

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 the antenna terminal: 20.71 (dBm)

Maximum peak output power at the antenna terminal: 117.7605974 (mW)

Antenna gain(typical): 3 (dBi)

Maximum antenna gain: 1.995262315 (numeric)

Prediction distance: 20 (cm)

Prediction frequency: 2450 (MHz)

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

Power density at prediction frequency: 0.046744 (mW/cm²)

Therefore complies with FCC RF radiation exposure limits for general population as a mobile device (d>20cm).