503376413 07/01/2015

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3423035

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JUNCHUL PARK	05/12/2015
BUMSOO KIM	05/12/2015
HYUNKYU OUH	05/12/2015
SANG-HYUB KANG	05/12/2015
CHADONG KIM	05/12/2015
SANHO BYUN	05/12/2015
JINCHUL LEE	05/12/2015
YOON-KYUNG CHOI	05/12/2015

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:	443-742

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14750079

CORRESPONDENCE DATA

Fax Number: (571)283-0740

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: 5712830720

Email: aloomis@volentine.com

Correspondent Name: VOLENTINE & WHITT, PLLC

Address Line 1: 11951 FREEDOM DRIVE, SUITE 1300

Address Line 4: RESTON, VIRGINIA 20190

ATTORNEY DOCKET NUMBER:	SEC.3654
NAME OF SUBMITTER:	ADAM C. VOLENTINE
SIGNATURE:	/ADAM C. VOLENTINE/

PATENT 503376413 REEL: 035990 FRAME: 0580

07/01/2015		
This document serves as an Oath/Declaration (37 CFR 1.63).		
#page1.tif		
#page2.tif		
#page3.tif		
#page4.tif		
source=Declaration Assignment Form#page5.tif		
#page6.tif		
h		

PATENT REEL: 035990 FRAME: 0581

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: SEMICONDUCTOR DEVICE AND SEMICONDUCTOR SYSTEM FOR PRODUCING Title: NOISE DIFFERENCES BETWEEN POINTS OF TIME 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: \boxtimes The attached U.S. non-provisional patent application, or U.S. non-provisional patent application number _______, filed 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. ¹ This form requires the use of an Application Data Sheet. SEC Ref No. IB-201408-035-1-US0 Attorney Ref No. SIP140144US SEC.3654

PATENT

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 443-742, 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

SEC Ref No. IB-201408-035-1-US0 Attorney Ref No. SIP140144US SEC.3654

> PATENT57 REEL: 035990 FRANE 0585

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 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 **VOLENTINE & WHITT**, **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 FIRST INVENTOR/ASSIGNOR	Family Name PARK	First Given Name	Second Given Name
SIGNATURE	H 3m	DATE	20/4. ot. 12

SEC Ref No. IB-201408-035-1-US0 Attorney Ref No. SIP140144US SEC.3654

LEGAL NAME OF SECOND	Family Name	First Given Name	Second Given Name
INVENTOR/ASSIGNOR	KIM	BUMSOO	
SIGNATURE	刀儿为	DATE —	201t_t_12
LEGAL NAME OF	Family Name	First Given Name	Second Given Name
THIRD INVENTOR/ASSIGNOR	ОИН	HYUNKYU	
SIGNATURE _	07317	DATE -	2015. 4.12
LEGAL NAME OF	Family Name	First Given Name	Second Given Name
FOURTH INVENTOR/ASSIGNOR	KANG	SANG-HYUB	
SIGNATURE	Liffel	DATE	2015. 5.12
EC Ref No. IB-201	408-035-1-US0	Attorney Ref No.	SIP140144US

SEC.3654

LEGAL NAME OF FIFTH INVENTOR/ASSIGNOR	Family Name KIM	First Given Name CHADONG	Second Given Name
SIGNATURE _	U/3	DATE	5/12/201f

LEGAL NAME OF SIXTH INVENTOR/ASSIGNOR	Family Name BYUN	First Given Name	Second Given Name
AVERTORY ASSIGNMENT			
SIGNATURE	ydiz	DATE	5/12/2015

LEGAL NAME OF SEVENTH	Family Name	First Given Name	Second Given Name
INVENTOR/ASSIGNOR	LEE	JINCHUL	
	į		
£16581 A **** A ***		DATE	5/12 / 2015
SIGNATURE	or and a second		

SEC Ref No. IB-201408-035-1-US0 Attorney Ref No. SIP140144US SEC.3654

LEGAL NAME OF EIGHTH	Family Name	First Given Name	Second Given Name
INVENTOR/ASSIGNOR	СНОІ	YOON-KYUNG	
SIGNATURE	Morj	DATE 2°	15.5.12

SEC Ref No. IB-201408-035-1-US0 Attorney Ref No. SIP140144US SEC.3654

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

RECORDED: 07/01/2015