Abstracts

Analysis of Bilateral Coplanar Waveguides Printed on Anisotropic Substrates for Use in Monolithic MICs

Y. Chen and B. Beker. "Analysis of Bilateral Coplanar Waveguides Printed on Anisotropic Substrates for Use in Monolithic MICs." 1993 Transactions on Microwave Theory and Techniques 41.8 (Sep. 1993 [T-MTT] (Special Issue on Modeling and Design of Coplanar Monolithic Microwave and Millimeter-Wave Integrated Circuits)): 1489-1493.

The spectral-domain method is applied to the analysis of bilateral (double-sided) coplanar waveguides that are printed on electric and/or magnetic anisotropic substrates. A non-decoupling approach is used to solve the coupled differential equations for the transverse propagation constants inside the substrate. The dyadic admittance Green's function is derived for both open and shielded bilateral coplanar waveguides, taking into account the anisotropy of the material. Finally, numerical results, describing the propagation characteristics of these structures, are presented for both electric and magnetic wall symmetries.

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