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	33.04	26.54	38.45	PASS
GSM850	190	5	33.12	26.62	38.45	PASS
GSM850	251	5	33.10	26.6	38.45	PASS
GSM1900	512	0	29.38	27.46	33.00	PASS
GSM1900	661	0	29.52	27.6	33.00	PASS
GSM1900	810	0	29.09	27.17	33.00	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
GPRS850	128	5	1	33.04	26.54	38.45	PASS
GPRS850	128	5	2	31.01	24.51	38.45	PASS
GPRS850	128	5	3	29.12	22.62	38.45	PASS
GPRS850	128	5	4	27.21	20.71	38.45	PASS
GPRS850	190	5	1	33.13	26.63	38.45	PASS
GPRS850	190	5	2	31.12	24.62	38.45	PASS
GPRS850	190	5	3	29.24	22.74	38.45	PASS
GPRS850	190	5	4	27.32	20.82	38.45	PASS
GPRS850	251	5	1	33.11	26.61	38.45	PASS
GPRS850	251	5	2	31.12	24.62	38.45	PASS
GPRS850	251	5	3	29.26	22.76	38.45	PASS
GPRS850	251	5	4	27.38	20.88	38.45	PASS
GPRS1900	512	0	1	29.38	27.46	33.00	PASS
GPRS1900	512	0	2	27.21	25.29	33.00	PASS
GPRS1900	512	0	3	25.71	23.79	33.00	PASS
GPRS1900	512	0	4	23.69	21.77	33.00	PASS
GPRS1900	661	0	1	29.52	27.6	33.00	PASS
GPRS1900	661	0	2	27.27	25.35	33.00	PASS
GPRS1900	661	0	3	25.78	23.86	33.00	PASS
GPRS1900	661	0	4	23.81	21.89	33.00	PASS
GPRS1900	810	0	1	29.10	27.18	33.00	PASS
GPRS1900	810	0	2	26.75	24.83	33.00	PASS
GPRS1900	810	0	3	25.30	23.38	33.00	PASS
GPRS1900	810	0	4	23.37	21.45	33.00	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
EGPRS850	128	8	1	27.01	20.51	38.45	PASS
EGPRS850	128	8	2	25.83	19.33	38.45	PASS
EGPRS850	128	8	3	23.89	17.39	38.45	PASS
EGPRS850	128	8	4	21.51	15.01	38.45	PASS
EGPRS850	190	8	1	27.14	20.64	38.45	PASS
EGPRS850	190	8	2	25.97	19.47	38.45	PASS
EGPRS850	190	8	3	24.00	17.5	38.45	PASS
EGPRS850	190	8	4	21.70	15.2	38.45	PASS
EGPRS850	251	8	1	27.04	20.54	38.45	PASS
EGPRS850	251	8	2	25.87	19.37	38.45	PASS
EGPRS850	251	8	3	23.86	17.36	38.45	PASS
EGPRS850	251	8	4	21.60	15.1	38.45	PASS
EGPRS1900	512	2	1	25.85	23.93	33.00	PASS
EGPRS1900	512	2	2	24.24	22.32	33.00	PASS
EGPRS1900	512	2	3	22.09	20.17	33.00	PASS
EGPRS1900	512	2	4	19.25	17.33	33.00	PASS
EGPRS1900	661	2	1	26.34	24.42	33.00	PASS
EGPRS1900	661	2	2	24.75	22.83	33.00	PASS
EGPRS1900	661	2	3	22.65	20.73	33.00	PASS
EGPRS1900	661	2	4	19.86	17.94	33.00	PASS
EGPRS1900	810	2	1	25.95	24.03	33.00	PASS
EGPRS1900	810	2	2	24.36	22.44	33.00	PASS
EGPRS1900	810	2	3	22.23	20.31	33.00	PASS
EGPRS1900	810	2	4	19.46	17.54	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)

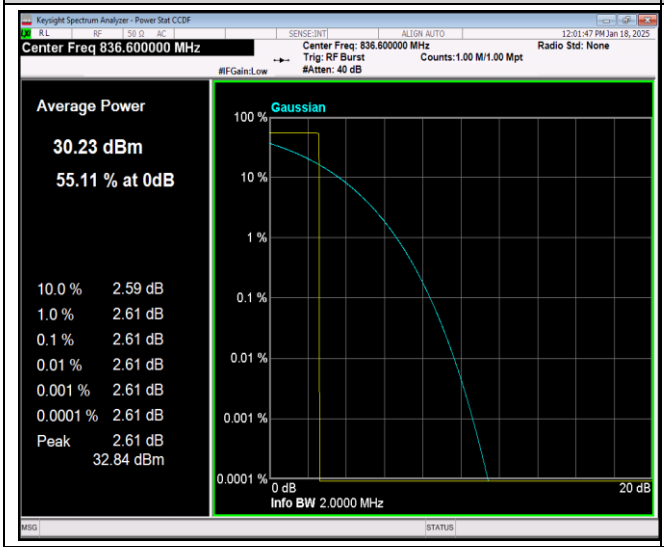
Test Result

Band	Channel	PCL	Result(dB)	Limit(dB)	Verdict
GSM850	190	5	2.61	13	PASS
EGPRS850	190	8	5.57	13	PASS
GSM1900	661	0	2.77	13	PASS
EGPRS1900	661	2	5.62	13	PASS

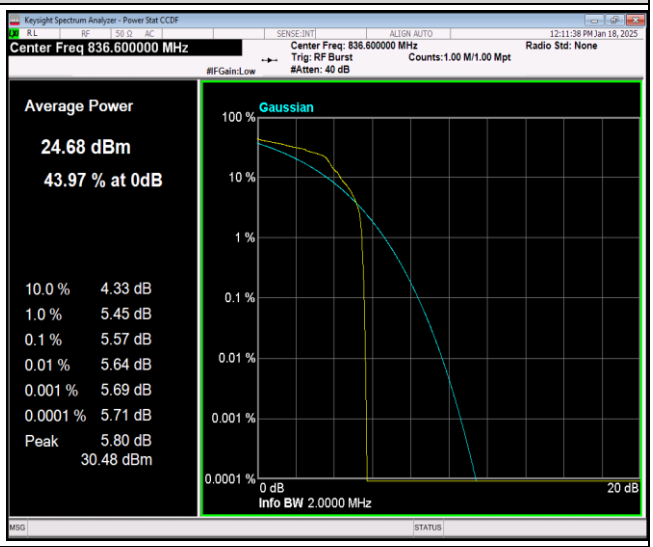
Remark: All channel and all modulation had been tested, but only the worst case data displayed in this report.

Test Graphs

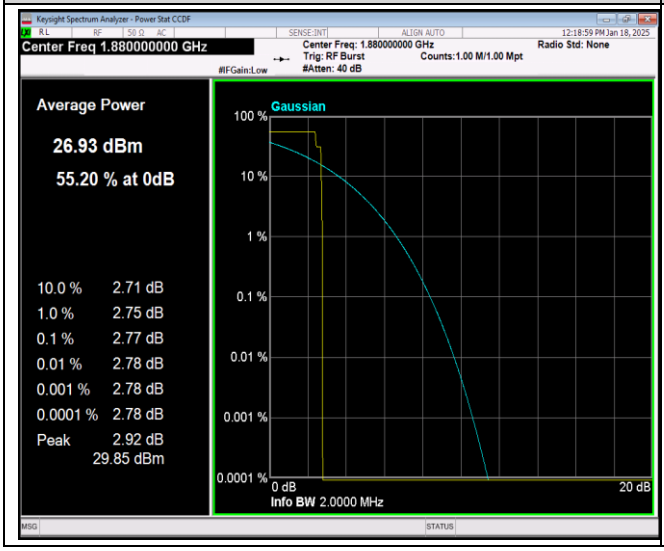
GSM850-190



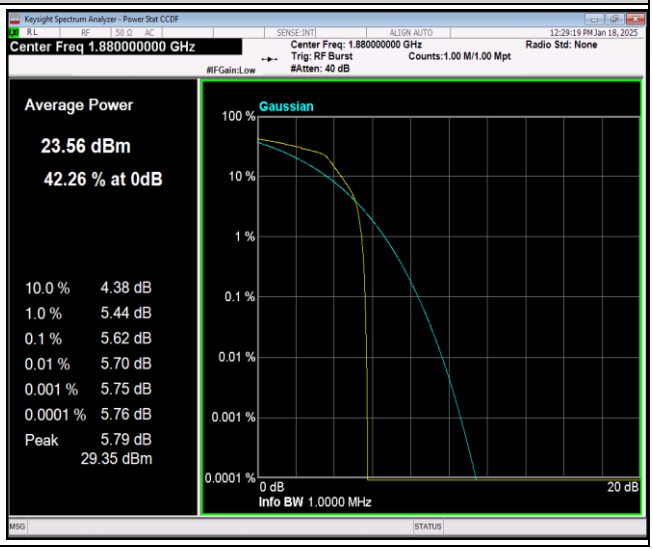
EGPRS850-190



GSM1900-661



EGPRS1900-661



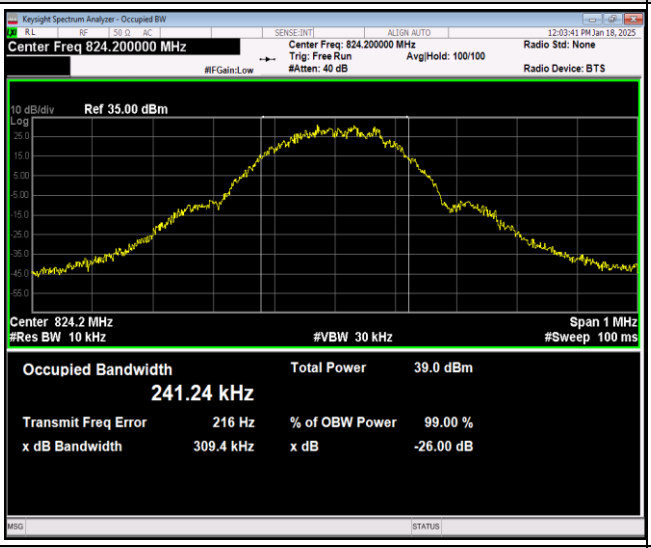
Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

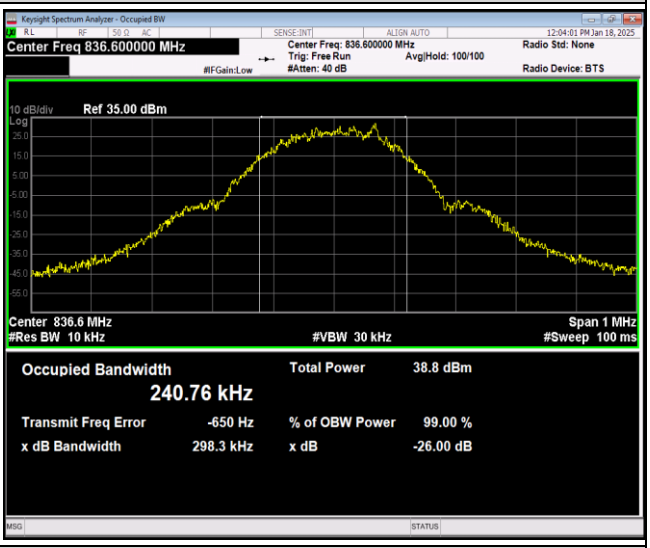
Band	Channel	PCL	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
GSM850	128	5	0.24124	0.3094	---	PASS
GSM850	190	5	0.24076	0.2983	---	PASS
GSM850	251	5	0.24449	0.3038	---	PASS
EGPRS850	128	8	0.24788	0.3135	---	PASS
EGPRS850	190	8	0.24188	0.3120	---	PASS
EGPRS850	251	8	0.24375	0.3125	---	PASS
GSM1900	512	0	0.24249	0.3058	---	PASS
GSM1900	661	0	0.24385	0.3021	---	PASS
GSM1900	810	0	0.24303	0.3090	---	PASS
EGPRS1900	512	2	0.24384	0.3161	---	PASS
EGPRS1900	661	2	0.24522	0.3072	---	PASS
EGPRS1900	810	2	0.24649	0.3028	---	PASS

Test Graphs

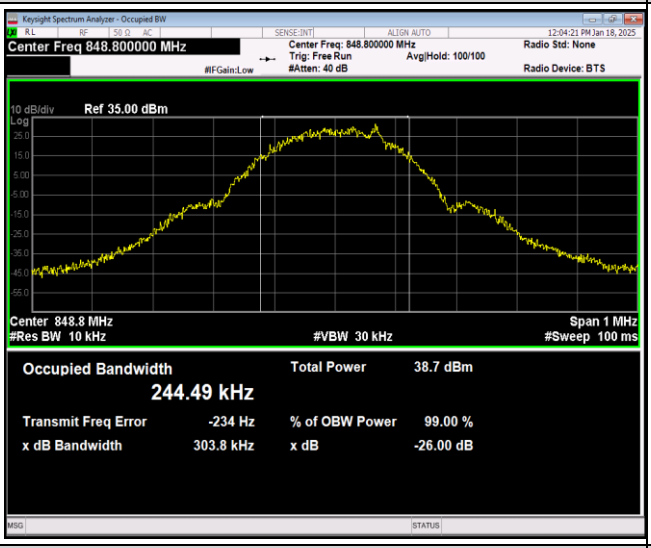
GSM850-128



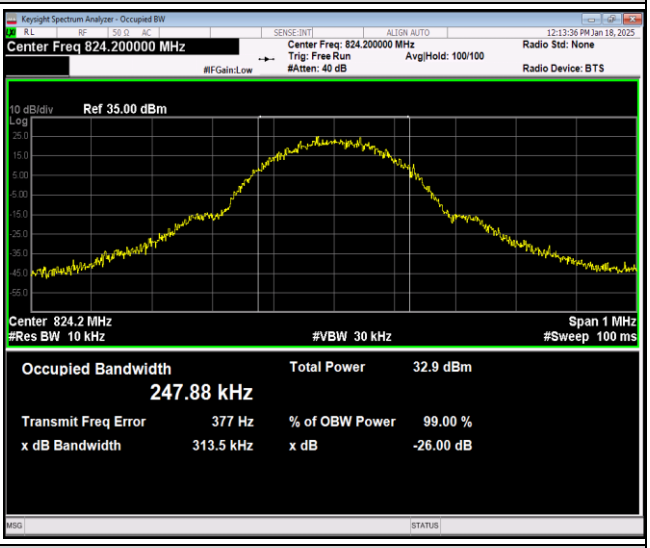
GSM850-190



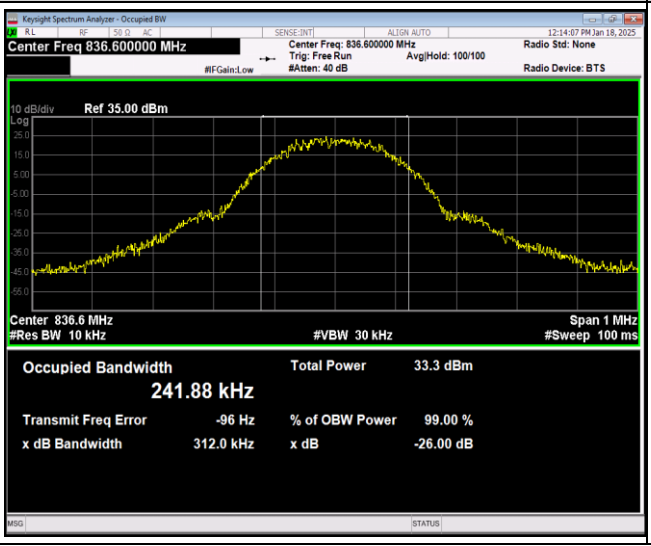
GSM850-251



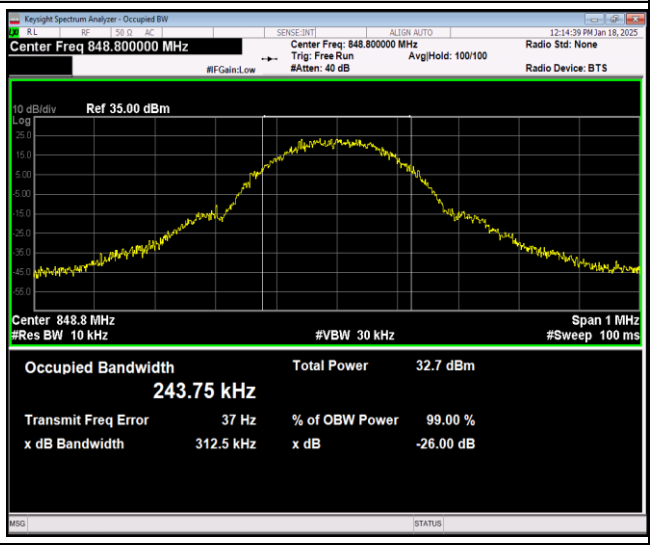
EGPRS850-128



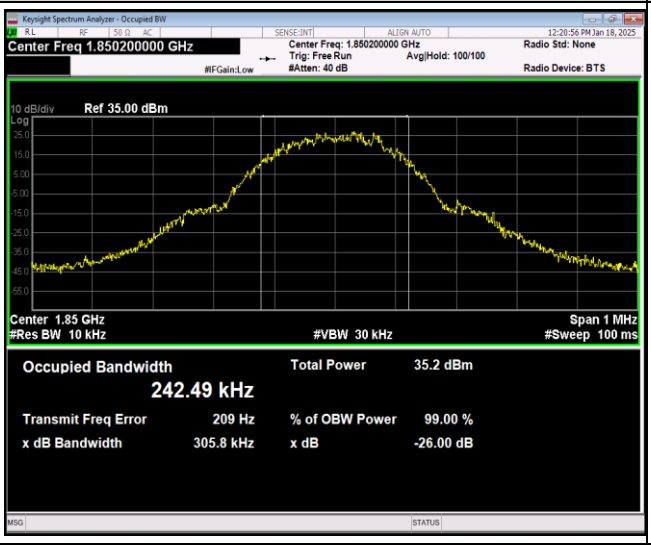
EGPRS850-190



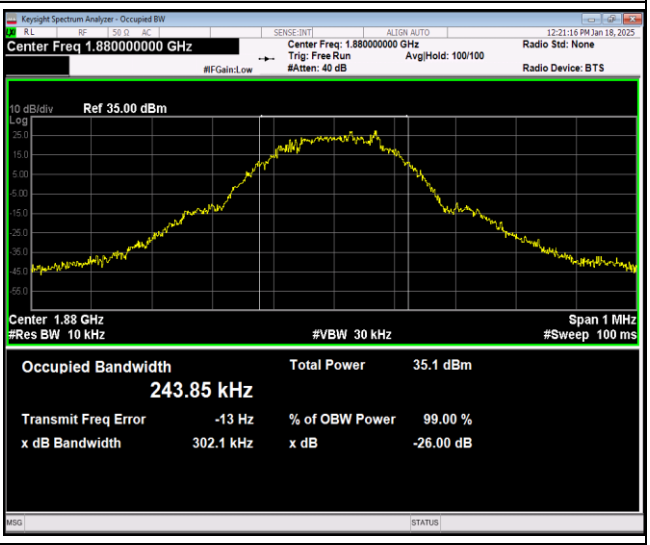
EGPRS850-251



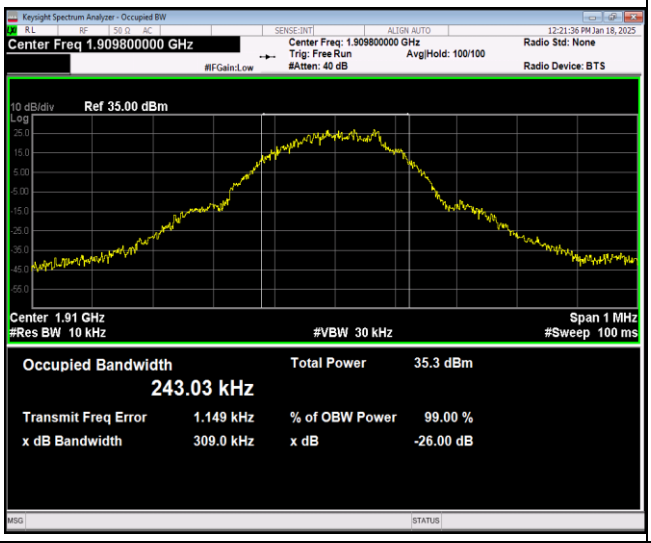
GSM1900-512



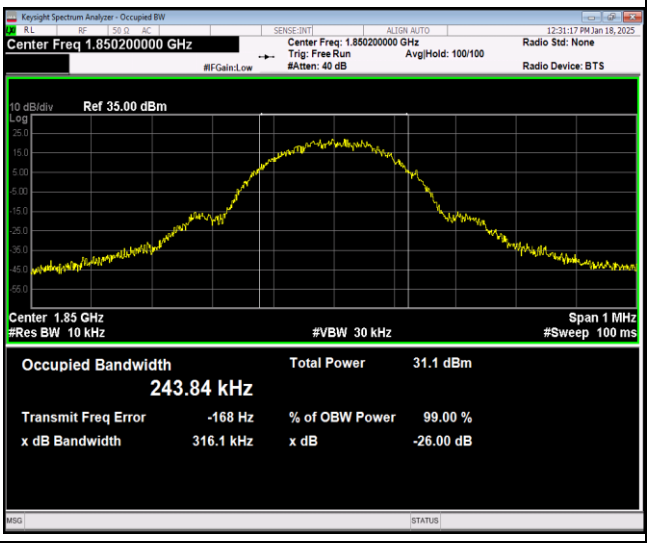
GSM1900-661



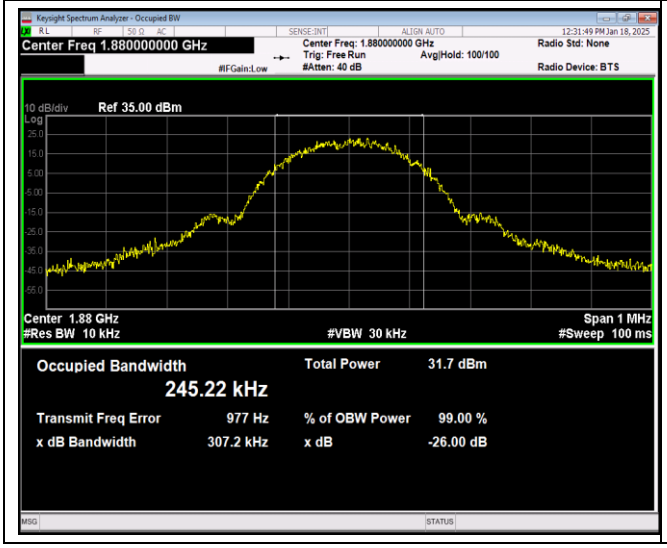
GSM1900-810



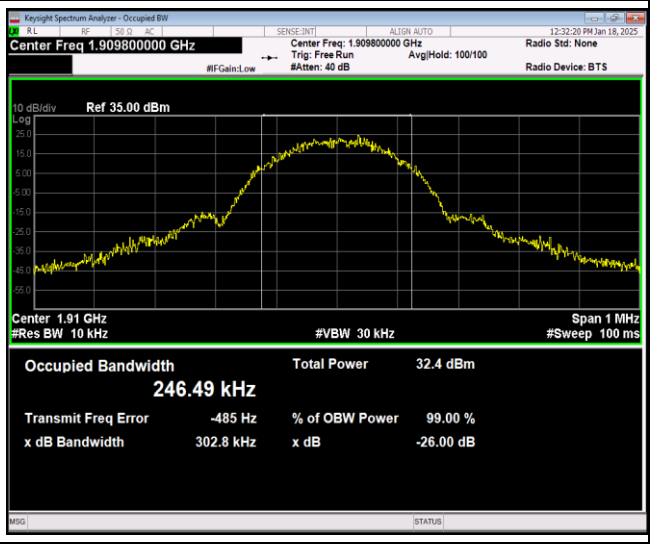
EGPRS1900-512



EGPRS1900-661



EGPRS1900-810



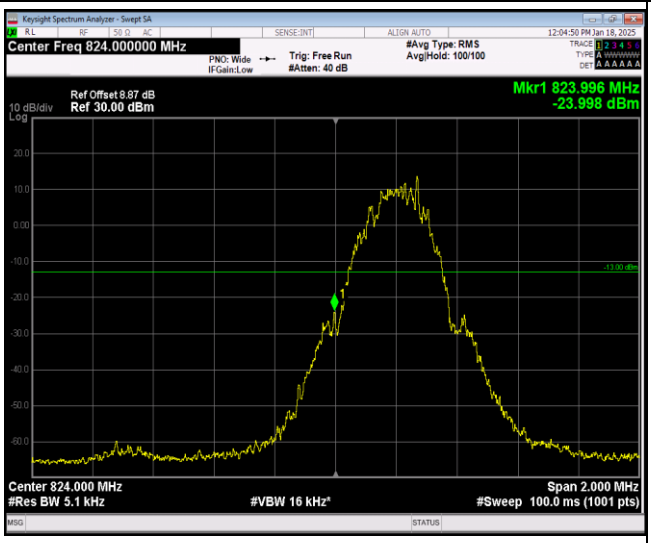
Appendix D: Band Edge

Test Result

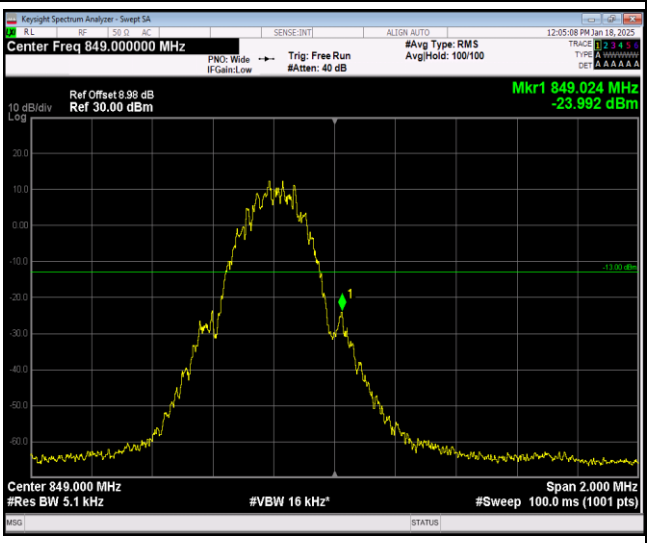
Band	Channel	PCL	Freq (MHz)	Result (dBm)	Limit(dBm)	Verdict
GSM850	128	5	824.00	-24.00	-13	PASS
GSM850	251	5	849.02	-23.99	-13	PASS
EGPRS850	128	8	823.99	-31.52	-13	PASS
EGPRS850	251	8	849.00	-33.35	-13	PASS
GSM1900	512	0	1850.00	-27.38	-13	PASS
GSM1900	810	0	1910.01	-27.43	-13	PASS
EGPRS1900	512	2	1849.99	-19.79	-13	PASS
EGPRS1900	810	2	1910.01	-19.24	-13	PASS

Test Graphs

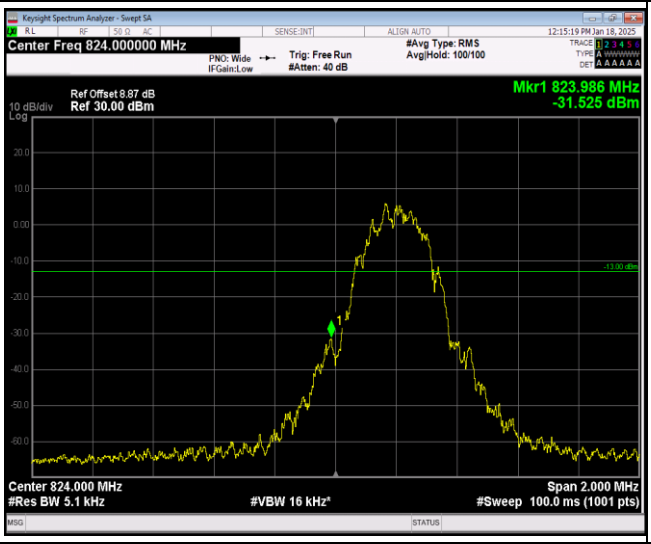
GSM850-128



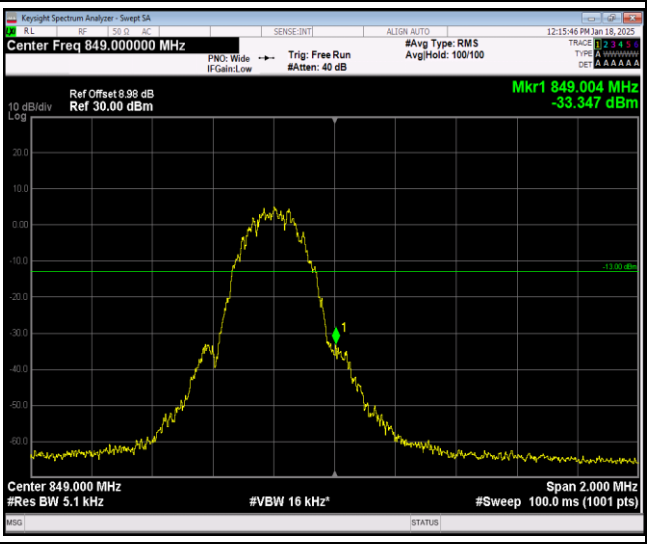
GSM850-251



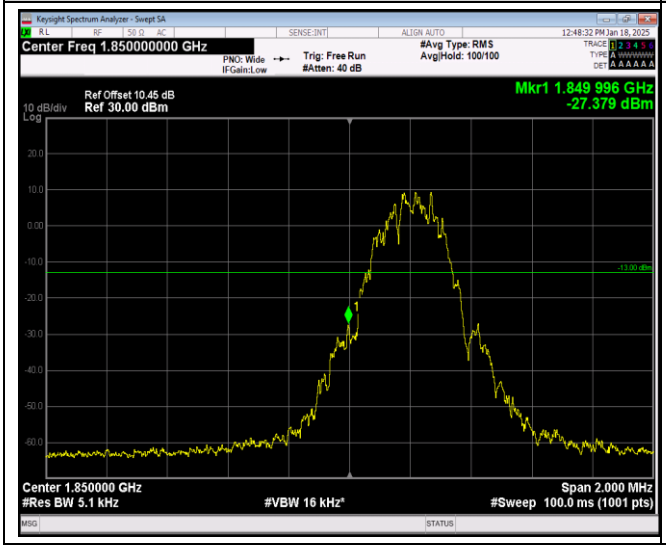
EGPRS850-128



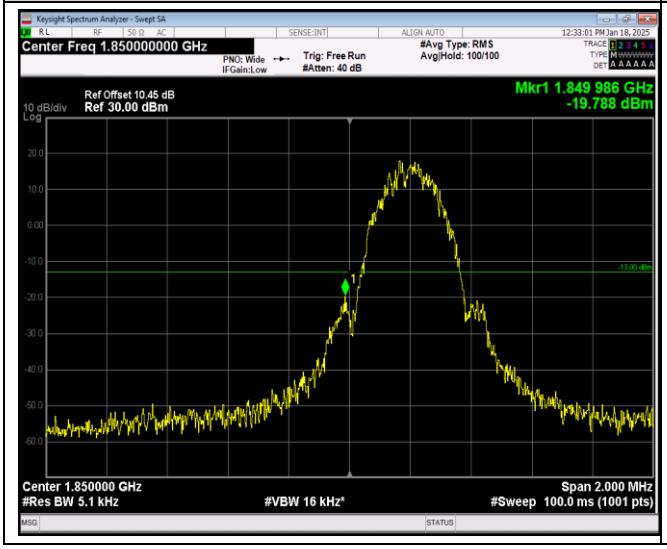
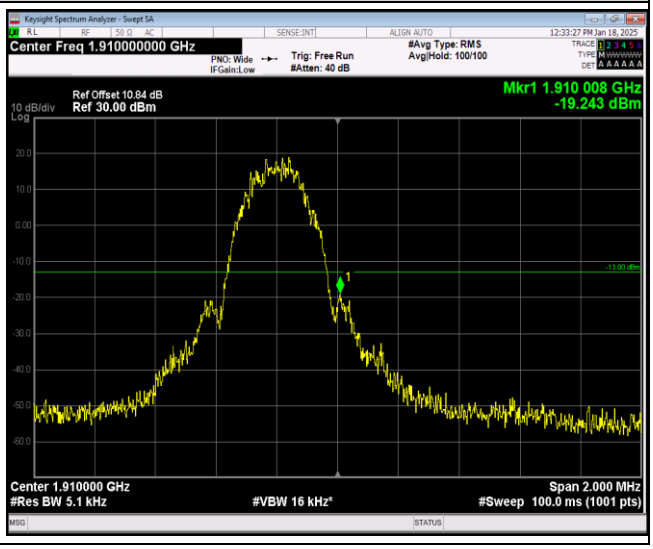
EGPRS850-251



GSM1900-512



GSM1900-810

EGPRS1900-512	EGPRS1900-810
	

Appendix E: Conducted Spurious Emission

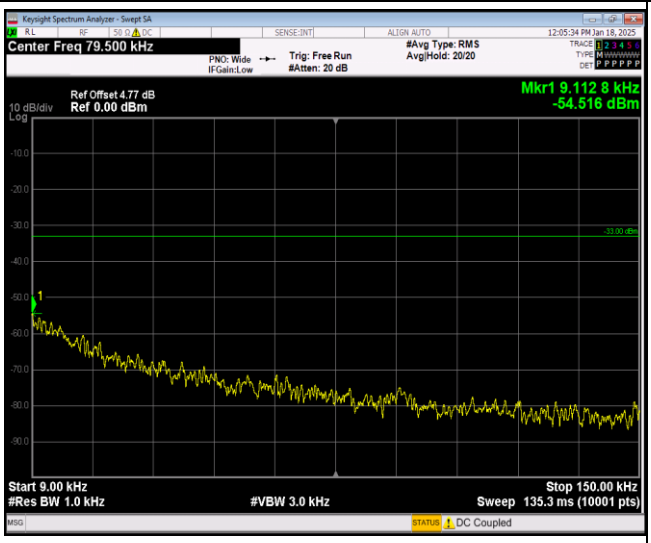
Test Result

Band	Channel	PCL	Frequency Range(MHz)	Max.Freq. (MHz)	Result (dBm)	Limit (dBm)	Verdict
GSM850	128	5	0.009~0.15MHz	0.01	-54.52	-33	PASS
GSM850	128	5	0.15~30MHz	0.15	-43.68	-13	PASS
GSM850	128	5	30~1000MHz	996.28	-44.78	-13	PASS
GSM850	128	5	1000~10000MHz	1648.3	-28.67	-13	PASS
GSM850	190	5	0.009~0.15MHz	0.01	-53.08	-33	PASS
GSM850	190	5	0.15~30MHz	0.16	-40.11	-13	PASS
GSM850	190	5	30~1000MHz	367.11	-44.94	-13	PASS
GSM850	190	5	1000~10000MHz	1673.5	-29.56	-13	PASS
GSM850	251	5	0.009~0.15MHz	0.01	-54.87	-33	PASS
GSM850	251	5	0.15~30MHz	0.16	-43.39	-13	PASS
GSM850	251	5	30~1000MHz	443.38	-44.78	-13	PASS
GSM850	251	5	1000~10000MHz	1697.8	-30.97	-13	PASS
GSM1900	512	0	0.009~0.15MHz	0.01	-55.5	-43	PASS
GSM1900	512	0	0.15~30MHz	0.15	-41.31	-23	PASS
GSM1900	512	0	30~1000MHz	859.32	-45.68	-13	PASS
GSM1900	512	0	1000~18000MHz	16121.5	-22.32	-13	PASS
GSM1900	661	0	0.009~0.15MHz	0.01	-54.52	-43	PASS
GSM1900	661	0	0.15~30MHz	0.15	-42.35	-23	PASS
GSM1900	661	0	30~1000MHz	938.86	-45.86	-13	PASS
GSM1900	661	0	1000~18000MHz	16998.7	-22.22	-13	PASS
GSM1900	810	0	0.009~0.15MHz	0.01	-54.97	-43	PASS
GSM1900	810	0	0.15~30MHz	0.15	-40.63	-23	PASS
GSM1900	810	0	30~1000MHz	858.02	-45.21	-13	PASS
GSM1900	810	0	1000~18000MHz	16789.6	-21.68	-13	PASS

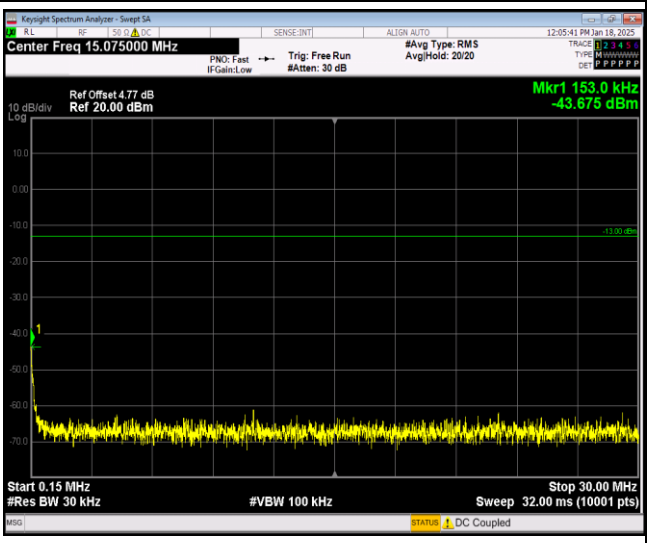
Remark: All channel and all modulation had been tested, but only the worst case data displayed in this report.

Test Graphs

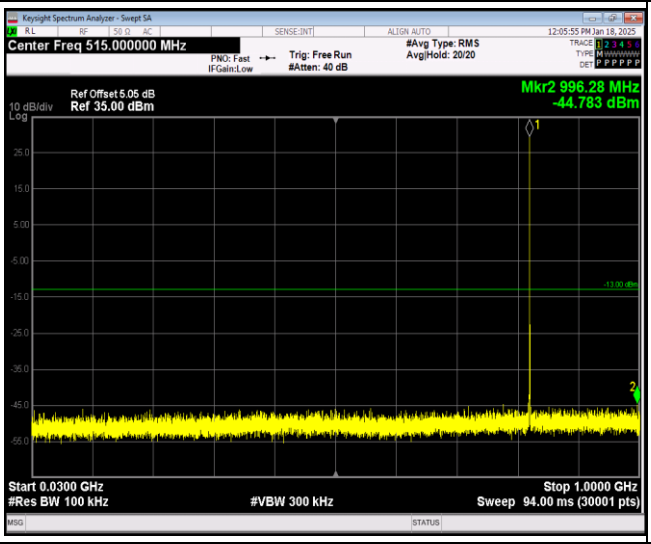
GSM850-128-0.009~0.15MHz



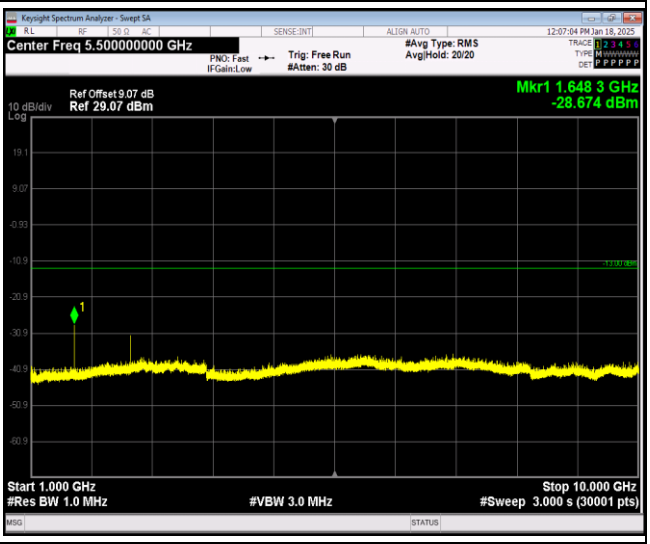
GSM850-128-0.15~30MHz



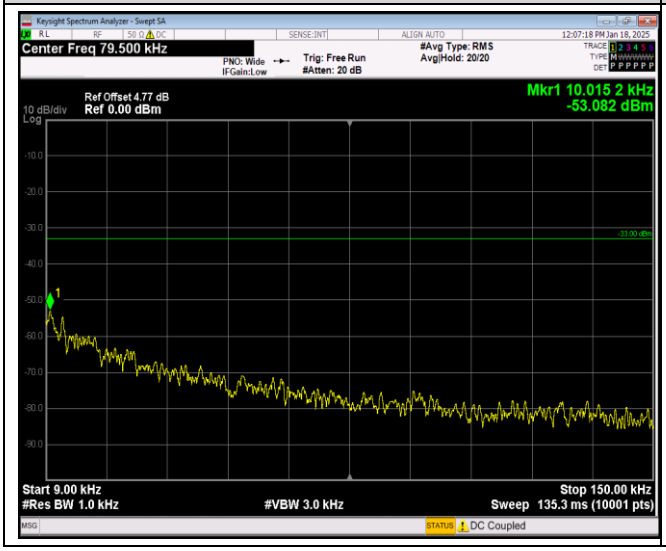
GSM850-128-30~1000MHz



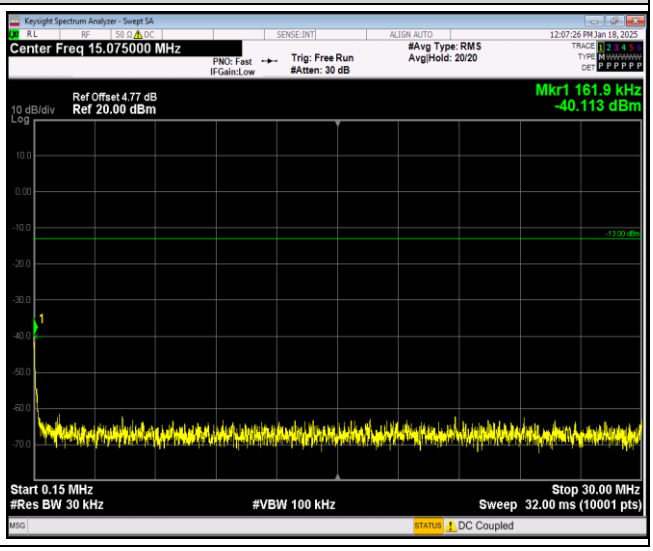
GSM850-128-1000~10000MHz



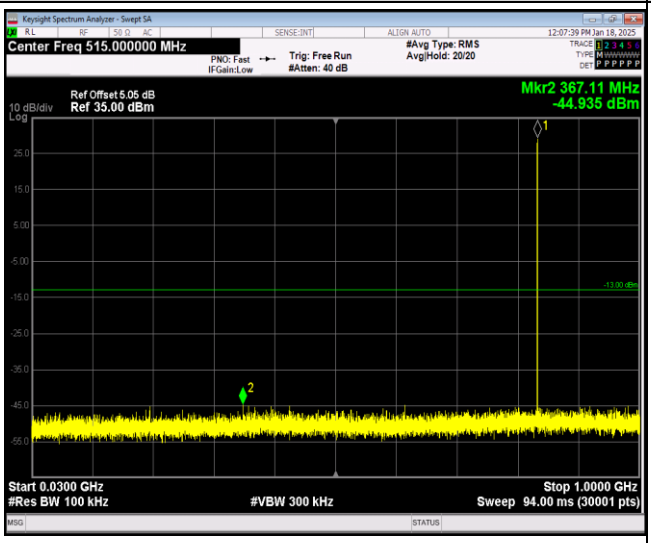
GSM850-190-0.009~0.15MHz



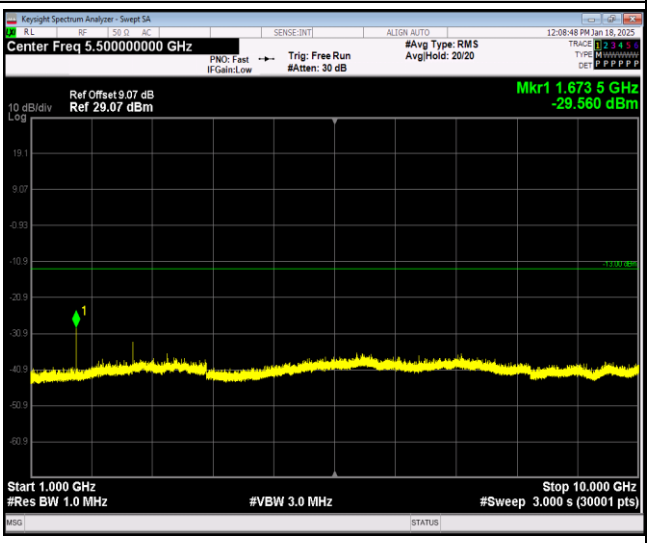
GSM850-190-0.15~30MHz



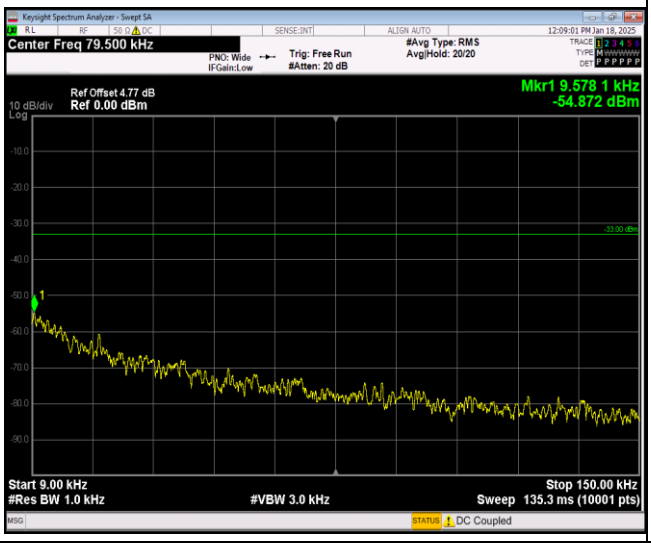
GSM850-190-30~1000MHz



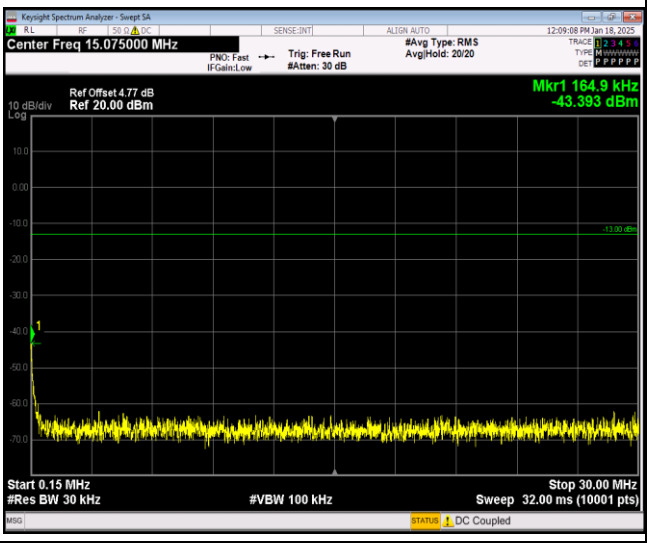
GSM850-190-1000~10000MHz



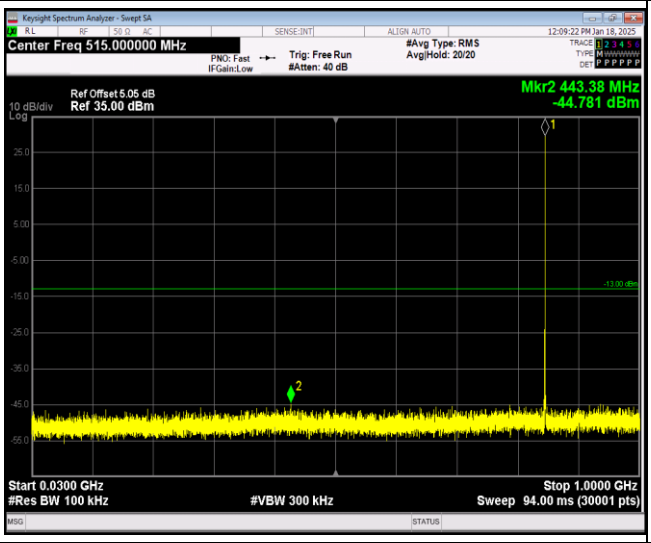
GSM850-251-0.009~0.15MHz



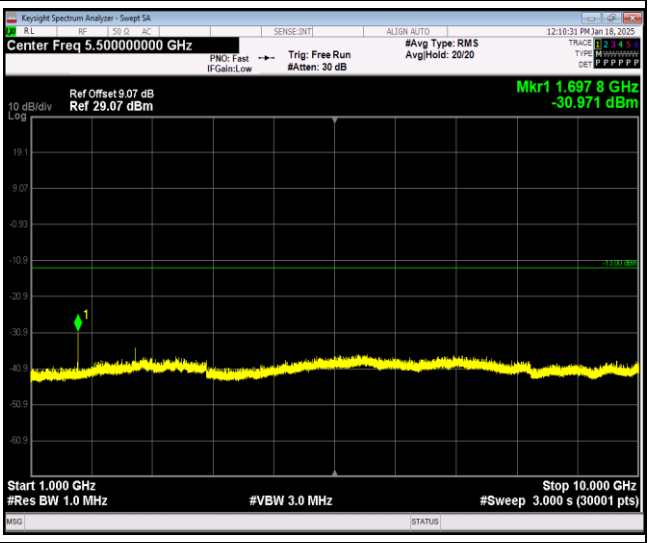
GSM850-251-0.15~30MHz



GSM850-251-30~1000MHz

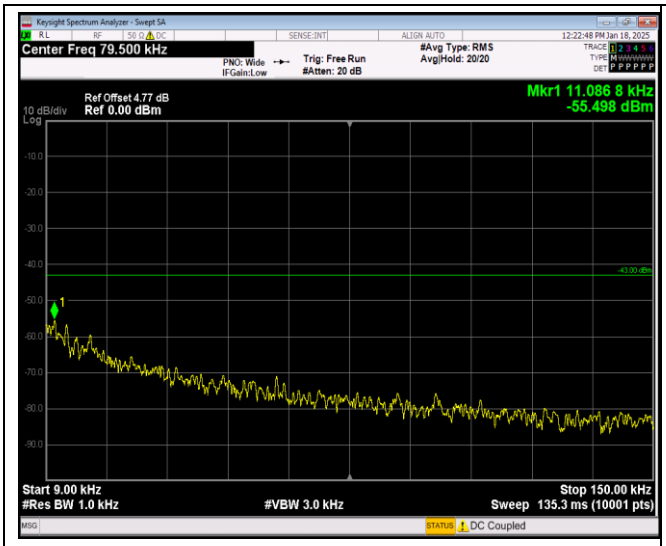


GSM850-251-1000~10000MHz

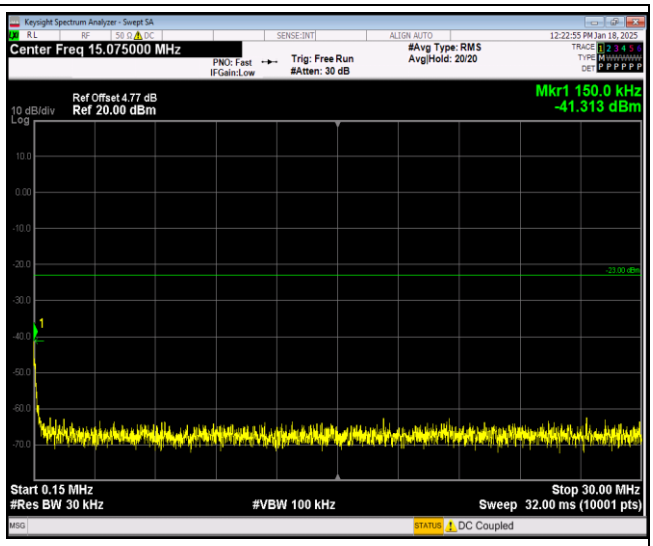


GSM1900-512-0.009~0.15MHz

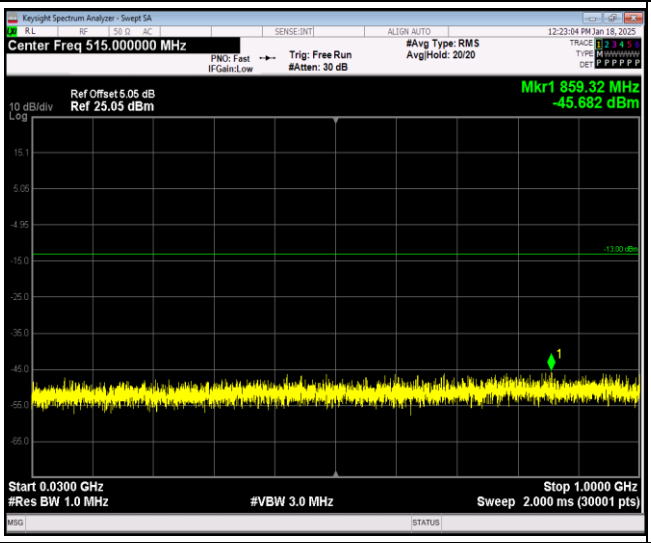
GSM1900-512-0.15~30MHz



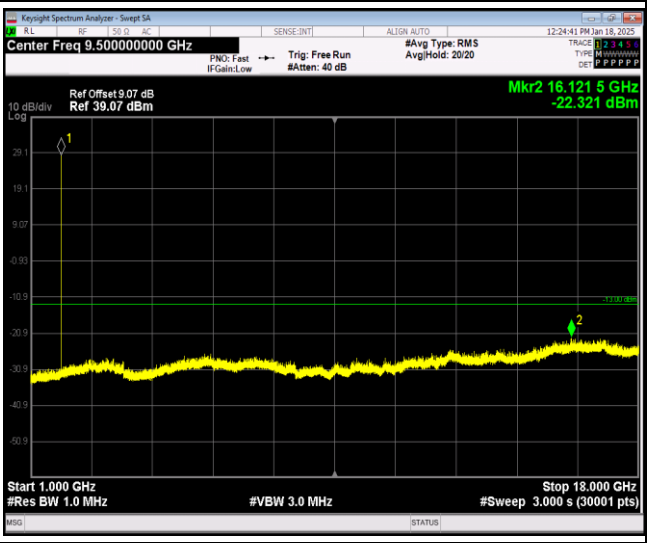
GSM1900-512-30~1000MHz



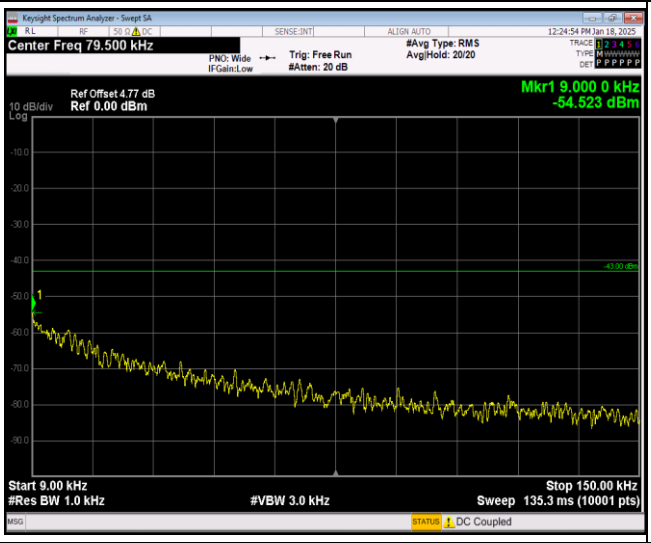
GSM1900-512-1000~18000MHz



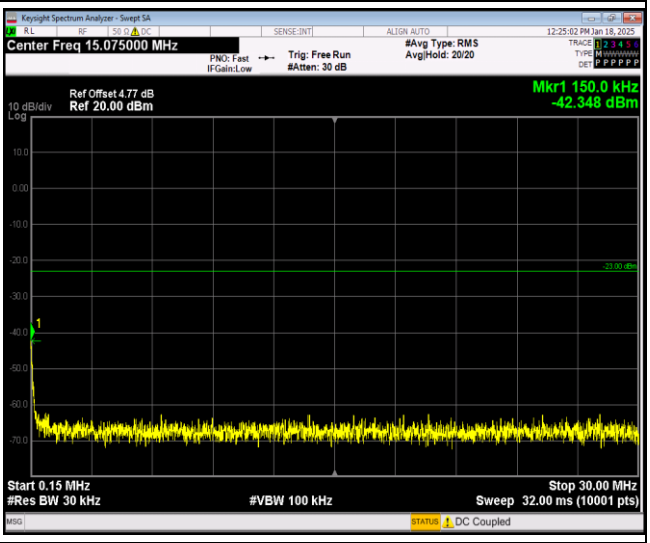
GSM1900-661-0.009~0.15MHz



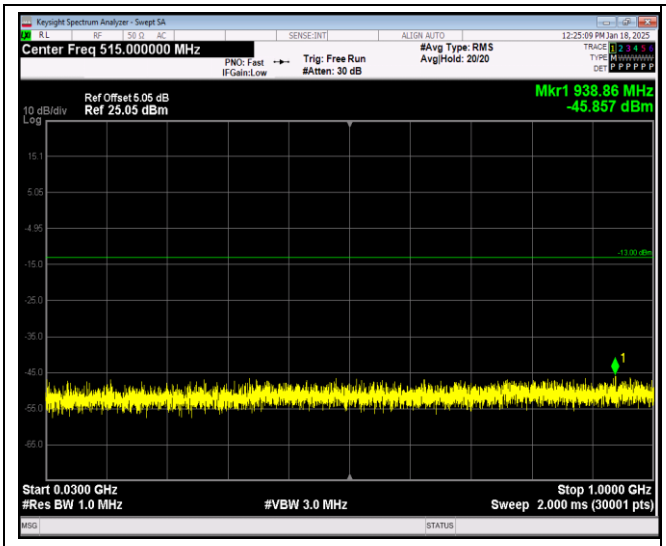
GSM1900-661-0.15~30MHz



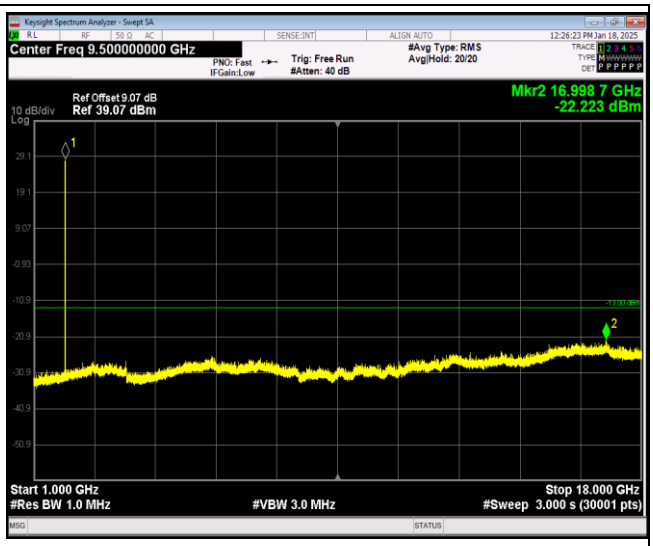
GSM1900-661-30~1000MHz



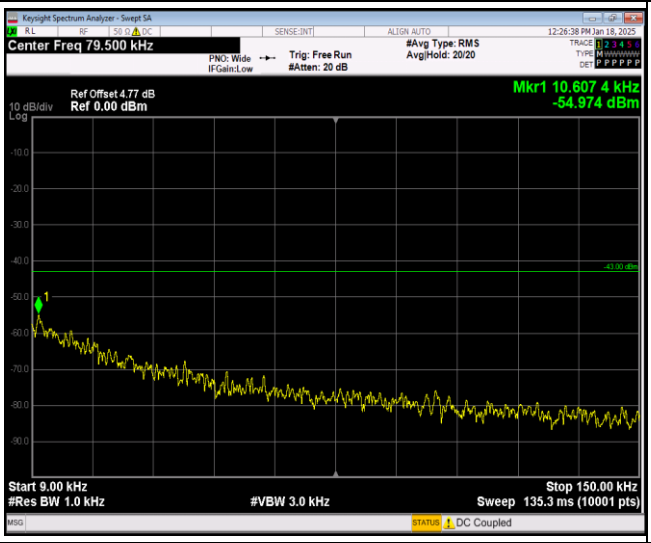
GSM1900-661-1000~18000MHz



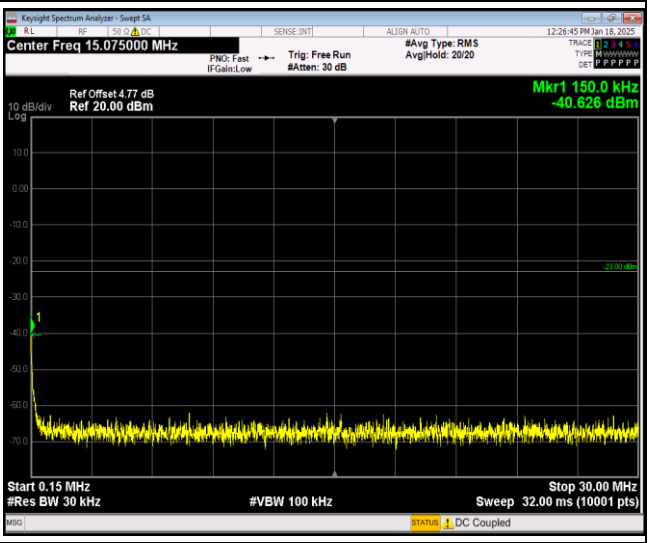
GSM1900-810-0.009~0.15MHz



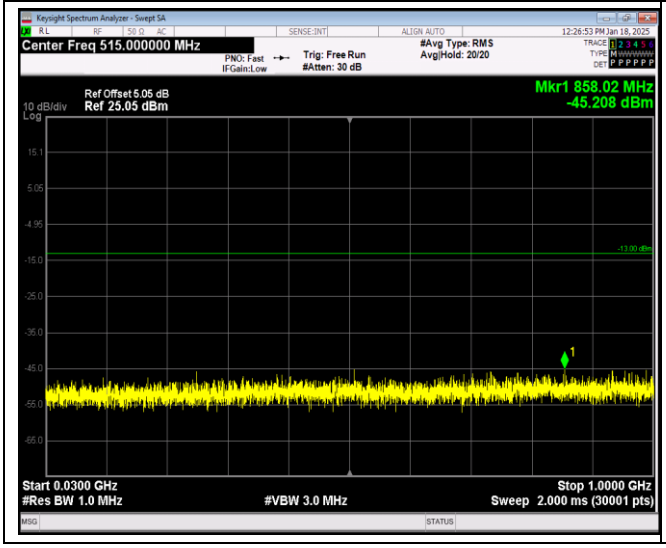
GSM1900-810-0.15~30MHz

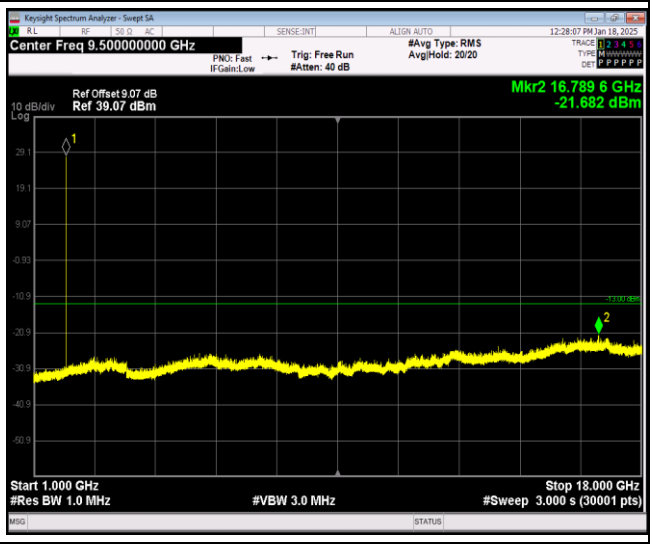


GSM1900-810-30~1000MHz



GSM1900-810-1000~18000MHz





Appendix F: Frequency Stability

Test Result

Reference Frequency: GSM850 Middle channel=190 Frequency=836.6MHz					
Temperature					
Power supplied (Vdc)	Temperature (℃)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	-2.32	-0.002773	±2.5	Pass
	-20	-7.68	-0.009180		
	-10	-10.59	-0.012658		
	0	-11.98	-0.014320		
	10	-8.46	-0.010112		
	20	-1.36	-0.001626		
	30	-7.94	-0.009491		
	40	-1.45	-0.001733		
	50	-10.69	-0.012778		
Voltage					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	-9.75	-0.011654	±2.5	Pass
	3.85	-9.23	-0.011033		
	4.40	-8.81	-0.010531		
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 (℃)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	16.95	0.020261	±2.5	Pass
	-20	12.98	0.015515		
	-10	17.47	0.020882		
	0	17.69	0.021145		
	10	15.24	0.018217		
	20	19.11	0.022842		
	30	14.30	0.017093		
	40	13.27	0.015862		
	50	15.27	0.018252		
Voltage					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	13.40	0.016017	±2.5	Pass
	3.85	15.63	0.018683		
	4.40	10.62	0.012694		
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 (℃)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	5.81	0.003090	Within authorized band for PCS 1900	Pass
	-20	-6.46	-0.003436		
	-10	1.00	0.000532		
	0	4.00	0.002128		
	10	-4.29	-0.002282		
	20	-1.52	-0.000809		
	30	-11.36	-0.006043		
	40	-1.61	-0.000856		
	50	1.94	0.001032		
Voltage					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	-16.01	-0.008516	Within authorized band for PCS 1900	Pass
	3.85	-14.66	-0.007798		
	4.40	-6.13	-0.003261		
Remark: All channel had been tested, but only the worst case data displayed in this report.					

Reference Frequency: EGPRS1900 Middle channel=661 Frequency=1880MHz					
Temperature					
Power supplied (Vdc)	Temperature (℃)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	-14.79	-0.007867	Within authorized band for PCS 1900	Pass
	-20	-0.26	-0.000138		
	-10	5.26	0.002798		
	0	-6.36	-0.003383		
	10	-12.14	-0.006457		
	20	-15.69	-0.008346		
	30	-8.01	-0.004261		
	40	-7.88	-0.004191		
	50	-12.82	-0.006819		
Voltage					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	-2.42	-0.001287	Within authorized band for PCS 1900	Pass
	3.85	-2.32	-0.001234		
	4.40	-11.75	-0.006250		
Remark: All channel had been tested, but only the worst case data displayed in this report.					

Appendix G: Modulation Characteristics

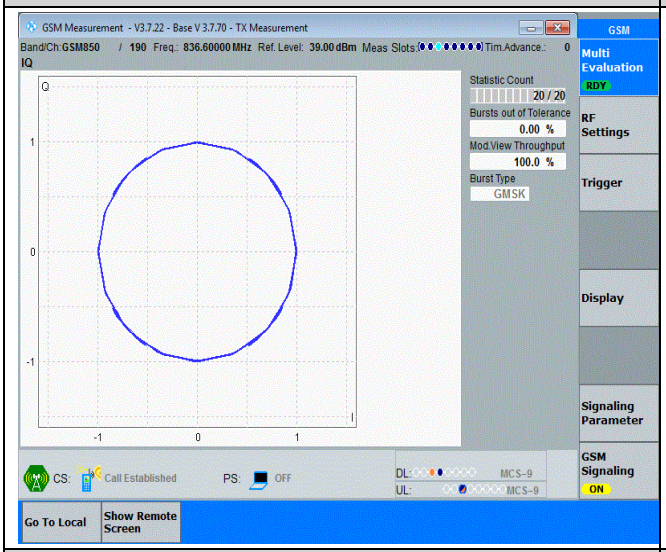
Test Result

Band	Channel	Result	Verdict
GSM850	190	PASS	PASS
EGPRS850	190	PASS	PASS
GSM1900	661	PASS	PASS
EGPRS1900	661	PASS	PASS

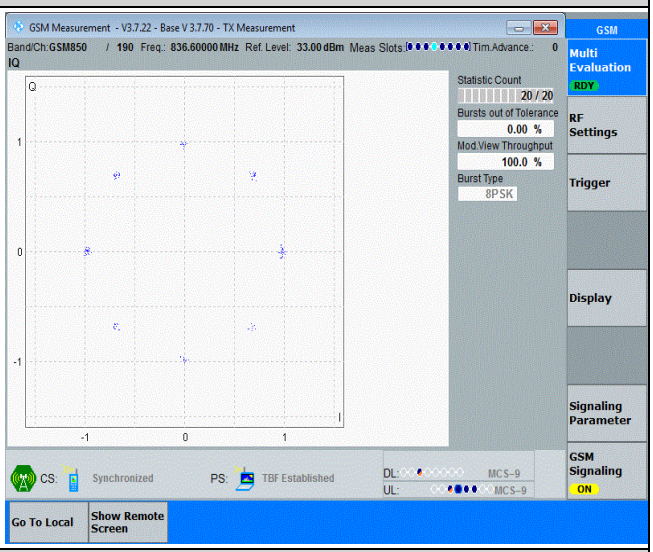
Remark: All channel had been tested, but only the worst case data displayed in this report.

Test Graphs

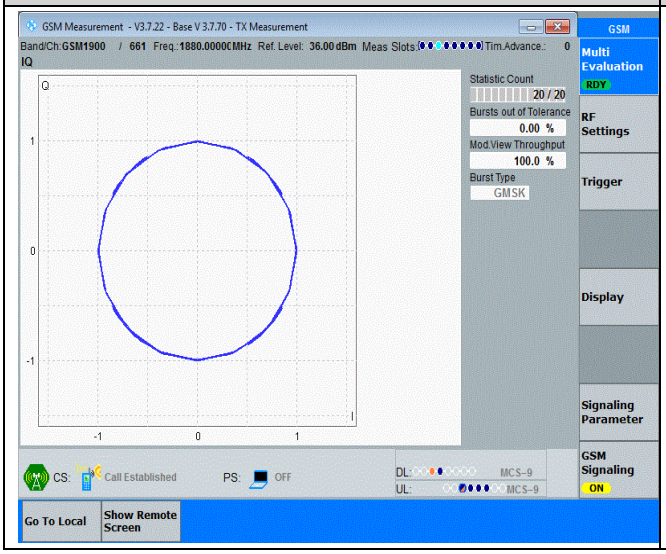
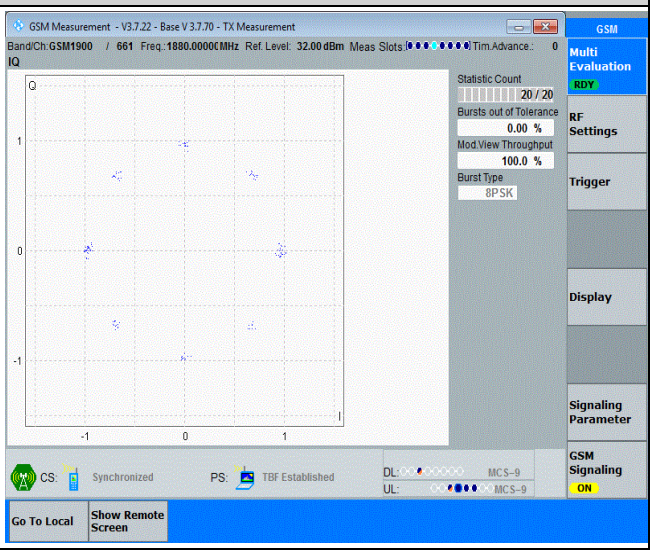
GSM850-190



EGPRS850-190



GSM1900-661



EGPRS1900-661