

Abstract

SEMICONDUCTOR DEVICE HAVING IPD STRUCTURE WITH SMOOTH CONDUCTIVE LAYER AND BOTTOM-SIDE CONDUCTIVE LAYER

A semiconductor device includes an interface layer, a smooth conductive layer disposed over the interface layer, and a first insulating layer disposed over a first surface of the smooth conductive layer. A first conductive layer is disposed over the first insulating layer and the interface layer, and the first conductive layer contacts the first insulating layer. A second insulating layer is disposed over the second insulating layer and the first conductive layer, and a second conductive layer is disposed below the first conductive layer and contacts a second surface of the smooth conductive layer. The second surface of the smooth conductive layer is opposite the first surface of the smooth conductive layer. A third insulating layer is disposed over the first insulating layer and the first surface of the smooth conductive layer, and a fourth insulating layer is disposed below the second conductive layer and the interface layer.

(Fig. 3g)