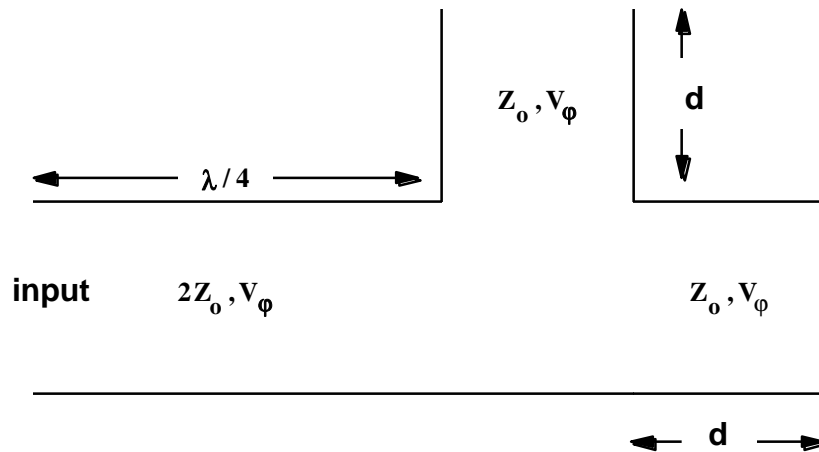


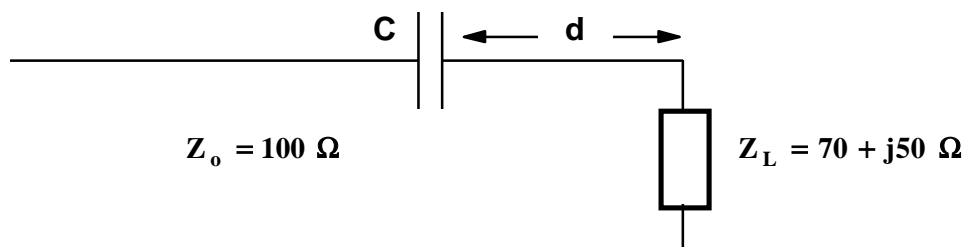
ECE424F MICROWAVE CIRCUITS

Homework #5

1. For the following lossless distributed element circuit, find an equivalent lumped element network as seen at the input-port. Assume $\beta d \ll 1$.



2. Find the length, d , and the capacitance, C , in order to match the load to the given air-filled lossless line. The operating frequency is $f=3$ GHz.



2. Find an equivalent lumped element network for the lossless transmission-line configuration shown below. Assume that $Z_1 \gg Z_2$ and that all sections have the same length and propagation constant with $\beta d \ll 1$.

To what impedance should the shown network be terminated in order to eliminate reflections at the input?

