

ABSTRACT

An example semiconductor device includes a transistor, a first device, a back side insulating structure below the transistor and the first device, a front side conductive structure on the transistor and the first device, a passivation structure between the first device and the back side insulating structure, a back side conductive pattern between the back side insulating structure and the transistor, and a back side interconnection structure in the back side insulating structure and electrically connected with the back side conductive pattern. The first device includes a semiconductor body, including a first semiconductor region having a first conductivity type and a second semiconductor region having a second conductivity type, a first semiconductor pattern on the first semiconductor region, and a second semiconductor pattern on the second semiconductor region.

FIG. 30