Abstracts

An Exact TEM Calculation of Loss in a Stripline of Arbitrary Dimensions

S. Rawal and D.R. Jackson. "An Exact TEM Calculation of Loss in a Stripline of Arbitrary Dimensions." 1991 Transactions on Microwave Theory and Techniques 39.4 (Apr. 1991 [T-MTT]): 694-699.

An exact expression for the quasi-static conductive attenuation in a symmetrical stripline is derived. The formulation is based on a TEM assumption, which assumes that the skin depth is much smaller than the strip thickness. The conductive attenuation is related to the charge density on the conductive surfaces, which is determined by a conformal mapping originally proposed by Bates. An analytic extraction of a charge singularity term is used to obtain a numerically efficient calculation, in which no singular integrations appear.

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