

# § 1.1310 Radiofrequency radiation exposure limits

|  |       |    |                |
|--|-------|----|----------------|
| Conducted Power (dBm):                   | 20.9  |    | 123 milliWatts |
| Maximum Antenna Gain (dBi):              | 5     |    |                |
| Minimum TX Cable Loss (dB):              | 0     |    |                |
| Minimum TX Jumpers and Adapter Loss(dB): |       |    |                |
| EIRP (dBm):                              | 25.9  | or | 388 milliWatts |
| At frequency (MHz):                      | 836   |    |                |
| General MPE Limit (mW/cm^2):             | 0.557 |    |                |
| Occupational MPE Limit (mW/cm^2):        | 2.787 |    |                |

Given the following equation  
Equation 1:

$$P_d = \frac{P_t G_t}{4\pi r^2}$$

Solve for r:  
Equation 2:

$$r = \sqrt{\frac{P_t G_t}{4\pi P_d}}$$

Using Equation 1, the power density at 20 cm is:  
Margin to General MPE Limit

|              |          |            |
|--------------|----------|------------|
| 0.08 mW/cm^2 | -8.58 dB | negative n |
|--------------|----------|------------|

General Results:  
Using Equation 2, the MPE limit is met at:

|        |    |      |
|--------|----|------|
| 7.4 cm | or | 0.07 |
|--------|----|------|

Occupational Results:  
Using Equation 2, the MPE limit is met at:

|        |    |      |
|--------|----|------|
| 3.3 cm | or | 0.03 |
|--------|----|------|

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# § 1.1310 Radiofrequency radiation exposure limits

|  |       |    |                |
|--|-------|----|----------------|
| Conducted Power (dBm):                   | 23.0  |    | 200 milliWatts |
| Maximum Antenna Gain (dBi):              | 5     |    |                |
| Minimum TX Cable Loss (dB):              | 0     |    |                |
| Minimum TX Jumpers and Adapter Loss(dB): |       |    |                |
| EIRP (dBm):                              | 28.0  | or | 634 milliWatts |
| At frequency (MHz):                      | 1880  |    |                |
| General MPE Limit (mW/cm^2):             | 1.000 |    |                |
| Occupational MPE Limit (mW/cm^2):        | 5.000 |    |                |

Given the following equation  
Equation 1:

$$P_d = \frac{P_t G_t}{4\pi r^2}$$

Solve for r:  
Equation 2:

$$r = \sqrt{\frac{P_t G_t}{4\pi P_d}}$$

Using Equation 1, the power density at 20 cm is:  
Margin to General MPE Limit

|              |          |            |
|--------------|----------|------------|
| 0.13 mW/cm^2 | -8.99 dB | negative n |
|--------------|----------|------------|

General Results:  
Using Equation 2, the MPE limit is met at:

|        |    |      |
|--------|----|------|
| 7.1 cm | or | 0.07 |
|--------|----|------|

Occupational Results:  
Using Equation 2, the MPE limit is met at:

|        |    |      |
|--------|----|------|
| 3.2 cm | or | 0.03 |
|--------|----|------|

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