Abstracts

End-Effects in Quasi-TEM Transmission Lines

W.J. Getsinger. "End-Effects in Quasi-TEM Transmission Lines." 1993 Transactions on Microwave Theory and Techniques 41.4 (Apr. 1993 [T-MTT]): 666-672.

Magnetostatic analysis of a finite-length two-wire transmission line yields simple closed-form expressions for inductive end-fringing and interaction between ends. A further argument relates the results to capacitive end effects. Application to microstrip-like lines, twin-strip line and coplanar waveguide is outlined. It is demonstrated by explanation and comparison with the literature that these effects are the dominant discontinuity elements in short lengths of line, vias, resonators, bends, and other basic microwave configurations.

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