

# Abstracts

## Characteristics of Multiconductor, Asymmetric, Slow-Wave Microstrip Transmission Lines (Dec. 1986 [T-MTT])

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*T.-C. Mu, H. Ogawa and T. Itoh. "Characteristics of Multiconductor, Asymmetric, Slow-Wave Microstrip Transmission Lines (Dec. 1986 [T-MTT])." 1986 Transactions on Microwave Theory and Techniques 34.12 (Dec. 1986 [T-MTT] (1986 Symposium Issue)): 1471-1477.*

Spectral-domain technique has been applied to analyze multiconductor, asymmetric, slow-wave microstrip lines. It is observed that 1) the coupled slow-wave microstrip line on a two-layer substrate may have substantially different propagation constants for even and odd modes and 2) the slow-wave factor of an odd mode of coupled microstrip lines on a three-layer substrate may be equal to or larger than that of an even mode under appropriate conditions. This presents the flexibility to realize a large variety of passive components, such as directional couplers, phase shifters, and attenuators.

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