Abstract of Disclosure

METHOD OF FORMING SEMICONDUCTOR DEVICE

A method of forming a semiconductor device. A substrate having a STI embedded in the substrate is provided. The STI is composed of a trench in the substrate and an insulating layer filling the trench. A gap is located between the side surface of the insulating layer and the substrate. A uniform dielectric layer is formed overlying the substrate, the insulating layer and in the gap. The dielectric layer is densified. A gate line is then formed on the densified dielectric layer. Finally, doping regions are formed at two opposite sides of the gate line in the substrate.

Figure 6