

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	3	33.85	-0.80	30.90	38.45
GSM850	190	3	33.84	-0.80	30.89	38.45
GSM850	251	3	33.71	-0.80	30.76	38.45
GSM1900	512	0	30.44	-0.80	29.64	33.00
GSM1900	661	0	30.41	-0.80	29.61	33.00
GSM1900	810	0	30.39	-0.80	29.59	33.00

Note: EIRP (dBm) = Average power (dBm) + Antenna Gain (dBi).
ERP (dBm) = EIRP (dBm) - 2.15 (dB).

Band	Channel	PCL	Slot	Average Power (dBm)	Antenna Gain (dBi)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)
GPRS850	128	3	1	33.80	-0.80	30.85	38.45
GPRS850	128	3	2	31.66	-0.80	28.71	38.45
GPRS850	128	3	3	29.72	-0.80	26.77	38.45
GPRS850	128	3	4	27.56	-0.80	24.61	38.45
GPRS850	190	3	1	33.74	-0.80	30.79	38.45
GPRS850	190	3	2	31.59	-0.80	28.64	38.45
GPRS850	190	3	3	29.68	-0.80	26.73	38.45
GPRS850	190	3	4	27.59	-0.80	24.64	38.45
GPRS850	251	3	1	33.60	-0.80	30.65	38.45
GPRS850	251	3	2	31.44	-0.80	28.49	38.45
GPRS850	251	3	3	29.55	-0.80	26.60	38.45
GPRS850	251	3	4	27.47	-0.80	24.52	38.45
GPRS1900	512	0	1	30.37	-0.80	29.57	33.00
GPRS1900	512	0	2	28.09	-0.80	27.29	33.00
GPRS1900	512	0	3	26.46	-0.80	25.66	33.00
GPRS1900	512	0	4	24.55	-0.80	23.75	33.00
GPRS1900	661	0	1	30.30	-0.80	29.50	33.00
GPRS1900	661	0	2	27.92	-0.80	27.12	33.00
GPRS1900	661	0	3	26.30	-0.80	25.50	33.00

GPRS1900	661	0	4	24.38	-0.80	23.58	33.00
GPRS1900	810	0	1	30.35	-0.80	29.55	33.00
GPRS1900	810	0	2	27.80	-0.80	27.00	33.00
GPRS1900	810	0	3	26.16	-0.80	25.36	33.00
GPRS1900	810	0	4	24.22	-0.80	23.42	33.00
<i>Note: EIRP (dBm) = Average power (dBm) + Antenna Gain (dBi).</i> <i>ERP (dBm) = EIRP (dBm) - 2.15 (dB).</i>							

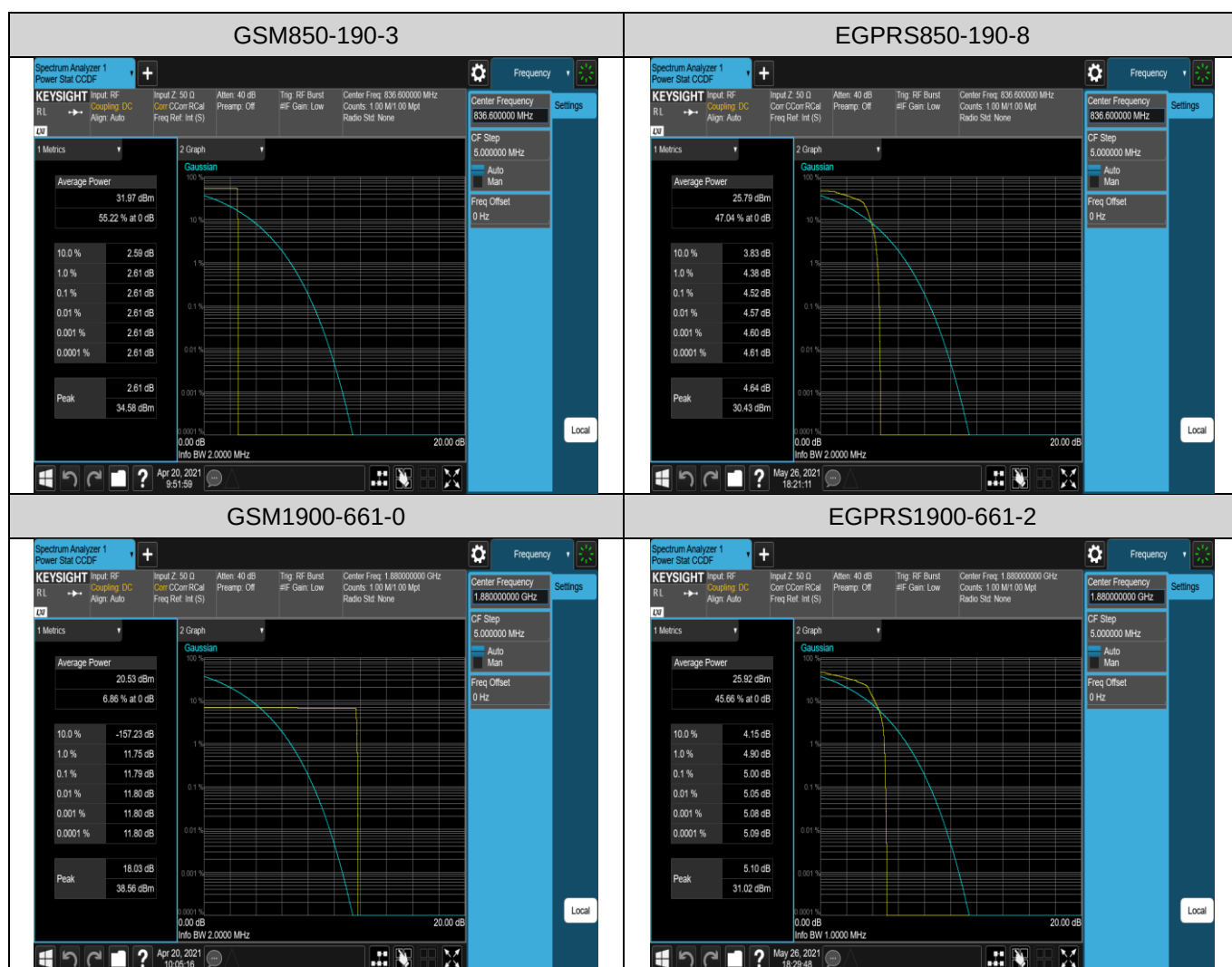
Band	Channel	PCL	Slot	Average Power (dBm)	Antenna Gain (dBi)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)
EGPRS850	128	8	1	26.71	-0.80	23.76	38.45
EGPRS850	128	8	2	26.55	-0.80	23.60	38.45
EGPRS850	128	8	3	25.15	-0.80	22.20	38.45
EGPRS850	128	8	4	22.19	-0.80	19.24	38.45
EGPRS850	190	8	1	27.18	-0.80	24.23	38.45
EGPRS850	190	8	2	27.26	-0.80	24.31	38.45
EGPRS850	190	8	3	26.05	-0.80	23.10	38.45
EGPRS850	190	8	4	23.39	-0.80	20.44	38.45
EGPRS850	251	8	1	26.57	-0.80	23.62	38.45
EGPRS850	251	8	2	26.61	-0.80	23.66	38.45
EGPRS850	251	8	3	25.32	-0.80	22.37	38.45
EGPRS850	251	8	4	22.47	-0.80	19.52	38.45
EGPRS1900	512	2	1	26.42	-0.80	25.62	33.00
EGPRS1900	512	2	2	26.24	-0.80	25.44	33.00
EGPRS1900	512	2	3	24.35	-0.80	23.55	33.00
EGPRS1900	512	2	4	21.79	-0.80	20.99	33.00
EGPRS1900	661	2	1	26.48	-0.80	25.68	33.00
EGPRS1900	661	2	2	26.52	-0.80	25.72	33.00
EGPRS1900	661	2	3	24.93	-0.80	24.13	33.00
EGPRS1900	661	2	4	22.81	-0.80	22.01	33.00
EGPRS1900	810	2	1	25.49	-0.80	24.69	33.00
EGPRS1900	810	2	2	25.14	-0.80	24.34	33.00
EGPRS1900	810	2	3	23.75	-0.80	22.95	33.00
EGPRS1900	810	2	4	21.03	-0.80	20.23	33.00
<i>Note: EIRP (dBm) = Average power (dBm) + Antenna Gain (dBi).</i> <i>ERP (dBm) = EIRP (dBm) - 2.15 (dB).</i>							

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

Test Result

Band	Channel	PCL	Result(dB)	Limit(dB)	Verdict
GSM850	190	3	2.61	13	PASS
EGPRS850	190	8	4.52	13	PASS
GSM1900	661	0	11.79	13	PASS
EGPRS1900	661	2	5	13	PASS

Test Graphs

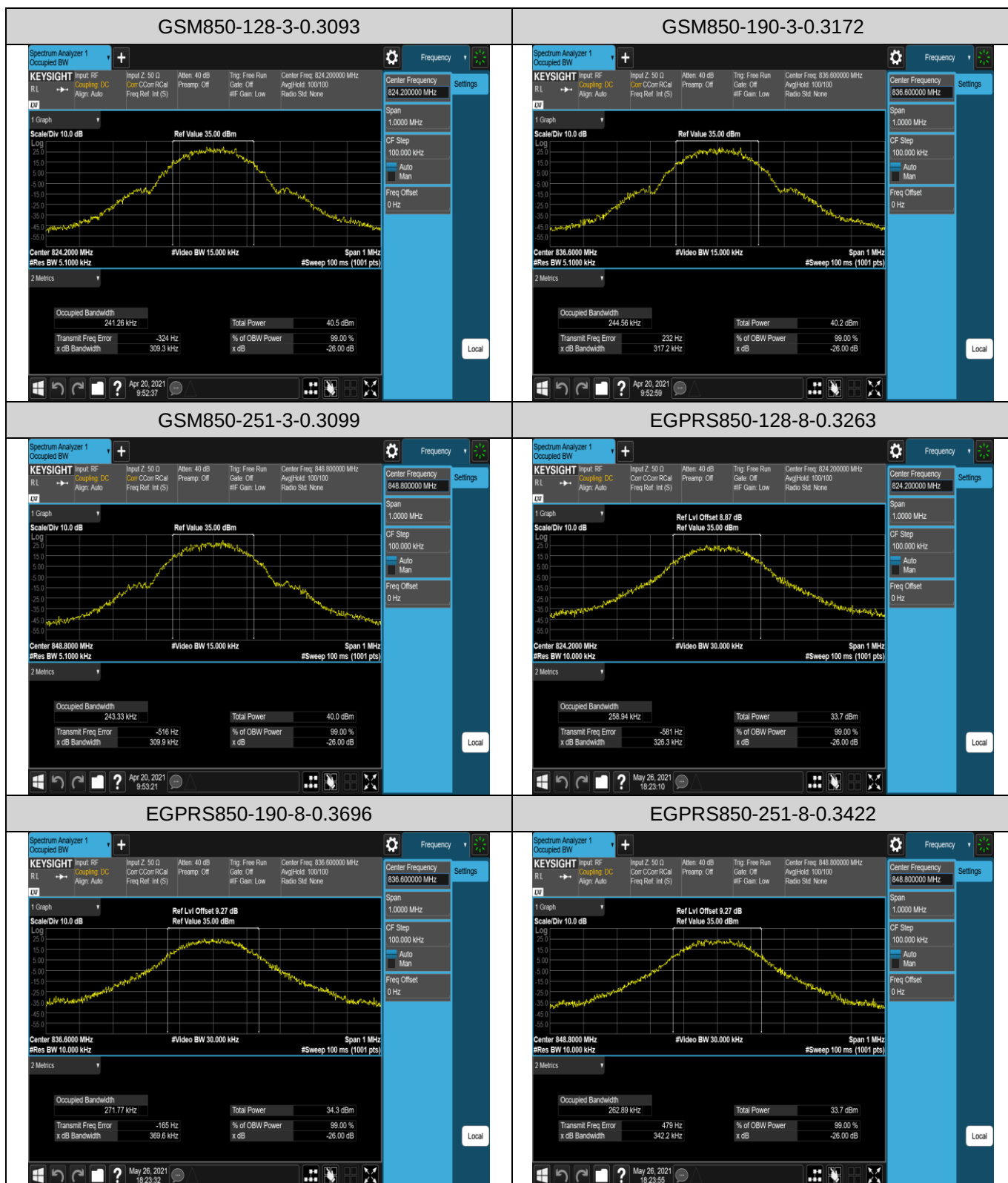


Appendix C: 26dB Bandwidth and Occupied Bandwidth

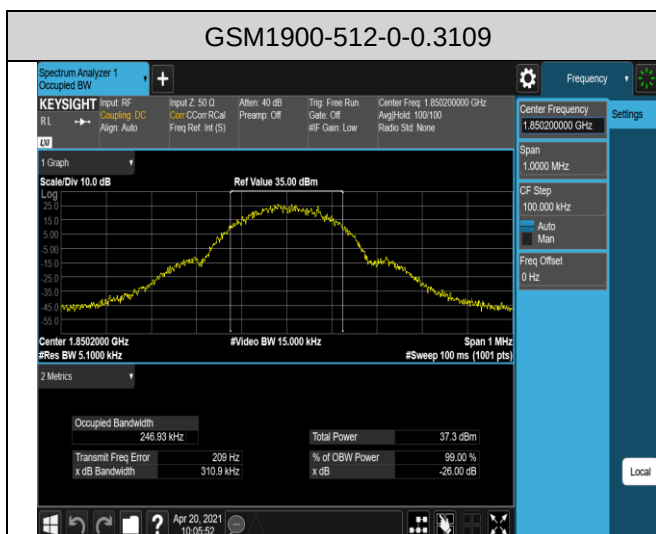
Test Result

Band	Channel	PCL	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
GSM850	128	3	0.24126	0.3093	---	PASS
GSM850	190	3	0.24456	0.3172	---	PASS
GSM850	251	3	0.24333	0.3099	---	PASS
EGPRS850	128	8	0.25894	0.3263	---	PASS
EGPRS850	190	8	0.27177	0.3696	---	PASS
EGPRS850	251	8	0.26289	0.3422	---	PASS
GSM1900	512	0	0.24693	0.3109	---	PASS
GSM1900	661	0	0.24485	0.3133	---	PASS
GSM1900	810	0	0.24026	0.3094	---	PASS
EGPRS1900	512	2	0.24521	0.3123	---	PASS
EGPRS1900	661	2	0.25004	0.3131	---	PASS
EGPRS1900	810	2	0.25350	0.3184	---	PASS

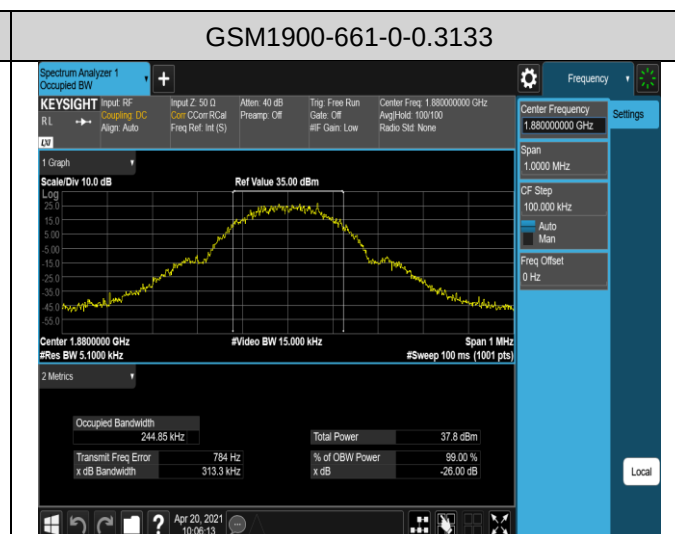
Test Graphs



GSM1900-512-0-0.3109



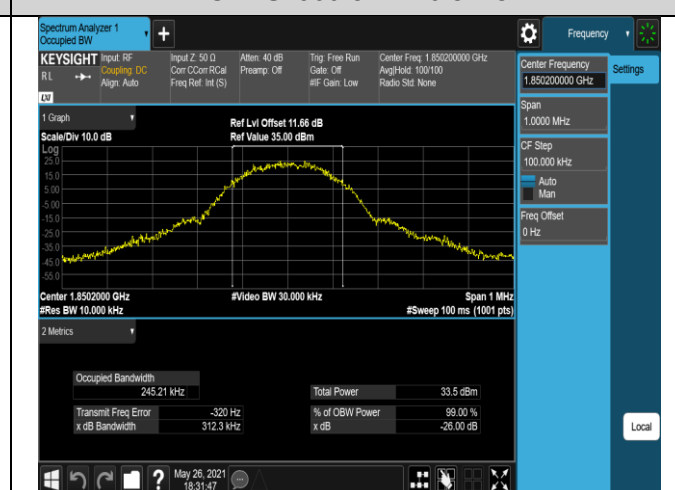
GSM1900-661-0-0.3133



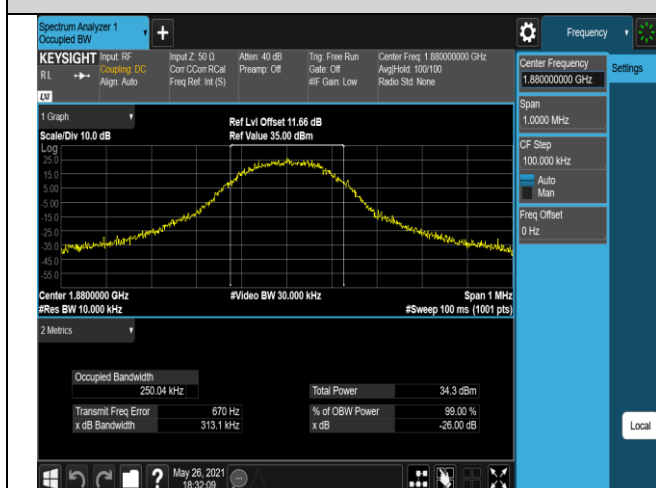
GSM1900-810-0-0.3094



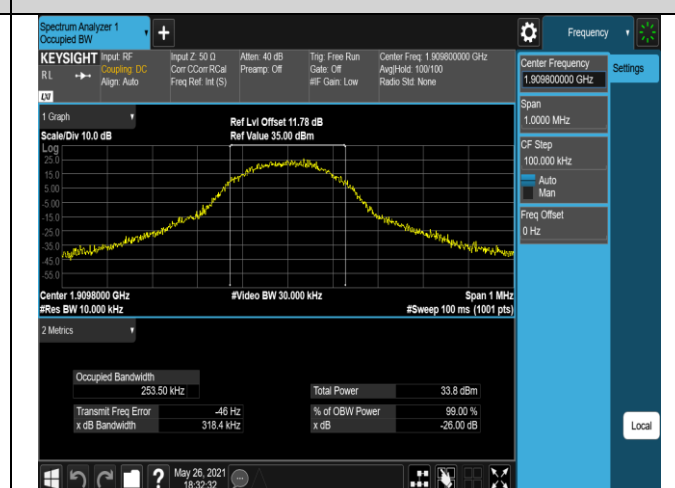
EGPRS1900-512-2-0.3123



EGPRS1900-661-2-0.3131



EGPRS1900-810-2-0.3184

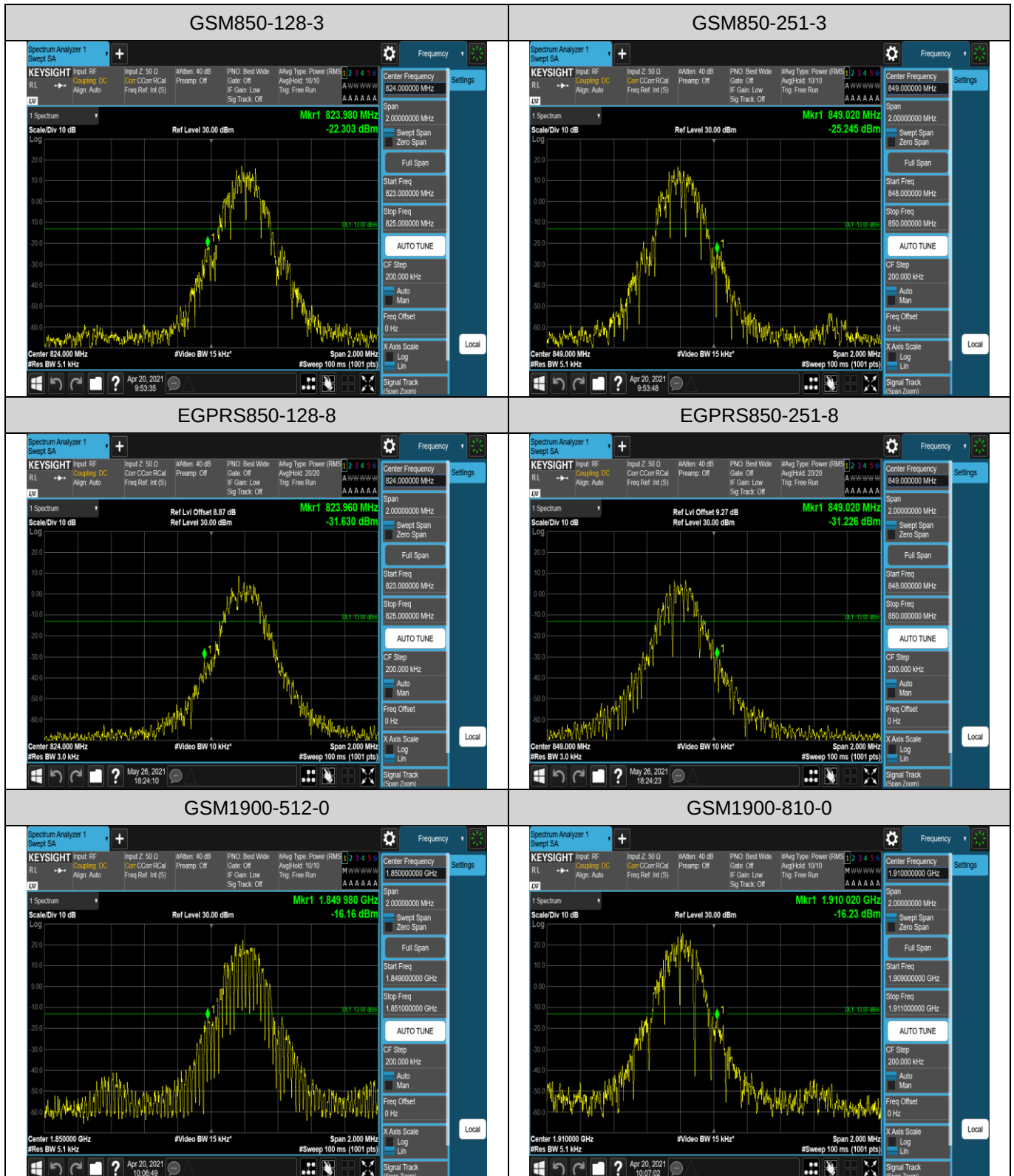


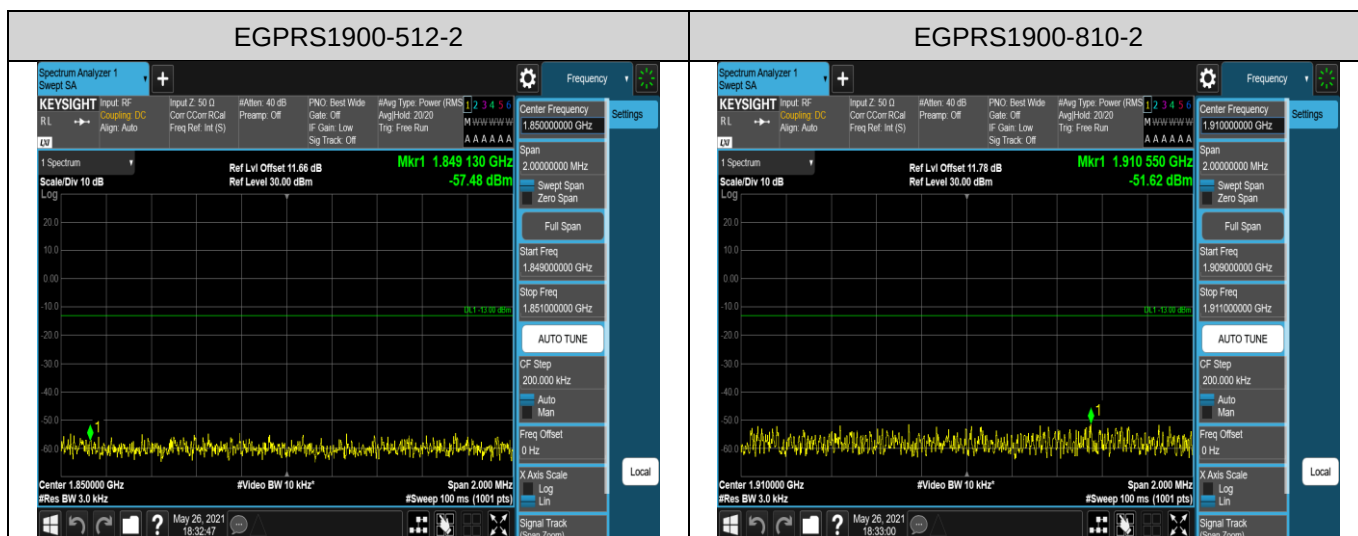
Appendix D: Band Edge

Test Result

Band	Channel	PCL	Freq (MHz)	Result (dBm)	Limit(dBm)	Verdict
GSM850	128	3	823.98	-20.97	-13	PASS
GSM850	251	3	849.02	-22.39	-13	PASS
EGPRS850	128	8	823.96	-31.63	-13	PASS
EGPRS850	251	8	849.02	-27.80	-13	PASS
GSM1900	512	0	1849.98	-16.16	-13	PASS
GSM1900	810	0	1910.02	-14.25	-13	PASS
EGPRS1900	512	2	1849.13	-54.44	-13	PASS
EGPRS1900	810	2	1910.55	-51.62	-13	PASS

Test Graphs





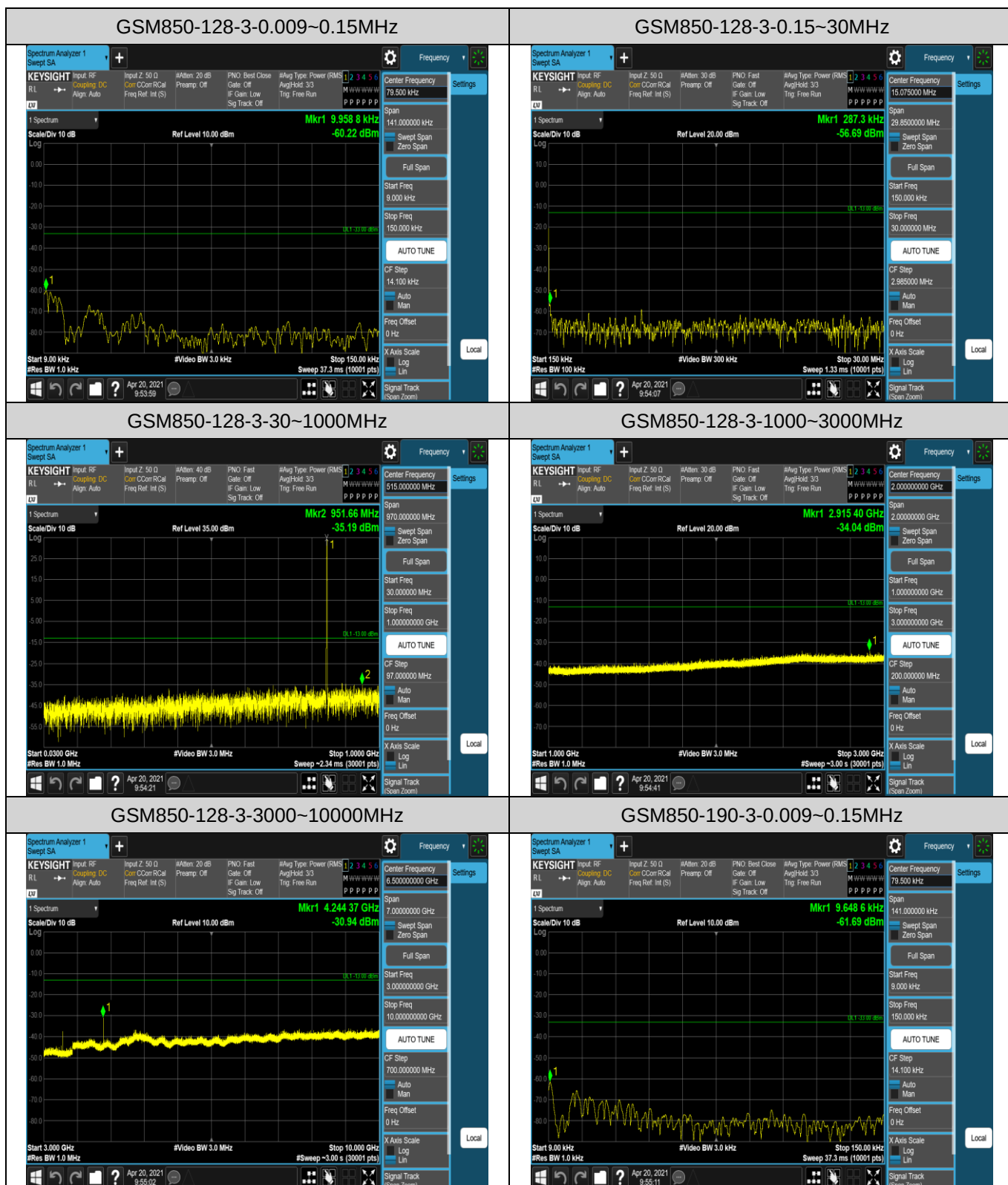
Appendix E: Conducted Spurious Emission

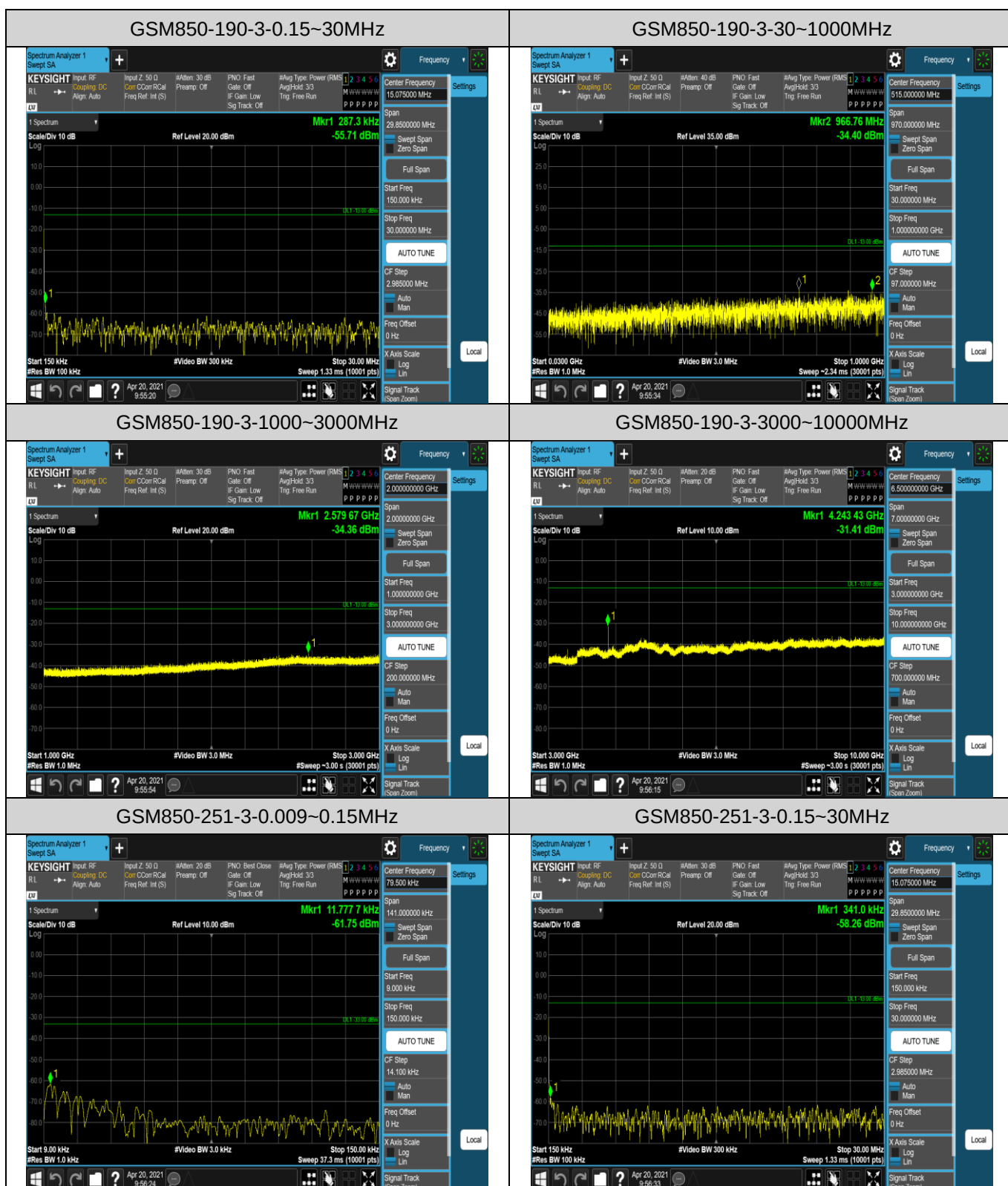
Test Result

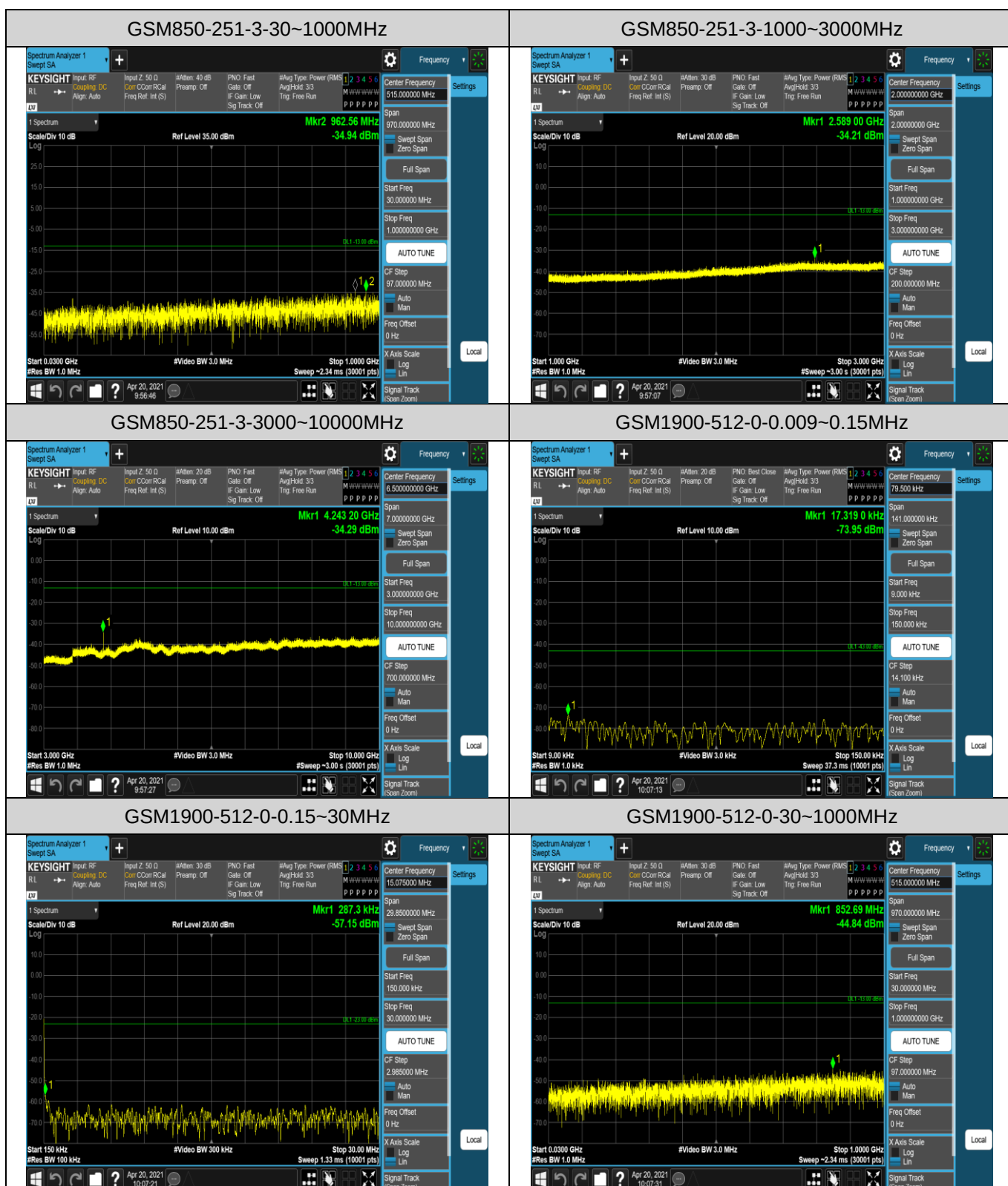
Band	Channel	PCL	Frequency Range(MHz)	Max.Freq. (MHz)	Result (dBm)	Limit (dBm)	Verdict
GSM850	128	3	0.009~0.15MHz	0.01	-60.22	-33	PASS
GSM850	128	3	0.15~30MHz	0.29	-56.69	-13	PASS
GSM850	128	3	30~1000MHz	951.66	-35.19	-13	PASS
GSM850	128	3	1000~3000MHz	2915.4	-34.04	-13	PASS
GSM850	128	3	3000~10000MHz	4244.37	-30.94	-13	PASS
GSM850	190	3	0.009~0.15MHz	0.01	-61.69	-33	PASS
GSM850	190	3	0.15~30MHz	0.29	-55.71	-13	PASS
GSM850	190	3	30~1000MHz	966.76	-34.4	-13	PASS
GSM850	190	3	1000~3000MHz	2579.67	-34.36	-13	PASS
GSM850	190	3	3000~10000MHz	4243.43	-31.41	-13	PASS
GSM850	251	3	0.009~0.15MHz	0.01	-61.75	-33	PASS
GSM850	251	3	0.15~30MHz	0.34	-58.26	-13	PASS
GSM850	251	3	30~1000MHz	962.56	-34.94	-13	PASS
GSM850	251	3	1000~3000MHz	2589	-34.21	-13	PASS
GSM850	251	3	3000~10000MHz	4243.2	-34.3	-13	PASS
GSM1900	512	0	0.009~0.15MHz	0.02	-73.95	-43	PASS
GSM1900	512	0	0.15~30MHz	0.29	-57.15	-23	PASS
GSM1900	512	0	30~1000MHz	852.69	-44.84	-13	PASS
GSM1900	512	0	1000~3000MHz	2730.8	-24.97	-13	PASS
GSM1900	512	0	3000~10000MHz	9087.43	-36.07	-13	PASS
GSM1900	512	0	10000~18000MHz	17956	-28.53	-13	PASS
GSM1900	661	0	0.009~0.15MHz	0.02	-74.25	-43	PASS
GSM1900	661	0	0.15~30MHz	0.31	-56.6	-23	PASS
GSM1900	661	0	30~1000MHz	812.56	-44.09	-13	PASS
GSM1900	661	0	1000~3000MHz	2989.53	-25.33	-13	PASS
GSM1900	661	0	3000~10000MHz	9744.27	-35.91	-13	PASS
GSM1900	661	0	10000~18000MHz	17931.73	-28.43	-13	PASS
GSM1900	810	0	0.009~0.15MHz	0.01	-71.08	-43	PASS
GSM1900	810	0	0.15~30MHz	0.29	-58.75	-23	PASS
GSM1900	810	0	30~1000MHz	928.58	-44.49	-13	PASS
GSM1900	810	0	1000~3000MHz	1000	-1000	-13	PASS

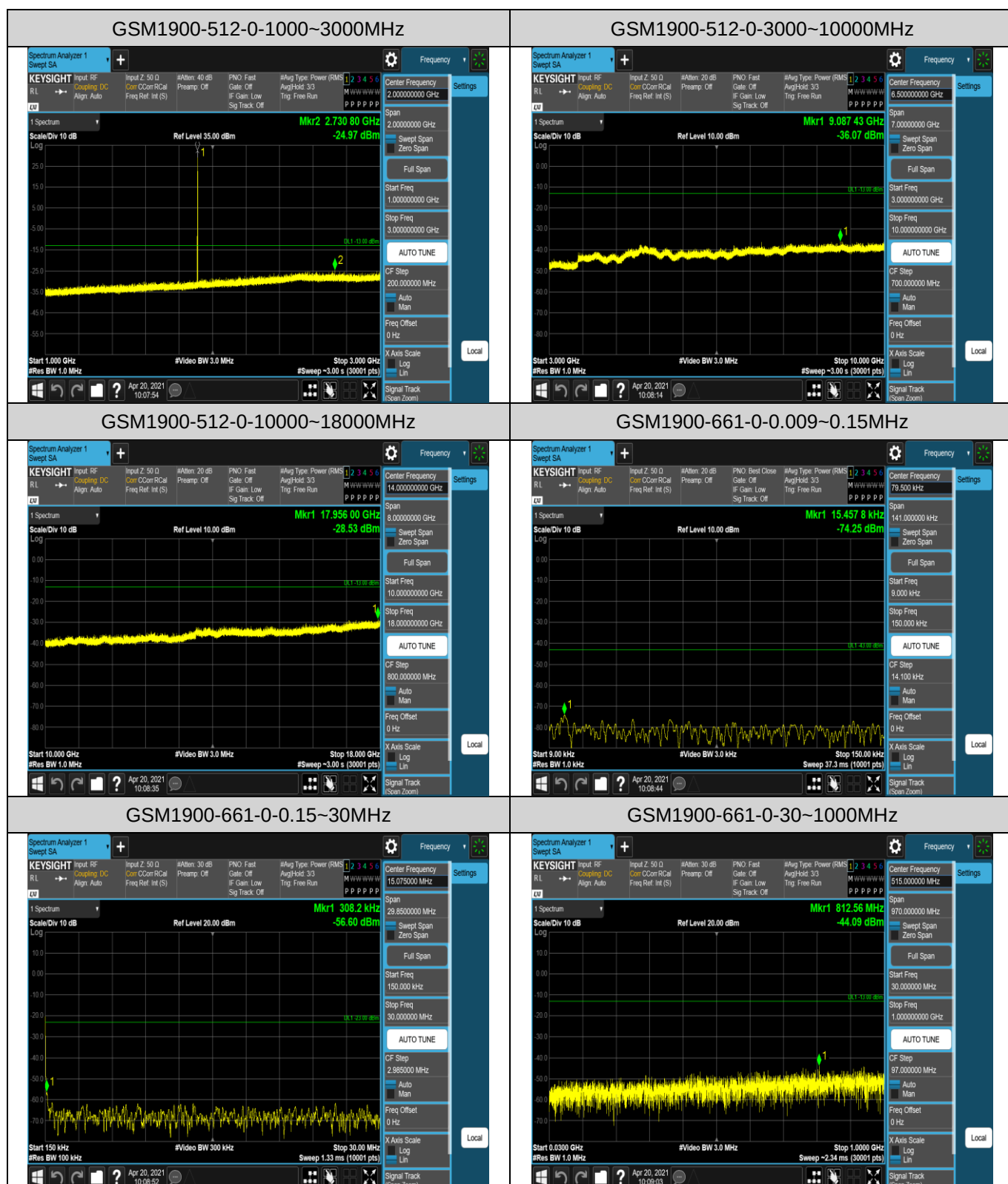
GSM1900	810	0	3000~10000MHz	5729.77	-35.67	-13	PASS
GSM1900	810	0	10000~18000MHz	17988	-28.59	-13	PASS

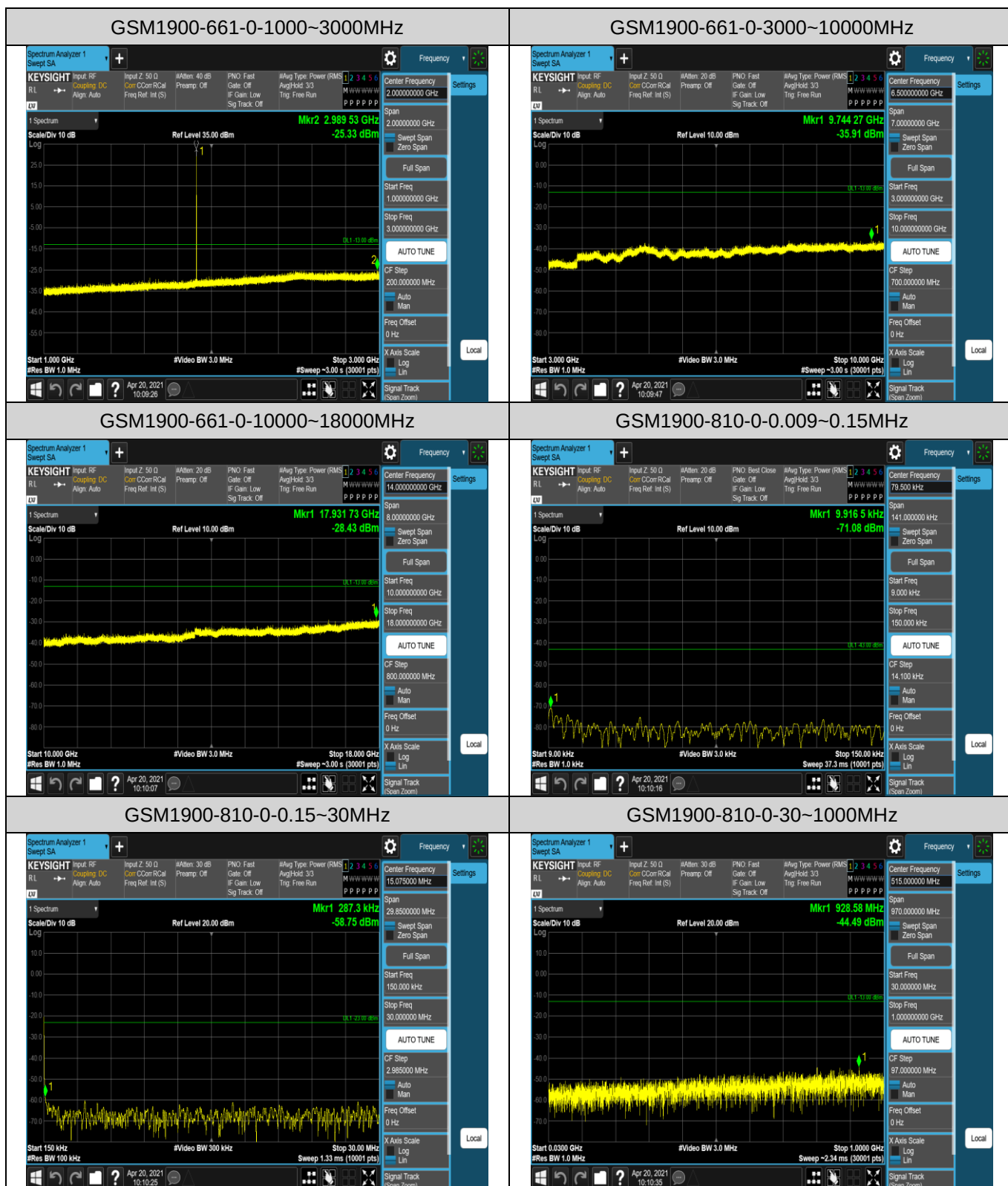
Test Graphs













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		
3.80	-30	8.65	0.010339	±2.5	Pass
	-20	10.01	0.011965		
	-10	8.62	0.010304		
	0	9.30	0.011116		
	10	6.30	0.007530		
	20	4.52	0.005403		
	30	3.29	0.003933		
	40	5.71	0.006825		
	50	4.13	0.004937		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	2.45	0.002929	±2.5	Pass
	3.80	3.65	0.004363		
	4.40	7.30	0.008726		
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		
3.80	-30	-2.03	-0.002426	±2.5	Pass
	-20	-5.26	-0.006287		
	-10	-4.58	-0.005475		
	0	-1.07	-0.001279		
	10	0.77	0.000920		
	20	3.33	0.003980		
	30	-0.52	-0.000622		
	40	3.03	0.003622		
	50	-1.29	-0.001542		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	-2.52	-0.003012	±2.5	Pass
	3.80	6.26	0.007483		
	4.40	0.23	0.000275		
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		
3.80	-30	7.59	0.004037	Within authorized band for PCS 1900	Pass
	-20	-2.16	-0.001149		
	-10	-0.74	-0.000394		
	0	-0.48	-0.000255		
	10	10.43	0.005548		
	20	4.75	0.002527		
	30	11.82	0.006287		
	40	10.17	0.005410		
	50	3.49	0.001856		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	2.91	0.001548	Within authorized band for PCS 1900	Pass
	3.80	2.65	0.001410		
	4.40	8.14	0.004330		
Note: Only the worst case shown in the 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	24.15	0.012846	Within authorized band for PCS 1900	Pass
	-20	11.69	0.006218		
	-10	21.08	0.011213		
	0	12.37	0.006580		
	10	18.27	0.009718		
	20	22.54	0.011989		
	30	13.50	0.007181		
	40	20.02	0.010649		
	50	11.30	0.006011		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	16.95	0.009016	Within authorized band for PCS 1900	Pass
	3.80	12.62	0.006713		
	4.40	18.89	0.010048		
Note: Only the worst case shown in the report.					