Title (en)

AVALANCHE PHOTODIODE

Title (de)

AVALANCHE-PHOTODIODE

Title (fr)

PHOTODIODE À AVALANCHE

Publication

EP 2174355 A1 20100414 (DE)

Application

EP 08773493 A 20080618

Priority

- EP 2008004903 W 20080618
- DE 102007037020 A 20070806

Abstract (en)

[origin: DE102007037020B3] The photodiode (1) has a lateral narrow snubber resistance layer arranged in a semiconductor substrate between a lower diode layer e.g. anode layer, and contacting layers. The resistance layer cancels radiation-generated avalanche breakdown within an Avalanche region. A depletion electrode is arranged partially lateral to the lower diode layer, and is doped corresponding to a type of doping such that the electrode depletes the substrate laterally adjacent to the diode layer, when the resistance layer is shielded from the diode layer opposite to the electrode and is not or partially depleted.

IPC 8 full level

H01L 27/144 (2006.01); **H01L 31/107** (2006.01)

CPC (source: EP US)

H01L 27/1446 (2013.01 - EP US); **H01L 31/107** (2013.01 - EP US)

Citation (search report)

See references of WO 2009018872A1

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)

DE 102007037020 B3 20080821; EP 2174355 A1 20100414; JP 2010536165 A 20101125; JP 5523317 B2 20140618; US 2011095388 A1 20110428; US 8258594 B2 20120904; WO 2009018872 A1 20090212

DOCDB simple family (application)

DE 102007037020 A 20070806; EP 08773493 A 20080618; EP 2008004903 W 20080618; JP 2010519347 A 20080618; US 67210208 A 20080618