

Abstracts

Analysis of Open-Type Waveguides by the Vector Finite-Element Method

M. Matsuhara, H. Yunoki and A. Maruta. "Analysis of Open-Type Waveguides by the Vector Finite-Element Method." 1991 Microwave and Guided Wave Letters 1.12 (Dec. 1991 [MGWL]): 376-378.

A novel variational expression that is suitable for the waveguide analysis is proposed. In addition, a new mapping technique to analyze open-type waveguides is introduced. Any arbitrarily shaped waveguides can be analyzed by the finite-element method with this variational expression and the mapping technique. The dispersion characteristics of the rectangular dielectric waveguide and the microstrip line are demonstrated and these results shows the validity and usefulness of this method well.

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