503791301 04/20/2016

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3837948

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
SHAO-YU LI	04/18/2016

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:	15133447

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.

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Correspondent Name: HAUPTMAN HAM, LLP (TSMC)

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ATTORNEY DOCKET NUMBER:	T5057-1196
NAME OF SUBMITTER:	RANDY A. NORANBROCK
SIGNATURE:	/Randy A. Noranbrock/
DATE SIGNED:	04/20/2016

Total Attachments: 1

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PATENT 503791301 REEL: 038330 FRAME: 0798

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)	Shao-Yu LI
who has MANUI 300, Tai	ACT	a certain new and useful invention, hereby sells, assigns and transfers unto TAIWAN SEMICONDUCTOR JRING COMPANY, LTD., having a place of business at No. 8, Li-Hsin Rd. VI, Hsinchu Science Park, Hsinchu O.C.
		and assigns (hereinafter designated "ASSIGNEE") the entire right, title and interest for the United States of America 5 U.S.C. 100 in the invention entitled
DE-SE	RIA	LIZATION CIRCUIT AND METHOD OF OPERATING THE SAME
(a)	for wl Unite	nich an application for United States Letters Patent was filed on 2016-04-20, and identified by d States Patent Application No. 15/133,447; or
(b)	for wl	nich an application for United States Letters Patent was executed on,
all Unite continua Property	ed State tions-i to the	igned hereby authorizes and requests the United States Commissioner of Patents and Trademarks to issue any and es Letters Patent which may be granted therefore and any and all extensions, divisions, reissues, continuations, or n-part thereof, and the right to all benefits under the International Convention for the Protection of Industrial said ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns and legal representatives; the undersigned attorneys of record in said application shall hereafter act on behalf of said ASSIGNEE;
ASSIGN applicati	on for IEE, it ons fo	the undersigned hereby agrees to transfer a like interest, and to render all necessary assistance in making and obtaining original, divisional, reissued or extended Letters Patent of the United States, upon request of the said is successors, assigns and legal representatives, and without further remuneration, in and to any improvements, and repatent based thereon, growing out of or related to the said invention; and to execute any papers by the said is successors, assigns and legal representatives, deemed essential to ASSIGNEE's full protection and title in and to

SIGNED on the date indicated aside my signature:

the invention hereby transferred.

RECORDED: 04/20/2016

) Shao Ju L

Date:

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