Advanced Thermal and Embedded Solutions for Laminate Substrate Designs

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Abstract
As demand for high-powered solutions and smaller package footprints continues to grow, it drives the need for continued advancement of laminate based substrate technologies. Besides shrinking the conventional SMT component and utilizing high thermally conductive epoxies, advancing the laminate substrate is the next step to increase functional integration and reduce package footprint. By embedding active and passive components as well as utilizing alternative fabrication methods we can balance increasing functional density while mitigating thermal challenges. This poster will review and compare various thermal solutions including standard vias, slot vias, and embedded heat slugs from both a fabrication and thermal modeling point of view.