Abstracts

Effect of Finite-Width Backside Plane on Overmoded Conductor-Backed Coplanar Waveguide

C.-C. Tien, C.-K.C. Tzuang and S.T. Peng. "Effect of Finite-Width Backside Plane on Overmoded Conductor-Backed Coplanar Waveguide." 1993 Microwave and Guided Wave Letters 3.8 (Aug. 1993 [MGWL]): 259-261.

The full-wave mode-matching method is utilized to investigate the transmission characteristics of a conductor-backed coplanar waveguide (CBCPW) with a finite backside plane. Experimental results of the scattering parameters of the CBCPW through line are presented. The theoretical results of the proposed CBCPW model, which consider a finite backside-plane CBCPW to be a system of coupled transmission lines, are shown to agree very well with the experimental ones. The anomalous resonant phenomena in the transmission characteristics of a CBCPW through line and the effect of the finite-width backside plane are obtained and discussed.

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