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PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
MING-CHANG WEN	12/26/2017
CHANG-YUN CHANG	12/27/2017
HSIEN-CHIN LIN	12/26/2017
HUNG-KAI CHEN	12/26/2017

RECEIVING PARTY DATA

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PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16690177

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SIGNATURE:	/Yilun Wang/
NAME OF SUBMITTER:	YILUN WANG
ATTORNEY DOCKET NUMBER:	2017-1550/24061.3634US02

Total Attachments: 2

PATENT REEL: 051071 FRAME: 0634 source=3634US02 - Assignment#page1.tif source=3634US02 - Assignment#page2.tif

> PATENT REEL: 051071 FRAME: 0635

Docket No.: P20171550US00/24061.3634US01

Customer No.: 42717

ASSIGNMENT

WHEREAS, we,

(1)	Ming-Chang Wen	of	Kaohsiung City, Taiwan, Republic of China
(2)	Chang-Yun Chang	of	Taipei, Taiwan, Republic of China
(3)	Hsien-Chin Lin	of	Hsinchu City, Taiwan, Republic of China
(4)	Hung-Kai Chen	of	Taichung City, Taiwan, Republic of China

have invented certain improvements in

ETCH STOP LAYER BETWEEN SUBSTRATE AND ISOLATION STRUCTURE

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

**************	of even date filed herewith; and	
X	filed on 11-17-2017 and assigned application number 15/816,155;	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

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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: Ming-Chang Wen Residence Address: No. 82, Alley 57, Lane 106, Heguang St., Zuoying District Kaohsiung City, Taiwan, Republic of China Mang-Chong Wen Inventor Signature Dated: Inventor Name: Chang-Yun Chang Residence Address: No. 5, 4F, Lane 71, Siamen St. Taipei, Taiwan, Republic of China Dated: 2017. 12. >17 Chang Tun Chang
Inventor Signature Inventor Name: Hsien-Chin Lin Residence Address: 18F., No. 149, Guanxin N. Rd., East Dist. Hsinchu City 300, Taiwan, Republic of China Haen-Chin Lin
Inventor Signature 2017.12.26 Inventor Name: Hung-Kai Chen Residence Address: Rm. 2, 11F., No. 65, Shizheng N. 2nd Rd., Xitun Dist. Taichung City 407, Taiwan, Republic of China Hung Jai Chen.
Inventor Signature Dated: 2017. 12. 76

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