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(54) Title: ACTIVE THERMAL CONTROL FOR STACKED IC DEVICES

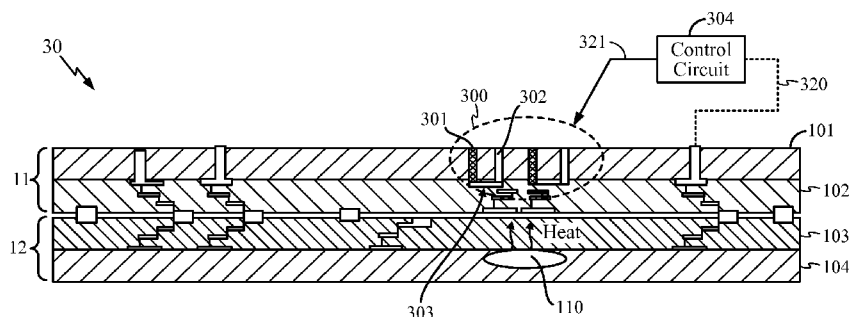


FIG. 3

(57) Abstract: Thermal conductivity in a stacked IC device (30) can be improved by constructing one or more active temperature control devices within the stacked IC device. In one embodiment, the control devices are thermal electric (TE) devices, such as Peltier devices. The TE devices (300) can then be selectively controlled to remove or add heat, as necessary, to maintain the stacked IC device within a defined temperature range. The active temperature control elements can be P-N junctions (301, 302) created in the stacked IC device and can serve to move the heat laterally and/or vertically, as desired.

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