

Title (en)

HIGH DENSITY CONTACTLESS FLASH EPROM ARRAY USING CHANNEL ERASE

Title (de)

KONTAKTLOSE FLASH-EPROM-MATRIX VON HOHER DICHT E MIT KANALLÖSCHUNG

Title (fr)

MEMOIRE FLASH EPROM SANS CONTACT EN MATRICE HAUTE DENSITE FONCTIONNANT PAR EFFACEMENT CANAL

Publication

EP 0742956 A1 19961120 (EN)

Application

EP 95942910 A 19951127

Priority

- US 9515395 W 19951127
- US 34598594 A 19941128

Abstract (en)

[origin: WO9617384A1] The present invention provides a contactless flash EPROM array formed in a P-well in a diffused silicon substrate of N-type conductivity. To facilitate a channel erase operation, thin tunnel oxide is formed between the P-well and the overlying polysilicon floating gate EPROM cells. The array is programmed in a conventional EPROM cell array manner. However, in accordance with the invention, the channel erase of a selected row of EPROM cells is accomplished by allowing all bit lines to float, applying a negative erase voltage to the word line of the selected row and holding the substrate at the supply voltage.

IPC 1-7

H01L 27/115; G11C 16/06

IPC 8 full level

G11C 16/04 (2006.01); **H10B 69/00** (2023.01)

CPC (source: EP KR)

G11C 16/0491 (2013.01 - EP KR); **H10B 41/35** (2023.02 - KR); **H10B 69/00** (2023.02 - EP); **H01L 21/0214** (2013.01 - KR); **H01L 21/32055** (2013.01 - KR)

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

WO 9617384 A1 19960606; EP 0742956 A1 19961120; KR 970700943 A 19970212

DOCDB simple family (application)

US 9515395 W 19951127; EP 95942910 A 19951127; KR 19960704077 A 19960727