

### 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 isotropic

R = distance to the center of radiation of the antenna

|  |         |                       |
|--|---------|-----------------------|
| Maximum peak output power at antenna input terminal:         | 31.70   | (dBm)                 |
| Maximum peak output power at antenna input terminal:         | 1479.1  | (mW)                  |
| Antenna gain(typical):                                       | 2.15    | (dBi)                 |
| Maximum antenna gain:  | 1.641   | (numeric)             |
| Prediction distance:   | 20      | (cm)                  |
| Source Based Time Average Duty Cycle:                        | 100     | (%)                   |
| Prediction frequency:  | 848.8   | (MHz)                 |
| MPE limit for uncontrolled exposure at prediction frequency: | 0.566   | (mW/cm <sup>2</sup> ) |
| Power density at prediction frequency:                       | 0.48276 | (mW/cm <sup>2</sup> ) |
| Power density at prediction frequency:                       | 4.8276  | (W/m <sup>2</sup> )   |
| Margin of Compliance:  | 0.69    | (dB)                  |

Simultaneously transmission with BT:  $0.48276 + 0.00099 = 0.48375 \text{ mW/cm}^2 < 0.566 \text{ mW/cm}^2$