

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	32.69	31.54	38.5	PASS
GSM850	190	5	33.04	31.89	38.5	PASS
GSM850	251	5	32.86	31.71	38.5	PASS
GSM1900	512	0	29.47	30.47	33	PASS
GSM1900	661	0	29.69	29.69	33	PASS
GSM1900	810	0	29.81	29.81	33	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
GPRS850	128	5	1	32.84	31.69	38.5	PASS
GPRS850	128	5	2	32.17	31.02	38.5	PASS
GPRS850	128	5	3	30.41	29.26	38.5	PASS
GPRS850	128	5	4	29.14	27.99	38.5	PASS
GPRS850	190	5	1	33.02	31.87	38.5	PASS
GPRS850	190	5	2	32.47	31.32	38.5	PASS
GPRS850	190	5	3	30.78	29.63	38.5	PASS
GPRS850	190	5	4	29.57	28.42	38.5	PASS
GPRS850	251	5	1	32.81	31.66	38.5	PASS
GPRS850	251	5	2	32.22	31.07	38.5	PASS
GPRS850	251	5	3	30.51	29.36	38.5	PASS
GPRS850	251	5	4	29.26	28.11	38.5	PASS
GPRS1900	512	0	1	29.39	30.39	33	PASS
GPRS1900	512	0	2	28.75	29.75	33	PASS
GPRS1900	512	0	3	27.17	28.17	33	PASS
GPRS1900	512	0	4	25.91	26.91	33	PASS
GPRS1900	661	0	1	29.47	29.47	33	PASS
GPRS1900	661	0	2	28.99	28.99	33	PASS
GPRS1900	661	0	3	27.36	27.36	33	PASS
GPRS1900	661	0	4	26.11	26.11	33	PASS
GPRS1900	810	0	1	29.52	29.52	33	PASS
GPRS1900	810	0	2	29.04	29.04	33	PASS
GPRS1900	810	0	3	27.52	27.52	33	PASS
GPRS1900	810	0	4	26.24	26.24	33	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
EGPRS850	128	8	1	28.03	26.88	38.5	PASS
EGPRS850	128	8	2	26.76	25.61	38.5	PASS
EGPRS850	128	8	3	24.52	23.37	38.5	PASS
EGPRS850	128	8	4	23.35	22.2	38.5	PASS
EGPRS850	190	8	1	28.09	26.94	38.5	PASS
EGPRS850	190	8	2	26.95	25.8	38.5	PASS
EGPRS850	190	8	3	24.67	23.52	38.5	PASS
EGPRS850	190	8	4	23.52	22.37	38.5	PASS
EGPRS850	251	8	1	28.13	26.98	38.5	PASS
EGPRS850	251	8	2	26.96	25.81	38.5	PASS
EGPRS850	251	8	3	24.70	23.55	38.5	PASS
EGPRS850	251	8	4	23.49	22.34	38.5	PASS
EGPRS1900	512	2	1	27.14	28.14	33	PASS
EGPRS1900	512	2	2	25.81	26.81	33	PASS
EGPRS1900	512	2	3	23.55	24.55	33	PASS
EGPRS1900	512	2	4	22.38	23.38	33	PASS
EGPRS1900	661	2	1	26.99	27.99	33	PASS
EGPRS1900	661	2	2	25.78	26.78	33	PASS
EGPRS1900	661	2	3	23.48	24.48	33	PASS
EGPRS1900	661	2	4	22.29	23.29	33	PASS
EGPRS1900	810	2	1	26.86	27.86	33	PASS
EGPRS1900	810	2	2	25.70	26.7	33	PASS
EGPRS1900	810	2	3	23.40	24.4	33	PASS
EGPRS1900	810	2	4	22.22	23.22	33	PASS

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

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

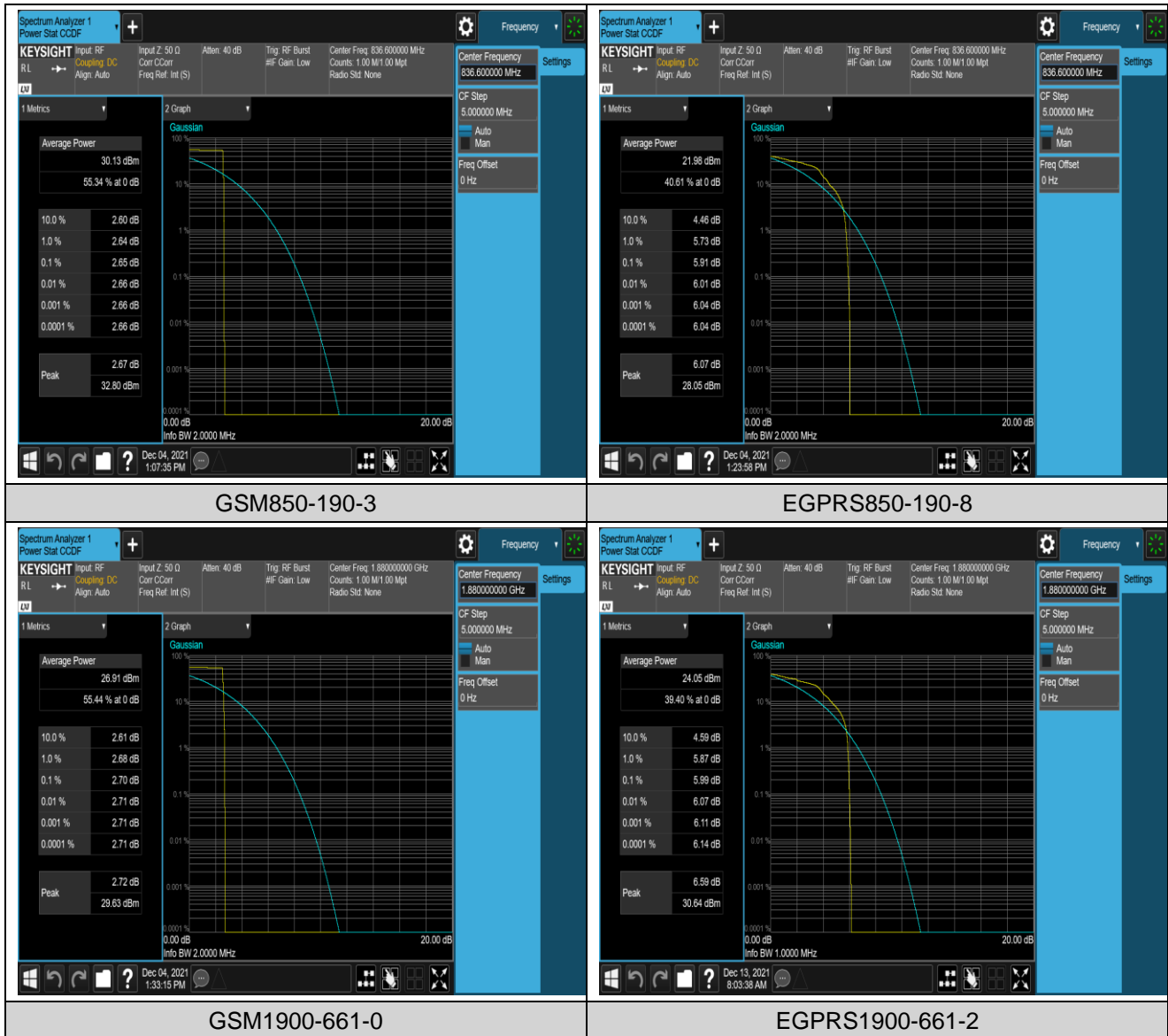
Appendix B: Peak-to-Average Ratio(CCDF)

Test Result

Band	Channel	PCL	Result(dB)	Limit(dB)	Verdict
GSM850	190	3	2.65	13	PASS
EGPRS850	190	8	5.91	13	PASS
GSM1900	661	0	2.7	13	PASS
EGPRS1900	661	2	5.99	13	PASS

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

Test Graphs

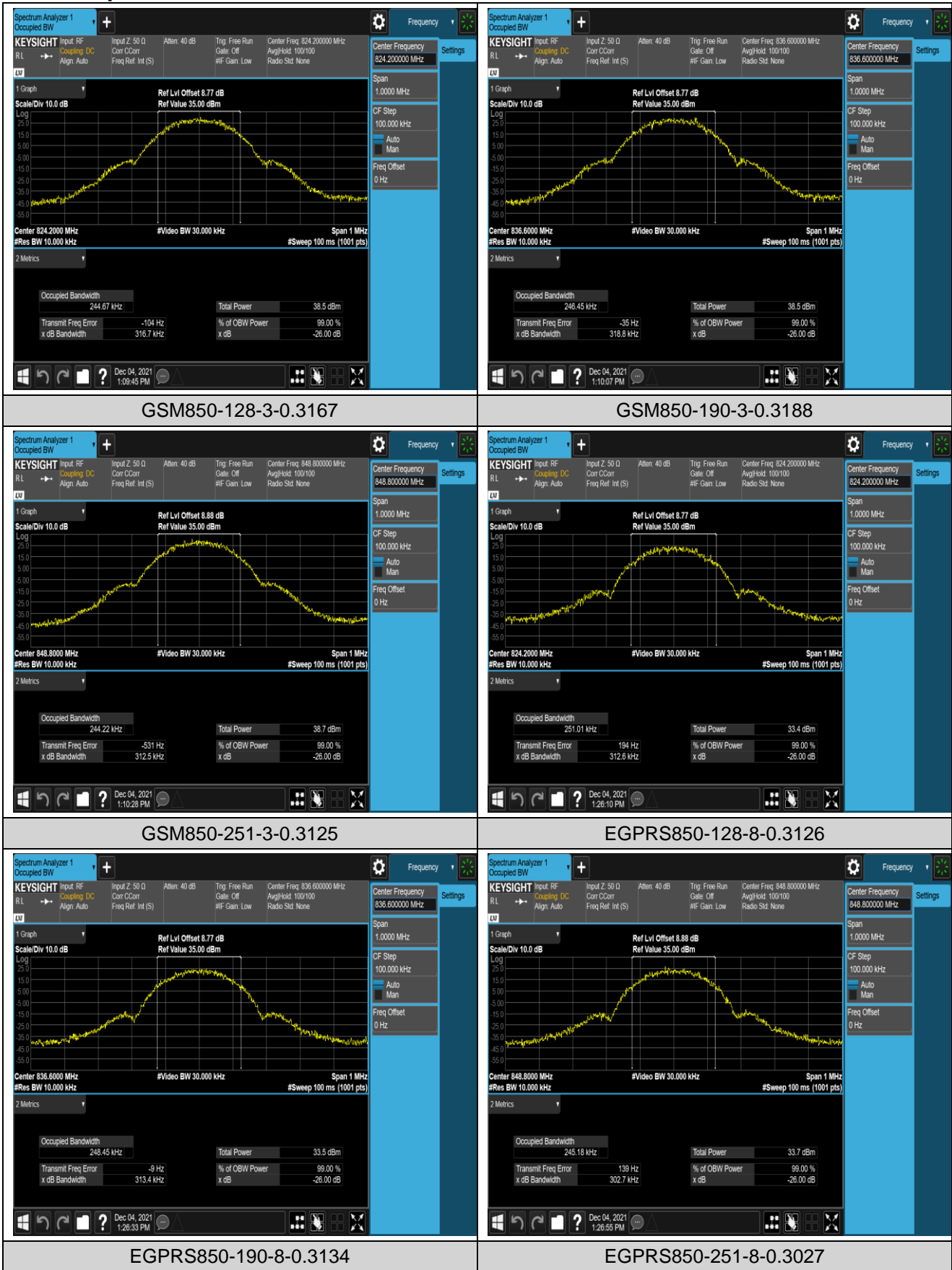


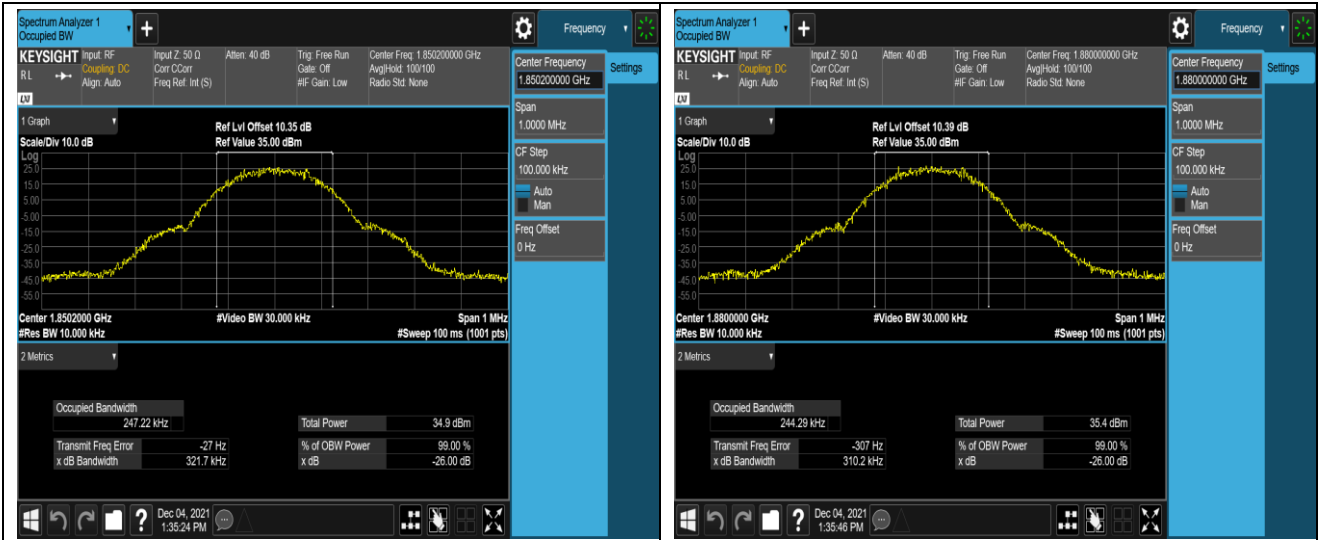
Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

Band	Channel	PCL	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
GSM850	128	3	0.24467	0.3167	---	PASS
GSM850	190	3	0.24645	0.3188	---	PASS
GSM850	251	3	0.24422	0.3125	---	PASS
EGPRS850	128	8	0.25101	0.3126	---	PASS
EGPRS850	190	8	0.24845	0.3134	---	PASS
EGPRS850	251	8	0.24518	0.3027	---	PASS
GSM1900	512	0	0.24722	0.3217	---	PASS
GSM1900	661	0	0.24429	0.3102	---	PASS
GSM1900	810	0	0.24550	0.3134	---	PASS
EGPRS1900	512	2	0.24391	0.3079	---	PASS
EGPRS1900	661	2	0.24357	0.3019	---	PASS
EGPRS1900	810	2	0.24069	0.3216	---	PASS

Test Graphs



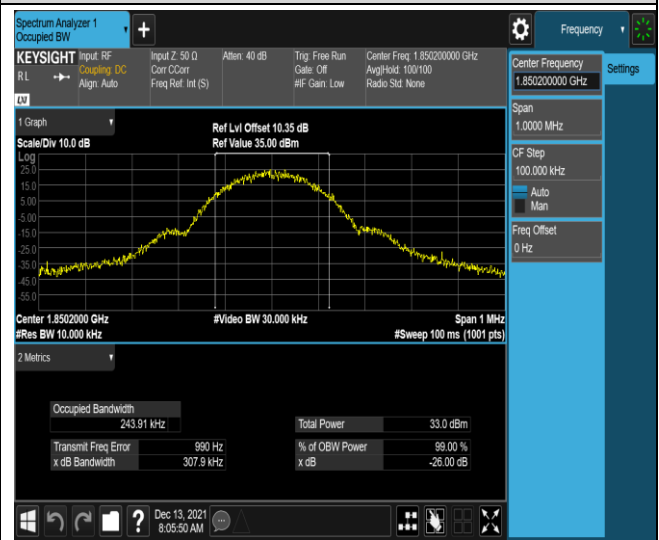


GSM1900-512-0-0.3217

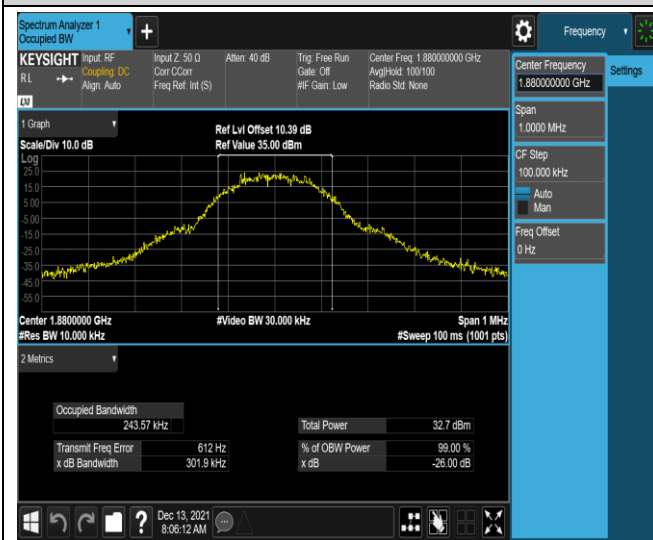
GSM1900-661-0-0.3102



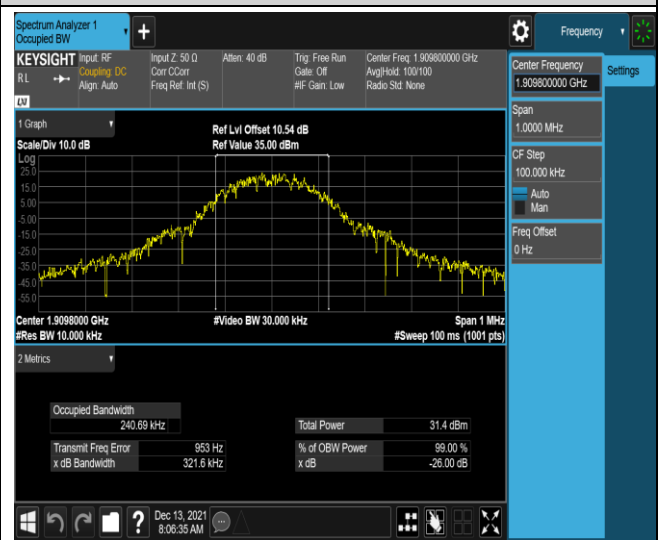
GSM1900-810-0-0.3134



EGPRS1900-512-2-0.3079



EGPRS1900-661-2-0.3019



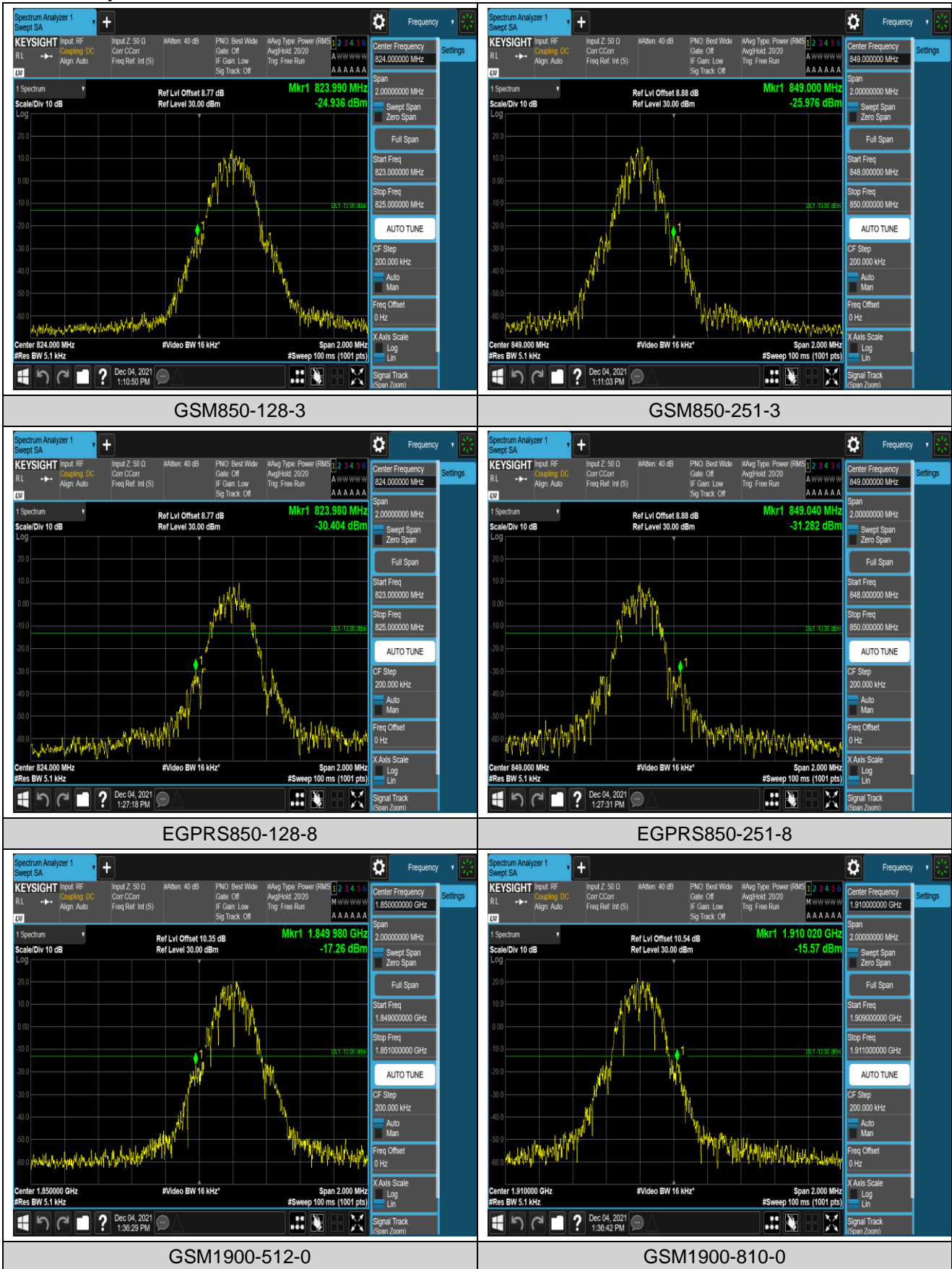
EGPRS1900-810-2-0.3216

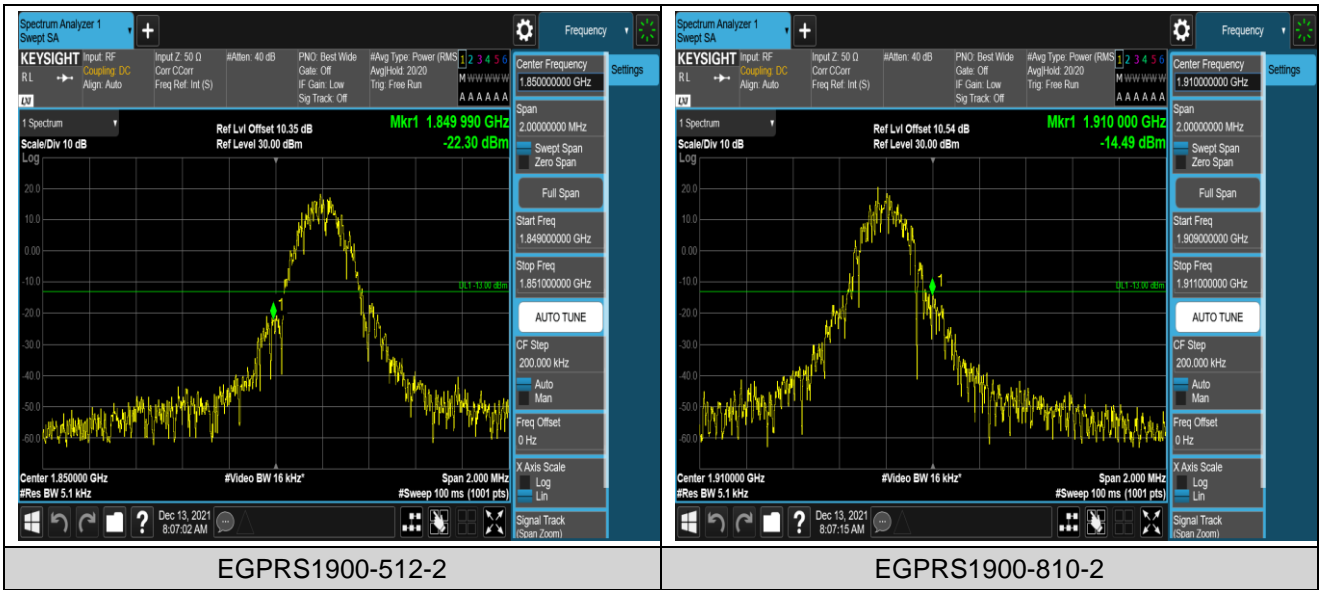
Appendix D: Band Edge

Test Result

Band	Channel	PCL	Freq (MHz)	Result (dBm)	Limit(dBm)	Verdict
GSM850	128	3	823.99	-24.94	-13	PASS
GSM850	251	3	849.00	-25.98	-13	PASS
EGPRS850	128	8	823.98	-30.40	-13	PASS
EGPRS850	251	8	849.04	-31.28	-13	PASS
GSM1900	512	0	1849.98	-17.26	-13	PASS
GSM1900	810	0	1910.02	-15.57	-13	PASS
EGPRS1900	512	2	1849.99	-22.30	-13	PASS
EGPRS1900	810	2	1910.00	-14.49	-13	PASS

Test Graphs





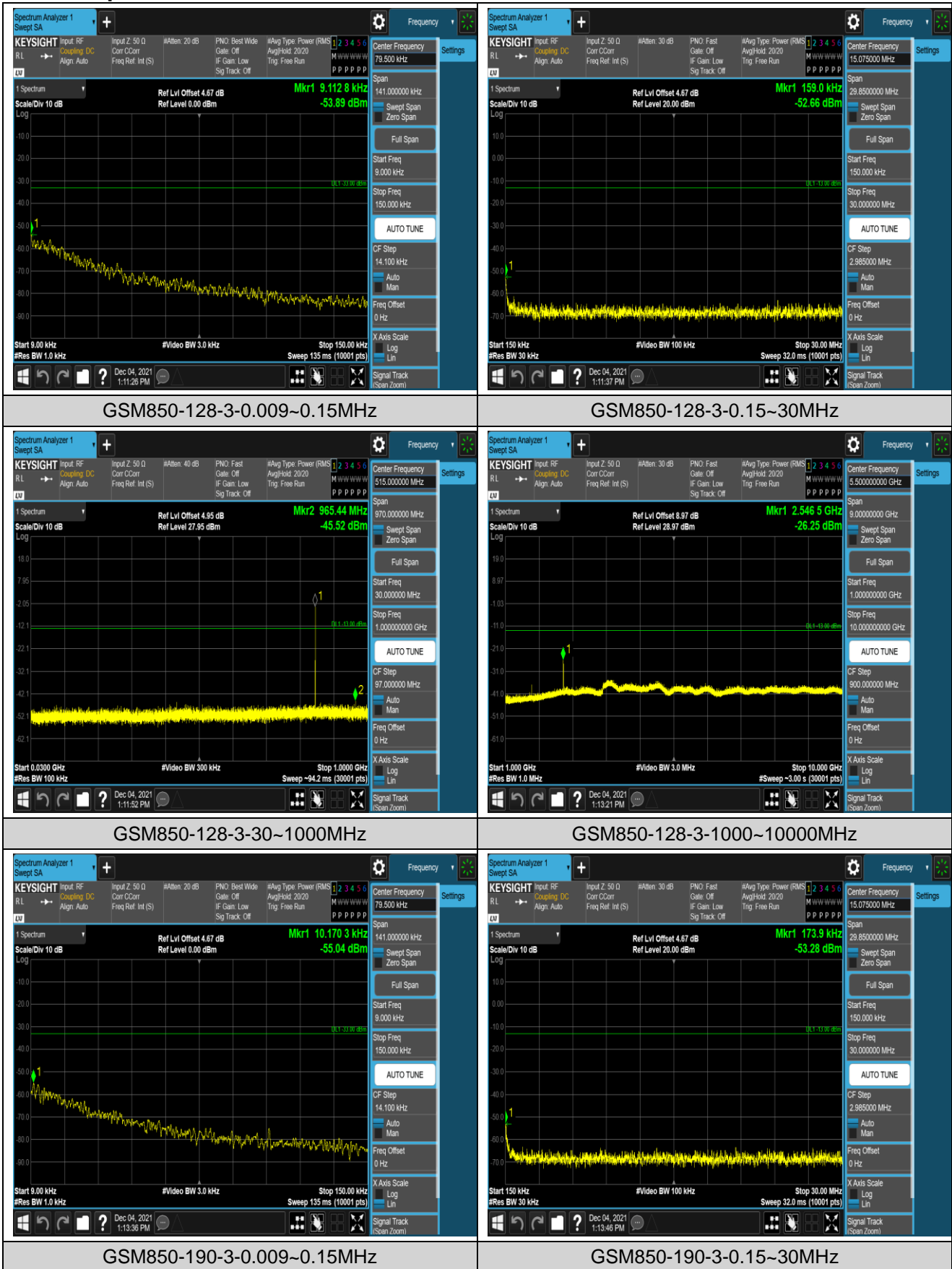
Appendix E: Conducted Spurious Emission

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	-53.89	-33	PASS
GSM850	128	3	0.15~30MHz	0.16	-52.66	-13	PASS
GSM850	128	3	30~1000MHz	965.44	-45.52	-13	PASS
GSM850	128	3	1000~10000MHz	2546.5	-26.25	-13	PASS
GSM850	190	3	0.009~0.15MHz	0.01	-55.04	-33	PASS
GSM850	190	3	0.15~30MHz	0.17	-53.28	-13	PASS
GSM850	190	3	30~1000MHz	969.22	-46.21	-13	PASS
GSM850	190	3	1000~10000MHz	2545.9	-26.04	-13	PASS
GSM850	251	3	0.009~0.15MHz	0.01	-54.64	-33	PASS
GSM850	251	3	0.15~30MHz	0.16	-52.82	-13	PASS
GSM850	251	3	30~1000MHz	957.93	-44.9	-13	PASS
GSM850	251	3	1000~10000MHz	2545.9	-27.81	-13	PASS
GSM1900	512	0	0.009~0.15MHz	0.01	-55.58	-43	PASS
GSM1900	512	0	0.15~30MHz	0.16	-53.07	-23	PASS
GSM1900	512	0	30~1000MHz	881.37	-46.13	-13	PASS
GSM1900	512	0	1000~18000MHz	3870.17	-34.88	-13	PASS
GSM1900	661	0	0.009~0.15MHz	0.01	-57.18	-43	PASS
GSM1900	661	0	0.15~30MHz	0.15	-52.16	-23	PASS
GSM1900	661	0	30~1000MHz	943.84	-46.37	-13	PASS
GSM1900	661	0	1000~18000MHz	3875.83	-34.57	-13	PASS
GSM1900	810	0	0.009~0.15MHz	0.01	-55.76	-43	PASS
GSM1900	810	0	0.15~30MHz	0.15	-51.26	-23	PASS
GSM1900	810	0	30~1000MHz	848.42	-46.52	-13	PASS
GSM1900	810	0	1000~18000MHz	3731.9	-34.89	-13	PASS

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

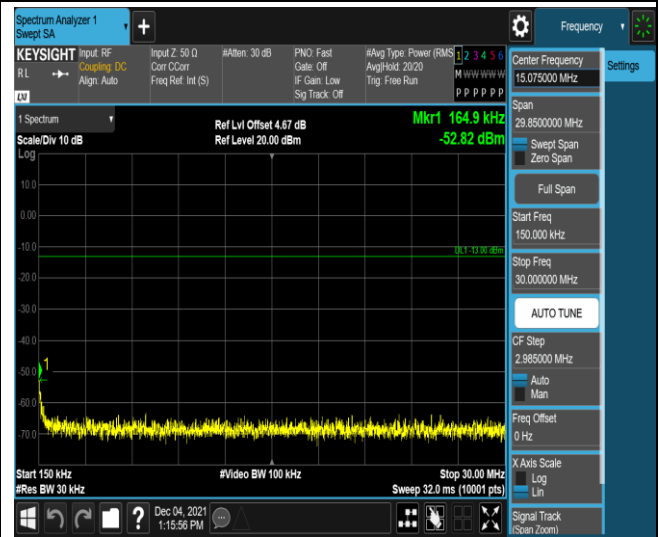
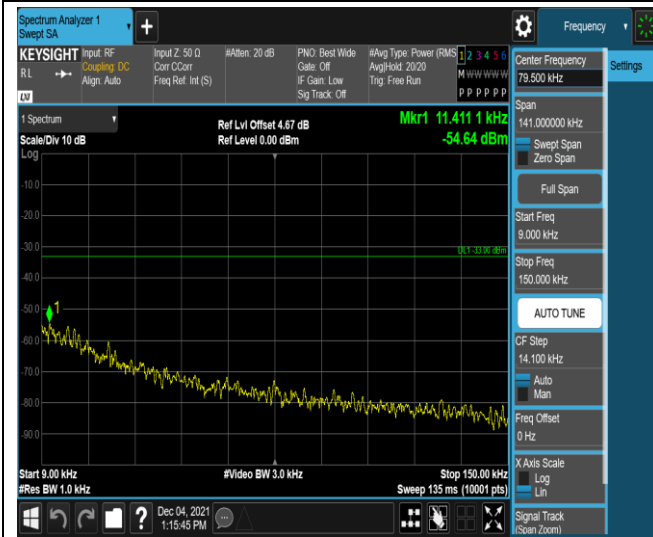
Test Graphs





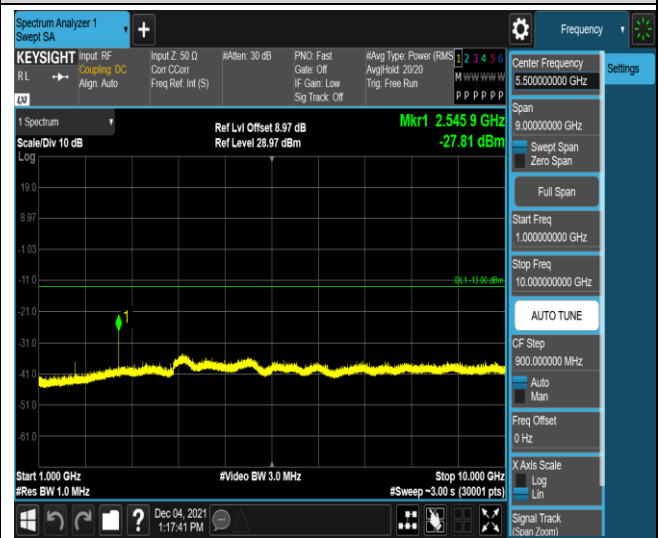
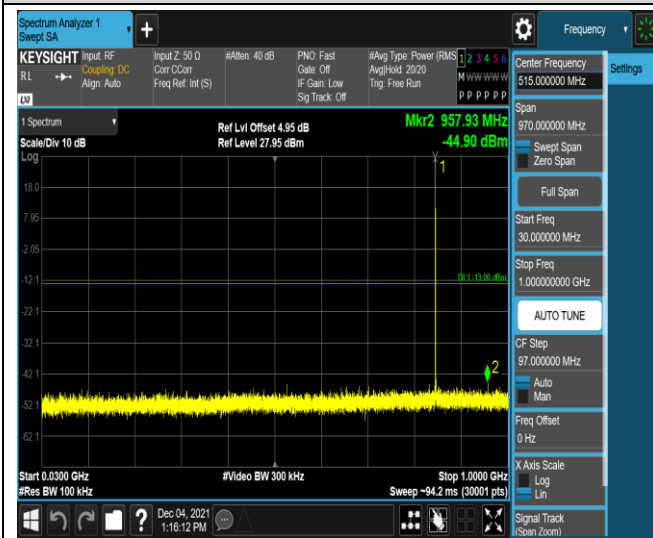
GSM850-190-3-30~1000MHz

GSM850-190-3-1000~10000MHz



GSM850-251-3-0.009~0.15MHz

GSM850-251-3-0.15~30MHz



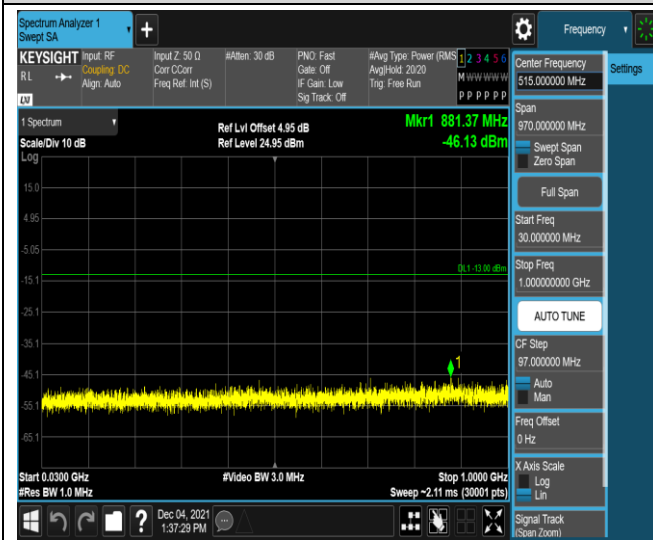
GSM850-251-3-30~1000MHz

GSM850-251-3-1000~10000MHz



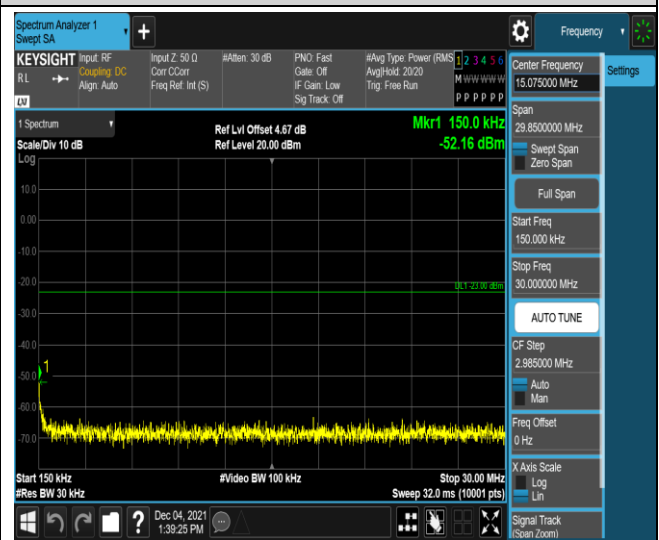
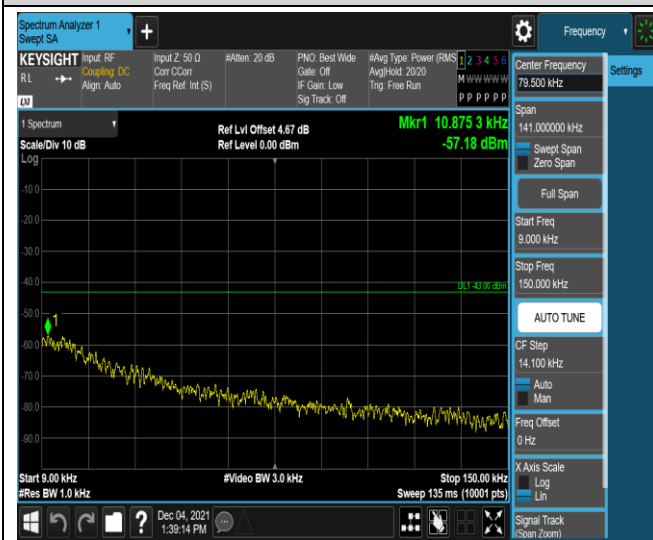
GSM1900-512-0-0.009~0.15MHz

GSM1900-512-0-0.15~30MHz



GSM1900-512-0-30~1000MHz

GSM1900-512-0-1000~18000MHz



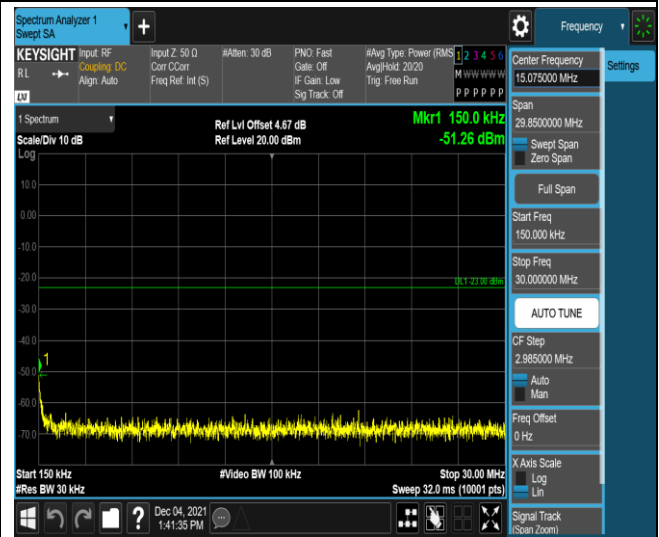
GSM1900-661-0-0.009~0.15MHz

GSM1900-661-0-0.15~30MHz



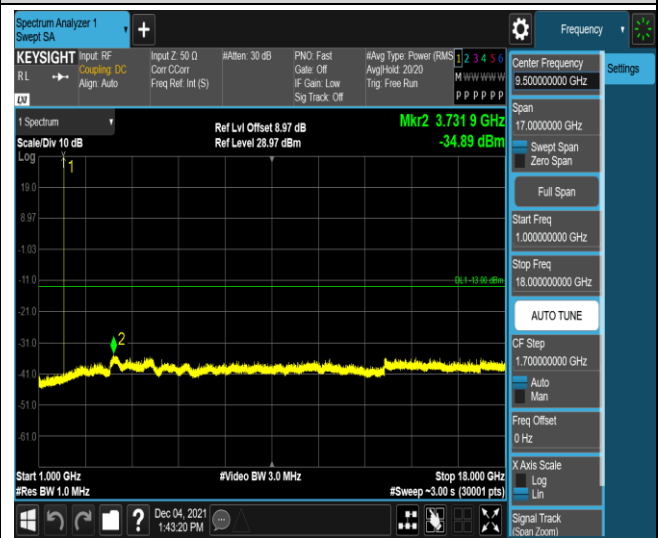
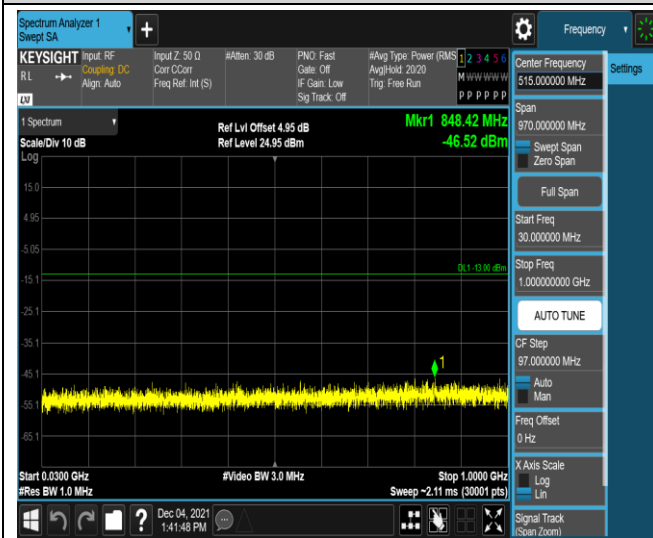
GSM1900-661-0-30~1000MHz

GSM1900-661-0-1000~18000MHz



GSM1900-810-0-0.009~0.15MHz

GSM1900-810-0-0.15~30MHz



GSM1900-810-0-30~1000MHz

GSM1900-810-0-1000~18000MHz

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		
3.70	-30	16.14	0.019292	±2.5	Pass
	-20	15.21	0.018181		
	-10	8.23	0.009837		
	0	11.46	0.013698		
	10	12.30	0.014702		
	20	20.44	0.024432		
	30	20.21	0.024157		
	40	13.98	0.016710		
	50	16.63	0.019878		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	8.20	0.009802	±2.5	Pass
	3.70	7.68	0.009180		
	4.20	14.98	0.017906		
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		
3.70	-30	4.49	0.005367	±2.5	Pass
	-20	9.65	0.011535		
	-10	13.04	0.015587		
	0	12.62	0.015085		
	10	15.66	0.018719		
	20	11.75	0.014045		
	30	13.82	0.016519		
	40	13.92	0.016639		
	50	11.98	0.014320		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	7.78	0.009300	±2.5	Pass
	3.70	4.20	0.005020		
	4.20	5.62	0.006718		
<i>Remark: All channel had been tested, but only the worst case data displayed in this report.</i>					

Reference Frequency: PCS1900 Middle channel=661 Frequency=1880MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	21.73	0.011559	Within authorized band for PCS 1900	Pass
	-20	26.44	0.014064		
	-10	21.60	0.011489		
	0	7.04	0.003745		
	10	14.72	0.007830		
	20	15.11	0.008037		
	30	23.79	0.012654		
	40	22.05	0.011729		
	50	12.11	0.006441		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	18.50	0.009840	Within authorized band for PCS 1900	Pass
	3.70	14.08	0.007489		
	4.20	10.98	0.005840		
<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		
3.70	-30	20.15	0.010718	Within authorized band for PCS 1900	Pass
	-20	29.28	0.015574		
	-10	17.47	0.009293		
	0	3.39	0.001803		
	10	-7.01	-0.003729		
	20	38.10	0.020266		
	30	5.55	0.002952		
	40	-5.46	-0.002904		
	50	8.43	0.004484		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	17.89	0.009516	Within authorized band for PCS 1900	Pass
	3.70	13.50	0.007181		
	4.20	25.93	0.013793		
<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

