505206309 11/27/2018

EPAS ID: PAT5253077

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

SUBMISSION TYPE: NEW ASSIGNMENT

NATURE OF CONVEYANCE: ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
CHI-HUNG LIAO	10/12/2017
MIN-CHENG WU	10/12/2017

RECEIVING PARTY DATA

Name:	TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.	
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:	16201126

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER: 2017-0994/24061.3588US02

NAME OF SUBMITTER: BRIAN D. GRAHAM

SIGNATURE: /Brian D. Graham/

DATE SIGNED: 11/27/2018

Total Attachments: 2

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PATENT 505206309 REEL: 047592 FRAME: 0141



Docket No.: P20170994US00/24061.3588US01

Customer No.: 42717



ASSIGNMENT

WHEREAS, we,

(1) Chi-Hung Liao of Taipei County, Taiwan, Republic of China
 (2) Min-Cheng Wu of Hsinchu, Taiwan, Republic of China

have invented certain improvements in

WAFER TABLE WITH DYNAMIC SUPPORT PINS

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

of even date filed herewith; and filed on _09-26-2017 and assigned application number _15/716,042 ; 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 generally do

PATENT REEL: 047592 FRAME: 0142

Docket No.: P20170994US00/24061.3588US01

Customer No.: 42717

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:

Chi-Hung Liao

Residence Address:

No. 11, Changlong St.

Sanchong City, Taipei County 241, Taiwan, Republic of China

Dated: Chi-Hung Ligo

Note that the second se

Inventor Name:

Min-Cheng Wu

Residence Address:

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Hsinchu, Taiwan 300-78, Republic of China

Dated: Min - Cheng Wu

Inventor Signature

PATENT REEL: 047592 FRAME: 0143

RECORDED: 11/27/2018