

MPE Calculation at 70 cm for Uncontrolled Environment

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = \frac{PG}{4\pi R^2}$$

MPE limits	(W/m ²)
IC	4,0812
FCC	10
EN & AS/NZS	8,08

← Most stringent limit used

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

Source Based Time Averaged Duty Cycle is 36.8% (4 burst) in calculation below

Maximum peak output power at antenna input terminal: **38,70** (dBm) (Pnorm+1dB)

Maximum peak output power at antenna input terminal: **7,413** (W)

Antenna gain(typical): **8,70** (dBi)

Maximum antenna gain: **7,413** (numeric)

Prediction distance: **70** (cm)

Prediction frequency: **1616** (MHz)

Time Averaged Duty Cycle **36,8** %

MPE limit for uncontrolled exposure at prediction frequency: **4,08** (W/m²)

Power density at prediction frequency: **0,3284** (mW/cm²)

Power density at prediction frequency: **3,284** (W/m²) ← Calculated Power density

Maximum allowable antenna gain: **5,3** (dBi)

Margin of Compliance: **0,9** (dB)

This prediction demonstrates the following:

The power density levels for IC, FCC, EN and AS/NZS at a distance of 70 cm are below the maximum levels allowed by regulations.