



### Prediction of MPE limit at a given distance

802.11a Radio, FCC ID# RAR20005001

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

Note: TX power at 95% duty cycle

Maximum peak output power at antenna input terminal: 13.27 (dBm)

Maximum peak output power at antenna input terminal: 21.23244462 (mW)

Antenna gain(typical): 15 (dBi)

Maximum antenna gain: 31.6227766 (numeric)

Prediction distance: 20 (cm)

Prediction frequency: 5250-5825 (MHz)

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

Power density at prediction frequency: 0.133577 (mW/cm<sup>2</sup>)

Maximum allowable antenna gain: 23.74269855 (dBi)

Margin of Compliance: 8.74269854

Note: The power delivered to the antenna is reduced by 0.5dB due to cable loss.