Abstracts

Waveform relaxation synthesis of time-domain characteristic model of loaded microstrip from FDTD simulation

Qing-Xin Chu and Fung-Yuel Chang. "Waveform relaxation synthesis of time-domain characteristic model of loaded microstrip from FDTD simulation." 1997 Microwave and Guided Wave Letters 7.6 (Jun. 1997 [MGWL]): 162-164.

From the finite-difference time-domain (FDTD) simulation of response voltages and currents of a microstrip terminated by a step-pulse excitation voltage source and a resistor load, the time-domain characteristic model (TDCM) of the microstrip is synthesized by use of the waveform relaxation method, which is based on the iteration and deconvolution techniques. As an example, the extracted model is applied to simulate the responses of the microstrip loaded by a capacitor and a resistor in parallel. The results are compared with the direct FDTD simulation to validate the accuracy of the model.

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