## 503832851 05/18/2016

# PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
JONATHAN TSUNG-YUNG CHANG	04/22/2016
CHENG-HUNG LEE	04/22/2016
CHI-TING CHENG	04/15/2016
HUNG-JEN LIAO	04/27/2016
JHON-JHY LIAW	05/04/2016
YEN-HUEI CHEN	05/04/2016

#### **RECEIVING PARTY DATA**

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Street Address:	NO.8, LI-HSIN RD.6
Internal Address:	SCIENCE-BASED INDUSTRIAL PARK
City:	HSINCHU
State/Country:	TAIWAN
Postal Code:	300

#### **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	15153687

#### **CORRESPONDENCE DATA**

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SIGNATURE:	/R. Burns Israelsen, Reg. No. 42685/
DATE SIGNED:	05/18/2016

PATENT REEL: 038639 FRAME: 0396

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## **Total Attachments: 4**

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## ASSIGNMENT

This assignment agreement is applicable to an invention entitled (Invention Title)
MEMORY DEVICES WITH STRAP CELLS
The PATENT RIGHTS referred to in this agreement are:
(check one) \( \sum \) a patent application for this invention, executed by the ASSIGNOR(S)
concurrently with this assignment.
U.S. patent application Serial No,filed
a U.S. patent application based on PCT International Application
Nofiled on (date)(U.S. patent application
Serial No, if known).
U.S. patent No, issued
The PATENT RIGHTS also include all divisions, reissues, continuations and extensions of
the patents and patent applications identified above.
The PATENT RIGHTS assigned under this agreement are:
(check one) ⊠U.S. patent rights only.
Worldwide patent rights. In this case, the assignee shall have the right to
claim the benefit of the filing date of any U.S. or foreign patent application
for this invention.
The ASSIGNOR(S) referred to in this agreement is (or are) the inventor(s) whose signatures
appear on page 2 of this Assignment and any Supplemental Sheet(s).
The ASSIGNEE referred to in this agreement is:
(Name of Assignee) TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.
(Address) NO.8, LI-HSIN RD.6, SCIENCE-BASED INDUSTRIAL PARK, HSINCHU,
TAIWAN 300, R.O.C.
The ASSIGNEE is:
(check one)⊡An individual.
☐A Partnership.
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
(other)
The ASSIGNOR(S) in consideration of \$10.00 paid by the ASSIGNEE, and other good and

The ASSIGNOR(S), in consideration of \$10.00 paid by the ASSIGNEE, and other good and valuable consideration, receipt of which is acknowledged, hereby assign(s) the following rights to the ASSIGNEE, its successors and assigns:

the full and exclusive right to the invention;

the entire right, title and interest in and to the PATENT RIGHTS;

the right to sue and recover for any past infringement; and

the right to claim priority under 35 USC 119, 35 USC 120, or any other applicable provisions, based on any earlier patent applications for this invention.

# THIS IS PAGE 2 OF AN ASSIGNMENT FROM THE INVENTOR(S) TO ASSIGNEE: <u>TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.</u> INVENTION TITLE: <u>MEMORY DEVICES WITH STRAP CELLS</u>

As to all U.S. patent applications assigned under this agreement, the ASSIGNOR(S) hereby authorize(s) and request(s) the Commissioner of Patents and Trademark to issue all Letters Patent to the ASSIGNEE as the assignee of the entire right, title and interest, for the sole use and enjoyment of said ASSIGNEE, its successors and assigns.

Further, the ASSIGNOR(S) agree(s) to communicate to said ASSIGNEE, or its representatives, any fact known to the ASSIGNOR(S) with respect to said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, substitute, renewal, reexamination and reissue applications, execute all necessary assignment papers to cause and all Letter Patent to be issued to said ASSIGNEE, make all rightful oaths and generally do everything necessary or desirable to aid said ASSIGNEE, its successors and assigns, to obtain and enforce proper protection for said invention.

The ASSIGNOR(S) authorize(s) the attorneys and agents who have the power of attorney in this application to check any appropriate boxes and to insert the Serial Number and filing date in this document after it has been executed.

Jonathan Tsung-Yung CHANG	M	4/22/2016
Name of sole or first inventor	Signature	Date
Cheng-Hung LEE	cheng-hung Lee	4/22/2016
Name of second inventor, if any	Signatule	Date
Chi-Ting CHENG	Chiting Cheny	216.4.15
Name of third inventor, if any	Signature /	Date
Hung-Jen LIAO	Hingi en (ia	2016.4.2
Name of fourth inventor, if any	Signature	Date
Jhon-Jhy LIAW		
Name of fifth inventor, if any	Signature	Date
Yen-Huei CHEN		
Name of sixth inventor, if any	Signature	Date

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THIS IS PAGE 2 OF AN ASSIGNMENT FROM THE INVENTOR(S) TO ASSIGNEE: TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD. INVENTION TITLE: MEMORY DEVICES WITH STRAP CELLS

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Jonathan Tsung-Yung CHANG		
Name of sole or first inventor	Signature	Date
Cheng-Hung LEE		
Name of second inventor, if any	Signature	Date
Chi-Ting CHENG		
Name of third inventor, if any	Signature	Date
Hung-Jen LIAO		
Name of fourth inventor, if any	Signature	Date
Jhon-Jhy LIAW	Thon Thy Lan	May.4. 2016
Name of fifth inventor, if any	Signature 0	Date
Yen-Huei CHEN		
Name of sixth inventor, if any	Signature	Date

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Name of second inventor, if any	Signature	Date
Chi-Ting CHENG		
Name of third inventor, if any	Signature	Date
Hung-Jen LIAO		
Name of fourth inventor, if any	Signature	Date
Jhon-Jhy LIAW		
Name of fifth inventor, if any	Signature	Date
Yen-Huei CHEN	Yen-Huei CHEN	5/4/2016
Name of sixth inventor, if any	Signature	Date

PATENT REEL: 038639 FRAME: 0401

RECORDED: 05/18/2016