MPE Calculation page

Laird Technologies		Model: LT1110-200		Test Number: 110825		
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^2					
					Antenna Gain (dBi)	6
		Output Power		dBd + 2.17 = dBi	dBi to dBd	2.2
Tx Frequency (MHz)	915	Maximum (Watts)	0.204174		Antenna Gain (dBd)	3.83
Cable Loss (dB)	0.0	(dBm)	23.10		Antenna minus cable (dBi)	6.00
Calculated ERP (mw)	493.174			EIRP = Po(dBM) + Gain (dB)		
Calculated EIRP (mw)	812.831				Radiated (EIRP) dBm	29.100
				ERP = EIRP - 2.17 dB		
Occupational Limit					Radiated (ERP) dBm	26.930
3.05000	mW/cm^2					
30.50000	W/m^2					
General Public Limit						
0.61000	mW/cm^2					
6.10000	W/m^2					

Power density (S)

EIRP
------- = mW/cm^2
4 p r^2

r (cm) EIRP (mW)

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)	3.05	0.61
300-1,500 (W/m2)	30.5	6.1
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^2	W/m^2	cm	meter	inches	Feet
812.831	0.00647	0.06468	100.00	1.00	39.37	0.08
812.831	0.00799	0.07986	90.00	0.90	35.43	0.08
812.831	0.01011	0.10107	80.00	0.80	31.50	0.07
812.831	0.01320	0.13201	70.00	0.70	27.56	0.06
812.831	0.01797	0.17967	60.00	0.60	23.62	0.05
812.831	0.02587	0.25873	50.00	0.50	19.69	0.04
812.831	0.04043	0.40427	40.00	0.40	15.75	0.03
812.831	0.05940	0.59397	33.00	0.33	12.99	0.03
812.831	0.16171	1.61707	20.00	0.20	7.87	0.02
812.831	0.64683	6.46830	10.00	0.10	3.94	0.01
812.831	0.79856	7.98556	9.00	0.09	3.54	0.01
812.831	1.01067	10.10672	8.00	0.08	3.15	0.01
812.831	1.32006	13.20061	7.00	0.07	2.76	0.01
812.831	1.79675	17.96750	6.00	0.06	2.36	0.01
812.831	2.58732	25.87320	5.00	0.05	1.97	0.00
812.831	4.04269	40.42687	4.00	0.04	1.57	0.00
812.831	7.18700	71.87000	3.00	0.03	1.18	0.00

Frequency (MHz)	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	0.33	33 / 13
1,500-10,000	N/A	N/A	N/A	N/A