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)	31.730
Max Peak output Power at antenna input terminal (mW)	1489.361
Prediction distance (cm)	20.000
Prediction frequency (MHz)	824.200
Antenna Gain(typical) (dBi)	1.000
Antenna Gain(numeric)	1.259
Power density at prediction frequency (mW/cm²)	0.373
MPE limit for uncontrolled exposure at prediction frequency (mW/cm²)	0.549

2-2. GSM1900 BAND

Max Peak output Power at antenna input terminal (dBm)	29.46000
Max Peak output Power at antenna input terminal (mW)	883.07990
Prediction distance (cm)	20.00000
Prediction frequency (MHz)	1880.00000
Antenna Gain(typical) (dBi)	1.00000
Antenna Gain(numeric)	1.25893
Power density at prediction frequency (mW/cm²)	0.22117
MPE limit for uncontrolled exposure at prediction frequency (mW/cm²)	1.00000

3. RESULTS

3-1. The power density level at 20 cm is 0.373 mW/cm², which is below the uncontrolled exposure limit of 1.0 mW/cm² at 824.2 MHz for GSM850 band.

3-2. The power density level at 20 cm is 0.22117 mW/cm², which is below the uncontrolled exposure limit of 1.0 mW/cm² at 1880 MHz for GSM1900 band.