

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)	2437	Maximum (Watts)	0.055719		Antenna Gain (dBd)	-1.17
Cable Loss (dB)	0.0	(dBm)	17.46		Antenna minus cable (dBi)	1.00
	Calculated ERP (mw)	42.560		EIRP = Po(dBM) + Gain (dB)		
	Calculated EIRP (mw)	70.146			Radiated (EIRP) dBm	18.460
				ERP = EIRP - 2.17 dB		
					Radiated (ERP) dBm	16.290
Occupational Limit		Power density (S) EIRP ----- = mW/cm^2 4 p r^2 r (cm) EIRP (mW)				
5.00000 mW/cm^2						
50.00000 W/m^2						
General Public Limit						
1.00000 mW/cm^2						
10.00000 W/m^2						
	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)	8.123333333	1.624666667			
	300-1,500 (W/m2)	81.23333333	16.24666667			
	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
70.146	0.00014	0.00140	200.00	2.00	78.74	6.56
70.146	0.00018	0.00182	175.00	1.75	68.90	5.74
70.146	0.00025	0.00248	150.00	1.50	59.06	4.92
70.146	0.00036	0.00357	125.00	1.25	49.21	4.10
70.146	0.00056	0.00558	100.00	1.00	39.37	3.28
70.146	0.00099	0.00992	75.00	0.75	29.53	2.46
70.146	0.00223	0.02233	50.00	0.50	19.69	1.64
70.146	0.00893	0.08931	25.00	0.25	9.84	0.82
70.146	0.02481	0.24809	15.00	0.15	5.91	0.49
70.146	0.05582	0.55820	10.00	0.10	3.94	0.33
70.146	0.08722	0.87219	8.00	0.080	3.15	0.26
70.146	0.22328	2.23280	5.00	0.050	1.97	0.16
70.146	0.34888	3.48875	4.00	0.040	1.57	0.13
70.146	0.62022	6.20223	3.00	0.030	1.18	0.10
70.146	0.89312	8.93121	2.50	0.025	0.98	0.08
70.146	0.96910	9.69098	2.40	0.024	0.94	0.079
70.146	1.39550	13.95501	2.00	0.020	0.79	0.07