

Appendix-A GSM

Effective (Isotropic) Radiated Power Output Data

Test Result

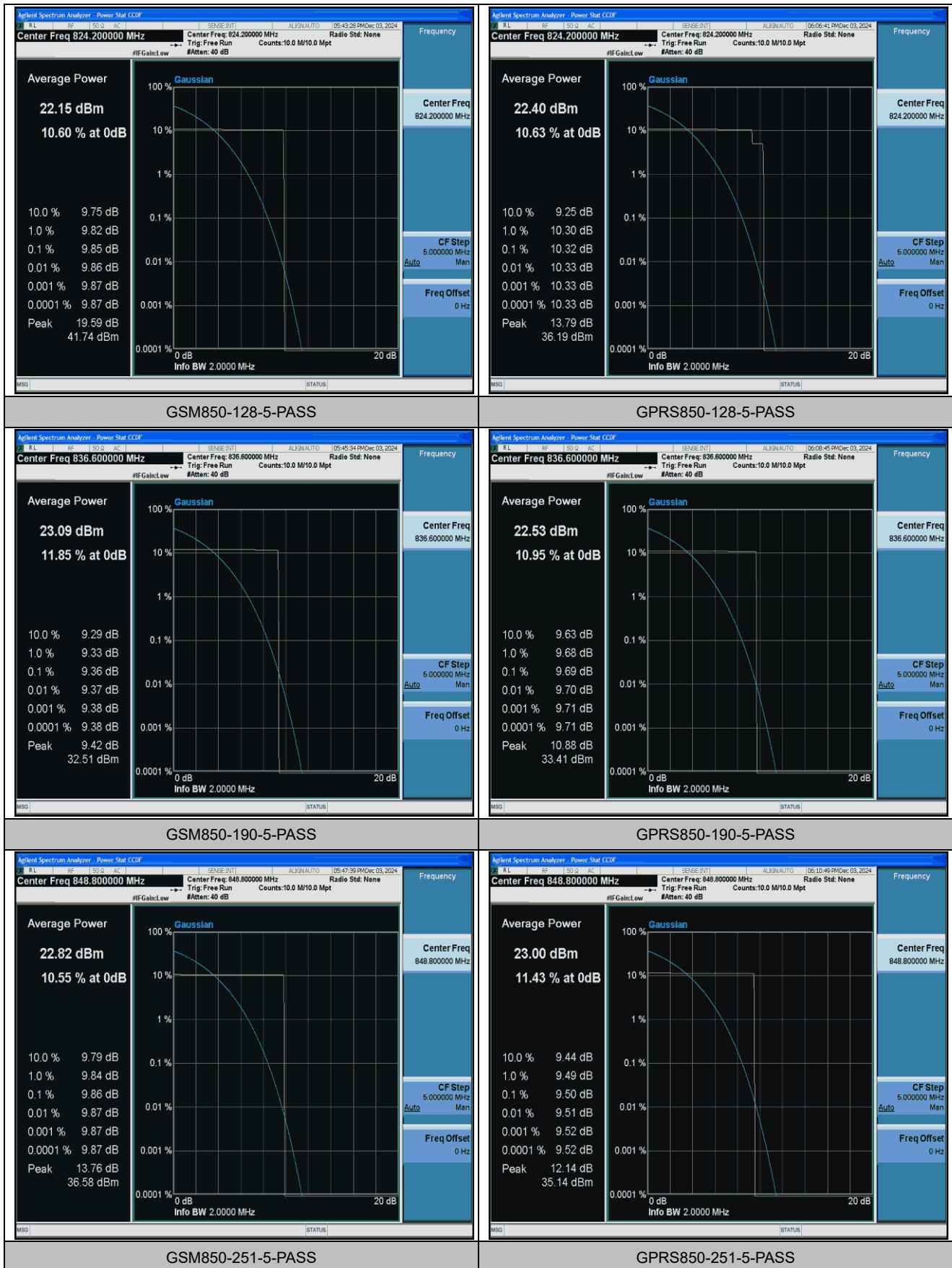
Band	Channel	Slot	Result (dBm)	ERP (dBm)	Limit(dBm)	Verdict
GSM850	128	1	32.94	27.89	38.45	PASS
GPRS850	128	1	32.85	27.8	38.45	PASS
GPRS850	128	2	30.59	25.54	38.45	PASS
GPRS850	128	3	29.05	24	38.45	PASS
GPRS850	128	4	28.14	23.09	38.45	PASS
EGPRS850	128	1	26.53	21.48	38.45	PASS
EGPRS850	128	2	24.54	19.49	38.45	PASS
EGPRS850	128	3	23.38	18.33	38.45	PASS
EGPRS850	128	4	22.31	17.26	38.45	PASS
GSM850	190	1	32.81	27.76	38.45	PASS
GPRS850	190	1	32.56	27.51	38.45	PASS
GPRS850	190	2	30.51	25.46	38.45	PASS
GPRS850	190	3	29.01	23.96	38.45	PASS
GPRS850	190	4	27.95	22.9	38.45	PASS
EGPRS850	190	1	26.73	21.68	38.45	PASS
EGPRS850	190	2	24.71	19.66	38.45	PASS
EGPRS850	190	3	23.28	18.23	38.45	PASS
EGPRS850	190	4	22.25	17.2	38.45	PASS
GSM850	251	1	33.03	27.98	38.45	PASS
GPRS850	251	1	32.95	27.9	38.45	PASS
GPRS850	251	2	30.89	25.84	38.45	PASS
GPRS850	251	3	29.31	24.26	38.45	PASS
GPRS850	251	4	27.98	22.93	38.45	PASS
EGPRS850	251	1	26.55	21.5	38.45	PASS
EGPRS850	251	2	24.74	19.69	38.45	PASS
EGPRS850	251	3	23.42	18.37	38.45	PASS
EGPRS850	251	4	22.43	17.38	38.45	PASS

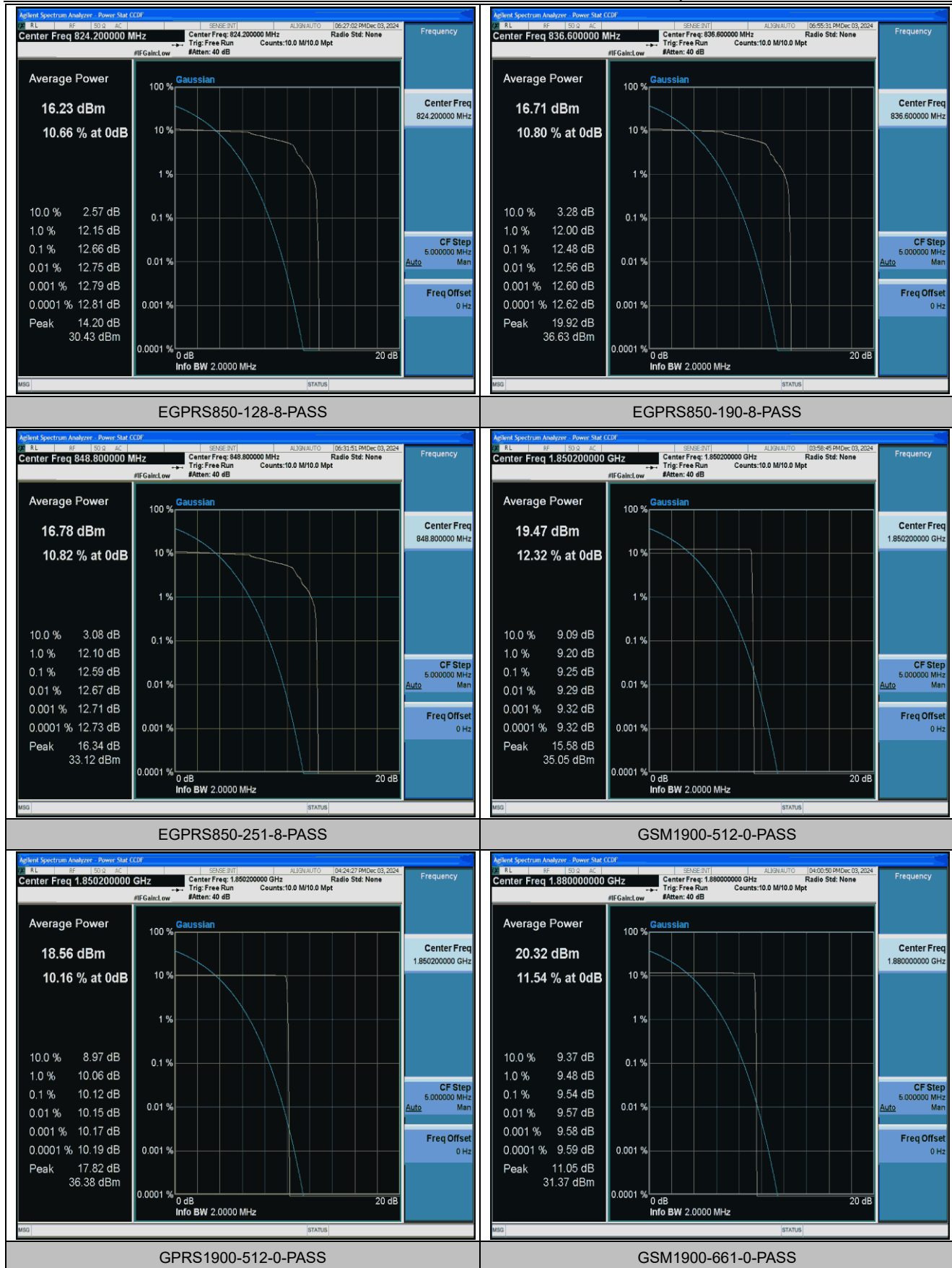
Band	Channel	Slot	Result (dBm)	EIRP (dBm)	Limit(dBm)	Verdict
GSM1900	512	1	29.78	28.78	33	PASS
GPRS1900	512	1	29.62	28.62	33	PASS
GPRS1900	512	2	27.47	26.47	33	PASS
GPRS1900	512	3	26.35	25.35	33	PASS
GPRS1900	512	4	24.03	23.03	33	PASS
EGPRS1900	512	1	25.31	24.31	33	PASS
EGPRS1900	512	2	24.02	23.02	33	PASS
EGPRS1900	512	3	22.81	21.81	33	PASS
EGPRS1900	512	4	21.18	20.18	33	PASS
GSM1900	661	1	29.49	28.49	33	PASS
GPRS1900	661	1	29.48	28.48	33	PASS
GPRS1900	661	2	27.05	26.05	33	PASS
GPRS1900	661	3	26.08	25.08	33	PASS
GPRS1900	661	4	24.21	23.21	33	PASS
EGPRS1900	661	1	25.96	24.96	33	PASS
EGPRS1900	661	2	24.44	23.44	33	PASS
EGPRS1900	661	3	22.45	21.45	33	PASS
EGPRS1900	661	4	20.92	19.92	33	PASS
GSM1900	810	1	29.75	28.75	33	PASS
GPRS1900	810	1	29.64	28.64	33	PASS
GPRS1900	810	2	26.92	25.92	33	PASS
GPRS1900	810	3	25.84	24.84	33	PASS
GPRS1900	810	4	24.05	23.05	33	PASS
EGPRS1900	810	1	25.47	24.47	33	PASS
EGPRS1900	810	2	23.96	22.96	33	PASS
EGPRS1900	810	3	22.75	21.75	33	PASS
EGPRS1900	810	4	21.22	20.22	33	PASS

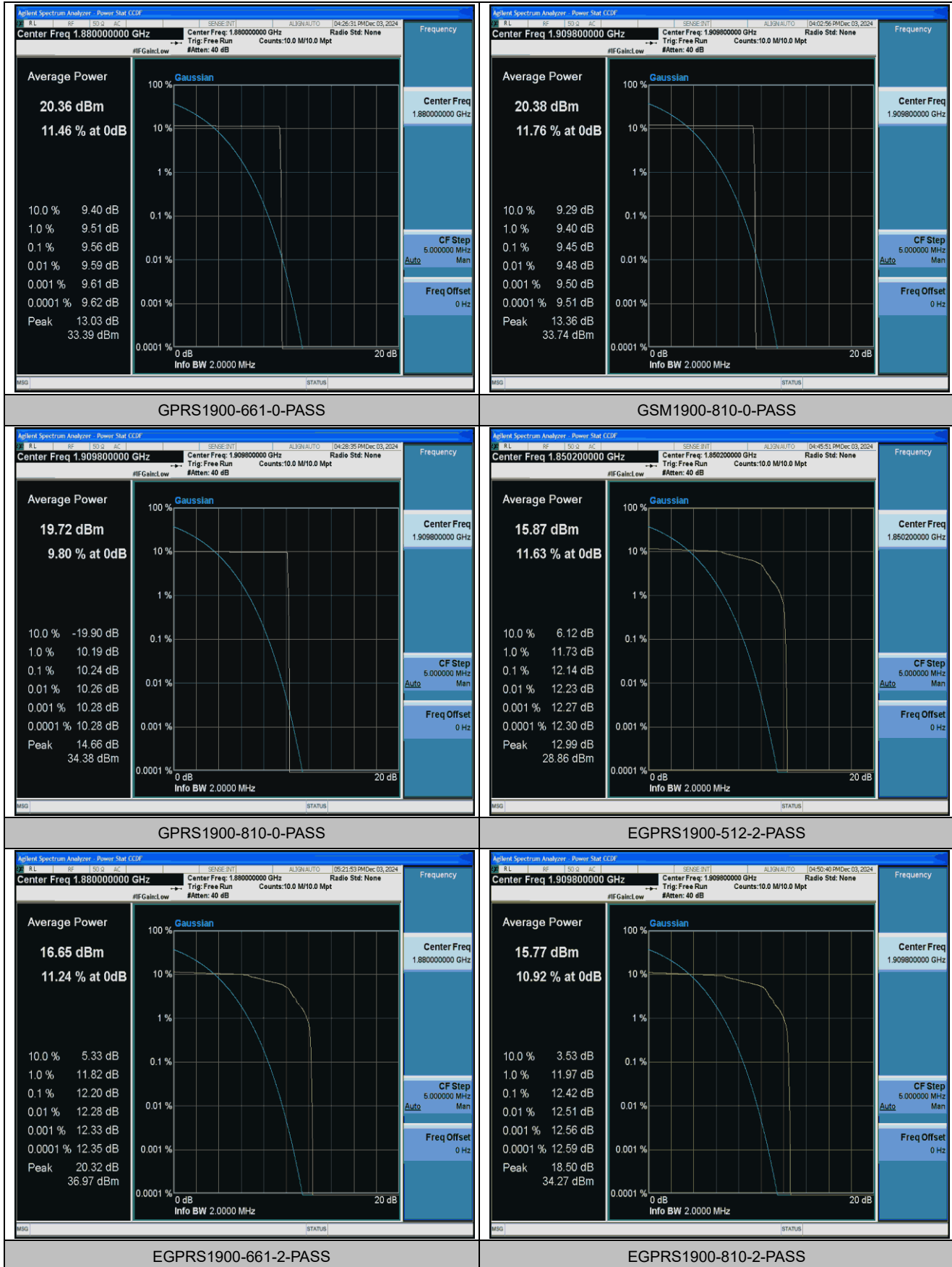
Peak-to-Average Ratio(CCDF)**Test Result**

Band	Channel	Result(dB)	Limit(dB)	Verdict
GSM850	128	9.85	13	PASS
GPRS850	128	10.32	13	PASS
GSM850	190	9.36	13	PASS
GPRS850	190	9.69	13	PASS
GSM850	251	9.86	13	PASS
GPRS850	251	9.50	13	PASS
EGPRS850	128	12.66	13	PASS
EGPRS850	190	12.48	13	PASS
EGPRS850	251	12.59	13	PASS
GSM1900	512	9.25	13	PASS
GPRS1900	512	10.12	13	PASS
GSM1900	661	9.54	13	PASS
GPRS1900	661	9.56	13	PASS
GSM1900	810	9.45	13	PASS
GPRS1900	810	10.24	13	PASS
EGPRS1900	512	12.14	13	PASS
EGPRS1900	661	12.20	13	PASS
EGPRS1900	810	12.42	13	PASS

Test Graphs





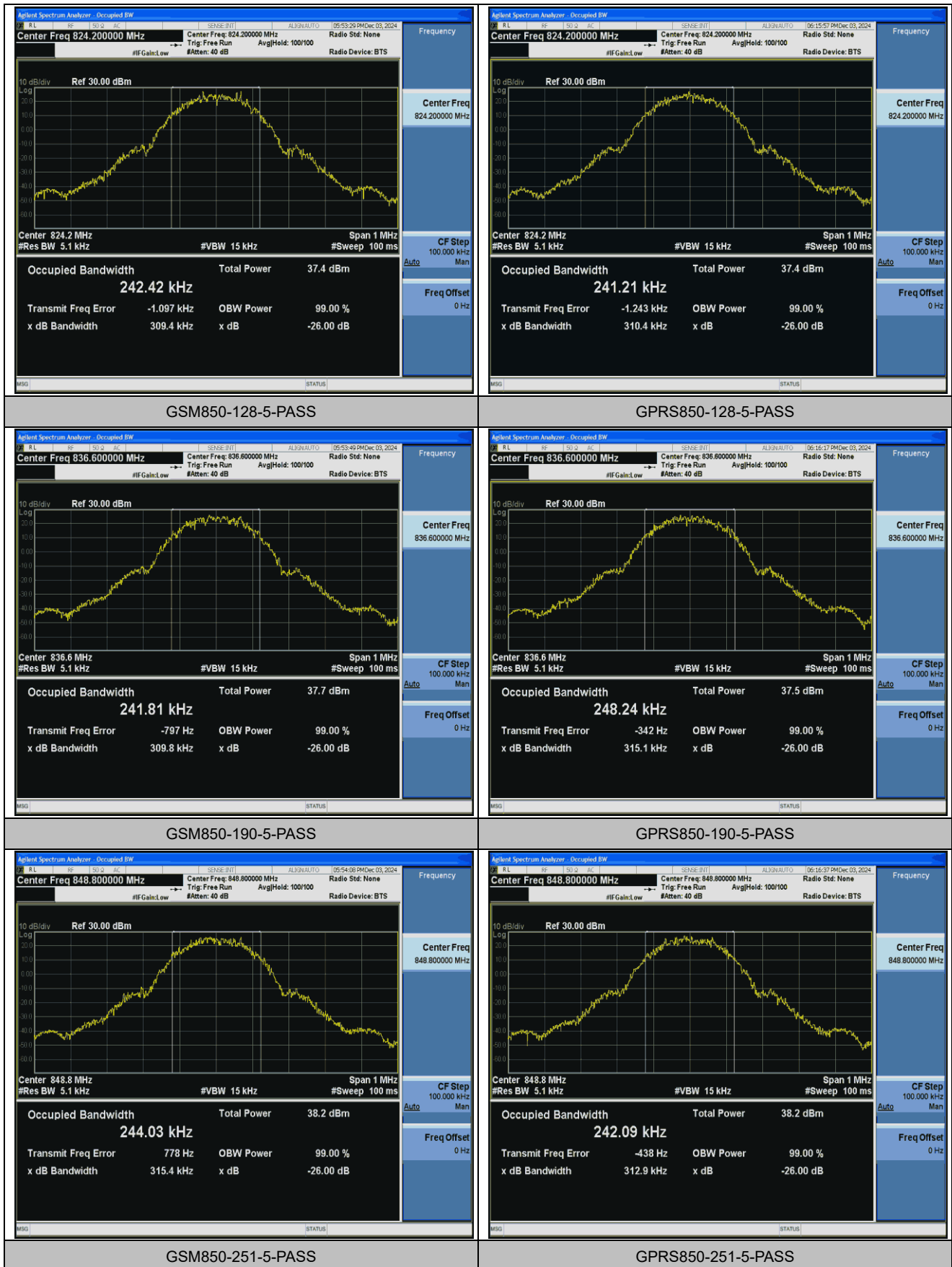


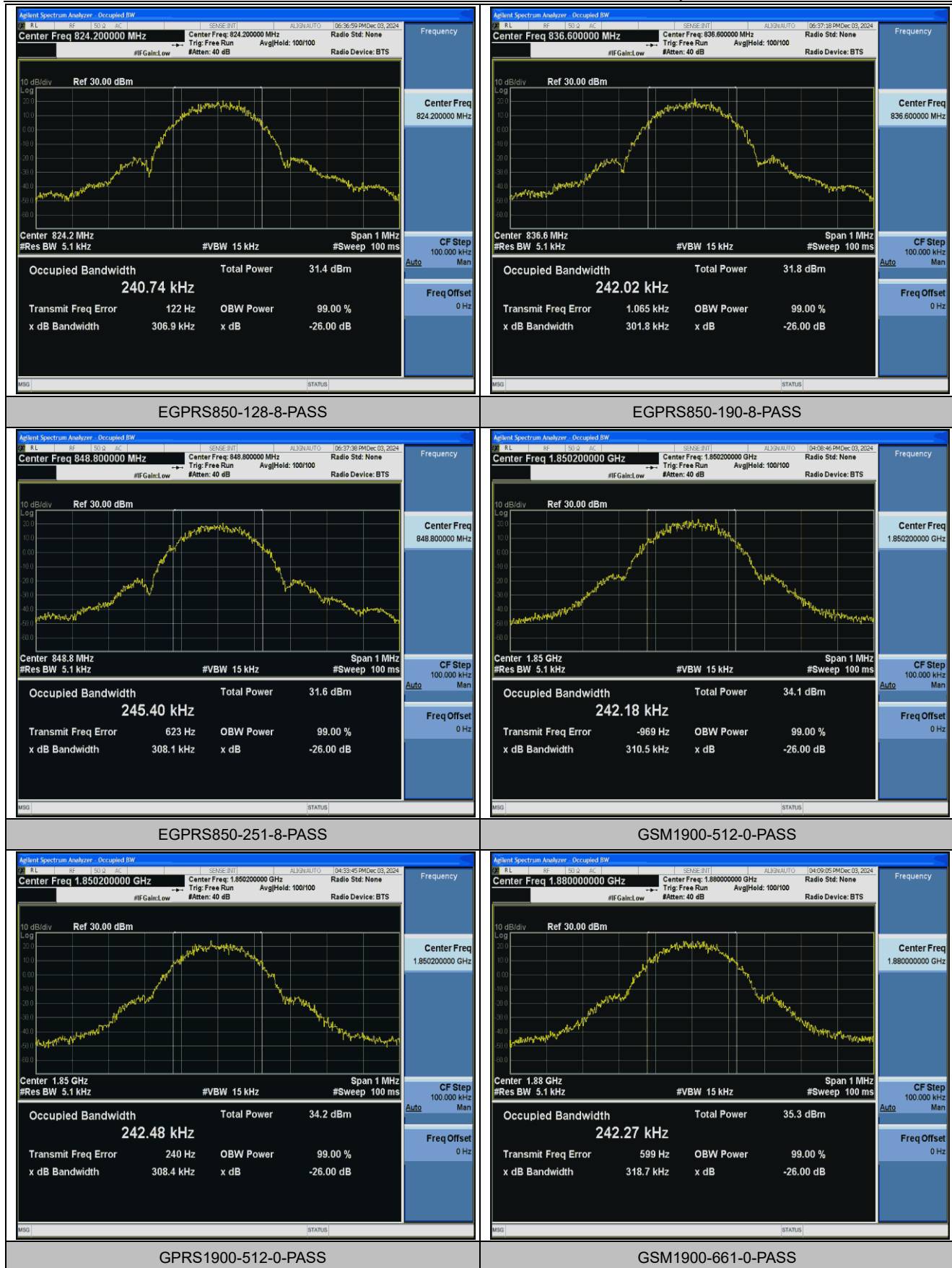
26dB Bandwidth and Occupied Bandwidth

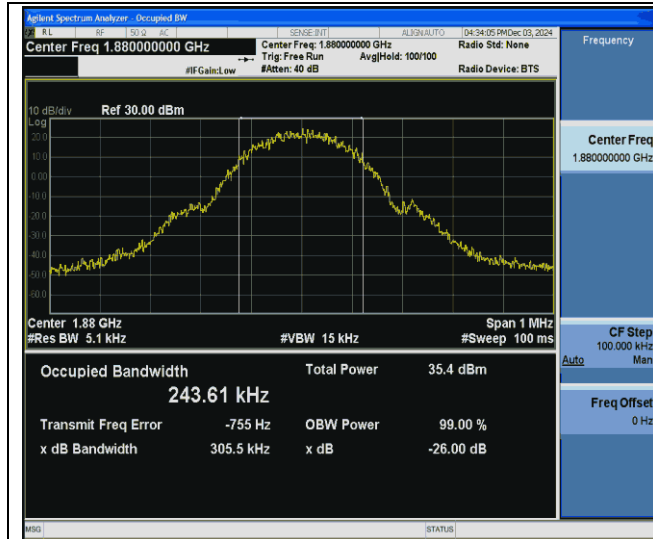
Test Result

Band	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
GSM850	128	0.24242	0.3094	---	PASS
GPRS850	128	0.24121	0.3104	---	PASS
GSM850	190	0.24181	0.3098	---	PASS
GPRS850	190	0.24824	0.3151	---	PASS
GSM850	251	0.24403	0.3154	---	PASS
GPRS850	251	0.24209	0.3129	---	PASS
EGPRS850	128	0.24074	0.3069	---	PASS
EGPRS850	190	0.24202	0.3018	---	PASS
EGPRS850	251	0.24540	0.3081	---	PASS
GSM1900	512	0.24218	0.3105	---	PASS
GPRS1900	512	0.24248	0.3084	---	PASS
GSM1900	661	0.24227	0.3187	---	PASS
GPRS1900	661	0.24361	0.3055	---	PASS
GSM1900	810	0.24669	0.3209	---	PASS
GPRS1900	810	0.24305	0.3096	---	PASS
EGPRS1900	512	0.24292	0.3066	---	PASS
EGPRS1900	661	0.24680	0.3140	---	PASS
EGPRS1900	810	0.24552	0.3127	---	PASS

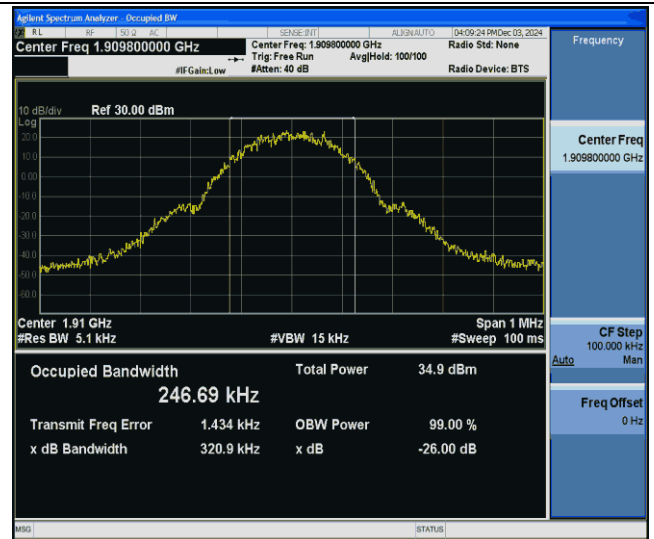
Test Graphs



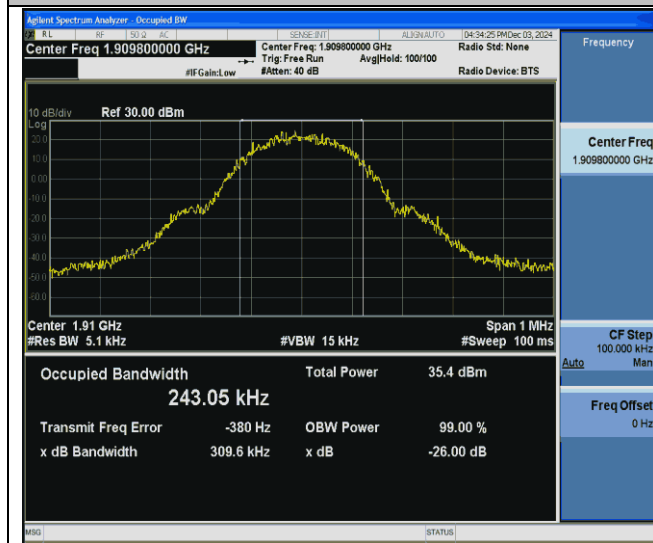




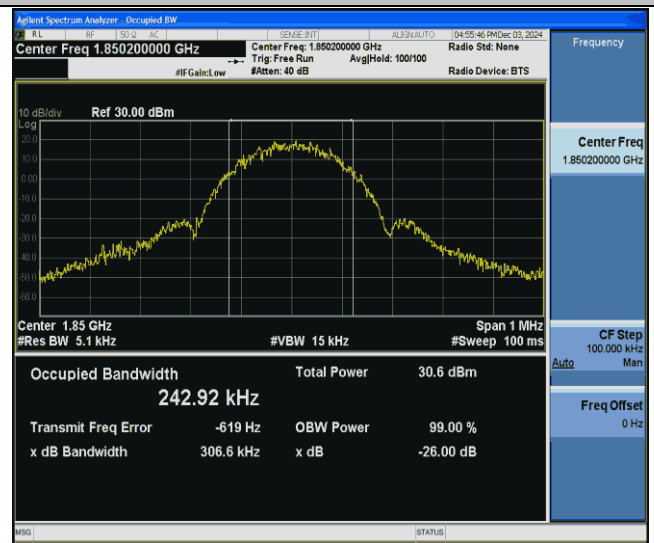
GPRS1900-661-0-PASS



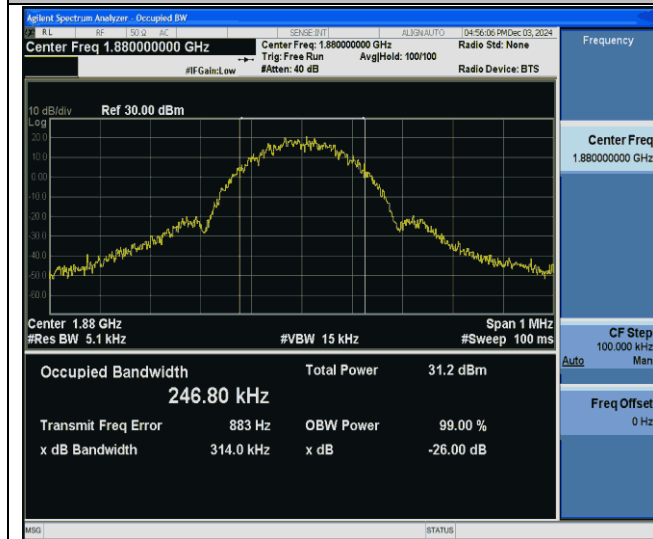
GSM1900-810-0-PASS



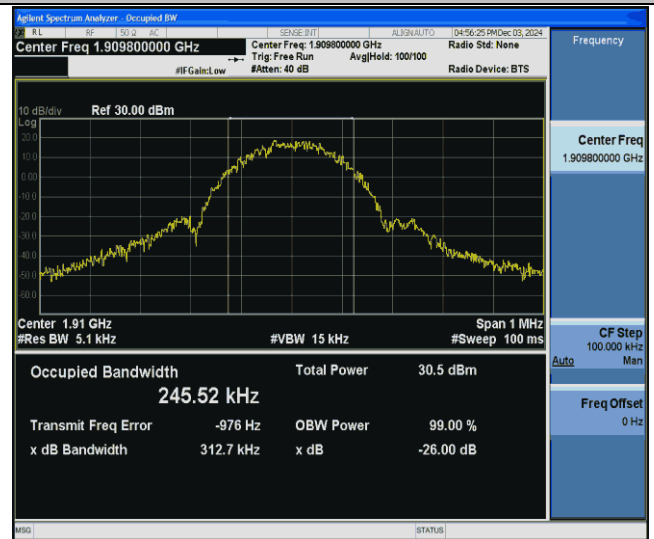
GPRS1900-810-0-PASS



EGPRS1900-512-2-PASS



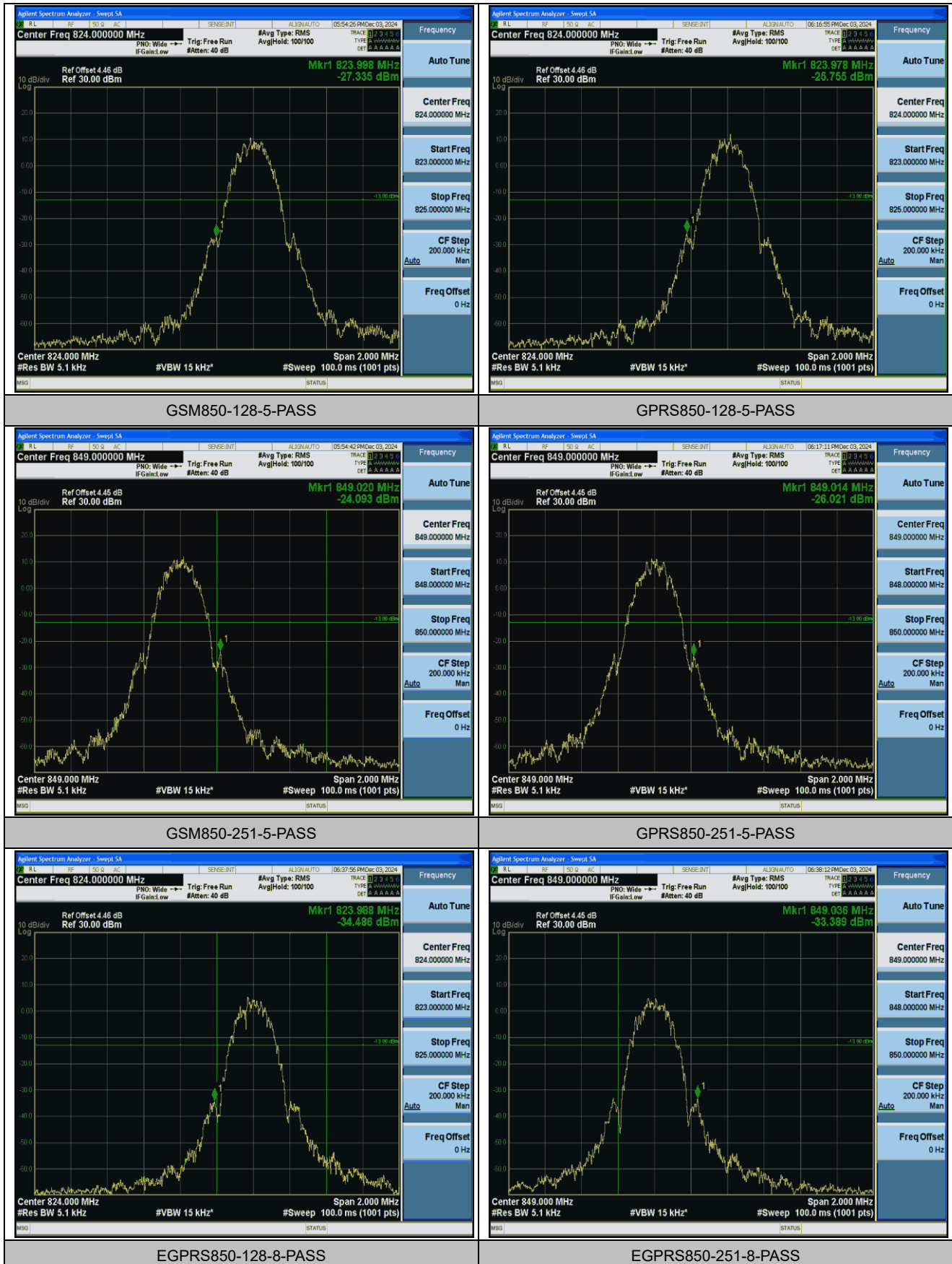
EGPRS1900-661-2-PASS



EGPRS1900-810-2-PASS

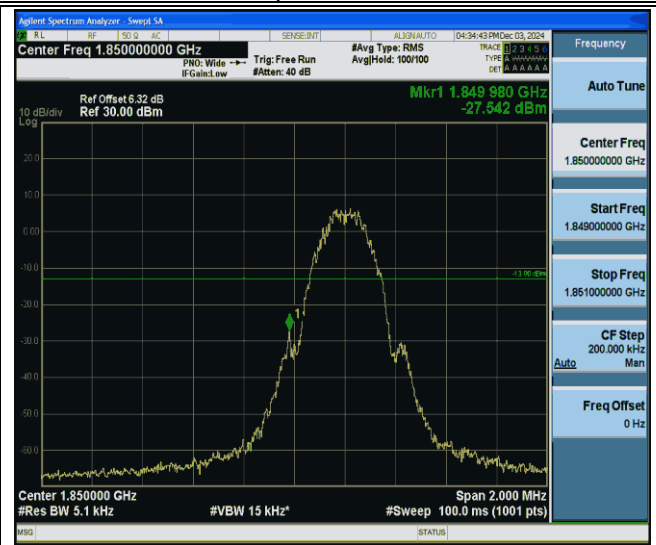
Band Edge

Test Graphs

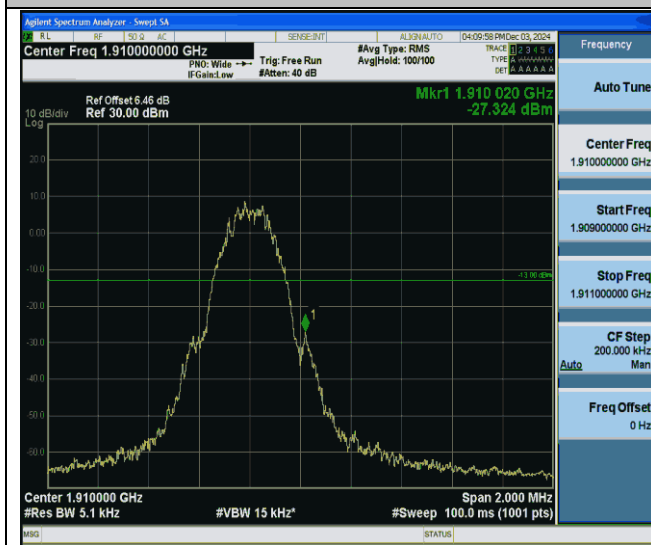




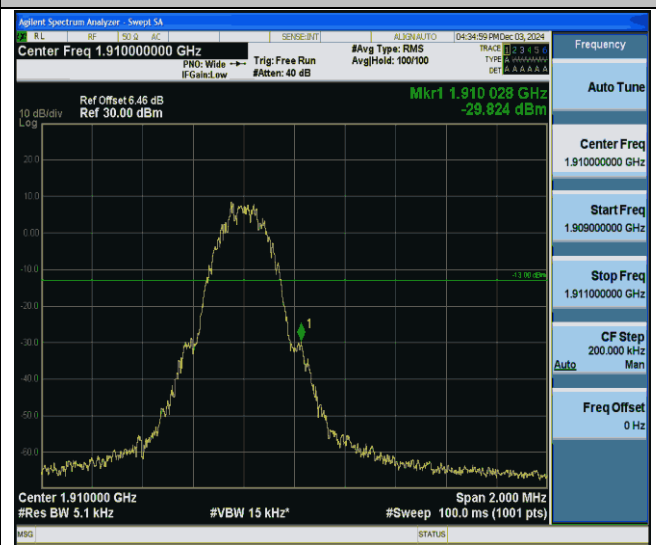
GSM1900-512-0-PASS



GPRS1900-512-0-PASS



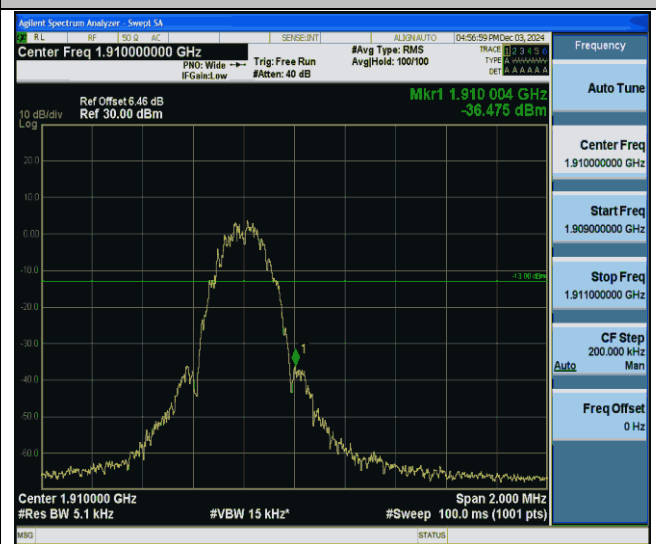
GSM1900-810-0-PASS



GPRS1900-810-0-PASS



EGPRS1900-512-2-PASS

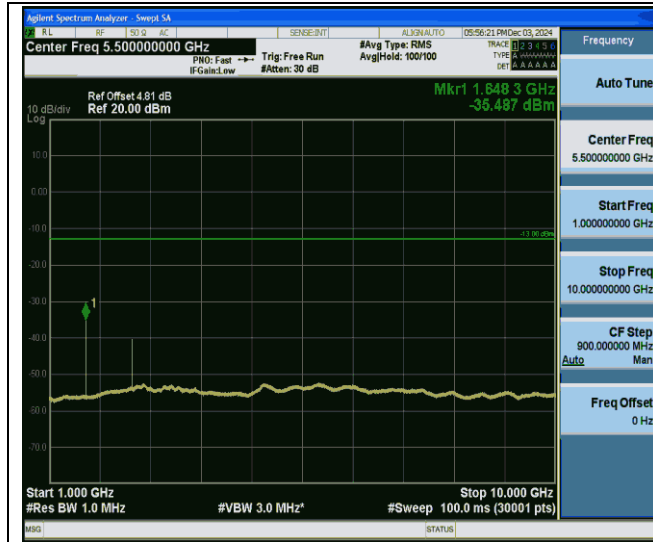


EGPRS1900-810-2-PASS

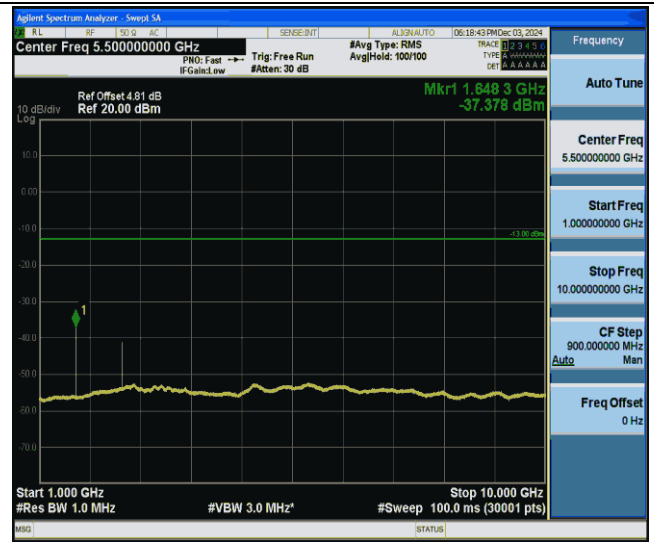
Conducted Spurious Emission

Test Graphs





GSM850-128-5-1000~10000MHz-PASS



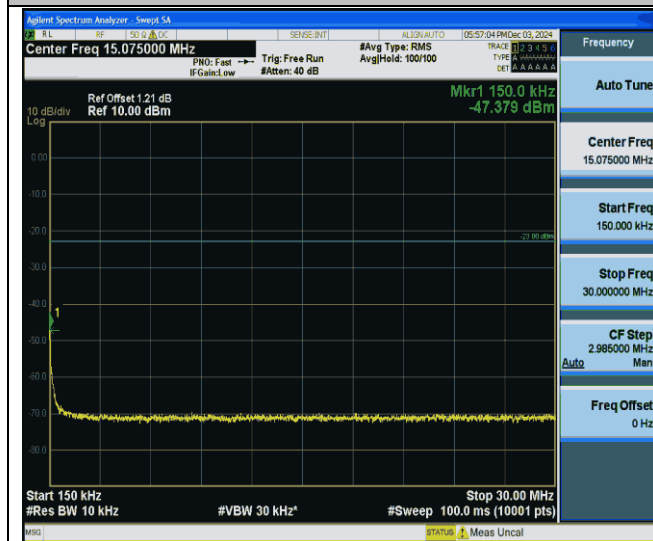
GPRS850-128-5-1000~10000MHz-PASS



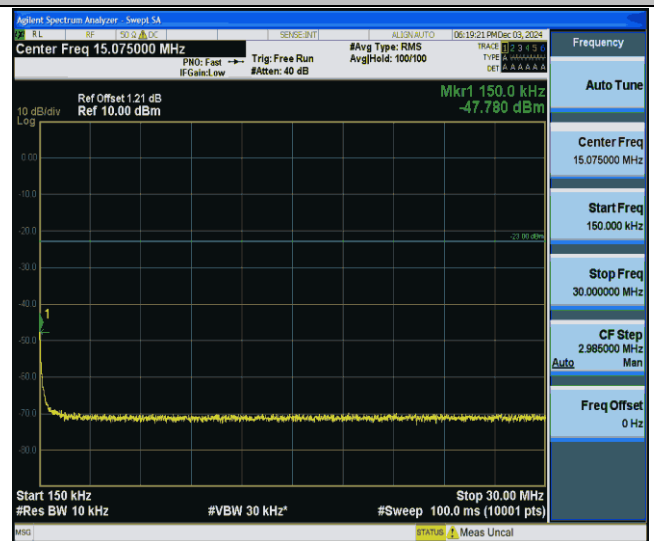
GSM850-190-5-0.009~0.15MHz-PASS



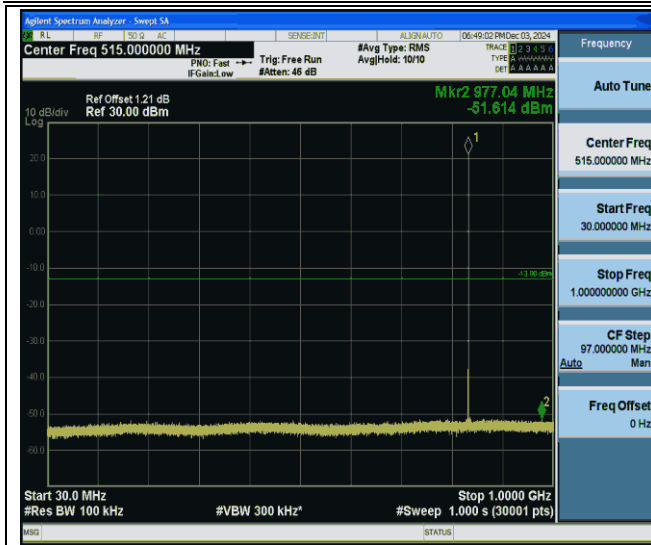
GPRS850-190-5-0.009~0.15MHz-PASS



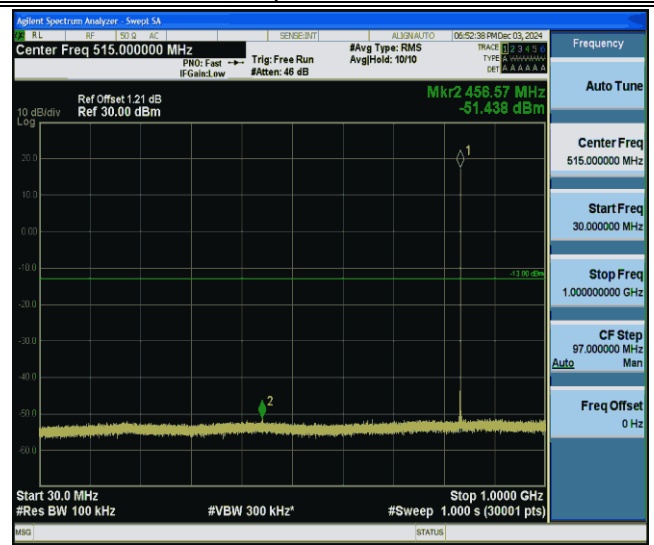
GSM850-190-5-0.15~30MHz-PASS



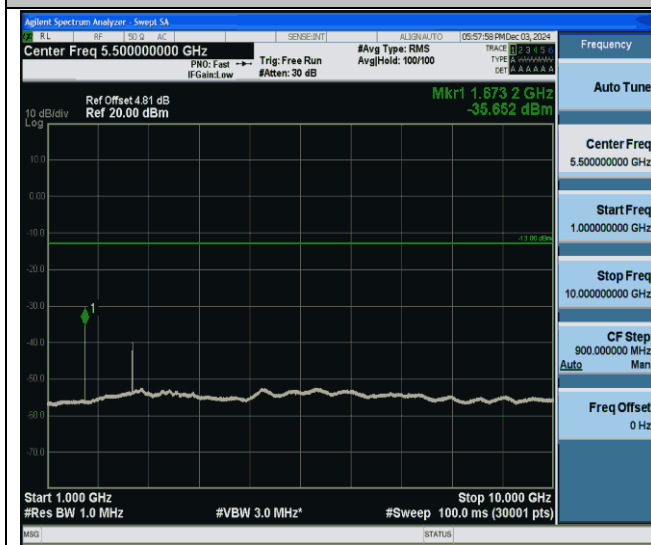
GPRS850-190-5-0.15~30MHz-PASS



GSM850-190-5-30~1000MHz-PASS



GPRS850-190-5-30~1000MHz-PASS



GSM850-190-5-1000~10000MHz-PASS



GPRS850-190-5-1000~10000MHz-PASS



GSM850-251-5-0.009~0.15MHz-PASS

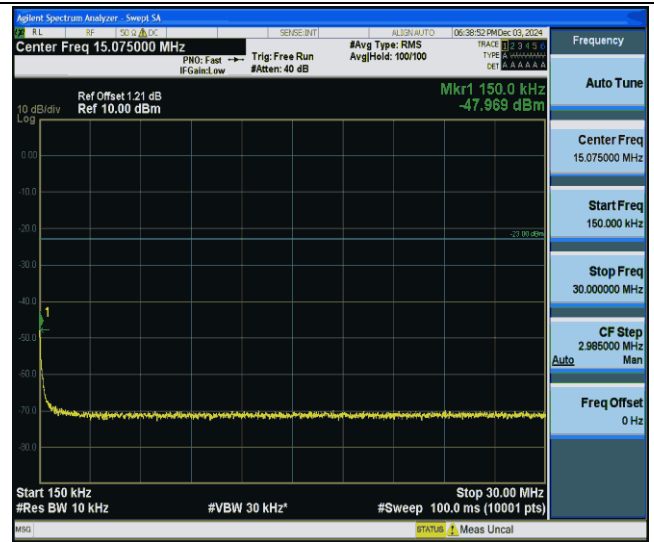


GPRS850-251-5-0.009~0.15MHz-PASS

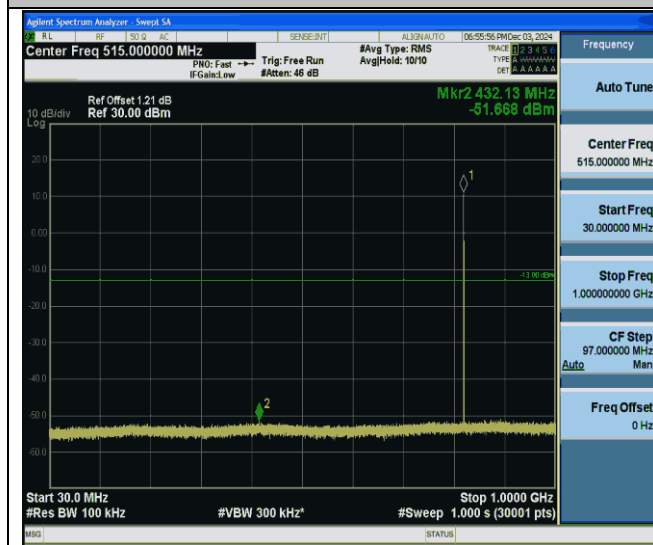




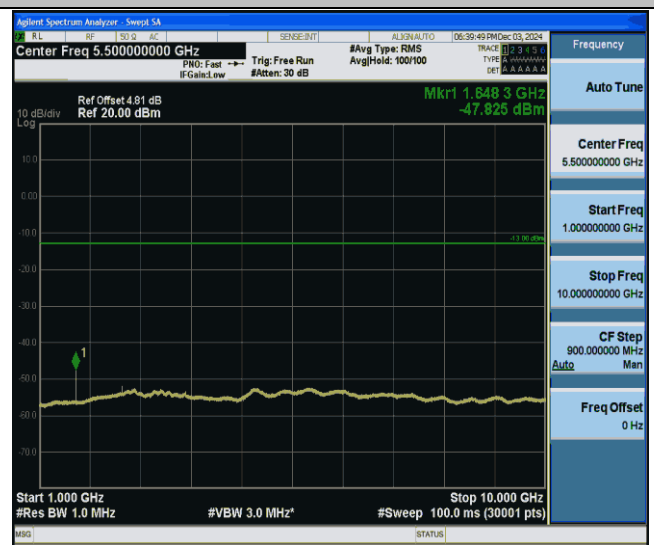
EGPRS850-128-8-0.009~0.15MHz-PASS



EGPRS850-128-8-0.15~30MHz-PASS



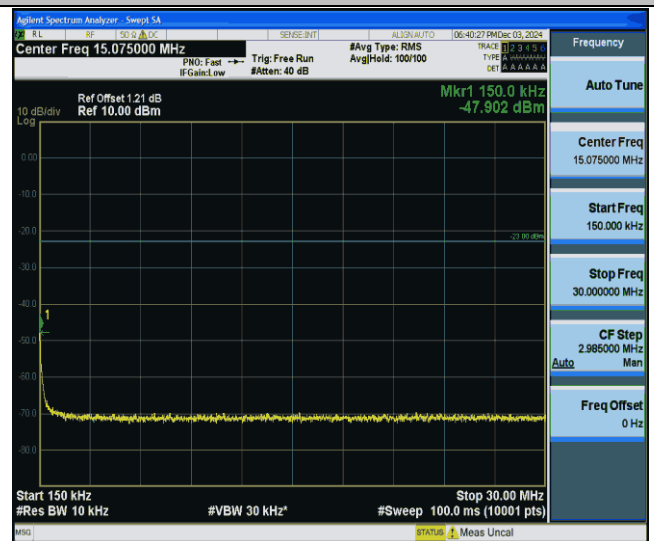
EGPRS850-128-8-30~1000MHz-PASS



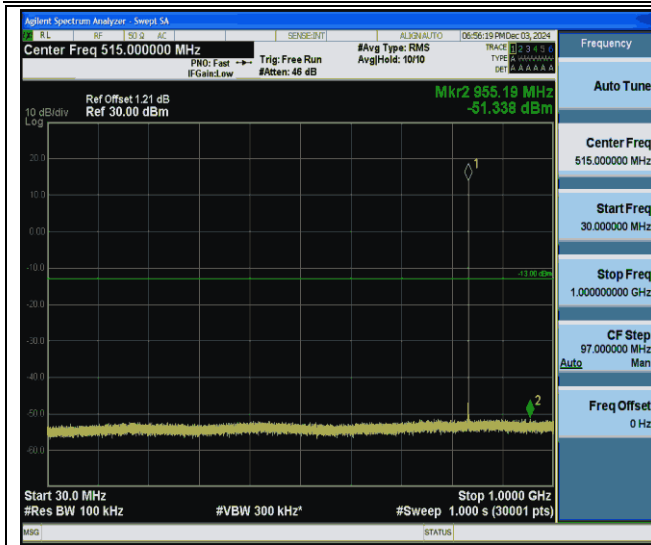
EGPRS850-128-8-1000~10000MHz-PASS



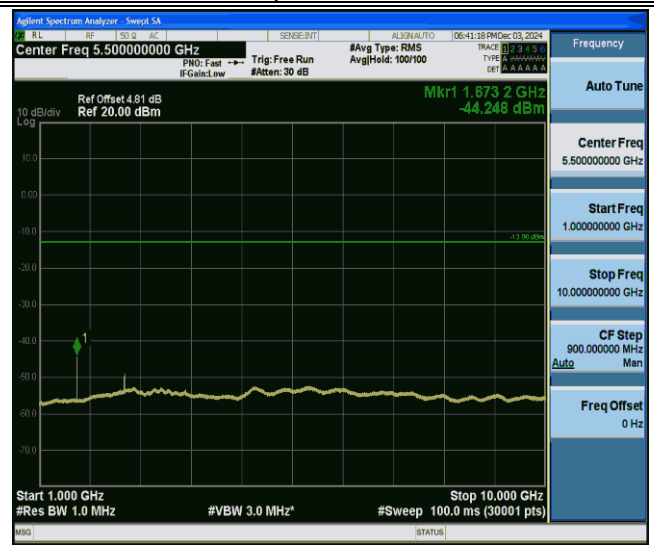
EGPRS850-190-8-0.009~0.15MHz-PASS



EGPRS850-190-8-0.15~30MHz-PASS



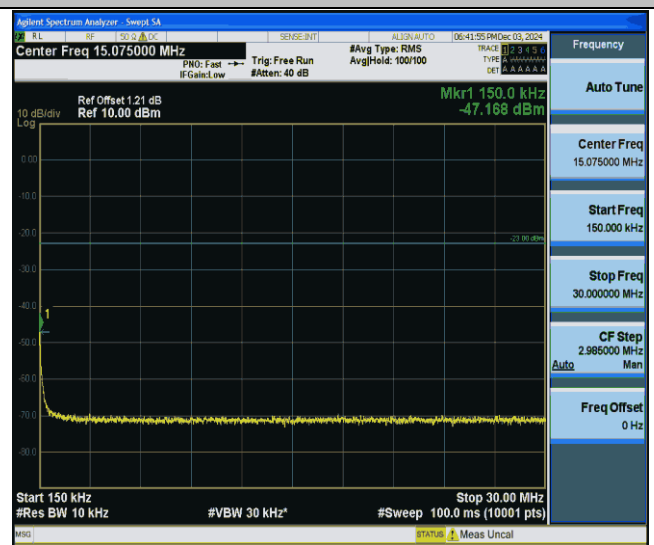
EGPRS850-190-8-30~1000MHz-PASS



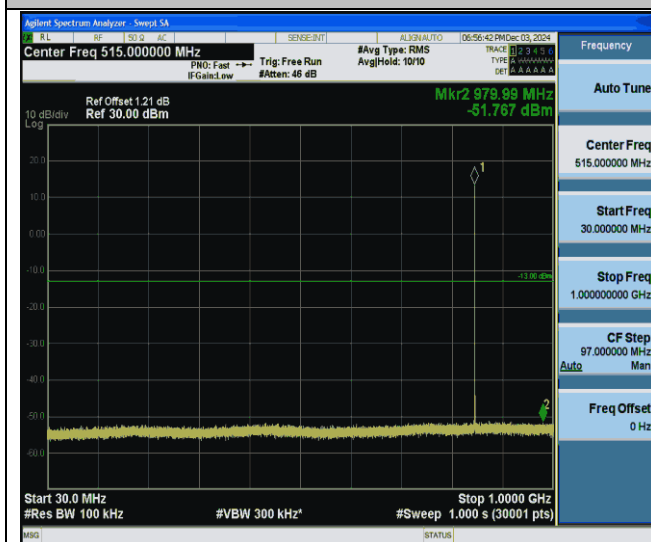
EGPRS850-190-8-1000~10000MHz-PASS



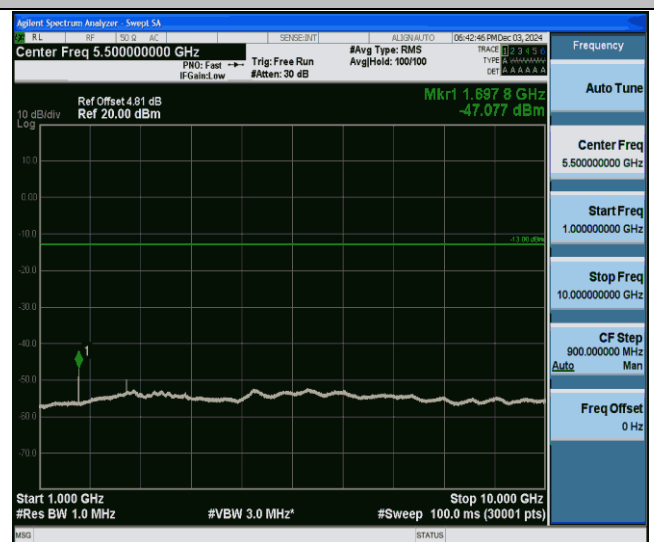
EGPRS850-251-8-0.009~0.15MHz-PASS



EGPRS850-251-8-0.15~30MHz-PASS



EGPRS850-251-8-30~1000MHz-PASS



EGPRS850-251-8-1000~10000MHz-PASS





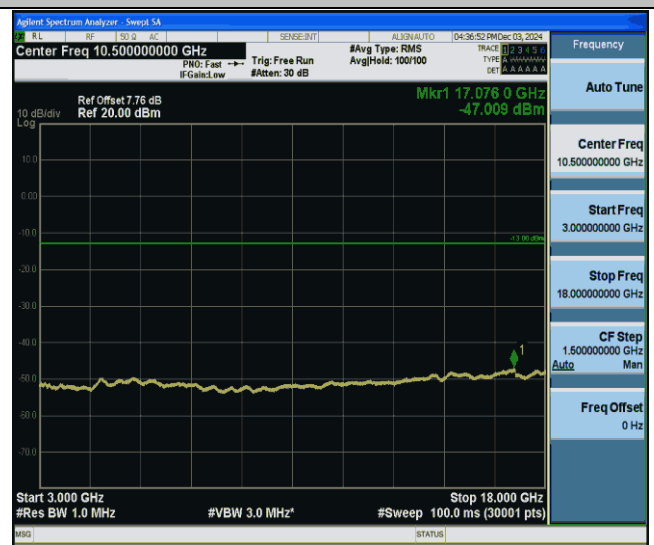
GSM1900-512-0-1000~3000MHz-PASS



GPRS1900-512-0-1000~3000MHz-PASS



GSM1900-512-0-3000~18000MHz-PASS



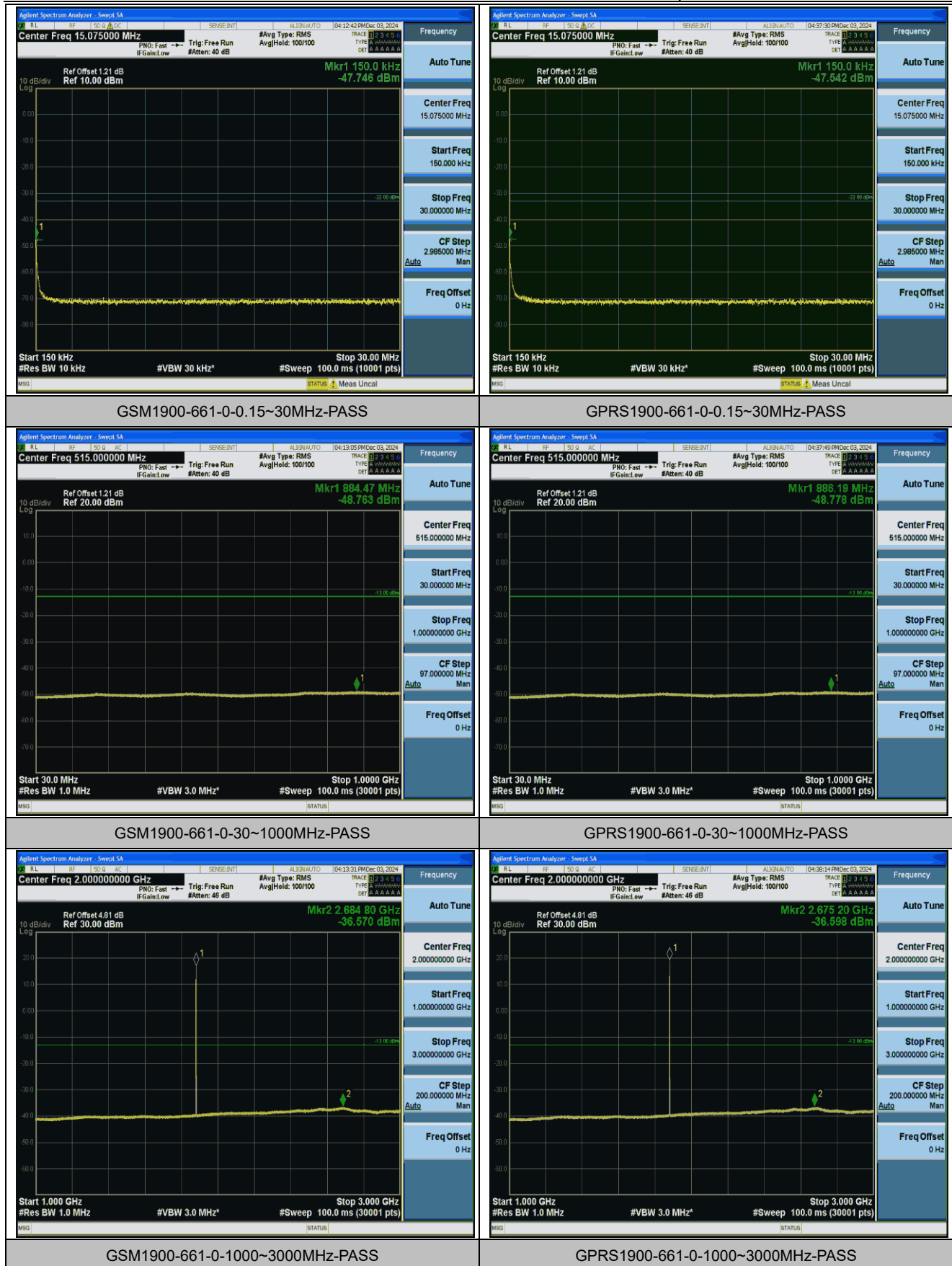
GPRS1900-512-0-3000~18000MHz-PASS

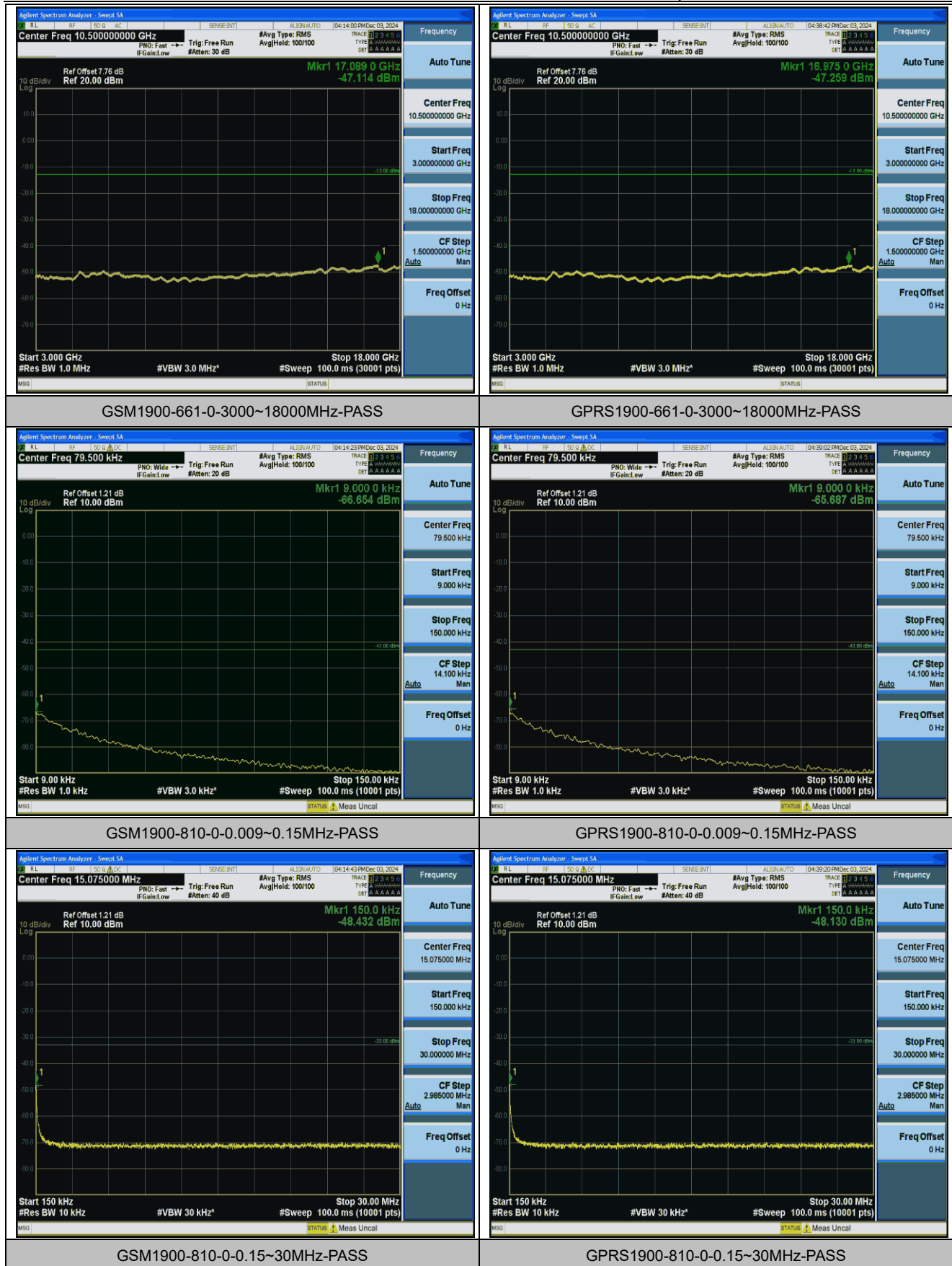


GSM1900-661-0-0.009~0.15MHz-PASS



GPRS1900-661-0-0.009~0.15MHz-PASS







GSM1900-810-0-30~1000MHz-PASS



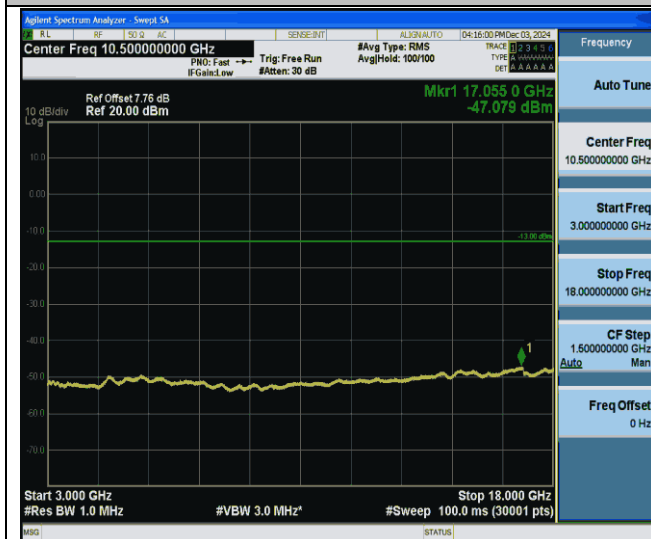
GPRS1900-810-0-30~1000MHz-PASS



GSM1900-810-0-1000~3000MHz-PASS



GPRS1900-810-0-1000~3000MHz-PASS

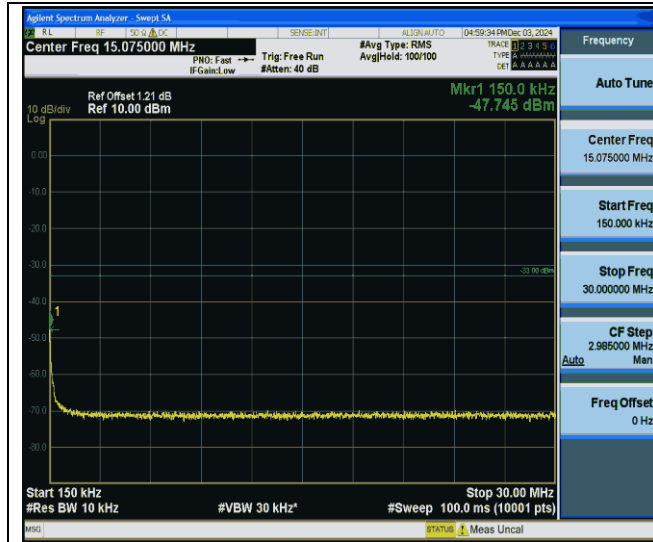


GSM1900-810-0-3000~18000MHz-PASS



GPRS1900-810-0-3000~18000MHz-PASS





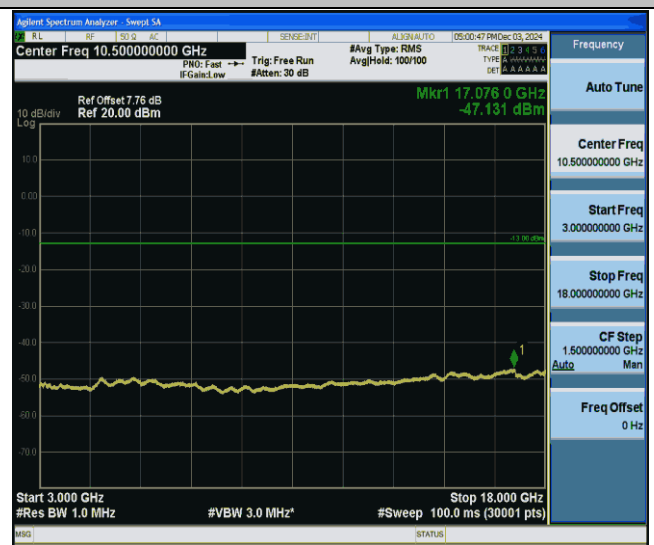
EGPRS1900-661-2-0.15~30MHz-PASS



EGPRS1900-661-2-30~1000MHz-PASS



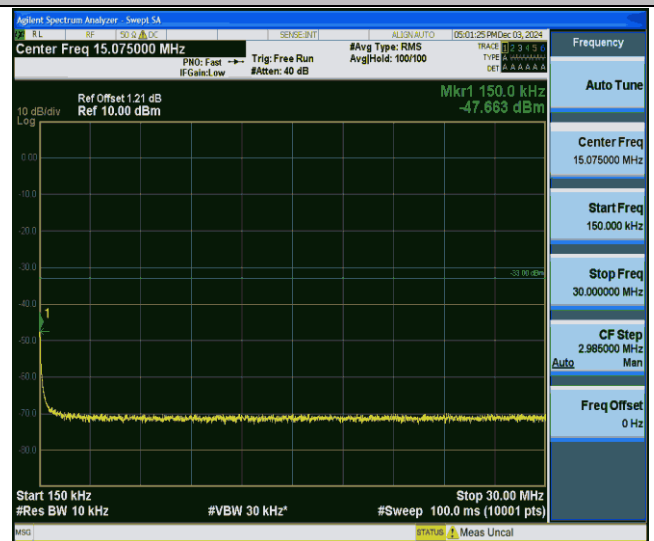
EGPRS1900-661-2-1000~3000MHz-PASS



EGPRS1900-661-2-3000~18000MHz-PASS



EGPRS1900-810-2-0.009~0.15MHz-PASS



EGPRS1900-810-2-0.15~30MHz-PASS



EGPRS1900-810-2-30~1000MHz-PASS



EGPRS1900-810-2-1000~3000MHz-PASS



EGPRS1900-810-2-3000~18000MHz-PASS

Frequency Stability

Test Result

Voltage							
Band	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
GSM850	190	VN	NT	-3.29	-0.003933	±2.5	PASS
GSM850	190	VL	NT	-1.58	-0.001889	±2.5	PASS
GSM850	190	VH	NT	-1.45	-0.001733	±2.5	PASS
GPRS850	190	VN	NT	11.88	0.014200	±2.5	PASS
GPRS850	190	VL	NT	10.75	0.012850	±2.5	PASS
GPRS850	190	VH	NT	11.01	0.013160	±2.5	PASS
EGPRS850	190	VN	NT	11.04	0.013196	±2.5	PASS
EGPRS850	190	VL	NT	11.20	0.013388	±2.5	PASS
EGPRS850	190	VH	NT	10.43	0.012467	±2.5	PASS
GSM1900	661	VN	NT	-10.04	-0.005340	--	PASS
GSM1900	661	VL	NT	-8.59	-0.004569	--	PASS
GSM1900	661	VH	NT	-5.62	-0.002989	--	PASS
GPRS1900	661	VN	NT	2.26	0.001202	--	PASS
GPRS1900	661	VL	NT	2.91	0.001548	--	PASS
GPRS1900	661	VH	NT	2.97	0.001580	--	PASS
EGPRS1900	661	VN	NT	4.71	0.002505	--	PASS
EGPRS1900	661	VL	NT	5.65	0.003005	--	PASS
EGPRS1900	661	VH	NT	7.07	0.003761	--	PASS

Temperature							
Band	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
GSM850	190	NV	-30	-3.49	-0.004234	±2.5	PASS
GSM850	190	NV	-20	-4.42	-0.005363	±2.5	PASS
GSM850	190	NV	-10	-3.07	-0.003725	±2.5	PASS
GSM850	190	NV	0	-0.29	-0.000352	±2.5	PASS
GSM850	190	NV	10	0.23	0.000279	±2.5	PASS
GSM850	190	NV	20	-1.42	-0.001723	±2.5	PASS
GSM850	190	NV	30	-2.49	-0.003021	±2.5	PASS
GSM850	190	NV	40	-3.07	-0.003725	±2.5	PASS
GSM850	190	NV	50	-0.52	-0.000631	±2.5	PASS
GSM850	190	NV	-30	-2.58	-0.003084	±2.5	PASS
GSM850	190	NV	-20	-1.84	-0.002199	±2.5	PASS
GSM850	190	NV	-10	-3.58	-0.004279	±2.5	PASS
GSM850	190	NV	0	-2.00	-0.002391	±2.5	PASS
GSM850	190	NV	10	-2.71	-0.003239	±2.5	PASS
GSM850	190	NV	20	-1.26	-0.001506	±2.5	PASS
GSM850	190	NV	30	-0.06	-0.000072	±2.5	PASS
GSM850	190	NV	40	-0.03	-0.000036	±2.5	PASS
GSM850	190	NV	50	-3.71	-0.004435	±2.5	PASS
GPRS850	190	NV	-30	10.75	0.012850	±2.5	PASS
GPRS850	190	NV	-20	12.07	0.014427	±2.5	PASS
GPRS850	190	NV	-10	10.56	0.012623	±2.5	PASS
GPRS850	190	NV	0	12.56	0.015013	±2.5	PASS
GPRS850	190	NV	10	10.94	0.013077	±2.5	PASS
GPRS850	190	NV	20	10.53	0.012587	±2.5	PASS
GPRS850	190	NV	30	10.53	0.012587	±2.5	PASS
GPRS850	190	NV	40	12.37	0.014786	±2.5	PASS
GPRS850	190	NV	50	10.88	0.013005	±2.5	PASS
EGPRS850	190	NV	-30	9.78	0.011690	±2.5	PASS
EGPRS850	190	NV	-20	11.07	0.013232	±2.5	PASS
EGPRS850	190	NV	-10	10.85	0.012969	±2.5	PASS
EGPRS850	190	NV	0	10.14	0.012120	±2.5	PASS
EGPRS850	190	NV	10	12.43	0.014858	±2.5	PASS
EGPRS850	190	NV	20	10.40	0.012431	±2.5	PASS
EGPRS850	190	NV	30	11.66	0.013937	±2.5	PASS
EGPRS850	190	NV	40	11.36	0.013579	±2.5	PASS
EGPRS850	190	NV	50	10.94	0.013077	±2.5	PASS
GSM1900	661	NV	-30	-8.27	-0.004399	--	PASS
GSM1900	661	NV	-20	-10.23	-0.005441	--	PASS
GSM1900	661	NV	-10	-5.17	-0.002750	--	PASS
GSM1900	661	NV	0	-10.91	-0.005803	--	PASS
GSM1900	661	NV	10	-9.33	-0.004963	--	PASS
GSM1900	661	NV	20	-8.85	-0.004707	--	PASS

GSM1900	661	NV	30	-7.85	-0.004176	--	PASS
GSM1900	661	NV	40	-5.68	-0.003021	--	PASS
GSM1900	661	NV	50	-8.30	-0.004415	--	PASS
GPRS1900	661	NV	-30	2.94	0.001564	--	PASS
GPRS1900	661	NV	-20	4.88	0.002596	--	PASS
GPRS1900	661	NV	-10	2.20	0.001170	--	PASS
GPRS1900	661	NV	0	3.52	0.001872	--	PASS
GPRS1900	661	NV	10	3.29	0.001750	--	PASS
GPRS1900	661	NV	20	0.58	0.000309	--	PASS
GPRS1900	661	NV	30	2.32	0.001234	--	PASS
GPRS1900	661	NV	40	1.71	0.000910	--	PASS
GPRS1900	661	NV	50	3.23	0.001718	--	PASS
EGPRS1900	661	NV	-30	6.52	0.003468	--	PASS
EGPRS1900	661	NV	-20	7.36	0.003915	--	PASS
EGPRS1900	661	NV	-10	9.30	0.004947	--	PASS
EGPRS1900	661	NV	0	5.84	0.003106	--	PASS
EGPRS1900	661	NV	10	5.46	0.002904	--	PASS
EGPRS1900	661	NV	20	5.91	0.003144	--	PASS
EGPRS1900	661	NV	30	5.20	0.002766	--	PASS
EGPRS1900	661	NV	40	8.36	0.004447	--	PASS
EGPRS1900	661	NV	50	6.46	0.003436	--	PASS

~The End~