

MPE Calculation page

MPE Calculator	Garmin	Test Number	090212
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 (Watts)	dBd + 2.17 = dBi	dBi to dBd 2.17
Tx Frequency (MHz)	2457	0.000267	0.03
Cable Loss (dB)	0.0	(dBm) -5.73	Antenna minus cable (dBi) 2.20
	Calculated ERP (mw) 0.269		Radiated (EIRP) dBm -3.529
	Calculated EIRP (mw) 0.444		Radiated (ERP) dBm -5.699
<b>Occupational Limit</b>	<b>5.00000</b> mW/cm <sup>2</sup>	<div style="border: 1px solid black; padding: 5px;">                     Power density (S) =                      EIRP                      ----- = mW/cm<sup>2</sup>                      4 π r<sup>2</sup>                      [ r (cm), EIRP (mW) ]                 </div>	
<b>General Public Limit</b>	<b>1.00000</b> mW/cm <sup>2</sup>		
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
	milliwatts	cm	inches
	0.444	10.00	3.94
	0.444	9.00	3.54
	0.444	8.00	3.15
	0.444	7.00	2.76
	0.444	6.00	2.36
	0.444	5.00	1.97
	0.444	4.00	1.57
	0.444	3.00	1.18
	0.444	2.00	0.79
	0.444	1.00	0.39
	0.444	0.50	0.20
	0.444	0.40	0.16
	0.444	0.25	0.10
	0.444	0.20	0.08
	0.444	0.19	0.07
		Occupational Limit minimum Distance (cm)	Public Limit minimum distance (cm)
	Frequency (MHz)		
	300-1,500	N/A	N/A
	1,500-10,000	N/A	0.19