

Form PTO-1595 (Rev. 6-12)  
OMB No. 0651-0027 (exp. 04/30/2015)

U.S. DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office

<b>RECORDATION FORM COVER SHEET</b> <b>PATENTS ONLY</b>	
To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.	
<b>1. Name of conveying party(ies):</b> Woo-chul JEON (03/08/2013), Young-hwan PARK (03/08/2013), Ki-yeol PARK (03/08/2013), Jai-kwang SHIN (03/08/2013), Jae-joo OH (03/08/2013), and Jong-bong HA (03/08/2013) Additional name(s) of conveying party(ies) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>2. Name and address of receiving party(ies)</b> Name: <u>Samsung Electronics Co., Ltd.</u> Internal Address: _____ Street Address: _____  129, Samsung-ro, Yeongtong-gu  City: <u>Suwon-Si, Gyeonggi-Do</u> State: _____ Country: <u>Republic of Korea</u> Zip: <u>443-742</u> Additional name(s) & address(es) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>3. Nature of conveyance/Execution Date(s):</b> Execution Date(s): in parentheses after inventor name <input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Change of Name <input type="checkbox"/> Security Agreement <input type="checkbox"/> Joint Research Agreement <input type="checkbox"/> Government Interest Assignment <input type="checkbox"/> Executive Order 9424, Confirmatory License <input type="checkbox"/> Other _____	<b>4. Application or patent number(s):</b> <input type="checkbox"/> This document serves as an Oath/Declaration (37 CFR 1.63). A. Patent Application No.(s) 13/790,319  B. Patent No.(s)  Additional numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>5. Name and address to whom correspondence concerning document should be mailed:</b> Name: <u>John A. Castellano</u> <u>HARNES, DICKEY &amp; PIERCE, P.L.C.</u> Internal Address: <u>Atty. Dkt.: 2557SI-001891/US</u> Street Address: <u>P.O. Box 8910</u>  City: <u>Reston</u> State: <u>VA</u> Zip: <u>20195</u> Phone Number: <u>(703) 668-8000</u> Fax Number: <u>(703) 668-8200</u> Email Address: <u>dcmalroom@hdp.com</u>	<b>6. Total number of applications and patents involved:</b> <span style="border: 1px solid black; padding: 2px 10px;">1</span>  <b>7. Total fee (37 CFR 1.21(h) &amp; 3.41)</b> \$ <u>40.00</u> <input checked="" type="checkbox"/> Authorized to be charged to deposit account <input type="checkbox"/> Enclosed <input type="checkbox"/> None required (government interest not affecting title)
<b>8. Payment Information</b> Deposit Account Number <u>08-0750</u> Authorized User Name <u>John A. Castellano</u>	
<b>9. Signature:</b>  <div style="display: flex; justify-content: space-between;"> <div style="width: 60%;">                      _____                      Signature                      John A. Castellano - 35 094                      Name of Person Signing                 </div> <div style="width: 35%; text-align: right;"> <u>March 8, 2013</u>                      Date                 </div> </div> Total number of pages including cover sheet, attachments, and documents: <span style="border: 1px solid black; padding: 2px 10px;">7</span>	
<small>Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to:                      Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450</small>	

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**COMBINED DECLARATION (37 CFR §1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM<sup>1</sup>**

The undersigned acknowledges that this document is being used both as an assignment of the invention and as the declaration (37 CFR 1.63) for a Utility or Design Application.

WHEREAS, the undersigned, hereinafter referred to collectively as Assignor, has invented:

Title: **SEMICONDUCTOR DEVICES AND METHODS OF MANUFACTURING THE SEMICONDUCTOR DEVICE**

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for which Assignor is about to make or has made United States or International application for patent.

WHEREAS, as a below named inventor(s), I/(we) hereby declare that:

**Section I. Declaration**

This declaration is directed to:

- The attached U.S. non-provisional patent application, or
- U.S. non-provisional patent application number \_\_\_\_\_, filed on \_\_\_\_\_, or
- PCT international patent application number \_\_\_\_\_, filed on \_\_\_\_\_.

The above-identified application was made or authorized to be made by me (us).

I (we) believe that I am (we are) the original inventor (original joint inventors) of a claimed invention in the above-identified application.

I (we) hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

<sup>1</sup> This form requires the use of an Application Data Sheet.

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I hereby state that I have reviewed and understand the contents of the above identified application; including the claims.

I acknowledge that I am aware of the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56.

**Section II. Assignment**

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

Samsung Electronics Co., Ltd.

having an address at 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do 443-742, Republic of Korea, (hereinafter designated as the Assignee), the entire (100%) right, title and interest for the United States as defined in 35 USC §100, in the invention described in the application identified in Section I of this document.

Assignor hereby confirms any prior assignment to Assignee, and to the extent that Assignor has not already done so, agrees to assign, and hereby does, sell, assign and transfer unto Assignee and its successors in interest, the full and exclusive right, title and interest in the United States of America and throughout the world, including the right to claim priority under the laws of the United States, the Paris Convention, and any foreign countries, to the inventions as described in the aforesaid application, to the aforesaid application itself, and all divisions, continuations, continuations-in-part, or other applications claiming priority directly or indirectly from the aforesaid application, and any United States or foreign Letters Patent, utility model, or other similar rights which may be granted thereon, including reissues, reexaminations and extensions thereof, and all copyright rights throughout the world in the aforesaid application and the subject matter disclosed therein, these rights, title and interest to be held and enjoyed by Assignee to the full end of the term for which the Letters Patent, utility model, or other similar rights, are granted and any extensions thereof as fully and entirely as the same would have been held by Assignor had this assignment and sale not been made, and the right to sue for, and recover for past infringements of, or liabilities for, any of the rights relating to any of the applications, patents, utility models, or other similar rights, resulting therefrom, and the copyright rights;

Assignor hereby covenants and agrees to execute all instruments or documents required or requested for the making and prosecution of any applications of any type for patent, utility model, or other similar rights, and for copyright, in the United States and in all foreign countries including, but not limited to, any provisional, continuation, continuation-in-part, divisional, renewal or substitute thereof, and as to letters patent any reissue, re-

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examination, or extension thereof, and for litigation regarding, or for the purpose of protecting title and to the said invention, the United States application for patent, or Letters Patent therefor, and to testify in support thereof, for the benefit of Assignee without further or other compensation than that above set forth;

Assignor hereby covenants that no assignment, sale, license, agreement or encumbrance has been or will be entered into which would conflict with this Assignment; and

Assignor hereby requests the United States Patent and Trademark Office to issue the Letters Patent of the United States of America to Assignee, and requests that any official of any country or countries foreign to the United States, whose duty it is to issue or grant patents and applications as aforesaid, to issue the Letters Patent, Utility Model Registration or other similar right to Assignee.

The undersigned hereby grant(s) the law firm of **Harness, Dickey & Pierce, P.L.C.** the power to insert on this Declaration and Assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office for recordation of this document.

**Section III. Inventor(s)/Assignor(s) Signature(s)**


LEGAL NAME OF FIRST INVENTOR/ASSIGNOR	Family Name	First Given Name	Second Given Name
	JEON	Woo-chul	
<p data-bbox="435 1331 561 1356">SIGNATURE</p>  <p data-bbox="1008 1304 1068 1329">DATE</p> <p data-bbox="1117 1314 1224 1335">March 8, 2013</p>			

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LEGAL NAME OF SECOND INVENTOR/ASSIGNOR	Family Name	First Given Name	Second Given Name
	PARK	Young-hwan	

SIGNATURE  DATE March 8, 2013

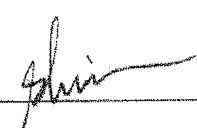
LEGAL NAME OF THIRD INVENTOR/ASSIGNOR	Family Name	First Given Name	Second Given Name
	PARK	Ki-yeol	

SIGNATURE  DATE March 8, 2013

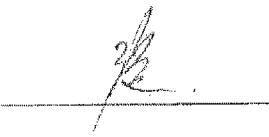
LEGAL NAME OF FOURTH INVENTOR/ASSIGNOR	Family Name	First Given Name	Second Given Name
	SHIN	Jai-kwang	

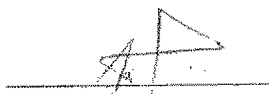
  

SIGNATURE  DATE March 8, 2013

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LEGAL NAME OF FIFTH INVENTOR/ASSIGNOR	Family Name	First Given Name	Second Given Name
	OH	Jae-joo	
<p>SIGNATURE <u></u> DATE <u>March 8, 2013</u></p>			

LEGAL NAME OF SIXTH INVENTOR/ASSIGNOR	Family Name	First Given Name	Second Given Name
	HA	Jong-bong	
<p>SIGNATURE <u></u> DATE <u>March 8, 2013</u></p>			

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