505629586 08/20/2019

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5676391

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
YEONG GIL KIM	07/22/2019
HAN SEONG KIM	07/22/2019
JONG MIN BAEK	07/22/2019
JI YOUNG KIM	07/22/2019
SUNG BIN PARK	07/22/2019
DEOK YOUNG JUNG	07/22/2019
KYU HEE HAN	07/22/2019

### **RECEIVING PARTY DATA**

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

### **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	16545150

## **CORRESPONDENCE DATA**

**Fax Number:** (919)854-1401

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:** 919-854-1400

**Email:** cgregory@myersbigel.com

Correspondent Name: MYERS BIGEL, P.A. Address Line 1: PO BOX 37428

Address Line 4: RALEIGH, NORTH CAROLINA 27627

ATTORNEY DOCKET NUMBER:	5649-5024
NAME OF SUBMITTER:	CAREY GREGORY
SIGNATURE:	/cbg/

PATENT 505629586 REEL: 050098 FRAME: 0317

DATE SIGNED:	08/20/2019
	This document serves as an Oath/Declaration (37 CFR 1.63).
Total Attachments: 5	
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source=5649-5024_dec#page5.tif	

PATENT REEL: 050098 FRAME: 0318

## 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: METHODS OF FABRICATING SEMICONDUCTOR DEVICES 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 32156 PCT international patent application number The above-identified application was made or authorized to be made by me (us).

<sup>1</sup> This form requ	his form requires the use of an Application Data Sheet.			
SEC Ref No.	IB-201808-030-1-US0	Attorney Ref No.	5649-5024	

I (we) believe that I am (we are) the original inventor (original joint inventors) of a claimed

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

COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM Page **1** of **5** 

**PATENT** 

invention in the above-identified application.

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 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-

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

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 Myers Bigel, P.A. 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	Family Name	First Given Name	Second Given Name
INVENTOR/ASSIGNOR	KIM 공정개발2팀(반도체연	<b>YEONG GIL</b> /김영길/11038156	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
SIGNATURE		DATE	2019. 7,22.

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SEC Ref No.	IB-201808-030-1-US0	Attorney Ref No.	5649-5024

LEGAL NAME OF	Family Name	First Given Name	Second Given Name
SECOND	KIM	HAN SEONG	
CICNATURE		DATE	2019. 1.22
SIGNATURE		_	

LEGAL NAME OF	Family Name	First Given Name	Second Given Name
THIRD INVENTOR/ASSIGNOR	ВАЕК	JONG MIN	
		DATE	
SIGNATURE	Back Jong Min		2019 7.22

LEGAL NAME OF	Family Name	First Given Name	Second Given Name
FOURTH INVENTOR/ASSIGNOR	KIM	JI YOUNG	
		DATE	
SIGNATURE	KIM JI TOUNG	DATE	2019.7.22

SEC Ref No. IB-201808-030-1-US0 Attorney Ref No. 5649-5024

LEGAL NAME OF FIFTH INVENTOR/ASSIGNOR	Family Name	First Given Name	Second Given Name
	PARK	SUNG BIN	
			·
SIGNATURE _	Park Sung B	77h DATE	2019/11/22

LEGAL NAME OF SIXTH INVENTOR/ASSIGNOR	Family Name	First Given Name	Second Given Name
	JUNG	DEOK YOUNG	
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- 9 Tas - March			· winty
SIGNATURE	Jiann Decky	DATE anha	200022

공정개발2팀(반도체면)/김영길/11038156

LEGAL NAME OF SEVENTH	Family Name	First Given Name	Second Given Name
INVENTOR/ASSIGNOR	HAN	KYU HEE	
SIGNATURE	Kynthee Han	DATE —	2019.7.22

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SEC Ref No.	IB-201808-030-1-US0	Attorney Ref No.	5649-5024	

**RECORDED: 08/20/2019**