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

U.S. DEPARTMENT OF COMMERCE

Date: 11/26/2012 4:38:34 PM

RECORDATION FORM COVER SHEET			
PATENTS ONLY			
To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.			
1. Name of conveying party(ies):	2. Name and address of receiving party(ies)		
Jae-kyu LEE (11/06/2012), Seung-pil KO (11/06/2012), Yong-jun KIM (11/06/2012), and	Name: Samsung Electronics Co., Ltd.		
Eun-jung KIM (11/07/2012)	Internal Address:		
Additional name(s) of conveying party(ies) attached? Yes X No No No	Street Address:		
•	129, Samsung-ro, Yeongtong-gu		
Execution Date(s): in parentheses after inventor name X Assignment Merger Change of Name	(Lo, cambang to, rosingtong ga		
Security Agreement Joint Research Agreement	City: Suwon-Si, Gyeonggi-Do		
Government Interest Assignment	State:		
Executive Order 9424, Confirmatory License	Country: Republic of Korea Zip: 443-742		
Other	Additional name(s) & address(es) Yes X No attached?		
4. Application or patent number(s): A. Patent Application No.(s) 13/684,884	ument serves as an Oath/Declaration (37 CFR 1.63). B. Patent No.(s)		
Additional numbers attached?	Yes X No		
Name and address to whom correspondence concerning document should be mailed:	6. Total number of applications and patents involved:		
Name: John A. Castellano HARNESS, DICKEY & PIERCE, P.L.C.	7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.00		
Internal Address: Atty. Dkt.: 2557-001852/US			
Street Address: P.O. Box 8910	X Authorized to be charged to deposit account		
	Enclosed		
	None required (government interest not affecting title)		
City: Reston	8. Payment Information		
State: VA Zip: 20195			
Phone Number: (708) 668-8000	00.0750		
Fax Number: (703) 668-8200	Deposit Account Number 08-0750		
Email Address: dcmailroom@fdp.com	Authorized User Name John A. Castellano		
9. Signature:	November 26, 2012		
John A Castellano / 35,094 Name of Person Gighing	Total number of pages including cover sheet, attachments, and documents: 6		
Documents to be recorded (including cover sh Mail Stop Assignment Recordation Services, Director	eet) should be faxed to (571) 273-0140, or mailed to: r of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450		

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SAMSUNG ELECTRONICS CO., LTD.

COMBINED DECLARATION (37 CFR §1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM¹

The undersigned acknowledges that this document is being used both as an assignment of				
the inventi	on and as the declaration (37 CFR 1.6	3) for a Utility or Des	ign Application.	
WHEREAS,	the undersigned, hereinafter referred	d to collectively as As	signor, has invented:	
Title: SE	MICONDUCTOR DEVICE AND METHO	D OF MANUFACTURII	NG THE SAME	
for which A for patent.	Assignor is about to make or has made	e United States or Int	ernational application	
WHEREAS,	as a below named inventor(s), I/(we)	hereby declare that:		
Section I. I	Declaration			
This declar	ration is directed to:			
\boxtimes	The attached U.S. non-provision	al patent application,	or	
- Inspecial	U.S. non-provisional patent appli on, o		, filed	
	PCT international patent applicat	ion number	, filed on	
The above-	-identified application was made or a	uthorized to be made	by me (us).	
	eve that I am (we are) the original invented in the above-identified application.	entor (original joint in	ventors) of a claimed	
	by acknowledge that any willful false under 18 U.S.C. 1001 by fine or impr			
			•.	
¹ This form r	requires the use of an Application Data Sheet	t.		
SEC Ref No.	IE-201106-110-1-US0	Attorney Ref No.	2557-001852/US	

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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)

Family Name	First Given Name	Second Given Name
LEE	Jae-kyu	
spile	DATE	11/06/2012
_	LEE	LEE Jae-kyu

SEC Ref No. IE-201106-110-1-USO Attorney Ref No. 2557-001852/US

SAMSUNG ELECTRONICS CO., LTD.

LEGAL NAME OF	Family Name	First Given Name	Second Given Name
SECOND INVENTOR/ASSIGNOR	КО	Seung-pil	

LEGAL NAME OF	Family Name	First Given Name	Second Given Name
THIRD INVENTOR/ASSIGNOR	KIM	Yong-jun	
	11:	DATE	2012.11.06

LEGAL NAME OF	Family Name	First Given Name	Second Given Name
FOURTH	KIM	Eun-Jung	
SIGNATURE	10. O	DATE	2012.11.1

EC Dof		IE-201106-110-1-US0	Attorney Ref No	2557-001852/US
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