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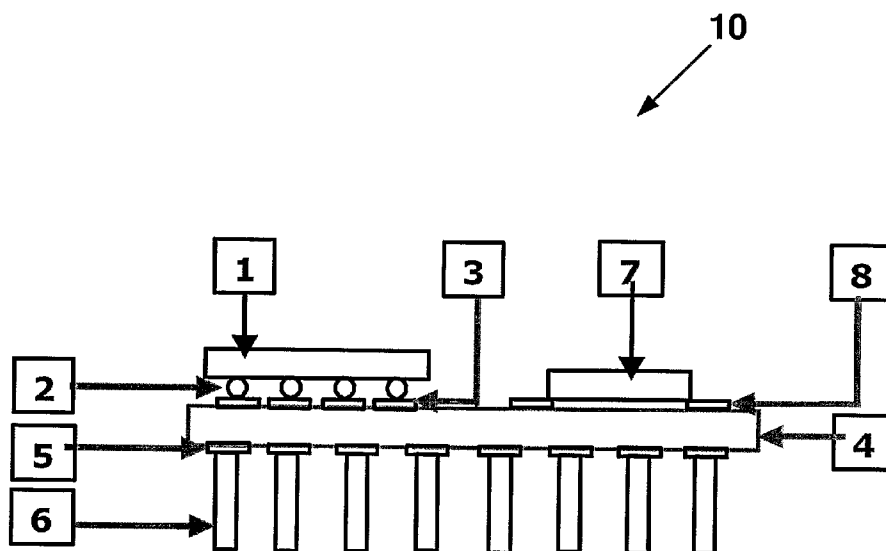
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(54) Title: LEAD-FREE SEMICONDUCTOR PACKAGE



(57) Abstract: A package substrate (4) includes die solder pads (3) and pin solder fillets (5). The pin solder fillets (5) might comprise between approximately 90 wt % to approximately 99 wt % tin and approximately 10 wt % to 1 wt % antimony. The die solder pads (3) might comprise between approximately 4 wt % to approximately 8 wt % bismuth, approximately 2 wt % to approximately 4 wt % silver, approximately 0 wt % to approximately 0.7 wt % copper, and approximately 87 wt % to approximately 92 wt % tin. The die solder pads (3) might comprise between approximately 7 wt % to approximately 20 wt % indium, between approximately 2 wt % to approximately 4.5 wt % silver, between approximately 0 wt % to approximately 0.7 wt % copper, between approximately 0 wt % to approximately 0.5 wt % antimony, and between approximately 74.3 wt % to approximately 90 wt % tin.

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