Abstracts

Full implementation of an implicit nonlinear model with memory in an harmonic balance software

R. Sommet and E. Ngoya. "Full implementation of an implicit nonlinear model with memory in an harmonic balance software." 1997 Microwave and Guided Wave Letters 7.6 (Jun. 1997 [MGWL]): 153-155.

This letter describes the mathematical formalism for a full computation of the Jacobian matrix as part of the harmonic balance (HB) technique in the case of implicit nonlinear equations with memory. This new formalism, based on a double Fourier transform of the nonlinearity derivatives versus the time-domain commands, has been developed especially in order to permit the direct coupling of the semiconductor equations of a GaInP/GaAs heterostructure bipolar transistor in a circuit simulator based on the HB analysis technique.

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