PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5278424

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
KUO-CHENG CHING	07/02/2014
KA-HING FUNG	07/02/2014
CHIH-SHENG CHANG	07/02/2014
ZHIQIANG WU	07/02/2014

RECEIVING PARTY DATA

Name:	TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD.
Street Address:	NO. 8, LI-HSIN RD. 6
Internal Address:	SCIENCE-BASED INDUSTRIAL PARK
City:	HSIN-CHU
State/Country:	TAIWAN
Postal Code:	300-77

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16217113

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: 2146515000

Email: ipdocketing@haynesboone.com

Correspondent Name: HAYNES AND BOONE, LLP IP SECTION

Address Line 1: 2323 VICTORY AVENUE

Address Line 2: SUITE 700

Address Line 4: DALLAS, TEXAS 75219

Total Attachments O	
DATE SIGNED:	12/12/2018
SIGNATURE:	/Kyle Howard/
NAME OF SUBMITTER:	KYLE HOWARD
ATTORNEY DOCKET NUMBER:	2014-0157/24061.2815US05

Total Attachments: 2

505231654

PATENT REEL: 047749 FRAME: 0641 source=2815US05 - Assignment#page1.tif source=2815US05 - Assignment#page2.tif

> PATENT REEL: 047749 FRAME: 0642

Docket No.: 2014-0157/24061.2815

Customer No.: 42717

ASSIGNMENT

WHEREAS, we,

Kuo-Cheng Ching	of	5F., No. 8-3, Guangming 9th Road Zhubei City, Hsinchu County 302 Taiwan, R.O.C.
Ka-Hing Fung	of	No. 12, Alley 28, Lane 438 Yuanshan Road, Zhudong Township Hsinchu County 310, Taiwan, R.O.C.
Chih-Sheng Chang	of	12F-1, No. 17 Guanghua E. Street Hsinchu 300, Taiwan, R.O.C.
Zhiqiang Wu	of	22F, No. 533 Hsin Long Road Section 1, Chubei, Hsinchu County Taiwan, R.O.C.
	Ka-Hing Fung Chih-Sheng Chang	Ka-Hing Fung of Chih-Sheng Chang of

have invented certain improvements in

A METHOD AND STRUCTURE FOR FINFET DEVICE

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

hannan anna anna anna anna anna anna an	of even date filed herewith; and
<u>X</u>	filed on April 16, 2014, and assigned application number 14/254,072; 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 Company, Ltd., ("TSMC"), No. 8, Li-Hsin Rd. 6, Science-Based Industrial Park Hsin-Chu, Taiwan 300-77, 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.

Docket No.: 2014-0157/24061.2815

Customer No.: 42717

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 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:	Kuo-Cheng Ching
Residence Address: Dated: Toly / 1	5F., No. 8-3, Guangming 9th Road, Zhubei City Hsinchu County 302, Taiwan, R.O.C. / Lo - Cuy Inventor Signature
Inventor Name:	Ka-Hing Fung
Residence Address:	No. 12, Alley 28, Lane 438, Yuanshan Road, Zhudong Township Hsinchu County 310, Taiwan, R.O.C. Land Hing Fung Inventor Signature
Inventor Name:	Chih-Sheng Chang
Residence Address:	12F-1, No. 17 Guanghua E. Street, Hsinchu 300, Taiwan, R.O.C.
Wated: 2014/1	/2 / Milhong Have Inventor Signature
Inventor Name:	Zhiqiang Wu
Residence Address:	22F, No. 533 Hsin Long Road, Section 1 Chubei, Hsinchu County, Taiwan, R.O.C.
Dated: 7/2/2	Inventor Signature

R-24061.2815 (2014-0157) - Assignment_362657(1).DOCX - 2 -