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(54) **METHOD OF FABRICATING SUBSTRATES
WITH THERMAL VIAS AND
SINTER-BONDED THERMAL DISSIPATION
STRUCTURES**

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ABSTRACT

A substrate is described with a thermal dissipation structure sintered to thermal vias. In one example, a microelectronic module includes a recess between first and second substrate surfaces. One or more thermal vias extend between the first substrate surface and the interior recess surface, wherein each of the thermal vias has an interior end exposed at the interior recess surface. A sintered metal layer is in the recess and in physical contact with the interior end of the thermal vias and a thermal dissipation structure is in the recess over the sintered metal layer. The thermal dissipation structure is attached to the substrate within the recess by the sintered metal layer, and the thermal dissipation structure is thermally coupled to the thermal vias through the sintered metal layer.

