

MPE CALCULATIONS

The following MPE calculations are based on a measured ERP of 106.8 dB μ V/m at 3m and conducted RF power of +11.3 dBm as presented to the antenna. The calculated gain of this antenna, based on the ERP measurements (over a conducting ground plane) is 0.27 dBi.

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: 9.94 (dBm)

Maximum peak output power at antenna input terminal: 9.863 (mW)

Antenna gain(typical): -1.4 (dBi)

Maximum antenna gain: 0.724 (numeric)

Prediction distance: 20 (cm)

Prediction frequency: 903 (MHz)

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

Power density at prediction frequency: 0.001421 (mW/cm²)

Maximum allowable antenna gain: 27.1 (dBi)

Margin of Compliance at 20 cm = 28.5 dB