研究简报

利用弱结构扰动理论确定非线性电路唯一稳态

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摘要
该文利用弱结构扰动理论得到了确定电路的唯一稳态的新条件,扩展了已有的结果。该文对电路元件的约束,仅要求其成份关系的斜率有界即可,放松了已有的经典结果中要求电路元件斜率为正的限制。

关键词　非线性电路　唯一稳态　弱结构扰动理论

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The study of the unique steady state of nonlinear circuits by weakly structured perturbation theory

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Abstract
The unique steady state of nonlinear circuits is studied by weakly structured perturbation theory. By means of this method, a new criterion of the unique steady state of the nonlinear circuits is obtained. The restriction to the elements of circuits is just the slope of the constitutive relation is bounded, which is much looser than the classic results published previously. The new criterion in this paper has much wider applicable range than the results already known.

Key words　Nonlinear circuit　Unique steady state　Weakly structured perturbation theory

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