

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	32.71	28.63	38.45	PASS
GSM850	190	5	32.95	28.87	38.45	PASS
GSM850	251	5	32.73	28.65	38.45	PASS
GSM1900	512	0	30.14	30.57	33.00	PASS
GSM1900	661	0	30.45	30.88	33.00	PASS
GSM1900	810	0	30.30	30.73	33.00	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
GPRS850	128	5	1	32.70	28.62	38.45	PASS
GPRS850	128	5	2	31.74	27.66	38.45	PASS
GPRS850	128	5	3	29.75	25.67	38.45	PASS
GPRS850	128	5	4	28.68	24.6	38.45	PASS
GPRS850	190	5	1	32.91	28.83	38.45	PASS
GPRS850	190	5	2	31.95	27.87	38.45	PASS
GPRS850	190	5	3	29.96	25.88	38.45	PASS
GPRS850	190	5	4	28.87	24.79	38.45	PASS
GPRS850	251	5	1	32.68	28.6	38.45	PASS
GPRS850	251	5	2	31.73	27.65	38.45	PASS
GPRS850	251	5	3	29.75	25.67	38.45	PASS
GPRS850	251	5	4	28.67	24.59	38.45	PASS
GPRS1900	512	0	1	30.14	30.57	33.00	PASS
GPRS1900	512	0	2	29.08	29.51	33.00	PASS
GPRS1900	512	0	3	26.93	27.36	33.00	PASS
GPRS1900	512	0	4	25.77	26.2	33.00	PASS
GPRS1900	661	0	1	30.42	30.85	33.00	PASS
GPRS1900	661	0	2	29.38	29.81	33.00	PASS
GPRS1900	661	0	3	27.23	27.66	33.00	PASS
GPRS1900	661	0	4	26.12	26.55	33.00	PASS
GPRS1900	810	0	1	30.26	30.69	33.00	PASS
GPRS1900	810	0	2	29.24	29.67	33.00	PASS
GPRS1900	810	0	3	27.16	27.59	33.00	PASS
GPRS1900	810	0	4	26.07	26.5	33.00	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
EGPRS850	128	8	1	25.95	21.87	38.45	PASS
EGPRS850	128	8	2	24.70	20.62	38.45	PASS
EGPRS850	128	8	3	22.52	18.44	38.45	PASS
EGPRS850	128	8	4	21.25	17.17	38.45	PASS
EGPRS850	190	8	1	25.48	21.4	38.45	PASS
EGPRS850	190	8	2	24.47	20.39	38.45	PASS
EGPRS850	190	8	3	22.30	18.22	38.45	PASS
EGPRS850	190	8	4	21.02	16.94	38.45	PASS
EGPRS850	251	8	1	25.51	21.43	38.45	PASS
EGPRS850	251	8	2	24.42	20.34	38.45	PASS
EGPRS850	251	8	3	22.24	18.16	38.45	PASS
EGPRS850	251	8	4	20.96	16.88	38.45	PASS
EGPRS1900	512	2	1	25.19	25.62	33.00	PASS
EGPRS1900	512	2	2	24.18	24.61	33.00	PASS
EGPRS1900	512	2	3	22.28	22.71	33.00	PASS
EGPRS1900	512	2	4	21.16	21.59	33.00	PASS
EGPRS1900	661	2	1	25.37	25.8	33.00	PASS
EGPRS1900	661	2	2	24.45	24.88	33.00	PASS
EGPRS1900	661	2	3	22.60	23.03	33.00	PASS
EGPRS1900	661	2	4	21.50	21.93	33.00	PASS
EGPRS1900	810	2	1	25.13	25.56	33.00	PASS
EGPRS1900	810	2	2	24.14	24.57	33.00	PASS
EGPRS1900	810	2	3	22.22	22.65	33.00	PASS
EGPRS1900	810	2	4	21.26	21.69	33.00	PASS

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

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

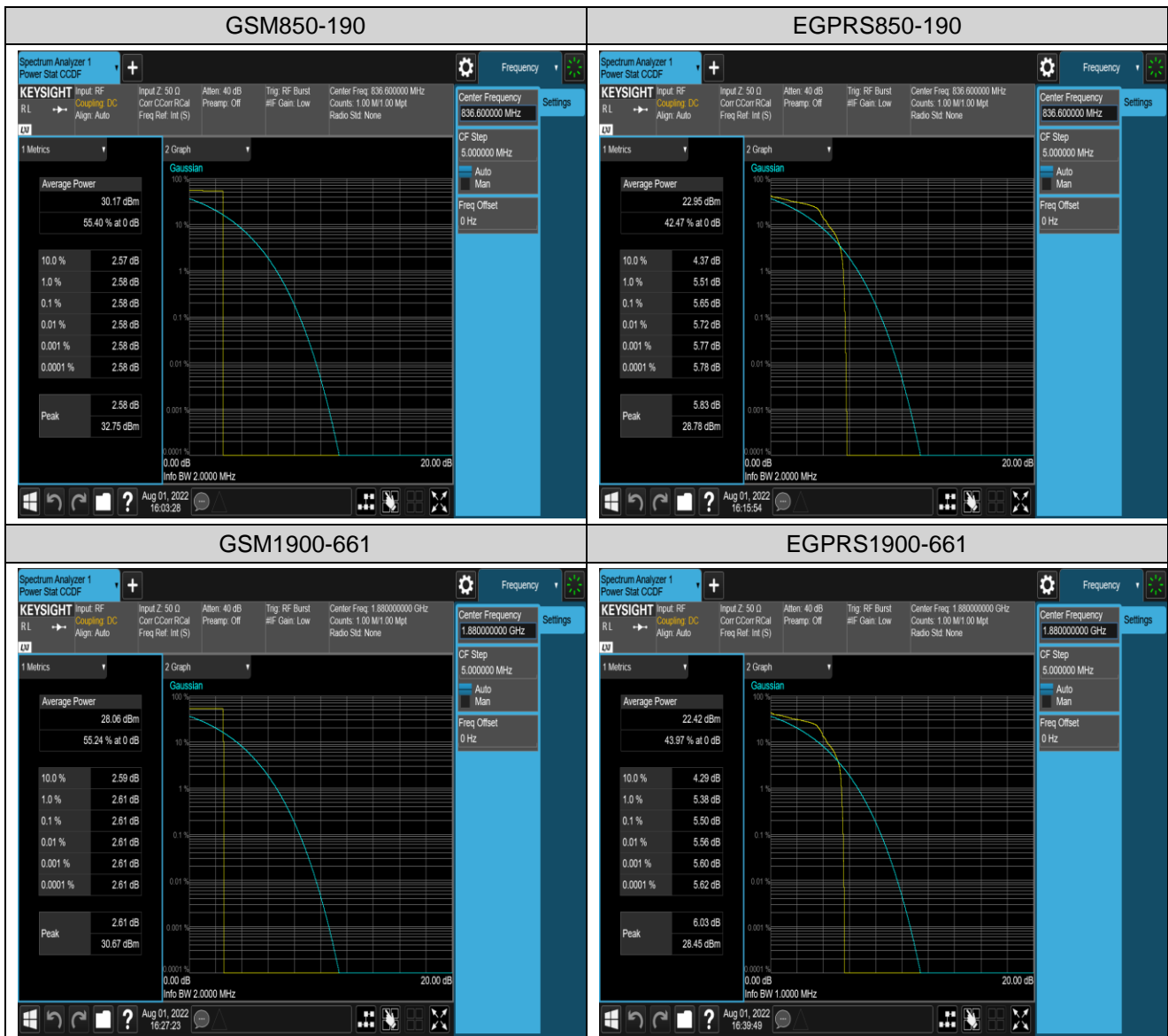
Appendix B: Peak-to-Average Ratio(CCDF)

Test Result

Band	Channel	PCL	Result(dB)	Limit(dB)	Verdict
GSM850	190	5	2.58	13	PASS
EGPRS850	190	8	5.65	13	PASS
GSM1900	661	0	2.61	13	PASS
EGPRS1900	661	2	5.5	13	PASS

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

Test Graphs

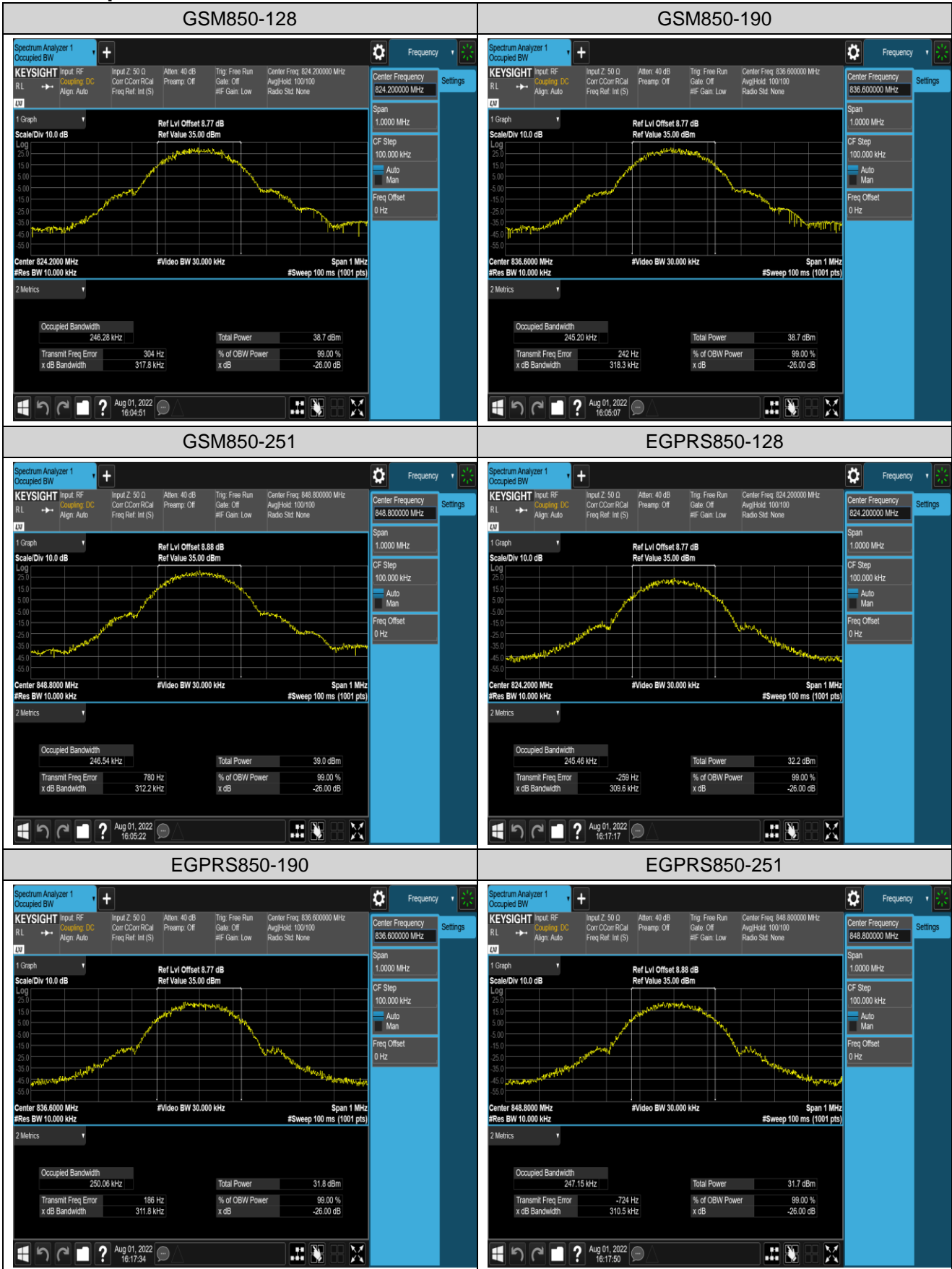


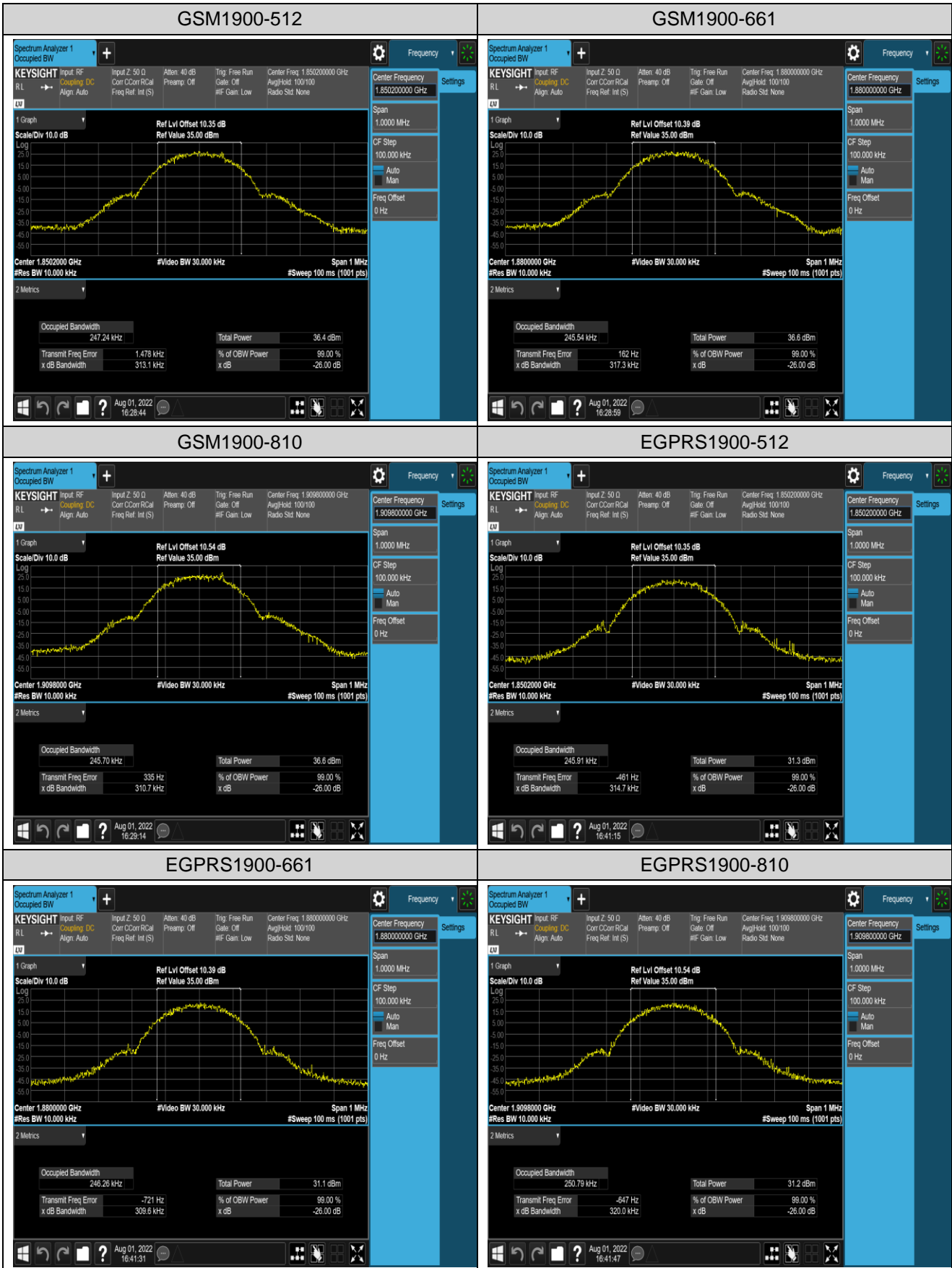
Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

Band	Channel	PCL	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
GSM850	128	5	0.24628	0.3178	---	PASS
GSM850	190	5	0.24520	0.3183	---	PASS
GSM850	251	5	0.24654	0.3122	---	PASS
EGPRS850	128	8	0.24546	0.3096	---	PASS
EGPRS850	190	8	0.25006	0.3118	---	PASS
EGPRS850	251	8	0.24715	0.3105	---	PASS
GSM1900	512	0	0.24724	0.3131	---	PASS
GSM1900	661	0	0.24554	0.3173	---	PASS
GSM1900	810	0	0.24570	0.3107	---	PASS
EGPRS1900	512	2	0.24591	0.3147	---	PASS
EGPRS1900	661	2	0.24626	0.3096	---	PASS
EGPRS1900	810	2	0.25079	0.3200	---	PASS

Test Graphs



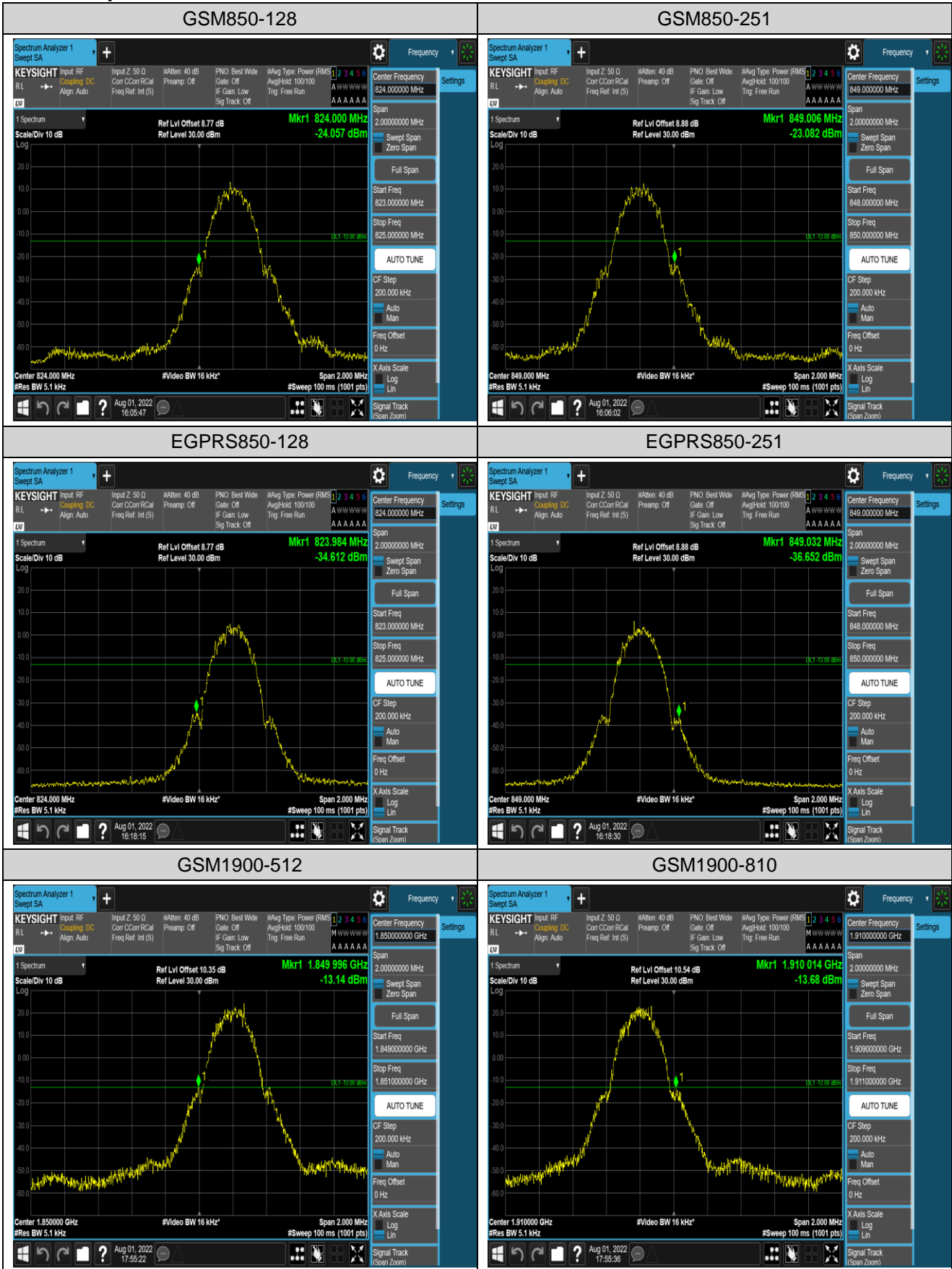


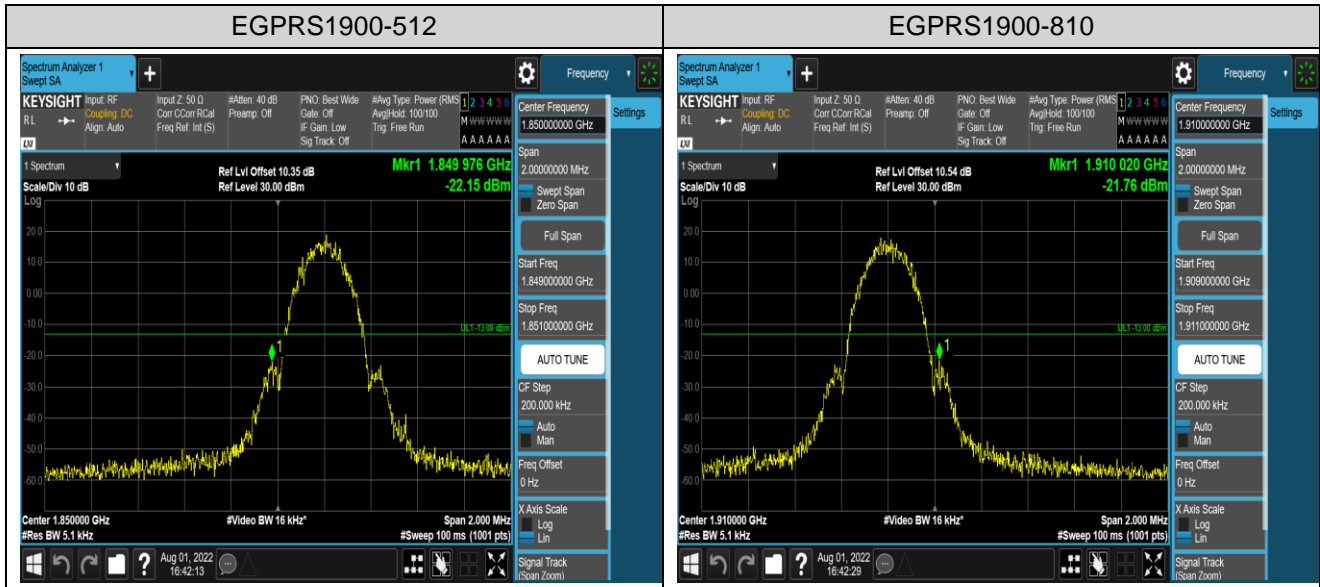
Appendix D: Band Edge

Test Result

Band	Channel	PCL	Freq (MHz)	Result (dBm)	Limit(dBm)	Verdict
GSM850	128	5	824.00	-24.06	-13	PASS
GSM850	251	5	849.01	-23.08	-13	PASS
EGPRS850	128	8	823.98	-34.61	-13	PASS
EGPRS850	251	8	849.03	-36.65	-13	PASS
GSM1900	512	0	1850.00	-13.14	-13	PASS
GSM1900	810	0	1910.01	-13.68	-13	PASS
EGPRS1900	512	2	1849.98	-22.15	-13	PASS
EGPRS1900	810	2	1910.02	-21.76	-13	PASS

Test Graphs





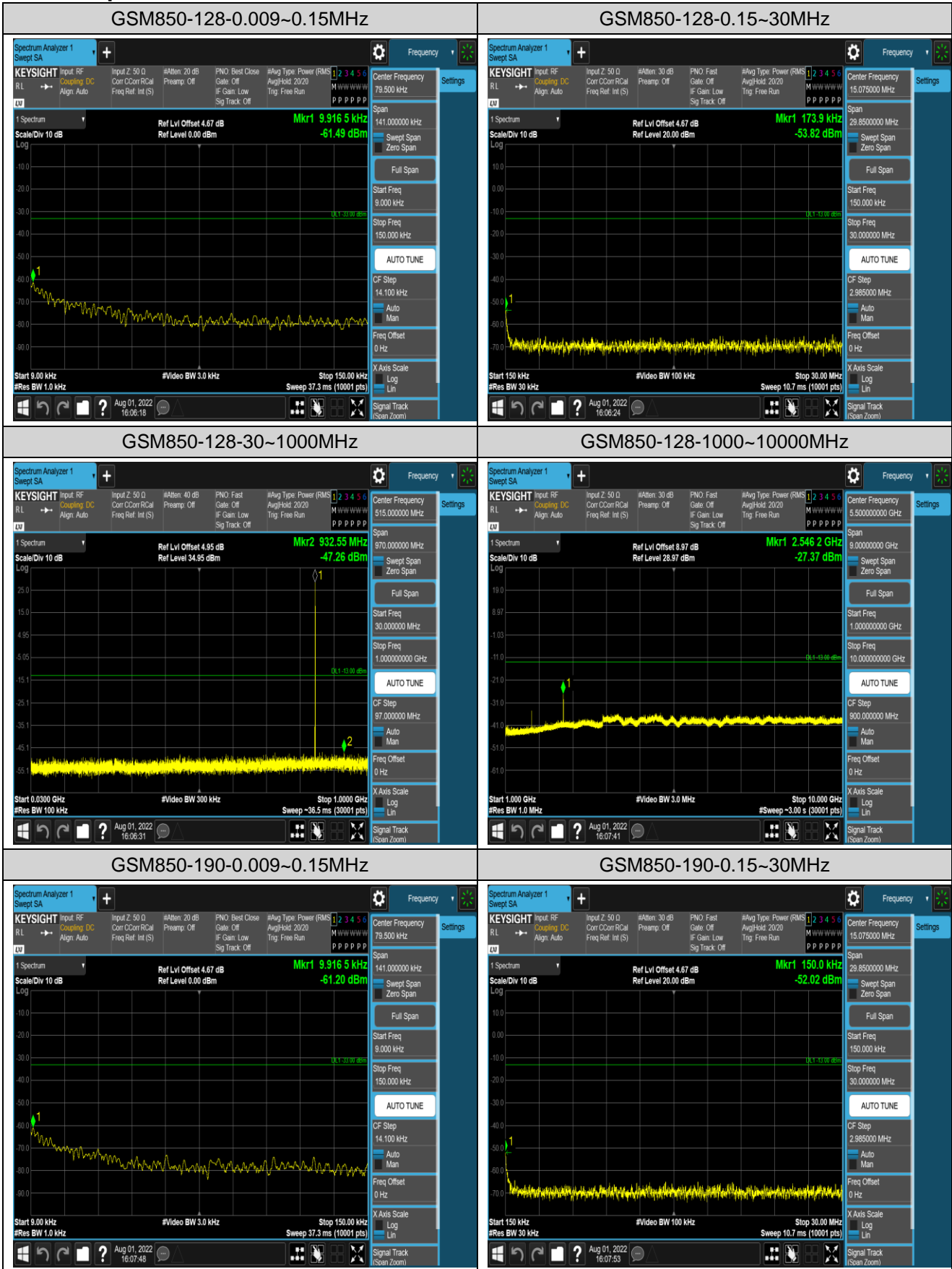
Appendix E: Conducted Spurious Emission

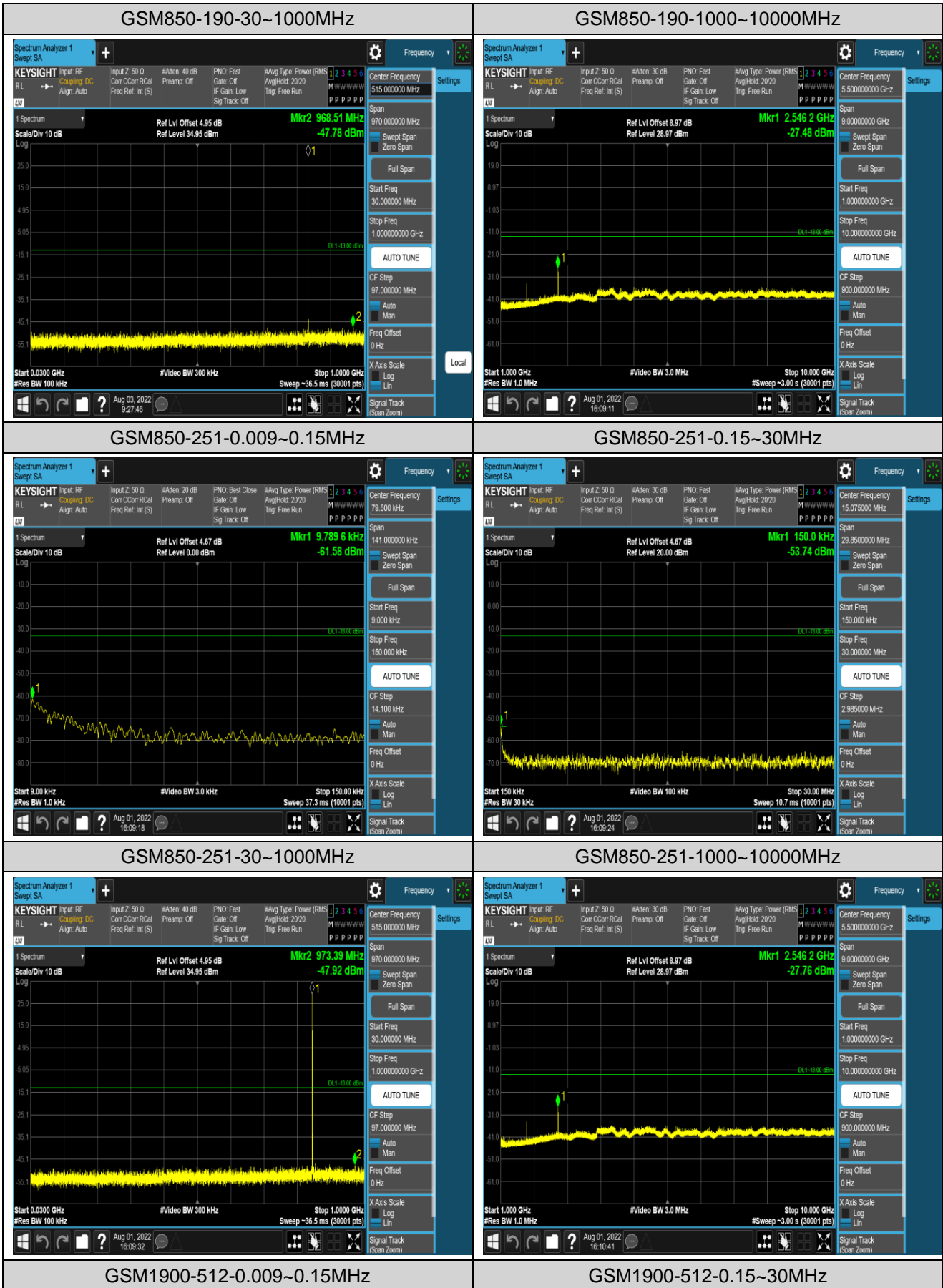
Test Result

Band	Channel	PCL	Frequency Range(MHz)	Max.Freq. (MHz)	Result (dBm)	Limit (dBm)	Verdict
GSM850	128	5	0.009~0.15MHz	0.01	-61.49	-33	PASS
GSM850	128	5	0.15~30MHz	0.17	-53.82	-13	PASS
GSM850	128	5	30~1000MHz	968.51	-47.78	-13	PASS
GSM850	128	5	1000~10000MHz	2546.2	-27.37	-13	PASS
GSM850	190	5	0.009~0.15MHz	0.01	-61.2	-33	PASS
GSM850	190	5	0.15~30MHz	0.15	-52.02	-13	PASS
GSM850	190	5	30~1000MHz	941.7	-47.79	-13	PASS
GSM850	190	5	1000~10000MHz	2546.2	-27.48	-13	PASS
GSM850	251	5	0.009~0.15MHz	0.01	-61.58	-33	PASS
GSM850	251	5	0.15~30MHz	0.15	-53.74	-13	PASS
GSM850	251	5	30~1000MHz	973.39	-47.92	-13	PASS
GSM850	251	5	1000~10000MHz	2546.2	-27.76	-13	PASS
GSM1900	512	0	0.009~0.15MHz	0.01	-69.64	-43	PASS
GSM1900	512	0	0.15~30MHz	0.15	-53.5	-23	PASS
GSM1900	512	0	30~1000MHz	744.63	-47.4	-13	PASS
GSM1900	512	0	1000~18000MHz	3819.73	-31.94	-13	PASS
GSM1900	661	0	0.009~0.15MHz	0.01	-69.65	-43	PASS
GSM1900	661	0	0.15~30MHz	0.15	-50.62	-23	PASS
GSM1900	661	0	30~1000MHz	947.78	-47.47	-13	PASS
GSM1900	661	0	1000~18000MHz	3819.17	-32.21	-13	PASS
GSM1900	810	0	0.009~0.15MHz	0.01	-71.11	-43	PASS
GSM1900	810	0	0.15~30MHz	0.15	-53.26	-23	PASS
GSM1900	810	0	30~1000MHz	839.85	-47.69	-13	PASS
GSM1900	810	0	1000~18000MHz	3819.17	-33.05	-13	PASS

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

Test Graphs

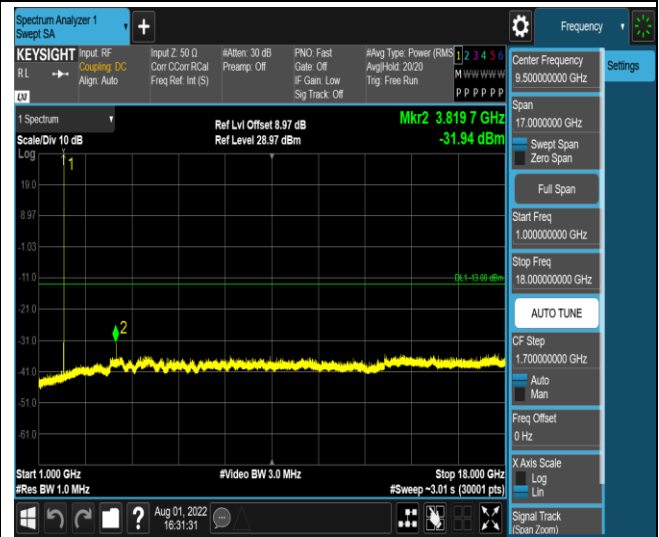
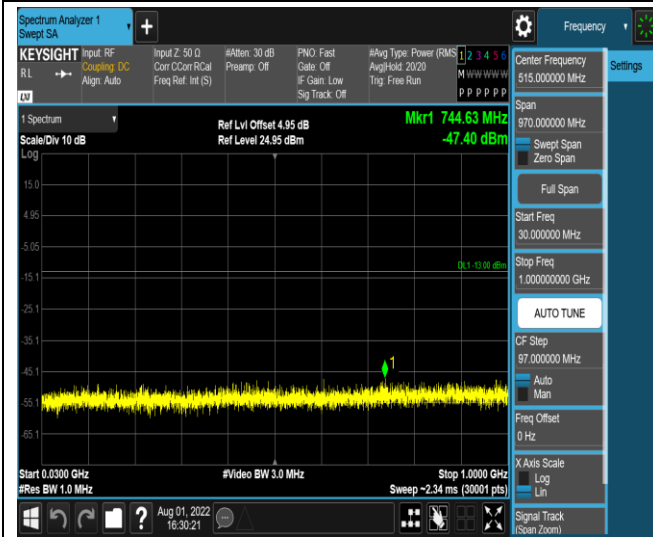






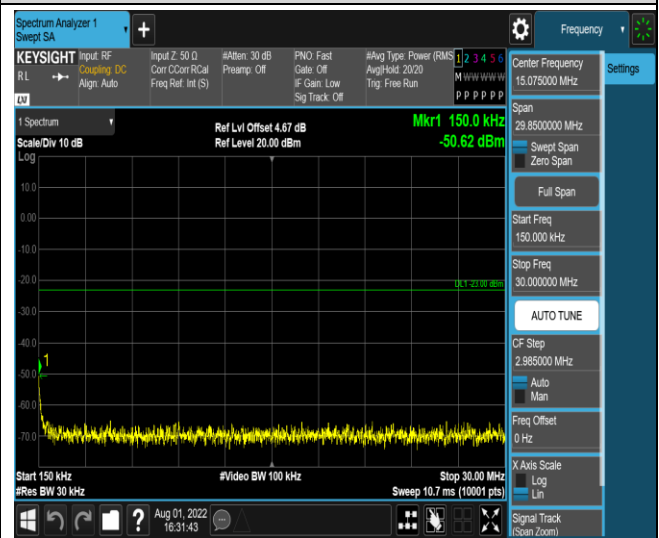
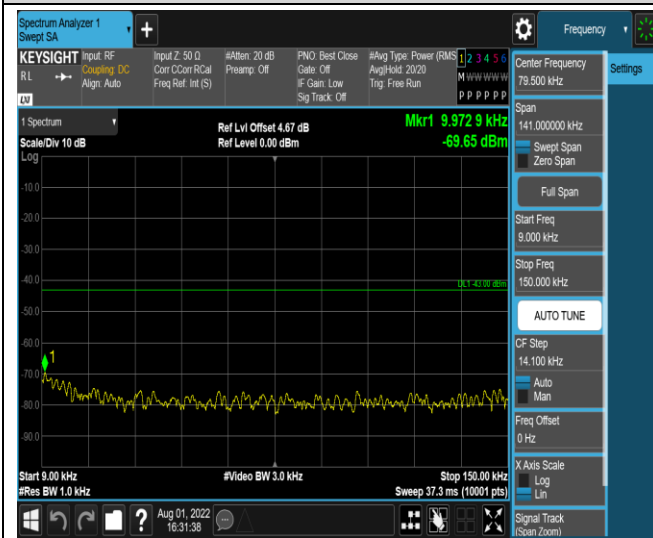
GSM1900-512-30~1000MHz

GSM1900-512-1000~18000MHz



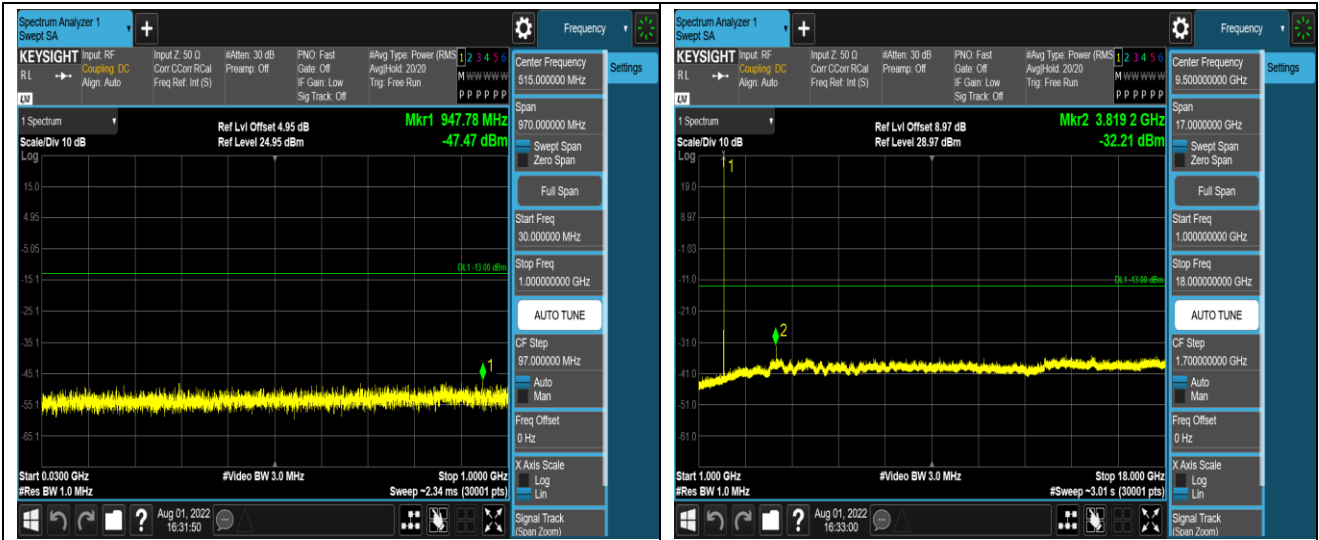
GSM1900-661-0.009~0.15MHz

GSM1900-661-0.15~30MHz



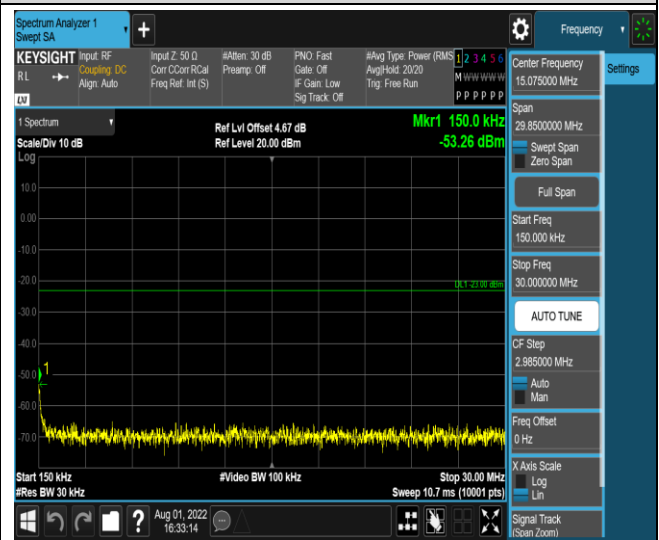
GSM1900-661-30~1000MHz

GSM1900-661-1000~18000MHz



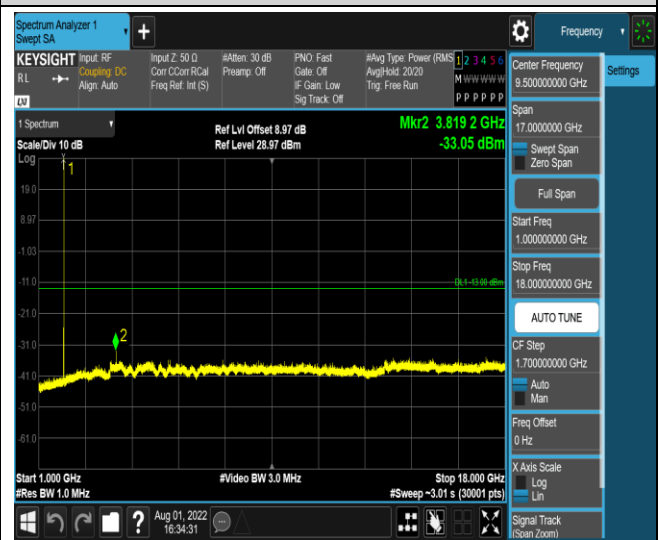
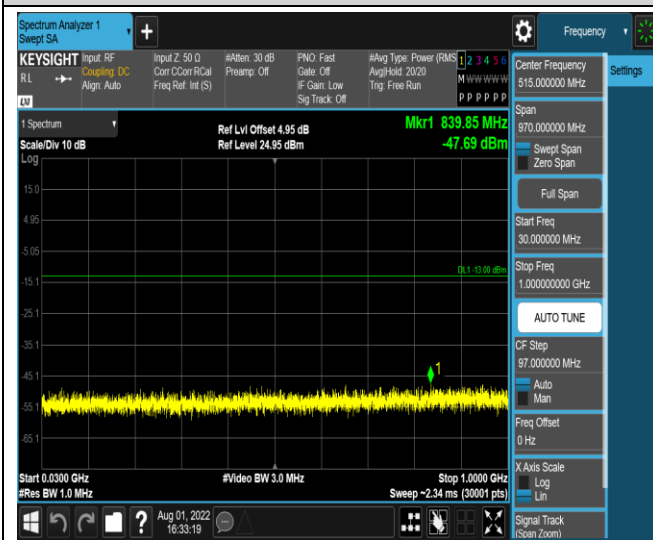
GSM1900-810-0.009~0.15MHz

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		
3.85	-30	15.30	0.018288	±2.5	Pass
	-20	14.21	0.016985		
	-10	12.72	0.015204		
	0	12.91	0.015432		
	10	12.07	0.014427		
	20	9.17	0.010961		
	30	12.24	0.014631		
	40	9.81	0.011726		
	50	10.91	0.013041		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	8.68	0.010375	±2.5	Pass
	3.85	4.91	0.005869		
	4.43	10.62	0.012694		
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	-4.75	-0.005678	±2.5	Pass
	-20	-3.84	-0.004590		
	-10	-8.39	-0.010029		
	0	-5.94	-0.007100		
	10	-7.97	-0.009527		
	20	1.81	0.002164		
	30	2.68	0.003203		
	40	0.52	0.000622		
	50	1.03	0.001231		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	-5.84	-0.006981	±2.5	Pass
	3.85	-1.90	-0.002271		
	4.43	-4.39	-0.005247		
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		
3.85	-30	20.05	0.010665	Within authorized band for PCS 1900	Pass
	-20	21.60	0.011489		
	-10	23.57	0.012537		
	0	27.73	0.014750		
	10	19.24	0.010234		
	20	21.02	0.011181		
	30	20.63	0.010973		
	40	23.25	0.012367		
	50	15.14	0.008053		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	16.76	0.008915	Within authorized band for PCS 1900	Pass
	3.85	16.56	0.008809		
	4.43	16.18	0.008606		
<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	5.88	0.003128	Within authorized band for PCS 1900	Pass
	-20	-2.42	-0.001287		
	-10	10.27	0.005463		
	0	2.62	0.001394		
	10	3.78	0.002011		
	20	6.75	0.003590		
	30	13.37	0.007112		
	40	9.69	0.005154		
	50	16.27	0.008654		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	1.39	0.000739	Within authorized band for PCS 1900	Pass
	3.85	2.00	0.001064		
	4.43	1.42	0.000755		
<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

