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,

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

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

$$ERP = EIRP - 2.15 = 17.6 - 2.15 = 15.5\ dBm$$
$$= 35.1\ mW = 0.0351\ W$$

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

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.