

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT2650278

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>YING-HSUEH CHANGCHIEN</td> <td>10/14/2013</td> </tr> <tr> <td>YU-MING LEE</td> <td>10/14/2013</td> </tr> <tr> <td>CHI-MING YANG</td> <td>10/14/2013</td> </tr> </tbody> </table>		Name	Execution Date	YING-HSUEH CHANGCHIEN	10/14/2013	YU-MING LEE	10/14/2013	CHI-MING YANG	10/14/2013
Name	Execution Date								
YING-HSUEH CHANGCHIEN	10/14/2013								
YU-MING LEE	10/14/2013								
CHI-MING YANG	10/14/2013								
RECEIVING PARTY DATA									
Name:	TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.								
Street Address:	NO. 8, LI-HSIN RD. 6, SCIENCE-BASED								
Internal Address:	INDUSTRIAL PARK,								
City:	HSINCHU								
State/Country:	TAIWAN								
Postal Code:	300								
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>14056673</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	14056673				
Property Type	Number								
Application Number:	14056673								
CORRESPONDENCE DATA									
Fax Number:	(202)756-8087								
Phone:	202-756-8000								
Email:	IPDOCKETMWE@MWE.COM								
<i>Correspondence will be sent via US Mail when the email attempt is unsuccessful.</i>									
Correspondent Name:	MCDERMOTT WILL & EMERY LLP								
Address Line 1:	THE MCDERMOTT BUILDING								
Address Line 2:	500 NORTH CAPITOL STREET, N.W.								
Address Line 4:	WASHINGTON, DISTRICT OF COLUMBIA 20001								
ATTORNEY DOCKET NUMBER:	050094-0132								
NAME OF SUBMITTER:	STEPHEN A. BECKER								

Signature:	/STEPHEN A. BECKER/
Date:	12/16/2013
Total Attachments: 2 source=executedassignment#page1.tif source=executedassignment#page2.tif	

NP-13989-US-B  
TSMC-2-13-0851

Inventor(s)-to-Assignee

### ASSIGNMENT

This assignment agreement is applicable to an invention entitled (Invention Title) METHOD OF SELECTIVELY REMOVING SILICON NITRIDE AND ETCHING APPARATUS THEREOF

The PATENT RIGHTS referred to in this agreement are:

- (check one)  a patent application for this invention, executed by the ASSIGNOR(S) concurrently with this assignment.
- U.S. patent application Serial No. 14/056,673, filed on October 17, 2013
- a U.S. patent application based on PCT International Application No. \_\_\_\_\_ filed on (date) \_\_\_\_\_ (U.S. patent application Serial No. \_\_\_\_\_, if known).
- U.S. patent No. \_\_\_\_\_, issued \_\_\_\_\_.

The PATENT RIGHTS also include all divisions, reissues, continuations and extensions of the patents and patent applications identified above.

The PATENT RIGHTS assigned under this agreement are:

- (check one)  U.S. patent rights only.
- Worldwide patent rights. In this case, the assignee shall have the right to claim the benefit of the filing date of any U.S. or foreign patent application for this invention.

The ASSIGNOR(S) referred to in this agreement is (or are) the inventor(s) whose signatures appear on page 2 of this Assignment and any Supplemental Sheet(s).

The ASSIGNEE referred to in this agreement is:

(Name of Assignee) TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.  
(Address) NO.8, LI-HSIN RD.6, SCIENCE-BASED INDUSTRIAL PARK, HSINCHU, TAIWAN 300, R.O.C.

The ASSIGNEE is:

- (check one)  An individual.
- A Partnership.
- A Corporation of TAIWAN, R.O.C. (specify state or country)
- (other) \_\_\_\_\_

The ASSIGNOR(S), in consideration of \$10.00 paid by the ASSIGNEE, and other good and valuable consideration, receipt of which is acknowledged, hereby assign(s) the following rights to the ASSIGNEE, its successors and assigns:

- the full and exclusive right to the invention;
- the entire right, title and interest in and to the PATENT RIGHTS;
- the right to sue and recover for any past infringement; and
- the right to claim priority under 35 USC 119, 35 USC 120, or any other applicable provisions, based on any earlier patent applications for this invention.

NP-13989-US-B  
TSMC-2-13-0851

THIS IS PAGE 2 OF AN ASSIGNMENT FROM THE INVENTOR(S) TO  
ASSIGNEE: TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.  
INVENTION TITLE: METHOD OF SELECTIVELY REMOVING SILICON  
NITRIDE AND ETCHING APPARATUS THEREOF

As to all U.S. patent applications assigned under this agreement, the ASSIGNOR(S) hereby authorize(s) and request(s) the Commissioner of Patents and Trademark to issue all Letters Patent to the ASSIGNEE as the assignee of the entire right, title and interest, for the sole use and enjoyment of said ASSIGNEE, its successors and assigns.

Further, the ASSIGNOR(S) agree(s) to communicate to said ASSIGNEE, or its representatives, any fact known to the ASSIGNOR(S) with respect to said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, substitute, renewal, reexamination and reissue applications, execute all necessary assignment papers to cause and all Letter Patent to be issued to said ASSIGNEE, make all rightful oaths and generally do everything necessary or desirable to aid said ASSIGNEE, its successors and assigns, to obtain and enforce proper protection for said invention.

The ASSIGNOR(S) authorize(s) the attorneys and agents who have the power of attorney in this application to check any appropriate boxes and to insert the Serial Number and filing date in this document after it has been executed.

Ying-Hsueh CHANGCHIEN      Ying-Hsueh Chang Chien      10/14, 2013  
Name of sole or first inventor      Signature      Date

Yu-Ming LEE      Yu-Ming Lee      10/14, 2013  
Name of second inventor, if any      Signature      Date

Chi-Ming YANG      Chi-Ming Yang      10/14, 2013  
Name of third inventor, if any      Signature      Date