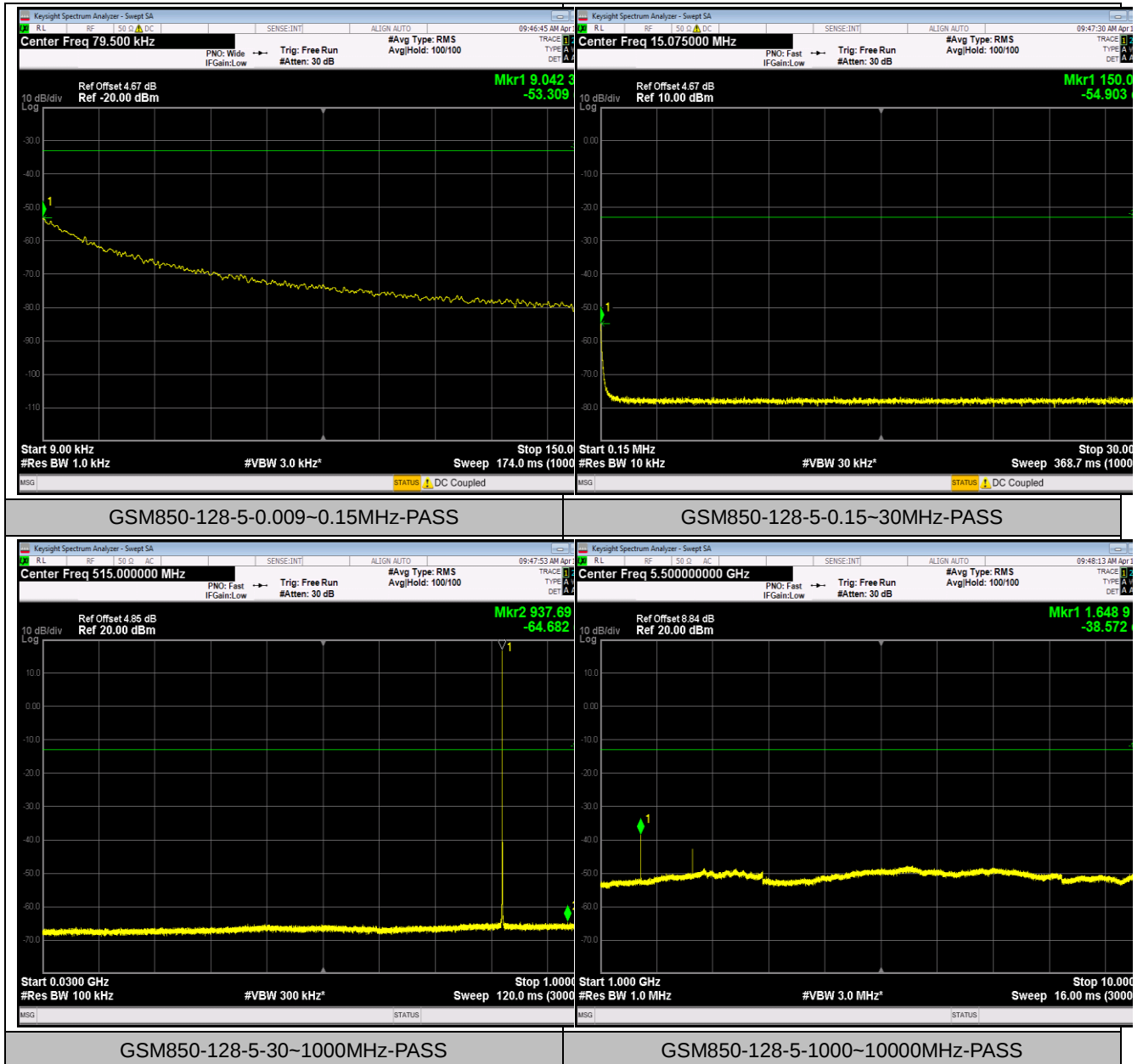
Appendix E: Conducted Spurious Emission

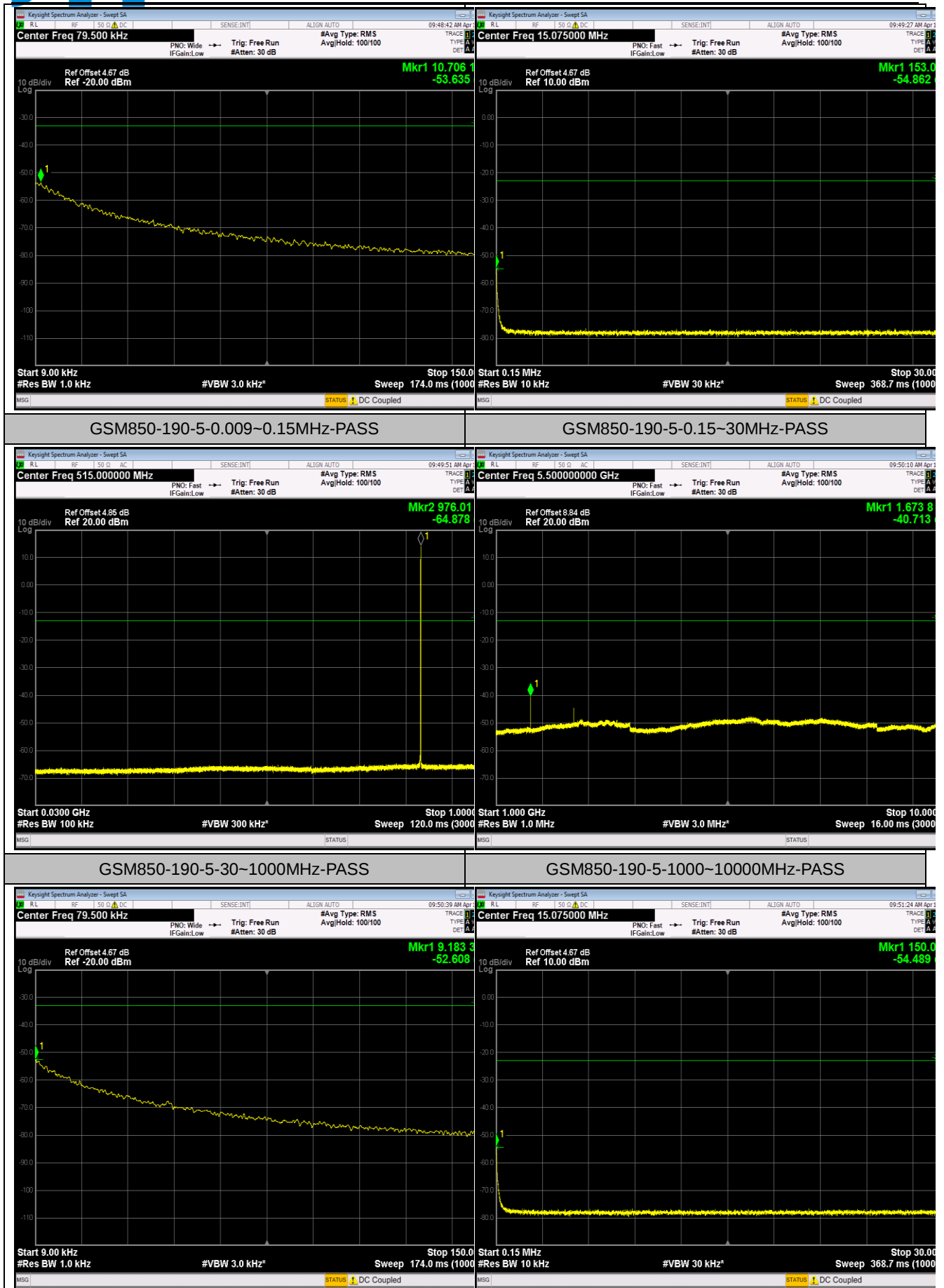
Test Result

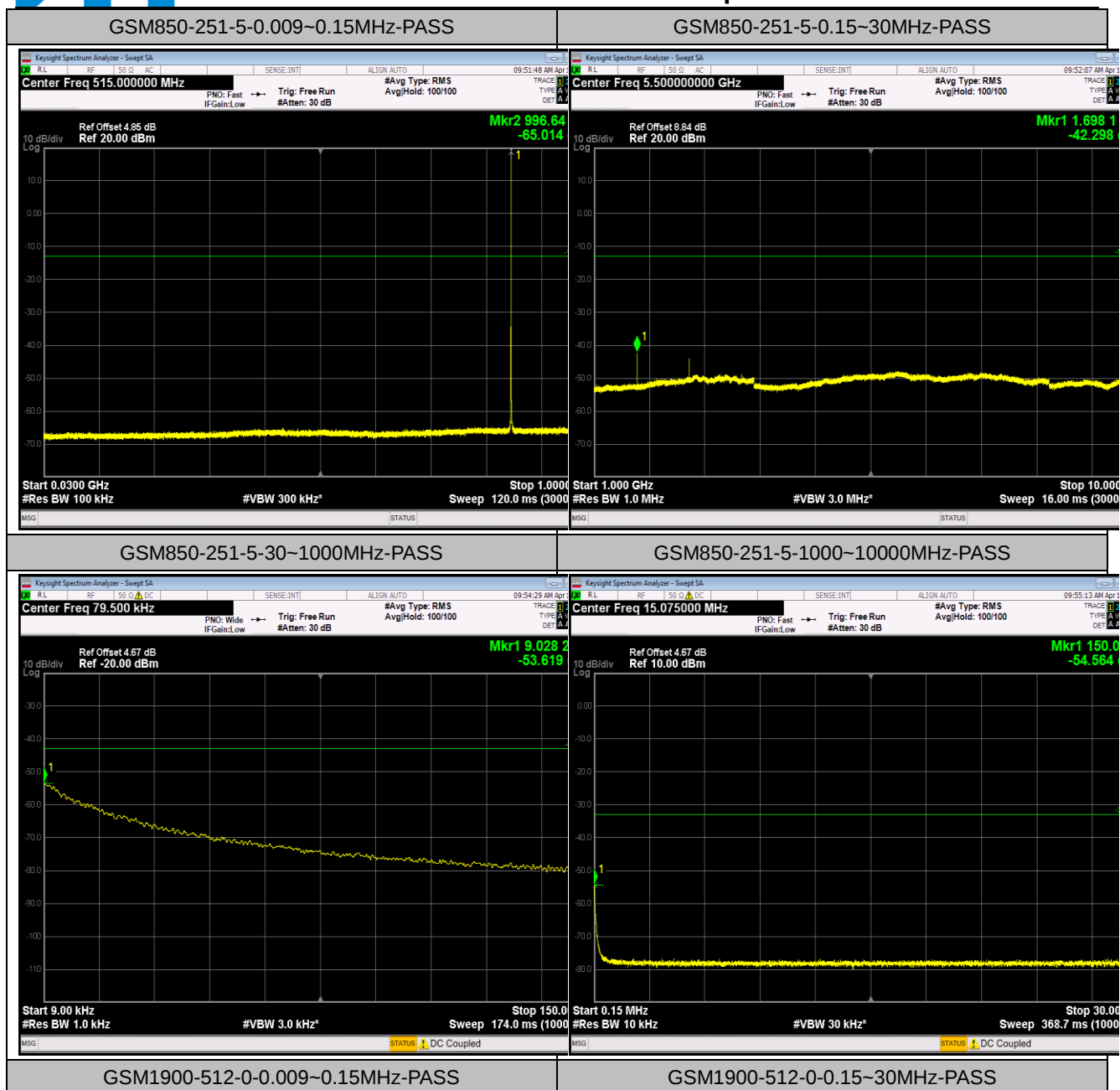
Band	Channel	Frequency Range(MHz)	Max.Freq. (MHz)	Result (dBm)	Limit (dBm)	Verdict
GSM850	128	0.009~0.15MHz	0.01	-53.31	-33	PASS
GSM850	128	0.15~30MHz	0.15	-54.9	-23	PASS
GSM850	128	30~1000MHz	937.69	-64.68	-13	PASS
GSM850	128	1000~10000MHz	1648.9	-38.57	-13	PASS
GSM850	190	0.009~0.15MHz	0.01	-53.64	-33	PASS
GSM850	190	0.15~30MHz	0.15	-54.86	-23	PASS
GSM850	190	30~1000MHz	976.01	-64.88	-13	PASS
GSM850	190	1000~10000MHz	1673.8	-40.71	-13	PASS
GSM850	251	0.009~0.15MHz	0.01	-52.61	-33	PASS
GSM850	251	0.15~30MHz	0.15	-54.49	-23	PASS
GSM850	251	30~1000MHz	996.64	-65.01	-13	PASS
GSM850	251	1000~10000MHz	1698.1	-42.3	-13	PASS
GSM1900	512	0.009~0.15MHz	0.01	-53.62	-43	PASS
GSM1900	512	0.15~30MHz	0.15	-54.56	-33	PASS
GSM1900	512	30~1000MHz	898.93	-54.74	-13	PASS
GSM1900	512	1000~18000MHz	17025.33	-43.49	-13	PASS
GSM1900	661	0.009~0.15MHz	0.01	-53.03	-43	PASS
GSM1900	661	0.15~30MHz	0.15	-54.68	-33	PASS
GSM1900	661	30~1000MHz	812.11	-54.47	-13	PASS
GSM1900	661	1000~18000MHz	17002.67	-43.35	-13	PASS
GSM1900	810	0.009~0.15MHz	0.01	-52.89	-43	PASS
GSM1900	810	0.15~30MHz	0.15	-55.21	-33	PASS
GSM1900	810	30~1000MHz	985.84	-54.81	-13	PASS
GSM1900	810	1000~18000MHz	17025.9	-43.48	-13	PASS

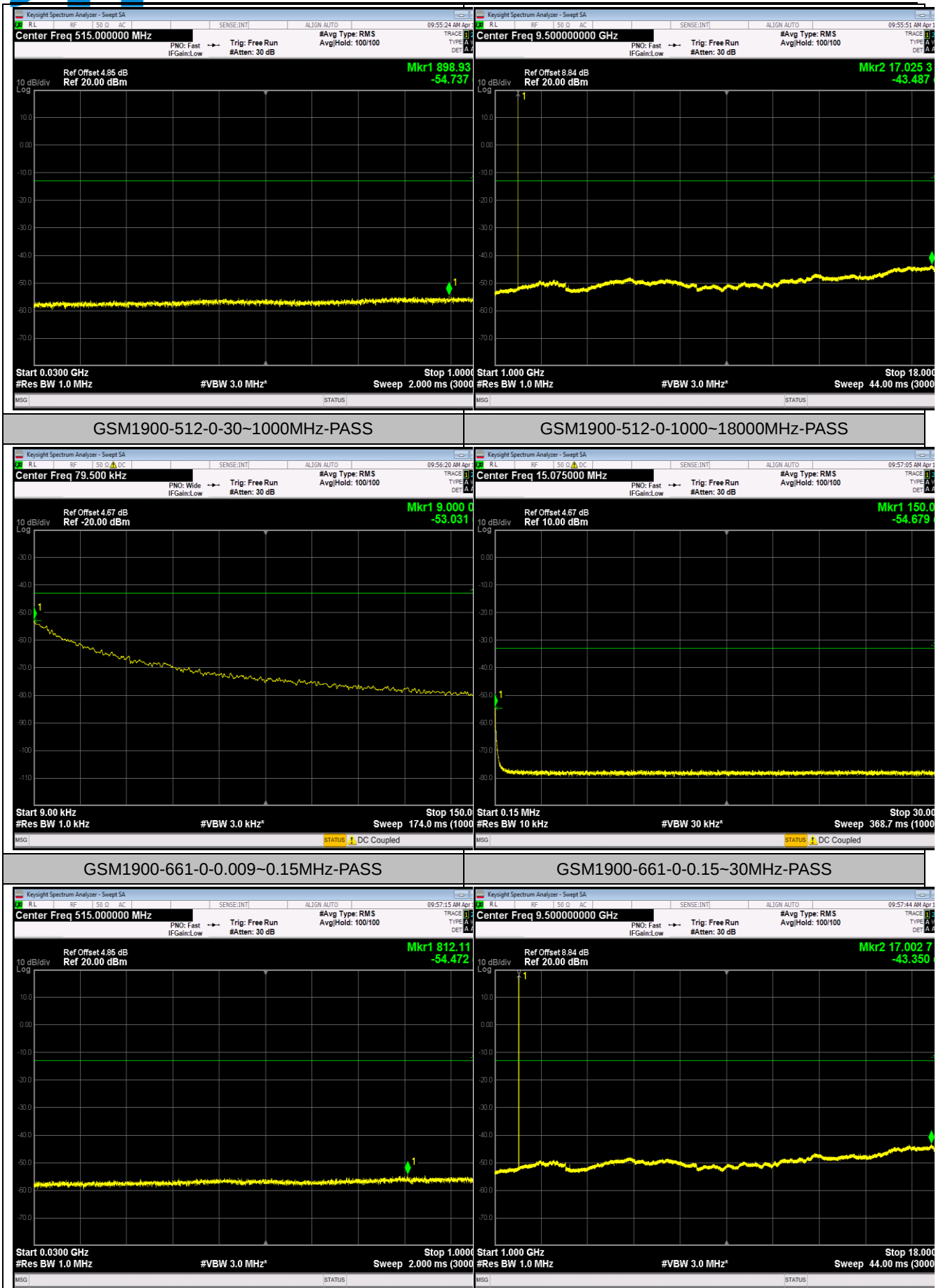
Remark: All channel and all modulation had been tested, but only the worst case data displayed in this report.

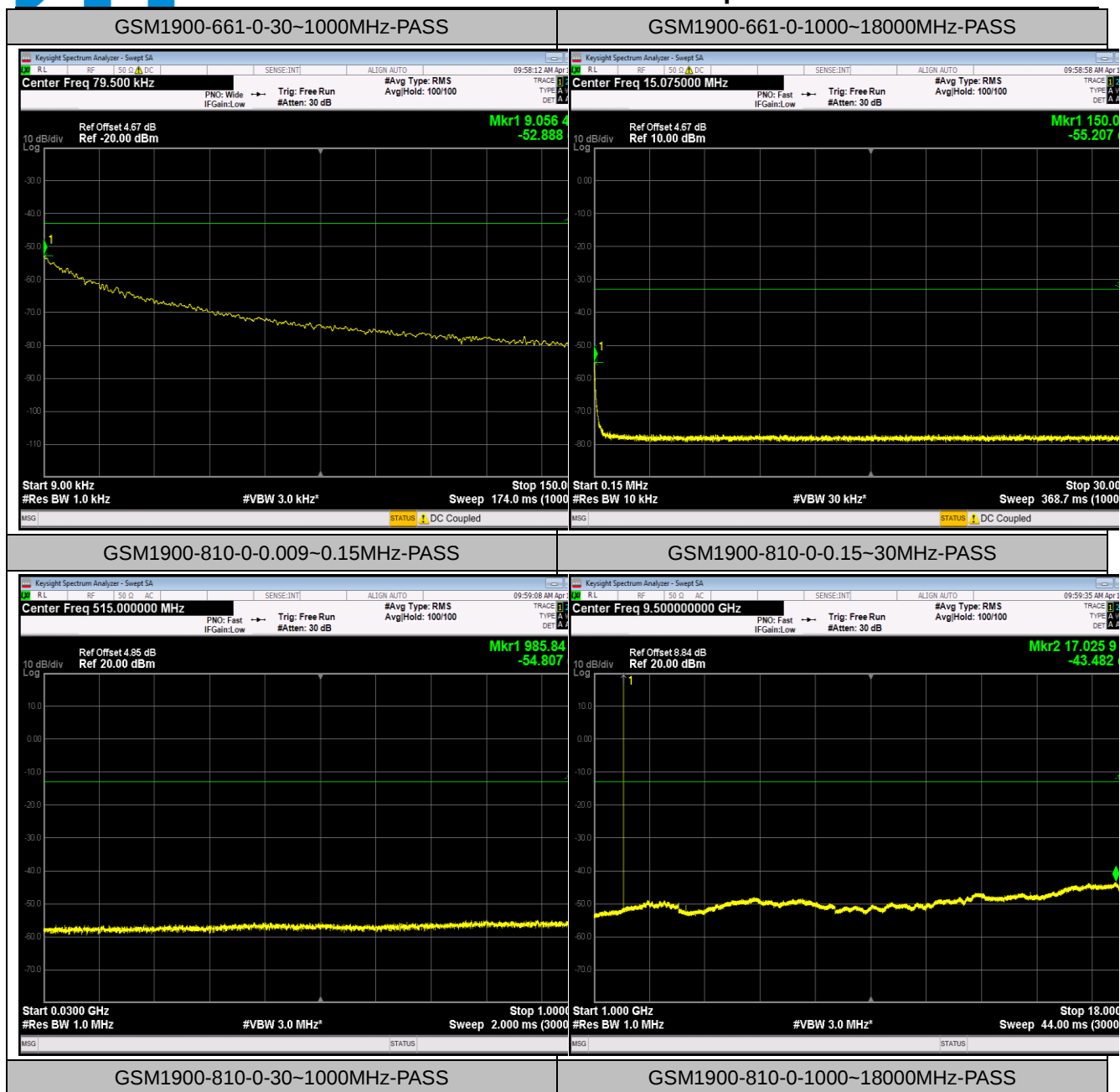
Test Graphs











Appendix F: Frequency Stability

Test Result

Reference Frequency: GSM850 Middle channel=190 Frequency=836.6MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.91	-30	-7.91	-0.009455	±2.5	Pass
	-20	-9.69	-0.011583		
	-10	-5.55	-0.006634		
	0	-5.65	-0.006754		
	10	3.42	0.004088		
	20	-4.58	-0.005475		
	30	-5.84	-0.006981		
	40	0.87	0.001040		
	50	-5.55	-0.006634		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	-14.69	-0.017559	±2.5	Pass
	3.91	-16.37	-0.019567		
	4.50	-10.98	-0.013125		
Remark: All channel had been tested, but only the worst case data displayed in this report.					

Reference Frequency: EGPRS850 Middle channel=190 Frequency=836.6MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.91	-30	-6.36	-0.007602	±2.5	Pass
	-20	-6.52	-0.007793		
	-10	-7.46	-0.008917		
	0	-16.95	-0.020261		
	10	-10.40	-0.012431		
	20	-11.91	-0.014236		
	30	-11.56	-0.013818		
	40	-13.82	-0.016519		
	50	-14.46	-0.017284		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	-3.29	-0.003933	±2.5	Pass
	3.91	-3.07	-0.003670		
	4.50	-6.20	-0.007411		
Remark: All channel had been tested, but only the worst case data displayed in this report.					

Reference Frequency: PCS1900 Middle channel=661 Frequency=1880MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.91	-30	-1.55	-0.000824	Within authorized band for PCS 1900	Pass
	-20	1.32	0.000702		
	-10	1.13	0.000601		
	0	-3.20	-0.001702		
	10	-5.91	-0.003144		
	20	0.77	0.000410		
	30	0.26	0.000138		
	40	-18.37	-0.009771		
	50	-13.50	-0.007181		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	-20.79	-0.011059	Within authorized band for PCS 1900	Pass
	3.91	-12.95	-0.006888		
	4.50	-11.01	-0.005856		
Remark: All channel had been tested, but only the worst case data displayed in this report.					

Reference Frequency: EGPRS1900 Middle channel=661 Frequency=1880MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.91	-30	-24.99	-0.013293	Within authorized band for PCS 1900	Pass
	-20	-16.50	-0.008777		
	-10	-10.94	-0.005819		
	0	-21.95	-0.011676		
	10	-32.51	-0.017293		
	20	-7.07	-0.003761		
	30	-11.36	-0.006043		
	40	-12.95	-0.006888		
	50	6.94	0.003691		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	-21.34	-0.011351	Within authorized band for PCS 1900	Pass
	3.91	-20.53	-0.010920		
	4.50	-22.21	-0.011814		
Remark: All channel had been tested, but only the worst case data displayed in this report.					

Appendix G: Modulation Characteristics

Test Result

Band	Channel	Result	Verdict
GSM850	190	PASS	PASS
EGPRS850	190	PASS	PASS
GSM1900	661	PASS	PASS
EGPRS1900	661	PASS	PASS

Remark: All channel had been tested, but only the worst case data displayed in this report.

Test Graphs

