

Title (en)

READING NON-VOLATILE STORAGE WITH EFFICIENT CONTROL OF NON-SELECTED WORD LINES

Title (de)

LESEN NICHTFLÜCHTIGER SPEICHERUNG MIT EFFIZIENTER KONTROLLE ÜBER NICHTGEWÄHLTE WORTLEITUNGEN

Title (fr)

PROCEDE DE LECTURE DE STOCKAGE NON VOLATILE AVEC CONTROLE EFFICACE DE LIGNES DE MOTS NON SELECTIONNEES

Publication

EP 1964129 A1 20080903 (EN)

Application

EP 06845066 A 20061211

Priority

- US 2006046961 W 20061211
- US 30319305 A 20051216
- US 30558805 A 20051216

Abstract (en)

[origin: WO2007078611A1] A process for reading data (including verifying during programming) from a selected non-volatile storage elements of a group (e.g., NAND string) of non-volatile storage elements includes maintaining an intermediate voltage as a control gate voltage for an unselected non-volatile storage element and subsequently changing the control gate voltage for the unselected non-volatile storage element from the intermediate voltage to a read enable voltage. The control gate voltage for the selected non-volatile storage element is raised from a standby voltage (which is different than the intermediate voltage) to a read compare voltage. While the control gate for the selected non-volatile storage element is at the read compare voltage and the control gate for the unselected non-volatile storage element is at the read enable voltage, the state of the selected non-volatile storage element is sensed to determine information about the data stored in the selected non-volatile storage element.

IPC 8 full level

G11C 16/26 (2006.01)

CPC (source: EP KR)

G11C 11/5628 (2013.01 - KR); **G11C 11/5642** (2013.01 - KR); **G11C 16/0483** (2013.01 - KR); **G11C 16/26** (2013.01 - EP KR); **G11C 16/3459** (2013.01 - EP KR); **G11C 16/3481** (2013.01 - EP)

Citation (search report)

See references of WO 2007078611A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

WO 2007078611 A1 20070712; EP 1964129 A1 20080903; JP 2009520310 A 20090521; JP 4820879 B2 20111124; KR 101007371 B1 20110113; KR 20080089401 A 20081006; TW 200737204 A 20071001; TW 201027538 A 20100716; TW I334142 B 20101201

DOCDB simple family (application)

US 2006046961 W 20061211; EP 06845066 A 20061211; JP 2008545686 A 20061211; KR 20087017367 A 20061211; TW 95147162 A 20061215; TW 99108720 A 20061215