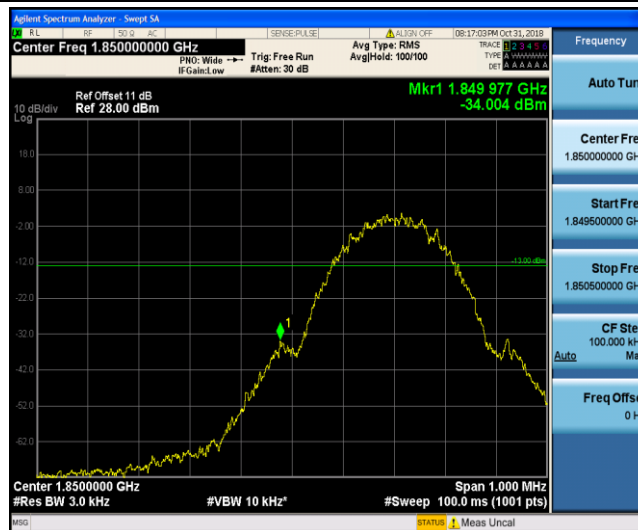




GPRS1900\_810



EGPRS1900\_512



EGPRS1900\_810



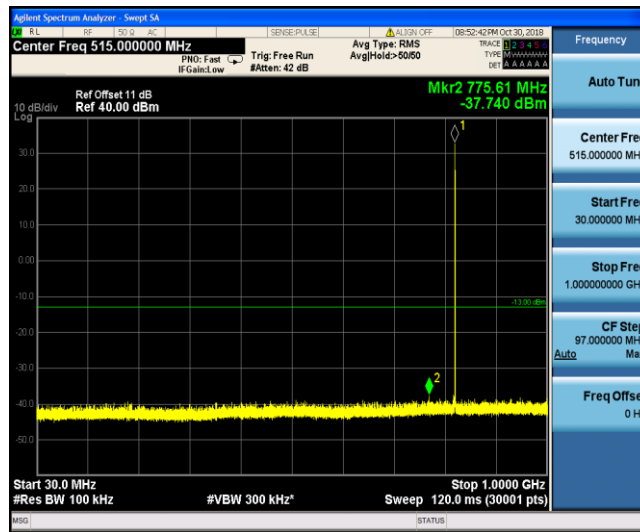
## 8.5 Appendix E: Conducted Spurious Emission

### Test Result

Band	Channel	Frequency Rang(Mhz)	Value(dBm)	Limit(dBm)	Verdict
GSM850	128	30~1000	-37.74	-13	PASS
GSM850	128	1000~10000	-34.40	-13	PASS
GSM850	190	30~1000	-38.00	-13	PASS
GSM850	190	1000~10000	-34.35	-13	PASS
GSM850	251	30~1000	-38.44	-13	PASS
GSM850	251	1000~10000	-34.42	-13	PASS
GPRS850	128	30~1000	-37.41	-13	PASS
GPRS850	128	1000~10000	-34.34	-13	PASS
GPRS850	190	30~1000	-37.52	-13	PASS
GPRS850	190	1000~10000	-34.36	-13	PASS
GPRS850	251	30~1000	-37.73	-13	PASS
GPRS850	251	1000~10000	-34.46	-13	PASS
EGPRS850	128	30~1000	-37.33	-13	PASS
EGPRS850	128	1000~10000	-34.41	-13	PASS
EGPRS850	190	30~1000	-37.77	-13	PASS
EGPRS850	190	1000~10000	-34.44	-13	PASS
EGPRS850	251	30~1000	-37.09	-13	PASS
EGPRS850	251	1000~10000	-34.37	-13	PASS
GSM1900	512	30~1000	-37.65	-13	PASS
GSM1900	512	1000~20000	-27.89	-13	PASS
GSM1900	661	30~1000	-37.47	-13	PASS
GSM1900	661	1000~20000	-27.81	-13	PASS
GSM1900	810	30~1000	-36.99	-13	PASS
GSM1900	810	1000~20000	-28.00	-13	PASS
GPRS1900	512	30~1000	-37.41	-13	PASS
GPRS1900	512	1000~20000	-27.74	-13	PASS
GPRS1900	661	30~1000	-37.79	-13	PASS
GPRS1900	661	1000~20000	-27.91	-13	PASS
GPRS1900	810	30~1000	-37.06	-13	PASS
GPRS1900	810	1000~20000	-27.86	-13	PASS
EGPRS1900	512	30~1000	-38.16	-13	PASS
EGPRS1900	512	1000~20000	-28.14	-13	PASS
EGPRS1900	661	30~1000	-37.22	-13	PASS
EGPRS1900	661	1000~20000	-27.92	-13	PASS
EGPRS1900	810	30~1000	-37.73	-13	PASS
EGPRS1900	810	1000~20000	-27.92	-13	PASS



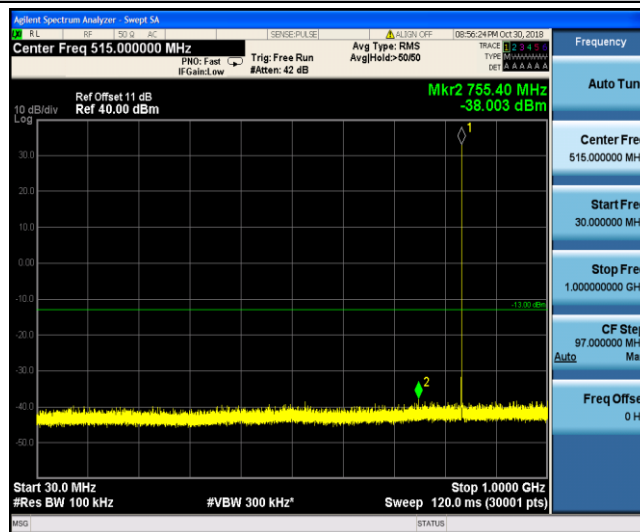
Test Graphs



GSM850\_128

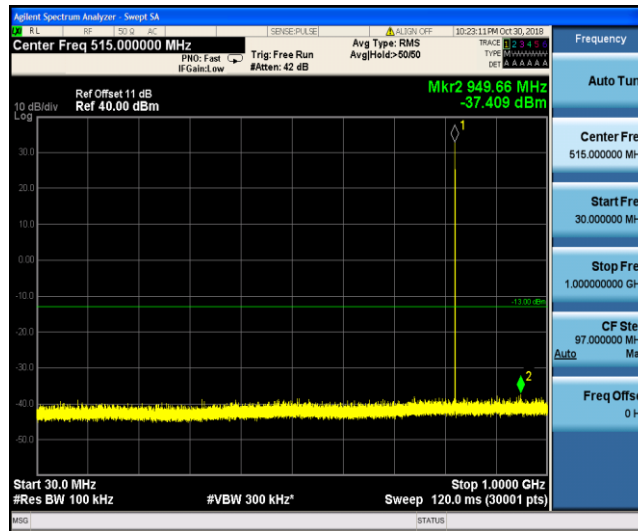


GSM850\_128



GSM850\_190

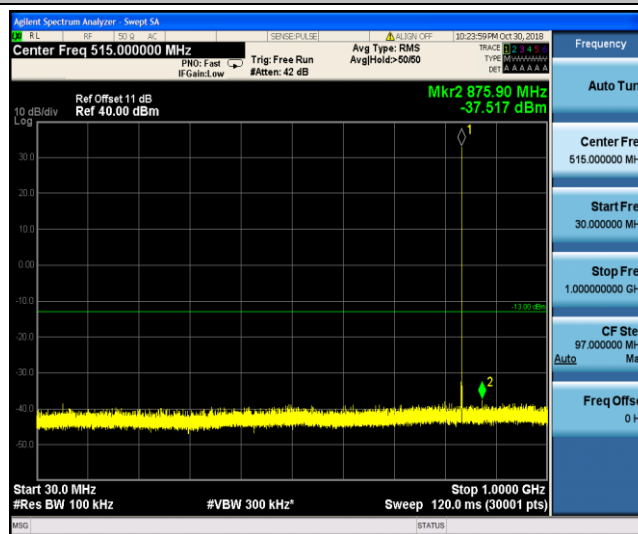




GPRS850\_128



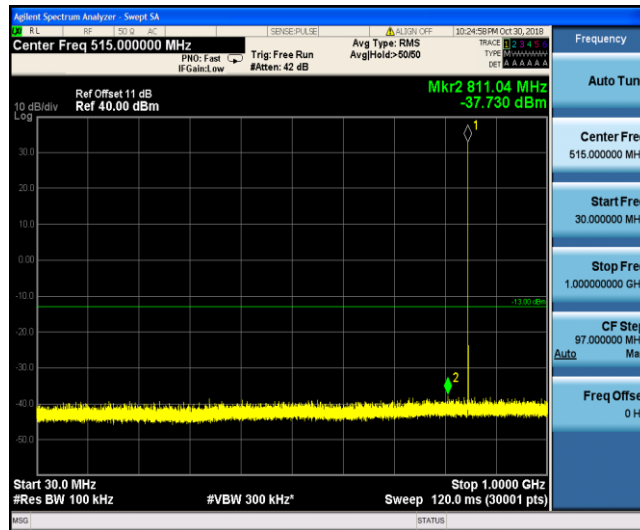
GPRS850\_128



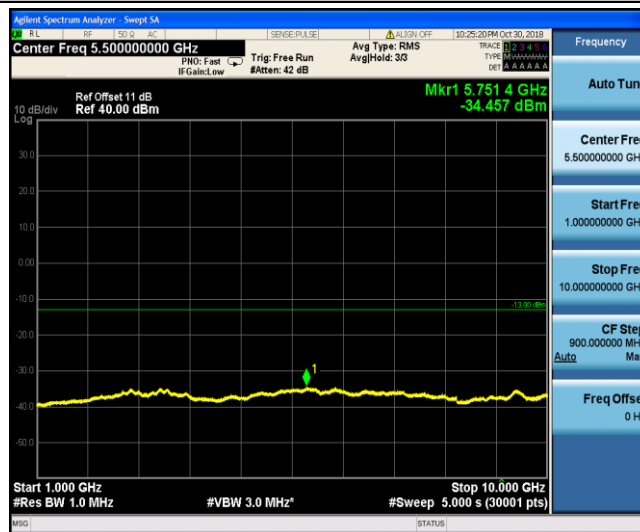
GPRS850\_190



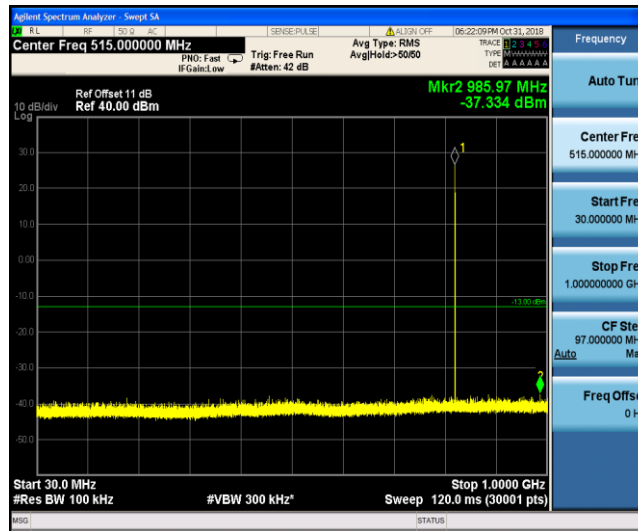
GPRS850\_190



GPRS850\_251



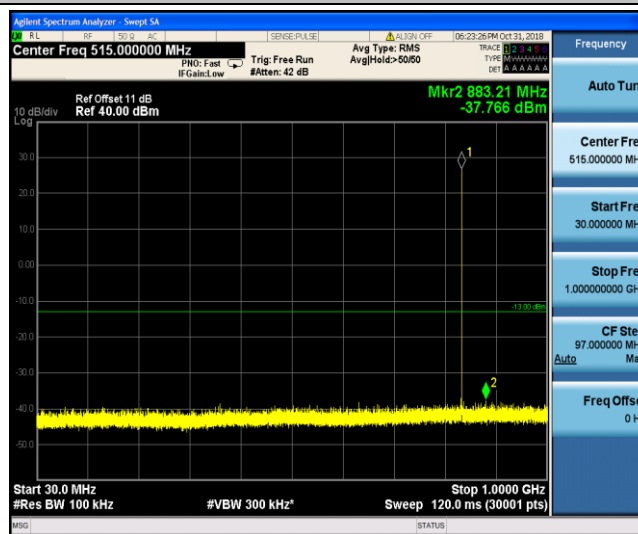
GPRS850\_251



EGPRS850\_128



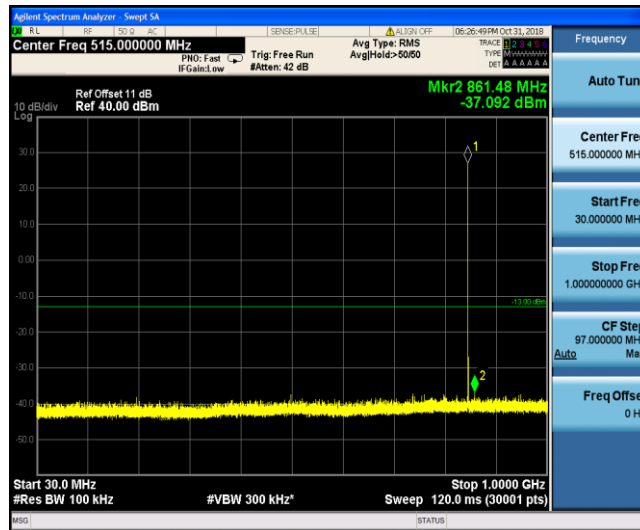
EGPRS850\_128



EGPRS850\_190



EGPRS850\_190

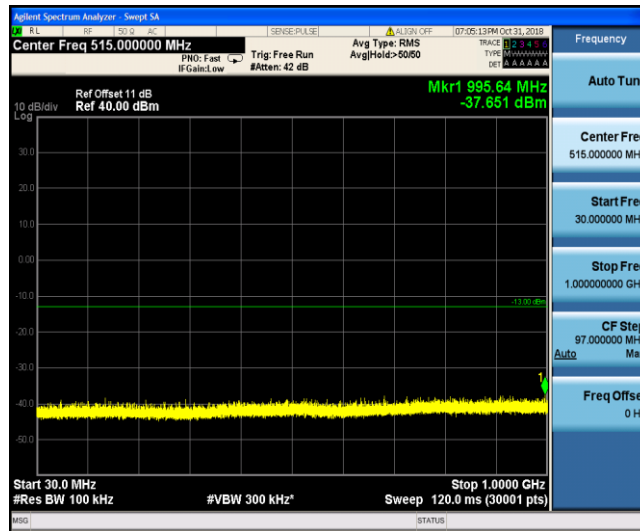


EGPRS850\_251



EGPRS850\_251

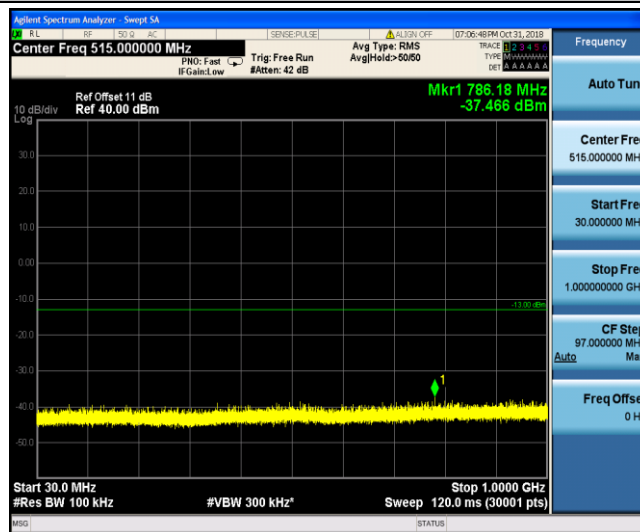




GSM1900\_512



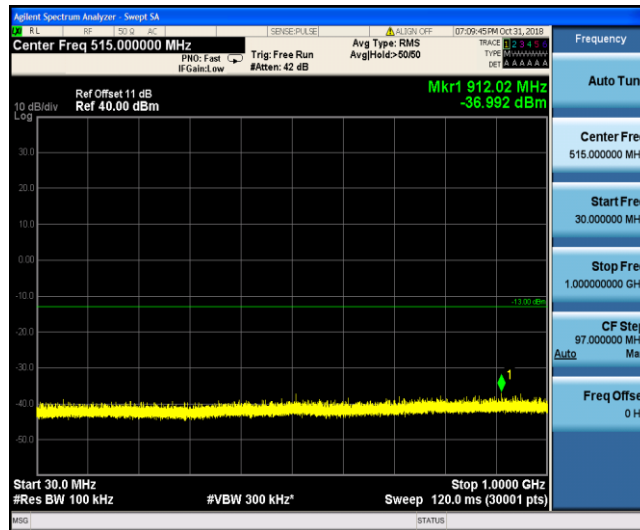
GSM1900\_512



GSM1900\_661



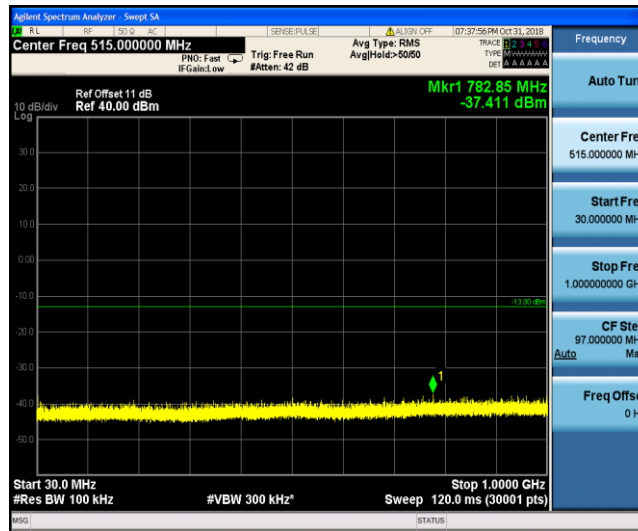
GSM1900\_661



GSM1900\_810



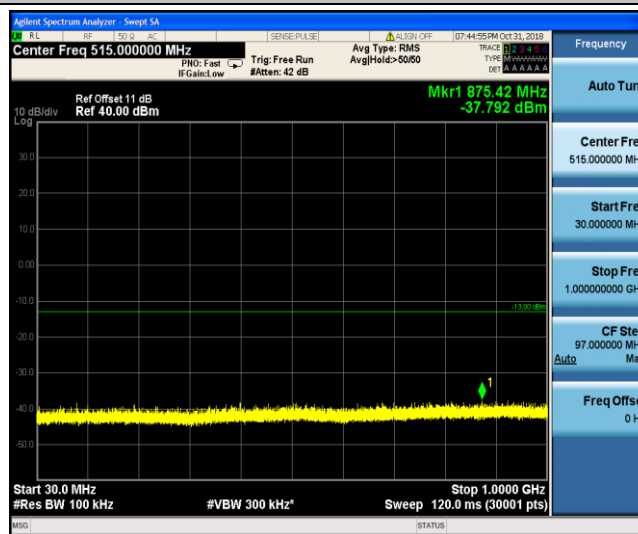
GSM1900\_810



GPRS1900\_512



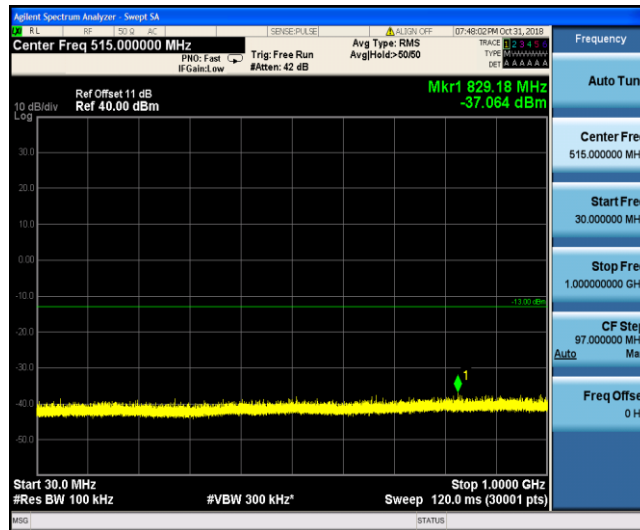
GPRS1900\_512



GPRS1900\_661



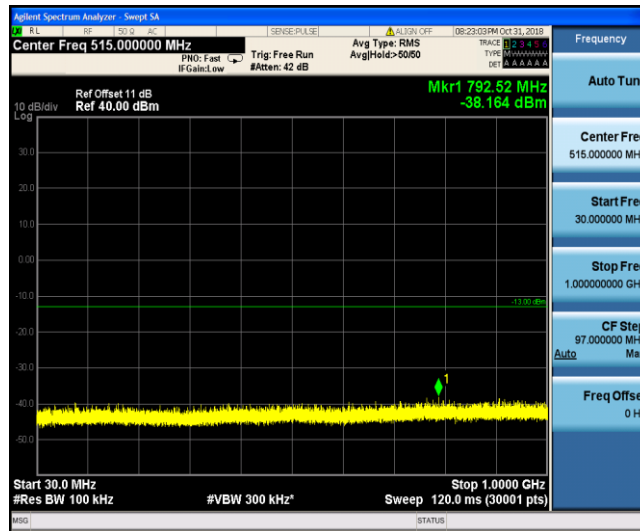
GPRS1900\_661



GPRS1900\_810



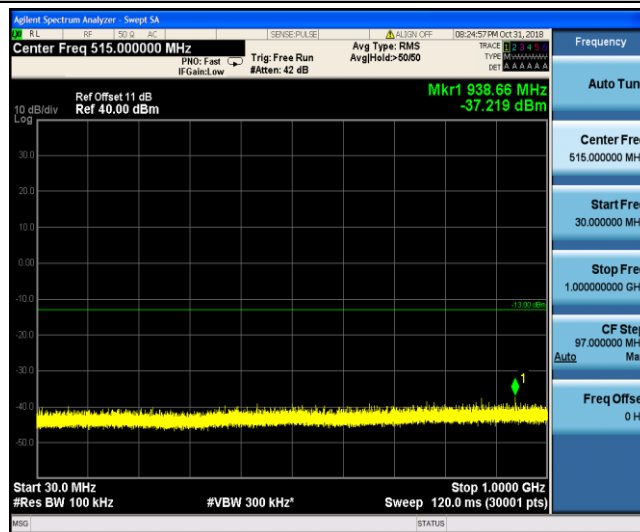
GPRS1900\_810



EGPRS1900\_512



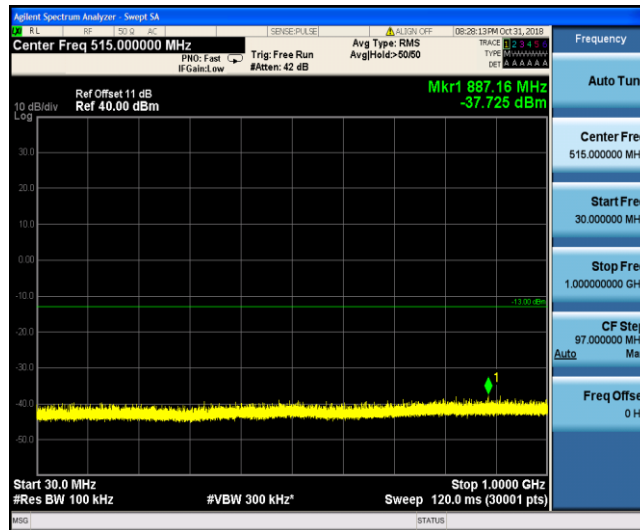
EGPRS1900\_512



EGPRS1900\_661



EGPRS1900\_661



EGPRS1900\_810



EGPRS1900\_810



## 8.6 Appendix F: Frequency Stability

### Test Result

Voltage							
Band	Channel	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
GSM850	128	VL	TN	7.14	0.008657	2.5	PASS
GSM850	128	VN	TN	8.01	0.009715	2.5	PASS
GSM850	128	VH	TN	5.71	0.006934	2.5	PASS
GSM850	190	VL	TN	7.78	0.009301	2.5	PASS
GSM850	190	VN	TN	10.01	0.011963	2.5	PASS
GSM850	190	VH	TN	8.85	0.010574	2.5	PASS
GSM850	251	VL	TN	11.11	0.013085	2.5	PASS
GSM850	251	VN	TN	7.52	0.008863	2.5	PASS
GSM850	251	VH	TN	8.56	0.010080	2.5	PASS
GPRS850	128	VL	TN	-2.91	-0.003526	2.5	PASS
GPRS850	128	VN	TN	0.13	0.000157	2.5	PASS
GPRS850	128	VH	TN	3.29	0.003996	2.5	PASS
GPRS850	190	VL	TN	7.85	0.009378	2.5	PASS
GPRS850	190	VN	TN	7.17	0.008567	2.5	PASS
GPRS850	190	VH	TN	7.39	0.008838	2.5	PASS
GPRS850	251	VL	TN	6.01	0.007075	2.5	PASS
GPRS850	251	VN	TN	6.84	0.008064	2.5	PASS
GPRS850	251	VH	TN	2.68	0.003157	2.5	PASS
EGPRS850	128	VL	TN	-3.39	-0.004113	2.5	PASS
EGPRS850	128	VN	TN	-0.19	-0.000235	2.5	PASS
EGPRS850	128	VH	TN	6.36	0.007717	2.5	PASS
EGPRS850	190	VL	TN	4.16	0.004978	2.5	PASS
EGPRS850	190	VN	TN	1.52	0.001814	2.5	PASS
EGPRS850	190	VH	TN	0.16	0.000193	2.5	PASS
EGPRS850	251	VL	TN	1.68	0.001978	2.5	PASS
EGPRS850	251	VN	TN	3.91	0.004602	2.5	PASS
EGPRS850	251	VH	TN	-0.06	-0.000076	2.5	PASS
GSM1900	512	VL	TN	13.75	0.007434	2.5	PASS
GSM1900	512	VN	TN	7.39	0.003996	2.5	PASS
GSM1900	512	VH	TN	13.37	0.007224	2.5	PASS
GSM1900	661	VL	TN	8.56	0.004551	2.5	PASS
GSM1900	661	VN	TN	14.69	0.007814	2.5	PASS
GSM1900	661	VH	TN	10.04	0.005341	2.5	PASS
GSM1900	810	VL	TN	11.59	0.006069	2.5	PASS
GSM1900	810	VN	TN	8.04	0.004209	2.5	PASS
GSM1900	810	VH	TN	16.43	0.008605	2.5	PASS
GPRS1900	512	VL	TN	4.84	0.002617	2.5	PASS
GPRS1900	512	VN	TN	16.56	0.008952	2.5	PASS
GPRS1900	512	VH	TN	26.60	0.014379	2.5	PASS
GPRS1900	661	VL	TN	9.52	0.005066	2.5	PASS
GPRS1900	661	VN	TN	10.40	0.005530	2.5	PASS
GPRS1900	661	VH	TN	11.66	0.006200	2.5	PASS
GPRS1900	810	VL	TN	12.82	0.006711	2.5	PASS
GPRS1900	810	VN	TN	11.88	0.006221	2.5	PASS
GPRS1900	810	VH	TN	6.94	0.003635	2.5	PASS
EGPRS1900	512	VL	TN	4.81	0.002600	2.5	PASS
EGPRS1900	512	VN	TN	12.46	0.006736	2.5	PASS
EGPRS1900	512	VH	TN	20.11	0.010871	2.5	PASS



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EGPRS1900	661	VL	TN	15.17	0.008071	2.5	PASS
EGPRS1900	661	VN	TN	9.62	0.005118	2.5	PASS
EGPRS1900	661	VH	TN	14.11	0.007505	2.5	PASS
EGPRS1900	810	VL	TN	4.46	0.002333	2.5	PASS
EGPRS1900	810	VN	TN	10.98	0.005748	2.5	PASS
EGPRS1900	810	VH	TN	14.53	0.007607	2.5	PASS





Temperature							
Band	Channel	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
GSM850	128	VN	-30	9.56	0.011595	2.5	PASS
GSM850	128	VN	-20	9.75	0.011830	2.5	PASS
GSM850	128	VN	-10	7.62	0.009245	2.5	PASS
GSM850	128	VN	0	7.26	0.008814	2.5	PASS
GSM850	128	VN	10	5.39	0.006542	2.5	PASS
GSM850	128	VN	20	3.13	0.003800	2.5	PASS
GSM850	128	VN	30	2.26	0.002742	2.5	PASS
GSM850	128	VN	40	5.17	0.006268	2.5	PASS
GSM850	128	VN	50	4.84	0.005876	2.5	PASS
GSM850	190	VN	-30	16.72	0.019991	2.5	PASS
GSM850	190	VN	-20	10.62	0.012697	2.5	PASS
GSM850	190	VN	-10	10.17	0.012156	2.5	PASS
GSM850	190	VN	0	5.97	0.007139	2.5	PASS
GSM850	190	VN	10	7.55	0.009030	2.5	PASS
GSM850	190	VN	20	8.59	0.010265	2.5	PASS
GSM850	190	VN	30	4.91	0.005866	2.5	PASS
GSM850	190	VN	40	6.10	0.007294	2.5	PASS
GSM850	190	VN	50	10.30	0.012311	2.5	PASS
GSM850	251	VN	-30	13.14	0.015481	2.5	PASS
GSM850	251	VN	-20	10.07	0.011868	2.5	PASS
GSM850	251	VN	-10	10.43	0.012286	2.5	PASS
GSM850	251	VN	0	6.88	0.008102	2.5	PASS
GSM850	251	VN	10	3.23	0.003804	2.5	PASS
GSM850	251	VN	20	8.78	0.010346	2.5	PASS
GSM850	251	VN	30	6.07	0.007151	2.5	PASS
GSM850	251	VN	40	6.97	0.008216	2.5	PASS
GSM850	251	VN	50	4.55	0.005363	2.5	PASS
GPRS850	128	VN	-30	10.20	0.012378	2.5	PASS
GPRS850	128	VN	-20	7.59	0.009206	2.5	PASS
GPRS850	128	VN	-10	6.33	0.007678	2.5	PASS
GPRS850	128	VN	0	2.26	0.002742	2.5	PASS
GPRS850	128	VN	10	5.00	0.006072	2.5	PASS
GPRS850	128	VN	20	9.23	0.011203	2.5	PASS
GPRS850	128	VN	30	6.33	0.007678	2.5	PASS
GPRS850	128	VN	40	5.13	0.006228	2.5	PASS
GPRS850	128	VN	50	2.58	0.003134	2.5	PASS
GPRS850	190	VN	-30	7.30	0.008722	2.5	PASS
GPRS850	190	VN	-20	3.29	0.003936	2.5	PASS
GPRS850	190	VN	-10	0.94	0.001119	2.5	PASS
GPRS850	190	VN	0	3.84	0.004592	2.5	PASS
GPRS850	190	VN	10	-1.78	-0.002123	2.5	PASS
GPRS850	190	VN	20	2.78	0.003319	2.5	PASS
GPRS850	190	VN	30	7.68	0.009185	2.5	PASS
GPRS850	190	VN	40	4.52	0.005403	2.5	PASS
GPRS850	190	VN	50	7.10	0.008490	2.5	PASS
GPRS850	251	VN	-30	7.07	0.008330	2.5	PASS
GPRS850	251	VN	-20	8.07	0.009509	2.5	PASS
GPRS850	251	VN	-10	9.04	0.010650	2.5	PASS
GPRS850	251	VN	0	8.65	0.010194	2.5	PASS
GPRS850	251	VN	10	1.49	0.001750	2.5	PASS
GPRS850	251	VN	20	5.71	0.006733	2.5	PASS



GPRS850	251	VN	30	8.46	0.009966	2.5	PASS
GPRS850	251	VN	40	6.65	0.007836	2.5	PASS
GPRS850	251	VN	50	8.62	0.010156	2.5	PASS
EGPRS850	128	VN	-30	2.36	0.002860	2.5	PASS
EGPRS850	128	VN	-20	2.97	0.003604	2.5	PASS
EGPRS850	128	VN	-10	7.94	0.009636	2.5	PASS
EGPRS850	128	VN	0	6.26	0.007599	2.5	PASS
EGPRS850	128	VN	10	2.42	0.002938	2.5	PASS
EGPRS850	128	VN	20	4.62	0.005602	2.5	PASS
EGPRS850	128	VN	30	12.27	0.014885	2.5	PASS
EGPRS850	128	VN	40	11.82	0.014337	2.5	PASS
EGPRS850	128	VN	50	6.26	0.007599	2.5	PASS
EGPRS850	190	VN	-30	5.88	0.007024	2.5	PASS
EGPRS850	190	VN	-20	0.48	0.000579	2.5	PASS
EGPRS850	190	VN	-10	0.48	0.000579	2.5	PASS
EGPRS850	190	VN	0	-3.33	-0.003975	2.5	PASS
EGPRS850	190	VN	10	6.55	0.007834	2.5	PASS
EGPRS850	190	VN	20	10.04	0.012002	2.5	PASS
EGPRS850	190	VN	30	4.94	0.005905	2.5	PASS
EGPRS850	190	VN	40	-0.26	-0.000309	2.5	PASS
EGPRS850	190	VN	50	1.45	0.001737	2.5	PASS
EGPRS850	251	VN	-30	2.62	0.003081	2.5	PASS
EGPRS850	251	VN	-20	0.84	0.000989	2.5	PASS
EGPRS850	251	VN	-10	-2.62	-0.003081	2.5	PASS
EGPRS850	251	VN	0	3.68	0.004336	2.5	PASS
EGPRS850	251	VN	10	-2.32	-0.002739	2.5	PASS
EGPRS850	251	VN	20	5.94	0.006999	2.5	PASS
EGPRS850	251	VN	30	7.07	0.008330	2.5	PASS
EGPRS850	251	VN	40	-2.42	-0.002853	2.5	PASS
EGPRS850	251	VN	50	-0.19	-0.000228	2.5	PASS
GSM1900	512	VN	-30	5.84	0.003158	2.5	PASS
GSM1900	512	VN	-20	9.59	0.005183	2.5	PASS
GSM1900	512	VN	-10	6.65	0.003595	2.5	PASS
GSM1900	512	VN	0	4.55	0.002460	2.5	PASS
GSM1900	512	VN	10	-8.59	-0.004642	2.5	PASS
GSM1900	512	VN	20	-9.56	-0.005165	2.5	PASS
GSM1900	512	VN	30	-13.66	-0.007381	2.5	PASS
GSM1900	512	VN	40	-6.72	-0.003630	2.5	PASS
GSM1900	512	VN	50	0.87	0.000471	2.5	PASS
GSM1900	661	VN	-30	10.49	0.005581	2.5	PASS
GSM1900	661	VN	-20	12.14	0.006457	2.5	PASS
GSM1900	661	VN	-10	7.43	0.003950	2.5	PASS
GSM1900	661	VN	0	12.37	0.006577	2.5	PASS
GSM1900	661	VN	10	-2.13	-0.001133	2.5	PASS
GSM1900	661	VN	20	1.61	0.000859	2.5	PASS
GSM1900	661	VN	30	-3.97	-0.002112	2.5	PASS
GSM1900	661	VN	40	-6.75	-0.003589	2.5	PASS
GSM1900	661	VN	50	-11.17	-0.005942	2.5	PASS
GSM1900	810	VN	-30	5.94	0.003111	2.5	PASS
GSM1900	810	VN	-20	12.66	0.006627	2.5	PASS
GSM1900	810	VN	-10	7.33	0.003838	2.5	PASS
GSM1900	810	VN	0	2.10	0.001099	2.5	PASS
GSM1900	810	VN	10	-1.68	-0.000879	2.5	PASS
GSM1900	810	VN	20	-6.94	-0.003635	2.5	PASS
GSM1900	810	VN	30	0.26	0.000135	2.5	PASS



GSM1900	810	VN	40	0.97	0.000507	2.5	PASS
GSM1900	810	VN	50	-2.20	-0.001150	2.5	PASS
GPRS1900	512	VN	-30	18.50	0.009999	2.5	PASS
GPRS1900	512	VN	-20	19.89	0.010749	2.5	PASS
GPRS1900	512	VN	-10	22.76	0.012302	2.5	PASS
GPRS1900	512	VN	0	20.08	0.010854	2.5	PASS
GPRS1900	512	VN	10	18.98	0.010261	2.5	PASS
GPRS1900	512	VN	20	35.26	0.019055	2.5	PASS
GPRS1900	512	VN	30	11.72	0.006334	2.5	PASS
GPRS1900	512	VN	40	26.35	0.014239	2.5	PASS
GPRS1900	512	VN	50	36.45	0.019701	2.5	PASS
GPRS1900	661	VN	-30	15.95	0.008484	2.5	PASS
GPRS1900	661	VN	-20	19.73	0.010493	2.5	PASS
GPRS1900	661	VN	-10	9.49	0.005049	2.5	PASS
GPRS1900	661	VN	0	14.33	0.007625	2.5	PASS
GPRS1900	661	VN	10	19.79	0.010527	2.5	PASS
GPRS1900	661	VN	20	2.97	0.001580	2.5	PASS
GPRS1900	661	VN	30	20.21	0.010751	2.5	PASS
GPRS1900	661	VN	40	7.59	0.004036	2.5	PASS
GPRS1900	661	VN	50	6.36	0.003383	2.5	PASS
GPRS1900	810	VN	-30	9.43	0.004936	2.5	PASS
GPRS1900	810	VN	-20	9.52	0.004987	2.5	PASS
GPRS1900	810	VN	-10	8.81	0.004615	2.5	PASS
GPRS1900	810	VN	0	9.88	0.005173	2.5	PASS
GPRS1900	810	VN	10	14.33	0.007506	2.5	PASS
GPRS1900	810	VN	20	18.21	0.009535	2.5	PASS
GPRS1900	810	VN	30	18.05	0.009450	2.5	PASS
GPRS1900	810	VN	40	17.95	0.009399	2.5	PASS
GPRS1900	810	VN	50	0.81	0.000423	2.5	PASS
EGPRS1900	512	VN	-30	16.76	0.009057	2.5	PASS
EGPRS1900	512	VN	-20	17.72	0.009580	2.5	PASS
EGPRS1900	512	VN	-10	9.07	0.004903	2.5	PASS
EGPRS1900	512	VN	0	21.63	0.011691	2.5	PASS
EGPRS1900	512	VN	10	22.34	0.012075	2.5	PASS
EGPRS1900	512	VN	20	48.91	0.026437	2.5	PASS
EGPRS1900	512	VN	30	42.36	0.022894	2.5	PASS
EGPRS1900	512	VN	40	41.58	0.022475	2.5	PASS
EGPRS1900	512	VN	50	28.70	0.015513	2.5	PASS
EGPRS1900	661	VN	-30	5.04	0.002679	2.5	PASS
EGPRS1900	661	VN	-20	11.85	0.006303	2.5	PASS
EGPRS1900	661	VN	-10	4.81	0.002559	2.5	PASS
EGPRS1900	661	VN	0	6.72	0.003572	2.5	PASS
EGPRS1900	661	VN	10	10.04	0.005341	2.5	PASS
EGPRS1900	661	VN	20	12.01	0.006388	2.5	PASS
EGPRS1900	661	VN	30	23.54	0.012519	2.5	PASS
EGPRS1900	661	VN	40	39.03	0.020763	2.5	PASS
EGPRS1900	661	VN	50	12.04	0.006406	2.5	PASS
EGPRS1900	810	VN	-30	7.68	0.004023	2.5	PASS
EGPRS1900	810	VN	-20	11.85	0.006204	2.5	PASS
EGPRS1900	810	VN	-10	14.98	0.007844	2.5	PASS
EGPRS1900	810	VN	0	6.30	0.003297	2.5	PASS
EGPRS1900	810	VN	10	12.91	0.006762	2.5	PASS
EGPRS1900	810	VN	20	18.11	0.009484	2.5	PASS
EGPRS1900	810	VN	30	24.50	0.012831	2.5	PASS
EGPRS1900	810	VN	40	13.17	0.006897	2.5	PASS



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EGPRS1900	810	VN	50	10.36	0.005427	2.5	PASS
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