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:

EIRP (Avg) = 22.8 dBm (Pk) – 4.7 dB (Duty) = 64.6 mW

$S(mW/cm^2) = EIRP(mW)/(4\pi R(cm)^2) = 64.6/(4\pi 20^2) = 0.013\ mW/cm^2$

ERP is computed to be:

ERP(Pk) = EIRP(Pk) – 2.15 = 22.8– 2.15 = 20.65 dBm

= 0.116 W

NOTE: 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.