Abstracts

Application of the Galerkin Method for Determination of Quasi TE/sub i0k/ Mode Frequencies of a Rectangular Cavity Containing a Dielectric Sample (Short Papers)

A. Kedzior and J. Krupka. "Application of the Galerkin Method for Determination of Quasi TE/sub i0k/ Mode Frequencies of a Rectangular Cavity Containing a Dielectric Sample (Short Papers)." 1982 Transactions on Microwave Theory and Techniques 30.2 (Feb. 1982 [T-MTT]): 196-198.

A new method determination of quasi TE/sub i0k/ mode frequencies of a rectangular cavity containing a dielectric sample is presented. A centrally loaded dielectric sample fills completely only one dimension of a cross section of the cavity. The calculations are based on the Galerkin method using a new suitable set of basis functions. The theoretical results are illustrated by experiments. The obtained results of calculations and experiments demonstrate the advantages of the new basis as compared with the classical one. The presented method may be applied for the analysis of two-dimensional boundary problems for various resonant cavities with inhomogeneous filling.

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