

## 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>Jung-Ping YANG</td> <td>09/12/2013</td> </tr> <tr> <td>Chih-Chieh CHIU</td> <td>09/12/2013</td> </tr> <tr> <td>Fu-An WU</td> <td>09/12/2013</td> </tr> <tr> <td>Chia-En HUANG</td> <td>09/12/2013</td> </tr> <tr> <td>I-Han HUANG</td> <td>09/12/2013</td> </tr> </tbody> </table>		Name	Execution Date	Jung-Ping YANG	09/12/2013	Chih-Chieh CHIU	09/12/2013	Fu-An WU	09/12/2013	Chia-En HUANG	09/12/2013	I-Han HUANG	09/12/2013
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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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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 &amp; Ham, LLP (TSMC)        Address Line 1: 2318 Mill Road        Address Line 2: Suite 1400        Address Line 4: Alexandria, VIRGINIA 22314</p>													
ATTORNEY DOCKET NUMBER:	T5057-933												
NAME OF SUBMITTER:	Randy A. Noranbrock												

OP \$40.00 14039340

Signature:	/Randy A. Noranbrock/
Date:	09/27/2013
Total Attachments: 1 source=EfiledAssgn#page1.tif	

Docket No. T5057-933  
TSMC2013-0829

## 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) Jung-Ping YANG  | 4) Chia-En HUANG |
| 2) Chih-Chieh CHIU | 5) I-Han HUANG   |
| 3) Fu-An WU        |                  |

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

### CIRCUIT TO GENERATE A SENSE AMPLIFIER ENABLE SIGNAL

(a) for which an application for United States Letters Patent was filed on \_\_\_\_\_, and identified by United States Patent Application No. \_\_\_\_\_; 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) Jung-Ping Yang  
Name: Jung-Ping YANG

Date: 9/12/2013

2) Chih-Chieh Chiu  
Name: Chih-Chieh CHIU

Date: 9/12/2013

3) Fu-An Wu  
Name: Fu-An WU

Date: 9/12/2013

4) Chia-En Huang  
Name: Chia-En HUANG

Date: 9/12/2013

5) I-Han Huang  
Name: I-Han HUANG

Date: 9/12/2013

PATENT