



8.1 Appendix A: Conducted Output Power

Test Result

Band	Channel	PCL	Power(dBm)	Limit(dBm)	Verdict
GSM850	128	5	32.42	38.5	PASS
GSM850	190	5	32.45	38.5	PASS
GSM850	251	5	32.41	38.5	PASS
GSM1900	512	0	29.98	33	PASS
GSM1900	661	0	29.91	33	PASS
GSM1900	810	0	29.66	33	PASS



Band	Channel	PCL	Slot	Power(dBm)	Limit(dBm)	Verdict
GPRS850	128	5	1	32.37	38.5	PASS
GPRS850	128	5	2	32.08	38.5	PASS
GPRS850	128	5	3	30.89	38.5	PASS
GPRS850	128	5	4	29.24	38.5	PASS
GPRS850	190	5	1	32.39	38.5	PASS
GPRS850	190	5	2	32.06	38.5	PASS
GPRS850	190	5	3	30.76	38.5	PASS
GPRS850	190	5	4	29.27	38.5	PASS
GPRS850	251	5	1	32.36	38.5	PASS
GPRS850	251	5	2	31.93	38.5	PASS
GPRS850	251	5	3	30.69	38.5	PASS
GPRS850	251	5	4	29.17	38.5	PASS
GPRS1900	512	0	1	29.91	33	PASS
GPRS1900	512	0	2	29.47	33	PASS
GPRS1900	512	0	3	28.05	33	PASS
GPRS1900	512	0	4	26.29	33	PASS
GPRS1900	661	0	1	29.83	33	PASS
GPRS1900	661	0	2	29.42	33	PASS
GPRS1900	661	0	3	27.81	33	PASS
GPRS1900	661	0	4	26.30	33	PASS
GPRS1900	810	0	1	29.55	33	PASS
GPRS1900	810	0	2	29.20	33	PASS
GPRS1900	810	0	3	27.91	33	PASS
GPRS1900	810	0	4	26.29	33	PASS



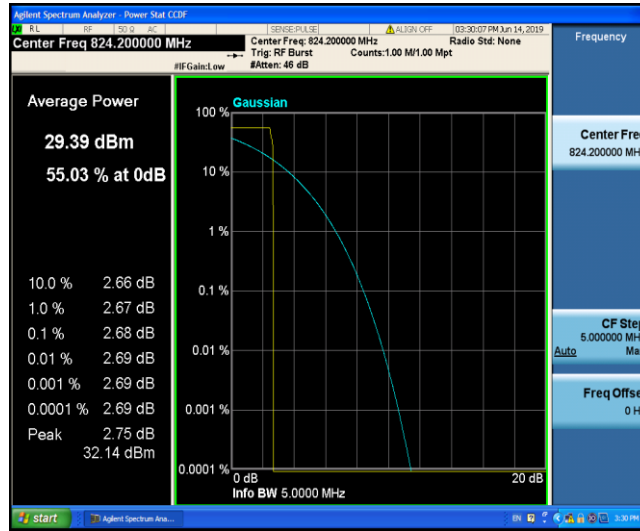
8.2 Appendix B: Peak-to-Average Ratio

Test Result

Band	Channel	Peak-to-Average Ratio(dB)	Limit(dB)	Verdict
GSM850	128	2.68	13	PASS
GSM850	190	2.64	13	PASS
GSM850	251	2.64	13	PASS
GPRS850	128	2.71	13	PASS
GPRS850	190	2.64	13	PASS
GPRS850	251	2.64	13	PASS
GSM1900	512	2.63	13	PASS
GSM1900	661	2.72	13	PASS
GSM1900	810	2.63	13	PASS
GPRS1900	512	2.63	13	PASS
GPRS1900	661	2.63	13	PASS
GPRS1900	810	2.64	13	PASS



Test Graphs



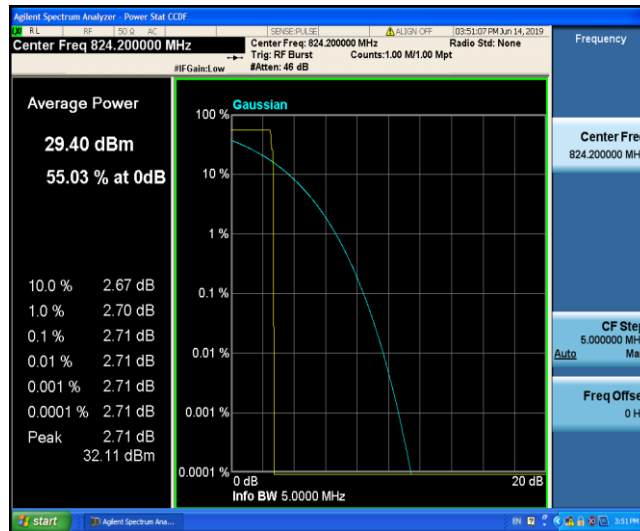
GSM850_128



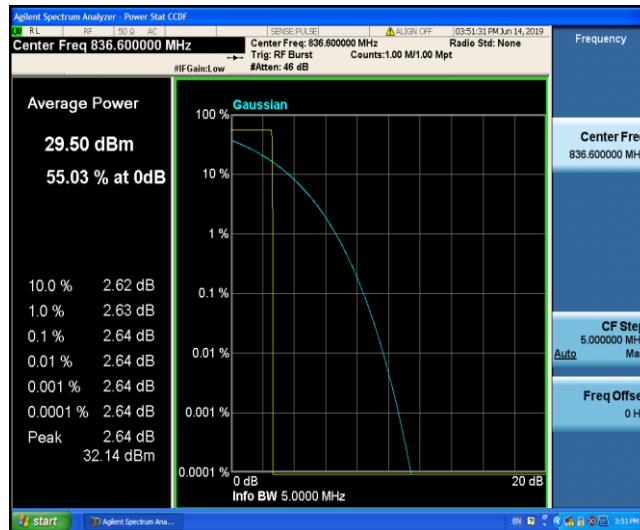
GSM850_190



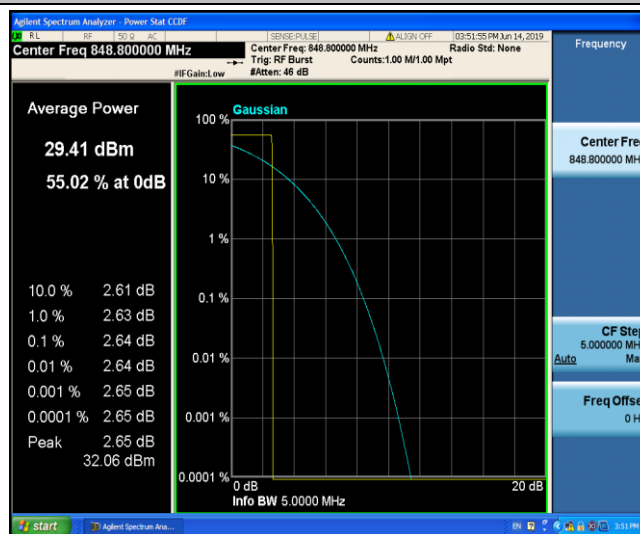
GSM850_251



GPRS850_128



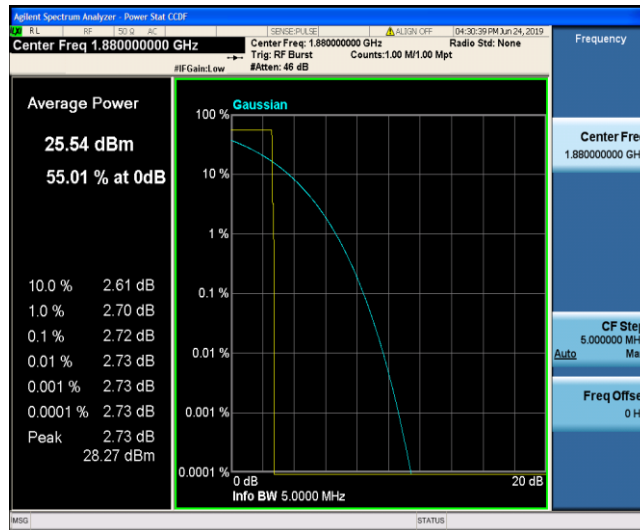
GPRS850_190



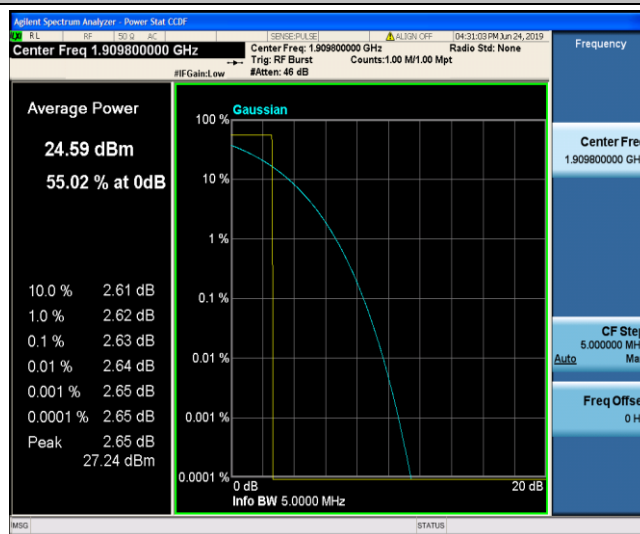
GPRS850_251



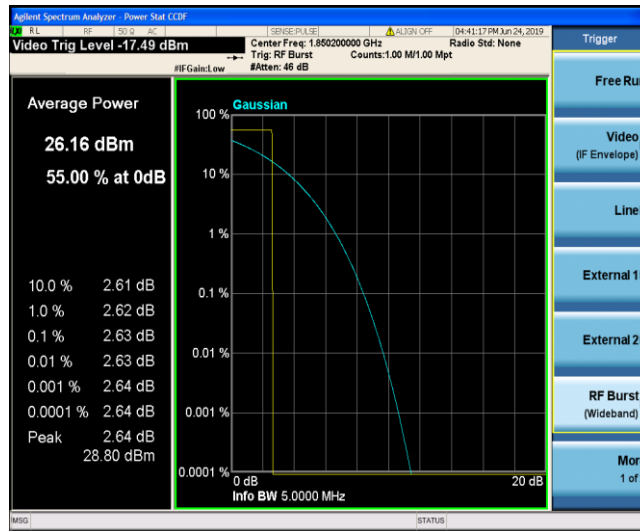
GSM1900_512



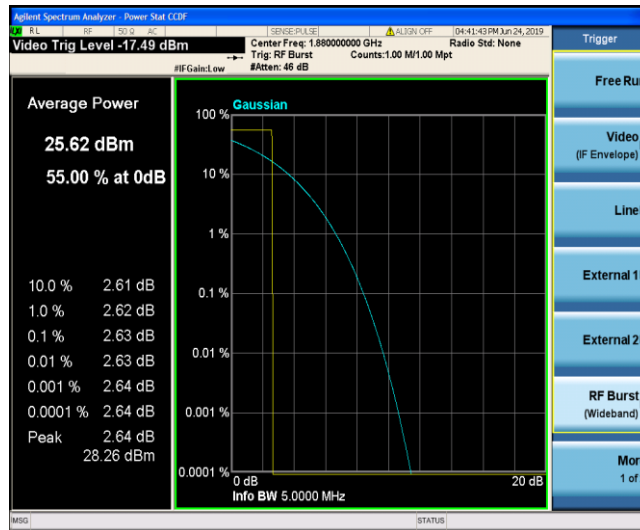
GSM1900_661



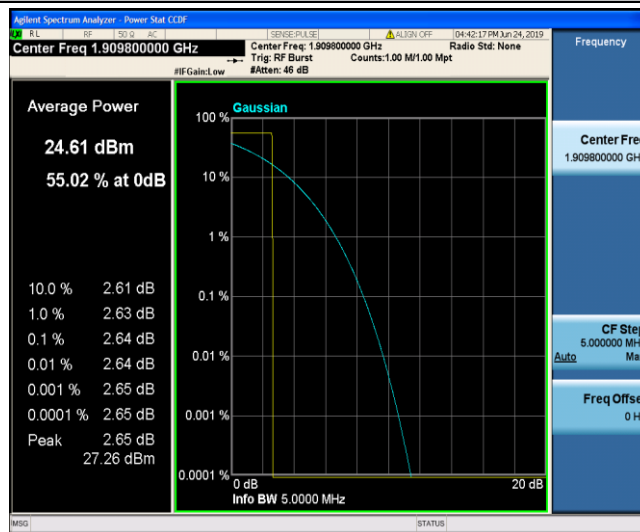
GSM1900_810



GPRS1900_512



GPRS1900_661



GPRS1900_810



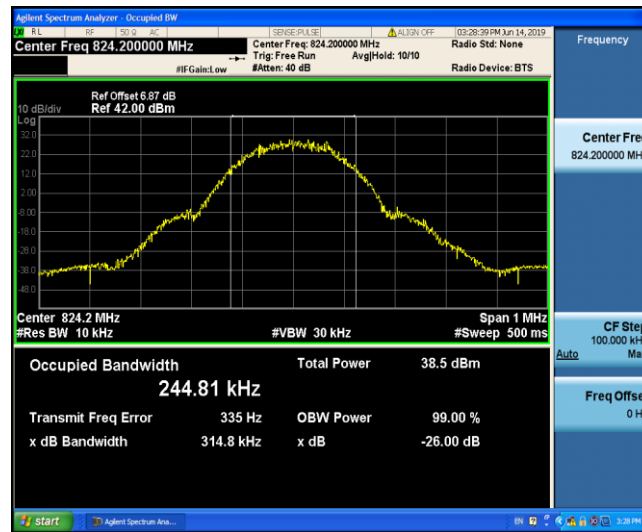
8.3 Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

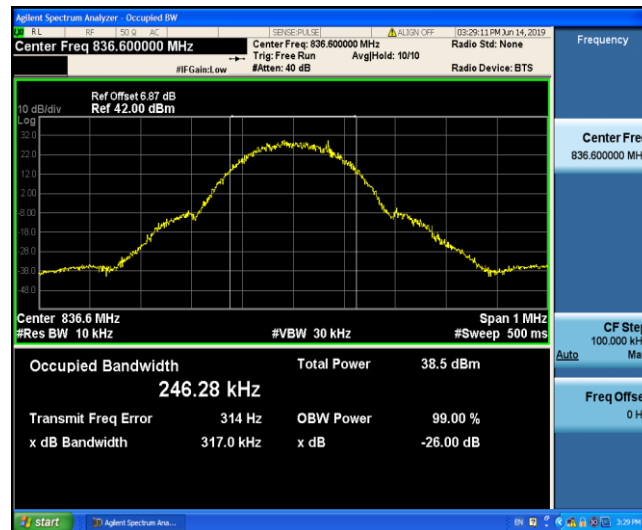
Band	Channel	Occupied Bandwidth (kHz)	26dB Bandwidth (kHz)	Limit(kHz)	Verdict
GSM850	128	244.81	314.8	---	PASS
GSM850	190	246.28	317.0	---	PASS
GSM850	251	245.47	312.9	---	PASS
GPRS850	128	248.62	318.5	---	PASS
GPRS850	190	245.77	317.6	---	PASS
GPRS850	251	244.97	318.1	---	PASS
GSM1900	512	246.75	314.00	---	PASS
GSM1900	661	244.76	309.00	---	PASS
GSM1900	810	244.76	314.00	---	PASS
GPRS1900	512	241.76	320.00	---	PASS
GPRS1900	661	243.76	309.00	---	PASS
GPRS1900	810	244.76	315.00	---	PASS



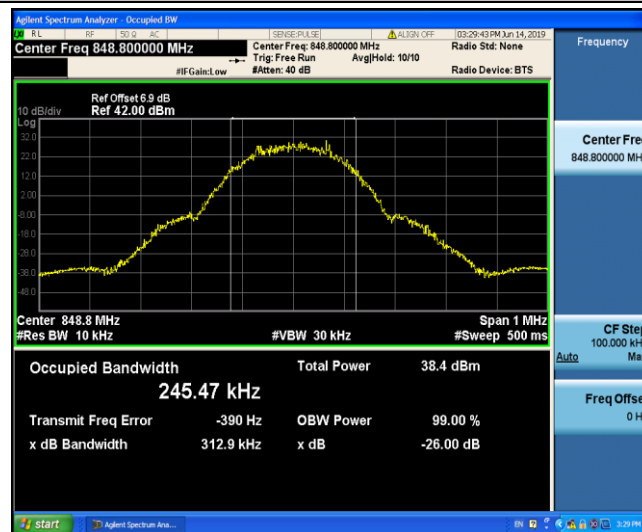
Test Graphs



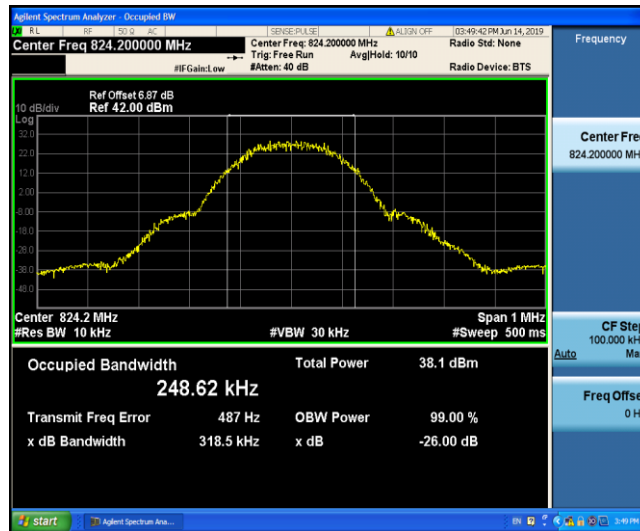
GSM850_128



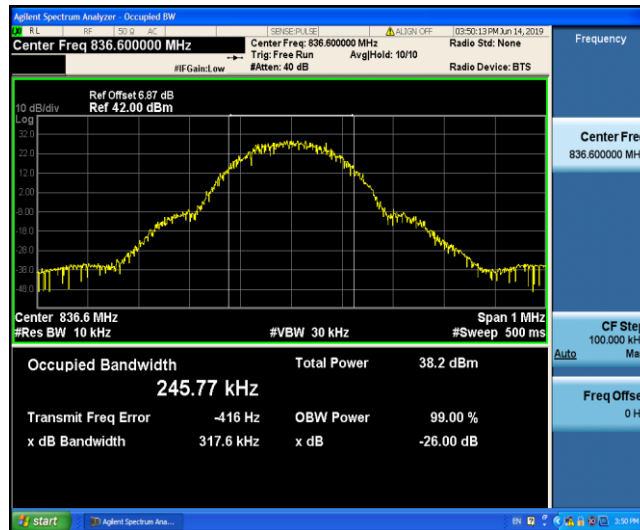
GSM850_190



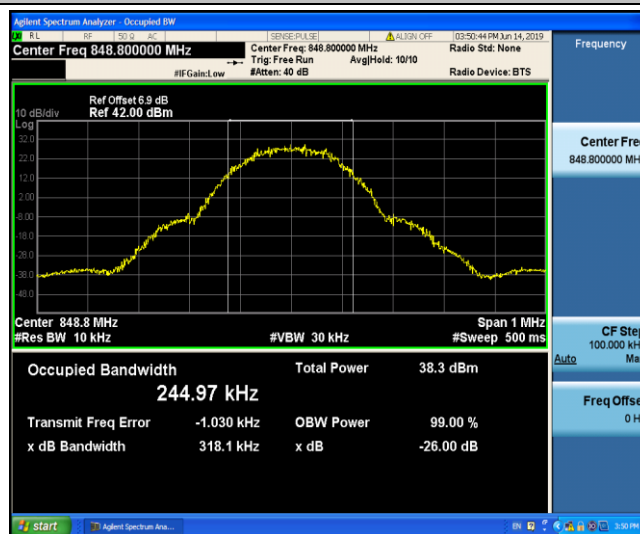
GSM850_251



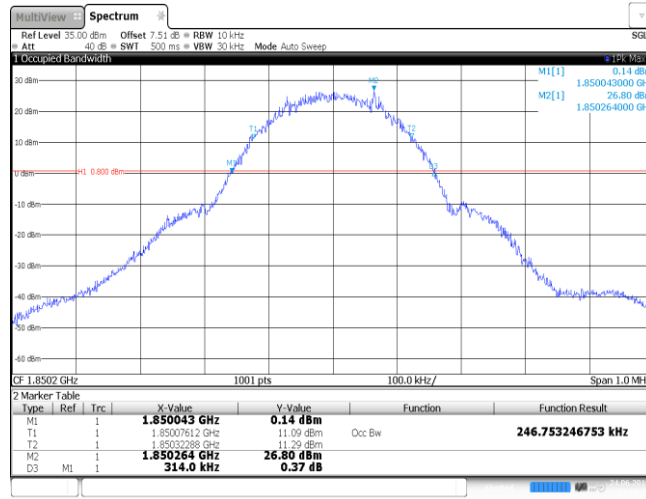
GPRS850_128



GPRS850_190

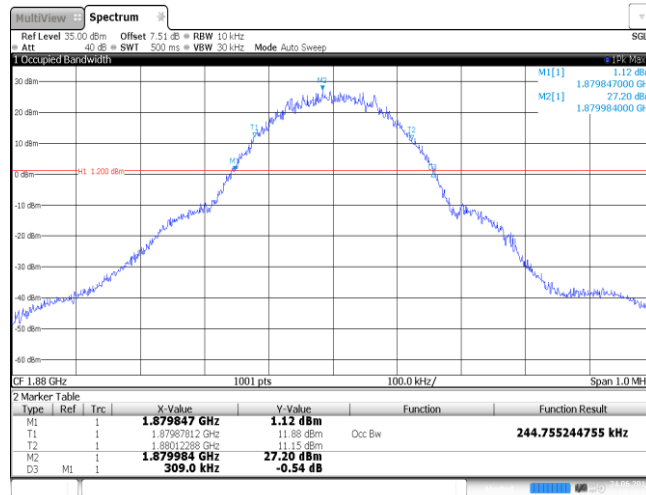


GPRS850_251



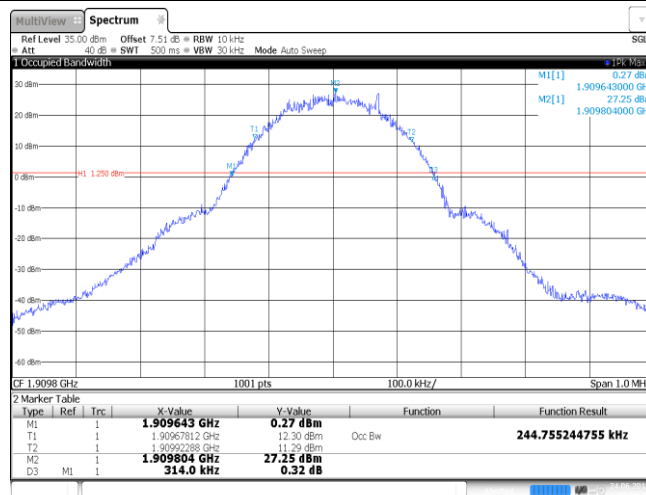
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GSM1900_512



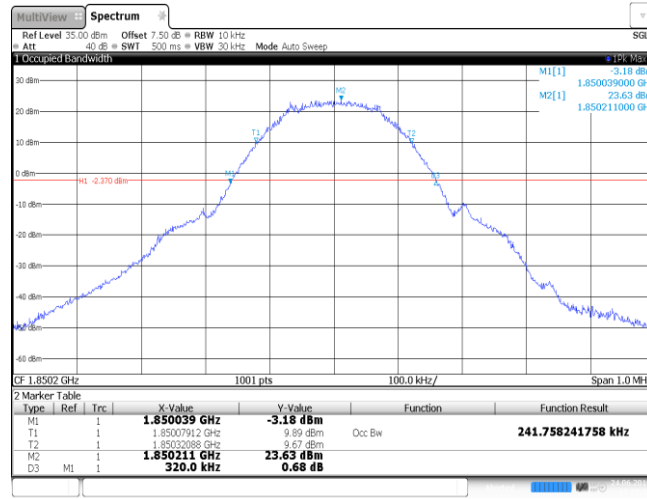
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GSM1900_661



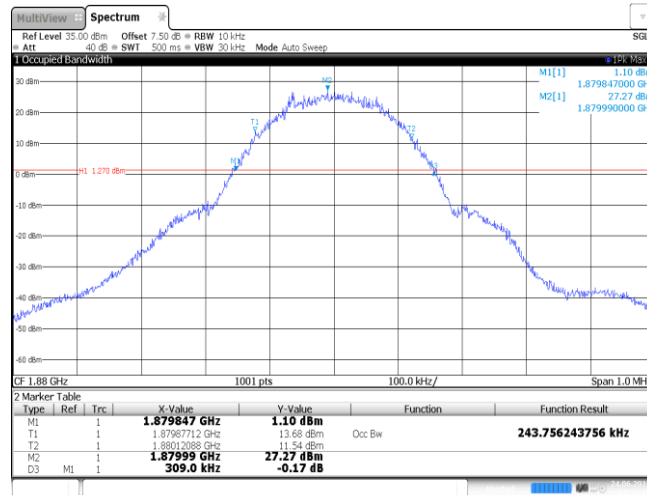
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GSM1900_810



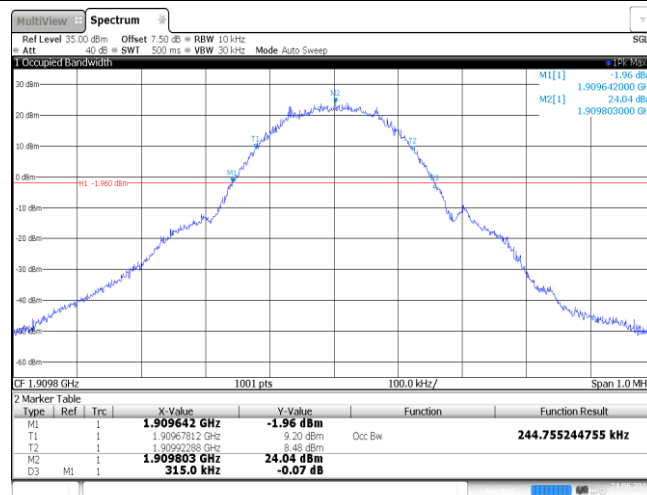
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GPRS1900_512



Date: 24.JUN.2019 15:26:35

GPRS1900_661



Date: 24.JUN.2019 15:35:40

GPRS1900_810



8.4 Appendix D: Band Edge

Test Result

Band	Channel	Value(dBm)	Limit(dBm)	Verdict
GSM850	128	-26.96	-13	PASS
GSM850	251	-27.95	-13	PASS
GSM1900	512	-30.67	-13	PASS
GSM1900	810	-29.82	-13	PASS
GPRS1900	512	-30.25	-13	PASS
GPRS1900	810	-30.39	-13	PASS



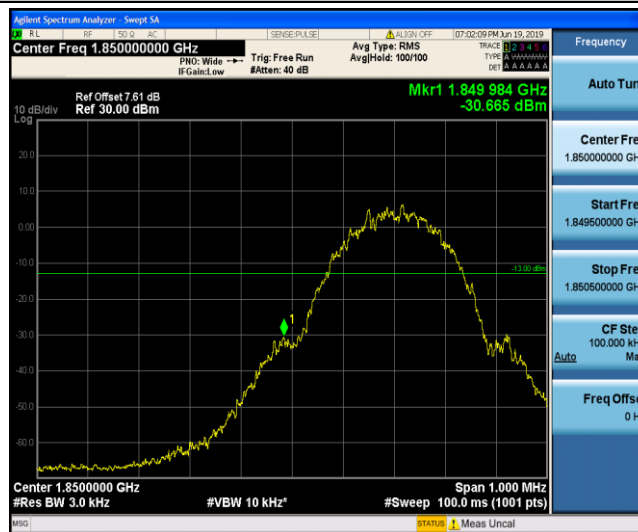
Test Graphs



GSM850_128



GSM850_251



GSM1900_512



GSM1900_810



GPRS1900_512



GPRS1900_810



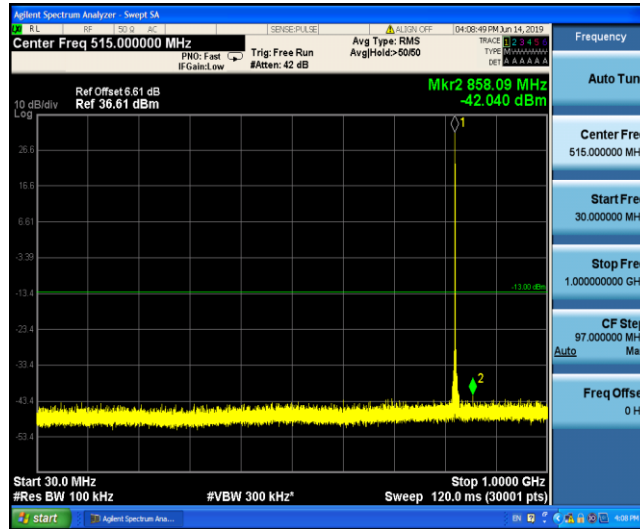
8.5 Appendix E: Conducted Spurious Emission

Test Result

Band	Channel	Frequency Rang(Mhz)	Value(dBm)	Limit(dBm)	Verdict
GSM850	128	30~1000	-42.04	-13	PASS
GSM850	128	1000~10000	-38.54	-13	PASS
GSM850	190	30~1000	-41.83	-13	PASS
GSM850	190	1000~10000	-38.59	-13	PASS
GSM850	251	30~1000	-42.52	-13	PASS
GSM850	251	1000~10000	-38.48	-13	PASS
GPRS850	128	30~1000	-43.10	-13	PASS
GPRS850	128	1000~10000	-42.11	-13	PASS
GPRS850	190	30~1000	-43.73	-13	PASS
GPRS850	190	1000~10000	-42.20	-13	PASS
GPRS850	251	30~1000	-43.13	-13	PASS
GPRS850	251	1000~10000	-41.90	-13	PASS
GSM1900	512	30~1000	-42.15	-13	PASS
GSM1900	512	1000~20000	-31.47	-13	PASS
GSM1900	661	30~1000	-41.30	-13	PASS
GSM1900	661	1000~20000	-31.50	-13	PASS
GSM1900	810	30~1000	-41.95	-13	PASS
GSM1900	810	1000~20000	-31.49	-13	PASS
GPRS1900	512	30~1000	-40.25	-13	PASS
GPRS1900	512	1000~20000	-31.29	-13	PASS
GPRS1900	661	30~1000	-42.21	-13	PASS
GPRS1900	661	1000~20000	-31.51	-13	PASS
GPRS1900	810	30~1000	-41.45	-13	PASS
GPRS1900	810	1000~20000	-31.38	-13	PASS



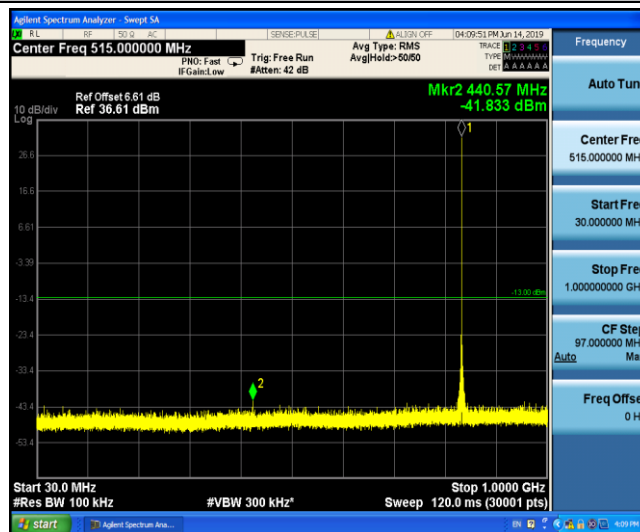
Test Graphs



GSM850_128



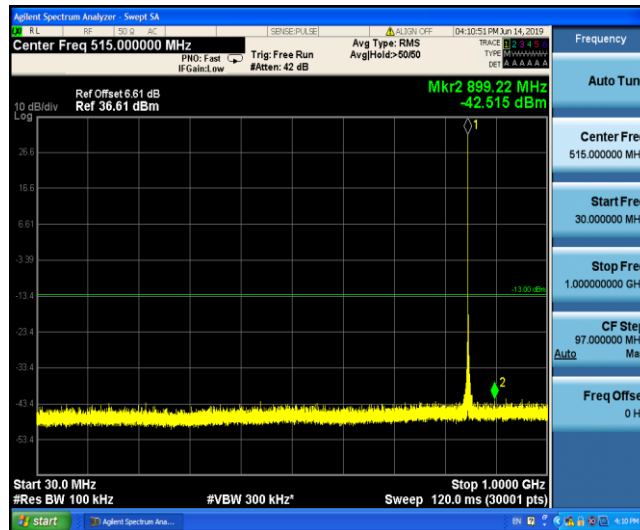
GSM850_128



GSM850_190



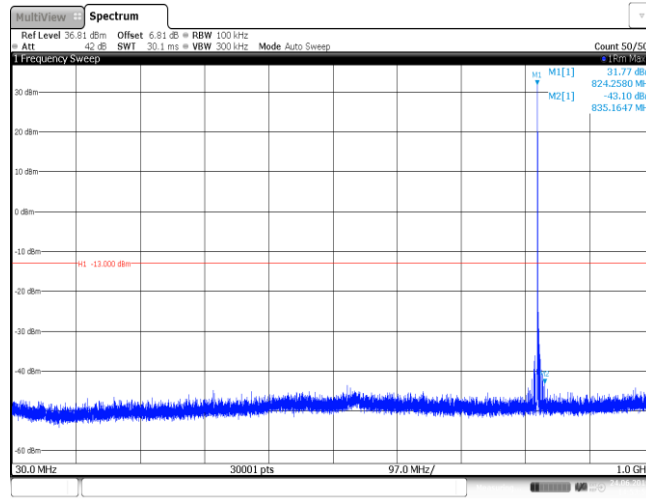
GSM850_190



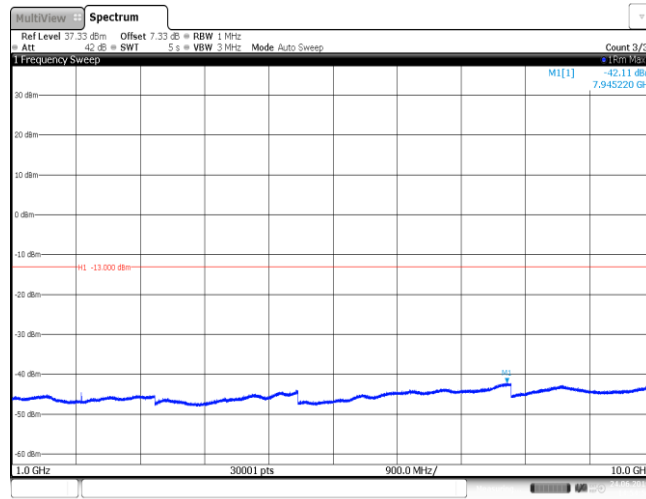
GSM850_251



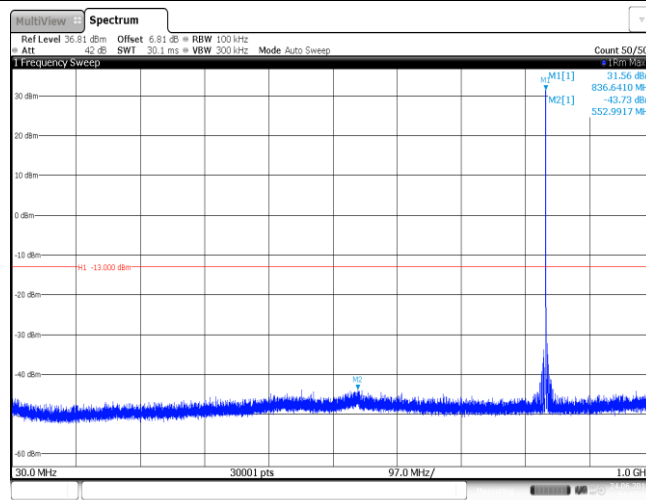
GSM850_251



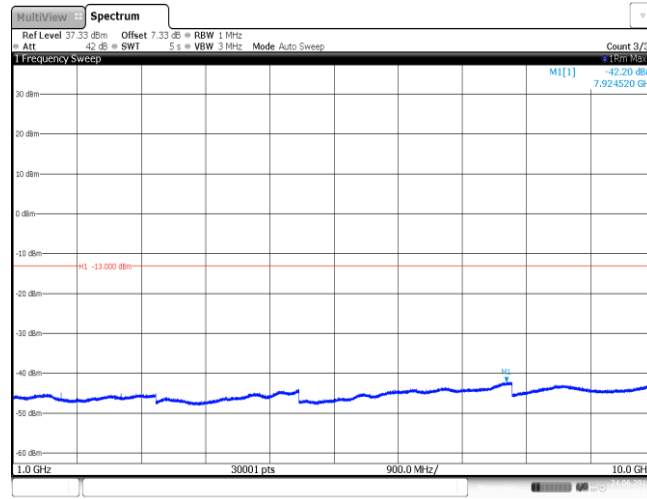
GPRS850_128



GPRS850_128

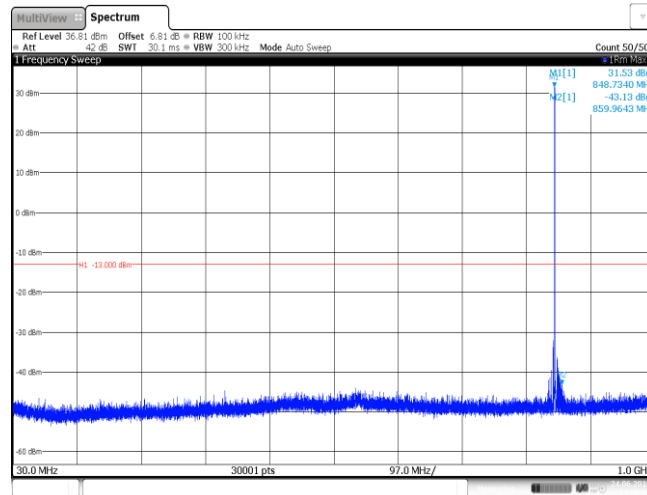


GPRS850_190



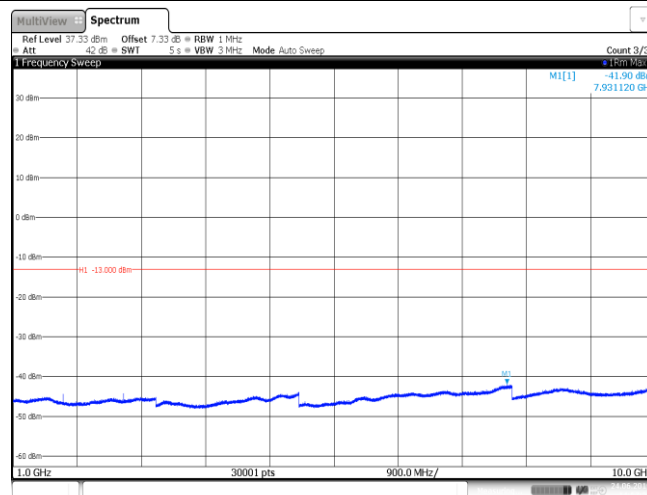
Date: 24.JUN.2019 14:56:14

GPRS850_190



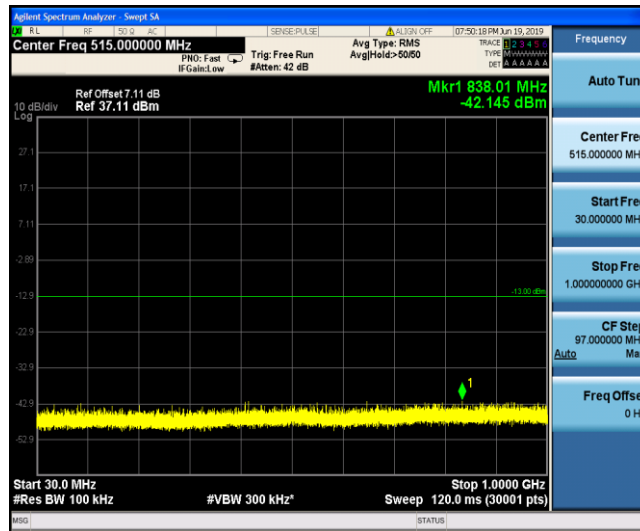
Date: 24.JUN.2019 14:56:28

GPRS850_251



Date: 24.JUN.2019 14:57:25

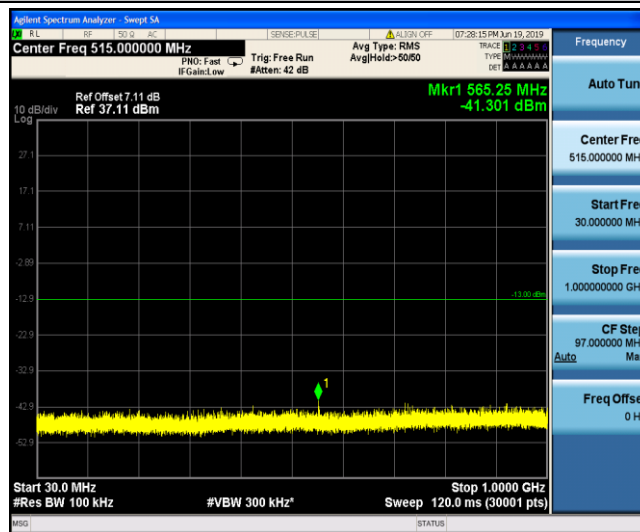
GPRS850_251



GSM1900_512



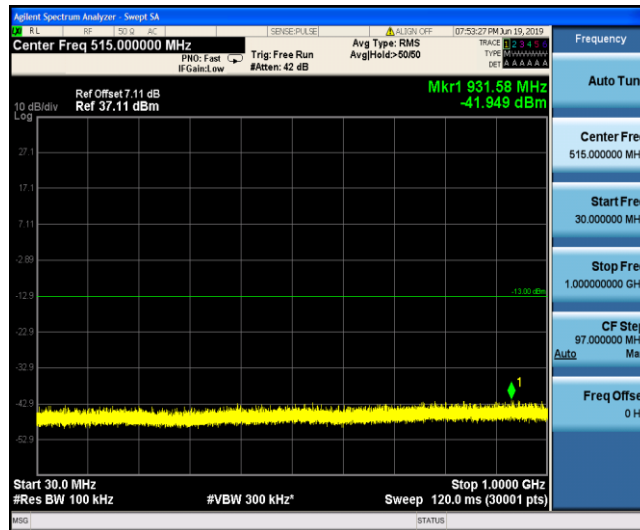
GSM1900_512



GSM1900_661



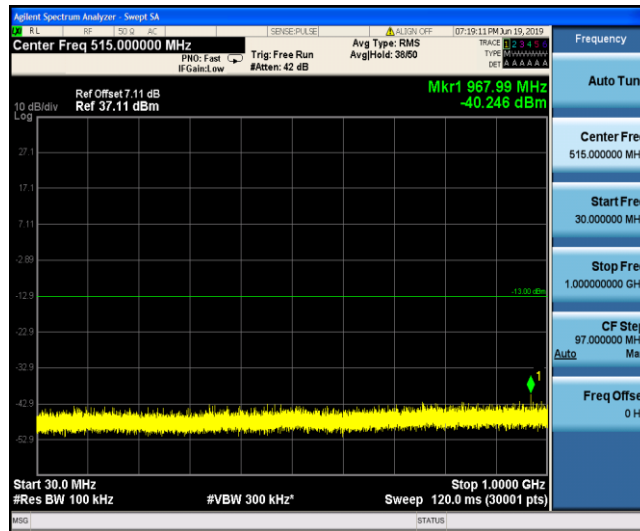
GSM1900_661



GSM1900_810



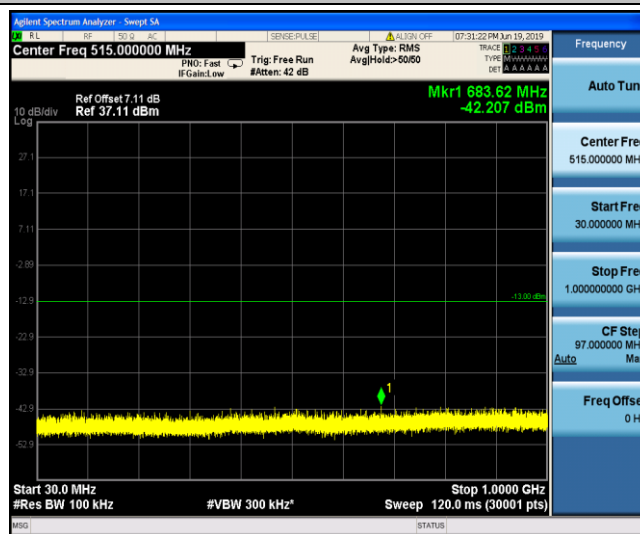
GSM1900_810



GPRS1900_512



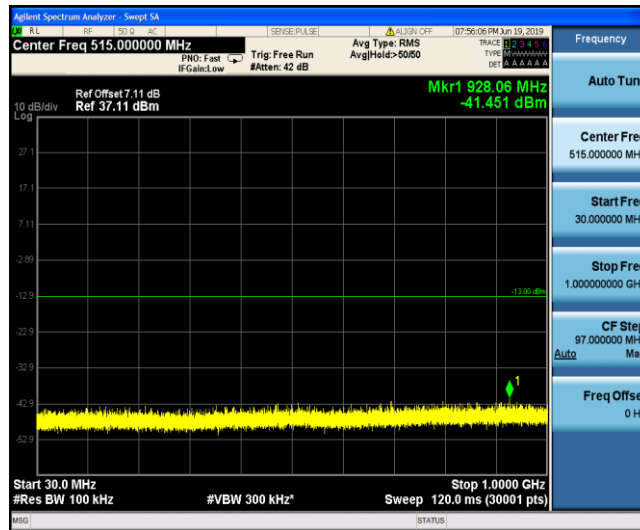
GPRS1900_512



GPRS1900_661



GPRS1900_661



GPRS1900_810



GPRS1900_810



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	8.49	0.010302	2.5	PASS
GSM850	128	VN	TN	9.23	0.011203	2.5	PASS
GSM850	128	VH	TN	7.52	0.009127	2.5	PASS
GSM850	190	VL	TN	4.91	0.005866	2.5	PASS
GSM850	190	VN	TN	7.17	0.008567	2.5	PASS
GSM850	190	VH	TN	4.36	0.005210	2.5	PASS
GSM850	251	VL	TN	6.97	0.008216	2.5	PASS
GSM850	251	VN	TN	7.59	0.008939	2.5	PASS
GSM850	251	VH	TN	4.91	0.005782	2.5	PASS
GPRS850	128	VL	TN	5.33	0.006463	2.5	PASS
GPRS850	128	VN	TN	4.00	0.004857	2.5	PASS
GPRS850	128	VH	TN	0.71	0.000862	2.5	PASS
GPRS850	190	VL	TN	5.20	0.006213	2.5	PASS
GPRS850	190	VN	TN	1.29	0.001544	2.5	PASS
GPRS850	190	VH	TN	2.68	0.003203	2.5	PASS
GPRS850	251	VL	TN	6.75	0.007950	2.5	PASS
GPRS850	251	VN	TN	-0.32	-0.000380	2.5	PASS
GPRS850	251	VH	TN	9.27	0.010917	2.5	PASS
GSM1900	512	VL	TN	25.54	0.013803	2.5	PASS
GSM1900	512	VN	TN	20.21	0.010924	2.5	PASS
GSM1900	512	VH	TN	22.37	0.012093	2.5	PASS
GSM1900	661	VL	TN	26.44	0.014065	2.5	PASS
GSM1900	661	VN	TN	26.83	0.014271	2.5	PASS
GSM1900	661	VH	TN	23.76	0.012640	2.5	PASS
GSM1900	810	VL	TN	25.96	0.013592	2.5	PASS
GSM1900	810	VN	TN	33.22	0.017396	2.5	PASS
GSM1900	810	VH	TN	28.61	0.014978	2.5	PASS
GPRS1900	512	VL	TN	17.92	0.009685	2.5	PASS
GPRS1900	512	VN	TN	16.79	0.009074	2.5	PASS
GPRS1900	512	VH	TN	21.24	0.011482	2.5	PASS
GPRS1900	661	VL	TN	18.98	0.010098	2.5	PASS
GPRS1900	661	VN	TN	24.25	0.012897	2.5	PASS
GPRS1900	661	VH	TN	31.19	0.016589	2.5	PASS
GPRS1900	810	VL	TN	21.83	0.011428	2.5	PASS
GPRS1900	810	VN	TN	22.70	0.011884	2.5	PASS
GPRS1900	810	VH	TN	28.35	0.014843	2.5	PASS



Temperature							
Band	Channel	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
GSM850	128	VN	-30	9.04	0.010968	2.5	PASS
GSM850	128	VN	-20	6.30	0.007639	2.5	PASS
GSM850	128	VN	-10	9.94	0.012065	2.5	PASS
GSM850	128	VN	0	8.65	0.010498	2.5	PASS
GSM850	128	VN	10	9.17	0.011125	2.5	PASS
GSM850	128	VN	20	5.29	0.006424	2.5	PASS
GSM850	128	VN	30	5.36	0.006503	2.5	PASS
GSM850	128	VN	40	7.17	0.008696	2.5	PASS
GSM850	128	VN	50	6.07	0.007364	2.5	PASS
GSM850	190	VN	-30	4.20	0.005017	2.5	PASS
GSM850	190	VN	-20	3.75	0.004477	2.5	PASS
GSM850	190	VN	-10	6.30	0.007525	2.5	PASS
GSM850	190	VN	0	5.36	0.006406	2.5	PASS
GSM850	190	VN	10	6.33	0.007564	2.5	PASS
GSM850	190	VN	20	5.88	0.007024	2.5	PASS
GSM850	190	VN	30	3.65	0.004361	2.5	PASS
GSM850	190	VN	40	1.84	0.002200	2.5	PASS
GSM850	190	VN	50	8.14	0.009725	2.5	PASS
GSM850	251	VN	-30	5.75	0.006771	2.5	PASS
GSM850	251	VN	-20	5.94	0.006999	2.5	PASS
GSM850	251	VN	-10	5.62	0.006618	2.5	PASS
GSM850	251	VN	0	6.10	0.007189	2.5	PASS
GSM850	251	VN	10	5.46	0.006428	2.5	PASS
GSM850	251	VN	20	4.81	0.005668	2.5	PASS
GSM850	251	VN	30	5.91	0.006961	2.5	PASS
GSM850	251	VN	40	6.07	0.007151	2.5	PASS
GSM850	251	VN	50	5.97	0.007037	2.5	PASS
GPRS850	128	VN	-30	2.42	0.002938	2.5	PASS
GPRS850	128	VN	-20	-0.10	-0.000118	2.5	PASS
GPRS850	128	VN	-10	4.81	0.005837	2.5	PASS
GPRS850	128	VN	0	-1.03	-0.001254	2.5	PASS
GPRS850	128	VN	10	3.39	0.004113	2.5	PASS
GPRS850	128	VN	20	3.20	0.003878	2.5	PASS
GPRS850	128	VN	30	5.62	0.006816	2.5	PASS
GPRS850	128	VN	40	5.00	0.006072	2.5	PASS
GPRS850	128	VN	50	7.46	0.009049	2.5	PASS
GPRS850	190	VN	-30	2.23	0.002663	2.5	PASS
GPRS850	190	VN	-20	3.23	0.003859	2.5	PASS
GPRS850	190	VN	-10	-2.36	-0.002817	2.5	PASS
GPRS850	190	VN	0	0.39	0.000463	2.5	PASS
GPRS850	190	VN	10	0.42	0.000502	2.5	PASS
GPRS850	190	VN	20	5.39	0.006445	2.5	PASS
GPRS850	190	VN	30	6.20	0.007410	2.5	PASS
GPRS850	190	VN	40	7.91	0.009455	2.5	PASS
GPRS850	190	VN	50	3.87	0.004631	2.5	PASS
GPRS850	251	VN	-30	5.17	0.006086	2.5	PASS
GPRS850	251	VN	-20	7.68	0.009053	2.5	PASS
GPRS850	251	VN	-10	7.72	0.009091	2.5	PASS
GPRS850	251	VN	0	1.10	0.001293	2.5	PASS
GPRS850	251	VN	10	0.68	0.000799	2.5	PASS
GPRS850	251	VN	20	6.91	0.008140	2.5	PASS



GPRS850	251	VN	30	7.46	0.008787	2.5	PASS
GPRS850	251	VN	40	5.39	0.006352	2.5	PASS
GPRS850	251	VN	50	9.33	0.010993	2.5	PASS
GSM1900	512	VN	-30	26.44	0.014291	2.5	PASS
GSM1900	512	VN	-20	23.44	0.012669	2.5	PASS
GSM1900	512	VN	-10	21.99	0.011883	2.5	PASS
GSM1900	512	VN	0	22.31	0.012058	2.5	PASS
GSM1900	512	VN	10	25.31	0.013681	2.5	PASS
GSM1900	512	VN	20	25.41	0.013733	2.5	PASS
GSM1900	512	VN	30	21.99	0.011883	2.5	PASS
GSM1900	512	VN	40	25.63	0.013855	2.5	PASS
GSM1900	512	VN	50	21.15	0.011430	2.5	PASS
GSM1900	661	VN	-30	26.57	0.014134	2.5	PASS
GSM1900	661	VN	-20	24.73	0.013155	2.5	PASS
GSM1900	661	VN	-10	24.70	0.013138	2.5	PASS
GSM1900	661	VN	0	27.09	0.014408	2.5	PASS
GSM1900	661	VN	10	24.76	0.013172	2.5	PASS
GSM1900	661	VN	20	28.06	0.014924	2.5	PASS
GSM1900	661	VN	30	27.41	0.014580	2.5	PASS
GSM1900	661	VN	40	26.76	0.014237	2.5	PASS
GSM1900	661	VN	50	26.31	0.013996	2.5	PASS
GSM1900	810	VN	-30	29.19	0.015282	2.5	PASS
GSM1900	810	VN	-20	27.15	0.014217	2.5	PASS
GSM1900	810	VN	-10	28.57	0.014961	2.5	PASS
GSM1900	810	VN	0	29.48	0.015435	2.5	PASS
GSM1900	810	VN	10	31.80	0.016652	2.5	PASS
GSM1900	810	VN	20	26.60	0.013930	2.5	PASS
GSM1900	810	VN	30	28.54	0.014944	2.5	PASS
GSM1900	810	VN	40	26.22	0.013727	2.5	PASS
GSM1900	810	VN	50	28.38	0.014860	2.5	PASS
GPRS1900	512	VN	-30	21.66	0.011709	2.5	PASS
GPRS1900	512	VN	-20	23.12	0.012494	2.5	PASS
GPRS1900	512	VN	-10	22.47	0.012145	2.5	PASS
GPRS1900	512	VN	0	11.85	0.006404	2.5	PASS
GPRS1900	512	VN	10	25.76	0.013925	2.5	PASS
GPRS1900	512	VN	20	17.34	0.009371	2.5	PASS
GPRS1900	512	VN	30	13.08	0.007067	2.5	PASS
GPRS1900	512	VN	40	20.66	0.011168	2.5	PASS
GPRS1900	512	VN	50	19.76	0.010679	2.5	PASS
GPRS1900	661	VN	-30	21.08	0.011214	2.5	PASS
GPRS1900	661	VN	-20	26.31	0.013996	2.5	PASS
GPRS1900	661	VN	-10	15.53	0.008260	2.5	PASS
GPRS1900	661	VN	0	24.96	0.013275	2.5	PASS
GPRS1900	661	VN	10	26.25	0.013962	2.5	PASS
GPRS1900	661	VN	20	21.99	0.011695	2.5	PASS
GPRS1900	661	VN	30	23.92	0.012725	2.5	PASS
GPRS1900	661	VN	40	20.82	0.011077	2.5	PASS
GPRS1900	661	VN	50	18.11	0.009634	2.5	PASS
GPRS1900	810	VN	-30	31.06	0.016263	2.5	PASS
GPRS1900	810	VN	-20	19.89	0.010414	2.5	PASS
GPRS1900	810	VN	-10	21.28	0.011141	2.5	PASS
GPRS1900	810	VN	0	25.96	0.013592	2.5	PASS
GPRS1900	810	VN	10	22.44	0.011749	2.5	PASS
GPRS1900	810	VN	20	19.57	0.010245	2.5	PASS
GPRS1900	810	VN	30	17.60	0.009213	2.5	PASS



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GPRS1900	810	VN	40	12.07	0.006323	2.5	PASS
GPRS1900	810	VN	50	19.11	0.010008	2.5	PASS

-----End of the Report -----