

MPE Calculator	Mikrotikls	Test Number	101209	
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)	24	
	Output Power (Watts)	dBi to dBd	2.17	
Tx Frequency (MHz)	2437	dBd + 2.17 = dBi	21.83	
		Antenna minus cable (dBi)	24.00	
Cable Loss (dB)	0.0	(dBm)	20.41	
	Calculated ERP (mw)	Radiated (EIRP) dBm	44.414	
	Calculated EIRP (mw)	Radiated (ERP) dBm	42.244	
<b>Occupational Limit</b>	<b>5.00000</b> mW/cm <sup>2</sup>	<div style="border: 1px solid black; padding: 5px;">           Power density (S) =            EIRP            ----- = mW/cm<sup>2</sup>            4 p r<sup>2</sup>            [ r (cm), EIRP (mW)]         </div>		
<b>General Public Limit</b>	<b>1.00000</b> mW/cm <sup>2</sup>			
FCC radio frequency radiation exposure limits per 1.1310				
	Frequency (MHz)	Occupational Limit	Public Limit	
	300-1,500	f/300	f/1500	
	1,500-100,000	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	8.123333333	1.624666667	
	1,500-100,000	5	1	
	EIRP	Distance	Distance	S
	milliwatts	cm	inches	mW/cm <sup>2</sup>
	27630.751	70.00	27.56	0.44873
	27630.751	60.00	23.62	0.61077
	27630.751	50.00	19.69	0.87951
	27630.751	45.00	17.72	1.08582
	27630.751	44.00	17.32	1.13574
	27630.751	40.00	15.75	1.37424
	27630.751	30.00	11.81	2.44309
	27630.751	25.00	9.84	3.51806
	27630.751	24.00	9.45	3.81734
	27630.751	23.00	9.06	4.15649
	27630.751	22.00	8.66	4.54294
	27630.751	21.00	8.27	4.98591
	27630.751	20.00	7.87	5.49696
	27630.751	19.00	7.48	6.09082
	27630.751	15.00	5.91	9.77238
	Frequency (MHz)	Occupational Limit minimum Distance (cm / in)	Public Limit minimum distance (cm / in)	
	300-1,500	N/A	N/A	
	1,500-10,000	21 cm / 7.9"	45 cm / 17.7"	