505240433 12/17/2018

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
CHIEN-NAN TU	07/10/2014
YU-LUNG YEH	07/14/2014
HSING-CHIH LIN	07/07/2014
CHIEN-CHANG HUANG	07/10/2014
SHIH-SHIUNG CHEN	07/14/2014

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:	16219492	

CORRESPONDENCE DATA

Fax Number:

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.

Email: kcale@mabr.com

Correspondent Name: R. BURNS ISRAELSEN Address Line 1: MASCHOFF BRENNAN

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

ATTORNEY DOCKET NUMBER:	T1516.10006US04
NAME OF SUBMITTER:	R. BURNS ISRAELSEN
SIGNATURE: /R. Burns Israelsen, Reg. No. 42685/	
DATE SIGNED:	12/17/2018

Total Attachments: 2

PATENT REEL: 047797 FRAME: 0672

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PATENT REEL: 047797 FRAME: 0673 encu 2014/07/10 10:48:11

Inventor(s)-to-Assignee

ASSIGNMENT

This assignment agreement is applicable to an invention entitled (Invention Title)
CMOS IMAGE SENSOR STRUCTURE
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,filed
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) \(\sum U.S.\) 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 Corporation of <u>TAIWAN, R.O.C.</u> (specify state or country)
(other)
The ASSIGNOR(S), in consideration of \$10.00 paid by the 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: 047797 FRAME: 0674 mpro \$614769716 30146131

NP-14944-US-B1 TSMC2014-0222

THIS IS PAGE 2 OF AN ASSIGNMENT FROM THE INVENTOR(S) TO ASSIGNEE: TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD. INVENTION TITLE: CMOS IMAGE SENSOR STRUCTURE

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.

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Chien-Nan TU	Orien-Nan Tu	2014, 7, 1D
Name of sole or first inventor	Signature	Date
Yu-Lung YEH	Ju-Lung Jeh	2014,7,14
Name of second inventor, if any	Signature	Date
Hsing-Chih LIN	Henry - Chille Viv Signature	2014,7.7
Name of third inventor, if any	Signature	Date
Chien-Chang HUANG	<u>Chion-Chang Hua</u> ng Signature	>014.7.10
Name of fourth inventor, if any	Signature	Date
Shih-Shiung cher	Shih- Shiung drew	2016.1.14
Name of fifth inventor, if any	Signature	Date

PATENT REEL: 047797 FRAME: 0675

RECORDED: 12/17/2018