PATENT ASSIGNMENT COVER SHEET

EPAS ID: PAT7321078

Electronic Version v1.1 Stylesheet Version v1.2

SUBMISSION TYPE:	CORRECTIVE ASSIGNMENT	
	Corrective Assignment to correct the ASSIGNEE NAME previously recorded on Reel 059840 Frame 0887. Assignor(s) hereby confirms the ASSIGNMENT.	

CONVEYING PARTY DATA

Name	Execution Date
SHINN-SHENG YU	08/20/2019
RU-GUN LIU	10/12/2019
HSU-TING HUANG	08/20/2019
KENJI YAMAZOE	08/27/2019
MINFENG CHEN	08/20/2019
SHUO-YEN CHOU	08/20/2019
CHIN-HSIANG LIN	08/20/2019

RECEIVING PARTY DATA

Name:	TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD.	
Street Address:	et 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:	17733664

CORRESPONDENCE DATA

Fax Number: (202)756-8087

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.

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Address Line 4: WASHINGTON, D.C. 20001

ATTORNEY DOCKET NUMBER: 095714-1643

NAME OF SUBMITTER: LYNN CRUZ

507274157 PATENT REEL: 059911 FRAME: 0723

SIGNATURE:	/LYNN CRUZ/	
DATE SIGNED:	05/09/2022	
Total Attachments: 6		
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PATENT REEL: 059911 FRAME: 0724

507261129 05/02/2022

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT7308050

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
SHINN-SHENG YU	08/20/2019
RU-GUN LIU	10/12/2019
HSU-TING HUANG	08/20/2019
KENJI YAMAZOE	08/27/2019
MINFENG CHEN	08/20/2019
SHUO-YEN CHOU	08/20/2019
CHIN-HSIANG LIN	08/20/2019

RECEIVING PARTY DATA

COMPANY, LTD.

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

PROPERTY NUMBERS Total: 1

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ATTORNEY DOCKET NUMBER: 095714-1643	
NAME OF SUBMITTER:	LYNN CRUZ
SIGNATURE:	/LYNN CRUZ/

PATENT REEL: 059911 FRAME: 0725

769

Attorney Docket No. 095714-0674 (P20181500US00)

M-23871-0-48-83

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:

METHOD OF MANUFACTURING A SEMICONDUCTOR DEVICE AND APPARATUS FOR MANUFACTURING THE SEMICONDUCTOR DEVICE

whic	ch application is:
\boxtimes	attached, or
	United States application number or PCT international application number filed on
The	above-identified application was made or authorized to be made by me.
time auth asso	te event that the filing date and/or application number are not entered above at the I execute this document, and if such information is deemed necessary, I hereby orize and request the registered practitioners of McDermott Will & Emery LLP, ciated with the Customer Number 20277, to insert above the filing date and/or ication number of the application.
	reby acknowledge that any willful false statement made in this declaration is shable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, oth.

ASSIGNMENT

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

TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD. No. 8, Li-Hsin Rd. 6, Science Based Industrial Park, Hsinchu, Taiwan 300

(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 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 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.

Page 2 of 3

Legal name of inventor	
Shinn-Sheng YU	
Inventor's signature	Date
Shinn: Shung Uje	2019,08.20
•	
Legal name of inventor Chin-Hsiang LIN	
Inventor's signature	Date
	1 VANV
Chilphi	2019, 8,20
Legal name of inventor	
Hsu-Ting HUANG	
Inventor's signature	Date
How-ting Greans	2019.8.20
L	<u></u>
Legal name of inventor	
Ru-Gun LIU	
Toventor's signature	Date
	S- 6-55-5-
Legal name of inventor	
Shuo-Yen CHOU	
Inventor's signature	Date
Show Me Oliva	2019.8.20
Shwo-yen Chin	1 77 0
Legal name of inventor	
Minfeng CHEN	
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¥.	
Legal name of inventor	
Kenji YAMAZOE	
Inventor's signature	Date

Attorney Docket No. 095714-0674 (P20181500US00)

Legal name of inventor	
Shinn-Sheng YU	
Inventor's signature	Date
Legal name of inventor Chin-Hsiang LIN	
	78
Inventor's signature	Date
Legal name of inventor	
Hsu-Ting HUANG	
Inventor's signature	Date

F Y 2027 - 202 2 - Province	
Legal name of inventor Ru-Gun LIU	
Inventor's signature	Date
Ru-Gun Lin	12 Oct. 2011

Attorney Docket No. 095714-0674 (P20181500US00)

Legal name of inventor Shinn-Sheng YU	
Inventor's signature	Date
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Legal name of inventor Chin-Hsiang LIN	
Inventor's signature	Date
Legal name of inventor Hsu-Ting HUANG	
Inventor's signature	Date
	· ·
Legal name of inventor Ru-Gun LIU	
Inventor's signature	Date
Legal name of inventor Shuo-Yen CHOU	
Inventor's signature	Date
Legal name of inventor Minfeng CHEN	
Inventor's signature	Date
Legal name of inventor Kenji YAMAZOE	
Inventor's signature Veri Hami	Date 8/27/2019

Page 3 of 3