504660258 11/28/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4706980

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
WEIMING CHRIS CHEN	10/30/2017
TING-YU YEH	10/27/2017
CHIA-HSIN CHEN	10/30/2017
TU-HAO YU	10/27/2017
KUO-CHIANG TING	10/30/2017
SHANG-YUN HOU	10/30/2017
CHI-HSI WU	11/06/2017

RECEIVING PARTY DATA

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

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15800962

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NAME OF SUBMITTER:	ANTHONY KING
SIGNATURE:	/Anthony King/
DATE SIGNED:	11/28/2017

Total Attachments: 3

PATENT REEL: 044239 FRAME: 0879 source=18506-1159_Assignment#page1.tif source=18506-1159_Assignment#page2.tif source=18506-1159_Assignment#page3.tif

> PATENT REEL: 044239 FRAME: 0880

US ONLY

ASSIGNMENT

WHEREAS, I(we), CHEN, WEIMING CHRIS, YEH, TING-YU, CHEN, CHIA-HSIN, YU, TU-HAO, TING, KUO-CHIANG, HOU, SHANG-YUN and WU, CHI-HSI whose post office address(es) appear(s) below, hereinafter referred to as ASSIGNOR, have invented certain new and useful invention entitled

SEMICONDUCTOR STRUCTURE AND MANUFACTURING METHOD THEREOF

SERVICE OF STREET OF STREE	TOB THEREOF
(hereinafter referred to as the INVENTION) for which an application for United States Lette is executed on even date herewith unless at least one of the following is checked: ☐ United States Design Patent was	rs Patent /Utility Patent
☐ executed on:	,
☐ filed on: 1 November 2017 Serial No.: 15/800,962 ☐ established by PCT International Patent Application No.: filed: United States of America	designating the
☐ issued on as U.S. Patent No.:	
WHEREAS, TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY	
address is NO.8, LI-HSIN RD. 6, HSINCHU SCIENCE PARK, HSINCH	
hereinafter referred to as ASSIGNEE, is desirous of acquiring the entire right, title and inte	rest in and to the same

address is NO.8, LI-HSIN RD. 6, HSINCHU SCIENCE PARK, HSINCHU, TAIWAN, R.O.C. hereinafter referred to as ASSIGNEE, is desirous of acquiring the entire right, title and interest in and to the same in the United States and its territorial possessions;

NOW, THEREFORE, for good and valuable consideration, receipt of which is hereby acknowledged, I (we), ASSIGNOR, by these presents do sell, assign and transfer unto said ASSIGNEE, the entire right, title, and interest in and to said INVENTION and application throughout the United States of America, including any and all Letters Patent granted on any division, continuation, continuation-in-part and reissue of said application for the full term or terms for which the same may be granted, including all priority rights under any International Convention.

ASSIGNOR further covenants that no assignments, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this Assignment;

ALSO, ASSIGNOR hereby agrees to execute any documents that legally may be required in connection with the filing, prosecution and maintenance of said application or any other patent application(s) in the United States for said INVENTION, including additional documents that may be required to affirm the rights of ASSIGNEE in and to said INVENTION, all without further consideration. ASSIGNOR also agrees, without further consideration and at ASSIGNEE'S expense, to identify and communicate to ASSIGNEE at ASSIGNEE'S request documents and information concerning the INVENTION that are within ASSIGNOR'S possession or control, and to provide further assurances and testimony on behalf of ASSIGNEE that lawfully may be required of ASSIGNOR in respect of the prosecution, maintenance, litigation and defense of any patent application or patent encompassed within the terms of this instrument. ASSIGNOR'S obligations under this instrument shall extend to ASSIGNOR'S heirs, executors, administrators and other legal representatives.

ALSO, ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks to issue any and all Letters Patent referred to above to ASSIGNEE, as the ASSIGNEE of the entire right, title and interest in and to the same, for ASSIGNEE'S sole use and behoof; and for the use and behoof of ASSIGNEE'S legal representatives and successors, to the full end of the term for which such Letters Patent may be granted, as fully and entirely as the same would have been held by ASSIGNOR had this assignment and sale not been made.

Assignor Name CHEN, WEIMING CHRIS	46dress 4F., NO.93, SEC. 6, ROOSEVELT RD., WENSHAN DIST., TAIPEI CITY 116, TAIWAN (R.O.C.)
Signature of Assignor (X) Westing Chin Chen	Date of Signature (X) /0 /30 / 2017
Name of Witness (optional)	Name of Witness (optional)
Signature of Witness (optional)	Signature of Witness (Optional)

Assignor Name YEH, TING-YU	Address NO.8, LI-HSIN RD. 6, HSINCHU SCIENCE PARK, HSINCHU, TAIWAN (R.O.C.)
Signature of Assignor (X) Name of Witness (ontional)	Date of Signature (X) 10 / 27 / 2011
Name of Witness (optional)	Name of Witness (optional)
Signature of Witness (optional)	Signature of Witness (Optional)
	•
Assignor Name CHEN, CHIA-HSIN	Address NO.8, LI-HSIN RD. 6, HSINCHU SCIENCE PARK, HSINCHU, TAIWAN (R.O.C.)
Signature of Assignor (X) CHEH CHUB MS Zon	Date of Signature (X) \(\frac{1}{2} - \lambda \gamma \lambda \rangle \) Name of Witness (optional)
Name of Witness (optional)	Name of Witness (optional)
Signature of Witness (optional)	Signature of Witness (Optional)
Assignor Name YU, TU-HAO	Address 9F, NO. 291, SEC. 2, GONGDAOWU RD., HSIN-CHU 300, TAIWAN (R.O.C.)
Signature of Assignor (X) Yil, Tu—Hav	Date of Signature (X) Co / 27 / 2017
Name of Witness (optional)	Name of Witness (optional)
Signature of Witness (optional)	Signature of Witness (Optional)
Assignor Name TING, KUO-CHIANG TON, kevo-Chimy	Address 12F3, NO.90, DAXUE RD., HSINCHU CITY 300, TAIWAN (R.O.C.)
Signature of Assignor my ken - Chry	Date of Signature (X) /=/30 > >0/1
Name of Witness (optional)	Name of Witness (optional)
Signature of Witness (optional)	Signature of Witness (Optional).
Assignor Name HOU, SHANG-YUN	Address 8, LANE 29, ZIQIANG S. ROAD, JUBEI CITY, HSINCHU, TAIWAN (R.O.C.)
Signature of Assignor (X) Than Jun Pan	Date of Signature (X) $0/30/20/7$
Name of Witness (optional)	Name of Wilness (optional)
Signature of Witness (optional)	Signature of Witness (Optional)

Assignor Name WU, CHI-HSI	NO. 26, LANE 862, NAN-DA ROAD, HSINCHU CITY 300, TAIWAN (R.O.C.)
Signature of Assignor (X) MAN 141	Date of Signature (X) (1/6 (70)
Name of Witness (optional)	Name of Witness (optional)
Signature of Witness (optional)	Signature of Witness (Optional)

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