Abstracts

A General Algorithm for Computing the Bidimensional Spectral Green's Dyad in Multilayered Complex Bianisotropic Media: The Equivalent Boundary Method

F.L. Mesa, R. Marques and M. Horno. "A General Algorithm for Computing the Bidimensional Spectral Green's Dyad in Multilayered Complex Bianisotropic Media: The Equivalent Boundary Method." 1991 Transactions on Microwave Theory and Techniques 39.9 (Sep. 1991 [T-MTT] (Special Issue on Microwave Applications of Superconductivity)): 1640-1649.

A systematic method to obtain the bidimensional spectral dyadic Green's function (BSDGF) of stratified planar structures with arbitrary complex bianisotropic layers is developed. The method is based on the uniqueness and equivalence electromagnetic theorems. A first-order partial differential formulation for the electromagnetic field inside each layer is used. An explicit algorithm makes it possible to go from the single-layer formulas to the general n-layer matrix formulation. The perturbative nature of the method provides good numerical efficiency and straightforward determination of asymptotic behavior.

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