Abstracts

A Full-Wave Analysis for Microwave, Planar, Distributed Discontinutites

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A full-wave analysis is presented for modeling microwave, planar distributed discontinuities. By choosing current-density basis functions that better match expected singular behavior of the current density near conductor edges, implementing a mode-matching method, and approximating the distributed discontinuity by a multi-step structure, this method is found to be more efficient for studying the characterisitics of the distributed discontinuity than similar, previously-reported methods. A combination of scattering matrices is used to numerically approximate the behavior of the distributed discontinuity. Simulation results are given for some specific illustrations, which exhibit good agreement with other known work.

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