Prediction of MPE limit at a given distance

4dBi 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:	22.00	(dBm)
Maximum peak output power at antenna input terminal:	158.4893192	(mW)
Antenna gain(typical):	4	(dBi)
Maximum antenna gain:	2.511886432	(numeric)
Prediction distance:	50	(cm)
Prediction frequency:	2412	(MHz)
MPE limit for uncontrolled exposure at prediction frequency:	1	(mW/cm^2)
Power density at prediction frequency:	0.012672	(mW/cm^2)
Maximum allowable antenna gain:	22.97149873	(dBi)
Margin of Compliance:	18.97149873	