505792529 11/26/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5839357

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
KENG-YU CHOU	06/12/2018
CHUN-HAO CHUANG	06/26/2018
CHIEN-HSIEN TSENG	06/12/2018
KAZUAKI HASHIMOTO	06/12/2018
WEI-CHIEH CHIANG	06/12/2018
CHENG YU HUANG	06/26/2018
WEN-HAU WU	06/26/2018
CHIH-KUNG CHANG	06/26/2018
JHY-JYI SZE	06/26/2018

RECEIVING PARTY DATA

Name:	TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.
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Internal Address:	HSIN-CHU SCIENCE PARK
City:	HSIN-CHU
State/Country:	TAIWAN
Postal Code:	300-77

PROPERTY NUMBERS Total: 1

Property Type	Number			
Application Number:	16695575			

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER: TSMCP891USB

505792529 REEL: 051116 FRAME: 0791

NAME OF SUBMITTER:	JAMES R. POTASHNIK			
SIGNATURE:	/James R. Potashnik/			
DATE SIGNED:	11/26/2019			
Total Attachments: 4				
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PATENT REEL: 051116 FRAME: 0792

PATENT ASSIGNMENT

PARTIES TO THE ASSIGNMENT

Assignor(s):

Keng-Yu Chou

Assignor(s):

Chun-Hao Chuang

Assignor(s):

Chien-Hsien Tseng

Assignor(s):

Kazuaki Hashimoto

Assignor(s):

Wei-Chieh Chiang

Assignor(s):

Cheng Yu Huang

Assignor(s):

Wen-Hau Wu

Assignor(s):

Chih-Kung Chang

Assignor(s):

Jhy-Jyi Sze

Assignee:

Taiwan Semiconductor Manufacturing Co., Ltd. No. 8, Li-Hsin Rd. 6, Hsin-Chu Science Park Hsin-Chu, Taiwan 300-77 Republic of China

AGREEMENT

WHEREAS, ASSIGNOR(S) (listed above) are inventor(s) of an invention entitled

"SEMICONDUCTOR IMAGE SENSOR" for which:

a non-provisional application for United States Letters Patent:

was executed on even date preparatory to filing (each inventor should sign this

Assignment on the same day as he/she signs the Declaration); or

Page 1 of 11

Ш	I hereby a	uthoriz	e and	request	my	attorney	associated	with	Customer	No.
	<u>107476</u> , to	insert	on the	designa	ited I	ines belo	w the filing	date	and applica	ation
	number of s	aid ap	plicatio	n when k	เทอพเ	n:				
	U.S. Serial I	No.			····					
	filed on	,	<u> </u>							

WHEREAS, ASSIGNEE (listed above), a corporation of the Republic of China is desirous of acquiring the entire right, title and interest in and to the invention and in and to any letters patent that may be granted therefore in the United States and in any and all foreign countries;

NOW, THEREFORE, in exchange for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNOR(S) hereby sell, assign and transfer unto ASSIGNEE its successors and assigns, the entire right, title and interest in and to said invention and improvements, said application and any and all letters patent which may be granted for said invention in the United States of America and its territorial possessions and in any and all foreign countries, and in any and all divisions, reissues, re-examinations and continuations thereof, including the right to file foreign applications directly in the name of ASSIGNEE and to claim priority rights deriving from said United States application to which said foreign applications are entitled by virtue of international convention, treaty or otherwise, said invention, application and all letters patent on said invention to be held and enjoyed by ASSIGNEE and its successors and assigns for their use and benefit and of their successors and assigns as fully and entirely as the same would have been held and enjoyed by ASSIGNOR(S) had this assignment, transfer and sale not been made. ASSIGNOR(S) hereby authorize and request the Commissioner of Patents and Trademarks to issue all letters patent on said invention to ASSIGNEE. ASSIGNOR(S) agree to execute all instruments and documents required for the making and prosecution of applications for

Page 2 of 3

PATENT REEL: 051116 FRAME: 0794 United States and foreign letters patent on said invention, for litigation regarding said letters patent, or for the purpose of protecting title to said invention or letters patent therefore.

2018. 6. 12 Date	Keng - Yu Chou Name 1st Inventor Keng-Yu Chou
>>/8'. 6, >6 Date	Name Chun-Hav Chuang 2 nd Inventor Chun-Hao Ghuang
2018.6.12 Date	Name 3 rd Inventor Chien-Hsien seng
20/8, 6,/2 Date	Name 4th Inventor Kazuaki Hashimoto
2018 6 12 Date	Name 5th Inventor Wei-Chieh Chiáng
2018, 6, 26 Date	Name 6th Inventor Cheng Yu Huang
<i>≥o/8, 6. ≥6.</i> Date	Name 7th Inventor Wen-Hau Wu
<u>>0/8.6.>6</u> Date	Chih-Kung Chare/ Name 8th Inventor Chih-Kung Chang

TSMC Docket No. P20173882US00 Docket No. TSMCP891US

5018, 6 16 Date

Thy-Tyi Sze

Name 9th Inventor Jhy-Jyi Sze

Page 11 of 11

PATENT **REEL: 051116 FRAME: 0796**

RECORDED: 11/26/2019