

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
YEN-HUEI CHEN	06/25/2019
HIDEHIRO FUJIWARA	06/25/2019
HUNG-JEN LIAO	06/26/2019
JONATHAN TSUNG-YUNG CHANG	07/01/2019
RECEIVING PARTY DATA	
Name:	TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD.
Street Address:	NO. 8, LI-HSIN RD. VI, HSINCHU SCIENCE PARK
City:	HSINCHU
State/Country:	TAIWAN
Postal Code:	300
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	16405822
CORRESPONDENCE DATA	
Fax Number:	(703)518-5499
<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:	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:	T5057-1343U
NAME OF SUBMITTER:	RANDY A. NORANBROCK
SIGNATURE:	/Randy A. Noranbrock/
DATE SIGNED:	08/05/2019
Total Attachments: 1	
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TL (S)

AP 13293-0-UC-85
Docket No. T5057-1343U
P20180540US00

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) Yen-Huei CHEN
- 2) Hidehiro FUJIWARA
- 3) Hung-Jen LIAO
- 4) Jonathan Tsung-Yung CHANG

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. 109 in the invention entitled

MEMORY COMPUTATION CIRCUIT AND METHOD

(a) for which an application for United States Letters Patent was filed on 2019-05-07, and identified by United States Patent Application No. 16/405,822; 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) Yen-Huei CHEN
Name: Yen-Huei CHEN

6.25.2019
Date:

2) Hidehiro Fujiwara
Name: Hidehiro FUJIWARA

6.25.2019
Date:

3) Hung-Jen LIAO
Name: Hung-Jen LIAO

6.26.2019
Date:

4) [Signature]
Name: Jonathan Tsung-Yung CHANG

7/1/2019
Date: