# Abstracts

## Finite-element analysis of generalized V- and W-shaped edge and broadside-edge-coupled shielded microstrip lines on anisotropic medium

*Yue Yan and P. Pramanick. "Finite-element analysis of generalized V- and W-shaped edge and broadside-edge-coupled shielded microstrip lines on anisotropic medium." 2001 Transactions on Microwave Theory and Techniques 49.9 (Sep. 2001 [T-MTT] (Mini-Special Issue on the 2001 IEEE Radio Frequency Integrated Circuit (RFIC) Symposium)): 1649-1657.*

This paper presents detailed finite-element analysis of generalized V- and W-shaped shielded microstrip lines in an anisotropic medium. The computed results show detailed quasistatic characteristics of the effective dielectric constant, characteristic impedance, and conductor loss of the lines. The broadside edge coupled lines are proposed for the first time in this paper. Unlike the previous analysis based on the conformal mapping method, this analysis takes into account the top walls and sidewalls, finite metallization thickness, and dielectric anisotropy. The results presented in this paper will considerable advance microwave-integrated-circuit technology using V- and W-shaped shielded microstrip lines.

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