Abstracts

Sensitivity Analysis of Lossy Coupled Transmission Lines with Nonlinear Terminations

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An analysis method is described for the evaluation of the time domain sensitivity of nonlinear networks which include lossy coupled transmission lines. The method combines a linear sensitivity analysis method based on the numerical inversion of Laplace transform with the piecewise decomposition technique. The sensitivity can be calculated with respect to network components and parameters of the transmission lines. Sensitivity analysis is useful for waveform shaping and optimization. Examples and comparisons with sensitivity determined by perturbation are presented.

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