Mikrotik	Model: cAP		Test Number:	160714		
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)	2.7
		Output Power	dBd + 2.17 = dBi		dBi to dBd	2.2
Tx Frequency (MHz)	2437	Maximum (Watts)	0.048		Antenna Gain (dBd)	0.53
Cable Loss (dB)	0.0	(dBm)	16.8		Antenna minus cable (dBi)	2.70

Calculated ERP (mw)	54.230		EIRP = Po(dBM) + Gain (dB)	
Calculated EIRP (mw)	89.380			Radiated (EIRP) dBm 19.512
			ERP = EIRP - 2.17 dB	
				Radiated (ERP) dBm 17.342

Power density (S)

$$\frac{EIRP}{4 p r^2} = mW/cm^2$$

EIRP (mW), r (cm)

	Occupational Limit	FCC radio frequency radiation exposure limits per 1.1310		
5	mW/cm^2	Frequency (MHz)	Occupational Limit (mW/cm^2)	Public Limit (mW/cm^2)
50	W/m^2	300-1,500	f/300	f/1500
	General Public Limit	1,500-10,000	5	1
1	mW/cm^2			
10	W/m^2			

	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
89.380	0.00088	0.00878	90.00	0.90	35.43	2.95
89.380	0.00111	0.01111	80.00	0.80	31.50	2.62
89.380	0.00145	0.01452	70.00	0.70	27.56	2.30
89.380	0.00198	0.01976	60.00	0.60	23.62	1.97
89.380	0.00285	0.02845	50.00	0.50	19.69	1.64
89.380	0.00445	0.04445	40.00	0.40	15.75	1.31
89.380	0.00790	0.07903	30.00	0.30	11.81	0.98
89.380	0.01778	0.17782	20.00	0.20	7.87	0.66
89.380	0.04209	0.42087	13.00	0.13	5.12	0.43
89.380	0.11114	1.11135	8.00	0.08	3.15	0.26
89.380	0.17921	1.79205	6.30	0.063	2.48	0.21
89.380	0.23513	2.35129	5.50	0.055	2.17	0.18
89.380	0.28451	2.84506	5.00	0.050	1.97	0.16
89.380	0.44454	4.44541	4.00	0.040	1.57	0.13
89.380	0.79029	7.90294	3.00	0.030	1.18	0.10
89.380	1.77816	17.78162	2.00	0.020	0.79	0.07
89.380	7.11265	71.12649	1.00	0.010	0.39	0.03

	Frequency (MHz)	Occupational Limit minimum Distance (meters)	Public Limit minimum distance (meters)	
	47CFR 1.1310	0.20	0.20	
	RSS-102			

The calculation demonstrates compliance with RF exposure requirements when the a seperation distance of 20cm or great is maintained.