

Appendix for GSM850

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1 Appendix A: Effective (Isotropic) Radiated Result Output Data**1.1 Test Result**

Ant31

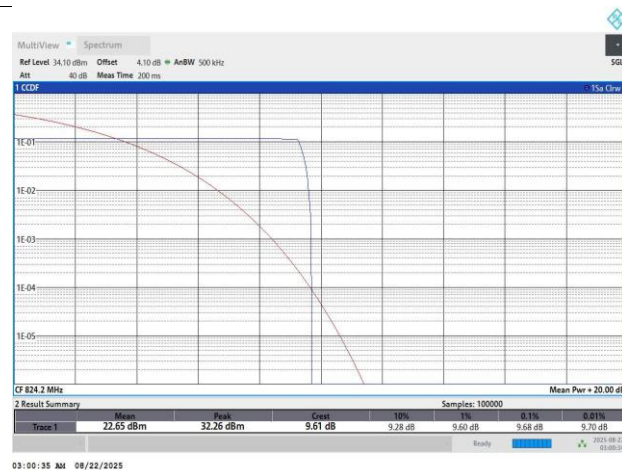
Band	Channel	Time Slots	Result (dBm)	ERP (dBm)	Limit (dBm)	Verdict
GSM850	128	1	32.13	24.48	38.5	PASS
GSM850	190	1	32.35	24.70	38.5	PASS
GSM850	251	1	32.39	24.74	38.5	PASS
GPRS850	128	1	31.94	24.29	38.5	PASS
GPRS850	190	1	32.25	24.60	38.5	PASS
GPRS850	251	1	32.26	24.61	38.5	PASS
EGPRS850	128	1	26.17	18.52	38.5	PASS
EGPRS850	190	1	26.19	18.54	38.5	PASS
EGPRS850	251	1	26.21	18.56	38.5	PASS

2 Appendix B: Peak-to-Average Ratio

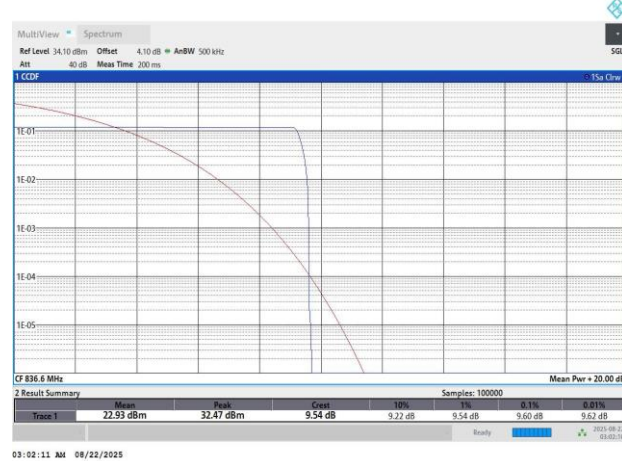
2.1 Test Result

Band	Channel	Result(dBm)	Limit(dB)	Verdict
GSM850	128	9.68	13	PASS
GSM850	190	9.60	13	PASS
GSM850	251	9.76	13	PASS
EGPRS850	128	9.80	13	PASS
EGPRS850	190	9.62	13	PASS
EGPRS850	251	9.76	13	PASS

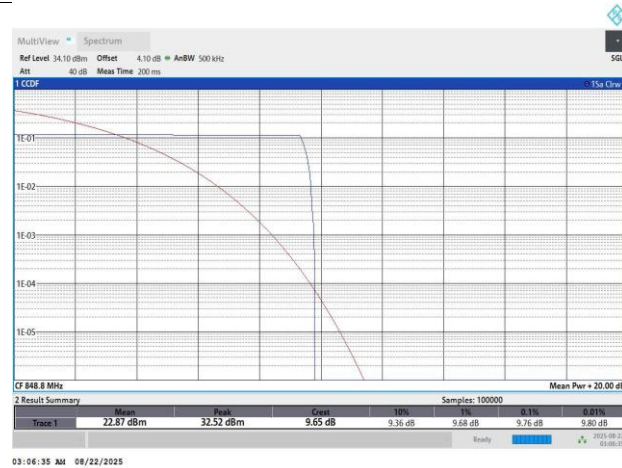
2.2 Test Plots



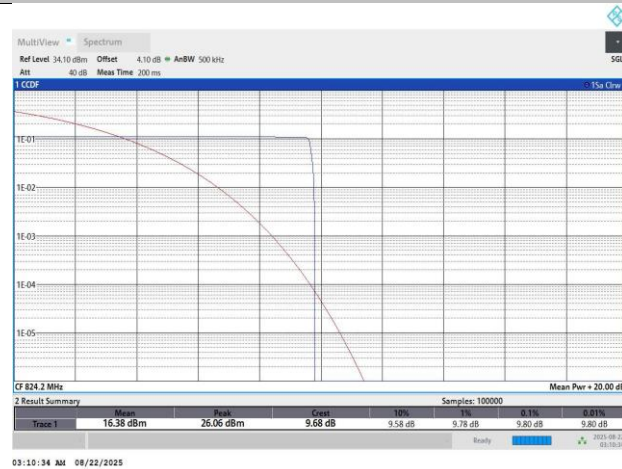
GSM850-128-9.68-13-PASS



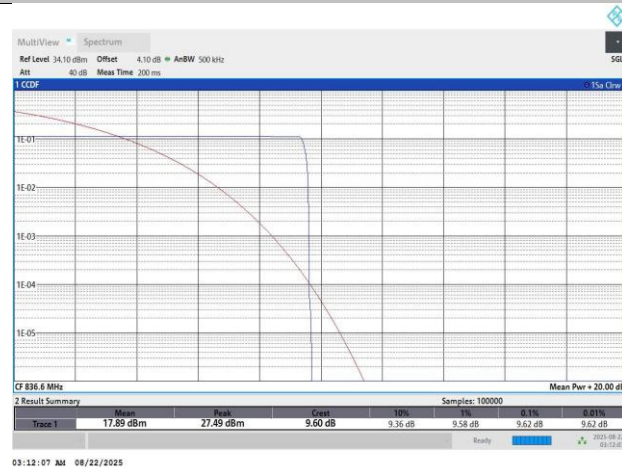
GSM850-190-9.6-13-PASS



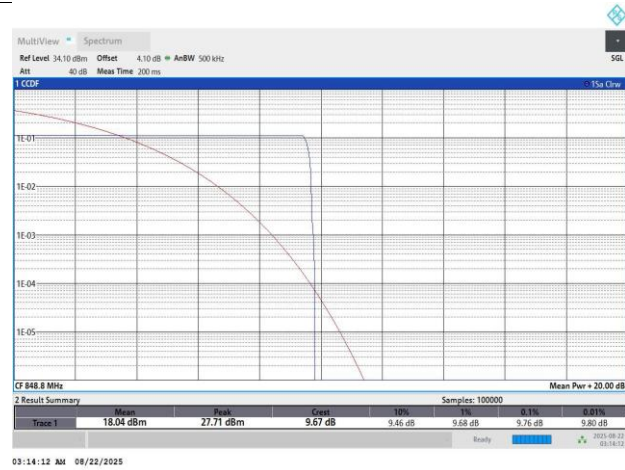
GSM850-251-9.76-13-PASS



EGPRS850-128-9.8-13-PASS



EGPRS850-190-9.62-13-PASS



EGPRS850-251-9.76-13-PASS

3 Appendix C: 26dB Bandwidth and Occupied Bandwidth

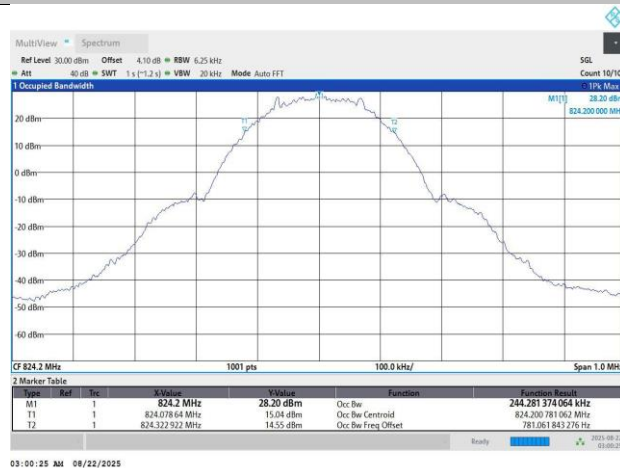
3.1 Test Result

Band	Channel	Occupied Bandwidth (KHz)	26dB Bandwidth (KHz)	Limit (MHZ)	Verdict
GSM850	128	244.3	316.7	---	See graph
GSM850	190	245.2	319.7	---	See graph
GSM850	251	245.2	319.7	---	See graph
EGPRS850	128	242.6	318.7	---	See graph
EGPRS850	190	243.5	316.7	---	See graph
EGPRS850	251	242.0	318.7	---	See graph

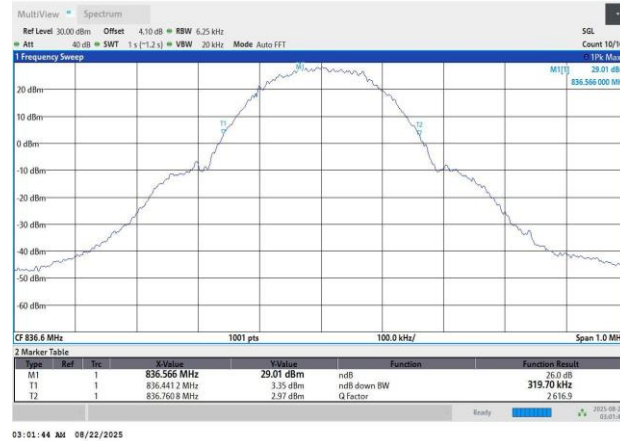
3.2 Test Plots



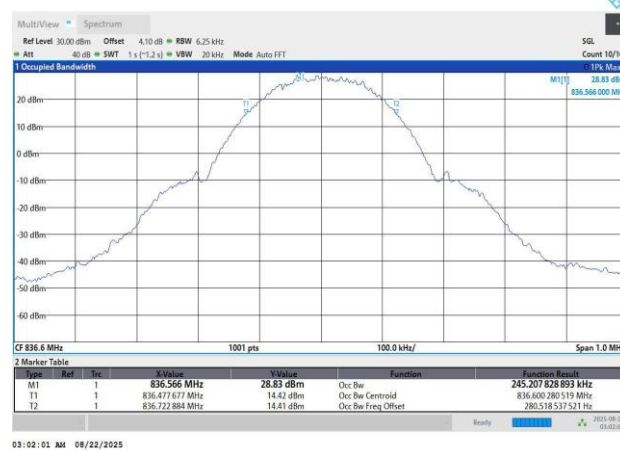
GSM850-128



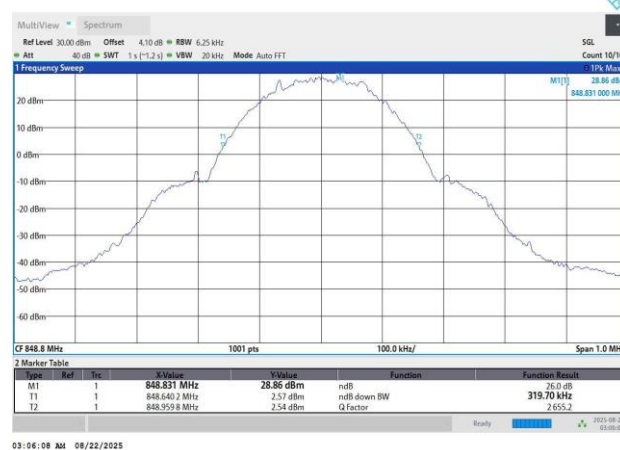
GSM850-128



GSM850-190



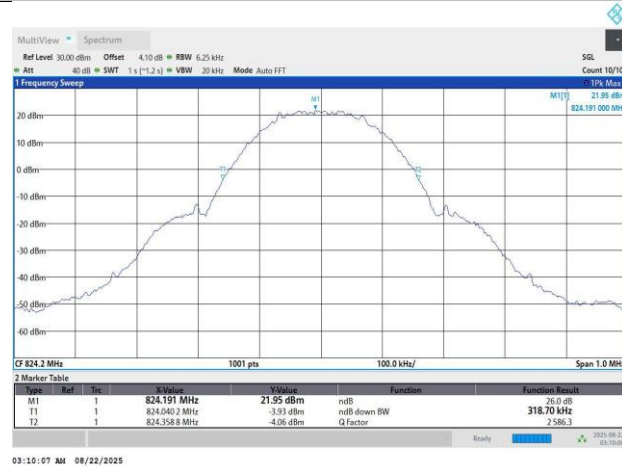
GSM850-190



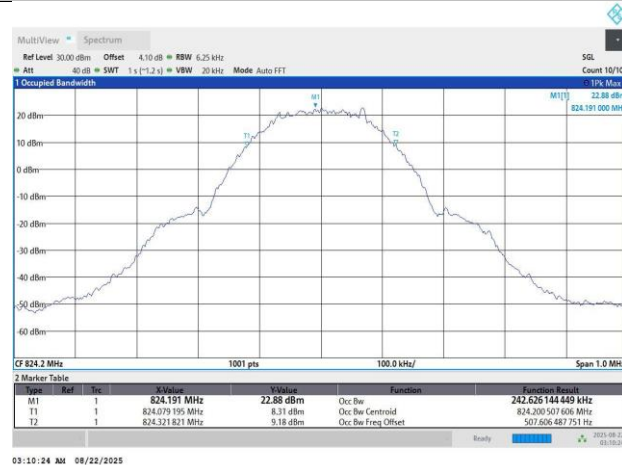
GSM850-251



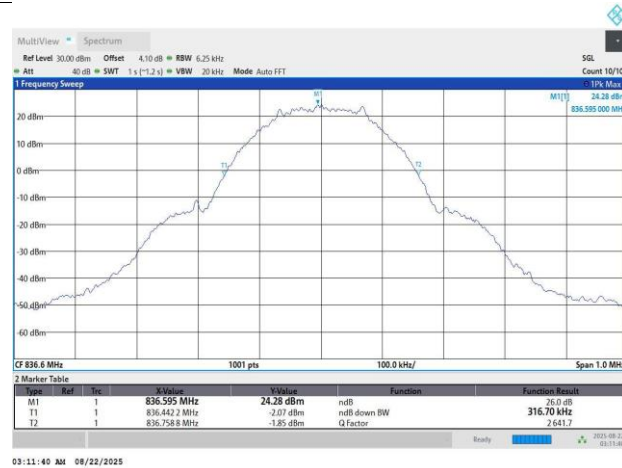
GSM850-251



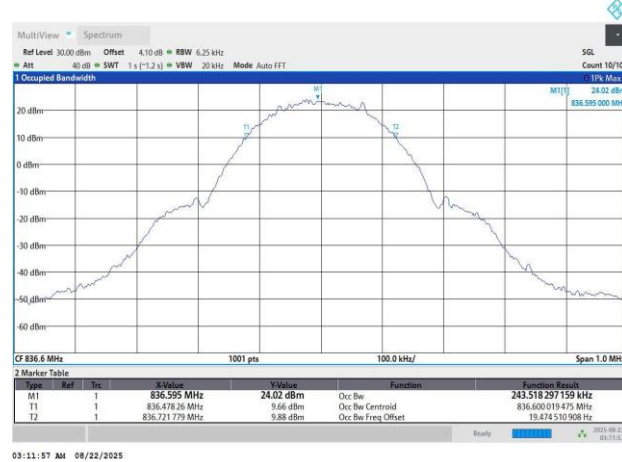
EGPRS850-128



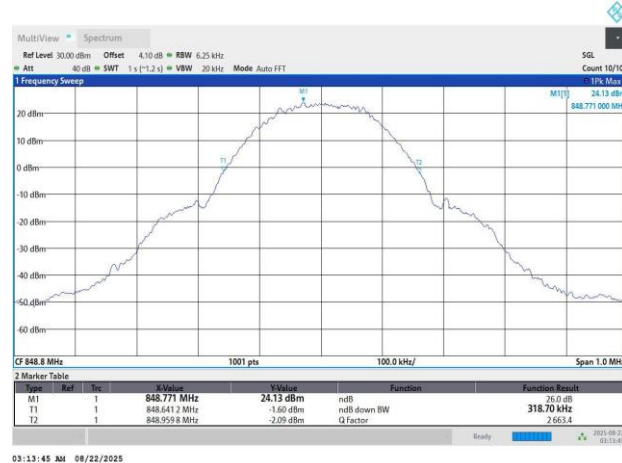
EGPRS850-128



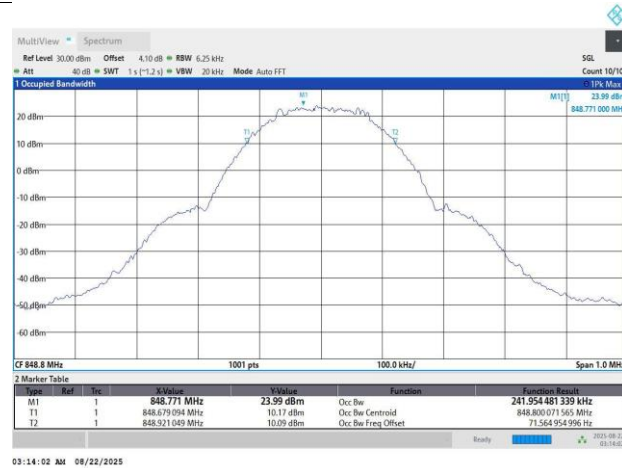
EGPRS850-190



EGPRS850-190



EGPRS850-251



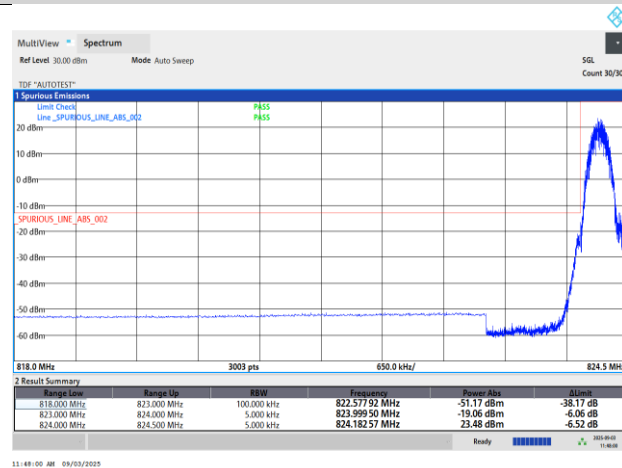
EGPRS850-251-0.24-0.32----

4 Appendix D: Band Edge

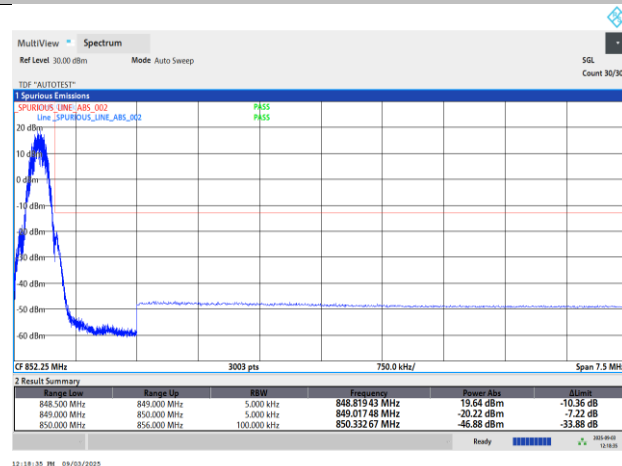
4.1 Test Result

Band	Channel	Result	Verdict
GSM850	128	See graph	PASS
GSM850	251	See graph	PASS
EGPRS850	128	See graph	PASS
EGPRS850	251	See graph	PASS

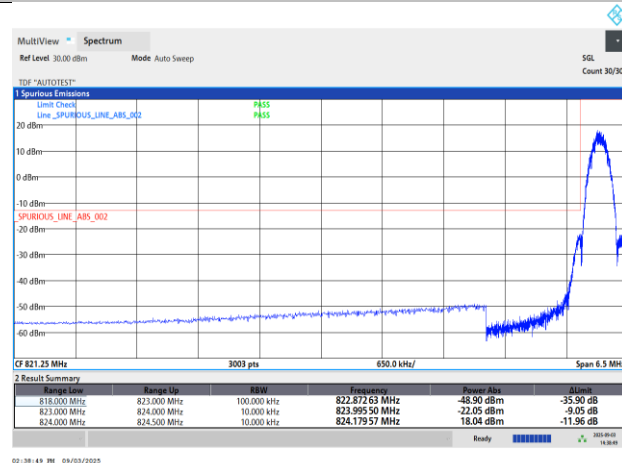
4.2 Test Plots



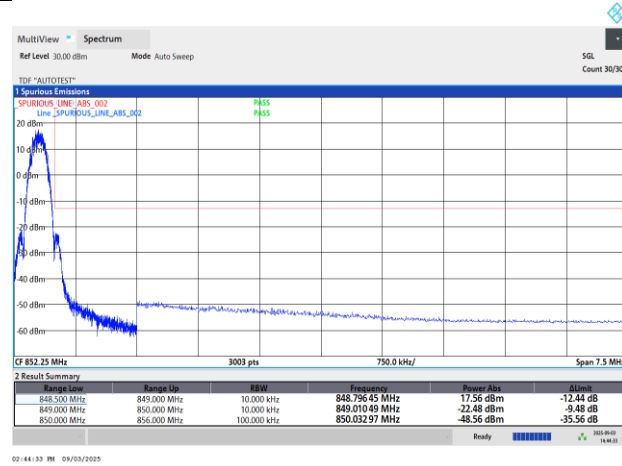
GSM850-128-PASS



GSM850-251-PASS



EGPRS850-128-PASS



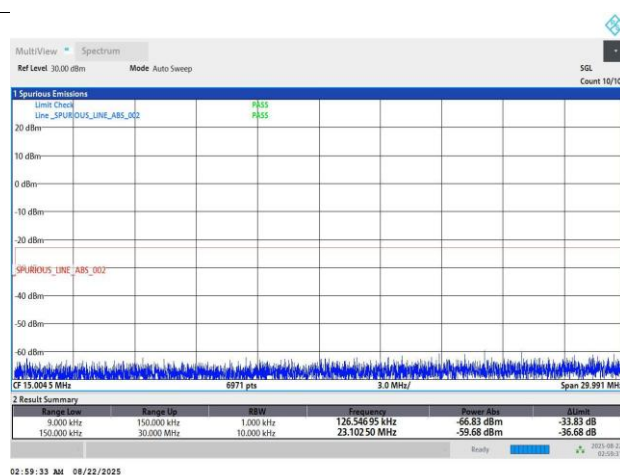
EGPRS850-251-PASS

5 Appendix E: Conducted Spurious Emission

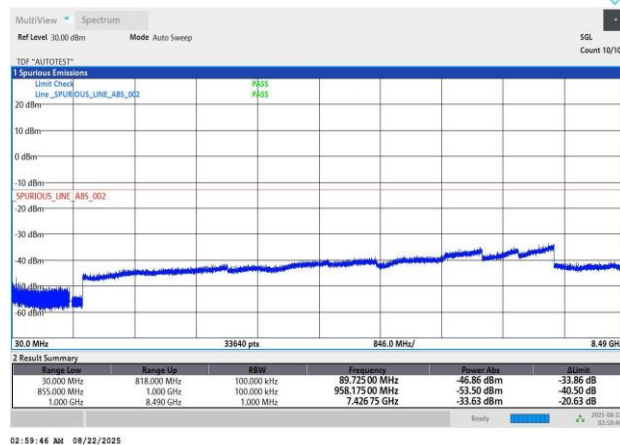
5.1 Test Result

Band	Channel	Result	Verdict
GSM850	128	See graph	PASS
GSM850	190	See graph	PASS
GSM850	251	See graph	PASS
EGPRS850	128	See graph	PASS
EGPRS850	190	See graph	PASS
EGPRS850	251	See graph	PASS

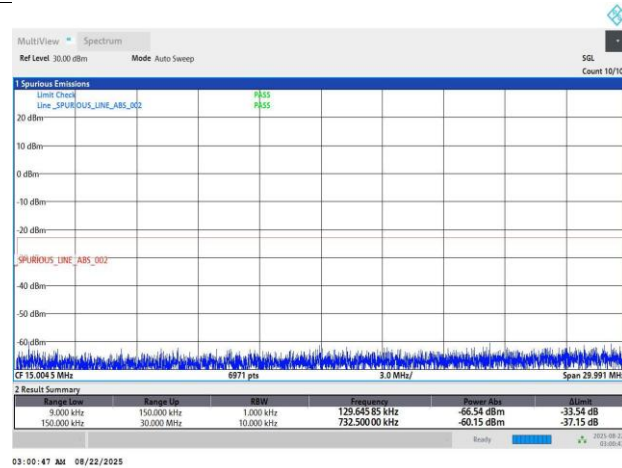
5.2 Test Plots



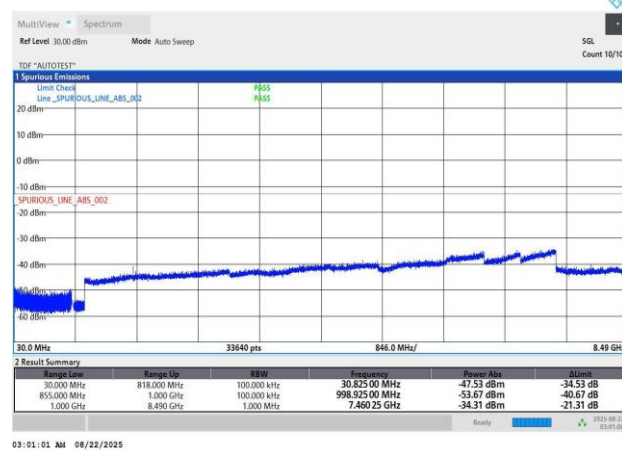
GSM850-128-PASS



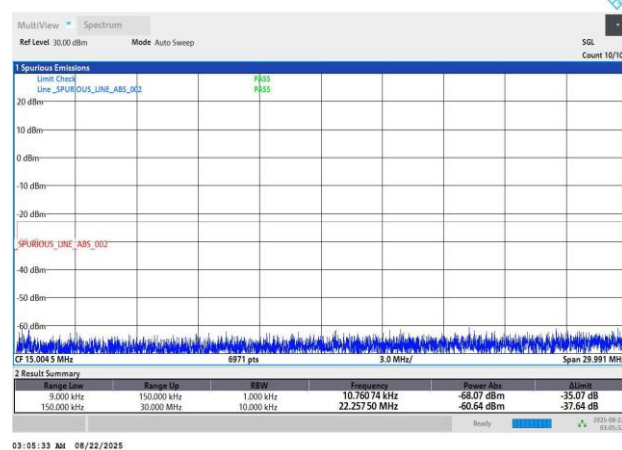
GSM850-128-PASS



GSM850-190-PASS



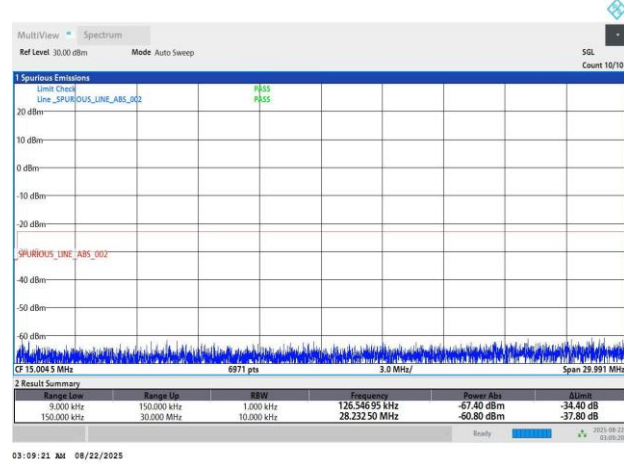
GSM850-190-PASS



GSM850-251-PASS



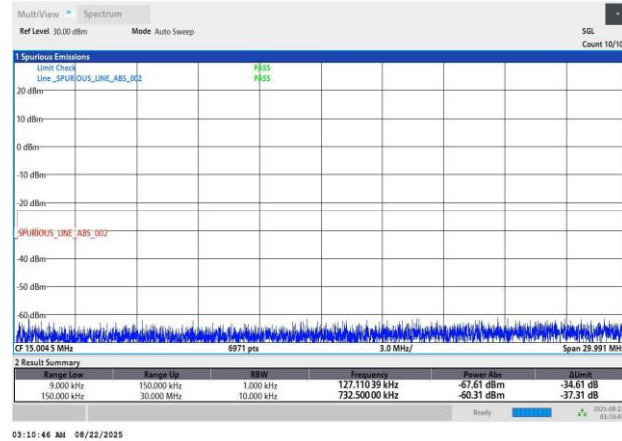
GSM850-251-PASS



EGPRS850-128-PASS



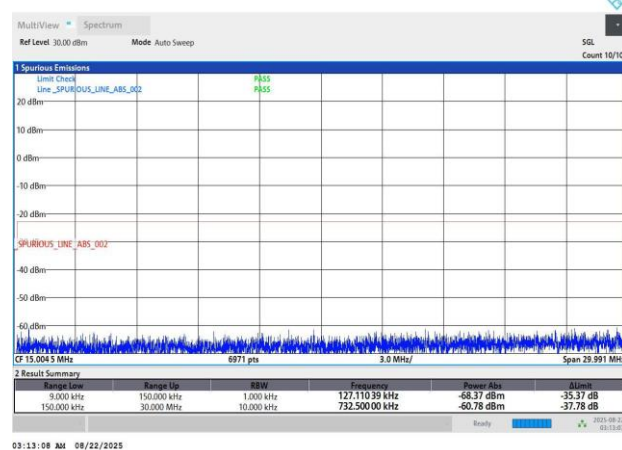
EGPRS850-128-PASS



EGPRS850-190-PASS



EGPRS850-190-PASS



EGPRS850-251-PASS



EGPRS850-251-PASS

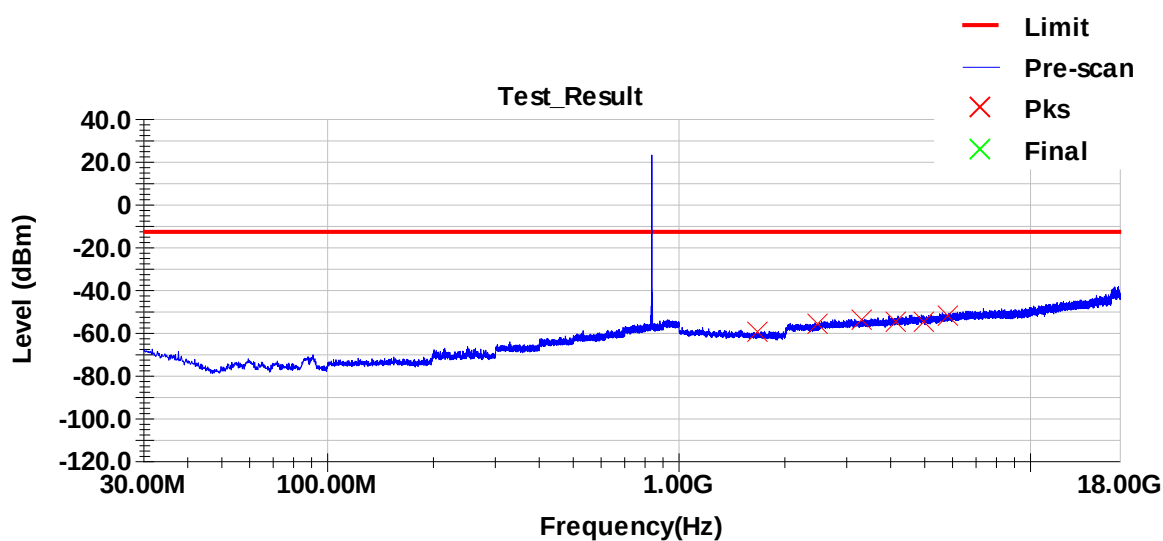
6 Appendix F: Radiated spurious emissions

Remark:

- The pre-tests cover all operation mode of EUT and the test reports show only the worst.
- If the margin is greater than 10dB, it is considered to meet the standard and no further test is conducted.
- The part of the graph that exceeds the limit is RF fundamental frequency and it should be excluded against the limits.

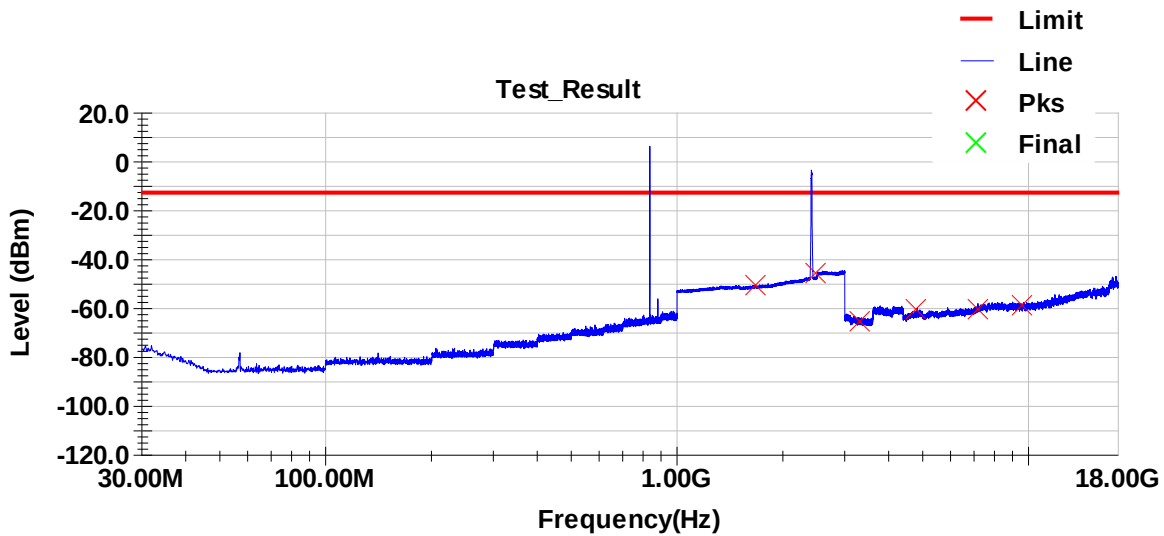
6.1 Test Result

The worst mode: GSM850_LINK/ANT 31-Mid-PCL=5

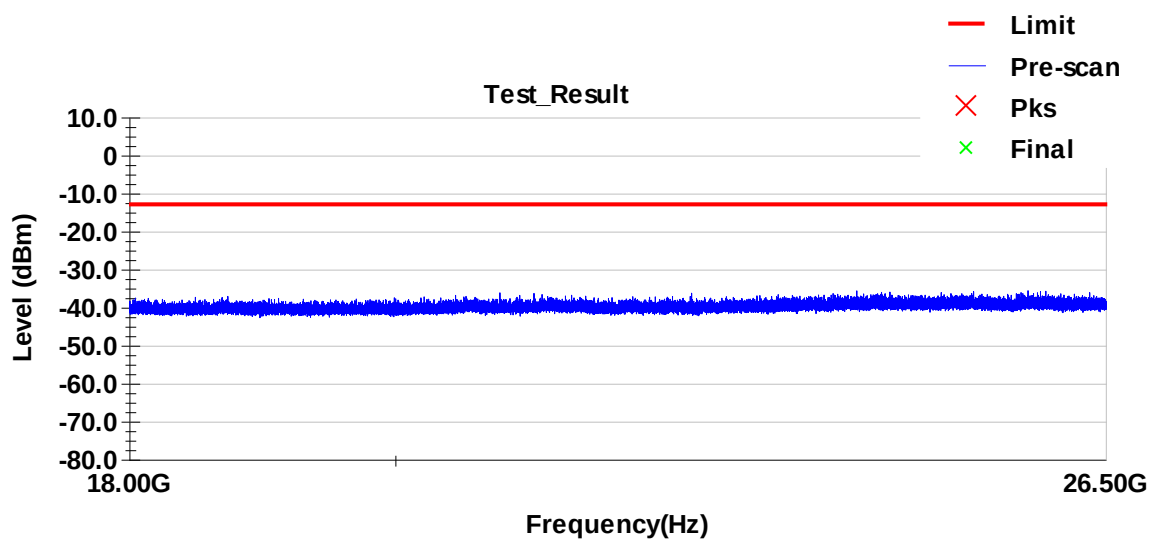


Frequency(MHz)	Measure Level(dBuV)	Factor	EIRP_CF	EIRP Result(dBm)	Limit(dBm)	Margin(dB)	Pol
1673.200	50.54	32.04	-95.200	-60.18	-13.00	47.18	V
2509.800	50.11	34.85	-95.200	-55.85	-13.00	42.85	V
3346.400	49.30	-8.65	-95.200	-54.55	-13.00	41.55	V
4183.000	47.41	-6.90	-95.200	-54.70	-13.00	41.70	V
5019.600	45.77	-5.69	-95.200	-55.11	-13.00	42.11	V
5856.200	47.03	-3.89	-95.200	-52.06	-13.00	39.06	V

The worst mode: GSM850-ANT 31-Mid-PCL=5+802.11G-CH1-2412M



Frequency(MHz)	Measure Level(dBuV)	Factor	EIRP_CF	EIRP Result(dBm)	Limit(dBm)	Margin(dB)	Pol
1673.200	12.06	32.01	-95.200	-51.26	-13.00	38.26	V
2509.800	14.51	34.93	-95.200	-46.11	-13.00	33.11	V
3346.400	42.91	-13.18	-95.200	-65.82	-13.00	52.82	V
4824.000	39.48	-6.57	-95.200	-60.52	-13.00	47.52	V
7236.000	38.41	-3.03	-95.200	-60.33	-13.00	47.33	V
9648.000	36.42	-0.48	-95.200	-58.99	-13.00	45.99	V



7 Appendix G: Frequency Stability

7.1 Test Result

Band	Channel	Voltage (Vdc)	Temperature (°C)	deviation (Hz)	deviation (ppm)	Limit((ppm)	Verdict
GSM850	128	NV	NT	-11.9	-0.014438	±2.5	PASS
GSM850	128	LV	NT	-5.1	-0.006096	±2.5	PASS
GSM850	128	HV	NT	-6.6	-0.007889	±2.5	PASS
GSM850	190	NV	NT	-2.5	-0.002988	±2.5	PASS
GSM850	190	LV	NT	-14.7	-0.017571	±2.5	PASS
GSM850	190	HV	NT	-28.0	-0.033469	±2.5	PASS
GSM850	251	NV	NT	-13.1	-0.015434	±2.5	PASS
GSM850	251	LV	NT	-12.8	-0.015080	±2.5	PASS
GSM850	251	HV	NT	-11.3	-0.013313	±2.5	PASS
EGPRS850	128	NV	NT	-12.6	-0.015288	±2.5	PASS
EGPRS850	128	LV	NT	-12.4	-0.014822	±2.5	PASS
EGPRS850	128	HV	NT	-12.6	-0.015061	±2.5	PASS
EGPRS850	190	NV	NT	2.3	0.002749	±2.5	PASS
EGPRS850	190	LV	NT	6.9	0.008248	±2.5	PASS
EGPRS850	190	HV	NT	4.1	0.004901	±2.5	PASS
EGPRS850	251	NV	NT	-18.3	-0.021560	±2.5	PASS
EGPRS850	251	LV	NT	-17.3	-0.020382	±2.5	PASS
EGPRS850	251	HV	NT	-17.3	-0.020382	±2.5	PASS

Band	Channel	Voltage (Vdc)	Temperature (°C)	deviation (Hz)	deviation (ppm)	Limit((ppm)	Verdict
GSM850	128	NV	-30	-13.3	-0.016137	±2.5	PASS
GSM850	128	NV	-20	-16.5	-0.020019	±2.5	PASS
GSM850	128	NV	-10	-14.9	-0.018078	±2.5	PASS
GSM850	128	NV	0	-20.1	-0.024387	±2.5	PASS
GSM850	128	NV	10	-16.6	-0.020141	±2.5	PASS
GSM850	128	NV	20	-19.4	-0.023538	±2.5	PASS
GSM850	128	NV	30	-13.3	-0.016137	±2.5	PASS
GSM850	128	NV	40	-5.9	-0.007158	±2.5	PASS
GSM850	128	NV	50	-10.0	-0.012133	±2.5	PASS
GSM850	190	NV	-30	14.7	0.017571	±2.5	PASS
GSM850	190	NV	-20	9.5	0.011355	±2.5	PASS
GSM850	190	NV	-10	-3.9	-0.004662	±2.5	PASS
GSM850	190	NV	0	-4.8	-0.005738	±2.5	PASS
GSM850	190	NV	10	-1.4	-0.001673	±2.5	PASS
GSM850	190	NV	20	-14.9	-0.017810	±2.5	PASS
GSM850	190	NV	30	-14.2	-0.016973	±2.5	PASS
GSM850	190	NV	40	-4.2	-0.005020	±2.5	PASS
GSM850	190	NV	50	-2.0	-0.002391	±2.5	PASS
GSM850	251	NV	-30	-19.8	-0.023327	±2.5	PASS
GSM850	251	NV	-20	-16.1	-0.018968	±2.5	PASS
GSM850	251	NV	-10	-20.1	-0.023680	±2.5	PASS
GSM850	251	NV	0	-16.6	-0.019557	±2.5	PASS
GSM850	251	NV	10	-10.6	-0.012488	±2.5	PASS
GSM850	251	NV	20	-14.1	-0.016612	±2.5	PASS
GSM850	251	NV	30	-16.7	-0.019675	±2.5	PASS
GSM850	251	NV	40	-14.3	-0.016847	±2.5	PASS
GSM850	251	NV	50	-20.2	-0.023798	±2.5	PASS
EGPRS850	128	NV	-30	5.5	0.006673	±2.5	PASS
EGPRS850	128	NV	-20	6.1	0.007401	±2.5	PASS
EGPRS850	128	NV	-10	2.4	0.002912	±2.5	PASS
EGPRS850	128	NV	0	-2.2	-0.002669	±2.5	PASS
EGPRS850	128	NV	10	1.9	0.002305	±2.5	PASS
EGPRS850	128	NV	20	-7.6	-0.009221	±2.5	PASS
EGPRS850	128	NV	30	6.0	0.007280	±2.5	PASS
EGPRS850	128	NV	40	4.9	0.005945	±2.5	PASS

EGPRS850	128	NV	50	2.9	0.003519	±2.5	PASS
EGPRS850	190	NV	-30	14.6	0.017452	±2.5	PASS
EGPRS850	190	NV	-20	10.7	0.012790	±2.5	PASS
EGPRS850	190	NV	-10	12.6	0.015061	±2.5	PASS
EGPRS850	190	NV	0	7.7	0.009204	±2.5	PASS
EGPRS850	190	NV	10	8.5	0.010160	±2.5	PASS
EGPRS850	190	NV	20	4.0	0.004781	±2.5	PASS
EGPRS850	190	NV	30	3.1	0.003705	±2.5	PASS
EGPRS850	190	NV	40	5.3	0.006335	±2.5	PASS
EGPRS850	190	NV	50	6.1	0.007291	±2.5	PASS
EGPRS850	251	NV	-30	14.6	0.017201	±2.5	PASS
EGPRS850	251	NV	-20	-7.5	-0.008836	±2.5	PASS
EGPRS850	251	NV	-10	3.9	0.004595	±2.5	PASS
EGPRS850	251	NV	0	-5.1	-0.006008	±2.5	PASS
EGPRS850	251	NV	10	4.0	0.004713	±2.5	PASS
EGPRS850	251	NV	20	6.8	0.008011	±2.5	PASS
EGPRS850	251	NV	30	4.2	0.004948	±2.5	PASS
EGPRS850	251	NV	40	-8.9	-0.010485	±2.5	PASS
EGPRS850	251	NV	50	-2.0	-0.002356	±2.5	PASS

END