



Prediction of MPE Limit at a given distance

Calculate the Maximum Personal Exposure (MPE) limits for the BTS for both Occupational/Controlled Exposure and General Population/Uncontrolled Exposure limits (for average exposure < 6 minutes)

Value is calculated at the maximum PO available (33.25dBm) This takes into account the minimum antenna feed line loss.

MPE limits will be calculated Using 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: 33.25 (dBm)

Maximum peak output power at antenna input terminal: 2113.5 (mW)

Antenna gain (typical): 17 (dBi)

Maximum antenna gain: 50.11872336 (numeric)

General Population/Uncontrolled Exposure

Prediction distance: **93 (cm) or approximately 37 inches**

Prediction frequency: 2600 (MHz)

MPE limit for General Population/Uncontrolled Exposure at prediction frequency: 1 (mW/cm²)

Power density at prediction frequency: 0.9751 (mW/cm²)

Occupational/Controlled Exposure

Prediction distance: **42 (cm) or approximately 17 inches**

Prediction frequency: 2600 (MHz)

MPE limit for Occupational/Controlled Exposure at prediction frequency: 5 (mW/cm²)

Power density at prediction frequency: 4.7809 (mW/cm²)

Note: MPE limits that are provided to the customer and only serve as a guideline. The site license holder is ultimately responsible for MPE compliance at a given site.
