

Title (en)
SEMICONDUCTOR MEMORY CELL COMPRISING A TRENCH CAPACITOR AND A SELECT TRANSISTOR AND A METHOD FOR THE PRODUCTION THEREOF

Title (de)
HALBLEITERSPEICHERZELLE MIT GRABENKONDENSATOR UND AUSWAHLTRANSISTOR UND VERFAHREN ZU IHRER HERSTELLUNG

Title (fr)
CELLULE DE MEMOIRE A SEMI-CONDUCTEUR POURVUE D'UN CONDENSATEUR EN TRANCHEE ET D'UN TRANSISTOR DE SELECTION, ET SON PROCEDE DE PRODUCTION

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Abstract (en)
[origin: WO0223636A1] The invention relates to a semiconductor memory cell (1), which is formed in a substrate (2) and comprises a trench capacitor (3) and a select transistor (4). The trench capacitor (3) comprises a capacitor dielectric (8) and a conductive trench fill material (10). A diffusion barrier (19) is located on the conductive trench fill material (10) and an epitaxial layer (24) is formed on top of said barrier. The select transistor (4) is a planar transistor, positioned above the trench capacitor (3), whereby a drain doping region (13) of said select transistor (4) is located in the epitaxial layer (24).

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