

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = \frac{PG}{4\pi R^2}$$



S = power density
P = output power
G = antenna gain
R = distance

| | | 22H | | 24E | |
|--------------------------|---------------|--------------|-----------------------|--------------|-----------------------|
| | Output Power | 24.62 | (dBm) | 24.58 | (dBm) |
| | Output Power | 290 | (mW) | 287 | (mW) |
| | Antenna Gain | 5.12 | (dBi) | 6.12 | (dBi) |
| | Antenna Gain | 3.25 | (numeric) | 4.09 | (numeric) |
| | Distance | 20 | (cm) | 20 | (cm) |
| | Duty Cycle: | 100 | (%) | 100 | (%) |
| | Frequency | 824.7 | (MHz) | 1900 | (MHz) |
| MPE Limit General Public | | 0.550 | (mW/cm ²) | 1.000 | (mW/cm ²) |
| | Power Density | 0.187 | (mW/cm ²) | 0.234 | (mW/cm ²) |
| | Margin | 4.67 | (dB) | 6.31 | (dB) |
| 2.1091 | EIRP | 29.74 | (dBm) | 30.70 | (dBm) |
| | ERP | 27.60 | (dBm) | 28.56 | (dBm) |
| | ERP | 0.58 | (W) | 0.72 | (W) |
| | ERP Limit | 1.5 | (W) | 3 | (W) |
| | Margin | 4.160 | (dB) | 6.21 | (dB) |
| 22.913 | ERP Limit | 7 | (W) | | |
| | ERP | 0.58 | (W) | | |
| 24.232 | EIRP Limit | | | 2 | (W) |
| | EIRP | | | 1.17 | (W) |
| | Margin | 10.85 | (dB) | 2.310 | (dB) |