

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
 0.333333333 33.333
 1/2 wavelength 16.667
 1/5 wavelength 6.667
 1/10 wavelength 3.333

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

Occupational Limit **3 mW/cm²**
 General Public Limit **0.6 mW/cm²**
 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