

MPE Calculation page

MPE Calculator	Garmin	Test Number	091211
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	dBi to dBd	2.17
Tx Frequency (MHz)	2441	(Watts)	0.001000
		Antenna minus cable (dBi)	1.00
Cable Loss (dB)	0.0	(dBm)	0.00
	Calculated ERP (mw)	Radiated (EIRP) dBm	1.000
	Calculated EIRP (mw)	Radiated (ERP) dBm	-1.170
Occupational Limit	5.00000 mW/cm ²	<div style="border: 1px solid black; padding: 5px;"> Power density (S) = EIRP ----- = mW/cm² 4 p r² [r (cm), EIRP (mW)] </div>	
General Public Limit	1.00000 mW/cm 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 (mW/cm ²)	Public Limit @ Tx Freq (mW/cm ²)	
300-1,500	8.136666667	1.627333333	
1,500-10,000	5	1	
EIRP	Distance	Distance	S
milliwatts	cm	inches	mW/cm ²
1.259	50.00	19.69	0.00004
1.259	40.00	15.75	0.00006
1.259	30.00	11.81	0.00011
1.259	20.00	7.87	0.00025
1.259	10.00	3.94	0.00100
1.259	5.00	1.97	0.00401
1.259	4.00	1.57	0.00626
1.259	3.00	1.18	0.01113
1.259	2.00	0.79	0.02505
1.259	1.00	0.39	0.10018
1.259	0.50	0.20	0.40073
1.259	0.32	0.13	0.97834
1.259	0.20	0.08	2.50455
1.259	0.15	0.06	4.45254
1.259	0.10	0.04	10.01821
Frequency (MHz)	Occupational Limit minimum Distance (cm / in)	Public Limit minimum distance (cm / in)	
300-1,500	N/A	N/A	
1,500-10,000	0.15 / 0.06	0.32 / 0.13	