

## 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>Cheng-Tung Lin</td><td>04/10/2013</td></tr> <tr><td>Teng-Chun Tsai</td><td>04/10/2013</td></tr> <tr><td>Li-Ting Wang</td><td>04/10/2013</td></tr> <tr><td>Chi-Yuan Chen</td><td>04/10/2013</td></tr> <tr><td>Kuo-Yin Lin</td><td>04/10/2013</td></tr> <tr><td>Wan-Chun Pan</td><td>04/10/2013</td></tr> <tr><td>Ming-Liang Yen</td><td>04/10/2013</td></tr> <tr><td>Ching-Wei Tsai</td><td>04/10/2013</td></tr> <tr><td>Kuo-Cheng Ching</td><td>04/10/2013</td></tr> <tr><td>Huicheng Chang</td><td>04/10/2013</td></tr> <tr><td>Chih-Hao Wang</td><td>04/10/2013</td></tr> </tbody> </table>		Name	Execution Date	Cheng-Tung Lin	04/10/2013	Teng-Chun Tsai	04/10/2013	Li-Ting Wang	04/10/2013	Chi-Yuan Chen	04/10/2013	Kuo-Yin Lin	04/10/2013	Wan-Chun Pan	04/10/2013	Ming-Liang Yen	04/10/2013	Ching-Wei Tsai	04/10/2013	Kuo-Cheng Ching	04/10/2013	Huicheng Chang	04/10/2013	Chih-Hao Wang	04/10/2013
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CORRESPONDENCE DATA																									
Fax Number:	9727329218																								
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>																									
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ATTORNEY DOCKET NUMBER:	TSM13-0143
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NAME OF SUBMITTER:	Donna Turner
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Signature:	/Donna Turner/
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Date:	04/12/2013
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Total Attachments: 3  
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ATTORNEY DOCKET NO.  
TSM13-0143

### 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

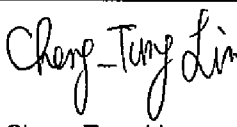
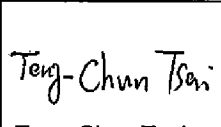
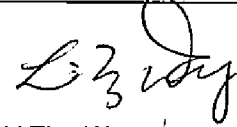
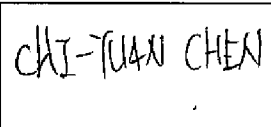
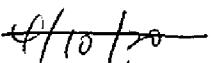
WHEREAS, Taiwan Semiconductor Manufacturing Company, Ltd. (TSMC), a corporation organized and existing under the laws of Taiwan, the Republic of China, with its principal office at No. 8, Li-Hsin Rd. 6, Science-Based Industrial Park, Hsin-Chu, Taiwan 300-77, R.O.C., is desirous of acquiring my entire 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	<i>Semiconductor Devices and Methods of Manufacture Thereof</i>			
SIGNATURE OF INVENTOR AND NAME	 Cheng-Tung Lin	 Teng-Chun Tsai	 Li-Ting Wang	 Chi-Yuan Chen
DATE	4/10/2013	4/10/2013	04/10/2013	04/10/2013
RESIDENCE (City, County, State)	Jhudong Township, Taiwan 	Hsin-Chu, Taiwan	Tainan, Taiwan	Hsin-Chu, Taiwan

林正雄



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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	<i>Semiconductor Devices and Methods of Manufacture Thereof</i>			
SIGNATURE OF INVENTOR AND NAME	<i>Kuo-Yin Lin</i> Kuo-Yin Lin	<i>Wan-Chun Pan</i> Wan-Chun Pan	<i>Ming-Liang Yen</i> Ming-Liang Yen	<i>Ching-Wei Tsai</i> Ching-Wei Tsai
DATE	<i>2013/4/10</i>	<i>2013/4/10</i>	<i>2013/4/10</i>	<i>2013/4/10</i>
RESIDENCE (City, County, State)	Jhubei City, Taiwan	Hsin-Chu, Taiwan	New Taipei City, Taiwan	Taoyuan City, Taiwan



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

TITLE OF INVENTION	<i>Semiconductor Devices and Methods of Manufacture Thereof</i>			
SIGNATURE OF INVENTOR AND NAME	<i>Kuo-Cheng Ching</i> Kuo-Cheng Ching	<i>Huicheng Chang</i> Huicheng Chang	<i>Chih-Hao Wang</i> Chih-Hao Wang	
DATE	<i>6/10/13</i>	<i>4/10/13</i>	<i>4/10/13</i>	
RESIDENCE (City, County, State)	Zhubei City, Taiwan	Tainan City, Taiwan	Hsin-Chu, Taiwan	