

MPE Calculation page

MPE Calculator	Laird Technologies	Test Number	090427
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>		Antenna Gain (dBi)	9
Output Power		dBd + 2.17 = dBi	dBi to dBd
Tx Frequency (MHz)	2440.1	(Watts)	0.382825
Cable Loss (dB)	0.0	(dBm)	25.83
Calculated ERP (mw)		1845.015	Radiated (EIRP) dBm
Calculated EIRP (mw)		3040.885	
			Radiated (ERP) dBm
			32.660
<b>Occupational Limit</b>	<b>5.00000</b>	<b>mW/cm<sup>2</sup></b>	
<b>General Public Limit</b>	<b>1.00000</b>	<b>mW/cm<sup>2</sup></b>	
<div style="border: 1px solid black; padding: 5px; display: inline-block;">                     Power density (S) =                      EIRP                      ----- = mW/cm<sup>2</sup>                      4 π r<sup>2</sup>                      [ r (cm), EIRP (mW) ]                 </div>			
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 (mW/cm <sup>2</sup> )	Public Limit @ Tx Freq (mW/cm <sup>2</sup> )	
300-1,500	8.133666667	1.626733333	
1,500-10,000	5	1	
EIRP	Distance	Distance	S
milliwatts	cm	inches	mW/cm <sup>2</sup>
3040.885	100.00	39.37	0.02420
3040.885	90.00	35.43	0.02987
3040.885	80.00	31.50	0.03781
3040.885	70.00	27.56	0.04938
3040.885	60.00	23.62	0.06722
3040.885	50.00	19.69	0.09679
3040.885	40.00	15.75	0.15124
3040.885	30.00	11.81	0.26887
3040.885	20.00	7.87	0.60496
3040.885	16.00	6.30	0.94526
3040.885	15.50	6.10	1.00723
3040.885	10.00	3.94	2.41986
3040.885	5.00	1.97	9.67944
3040.885	2.00	0.79	60.49649
3040.885	1.00	0.39	241.98594
Frequency (MHz)	Occupational Limit minimum Distance (cm)	Public Limit minimum distance (cm)	
300-1,500	N/A	N/A	
1,500-10,000	N/A	15.50	