504712917 01/03/2018

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

nic Version v1.1 EPAS ID: PAT4759639

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

CONVEYING PARTY DATA

| Name | Execution Date |
|-----------------|----------------|
| CHE-CHENG CHANG | 12/18/2015 |
| CHIH-HAN LIN | 12/18/2015 |

RECEIVING PARTY DATA

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

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 15851661 |

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER: T1516.10282US02

NAME OF SUBMITTER: R. BURNS ISRAELSEN

SIGNATURE: /R. Burns Israelsen, Reg. No. 42685/

DATE SIGNED: 01/03/2018

Total Attachments: 2

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PATENT 504712917 REEL: 044528 FRAME: 0394

ASSIGNMENT

| This assignment agreement is applicable to an inventi | on entitled (Invention Title) | | | |
|--|--|--|--|--|
| INTERCONNECTION STRUCTURE AND METHO | DD OF FORMING THE SAME | | | |
| The PATENT RIGHTS referred to in this agreement a | are: | | | |
| (check one) a patent application for this invention, | executed by the ASSIGNOR(S) | | | |
| concurrently with this assignment. | | | | |
| U.S. patent application Serial No | ,filed | | | |
| ☐a U.S. patent application based on PCI | [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, reis | ssues, continuations and extensions of | | | |
| the patents and patent applications identified above. | | | | |
| The PATENT RIGHTS assigned under this agreemen | t are: | | | |
| (check one) ⊠U.S. patent rights only. | | | | |
| ☐Worldwide patent rights. In this case, t | he assignee shall have the right to | | | |
| claim the benefit of the filing date of a | ny 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 1 | MANUFACTURING CO., LTD. | | | |
| (Address) NO.8, LI-HSIN RD.6, SCIENCE-BASED I | NDUSTRIAL PARK, HSINCHU, | | | |
| <u>TAIWAN 300, R.O.C.</u> | | | | |
| The ASSIGNEE is: | | | | |
| (check one)∏An individual. | | | | |
| ☐A Partnership. | | | | |
| | (specify state or country) | | | |
| (other) | | | | |
| The ASSIGNOR(S) in consideration of \$10.00 paid b | withe 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.

PATENT REEL: 044528 FRAME: 0395 ₫

THIS IS PAGE 2 OF AN ASSIGNMENT FROM THE INVENTOR(S) TO ASSIGNEE: TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.

INVENTION TITLE: INTERCONNECTION STRUCTURE AND METHOD OF FORMING THE SAME

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.

Che-Cheng CHANG

Name of sole or first inventor

Chih-Han LIN

Name of second inventor, if any

Che-Cheng Chang

Chang

Che-Cheng Chang

PATENT REEL: 044528 FRAME: 0396

RECORDED: 01/03/2018