

		<b>RECORDATION FORM COVER SHEET PATENTS ONLY</b>		U.S. Department of Commerce Patent and Trademark Office Attorney Docket No. SAM-51159	
To the Director of the U.S. Patent and Trademark Office: Please record the attached original documents or copy thereof.				Mail Stop Assignment Recordation Services	
1. Name of conveying party(ies): 1. Dong-Hak SHIN 2. Yong-Sang PARK 3. Young-Yong BYUN 4. In-Chul JEONG			2. Name and address of receiving party: Name: Samsung Electronics Co., Ltd.		
Additional name(s) of conveying parties attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			Internal Address:		
3. Nature of conveyance:			Street Address: 129, Samsung-ro, Yeongtong-gu		
<input checked="" type="checkbox"/>	Assignment	<input type="checkbox"/>	Merger	City: Suwon-si	
<input type="checkbox"/>	Security Agreement	<input type="checkbox"/>	Change of Name	State: Gyeonggi-do	Country: Republic of Korea Zip Code: 443-742
<input type="checkbox"/>	Joint Research Agreement	<input type="checkbox"/>	Government Interest Assignment	Additional name(s) & Address(es) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<input type="checkbox"/>	Executive Order 9494, Confirmatory License	<input type="checkbox"/>	Other:		
Execution Date(s):		10/1/2013			
4. Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the application:					
A. Patent Application Number:			B. Patent Number(s):		
14/059,619					
Additional numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
5. Name and address of party to whom correspondence concerning document should be mailed:			6. Total number of applications and patents involved: 1		
Name:	Patrick D. Muir	(tel): 703-757-7880 (fax): 703-757-7447 (e-mail): mailroom@muirpatentconsulting.com			
Internal Address:	Muir Patent Consulting, PLLC				
Street Address:	9913 Georgetown Pike, Suite 200, P.O. Box 1213				
City:	Great Falls				
State:	VA	Zip:	22066		
7. Total fee (37 CFR 1.21(h) and 3.41): \$ 40			8. Deposit Account No.: 50-4574		
<input type="checkbox"/> Enclosed (Please charge deficiency or credit overpayment to deposit account 50-4574) <input checked="" type="checkbox"/> Authorized to be charged to deposit account <input type="checkbox"/> None required (government interest not affecting title)					
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.					
Signed:		/Sang Ki Hwang/		October 22, 2013	
		Sang Ki Hwang, Reg. No. 66,641		Date	
Total number of pages including cover sheet, attachments and documents:					5

CH \$40.00 504574 14059619

SAMSUNG ELECTRONICS CO., LTD.

**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: **SENSE AMPLIFIER CIRCUIT AND SEMICONDUCTOR MEMORY DEVICE**

---

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.

---

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

SEC Ref  
No.

**ID-201206-024-1-US0**

Attorney Ref  
No.

**SAM-51159**

SAMSUNG ELECTRONICS CO., LTD.

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.

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

SEC Ref  
No.

**ID-201206-024-1-US0**

Attorney Ref  
No.

**SAM-51159**

SAMSUNG ELECTRONICS CO., LTD.

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-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 ~~Muir Patent Consulting, PLLC~~ 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
	SHIN	Dong-Hak	

SIGNATURE 	DATE <u>Oct 1, 2013</u>
---	-------------------------

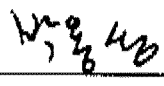
SEC Ref  
No.

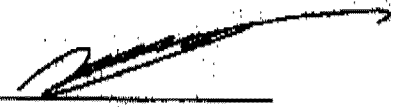
**ID-201206-024-1-US0**

Attorney Ref  
No.

**SAM-51159**

SAMSUNG ELECTRONICS CO., LTD.

LEGAL NAME OF SECOND INVENTOR/ASSIGNOR	Family Name	First Given Name	Second Given Name
	PARK	Yong-Sang	
SIGNATURE <u></u> DATE <u>OCT 1, 2013</u>			

LEGAL NAME OF THIRD INVENTOR/ASSIGNOR	Family Name	First Given Name	Second Given Name
	BYUN	Young-Yong	
SIGNATURE <u></u> DATE <u>OCT 1, 2013</u>			

LEGAL NAME OF FOURTH INVENTOR/ASSIGNOR	Family Name	First Given Name	Second Given Name
	JEONG	In-Chul	
SIGNATURE <u>JEONG IN CHUL</u> DATE <u>OCT 1, 2013</u>			

SEC Ref ID-201206-024-1-US0 Attorney Ref SAM-51159  
No. No.

COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM  
Page 4 of 4