

Abstracts

The Use of SPICE Lumped Circuits as Sub-Grid Models for FDTD Analysis

V.A. Thomas, M.E. Jones, M. Piket-May, A. Taflove and E. Harrigan. "The Use of SPICE Lumped Circuits as Sub-Grid Models for FDTD Analysis." 1994 Microwave and Guided Wave Letters 4.5 (May 1994 [MGWL]): 141-143.

A general approach for including lumped circuit elements in a finite difference, time domain (FDTD) solution of Maxwell's equations is presented. The methodology allows the direct access to SPICE to model the lumped circuits, while the full 3-Dimensional solution to Maxwell's equations provides the crosstalk and dispersive properties of the microstrips and striplines in the circuit.

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