

## 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: 19.03 (dBm)

\*Maximum peak output power at antenna input terminal: 80 (mW)

Antenna gain(typical): 0.5 (dBi)

Maximum antenna gain: 1.122 (numeric)

Prediction distance: 20 (cm)

Prediction frequency: 460 (MHz)

MPE limit for uncontrolled exposure at prediction frequency: 0.307 (mW/cm<sup>2</sup>)

Power density at prediction frequency: 0.017857 (mW/cm<sup>2</sup>)

Maximum allowable antenna gain: 12.848 (dBi)

Margin of Compliance: 12.348 (dB)

\*Output is always limited by a restriction of supply voltage set to 8.4V giving max. Output of 80 mW. Nominal output power is < 50 mW. Calculations is made on basis of 20 cm distance.