

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	33.18	-2.50	28.53	38.45
GSM850	190	0	33.17	-2.50	28.52	38.45
GSM850	251	0	33.00	-2.50	28.35	38.45
GSM1900	512	0	29.68	-1.20	28.48	33.00
GSM1900	661	0	29.87	-1.20	28.67	33.00
GSM1900	810	0	29.81	-1.20	28.61	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	33.15	-2.50	28.50	38.45
GPRS850	128	3	2	31.12	-2.50	26.47	38.45
GPRS850	128	3	3	29.11	-2.50	24.46	38.45
GPRS850	128	3	4	26.86	-2.50	22.21	38.45
GPRS850	190	3	1	33.12	-2.50	28.47	38.45
GPRS850	190	3	2	31.04	-2.50	26.39	38.45
GPRS850	190	3	3	29.06	-2.50	24.41	38.45
GPRS850	190	3	4	26.85	-2.50	22.20	38.45
GPRS850	251	3	1	32.96	-2.50	28.31	38.45
GPRS850	251	3	2	30.87	-2.50	26.22	38.45
GPRS850	251	3	3	28.91	-2.50	24.26	38.45
GPRS850	251	3	4	26.71	-2.50	22.06	38.45
GPRS1900	512	0	1	29.61	-1.20	28.41	33.00
GPRS1900	512	0	2	27.75	-1.20	26.55	33.00
GPRS1900	512	0	3	26.13	-1.20	24.93	33.00
GPRS1900	512	0	4	24.17	-1.20	22.97	33.00
GPRS1900	661	0	1	29.79	-1.20	28.59	33.00
GPRS1900	661	0	2	27.56	-1.20	26.36	33.00
GPRS1900	661	0	3	25.97	-1.20	24.77	33.00

GPRS1900	661	0	4	23.97	-1.20	22.77	33.00
GPRS1900	810	0	1	29.74	-1.20	28.54	33.00
GPRS1900	810	0	2	27.18	-1.20	25.98	33.00
GPRS1900	810	0	3	25.54	-1.20	24.34	33.00
GPRS1900	810	0	4	23.53	-1.20	22.33	33.00
<i>Note: EIRP (dBm) = Average power (dBm) + Antenna Gain (dBi).</i> <i>ERP (dBm) = EIRP (dBm) - 2.15 (dB).</i>							

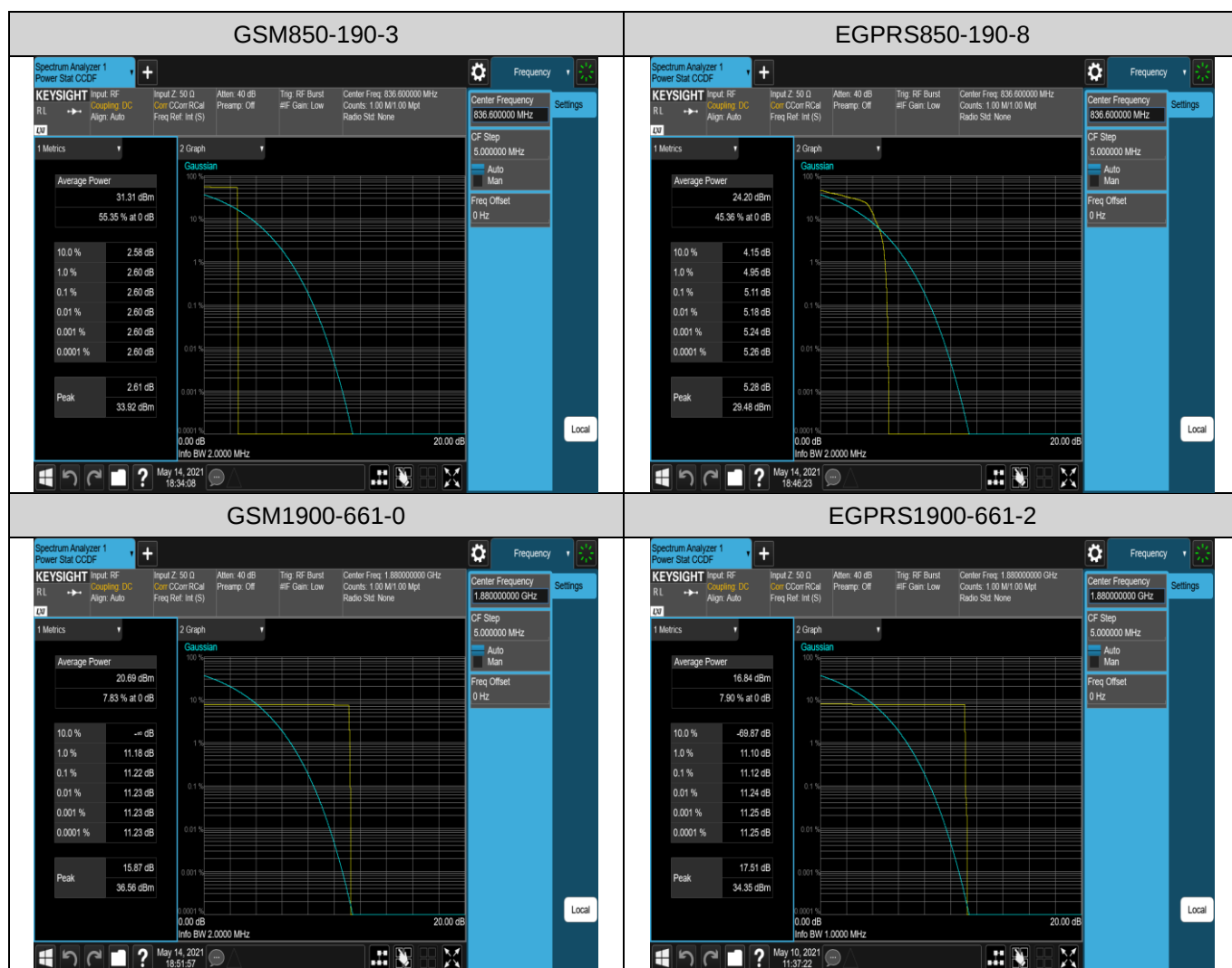
Band	Channel	PCL	Slot	Average Power (dBm)	Antenna Gain (dBi)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)
EGPRS850	128	8	1	25.08	-2.50	20.43	38.45
EGPRS850	128	8	2	23.62	-2.50	18.97	38.45
EGPRS850	128	8	3	21.08	-2.50	16.43	38.45
EGPRS850	128	8	4	18.84	-2.50	14.19	38.45
EGPRS850	190	8	1	25.76	-2.50	21.11	38.45
EGPRS850	190	8	2	24.78	-2.50	20.13	38.45
EGPRS850	190	8	3	22.23	-2.50	17.58	38.45
EGPRS850	190	8	4	20.21	-2.50	15.56	38.45
EGPRS850	251	8	1	25.18	-2.50	20.53	38.45
EGPRS850	251	8	2	24.33	-2.50	19.68	38.45
EGPRS850	251	8	3	21.68	-2.50	17.03	38.45
EGPRS850	251	8	4	19.7	-2.50	15.05	38.45
EGPRS1900	512	2	1	25.78	-1.20	24.58	33.00
EGPRS1900	512	2	2	23.77	-1.20	22.57	33.00
EGPRS1900	512	2	3	21.34	-1.20	20.14	33.00
EGPRS1900	512	2	4	19.7	-1.20	18.50	33.00
EGPRS1900	661	2	1	27.16	-1.20	25.96	33.00
EGPRS1900	661	2	2	25.34	-1.20	24.14	33.00
EGPRS1900	661	2	3	23.12	-1.20	21.92	33.00
EGPRS1900	661	2	4	21.22	-1.20	20.02	33.00
EGPRS1900	810	2	1	25.79	-1.20	24.59	33.00
EGPRS1900	810	2	2	23.63	-1.20	22.43	33.00
EGPRS1900	810	2	3	21.59	-1.20	20.39	33.00
EGPRS1900	810	2	4	18.79	-1.20	17.59	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	2.6	13	PASS
EGPRS850	190	6	5.11	13	PASS
GSM1900	661	0	11.22	13	PASS
EGPRS1900	661	5	11.12	13	PASS

Test Graphs

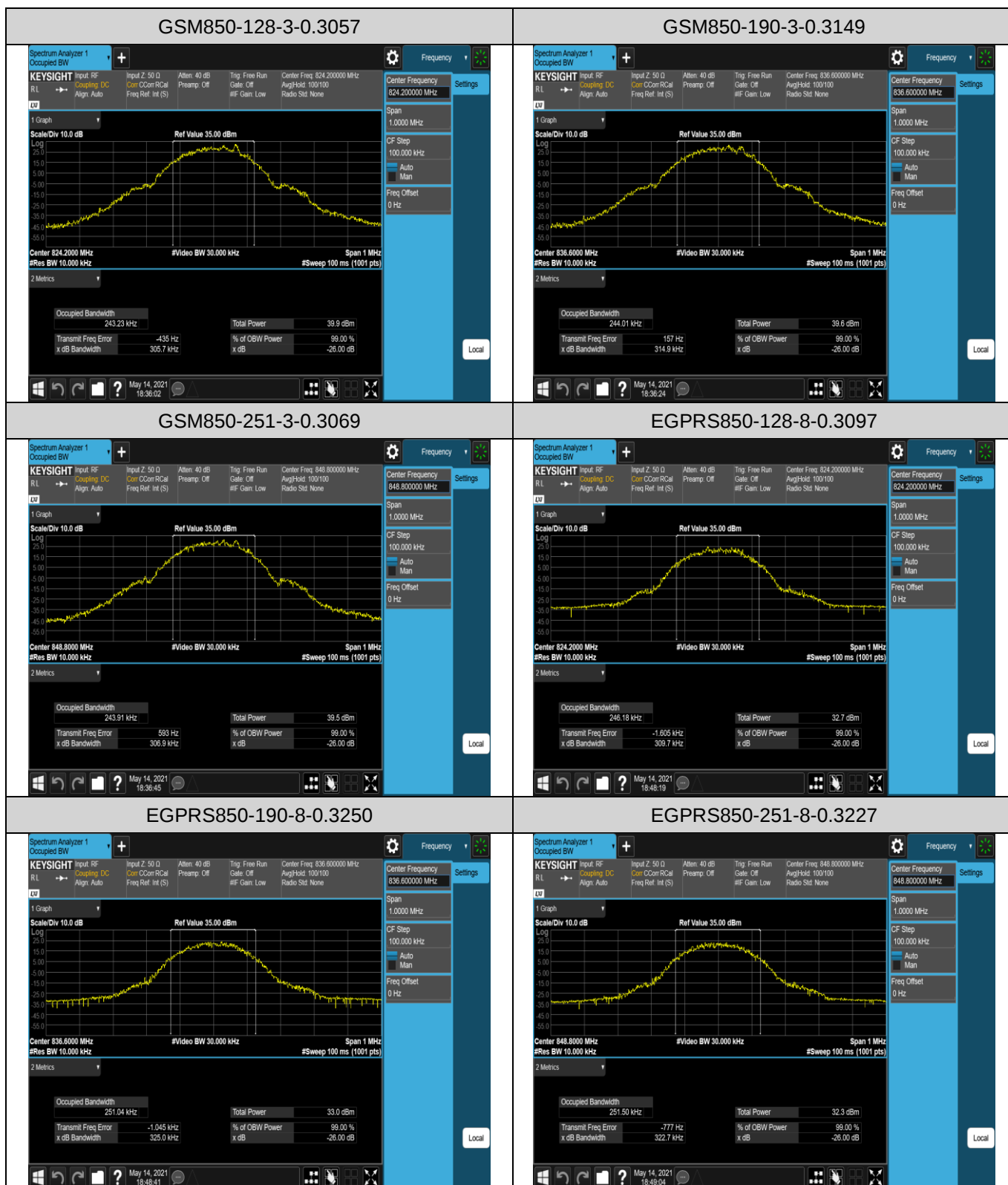


Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

Band	Channel	PCL	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
GSM850	128	3	0.24323	0.3057	---	PASS
GSM850	190	3	0.24401	0.3149	---	PASS
GSM850	251	3	0.24391	0.3069	---	PASS
EGPRS850	128	8	0.24618	0.3097	---	PASS
EGPRS850	190	8	0.25104	0.3250	---	PASS
EGPRS850	251	8	0.25150	0.3227	---	PASS
GSM1900	512	0	0.24518	0.3034	---	PASS
GSM1900	661	0	0.24544	0.3136	---	PASS
GSM1900	810	0	0.24334	0.3096	---	PASS
EGPRS1900	512	2	0.24419	0.3053	---	PASS
EGPRS1900	661	2	0.24956	0.3180	---	PASS
EGPRS1900	810	2	0.24841	0.3052	---	PASS

Test Graphs



GSM1900-512-0-0.3034



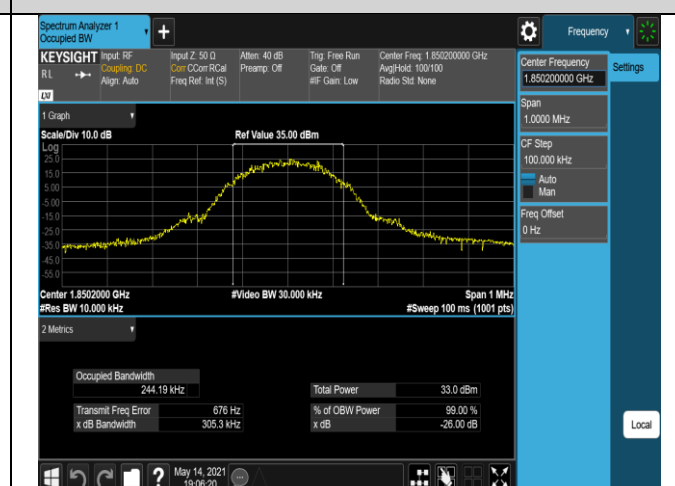
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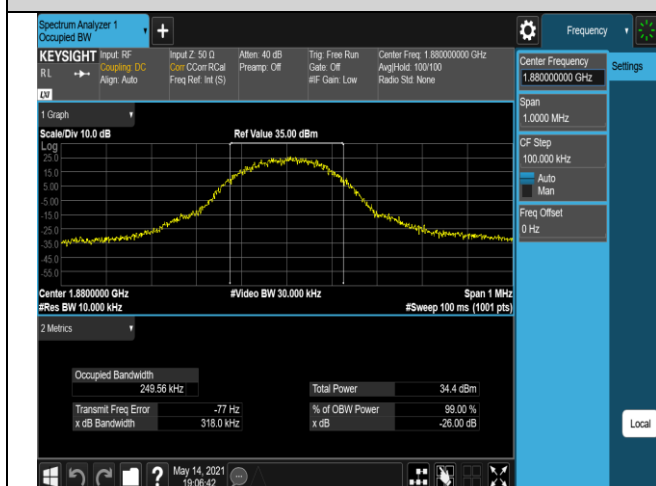
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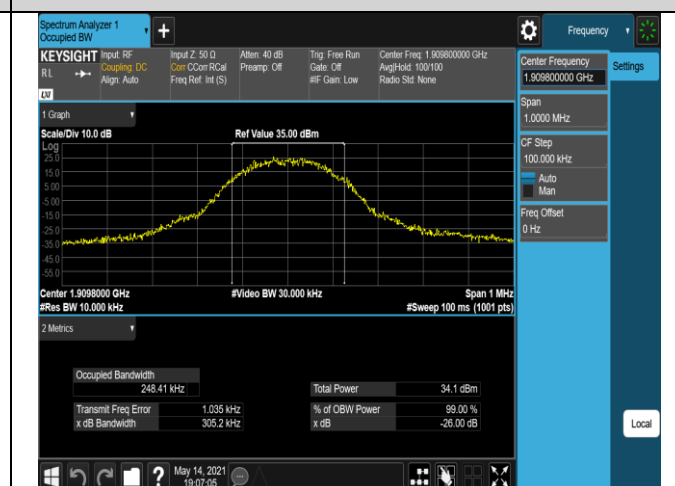
EGPRS1900-512-2-0.3053



EGPRS1900-661-2-0.3180



EGPRS1900-810-2-0.3052

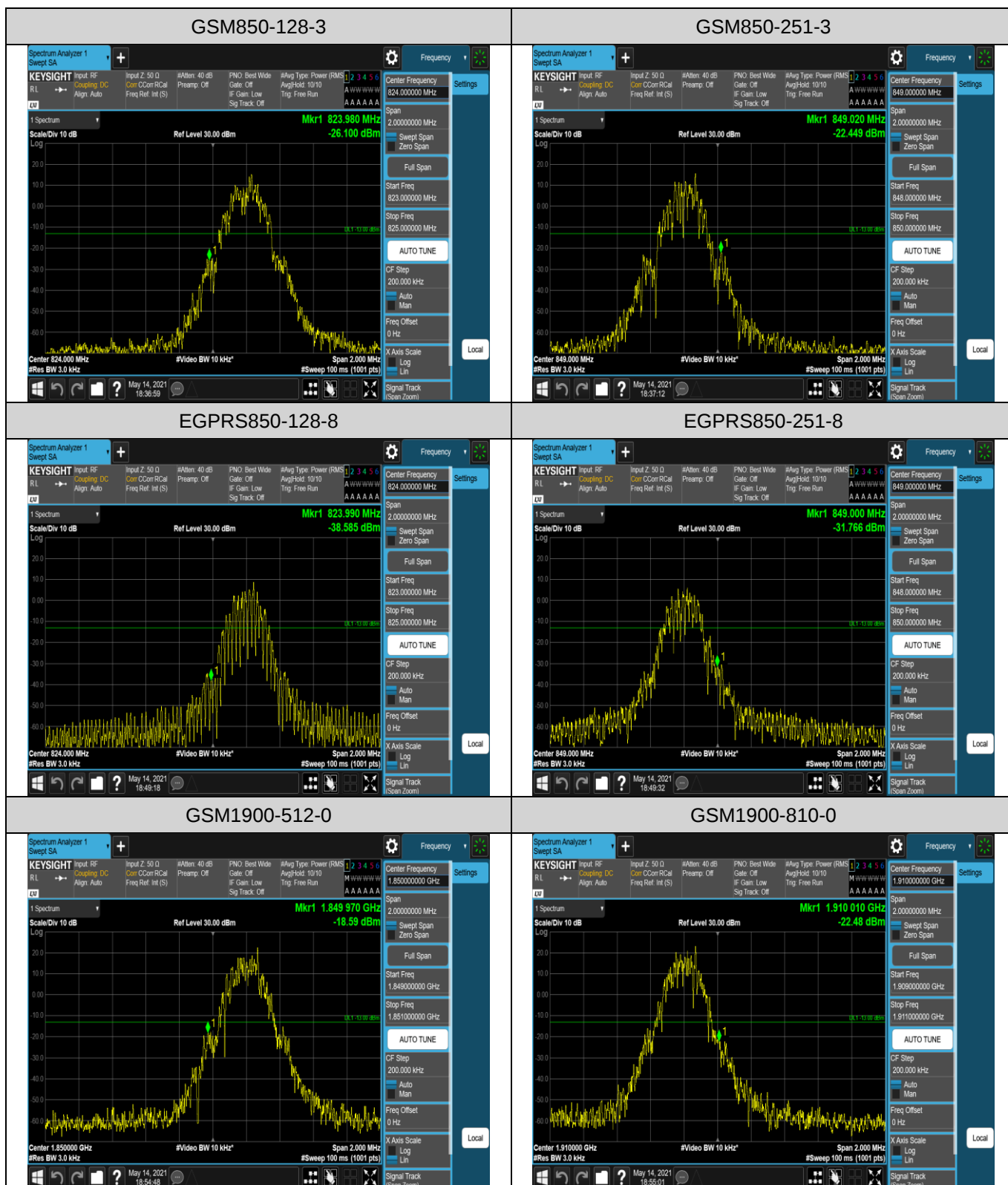


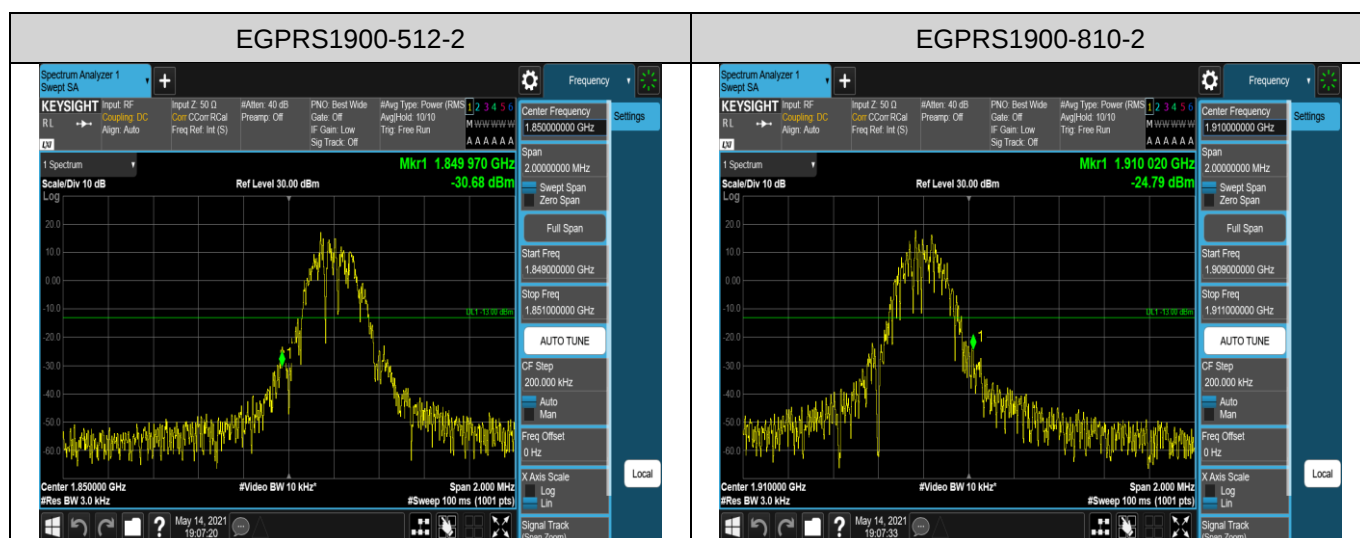
Appendix D: Band Edge

Test Result

Band	Channel	PCL	Freq (MHz)	Result (dBm)	Limit(dBm)	Verdict
GSM850	128	3	823.98	-21.18	-13	PASS
GSM850	251	3	849.02	-19.65	-13	PASS
EGPRS850	128	8	823.99	-32.85	-13	PASS
EGPRS850	251	8	849.00	-30.22	-13	PASS
GSM1900	512	0	1849.97	-16.95	-13	PASS
GSM1900	810	0	1910.01	-18.14	-13	PASS
EGPRS1900	512	2	1849.97	-23.47	-13	PASS
EGPRS1900	810	2	1910.02	-23.22	-13	PASS

Test Graphs



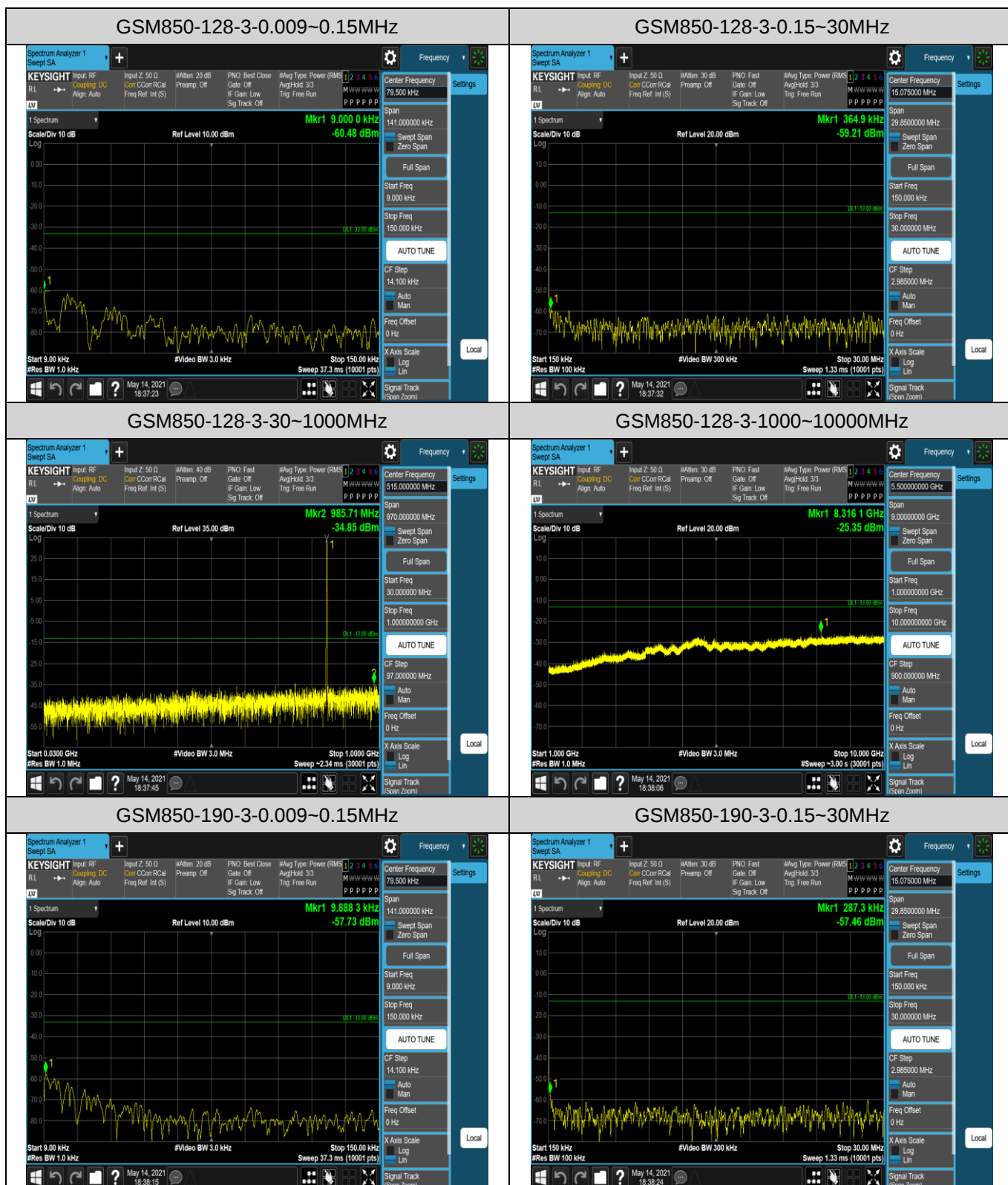


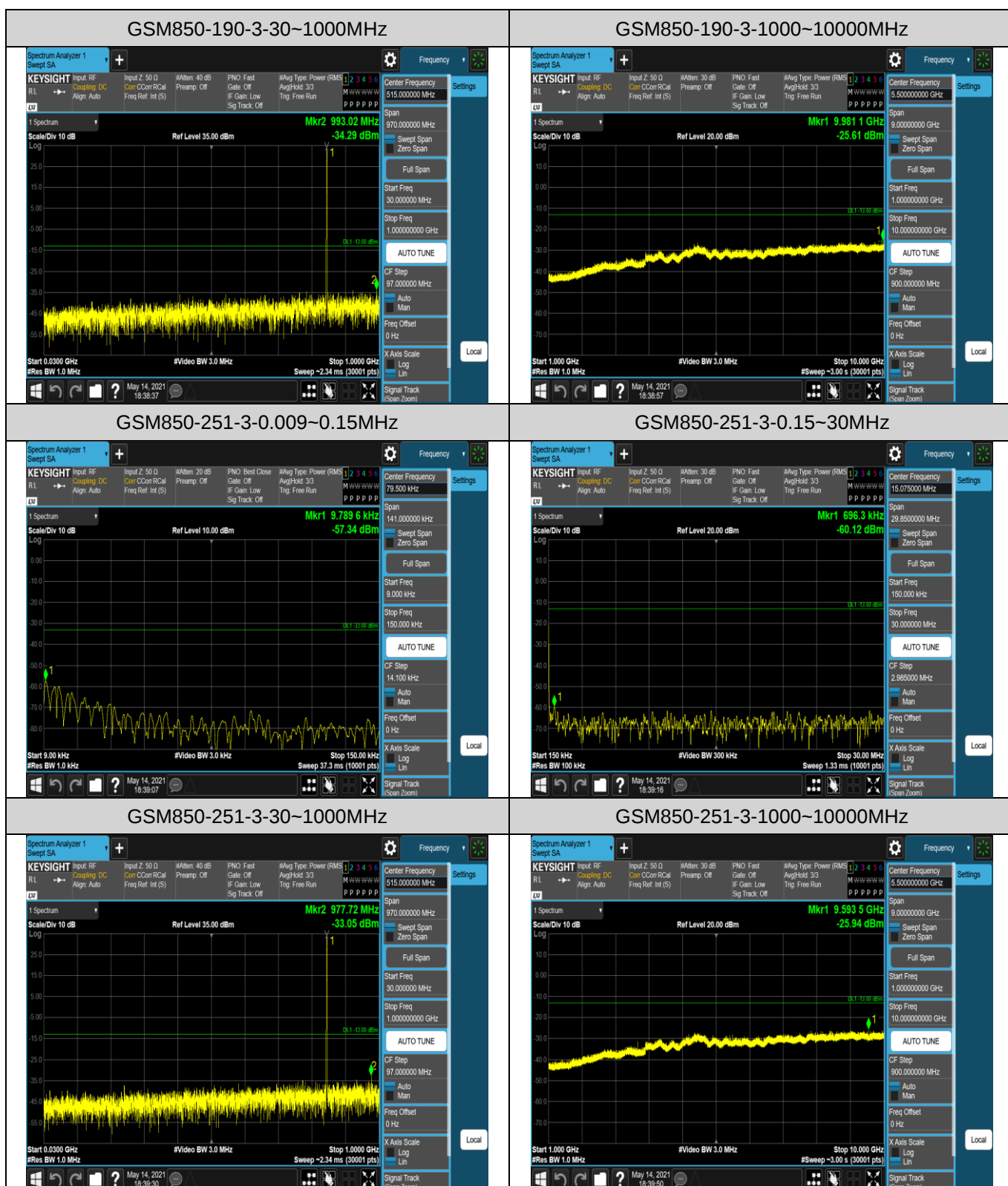
Appendix E: Conducted Spurious Emission

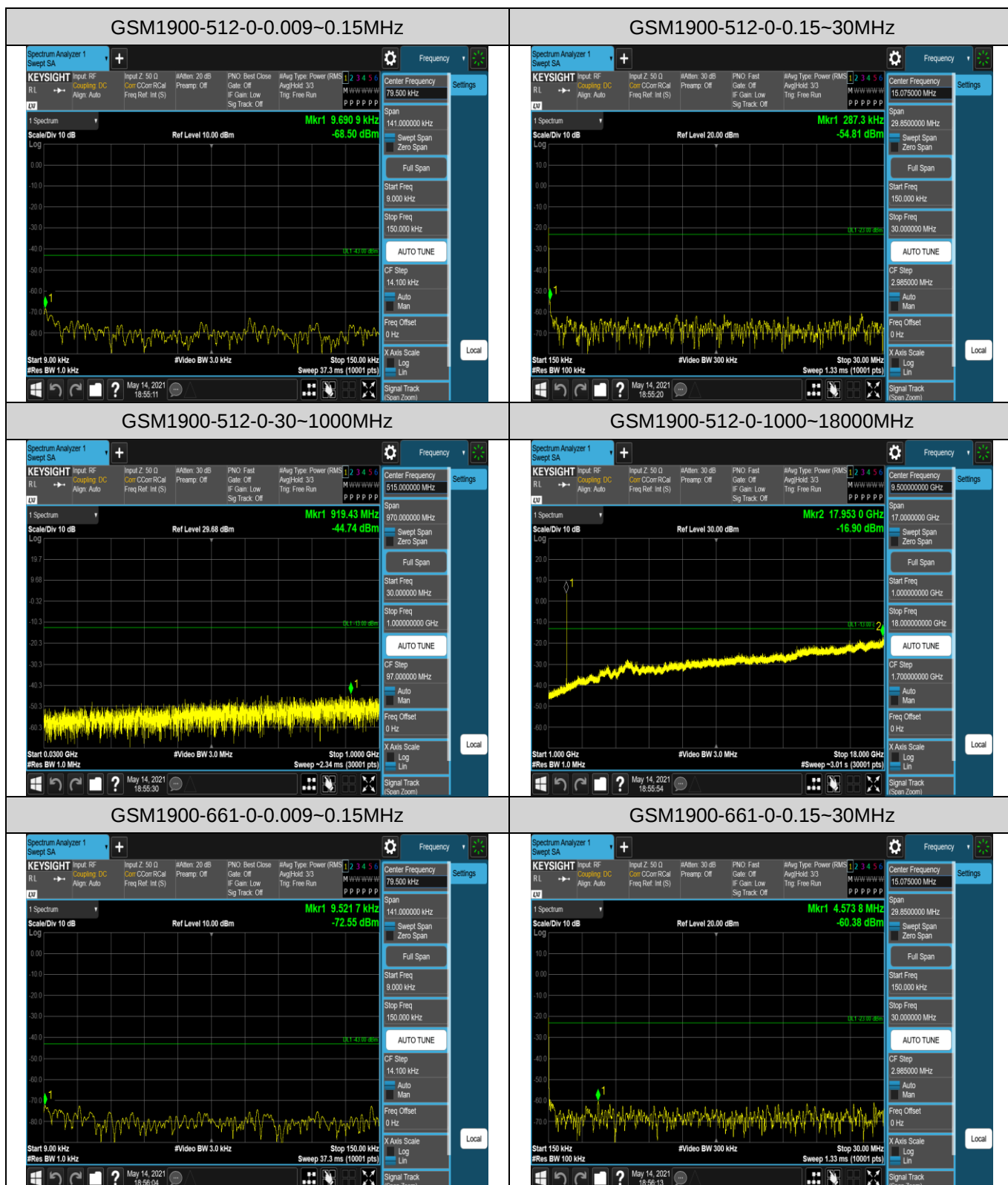
Test Result

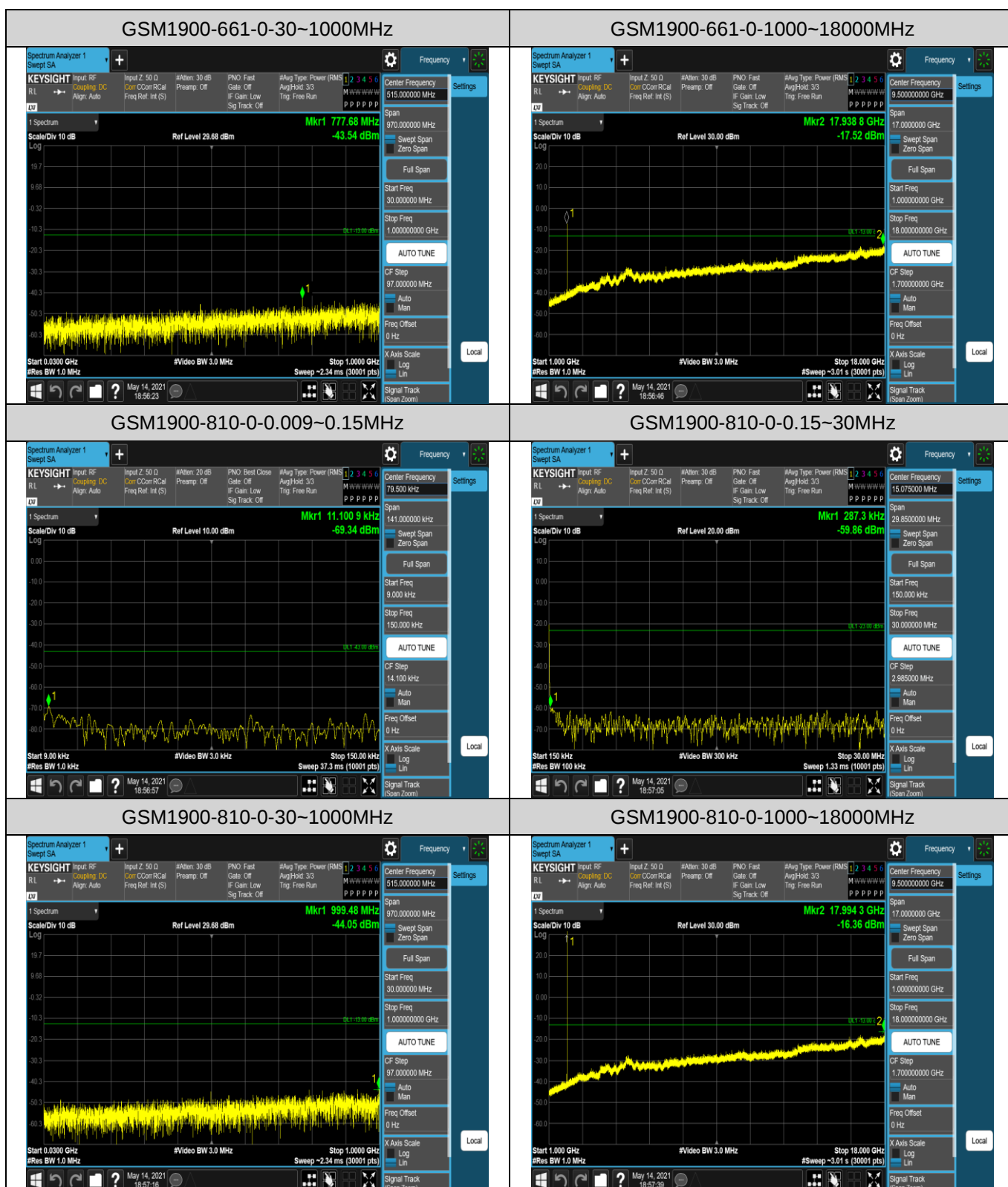
Band	Channel	PCL	Frequency Range(MHz)	Max.Freq. (MHz)	Result (dBm)	Limit (dBm)	Verdict
GSM850	128	3	0.009~0.15MHz	0.01	-60.48	-33	PASS
GSM850	128	3	0.15~30MHz	0.36	-59.21	-13	PASS
GSM850	128	3	30~1000MHz	985.71	-34.85	-13	PASS
GSM850	128	3	1000~10000MHz	8316.1	-25.35	-13	PASS
GSM850	190	3	0.009~0.15MHz	0.01	-57.73	-33	PASS
GSM850	190	3	0.15~30MHz	0.29	-57.46	-13	PASS
GSM850	190	3	30~1000MHz	993.02	-34.29	-13	PASS
GSM850	190	3	1000~10000MHz	9981.1	-25.61	-13	PASS
GSM850	251	3	0.009~0.15MHz	0.01	-57.34	-33	PASS
GSM850	251	3	0.15~30MHz	0.7	-60.12	-13	PASS
GSM850	251	3	30~1000MHz	977.72	-33.05	-13	PASS
GSM850	251	3	1000~10000MHz	9593.5	-25.94	-13	PASS
GSM1900	512	0	0.009~0.15MHz	0.01	-68.5	-43	PASS
GSM1900	512	0	0.15~30MHz	0.29	-54.81	-23	PASS
GSM1900	512	0	30~1000MHz	919.43	-44.74	-13	PASS
GSM1900	512	0	1000~18000MHz	17952.97	-16.9	-13	PASS
GSM1900	661	0	0.009~0.15MHz	0.01	-72.55	-43	PASS
GSM1900	661	0	0.15~30MHz	4.57	-60.38	-23	PASS
GSM1900	661	0	30~1000MHz	777.68	-43.54	-13	PASS
GSM1900	661	0	1000~18000MHz	17938.8	-17.52	-13	PASS
GSM1900	810	0	0.009~0.15MHz	0.01	-69.34	-43	PASS
GSM1900	810	0	0.15~30MHz	0.29	-59.86	-23	PASS
GSM1900	810	0	30~1000MHz	999.48	-44.05	-13	PASS
GSM1900	810	0	1000~18000MHz	17994.33	-16.36	-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	-5.10	-0.006096	±2.5	Pass
	-20	-5.91	-0.007064		
	-10	-4.46	-0.005331		
	0	-8.01	-0.009574		
	10	-9.78	-0.011690		
	20	-5.42	-0.006479		
	30	-6.97	-0.008331		
	40	-7.72	-0.009228		
	50	-8.72	-0.010423		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	-7.04	-0.008415	±2.5	Pass
	3.80	-5.71	-0.006825		
	4.18	-5.52	-0.006598		
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	-0.13	-0.000155	±2.5	Pass
	-20	-4.07	-0.004865		
	-10	0.87	0.001040		
	0	-6.52	-0.007793		
	10	-4.29	-0.005128		
	20	-3.68	-0.004399		
	30	-0.90	-0.001076		
	40	-4.39	-0.005247		
	50	-1.26	-0.001506		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	-4.71	-0.005630	±2.5	Pass
	3.80	0.58	0.000693		
	4.18	-7.17	-0.008570		
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	-6.65	-0.003537	Within authorized band for PCS 1900	Pass
	-20	-7.94	-0.004223		
	-10	-9.46	-0.005032		
	0	-6.97	-0.003707		
	10	-15.43	-0.008207		
	20	-8.39	-0.004463		
	30	-12.37	-0.006580		
	40	-13.98	-0.007436		
	50	-2.74	-0.001457		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	-0.77	-0.000410	Within authorized band for PCS 1900	Pass
	3.80	-5.46	-0.002904		
	4.18	-8.72	-0.004638		
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	-13.17	-0.007005	Within authorized band for PCS 1900	Pass
	-20	-7.26	-0.003862		
	-10	-29.38	-0.015628		
	0	-11.66	-0.006202		
	10	-17.63	-0.009378		
	20	-16.43	-0.008739		
	30	-15.98	-0.008500		
	40	-15.53	-0.008261		
	50	-19.47	-0.010356		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	-29.32	-0.015596	Within authorized band for PCS 1900	Pass
	3.80	-16.85	-0.008963		
	4.18	-26.02	-0.013840		
Note: Only the worst case shown in the report.					