



## 8.1 Appendix A: Conducted Output Power

### Test Result

Band	Channel	PCL	Power(dBm)	Limit(dBm)	Verdict
GSM850	128	5	32.85	38.5	PASS
GSM850	190	5	32.54	38.5	PASS
GSM850	251	5	32.60	38.5	PASS
GSM1900	512	0	29.96	33	PASS
GSM1900	661	0	29.39	33	PASS
GSM1900	810	0	29.03	33	PASS



Band	Channel	PCL	Slot	Power(dBm)	Limit(dBm)	Verdict
GPRS850	128	5	1	33.15	38.5	PASS
GPRS850	128	5	2	31.79	38.5	PASS
GPRS850	128	5	3	29.76	38.5	PASS
GPRS850	128	5	4	27.08	38.5	PASS
GPRS850	190	5	1	32.84	38.5	PASS
GPRS850	190	5	2	31.66	38.5	PASS
GPRS850	190	5	3	29.51	38.5	PASS
GPRS850	190	5	4	27.02	38.5	PASS
GPRS850	251	5	1	32.86	38.5	PASS
GPRS850	251	5	2	31.30	38.5	PASS
GPRS850	251	5	3	29.98	38.5	PASS
GPRS850	251	5	4	27.00	38.5	PASS
GPRS1900	512	0	1	29.13	33	PASS
GPRS1900	512	0	2	27.74	33	PASS
GPRS1900	512	0	3	26.09	33	PASS
GPRS1900	512	0	4	23.18	33	PASS
GPRS1900	661	0	1	29.58	33	PASS
GPRS1900	661	0	2	27.35	33	PASS
GPRS1900	661	0	3	26.44	33	PASS
GPRS1900	661	0	4	23.50	33	PASS
GPRS1900	810	0	1	29.31	33	PASS
GPRS1900	810	0	2	27.52	33	PASS
GPRS1900	810	0	3	26.02	33	PASS
GPRS1900	810	0	4	23.03	33	PASS



## 8.2 Appendix B: Peak-to-Average Ratio

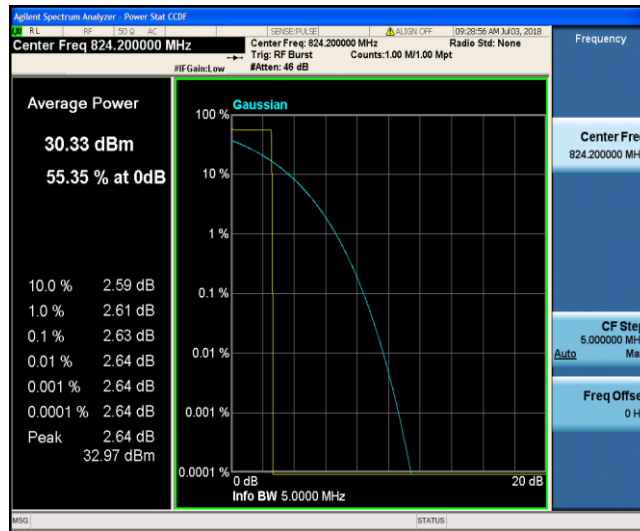
### Test Result

Band	Channel	Peak-to-Average Ratio(dB)	Limit(dBm)	Verdict
GSM850	128	2.63	13	PASS
GSM850	190	2.63	13	PASS
GSM850	251	2.62	13	PASS
GPRS850	128	2.64	13	PASS
GPRS850	190	2.64	13	PASS
GPRS850	251	2.64	13	PASS
GSM1900	512	2.69	13	PASS
GSM1900	661	2.71	13	PASS
GSM1900	810	2.71	13	PASS
GPRS1900	512	2.68	13	PASS
GPRS1900	661	2.69	13	PASS
GPRS1900	810	2.78	13	PASS

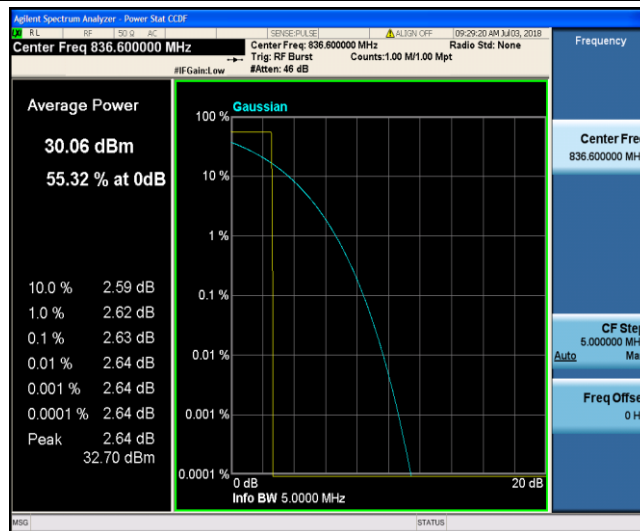


Test Graphs

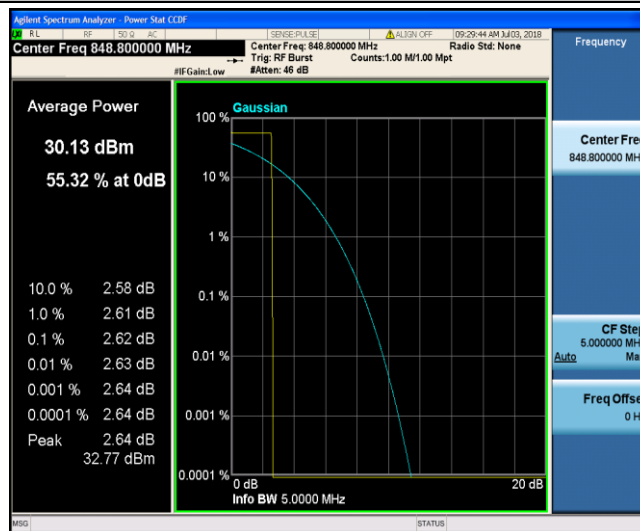
GSM850\_128



GSM850\_190



GSM850\_251

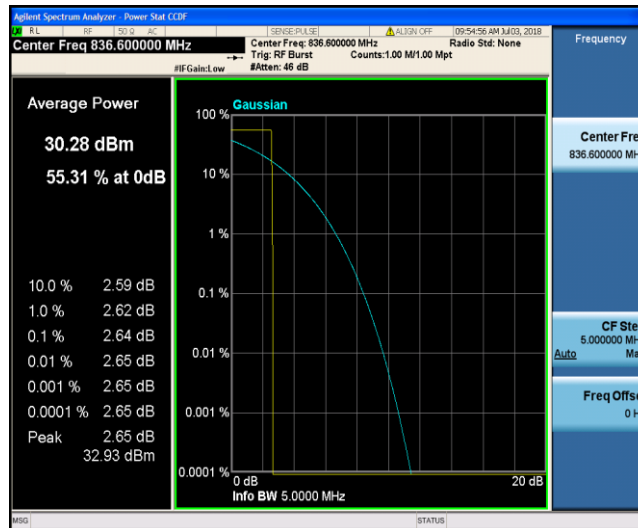




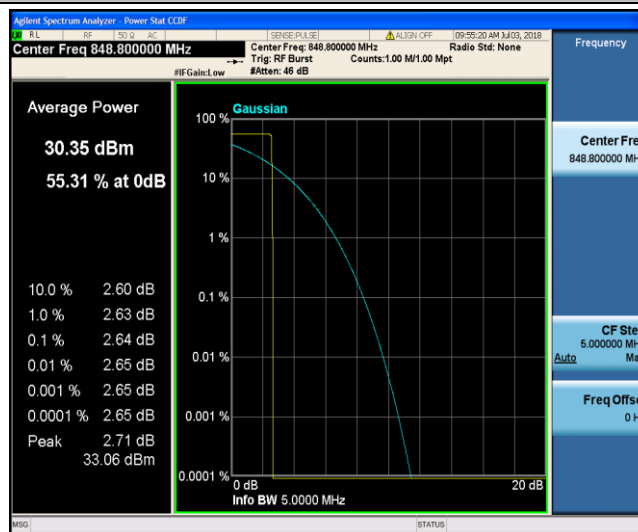
### GPRS850\_128



### GPRS850\_190

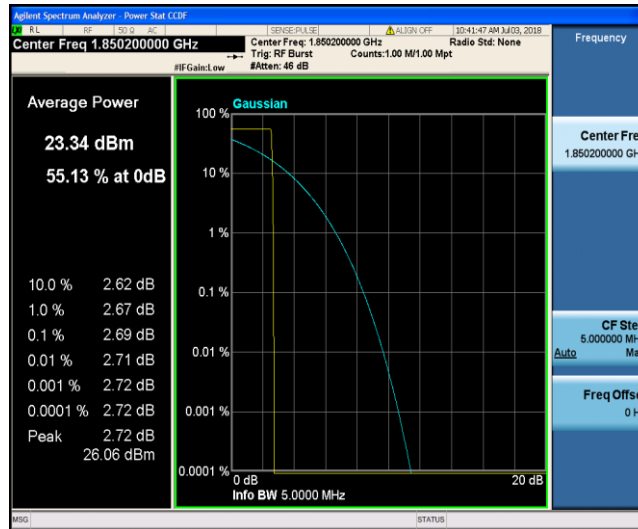


### GPRS850\_251

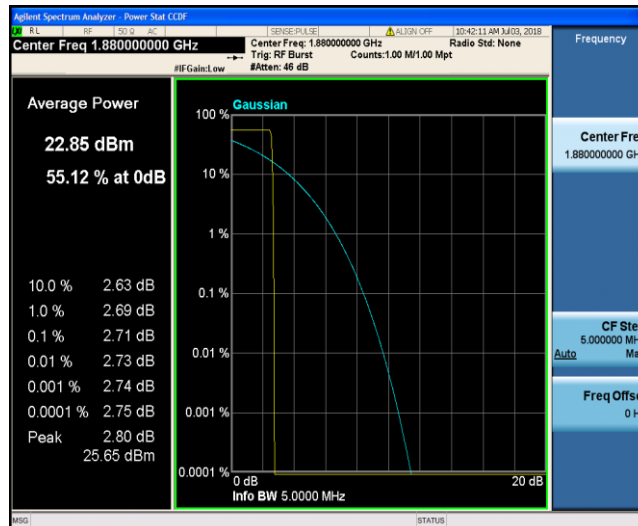




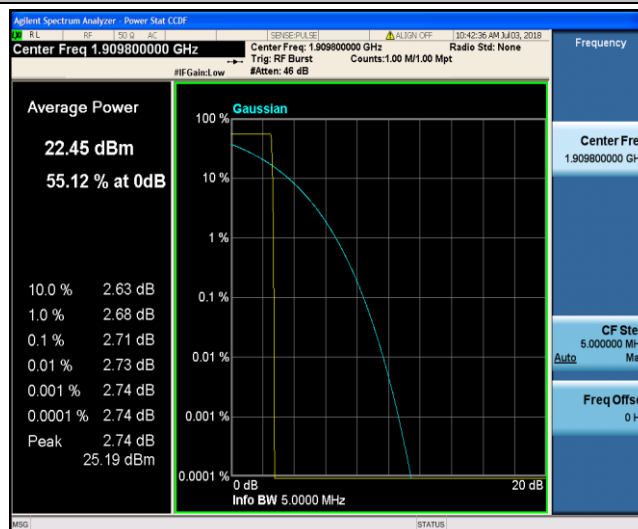
### GSM1900\_512



### GSM1900\_661

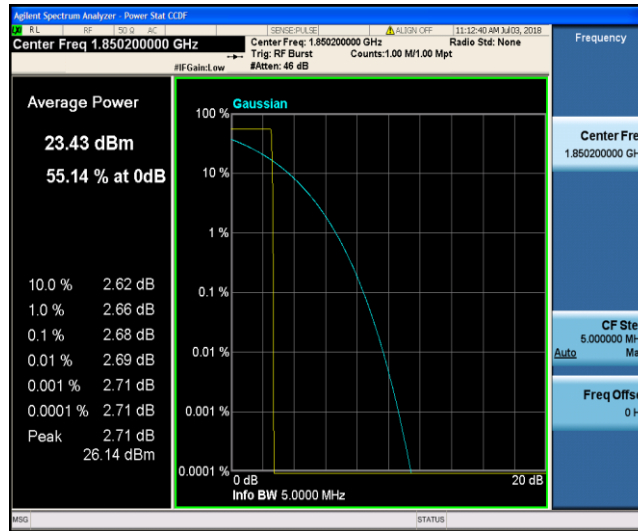


### GSM1900\_810





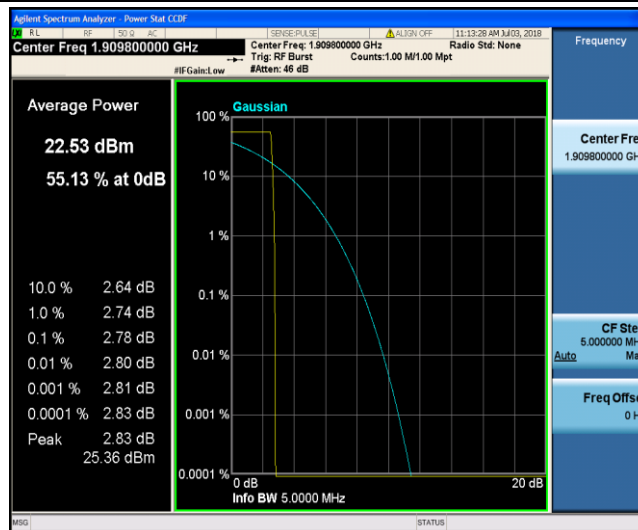
### GPRS1900\_512



### GPRS1900\_661



### GPRS1900\_810





### 8.3 Appendix C: 26dB Bandwidth and Occupied Bandwidth

#### Test Result

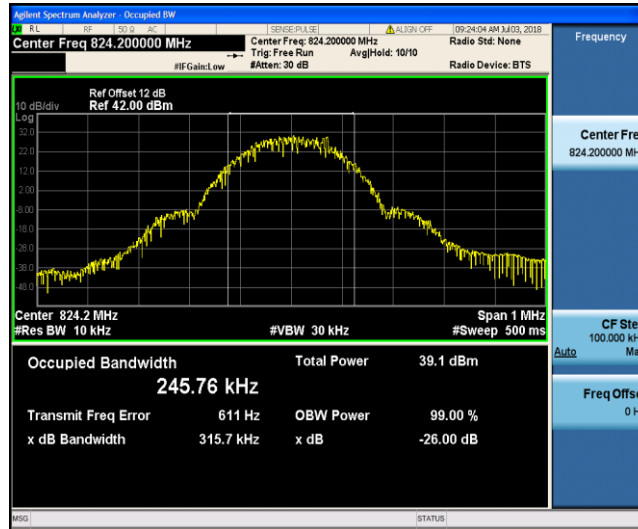
Band	Channel	Occupied Bandwidth (kHz)	26dB Bandwidth (kHz)	Limit(kHz)	Verdict
GSM850	128	245.76	315.7	---	PASS
GSM850	190	245.88	311.8	---	PASS
GSM850	251	245.15	310.8	---	PASS
GPRS850	128	241.85	316.8	---	PASS
GPRS850	190	242.96	313.3	---	PASS
GPRS850	251	242.66	318.4	---	PASS
GSM1900	512	244.57	316.9	---	PASS
GSM1900	661	244.92	320.5	---	PASS
GSM1900	810	246.07	316.4	---	PASS
GPRS1900	512	244.52	315.5	---	PASS
GPRS1900	661	245.27	313.8	---	PASS
GPRS1900	810	242.74	318.3	---	PASS



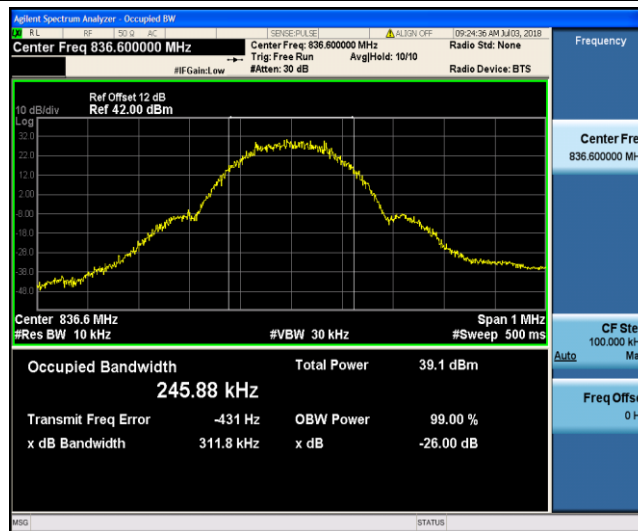


Test Graphs

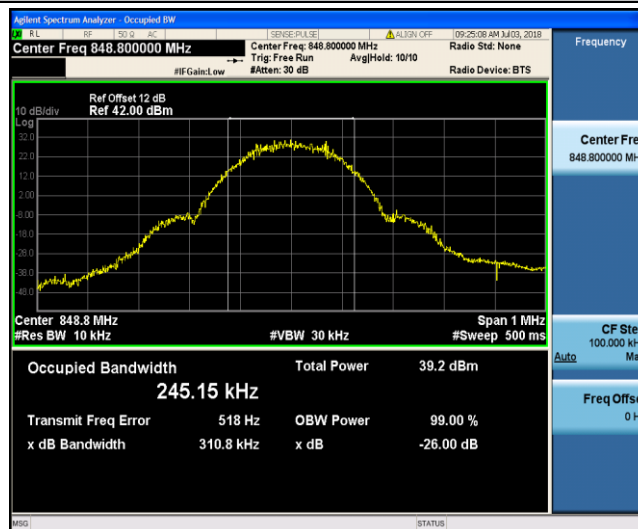
GSM850\_128



GSM850\_190

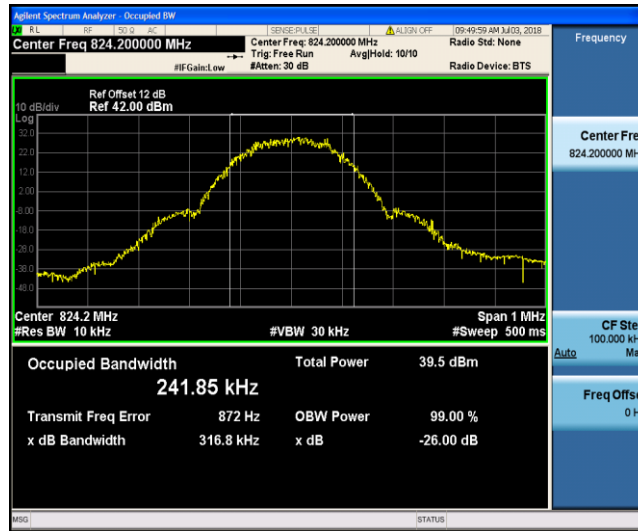


GSM850\_251

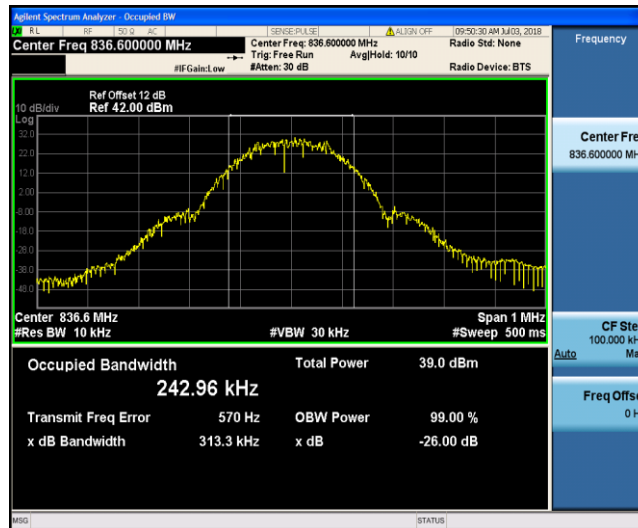




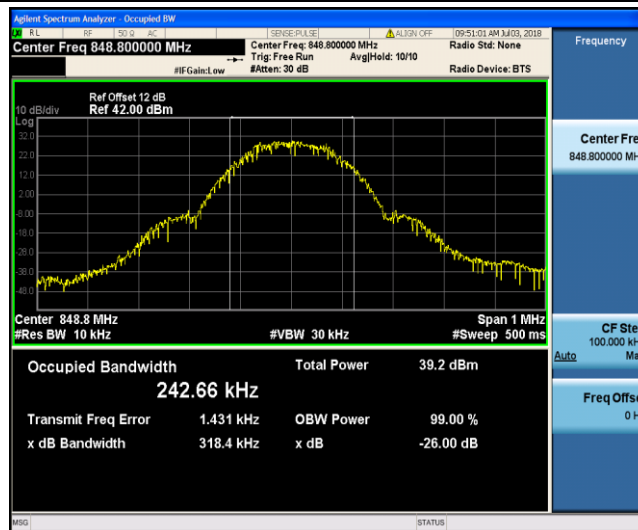
GPRS850\_128



GPRS850\_190

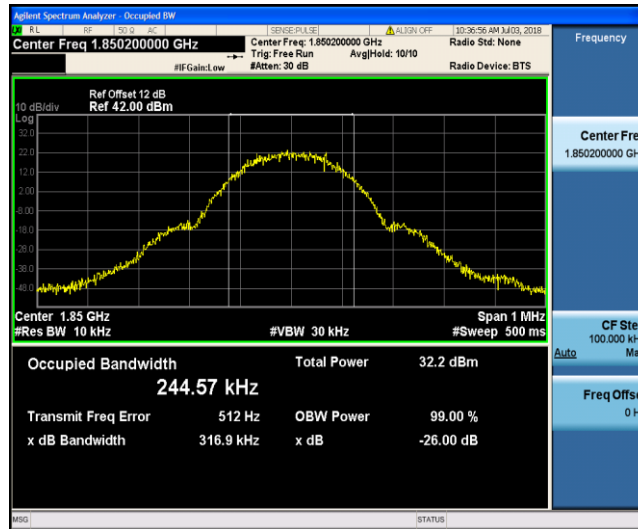


GPRS850\_251

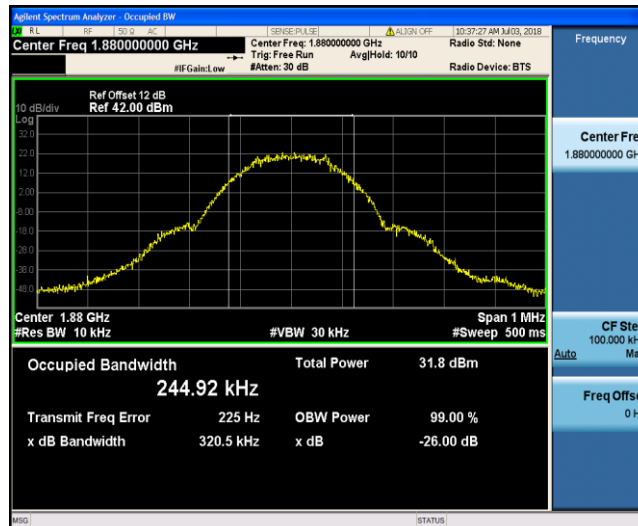




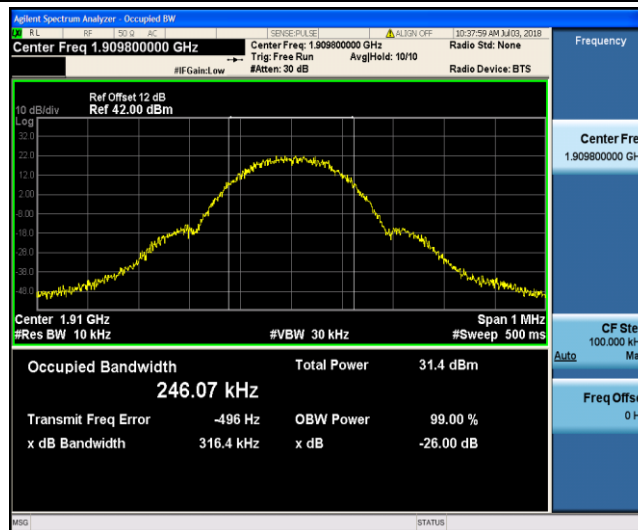
### GSM1900\_512



### GSM1900\_661

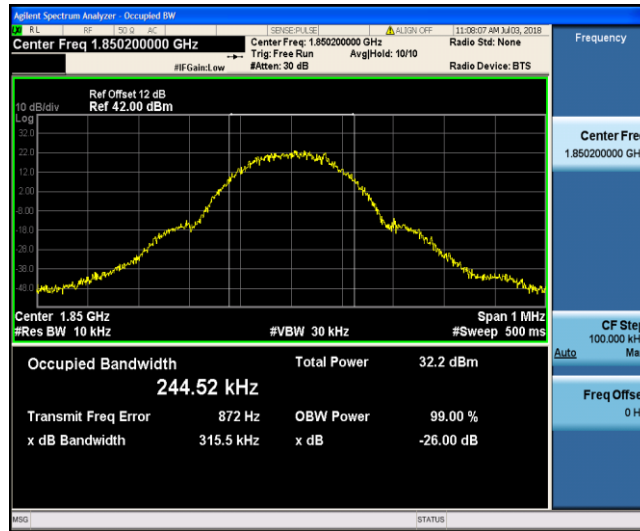


### GSM1900\_810

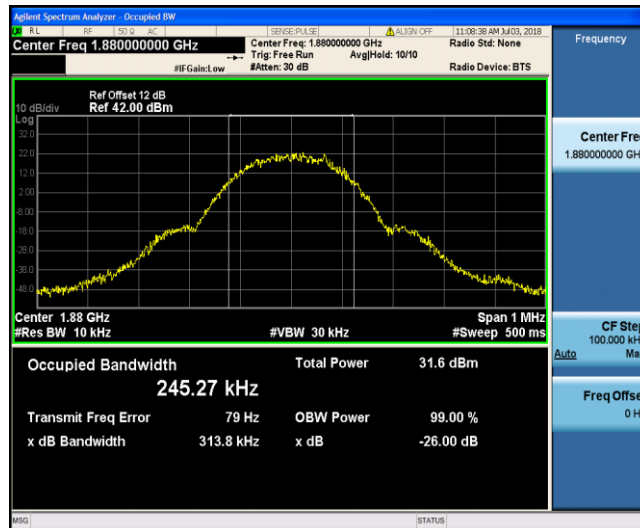




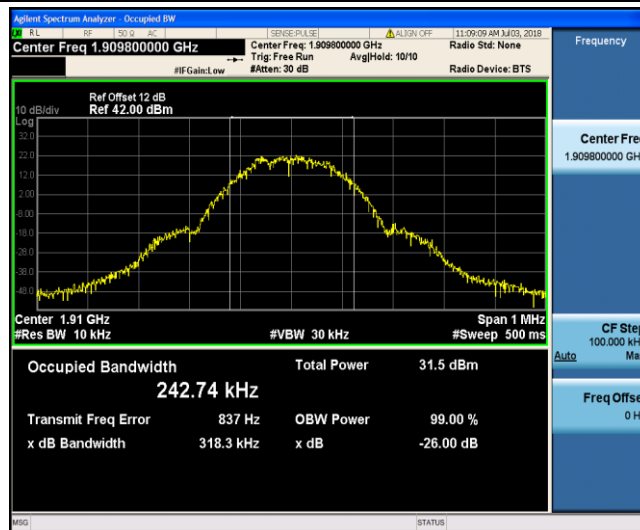
### GPRS1900\_512



### GPRS1900\_661



### GPRS1900\_810





#### 8.4 Appendix D: Band Edge

##### Test Result

Band	Channel	Value(dBm)	Limit(dBm)	Verdict
GSM850	128	-26.90	-13	PASS
GSM850	251	-27.04	-13	PASS
GPRS850	128	-25.48	-13	PASS
GPRS850	251	-25.93	-13	PASS
GSM1900	512	-34.43	-13	PASS
GSM1900	810	-33.21	-13	PASS
GPRS1900	512	-34.42	-13	PASS
GPRS1900	810	-33.42	-13	PASS



Test Graphs

GSM850\_128



GSM850\_251



GPRS850\_128

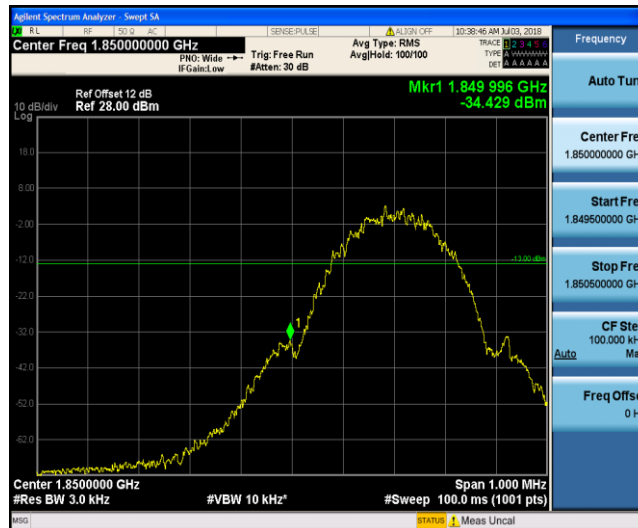




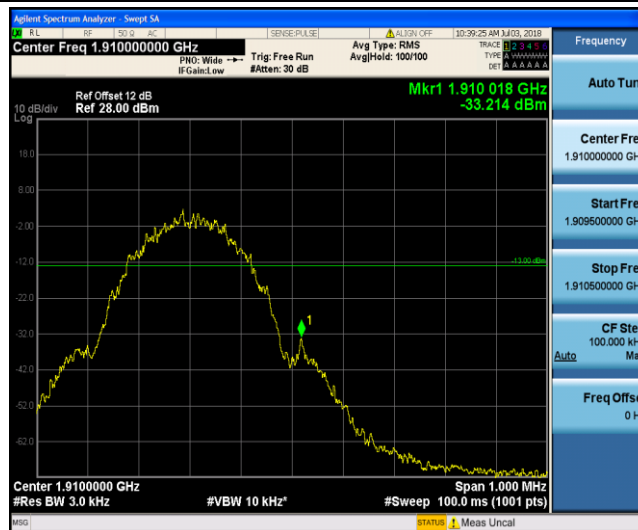
### GPRS850\_251



### GSM1900\_512



### GSM1900\_810









## 8.5 Appendix E: Conducted Spurious Emission

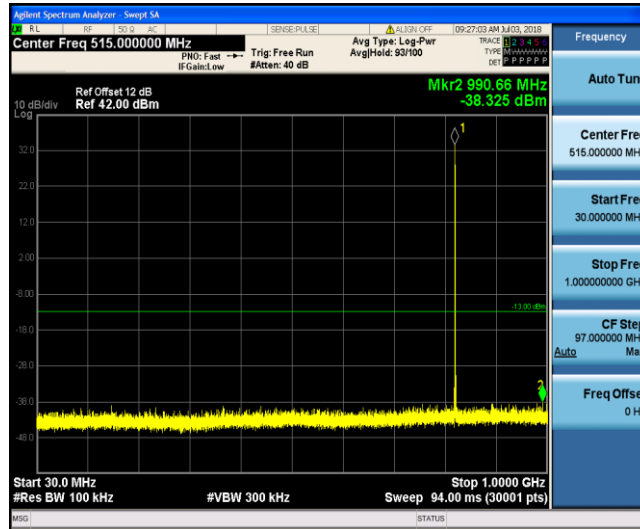
### Test Result

Band	Channel	Frequency Rang(Mhz)	Value(dBm)	Limit(dBm)	Verdict
GSM850	128	30~1000	-38.32	-13	PASS
GSM850	128	1000~10000	-25.54	-13	PASS
GSM850	190	30~1000	-38.62	-13	PASS
GSM850	190	1000~10000	-23.31	-13	PASS
GSM850	251	30~1000	-38.03	-13	PASS
GSM850	251	1000~10000	-24.03	-13	PASS
GPRS850	128	30~1000	-37.58	-13	PASS
GPRS850	128	1000~10000	-25.55	-13	PASS
GPRS850	190	30~1000	-38.57	-13	PASS
GPRS850	190	1000~10000	-23.12	-13	PASS
GPRS850	251	30~1000	-37.30	-13	PASS
GPRS850	251	1000~10000	-23.22	-13	PASS
GSM1900	512	30~1000	-38.60	-13	PASS
GSM1900	512	1000~20000	-19.57	-13	PASS
GSM1900	661	30~1000	-38.47	-13	PASS
GSM1900	661	1000~20000	-19.14	-13	PASS
GSM1900	810	30~1000	-38.29	-13	PASS
GSM1900	810	1000~20000	-19.07	-13	PASS
GPRS1900	512	30~1000	-38.54	-13	PASS
GPRS1900	512	1000~20000	-19.09	-13	PASS
GPRS1900	661	30~1000	-37.79	-13	PASS
GPRS1900	661	1000~20000	-19.40	-13	PASS
GPRS1900	810	30~1000	-38.56	-13	PASS
GPRS1900	810	1000~20000	-18.66	-13	PASS

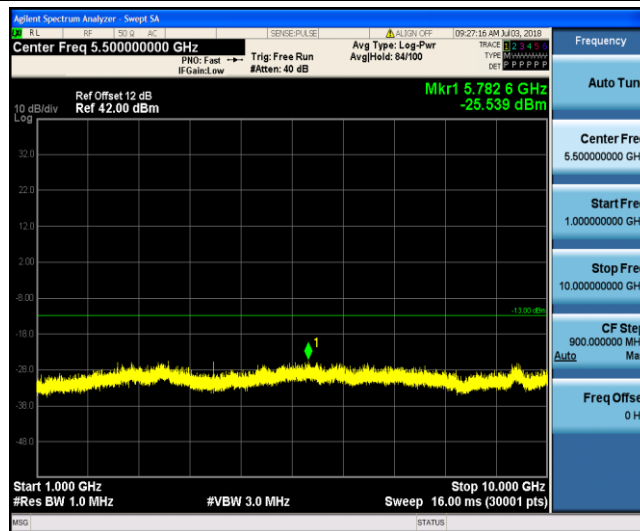


Test Graphs

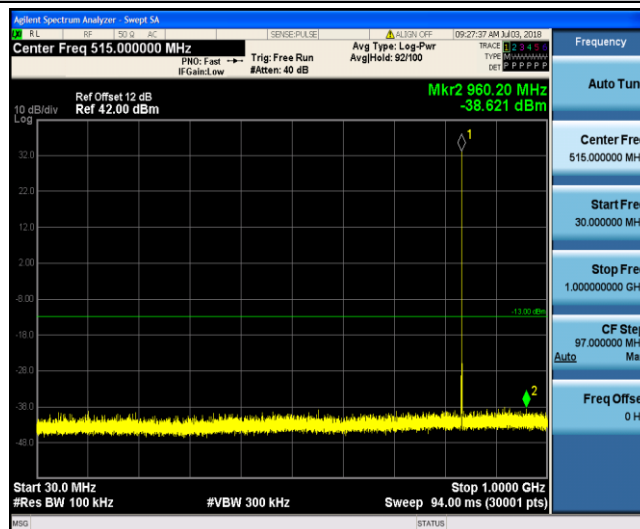
GSM850\_128



GSM850\_128

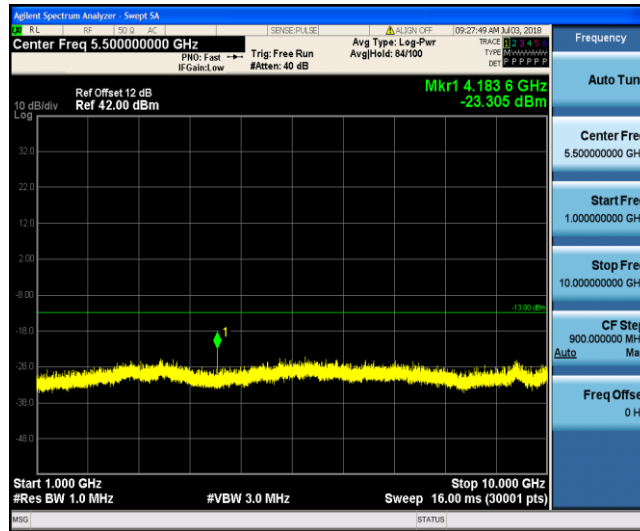


GSM850\_190

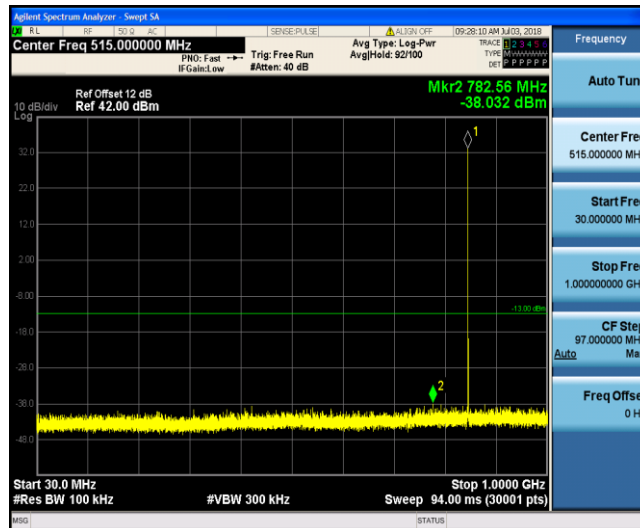




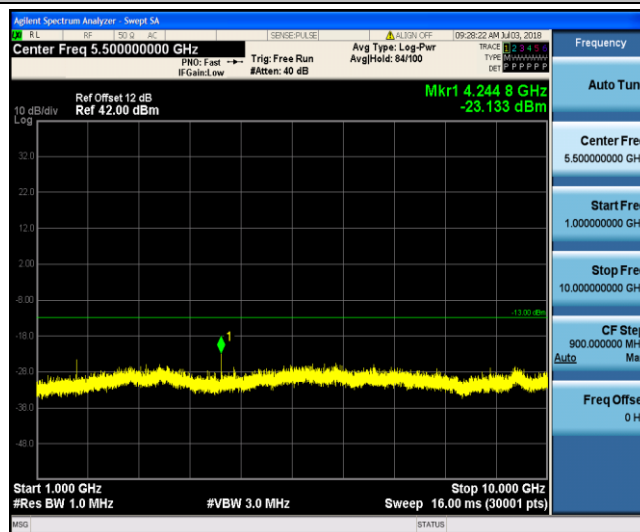
GSM850\_190



GSM850\_251

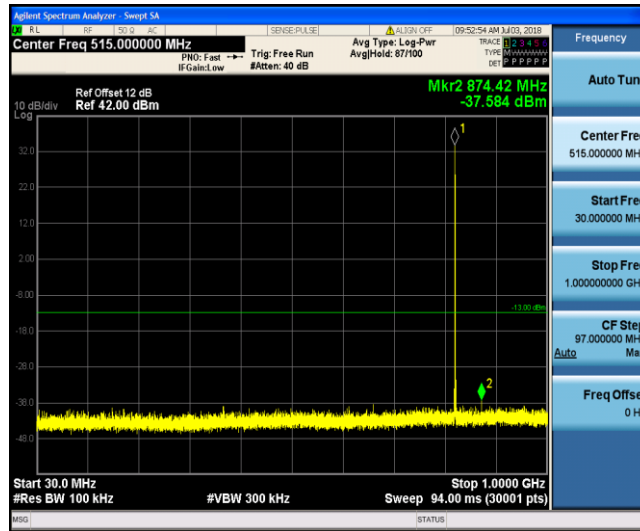


GSM850\_251

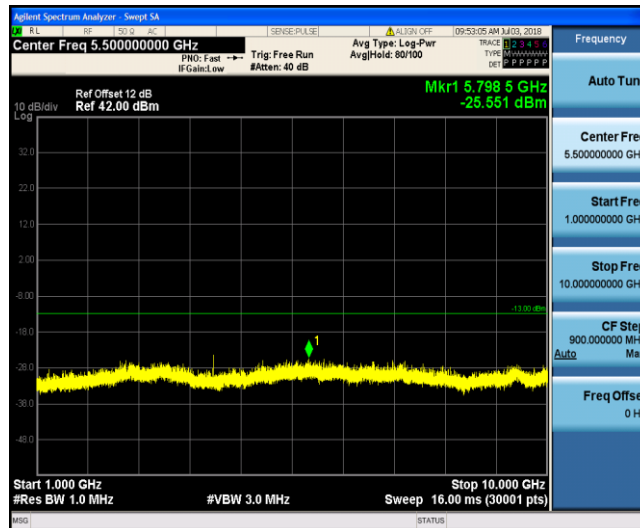




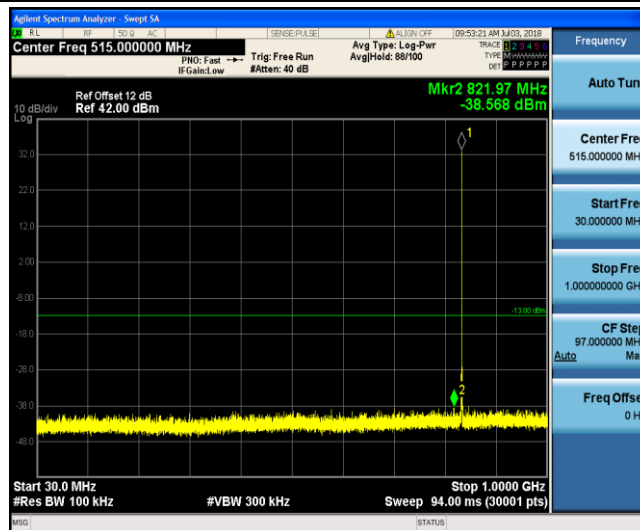
GPRS850\_128



GPRS850\_128

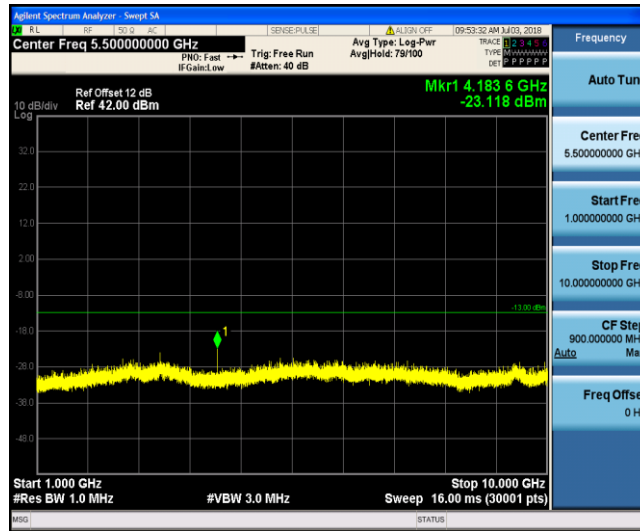


GPRS850\_190

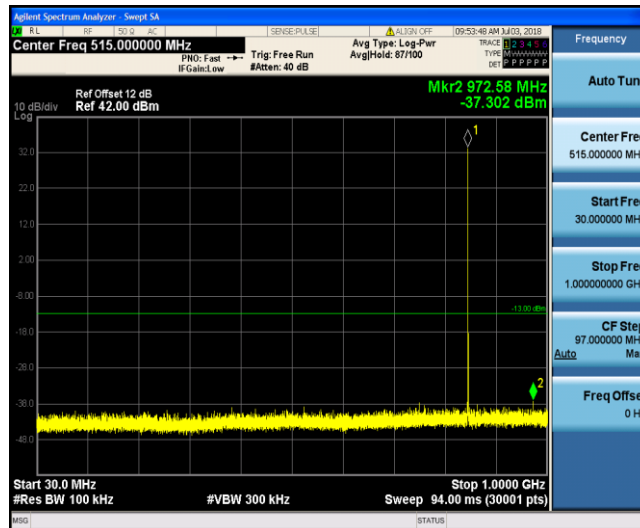




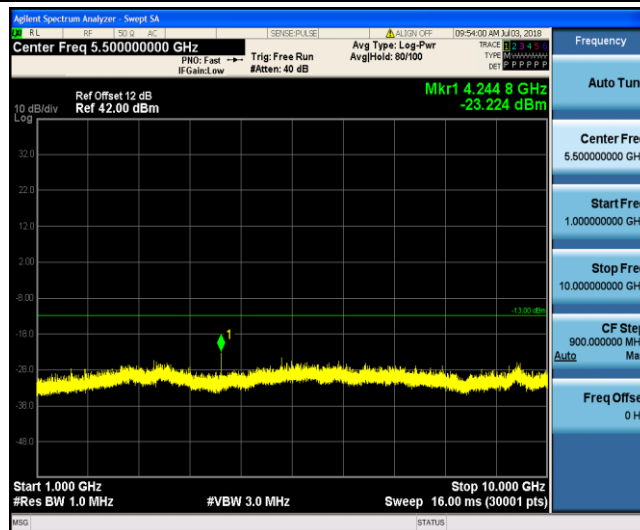
GPRS850\_190



GPRS850\_251

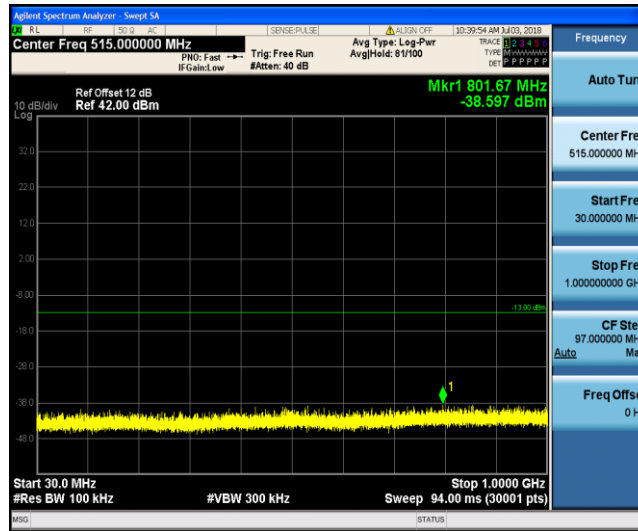


GPRS850\_251

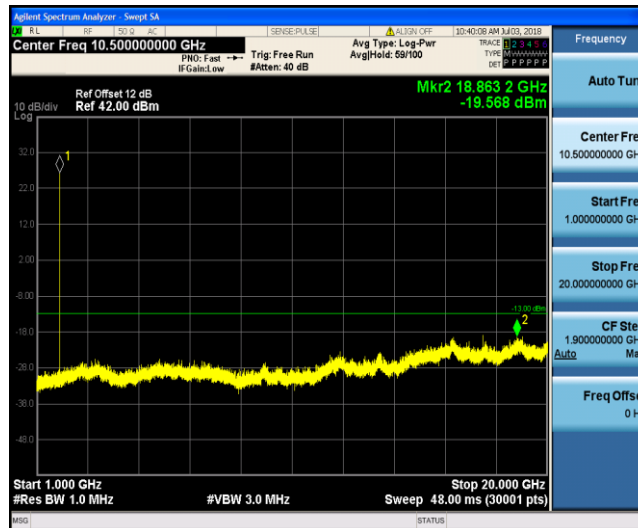




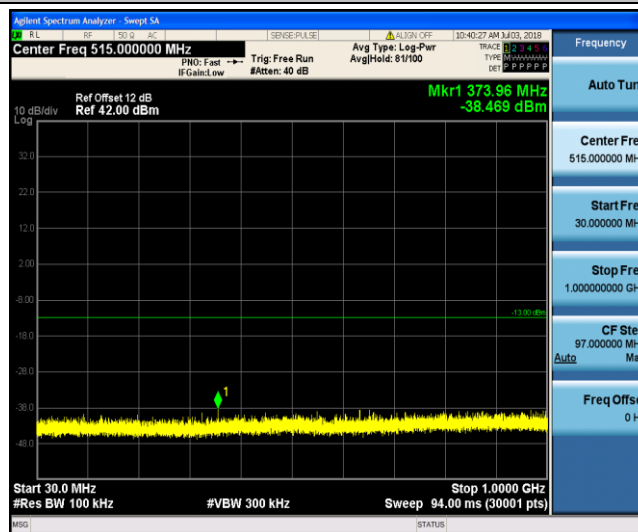
GSM1900\_512



GSM1900\_512

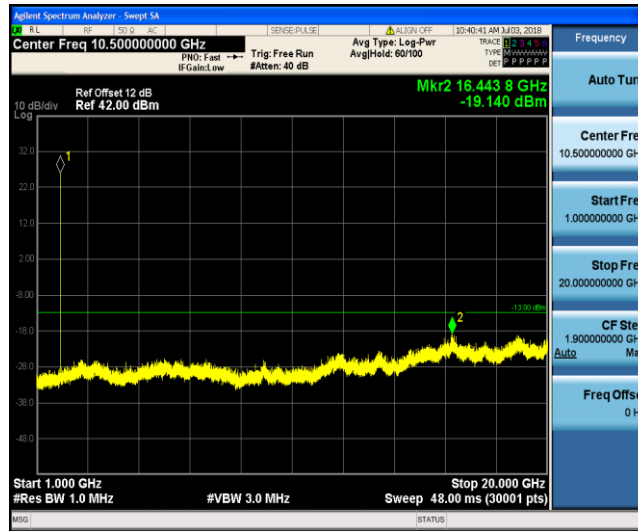


GSM1900\_661

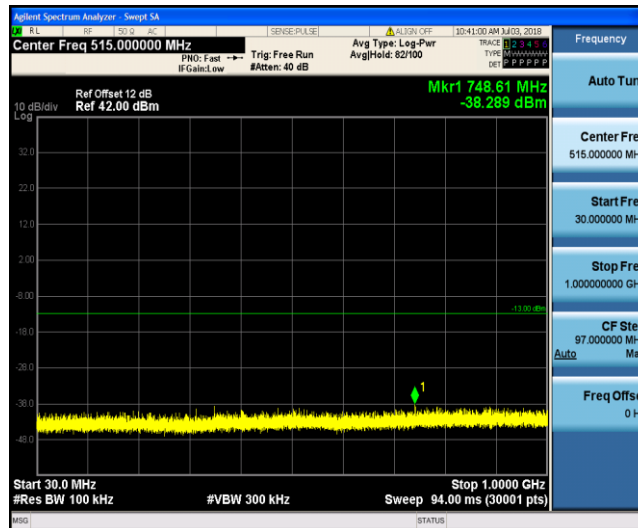




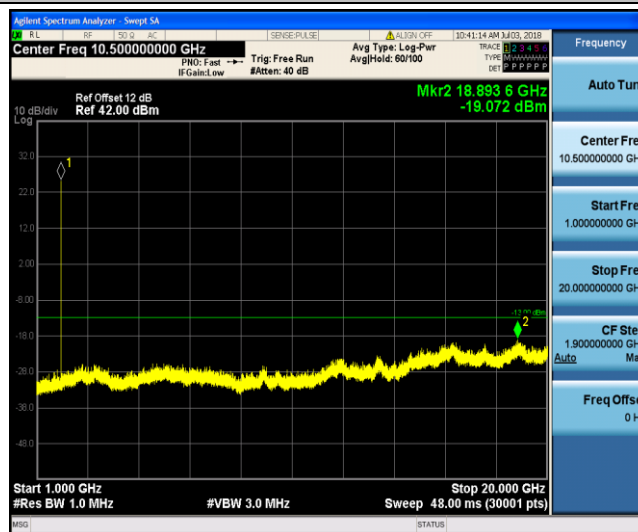
GSM1900\_661



GSM1900\_810



GSM1900\_810





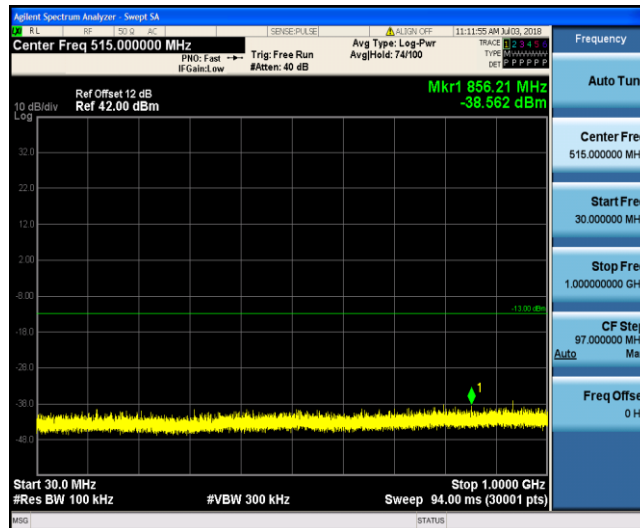




GPRS1900\_661



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	25.47	0.030907	2.5	PASS
GSM850	128	VN	TN	19.37	0.023503	2.5	PASS
GSM850	128	VH	TN	28.61	0.034707	2.5	PASS
GSM850	190	VL	TN	20.34	0.024313	2.5	PASS
GSM850	190	VN	TN	16.24	0.019412	2.5	PASS
GSM850	190	VH	TN	12.69	0.015167	2.5	PASS
GSM850	251	VL	TN	9.20	0.010841	2.5	PASS
GSM850	251	VN	TN	21.63	0.025485	2.5	PASS
GSM850	251	VH	TN	13.14	0.015481	2.5	PASS
GPRS850	128	VL	TN	4.58	0.005562	2.5	PASS
GPRS850	128	VN	TN	15.69	0.019038	2.5	PASS
GPRS850	128	VH	TN	17.53	0.021271	2.5	PASS
GPRS850	190	VL	TN	19.18	0.022923	2.5	PASS
GPRS850	190	VN	TN	21.79	0.026049	2.5	PASS
GPRS850	190	VH	TN	29.77	0.035582	2.5	PASS
GPRS850	251	VL	TN	17.56	0.020692	2.5	PASS
GPRS850	251	VN	TN	12.01	0.014150	2.5	PASS
GPRS850	251	VH	TN	15.34	0.018068	2.5	PASS
GSM1900	512	VL	TN	25.96	0.014030	2.5	PASS
GSM1900	512	VN	TN	43.04	0.023261	2.5	PASS
GSM1900	512	VH	TN	41.52	0.022441	2.5	PASS
GSM1900	661	VL	TN	31.54	0.016778	2.5	PASS
GSM1900	661	VN	TN	32.41	0.017242	2.5	PASS
GSM1900	661	VH	TN	16.79	0.008930	2.5	PASS
GSM1900	810	VL	TN	25.83	0.013524	2.5	PASS
GSM1900	810	VN	TN	24.18	0.012662	2.5	PASS
GSM1900	810	VH	TN	21.70	0.011360	2.5	PASS
GPRS1900	512	VL	TN	22.66	0.012250	2.5	PASS
GPRS1900	512	VN	TN	38.84	0.020992	2.5	PASS
GPRS1900	512	VH	TN	58.70	0.031724	2.5	PASS
GPRS1900	661	VL	TN	44.36	0.023596	2.5	PASS
GPRS1900	661	VN	TN	48.65	0.025880	2.5	PASS
GPRS1900	661	VH	TN	55.21	0.029366	2.5	PASS
GPRS1900	810	VL	TN	50.33	0.026355	2.5	PASS
GPRS1900	810	VN	TN	39.45	0.020658	2.5	PASS
GPRS1900	810	VH	TN	44.07	0.023076	2.5	PASS



Temperature							
Band	Channel	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
GSM850	128	VN	-30	12.24	0.014846	2.5	PASS
GSM850	128	VN	-20	13.04	0.015826	2.5	PASS
GSM850	128	VN	-10	23.12	0.028047	2.5	PASS
GSM850	128	VN	0	23.37	0.028361	2.5	PASS
GSM850	128	VN	10	19.95	0.024209	2.5	PASS
GSM850	128	VN	20	9.81	0.011908	2.5	PASS
GSM850	128	VN	30	9.01	0.010929	2.5	PASS
GSM850	128	VN	40	14.59	0.017706	2.5	PASS
GSM850	128	VN	50	9.17	0.011125	2.5	PASS
GSM850	190	VN	-30	5.26	0.006290	2.5	PASS
GSM850	190	VN	-20	15.01	0.017945	2.5	PASS
GSM850	190	VN	-10	14.98	0.017907	2.5	PASS
GSM850	190	VN	0	5.71	0.006831	2.5	PASS
GSM850	190	VN	10	20.21	0.024158	2.5	PASS
GSM850	190	VN	20	4.20	0.005017	2.5	PASS
GSM850	190	VN	30	9.23	0.011037	2.5	PASS
GSM850	190	VN	40	23.70	0.028326	2.5	PASS
GSM850	190	VN	50	20.63	0.024660	2.5	PASS
GSM850	251	VN	-30	10.27	0.012096	2.5	PASS
GSM850	251	VN	-20	27.44	0.032331	2.5	PASS
GSM850	251	VN	-10	11.66	0.013731	2.5	PASS
GSM850	251	VN	0	10.49	0.012362	2.5	PASS
GSM850	251	VN	10	9.04	0.010650	2.5	PASS
GSM850	251	VN	20	10.14	0.011944	2.5	PASS
GSM850	251	VN	30	18.47	0.021757	2.5	PASS
GSM850	251	VN	40	33.16	0.039064	2.5	PASS
GSM850	251	VN	50	9.17	0.010803	2.5	PASS
GPRS850	128	VN	-30	19.44	0.023582	2.5	PASS
GPRS850	128	VN	-20	20.37	0.024718	2.5	PASS
GPRS850	128	VN	-10	18.05	0.021897	2.5	PASS
GPRS850	128	VN	0	34.35	0.041679	2.5	PASS
GPRS850	128	VN	10	36.35	0.044108	2.5	PASS
GPRS850	128	VN	20	8.43	0.010224	2.5	PASS
GPRS850	128	VN	30	13.46	0.016335	2.5	PASS
GPRS850	128	VN	40	12.20	0.014807	2.5	PASS
GPRS850	128	VN	50	10.01	0.012143	2.5	PASS
GPRS850	190	VN	-30	40.39	0.048278	2.5	PASS
GPRS850	190	VN	-20	22.54	0.026937	2.5	PASS
GPRS850	190	VN	-10	16.30	0.019489	2.5	PASS
GPRS850	190	VN	0	18.60	0.022229	2.5	PASS
GPRS850	190	VN	10	20.70	0.024737	2.5	PASS
GPRS850	190	VN	20	14.69	0.017559	2.5	PASS
GPRS850	190	VN	30	34.00	0.040637	2.5	PASS
GPRS850	190	VN	40	32.96	0.039402	2.5	PASS
GPRS850	190	VN	50	18.14	0.021689	2.5	PASS
GPRS850	251	VN	-30	20.02	0.023583	2.5	PASS
GPRS850	251	VN	-20	18.44	0.021719	2.5	PASS
GPRS850	251	VN	-10	34.38	0.040509	2.5	PASS
GPRS850	251	VN	0	31.03	0.036554	2.5	PASS
GPRS850	251	VN	10	31.80	0.037466	2.5	PASS
GPRS850	251	VN	20	18.44	0.021719	2.5	PASS



GPRS850	251	VN	30	21.47	0.025295	2.5	PASS
GPRS850	251	VN	40	18.50	0.021795	2.5	PASS
GPRS850	251	VN	50	22.63	0.026664	2.5	PASS
GSM1900	512	VN	-30	23.47	0.012686	2.5	PASS
GSM1900	512	VN	-20	27.22	0.014710	2.5	PASS
GSM1900	512	VN	-10	22.79	0.012320	2.5	PASS
GSM1900	512	VN	0	33.96	0.018357	2.5	PASS
GSM1900	512	VN	10	19.24	0.010400	2.5	PASS
GSM1900	512	VN	20	32.67	0.017659	2.5	PASS
GSM1900	512	VN	30	47.04	0.025425	2.5	PASS
GSM1900	512	VN	40	23.44	0.012669	2.5	PASS
GSM1900	512	VN	50	30.06	0.016246	2.5	PASS
GSM1900	661	VN	-30	33.06	0.017585	2.5	PASS
GSM1900	661	VN	-20	27.22	0.014477	2.5	PASS
GSM1900	661	VN	-10	36.06	0.019183	2.5	PASS
GSM1900	661	VN	0	35.00	0.018616	2.5	PASS
GSM1900	661	VN	10	25.12	0.013361	2.5	PASS
GSM1900	661	VN	20	23.96	0.012743	2.5	PASS
GSM1900	661	VN	30	27.54	0.014649	2.5	PASS
GSM1900	661	VN	40	20.76	0.011042	2.5	PASS
GSM1900	661	VN	50	33.09	0.017603	2.5	PASS
GSM1900	810	VN	-30	44.88	0.023498	2.5	PASS
GSM1900	810	VN	-20	23.05	0.012070	2.5	PASS
GSM1900	810	VN	-10	31.25	0.016364	2.5	PASS
GSM1900	810	VN	0	27.06	0.014167	2.5	PASS
GSM1900	810	VN	10	43.17	0.022602	2.5	PASS
GSM1900	810	VN	20	37.90	0.019847	2.5	PASS
GSM1900	810	VN	30	35.97	0.018833	2.5	PASS
GSM1900	810	VN	40	37.97	0.019881	2.5	PASS
GSM1900	810	VN	50	33.90	0.017751	2.5	PASS
GPRS1900	512	VN	-30	48.14	0.026018	2.5	PASS
GPRS1900	512	VN	-20	59.08	0.031933	2.5	PASS
GPRS1900	512	VN	-10	44.94	0.024290	2.5	PASS
GPRS1900	512	VN	0	51.21	0.027676	2.5	PASS
GPRS1900	512	VN	10	41.33	0.022336	2.5	PASS
GPRS1900	512	VN	20	53.14	0.028723	2.5	PASS
GPRS1900	512	VN	30	64.86	0.035057	2.5	PASS
GPRS1900	512	VN	40	55.98	0.030258	2.5	PASS
GPRS1900	512	VN	50	41.91	0.022650	2.5	PASS
GPRS1900	661	VN	-30	57.69	0.030689	2.5	PASS
GPRS1900	661	VN	-20	48.59	0.025846	2.5	PASS
GPRS1900	661	VN	-10	53.34	0.028370	2.5	PASS
GPRS1900	661	VN	0	58.63	0.031187	2.5	PASS
GPRS1900	661	VN	10	61.92	0.032938	2.5	PASS
GPRS1900	661	VN	20	60.37	0.032114	2.5	PASS
GPRS1900	661	VN	30	62.57	0.033282	2.5	PASS
GPRS1900	661	VN	40	62.18	0.033076	2.5	PASS
GPRS1900	661	VN	50	56.95	0.030294	2.5	PASS
GPRS1900	810	VN	-30	35.51	0.018596	2.5	PASS
GPRS1900	810	VN	-20	29.32	0.015350	2.5	PASS
GPRS1900	810	VN	-10	35.03	0.018342	2.5	PASS
GPRS1900	810	VN	0	32.71	0.017125	2.5	PASS
GPRS1900	810	VN	10	32.80	0.017176	2.5	PASS
GPRS1900	810	VN	20	29.28	0.015333	2.5	PASS
GPRS1900	810	VN	30	30.22	0.015823	2.5	PASS



Report No.: TRE1806021801

Issued: 2018-07-10

---

GPRS1900	810	VN	40	30.90	0.016178	2.5	PASS
GPRS1900	810	VN	50	36.81	0.019272	2.5	PASS

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