

MPE Calculation page

MPE Calculator	Garmin	Test Number	090730		
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	2.17	
Tx Frequency (MHz)	2441	(Watts)	0.000656	-1.17	
			Antenna minus cable (dBi)	1.00	
Cable Loss (dB)	0.0	(dBm)	-1.83		
	Calculated ERP (mw)	0.501	Radiated (EIRP) dBm	-0.829	
	Calculated EIRP (mw)	0.826			
			Radiated (ERP) dBm	-2.999	
Occupational Limit	Power density (S) = EIRP ----- = mW/cm^2 4 π r^2 [r (cm), EIRP (mW)]				
5.00000					mW/cm^2
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	
0.826		10.00	3.94	0.00066	
0.826		9.00	3.54	0.00081	
0.826		8.00	3.15	0.00103	
0.826		7.00	2.76	0.00134	
0.826		6.00	2.36	0.00183	
0.826		5.00	1.97	0.00263	
0.826		4.00	1.57	0.00411	
0.826		3.00	1.18	0.00731	
0.826		2.00	0.79	0.01644	
0.826		1.00	0.39	0.06575	
0.826		0.50	0.20	0.26301	
0.826		0.40	0.16	0.41095	
0.826		0.25	0.10	1.01916	
0.826		0.10	0.04	6.57524	
0.826		0.05	0.02	26.30095	
Frequency (MHz)		Occupational Limit minimum Distance (cm)	Public Limit minimum distance (cm)		
300-1,500		N/A	N/A		
1,500-10,000		N/A	0.25		