SEMICONDUCTOR DEVICE AND PRODUCTION METHOD

ABSTRACT

The semiconductor device according to the present invention is an nMOS SGT and is composed of a first n+ type silicon layer, a first gate electrode containing metal and a second n+ type silicon layer arranged on the surface of a first columnar silicon layer positioned vertically on a first planar silicon layer. Furthermore, a first insulating film is positioned between the first gate electrode and the first planar silicon layer, and a second insulating film is positioned on the top surface of the first gate electrode. In addition, the first gate electrode containing metal is surrounded by the first n+ type silicon layer, the second n+ type silicon layer, the first insulating film and the second insulating film.

Figure 1C