

16. MPE Calculations

***The MPE calculations are based on the
Centurion Brand antenna, part number: WIC2450-U
Ceramic Chip Antenna***

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

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|--|---------------|-----------------------|
| Maximum peak output power at antenna input terminal: | <u>17.00</u> | (dBm) |
| Maximum peak output power at antenna input terminal: | <u>50.119</u> | (mW) |
| Antenna gain(typical): | <u>2</u> | (dBi) |
| Maximum antenna gain: | <u>1.585</u> | (numeric) |
| Prediction distance: | <u>20</u> | (cm) |
| Prediction frequency: | <u>2400</u> | (MHz) |
| MPE limit for uncontrolled exposure at prediction frequency: | <u>1</u> | (mW/cm ²) |
| Power density at prediction frequency: | 0.015803 | (mW/cm ²) |
| Maximum allowable antenna gain: | 20.0 | (dBi) |
| Margin of Compliance at 20 cm = | 18.0 | dB |