Abstracts

A New Formulation of the Boundary Condition at Infinity for a Hybrid Radiation Mode and its Application to the Analysis of Radiation Modes of Microstrip Lines

W. Zieniutycz. "A New Formulation of the Boundary Condition at Infinity for a Hybrid Radiation Mode and its Application to the Analysis of Radiation Modes of Microstrip Lines." 1990 Transactions on Microwave Theory and Techniques 38.9 (Sep. 1990 [T-MTT] (Special Issue on Multifunction MMIC's and their System Applications)): 1294-1299.

In the paper a new boundary condition for hybrid radiation modes is introduced. The validity of the condition is proved by its application to the analysis of a laterally shielded dielectric slab. Next, using this condition, an iterative method in the spectral domain is proposed in order to analyze striplike stratified transmission lines. As a result, two solutions, classified as perturbed LSE and LSM modes, have been obtained. Numerical results concerning the convergence of the method as well as the field distribution are also presented for the case of a microstrip line.

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