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PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5996398

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
MINJUNG CHOI	02/11/2020
SOOHO SHIN	02/11/2020
YEONJIN LEE	02/11/2020
JUNGHOON HAN	02/12/2020

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:	16795658

CORRESPONDENCE DATA

Fax Number: (703)563-0600

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)757-7880

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

Address Line 1: P.O. BOX 1213

Address Line 4: GREAT FALLS, VIRGINIA 22066

ATTORNEY DOCKET NUMBER:	SAM-57383
NAME OF SUBMITTER:	BRADLEY EDELMAN, REG. NO. 57648
SIGNATURE:	/Bradley Edelman/
DATE SIGNED:	03/04/2020

Total Attachments: 4

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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 individually and collectively as Assignor, has invented:

Title: S	EMICONDUCTOR DEVICE INCLUDI	NG A THICK METAL LAY	ER AND A BUMP
for which Assi for patent.	gnor is about to make or has made	United States or Intern	ational application
WHEREAS, as	a below named inventor(s), I/(we)	hereby declare that:	
Section I. Dec	claration		
This declaration	on is directed to:		
\boxtimes	The attached U.S. non-provisiona	patent application, or	
	U.S. non-provisional patent applic	ation number	, filed on
	PCT international patent applicati	on number	filed on
		on number	, filed off
The above-ide	entified application was made or au	thorized to be made by	me (us).
	that I am (we are) the original invine above-identified application.	entor (original joint inv	ventors) of a claimed
	y acknowledge that any willful fander 18 U.S.C. § 1001 by fine or im		
	state that I (we) have reviewed lication, including the claims.	and understand the co	ntents of the above
• •	vledge that I (we) am (are) aware stentability as defined in 37 C.F.R. §	•	information which is
¹ This form requ	ires the use of an Application Data Sheet		
SEC Ref No	IC-201904-009-1-US0	Attorney Ref No.	SAM-57383
COMBINED DE	CLARATION (37 CFR 1.63) FOR UTILITY	PATENT APPLICATION AN	D ASSIGNMENT FORM

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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 U.S.C. § 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, 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 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.

SEC Ref No. 1C-201904-009-1-US0 Attorney Ref No. SAM-5/383	SEC Ret No.	IC-201904-009-1-US0	Attorney Ref No.	SAM-57383
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SAMSUNG ELECTRONICS	CO.,	LTU

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 NAME OF	Family Name	First Given Name	Second Given Name
FIRST INVENTOR/ASSIGNOR	CHOL	Minjung	
SIGNATURE	MINIUNG CHUL	DATE	02/h/2020

LEGAL NAME OF	Family Name	First Given Name	Second Given Name	
SECOND	SHIN	Soohs		
SIGNATURE	Scotto SHIN	DATE	0/1/200	

LEGAL NAME OF	Family Name	First Given Name	Second Given Name
THIRD INVENTOR/ASSIGNOR	ree	Yeonjin	
SIGNATURE	YEAR THE SEE	ATAO	OST IF Family

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SEC Ref No. 1C-2	01904-009-1-1/80	Attorney Ref No.	SAM-57383	
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SAMSUNG ELECTRONICS CO., LTD.

LEGAL NAME OF	Family Name	First Given Name	Second Given Name
FOURTH INVENTOR/ASSIGNOR	HAN	Junghoon	
SIGNATURE	JUNG HOON HAN	DATÉ	62,12,2020

主要各种 医科斯耳耳氏氏试验 机可用电路管压器

SEC Ref No. IC-201984-009-1-USB Attorney Ref No. SAM-57383

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

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PATENT REEL: 052014 FRAME: 0045

RECORDED: 03/04/2020