



**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>20.20</u>  | (dBm)                 |
| Maximum peak output power at antenna input terminal:         | <u>0.105</u>  | (W)                   |
| Maximum antenna gain:  | <u>-1.20</u>  | (dBi)                 |
| Maximum antenna gain:  | <u>0.759</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 <sup>2</sup> )   |
| Power density at prediction frequency:                       | <u>0.0158</u> | (mW/cm <sup>2</sup> ) |
| Power density at prediction frequency:                       | <u>0.158</u>  | (W/m <sup>2</sup> )   |
| Maximum allowable antenna gain:                              | <u>16.81</u>  | (dBi)                 |
| Margin of Compliance:  | <u>18.01</u>  | (dB)                  |