

## 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>Jyuh-Fuh Lin</td> <td>01/18/2012</td> </tr> <tr> <td>Te-Chih Huang</td> <td>02/10/2012</td> </tr> <tr> <td>Guo-Tsai Huang</td> <td>01/18/2012</td> </tr> <tr> <td>Jia-Rui Hu</td> <td>01/18/2012</td> </tr> <tr> <td>Chih-Ming Ke</td> <td>01/18/2012</td> </tr> </tbody> </table>		Name	Execution Date	Jyuh-Fuh Lin	01/18/2012	Te-Chih Huang	02/10/2012	Guo-Tsai Huang	01/18/2012	Jia-Rui Hu	01/18/2012	Chih-Ming Ke	01/18/2012
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RECEIVING PARTY DATA													
<table border="1"> <tr> <td>Name:</td> <td>Taiwan Semiconductor Manufacturing Company, Ltd.</td> </tr> <tr> <td>Street Address:</td> <td>No. 8, Li-Hsin Rd 6</td> </tr> <tr> <td>Internal Address:</td> <td>Science-Based Industrial Park</td> </tr> <tr> <td>City:</td> <td>Hsin-Chu</td> </tr> <tr> <td>State/Country:</td> <td>TAIWAN</td> </tr> <tr> <td>Postal Code:</td> <td>300-77</td> </tr> </table>		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
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PROPERTY NUMBERS Total: 1													
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CORRESPONDENCE DATA													
<p>Fax Number: (214)200-0853</p> <p>Phone: 214-651-5000</p> <p>Email: ipdocketing@haynesboone.com</p> <p><i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.</i></p> <p>Correspondent Name: Haynes and Boone LLP</p> <p>Address Line 1: 2323 Victory Avenue</p> <p>Address Line 2: Suite 700</p> <p>Address Line 4: Dallas, TEXAS 75219</p>													
ATTORNEY DOCKET NUMBER:	24061.1817/2011-0276												

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NAME OF SUBMITTER:

David M. O'Dell

**Total Attachments: 6**

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**PATENT**

**REEL: 027868 FRAME: 0268**

**ASSIGNMENT**

WHEREAS, we,

- |     |                |    |   |
|-----|----------------|----|---|
| (1) | Jyuh-Fuh Lin   | of | No. 8, Lane 41, Section 1, Huanshi Road<br>Chunan Township, Miaoli County 305, Taiwan, R.O.C. |
| (2) | Te-Chih Huang  | of | No. 35, Lane 53, Alley 268, Shin-Ming Street<br>Chu-Bei City, Shin-Chu County, Taiwan, R.O.C. |
| (3) | Guo-Tsai Huang | of | 3F., No.388, Bihua St., Sanchong Dist., New Taipei City 241,<br>Taiwan, R.O.C.                |
| (4) | Jia-Rui Hu     | of | 11F-2, No. 96-30, Gongyequ 1st Road, Xitun District<br>Taichung City 407, Taiwan, R.O.C.      |
| (5) | Chih-Ming Ke   | of | 9F, No. 17, Alley 7, Lane 298, Sec. 2, Guangfu Road<br>Hsinchu City 300, Taiwan, R.O.C.       |

have invented certain improvements in

**DETECTING METHOD FOR FORMING SEMICONDUCTOR DEVICE**

for which we have executed an application for Letters Patent of the United States of America, filed on January 6, 2012 and assigned application no. 13/344,670 and;

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.

Docket No.: 2011-0276 / 24061.1817

Customer No.: 42717

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.

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Inventor Name: Jyuh-Fuh Lin

Residence Address: No. 8, Lane 41, Section 1, Huanshi Road  
Chunan Township, Miaoli County 305, Taiwan, R.O.C.

Dated: 2012, 1, 18

林 鈺 復  
Inventor Signature Jyuh Fuh Lin

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Inventor Name: Te-Chih Huang

Residence Address: No. 35, Lane 53, Alley 268, Shin-Ming Street  
Chu-Bei City, Shin-Chu County, Taiwan, R.O.C.

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

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

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Inventor Name: Guo-Tsai Huang

Residence Address: 168, Park Avenue 2, Hsinchu Science Park  
Hsinchu County 308-44, Taiwan, R.O.C.

Dated: 2012, 1, 18

Guo-Tsai Huang  
Inventor Signature

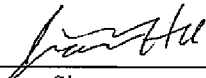
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Inventor Name: Jia-Rui Hu

Residence Address: 11F-2, No. 96-30, Gongyequ 1st Road, Xitun District  
Taichung City 407, Taiwan, R.O.C.

Dated: 1/18/2012

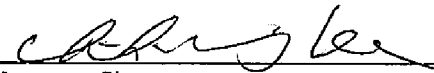
  
Inventor Signature

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Inventor Name: Chih-Ming Ke

Residence Address: 9F, No. 17, Alley 7, Lane 298, Sec. 2, Guangfu Road  
Hsinchu City 300, Taiwan, R.O.C.

Dated: 1/18/2012

  
Inventor Signature

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WHEREAS, we,

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| (3) | Guo-Tsai Huang | of | 168, Park Avenue 2, Hsinchu Science Park<br>Hsinchu County 308-44, Taiwan, R.O.C.             |
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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.

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Inventor Name: Jyuh-Fuh Lin

Residence Address: No. 8, Lane 41, Section 1, Huanshi Road  
Chunan Township, Miaoli County 305, Taiwan, R.O.C.

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

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

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Inventor Name: Te-Chih Huang

Residence Address: No. 35, Lane 53, Alley 268, Shin-Ming Street  
Chu-Bei City, Shin-Chu County, Taiwan, R.O.C.

Dated: 2012/2/10

Te-Chih Huang  
Inventor Signature

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Inventor Name: Guo-Tsai Huang

Residence Address: 168, Park Avenue 2, Hsinchu Science Park  
Hsinchu County 308-44, Taiwan, R.O.C.

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

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Inventor Signature

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Inventor Name: Jia-Rui Hu

Residence Address: 11F-2, No. 96-30, Gongyequ 1st Road, Xitun District  
Taichung City 407, Taiwan, R.O.C.

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

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Inventor Signature

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Inventor Name: Chih-Ming Ke

Residence Address: 9F, No. 17, Alley 7, Lane 298, Sec. 2, Guangfu Road  
Hsinchu City 300, Taiwan, R.O.C.

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

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Inventor Signature