

Mikrotik	Model: QRT2	Test Number:	160718		
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				
		Output Power	dBd + 2.17 = dBi	Antenna Gain (dBi)	17
		Maximum (Watts)	0.009	dBi to dBd	2.2
Tx Frequency (MHz)	2437			Antenna Gain (dBd)	14.83
Cable Loss (dB)	0.0	(dBm)	9.5	Antenna minus cable (dBi)	17.00
	Calculated ERP (mw) 273.680		EIRP = Po(dBm) + Gain (dB)		
	Calculated EIRP (mw) 451.069			Radiated (EIRP) dBm	26.542
			ERP = EIRP - 2.17 dB		
				Radiated (ERP) dBm	24.372
	Power density (S) EIRP ----- = mW/cm ² 4 π r 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	≤300	≤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				
0.6455/ ^{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	0.6455/ ^{0.5}		
	General Public Limit	6,000-15,000	50		
0.02619/ ^{0.6834}	W/m ²	48-300		1.291	
5.40397	W/m ²	300-6,000		0.02619/ ^{0.6834}	
		6,000-15,000	50	10	
EIRP	S	S	Distance	Distance	Distance
milliwatts	mW/cm ²	W/m ²	cm	meter	inches
451.069	0.00443	0.04431	90.00	0.90	35.43
451.069	0.00561	0.05609	80.00	0.80	31.50
451.069	0.00733	0.07325	70.00	0.70	27.56
451.069	0.00997	0.09971	60.00	0.60	23.62
451.069	0.01436	0.14358	50.00	0.50	19.69
451.069	0.02243	0.22434	40.00	0.40	15.75
451.069	0.03988	0.39883	30.00	0.30	11.81
451.069	0.08974	0.89737	20.00	0.20	7.87
451.069	0.21240	2.12396	13.00	0.13	5.12
451.069	0.56086	5.60858	8.00	0.08	3.15
451.069	0.90438	9.04381	6.30	0.063	2.48
451.069	1.18661	11.86608	5.50	0.055	2.17
451.069	1.43580	14.35796	5.00	0.050	1.97
451.069	2.24343	22.43431	4.00	0.040	1.57
451.069	3.98832	39.88321	3.00	0.030	1.18
451.069	8.97372	89.73723	2.00	0.020	0.79
451.069	35.89489	358.94892	1.00	0.010	0.39
		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 separation distance of 20cm or great is maintained.

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Revision 1

Mikrotiks SIA
Model: RBQRTG-2SHPnD
Test #: 160718
Test to: 47CFR 15.247, RSS-247
File: RBQRTG2SHPnD RFExp

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