



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

91.0 dBuV/m From test report's measured radiated power.

3 m

$$\begin{aligned} 3.5E-02 \text{ V} &= 10^{((35.5-120)/120)} \\ 0.00059 \text{ W} &= ((V \times 3\text{m}/5.5)^2)/G \\ G &= 2 \text{ dBi or } 1.58 \end{aligned}$$

Maximum peak output power --Radiated: 0.0006 (W)

Prediction distance: 20.00 (cm)
Prediction frequency: 2450.0 (MHz)
Limit from table below: 1.000 (mW/cm²)

Power density at prediction frequency: **0.000118** (mW/cm²)

EUT complies

FCC/LSGAC Local Official's Guide to RF
A LOCAL GOVERNMENT OFFICIAL'S GUIDE TO TRANSMITTING ANTENNA RF
EMISSION SAFETY: RULES, PROCEDURES, AND PRACTICAL GUIDANCE

(B) Limits for General Population/Uncontrolled Exposure

| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/cm ²) | Averaging Time E ² , H ² or S (minutes) |
|-----------------------|-----------------------------------|-----------------------------------|---|---|
| 0.3-1.34 | 614 | 1.63 | (100)* | 30 |
| 1.34-30 | 824/f | 2.19/f | (180/f ²)* | 30 |
| 30-300 | 27.5 | 0.073 | 0.2 | 30 |
| 300-1500 | -- | -- | f/1500 | 30 |
| 1500-100,000 | -- | -- | 1.0 | 30 |

f= frequency in MHz

*Plane-wave equivalent power density

NOTE 1: Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

NOTE 2: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.