



Prediction of MPE limit at a given distance

5dBi Whip Antenna

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: 20.80 (dBm)

Maximum peak output power at antenna input terminal: 120.2264435 (mW)

Antenna gain(typical): 5 (dBi)

Maximum antenna gain: 3.16227766 (numeric)

Prediction distance: 20 (cm)

Prediction frequency: 2400 (MHz)

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

Power density at prediction frequency: **0.075636** (mW/cm²)

Maximum allowable antenna gain: **16.21269855** (dBi)

Margin of Compliance: 11.21269855