

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	32.94	29.19	38.5	PASS
GSM850	190	5	33.23	29.48	38.5	PASS
GSM850	251	5	32.96	29.21	38.5	PASS
GSM1900	512	0	29.70	29.00	33	PASS
GSM1900	661	0	29.85	29.15	33	PASS
GSM1900	810	0	29.85	29.15	33	PASS

Band	Channel	PCL	Slot	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
GPRS850	128	5	1	33.00	29.25	38.5	PASS
GPRS850	128	5	2	31.96	28.21	38.5	PASS
GPRS850	128	5	3	29.94	26.19	38.5	PASS
GPRS850	128	5	4	28.82	25.07	38.5	PASS
GPRS850	190	5	1	33.22	29.47	38.5	PASS
GPRS850	190	5	2	32.27	28.52	38.5	PASS
GPRS850	190	5	3	30.24	26.49	38.5	PASS
GPRS850	190	5	4	29.11	25.36	38.5	PASS
GPRS850	251	5	1	32.98	29.23	38.5	PASS
GPRS850	251	5	2	32.03	28.28	38.5	PASS
GPRS850	251	5	3	29.98	26.23	38.5	PASS
GPRS850	251	5	4	28.86	25.11	38.5	PASS
GPRS1900	512	0	1	29.70	29.00	33	PASS
GPRS1900	512	0	2	28.69	27.99	33	PASS
GPRS1900	512	0	3	26.65	25.95	33	PASS
GPRS1900	512	0	4	25.54	24.84	33	PASS
GPRS1900	661	0	1	29.82	29.12	33	PASS
GPRS1900	661	0	2	28.89	28.19	33	PASS
GPRS1900	661	0	3	26.89	26.19	33	PASS
GPRS1900	661	0	4	25.79	25.09	33	PASS
GPRS1900	810	0	1	29.84	29.14	33	PASS
GPRS1900	810	0	2	28.92	28.22	33	PASS
GPRS1900	810	0	3	26.93	26.23	33	PASS
GPRS1900	810	0	4	25.86	25.16	33	PASS

Band	Channel	PCL	Slot	Conducted	ERP/EIRP	ERP/EIRP	Verdict
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				Power (dBm)	(dBm)	Limit (dBm)	
EGPRS850	128	8	1	27.53	23.78	38.5	PASS
EGPRS850	128	8	2	26.24	22.49	38.5	PASS
EGPRS850	128	8	3	23.90	20.15	38.5	PASS
EGPRS850	128	8	4	22.55	18.80	38.5	PASS
EGPRS850	190	8	1	27.20	23.45	38.5	PASS
EGPRS850	190	8	2	26.28	22.53	38.5	PASS
EGPRS850	190	8	3	23.90	20.15	38.5	PASS
EGPRS850	190	8	4	22.62	18.87	38.5	PASS
EGPRS850	251	8	1	27.52	23.77	38.5	PASS
EGPRS850	251	8	2	26.51	22.76	38.5	PASS
EGPRS850	251	8	3	24.14	20.39	38.5	PASS
EGPRS850	251	8	4	22.90	19.15	38.5	PASS
EGPRS1900	512	2	1	25.57	24.87	33	PASS
EGPRS1900	512	2	2	24.44	23.74	33	PASS
EGPRS1900	512	2	3	22.45	21.75	33	PASS
EGPRS1900	512	2	4	21.54	20.84	33	PASS
EGPRS1900	661	2	1	25.47	24.77	33	PASS
EGPRS1900	661	2	2	24.45	23.75	33	PASS
EGPRS1900	661	2	3	22.59	21.89	33	PASS
EGPRS1900	661	2	4	21.57	20.87	33	PASS
EGPRS1900	810	2	1	25.50	24.80	33	PASS
EGPRS1900	810	2	2	24.71	24.01	33	PASS
EGPRS1900	810	2	3	22.78	22.08	33	PASS
EGPRS1900	810	2	4	21.73	21.03	33	PASS

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

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

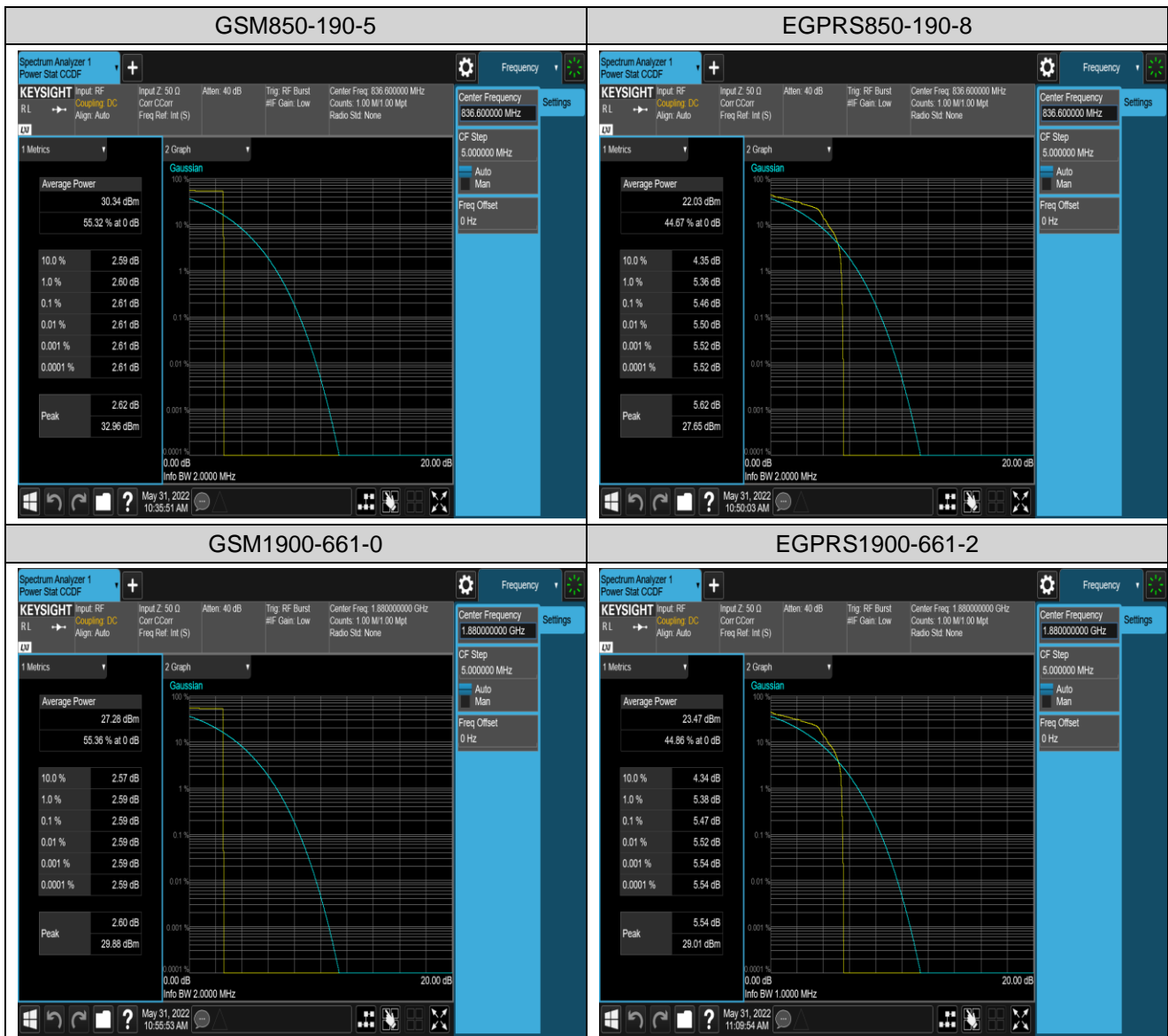
Appendix B: Peak-to-Average Ratio(CCDF)

Test Result

Band	Channel	PCL	Result(dB)	Limit(dB)	Verdict
GSM850	190	5	2.61	13	PASS
EGPRS850	190	8	5.46	13	PASS
GSM1900	661	0	2.59	13	PASS
EGPRS1900	661	2	5.47	13	PASS

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

Test Graphs

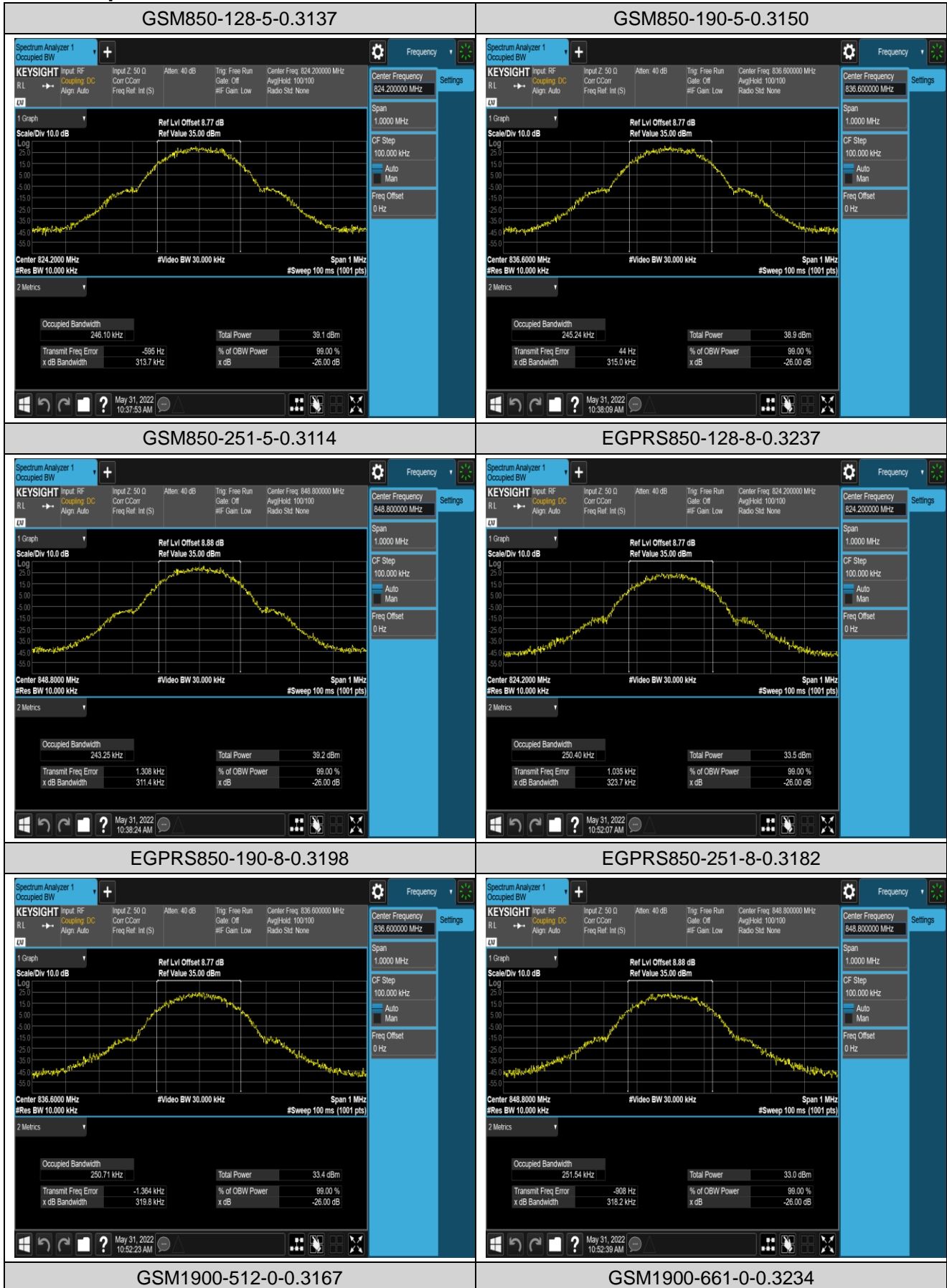


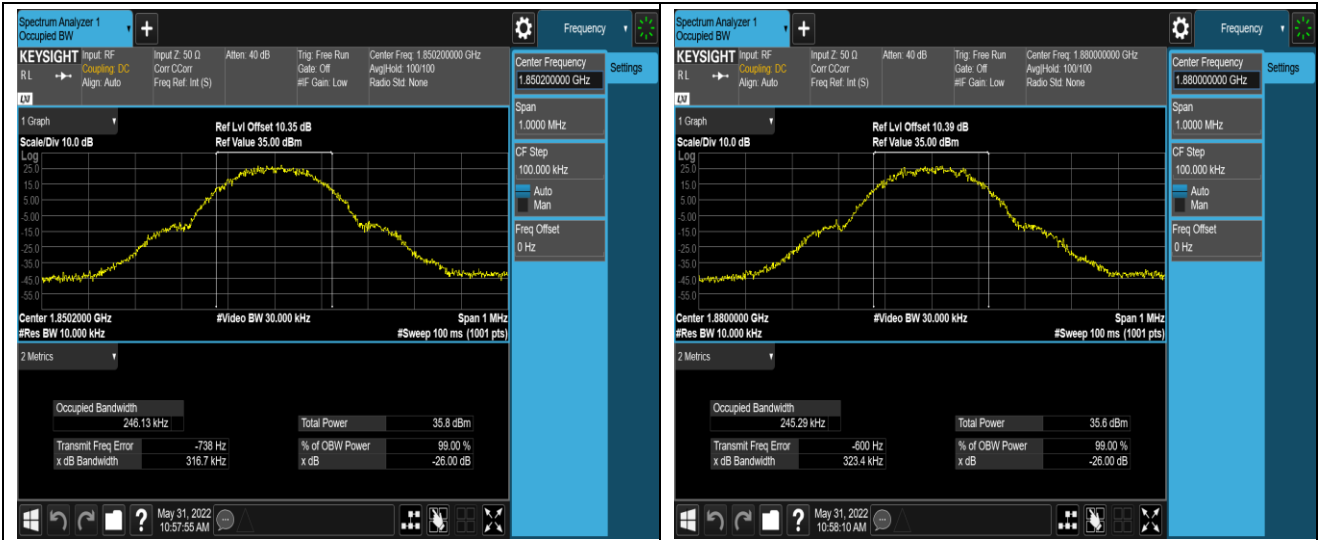
Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

Band	Channel	PCL	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
GSM850	128	5	0.24610	0.3137	---	PASS
GSM850	190	5	0.24524	0.3150	---	PASS
GSM850	251	5	0.24325	0.3114	---	PASS
EGPRS850	128	8	0.25040	0.3237	---	PASS
EGPRS850	190	8	0.25071	0.3198	---	PASS
EGPRS850	251	8	0.25154	0.3182	---	PASS
GSM1900	512	0	0.24613	0.3167	---	PASS
GSM1900	661	0	0.24529	0.3234	---	PASS
GSM1900	810	0	0.24568	0.3149	---	PASS
EGPRS1900	512	2	0.24624	0.3190	---	PASS
EGPRS1900	661	2	0.24902	0.3078	---	PASS
EGPRS1900	810	2	0.24890	0.3165	---	PASS

Test Graphs



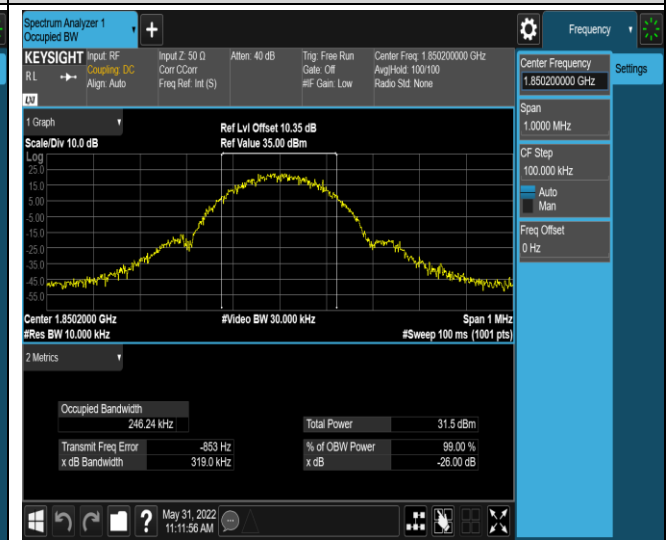


GSM1900-810-0-0.3149

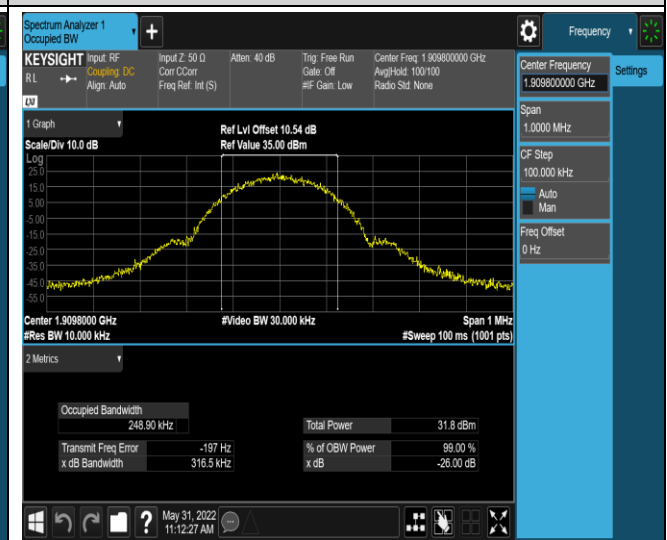
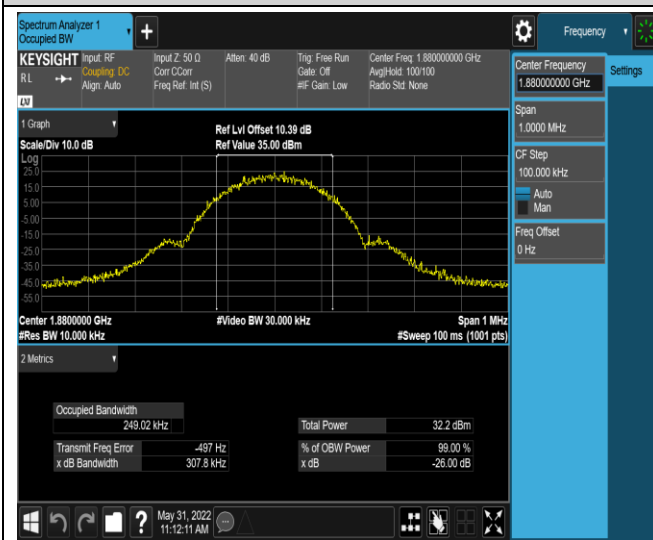
EGPRS1900-512-2-0.3190



EGPRS1900-661-2-0.3078



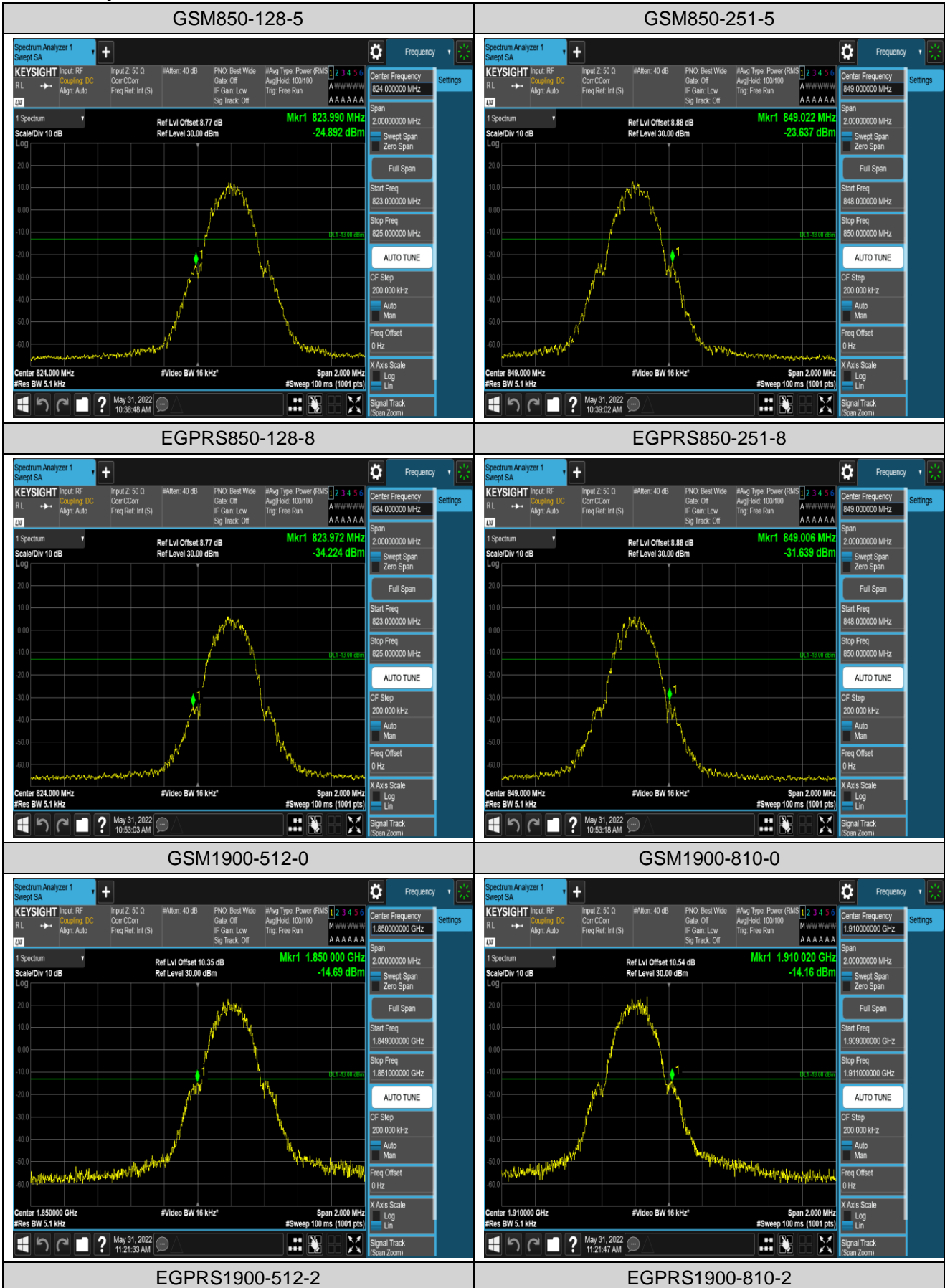
EGPRS1900-810-2-0.3165

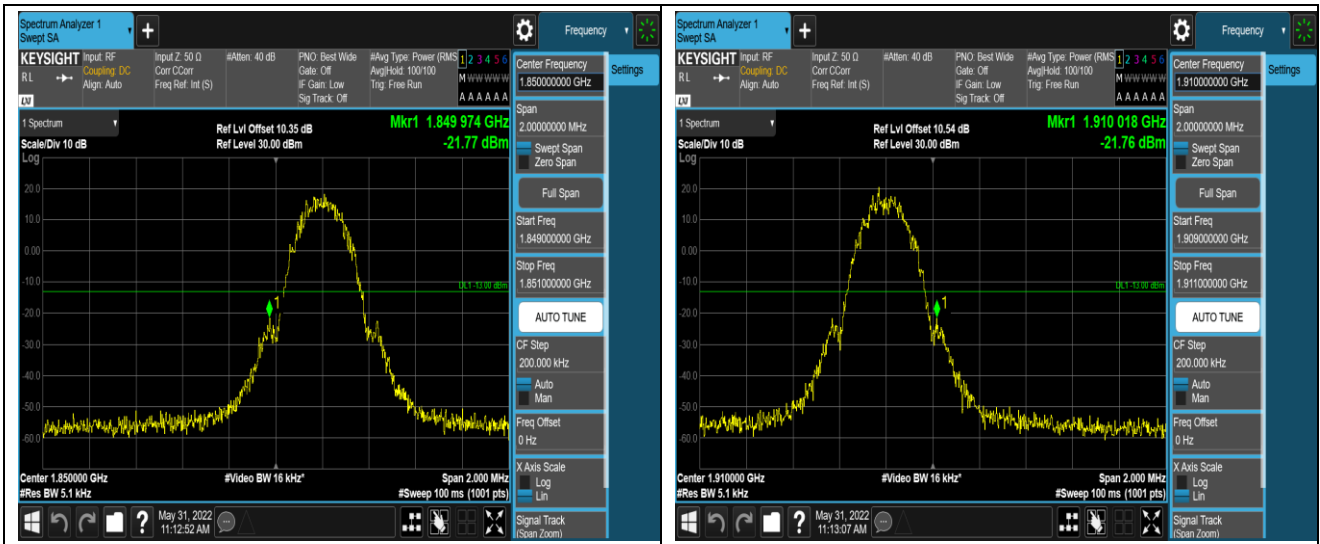


Appendix D: Band Edge**Test Result**

Band	Channel	PCL	Freq (MHz)	Result (dBm)	Limit(dBm)	Verdict
GSM850	128	5	823.99	-24.89	-13	PASS
GSM850	251	5	849.02	-23.64	-13	PASS
EGPRS850	128	8	823.97	-34.22	-13	PASS
EGPRS850	251	8	849.01	-31.64	-13	PASS
GSM1900	512	0	1850.00	-14.69	-13	PASS
GSM1900	810	0	1910.02	-14.16	-13	PASS
EGPRS1900	512	2	1849.97	-21.77	-13	PASS
EGPRS1900	810	2	1910.02	-21.76	-13	PASS

Test Graphs





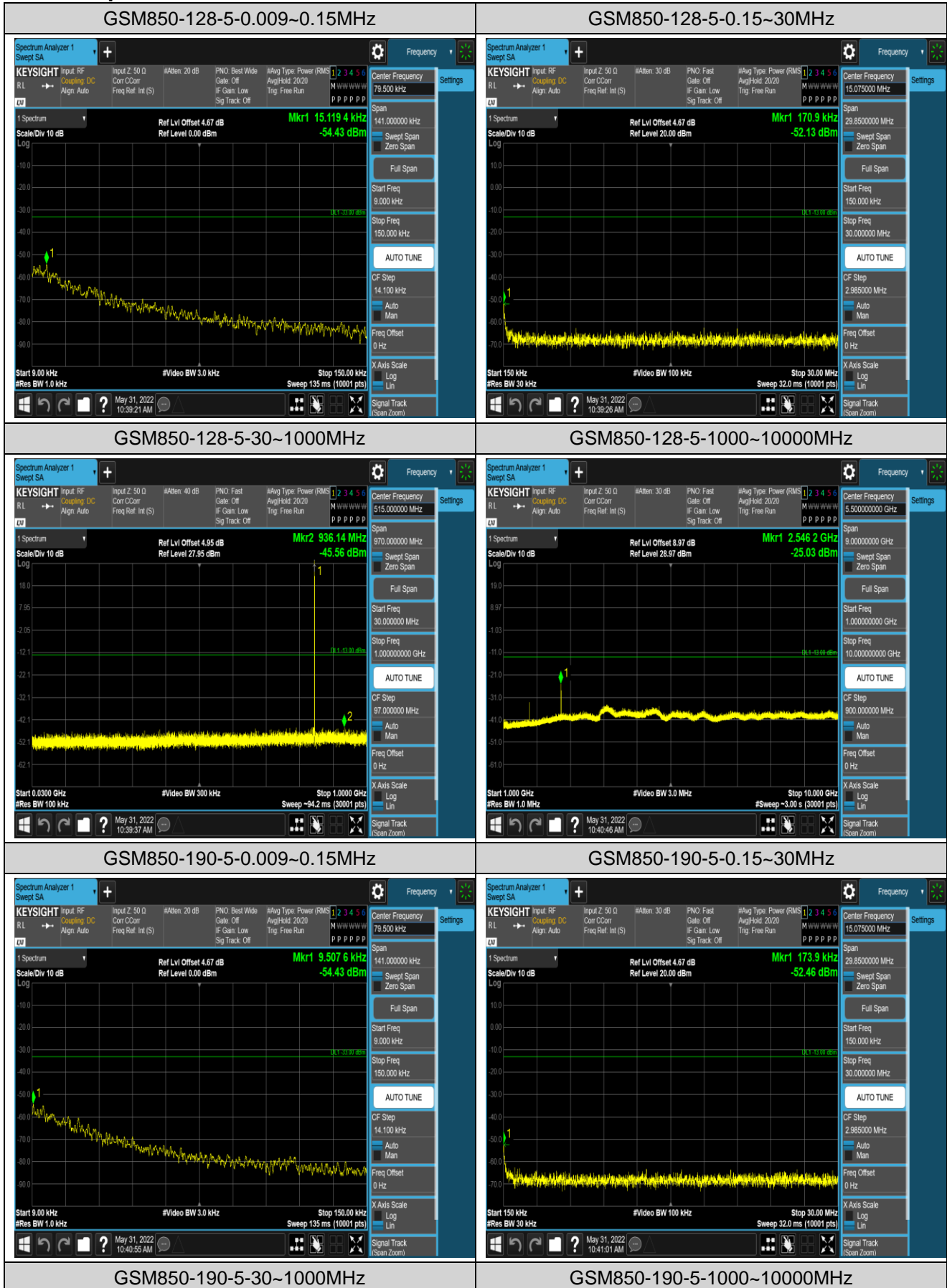
Appendix E: Conducted Spurious Emission

Test Result

Band	Channel	PCL	Frequency Range(MHz)	Max.Freq. (MHz)	Result (dBm)	Limit (dBm)	Verdict
GSM850	128	5	0.009~0.15MHz	0.02	-54.43	-33	PASS
GSM850	128	5	0.15~30MHz	0.17	-52.13	-13	PASS
GSM850	128	5	30~1000MHz	936.14	-45.56	-13	PASS
GSM850	128	5	1000~10000MHz	2546.2	-25.03	-13	PASS
GSM850	190	5	0.009~0.15MHz	0.01	-54.43	-33	PASS
GSM850	190	5	0.15~30MHz	0.17	-52.46	-13	PASS
GSM850	190	5	30~1000MHz	938.99	-45.22	-13	PASS
GSM850	190	5	1000~10000MHz	2546.5	-24.36	-13	PASS
GSM850	251	5	0.009~0.15MHz	0.01	-54.14	-33	PASS
GSM850	251	5	0.15~30MHz	0.16	-53.59	-13	PASS
GSM850	251	5	30~1000MHz	989.72	-46.2	-13	PASS
GSM850	251	5	1000~10000MHz	2546.2	-24.39	-13	PASS
GSM1900	512	0	0.009~0.15MHz	0.01	-56.36	-43	PASS
GSM1900	512	0	0.15~30MHz	0.17	-53.11	-23	PASS
GSM1900	512	0	30~1000MHz	867.11	-46.28	-13	PASS
GSM1900	512	0	1000~18000MHz	3726.23	-34.47	-13	PASS
GSM1900	661	0	0.009~0.15MHz	0.01	-56.08	-43	PASS
GSM1900	661	0	0.15~30MHz	0.15	-51.87	-23	PASS
GSM1900	661	0	30~1000MHz	988.26	-45.99	-13	PASS
GSM1900	661	0	1000~18000MHz	3848.07	-34.47	-13	PASS
GSM1900	810	0	0.009~0.15MHz	0.01	-55.97	-43	PASS
GSM1900	810	0	0.15~30MHz	0.16	-52	-23	PASS
GSM1900	810	0	30~1000MHz	900.19	-45.95	-13	PASS
GSM1900	810	0	1000~18000MHz	3845.23	-34.22	-13	PASS

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

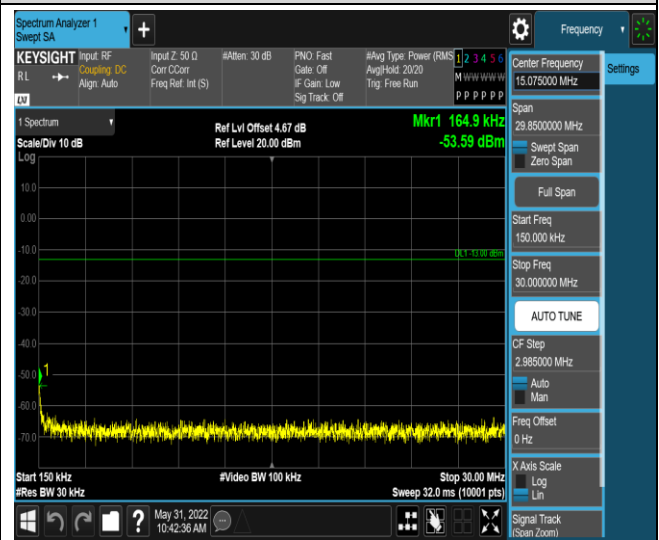
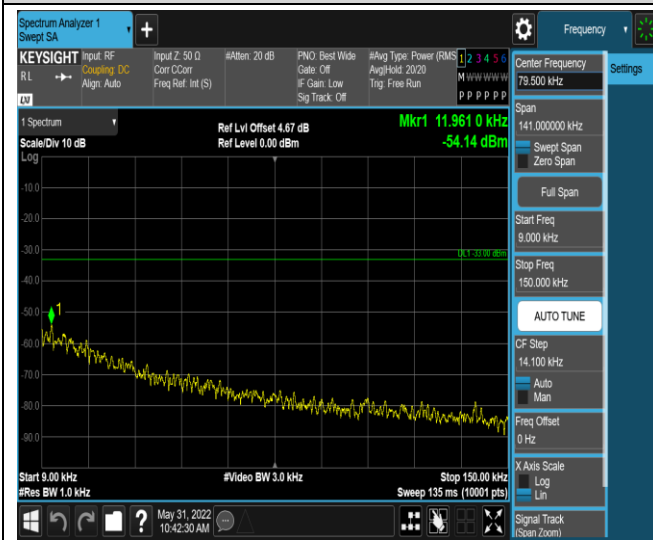
Test Graphs





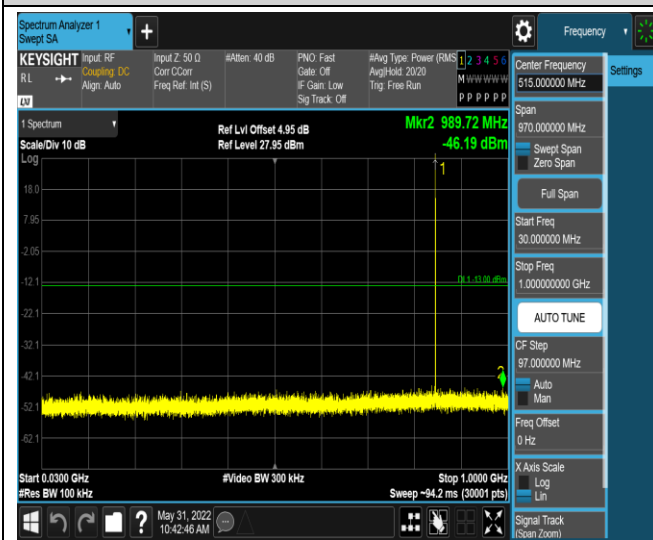
GSM850-251-5-0.009~0.15MHz

GSM850-251-5-0.15~30MHz



GSM850-251-5-30~1000MHz

GSM850-251-5-1000~10000MHz



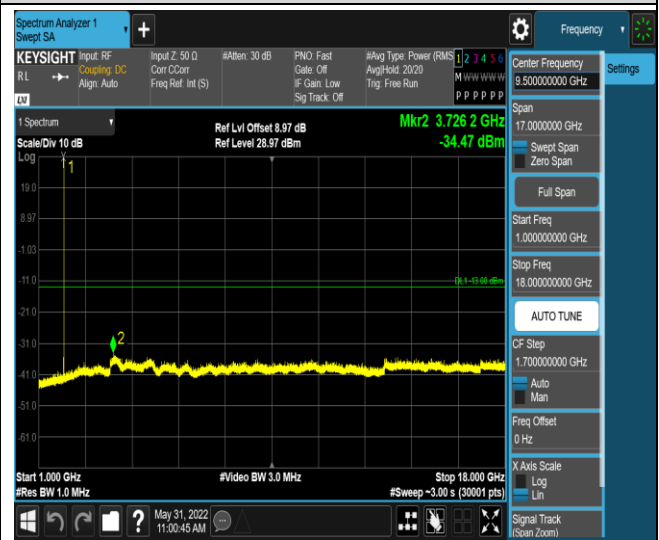
GSM1900-512-0-0.009~0.15MHz

GSM1900-512-0-0.15~30MHz



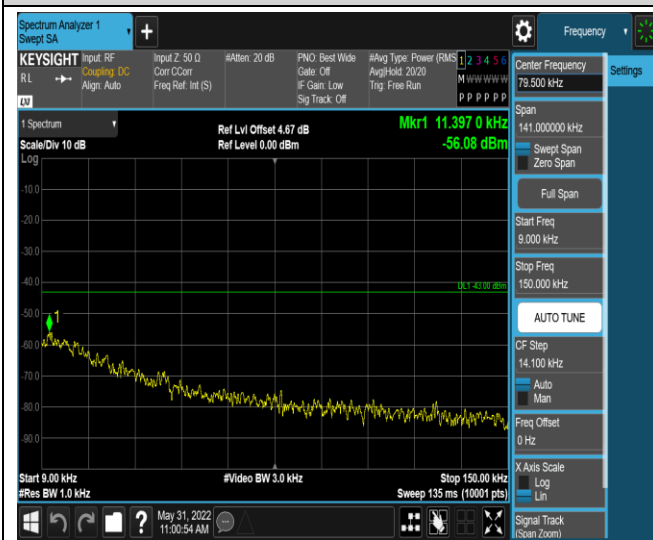
GSM1900-512-0-30~1000MHz

GSM1900-512-0-1000~18000MHz



GSM1900-661-0-0.009~0.15MHz

GSM1900-661-0-0.15~30MHz



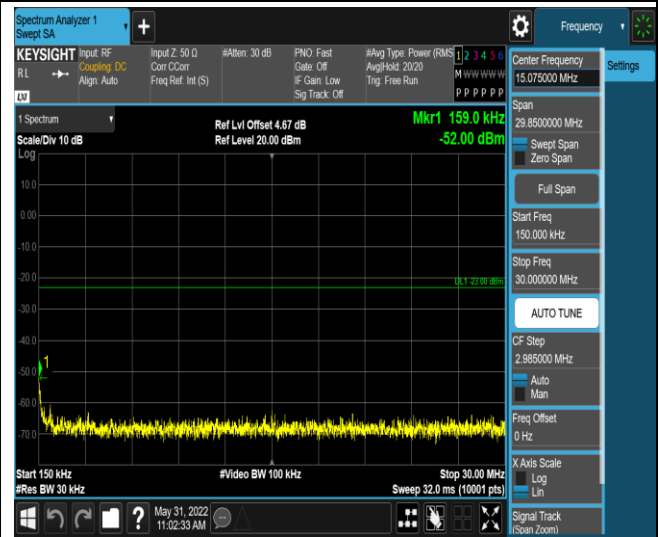
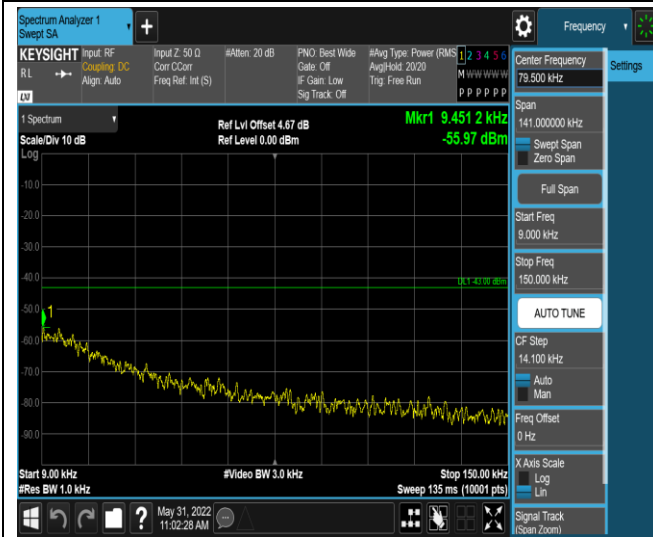
GSM1900-661-0-30~1000MHz

GSM1900-661-0-1000~18000MHz



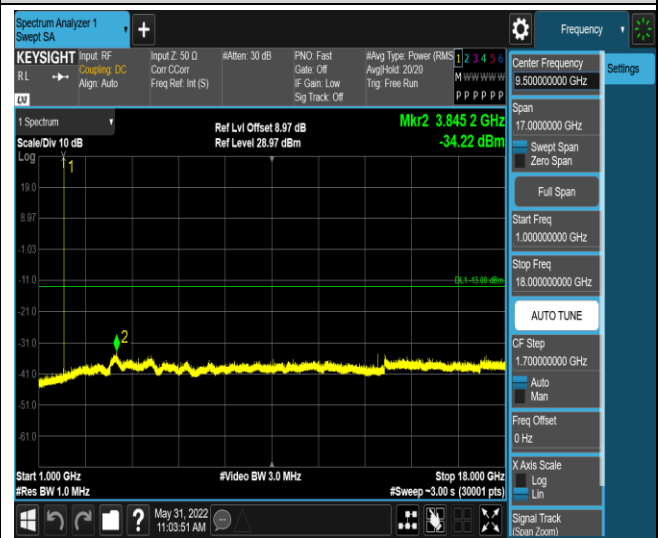
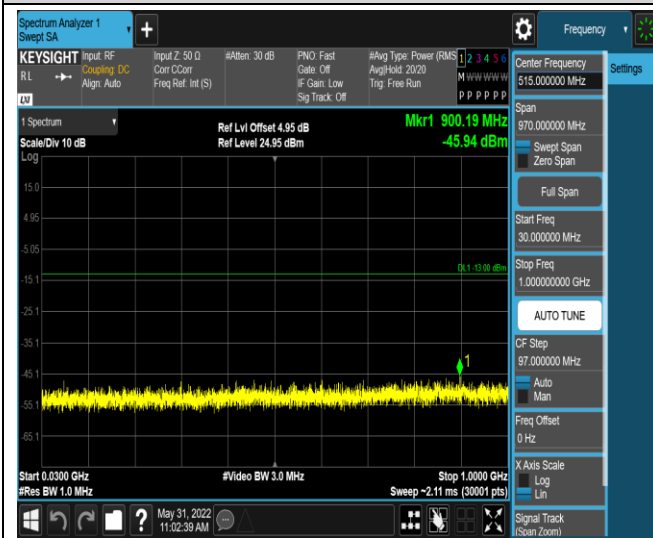
GSM1900-810-0-0.009~0.15MHz

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	9.65	0.011535	±2.5	Pass
	-20	10.53	0.012587		
	-10	-9.59	-0.011463		
	0	-12.33	-0.014738		
	10	-9.81	-0.011726		
	20	-6.42	-0.007674		
	30	-8.10	-0.009682		
	40	-5.84	-0.006981		
	50	-5.33	-0.006371		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	7.97	0.009527	±2.5	Pass
	3.85	4.71	0.005630		
	4.40	12.72	0.015204		
Remark: All channels 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	-12.27	-0.014667	±2.5	Pass
	-20	-9.65	-0.011535		
	-10	-4.36	-0.005212		
	0	1.58	0.001889		
	10	3.87	0.004626		
	20	-10.53	-0.012587		
	30	-25.67	-0.030684		
	40	-25.89	-0.030947		
	50	-23.92	-0.028592		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	-10.98	-0.013125	±2.5	Pass
	3.85	-9.07	-0.010842		
	4.40	-7.97	-0.009527		
Remark: All channels 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 (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	8.14	0.004330	Within authorized band for PCS 1900	Pass
	-20	2.07	0.001101		
	-10	0.74	0.000394		
	0	19.76	0.010511		
	10	0.03	0.000016		
	20	5.23	0.002782		
	30	19.86	0.010564		
	40	5.94	0.003160		
	50	19.27	0.010250		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	33.51	0.017824	Within authorized band for PCS 1900	Pass
	3.85	33.09	0.017601		
	4.40	4.94	0.002628		
<i>Remark: All channels 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		
3.85	-30	22.57	0.012005	Within authorized band for PCS 1900	Pass
	-20	19.82	0.010543		
	-10	32.64	0.017362		
	0	37.61	0.020005		
	10	51.30	0.027287		
	20	29.19	0.015527		
	30	-7.65	-0.004069		
	40	-1.36	-0.000723		
	50	3.13	0.001665		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	3.45	18.89	0.010048	Within authorized band for PCS 1900	Pass
	3.85	21.73	0.011559		
	4.40	19.18	0.010202		
<i>Remark: All channels 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

