

# Abstracts

## Finite Element Formulation for Guided-Wave Problems Using Transverse Electric Field Component (Short Papers)

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*K. Hayata, M. Eguchi and M. Koshiba. "Finite Element Formulation for Guided-Wave Problems Using Transverse Electric Field Component (Short Papers)." 1989 Transactions on Microwave Theory and Techniques 37.1 (Jan. 1989 [T-MTT]): 256-258.*

A finite-element formulation for electromagnetic waveguide problems is described using the transverse electric field component. In this approach, the divergence relation  $\nabla \cdot \mathbf{D} = 0$  is satisfied and spurious solutions can be eliminated in the entire region of a propagation diagram. The validity of the formulation is examined via applications to a few canonical guided-wave problems.

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