

6.7 Potential Health Hazard EM Radiation Level

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

$$EIRP(dBm) = E_3(dB\mu V/m) - 95.2 \text{ dB}(mW/(\mu V/m))$$

$$EIRP = 112.8 \text{ (dB}\mu V/m) - 95.2 \text{ dB}(mW/(\mu V/m)) = 17.6 \text{ dBm}$$

$$\begin{aligned} ERP &= EIRP - 2.15 = 17.6 - 2.15 = 15.5 \text{ dBm} \\ &= 35.1 \text{ mW} = 0.0351 \text{ W} \end{aligned}$$

Thus, the power density at 20 cm becomes $S(mW/cm^2) = EIRP(mW)/(4\pi R(cm)^2) = 0.008 \text{ mW/cm}^2$

NOTE:

- (1) Under no circumstances is the ERP of this device greater than 3W, as required by 2.1091 and the FCC mm-wave accepted test procedures.