504680949 12/11/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 EPAS ID: PAT4727671

Stylesheet Version v1.2

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
SU-CHUN YANG	11/25/2014
YI-LI HSIAO	11/25/2014
CHIH-HANG TUNG	12/02/2014
CHEN-HUA YU	12/02/2014

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:	15837403

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:	T5057-696D
NAME OF SUBMITTER:	RANDY A. NORANBROCK
SIGNATURE:	/Randy A. Noranbrock/
DATE SIGNED:	12/11/2017

Total Attachments: 1

504680949

source=EfiledAssgn#page1.tif

PATENT REEL: 044354 FRAME: 0001 scyangp 2014-11-25 13:33:41

Docket No. T5057-696B P20111238US02

ASSIGNMENT

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

1) Su-Chun YANG

3) Chih-Hang TUNG

2) Yi-Li HSIAO

4) Chen-Hua YU

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

SOLDER BUMP STRETCHING METHOD AND DEVICE FOR PERFORMING THE SAME

(a)	for which an application for United States Letters Patent was filed on 2014-11-26, and identified by United States Patent Application No. 14/554,354; or
(b)	for which an application for United States Letters Patent was executed on,
	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, or

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) Su-Chun Yang	20/4/11/25
Name: Su-Chun YANG	Date:
2) Yi Li Hsiao	2014/11/25
Name: Yi-Li HSIAO	Date:
3) ())	2014/12/02
Name: Chih-Hang TUNG	Date:
4)	12/2/14
Name Chen-Hua YU	Date:

PATENT REEL: 044354 FRAME: 0002

RECORDED: 12/11/2017