01/17/2019 505285076

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT5331850

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Chih-Yi Wang	01/16/2019
Tien-Shan Hsu	01/16/2019
Cheng-Pu Chiu	01/16/2019
Yao-Jhan Wang	01/16/2019

RECEIVING PARTY DATA

Name:	UNITED MICROELECTRONICS CORP.
Street Address:	No.3, Li-Hsin Road 2, Science-Based Industrial Park
City:	Hsin-Chu City
State/Country:	TAIWAN

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16251053

CORRESPONDENCE DATA

Fax Number: (703)997-4517

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using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

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Email: Patent.admin.uspto.cr@naipo.com

WINSTON HSU Correspondent Name:

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Address Line 4: **NEW TAIPEI CITY, TAIWAN**

ATTORNEY DOCKET NUMBER:	NAUP3377USA
NAME OF SUBMITTER:	KATE YEH
SIGNATURE:	/KATE YEH/
DATE SIGNED:	01/17/2019

Total Attachments: 8

source=3369405#page1.tif source=3369405#page2.tif source=3369405#page3.tif source=3369405#page4.tif

> **PATENT** REEL: 048054 FRAME: 0483 505285076



PATENT REEL: 048054 FRAME: 0484

Title of Invention:

SEMICONDUCTOR DEVICE AND METHOD OF MANUFACTURING THE SAME

As the below named inventor, I here This declaration is directed to:	by declare that:		
☑ The attached application, or			
☐ United States application nu	mber	_filed on	, or
☐ PCT international application	number	filed on	
The above-identified application was	made or authorized to be made	by me.	
I believe that I am the original inventapplication.	or or an original joint inventor of a	ı claimed invention in	ı the
I hereby acknowledge that any willfu under18 U.S.C. 1001 by fine or impr	I false statement made in this decisonment of not more than five (5)	claration is punishable) years, or both.	e
In consideration of the payment by	UNITED MICROELECTRON CORP.	NICS having a po	ostal address of
No.3, Li-Hsin Road 2, Science	-Based Industrial Park, Hsi	n-Chu City 300, 1	Taiwan, R.O.C
(referred to as "ASSIGNEE"below) to acknowledged, andfor other good an		00), the receipt of whi	ich is hereby
I hereby sell, assign and transfer to a the entire right, title and interest in a invention as above-identified applica invention by the above application of substitutes, or extensions thereof, ar	nd to any and all improvements w tion and, in and to, all Letters Pat any continuations, continuation-i	rhich are disclosed in ent to be obtained fo in-part, divisions, ren	the r said ewals,
I hereby covenant that no assignmer entered into which would conflict with	nt, sale, agreement or encumbran n this assignment;	ice has been or will b	e made or
I further covenant that ASSIGNEE w and documents relating to said inver known and accessible to I and will te related thereto and will promptly exe	ntion and said Letters Patent and stify as to the same in any interfe	legal equivalents as rence, litigation proc	may be
representatives any and all papers, i maintain, issue and enforce said app equivalents thereof which may be no IN WITNESS WHEREOF, I have her	olication, said invention and said Lecessary or desirable to carry out	etters Patent and sa the proposes thereof	f.
Note: An application data sheet (PTC inventive entity, must accompany thi	D/SB/14 or equivalent), including s form. Use this form for each add	naming the entire ditional inventor.	

Page 1 of 8

NPO#NAU-P3377-USA:0 CUST#UMCD-2018-0469

Docket No NAUP3377USA

Inventor: Chih-Yi Wang

Signature: Chih-Yi Wang

Date: JAN 1 6 2019

NPO#NAU-P3377-USA:0 CUST#UMCD-2018-0469 Page 2 of 8

Title of Invention:

SEMICONDUCTOR DEVICE AND METHOD OF MANUFACTURING THE SAME

As the below named inventor, I here This declaration is directed to:	by declare that:		
☑ The attached application, or			
☐ United States application number		_filed on, o	or
☐ PCT international application	n number	filed on	
The above-identified application was	made or authorized to be made	by me.	
I believe that I am the original invente application.	or or an original joint inventor of a	a claimed invention in the	
I hereby acknowledge that any willful under18 U.S.C. 1001 by fine or impri	I false statement made in this de isonment of not more than five (5	claration is punishable) years, or both.	
In consideration of the payment by	UNITED MICROELECTRO	NICS having a postal addre	ss of
No.3, Li-Hsin Road 2, Science	-Based Industrial Park, Hs	in-Chu City 300, Taiwan, I	R.O.C.
(referred to as "ASSIGNEE"below) to acknowledged, andfor other good an	o I of the sum of One Dollar (\$ 1.6 ad valuable consideration.	00), the receipt of which is here	by
I hereby sell, assign and transfer to A the entire right, title and interest in an invention as above-identified application or substitutes, or extensions thereof, an	nd to any and all improvements w tion and, in and to, all Letters Par any continuations, continuation-	hich are disclosed in the tent to be obtained for said in-part, divisions, renewals	Ξ
I hereby covenant that no assignment entered into which would conflict with	nt, sale, agreement or encumbrar n this assignment;	nce has been or will be made or	•
I further covenant that ASSIGNEE wi and documents relating to said inven known and accessible to I and will te related thereto and will promptly exec	ition and said Letters Patent and stify as to the same in any interfe	legal equivalents as may be	
representatives any and all papers, ir maintain, issue and enforce said app equivalents thereof which may be ne- IN WITNESS WHEREOF, I have here	lication, said invention and said I cessary or desirable to carry out	Letters Patent and said the proposes thereof	
Note: An application data sheet (PTC inventive entity, must accompany this	D/SB/14 or equivalent), including s form. Use this form for <u>each ad</u>	naming the entire ditional inventor.	

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NPO#NAU-P3377-USA:0 CUST#UMCD-2018-0469

LEGAL NAME OF INVENTOR(ASSIGNOR)					
Inventor:	Tien-Shan Hsu	Date:	JAN 1 6 2019		
Signature:	Tien-shan Hsu				

Page 4 of 8

Title of Invention:

SEMICONDUCTOR DEVICE AND METHOD OF MANUFACTURING THE SAME

As the below named inventor, I here This declaration is directed to:	by declare that:		
☑ The attached application, or			
☐ United States application nu	mber	filed on	, or
☐ PCT international application	number	filed on	
The above-identified application was	made or authorized to be made	by me.	400
I believe that I am the original invent application.	or or an original joint inventor of	a claimed invention in the	
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(referred to as "ASSIGNEE"below) to acknowledged, andfor other good an	I of the sum of One Dollar (\$ 1.		
I hereby sell, assign and transfer to A the entire right, title and interest in ar invention as above-identified applica invention by the above application or substitutes, or extensions thereof, an	nd to any and all improvements w tion and, in and to, all Letters Par any continuations, continuation-	which are disclosed in the tent to be obtained for said in-part, divisions, renewals	EE
I hereby covenant that no assignmer entered into which would conflict with	nt, sale, agreement or encumbrar n this assignment;	nce has been or will be made	or
I further covenant that ASSIGNEE wi and documents relating to said inven known and accessible to I and will te related thereto and will promptly exec	tion and said Letters Patent and stify as to the same in any interfe	legal equivalents as may be	ts
representatives any and all papers, in maintain, issue and enforce said app equivalents thereof which may be ne IN WITNESS WHEREOF, I have her	lication, said invention and said l	Letters Patent and said	
Note: An application data sheet (PTC	0/SB/14 or equivalent), including	naming the entire	

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NPO#NAU-P3377-USA:0 CUST#UMCD-2018-0469

Docket No NAUP3377USA

LEGAL NAME OF INVENTOR(ASSIGNOR)

Inventor:

Cheng-Pu Chiu

Date:

JAN 1 6 2019

Signature:

Page 6 of 8

F#NPO-P0002E-US1201 DSB0-107U031656

PATENT REEL: 048054 FRAME: 0490

Title of Invention:

SEMICONDUCTOR DEVICE AND METHOD OF MANUFACTURING THE SAME

As the below named inventor, I here This declaration is directed to:	by declare that:			
☑ The attached application, or				
☐ United States application nu	mber	_filed on,	or	
☐ PCT international application	n number	filed on		
The above-identified application was	s made or authorized to be made	by me.		
I believe that I am the original invent application.	or or an original joint inventor of a	a claimed invention in the		
I hereby acknowledge that any willfu under18 U.S.C. 1001 by fine or impr	I false statement made in this dec isonment of not more than five (5	claration is punishable) years, or both.		
In consideration of the payment by	UNITED MICROELECTROI CORP.	NICS having a postal addr	ess of	
No.3, Li-Hsin Road 2, Science	-Based Industrial Park, Hsi	n-Chu City 300, Taiwan,	R.O.C.	
(referred to as "ASSIGNEE"below) to acknowledged, andfor other good an	o I of the sum of One Dollar (\$ 1.0 and valuable consideration.	0), the receipt of which is here	eby	
I hereby sell, assign and transfer to A the entire right, title and interest in an invention as above-identified applica invention by the above application or substitutes, or extensions thereof, ar	nd to any and all improvements w tion and, in and to, all Letters Pat r any continuations, continuation-	hich are disclosed in the ent to be obtained for said in-part, divisions, renewals	ΪΕ	
I hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment;				
I further covenant that ASSIGNEE w and documents relating to said inven known and accessible to I and will te related thereto and will promptly exec	ition and said Letters Patent and stify as to the same in any interfe	legal equivalents as may be rence litigation proceeding	5	
representatives any and all papers, in maintain, issue and enforce said app equivalents thereof which may be ne IN WITNESS WHEREOF, I have her	lication, said invention and said Licessary or desirable to carry out	etters Patent and said		
Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use this form for each additional inventor.				

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NPO#NAU-P3377-USA:0 CUST#UMCD-2018-0469

LEGAL NAME OF INVENTOR(ASSIGNOR)

Inventor: Yao-Jhan Wang Date:

JAN 1 6 2019

Signature: Yas-Than Wang

NPO#NAU-P3377-USA:0 CUST#UMCD-2018-0469 Page

F#NPO-P0002E-US1201 DSB0-107U031656

PATENT REEL: 048054 FRAME: 0492

RECORDED: 01/17/2019