

**FCC §15.247 (I) & §1.1310 & §2.1091 - MAXIMUM PERMISSIBLE
EXPOSURE (MPE)**

Applicable Standard

According to subpart 15.247 (i) and subpart 1.1310 (b)(1), 2.1091 systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to RF energy level in excess of the communication guidelines.

| Limits for General Population/Uncontrolled Exposure | | | | |
|---|-------------------------------|-------------------------------|-------------------------------------|--------------------------|
| Frequency Range (MHz) | Electric Field Strength (V/m) | Magnetic Field Strength (A/m) | Power Density (mW/cm ²) | Averaging Time (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

Calculated Formulary:

Predication of MPE limit at a given distance

$S = PG/4\pi R^2$ = power density (in appropriate units, e.g. mW/cm²);

P = power input to the antenna (in appropriate units, e.g., mW);

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain;

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

Calculated Data:

| Frequency Range (MHz) | Antenna Gain | | Tune-up Conducted Power | | Evaluation Distance (cm) | Power Density (mW/cm ²) | MPE Limit (mW/cm ²) |
|-----------------------|--------------|-----------|-------------------------|-------|--------------------------|-------------------------------------|---------------------------------|
| | (dBi) | (numeric) | (dBm) | (mW) | | | |
| 2402 | -9.86 | 0.103 | 18.31 | 67.76 | 20 | 0.00139 | 1.0000 |
| 2440 | -9.86 | 0.103 | 18.55 | 71.61 | 20 | 0.00147 | 1.0000 |
| 2480 | -9.86 | 0.103 | 18.42 | 69.50 | 20 | 0.00142 | 1.0000 |

Conclusion: The EUT meets exemption requirement - RF exposure evaluation greater than 20cm distance specified in § 2.1091. If the device built into a host as a portable usage, the additional RF exposure evaluation may be required as specified by § 2.1093.