

MPE CALCULATIONS

The following MPE calculations are based on a +2.0 dBi dipole antenna, with a measured ERP of 127.90 dBμV/m, at 3 meters, and conducted RF power of +28.14 dBm as presented to the antenna.

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:	28.14 (dBm)
Maximum peak output power at antenna input terminal:	646.000 (mW)
Antenna gain(typical):	2 (dBi)
Maximum antenna gain:	1.585 (numeric)
Prediction distance:	20 (cm)
Prediction frequency:	906 (MHz)
MPE limit for uncontrolled exposure at prediction frequency:	1 (mW/cm ²)
Power density at prediction frequency:	0.203687 (mW/cm ²)
Maximum allowable antenna gain:	8.9 (dBi)
Margin of Compliance at 20 cm =	6.9 dB