

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	33.66	28.06	38.45	PASS
GSM850	190	5	33.67	28.07	38.45	PASS
GSM850	251	5	33.57	27.97	38.45	PASS
GSM1900	512	0	30.54	29.54	33.00	PASS
GSM1900	661	0	30.81	29.81	33.00	PASS
GSM1900	810	0	30.75	29.75	33.00	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
GPRS850	128	5	1	33.60	28	38.45	PASS
GPRS850	128	5	2	32.65	27.05	38.45	PASS
GPRS850	128	5	3	30.70	25.1	38.45	PASS
GPRS850	128	5	4	29.65	24.05	38.45	PASS
GPRS850	190	5	1	33.61	28.01	38.45	PASS
GPRS850	190	5	2	32.68	27.08	38.45	PASS
GPRS850	190	5	3	30.70	25.1	38.45	PASS
GPRS850	190	5	4	29.67	24.07	38.45	PASS
GPRS850	251	5	1	33.49	27.89	38.45	PASS
GPRS850	251	5	2	32.55	26.95	38.45	PASS
GPRS850	251	5	3	30.60	25	38.45	PASS
GPRS850	251	5	4	29.57	23.97	38.45	PASS
GPRS1900	512	0	1	30.52	29.52	33.00	PASS
GPRS1900	512	0	2	29.33	28.33	33.00	PASS
GPRS1900	512	0	3	27.19	26.19	33.00	PASS
GPRS1900	512	0	4	26.39	25.39	33.00	PASS
GPRS1900	661	0	1	30.78	29.78	33.00	PASS
GPRS1900	661	0	2	29.61	28.61	33.00	PASS
GPRS1900	661	0	3	27.49	26.49	33.00	PASS
GPRS1900	661	0	4	26.69	25.69	33.00	PASS
GPRS1900	810	0	1	30.71	29.71	33.00	PASS
GPRS1900	810	0	2	29.54	28.54	33.00	PASS
GPRS1900	810	0	3	27.45	26.45	33.00	PASS
GPRS1900	810	0	4	26.65	25.65	33.00	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
EGPRS850	128	8	1	27.62	22.02	38.45	PASS
EGPRS850	128	8	2	26.53	20.93	38.45	PASS
EGPRS850	128	8	3	24.44	18.84	38.45	PASS
EGPRS850	128	8	4	23.31	17.71	38.45	PASS
EGPRS850	190	8	1	27.56	21.96	38.45	PASS
EGPRS850	190	8	2	26.57	20.97	38.45	PASS
EGPRS850	190	8	3	24.39	18.79	38.45	PASS
EGPRS850	190	8	4	23.32	17.72	38.45	PASS
EGPRS850	251	8	1	27.66	22.06	38.45	PASS
EGPRS850	251	8	2	26.53	20.93	38.45	PASS
EGPRS850	251	8	3	24.41	18.81	38.45	PASS
EGPRS850	251	8	4	23.31	17.71	38.45	PASS
EGPRS1900	512	2	1	26.67	25.67	33.00	PASS
EGPRS1900	512	2	2	25.68	24.68	33.00	PASS
EGPRS1900	512	2	3	23.41	22.41	33.00	PASS
EGPRS1900	512	2	4	22.16	21.16	33.00	PASS
EGPRS1900	661	2	1	26.61	25.61	33.00	PASS
EGPRS1900	661	2	2	25.58	24.58	33.00	PASS
EGPRS1900	661	2	3	23.37	22.37	33.00	PASS
EGPRS1900	661	2	4	22.18	21.18	33.00	PASS
EGPRS1900	810	2	1	26.37	25.37	33.00	PASS
EGPRS1900	810	2	2	25.41	24.41	33.00	PASS
EGPRS1900	810	2	3	23.22	22.22	33.00	PASS
EGPRS1900	810	2	4	21.94	20.94	33.00	PASS

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

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

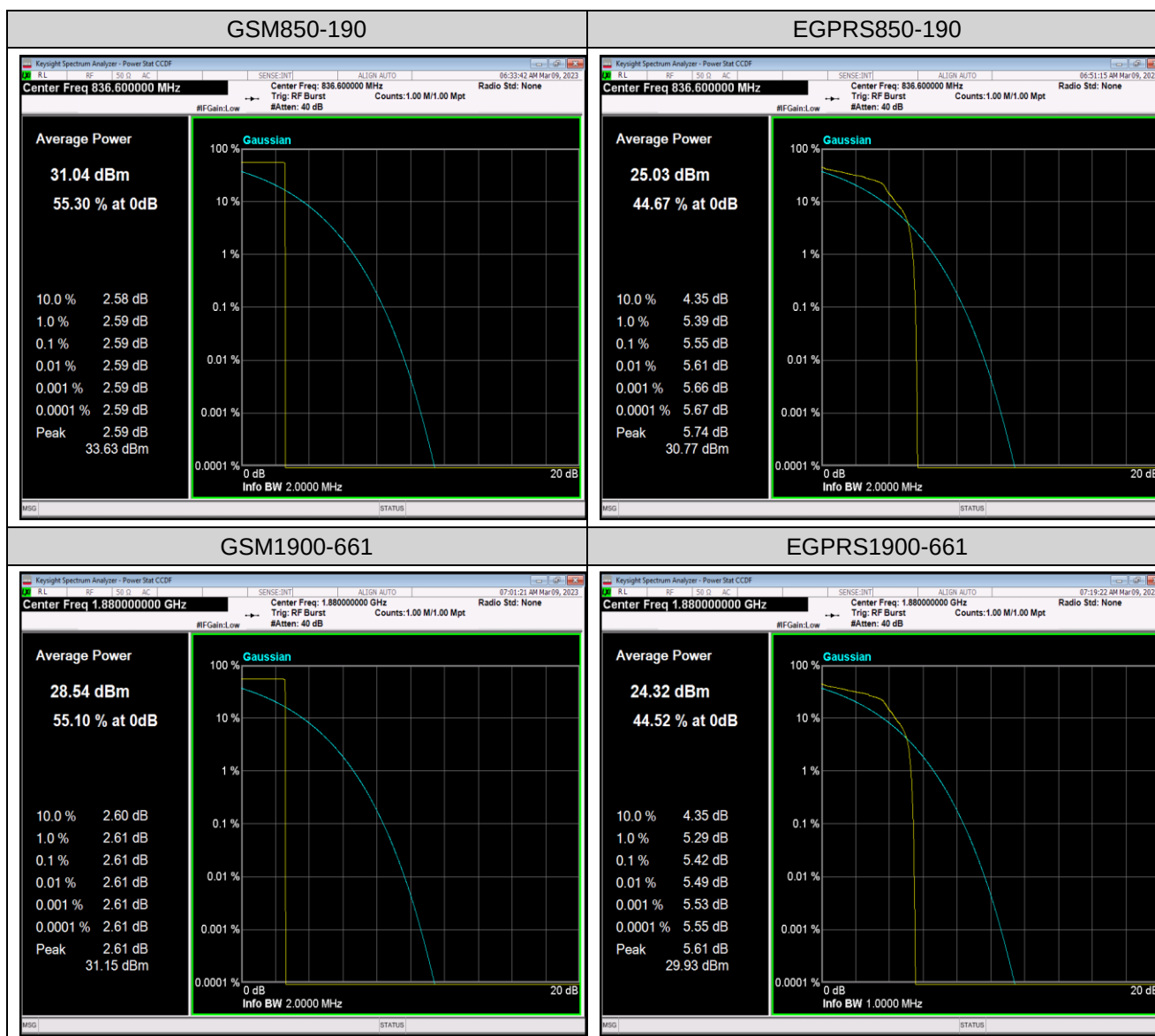
Appendix B: Peak-to-Average Ratio(CCDF)

Test Result

Band	Channel	PCL	Result(dB)	Limit(dB)	Verdict
GSM850	190	5	2.59	13	PASS
EGPRS850	190	8	5.55	13	PASS
GSM1900	661	0	2.61	13	PASS
EGPRS1900	661	2	5.42	13	PASS

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

Test Graphs

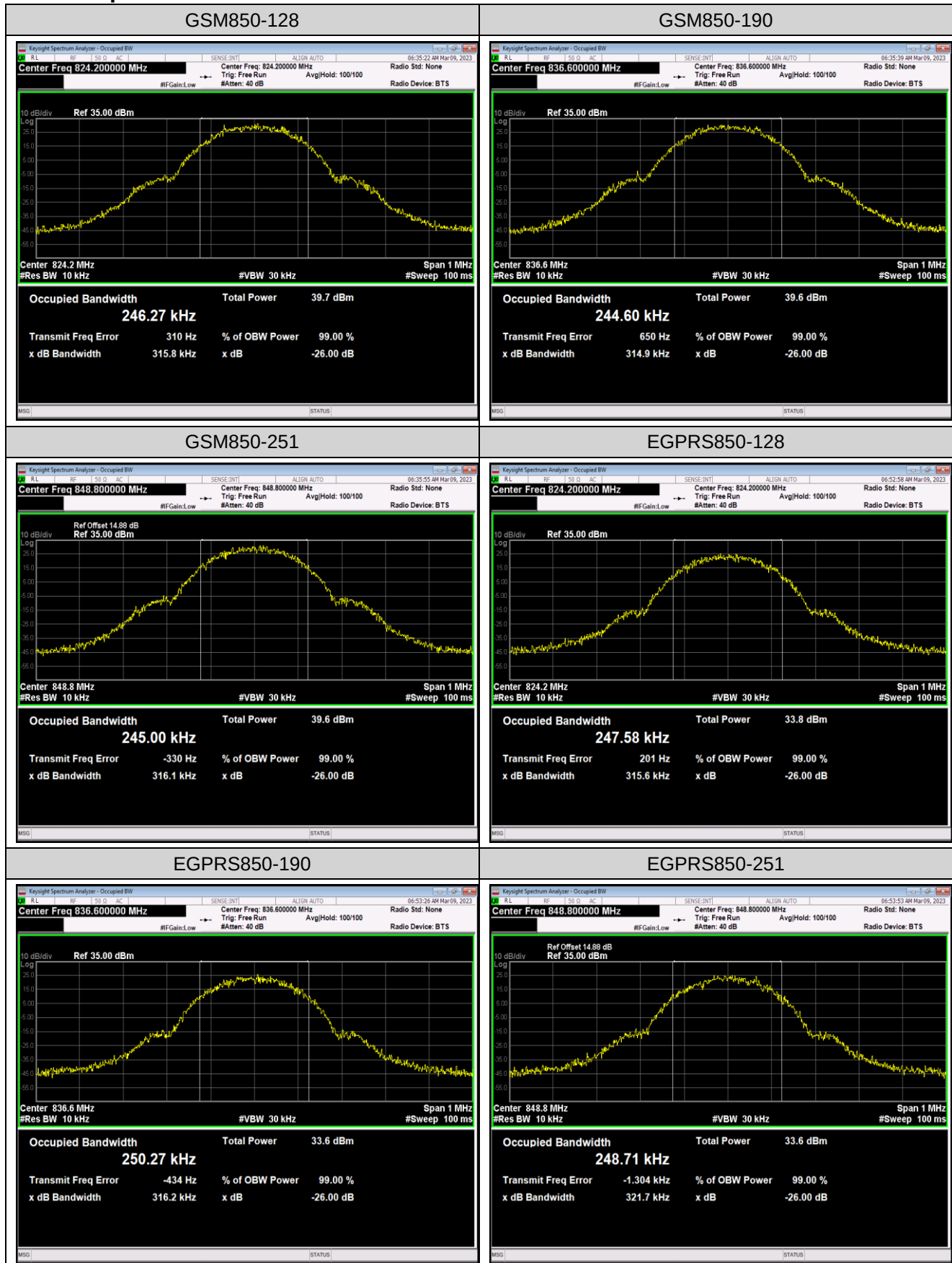


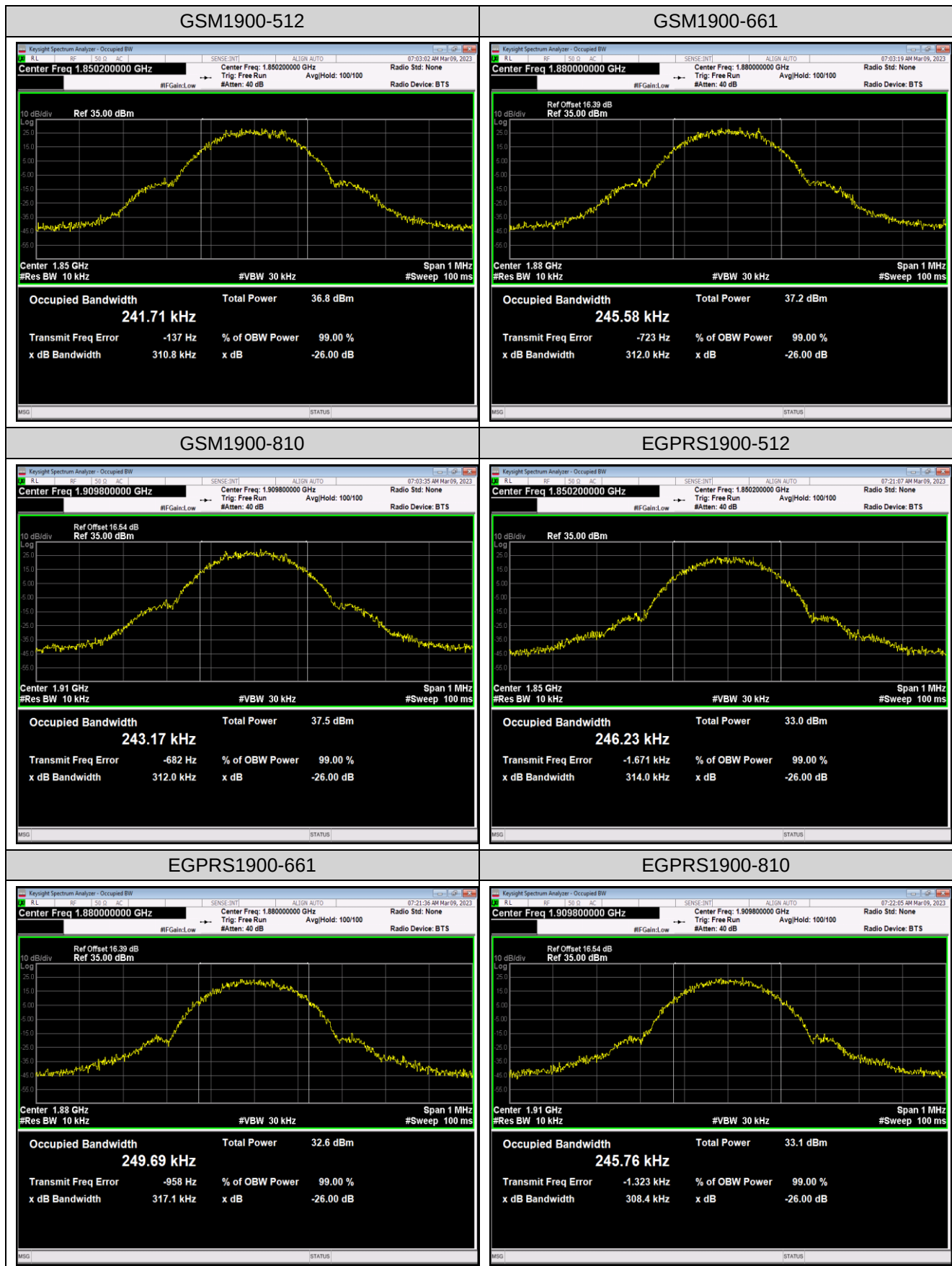
Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

Band	Channel	PCL	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
GSM850	128	5	0.24627	0.3158	---	PASS
GSM850	190	5	0.24460	0.3149	---	PASS
GSM850	251	5	0.24500	0.3161	---	PASS
EGPRS850	128	8	0.24758	0.3156	---	PASS
EGPRS850	190	8	0.25027	0.3162	---	PASS
EGPRS850	251	8	0.24871	0.3217	---	PASS
GSM1900	512	0	0.24171	0.3108	---	PASS
GSM1900	661	0	0.24558	0.3120	---	PASS
GSM1900	810	0	0.24317	0.3120	---	PASS
EGPRS1900	512	2	0.24623	0.3140	---	PASS
EGPRS1900	661	2	0.24969	0.3171	---	PASS
EGPRS1900	810	2	0.24576	0.3084	---	PASS

Test Graphs



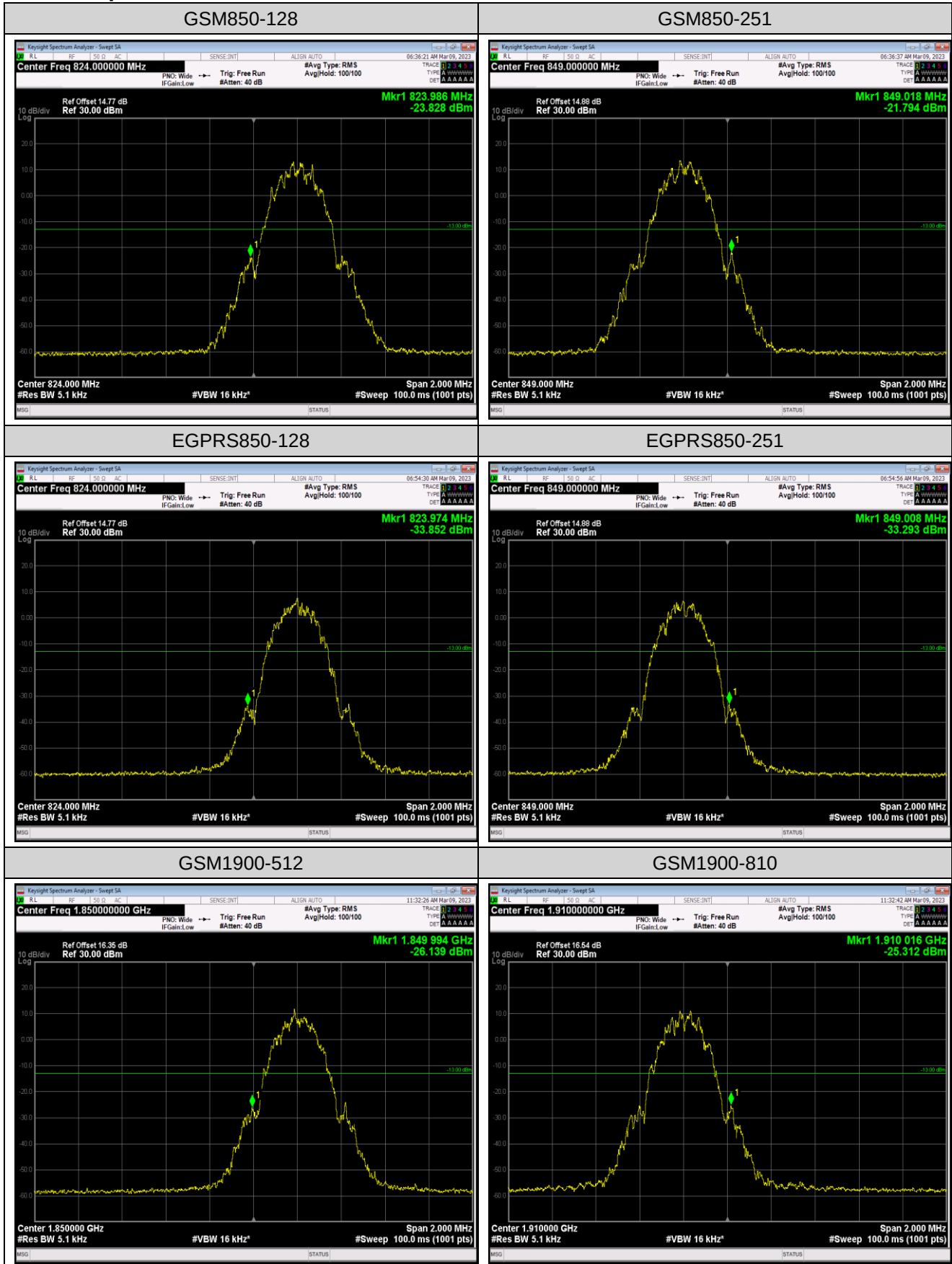


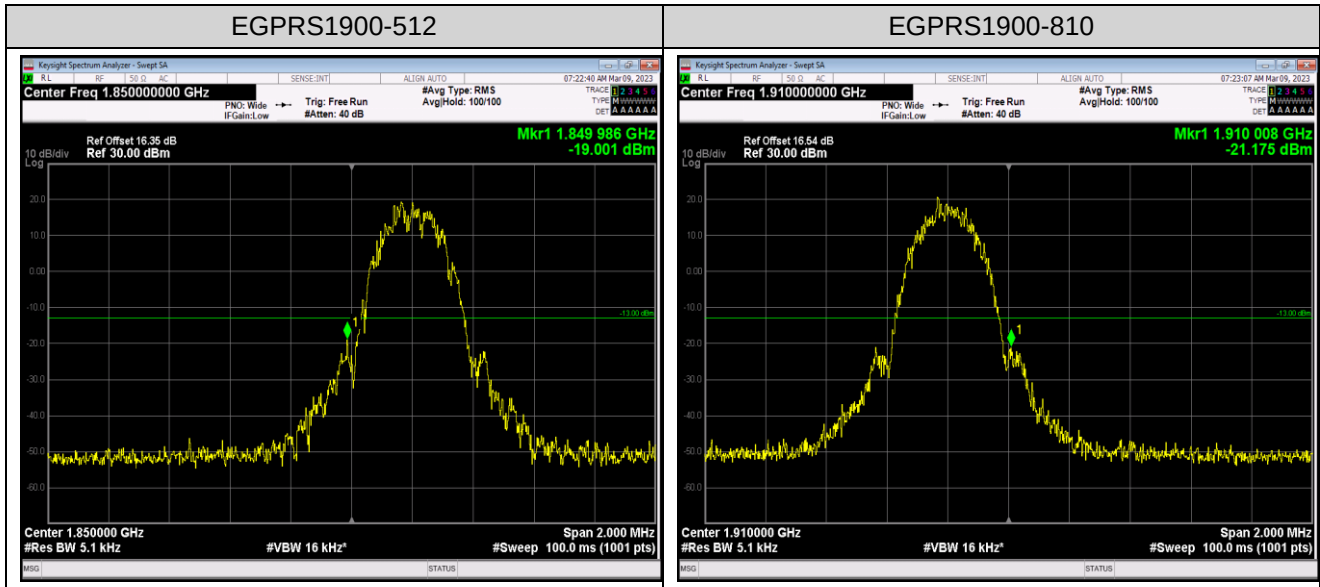
Appendix D: Band Edge

Test Result

Band	Channel	PCL	Freq (MHz)	Result (dBm)	Limit(dBm)	Verdict
GSM850	128	5	823.99	-23.83	-13	PASS
GSM850	251	5	849.02	-21.79	-13	PASS
EGPRS850	128	8	823.97	-33.85	-13	PASS
EGPRS850	251	8	849.01	-33.29	-13	PASS
GSM1900	512	0	1849.99	-26.14	-13	PASS
GSM1900	810	0	1910.02	-25.31	-13	PASS
EGPRS1900	512	2	1849.99	-19.00	-13	PASS
EGPRS1900	810	2	1910.01	-21.17	-13	PASS

Test Graphs





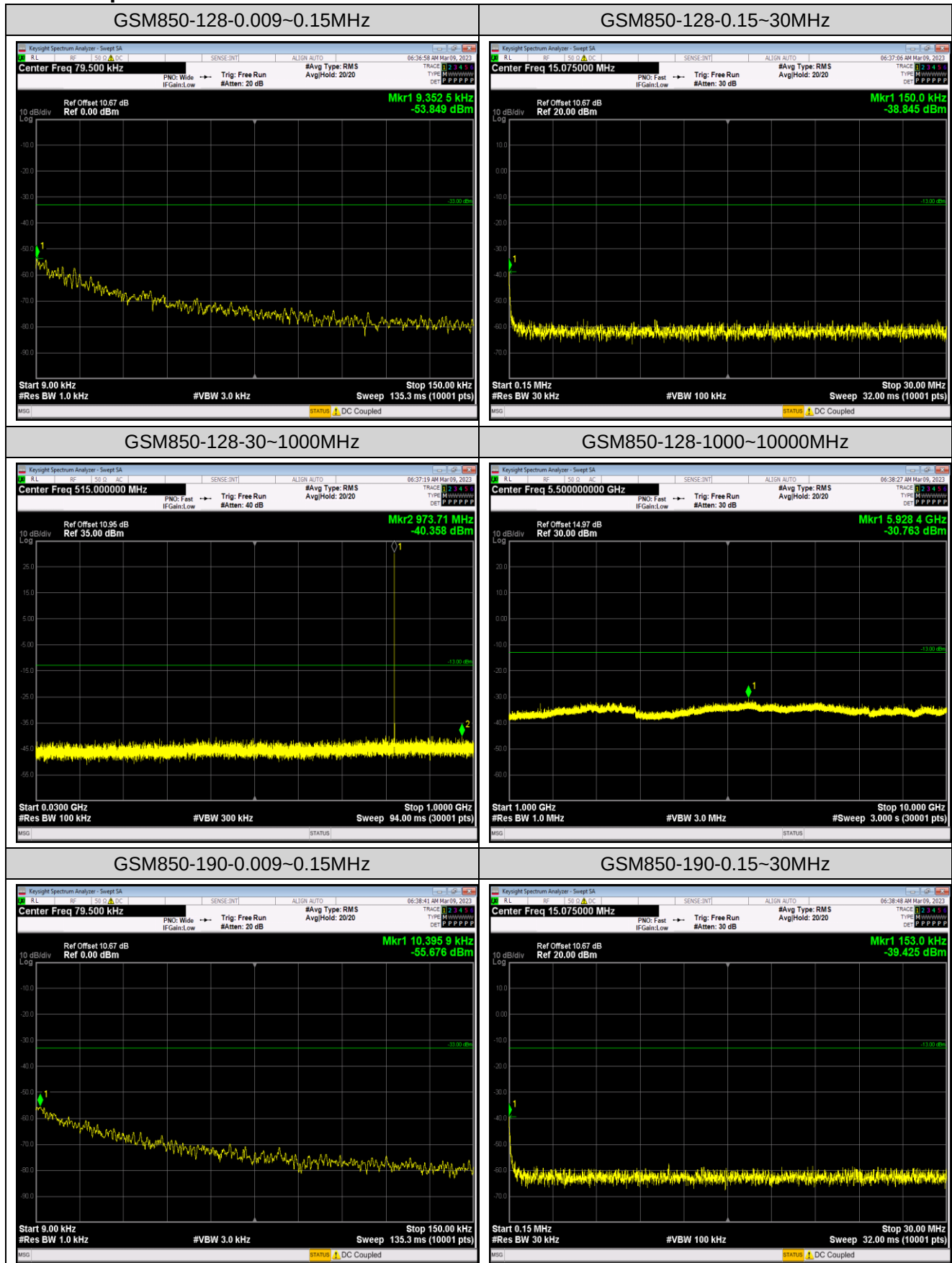
Appendix E: Conducted Spurious Emission

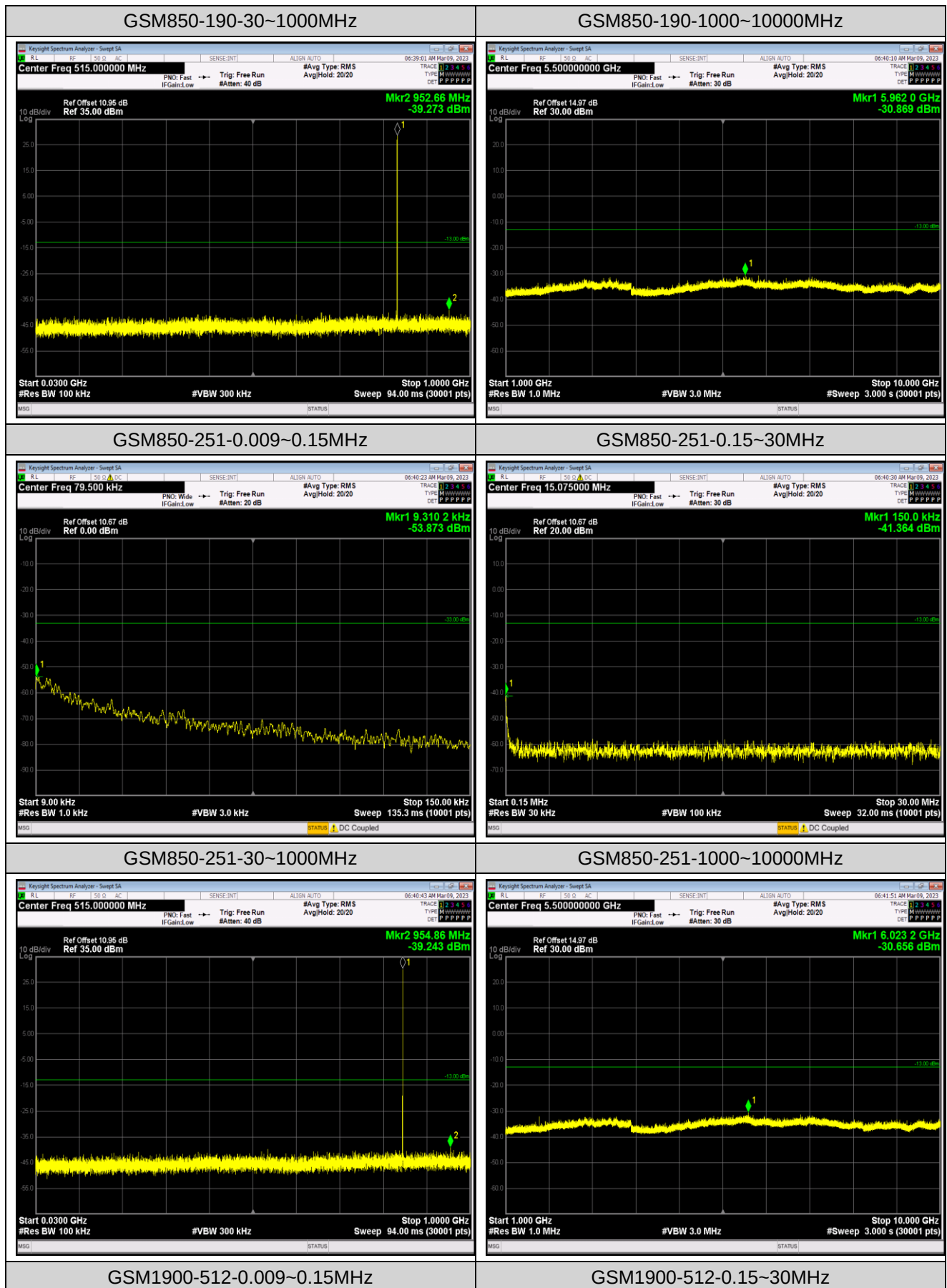
Test Result

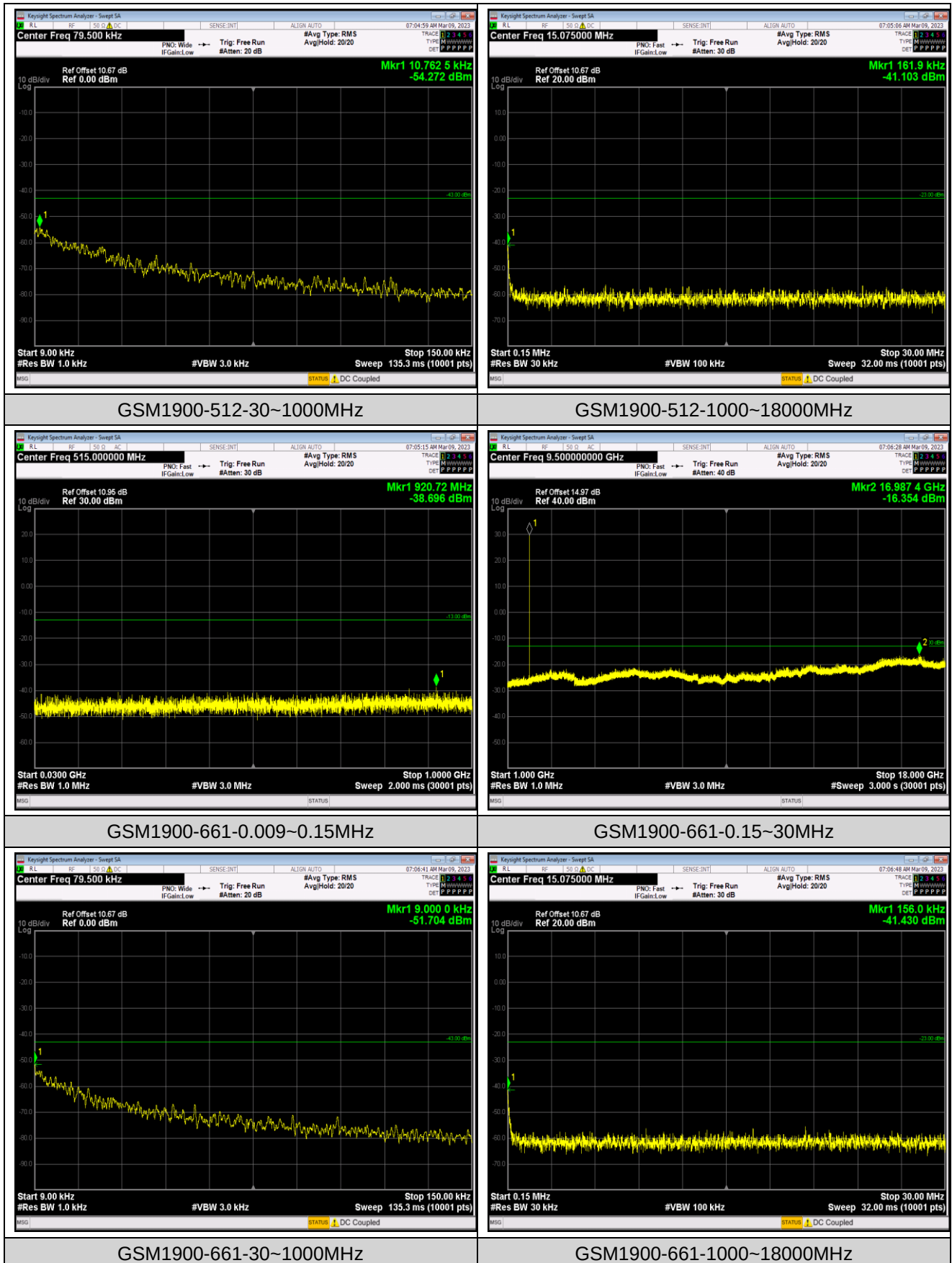
Band	Channel	PCL	Frequency Range(MHz)	Max.Freq. (MHz)	Result (dBm)	Limit (dBm)	Verdict
GSM850	128	5	0.009~0.15MHz	0.01	-53.85	-33	PASS
GSM850	128	5	0.15~30MHz	0.15	-38.85	-13	PASS
GSM850	128	5	30~1000MHz	973.71	-40.36	-13	PASS
GSM850	128	5	1000~10000MHz	5928.4	-30.76	-13	PASS
GSM850	190	5	0.009~0.15MHz	0.01	-55.68	-33	PASS
GSM850	190	5	0.15~30MHz	0.15	-39.43	-13	PASS
GSM850	190	5	30~1000MHz	952.66	-39.27	-13	PASS
GSM850	190	5	1000~10000MHz	5962	-30.87	-13	PASS
GSM850	251	5	0.009~0.15MHz	0.01	-53.87	-33	PASS
GSM850	251	5	0.15~30MHz	0.15	-41.36	-13	PASS
GSM850	251	5	30~1000MHz	954.86	-39.24	-13	PASS
GSM850	251	5	1000~10000MHz	6023.2	-30.66	-13	PASS
GSM1900	512	0	0.009~0.15MHz	0.01	-54.27	-43	PASS
GSM1900	512	0	0.15~30MHz	0.16	-41.1	-23	PASS
GSM1900	512	0	30~1000MHz	920.72	-38.7	-13	PASS
GSM1900	512	0	1000~18000MHz	16987.37	-16.35	-13	PASS
GSM1900	661	0	0.009~0.15MHz	0.01	-51.7	-43	PASS
GSM1900	661	0	0.15~30MHz	0.16	-41.43	-23	PASS
GSM1900	661	0	30~1000MHz	861.58	-38.78	-13	PASS
GSM1900	661	0	1000~18000MHz	17027.6	-15.69	-13	PASS
GSM1900	810	0	0.009~0.15MHz	0.01	-53.13	-43	PASS
GSM1900	810	0	0.15~30MHz	0.15	-40.58	-23	PASS
GSM1900	810	0	30~1000MHz	961.59	-40.48	-13	PASS
GSM1900	810	0	1000~18000MHz	16221.8	-16.15	-13	PASS

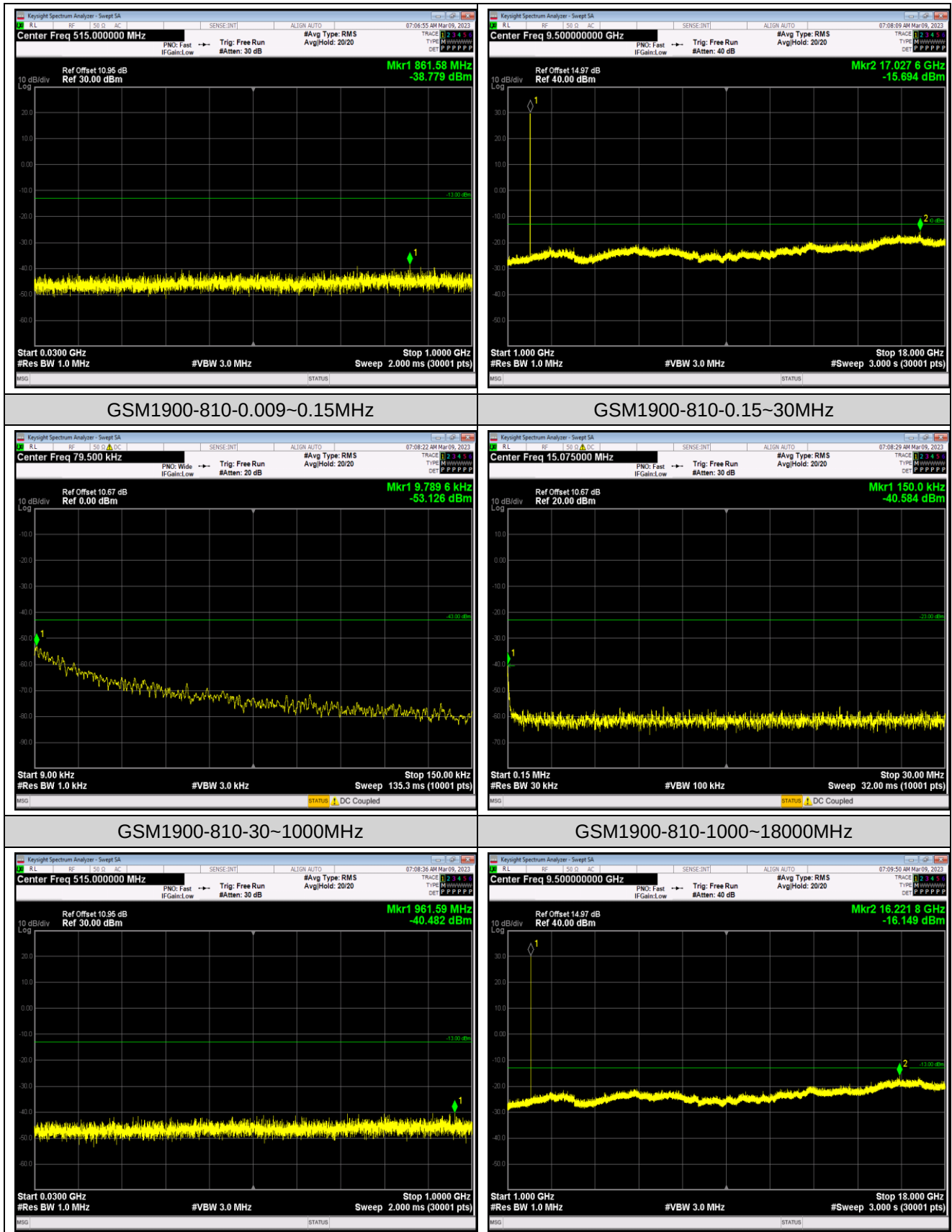
Remark: All channel and all modulation had been tested, but only the worst case data displayed in this report.

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		
3.87	-30	-9.65	-0.011535	±2.5	Pass
	-20	-12.27	-0.014667		
	-10	-12.62	-0.015085		
	0	-10.98	-0.013125		
	10	-9.98	-0.011929		
	20	-11.72	-0.014009		
	30	-9.81	-0.011726		
	40	-12.27	-0.014667		
	50	-13.66	-0.016328		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	-12.62	-0.015085	±2.5	Pass
	3.87	-8.65	-0.010339		
	4.45	-11.98	-0.014320		
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		
3.87	-30	-7.88	-0.009419	±2.5	Pass
	-20	-10.49	-0.012539		
	-10	-7.01	-0.008379		
	0	-9.33	-0.011152		
	10	-9.23	-0.011033		
	20	-9.94	-0.011881		
	30	-4.20	-0.005020		
	40	-7.01	-0.008379		
	50	-5.55	-0.006634		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	-4.49	-0.005367	±2.5	Pass
	3.87	-8.07	-0.009646		
	4.45	-6.75	-0.008068		
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		
3.87	-30	-11.43	-0.006080	Within authorized band for PCS 1900	Pass
	-20	-11.46	-0.006096		
	-10	-5.81	-0.003090		
	0	-11.72	-0.006234		
	10	-7.43	-0.003952		
	20	-13.24	-0.007043		
	30	-9.36	-0.004979		
	40	-11.43	-0.006080		
	50	-13.50	-0.007181		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	-13.27	-0.007059	Within authorized band for PCS 1900	Pass
	3.87	-6.59	-0.003505		
	4.45	-12.88	-0.006851		
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		
3.87	-30	-9.10	-0.004840	Within authorized band for PCS 1900	Pass
	-20	-3.55	-0.001888		
	-10	-6.26	-0.003330		
	0	-7.20	-0.003830		
	10	-15.92	-0.008468		
	20	-11.11	-0.005910		
	30	-6.26	-0.003330		
	40	-6.78	-0.003606		
	50	-7.91	-0.004207		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	-13.46	-0.007160	Within authorized band for PCS 1900	Pass
	3.87	-8.43	-0.004484		
	4.45	-10.49	-0.005580		
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

