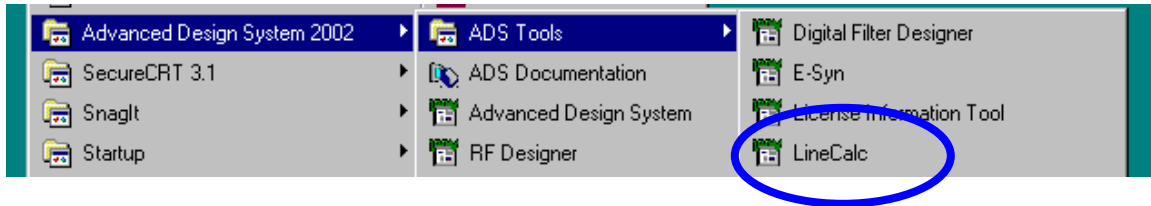
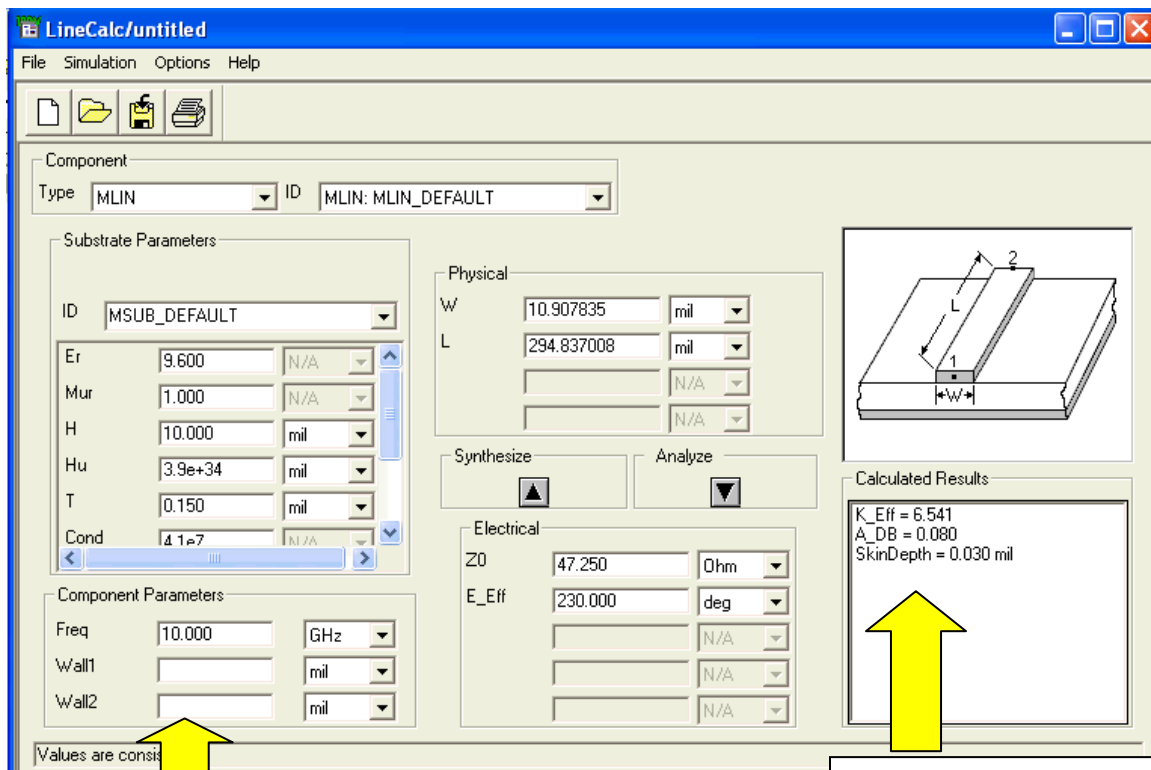


# LINECALC

To start LINECALC,



Select MLIN for the microstrip model.



**Enter on the left:**

relative dielectric constant, Er, (4.5 for FR4)  
board thickness, H, (62.5 mils)  
Conductor thickness, T (use default)  
Design frequency (used to calculate attenuation  
A\_DB and SkinDepth)

K\_Eff = Effective dielectric  
constant  
 $v_p = c/\sqrt{K\_Eff}$

Then choose either synthesize or analyze function giving either electrical or physical line specifications respectively. Electrical length (E\_Eff) can be entered as either degrees or radians.  $E\_Eff$  (degrees) = length in wavelengths \* 360°