Abstract

SEMICONDUCTOR DEVICE AND METHOD OF FORMING BUMP STRUCTURE WITH MULTI-LAYER UBM AROUND BUMP FORMATION AREA

A semiconductor wafer has a first conductive layer formed over its active surface. A first insulating layer is formed over the substrate and first conductive layer. A second conductive layer is formed over the first conductive layer and first insulating layer. A UBM layer is formed around a bump formation area over the second conductive layer. The UBM layer can be two stacked metal layers or three stacked metal layers. The second conductive layer is exposed in the bump formation area. A second insulating layer is formed over the UBM layer and second conductive layer. A portion of the second insulating layer is removed over the bump formation area and a portion of the UBM layer. A bump is formed over the second conductive layer in the bump formation area. The bump contacts the UBM layer to seal a contact interface between the bump and second conductive layer.

(Fig. 5)