

Abstracts

Accurately Approximate Formula of Effective Filling Fraction for Microstrip Line with Isotropic Substrate and its Application to the Case with Anisotropic Substrate

M. Kobayashi and R. Terakado. "Accurately Approximate Formula of Effective Filling Fraction for Microstrip Line with Isotropic Substrate and its Application to the Case with Anisotropic Substrate." 1979 Transactions on Microwave Theory and Techniques 27.9 (Sep. 1979 [T-MTT]): 776-778.

The accurately approximate formula of effective filling fraction $q_{\text{sub } w/}$ is obtained for the microstrip line with zero-thickness strip and isotropic substrate. The line capacitance per unit length $C_{\text{epsilon/sub } 0/}$ for the case with anisotropic substrate can easily be obtained by using the approximate formula of $q_{\text{sub } w/}$ and $C_{\text{sub } 0/\text{epsilon/sub } 0/}$ tabulated for the wide range of shape ratio w/h . The parameters Z , v , and λ for such a line can be calculated by using $C_{\text{epsilon/sub } 0/}$ and $C_{\text{sub } 0/\text{epsilon/sub } 0/}$.

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