

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	33.22	30.07	38.45	PASS
GSM850	190	5	33.27	30.12	38.45	PASS
GSM850	251	5	33.36	30.21	38.45	PASS
GSM1900	512	0	30.06	30.66	33.00	PASS
GSM1900	661	0	30.22	30.82	33.00	PASS
GSM1900	810	0	30.22	30.82	33.00	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
GPRS850	128	5	1	33.29	30.14	38.45	PASS
GPRS850	128	5	2	31.64	28.49	38.45	PASS
GPRS850	128	5	3	29.71	26.56	38.45	PASS
GPRS850	128	5	4	27.56	24.41	38.45	PASS
GPRS850	190	5	1	33.32	30.17	38.45	PASS
GPRS850	190	5	2	31.57	28.42	38.45	PASS
GPRS850	190	5	3	29.65	26.5	38.45	PASS
GPRS850	190	5	4	27.52	24.37	38.45	PASS
GPRS850	251	5	1	33.42	30.27	38.45	PASS
GPRS850	251	5	2	31.55	28.4	38.45	PASS
GPRS850	251	5	3	29.56	26.41	38.45	PASS
GPRS850	251	5	4	27.42	24.27	38.45	PASS
GPRS1900	512	0	1	30.05	30.65	33.00	PASS
GPRS1900	512	0	2	27.92	28.52	33.00	PASS
GPRS1900	512	0	3	26.43	27.03	33.00	PASS
GPRS1900	512	0	4	24.36	24.96	33.00	PASS
GPRS1900	661	0	1	30.21	30.81	33.00	PASS
GPRS1900	661	0	2	28.14	28.74	33.00	PASS
GPRS1900	661	0	3	26.64	27.24	33.00	PASS
GPRS1900	661	0	4	24.56	25.16	33.00	PASS
GPRS1900	810	0	1	30.27	30.87	33.00	PASS
GPRS1900	810	0	2	28.08	28.68	33.00	PASS
GPRS1900	810	0	3	26.58	27.18	33.00	PASS
GPRS1900	810	0	4	24.43	25.03	33.00	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
EGPRS850	128	8	1	27.38	24.23	38.45	PASS
EGPRS850	128	8	2	26.02	22.87	38.45	PASS
EGPRS850	128	8	3	23.61	20.46	38.45	PASS
EGPRS850	128	8	4	21.31	18.16	38.45	PASS
EGPRS850	190	8	1	27.40	24.25	38.45	PASS
EGPRS850	190	8	2	26.13	22.98	38.45	PASS
EGPRS850	190	8	3	23.74	20.59	38.45	PASS
EGPRS850	190	8	4	21.41	18.26	38.45	PASS
EGPRS850	251	8	1	27.31	24.16	38.45	PASS
EGPRS850	251	8	2	26.10	22.95	38.45	PASS
EGPRS850	251	8	3	23.72	20.57	38.45	PASS
EGPRS850	251	8	4	21.31	18.16	38.45	PASS
EGPRS1900	512	2	1	26.56	27.16	33.00	PASS
EGPRS1900	512	2	2	24.68	25.28	33.00	PASS
EGPRS1900	512	2	3	22.22	22.82	33.00	PASS
EGPRS1900	512	2	4	20.14	20.74	33.00	PASS
EGPRS1900	661	2	1	26.70	27.3	33.00	PASS
EGPRS1900	661	2	2	24.96	25.56	33.00	PASS
EGPRS1900	661	2	3	22.50	23.1	33.00	PASS
EGPRS1900	661	2	4	20.33	20.93	33.00	PASS
EGPRS1900	810	2	1	26.86	27.46	33.00	PASS
EGPRS1900	810	2	2	25.04	25.64	33.00	PASS
EGPRS1900	810	2	3	22.72	23.32	33.00	PASS
EGPRS1900	810	2	4	20.52	21.12	33.00	PASS

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

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

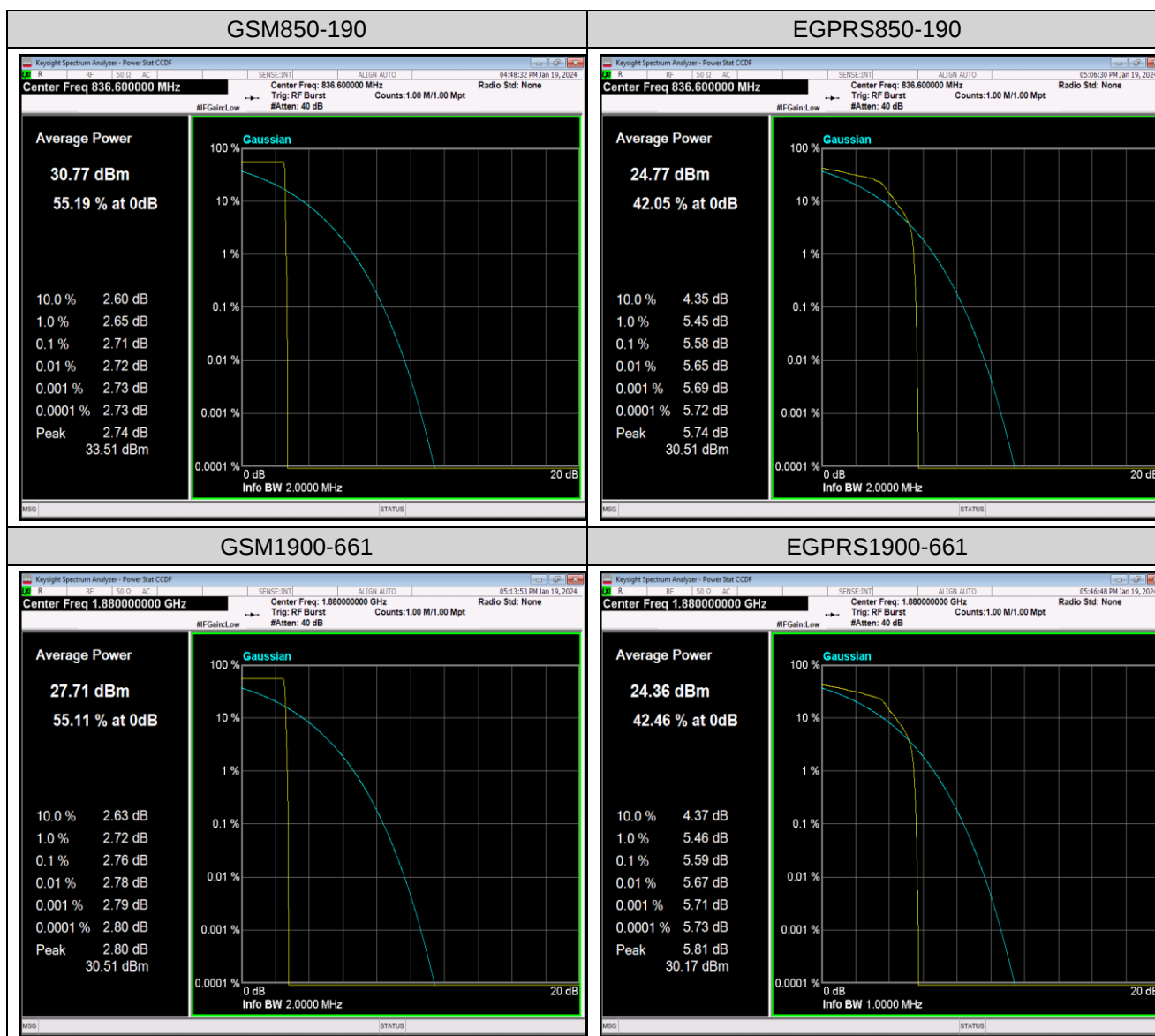
Appendix B: Peak-to-Average Ratio(CCDF)

Test Result

Band	Channel	PCL	Result(dB)	Limit(dB)	Verdict
GSM850	190	5	2.71	13	PASS
EGPRS850	190	8	5.58	13	PASS
GSM1900	661	0	2.76	13	PASS
EGPRS1900	661	2	5.59	13	PASS

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

Test Graphs

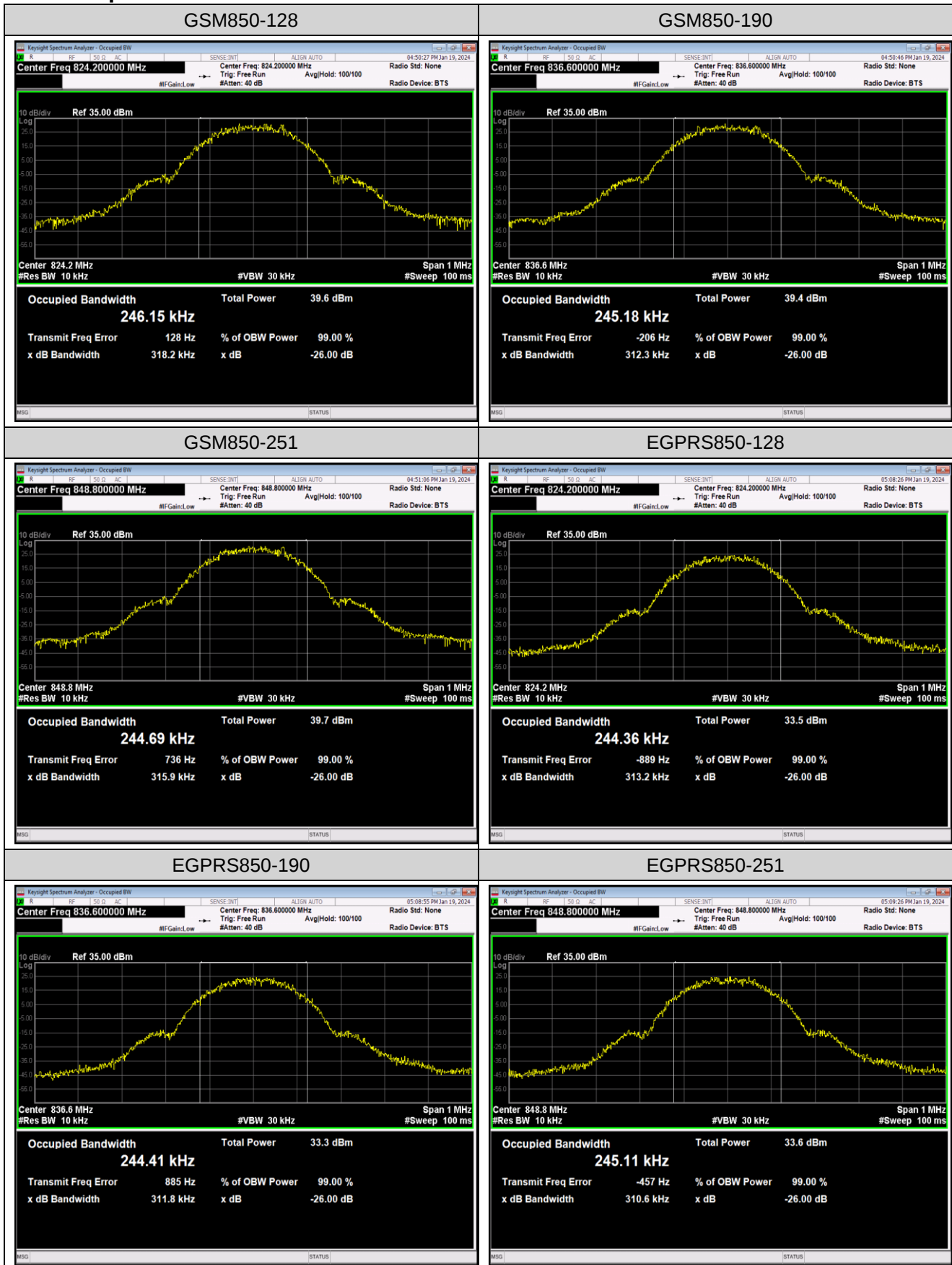


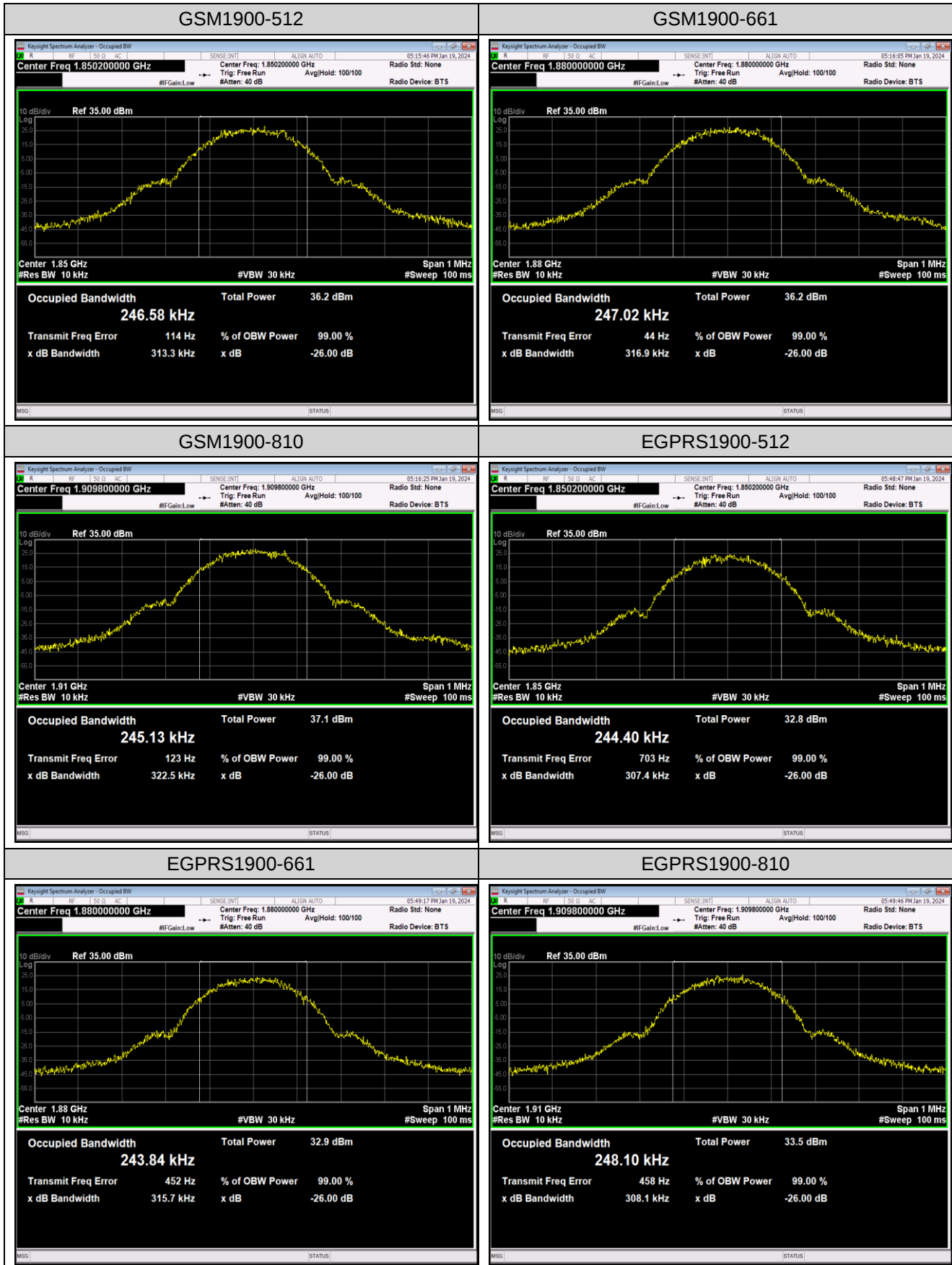
Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

Band	Channel	PCL	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
GSM850	128	5	0.24615	0.3182	---	PASS
GSM850	190	5	0.24518	0.3123	---	PASS
GSM850	251	5	0.24469	0.3159	---	PASS
EGPRS850	128	8	0.24436	0.3132	---	PASS
EGPRS850	190	8	0.24441	0.3118	---	PASS
EGPRS850	251	8	0.24511	0.3106	---	PASS
GSM1900	512	0	0.24658	0.3133	---	PASS
GSM1900	661	0	0.24702	0.3169	---	PASS
GSM1900	810	0	0.24513	0.3225	---	PASS
EGPRS1900	512	2	0.24440	0.3074	---	PASS
EGPRS1900	661	2	0.24384	0.3157	---	PASS
EGPRS1900	810	2	0.24810	0.3081	---	PASS

Test Graphs



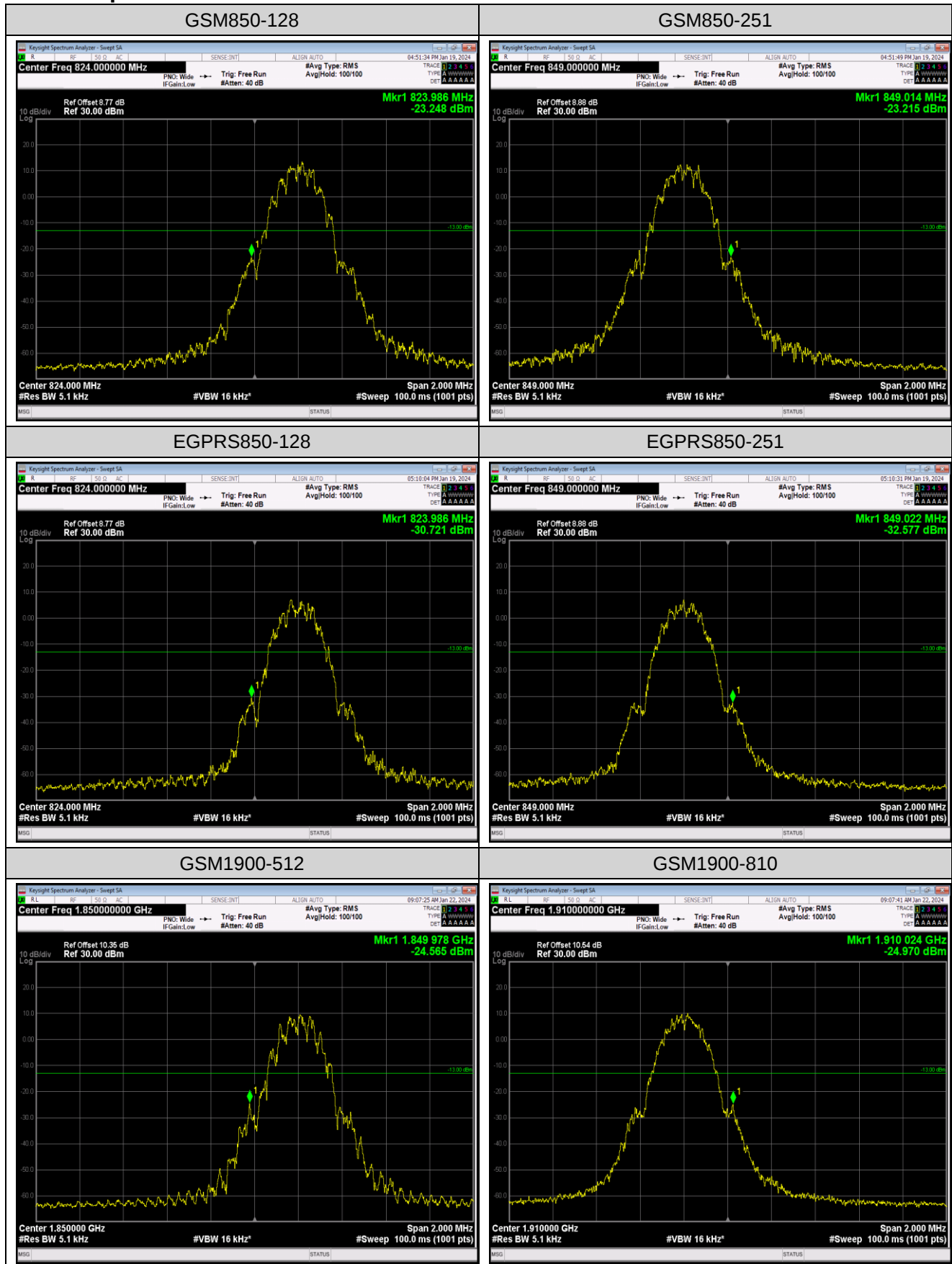


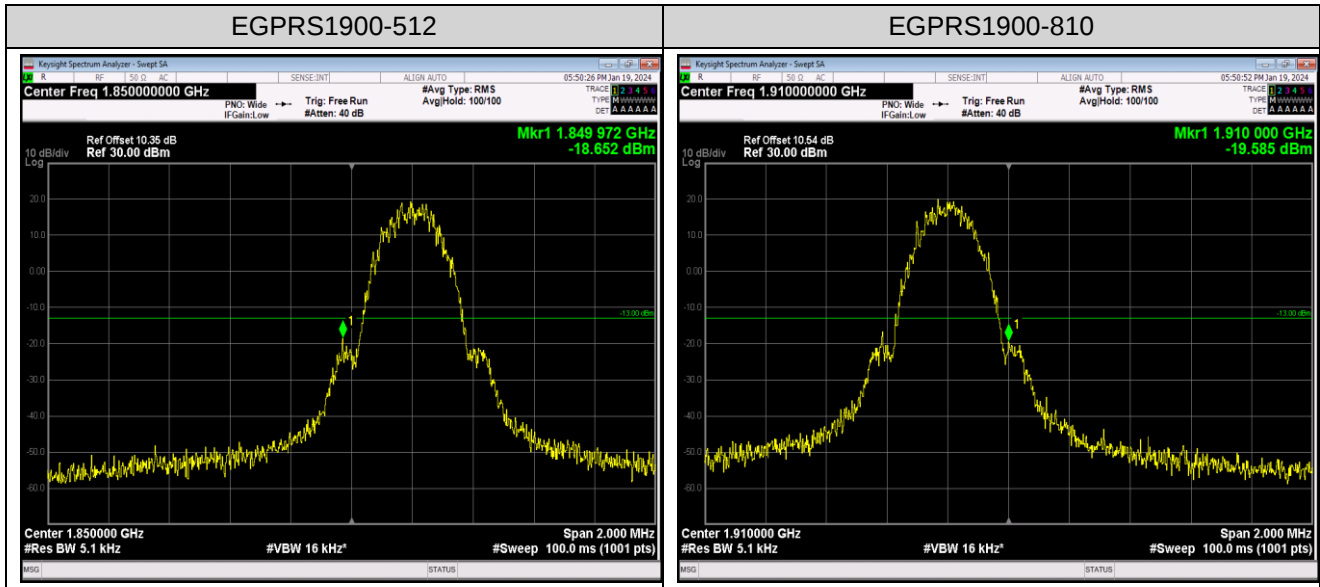
Appendix D: Band Edge

Test Result

Band	Channel	PCL	Freq (MHz)	Result (dBm)	Limit(dBm)	Verdict
GSM850	128	5	823.99	-23.25	-13	PASS
GSM850	251	5	849.01	-23.21	-13	PASS
EGPRS850	128	8	823.99	-30.72	-13	PASS
EGPRS850	251	8	849.02	-32.58	-13	PASS
GSM1900	512	0	1849.98	-24.57	-13	PASS
GSM1900	810	0	1910.02	-24.97	-13	PASS
EGPRS1900	512	2	1849.97	-18.65	-13	PASS
EGPRS1900	810	2	1910.00	-19.59	-13	PASS

Test Graphs





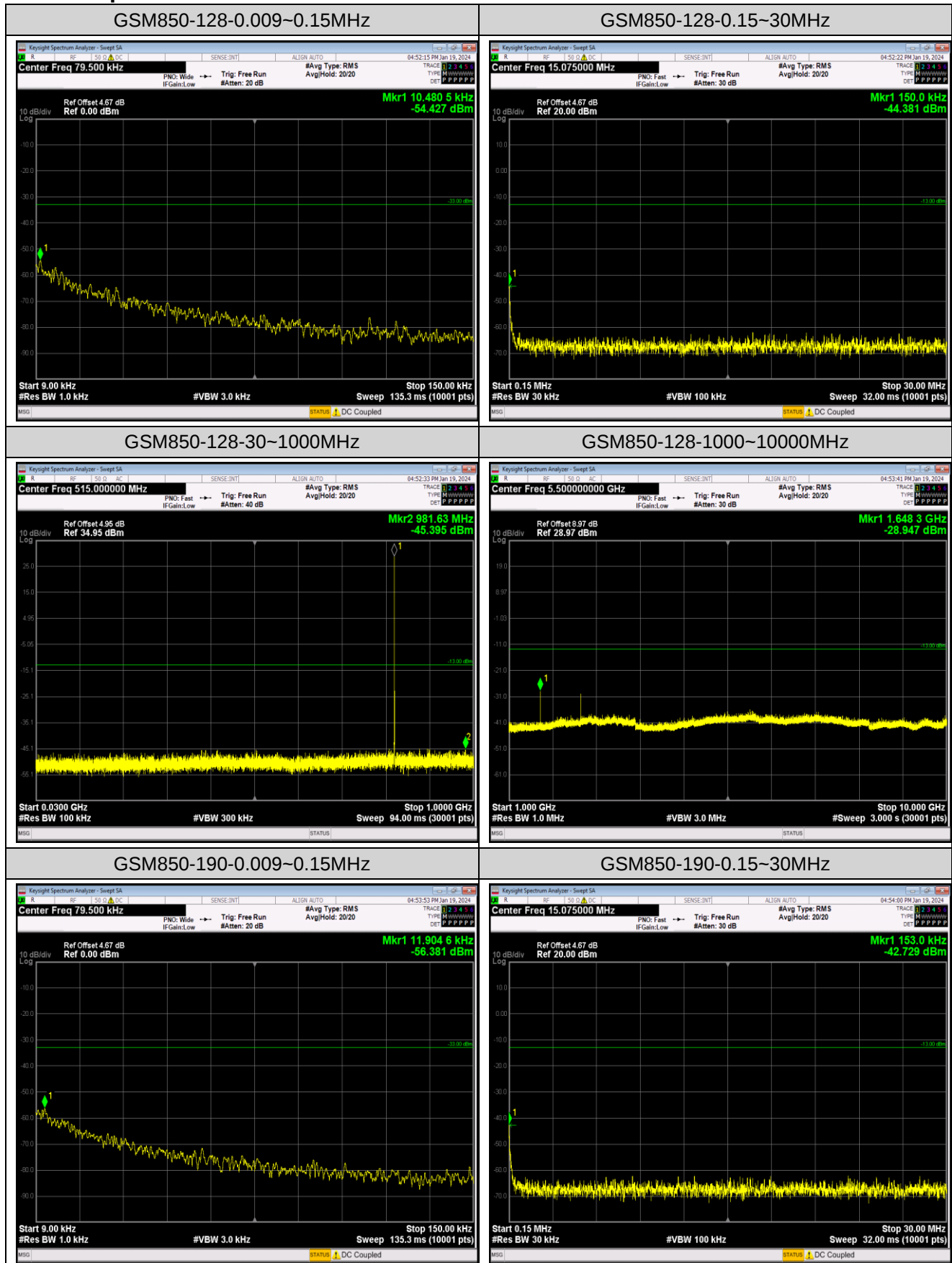
Appendix E: Conducted Spurious Emission

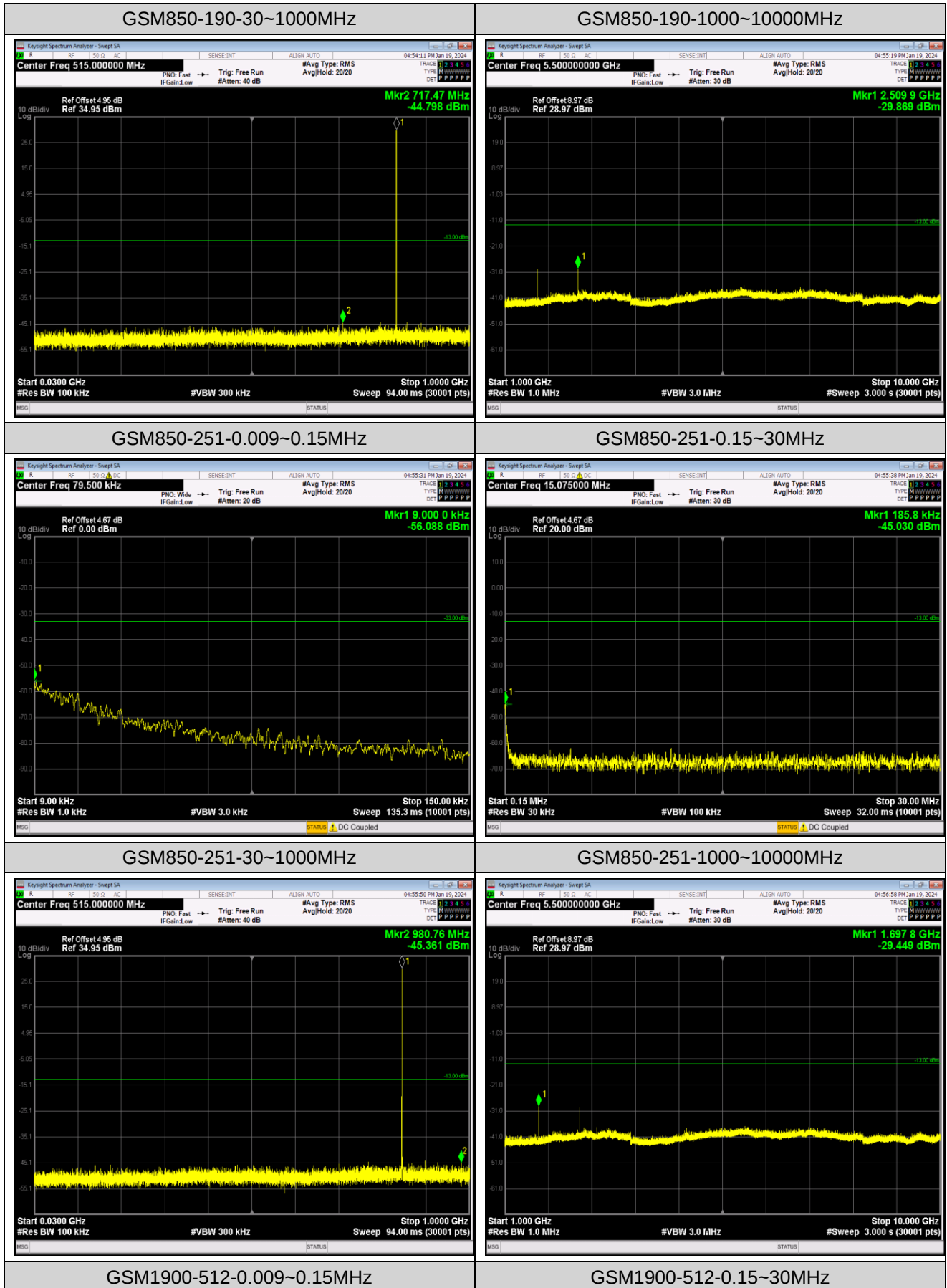
Test Result

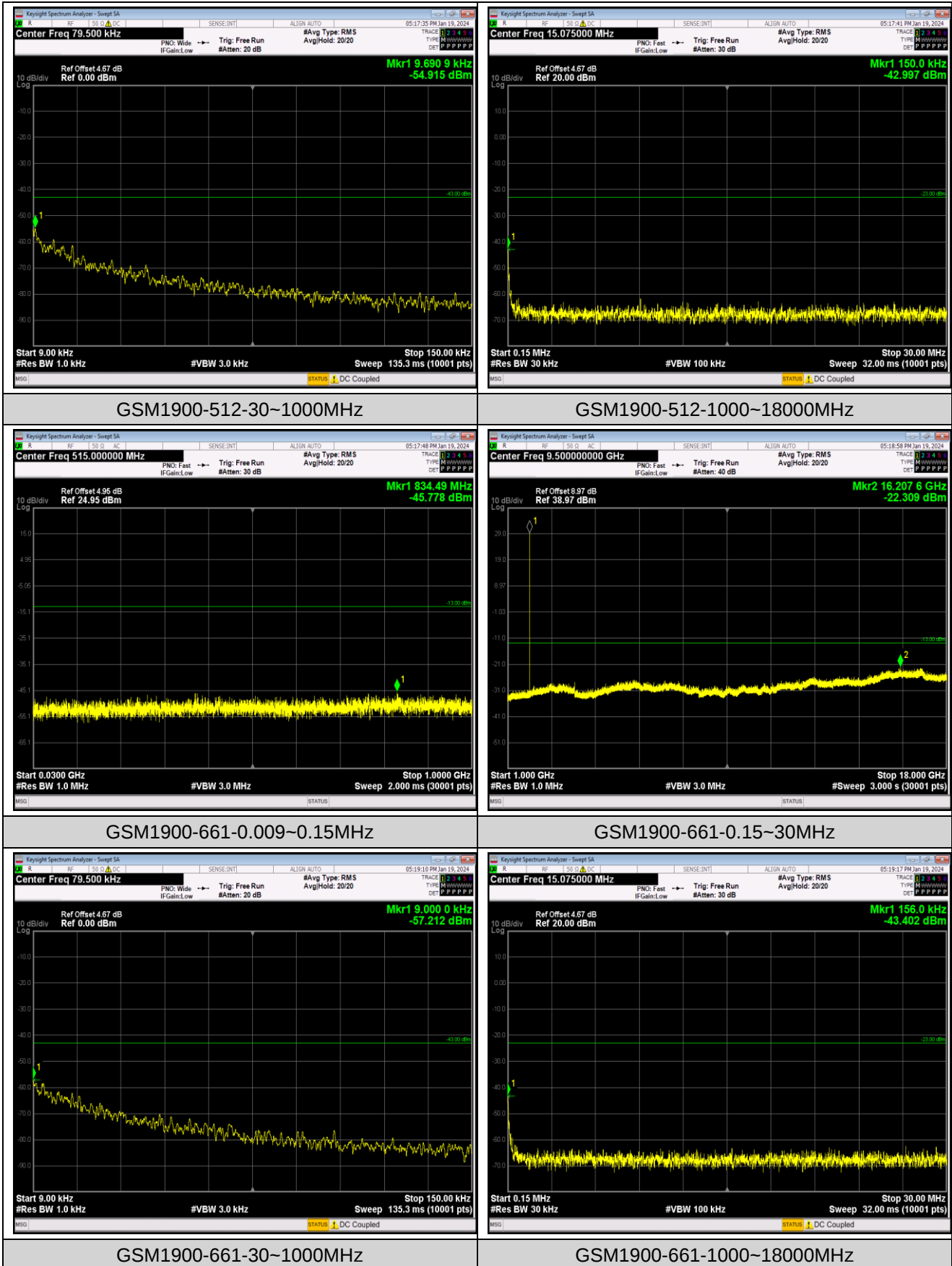
Band	Channel	PCL	Frequency Range(MHz)	Max.Freq. (MHz)	Result (dBm)	Limit (dBm)	Verdict
GSM850	128	5	0.009~0.15MHz	0.01	-54.43	-33	PASS
GSM850	128	5	0.15~30MHz	0.15	-44.38	-13	PASS
GSM850	128	5	30~1000MHz	981.63	-45.4	-13	PASS
GSM850	128	5	1000~10000MHz	1648.3	-28.95	-13	PASS
GSM850	190	5	0.009~0.15MHz	0.01	-56.38	-33	PASS
GSM850	190	5	0.15~30MHz	0.15	-42.73	-13	PASS
GSM850	190	5	30~1000MHz	717.47	-44.8	-13	PASS
GSM850	190	5	1000~10000MHz	2509.9	-29.87	-13	PASS
GSM850	251	5	0.009~0.15MHz	0.01	-56.09	-33	PASS
GSM850	251	5	0.15~30MHz	0.19	-45.03	-13	PASS
GSM850	251	5	30~1000MHz	980.76	-45.36	-13	PASS
GSM850	251	5	1000~10000MHz	1697.8	-29.45	-13	PASS
GSM1900	512	0	0.009~0.15MHz	0.01	-54.92	-43	PASS
GSM1900	512	0	0.15~30MHz	0.15	-43	-23	PASS
GSM1900	512	0	30~1000MHz	834.49	-45.78	-13	PASS
GSM1900	512	0	1000~18000MHz	16207.63	-22.31	-13	PASS
GSM1900	661	0	0.009~0.15MHz	0.01	-57.21	-43	PASS
GSM1900	661	0	0.15~30MHz	0.16	-43.4	-23	PASS
GSM1900	661	0	30~1000MHz	995.31	-45.43	-13	PASS
GSM1900	661	0	1000~18000MHz	17049.13	-22.52	-13	PASS
GSM1900	810	0	0.009~0.15MHz	0.01	-56.91	-43	PASS
GSM1900	810	0	0.15~30MHz	0.15	-44.15	-23	PASS
GSM1900	810	0	30~1000MHz	933.94	-46.34	-13	PASS
GSM1900	810	0	1000~18000MHz	17058.2	-22.34	-13	PASS

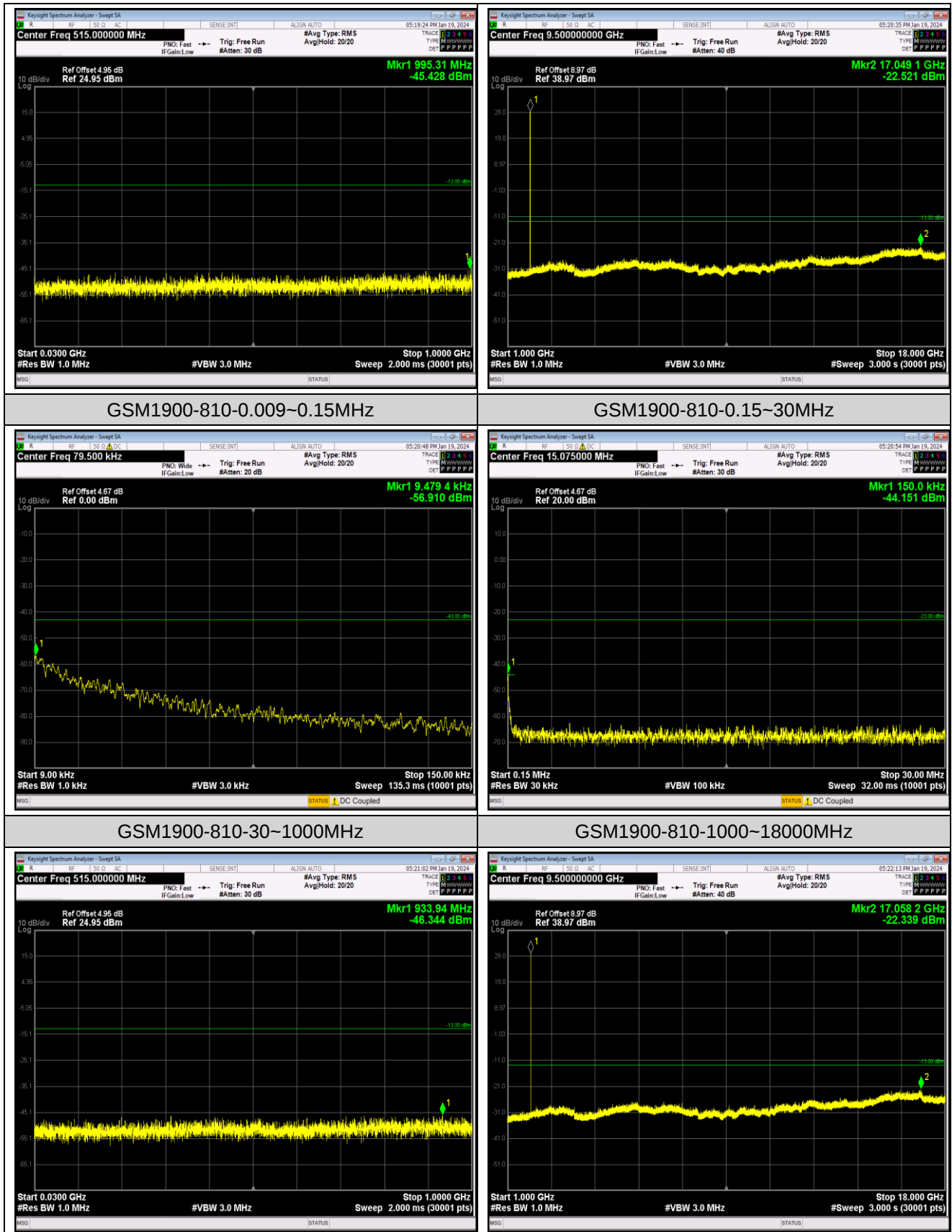
Remark: All channel and all modulation had been tested, but only the worst case data displayed in this report.

Test Graphs









Appendix 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		
3.80	-30	1.13	0.001351	±2.5	Pass
	-20	2.52	0.003012		
	-10	4.62	0.005522		
	0	-0.32	-0.000383		
	10	-2.00	-0.002391		
	20	-0.03	-0.000036		
	30	-3.10	-0.003705		
	40	-5.52	-0.006598		
	50	4.88	0.005833		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.42	0.55	0.000657	±2.5	Pass
	3.80	8.94	0.010686		
	4.18	1.68	0.002008		
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		
3.80	-30	4.26	0.005092	±2.5	Pass
	-20	2.26	0.002701		
	-10	8.14	0.009730		
	0	7.10	0.008487		
	10	9.36	0.011188		
	20	11.46	0.013698		
	30	4.71	0.005630		
	40	8.68	0.010375		
	50	3.52	0.004208		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.42	7.33	0.008762	±2.5	Pass
	3.80	6.10	0.007291		
	4.18	7.94	0.009491		
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		
3.80	-30	-1.87	-0.000995	Within authorized band for PCS 1900	Pass
	-20	-0.13	-0.000069		
	-10	-3.16	-0.001681		
	0	-8.10	-0.004309		
	10	-9.14	-0.004862		
	20	-0.61	-0.000324		
	30	7.04	0.003745		
	40	-4.29	-0.002282		
	50	-12.59	-0.006697		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.42	-10.17	-0.005410	Within authorized band for PCS 1900	Pass
	3.80	2.91	0.001548		
	4.18	-7.36	-0.003915		
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		
3.80	-30	5.68	0.003021	Within authorized band for PCS 1900	Pass
	-20	12.85	0.006835		
	-10	16.34	0.008691		
	0	1.00	0.000532		
	10	5.04	0.002681		
	20	5.46	0.002904		
	30	9.62	0.005117		
	40	-0.58	-0.000309		
	50	1.55	0.000824		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.42	12.24	0.006511	Within authorized band for PCS 1900	Pass
	3.80	-0.36	-0.000191		
	4.18	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

