Abstracts

Circuit Model for Substrate Resonance Coupling in Grounded Coplanar Waveguide Circuits (Short Papers)

R.W. Jackson. "Circuit Model for Substrate Resonance Coupling in Grounded Coplanar Waveguide Circuits (Short Papers)." 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)): 1641-1645.

At high frequencies, grounded coplanar waveguide MMIC circuits can be prone to destructive intercircuit coupling effects due to substrate resonances. Analytic formulas for a simple circuit model of this coupling are presented in this paper. The model can be used with commercially available CAD in order to estimate the importance of such coupling for a particular circuit and substrate configuration. Results predicted by this model are compared to numerically rigorous spectral domain results and to experiment.

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