APPENDIX REPORT

Project No.	SHT1911050201EW	Radio Specification	GSM
Test sample No.	YPHT19110671003	Model No.	800
Start test date	2019/12/10	Finish date	2019/12/10
Temperature	25°C	Humidity	50%
Test Engineer	Jess He	Auditor	William.wang

Appendix clause	Test item	Result
A	Conducted Output Power	PASS
B	Peak-to-Average Ratio	PASS
C	26 dB Bandwidth and Occupied Bandwidth	PASS
D	Band edge	PASS
E	Conducted Spurious Emission	PASS
F	Frequency Stability	PASS

8.1   Appendix A: Conducted Output Power

Test Result

Band	Channel	PCL	Slot	Power(dBm)	Limit(dBm)	Verdict
GPRS850	128	5	1	33.84	38.5	PASS
GPRS850	128	5	2	33.66	38.5	PASS
GPRS850	128	5	3	32.45	38.5	PASS
GPRS850	128	5	4	30.18	38.5	PASS
GPRS850	190	5	1	33.75	38.5	PASS
GPRS850	190	5	2	33.61	38.5	PASS
GPRS850	190	5	3	31.68	38.5	PASS
GPRS850	190	5	4	30.22	38.5	PASS
GPRS850	251	5	1	33.78	38.5	PASS
GPRS850	251	5	2	33.64	38.5	PASS
GPRS850	251	5	3	31.78	38.5	PASS
GPRS850	251	5	4	30.26	38.5	PASS
GPRS1900	512	0	1	29.88	33	PASS
GPRS1900	512	0	2	30.02	33	PASS
GPRS1900	512	0	3	29.91	33	PASS
GPRS1900	512	0	4	29.74	33	PASS
GPRS1900	661	0	1	29.91	33	PASS
GPRS1900	661	0	2	30.05	33	PASS
GPRS1900	661	0	3	29.97	33	PASS
GPRS1900	661	0	4	29.85	33	PASS
GPRS1900	810	0	1	29.31	33	PASS
GPRS1900	810	0	2	29.43	33	PASS
GPRS1900	810	0	3	29.33	33	PASS
GPRS1900	810	0	4	29.22	33	PASS

Band	Channel	PCL	Slot	Power(dBm)	Limit(dBm)	Verdict
EGPRS850	128	8	1	26.47	38.5	PASS
EGPRS850	128	8	2	26.47	38.5	PASS
EGPRS850	128	8	3	26.30	38.5	PASS
EGPRS850	128	8	4	25.92	38.5	PASS
EGPRS850	190	8	1	26.36	38.5	PASS
EGPRS850	190	8	2	26.56	38.5	PASS
EGPRS850	190	8	3	26.05	38.5	PASS
EGPRS850	190	8	4	25.83	38.5	PASS
EGPRS850	251	8	1	26.22	38.5	PASS
EGPRS850	251	8	2	26.30	38.5	PASS
EGPRS850	251	8	3	26.12	38.5	PASS
EGPRS850	251	8	4	25.87	38.5	PASS
EGPRS1900	512	2	1	23.20	33	PASS
EGPRS1900	512	2	2	23.14	33	PASS
EGPRS1900	512	2	3	22.90	33	PASS
EGPRS1900	512	2	4	22.61	33	PASS
EGPRS1900	661	2	1	23.27	33	PASS
EGPRS1900	661	2	2	23.27	33	PASS
EGPRS1900	661	2	3	23.05	33	PASS
EGPRS1900	661	2	4	22.95	33	PASS
EGPRS1900	810	2	1	23.82	33	PASS
EGPRS1900	810	2	2	23.86	33	PASS
EGPRS1900	810	2	3	23.63	33	PASS
EGPRS1900	810	2	4	23.76	33	PASS

8.2   Appendix B: Peak-to-Average Ratio

Test Result

Band	Channel	Peak-to-Average Ratio(dB)	Limit(dBm)	Verdict
GPRS850	128	2.79	13	PASS
GPRS850	190	2.81	13	PASS
GPRS850	251	2.81	13	PASS
GPRS1900	512	2.68	13	PASS
GPRS1900	661	2.64	13	PASS
GPRS1900	810	2.63	13	PASS
EGPRS1900	512	6.04	13	PASS
EGPRS1900	661	6.18	13	PASS
EGPRS1900	810	6.25	13	PASS

Test Graphs
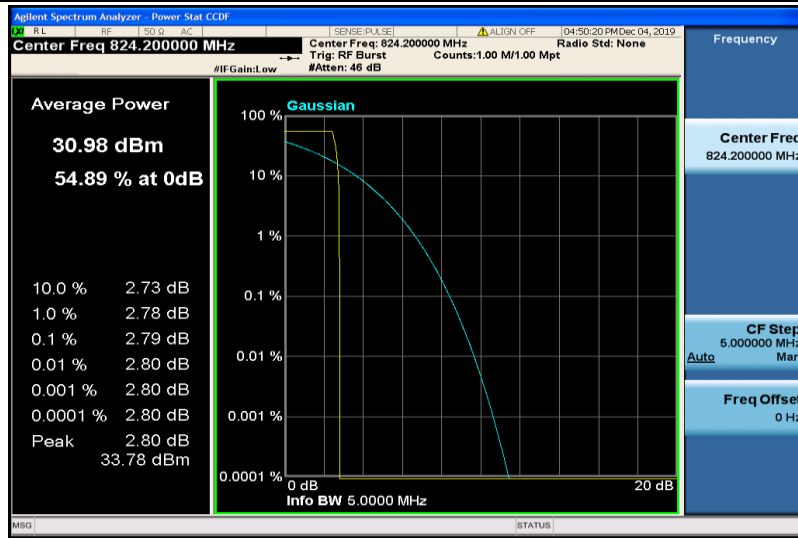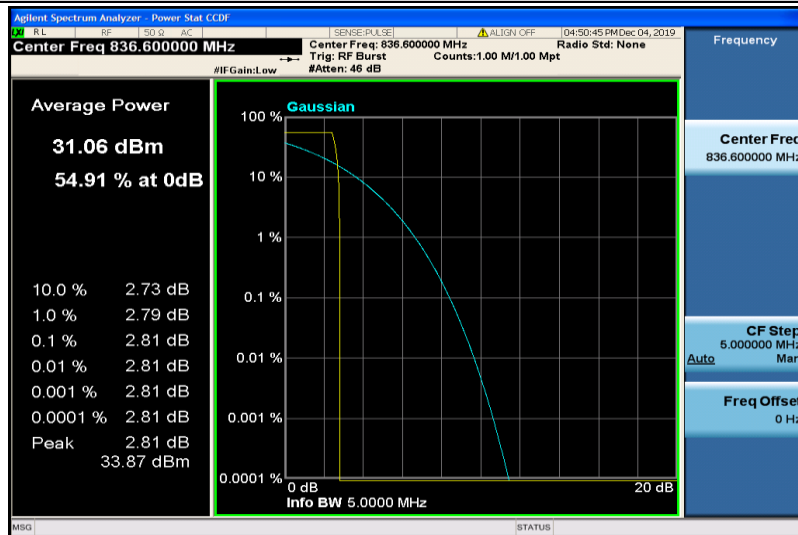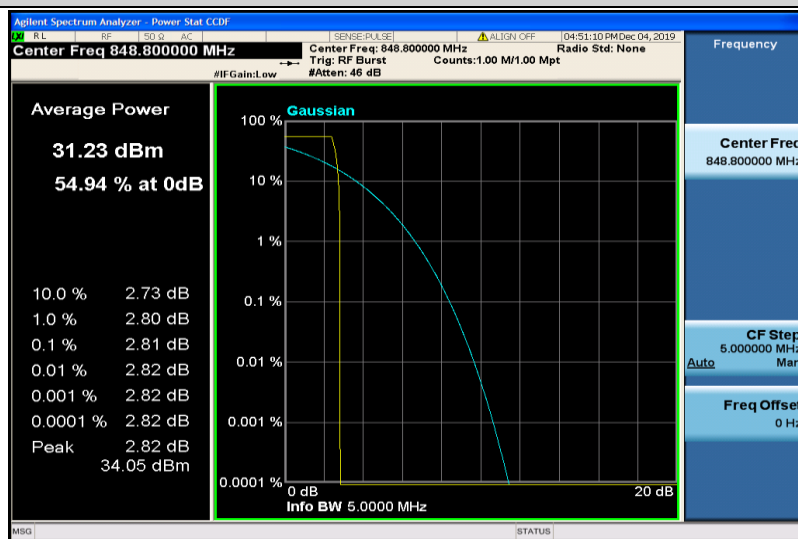
GPRS850-128

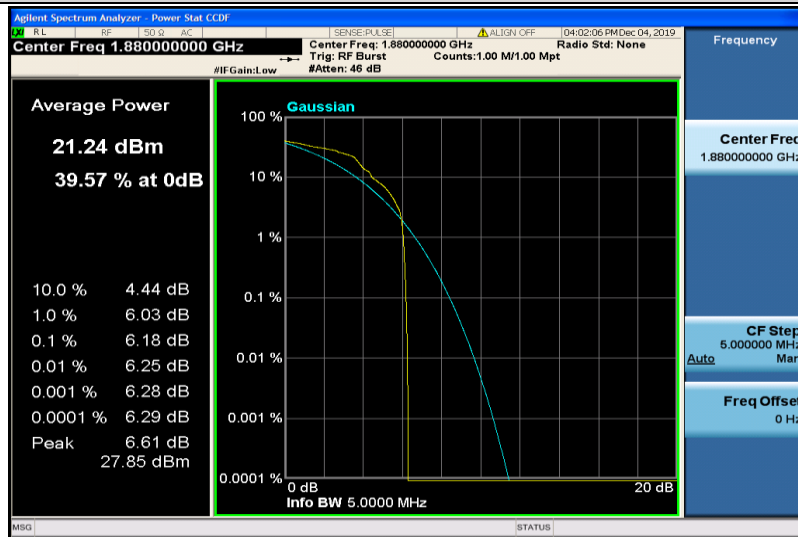GPRS850-190

GPRS850-251
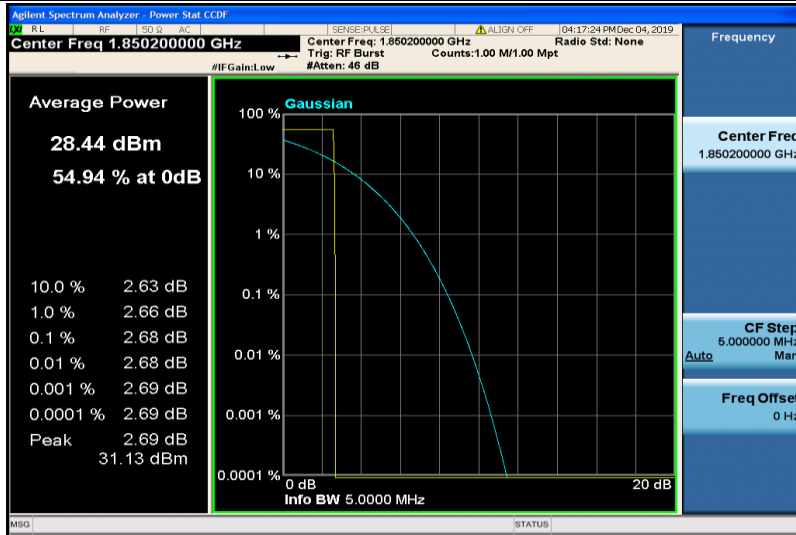
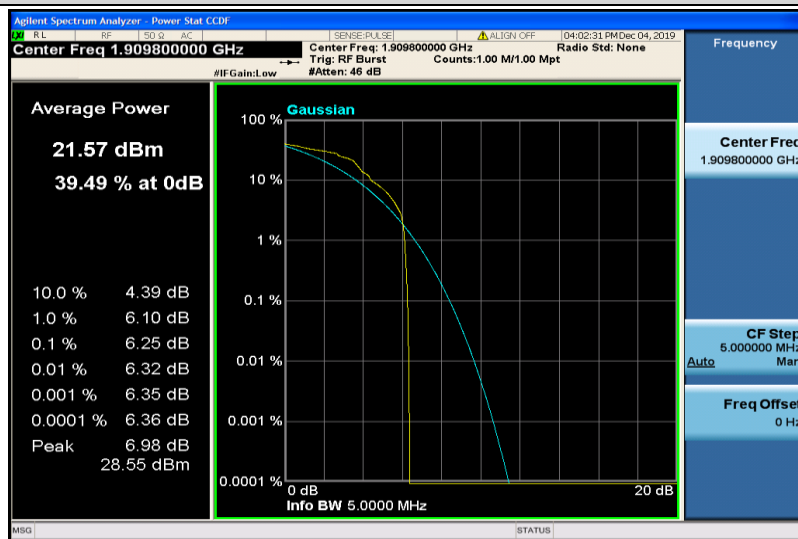GPRS1900-512
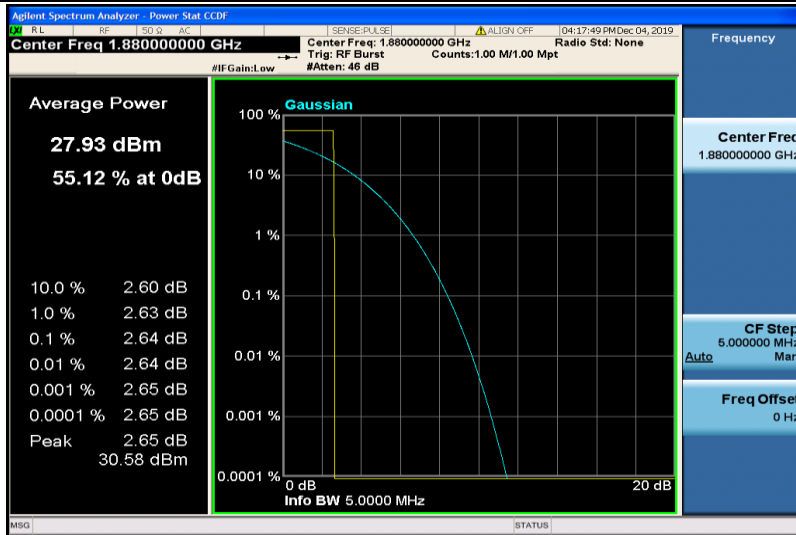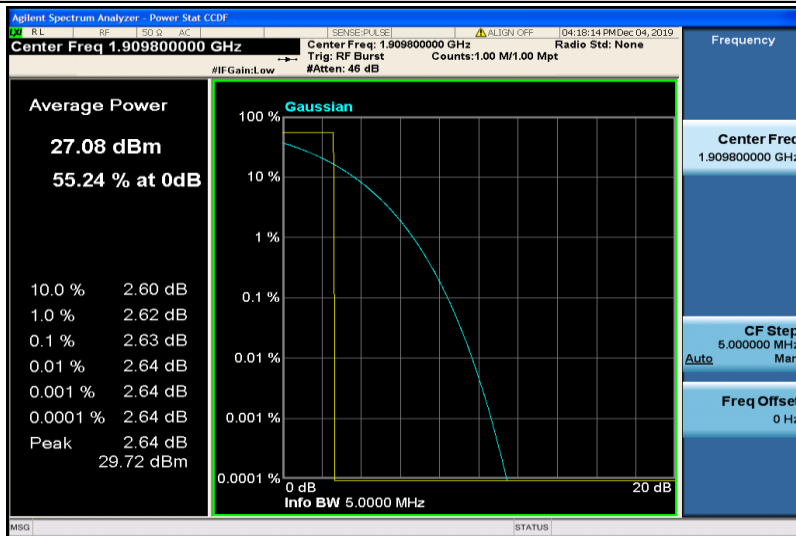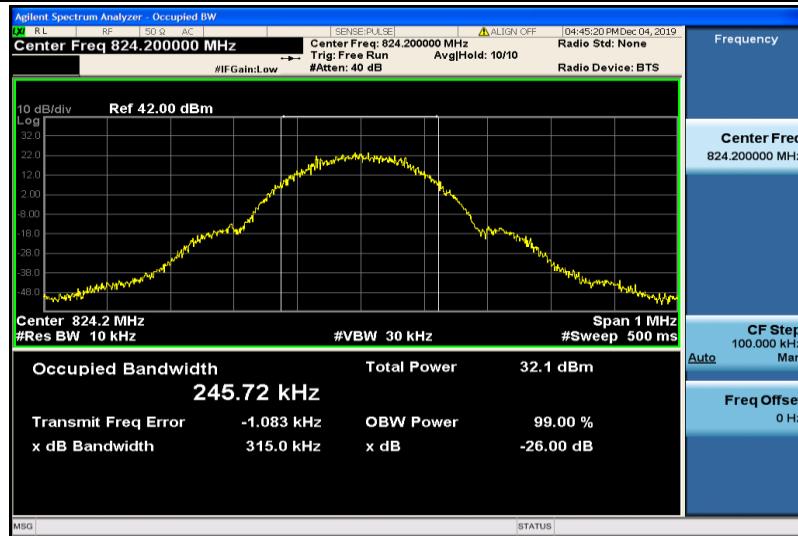

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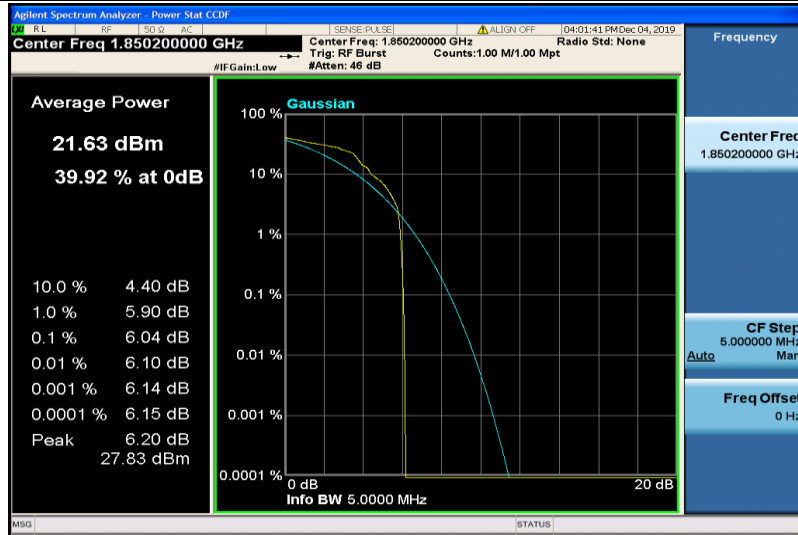
GPRS1900-810

EGPRS1900-512

EGPRS1900-661

EGPRS1900-810

8.3 Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

Band	Channel	Occupied Bandwidth (kHz)	26dB Bandwidth (kHz)	Limit(kHz)	Verdict
GPRS850	128	245.72	315.0	---	PASS
GPRS850	190	244.46	316.4	---	PASS
GPRS850	251	245.04	310.6	---	PASS
EGPRS850	128	245.12	300.2	---	PASS
EGPRS850	190	245.80	310.1	---	PASS
EGPRS850	251	243.53	307.9	---	PASS
GPRS1900	512	241.99	316.8	---	PASS
GPRS1900	661	242.40	314.9	---	PASS
GPRS1900	810	247.64	317.5	---	PASS
EGPRS1900	512	243.07	304.6	---	PASS
EGPRS1900	661	242.32	309.9	---	PASS
EGPRS1900	810	242.04	305.5	---	PASS

Test Graphs

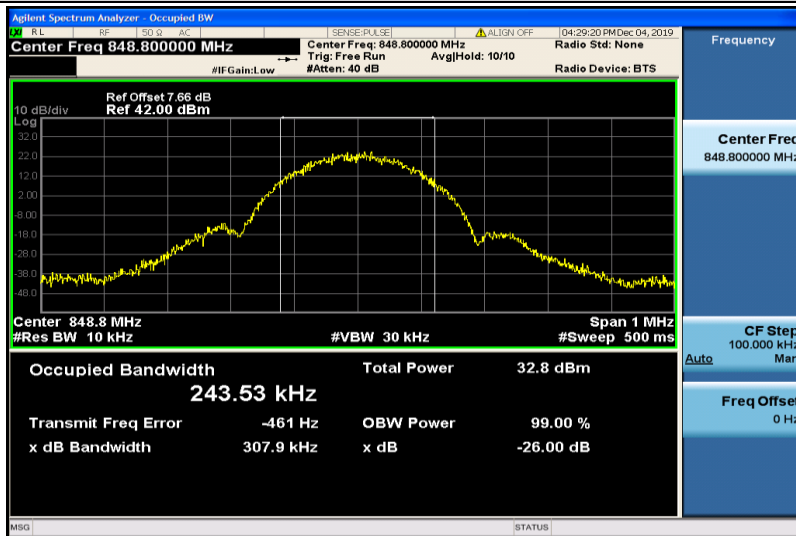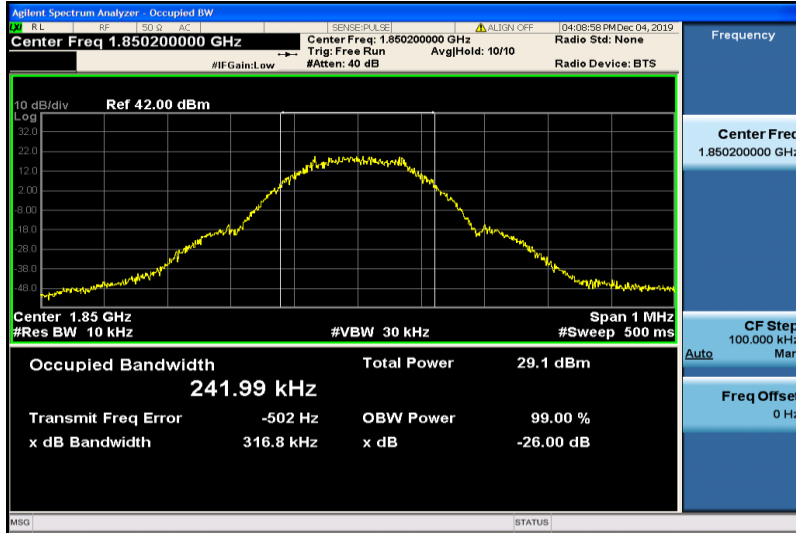| GPRS850-128 |
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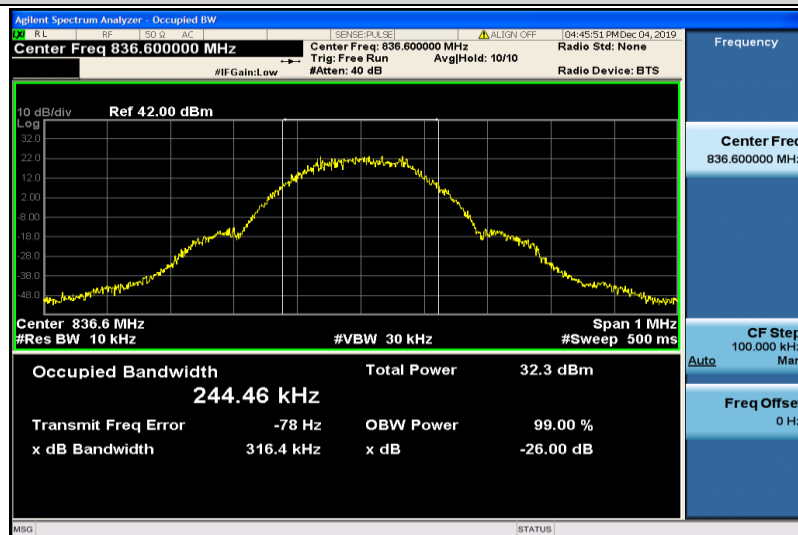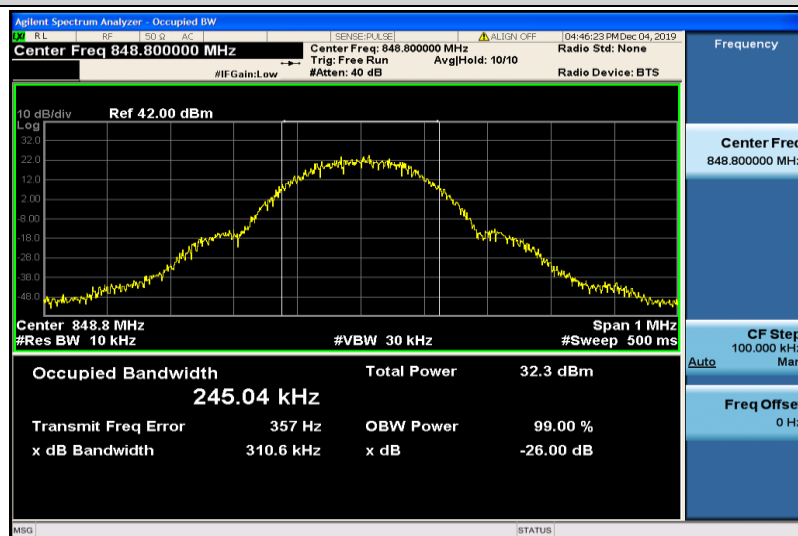
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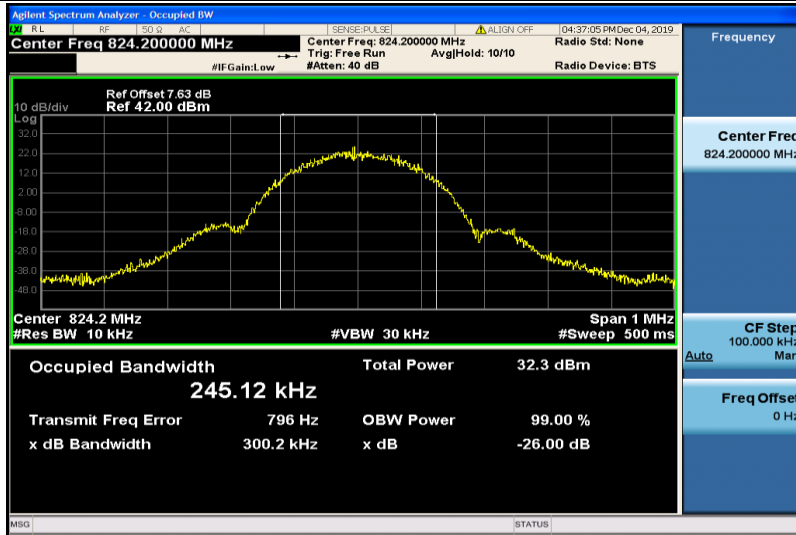
GPRS850-251

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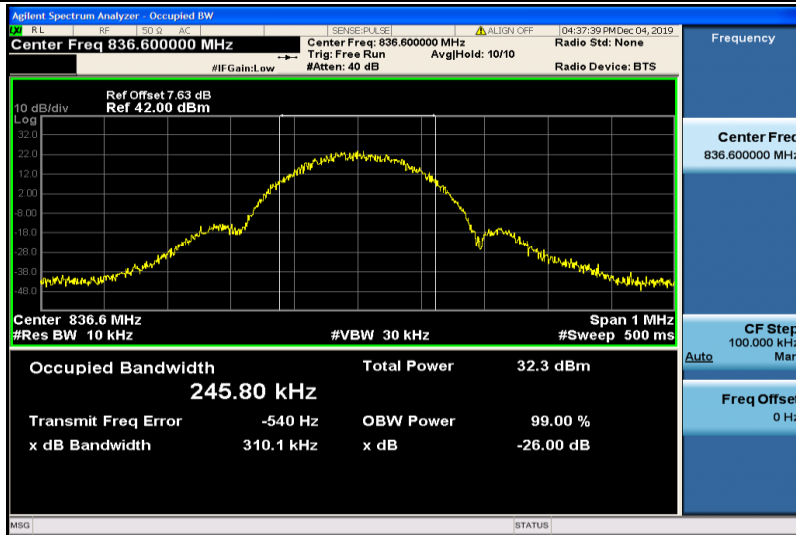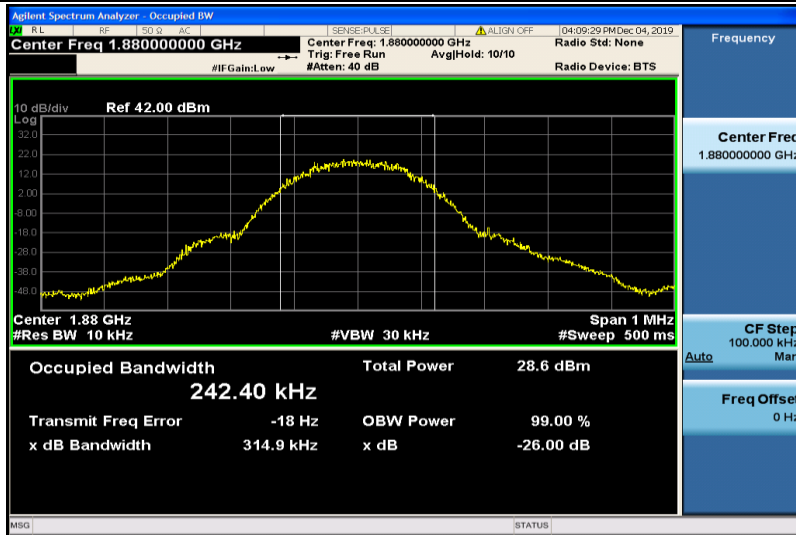

EGPRS850-190

EGPRS850-251

GPRS1900-512

GPRS1900-661

GPRS1900-810

EGPRS1900-512

EGPRS1900-661

EGPRS1900-810

8.4　Appendix D: Band Edge

Test Result

Band	Channel	Value(dBm)	Limit(dBm)	Verdict
GPRS850	128	-26.87	-13	PASS
GPRS850	251	-26.53	-13	PASS
EGPRS850	128	-34.10	-13	PASS
EGPRS850	251	-35.21	-13	PASS
GPRS1900	512	-29.34	-13	PASS
GPRS1900	810	-29.92	-13	PASS
EGPRS1900	512	-33.54	-13	PASS
EGPRS1900	810	-36.66	-13	PASS

Test Graphs

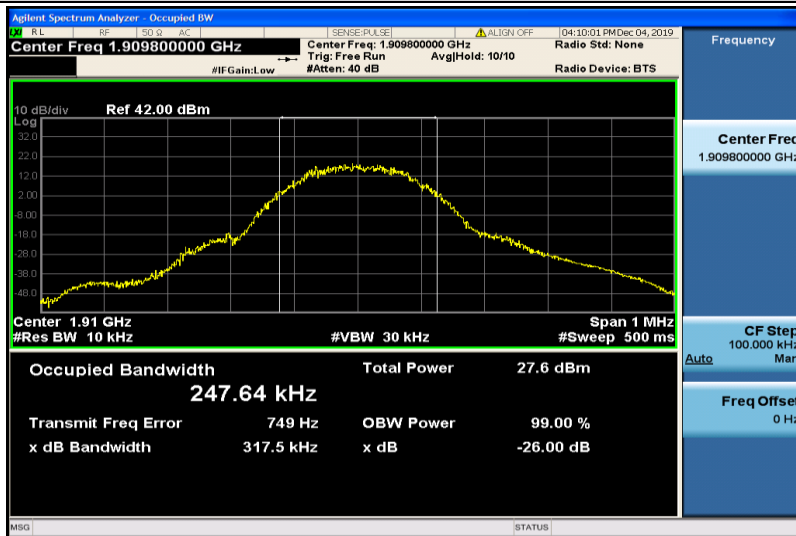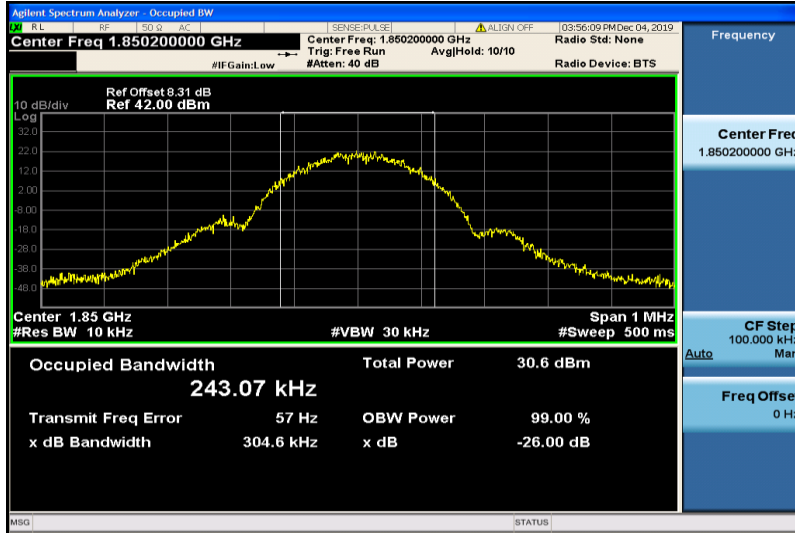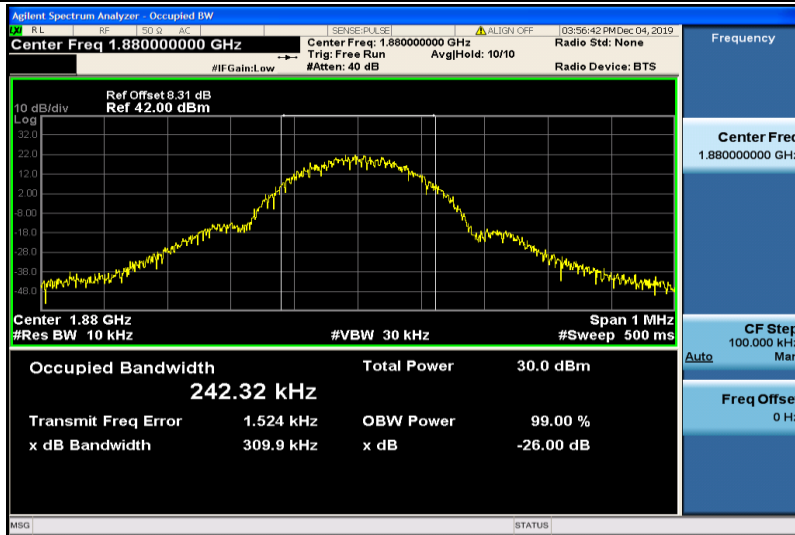GPRS850-128

GPRS850-251

EGPRS850-128

EGPRS850-251

GPRS1900-512

GPRS1900-810
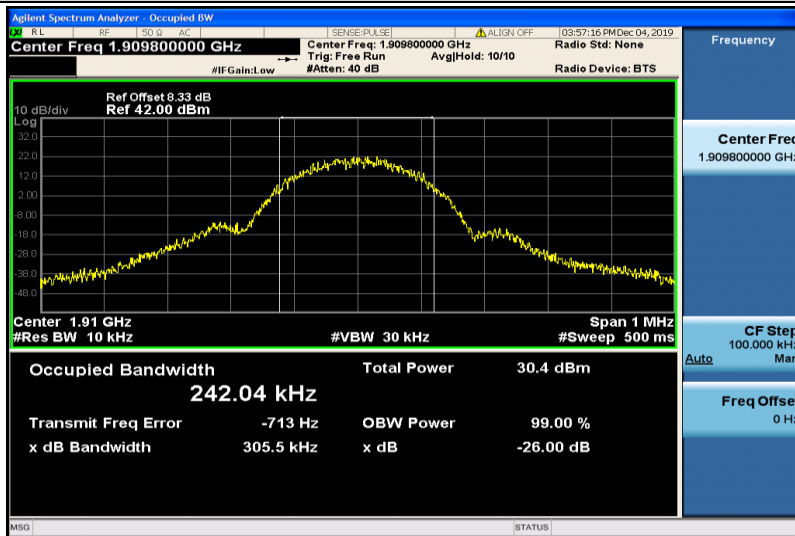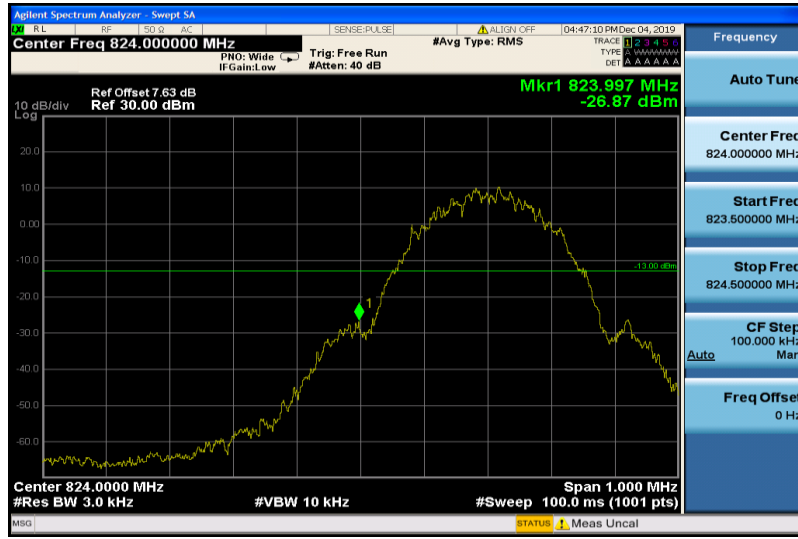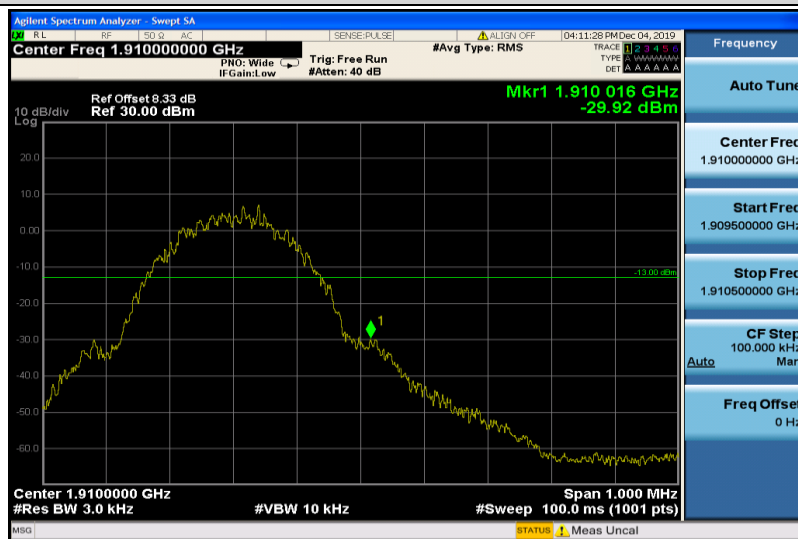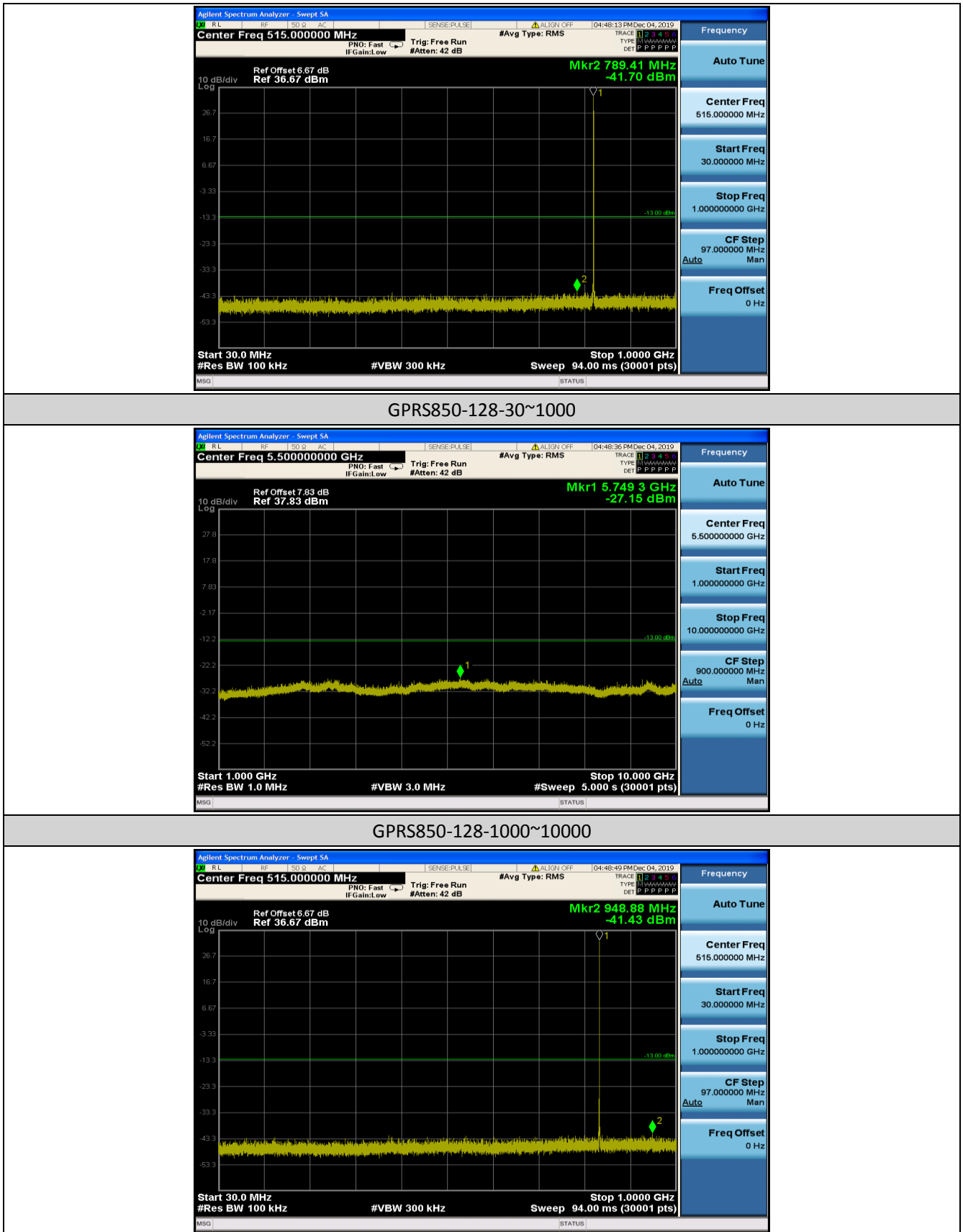
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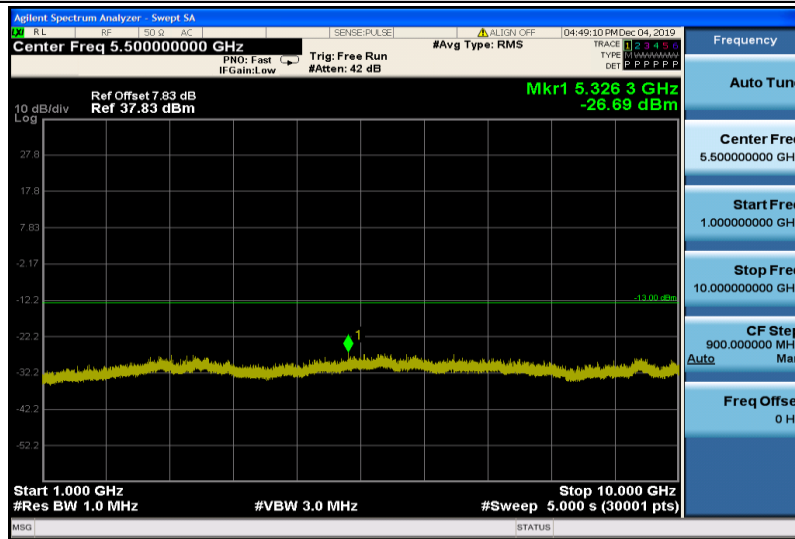EGPRS1900-810

8.5 Appendix E: Conducted Spurious Emission

Test Result

Band	Channel	Frequency Range(Mhz)	Value(dBm)	Limit(dBm)	Verdict
GPRS850	128	30~1000	-41.70	-13	PASS
GPRS850	128	1000~10000	-27.15	-13	PASS
GPRS850	190	30~1000	-41.43	-13	PASS
GPRS850	190	1000~10000	-26.69	-13	PASS
GPRS850	251	30~1000	-41.67	-13	PASS
GPRS850	251	1000~10000	-26.95	-13	PASS
EGPRS850	128	30~1000	-41.46	-13	PASS
EGPRS850	128	1000~10000	-26.92	-13	PASS
EGPRS850	190	30~1000	-41.58	-13	PASS
EGPRS850	190	1000~10000	-26.54	-13	PASS
EGPRS850	251	30~1000	-41.35	-13	PASS
EGPRS850	251	1000~10000	-25.25	-13	PASS
GPRS1900	512	30~1000	-41.23	-13	PASS
GPRS1900	512	1000~20000	-20.25	-13	PASS
GPRS1900	661	30~1000	-41.54	-13	PASS
GPRS1900	661	1000~20000	-20.17	-13	PASS
GPRS1900	810	30~1000	-41.66	-13	PASS
GPRS1900	810	1000~20000	-20.56	-13	PASS
EGPRS1900	512	30~1000	-41.23	-13	PASS
EGPRS1900	512	1000~20000	-20.59	-13	PASS
EGPRS1900	661	30~1000	-41.59	-13	PASS
EGPRS1900	661	1000~20000	-20.04	-13	PASS
EGPRS1900	810	30~1000	-41.26	-13	PASS
EGPRS1900	810	1000~20000	-20.59	-13	PASS

Test Graphs

GPRS850-128-30~1000

GPRS850-128-1000~10000

GPRS850-190-30~1000

GPRS850-190-1000~10000

GPRS850-251-30~1000

GPRS850-251-1000~10000

EGPRS850-128-30~1000
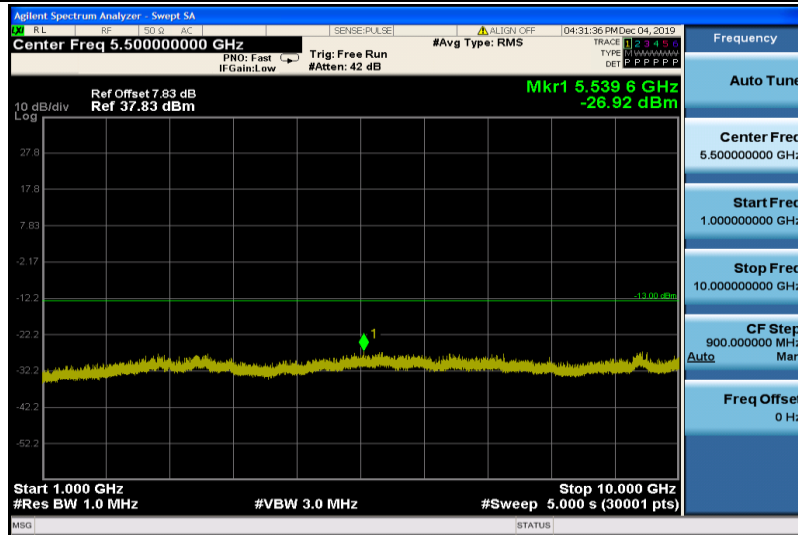
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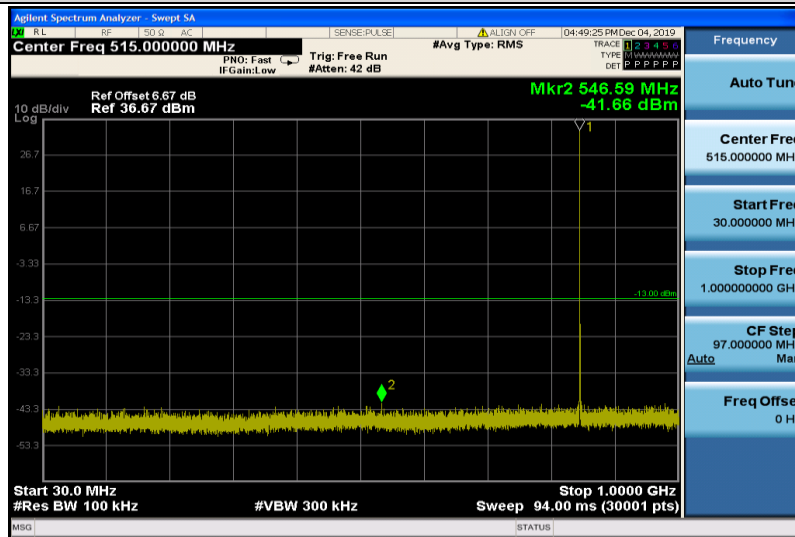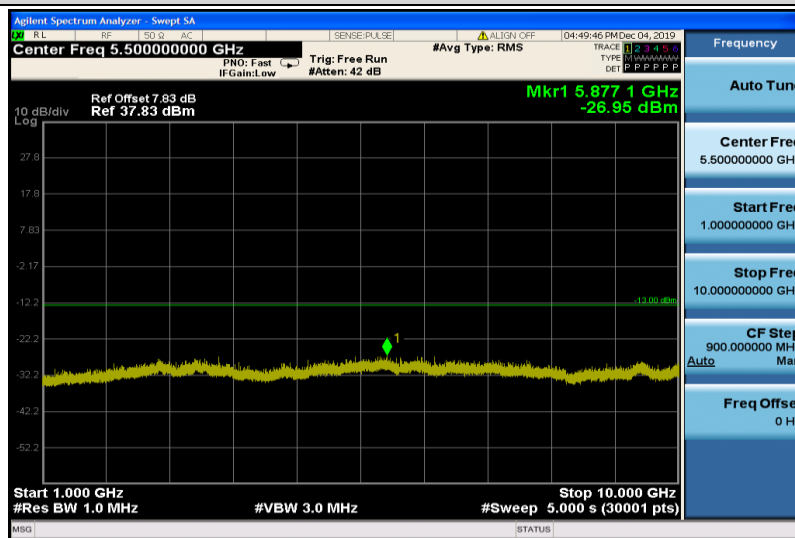EGPRS850-190-30~1000

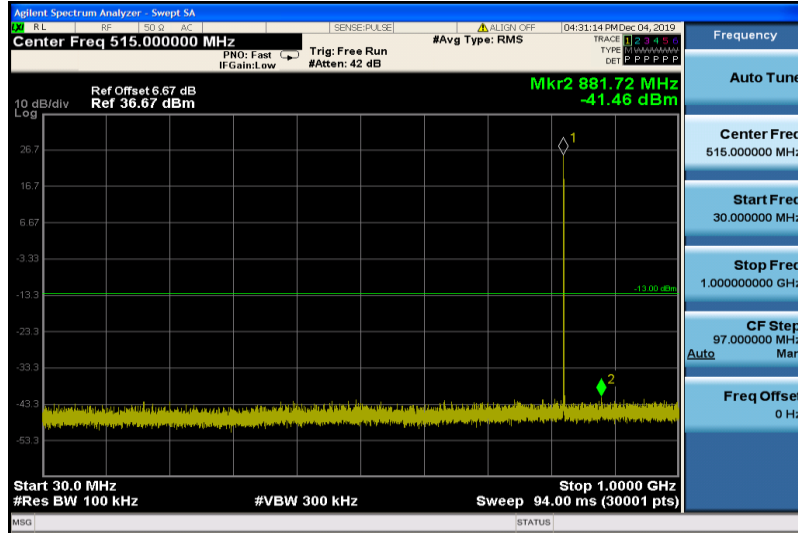EGPRS850-190-1000~10000

EGPRS850-251-30~1000
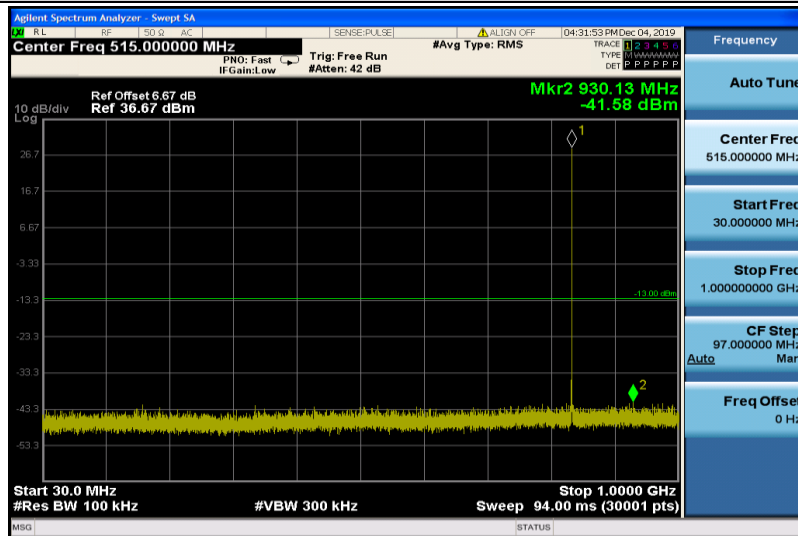

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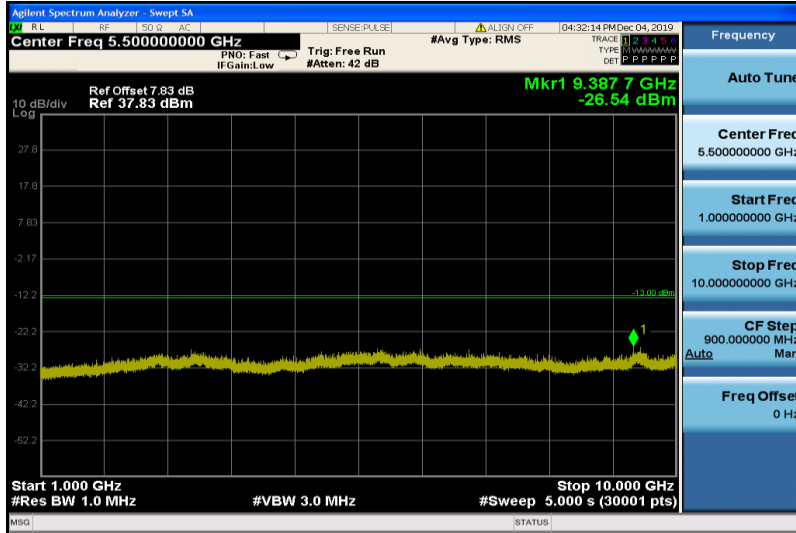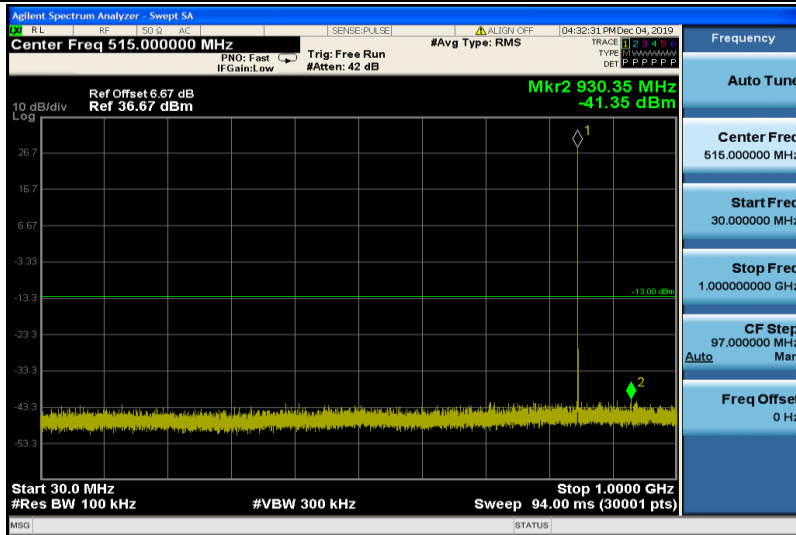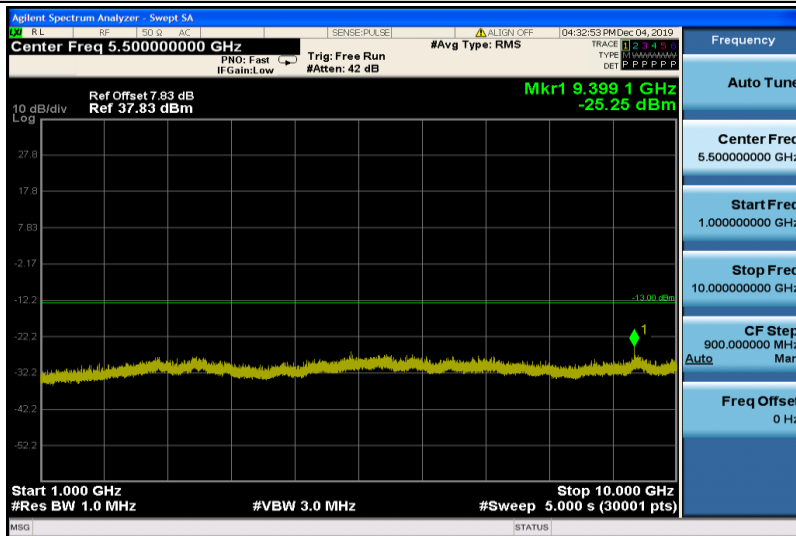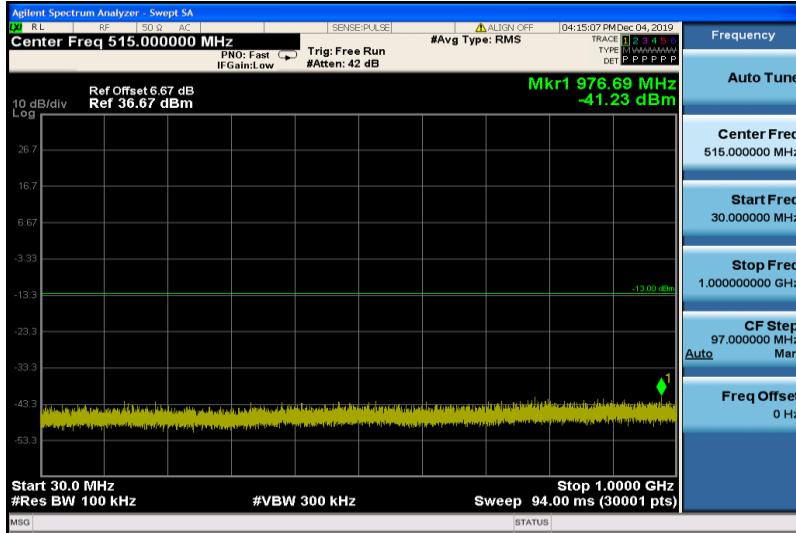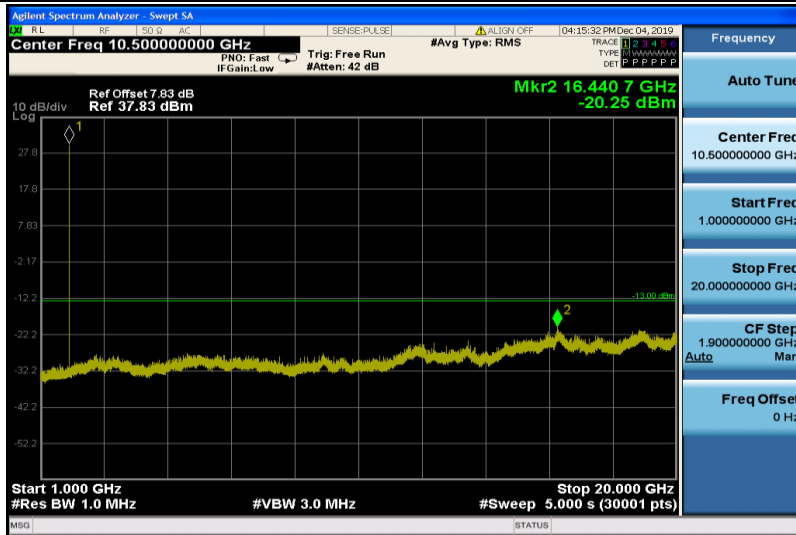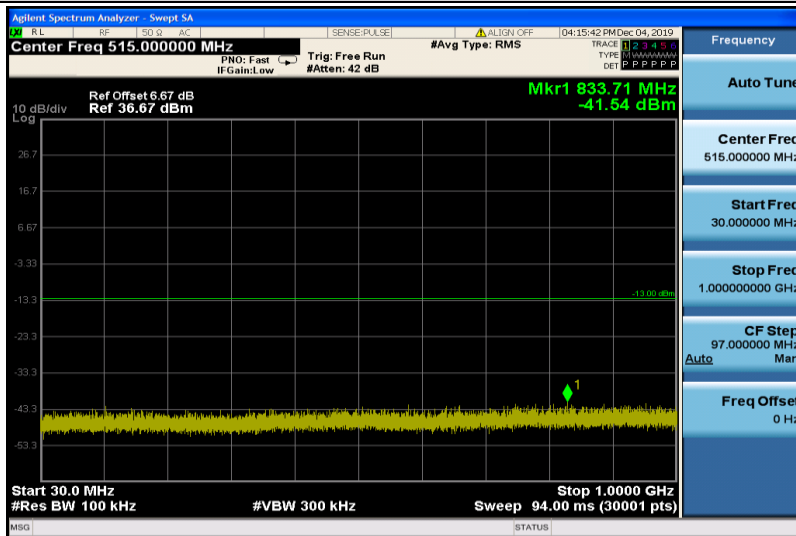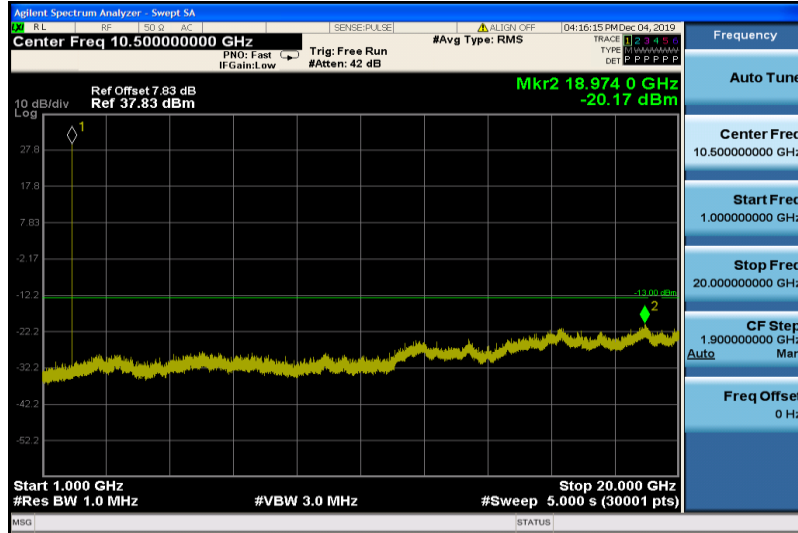
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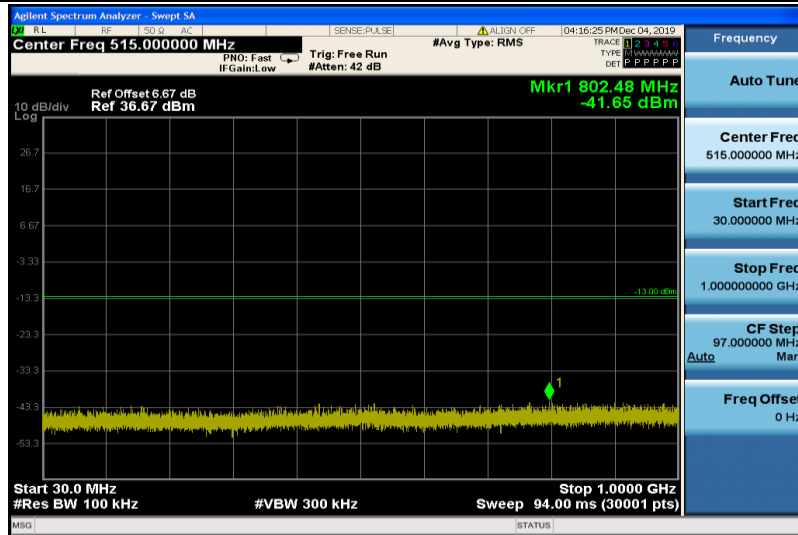GPRS1900-512-1000~20000

GPRS1900-661-30~1000

GPRS1900-661-1000~20000

GPRS1900-810-30~1000
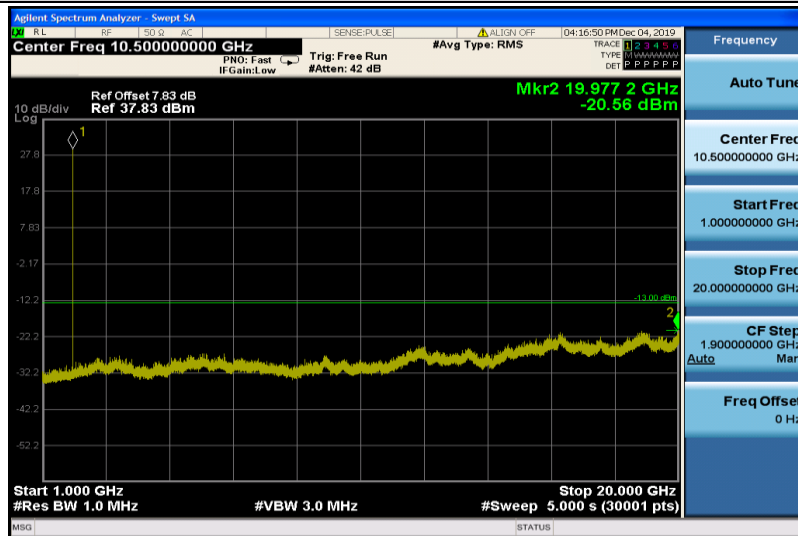
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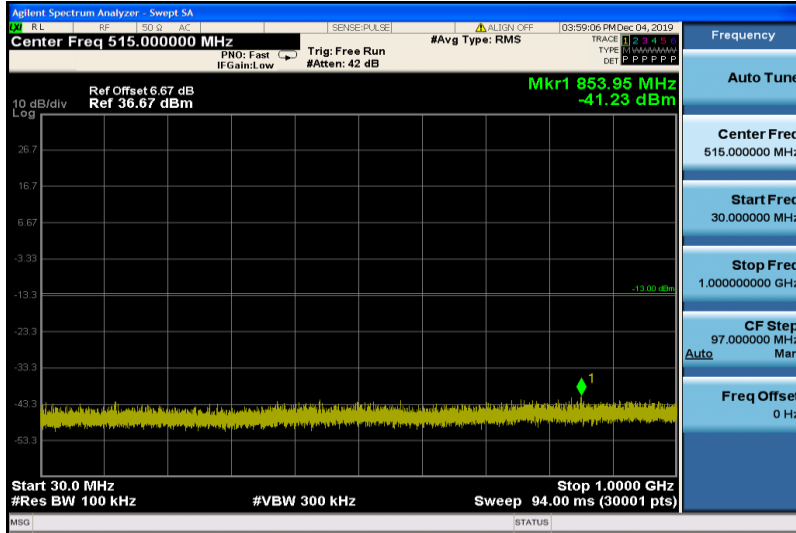
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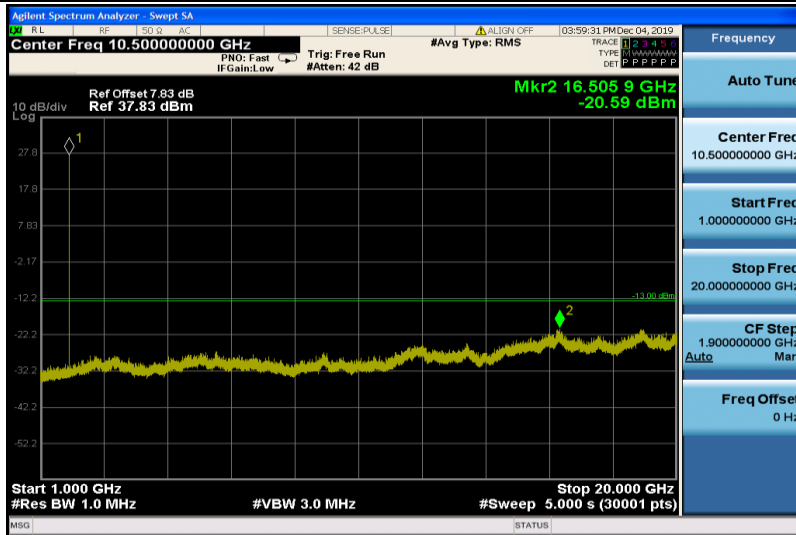
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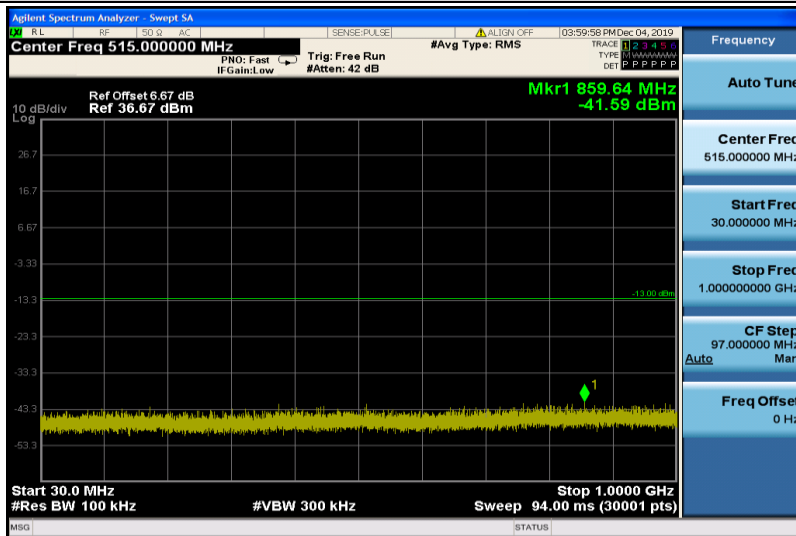
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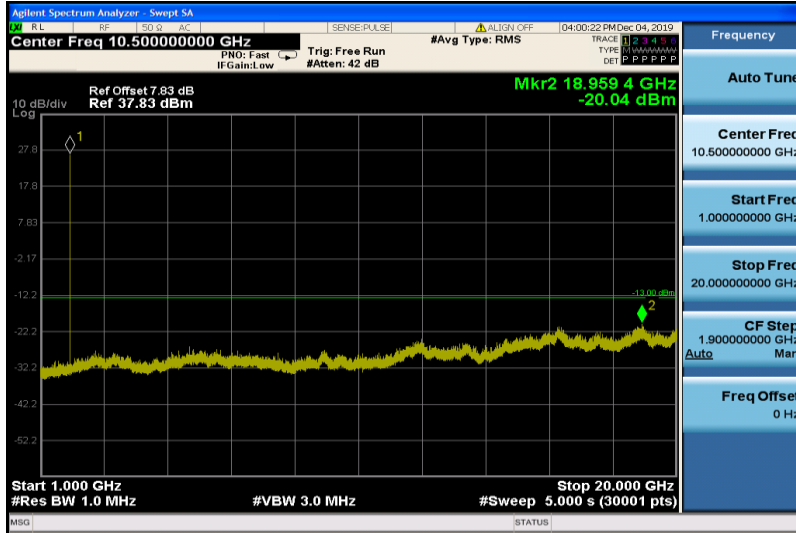
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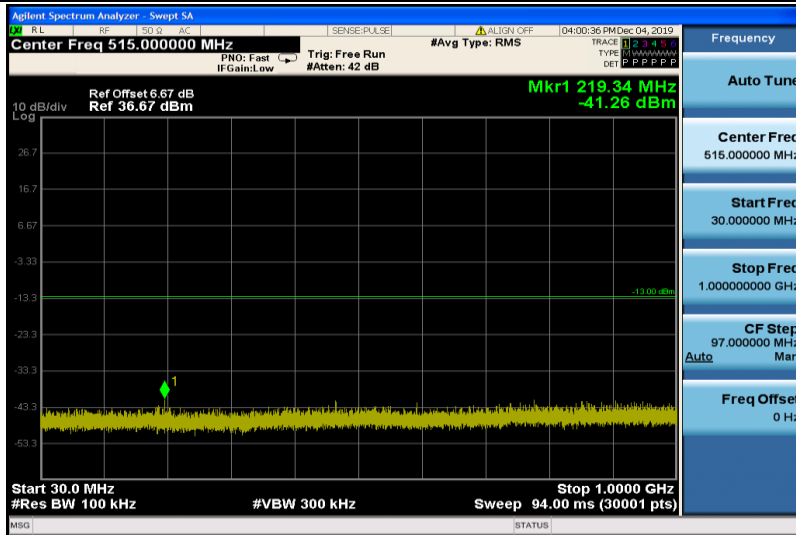
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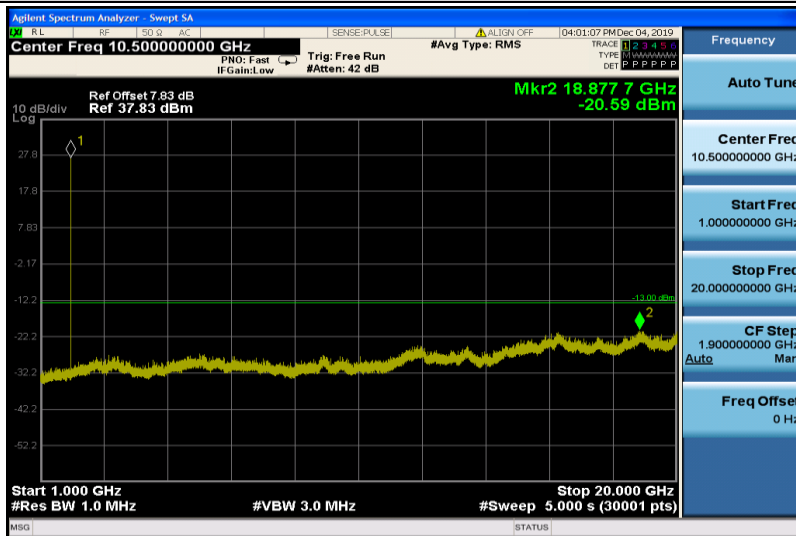
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8.6   Appendix F: Frequency Stability

Test Result

Voltage							
Band	Channel	Voltage (Vdc)	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
GPRS850	128	VL	TN	5.68	0.006894	2.5	PASS
GPRS850	128	VN	TN	12.04	0.014611	2.5	PASS
GPRS850	128	VH	TN	18.14	0.022015	2.5	PASS
GPRS850	190	VL	TN	10.40	0.012427	2.5	PASS
GPRS850	190	VN	TN	11.98	0.014318	2.5	PASS
GPRS850	190	VH	TN	12.91	0.015437	2.5	PASS
GPRS850	251	VL	TN	11.98	0.014112	2.5	PASS
GPRS850	251	VN	TN	13.79	0.016242	2.5	PASS
GPRS850	251	VH	TN	14.75	0.017383	2.5	PASS
EGPRS850	128	VL	TN	10.33	0.012535	2.5	PASS
EGPRS850	128	VN	TN	14.46	0.017549	2.5	PASS
EGPRS850	128	VH	TN	16.66	0.020213	2.5	PASS
EGPRS850	190	VL	TN	12.69	0.015167	2.5	PASS
EGPRS850	190	VN	TN	20.44	0.024429	2.5	PASS
EGPRS850	190	VH	TN	25.31	0.030256	2.5	PASS
EGPRS850	251	VL	TN	21.41	0.025219	2.5	PASS
EGPRS850	251	VN	TN	19.89	0.023431	2.5	PASS
EGPRS850	251	VH	TN	21.57	0.025409	2.5	PASS
GPRS1900	512	VL	TN	-20.44	-0.011046	2.5	PASS
GPRS1900	512	VN	TN	5.29	0.002862	2.5	PASS
GPRS1900	512	VH	TN	11.82	0.006387	2.5	PASS
GPRS1900	661	VL	TN	10.91	0.005805	2.5	PASS
GPRS1900	661	VN	TN	14.63	0.007780	2.5	PASS
GPRS1900	661	VH	TN	11.95	0.006354	2.5	PASS
GPRS1900	810	VL	TN	11.07	0.005799	2.5	PASS
GPRS1900	810	VN	TN	4.75	0.002485	2.5	PASS
GPRS1900	810	VH	TN	4.55	0.002384	2.5	PASS
EGPRS1900	512	VL	TN	-4.29	-0.002321	2.5	PASS
EGPRS1900	512	VN	TN	11.27	0.006090	2.5	PASS
EGPRS1900	512	VH	TN	15.50	0.008376	2.5	PASS
EGPRS1900	661	VL	TN	12.56	0.006680	2.5	PASS
EGPRS1900	661	VN	TN	13.66	0.007264	2.5	PASS
EGPRS1900	661	VH	TN	15.79	0.008398	2.5	PASS
EGPRS1900	810	VL	TN	12.79	0.006695	2.5	PASS
EGPRS1900	810	VN	TN	8.17	0.004277	2.5	PASS

EGPRS1900	810	VH	TN	8.14	0.004260	2.5	PASS

Temperature							
Band	Channel	Voltage (Vdc)	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
GPRS850	128	VN	-30	14.43	0.017510	2.5	PASS
GPRS850	128	VN	-20	17.18	0.020840	2.5	PASS
GPRS850	128	VN	-10	16.24	0.019704	2.5	PASS
GPRS850	128	VN	0	14.56	0.017667	2.5	PASS
GPRS850	128	VN	10	14.43	0.017510	2.5	PASS
GPRS850	128	VN	20	12.27	0.014885	2.5	PASS
GPRS850	128	VN	30	12.49	0.015160	2.5	PASS
GPRS850	128	VN	40	14.37	0.017432	2.5	PASS
GPRS850	128	VN	50	10.72	0.013005	2.5	PASS
GPRS850	190	VN	-30	13.01	0.015552	2.5	PASS
GPRS850	190	VN	-20	11.49	0.013739	2.5	PASS
GPRS850	190	VN	-10	11.66	0.013932	2.5	PASS
GPRS850	190	VN	0	14.27	0.017058	2.5	PASS
GPRS850	190	VN	10	11.46	0.013700	2.5	PASS
GPRS850	190	VN	20	12.11	0.014472	2.5	PASS
GPRS850	190	VN	30	12.01	0.014356	2.5	PASS
GPRS850	190	VN	40	10.75	0.012851	2.5	PASS
GPRS850	190	VN	50	11.53	0.013777	2.5	PASS
GPRS850	251	VN	-30	11.46	0.013503	2.5	PASS
GPRS850	251	VN	-20	11.27	0.013275	2.5	PASS
GPRS850	251	VN	-10	12.40	0.014606	2.5	PASS
GPRS850	251	VN	0	12.20	0.014378	2.5	PASS
GPRS850	251	VN	10	13.08	0.015405	2.5	PASS
GPRS850	251	VN	20	11.66	0.013731	2.5	PASS
GPRS850	251	VN	30	11.30	0.013313	2.5	PASS
GPRS850	251	VN	40	11.04	0.013009	2.5	PASS
GPRS850	251	VN	50	9.62	0.011335	2.5	PASS
EGPRS850	128	VN	-30	12.91	0.015669	2.5	PASS
EGPRS850	128	VN	-20	13.92	0.016883	2.5	PASS
EGPRS850	128	VN	-10	10.94	0.013279	2.5	PASS
EGPRS850	128	VN	0	12.07	0.014650	2.5	PASS
EGPRS850	128	VN	10	13.37	0.016217	2.5	PASS
EGPRS850	128	VN	20	15.17	0.018411	2.5	PASS
EGPRS850	128	VN	30	13.92	0.016883	2.5	PASS
EGPRS850	128	VN	40	14.98	0.018176	2.5	PASS
EGPRS850	128	VN	50	13.08	0.015865	2.5	PASS
EGPRS850	190	VN	-30	27.54	0.032919	2.5	PASS
EGPRS850	190	VN	-20	22.05	0.026358	2.5	PASS

EGPRS850	190	VN	-10	21.50	0.025702	2.5	PASS
EGPRS850	190	VN	0	22.83	0.027284	2.5	PASS
EGPRS850	190	VN	10	22.50	0.026898	2.5	PASS
EGPRS850	190	VN	20	23.83	0.028481	2.5	PASS
EGPRS850	190	VN	30	20.76	0.024814	2.5	PASS
EGPRS850	190	VN	40	22.89	0.027362	2.5	PASS
EGPRS850	190	VN	50	22.37	0.026744	2.5	PASS
EGPRS850	251	VN	-30	19.89	0.023431	2.5	PASS
EGPRS850	251	VN	-20	20.50	0.024154	2.5	PASS
EGPRS850	251	VN	-10	20.89	0.024610	2.5	PASS
EGPRS850	251	VN	0	19.98	0.023545	2.5	PASS
EGPRS850	251	VN	10	20.79	0.024496	2.5	PASS
EGPRS850	251	VN	20	22.08	0.026017	2.5	PASS
EGPRS850	251	VN	30	21.73	0.025599	2.5	PASS
EGPRS850	251	VN	40	22.12	0.026055	2.5	PASS
EGPRS850	251	VN	50	21.50	0.025333	2.5	PASS
GPRS1900	512	VN	-30	12.59	0.006805	2.5	PASS
GPRS1900	512	VN	-20	13.82	0.007469	2.5	PASS
GPRS1900	512	VN	-10	15.40	0.008324	2.5	PASS
GPRS1900	512	VN	0	11.11	0.006003	2.5	PASS
GPRS1900	512	VN	10	10.14	0.005479	2.5	PASS
GPRS1900	512	VN	20	10.69	0.005776	2.5	PASS
GPRS1900	512	VN	30	11.43	0.006177	2.5	PASS
GPRS1900	512	VN	40	12.43	0.006718	2.5	PASS
GPRS1900	512	VN	50	9.27	0.005008	2.5	PASS
GPRS1900	661	VN	-30	13.43	0.007144	2.5	PASS
GPRS1900	661	VN	-20	11.43	0.006079	2.5	PASS
GPRS1900	661	VN	-10	12.27	0.006526	2.5	PASS
GPRS1900	661	VN	0	7.91	0.004207	2.5	PASS
GPRS1900	661	VN	10	8.52	0.004534	2.5	PASS
GPRS1900	661	VN	20	9.10	0.004843	2.5	PASS
GPRS1900	661	VN	30	11.66	0.006200	2.5	PASS
GPRS1900	661	VN	40	9.62	0.005118	2.5	PASS
GPRS1900	661	VN	50	12.46	0.006629	2.5	PASS
GPRS1900	810	VN	-30	4.42	0.002316	2.5	PASS
GPRS1900	810	VN	-20	7.75	0.004057	2.5	PASS
GPRS1900	810	VN	-10	2.71	0.001420	2.5	PASS
GPRS1900	810	VN	0	6.07	0.003178	2.5	PASS
GPRS1900	810	VN	10	2.97	0.001555	2.5	PASS
GPRS1900	810	VN	20	5.29	0.002772	2.5	PASS
GPRS1900	810	VN	30	3.49	0.001826	2.5	PASS
GPRS1900	810	VN	40	4.94	0.002587	2.5	PASS

GPRS1900	810	VN	50	3.68	0.001927	2.5	PASS
EGPRS1900	512	VN	-30	11.59	0.006265	2.5	PASS
EGPRS1900	512	VN	-20	15.24	0.008236	2.5	PASS
EGPRS1900	512	VN	-10	17.08	0.009231	2.5	PASS
EGPRS1900	512	VN	0	17.05	0.009214	2.5	PASS
EGPRS1900	512	VN	10	10.69	0.005776	2.5	PASS
EGPRS1900	512	VN	20	11.46	0.006195	2.5	PASS
EGPRS1900	512	VN	30	11.49	0.006212	2.5	PASS
EGPRS1900	512	VN	40	12.04	0.006509	2.5	PASS
EGPRS1900	512	VN	50	10.01	0.005409	2.5	PASS
EGPRS1900	661	VN	-30	17.89	0.009514	2.5	PASS
EGPRS1900	661	VN	-20	14.37	0.007642	2.5	PASS
EGPRS1900	661	VN	-10	16.18	0.008604	2.5	PASS
EGPRS1900	661	VN	0	14.30	0.007608	2.5	PASS
EGPRS1900	661	VN	10	11.72	0.006234	2.5	PASS
EGPRS1900	661	VN	20	12.30	0.006543	2.5	PASS
EGPRS1900	661	VN	30	15.82	0.008415	2.5	PASS
EGPRS1900	661	VN	40	18.02	0.009583	2.5	PASS
EGPRS1900	661	VN	50	14.14	0.007522	2.5	PASS
EGPRS1900	810	VN	-30	10.56	0.005528	2.5	PASS
EGPRS1900	810	VN	-20	6.13	0.003212	2.5	PASS
EGPRS1900	810	VN	-10	11.11	0.005815	2.5	PASS
EGPRS1900	810	VN	0	9.46	0.004953	2.5	PASS
EGPRS1900	810	VN	10	8.20	0.004294	2.5	PASS
EGPRS1900	810	VN	20	10.53	0.005511	2.5	PASS
EGPRS1900	810	VN	30	12.46	0.006525	2.5	PASS
EGPRS1900	810	VN	40	12.85	0.006728	2.5	PASS
EGPRS1900	810	VN	50	7.43	0.003888	2.5	PASS

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