Abstracts

Alternative Field Representations and Integral Equations for Modeling Inhomogeneous Dielectrics (Short Papers)

J.L. Volakis. "Alternative Field Representations and Integral Equations for Modeling Inhomogeneous Dielectrics (Short Papers)." 1992 Transactions on Microwave Theory and Techniques 40.3 (Mar. 1992 [T-MTT]): 604-608.

New volume and volume-surface integral equations are presented for modeling inhomogeneous dielectric regions. In particular, it is shown that materials with non-trivial permeability and permittivity can be modeled using a single unknown equivalent current or field component. The presented integral equations result in more efficient numerical implementations and should therefore be useful in a variety of electromagnetic applications.

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