

Title (en)
PHOTODETECTOR CIRCUIT

Title (de)
PHOTODETEKTOR-SCHALTKREIS

Title (fr)
CIRCUIT PHOTODETECTEUR

Publication
EP 1472739 A1 20041103 (EN)

Application
EP 02704895 A 20020208

Priority
GB 0200526 W 20020208

Abstract (en)
[origin: WO03067663A1] A photodetector circuit incorporates an avalanche photodiode (APD) (300) produced by epitaxy on a CMOS substrate (302) with implanted n-well (304) and p-well (306). The n-well (304) has an implanted p+ guard ring (310) delimiting the APD (300). Within the guard ring (310) is an implanted n+ APD layer (312) upon which is deposited an epitaxial p+ APD layer (314), these layers forming the APD (300). The APD may be incorporated in an amplifier circuit (50) providing feedback to maintain constant bias voltage, and may include an SiGe absorption region to provide extended long wavelength response or lower avalanche voltage. Non-avalanche photodiodes may also be used.

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H01L 27/146; H01L 31/0312; H01L 31/107

IPC 8 full level
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CPC (source: EP)
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