# Abstracts

## Highly Accurate Quasi-Static Modeling of Microstrip Lines Over Lossy Substrates

*E. Tuncer and D.P. Neikirk. "Highly Accurate Quasi-Static Modeling of Microstrip Lines Over Lossy Substrates." 1992 Microwave and Guided Wave Letters 2.10 (Oct. 1992 [MGWL]): 409-411.*

A highly accurate quasi-static model of a microstrip over a semiconductor layer has been developed. The model agrees with full-wave calculations in all three modes of propagation (skin-effect, slow-wave, and dielectric quasi-TEM), for both the attenuation constant alpha and the propagation constant beta over a very wide range of dimension, substrate conductivity, and frequency. To achieve this level of agreement, a nonuniform cross-section, transverse resonance technique has been applied to find the series impedance per unit length of the microstrip transmission line.

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