Abstracts

An Improved Transmission Matrix Formulation of Cascaded Discontinuities and its Application to E-Plane Circuits (Dec. 1986 [T-MTT])

R.R. Mansour and R.H. MacPhie. "An Improved Transmission Matrix Formulation of Cascaded Discontinuities and its Application to E-Plane Circuits (Dec. 1986 [T-MTT])." 1986 Transactions on Microwave Theory and Techniques 34.12 (Dec. 1986 [T-MTT] (1986 Symposium Issue)): 1490-1498.

We study the effect of the relative convergence problem on the transmission matrix formulation of cascaded discontinuities. A numerically efficient modified formulation satisfying the edge condition is presented. Application is in the analysis of waveguiding structures in which a number of conductors are placed on various interfaces. Numerical results are presented for double-ridged waveguides and finlines. Applications to E-plane filters are also discussed.

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