

### 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 device output terminal: 22.21 (dBm)

Cable and Jumper loss 0.0 (dB)

Maximum peak output power at antenna input terminal: 22.21 (dBm)

Maximum peak output power at antenna input terminal: 166.341265 (mW)

Antenna gain: 8 (dBi)

Maximum antenna gain: 6.309573445 (numeric)

Prediction distance: 20 (cm)

Prediction frequency: 2437 (MHz)

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

Power density at prediction frequency: 0.208800 (mW/cm<sup>2</sup>)  
2.087998 (W/m<sup>2</sup>)

Tx On time: 1.000000

Tx period time: 1.000000

Average Factor: 100.000000

Average Power density at prediction frequency: 2.087998 (W/m<sup>2</sup>)

Maximum allowable antenna gain: 14.80269855 (dBi)

Margin of Compliance: 6.802698554 dB