[ABSTRACT]

Disclosed is a method for producing a semiconductor device in which solder joints are made between a semiconductor chip with bumps and a substrate with electrodes corresponding to the bumps through a thermosetting adhesive layer, the method including the successive steps of: (A) forming a thermosetting adhesive layer in advance on a surface including bumps of the semiconductor chip; (B) laying a surface on the thermosetting adhesive layer side of the semiconductor chip, on which the thermosetting adhesive layer is formed, and a substrate one upon another, followed by pre-bonding using a heat tool to obtain a pre-bonded laminate; and (C) interposing a protective film having a thermal conductivity of 100 W/mK or more between the heat tool and a surface on the semiconductor chip side of the pre-bonded laminate, melting a solder between the semiconductor chips and the substrate and simultaneously curing the thermosetting adhesive layer using the heat tool. There is provided a method and an apparatus for producing a semiconductor device, which is capable of making a satisfactory joint without causing catching of a resin of an adhesive film between bumps and electrode pads.