

Form PTO-595
1-31-92

11-07-2006

U.S. DEPARTMENT OF COMMERCE
Patent and Trademark OfficeCOVER SHEET
ONLYTo the Honorable Commiss. 103333288 Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

Doo-youll LEE
Han-ku CHO
Suk-joo LEE
Gi-sung YEO
Cha-won KOH
Pan-suk KWAKAdditional name(s) of conveying party(ies)
attached? ☐ Yes ☒ No

2. Name and address of receiving party(ies):

Name: SAMSUNG ELECTRONICS CO., LTD.Internal Address: 416, Maetan-dong,Yeongtong-gu, Suwon-si, Gyeonggi-do,

Republic of Korea

Additional name(s) & address(es) attached:

☐ Yes ☒ No

3. Nature of conveyance:

☒ Assignment ☐ Merger
☐ Security Agreement ☐ Change of Name
☐ Other _____Execution Date: (10/18/06; DYL; HKC; SJL;
GSY; CWK) and (10/20/06; PSK)

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date
of the application is: (10/18/06; DYL; HKC; SJL; GSY; CWK) and (10/20/06; PSK)

A. Patent Application No. (s)

B. Patent No. (s)

Additional numbers attached? ☐ Yes ☒ No5. Name and address of party to whom
correspondence concerning document
should be mailed:Name: Frank Chau, Esq.Street Address: F. CHAU & ASSOCIATES, LLC130 Woodbury RoadCity: Woodbury State: NY Zip: 117976. Total number of applications and
patents involved: 17. Total fee (37 C.F.R. §3.41): \$40.00☒ Credit Card Payment Form PTO-2038
enclosed☐ Authorized to be charged to deposit
account

8. Deposit account number:

(Attach duplicate copy of this page if
paying by deposit account)

11/02/2006 WABDELRI 00000008 11590207

06 FC:8021

40.00 DP

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and
correct and any attached copy is a true copy of the original document.

Joseph B. Gross

Registration No. 57,109

Name of Person Signing

Signature

Date

Total number of pages including cover sheet, attachments and documents: 3

Do not detach this portion

Mail documents to be recorded with required cover sheet information to:

Commissioner for Patents

Mail Stop Assignments, PO Box 1450

Alexandria VA 22313-1450

Public burden reporting for this sample cover sheet is estimated to average about 30 minutes per document to
be recorded, including time for reviewing the document and gathering the data needed, and completing and
reviewing the sample cover sheet. Send comments regarding this burden estimate to the U.S. Patent and
Trademark Office, Office of Information Systems, PK2-1000C, Alexandria VA 22313, and to the Office of
Management and Budget, Paperwork Reduction Project (0651-0011), Alexandria VA 22313.

PATENT

REEL: 018489 FRAME: 0496

10.31.06

113264 U.S. PTO
11/590207

103106

ASSIGNMENT

DOCKET NO.: 8111S-74 (SIP060189US)

AS A BELOW NAMED INVENTOR, I, and each of us, individually hereby declare that: IN CONSIDERATION of the sum of TEN (\$10.00) dollars or the equivalent thereof, and other good and valuable consideration, the receipt of which from the hereinafter named Assignee is hereby acknowledged, I do hereby sell, assign and forever grant and convey unto:

ASSIGNEE: Samsung Electronics Co., Ltd.

ADDRESS: 416, Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do, KOREA

Who is my Assignee, and to the successes and assigns of my Assignee, all my right, title and interest, in and for the United States of America and all other countries, including all rights of priority, in and to the invention entitled:

TITLE: **FLASH MEMORY DEVICE USING DOUBLE PATTERNING TECHNOLOGY AND METHOD OF MANUFACTURING THE SAME**

invented by me (if only one inventor is named below) or us (if more than one inventor is named below) and described in an application for a United States patent the specification of which is either attached hereto or otherwise accompanies this Assignment or indicates an attorney docket no. 8111S-74 (SIP060189US), or is more particularly identified as:

G executed on even date herewith, or

G Serial No. _____ filed in the U.S. Patent & Trademark Office on _____, or

G executed on _____,

and in and to all United States patents which may be granted thereon and therefore, and in and to all certificates of corrections, divisions, continuations, continuations-in-part, reissued and re-examined patents, and to any extensions thereof, said interest being the entire ownership of the patent when granted, to be held and enjoyed by said **SAMSUNG ELECTRONICS CO., LTD.**, my Assignee, its successors, assigns or other legal representatives, to the full end of the term, terms, or any extension or renewal thereof, for which said patent or patents may be granted, as fully and entirely as the same would have been held and enjoyed by me or us if this assignment, sale and conveyance had not been made;

AND I hereby covenant and agree to sign and execute any further documents or instruments which may from time-to-time be either necessary, lawful, proper or requested by the Assignee, in the prosecution of the above-named application or in the preparation and prosecution of any certificate of correction, division, continuation, continuation-in-part, reissue, re-examination, in any amendment, extension, or interference proceeding, whether administrative or judicial, or otherwise, to secure the title hereto in said Assignee;

AND I do hereby authorize and request the Commissioner of Patents and Trademarks to issue said Patent or Patents to the Assignee, and I hereby appoint as my, or our attorney, and authorize and request **Frank Chau, Reg. No. 34,136**, to insert on this Assignment any further identification or to complete such identification which may be either necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

Page



IN WITNESS WHEREOF, I and we have set our hands and seals on the dates written beside my and our respective names:

INVENTOR(S)

Date Signed

1) Doo Youl Lee
Doo-youl LEE

Oct. 18, 2006

2) Han-ku Cho
Han-ku CHO

Oct. 18, 2006

3) Suk-joo Lee
Suk-joo LEE

Oct. 18, 2006

4) Gi Sung Yeo
Gi-sung YEO

Oct. 18, 2006

5) Cha-won Koh
Cha-won KOH

Oct. 18, 2006

6) Pan-suk Kwak
Pan-suk KWAK

Oct. 20, 2006