

Abstracts

Analysis of electrothermal transients and digital signal processing in electrically and thermally nonlinear microwave circuits

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The paper introduces a new approach to the analysis of nonlinear circuits containing temperature-dependent devices and excited by slowly modulated microwave carriers. For best accuracy and efficiency, the different dynamics of electrical and thermal phenomena are exploited. The electric circuit is simulated by a sequence of HB analyses of equal size, driven by an exact HB analysis loop for the thermal circuit.

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