01/12/2018 504727015

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
NAYA HA	04/17/2017
YONG-DURK KIM	04/17/2017
BONG-HYUN LEE	04/17/2017
HYUNG-OCK KIM	04/17/2017
KWANG-OK JEONG	04/19/2017
JAE-HOON KIM	04/19/2017

RECEIVING PARTY DATA

Name:	SAMSUNG ELECTRONICS CO., LTD	
Street Address:	Address: 129, SAMSUNG-RO, YEONGTONG-GU	
City:	SUWON-SI, GYEONGGI-DO	
State/Country:	KOREA, REPUBLIC OF	
Postal Code:	16677	

PROPERTY NUMBERS Total: 1

Property Type	Number	
Application Number:	15643472	

CORRESPONDENCE DATA

Fax Number: (703)757-7447

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 7037577880

Email: pto@muirpatentlaw.com MUIR PATENT LAW, PLLC **Correspondent Name:**

Address Line 1: P.O. BOX 1213

Address Line 4: GREAT FALLS, VIRGINIA 22066

ATTORNEY DOCKET NUMBER:	SAM-55132
NAME OF SUBMITTER:	PATRICK MUIR
SIGNATURE:	/Patrick Muir/
DATE SIGNED:	01/12/2018

Total Attachments: 5

PATENT REEL: 044607 FRAME: 0087

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> PATENT REEL: 044607 FRAME: 0088

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

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:		M AND METHOD OF DESIGNI JT EFFECT	NG INTEGRATED CIRCUIT I	3Y CONSIDERING LOCAL
for whi		gnor is about to make or has m	nade United States or Inter	national application for
WHERI	EAS, as i	below named inventor(s), I/(we) hereby declare that:	
Section	n I. Dec	laration		
This de	claratio	n is directed to:		
	\boxtimes	The attached U.S. non-provisi	ional patent application, or	r
		U.S. non-provisional patent ap		filed on
		PCT international patent appli	cation number	, filed on
I (we) I inventi I (we) I	believe ion in th hereby a	ntified application was made o that I am (we are) the original e above-identified application acknowledge that any willful fa	inventor (original joint inve Ilse statement made in this	entors) of a claimed s declaration is
punish both.	able un	der 18 U.S.C. 1001 by fine or ir	nprisonment of not more t	:han five (5) years, or
SEC Res	f No.	IB-201607-024-1-US0	Attorney Ref No.	SAM-55132
COM	IBINED D	ECLARATION (37 CFR 1.63) FOR (JTILITY PATENT APPLICATION	I AND ASSIGNMENT AND

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REEL: 044607 FRAME: 0089

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 16677, 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-examination, or extension thereof, and for litigation regarding, or for the purpose of protecting title and to the said

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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	Family Name	First Given Name	Second Given Name
FIRST INVENTOR/ASSIGNOR	НА	Naya	
SIGNATURE	Jam 2	DATE	17/04/17

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Family Name	First Given Name	Second Given Name
KIM	Yong-Durk	
	DATE 	<u>19, 4.19</u>
Family Name	First Given Name	Second Given Name
FEE	Bong-hyun	
Bong Ugun Lo	DATE	17. 04. 17
Family Name	First Given Name	Second Given Name
	Family Name LEE	KIM Yong-Durk DATE Family Name First Given Name LEE Bong-hyun

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DATE

LEGAL NAME OF	Family Name	First Given Name	Second Given Name
FIFTH INVENTOR/ASSIGNOR	JEONG	Kwang-ok	
<u>l</u>		1	
	Journal Zeon	DATE	4-19-2017
SIGNATURE			4-19-20//

LEGAL NAME OF	Far	nily Nan	ne	First Given Name	Second Given Name
SIXTH INVENTOR/ASSIGNOR	KIM		Jae-hoon		
SIGNATURE _	Kin	Jae	1-100 U	DATE	2018.04.19

*******	***************************************	***************************************	
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