504848110 04/02/2018

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4894847

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
WUN-KAI TSAI	02/21/2018
WEN-CHE LIANG	02/21/2018
CHAO-KENG LI	02/23/2018
ZHENG-JIE XU	02/22/2018
CHIH-KUO CHANG	03/27/2018
SING-TSUNG LI	03/27/2018
FENG-KUANG WU	03/27/2018
HSU-SHUI LIU	03/27/2018

RECEIVING PARTY DATA

Name:	TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.
Street Address:	NO. 8, LI-HSIN RD. 6, HSINCHU SCIENCE PARK
City:	HSINCHU
State/Country:	TAIWAN
Postal Code:	300-78

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15901970

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER:	252011-7150
NAME OF SUBMITTER:	DANIEL R. MCCLURE
SIGNATURE:	/Daniel R. McClure/

504848110 PATENT REEL: 045409 FRAME: 0492

DATE SIGNED:	04/02/2018
Total Attachments: 2	
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ASSIGNMENT

WHEREAS, Wun-Kai TSAI, Wen-Che LIANG, Chao-Keng Ll, Zheng-Jie XU, Chih-Kuo CHANG Sing-Tsung Ll, Feng-Kuang WU, Hsu-Shui LIU

hereafter referred to as ASSIGNOR, has/have invented certain new and useful improvements as described and set forth in the below identified application for United States Letters Patent:

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Filed:	2018-02-22	Serial No.	10,001,010	
Execute	ed on:			

WHEREAS, <u>Taiwan Semiconductor Manufacturing Co., Ltd.</u>, of <u>No. 8, Li-Hsin Rd. 6, Hsinchu Science Park, Hsinchu 300-78, Taiwan R.O.C.</u>, hereinafter referred to as ASSIGNEE, is desirous of acquiring ASSIGNOR'S interest in the said invention and application and in any U.S. Letters Patent which may be granted on the same;

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN: Be it known that, for good and valuable consideration, receipt of which is hereby acknowledged by Assignor, Assignor has/have sold, assigned and transferred, and by these presents does/do sell, assign and transfer unto the said Assignee, and Assignee's successors and assigns, all his/her/their rights, title and interest in and to the said invention and application and all future improvements thereon, and in and to any Letters Patent which may hereafter be granted on the same in the United States, the said interest to be held and enjoyed by said Assignee as fully and exclusively as it would have been held and enjoyed by said Assignor had this Assignment and transfer not been made, to the full end and term of any Letters Patent which may be granted thereon, or of any division, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof.

Assignor further agrees/agree that he/she/they will, without charge to said Assignee, but at Assignee's expense, cooperate with Assignee in the prosecution of said application and/or applications, execute, verify, acknowledge and deliver all such further papers, including applications for Letters Patent and for the reissue thereof, and instruments of assignment and transfer thereof, and will perform such other acts as Assignee lawfully may request, to obtain or maintain Letters Patent for said invention and improvement, and to vest title thereto in said Assignee, or Assignee's successors and assigns.

IN TESTIMONY WHEREOF, Assignor has/have signed his/her/their name(s) on the date(s) indicated.

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ASSIGNMENT

<u> 2018. ≥. ≥ \</u>	Name: Wun-Kai TSAI
Date	Name: Wun-Kai TSAI
$\frac{20(8,2,2)}{\text{Date}}$	Name: Wen-Che LIANG
<u> 2018. ユルラ</u> Date	Charkeng Li Name: Chao-Keng Li
<u>ンで(多、02、ンレ</u> Date	Name: Zheng-Jie XU
3-3 18, 3, 5 Date	Name: Chih-Kuo CHANG
188. 03. 7 Date	Sty - Isaa Li Named Sing-Tsung LI
24 () , 3 , 3 T	Lorg Lung Un Name: Feng-Kuang WU
2018. 3. 27 Date) dan Shi Liu

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