Abstracts

Theoretical and Experimental Investigation of Asymmetric Coplanar Waveguides (Short Papers)

V.F. Hanna and D. Thebault. "Theoretical and Experimental Investigation of Asymmetric Coplanar Waveguides (Short Papers)." 1984 Transactions on Microwave Theory and Techniques 32.12 (Dec. 1984 [T-MTT] (1984 Symposium Issue)): 1649-1651.

Conformal mapping techniques are used to obtain analytic closed-form expressions for the characteristic impedance and the relative effective dielectric constant of asymmetric coplanar waveguide with infinite or finite dielectric thickness. The line asymmetry leads to a decrease of its characteristic impedance and to an increase of its relative effective dielectric constant. Six asymmetric coplanar waveguides are realized and their characteristic impedances are measured using time-domain reflectometry techniques. The experimental results show very good agreement with the theoretical ones.

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