

Appendix A: Effective (Isotropic) Radiated Power Output Data

Test Result

Band	Channel	PCL	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
GSM850	128	5	33.59	25.10	38.45	PASS
GSM850	190	5	33.89	25.40	38.45	PASS
GSM850	251	5	33.57	25.08	38.45	PASS
GSM1900	512	0	31.13	28.01	33.00	PASS
GSM1900	661	0	31.33	28.21	33.00	PASS
GSM1900	810	0	31.22	28.10	33.00	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
GPRS850	128	5	1	33.56	25.07	38.45	PASS
GPRS850	128	5	2	32.37	23.88	38.45	PASS
GPRS850	128	5	3	30.02	21.53	38.45	PASS
GPRS850	128	5	4	28.62	20.13	38.45	PASS
GPRS850	190	5	1	33.83	25.34	38.45	PASS
GPRS850	190	5	2	32.71	24.22	38.45	PASS
GPRS850	190	5	3	30.36	21.87	38.45	PASS
GPRS850	190	5	4	28.98	20.49	38.45	PASS
GPRS850	251	5	1	33.48	24.99	38.45	PASS
GPRS850	251	5	2	32.26	23.77	38.45	PASS
GPRS850	251	5	3	29.93	21.44	38.45	PASS
GPRS850	251	5	4	28.53	20.04	38.45	PASS
GPRS1900	512	0	1	31.16	28.04	33.00	PASS
GPRS1900	512	0	2	30.36	27.24	33.00	PASS
GPRS1900	512	0	3	28.03	24.91	33.00	PASS
GPRS1900	512	0	4	26.18	23.06	33.00	PASS
GPRS1900	661	0	1	31.35	28.23	33.00	PASS
GPRS1900	661	0	2	30.59	27.47	33.00	PASS
GPRS1900	661	0	3	28.24	25.12	33.00	PASS
GPRS1900	661	0	4	26.47	23.35	33.00	PASS
GPRS1900	810	0	1	31.23	28.11	33.00	PASS
GPRS1900	810	0	2	30.44	27.32	33.00	PASS
GPRS1900	810	0	3	28.15	25.03	33.00	PASS
GPRS1900	810	0	4	26.44	23.32	33.00	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
EGPRS850	128	8	1	28.47	19.98	38.45	PASS
EGPRS850	128	8	2	27.22	18.73	38.45	PASS
EGPRS850	128	8	3	25.20	16.71	38.45	PASS
EGPRS850	128	8	4	23.98	15.49	38.45	PASS
EGPRS850	190	8	1	28.56	20.07	38.45	PASS
EGPRS850	190	8	2	27.39	18.9	38.45	PASS
EGPRS850	190	8	3	25.25	16.76	38.45	PASS
EGPRS850	190	8	4	24.11	15.62	38.45	PASS
EGPRS850	251	8	1	28.47	19.98	38.45	PASS
EGPRS850	251	8	2	27.28	18.79	38.45	PASS
EGPRS850	251	8	3	25.21	16.72	38.45	PASS
EGPRS850	251	8	4	23.99	15.5	38.45	PASS
EGPRS1900	512	2	1	27.51	24.39	33.00	PASS
EGPRS1900	512	2	2	26.35	23.23	33.00	PASS
EGPRS1900	512	2	3	24.18	21.06	33.00	PASS
EGPRS1900	512	2	4	22.96	19.84	33.00	PASS
EGPRS1900	661	2	1	27.97	24.85	33.00	PASS
EGPRS1900	661	2	2	26.84	23.72	33.00	PASS
EGPRS1900	661	2	3	24.74	21.62	33.00	PASS
EGPRS1900	661	2	4	23.49	20.37	33.00	PASS
EGPRS1900	810	2	1	28.03	24.91	33.00	PASS
EGPRS1900	810	2	2	26.92	23.8	33.00	PASS
EGPRS1900	810	2	3	24.79	21.67	33.00	PASS
EGPRS1900	810	2	4	23.58	20.46	33.00	PASS

Remark: EIRP (dBm) = Conducted power (dBm) + Antenna Gain (dBi). (For GSM1900)

ERP (dBm) = EIRP (dBm) - 2.15 (dB). (For GSM850)

Appendix B: Peak-to-Average Ratio(CCDF)

Test Result

Band	Channel	PCL	Result(dB)	Limit(dB)	Verdict
GSM850	190	5	2.73	13	PASS
EGPRS850	190	8	5.66	13	PASS
GSM1900	661	0	2.71	13	PASS
EGPRS1900	661	2	5.65	13	PASS

Remark: All channel and all modulation had been tested, but only the worst case data displayed in this report.

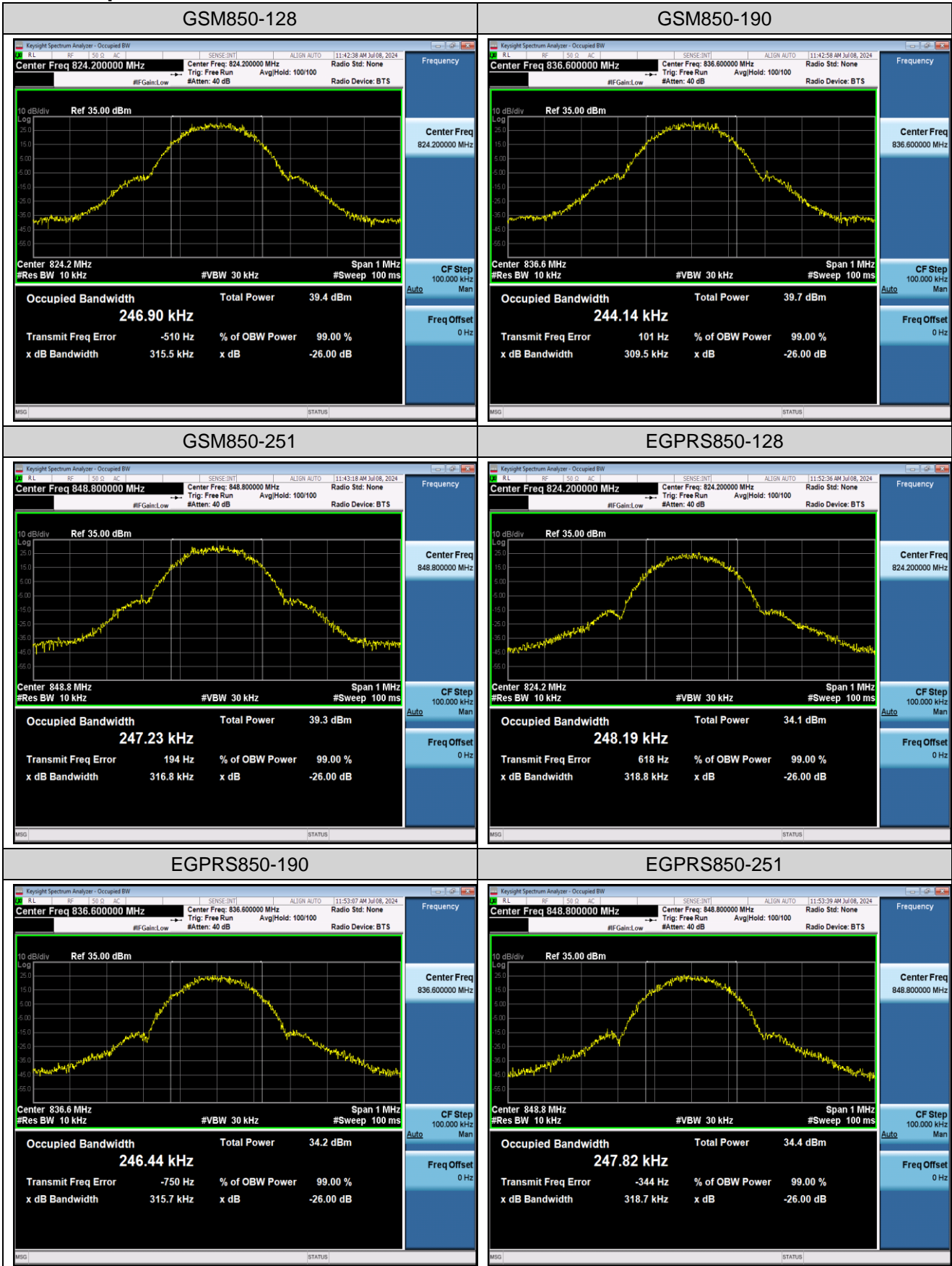
Test Graphs

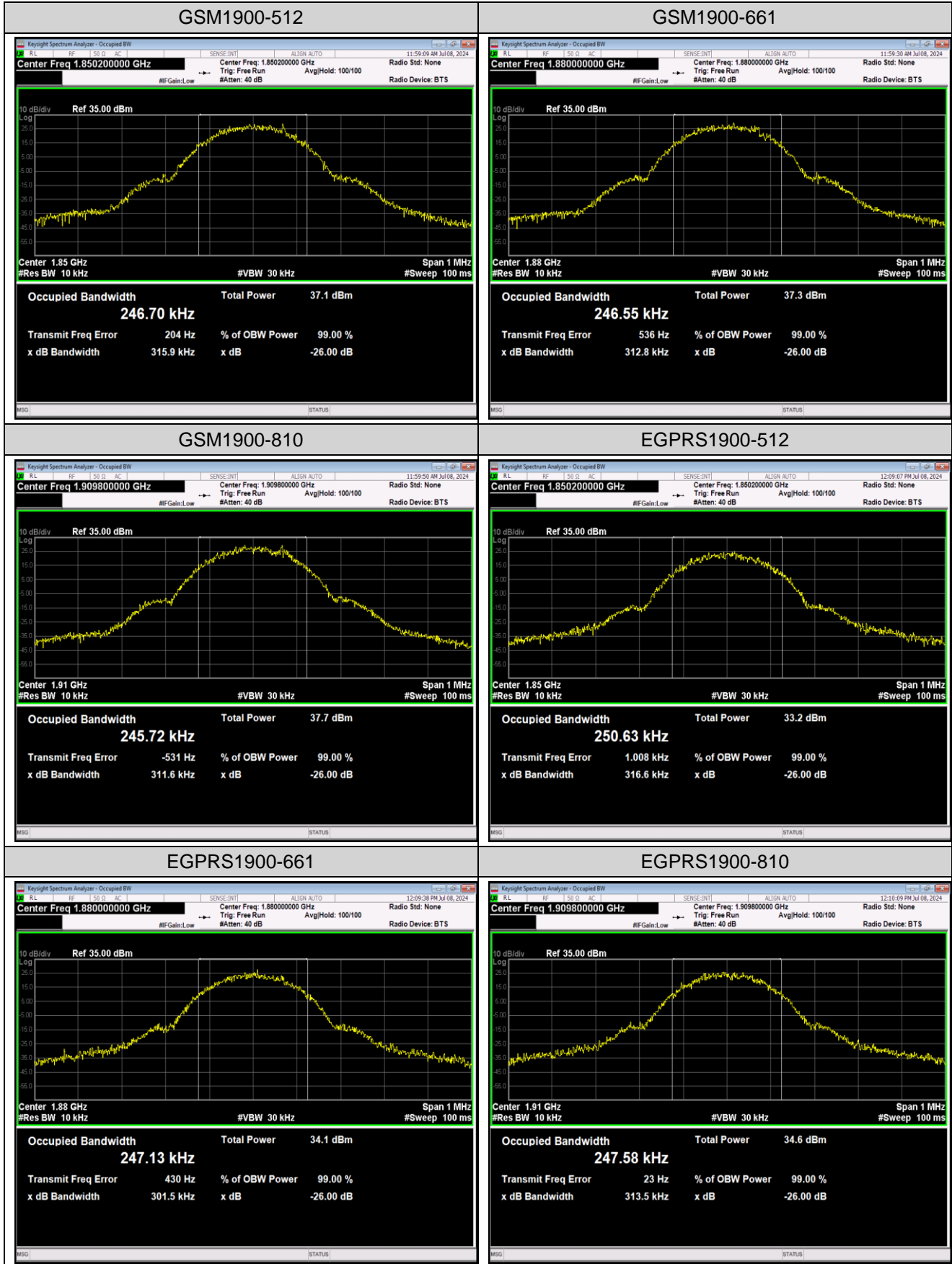


Appendix C: 26dB Bandwidth and Occupied Bandwidth**Test Result**

Band	Channel	PCL	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
GSM850	128	5	0.24690	0.3155	---	PASS
GSM850	190	5	0.24414	0.3095	---	PASS
GSM850	251	5	0.24723	0.3168	---	PASS
EGPRS850	128	8	0.24819	0.3188	---	PASS
EGPRS850	190	8	0.24644	0.3157	---	PASS
EGPRS850	251	8	0.24782	0.3187	---	PASS
GSM1900	512	0	0.24670	0.3159	---	PASS
GSM1900	661	0	0.24655	0.3128	---	PASS
GSM1900	810	0	0.24572	0.3116	---	PASS
EGPRS1900	512	2	0.25063	0.3166	---	PASS
EGPRS1900	661	2	0.24713	0.3015	---	PASS
EGPRS1900	810	2	0.24758	0.3135	---	PASS

Test Graphs

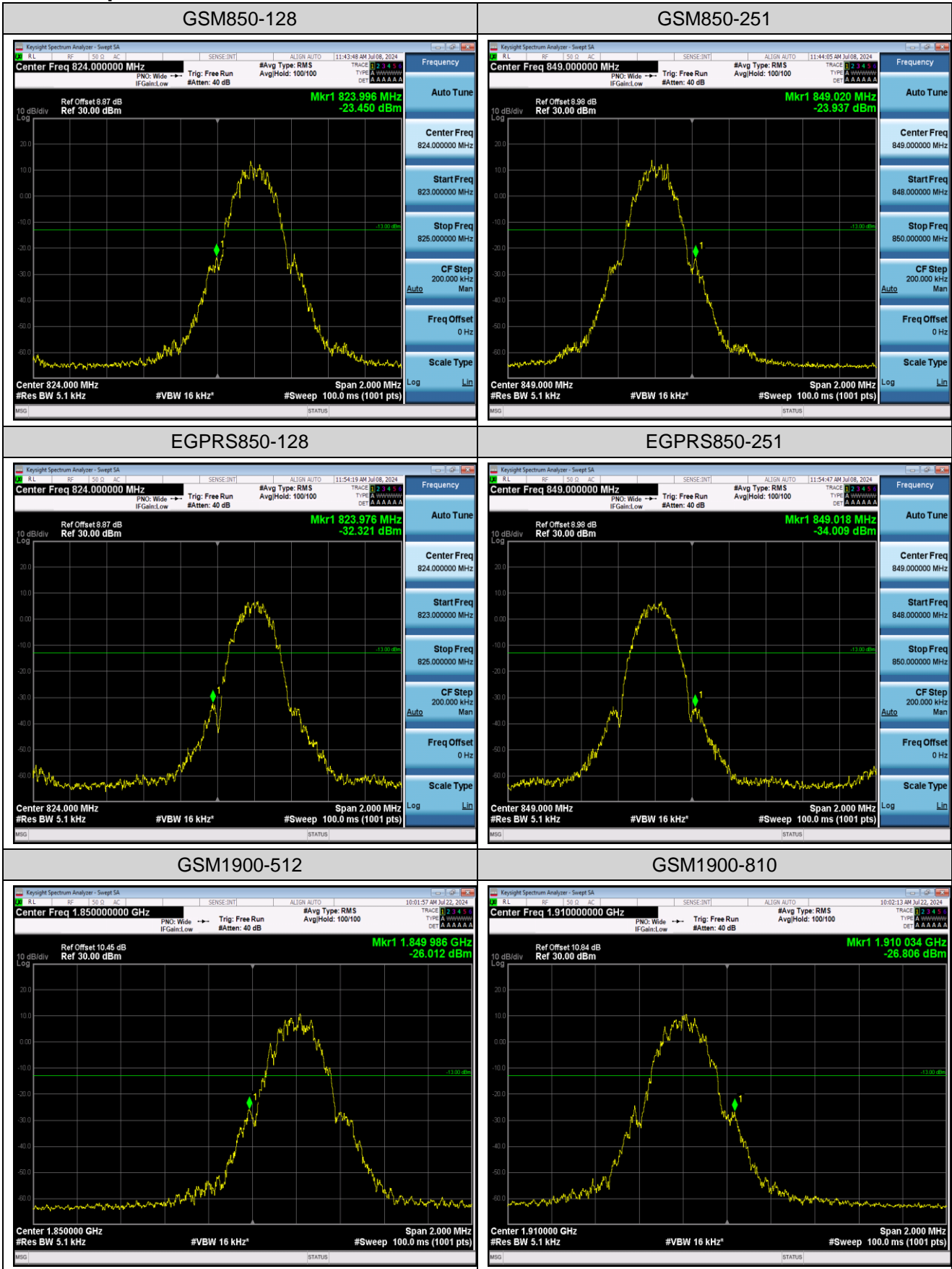


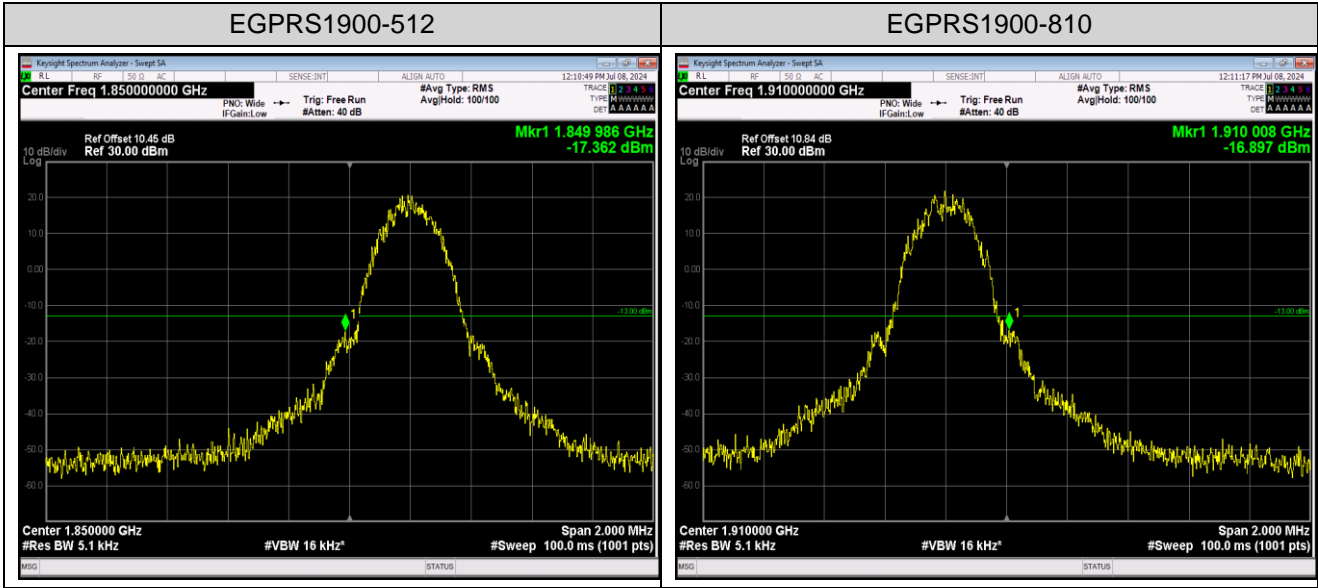


Appendix D: Band Edge**Test Result**

Band	Channel	PCL	Freq (MHz)	Result (dBm)	Limit(dBm)	Verdict
GSM850	128	5	824.00	-23.45	-13	PASS
GSM850	251	5	849.02	-23.94	-13	PASS
EGPRS850	128	8	823.98	-32.32	-13	PASS
EGPRS850	251	8	849.02	-34.01	-13	PASS
GSM1900	512	0	1849.99	-26.01	-13	PASS
GSM1900	810	0	1910.03	-26.81	-13	PASS
EGPRS1900	512	2	1849.99	-17.36	-13	PASS
EGPRS1900	810	2	1910.01	-16.90	-13	PASS

Test Graphs





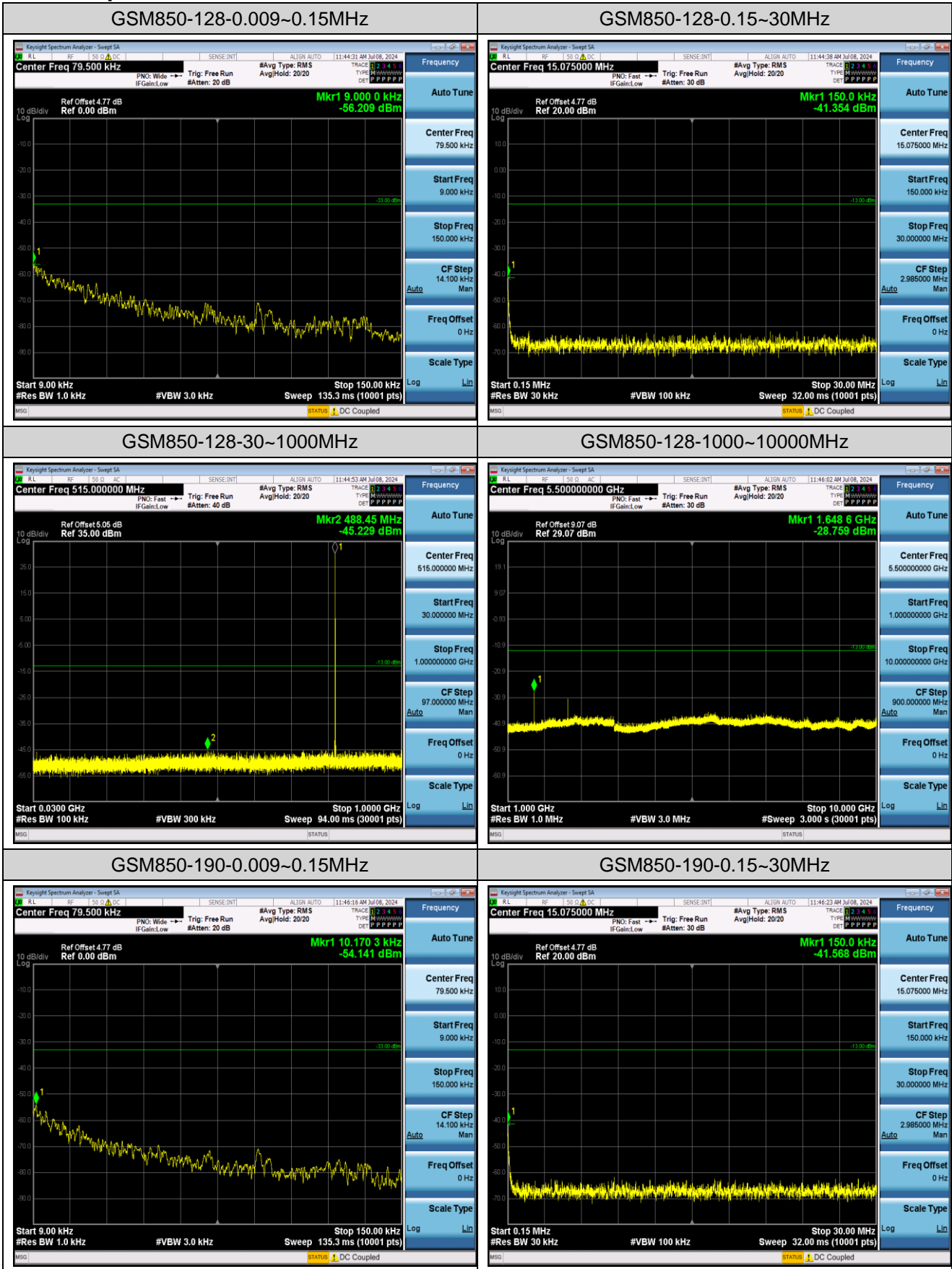
Appendix E: Conducted Spurious Emission

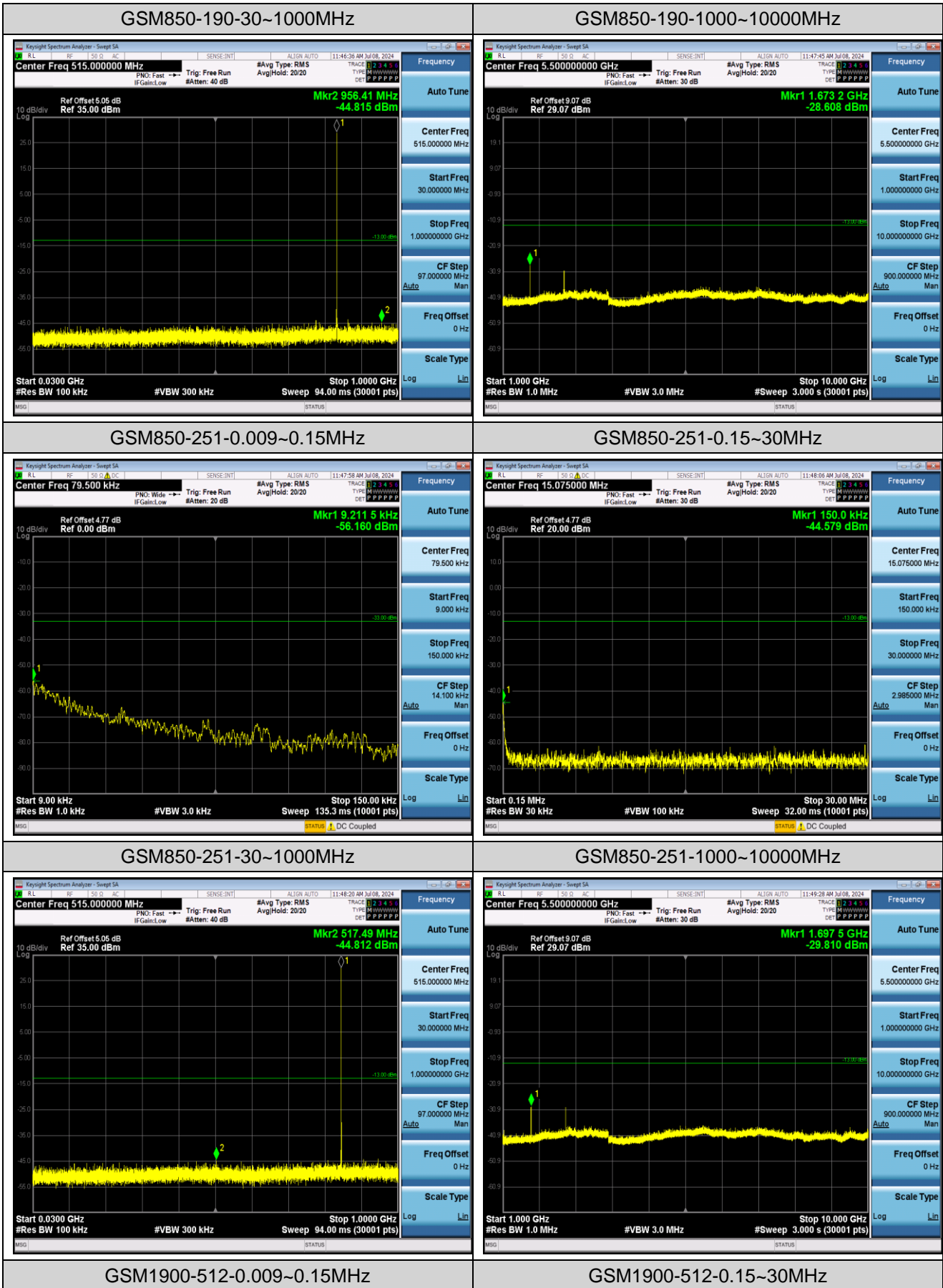
Test Result

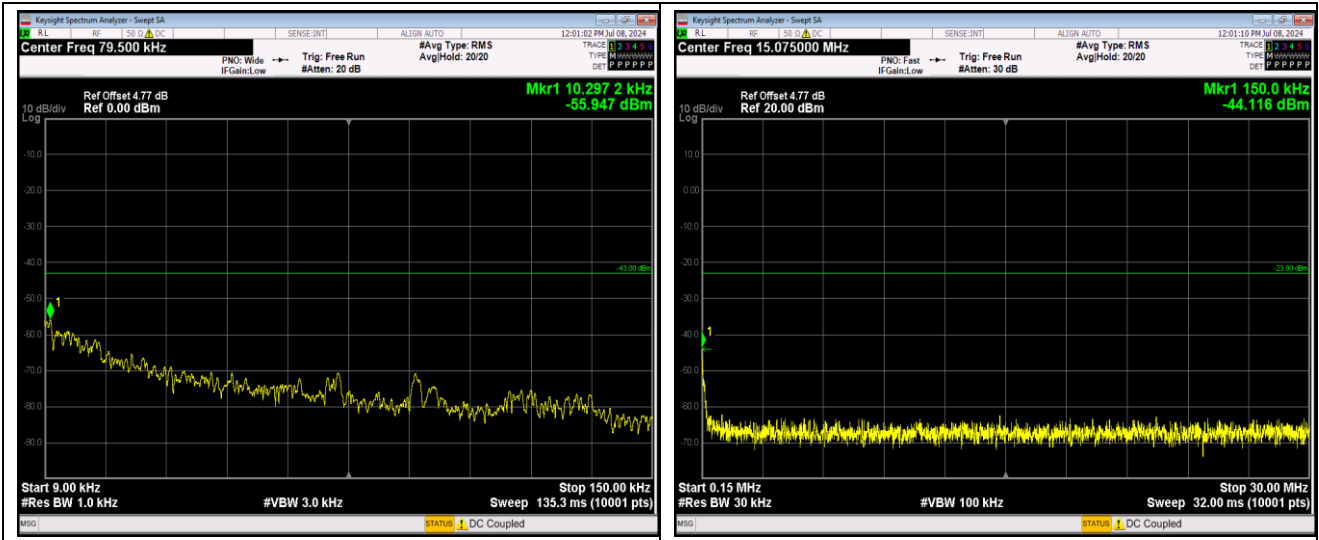
Band	Channel	PCL	Frequency Range(MHz)	Max.Freq. (MHz)	Result (dBm)	Limit (dBm)	Verdict
GSM850	128	5	0.009~0.15MHz	0.01	-56.21	-33	PASS
GSM850	128	5	0.15~30MHz	0.15	-41.35	-13	PASS
GSM850	128	5	30~1000MHz	488.45	-45.23	-13	PASS
GSM850	128	5	1000~10000MHz	1648.6	-28.76	-13	PASS
GSM850	190	5	0.009~0.15MHz	0.01	-54.14	-33	PASS
GSM850	190	5	0.15~30MHz	0.15	-41.57	-13	PASS
GSM850	190	5	30~1000MHz	956.41	-44.82	-13	PASS
GSM850	190	5	1000~10000MHz	1673.2	-28.61	-13	PASS
GSM850	251	5	0.009~0.15MHz	0.01	-56.16	-33	PASS
GSM850	251	5	0.15~30MHz	0.15	-44.58	-13	PASS
GSM850	251	5	30~1000MHz	517.49	-44.81	-13	PASS
GSM850	251	5	1000~10000MHz	1697.5	-29.81	-13	PASS
GSM1900	512	0	0.009~0.15MHz	0.01	-55.95	-43	PASS
GSM1900	512	0	0.15~30MHz	0.15	-44.12	-23	PASS
GSM1900	512	0	30~1000MHz	495.5	-45.47	-13	PASS
GSM1900	512	0	1000~18000MHz	16225.77	-22.27	-13	PASS
GSM1900	661	0	0.009~0.15MHz	0.01	-54.95	-43	PASS
GSM1900	661	0	0.15~30MHz	0.15	-44.11	-23	PASS
GSM1900	661	0	30~1000MHz	713.43	-45.53	-13	PASS
GSM1900	661	0	1000~18000MHz	16169.1	-21.98	-13	PASS
GSM1900	810	0	0.009~0.15MHz	0.01	-56.84	-43	PASS
GSM1900	810	0	0.15~30MHz	0.15	-42.39	-23	PASS
GSM1900	810	0	30~1000MHz	888.61	-45.36	-13	PASS
GSM1900	810	0	1000~18000MHz	16730.1	-22.27	-13	PASS

Remark: All channel and all modulation had been tested, but only the worst case data displayed in this report.

Test Graphs

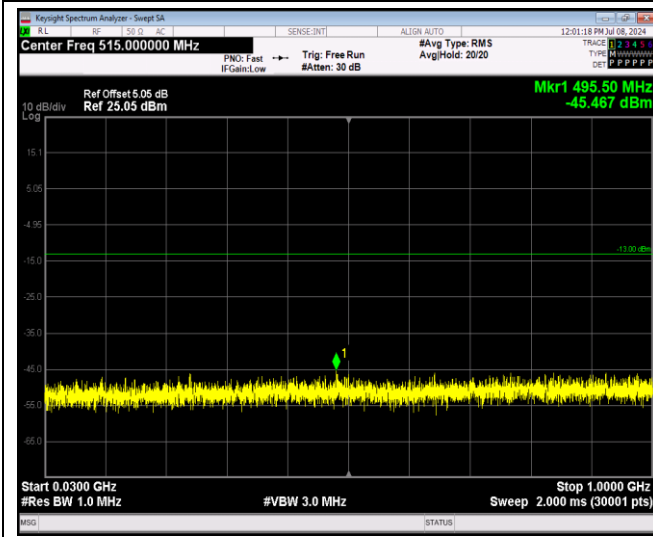




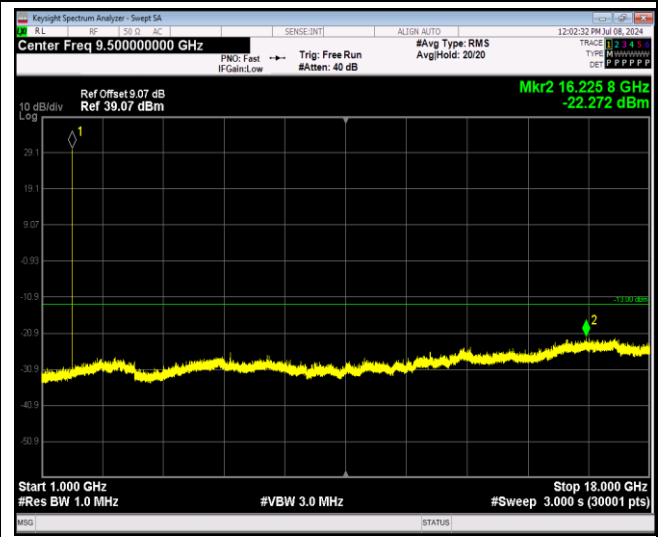


GSM1900-512-30~1000MHz

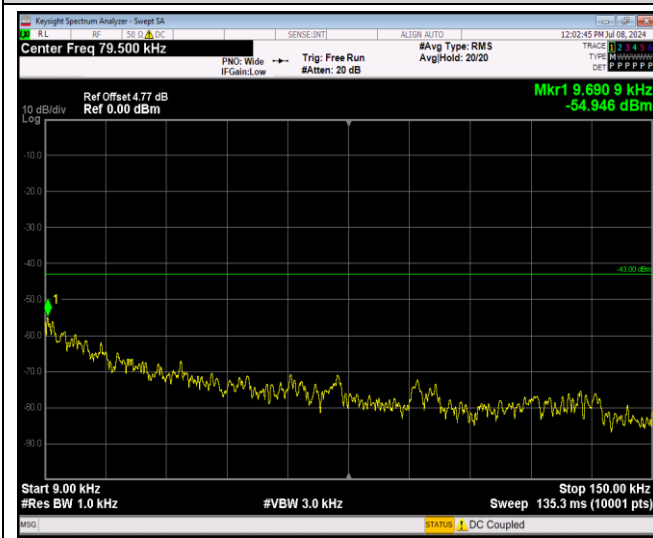
GSM1900-512-1000~18000MHz



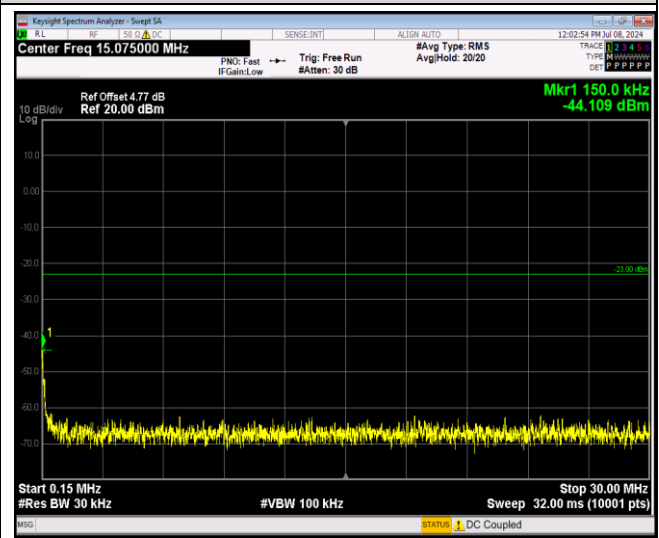
GSM1900-661-0.009~0.15MHz



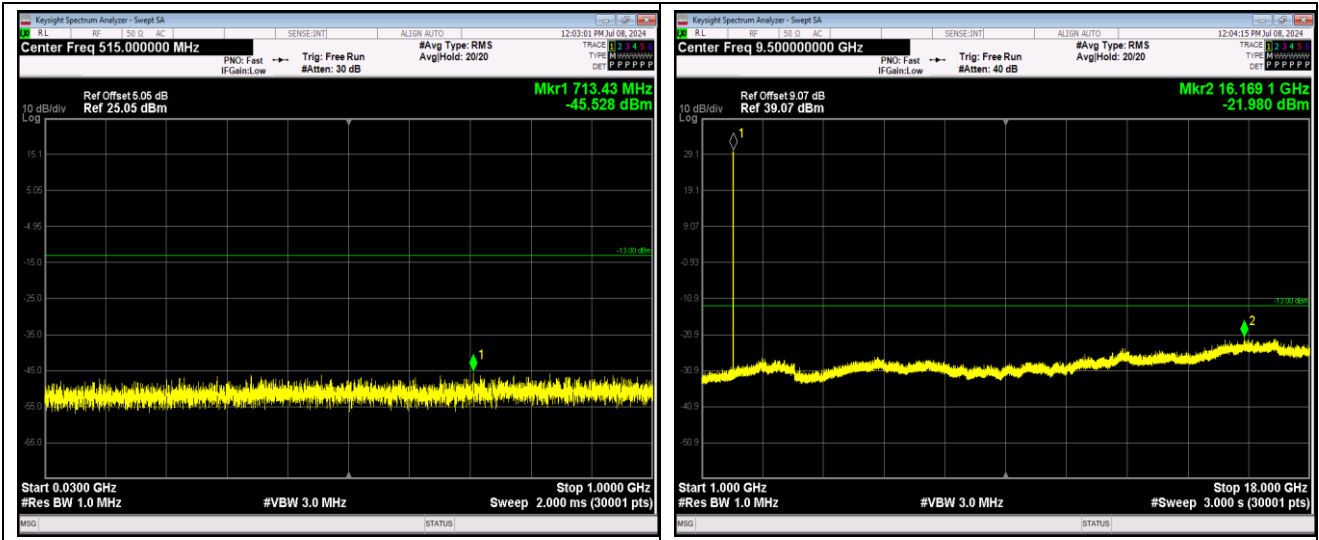
GSM1900-661-0.15~30MHz



GSM1900-661-30~1000MHz

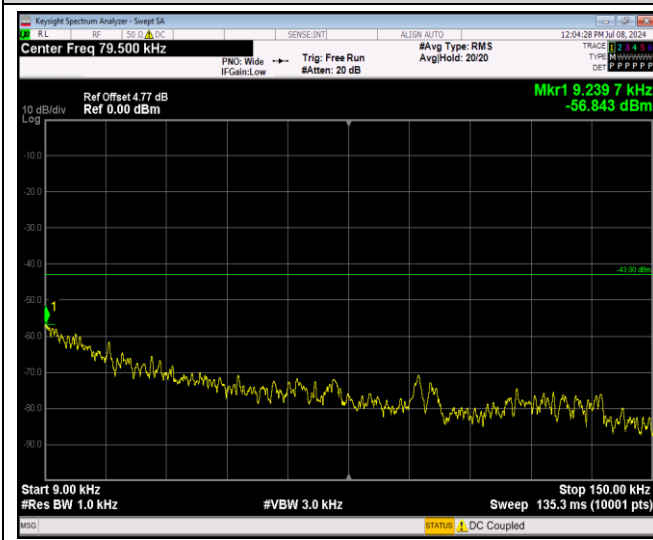


GSM1900-661-1000~18000MHz

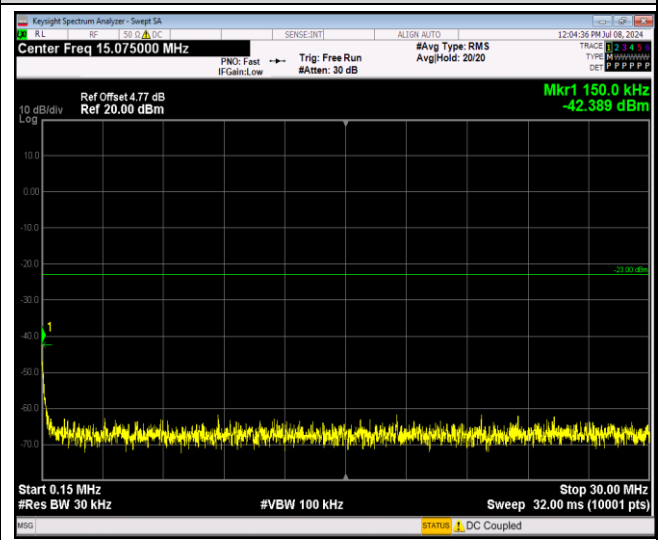


GSM1900-810-0.009~0.15MHz

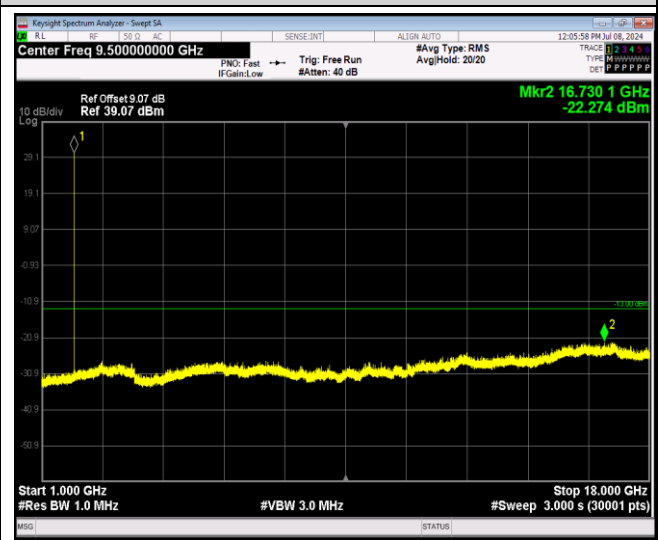
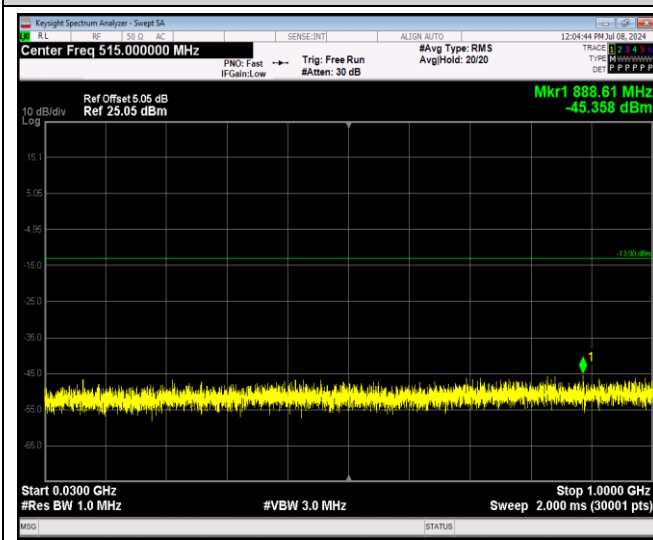
GSM1900-810-0.15~30MHz



GSM1900-810-30~1000MHz



GSM1900-810-1000~18000MHz



Appendix F: Frequency Stability

Test Result

Reference Frequency: GSM850 Middle channel=190 Frequency=836.6MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.87	-30	-8.27	-0.009885	±2.5	Pass
	-20	-5.29	-0.006323		
	-10	-3.84	-0.004590		
	0	-8.01	-0.009574		
	10	-3.68	-0.004399		
	20	-3.97	-0.004745		
	30	-5.46	-0.006526		
	40	-5.81	-0.006945		
	50	0.81	0.000968		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	-9.30	-0.011116	±2.5	Pass
	3.87	-6.49	-0.007758		
	4.45	-7.30	-0.008726		
<i>Remark: All channel had been tested, but only the worst case data displayed in this report.</i>					

Reference Frequency: EGPRS850 Middle channel=190 Frequency=836.6MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.87	-30	-6.65	-0.007949	±2.5	Pass
	-20	-4.29	-0.005128		
	-10	-8.62	-0.010304		
	0	-8.07	-0.009646		
	10	-2.49	-0.002976		
	20	-3.58	-0.004279		
	30	-4.07	-0.004865		
	40	-3.68	-0.004399		
	50	-0.13	-0.000155		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	-4.16	-0.004973	±2.5	Pass
	3.87	-11.04	-0.013196		
	4.45	-7.23	-0.008642		
<i>Remark: All channel had been tested, but only the worst case data displayed in this report.</i>					

Reference Frequency: PCS1900 Middle channel=661 Frequency=1880MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.87	-30	-21.08	-0.011213	Within authorized band for PCS 1900	Pass
	-20	-26.57	-0.014133		
	-10	-17.66	-0.009394		
	0	-23.02	-0.012245		
	10	-19.86	-0.010564		
	20	-14.88	-0.007915		
	30	-17.27	-0.009186		
	40	-14.50	-0.007713		
	50	-15.17	-0.008069		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	-29.09	-0.015473	Within authorized band for PCS 1900	Pass
	3.87	-31.90	-0.016968		
	4.45	-24.86	-0.013223		
<i>Remark: All channel had been tested, but only the worst case data displayed in this report.</i>					

Reference Frequency: EGPRS1900 Middle channel=661 Frequency=1880MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.87	-30	1.74	0.000926	Within authorized band for PCS 1900	Pass
	-20	-2.03	-0.001080		
	-10	-4.29	-0.002282		
	0	-0.39	-0.000207		
	10	-4.88	-0.002596		
	20	1.90	0.001011		
	30	5.84	0.003106		
	40	5.94	0.003160		
	50	5.49	0.002920		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	-6.78	-0.003606	Within authorized band for PCS 1900	Pass
	3.87	-9.43	-0.005016		
	4.45	-3.71	-0.001973		
<i>Remark: All channel had been tested, but only the worst case data displayed in this report.</i>					

Appendix G: Modulation Characteristics**Test Result**

Band	Channel	Result	Verdict
GSM850	190	PASS	PASS
EGPRS850	190	PASS	PASS
GSM1900	661	PASS	PASS
EGPRS1900	661	PASS	PASS

Remark: All channel had been tested, but only the worst case data displayed in this report.

Test Graphs

