

APPENDIX REPORT

Project No.	SHT2304055302EW	Radio Specification	EGPRS
Test sample No.	YPHT23040553011	Model No.	AES-U211
Start test date	2023-06-02	Finish date	2023-06-28
Temperature	25.3℃	Humidity	54%
Test Engineer	Xiaodong Zhao	Auditor	

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
G	ERP and EIRP	PASS

8.1 Appendix A: Conducted Output Power

Test Result

Band	Channel	PCL	Slot	Power(dBm)	Limit(dBm)	Verdict
EGPRS850	128	5	1	31.98	38.5	PASS
EGPRS850	128	5	2	30.95	38.5	PASS
EGPRS850	128	5	3	29.13	38.5	PASS
EGPRS850	128	5	4	28.23	38.5	PASS
EGPRS850	190	5	1	31.92	38.5	PASS
EGPRS850	190	5	2	30.99	38.5	PASS
EGPRS850	190	5	3	29.28	38.5	PASS
EGPRS850	190	5	4	28.47	38.5	PASS
EGPRS850	251	5	1	32.19	38.5	PASS
EGPRS850	251	5	2	31.64	38.5	PASS
EGPRS850	251	5	3	30.06	38.5	PASS
EGPRS850	251	5	4	29.13	38.5	PASS
EGPRS1900	512	0	1	30.44	33	PASS
EGPRS1900	512	0	2	29.64	33	PASS
EGPRS1900	512	0	3	27.27	33	PASS
EGPRS1900	512	0	4	26.00	33	PASS
EGPRS1900	661	0	1	30.05	33	PASS
EGPRS1900	661	0	2	29.50	33	PASS
EGPRS1900	661	0	3	27.14	33	PASS
EGPRS1900	661	0	4	25.88	33	PASS
EGPRS1900	810	0	1	30.66	33	PASS
EGPRS1900	810	0	2	29.29	33	PASS
EGPRS1900	810	0	3	26.81	33	PASS
EGPRS1900	810	0	4	25.30	33	PASS

Band	Channel	PCL	Slot	Power(dBm)	Limit(dBm)	Verdict
EGPRS850	128	8	1	26.00	38.5	PASS
EGPRS850	128	8	2	24.77	38.5	PASS
EGPRS850	128	8	3	22.93	38.5	PASS
EGPRS850	128	8	4	21.49	38.5	PASS
EGPRS850	190	8	1	26.12	38.5	PASS
EGPRS850	190	8	2	25.07	38.5	PASS
EGPRS850	190	8	3	23.20	38.5	PASS
EGPRS850	190	8	4	21.74	38.5	PASS
EGPRS850	251	8	1	26.29	38.5	PASS
EGPRS850	251	8	2	25.16	38.5	PASS
EGPRS850	251	8	3	23.60	38.5	PASS
EGPRS850	251	8	4	22.18	38.5	PASS
EGPRS1900	512	2	1	26.63	33	PASS
EGPRS1900	512	2	2	25.92	33	PASS
EGPRS1900	512	2	3	23.39	33	PASS
EGPRS1900	512	2	4	21.90	33	PASS
EGPRS1900	661	2	1	26.21	33	PASS
EGPRS1900	661	2	2	25.63	33	PASS
EGPRS1900	661	2	3	23.07	33	PASS
EGPRS1900	661	2	4	21.53	33	PASS
EGPRS1900	810	2	1	26.37	33	PASS
EGPRS1900	810	2	2	25.59	33	PASS
EGPRS1900	810	2	3	23.50	33	PASS
EGPRS1900	810	2	4	21.98	33	PASS

8.2 Appendix B: Peak-to-Average Ratio

Test Result

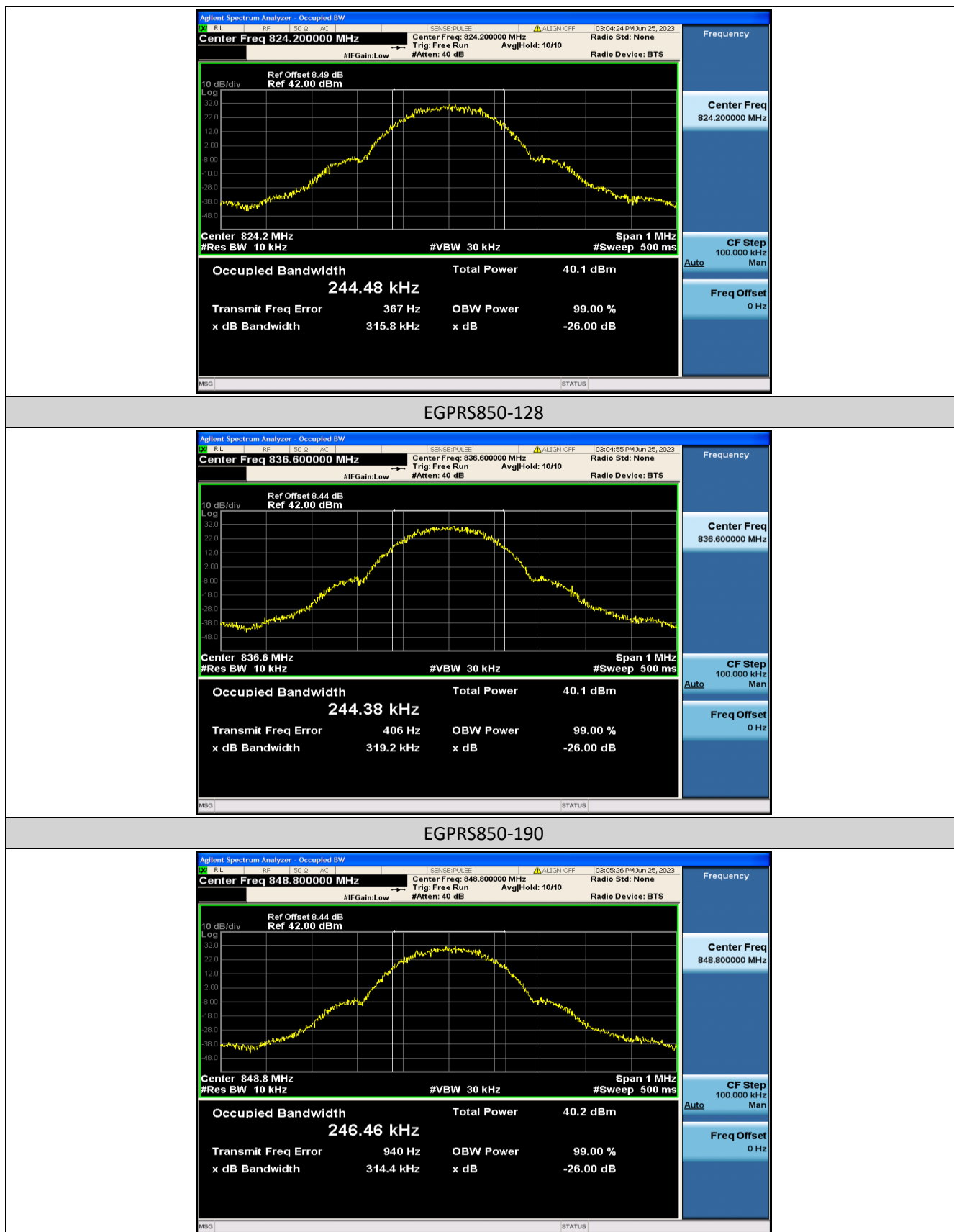
Band	Channel	Peak-to-Average Ratio(dB)	Limit(dBm)	Verdict
EGPRS850	128	3.13	13	PASS
EGPRS850	190	3.17	13	PASS
EGPRS850	251	3.20	13	PASS
EGPRS850	128	5.76	13	PASS
EGPRS850	190	5.74	13	PASS
EGPRS850	251	5.76	13	PASS
EGPRS1900	512	2.90	13	PASS
EGPRS1900	661	2.93	13	PASS
EGPRS1900	810	2.96	13	PASS
EGPRS1900	512	5.88	13	PASS
EGPRS1900	661	5.92	13	PASS
EGPRS1900	810	5.92	13	PASS

8.3 Appendix C: 26dB Bandwidth and Occupied Bandwidth

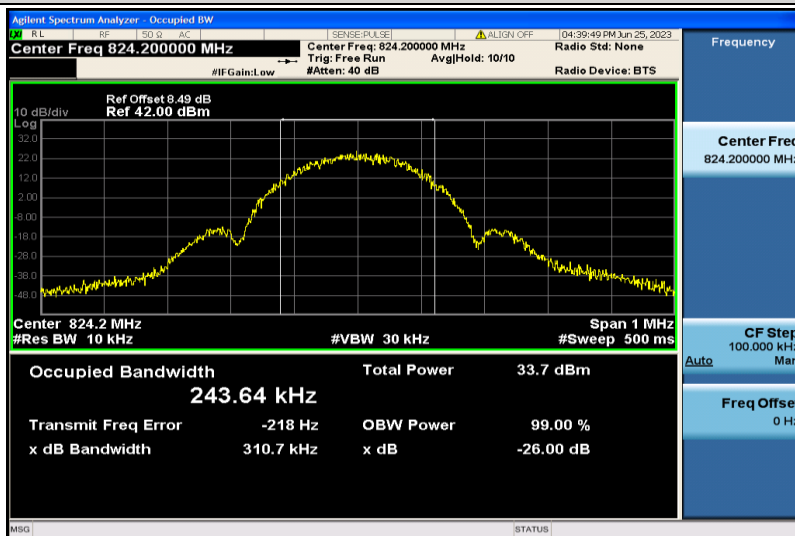
Test Result

Band	Channel	Occupied Bandwidth (kHz)	26dB Bandwidth (kHz)	Limit(kHz)	Verdict
EGPRS850	128	244.48	315.8	---	PASS
EGPRS850	190	244.38	319.2	---	PASS
EGPRS850	251	246.46	314.4	---	PASS
EGPRS850	128	243.64	310.7	---	PASS
EGPRS850	190	244.68	318.5	---	PASS
EGPRS850	251	246.30	308.7	---	PASS
EGPRS1900	512	244.32	316.1	---	PASS
EGPRS1900	661	244.79	319.5	---	PASS
EGPRS1900	810	244.45	310.5	---	PASS
EGPRS1900	512	245.22	312.0	---	PASS
EGPRS1900	661	246.22	311.9	---	PASS
EGPRS1900	810	245.06	314.0	---	PASS

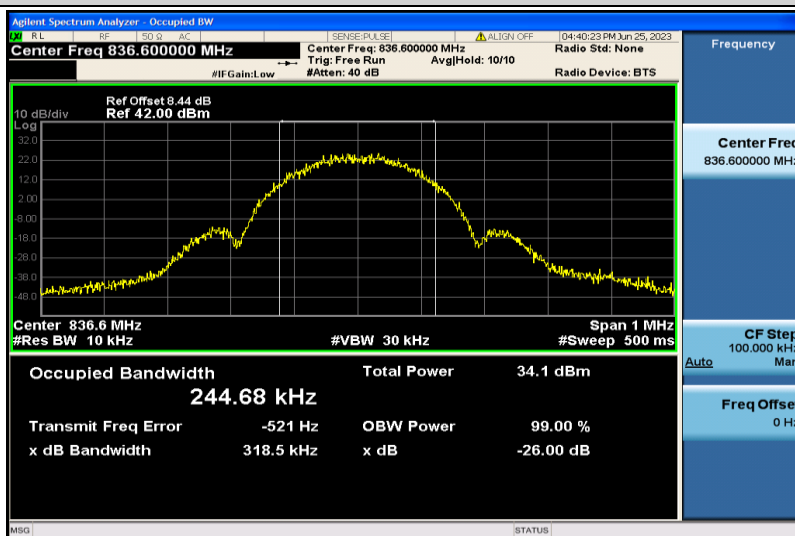
Test Graphs



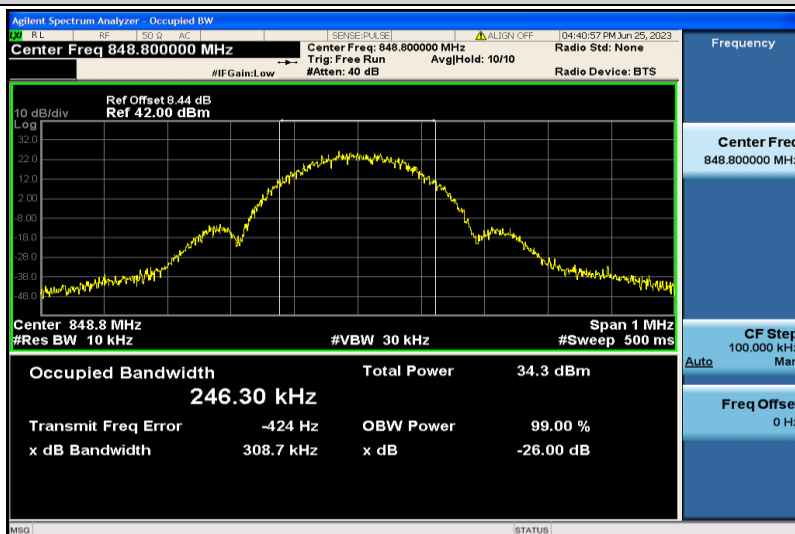
EGPRS850-251



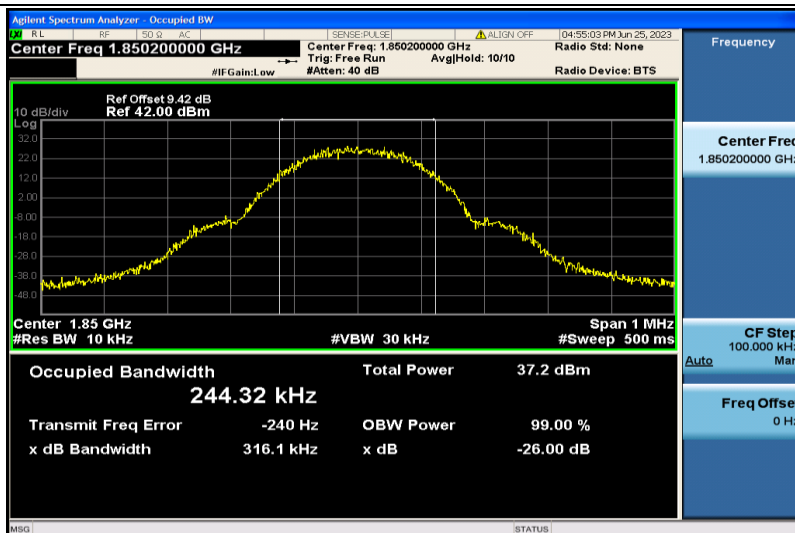
EGPRS850-128



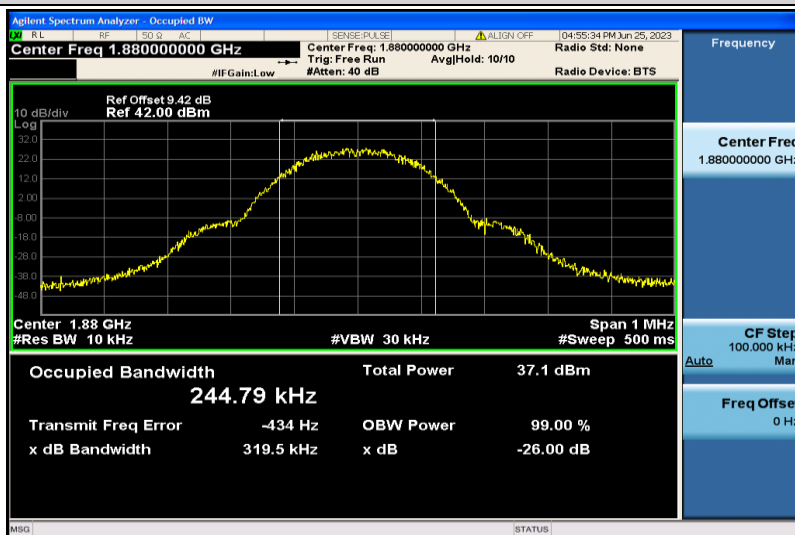
EGPRS850-190



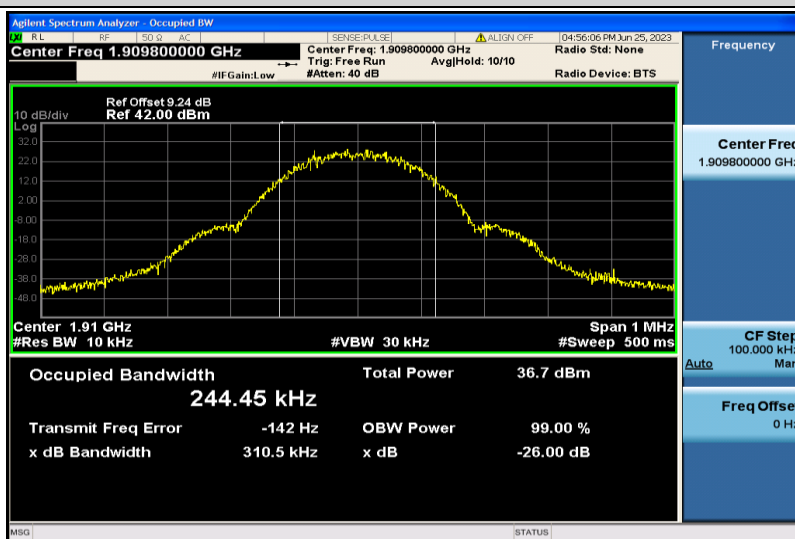
EGPRS850-251



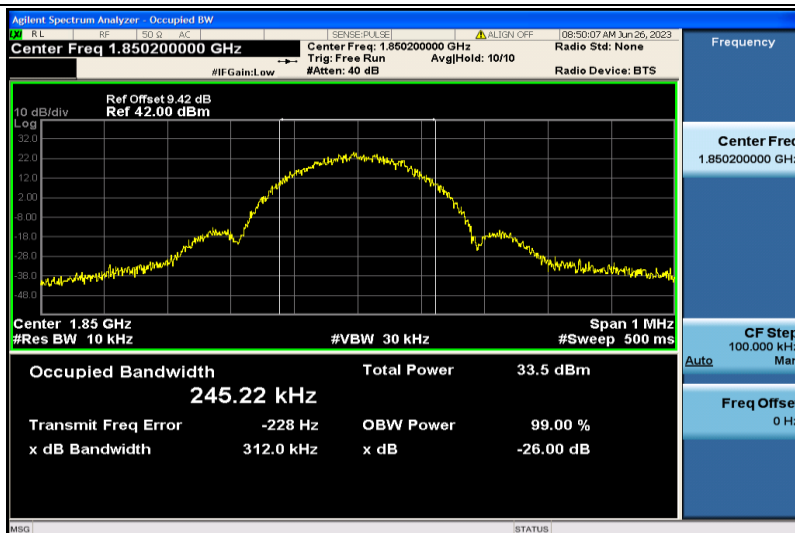
EGPRS1900-512



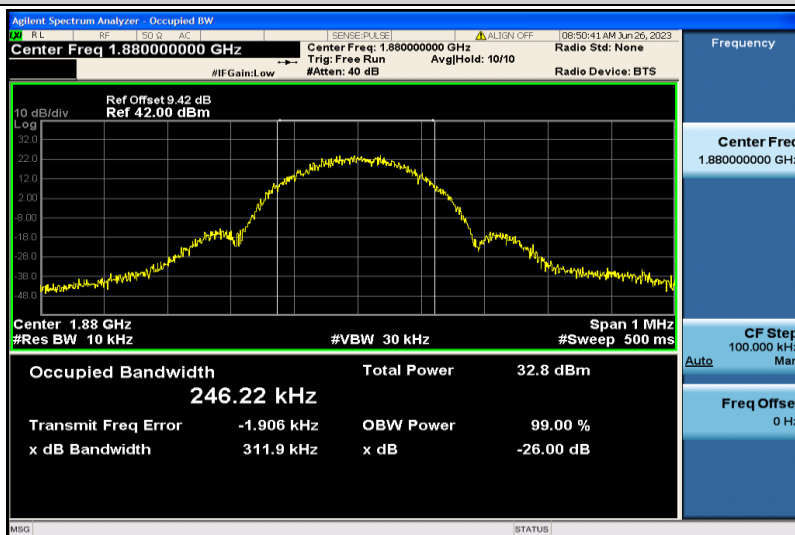
EGPRS1900-661



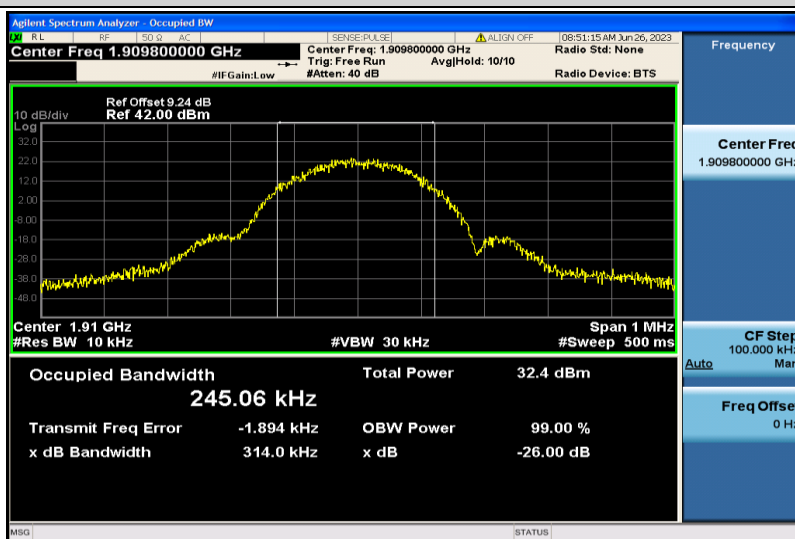
EGPRS1900-810



EGPRS1900-512



EGPRS1900-661



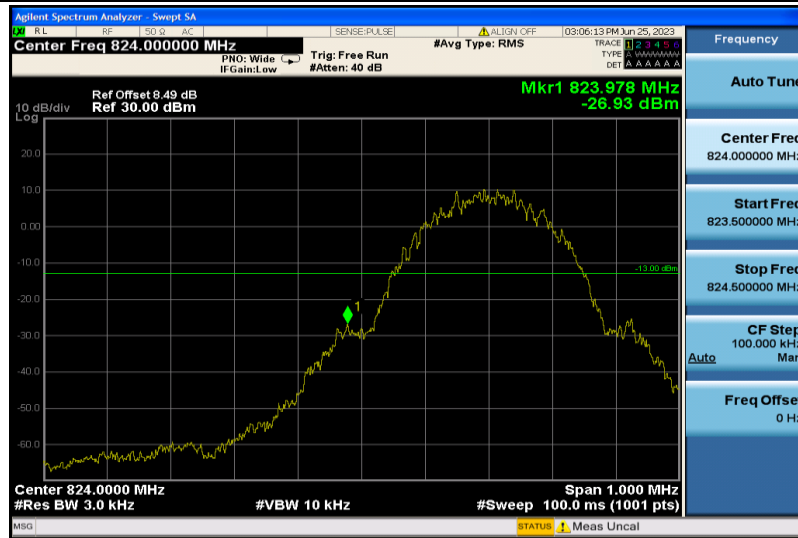
EGPRS1900-810

8.4 Appendix D: Band Edge

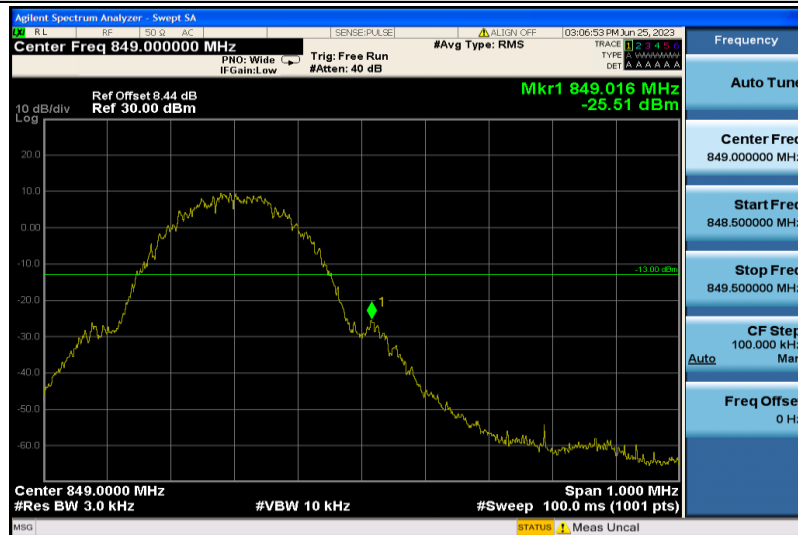
Test Result

Band	Channel	Value(dBm)	Limit(dBm)	Verdict
EGPRS850	128	-26.93	-13	PASS
EGPRS850	251	-25.51	-13	PASS
EGPRS850	128	-32.39	-13	PASS
EGPRS850	251	-33.66	-13	PASS
EGPRS1900	512	-29.83	-13	PASS
EGPRS1900	810	-29.53	-13	PASS
EGPRS1900	512	-33.95	-13	PASS
EGPRS1900	810	-35.62	-13	PASS

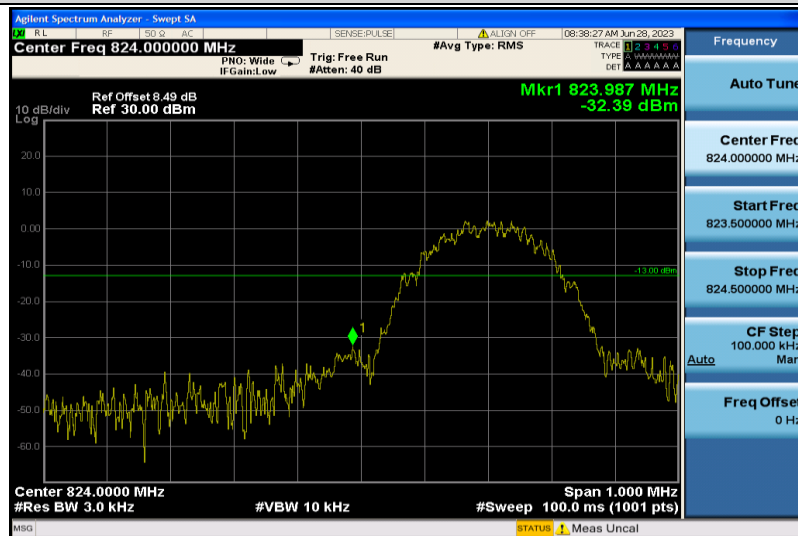
Test Graphs



EGPRS850-128



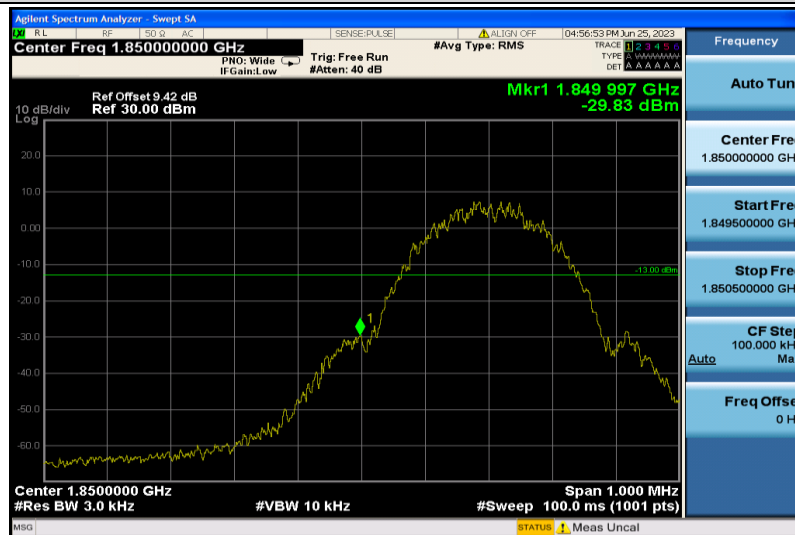
EGPRS850-251



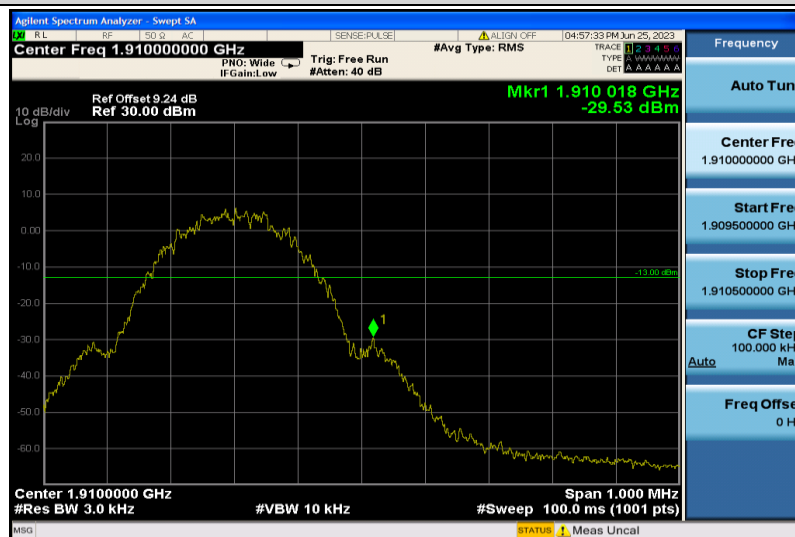
EGPRS850-128



EGPRS850-251



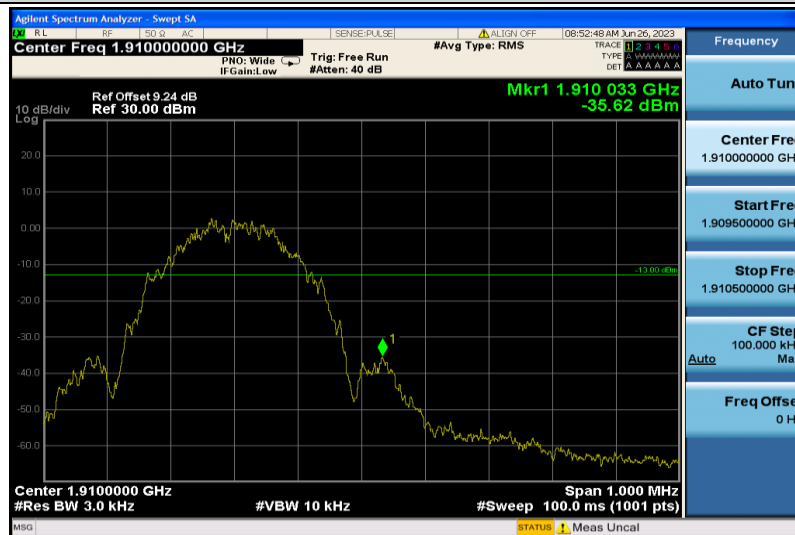
EGPRS1900-512



EGPRS1900-810



EGPRS1900-512



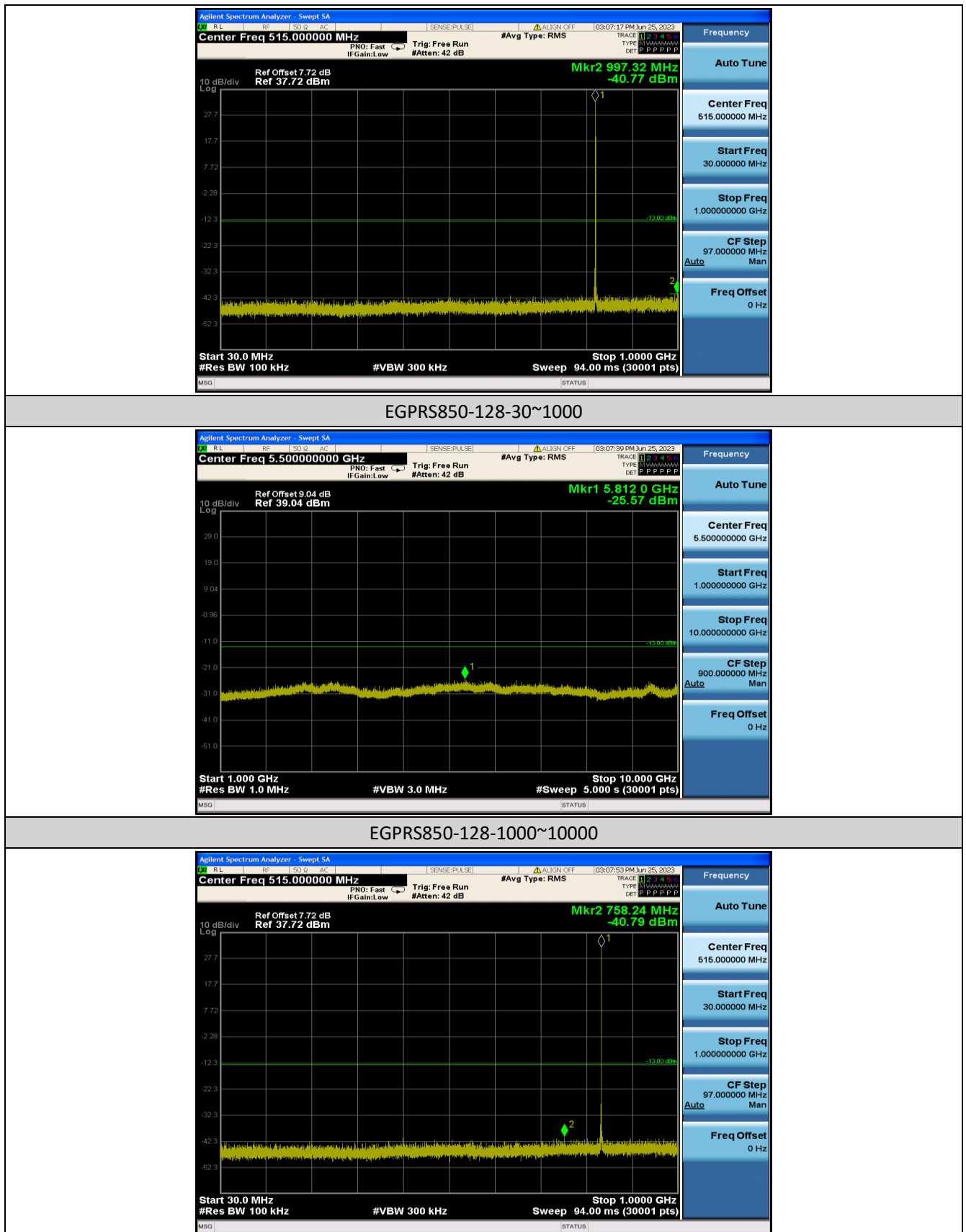
EGPRS1900-810

8.5 Appendix E: Conducted Spurious Emission

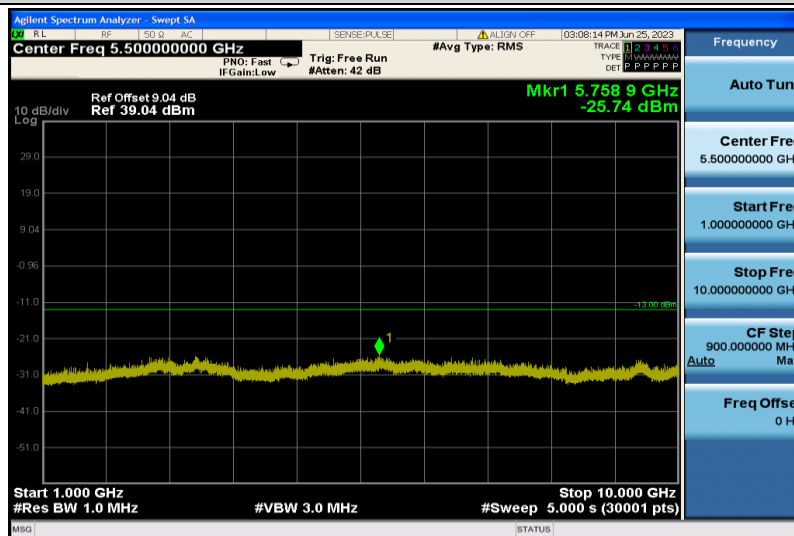
Test Result

Band	Channel	Frequency Range(Mhz)	Value(dBm)	Limit(dBm)	Verdict
EGPRS850	128	30~1000	-40.77	-13	PASS
EGPRS850	128	1000~10000	-25.57	-13	PASS
EGPRS850	190	30~1000	-40.79	-13	PASS
EGPRS850	190	1000~10000	-25.74	-13	PASS
EGPRS850	251	30~1000	-40.72	-13	PASS
EGPRS850	251	1000~10000	-25.80	-13	PASS
EGPRS850	128	30~1000	-38.98	-13	PASS
EGPRS850	128	1000~10000	-25.66	-13	PASS
EGPRS850	190	30~1000	-39.84	-13	PASS
EGPRS850	190	1000~10000	-25.42	-13	PASS
EGPRS850	251	30~1000	-40.09	-13	PASS
EGPRS850	251	1000~10000	-25.03	-13	PASS
EGPRS1900	512	30~1000	-40.11	-13	PASS
EGPRS1900	512	1000~20000	-18.73	-13	PASS
EGPRS1900	661	30~1000	-40.37	-13	PASS
EGPRS1900	661	1000~20000	-19.40	-13	PASS
EGPRS1900	810	30~1000	-40.27	-13	PASS
EGPRS1900	810	1000~20000	-19.44	-13	PASS
EGPRS1900	512	30~1000	-40.85	-13	PASS
EGPRS1900	512	1000~20000	-19.40	-13	PASS
EGPRS1900	661	30~1000	-40.89	-13	PASS
EGPRS1900	661	1000~20000	-19.05	-13	PASS
EGPRS1900	810	30~1000	-41.04	-13	PASS
EGPRS1900	810	1000~20000	-19.77	-13	PASS

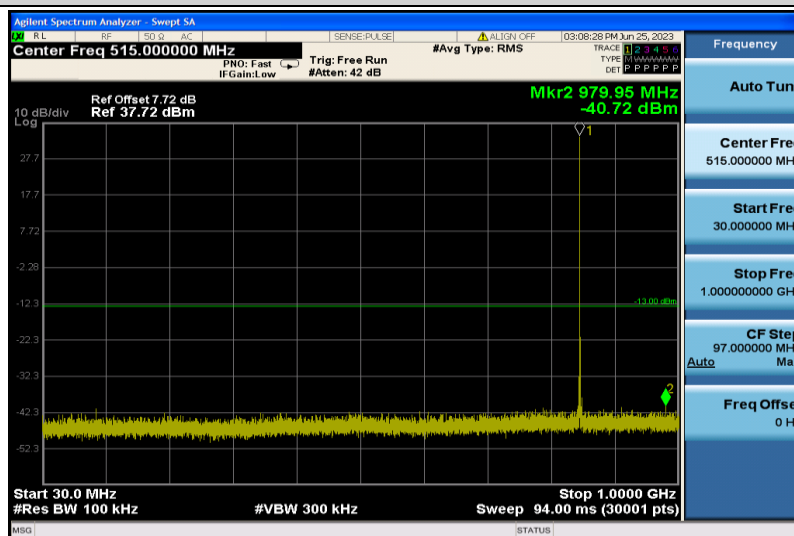
Test Graphs



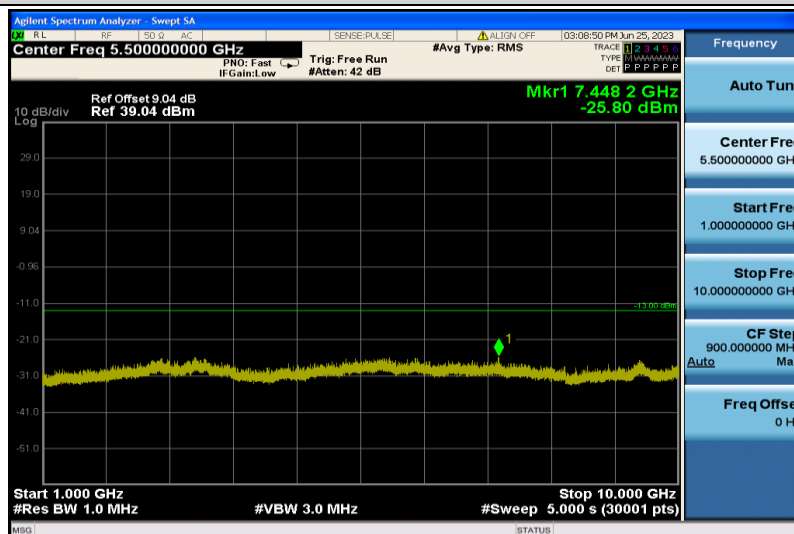
EGPRS850-190-30~1000



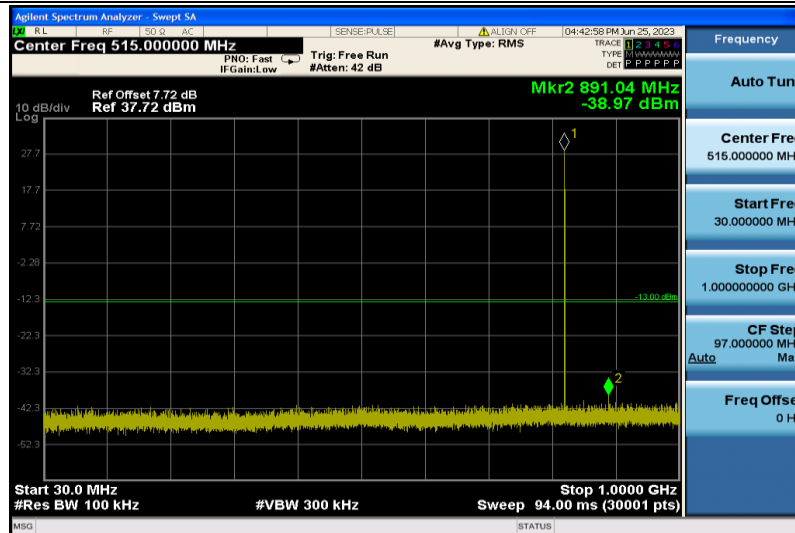
EGPRS850-190-1000~10000



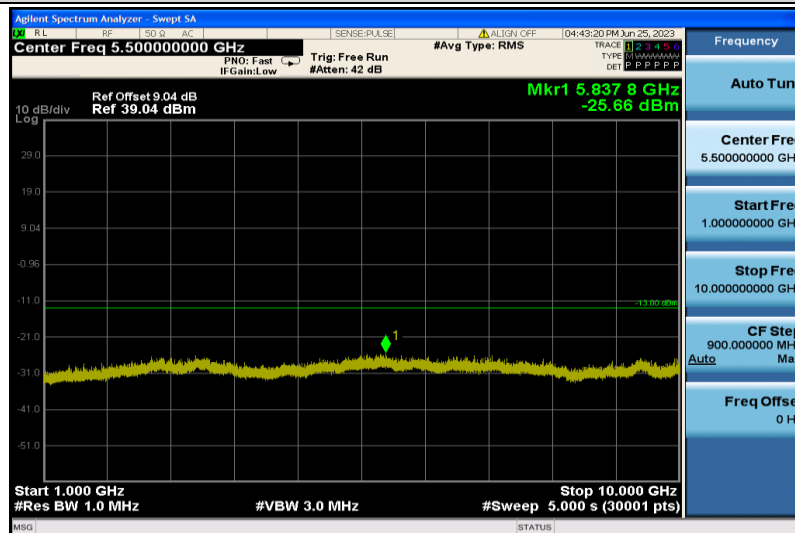
EGPRS850-251-30~1000



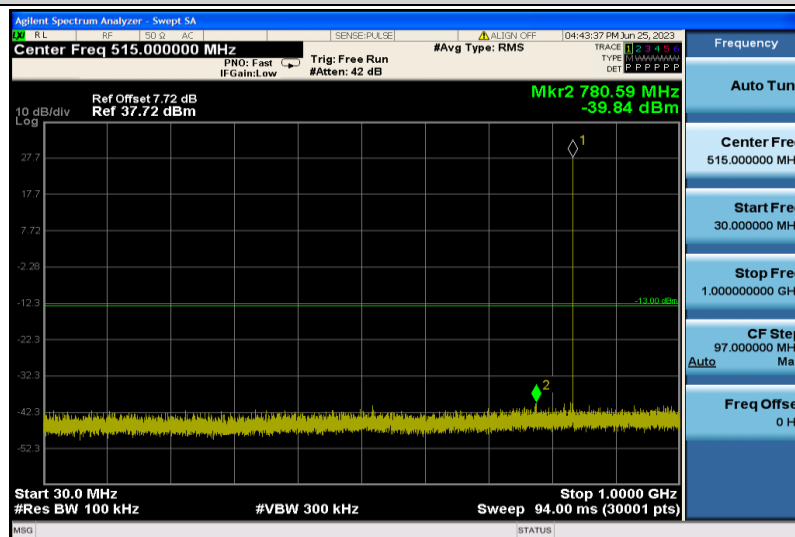
EGPRS850-251-1000~10000



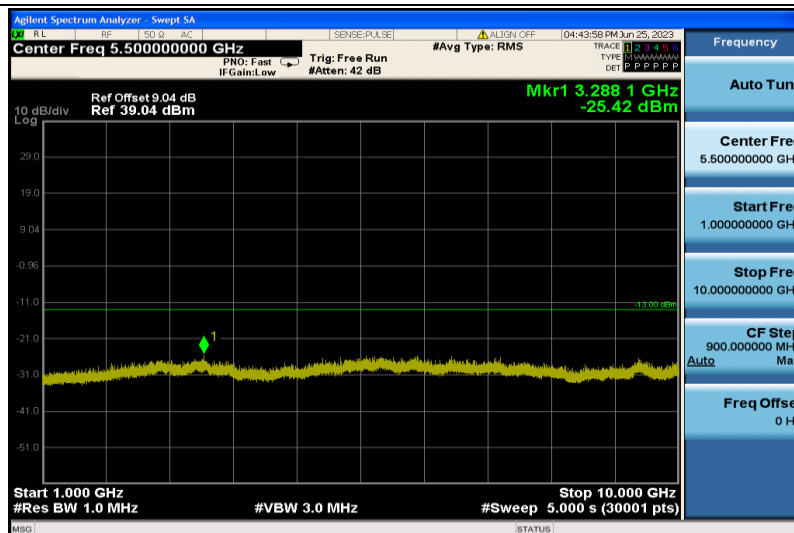
EGPRS850-128-30~1000



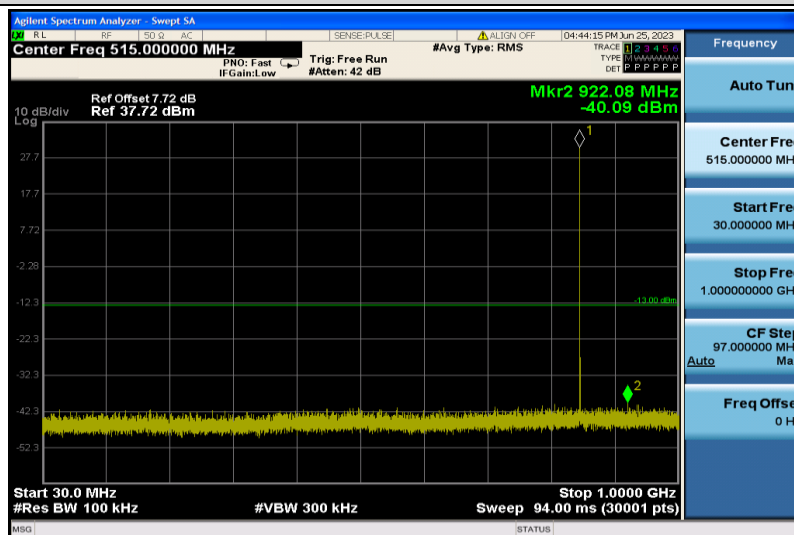
EGPRS850-128-1000~10000



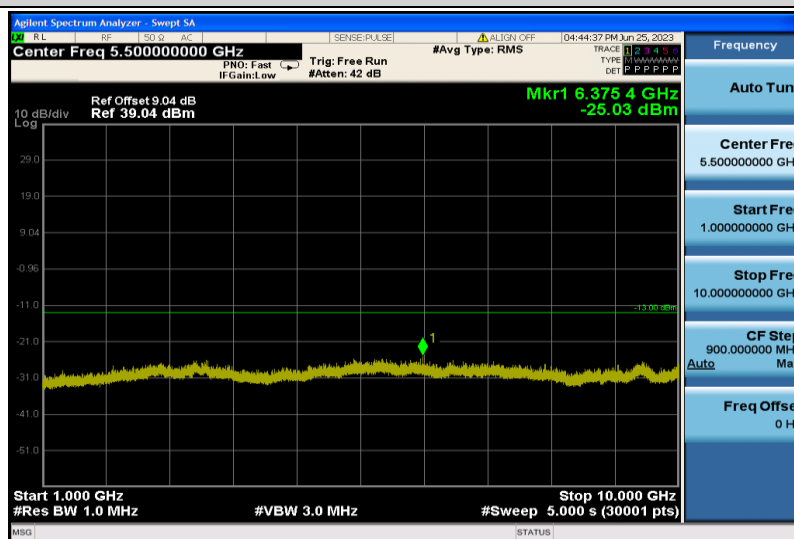
EGPRS850-190-30~1000



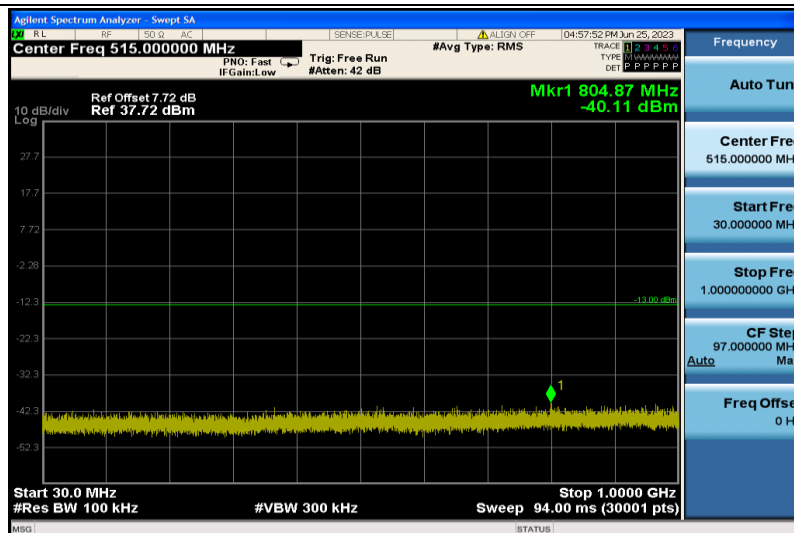
EGPRS850-190-1000~10000



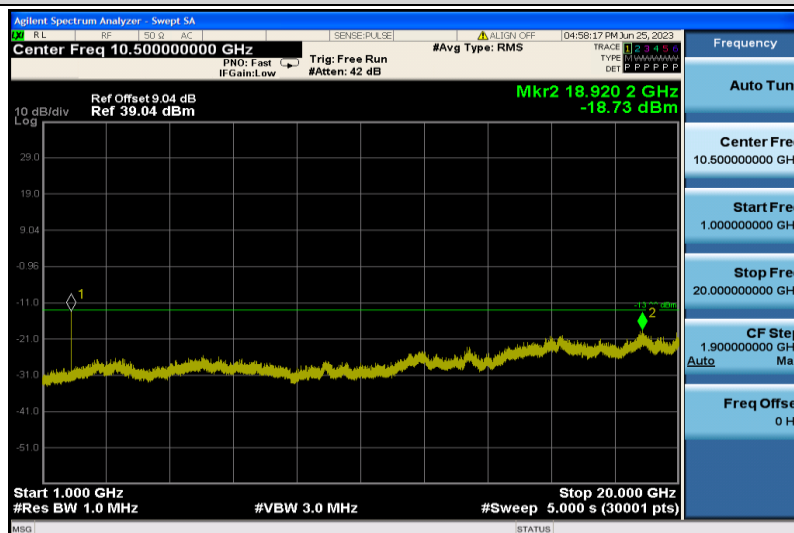
EGPRS850-251-30~1000



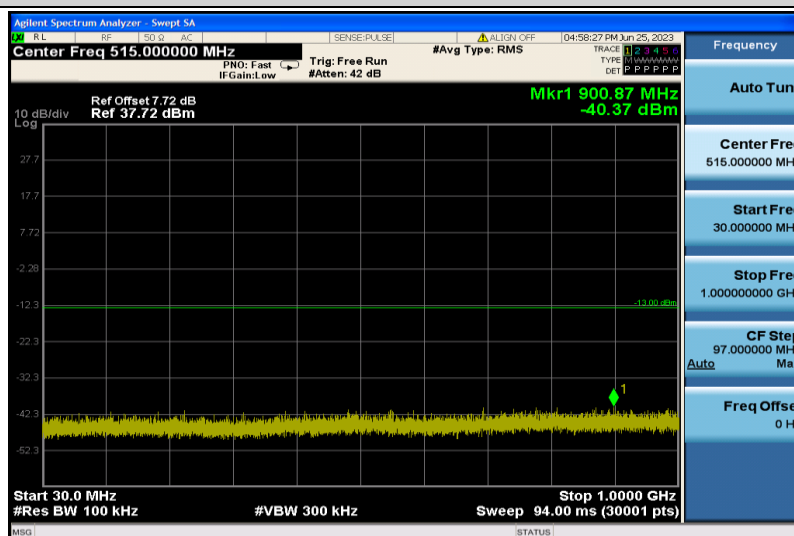
EGPRS850-251-1000~10000



EGPRS1900-512-30~1000



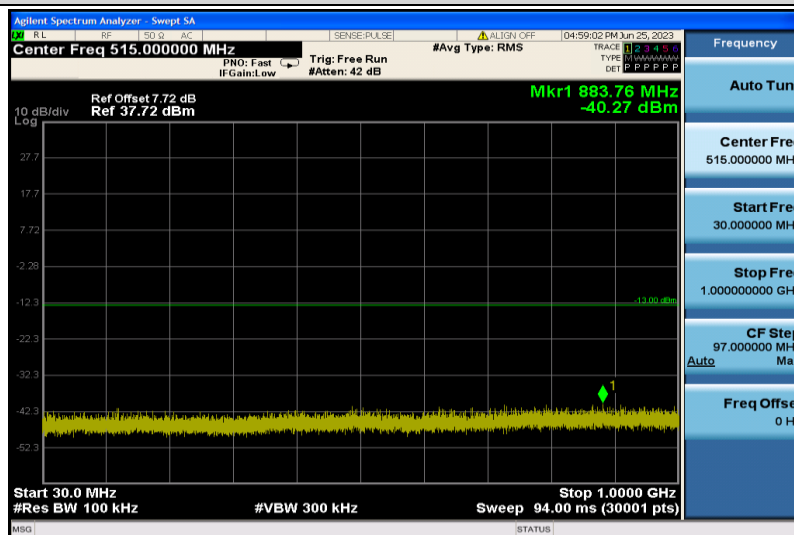
EGPRS1900-512-1000~20000



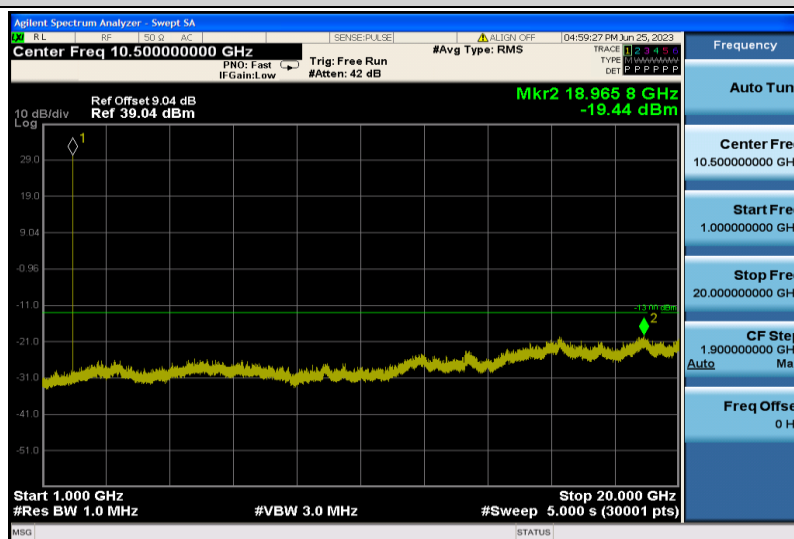
EGPRS1900-661-30~1000



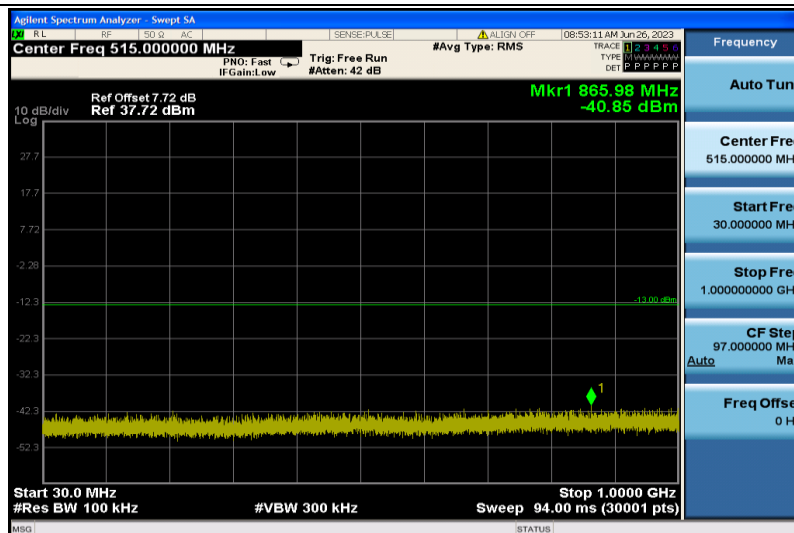
EGPRS1900-661-1000~20000



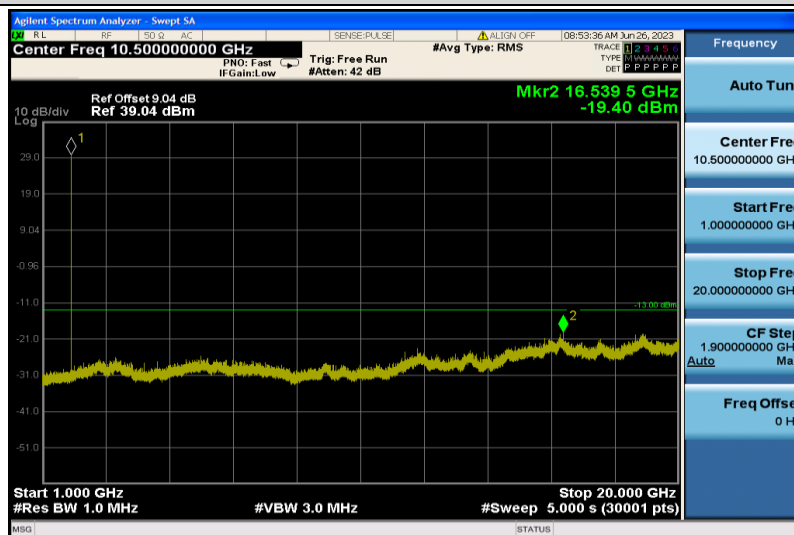
EGPRS1900-810-30~1000



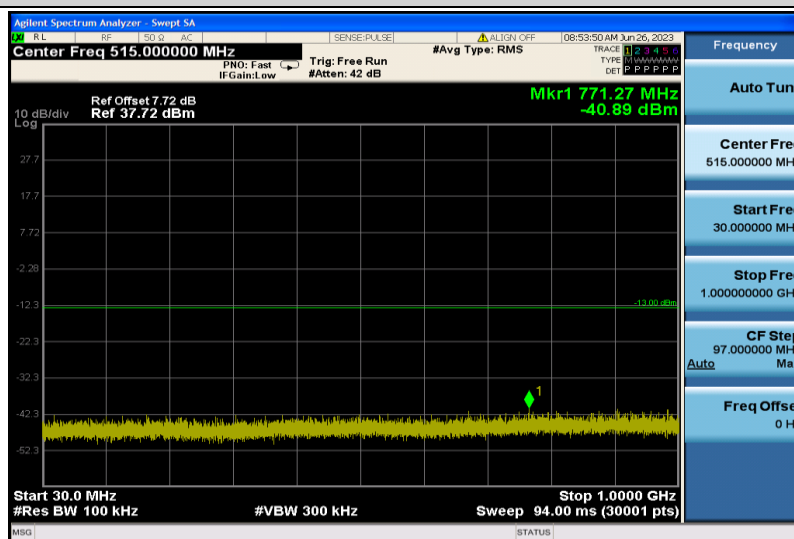
EGPRS1900-810-1000~20000



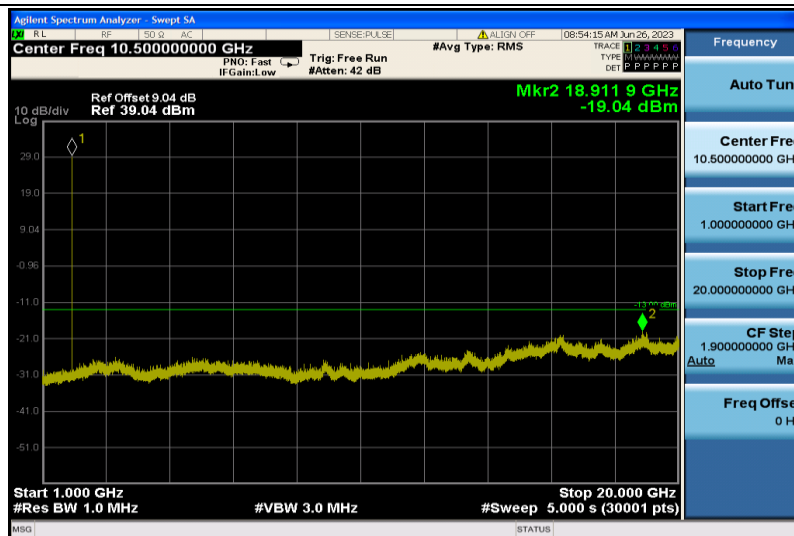
EGPRS1900-512-30~1000



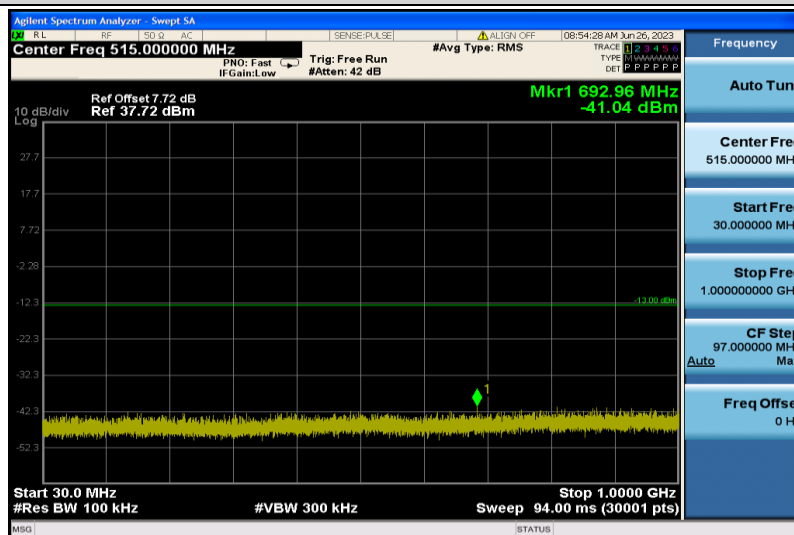
EGPRS1900-512-1000~20000



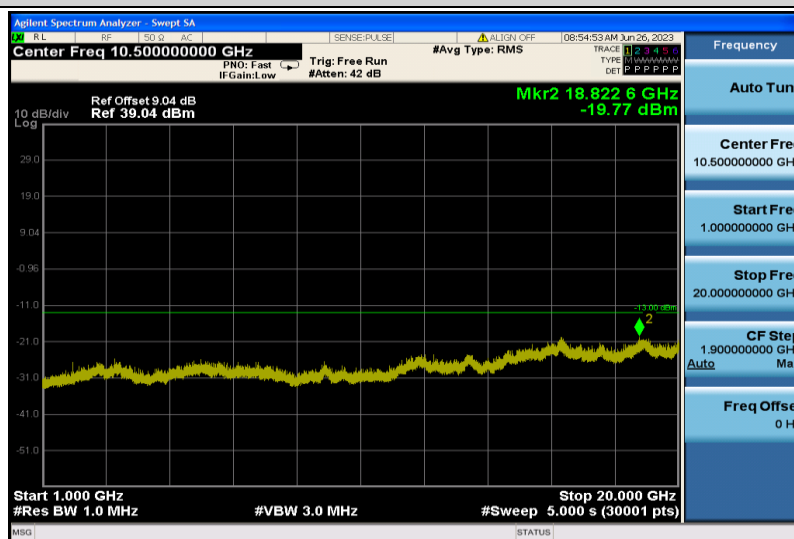
EGPRS1900-661-30~1000



EGPRS1900-661-1000~20000



EGPRS1900-810-30~1000



EGPRS1900-810-1000~20000

8.6 Appendix F: Frequency Stability

Test Result

Voltage							
Band	Channel	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
EGPRS850	128	VL	TN	7.97	0.009670	2.5	PASS
EGPRS850	128	VN	TN	13.59	0.016489	2.5	PASS
EGPRS850	128	VH	TN	10.30	0.012497	2.5	PASS
EGPRS850	190	VL	TN	14.98	0.017906	2.5	PASS
EGPRS850	190	VN	TN	15.95	0.019065	2.5	PASS
EGPRS850	190	VH	TN	12.11	0.014475	2.5	PASS
EGPRS850	251	VL	TN	17.98	0.021183	2.5	PASS
EGPRS850	251	VN	TN	15.30	0.018025	2.5	PASS
EGPRS850	251	VH	TN	15.43	0.018179	2.5	PASS
EGPRS850	128	VL	TN	26.54	0.032201	2.5	PASS
EGPRS850	128	VN	TN	27.51	0.033378	2.5	PASS
EGPRS850	128	VH	TN	32.12	0.038971	2.5	PASS
EGPRS850	190	VL	TN	20.76	0.024815	2.5	PASS
EGPRS850	190	VN	TN	20.95	0.025042	2.5	PASS
EGPRS850	190	VH	TN	25.73	0.030755	2.5	PASS
EGPRS850	251	VL	TN	22.83	0.026897	2.5	PASS
EGPRS850	251	VN	TN	24.02	0.028299	2.5	PASS
EGPRS850	251	VH	TN	22.05	0.025978	2.5	PASS
EGPRS1900	512	VL	TN	16.92	0.009145	2.5	PASS
EGPRS1900	512	VN	TN	13.50	0.007297	2.5	PASS
EGPRS1900	512	VH	TN	19.89	0.010750	2.5	PASS
EGPRS1900	661	VL	TN	33.00	0.017553	2.5	PASS
EGPRS1900	661	VN	TN	8.85	0.004707	2.5	PASS
EGPRS1900	661	VH	TN	10.01	0.005324	2.5	PASS
EGPRS1900	810	VL	TN	16.18	0.008472	2.5	PASS
EGPRS1900	810	VN	TN	30.32	0.015876	2.5	PASS
EGPRS1900	810	VH	TN	18.53	0.009703	2.5	PASS
EGPRS1900	512	VL	TN	11.88	0.006421	2.5	PASS
EGPRS1900	512	VN	TN	20.92	0.011307	2.5	PASS
EGPRS1900	512	VH	TN	23.47	0.012685	2.5	PASS
EGPRS1900	661	VL	TN	14.01	0.007452	2.5	PASS
EGPRS1900	661	VN	TN	2.62	0.001394	2.5	PASS
EGPRS1900	661	VH	TN	9.81	0.005218	2.5	PASS
EGPRS1900	810	VL	TN	15.88	0.008315	2.5	PASS
EGPRS1900	810	VN	TN	19.95	0.010446	2.5	PASS

EGPRS1900	810	VH	TN	15.92	0.008336	2.5	PASS
-----------	-----	----	----	-------	----------	-----	------

Temperature							
Band	Channel	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
EGPRS850	128	VN	-30	17.60	0.021354	2.5	PASS
EGPRS850	128	VN	-20	12.79	0.015518	2.5	PASS
EGPRS850	128	VN	-10	12.72	0.015433	2.5	PASS
EGPRS850	128	VN	0	19.44	0.023587	2.5	PASS
EGPRS850	128	VN	10	15.95	0.019352	2.5	PASS
EGPRS850	128	VN	20	14.75	0.017896	2.5	PASS
EGPRS850	128	VN	30	19.50	0.023659	2.5	PASS
EGPRS850	128	VN	40	10.40	0.012618	2.5	PASS
EGPRS850	128	VN	50	12.59	0.015275	2.5	PASS
EGPRS850	190	VN	-30	15.50	0.018527	2.5	PASS
EGPRS850	190	VN	-20	18.14	0.021683	2.5	PASS
EGPRS850	190	VN	-10	19.53	0.023344	2.5	PASS
EGPRS850	190	VN	0	16.69	0.019950	2.5	PASS
EGPRS850	190	VN	10	18.79	0.022460	2.5	PASS
EGPRS850	190	VN	20	15.66	0.018719	2.5	PASS
EGPRS850	190	VN	30	19.73	0.023584	2.5	PASS
EGPRS850	190	VN	40	18.66	0.022305	2.5	PASS
EGPRS850	190	VN	50	12.37	0.014786	2.5	PASS
EGPRS850	251	VN	-30	13.08	0.015410	2.5	PASS
EGPRS850	251	VN	-20	17.18	0.020240	2.5	PASS
EGPRS850	251	VN	-10	7.49	0.008824	2.5	PASS
EGPRS850	251	VN	0	16.56	0.019510	2.5	PASS
EGPRS850	251	VN	10	8.30	0.009779	2.5	PASS
EGPRS850	251	VN	20	18.60	0.021913	2.5	PASS
EGPRS850	251	VN	30	7.49	0.008824	2.5	PASS
EGPRS850	251	VN	40	11.72	0.013808	2.5	PASS
EGPRS850	251	VN	50	15.69	0.018485	2.5	PASS
EGPRS850	128	VN	-30	40.03	0.048568	2.5	PASS
EGPRS850	128	VN	-20	12.40	0.015045	2.5	PASS
EGPRS850	128	VN	-10	17.69	0.021463	2.5	PASS
EGPRS850	128	VN	0	15.11	0.018333	2.5	PASS
EGPRS850	128	VN	10	19.92	0.024169	2.5	PASS
EGPRS850	128	VN	20	16.08	0.019510	2.5	PASS
EGPRS850	128	VN	30	20.92	0.025382	2.5	PASS
EGPRS850	128	VN	40	20.47	0.024836	2.5	PASS
EGPRS850	128	VN	50	21.76	0.026401	2.5	PASS
EGPRS850	190	VN	-30	22.12	0.026440	2.5	PASS
EGPRS850	190	VN	-20	27.93	0.033385	2.5	PASS

EGPRS850	190	VN	-10	26.41	0.031568	2.5	PASS
EGPRS850	190	VN	0	26.47	0.031640	2.5	PASS
EGPRS850	190	VN	10	22.54	0.026942	2.5	PASS
EGPRS850	190	VN	20	24.44	0.029213	2.5	PASS
EGPRS850	190	VN	30	27.80	0.033230	2.5	PASS
EGPRS850	190	VN	40	24.60	0.029405	2.5	PASS
EGPRS850	190	VN	50	30.74	0.036744	2.5	PASS
EGPRS850	251	VN	-30	21.28	0.025071	2.5	PASS
EGPRS850	251	VN	-20	22.05	0.025978	2.5	PASS
EGPRS850	251	VN	-10	21.34	0.025141	2.5	PASS
EGPRS850	251	VN	0	26.57	0.031303	2.5	PASS
EGPRS850	251	VN	10	25.22	0.029713	2.5	PASS
EGPRS850	251	VN	20	22.99	0.027085	2.5	PASS
EGPRS850	251	VN	30	25.12	0.029595	2.5	PASS
EGPRS850	251	VN	40	28.73	0.033848	2.5	PASS
EGPRS850	251	VN	50	26.70	0.031456	2.5	PASS
EGPRS1900	512	VN	-30	22.70	0.012269	2.5	PASS
EGPRS1900	512	VN	-20	20.40	0.011026	2.5	PASS
EGPRS1900	512	VN	-10	20.89	0.011291	2.5	PASS
EGPRS1900	512	VN	0	33.38	0.018041	2.5	PASS
EGPRS1900	512	VN	10	32.06	0.017328	2.5	PASS
EGPRS1900	512	VN	20	29.41	0.015896	2.5	PASS
EGPRS1900	512	VN	30	21.60	0.011674	2.5	PASS
EGPRS1900	512	VN	40	23.76	0.012842	2.5	PASS
EGPRS1900	512	VN	50	29.09	0.015723	2.5	PASS
EGPRS1900	661	VN	-30	14.33	0.007622	2.5	PASS
EGPRS1900	661	VN	-20	24.63	0.013101	2.5	PASS
EGPRS1900	661	VN	-10	8.56	0.004553	2.5	PASS
EGPRS1900	661	VN	0	9.59	0.005101	2.5	PASS
EGPRS1900	661	VN	10	13.20	0.007021	2.5	PASS
EGPRS1900	661	VN	20	26.05	0.013856	2.5	PASS
EGPRS1900	661	VN	30	11.82	0.006287	2.5	PASS
EGPRS1900	661	VN	40	19.60	0.010426	2.5	PASS
EGPRS1900	661	VN	50	16.53	0.008793	2.5	PASS
EGPRS1900	810	VN	-30	23.50	0.012305	2.5	PASS
EGPRS1900	810	VN	-20	29.48	0.015436	2.5	PASS
EGPRS1900	810	VN	-10	30.22	0.015824	2.5	PASS
EGPRS1900	810	VN	0	19.15	0.010027	2.5	PASS
EGPRS1900	810	VN	10	23.31	0.012205	2.5	PASS
EGPRS1900	810	VN	20	30.61	0.016028	2.5	PASS
EGPRS1900	810	VN	30	28.25	0.014792	2.5	PASS
EGPRS1900	810	VN	40	18.82	0.009854	2.5	PASS

EGPRS1900	810	VN	50	32.45	0.016991	2.5	PASS
EGPRS1900	512	VN	-30	27.83	0.015042	2.5	PASS
EGPRS1900	512	VN	-20	19.34	0.010453	2.5	PASS
EGPRS1900	512	VN	-10	8.07	0.004362	2.5	PASS
EGPRS1900	512	VN	0	7.52	0.004064	2.5	PASS
EGPRS1900	512	VN	10	24.02	0.012982	2.5	PASS
EGPRS1900	512	VN	20	23.47	0.012685	2.5	PASS
EGPRS1900	512	VN	30	14.11	0.007626	2.5	PASS
EGPRS1900	512	VN	40	19.50	0.010539	2.5	PASS
EGPRS1900	512	VN	50	17.47	0.009442	2.5	PASS
EGPRS1900	661	VN	-30	6.10	0.003245	2.5	PASS
EGPRS1900	661	VN	-20	18.69	0.009941	2.5	PASS
EGPRS1900	661	VN	-10	5.71	0.003037	2.5	PASS
EGPRS1900	661	VN	0	15.14	0.008053	2.5	PASS
EGPRS1900	661	VN	10	9.75	0.005186	2.5	PASS
EGPRS1900	661	VN	20	6.88	0.003660	2.5	PASS
EGPRS1900	661	VN	30	17.85	0.009495	2.5	PASS
EGPRS1900	661	VN	40	20.05	0.010665	2.5	PASS
EGPRS1900	661	VN	50	13.75	0.007314	2.5	PASS
EGPRS1900	810	VN	-30	13.69	0.007168	2.5	PASS
EGPRS1900	810	VN	-20	20.11	0.010530	2.5	PASS
EGPRS1900	810	VN	-10	17.82	0.009331	2.5	PASS
EGPRS1900	810	VN	0	20.28	0.010619	2.5	PASS
EGPRS1900	810	VN	10	19.11	0.010006	2.5	PASS
EGPRS1900	810	VN	20	24.70	0.012933	2.5	PASS
EGPRS1900	810	VN	30	22.41	0.011734	2.5	PASS
EGPRS1900	810	VN	40	23.92	0.012525	2.5	PASS
EGPRS1900	810	VN	50	11.88	0.006221	2.5	PASS

8.7 Appendix G: ERP and EIRP

Test Result

Band	Mode	Conducted Power (dBm)	Antenna Gain (dBi)	ERP		Limit (W)	Verdict
				(dBm)	(W)		
GSM850	EGPRS (GMSK)	32.19	-3.00	27.04	0.5058	7	PASS
	EGPRS (8PSK)	26.29	-3.00	21.14	0.1300	7	PASS

Band	Mode	Conducted Power (dBm)	Antenna Gain (dBi)	EIRP		Limit (W)	Verdict
				(dBm)	(W)		
GSM1900	EGPRS (GMSK)	30.66	-3.00	27.66	0.5834	2	PASS
	EGPRS (8PSK)	26.63	-3.00	23.63	0.2307	2	PASS

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