

Strained-Channel Transistor and Methods of Manufacture

ABSTRACT OF THE DISCLOSURE

A semiconductor device includes a region of semiconductor material with first and second isolation trenches formed therein. The first isolation trench is lined with a first material having a low oxygen diffusion rate and is filled with an insulating material. The second isolation trench is not lined with the first material but is filled with an insulating material. A first transistor is formed adjacent the first isolation region and a second transistor formed adjacent the second isolation region.

(FIG. 4a)