

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	33.10	26.85	38.45	PASS
GSM850	190	5	33.21	26.96	38.45	PASS
GSM850	251	5	33.01	26.76	38.45	PASS
GSM1900	512	0	29.67	29.57	33.00	PASS
GSM1900	661	0	29.65	29.55	33.00	PASS
GSM1900	810	0	29.65	29.55	33.00	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
GPRS850	128	5	1	33.08	26.83	38.45	PASS
GPRS850	128	5	2	32.08	25.83	38.45	PASS
GPRS850	128	5	3	30.04	23.79	38.45	PASS
GPRS850	128	5	4	28.91	22.66	38.45	PASS
GPRS850	190	5	1	33.10	26.85	38.45	PASS
GPRS850	190	5	2	32.16	25.91	38.45	PASS
GPRS850	190	5	3	30.10	23.85	38.45	PASS
GPRS850	190	5	4	28.98	22.73	38.45	PASS
GPRS850	251	5	1	32.89	26.64	38.45	PASS
GPRS850	251	5	2	31.96	25.71	38.45	PASS
GPRS850	251	5	3	29.91	23.66	38.45	PASS
GPRS850	251	5	4	28.80	22.55	38.45	PASS
GPRS1900	512	0	1	29.64	29.54	33.00	PASS
GPRS1900	512	0	2	28.65	28.55	33.00	PASS
GPRS1900	512	0	3	26.61	26.51	33.00	PASS
GPRS1900	512	0	4	25.49	25.39	33.00	PASS
GPRS1900	661	0	1	29.62	29.52	33.00	PASS
GPRS1900	661	0	2	28.68	28.58	33.00	PASS
GPRS1900	661	0	3	26.64	26.54	33.00	PASS
GPRS1900	661	0	4	25.52	25.42	33.00	PASS
GPRS1900	810	0	1	29.60	29.5	33.00	PASS
GPRS1900	810	0	2	28.68	28.58	33.00	PASS
GPRS1900	810	0	3	26.67	26.57	33.00	PASS
GPRS1900	810	0	4	25.56	25.46	33.00	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
EGPRS850	128	8	1	27.53	21.28	38.45	PASS
EGPRS850	128	8	2	26.38	20.13	38.45	PASS
EGPRS850	128	8	3	24.14	17.89	38.45	PASS
EGPRS850	128	8	4	22.72	16.47	38.45	PASS
EGPRS850	190	8	1	27.32	21.07	38.45	PASS
EGPRS850	190	8	2	26.29	20.04	38.45	PASS
EGPRS850	190	8	3	24.03	17.78	38.45	PASS
EGPRS850	190	8	4	22.66	16.41	38.45	PASS
EGPRS850	251	8	1	27.43	21.18	38.45	PASS
EGPRS850	251	8	2	26.40	20.15	38.45	PASS
EGPRS850	251	8	3	24.14	17.89	38.45	PASS
EGPRS850	251	8	4	22.77	16.52	38.45	PASS
EGPRS1900	512	2	1	26.16	26.06	33.00	PASS
EGPRS1900	512	2	2	25.09	24.99	33.00	PASS
EGPRS1900	512	2	3	23.19	23.09	33.00	PASS
EGPRS1900	512	2	4	22.22	22.12	33.00	PASS
EGPRS1900	661	2	1	26.24	26.14	33.00	PASS
EGPRS1900	661	2	2	25.27	25.17	33.00	PASS
EGPRS1900	661	2	3	23.29	23.19	33.00	PASS
EGPRS1900	661	2	4	22.38	22.28	33.00	PASS
EGPRS1900	810	2	1	26.06	25.96	33.00	PASS
EGPRS1900	810	2	2	25.04	24.94	33.00	PASS
EGPRS1900	810	2	3	23.15	23.05	33.00	PASS
EGPRS1900	810	2	4	22.21	22.11	33.00	PASS

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

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

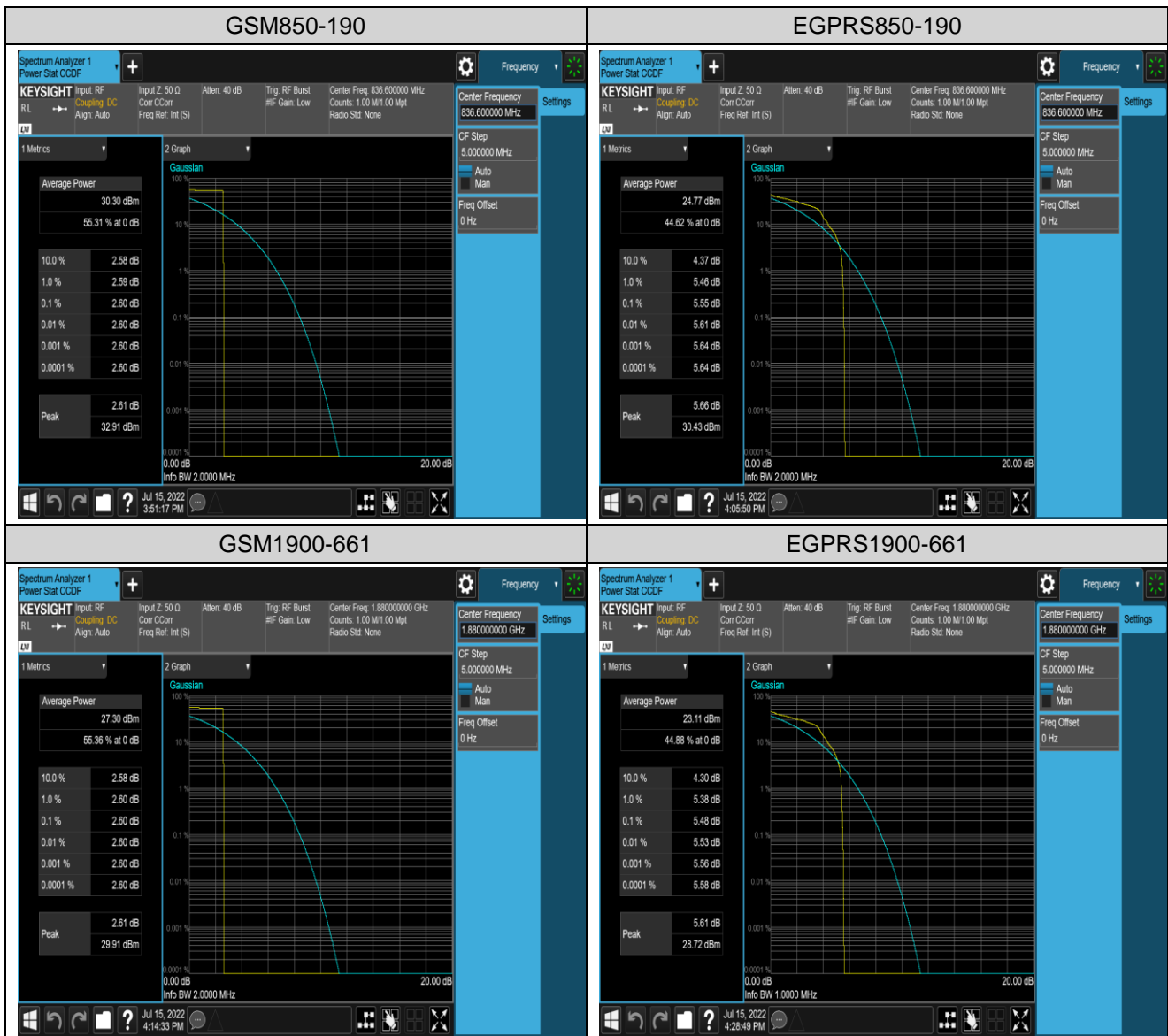
Appendix B: Peak-to-Average Ratio(CCDF)

Test Result

Band	Channel	PCL	Result(dB)	Limit(dB)	Verdict
GSM850	190	5	2.6	13	PASS
EGPRS850	190	8	5.55	13	PASS
GSM1900	661	0	2.6	13	PASS
EGPRS1900	661	2	5.48	13	PASS

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

Test Graphs

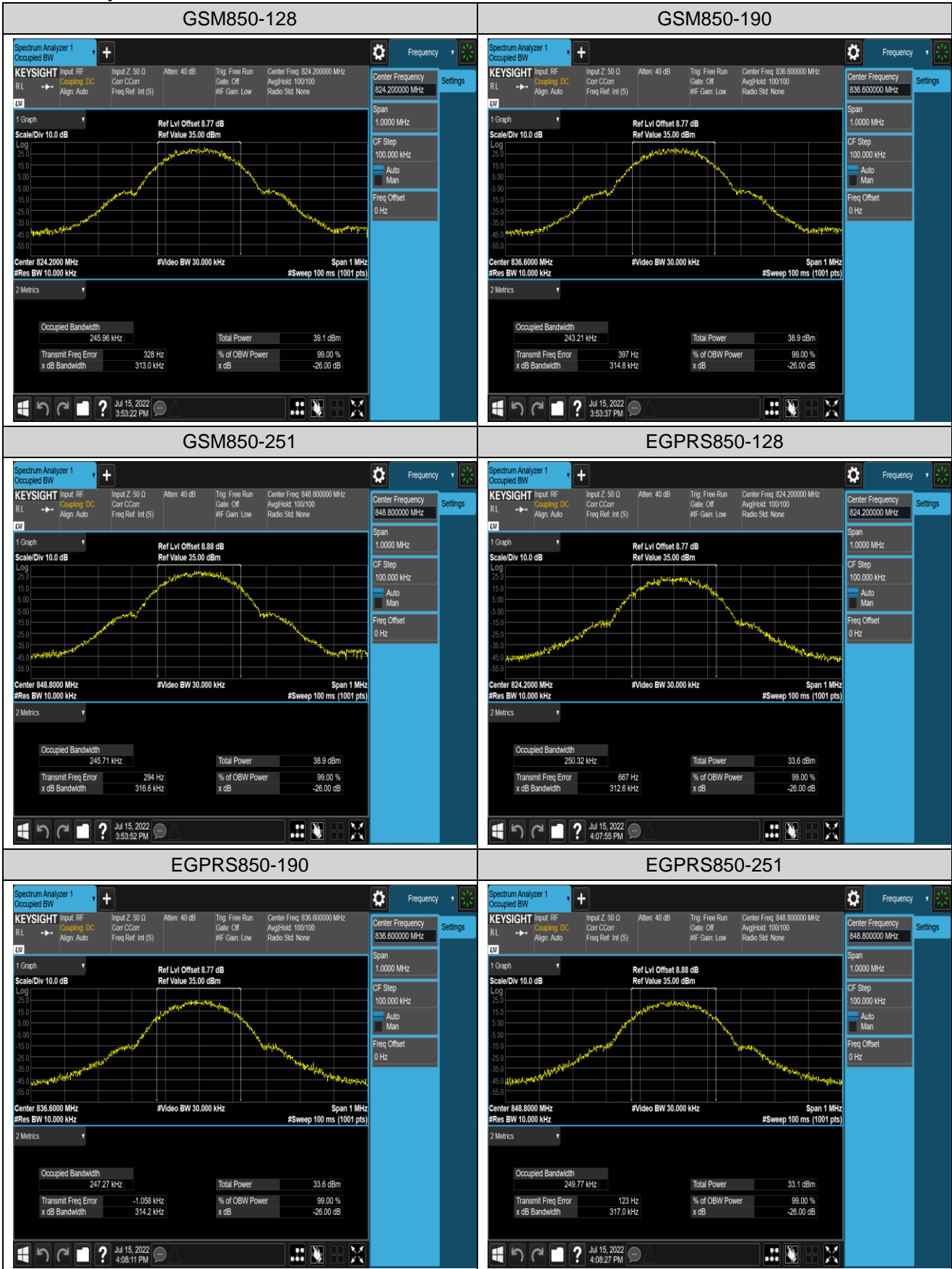


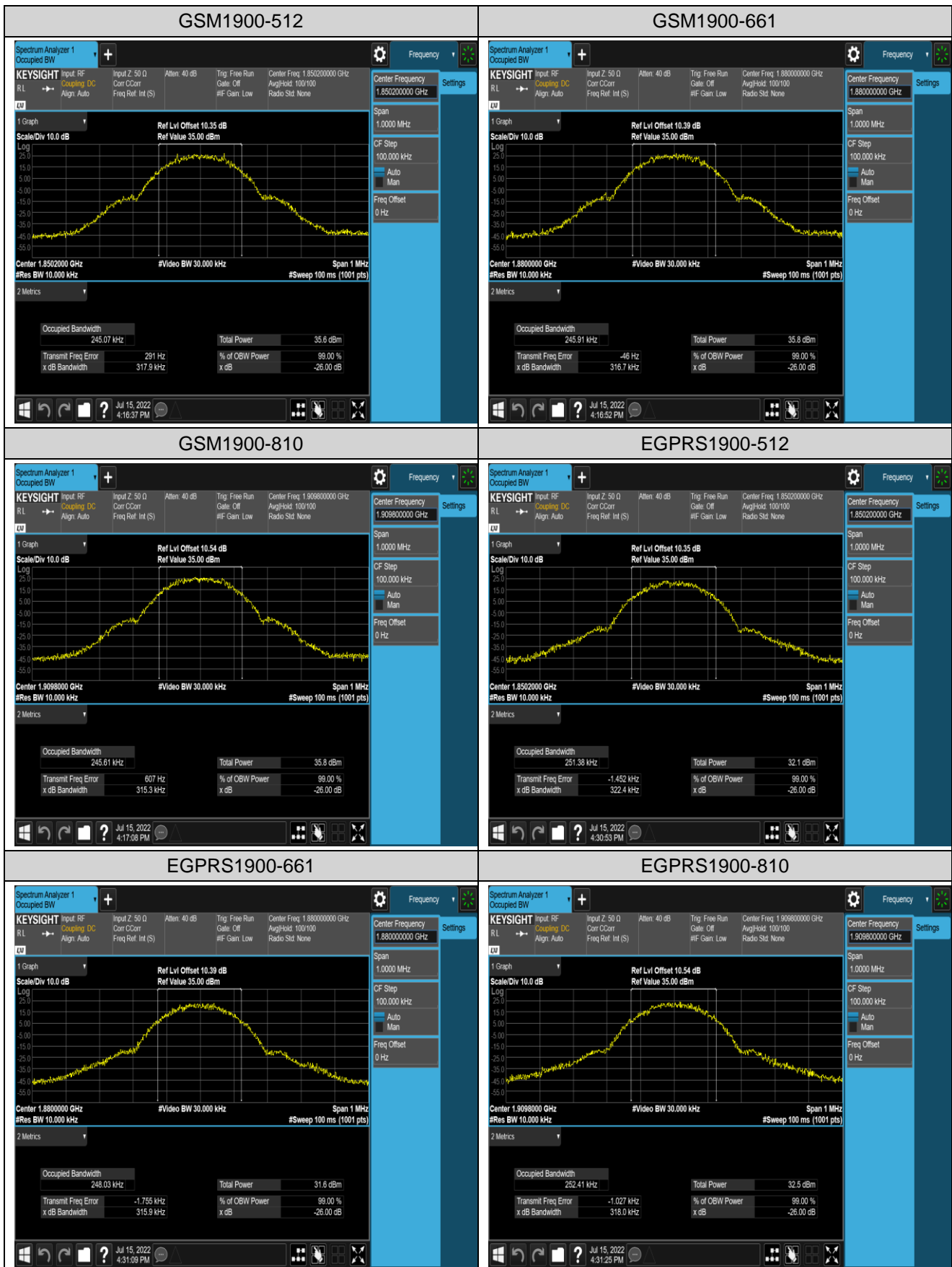
Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

Band	Channel	PCL	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
GSM850	128	5	0.24596	0.3130	---	PASS
GSM850	190	5	0.24321	0.3148	---	PASS
GSM850	251	5	0.24571	0.3166	---	PASS
EGPRS850	128	8	0.25032	0.3126	---	PASS
EGPRS850	190	8	0.24727	0.3142	---	PASS
EGPRS850	251	8	0.24977	0.3170	---	PASS
GSM1900	512	0	0.24507	0.3179	---	PASS
GSM1900	661	0	0.24591	0.3167	---	PASS
GSM1900	810	0	0.24561	0.3153	---	PASS
EGPRS1900	512	2	0.25138	0.3224	---	PASS
EGPRS1900	661	2	0.24803	0.3159	---	PASS
EGPRS1900	810	2	0.25241	0.3180	---	PASS

Test Graphs



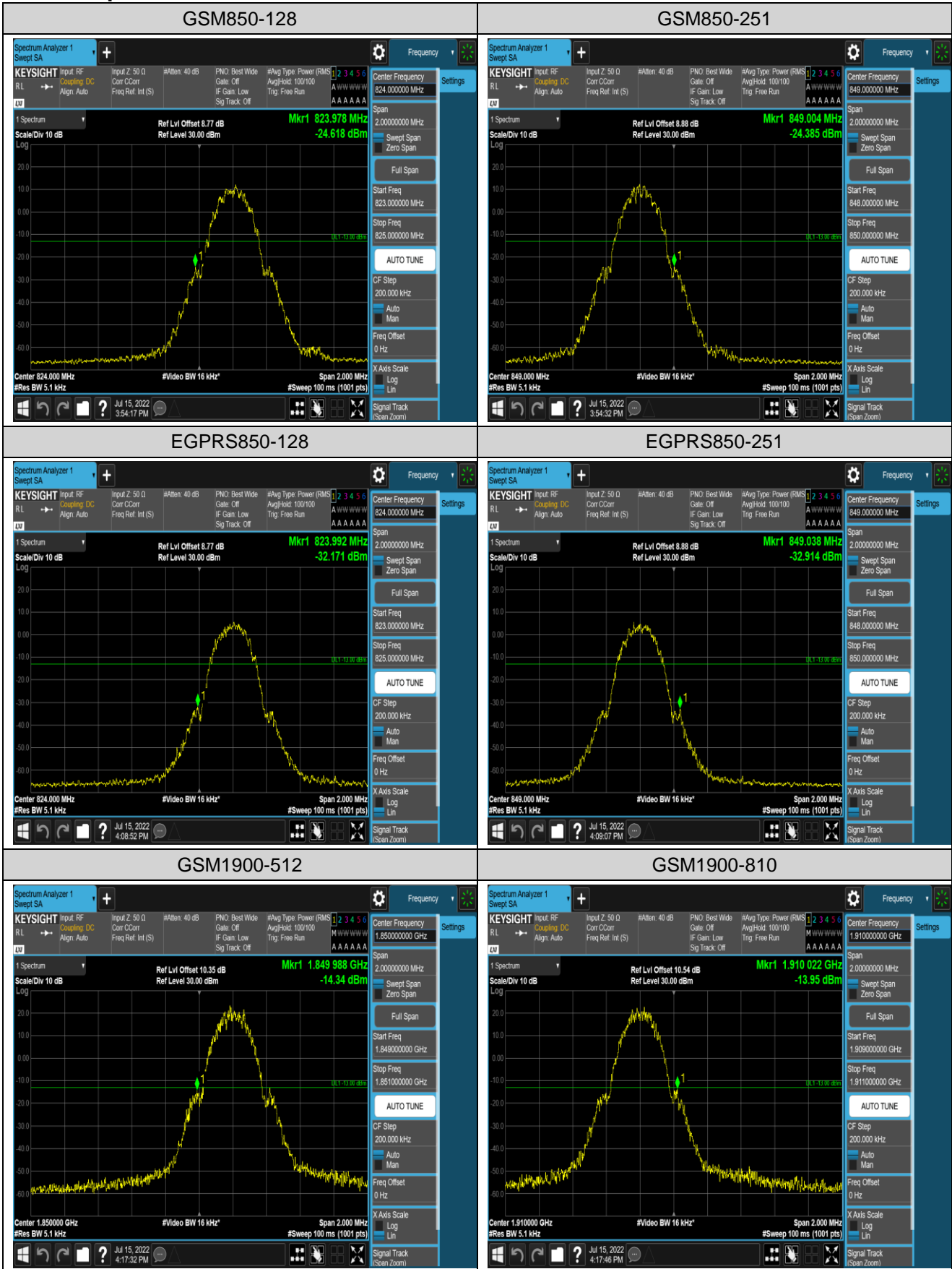


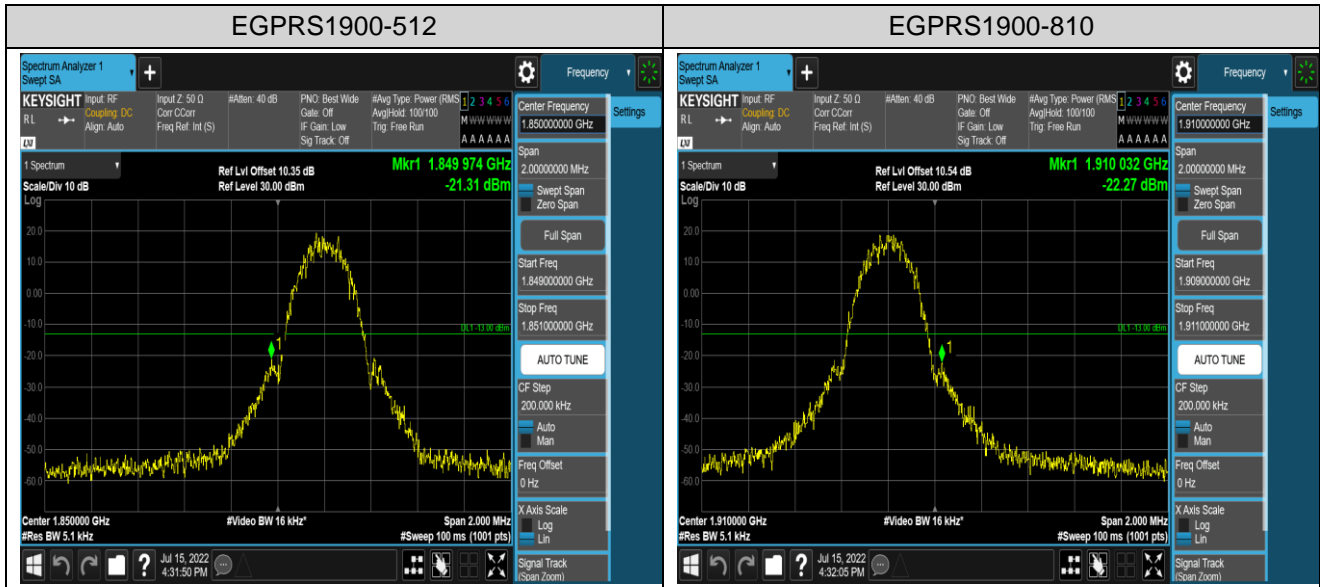
Appendix D: Band Edge

Test Result

Band	Channel	PCL	Freq (MHz)	Result (dBm)	Limit(dBm)	Verdict
GSM850	128	5	823.98	-24.62	-13	PASS
GSM850	251	5	849.00	-24.39	-13	PASS
EGPRS850	128	8	823.99	-32.17	-13	PASS
EGPRS850	251	8	849.04	-32.91	-13	PASS
GSM1900	512	0	1849.99	-14.34	-13	PASS
GSM1900	810	0	1910.02	-13.95	-13	PASS
EGPRS1900	512	2	1849.97	-21.31	-13	PASS
EGPRS1900	810	2	1910.03	-22.27	-13	PASS

Test Graphs





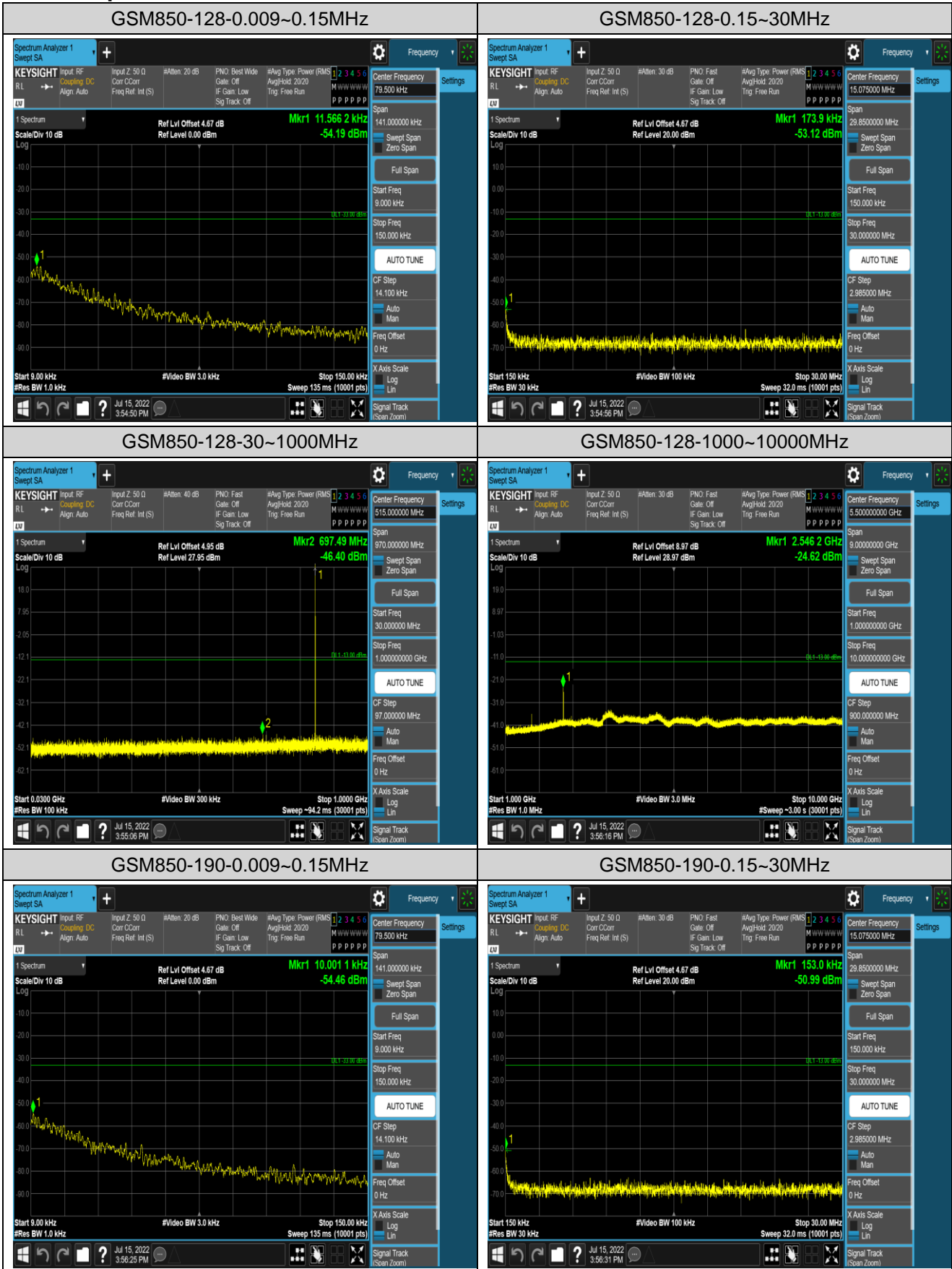
Appendix E: Conducted Spurious Emission

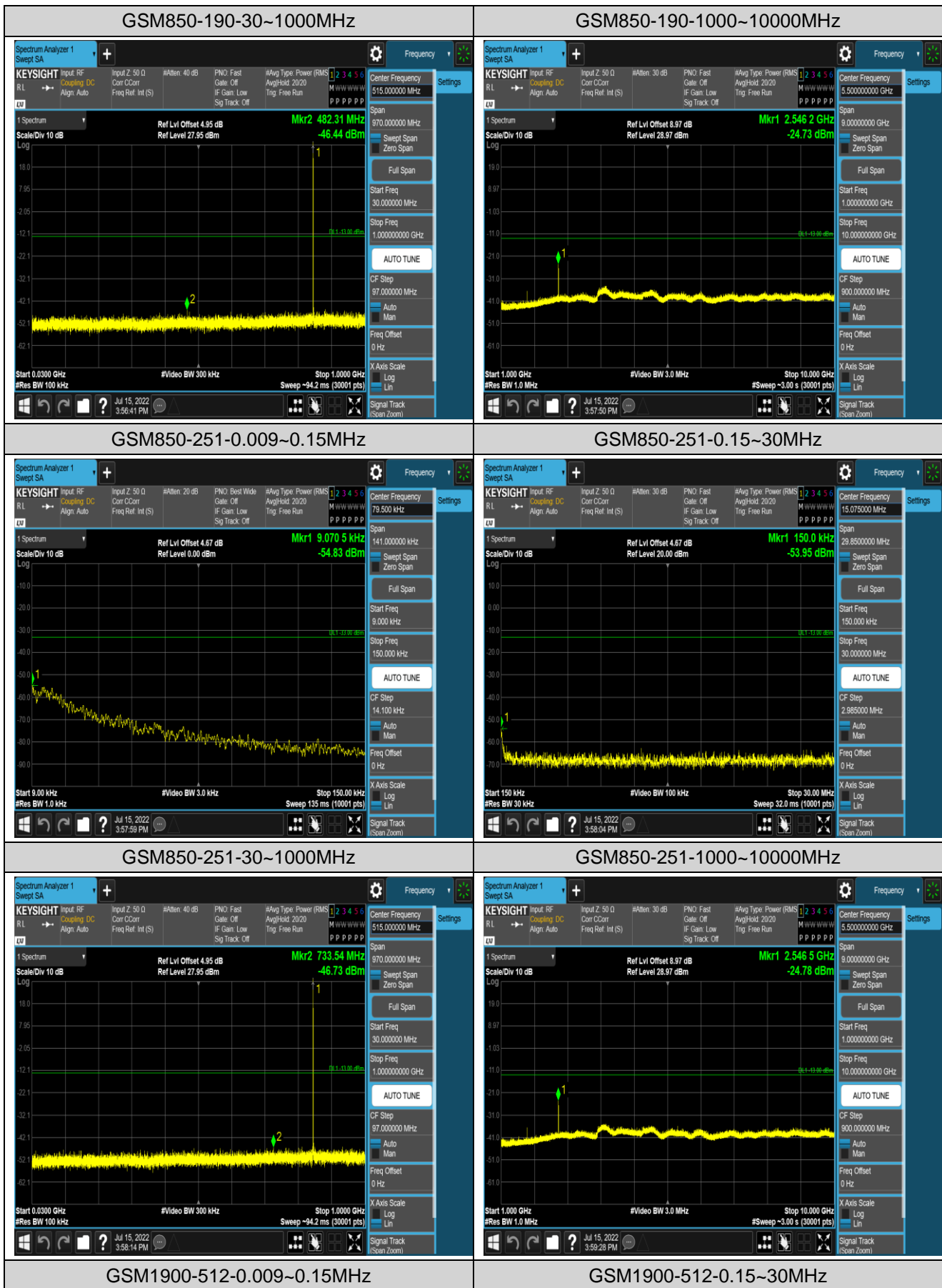
Test Result

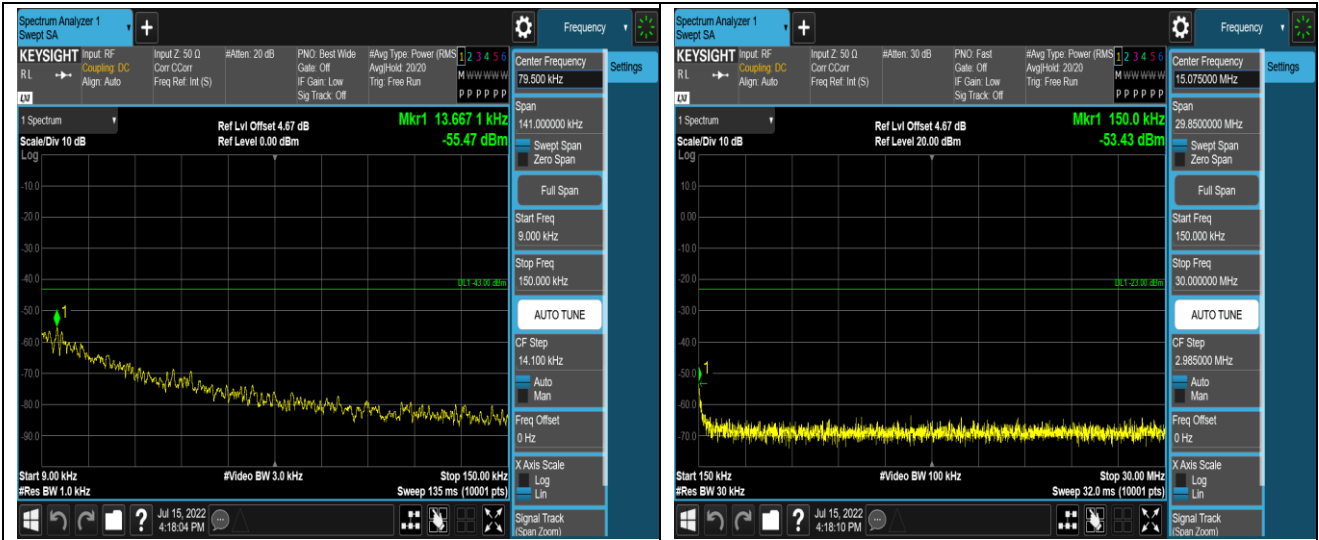
Band	Channel	PCL	Frequency Range(MHz)	Max.Freq. (MHz)	Result (dBm)	Limit (dBm)	Verdict
GSM850	128	5	0.009~0.15MHz	0.01	-54.19	-33	PASS
GSM850	128	5	0.15~30MHz	0.17	-53.12	-13	PASS
GSM850	128	5	30~1000MHz	697.49	-46.4	-13	PASS
GSM850	128	5	1000~10000MHz	2546.2	-24.62	-13	PASS
GSM850	190	5	0.009~0.15MHz	0.01	-54.46	-33	PASS
GSM850	190	5	0.15~30MHz	0.15	-51	-13	PASS
GSM850	190	5	30~1000MHz	482.31	-46.44	-13	PASS
GSM850	190	5	1000~10000MHz	2546.2	-24.73	-13	PASS
GSM850	251	5	0.009~0.15MHz	0.01	-54.83	-33	PASS
GSM850	251	5	0.15~30MHz	0.15	-53.95	-13	PASS
GSM850	251	5	30~1000MHz	733.54	-46.73	-13	PASS
GSM850	251	5	1000~10000MHz	2546.5	-24.78	-13	PASS
GSM1900	512	0	0.009~0.15MHz	0.01	-55.47	-43	PASS
GSM1900	512	0	0.15~30MHz	0.15	-53.44	-23	PASS
GSM1900	512	0	30~1000MHz	750.19	-47.15	-13	PASS
GSM1900	512	0	1000~18000MHz	3819.73	-32.27	-13	PASS
GSM1900	661	0	0.009~0.15MHz	0.01	-55.49	-43	PASS
GSM1900	661	0	0.15~30MHz	0.15	-50.7	-23	PASS
GSM1900	661	0	30~1000MHz	489.3	-46.97	-13	PASS
GSM1900	661	0	1000~18000MHz	3819.73	-31.85	-13	PASS
GSM1900	810	0	0.009~0.15MHz	0.02	-57.43	-43	PASS
GSM1900	810	0	0.15~30MHz	0.15	-53.06	-23	PASS
GSM1900	810	0	30~1000MHz	903	-46.49	-13	PASS
GSM1900	810	0	1000~18000MHz	3819.73	-32.16	-13	PASS

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

Test Graphs

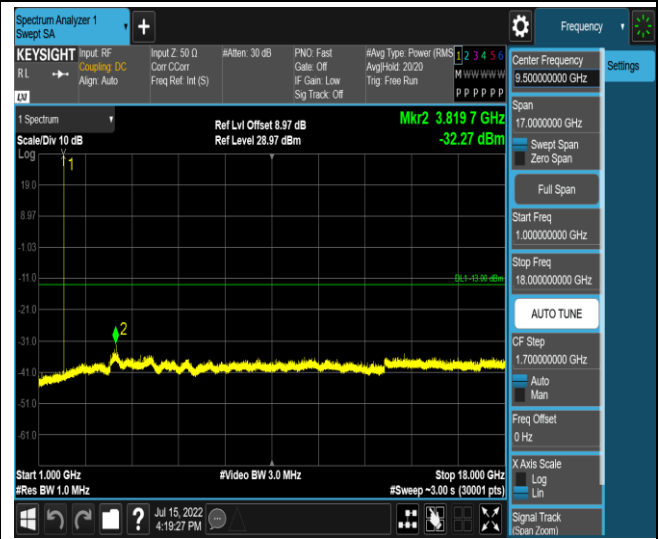
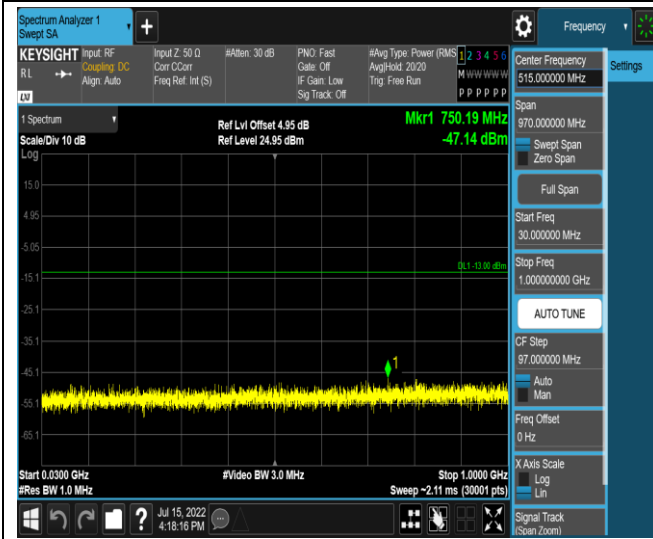






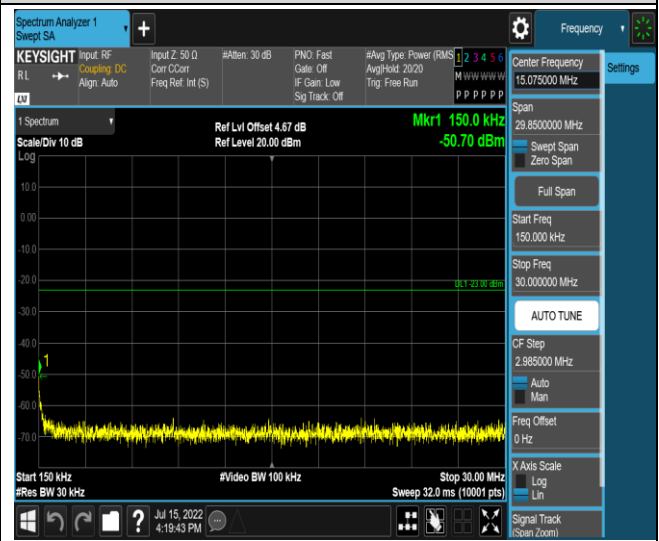
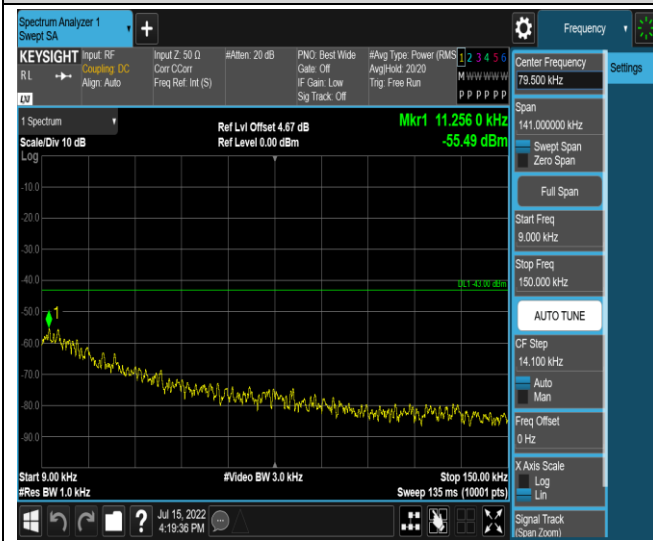
GSM1900-512-30~1000MHz

GSM1900-512-1000~18000MHz



GSM1900-661-0.009~0.15MHz

GSM1900-661-0.15~30MHz



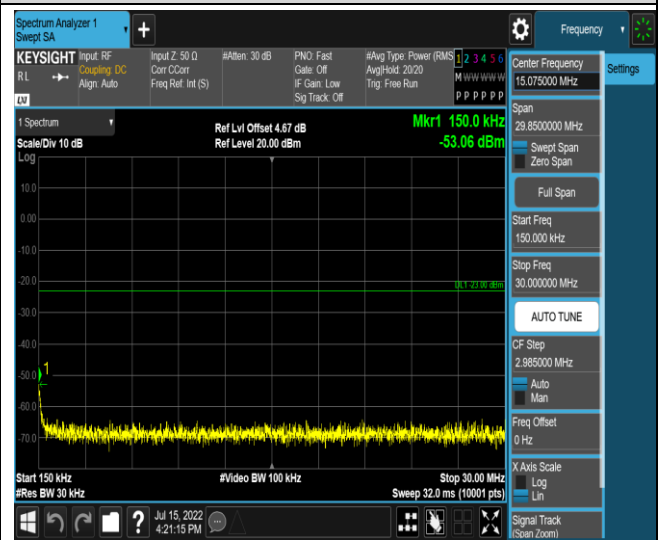
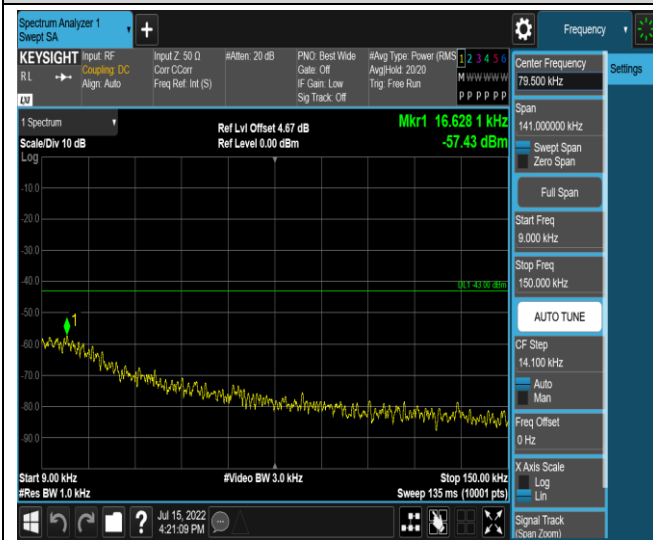
GSM1900-661-30~1000MHz

GSM1900-661-1000~18000MHz



GSM1900-810-0.009~0.15MHz

GSM1900-810-0.15~30MHz



GSM1900-810-30~1000MHz

GSM1900-810-1000~18000MHz



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		
3.87	-30	-7.30	-0.008726	±2.5	Pass
	-20	-4.26	-0.005092		
	-10	0.19	0.000227		
	0	-11.66	-0.013937		
	10	1.32	0.001578		
	20	-2.81	-0.003359		
	30	2.97	0.003550		
	40	-6.01	-0.007184		
	50	-11.40	-0.013627		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	-2.94	-0.003514	±2.5	Pass
	3.87	1.49	0.001781		
	4.45	-8.46	-0.010112		
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 (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.87	-30	-10.30	-0.012312	±2.5	Pass
	-20	-3.81	-0.004554		
	-10	0.42	0.000502		
	0	-4.07	-0.004865		
	10	8.01	0.009574		
	20	0.06	0.000072		
	30	0.13	0.000155		
	40	-3.39	-0.004052		
	50	-0.58	-0.000693		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	-6.26	-0.007483	±2.5	Pass
	3.87	-6.13	-0.007327		
	4.45	-4.36	-0.005212		
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		
3.87	-30	53.66	0.028543	Within authorized band for PCS 1900	Pass
	-20	33.22	0.017670		
	-10	26.99	0.014356		
	0	20.37	0.010835		
	10	54.72	0.029106		
	20	30.74	0.016351		
	30	40.65	0.021622		
	40	27.86	0.014819		
	50	48.75	0.025931		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	23.73	0.012622	Within authorized band for PCS 1900	Pass
	3.87	31.12	0.016553		
	4.45	46.20	0.024574		
<i>Remark: All channel had been tested, but only the worst case data displayed in this report.</i>					

Reference Frequency: EGPRS1900 Middle channel=661 Frequency=1880MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.87	-30	23.54	0.012521	Within authorized band for PCS 1900	Pass
	-20	30.09	0.016005		
	-10	27.12	0.014426		
	0	54.72	0.029106		
	10	54.98	0.029245		
	20	64.44	0.034277		
	30	23.12	0.012298		
	40	32.00	0.017021		
	50	0.10	0.000053		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	24.99	0.013293	Within authorized band for PCS 1900	Pass
	3.87	25.34	0.013479		
	4.45	24.54	0.013053		
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

