Abstracts

CAD of integrated passives on printed circuit boards through utilization of multiple material domains

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With the addition of microvia and other organic layer technologies, integrated passives on Printed Circuit Boards (PCB) are a possible way to reduce the cost and size of designs in FR4 and similar panelized manufacturing processes; however, the actual deployment of this design methodology has been limited by CAD tools and current design methodologies. In this paper, a CAD methodology for PCB's is presented that defines correlated component representations in two material stratifications. One is similar to the current SMT component approach whereas the other is an integrated passives approach. By specifying the materials carefully and creating a mapping of components between the two physical domains, a product development methodology is described that combines the best characteristics of both domains while minimizing risk.

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