The following MPE calculation is based on 1.8 centimeter inverted-F printed circuit board trace antenna, with a measured field strength of 124.2 dBµV/m, at 3 meters, and conducted RF power of +19.68 dBm as presented to the antenna. The calculated gain of this antenna, based on fundamental field strength conversion is 9.3dBi.

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:	19.68	(dBm)
Maximum peak output power at the antenna terminal:	92.89663868	(mW)
Antenna gain(typical):	9.3	(dBi)
Maximum antenna gain:	8.511380382	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	2450	(MHz)
MPE limit for uncontrolled exposure at prediction frequency:	1	(mW/cm^2)
Power density at prediction frequency:	0.157301	(mW/cm^2)