

Appendix A: Effective (Isotropic) Radiated Power Output Data

Test Result

Main antenna(GSM850 ANT3 PRX &PCS 1900 ANT2 PRX):

Band	Channel	PCL	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
GSM850	128	5	33.40	31.18	38.45	PASS
GSM850	190	5	33.26	31.04	38.45	PASS
GSM850	251	5	33.19	30.97	38.45	PASS
GSM1900	512	0	28.79	27.28	33.00	PASS
GSM1900	661	0	29.29	27.78	33.00	PASS
GSM1900	810	0	29.38	27.87	33.00	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
GPRS850	128	5	1	33.42	31.2	38.45	PASS
GPRS850	128	5	2	32.32	30.1	38.45	PASS
GPRS850	128	5	3	30.15	27.93	38.45	PASS
GPRS850	128	5	4	28.91	26.69	38.45	PASS
GPRS850	190	5	1	33.29	31.07	38.45	PASS
GPRS850	190	5	2	32.17	29.95	38.45	PASS
GPRS850	190	5	3	29.97	27.75	38.45	PASS
GPRS850	190	5	4	28.73	26.51	38.45	PASS
GPRS850	251	5	1	33.23	31.01	38.45	PASS
GPRS850	251	5	2	32.14	29.92	38.45	PASS
GPRS850	251	5	3	29.97	27.75	38.45	PASS
GPRS850	251	5	4	28.73	26.51	38.45	PASS
GPRS1900	512	0	1	28.78	27.27	33.00	PASS
GPRS1900	512	0	2	27.74	26.23	33.00	PASS
GPRS1900	512	0	3	25.65	24.14	33.00	PASS
GPRS1900	512	0	4	24.49	22.98	33.00	PASS
GPRS1900	661	0	1	29.30	27.79	33.00	PASS
GPRS1900	661	0	2	28.29	26.78	33.00	PASS
GPRS1900	661	0	3	26.23	24.72	33.00	PASS
GPRS1900	661	0	4	25.04	23.53	33.00	PASS
GPRS1900	810	0	1	29.42	27.91	33.00	PASS
GPRS1900	810	0	2	28.46	26.95	33.00	PASS
GPRS1900	810	0	3	26.41	24.9	33.00	PASS
GPRS1900	810	0	4	25.25	23.74	33.00	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
EGPRS850	128	8	1	27.23	25.01	38.45	PASS
EGPRS850	128	8	2	27.16	24.94	38.45	PASS
EGPRS850	128	8	3	27.07	24.85	38.45	PASS
EGPRS850	128	8	4	26.95	24.73	38.45	PASS
EGPRS850	190	8	1	27.07	24.85	38.45	PASS
EGPRS850	190	8	2	27.01	24.79	38.45	PASS
EGPRS850	190	8	3	26.95	24.73	38.45	PASS
EGPRS850	190	8	4	26.86	24.64	38.45	PASS
EGPRS850	251	8	1	27.10	24.88	38.45	PASS
EGPRS850	251	8	2	27.03	24.81	38.45	PASS
EGPRS850	251	8	3	26.95	24.73	38.45	PASS
EGPRS850	251	8	4	26.86	24.64	38.45	PASS
EGPRS1900	512	2	1	24.79	23.28	33.00	PASS
EGPRS1900	512	2	2	24.73	23.22	33.00	PASS
EGPRS1900	512	2	3	24.63	23.12	33.00	PASS
EGPRS1900	512	2	4	24.54	23.03	33.00	PASS
EGPRS1900	661	2	1	25.41	23.9	33.00	PASS
EGPRS1900	661	2	2	25.34	23.83	33.00	PASS
EGPRS1900	661	2	3	25.23	23.72	33.00	PASS
EGPRS1900	661	2	4	25.10	23.59	33.00	PASS
EGPRS1900	810	2	1	25.58	24.07	33.00	PASS
EGPRS1900	810	2	2	25.51	24.00	33.00	PASS
EGPRS1900	810	2	3	25.40	23.89	33.00	PASS
EGPRS1900	810	2	4	25.26	23.75	33.00	PASS

DPDT antenna (GSM850 ANT1 PRX &PCS 1900 ANT4 PRX):

Band	Channel	PCL	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
GSM850	128	5	31.96	22.12	38.45	PASS
GSM850	190	5	32.00	22.16	38.45	PASS
GSM850	251	5	31.84	22.00	38.45	PASS
GSM1900	512	0	27.77	24.37	33.00	PASS
GSM1900	661	0	28.26	24.86	33.00	PASS
GSM1900	810	0	28.29	24.89	33.00	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
GPRS850	128	5	1	31.96	22.12	38.45	PASS
GPRS850	128	5	2	31.17	21.33	38.45	PASS
GPRS850	128	5	3	29.36	19.52	38.45	PASS
GPRS850	128	5	4	28.21	18.37	38.45	PASS
GPRS850	190	5	1	31.99	22.15	38.45	PASS
GPRS850	190	5	2	31.17	21.33	38.45	PASS
GPRS850	190	5	3	29.21	19.37	38.45	PASS
GPRS850	190	5	4	28.08	18.24	38.45	PASS
GPRS850	251	5	1	31.83	21.99	38.45	PASS
GPRS850	251	5	2	31.00	21.16	38.45	PASS
GPRS850	251	5	3	29.04	19.20	38.45	PASS
GPRS850	251	5	4	27.89	18.05	38.45	PASS
GPRS1900	512	0	1	27.79	24.39	33.00	PASS
GPRS1900	512	0	2	26.91	23.51	33.00	PASS
GPRS1900	512	0	3	24.93	21.53	33.00	PASS
GPRS1900	512	0	4	23.85	20.45	33.00	PASS
GPRS1900	661	0	1	28.28	24.88	33.00	PASS
GPRS1900	661	0	2	27.44	24.04	33.00	PASS
GPRS1900	661	0	3	25.53	22.13	33.00	PASS
GPRS1900	661	0	4	24.43	21.03	33.00	PASS
GPRS1900	810	0	1	28.33	24.93	33.00	PASS
GPRS1900	810	0	2	27.53	24.13	33.00	PASS
GPRS1900	810	0	3	25.64	22.24	33.00	PASS
GPRS1900	810	0	4	24.57	21.17	33.00	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
EGPRS850	128	8	1	26.56	16.72	38.45	PASS
EGPRS850	128	8	2	26.51	16.67	38.45	PASS
EGPRS850	128	8	3	26.47	16.63	38.45	PASS
EGPRS850	128	8	4	26.38	16.54	38.45	PASS
EGPRS850	190	8	1	26.47	16.63	38.45	PASS
EGPRS850	190	8	2	26.42	16.58	38.45	PASS
EGPRS850	190	8	3	26.35	16.51	38.45	PASS
EGPRS850	190	8	4	26.27	16.43	38.45	PASS
EGPRS850	251	8	1	26.27	16.43	38.45	PASS
EGPRS850	251	8	2	26.22	16.38	38.45	PASS
EGPRS850	251	8	3	26.15	16.31	38.45	PASS
EGPRS850	251	8	4	26.10	16.26	38.45	PASS
EGPRS1900	512	2	1	24.10	20.7	33.00	PASS
EGPRS1900	512	2	2	24.04	20.64	33.00	PASS
EGPRS1900	512	2	3	23.97	20.57	33.00	PASS
EGPRS1900	512	2	4	23.89	20.49	33.00	PASS
EGPRS1900	661	2	1	24.70	21.3	33.00	PASS
EGPRS1900	661	2	2	24.64	21.24	33.00	PASS
EGPRS1900	661	2	3	24.57	21.17	33.00	PASS
EGPRS1900	661	2	4	24.51	21.11	33.00	PASS
EGPRS1900	810	2	1	24.83	21.43	33.00	PASS
EGPRS1900	810	2	2	24.77	21.37	33.00	PASS
EGPRS1900	810	2	3	24.69	21.29	33.00	PASS
EGPRS1900	810	2	4	24.63	21.23	33.00	PASS

All Band support multi-antenna transmission, can be switched and apart from power, the report only presents the test data of the main antenna.

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

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

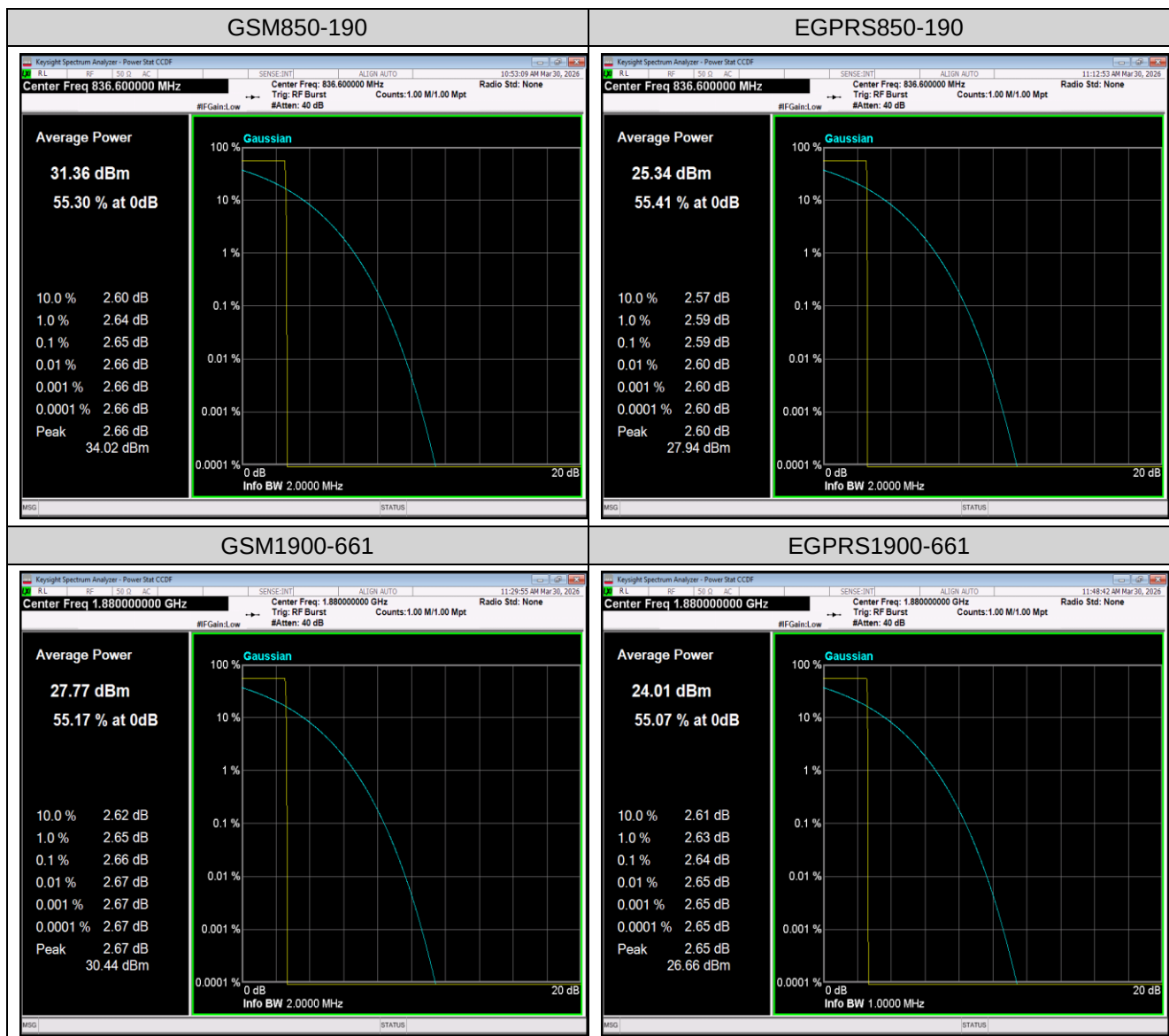
Appendix B: Peak-to-Average Ratio(CCDF)

Test Result

Band	Channel	PCL	Result(dB)	Limit(dB)	Verdict
GSM850	190	5	2.65	13	PASS
EGPRS850	190	8	2.59	13	PASS
GSM1900	661	0	2.66	13	PASS
EGPRS1900	661	2	2.64	13	PASS

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

Test Graphs

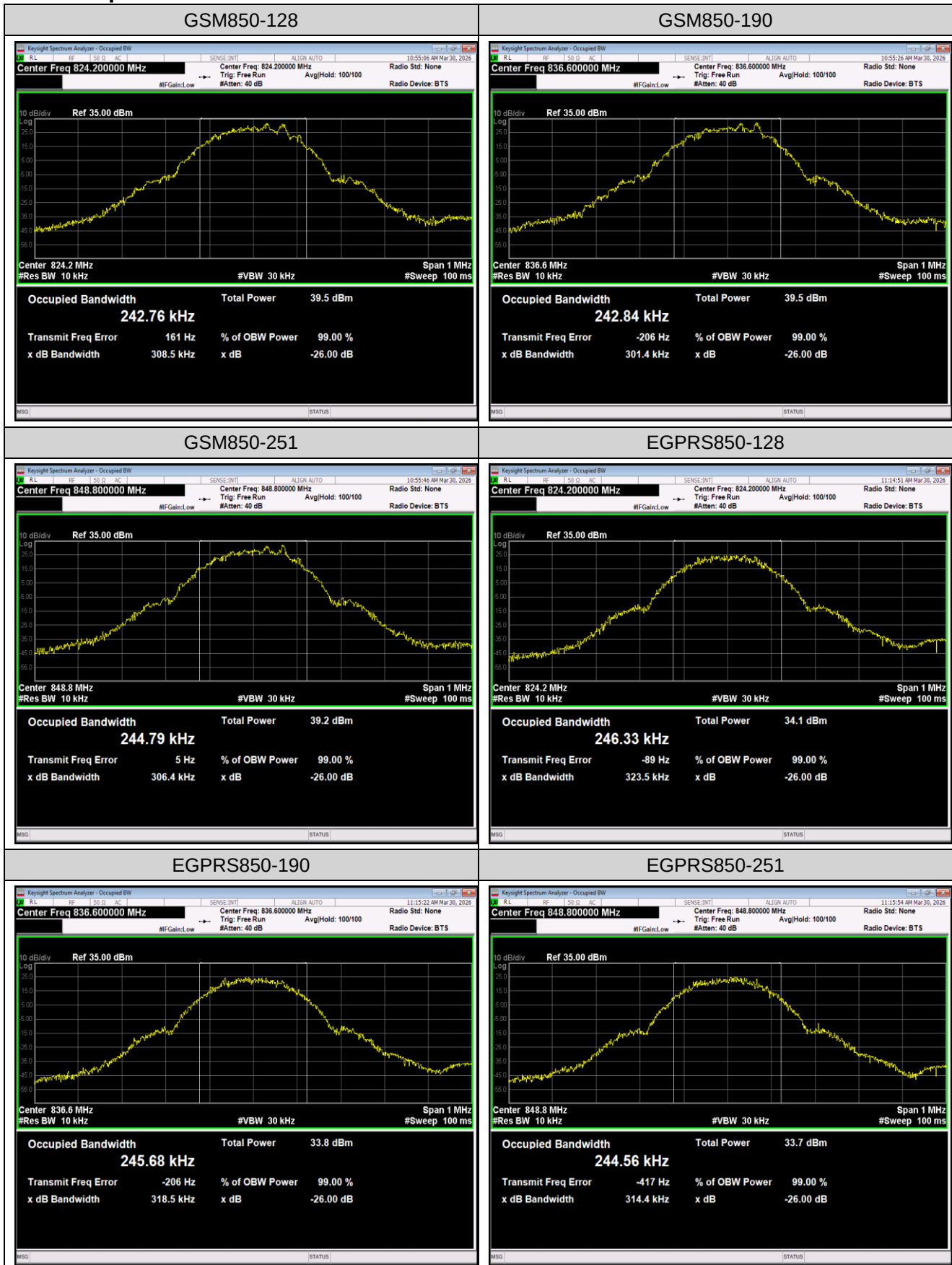


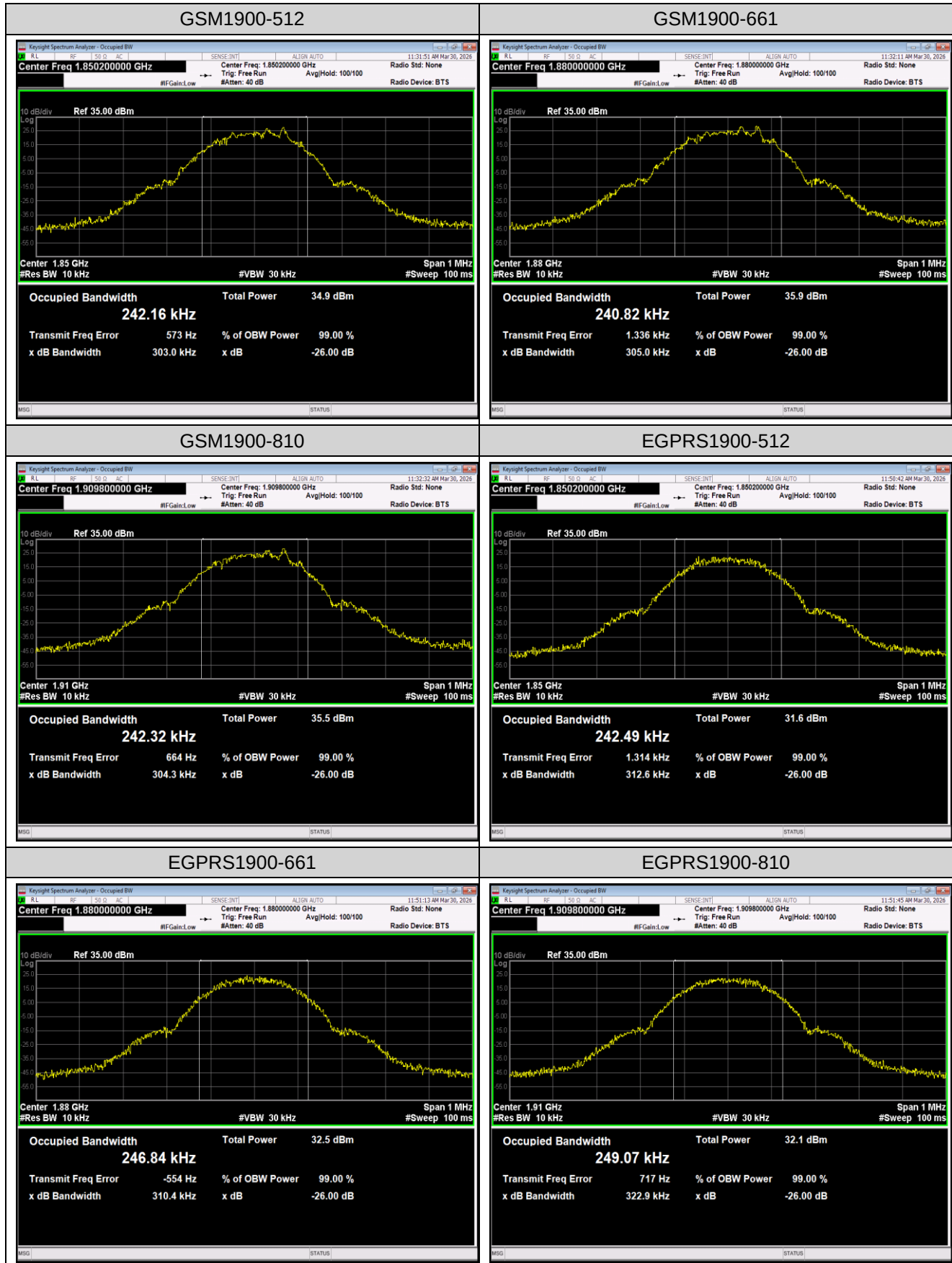
Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

Band	Channel	PCL	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
GSM850	128	5	0.24276	0.3085	---	PASS
GSM850	190	5	0.24284	0.3014	---	PASS
GSM850	251	5	0.24479	0.3064	---	PASS
EGPRS850	128	8	0.24633	0.3235	---	PASS
EGPRS850	190	8	0.24568	0.3185	---	PASS
EGPRS850	251	8	0.24456	0.3144	---	PASS
GSM1900	512	0	0.24216	0.3030	---	PASS
GSM1900	661	0	0.24082	0.3050	---	PASS
GSM1900	810	0	0.24232	0.3043	---	PASS
EGPRS1900	512	2	0.24249	0.3126	---	PASS
EGPRS1900	661	2	0.24684	0.3104	---	PASS
EGPRS1900	810	2	0.24907	0.3229	---	PASS

Test Graphs



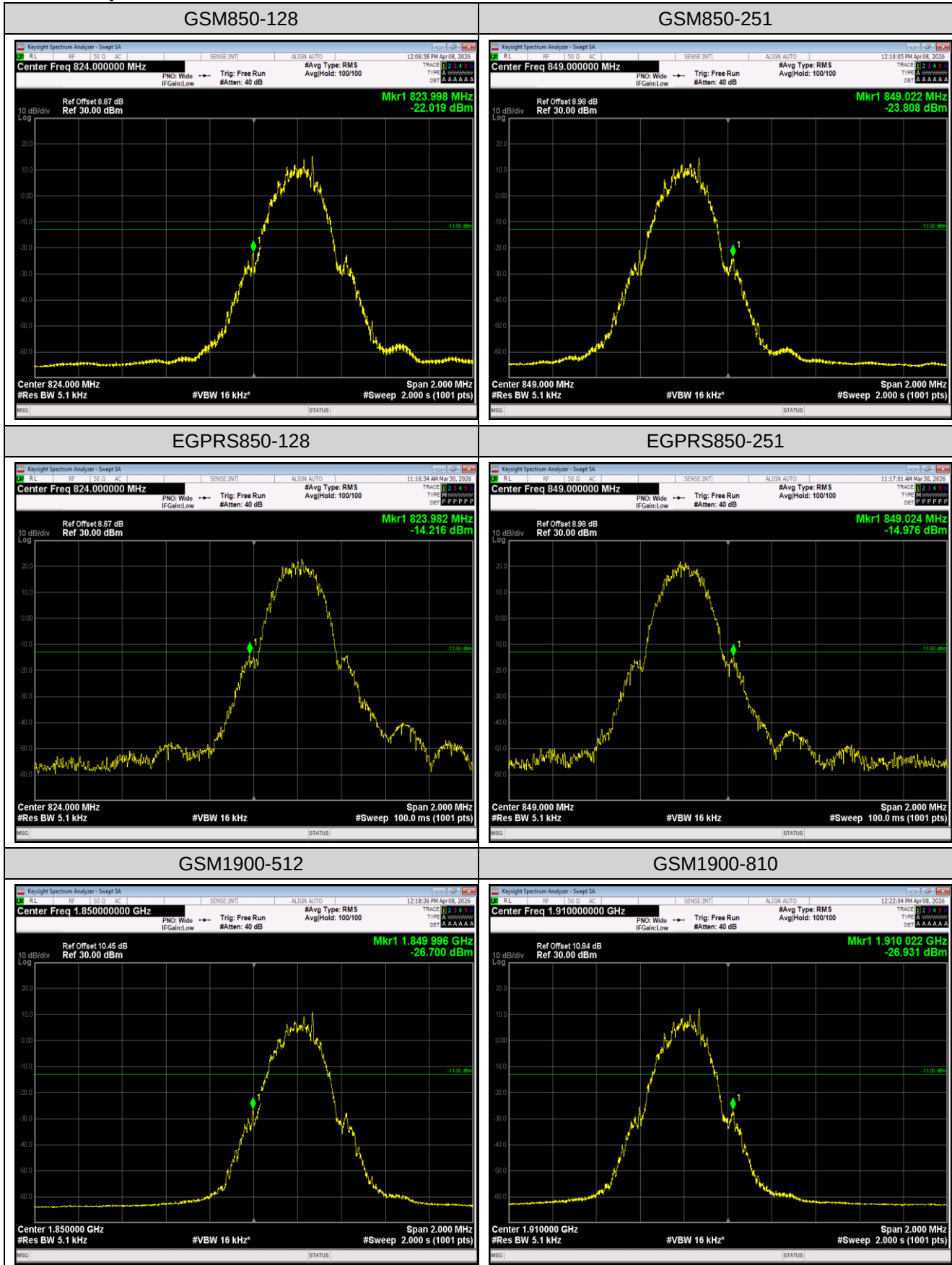


Appendix D: Band Edge

Test Result

Band	Channel	PCL	Freq (MHz)	Result (dBm)	Limit(dBm)	Verdict
GSM850	128	5	824.00	-22.02	-13	PASS
GSM850	251	5	849.02	-23.81	-13	PASS
EGPRS850	128	8	823.98	-14.22	-13	PASS
EGPRS850	251	8	849.02	-14.98	-13	PASS
GSM1900	512	0	1850.00	-26.70	-13	PASS
GSM1900	810	0	1910.02	-26.93	-13	PASS
EGPRS1900	512	2	1849.99	-19.73	-13	PASS
EGPRS1900	810	2	1910.02	-18.16	-13	PASS

Test Graphs

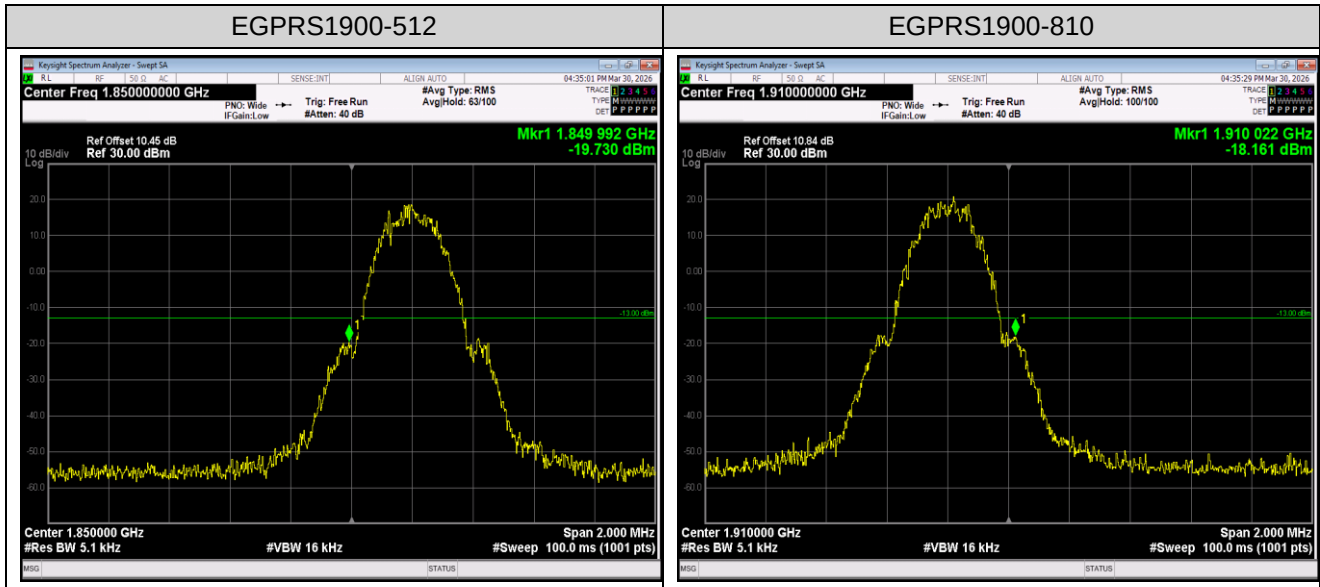


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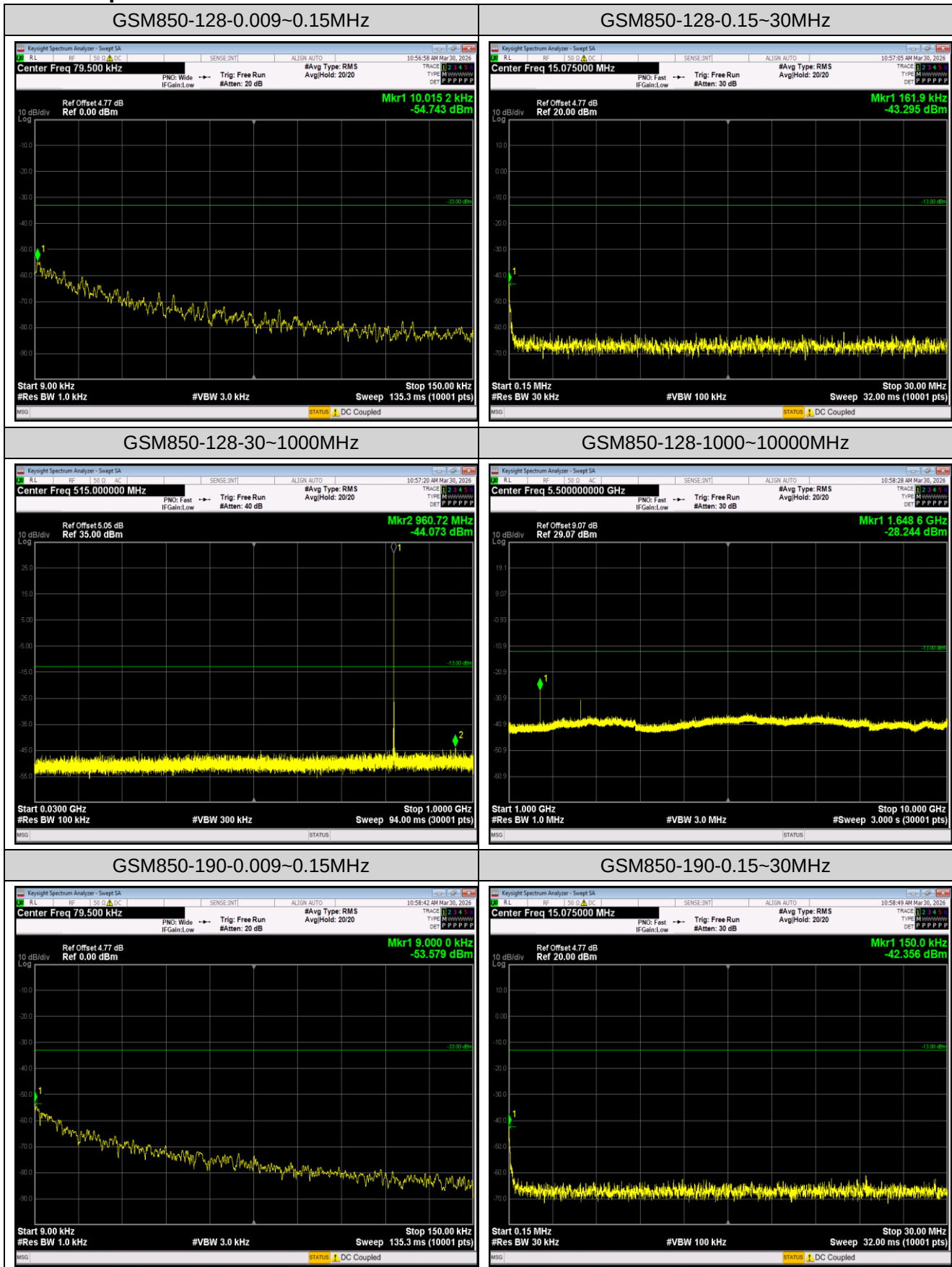
Appendix E: Conducted Spurious Emission

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	-54.74	-33	PASS
GSM850	128	5	0.15~30MHz	0.16	-43.3	-13	PASS
GSM850	128	5	30~1000MHz	960.72	-44.07	-13	PASS
GSM850	128	5	1000~10000MHz	1648.6	-28.24	-13	PASS
GSM850	190	5	0.009~0.15MHz	0.01	-53.58	-33	PASS
GSM850	190	5	0.15~30MHz	0.15	-42.36	-13	PASS
GSM850	190	5	30~1000MHz	413.93	-44.87	-13	PASS
GSM850	190	5	1000~10000MHz	1673.2	-28.57	-13	PASS
GSM850	251	5	0.009~0.15MHz	0.01	-54.15	-33	PASS
GSM850	251	5	0.15~30MHz	0.16	-41.09	-13	PASS
GSM850	251	5	30~1000MHz	698.52	-45.17	-13	PASS
GSM850	251	5	1000~10000MHz	1698.4	-33.38	-13	PASS
GSM1900	512	0	0.009~0.15MHz	0.01	-53.19	-43	PASS
GSM1900	512	0	0.15~30MHz	0.15	-42.81	-23	PASS
GSM1900	512	0	30~1000MHz	988.59	-43.95	-13	PASS
GSM1900	512	0	1000~18000MHz	16177.03	-21.94	-13	PASS
GSM1900	661	0	0.009~0.15MHz	0.01	-54.96	-43	PASS
GSM1900	661	0	0.15~30MHz	0.15	-42.29	-23	PASS
GSM1900	661	0	30~1000MHz	445.32	-45.65	-13	PASS
GSM1900	661	0	1000~18000MHz	16390.1	-22.1	-13	PASS
GSM1900	810	0	0.009~0.15MHz	0.01	-54.98	-43	PASS
GSM1900	810	0	0.15~30MHz	0.15	-45.66	-23	PASS
GSM1900	810	0	30~1000MHz	807.23	-44.67	-13	PASS
GSM1900	810	0	1000~18000MHz	17000.4	-21.92	-13	PASS

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

Test Graphs

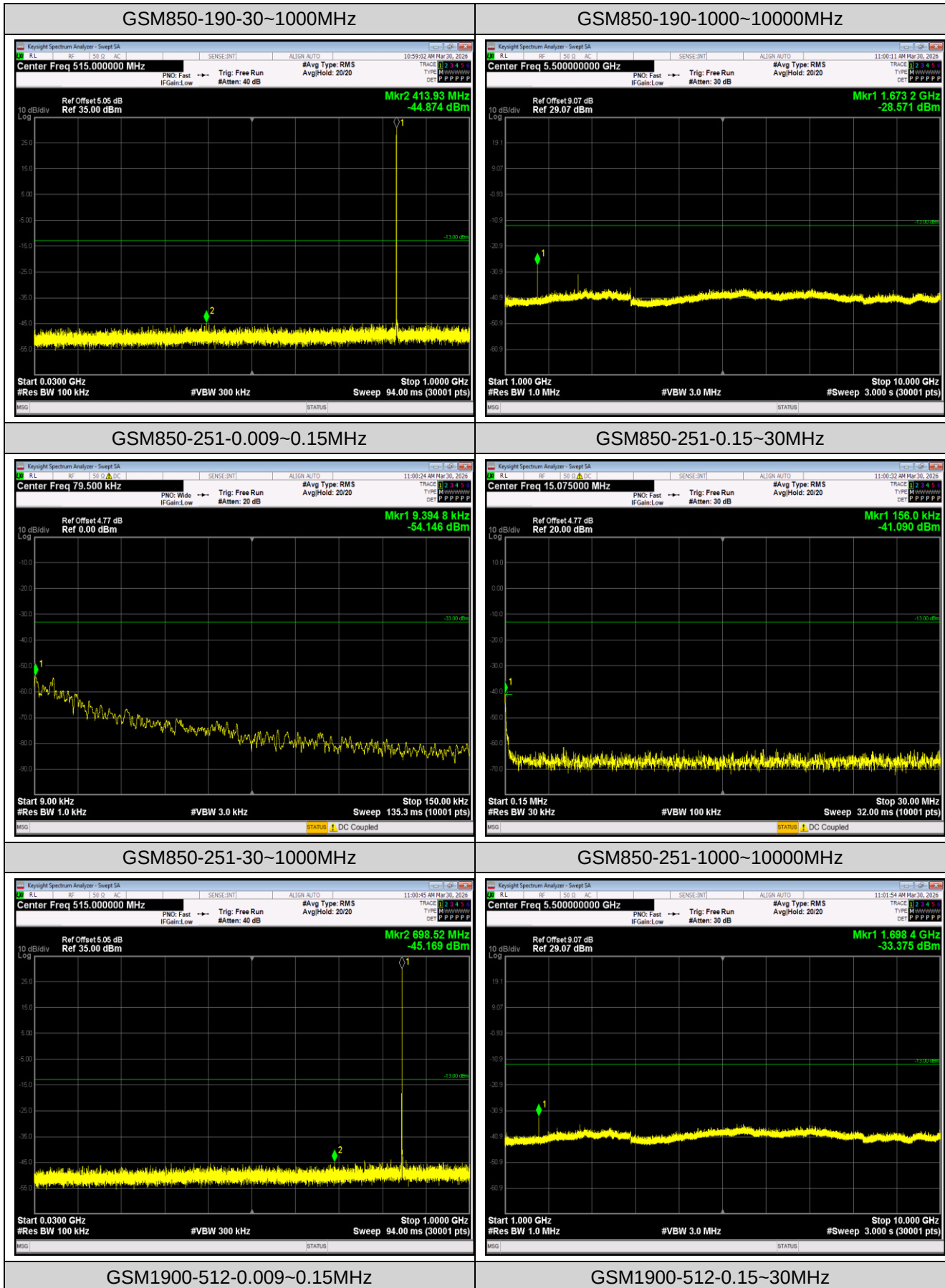


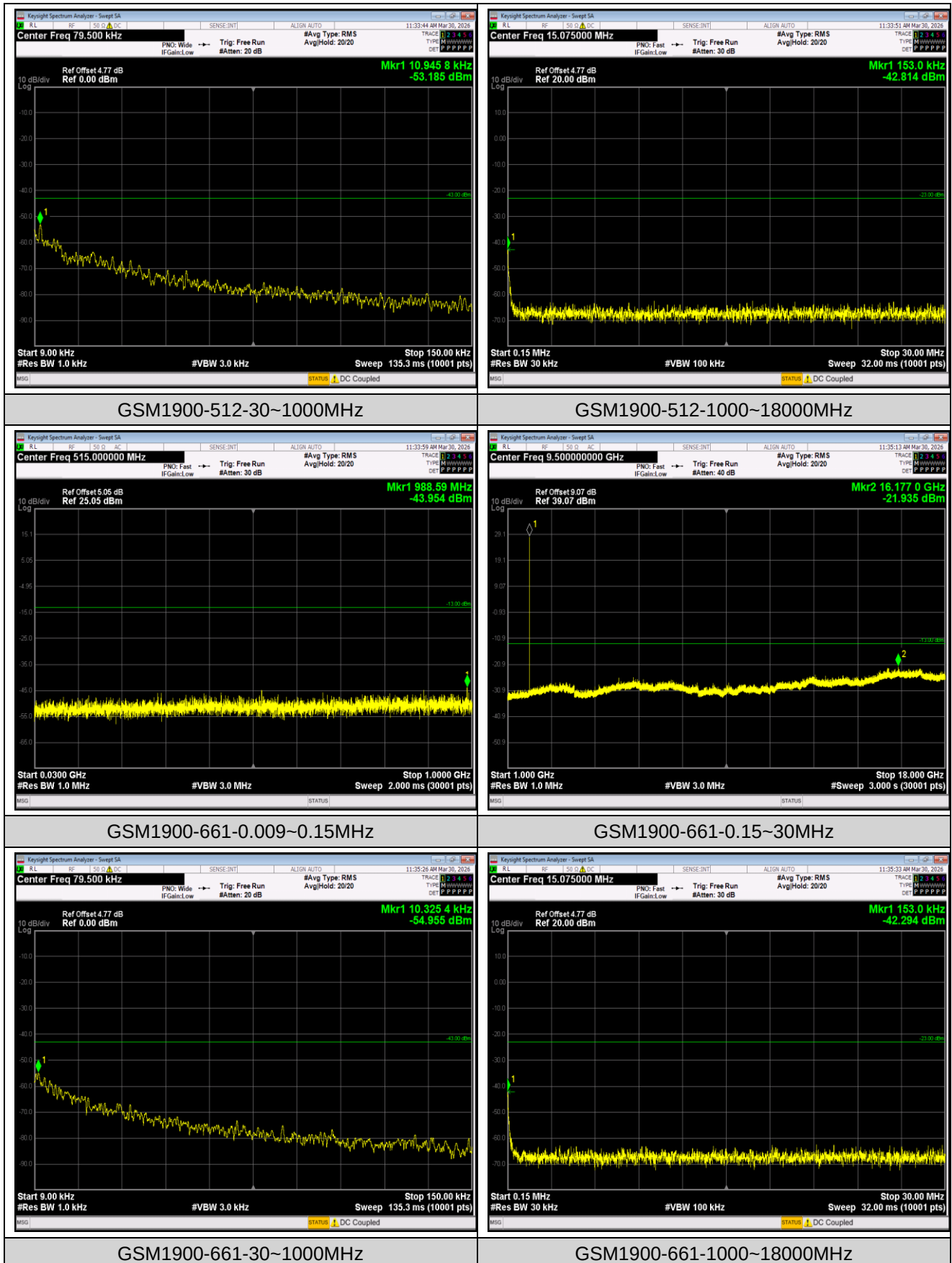
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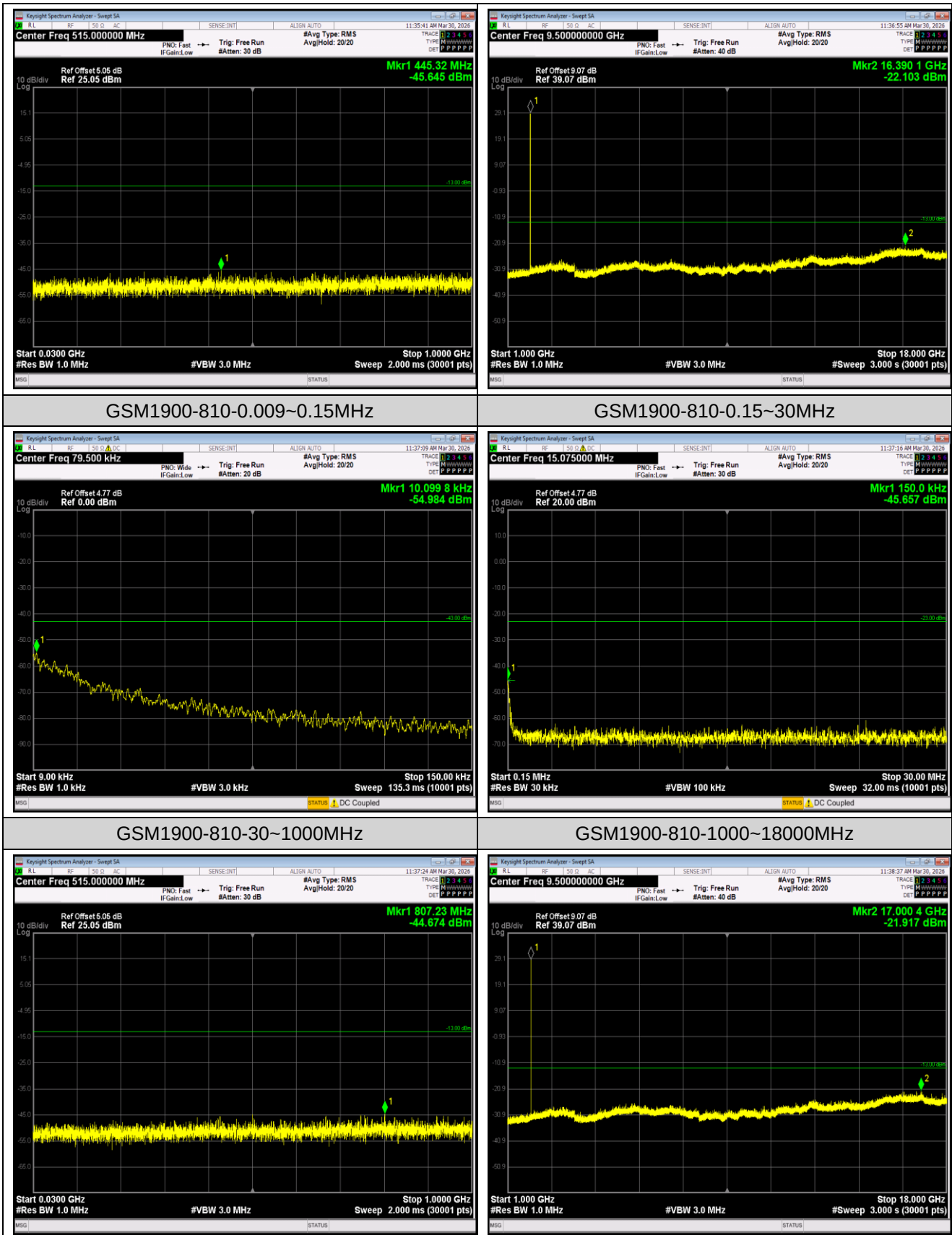
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Appendix F: Frequency Stability

Test Result

Reference Frequency: GSM850 Middle channel=190 Frequency=836.6MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.82	-30	-3.52	-0.004208	±2.5	Pass
	-20	-1.84	-0.002199		
	-10	-2.91	-0.003478		
	0	7.26	0.008678		
	10	6.39	0.007638		
	20	5.84	0.006981		
	30	4.97	0.005941		
	40	-7.94	-0.009491		
	50	-4.07	-0.004865		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	5.42	0.006479	±2.5	Pass
	3.82	-3.23	-0.003861		
	4.53	-2.68	-0.003203		
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		
3.82	-30	-3.65	-0.004363	±2.5	Pass
	-20	-5.07	-0.006060		
	-10	-6.01	-0.007184		
	0	-5.59	-0.006682		
	10	-1.45	-0.001733		
	20	-2.65	-0.003168		
	30	-3.81	-0.004554		
	40	-3.23	-0.003861		
	50	-3.26	-0.003897		
Voltage					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	-5.62	-0.006718	±2.5	Pass
	3.82	-5.20	-0.006216		
	4.53	-3.87	-0.004626		
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		
3.82	-30	0.16	0.000085	Within authorized band for PCS 1900	Pass
	-20	5.29	0.002814		
	-10	13.08	0.006957		
	0	-6.81	-0.003622		
	10	-2.78	-0.001479		
	20	1.13	0.000601		
	30	-0.90	-0.000479		
	40	1.16	0.000617		
	50	5.97	0.003176		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	-13.27	-0.007059	Within authorized band for PCS 1900	Pass
	3.82	5.91	0.003144		
	4.53	3.94	0.002096		
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 (℃)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.82	-30	-10.36	-0.005511	Within authorized band for PCS 1900	Pass
	-20	-6.23	-0.003314		
	-10	-7.04	-0.003745		
	0	-6.17	-0.003282		
	10	-11.20	-0.005957		
	20	3.65	0.001941		
	30	-3.39	-0.001803		
	40	2.58	0.001372		
	50	-1.39	-0.000739		
Voltage					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	-3.58	-0.001904	Within authorized band for PCS 1900	Pass
	3.82	-7.10	-0.003777		
	4.53	-2.00	-0.001064		
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

