506687365 05/27/2021

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
SHIH-LIEN LINUS LU	02/22/2018

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:	17332753

CORRESPONDENCE DATA

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Correspondent Name: HAUPTMAN HAM, LLP (TSMC)

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ATTORNEY DOCKET NUMBER:	T5057-1309C
NAME OF SUBMITTER:	RANDY A. NORANBROCK
SIGNATURE:	/Randy A. Noranbrock/
DATE SIGNED:	05/27/2021

Total Attachments: 1

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PATENT 506687365 REEL: 056377 FRAME: 0538



Docket No. T5057-1309 P20171348US00

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) Shih-Lien Linns LU

RECORDED: 05/27/2021

who has made a certain new and useful invention, hereby sells, assigns and transfers unto <u>TAIWAN SEMICONDUCTOR</u> <u>MANUFACTURING COMPANY, LTD.</u>, 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, fitle and interest for the United States of America as defined in 35 U.S.C. 100 in the invention entitled

4.7 44.17.	modified choice the in the invitation entitled
MEN	IORY CIRCUIT CONFIGURATION AND METHOD
(a)	for which an application for United States Letters Patent was filed on 2018-03-20 and identified by United States Patent Application No. 15/927,044; or
(b)	for which an application for United States Letters Patent was executed on,
all Uni	e undersigned hereby authorizes and requests the United States Commissioner of Patents and Trademarks to issue any and ited States Letters Patent which may be granted therefore and any and all extensions, divisions, reissues, continuations, o pations-in-part thereof, and the right to all benefits under the International Convention for the Protection of Industrial ty to the said ASSIGNEE, for its interest as ASSIGNEE, its successors, actions and lead representatives the understoner.

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) Feb 22 2018

Name: Shift-Lieu Linus LU

Date:

agrees that the attorneys of record in said application shall hereafter act on behalf of said ASSIGNEE;

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PATENT REEL: 056377 FRAME: 0539