(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
12 September 2002 (12.09.2002)

(21) International Application Number:
PCT/US02/03945

(22) International Filing Date:
1 February 2002 (01.02.2002)

(25) Filing Language:
English

(30) Priority Data:
09/800,250 6 March 2001 (06.03.2001) US

(71) Applicant: ADVANCED MICRO DEVICES, INC.
[US/US]; One AMD Place, Mail Stop 68, Sunnyvale, CA 94088-3453 (US).

(72) Inventors: PELLERIN, John, G.; 6546 Needham Lane,
Austin, TX 78739 (US); WRISTERS, Derick, J.; 1904 Terisu Cove, Austin, TX 78728 (US).

(74) Agent: DRAKE, Paul, S.; Advanced Micro Devices, Inc.,
5204 East Ben White Boulevard, Mail Stop 562, Austin, TX 78741 (US).

(51) International Patent Classification:
H01L 21/768

(81) Designated States (national): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LI, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG,
SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU,
ZA, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR,
GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent
(BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
NE, SN, TD, TG).

(88) Date of publication of the international search report:
13 March 2003

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD OF FORMING CONDUCTIVE INTERCONNECTIONS IN POROUS INSULATING FILMS AND ASSOCIATED DEVICE

(57) Abstract: The integrated circuit device disclosed herein comprises an insulating layer (32) comprised of a first insulating material that has an opening (36) formed therein as defined by at least one sidewall (36A), at least one sidewall spacer (40) positioned adjacent the sidewall (36A) of the opening (36), the sidewall spacer (40) being comprised of a second insulating material, and a conductive interconnection (42) formed in the opening (36) in the insulating layer (32). In a further embodiment, the first insulating material has a dielectric constant less than approximately 3, and a density less than approximately 1.2 grams/cm³, whereas the second insulating material has a dielectric constant less than approximately 7 and a density less than approximately 3 grams/cm³. The method disclosed herein comprises forming an opening (36) in a first layer (32) of a first insulating material, the opening (36) being defined by at least one sidewall (36A), and conformally depositing a second layer (38) comprised of a second insulating material in the opening (36) above the sidewall (36A). The method further comprises performing an anisotropic etching process on the second layer to define a sidewall spacer (40) comprised of the second insulating material positioned adjacent the sidewall (36A) of the opening (36), and forming a conductive interconnection (42) in the opening (36) in the insulating layer (32) between the sidewall spacer (40).
INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 02/03945

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 HOIL21/768

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 HOIL

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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Patent family members are listed in annex.

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Date of the actual completion of the International search: 7 November 2002

Date of mailing of the International search report: 15/11/2002

Name and mailing address of the ISA
European Patent Office, P.B. 5818 Patentlaan 2 NL–2280 HV Rijswijk
Tel. (+31–70) 940–2040, Tx. 31 651 epo nl
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Ploner, G
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