

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 antenna input terminal: 21.40 (dBm)

Maximum peak output power at antenna input terminal: 138.038 (mW)

Antenna gain(typical): 11 (dBi)

Maximum antenna gain: 12.589 (numeric)

Prediction distance: 20 (cm)

Prediction frequency: 2402 (MHz)

MPE limit for uncontrolled exposure at prediction frequency: 1 (mW/cm²)

Power density at prediction frequency: 0.345724 (mW/cm²)

Maximum allowable antenna gain: 15.6 (dBi)

Margin of Compliance at 20 cm = 4.6 dB

Summary: There is 16.6 dB of margin therefore, the unit meets the MPE limit requirement.