Abstract

SEMICONDUCTOR DEVICE AND METHOD OF FORMING REPASSIVATION LAYER WITH REDUCED OPENING TO CONTACT PAD OF SEMICONDUCTOR DIE

A semiconductor wafer has a plurality of first semiconductor die. A first conductive layer is formed over an active surface of the die. A first insulating layer is formed over the active surface and first conductive layer. A repassivation layer is formed over the first insulating layer and first conductive layer. A via is formed through the repassivation layer to the first conductive layer. The semiconductor wafer is singulated to separate the semiconductor die. The semiconductor die is mounted to a temporary carrier. An encapsulant is deposited over the semiconductor die and carrier. The carrier is removed. A second insulating layer is formed over the repassivation layer and encapsulant. A second conductive layer is formed over the repassivation layer and first conductive layer. A third insulating layer is formed over the second conductive layer and second insulating layer. An interconnect structure is formed over the second conductive layer.

(Fig. 3n)