

MPE Calculation page

MPE Calculator	Garmin	Test Number	100510
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
Tx Frequency (MHz)	2441	(Watts)	0.000200
			Antenna minus cable (dBi)
Cable Loss (dB)	0.0	(dBm)	-6.99
	Calculated ERP (mw)	0.153	Radiated (EIRP) dBm
	Calculated EIRP (mw)	0.252	
			Radiated (ERP) dBm
			-8.160
	Occupational Limit	Power density (S)	
	5.00000 mW/cm ²	EIRP	
		----- = mW/cm ²	
	General Public Limit	4 π r ²	
	1.00000 mW/cm ²	r (cm) EIRP (mW)	
FCC radio frequency radiation exposure limits per 1.1310			
Frequency (MHz)	Occupational Limit	Public Limit	
300-1,500	ƒ/300	ƒ/1500	
1,500-100,000	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	
1,500-100,000	5	1	
EIRP	Distance	Distance	S
milliwatts	cm	inches	mW/cm ²
0.252	50.00	19.69	0.00001
0.252	40.00	15.75	0.00001
0.252	30.00	11.81	0.00002
0.252	20.00	7.87	0.00005
0.252	10.00	3.94	0.00020
0.252	5.00	1.97	0.00080
0.252	4.00	1.57	0.00125
0.252	3.00	1.18	0.00223
0.252	2.00	0.79	0.00501
0.252	1.00	0.39	0.02004
0.252	0.50	0.20	0.08015
0.252	0.32	0.13	0.19567
0.252	0.20	0.08	0.50091
0.252	0.15	0.06	0.89051
0.252	0.10	0.04	2.00364
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	0.10 / 0.04	0.15 / 0.06	