505053427 08/21/2018

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5100182

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JIN-HO CHUN	06/18/2018
SEONG-MIN SON	06/18/2018
HYUNG-JUN JEON	06/18/2018
KWANG-JIN MOON	06/18/2018
JIN-HO AN	06/18/2018
HO-JIN LEE	06/18/2018
ATSUSHI FUJISAKI	06/18/2018

RECEIVING PARTY DATA

Name:	SAMSUNG ELECTRONICS CO., LTD.
Street 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:	16106645	

CORRESPONDENCE DATA

Fax Number: (703)207-0003

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: 703-207-0008 Email: eoa@lee-iplaw.com **Correspondent Name:** LEE & MORSE, P.C.

3141 FAIRVIEW PARK DRIVE Address Line 1:

Address Line 2: SUITE 500

Address Line 4: FALLS CHURCH, VIRGINIA 22042

ATTORNEY DOCKET NUMBER:	253/1166_00
NAME OF SUBMITTER:	EUGENE M. LEE
SIGNATURE:	/Eugene M. Lee/
DATE SIGNED:	08/21/2018

This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 6

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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:	SEMICONDUCTOR DEVICES AND SEMICONDUCTOR PACKAGES INCLUDING THE SAME, AND METHODS OF MANUFACTURING THE SEMICONDUCTOR DEVICES				
for wh patent.		signor is about to make or has made United States or Interna	itional application for		
WHER	KEAS,	as a below named inventor(s), I/(we) hereby declare that:			
Section	a I. D	eclaration			
This do	eclarat	ion is directed to:			
	\boxtimes	The attached U.S. non-provisional patent application, or			
		U.S. non-provisional patent application number	, filed on		
		PCT international patent application number	, filed on		
The ab	ove-ic	lentified application was made or authorized to be made by r	ne (us).		
N		e that I am (we are) the original inventor (original joint invented above-identified application.	ntors) of a claimed		
		acknowledge that any willful false statement made in this d i.C. 1001 by fine or imprisonment of not more than five (5) y			
This f	orm rer	quires the use of an Application Data Sheet.			
SEC R	ef No.	IE-201706-064-1-USO* Attorney Ref No.	253/1166_98 (AY5048US)		

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

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SAMSUNG ELECTRONICS CO., LTD.

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 invention, the United States application for patent, or Letters Patent therefor, and to testify in

SEC Ref No. IE-201706-064-1-US0' Attorney Ref No. 253/1166_00 (AY5048US)

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

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교정개발2팀(배도체역)/천진호/05151780/2018-06-18 12:58

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 LEE & MORSE, PC 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	CHUN	.lin-Ho	
SIGNATURE	1871 = 1810 = X1(8)/1 Chun J74h0	97938705151780 DATE	78. 6. 18

LEGAL NAN SECON INVENTOR/AS	D	Family Nam		Given Name ong-Min	Second Given Nan	ne
SIG	NATURE	San Jeorg	M/n ==	DATE	28. 6.18	
SEC Ref No.	IE-20170	6-064-1-US0*	Attorney R	ef No.	253/1166_00 (AYSO48US)	300 ,

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SAMSUNG ELECTRONICS CO., LTD.



땅 걔 걔 !!! 4 !!! (전 EL 웹 앱)/건 전 5±/08 15 17 8 :)

SEC Ref No. IE-201706-064-1-USO * Attorney Ref No. 253/1166_00 (AY5048U5)

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

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공항개발2림(반도체연)/천진호/05151780/2018-06-18 12:58

LEGAL NAME OF	Family Name	First Given Name	Second Given Name
INVENTOR/ASSIGNOR	JEON	Hyung-Jun	
······································			
SIGNATURE	Jeon Hywe	JUN DATE	(8.6.18

LEGAL NAME OF FOURTH	Family Name	First Given Name	Second Given Name
NVENTOR/ASSIGNOR	MOON	Kwang-Jin	
	s		
SIGNATURE	<u>Yoon kwanc</u>	∭``M DATE	<u> </u>

LEGAL NAME OF	Family Name	First Given Name	
FIFTH INVENTOR/ASSIGNOR	AN	Jin-Ho	
SIGNATURE	4n 70	<u>14</u> DATI	E 18: 6.18
÷	86-864-1-US8°	Attorney Ref No.	253/1166_00 (AY5048US)

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공정개발2팀(반도체연)/천진호/05151780/2018-06-18 12:58

LEE		
Auglickie	Ho-Jin	
z Hojiy	DATE	12.6.18
	Z Hojiy	

LEGAL NAME OF		First Given Name	Second Given Name
SEVENTH INVENTOR/ASSIGNOR	FUJISAKI	Atsushi	

SEC Ref No. IE-201706-064-1-US0 Attorney Ref No. 253/1166_00 (AY5048US)

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RECORDED: 08/21/2018