**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: | **3.90** | (dBm) |
| Maximum peak output power at antenna input terminal: | **0.002455** | (W) |
| Maximum antenna gain: | **3.00** | (dBi) |
| Maximum antenna gain: | **1.995** | (numeric) |
| Prediction distance: | **20** | (cm) |
| Prediction frequency: | **2480** | (MHz) |
| Time Averaged Duty Cycle | **100** | % |
| MPE limit for uncontrolled exposure at prediction frequency: | **10.00** | (W/m^2) |
| Power density at prediction frequency: | **0.0009744** | (mW/cm^2) |
| Power density at prediction frequency: | **0.009744** | (W/m^2) |
| Maximum allowable antenna gain: | **33.11** | (dBi) |
| Margin of Compliance: | **30.11** | (dB) |

| Frequency(MHz) | Limit(mW/cm^2) |
| --- | --- |
| 0.3 | 100 |
| 1.34 | 100 |
| 1.341 | 2.92664E-05 |
| 29.9 | 2.92664E-05 |
| 30 | 0.2 |
| 299.999 | 0.2 |
| 300 | 0.2 |
| 350 | 0.233333333 |
| 375 | 0.25 |
| 400 | 0.266666667 |
| 450 | 0.3 |
| 460 | 0.306666667 |
| 475 | 0.316666667 |
| 500 | 0.333333333 |
| 525 | 0.35 |
| 540 | 0.36 |
| 550 | 0.366666667 |
| 600 | 0.4 |
| 625 | 0.416666667 |
| 650 | 0.433333333 |
| 700 | 0.466666667 |
| 800 | 0.533333333 |
| 900 | 0.6 |
| 1000 | 0.666666667 |
| 1100 | 0.733333333 |
| 1200 | 0.8 |
| 1300 | 0.866666667 |
| 1400 | 0.933333333 |
| 1500 | 1 |
| 100000 | 1 |