

**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>Chun-Chieh Chuang</td> <td>05/28/2010</td> </tr> <tr> <td>Dun-Nian Yaung</td> <td>05/28/2010</td> </tr> <tr> <td>Jen-Cheng Liu</td> <td>05/28/2010</td> </tr> <tr> <td>Keng-Yu Chou</td> <td>05/28/2010</td> </tr> <tr> <td>Wen-De Wang</td> <td>05/28/2010</td> </tr> <tr> <td>Pao-Tung Chen</td> <td>05/28/2010</td> </tr> </tbody> </table>		Name	Execution Date	Chun-Chieh Chuang	05/28/2010	Dun-Nian Yaung	05/28/2010	Jen-Cheng Liu	05/28/2010	Keng-Yu Chou	05/28/2010	Wen-De Wang	05/28/2010	Pao-Tung Chen	05/28/2010
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Wen-De Wang	05/28/2010														
Pao-Tung Chen	05/28/2010														
<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>12794101</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	12794101										
Property Type	Number														
Application Number:	12794101														
<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:	24061.1460														

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**PATENT  
 REEL: 024487 FRAME: 0480**

NAME OF SUBMITTER:

Eric Q. Li

**Total Attachments: 3**

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Docket No.: 2010-0154 / 24061.1460  
Customer No.: 42717

### ASSIGNMENT

WHEREAS, we,

- |     |                   |    |  |
|-----|-------------------|----|--|
| (1) | Chun-Chieh Chuang | of | No. 61, Meinan Street<br>Tainan City, Taiwan, R.O.C.                                       |
| (2) | Dun-Nian Yaung    | of | 4F, No. 15, Lane 130, Wansheng Street, Wunshan District<br>Taipei City 116, Taiwan, R.O.C. |
| (3) | Jen-Cheng Liu     | of | 5F, #219, Guan-Dong Road<br>Hsin-Chu City, Taiwan, R.O.C.                                  |
| (4) | Keng-Yu Chou      | of | No. 329, Liaoning 1st Street, Sanmin District<br>Kaohsiung City 807, Taiwan, R.O.C.        |
| (5) | Wen-De Wang       | of | No. 17, Jhonghe Village<br>Minsyong Village, Chiayi County 621, Taiwan, R.O.C.             |
| (6) | Pao-Tung Chen     | of | No. 10-11, Pei-Shi Li, Ma-Do Jen<br>Tainan Hsien, Taiwan, R.O.C.                           |

have invented certain improvements in

### RIDGE STRUCTURE FOR BACK SIDE ILLUMINATED IMAGE SENSOR

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 June 4, 2010 and assigned application number 12/794,101; 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

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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: Chun-Chieh Chuang  
Residence Address: No. 61, Meinan Street  
Tainan City, Taiwan, R.O.C.

Dated: 2010, 5/28  
Chun-Chieh Chuang  
Inventor Signature

Inventor Name: Dun-Nian Yang  
Residence Address: 4F, No. 15, Lane 130, Wansheng Street, Wunshan District  
Taipei City 116, Taiwan, R.O.C.

Dated: 2010, 5/28  
Dun-Nian Yang  
Inventor Signature

Inventor Name: Jen-Cheng Liu  
Residence Address: 5F, #219, Guan-Dong Road  
Hsin-Chu City, Taiwan, R.O.C.

Dated: 2010, 5/28  
Jen-Cheng Liu  
Inventor Signature

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Inventor Name: Keng-Yu Chou

Residence Address: No. 329, Liaoning 1st Street, Sanmin District,  
Kaohsiung City 807, Taiwan, R.O.C.

Dated: 2010, 5/28

Keng-Yu Chou  
Inventor Signature

Inventor Name: Wen-De Wang

Residence Address: No. 17, Jhonghe Village  
Minsyong Village, Chiayi County 621, Taiwan, R.O.C.

Dated: 2010, 5/28

Wen-De Wang  
Inventor Signature

Inventor Name: Pao-Tung Chen

Residence Address: No. 10-11, Pei-Shi Li, Ma-Do Jen  
Tainan Hsien, Taiwan, R.O.C.

Dated: 2010, 5/28

Pao-Tung Chen  
Inventor Signature