

BALL GRID ARRAY PLASTIC PACKAGE

Abstract

A pad grid array plastic package includes a laminated plastic body with a centrally located cavity, an IC unit secured within the cavity, and an encapsulating organic polymer, such as epoxy, enclosing the cavity. The laminated body includes a substrate and a structural member on top of the substrate and having a centrally located aperture forming the cavity. The substrate is provided with metal patterns on both planar surfaces thereof, through-plated vias electrically connecting the metal patterns, and a grid array of contact pads on the bottom surface of the substrate, electrically connected to the metal pattern. The structural member provides strength and rigidity to the laminate and is sufficiently thick to enable protecting of the IC unit when the cavity is enclosed with the encapsulating polymer. Also disclosed is a method of making the package and a laminate with the cavity, metal patterns and grid pad array for use in assembling the package.

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