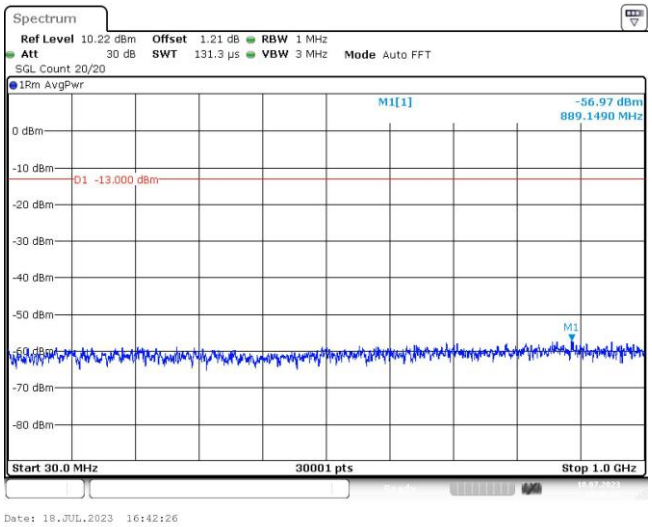
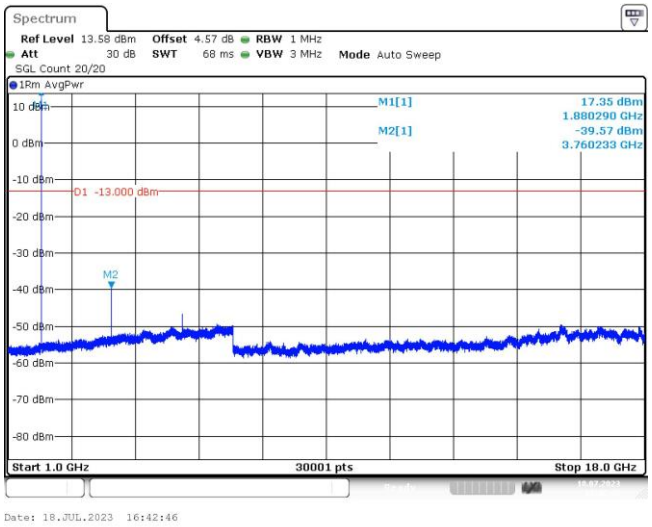
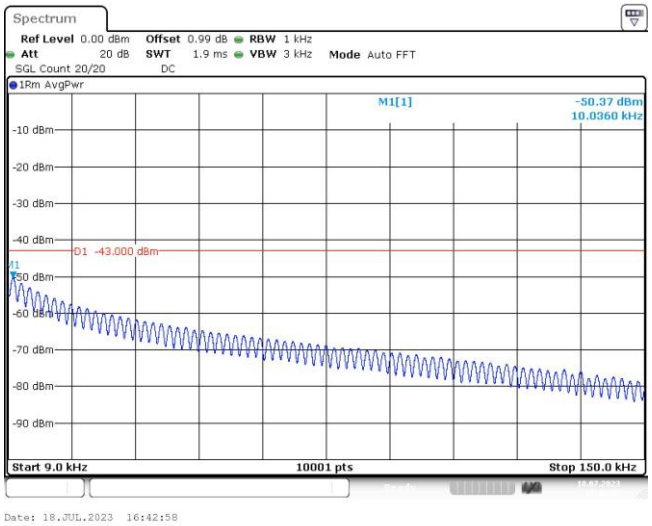


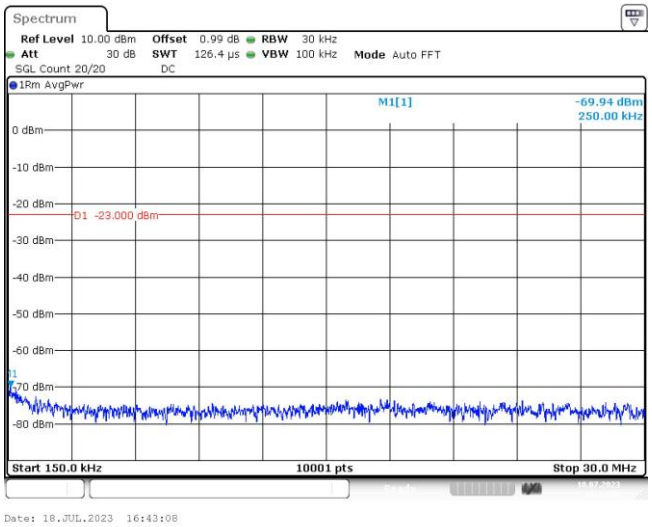
GSM1900-661-1000~18000MHz



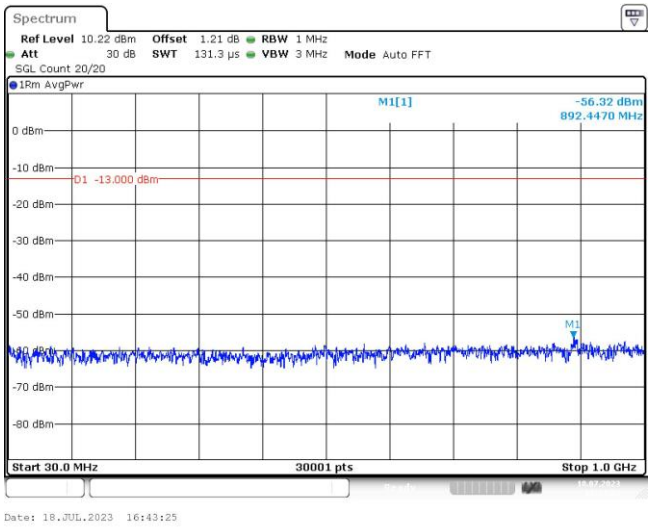
GSM1900-810-0.009~0.15MHz



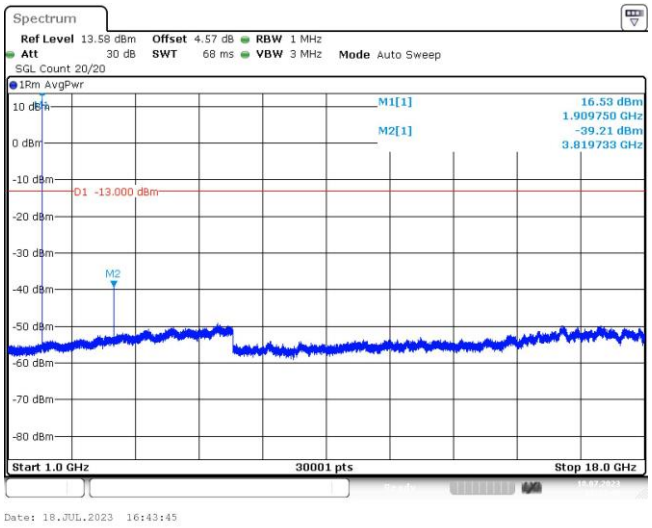
GSM1900-810-0.15~30MHz



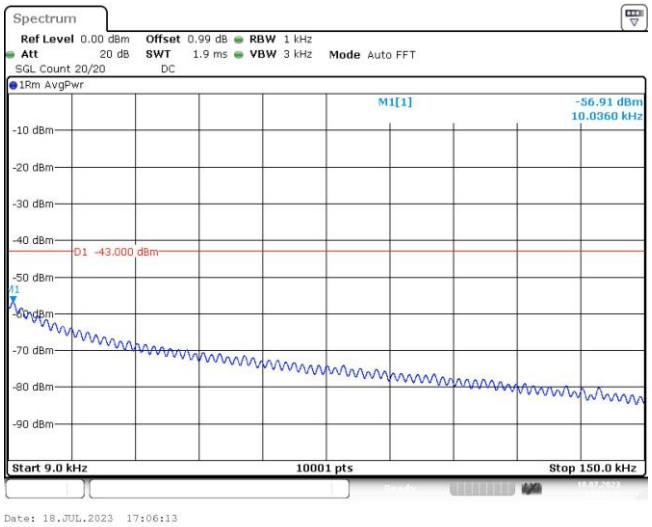
GSM1900-810-30~1000MHz



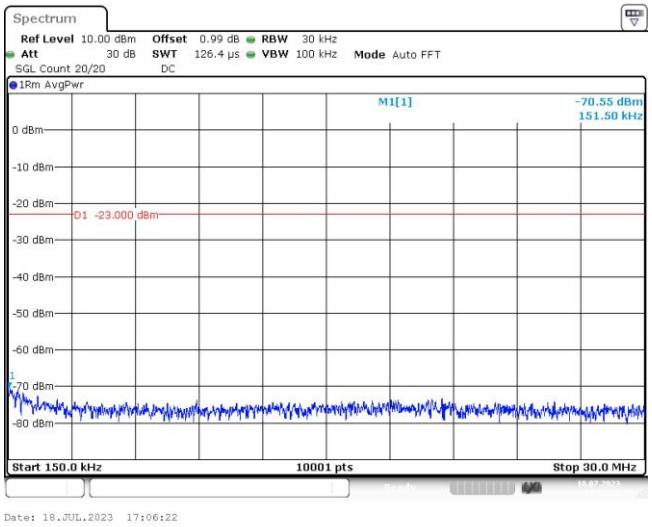
GSM1900-810-1000~18000MHz



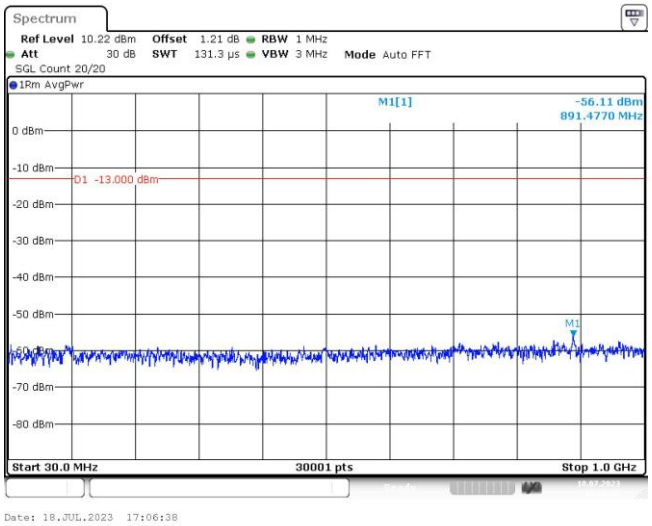
GPRS1900-512-0.009~0.15MHz



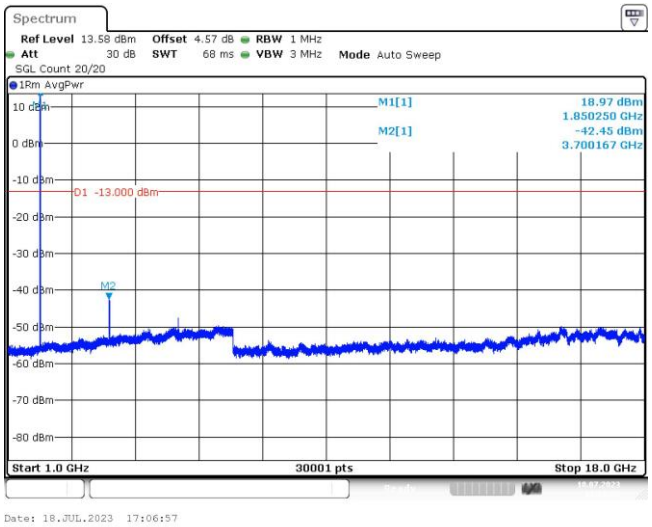
GPRS1900-512-0.15~30MHz



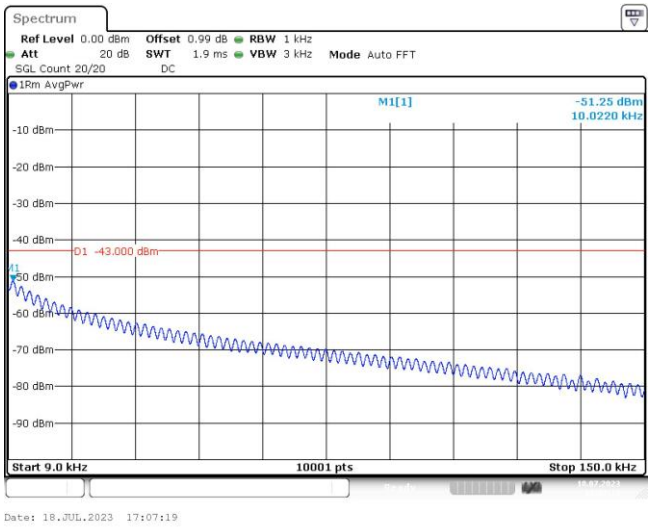
GPRS1900-512-30~1000MHz



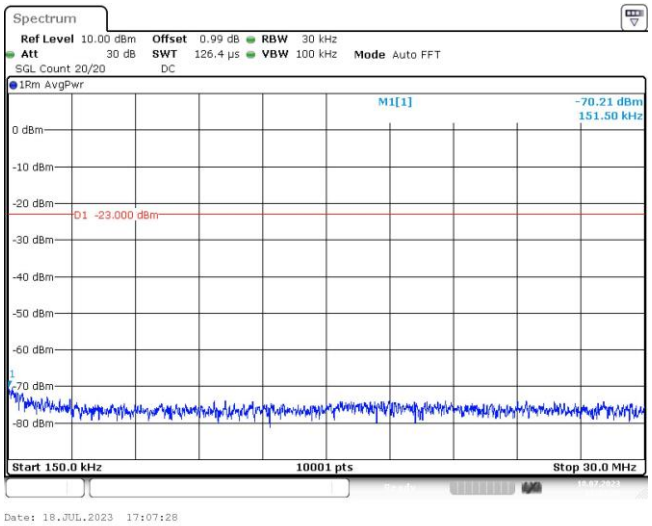
GPRS1900-512-1000~18000MHz



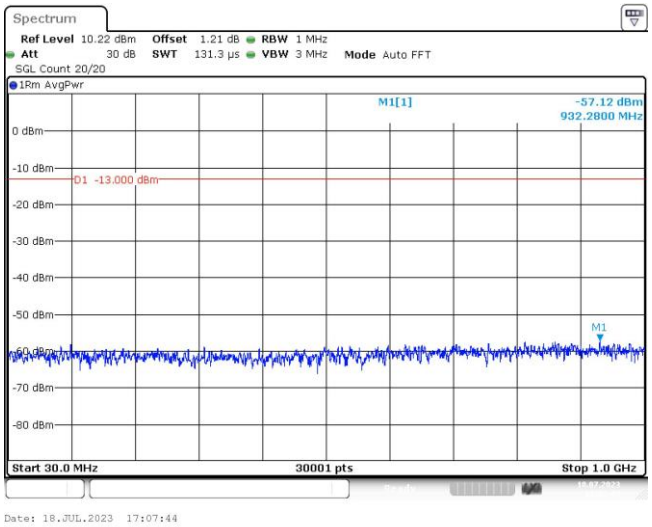
GPRS1900-661-0.009~0.15MHz



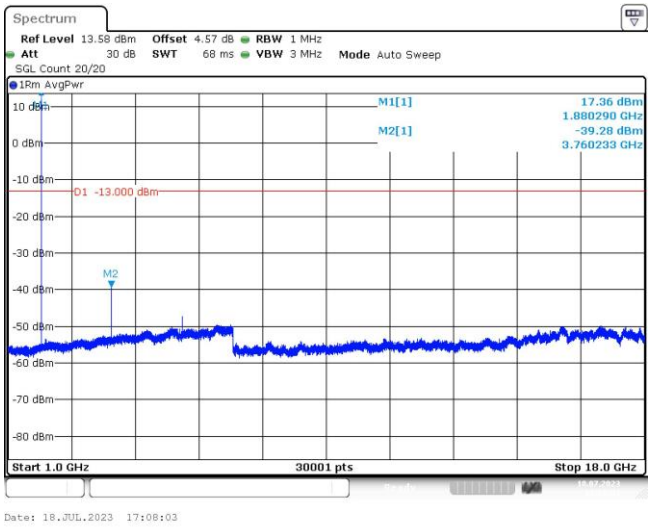
GPRS1900-661-0.15~30MHz



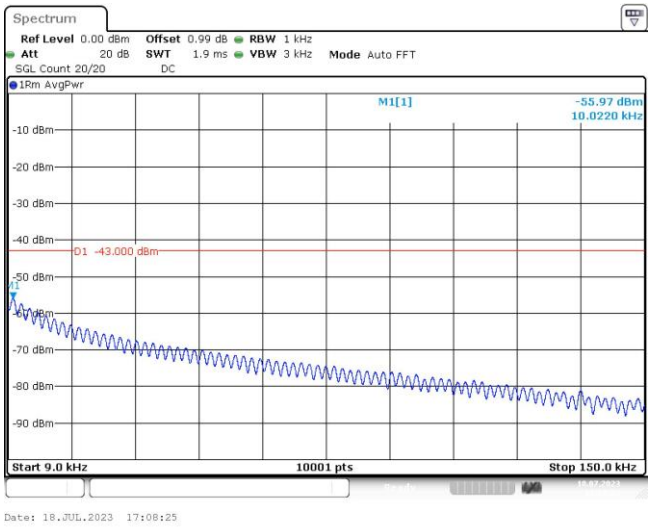
GPRS1900-661-30~1000MHz



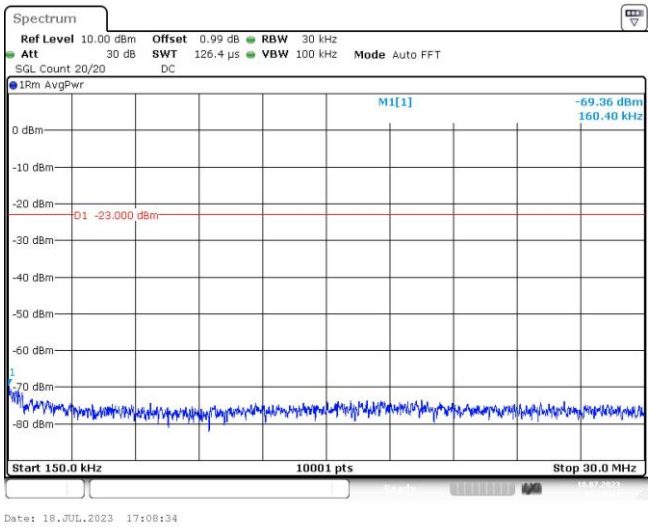
GPRS1900-661-1000~18000MHz



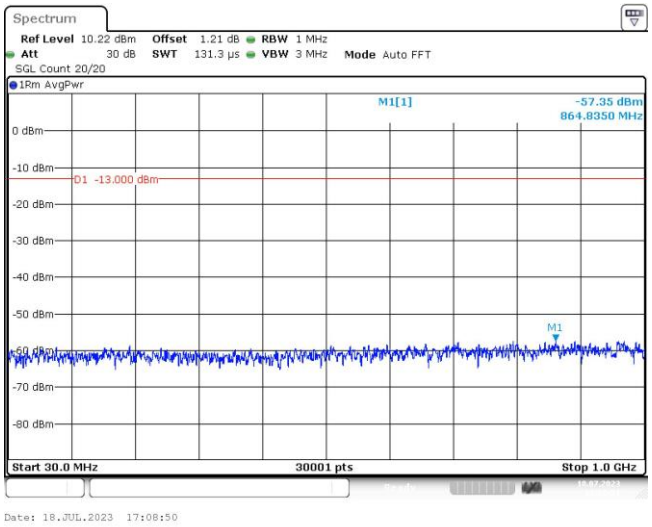
GPRS1900-810-0.009~0.15MHz



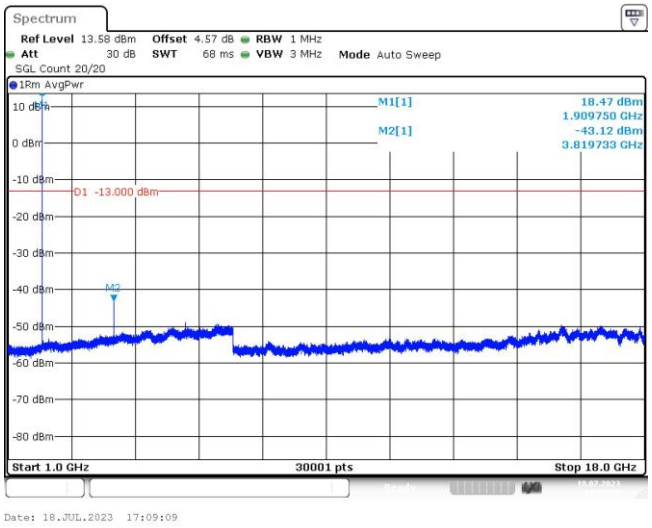
GPRS1900-810-0.15~30MHz



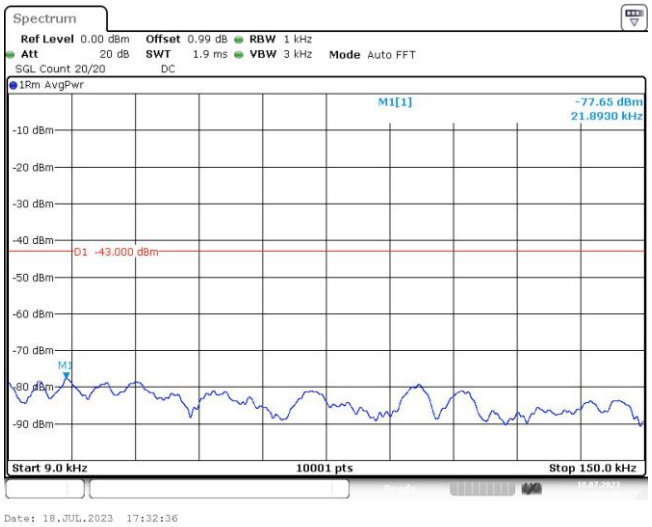
GPRS1900-810-30~1000MHz



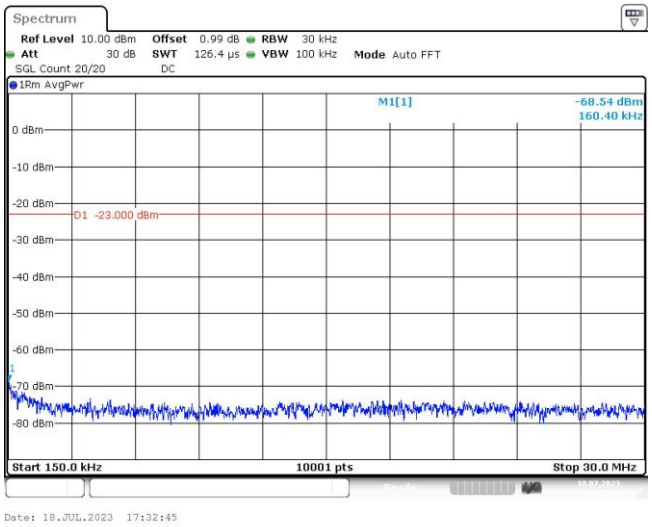
GPRS1900-810-1000~18000MHz



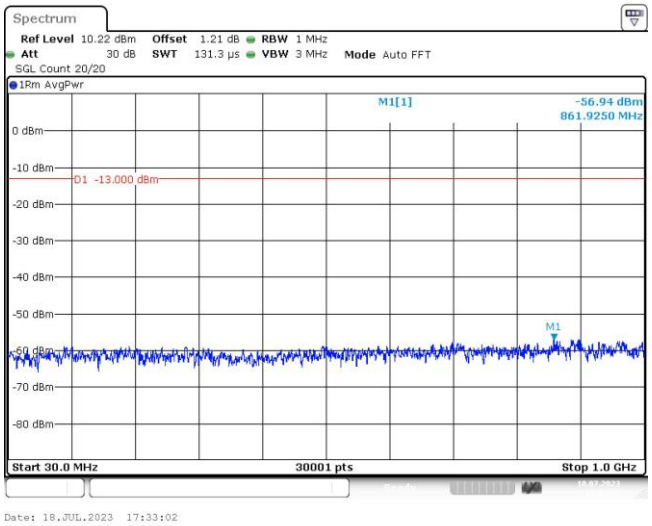
EGPRS1900-512-0.009~0.15MHz



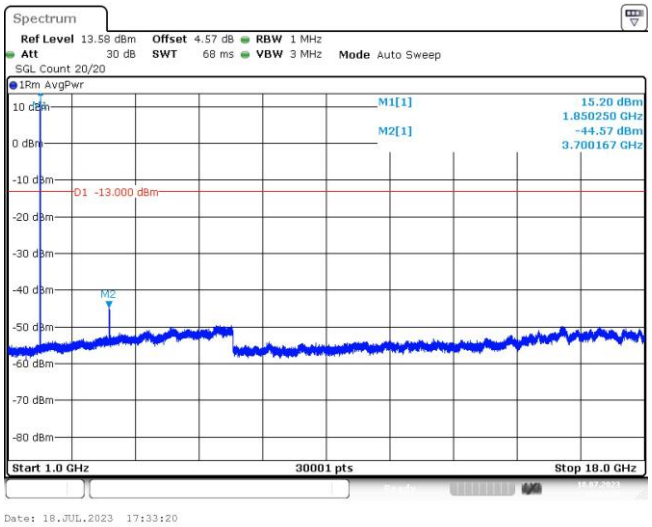
EGPRS1900-512-0.15~30MHz



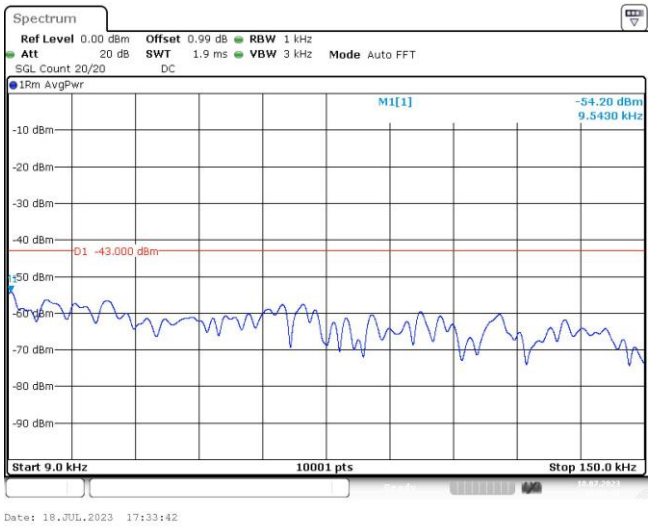
EGPRS1900-512-30~1000MHz



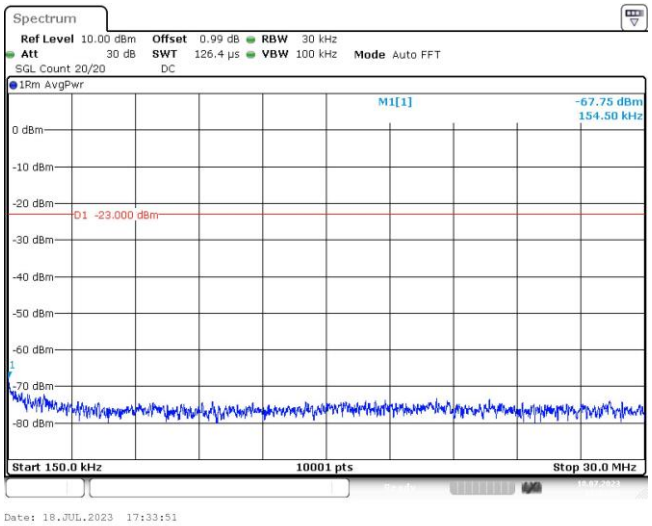
EGPRS1900-512-1000~18000MHz



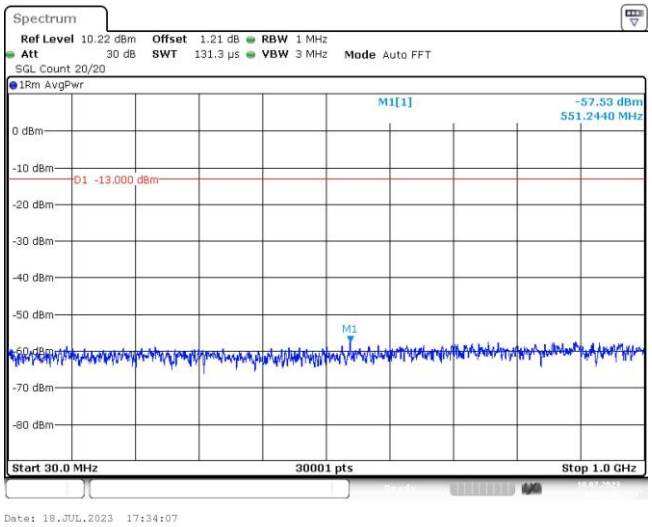
EGPRS1900-661-0.009~0.15MHz



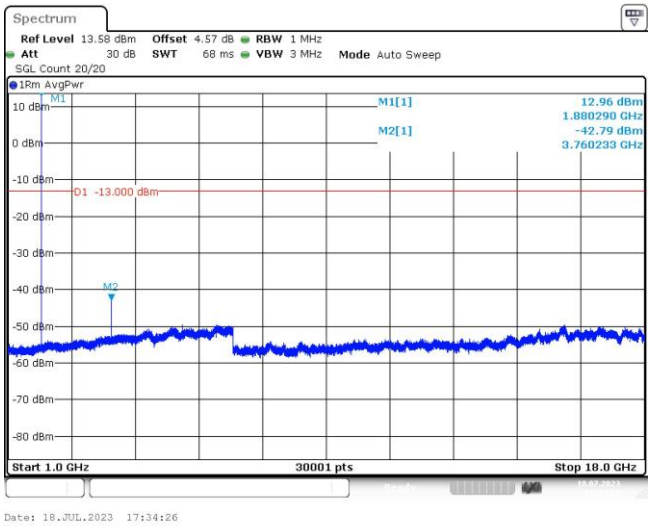
EGPRS1900-661-0.15~30MHz



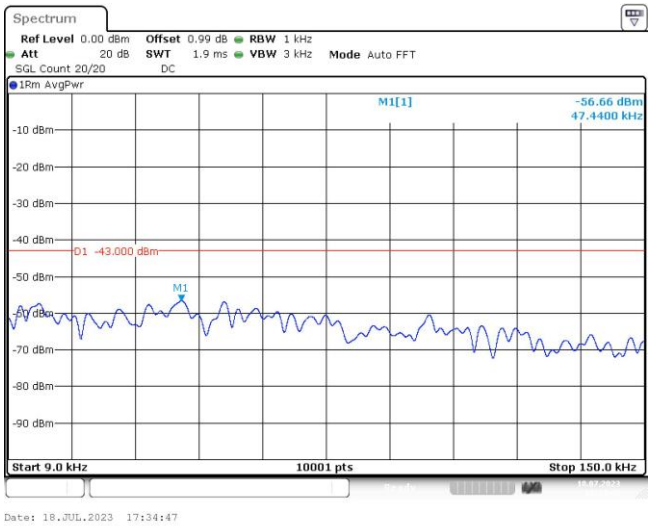
EGPRS1900-661-30~1000MHz



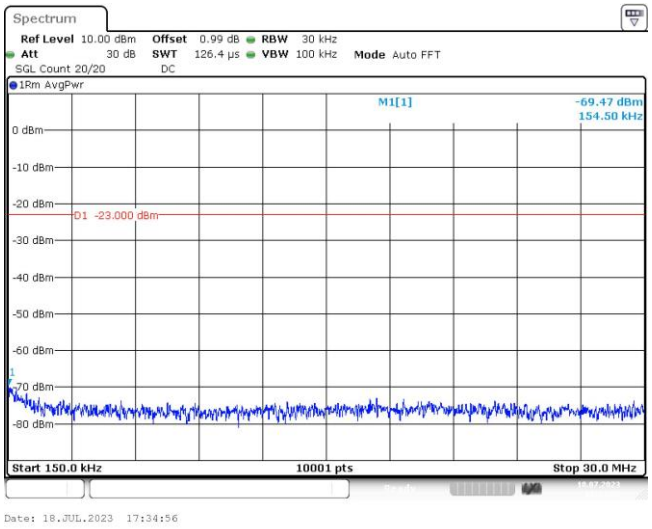
EGPRS1900-661-1000~18000MHz



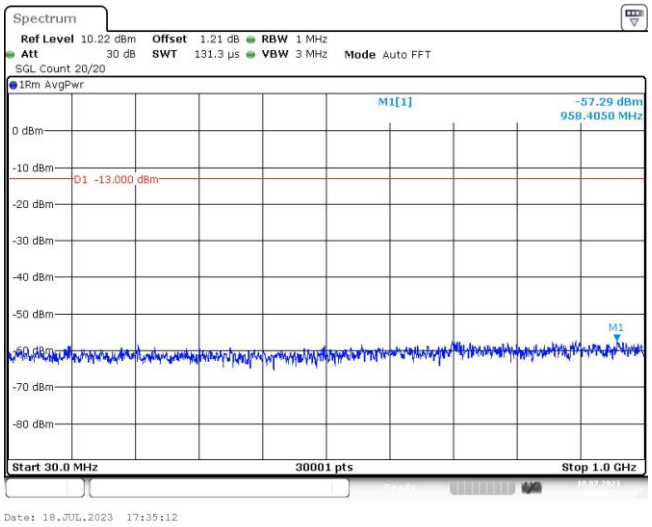
EGPRS1900-810-0.009~0.15MHz



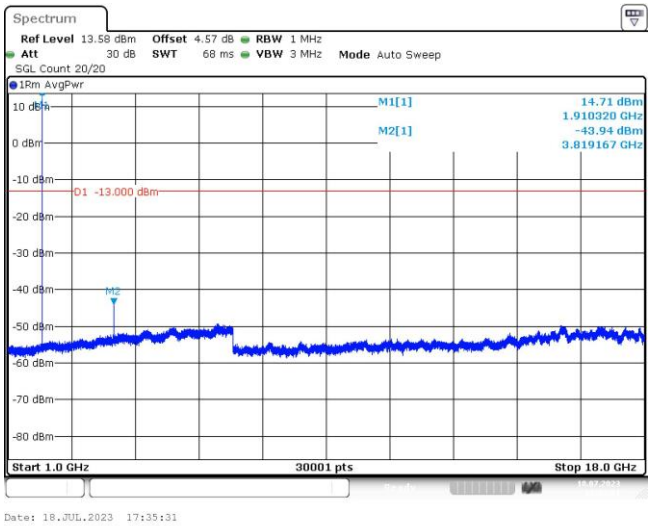
EGPRS1900-810-0.15~30MHz



EGPRS1900-810-30~1000MHz



EGPRS1900-810-1000~18000MHz



Appendix F: Frequency Stability

Test Result

Voltage							
Band	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
GSM850	128	VL	NT	16.85	0.020444	±2.5	PASS
GSM850	128	VN	NT	20.37	0.024715	±2.5	PASS
GSM850	128	VH	NT	15.88	0.019267	±2.5	PASS
GSM850	190	VL	NT	18.82	0.022496	±2.5	PASS
GSM850	190	VN	NT	18.66	0.022305	±2.5	PASS
GSM850	190	VH	NT	15.17	0.018133	±2.5	PASS
GSM850	251	VL	NT	17.40	0.020500	±2.5	PASS
GSM850	251	VN	NT	14.56	0.017154	±2.5	PASS
GSM850	251	VH	NT	18.31	0.021572	±2.5	PASS
GPRS850	128	VL	NT	28.28	0.034312	±2.5	PASS
GPRS850	128	VN	NT	26.47	0.032116	±2.5	PASS
GPRS850	128	VH	NT	27.38	0.033220	±2.5	PASS
GPRS850	190	VL	NT	30.67	0.036660	±2.5	PASS
GPRS850	190	VN	NT	31.32	0.037437	±2.5	PASS
GPRS850	190	VH	NT	30.35	0.036278	±2.5	PASS
GPRS850	251	VL	NT	28.73	0.033848	±2.5	PASS
GPRS850	251	VN	NT	30.09	0.035450	±2.5	PASS
GPRS850	251	VH	NT	29.61	0.034885	±2.5	PASS
EGPRS850	128	VL	NT	24.92	0.030235	±2.5	PASS
EGPRS850	128	VN	NT	25.44	0.030866	±2.5	PASS
EGPRS850	128	VH	NT	23.70	0.028755	±2.5	PASS
EGPRS850	190	VL	NT	25.96	0.031030	±2.5	PASS
EGPRS850	190	VN	NT	25.60	0.030600	±2.5	PASS
EGPRS850	190	VH	NT	25.54	0.030528	±2.5	PASS
EGPRS850	251	VL	NT	25.93	0.030549	±2.5	PASS
EGPRS850	251	VN	NT	27.18	0.032022	±2.5	PASS
EGPRS850	251	VH	NT	26.28	0.030961	±2.5	PASS
GSM1900	512	VL	NT	17.60	0.009512	±2.5	PASS
GSM1900	512	VN	NT	19.44	0.010507	±2.5	PASS
GSM1900	512	VH	NT	17.98	0.009718	±2.5	PASS
GSM1900	661	VL	NT	17.95	0.009548	±2.5	PASS
GSM1900	661	VN	NT	16.95	0.009016	±2.5	PASS
GSM1900	661	VH	NT	16.37	0.008707	±2.5	PASS

GSM1900	810	VL	NT	14.24	0.007456	±2.5	PASS
GSM1900	810	VN	NT	12.66	0.006629	±2.5	PASS
GSM1900	810	VH	NT	12.82	0.006713	±2.5	PASS
GPRS1900	512	VL	NT	22.34	0.012074	±2.5	PASS
GPRS1900	512	VN	NT	22.54	0.012182	±2.5	PASS
GPRS1900	512	VH	NT	23.41	0.012653	±2.5	PASS
GPRS1900	661	VL	NT	26.05	0.013856	±2.5	PASS
GPRS1900	661	VN	NT	26.15	0.013910	±2.5	PASS
GPRS1900	661	VH	NT	25.34	0.013479	±2.5	PASS
GPRS1900	810	VL	NT	24.76	0.012965	±2.5	PASS
GPRS1900	810	VN	NT	26.73	0.013996	±2.5	PASS
GPRS1900	810	VH	NT	24.99	0.013085	±2.5	PASS
EGPRS1900	512	VL	NT	27.12	0.014658	±2.5	PASS
EGPRS1900	512	VN	NT	26.44	0.014290	±2.5	PASS
EGPRS1900	512	VH	NT	29.02	0.015685	±2.5	PASS
EGPRS1900	661	VL	NT	26.64	0.014170	±2.5	PASS
EGPRS1900	661	VN	NT	24.92	0.013255	±2.5	PASS
EGPRS1900	661	VH	NT	27.38	0.014564	±2.5	PASS
EGPRS1900	810	VL	NT	24.44	0.012797	±2.5	PASS
EGPRS1900	810	VN	NT	27.06	0.014169	±2.5	PASS
EGPRS1900	810	VH	NT	24.96	0.013069	±2.5	PASS

Temperature							
Band	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
GSM850	128	NV	-30	17.05	0.020687	±2.5	PASS
GSM850	128	NV	-20	16.69	0.020250	±2.5	PASS
GSM850	128	NV	-10	16.66	0.020214	±2.5	PASS
GSM850	128	NV	0	13.69	0.016610	±2.5	PASS
GSM850	128	NV	10	14.24	0.017277	±2.5	PASS
GSM850	128	NV	20	16.08	0.019510	±2.5	PASS
GSM850	128	NV	30	13.33	0.016173	±2.5	PASS
GSM850	128	NV	40	13.43	0.016295	±2.5	PASS
GSM850	128	NV	50	14.50	0.017593	±2.5	PASS
GSM850	190	NV	-30	20.18	0.024121	±2.5	PASS
GSM850	190	NV	-20	20.05	0.023966	±2.5	PASS
GSM850	190	NV	-10	17.37	0.020763	±2.5	PASS
GSM850	190	NV	0	19.50	0.023309	±2.5	PASS
GSM850	190	NV	10	18.47	0.022077	±2.5	PASS
GSM850	190	NV	20	17.85	0.021336	±2.5	PASS
GSM850	190	NV	30	17.53	0.020954	±2.5	PASS

GSM850	190	NV	40	16.82	0.020105	±2.5	PASS
GSM850	190	NV	50	15.30	0.018288	±2.5	PASS
GSM850	251	NV	-30	17.18	0.020240	±2.5	PASS
GSM850	251	NV	-20	17.98	0.021183	±2.5	PASS
GSM850	251	NV	-10	18.37	0.021642	±2.5	PASS
GSM850	251	NV	0	17.82	0.020994	±2.5	PASS
GSM850	251	NV	10	13.98	0.016470	±2.5	PASS
GSM850	251	NV	20	19.98	0.023539	±2.5	PASS
GSM850	251	NV	30	14.40	0.016965	±2.5	PASS
GSM850	251	NV	40	16.05	0.018909	±2.5	PASS
GSM850	251	NV	50	17.14	0.020193	±2.5	PASS
GPRS850	128	NV	-30	27.51	0.033378	±2.5	PASS
GPRS850	128	NV	-20	27.38	0.033220	±2.5	PASS
GPRS850	128	NV	-10	27.67	0.033572	±2.5	PASS
GPRS850	128	NV	0	27.54	0.033414	±2.5	PASS
GPRS850	128	NV	10	26.51	0.032165	±2.5	PASS
GPRS850	128	NV	20	26.15	0.031728	±2.5	PASS
GPRS850	128	NV	30	27.06	0.032832	±2.5	PASS
GPRS850	128	NV	40	27.06	0.032832	±2.5	PASS
GPRS850	128	NV	50	28.77	0.034907	±2.5	PASS
GPRS850	190	NV	-30	29.90	0.035740	±2.5	PASS
GPRS850	190	NV	-20	30.57	0.036541	±2.5	PASS
GPRS850	190	NV	-10	29.51	0.035274	±2.5	PASS
GPRS850	190	NV	0	30.38	0.036314	±2.5	PASS
GPRS850	190	NV	10	28.67	0.034270	±2.5	PASS
GPRS850	190	NV	20	28.19	0.033696	±2.5	PASS
GPRS850	190	NV	30	29.02	0.034688	±2.5	PASS
GPRS850	190	NV	40	28.90	0.034545	±2.5	PASS
GPRS850	190	NV	50	29.44	0.035190	±2.5	PASS
GPRS850	251	NV	-30	28.31	0.033353	±2.5	PASS
GPRS850	251	NV	-20	27.41	0.032293	±2.5	PASS
GPRS850	251	NV	-10	27.44	0.032328	±2.5	PASS
GPRS850	251	NV	0	26.38	0.031079	±2.5	PASS
GPRS850	251	NV	10	26.86	0.031645	±2.5	PASS
GPRS850	251	NV	20	27.99	0.032976	±2.5	PASS
GPRS850	251	NV	30	27.93	0.032905	±2.5	PASS
GPRS850	251	NV	40	27.41	0.032293	±2.5	PASS
GPRS850	251	NV	50	26.09	0.030738	±2.5	PASS
EGPRS850	128	NV	-30	26.09	0.031655	±2.5	PASS
EGPRS850	128	NV	-20	25.38	0.030793	±2.5	PASS
EGPRS850	128	NV	-10	25.28	0.030672	±2.5	PASS

EGPRS850	128	NV	0	25.67	0.031145	±2.5	PASS
EGPRS850	128	NV	10	25.70	0.031182	±2.5	PASS
EGPRS850	128	NV	20	22.70	0.027542	±2.5	PASS
EGPRS850	128	NV	30	25.18	0.030551	±2.5	PASS
EGPRS850	128	NV	40	25.34	0.030745	±2.5	PASS
EGPRS850	128	NV	50	25.44	0.030866	±2.5	PASS
EGPRS850	190	NV	-30	25.57	0.030564	±2.5	PASS
EGPRS850	190	NV	-20	24.76	0.029596	±2.5	PASS
EGPRS850	190	NV	-10	24.70	0.029524	±2.5	PASS
EGPRS850	190	NV	0	26.51	0.031688	±2.5	PASS
EGPRS850	190	NV	10	24.80	0.029644	±2.5	PASS
EGPRS850	190	NV	20	24.50	0.029285	±2.5	PASS
EGPRS850	190	NV	30	24.89	0.029751	±2.5	PASS
EGPRS850	190	NV	40	25.34	0.030289	±2.5	PASS
EGPRS850	190	NV	50	25.25	0.030182	±2.5	PASS
EGPRS850	251	NV	-30	26.80	0.031574	±2.5	PASS
EGPRS850	251	NV	-20	26.38	0.031079	±2.5	PASS
EGPRS850	251	NV	-10	26.31	0.030997	±2.5	PASS
EGPRS850	251	NV	0	28.41	0.033471	±2.5	PASS
EGPRS850	251	NV	10	26.35	0.031044	±2.5	PASS
EGPRS850	251	NV	20	26.18	0.030844	±2.5	PASS
EGPRS850	251	NV	30	25.99	0.030620	±2.5	PASS
EGPRS850	251	NV	40	26.51	0.031232	±2.5	PASS
EGPRS850	251	NV	50	26.99	0.031798	±2.5	PASS
GSM1900	512	NV	-30	19.05	0.010296	±2.5	PASS
GSM1900	512	NV	-20	16.34	0.008831	±2.5	PASS
GSM1900	512	NV	-10	14.01	0.007572	±2.5	PASS
GSM1900	512	NV	0	12.85	0.006945	±2.5	PASS
GSM1900	512	NV	10	12.43	0.006718	±2.5	PASS
GSM1900	512	NV	20	15.50	0.008377	±2.5	PASS
GSM1900	512	NV	30	15.08	0.008150	±2.5	PASS
GSM1900	512	NV	40	12.24	0.006616	±2.5	PASS
GSM1900	512	NV	50	12.75	0.006891	±2.5	PASS
GSM1900	661	NV	-30	17.01	0.009048	±2.5	PASS
GSM1900	661	NV	-20	17.89	0.009516	±2.5	PASS
GSM1900	661	NV	-10	15.56	0.008277	±2.5	PASS
GSM1900	661	NV	0	15.66	0.008330	±2.5	PASS
GSM1900	661	NV	10	14.27	0.007590	±2.5	PASS
GSM1900	661	NV	20	18.50	0.009840	±2.5	PASS
GSM1900	661	NV	30	17.69	0.009410	±2.5	PASS
GSM1900	661	NV	40	19.95	0.010612	±2.5	PASS

GSM1900	661	NV	50	16.47	0.008761	±2.5	PASS
GSM1900	810	NV	-30	15.98	0.008367	±2.5	PASS
GSM1900	810	NV	-20	16.18	0.008472	±2.5	PASS
GSM1900	810	NV	-10	14.24	0.007456	±2.5	PASS
GSM1900	810	NV	0	17.08	0.008943	±2.5	PASS
GSM1900	810	NV	10	11.78	0.006168	±2.5	PASS
GSM1900	810	NV	20	15.14	0.007928	±2.5	PASS
GSM1900	810	NV	30	14.88	0.007791	±2.5	PASS
GSM1900	810	NV	40	14.95	0.007828	±2.5	PASS
GSM1900	810	NV	50	13.95	0.007304	±2.5	PASS
GPRS1900	512	NV	-30	22.21	0.012004	±2.5	PASS
GPRS1900	512	NV	-20	23.37	0.012631	±2.5	PASS
GPRS1900	512	NV	-10	21.89	0.011831	±2.5	PASS
GPRS1900	512	NV	0	21.53	0.011637	±2.5	PASS
GPRS1900	512	NV	10	21.08	0.011393	±2.5	PASS
GPRS1900	512	NV	20	21.18	0.011447	±2.5	PASS
GPRS1900	512	NV	30	21.41	0.011572	±2.5	PASS
GPRS1900	512	NV	40	21.66	0.011707	±2.5	PASS
GPRS1900	512	NV	50	22.92	0.012388	±2.5	PASS
GPRS1900	661	NV	-30	26.93	0.014324	±2.5	PASS
GPRS1900	661	NV	-20	26.60	0.014149	±2.5	PASS
GPRS1900	661	NV	-10	23.47	0.012484	±2.5	PASS
GPRS1900	661	NV	0	26.22	0.013947	±2.5	PASS
GPRS1900	661	NV	10	24.96	0.013277	±2.5	PASS
GPRS1900	661	NV	20	27.22	0.014479	±2.5	PASS
GPRS1900	661	NV	30	25.86	0.013755	±2.5	PASS
GPRS1900	661	NV	40	24.31	0.012931	±2.5	PASS
GPRS1900	661	NV	50	25.31	0.013463	±2.5	PASS
GPRS1900	810	NV	-30	25.60	0.013405	±2.5	PASS
GPRS1900	810	NV	-20	25.76	0.013488	±2.5	PASS
GPRS1900	810	NV	-10	24.57	0.012865	±2.5	PASS
GPRS1900	810	NV	0	24.34	0.012745	±2.5	PASS
GPRS1900	810	NV	10	25.44	0.013321	±2.5	PASS
GPRS1900	810	NV	20	23.05	0.012069	±2.5	PASS
GPRS1900	810	NV	30	23.54	0.012326	±2.5	PASS
GPRS1900	810	NV	40	25.54	0.013373	±2.5	PASS
GPRS1900	810	NV	50	23.86	0.012493	±2.5	PASS
EGPRS1900	512	NV	-30	28.99	0.015669	±2.5	PASS
EGPRS1900	512	NV	-20	27.48	0.014852	±2.5	PASS
EGPRS1900	512	NV	-10	27.41	0.014815	±2.5	PASS
EGPRS1900	512	NV	0	27.93	0.015096	±2.5	PASS

EGPRS1900	512	NV	10	27.73	0.014988	±2.5	PASS
EGPRS1900	512	NV	20	28.73	0.015528	±2.5	PASS
EGPRS1900	512	NV	30	29.15	0.015755	±2.5	PASS
EGPRS1900	512	NV	40	27.64	0.014939	±2.5	PASS
EGPRS1900	512	NV	50	28.12	0.015198	±2.5	PASS
EGPRS1900	661	NV	-30	26.99	0.014356	±2.5	PASS
EGPRS1900	661	NV	-20	25.12	0.013362	±2.5	PASS
EGPRS1900	661	NV	-10	26.02	0.013840	±2.5	PASS
EGPRS1900	661	NV	0	26.80	0.014255	±2.5	PASS
EGPRS1900	661	NV	10	29.48	0.015681	±2.5	PASS
EGPRS1900	661	NV	20	28.19	0.014995	±2.5	PASS
EGPRS1900	661	NV	30	28.06	0.014926	±2.5	PASS
EGPRS1900	661	NV	40	27.83	0.014803	±2.5	PASS
EGPRS1900	661	NV	50	26.67	0.014186	±2.5	PASS
EGPRS1900	810	NV	-30	25.51	0.013357	±2.5	PASS
EGPRS1900	810	NV	-20	22.70	0.011886	±2.5	PASS
EGPRS1900	810	NV	-10	24.44	0.012797	±2.5	PASS
EGPRS1900	810	NV	0	22.89	0.011986	±2.5	PASS
EGPRS1900	810	NV	10	22.12	0.011582	±2.5	PASS
EGPRS1900	810	NV	20	24.73	0.012949	±2.5	PASS
EGPRS1900	810	NV	30	24.80	0.012986	±2.5	PASS
EGPRS1900	810	NV	40	26.05	0.013640	±2.5	PASS
EGPRS1900	810	NV	50	26.51	0.013881	±2.5	PASS

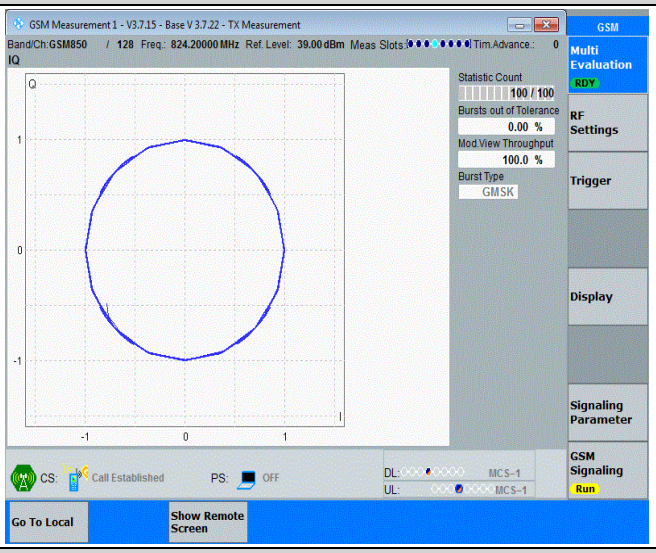
Appendix G: Modulation Characteristics

Test Result

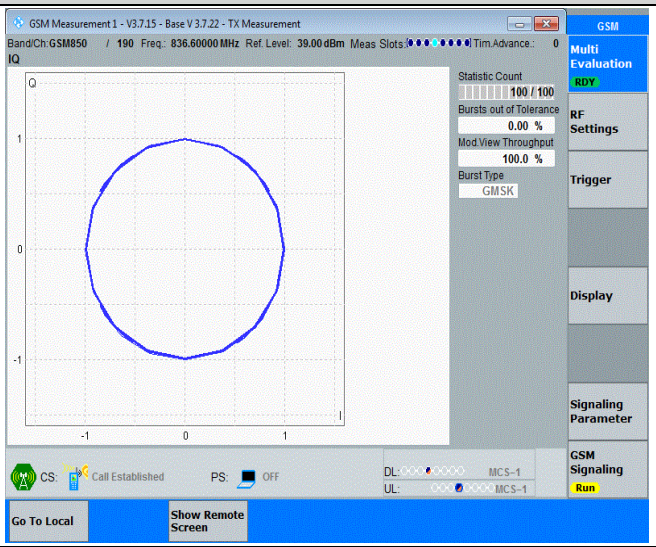
Band	Channel	Result	Verdict
GSM850	128	PASS	PASS
GSM850	190	PASS	PASS
GSM850	251	PASS	PASS
GPRS850	128	PASS	PASS
GPRS850	190	PASS	PASS
GPRS850	251	PASS	PASS
EGPRS850	128	PASS	PASS
EGPRS850	190	PASS	PASS
EGPRS850	251	PASS	PASS
GSM1900	512	PASS	PASS
GSM1900	661	PASS	PASS
GSM1900	810	PASS	PASS
GPRS1900	512	PASS	PASS
GPRS1900	661	PASS	PASS
GPRS1900	810	PASS	PASS
EGPRS1900	512	PASS	PASS
EGPRS1900	661	PASS	PASS
EGPRS1900	810	PASS	PASS

Test Graphs

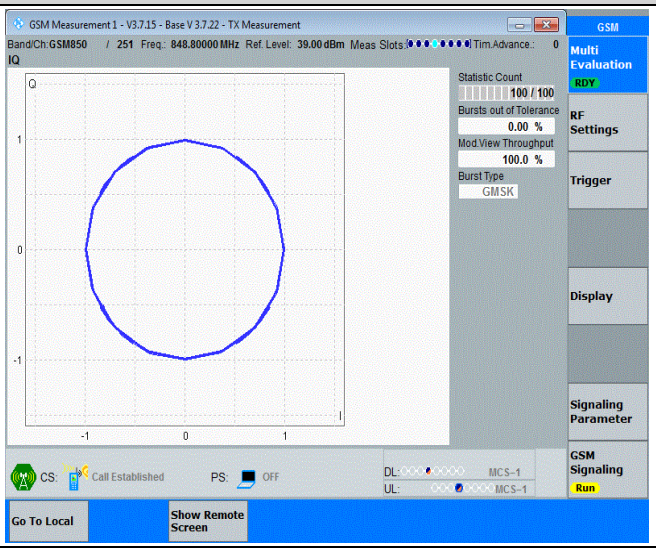
GSM850-128



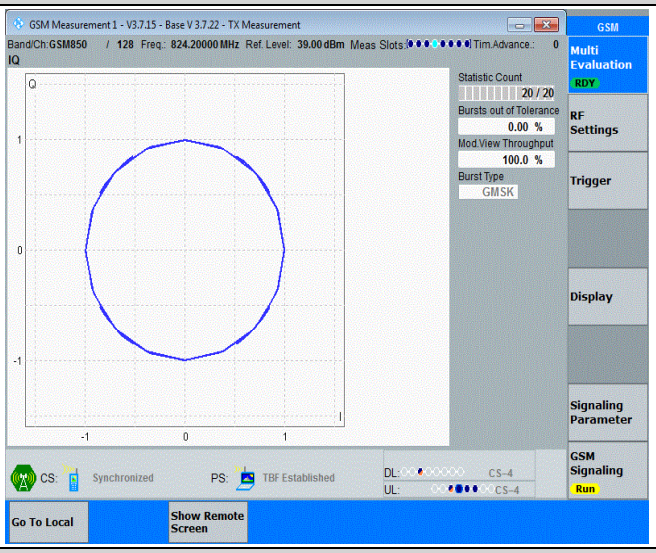
GSM850-190



GSM850-251



GPRS850-128



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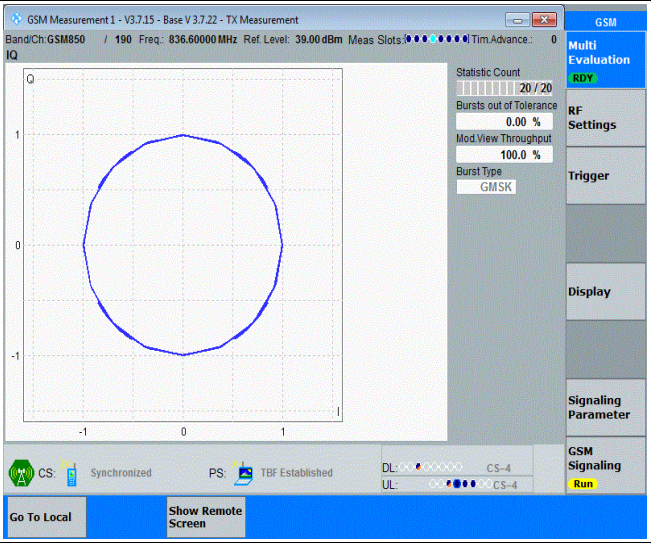

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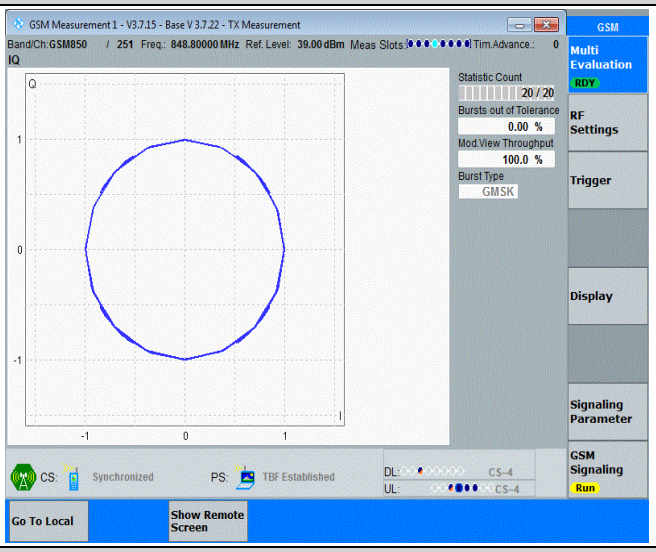

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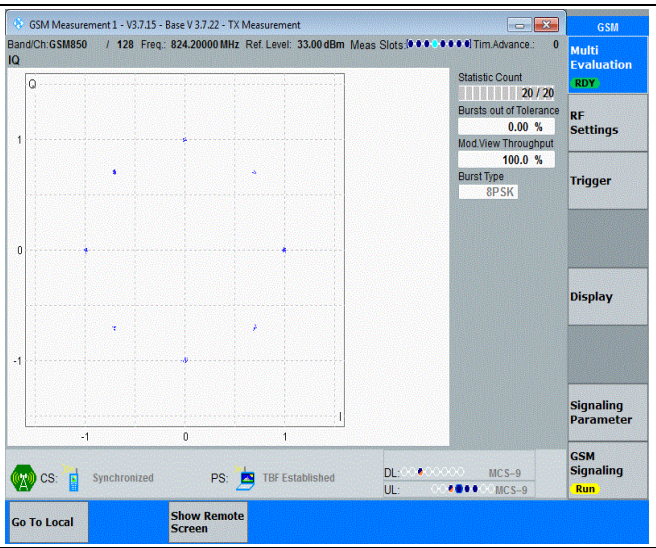

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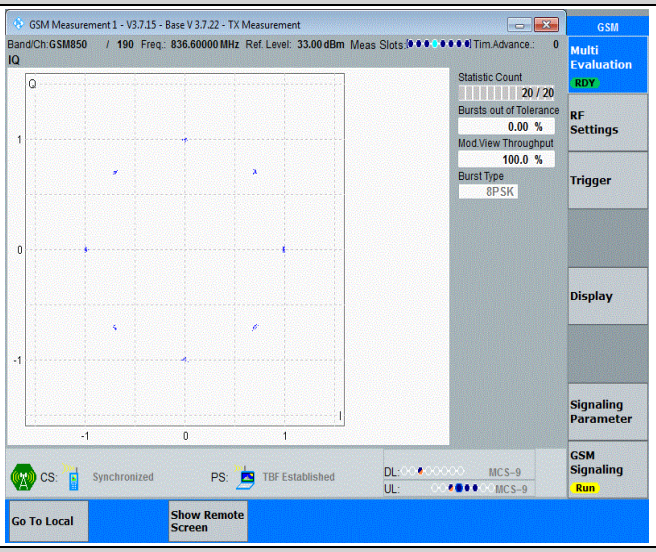

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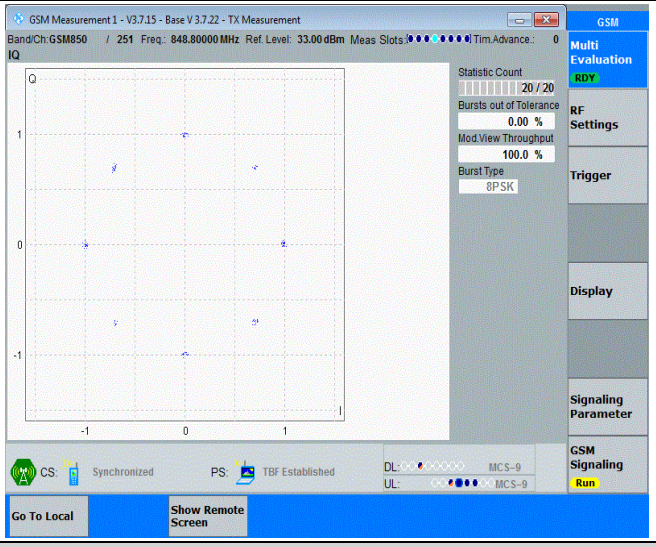

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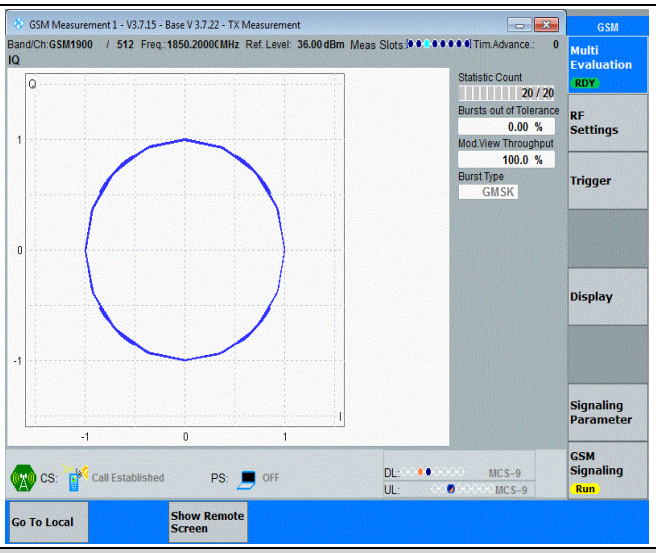
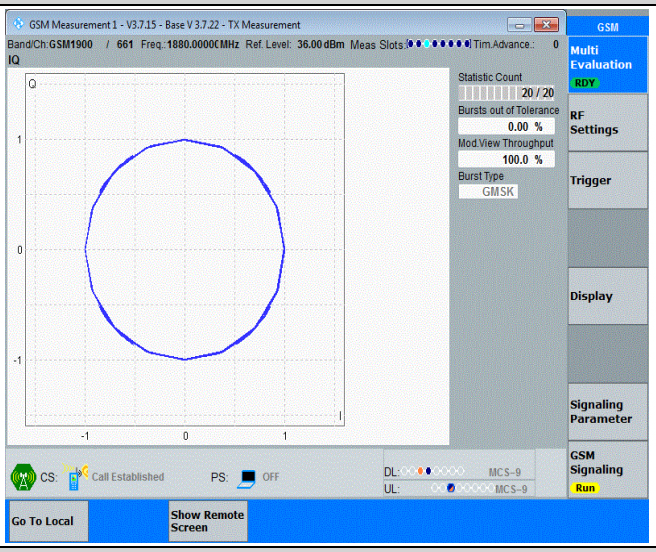
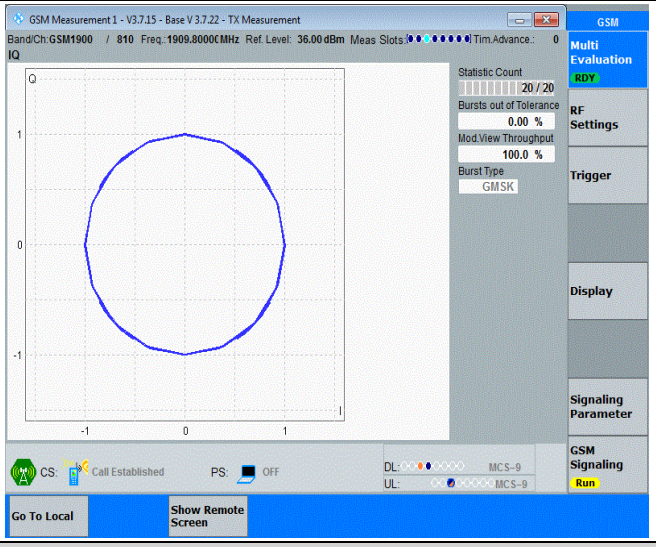


GSM1900-661



GSM1900-810



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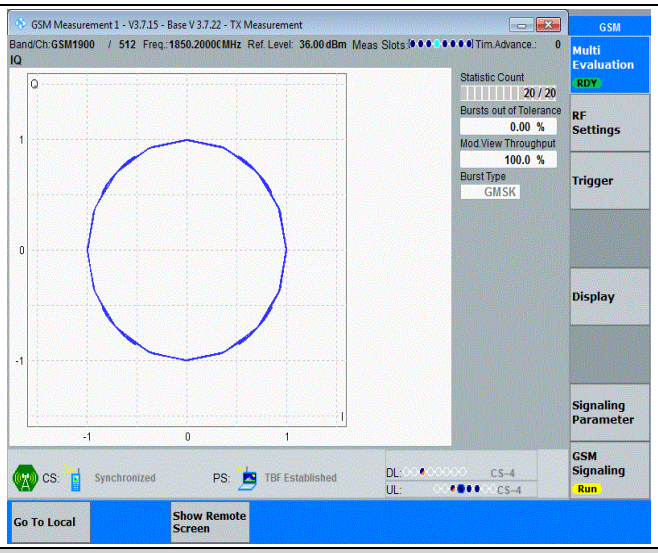

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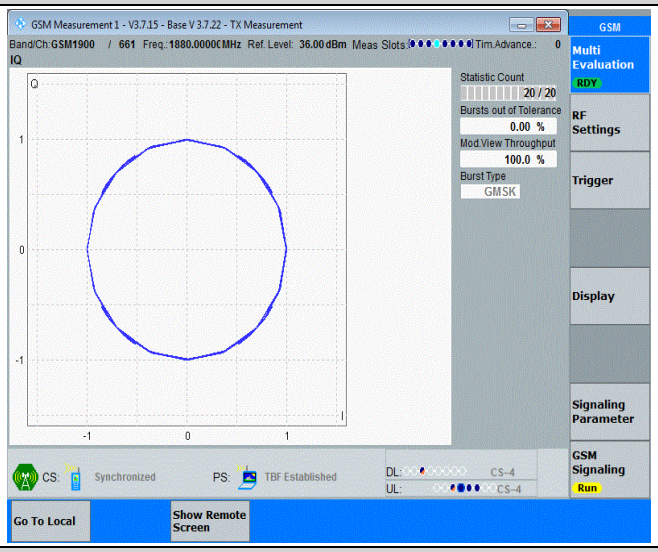

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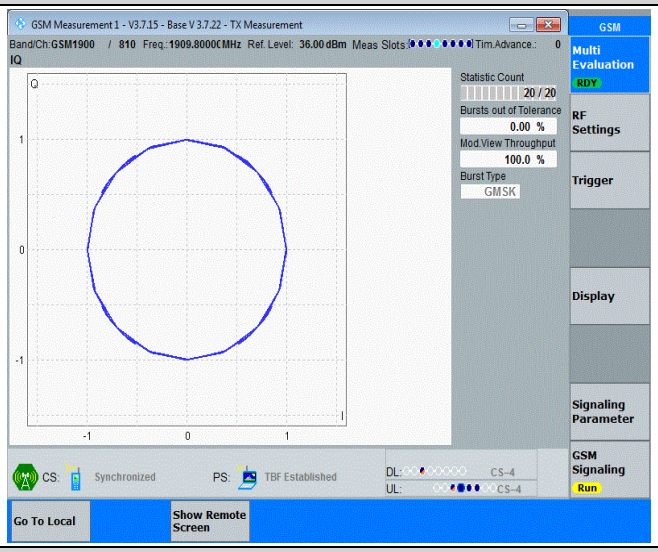

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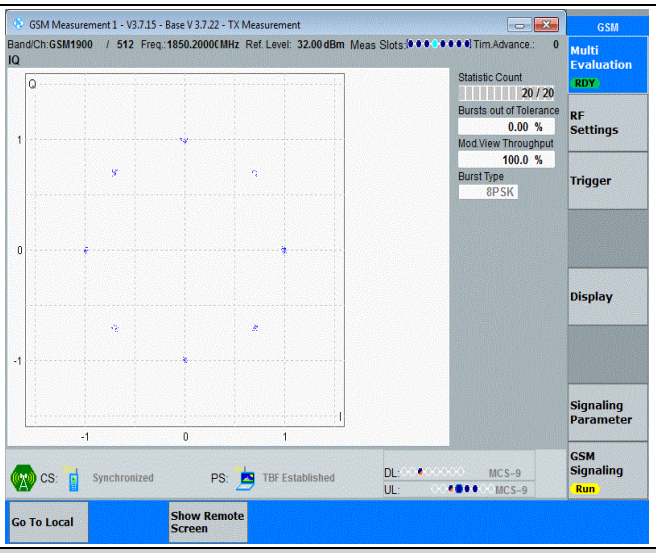

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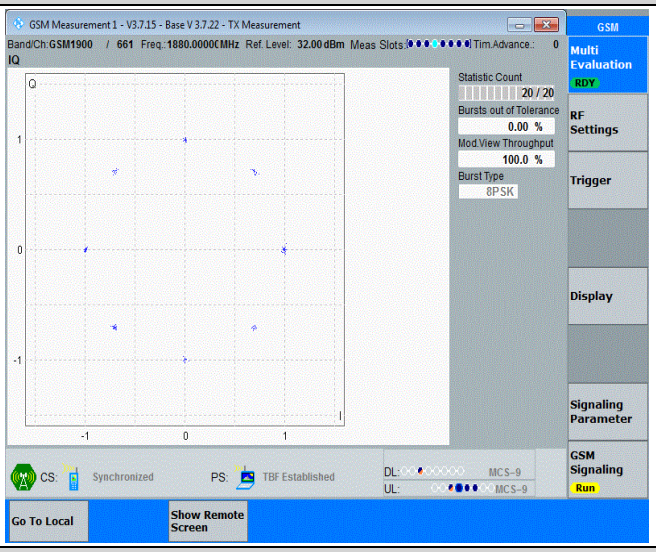
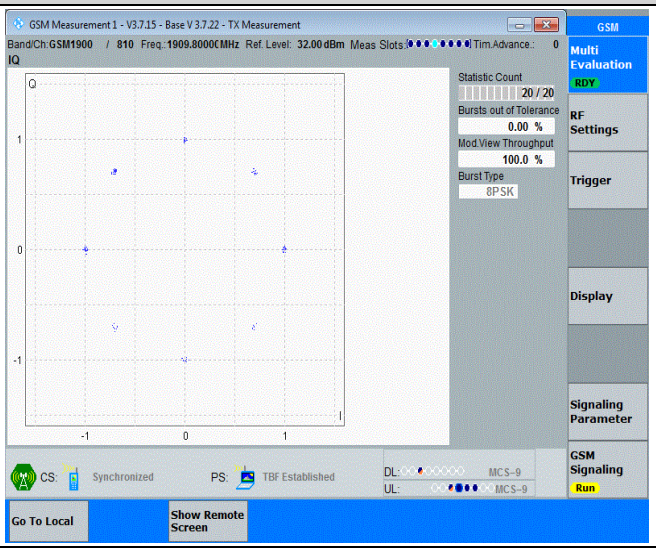
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