MPE Calculation page

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^2					
					Antenna Gain (dBi)	1
		Output Power		dBd + 2.17 = dBi	dBi to dBd	2.2
Tx Frequency (MHz)	2440	Maximum (Watts)	0.047863		Antenna Gain (dBd)	-1.17
Cable Loss (dB)	0.0	(dBm)	16.80		Antenna minus cable (dBi)	1.00
	Calculated ERP (mw)	36.559		EIRP = Po(dBM) + Gain (dB)		
	Calculated EIRP (mw)	60.256			Radiated (EIRP) dBm	17.800
				ERP = EIRP - 2.17 dB		
	Occupational Limit				Radiated (ERP) dBm	15.630
	5.00000 mW/cm^2					
	50.00000 W/m^2					
	General Public Limit					
	1.00000 mW/cm^2					
	10.00000 W/m^2					

Power density (S)
EIRP
------- = mW/cm^2
4 p r^2
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	Public Limit @ Tx Freq (mW/cm^2)
300-1,500 (mW/cm2)	8.133333333	1.626666667
300-1,500 (W/m2)	81.33333333	16.26666667
1,500-10,000 (mW/cm2)	5	1
1,500-10,000 (W/m2)	50	10

EIRP	S	S	Distance	Distance	Distance	Distance
milliwatts	mW/cm^2	W/m^2	cm	meter	inches	Feet
60.256	0.04795	0.47950	10.00	0.10	3.94	0.33
60.256	0.05920	0.59198	9.00	0.09	3.54	0.30
60.256	0.07492	0.74922	8.00	0.08	3.15	0.26
60.256	0.09786	0.97857	7.00	0.07	2.76	0.23
60.256	0.13319	1.33195	6.00	0.06	2.36	0.20
60.256	0.19180	1.91801	5.00	0.05	1.97	0.16
60.256	0.29969	2.99689	4.00	0.04	1.57	0.13
60.256	0.53278	5.32780	3.00	0.03	1.18	0.10
60.256	0.76720	7.67203	2.50	0.03	0.98	0.08
60.256	0.99071	9.90706	2.20	0.02	0.87	0.07
60.256	1.19875	11.98754	2.00	0.020	0.79	0.07
60.256	1.56572	15.65720	1.75	0.018	0.69	0.06
60.256	2.13112	21.31119	1.50	0.015	0.59	0.05
60.256	3.06881	30.68811	1.25	0.013	0.49	0.04
60.256	4.79502	47.95017	1.00	0.010	0.39	0.03
60.256	8.52447	85.24474	0.75	0.008	0.30	0.02
60.256	19.18007	191.80067	0.50	0.005	0.20	0.02

Frequency (MHz)	Occupational Limit minimum Distance (meters)	Occupational Limit minimum Distance (cm / inches)	Public Limit minimum distance (meters)	Public Limit minimum distance (cm / inches)
300-1,500	N/A	N/A	N/A	N/A
1,500-10,000	N/A	N/A	0.02	2.2 / 0.9