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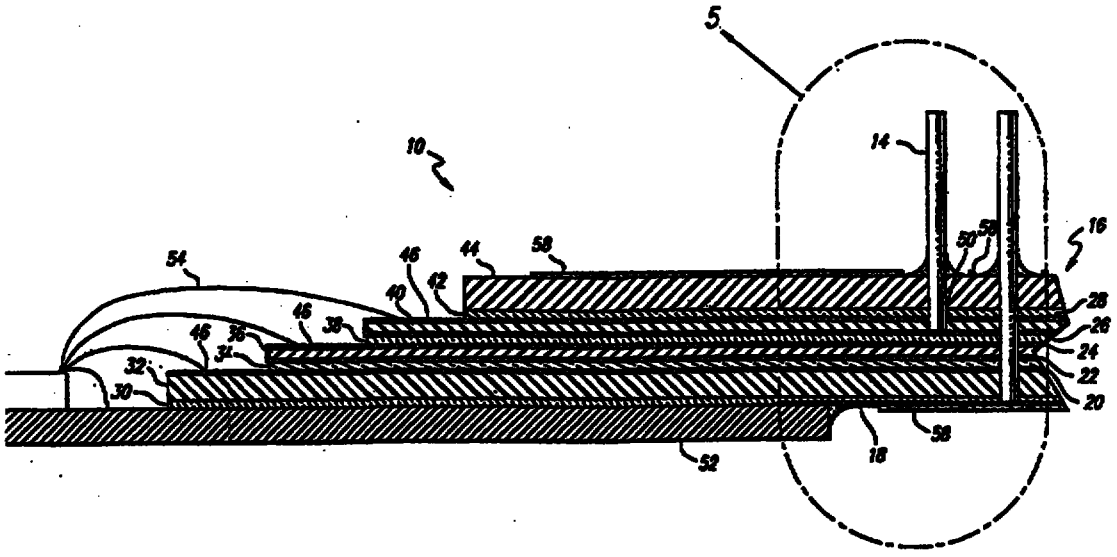
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(54) Title: THERMALLY AND ELECTRICALLY ENHANCED PLASTIC PIN GRID ARRAY (PPGA) PACKAGE



(57) Abstract

The present invention is an integrated circuit package (10) which contains a multi-layer printed circuit board (16) that is coupled to a plurality of external mounting pins (14) and an integrated circuit (12). The multi-layered circuit board (16) has a plurality of inner bonding pads (46) that are coupled to the integrated circuit (12) and routed directly to the pins (14) without use of any vias. The printed circuit board (16) has multiple voltage/ground layers (20, 22, 24, 26 & 28) so that different power levels can be supplied to the integrated circuit board (12). The integrated circuit board (12) is mounted and electrically grounded to a heat slug (52) that is also coupled to the printed circuit board (16). The heat slug (52) provides the dual function of a ground plane and a thermal heat sink for the package (10). The pins (14) and package (10) are typically configured in a conventional PPGA package arrangement.