Abstracts

Closed-Form Expressions for the Current Density on the Ground Plane of a Microstrip Line, with Application to Ground Plane Loss (Short Papers)

In this paper closed-form expressions for the current density on the ground plane of a microstrip line are derived. The derivation is based on a quasistatic Green's function approach. These expressions are compared to both experimental and numerical values, and excellent agreement is demonstrated. The loss on a ground plane for a microstrip structure is calculated rising these expressions, and comparisons with results from Wheeler's incremental inductance rule are made.

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