PATENT ASSIGNMENT COVER SHEET

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NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
CHIEN-FA LEE	08/31/2018
HSU-SHUI LIU	08/31/2018
JIUN-RONG PAI	09/10/2018
SHOU-WEN KUO	09/10/2018
JIAN-HUNG CHEN	09/03/2018
M.C. LIN	09/04/2018
C.C. CHIEN	09/05/2018
HSUAN LEE	09/06/2018
BORIS HUANG	09/10/2018

RECEIVING PARTY DATA

Name:	TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.	
Street Address:	NO. 8, LI-HSIN ROAD 6	
Internal Address:	HSINCHU SCIENCE PARK	
City:	HSIN-CHU	
State/Country:	TAIWAN	
Postal Code:	300-77	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15987581

CORRESPONDENCE DATA

Fax Number: (215)979-1020

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.

215-979-1000 Phone:

Email: idocketing@duanemorris.com

DUANE MORRIS LLP (TSMC) IP DEPARTMENT Correspondent Name:

Address Line 1: 30 SOUTH 17TH STREET

Address Line 4: PHILADELPHIA, PENNSYLVANIA 19103-4196

ATTORNEY DOCKET NUMBER: P20172690US00/N1085-01871

> **PATENT** REEL: 047235 FRAME: 0119

NAME OF SUBMITTER:	RICHARD C. KIM
SIGNATURE:	/Richard C. Kim/
DATE SIGNED: 10/19/2018	
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Total Attachments: 3

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> PATENT REEL: 047235 FRAME: 0120

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ATTORNEY DOCKET NO.: P20172690US00/N1085-01871

ASSIGNMENT AND AGREEMENT

For value received, we, Chien-Fa LEE, Hsu-Shui LIU, Jiun-Rong PAI, Shou-Wen KUO, Jian-Hung CHEN, M.C. LIN, C. C. CHIEN, Hsuan LEE, and Boris HUANG, hereby transfer to Taiwan Semiconductor Manufacturing Co., Ltd., with its principal place of business located at No. 8, Li-Hsin Road 6, Hsinchu Science Park, Hsin-Chu 300-77. Taiwan, Republic of China, and its successors, assigns and legal representatives, the entire right, title and interest, for the United States of America, in and to certain inventions related to SYSTEM AND METHOD FOR RING FRAME CLEANING AND INSPECTION. described in non-provisional patent application S.N. filed under any and all Letters Patent and any divisions, continuations, continuations-in-part, reexamination certificates, reissues, and extensions thereof, or claiming priority therefrom that may be granted in the United States for said inventions; and we also concurrently hereby sell, assign and transfer to Taiwan Semiconductor Manufacturing Co., Ltd. the entire right, title and interest in and to said inventions for all countries foreign to the United States. including all rights of priority arising from the application aforesaid, and all the rights and privileges under any and all forms of protection, including Letters Patent, that may be granted in said countries foreign to the United States for said inventions.

We authorize Taiwan Semiconductor Manufacturing Co., Ltd. to make application for such protection in its own name and maintain such protection in any and all countries foreign to the United States, and to invoke and claim for any application for patent or other form of protection for said inventions, without further authorization from us, any and all benefits, including the right of priority provided by any and all treaties, conventions, or agreements.

We hereby consent that a copy of this assignment shall be deemed a full legal and formal equivalent of any document which may be required in any country in proof of the right of Taiwan Semiconductor Manufacturing Co., Ltd. to apply for patent or other form of protection for said inventions and to claim the aforesaid benefit of the right of priority.

We request that any and all patents for said inventions be issued to Taiwan Semiconductor Manufacturing Co., Ltd. in the United States and in all countries foreign to the United States, or to such nominees as Taiwan Semiconductor Manufacturing Co., Ltd. may designate.

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ATTORNEY DOCKET NO.: P20172690US00/N1085-01871

We agree that, when requested, we shall, without charge to Taiwan Semiconductor Manufacturing Co., Ltd. but at its expense, sign all papers, and do all acts which may be necessary, desirable or convenient in connection with said applications, patents, or other forms of protection.

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Inventor No. 1	
Dated: 1/21/WIA	- Chartafill

Address: No. 26, Aly. 14, Ln. 452, Baoshan Rd., East Dist., Hsinchu City 300, Taiwan

Chien-Fa LEE

Hsu-Shui LIU

(R,O,C.)

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Inventor No. 2 Han Show In Dated: 2018 08, 31

Address: No. 13, Lane 675, Sec. 2, Nanping Rd., Pingjhen City, Taoyuan County 324,

Taiwan (R.O.C.)

Inventor No. 3 Jiun-Rong PAI Dated: 9/10/10/18

Address: No. 12, Alley 53, Lane 268, Sinmin Street, Jhubei City, Hsinchu County 302, Taiwan (R.O.C.)

Inventor No. 4 Show War Euro Dated: 40 70 18

Address: 1F, No. 16, Alley 7, Lane 384, Sec. 1, Zhonghua Road, Hsinchu City, Taiwan

(R.O.C.)

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ATTORNEY DOCKET NO.: P20172690US00/N1085-01871

Inventor No. 5 Dated: 9/3, >0/8	Jian-Hung Chen		
	Jian-Hung CHEN		
Address: No. 8, Li-Hsin Road 6, Hsinchu So	cience Park, Hsin-Chu 300-77, Taiwan (R.O.C.)		
Inventor No. 6			
Dated: $\frac{9/q}{\sqrt{8}}$	Mong-Chen Lin		
* *	M.C. LIN		
Address: No. 8, Li-Hsin Road 6, Hsinchu So	cience Park, Hsin-Chu 300-77, Taiwan (R.O.C.)		
Inventor No. 7			
Dated: 9/5, 2-018	Chung-Him Chien		
·	Chung-Hsin Chien C.C. CHIEN		
Address: No. 8, Li-Hsin Road 6, Hsinchu Science Park, Hsin-Chu 300-77, Taiwan (R.O.C.)			
Inventor No. 8 Dated: 4/6/18	Hruan Lec		
Hsuan LEE			
Address: 1-1 Nan-Ke N, Rd. Tainan Science Park Tainan, Tainan City 741-44, Taiwan			
(R.O.C.)			
Inventor No. 9 Dated:	Bon's Huarg Boris HUANG		
	ience Park, Hsin-Chu 300-77, Taiwan (R.O.C.)		

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