506134146 07/01/2020

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
PO-HAO TSAI	06/11/2020
MING-DA CHENG	06/11/2020
MIRNG-JI LII	06/15/2020

RECEIVING PARTY DATA

Name:	TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.
Street Address:	NO. 8, LI-HSIN RD. 6, HSINCHU SCIENCE PARK
City:	HSINCHU
State/Country:	TAIWAN
Postal Code:	300-78

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16918188

CORRESPONDENCE DATA

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MCCLURE, QUALEY & RODACK, LLP **Correspondent Name:** Address Line 1: 280 INTERSTATE NORTH CIRCLE SE

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ATTORNEY DOCKET NUMBER:	252056-1240
NAME OF SUBMITTER:	DANIEL R. MCCLURE
SIGNATURE: /Daniel R. McClure/	
DATE SIGNED:	07/01/2020

Total Attachments: 2

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> **PATENT REEL: 053098 FRAME: 0569** 506134146

ASSIGNMENT

WHEREAS, Po-Hao TSAI, Ming-Da CHENG and Mirng-Ji LII
hereafter referred to as ASSIGNOR, has/have invented certain new and useful improvements as
described and set forth in the below identified application for United States Letters Patent:
Title: PACKAGE STRUCTURE WITH CAVITY SUBSTRATE AND METHOD FOR
THE REAL OF THE RESERVE THE RE

5. CASILLES INC. CLUSS.	
Filed:	Serial No.
Executed on:	

WHEREAS, <u>Taiwan Semiconductor Manufacturing Co., Ltd.</u>, of <u>No. 8, Li-Hsin Rd. 6, Hsinchu Science Park</u>, <u>Hsinchu 300-78</u>, <u>Taiwan R.O.C.</u>, hereinafter referred to as ASSIGNEE, is desirous of acquiring ASSIGNOR'S interest in the said invention and application and in any U.S. Letters Patent which may be granted on the same;

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN: Be it known that, for good and valuable consideration, receipt of which is hereby acknowledged by Assignor, Assignor has/have sold, assigned and transferred, and by these presents does/do sell, assign and transfer unto the said Assignee, and Assignee's successors and assigns, all his/her/their rights, title and interest in and to the said invention and application and all future improvements thereon, and in and to any Letters Patent which may hereafter be granted on the same in the United States, the said interest to be held and enjoyed by said Assignee as fully and exclusively as it would have been held and enjoyed by said Assignment and transfer not been made, to the full end and term of any Letters Patent which may be granted thereon, or of any division, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof.

Assignor further agrees/agree that he/she/they will, without charge to said Assignee, but at Assignee's expense, cooperate with Assignee in the prosecution of said application and/or applications, execute, verify, acknowledge and deliver all such further papers, including applications for Letters Patent and for the reissue thereof, and instruments of assignment and transfer thereof, and will perform such other acts as Assignee lawfully may request, to obtain or maintain Letters Patent for said invention and improvement, and to vest title thereto in said Assignee, or Assignee's successors and assigns.

IN TESTIMONY WHEREOF, Assignor has/have signed his/her/their name(s) on the date(s) indicated.

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PATENT REEL: 053098 FRAME: 0570

ASSIGNMENT

June 11, 2020	Po-Has Tsai
Date	Name: Po-Hao TSAI
<u>>√> √ 6 / 11</u> Date	Name: Ming-Da CHENG
06/15/2020	Though him
Date	Name: Mirng-Ji LII