

## 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:

$$P = 21.1\text{dBm} = 128.8\text{mW}$$
$$A = \pi * r^2 = \pi * (12.7\text{cm})^2 = 506.7\text{cm}^2$$

$$S = 4(128.8\text{mW})/506.7\text{cm}^2 = \mathbf{1.017\text{mW/cm}^2}$$

Since the surface power density of this product is close to the limit of  $1\text{mW/cm}^2$ , then at 2m separation distance for a fixed installation the product is expected to meet FCC's RF radiation exposure limit for general population.