

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT3751460

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
CHIU-JUNG CHEN	02/05/2016
YUN-WEI CHENG	02/05/2016
VOLUME CHIEN	02/05/2016
KUO-CHENG LEE	02/05/2016
CHUN-HAO CHOU	02/05/2016
YUNG-LUNG HSU	02/05/2016
HSIN-CHI CHEN	02/05/2016
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD.
<b>Street Address:</b>	NO. 8, LI-HSIN ROAD 6
<b>Internal Address:</b>	SCIENCE-BASED INDUSTRIAL PARK
<b>City:</b>	HSIN-CHU
<b>State/Country:</b>	TAIWAN
<b>Postal Code:</b>	300-77
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	15050819
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(214)651-5940
<i>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.</i>	
<b>Phone:</b>	214-651-5000
<b>Email:</b>	ipdocketing@haynesboone.com
<b>Correspondent Name:</b>	HAYNES AND BOONE, LLP IP SECTION
<b>Address Line 1:</b>	2323 VICTORY AVENUE
<b>Address Line 2:</b>	SUITE 700
<b>Address Line 4:</b>	DALLAS, TEXAS 75219
<b>ATTORNEY DOCKET NUMBER:</b>	24061.2841US02
<b>NAME OF SUBMITTER:</b>	LADONNA JOHNSON
<b>SIGNATURE:</b>	/LaDonna Johnson/

PATENT

<b>DATE SIGNED:</b>	02/23/2016
<b>Total Attachments: 4</b> source=Assignment#page1.tif source=Assignment#page2.tif source=Assignment#page3.tif source=Assignment#page4.tif	

Docket No.: 2014-0255 / 24061.2841  
Customer No.: 42717

**ASSIGNMENT**

WHEREAS, we,

- (1) Chiu-Jung Chen of No. 283, Xinglong Rd., South District  
Tainan City, Taiwan, R.O.C. 70261
- (2) Yun-Wei Cheng of 9F.-1, No. 127, Sec. 3, Muzha Rd., Wenshan District  
Taipei City, Taiwan, R.O.C. 116
- (3) Volume Chien of No. 31, Aly. 14, Ln. 89, Dongxing 6th St., Xinying District  
Tainan City, Taiwan, R.O.C. 730
- (4) Kuo-Cheng Lee of No. 31, Dongqiao 8th St., Yongkang District  
Tainan City, Taiwan, R.O.C. 710
- (5) Chun-Hao Chou of No. 8, Ln. 156, Wenhua 1st St., East District  
Tainan City, Taiwan, R.O.C. 701
- (6) Yung-Lung Hsu of No. 67, Lane 199, Yu-De Rd., North District  
Tainan, Taiwan, R.O.C.
- (7) Hsin-Chi Chen of No. 51, Ln. 239, Dingmei 3rd St., West Central District  
Tainan City, Taiwan, R.O.C. 700

have invented certain improvements in

**SEMICONDUCTOR IMAGE SENSOR DEVICE HAVING BACK SIDE  
ILLUMINATED IMAGE SENSORS WITH EMBEDDED COLOR FILTERS**

for which we have executed an application for Letters Patent of the United States of America,

  X   of even date filed herewith; and  
           filed on                            and assigned application number                           ; and

WHEREAS, we authorize the attorney of record to update this document to include Patent Office information as deemed necessary (i.e., filing date, serial number, etc.);

WHEREAS, Taiwan Semiconductor Manufacturing Company, Ltd., ("TSMC"), No. 8, Li-Hsin Rd. 6, Science-Based Industrial Park Hsin-Chu, Taiwan 300-77, Republic of China. is desirous of obtaining the entire right, title, and interest in, to and under the said invention and the said application in the United States of America and in any and all countries foreign thereto;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and other good and valuable consideration, we have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said TSMC, its successors, legal representatives, and assigns, the entire right, title, and interest in, to and under the said invention, and the said application, and all divisional, renewal, substitutional, and continuing applications thereof, and all Letters Patent of the United States of America which may be granted thereon and all reissues and extensions thereof, and all applications for Letters Patent which may be

Docket No.: 2014-0255 / 24061.2841

Customer No.: 42717

filed for said invention in any country or countries foreign to the United States of America, and all extensions, renewals, and reissues thereof, and all prior patents and patent applications from which a filing priority of the above-described patent application may be obtained, including the right to collect past damages; and we hereby authorize and request the Commissioner of Patents of the United States of America, and any official of any country or countries foreign to the United States of America, whose duty it is to issue patents on applications as aforesaid, to issue all Letters Patent for said invention to the said TSMC, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND WE HEREBY covenant that we have full right to convey the entire interest herein assigned, and that we have not executed, and will not execute, any agreement in conflict herewith.

AND WE HEREBY further covenant and agree that we will communicate to said TSMC, its successors, legal representatives and assigns, any facts known to us respecting said invention, and testify in any legal proceedings, sign all lawful papers, execute all divisional, renewal, substitutional, continuing, and reissue applications, make all rightful declarations and/or oaths and generally do everything possible to aid the said TSMC, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for said invention in all countries.

---

Inventor Name: Chiu-Jung Chen

Residence Address: No. 283, Xinglong Rd., South District  
Tainan City, Taiwan, R.O.C. 70261

Dated: 2016/2/15

Chiu Jung Chen  
Inventor Signature

---

Inventor Name: Yun-Wei Cheng

Residence Address: 9F.-1, No. 127, Sec. 3, Muzha Rd., Wenshan District  
Taipei City, Taiwan, R.O.C. 116

Dated: 2016/2/15

Yun Wei Cheng  
Inventor Signature

---

Docket No.: 2014-0255 / 24061.2841  
Customer No.: 42717

---

Inventor Name: Volume Chien

Residence Address: No. 31, Aly. 14, Ln. 89, Dongxing 6th St., Xinying District  
Tainan City, Taiwan, R.O.C. 730

Dated: 2016. 7. 5

Volume Chien  
Inventor Signature

---

Inventor Name: Kuo-Cheng Lee

Residence Address: No. 31, Dongqiao 8th St., Yongkang District  
Tainan City, Taiwan, R.O.C. 710

Dated: 2016. 7. 5

Kuo-Cheng Lee  
Inventor Signature

---

Inventor Name: Chun-Hao Chou

Residence Address: No. 8, Ln. 156, Wenhua 1st St., East District  
Tainan City, Taiwan, R.O.C. 701

Dated: 2016. 2. 5

Chun-Hao Chou  
Inventor Signature

---

Inventor Name: Yung-Lung Hsu

Residence Address: No. 67, Lane 199, Yu-De Rd., North District  
Tainan, Taiwan, R.O.C.

Dated: 2016. 2. 5

Yung-Lung Hsu  
Inventor Signature

Docket No.: 2014-0255 / 24061.2841  
Customer No.: 42717

---

Inventor Name: Hsin-Chi Chen

Residence Address: No. 51, Ln. 239, Dingmei 3rd St., West Central District  
Tainan City, Taiwan, R.O.C. 700

Dated: 2016.02.05

Chen Hsin-Chi  
Inventor Signature