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METHOD OF MANUFACTURE OF THIN FILM TRANSISTOR SRAM
DEVICE WITH A TITANIUM NITRIDE OR SILICIDE GATE AND
DEVICE MANUFACTURED THEREBY

ABSTRACT OF THE DISCLOSURE

A semiconductor device comprises a semiconductor substrate of a first conductivity type with a first insulating layer formed on the semiconductor substrate and a thin film field effect transistor with a control gate containing a refractory metal silicide formed on the semiconductor substrate over the first insulating layer. A second insulating layer covers the control gate electrode. A semiconductor film is formed on the semiconductor substrate over the first and second insulating layers and having a first region of a second conductivity type opposite to the first conductivity type. A second region of the first conductivity type is formed in contact with a first end of the first region. A third region of the first conductivity type is formed in contact with a second end of the first region. The control gate electrode and a part of the first region are overlapped with each other over the second insulating layer. The second end of the first region is apart from the second side surface of the control gate electrode by a distance more than a thickness of a part of the second insulating layer covering a side surface of the control gate electrode and overlaps with the control gate electrode, wherein the second



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and third regions serve as a source and a drain of the thin film field effect transistor, respectively.

(Figure 1 is suggested for publication.)