Abstracts

A Circuit Topology for Microwave Modeling of Plastic Surface Mount Packages

R.W. Jackson. "A Circuit Topology for Microwave Modeling of Plastic Surface Mount Packages." 1996 Transactions on Microwave Theory and Techniques 44.7 (Jul. 1996, Part I [T-MTT]): 1140-1146.

A circuit topology is described for modeling a class of plastic surface mount packages. The model consists of three pieces each of which is circuit modeled based on an electromagnetic simulation. The resulting parts of the model can then be interconnected with each other and with the model of the monolithic microwave/millimeter wave integrated circuit (MMIC) to be packaged. Various interconnections and grounding schemes can be investigated without resorting to further electromagnetic simulation. The circuit model topology is verified by circuit simulating two simple packaged test circuits and comparing the results to a full electromagnetic simulation. The resulting S parameters are in good agreement over a wide range of frequencies and for a variety of grounding configurations.

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