

MPE Calculation page

MPE Calculator	Trig Avionics	Test Number	091002
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)	2.2
	Output Power (Watts)	dBi to dBd	2.17
Tx Frequency (MHz)	1090	270.000000	0.03
Cable Loss (dB)	0.0	54.31	2.20
	Calculated ERP (mw)	271871.551	Radiated (EIRP) dBm
	Calculated EIRP (mw)	448088.465	Radiated (ERP) dBm
			54.344
Occupational Limit	5.00000 mW/cm ²	<div style="border: 1px solid black; padding: 5px;"> Power density (S) = EIRP ----- = mW/cm² 4 p r² [r (cm), EIRP (mW)] </div>	
General Public Limit	1.00000 mW/cm ²		
FCC radio frequency radiation exposure limits per 1.1310			
	Frequency (MHz)	Occupational Limit	Public Limit
	300-1,500	ƒ/300	ƒ/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	3.633333333	0.726666667
	1,500-10,000	5	1
	EIRP	Distance	Distance
	milliwatts	cm	inches
	448088.465	300.00	118.11
	448088.465	250.00	98.43
	448088.465	240.00	94.49
	448088.465	230.00	90.55
	448088.465	223.00	87.80
	448088.465	220.00	86.61
	448088.465	200.00	78.74
	448088.465	175.00	68.90
	448088.465	150.00	59.06
	448088.465	140.00	55.12
	448088.465	130.00	51.18
	448088.465	120.00	47.24
	448088.465	110.00	43.31
	448088.465	100.00	39.37
	448088.465	95.00	37.40
	Frequency (MHz)	Occupational Limit minimum Distance (cm)	Public Limit minimum distance (cm)
	300-1,500	N/A	N/A
	1,500-10,000	100.00	223.00