

Abstracts

Modeling of Some Coplanar Waveguide Discontinuities (Dec. 1988 [T-MTT])

R.N. Simons and G.E. Ponchak. "Modeling of Some Coplanar Waveguide Discontinuities (Dec. 1988 [T-MTT])." 1988 Transactions on Microwave Theory and Techniques 36.12 (Dec. 1988 [T-MTT] (1988 Symposium Issue)): 1796-1803.

The paper presents lumped equivalent circuit models for several coplanar waveguide (CPW), discontinuities such as an open circuit, a series gap in the center conductor, and a symmetric step in the center conductor and gives their element values as a function of the discontinuity physical dimensions. The model element values are de-embedded from measured S parameters. In addition, the effects of the center conductor width and the substrate thickness on the equivalent circuit element values are presented. The characteristics of a CPW right angle bend employing a novel compensation technique is also presented. The frequency dependence of the effective dielectric constant is measured and compared to computed values.

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