

## 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	32.93	28.58	38.5	PASS
GSM850	190	5	33.01	28.66	38.5	PASS
GSM850	251	5	32.98	28.63	38.5	PASS
GSM1900	512	0	29.85	30.85	33	PASS
GSM1900	661	0	30.17	31.17	33	PASS
GSM1900	810	0	29.82	30.82	33	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
GPRS850	128	5	1	32.88	28.53	38.5	PASS
GPRS850	128	5	2	30.97	26.62	38.5	PASS
GPRS850	128	5	3	28.96	24.61	38.5	PASS
GPRS850	128	5	4	26.77	22.42	38.5	PASS
GPRS850	190	5	1	32.97	28.62	38.5	PASS
GPRS850	190	5	2	30.87	26.52	38.5	PASS
GPRS850	190	5	3	28.84	24.49	38.5	PASS
GPRS850	190	5	4	26.73	22.38	38.5	PASS
GPRS850	251	5	1	33.01	28.66	38.5	PASS
GPRS850	251	5	2	31.01	26.66	38.5	PASS
GPRS850	251	5	3	28.97	24.62	38.5	PASS
GPRS850	251	5	4	26.84	22.49	38.5	PASS
GPRS1900	512	0	1	29.93	30.93	33	PASS
GPRS1900	512	0	2	27.93	28.93	33	PASS
GPRS1900	512	0	3	25.44	26.44	33	PASS
GPRS1900	512	0	4	23.50	24.50	33	PASS
GPRS1900	661	0	1	30.13	31.13	33	PASS
GPRS1900	661	0	2	27.97	28.97	33	PASS
GPRS1900	661	0	3	25.49	26.49	33	PASS
GPRS1900	661	0	4	23.64	24.64	33	PASS
GPRS1900	810	0	1	29.71	30.71	33	PASS
GPRS1900	810	0	2	27.59	28.59	33	PASS
GPRS1900	810	0	3	24.95	25.95	33	PASS
GPRS1900	810	0	4	23.18	24.18	33	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
EGPRS850	128	8	1	27.05	22.70	38.5	PASS
EGPRS850	128	8	2	25.97	21.62	38.5	PASS
EGPRS850	128	8	3	24.29	19.94	38.5	PASS
EGPRS850	128	8	4	22.81	18.46	38.5	PASS
EGPRS850	190	8	1	26.96	22.61	38.5	PASS
EGPRS850	190	8	2	25.91	21.56	38.5	PASS
EGPRS850	190	8	3	24.28	19.93	38.5	PASS
EGPRS850	190	8	4	22.77	18.42	38.5	PASS
EGPRS850	251	8	1	26.96	22.61	38.5	PASS
EGPRS850	251	8	2	25.93	21.58	38.5	PASS
EGPRS850	251	8	3	24.49	20.14	38.5	PASS
EGPRS850	251	8	4	22.98	18.63	38.5	PASS
EGPRS1900	512	2	1	26.08	27.08	33	PASS
EGPRS1900	512	2	2	24.70	25.70	33	PASS
EGPRS1900	512	2	3	23.43	24.43	33	PASS
EGPRS1900	512	2	4	21.48	22.48	33	PASS
EGPRS1900	661	2	1	26.13	27.13	33	PASS
EGPRS1900	661	2	2	24.81	25.81	33	PASS
EGPRS1900	661	2	3	23.51	24.51	33	PASS
EGPRS1900	661	2	4	21.57	22.57	33	PASS
EGPRS1900	810	2	1	25.48	26.48	33	PASS
EGPRS1900	810	2	2	24.61	25.61	33	PASS
EGPRS1900	810	2	3	23.33	24.33	33	PASS
EGPRS1900	810	2	4	21.30	22.30	33	PASS

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

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

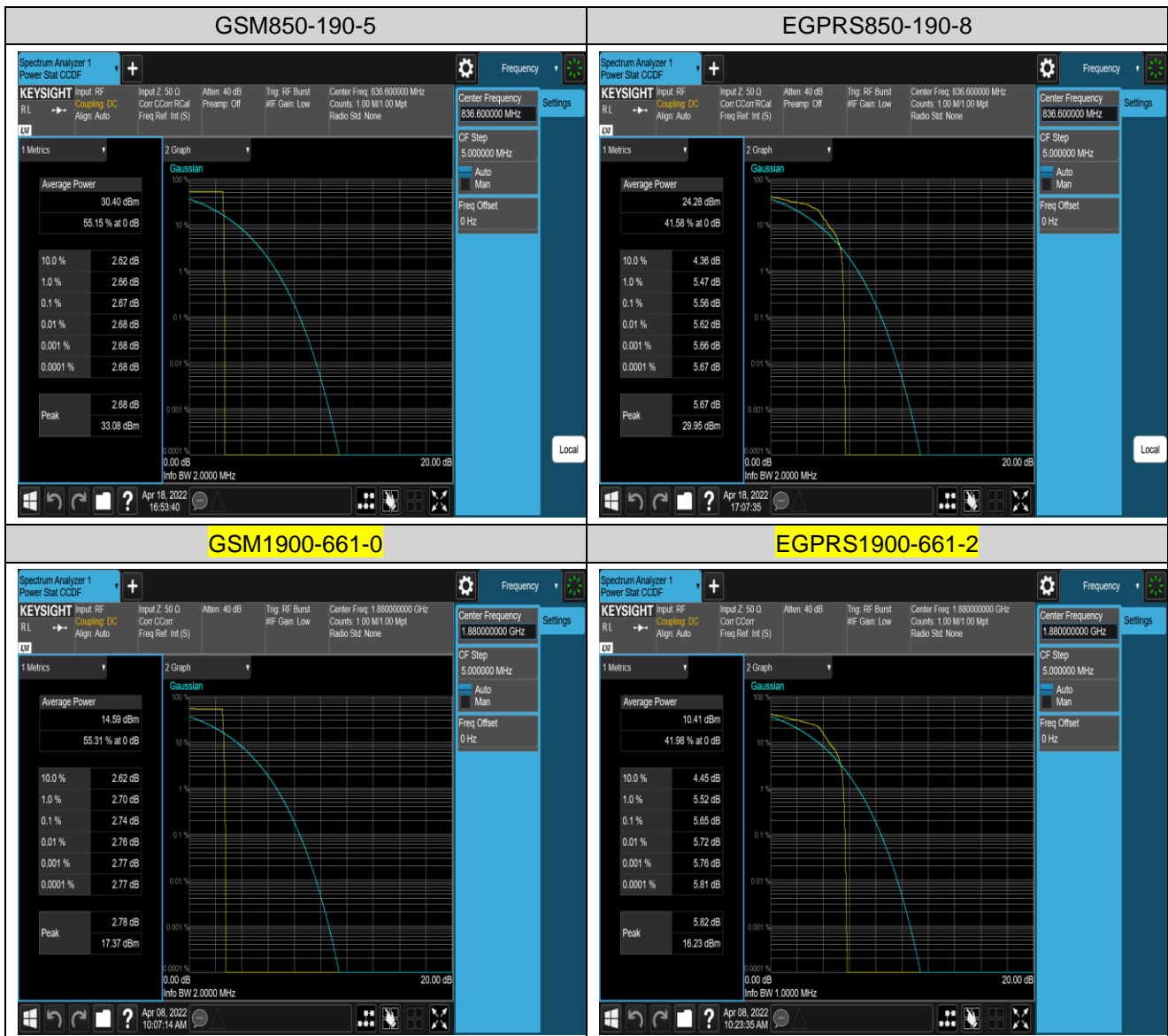
## Appendix B: Peak-to-Average Ratio(CCDF)

### Test Result

Band	Channel	PCL	Result(dB)	Limit(dB)	Verdict
GSM850	190	5	2.67	13	PASS
EGPRS850	190	8	5.56	13	PASS
GSM1900	661	0	2.74	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

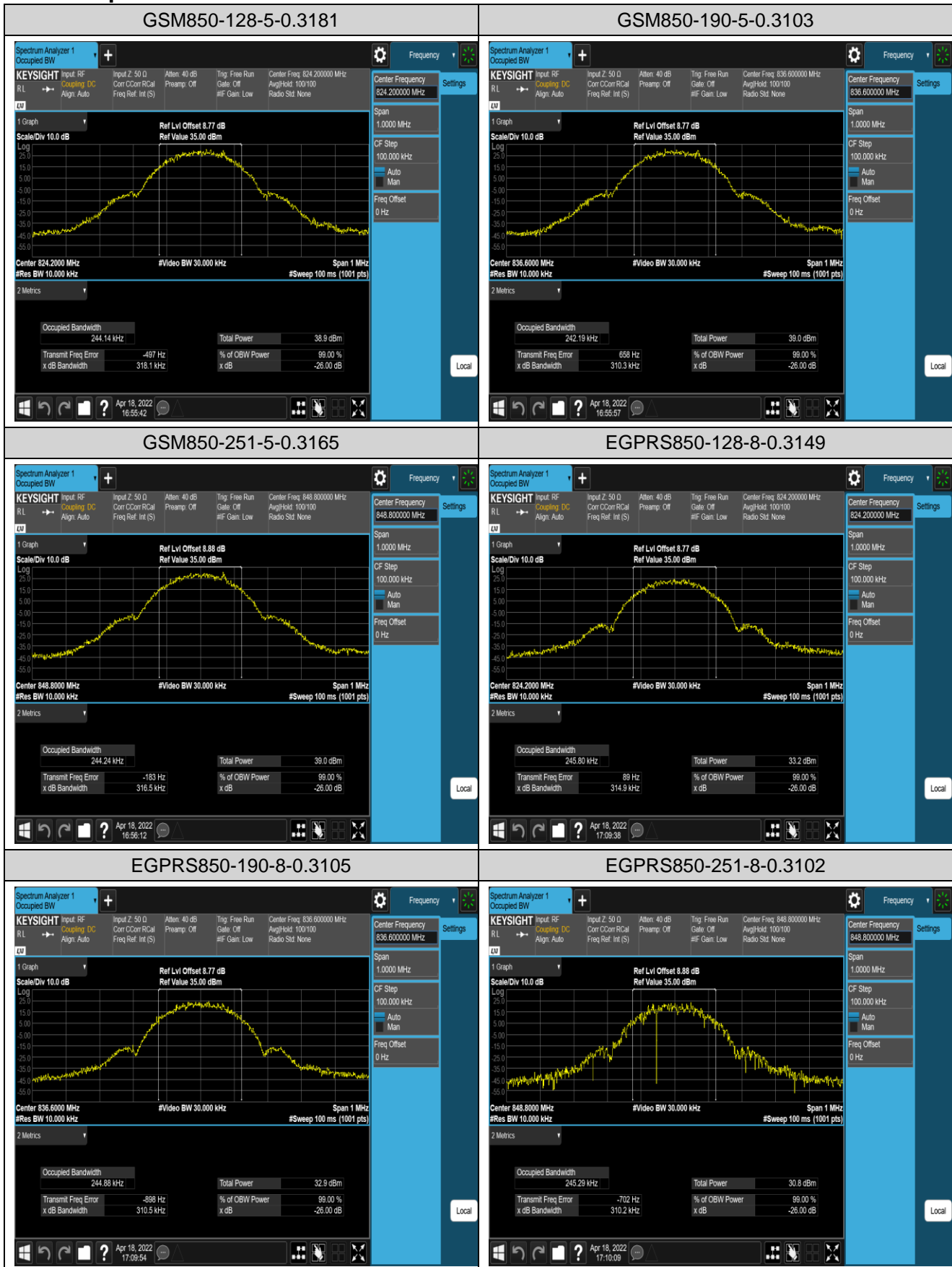


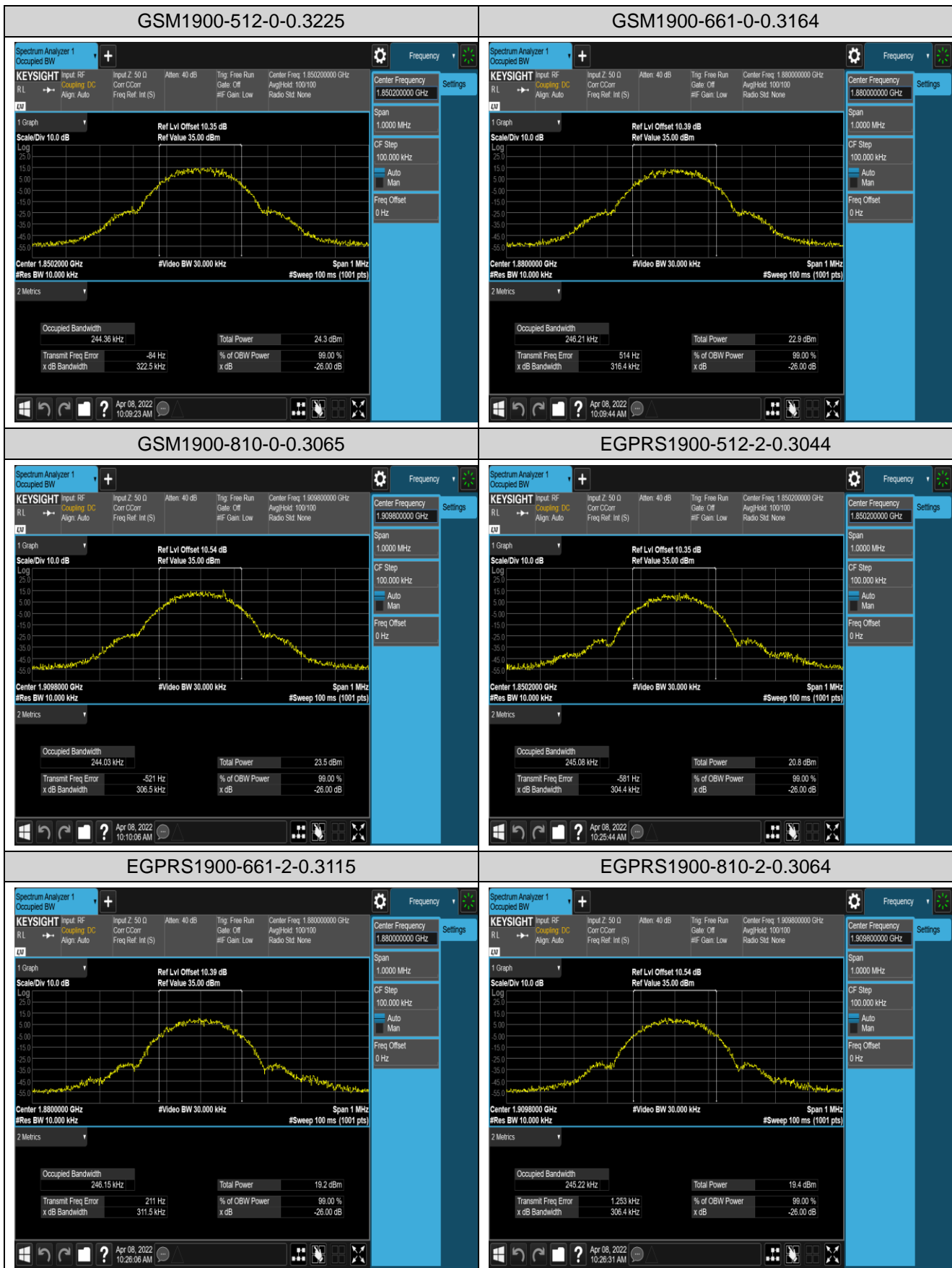
## Appendix C: 26dB Bandwidth and Occupied Bandwidth

### Test Result

Band	Channel	PCL	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
GSM850	128	5	0.24414	0.3181	---	PASS
GSM850	190	5	0.24219	0.3103	---	PASS
GSM850	251	5	0.24424	0.3165	---	PASS
EGPRS850	128	8	0.24580	0.3149	---	PASS
EGPRS850	190	8	0.24488	0.3105	---	PASS
EGPRS850	251	8	0.24529	0.3102	---	PASS
GSM1900	512	0	0.24436	0.3225	---	PASS
GSM1900	661	0	0.24621	0.3164	---	PASS
GSM1900	810	0	0.24403	0.3065	---	PASS
EGPRS1900	512	2	0.24508	0.3044	---	PASS
EGPRS1900	661	2	0.24615	0.3115	---	PASS
EGPRS1900	810	2	0.24522	0.3064	---	PASS

Test Graphs



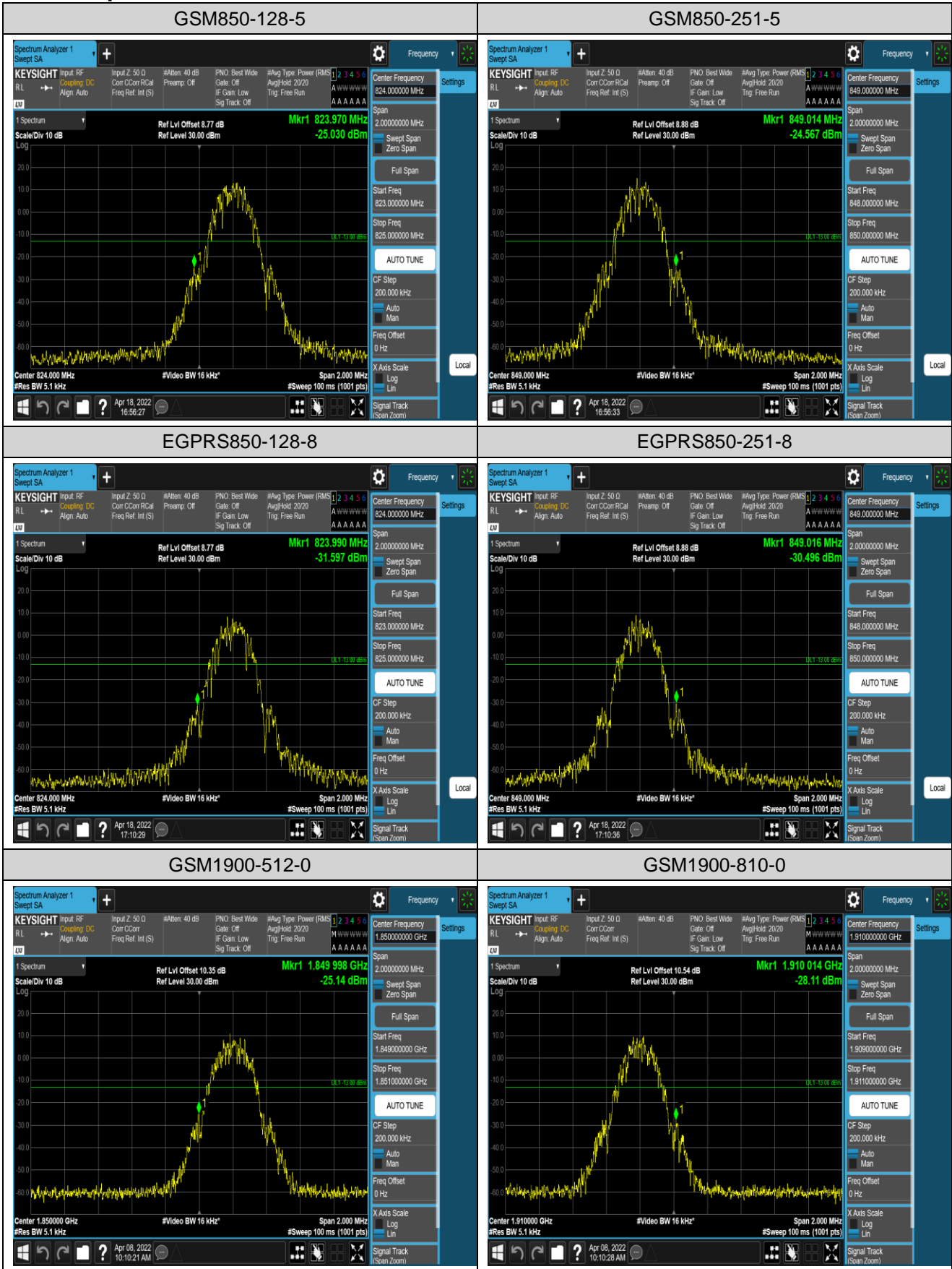


## Appendix D: Band Edge

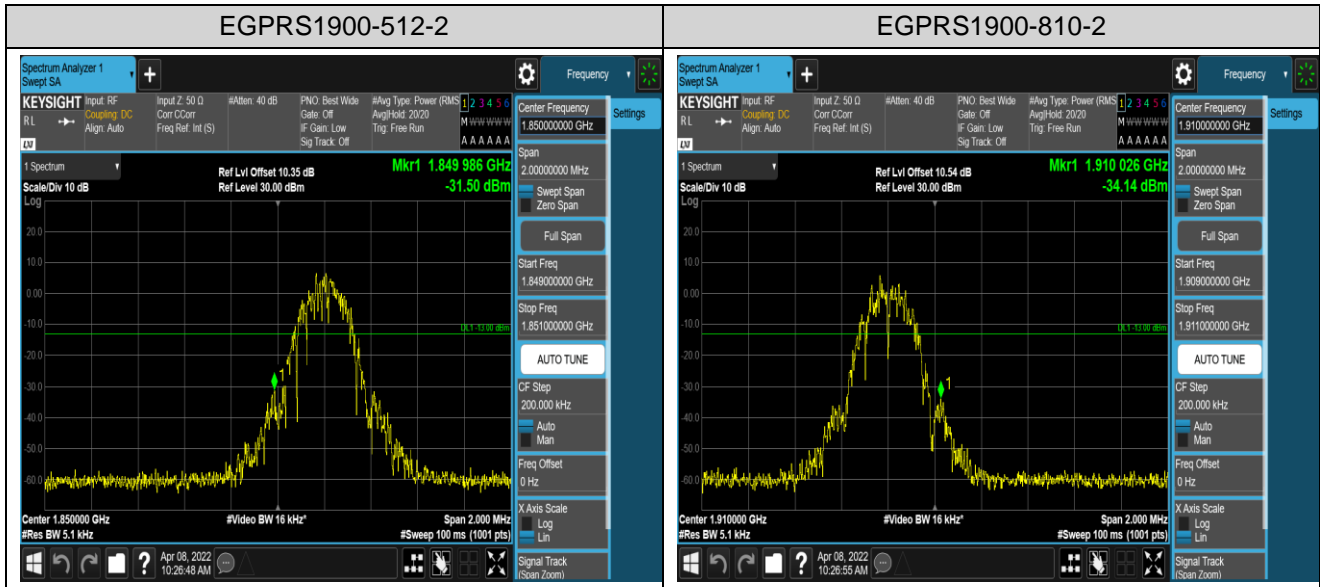
### Test Result

Band	Channel	PCL	Freq (MHz)	Result (dBm)	Limit(dBm)	Verdict
GSM850	128	5	823.97	-25.03	-13	PASS
GSM850	251	5	849.01	-24.57	-13	PASS
EGPRS850	128	8	823.99	-31.60	-13	PASS
EGPRS850	251	8	849.02	-30.50	-13	PASS
GSM1900	512	0	1850.00	-25.14	-13	PASS
GSM1900	810	0	1910.01	-28.11	-13	PASS
EGPRS1900	512	2	1849.99	-31.50	-13	PASS
EGPRS1900	810	2	1910.03	-34.14	-13	PASS

Test Graphs







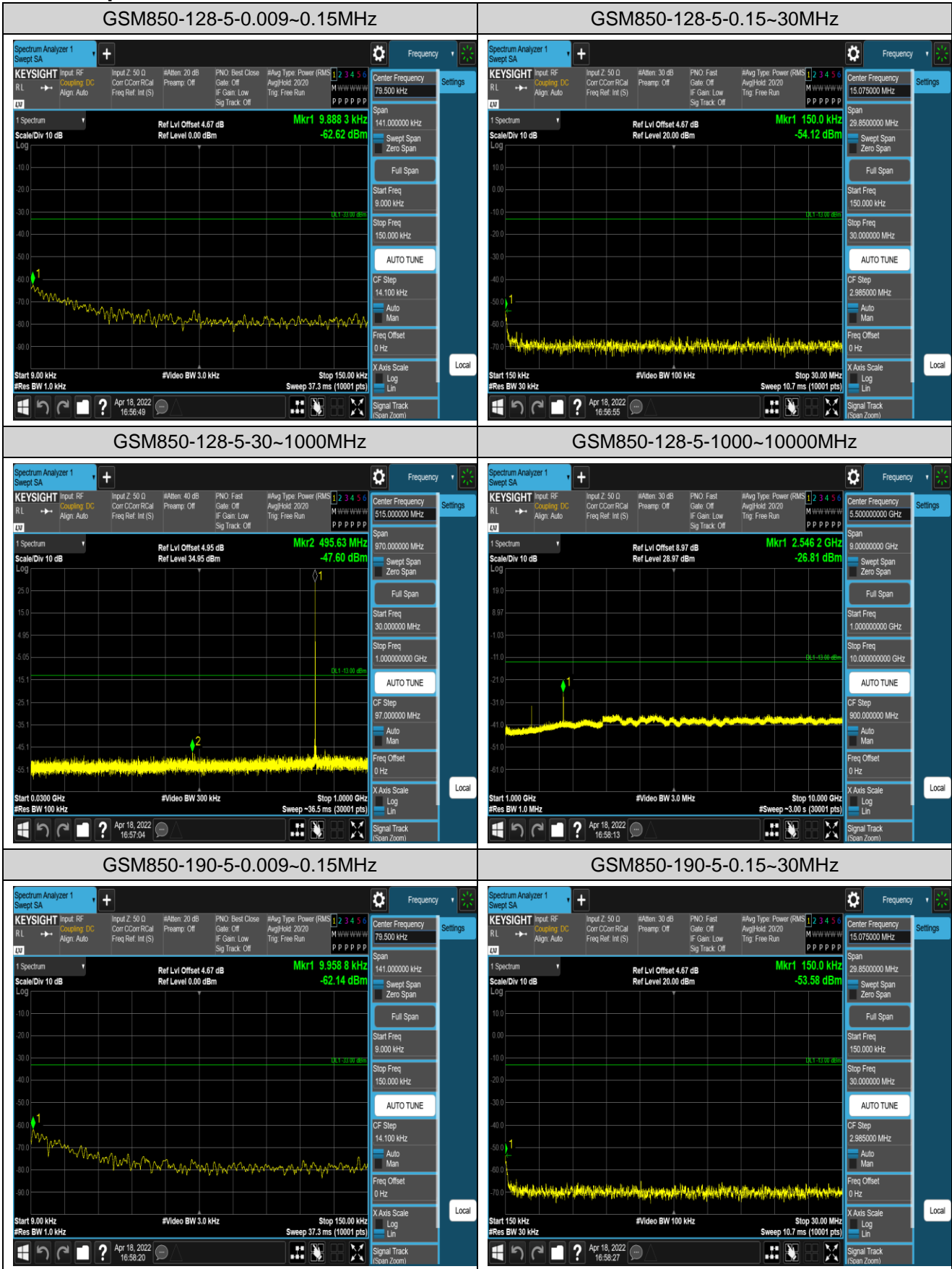
## Appendix E: Conducted Spurious Emission

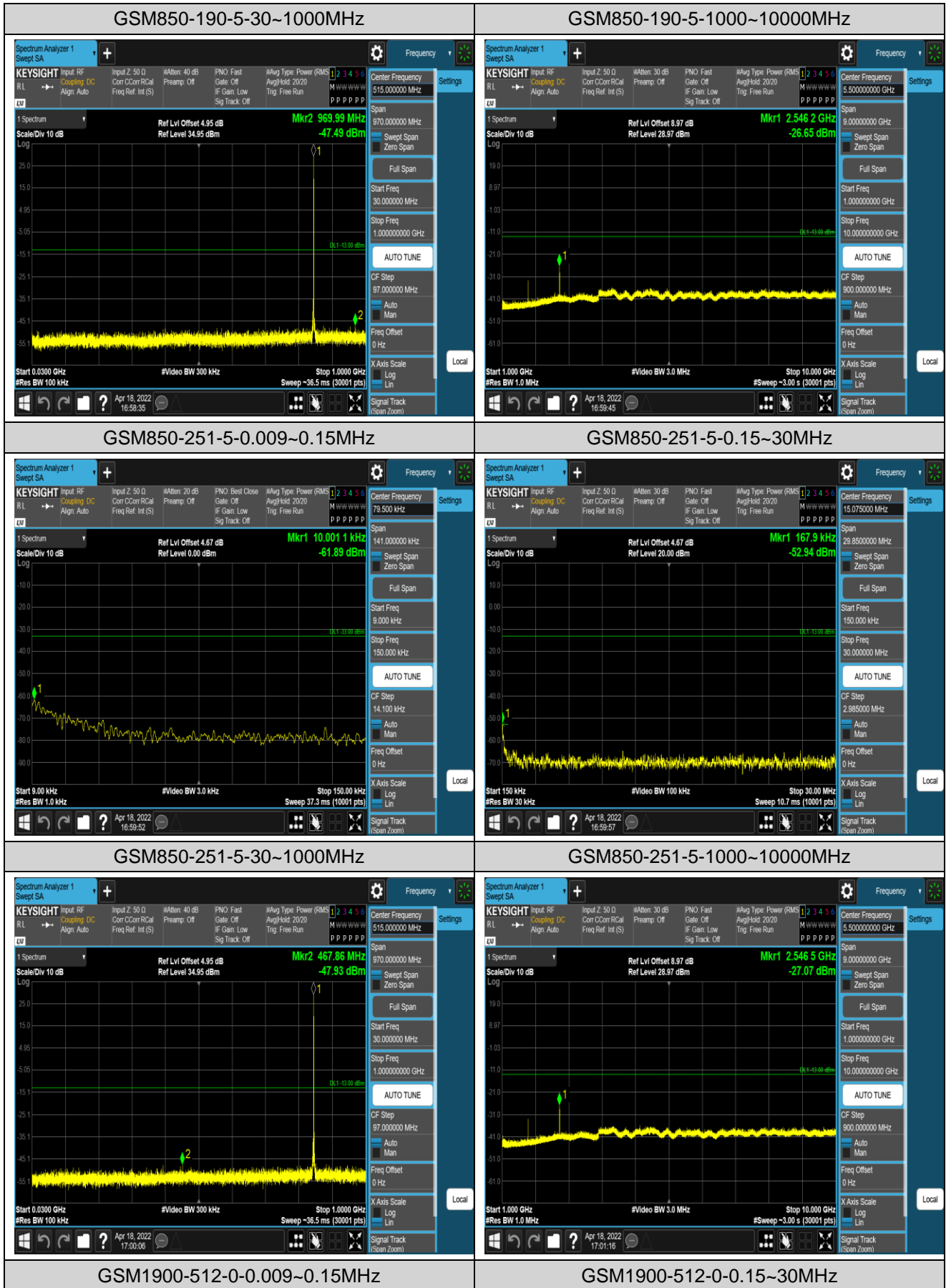
### Test Result

Band	Channel	PCL	Frequency Range(MHz)	Max.Freq. (MHz)	Result (dBm)	Limit (dBm)	Verdict
GSM850	128	5	0.009~0.15MHz	0.01	-62.62	-33	PASS
GSM850	128	5	0.15~30MHz	0.15	-54.13	-13	PASS
GSM850	128	5	30~1000MHz	495.63	-47.6	-13	PASS
GSM850	128	5	1000~10000MHz	2546.2	-26.81	-13	PASS
GSM850	190	5	0.009~0.15MHz	0.01	-62.14	-33	PASS
GSM850	190	5	0.15~30MHz	0.15	-53.58	-13	PASS
GSM850	190	5	30~1000MHz	969.99	-47.49	-13	PASS
GSM850	190	5	1000~10000MHz	2546.2	-26.65	-13	PASS
GSM850	251	5	0.009~0.15MHz	0.01	-61.89	-33	PASS
GSM850	251	5	0.15~30MHz	0.17	-52.94	-13	PASS
GSM850	251	5	30~1000MHz	467.86	-47.93	-13	PASS
GSM850	251	5	1000~10000MHz	2546.5	-27.07	-13	PASS
GSM1900	512	0	0.009~0.15MHz	0.01	-56.6	-43	PASS
GSM1900	512	0	0.15~30MHz	0.15	-54.52	-23	PASS
GSM1900	512	0	30~1000MHz	155.26	-46.12	-13	PASS
GSM1900	512	0	1000~18000MHz	3851.47	-34.41	-13	PASS
GSM1900	661	0	0.009~0.15MHz	0.01	-57.3	-43	PASS
GSM1900	661	0	0.15~30MHz	0.16	-53.25	-23	PASS
GSM1900	661	0	30~1000MHz	900.7	-46.17	-13	PASS
GSM1900	661	0	1000~18000MHz	3735.87	-34.8	-13	PASS
GSM1900	810	0	0.009~0.15MHz	0.01	-57.21	-43	PASS
GSM1900	810	0	0.15~30MHz	0.16	-53.3	-23	PASS
GSM1900	810	0	30~1000MHz	863.68	-45.34	-13	PASS
GSM1900	810	0	1000~18000MHz	3760.23	-34.63	-13	PASS

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

Test Graphs

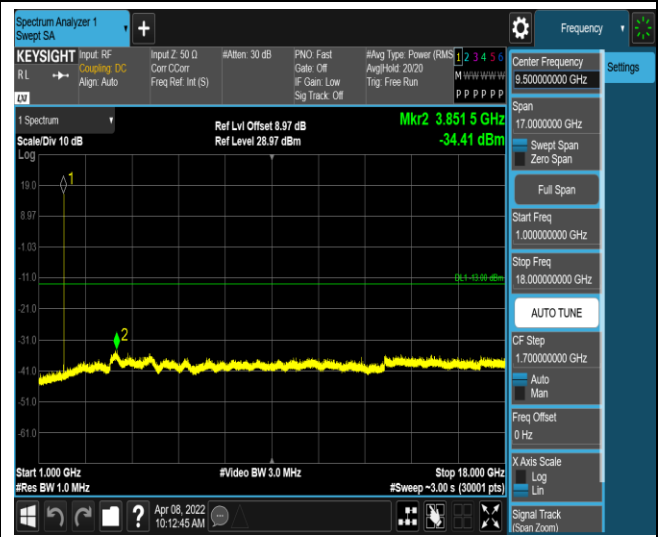
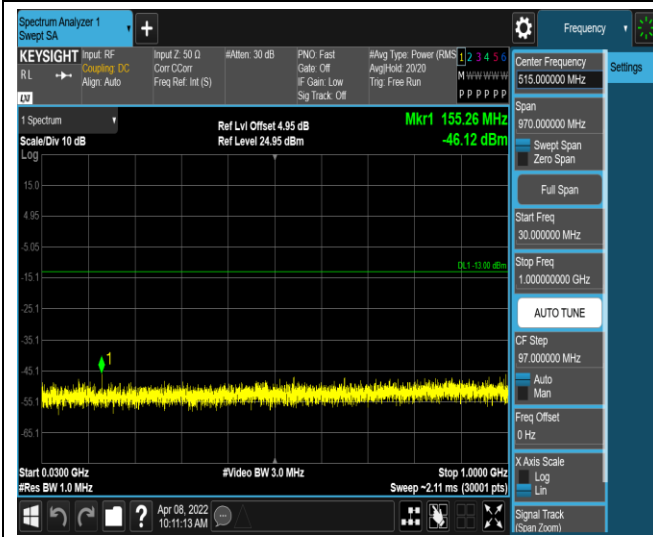






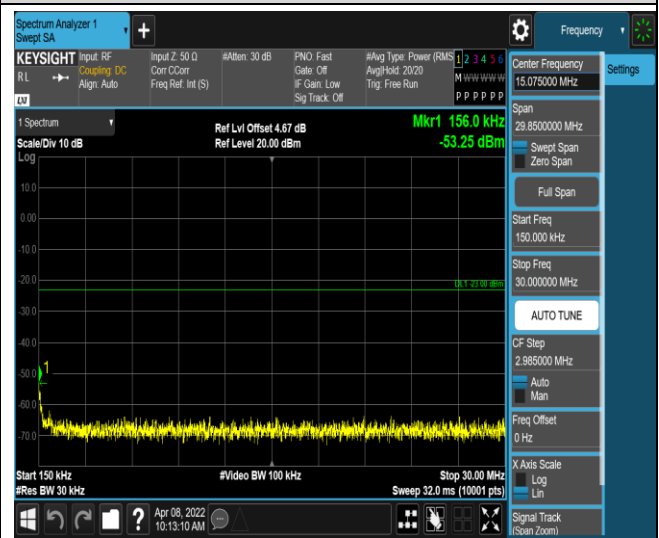
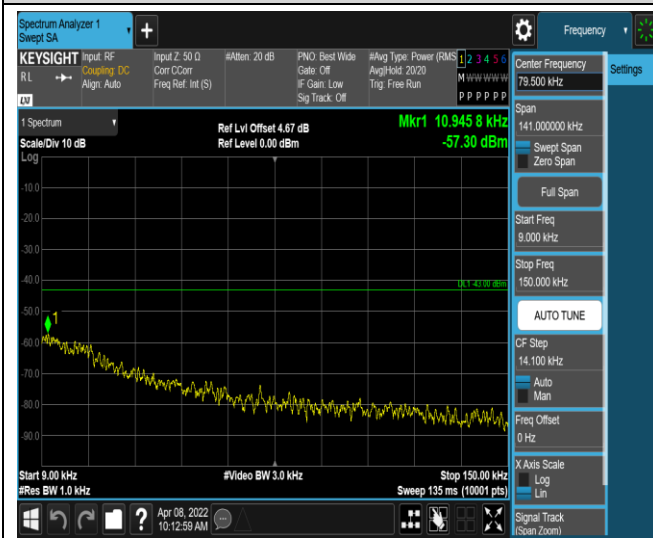
GSM1900-512-0-30~1000MHz

GSM1900-512-0-1000~18000MHz



GSM1900-661-0-0.009~0.15MHz

GSM1900-661-0-0.15~30MHz



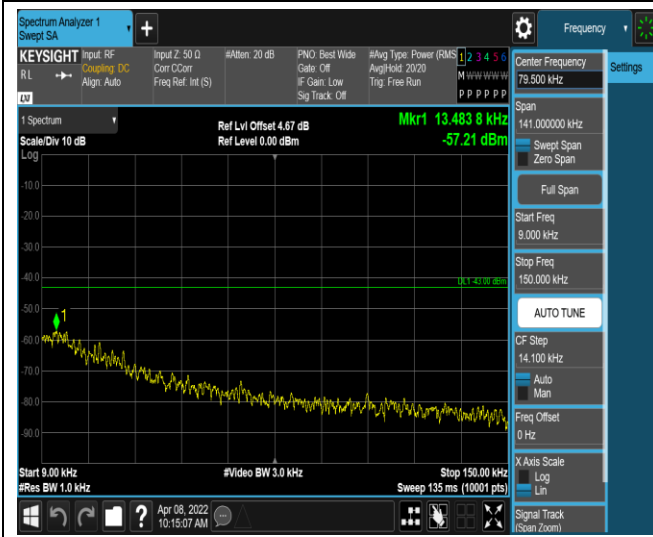
GSM1900-661-0-30~1000MHz

GSM1900-661-0-1000~18000MHz

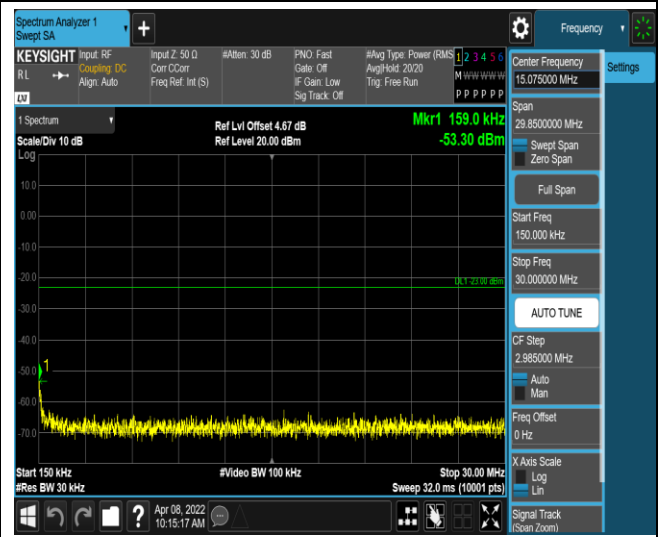


GSM1900-810-0-0.009~0.15MHz

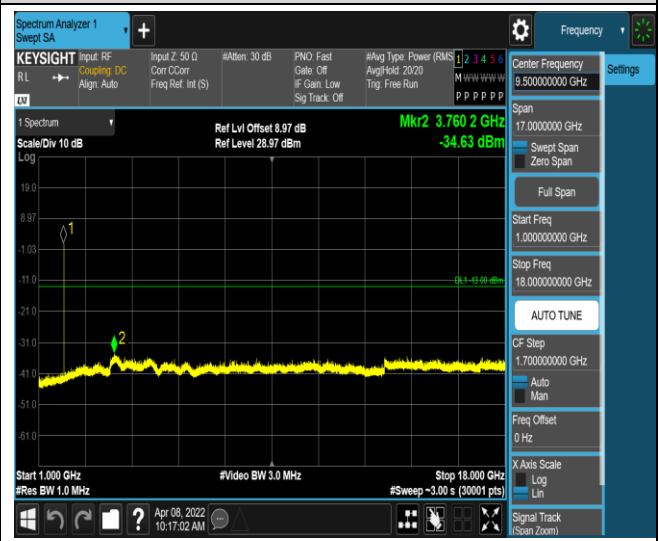
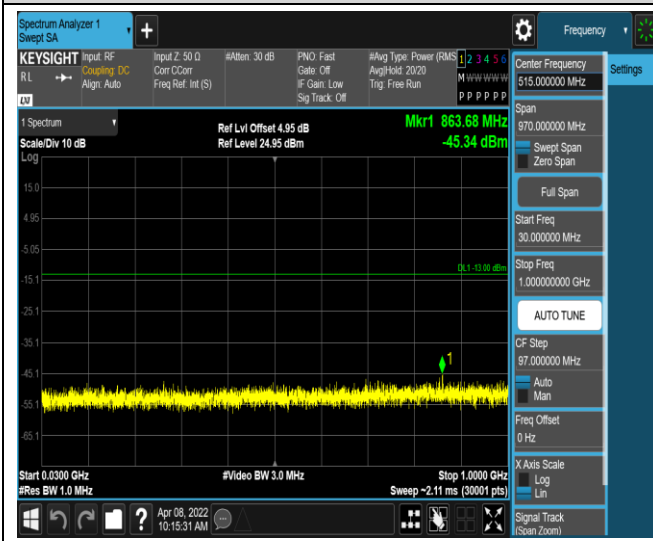
GSM1900-810-0-0.15~30MHz



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		
7.78	-30	21.41	0.025592	±2.5	Pass
	-20	22.12	0.026440		
	-10	22.18	0.026512		
	0	22.86	0.027325		
	10	20.73	0.024779		
	20	20.37	0.024349		
	30	16.95	0.020261		
	40	16.89	0.020189		
	50	20.92	0.025006		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	7.2	22.92	0.027397	±2.5	Pass
	7.78	25.96	0.031030		
	8.96	24.76	0.029596		
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		
7.78	-30	28.02	0.033493	±2.5	Pass
	-20	27.57	0.032955		
	-10	29.67	0.035465		
	0	29.06	0.034736		
	10	27.93	0.033385		
	20	28.15	0.033648		
	30	29.51	0.035274		
	40	28.44	0.033995		
	50	29.25	0.034963		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	7.2	29.77	0.035585	±2.5	Pass
	7.78	31.32	0.037437		
	8.96	29.06	0.034736		
<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		
7.78	-30	21.76	0.011574	Within authorized band for PCS 1900	Pass
	-20	18.82	0.010011		
	-10	23.02	0.012245		
	0	17.27	0.009186		
	10	16.43	0.008739		
	20	19.98	0.010628		
	30	24.31	0.012931		
	40	18.34	0.009755		
	50	22.66	0.012053		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	7.2	22.05	0.011729	Within authorized band for PCS 1900	Pass
	7.78	20.79	0.011059		
	8.96	20.95	0.011144		
<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		
7.78	-30	33.77	0.017963	Within authorized band for PCS 1900	Pass
	-20	30.35	0.016144		
	-10	31.06	0.016521		
	0	31.16	0.016574		
	10	30.28	0.016106		
	20	29.19	0.015527		
	30	28.93	0.015388		
	40	27.89	0.014835		
	50	28.57	0.015197		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	7.2	36.48	0.019404	Within authorized band for PCS 1900	Pass
	7.78	36.26	0.019287		
	8.96	32.58	0.017330		
<i>Remark: All channel had been tested, but only the worst case data displayed in this report.</i>					

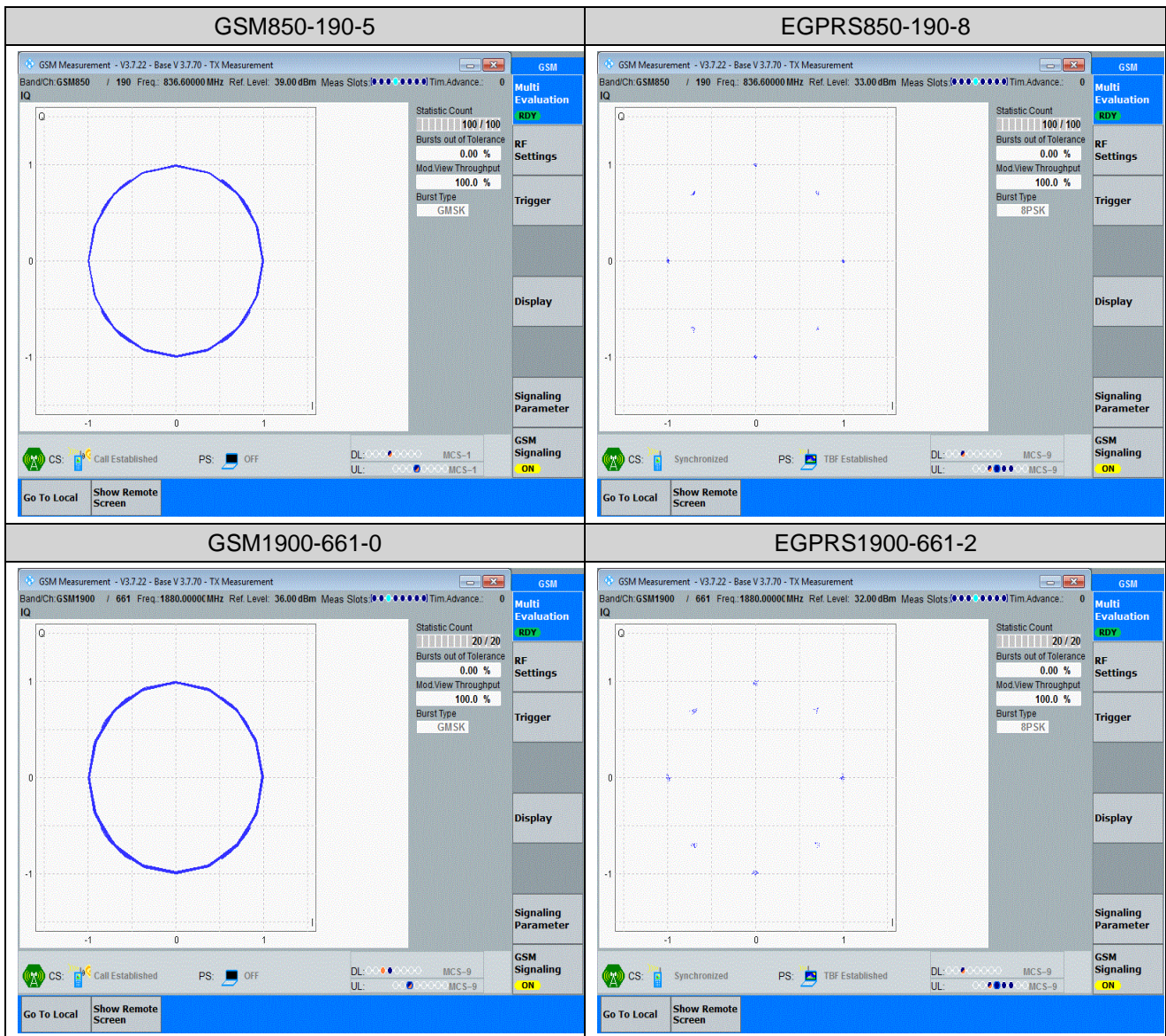
## Appendix G: Modulation Characteristics

### 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



**Remark: GSM 850 was tested ANT1, PCS1900 was tested ANT3.**