Abstracts

Multiple Dielectric Structures to Eliminate Moding Problems in Conductor-Backed Coplanar Waveguide MIC's

M.A. Magerko, L. Fan and K. Chang. "Multiple Dielectric Structures to Eliminate Moding Problems in Conductor-Backed Coplanar Waveguide MIC's." 1992 Microwave and Guided Wave Letters 2.6 (Jun. 1992 [MGWL]): 257-259.

Conventional conductor-backed (grounded) coplanar waveguides (CBCPW) leak energy from its dominant mode in the form of a parallel plate mode (PPM) in the substrate region at all frequencies which can generate undesirable coupling effects and produce an ineffective circuit. A multiple dielectric structure with appropriate dimensions is used to suppress the leakage effects and the spectral domain method (SDM) predicts the critical frequency (transition point for leaky and nonleaky modes) for the waveguide. Experimental data verifies this procedure and demonstrates the significance of the moding (leakage coupling) problems.

❑ Return to main document.