

**Prediction of MPE limit at a given distance**

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = \frac{PG}{4\pi R^2}$$

where: S = power density  
P = power input to the 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

Maximum peak output power at the antenna terminal: 12.30 (dBm)  
Maximum peak output power at the antenna terminal: 16.98243652 (mW)  
Antenna gain(typical): 2.15 (dBi)  
Maximum antenna gain: 1.640589773 (numeric)  
Prediction distance: 20 (cm)  
Prediction frequency: 1922 (MHz)  
MPE limit for uncontrolled exposure at prediction frequency: 1 (mW/cm<sup>2</sup>)  
  
Power density at prediction frequency: 0.005543 (mW/cm<sup>2</sup>)

Collocated RF Exposure MPE Calculation for simultaneous operation of 4 RFP's (worst case):

All 4 antennas are at least 20cm away from the user, but individual antennas can not be separated by 20cm from each other.

$$\frac{.005543 \frac{mW}{cm^2}}{1 \frac{mW}{cm^2}} \times 4 = .02217$$

$$0.02217 < 1$$

Therefore, the device complies with FCC's RF radiation exposure limit for general population for a mobile device.