

Appendix A: Effective (Isotropic) Radiated Power Output Data

Test Result

Band	Channel	PCL	Average Power (dBm)	Antenna Gain (dBi)	ERP/EIRP(dBm)	ERP/EIRP Limit (dBm)
GSM850	128	0	33.98	-0.21	31.62	38.45
GSM850	190	0	33.89	-0.21	31.53	38.45
GSM850	251	0	33.82	-0.21	31.46	38.45
GSM1900	512	0	30.22	0.29	30.51	33.00
GSM1900	661	0	30.26	0.29	30.55	33.00
GSM1900	810	0	29.38	0.29	29.67	33.00
Note: EIRP (dBm) = Average power (dBm) + Antenna Gain (dBi). (For GSM 1900) ERP (dBm) = EIRP (dBm) - 2.15 (dB). (For GSM 850)						

Band	Channel	PCL	Slot	Average Power (dBm)	Antenna Gain (dBi)	ERP(dBm)	ERP/EIRP Limit (dBm)
GPRS850	128	3	1	34.01	-0.21	31.65	38.45
GPRS850	128	3	2	31.85	-0.21	29.49	38.45
GPRS850	128	3	3	29.91	-0.21	27.55	38.45
GPRS850	128	3	4	27.72	-0.21	25.36	38.45
GPRS850	190	3	1	33.87	-0.21	31.51	38.45
GPRS850	190	3	2	31.81	-0.21	29.45	38.45
GPRS850	190	3	3	29.90	-0.21	27.54	38.45
GPRS850	190	3	4	27.73	-0.21	25.37	38.45
GPRS850	251	3	1	33.81	-0.21	31.45	38.45
GPRS850	251	3	2	31.72	-0.21	29.36	38.45
GPRS850	251	3	3	29.81	-0.21	27.45	38.45
GPRS850	251	3	4	27.62	-0.21	25.26	38.45
EGPRS850	128	8	1	27.19	-0.21	24.83	38.45
EGPRS850	128	8	2	27.08	-0.21	24.72	38.45
EGPRS850	128	8	3	26.12	-0.21	23.76	38.45
EGPRS850	128	8	4	23.85	-0.21	21.49	38.45
EGPRS850	190	8	1	27.81	-0.21	25.45	38.45

EGPRS850	190	8	2	27.86	-0.21	25.50	38.45
EGPRS850	190	8	3	26.97	-0.21	24.61	38.45
EGPRS850	190	8	4	24.75	-0.21	22.39	38.45
EGPRS850	251	8	1	27.21	-0.21	24.85	38.45
EGPRS850	251	8	2	27.21	-0.21	24.85	38.45
EGPRS850	251	8	3	26.32	-0.21	23.96	38.45
EGPRS850	251	8	4	24.05	-0.21	21.69	38.45
GPRS1900	512	0	1	30.22	0.29	30.51	33.00
GPRS1900	512	0	2	27.86	0.29	28.15	33.00
GPRS1900	512	0	3	26.31	0.29	26.60	33.00
GPRS1900	512	0	4	24.15	0.29	24.44	33.00
GPRS1900	661	0	1	30.29	0.29	30.58	33.00
GPRS1900	661	0	2	27.54	0.29	27.83	33.00
GPRS1900	661	0	3	25.93	0.29	26.22	33.00
GPRS1900	661	0	4	23.73	0.29	24.02	33.00
GPRS1900	810	0	1	29.42	0.29	29.71	33.00
GPRS1900	810	0	2	26.68	0.29	26.97	33.00
GPRS1900	810	0	3	25.07	0.29	25.36	33.00
GPRS1900	810	0	4	22.87	0.29	23.16	33.00
EGPRS1900	512	2	1	26.72	0.29	27.01	33.00
EGPRS1900	512	2	2	26.47	0.29	26.76	33.00
EGPRS1900	512	2	3	24.69	0.29	24.98	33.00
EGPRS1900	512	2	4	22.46	0.29	22.75	33.00
EGPRS1900	661	2	1	26.58	0.29	26.87	33.00
EGPRS1900	661	2	2	26.39	0.29	26.68	33.00
EGPRS1900	661	2	3	24.78	0.29	25.07	33.00
EGPRS1900	661	2	4	22.47	0.29	22.76	33.00
EGPRS1900	810	2	1	25.86	0.29	26.15	33.00
EGPRS1900	810	2	2	25.76	0.29	26.05	33.00
EGPRS1900	810	2	3	24.10	0.29	24.39	33.00
EGPRS1900	810	2	4	22.00	0.29	22.29	33.00

Note: EIRP (dBm) = Average power (dBm) + Antenna Gain (dBi). (For GSM 1900)

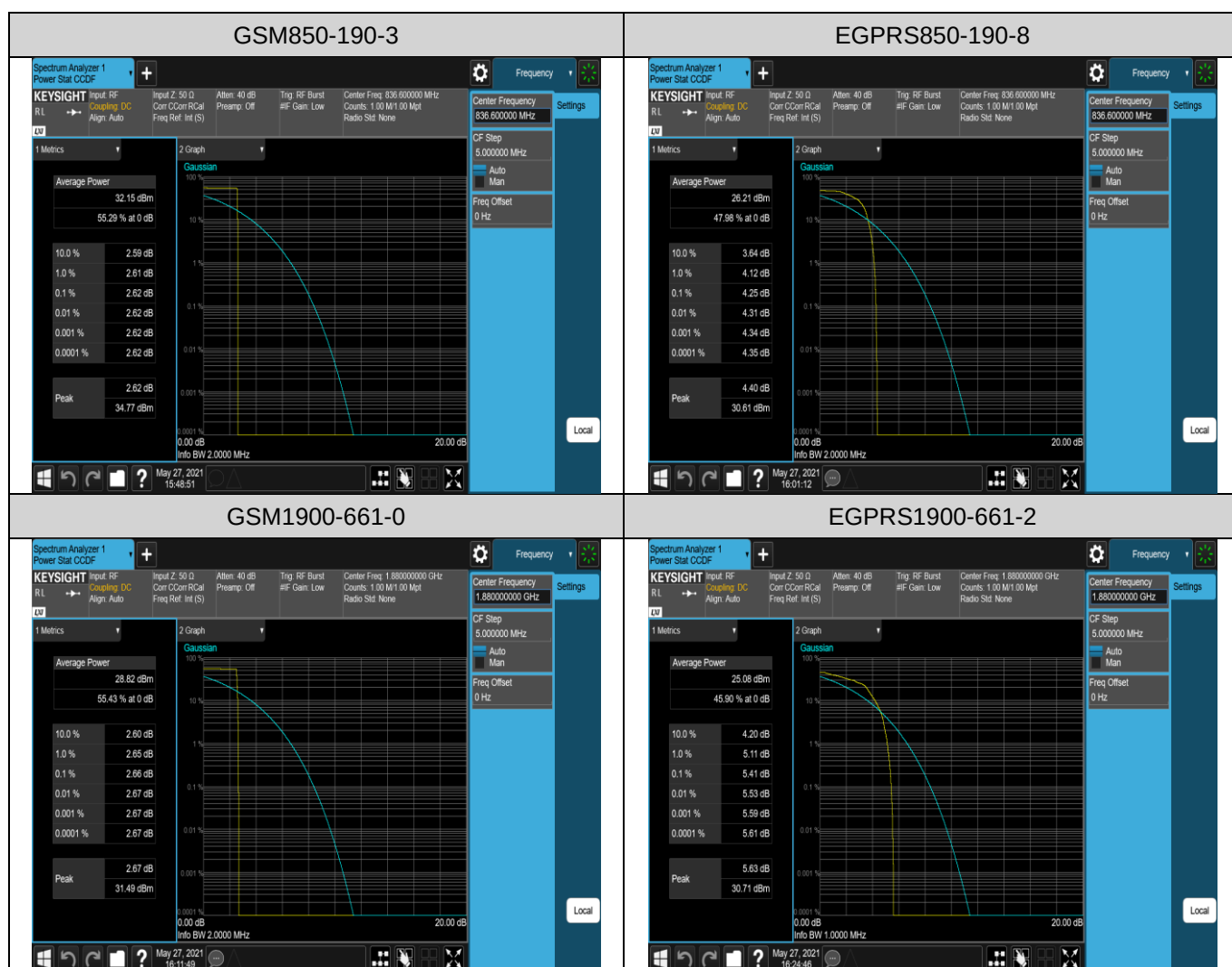
ERP (dBm) = EIRP (dBm) - 2.15 (dB). (For GSM 850)

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

Test Result

Band	Channel	PCL	Result(dB)	Limit(dB)	Verdict
GSM850	190	3	2.62	13	PASS
EGPRS850	190	8	4.25	13	PASS
GSM1900	661	0	2.66	13	PASS
EGPRS1900	661	2	5.41	13	PASS

Test Graphs

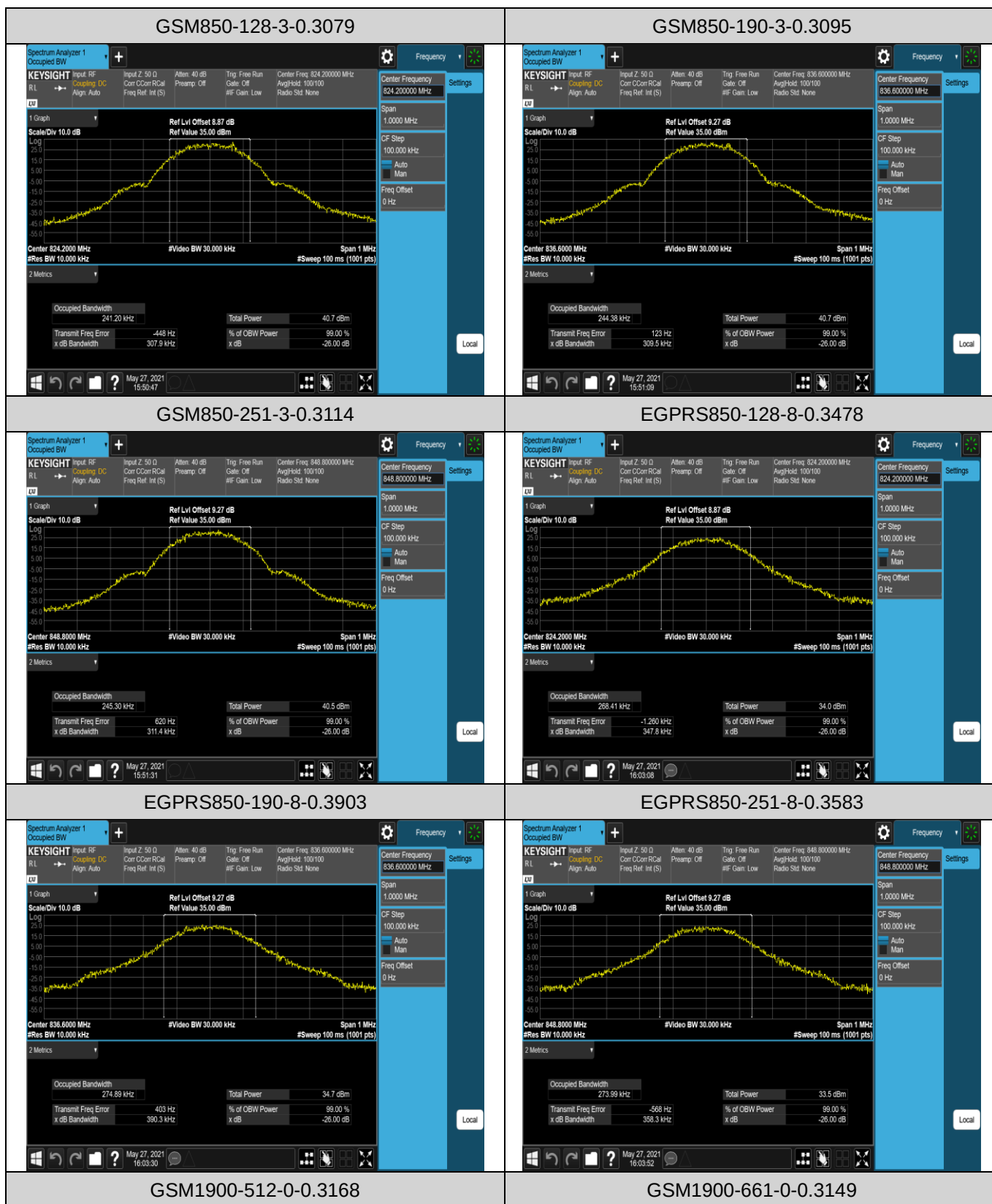


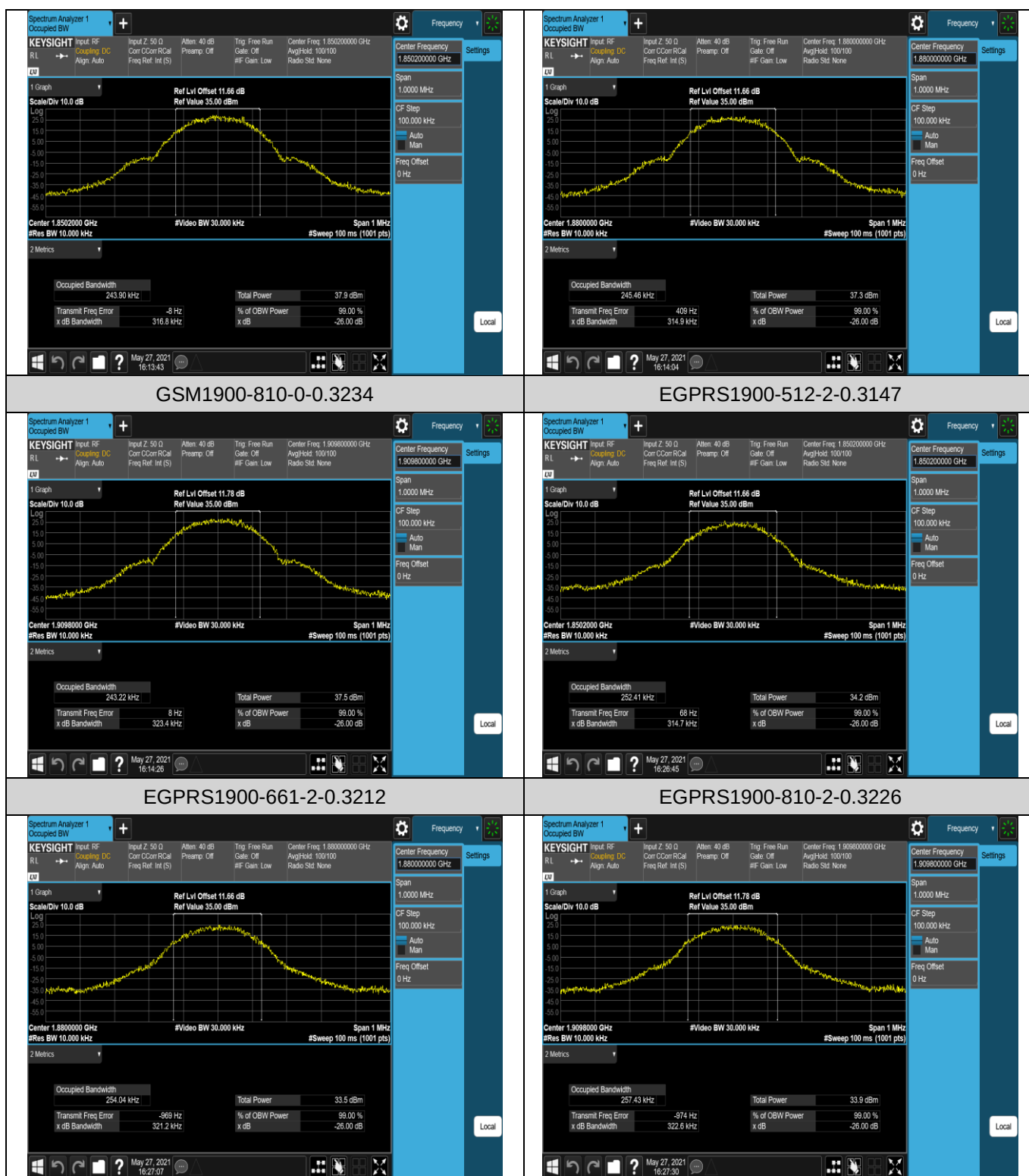
Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

Band	Channel	PCL	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
GSM850	128	3	0.24120	0.3079	---	PASS
GSM850	190	3	0.24438	0.3095	---	PASS
GSM850	251	3	0.24530	0.3114	---	PASS
EGPRS850	128	8	0.26841	0.3478	---	PASS
EGPRS850	190	8	0.27489	0.3903	---	PASS
EGPRS850	251	8	0.27399	0.3583	---	PASS
GSM1900	512	0	0.24390	0.3168	---	PASS
GSM1900	661	0	0.24546	0.3149	---	PASS
GSM1900	810	0	0.24322	0.3234	---	PASS
EGPRS1900	512	2	0.25241	0.3147	---	PASS
EGPRS1900	661	2	0.25404	0.3212	---	PASS
EGPRS1900	810	2	0.25743	0.3226	---	PASS

Test Graphs



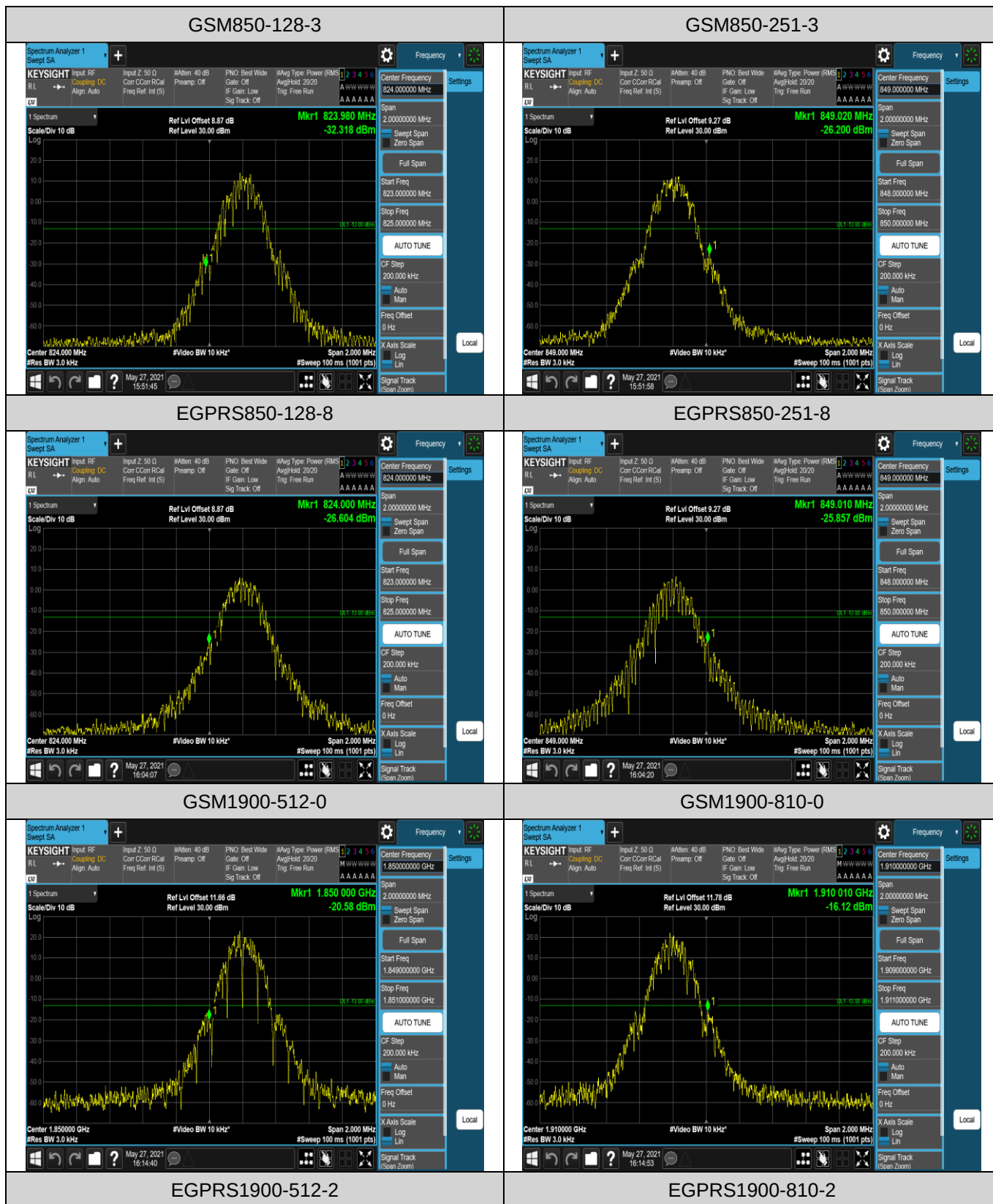


Appendix D: Band Edge

Test Result

Band	Channel	PCL	Freq (MHz)	Result (dBm)	Limit(dBm)	Verdict
GSM850	128	3	823.98	-25.46	-13	PASS
GSM850	251	3	849.02	-24.95	-13	PASS
EGPRS850	128	8	824.00	-24.71	-13	PASS
EGPRS850	251	8	849.01	-24.09	-13	PASS
GSM1900	512	0	1850.00	-15.13	-13	PASS
GSM1900	810	0	1910.01	-16.12	-13	PASS
EGPRS1900	512	2	1849.97	-22.80	-13	PASS
EGPRS1900	810	2	1910.00	-18.14	-13	PASS

Test Graphs



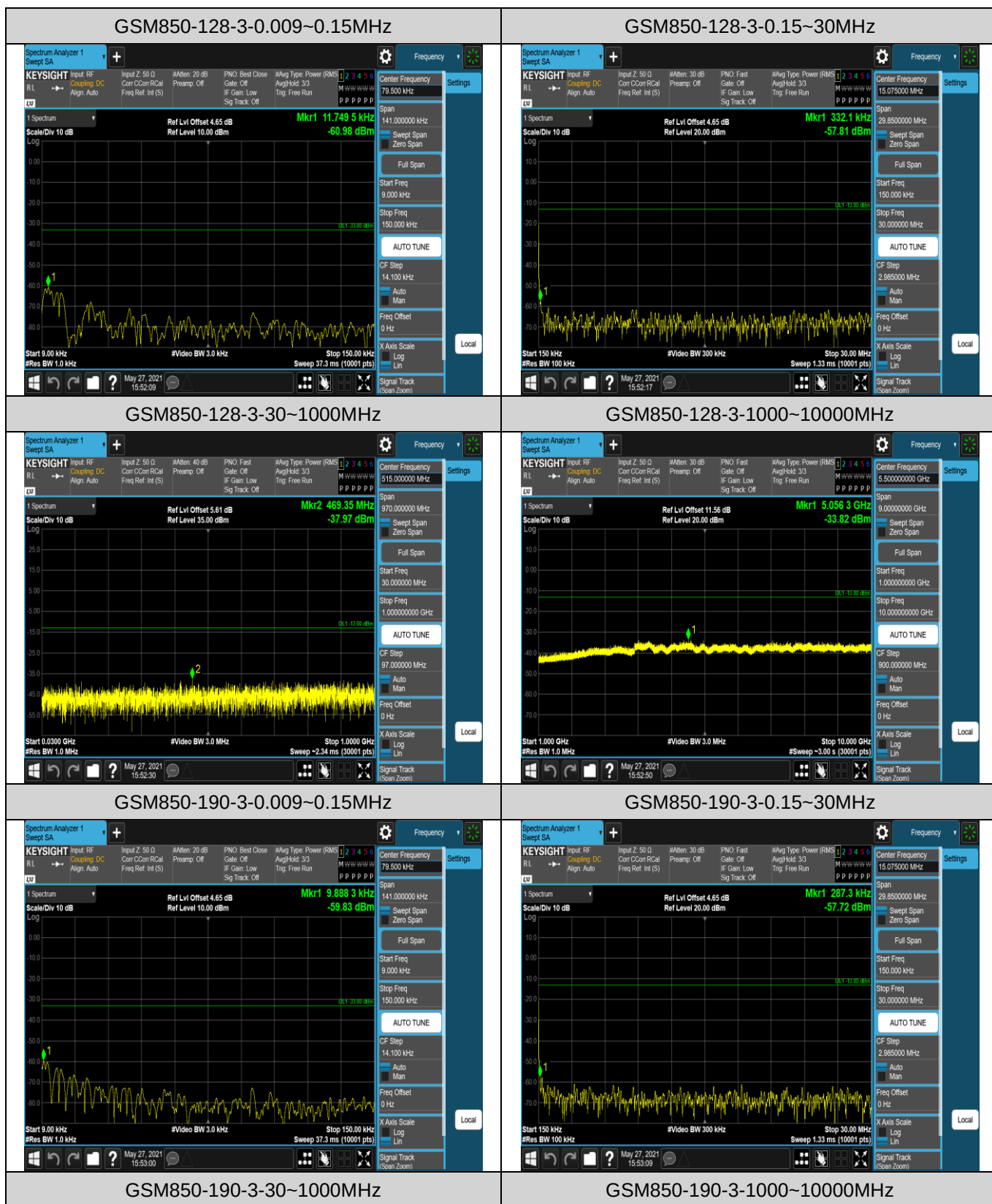


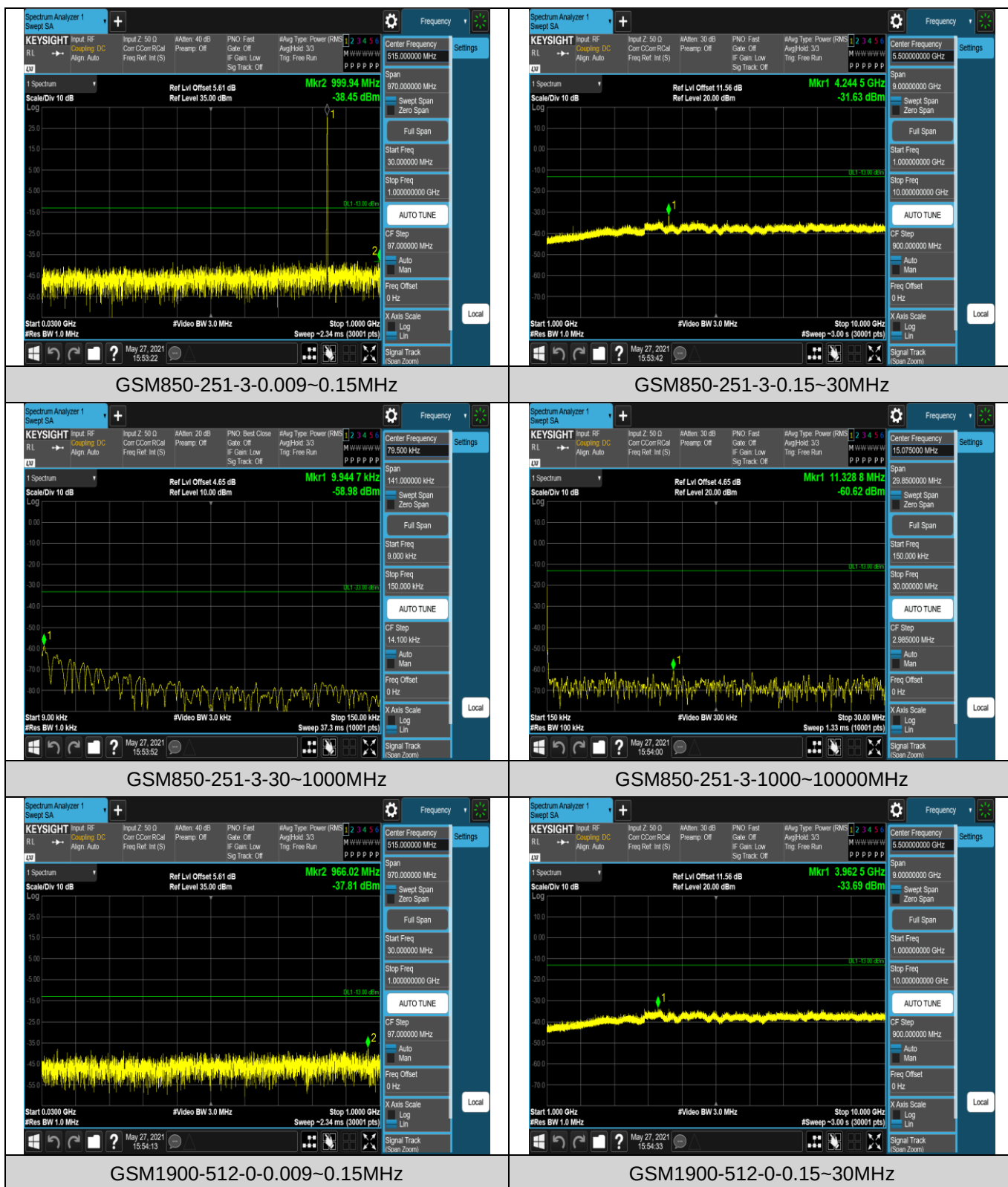
Appendix E: Conducted Spurious Emission

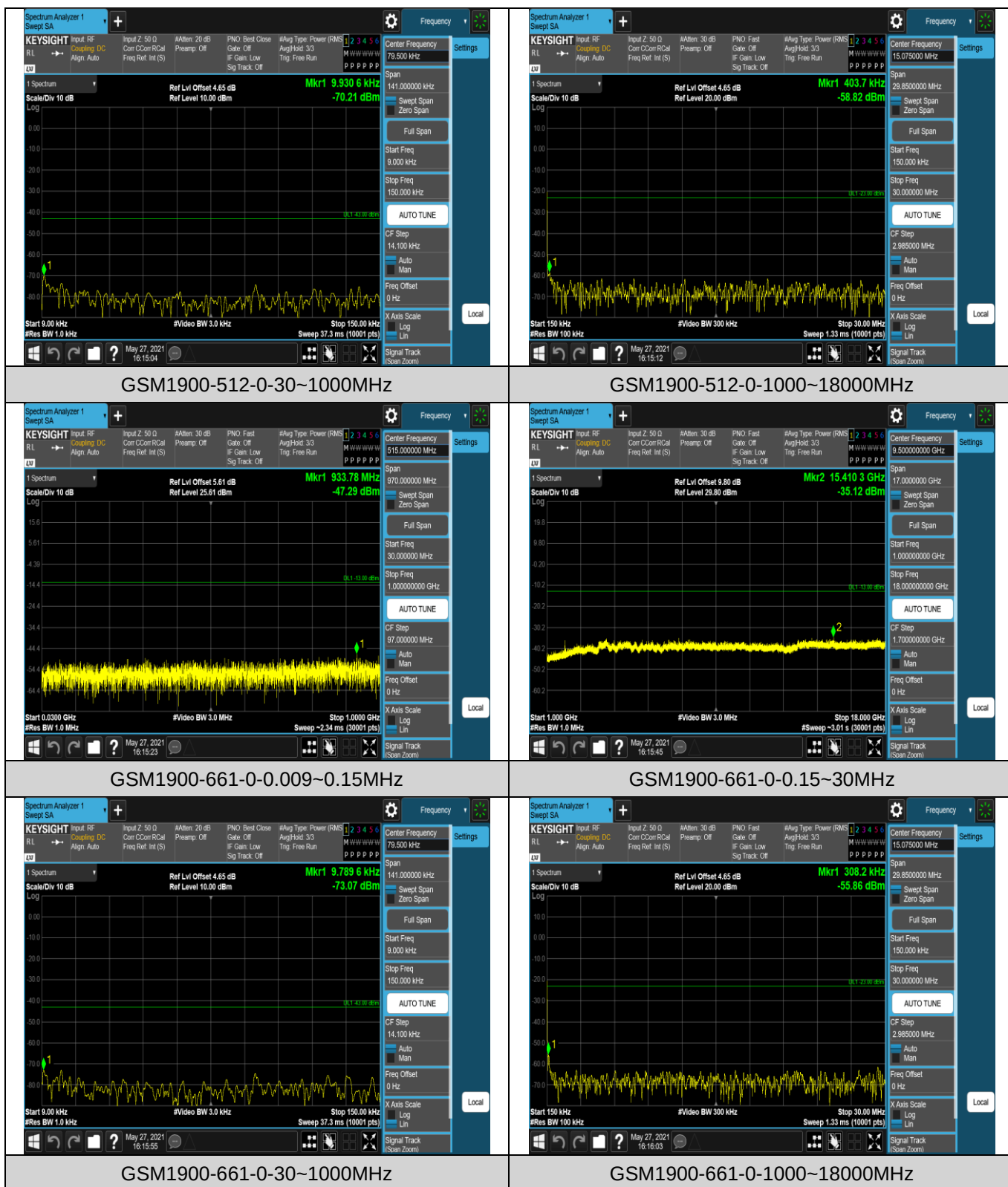
Test Result

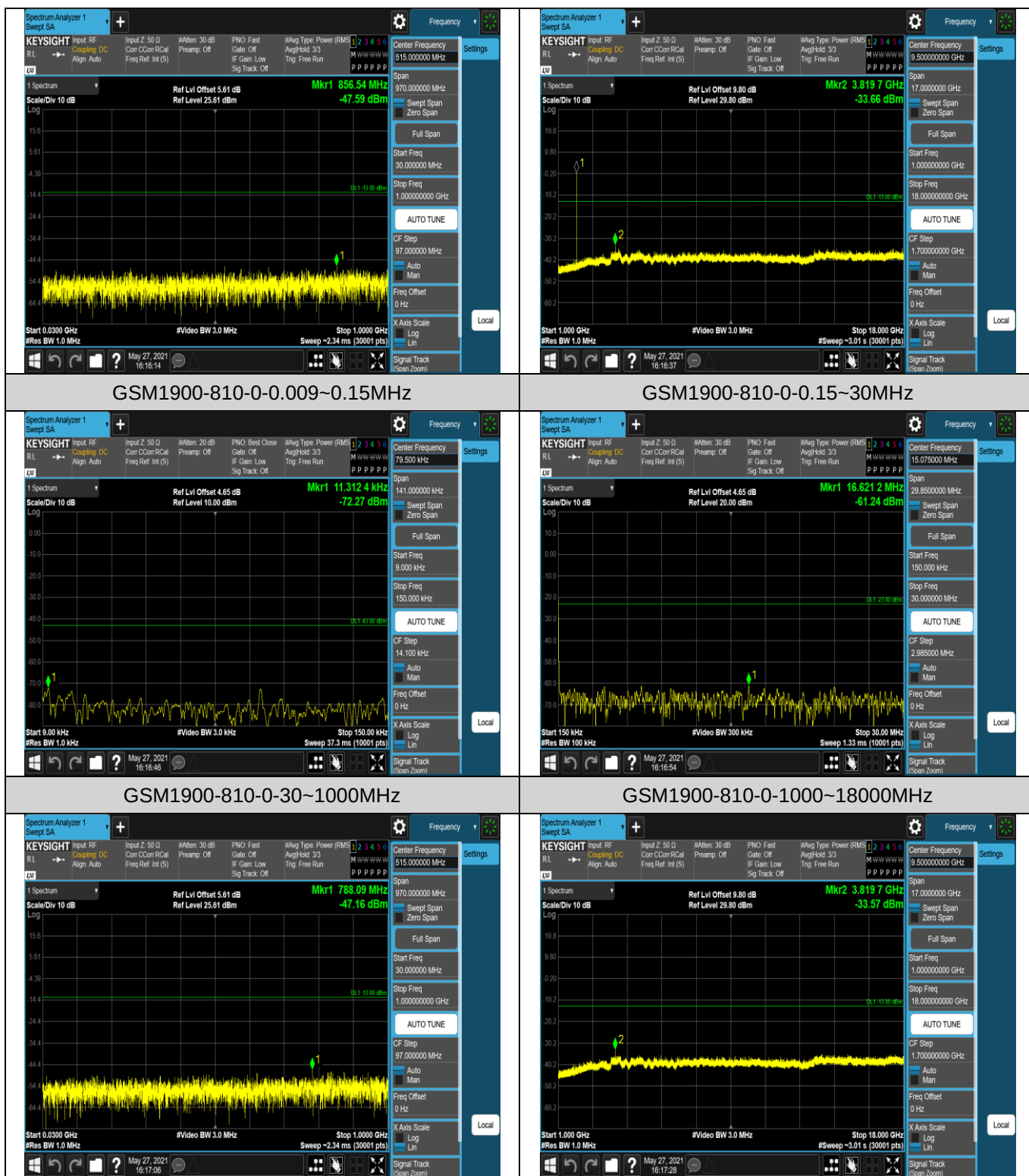
Band	Channel	PCL	Frequency Range(MHz)	Max.Freq. (MHz)	Result (dBm)	Limit (dBm)	Verdict
GSM850	128	3	0.009~0.15MHz	0.01	-60.98	-33	PASS
GSM850	128	3	0.15~30MHz	0.33	-57.81	-13	PASS
GSM850	128	3	30~1000MHz	469.35	-37.97	-13	PASS
GSM850	128	3	1000~10000MHz	5056.3	-33.82	-13	PASS
GSM850	190	3	0.009~0.15MHz	0.01	-59.83	-33	PASS
GSM850	190	3	0.15~30MHz	0.29	-57.72	-13	PASS
GSM850	190	3	30~1000MHz	999.94	-38.45	-13	PASS
GSM850	190	3	1000~10000MHz	4244.5	-31.63	-13	PASS
GSM850	251	3	0.009~0.15MHz	0.01	-58.98	-33	PASS
GSM850	251	3	0.15~30MHz	11.33	-60.62	-13	PASS
GSM850	251	3	30~1000MHz	966.02	-37.81	-13	PASS
GSM850	251	3	1000~10000MHz	3962.5	-33.69	-13	PASS
GSM1900	512	0	0.009~0.15MHz	0.01	-70.21	-43	PASS
GSM1900	512	0	0.15~30MHz	0.4	-58.82	-23	PASS
GSM1900	512	0	30~1000MHz	933.78	-47.29	-13	PASS
GSM1900	512	0	1000~18000MHz	15410.33	-35.12	-13	PASS
GSM1900	661	0	0.009~0.15MHz	0.01	-73.07	-43	PASS
GSM1900	661	0	0.15~30MHz	0.31	-55.86	-23	PASS
GSM1900	661	0	30~1000MHz	856.54	-47.59	-13	PASS
GSM1900	661	0	1000~18000MHz	3819.73	-33.66	-13	PASS
GSM1900	810	0	0.009~0.15MHz	0.01	-72.27	-43	PASS
GSM1900	810	0	0.15~30MHz	16.62	-61.24	-23	PASS
GSM1900	810	0	30~1000MHz	788.09	-47.16	-13	PASS
GSM1900	810	0	1000~18000MHz	3819.73	-33.57	-13	PASS

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	-1.52	-0.001817	±2.5	Pass
	-20	-1.81	-0.002164		
	-10	0.00	0.000000		
	0	-1.49	-0.001781		
	10	-2.29	-0.002737		
	20	-4.26	-0.005092		
	30	-1.32	-0.001578		
	40	0.65	0.000777		
	50	6.42	0.007674		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	-3.84	-0.004590	±2.5	Pass
	3.85	1.58	0.001889		
	4.42	-5.29	-0.006323		
Note: Only the worst case shown in the 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	7.85	0.009383	±2.5	Pass
	-20	7.10	0.008487		
	-10	3.45	0.004124		
	0	11.01	0.013160		
	10	8.04	0.009610		
	20	5.55	0.006634		
	30	5.62	0.006718		
	40	1.81	0.002164		
	50	-0.23	-0.000275		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	2.16	0.002582	±2.5	Pass
	3.85	-0.71	-0.000849		
	4.42	1.71	0.002044		
Note: Only the worst case shown in the 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	-6.68	-0.003553	Within authorized band for PCS 1900	Pass
	-20	0.77	0.000410		
	-10	2.20	0.001170		
	0	1.49	0.000793		
	10	-7.30	-0.003883		
	20	1.78	0.000947		
	30	1.26	0.000670		
	40	3.42	0.001819		
	50	-6.26	-0.003330		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	-8.04	-0.004277	Within authorized band for PCS 1900	Pass
	3.85	5.00	0.002660		
	4.42	0.00	0.000000		
Note: Only the worst case shown in the report.					

Reference Frequency: EGPRS1900 Middle channel=661 Frequency=1880MHz					
Temperature					
Power supplied (Vdc)	Temperature (℃)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	-5.88	-0.003128	Within authorized band for PCS 1900	Pass
	-20	-2.71	-0.001441		
	-10	4.46	0.002372		
	0	-5.00	-0.002660		
	10	-6.88	-0.003660		
	20	-1.49	-0.000793		
	30	-12.40	-0.006596		
	40	-6.20	-0.003298		
	50	-1.16	-0.000617		
Voltage					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	2.45	0.001303	Within authorized band for PCS 1900	Pass
	3.85	-5.23	-0.002782		
	4.42	-4.20	-0.002234		
Note: Only the worst case shown in the report.					