505229957 12/11/2018

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5276727

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JOHN B. MATOVU	01/08/2018
DAVID S. MEYAARD	01/04/2018
GOWRISANKAR DAMARLA	01/10/2018
SRI SAI SIVAKUMAR VEGUNTA	01/22/2018
KUNAL SHROTRI	07/28/2018
SHASHANK SARAF	01/23/2018
KEVIN R. GAST	01/08/2018
JIVAAN KISHORE JHOTHIRAMAN	01/08/2018
SURESH RAMARAJAN	07/28/2018
LIFANG XU	12/03/2018
RITHU K. BHONSLE	01/08/2018
RUTUPARNA NARULKAR	05/08/2018
MATTHEW J. KING	07/27/2018

RECEIVING PARTY DATA

Name:	MICRON TECHNOLOGY, INC.
Street Address:	8000 SOUTH FEDERAL WAY
Internal Address:	MAILSTOP 1-507
City:	BOISE
State/Country:	IDAHO
Postal Code:	83707-0006

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15857197

CORRESPONDENCE DATA

Fax Number: (801)531-9168

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: 8015321922

Email: djpfeil@traskbritt.com

PATENT REEL: 047740 FRAME: 0382 Correspondent Name: TRASK BRITT, P.C Address Line 1: P.O. BOX 2550

Address Line 4: SALT LAKE CITY, UTAH 84110

ATTORNEY DOCKET NUMBER:	2269-13936(2017-0300.00)		
NAME OF SUBMITTER:	DANIEL J. BEZDJIAN		
SIGNATURE:	/Daniel J. Bezdjian/		
DATE SIGNED:	12/11/2018		

Total Attachments: 14

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PATENT REEL: 047740 FRAME: 0383

ASSIGNMENT

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, each undersigned ASSIGNOR does hereby:

SELL, ASSIGN AND TRANSFER to MICRON TECHNOLOGY, INC. ("ASSIGNEE"), a Corporation of the State of Delaware, having a place of business at 8000 South Federal Way, Mailstop 1-507, Boise, ID 83707-0006, the entire right, title and interest for the United States and all foreign countries in and to any and all improvements that are disclosed in the Application for United States Letters Patent Serial No. 15/857,197 filed on December 28, 2017, and titled SEMICONDUCTOR DEVICES INCLUDING A STAIR STEP STRUCTURE, AND RELATED METHODS, such application and all divisional, continuing, substitute, renewal, reissue and all other applications for patent or the legal equivalent thereof that have been or may be filed in the United States and all foreign countries relating to any of such improvements; all original, reexamined and reissued patents that have been or shall be issued in the United States and all foreign countries on such improvements; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application made in the United States;

AUTHORIZE the ASSIGNEE to apply for and receive any and all United States and foreign patents relating to such improvements in its own name;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such improvements to and in the name of the ASSIGNEE;

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement or encumbrance affecting the rights and property herein conveyed has been or will be made or entered into by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned;

COVENANT, when requested and at the expense of the ASSIGNEE, to carry out in good faith the intent and purpose of this Assignment, to execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications relating to any and all such improvements; to execute all rightful oaths, declarations, assignments, powers of attorney and other papers; to communicate to the ASSIGNEE all facts and provide to the ASSIGNEE all documents and things known and accessible to the undersigned relating to such improvements and the history thereof, and testify as to the same in any interference, litigation or other proceeding relating thereto; and generally to do everything possible that the ASSIGNEE shall consider desirable for vesting title to such improvements in the ASSIGNEE, and to secure, maintain, defend and enforce valid and enforceable patent protection for such improvements;

PATENT REEL: 047740 FRAME: 0384 AGREE AND ACKNOWLEDGE that the SALE, ASSIGNMENT AND TRANSFER of rights and property set forth herein is and shall be IRREVOCABLE and BINDING upon the heirs, assigns, representatives and successors of each undersigned ASSIGNOR and EXTEND to the successors, assigns and nominees of the ASSIGNEE.

John B. Matovu Residing at: 10019 West Littl	lewood Drive, B		01/08/2018
COUNTY OF Ada STATE OF Idah o) : ss.		
)		
On this Standay of Saca MATOVU, to me known to be and acknowledged to me that	e the person who	se name is subscribed	personally appeared JO to the foregoing instrun
MATOVU, to me known to b	e the person who	se name is subscribed he same, <u>Saule</u>	personally appeared JO to the foregoing instrun A J J J J J J J J J J J J J J J J J J
MATOVU, to me known to b	e the person who	se name is subscribed he same, <u>Saule</u>	to the foregoing instrum

ASSIGNOR:

David S. Meyaard
Residing at: 5878 E. Deer Ridge St., Boise, ID 83716

Date: 01/04/2016

COUNTY OF Ada

3 1 00

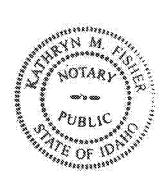
STATE OF Idaho

On this OH day of January, 2018, before me personally appeared DAVID'S. MEYAARD, to me known to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he/she executed the same.

Notary Public in and for said County and State

My Commission Expires:

July 17, 2023



ASSIGNOR:	
South.	Date: 1/10/2018
Gowrisankar Damarla Residing at: 4134 North Red Maple Court, Lehi	
COUNTY OF Utah	
STATE OF UTAh	
On this 10 day of 34 MANA GOWRISANKAR DAMARLA, to me known to foregoing instrument, and acknowledged to me t	be the person whose name is subscribed to the
	Mandy Prah.
	Notary Public in and for said Gounty and State
My Commission Expires:	replication about the Alexander Alberton allow the Area Company
06/20/19	MANDY PUGH Notary Public
	State of Utah Comm. No. 883905 My Comm. Expires Jun 30, 2019

ASSIGNOR:

V. S. Siva Lauraa

Sri Sai Sivakumar Vegunta
Residing at: 6181 East Settlement Court, Boise, ID 83716

COUNTY OF Ada

STATE OF Idaha

1 SS.

On this 22th day of Jauran, 2018, before me personally appeared SRI SAI SIVAKUMAR VEGUNTA, to me known to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he/she executed the same.

State Date: 1/22/18

Date: 1/22/18

1/22/18

Notary Of Boise, ID 83716



ASSIGNOR:		
Kunal Shrotri Residing at: 4297 South Red	પ્રે • hawk Place, Bois	Date; <u>7/28/2018</u> se, ID 83716
COUNTY OF)	
STATE OF	; ss.)	
On this day of SHROTRI, to me known to b and acknowledged to me that	e the person who	, 2018, before me personally appeared KUNAL se name is subscribed to the foregoing instrument, the same.
My Commission Expires:		Notary Public in and for said County and State

Shashank Saraf
Residing at: 1644 South Loggers Pond Place, Apt. 33, Boise, ID 83706

COUNTY OF Ada

STATE OF Idaho

On this 23 day of January

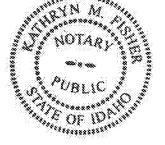
On the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he/she executed the same.

Notary Public in and for said County and State

My Commission Expires:

O7/17/2023

ASSIGNOR:



ASSIGNOR: Residing at: 3290 South Gekeler Lane, Apt. L304, Boise, ID 83706 COUNTY OF Ada STATE OF Idaha On this $\frac{\delta^{\frac{2n}{2}}}{\text{day of }}$ day of $\frac{3}{\text{Constant}}$ $\frac{2018}{\text{Mose name is subscribed to the foregoing instrument, and}}$ acknowledged to me that he/she executed the same. Datal Mi Peckely

Notary Public in and for said County and State My Commission Expires:

Jivaan Kishore Jhothiraman
Residing at: 206 West Boise Avenue, Boise, ID 83706

COUNTY OF Ada

STATE OF Idaho

1 Ss.

STATE OF Jay of Jayan , 2018, before me personally appeared JIVAAN KISHORE JHOTHIRAMAN, to me known to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he/she executed the same.

My Commission Expires:

Le / 16/2023

ASSIGNOR:

ASSIGNOR:		
R. Lust		Date: 07/28/2018
Suresh Ramarajan		
Residing at: 4686 South Chu	igwater Way, Bo	ise, ID 83716
COUNTY OF) : ss.	
STATE OF)	
On this day of RAMARAJAN, to me know instrument, and acknowledge	1 to be the person	, 2018, before me personally appeared SURESH whose name is subscribed to the foregoing be executed the same.
		Notary Public in and for said County and State
My Commission Expires:		

ASSIGNOR:

Lifang Xu

Residing at: 6566 East Playwright Drive, Boise, ID 83716

ASSIGNOR:	
Lite-Je-R	Date: 01)08/18
Rithu K. Bhonsle	
Residing at: 1449 South Goldking Way, #2	07, Boise, ID 83709
COUNTY OF Ada) STATE OF Table)	
STATE OF Tobbo	
On this 8th day of January	, 2018, before me personally appeared RITHUK.
BHONSLE, to me known to be the person v and acknowledged to me that he/she execute	whose name is subscribed to the foregoing instrument,
and describinged to the that the site encount	a see baseau.
	Snal MR Sulm
	Notary Public in and for said County and State
My Commission Expires:	
6/16/2023	***************************************
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ASSIGNOR:		
l-th-	··········	Date: 05/08/2018
Rutuparna Narulker	***	
Residing at: 4714 East Per	gasus Court, Boise,	ID 83716
	No.	
COUNTY OF) : ss.	
STATE OF)	
RUTUPARNA NARULKA	AR, to me known to	2018, before me personally appeared be the person whose name is subscribed to the that he/she executed the same.
		Notary Public in and for said County and State
My Commission Expires:		

MuH12-2	>	Date: 7/27/2018
Matthew J. King Residing at: 6272 North	Stafford Place, Boise	, ID 83713
COUNTY OF	<u>)</u>	
STATE OF	; ss.)	
On this day of MATTHEW J. KING, to instrument, and acknowle		person whose name is subscribed to the foregoing
		Notary Public in and for said County and State

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RECORDED: 12/11/2018