

MPE Calculation page

Garmin	Model: Vector	Test Number:	120208			
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)	0.000750	Antenna Gain (dBd)		-1.17
Cable Loss (dB)	0.0	(dBm)	-1.25	Antenna minus cable (dBi)		1.00
	Calculated ERP (mw)	0.573		EIRP = Po(dBm) + Gain (dB)		
	Calculated EIRP (mw)	0.944			Radiated (EIRP) dBm	-0.250
				ERP = EIRP - 2.17 dB		
					Radiated (ERP) dBm	-2.420
Occupational Limit	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> Power density (S) EIRP ----- = mW/cm² 4 π r² r (cm) EIRP (mW) </div>					
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			
	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
0.944	0.00075	0.00751	10.00	0.10	3.94	0.01
0.944	0.00093	0.00927	9.00	0.09	3.54	0.01
0.944	0.00117	0.01174	8.00	0.08	3.15	0.01
0.944	0.00153	0.01533	7.00	0.07	2.76	0.01
0.944	0.00209	0.02087	6.00	0.06	2.36	0.01
0.944	0.00301	0.03005	5.00	0.05	1.97	0.00
0.944	0.00470	0.04695	4.00	0.04	1.57	0.00
0.944	0.00835	0.08347	3.00	0.03	1.18	0.00
0.944	0.01878	0.18781	2.00	0.02	0.79	0.00
0.944	0.07513	0.75126	1.00	0.01	0.39	0.00
0.944	0.09275	0.92748	0.90	0.009	0.35	0.001
0.944	0.11738	1.17384	0.80	0.008	0.31	0.001
0.944	0.15332	1.53318	0.70	0.007	0.28	0.001
0.944	0.20868	2.08683	0.60	0.006	0.24	0.001
0.944	0.30050	3.00504	0.50	0.005	0.20	0.000
0.944	0.46954	4.69537	0.40	0.004	0.16	0.000
0.944	0.83473	8.34733	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