RF Exposure Calculations

Mikrotik	Model: RB953GS-5HnT-RI	P-US	Test Number:	170316		
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 a	an isotropic radiator.				
	S = power density in mW/cn	m^2				
					Antenna Gain (dBi)	36.
		Output Power		dBd + 2.17 = dBi	dBi to dBd	2.3
Tx Frequency (MHz)	5825	Maximum (Watts)	0.28794	5	Antenna Gain (dBd)	34.53
Cable Loss (dB)	0.0	(dBm)	24.0	5	Antenna minus cable (dBi)	36.70
	Calculated ERP (mw)	217165 240		EIRP = Po(dBM) + Gain (dB)		
	Calculated EIRP (mw)			EIRT – FO(dDivi) + Gain (dB)	Radiated (EIRP) dBm	61.293
	Culculated Early (IIIII)	Power density (S)		ERP = EIRP - 2.17 dB	Tulumed (Effer) abiii	01.27
					Radiated (ERP) dBm	59.12
		EIRP				
		= mW/cn 4 p r^2	m^2			
		EIRP (mW), r (cm)				
	Occupational Limit		FCC radio frequency radiation exposure	limits per 1.1310		
5		Frequency (MHz)	Occupational Limit (mW/cm ²)	Public Limit (mW/cm ²)		
50	117.444	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				
$0.6455 f^{0.5}$		Frequency (MHz)	Occupational Limit (W/m²)	Public Limit (W/m²)		
49.26565		100-6,000	$0.6455f^{0.5}$			
	General Public Limit	6,000-15,000	50			
$0.02619 f^{0.6834}$	W/m ²	48-300		1.291		
9.80254	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
1346821.181	0.42871	4.287	500.00	5.00	196.85	16.40
1346821.181	0.66985	6.699	400.00	4.00	157.48	13.12
1346821.181	0.98417	9.842	330.00	3.30	129.92	10.83
1346821.181	1.01469	10.147	325.00	3.25	127.95	10.66
1346821.181	1.19085	11.909	300.00	3.00	118.11	9.84
1346821.181 1346821.181	1.41721 1.71483	14.172 17.148	275.00 250.00	2.75 2.50	108.27 98.43	9.02 8.20
1346821.181	2.11707	21.171	225.00	2.25	88.58	7.38
1346821.181	2.67942	26.794	200.00	2.00	78.74	6.56
1346821.181	3.49964	34.996	175.00	1.75	68.90	5.74
1346821.181	4.76341	47.634	150.00	1.500	59.06	4.92
1346821.181	4.89302	48.930	148.00	1.480	58.27	4.86
1346821.181	5.09758	50.976	145.00	1.450	57.09	4.76
1346821.181	5.46820	54.682	140.00	1.400	55.12	4.59
1346821.181 1346821.181	6.34181 7.44282	63.418 74.428	130.00 120.00	1.300 1.200	51.18 47.24	4.27 3.94
1346821.181	8.85757	88.576	110.00	1.100	43.31	3.61
1340021.101	0.03737	00.570	110.00	1.100	75.51	5.01
			Occupational Limit Di-t			
		Frequency (MHz)	Occupational Limit minimum Distance (meters)	Public Limit minimum distance (meters)		
		47CFR 1.1310	1.48	3.30		
		RSS-102	1.48	3.30		

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Revision 1

Mikrotikls SIA S/N: 54EE04337EEF

Model: PR053GS-5HnT-PP-US FCC ID: TV7PR053G

Model: RB953GS-5HnT-RP-US FCC ID: TV7RB953GS5HNTM Test #: 170316 IC: 7442A-RB953GS5HNT

Test to: 47CFR, 15.407, RSS-247 Date: April 3, 2017 File: RB953GS-5HnT-RP-US FCC RFExp Page 1 of 1