Abstracts

Coupled Pade approximation-finite element method applied to microwave device design

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In this paper, a fast and rigorous analysis method is presented, combining the Pade approximation and a finite element method. The method is applied to the design of two microwave devices: a narrow band bandpass filter and a broadband microwave module. The accuracy of this approach is demonstrated by the good agreement between the coupled Pade approximation-finite element analyses and the standard finite element ones, and also between the coupled Pade approximation-FE analysis and the experimental filter response.

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