504608475 10/24/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4655188

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
HSIA-WEI CHEN	10/11/2017
WEN-TING CHU	10/11/2017
YU-WEN LIAO	10/11/2017

RECEIVING PARTY DATA

Name:	TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.
Street Address:	NO. 8, LI-HSIN RD. 6
Internal Address:	HSIN-CHU SCIENCE PARK
City:	HSIN-CHU
State/Country:	TAIWAN
Postal Code:	300-77

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15715487

CORRESPONDENCE DATA

Fax Number: (216)502-0601

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: 216-502-0600

Email: docketing@eschweilerlaw.com **Correspondent Name:** ESCHWEILER & POTASHNIK, LLC

Address Line 1: ROSETTA CENTER

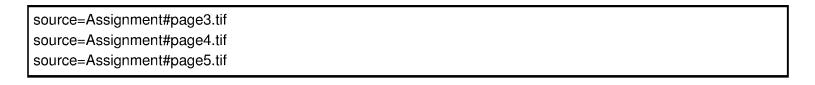
Address Line 2: 629 EUCLID AVE., SUITE 1000
Address Line 4: CLEVELAND, OHIO 44114

ATTORNEY DOCKET NUMBER:	TSMCP840US
NAME OF SUBMITTER:	DAVID W. POTASHNIK
SIGNATURE:	/David W. Potashnik/
DATE SIGNED:	10/24/2017

Total Attachments: 5

source=Assignment#page1.tif source=Assignment#page2.tif

PATENT 504608475 REEL: 043936 FRAME: 0740



PATENT REEL: 043936 FRAME: 0741



(JC)

PATENT ASSIGNMENT

PARTIES TO THE ASSIGNMENT

Assignor(s):
Hsia-Wei Chen

Assignor(s):
Wen-Ting Chu

Assignor(s): Yu-Wen Liao

Assignee:
Taiwan Semiconductor Manufacturing Co., Ltd.
No. 8, Li-Hsin Rd. 6, Hsin-Chu Science Park
Hsin-Chu, Taiwan 300-77
Republic of China

AGREEMENT

WHEREAS, ASSIGNOR(S) (listed above) are inventor(s) of an invention entitled

"METHOD FOR FORMING A HOMOGENEOUS BOTTOM ELECTRODE

a non-provisional application for United States Letters Patent:

VIA (BEVA) TOP SURFACE FOR MEMORY" for which:

\boxtimes	was executed on even date preparatory to filing (each inventor should sign this
	Assignment on the same day as he/she signs the Declaration); or
	was filed on and accorded U.S. Serial No; or
	I hereby authorize and request my attorney associated with Customer No.
	107476, to insert on the designated lines below the filing date and application
	number of said application when known:
	U.S. Serial No.
	filed on

Page 1 of 5

Jan 2008

Attachment 15a PATENT
REEL: 043936 FRAME: 0742

WHEREAS, ASSIGNEE (listed above), a corporation of the Republic of China is

desirous of acquiring the entire right, title and interest in and to the invention and in and to

any letters patent that may be granted therefore in the United States and in any and all

foreign countries;

NOW, THEREFORE, in exchange for good and valuable consideration, the receipt of

which is hereby acknowledged, ASSIGNOR(S) hereby sell, assign and transfer unto

ASSIGNEE its successors and assigns, the entire right, title and interest in and to said

invention and improvements, said application and any and all letters patent which may be

granted for said invention in the United States of America and its territorial possessions and

in any and all foreign countries, and in any and all divisions, reissues, re-examinations and

continuations thereof, including the right to file foreign applications directly in the name of

ASSIGNEE and to claim priority rights deriving from said United States application to which

said foreign applications are entitled by virtue of international convention, treaty or otherwise,

said invention, application and all letters patent on said invention to be held and enjoyed by

ASSIGNEE and its successors and assigns for their use and benefit and of their successors

and assigns as fully and entirely as the same would have been held and enjoyed by

ASSIGNOR(S) had this assignment, transfer and sale not been made. ASSIGNOR(S)

hereby authorize and request the Commissioner of Patents and Trademarks to issue all

letters patent on said invention to ASSIGNEE. ASSIGNOR(S) agree to execute all

instruments and documents required for the making and prosecution of applications for

United States and foreign letters patent on said invention, for litigation regarding said letters

patent, or for the purpose of protecting title to said invention or letters patent therefore.

Page 2 of 5

TSMC Docket No. P20171251US00 Docket No. TSMCP840US

10/11 2017

Date

Hsia-Wei Chen

Name 1st Inventor Hsia-Wei Chen

TSMC Docket No. P20171251US00 Docket No. TSMCP840US

Name 2nd Inventor Wen-Ting Chu

Page 4 of 5

TSMC Docket No. P20171251US00 Docket No. TSMCP840US

Page 5 of 5

Jan 2008

Attachment 15a **PATENT**