

## 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

|                                                              |                                   |
|--------------------------------------------------------------|-----------------------------------|
| Maximum peak output power at device output terminal:         | 29.58 dBm                         |
| Cable and Jumper loss:                                       | 0.0 dB                            |
| Maximum peak output power at antenna input terminal:         | 29.58 dBm                         |
|                                                              | 907.8205302 mW                    |
| Single Antenna gain (typical):                               | 6 dBi                             |
| Number of Antennae:                                          | 1                                 |
| Total Antenna gain (typical):                                | 6 dBi                             |
|                                                              | 3.981071706 (numeric)             |
| Prediction distance:                                         | 20 cm                             |
| Prediction frequency:                                        | 2480 MHz                          |
| MPE limit for uncontrolled exposure at prediction frequency: | 0.546894779 mW/cm <sup>2</sup>    |
| <b>Power density at prediction frequency:</b>                | <b>0.719002 mW/cm<sup>2</sup></b> |
|                                                              | 7.190021 W/m <sup>2</sup>         |
| Tx On time:                                                  | 1.000000 ms                       |
| Tx period time:                                              | 1.000000 ms                       |
| Average Factor:                                              | 100.000000 %                      |
| Average Power density at prediction frequency:               | 7.190021 W/m <sup>2</sup>         |
| Maximum allowable antenna gain:                              | 4.811736325 dBi                   |
| <b>Margin of Compliance:</b>                                 | <b>-1.188263675 dB</b>            |