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Nakagawa

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(54) **NONVOLATILE SEMICONDUCTOR
MEMORY DEVICE AND ITS
MANUFACTURE**

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(75) Inventor: **Shinichi Nakagawa, Kawasaki (JP)**

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(73) Assignee: **Fujitsu Limited, Kawasaki (JP)**

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Primary Examiner—Steven Loke
Assistant Examiner—Douglas W. Owens
(74) *Attorney, Agent, or Firm*—Armstrong, Westerman,
Hattori, McLeland, & Naughton, LLP

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(57) **ABSTRACT**

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(30) **Foreign Application Priority Data**

On a SIMOX substrate having a plurality of STI layers and
first conductivity type semiconductor layers disposed in the
row direction, a stacked-layer structure SS is formed on a
gate dielectric film formed on the first conductivity type
semiconductor layer, the structure SS being made of a first
polysilicon film, a second gate dielectric film and a second
polysilicon film. Second conductivity type source and drain
regions are formed in the first conductivity type semicon-
ductor layer on both sides of the structure SS. In a plurality
of source regions adjacent in the column direction between
the stacked-layer structures SS, a common source line CSL
is formed which is made of second conductivity type source
region connecting semiconductor regions, source regions
and conductive films formed on these semiconductor and
source regions.

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(51) **Int. Cl.⁷** **H01L 31/0392**

(52) **U.S. Cl.** **257/354; 257/319; 257/316;
257/315**

(58) **Field of Search** **257/354, 353,
257/347, 320, 319, 314, 315, 316; 438/257**

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18 Claims, 24 Drawing Sheets

