Abstracts

Integral Equation Solution to the Guidance and Leakage Properties of Coupled Dielectric Strip Waveguides

The guidance and leakage properties of single and coupled dielectric strip waveguides are analyzed using the dyadic Green's function and integral equation formulation. Galerkin's method is used to solve the integral equation for the dispersion relation. The effects of the geometrical and the electrical parameters on the dispersion relation are investigated. A method to predict the occurrence of leakage is proposed. The properties of the even and the odd leaky modes are also investigated. Results are compared with previous analysis and shown to be in good agreement.

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