



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

Lane Display Controller for Micro Industries

Maximum peak output power at antenna input terminal: 0.17 (dBm)

Maximum peak output power at antenna input terminal: 0.001 (W)

Antenna gain(typical): 0.40 (dBi)

Maximum antenna gain: 1.10 (numeric)

Prediction distance: 20.00 (cm)

Prediction frequency: 824.20 (MHz)

MPE limit for uncontrolled exposure at prediction frequency: 1.00 (mW/cm²)

Power density at prediction frequency: **0.000227** (mW/cm²)

Maximum allowable antenna gain: **66.84** (dBi)

Margin of Compliance: 36.44 dB

Therefore the power density at 20 cm = 0.0000227 W/m^2