Abstracts

Application of the Eigenmode Transformation Technique for the Analysis of Planar Transmission Lines (1996 Vol. II [MWSYM])

C. Rieckmann, A. Jostingmeier and A.S. Omar. "Application of the Eigenmode Transformation Technique for the Analysis of Planar Transmission Lines (1996 Vol. II [MWSYM])." 1996 MTT-S International Microwave Symposium Digest 96.2 (1996 Vol. II [MWSYM]): 1023-1026.

The eigenmode transformation technique is suitable for the analysis of inhomogeneously filled shielded waveguides containing metal inserts. The permittivity of the filling medium may be an arbitrary function of the transverse coordinates. The method is based on expanding the electromagnetic field in terms of the eigenmodes of the corresponding empty shielding waveguide. The metal inserts have the effect of linearly transforming these eigenmodes into those of the waveguide containing the metal inserts only. This leads to a proper matrix eigenvalue problem. The method is applied to different types of planar transmission lines and the results are compared with other methods.

❑ Return to main document.