

Abstracts

Effects of Misalignment on Propagation Characteristics of Transmission Lines Printed on Anisotropic Substrates (Short Papers)

T.Q. Ho and B. Beker. "Effects of Misalignment on Propagation Characteristics of Transmission Lines Printed on Anisotropic Substrates (Short Papers)." 1992 Transactions on Microwave Theory and Techniques 40.5 (May 1992 [T-MTT]): 1018-1021.

The spectral-domain method is applied to study the propagation characteristics of grounded transmission lines on biaxial substrates whose axes are misaligned with those of the line. The three structures under investigation are the grounded slotline, microstrip, and the edge coupled line. The formulation derives an expression for the Green's function that is valid for substrates which are simultaneously characterized by both their permittivity and permeability tensors. The off-diagonal elements of the permittivity tensor, present due to the misalignment of the axes, are used to examine the dispersion properties of these transmission lines with numerous case-studies presented for different angles of rotation.

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