

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)	3.4	
		Output Power		dBd + 2.17 = dBi	2.2	
Tx Frequency (MHz)	2437	Maximum (Watts)	0.000509	Antenna Gain (dBd)	1.23	
Cable Loss (dB)	0.0	(dBm)	-2.93	Antenna minus cable (dBi)	3.40	
	Calculated ERP (mw)	0.676		EIRP = Po(dBm) + Gain (dB)		
	Calculated EIRP (mw)	1.115		Radiated (EIRP) dBm	0.471	
				ERP = EIRP - 2.17 dB		
	Occupational Limit	Power density (S)		Radiated (ERP) dBm	-1.699	
	5.00000 mW/cm ²	<div style="border: 1px solid black; padding: 5px;"> EIRP $----- = mW/cm^2$ $4 \pi r^2$ r (cm) EIRP (mW) </div>				
	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 (mW/cm2)						
	Frequency (MHz)	Occupational Limit	Public Limit			
	300-1,500	ƒ300	ƒ1500			
	1,500-10,000	5	1			
FCC radio frequency radiation exposure limits per 1.1310						
	Frequency (MHz)	Occupational Limit	Public Limit			
	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
1.115	0.00000	0.00000	500.00	5.00	196.85	0.42
1.115	0.00000	0.00001	400.00	4.00	157.48	0.33
1.115	0.00000	0.00001	300.00	3.00	118.11	0.25
1.115	0.00000	0.00002	200.00	2.00	78.74	0.17
1.115	0.00000	0.00003	175.00	1.75	68.90	0.15
1.115	0.00000	0.00004	150.00	1.50	59.06	0.13
1.115	0.00001	0.00006	125.00	1.25	49.21	0.10
1.115	0.00001	0.00009	100.00	1.00	39.37	0.08
1.115	0.00001	0.00011	90.00	0.90	35.43	0.08
1.115	0.00001	0.00014	80.00	0.80	31.50	0.07
1.115	0.00002	0.00018	70.00	0.70	27.56	0.06
1.115	0.00002	0.00025	60.00	0.60	23.62	0.05
1.115	0.00004	0.00035	50.00	0.50	19.69	0.04
1.115	0.00014	0.00142	25.00	0.25	9.84	0.02
1.115	0.00089	0.00887	10.00	0.10	3.94	0.01
1.115	0.00355	0.03548	5.00	0.05	1.97	0.00
1.115	0.08870	0.88698	1.00	0.01	0.39	0.00
			Occupational Limit minimum Distance (meters)	Occupational Limit minimum Distance (cm / inches)	Public Limit minimum distance (meters)	Public Limit minimum distance (cm / inches)
		Frequency (MHz)				
		300-1,500	N/A	N/A	N/A	N/A
		1,500-10,000				