Abstracts

Analysis of an Infinite Array of Rectangular Anisotropic Dielectric Waveguides Using the Finite-Difference Method (Short Papers)

C.L. da Silva Souza Sobrinho and A.J. Giarola. "Analysis of an Infinite Array of Rectangular Anisotropic Dielectric Waveguides Using the Finite-Difference Method (Short Papers)." 1992 Transactions on Microwave Theory and Techniques 40.5 (May 1992 [T-MTT]): 1021-1025.

The finite-difference method is used in the analysis of the propagation characteristics of an infinite array of rectangular dielectric waveguides. Particular attention is devoted to the mode coupling analysis and a comparison with results from an integral equation method is presented. The wave, equation is solved in terms of the transverse components of the magnetic field, resulting in an eigenvalue problem with the elimination of spurious modes. The formulation is general and may be applied to the solution of other problems, including those with anisotropic dielectrics and with a continuous variation of the index of refraction profile in the wavegide cross section.

❑ Return to main document.