

MPE Calculator	SAF Tehnika	Test Number	090626A	
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)	40
	Output Power dBd + 2.17 = dBi		dBi to dBd	2.17
Tx Frequency (MHz)	24146.5	(Watts)	0.010998	37.83
			Antenna minus cable (dBi)	40.00
Cable Loss (dB)	0.0	(dBm)	10.41	
	Calculated ERP (mw)	66730.363	Radiated (EIRP) dBm	50.413
	Calculated EIRP (mw)	109982.474	Radiated (ERP) dBm	48.243
Occupational Limit	5.00000	mW/cm²	<div style="border: 1px solid black; padding: 5px;"> Power density (S) = EIRP ----- = mW/cm² 4 π r² [r (cm), EIRP (mW)] </div>	
General Public Limit	1.00000	mW/cm²		
FCC radio frequency radiation exposure limits per 1.1310				
	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 @ Tx Freq (mW/cm ²)	Public Limit @ Tx Freq (mW/cm ²)	
	300-1,500	80.48833333	16.09766667	
	1,500-10,000	5	1	
	EIRP	Distance	Distance	S
	milliwatts	cm	inches	mW/cm ²
	109982.474	100.00	39.37	0.87521
	109982.474	95.00	37.40	0.96976
	109982.474	93.00	36.61	1.01192
	109982.474	90.00	35.43	1.08051
	109982.474	80.00	31.50	1.36752
	109982.474	70.00	27.56	1.78615
	109982.474	60.00	23.62	2.43115
	109982.474	50.00	19.69	3.50085
	109982.474	45.00	17.72	4.32204
	109982.474	44.00	17.32	4.52073
	109982.474	43.00	16.93	4.73344
	109982.474	42.00	16.54	4.96152
	109982.474	41.00	16.14	5.20650
	109982.474	40.00	15.75	5.47008
	109982.474	30.00	11.81	9.72459
	Frequency (MHz)	Occupational Limit minimum Distance (cm)	Public Limit minimum distance (cm)	
	300-1,500	N/A	N/A	
	1,500-10,000	42.00	93.00	