

## 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>Ker Hsiao HUO</td> <td>01/16/2012</td> </tr> <tr> <td>Chih-Chang CHENG</td> <td>01/16/2012</td> </tr> <tr> <td>Ru-Yi SU</td> <td>01/16/2012</td> </tr> <tr> <td>Jen-Hao YEH</td> <td>01/16/2012</td> </tr> <tr> <td>Fu-Chih YANG</td> <td>01/16/2012</td> </tr> <tr> <td>Chun Lin TSAI</td> <td>01/16/2012</td> </tr> </tbody> </table>		Name	Execution Date	Ker Hsiao HUO	01/16/2012	Chih-Chang CHENG	01/16/2012	Ru-Yi SU	01/16/2012	Jen-Hao YEH	01/16/2012	Fu-Chih YANG	01/16/2012	Chun Lin TSAI	01/16/2012
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RECEIVING PARTY DATA															
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														
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>13372037</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13372037										
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Application Number:	13372037														
CORRESPONDENCE DATA															
Fax Number:	(703)518-5499														
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OP \$40.00 13372037

NAME OF SUBMITTER:

Randy A. Noranbrock

Total Attachments: 2

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### 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) Ker Hsiao HUO
- 2) Chih-Chang CHENG
- 3) Ru-Yi SU
- 4) Jen-Hao YEH
- 5) Fu-Chih YANG
- 6) Chun Lin TSAI

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

INSULATED GATE BIPOLAR TRANSISTOR STRUCTURE HAVING LOW SUBSTRATE LEAKAGE

- (a) for which an application for United States Letters Patent was filed on 2012-02-13, and identified by United States Patent Application No. 13/372,037; 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) Ker Hsiao HUO  
Name: Ker Hsiao HUO

2) Chih-Chang Cheng  
Name: Chih-Chang CHENG

3) Ru-Yi Su  
Name: Ru-Yi SU

2012. 1. 16  
Date:

2012. 1. 16  
Date:

2012, 1/16  
Date:

- 4) Jen-Hao Yeh  
Name: Jen-Hao YEH
- 5) Fu-Chih Yang  
Name: Fu-Chih YANG
- 6) Chun Lin Tsai  
Name: Chun Lin TSAI

Jan. 16. 2012.  
Date:

Jan, 16, 2012  
Date:

Jan, 16. 2012  
Date: