Abstract

SEMICONDUCTOR DEVICE AND METHOD OF FORMING INTERPOSER FRAME OVER SEMICONDUCTOR DIE TO PROVIDE VERTICAL INTERCONNECT

A semiconductor device has a first semiconductor die mounted over a carrier. An interposer frame has an opening in the interposer frame and a plurality of conductive pillars formed over the interposer frame. The interposer is mounted over the carrier and first die with the conductive pillars disposed around the die. A cavity can be formed in the interposer frame to contain a portion of the first die. An encapsulant is deposited through the opening in the interposer frame over the carrier and first die. Alternatively, the encapsulant is deposited over the carrier and first die and the interposer frame is pressed against the encapsulant. Excess encapsulant exits through the opening in the interposer frame. The carrier is removed. An interconnect structure is formed over the encapsulant and first die. A second semiconductor die can be mounted over the first die or over the interposer frame.

(Fig. 6)