# Abstracts

## An Integrated Transition of Microstrip to Nonradiative Dielectric Waveguide for Microwave and Millimeter-Wave Circuits

*L. Han, K. Wu and R.G. Bosisio. "An Integrated Transition of Microstrip to Nonradiative Dielectric Waveguide for Microwave and Millimeter-Wave Circuits." 1996 Transactions on Microwave Theory and Techniques 44.7 (Jul. 1996, Part I [T-MTT]): 1091-1096.*

Effective interconnects between two or more different waveguides are essential for using hybrid architecture of circuits as well as multipurpose instrumentation and measurements at microwave and millimeter-wave frequencies. In this paper, a new transition of microstrip line to nonradiative dielectric (NRD) guide is reported that makes it possible to design a class of compact NRD waveguide circuits directly integrated with planar-microstrip-based devices and components. A small aperture coupling theory is developed and effectively applied to model the proposed structure. It is found that theoretical results are in good agreement with experiments. The proposed transition promises to be instrumental in integrating planar microstrip devices and components with NRD guide circuits.

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