10/14/2019 505721919

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	

CONVEYING PARTY DATA

Name	Execution Date
JYUH-FUH LIN	08/20/2014
CHENG-HUNG CHEN	08/21/2014
PEI-YI LIU	08/21/2014
WEN-CHUAN WANG	08/21/2014
SHY-JAY LIN	08/26/2014
BURN JENG LIN	08/29/2014

RECEIVING PARTY DATA

Name:	me: TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD.	
Street Address:	eet Address: NO. 8, LI-HSIN RD. 6	
Internal Address:	nternal Address: SCIENCE-BASED INDUSTRIAL PARK	
City:	ty: HSIN-CHU	
State/Country:	State/Country: TAIWAN	
Postal Code:	300-77	

PROPERTY NUMBERS Total: 1

Property Type	Number		
Application Number:	16587006		

CORRESPONDENCE DATA

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HAYNES AND BOONE, LLP IP SECTION **Correspondent Name:**

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ATTORNEY DOCKET NUMBER:	20131459 /24061.2939US04	
NAME OF SUBMITTER:	SVJETLANA LONG	
SIGNATURE:	/Svjetlana Long/	
DATE SIGNED:	10/14/2019	

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Total Attachments: 3

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PATENT REEL: 050707 FRAME: 0989

Docket No.: 2013-1459/24061.2939

Customer No.: 42717

ASSIGNMENT

WHEREAS, v	ve.
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(1)	Jyuh-Fuh Lin	of	No. 8, Lane 41, Section 1, Huanshi Road Chunan Township, Miaoli County 305 Taiwan, R.O.C.
(2)	Cheng-Hung Chen	of	9F., No. 3, Liujia 8th Street, Zhubei City Hsinchu County 302, Taiwan, R.O.C.
(3)	Pei-Yi Liu	of	No. 62, Lane 200, Zhuhe Road, Changhua City Changhua County 500, Taiwan, R.O.C.
(4)	Wen-Chuan Wang	of	3F2, No. 133, Jiangong 1st Road, East District Hsinchu City 300, Taiwan, R.O.C.
(5)	Shy-Jay Lin	of	No. 15, Alley 36, Lane 134, Yuanshan Road Jhudong Township, Hsinchu County 310 Taiwan, R.O.C.
(6)	Burn Jeng Lin	of	153 Guang Fu Road, Section 1, Lane 89, 1st Floor Hsinchu City, Taiwan, R.O.C.

have invented certain improvements in

METHOD OF FABRICATING AN INTEGRATED CIRCUIT WITH A PATTERN DENSITY-OUTLIER-TREATMENT FOR OPTIMIZED PATTERN DENSITY UNIFORMITY

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

of even date filed herewith; and filed on September 11, 2014, and assigned application number 14/483,893; 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

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Customer No.: 42717

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.

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: Jyuh-Fuh Lin Residence Address: No. 8, Lane 41, Section 1, Huanshi Road, Chunan Township Miaoli County 305, Taiwan, R.O.C. Jyuh Fuh Lin
Inventor Signature Inventor Name: Cheng-Hung Chen Residence Address: 9F., No. 3, Liujia 8th Street, Zhubei City Hsinchu County 302, Taiwan, R.O.C. Thong Ming Chen
Inventor Signature Dated: 21st, Ang, 2014 Inventor Name: Pei-Yi Liu Residence Address: No. 62, Lane 200, Zhuhe Road, Changhua City Changhua County 500, Taiwan, R.O.C.

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Inventor Name:

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Dated:

08/2/10014

Inventor Signature

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Dated: _8/26/20/4

Inventor Signature

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Dated: -2014-8-27

Inventor Signs

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RECORDED: 10/14/2019

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