

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT6120131

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
MING-CHANG WEN	03/02/2017
HSIEN-CHENG WANG	03/02/2017
CHUN-KUANG CHEN	03/06/2017
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD.
<b>Street Address:</b>	8, LI-HSIN RD. 6
<b>Internal Address:</b>	HSINCHU SCIENCE PARK
<b>City:</b>	HSINCHU
<b>State/Country:</b>	TAIWAN
<b>Postal Code:</b>	300-78
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	16881926
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(214)200-0853
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<b>Correspondent Name:</b>	HAYNES AND BOONE, LLP (24061) IP SECTION
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<b>ATTORNEY DOCKET NUMBER:</b>	2010-0103/24061.1450US03
<b>NAME OF SUBMITTER:</b>	MARCY OGADO
<b>SIGNATURE:</b>	/Marcy Ogado/
<b>DATE SIGNED:</b>	05/22/2020
<b>Total Attachments: 2</b>	
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Docket No.: P20100103US01/24061.1450US02  
Customer No.: 42717

### ASSIGNMENT

WHEREAS, we,

- (1) Ming-Chang Wen of No. 82, Alley 57, Lane 106, Huguang Street, Zuoying District  
Kaohsiung City, Taiwan, R.O.C.
- (2) Hsien-Cheng Wang of 13F-1, No. 373, Sec. 2, Gong-Dao 5 Road  
Hsinchu 300, Taiwan, R.O.C.
- (3) Chun-Kuang Chen of No. 122, Yu-Hsien Street, Guan-Shi Jeng  
Hsin-Chu Hsien, Taiwan, R.O.C.

have invented certain improvements in

### STRUCTURE AND METHOD FOR ALIGNMENT MARKS

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 April 6, 2013 and assigned application number 14/679,326; 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.

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.

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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.

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Inventor Name: Ming-Chang Wen

Residence Address: No. 82, Alley 57, Lane 106, Huguang Street, Zuoying District  
Kaohsiung City, Taiwan, R.O.C.

Dated: 2017, 03, 02

Ming-Chang Wen  
Inventor Signature

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Inventor Name: Hsien-Cheng Wang

Residence Address: 13F-1, No. 373, Sec. 2, Gong-Dao 5 Road  
Hsinchu 300, Taiwan, R.O.C.

Dated: 2017/3/2

Hsien-Cheng Wang  
Inventor Signature

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Inventor Name: Chun-Kuang Chen

Residence Address: No. 122, Yu-Hsien Street, Guan-Shi Jeng  
Hsin-Chu Hsien, Taiwan, R.O.C.

Dated: 2017/3/6

Chun-Kuang Chen  
Inventor Signature