

MPE Calculation page

MPE Calculator	Garmin	Test Number	090819
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)	2441	(Watts)	0.000487
		Antenna minus cable (dBi)	2.20
Cable Loss (dB)	0.0	(dBm)	-3.13
	Calculated ERP (mw)	0.490	Radiated (EIRP) dBm -0.929
	Calculated EIRP (mw)	0.807	
			Radiated (ERP) dBm -3.099
Occupational Limit		Power density (S) =	
5.00000	mW/cm²	EIRP	
		(S) = ----- = mW/cm ²	
General Public Limit		4 p r ²	
1.00000	mW/cm²	[r (cm), EIRP (mW)]	
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
	milliwatts	cm	inches
	0.807	10.00	3.94
	0.807	9.00	3.54
	0.807	8.00	3.15
	0.807	7.00	2.76
	0.807	6.00	2.36
	0.807	5.00	1.97
	0.807	4.00	1.57
	0.807	3.00	1.18
	0.807	2.00	0.79
	0.807	1.00	0.39
	0.807	0.50	0.20
	0.807	0.40	0.16
	0.807	0.30	0.12
	0.807	0.25	0.10
	0.807	0.20	0.08
	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