## Prediction of MPE limit at a given distance

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

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

where: $\quad \mathrm{S}=$ power density
$P=$ power input to the antenna
$\mathrm{G}=$ power gain of the antenna in the direction of interest relative to an isotropic radiator
$\mathrm{R}=$ distance to the center of radiation of the antenna

Maximum peak output power at the antenna terminal
11.74 (dBm)

Maximum peak output power at the antenna terminal:
$14.9279441(\mathrm{~mW})$
Antenna gain(typical):
Maximum antenna gain:
Prediction distance:
1 (numeric)

Prediction frequency:
$870.03(\mathrm{MHz})$

MPE limit for uncontrolled exposure at prediction frequency: $0.5800\left(\mathrm{~mW} / \mathrm{cm}^{\wedge} 2\right)$

$$
\text { Power density at prediction frequency: } 0.002970\left(\mathrm{~mW} / \mathrm{cm}^{\wedge} 2\right)
$$

One-X

## Prediction of MPE limit at a given distance

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

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

where: $\mathrm{S}=$ power density
$P=$ power input to the antenna
$\mathrm{G}=$ power gain of the antenna in the direction of interest relative to an isotropic radiator
$\mathrm{R}=$ distance to the center of radiation of the antenna


Power density at prediction frequency: $\quad 0.012267\left(\mathrm{~mW} / \mathrm{cm}^{\wedge} 2\right)$

EVDO

## Prediction of MPE limit at a given distance

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

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

where: $\quad \mathrm{S}=$ power density
$P=$ power input to the antenna
$G=$ power gain of the antenna in the direction of interest relative to an isotropic radiator
$\mathrm{R}=$ distance to the center of radiation of the antenna


## Prediction of MPE limit at a given distance

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

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

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
$\mathrm{R}=$ distance to the center of radiation of the antenna


Part 90

## Prediction of MPE limit at a given distance

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

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

where: $S=$ power density
$P=$ power input to the antenna
$\mathrm{G}=$ power gain of the antenna in the direction of interest relative to an isotropic radiator
$\mathrm{R}=$ distance to the center of radiation of the antenna

$$
\begin{aligned}
& \text { Maximum peak output power at the antenna terminal: } 12.74(\mathrm{dBm}) \\
& \text { Maximum peak output power at the antenna terminal: } 18.79316817(\mathrm{~mW}) \\
& \text { Antenna gain(typical): } \quad 0 \text { (dBi) } \\
& \text { Maximum antenna gain: } \quad 1 \text { (numeric) } \\
& \text { Prediction distance: } \\
& 20 \text { (cm) } \\
& \text { Prediction frequency: } \\
& \text { : } \\
& 862.9 \text { (MHz) } \\
& \text { MPE limit for uncontrolled exposure at prediction frequency: } \\
& 0.5753\left(\mathrm{~mW} / \mathrm{cm}^{\wedge} 2\right) \\
& \text { Power density at prediction frequency: } \quad 0.003739\left(\mathrm{~mW} / \mathrm{cm}^{\wedge} 2\right)
\end{aligned}
$$

$[\operatorname{Pd}(1) / \operatorname{LPd}(1)]+[\operatorname{Pd}(2) / \operatorname{LPd}(2)]+\ldots . .+[\operatorname{Pd}(n) / \operatorname{LPd}(n)]<1$,
then device complies with FCC's RF radiation exposure limit for general population for a mobile device.

Where;
$\operatorname{Pd}(\mathrm{n})=$ Power density of $\mathrm{n}^{\text {th }}$ transmitter at 20 cm
$\operatorname{LPd}(n)=$ Power density limit for the $\mathrm{n}^{\text {th }}$ transmitter

The highest gain values were used for antenna gain.

| Radio Type | Power Density <br> $\left(\mathrm{mW} / \mathrm{cm}^{2}\right)$ | Limit <br> $\left(\mathrm{mW} / \mathrm{cm}^{2}\right)$ |
| ---: | :---: | :--- |
| Part 22 (BC0) | 0.002970 | 0.5800 |
| Part 24 (one- x) | 0.012267 | 1.00000000 |
| Part 24 (EVDO) | 0.065876 | 1.00000000 |
| Part 24 (BC1) | 0.008293 | 1.00000000 |
| Part 90 (BC10) | 0.003739 | 0.5753 |

FINAL COMBINED MPE $\quad 0.0981<1$
PASS

