

MPE Calculator	Mikrotik		Test Number	100615
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)	23
	Output Power dBd + 2.17 = dBi			dBi to dBd
				2.17
Tx Frequency (MHz)	5785	(Watts)	0.200000	20.83
				Antenna minus cable (dBi)
				23.00
Cable Loss (dB)	0.0	(dBm)	23.01	
	Calculated ERP (mw)	24211.963		Radiated (EIRP) dBm
	Calculated EIRP (mw)	39905.246		
				Radiated (ERP) dBm
				43.840
Occupational Limit		<div style="border: 1px solid black; padding: 5px; width: fit-content;"> Power density (S) = EIRP ----- = mW/cm² 4 π r² [r (cm), EIRP (mW)] </div>		
5.00000	mW/cm ²			
General Public Limit				
1.00000	mW/cm ²			
FCC radio frequency radiation exposure limits per 1.1310				
	Frequency (MHz)	Occupational Limit	Public Limit	
	300-1,500	f/300	f/1500	
	1,500-100,000	5	1	
FCC radio frequency radiation exposure limits per 1.1310				
	Frequency (MHz)	Occupational Limit @ Tx Freq (mW/cm ²)	Public Limit @ Tx Freq (mW/cm ²)	
	300-1,500	19.28333333	3.85666667	
	1,500-100,000	5	1	
	EIRP	Distance	Distance	S
	milliwatts	cm	inches	mW/cm ²
	39905.246	70.00	27.56	0.64807
	39905.246	60.00	23.62	0.88210
	39905.246	57.00	22.44	0.97740
	39905.246	55.00	21.65	1.04977
	39905.246	50.00	19.69	1.27022
	39905.246	40.00	15.75	1.98472
	39905.246	30.00	11.81	3.52840
	39905.246	29.00	11.42	3.77593
	39905.246	28.00	11.02	4.05046
	39905.246	27.00	10.63	4.35605
	39905.246	26.00	10.24	4.69757
	39905.246	25.00	9.84	5.08089
	39905.246	24.00	9.45	5.51312
	39905.246	20.00	7.87	7.93890
	39905.246	15.00	5.91	14.11359
	Frequency (MHz)	Occupational Limit minimum Distance (cm)	Public Limit minimum distance (cm)	
	300-1,500	N/A	N/A	
	1,500-10,000	25 cm	57 cm	