

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	32.86	28.26	38.45	PASS
GSM850	190	5	33.14	28.54	38.45	PASS
GSM850	251	5	33.11	28.51	38.45	PASS
GSM1900	512	0	29.53	31.07	33.00	PASS
GSM1900	661	0	29.57	31.11	33.00	PASS
GSM1900	810	0	29.48	31.02	33.00	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
GPRS850	128	5	1	32.84	28.24	38.45	PASS
GPRS850	128	5	2	30.96	26.36	38.45	PASS
GPRS850	128	5	3	29.12	24.52	38.45	PASS
GPRS850	128	5	4	27.06	22.46	38.45	PASS
GPRS850	190	5	1	33.10	28.5	38.45	PASS
GPRS850	190	5	2	31.07	26.47	38.45	PASS
GPRS850	190	5	3	29.23	24.63	38.45	PASS
GPRS850	190	5	4	27.20	22.6	38.45	PASS
GPRS850	251	5	1	33.08	28.48	38.45	PASS
GPRS850	251	5	2	30.99	26.39	38.45	PASS
GPRS850	251	5	3	29.18	24.58	38.45	PASS
GPRS850	251	5	4	27.15	22.55	38.45	PASS
GPRS1900	512	0	1	29.52	31.06	33.00	PASS
GPRS1900	512	0	2	27.45	28.99	33.00	PASS
GPRS1900	512	0	3	25.85	27.39	33.00	PASS
GPRS1900	512	0	4	23.81	25.35	33.00	PASS
GPRS1900	661	0	1	29.67	31.21	33.00	PASS
GPRS1900	661	0	2	27.39	28.93	33.00	PASS
GPRS1900	661	0	3	25.84	27.38	33.00	PASS
GPRS1900	661	0	4	23.84	25.38	33.00	PASS
GPRS1900	810	0	1	29.58	31.12	33.00	PASS
GPRS1900	810	0	2	27.03	28.57	33.00	PASS
GPRS1900	810	0	3	25.51	27.05	33.00	PASS
GPRS1900	810	0	4	23.56	25.1	33.00	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
EGPRS850	128	8	1	26.68	22.08	38.45	PASS
EGPRS850	128	8	2	25.53	20.93	38.45	PASS
EGPRS850	128	8	3	23.37	18.77	38.45	PASS
EGPRS850	128	8	4	20.81	16.21	38.45	PASS
EGPRS850	190	8	1	26.46	21.86	38.45	PASS
EGPRS850	190	8	2	25.37	20.77	38.45	PASS
EGPRS850	190	8	3	23.16	18.56	38.45	PASS
EGPRS850	190	8	4	20.65	16.05	38.45	PASS
EGPRS850	251	8	1	26.47	21.87	38.45	PASS
EGPRS850	251	8	2	25.43	20.83	38.45	PASS
EGPRS850	251	8	3	23.22	18.62	38.45	PASS
EGPRS850	251	8	4	20.70	16.1	38.45	PASS
EGPRS1900	512	2	1	26.11	27.65	33.00	PASS
EGPRS1900	512	2	2	24.44	25.98	33.00	PASS
EGPRS1900	512	2	3	22.31	23.85	33.00	PASS
EGPRS1900	512	2	4	19.68	21.22	33.00	PASS
EGPRS1900	661	2	1	25.94	27.48	33.00	PASS
EGPRS1900	661	2	2	24.56	26.1	33.00	PASS
EGPRS1900	661	2	3	22.34	23.88	33.00	PASS
EGPRS1900	661	2	4	19.55	21.09	33.00	PASS
EGPRS1900	810	2	1	25.75	27.29	33.00	PASS
EGPRS1900	810	2	2	24.36	25.9	33.00	PASS
EGPRS1900	810	2	3	22.16	23.7	33.00	PASS
EGPRS1900	810	2	4	19.46	21	33.00	PASS

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

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

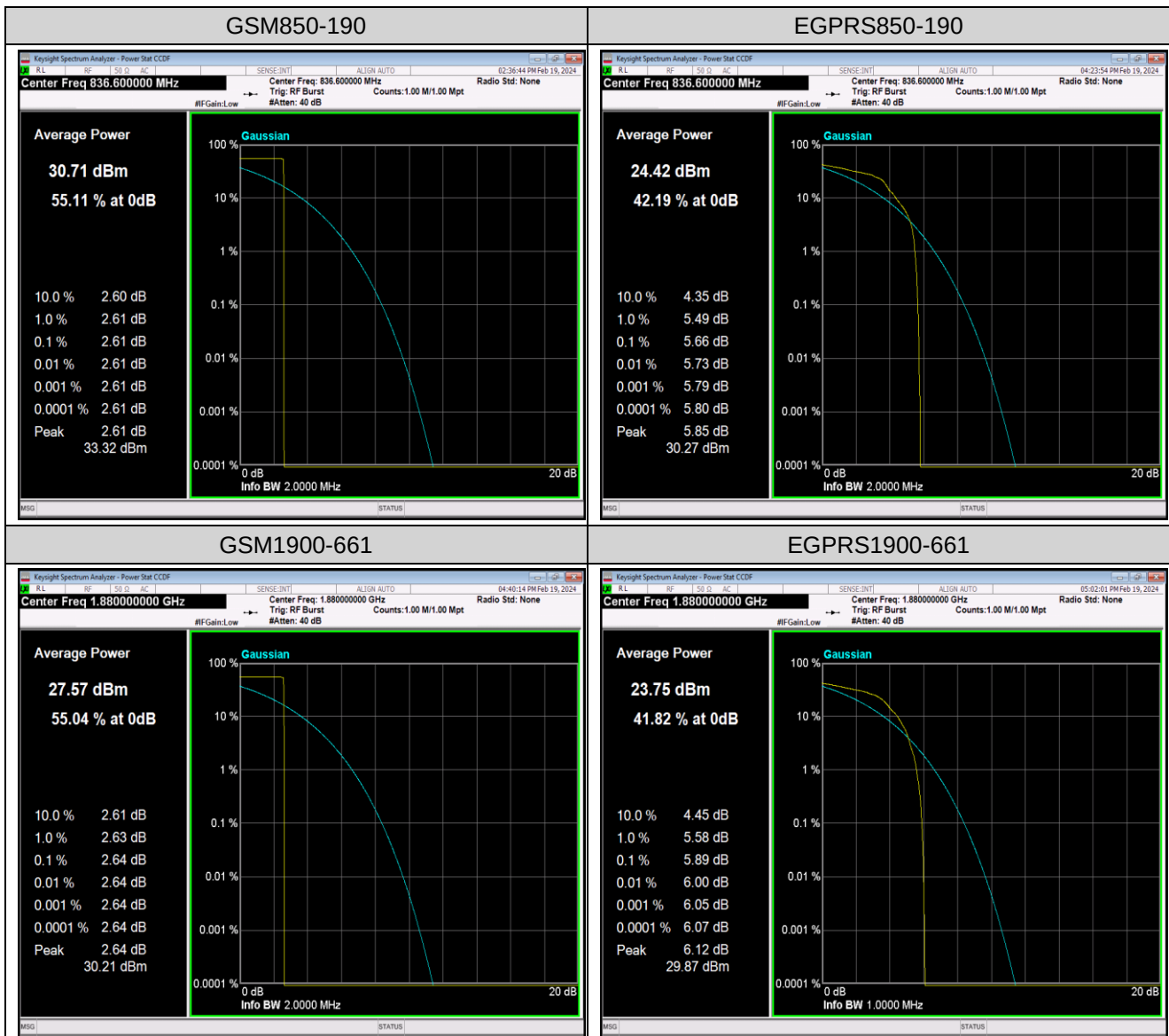
Appendix B: Peak-to-Average Ratio(CCDF)

Test Result

Band	Channel	PCL	Result(dB)	Limit(dB)	Verdict
GSM850	190	5	2.61	13	PASS
EGPRS850	190	8	5.66	13	PASS
GSM1900	661	0	2.64	13	PASS
EGPRS1900	661	2	5.89	13	PASS

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

Test Graphs

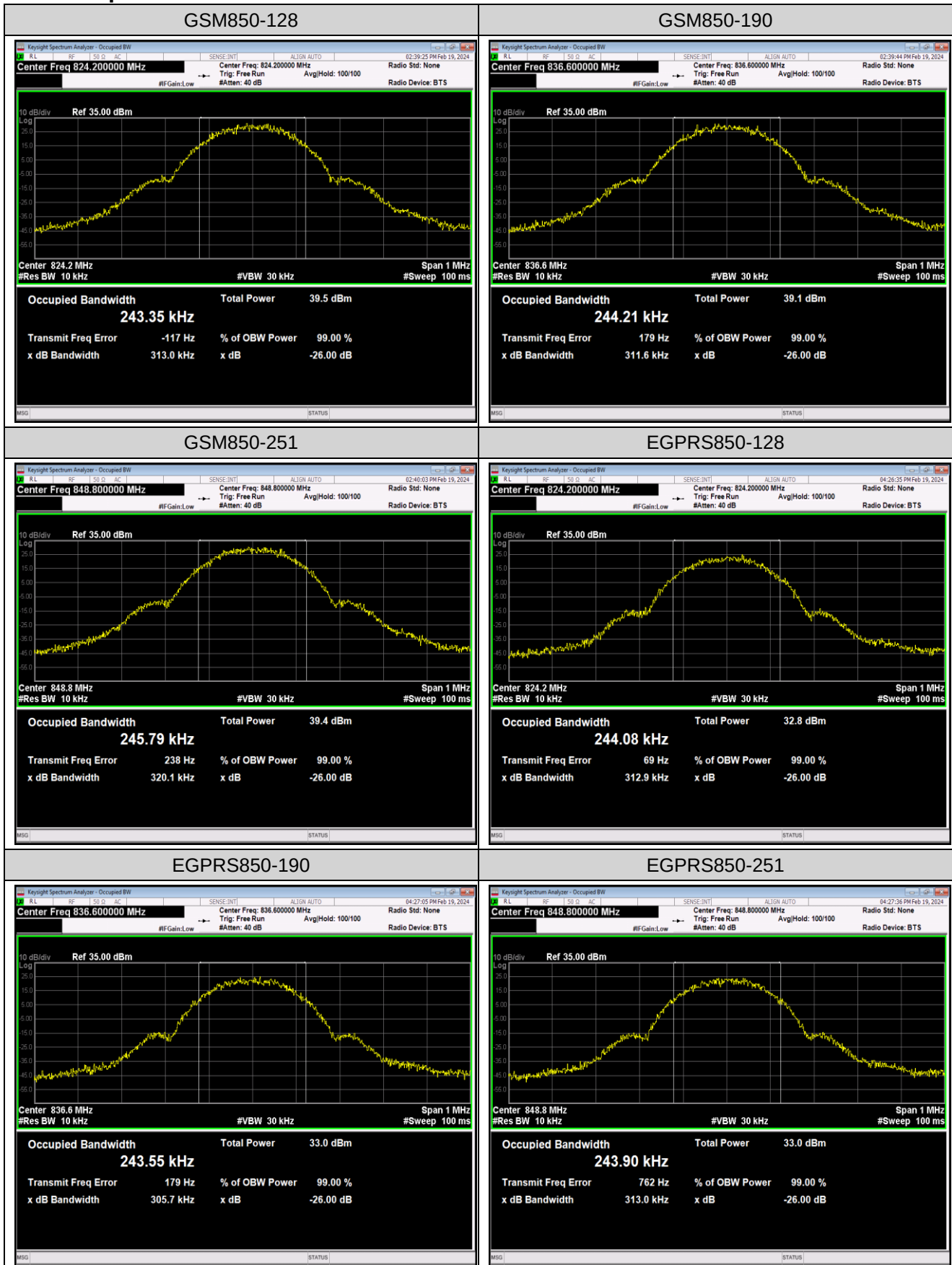


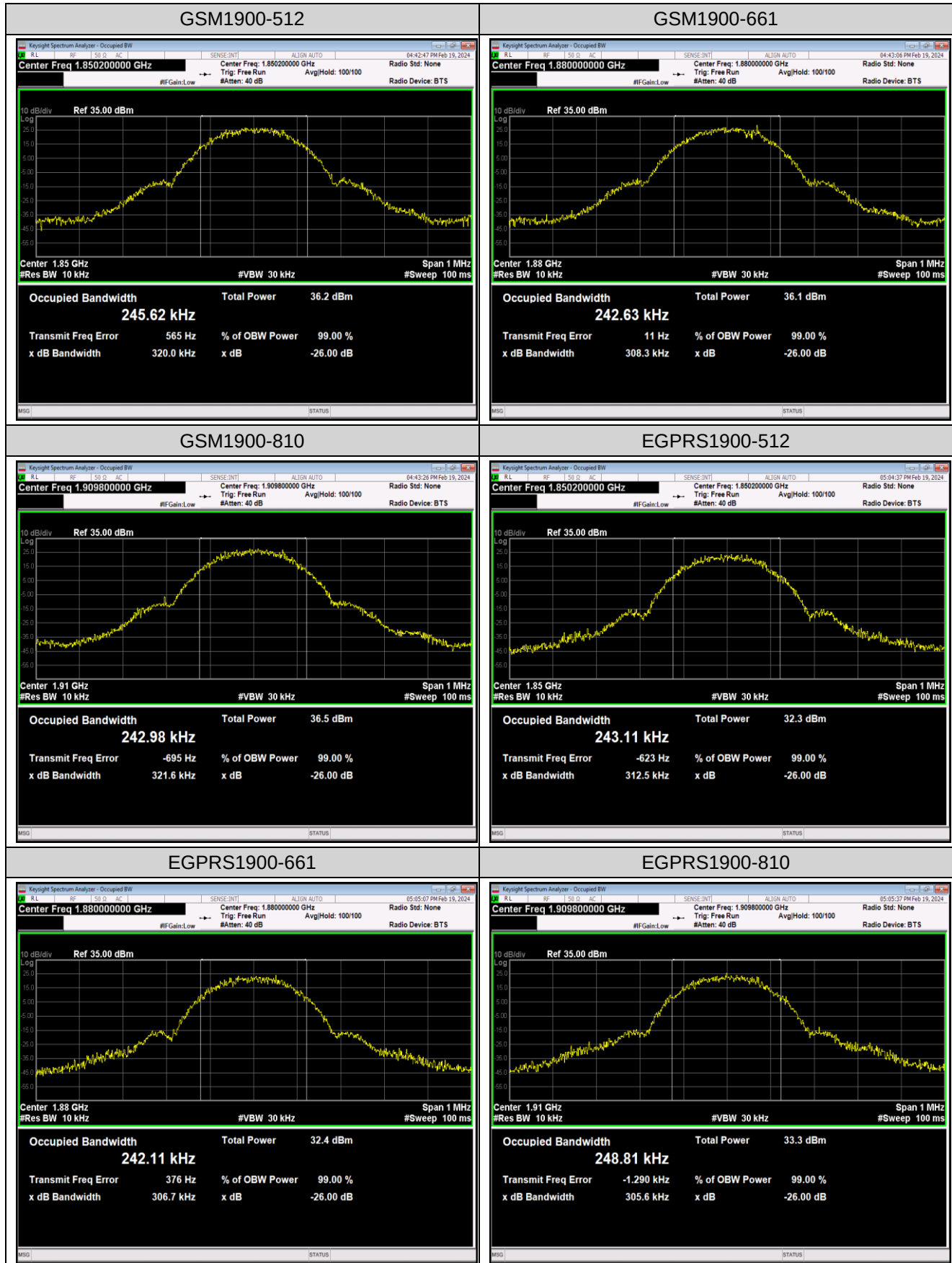
Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

Band	Channel	PCL	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
GSM850	128	5	0.24335	0.3130	---	PASS
GSM850	190	5	0.24421	0.3116	---	PASS
GSM850	251	5	0.24579	0.3201	---	PASS
EGPRS850	128	8	0.24408	0.3129	---	PASS
EGPRS850	190	8	0.24355	0.3057	---	PASS
EGPRS850	251	8	0.24390	0.3130	---	PASS
GSM1900	512	0	0.24562	0.3200	---	PASS
GSM1900	661	0	0.24263	0.3083	---	PASS
GSM1900	810	0	0.24298	0.3216	---	PASS
EGPRS1900	512	2	0.24311	0.3125	---	PASS
EGPRS1900	661	2	0.24211	0.3067	---	PASS
EGPRS1900	810	2	0.24881	0.3056	---	PASS

Test Graphs



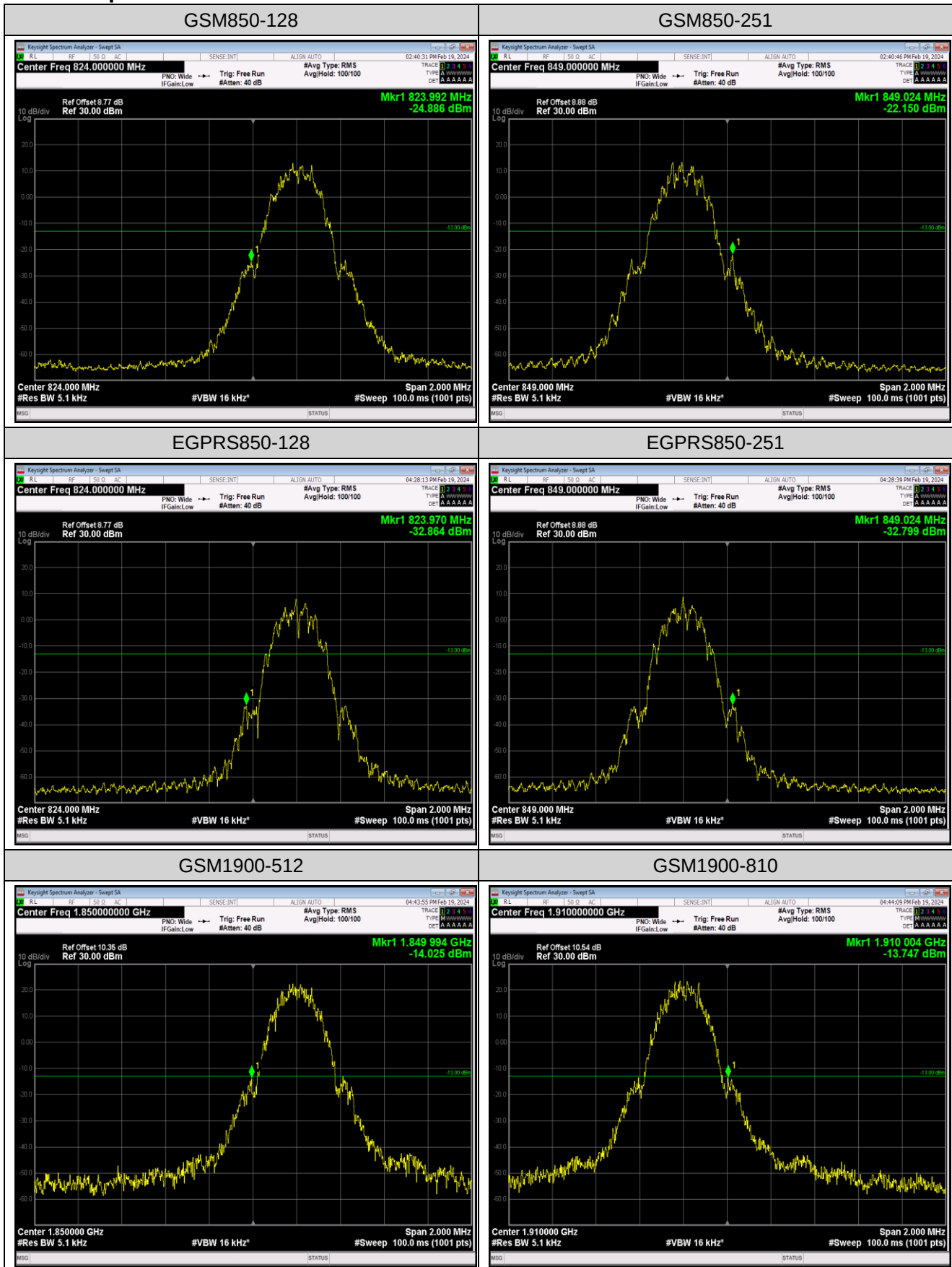


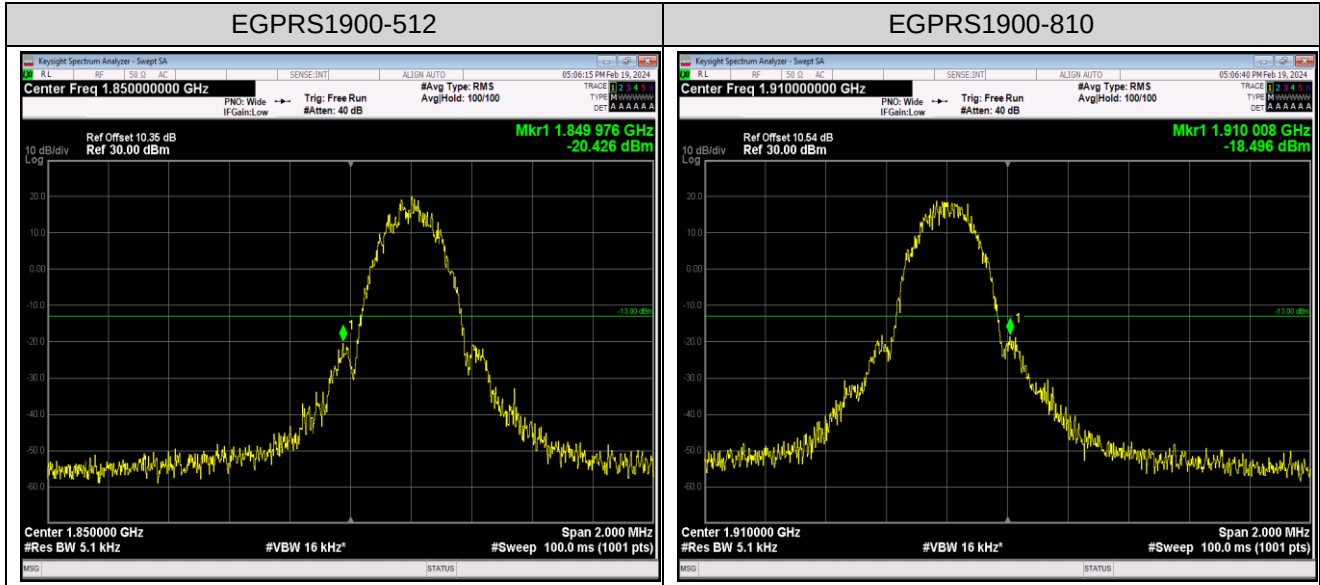
Appendix D: Band Edge

Test Result

Band	Channel	PCL	Freq (MHz)	Result (dBm)	Limit(dBm)	Verdict
GSM850	128	5	823.99	-24.89	-13	PASS
GSM850	251	5	849.02	-22.15	-13	PASS
EGPRS850	128	8	823.97	-32.86	-13	PASS
EGPRS850	251	8	849.02	-32.80	-13	PASS
GSM1900	512	0	1849.99	-14.02	-13	PASS
GSM1900	810	0	1910.00	-13.75	-13	PASS
EGPRS1900	512	2	1849.98	-20.43	-13	PASS
EGPRS1900	810	2	1910.01	-18.50	-13	PASS

Test Graphs





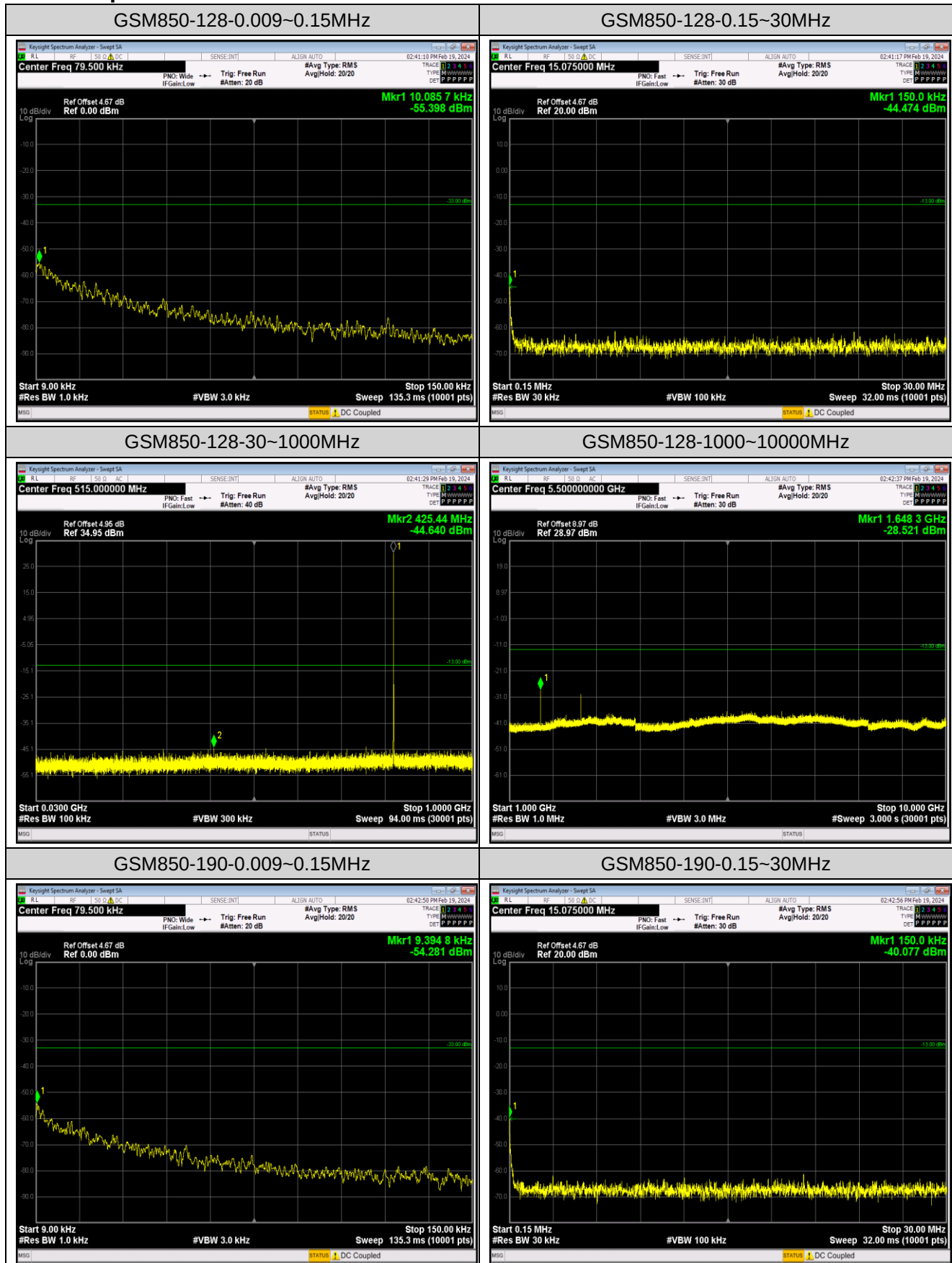
Appendix E: Conducted Spurious Emission

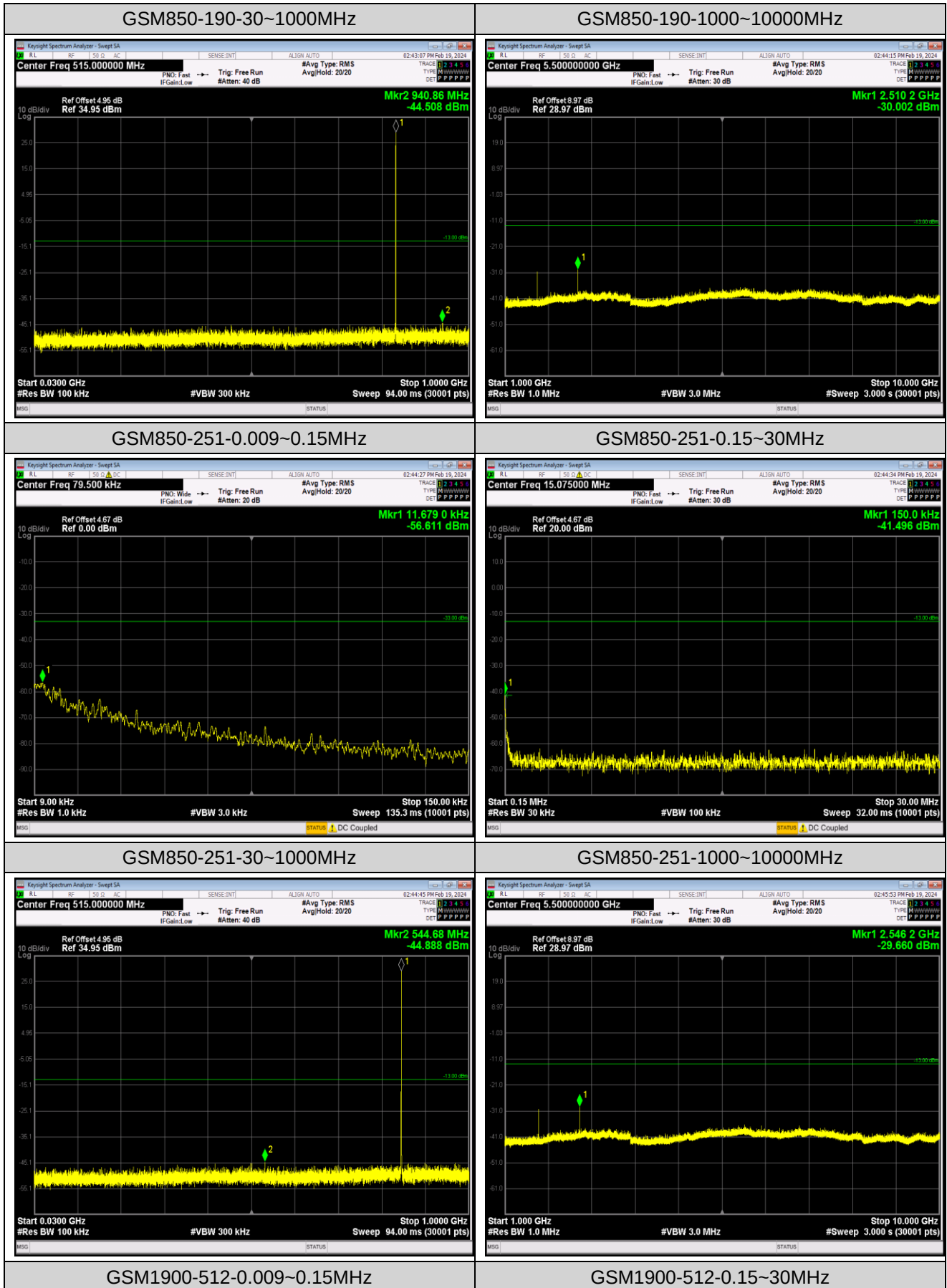
Test Result

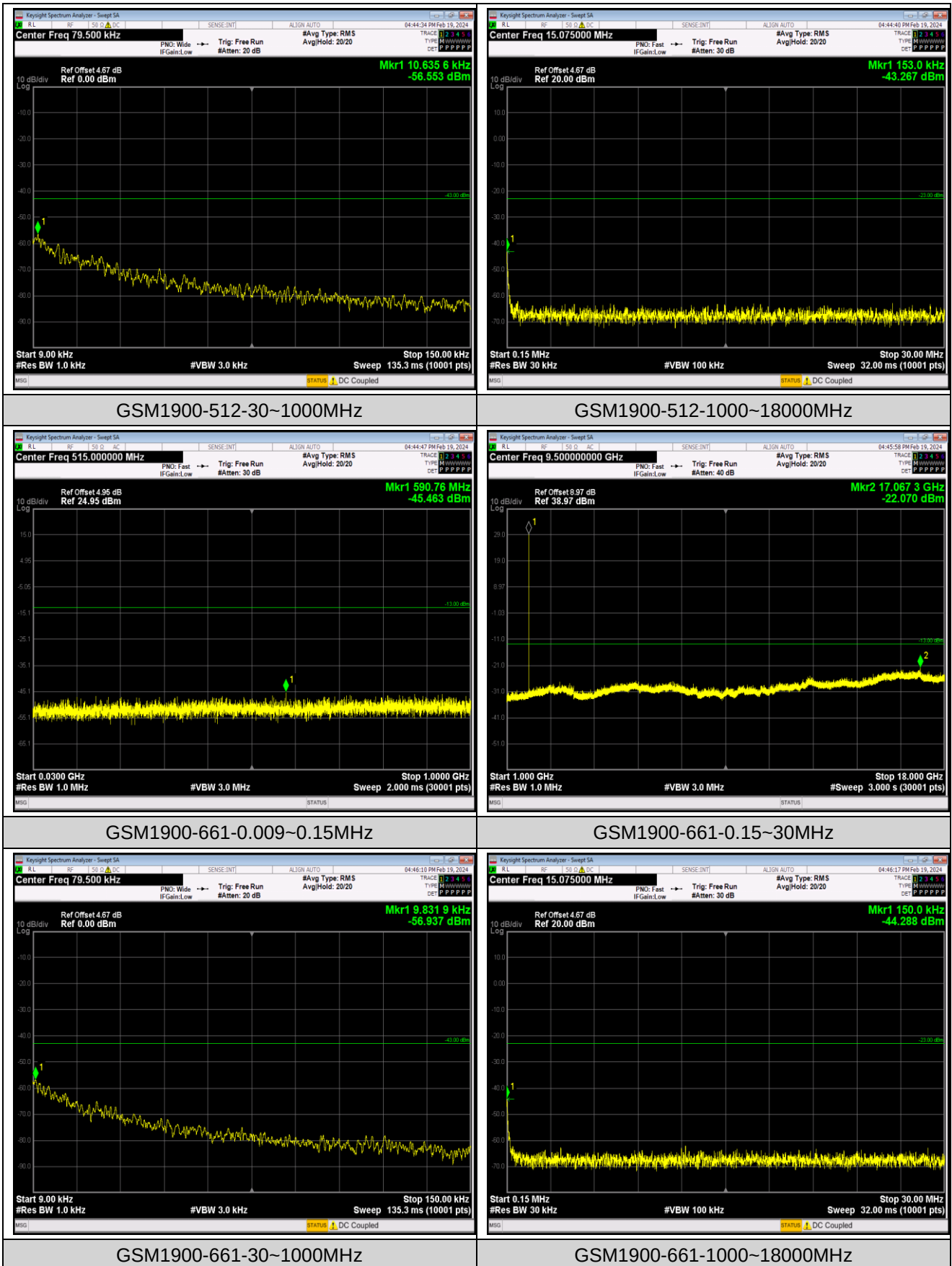
Band	Channel	PCL	Frequency Range(MHz)	Max.Freq. (MHz)	Result (dBm)	Limit (dBm)	Verdict
GSM850	128	5	0.009~0.15MHz	0.01	-55.4	-33	PASS
GSM850	128	5	0.15~30MHz	0.15	-44.47	-13	PASS
GSM850	128	5	30~1000MHz	425.44	-44.64	-13	PASS
GSM850	128	5	1000~10000MHz	1648.3	-28.52	-13	PASS
GSM850	190	5	0.009~0.15MHz	0.01	-54.28	-33	PASS
GSM850	190	5	0.15~30MHz	0.15	-40.08	-13	PASS
GSM850	190	5	30~1000MHz	940.86	-44.51	-13	PASS
GSM850	190	5	1000~10000MHz	2510.2	-30	-13	PASS
GSM850	251	5	0.009~0.15MHz	0.01	-56.61	-33	PASS
GSM850	251	5	0.15~30MHz	0.15	-41.5	-13	PASS
GSM850	251	5	30~1000MHz	544.68	-44.89	-13	PASS
GSM850	251	5	1000~10000MHz	2546.2	-29.66	-13	PASS
GSM1900	512	0	0.009~0.15MHz	0.01	-56.55	-43	PASS
GSM1900	512	0	0.15~30MHz	0.15	-43.27	-23	PASS
GSM1900	512	0	30~1000MHz	590.76	-45.46	-13	PASS
GSM1900	512	0	1000~18000MHz	17067.27	-22.07	-13	PASS
GSM1900	661	0	0.009~0.15MHz	0.01	-56.94	-43	PASS
GSM1900	661	0	0.15~30MHz	0.15	-44.29	-23	PASS
GSM1900	661	0	30~1000MHz	905.94	-45.22	-13	PASS
GSM1900	661	0	1000~18000MHz	16989.63	-22.68	-13	PASS
GSM1900	810	0	0.009~0.15MHz	0.01	-57.64	-43	PASS
GSM1900	810	0	0.15~30MHz	0.16	-44.74	-23	PASS
GSM1900	810	0	30~1000MHz	935.11	-45.63	-13	PASS
GSM1900	810	0	1000~18000MHz	16114.13	-22.19	-13	PASS

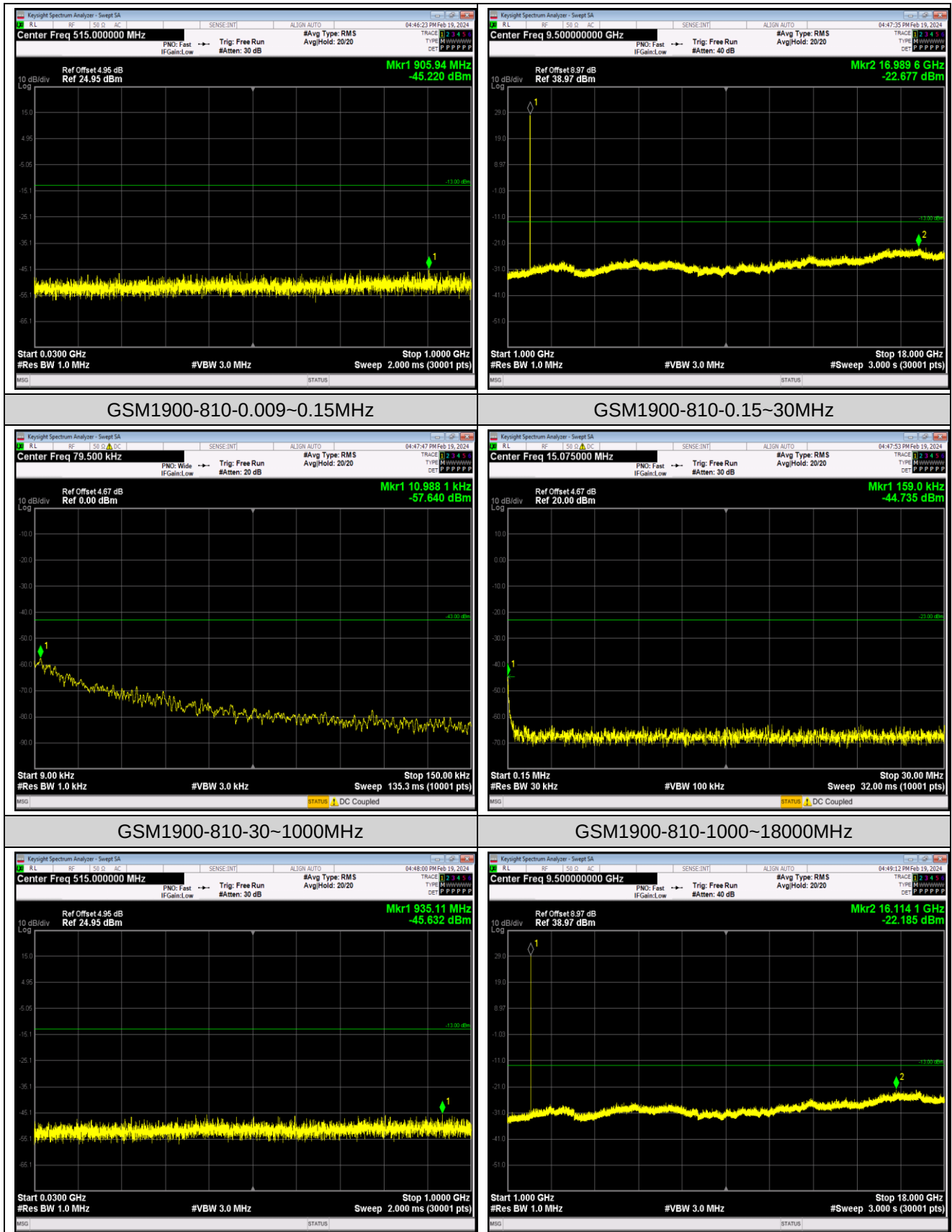
Remark: All channel and all modulation had been tested, but only the worst case data displayed in this report.

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		
3.85	-30	0.58	0.000693	±2.5	Pass
	-20	-1.84	-0.002199		
	-10	-0.19	-0.000227		
	0	-2.49	-0.002976		
	10	-9.27	-0.011081		
	20	-3.26	-0.003897		
	30	-4.52	-0.005403		
	40	-5.55	-0.006634		
	50	-7.65	-0.009144		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.00	-5.20	-0.006216	±2.5	Pass
	3.85	-4.49	-0.005367		
	4.40	1.97	0.002355		
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	9.40	0.011236	±2.5	Pass
	-20	10.72	0.012814		
	-10	7.17	0.008570		
	0	8.27	0.009885		
	10	12.37	0.014786		
	20	10.14	0.012120		
	30	8.01	0.009574		
	40	7.14	0.008535		
	50	6.55	0.007829		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.00	11.27	0.013471	±2.5	Pass
	3.85	8.94	0.010686		
	4.40	8.17	0.009766		
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		
3.85	-30	10.53	0.005601	Within authorized band for PCS 1900	Pass
	-20	-0.97	-0.000516		
	-10	1.58	0.000840		
	0	2.94	0.001564		
	10	8.30	0.004415		
	20	-2.52	-0.001340		
	30	0.39	0.000207		
	40	-0.74	-0.000394		
	50	-6.46	-0.003436		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.00	4.55	0.002420	Within authorized band for PCS 1900	Pass
	3.85	-5.84	-0.003106		
	4.40	13.95	0.007420		
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		
3.85	-30	-12.43	-0.006612	Within authorized band for PCS 1900	Pass
	-20	-12.88	-0.006851		
	-10	-16.01	-0.008516		
	0	-23.57	-0.012537		
	10	-19.21	-0.010218		
	20	-11.98	-0.006372		
	30	-20.50	-0.010904		
	40	-14.50	-0.007713		
	50	-18.66	-0.009926		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.00	-19.63	-0.010441	Within authorized band for PCS 1900	Pass
	3.85	-17.50	-0.009309		
	4.40	-11.85	-0.006303		
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

