PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

Stylesheet Version v1.2

SUBMISSION TYPE:	CORRECTIVE ASSIGNMENT
NATURE OF CONVEYANCE:	Corrective Assignment to correct the ASSIGNEE ADDRESS previously recorded on Reel 048761 Frame 0276. Assignor(s) hereby confirms the ASSIGNMENT.

CONVEYING PARTY DATA

Name	Execution Date
CHIN-YUAN TSENG	09/01/2018
YU-TIEN SHEN	04/17/2018
WEI-LIANG LIN	04/18/2018
CHIH-MING LAI	04/25/2018
KUO-CHENG CHING	04/25/2018
SHI-NING JU	04/25/2018
LI-TE LIN	04/25/2018
RU-GUN LIU	04/25/2018

RECEIVING PARTY DATA

Name:	TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, 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:	15967100

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER: 950000-000399

PATENT REEL: 065661 FRAME: 0080

EPAS ID: PAT8290538

508243348

NAME OF SUBMITTER:	BRENDA PUGH
SIGNATURE:	/Brenda Pugh/
DATE SIGNED:	11/22/2023
Total Attachments: 7	
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PATENT REEL: 065661 FRAME: 0081

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

SUBMISSION TYPE:	CORRECTIVE ASSIGNMENT
NATURE OF CONVEYANCE:	Corrective Assignment to correct the APPLICANT'S ADDRESS previously recorded on Reel 048498 Frame 0531. Assignor(s) hereby confirms the ASSIGNMENT.

CONVEYING PARTY DATA

Name	Execution Date
CHIN-YUAN TSENG	09/01/2018
YU-TIEN SHEN	04/17/2018
WEI-LIANG LIN	04/18/2018
CHIH-MING LAI	04/25/2018
KUO-CHENG CHING	04/25/2018
SHI-NING JU	04/25/2018
LI-TE LIN	04/25/2018
RU-GUN LIU	04/25/2018

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:	JAPAN
Postal Code:	300

PROPERTY NUMBERS Total: 1

********	Property Type	Number	
*******	Application Number:	15967100	**********

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PATENT REEL: 065661 FRAME: 0082

ATTORNEY DOCKET NUMBER:	095714-0410
NAME OF SUBMITTER:	BRENDA PUGH
Signature:	/Brenda Pugh/
Date:	04/01/2019
Total Attachments: 8 source=AssignCvrSheet_Dec_095714-041 source=AssignCvrSheet_Dec_095714-041 source=AssignCvrSheet_Dec_095714-041 source=AssignCvrSheet_Dec_095714-041 source=AssignCvrSheet_Dec_095714-041 source=AssignCvrSheet_Dec_095714-041 source=AssignCvrSheet_Dec_095714-041 source=AssignCvrSheet_Dec_095714-041 source=AssignCvrSheet_Dec_095714-041	0#page2.tif 0#page3.tif 0#page4.tif 0#page5.tif 0#page6.tif 0#page6.tif
EPAS ID: PAT545	2235
Receipt Date: 04/02/20	 -

PATENT REEL: 065661 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:

METHOD OF PATTERNING

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

Attorney Docket No. 095714-0410 (P20171182US00)

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 4

Attorney Docket No. 095714-0410 (P20171182US00)

Logal name of inventor	
Legal name of inventor Chin-Yuan Tseng	
	Doto
Inventor's signature	Date
Legal name of inventor	
Yu-Tien Shen	
Inventor's signature	Date
	2018,04,17
Yu-Tien Shen	2010,01,
Legal name of inventor	
Wei-Liang Lin	
Inventor's signature	Date
Not - Gary Um	81.46.81 or
Nei-Ciany Lin	
V	
Legal name of inventor	
Chih-Ming Lai	
Inventor's signature	Date
Chih-Ming Lai	2018.04.25
Colin 10 11 Coli	, ,
C:	
Legal name of inventor	
Kuo-Cheng Ching Inventor's signature	
I HIVEHUU S SIPHALU E	Data
	Date
to Chy am	Date 7018. K. V
Lo. Chy Ciny	
to. Chy Cimy	
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Legal name of inventor Shi Ning Ju	7218. 4.75
Legal name of inventor Shi Ning Ju Inventor's signature	7218. K. 74
Legal name of inventor Shi Ning Ju Inventor's signature	7018. 4.74
Legal name of inventor Shi Ning Ju	7218. K. 75
Legal name of inventor Shi Ning Ju Inventor's signature	7218. K. 74
Legal name of inventor Shi Ning Ju Inventor's signature Shi Norg Ju	7218. K. 74
Legal name of inventor Shi Ning Ju Inventor's signature Shi Ving Ju Legal name of inventor	7218. K. 74
Legal name of inventor Shi Ning Ju Inventor's signature Shi Ning Ju Legal name of inventor Li-Te Lin	7218. x. x. Date 2018. 4. 25

Legal name of inventor Chin-Yuan Tseng	
Inventor's signature	Date
	09/01/2018
Chin-Tyon Tsen	1 1/ 1/ 2010
Legal name of inventor	보기 불화로 하면 보겠느냐는 것이라요? 는 경기
Yu-Tien Shen	
Inventor's signature	Date
	- 본리일보다 집에 나라나면 하다 중화됐다.
Legal name of inventor	
Wei-Liang Lin	
Inventor's signature	Date
	할 소개를 잃었는데 내가 있는 그 얼굴 없는데 없다.
Legal name of inventor	
Chih-Ming Lai	
Inventor's signature	Date
- TO THE TEST (1997) - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	
Legal name of inventor	
Kuo-Cheng Ching	
Inventor's signature	Date
Legal name of inventor	
Shi Ning Ju	
Inventor's signature	Date
Legal name of inventor	7.0 (1997)
Li-Te Lin	
Inventor's signature	Date

Page 3 of 4

Attorney Docket No. 095714-0410 (P20171182US00)

Legal name of inventor	
Ru-Gun Liu	•
Inventor's signature	Date
Ru- Com Liy.	> 5 Apr. 2018

Page 4 of 4

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PATENT REEL: 065661 FRAME: 0088

RECORDED: 11/22/2023