Abstracts

A Numerical Method Based on the Discretization of Maxwell Equations in Integral Form (Short Papers)

A method is described for the solution of the electromagnetic field inside resonant cavities and waveguides of arbitrary shape, whether homogeneously or inhomogeneously filled. The method, suitably programmed for use with a digital computer, is based on the direct discretization of the Maxwell equations in integral form. Since the method works with the components of the electromagnetic field, the numerical solution directly gives the distributions of the field in the structure, in addition to the resonant frequencies of cavities or the propagation constants of waveguides. Some numerical applications of the method are given.

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