RF Exposure Calculations

Mikrotik	Model: DynaDish 5 (RBDynaDishG-5HacD-US)		Test Number:	170217		
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)	24
		Output Power		dBd + 2.17 = dBi	dBi to dBd	2.2
Tx Frequency (MHz)	5785	Maximum (Watts)	0.242000		Antenna Gain (dBd)	21.83
Cable Loss (dB)	0.0	(dBm)	23.8		Antenna minus cable (dBi)	24.00
	Calculated ERP (mw)	36882.077		EIRP = Po(dBM) + Gain (dB)		
	Calculated EIRP (mw)	60787.652			Radiated (EIRP) dBm	47.838
				ERP = EIRP - 2.17 dB		
					Radiated (ERP) dBm	45.668

Power density (S)

EIRP
------- = mW/cm^2
4 p 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	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)
49.09621	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
9.75649	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
60787.652	0.59720	5.97201	90.00	0.90	35.43	2.95
60787.652	0.75583	7.55832	80.00	0.80	31.50	2.62
60787.652	0.95960	9.59597	71.00	0.71	27.95	2.33
60787.652	1.34370	13.43702	60.00	0.60	23.62	1.97
60787.652	1.59912	15.99117	55.00	0.55	21.65	1.80
60787.652	3.02333	30.23330	40.00	0.40	15.75	1.31
60787.652	3.34995	33.49950	38.00	0.38	14.96	1.25
60787.652	3.53348	35.33475	37.00	0.37	14.57	1.21
60787.652	3.94884	39.48839	35.00	0.35	13.78	1.15
60787.652	4.44199	44.41990	33.00	0.33	12.99	1.08
60787.652	4.72395	47.23953	32.00	0.320	12.60	1.05
60787.652	5.03364	50.33640	31.00	0.310	12.20	1.02
60787.652	5.37481	53.74808	30.00	0.300	11.81	0.98
60787.652	7.73972	77.39724	25.00	0.250	9.84	0.82
60787.652	12.09332	120.93319	20.00	0.200	7.87	0.66
60787.652	21.49923	214.99234	15.00	0.150	5.91	0.49
60787.652	48.37328	483.73276	10.00	0.100	3.94	0.33

Frequency (MHz)	Occupational Limit minimum Distance (meters)	Public Limit minimum distance (meters)
47CFR 1.1310	0.32	0.71
RSS-102	0.32	0.71