SOI CMOS BODY CONTACT THROUGH GATE, SELF-ALIGNED TO SOURCE-DRAIN DIFFUSIONS

ABSTRACT

A structure and process for making a semiconductor device with SOI body contacts under the gate conductor (10). The gate conductor is partitioned into segments and provides a body contact under each gate conductor segment over the width of the device. A plurality of body contacts may be distributed across the length of the gate conductor (10). This results in a relatively short path for holes leaving the body to traverse and allows accumulated charge to be removed from the body region under the gate. The structure provides for stable and efficient body-contact operation for SOI MOSFETS of any width operating at high speeds.

FIG.3