



Prediction of MPE limit at a given distance

[RedLine AN-80i 5.4GHz](#)

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: 7.90 (dBm)

Maximum peak output power at antenna input terminal: 6.165950019 (mW)

Antenna gain(typical): 22 (dBi)

Maximum antenna gain: 158.4893192 (numeric)

Prediction distance: 20 (cm)

Prediction frequency: 5400 (MHz)

MPE limit for uncontrolled exposure at prediction frequency: 1 (mW/cm²)

Power density at prediction frequency: 0.194415 (mW/cm²)

1.944152 (W/m²)

Maximum allowable antenna gain: 29.11269855 (dBi)

Margin of Compliance: 7.112698554 dB