MPE Calculator Garmin In IPH-01393 Test 080306

MPE uses EIRP for calculation. .
EIRP is based on TX power added to the antenna gain in dBi
dBi = dB gain compared to an isotropic radiator.
S = power density in mW/cm^2

| | | | | | |
|---|---|---|---|---|---|
| | | | | Antenna Gain (dBi) | 0 |
| | | Output Power | dBd + 2.17 = dBi | dBi to dBd | 2.17 |
| Tx Frequency (MHz) | 154.6 | (Watts) | 2.0000 | Antenna Gain (dBd) | -2.17 |
| | | (dBm) | 33.01 | | |
| Cable Loss (dB) | 0.0 | | | Antenna minus cable (dBi) | 0.00 |

Calculated ERP (mw) 1213.473
Calculated EIRP (mw) 2000.000

EIRP = Po(dBM) + Gain (dB)
Radiated (EIRP) dBm 33.010
ERP = EIRP - 2.17 dB
Radiated (ERP) dBm 30.840

**Occupational Limit**
**0.51533 mW/cm$^2$**

**General Public Limit**
**0.10307 mW/cm$^2$**

Power density (S)
EIRP
------- = mW/cm^2
4 π r^2
r (cm) EIRP (mW)

| FCC radio frequency radiation exposure limits per 1.1310 | | |
|---|---|---|
| Frequency (MHz) | Occupational Limit | Public Limit |
| 300-1,500 | f/300 | f/1500 |
| 1,500-10,000 | 5 | 1 |

| FCC radio frequency radiation exposure limits per 1.1310 | | |
|---|---|---|
| Frequency (MHz) | Occupational Limit @ Tx Freq (mW/cm^2) | Public Limit @ Tx Freq (mW/cm^2) |
| 300-1,500 | 0.515333333 | 0.103066667 |
| 1,500-10,000 | 5 | 1 |

| EIRP | Distance | Distance | S |
|---|---|---|---|
| milliwatts | cm | inches | mW/cm$^2$ |
| 2000.000 | 200.00 | 78.74 | 0.00398 |
| 2000.000 | 180.00 | 70.87 | 0.00491 |
| 2000.000 | 160.00 | 62.99 | 0.00622 |
| 2000.000 | 140.00 | 55.12 | 0.00812 |
| 2000.000 | 120.00 | 47.24 | 0.01105 |
| 2000.000 | 100.00 | 39.37 | 0.01592 |
| 2000.000 | 95.00 | 37.40 | 0.01763 |
| 2000.000 | 90.00 | 35.43 | 0.01965 |
| 2000.000 | 85.00 | 33.46 | 0.02203 |
| 2000.000 | 80.00 | 31.50 | 0.02487 |
| 2000.000 | 75.00 | 29.53 | 0.02829 |
| 2000.000 | 70.00 | 27.56 | 0.03248 |
| 2000.000 | 60.00 | 23.62 | 0.04421 |
| 2000.000 | 50.00 | 19.69 | 0.06366 |
| 2000.000 | 40.00 | 15.75 | 0.09947 |
| 2000.000 | 30.00 | 11.81 | 0.17684 |
| 2000.000 | 25.00 | 9.84 | 0.25465 |
| 2000.000 | 20.00 | 7.87 | 0.39789 |
| 2000.000 | 19.00 | 7.48 | 0.44087 |
| 2000.000 | 18.00 | 7.09 | 0.49122 |
| 2000.000 | 17.00 | 6.69 | 0.55071 |
| 2000.000 | 15.00 | 5.91 | 0.70736 |
| 2000.000 | 10.00 | 3.94 | 1.59155 |
| 2000.000 | 5.00 | 1.97 | 6.36620 |
| 2000.000 | 2.00 | 0.79 | 39.78874 |

| Frequency (MHz) | Occupational Limit minimum Distance (cm) | General Public Limit minimum distance (cm) |
|---|---|---|
| 300-1,500 | 18.00 | 40.00 |
| 1,500-10,000 | N/A | N/A |