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PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5662918

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|---------------|----------------|
| PO-YUAN TENG | 06/18/2019 |
| BOR-RUNG SU | 06/19/2019 |
| DE-YUAN LU | 06/18/2019 |
| HAO-YI TSAI | 06/25/2019 |
| TIN-HAO KUO | 06/19/2019 |
| TZUNG-HUI LEE | 06/19/2019 |
| TAI-MIN CHANG | 06/19/2019 |

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: | 16504328 | |

CORRESPONDENCE DATA

Fax Number: (949)391-4699

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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| ATTORNEY DOCKET NUMBER: | 80503-US-PA |
|-------------------------|---------------|
| NAME OF SUBMITTER: | BELINDA LEE |
| SIGNATURE: | /Belinda Lee/ |
| DATE SIGNED: | 08/11/2019 |

PATENT REEL: 050020 FRAME: 0200

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the application.

DECLARATION AND ASSIGNMENT

FOR UTILITY OR DESIGN PATENT APPLICATION

| Declaration Submitted With Initial Filing | | | | |
|--|--|--|--|--|
| OR | | | | |
| ☐ Declaration Submitted After Initial Filing (surcharge 37 CFR 1.16(f) required) | | | | |
| | | | | |
| (Title of the Invention) | | | | |
| SEMICONDCUTOR PACKAGE AND MANUFACTURING METHOD THEREOF | | | | |
| As a below named inventor (hereinafter designated as the undersigned), I hereby | | | | |
| declare that: | | | | |
| This declaration is directed to: | | | | |
| ∑ The attached application, | | | | |
| OR | | | | |
| United States Application Number or PCT International application number | | | | |
| Filed on | | | | |
| | | | | |
| | | | | |
| The above-identified application was made or authorized to be made by me. | | | | |

The undersigned hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

I believe I am the original inventor or an original joint inventor of a claimed invention in

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DECLARATION AND ASSIGNMENT FOR UTILITY OR DESIGN PATENT APPLICATION

WHEREAS, the undersigned has invented certain new and useful improvements described in the application identified.

WHEREAS,

1. Taiwan Semiconductor Manufacturing Co., Ltd.

of No.8, Li-Hsin Rd. 6, Hsinchu Science Park, Hsinchu, Taiwan 300-78, R.O.C.

hereinafter referred to as ASSIGNEE, is desirous of acquiring the undersigned'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 the undersigned, the undersigned 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 rights, title and interest to be held and enjoyed by said Assignee as fully and exclusively as it would have been held and enjoyed by said the undersigned had this 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.

The undersigned 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.

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DECLARATION AND ASSIGNMENT

FOR UTILITY OR DESIGN PATENT APPLICATION

| Signature: 10- Your Teny Date: 2019/6/18 | | | |
|--|--|--|--|
| Legal Name of Sole or First Inventor: Po-Yuan Teng | | | |
| Residence: Hsinchu City, Taiwan | | | |
| Mailing Address: c/o No.8, Li-Hsin Rd. 6, Hsinchu Science Park, Hsinchu, Taiwan 300-78, R.O.C. | | | |
| Signature: Bor Ruy Spate: 2019/6/19 | | | |
| Legal Name of Additional Joint Inventor, if any: Bor-Rung Su | | | |
| Residence: New Taipei City, Taiwan | | | |
| Mailing Address: c/o No.8, Li-Hsin Rd. 6, Hsinchu Science Park, Hsinchu, Taiwan 300-78, R.O.C. | | | |
| | | | |
| Signature: 7e-Yuan Lu Date: 2019. 6.18 | | | |
| Legal Name of Additional Joint Inventor, if any: De-Yuan Lu | | | |
| Residence: Taipei City, Taiwan | | | |
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| Signature: $\frac{1}{100} - \frac{1}{100} = \frac{1}{$ | | | |
| Legal Name of Additional Joint Inventor, if any: Hao-Yi Tsai | | | |
| Residence: Hsinchu City, Taiwan | | | |
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| Signature: Th Haokuo Date: 2019, 6, 19 | | | |
| Legal Name of Additional Joint Inventor, if any: Tin-Hao Kuo | | | |
| Residence: Hsinchu City, Taiwan | | | |
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DECLARATION AND ASSIGNMENT

FOR UTILITY OR DESIGN PATENT APPLICATION

| Signature: JZwy | Au Lee | Date: 7019/6/19 | | |
|--|--------|-----------------|--|--|
| Legal Name of Additional Joint Inventor, if any: Tzung-Hui Lee | | | | |
| Residence: New Taipei City, Taiwan | | | | |

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Signature: Tai Min Chang Date: 2019 / 6/19
Legal Name of Additional Joint Inventor, if any: Tai-Min Chang

Residence: Taipei City, Taiwan

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