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PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
YUN-LIN WU	01/16/2017
CHENG-CHENG KUO	01/16/2017
CHIA-PING CHIANG	01/16/2017
CHIH-WEI HSU	01/16/2017
HUA-TAI LIN	01/17/2017
KUEI-SHUN CHEN	01/17/2017
YUAN-HSIANG LUNG	01/16/2017
YAN-TSO TSAI	01/17/2017

RECEIVING PARTY DATA

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

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	17106602

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER:	2016-0707/24061.3461US03
NAME OF SUBMITTER:	MARCY OGADO

PAIENI **REEL: 054489 FRAME: 0900** 506375865

SIGNATURE:	/Marcy Ogado/	
DATE SIGNED: 11/30/2020		
Total Attachments: 3		
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source=24061-3461US03_Assignment#page3_tif		

PATENT REEL: 054489 FRAME: 0901 Docket NoDocket No.: P20160707US01/24061.3461US01

Customer No.: 000042717

ASSIGNMENT

WHEREAS, we,

(1)	Yun-Lin Wu	of	Hsin-Chu, Taiwan, Republic of China
(2)	Cheng-Cheng Kuo	of	Hsinchu City, Taiwan, Republic of China
(3)	Chia-Ping Chiang	of	Taipei City, Taiwan, Republic of China
(4)	Chih-Wei Hsu	of	Zhubei City, Taiwan, Republic of China
(5)	Hua-Tai Lin	of	Hsinchu City, Taiwan, Republic of China
(6)	Kuei-Shun Chen	of	Hsinchu City, Taiwan, Republic of China
(7)	Yuan-Hsiang Lung	of	Hsinchu City, Taiwan, Republic of China
(8)	Yan-Tso Tsai	of	Hsin-Chu, Taiwan, Republic of China

have invented certain improvements in

METHOD FOR IMPROVING CIRCUIT LAYOUT FOR MANUFACTURABILITY

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

X	of even date filed herewith; and		
	filed on January 20, 2017 and assigned application number	15/411,613;	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 Co., 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

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Docket NoDocket No.: P20160707US01/24061.3461US01

Customer No.: 000042717

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:	Yun-Lin Wu	
Residence Address:	No. 8, Li-Hsin Road 6 Hsin-Chu, Taiwan, 300-77, Republic of China	
Dated: <u>10 1) . </u>	. 16	Tun-Lin Wu Inventor Signature
Inventor Name:	Cheng-Cheng Kuo	
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Dated: 2017, 1	.16	Cheng - Cheng Kuo Inventor Signature
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Dated: 1),	1,16	Chra-Prop Chrang Inventor Signature
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Dated: 2017. 1.	. 16	Chih-Wei Hay Inventor Signature

Docket NoDocket No.: P20160707US01/24061.3461US01

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Dated: 70/1/01/19

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ventor Signature

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Dated: 2017. /- 16

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RECORDED: 11/30/2020

Dated: >017/1/1]

<u>Jan - Iso</u> <u>Isai</u> Inventor Signature

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