Abstract

SEMICONDUCTOR DEVICE AND METHOD OF FORMING NO-FLOW UNDERFILL MATERIAL AROUND VERTICAL INTERCONNECT STRUCTURE

A semiconductor device is made by forming a conductive layer over a first sacrificial carrier. A solder bump is formed over the conductive layer. A no-flow underfill material is deposited over the first carrier, conductive layer, and solder bump. A semiconductor die or component is compressed into the no-flow underfill material to electrically contact the conductive layer. A surface of the no-flow underfill material and first solder bump is planarized. A first interconnect structure is formed over a first surface of the no-flow underfill material. The first interconnect structure is electrically connected to the solder bump. A second sacrificial carrier is mounted over the first interconnect structure. A second interconnect structure is formed over a second side of the no-flow underfill material. The second interconnect structure is electrically connected to the first solder bump. The semiconductor devices can be stacked and electrically connected through the solder bump.
(Figure 6)