Abstracts

Full-Wave Analysis of Coplanar Strips Considering the Finite Strip Metallization Thickness (Short Papers)

K.M. Rahman and C. Nguyen. "Full-Wave Analysis of Coplanar Strips Considering the Finite Strip Metallization Thickness (Short Papers)." 1994 Transactions on Microwave Theory and Techniques 42.11 (Nov. 1994 [T-MTT]): 2177-2179.

An extensive analysis, based on a full-wave mode-matching technique, is described for coplanar strips (CPS) incorporating the strips' finite metallization thickness. Results for the effective dielectric constant and characteristic impedance are presented to show the effect of the metallization thickness. It is found that the characteristic impedance has a strong dependence on the metallization thickness, which signifies the fact that the finite metallization thickness needs to be considered in designing practical microwave circuits employing CPS. Numerical results of CPS with zero metallization thickness obtained using this method are found to be in good agreement with those published previously. Extensive investigation of the numerical convergence of these results is also described.

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