

Abstract

SEMICONDUCTOR DEVICE AND METHOD OF DUAL-MOLDING DIE FORMED ON OPPOSITE SIDES OF BUILD-UP INTERCONNECT STRUCTURE

A semiconductor device has a first interconnect structure. A first semiconductor die has an active surface oriented towards and mounted to a first surface of the first interconnect structure. A first encapsulant is deposited over the first interconnect structure and first semiconductor die. A second semiconductor die has an active surface oriented towards and mounted to a second surface of the first interconnect structure opposite the first surface. A plurality of first conductive pillars is formed over the second surface of the first interconnect structure and around the second semiconductor die. A second encapsulant is deposited over the second semiconductor die and around the plurality of first conductive pillars. A second interconnect structure including a conductive layer and bumps is formed over the second encapsulant and electrically connects to the plurality of first conductive pillars and the first and second semiconductor die.

(Fig. 4)