



8.1 Appendix A: Conducted Output Power

Test Result

Band	Channel	PCL	Power(dBm)	Limit(dBm)	Verdict
GSM850	128	5	33.49	38.5	PASS
GSM850	190	5	33.47	38.5	PASS
GSM850	251	5	33.52	38.5	PASS
GSM1900	512	0	29.14	33	PASS
GSM1900	661	0	29.66	33	PASS
GSM1900	810	0	29.40	33	PASS



Band	Channel	PCL	Slot	Power(dBm)	Limit(dBm)	Verdict
GPRS850	128	5	1	33.52	38.5	PASS
GPRS850	128	5	2	31.98	38.5	PASS
GPRS850	128	5	3	30.13	38.5	PASS
GPRS850	128	5	4	27.19	38.5	PASS
GPRS850	190	5	1	33.33	38.5	PASS
GPRS850	190	5	2	31.72	38.5	PASS
GPRS850	190	5	3	29.95	38.5	PASS
GPRS850	190	5	4	27.20	38.5	PASS
GPRS850	251	5	1	33.53	38.5	PASS
GPRS850	251	5	2	31.95	38.5	PASS
GPRS850	251	5	3	30.18	38.5	PASS
GPRS850	251	5	4	27.18	38.5	PASS
GPRS1900	512	0	1	29.28	33	PASS
GPRS1900	512	0	2	27.29	33	PASS
GPRS1900	512	0	3	26.43	33	PASS
GPRS1900	512	0	4	24.60	33	PASS
GPRS1900	661	0	1	29.84	33	PASS
GPRS1900	661	0	2	27.60	33	PASS
GPRS1900	661	0	3	26.66	33	PASS
GPRS1900	661	0	4	24.94	33	PASS
GPRS1900	810	0	1	29.14	33	PASS
GPRS1900	810	0	2	27.10	33	PASS
GPRS1900	810	0	3	26.40	33	PASS
GPRS1900	810	0	4	24.44	33	PASS



8.2 Appendix B: Peak-to-Average Ratio

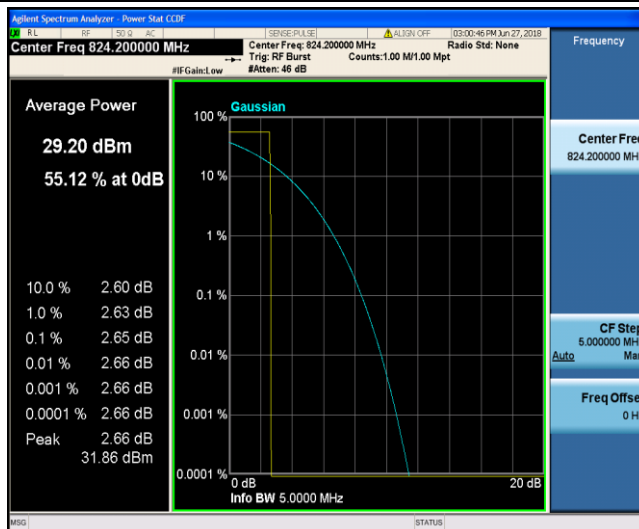
Test Result

Band	Channel	Peak-to-Average Ratio(dB)	Limit(dBm)	Verdict
GSM850	128	2.65	13	PASS
GSM850	190	2.65	13	PASS
GSM850	251	2.63	13	PASS
GPRS850	128	2.65	13	PASS
GPRS850	190	2.64	13	PASS
GPRS850	251	2.63	13	PASS
GSM1900	512	2.71	13	PASS
GSM1900	661	2.71	13	PASS
GSM1900	810	2.71	13	PASS

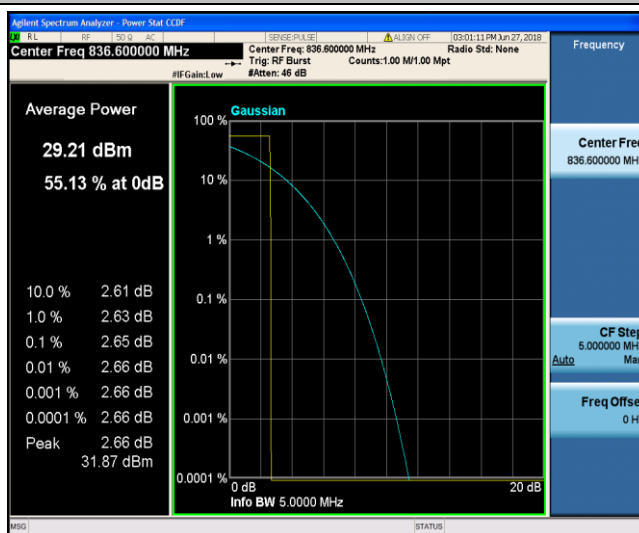


Test Graphs

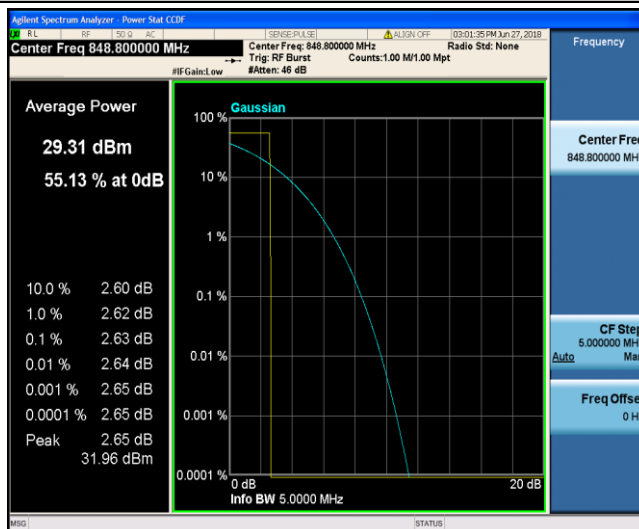
GSM850_128



GSM850_190

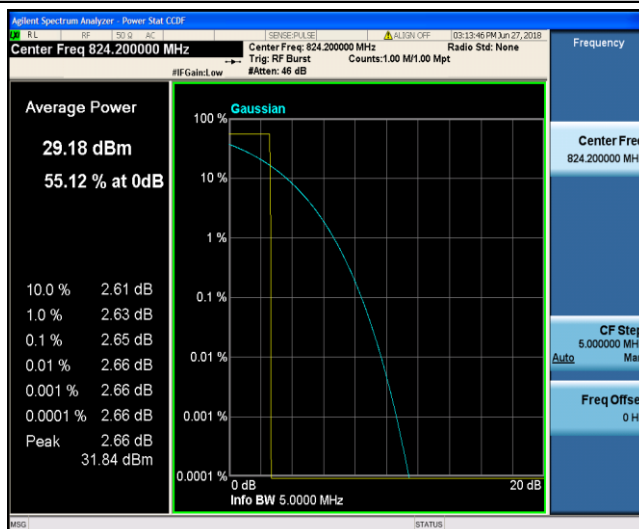


GSM850_251

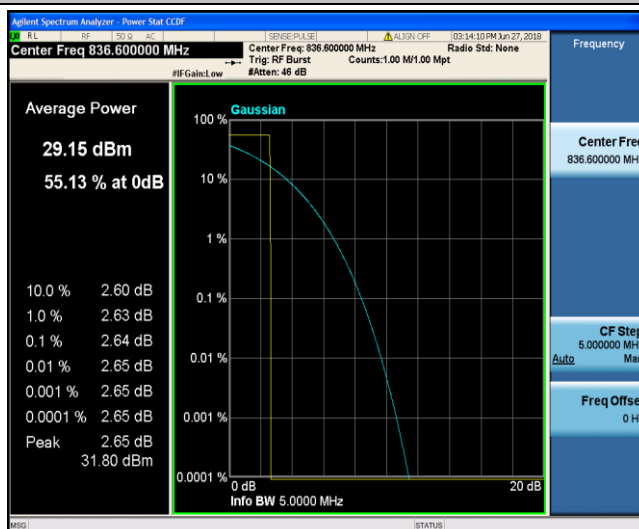




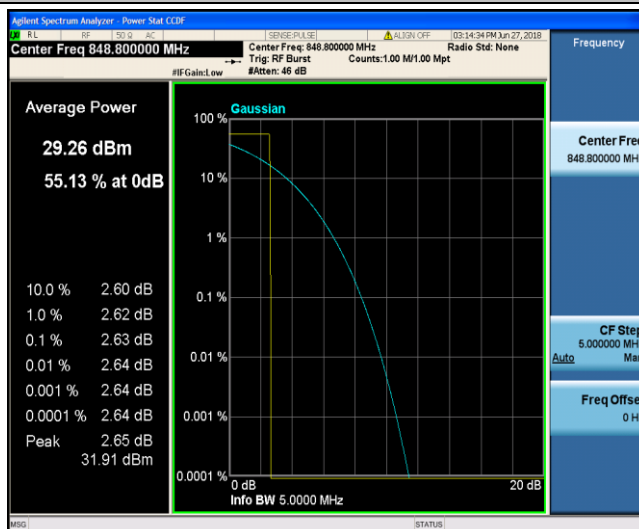
GPRS850_128



GPRS850_190

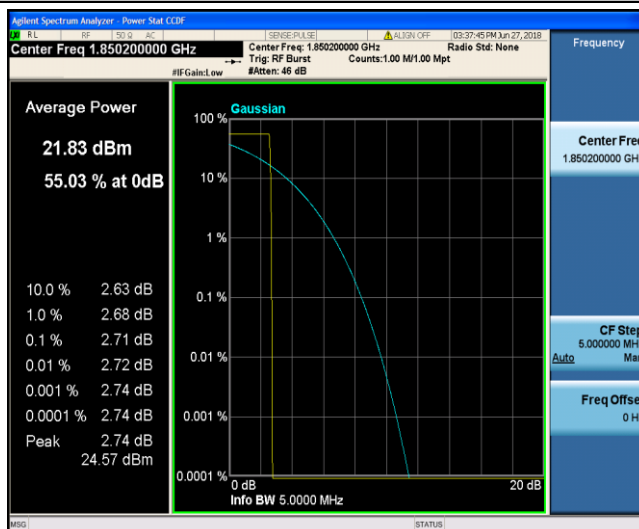


GPRS850_251





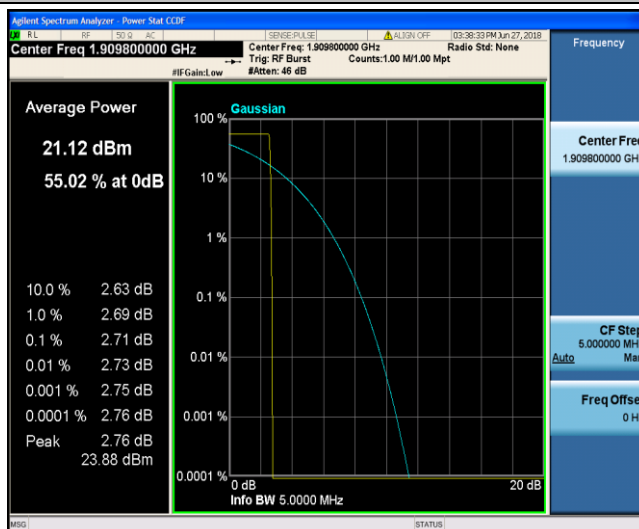
GSM1900_512



GSM1900_661



GSM1900_810





8.3 Appendix C: 26dB Bandwidth and Occupied Bandwidth

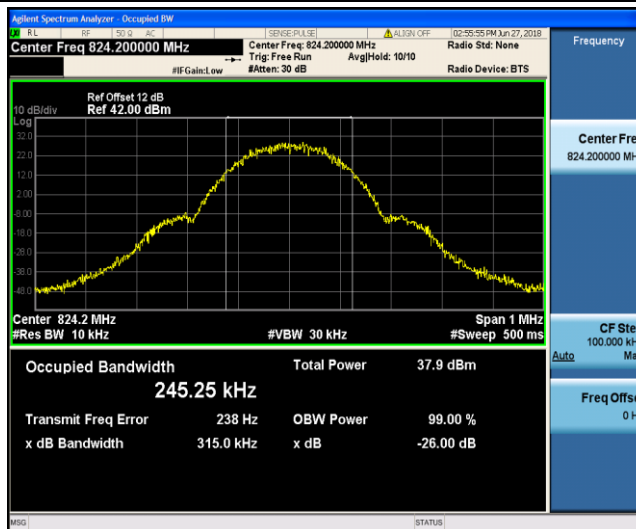
Test Result

Band	Channel	Occupied Bandwidth (kHz)	26dB Bandwidth (kHz)	Limit(kHz)	Verdict
GSM850	128	245.25	315.0	---	PASS
GSM850	190	244.89	316.4	---	PASS
GSM850	251	245.29	316.2	---	PASS
GPRS850	128	243.37	316.3	---	PASS
GPRS850	190	245.58	315.1	---	PASS
GPRS850	251	244.13	317.6	---	PASS
GSM1900	512	245.13	304.3	---	PASS
GSM1900	661	246.08	317.6	---	PASS
GSM1900	810	247.42	318.6	---	PASS
GPRS1900	512	243.48	315.1	---	PASS
GPRS1900	661	244.94	318.7	---	PASS
GPRS1900	810	245.26	313.9	---	PASS

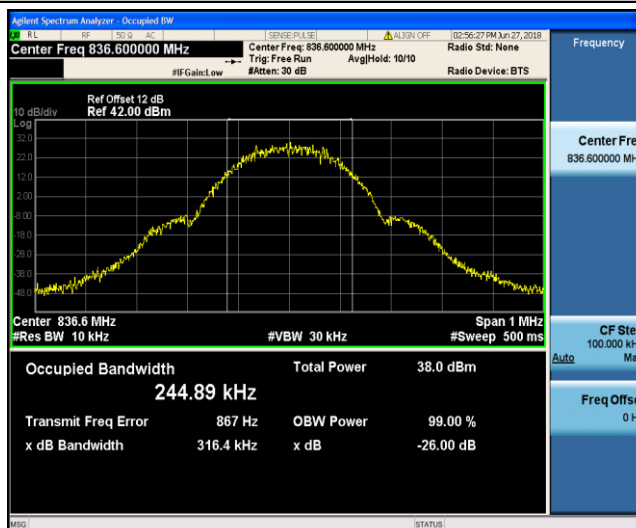


Test Graphs

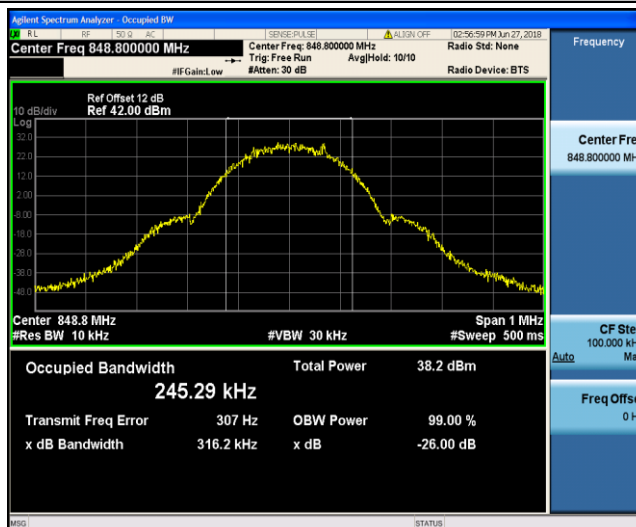
GSM850_128



GSM850_190

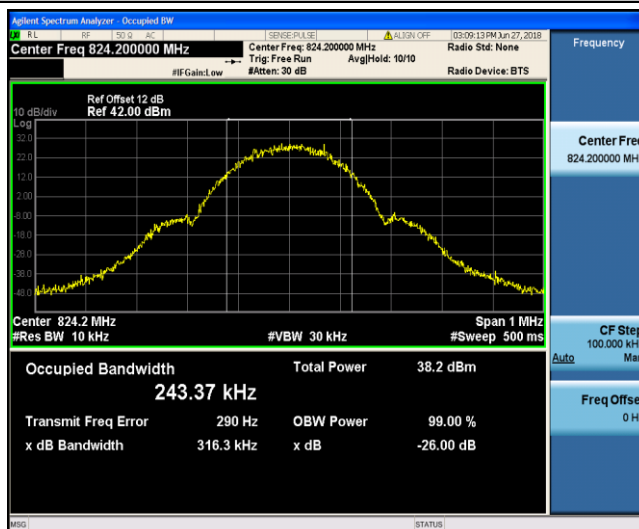


GSM850_251

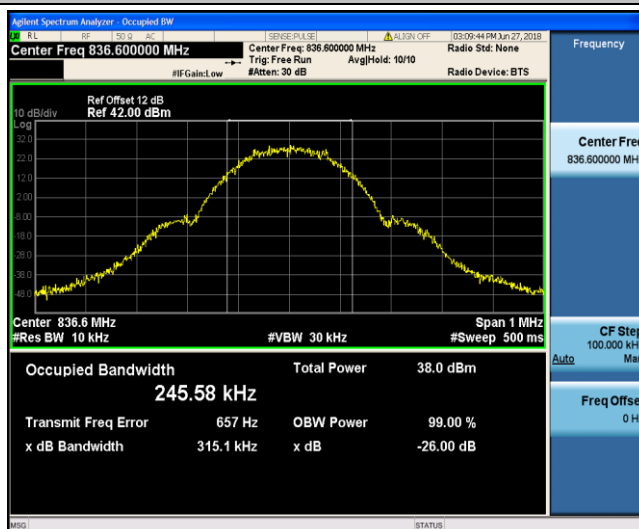




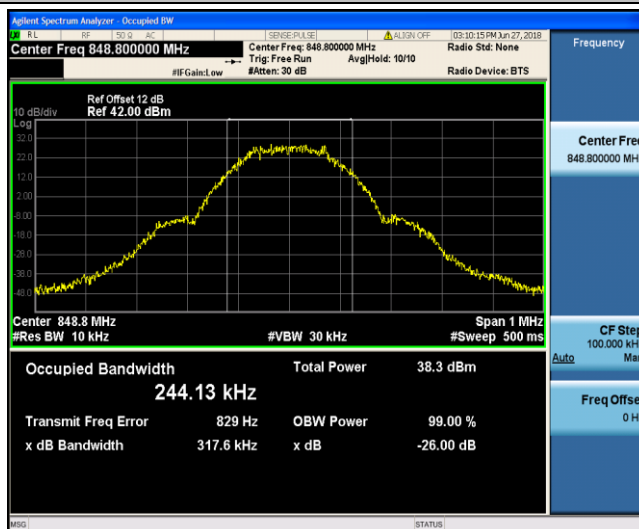
GPRS850_128



GPRS850_190

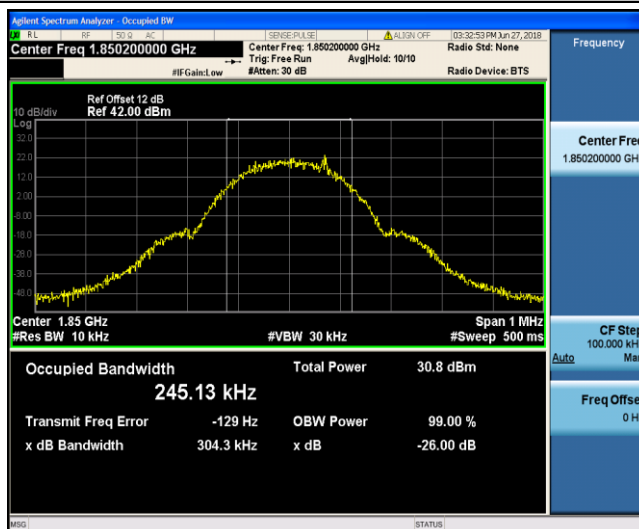


GPRS850_251

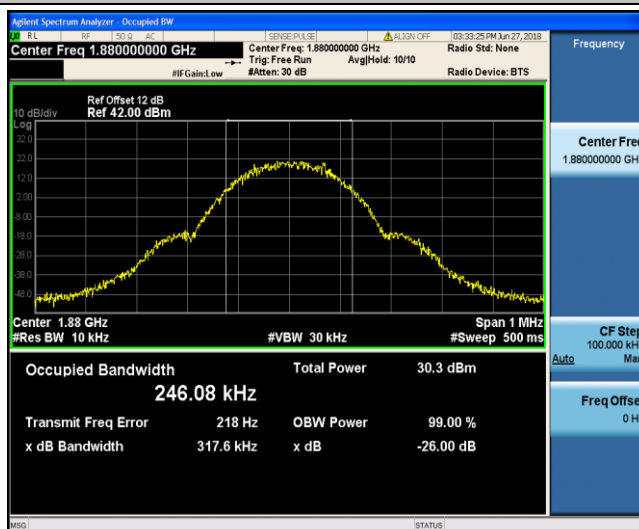




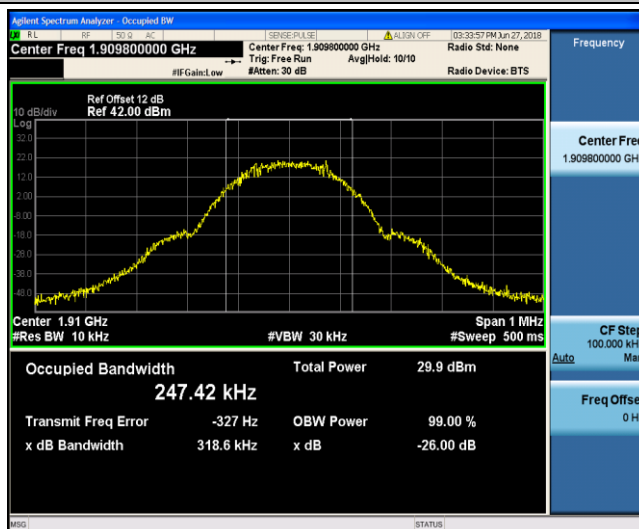
GSM1900_512



GSM1900_661

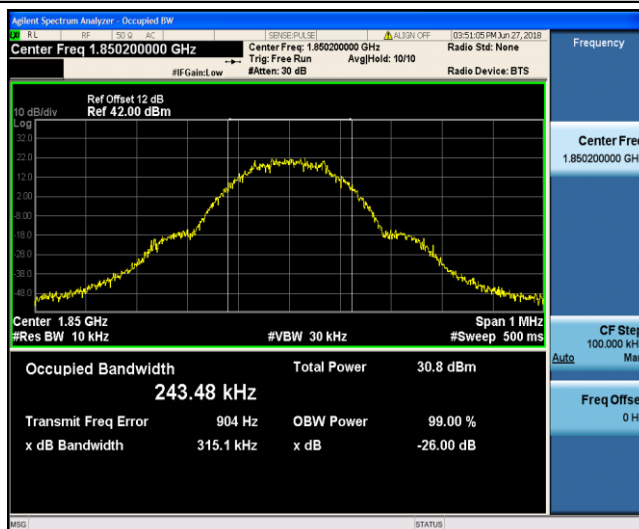


GSM1900_810

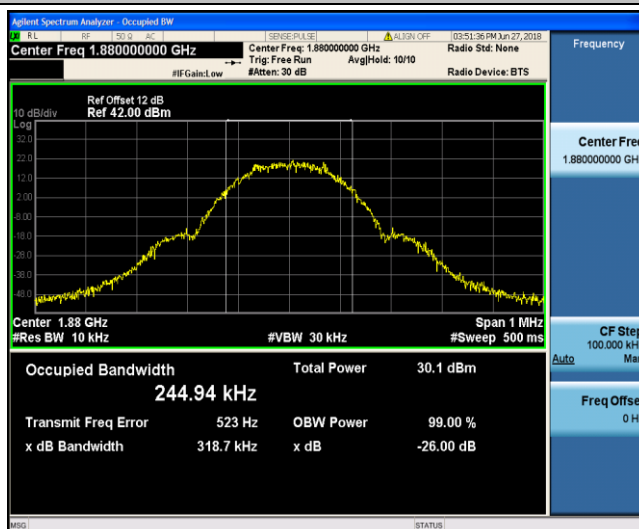




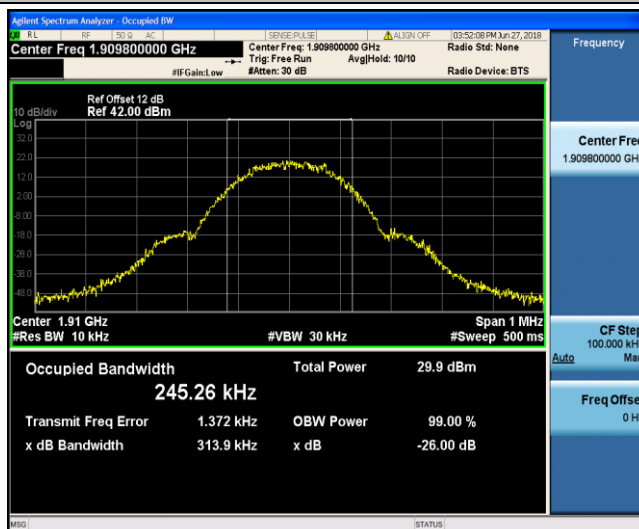
GPRS1900_512



GPRS1900_661



GPRS1900_810





8.4 Appendix D: Band Edge

Test Result

Band	Channel	Value(dBm)	Limit(dBm)	Verdict
GSM850	128	-27.65	-13	PASS
GSM850	251	-28.36	-13	PASS
GPRS850	128	-28.25	-13	PASS
GPRS850	251	-27.04	-13	PASS
GSM1900	512	-34.69	-13	PASS
GSM1900	810	-34.95	-13	PASS
GPRS1900	512	-34.25	-13	PASS
GPRS1900	810	-33.70	-13	PASS



Test Graphs

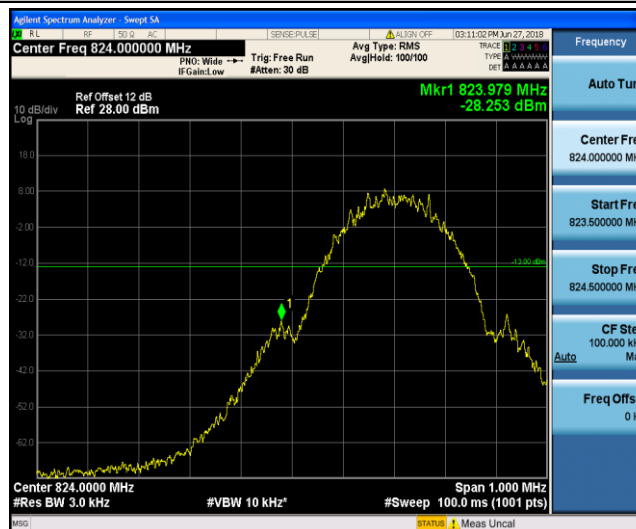
GSM850_128



GSM850_251

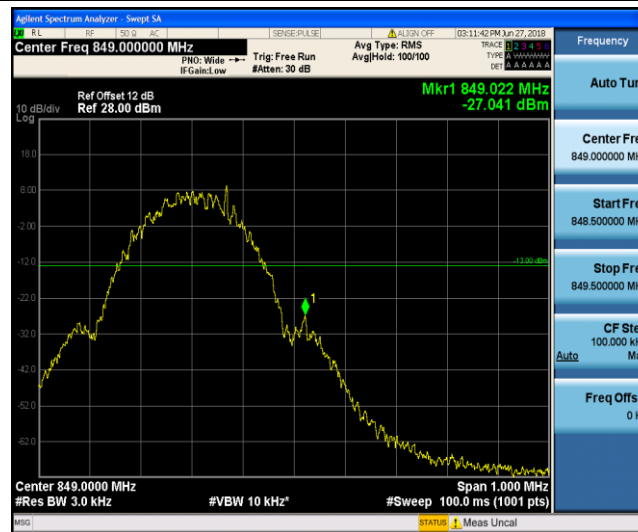


GPRS850_128

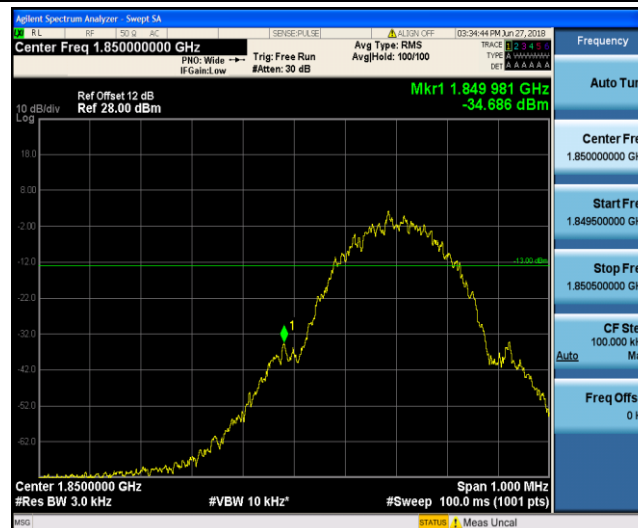




GPRS850_251



GSM1900_512



GSM1900_810





GPRS1900_512



GPRS1900_810





8.5 Appendix E: Conducted Spurious Emission

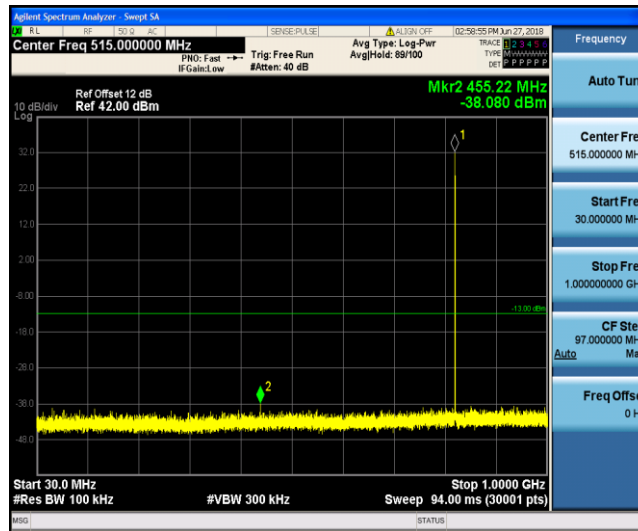
Test Result

Band	Channel	Frequency Rang(Mhz)	Value(dBm)	Limit(dBm)	Verdict
GSM850	128	30~1000	-38.08	-13	PASS
GSM850	128	1000~10000	-25.75	-13	PASS
GSM850	190	30~1000	-38.40	-13	PASS
GSM850	190	1000~10000	-25.81	-13	PASS
GSM850	251	30~1000	-38.06	-13	PASS
GSM850	251	1000~10000	-25.77	-13	PASS
GPRS850	128	30~1000	-38.58	-13	PASS
GPRS850	128	1000~10000	-25.08	-13	PASS
GPRS850	190	30~1000	-38.58	-13	PASS
GPRS850	190	1000~10000	-25.67	-13	PASS
GPRS850	251	30~1000	-38.21	-13	PASS
GPRS850	251	1000~10000	-25.57	-13	PASS
GSM1900	512	30~1000	-38.97	-13	PASS
GSM1900	512	1000~20000	-19.12	-13	PASS
GSM1900	661	30~1000	-38.06	-13	PASS
GSM1900	661	1000~20000	-19.74	-13	PASS
GSM1900	810	30~1000	-38.47	-13	PASS
GSM1900	810	1000~20000	-19.11	-13	PASS
GPRS1900	512	30~1000	-38.10	-13	PASS
GPRS1900	512	1000~20000	-19.61	-13	PASS
GPRS1900	661	30~1000	-38.67	-13	PASS
GPRS1900	661	1000~20000	-19.40	-13	PASS
GPRS1900	810	30~1000	-38.30	-13	PASS
GPRS1900	810	1000~20000	-19.72	-13	PASS

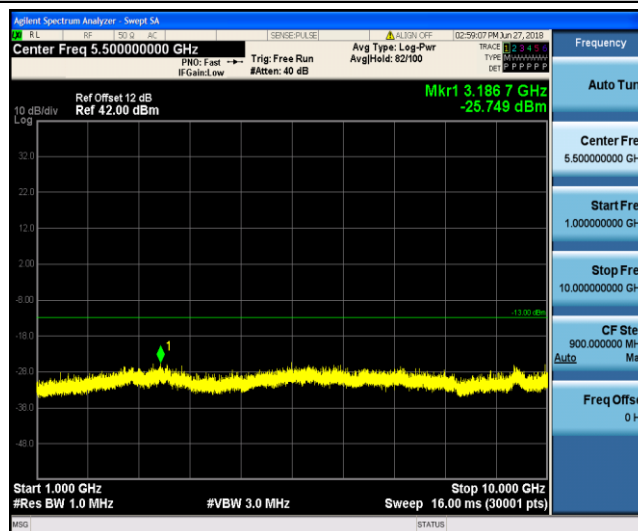


Test Graphs

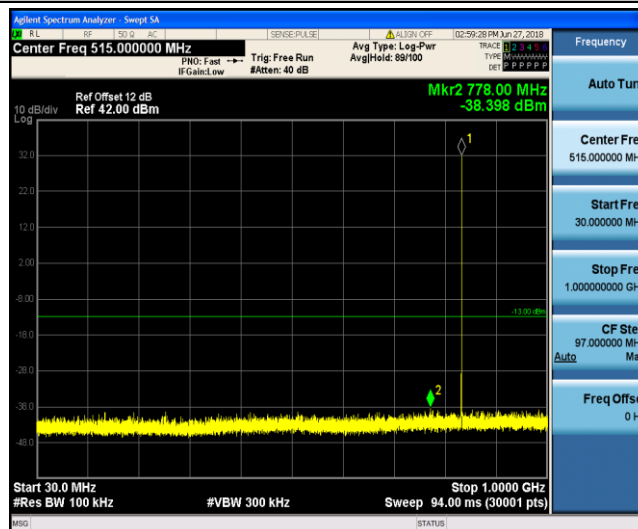
GSM850_128



GSM850_128

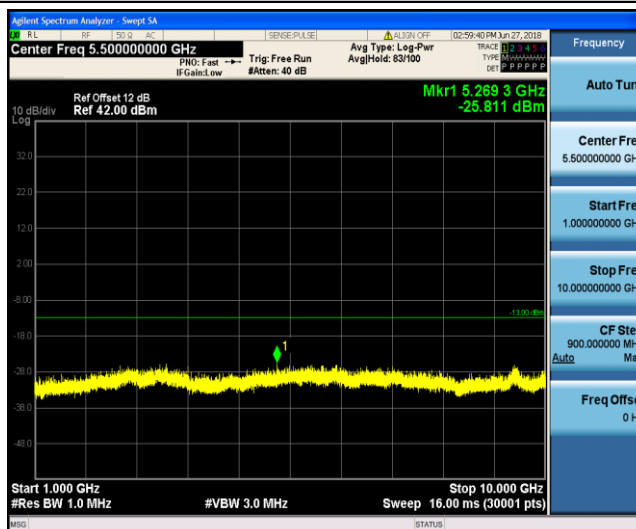


GSM850_190

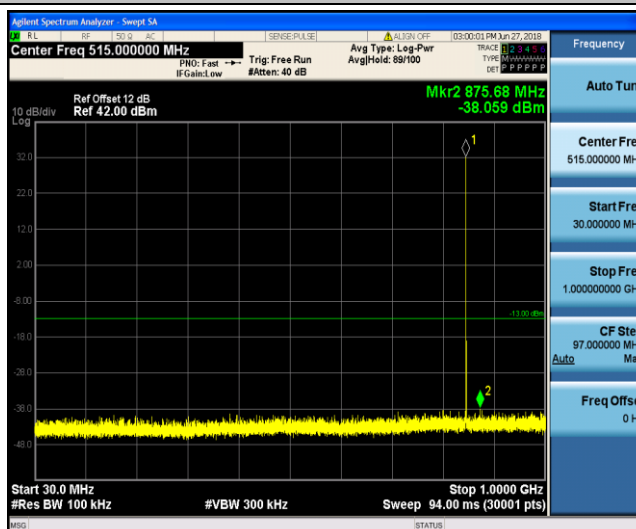




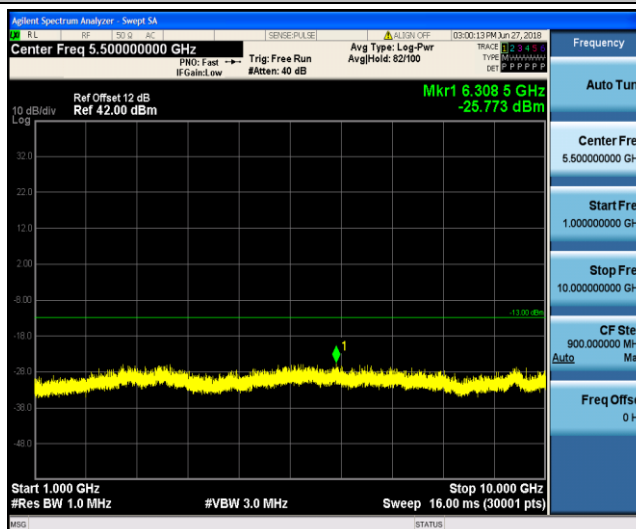
GSM850_190



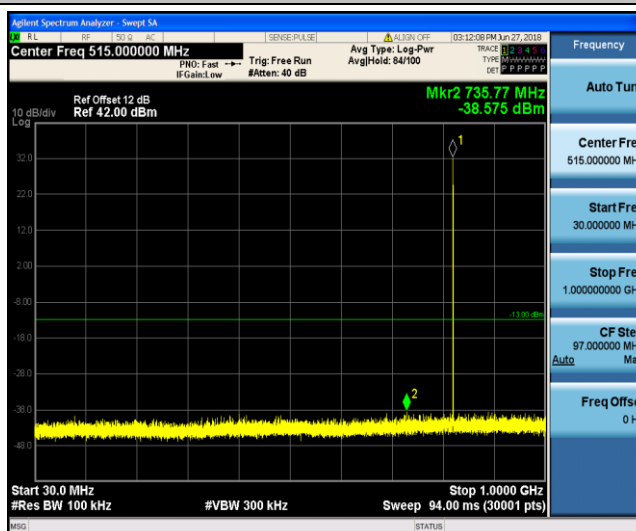
GSM850_251



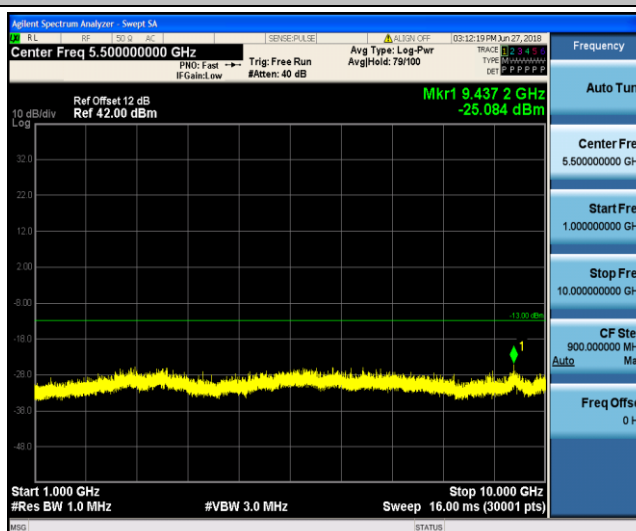
GSM850_251



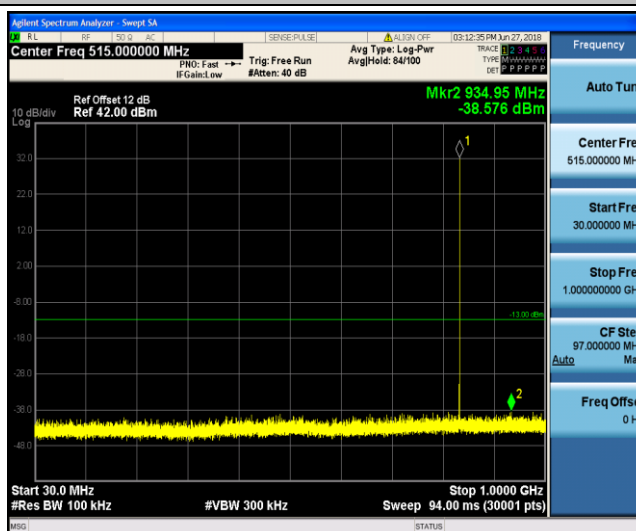
GPRS850 128



GPRS850 128

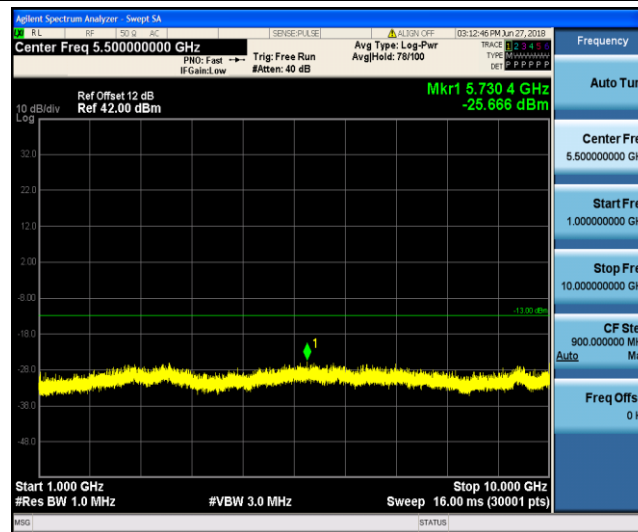


GPRS850 190

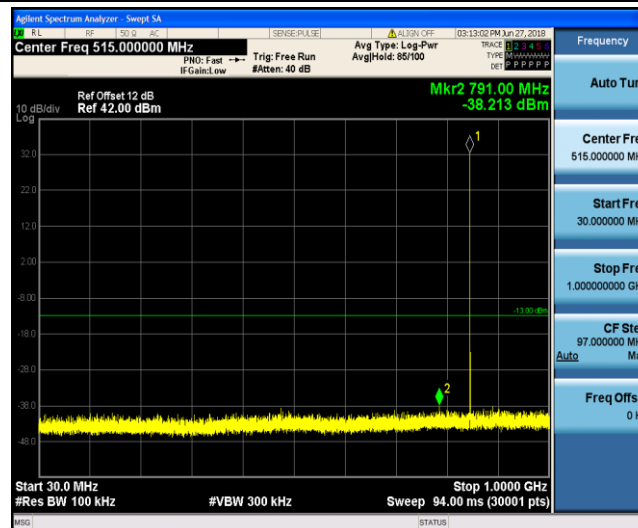




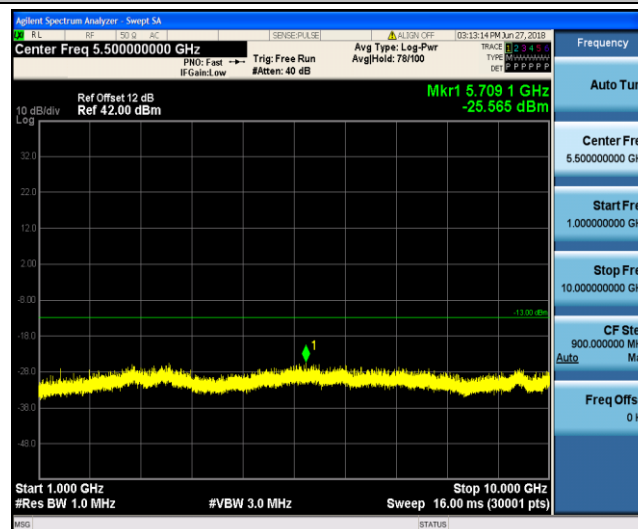
GPRS850_190



GPRS850_251

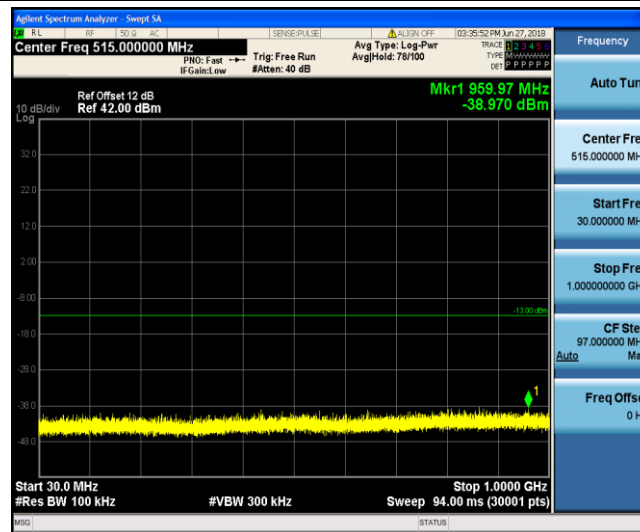


GPRS850_251

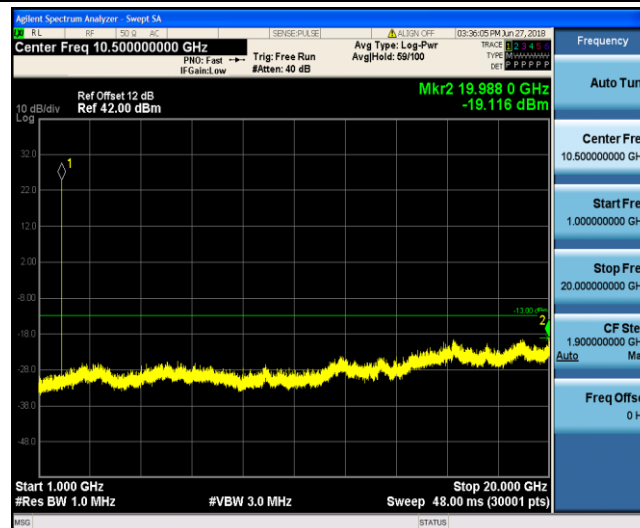




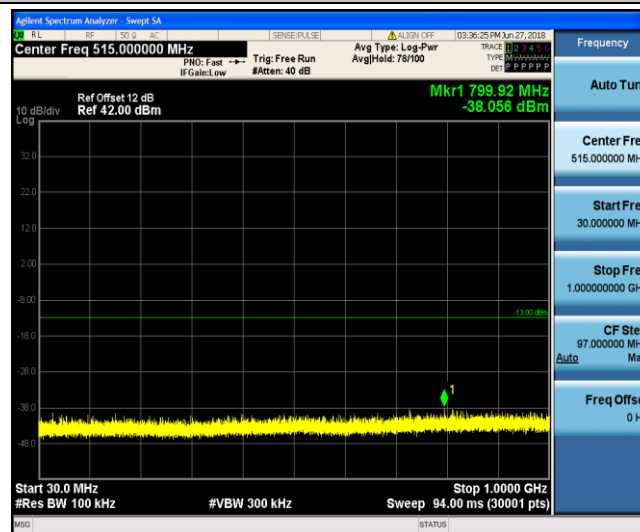
GSM1900_512



GSM1900_512

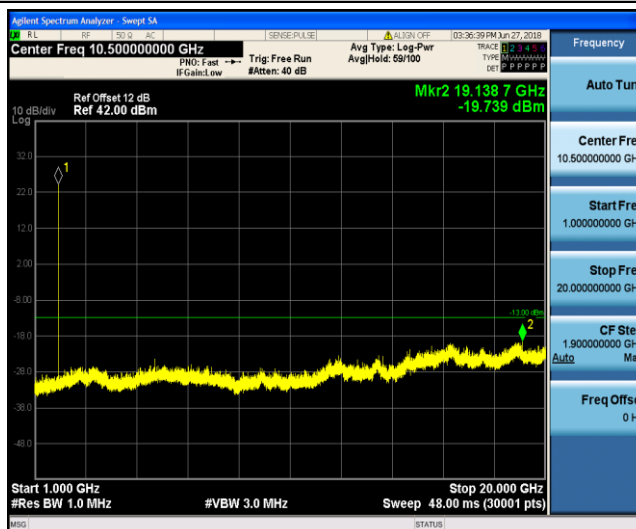


GSM1900_661

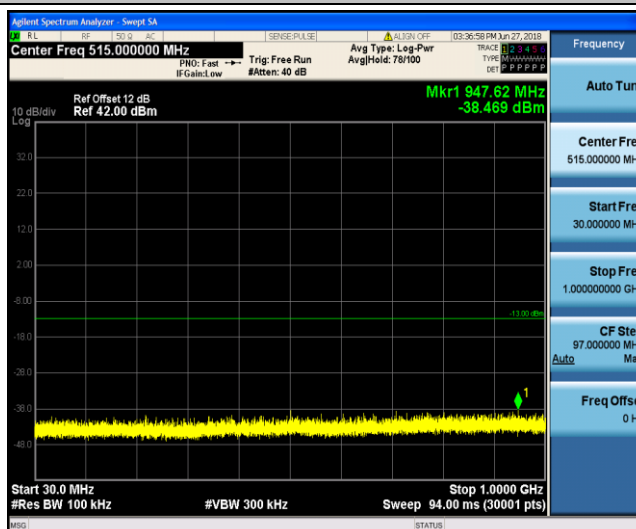




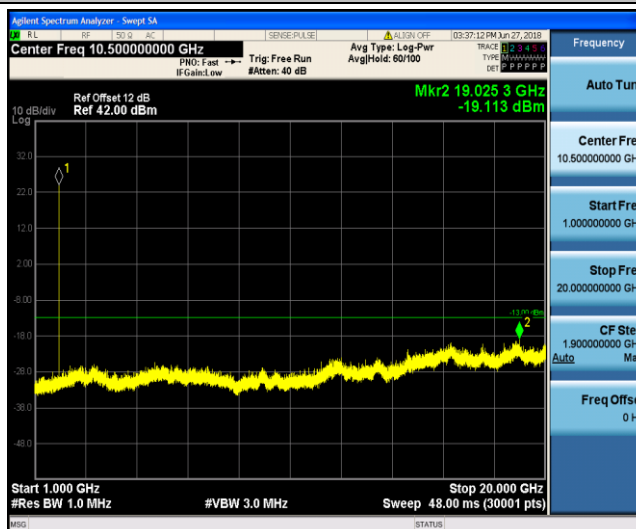
GSM1900_661



GSM1900_810

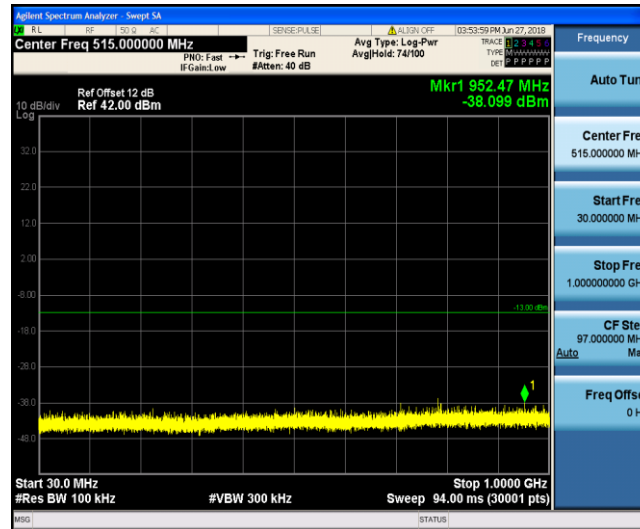


GSM1900_810





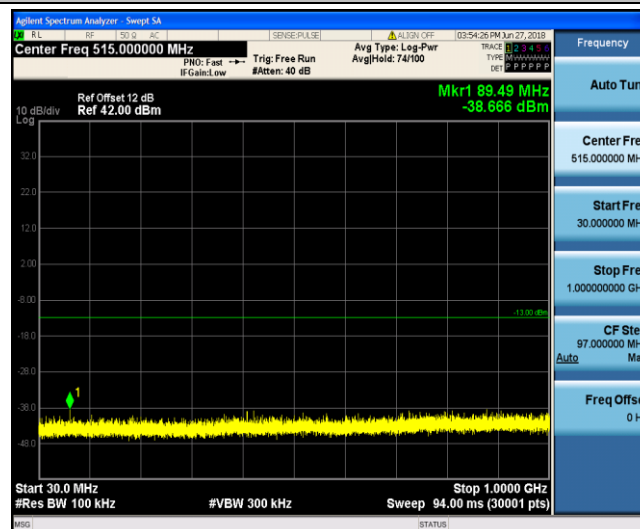
GPRS1900_512



GPRS1900_512

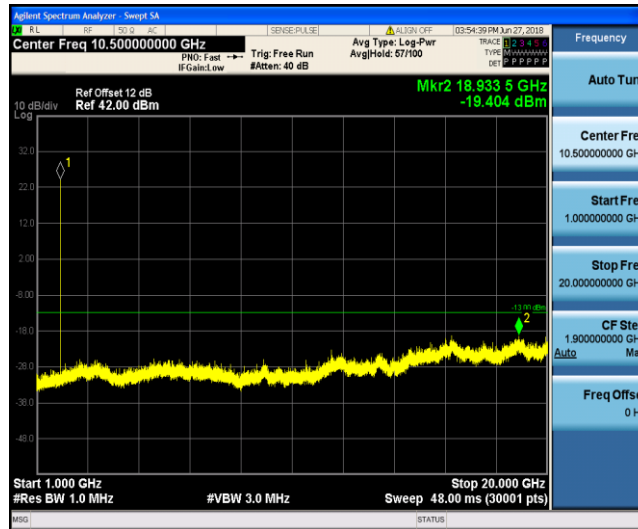


GPRS1900_661

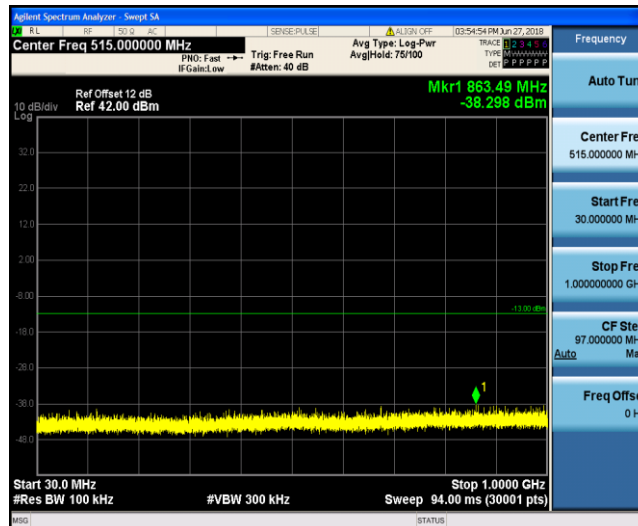




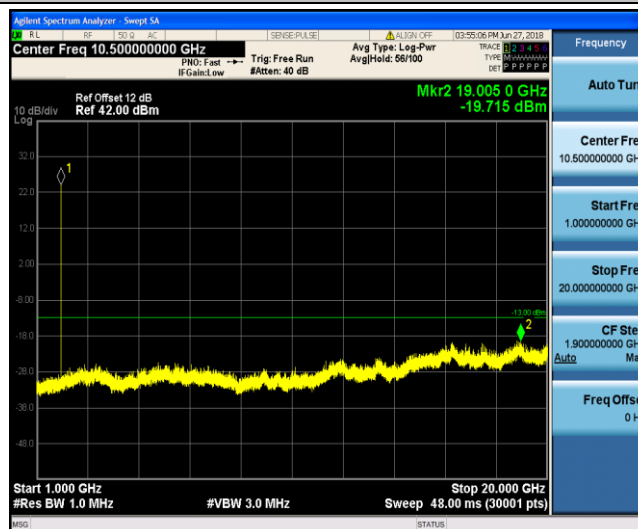
GPRS1900_661



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	4.33	0.005249	2.5	PASS
GSM850	128	VN	TN	10.43	0.012653	2.5	PASS
GSM850	128	VH	TN	10.23	0.012418	2.5	PASS
GSM850	190	VL	TN	15.40	0.018408	2.5	PASS
GSM850	190	VN	TN	18.40	0.021997	2.5	PASS
GSM850	190	VH	TN	10.78	0.012890	2.5	PASS
GSM850	251	VL	TN	22.83	0.026892	2.5	PASS
GSM850	251	VN	TN	18.05	0.021263	2.5	PASS
GSM850	251	VH	TN	22.24	0.026208	2.5	PASS
GPRS850	128	VL	TN	3.52	0.004270	2.5	PASS
GPRS850	128	VN	TN	14.01	0.017001	2.5	PASS
GPRS850	128	VH	TN	19.50	0.023660	2.5	PASS
GPRS850	190	VL	TN	22.54	0.026937	2.5	PASS
GPRS850	190	VN	TN	39.20	0.046850	2.5	PASS
GPRS850	190	VH	TN	38.71	0.046271	2.5	PASS
GPRS850	251	VL	TN	17.01	0.020046	2.5	PASS
GPRS850	251	VN	TN	12.43	0.014644	2.5	PASS
GPRS850	251	VH	TN	16.89	0.019893	2.5	PASS
GSM1900	512	VL	TN	31.80	0.017188	2.5	PASS
GSM1900	512	VN	TN	26.28	0.014204	2.5	PASS
GSM1900	512	VH	TN	22.50	0.012163	2.5	PASS
GSM1900	661	VL	TN	23.99	0.012760	2.5	PASS
GSM1900	661	VN	TN	36.26	0.019286	2.5	PASS
GSM1900	661	VH	TN	45.72	0.024317	2.5	PASS
GSM1900	810	VL	TN	31.67	0.016584	2.5	PASS
GSM1900	810	VN	TN	31.80	0.016652	2.5	PASS
GSM1900	810	VH	TN	23.08	0.012087	2.5	PASS
GPRS1900	512	VL	TN	0.19	0.000105	2.5	PASS
GPRS1900	512	VN	TN	48.04	0.025965	2.5	PASS
GPRS1900	512	VH	TN	41.04	0.022179	2.5	PASS
GPRS1900	661	VL	TN	22.31	0.011867	2.5	PASS
GPRS1900	661	VN	TN	42.88	0.022806	2.5	PASS
GPRS1900	661	VH	TN	49.72	0.026447	2.5	PASS
GPRS1900	810	VL	TN	52.43	0.027454	2.5	PASS
GPRS1900	810	VN	TN	59.21	0.031004	2.5	PASS
GPRS1900	810	VH	TN	57.44	0.030075	2.5	PASS



Temperature							
Band	Channel	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
GSM850	128	VN	-30	14.56	0.017667	2.5	PASS
GSM850	128	VN	-20	13.01	0.015786	2.5	PASS
GSM850	128	VN	-10	16.50	0.020017	2.5	PASS
GSM850	128	VN	0	8.04	0.009754	2.5	PASS
GSM850	128	VN	10	9.33	0.011321	2.5	PASS
GSM850	128	VN	20	15.82	0.019194	2.5	PASS
GSM850	128	VN	30	14.01	0.017001	2.5	PASS
GSM850	128	VN	40	16.69	0.020252	2.5	PASS
GSM850	128	VN	50	18.27	0.022172	2.5	PASS
GSM850	190	VN	-30	18.14	0.021689	2.5	PASS
GSM850	190	VN	-20	9.62	0.011500	2.5	PASS
GSM850	190	VN	-10	15.24	0.018215	2.5	PASS
GSM850	190	VN	0	17.05	0.020376	2.5	PASS
GSM850	190	VN	10	12.53	0.014974	2.5	PASS
GSM850	190	VN	20	14.27	0.017058	2.5	PASS
GSM850	190	VN	30	19.50	0.023309	2.5	PASS
GSM850	190	VN	40	14.40	0.017212	2.5	PASS
GSM850	190	VN	50	10.85	0.012967	2.5	PASS
GSM850	251	VN	-30	9.59	0.011297	2.5	PASS
GSM850	251	VN	-20	14.17	0.016698	2.5	PASS
GSM850	251	VN	-10	24.89	0.029327	2.5	PASS
GSM850	251	VN	0	6.62	0.007798	2.5	PASS
GSM850	251	VN	10	9.36	0.011031	2.5	PASS
GSM850	251	VN	20	18.69	0.022023	2.5	PASS
GSM850	251	VN	30	14.21	0.016736	2.5	PASS
GSM850	251	VN	40	20.53	0.024192	2.5	PASS
GSM850	251	VN	50	26.60	0.031343	2.5	PASS
GPRS850	128	VN	-30	13.17	0.015982	2.5	PASS
GPRS850	128	VN	-20	12.69	0.015395	2.5	PASS
GPRS850	128	VN	-10	13.66	0.016570	2.5	PASS
GPRS850	128	VN	0	34.90	0.042345	2.5	PASS
GPRS850	128	VN	10	29.02	0.035216	2.5	PASS
GPRS850	128	VN	20	19.92	0.024169	2.5	PASS
GPRS850	128	VN	30	20.44	0.024796	2.5	PASS
GPRS850	128	VN	40	17.53	0.021271	2.5	PASS
GPRS850	128	VN	50	25.12	0.030476	2.5	PASS
GPRS850	190	VN	-30	30.09	0.035967	2.5	PASS
GPRS850	190	VN	-20	29.54	0.035311	2.5	PASS
GPRS850	190	VN	-10	24.05	0.028751	2.5	PASS
GPRS850	190	VN	0	24.28	0.029021	2.5	PASS
GPRS850	190	VN	10	24.05	0.028751	2.5	PASS
GPRS850	190	VN	20	40.55	0.048471	2.5	PASS
GPRS850	190	VN	30	35.09	0.041949	2.5	PASS
GPRS850	190	VN	40	31.48	0.037627	2.5	PASS
GPRS850	190	VN	50	28.15	0.033652	2.5	PASS
GPRS850	251	VN	-30	19.31	0.022746	2.5	PASS
GPRS850	251	VN	-20	16.95	0.019969	2.5	PASS
GPRS850	251	VN	-10	25.05	0.029517	2.5	PASS
GPRS850	251	VN	0	33.35	0.039292	2.5	PASS
GPRS850	251	VN	10	34.61	0.040776	2.5	PASS
GPRS850	251	VN	20	10.88	0.012818	2.5	PASS



GPRS850	251	VN	30	15.05	0.017725	2.5	PASS
GPRS850	251	VN	40	15.85	0.018676	2.5	PASS
GPRS850	251	VN	50	13.43	0.015823	2.5	PASS
GSM1900	512	VN	-30	19.40	0.010487	2.5	PASS
GSM1900	512	VN	-20	31.54	0.017049	2.5	PASS
GSM1900	512	VN	-10	30.83	0.016665	2.5	PASS
GSM1900	512	VN	0	18.66	0.010086	2.5	PASS
GSM1900	512	VN	10	27.99	0.015129	2.5	PASS
GSM1900	512	VN	20	16.89	0.009126	2.5	PASS
GSM1900	512	VN	30	19.31	0.010435	2.5	PASS
GSM1900	512	VN	40	33.03	0.017851	2.5	PASS
GSM1900	512	VN	50	27.15	0.014675	2.5	PASS
GSM1900	661	VN	-30	45.26	0.024077	2.5	PASS
GSM1900	661	VN	-20	27.80	0.014786	2.5	PASS
GSM1900	661	VN	-10	27.02	0.014374	2.5	PASS
GSM1900	661	VN	0	36.42	0.019372	2.5	PASS
GSM1900	661	VN	10	45.26	0.024077	2.5	PASS
GSM1900	661	VN	20	18.24	0.009703	2.5	PASS
GSM1900	661	VN	30	24.21	0.012880	2.5	PASS
GSM1900	661	VN	40	26.28	0.013979	2.5	PASS
GSM1900	661	VN	50	18.66	0.009926	2.5	PASS
GSM1900	810	VN	-30	13.20	0.006914	2.5	PASS
GSM1900	810	VN	-20	37.74	0.019762	2.5	PASS
GSM1900	810	VN	-10	7.33	0.003838	2.5	PASS
GSM1900	810	VN	0	30.45	0.015942	2.5	PASS
GSM1900	810	VN	10	25.05	0.013119	2.5	PASS
GSM1900	810	VN	20	11.36	0.005951	2.5	PASS
GSM1900	810	VN	30	17.69	0.009264	2.5	PASS
GSM1900	810	VN	40	6.07	0.003178	2.5	PASS
GSM1900	810	VN	50	19.18	0.010042	2.5	PASS
GPRS1900	512	VN	-30	56.34	0.030450	2.5	PASS
GPRS1900	512	VN	-20	31.25	0.016892	2.5	PASS
GPRS1900	512	VN	-10	53.79	0.029072	2.5	PASS
GPRS1900	512	VN	0	57.99	0.031340	2.5	PASS
GPRS1900	512	VN	10	53.08	0.028688	2.5	PASS
GPRS1900	512	VN	20	45.43	0.024552	2.5	PASS
GPRS1900	512	VN	30	32.58	0.017607	2.5	PASS
GPRS1900	512	VN	40	31.93	0.017258	2.5	PASS
GPRS1900	512	VN	50	27.83	0.015042	2.5	PASS
GPRS1900	661	VN	-30	52.79	0.028078	2.5	PASS
GPRS1900	661	VN	-20	45.62	0.024266	2.5	PASS
GPRS1900	661	VN	-10	50.88	0.027065	2.5	PASS
GPRS1900	661	VN	0	40.71	0.021656	2.5	PASS
GPRS1900	661	VN	10	42.10	0.022394	2.5	PASS
GPRS1900	661	VN	20	38.65	0.020556	2.5	PASS
GPRS1900	661	VN	30	23.70	0.012605	2.5	PASS
GPRS1900	661	VN	40	38.42	0.020436	2.5	PASS
GPRS1900	661	VN	50	27.28	0.014511	2.5	PASS
GPRS1900	810	VN	-30	50.69	0.026541	2.5	PASS
GPRS1900	810	VN	-20	39.10	0.020472	2.5	PASS
GPRS1900	810	VN	-10	38.84	0.020337	2.5	PASS
GPRS1900	810	VN	0	33.58	0.017582	2.5	PASS
GPRS1900	810	VN	10	43.33	0.022687	2.5	PASS
GPRS1900	810	VN	20	41.58	0.021774	2.5	PASS
GPRS1900	810	VN	30	51.08	0.026744	2.5	PASS



Report No.: TRE1806019001

Issued: 2018-07-05

GPRS1900	810	VN	40	49.72	0.026034	2.5	PASS
GPRS1900	810	VN	50	46.10	0.024141	2.5	PASS

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