

Abstracts

Efficient 3D-SCN-TLM Diakoptics for Waveguide Components (Dec. 1994, Part. II [T-MTT])

M. Righi and W.J.R. Hoefer. "Efficient 3D-SCN-TLM Diakoptics for Waveguide Components (Dec. 1994, Part. II [T-MTT])." 1994 Transactions on Microwave Theory and Techniques 42. 12 (Dec. 1994, Part II [T-MTT] (1994 Symposium Issue)): 2381-2385.

In this paper, the efficiency of the diakoptic procedure, when applied to three-dimensional waveguide discontinuity problems, is improved by taking advantage of the separability of the time domain Green's function that holds for homogeneous waveguides. The procedure has been applied to the analysis of waveguide discontinuities showing how absorbing boundaries generated with the modal diakoptic procedure provide wide-band matching for the fundamental mode as well as all of the TE and TM modes excited by the discontinuity. In addition, the modal approach leads to the generalized S matrix of a general discontinuity with a single TLM simulation.

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