PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE: NEW ASSIGNMENT

NATURE OF CONVEYANCE: ASSIGNMENT

EPAS ID: PAT6709945

CONVEYING PARTY DATA

Name	Execution Date
WEI-JEN LAI	09/07/2020
WEI-YUAN LU	09/07/2020
CHIA-PIN LIN	09/09/2020

RECEIVING PARTY DATA

Name:	TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.	
Street Address:	Street Address: 8, LI-HSIN RD. 6	
Internal Address:	HSINCHU SCIENCE PARK	
City:	HSINCHU	
State/Country:	TAIWAN	
Postal Code:	300-78	

PROPERTY NUMBERS Total: 1

Property Type	Number	
Application Number:	17320428	

CORRESPONDENCE DATA

Fax Number: (214)200-0853

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: 214-651-5000

Email: ipdocketing@haynesboone.com

Correspondent Name: HAYNES AND BOONE, LLP (24061) IP SECTION

Address Line 1: 2323 VICTORY AVENUE

Address Line 2: SUITE 700

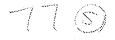
Address Line 4: DALLAS, TEXAS 75219

TTORNEY DOCKET NUMBER: 2020-0176/24061.4184US01	
NAME OF SUBMITTER:	MARIA TEDESCO
SIGNATURE: /Maria Tedesco/	
DATE SIGNED:	05/14/2021

Total Attachments: 2

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PATENT 506663131 REEL: 056241 FRAME: 0171



Docket No.: P20200176US00/24061.4184US01

Customer No.: 000042717

ASSIGNMENT

WHEREAS, we,

(1)	Wei-Jen Lai	of	Keelung City 203, Taiwan (R.O.C.)
(2)	Wei-Yuan Lu	of	Taipei City, Taiwan (R.O.C)
(3)	Chia-Pin Lin	of	Hsinchu County, Taiwan (R.O.C.)

have invented certain improvements in

SEMICONDUCTOR DEVICE HAVING STRAINED CHANNELS

for which we have executed an application for Letters Patent of the United States of America,

<u>X</u>	of even date filed herewith; and			
*****	filed on 05-14-2021 and assigned application number 17/320,428; and			

WHEREAS, we authorize the attorney of record to update this document to include Patent Office information as deemed necessary (i.e., filing date, serial number, etc.);

WHEREAS, Taiwan Semiconductor Manufacturing Co., Ltd., ("TSMC"), 8, Li-Hsin Rd. 6, Hsinchu Science Park, Hsinchu, Taiwan 300-78, Republic of China. is desirous of obtaining the entire right, title, and interest in, to and under the said invention and the said application in the United States of America and in any and all countries foreign thereto;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and other good and valuable consideration, we have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said TSMC, its successors, legal representatives, and assigns, the entire right, title, and interest in, to and under the said invention, and the said application, and all divisional, renewal, substitutional, and continuing applications thereof, and all Letters Patent of the United States of America which may be granted thereon and all reissues and extensions thereof, and all applications for Letters Patent which may be filed for said invention in any country or countries foreign to the United States of America, and all extensions, renewals, and reissues thereof, and all prior patents and patent applications from which a filing priority of the above-described patent application may be obtained, including the right to collect past damages; and we hereby authorize and request the Commissioner of Patents of the United States of America, and any official of any country or countries foreign to the United States of America, whose duty it is to issue patents on applications as aforesaid, to issue all Letters Patent for said invention to the said TSMC, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND WE HEREBY covenant that we have full right to convey the entire interest herein assigned, and that we have not executed, and will not execute, any agreement in conflict herewith.

AND WE HEREBY further covenant and agree that we will communicate to said TSMC, its successors, legal representatives and assigns, any facts known to us respecting said invention, and testify in any legal proceedings, sign all lawful papers, execute all divisional, renewal, substitutional, continuing, and reissue applications, make all rightful declarations and/or oaths and

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generally do everything possible to aid the said TSMC, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for said invention in all countries.

Inventor Name:

Wei-Jen Lai

Residence Address:

5F., No.7, Aly. 10, Ln. 168, Zhonghe Rd., Zhongshan Dist.

Keelung City 203, Taiwan (R.O.C.)

Dated: >0 > 0 / 09 / 09

Well-Jew Lai Inventor Signature

Inventor Name:

Wei-Yuan Lu

Residence Address:

2FL, No. 9, Lane 2, Yongkang St., Daan Dist.

Taipei City 106, Taiwan (R.O.C)

Dated: >20 /09 /0 /

May John Manure

Inventor Name:

Chia-Pin Lin

Residence Address:

No.32, Sec. 1, Yangxin Rd., Xinpu Township

Hsinchu County 305, Taiwan (R.O.C.)

Dated: 2020/09/09

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PATENT REEL: 056241 FRAME: 0173