

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	33.72	30.07	38.45	PASS
GSM850	190	5	34.11	30.46	38.45	PASS
GSM850	251	5	33.89	30.24	38.45	PASS
GSM1900	512	0	30.57	30.07	33.00	PASS
GSM1900	661	0	30.34	29.84	33.00	PASS
GSM1900	810	0	30.37	29.87	33.00	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
GPRS850	128	5	1	33.68	30.03	38.45	PASS
GPRS850	128	5	2	32.79	29.14	38.45	PASS
GPRS850	128	5	3	30.89	27.24	38.45	PASS
GPRS850	128	5	4	29.85	26.20	38.45	PASS
GPRS850	190	5	1	34.09	30.44	38.45	PASS
GPRS850	190	5	2	33.20	29.55	38.45	PASS
GPRS850	190	5	3	31.30	27.65	38.45	PASS
GPRS850	190	5	4	30.25	26.60	38.45	PASS
GPRS850	251	5	1	33.87	30.22	38.45	PASS
GPRS850	251	5	2	32.98	29.33	38.45	PASS
GPRS850	251	5	3	31.08	27.43	38.45	PASS
GPRS850	251	5	4	30.02	26.37	38.45	PASS
GPRS1900	512	0	1	30.55	30.05	33.00	PASS
GPRS1900	512	0	2	29.72	29.22	33.00	PASS
GPRS1900	512	0	3	27.87	27.37	33.00	PASS
GPRS1900	512	0	4	26.76	26.26	33.00	PASS
GPRS1900	661	0	1	30.33	29.83	33.00	PASS
GPRS1900	661	0	2	29.49	28.99	33.00	PASS
GPRS1900	661	0	3	27.61	27.11	33.00	PASS
GPRS1900	661	0	4	26.53	26.03	33.00	PASS
GPRS1900	810	0	1	30.38	29.88	33.00	PASS
GPRS1900	810	0	2	29.54	29.04	33.00	PASS
GPRS1900	810	0	3	27.69	27.19	33.00	PASS
GPRS1900	810	0	4	26.63	26.13	33.00	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
EGPRS850	128	8	1	28.06	24.41	38.45	PASS
EGPRS850	128	8	2	26.99	23.34	38.45	PASS
EGPRS850	128	8	3	25.14	21.49	38.45	PASS
EGPRS850	128	8	4	23.89	20.24	38.45	PASS
EGPRS850	190	8	1	27.97	24.32	38.45	PASS
EGPRS850	190	8	2	26.96	23.31	38.45	PASS
EGPRS850	190	8	3	25.08	21.43	38.45	PASS
EGPRS850	190	8	4	23.85	20.20	38.45	PASS
EGPRS850	251	8	1	28.10	24.45	38.45	PASS
EGPRS850	251	8	2	27.13	23.48	38.45	PASS
EGPRS850	251	8	3	25.11	21.46	38.45	PASS
EGPRS850	251	8	4	23.94	20.29	38.45	PASS
EGPRS1900	512	2	1	26.90	26.40	33.00	PASS
EGPRS1900	512	2	2	26.05	25.55	33.00	PASS
EGPRS1900	512	2	3	24.30	23.80	33.00	PASS
EGPRS1900	512	2	4	23.12	22.62	33.00	PASS
EGPRS1900	661	2	1	26.67	26.17	33.00	PASS
EGPRS1900	661	2	2	25.84	25.34	33.00	PASS
EGPRS1900	661	2	3	24.08	23.58	33.00	PASS
EGPRS1900	661	2	4	22.92	22.42	33.00	PASS
EGPRS1900	810	2	1	26.73	26.23	33.00	PASS
EGPRS1900	810	2	2	25.92	25.42	33.00	PASS
EGPRS1900	810	2	3	24.19	23.69	33.00	PASS
EGPRS1900	810	2	4	23.06	22.56	33.00	PASS

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

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

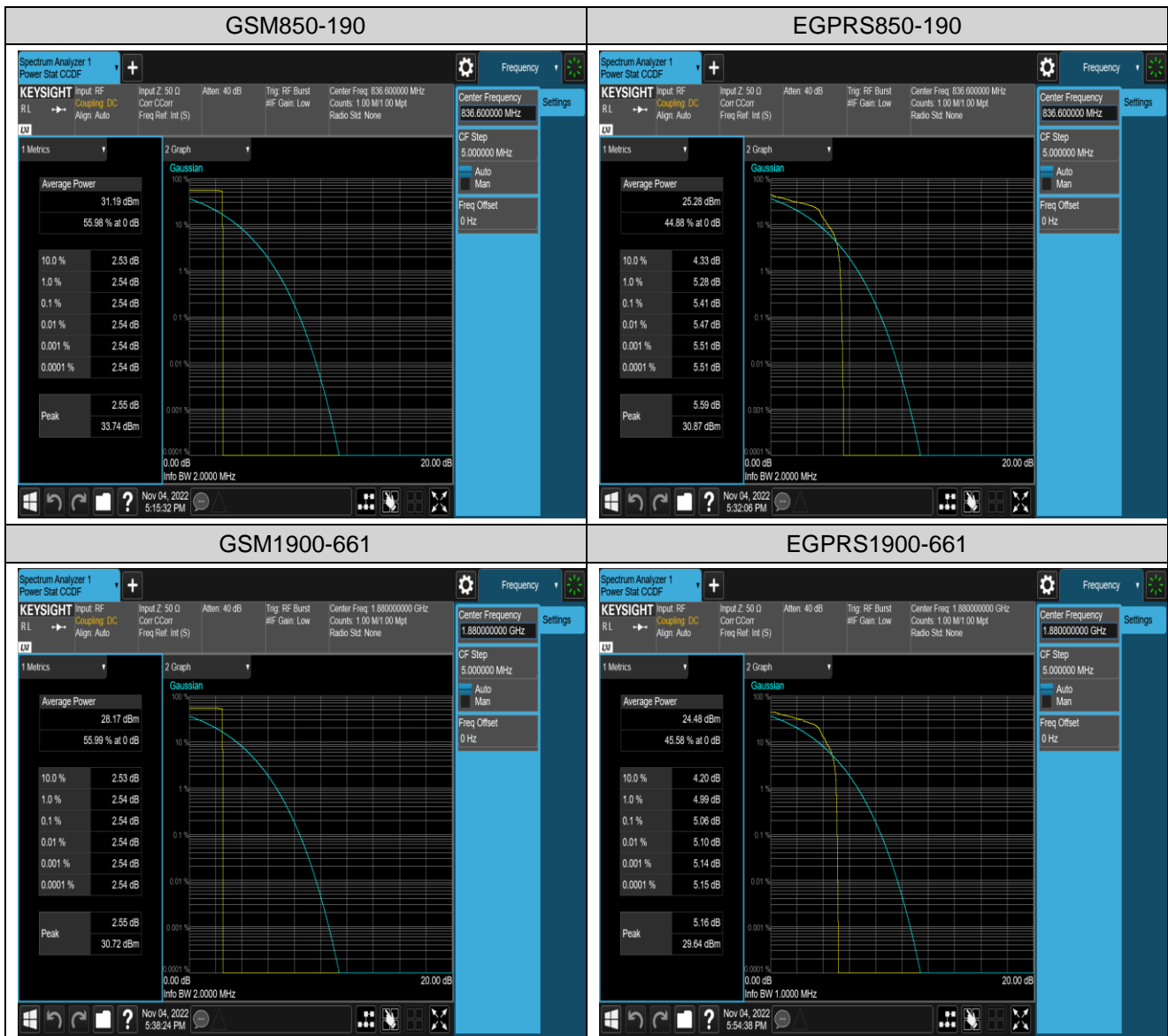
Appendix B: Peak-to-Average Ratio(CCDF)

Test Result

Band	Channel	PCL	Result(dB)	Limit(dB)	Verdict
GSM850	190	5	2.54	13	PASS
EGPRS850	190	8	5.41	13	PASS
GSM1900	661	0	2.54	13	PASS
EGPRS1900	661	2	5.06	13	PASS

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

Test Graphs

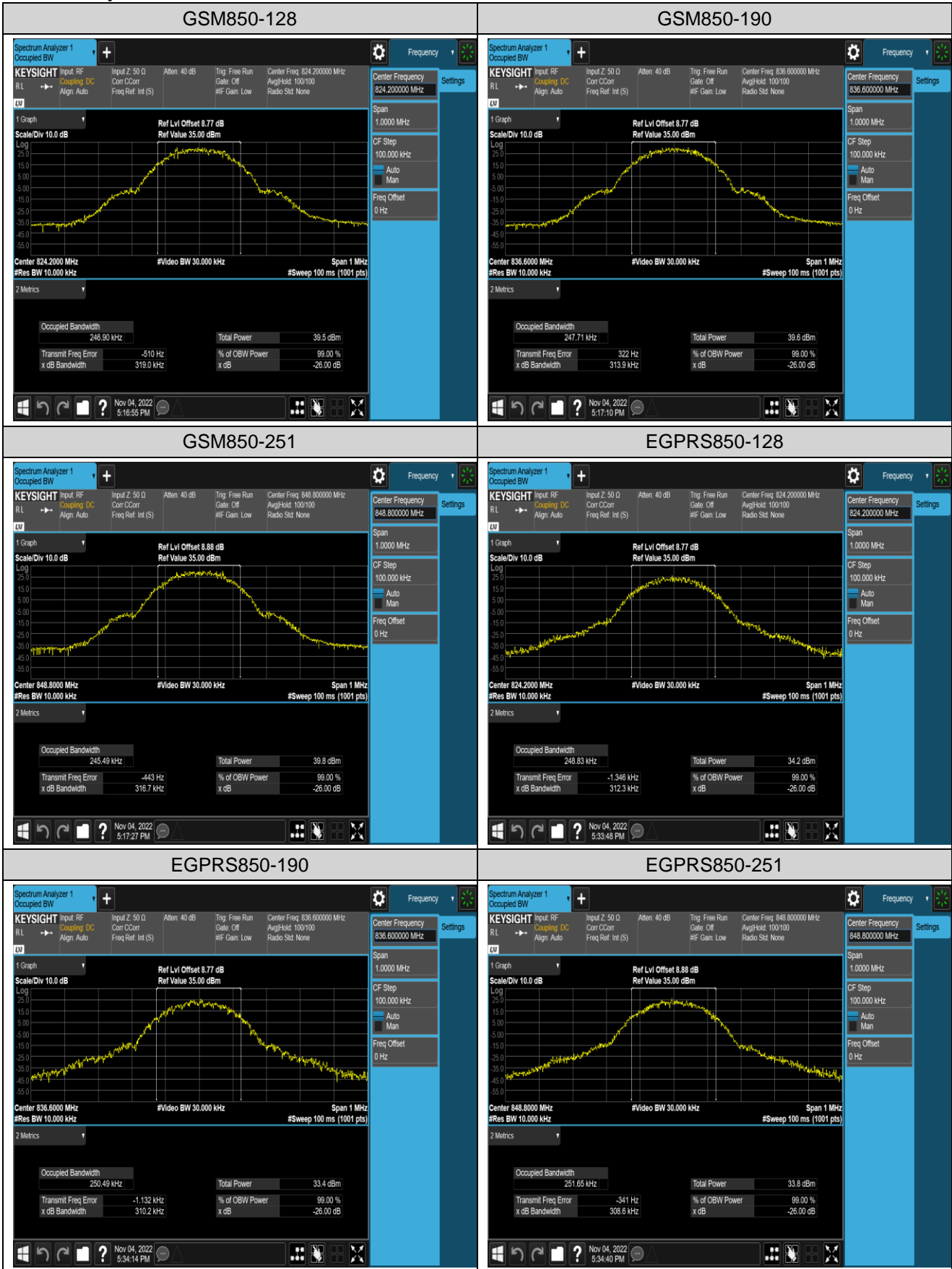


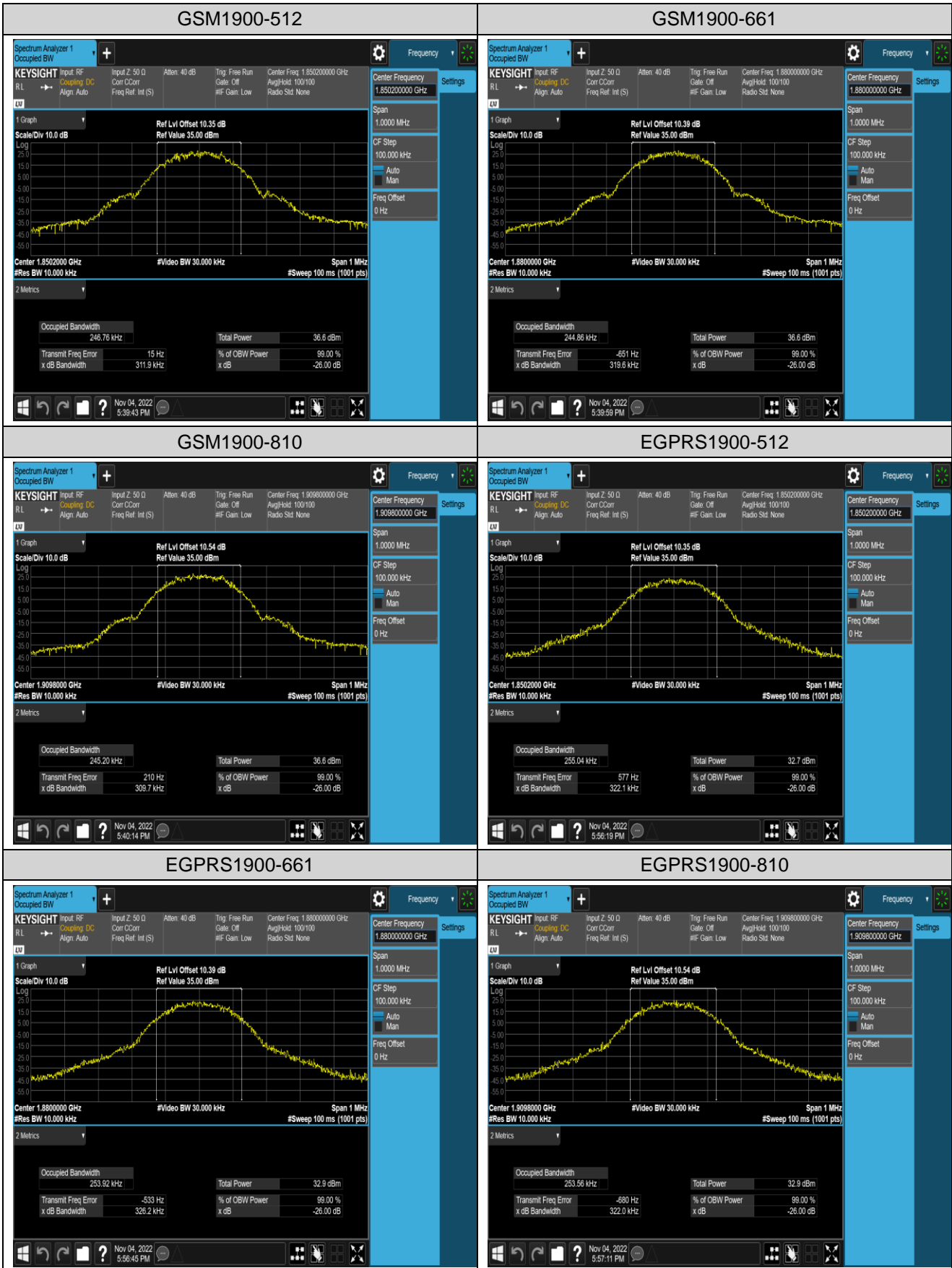
Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

Band	Channel	PCL	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
GSM850	128	5	0.24690	0.3190	---	PASS
GSM850	190	5	0.24771	0.3139	---	PASS
GSM850	251	5	0.24549	0.3167	---	PASS
EGPRS850	128	8	0.24883	0.3123	---	PASS
EGPRS850	190	8	0.25049	0.3102	---	PASS
EGPRS850	251	8	0.25165	0.3086	---	PASS
GSM1900	512	0	0.24676	0.3119	---	PASS
GSM1900	661	0	0.24486	0.3196	---	PASS
GSM1900	810	0	0.24520	0.3097	---	PASS
EGPRS1900	512	2	0.25504	0.3221	---	PASS
EGPRS1900	661	2	0.25392	0.3262	---	PASS
EGPRS1900	810	2	0.25356	0.3220	---	PASS

Test Graphs

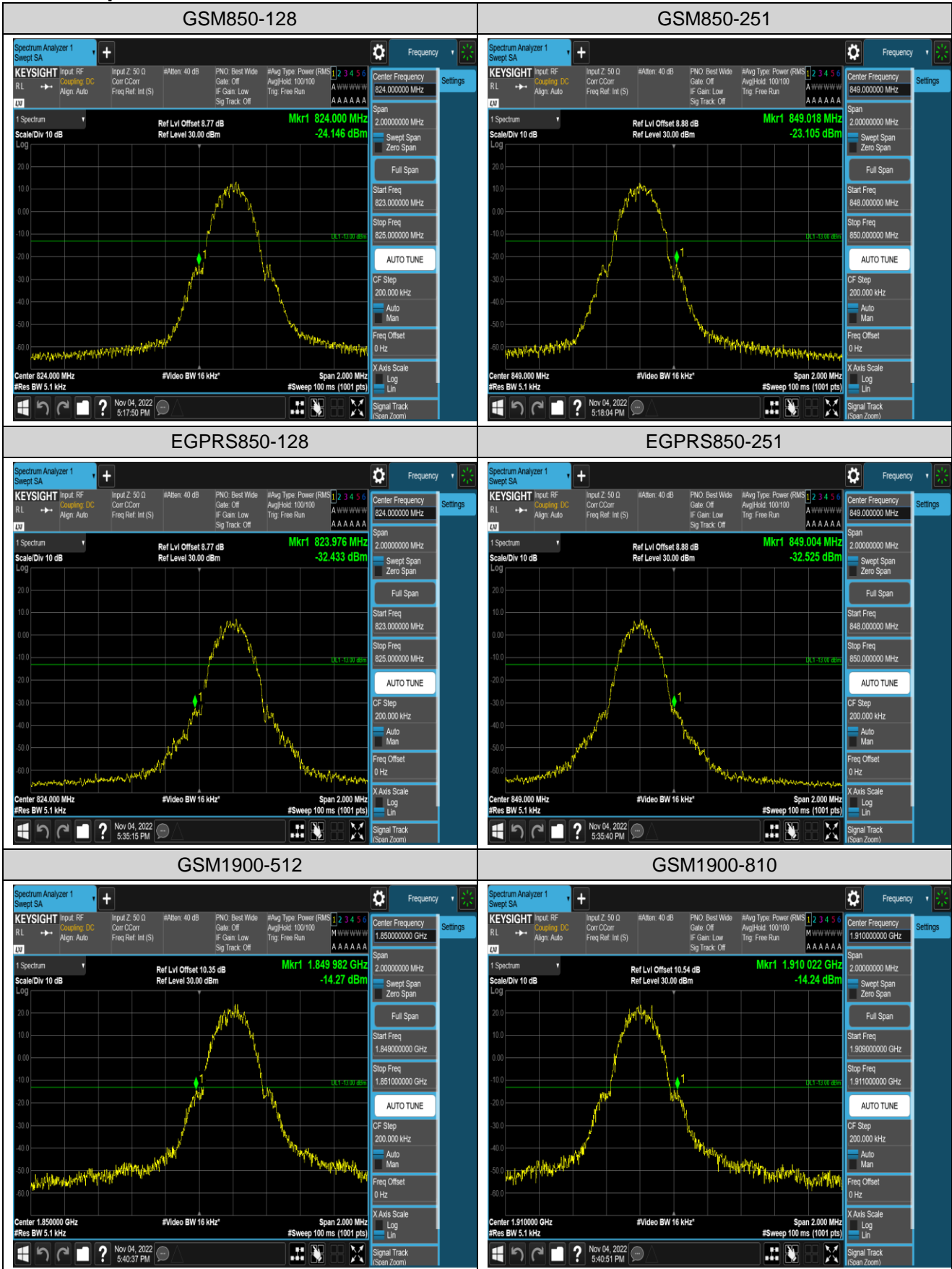


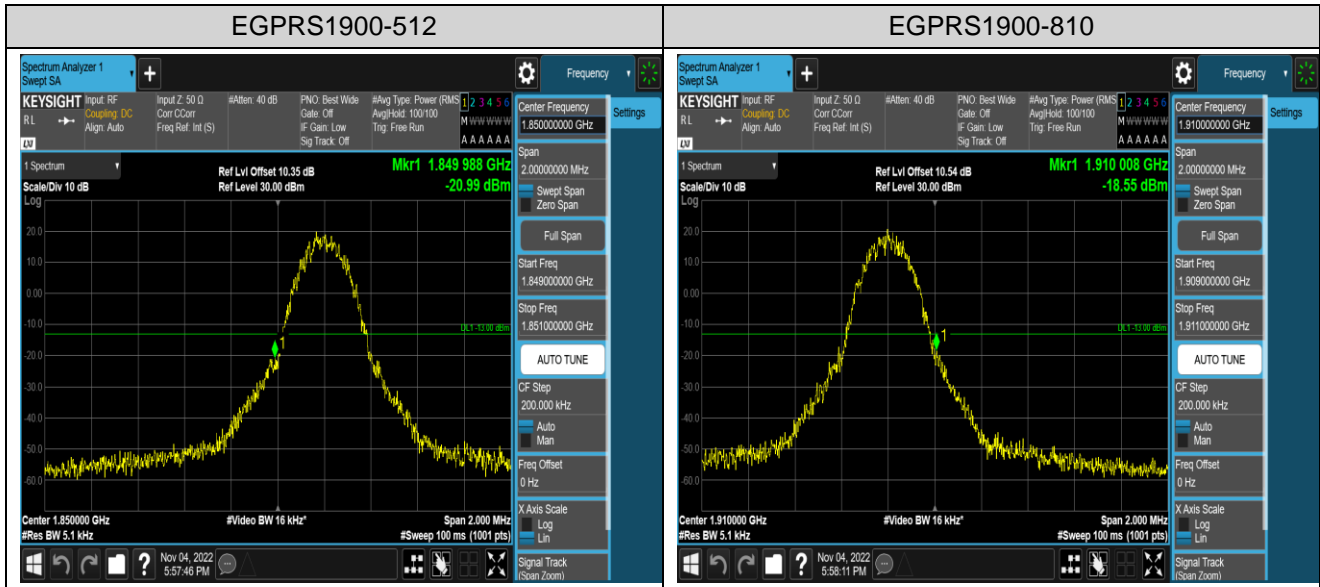


Appendix D: Band Edge**Test Result**

Band	Channel	PCL	Freq (MHz)	Result (dBm)	Limit(dBm)	Verdict
GSM850	128	5	824.00	-24.15	-13	PASS
GSM850	251	5	849.02	-23.10	-13	PASS
EGPRS850	128	8	823.98	-32.43	-13	PASS
EGPRS850	251	8	849.00	-32.53	-13	PASS
GSM1900	512	0	1849.98	-14.27	-13	PASS
GSM1900	810	0	1910.02	-14.24	-13	PASS
EGPRS1900	512	2	1849.99	-20.99	-13	PASS
EGPRS1900	810	2	1910.01	-18.55	-13	PASS

Test Graphs





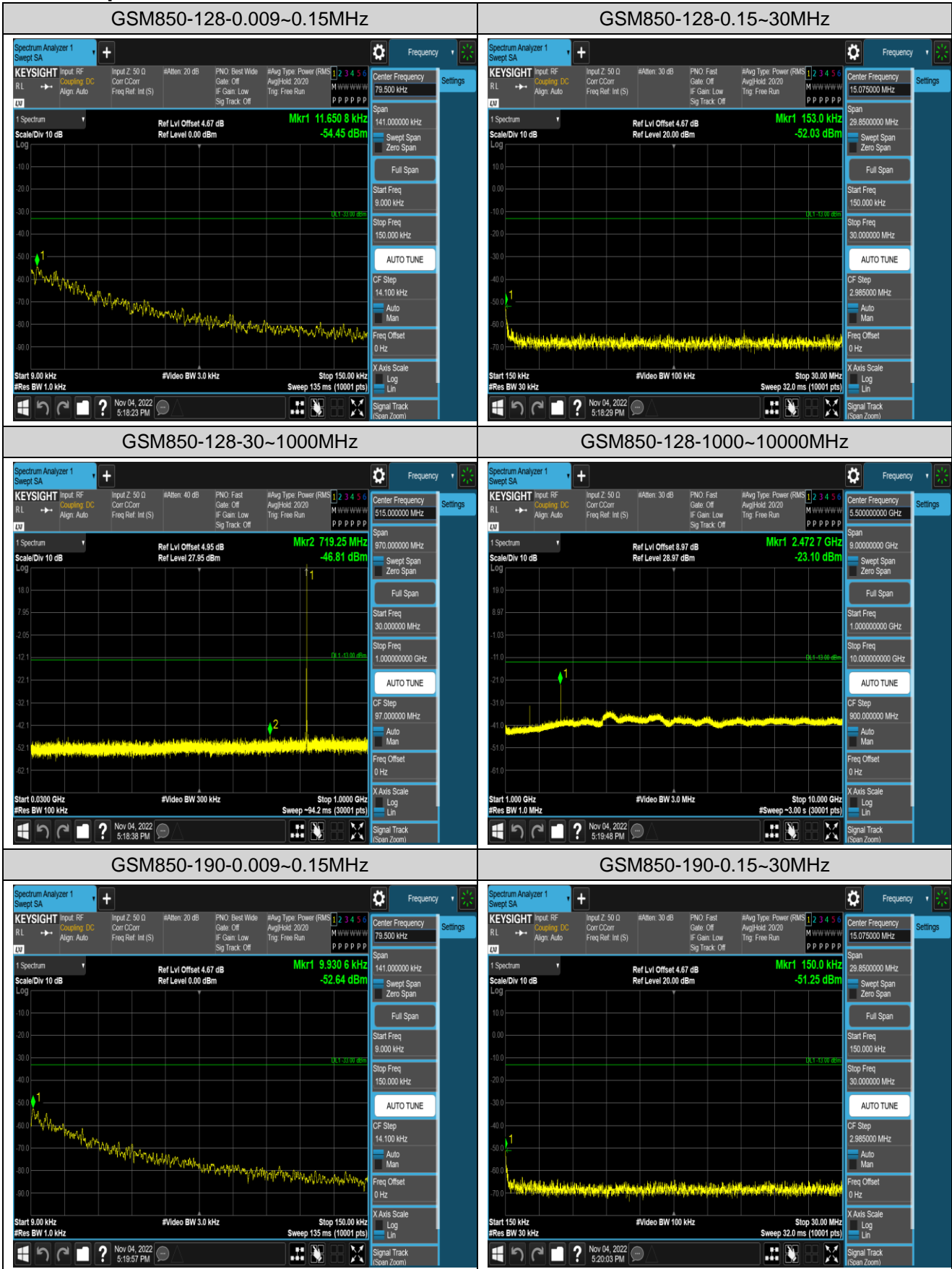
Appendix E: Conducted Spurious Emission

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	-54.45	-33	PASS
GSM850	128	5	0.15~30MHz	0.15	-52.03	-13	PASS
GSM850	128	5	30~1000MHz	719.25	-46.81	-13	PASS
GSM850	128	5	1000~10000MHz	2472.7	-23.1	-13	PASS
GSM850	190	5	0.009~0.15MHz	0.01	-52.64	-33	PASS
GSM850	190	5	0.15~30MHz	0.15	-51.25	-13	PASS
GSM850	190	5	30~1000MHz	454.89	-46.07	-13	PASS
GSM850	190	5	1000~10000MHz	2509.9	-21.89	-13	PASS
GSM850	251	5	0.009~0.15MHz	0.01	-54.3	-33	PASS
GSM850	251	5	0.15~30MHz	0.15	-52.94	-13	PASS
GSM850	251	5	30~1000MHz	595.12	-46.75	-13	PASS
GSM850	251	5	1000~10000MHz	2546.2	-21.15	-13	PASS
GSM1900	512	0	0.009~0.15MHz	0.01	-57.54	-43	PASS
GSM1900	512	0	0.15~30MHz	0.16	-50.46	-23	PASS
GSM1900	512	0	30~1000MHz	869.86	-47.15	-13	PASS
GSM1900	512	0	1000~18000MHz	3834.47	-34.85	-13	PASS
GSM1900	661	0	0.009~0.15MHz	0.01	-56.72	-43	PASS
GSM1900	661	0	0.15~30MHz	0.15	-53.33	-23	PASS
GSM1900	661	0	30~1000MHz	869.47	-46.25	-13	PASS
GSM1900	661	0	1000~18000MHz	3880.37	-34.76	-13	PASS
GSM1900	810	0	0.009~0.15MHz	0.01	-57.15	-43	PASS
GSM1900	810	0	0.15~30MHz	0.15	-50.68	-23	PASS
GSM1900	810	0	30~1000MHz	950.76	-47.03	-13	PASS
GSM1900	810	0	1000~18000MHz	3813.5	-34.01	-13	PASS

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

Test Graphs

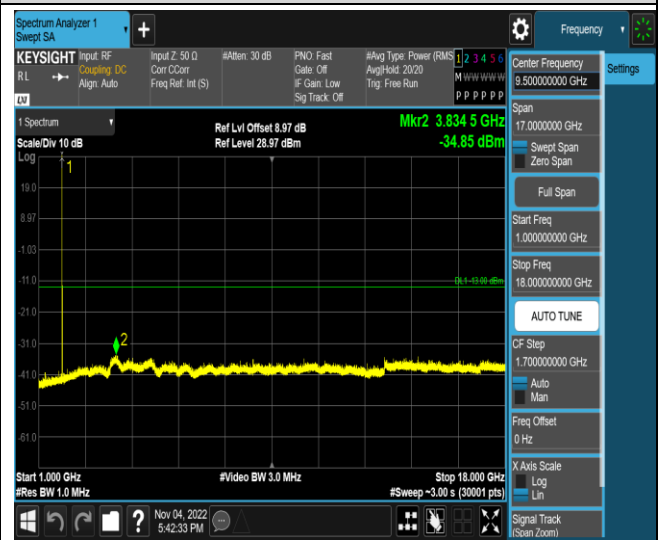
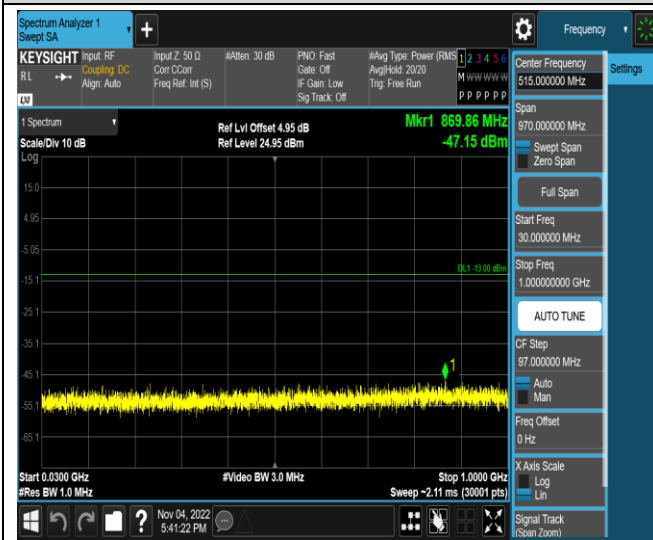






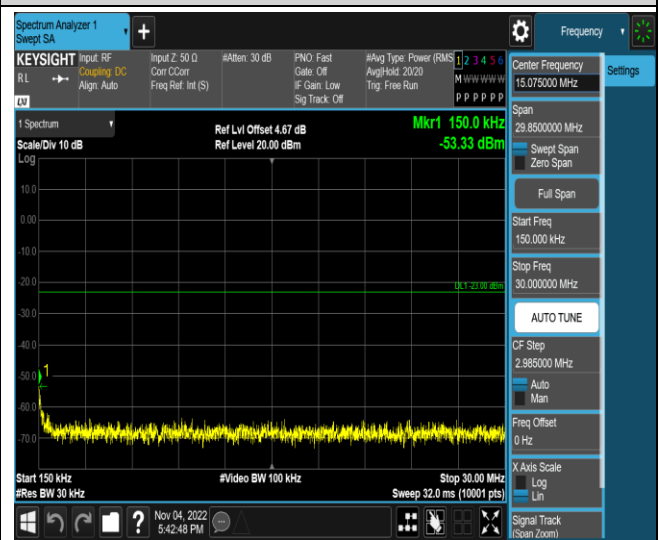
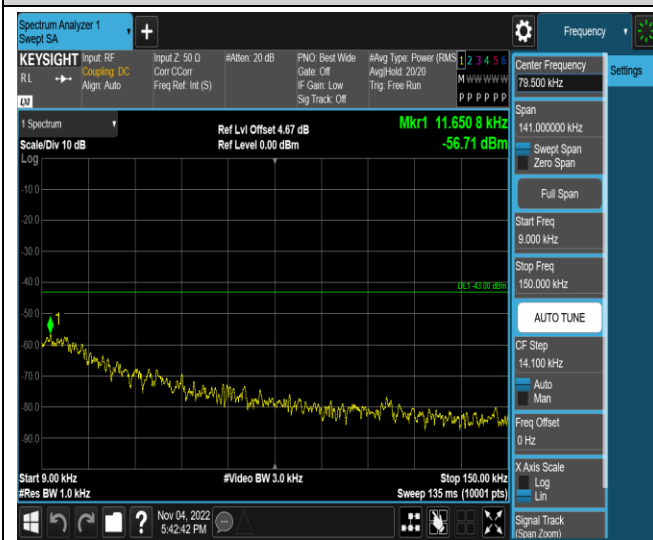
GSM1900-512-30~1000MHz

GSM1900-512-1000~18000MHz



GSM1900-661-0.009~0.15MHz

GSM1900-661-0.15~30MHz



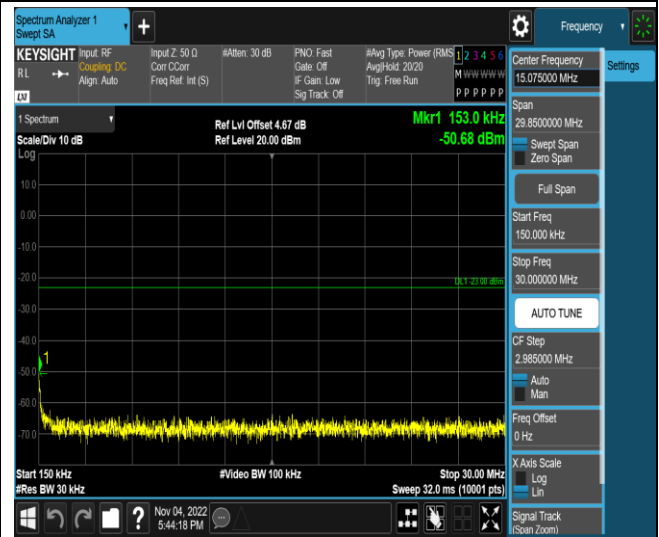
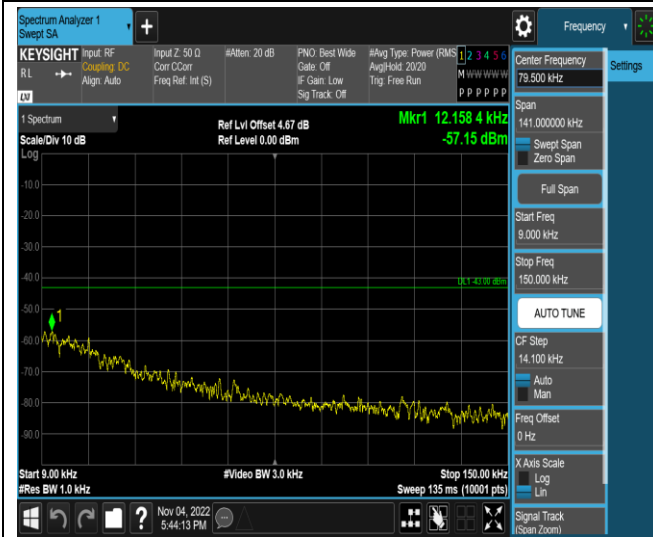
GSM1900-661-30~1000MHz

GSM1900-661-1000~18000MHz



GSM1900-810-0.009~0.15MHz

GSM1900-810-0.15~30MHz



GSM1900-810-30~100MHz

GSM1900-810-1000~1800MHz



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		
3.85	-30	-3.52	-0.004208	±2.5	Pass
	-20	-5.39	-0.006443		
	-10	-3.26	-0.003897		
	0	-3.87	-0.004626		
	10	-3.87	-0.004626		
	20	-2.32	-0.002773		
	30	-4.39	-0.005247		
	40	-4.26	-0.005092		
	50	-3.97	-0.004745		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	-1.00	-0.001195	±2.5	Pass
	3.85	-1.81	-0.002164		
	4.40	-2.03	-0.002426		
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		
3.85	-30	-9.33	-0.011152	±2.5	Pass
	-20	-16.43	-0.019639		
	-10	-5.91	-0.007064		
	0	-13.14	-0.015706		
	10	-8.27	-0.009885		
	20	-3.13	-0.003741		
	30	-4.13	-0.004937		
	40	-0.77	-0.000920		
	50	-2.94	-0.003514		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	-13.14	-0.015706	±2.5	Pass
	3.85	-11.33	-0.013543		
	4.40	-7.49	-0.008953		
<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		
3.85	-30	-9.75	-0.005186	Within authorized band for PCS 1900	Pass
	-20	-18.82	-0.010011		
	-10	-17.05	-0.009069		
	0	-11.72	-0.006234		
	10	-10.23	-0.005441		
	20	-14.63	-0.007782		
	30	-17.76	-0.009447		
	40	-21.18	-0.011266		
	50	-15.21	-0.008090		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	-3.52	-0.001872	Within authorized band for PCS 1900	Pass
	3.85	0.26	0.000138		
	4.40	-4.75	-0.002527		
<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		
3.85	-30	-6.78	-0.003606	Within authorized band for PCS 1900	Pass
	-20	-6.88	-0.003660		
	-10	-7.14	-0.003798		
	0	-4.97	-0.002644		
	10	-7.68	-0.004085		
	20	-8.85	-0.004707		
	30	-15.82	-0.008415		
	40	-10.72	-0.005702		
	50	-7.17	-0.003814		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	-5.75	-0.003059	Within authorized band for PCS 1900	Pass
	3.85	-6.75	-0.003590		
	4.40	-9.20	-0.004894		
<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

