THIS SHEET HAS BEEN
REPLACED

A HIGH DENSITY INTERCONNECTED CIRCUIT MODULE WITH A COMPLIANT LAYER AS PART OF A STRESS-REDUCING MOLDED SUBSTRATE

ABSTRACT OF THE DISCLOSURE

A high density interconnected multi-chip module is provided with a stress-reducing compliant material disposed around the chips prior to molding a polymeric substrate around the chips. Chips having contact pads are placed face down on a layer of adhesive supported by a base. A compliant material is deposited around the chips, and then a mold form is positioned around the chips. Polymeric substrate molding material is added within the mold form, and then the substrate molding material is hardened. A dielectric layer having vias aligned with predetermined ones of the contact pads and having an electrical conductor extending through the vias is situated on the hardened substrate molding material and faces of the chips. A thermal plug may be affixed to the backside of a chip prior to the addition of substrate molding material.

Figure 1a

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