

Appendix A: Effective (Isotropic) Radiated Power Output Data

Test Result

Band	Channel	PCL	Average Power (dBm)	Antenna Gain (dBi)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)
GSM850	128	5	33.90	-3.78	27.97	38.45
GSM850	190	5	33.81	-3.78	27.88	38.45
GSM850	251	5	33.79	-3.78	27.86	38.45
GSM1900	512	0	33.90	-1.02	32.88	33.00
GSM1900	661	0	33.81	-1.02	32.79	33.00
GSM1900	810	0	33.79	-1.02	32.77	33.00

Note: EIRP (dBm) = Average power (dBm) + Antenna Gain (dBi). (For GSM1900)
ERP (dBm) = EIRP (dBm) - 2.15 (dB). (For GSM850)

Band	Channel	PCL	Slot	Average Power (dBm)	Antenna Gain (dBi)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)
GPRS850	128	3	1	33.89	-3.78	27.96	38.45
GPRS850	128	3	2	31.83	-3.78	25.90	38.45
GPRS850	128	3	3	29.85	-3.78	23.92	38.45
GPRS850	128	3	4	27.73	-3.78	21.80	38.45
GPRS850	190	3	1	33.75	-3.78	27.82	38.45
GPRS850	190	3	2	31.69	-3.78	25.76	38.45
GPRS850	190	3	3	29.75	-3.78	23.82	38.45
GPRS850	190	3	4	27.66	-3.78	21.73	38.45
GPRS850	251	3	1	33.72	-3.78	27.79	38.45
GPRS850	251	3	2	31.56	-3.78	25.63	38.45
GPRS850	251	3	3	29.65	-3.78	23.72	38.45
GPRS850	251	3	4	27.53	-3.78	21.60	38.45
EGPRS850	128	8	1	25.95	-3.78	20.02	38.45
EGPRS850	128	8	2	24.75	-3.78	18.82	38.45
EGPRS850	128	8	3	22.44	-3.78	16.51	38.45
EGPRS850	128	8	4	20.65	-3.78	14.72	38.45
EGPRS850	190	8	1	26.28	-3.78	20.35	38.45
EGPRS850	190	8	2	25.40	-3.78	19.47	38.45
EGPRS850	190	8	3	23.08	-3.78	17.15	38.45

EGPRS850	190	8	4	21.39	-3.78	15.46	38.45
EGPRS850	251	8	1	25.80	-3.78	19.87	38.45
EGPRS850	251	8	2	24.87	-3.78	18.94	38.45
EGPRS850	251	8	3	22.52	-3.78	16.59	38.45
EGPRS850	251	8	4	20.83	-3.78	14.90	38.45
GPRS1900	512	0	1	30.47	-1.02	29.45	33.00
GPRS1900	512	0	2	28.30	-1.02	27.28	33.00
GPRS1900	512	0	3	26.82	-1.02	25.80	33.00
GPRS1900	512	0	4	24.86	-1.02	23.84	33.00
GPRS1900	661	0	1	30.21	-1.02	29.19	33.00
GPRS1900	661	0	2	28.01	-1.02	26.99	33.00
GPRS1900	661	0	3	26.51	-1.02	25.49	33.00
GPRS1900	661	0	4	24.55	-1.02	23.53	33.00
GPRS1900	810	0	1	30.08	-1.02	29.06	33.00
GPRS1900	810	0	2	27.56	-1.02	26.54	33.00
GPRS1900	810	0	3	26.01	-1.02	24.99	33.00
GPRS1900	810	0	4	23.99	-1.02	22.97	33.00
EGPRS1900	512	2	1	26.59	-1.02	25.57	33.00
EGPRS1900	512	2	2	25.12	-1.02	24.10	33.00
EGPRS1900	512	2	3	23.31	-1.02	22.29	33.00
EGPRS1900	512	2	4	22.55	-1.02	21.53	33.00
EGPRS1900	661	2	1	26.70	-1.02	25.68	33.00
EGPRS1900	661	2	2	24.83	-1.02	23.81	33.00
EGPRS1900	661	2	3	22.59	-1.02	21.57	33.00
EGPRS1900	661	2	4	21.54	-1.02	20.52	33.00
EGPRS1900	810	2	1	25.95	-1.02	24.93	33.00
EGPRS1900	810	2	2	23.92	-1.02	22.90	33.00
EGPRS1900	810	2	3	21.84	-1.02	20.82	33.00
EGPRS1900	810	2	4	20.09	-1.02	19.07	33.00

Note: EIRP (dBm) = Average power (dBm) + Antenna Gain (dBi). (For GSM1900)

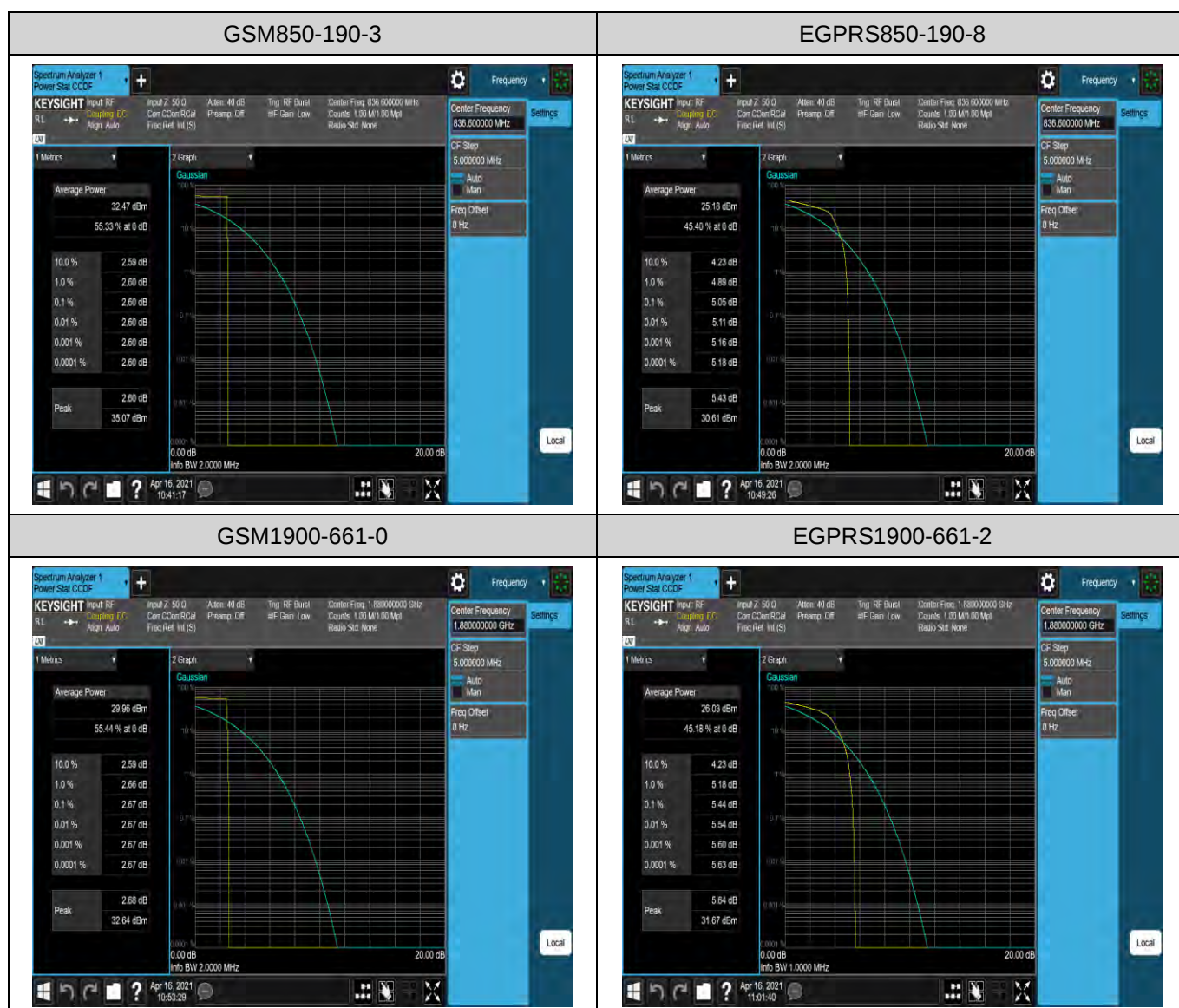
ERP (dBm) = EIRP (dBm) - 2.15 (dB). (For GSM850)

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

Test Result

Band	Channel	PCL	Result(dB)	Limit(dB)	Verdict
GSM850	190	3	2.6	13	PASS
EGPRS850	190	8	5.05	13	PASS
GSM1900	661	0	2.67	13	PASS
EGPRS1900	661	2	5.44	13	PASS

Test Graphs



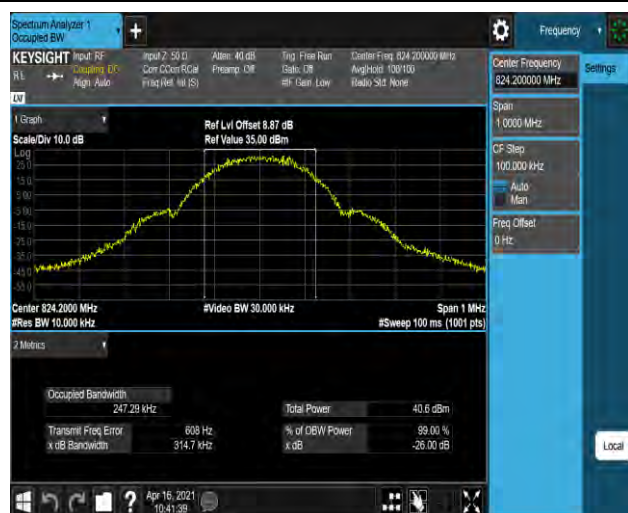
Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

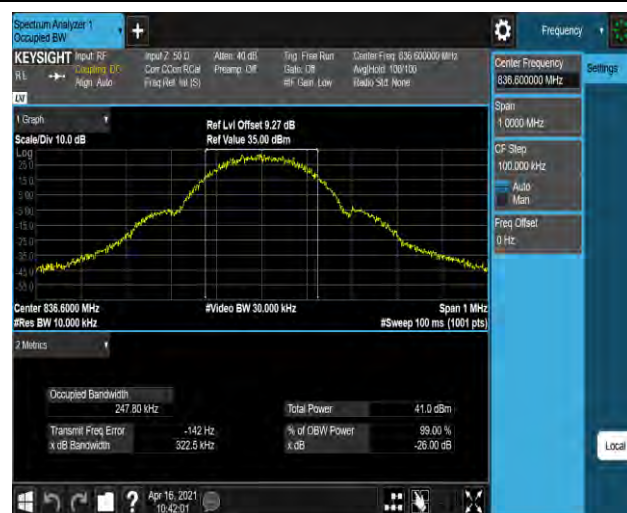
Band	Channel	PCL	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
GSM850	128	3	0.24729	0.3147	---	PASS
GSM850	190	3	0.24780	0.3225	---	PASS
GSM850	251	3	0.25007	0.3185	---	PASS
EGPRS850	128	8	0.24931	0.3189	---	PASS
EGPRS850	190	8	0.25156	0.3206	---	PASS
EGPRS850	251	8	0.25363	0.3219	---	PASS
GSM1900	512	0	0.24712	0.3129	---	PASS
GSM1900	661	0	0.24690	0.3192	---	PASS
GSM1900	810	0	0.24800	0.3193	---	PASS
EGPRS1900	512	2	0.24900	0.3104	---	PASS
EGPRS1900	661	2	0.25040	0.3180	---	PASS
EGPRS1900	810	2	0.24872	0.3176	---	PASS

Test Graphs

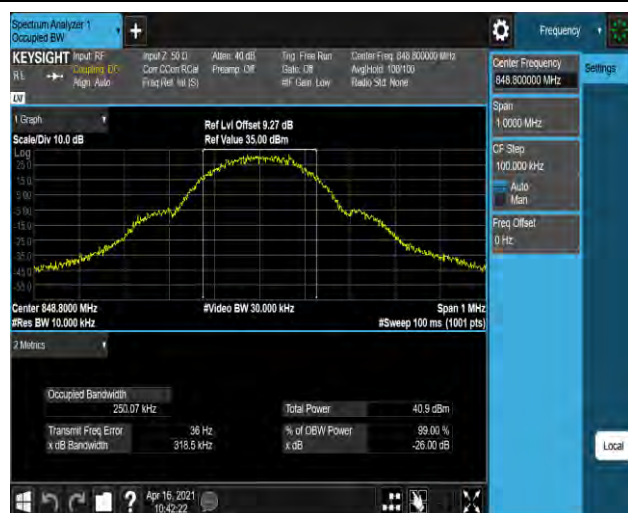
GSM850-128-3-0.3147



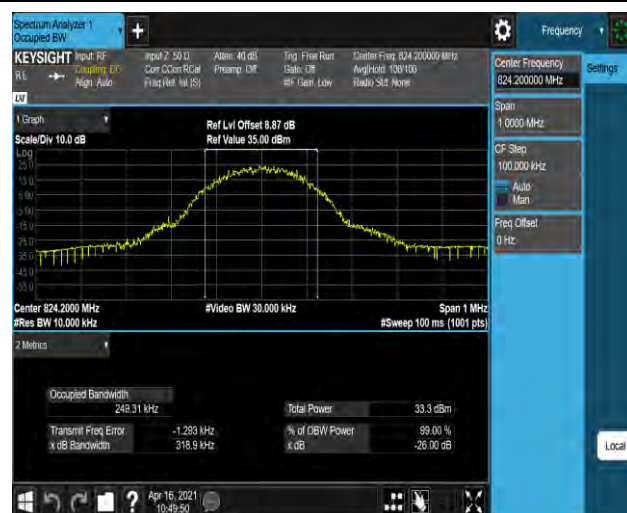
GSM850-190-3-0.3225



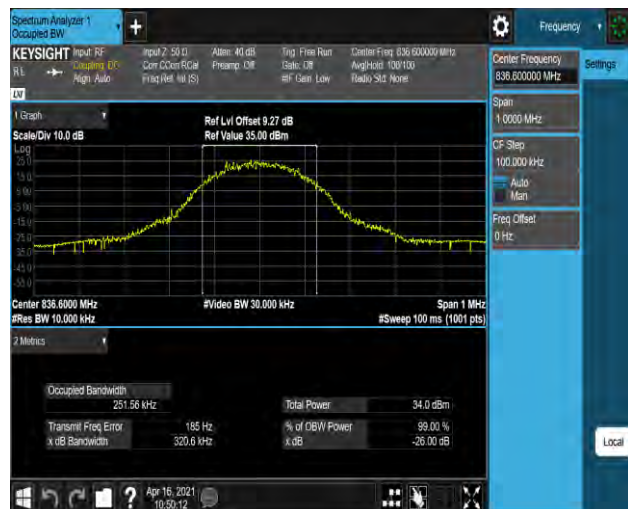
GSM850-251-3-0.3185



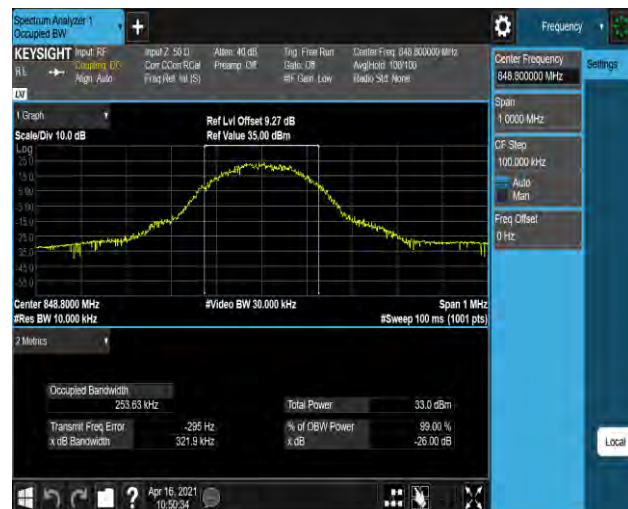
EGPRS850-128-8-0.3189



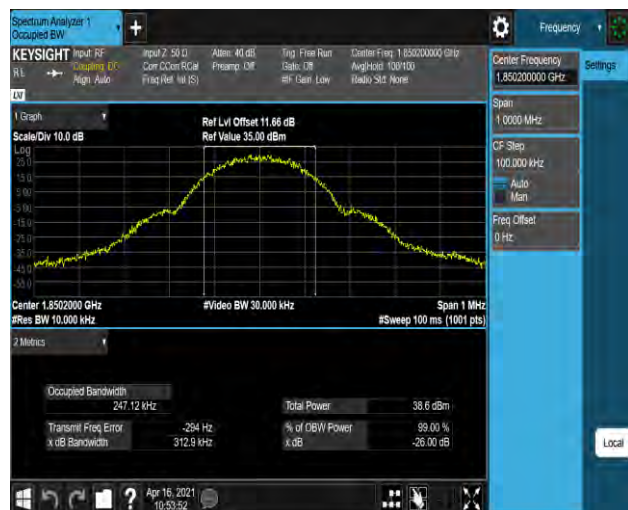
EGPRS850-190-8-0.3206



EGPRS850-251-8-0.3219



GSM1900-512-0-0.3129



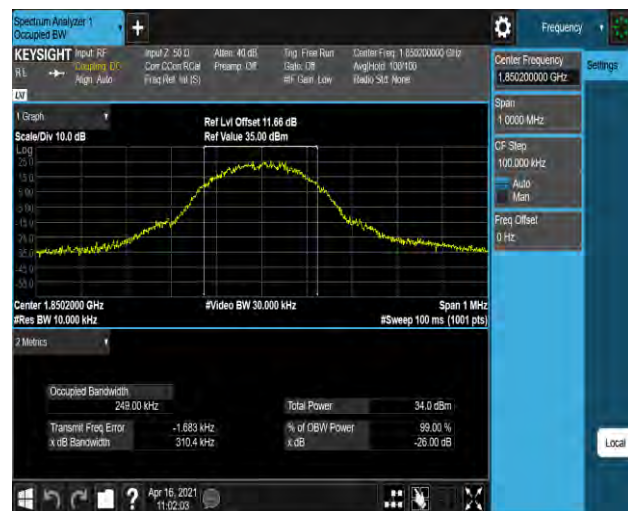
GSM1900-661-0-0.3192

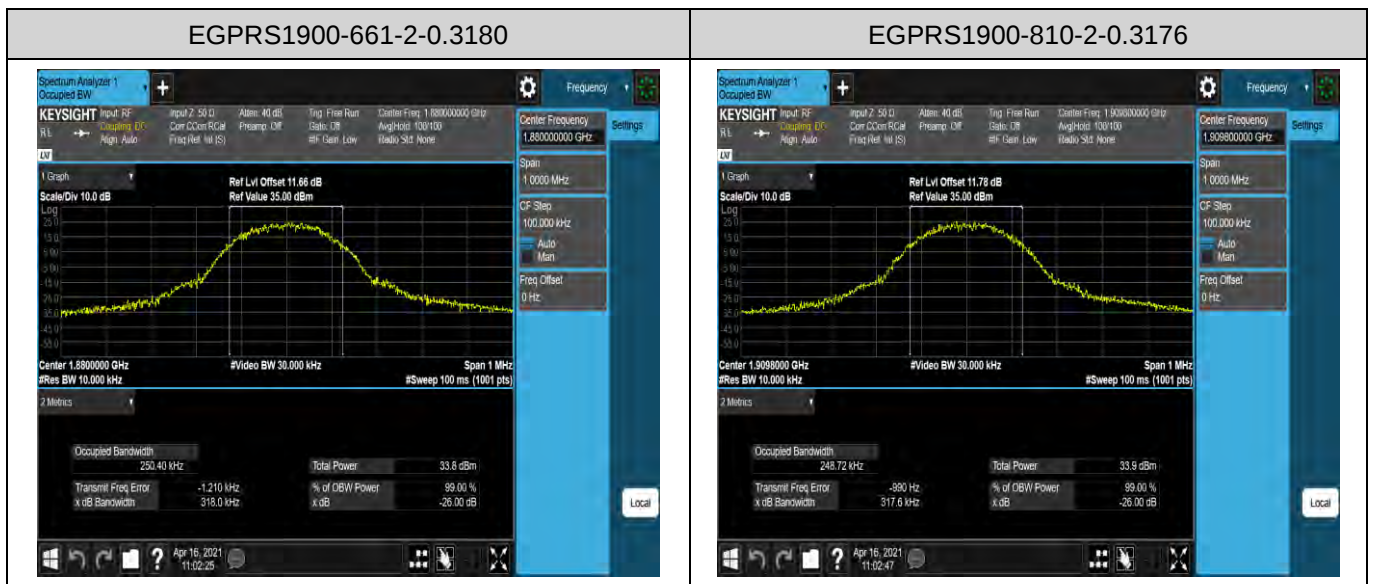


GSM1900-810-0-0.3193



EGPRS1900-512-2-0.3104





Appendix D: Band Edge

Test Result

Band	Channel	PCL	Freq (MHz)	Result (dBm)	Limit(dBm)	Verdict
GSM850	128	3	823.98	-20.20	-13	PASS
GSM850	251	3	849.01	-21.98	-13	PASS
EGPRS850	128	8	823.98	-35.31	-13	PASS
EGPRS850	251	8	849.02	-30.03	-13	PASS
GSM1900	512	0	1849.98	-15.15	-13	PASS
GSM1900	810	0	1910.02	-13.20	-13	PASS
EGPRS1900	512	2	1849.97	-24.79	-13	PASS
EGPRS1900	810	2	1910.00	-25.48	-13	PASS

Test Graphs

GSM850-128-3



GSM850-251-3



EGPRS850-128-8



EGPRS850-251-8

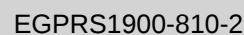


GSM1900-512-0



GSM1900-810-0





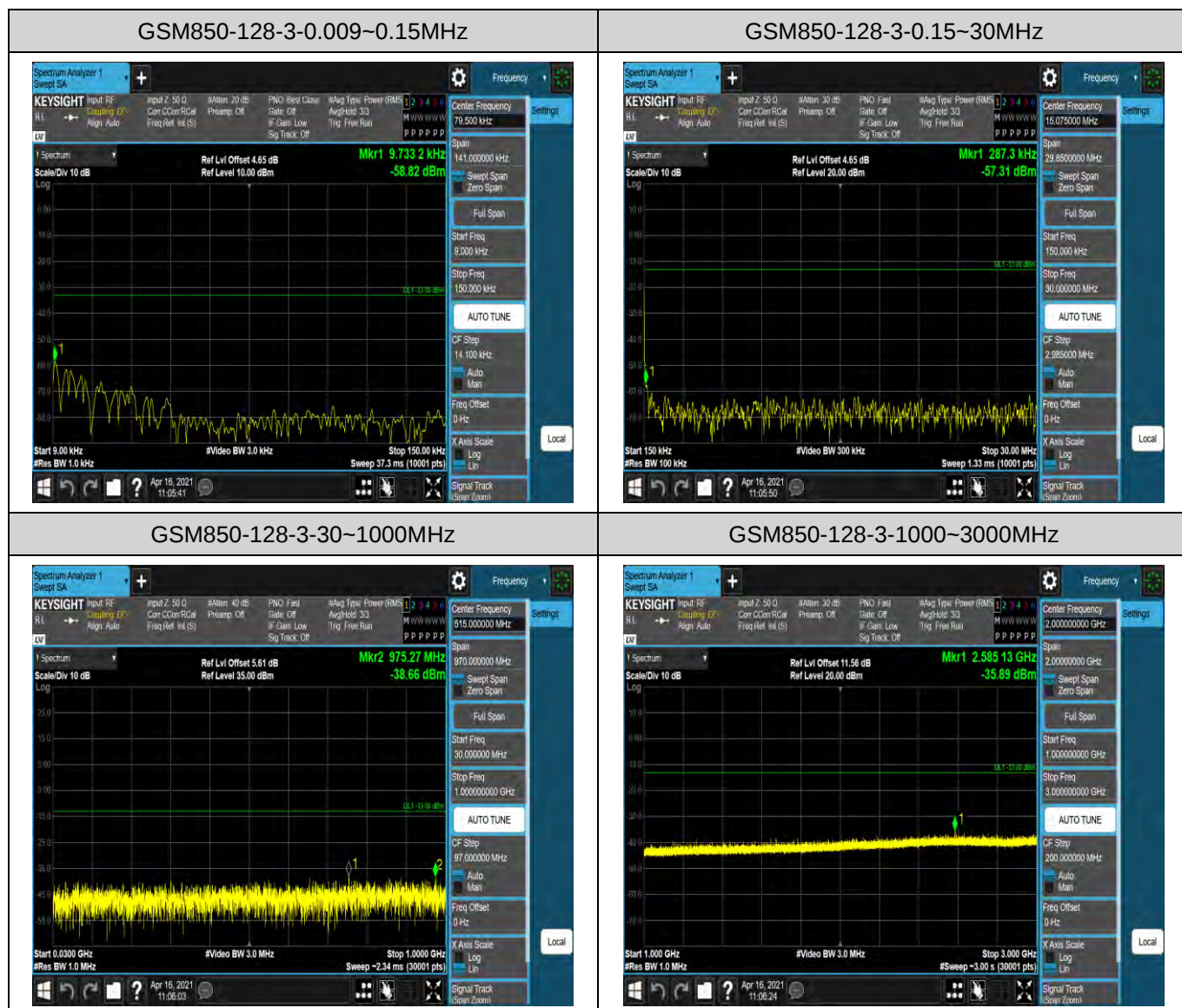
Appendix E: Conducted Spurious Emission

Test Result

Band	Channel	PCL	Frequency Range(MHz)	Max.Freq. (MHz)	Result (dBm)	Limit (dBm)	Verdict
GSM850	128	3	0.009~0.15MHz	0.01	-58.82	-33	PASS
GSM850	128	3	0.15~30MHz	0.29	-57.31	-13	PASS
GSM850	128	3	30~1000MHz	975.27	-38.66	-13	PASS
GSM850	128	3	1000~3000MHz	2585.13	-35.89	-13	PASS
GSM850	128	3	3000~10000MHz	3347.9	-36.73	-13	PASS
GSM850	190	3	0.009~0.15MHz	0.01	-59.3	-33	PASS
GSM850	190	3	0.15~30MHz	0.29	-56.34	-13	PASS
GSM850	190	3	30~1000MHz	324.65	-38.93	-13	PASS
GSM850	190	3	1000~3000MHz	2498.33	-36.37	-13	PASS
GSM850	190	3	3000~10000MHz	3347.2	-37.85	-13	PASS
GSM850	251	3	0.009~0.15MHz	0.01	-57.85	-33	PASS
GSM850	251	3	0.15~30MHz	0.29	-58.1	-13	PASS
GSM850	251	3	30~1000MHz	457.8	-36.96	-13	PASS
GSM850	251	3	1000~3000MHz	2997.27	-35.95	-13	PASS
GSM850	251	3	3000~10000MHz	3348.83	-39.08	-13	PASS
EGPRS850	128	8	0.009~0.15MHz	0.01	-64.07	-33	PASS
EGPRS850	128	8	0.15~30MHz	0.3	-58.93	-13	PASS
EGPRS850	128	8	30~1000MHz	928.25	-38.47	-13	PASS
EGPRS850	128	8	1000~3000MHz	2603.4	-36.63	-13	PASS
EGPRS850	128	8	3000~10000MHz	4898.87	-41.3	-13	PASS
EGPRS850	190	8	0.009~0.15MHz	0.01	-64.86	-33	PASS
EGPRS850	190	8	0.15~30MHz	0.29	-56.79	-13	PASS
EGPRS850	190	8	30~1000MHz	610.38	-38.49	-13	PASS
EGPRS850	190	8	1000~3000MHz	2968.13	-36.32	-13	PASS
EGPRS850	190	8	3000~10000MHz	5024.87	-41.46	-13	PASS
EGPRS850	251	8	0.009~0.15MHz	0.02	-63.42	-33	PASS
EGPRS850	251	8	0.15~30MHz	0.41	-59.09	-13	PASS
EGPRS850	251	8	30~1000MHz	981.44	-38.56	-13	PASS
EGPRS850	251	8	1000~3000MHz	2763.13	-36.11	-13	PASS
EGPRS850	251	8	3000~10000MHz	5168.83	-41.31	-13	PASS
GSM1900	512	0	0.009~0.15MHz	0.01	-69.21	-43	PASS

GSM1900	512	0	0.15~30MHz	0.29	-54.85	-23	PASS
GSM1900	512	0	30~1000MHz	956.9	-46.93	-13	PASS
GSM1900	512	0	1000~3000MHz	2419.53	-28.15	-13	PASS
GSM1900	512	0	3000~10000MHz	9087.9	-41.37	-13	PASS
GSM1900	512	0	10000~18000MHz	15414.93	-34.56	-13	PASS
GSM1900	661	0	0.009~0.15MHz	0.01	-70.75	-43	PASS
GSM1900	661	0	0.15~30MHz	0.51	-58.49	-23	PASS
GSM1900	661	0	30~1000MHz	738.65	-46.92	-13	PASS
GSM1900	661	0	1000~3000MHz	2605.67	-27.89	-13	PASS
GSM1900	661	0	3000~10000MHz	3858.2	-41.74	-13	PASS
GSM1900	661	0	10000~18000MHz	17110.13	-35.02	-13	PASS
GSM1900	810	0	0.009~0.15MHz	0.01	-68.16	-43	PASS
GSM1900	810	0	0.15~30MHz	0.3	-52.67	-23	PASS
GSM1900	810	0	30~1000MHz	831.58	-47.63	-13	PASS
GSM1900	810	0	1000~3000MHz	2740.33	-28.08	-13	PASS
GSM1900	810	0	3000~10000MHz	5640.4	-39.59	-13	PASS
GSM1900	810	0	10000~18000MHz	17480.8	-34.74	-13	PASS

Test Graphs



GSM850-128-3-3000~10000MHz



GSM850-190-3-0.009~0.15MHz



GSM850-190-3-0.15~30MHz



GSM850-190-3-30~10000MHz



GSM850-190-3-1000~3000MHz



GSM850-190-3-3000~10000MHz



GSM850-251-3-0.009~0.15MHz



GSM850-251-3-0.15~30MHz



GSM850-251-3-30~1000MHz



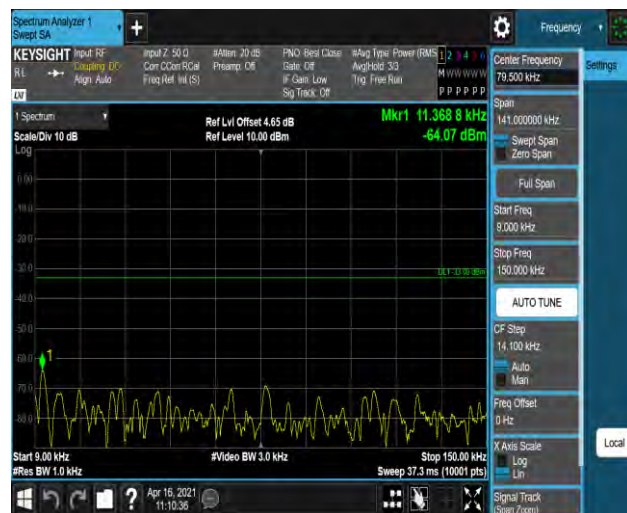
GSM850-251-3-1000~3000MHz



GSM850-251-3-3000~10000MHz



EGPRS850-128-8-0.009~0.15MHz



EGPRS850-128-8-0.15~30MHz



EGPRS850-128-8-30~1000MHz



EGPRS850-128-8-1000~3000MHz



EGPRS850-128-8-3000~10000MHz



EGPRS850-190-8-0.009~0.15MHz



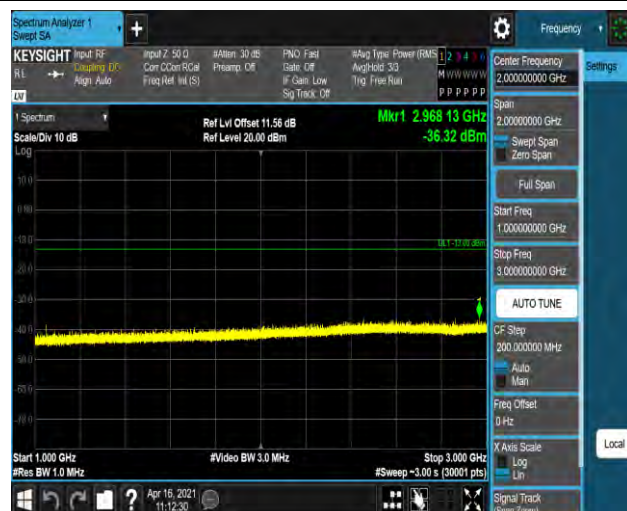
EGPRS850-190-8-0.15~30MHz



EGPRS850-190-8-30~1000MHz



EGPRS850-190-8-1000~3000MHz



EGPRS850-190-8-3000~10000MHz



EGPRS850-251-8-0.009~0.15MHz

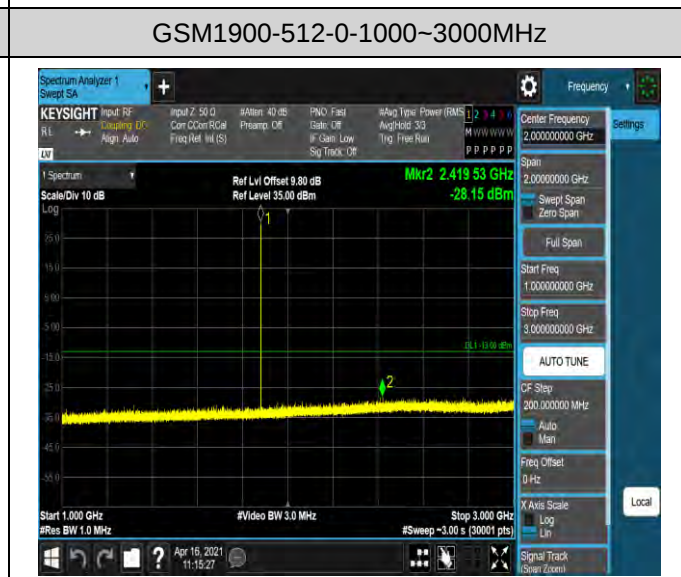
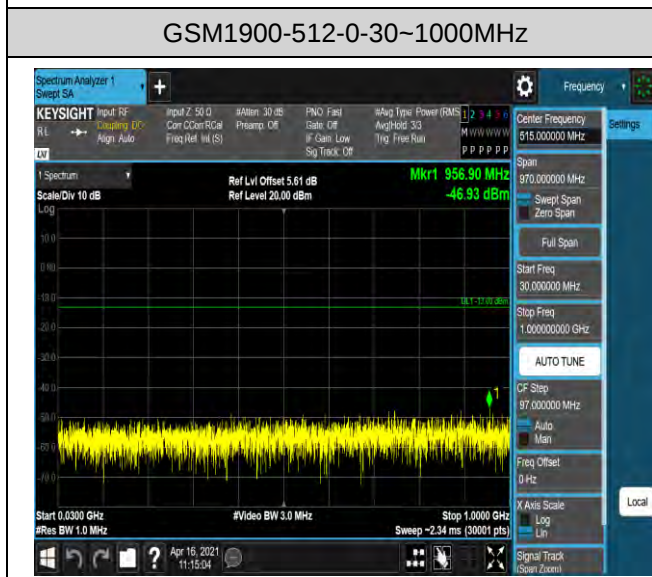
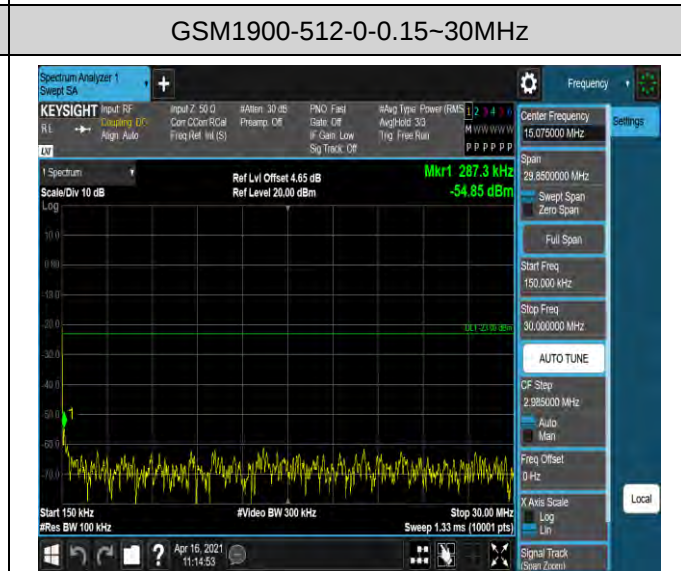
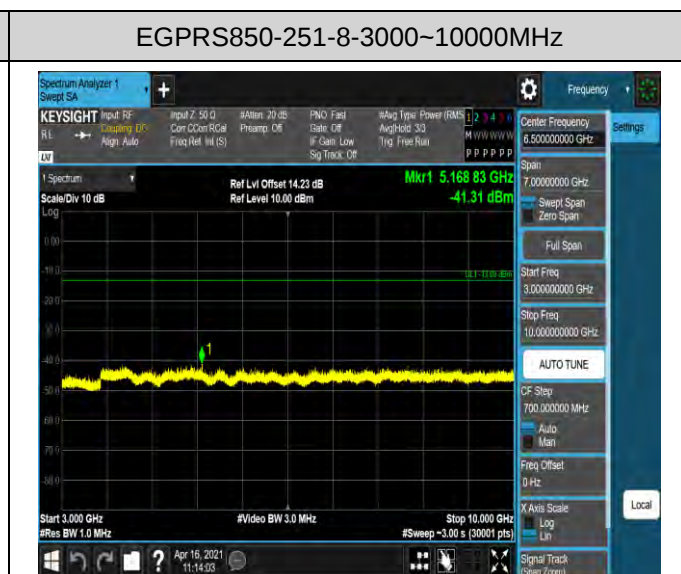
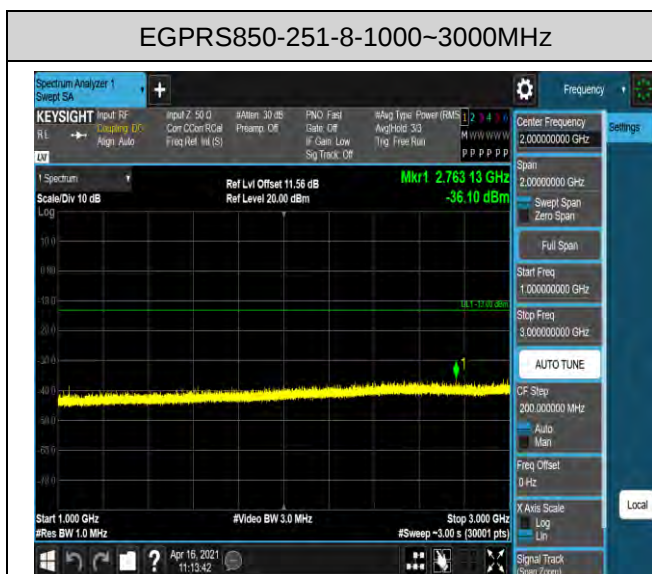


EGPRS850-251-8-0.15~30MHz



EGPRS850-251-8-30~1000MHz





GSM1900-512-0-3000~10000MHz



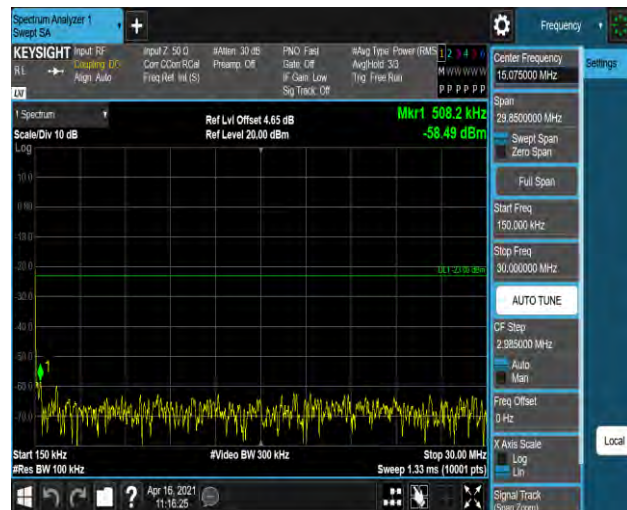
GSM1900-512-0-10000~18000MHz



GSM1900-661-0-0.009~0.15MHz



GSM1900-661-0-0.15~30MHz



GSM1900-661-0-30~1000MHz



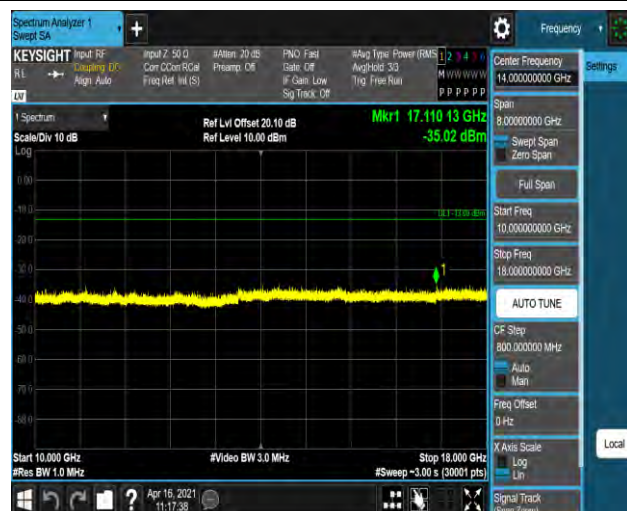
GSM1900-661-0-1000~3000MHz



GSM1900-661-0-3000~10000MHz



GSM1900-661-0-10000~18000MHz



GSM1900-810-0-0.009~0.15MHz



GSM1900-810-0-0.15~30MHz

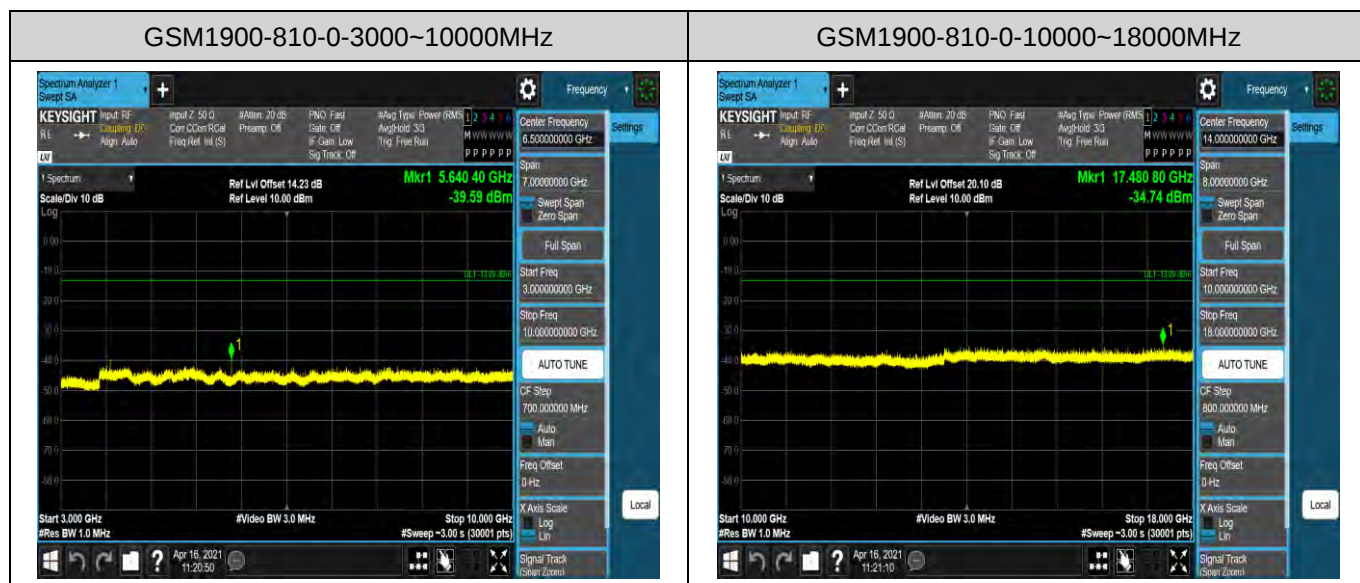


GSM1900-810-0-30~1000MHz



GSM1900-810-0-1000~3000MHz





Appendix F: Frequency Stability

Test Result (the worst channel)

Voltage					
Reference Frequency: GSM850 Middle channel=190 Frequency=836.6MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	-8.10	-0.009682	±2.5	Pass
	3.85	-11.27	-0.013471		
	4.40	-6.23	-0.007447		
Reference Frequency: PCS1900 Middle channel=661 Frequency=1880MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	-5.59	-0.002973	Within authorized band for PCS 1900	Pass
	3.85	-6.23	-0.003314		
	4.40	-6.07	-0.003229		
Reference Frequency: EGPRS 850 Middle channel= 190 Frequency=836.6MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	-0.68	-0.000813	±2.5	Pass
	3.85	3.29	0.003933		
	4.40	-1.36	-0.001626		
Reference Frequency: EGPRS 1900 Middle channel= 661 Frequency=1880MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	-8.52	-0.004532	Within authorized band for PCS 1900	Pass
	3.85	-11.59	-0.006165		
	4.40	-9.04	-0.004809		
Note: Only the worst case shown in the report.					

Temperature					
Reference Frequency: GSM850 Middle channel=190 Frequency=836.6MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	-7.23	-0.008642	±2.5	Pass
	-20	-2.87	-0.003431		
	-10	-4.78	-0.005714		
	0	-6.91	-0.008260		
	10	-7.20	-0.008606		
	20	-5.71	-0.006825		
	30	-2.55	-0.003048		
	40	-4.94	-0.005905		
	50	-5.20	-0.006216		
Reference Frequency: PCS1900 Middle channel=661 Frequency=1880MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	-2.39	-0.001271	Within authorized band for PCS 1900	Pass
	-20	-10.62	-0.005649		
	-10	2.10	0.001117		
	0	-6.55	-0.003484		
	10	-6.10	-0.003245		
	20	-3.84	-0.002043		
	30	-4.26	-0.002266		
	40	-6.78	-0.003606		
	50	-2.36	-0.001255		
Note: Only the worst case shown in the report.					

Temperature					
Reference Frequency: EGPRS850 Middle channel=190 Frequency=836.6MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	-1.68	-0.002008	±2.5	Pass
	-20	-0.97	-0.001159		
	-10	0.81	0.000968		
	0	0.00	0.000000		
	10	-3.94	-0.004710		
	20	3.65	0.004363		
	30	0.97	0.001159		
	40	2.23	0.002666		
	50	4.07	0.004865		
Reference Frequency: EGPRS 1900 Middle channel=661 Frequency=1880MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	-21.11	-0.011229	Within authorized band for PCS 1900	Pass
	-20	-16.53	-0.008793		
	-10	0.97	0.000516		
	0	-0.32	-0.000170		
	10	-0.68	-0.000362		
	20	1.26	0.000670		
	30	-8.68	-0.004617		
	40	0.19	0.000101		
	50	-7.72	-0.004106		
Note: Only the worst case shown in the report.					