Abstract

Multiple Gate Field Effect Transistor Structure and Method for Fabricating Same

The present invention relates to a Multiple Gate Field Effect Transistor structure with a fin-like structure for forming therein a transistor channel of the Multiple Gate Field Effect Transistor structure, the fin-like structure being formed from at least one active semiconductor layer of a SOI type structure on a buried insulator of said SOI type structure, and a method for fabricating same, said method comprising providing a SOI type substrate comprising at least one active semiconductor layer, a buried insulator and a carrier substrate, and forming from said semiconductor layer a fin-like structure on said insulator, said fin-like structure forming a region for a transistor channel of the Multiple Gate Field Effect Transistor structure. It is the object of the present invention to provide a Multiple Gate Field Effect Transistor structure and a method for fabricating same, wherein the Multiple Gate Field Effect Transistor structure can be near ideally prepared to overcome several related issues. The object is solved by a Multiple Gate Field Effect Transistor structure and a method for fabricating same of the above mentioned type, wherein said insulator comprises at least one high-k layer of a material having a higher dielectric constant than silicon oxide.

FIGURE 1