Semiconductor device and production method therefor

ABSTRACT OF THE DISCLOSURE

It is an object to allow an inverter to be made up using a single island-shaped semiconductor, so as to provide a semiconductor device comprising a highly-integrated SGT-based CMOS inverter circuit. The object is achieved by a semiconductor device which comprises an island-shaped semiconductor layer, a first gate dielectric film surrounding a periphery of the island-shaped semiconductor layer, a gate electrode surrounding a periphery of the first gate dielectric film, a second gate dielectric film surrounding a periphery of the gate electrode, a tubular semiconductor layer surrounding a periphery of the second gate dielectric film, a first first-conductive-type high-concentration semiconductor layer disposed on top of the island-shaped semiconductor layer, a second first-conductive-type high-concentration semiconductor layer disposed underneath the island-shaped semiconductor layer, a first second-conductive-type high-concentration semiconductor layer disposed on top of the tubular semiconductor layer, and a second second-conductive-type high-concentration semiconductor layer disposed underneath the tubular semiconductor layer.

(Fig. 3)