

850 MHz frequency band (GSM 850, FDD V)

Bands	Sub-Test	Frequency (MHz)	RF Output Power				Calculations to meet ERP limits				Calculations to meet MPE limits				
			Burst Average Power		Peak Power		ERP limit	EIRP limit	Antenna gain to meet ERP limits		MPE limits according to §1.1310	Duty cycle	Evaluation distance	Antenna gain to meet MPE limits	
			(dBm)	(W)	(dBm)	(W)	(W)	(W)	Numerical	(dBi)	(mW/cm ²)	(%)	(cm)	Numerical	(dBi)
GSM 850	-----	824.2	32.50	1.778	32.70	1.862	7	11.48	6.17	7.89	0.55	12.50%	20	12.43	10.94
		836.4	32.40	1.738	32.60	1.820	7	11.48	6.31	7.99	0.56	12.50%	20	12.90	11.10
		848.8	32.40	1.738	32.60	1.820	7	11.48	6.31	7.99	0.57	12.50%	20	13.09	11.17
GPRS 850	4Down1Up	824.2	32.80	1.905	33.00	1.995	7	11.48	5.75	7.59	0.55	12.50%	20	11.60	10.64
		836.4	32.70	1.862	32.90	1.950	7	11.48	5.89	7.69	0.56	12.50%	20	12.04	10.80
		848.8	32.70	1.862	32.90	1.950	7	11.48	5.89	7.69	0.57	12.50%	20	12.22	10.87
	3Down2Up	824.2	32.20	1.660	32.40	1.738	7	11.48	6.61	8.19	0.55	50.00%	20	3.33	5.22
		836.4	32.20	1.660	32.40	1.738	7	11.48	6.61	8.19	0.56	50.00%	20	3.38	5.28
		848.8	32.30	1.698	32.40	1.738	7	11.48	6.61	8.19	0.57	50.00%	20	3.35	5.25
	2Down3Up	824.2	31.70	1.479	31.90	1.549	7	11.48	7.41	8.69	0.55	37.50%	20	4.98	6.97
		836.4	31.70	1.479	31.80	1.514	7	11.48	7.58	8.79	0.56	37.50%	20	5.05	7.03
		848.8	31.70	1.479	31.90	1.549	7	11.48	7.41	8.69	0.57	37.50%	20	5.13	7.09
	1Down4Up	824.2	30.60	1.148	30.80	1.202	7	11.48	9.55	9.80	0.55	50.00%	20	4.81	6.82
		836.4	30.60	1.148	30.70	1.175	7	11.48	9.77	9.89	0.56	50.00%	20	4.88	6.88
		848.8	30.60	1.148	30.80	1.202	7	11.48	9.55	9.80	0.57	50.00%	20	4.96	6.95
EGPRS 850	4Down1Up	824.2	27.40	0.550	29.90	0.977	7	11.48	11.75	10.70	0.55	12.50%	20	40.17	16.03
		836.4	27.20	0.525	29.80	0.955	7	11.48	12.02	10.79	0.56	12.50%	20	42.71	16.30
		848.8	27.20	0.525	29.80	0.955	7	11.48	12.02	10.79	0.57	12.50%	20	43.34	16.36
	3Down2Up	824.2	26.90	0.490	29.50	0.891	7	11.48	12.88	11.10	0.55	25.00%	20	22.55	13.53
		836.4	26.90	0.490	29.70	0.933	7	11.48	12.30	10.90	0.56	25.00%	20	22.88	13.59
		848.8	26.90	0.490	29.70	0.933	7	11.48	12.30	10.90	0.57	25.00%	20	23.22	13.65
	2Down3Up	824.2	26.00	0.398	28.90	0.776	7	11.48	14.79	11.70	0.55	37.50%	20	18.51	12.67
		836.4	26.10	0.407	28.90	0.776	7	11.48	14.79	11.70	0.56	37.50%	20	18.36	12.63
		848.8	26.20	0.417	29.00	0.794	7	11.48	14.46	11.60	0.57	37.50%	20	18.19	12.59
	1Down4Up	824.2	25.40	0.347	28.40	0.692	7	11.48	16.59	12.19	0.55	50.00%	20	15.92	12.01
		836.4	25.40	0.347	28.40	0.692	7	11.48	16.59	12.19	0.56	50.00%	20	16.15	12.08
		848.8	25.50	0.355	28.50	0.708	7	11.48	16.21	12.09	0.57	50.00%	20	16.02	12.04
WCDMA Band V	-----	826.4	23.82	0.241	26.63	0.460	7	11.48	24.96	13.97	0.55	100.00%	20	11.49	10.60
		836.4	23.70	0.234	26.43	0.440	7	11.48	26.09	14.16	0.56	100.00%	20	11.98	10.78
		846.4	23.61	0.230	26.47	0.444	7	11.48	25.86	14.12	0.56	100.00%	20	12.33	10.91

Maximum antenna gain for 850 MHz frequency band: 5.22 dBi

1900 MHz frequency band (PCS 1900, FDD II)

Bands	Sub-Test	Frequency (MHz)	RF Output Power				Calculations to meet EIRP limits				Calculations to meet MPE limits			
			Burst Average Power		Peak Power		EIRP limit	Antenna gain to meet ERP limits			MPE limits according to §1.1310	Duty cycle	Evaluation distance	Antenna gain to meet MPE limits
			(dBm)	(W)	(dBm)	(W)	(W)	Numerical	(dBi)	(mW/cm ²)	(%)	(cm)	Numerical	(dBi)
GSM 1900	-----	1850.20	29.50	0.891	29.70	0.933	2	2.24	3.51	1.00	12.50%	20	45.13	16.54
		1880.00	29.40	0.871	29.60	0.912	2	2.30	3.61	1.00	12.50%	20	46.17	16.64
		1909.80	29.20	0.832	29.30	0.851	2	2.40	3.80	1.00	12.50%	20	48.33	16.84
GPRS 1900	4Down1Up	1850.20	29.70	0.933	29.90	0.977	2	2.14	3.31	1.00	12.50%	20	43.10	16.34
		1880.00	29.60	0.912	29.80	0.955	2	2.19	3.41	1.00	12.50%	20	44.09	16.44
		1909.80	29.30	0.851	29.50	0.891	2	2.35	3.71	1.00	12.50%	20	47.25	16.74
	3Down2Up	1850.20	29.20	0.832	29.40	0.871	2	2.40	3.80	1.00	50.00%	20	12.08	10.82
		1880.00	29.20	0.832	29.40	0.871	2	2.40	3.80	1.00	50.00%	20	12.08	10.82
		1909.80	29.00	0.794	29.20	0.832	2	2.52	4.01	1.00	50.00%	20	12.66	11.02
	2Down3Up	1850.20	28.80	0.759	29.00	0.794	2	2.64	4.20	1.00	37.50%	20	17.66	12.46
		1880.00	28.60	0.724	28.80	0.759	2	2.76	4.41	1.00	37.50%	20	18.51	12.67
		1909.80	28.40	0.692	28.60	0.724	2	2.89	4.60	1.00	37.50%	20	19.37	12.87
	1Down4Up	1850.20	27.70	0.589	27.80	0.603	2	3.40	5.30	1.00	50.00%	20	17.07	12.32
		1880.00	27.40	0.550	27.50	0.562	2	3.64	5.60	1.00	50.00%	20	18.28	12.61
		1909.80	27.20	0.525	27.30	0.537	2	3.81	5.80	1.00	50.00%	20	19.15	12.82
EGPRS 1900	4Down1Up	1850.20	25.80	0.380	28.60	0.724	2	5.26	7.21	1.00	12.50%	20	105.82	20.24
		1880.00	25.60	0.363	28.40	0.692	2	5.51	7.41	1.00	12.50%	20	110.78	20.44
		1909.80	25.40	0.347	28.30	0.676	2	5.76	7.60	1.00	12.50%	20	115.89	20.64
	3Down2Up	1850.20	25.60	0.363	28.40	0.692	2	5.51	7.41	1.00	25.00%	20	55.39	17.43
		1880.00	25.40	0.347	28.10	0.646	2	5.76	7.60	1.00	25.00%	20	57.94	17.63
		1909.80	25.20	0.331	28.10	0.646	2	6.04	7.81	1.00	25.00%	20	60.74	17.83
	2Down3Up	1850.20	25.00	0.316	27.50	0.562	2	6.33	8.01	1.00	37.50%	20	42.42	16.27
		1880.00	24.70	0.295	27.40	0.550	2	6.78	8.31	1.00	37.50%	20	45.44	16.57
		1909.80	24.50	0.282	27.20	0.525	2	7.09	8.50	1.00	37.50%	20	47.53	16.76
	1Down4Up	1850.20	24.40	0.275	27.20	0.525	2	7.27	8.61	1.00	50.00%	20	36.56	15.62
		1880.00	24.30	0.269	27.00	0.501	2	7.43	8.71	1.00	50.00%	20	37.37	15.72
		1909.80	24.10	0.257	27.00	0.501	2	7.78	8.91	1.00	50.00%	20	39.12	15.92
WCDMA Band II	-----	1852.40	23.85	0.243	26.39	0.436	2	8.23	9.15	1.00	100.00%	20	20.69	13.15
		1880.00	23.57	0.228	25.93	0.392	2	8.77	9.43	1.00	100.00%	20	22.05	13.43
		1907.60	23.49	0.223	25.59	0.362	2	8.97	9.52	1.00	100.00%	20	22.54	13.52

Maximum antenna gain for 1900 MHz frequency band: 3.31 dBi

1700 MHz frequency band (FDD IV)

Bands	Sub-Test	Frequency (MHz)	RF Output Power				Calculations to meet EIRP limits				Calculations to meet MPE limits			
			Burst Average Power		Peak Power		EIRP limit	Antenna gain to meet ERP limits			MPE limits according to §1.1310	Duty cycle	Evaluation distance	Antenna gain to meet MPE limits
			(dBm)	(W)	(dBm)	(W)	(W)	Numerical	(dBi)	(mW/cm ²)	(%)	(cm)	Numerical	(dBi)
WCDMA Band IV	-----	1712.40	23.54	0.226	26.40	0.437	1	4.42	6.45	1.00	100.00%	20	22.24	13.47
		1740.00	23.48	0.223	26.30	0.427	1	4.48	6.51	1.00	100.00%	20	22.54	13.52
		1752.60	23.46	0.222	26.32	0.429	1	4.50	6.53	1.00	100.00%	20	22.64	13.54

Maximum antenna gain for 1700 MHz frequency band: 6.45 dBi