PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JAE ICK SON	08/10/2020
DAE SEOK BYEON	08/10/2020
BONG SOON LIM	08/10/2020

RECEIVING PARTY DATA

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City:	SUWON-SI, GYEONGGI-DO
State/Country:	KOREA, REPUBLIC OF
Postal Code:	16677

PROPERTY NUMBERS Total: 1

Property Type	Number	
Application Number:	16995093	

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER: 2677-000570-US-CPA		
NAME OF SUBMITTER: JOHN A. CASTELLANO REG. NO. 35,094		
SIGNATURE:	/John A. Castellano/	
DATE SIGNED:	08/18/2020	
	This document serves as an Oath/Declaration (37 CFR 1.63).	

Total Attachments: 4

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> **PATENT** REEL: 053531 FRAME: 0267 506209959

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PATENT REEL: 053531 FRAME: 0268

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 DEVICE					
for which Ass	ignor is about to make or has made	United States or In	ternational application			
for patent.						
WHEREAS, as	a below named inventor(s), I/(we)	hereby declare that	t:			
Section I. De	claration					
This declarati	on is directed to:					
\boxtimes	The attached U.S. non-provisiona	l patent application	, or			
	U.S. non-provisional patent applic on, or		, filed			
	PCT international patent applicati	on number	, filed on			
The above-ide	entified application was made or au	thorized to be mad	e by me (us).			
	that I am (we are) the original inve he above-identified application.	ntor (original joint i	nventors) of a claimed			
	acknowledge that any willful false s nder 18 U.S.C. 1001 by fine or impri					
	 uires the use of an Application Data Sheet.					
SEC Ref No.	ID-201906-012-1-US1	Attorney Ref No.	2677-000570-US-CPA			

COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM Page 1 of 4

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-

SEC Ref No. ID-201906-012-1-US1 Attorney Ref No. 2677-000570-US-CPA

PATENT REEL: 053531 FRAME: 0270 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 Harness, Dickey & Pierce, P.L.C. 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	I	irst Given Name	Second Given Name
inventor/assignor		50N		jae ick	
Flash설계됐리)/관계역/05039203					
SIGNATURE	5	n Jaerel	k	DATE	10 Aug 2000
	green Mr.	5.5	<u> </u>		

LEGAL NAME OF SECOND	Family Name	First Given Name	Second Given Name
INVENTOR/ASSIGNOR	BYEON	Dae Seok	
-	3750N Dee Sed	• • •	10 Aug 2020

SEC Ref No. ID-201996-012-1-USI Attorney Ref No. 2677-000570-US-CPA

COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM Page 3 of 4

LEGAL NAME OF	Family Name	First Given Name	Second Given Name
INVENTOR/ASSIGNOR	UM	Bong Soon	
SIGNATURE		DATE	-200 · 8 · 10

Flash설계됨(예요리)/손제익/05039203

Attorney Ref No. 2677-000570-US-CPA ID-201906-012-1-US1 SEC Ref No.

COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM Page 4 of 4

Flash 설계팀(메모리)/손재익/05039203/2020-08-07 18:32

RECORDED: 08/18/2020

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