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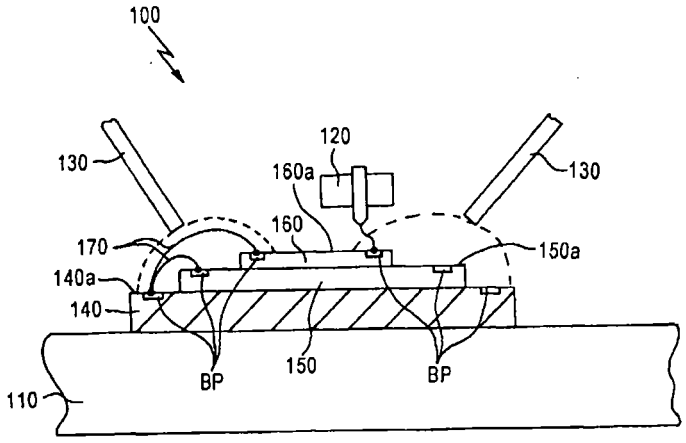
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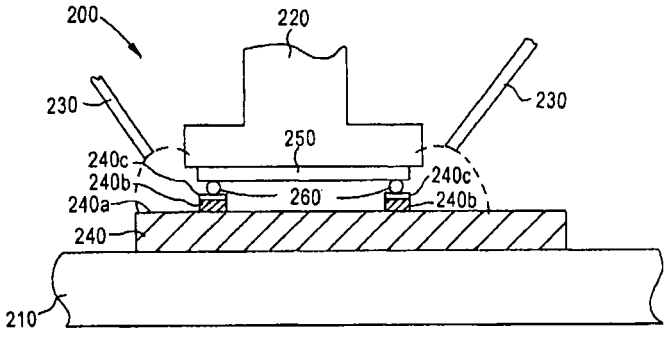
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(54) Title: SOLDER BUMP AND WIRE BONDING BY INFRARED HEATING





(57) Abstract: A method and apparatus are provided for reliably heating the bonding areas of a substrate and/or a die or dies of a stacked die assembly or a flip-chip assembly to ensure high-quality solder or wire bonds between the substrate and the die. Embodiments include heating the wire bonding areas of the dies of a stacked die package with infrared radiation with an infrared lamp or gun directed towards the top surfaces of the dies before and during the wire bonding process, or heating the bonding pad area of the top surface of a substrate to which a flip-chip is to be mounted from above with infrared radiation from a lamp or gun to the desired temperature, then bonding the flip-chip to the substrate. The use of infrared radiant heating directed at the top surfaces of the dies and/or the substrate ensures that their respective bonding areas are heated to the proper temperature within the necessary time period, thereby enabling high-quality wire bonding or die bonding, and increasing yield.

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