

Docket No.: SEC.2084

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(Rev. 03-01)  
OMB No. 0651-0027 (exp. 5/31/2002)  
P06A/REV03

## RECORDATION FORM COVER SHEET

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To the Director of the United States Patent and Trademark Office: Please record the attached original documents or copy thereof.

## 1. Name of conveying party(ies):

Joon-Min PARK  
Sang-Beom KANG  
Hyun-Rok OH  
Woo-Yeong CHO

Additional names(s) of conveying party(ies)

☐ Yes ☒ No

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

Name: Samsung Electronics Co., Ltd.Address: 416, Maetan-dong, Yeongtong-gu

## 3. Nature of conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ OtherCity: Seoul-si State/Prov.: Gyeonggi-doCountry: Republic of Korea ZIP: 442-742Execution Date: January 16, 2008

Additional name(s) &amp; address(es)

☐ Yes ☒ No

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

If this document is being filed together with a new application, the execution date of the application is:

Patent Application No.

Filing date

B. Patent No.(s)

12/015,624

January 17, 2008

Additional numbers

☐ Yes ☒ No

## 5. Name and address of party to whom correspondence concerning document should be mailed:

Name: STEPHEN R. WHITTRegistration No. 34,753Address: VOLENTINE & WHITT, PLLCONE FREEDOM SQUARE11951 FREEDOM DRIVE, SUITE 1260City: RESTON State/Prov.: VACountry: USA ZIP: 20190

## 6. Total number of applications and patents involved:

1

7. Total fee (37 CFR 3.41):.....\$ 40.00☐ Enclosed - Any excess or insufficiency should be credited or debited to deposit account☒ Authorized to be charged to deposit account

## 8. Deposit account number:

50-0238

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## 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.

STEPHEN R. WHITT

Name of Person Signing



Signature

January 17, 2008

Date

Total number of pages including cover sheet, attachments, and document:

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PATENT

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VOLENTINE &amp; WHITT, P.L.L.C. (01/2007)

ATTORNEY DOCKET NO. SEC.2004

**ASSIGNMENT**

In consideration of the sum of One Dollar (\$1.00) and other good and valuable consideration paid to each of the undersigned

Insert  
Name(s) of  
Inventor(s)

- |                          |           |
|--------------------------|-----------|
| 1. <u>Joon-Min PARK</u>  | 7. _____  |
| 2. <u>Sang-Beom KANG</u> | 8. _____  |
| 3. <u>Hyung-Rok OH</u>   | 9. _____  |
| 4. <u>Woo-Yeong CHO</u>  | 10. _____ |
| 5. _____                 | 11. _____ |
| 6. _____                 | 12. _____ |

Insert  
Name(s) of  
Assignee(s) &

the undersigned hereby sell(s) and assign(s) to

Address(es)

SAMSUNG ELECTRONICS CO., LTD.  
416, Maetan-dong, Yeongtong-gu,  
suwon-si, Gyeonggi-do 442-742, Republic of Korea

(hereinafter designated as the Assignee) the entire right, title and interest for the United States as defined in 35 USC 100, in the invention known as

Title of  
Invention

MEMORY CELL OF A RESISTIVE SEMICONDUCTOR MEMORY DEVICE, A  
RESISTIVE SEMICONDUCTOR MEMORY DEVICE HAVING A THREE-DIMENSIONAL  
STACK STRUCTURE, AND RELATED METHODS

Date of  
Signing of  
Application

for which an application for patent in the United States of America has been executed by  
the undersigned on January 16, 2008

The undersigned agree(s) to execute all papers necessary in connection with this application and any continuing, divisional or reissue applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

The undersigned agree(s) to execute all papers necessary in connection with any interference which may be declared concerning this application or continuing, division or reissue thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference.

The undersigned agree(s) to execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.

The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States patent to the Assignee.

VOLENTINE &amp; WHITT, P.L.L.C. (01/2007)

ATTORNEY DOCKET NO. SEC.2084

The undersigned hereby grant(s) the practitioners associated with the CUSTOMER NUMBER 20987 the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent Office for recordation of this document.

The undersigned hereby authorize(s) and request(s) the Commissioner of Patents to issue any and all Letters Patents of the United States resulting from said application or any division or divisions or continuing or reissue applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has (they have) full right to convey the entire interest herein assigned, and that he has (they have) not executed, and will not execute, any agreement in conflict herewith.

In witness whereof, executed by the undersigned on the date(s) opposite the undersigned name(s).

Date	<u>2008 Jan. 16</u>	Signature of Inventor	<u>Joon-Min Park</u> Joon-Min PARK
Date	<u>2008, Jan 16</u>	Signature of Inventor	<u>Sang-Ho Kang</u> Sang-Ho KANG
Date	<u>2009, Jan 16</u>	Signature of Inventor	<u>Hyung-Rok Oh</u> Hyung-Rok OH
Date	<u>Jan. 16, 2008</u>	Signature of Inventor	<u>Woo-Young Cho</u> Woo-Young CHO

(Note regarding Witnessing: It is recommended that the execution by the Inventor(s) be witnessed by at least two witnesses who sign here. However, the current practice of the U.S. Patent and Trademark Office is to record an Assignment even it has not been witnessed.)

Witness \_\_\_\_\_

Witness \_\_\_\_\_

Applicant Reference No. PX2268-US/SSD