PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
HAE-SANG PARK	05/12/2014
YOUNG-HAK LEE	05/12/2014
JUNG-HEE KIM	05/12/2014
HEUI-SIK JEON	05/12/2014
EUNJEONG LUCY PARK	05/12/2014
SUNGZOON CHO	05/12/2014
JOOSEOUNG PARK	05/12/2014
JIWON YANG	05/12/2014

RECEIVING PARTY DATA

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Postal Code:	443-742
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Name: Street Address:	SEOUL NATIONAL UNIVERSITY R&DB FOUNDATION SAN 56-1, SILLIM-DONG, GWANAK-GU
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PROPERTY NUMBERS Total: 1

Property Type	Number	
Application Number:	14279629	

CORRESPONDENCE DATA

Fax Number: (516)692-8889

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via

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PATENT

502812172 REEL: 032912 FRAME: 0310

Address Line 4: WOO	DDBURY, NEW YORK 11797
ATTORNEY DOCKET NUMBER:	8111S-385/RDR
NAME OF SUBMITTER:	FRANK CHAU
SIGNATURE:	/Frank Chau/
DATE SIGNED:	05/16/2014
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 6

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> PATENT REEL: 032912 FRAME: 0311

COMBINED DECLARATION (37 CFR §1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM¹ FOR MORE THAN ONE ASSIGNEE

The undersigned acknowledge 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 inventors have invented:

Title:		RATUS AND METHOD OF SEG CONDUCTOR MANUFACTURIN	IG FACILITY	UTPUT FROM A
for whi	ich Inve	entors are about to make or ha	4	
			5 made omied states of mi	Ciriotional
applica	ition to	r patent.	· ·	
WHERE	EAS, as	a below named inventor(s), I/(we) hereby declare that:	
Section	ı I. De	claration	* * **	v.
This de	clarati	on is directed to:	ar Ar	
	\boxtimes	The attached U.S. non-provis	ional patent application, or	
		U.S. non-provisional patent a		filed,
		PCT international patent appl	ication number	, filed on
The ab	ove-ide	entified application was made o	or authorized to be made by	y me (us).
		that I am (we are) the original ne above-identified application		ntors) of a claimed
		acknowledge that any willful fa ider 18 U.S.C. 1001 by fine or it		
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	orm requ	uires the use of an Application Data S	heet.	
		IJ-201303-001-1-US0		
		CLARATION (37 CFR 1.63) FOR UT		

PATENT REEL: 032912 FRAME: 0312 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, collectively referred to in Section II as Assignors in this section, hereby sell(s) and assign(s) to

Samsung Electronics Co., Ltd. and Seoul National University R&DB Foundation

having an address at 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do 443-742, Republic of Korea and San 56-1, Sillim-dong, Gwanak-gu, Seoul, 151-742 Republic of Korea, respectively, (hereinafter designated as the Assignees), 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 Assignees, and to the extent that Assignor has not already done so, agrees to assign, and hereby does, sell, assign and transfer unto Assignees 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 Assignees 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;

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SEC Ref No.	IJ-201303-001-1-US0	Attorney Ref No.	8111S-385
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COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM

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, reexamination, 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 Assignees 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 Assignees, 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 Assignees.

The undersigned hereby grant(s) the law firm of F. Chau & Associates, LLC 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.

Inventor(s)/Assignor(s) Signature(s) for Section II.

LEGAL NAME OF FIRST	Family Name	First Given Name	Second Given Name
INVENTOR/ASSIGNOR	Park (2) (2)	Hae-Sang	
	114	DATE	
SIGNATURE	WVA		May 12, 2014
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COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM

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LEGAL NAME OF	Family Name	First Given Name	Second Giv	en Name
SECOND INVENTOR/ASSIGNOR	Lee	Young-Hak		
	· · · · · · · · · · · · · · · · · · ·	DATE	Mara 12	2014
SIGNATURE _	103		May 12,	

LEGAL NAME OF	Family Name	First Given Name	Second Given Name
THIRD INVENTOR/ASSIGNOR	Kim	Jung-Hee	
SIGNATURE	Du Ar	DATE	May 12, 2014

LEGAL NAME OF	Family Name	First Given Name	Second Given Name
FOURTH INVENTOR/ASSIGNOR	Jeon	Heul-Sik	
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	4-18		

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SEC Ref No.	1J-201303-001-1-US0	Attorney Ref No.	8111S-385

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

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SIGNATURE		DATE	May 12, 2014
	la s a	5 11 12 - 13	May 12, 2014
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INVENTOR/ASSIGNOR			
LEGAL NAME OF SEVENTH	Park	Jooseoung	
	Family Name	First Given Name	Second Given Name
		ingerial de la companya de la compa	
SIGNATURE	345	DATÉ	May 12, 2014
rev v parv v po svjetenood bott pool s			
EGAL NAME OF SIXTH INVENTOR/ASSIGNOR	Cho	Sungzoon	
	Family Name	First Given Name	Second Given Name
SIGNATURE	\$£;=1	DATE Ma	y 12, 2014
NVENTOR/ASSIGNOR			
EGAL NAME OF FIFTH	Park	Eunjeong Lucy	
	Family Name	First Given Name	Second Given Name

PATENT REEL: 032912 FRAME: 0316

SAMSUNG ELECTRONICS CO., LTD. and SEOUL NATIONAL UNIVERSITY R&DB FOUNDATION

LEGAL NAME OF EIGHTH INVENTOR/ASSIGNOR	Family Name Yang	First Given Name Jiwon	Second Given Name
SIGNATURE	양계원	DATE M	ay 12, 2014

SEC Ref No.	LJ-201303-001-1-US0	Attorney Ref No.	81118-385			
COMBINED DECL	ARATION (37 CFR 1.63) FOR UTILIT	Y PATENT APPLICATION	AND ASSIGNMENT FORM			

PATENT REEL: 032912 FRAME: 0317

RECORDED: 05/16/2014