

Prediction of Maximum Permissible Exposure

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. CDMA BAND

Max Peak output Power at antenna input terminal	23.800	dBm
Max Peak output Power at antenna input terminal	239.883	mW
Prediction distance	20.000	cm
Prediction frequency	824.700	MHz
Antenna Gain(typical)	-1.500	dBi
Antenna Gain(numeric)	0.708	-
Power density at prediction frequency(S)	0.034	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	0.550	mW/cm ²

2-2. PCS CDMA BAND

Max Peak output Power at antenna input terminal	24.00000	dBm
Max Peak output Power at antenna input terminal	251.18864	mW
Prediction distance	20.00000	cm
Prediction frequency	1880.00000	MHz
Antenna Gain(typical)	-2.50000	dBi
Antenna Gain(numeric)	0.56234	-
Power density at prediction frequency (S)	0.02810	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.00000	mW/cm ²

3. RESULTS

The power density level at 20 cm is 0.034 mW/cm² (CDMA Band), 0.02810 mW/cm² (PCS CDMA Band), which is below the uncontrolled exposure limit.