Abstracts

On the Analysis of Single- and Multiple-Step Discontinuities for a Shielded Three-Layer Coplanar Waveguide

K.M. Rahman and C. Nguyen. "On the Analysis of Single- and Multiple-Step Discontinuities for a Shielded Three-Layer Coplanar Waveguide." 1993 Transactions on Microwave Theory and Techniques 41.8 (Sep. 1993 [T-MTT] (Special Issue on Modeling and Design of Coplanar Monolithic Microwave and Millimeter-Wave Integrated Circuits)): 1484-1488.

Single- and multiple-step discontinuities for a shielded three-layer coplanar waveguide (CPW) are studied. The mode matching procedure is employed to obtain the scattering (S) parameters of the discontinuities. The analysis is validated through a comparison of the calculated S-parameters of a single step discontinuity for a shielded single-layer CPW and those published previously. Calculated S-parameters for various single, double, and triple step discontinuities are presented. Effect of the modal orthogonality criterion on the discontinuity S-parameters is given. Extensive investigation of the numerical convergence of the S-parameters is also described.

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