505023233 07/27/2018

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

ersion v1.1 EPAS ID: PAT5069982

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	

CONVEYING PARTY DATA

Name	Execution Date
CHENG-CHIEH LAI	12/22/2015
KUANG-HSIN CHEN	01/04/2016
YUNG-HSIEN WU	01/08/2016
MENG-TING YU	01/08/2016

RECEIVING PARTY DATA

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

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16047048

CORRESPONDENCE DATA

Fax Number: (214)200-0853

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Email: ipdocketing@haynesboone.com

Correspondent Name: HAYNES AND BOONE, LLP IP SECTION

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Address Line 2: SUITE 700

Address Line 4: DALLAS, TEXAS 75219

Total Attachments, A		
DATE SIGNED: 07/27/2018		
SIGNATURE:	E: /Jordan Maucotel/	
NAME OF SUBMITTER: JORDAN MAUCOTEL		
ATTORNEY DOCKET NUMBER:	2015-0732/24061.3249US02	

Total Attachments: 4

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Customer No.: 000042717

ASSIGNMENT

WHEREAS, we,

(1)	Cheng-Chieh Lai	of	Hsin-Chu County, Taiwan, Republic of China
(2)	Kuang-Hsin Chen	of	Jung-Li City, Taiwan, Republic of China
(3)	Yung-Hsien Wu	of	Hsin-Chu County, Taiwan, Republic of China
(4)	Meng-Ting Yu	of	Hsin-Chu County, Taiwan, Republic of China

have invented certain improvements in

CAPACITOR EMBEDDED WITH NANOCRYSTALS

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

of even date filed herewith; and

The filed on January 13, 2016 and assigned application number 14/995,036; 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 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

15492962_1 - 1 -

Customer No.: 000042717

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:	Cheng-Chieh Lai		
Residence Address:	No. 8, Li-Hsin Road 6, Science-Based Industrial Park Hsin-Chu, Taiwan 300-77, Republic of China		
Dated: 15. 12. 27	Inventor Sig	Chieh Lai.	
Inventor Name:	Kuang-Hsin Chen	77.555	
Residence Address:	440, Chun-Fu Road, Jung-Li City, Taiwan, R	epublic of China	
Dated: 2016 , 01	. 04 <u>Chen</u> , Inventor Sign	kuang -hsin	
Inventor Name:	Yung-Hsien Wu	***************************************	
Residence Address:	No. 8, Li-Hsin Road 6, Science-Based Industrial Park Hsin-Chu, Taiwan 300-77, Republic of China		
Dated:			
**************************************	Inventor Sign	nature	
Inventor Name:	Meng-Ting Yu		
Residence Address:	No. 8, Li-Hsin Road 6, Science-Based Industrial Park Hsin-Chu, Taiwan 300-77, Republic of China		
Dated:		****	
	Inventor Sign	nature	

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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 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.

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15492962_1 - 1 -

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Inventor Name:	Cheng-Chieh Lai		
Residence Address:	No. 8, Li-Hsin Road 6, Science-Based Industrial Park Hsin-Chu, Taiwan 300-77, Republic of China		
Dated:		Inventor Signature	
Inventor Name:	Kuang-Hsin Chen		
Residence Address:	440, Chun-Fu Road, Jung-Li City, Taiwan, Republic of China		
Dated:		Inventor Signature	
Inventor Name:	Yung-Hsien Wu		
Residence Address:	No. 101, Section 2, Kuang-Fu Hsin-Chu, Taiwan 300-13, Re		
Dated: <u> </u>	/1/8	Tung-HSRuWu Inventor Signature	
Inventor Name:	Meng-Ting Yu		
Residence Address:	No. 101, Section 2, Kuang-Fu Road, Hsin-Chu, Taiwan 300-13, Republic of China		
Dated: 20/6/	1/8	MENG - TING YU Inventor Signature	

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