



### MPE Calculation for FCC Uncontrolled Environment

Formula 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

Source Based Time Averaged Duty Cycle is 100% in calculation below

|                                                              |               |           |
|--------------------------------------------------------------|---------------|-----------|
| Maximum peak output power at antenna input terminal:         | <u>19.40</u>  | (dBm)     |
| Maximum peak output power at antenna input terminal:         | <u>0.087</u>  | (W)       |
| Maximum antenna gain:                                        | <u>-4.50</u>  | (dBi)     |
| Maximum antenna gain:                                        | <u>0.355</u>  | (numeric) |
| Prediction distance:                                         | <u>20</u>     | (cm)      |
| Prediction frequency:                                        | <u>1925</u>   | (MHz)     |
| Time Averaged Duty Cycle                                     | <u>100</u>    | %         |
| MPE limit for uncontrolled exposure at prediction frequency: | <u>10.00</u>  | (W/m^2)   |
| Power density at prediction frequency:                       | <u>0.0061</u> | (mW/cm^2) |
| Power density at prediction frequency:                       | <u>0.061</u>  | (W/m^2)   |
| Maximum allowable antenna gain:                              | <u>17.61</u>  | (dBi)     |
| Margin of Compliance:                                        | <u>22.11</u>  | (dB)      |