Semiconductor Device and Production Method

ABSTRACT

The object to provide a semiconductor device comprising a highly-integrated SGT-based CMOS inverter circuit is achieved by forming an inverter which comprises: a first transistor including; an first island-shaped semiconductor layer; a first gate insulating film; a gate electrode; a first first-conductive-type high-concentration semiconductor layer arranged above the first island-shaped semiconductor layer; and a second first-conductive-type high-concentration semiconductor layer arranged below the first island-shaped semiconductor layer, and a second transistor including; a second gate insulating film surrounding a part of the periphery of the gate electrode; a second semiconductor layer in contact with a part of the periphery of the second gate insulating film; a first second-conductive-type high-concentration semiconductor layer arranged above the second semiconductor layer; and a second second-conductive-type high-concentration semiconductor layer arranged below the second semiconductor layer.

Figures 1a - 1c