

Title (en)

INTEGRATED CIRCUIT CHIP MADE SECURE AGAINST THE ACTION OF ELECTROMAGNETIC RADIATION

Title (de)

INTEGRIERTER SCHALTKREIS-CHIP, GESCHÜTZT GEGEN DIE BEHANDLUNG MIT ELEKTROMAGNETISCHER STRAHLUNG

Title (fr)

PUCE A CIRCUITS INTEGRES SECURISEE CONTRE L'ACTION DE RAYONNEMENTS ELECTROMAGNETIQUES

Publication

EP 1127376 A1 20010829 (FR)

Application

EP 99947524 A 19991008

Priority

- FR 9902428 W 19991008
- FR 9813029 A 19981016

Abstract (en)

[origin: FR2784768A1] An integrated circuit (5) may be protected from maloperation due to the incidence of infrared electromagnetic radiation by a doped layer, an irregular surface or a metallic screen. Where doping is used it comprises the addition of some 1019 atoms of Phosphorus or Boron per cm³ in a layer (14) located above the processor, memory units and contacts (8) of the integrated circuit

IPC 1-7

H01L 23/552; G06K 19/073

IPC 8 full level

B42D 15/10 (2006.01); **G06K 19/073** (2006.01); **G06K 19/077** (2006.01); **H01L 21/822** (2006.01); **H01L 23/552** (2006.01); **H01L 27/04** (2006.01)

CPC (source: EP US)

G06K 19/073 (2013.01 - EP US); **G06K 19/07372** (2013.01 - EP US); **H01L 23/552** (2013.01 - EP US); **H01L 24/48** (2013.01 - EP US); **H01L 2224/05599** (2013.01 - EP US); **H01L 2224/451** (2013.01 - EP US); **H01L 2224/48091** (2013.01 - EP US); **H01L 2224/48227** (2013.01 - EP US); **H01L 2224/48465** (2013.01 - EP US); **H01L 2224/85399** (2013.01 - EP US); **H01L 2924/00014** (2013.01 - EP US); **H01L 2924/01005** (2013.01 - EP US); **H01L 2924/01013** (2013.01 - EP US); **H01L 2924/01019** (2013.01 - EP US); **H01L 2924/01024** (2013.01 - EP US); **H01L 2924/01033** (2013.01 - EP US); **H01L 2924/01046** (2013.01 - EP US); **H01L 2924/01051** (2013.01 - EP US); **H01L 2924/0106** (2013.01 - EP US); **H01L 2924/01061** (2013.01 - EP US); **H01L 2924/01079** (2013.01 - EP US); **H01L 2924/01082** (2013.01 - EP US); **H01L 2924/01094** (2013.01 - EP US); **H01L 2924/13091** (2013.01 - EP US); **H01L 2924/14** (2013.01 - EP US); **H01L 2924/181** (2013.01 - EP US)

Citation (search report)

See references of WO 0024058A1

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)

FR 2784768 A1 20000421; CN 1217411 C 20050831; CN 1323448 A 20011121; EP 1127376 A1 20010829; JP 2002528896 A 20020903; JP 4694693 B2 20110608; US 8138566 B1 20120320; WO 0024058 A1 20000427

DOCDB simple family (application)

FR 9813029 A 19981016; CN 99812223 A 19991008; EP 99947524 A 19991008; FR 9902428 W 19991008; JP 2000577713 A 19991008; US 80768699 A 19991008