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ABSTRACT

ENHANCED BGA GROUNDED HEATSINK

A new method is provided for the establishment of a low resistivity connection between a wire bonded IC chip that is mounted on a heatsink and the heatsink of the package. A copper trace connection is allocated for this purpose on the surface of the substrate layer to which the IC chip is connected. An opening is provided in the substrate layer of the package, this opening aligns with the copper trace that has been allocated for establishing a ground connection and penetrates the substrate layer down to the surface of the underlying heatsink. The opening is filled with a conductive epoxy or an equivalent low-resistivity material thereby establishing a direct electrical connection or short between the allocated copper trace and the underlying heatsink. By connecting the ground point of the IC chip to the allocated copper trace, a direct electrical low resistivity connection is made between the ground point of the IC chip and the heatsink into which the IC chip is mounted.

(Figure 2a)