ABSTRACT

A semiconductor chip (105') and a substrate (102) are bonded with an organic adhesive layer (409) containing conductive particles (406), and a pad (405) and an electrode (412) are mutually, electrically connected through the conductive particles (406).

The semiconductor chip (105') is formed by contacting a semiconductor wafer (105) attached to a tape (107) with an etchant while rotating the semiconductor wafer (105) within an in-plane direction at a high speed or reciprocating the wafer (105) laterally to uniformly etch the semiconductor wafer (105) thereby reducing the thickness thereof, and dicing the thus reduced wafer. The resultant thin chip (105') is hot-pressed by means of a heating head (106) for bonding on the substrate (102).

In this way, a thin semiconductor chip can be formed stably at low costs and bonded on a substrate without causing any crack of the chip, thereby obtaining a semiconductor device which is unlikely to break owing to the bending stress from outside.