

## 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>Chia-Yu Lu</td> <td>06/04/2012</td> </tr> <tr> <td>Jian-Hao Chen</td> <td>06/04/2012</td> </tr> <tr> <td>Chih-Hung Wang</td> <td>06/04/2012</td> </tr> <tr> <td>Tung-Heng Hsieh</td> <td>06/05/2012</td> </tr> <tr> <td>Kuo-Feng Yu</td> <td>06/05/2012</td> </tr> <tr> <td>Chin-Shan Hou</td> <td>06/04/2012</td> </tr> <tr> <td>Shyue-Shyh Lin</td> <td>06/05/2012</td> </tr> </tbody> </table>		Name	Execution Date	Chia-Yu Lu	06/04/2012	Jian-Hao Chen	06/04/2012	Chih-Hung Wang	06/04/2012	Tung-Heng Hsieh	06/05/2012	Kuo-Feng Yu	06/05/2012	Chin-Shan Hou	06/04/2012	Shyue-Shyh Lin	06/05/2012
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Application Number:	13492571																
CORRESPONDENCE DATA																	
Fax Number:	(972)732-9218																
Phone:	972-732-1001																
Email:	docketing@slater-matsil.com																
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.</i>																	
Correspondent Name:	Slater & Matsil, L.L.P.																
Address Line 1:	17950 Preston Road																
Address Line 2:	Suite 1000																
Address Line 4:	Dallas, TEXAS 75252																

CH \$40.00 13492571

PATENT

ATTORNEY DOCKET NUMBER:	TSM12-0190
NAME OF SUBMITTER:	Kasey Edwards
Total Attachments: 2 source=TSM12-0190_Assignment#page1.tif source=TSM12-0190_Assignment#page2.tif	

**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	<b>Semiconductor Devices, Methods of Manufacture Thereof, and Methods of Forming Resistors</b>			
SIGNATURE OF INVENTOR AND NAME	✓ Chia-Yu Lu Chia-Yu Lu	✓ Jian-Hao Chen Jian-Hao Chen	✓ Chih-Hung Wang Chih-Hung Wang	✓ Tung-Heng Hsieh Tung-Heng Hsieh
DATE	✓ 2012/06/04	✓ 2012, June 4 <sup>th</sup>	✓ 2012/06/04	✓ 2012/06/05
RESIDENCE (City, County, State)	Hsin-Chu City, Taiwan, R.O.C.	Hsin-Chu City, Taiwan, R.O.C.	Hsin-Chu City, Taiwan, R.O.C.	Zhudong Town, Taiwan, R.O.C.

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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.

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SIGNATURE OF INVENTOR AND NAME	✓ <i>Kuo Feng Yu</i> Kuo-Feng Yu	✓ <i>Chin-Shan Hou</i> Chin-Shan Hou	✓ <i>Shyue Shyh Lin</i> Shyue Shyh Lin	
DATE	✓ 2012/06/05	✓ 2012.6.4	✓ 06/05 '12	
RESIDENCE (City, County, State)	Zhudong Township, Taiwan, R.O.C.	Hsin-Chu, Taiwan, R.O.C.	Zhubei City, Taiwan, R.O.C.	