Abstracts

The Microstrip Step Discontinuity: A Revised Description

N.H.L. Koster and R.H. Jansen. "The Microstrip Step Discontinuity: A Revised Description." 1986 Transactions on Microwave Theory and Techniques 34.2 (Feb. 1986 [T-MTT]): 213-223.

A systematic variety of frequency-dependent numerical results hitherto unavailable are presented for the shielded microstrip impedance step. The computational method used is a rigorous full-wave spectral-domain approach developed by Jansen. The given data describe the steps for two very common groups of dielectric substrates as a function of stepwidth ratio in the range of normalized frequencies where it behaves like a two-port. They represent new MIC design information and are compared with quasi-static results and the widely used magnetic-wall waveguide approximation. Beyond this, they are validated against the sparse step-discontinuity data available from previous rigorous approaches.

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