Abstracts

Analysis of planar microwave and millimeter-wave circuits with anisotropic layers based on generalized transmission line equations and on the method of lines

R. Pregla. "Analysis of planar microwave and millimeter-wave circuits with anisotropic layers based on generalized transmission line equations and on the method of lines." 2000 MTT-S International Microwave Symposium Digest 00.1 (2000 Vol. I [MWSYM]): 125-128.

A novel algorithm based on generalized transmission line equations (GTL) and on the method of lines (MoL) for the analysis of planar waveguide circuits with anisotropic layers is proposed and substantiated. The algorithm uses discretization lines in the propagation direction of the waves. As in the case of multiconductor transmission lines two modal matrices are determined. Impedance/admittance transformation equations are determined on the basis of the GTL equations. Using these equations numerically stable and accurate impedance transformations and field calculations can be performed.

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