Mikrotik		RBmAPL-2nD	Test Number:	150730A-151104		
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)	1.2
		Output Power		dBd + 2.17 = dBi	dBi to dBd	2.2
Tx Frequency (MHz)	2437	Maximum (Watts)	0.16111		Antenna Gain (dBd)	-0.97
Cable Loss (dB)	0.0	(dBm)	22.1		Antenna minus cable (dBi)	1.20
Calculated ERP (mw)	128.861			EIRP = Po(dBM) + Gain (dB)		
Calculated EIRP (mw)	212.384				Radiated (EIRP) dBm	23.271
				ERP = EIRP - 2.17 dB		
Occupational Limit					Radiated (ERP) dBm	21.101
5 W/m^2						
General Public Limit						
1 W/m^2						

Power density (S)

$$S = \frac{EIRP}{4\pi r^2} = \text{mW/cm}^2$$

r (cm) EIRP (mW)

FCC radio frequency radiation exposure limits per 1.1310		
Frequency (MHz)	Occupational Limit (W/m^2)	Public Limit (W/m^2)
300-1,500	f/300	f/1500
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
212.384	0.00209	0.02087	90.00	0.90	35.43	2.95
212.384	0.00264	0.02641	80.00	0.80	31.50	2.62
212.384	0.00345	0.03449	70.00	0.70	27.56	2.30
212.384	0.00469	0.04695	60.00	0.60	23.62	1.97
212.384	0.00676	0.06760	50.00	0.50	19.69	1.64
212.384	0.01056	0.10563	40.00	0.40	15.75	1.31
212.384	0.01878	0.18779	30.00	0.30	11.81	0.98
212.384	0.04225	0.42252	20.00	0.20	7.87	0.66
212.384	0.10001	1.00006	13.00	0.13	5.12	0.43
212.384	0.20865	2.08654	9.00	0.09	3.54	0.30
212.384	0.26408	2.64078	8.00	0.080	3.15	0.26
212.384	0.34492	3.44918	7.00	0.070	2.76	0.23
212.384	0.46947	4.69471	6.00	0.060	2.36	0.20
212.384	0.53893	5.38934	5.60	0.056	2.20	0.18
212.384	1.05631	10.56310	4.00	0.040	1.57	0.13
212.384	1.87788	18.77885	3.00	0.030	1.18	0.10
212.384	2.93419	29.34195	2.40	0.024	0.94	0.08

Frequency (MHz)	Occupational Limit minimum Distance (meters) FCC Limits	Occupational Limit minimum Distance (Meters) IC Limits	Public Limit minimum distance (meters) FCC Limits	Public Limit minimum distance (Meters) IC Limits
300-1,500	N/A	N/A	N/A	N/A
1,500-10,000	0.06	0.02	0.13	0.06