Garmin		A03139	Test Number:	161005		
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)	2437	Maximum (Watts)	0.02999		Antenna Gain (dBd)	-1.17
Cable Loss (dB)	0.0	(dBm)	14.8		Antenna minus cable (dBi)	1.00
Calculated ERP (mw)	22.909			EIRP = Po(dBM) + Gain (dB)		
Calculated EIRP (mw)	37.757				Radiated (EIRP) dBm	15.770
				ERP = EIRP - 2.17 dB		
					Radiated (ERP) dBm	13.600

Power density (S)
EIRP
------- = mW/cm^2
4 p r^2
r (cm) EIRP (mW)

Occupational Limit				
5	mW/cm^2			
50	W/m^2	FCC radio frequency radiation exposure limits per 1.1310		
General Public Limit		Frequency (MHz)	Occupational Limit (mW/cm2)	Public Limit (mW/cm^2)
1	mW/cm^2	300-1,500	f/300	f/1500
10	W/m^2	1,500-10,000	5	1
Occupational Limit		IC radio frequency radiation exposure limits per RSS-102		
$0.6455f^{0.5}$	W/m^2	Frequency (MHz)	Occupational Limit (W/m^2)	Public Limit (W/m^2)
31.86574	W/m^2	100-6,000	$0.6455f^{0.5}$	
General Public Limit		6,000-15,000	50	
$0.02619f^{0.6834}$	W/m^2	48-300		1.291
5.40397	W/m^2	300-6,000		$0.02619f^{0.6834}$
		6,000-15,000	50	10

EIRP	S	S	Distance	Distance	Distance	Distance
milliwatts	mW/cm^2	W/m^2	cm	meter	inches	Feet
37.757	0.00037	0.00371	90.00	0.90	35.43	2.95
37.757	0.00047	0.00469	80.00	0.80	31.50	2.62
37.757	0.00061	0.00613	70.00	0.70	27.56	2.30
37.757	0.00083	0.00835	60.00	0.60	23.62	1.97
37.757	0.00120	0.01202	50.00	0.50	19.69	1.64
37.757	0.00188	0.01878	40.00	0.40	15.75	1.31
37.757	0.00334	0.03338	30.00	0.30	11.81	0.98
37.757	0.00751	0.07512	20.00	0.20	7.87	0.66
37.757	0.03005	0.30046	10.00	0.10	3.94	0.33
37.757	0.03709	0.37094	9.00	0.09	3.54	0.30
37.757	0.04695	0.46947	8.00	0.080	3.15	0.26
37.757	0.06132	0.61319	7.00	0.070	2.76	0.23
37.757	0.08346	0.83462	6.00	0.060	2.36	0.20
37.757	0.12018	1.20185	5.00	0.050	1.97	0.16
37.757	0.18779	1.87789	4.00	0.040	1.57	0.13
37.757	0.33385	3.33847	3.00	0.030	1.18	0.10
37.757	0.75116	7.51156	2.00	0.020	0.79	0.07

Frequency (MHz)	Occupational Limit minimum Distance (meters)	Occupational Limit minimum Distance (cm / inches)	Public Limit minimum distance (meters)	Public Limit minimum distance (cm)
300-1,500	N/A	N/A	0.20	20.00
1,500-10,000	N/A	N/A	0.20	20.00