Abstracts

Statistical construction of a representative CAD model from a measured population for RF design applications

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Component models available in CAD software do not consider statistical variation and layout or package parasitic effects of components. Because of the complexity of device packages, EM simulation can only be used to analyze relatively simple circuits. In this paper, we present a methodology to statistically construct a representative SMD component model from a measured population, and show how such a model can be used in a circuit simulator for effective first-pass design, which incorporates all the parasitic effects through measurements. Using measured component data in optimization and yield analysis is expected to enable CAD packages to reduce considerably the number of design cycles.

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