

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 - 100000.....	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)	24.06
Max Peak output Power at antenna input terminal (mW)	254.683
Prediction distance (cm)	20
Prediction frequency (MHz)	848.8
Antenna Gain(typical) (dBi)	2
Antenna Gain(numeric)	1.58
Power density at prediction frequency (mW/cm ²)	0.080
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)	24.99
Max Peak output Power at antenna input terminal (mW)	315.50
Prediction distance (cm)	20
Prediction frequency (MHz)	1850
Antenna Gain(typical) (dBi)	2
Antenna Gain(numeric)	1.58
Power density at prediction frequency (mW/cm ²)	0.100
MPE limit for uncontrolled exposure at prediction frequency(mW/cm ²)	1.0

3. RESULTS

The power density level at 20 cm is 0.080 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 20 cm is 0.100 mW/cm², which is below the uncontrolled exposure limit of 1.0 mW/cm² at 1850 MHz for GSM1900 band.