

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT4981534

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
YU-HUNG CHENG	02/06/2017
CHING-WEI TSAI	02/23/2017
YEUR-LUEN TU	02/06/2017
TUNG-I LIN	02/20/2017
WEI-LI CHEN	02/21/2017
<b>RECEIVING PARTY DATA</b>	
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<b>Street Address:</b>	NO. 8, LI-HSIN RD. 6
<b>Internal Address:</b>	SCIENCE-BASED INDUSTRIAL PARK
<b>City:</b>	HSIN-CHU
<b>State/Country:</b>	TAIWAN
<b>Postal Code:</b>	300-77
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	15982033
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<b>ATTORNEY DOCKET NUMBER:</b>	20121239 / 24061.3030US02
<b>NAME OF SUBMITTER:</b>	JANIE MARTINEZ-HOLM
<b>SIGNATURE:</b>	/Janie Martinez-Holm/
<b>DATE SIGNED:</b>	05/29/2018

**Total Attachments: 2**

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**ASSIGNMENT**

WHEREAS, we,

- (1) Yu-Hung Cheng of No.1-56, Xuzhongying, Anding Dist., Tainan City 745, Taiwan
- (2) Ching-Wei Tsai of 20F.-13, No.188, Guanxin Rd., East Dist., Hsinchu City 300, Taiwan
- (3) Yeur-Luen Tu of No. 3-6, Lane 12, Gong-Xue Rd., Taichung, Taiwan
- (4) Tung-I Lin of 5F.-2, No.20, Ln. 144, Sec. 5, Fu??an Rd., Annan Dist., Tainan City 709, Taiwan
- (5) Wei-Li Chen of No.3, Ln. 329, Jianguo Rd., Shanhua Dist., Tainan City 74153, Taiwan

have invented certain improvements in

**IMPROVED TRANSISTOR CHANNEL**

for which we have executed an application for Letters Patent of the United States of America,

\_\_\_\_\_ of even date filed herewith; and  
 X  filed on  12-23-2014  and assigned application number  14/581,970 ; and

WHEREAS, we authorize the attorney of record to update this document to include Patent Office information as deemed necessary (i.e., filing date, serial number, etc.);

WHEREAS, Taiwan Semiconductor Manufacturing Company, Ltd., ("TSMC"), No. 8, Li-Hsin Rd. 6, Science-Based Industrial Park Hsin-Chu, Taiwan 300-77, Republic of China. is desirous of obtaining the entire right, title, and interest in, to and under the said invention and the said application in the United States of America and in any and all countries foreign thereto;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and other good and valuable consideration, we have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said TSMC, its successors, legal representatives, and assigns, the entire right, title, and interest in, to and under the said invention, and the said application, and all divisional, renewal, substitutional, and continuing applications thereof, and all Letters Patent of the United States of America which may be granted thereon and all reissues and extensions thereof, and all applications for Letters Patent which may be filed for said invention in any country or countries foreign to the United States of America, and all extensions, renewals, and reissues thereof, and all prior patents and patent applications from which a filing priority of the above-described patent application may be obtained, including the right to collect past damages; and we hereby authorize and request the Commissioner of Patents of the United States of America, and any official of any country or countries foreign to the United States of America, whose duty it is to issue patents on applications as aforesaid, to issue all Letters Patent for said invention to the said TSMC, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

Attorney Reference 2012-1239-CIP/ 24061.3030  
Customer No.: 42717

AND WE HEREBY covenant that we have full right to convey the entire interest herein assigned, and that we have not executed, and will not execute, any agreement in conflict herewith.

AND WE HEREBY further covenant and agree that we will communicate to said TSMC, its successors, legal representatives and assigns, any facts known to us respecting said invention, and testify in any legal proceedings, sign all lawful papers, execute all divisional, renewal, substitutional, continuing, and reissue applications, make all rightful declarations and/or oaths and generally do everything possible to aid the said TSMC, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for said invention in all countries.

Inventor Name: Yu-Hung Cheng

Residence Address: No.1-56, Xuzhongying, Anding Dist., Tainan City 745, Taiwan

Dated: 2017.02.06

Yu-Hung Cheng  
Inventor Signature

Inventor Name: Ching-Wei Tsai

Residence Address: 20F.-13, No.188, Guanxin Rd., East Dist., Hsinchu City 300, Taiwan

Dated: 2017.2.23

Ching Wei Tsai  
Inventor Signature

Inventor Name: Yeur-Luen Tu

Residence Address: No. 3-6, Lane 12, Gong-Xue Rd., Taichung, Taiwan

Dated: 2017.02.06

Yeur-Luen Tu  
Inventor Signature

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Dated: 2017.02.20

Tung-I Lin  
Inventor Signature

Inventor Name: Wei-Li Chen

Residence Address: No.3, Ln. 329, Jianguo Rd., Shanhuia Dist., Tainan City 74153, Taiwan

Dated: 2017, 2, 21

Wei-Li Chen  
Inventor Signature