MPE Calculation page

MPE Calculator	Laird Technologies		Test Number	100314	
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)	5
		Output Power	dBd + 2.17 = dBi	dBi to dBd	2.17
Tx Frequency (MHz)	2441	(Watts)	0.125000		2.83
				Antenna minus cable (dBi)	5.00
Cable Loss (dB)	0.0	(dBm)	20.97		
	Calculated ERP (mw)	239.834		Radiated (EIRP) dBm	25.969
	Calculated EIRP (mw)	395.285			
				Radiated (ERP) dBm	23.799
	Occupational Limit				
5.00000	**mW/cm^2**				
	General Public Limit				
1.00000	**mW/cm^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		
Frequency (MHz)	Occupational Limit	Public Limit
300-1,500	f/300	f/1500
1,500-100,000	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	8.136666667	1.627333333
1,500-100,000	5	1

EIRP	Distance	Distance	S
milliwatts	cm	inches	mW/cm^2
395.285	70.00	27.56	0.00642
395.285	60.00	23.62	0.00874
395.285	50.00	19.69	0.01258
395.285	40.00	15.75	0.01966
395.285	30.00	11.81	0.03495
395.285	20.00	7.87	0.07864
395.285	10.00	3.94	0.31456
395.285	9.00	3.54	0.38834
395.285	8.00	3.15	0.49150
395.285	7.00	2.76	0.64195
395.285	6.00	2.36	0.87377
395.285	5.70	2.24	0.96817
395.285	4.00	1.57	1.96598
395.285	3.00	1.18	3.49508
395.285	2.60	1.02	4.65322

Frequency (MHz)	Occupational Limit minimum Distance (cm)	Public Limit minimum distance (cm)
300-1,500	N/A	N/A
1,500-10,000	2.60	5.70