

**PATENT ASSIGNMENT**

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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
Dong-Chul Yoo	09/09/2011
Chan-Jin Park	09/09/2011
Ki-Hyun Hwang	08/31/2011
Han-Mei Choi	09/09/2011
Joon-Suk Lee	09/09/2011
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	Samsung Electronics Co., Ltd.
<b>Street Address:</b>	416 Maetan-dong
<b>Internal Address:</b>	Yeongtong-gu
<b>City:</b>	Suwon-si, Gyeonggi-do
<b>State/Country:</b>	KOREA, REPUBLIC OF
<b>Postal Code:</b>	000
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	13241316
<b>CORRESPONDENCE DATA</b>	
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<b>Correspondent Name:</b>	Michele P. McMahan
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<b>ATTORNEY DOCKET NUMBER:</b>	5649-3326

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NAME OF SUBMITTER:

Michele P. McMahan

**Total Attachments: 6**

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**ASSIGNMENT**

THIS ASSIGNMENT, made by us, **Dong-Chul YOO**, citizen of the Republic of Korea, residing at 413-804 SaetbyeolMaeul Sambu Apt., Bundang-dong, Bundang-gu, Seongnam-si, Gyeonggi-do, Republic of Korea; **Chan-Jin PARK**, citizen of the Republic of Korea, residing at 102-1904 Sunny Valley Apt., Jigok-dong, Giheung-gu, Yongin-si, Gyeonggi-do, Republic of Korea; **Ki-Hyun HWANG**, citizen of the Republic of Korea, residing at 202-604 Hansol Maeul LG Apt., Jeongja-dong, Bundang-gu, Seongnam-si, Gyeonggi-do, Republic of Korea; **Han-Mei CHOI**, citizen of the Republic of Korea, residing at F-1102 Samho Garden Apt., 32-8, Banpo-dong, Seocho-gu, Seoul, Republic of Korea; and **Joon-Suk LEE**, citizen of the Republic of Korea, residing at 1621-2401 Sarang Maeul Apt., Sang-dong, Wonmi-gu, Bucheon-si, Gyeonggi-do, Republic of Korea;

WITNESSETH: That,

WHEREAS, we are the joint inventors of certain new and useful improvements in for which an application for United States Letters Patent has been filed, or is being filed **METHODS OF MANUFACTURING A VERTICAL TYPE SEMICONDUCTOR DEVICE** concurrently, in the United States Patent and Trademark Office. We hereby authorize and request Myers Bigel Sibley & Sajovec, P.A., to insert here in parentheses (Application No. \_\_\_\_\_, filed \_\_\_\_\_) the filing date and application number of said application when known or to file this Assignment concurrently with the application, and

WHEREAS, **Samsung Electronics Co., Ltd.**, a Korean corporation having a principal place of business at 416 Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea, hereinafter referred to as assignee, is desirous of acquiring the entire right, title and interest in and to said invention as described in said application, and in and to any and all Letters Patent which shall be granted therefor in the United States of America and all foreign countries;

NOW, THEREFORE, To Whom It May Concern, be it known that for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, we have sold and by these presents do hereby sell, assign, transfer and convey unto the said assignee, its successors and assigns, the entire right, title and interest in and to the said invention and application, and in and to any and all continuations, continuations-in-part, or divisions thereof, and in and to any and all Letters Patent of the United States of America and all foreign countries or reissues thereof which may be granted therefor or thereon, for the full end of the



**ASSIGNMENT – CONTINUED**

term for which said Letters Patent may be granted, together with the right to claim the priority of said application in all foreign countries in accordance with the International Convention, the same to be held and enjoyed by said assignee, its successors and assigns, as fully and entirely as the same would have been held and enjoyed by us if this assignment and sale had not been made.

We hereby request that said Letters Patent be issued in accordance with this assignment.

We further covenant and agree that, at the time of the execution and delivery of these presents, we possess full title to the invention and application above-mentioned, and that we have the unencumbered right and authority to make this assignment.

We further covenant and agree to bind our heirs, legal representatives and assigns, promptly to communicate to said assignee or its representatives any facts known to us relating to said invention, to testify in any interference or legal proceedings involving said invention, to execute any additional papers which may be requested to confirm the right of the assignee, its representatives, successors or assigns to secure patent or similar protection for the said invention in all countries and to vest in the assignee complete title to the said invention and Letters Patent, without further compensation, but at the expense of said assignee, its successors, assigns and other legal representatives.

IN WITNESS WHEREOF, I have hereunto set my hand and seal on this 9th day of September, 2011.

Dong Chul Yoo (SEAL)  
**Dong-Chul YOO**

Witnessed by:

\_\_\_\_\_

Date: \_\_\_\_\_



**ASSIGNMENT - CONTINUED**

IN WITNESS WHEREOF, I have hereunto set my hand and seal on this 9<sup>th</sup> day  
of September, 2011.

Chan-Jin Park (SEAL)  
**Chan-Jin PARK**

Witnessed by:

\_\_\_\_\_

Date: \_\_\_\_\_



**ASSIGNMENT - CONTINUED**

IN WITNESS WHEREOF, I have hereunto set my hand and seal on this 31 day  
of August, 2011.

  
\_\_\_\_\_  
**Ki-Hyun HWANG** (SEAL)

Witnessed by:

\_\_\_\_\_

Date: \_\_\_\_\_



**ASSIGNMENT - CONTINUED**

IN WITNESS WHEREOF, I have hereunto set my hand and seal on this 9<sup>th</sup> day  
of September, 2011.

Han-Mei CHOI (SEAL)  
**Han-Mei CHOI**

Witnessed by:

\_\_\_\_\_

Date: \_\_\_\_\_



**ASSIGNMENT – CONTINUED**

IN WITNESS WHEREOF, I have hereunto set my hand and seal on this 9<sup>th</sup> day  
of September, 2011.

  
\_\_\_\_\_  
**Joon-Suk LEE** (SEAL)

Witnessed by:

\_\_\_\_\_

Date: \_\_\_\_\_

