

For 1 dBi antenna

<u>M P E C A L C U L A T I O N for G A L T R O N I C S W N G -W A P-104</u>			
Formulas used in the M P E Calculations:			
$E^2/3770 = S, \text{m W /cm}^2$			
$P_{\text{watts}} * G_{\text{gain}} = 10^{(P_{\text{dBm}} - 30 + G_{\text{dBi}})/10}$			
$E, \text{V/m} = (P_{\text{watts}} * G_{\text{gain}} * 30)^{.5}/d, \text{meters}$			
$d = ((P_{\text{watts}} * G * 30)/(3770 * S))^{.5} \text{ ----- (A)}$			
Since			
$S (\text{m W /cm}^2) = 1.00$		from 1.1310 Table 1	
$P (\text{dBm}) = 20.7$		EUT output power	
$G (\text{dBi}) = 1.0$		EUT antenna gain	
Substitute these parameters into the A above, we have			
M P E safe distance d (cm) =		3.4	
NOTE: For mobile or fixed location transmitters, minimum separation distance is 20 cm , even if calculations indicate M P E distance is less			

For 8 dBi antenna

<u>MPE CALCULATION for GALTRONICS WNG-WAP-104</u>			
Formular used in the MPE Calculations:			
$E^2/3770 = S, \text{ mW/cm}^2$			
$P_{\text{watts}} * G_{\text{gain}} = 10^{(P_{\text{dBm}} - 30 + G_{\text{dBi}})/10}$			
$E, \text{ V/m} = (P_{\text{watts}} * G_{\text{gain}} * 30)^{.5}/d, \text{ meters}$			
$d = ((P_{\text{watts}} * G * 30)/3770 * S))^{.5} \text{ ----- (A)}$			
Since			
$S (\text{mW/cm}^2) = 1.00$		from 1.1310 Table 1	
$P (\text{dBm}) = 20.7$		EUT output power	
$G (\text{dBi}) = 8.0$		EUT antenna gain	
Substitute these parameters into the A above, we have			
MPE safe distance d (cm) =		7.7	
NOTE: For mobile or fixed location transmitters, minimum separation distance is 20 cm, even if calculations indicate MPE distance is less			