Abstracts

Effect of Inner Conductor Offset in a Coplanar Waveguide (Short Papers)

K. Koshiji and E. Shu. "Effect of Inner Conductor Offset in a Coplanar Waveguide (Short Papers)." 1984 Transactions on Microwave Theory and Techniques 32.10 (Oct. 1984 [T-MTT]): 1387-1390.

This paper reports on the effect of structural offset in a coplanar waveguide on the characteristic impedance and fine loss. This effect can be an appreciable factor in designing highy precise circuits, such as MIC's using coplanar waveguide, or a coplanar-type standing-wave detector. The electric field over the cross section of the line is analyzed by assuming a TEM mode of wave propagation, and solving a two-dimensional Laplace's equation by means of the successive over-relaxation method. In the analysis, an approximate solution based on symmetry is employed. Also, measurements are made, to confirm the results thus obtained.

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