Abstract

BOAT AND ASSEMBLY METHOD FOR BALL GRID ARRAY PACKAGES

The present invention provides a boat and method for holding one or more substrates during a ball grid array packaging assembly. The boat comprises a base and one or more spring locks. The base has one or more openings which provide access to both faces of said substrates. The base has bottom supports protruding into the openings to retain the substrates from below and top supports protruding into the openings to retain the substrates from above. The spring locks apply lateral pressure to the substrates forcing the substrates over the bottom supports and under the top supports, whereby the boat can be flipped with the substrates retained between the top supports and the bottom supports. In one embodiment, substrates are installed in the boat, and the entire boat is flipped when the opposite face needs to be accessed, rather than manually flipping each substrate.

FIGURE 3 IS SUGGESTED FOR PUBLICATION