506245965 09/10/2020

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
YI-CHEN HO	08/05/2020
CHIEN LIN	08/05/2020
CHENG-YEH YU	08/12/2020
HSIN-HSING CHEN	08/12/2020
JU RU HSIEH	08/12/2020

RECEIVING PARTY DATA

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State/Country:	TAIWAN
Postal Code:	300-78

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	17017356

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ATTORNEY DOCKET NUMBER:	2020-2394/24061.4221US01
NAME OF SUBMITTER:	MARIA TEDESCO
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DATE SIGNED:	09/10/2020

PATENT 506245965 REEL: 053738 FRAME: 0558

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NP-21139-0-US-B2

Docket No.: P20202394US01/24061.4221US01

Customer No.: 000042717

ASSIGNMENT

WHEREAS, we,

(1)	Yi-Chen Ho	of	Hsinchu, Taiwan (R.O.C.)
(2)	Chien Lin	of	Hsinchu, Taiwan (R.O.C.)
(3)	Cheng-Yeh Yu	of	Hsinchu, Taiwan (R.O.C.)
(4)	Hsin-Hsing Chen	of	Hsinchu, Taiwan (R.O.C.)
(5)	Ju Ru Hsieh	of	Hsinchu, Taiwan (R.O.C.)

have invented certain improvements in

ELECTRO-MIGRATION REDUCTION

for which we have	executed an application for Letters Patent of the United States of Am	erica,
_X	of even date filed herewith; and filed on and assigned application number	_; 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.

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

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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: Yi-Chen Ho Residence Address: 8 Li-Hsin Road 6, Hsinchu Science Park Hsinchu 300-78, Taiwan (R.O.C.) Jichen He Inventor Signature Dated: 2020 . 8. 5 Inventor Name: Chien Lin Residence Address: 8 Li-Hsin Road 6, Hsinchu Science Park Hsinchu 300-78, Taiwan (R.O.C.) Chien Gh Inventor Signature Dated: 2020/8/5 Inventor Name: Cheng-Yeh Yu Residence Address: 8 Li-Hsin Road 6, Hsinchu Science Park Hsinchu 300-78, Taiwan (R.O.C.) CHENG-YEH, YU Dated: 2070.08.12

Inventor Signature

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Inventor Name:

Hsin-Hsing Chen

Residence Address:

8 Li-Hsin Road 6, Hsinchu Science Park

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Dated: >020.08.12

Hein-Hzing Chen.
Inventor Signature

Inventor Name:

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Hsinchu 300-78, Taiwan (R.O.C.)

Dated: 2020.8./2