ABSTRACT

MULTIPLE-GATE TRANSISTOR STRUCTURE AND METHOD FOR FABRICATING

0039 A multiple-gate transistor structure which includes a substrate, source and drain islands formed in a portion of the substrate, a fin formed of a semi-conducting material that has a top surface and two sidewall surfaces, a gate dielectric layer overlying the fin, and a gate electrode wrapping around the fin on the top surface and the two sidewall surfaces separating source and drain islands. In an alternate embodiment, a substrate that has a depression of an undercut or a notch in a top surface of the substrate is utilized.

(FIG. 2A)