504133135 12/16/2016

PATENT ASSIGNMENT COVER SHEET

EPAS ID: PAT4189421

Electronic Version v1.1
Stylesheet Version v1.2

 SUBMISSION TYPE:
 NEW ASSIGNMENT

 NATURE OF CONVEYANCE:
 ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
WEI-YANG LO	06/22/2015
SHIH-HAO CHEN	06/22/2015
MU-TSANG LIN	06/22/2015
TUNG-WEN CHENG	06/22/2015

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:	15381032

CORRESPONDENCE DATA

Fax Number: (435)252-1360

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.

Phone: 4352521360

Email:mthornton@mabr.comCorrespondent Name:R. BURNS ISRAELSENAddress Line 1:MASCHOFF BRENNAN

Address Line 2: 1389 CENTER DR. SUITE 300
Address Line 4: PARK CITY, UTAH 84098

ATTORNEY DOCKET NUMBER: T1516.10105US03

NAME OF SUBMITTER: R. BURNS ISRAELSEN

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

DATE SIGNED: 12/16/2016

Total Attachments: 2

PATENT REEL: 040644 FRAME: 0044

504133135

source=T1516-10105US03-Assignment#page1.tif source=T1516-10105US03-Assignment#page2.tif

PATENT REEL: 040644 FRAME: 0045 wylab 2015/06/22 16,24,27

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. <u>14/742.552</u> , filed <u>June 17, 2015</u>			
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) \(\subseteq U.S.\) 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. Gorposation of TAIWAN, R.O.C. (specify state or country)			
[](other)			
n de la composition de la composition La composition de la			
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: 040644 FRAME: 0046 wyleb 2015/00/22 10:24:37

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.

Wei-Yang LO	Mir Jan Lo	6/22/2015
Name of sole or first inventor	Signature	Date
Shih-Hao CHEN	Shih-Hao	Chen 6/22/2015
Name of second inventor, if any	Signature	Date
Mu-Tsang LIN	Mu-Tsam	m b/22/2015
Name of third inventor, if any	Signature ()	Date
Tung-Wen CHENG Name of fourth inventor, if any	Signature 4.	S. Date
and the state of t	i of it graphy (US) White Wheth with his brack was	James Art Committee

PATENT REEL: 040644 FRAME: 0047

RECORDED: 12/16/2016