

Abstracts

Multimode Moment Method Formulation for Waveguide Discontinuities

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A computationally efficient method for analyzing waveguide discontinuities is presented. The method is based on Galerkin's moment method formulation. The generalized scattering matrix of a waveguide discontinuity is derived. A generalized equivalent circuit is constructed which gives physical insight to the problem. The method is found to be several times faster than the well-known mode matching technique. The accuracy of the proposed method is demonstrated by comparing the numerical result with the measured return loss of a multisection iris-coupled filter.

 [Return to main document.](#)