

MPE Calculation Page

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 <sup>2</sup>					
				Antenna Gain (dBi)	32	
		Output Power		dBd + 2.17 = dBi	2.2	
Tx Frequency (MHz)	5785	Maximum (Watts)	0.739111	Antenna Gain (dBd)	29.83	
Cable Loss (dB)	0.0	(dBm)	28.69	Antenna minus cable (dBi)	32.00	
	Calculated ERP (mw)	710738.531		EIRP = Po(dBm) + Gain (dB)		
	Calculated EIRP (mw)	1171412.517		Radiated (EIRP) dBm	60.687	
				ERP = EIRP - 2.17 dB		
				Radiated (ERP) dBm	58.517	
<b>Occupational Limit</b>	5.00000 mW/cm <sup>2</sup>	Power density (S) EIRP ----- = mW/cm <sup>2</sup> 4 π r <sup>2</sup> r (cm) EIRP (mW)				
	50.00000 W/m <sup>2</sup>					
<b>General Public Limit</b>	1.00000 mW/cm <sup>2</sup>					
	10.00000 W/m <sup>2</sup>					
FCC radio frequency radiation exposure limits per 1.1310 (mW/cm2)						
	Frequency (MHz)	Occupational Limit	Public Limit			
	300-1,500	f/300	f/1500			
	1,500-10,000	5	1			
FCC radio frequency radiation exposure limits per 1.1310						
	Frequency (MHz)	Occupational Limit	Public Limit			
	300-1,500 (mW/cm2)	19.28333333	3.856666667			
	300-1,500 (W/m2)	192.8333333	38.56666667			
	1,500-10,000 (mW/cm2)	5	1			
	1,500-10,000 (W/m2)	50	10			
EIRP	S	S	Distance	Distance	Distance	Distance
milliwatts	mW/cm <sup>2</sup>	W/m <sup>2</sup>	cm	meter	inches	Feet
1171412.517	0.37287	3.72872	500.00	5.00	196.85	0.42
1171412.517	0.58261	5.82613	400.00	4.00	157.48	0.33
1171412.517	1.03576	10.35756	300.00	3.00	118.11	0.25
1171412.517	2.33045	23.30451	200.00	2.00	78.74	0.17
1171412.517	3.04385	30.43855	175.00	1.75	68.90	0.15
1171412.517	4.14302	41.43024	150.00	1.50	59.06	0.13
1171412.517	4.75602	47.56023	140.00	1.40	55.12	0.12
1171412.517	5.03990	50.39903	136.00	1.36	53.54	0.11
1171412.517	5.51586	55.15861	130.00	1.30	51.18	0.11
1171412.517	5.96595	59.65955	125.00	1.25	49.21	0.10
1171412.517	6.47348	64.73475	120.00	1.20	47.24	0.10
1171412.517	7.70397	77.03971	110.00	1.10	43.31	0.09
1171412.517	9.32180	93.21805	100.00	1.00	39.37	0.08
1171412.517	11.50840	115.08401	90.00	0.90	35.43	0.08
1171412.517	14.56532	145.65320	80.00	0.80	31.50	0.07
1171412.517	19.02409	190.24091	70.00	0.70	27.56	0.06
1171412.517	25.89390	258.93902	60.00	0.60	23.62	0.05
			Occupational Limit minimum Distance (meters)	Occupational Limit minimum Distance (cm / inches)	Public Limit minimum distance (meters)	Public Limit minimum distance (cm / inches)
			300-1,500	N/A	N/A	N/A
			1,500-10,000		3.00	300 / 118

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Revision 1

Mikrotikls SIA  
Model: R11e-5HnD  
Test #: 130319  
Test to: CFR47 (15.247)  
File: RFExp R11E5HND

SN: EUT1  
FCC ID#: TV7R11E5HND  
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