Effective method of flip-chip components production

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The work is devoted to developing and testing a new method of forming a ball lead of integrated chips at their assembly, embodiment and installation on printed-circuit boards. The study makes an analysis of a priori known methods of assembling semiconductor devices and reveals their main shortcomings.
The technique of forming ball leads, which makes it possible to considerably raise the integrated chip assembly efficiency, is offered. The proposed method can be used both in production of frame integrated chips, and at open-frame installation of semiconductor electronic devices on printed-circuit boards, hybrid integrated chips and RFID. We selected materials for forming the ball leads and defined modes for forming contacts. The special attention is paid to establishment of technological parameters in the large-scale production equipment, which is an essential groundwork for practical application of the offered method.

Keywords: *FLIP-CHIP, integrated chip, soldering, temperature features, surface mount technology*

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