MPE Calculation page

MPE Calculator	Garmin		Test Number	101118A	
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	2.17
Tx Frequency (MHz)	2441	(Watts)	0.001035		-1.17
				Antenna minus cable (dBi)	1.00
Cable Loss (dB)	0.0	(dBm)	0.15		
Calculated ERP (mw)	0.790			Radiated (EIRP) dBm	1.148
Calculated EIRP (mw)	1.303				
				Radiated (ERP) dBm	-1.022

Occupational Limit

5.00000 mW/cm²

General Public Limit

1.00000 mW/cm²

Power density (S) = EIRP / (4 p r^2) = 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	f/300	f/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/cm²
1.303	50.00	19.69	0.00004
1.303	40.00	15.75	0.00006
1.303	30.00	11.81	0.00012
1.303	20.00	7.87	0.00026
1.303	10.00	3.94	0.00104
1.303	5.00	1.97	0.00415
1.303	4.00	1.57	0.00648
1.303	3.00	1.18	0.01152
1.303	2.00	0.79	0.02591
1.303	1.00	0.39	0.10366
1.303	0.50	0.20	0.41462
1.303	0.33	0.13	0.95184
1.303	0.20	0.08	2.59139
1.303	0.15	0.06	4.60692
1.303	0.14	0.06	5.28856

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	0.15 / 0.06	0.33 / 0.13