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Optimization parameters of installation automatic die bonding machine for integrated circuit packaging

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In this paper, installation automatic die bonding machine and optimization parameters were studied in die attach process for integrated circuit (IC) packaging. Die attach process is one that is very important IC packaging manufacturing. This process is attaching a die or chip take to leadframe or substrate using die bonding machine. After installation machine, the parameters of equipment effect to performance of die attach process due to properties of die onto leadframe. For installation, the components of equipment were set up such as wafer table, stack loader, work holder, optical system, dispensing, and bond head before optimization parameters of die attach process. In experiment, the parameters of die bonding machine were optimized such as bond force, bond height, and bond time. The results showed that these parameters lead to optimize performance of die attach process that depend on properties of die bonding such as bond line thickness, fillet height, die tile, and die shear.

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