

Polymer Core BGA Stress Analysis at Minimal Vertical Loading

Abstract

Ball grid array is an interconnection method widely used in the electronic packaging industry. The reliability of the solder ball is being improved by introducing new materials for the solder ball. In this study, the stress response of BGA solder ball during minimum vertical loading is analyzed through simulation. The stress response between two types of solder ball, Normal BGA and Micropearl BGA are compared. The Micropearl BGA is a solder ball which contains polymer core. The vertical loading forces used were 1N and 3N. A commercial computational software ANSYS was used for the simulation. The simulation results showed that the Normal BGA exhibited higher stress response.

Keywords; BGA, Micropearl