

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: 20.99 (dBm)

Cable and Jumper loss 0.0 (dB)

Maximum peak output power at antenna input terminal: 20.99 (dBm)

Maximum peak output power at antenna input terminal: 125.6029964 (mW)

Single Antenna gain(typical): 15 (dBi) See note below

Number of Antennae 2

Total Antenna gain(typical): 18.01029996 (dBi)

Maximum antenna gain: 63.2455532 (numeric)

Prediction distance: 30 (cm)

Prediction frequency: 2437 (MHz)

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

Power density at prediction frequency: 0.702389 (mW/cm²)

7.023889 (W/m²)

Tx On time: 1.000000

Tx period time: 1.000000

Average Factor: 100.000000

Average Power density at prediction frequency: 7.023889 (W/m²)

Maximum allowable antenna gain: 19.54452373 (dBi)

Margin of Compliance: 1.534223778 dB

Note: Antenna gain: 12 dBi + 10 × log10 (2) dB = 15 dBi

