

PATENT APPLICATION  
Docket No. 8750-113  
Client No. SPX200406-003US-CIP

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

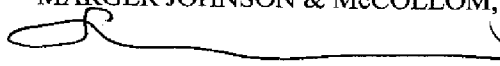
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Please record the attached original document or copy thereof and return the recorded instrument to the undersigned.

1. Name of party(ies) conveying an interest: Yoon-Jong SONG, Young-Nam HWANG, Sang-Don NAM, Sung-Lae CHO, Gwan-Hyeob KOH, Choong-Man LEE, Bong-Jin KUH, Yong-Ho HA, Su-Youn LEE, Chang-Wook JEONG, Ji-Hye YI, Kyung-Chang RYOO, Se-Ho LEE, Su-Jin AHN, Soon-Oh PARK, and Jang-Eun LEE
2. Name and address of party(ies) receiving an interest: Samsung Electronics Co., Ltd.  
416 Maetan-dong, Yeongtong-gu,  
Suwon-si, Gyeonggi-do  
Korea (South)
3. Description of the interest conveyed:  
☒ Assignment ☐ Change of Name ☐ Security Agreement ☐ Merger  
Date of execution of attached document: May 25, 2005; May 26, 2005; May 25, 2005; and May 27, 2005
4. Application number(s) or patent number(s). Additional sheet attached? Yes \_\_\_ No X  
If this document is being filed together with a new application, the execution date of the application is:  
Patent Application No. 11/139,283, filed on 27 May 2005
5. Name and address of party to whom correspondence concerning document should be mailed:  
MARGER JOHNSON & McCOLLOM, P.C.  
1030 S.W. Morrison Street  
Portland, Oregon 97205  
Telephone: (503) 222-3613
6. Number of applications and patents involved: 1
7. PTO Form 2038 authorizing credit card payment (\$40) is enclosed.
8. Any deficiency or overpayment should be charged or credited to deposit account number 13-1703.
9. 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.

Dated: July 12, 2005

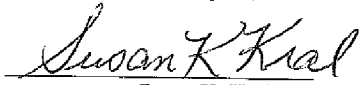
Respectfully submitted,  
MARGER JOHNSON & McCOLLOM, P.C.



Hosoon Lee  
Reg. No. 56,737

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I hereby certify that this correspondence is being transmitted to the U.S. Patent and Trademark Office via facsimile number 703-306-5995, on July 12, 2005.

  
Susan K. Kral

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Total number of pages **PATENT**  
cover sheet and attached assignment 5  
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PATENT APPLICATION  
Docket No. 8750-113  
Client Ref. No. SPX200406-0003US-CIP

**ASSIGNMENT**

U.S.A. Patent Application  
Sole or Joint  
For Inventions Made Outside U.S.A.  
Executed With Application

In consideration of the sum of Ten Dollars (10.00) and other good and valuable considerations paid to each of the undersigned, to wit:

- (1) Yoon-Jong SONG
- (2) Young-Nam HWANG
- (3) Sang-Don NAM
- (4) Sung-Lae CHO
- (5) Gwan-Hyeob KOH
- (6) Choong-Man LEE
- (7) Bong-Jin KUH
- (8) Yong-Ho HA
- (9) Su-Youn LEE
- (10) Chang-Wook JEONG
- (11) Ji-Hye YI
- (12) Kyung-Chang RYOO
- (13) Se-Ho LEE
- (14) Su-Jin AHN
- (15) Soon-Oh PARK
- (16) Jang-Eun LEE

☐ X if continued on separate page

the receipt and sufficiency of which are hereby acknowledged by the undersigned who hereby sell(s), assign(s) and transfer(s) unto:

**SAMSUNG ELECTRONICS CO., LTD.  
416 MAETAN-DONG, YEONGTONG-GU  
SUWON-SI, GYEONGGI-DO  
REPUBLIC OF KOREA**

(hereinafter designated "ASSIGNEE") the entire right, title and interest in and to the invention as defined in 35 USC §100, for the United States of America, the invention entitled:

**SEMICONDUCTOR DEVICES HAVING PHASE CHANGE MEMORY CELLS,  
ELECTRONIC SYSTEMS EMPLOYING THE SAME AND METHODS OF  
FABRICATING THE SAME**

for which an application for Letters Patent of the United States of America has been executed

even date herewith by the undersigned, and in and to any and all divisionals, continuations, substitutes, and reissues thereof; and all resulting patents and the undersigned hereby authorizes and requests the United States Assistant Commissioner of Patents to issue said Letters Patent to the said ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns and legal representatives; the undersigned agrees that the attorneys of record in said application shall hereafter act on behalf of said ASSIGNEE;

And the undersigned hereby agrees to testify and execute any papers for ASSIGNEE, its successors, assigns and legal representatives, deemed essential by ASSIGNEE to ASSIGNEE'S full protection and title in and to the invention hereby transferred.

Please sign  
concurrently  
 with Oath or Declaration  
 and Power of Attorney

SIGNED ON THE DATES INDICATED BESIDE OUR SIGNATURES:

<u>INVENTOR(S)</u>	<u>DATE SIGNED</u>	<u>WITNESSED</u>
(1) <u>Yoon-Jong SONG</u> Yoon-Jong SONG	<u>2005/05/25</u>	_____
(2) <u>Young-Nam Hwang</u> Young-Nam HWANG	<u>2005.05.26</u>	_____
(3) <u>Sangdon Nam</u> Sang-Don NAM	<u>2005.05.26</u>	_____
(4) <u>Sung-Lae Cho</u> Sung-Lae CHO	<u>2005.05.26</u>	_____
(5) <u>Gwan-Hyeob Koh</u> Gwan-Hyeob KOH	<u>2005/05/26</u>	_____
(6) <u>Choong-Man LEE</u> Choong-Man LEE	<u>2005.05/26</u>	_____
(7) <u>Bong-Jin Kuh</u> Bong-Jin KUH	<u>2005.5.26</u>	_____
(8) <u>Yong-Ho HA</u> Yong-Ho HA	<u>2005.05.26</u>	_____
(9) <u>Su-Youn Lee</u> Su-Youn LEE	<u>2005.05.26</u>	_____

(10) Chang-Wook Jeong 2005/05/26  
Chang-Wook JEONG

(11) Ji-Hye Yi 2005/05/26  
Ji-Hye YI

(12) Kyung Chang Ryoo 2005/5/26  
Kyung-Chang RYOO

(13) Se-Ho LEE 2005/5/26  
Se-Ho LEE

(14) SU-JIN AHN 2005/05/28  
Su-Jin AHN

(15) Soon Oh Park 2005/05/28  
Soon-Oh PARK

(16) Jang-Eun LEE 2005/05/28  
Jang-Eun LEE

PLEASE RETURN RECORDED ASSIGNMENT TO:

Alan T. McCollom  
Marger Johnson & McCollom  
1030 S.W. Morrison Street  
Portland, OR 97205