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ABSTRACT

**APPARATUS AND METHOD FOR MOUNTING SEMICONDUCTOR CHIPS
ON A SUBSTRATE**

A pick-and-place apparatus of a die bonder used in semiconductor mounting includes a manipulator which moves a chip gripper with a reciprocating movement between two mechanically defined limit positions. In that way a respective chip is lifted off a chip carrier at a first location, displaced sideways and deposited on a substrate at a second location. Disposed at the first location are a displacement table for providing a respective chip and a measuring camera for ascertaining the position of the chip in question. At the second location a substrate feed unit provides a respective substrate place and a measuring camera or sensor means ascertain the position of said substrate place. Associated with the manipulator is a correction motion unit which is controllable on the basis of positional measurement values from the cameras or sensor means. In that way positional errors in respect of the provided chip and the provided substrate place are compensated in each case at the latest prior to deposit of the respective chip on the substrate place. That provides for positionally accurate mounting without a correspondingly increased degree of accuracy in the motion units, as well as a reduced cycle duration.

(Fig. 2)

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