#### 507317232 06/03/2022

# PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
JORDAN HSU	02/14/2017
YU-KUAN LIN	11/22/2016
SHAU-WEI LU	11/23/2016
CHANG-TA YANG	11/22/2016
PING-WEI WANG	11/22/2016
KUO-HUNG LO	11/23/2016

# **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:	17830967

## **CORRESPONDENCE DATA**

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NAME OF SUBMITTER:	CANDICE LEE
SIGNATURE:	/Candice Lee/
DATE SIGNED:	06/03/2022

Total Attachments:	3			
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source=2022-06-03_	_Assignmenta	sfiled_	_2519-0517PUS3#page3.tif	

## 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. 15/354,052 ,filed November 17, 2016
☐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:
(check one) U.S. patent rights only.
Worldwide patent rights. In this case, the assignee shall have the right to
claim the benefit of the filing date of any U.S. or foreign patent application
for this invention.
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

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.

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 Scrial Number and filing date in this document after it has been executed.

Jordan HSU	Jordan Hein	2017.2.14
Name of sole or first inventor	Signature	Date
Yu-Kuan LIN		
Name of second inventor, if any	Signature	Date
Shau-Wei LU		
Name of third inventor, if any	Signature	Date
Chang-Ta YANG		
Name of fourth inventor, if any	Signature	Date
Ping-Wei WANG		
Name of fifth inventor, if any	Signature	Date
Kuo-Hung LO	×	
Name of sixth inventor, if any	Signature	Date

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.

Jordan HSU		
Name of sole or first inventor	Signature	Date
Yu-Kuan LIN	ala	Nov.22, 2016
Name of second inventor, if any	Signature	Date
Shau-Wei LU  Name of third inventor, if any	Signature	16023.2016 Date
Chang-Ta YANG  Name of fourth inventor, if any	Og-In Yoy Signature	Nov. 22, 20 / 6 Date
Ping-Wei WANG  Name of fifth inventor, if any	Fingues Wo Signature	Date Nov 22, 2016
Kuo-Hung LO  Name of sixth inventor, if any	Kuo-Hy Lo Signature	<u>Nor. 23</u> 2016 Date

PATENT REEL: 060095 FRAME: 0802

**RECORDED: 06/03/2022**