Abstracts

A Planar-Lumped Model for Coupled Microstrip Line Discontinuities

A. Sabban and K.C. Gupta. "A Planar-Lumped Model for Coupled Microstrip Line Discontinuities." 1990 MTT-S International Microwave Symposium Digest 90.1 (1990 Vol. I [MWSYM]): 247-250.

This paper presents a convenient model for analyzing coupled microstrip line discontinuities. Similar to the planar magnetic wall model for single microstrip lines, a planar-lumped model is developed for coupled microstrip lines. Fields underneath the two strips and those fringing at the outer edges are modeled by equivalent planar waveguides. Electric and magnetic field coupling in the gap region is modeled by a lumped network. Model parameters are evaluated such that [C] and [L] matrices of the model are identical with those of coupled lines. This modeling approach is applied to a coupled microstrip section with chamfered right-angled bends to single microstrip lines, and results are in good agreement with experimental values.

❑ Return to main document.