

MPE Calculation page

MPE Calculator	Garmin	Test Number	090424W	
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 <sup>2</sup>		Antenna Gain (dBi)	2.2
		Output Power dBd + 2.17 = dBi	dBi to dBd	2.17
Tx Frequency (MHz)	2457	(Watts)	0.000566	0.03
			Antenna minus cable (dBi)	2.20
Cable Loss (dB)	0.0	(dBm)	-2.47	
	Calculated ERP (mw)	0.570	Radiated (EIRP) dBm	-0.272
	Calculated EIRP (mw)	0.939		
			Radiated (ERP) dBm	-2.442
<b>Occupational Limit</b>	<b>5.00000</b>	<b>mW/cm<sup>2</sup></b>		
<b>General Public Limit</b>	<b>1.00000</b>	<b>mW/cm<sup>2</sup></b>		
<div style="border: 1px solid black; padding: 5px; width: fit-content;">                 Power density (S) =                  EIRP                  ----- = mW/cm<sup>2</sup>                  4 p r<sup>2</sup>                  [ r (cm), EIRP (mW)]             </div>				
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 <sup>2</sup> )	Public Limit @ Tx Freq (mW/cm <sup>2</sup> )	
	300-1,500	8.19	1.638	
	1,500-10,000	5	1	
	EIRP	Distance	Distance	S
	milliwatts	cm	inches	mW/cm <sup>2</sup>
	0.939	10.00	3.94	0.00075
	0.939	9.00	3.54	0.00092
	0.939	8.00	3.15	0.00117
	0.939	7.00	2.76	0.00153
	0.939	6.00	2.36	0.00208
	0.939	5.00	1.97	0.00299
	0.939	4.00	1.57	0.00467
	0.939	3.00	1.18	0.00831
	0.939	2.00	0.79	0.01869
	0.939	1.00	0.39	0.07475
	0.939	0.50	0.20	0.29900
	0.939	0.40	0.16	0.46718
	0.939	0.28	0.11	0.95343
	0.939	0.25	0.10	1.19599
	0.939	0.20	0.08	1.86873
	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	0.28	