# Abstracts

## Effects of Conductor Edge Profile on Transmission Properties of Conductor-Backed Coplanar Waveguides

*L. Zhu and E. Yamashita. "Effects of Conductor Edge Profile on Transmission Properties of Conductor-Backed Coplanar Waveguides." 1995 Transactions on Microwave Theory and Techniques 43.4 (Apr. 1995, Part I [T-MTT]): 847-853.*

A boundary integral equation method is applied to the full-wave analysis of conductor-backed coplanar waveguides with a rectangular or trapezoidal conductor cross-section. One to a particular choice of Green's functions for each subregion defined in a given cross-section, electromagnetic fields in each subregion are analytically expressed in terms of equivalent magnetic currents on apertures and resulting integration contours are defined only on aperture surfaces. Consequently, this approach can overcome relative convergence problems even in the case of largely different aperture widths among subregions. Numerical data show that this approach has a stable convergence property and requires a short computation time. Numerical results obtained with this approach are in excellent agreement with other available theoretical data. A series of calculated data for some rectangular and trapezoidal conductor configurations are provided to show the effects of conductor edge profile on transmission properties of conductor-backed coplanar waveguides.

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