# Abstracts

## Application of a Coupled-Integral-Equations Technique to Ridged Waveguides

*S. Amari, J. Bornemann and R. Vahldieck. "Application of a Coupled-Integral-Equations Technique to Ridged Waveguides." 1996 Transactions on Microwave Theory and Techniques 44.12 (Dec. 1996, Part I [T-MTT]): 2256-2264.*

Cut-off frequencies of all TE and TM modes of a ridged rectangular wave guide are accurately determined using a coupled-integral equations technique (CIET). The technique analyzes both symmetric and asymmetric situations in one step. Basis functions, which include the edge conditions and mirror images in the waveguide walls, are used in the moment method solution of the integral equations. One or two basis functions are found sufficient to accurately determine the spectrum. The limiting case of a zero-thickness metallic ridge is also presented. Results from the present technique are compared with available data; excellent agreement is documented.

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