

## 850 MHz frequency band (GSM 850, FDD V)

			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	
Bands	Sub-Test	Frequency (MHz)	(dBm)	(W)	(dBm)	(W)	(W)	(W)	Numerical	(dBi)	(mW/cm^2)	(%)	(cm)	Numerical	(dBi)
GSM 850	----	824,2	32,08	1,614	32,26	1,683	7	11,48	7,11	8,51	0,55	12,50%	20	13,69	11,36
		836,4	32,13	1,633	32,25	1,679	7	11,48	7,03	8,46	0,56	12,50%	20	13,73	11,37
		848,8	32,07	1,611	32,24	1,675	7	11,48	7,13	8,52	0,57	12,50%	20	14,13	11,50
GPRS 850	4Down1Up	824,2	32,17	1,648	32,24	1,675	7	11,48	6,97	8,42	0,55	12,50%	20	13,41	11,27
		836,4	32,15	1,641	32,27	1,687	7	11,48	7,00	8,44	0,56	12,50%	20	13,67	11,35
		848,8	32,10	1,622	32,22	1,667	7	11,48	7,08	8,49	0,57	12,50%	20	14,03	11,47
	3Down2Up	824,2	32,13	1,633	32,25	1,679	7	11,48	7,03	8,46	0,55	50,00%	20	3,38	5,29
		836,4	32,14	1,637	32,25	1,679	7	11,48	7,01	8,45	0,56	50,00%	20	3,42	5,34
		848,8	32,11	1,626	32,24	1,675	7	11,48	7,06	8,48	0,57	50,00%	20	3,50	5,44
	2Down3Up	824,2	31,31	1,352	31,41	1,384	7	11,48	8,49	9,28	0,55	37,50%	20	5,45	7,36
		836,4	31,22	1,324	31,32	1,355	7	11,48	8,67	9,37	0,56	37,50%	20	5,64	7,51
		848,8	31,21	1,321	31,31	1,352	7	11,48	8,69	9,38	0,57	37,50%	20	5,74	7,58
	1Down4Up	824,2	30,13	1,030	30,33	1,079	7	11,48	11,14	10,46	0,55	50,00%	20	5,36	7,29
		836,4	30,11	1,026	30,21	1,050	7	11,48	11,19	10,48	0,56	50,00%	20	5,47	7,37
		848,8	30,09	1,021	30,12	1,028	7	11,48	11,24	10,50	0,57	50,00%	20	5,57	7,46
EGPRS 850	4Down1Up	824,2	26,69	0,467	29,49	0,889	7	11,48	24,60	13,90	0,55	12,50%	20	47,35	16,75
		836,4	26,66	0,463	29,46	0,883	7	11,48	24,77	13,93	0,56	12,50%	20	48,38	16,84
		848,8	26,61	0,458	29,42	0,875	7	11,48	25,06	13,98	0,57	12,50%	20	49,67	16,96
	3Down2Up	824,2	26,58	0,455	29,31	0,853	7	11,48	25,23	14,01	0,55	25,00%	20	24,28	13,85
		836,4	26,56	0,453	29,29	0,849	7	11,48	25,35	14,03	0,56	25,00%	20	24,75	13,93
		848,8	26,47	0,444	29,26	0,843	7	11,48	25,88	14,12	0,57	25,00%	20	25,65	14,09
	2Down3Up	824,2	25,32	0,340	28,82	0,762	7	11,48	33,72	15,27	0,55	37,50%	20	21,64	13,35
		836,4	25,31	0,340	28,81	0,760	7	11,48	33,80	15,28	0,56	37,50%	20	22,01	13,42
		848,8	25,30	0,339	28,80	0,759	7	11,48	33,88	15,29	0,57	37,50%	20	22,38	13,49
	1Down4Up	824,2	24,72	0,296	27,95	0,624	7	11,48	38,72	15,87	0,55	50,00%	20	18,63	12,70
		836,4	24,70	0,295	27,92	0,619	7	11,48	38,90	15,89	0,56	50,00%	20	18,99	12,78
		848,8	24,69	0,294	27,90	0,617	7	11,48	38,99	15,90	0,57	50,00%	20	19,32	12,86
WCDMA Band V	----	826,4	23,76	0,238	26,43	0,440	7	11,48	48,30	16,83	0,55	100,00%	20	11,65	10,66
		836,4	23,58	0,228	26,28	0,425	7	11,48	50,34	17,01	0,56	100,00%	20	12,29	10,89
		846,4	23,54	0,226	26,23	0,420	7	11,48	50,81	17,05	0,56	100,00%	20	12,55	10,98
HSDPA Band V	1	826,4	23,05	0,202	26,39	0,436	7	11,48	56,88	17,54	0,55	100,00%	20	13,72	11,37
		836,4	22,94	0,197	26,24	0,421	7	11,48	58,34	17,65	0,56	100,00%	20	14,24	11,53
		846,4	22,81	0,191	26,21	0,418	7	11,48	60,11	17,78	0,56	100,00%	20	14,85	11,71
	2	826,4	23,04	0,201	26,38	0,435	7	11,48	57,01	17,55	0,55	100,00%	20	13,75	11,38
		836,4	22,93	0,196	26,23	0,420	7	11,48	58,47	17,66	0,56	100,00%	20	14,28	11,54
		846,4	22,81	0,191	26,21	0,418	7	11,48	60,11	17,78	0,56	100,00%	20	14,85	11,71
	3	826,4	23,03	0,201	26,37	0,434	7	11,48	57,14	17,56	0,55	100,00%	20	13,78	11,39
		836,4	22,93	0,196	26,23	0,420	7	11,48	58,47	17,66	0,56	100,00%	20	14,28	11,54
		846,4	22,79	0,190	26,19	0,416	7	11,48	60,39	17,80	0,56	100,00%	20	14,92	11,73
	4	826,4	23,02	0,200	26,36	0,433	7	11,48	57,27	17,57	0,55	100,00%	20	13,82	11,40
		836,4	22,91	0,195	26,21	0,418	7	11,48	58,74	17,68	0,56	100,00%	20	14,34	11,56
		846,4	22,78	0,190	26,18	0,415	7	11,48	60,53	17,81	0,56	100,00%	20	14,95	11,74
HSUPA BandV	1	826,4	22,98	0,199	26,32	0,429	7	11,48	57,80	17,61	0,55	100,00%	20	13,94	11,44
		836,4	22,87	0,194	26,22	0,419	7	11,48	59,28	17,72	0,56	100,00%	20	14,47	11,60
		846,4	22,77	0,189	26,17	0,414	7	11,48	60,67	17,82	0,56	100,00%	20	14,99	11,75
	2	826,4	20,97	0,125	24,31	0,270	7	11,48	91,82	19,62	0,55	100,00%	20	22,15	13,45
		836,4	20,86	0,122	24,21	0,264	7	11,48	94,18	19,73	0,56	100,00%	20	22,99	13,61
		846,4	20,76	0,119	24,16	0,261	7	11,48	96,37	19,83	0,56	100,00%	20	23,81	13,76
	3	826,4	21,97	0,157	25,31	0,340	7	11,48	72,94	18,62	0,55	100,00%	20	17,59	12,45
		836,4	21,86	0,153	25,21	0,332	7	11,48	74,81	18,73	0,56	100,00%	20	18,26	12,61
		846,4	21,77	0,150	25,17	0,329	7	11,48	76,37	18,82	0,56	100,00%	20	18,87	12,75
	4	826,4	20,97	0,125	24,31	0,270	7	11,48	91,82	19,62	0,55	100,00%	20	22,15	13,45
		836,4	20,88	0,122	24,23	0,265	7	11,48	93,74	19,71	0,56	100,00%	20	22,89	13,59
		846,4	20,79	0,120	24,19	0,262	7	11,48	95,71	19,80	0,56	100,00%	20	23,65	13,73
	5	826,4	22,97	0,198	26,31	0,428	7	11,48	57,94	17,62	0,55	100,00%	20	13,98	11,45
		836,4	22,87	0,194	26,22	0,419	7	11,48	59,28	17,72	0,56	100,00%	20	14,47	11,60
		846,4	22,76	0,189	26,16	0,413	7	11,48	60,81	17,83	0,56	100,00%	20	15,02	11,76

Maximum antenna gain for **850 MHz** frequency band: **5.29 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 EIRP 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	28.95	0.785	29.12	0.817	2	2.55	4.06	1.00	12.50%	20	51.21	17.09
		1880.00	28.94	0.783	29.09	0.811	2	2.55	4.07	1.00	12.50%	20	51.33	17.10
		1909.80	28.93	0.782	29.08	0.809	2	2.56	4.08	1.00	12.50%	20	51.45	17.11
GPRS 850	4Down1Up	1850.20	28.99	0.793	29.21	0.834	2	2.52	4.02	1.00	12.50%	20	50.74	17.05
		1880.00	28.98	0.791	29.20	0.832	2	2.53	4.03	1.00	12.50%	20	50.86	17.06
		1909.80	28.96	0.787	29.18	0.828	2	2.54	4.05	1.00	12.50%	20	51.09	17.08
	3Down2Up	1850.20	28.96	0.787	29.16	0.824	2	2.54	4.05	1.00	50.00%	20	12.77	11.06
		1880.00	28.95	0.785	29.15	0.822	2	2.55	4.06	1.00	50.00%	20	12.80	11.07
		1909.80	28.94	0.783	29.14	0.820	2	2.55	4.07	1.00	50.00%	20	12.83	11.08
	2Down3Up	1850.20	28.16	0.655	28.31	0.678	2	3.06	4.85	1.00	37.50%	20	20.48	13.11
		1880.00	28.15	0.653	28.27	0.671	2	3.06	4.86	1.00	37.50%	20	20.52	13.12
		1909.80	28.13	0.650	27.25	0.531	2	3.08	4.88	1.00	37.50%	20	20.62	13.14
	1Down4Up	1850.20	27.06	0.508	27.15	0.519	2	3.94	5.95	1.00	50.00%	20	19.78	12.96
		1880.00	26.95	0.495	27.13	0.516	2	4.04	6.06	1.00	50.00%	20	20.29	13.07
		1909.80	26.94	0.494	27.12	0.515	2	4.05	6.07	1.00	50.00%	20	20.34	13.08
EGPRS 1900	4Down1Up	1850.20	25.32	0.340	28.27	0.671	2	5.88	7.69	1.00	12.50%	20	118.13	20.72
		1880.00	25.27	0.337	28.23	0.665	2	5.94	7.74	1.00	12.50%	20	119.50	20.77
		1909.80	25.26	0.336	28.21	0.662	2	5.96	7.75	1.00	12.50%	20	119.77	20.78
	3Down2Up	1850.20	25.28	0.337	28.22	0.664	2	5.93	7.73	1.00	25.00%	20	59.61	17.75
		1880.00	25.26	0.336	28.18	0.658	2	5.96	7.75	1.00	25.00%	20	59.89	17.77
		1909.80	25.23	0.333	28.17	0.656	2	6.00	7.78	1.00	25.00%	20	60.30	17.80
	2Down3Up	1850.20	24.61	0.289	27.63	0.579	2	6.92	8.40	1.00	37.50%	20	46.37	16.66
		1880.00	24.57	0.286	27.57	0.571	2	6.98	8.44	1.00	37.50%	20	46.80	16.70
		1909.80	24.56	0.286	27.53	0.566	2	7.00	8.45	1.00	37.50%	20	46.91	16.71
	1Down4Up	1850.20	23.45	0.221	26.45	0.442	2	9.04	9.56	1.00	50.00%	20	45.43	16.57
		1880.00	23.37	0.217	26.41	0.438	2	9.21	9.64	1.00	50.00%	20	46.27	16.65
		1909.80	23.36	0.217	26.37	0.434	2	9.23	9.65	1.00	50.00%	20	46.38	16.66
WCDMA Band II	----	1852.40	23.70	0.234	26.44	0.441	2	8.53	9.31	1.00	100.00%	20	21.44	13.31
		1880.00	23.31	0.214	26.07	0.405	2	9.33	9.70	1.00	100.00%	20	23.46	13.70
		1907.60	23.37	0.217	26.13	0.410	2	9.21	9.64	1.00	100.00%	20	23.14	13.64
HSDPA Band V	1	1852.40	23.18	0.208	25.94	0.393	2	9.62	9.83	1.00	100.00%	20	24.17	13.83
		1880.00	22.79	0.190	25.57	0.361	2	10.52	10.22	1.00	100.00%	20	26.44	14.22
		1907.60	22.83	0.192	25.63	0.366	2	10.42	10.18	1.00	100.00%	20	26.20	14.18
	2	1852.40	23.17	0.207	25.93	0.392	2	9.64	9.84	1.00	100.00%	20	24.23	13.84
		1880.00	22.78	0.190	25.56	0.360	2	10.54	10.23	1.00	100.00%	20	26.50	14.23
		1907.60	22.82	0.191	25.62	0.365	2	10.45	10.19	1.00	100.00%	20	26.26	14.19
	3	1852.40	23.18	0.208	25.94	0.393	2	9.62	9.83	1.00	100.00%	20	24.17	13.83
		1880.00	22.79	0.190	25.57	0.361	2	10.52	10.22	1.00	100.00%	20	26.44	14.22
		1907.60	22.81	0.191	25.61	0.364	2	10.47	10.20	1.00	100.00%	20	26.32	14.20
	4	1852.40	23.17	0.207	25.93	0.392	2	9.64	9.84	1.00	100.00%	20	24.23	13.84
		1880.00	22.78	0.190	25.56	0.360	2	10.54	10.23	1.00	100.00%	20	26.50	14.23
		1907.60	22.82	0.191	25.62	0.365	2	10.45	10.19	1.00	100.00%	20	26.26	14.19
HSUPA BandV	1	1852.40	23.16	0.207	25.91	0.390	2	9.66	9.85	1.00	100.00%	20	24.28	13.85
		1880.00	22.77	0.189	25.54	0.358	2	10.57	10.24	1.00	100.00%	20	26.56	14.24
		1907.60	22.81	0.191	25.61	0.364	2	10.47	10.20	1.00	100.00%	20	26.32	14.20
	2	1852.40	21.15	0.130	23.90	0.245	2	15.35	11.86	1.00	100.00%	20	38.57	15.86
		1880.00	20.76	0.119	23.53	0.225	2	16.79	12.25	1.00	100.00%	20	42.20	16.25
		1907.60	20.80	0.120	23.60	0.229	2	16.64	12.21	1.00	100.00%	20	41.81	16.21
	3	1852.40	22.17	0.165	24.92	0.310	2	12.13	10.84	1.00	100.00%	20	30.50	14.84
		1880.00	21.76	0.150	24.53	0.284	2	13.34	11.25	1.00	100.00%	20	33.52	15.25
		1907.60	21.82	0.152	24.62	0.290	2	13.15	11.19	1.00	100.00%	20	33.06	15.19
	4	1852.40	21.15	0.130	23.90	0.245	2	15.35	11.86	1.00	100.00%	20	38.57	15.86
		1880.00	20.76	0.119	23.53	0.225	2	16.79	12.25	1.00	100.00%	20	42.20	16.25
		1907.60	20.82	0.121	23.62	0.230	2	16.56	12.19	1.00	100.00%	20	41.62	16.19
	5	1852.40	23.15	0.207	25.90	0.389	2	9.68	9.86	1.00	100.00%	20	24.34	13.86
		1880.00	22.76	0.189	25.53	0.357	2	10.59	10.25	1.00	100.00%	20	26.62	14.25
		1907.60	22.79	0.190	25.59	0.362	2	10.52	10.22	1.00	100.00%	20	26.44	14.22

Maximum antenna gain for **1900 MHz** frequency band: **4.02 dBi**

## 1700 MHz frequency band (FDD IV)

			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	
Bands	Sub-Test	Frequency (MHz)	(dBm)	(W)	(dBm)	(W)	(W)	Numerical	(dBi)	(mW/cm^2)	(%)	(cm)	Numerical	(dBi)
WCDMA Band IV	-----	1712,40	23,68	0,233	26,61	0,458	1	4,29	6,32	1,00	100,00%	20	21,54	13,33
		1740,00	23,51	0,224	26,46	0,443	1	4,46	6,49	1,00	100,00%	20	22,40	13,50
		1752,60	23,59	0,229	26,53	0,450	1	4,38	6,41	1,00	100,00%	20	21,99	13,42
HSDPA Band V	1	1712,40	23,17	0,207	26,10	0,407	1	4,82	6,83	1,00	100,00%	20	24,23	13,84
		1740,00	23,00	0,200	25,95	0,394	1	5,01	7,00	1,00	100,00%	20	25,19	14,01
		1752,60	23,08	0,203	26,02	0,400	1	4,92	6,92	1,00	100,00%	20	24,73	13,93
	2	1712,40	23,16	0,207	26,09	0,406	1	4,83	6,84	1,00	100,00%	20	24,28	13,85
		1740,00	22,99	0,199	25,94	0,393	1	5,02	7,01	1,00	100,00%	20	25,25	14,02
		1752,60	23,07	0,203	26,01	0,399	1	4,93	6,93	1,00	100,00%	20	24,79	13,94
	3	1712,40	23,15	0,207	26,08	0,406	1	4,84	6,85	1,00	100,00%	20	24,34	13,86
		1740,00	22,98	0,199	25,93	0,392	1	5,04	7,02	1,00	100,00%	20	25,31	14,03
		1752,60	23,06	0,202	26,00	0,398	1	4,94	6,94	1,00	100,00%	20	24,85	13,95
	4	1712,40	23,16	0,207	26,09	0,406	1	4,83	6,84	1,00	100,00%	20	24,28	13,85
		1740,00	22,99	0,199	25,94	0,393	1	5,02	7,01	1,00	100,00%	20	25,25	14,02
		1752,60	23,07	0,203	26,01	0,399	1	4,93	6,93	1,00	100,00%	20	24,79	13,94
HSUPA BandV	1	1712,40	22,97	0,198	25,90	0,389	1	5,05	7,03	1,00	100,00%	20	25,37	14,04
		1740,00	22,80	0,191	25,75	0,376	1	5,25	7,19	1,00	100,00%	20	26,38	14,21
		1752,60	22,88	0,194	25,82	0,382	1	5,15	7,12	1,00	100,00%	20	25,90	14,13
	2	1712,40	20,96	0,125	23,89	0,245	1	8,02	9,04	1,00	100,00%	20	40,30	16,05
		1740,00	20,79	0,120	23,74	0,237	1	8,34	9,21	1,00	100,00%	20	41,91	16,22
		1752,60	20,87	0,122	23,81	0,240	1	8,18	9,13	1,00	100,00%	20	41,14	16,14
	3	1712,40	21,96	0,157	24,89	0,308	1	6,37	8,04	1,00	100,00%	20	32,01	15,05
		1740,00	21,79	0,151	24,74	0,298	1	6,62	8,21	1,00	100,00%	20	33,29	15,22
		1752,60	21,89	0,155	24,83	0,304	1	6,47	8,11	1,00	100,00%	20	32,53	15,12
	4	1712,40	20,96	0,125	23,89	0,245	1	8,02	9,04	1,00	100,00%	20	40,30	16,05
		1740,00	20,81	0,121	23,76	0,238	1	8,30	9,19	1,00	100,00%	20	41,71	16,20
		1752,60	20,87	0,122	23,81	0,240	1	8,18	9,13	1,00	100,00%	20	41,14	16,14
	5	1712,40	22,96	0,198	25,89	0,388	1	5,06	7,04	1,00	100,00%	20	25,43	14,05
		1740,00	22,79	0,190	25,74	0,375	1	5,26	7,21	1,00	100,00%	20	26,44	14,22
		1752,60	22,87	0,194	25,81	0,381	1	5,16	7,13	1,00	100,00%	20	25,96	14,14

Maximum antenna gain for **1700 MHz** frequency band: **6.32 dBi**