

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/cm²

Antenna Gain (dBi) **9**
 dBi to dBd **3**
 Tx Frequency (MHz) **960** Output Power Average (Watts) **100.0000** dBd + 2.17 = dBi
 Antenna Gain (dBd) **6**
 Cable Loss (dB) **0.0** (dBm) 50.00 Antenna minus cable (dB) 9.00

Calculated ERP (mw) 398107.171
 Calculated EIRP (mw) 794328.235

EIRP = Po(dBM) + Gain (dB)
 Radiated (EIRP) dBm 59.000
 ERP = EIRP - 2.17 dB
 Radiated (ERP) dBm 56.000

Occupational Limit
3.20000 mW/cm²

General Public Limit
0.64000 mW/cm²

Power density (S)
 EIRP
 ----- = mW/cm²
 $4 \pi r^2$
 r (cm) EIRP (mW)

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	3.2	0.64
1,500-10,000	5	1

EIRP	Distance	Distance	S	Distance
milliwatts	cm	inches	mW/cm ²	Feet
794328.235	1000.00	393.70	0.06321	32.80839895
794328.235	900.00	354.33	0.07804	29.52755906
794328.235	800.00	314.96	0.09877	26.24671916
794328.235	700.00	275.59	0.12900	22.96587927
794328.235	650.00	255.91	0.14961	21.32545932
794328.235	600.00	236.22	0.17559	19.68503937
794328.235	550.00	216.54	0.20896	18.04461942
794328.235	500.00	196.85	0.25284	16.40419948
794328.235	450.00	177.17	0.31215	14.76377953
794328.235	400.00	157.48	0.39507	13.12335958
794328.235	375.00	147.64	0.44950	12.30314961
794328.235	350.00	137.80	0.51601	11.48293963
794328.235	325.00	127.95	0.59844	10.66272966
794328.235	315.00	124.02	0.63704	10.33464567
794328.235	295.00	116.14	0.72635	9.67847769
794328.235	275.00	108.27	0.83584	9.022309711
794328.235	250.00	98.43	1.01137	8.202099738
794328.235	225.00	88.58	1.24861	7.381889764
794328.235	200.00	78.74	1.58027	6.56167979
794328.235	190.00	74.80	1.75099	6.233595801
794328.235	180.00	70.87	1.95095	5.905511811
794328.235	170.00	66.93	2.18722	5.577427822
794328.235	160.00	62.99	2.46917	5.249343832
794328.235	150.00	59.06	2.80936	4.921259843
794328.235	142.00	55.91	3.13483	4.658792651
794328.235	137.00	53.94	3.36782	4.494750656
794328.235	136.00	53.54	3.41753	4.461942257
794328.235	135.00	53.15	3.46835	4.429133858
794328.235	134.00	52.76	3.52031	4.396325459
794328.235	133.00	52.36	3.57344	4.36351706
794328.235	132.00	51.97	3.62779	4.330708661

Frequency (MHz)	Occupational Limit minimum Distance (inches)	Public Limit minimum distance (inches)
300-1,500	56.00	124.00
1,500-10,000	N/A	N/A

ROGERS LABS, INC.
 4405 W. 259th Terrace
 Louisburg, KS 66053
 Phone/Fax: (913) 837-3214

Selex Sistemi Integrati Inc.
 Model: 1118A FCCID#: JPA1118A
 Test #: 060821A SN: E200
 Test to: FCC Parts 2 and 87