

APPARATUS AND MANUFACTURING METHOD

ABSTRACT

Embodiments of the present invention provide an apparatus. The apparatus includes: a circuit device, a heat sink fin, and a thermal interface material layer. The thermal interface material layer is thermally coupled to the circuit device and the heat sink fin. The thermal interface material layer includes: a first alloy layer, a nanometal particle layer, and a second alloy layer. The first alloy layer is thermally coupled to the circuit device. The nanometal particle layer is thermally coupled to the first alloy layer. The nanometal particle layer includes nanometal particles and an intermediate mixture.

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Figure 2