

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:

$$\text{EIRP (dBm)} = 20.3 \text{ dBm} = 107.2 \text{ mW}$$

$$S(\text{mW/cm}^2) = \text{EIRP}(\text{mW}) / (4 \pi R(\text{cm})^2) = 107.2 / (4 \pi 20^2) = 0.021 \text{ mW/cm}^2$$

$$R_{\text{min}} (\text{cm}) = \text{SQRT} (\text{EIRP}(\text{mW}) / (4 \pi S_{\text{lim}}(\text{mW/cm}^2))) = \text{SQRT}(107.2 / (4 \pi 1^2)) = 2.9 \text{ cm}$$