MPE Calculation page

Garmin		Model: A2AVGB00	Test Number:	111031			
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)	0.001079		Antenna Gain (dBd)		-1.17
Cable Loss (dB)	0.0	(dBm)	0.33		Antenna minus cable (dBi)		1.00
	Calculated ERP (mw)	0.824		EIRP = Po(dBM) + Gain (dB)			
	Calculated EIRP (mw)	1.358			Radiated (EIRP) dBm		1.330
				ERP = EIRP - 2.17 dB			
	Occupational Limit				Radiated (ERP) dBm		-0.840

Power density (S)

$$\frac{EIRP}{4 p r^2} = mW/cm^2$$

r (cm)   EIRP (mW)

Occupational Limit	
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)	81.36666667	16.27333333
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
1.358	0.00108	0.01081	10.00	0.10	3.94	0.01
1.358	0.00133	0.01334	9.00	0.09	3.54	0.01
1.358	0.00169	0.01689	8.00	0.08	3.15	0.01
1.358	0.00221	0.02206	7.00	0.07	2.76	0.01
1.358	0.00300	0.03003	6.00	0.06	2.36	0.01
1.358	0.00432	0.04324	5.00	0.05	1.97	0.00
1.358	0.00676	0.06756	4.00	0.04	1.57	0.00
1.358	0.01201	0.12010	3.00	0.03	1.18	0.00
1.358	0.02702	0.27023	2.00	0.02	0.79	0.00
1.358	0.10809	1.08091	1.00	0.01	0.39	0.00
1.358	0.13345	1.33446	0.90	0.009	0.35	0.001
1.358	0.16889	1.68892	0.80	0.008	0.31	0.001
1.358	0.22059	2.20594	0.70	0.007	0.28	0.001
1.358	0.30025	3.00253	0.60	0.006	0.24	0.001
1.358	0.43236	4.32365	0.50	0.005	0.20	0.000
1.358	0.67557	6.75570	0.40	0.004	0.16	0.000
1.358	1.20101	12.01013	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