507364566 06/30/2022

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
SHIH-CHENG CHEN	06/03/2020
CHUN-HSIUNG LIN	08/03/2020
CHIH-HAO WANG	06/03/2020

RECEIVING PARTY DATA

Name:	TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.
Street Address:	8, LI-HSIN RD. 6
Internal Address:	HSINCHU SCIENCE PARK
City:	HSINCHU
State/Country:	TAIWAN
Postal Code:	300-78

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	17853709

CORRESPONDENCE DATA

Fax Number:

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

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Correspondent Name: R. BURNS ISRAELSEN
Address Line 1: MASCHOFF BRENNAN
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ATTORNEY DOCKET NUMBER:	T1516.10694US02
NAME OF SUBMITTER:	R. BURNS ISRAELSEN
SIGNATURE:	/R. Burns Israelsen, Reg. No. 42685/
DATE SIGNED:	06/30/2022

Total Attachments: 3

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PATENT 507364566 REEL: 060374 FRAME: 0270

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PATENT REEL: 060374 FRAME: 0271

ASSIGNMENT

This assignment agreement is applicable to an invention entitled (Invention Title)
SEMICONDUCTOR DEVICE AND MANUFACTURING METHOD THEREOF
The PATENT RIGHTS referred to in this agreement are:
(check one) a patent application for this invention, executed by the ASSIGNOR(S)
concurrently with this assignment.
☑U.S. patent application Serial No. 16/886,572 , filed May 28, 2020
☐a U.S. patent application based on PCT International Application
Nofiled on (date)(U.S. patent application
Serial No, if known).
U.S. patent No, issued
The PATENT RIGHTS also include all divisions, reissues, continuations and extensions of
the patents and patent applications identified above.
The PATENT RIGHTS assigned under this agreement are:
⊠U.S. patent rights only.
The ASSIGNOR(S) referred to in this agreement is (or are) the inventor(s) whose signatures
appear on page 2 of this Assignment and any Supplemental Sheet(s).
The ASSIGNEE referred to in this agreement is:
(Name of Assignee) TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.
(Address) NO.8, LI-HSIN RD.6, SCIENCE-BASED INDUSTRIAL PARK, HSINCHU,
TAIWAN 300, R.O.C.
The ASSIGNEE is:
(check one) ☐ An individual.
☐A Partnership.
A Corporation ofTAIWAN, R.O.C(specify state or country)
[](other)
The ASSIGNOR(S), in consideration of \$10.00 paid by the ASSIGNEE, and other good and
valuable consideration, receipt of which is acknowledged, hereby assign(s) the following
rights to the ASSIGNEE, its successors and assigns:
the full and exclusive right to the invention;
the entire right, title and interest in and to the PATENT RIGHTS;
the right to sue and recover for any past infringement; and

the right to claim priority under 35 USC 119, 35 USC 120, or any other applicable

provisions, based on any earlier patent applications for this invention.

PATENT REEL: 060374 FRAME: 0272 THIS IS PAGE 2 OF AN ASSIGNMENT FROM THE INVENTOR(S) TO
ASSIGNEE: TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.
INVENTION TITLE: SEMICONDUCTOR DEVICE AND MANUFACTURING
METHOD THEREOF

As to all U.S. patent applications assigned under this agreement, the ASSIGNOR(8) hereby authorize(s) and request(s) the Commissioner of Patents and Trademark to issue all Letters Patent to the ASSIGNEE as the assignee of the entire right, title and interest, for the sole use and enjoyment of said ASSIGNEE, its successors and assigns.

Further, the ASSIGNOR(S) agree(s) to communicate to said ASSIGNEE, or its representatives, any fact known to the ASSIGNOR(S) with respect to said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, substitute, renewal, reexamination and reissue applications, execute all necessary assignment papers to cause and all Letter Patent to be issued to said ASSIGNEE, make all rightful oaths and generally do everything necessary or desirable to aid said ASSIGNEE, its successors and assigns, to obtain and enforce proper protection for said invention.

The ASSIGNOR(S) authorize(s) the attorneys and agents who have the power of attorney in this application to check any appropriate boxes and to insert the Serial Number and filing date in this document after it has been executed.

Shih-Cheng CHEN	Shith-Chang Chen	70×1.06.63
Name of sole or first inventor	Signature	Date
Chun-Hsiung LIN		
Name of second inventor, if any	Signature	Date
Chih-Hao WANG	Chih-Hao Wang	6/3/2020
Name of third inventor, if any	Signature	Date

PATENT REEL: 060374 FRAME: 0273 THIS IS PAGE 2 OF AN ASSIGNMENT FROM THE INVENTOR(S) TO ASSIGNEE: TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD. INVENTION TITLE; SEMICONDUCTOR DEVICE AND MANUFACTURING METHOD THEREOF

As to all U.S. patent applications assigned under this agreement, the ASSIGNOR(S) hereby authorize(s) and request(s) the Commissioner of Patents and Trademark to issue all Letters Patent to the ASSIGNEE as the assignee of the entire right, title and interest, for the sole use and enjoyment of said ASSIGNEE, its successors and assigns.

Further, the ASSIGNOR(S) agree(s) to communicate to said ASSIGNEE, or its representatives, any fact known to the ASSIGNOR(S) with respect to said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, substitute, renewal, reexamination and reissue applications, execute all necessary assignment papers to cause and all Letter Patent to be issued to said ASSIGNEE, make all rightful oaths and generally do everything necessary or desirable to aid said ASSIGNEE, its successors and assigns, to obtain and enforce proper protection for said invention.

The ASSIGNOR(S) authorize(s) the attorneys and agents who have the power of attorney in this application to check any appropriate boxes and to insert the Serial Number and filing date in this document after it has been executed.

Shih-Cheng CHEN		
Name of sole or first inventor	Signature	Date
Chun-Hsiung LIN	Old-C	8/3/2000
Name of second inventor, if any	Signature	Date
Chih-Hao WANG		
Name of third inventor, if any	Signature	Date

PATENT REEL: 060374 FRAME: 0274

RECORDED: 06/30/2022