MPE Calculation page

MPE Calculator Garmin IPH-01129 Test Number 071012

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)	2460	(Watts)	0.00003		-1.17
				Antenna minus cable (dBi)	1.00
Cable Loss (dB)	0.0	(dBm)	-15.23		
				Radiated (EIRP) dBm	-14.229
	Calculated ERP (mw)	0.023			
	Calculated EIRP (mw)	0.038		Radiated (ERP) dBm	-16.399

Occupational Limit

5.00000 **mW/cm^2**

General Public Limit

1.00000 **mW/cm^2**

Power density (S) = EIRP
------- = mW/cm^2
4 π r^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	8.2	1.64
1,500-10,000	5	1

EIRP	Distance	Distance	S
milliwatts	cm	inches	mW/cm^2
0.038	50.00	19.69	0.00000
0.038	40.00	15.75	0.00000
0.038	30.00	11.81	0.00000
0.038	25.00	9.84	0.00000
0.038	20.00	7.87	0.00001
0.038	15.00	5.91	0.00001
0.038	14.00	5.51	0.00002
0.038	13.00	5.12	0.00002
0.038	12.00	4.72	0.00002
0.038	11.00	4.33	0.00002
0.038	10.00	3.94	0.00003
0.038	9.00	3.54	0.00004
0.038	8.00	3.15	0.00005
0.038	7.00	2.76	0.00006
0.038	6.00	2.36	0.00008
0.038	5.00	1.97	0.00012
0.038	4.00	1.57	0.00019
0.038	3.00	1.18	0.00033
0.038	2.00	0.79	0.00075
0.038	1.00	0.39	0.00301
0.038	0.50	0.20	0.01202
0.038	0.10	0.04	0.30055
0.038	0.08	0.03	0.46960
0.038	0.06	0.02	0.83485
0.038	0.05	0.02	1.20219

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	0.06