Abstracts

A Scattering-Type Transverse Resonance Formulation and its Application to Open, Conductor-Backed and Shielded Slotline (M)MIC Structures

J. Bornemann. "A Scattering-Type Transverse Resonance Formulation and its Application to Open, Conductor-Backed and Shielded Slotline (M)MIC Structures." 1991 MTT-S International Microwave Symposium Digest 91.2 (1991 Vol. II [MWSYM]): 695-698.

A new formulation of the transverse resonance technique is introduced and applied to the propagation characteristics calculation of MIC and MMIC slot line configurations. By utilizing a scattering-type representation of the transverse discontinuities involved, the influences of different boundary conditions as required for conductor-backed, shielded or even open structures can be easily incorporated. The computed results obtained with this method are found to be in excellent agreement with measurements as well as with previously published theoretical data on fundamental and higher-order mode characteristics. The software is operational on 386-compatible workstations.

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