# BURIED METAL BODY CONTACT STRUCTURE AND A METHOD OF FABRICATING SOI MOSFET DEVICES

## ABSTRACT

An SOI MOSFET device is described having a body region positioned between and separating the source (40) and drain (30). A buried metal via (80) is placed directly underneath the body region and is aligned with the gate. The buried metal contacts the body region but not the source (40) or the drain (30). The structure includes a metal interconnect directly underneath the device, wherein one or more interconnect layers contact the silicon insulator from below the device through the buried oxide. In this manner, the bottom of the source or drain diffusion area as well as the body region can be coupled. The body contact, in particular, has an extremely low resistance along the width of the device when compared to a conventional body contact structure.The structure also allows for the formation of multi-layers of metal underneath the device, which translates in an improved density and performance.

Fig 2a