

RF Exposure Statement

1. LIMITS

According to §1.1310 and §2.1091 RF exposure is calculated.

(B) Limits for General Population/Uncontrolled Exposures

Frequency range (MHz)	Electric field Strength (V/m)	Magnetic field Strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
0.3 - 1.34.....	614	1.63	*(100)	30
1.34 - 30.....	824/f	2.19/f	*(180/ f ²)	30
30 - 300.....	27.5	0.073	0.2	30
300 - 1500.....			f/1500	30
1500 - 100.000.....			1.0	30

F = frequency in MHz

* = Plane-wave equivalent power density

2. MAXIMUM PERMISSIBLE EXPOSURE Prediction

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG/4\pi R^2$$

S = Power density

P = power input to antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

2-1. GSM 850

Max Peak output Power at antenna input terminal (dBm)	33.740
Max Peak output Power at antenna input terminal (mW)	2365.920
Prediction distance (cm)	20.000
Prediction frequency (MHz)	836.600
Antenna Gain(typical) (dBi)	-7.000
Antenna Gain(numeric)	0.200
Power density at prediction frequency (mW/cm ²)	0.09391
MPE limit for uncontrolled exposure at prediction frequency (mW/cm ²)	0.558

2-2. GSM 1900

Max Peak output Power at antenna input terminal (dBm)	30.76
Max Peak output Power at antenna input terminal (mW)	1191.2
Prediction distance (cm)	20.00000
Prediction frequency (MHz)	1880.00000
Antenna Gain(typical) (dBi)	-7.00000
Antenna Gain(numeric)	0.19953
Power density at prediction frequency (mW/cm ²)	0.047286
MPE limit for uncontrolled exposure at prediction frequency (mW/cm ²)	1.00000

3. RESULTS

The power density level at 20 cm is 0.09391 mW/cm², which is below the uncontrolled exposure limit of 0.558 mW/cm² at **GSM 850** band. The power density level at 20 cm is 0.047286 mW/cm², which is below the uncontrolled exposure limit of 1.0 mW/cm² at **GSM 1900**