

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	33.46	27.51	38.45	PASS
GSM850	190	5	33.31	27.36	38.45	PASS
GSM850	251	5	33.23	27.28	38.45	PASS
GSM1900	512	0	29.79	29.89	33.00	PASS
GSM1900	661	0	29.56	29.66	33.00	PASS
GSM1900	810	0	29.41	29.51	33.00	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
GPRS850	128	5	1	33.38	27.43	38.45	PASS
GPRS850	128	5	2	32.39	26.44	38.45	PASS
GPRS850	128	5	3	30.39	24.44	38.45	PASS
GPRS850	128	5	4	29.25	23.30	38.45	PASS
GPRS850	190	5	1	33.15	27.20	38.45	PASS
GPRS850	190	5	2	32.23	26.28	38.45	PASS
GPRS850	190	5	3	30.21	24.26	38.45	PASS
GPRS850	190	5	4	29.09	23.14	38.45	PASS
GPRS850	251	5	1	33.06	27.11	38.45	PASS
GPRS850	251	5	2	32.14	26.19	38.45	PASS
GPRS850	251	5	3	30.09	24.14	38.45	PASS
GPRS850	251	5	4	28.99	23.04	38.45	PASS
GPRS1900	512	0	1	29.75	29.85	33.00	PASS
GPRS1900	512	0	2	28.76	28.86	33.00	PASS
GPRS1900	512	0	3	26.70	26.80	33.00	PASS
GPRS1900	512	0	4	25.54	25.64	33.00	PASS
GPRS1900	661	0	1	29.42	29.52	33.00	PASS
GPRS1900	661	0	2	28.52	28.62	33.00	PASS
GPRS1900	661	0	3	26.51	26.61	33.00	PASS
GPRS1900	661	0	4	25.40	25.50	33.00	PASS
GPRS1900	810	0	1	29.34	29.44	33.00	PASS
GPRS1900	810	0	2	28.46	28.56	33.00	PASS
GPRS1900	810	0	3	26.50	26.60	33.00	PASS
GPRS1900	810	0	4	25.42	25.52	33.00	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
EGPRS850	128	8	1	27.56	21.61	38.45	PASS
EGPRS850	128	8	2	26.39	20.44	38.45	PASS
EGPRS850	128	8	3	24.14	18.19	38.45	PASS
EGPRS850	128	8	4	22.85	16.90	38.45	PASS
EGPRS850	190	8	1	27.39	21.44	38.45	PASS
EGPRS850	190	8	2	26.49	20.54	38.45	PASS
EGPRS850	190	8	3	24.23	18.28	38.45	PASS
EGPRS850	190	8	4	22.98	17.03	38.45	PASS
EGPRS850	251	8	1	27.48	21.53	38.45	PASS
EGPRS850	251	8	2	26.51	20.56	38.45	PASS
EGPRS850	251	8	3	24.29	18.34	38.45	PASS
EGPRS850	251	8	4	23.02	17.07	38.45	PASS
EGPRS1900	512	2	1	25.40	25.50	33.00	PASS
EGPRS1900	512	2	2	24.48	24.58	33.00	PASS
EGPRS1900	512	2	3	22.59	22.69	33.00	PASS
EGPRS1900	512	2	4	21.62	21.72	33.00	PASS
EGPRS1900	661	2	1	25.66	25.76	33.00	PASS
EGPRS1900	661	2	2	24.87	24.97	33.00	PASS
EGPRS1900	661	2	3	22.99	23.09	33.00	PASS
EGPRS1900	661	2	4	22.06	22.16	33.00	PASS
EGPRS1900	810	2	1	26.13	26.23	33.00	PASS
EGPRS1900	810	2	2	25.31	25.41	33.00	PASS
EGPRS1900	810	2	3	23.45	23.55	33.00	PASS
EGPRS1900	810	2	4	22.43	22.53	33.00	PASS

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

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

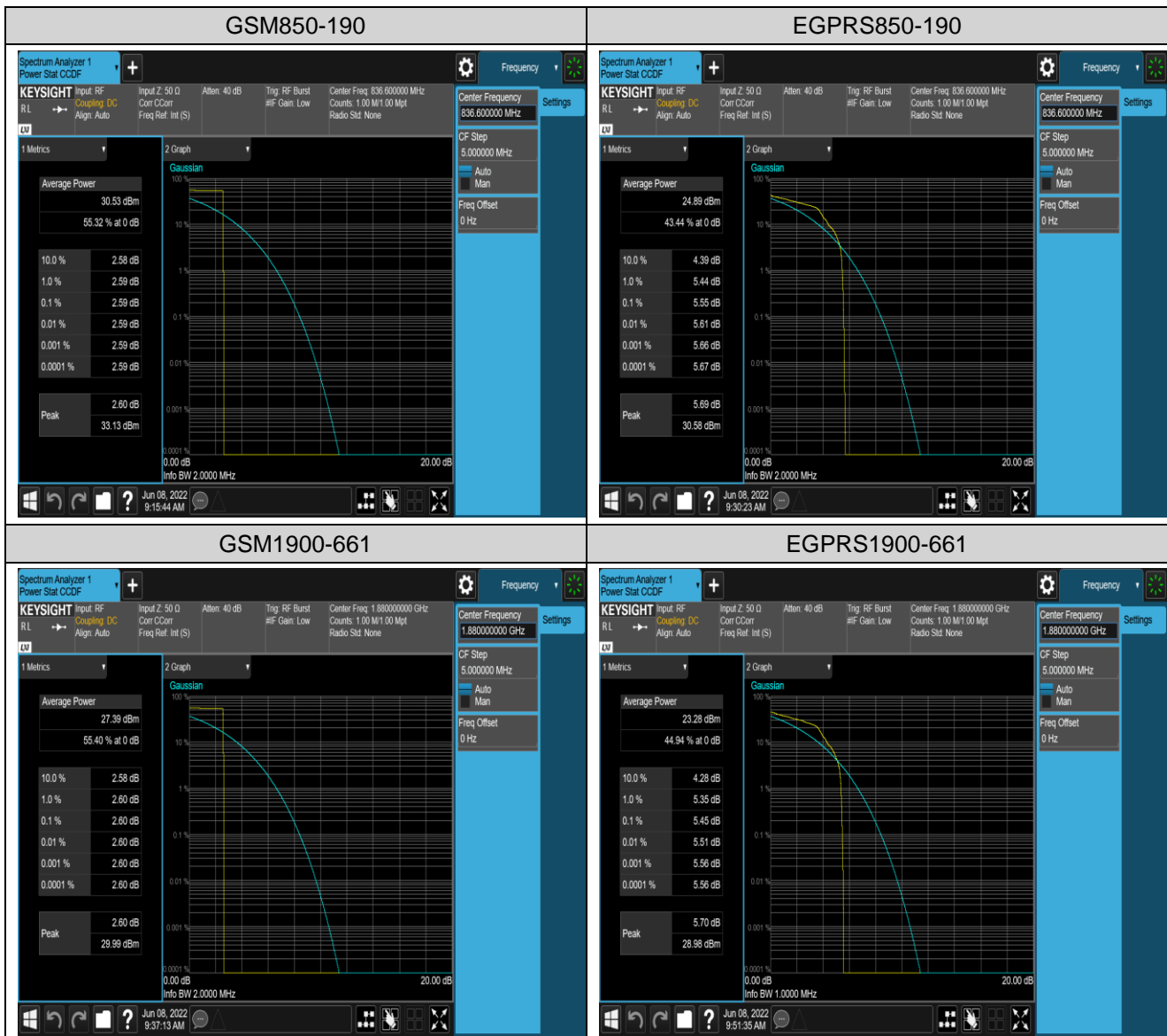
Appendix B: Peak-to-Average Ratio(CCDF)

Test Result

Band	Channel	PCL	Result(dB)	Limit(dB)	Verdict
GSM850	190	5	2.59	13	PASS
EGPRS850	190	8	5.55	13	PASS
GSM1900	661	0	2.6	13	PASS
EGPRS1900	661	2	5.45	13	PASS

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

Test Graphs

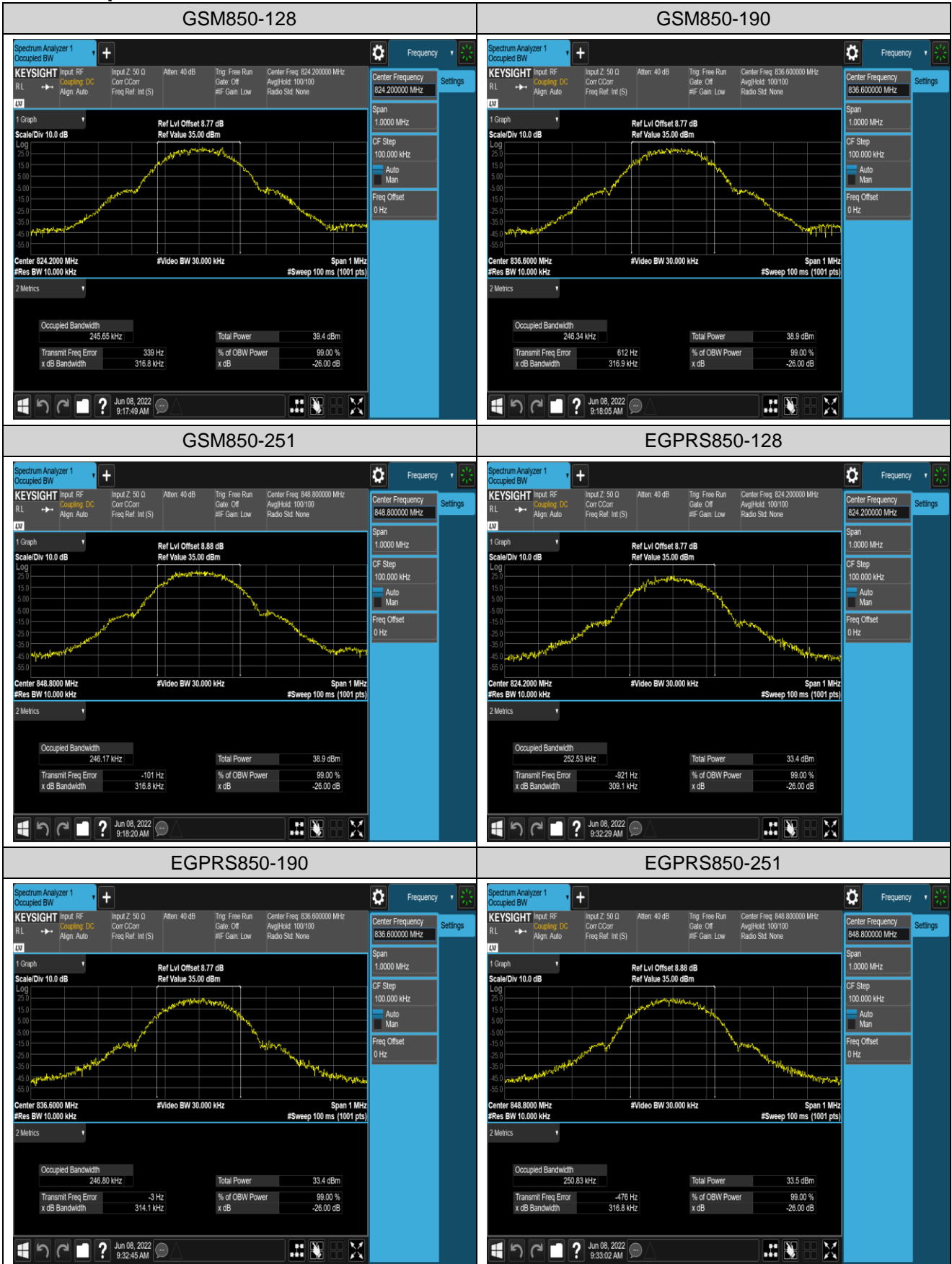


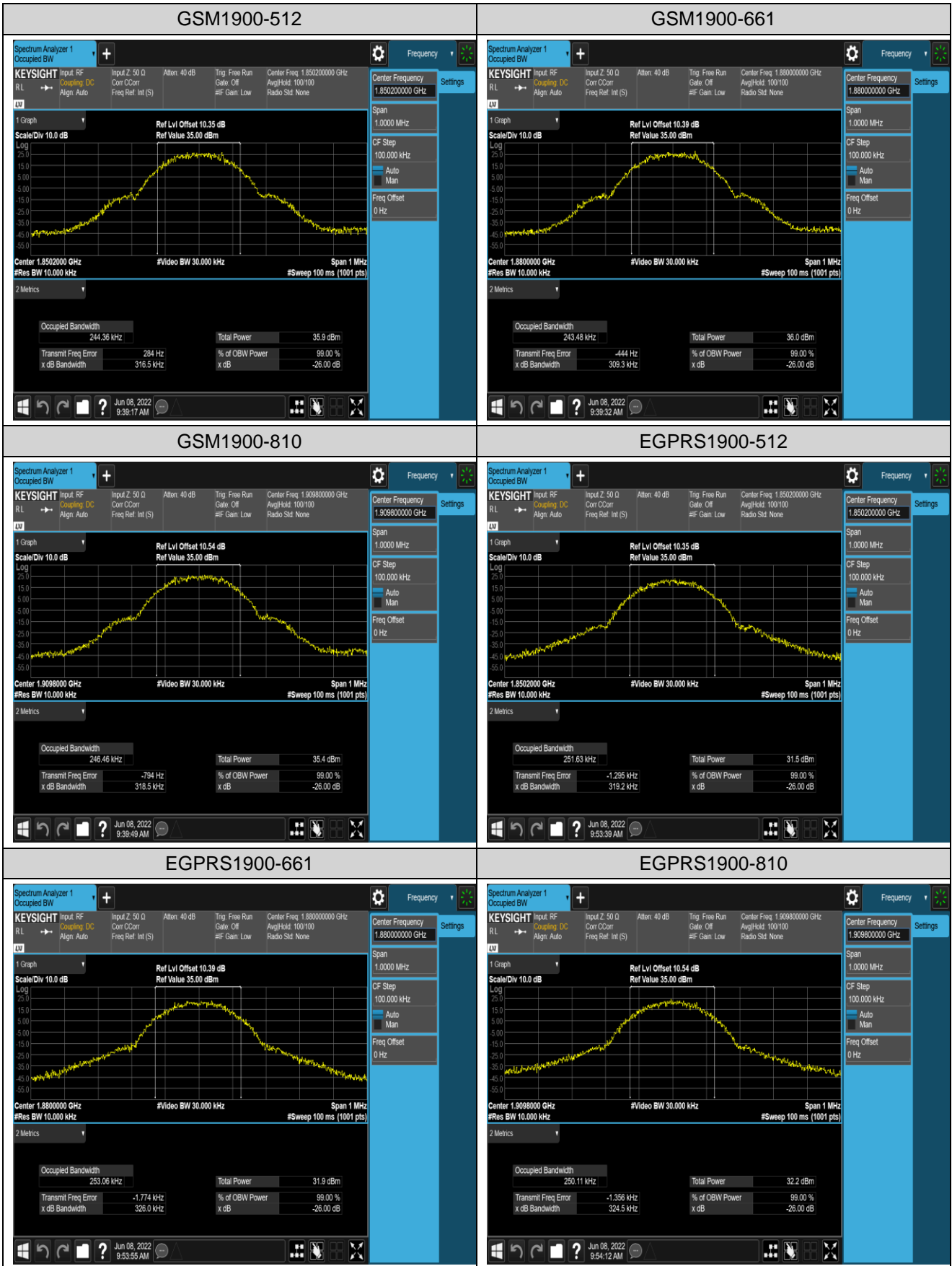
Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

Band	Channel	PCL	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
GSM850	128	5	0.24565	0.3168	---	PASS
GSM850	190	5	0.24634	0.3169	---	PASS
GSM850	251	5	0.24617	0.3168	---	PASS
EGPRS850	128	8	0.25253	0.3091	---	PASS
EGPRS850	190	8	0.24680	0.3141	---	PASS
EGPRS850	251	8	0.25083	0.3168	---	PASS
GSM1900	512	0	0.24436	0.3165	---	PASS
GSM1900	661	0	0.24348	0.3093	---	PASS
GSM1900	810	0	0.24646	0.3185	---	PASS
EGPRS1900	512	2	0.25163	0.3192	---	PASS
EGPRS1900	661	2	0.25306	0.3260	---	PASS
EGPRS1900	810	2	0.25011	0.3245	---	PASS

Test Graphs



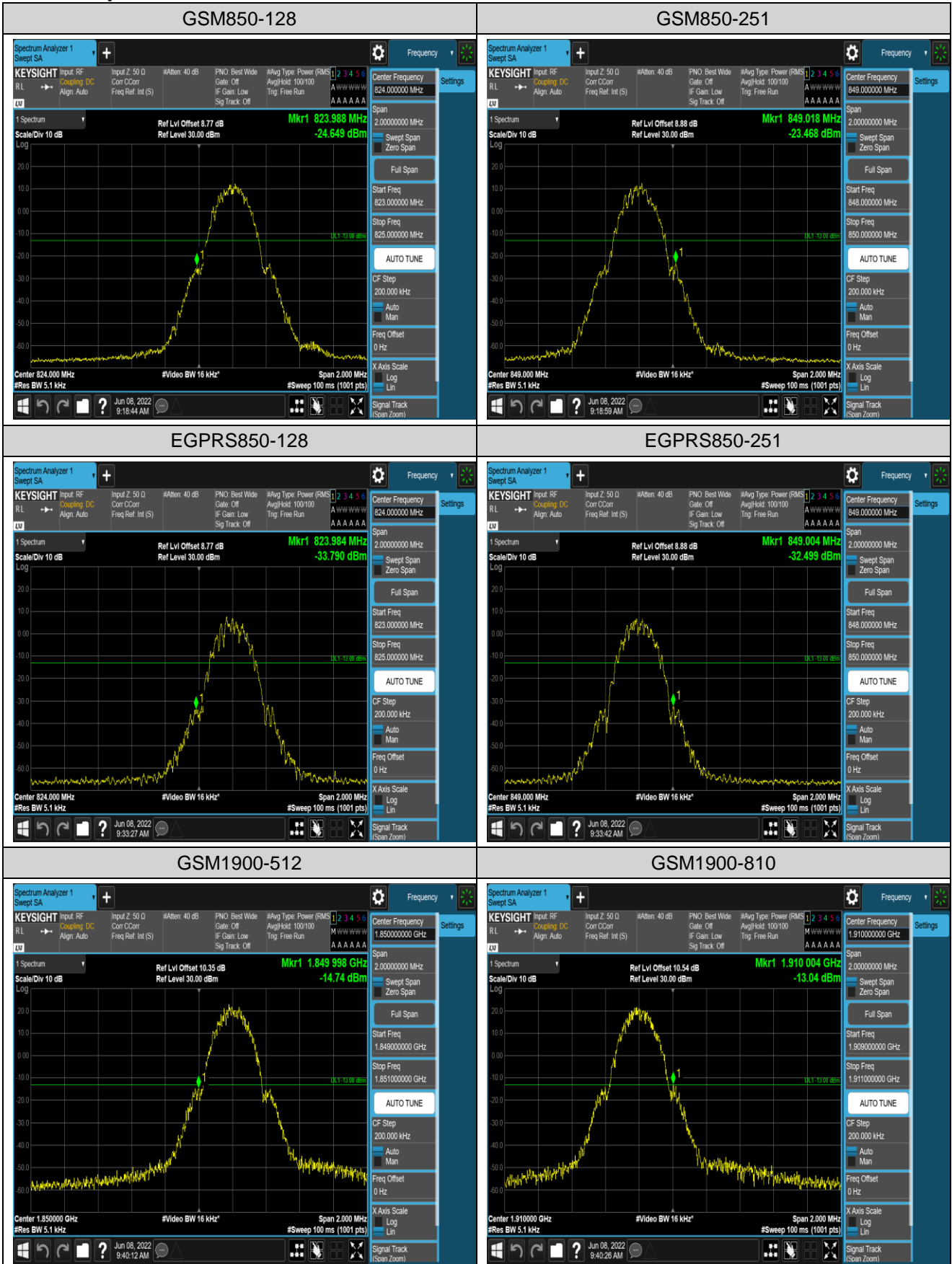


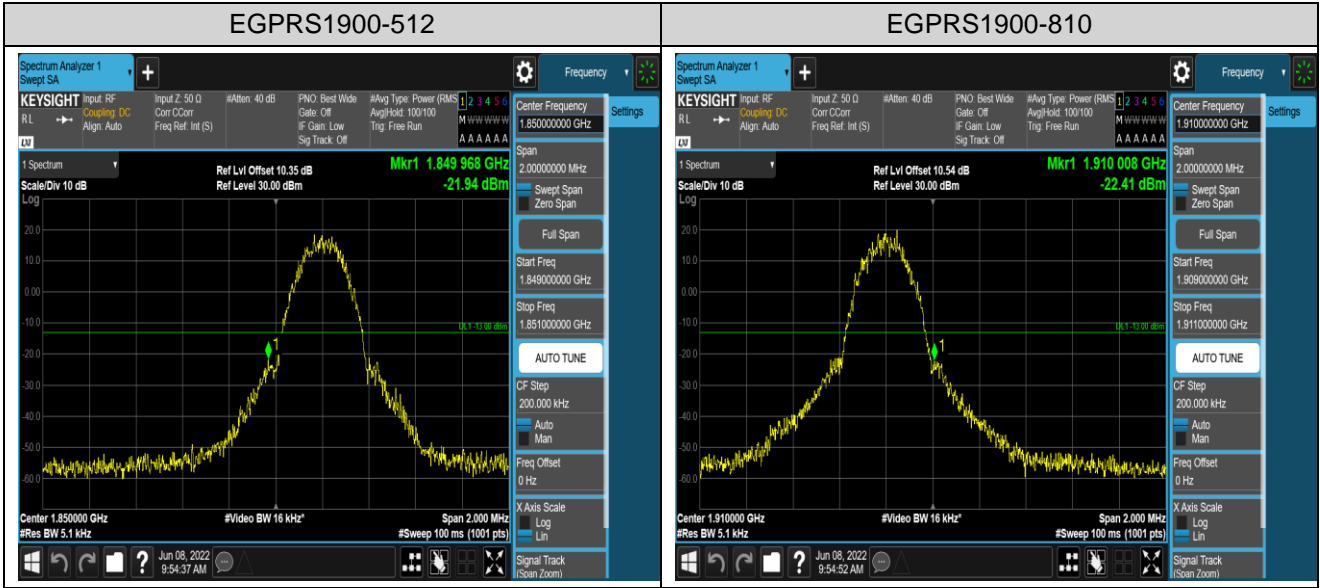
Appendix D: Band Edge

Test Result

Band	Channel	PCL	Freq (MHz)	Result (dBm)	Limit(dBm)	Verdict
GSM850	128	5	823.99	-24.65	-13	PASS
GSM850	251	5	849.02	-23.47	-13	PASS
EGPRS850	128	8	823.98	-33.79	-13	PASS
EGPRS850	251	8	849.00	-32.50	-13	PASS
GSM1900	512	0	1850.00	-14.74	-13	PASS
GSM1900	810	0	1910.00	-13.04	-13	PASS
EGPRS1900	512	2	1849.97	-21.94	-13	PASS
EGPRS1900	810	2	1910.01	-22.41	-13	PASS

Test Graphs





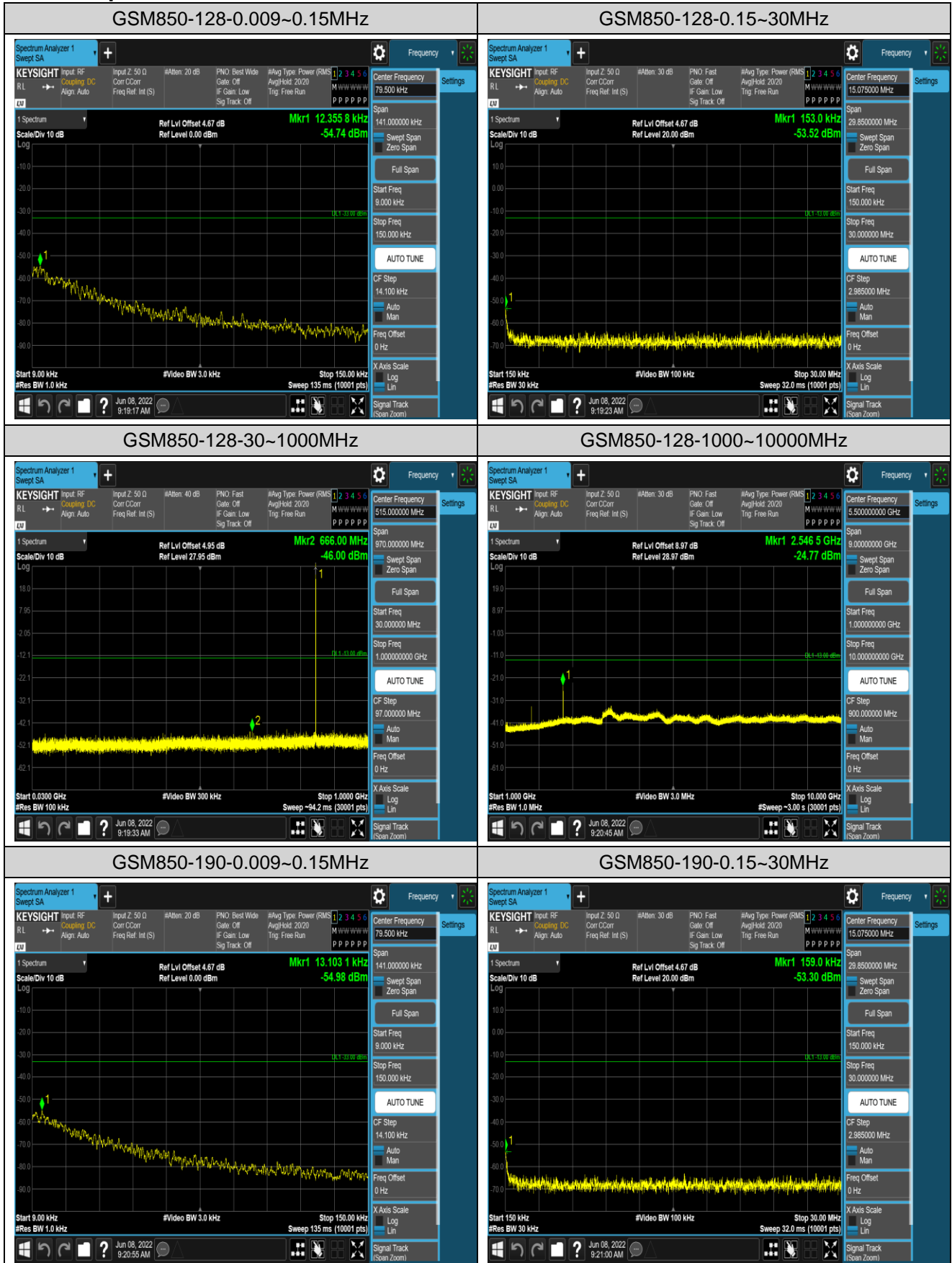
Appendix E: Conducted Spurious Emission

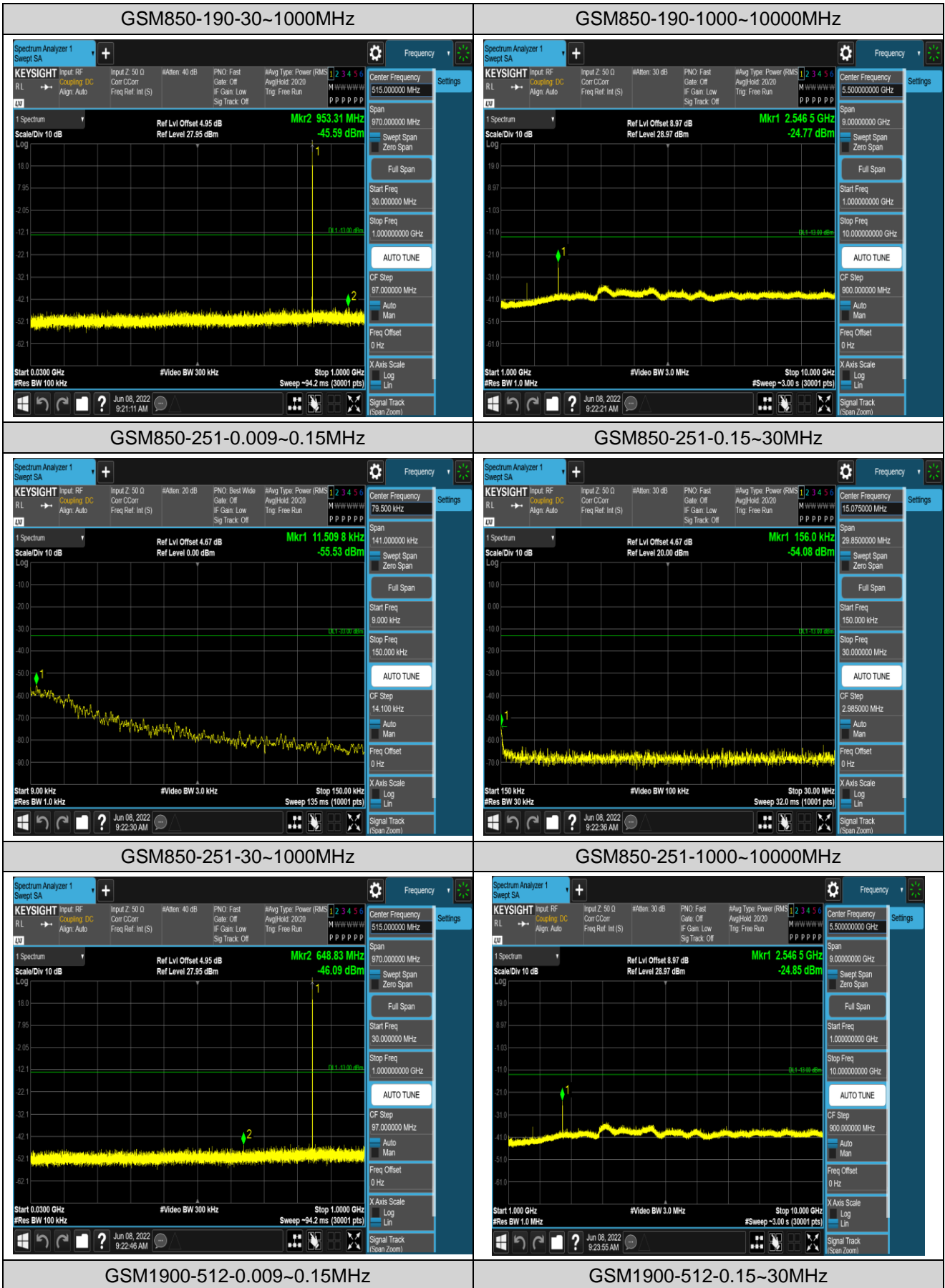
Test Result

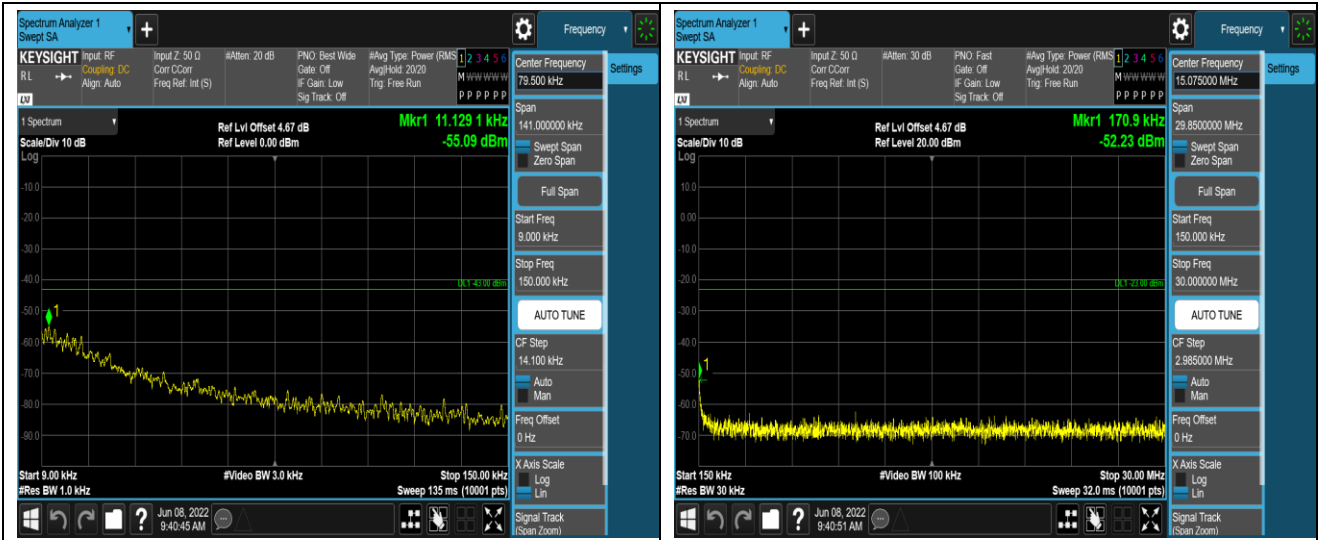
Band	Channel	PCL	Frequency Range(MHz)	Max.Freq. (MHz)	Result (dBm)	Limit (dBm)	Verdict
GSM850	128	5	0.009~0.15MHz	0.01	-54.74	-33	PASS
GSM850	128	5	0.15~30MHz	0.15	-53.53	-13	PASS
GSM850	128	5	30~1000MHz	666	-46	-13	PASS
GSM850	128	5	1000~10000MHz	2546.5	-24.77	-13	PASS
GSM850	190	5	0.009~0.15MHz	0.01	-54.98	-33	PASS
GSM850	190	5	0.15~30MHz	0.16	-53.3	-13	PASS
GSM850	190	5	30~1000MHz	953.31	-45.6	-13	PASS
GSM850	190	5	1000~10000MHz	2546.5	-24.77	-13	PASS
GSM850	251	5	0.009~0.15MHz	0.01	-55.53	-33	PASS
GSM850	251	5	0.15~30MHz	0.16	-54.08	-13	PASS
GSM850	251	5	30~1000MHz	648.83	-46.09	-13	PASS
GSM850	251	5	1000~10000MHz	2546.5	-24.85	-13	PASS
GSM1900	512	0	0.009~0.15MHz	0.01	-55.09	-43	PASS
GSM1900	512	0	0.15~30MHz	0.17	-52.23	-23	PASS
GSM1900	512	0	30~1000MHz	951.76	-46.89	-13	PASS
GSM1900	512	0	1000~18000MHz	3832.77	-34.36	-13	PASS
GSM1900	661	0	0.009~0.15MHz	0.01	-57.36	-43	PASS
GSM1900	661	0	0.15~30MHz	0.15	-54.04	-23	PASS
GSM1900	661	0	30~1000MHz	825.46	-46.56	-13	PASS
GSM1900	661	0	1000~18000MHz	3819.73	-32.88	-13	PASS
GSM1900	810	0	0.009~0.15MHz	0.01	-56.65	-43	PASS
GSM1900	810	0	0.15~30MHz	0.15	-52.9	-23	PASS
GSM1900	810	0	30~1000MHz	558.84	-47.27	-13	PASS
GSM1900	810	0	1000~18000MHz	3819.73	-33.35	-13	PASS

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

Test Graphs

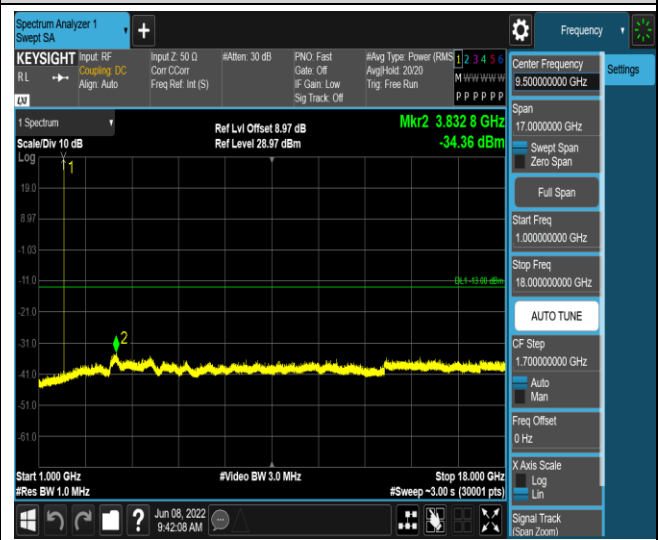






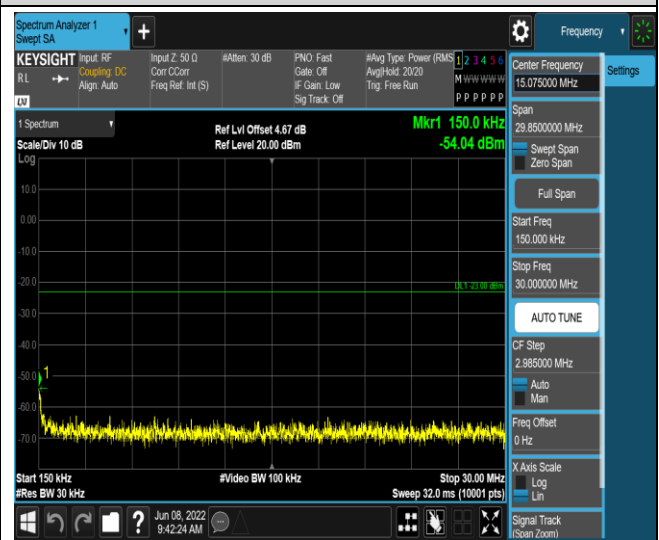
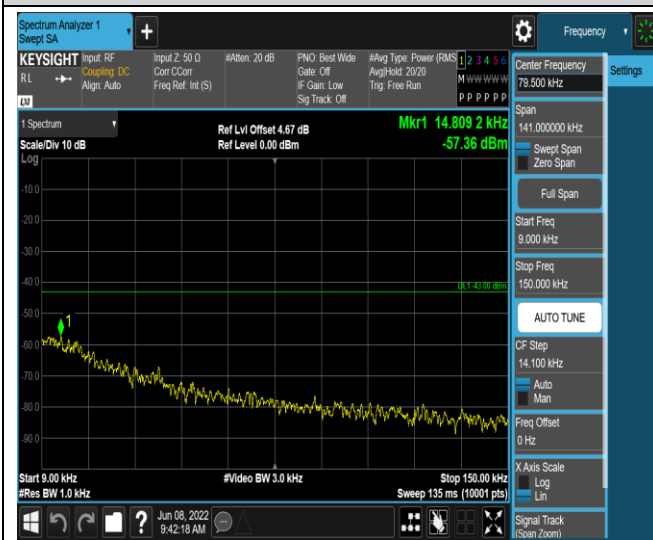
GSM1900-512-30~1000MHz

GSM1900-512-1000~18000MHz



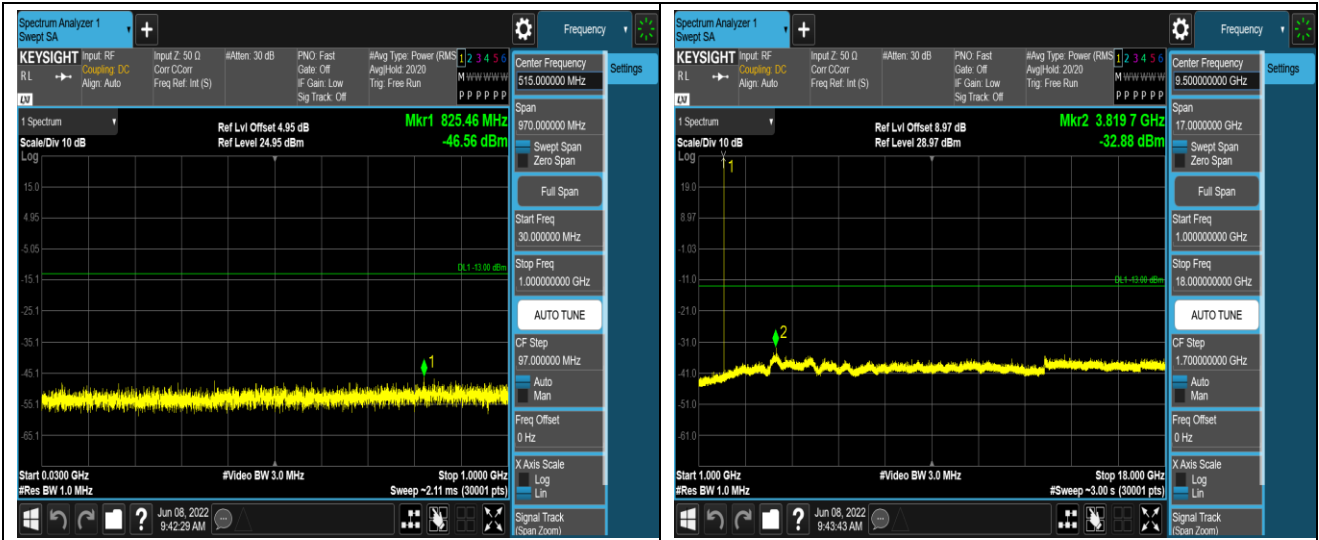
GSM1900-661-0.009~0.15MHz

GSM1900-661-0.15~30MHz



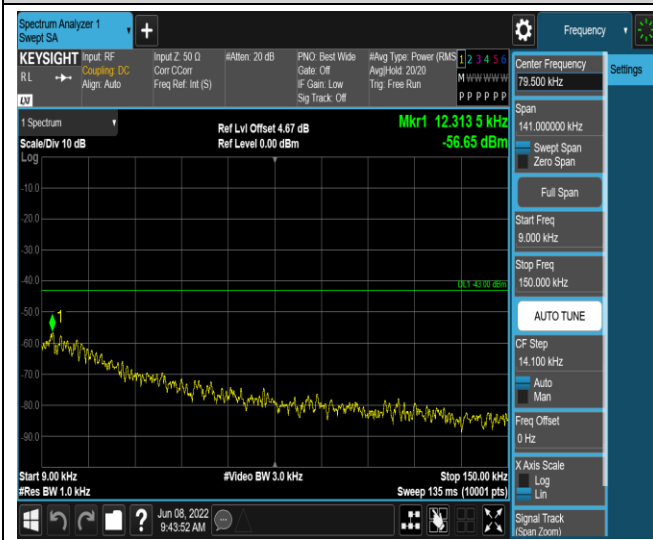
GSM1900-661-30~1000MHz

GSM1900-661-1000~18000MHz

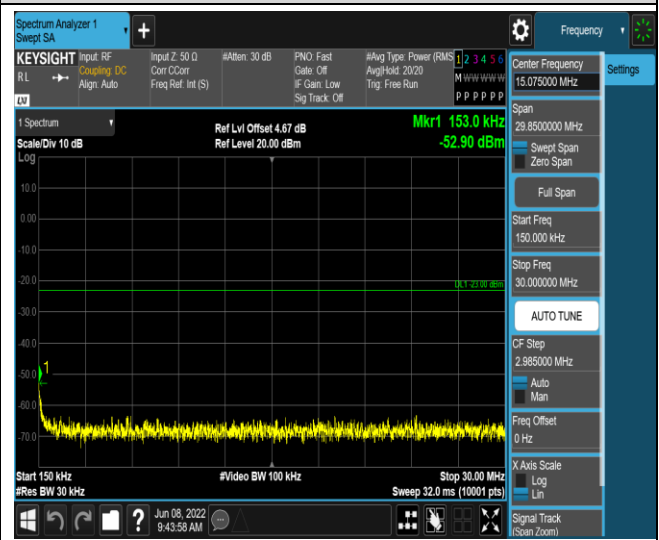


GSM1900-810-0.009~0.15MHz

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		
3.89	-30	-14.30	-0.017093	±2.5	Pass
	-20	-12.98	-0.015515		
	-10	-10.91	-0.013041		
	0	-11.01	-0.013160		
	10	-9.20	-0.010997		
	20	-10.27	-0.012276		
	30	-12.59	-0.015049		
	40	-9.33	-0.011152		
	50	-9.30	-0.011116		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	-14.01	-0.016746	±2.5	Pass
	3.89	-2.94	-0.003514		
	4.48	-15.95	-0.019065		
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		
3.89	-30	-4.23	-0.005056	±2.5	Pass
	-20	0.36	0.000430		
	-10	6.13	0.007327		
	0	1.61	0.001924		
	10	6.33	0.007566		
	20	-4.36	-0.005212		
	30	4.26	0.005092		
	40	3.29	0.003933		
	50	1.10	0.001315		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	-4.42	-0.005283	±2.5	Pass
	3.89	-6.42	-0.007674		
	4.48	-8.46	-0.010112		
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		
3.89	-30	11.40	0.006064	Within authorized band for PCS 1900	Pass
	-20	5.94	0.003160		
	-10	14.17	0.007537		
	0	9.59	0.005101		
	10	5.71	0.003037		
	20	19.37	0.010303		
	30	18.85	0.010027		
	40	9.46	0.005032		
	50	17.50	0.009309		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	16.92	0.009000	Within authorized band for PCS 1900	Pass
	3.89	16.69	0.008878		
	4.48	11.69	0.006218		
<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		
3.89	-30	16.01	0.008516	Within authorized band for PCS 1900	Pass
	-20	26.89	0.014303		
	-10	53.05	0.028218		
	0	45.17	0.024027		
	10	36.32	0.019319		
	20	52.66	0.028011		
	30	36.84	0.019596		
	40	27.64	0.014702		
	50	36.03	0.019165		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	24.96	0.013277	Within authorized band for PCS 1900	Pass
	3.89	33.42	0.017777		
	4.48	18.69	0.009941		
<i>Remark: All channel had been tested, but only the worst case data displayed in this report.</i>					

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

