

GSM850(ANT1) TX

PCS 1900(ANT0) TX

Appendix A: Effective (Isotropic) Radiated Power Output Data

Test Result

Band	Channel	PCL	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
GSM850	128	5	32.65	24.61	38.45	PASS
GSM850	190	5	32.64	24.6	38.45	PASS
GSM850	251	5	32.84	24.8	38.45	PASS
GSM1900	512	0	30.71	27.91	33.00	PASS
GSM1900	661	0	30.42	27.62	33.00	PASS
GSM1900	810	0	30.15	27.35	33.00	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
GPRS850	128	5	1	32.67	24.63	38.45	PASS
GPRS850	128	5	2	30.95	22.91	38.45	PASS
GPRS850	128	5	3	29.02	20.98	38.45	PASS
GPRS850	128	5	4	26.95	18.91	38.45	PASS
GPRS850	190	5	1	32.64	24.6	38.45	PASS
GPRS850	190	5	2	30.73	22.69	38.45	PASS
GPRS850	190	5	3	28.84	20.8	38.45	PASS
GPRS850	190	5	4	26.83	18.79	38.45	PASS
GPRS850	251	5	1	32.83	24.79	38.45	PASS
GPRS850	251	5	2	30.69	22.65	38.45	PASS
GPRS850	251	5	3	28.81	20.77	38.45	PASS
GPRS850	251	5	4	26.77	18.73	38.45	PASS
GPRS1900	512	0	1	30.69	27.89	33.00	PASS
GPRS1900	512	0	2	28.24	25.44	33.00	PASS
GPRS1900	512	0	3	26.73	23.93	33.00	PASS
GPRS1900	512	0	4	24.71	21.91	33.00	PASS
GPRS1900	661	0	1	30.38	27.58	33.00	PASS
GPRS1900	661	0	2	28.22	25.42	33.00	PASS
GPRS1900	661	0	3	26.68	23.88	33.00	PASS
GPRS1900	661	0	4	24.70	21.9	33.00	PASS
GPRS1900	810	0	1	30.20	27.4	33.00	PASS

GPRS1900	810	0	2	28.06	25.26	33.00	PASS
GPRS1900	810	0	3	26.54	23.74	33.00	PASS
GPRS1900	810	0	4	24.57	21.77	33.00	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
EGPRS850	128	8	1	25.35	17.31	38.45	PASS
EGPRS850	128	8	2	24.21	16.17	38.45	PASS
EGPRS850	128	8	3	22.11	14.07	38.45	PASS
EGPRS850	128	8	4	20.20	12.16	38.45	PASS
EGPRS850	190	8	1	25.53	17.49	38.45	PASS
EGPRS850	190	8	2	24.54	16.5	38.45	PASS
EGPRS850	190	8	3	22.63	14.59	38.45	PASS
EGPRS850	190	8	4	20.44	12.4	38.45	PASS
EGPRS850	251	8	1	25.43	17.39	38.45	PASS
EGPRS850	251	8	2	24.43	16.39	38.45	PASS
EGPRS850	251	8	3	22.67	14.63	38.45	PASS
EGPRS850	251	8	4	20.31	12.27	38.45	PASS
EGPRS1900	512	2	1	26.79	23.99	33.00	PASS
EGPRS1900	512	2	2	25.06	22.26	33.00	PASS
EGPRS1900	512	2	3	22.45	19.65	33.00	PASS
EGPRS1900	512	2	4	20.12	17.32	33.00	PASS
EGPRS1900	661	2	1	26.89	24.09	33.00	PASS
EGPRS1900	661	2	2	25.06	22.26	33.00	PASS
EGPRS1900	661	2	3	22.59	19.79	33.00	PASS
EGPRS1900	661	2	4	20.43	17.63	33.00	PASS
EGPRS1900	810	2	1	26.60	23.8	33.00	PASS
EGPRS1900	810	2	2	24.77	21.97	33.00	PASS
EGPRS1900	810	2	3	22.22	19.42	33.00	PASS
EGPRS1900	810	2	4	20.11	17.31	33.00	PASS

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

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

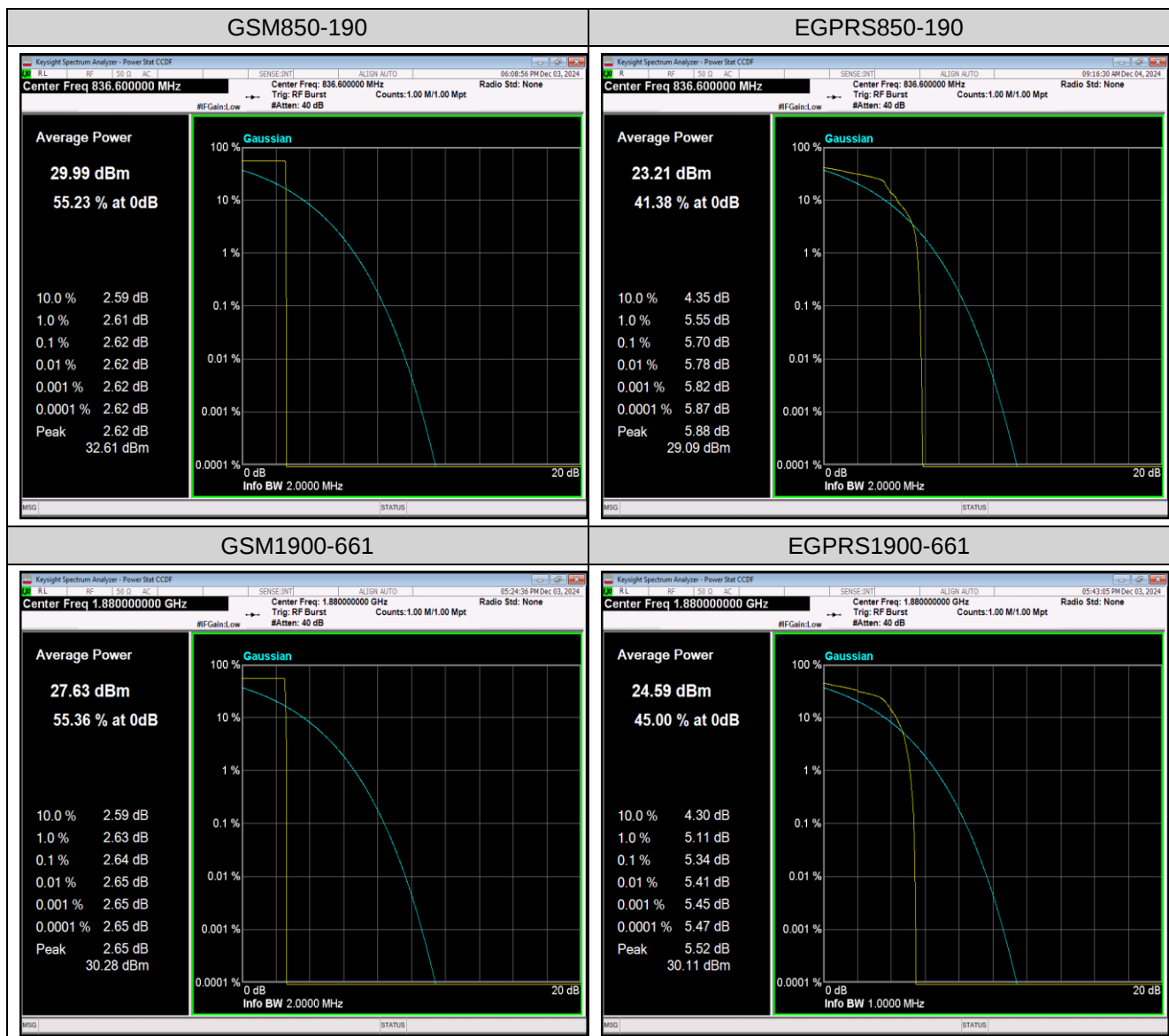
Appendix B: Peak-to-Average Ratio(CCDF)

Test Result

Band	Channel	PCL	Result(dB)	Limit(dB)	Verdict
GSM850	190	5	2.62	13	PASS
EGPRS850	190	8	5.7	13	PASS
GSM1900	661	0	2.64	13	PASS
EGPRS1900	661	2	5.34	13	PASS

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

Test Graphs

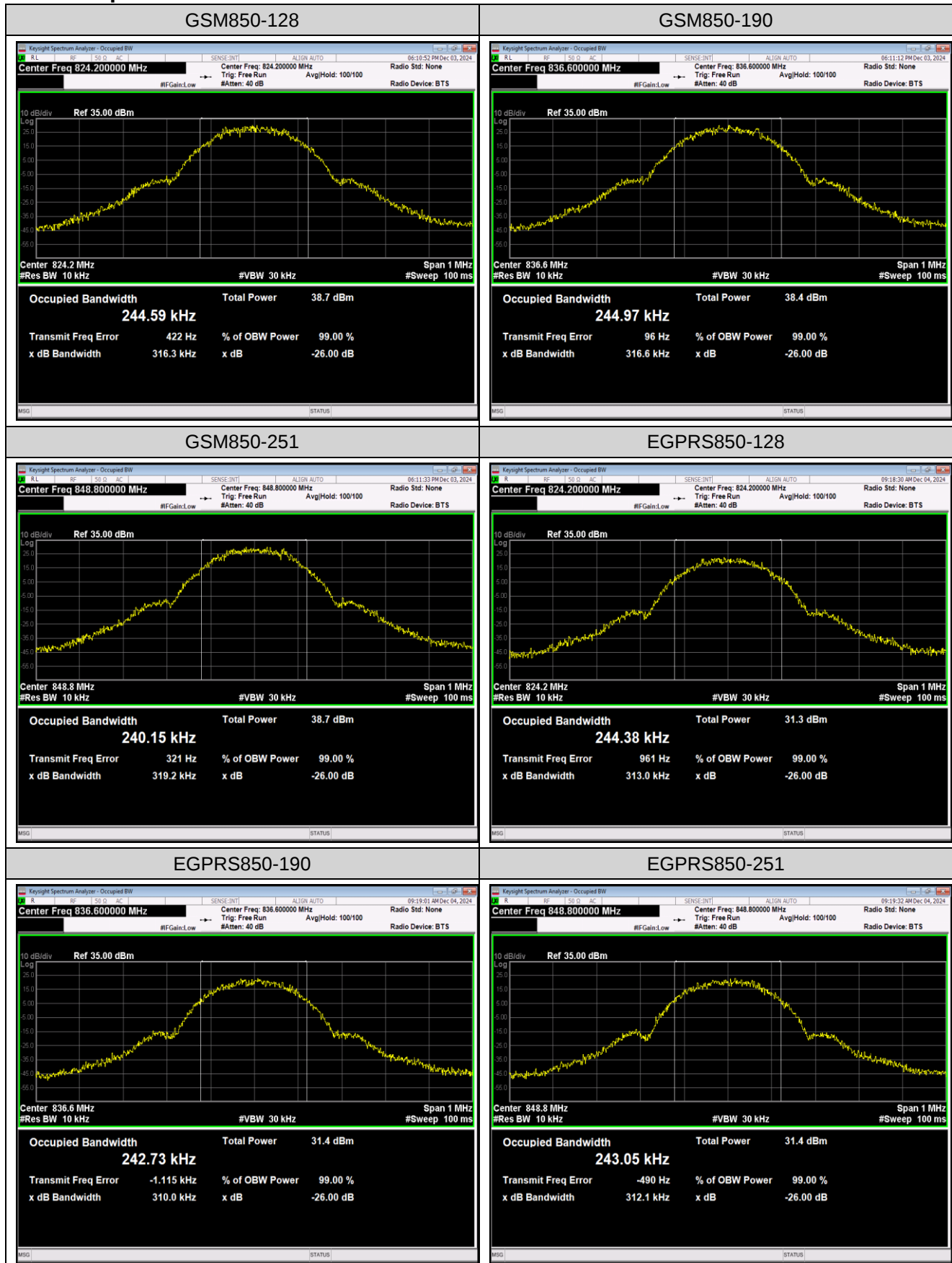


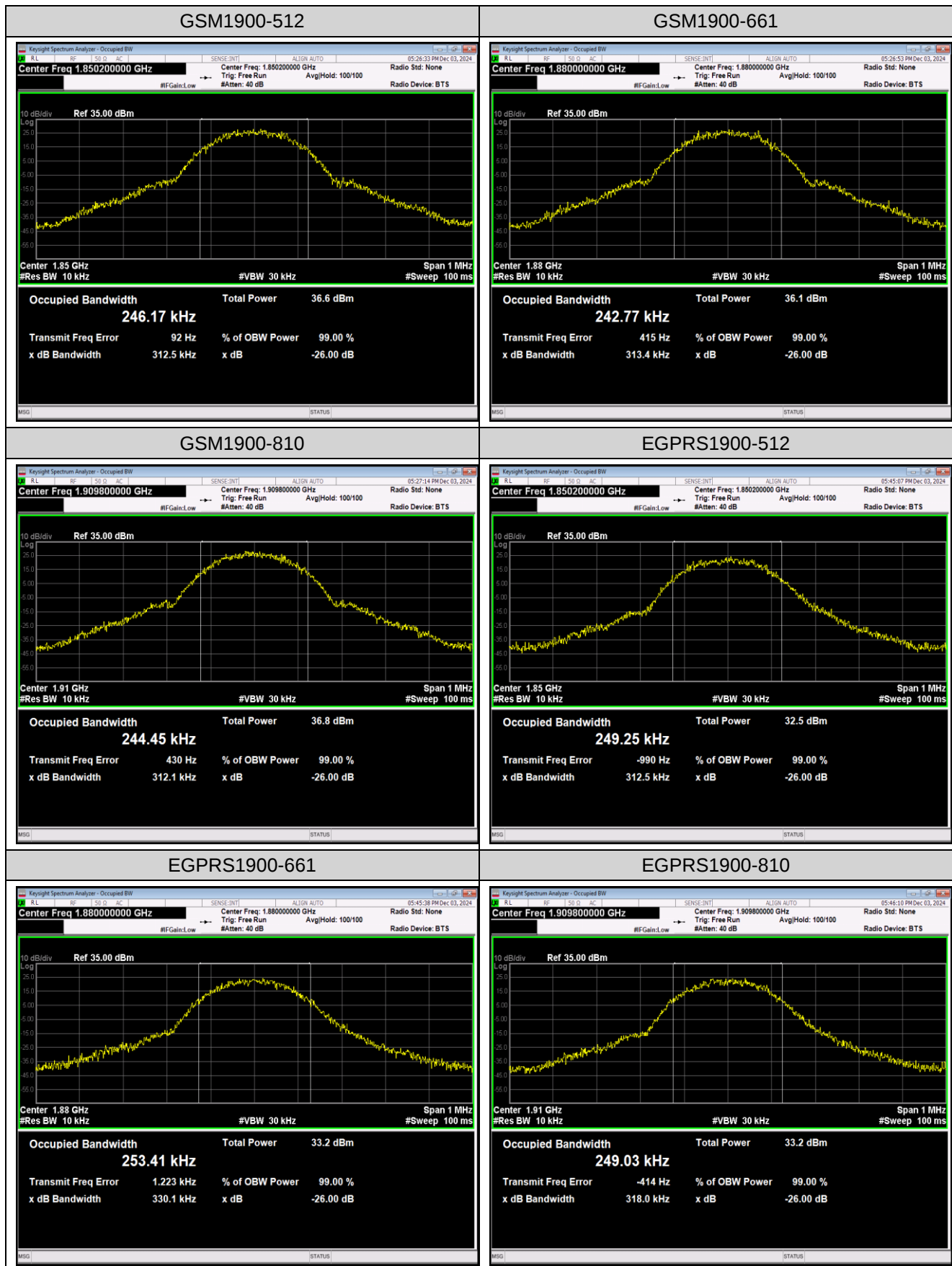
Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

Band	Channel	PCL	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
GSM850	128	5	0.24459	0.3163	---	PASS
GSM850	190	5	0.24497	0.3166	---	PASS
GSM850	251	5	0.24015	0.3192	---	PASS
EGPRS850	128	8	0.24438	0.3130	---	PASS
EGPRS850	190	8	0.24273	0.3100	---	PASS
EGPRS850	251	8	0.24305	0.3121	---	PASS
GSM1900	512	0	0.24617	0.3125	---	PASS
GSM1900	661	0	0.24277	0.3134	---	PASS
GSM1900	810	0	0.24445	0.3121	---	PASS
EGPRS1900	512	2	0.24925	0.3125	---	PASS
EGPRS1900	661	2	0.25341	0.3301	---	PASS
EGPRS1900	810	2	0.24903	0.3180	---	PASS

Test Graphs



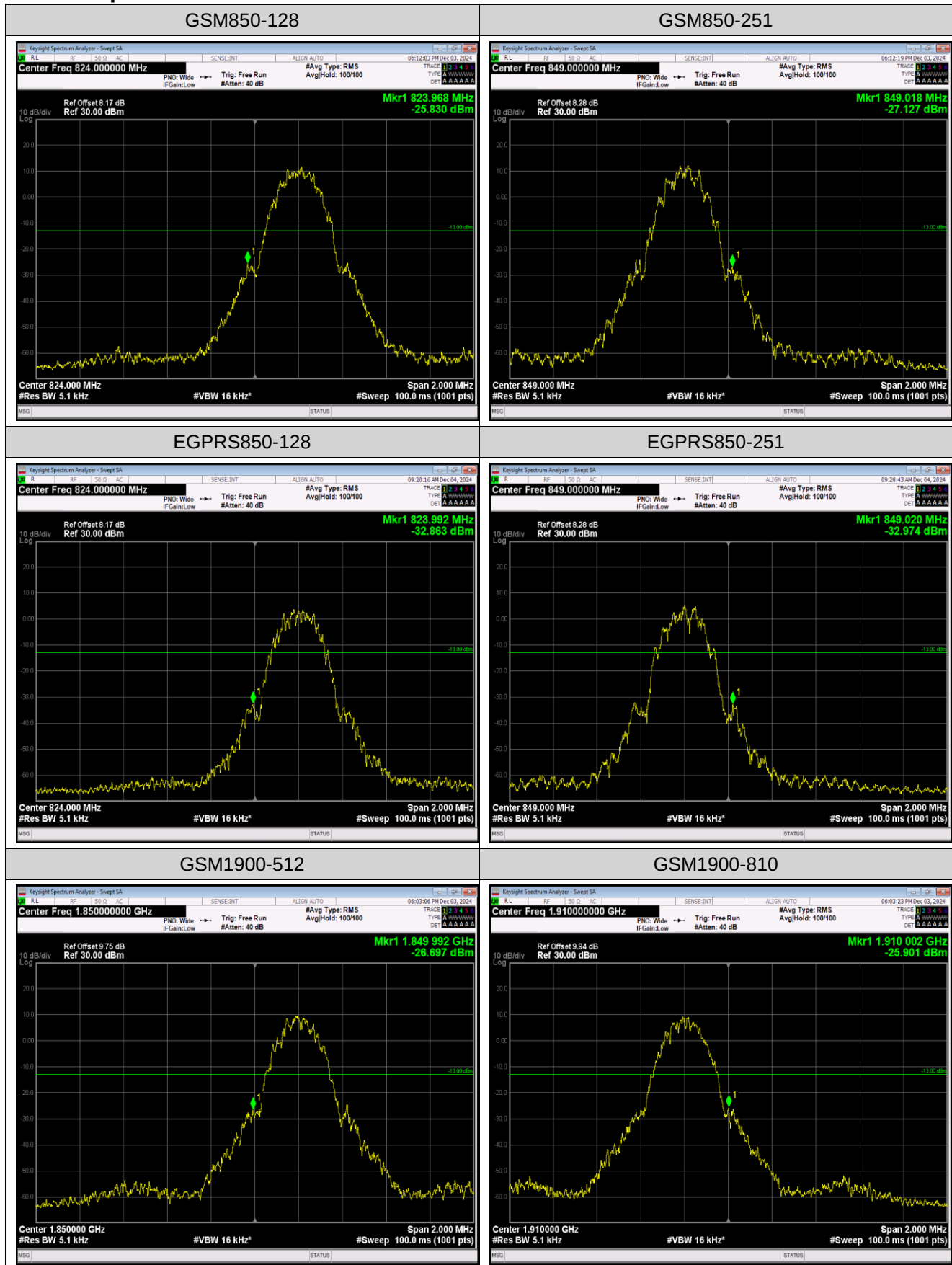


Appendix D: Band Edge

Test Result

Band	Channel	PCL	Freq (MHz)	Result (dBm)	Limit(dBm)	Verdict
GSM850	128	5	823.97	-25.83	-13	PASS
GSM850	251	5	849.02	-27.13	-13	PASS
EGPRS850	128	8	823.99	-32.86	-13	PASS
EGPRS850	251	8	849.02	-32.97	-13	PASS
GSM1900	512	0	1849.99	-26.70	-13	PASS
GSM1900	810	0	1910.00	-25.90	-13	PASS
EGPRS1900	512	2	1849.99	-18.76	-13	PASS
EGPRS1900	810	2	1910.00	-15.49	-13	PASS

Test Graphs

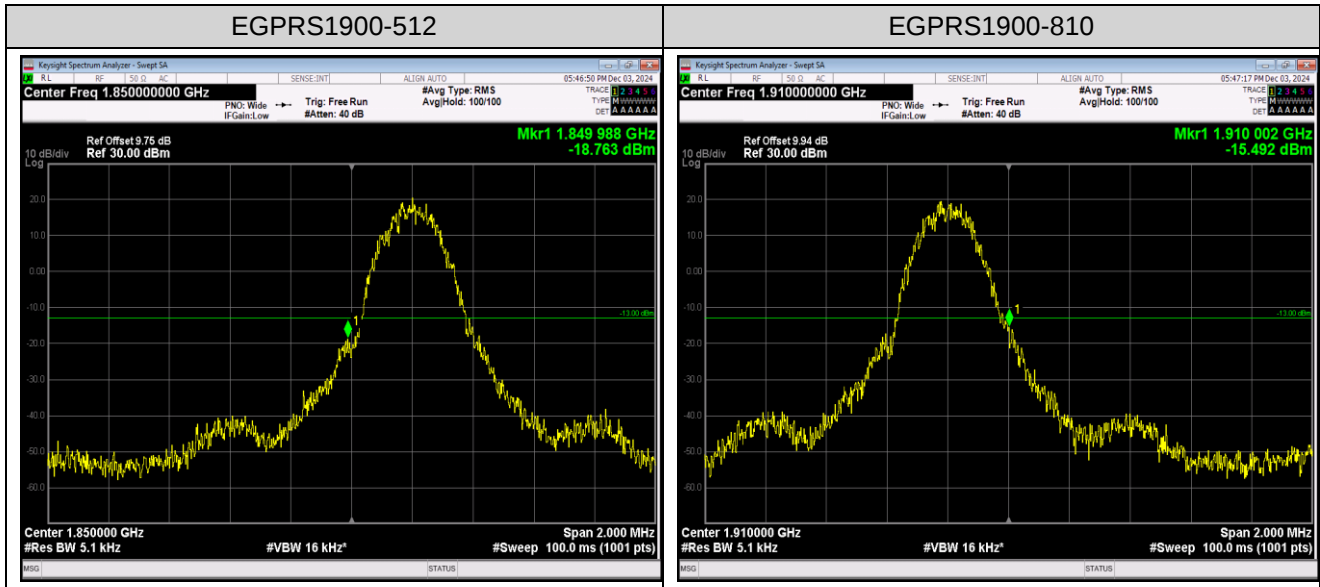


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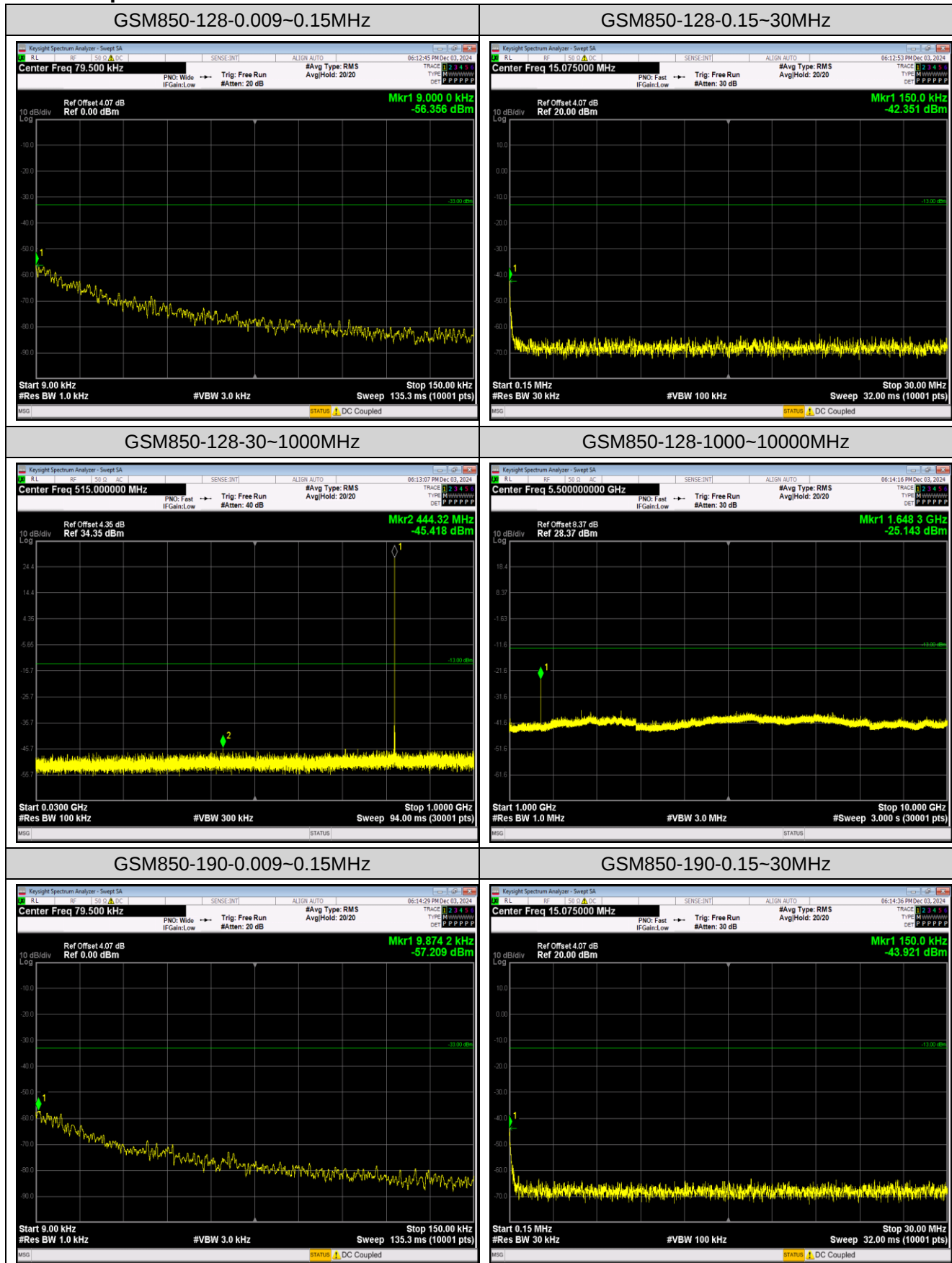
Appendix E: Conducted Spurious Emission

Test Result

Band	Channel	PCL	Frequency Range(MHz)	Max.Freq. (MHz)	Result (dBm)	Limit (dBm)	Verdict
GSM850	128	5	0.009~0.15MHz	0.01	-56.36	-33	PASS
GSM850	128	5	0.15~30MHz	0.15	-42.35	-13	PASS
GSM850	128	5	30~1000MHz	444.32	-45.42	-13	PASS
GSM850	128	5	1000~10000MHz	1648.3	-25.14	-13	PASS
GSM850	190	5	0.009~0.15MHz	0.01	-57.21	-33	PASS
GSM850	190	5	0.15~30MHz	0.15	-43.92	-13	PASS
GSM850	190	5	30~1000MHz	516.94	-45.3	-13	PASS
GSM850	190	5	1000~10000MHz	1673.2	-28.09	-13	PASS
GSM850	251	5	0.009~0.15MHz	0.01	-54.86	-33	PASS
GSM850	251	5	0.15~30MHz	0.15	-43.45	-13	PASS
GSM850	251	5	30~1000MHz	998.87	-45.83	-13	PASS
GSM850	251	5	1000~10000MHz	1697.5	-29.14	-13	PASS
GSM1900	512	0	0.009~0.15MHz	0.01	-56.57	-43	PASS
GSM1900	512	0	0.15~30MHz	0.15	-42.76	-23	PASS
GSM1900	512	0	30~1000MHz	958.68	-45.63	-13	PASS
GSM1900	512	0	1000~18000MHz	16206.5	-22.3	-13	PASS
GSM1900	661	0	0.009~0.15MHz	0.01	-57.14	-43	PASS
GSM1900	661	0	0.15~30MHz	0.16	-42.18	-23	PASS
GSM1900	661	0	30~1000MHz	719.9	-45.67	-13	PASS
GSM1900	661	0	1000~18000MHz	16052.93	-22.99	-13	PASS
GSM1900	810	0	0.009~0.15MHz	0.01	-55.3	-43	PASS
GSM1900	810	0	0.15~30MHz	0.15	-42.34	-23	PASS
GSM1900	810	0	30~1000MHz	518.78	-46.09	-13	PASS
GSM1900	810	0	1000~18000MHz	16213.3	-22.4	-13	PASS

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

Test Graphs

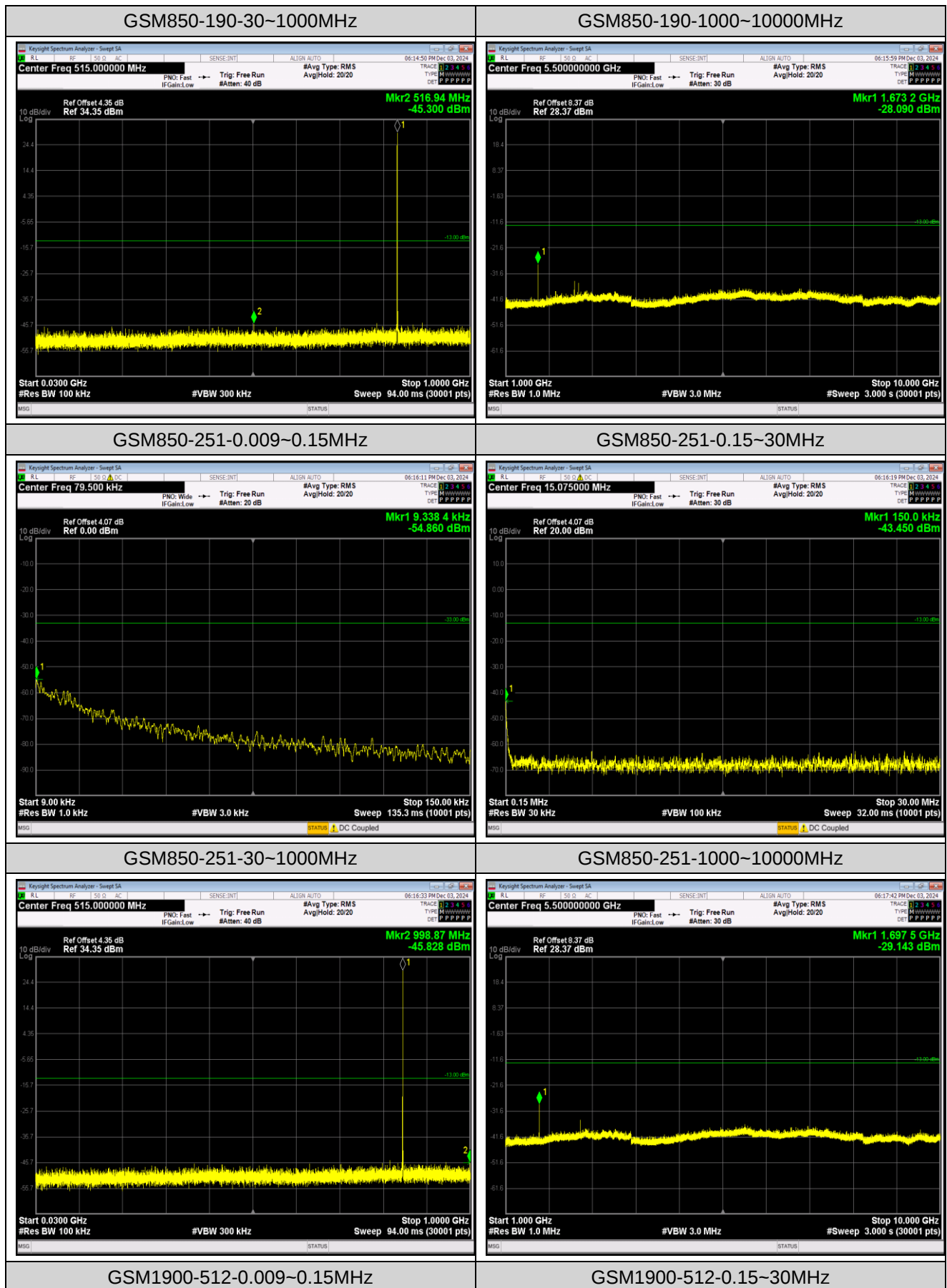


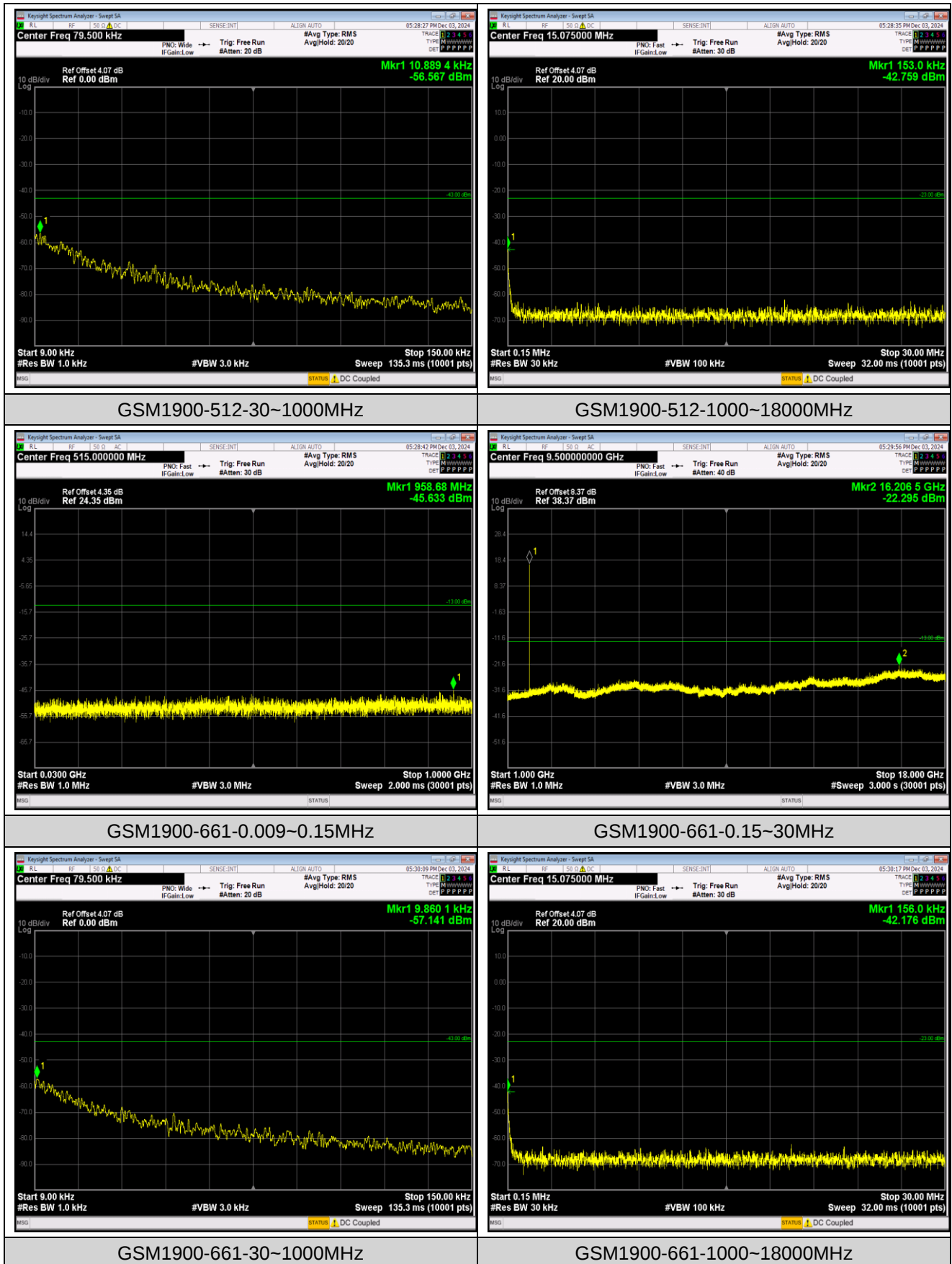
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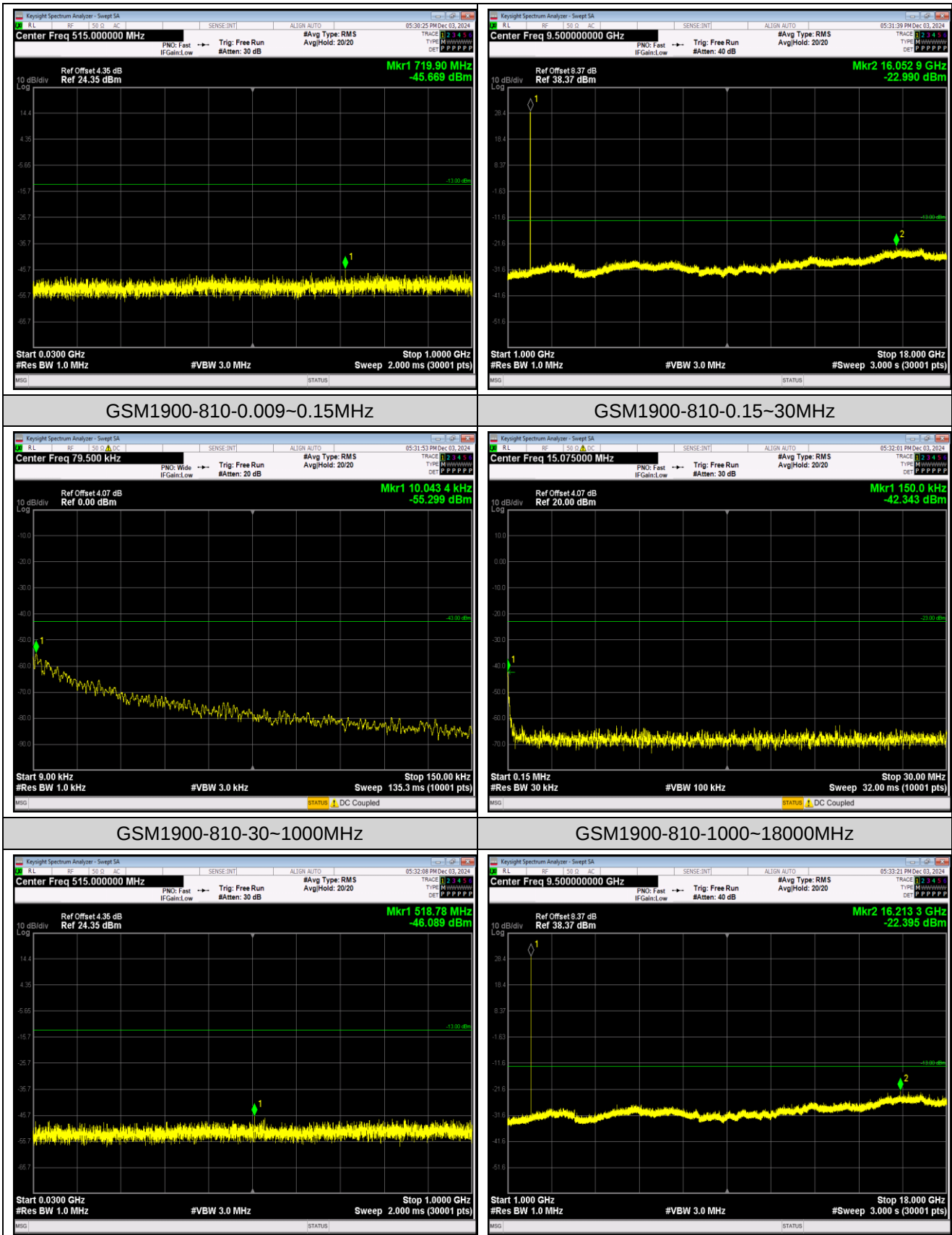
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Appendix F: Frequency Stability

Test Result

Reference Frequency: GSM850 Middle channel=190 Frequency=836.6MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	0.16	0.000191	±2.5	Pass
	-20	1.97	0.002355		
	-10	0.29	0.000347		
	0	-0.36	-0.000430		
	10	-2.36	-0.002821		
	20	1.78	0.002128		
	30	0.90	0.001076		
	40	7.59	0.009072		
	50	4.42	0.005283		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	0.10	0.000120	±2.5	Pass
	3.85	1.26	0.001506		
	4.40	-0.61	-0.000729		
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		
3.85	-30	0.81	0.000968	±2.5	Pass
	-20	-2.39	-0.002857		
	-10	-3.68	-0.004399		
	0	-2.97	-0.003550		
	10	-2.74	-0.003275		
	20	-5.07	-0.006060		
	30	-0.55	-0.000657		
	40	-3.23	-0.003861		
	50	0.26	0.000311		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	-1.45	-0.001733	±2.5	Pass
	3.85	-4.65	-0.005558		
	4.40	-3.03	-0.003622		
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 (℃)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	-3.58	-0.001904	Within authorized band for PCS 1900	Pass
	-20	-13.85	-0.007367		
	-10	-2.65	-0.001410		
	0	-4.23	-0.002250		
	10	13.66	0.007266		
	20	7.91	0.004207		
	30	6.23	0.003314		
	40	-1.81	-0.000963		
	50	-9.43	-0.005016		
Voltage					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	12.85	0.006835	Within authorized band for PCS 1900	Pass
	3.85	3.10	0.001649		
	4.40	14.43	0.007676		
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 (℃)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	-6.36	-0.003383	Within authorized band for PCS 1900	Pass
	-20	2.74	0.001457		
	-10	-3.13	-0.001665		
	0	-2.55	-0.001356		
	10	1.10	0.000585		
	20	-0.45	-0.000239		
	30	11.14	0.005926		
	40	0.39	0.000207		
	50	3.55	0.001888		
Voltage					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	2.36	0.001255	Within authorized band for PCS 1900	Pass
	3.85	-0.74	-0.000394		
	4.40	-11.24	-0.005979		
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

