

MPE Calculation page

Garmin	Model: A2AMGB00	Test Number:	120228			
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					
		Output Power		Antenna Gain (dBi)	1.7	
				dBi to dBd	2.2	
Tx Frequency (MHz)	2441	Maximum (Watts)	0.001180	Antenna Gain (dBd)	-0.47	
Cable Loss (dB)	0.0	(dBm)	0.72	Antenna minus cable (dBi)	1.70	
	Calculated ERP (mw)	1.059		EIRP = Po(dBm) + Gain (dB)		
	Calculated EIRP (mw)	1.746		Radiated (EIRP) dBm	2.420	
				ERP = EIRP - 2.17 dB		
	Occupational Limit	<div style="border: 1px solid black; padding: 5px;"> Power density (S) EIRP $\frac{EIRP}{4 \pi r^2} = \text{mW/cm}^2$ r (cm) EIRP (mW) </div>			Radiated (ERP) dBm	0.250
	5.00000 mW/cm ²					
	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 (mW/cm ²)			
	300-1,500 (mW/cm2)	8.136666667	1.627333333			
	300-1,500 (W/m2)	81.366666667	16.273333333			
	1,500-10,000 (mW/cm2)	5	1			
	1,500-10,000 (W/m2)	50	10			
EIRP	S	S	Distance	Distance	Distance	Distance
milliwatts	mW/cm ²	W/m ²	cm	meter	inches	Feet
1.746	0.00139	0.01389	10.00	0.10	3.94	0.01
1.746	0.00172	0.01715	9.00	0.09	3.54	0.01
1.746	0.00217	0.02171	8.00	0.08	3.15	0.01
1.746	0.00284	0.02835	7.00	0.07	2.76	0.01
1.746	0.00386	0.03859	6.00	0.06	2.36	0.01
1.746	0.00556	0.05557	5.00	0.05	1.97	0.00
1.746	0.00868	0.08683	4.00	0.04	1.57	0.00
1.746	0.01544	0.15436	3.00	0.03	1.18	0.00
1.746	0.03473	0.34732	2.00	0.02	0.79	0.00
1.746	0.13893	1.38928	1.00	0.01	0.39	0.00
1.746	0.17152	1.71516	0.90	0.009	0.35	0.001
1.746	0.21708	2.17075	0.80	0.008	0.31	0.001
1.746	0.28353	2.83527	0.70	0.007	0.28	0.001
1.746	0.38591	3.85911	0.60	0.006	0.24	0.001
1.746	0.55571	5.55712	0.50	0.005	0.20	0.000
1.746	0.86830	8.68301	0.40	0.004	0.16	0.000
1.746	1.01481	10.14815	0.37	0.004	0.15	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