

APPENDIX A RF EXPOSURE MPE CALCULATION

WORST CASE ANTENNA CONFIGURATION ONLY!



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MPE Calculator

dBd + 2.17 = dBi

TX Frequency (MHz) **900** Watts **0.325** Antenna Gain dBi **6.00**
 Antenna Gain dBd **3.83**

Cable Losses dB **0.5** dBm 25.119 radiated dBm 30.619

Calculated EIRP (mW) 1153.144 wavelength
 meters cm
 0.33333333 33.333

Occupational Limit
3 mW/cm²

General Public Limit
0.6 mW/cm²

EIRP

$\frac{EIRP}{4 \pi d^2} = \text{mw/cm}^2$

1/2 wavelength 16.667
 1/5 wavelength 6.667
 1/10 wavelength 3.333

d = cm ERP=mW

Freq. MHz	occ.limit		public limit
300-1,500	f/300		f/1500
1,500-10,000	5		1

Note:

Far field calculations remains linear to 1/2 wavelength.

0.325 watt EIRP 915 MHz Spread Spectrum 6 dBi Antenna

EIRP (milliwatts)	Distance (cm)	Distance (Meters)		mW/cm ²		Distance (inches)
1153.144	20	0.200		0.22941		7.87
1153.144	16.7	0.167		0.32903		6.57
1153.144	15	0.150		0.40784		5.91
1153.144	12.5	0.125		0.58729		4.92