

MPE Calculation page

MPE Calculator	Laird Technologies	Test Number	100714		
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)	15	
		Output Power dBd + 2.17 = dBi	dBd to dBd	2.17	
Tx Frequency (MHz)	915	(Watts)	0.008000	12.83	
				Antenna minus cable (dBi)	15.00
Cable Loss (dB)	0.0	(dBm)	9.03		
	Calculated ERP (mw)	153.493		Radiated (EIRP) dBm	24.031
	Calculated EIRP (mw)	252.982			
				Radiated (ERP) dBm	21.861
Occupational Limit		Power density (S) = EIRP ----- = mW/cm^2 4 p r^2 [r (cm), EIRP (mW)]			
3.05000	mW/cm^2				
General Public Limit					
0.61000	mW/cm^2				
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		3.05	0.61		
1,500-100,000		5	1		
EIRP		Distance	Distance	S	
milliwatts		cm	inches	mW/cm^2	
252.982		70.00	27.56	0.00411	
252.982		60.00	23.62	0.00559	
252.982		50.00	19.69	0.00805	
252.982		40.00	15.75	0.01258	
252.982		30.00	11.81	0.02237	
252.982		20.00	7.87	0.05033	
252.982		10.00	3.94	0.20132	
252.982		9.00	3.54	0.24854	
252.982		8.00	3.15	0.31456	
252.982		7.00	2.76	0.41085	
252.982		6.00	2.36	0.55921	
252.982		5.75	2.26	0.60890	
252.982		4.00	1.57	1.25823	
252.982		3.00	1.18	2.23685	
252.982		2.60	1.02	2.97806	
FCC radio frequency radiation exposure limits per 1.1310					
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	5.75		