Pd-TX-250 RF Exposure:

Calculation Method of RF Power Density:

The power density S, in mW/ cm^2 is:

$$S = (P*G)/(4*\Pi*r^2)$$

Where:
  S = allowable power density in mW/cm^2
  P = power to the antenna in mW
  G = numeric gain of the antenna relative to an isotropic radiator
  r = 20 cM (minimum limit for a 'mobile' product)

The limit for Maximum Permissible Exposure (MPE) limits for Occupational/General Population in the frequency band 1.50 – 100 GHz are 5/1 mW/cm^2 respectively(47 CFR 1.1310).

Antennas intended for use with this device have an approximate gain of 2.1 dBi.
The maximum transmitter power is 250 milliWattS.

Conversion of antenna gain from dB to numeric:

$$G = 10^{(2.1/10)} = 1.62$$

Substitute P, G, and r into Eq. 2 to solve for the Power Density:

$$S = (P*G)/(4*\Pi*r^2)$$
$$.080 = (250*1.62)/(4*3.14*400)$$

$$S = 80.5 \ \mu W/cm^2$$

Therefore, the Maximum Permissable Exposure (MPE) limits as specified in FCC 47 CFR 1.1310 are not exceeded when the device is used as described in the Operator Guide.