

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT6220232

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
CHIA-HAO CHANG	05/15/2020
LIN-YU HUANG	05/15/2020
HAN-JONG CHIA	05/15/2020
BO-FENG YOUNG	05/15/2020
YU-MING LIN	05/18/2020
RECEIVING PARTY DATA	
Name:	TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.
Street Address:	8, LI-HSIN RD. 6
Internal Address:	HSINCHU SCIENCE PARK
City:	HSINCHU
State/Country:	TAIWAN
Postal Code:	300-78
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	16939909
CORRESPONDENCE DATA	
Fax Number:	(214)200-0853
<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>	
Phone:	214-651-5000
Email:	ipdocketing@haynesboone.com
Correspondent Name:	HAYNES AND BOONE, LLP (24061) IP SECTION
Address Line 1:	2323 VICTORY AVENUE
Address Line 2:	SUITE 700
Address Line 4:	DALLAS, TEXAS 75219
ATTORNEY DOCKET NUMBER:	2019-3377/24061.4129US01
NAME OF SUBMITTER:	MARCY OGADO
SIGNATURE:	/Marcy Ogado/
DATE SIGNED:	07/27/2020

Total Attachments: 3

source=24061-4129US01_Assignment#page1.tif

source=24061-4129US01_Assignment#page2.tif

source=24061-4129US01_Assignment#page3.tif

77 (5)

Docket No.: P20193377US00/24061.4129US01
Customer No.: 000042717

ASSIGNMENT

WHEREAS, we,

- | | | | |
|-----|----------------|----|-------------------------------|
| (1) | Chia-Hao Chang | of | Hsinchu City, Taiwan (R.O.C.) |
| (2) | Lin-Yu Huang | of | Hsinchu, Taiwan (R.O.C.) |
| (3) | Han-Jong Chia | of | Hsinchu City, Taiwan (R.O.C.) |
| (4) | Bo-Feng Young | of | Hsinchu, Taiwan (R.O.C.) |
| (5) | Yu-Ming Lin | of | Hsinchu City, Taiwan (R.O.C.) |

have invented certain improvements in

SEMICONDUCTOR DEVICES WITH EMBEDDED FERROELECTRIC FIELD EFFECT TRANSISTORS

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 July 27, 2020 and assigned application number 16/939,909; 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 Co., Ltd., ("TSMC"), 8, Li-Hsin Rd. 6, Hsinchu Science Park, Hsinchu, Taiwan 300-78, 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.

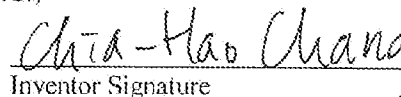
Docket No.: P20193377US00/24061.4129US01

Customer No.: 000042717

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.

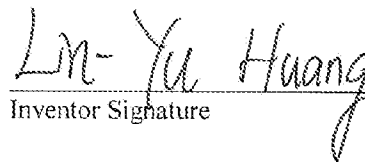
Inventor Name: Chia-Hao ChangResidence Address: 14F., No. 111, Ln. 19, Guanxin Rd., East Dist.,
Hsinchu City 300, Taiwan (R.O.C.)

Dated: 05/15/2020


Inventor Signature

Inventor Name: Lin-Yu HuangResidence Address: 8, Li-Hsin Rd. 6
Hsinchu, Taiwan (R.O.C.)

Dated: 05/15/2020


Inventor Signature

Inventor Name: Han-Jong ChiaResidence Address: 17F-6, No. 188, Guanxin Rd.,
Hsinchu City, Taiwan (R.O.C.)

Dated: 05/15/2020


Inventor Signature

Inventor Name: Bo-Feng YoungResidence Address: 8, Li-Hsin Rd. 6
Hsinchu, Taiwan (R.O.C.)

Dated: 05/15/2020

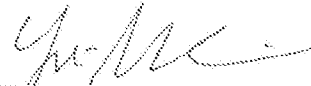

Inventor Signature

Docket No.: P20193377US00/24061.4129US01
Customer No.: 000042717

Inventor Name: Yu-Ming Lin

Residence Address: 10F-2, No. 270, Guanxing East Road,
Hsinchu City 300, Taiwan (R.O.C.)

Dated: 5/18/2020


Inventor Signature