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PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
KEUN HEE BAI	10/04/2015
KYOUNG HWAN YEO	10/03/2015
SEUNG SEOK HA	10/03/2015
SEUNG JU PARK	10/03/2015
DO HYOUNG KIM	10/04/2015
MYEONG CHEOL KIM	10/04/2015
JAE HYOUNG KOO	10/03/2015
KI BYUNG PARK	10/05/2015

RECEIVING PARTY DATA

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City:	SUWON-SI, GYEONGGI-DO
State/Country:	KOREA, REPUBLIC OF
Postal Code:	443-742

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14959457

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER: SAM-53151

NAME OF SUBMITTER: SANG KI HWANG

SIGNATURE: /SANG KI HWANG/

DATE SIGNED:	12/07/2015	
Total Attachments: 5		
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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 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:	МЕТН	HOD FOR MANUFACTURING SEMICONDUCTOR DEVICE			
for whi		gnor is about to make or has m	ade United States or Intern	ational application for	
WHERE	EAS, as	a below named inventor(s), I/	(we) hereby declare that:		
Section	n I. Dec	laration			
This de	eclaratio	on is directed to:			
	\boxtimes	The attached U.S. non-provisi	onal patent application, or		
		U.S. non-provisional patent application number, filed on, or			
		PCT international patent application number, filed on,			
The ab	ove-ide	ntified application was made o	r authorized to be made by	me (us).	
		that I am (we are) the original i le above-identified application.		ntors) of a claimed	
¹ This fo	orm requ	ires the use of an Application Data Sh	neet.		
SEC R No.		IE-201407-117-1-US0	Attorney Ref No.	SAM-53151	
СОМЕ	BINED D	ECLARATION (37 CFR 1.63) FOR U	FILITY PATENT APPLICATION A	AND ASSIGNMENT FORM	

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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;

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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-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 Law, 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 NAM	1	Family Nam	First Given Na	me Second Given Name
FIRST NVENTOR/AS		BAI	Keun Hee	
SIG	NATURE	Birt	4	ATE 2015,10.4
SEC Ref	IE-20140	7-117-1-US0	Attorney Ref No.	SAM-53151

Page 3 of 5

LEGAL NAME OF SECOND	Family Name	First Given Name	Second Given Name
INVENTOR/ASSIGNOR	YEO Kyoung Hwan		
SIGNATURE	O POSEC	DATE	2015,10,3
LEGAL NAME OF	Family Name	First Given Name	Second Given Name
THIRD INVENTOR/ASSIGNOR	НА	Seung Seok	
SIGNATURE	45	DATE	20/5./0.3
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INVENTOR/ASSIGNOR	PARK Seung Ju		
SIGNATURE	박승구	DATE	2016, 10.3
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FIFTH INVENTOR/ASSIGNOR	KIM	Do Hyoung	
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SAMSUNG ELECTRONICS CO., LTD.

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SEVENTH INVENTOR/ASSIGNOR	коо	Jae Hyoung	
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EIGHTH INVENTOR/ASSIGNOR	PARK	Ki Byung	
SIGNATURE	447146	DATE	2015.10.5.

SEC Ref	IE-201407-117-1-US0	Attorney Ref No.	SAM-53151
No.			

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PATENT REEL: 037222 FRAME: 0183

RECORDED: 12/07/2015