PATENT ASSIGNMENT

Electronic Version v1.1

Stylesheet Version v1.1

| SUBMISSION TYPE: | | NEW ASSIGNMENT | | | | | | |
|---|--|--|---------------------|--|--|--|--|--|
| NATURE OF CONVEYANCE: | | ASSIGNMENT | | | | | | |
| CONVEYING PARTY DATA | | | | | | | | |
| Name Execution Date | | | | | | | | |
| Jing-Cheng LIN | | | 07/05/2013 | | | | | |
| RECEIVING PARTY DATA | | | | | | | | |
| Name: | Taiwan Semico | nductor Manufacturing Co., Ltd. | | | | | | |
| Street Address: | No.8, Li-Hsin R | No.8, Li-Hsin Road. 6, Science-Based Industrial Park | | | | | | |
| City: | Hsin-Chu | | | | | | | |
| State/Country: | TAIWAN | | | | | | | |
| Postal Code: | 300-77 | 300-77 | | | | | | |
| PROPERTY NUMBERS Total: 1 | | | | | | | | |
| Property Ty | ире | Number | | | | | | |
| | | | | | | | | |
| Application Number: | 1 | 3943157 | | | | | | |
| Application Number: | | 3943157 | | | | | | |
| CORRESPONDENCE | DATA 70320580 <i>De sent via US M</i> (703)205- mailroom(Birch, Ste P.O. Box | 50 <i>ail when the fax attempt is unsuccessful.</i> 3000 @bskb.com, Kleithon.G.Sayson@bskb.com wart, Kolasch & Birch, LLP | OP \$40.00 13943157 | | | | | |
| CORRESPONDENCE Fax Number: <i>Correspondence will b</i> Phone: Email: Correspondent Name: Address Line 1: | DATA 70320580 <i>be sent via US M</i> (703)205- mailroom(Birch, Ste P.O. Box Falls Chur | 50 <i>ail when the fax attempt is unsuccessful.</i> 3000 Dbskb.com, Kleithon.G.Sayson@bskb.com vart, Kolasch & Birch, LLP '47 | \$40.00 | | | | | |
| CORRESPONDENCE Fax Number: <i>Correspondence will b</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 4: | DATA 70320580 <i>De sent via US M</i> (703)205- mailroom(Birch, Ste P.O. Box Falls Chur NUMBER: | 50 ail when the fax attempt is unsuccessful. 3000 Dobskb.com, Kleithon.G.Sayson@bskb.com vart, Kolasch & Birch, LLP '47 ch, VIRGINIA 22040-0747 | \$40.00 | | | | | |
| CORRESPONDENCE Fax Number: <i>Correspondence will b</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 4: ATTORNEY DOCKET | DATA 70320580 <i>De sent via US M</i> (703)205- mailroom(Birch, Ste P.O. Box Falls Chur NUMBER: | 50 ail when the fax attempt is unsuccessful. 3000 @bskb.com, Kleithon.G.Sayson@bskb.com vart, Kolasch & Birch, LLP '47 ch, VIRGINIA 22040-0747 0941-2789PUS1 | \$40.00 | | | | | |
| CORRESPONDENCE Fax Number: <i>Correspondence will b</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 4: ATTORNEY DOCKET NAME OF SUBMITTE | DATA 70320580 <i>De sent via US M</i> (703)205- mailroom(Birch, Ste P.O. Box Falls Chur NUMBER: | 50 ail when the fax attempt is unsuccessful. 3000 Dbskb.com, Kleithon.G.Sayson@bskb.com vart, Kolasch & Birch, LLP '47 ch, VIRGINIA 22040-0747 0941-2789PUS1 Kleithon Sayson | \$40.00 | | | | | |

ASSIGNMENT

WHEREAS, Jing-Cheng LIN

hereafter referred to as ASSIGNOR, has/have invented certain new and useful improvements as described and set forth in the below identified application for United States Letters Patent:

Title: FRONT-TO-BACK BONDING WITH THROUGH-SUBSTRATE VIA (TSV)

| Filed: | July | 16, | 2013 | Serial No. | 13/943,157 | ······ |
|----------|------|-----|------|------------|------------|--------|
| Executed | on: | | | 07/05/2013 | | |

WHEREAS, <u>Taiwan Semiconductor Manufacturing Co., Ltd.</u> of <u>No.8, Li-Hsin Road. 6,</u> <u>Science-Based Industrial Park, Hsin-Chu, Taiwan 300-77, R.O.C.</u> hereinafter referred to as ASSIGNEES, is desirous of acquiring ASSIGNOR'S interest in the said invention and application and in any U.S. Letters Patent which may be granted on the same;

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN: Be it known that, for good and valuable consideration, receipt of which is hereby acknowledged by Assignor, Assignor has/have sold, assigned and transferred, and by these presents does/do sell, assign and transfer unto the said Assignee, and Assignee's successors and assigns, all his/her/their rights, title and interest in and to the said invention and application and all future improvements thereon, and in and to any Letters Patent which may hereafter be granted on the same in the United States, the said interest to be held and enjoyed by said Assignee as fully and exclusively as it would have been held and enjoyed by said Assignment and transfer not been made, to the full end and term of any Letters Patent which may be granted thereon, or of any division, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof.

Assignor further agrees/agree that he/she/they will, without charge to said Assignee, but at Assignee's expense, cooperate with Assignee in the prosecution of said application and/or applications, execute, verify, acknowledge and deliver all such further papers, including applications for Letters Patent and for the reissue thereof, and instruments of assignment and transfer thereof, and will perform such other acts as Assignee lawfully may request, to obtain or maintain Letters Patent for said invention and improvement, and to vest title thereto in said Assignee, or Assignee's successors and assigns.

IN TESTIMONY WHEREOF, Assignor has/have signed his/her/their name(s) on the date(s) indicated.

Name: Jing (Last name: LIN)

RECORDED: 07/17/2013

PATENT REEL: 030817 FRAME: 0008