

## 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:

$$P = 21.9 \text{ dBm} = 154.9 \text{ mW}$$

$$A = \pi * r^2 = \pi * (12.7 \text{ cm})^2 = 506.7 \text{ cm}^2$$

$$S = 4(154.9 \text{ mW})/506.7 \text{ cm}^2 = \mathbf{1.22 \text{ mW/cm}^2}$$

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.