

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) **0**
dBi to dBd 2.17
Tx Frequency (MHz) **1090** Output Power Average (Watts) **2.5000** Antenna Gain (dBd) **-2.17**
Cable Loss (dB) **0.0** (dBm) 33.98 Antenna minus cable (dBi) 0.00

Calculated ERP (mw) 1516.841
Calculated EIRP (mw) 2500.000

EIRP = Po(dBm) + Gain (dB)
Radiated (EIRP) dBm 33.979
ERP = EIRP - 2.17 dB
Radiated (ERP) dBm 31.809

Occupational Limit
3.63333 mW/cm²

General Public Limit
0.72667 mW/cm²

Power density
(S)
EIRP
----- =
mW/cm²
4 π r²

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	3.633333333	0.726666667
1,500-10,000	5	1

EIRP	Distance	Distance	S	Distance
milliwatts	cm	inches	mW/cm ²	Feet
2500.000	1000.00	393.70	0.00020	32.80839895
2500.000	900.00	354.33	0.00025	29.52755906
2500.000	800.00	314.96	0.00031	26.24671916
2500.000	700.00	275.59	0.00041	22.96587927
2500.000	600.00	236.22	0.00055	19.68503937
2500.000	500.00	196.85	0.00080	16.40419948
2500.000	400.00	157.48	0.00124	13.12335958
2500.000	350.00	137.80	0.00162	11.48293963
2500.000	325.00	127.95	0.00188	10.66272966
2500.000	300.00	118.11	0.00221	9.842519685
2500.000	275.00	108.27	0.00263	9.022309711
2500.000	250.00	98.43	0.00318	8.202099738
2500.000	225.00	88.58	0.00393	7.381889764
2500.000	200.00	78.74	0.00497	6.56167979
2500.000	175.00	68.90	0.00650	5.741469816
2500.000	150.00	59.06	0.00884	4.921259843
2500.000	125.00	49.21	0.01273	4.101049869
2500.000	100.00	39.37	0.01989	3.280839895
2500.000	90.00	35.43	0.02456	2.952755906
2500.000	80.00	31.50	0.03108	2.624671916
2500.000	70.00	27.56	0.04060	2.296587927
2500.000	60.00	23.62	0.05526	1.968503937
2500.000	50.00	19.69	0.07958	1.640419948
2500.000	40.00	15.75	0.12434	1.312335958
2500.000	35.00	13.78	0.16240	1.148293963
2500.000	30.00	11.81	0.22105	0.984251969
2500.000	25.00	9.84	0.31831	0.820209974
2500.000	20.00	7.87	0.49736	0.656167979
2500.000	17.00	6.69	0.68839	0.557742782
2500.000	16.65	6.56	0.71763	0.546259843
2500.000	8.00	3.15	3.10849	0.262467192

Frequency (MHz)	Occupational Limit minimum Distance (cm.)	Public Limit minimum distance (cm)
300-1,500	8.00	16.65
1,500-10,000	N/A	N/A

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Honeywell International Inc.
Model: KXP22990
Test #: 060613
Test to: FCC Parts 2 and 87

FCCID#: ASYKXP2290

Page 1 of 1

KXP2290 MPE Calculation.doc 6/21/2006