

BODY CONTACT IN SOI DEVICES BY ELECTRICALLY WEAKENING THE OXIDE UNDER THE BODY

ABSTRACT

An SOI substrate contact is provided to the bodies of transistors fabricated in an SOI silicon wafer by selectively making the insulating layer below the bodies leaky. This is achieved by implanting below a set of transistor body locations a dose of ions having an energy such that the implanted region (25) extends vertically through the buried insulator between the body and the wafer substrate (10), after which a voltage is applied sufficient to break down the oxide and establish a conductive path between the body and the substrate (10).

Fig. 3



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