

Garmin	Model: GMN 01589		Test Number:	170614		
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 <sup>2</sup>					
		Output Power		dBd + 2.17 = dBi	Antenna Gain (dBi)	24
					dBi to dBd	2.2
Tx Frequency (MHz)	9400	Maximum (Watts)	48.305880		Antenna Gain (dBd)	21.83
Cable Loss (dB)	0.0	(dBm)	46.8		Antenna minus cable (dBi)	24.00
	Calculated ERP (mw)	7362070.975		EIRP = Po(dBm) + Gain (dB)		
	Calculated EIRP (mw)	12133888.505			Radiated (EIRP) dBm	70.840
		Power density (S)		ERP = EIRP - 2.17 dB		
		EIRP			Radiated (ERP) dBm	68.670
		----- = mW/cm <sup>2</sup>				
		4 p r <sup>2</sup>				
		EIRP (mW), r (cm)				
	<b>Occupational Limit</b>	FCC radio frequency radiation exposure limits per 1.1310				
5	mW/cm <sup>2</sup>	Frequency (MHz)	Occupational Limit (mW/cm <sup>2</sup> )	Public Limit (mW/cm <sup>2</sup> )		
50	W/m <sup>2</sup>	300-1,500	ƒ/300	ƒ/1500		
	<b>General Public Limit</b>	1,500-10,000	5	1		
1	mW/cm <sup>2</sup>					
10	W/m <sup>2</sup>					
	<b>Occupational Limit</b>	IC radio frequency radiation exposure limits per RSS-102				
50	W/m <sup>2</sup>	Frequency (MHz)	Occupational Limit (W/m <sup>2</sup> )	Public Limit (W/m <sup>2</sup> )		
50.00000	W/m <sup>2</sup>	100-6,000	0.6455 f <sup>0.5</sup>			
	<b>General Public Limit</b>	6,000-15,000	50			
10	W/m <sup>2</sup>	48-300		1.291		
10.00000	W/m <sup>2</sup>	300-6,000		0.02619 f <sup>0.6834</sup>		
		6,000-15,000	50	10		
EIRP	S	S	Distance	Distance	Distance	Distance
milliwatts	mW/cm <sup>2</sup>	W/m <sup>2</sup>	cm	meter	inches	Feet
12133888.505	0.96558	9.656	1000.00	10.00	393.70	32.81
12133888.505	1.19208	11.921	900.00	9.00	354.33	29.53
12133888.505	1.50873	15.087	800.00	8.00	314.96	26.25
12133888.505	1.97058	19.706	700.00	7.00	275.59	22.97
12133888.505	2.68218	26.822	600.00	6.00	236.22	19.69
12133888.505	3.19201	31.920	550.00	5.50	216.54	18.04
12133888.505	3.37351	33.735	535.00	5.35	210.63	17.55
12133888.505	3.86234	38.623	500.00	5.00	196.85	16.40
12133888.505	4.02159	40.216	490.00	4.90	192.91	16.08
12133888.505	4.19090	41.909	480.00	4.80	188.98	15.75
12133888.505	4.56325	45.633	460.00	4.600	181.10	15.09
12133888.505	4.76832	47.683	450.00	4.500	177.17	14.76
12133888.505	4.98752	49.875	440.00	4.400	173.23	14.44
12133888.505	5.22220	52.222	430.00	4.300	169.29	14.11
12133888.505	5.47383	54.738	420.00	4.200	165.35	13.78
12133888.505	5.74411	57.441	410.00	4.100	161.42	13.45
12133888.505	6.03490	60.349	400.00	4.000	157.48	13.12
		Frequency (MHz)	Occupational Limit minimum Distance (meters)	Public Limit minimum distance (meters)		
		47CFR 1.1310	4.40	10.00		
		RSS-102				

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Revision 1

Garmin International, Inc.  
Model: GMN-01589  
Test #: 170614  
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