## 505808798 12/06/2019

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5855627

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
JASPAL SINGH SHAH	06/30/2016

## **RECEIVING PARTY DATA**

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

## **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	16704201

#### **CORRESPONDENCE DATA**

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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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ATTORNEY DOCKET NUMBER:	T1516.10275US05	
NAME OF SUBMITTER:	R. BURNS ISRAELSEN	
SIGNATURE:	/R. Burns Israelsen, Reg. No. 42685/	
DATE SIGNED:	12/06/2019	

**Total Attachments: 2** 

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PATENT 505808798 REEL: 051207 FRAME: 0895

#### ASSIGNMENT

	IST CIRCUIT OF M		on citatica (investion Title)
	RIGHTS referred to	***************************************	are:
			executed by the ASSIGNOR(S)
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Ė	U.S. patent applica		filed
			International Application
			(U.S. patent application
	Serial No		
	U.S. patent No		
			sues, continuations and extensions of
	d patent applications		
	RIGHTS assigned		t are:
the street			he assignee shall have the right to
			ny U.S. or foreign patent application
	for this invention.		
The ASSIGN	OR(S) referred to in	this agreement is (o	or are) the inventor(s) whose signatures
	e 2 of this Assignme		
	EE referred to in this		
			MANUFACTURING CO., LTD.
			NDUSTRIAL PARK, HSINCHU,
TAIWAN 30			
The ASSIGN			
(check one)[	]An individual.		
	A Partnership.		
Ø	A Corporation of _	TAIWAN, R.O.C	(specify state or country)
. П	(other)		
The ASSIGN	OR(S), in considerat	tion of \$10.00 paid b	by the ASSIGNEE, and other good and
valuable cons	ideration, receipt of	which is acknowled	ged, hereby assign(s) the following
rights to the A	ASSIGNEE, its succe	essors and assigns:	
the full and ex	xclusive right to the	invention;	
the entire righ	it, title and interest in	n and to the PATEN	T RIGHTS;
the right to su	e and recover for an	y past infringement;	and
the right to cl	aim priority under 3:	5 USC 119, 35 USC	120, or any other applicable
provisions, ba	ised on any earlier p	atent applications fo	r this invention.

PATENT REEL: 051207 FRAME: 0896 inches Roze/ox/No is-ag-o.

THIS IS PAGE 2 OF AN ASSIGNMENT FROM THE INVENTOR(S) TO ASSIGNEE: TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD. INVENTION TITLE: WRITE ASSIST CIRCUIT OF MEMORY DEVICE

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.

Jaspal Singh SHAH

Name of sole or first inventor

June 30, 2016

**PATENT REEL: 051207 FRAME: 0897** 

**RECORDED: 12/06/2019**