

## 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	33.20	29.45	38.5	PASS
GSM850	190	5	33.35	30.5	38.5	PASS
GSM850	251	5	33.43	30.58	38.5	PASS
GSM1900	512	0	30.04	29.34	33	PASS
GSM1900	661	0	30.12	30.12	33	PASS
GSM1900	810	0	29.90	29.9	33	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
GPRS850	128	5	1	33.38	29.63	38.5	PASS
GPRS850	128	5	2	31.33	27.58	38.5	PASS
GPRS850	128	5	3	29.33	25.58	38.5	PASS
GPRS850	128	5	4	27.22	23.47	38.5	PASS
GPRS850	190	5	1	33.43	30.58	38.5	PASS
GPRS850	190	5	2	31.39	28.54	38.5	PASS
GPRS850	190	5	3	29.39	26.54	38.5	PASS
GPRS850	190	5	4	27.26	24.41	38.5	PASS
GPRS850	251	5	1	33.50	30.65	38.5	PASS
GPRS850	251	5	2	31.32	28.47	38.5	PASS
GPRS850	251	5	3	29.33	26.48	38.5	PASS
GPRS850	251	5	4	27.20	24.35	38.5	PASS
GPRS1900	512	0	1	29.95	29.25	33	PASS
GPRS1900	512	0	2	27.92	27.22	33	PASS
GPRS1900	512	0	3	26.23	25.53	33	PASS
GPRS1900	512	0	4	24.08	23.38	33	PASS
GPRS1900	661	0	1	30.08	30.08	33	PASS
GPRS1900	661	0	2	27.74	27.74	33	PASS
GPRS1900	661	0	3	26.06	26.06	33	PASS
GPRS1900	661	0	4	23.91	23.91	33	PASS
GPRS1900	810	0	1	29.88	29.88	33	PASS
GPRS1900	810	0	2	27.54	27.54	33	PASS
GPRS1900	810	0	3	25.83	25.83	33	PASS
GPRS1900	810	0	4	23.62	23.62	33	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
EGPRS850	128	8	1	26.63	22.88	38.5	PASS
EGPRS850	128	8	2	25.32	21.57	38.5	PASS
EGPRS850	128	8	3	22.28	18.53	38.5	PASS
EGPRS850	128	8	4	18.88	15.13	38.5	PASS
EGPRS850	190	8	1	26.75	23.9	38.5	PASS
EGPRS850	190	8	2	25.79	22.94	38.5	PASS
EGPRS850	190	8	3	23.09	20.24	38.5	PASS
EGPRS850	190	8	4	19.88	17.03	38.5	PASS
EGPRS850	251	8	1	26.69	23.84	38.5	PASS
EGPRS850	251	8	2	25.74	22.89	38.5	PASS
EGPRS850	251	8	3	23.06	20.21	38.5	PASS
EGPRS850	251	8	4	19.81	16.96	38.5	PASS
EGPRS1900	512	2	1	26.34	25.64	33	PASS
EGPRS1900	512	2	2	24.94	24.24	33	PASS
EGPRS1900	512	2	3	22.79	22.09	33	PASS
EGPRS1900	512	2	4	20.56	19.86	33	PASS
EGPRS1900	661	2	1	26.24	25.54	33	PASS
EGPRS1900	661	2	2	24.89	24.19	33	PASS
EGPRS1900	661	2	3	22.63	21.93	33	PASS
EGPRS1900	661	2	4	20.29	19.59	33	PASS
EGPRS1900	810	2	1	26.06	25.36	33	PASS
EGPRS1900	810	2	2	24.80	24.1	33	PASS
EGPRS1900	810	2	3	22.60	21.9	33	PASS
EGPRS1900	810	2	4	20.37	19.67	33	PASS

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

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

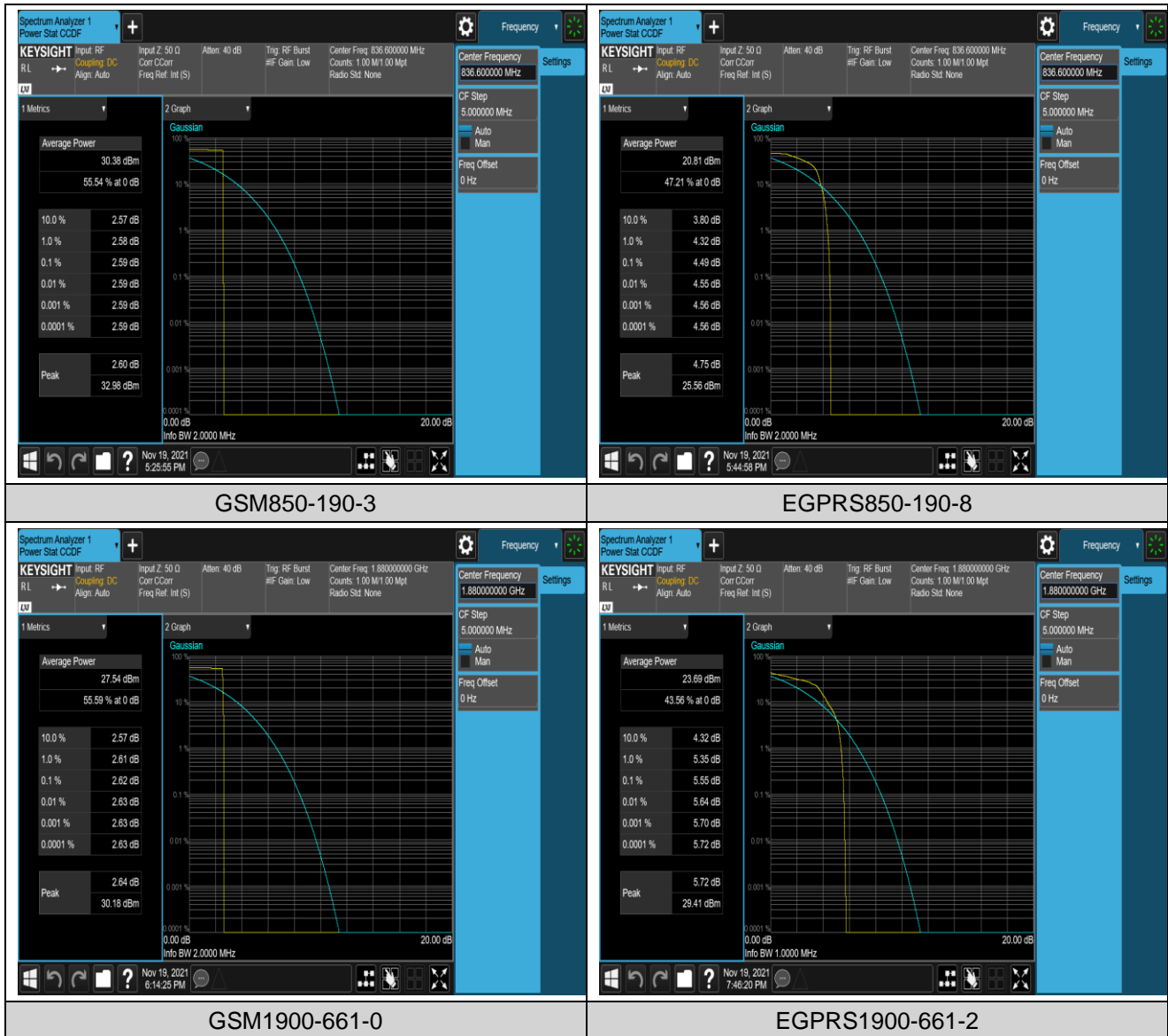
## Appendix B: Peak-to-Average Ratio(CCDF)

### Test Result

Band	Channel	PCL	Result(dB)	Limit(dB)	Verdict
GSM850	190	5	2.59	13	PASS
EGPRS850	190	8	4.49	13	PASS
GSM1900	661	0	2.62	13	PASS
EGPRS1900	661	2	5.55	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

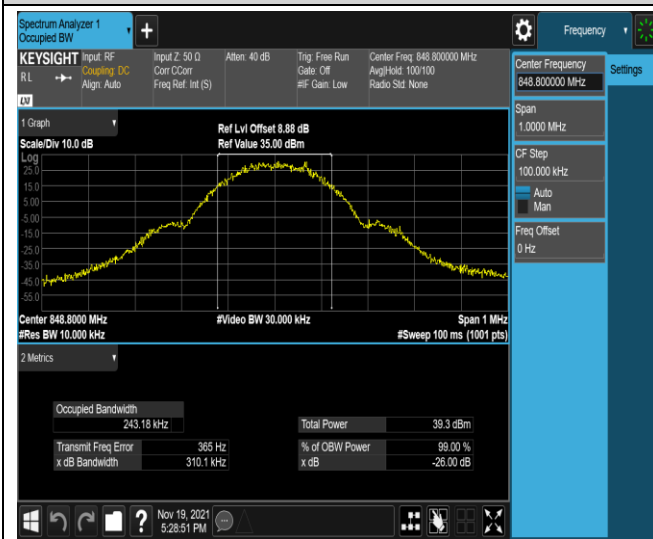
Band	Channel	PCL	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
GSM850	128	5	0.24490	0.3114	---	PASS
GSM850	190	5	0.24524	0.3129	---	PASS
GSM850	251	5	0.24318	0.3101	---	PASS
EGPRS850	128	8	0.26430	0.3388	---	PASS
EGPRS850	190	8	0.27177	0.3857	---	PASS
EGPRS850	251	8	0.27235	0.3833	---	PASS
GSM1900	512	0	0.24275	0.3110	---	PASS
GSM1900	661	0	0.24493	0.3179	---	PASS
GSM1900	810	0	0.24410	0.3121	---	PASS
EGPRS1900	512	2	0.24295	0.3096	---	PASS
EGPRS1900	661	2	0.24726	0.3133	---	PASS
EGPRS1900	810	2	0.24798	0.3130	---	PASS

Test Graphs

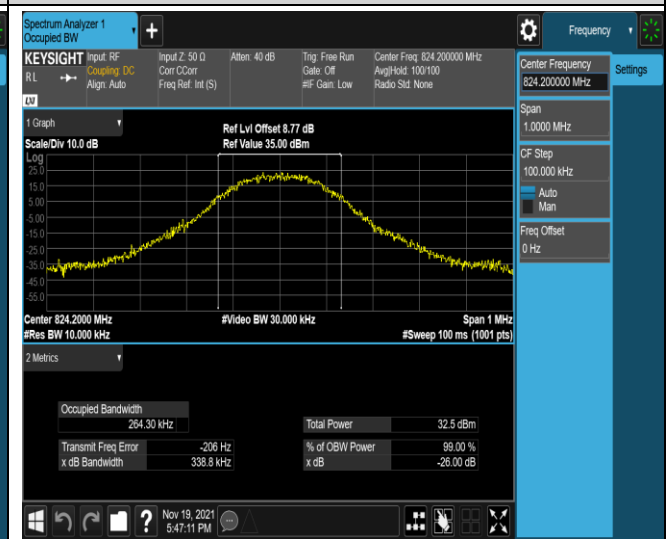


GSM850-128-3-0.3114

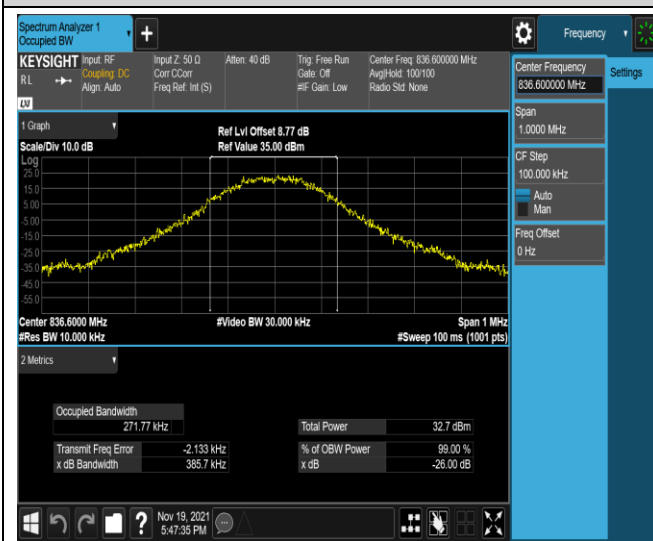
GSM850-190-3-0.3129



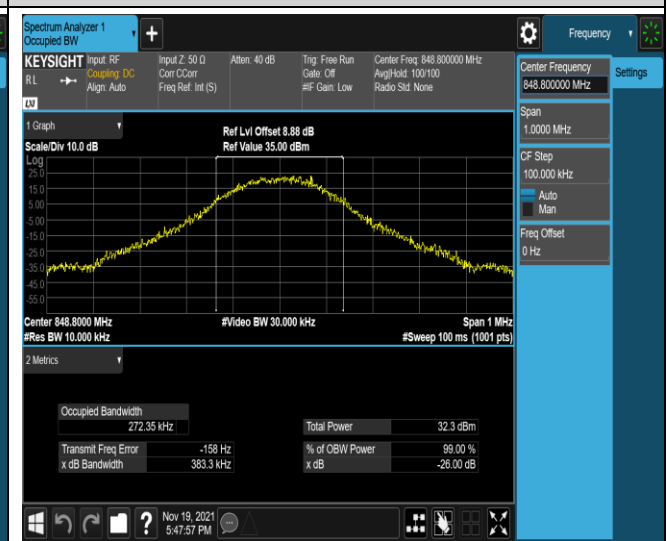
GSM850-251-3-0.3101



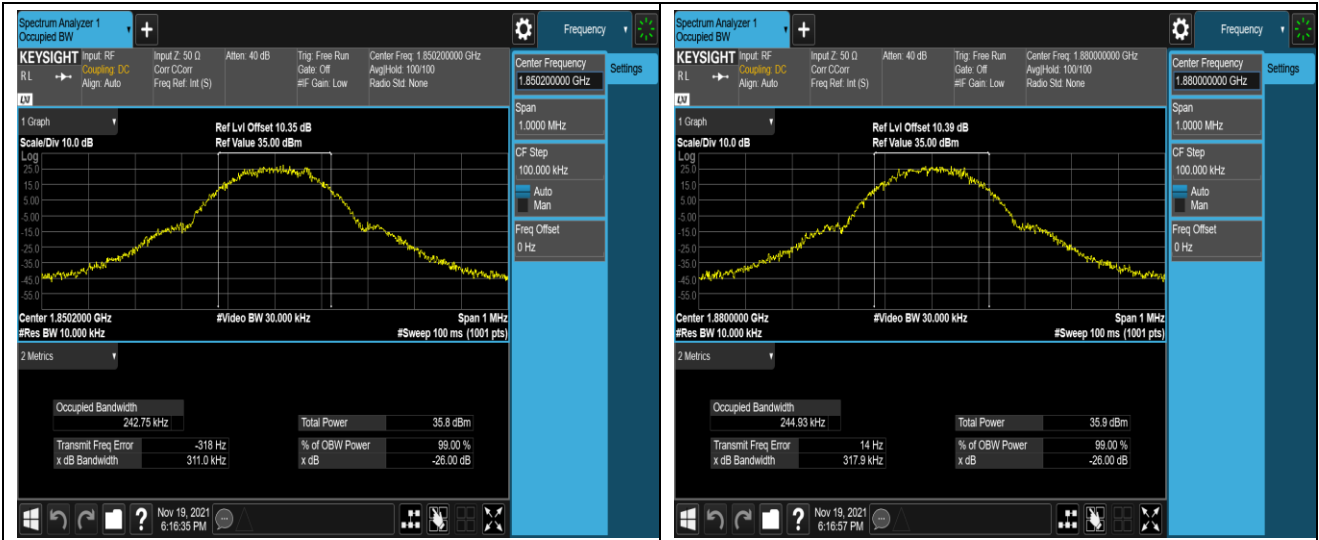
EGPRS850-128-8-0.3388



EGPRS850-190-8-0.3857

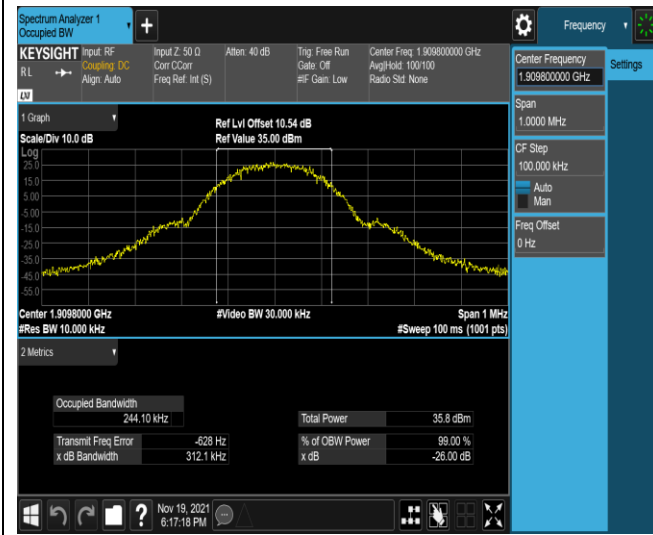


EGPRS850-251-8-0.3833

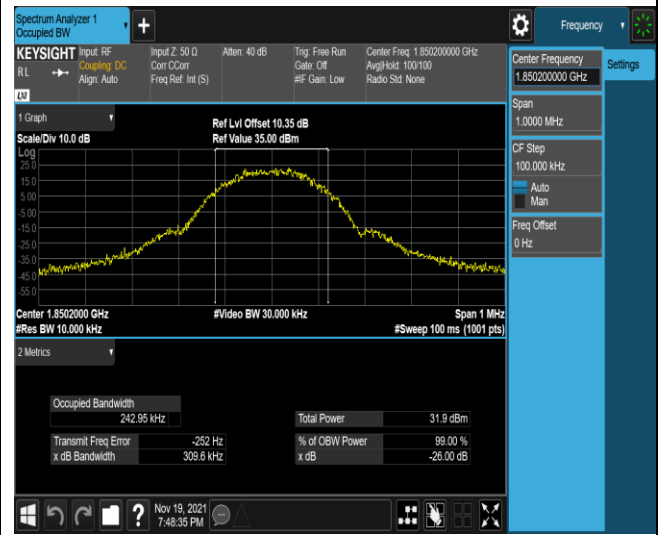


GSM1900-512-0-0.3110

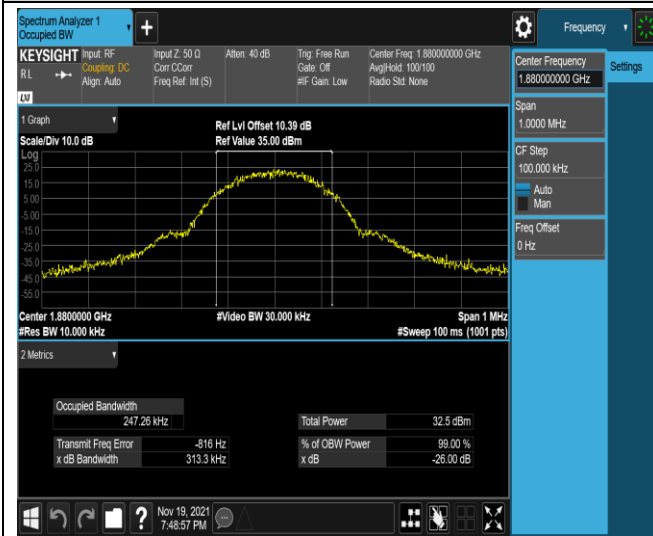
GSM1900-661-0-0.3179



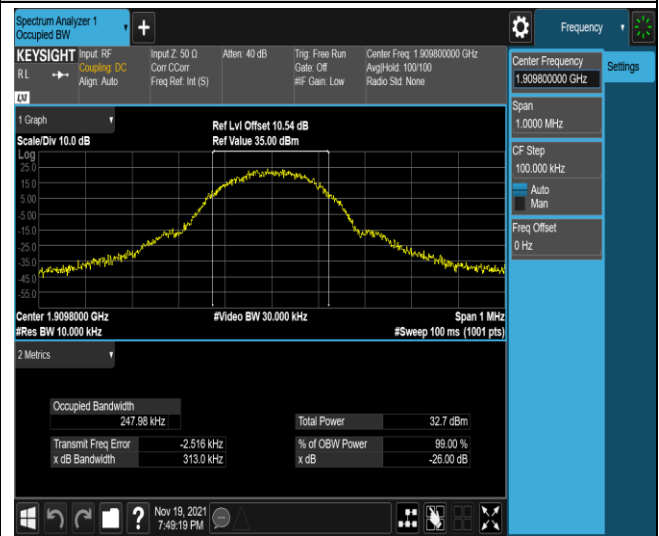
GSM1900-810-0-0.3121



EGPRS1900-512-2-0.3096



EGPRS1900-661-2-0.3133

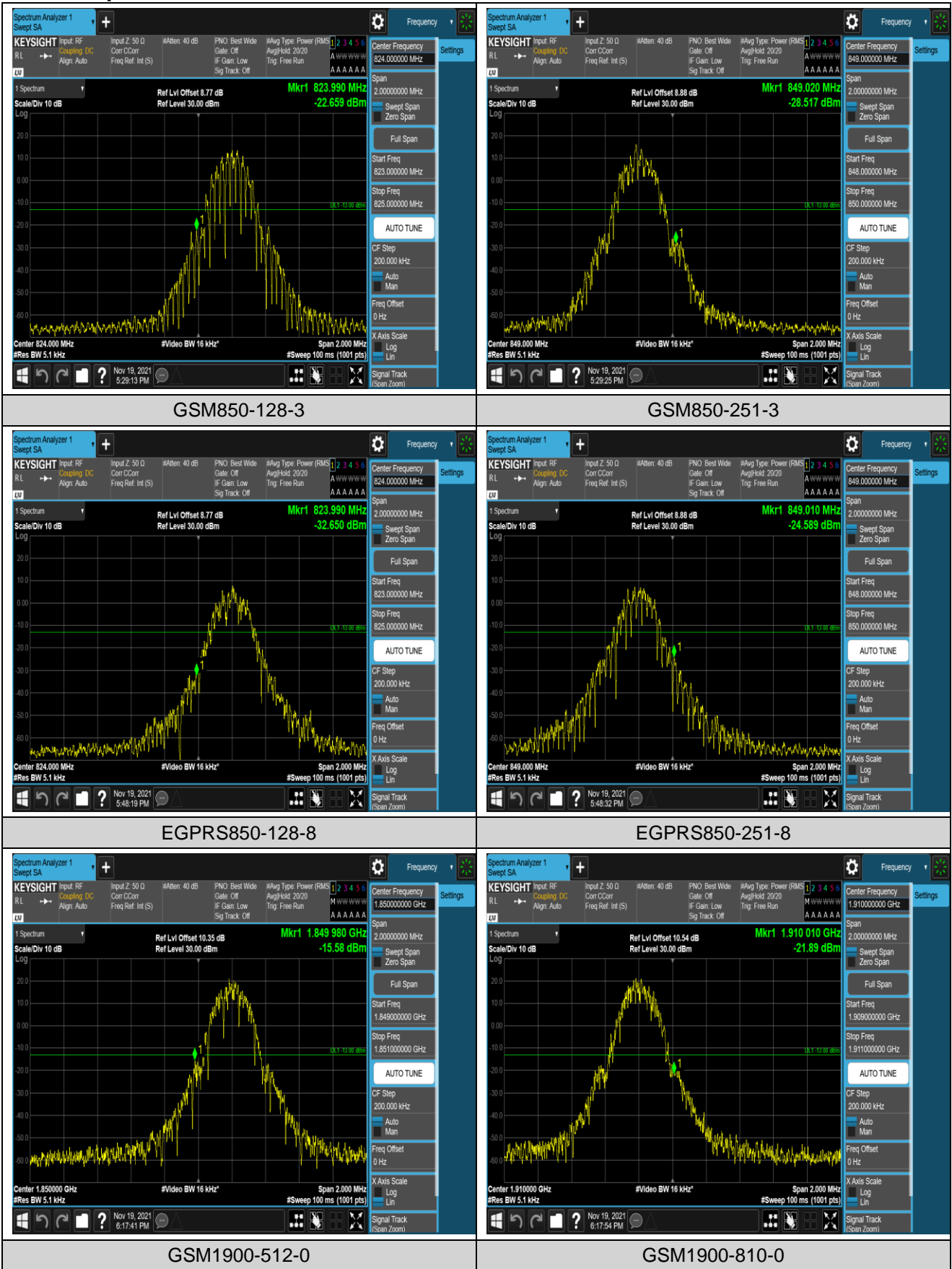


EGPRS1900-810-2-0.3130

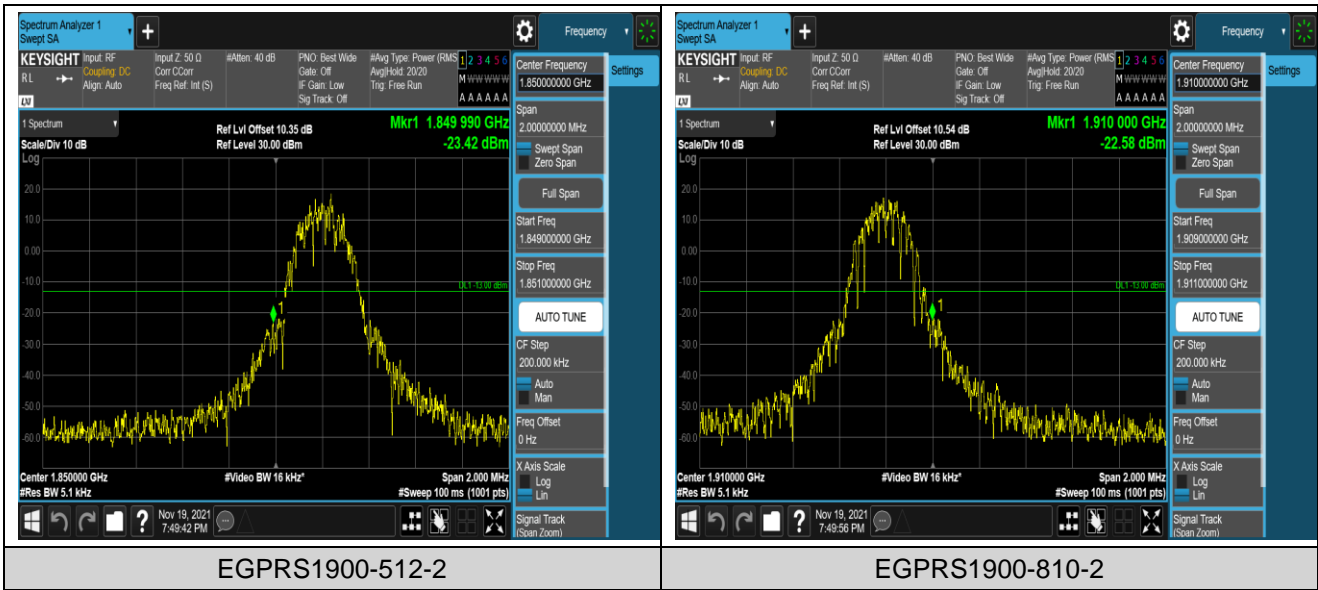
**Appendix D: Band Edge****Test Result**

Band	Channel	PCL	Freq (MHz)	Result (dBm)	Limit(dBm)	Verdict
GSM850	128	5	823.99	-22.66	-13	PASS
GSM850	251	5	849.02	-25.16	-13	PASS
EGPRS850	128	8	823.99	-28.05	-13	PASS
EGPRS850	251	8	849.01	-24.59	-13	PASS
GSM1900	512	0	1849.98	-15.58	-13	PASS
GSM1900	810	0	1910.01	-16.28	-13	PASS
EGPRS1900	512	2	1849.99	-23.42	-13	PASS
EGPRS1900	810	2	1910.00	-21.24	-13	PASS

Test Graphs







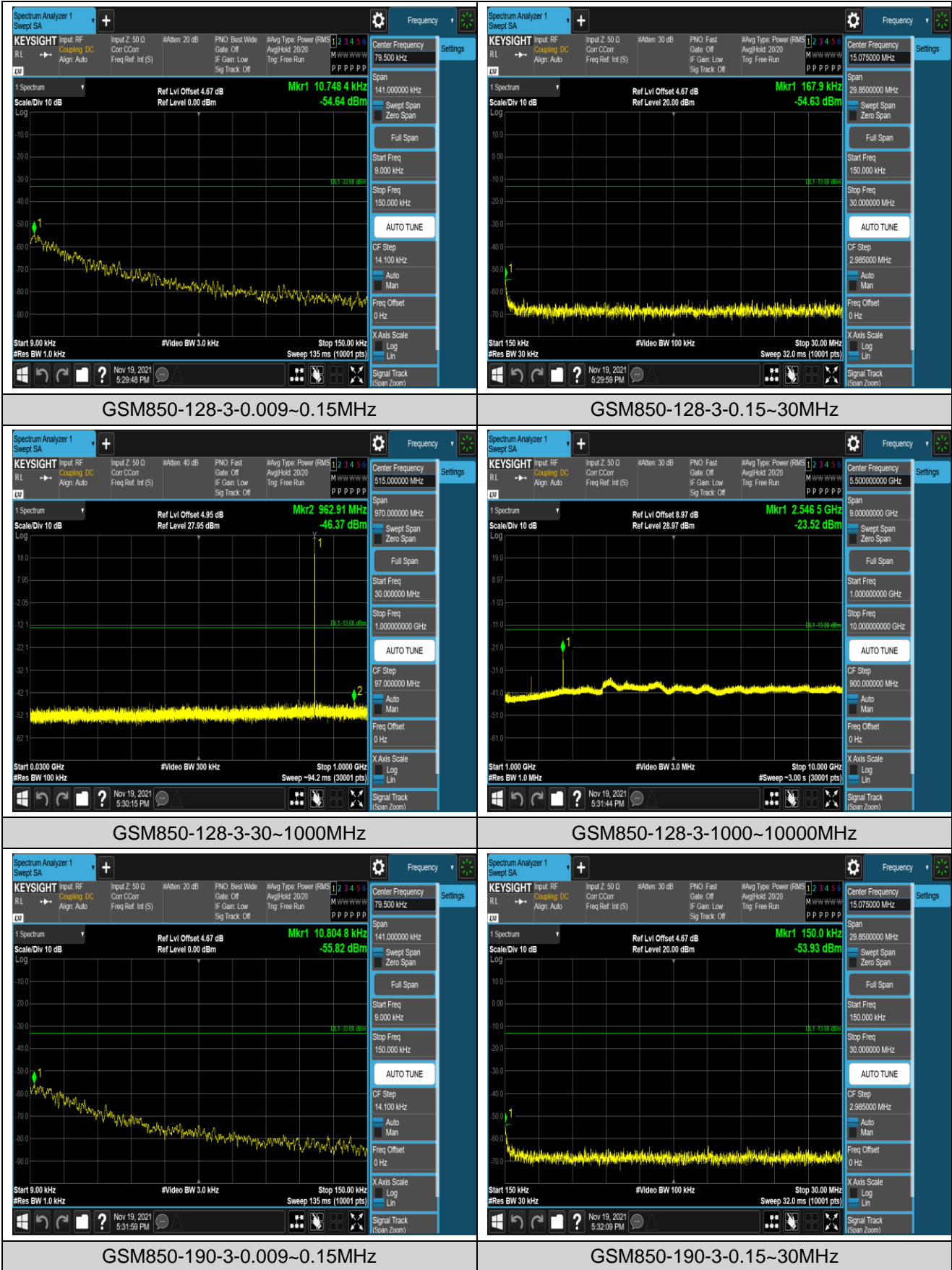
## Appendix E: Conducted Spurious Emission

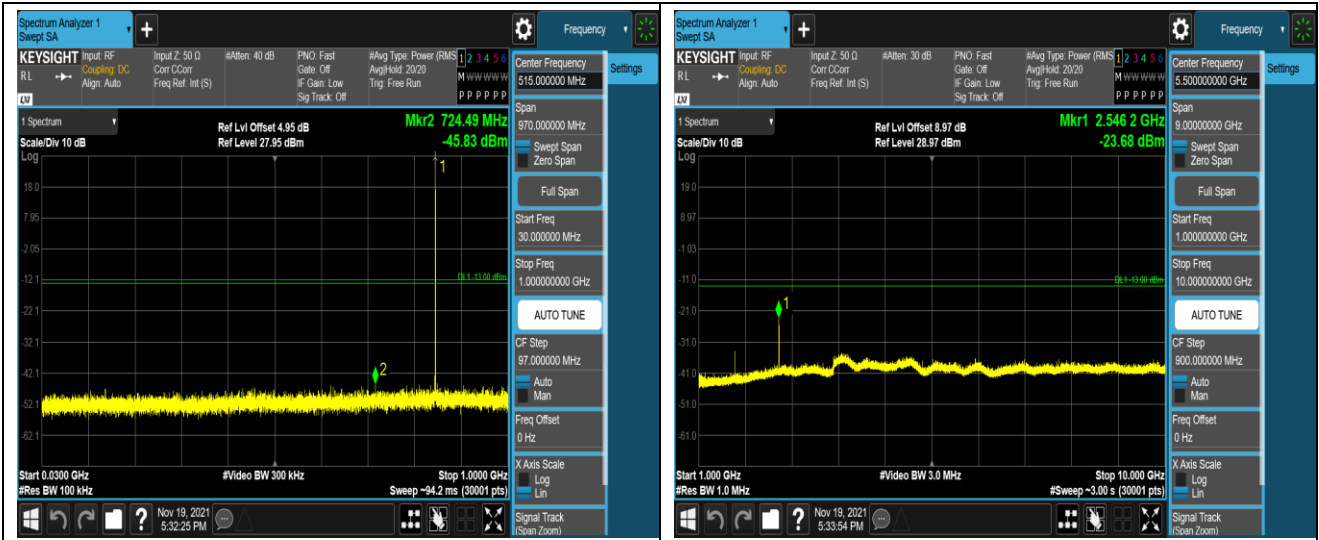
### Test Result

Band	Channel	PCL	Frequency Range(MHz)	Max.Freq. (MHz)	Result (dBm)	Limit (dBm)	Verdict
GSM850	128	5	0.009~0.15MHz	0.01	-54.64	-33	PASS
GSM850	128	5	0.15~30MHz	0.17	-54.63	-13	PASS
GSM850	128	5	30~1000MHz	962.91	-46.37	-13	PASS
GSM850	128	5	1000~10000MHz	2546.5	-23.52	-13	PASS
GSM850	190	5	0.009~0.15MHz	0.01	-55.82	-33	PASS
GSM850	190	5	0.15~30MHz	0.15	-53.93	-13	PASS
GSM850	190	5	30~1000MHz	724.49	-45.83	-13	PASS
GSM850	190	5	1000~10000MHz	2546.2	-23.68	-13	PASS
GSM850	251	5	0.009~0.15MHz	0.01	-54.14	-33	PASS
GSM850	251	5	0.15~30MHz	0.15	-55.18	-13	PASS
GSM850	251	5	30~1000MHz	598.97	-46.16	-13	PASS
GSM850	251	3	1000~10000MHz	2546.5	-23.78	-13	PASS
GSM1900	512	0	0.009~0.15MHz	0.01	-55.21	-43	PASS
GSM1900	512	0	0.15~30MHz	0.17	-52.43	-23	PASS
GSM1900	512	0	30~1000MHz	908.08	-46.9	-13	PASS
GSM1900	512	0	1000~18000MHz	3927.97	-34.7	-13	PASS
GSM1900	661	0	0.009~0.15MHz	0.01	-56.55	-43	PASS
GSM1900	661	0	0.15~30MHz	0.18	-52.13	-23	PASS
GSM1900	661	0	30~1000MHz	886.96	-46.85	-13	PASS
GSM1900	661	0	1000~18000MHz	3734.73	-34.99	-13	PASS
GSM1900	810	0	0.009~0.15MHz	0.01	-57.13	-43	PASS
GSM1900	810	0	0.15~30MHz	0.17	-53.96	-23	PASS
GSM1900	810	0	30~1000MHz	883.7	-46.75	-13	PASS
GSM1900	810	0	1000~18000MHz	3694.5	-34.47	-13	PASS

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

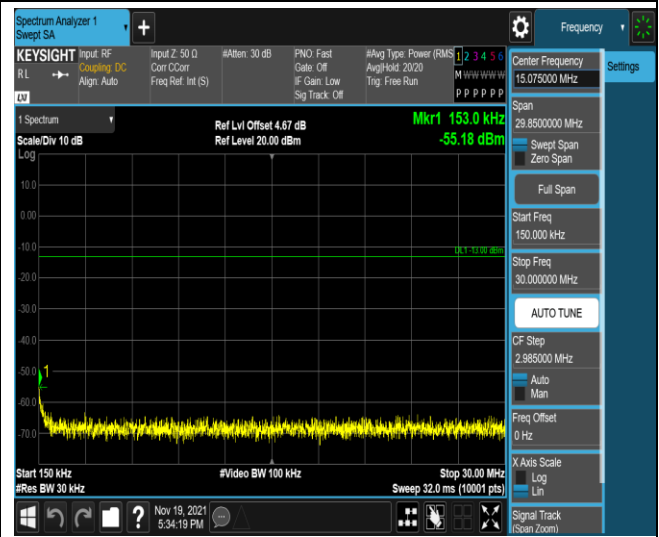
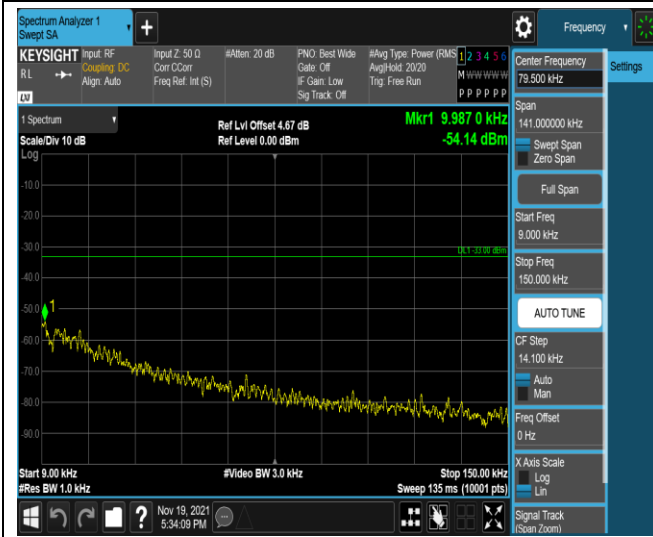
Test Graphs





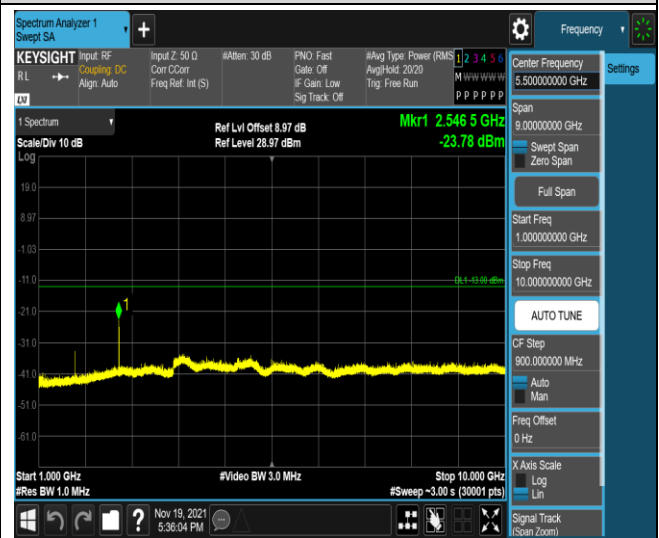
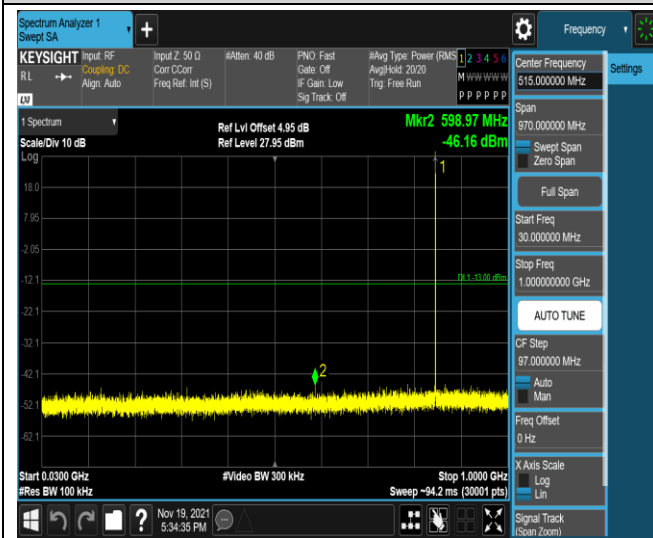
GSM850-190-3-30~1000MHz

GSM850-190-3-1000~10000MHz



GSM850-251-3-0.009~0.15MHz

GSM850-251-3-0.15~30MHz



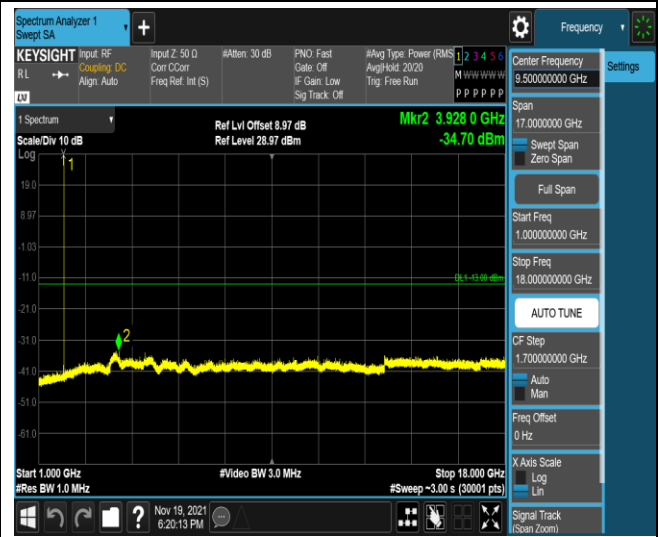
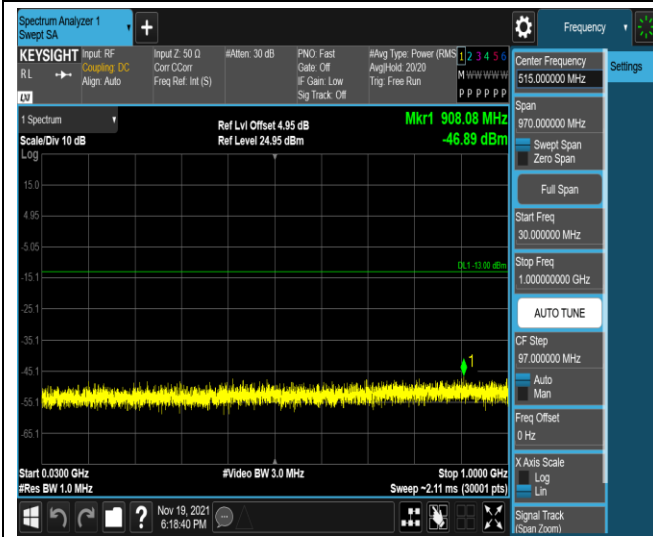
GSM850-251-3-30~1000MHz

GSM850-251-3-1000~10000MHz



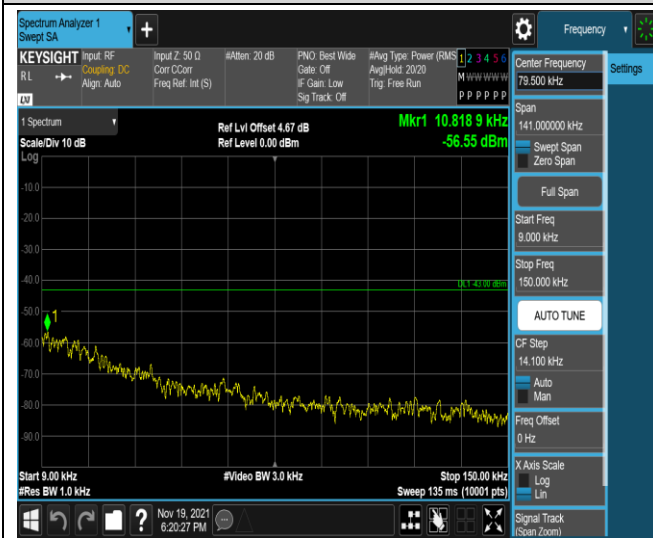
GSM1900-512-0-0.009~0.15MHz

GSM1900-512-0-0.15~30MHz



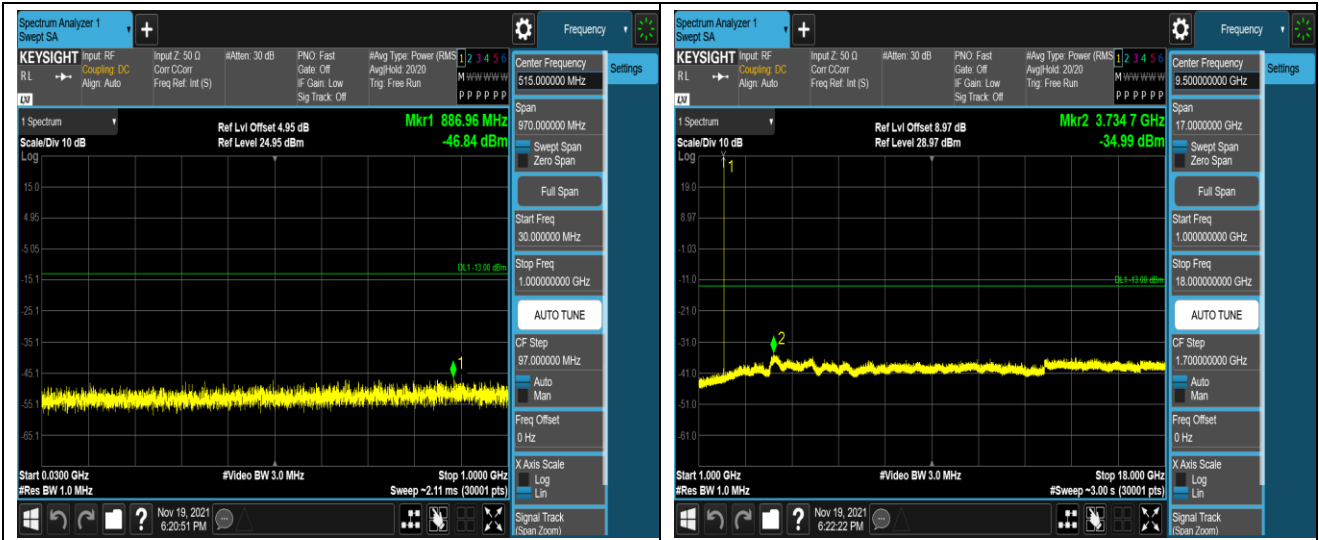
GSM1900-512-0-30~1000MHz

GSM1900-512-0-1000~18000MHz



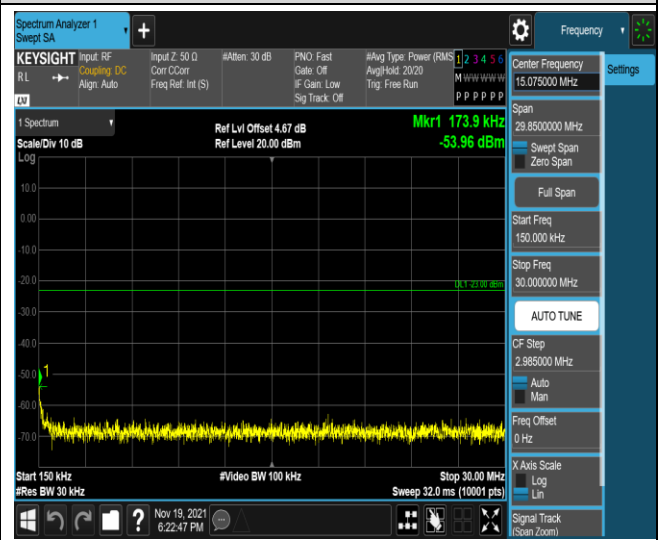
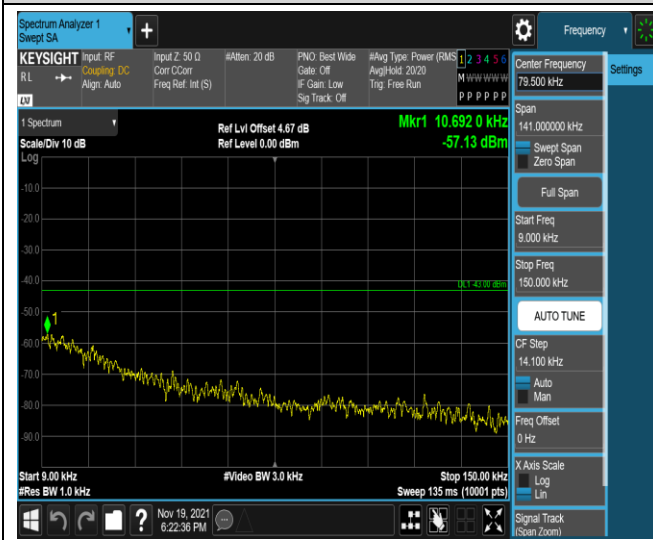
GSM1900-661-0-0.009~0.15MHz

GSM1900-661-0-0.15~30MHz



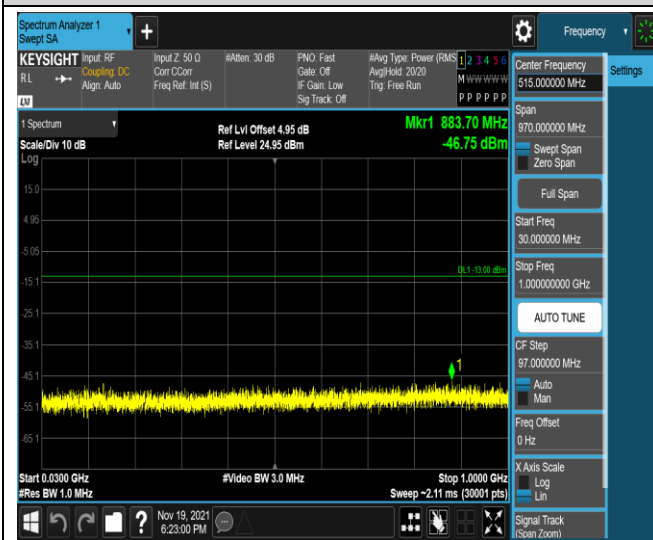
GSM1900-661-0-30~1000MHz

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	2.45	0.002929	±2.5	Pass
	-20	2.97	0.003550		
	-10	4.07	0.004865		
	0	1.42	0.001697		
	10	2.68	0.003203		
	20	1.10	0.001315		
	30	0.61	0.000729		
	40	-0.55	-0.000657		
	50	0.55	0.000657		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	3.78	0.004518	±2.5	Pass
	3.85	-5.07	-0.006060		
	4.40	0.23	0.000275		
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 (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	-3.16	-0.003777	±2.5	Pass
	-20	-2.03	-0.002426		
	-10	0.39	0.000466		
	0	5.94	0.007100		
	10	2.23	0.002666		
	20	-0.16	-0.000191		
	30	2.26	0.002701		
	40	0.74	0.000885		
	50	0.32	0.000383		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	4.29	0.005128	±2.5	Pass
	3.85	-1.45	-0.001733		
	4.40	-3.16	-0.003777		
<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		
3.85	-30	-5.55	-0.002952	Within authorized band for PCS 1900	Pass
	-20	-1.19	-0.000633		
	-10	3.16	0.001681		
	0	5.68	0.003021		
	10	-7.75	-0.004122		
	20	2.49	0.001324		
	30	3.62	0.001926		
	40	-8.10	-0.004309		
	50	-1.03	-0.000548		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	6.65	0.003537	Within authorized band for PCS 1900	Pass
	3.85	-0.03	-0.000016		
	4.40	-0.90	-0.000479		
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 (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	13.27	0.007059	Within authorized band for PCS 1900	Pass
	-20	15.01	0.007984		
	-10	13.40	0.007128		
	0	8.91	0.004739		
	10	8.68	0.004617		
	20	1.29	0.000686		
	30	-10.46	-0.005564		
	40	7.46	0.003968		
	50	9.52	0.005064		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.50	5.20	0.002766	Within authorized band for PCS 1900	Pass
	3.85	4.26	0.002266		
	4.40	4.62	0.002457		
<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

