DEVICE CONTACT STRUCTURE AND METHOD FOR FABRICATING SAME.

ABSTRACT

The present invention overcomes the difficulties found in the background art by providing a direct low resistive contact between devices (103,104) on a semiconductor chip without excessive current leakage. Current leakage is prevented in the preferred design by using silicon on insulator (SOI) construction for the chip. By constructing the direct contact (101,102) over an insulator, such as silicon dioxide, current leakage is minimized. The preferred embodiment uses silicide (145,147) to connect a polysilicon gate (115,117) to a doped region of the substrate (105). An alternative embodiment of the present invention provides for the use of conductive studs (1910,1920) to electrically connect devices. An increased density of approximately twenty percent may be realized using the present invention.

FIG.1.

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