RF Exposure Calculations

Mikrotik	Model: OmniTik 5 POE		Test Number:	170309		
MPE Calculator	MPE uses EIRP for calculati	ion. EIRP is based on TX	X power added to the antenna gain in dBi.			
	dBi = dB gain compared to a	an isotropic radiator.				
	S = power density in mW/cn	m^2				
					Antenna Gain (dBi)	10
		Output Power		dBd + 2.17 = dBi	dBi to dBd	2
Γx Frequency (MHz)	5785	Maximum (Watts)	0.02729	<mark>3</mark>	Antenna Gain (dBd)	8.3
Cable Loss (dB)	0.0	(dBm)	14.	4	Antenna minus cable (dBi)	10.5
Caok 1955 (III)	0.0	(uBii)	1		Timenia niiki ettek (ubi)	10.0
	Calculated ERP (mw)			EIRP = Po(dBM) + Gain (dB)		***
	Calculated EIRP (mw)			ERP = EIRP - 2.17 dB	Radiated (EIRP) dBm	24.86
		Power density (S)		ERC - ERC 2.17 GB	Radiated (ERP) dBm	22.69
		EIRP				
		= mW/cn 4 p r^2	n^2			
		EIRP (mW), r (cm)				
	Occupational Limit		FCC radio frequency radiation exposure	e 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					
	0	IC radio frequency radiation exposure limits per RSS-102				
0.6455.015	Occupational Limit	Frequency (MHz)				
$0.6455f^{0.5}$	W/m ²		Occupational Limit (W/m²)	Public Limit (W/m ²)		
49.09621	W/m ²	100-6,000	$0.6455f^{0.5}$			
$0.02619f^{0.6834}$	General Public Limit W/m ²	6,000-15,000 48-300	50	1.291		
		300-6,000		$0.02619f^{0.6834}$		
9.75649	W/m ²	6,000-15,000	50	10		
		0,000-13,000	50	10		
EIDD	S	c	Di-t	Distance	Distance	Distance
EIRP		S 2	Distance	Distance	Distance	Distance
milliwatts	mW/cm ²	W/m ²	cm	meter	inches	Feet
306.238	0.00244 0.00381	0.024 0.038	100.00 80.00	1.00	39.37	3.28
306.238 306.238	0.00381	0.068	60.00	0.80 0.60	31.50 23.62	2.62 1.97
306.238	0.01523	0.152	40.00	0.40	15.75	1.31
306.238	0.02708	0.271	30.00	0.30	11.81	0.98
306.238	0.06092	0.609	20.00	0.20	7.87	0.66
306.238	0.10831	1.083	15.00	0.15	5.91	0.49
306.238	0.24370	2.437	10.00	0.10	3.94	0.33
306.238	0.30086	3.009	9.00	0.09	3.54	0.30
306.238	0.38078	3.808	8.00	0.08	3.15	0.26
306.238	0.49734	4.973	7.00	0.070	2.76	0.23
306.238	0.67693	6.769	6.00	0.060	2.36	0.20
306.238	0.97479	9.748	5.00	0.050	1.97	0.16
306.238	1.52310	15.231	4.00	0.040	1.57	0.13
306.238 306.238	2.70774 4.60674	27.077 46.067	3.00 2.30	0.030 0.023	1.18 0.91	0.10
306.238	6.09241	60.924	2.00	0.023	0.79	0.08
500.250	0.0/241	55.724	2.00	0.020	0.77	0.07
		Frequency (MHz)	Occupational Limit minimum Distance (meters)	Public Limit minimum distance (meters)		
		47CFR 1.1310	0.02	0.02		
		RSS-102	0.02	0.02		

Rogers Labs, Inc. Mikrotikls SIA S/N: 67E005F59568/67E005D89787
4405 W. 259th Terrace Model: RBOmniTikUPA-5HnD-US FCC ID: TV7RBOMNITIK5HND
Louisburg, KS 66053 Test #: 170309 IC: 7442A-OMNTK5HND

Phone/Fax: (913) 837-3214 Test to: 47CFR, 15.407, RSS-247 Date: May 3, 2017 Revision 1 File: RBOmniTikUPA 5HacD US RFExp Page 1 of 1