Abstracts

Numerical Solution of Dielectric Loaded Waveguides: I--Finite-Element Analysis

A variational expression of the electromagnetic fields in dielectric loaded waveguides is derived. This expression is discretized using the finite-element method and an electromagnetic coupling matrix is derived and evaluated. No restriction is placed on the shapes of the triangular elements or the order of the polynomial approximation. A general finite-element computer program is described and dispersion curves and field plots of some dielectric loaded waveguides are presented.

❑ Return to main document.