

Abstract

SEMICONDUCTOR DEVICE AND METHOD OF FORMING INTERCONNECT STRUCTURE OVER SEED LAYER ON CONTACT PAD OF SEMICONDUCTOR DIE WITHOUT UNDERCUTTING SEED LAYER BENEATH INTERCONNECT STRUCTURE

A semiconductor device has a semiconductor die with a first conductive layer formed over the die. A first insulating layer is formed over the die with a first opening in the first insulating layer disposed over the first conductive layer. A second conductive layer is formed over the first insulating layer and into the first opening over the first conductive layer. An interconnect structure is constructed by forming a second insulating layer over the first insulating layer with a second opening having a width less than the first opening and depositing a conductive material into the second opening. The interconnect structure can be a conductive pillar or conductive pad. The interconnect structure has a width less than a width of the first opening. The second conductive layer over the first insulating layer outside the first opening is removed while leaving the second conductive layer under the interconnect structure.

(Fig. 4)