

### 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: 29.50 (dBm)

Maximum peak output power at the antenna terminal: 891.2509381 (mW)

Antenna gain(typical): 10 (dBi)

Maximum antenna gain: 10 (numeric)

Prediction distance: 50 (cm)

Prediction frequency: 450 (MHz)

MPE limit for uncontrolled exposure at prediction frequency: 0.3 (mW/cm<sup>2</sup>)

**Power density** at prediction frequency: **0.283694** (mW/cm<sup>2</sup>)

Maximum allowable antenna gain: **10.24271127** (dBi)

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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: 29.50 (dBm)

Maximum peak output power at the antenna terminal: 891.2509381 (mW)

Antenna gain(typical): 2.2 (dBi)

Maximum antenna gain: 1.659586907 (numeric)

Prediction distance: 20 (cm)

Prediction frequency: 450 (MHz)

MPE limit for uncontrolled exposure at prediction frequency: 0.3 (mW/cm<sup>2</sup>)

**Power density** at prediction frequency: **0.294259** (mW/cm<sup>2</sup>)

Maximum allowable antenna gain: **2.283911101** (dBi)