Abstracts

Theoretical and Experimental Characterization of Coplanar Waveguide Discontinuities for Filter Applications

N.I. Dib, L.P.B. Katehi, G.E. Ponchak and R.N. Simons. "Theoretical and Experimental Characterization of Coplanar Waveguide Discontinuities for Filter Applications." 1991 Transactions on Microwave Theory and Techniques 39.5 (May 1991 [T-MTT] (Special Issue on Directions in Design and Applications of Microwave Systems)): 873-882.

A full-wave analysis of shielded coplanar waveguide two-port discontinuities based on the solution of an appropriate surface integral equation in the space domain is presented. Using this method, frequency-dependent scattering parameters for open-end and short-end CPW stubs are computed. The numerically derived results are compared with measurements performed in the frequency range 5-25 GHz and show very good agreement. Equivalent circuit models and closed-form expressions to compute the circuit element values for these discontinuities are also presented.

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