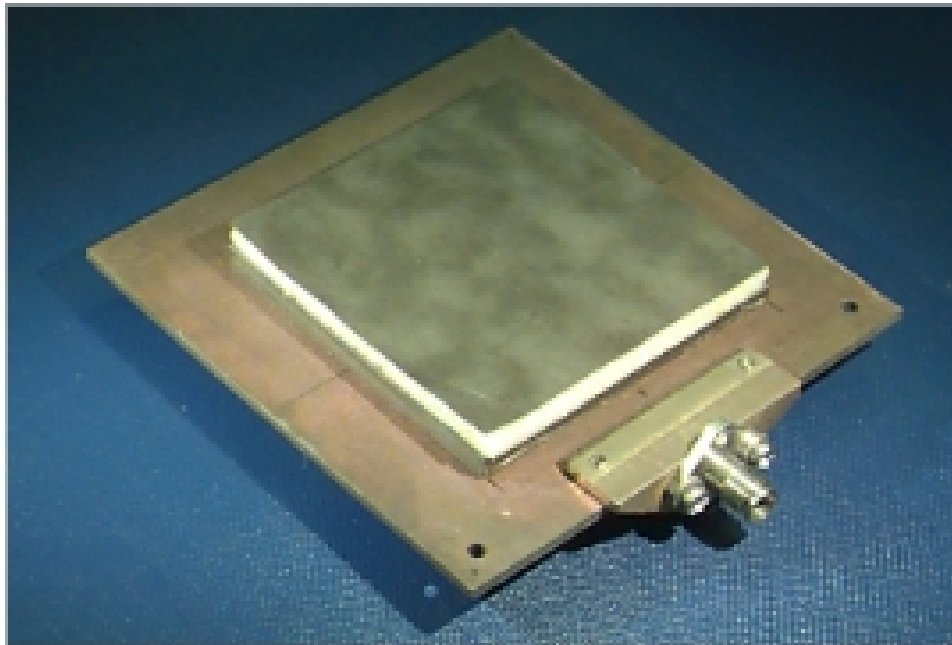


ECE 6345

Spring 2011

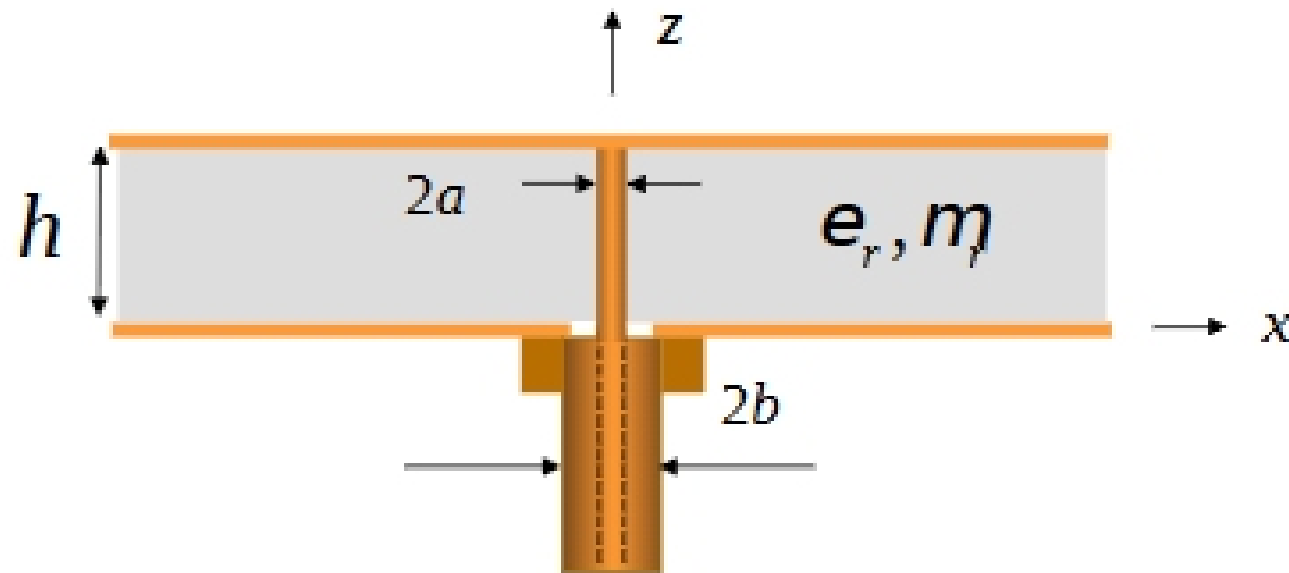
Prof. David R. Jackson
ECE Dept.



Notes 5

Overview

This set of notes discusses **improved models** of the probe inductance of a coaxially-fed patch (accurate for thicker substrates). A parallel-plate waveguide model is initially assumed (at the end of the notes we will also look at the actual finite patch).



Overview (cont.)

The following models are investigated:

- cosine-current model
- gap-source model
- frill model

Reference:

“Comparison of Models for the Probe Inductance for a Parallel Plate Waveguide and a Microstrip Patch,” H. Xu, D. R. Jackson, and J. T. Williams, *IEEE Trans. Antennas and Propagation*, Vol. 53, pp. 3229-3235, Oct. 2005.