506003516 04/07/2020

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
KUO-YEN LIU	03/17/2016
BOO YEH	03/17/2016
MIN-CHANG LIANG	03/17/2016
JUI-YAO LAI	04/20/2016
SAI-HOOI YEONG	03/18/2016
YING-YAN CHEN	03/18/2016
YEN-MING CHEN	03/18/2016

RECEIVING PARTY DATA

Name:	TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.	
Street Address:	NO. 8, LI-HSIN RD. 6, SCIENCE BASED INDUSTRIAL PARK	
City:	HSINCHU	
State/Country:	TAIWAN	
Postal Code:	300	

PROPERTY NUMBERS Total: 1

Property Type	Number	
Application Number:	16811873	

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER:	095714-1150
NAME OF SUBMITTER:	ANN ZIEGLER
SIGNATURE:	/Ann Ziegler/

PATENT 506003516 REEL: 052333 FRAME: 0082

DATE SIGNED: 04/07/2020

Total Attachments: 3
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PATENT REEL: 052333 FRAME: 0083

COMBINED DECLARATION AND ASSIGNMENT FOR PATENT APPLICATION

As a below named inventor, I hereby declare that:

I believe I am the original or an original joint inventor of a claimed invention in the application for which a patent is sought on the invention entitled:

SEMICONDUCTOR DEVICE AND MANUFACTURING METHOD THEREOF

which application is:	·	
attached, or		
☑ United States a 15/061,627 filed on <u>M</u> :	pplication number or PCT international application number arch 4, 2016.	
The above-identified a	oplication was made or authorized to be made by me	

In the event that the filing date and/or application number are not entered above at the time I execute this document, and if such information is deemed necessary, I hereby authorize and request the registered practitioners of McDermott Will & Emery LLP, associated with the Customer Number 20277, to insert above the filing date and/or application number of the application.

I 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.

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Attorney Docket No. 095714-0057 P20150565US00

ASSIGNMENT

For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I hereby assign to:

TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD.

having an address at No. 8, Li-Hsin Rd. 6, Hsinchu Science-Based Industrial Park, Hsinchu 300, Taiwan (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 this document.

I hereby confirm any prior assignment to Assignee, and to the extent that I have not already done so, agree to assign, and hereby do, 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 Assignce 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 the undersigned 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;

I hereby covenant and agree 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 support thereof, for the benefit of Assignee without further or other compensation than that above set forth;

I hereby covenant that no assignment, sale, license, agreement or encumbrance has been or will be entered into which would conflict with this Assignment.

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PATENT REEL: 052333 FRAME: 0085

	Legal name of first inventor	
	Kuo-Yen LIU First inventor's signature	
	rist inventor's signature	Date
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0 .	Legal name of second inventor, if any	
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•	Second inventor's signature	Date
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	Legal name of third inventor, if any	
	Min-Chang LIANG	
	Thirdihventer's signature	
		Date
	1170	3/17/2016
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r	Legal name of fourth inventor, if any	
	Jui-Yao LAI	
-	our tao LAI	
	Fourth inventor's signature	Date
}	教育 Jun-Yao, Lai	14.7 1
L	Terdation Can Constitution	4/20/2016
	Legal name of fifth inventor, if any	
Ĺ	Sai-Hooi YEONG	
	Fifth infentor's signature	Date
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ſ	Legal name of sixth inventor, if any	
	Ying-Yan CHEN	
	Sixth inventor's signature	Y
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	Legal name of seventh inventor, if any	
	Yen-Ming CHEN]
	Seventh inventor's signature	5
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