

# Abstracts

## Design and Analysis of Transitions from Rectangular Waveguide to Layered Ridge Dielectric Waveguide

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G.E. Ponchak, N.I. Dib and L.P.B. Katehi. "Design and Analysis of Transitions from Rectangular Waveguide to Layered Ridge Dielectric Waveguide." 1996 Transactions on Microwave Theory and Techniques 44.7 (Jul. 1996, Part I [T-MTT]): 1032-1040.

Transitions from rectangular waveguide to layered ridge dielectric waveguide are studied both experimentally and theoretically. In addition, a design procedure is given for each transition. The analysis and design procedures are valid for transitions between rectangular waveguide and other open dielectric waveguides such as image guide, insulated image guide, dielectric ridge guide, and inverted strip dielectric waveguide. It is shown that for small dielectric waveguides such as layered ridge dielectric waveguide, a transition which is comprised of a tapered ridge waveguide reduces the radiation loss by at least 1 dB.

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