PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT7433146

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
WEI-CHENG LIN	09/12/2019
HUI-TING YANG	12/24/2019
JIANN-TYNG TZENG	09/12/2019
LIPEN YUAN	10/07/2019
WEI-AN LAI	08/08/2019

RECEIVING PARTY DATA

Name:	TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD.
Street Address:	8, LI-HSIN RD. 6, HSINCHU SCIENCE PARK
City:	HSINCHU
State/Country:	TAIWAN
Postal Code:	300-78

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	17865272

CORRESPONDENCE DATA

Fax Number: (703)518-5499

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.

Phone: 7036841111
Email: tsmc@ipfirm.com
Correspondent Name: HAUPTMAN HAM, LLP (TSMC)
Address Line 1: 2318 MILL ROAD
Address Line 2: SUITE 1400
Address Line 4: ALEXANDRIA, VIRGINIA 22314

ATTORNEY DOCKET NUMBER:	T5057-1329UB
NAME OF SUBMITTER:	RANDY A. NORANBROCK
SIGNATURE:	/Randy A. Noranbrock/
DATE SIGNED:	07/14/2022
Total Attachments: 3	

source=EfiledAssgn#page1.tif
source=EfiledAssgn#page2.tif
source=EfiledAssgn#page3.tif

Docket No. T5057-1329U
P20173326US00

ASSIGNMENT

In consideration of the premises and other good and valuable consideration in hand paid, the receipt and sufficiency of which is hereby acknowledged, the undersigned,

1) **Wei-Cheng LIN**
2) **Hui-Ting YANG**
3) **Jiann-Tyng TZENG**
4) **Lipen YUAN**
5) **Wei-An LAI**

who has made a certain new and useful invention, hereby sells, assigns and transfers unto TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD., having a place of business at No. 8, Li-Hsin Rd. VI, Hsinchu Science Park, Hsinchu 300, Taiwan R.O.C.
its successors and assigns (hereinafter designated "ASSIGNEE") the entire right, title and interest for the United States of America as defined in 35 U.S.C. 100 in the invention entitled

SEMICONDUCTOR DEVICE INCLUDING CELL REGION HAVING MOR SIMILAR CELL DENSITIES IN DIFFERENT HEIGHT ROWS, AND METHOD AND SYSTEM FOR GENERATING LAYOUT DIAGRAM OF SAME

(a) for which an application for United States Letters Patent was filed on 2019-07-03, and identified by United States Patent Application No. 16/502,869 ; or

(b) for which an application for United States Letters Patent was executed on ______,

and the undersigned hereby authorizes and requests the United States Commissioner of Patents and Trademarks to issue any and all United States Letters Patent which may be granted therefore and any and all extensions, divisions, reissues, continuations, or continuations-in-part thereof, and the right to all benefits under the International Convention for the Protection of Industrial Property to the said ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns and legal representatives; the undersigned agrees that the attorneys of record in said application shall hereafter act on behalf of said ASSIGNEE;

AND the undersigned hereby agrees to transfer a like interest, and to render all necessary assistance in making application for and obtaining original, divisional, reissued or extended Letters Patent of the United States, upon request of the said ASSIGNEE, its successors, assigns and legal representatives, and without further remuneration, in and to any improvements, and applications for patent based thereon, growing out of or related to the said invention; and to execute any papers by the said ASSIGNEE, its successors, assigns and legal representatives, deemed essential to ASSIGNEE's full protection and title in and to the invention hereby transferred.

SIGNED on the date indicated aside my signature:

1) Wei-Cheng, Lin
Name: **Wei-Cheng LIN**

2019/09/12
Date:

2) ______
Name: **Hui-Ting YANG**

______
Date:

✓ 3) Jiann Tyng Tzeng
Name: **Jiann-Tyng TZENG**

2019/09/12
Date:

Docket No. T5057-1329U
P20173326US00

ASSIGNMENT

In consideration of the premises and other good and valuable consideration in hand paid, the receipt and sufficiency of which is hereby acknowledged, the undersigned,

1) **Wei-Cheng LIN**
2) **Hui-Ting YANG**
3) **Jiann-Tyng TZENG**
4) **Lipen YUAN**
5) **Wei-An LAI**

who has made a certain new and useful invention, hereby sells, assigns and transfers unto TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD., having a place of business at No. 8, Li-Hsin Rd. VI, Hsinchu Science Park, Hsinchu 300, Taiwan R.O.C.
its successors and assigns (hereinafter designated "ASSIGNEE") the entire right, title and interest for the United States of America as defined in 35 U.S.C. 100 in the invention entitled

SEMICONDUCTOR DEVICE INCLUDING CELL REGION HAVING MOR SIMILAR CELL DENSITIES IN DIFFERENT HEIGHT ROWS, AND METHOD AND SYSTEM FOR GENERATING LAYOUT DIAGRAM OF SAME

(a) for which an application for United States Letters Patent was filed on 2019-07-03, and identified by United States Patent Application No. 16/502,869; or

(b) for which an application for United States Letters Patent was executed on ________.

and the undersigned hereby authorizes and requests the United States Commissioner of Patents and Trademarks to issue any and all United States Letters Patent which may be granted therefore and any and all extensions, divisions, reissues, continuations, or continuations-in-part thereof, and the right to all benefits under the International Convention for the Protection of Industrial Property to the said ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns and legal representatives; the undersigned agrees that the attorneys of record in said application shall hereafter act on behalf of said ASSIGNEE;

AND the undersigned hereby agrees to transfer a like interest, and to render all necessary assistance in making application for and obtaining original, divisional, reissued or extended Letters Patent of the United States, upon request of the said ASSIGNEE, its successors, assigns and legal representatives, and without further remuneration, in and to any improvements, and applications for patent based thereon, growing out of or related to the said invention; and to execute any papers by the said ASSIGNEE, its successors, assigns and legal representatives, deemed essential to ASSIGNEE's full protection and title in and to the invention hereby transferred.

SIGNED on the date indicated aside my signature:

1) ________________________
Name: **Wei-Cheng LIN**
____
Date:

2) Hui-Ting Yang
Name: **Hui-Ting YANG**
2019/12/24
Date:

3) ________________________
Name: **Jiann-Tyng TZENG**
____
Date:

Docket No. T5057-1329U
P20173326US00

✓ 4) ______________________ 2019/10/07 ______________________
Name: Lipen YUAN Date:

✓ 5) Wei An Lai ______________________ 2019 / 08 / 08 ______________________
Name: Wei-An LAI Date: