# Abstracts

## CAD-Oriented Fullwave Equivalent Circuit Models for Waveguide Components and Circuits

*A. Weisshaar, M. Mongiardo, A. Tripathi and V.K. Tripathi. "CAD-Oriented Fullwave Equivalent Circuit Models for Waveguide Components and Circuits." 1996 Transactions on Microwave Theory and Techniques 44.12 (Dec. 1996, Part II [T-MTT] (1996 Symposium Issue)): 2564-2570.*

New multimode equivalent circuit models for single and cascaded E-plane and H-plane step discontinuities in rectangular waveguides are presented. The computer-aided design (CAD)-oriented equivalent circuit models enable rigorous and efficient fullwave analysis of waveguide components and circuits entirely by circuit simulation. The method has been implemented on the microwave circuit simulator Libra and applied to waveguide structures containing single and cascaded irises and stub discontinuities. Comparisons of circuit simulation results for single and cascaded inductive irises as well as a single and three E-plane stubs with the standard mode-matching method show perfect agreement. Results of a Ka-Band bandpass filter analysis are in good agreement with a mode-matching solution that includes the correct edge condition.

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