

## Prediction of MPE limit at a given distance(WiMAX)



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: 30.55 (dBm)

Maximum peak output power at antenna input terminal: 1135.010816 (mW)

Antenna gain(typical): 5.9 (dBi)

Maximum antenna gain: 3.89045145 (numeric)

Prediction distance: 20 (cm)

Prediction frequency: 2312.5 (MHz)

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

Power density at prediction frequency: 0.878476 (mW/cm<sup>2</sup>)

8.784764927 (W/m<sup>2</sup>)

Maximum allowable antenna gain: 6.462698554 (dBi)

Antenna Gain Margin of Compliance: 0.562698554 (dB)

Maximum Distance: 18.74541536 (cm)

## Prediction of MPE limit at a given distance(WLAN)



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: 11.48 (dBm)

Maximum peak output power at antenna input terminal: 14.06047524 (mW)

Antenna gain(typical): -2.77 (dBi)

Maximum antenna gain: 0.528445252 (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: 0.001478 (mW/cm<sup>2</sup>)

0.014781896 (W/m<sup>2</sup>)

Maximum allowable antenna gain: 25.53269855 (dBi)

Antenna Gain Margin of Compliance: 28.30269855 (dB)

Maximum Distance: 0.768944629 (cm)