

Abstracts

Analysis of a Microstrip Covered with a Lossy Dielectric

I.J. Bahl and S.S. Stuchly. "Analysis of a Microstrip Covered with a Lossy Dielectric." 1980 Transactions on Microwave Theory and Techniques 28.2 (Feb. 1980 [T-MTT]): 104-109.

The analysis of a microstrip line covered with a low-loss sheet material is presented in this paper. Numerical results show that the characteristics of a microstrip covered with a thick sheet of high dielectric constant are drastically affected. The effect is more for small values of W/h ratio. A closed-form expression for the dielectric loss of a multilayer structure is derived. The extension of present method to high-loss materials is also discussed. Numerical and experimental results for effective dielectric constant of a microstrip covered with low- and high-loss sheet materials are compared and found to be in good agreement.

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