

### 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: 19.30 (dBm)

Maximum peak output power at the antenna terminal: 85.11380382 (mW)

Antenna gain(typical): 2.5 (dBi)

Maximum antenna gain: 1.77827941 (numeric)

Prediction distance: 20 (cm)

Prediction frequency: 2462 (MHz)

MPE limit for uncontrolled exposure at prediction frequency: 1 (mW/cm<sup>2</sup>)

Worst case antenna gain  
used at 5GHz channel  
Worst case power used from  
FCC ID: RTP-550-10016-6

Power density at prediction frequency: 0.030111 (mW/cm<sup>2</sup>)

Maximum allowable antenna gain: 17.71269855 (dBi)