

Variational Method for Planar Transmission Lines with Anisotropic Magnetic Media

T. Kitazawa. "Variational Method for Planar Transmission Lines with Anisotropic Magnetic Media." 1989 Transactions on Microwave Theory and Techniques 37.11 (Nov. 1989 [T-MTT]): 1749-1754.

Upper and lower bound expressions of line inductances are presented for the first time for planar transmission lines with anisotropic magnetic media. Green's functions are derived for the general structure by using recurrent relations. Numerical examples of striplines and coplanar waveguide are presented, and the calculated values of the quasi-static characteristics of stripline on an anisotropic magnetic substrate with the tensor permeability are in good agreement with measured values.

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