

MPE Calculation page

Garmin	Model: A1B-3490LM	Test Number:	110609			
MPE Calculator	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	2.2
Tx Frequency (MHz)	2441	Maximum (Watts)	0.001294		Antenna Gain (dBd)	-1.17
Cable Loss (dB)	0.0	(dBm)	1.12		Antenna minus cable (dBi)	1.00
	Calculated ERP (mw)	0.989		EIRP = Po(dBm) + Gain (dB)		
	Calculated EIRP (mw)	1.629			Radiated (EIRP) dBm	2.120
				ERP = EIRP - 2.17 dB		
Occupational Limit					Radiated (ERP) dBm	-0.050
5.00000 mW/cm ²	<div style="border: 1px solid black; padding: 5px;"> Power density (S) EIRP ----- = mW/cm² 4 π r² r (cm) EIRP (mW) </div>					
50.00000 W/m ²						
General Public Limit						
1.00000 mW/cm ²						
10.00000 W/m ²						
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	Public Limit @ Tx Freq			
	300-1,500 (mW/cm ²)	8.136666667	1.627333333			
	300-1,500 (W/m ²)	81.366666667	16.273333333			
	1,500-10,000 (mW/cm ²)	5	1			
	1,500-10,000 (W/m ²)	50	10			
EIRP	S	S	Distance	Distance	Distance	Distance
milliwatts	mW/cm ²	W/m ²	cm	meter	inches	Feet
1.629	0.00130	0.01297	10.00	0.10	3.94	0.01
1.629	0.00160	0.01601	9.00	0.09	3.54	0.01
1.629	0.00203	0.02026	8.00	0.08	3.15	0.01
1.629	0.00265	0.02646	7.00	0.07	2.76	0.01
1.629	0.00360	0.03602	6.00	0.06	2.36	0.01
1.629	0.00519	0.05186	5.00	0.05	1.97	0.00
1.629	0.00810	0.08103	4.00	0.04	1.57	0.00
1.629	0.01441	0.14406	3.00	0.03	1.18	0.00
1.629	0.03241	0.32414	2.00	0.02	0.79	0.00
1.629	0.12966	1.29655	1.00	0.01	0.39	0.00
1.629	0.16007	1.60068	0.90	0.009	0.35	0.001
1.629	0.20259	2.02586	0.80	0.008	0.31	0.001
1.629	0.26460	2.64603	0.70	0.007	0.28	0.001
1.629	0.36015	3.60153	0.60	0.006	0.24	0.001
1.629	0.51862	5.18621	0.50	0.005	0.20	0.000
1.629	0.81035	8.10345	0.40	0.004	0.16	0.000
1.629	1.44061	14.40614	0.30	0.003	0.12	0.000
			Occupational Limit minimum Distance (meters)	Occupational Limit minimum Distance (cm / inches)	Public Limit minimum distance (meters)	Public Limit minimum distance (cm / inches)
	Frequency (MHz)					
	300-1,500		N/A	N/A	N/A	N/A
	1,500-10,000		N/A	N/A	N/A	N/A