Abstracts

Quasi-TEM Analysis of V-Shaped Conductor-Backed Coplanar Waveguide

K.-K.M. Cheng and I.D. Robertson. "Quasi-TEM Analysis of V-Shaped Conductor-Backed Coplanar Waveguide." 1995 Transactions on Microwave Theory and Techniques 43.8 (Aug. 1995 [T-MTT]): 1992-1994.

In this paper, a new type of V-shaped conductor-backed coplanar waveguide (VGCPW) is proposed. The characteristic impedance of the new line is obtained analytically using conformal mapping method under the assumption of pure-TEM propagation and zero dispersion. Direct solutions for the quasistatic normal electric field components and cumulative electric flux distribution across conductor surfaces are also presented. The numerical results show how the total electric flux terminating on the conductor surfaces varies in terms of the CPW's geometry and substrate parameters.

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