

## Maximum Human Exposure Calculation

The equation used for calculating the power density at the surface of a parabolic aperture antenna is as follows:

$$S = 4P/A$$

where:       $S$  = maximum power density at the antenna surface  
                   $P$  = power fed to the antenna  
                   $A$  = physical area of the aperture antenna

### This Application:

$$P = 8.3\text{dBm} = 6.76\text{mW}$$
$$A = \pi * r^2 = \pi * (30.48\text{cm})^2 = 2918.6\text{cm}^2$$

$$S = 4(6.76\text{mW})/2918.6\text{cm}^2 = \mathbf{0.0093\text{mW/cm}^2}$$

Since the surface power density of this product passes the limit of  $1\text{mW/cm}^2$  , then the only distance requirement that applies is the requisite 2m for fixed antennas.