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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
CHIH-CHAO CHOU	06/03/2019
KUO-CHENG CHING	06/03/2019
SHI NING JU	06/03/2019
WEN-TING LAN	06/03/2019
CHIH-HAO WANG	06/03/2019

RECEIVING PARTY DATA

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City:	HSINCHU	
State/Country:	TAIWAN	
Postal Code:	300-78	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16427831

CORRESPONDENCE DATA

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NAME OF SUBMITTER:	SUBMITTER: MARCY OGADO	
SIGNATURE:	/Marcy Ogado/	
DATE SIGNED:	11/08/2019	

PATENT REEL: 050961 FRAME: 0133 505765165

Total Attachments: 3

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PATENT REEL: 050961 FRAME: 0134

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Docket No.: P20183789US00/24061.3877US01 Customer No.: 42717

ASSIGNMENT

WHEREAS, we,

(1)	Chih-Chao Chou	of	Hsinchu, Taiwan, Republic of China
(2)	Kuo-Cheng Ching	of	Hsinchu County, Taiwan, Republic of China
(3)	Shi Ning Ju	of	Hsinchu City, Taiwan, Republic of China
(4)	Wen-Ting Lan	of	Hsinchu City, Taiwan, Republic of China
(5)	Chih-Hao Wang	of	Hsinchu County, Taiwan, Republic of China

have invented certain improvements in

INTEGRATED CIRCUITS WITH BACKSIDE POWER RAILS

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 May 31, 2019 and assigned application number	16/427,831; 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"), 8, Li-Hsin Rd. 6, Hsinchu Science Park, Hsinchu, Taiwan 300-78, 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.

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.

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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:	Chih-Chao Chou		
Residence Address:	8, Li-Hsin Rd. 6 Hsinchu, Taiwan 300-78	3, Republic of China	
Dated: 2019	6/3	chih-chao chon	
CENTER SERVICE DE L'ESTRETO DE CONTROL DE L'ESTRETO DE L'E	Inventor Signature		
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Dated:	6/3	La-Chy Chy	
·		Inventor Signatur	
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Dated:	b/3	Shi Ning TU	
		Inventor Signature	

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Inventor Name:

Wen-Ting Lan

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Dated: 2019

<u>/</u>

Wen-Ting Lan

Inventor Signature

Inventor Name:

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Dated: 7019

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Chih-Hao Wang

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