

**PATENT ASSIGNMENT**

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| SUBMISSION TYPE:  | NEW ASSIGNMENT                                   |               |                |                     |            |              |            |            |            |              |            |                 |            |               |            |
|---|--|---------------|----------------|---------------------|------------|--------------|------------|------------|------------|--------------|------------|-----------------|------------|---------------|------------|
| NATURE OF CONVEYANCE:   | ASSIGNMENT                                       |               |                |                     |            |              |            |            |            |              |            |                 |            |               |            |
| <b>CONVEYING PARTY DATA</b>   |  |               |                |                     |            |              |            |            |            |              |            |                 |            |               |            |
| <table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Ming-Feng Shieh</td> <td>09/13/2010</td> </tr> <tr> <td>Ya Hui Chang</td> <td>09/13/2010</td> </tr> <tr> <td>Ru-Gun Liu</td> <td>09/17/2010</td> </tr> <tr> <td>Tsong-Hua Ou</td> <td>09/13/2010</td> </tr> <tr> <td>Ken-Hsien Hsieh</td> <td>09/13/2010</td> </tr> <tr> <td>Burn Jeng Lin</td> <td>09/23/2010</td> </tr> </tbody> </table> |  | Name          | Execution Date | Ming-Feng Shieh     | 09/13/2010 | Ya Hui Chang | 09/13/2010 | Ru-Gun Liu | 09/17/2010 | Tsong-Hua Ou | 09/13/2010 | Ken-Hsien Hsieh | 09/13/2010 | Burn Jeng Lin | 09/23/2010 |
| Name  | Execution Date                                   |               |                |                     |            |              |            |            |            |              |            |                 |            |               |            |
| Ming-Feng Shieh   | 09/13/2010                                       |               |                |                     |            |              |            |            |            |              |            |                 |            |               |            |
| Ya Hui Chang  | 09/13/2010                                       |               |                |                     |            |              |            |            |            |              |            |                 |            |               |            |
| Ru-Gun Liu  | 09/17/2010                                       |               |                |                     |            |              |            |            |            |              |            |                 |            |               |            |
| Tsong-Hua Ou  | 09/13/2010                                       |               |                |                     |            |              |            |            |            |              |            |                 |            |               |            |
| Ken-Hsien Hsieh   | 09/13/2010                                       |               |                |                     |            |              |            |            |            |              |            |                 |            |               |            |
| Burn Jeng Lin   | 09/23/2010                                       |               |                |                     |            |              |            |            |            |              |            |                 |            |               |            |
| <b>RECEIVING PARTY DATA</b>   |  |               |                |                     |            |              |            |            |            |              |            |                 |            |               |            |
| Name:   | Taiwan Semiconductor Manufacturing Company, Ltd. |               |                |                     |            |              |            |            |            |              |            |                 |            |               |            |
| Street Address:   | No. 8, Li-Hsin Road 6                            |               |                |                     |            |              |            |            |            |              |            |                 |            |               |            |
| City:   | Hsin-Chu   |               |                |                     |            |              |            |            |            |              |            |                 |            |               |            |
| State/Country:  | TAIWAN   |               |                |                     |            |              |            |            |            |              |            |                 |            |               |            |
| Postal Code:  | 300-77   |               |                |                     |            |              |            |            |            |              |            |                 |            |               |            |
| <b>PROPERTY NUMBERS Total: 1</b>  |  |               |                |                     |            |              |            |            |            |              |            |                 |            |               |            |
| <table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>12892403</td> </tr> </tbody> </table>   |  | Property Type | Number         | Application Number: | 12892403   |              |            |            |            |              |            |                 |            |               |            |
| Property Type   | Number   |               |                |                     |            |              |            |            |            |              |            |                 |            |               |            |
| Application Number:   | 12892403   |               |                |                     |            |              |            |            |            |              |            |                 |            |               |            |
| <b>CORRESPONDENCE DATA</b>  |  |               |                |                     |            |              |            |            |            |              |            |                 |            |               |            |
| Fax Number:   | (214)200-0853                                    |               |                |                     |            |              |            |            |            |              |            |                 |            |               |            |
| <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>  |  |               |                |                     |            |              |            |            |            |              |            |                 |            |               |            |
| Phone:  | 214-651-5000                                     |               |                |                     |            |              |            |            |            |              |            |                 |            |               |            |
| Email:  | ipdocketing@haynesboone.com                      |               |                |                     |            |              |            |            |            |              |            |                 |            |               |            |
| Correspondent Name:   | HAYNES AND BOONE, LLP                            |               |                |                     |            |              |            |            |            |              |            |                 |            |               |            |
| Address Line 1:   | 2323 Victory Avenue                              |               |                |                     |            |              |            |            |            |              |            |                 |            |               |            |
| Address Line 2:   | Suite 700  |               |                |                     |            |              |            |            |            |              |            |                 |            |               |            |
| Address Line 4:   | Dallas, TEXAS 75219                              |               |                |                     |            |              |            |            |            |              |            |                 |            |               |            |
| ATTORNEY DOCKET NUMBER:   | 24061.1540                                       |               |                |                     |            |              |            |            |            |              |            |                 |            |               |            |

OP \$40.00 12892403

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**PATENT  
 REEL: 025054 FRAME: 0864**

NAME OF SUBMITTER:

Eric Q. Li

Total Attachments: 3

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Docket No.: 2010-0618 (-0619) / 24061.1540  
Customer No.: 42717

**ASSIGNMENT**

WHEREAS, we,

- (1) Ming-Feng Shieh of No. 68, Lane 186, Shenglong Street  
Yongkang City, Tainan County 710, Taiwan, R.O.C.
- (2) Ya Hui Chang of 12F-5, No. 419-1, Sec. 2, Gongdao 5<sup>th</sup> Rd., East Dist.  
Hsinchu City 300, Taiwan, R.O.C.
- (3) Ru-Gun Liu of No. 9, Alley 19, Lane 452, Baoshan Road  
Hsinchu City 300, Taiwan R.O.C.
- (4) Tsong-Hua Ou of 4F, No. 76, Hualing Street,, Shihlin District  
Taipei City 111, Taiwan R.O.C.
- (5) Ken-Hsien Hsieh of 5F, No. 49, Sec. 2, Roosevelt Rd., Da-an District  
Taipei City 106, Taiwan, R.O.C.
- (6) Burn Jeng Lin of 153 Guang Fu Rd., Section 1, Lane 89, 1<sup>st</sup> Fl.  
Hsin-Chu, Taiwan, R.O.C.

have invented certain improvements in

**MULTIPLE EDGE ENABLED PATTERNING**

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

  X   of even date filed herewith; and  
           filed on 09-28-2010 and assigned application number 12/892,403; 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,

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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: Ming-Feng Shieh

Residence Address: No. 68, Lane 186, Shenglong Street  
Yongkang City, Tainan County 710, Taiwan, R.O.C.

Dated: 2010, 9, 13

Ming-Feng Shieh  
Inventor Signature

Inventor Name: Ya Hui Chang

Residence Address: 12F-5, No. 419-1, Sec. 2, Gongdao 5<sup>th</sup> Road, East District  
Hsinchu City 300, Taiwan, R.O.C.

Dated: 2010.9.13

Ya Hui Chang  
Inventor Signature

Inventor Name: Ru-Gun Liu

Residence Address: No. 9, Alley 19, Lane 452, Baoshan Road  
Hsinchu City 300, Taiwan R.O.C.

Dated: 2010.9.17

Ru-Gun Liu  
Inventor Signature

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Inventor Name: Tsong-Hua Ou

Residence Address: 4F, No. 76, Hualing Street, Shihlin District  
Taipei City 111, Taiwan R.O.C.

Dated: 2010/09/13

Tsong-Hua Ou  
Inventor Signature

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Inventor Name: Ken-Hsien Hsieh

Residence Address: 5F, No. 49, Sec. 2, Roosevelt Rd., Da-an District  
Taipei City 106, Taiwan, R.O.C.

Dated: 2010/09/13

Ken-Hsien Hsieh  
Inventor Signature

---

Inventor Name: Burn Jeng Lin

Residence Address: 153 Guang Fu Rd., Section 1, Lane 89, 1<sup>st</sup> Fl.  
Hsin-Chu, Taiwan, R.O.C.

Dated: 2010/9/23

Burn Jeng Lin  
Inventor Signature