Abstracts

Equivalent-circuit modeling and verification of metal-ceramic packages for RF and microwave power transistors

Tao Liang, J.A. Pla, P.H. Aaen and M. Mahalingam. "Equivalent-circuit modeling and verification of metal-ceramic packages for RF and microwave power transistors." 1999 Transactions on Microwave Theory and Techniques 47.6 (Jun. 1999, Part I [T-MTT]): 709-714.

A modeling procedure was developed to generate electrical package models for metal-ceramic packages. These models are capable of accounting for package effects associated with the package lead capacitance, the self and mutual inductances of the bond wires, and the coupling between the input and output of the package. A combination of full-wave electromagnetic simulation and equivalent-circuit model extraction allows accurate model generation and efficient circuit simulation. Measured S-parameters were used to verify the overall modeling methodology. It has been demonstrated that the package effects play an important role in the accurate prediction of the packaged transistor performance.

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