



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 radiator
R = distance to the center of radiation of the antenna

| | | | |
|---|--|---------|--------------------|
| PWR in dBm | Maximum peak output power at antenna input terminal: | 48.6 | dBm |
| | Maximum peak output power at antenna input terminal: | 72400.1 | mW |
| | Ant. gain in dBi | 12 | dBi |
| | Antenna gain(maximum): | 15.8 | numeric |
| Use the duty cycle from test report or 100% | Time Averaging: | 100 | % |
| Separation distance from antenna to user in cm. | Prediction distance: | 600 | cm |
| Freq. in MHz | Prediction frequency: | 869 | MHz |
| | FCC MPE limit for uncontrolled exposure at prediction frequency: | 0.58 | mW/cm ² |
| | IC MPE limit for uncontrolled exposure at prediction frequency: | 2.67 | W/m ² |
| | Power density at prediction frequency: | 0.25 | mW/cm ² |
| | This equates to: | 2.54 | W/m ² |