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(54) Title: SEMICONDUCTOR DIE ATTACHMENT METHOD USING NON-CONDUCTIVE SCREEN PRINT AND DISPENSE ADHESIVE

(57) Abstract: A uniform layer of non-conductive material, e.g., epoxy, is screen printed onto the backside of an integrated circuit wafer to a required thickness, and then heated until it is hard cured (C-stage). The integrated circuit wafer having the hard cured coating is then sawn apart to separate the individual integrated circuit dice. A non-conductive adhesive is dispensed onto mating faces of die attach paddles of leadframes. The dice are placed into the non-conductive adhesive and then the die and die attach paddle assembly are heated to hard cure the adhesive between the mating faces of the die and die attach paddle. This provides long term electrical isolation of the integrated circuit die from the die attach paddle, and effectively eliminates silver migration from the die attach paddle which causes conductive paths to form that increase unwanted leakage currents in the die and ultimately cause failure during operation thereof.



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