Prediction of MPE limit at a given distance

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

$$S = \frac{PG}{4\pi R^2}$$

where: S = power density

P = power input to the antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

Maximum peak output power at the antenna terminal:

Maximum peak output power at the antenna terminal:

Antenna gain(typical):

Maximum antenna gain:

Prediction distance:

Prediction frequency:

MPE limit for uncontrolled exposure at prediction frequency:

-0.17 (dBm)

0.961612278 (mW)

0.630957344 (numeric)

20 (cm)

Prediction frequency:

1 (mW/cm^2)

Power density at prediction frequency: 0.000121 (mW/cm^2)

Therefore device complies with FCC's RF radiation exposure limits at 20cm.