

## MPE / Health Hazard

### Requirement:

According to CFR 15 §1.1307 (b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines.

### MPE / Health Hazard Separation Distance:

The minimum separation distance calculated following FCC OET Bulletin 65 is calculated as follows, where S is power density,

The power density at 20 cm is computed to be:

$$\text{Max } P_o/\text{EIRP (dBm)} = 0.0 \text{ dBm} = 1 \text{ mW}$$

$$S(\text{mW}/\text{cm}^2) = \text{EIRP}(\text{mW})/(4 \pi R(\text{cm})^2) = 1/(4 \pi 20^2) = 0.0002 \text{ mW}/\text{cm}^2$$

$$R_{\text{min}} (\text{cm}) = \text{SQRT} ( \text{EIRP}(\text{mW})/(4 \pi S_{\text{lim}}(\text{mW}/\text{cm}^2)) ) = \text{SQRT}( 1/(4 \pi 1^2)) = 0.28 \text{ cm}$$