

## PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT														
NATURE OF CONVEYANCE:	ASSIGNMENT														
CONVEYING PARTY DATA															
<table border="1"><thead><tr><th>Name</th><th>Execution Date</th></tr></thead><tbody><tr><td>Sung-Il Cho</td><td>02/21/2011</td></tr><tr><td>Nam-Gun Kim</td><td>02/21/2011</td></tr><tr><td>Jin-Young Kim</td><td>02/21/2011</td></tr><tr><td>Hyun-Chul Yoon</td><td>02/21/2011</td></tr><tr><td>Bong-Soo Kim</td><td>02/21/2011</td></tr><tr><td>Kwan-Sik Cho</td><td>02/21/2011</td></tr></tbody></table>	Name	Execution Date	Sung-Il Cho	02/21/2011	Nam-Gun Kim	02/21/2011	Jin-Young Kim	02/21/2011	Hyun-Chul Yoon	02/21/2011	Bong-Soo Kim	02/21/2011	Kwan-Sik Cho	02/21/2011	
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Kwan-Sik Cho	02/21/2011														
RECEIVING PARTY DATA															
Name:	SAMSUNG ELECTRONICS CO., LTD.														
Street Address:	416, Maetan-dong, Yeongtong-gu,														
City:	Suwon-si, Gyeonggi-do,														
State/Country:	REPUBLIC OF KOREA														
Postal Code:	442-742														
PROPERTY NUMBERS Total: 1															
<table border="1"><thead><tr><th>Property Type</th><th>Number</th></tr></thead><tbody><tr><td>Application Number:</td><td>13072907</td></tr></tbody></table>	Property Type	Number	Application Number:	13072907											
Property Type	Number														
Application Number:	13072907														
CORRESPONDENCE DATA															
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ATTORNEY DOCKET NUMBER:	SEC.2897														
NAME OF SUBMITTER:	ADAM C. VOLENTINE														
Total Attachments: 2 source=Assignment#page1.tif source=Assignment#page2.tif															

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PATENT  
REEL: 026029 FRAME: 0865

**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. Sung-Il CHO 7. \_\_\_\_\_
2. Nam-Gun KIM 8. \_\_\_\_\_
3. Jin-Young KIM 9. \_\_\_\_\_
4. Hyun-Chul YOON 10. \_\_\_\_\_
5. Bong-Soo KIM 11. \_\_\_\_\_
6. Kwan-Sik CHO 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**

SEMICONDUCTOR DEVICES INCLUDING BIT LINE CONTACT PLUG AND  
BURIED CHANNEL ARRAY TRANSISTOR, METHODS OF FABRICATING THE  
SAME, AND SEMICONDUCTOR MODULES, ELECTRONIC CIRCUIT BOARDS  
AND ELECTRONIC SYSTEMS INCLUDING THE SAME

**Date of****Signing of****Application**

for which an application for patent in the United States of America has been executed by  
the undersigned on February 21, 2011

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.

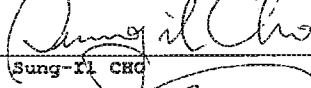
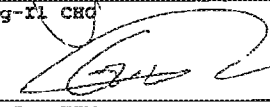
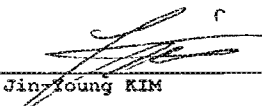
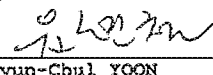
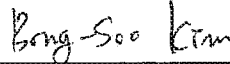
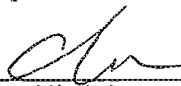
The undersigned agree(s) to execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.

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.

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>2011. 2. 21</u>	Signature of Inventor	 Sung-il CHO
Date	<u>2011. 2. 21</u>	Signature of Inventor	 Nam-Gun KIM
Date	<u>2011. 2. 21</u>	Signature of Inventor	 Jin-Young KIM
Date	<u>2011. 2. 21</u>	Signature of Inventor	 Hyun-Chul YOON
Date	<u>2011. 2. 21</u>	Signature of Inventor	 Bong-Soo KIM
Date	<u>2011. 2. 21</u>	Signature of Inventor	 Kwan-Sik 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. SPX200910-0008US