

# Abstracts

## Closed-Form Expressions for the Design of Microstrip Lines with Two Substrate Layers

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*J.P.K. Gilb and C.A. Balanis. "Closed-Form Expressions for the Design of Microstrip Lines with Two Substrate Layers." 1993 MTT-S International Microwave Symposium Digest 93.2 (1993 Vol. II [MWSYM]): 1005-1008.*

A simple closed-form expression for the effective dielectric constant of a microstrip on a two-layer substrate is presented. Results for single layer cases are incorporated in the formula to simplify it and increase the accuracy. The formula is curve-fitted from results computed with the Spectral Domain approach and is accurate to within three percent relative error over a wide range of parameters.

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