Abstracts

Generalized Analysis of Microstrip-Like Transmission Lines and Coplanar Strips with Anisotropic Substrates for MIC, Electrooptic Modulator, and SAW Application

S.K. Koul and B. Bhat. "Generalized Analysis of Microstrip-Like Transmission Lines and Coplanar Strips with Anisotropic Substrates for MIC, Electrooptic Modulator, and SAW Application." 1983 Transactions on Microwave Theory and Techniques 31.12 (Dec. 1983 [T-MTT] (1983 Symposium Issue)): 1051-1059.

A unified variational expression is presented for the line capacitance of a general, multilayer anisotropic structure. The propagation characteristics of a variety of striplines, microstriplines, and coplanar strips, in isolated and coupled configurations, with anisotropic substrates having optical axis aligned along the axis of the substrate, are computed. The characteristics of these structures with anisotropic substrates having tilted optical axis are also studied. Using the formulas presented, the study of structures with anisotropic substrates having aligned or tilted optical axis, for various applications including MIC, electrooptic modulator, and SAW IDT, reduces to the determination of a single admittance parameter. This parameter can be obtained from the transmission-line equivalent circuit of the structure almost by inspection.

❑ Return to main document.