

## PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT2742664

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>HARRY-HAK-LAY CHUANG</td> <td>12/06/2013</td> </tr> <tr> <td>MING ZHU</td> <td>12/06/2013</td> </tr> </tbody> </table>		Name	Execution Date	HARRY-HAK-LAY CHUANG	12/06/2013	MING ZHU	12/06/2013
Name	Execution Date						
HARRY-HAK-LAY CHUANG	12/06/2013						
MING ZHU	12/06/2013						
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>14083956</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	14083956		
Property Type	Number						
Application Number:	14083956						
CORRESPONDENCE DATA							
Fax Number:	(214)200-0853						
Phone:	214-651-5000						
Email:	ipdocketing@haynesboone.com						
<i>Correspondence will be sent via US Mail when the email attempt is unsuccessful.</i>							
Correspondent Name:	HAYNES AND BOONE, LLP - IP SECTION						
Address Line 1:	2323 VICTORY AVENUE, SUITE 700						
Address Line 4:	DALLAS, TEXAS 75219						
ATTORNEY DOCKET NUMBER:	2011-0157-D/24061.2707						
NAME OF SUBMITTER:	LYDIA EPPS-HILLIARD						
Signature:	/LYDIA EPPS-HILLIARD/						
Date:	02/26/2014						
Total Attachments: 3 source=2707_assignment#page1.tif source=2707_assignment#page2.tif source=2707_assignment#page3.tif							

PATENT

Docket No.: 2011-0157-D/24061.2707  
Customer No.: 000042717

**ASSIGNMENT**

WHEREAS, we,

- (1) Harry-Hak-Lay Chuang of 51 Paya Lebar Crescent  
Singapore 536191
- (2) Ming Zhu of Block 688F, #13-74  
Woodlands Drive 75, Singapore 736688

have invented certain improvements in

**LARGE DIMENSION DEVICE AND METHOD OF  
MANUFACTURING SAME IN GATE LAST PROCESS**

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 November 19, 2013, and assigned application number 14/083,956; 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

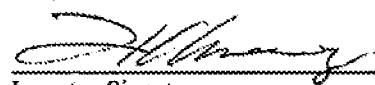
Docket No.: 2011-0157-D/24061.2707  
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said TSMC, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for said invention in all countries.

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Inventor Name: Harry-Hak-Lay Chuang  
Residence Address: 51 Paya Lebar Crescent, Singapore 536191

Dated: 2013-12-06

  
\_\_\_\_\_  
Inventor Signature

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Inventor Name: Ming Zhu  
Residence Address: Block 688F, #13-74, Woodlands Drive 75, Singapore 736688

Dated: \_\_\_\_\_

\_\_\_\_\_  
Inventor Signature

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Inventor Name: Harry-Hak-Lay Chuang

Residence Address: 51 Paya Lebar Crescent  
Singapore 536191

Dated: \_\_\_\_\_


\_\_\_\_\_  
Inventor Signature

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Inventor Name: Ming Zhu

Residence Address: Block 688F, #13-74, Woodlands Drive 75  
Singapore 736688

Dated: \_\_\_\_\_

  
\_\_\_\_\_  
Inventor Signature