

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>Nan-Hsin Tseng</td> <td>05/06/2011</td> </tr> <tr> <td>Yun-Han Lee</td> <td>05/06/2011</td> </tr> <tr> <td>Chin-Chou Liu</td> <td>05/06/2011</td> </tr> <tr> <td>Ji-Jan Chen</td> <td>05/06/2011</td> </tr> <tr> <td>Wei-Pin Changchien</td> <td>05/06/2011</td> </tr> <tr> <td>Chien-Hui Chen</td> <td>05/09/2011</td> </tr> </tbody> </table>		Name	Execution Date	Nan-Hsin Tseng	05/06/2011	Yun-Han Lee	05/06/2011	Chin-Chou Liu	05/06/2011	Ji-Jan Chen	05/06/2011	Wei-Pin Changchien	05/06/2011	Chien-Hui Chen	05/09/2011
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Wei-Pin Changchien	05/06/2011														
Chien-Hui Chen	05/09/2011														
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 R.O.C.														
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>13107476</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13107476										
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CORRESPONDENCE DATA															
Fax Number:	(972)732-9218														
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>															
Phone:	972-732-1001														
Email:	edwards@slater-matsil.com														
Correspondent Name:	Slater & Matsil, L.L.P.														
Address Line 1:	17950 Preston Road														
Address Line 2:	Suite 1000														
Address Line 4:	Dallas, TEXAS 75252														
ATTORNEY DOCKET NUMBER:	TSM11-0168														

CH \$40.00 13107476

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PATENT
REEL: 026277 FRAME: 0981

NAME OF SUBMITTER:

Kasey Edwards

Total Attachments: 2

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ATTORNEY DOCKET NO. TSM11-0168

ASSIGNMENT

WHEREAS, I, the undersigned inventor (or one of the undersigned joint inventors), of residence as listed, having invented certain new and useful improvements as below entitled, for which application for United States Letters Patent is made, the said application having been executed on the date set forth below; and

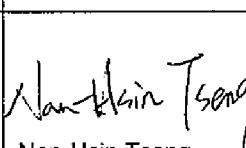
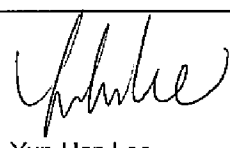
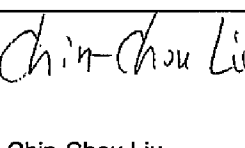
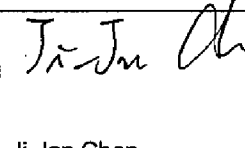
WHEREAS, Taiwan Semiconductor Manufacturing Company, Ltd. (TSMC), a corporation organized and existing under the laws of Taiwan, the Republic of China, with its principal office at No. 8, Li-Hsin Rd. 6, Science-Based Industrial Park, Hsin-Chu, Taiwan 300-77, R.O.C., is desirous of acquiring my entire right, title and interest in and to the said invention, and to the said application and any Letters Patent that may issue thereon in the United States and all other countries throughout the world;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, I hereby sell and assign to the said TSMC, its successors and assigns, my entire right, title and interest in and to the said invention and in to the said application and all patents which may be granted therefor, and all divisions, reissues, substitutions, continuations, and extensions thereof; and I hereby authorize and request the Commissioner for Patents to issue all patents for said invention, or patent resulting therefrom, insofar as my interest is concerned, to the said TSMC, as assignee of my entire right, title and interest. I declare that I have not executed and will not execute any agreement in conflict herewith.

I also hereby sell and assign to TSMC, its successors and assigns, my foreign rights to the invention disclosed in said application, in all countries of the world, including, but not limited to, the right to file applications and obtain patents under the terms of the International Convention for the Protection of Industrial Property, and of the European Patent Convention, and further agree to execute any and all patent applications, assignments, affidavits, and any other papers in connection therewith necessary to perfect such patent rights.

I hereby further agree that I will communicate to said TSMC, or to its successors, assigns, and legal representatives, any facts known to me respecting said invention or the file history thereof, and at the expense of said assignee company, testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, reissue and substitute applications, make all lawful oaths, and generally do everything possible to aid said TSMC, its successors, assigns and nominees to obtain and enforce proper patent protection for said invention in all countries.

IN WITNESS WHEREOF, I hereunto set my hand and seal this day and year;

TITLE OF INVENTION	Methods for Detecting Defect Connections between Metal Bumps			
SIGNATURE OF INVENTOR AND NAME	 Nan-Hsin Tseng	 Yun-Han Lee	 Chin-Chou Liu	 Ji-Jan Chen
DATE	May. 06. 2011	05/06/2011	May 6, 2011	May-6.2011
RESIDENCE (City, County, State)	Tainan City, Taiwan	Baoshan Township, Taiwan	Jhubei City, Taiwan	Hsin-Chu, Taiwan

ATTORNEY DOCKET NO. TSM11-0168

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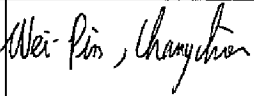
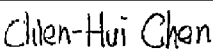
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NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, I hereby sell and assign to the said TSMC, its successors and assigns, my entire right, title and interest in and to the said invention and in to the said application and all patents which may be granted therefor, and all divisions, reissues, substitutions, continuations, and extensions thereof; and I hereby authorize and request the Commissioner for Patents to issue all patents for said invention, or patent resulting therefrom, insofar as my interest is concerned, to the said TSMC, as assignee of my entire right, title and interest. I declare that I have not executed and will not execute any agreement in conflict herewith.

I also hereby sell and assign to TSMC, its successors and assigns, my foreign rights to the invention disclosed in said application, in all countries of the world, including, but not limited to, the right to file applications and obtain patents under the terms of the International Convention for the Protection of Industrial Property, and of the European Patent Convention, and further agree to execute any and all patent applications, assignments, affidavits, and any other papers in connection therewith necessary to perfect such patent rights.

I hereby further agree that I will communicate to said TSMC, or to its successors, assigns, and legal representatives, any facts known to me respecting said invention or the file history thereof, and at the expense of said assignee company, testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, reissue and substitute applications, make all lawful oaths, and generally do everything possible to aid said TSMC, its successors, assigns and nominees to obtain and enforce proper patent protection for said invention in all countries.

IN WITNESS WHEREOF, I hereunto set my hand and seal this day and year;

TITLE OF INVENTION	Methods for Detecting Defect Connections between Metal Bumps		
SIGNATURE OF INVENTOR AND NAME	 Wei-Pin Changchien	 Chien-Hui Chen	
DATE	05/06/2011	May. 09, 2011	
RESIDENCE (City, County, State)	Taichung City, Taiwan	Jhu-Dong Township, Taiwan	