

MPE Calculation page

MPE Calculator	Garmin	Test Number	090423D		
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)	2.2	
	Output Power		dBd + 2.17 = dBi	dBi to dBd 2.17	
Tx Frequency (MHz)	2457	(Watts)	0.000369	0.03	
			Antenna minus cable (dBi)	2.20	
Cable Loss (dB)	0.0	(dBm)	-4.33		
	Calculated ERP (mw)	0.372	Radiated (EIRP) dBm	-2.129	
	Calculated EIRP (mw)	0.613			
			Radiated (ERP) dBm	-4.299	
Occupational Limit	Power density (S) = EIRP ----- = mW/cm^2 4 p 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		8.19	1.638		
1,500-10,000		5	1		
EIRP		Distance	Distance	S	
milliwatts		cm	inches	mW/cm^2	
0.613		10.00	3.94	0.00049	
0.613		9.00	3.54	0.00060	
0.613		8.00	3.15	0.00076	
0.613		7.00	2.76	0.00099	
0.613		6.00	2.36	0.00135	
0.613		5.00	1.97	0.00195	
0.613		4.00	1.57	0.00305	
0.613		3.00	1.18	0.00542	
0.613		2.00	0.79	0.01219	
0.613		1.00	0.39	0.04874	
0.613		0.50	0.20	0.19497	
0.613		0.40	0.16	0.30464	
0.613		0.25	0.10	0.77989	
0.613		0.22	0.09	1.00708	
0.613		0.20	0.08	1.21857	
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	0.22		