

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	33.91	27.46	38.45	PASS
GSM850	190	5	33.97	27.52	38.45	PASS
GSM850	251	5	33.81	27.36	38.45	PASS
GSM1900	512	0	30.69	29.69	33.00	PASS
GSM1900	661	0	30.84	29.84	33.00	PASS
GSM1900	810	0	30.58	29.58	33.00	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
GPRS850	128	5	1	33.90	27.45	38.45	PASS
GPRS850	128	5	2	32.91	26.46	38.45	PASS
GPRS850	128	5	3	30.97	24.52	38.45	PASS
GPRS850	128	5	4	29.98	23.53	38.45	PASS
GPRS850	190	5	1	33.96	27.51	38.45	PASS
GPRS850	190	5	2	32.98	26.53	38.45	PASS
GPRS850	190	5	3	31.08	24.63	38.45	PASS
GPRS850	190	5	4	30.08	23.63	38.45	PASS
GPRS850	251	5	1	33.80	27.35	38.45	PASS
GPRS850	251	5	2	32.83	26.38	38.45	PASS
GPRS850	251	5	3	30.98	24.53	38.45	PASS
GPRS850	251	5	4	29.95	23.5	38.45	PASS
GPRS1900	512	0	1	30.68	29.68	33.00	PASS
GPRS1900	512	0	2	29.57	28.57	33.00	PASS
GPRS1900	512	0	3	27.40	26.4	33.00	PASS
GPRS1900	512	0	4	26.34	25.34	33.00	PASS
GPRS1900	661	0	1	30.85	29.85	33.00	PASS
GPRS1900	661	0	2	29.77	28.77	33.00	PASS
GPRS1900	661	0	3	27.61	26.61	33.00	PASS
GPRS1900	661	0	4	26.58	25.58	33.00	PASS
GPRS1900	810	0	1	30.66	29.66	33.00	PASS
GPRS1900	810	0	2	29.57	28.57	33.00	PASS
GPRS1900	810	0	3	27.42	26.42	33.00	PASS
GPRS1900	810	0	4	26.36	25.36	33.00	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
EGPRS850	128	8	1	27.85	21.4	38.45	PASS
EGPRS850	128	8	2	26.72	20.27	38.45	PASS
EGPRS850	128	8	3	24.65	18.2	38.45	PASS
EGPRS850	128	8	4	23.56	17.11	38.45	PASS
EGPRS850	190	8	1	27.92	21.47	38.45	PASS
EGPRS850	190	8	2	26.87	20.42	38.45	PASS
EGPRS850	190	8	3	24.81	18.36	38.45	PASS
EGPRS850	190	8	4	23.66	17.21	38.45	PASS
EGPRS850	251	8	1	27.82	21.37	38.45	PASS
EGPRS850	251	8	2	26.69	20.24	38.45	PASS
EGPRS850	251	8	3	24.59	18.14	38.45	PASS
EGPRS850	251	8	4	23.46	17.01	38.45	PASS
EGPRS1900	512	2	1	26.03	25.03	33.00	PASS
EGPRS1900	512	2	2	25.08	24.08	33.00	PASS
EGPRS1900	512	2	3	23.13	22.13	33.00	PASS
EGPRS1900	512	2	4	22.47	21.47	33.00	PASS
EGPRS1900	661	2	1	26.53	25.53	33.00	PASS
EGPRS1900	661	2	2	25.61	24.61	33.00	PASS
EGPRS1900	661	2	3	23.80	22.8	33.00	PASS
EGPRS1900	661	2	4	22.68	21.68	33.00	PASS
EGPRS1900	810	2	1	26.15	25.15	33.00	PASS
EGPRS1900	810	2	2	25.23	24.23	33.00	PASS
EGPRS1900	810	2	3	23.33	22.33	33.00	PASS
EGPRS1900	810	2	4	22.27	21.27	33.00	PASS

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

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

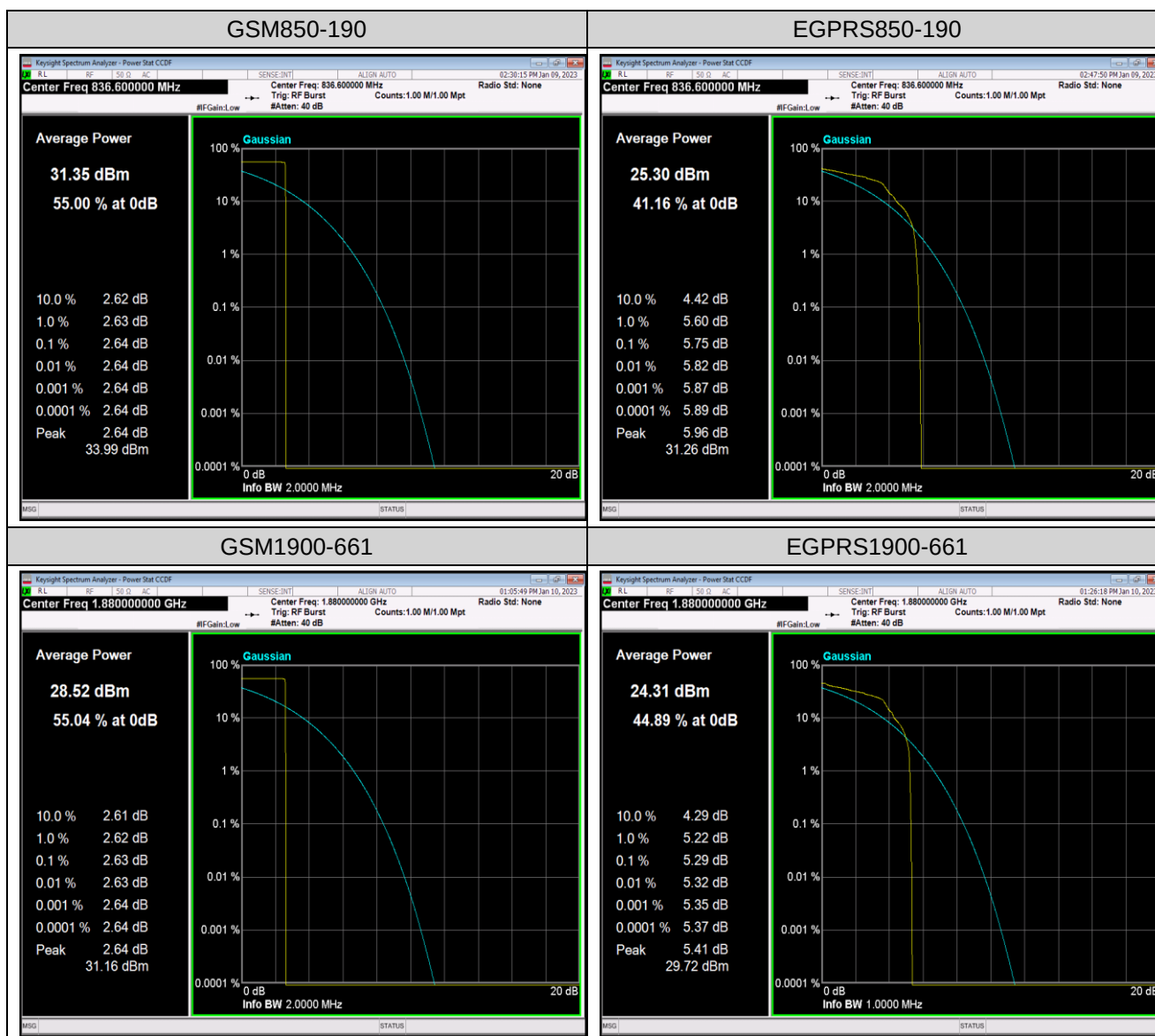
Appendix B: Peak-to-Average Ratio(CCDF)

Test Result

Band	Channel	PCL	Result(dB)	Limit(dB)	Verdict
GSM850	190	5	2.64	13	PASS
EGPRS850	190	8	5.75	13	PASS
GSM1900	661	0	2.63	13	PASS
EGPRS1900	661	2	5.29	13	PASS

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

Test Graphs

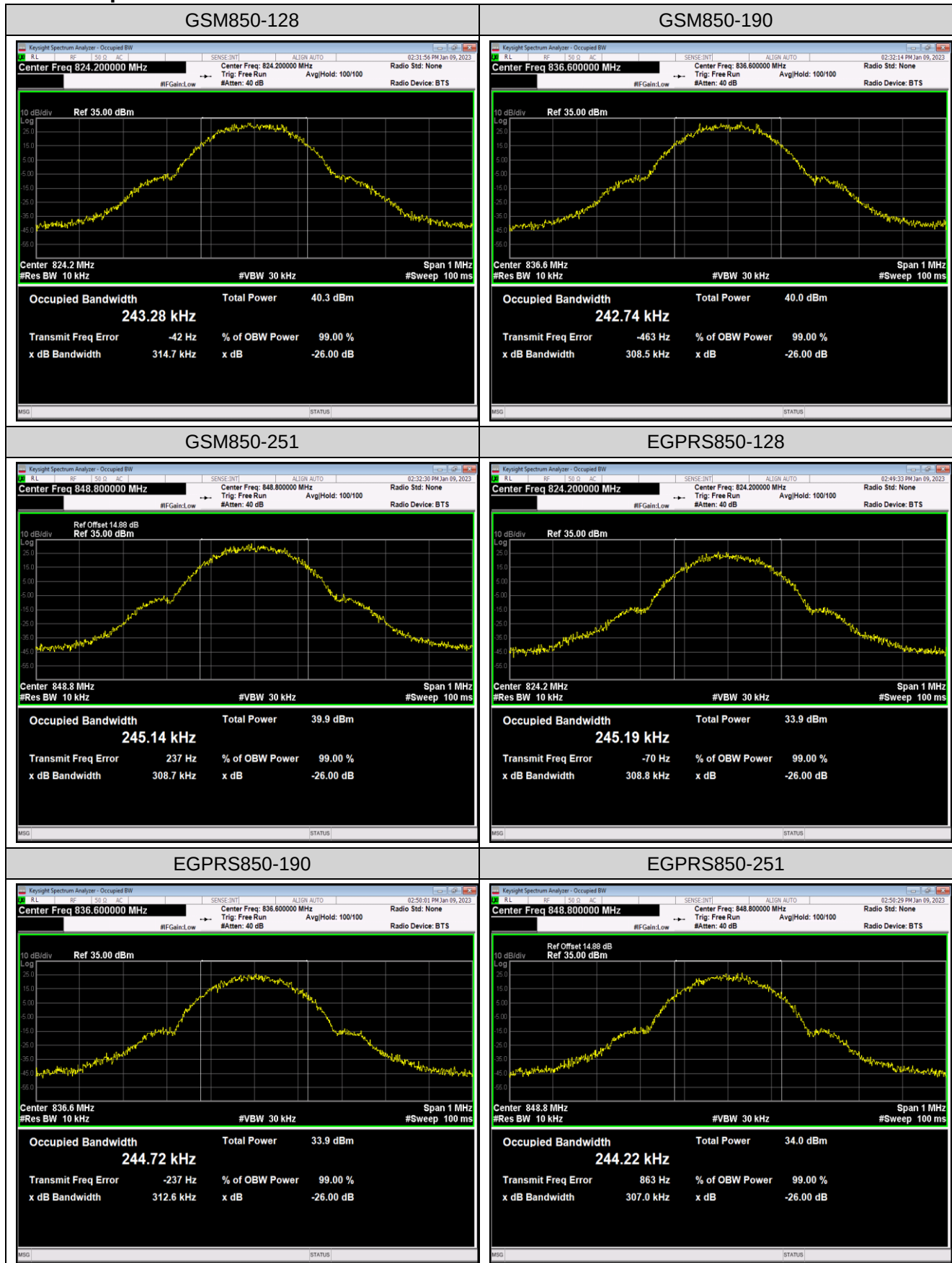


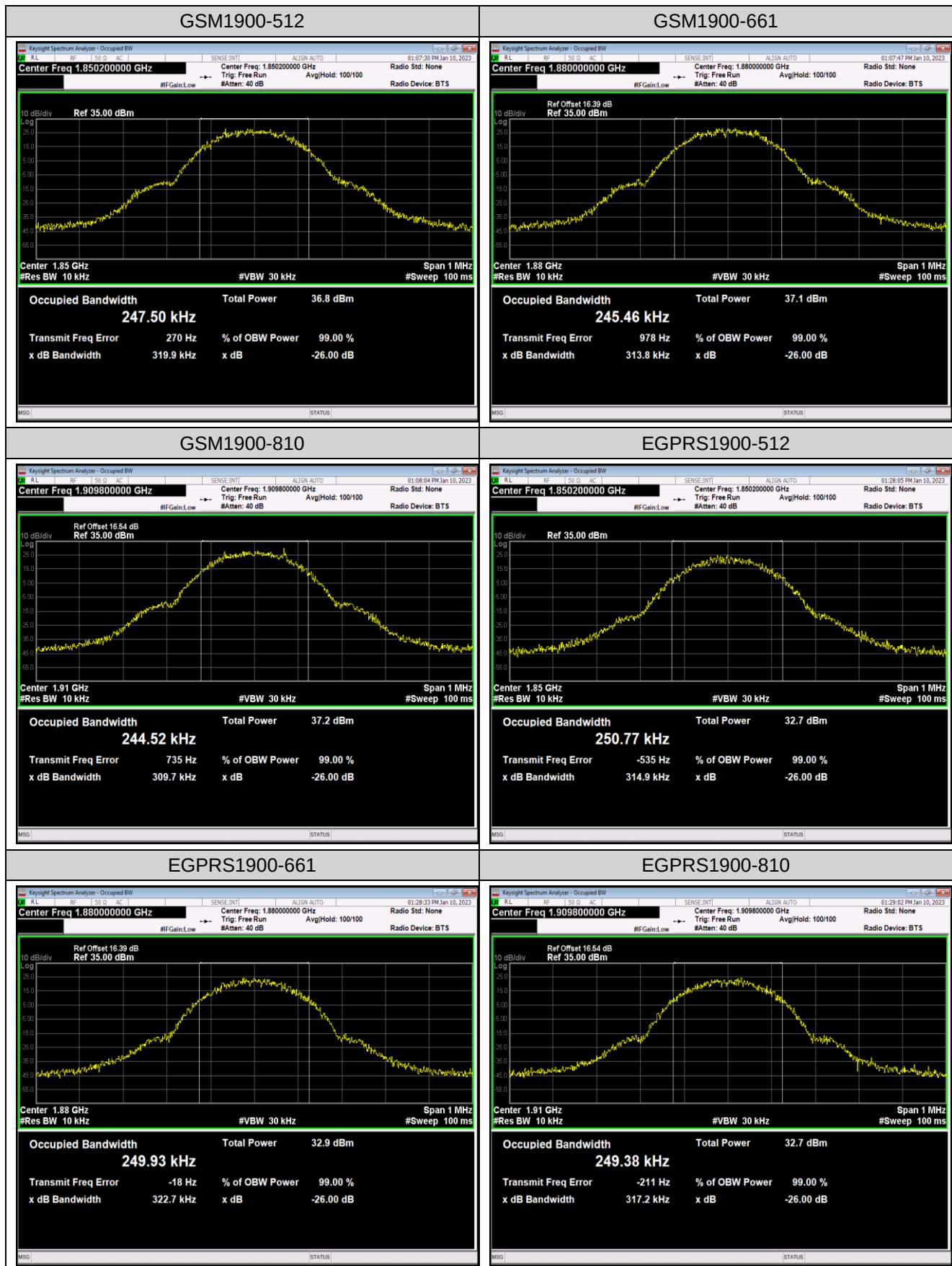
Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

Band	Channel	PCL	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
GSM850	128	5	0.24328	0.3147	---	PASS
GSM850	190	5	0.24274	0.3085	---	PASS
GSM850	251	5	0.24514	0.3087	---	PASS
EGPRS850	128	8	0.24519	0.3088	---	PASS
EGPRS850	190	8	0.24472	0.3126	---	PASS
EGPRS850	251	8	0.24422	0.3070	---	PASS
GSM1900	512	0	0.24750	0.3199	---	PASS
GSM1900	661	0	0.24546	0.3138	---	PASS
GSM1900	810	0	0.24452	0.3097	---	PASS
EGPRS1900	512	2	0.25077	0.3149	---	PASS
EGPRS1900	661	2	0.24993	0.3227	---	PASS
EGPRS1900	810	2	0.24938	0.3172	---	PASS

Test Graphs



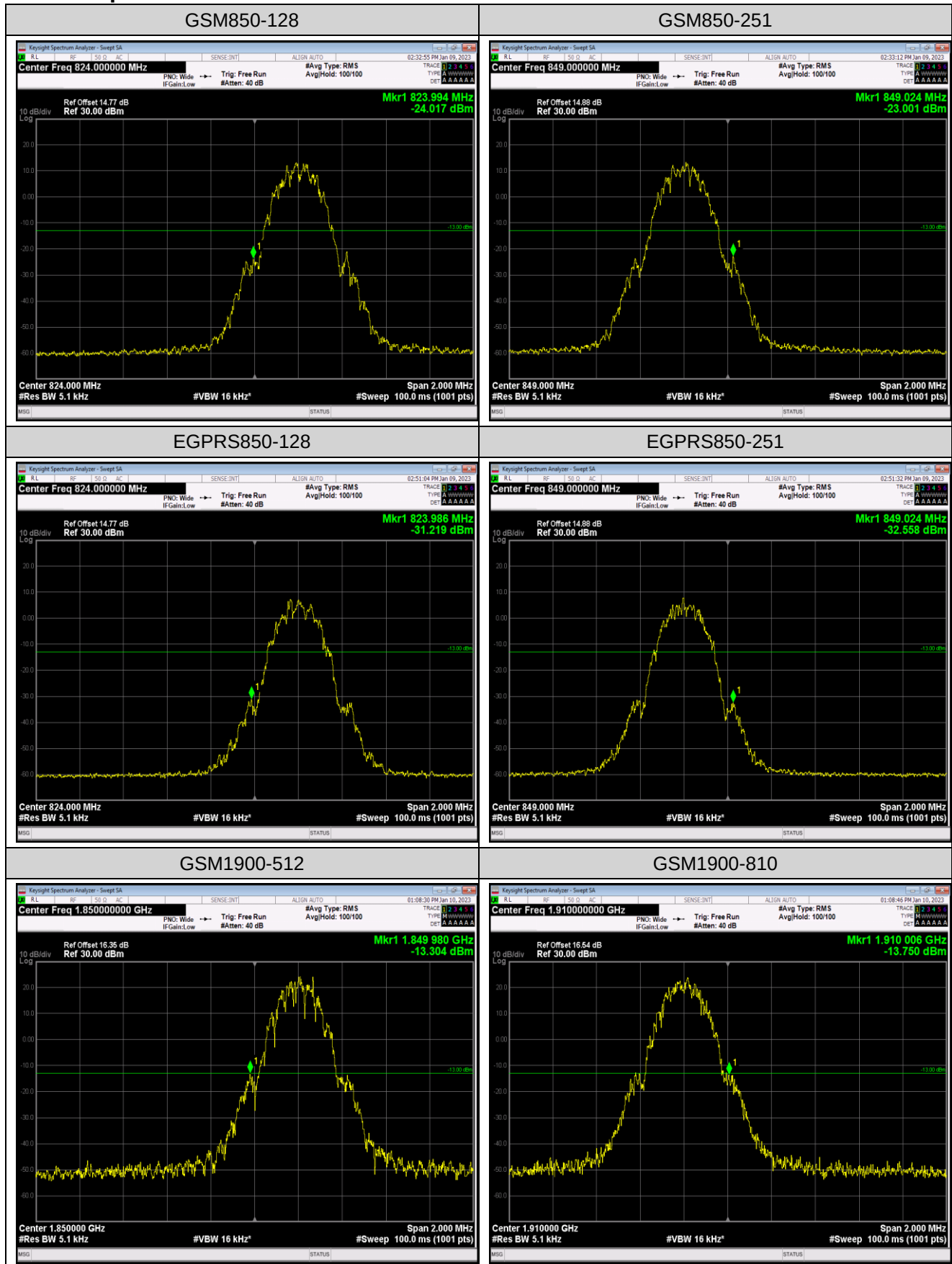


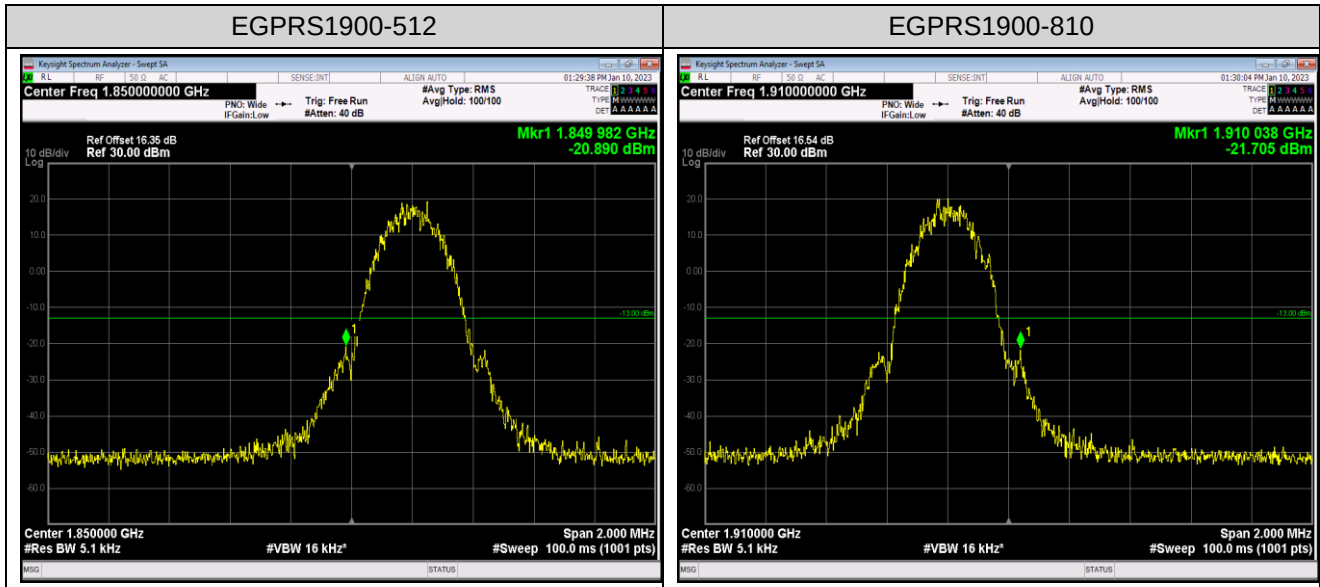
Appendix D: Band Edge

Test Result

Band	Channel	PCL	Freq (MHz)	Result (dBm)	Limit(dBm)	Verdict
GSM850	128	5	823.99	-24.02	-13	PASS
GSM850	251	5	849.02	-23.00	-13	PASS
EGPRS850	128	8	823.99	-31.22	-13	PASS
EGPRS850	251	8	849.02	-32.56	-13	PASS
GSM1900	512	0	1849.98	-13.30	-13	PASS
GSM1900	810	0	1910.01	-13.75	-13	PASS
EGPRS1900	512	2	1849.98	-20.89	-13	PASS
EGPRS1900	810	2	1910.04	-21.70	-13	PASS

Test Graphs





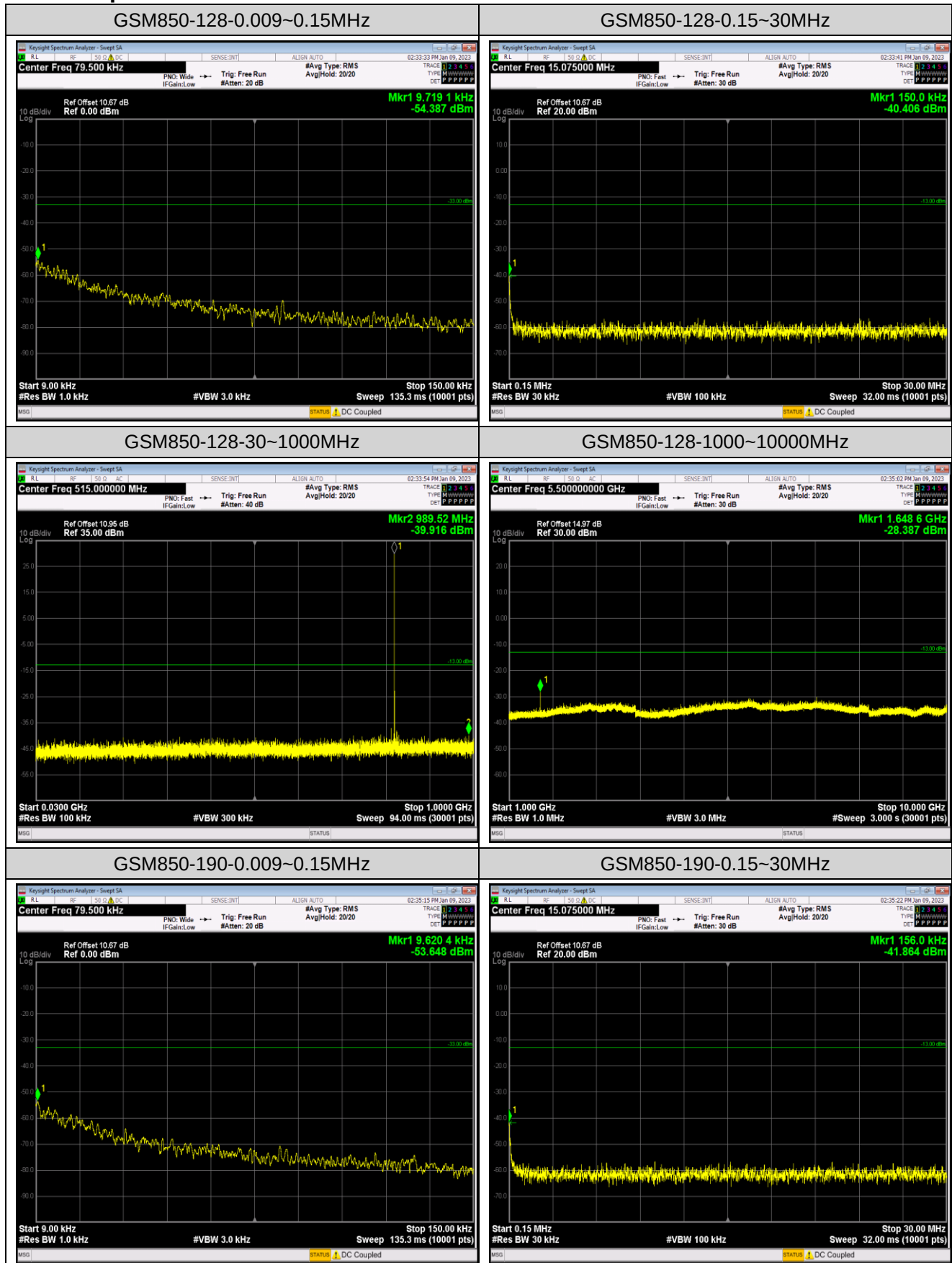
Appendix E: Conducted Spurious Emission

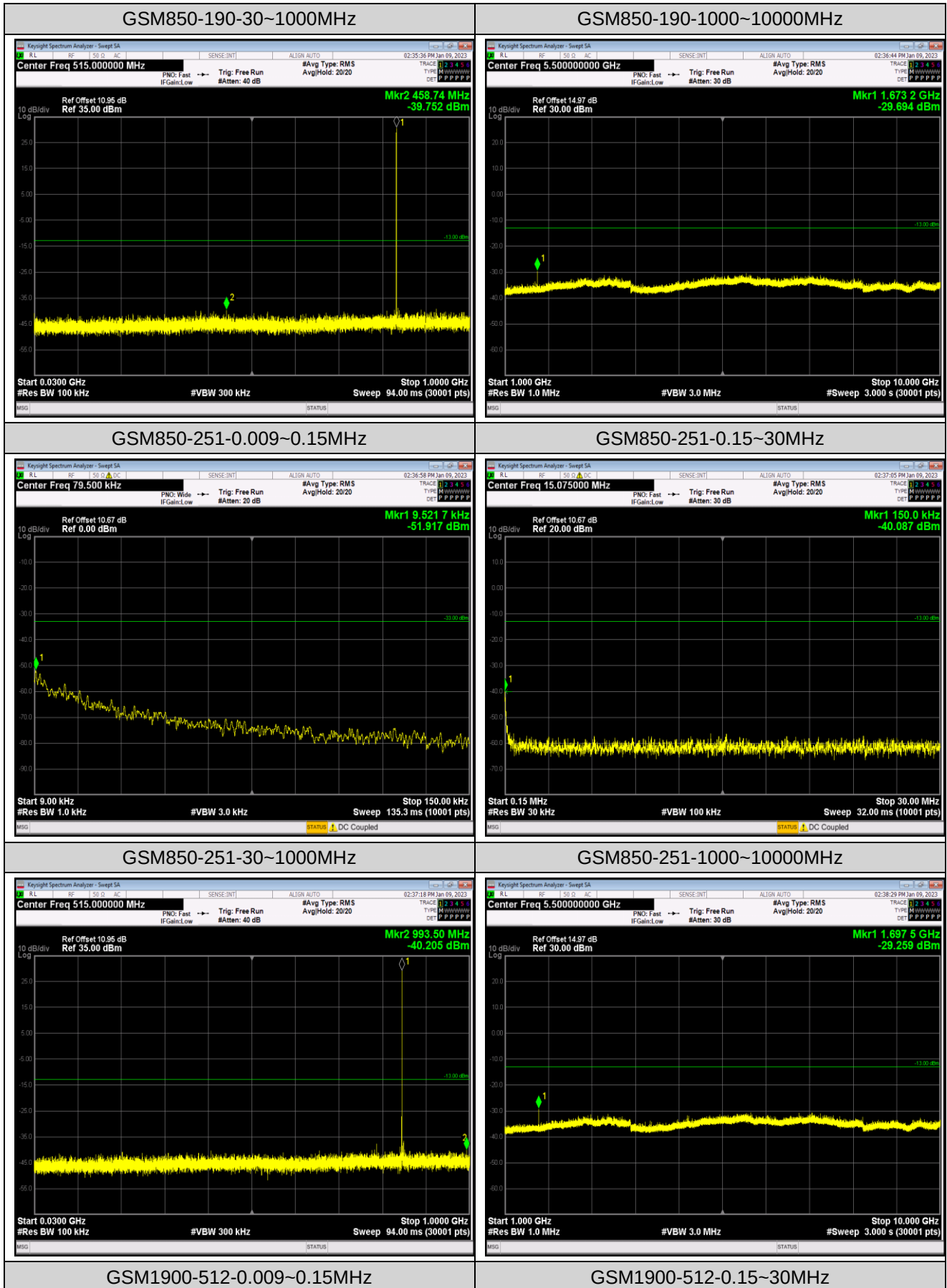
Test Result

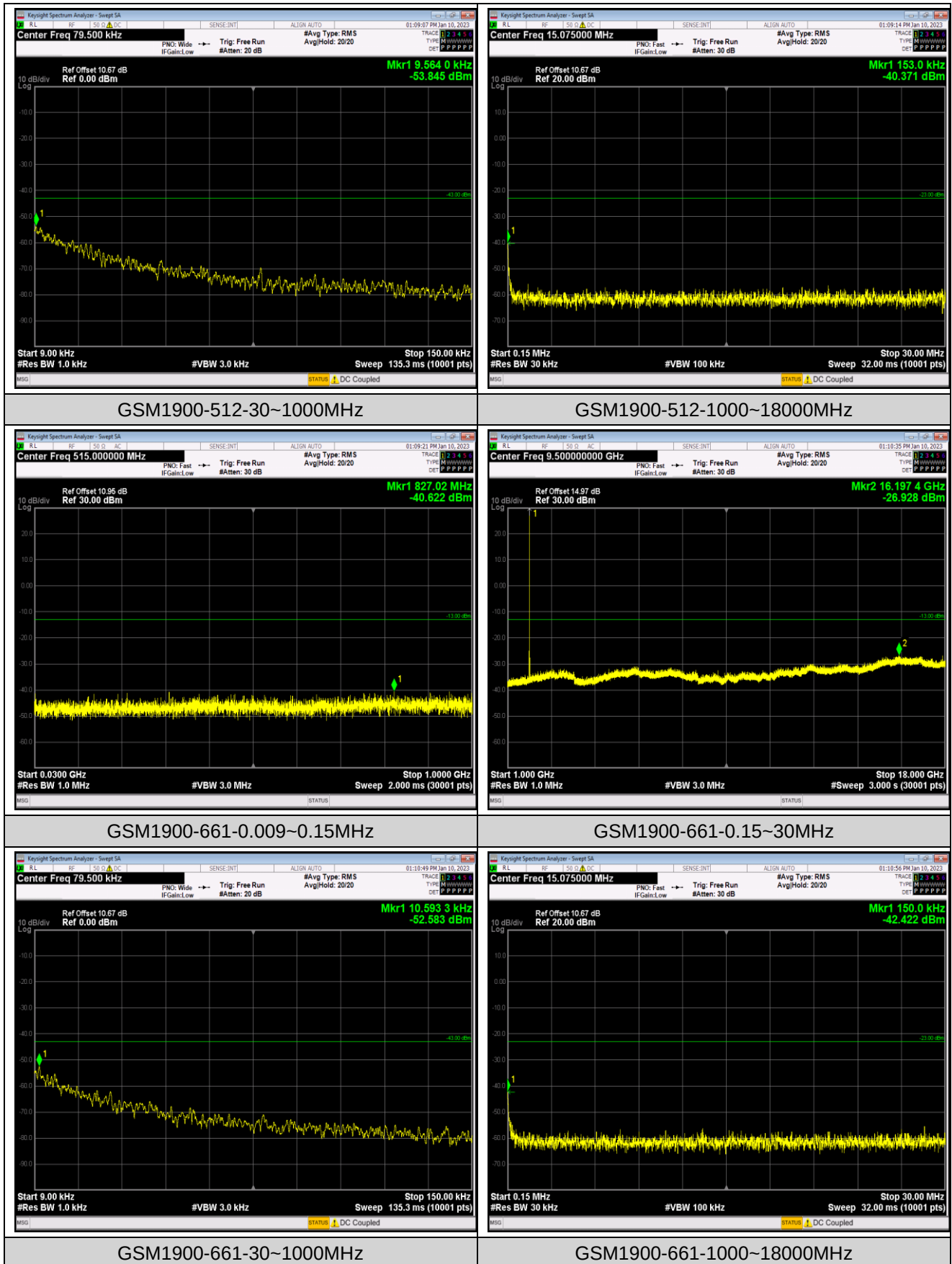
Band	Channel	PCL	Frequency Range(MHz)	Max.Freq. (MHz)	Result (dBm)	Limit (dBm)	Verdict
GSM850	128	5	0.009~0.15MHz	0.01	-54.39	-33	PASS
GSM850	128	5	0.15~30MHz	0.15	-40.41	-13	PASS
GSM850	128	5	30~1000MHz	989.52	-39.92	-13	PASS
GSM850	128	5	1000~10000MHz	1648.6	-28.39	-13	PASS
GSM850	190	5	0.009~0.15MHz	0.01	-53.65	-33	PASS
GSM850	190	5	0.15~30MHz	0.16	-41.86	-13	PASS
GSM850	190	5	30~1000MHz	458.74	-39.75	-13	PASS
GSM850	190	5	1000~10000MHz	1673.2	-29.69	-13	PASS
GSM850	251	5	0.009~0.15MHz	0.01	-51.92	-33	PASS
GSM850	251	5	0.15~30MHz	0.15	-40.09	-13	PASS
GSM850	251	5	30~1000MHz	993.5	-40.21	-13	PASS
GSM850	251	5	1000~10000MHz	1697.5	-29.26	-13	PASS
GSM1900	512	0	0.009~0.15MHz	0.01	-53.85	-43	PASS
GSM1900	512	0	0.15~30MHz	0.15	-40.37	-23	PASS
GSM1900	512	0	30~1000MHz	827.02	-40.62	-13	PASS
GSM1900	512	0	1000~18000MHz	16197.43	-26.93	-13	PASS
GSM1900	661	0	0.009~0.15MHz	0.01	-52.58	-43	PASS
GSM1900	661	0	0.15~30MHz	0.15	-42.42	-23	PASS
GSM1900	661	0	30~1000MHz	866.14	-40.45	-13	PASS
GSM1900	661	0	1000~18000MHz	16978.3	-26.21	-13	PASS
GSM1900	810	0	0.009~0.15MHz	0.01	-52.6	-43	PASS
GSM1900	810	0	0.15~30MHz	0.15	-41.47	-23	PASS
GSM1900	810	0	30~1000MHz	452.31	-39.6	-13	PASS
GSM1900	810	0	1000~18000MHz	17021.37	-26.45	-13	PASS

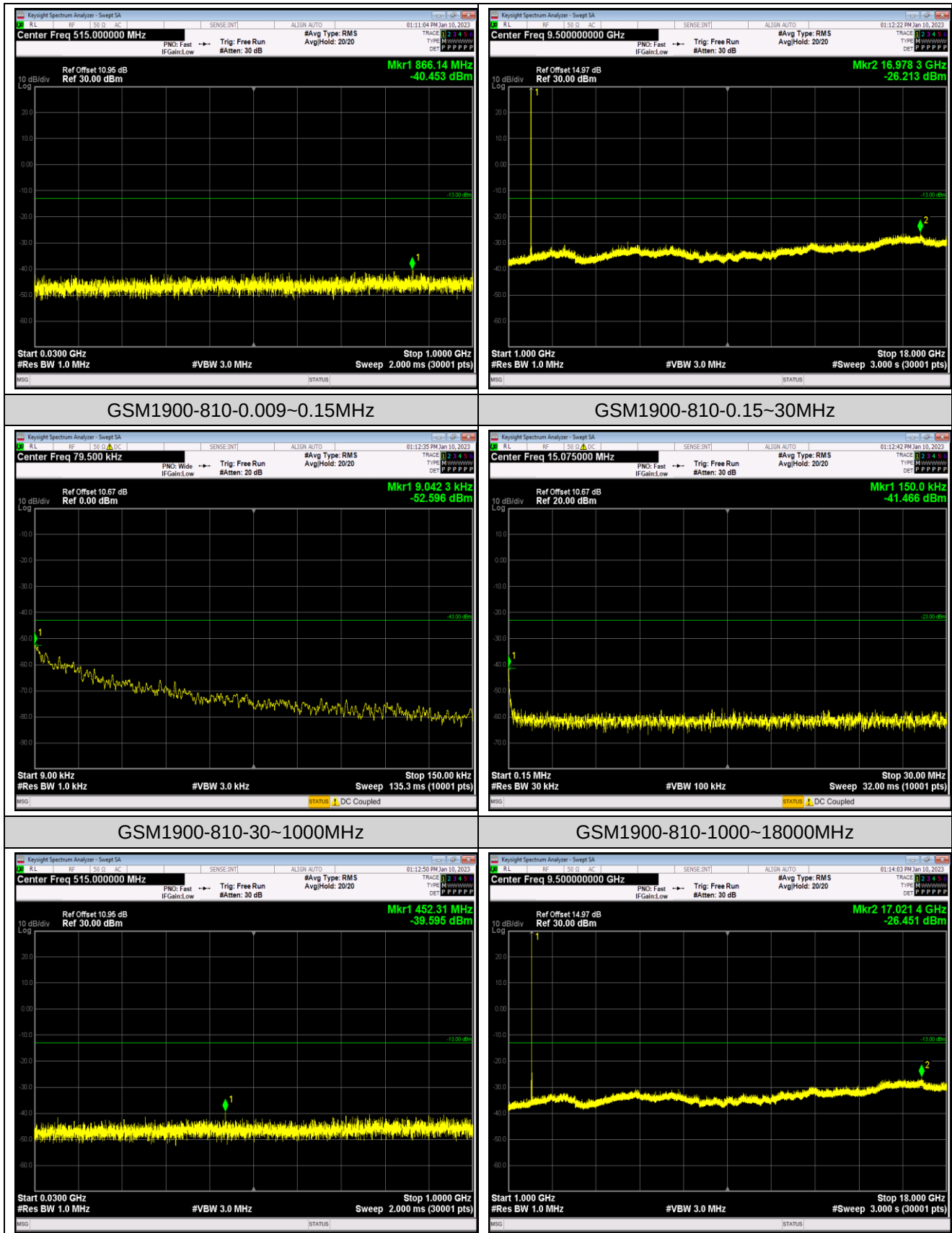
Remark: All channel and all modulation had been tested, but only the worst case data displayed in this report.

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	-1.71	-0.002044	±2.5	Pass
	-20	-3.81	-0.004554		
	-10	-0.36	-0.000430		
	0	-1.26	-0.001506		
	10	-0.16	-0.000191		
	20	-2.74	-0.003275		
	30	-2.16	-0.002582		
	40	-2.97	-0.003550		
	50	-0.32	-0.000383		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	-2.03	-0.002426	±2.5	Pass
	3.87	-2.74	-0.003275		
	4.45	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		
3.87	-30	-4.97	-0.005941	±2.5	Pass
	-20	-2.23	-0.002666		
	-10	0.00	0.000000		
	0	-4.23	-0.005056		
	10	0.74	0.000885		
	20	2.39	0.002857		
	30	-3.20	-0.003825		
	40	-0.77	-0.000920		
	50	0.87	0.001040		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	-3.23	-0.003861	±2.5	Pass
	3.87	-2.52	-0.003012		
	4.45	-2.45	-0.002929		
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	-12.82	-0.006819	Within authorized band for PCS 1900	Pass
	-20	-19.57	-0.010410		
	-10	-13.79	-0.007335		
	0	-14.66	-0.007798		
	10	-18.53	-0.009856		
	20	-10.46	-0.005564		
	30	-14.14	-0.007521		
	40	-17.79	-0.009463		
	50	-13.95	-0.007420		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	-14.88	-0.007915	Within authorized band for PCS 1900	Pass
	3.87	-12.33	-0.006559		
	4.45	-13.43	-0.007144		
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	-8.98	-0.004777	Within authorized band for PCS 1900	Pass
	-20	-13.75	-0.007314		
	-10	-12.01	-0.006388		
	0	-5.17	-0.002750		
	10	-11.01	-0.005856		
	20	-11.40	-0.006064		
	30	-21.02	-0.011181		
	40	-10.11	-0.005378		
	50	-19.21	-0.010218		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	-7.81	-0.004154	Within authorized band for PCS 1900	Pass
	3.87	-16.56	-0.008809		
	4.45	-9.04	-0.004809		
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

