MPE Calculation page

MPE Calculator	Garmin		Test Number	090408C	
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)	2457	(Watts)	0.000414		0.03
				Antenna minus cable (dBi)	2.20
Cable Loss (dB)	0.0	(dBm)	-3.83		
Calculated ERP (mw)	0.417			Radiated (EIRP) dBm	-1.629
Calculated EIRP (mw)	0.687				
				Radiated (ERP) dBm	-3.799
Occupational Limit					
5.00000	**mW/cm^2**				
General Public Limit					
1.00000	**mW/cm^2**				

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
1,500-10,000	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	8.19	1.638
1,500-10,000	5	1

EIRP	Distance	Distance	S
milliwatts	cm	inches	mW/cm^2
0.687	10.00	3.94	0.00055
0.687	9.00	3.54	0.00068
0.687	8.00	3.15	0.00085
0.687	7.00	2.76	0.00112
0.687	6.00	2.36	0.00152
0.687	5.00	1.97	0.00219
0.687	4.00	1.57	0.00342
0.687	3.00	1.18	0.00608
0.687	2.00	0.79	0.01367
0.687	1.00	0.39	0.05469
0.687	0.50	0.20	0.21876
0.687	0.40	0.16	0.34182
0.687	0.25	0.10	0.87505
0.687	0.23	0.09	1.03385
0.687	0.20	0.08	1.36726

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	0.23