

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	33.39	30.94	38.45	PASS
GSM850	190	5	33.35	30.9	38.45	PASS
GSM850	251	5	33.42	30.97	38.45	PASS
GSM1900	512	0	30.36	30.96	33.00	PASS
GSM1900	661	0	30.53	31.13	33.00	PASS
GSM1900	810	0	30.24	30.84	33.00	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
GPRS850	128	5	1	33.39	30.94	38.45	PASS
GPRS850	128	5	2	32.43	29.98	38.45	PASS
GPRS850	128	5	3	30.36	27.91	38.45	PASS
GPRS850	128	5	4	29.19	26.74	38.45	PASS
GPRS850	190	5	1	33.31	30.86	38.45	PASS
GPRS850	190	5	2	32.34	29.89	38.45	PASS
GPRS850	190	5	3	30.28	27.83	38.45	PASS
GPRS850	190	5	4	29.12	26.67	38.45	PASS
GPRS850	251	5	1	33.37	30.92	38.45	PASS
GPRS850	251	5	2	32.43	29.98	38.45	PASS
GPRS850	251	5	3	30.39	27.94	38.45	PASS
GPRS850	251	5	4	29.22	26.77	38.45	PASS
GPRS1900	512	0	1	30.40	31	33.00	PASS
GPRS1900	512	0	2	29.17	29.77	33.00	PASS
GPRS1900	512	0	3	26.63	27.23	33.00	PASS
GPRS1900	512	0	4	25.47	26.07	33.00	PASS
GPRS1900	661	0	1	30.56	31.16	33.00	PASS
GPRS1900	661	0	2	29.33	29.93	33.00	PASS
GPRS1900	661	0	3	26.86	27.46	33.00	PASS
GPRS1900	661	0	4	25.76	26.36	33.00	PASS
GPRS1900	810	0	1	30.29	30.89	33.00	PASS
GPRS1900	810	0	2	29.01	29.61	33.00	PASS
GPRS1900	810	0	3	26.60	27.2	33.00	PASS
GPRS1900	810	0	4	25.53	26.13	33.00	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
EGPRS850	128	8	1	30.42	27.97	38.45	PASS
EGPRS850	128	8	2	29.65	27.2	38.45	PASS
EGPRS850	128	8	3	28.05	25.6	38.45	PASS
EGPRS850	128	8	4	27.07	24.62	38.45	PASS
EGPRS850	190	8	1	30.12	27.67	38.45	PASS
EGPRS850	190	8	2	29.36	26.91	38.45	PASS
EGPRS850	190	8	3	27.82	25.37	38.45	PASS
EGPRS850	190	8	4	26.78	24.33	38.45	PASS
EGPRS850	251	8	1	29.96	27.51	38.45	PASS
EGPRS850	251	8	2	29.17	26.72	38.45	PASS
EGPRS850	251	8	3	27.66	25.21	38.45	PASS
EGPRS850	251	8	4	26.55	24.1	38.45	PASS
EGPRS1900	512	2	1	29.60	30.2	33.00	PASS
EGPRS1900	512	2	2	28.78	29.38	33.00	PASS
EGPRS1900	512	2	3	27.06	27.66	33.00	PASS
EGPRS1900	512	2	4	25.94	26.54	33.00	PASS
EGPRS1900	661	2	1	29.61	30.21	33.00	PASS
EGPRS1900	661	2	2	28.79	29.39	33.00	PASS
EGPRS1900	661	2	3	27.03	27.63	33.00	PASS
EGPRS1900	661	2	4	25.91	26.51	33.00	PASS
EGPRS1900	810	2	1	29.29	29.89	33.00	PASS
EGPRS1900	810	2	2	28.45	29.05	33.00	PASS
EGPRS1900	810	2	3	26.62	27.22	33.00	PASS
EGPRS1900	810	2	4	25.58	26.18	33.00	PASS

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

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

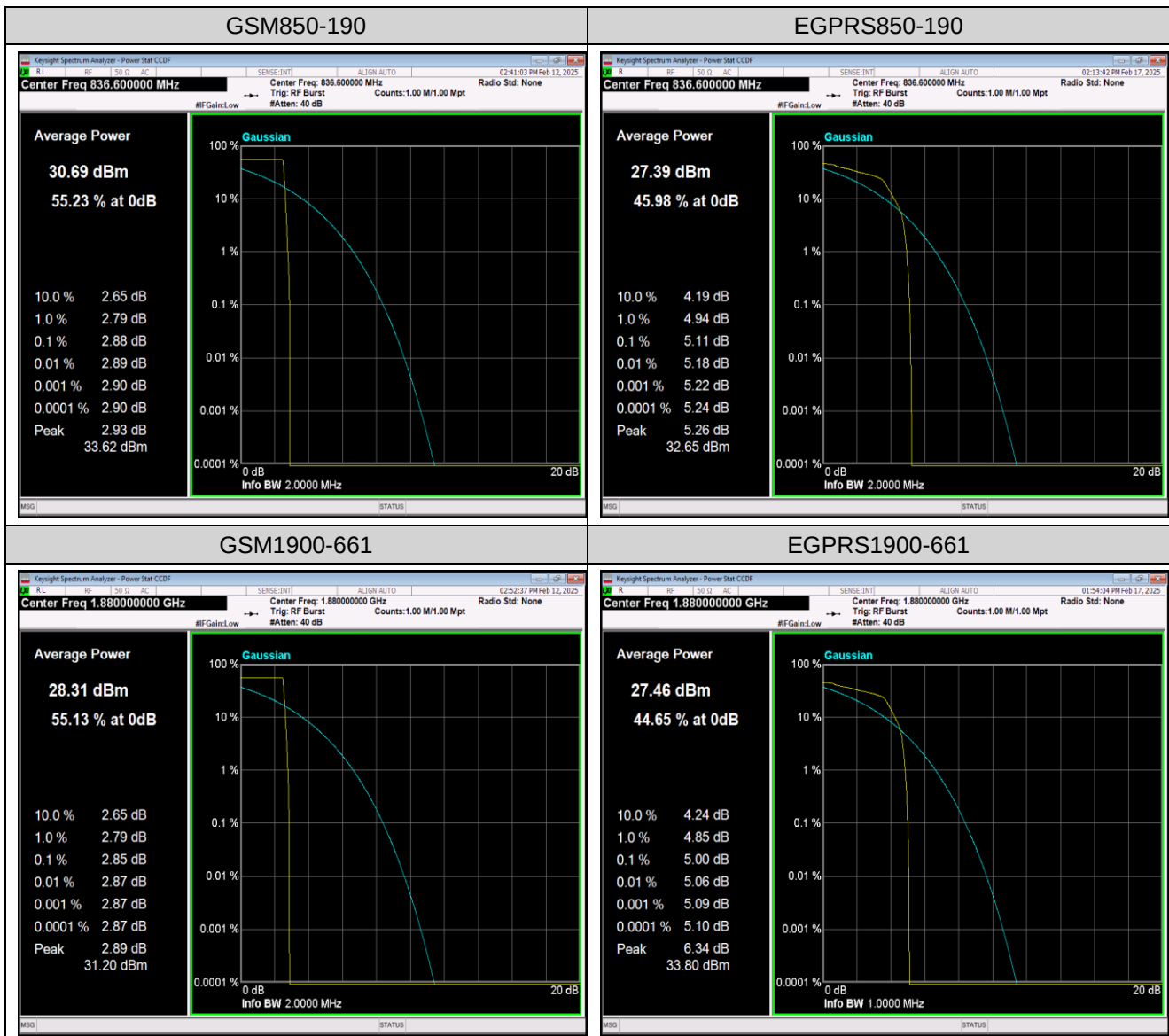
Appendix B: Peak-to-Average Ratio(CCDF)

Test Result

Band	Channel	PCL	Result(dB)	Limit(dB)	Verdict
GSM850	190	5	2.88	13	PASS
EGPRS850	190	8	5.11	13	PASS
GSM1900	661	0	2.85	13	PASS
EGPRS1900	661	2	5	13	PASS

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

Test Graphs

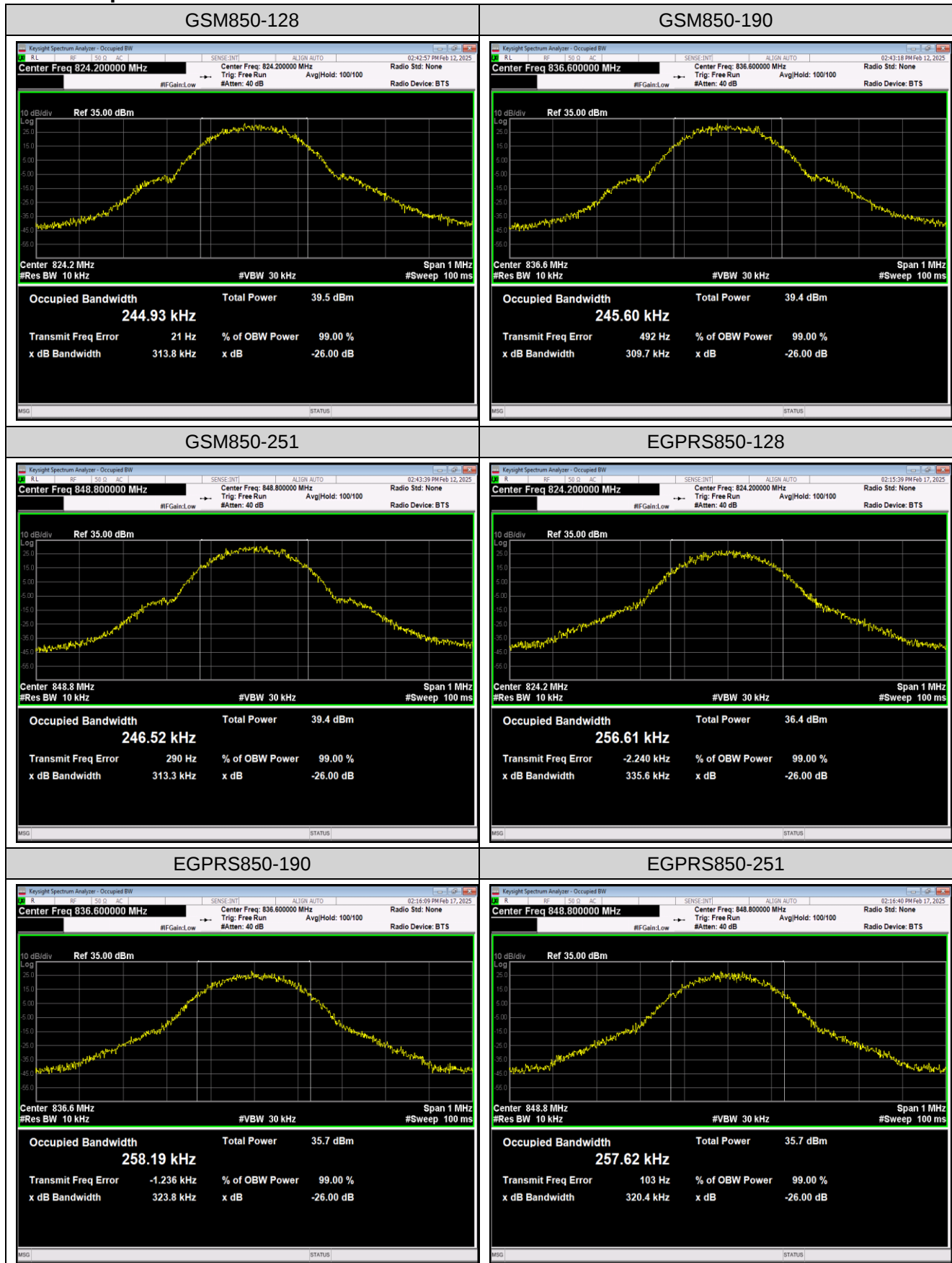


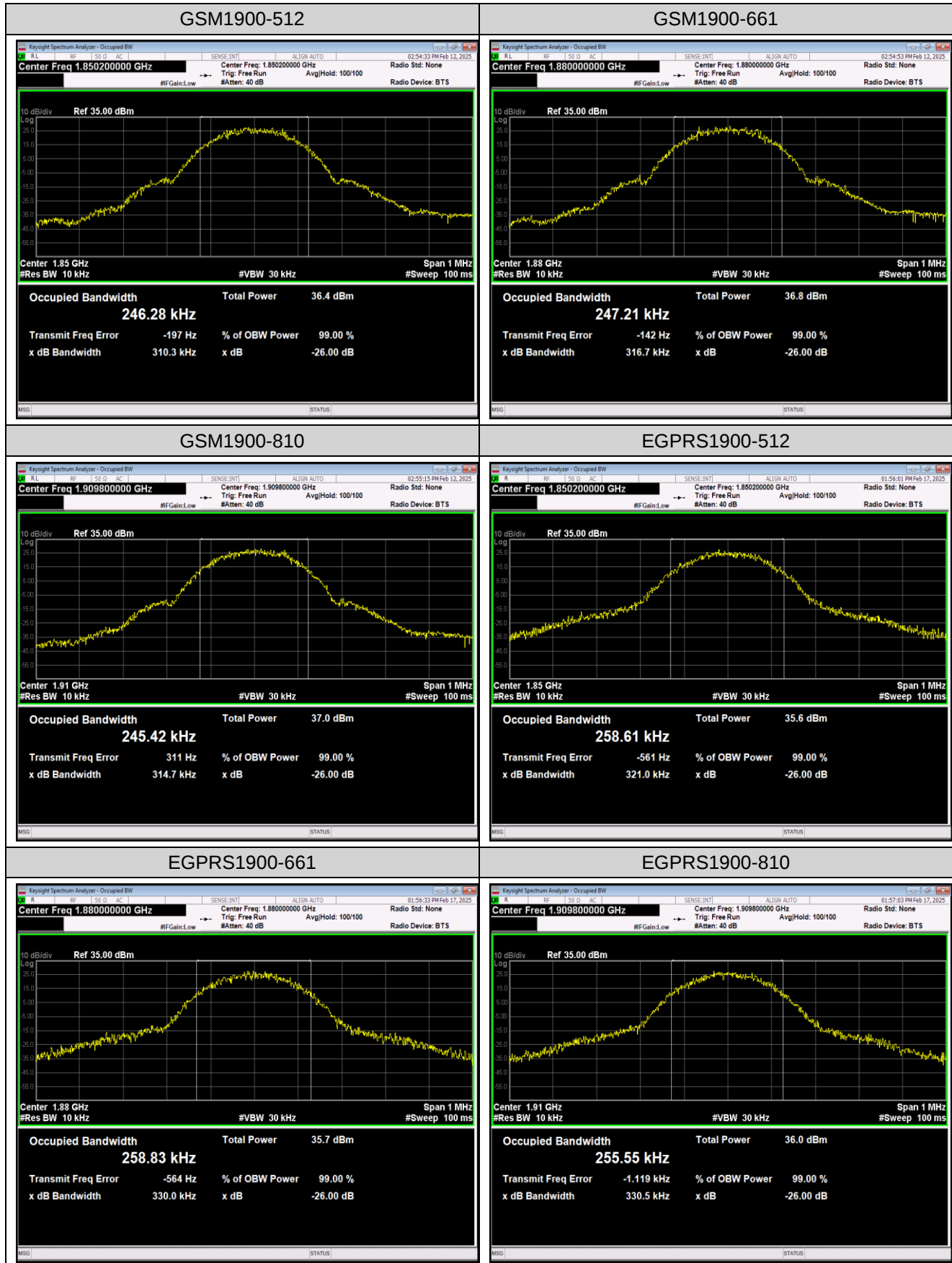
Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

Band	Channel	PCL	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
GSM850	128	5	0.24493	0.3138	---	PASS
GSM850	190	5	0.24560	0.3097	---	PASS
GSM850	251	5	0.24652	0.3133	---	PASS
EGPRS850	128	8	0.25661	0.3356	---	PASS
EGPRS850	190	8	0.25819	0.3238	---	PASS
EGPRS850	251	8	0.25762	0.3204	---	PASS
GSM1900	512	0	0.24628	0.3103	---	PASS
GSM1900	661	0	0.24721	0.3167	---	PASS
GSM1900	810	0	0.24542	0.3147	---	PASS
EGPRS1900	512	2	0.25861	0.3210	---	PASS
EGPRS1900	661	2	0.25883	0.3300	---	PASS
EGPRS1900	810	2	0.25555	0.3305	---	PASS

Test Graphs

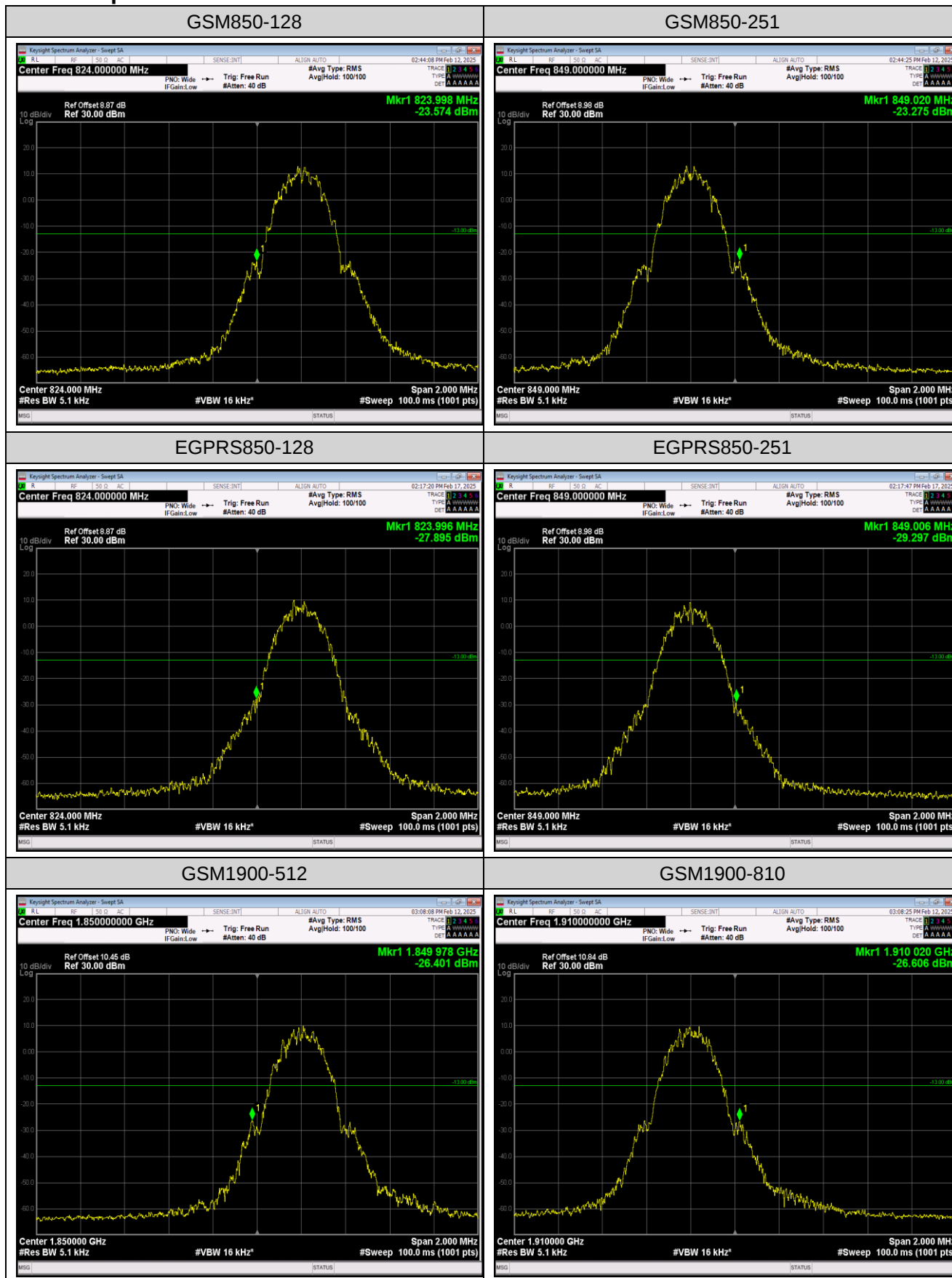


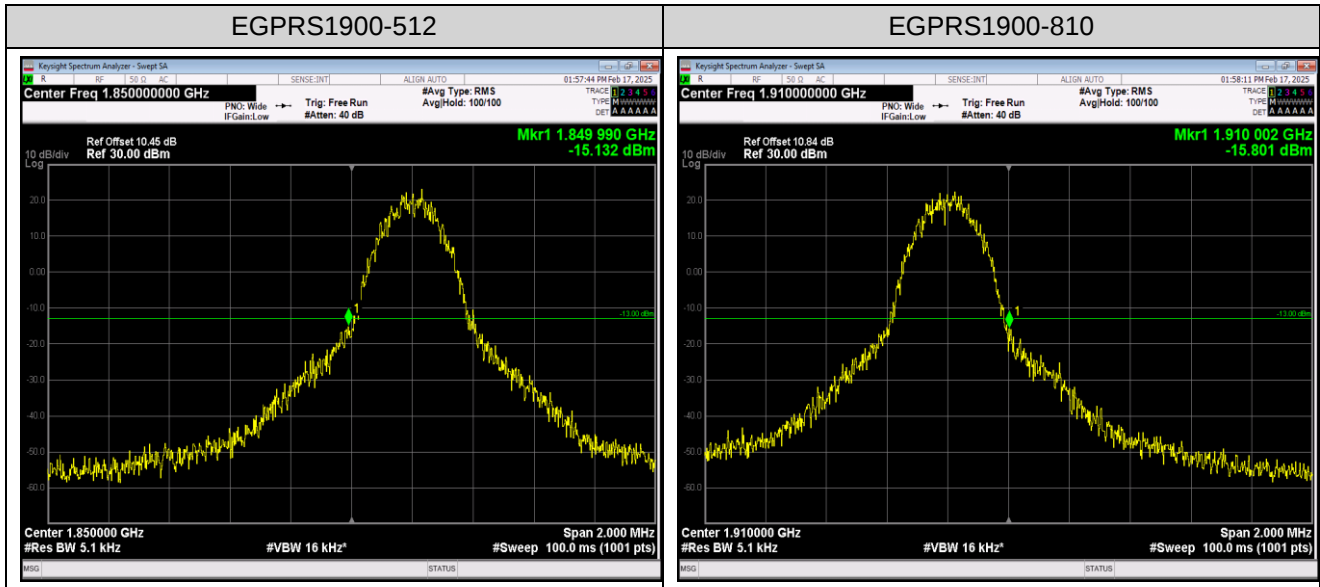


Appendix D: Band Edge**Test Result**

Band	Channel	PCL	Freq (MHz)	Result (dBm)	Limit(dBm)	Verdict
GSM850	128	5	824.00	-23.57	-13	PASS
GSM850	251	5	849.02	-23.28	-13	PASS
EGPRS850	128	8	824.00	-27.89	-13	PASS
EGPRS850	251	8	849.01	-29.30	-13	PASS
GSM1900	512	0	1849.98	-26.40	-13	PASS
GSM1900	810	0	1910.02	-26.61	-13	PASS
EGPRS1900	512	2	1849.99	-15.13	-13	PASS
EGPRS1900	810	2	1910.00	-15.80	-13	PASS

Test Graphs





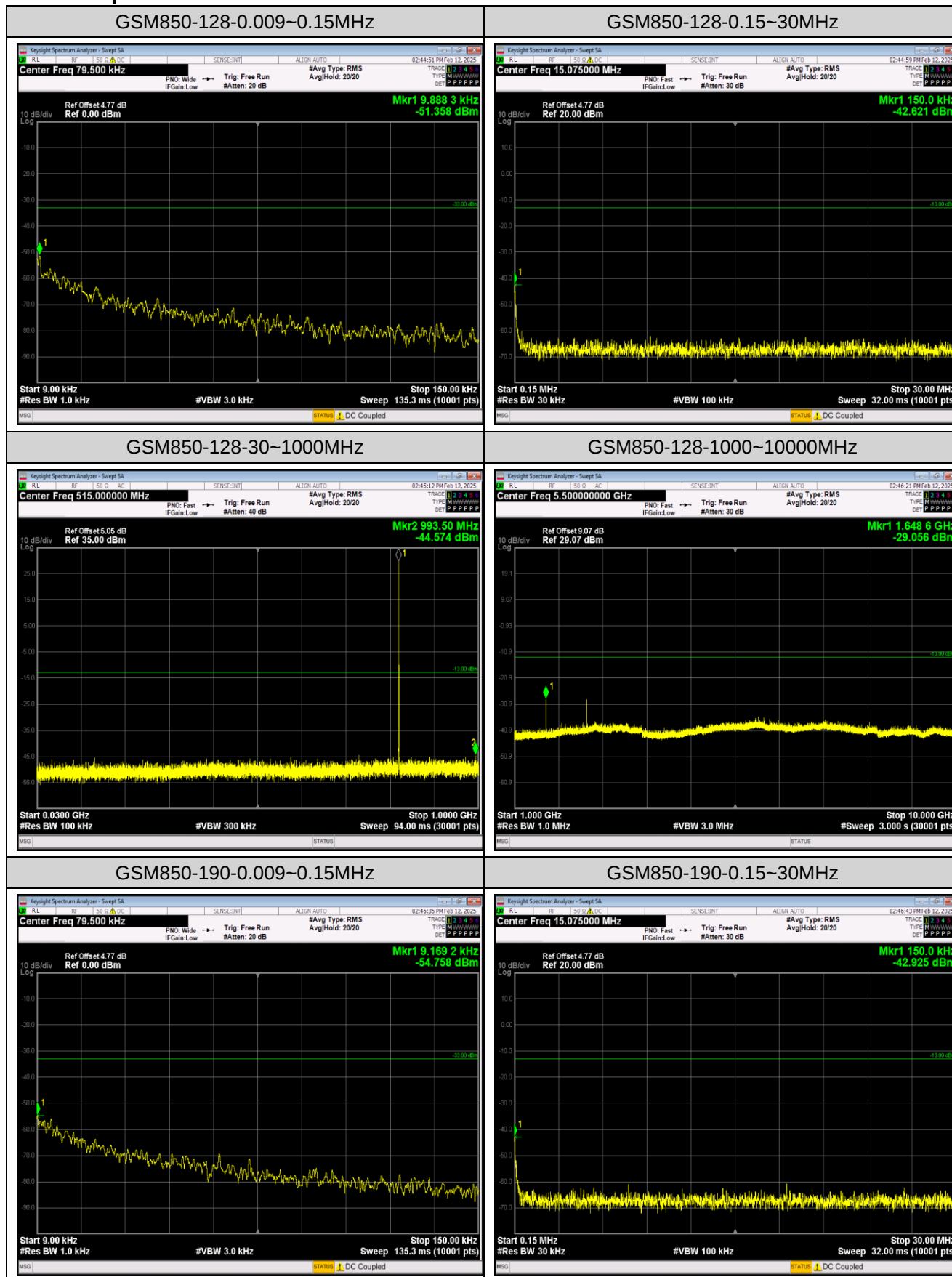
Appendix E: Conducted Spurious Emission

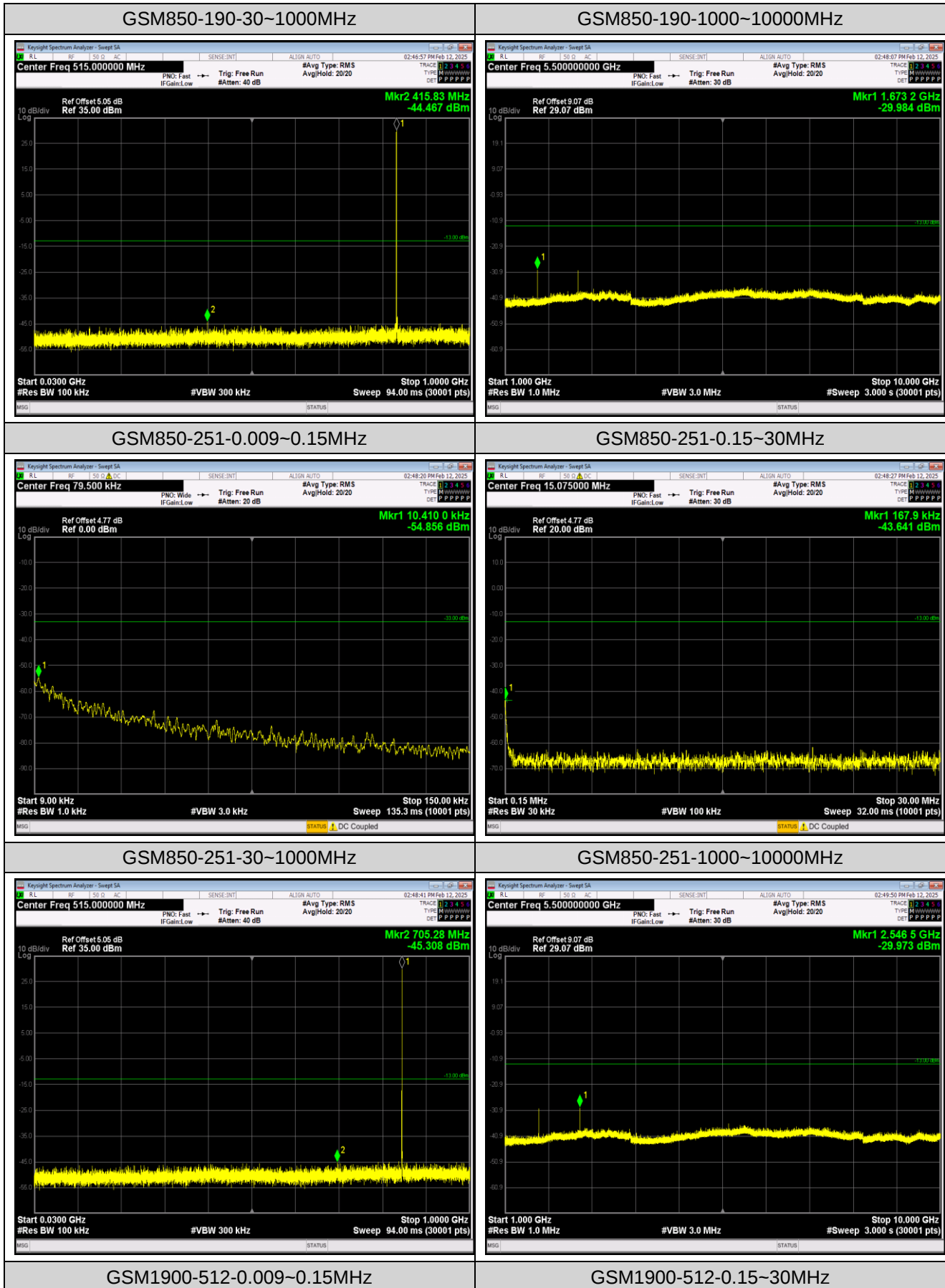
Test Result

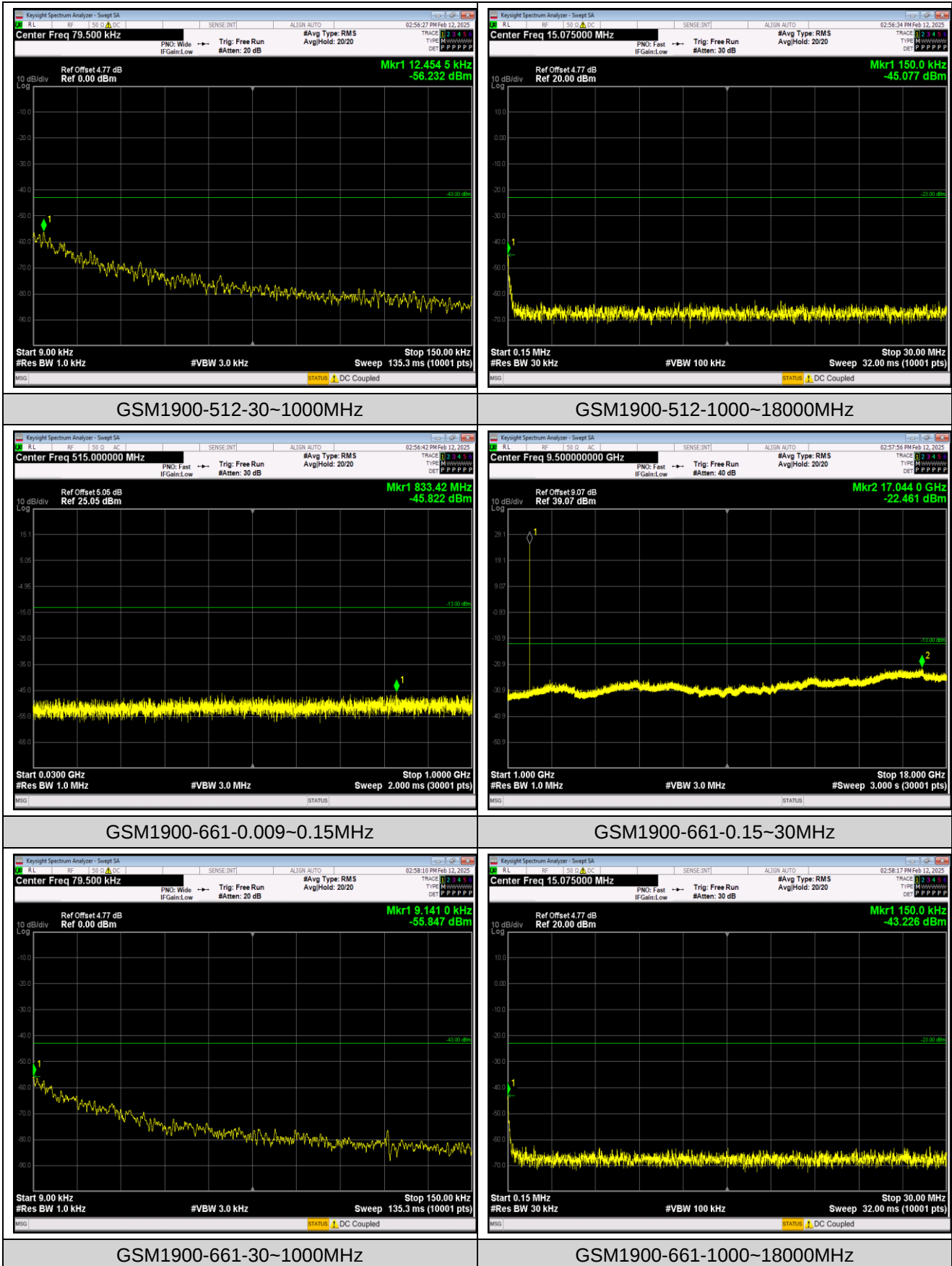
Band	Channel	PCL	Frequency Range(MHz)	Max.Freq. (MHz)	Result (dBm)	Limit (dBm)	Verdict
GSM850	128	5	0.009~0.15MHz	0.01	-51.36	-33	PASS
GSM850	128	5	0.15~30MHz	0.15	-42.62	-13	PASS
GSM850	128	5	30~1000MHz	993.5	-44.57	-13	PASS
GSM850	128	5	1000~10000MHz	1648.6	-29.06	-13	PASS
GSM850	190	5	0.009~0.15MHz	0.01	-54.76	-33	PASS
GSM850	190	5	0.15~30MHz	0.15	-42.93	-13	PASS
GSM850	190	5	30~1000MHz	415.83	-44.47	-13	PASS
GSM850	190	5	1000~10000MHz	1673.2	-29.98	-13	PASS
GSM850	251	5	0.009~0.15MHz	0.01	-54.86	-33	PASS
GSM850	251	5	0.15~30MHz	0.17	-43.64	-13	PASS
GSM850	251	5	30~1000MHz	705.28	-45.31	-13	PASS
GSM850	251	5	1000~10000MHz	2546.5	-29.97	-13	PASS
GSM1900	512	0	0.009~0.15MHz	0.01	-56.23	-43	PASS
GSM1900	512	0	0.15~30MHz	0.15	-45.08	-23	PASS
GSM1900	512	0	30~1000MHz	833.42	-45.82	-13	PASS
GSM1900	512	0	1000~18000MHz	17044.03	-22.46	-13	PASS
GSM1900	661	0	0.009~0.15MHz	0.01	-55.85	-43	PASS
GSM1900	661	0	0.15~30MHz	0.15	-43.23	-23	PASS
GSM1900	661	0	30~1000MHz	880.98	-45.01	-13	PASS
GSM1900	661	0	1000~18000MHz	17020.23	-22.19	-13	PASS
GSM1900	810	0	0.009~0.15MHz	0.01	-56.01	-43	PASS
GSM1900	810	0	0.15~30MHz	0.15	-43.23	-23	PASS
GSM1900	810	0	30~1000MHz	843.83	-45.18	-13	PASS
GSM1900	810	0	1000~18000MHz	15680.07	-22.42	-13	PASS

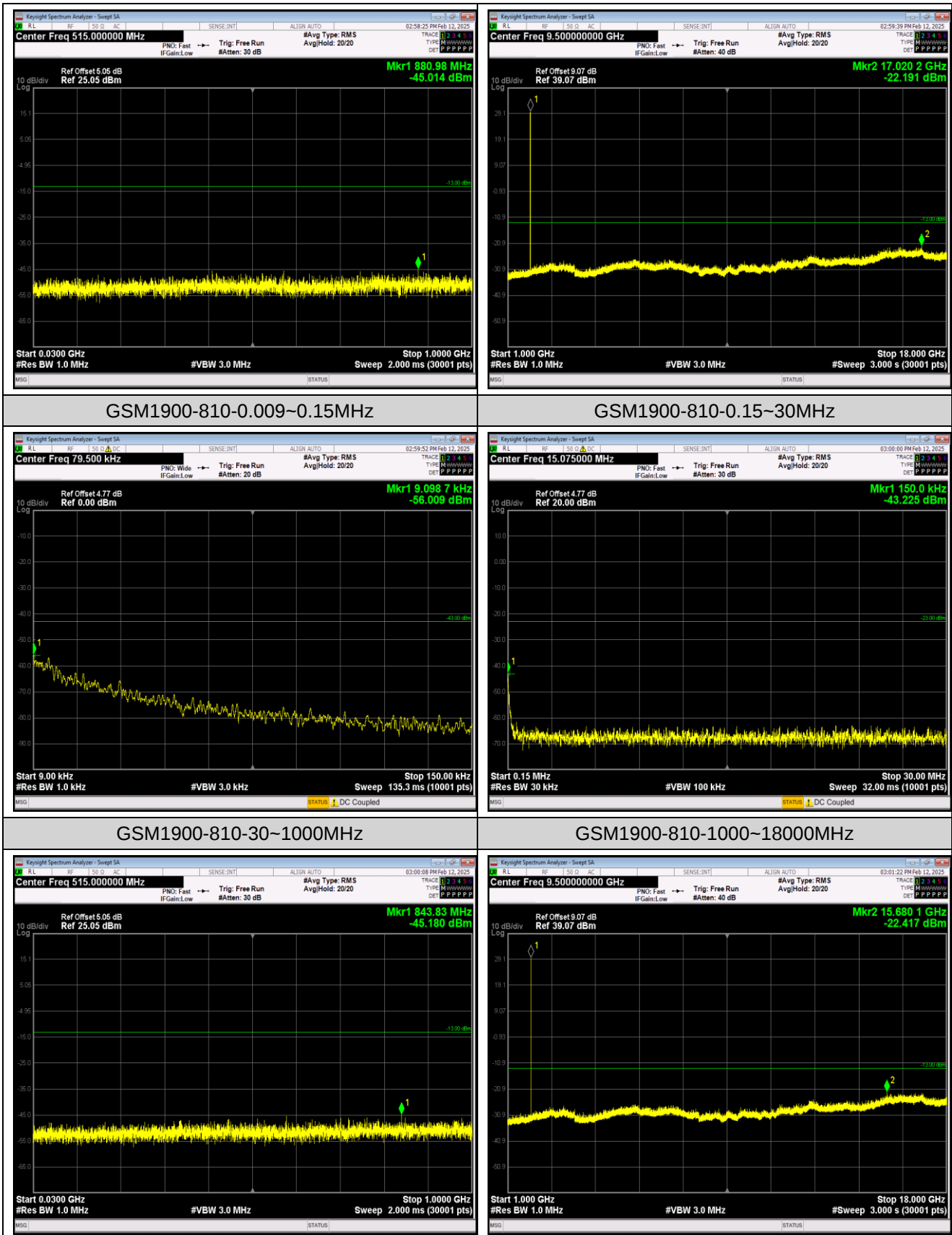
Remark: All channel and all modulation had been tested, but only the worst case data displayed in this report.

Test Graphs









Appendix 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	14.59	0.017440	±2.5	Pass
	-20	12.79	0.015288		
	-10	28.44	0.033995		
	0	41.78	0.049940		
	10	51.88	0.062013		
	20	46.23	0.055259		
	30	47.40	0.056658		
	40	49.91	0.059658		
	50	45.20	0.054028		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	11.59	0.013854	±2.5	Pass
	3.80	11.72	0.014009		
	4.35	11.88	0.014200		
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 (℃)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	15.17	0.018133	±2.5	Pass
	-20	18.24	0.021803		
	-10	13.56	0.016208		
	0	18.95	0.022651		
	10	15.59	0.018635		
	20	14.30	0.017093		
	30	15.76	0.018838		
	40	18.08	0.021611		
	50	16.85	0.020141		
Voltage					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	13.98	0.016710	±2.5	Pass
	3.80	15.66	0.018719		
	4.35	17.24	0.020607		
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		
3.80	-30	105.32	0.056021	Within authorized band for PCS 1900	Pass
	-20	99.83	0.053101		
	-10	123.72	0.065809		
	0	165.47	0.088016		
	10	170.73	0.090814		
	20	164.75	0.087633		
	30	166.30	0.088457		
	40	165.66	0.088117		
	50	166.24	0.088426		
Voltage					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	101.12	0.053787	Within authorized band for PCS 1900	Pass
	3.80	100.02	0.053202		
	4.35	103.77	0.055197		
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	105.93	0.056346	Within authorized band for PCS 1900	Pass
	-20	102.77	0.054665		
	-10	106.93	0.056878		
	0	101.73	0.054112		
	10	106.25	0.056516		
	20	110.64	0.058851		
	30	116.46	0.061947		
	40	112.65	0.059920		
	50	116.04	0.061723		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	104.41	0.055537	Within authorized band for PCS 1900	Pass
	3.80	109.93	0.058473		
	4.35	107.80	0.057340		
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

