

# Abstracts

## Space Domain Analysis of Micro-IDG Structures

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*N. Izzat, S.R. Pennock and T. Rozzi. "Space Domain Analysis of Micro-IDG Structures." 1994 Transactions on Microwave Theory and Techniques 42.6 (Jun. 1994 [T-MTT]): 1074-1078.*

The Microstrip Loaded Inset Dielectric Waveguide has been proposed as a transmission medium alternative to microstrip, and as a useful antenna medium at X-band and millimetric frequencies. In the present analysis we consider the case where a multi-layer, multi-conductor microstrip circuit may be housed within Inset Dielectric Waveguide. A generalised Transverse Resonance Diffraction method is developed in the space domain for analyzing such structures. Experimental and theoretical results for the propagation characteristics of the fundamental and first higher order mode of a few different configurations are presented showing good agreement.

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