Abstracts

On the Reduction of the Number of Spurious Modes in the Vectorial Finite-Element Solution of Three-Dimensional Cavities and Waveguides

A. Konrad. "On the Reduction of the Number of Spurious Modes in the Vectorial Finite-Element Solution of Three-Dimensional Cavities and Waveguides." 1986 Transactions on Microwave Theory and Techniques 34.2 (Feb. 1986 [T-MTT]): 224-227.

A novel approach to the solution of three-dimensional micro-wave cavity and waveguide problems by finite elements reduces the number of spurious, nonphysical modes. Solutions are obtained in terms of the field vector H. Three-dimensional vector boundary conditions are implemented in a way that allows arbitrarily-shaped curved boundaries to be modeled. The formulation is based on a subparametric finite element with 27 interpolation nodes.

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