

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. GSM850 BAND

Max Peak output Power at antenna input terminal (dBm)	32.65
Max Peak output Power at antenna input terminal (mW)	1840.772
Prediction distance (cm)	100.000
Prediction frequency (MHz)	848.800
Antenna Gain(typical) (dBi)	3.500
Antenna Gain(numeric)	2.239
Power density at prediction frequency (mW/cm ²)	0.03279
MPE limit for uncontrolled exposure at prediction frequency (mW/cm ²)	0.566

2-2. GSM1900 BAND

Max Peak output Power at antenna input terminal (dBm)	29.9
Max Peak output Power at antenna input terminal (mW)	977.23722
Prediction distance (cm)	100.000
Prediction frequency (MHz)	1850.2
Antenna Gain(typical) (dBi)	3.100
Antenna Gain(numeric)	1.81000
Power density at prediction frequency (mW/cm ²)	0.01408
MPE limit for uncontrolled exposure at prediction frequency (mW/cm ²)	1.00000

3. RESULTS

The power density level at 100 cm is 0.03279 mW/cm², which is below the uncontrolled exposure limit of 0.566 mW/cm² at 848.800 MHz for GSM850 band. The power density level at 100 cm is 0.01408 mW/cm², which is below the uncontrolled exposure limit of 1.0 mW/cm² at 1850.2 MHz for GSM1900 band.