

Computation of Characteristic Impedance for Multiple Microstrip Transmission Lines Using a Vector Finite Element Method

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The total characteristic impedance is computed from the field solution generated by a vector magnetic field finite element method for several microstrip geometries. By making use of the power orthogonality of the modes, characteristic impedances are computed. Additionally, the existence of negative modal characteristic impedances is verified for certain multiconductor striplines. Circuit parameters which are generated using this new method are verified by results from the spectral domain technique.

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