

PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT												
NATURE OF CONVEYANCE:	ASSIGNMENT												
CONVEYING PARTY DATA													
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Hung-Wen Hsu</td> <td>05/06/2013</td> </tr> <tr> <td>Tung-Ting Wu</td> <td>05/07/2013</td> </tr> <tr> <td>Jiech-Fun Lu</td> <td>05/06/2013</td> </tr> <tr> <td>Yeur-Luen Tu</td> <td>05/06/2013</td> </tr> <tr> <td>Chia-Shiung Tsai</td> <td>05/06/2013</td> </tr> </tbody> </table>		Name	Execution Date	Hung-Wen Hsu	05/06/2013	Tung-Ting Wu	05/07/2013	Jiech-Fun Lu	05/06/2013	Yeur-Luen Tu	05/06/2013	Chia-Shiung Tsai	05/06/2013
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Chia-Shiung Tsai	05/06/2013												
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													
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13802732</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13802732								
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CORRESPONDENCE DATA													
Fax Number:													
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>													
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ATTORNEY DOCKET NUMBER:	2012-1013/24061.2341												
NAME OF SUBMITTER:	Scott Matthews												

OP \$40.00 13802732

Signature:	/sm82918/
Date:	06/03/2013
Total Attachments: 3 source=Assign13802732#page1.tif source=Assign13802732#page2.tif source=Assign13802732#page3.tif	

ASSIGNMENT

WHEREAS, we,

- (1) Hung-Wen Hsu of No.2, Alley 42, Lane 111, Sec. 6, Jun-an Road
Annan District, Tainan City 709, Taiwan R.O.C.
- (2) Tung-Ting Wu of 5F., No.5, Alley 1, Lane 343, Sec. 3, Neihu Road
Neihu District, Taipei City 114, Taiwan R.O.C.
- (3) Jiech-Fun Lu of No.157-2, Jhongshan Road
Madou Township, Tainan County 721, Taiwan R.O.C.
- (4) Yeur-Luen Tu of No. 3-6, Lane 12, Gong-Xue Road
Taichung, Taiwan R.O.C.
- (5) Chia-Shiung Tsai of No. 5, 50 Alley, 62 Lane, Gua-Tsuey Road
Hsin-Chu, Taiwan R.O.C.

have invented certain improvements in

**SYSTEM AND METHOD FOR PREVENTING ETCH ARCING DURING
SEMICONDUCTOR PROCESSING**

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 03/14/2013 and assigned application number 13/802,732; 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.

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: Hung-Wen Hsu

Residence Address: No.2, Alley 42, Lane 111, Sec. 6, Jun-an Road
Annan District, Tainan City 709, Taiwan R.O.C.

✓ 2013.05.06
Dated: Hung-Wen Hsu

✓ Hung-wen Hsu
Inventor Signature

Inventor Name: Tung-Ting Wu

Residence Address: 5F., No.5, Alley 1, Lane 343, Sec. 3, Neihu Road
Neihu District, Taipei City 114, Taiwan R.O.C.

✓ 2013.05.07
Dated: _____

✓ Tung-ting Wu
Inventor Signature

Inventor Name: Jiech-Fun Lu

Residence Address: No.157-2, Zhongshan Road
Madou Township, Tainan County 721, Taiwan R.O.C.

✓ 2013.05.06
Dated: _____

✓ Jiech-Fun Lu
Inventor Signature

Inventor Name: Yeur-Luen Tu

Residence Address: No. 3-6, Lane 12, Gong-Xue Road
Taichung, Taiwan R.O.C.

Dated: ✓ 2013.05.06

✓ [Signature]
Inventor Signature

Inventor Name: Chia-Shiung Tsai

Residence Address: No. 5, 50 Alley, 62 Lane, Gua-Tsuey Road
Hsin-Chu, Taiwan R.O.C.

Dated: ✓ 2013.05.06

✓ Chia Shiang Tsai
Inventor Signature