

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>Chi-Ming CHEN</td> <td>07/05/2013</td> </tr> <tr> <td>Chih-Wen HSIUNG</td> <td>07/05/2013</td> </tr> <tr> <td>Po-Chun LIU</td> <td>07/05/2013</td> </tr> <tr> <td>Ming-Chang CHING</td> <td>07/05/2013</td> </tr> <tr> <td>Chung-Yi YU</td> <td>07/05/2013</td> </tr> <tr> <td>Xiaomeng CHEN</td> <td>07/11/2013</td> </tr> </tbody> </table>		Name	Execution Date	Chi-Ming CHEN	07/05/2013	Chih-Wen HSIUNG	07/05/2013	Po-Chun LIU	07/05/2013	Ming-Chang CHING	07/05/2013	Chung-Yi YU	07/05/2013	Xiaomeng CHEN	07/11/2013
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<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. VI, Hsinchu Science Park</td> </tr> <tr> <td>City:</td> <td>Hsinchu</td> </tr> <tr> <td>State/Country:</td> <td>TAIWAN</td> </tr> <tr> <td>Postal Code:</td> <td>300</td> </tr> </table>		Name:	TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD.	Street Address:	No. 8, Li-Hsin Rd. VI, Hsinchu Science Park	City:	Hsinchu	State/Country:	TAIWAN	Postal Code:	300				
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PROPERTY NUMBERS Total: 1															
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CORRESPONDENCE DATA															
<p>Fax Number: 7035185499 <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i></p> <p>Phone: 7036841111 Email: tsmc@ipfirm.com Correspondent Name: Lowe Hauptman Ham & Berner, LLP (TSMC) Address Line 1: 2318 Mill Road Address Line 2: Suite 1400 Address Line 4: Alexandria, VIRGINIA 22314</p>															
ATTORNEY DOCKET NUMBER:	T5057-896														

NAME OF SUBMITTER:	Randy A. Noranbrock
Signature:	/Randy A. Noranbrock/
Date:	07/17/2013
Total Attachments: 2 source=EfiledAssgn#page1.tif source=EfiledAssgn#page2.tif	

ASSIGNMENT

In consideration of the premises and other good and valuable consideration in hand paid, the receipt and sufficiency of which is hereby acknowledged, the undersigned,

- | | |
|--------------------|---------------------|
| 1) Chi-Ming CHEN | 4) Ming-Chang CHING |
| 2) Chih-Wen HSIUNG | 5) Chung-Yi YU |
| 3) Po-Chun LIU | 6) Xiaomeng CHEN |

who has made a certain new and useful invention, hereby sells, assigns and transfers unto TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD., having a place of business at No. 8, Li-Hsin Rd. VI, Hsinchu Science Park, Hsinchu 300, Taiwan R.O.C.

its successors and assigns (hereinafter designated "ASSIGNEE") the entire right, title and interest for the United States of America as defined in 35 U.S.C. 100 in the invention entitled

TRANSISTOR HAVING BACK-BARRIER LAYER AND METHOD OF MAKING THE SAME

(a) for which an application for United States Letters Patent was filed on July 17, 2013, and identified by United States Patent Application No. 13/944,672; or

(b) for which an application for United States Letters Patent was executed on _____,

and the undersigned hereby authorizes and requests the United States Commissioner of Patents and Trademarks to issue any and all United States Letters Patent which may be granted therefore and any and all extensions, divisions, reissues, continuations, or continuations-in-part thereof, and the right to all benefits under the International Convention for the Protection of Industrial Property to the said ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns and legal representatives; the undersigned agrees that the attorneys of record in said application shall hereafter act on behalf of said ASSIGNEE;

AND the undersigned hereby agrees to transfer a like interest, and to render all necessary assistance in making application for and obtaining original, divisional, reissued or extended Letters Patent of the United States, upon request of the said ASSIGNEE, its successors, assigns and legal representatives, and without further remuneration, in and to any improvements, and applications for patent based thereon, growing out of or related to the said invention; and to execute any papers by the said ASSIGNEE, its successors, assigns and legal representatives, deemed essential to ASSIGNEE's full protection and title in and to the invention hereby transferred.

SIGNED on the date indicated aside my signature:

1) ✓ Chi-Ming Chen
Name: Chi-Ming CHEN

2) ✓ Chih-Wen HSIUNG
Name: Chih-Wen HSIUNG

3) ✓ Po-Chun Liu
Name: Po-Chun LIU

4) ✓ Alvin Alvin
Name: Ming-Chang CHING

5) ✓ Chung-Yi Yu
Name: Chung-Yi YU

✓ 2013. 7. 5
Date:

✓ 2013. 7. 5
Date:

✓ 2013. 7. 5
Date:

✓ 2013. 7. 5 2013. 7. 5
Date:

✓ 2013. 7. 5
Date:

✓
6) Xiaomeng Chen
Name: Xiaomeng CHEN

✓ 7/11/2013
Date: