

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT4487954

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
JO-YOUNG PARK	05/24/2017
CHANG-SEOK KANG	05/24/2017
CHANG-SUP LEE	05/24/2017
SE-MEE JANG	05/24/2017
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:	15620870
CORRESPONDENCE DATA	
Fax Number:	(703)757-7447
<i>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.</i>	
Phone:	7037577880
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-55140
NAME OF SUBMITTER:	BRADLEY EDELMAN, REG. NO. 57648
SIGNATURE:	/Bradley Edelman/
DATE SIGNED:	07/02/2017
Total Attachments: 4	
source=SAM-55140_Dec_Assign#page1.tif	
source=SAM-55140_Dec_Assign#page2.tif	
source=SAM-55140_Dec_Assign#page3.tif	

SAMSUNG ELECTRONICS CO., LTD.

**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: **VERTICAL SEMICONDUCTOR DEVICE**

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 _____, filed on _____, or
 PCT international patent application number _____, filed on _____.

The above-identified application was made or authorized to be made by me (us).

I (we) believe that I am (we are) the original inventor (original joint inventors) of a claimed invention in the above-identified application.

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 both.

SEC Ref No. IE-201608-038-1-US0 Attorney Ref No. SAM-55140

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

Page 1 of 4

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

SEC Ref No. IE-201608-038-1-US0 Attorney Ref No. SAM-55140

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

Page 2 of 4

SAMSUNG ELECTRONICS CO., LTD.

LEGAL NAME OF SECOND INVENTOR/ASSIGNOR	Family Name	First Given Name	Second Given Name
	KANG	Chang-seok	

SIGNATURE Kang ChangSeok DATE 17.05.24

LEGAL NAME OF THIRD INVENTOR/ASSIGNOR	Family Name	First Given Name	Second Given Name
	LEE	Chang-sup	

SIGNATURE Lee Chang sup DATE 17.05.24

Flash ID팀(반도체연)/박조영/10186535

LEGAL NAME OF FOURTH INVENTOR/ASSIGNOR	Family Name	First Given Name	Second Given Name
	JANG	Se-mee	

SIGNATURE 74 Min1 DATE 17.05.24

SEC Ref No. IE-201608-038-1-US0 Attorney Ref No. SAM-55140

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

Page 4 of 4