

MPE Calculator

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<sup>2</sup>

		Antenna Gain (dBi)	2.17
		dBd + 2.17 = dBi	dBi to dBd 2.17
Tx Frequency (MHz)	914	Antenna Gain (dBd)	0
		Output Power (Watts)	0.0001
Cable Loss (dB)	0.0	(dBm)	-12.22
		Antenna minus cable (dB)	0.00

Calculated ERP (mw) 0.036  
 Calculated EIRP (mw) 0.060  
 EIRP = Po(dBm) + Gain (dB)  
 Radiated (EIRP) dBm -12.218  
 ERP = EIRP - 2.17 dB  
 Radiated (ERP) dBm -14.388

<b>Occupational Limit</b> 3.04667 mW/cm <sup>2</sup>	Power density (S) EIRP ----- = mW/cm <sup>2</sup> 4 p r <sup>2</sup>
<b>General Public Limit</b> 0.60933 mW/cm <sup>2</sup>	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 <sup>2</sup> )	Public Limit @ Tx Freq (mW/cm <sup>2</sup> )
300-1,500	3.046666667	0.609333333
1,500-10,000	5	1

EIRP	Distance	Distance	S
milliwatts	cm	inches	mW/cm <sup>2</sup>
0.060	250.00	98.43	0.00000
0.060	200.00	78.74	0.00000
0.060	150.00	59.06	0.00000
0.060	100.00	39.37	0.00000
0.060	77.00	30.31	0.00000
0.060	55.00	21.65	0.00000
0.060	50.00	19.69	0.00000
0.060	45.00	17.72	0.00000
0.060	43.00	16.93	0.00000
0.060	40.00	15.75	0.00000
0.060	35.00	13.78	0.00000
0.060	30.00	11.81	0.00001
0.060	25.00	9.84	0.00001
0.060	20.00	7.87	0.00001
0.060	15.00	5.91	0.00002
0.060	10.00	3.94	0.00005
0.060	9.00	3.54	0.00006
0.060	8.00	3.15	0.00007
0.060	7.00	2.76	0.00010
0.060	6.00	2.36	0.00013
0.060	5.00	1.97	0.00019
0.060	4.00	1.57	0.00030
0.060	3.00	1.18	0.00053
0.060	2.00	0.79	0.00119
0.060	1.00	0.39	0.00477
0.060	0.90	0.35	0.00589
0.060	0.80	0.31	0.00746
0.060	0.70	0.28	0.00974
0.060	0.60	0.24	0.01326
0.060	0.50	0.20	0.01910
0.060	0.10	0.04	0.47746

Frequency (MHz)	Occupational Limit minimum Distance (cm)	Public Limit minimum distance (cm)
300-1,500	0.00	0.00
1,500-10,000	N/A	N/A