

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	3	33.16	29.41	38.5	PASS
GSM850	190	3	33.21	29.46	38.5	PASS
GSM850	251	3	33.10	29.35	38.5	PASS
GSM1900	512	0	29.93	29.43	33	PASS
GSM1900	661	0	29.97	29.47	33	PASS
GSM1900	810	0	29.99	29.49	33	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
GPRS850	128	3	1	33.12	29.37	38.5	PASS
GPRS850	128	3	2	31.21	27.46	38.5	PASS
GPRS850	128	3	3	29.23	25.48	38.5	PASS
GPRS850	128	3	4	28.11	24.36	38.5	PASS
GPRS850	190	3	1	33.17	29.42	38.5	PASS
GPRS850	190	3	2	31.34	27.59	38.5	PASS
GPRS850	190	3	3	29.32	25.57	38.5	PASS
GPRS850	190	3	4	28.17	24.42	38.5	PASS
GPRS850	251	3	1	33.07	29.32	38.5	PASS
GPRS850	251	3	2	31.15	27.40	38.5	PASS
GPRS850	251	3	3	29.15	25.40	38.5	PASS
GPRS850	251	3	4	28.05	24.30	38.5	PASS
GPRS1900	512	0	1	29.91	29.41	33	PASS
GPRS1900	512	0	2	28.93	28.43	33	PASS
GPRS1900	512	0	3	26.89	26.39	33	PASS
GPRS1900	512	0	4	25.76	25.26	33	PASS
GPRS1900	661	0	1	29.93	29.43	33	PASS
GPRS1900	661	0	2	29.04	28.54	33	PASS
GPRS1900	661	0	3	27.02	26.52	33	PASS
GPRS1900	661	0	4	25.91	25.41	33	PASS
GPRS1900	810	0	1	29.97	29.47	33	PASS
GPRS1900	810	0	2	29.07	28.57	33	PASS
GPRS1900	810	0	3	27.09	26.59	33	PASS
GPRS1900	810	0	4	26.01	25.51	33	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
EGPRS850	128	8	1	27.78	24.03	38.5	PASS
EGPRS850	128	8	2	26.61	22.86	38.5	PASS
EGPRS850	128	8	3	24.33	20.58	38.5	PASS
EGPRS850	128	8	4	22.91	19.16	38.5	PASS
EGPRS850	190	8	1	27.39	23.64	38.5	PASS
EGPRS850	190	8	2	26.31	22.56	38.5	PASS
EGPRS850	190	8	3	24.09	20.34	38.5	PASS
EGPRS850	190	8	4	22.79	19.04	38.5	PASS
EGPRS850	251	8	1	27.47	23.72	38.5	PASS
EGPRS850	251	8	2	26.41	22.66	38.5	PASS
EGPRS850	251	8	3	24.21	20.46	38.5	PASS
EGPRS850	251	8	4	22.80	19.05	38.5	PASS
EGPRS1900	512	2	1	26.72	26.22	33	PASS
EGPRS1900	512	2	2	25.83	25.33	33	PASS
EGPRS1900	512	2	3	23.82	23.32	33	PASS
EGPRS1900	512	2	4	22.87	22.37	33	PASS
EGPRS1900	661	2	1	26.83	26.33	33	PASS
EGPRS1900	661	2	2	25.91	25.41	33	PASS
EGPRS1900	661	2	3	23.92	23.42	33	PASS
EGPRS1900	661	2	4	22.88	22.38	33	PASS
EGPRS1900	810	2	1	26.62	26.12	33	PASS
EGPRS1900	810	2	2	25.74	25.24	33	PASS
EGPRS1900	810	2	3	23.75	23.25	33	PASS
EGPRS1900	810	2	4	22.71	22.21	33	PASS

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

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

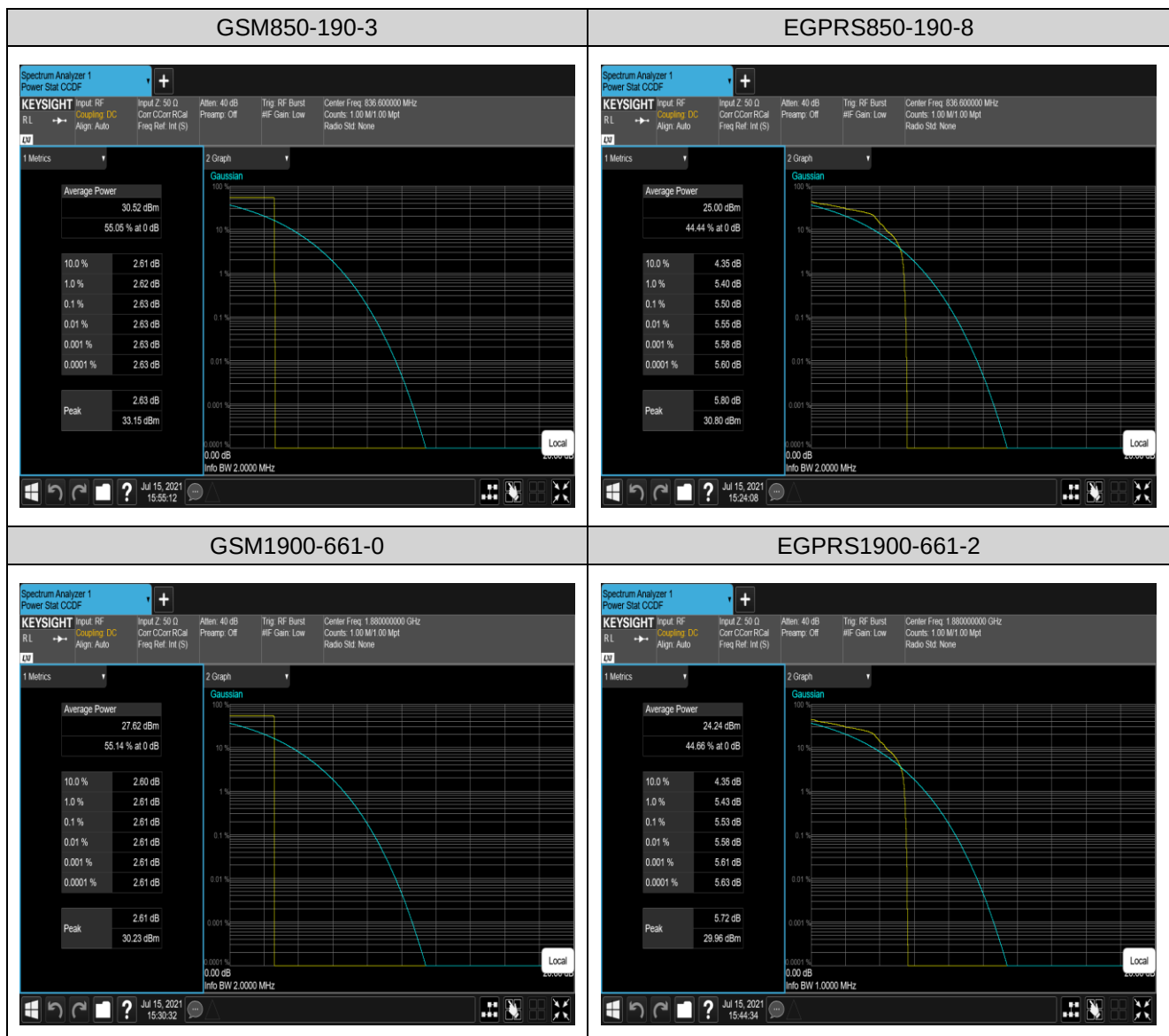
Appendix B: Peak-to-Average Ratio(CCDF)

Test Result

Band	Channel	PCL	Result(dB)	Limit(dB)	Verdict
GSM850	190	3	2.63	13	PASS
EGPRS850	190	8	5.5	13	PASS
GSM1900	661	0	2.61	13	PASS
EGPRS1900	661	2	5.53	13	PASS

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

Test Graphs



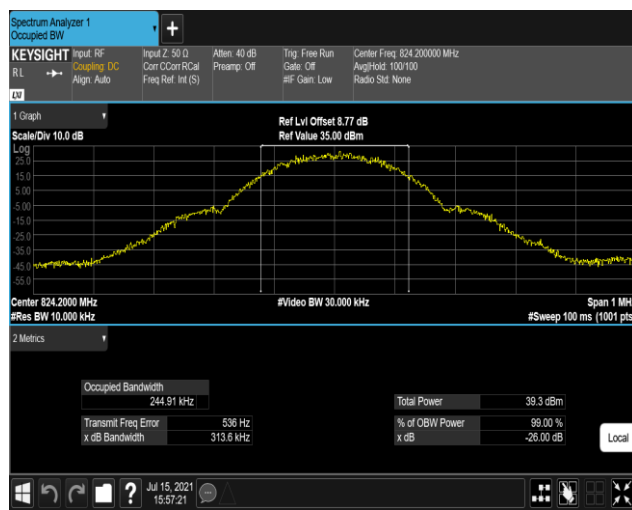
Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

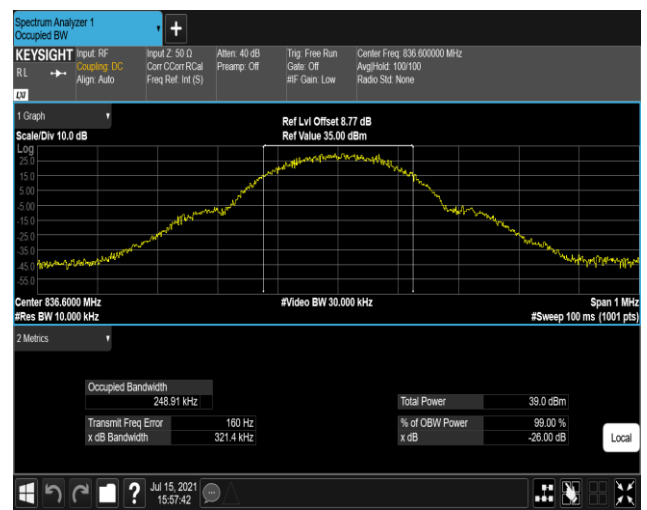
Band	Channel	PCL	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
GSM850	128	3	0.24491	0.3136	---	PASS
GSM850	190	3	0.24891	0.3214	---	PASS
GSM850	251	3	0.24481	0.3140	---	PASS
EGPRS850	128	8	0.25009	0.3104	---	PASS
EGPRS850	190	8	0.24944	0.3181	---	PASS
EGPRS850	251	8	0.24929	0.3099	---	PASS
GSM1900	512	0	0.24552	0.3155	---	PASS
GSM1900	661	0	0.24657	0.3138	---	PASS
GSM1900	810	0	0.24564	0.3150	---	PASS
EGPRS1900	512	2	0.25068	0.3151	---	PASS
EGPRS1900	661	2	0.25038	0.3169	---	PASS
EGPRS1900	810	2	0.25200	0.3212	---	PASS

Test Graphs

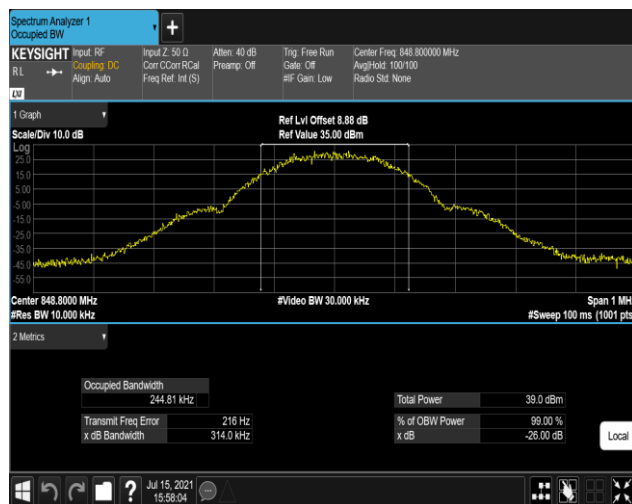
GSM850-128-3-0.3136



GSM850-190-3-0.3214



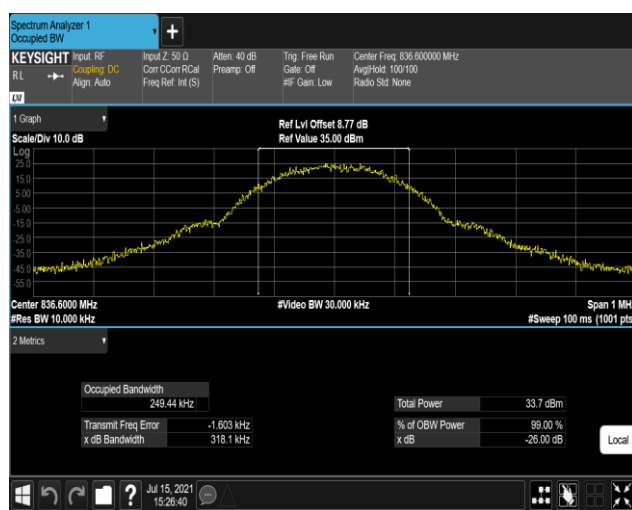
GSM850-251-3-0.3140



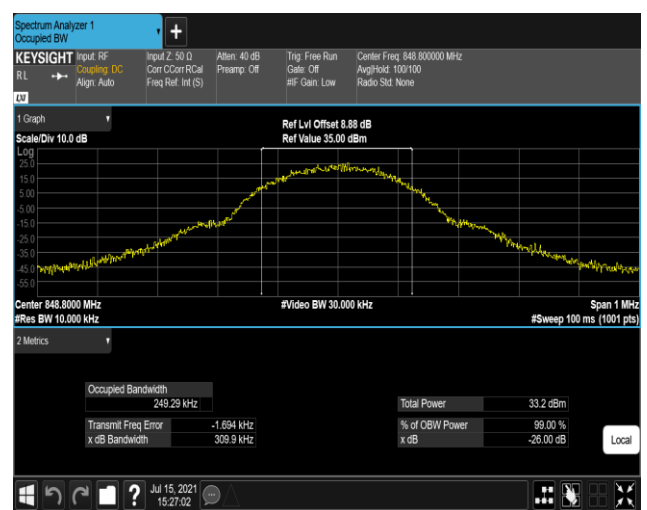
EGPRS850-128-8-0.3104



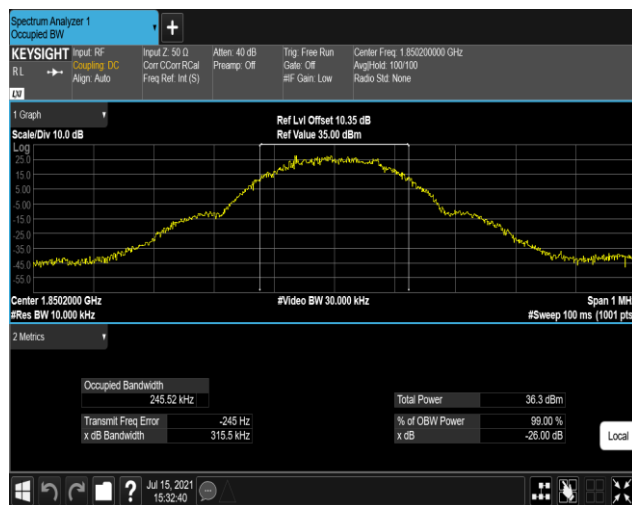
EGPRS850-190-8-0.3181



EGPRS850-251-8-0.3099



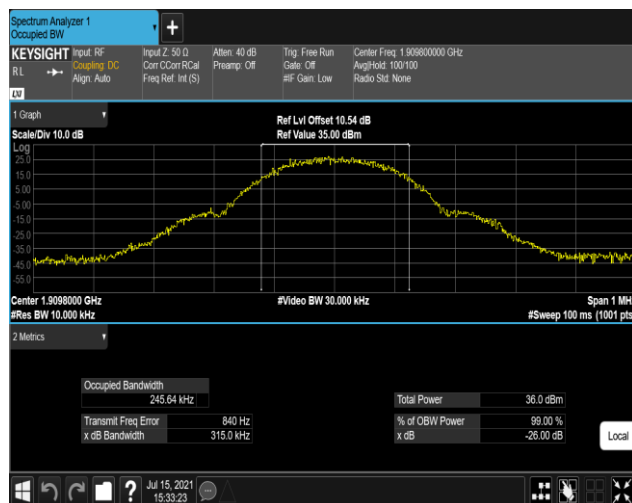
GSM1900-512-0-0.3155



GSM1900-661-0-0.3138



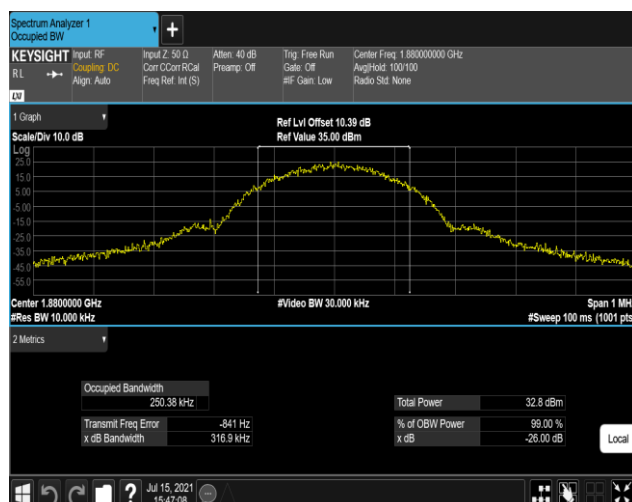
GSM1900-810-0-0.3150



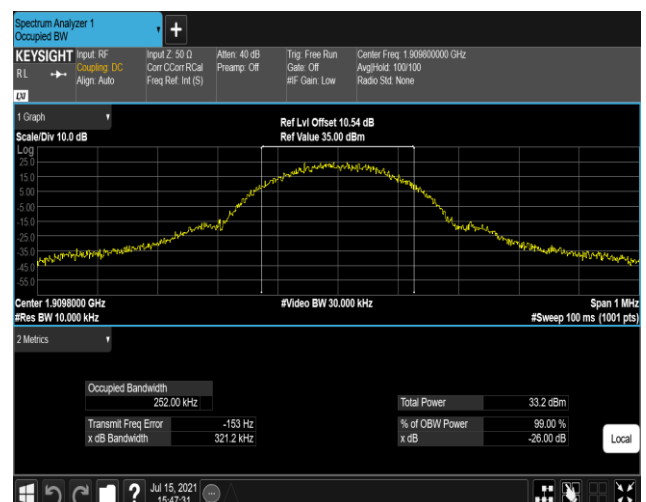
EGPRS1900-512-2-0.3151



EGPRS1900-661-2-0.3169



EGPRS1900-810-2-0.3212

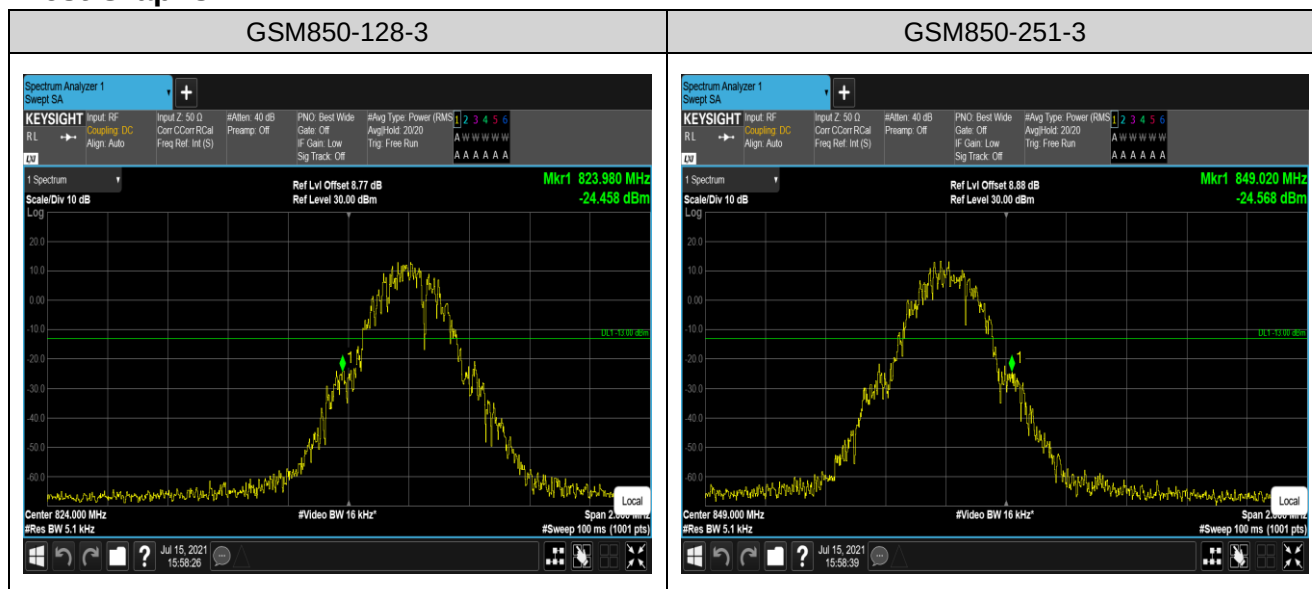


Appendix D: Band Edge

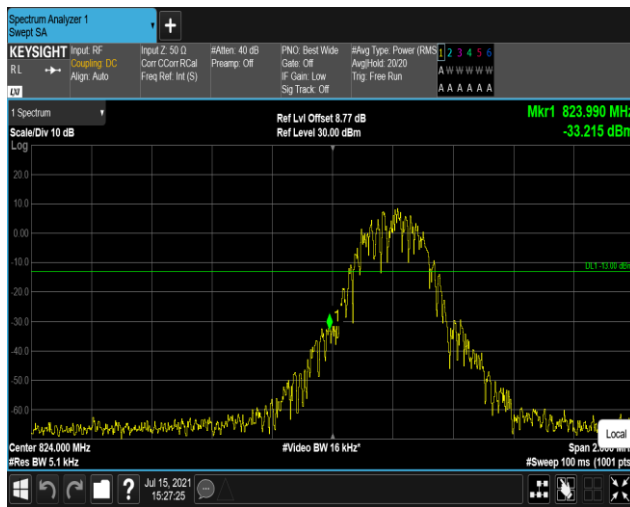
Test Result

Band	Channel	PCL	Freq (MHz)	Result (dBm)	Limit(dBm)	Verdict
GSM850	128	3	823.98	-23.53	-13	PASS
GSM850	251	3	849.02	-24.57	-13	PASS
EGPRS850	128	8	823.99	-30.75	-13	PASS
EGPRS850	251	8	849.01	-31.29	-13	PASS
GSM1900	512	0	1849.98	-17.25	-13	PASS
GSM1900	810	0	1910.01	-13.03	-13	PASS
EGPRS1900	512	2	1850.00	-21.62	-13	PASS
EGPRS1900	810	2	1910.01	-22.16	-13	PASS

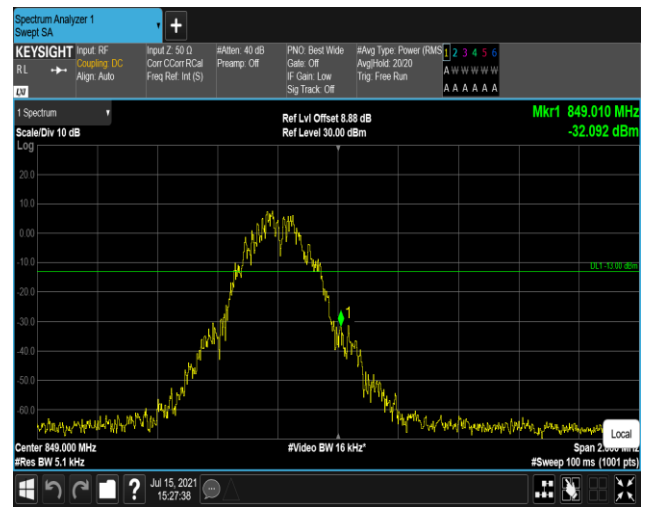
Test Graphs



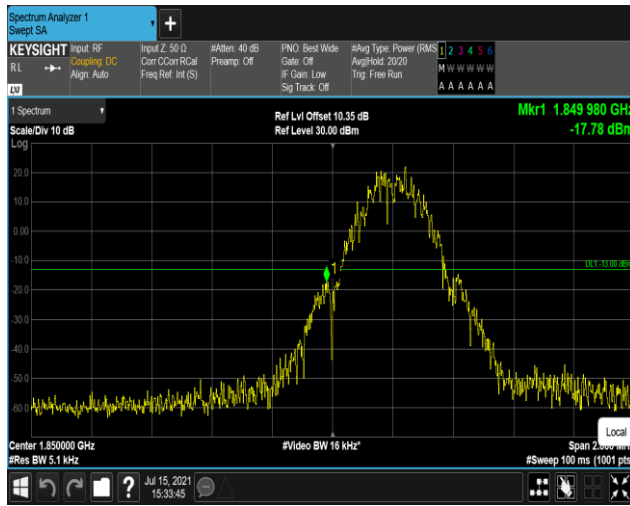
EGPRS850-128-8



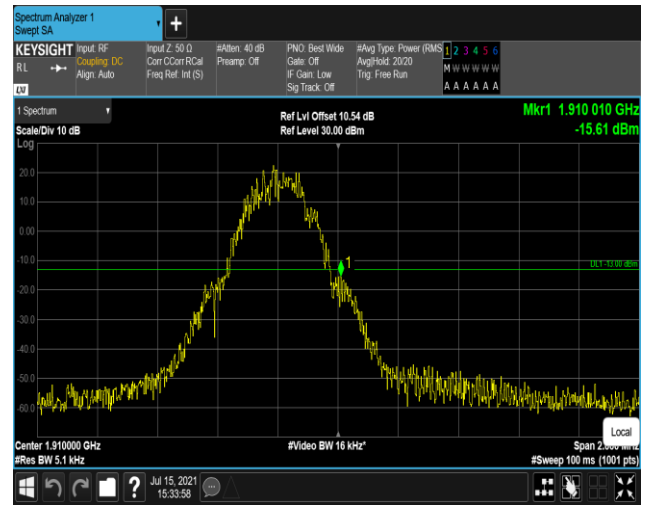
EGPRS850-251-8



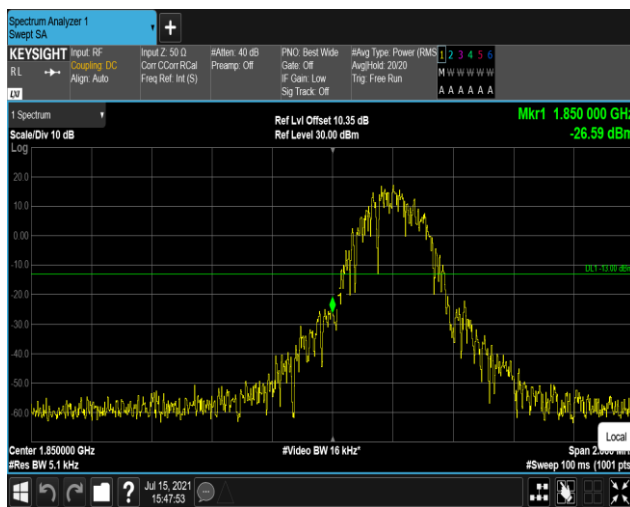
GSM1900-512-0



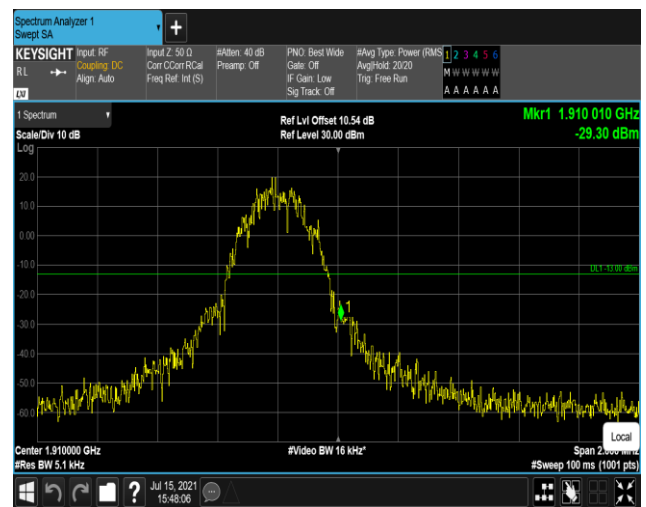
GSM1900-810-0



EGPRS1900-512-2



EGPRS1900-810-2



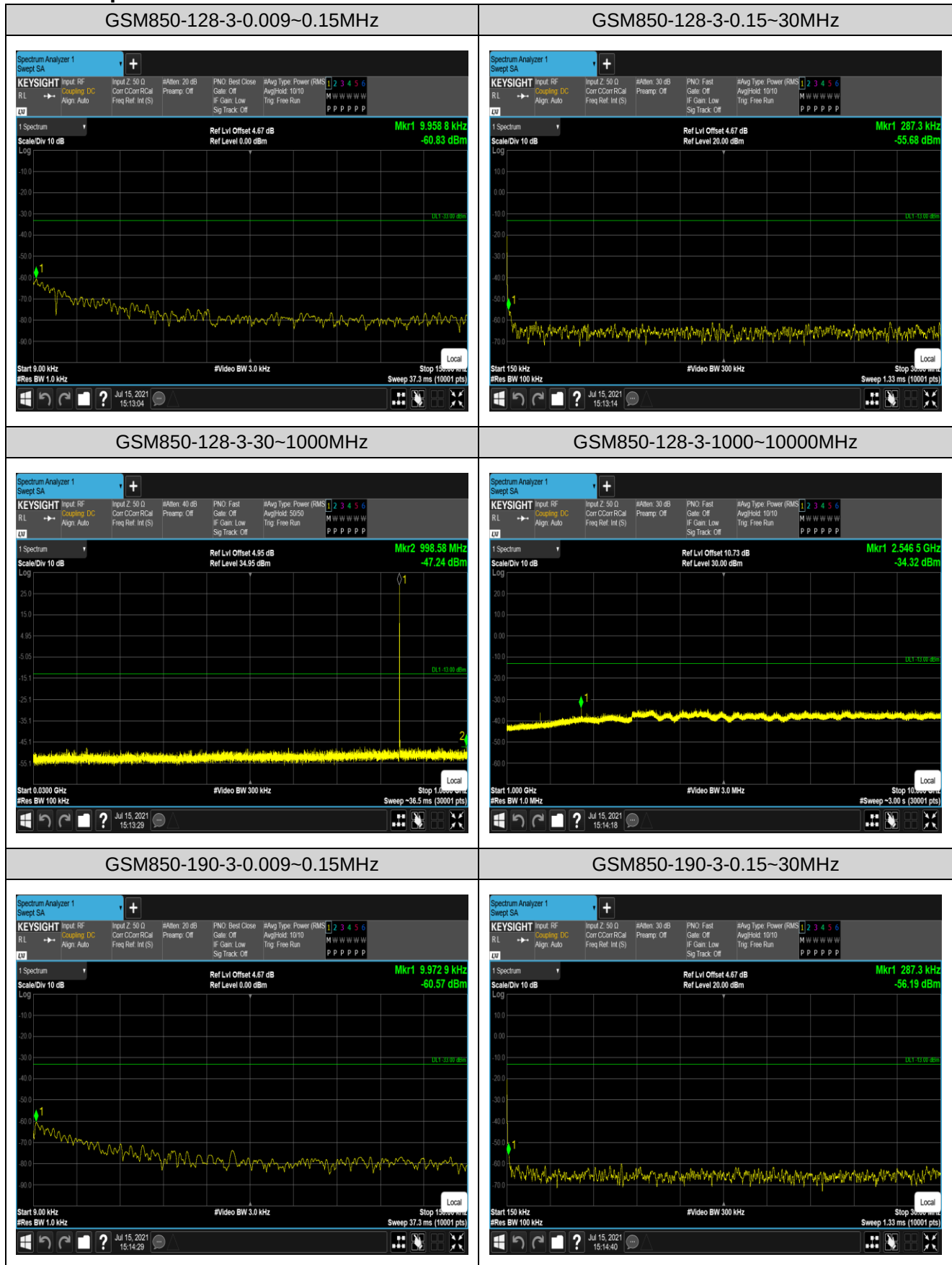
Appendix E: Conducted Spurious Emission

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	-60.83	-33	PASS
GSM850	128	3	0.15~30MHz	0.29	-55.68	-13	PASS
GSM850	128	3	30~1000MHz	998.58	-47.24	-13	PASS
GSM850	128	3	1000~10000MHz	2546.5	-34.32	-13	PASS
GSM850	190	3	0.009~0.15MHz	0.01	-60.57	-33	PASS
GSM850	190	3	0.15~30MHz	0.29	-56.19	-13	PASS
GSM850	190	3	30~1000MHz	736.1	-47.49	-13	PASS
GSM850	190	3	1000~10000MHz	3847.3	-34.06	-13	PASS
GSM850	251	3	0.009~0.15MHz	0.01	-60.37	-33	PASS
GSM850	251	3	0.15~30MHz	0.29	-57.52	-13	PASS
GSM850	251	3	30~1000MHz	703.41	-47.57	-13	PASS
GSM850	251	3	1000~10000MHz	5024.5	-34.03	-13	PASS
GSM1900	512	0	0.009~0.15MHz	0.01	-67.92	-43	PASS
GSM1900	512	0	0.15~30MHz	0.29	-58.43	-23	PASS
GSM1900	512	0	30~1000MHz	809.62	-41.03	-13	PASS
GSM1900	512	0	1000~18000MHz	3819.73	-33.23	-13	PASS
GSM1900	661	0	0.009~0.15MHz	0.01	-69.04	-43	PASS
GSM1900	661	0	0.15~30MHz	0.29	-55.09	-23	PASS
GSM1900	661	0	30~1000MHz	838.56	-42.01	-13	PASS
GSM1900	661	0	1000~18000MHz	3819.73	-33.08	-13	PASS
GSM1900	810	0	0.009~0.15MHz	0.01	-68.57	-43	PASS
GSM1900	810	0	0.15~30MHz	0.29	-55.55	-23	PASS
GSM1900	810	0	30~1000MHz	907.37	-41.46	-13	PASS
GSM1900	810	0	1000~18000MHz	13672.37	-33.42	-13	PASS

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

Test Graphs



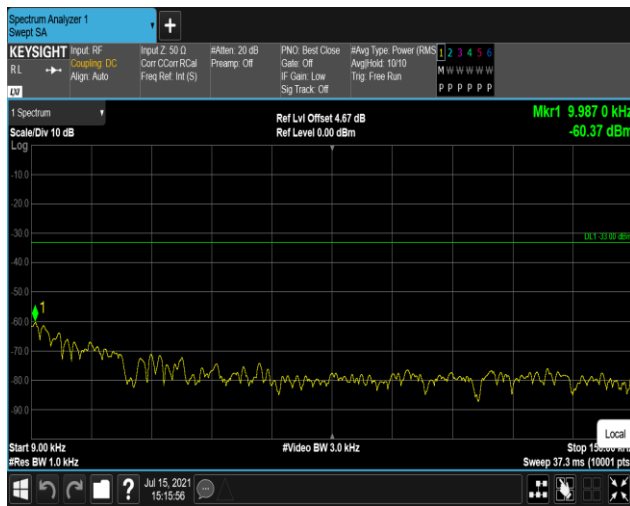
GSM850-190-3-30~1000MHz



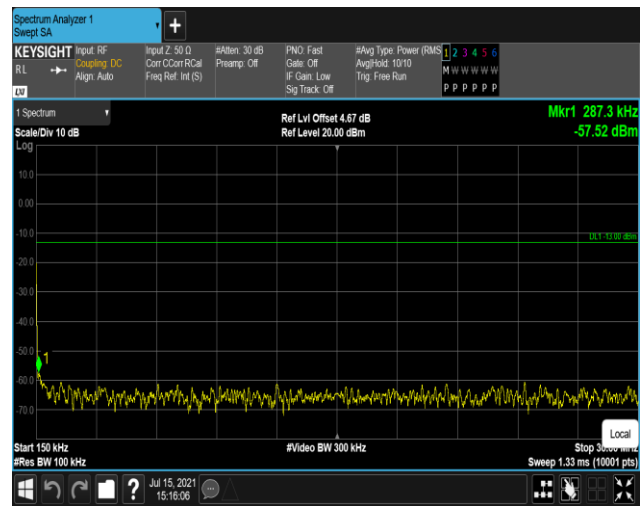
GSM850-190-3-1000~10000MHz



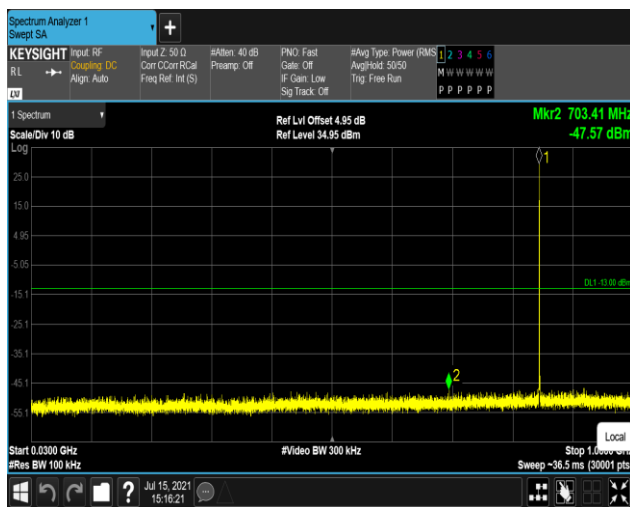
GSM850-251-3-0.009~0.15MHz



GSM850-251-3-0.15~30MHz



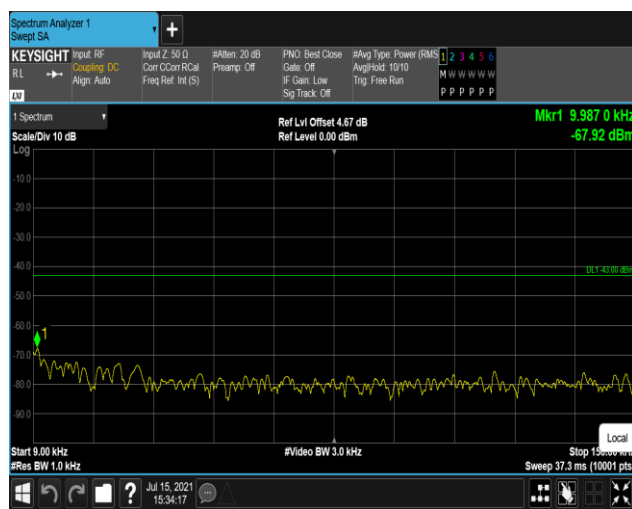
GSM850-251-3-30~1000MHz



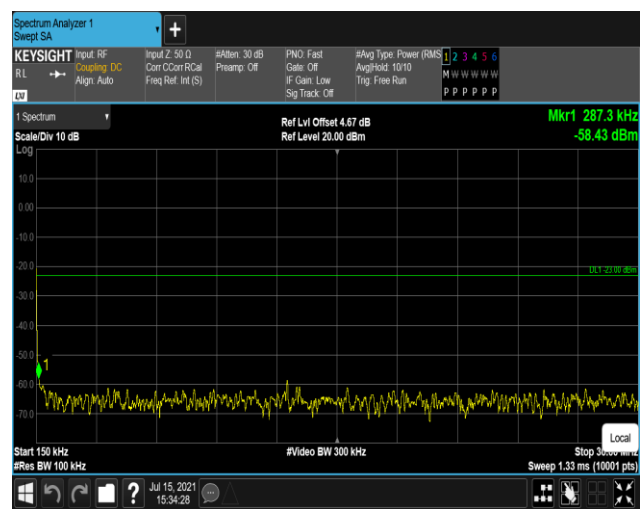
GSM850-251-3-1000~10000MHz



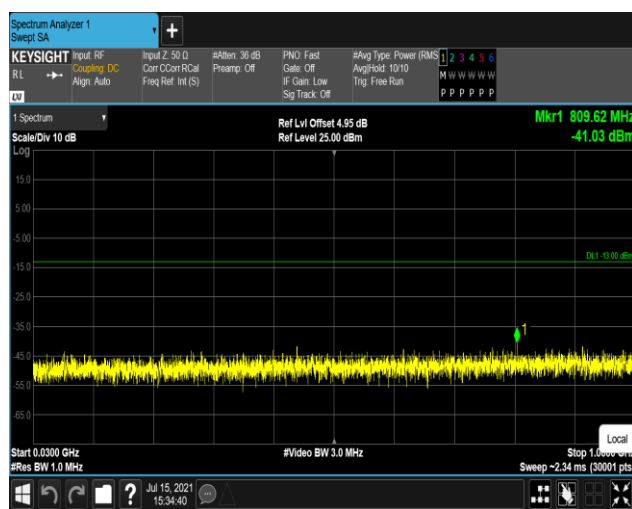
GSM1900-512-0-0.009~0.15MHz



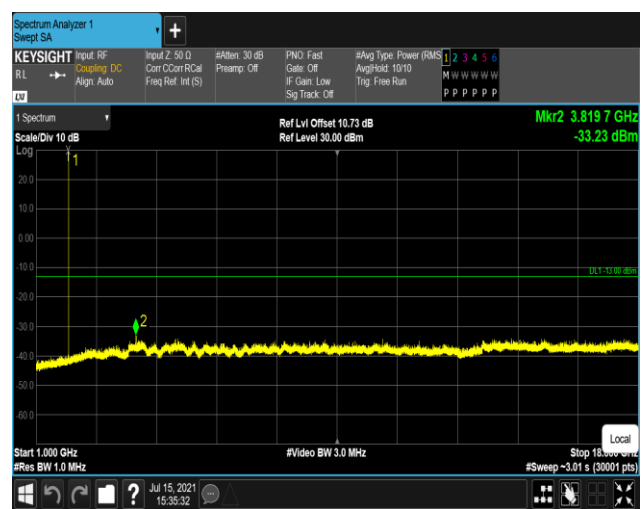
GSM1900-512-0-0.15~30MHz



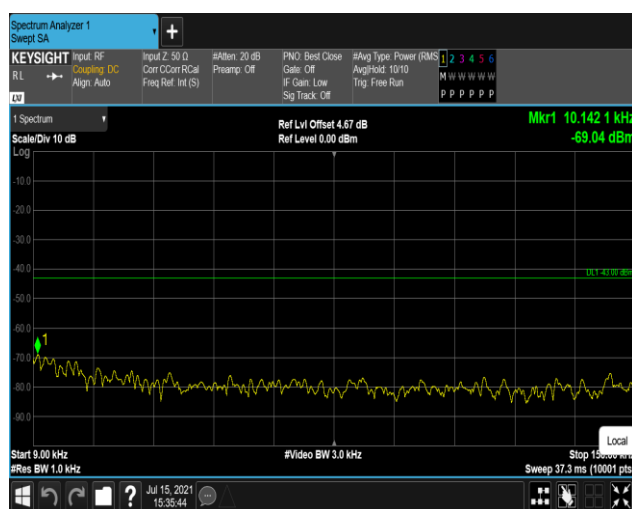
GSM1900-512-0-30~1000MHz



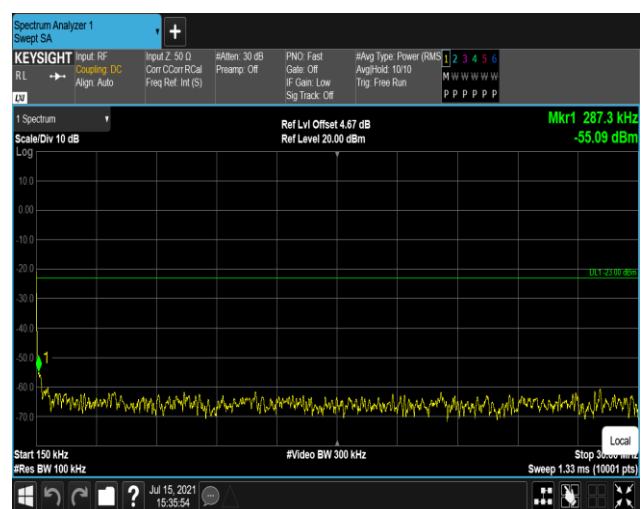
GSM1900-512-0-1000~18000MHz



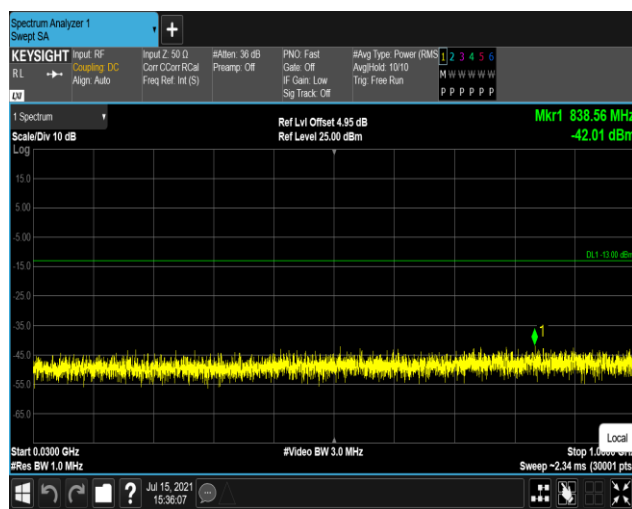
GSM1900-661-0-0.009~0.15MHz



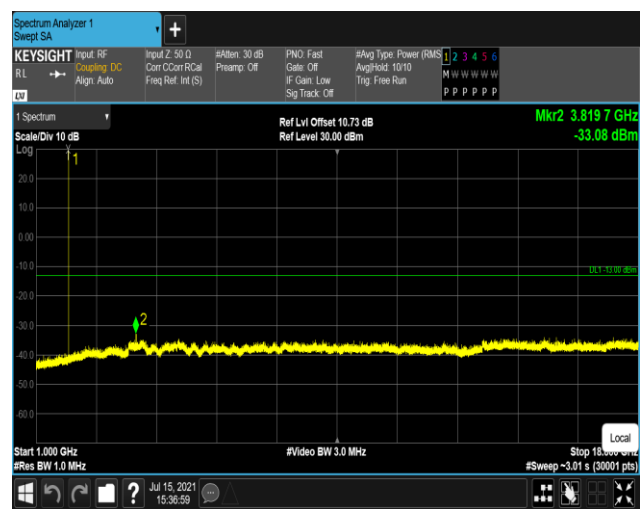
GSM1900-661-0-0.15~30MHz



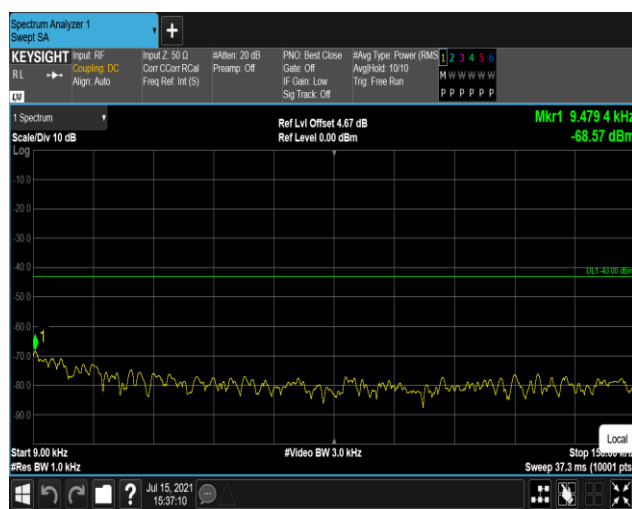
GSM1900-661-0-30~1000MHz



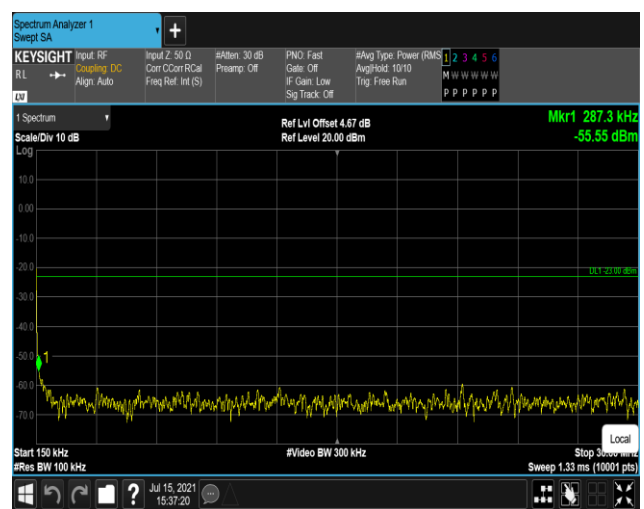
GSM1900-661-0-1000~18000MHz



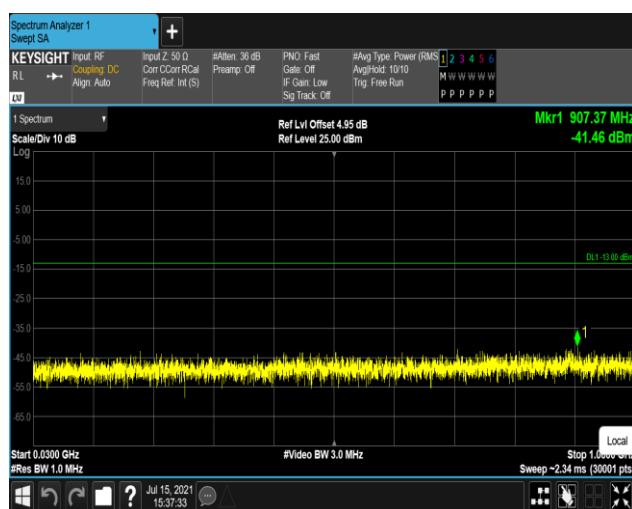
GSM1900-810-0-0.009~0.15MHz



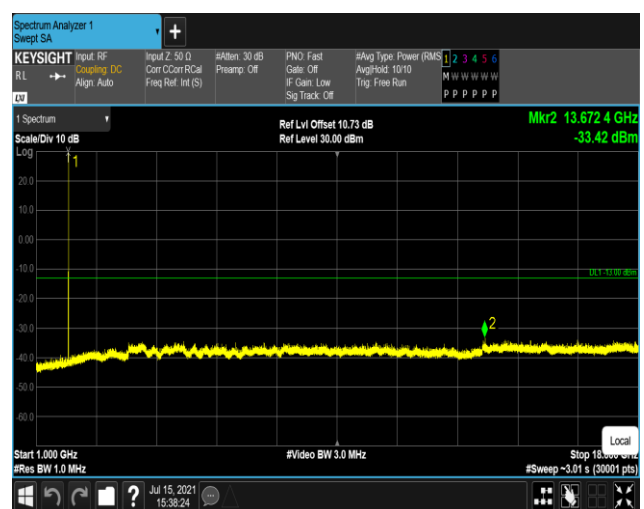
GSM1900-810-0-0.15~30MHz



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		
3.85	-30	19.37	0.010303	±2.5	Pass
	-20	25.96	0.013809		
	-10	36.00	0.019149		
	0	39.16	0.020830		
	10	28.73	0.015282		
	20	38.10	0.020266		
	30	38.74	0.020606		
	40	36.52	0.019426		
	50	32.35	0.017207		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	-2.94	-0.003514	±2.5	Pass
	3.85	-1.94	-0.002319		
	4.40	-1.42	-0.001697		
Remark: All channel had been tested, but only the worst case data displayed in this report.					

Reference Frequency: EGPRS850 Middle channel=190 Frequency=836.6MHz					
Temperature					
Power supplied (Vdc)	Temperature (℃)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	-0.29	-0.000347	±2.5	Pass
	-20	-0.74	-0.000885		
	-10	2.58	0.003084		
	0	-3.84	-0.004590		
	10	2.32	0.002773		
	20	0.36	0.000430		
	30	1.90	0.002271		
	40	-6.26	-0.007483		
	50	-1.07	-0.001279		
Voltage					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	-13.56	-0.016208	±2.5	Pass
	3.85	-8.46	-0.010112		
	4.40	-11.75	-0.014045		
Remark: All channel had been tested, but only the worst case data displayed in this report.					

Reference Frequency: PCS1900 Middle channel=661 Frequency=1880MHz					
Temperature					
Power supplied (Vdc)	Temperature (℃)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	-10.36	-0.012383	Within authorized band for PCS 1900	Pass
	-20	-11.24	-0.013435		
	-10	-2.91	-0.003478		
	0	2.91	0.003478		
	10	3.68	0.004399		
	20	3.36	0.004016		
	30	-5.10	-0.006096		
	40	-1.97	-0.002355		
	50	-3.91	-0.004674		
Voltage					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	28.06	0.014926	Within authorized band for PCS 1900	Pass
	3.85	23.99	0.012761		
	4.40	24.86	0.013223		
Remark: All channel had been tested, but only the worst case data displayed in this report.					

Reference Frequency: EGPRS1900 Middle channel=661 Frequency=1880MHz					
Temperature					
Power supplied (Vdc)	Temperature (℃)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	33.16	0.017638	Within authorized band for PCS 1900	Pass
	-20	30.99	0.016484		
	-10	19.69	0.010473		
	0	26.54	0.014117		
	10	32.80	0.017447		
	20	23.37	0.012431		
	30	21.18	0.011266		
	40	31.25	0.016622		
	50	23.96	0.012745		
Voltage					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	16.89	0.008984	Within authorized band for PCS 1900	Pass
	3.85	26.80	0.014255		
	4.40	17.98	0.009564		
Remark: All channel had been tested, but only the worst case data displayed in this 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

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

Test Graphs

