

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	33.34	-2.00	29.19	38.45
GSM850	190	5	33.32	-2.00	29.17	38.45
GSM850	251	5	33.36	-2.00	29.21	38.45
GSM1900	512	0	30.26	-1.20	29.06	33.00
GSM1900	661	0	30.33	-1.20	29.13	33.00
GSM1900	810	0	30.34	-1.20	29.14	33.00
Note: EIRP (dBm) = Average power (dBm) + Antenna Gain (dBi). (For GSM 1900) ERP (dBm) = EIRP (dBm) - 2.15 (dB). (For GSM 850)						

Band	Channel	PCL	Slot	Average Power (dBm)	Antenna Gain (dBi)	ERP(dBm)	ERP/EIRP Limit (dBm)
GPRS850	128	3	1	33.3	-2.00	29.15	38.45
GPRS850	128	3	2	31.25	-2.00	27.10	38.45
GPRS850	128	3	3	29.29	-2.00	25.14	38.45
GPRS850	128	3	4	27.05	-2.00	22.90	38.45
GPRS850	190	3	1	33.22	-2.00	29.07	38.45
GPRS850	190	3	2	31.13	-2.00	26.98	38.45
GPRS850	190	3	3	29.19	-2.00	25.04	38.45
GPRS850	190	3	4	26.97	-2.00	22.82	38.45
GPRS850	251	3	1	33.29	-2.00	29.14	38.45
GPRS850	251	3	2	31.1	-2.00	26.95	38.45
GPRS850	251	3	3	29.18	-2.00	25.03	38.45
GPRS850	251	3	4	26.99	-2.00	22.84	38.45
EGPRS850	128	8	1	26.46	-2.00	22.31	38.45
EGPRS850	128	8	2	26.2	-2.00	22.05	38.45
EGPRS850	128	8	3	24.54	-2.00	20.39	38.45
EGPRS850	128	8	4	21.8	-2.00	17.65	38.45
EGPRS850	190	8	1	26.17	-2.00	22.02	38.45

EGPRS850	190	8	2	26.23	-2.00	22.08	38.45
EGPRS850	190	8	3	24.54	-2.00	20.39	38.45
EGPRS850	190	8	4	21.85	-2.00	17.70	38.45
EGPRS850	251	8	1	26.04	-2.00	21.89	38.45
EGPRS850	251	8	2	26.07	-2.00	21.92	38.45
EGPRS850	251	8	3	24.39	-2.00	20.24	38.45
EGPRS850	251	8	4	21.7	-2.00	17.55	38.45
GPRS1900	512	0	1	30.23	-1.20	29.03	33.00
GPRS1900	512	0	2	27.86	-1.20	26.66	33.00
GPRS1900	512	0	3	26.27	-1.20	25.07	33.00
GPRS1900	512	0	4	24.2	-1.20	23.00	33.00
GPRS1900	661	0	1	30.35	-1.20	29.15	33.00
GPRS1900	661	0	2	27.82	-1.20	26.62	33.00
GPRS1900	661	0	3	26.23	-1.20	25.03	33.00
GPRS1900	661	0	4	24.13	-1.20	22.93	33.00
GPRS1900	810	0	1	30.34	-1.20	29.14	33.00
GPRS1900	810	0	2	27.63	-1.20	26.43	33.00
GPRS1900	810	0	3	26.02	-1.20	24.82	33.00
GPRS1900	810	0	4	23.92	-1.20	22.72	33.00
EGPRS1900	512	2	1	25.74	-1.20	24.54	33.00
EGPRS1900	512	2	2	25.63	-1.20	24.43	33.00
EGPRS1900	512	2	3	24.24	-1.20	23.04	33.00
EGPRS1900	512	2	4	21.71	-1.20	20.51	33.00
EGPRS1900	661	2	1	25.93	-1.20	24.73	33.00
EGPRS1900	661	2	2	26	-1.20	24.80	33.00
EGPRS1900	661	2	3	24.66	-1.20	23.46	33.00
EGPRS1900	661	2	4	22.33	-1.20	21.13	33.00
EGPRS1900	810	2	1	25.66	-1.20	24.46	33.00
EGPRS1900	810	2	2	25.59	-1.20	24.39	33.00
EGPRS1900	810	2	3	24.23	-1.20	23.03	33.00
EGPRS1900	810	2	4	21.7	-1.20	20.50	33.00

Note: EIRP (dBm) = Average power (dBm) + Antenna Gain (dBi). (For GSM 1900)

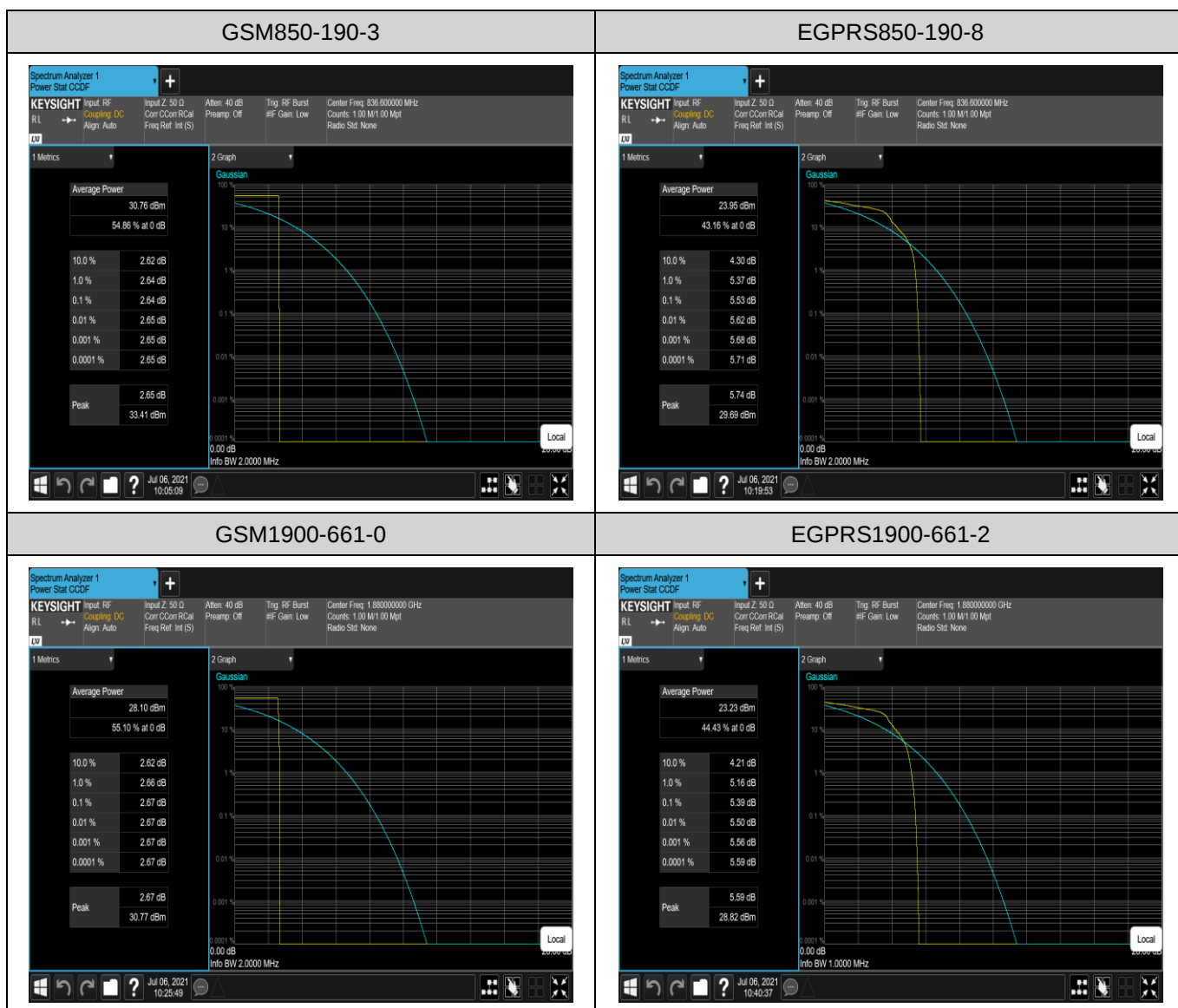
ERP (dBm) = EIRP (dBm) - 2.15 (dB). (For GSM 850)

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

Test Result

Band	Channel	PCL	Result(dB)	Limit(dB)	Verdict
GSM850	190	3	2.64	13	PASS
EGPRS850	190	8	5.53	13	PASS
GSM1900	661	0	2.67	13	PASS
EGPRS1900	661	2	5.39	13	PASS

Test Graphs



Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

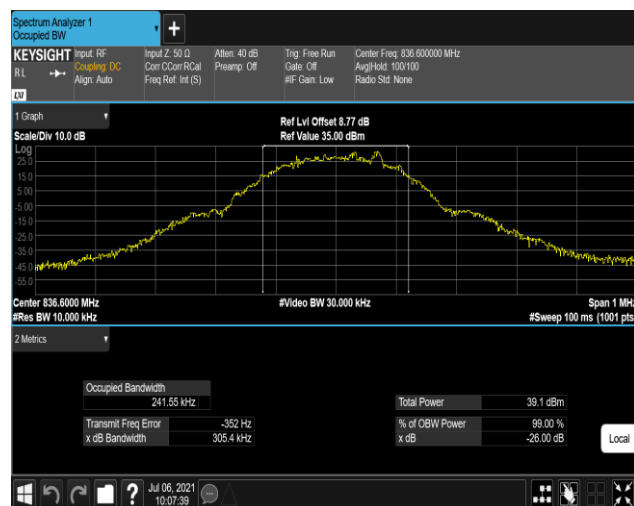
Band	Channel	PCL	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
GSM850	128	3	0.23849	0.3021	---	PASS
GSM850	190	3	0.24155	0.3054	---	PASS
GSM850	251	3	0.24242	0.3068	---	PASS
EGPRS850	128	8	0.24530	0.3127	---	PASS
EGPRS850	190	8	0.24510	0.3100	---	PASS
EGPRS850	251	8	0.24532	0.3078	---	PASS
GSM1900	512	0	0.24086	0.3073	---	PASS
GSM1900	661	0	0.24081	0.3029	---	PASS
GSM1900	810	0	0.24168	0.3028	---	PASS
EGPRS1900	512	2	0.24489	0.3137	---	PASS
EGPRS1900	661	2	0.24914	0.3167	---	PASS
EGPRS1900	810	2	0.24937	0.3164	---	PASS

Test Graphs

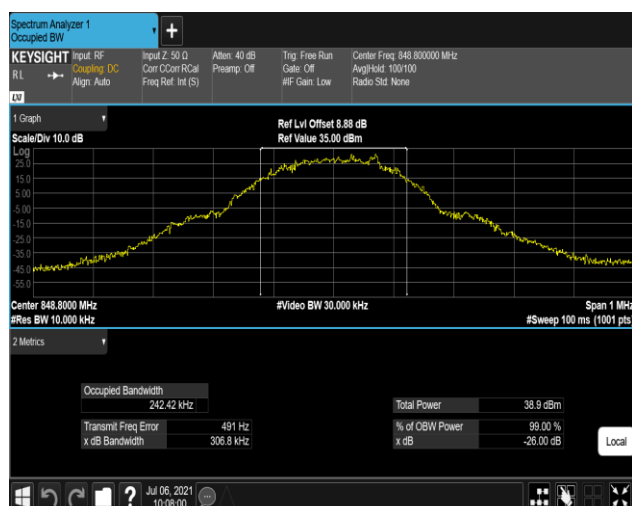
GSM850-128-3-0.3021



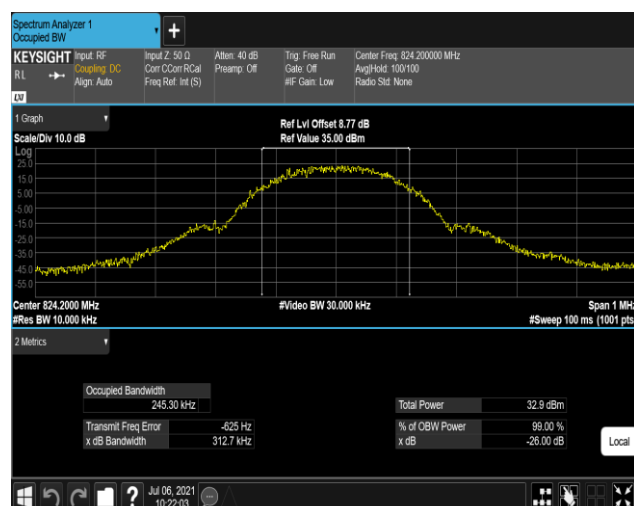
GSM850-190-3-0.3054



GSM850-251-3-0.3068

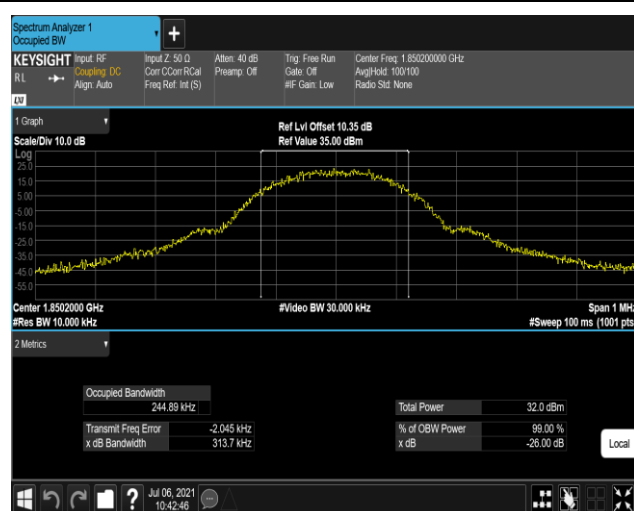
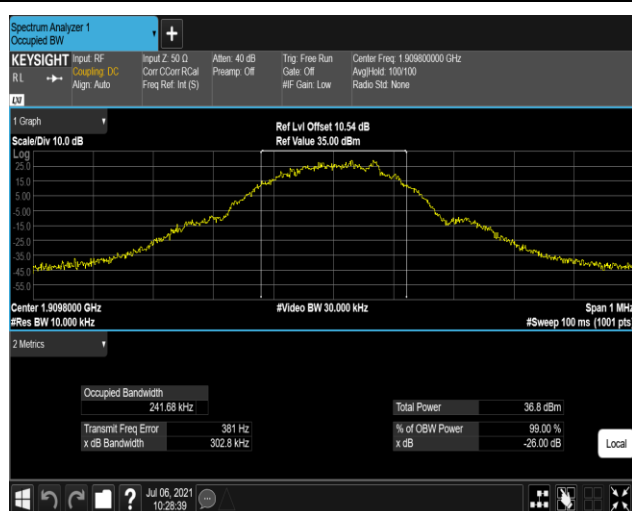
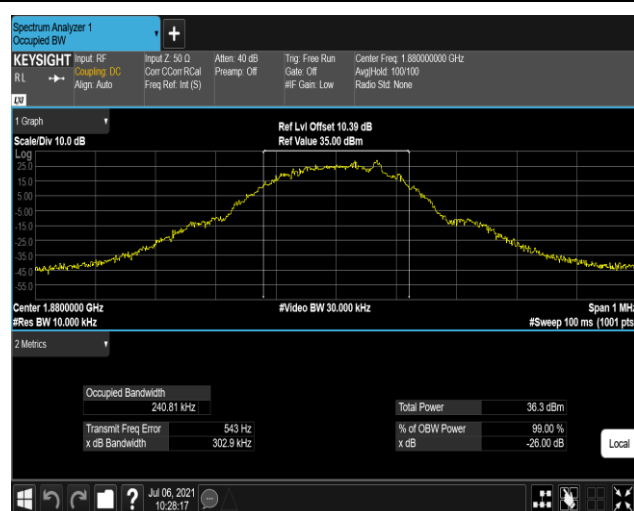
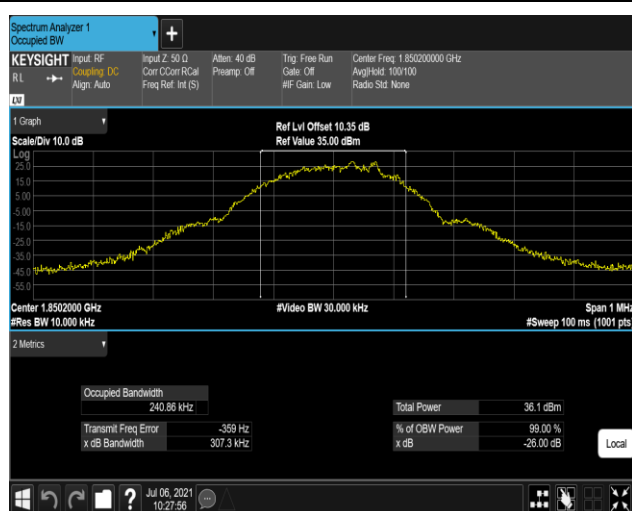
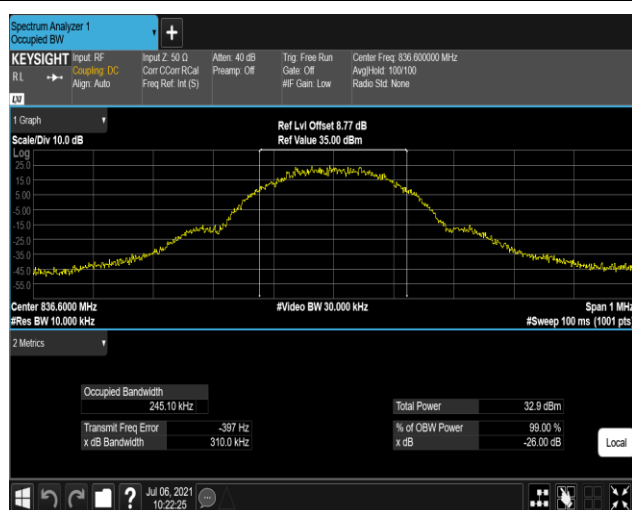


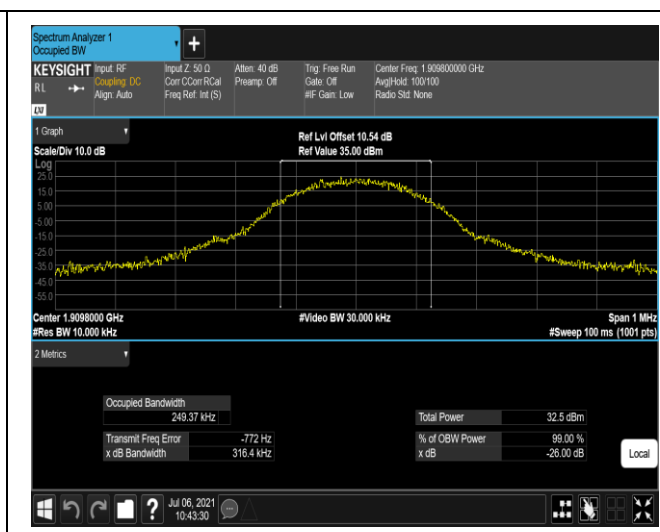
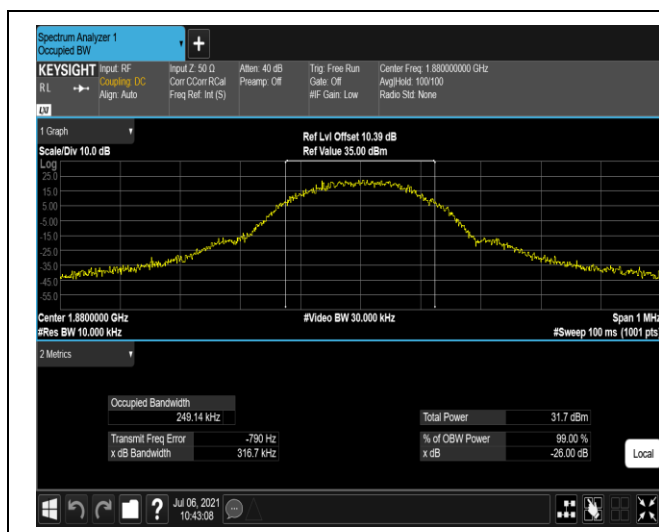
EGPRS850-128-8-0.3127



EGPRS850-190-8-0.3100

EGPRS850-251-8-0.3078





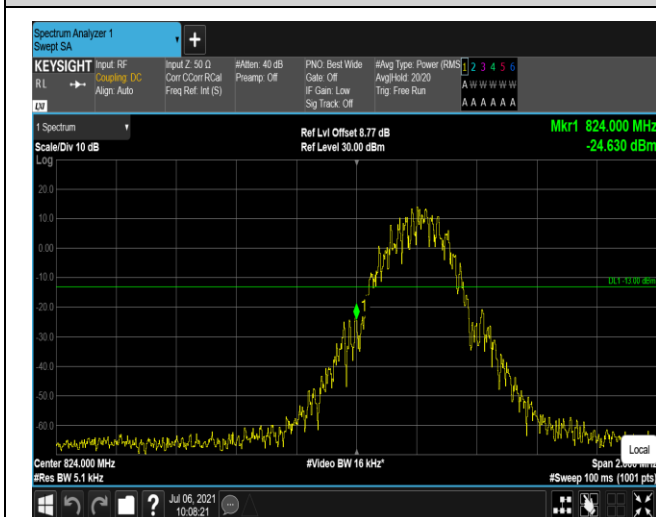
Appendix D: Band Edge

Test Result

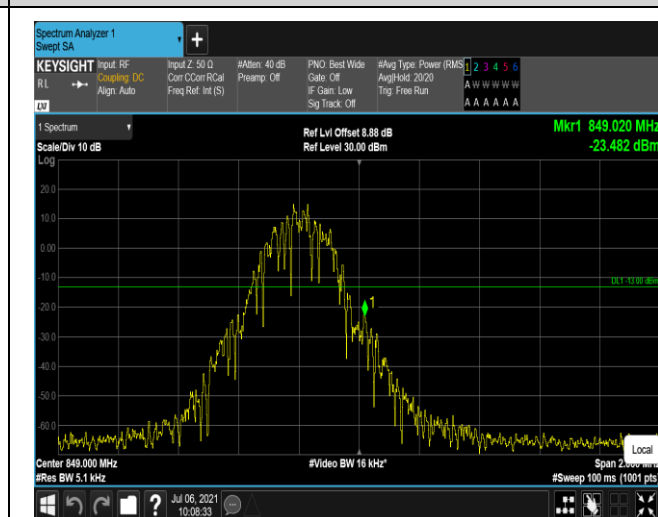
Band	Channel	PCL	Freq (MHz)	Result (dBm)	Limit(dBm)	Verdict
GSM850	128	3	824.00	-22.77	-13	PASS
GSM850	251	3	849.02	-21.81	-13	PASS
EGPRS850	128	8	823.98	-30.61	-13	PASS
EGPRS850	251	8	849.01	-35.07	-13	PASS
GSM1900	512	0	1849.98	-16.75	-13	PASS
GSM1900	810	0	1910.02	-15.99	-13	PASS
EGPRS1900	512	2	1849.97	-22.89	-13	PASS
EGPRS1900	810	2	1910.00	-18.60	-13	PASS

Test Graphs

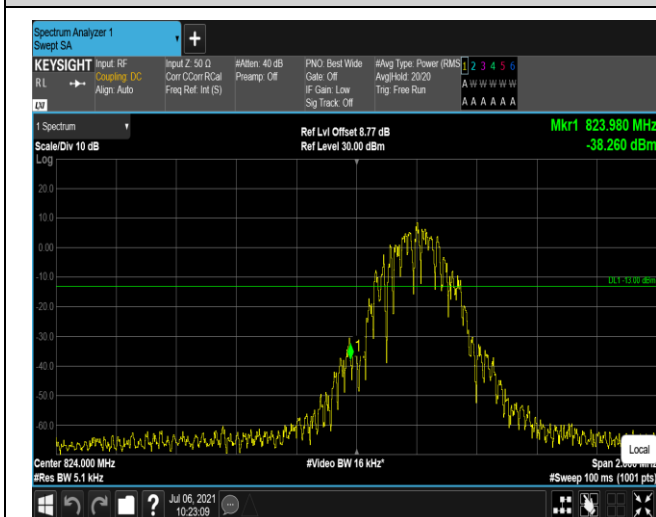
GSM850-128-3



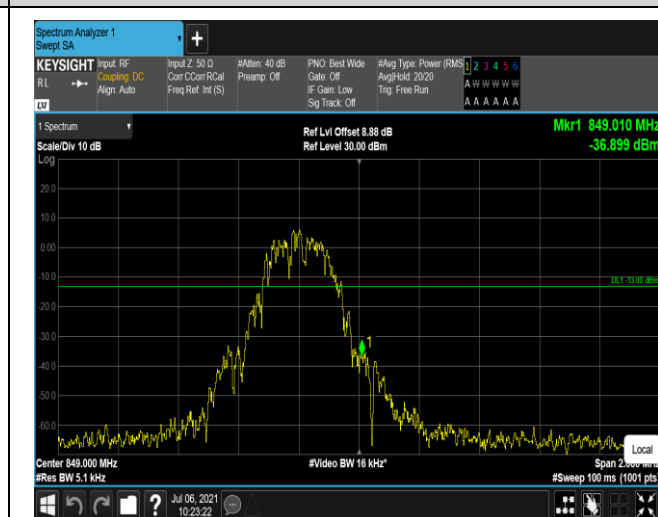
GSM850-251-3



EGPRS850-128-8

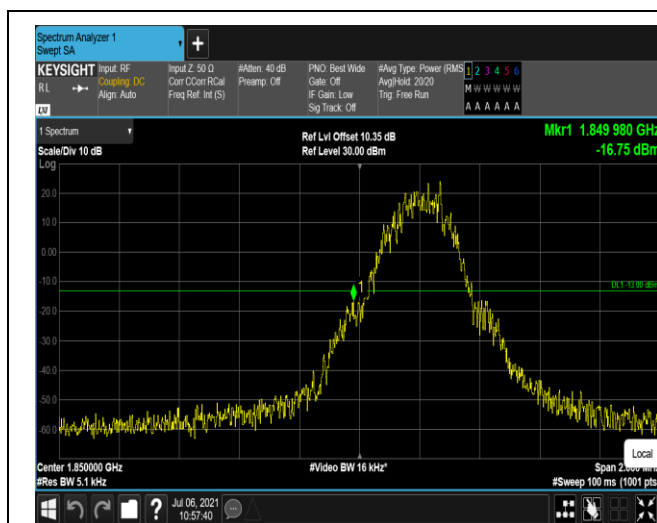


EGPRS850-251-8

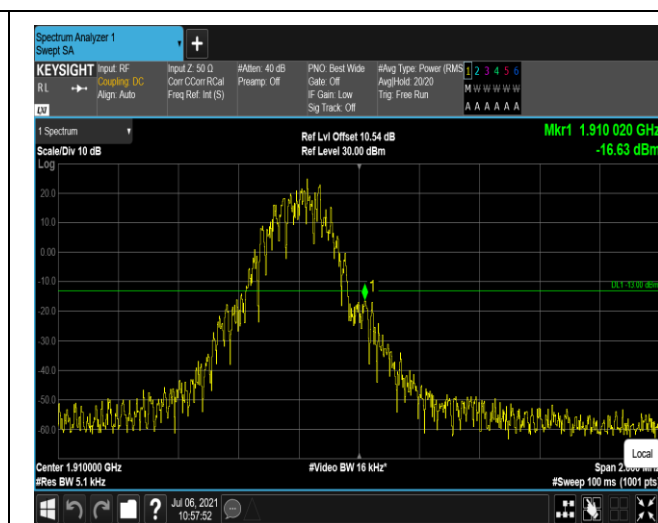


GSM1900-512-0

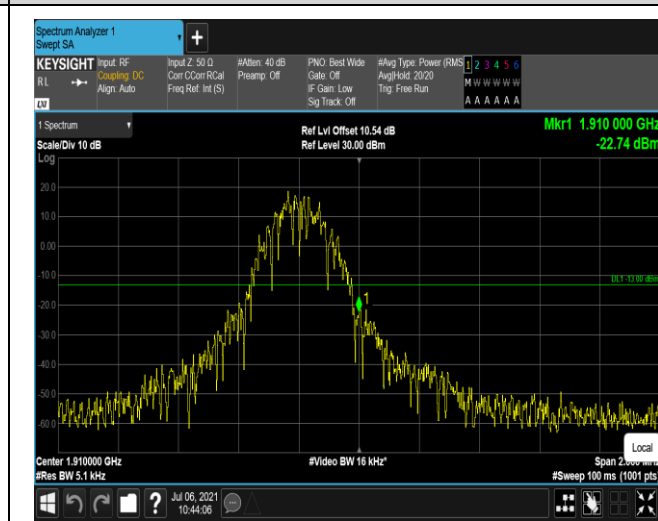
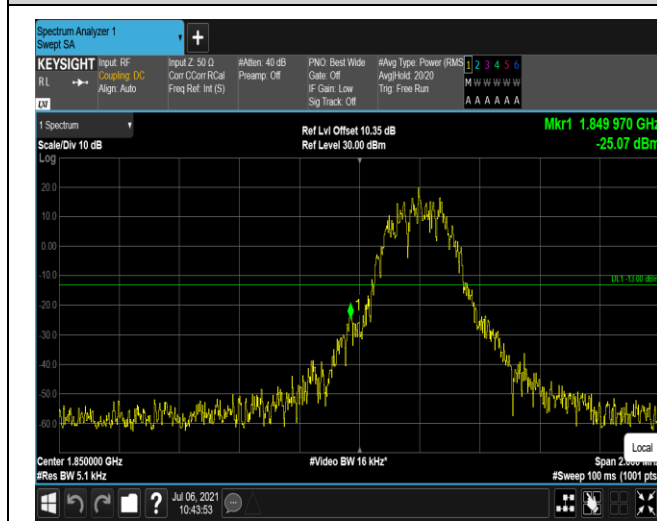
GSM1900-810-0



EGPRS1900-512-2



EGPRS1900-810-2

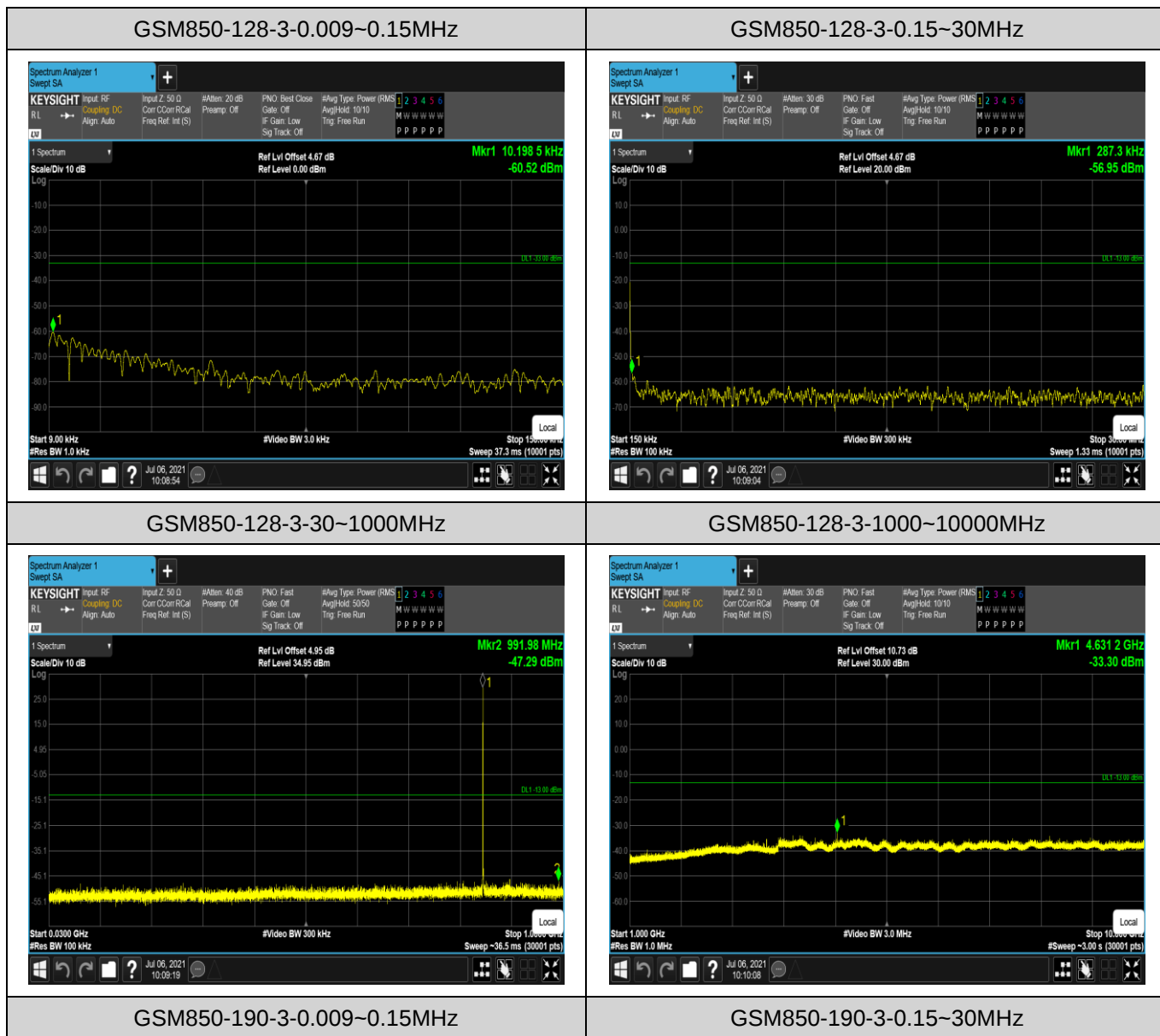


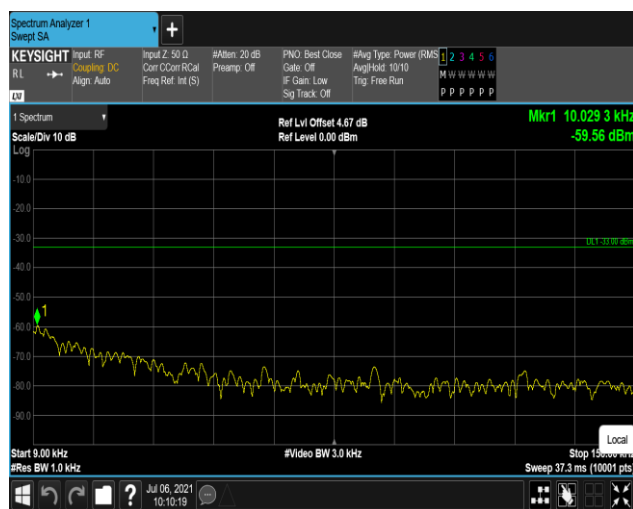
Appendix E: Conducted Spurious Emission

Test Result

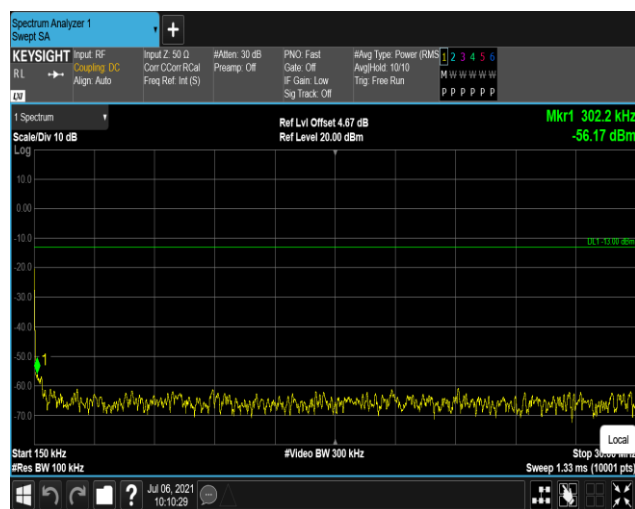
Band	Channel	PCL	Frequency Range(MHz)	Max.Freq. (MHz)	Result (dBm)	Limit (dBm)	Verdict
GSM850	128	3	0.009~0.15MHz	0.01	-60.52	-33	PASS
GSM850	128	3	0.15~30MHz	0.29	-56.95	-13	PASS
GSM850	128	3	30~1000MHz	991.98	-47.3	-13	PASS
GSM850	128	3	1000~10000MHz	4631.2	-33.3	-13	PASS
GSM850	190	3	0.009~0.15MHz	0.01	-59.56	-33	PASS
GSM850	190	3	0.15~30MHz	0.3	-56.17	-13	PASS
GSM850	190	3	30~1000MHz	976.85	-47.38	-13	PASS
GSM850	190	3	1000~10000MHz	4013.5	-33.79	-13	PASS
GSM850	251	3	0.009~0.15MHz	0.01	-59.6	-33	PASS
GSM850	251	3	0.15~30MHz	0.29	-54.5	-13	PASS
GSM850	251	3	30~1000MHz	976.91	-47.08	-13	PASS
GSM850	251	3	1000~10000MHz	5040.4	-34.47	-13	PASS
GSM1900	512	0	0.009~0.15MHz	0.01	-65.42	-43	PASS
GSM1900	512	0	0.15~30MHz	0.29	-56.74	-23	PASS
GSM1900	512	0	30~1000MHz	889.87	-42.11	-13	PASS
GSM1900	512	0	1000~18000MHz	4006.73	-34	-13	PASS
GSM1900	661	0	0.009~0.15MHz	0.01	-66.04	-43	PASS
GSM1900	661	0	0.15~30MHz	0.32	-58.19	-23	PASS
GSM1900	661	0	30~1000MHz	908.59	-40.8	-13	PASS
GSM1900	661	0	1000~18000MHz	15315.13	-33.85	-13	PASS
GSM1900	810	0	0.009~0.15MHz	0.01	-65.66	-43	PASS
GSM1900	810	0	0.15~30MHz	0.3	-55.96	-23	PASS
GSM1900	810	0	30~1000MHz	892.07	-41.57	-13	PASS
GSM1900	810	0	1000~18000MHz	3984.07	-34.37	-13	PASS

Test Graphs





GSM850-190-3-30~1000MHz



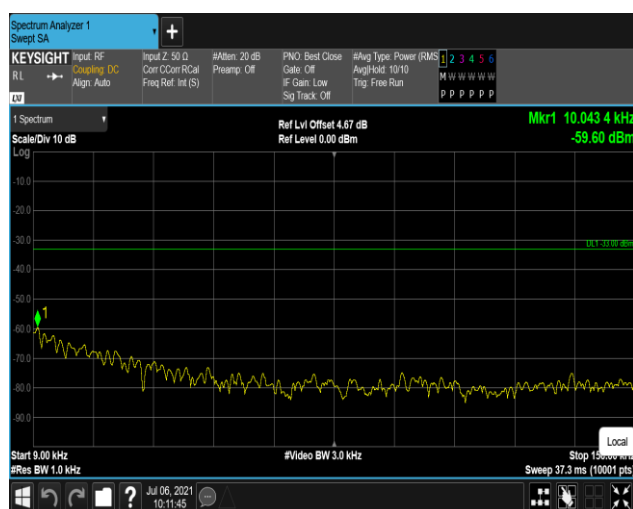
GSM850-190-3-1000~10000MHz



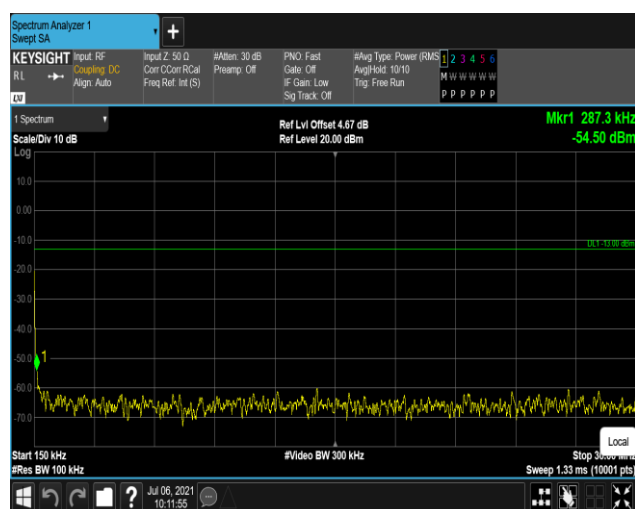
GSM850-251-3-0.009~0.15MHz



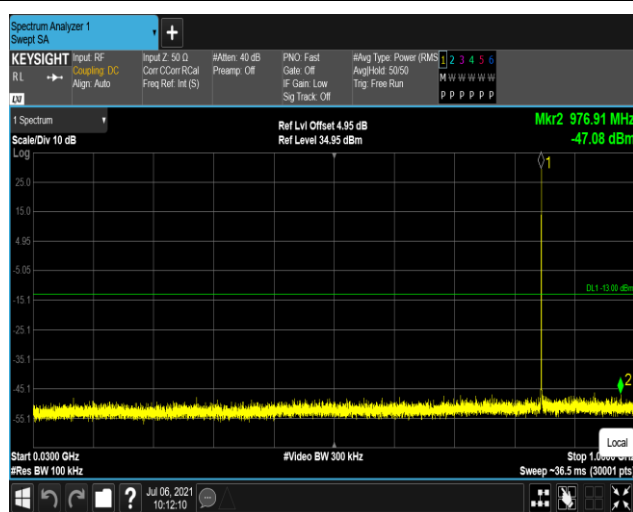
GSM850-251-3-0.15~30MHz



GSM850-251-3-30~1000MHz



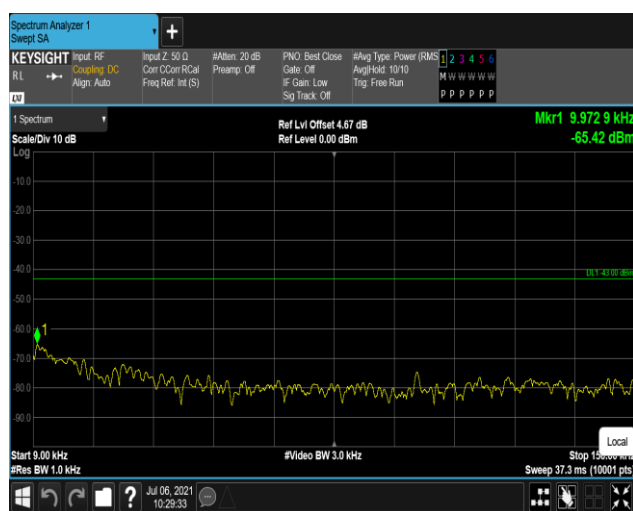
GSM850-251-3-1000~10000MHz



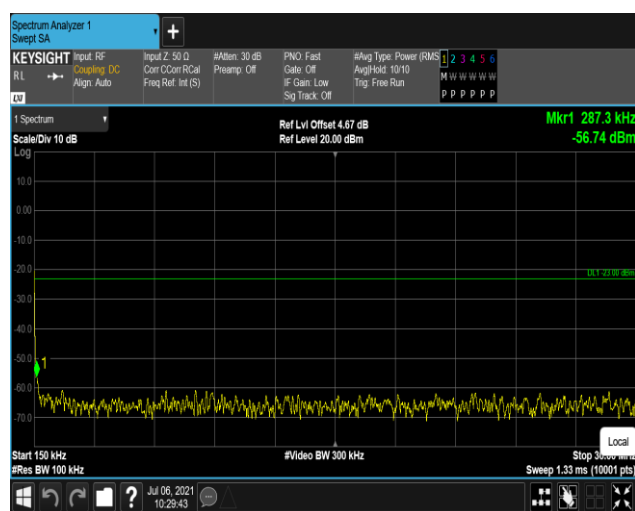
GSM1900-512-0-0.009~0.15MHz



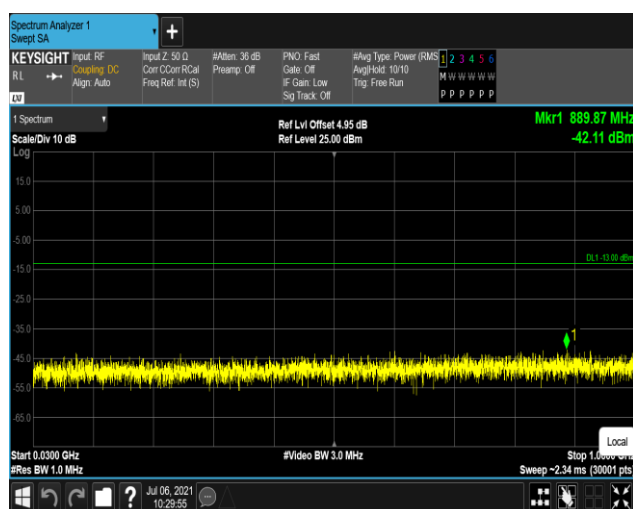
GSM1900-512-0-0.15~30MHz



GSM1900-512-0-30~1000MHz



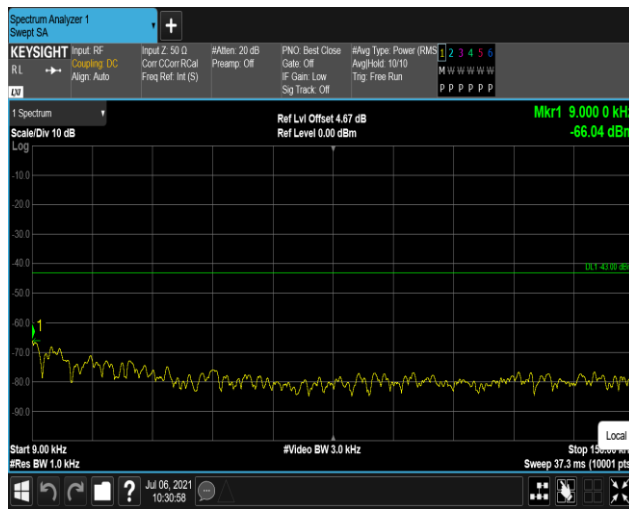
GSM1900-512-0-1000~18000MHz



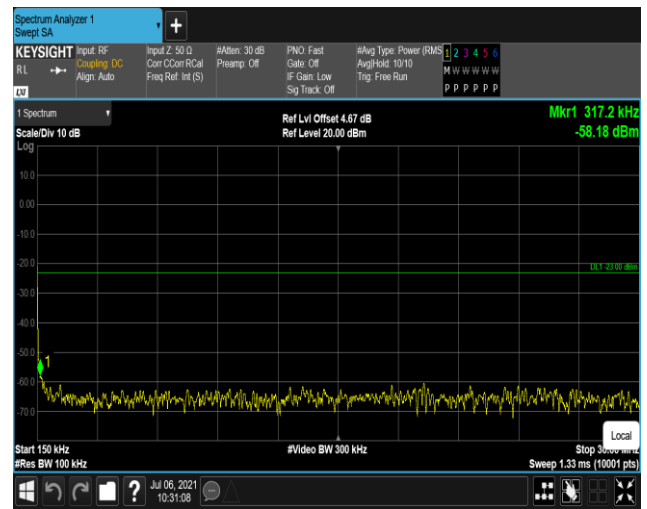
GSM1900-661-0-0.009~0.15MHz



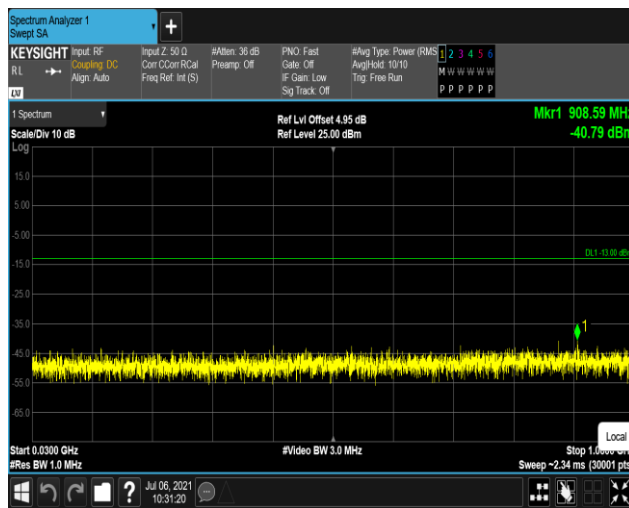
GSM1900-661-0-0.15~30MHz



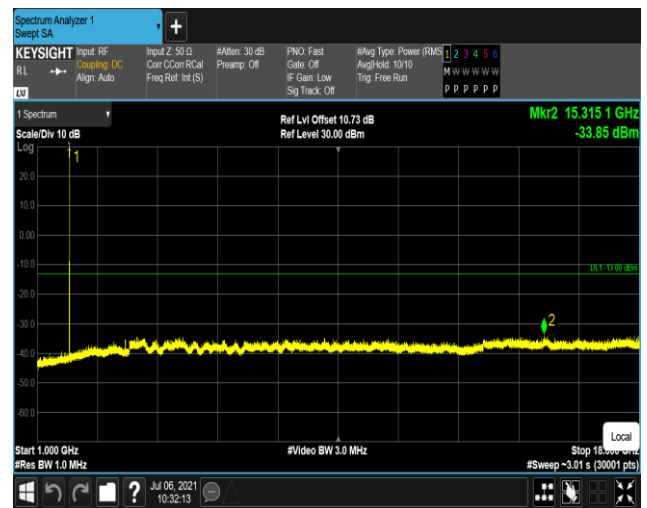
GSM1900-661-0-30~1000MHz



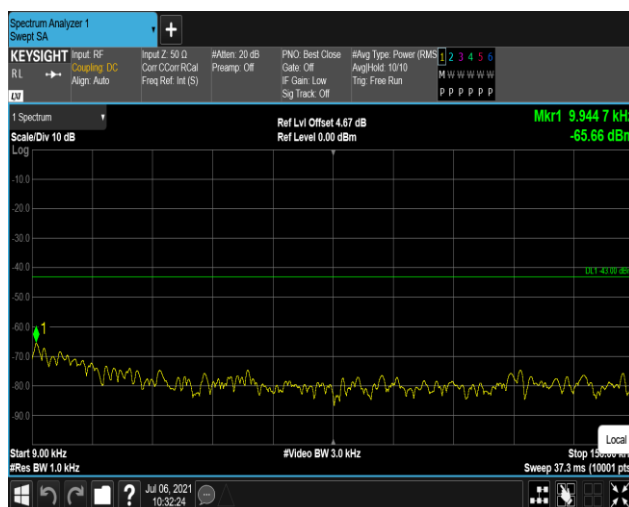
GSM1900-661-0-1000~18000MHz



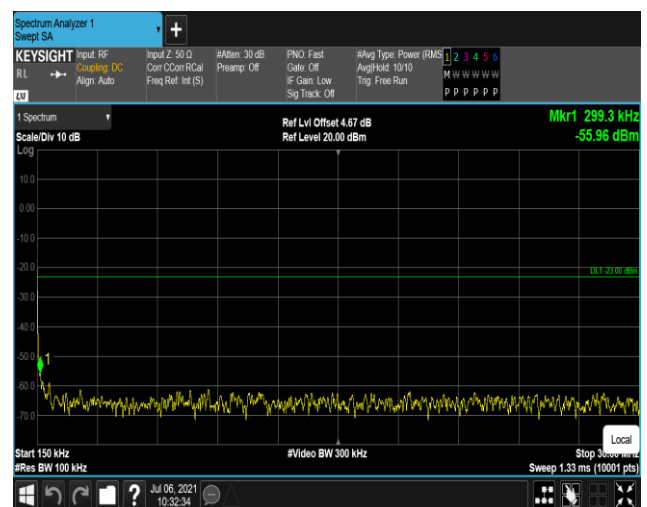
GSM1900-810-0-0.009~0.15MHz



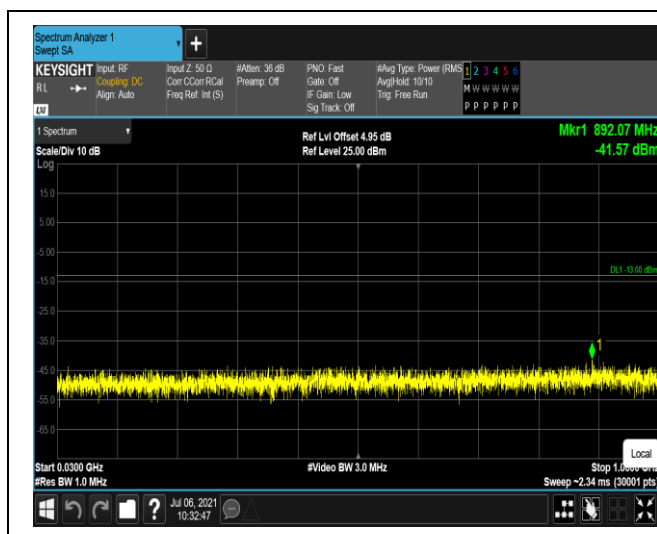
GSM1900-810-0-0.15~30MHz



GSM1900-810-0-30~1000MHz



GSM1900-810-0-1000~18000MHz



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		
3.80	-30	-3.84	-0.004590	±2.5	Pass
	-20	8.30	0.009921		
	-10	7.78	0.009300		
	0	7.97	0.009527		
	10	-4.97	-0.005941		
	20	-4.88	-0.005833		
	30	6.84	0.008176		
	40	6.88	0.008224		
	50	8.72	0.010423		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	-0.94	-0.001124	±2.5	Pass
	3.80	8.62	0.010304		
	4.25	0.55	0.000657		
Note: Only the worst case shown in the report.					

Reference Frequency: EGPRS850 Middle channel=190 Frequency=836.6MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	5.00	0.005977	±2.5	Pass
	-20	6.81	0.008140		
	-10	-0.52	-0.000622		
	0	4.29	0.005128		
	10	1.68	0.002008		
	20	4.81	0.005749		
	30	4.68	0.005594		
	40	3.55	0.004243		
	50	4.10	0.004901		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	5.84	0.006981	±2.5	Pass
	3.80	4.84	0.005785		
	4.25	2.23	0.002666		
Note: Only the worst case shown in the report.					

Reference Frequency: PCS1900 Middle channel=661 Frequency=1880MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	15.01	0.007984	Within authorized band for PCS 1900	Pass
	-20	13.30	0.007074		
	-10	14.53	0.007729		
	0	7.88	0.004191		
	10	2.81	0.001495		
	20	-6.26	-0.003330		
	30	2.10	0.001117		
	40	7.33	0.003899		
	50	2.87	0.001527		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	9.75	0.005186	Within authorized band for PCS 1900	Pass
	3.80	12.66	0.006734		
	4.25	14.79	0.007867		
Note: Only the worst case shown in the report.					

Reference Frequency: EGPRS1900 Middle channel=661 Frequency=1880MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	-1.97	-0.001048	Within authorized band for PCS 1900	Pass
	-20	6.91	0.003676		
	-10	-6.39	-0.003399		
	0	-0.23	-0.000122		
	10	7.30	0.003883		
	20	-5.23	-0.002782		
	30	-0.32	-0.000170		
	40	14.14	0.007521		
	50	-3.45	-0.001835		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	-8.27	-0.004399	Within authorized band for PCS 1900	Pass
	3.80	-2.00	-0.001064		
	4.25	1.49	0.000793		
Note: Only the worst case shown in the report.					

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

Test Graphs

