

MPE limit Calculation:

Equation from page 18 of OET 65, Edition 97-01:

The MPE calculation for OEM card (0.857 W conducted power) @ 20cm:

$$\begin{aligned} P_s &= PG / 4\pi R^2 \\ &= 0.857 \times 5.8 / 12.566 \times (0.2)^2 \\ &= 0.857 \times 5.8 / 12.566 \times 0.04 = 4.97 / 0.5 \\ &= 9.94 \text{ W/m}^2 \end{aligned}$$

P_s is power density in W/m^2

G is Antenna gain (5.8)

P is Power into antenna (0.857 W conducted power)

***The power density $P_s = 9.94 \text{ W/m}^2$ @ 20cm**

Listed MPE limit is 10 W/m^2 (Uncontrolled exposure)