

10. 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. PCS Downlink

| | | |
|---|------------|--------------------|
| Max Peak output Power at antenna input terminal | 23.96000 | dBm |
| Max Peak output Power at antenna input terminal | 248.88573 | mW |
| Prediction distance | 20.00000 | cm |
| Prediction frequency | 1931.25000 | MHz |
| Antenna Gain(typical) | 12.00000 | dBi |
| Antenna Gain(numeric) | 15.84893 | — |
| Power density at prediction frequency (S) | 0.78475 | mW/cm ² |
| MPE limit for uncontrolled exposure at prediction frequency | 1.00000 | mW/cm ² |

2-2. PCS Uplink

| | | |
|---|------------|--------------------|
| Max Peak output Power at antenna input terminal | 24.07000 | dBm |
| Max Peak output Power at antenna input terminal | 255.27013 | mW |
| Prediction distance | 20.00000 | cm |
| Prediction frequency | 1851.25000 | MHz |
| Antenna Gain(typical) | 12.00000 | dBi |
| Antenna Gain(numeric) | 15.84893 | — |
| Power density at prediction frequency (S) | 0.80488 | 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 0.78475 mW/cm²(DownLink), 0.80488 mW/cm²(UpLink), which is below the uncontrolled exposure limit for PCS Band.

Warning: In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, it must also have a minimum distance of 20 cm from the body during normal operation.