

Title (en)

NOVEL SEMICONDUCTOR DEVICE COMBINING THE ADVANTAGES OF SOLID AND SOI ARCHITECTURES, AND METHOD FOR MAKING SAME

Title (de)

NEUES HALBLEITERBAUELEMENT, DAS DIE VORTEILE DER MASSEN- UND SOI-ARCHITEKTUR KOMBINIERT, UND DESSEN HERSTELLUNGSVERFAHREN

Title (fr)

NOUVEAU DISPOSITIF SEMI-CONDUCTEUR COMBINANT LES AVANTAGES DES ARCHITECTURES MASSIVE ET SOI, ET PROCEDE DE FABRICATION

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Application

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Abstract (en)

[origin: FR2791178A1] The invention concerns a device comprising a silicon substrate (1) having a top surface coated with a thin gate dielectric layer (4) and wherein are formed source and drain regions (5, 6) defining between them a channel region (1a), a gate (7) on the thin gate dielectric layer (4) above the channel (1a) region. The invention is characterised in that it comprises in the channel region(1a) a continuous or discontinuous insulating cavity (2) defining with the source and drain regions a thin silicon layer (3) 1 to 50 nm thick located above the insulating cavity, said insulating cavity (2) having a length representing at least 70 % of a predetermined minimum channel length. The invention is applicable to MOSFET transistors.

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