Applied Mechanics and Materials, vol. 404, 2013, pages 72-76

Shear speed analysis on Sn-3.9Ag-0.6CuSolder

Abstract

Ball Grid Array (BGA) is a type of semiconductor interconnection used in Integrated Circuit (IC) which is being scaled down to micro and nano size. The reliability of BGA in IC becomes a concern as the size of IC reduces. Hence, this leads to the study of stress on the BGA. This paper discussed the load effects of varying shear speed analysis on the BGA. A Pb-free material, Sn-3.9Ag-0.6Cu solder was applied in the simulation. Shear height value is fixed while the shear speed is varied to investigate the dynamic stress on a BGA package using Ansys software. The results from the graph plotted showed that higher shear speed results to higher shear force.

Keywords

Ansys; Ball grid array (BGA); Shear speed; Stress