

Title (en)  
INTELLIGENT CONTROL OF PROGRAM PULSE DURATION

Title (de)  
INTELLIGENTE STEUERUNG DER PROGRAMMIMPULSDAUER

Title (fr)  
COMMANDE INTELLIGENTE DE DURÉE D'IMPULSION DE PROGRAMME

Publication  
**EP 2160735 A1 20100310 (EN)**

Application  
**EP 08771368 A 20080618**

Priority

- US 2008067347 W 20080618
- US 76658307 A 20070621
- US 76658007 A 20070621

Abstract (en)  
[origin: WO2008157606A1] To program a set of non-volatile storage elements, a set of programming pulses are applied to the control gates (or other terminals) of the non-volatile storage elements. The programming pulses have a constant pulse width and increasing magnitudes until a maximum voltage is reached. At that point, the magnitude of the programming pulses stops increasing and the programming pulses are applied in a manner to provide varying time duration of the programming signal between verification operations. In one embodiment, for example, after the pulses reach the maximum magnitude the pulse widths are increased. In another embodiment, after the pulses reach the maximum magnitude multiple program pulses are applied between verification operations.

IPC 8 full level  
**G11C 16/10** (2006.01); **G11C 16/34** (2006.01)

CPC (source: EP)  
**G11C 11/5628** (2013.01); **G11C 16/10** (2013.01); **G11C 16/3454** (2013.01); **G11C 16/3459** (2013.01); **G11C 2211/5621** (2013.01)

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)  
AL BA MK RS

DOCDB simple family (publication)  
**WO 2008157606 A1 20081224**; CN 101779250 A 20100714; CN 101779250 B 20140108; EP 2160735 A1 20100310; EP 2160735 A4 20110420; JP 2010530596 A 20100909; KR 20100050471 A 20100513; TW 200907976 A 20090216; TW I378457 B 20121201

DOCDB simple family (application)  
**US 2008067347 W 20080618**; CN 200880100547 A 20080618; EP 08771368 A 20080618; JP 2010513379 A 20080618; KR 20107001506 A 20080618; TW 97122758 A 20080618