#### 05/10/2017 504361475

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4408166

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
Chia-Ming Kuo	12/31/2015
Po-Jen Chuang	12/31/2015
Fu-Jung Chuang	01/18/2016
Tsai-Yu Wen	01/18/2016
Tsuo-Wen Lu	01/18/2016
Yu-Ren Wang	01/18/2016
Fu-Yu Tsai	01/18/2016

#### 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:	15592150

#### **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

**Correspondent Name:** WINSTON HSU

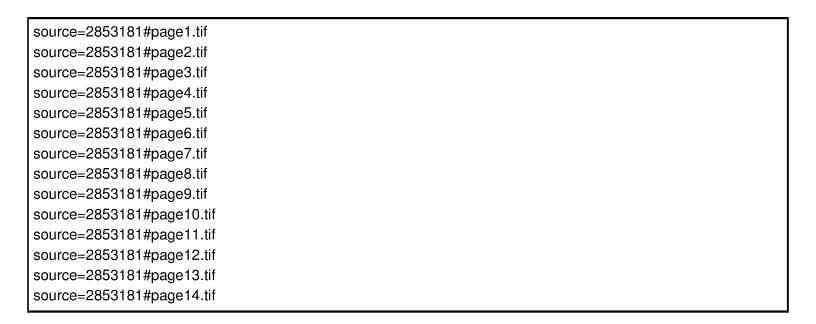
Address Line 1: 5F., NO.389, FUHE RD., YONGHE DIST.,

Address Line 4: NEW TAIPEI CITY, TAIWAN

ATTORNEY DOCKET NUMBER:	NAUP2674USA1
NAME OF SUBMITTER:	SIBYL YU
SIGNATURE:	/SIBYL YU/
DATE SIGNED:	05/10/2017

**Total Attachments: 14** 

**PATENT** REEL: 042332 FRAME: 0686



PATENT REEL: 042332 FRAME: 0687

### Title of Invention:

## SEMICONDUCTOR DEVICE AND METHOD FOR 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	ımber	filed on, c	or
☐ PCT international application	n number	filed on	
The above-identified application was	s made or authorized to be made	e by me.	
I believe that I am the original invent application.	tor or an original joint inventor of	f a claimed invention in the	
I hereby acknowledge that any willfu under18 U.S.C. 1001 by fine or impr	Il false statement made in this di isonment of not more than five (	eclaration is punishable (5) years, or both.	
In consideration of the payment by	UNITED MICROELECTRO	ONICS having a postal addre	ss of
No.3, Li-Hsin Road 2, Science	e-Based Industrial Park, H	sin-Chu City 300, Taiwan, F	R.O.C.
(referred to as "ASSIGNEE"below) to acknowledged, andfor other good ar		.00), the receipt of which is herel	by
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 ition and, in and to, all Letters Par r any continuations, continuatior	which are disclosed in the atent to be obtained for said ninpart, divisions, renewals,	Ξ
I hereby covenant that no assignment entered into which would conflict with	nt, sale, agreement or encumbra h this assignment;	ance has been or will be made or	•
I further covenant that ASSIGNEE wand 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 estify as to the same in any inter	d legal equivalents as may be ference, litigation proceeding	
representatives any and all papers, i maintain, issue and enforce said app equivalents thereof which may be ne IN WINTNESS WHEREOF, I have h	olication, said invention and said ecessary or desirable to carry ou	Letters Patent and said	signing)
Note: An application data sheet (PT0 inventive entity, must accompany thi			

Page 1 of 14

NPO#NAU-P2674-USA:0 CUST#UMCD-2015-0739

LEGAL NAME OF INVENTOR(ASSIGNOR)

Inventor:

**Chia-Ming Kuo** 

Date:

2015/12/31

Signature:

Chia-Ming Kdo

Page 2 of 14

F#NPO-P0002E-US1201

**PATENT** REEL: 042332 FRAME: 0689

CUST#UMCD-2015-0739

NPO#NAU-P2674-USA:0

DSB0-104U038832

# Title of Invention: SEMICONDUCTOR DEVICE AND METHOD FOR MANUFACTURING THE SAME

As the below named inventor, I hereby declaration is directed to:	re that:		
☑ The attached application, or			
☐ United States application number		_filed on	, or
☐ PCT international application numb	er	filed on	
The above-identified application was made of	r authorized to be made	by me.	
I believe that I am the original inventor or an application.	original joint inventor of	a claimed invention in the	•
I hereby acknowledge that any willful false st under18 U.S.C. 1001 by fine or imprisonmen	atement made in this de t of not more than five (5	claration is punishable b) years, or both.	
In consideration of the payment by CORP	D MICROELECTRO	NICS having a postal	l address of
No.3, Li-Hsin Road 2, Science-Based	l Industrial Park, Hs	in-Chu City 300, Taiv	wan, R.O.C.
(referred to as "ASSIGNEE"below) to I of the acknowledged, andfor other good and valual	sum of One Dollar (\$ 1.0) sum of One Dollar (\$ 1.0) le consideration.	00), the receipt of which i	s hereby
I hereby sell, assign and transfer to ASSIGN the entire right, title and interest in and to any invention as above-identified application and invention by the above application or any corsubstitutes, or extensions thereof, and as to	/ and all improvements w , in and to, all Letters Pa ntinuations, continuation-	vhich are disclosed in the tent to be obtained for sa in-part, divisions, renewa	id als.
I hereby covenant that no assignment, sale, a entered into which would conflict with this as	agreement or encumbrar signment;	nce has been or will be m	nade or
I further covenant that ASSIGNEE will, upon and documents relating to said invention and known and accessible to I and will testify as to related thereto and will promptly execute and	said Letters Patent and o the same in any interfe	legal equivalents as may erence, litigation proceedi	/ be
representatives any and all papers, instrume maintain, issue and enforce said application, equivalents thereof which may be necessary IN WINTNESS WHEREOF, I have hereunto	said invention and said I or desirable to carry out	Letters Patent and said the proposes thereof.	ate of signing)
Note: An application data sheet (PTO/SB/14 nventive entity, must accompany this form. U	or equivalent), including Jse this form for each ad	naming the entire	

Page 3 of 14

NPO#NAU-P2674-USA:0 CUST#UMCD-2015-0739

LEGAL NAI	ME OF INVENTOR(ASSI	,		
Inventor:	Po-Jen Chuang		Date:	20/t/12/3/
Signature:	Po-Jen	Chuang		

Page 4 of 14

# Title of Invention: SEMICONDUCTOR DEVICE AND METHOD FOR 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	file	d on	, or
☐ PCT international application	n number	f	filed on	
The above-identified application was	s made or authorized to	o be made by m	e.	
I believe that I am the original invent application.	or or an original joint i	nventor of a clair	ned invention in the	
I hereby acknowledge that any willfu under18 U.S.C. 1001 by fine or impr	I false statement made isonment of not more	e in this declarat than five (5) yea	ion is punishable rs, or both.	
In consideration of the payment by	UNITED MICROEI	LECTRONICS	having a postal ad	ddress of
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(referred to as "ASSIGNEE" below) to acknowledged, andfor other good an	o I of the sum of One I ad valuable considerati	Pollar (\$ 1.00), th	ne receipt of which is h	nereby
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 impro tion and, in and to, all rany continuations, co	vements which a Letters Patent to ntinuation-in-par	are disclosed in the be obtained for said to divisions, renewals	
I hereby covenant that no assignment entered into which would conflict with	nt, sale, agreement or an this assignment;	encumbrance ha	as been or will be mad	le or
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 exe	ition and said Letters F stifv as to the same in	Patent and legal any interference	equivalents as may be	e .
representatives any and all papers, in maintain, issue and enforce said app equivalents thereof which may be ne IN WINTNESS WHEREOF, I have he	lication, said invention cessary or desirable to	and said Letters carry out the pi	s Patent and said roposes thereof.	of signing)
Note: An application data sheet (PTC inventive entity, must accompany this	D/SB/14 or equivalent) s form. Use this form fo	, including namir or <u>each additi</u> ona	ng the entire al inventor.	

Page 5 of 14

NPO#NAU-P2674-USA:0 CUST#UMCD-2015-0739

LEGAL NAME OF INVENTOR(ASSIGNOR)

Inventor:

Fu-Jung Chuang

Date: >010/01/18

菲截我 Fu-Jung Chuang

Page 6 of 14

NPO#NAU-P2674-USA:0 CUST#UMCD-2015-0739

### Title of Invention:

## SEMICONDUCTOR DEVICE AND METHOD FOR MANUFACTURING THE SAME

As the below named inventor, I hereby declare that: This declaration is directed to:	
☑ The attached application, or	
☐ United States application number 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 inventor or an original joint inventor of a claimed invention in the application.	
I hereby acknowledge that any willful false statement made in this declaration is punishable under18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.	
In consideration of the payment by UNITED MICROELECTRONICS having a postal address of CORP.	
No.3, Li-Hsin Road 2, Science-Based Industrial Park, Hsin-Chu City 300, Taiwan, R.O.	C.
(referred to as "ASSIGNEE"below) to I of the sum of One Dollar (\$ 1.00), the receipt of which is hereby acknowledged, andfor other good and valuable consideration.	
I hereby sell, assign and transfer to ASSIGNEE and the successors and assignees of the ASSIGNEE the entire right, title and interest in and to any and all improvements which are disclosed in the invention as above-identified application and, in and to, all Letters Patent to be obtained for said invention by the above application or any continuations, continuation-in-part, divisions, renewals, substitutes, or extensions thereof, and as to Letters Patent any reissue or re-examination thereof.	
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 will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents as may be known and accessible to I and will testify as to the same in any interference, litigation proceeding related thereto and will promptly execute and deliver to ASSIGNEE or its legal	
representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents thereof which may be necessary or desirable to carry out the proposes thereof.  IN WINTNESS WHEREOF, I have hereunto set hand and seal this	g)
Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use this form for <u>each additional inventor</u> .	

Page 7 of 14

NPO#NAU-P2674-USA:0 CUST#UMCD-2015-0739

LEGAL NAI	VIE OF INVENTOR(ASSI			
Inventor:	Tsai-Yu Wen	Date:	JAN 1 8 2016	
Signature:	Teni - Tu	Jen		

Page 8 of 14

NPO#NAU-P2674-USA:0 CUST#UMCD-2015-0739

### Title of Invention:

## SEMICONDUCTOR DEVICE AND METHOD FOR MANUFACTURING THE SAME

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The above-identified application was	s made or authorized to be made	by me.	***************************************
I believe that I am the original inventage application.	tor or an original joint inventor of a	a claimed invention in the	
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hereby covenant that no assignmer entered into which would conflict with	nt, sale, agreement or encumbran h this assignment;	ce has been or will be made o	or
further covenant that ASSIGNEE wand documents relating to said invention and accessible to I and will terelated thereto and will promptly executed.	ition and said Letters Patent and I stify as to the same in any interfer	egal equivalents as may be	5
representatives any and all papers, in maintain, issue and enforce said app equivalents thereof which may be ne N WINTNESS WHEREOF, I have he	dication, said invention and said Licessary or desirable to carry out t	effers Datent and sold	signing)
Note: An application data sheet (PTC nventive entity, must accompany this	D/SB/14 or equivalent), including n s form. Use this form for <u>each add</u>	aming the entire itional inventor.	

Page 9 of 14

NPO#NAU-P2674-USA:0 CUST#UMCD-2015-0739

LEGAL NAM	ME OF INVENTOR (ASSIGN	UR)		
Inventor:	Tsuo-Wen Lu	Date:	JAN 1 8 2015	
Signature:	Tsur-Wen L	- 4		

Page 10 of 14

NPO#NAU-P2674-USA:0 CUST#UMCD-2015-0739

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hereby covenant that no assignment entered into which would conflict with	nt, sale, agreement or encumbr n this assignment;	rance has been or will be made or	<u>.</u>
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 an stify as to the same in any inter	d legal equivalents as may be	
epresentatives any and all papers, in naintain, issue and enforce said app equivalents thereof which may be ne N WINTNESS WHEREOF, I have he	lication, said invention and said	I etters Patent and said	signing)
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Page 11 of 14

NPO#NAU-P2674-USA:0 CUST#UMCD-2015-0739

LEGAL NA	ME OF INVENTOR(ASSIGNOR)			
Inventor:	Yu-Ren Wang	Date:	JAN 1 8 2016	
Signature:	Yu-Ren Wong			

Page 12 of 14

NPO#NAU-P2674-USA:0 CUST#UMCD-2015-0739

# Title of Invention: SEMICONDUCTOR DEVICE AND METHOD FOR MANUFACTURING THE SAME

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hereby covenant that no assignment entered into which would conflict with	nt, sale, agreement or encur h this assignment;	mbrance has	been or will be m	ade or
further covenant that ASSIGNEE wand documents relating to said inventorown and accessible to I and will terelated thereto and will promptly executed.	ition and said Letters Patent estify as to the same in any i	t and legal eq nterference. I	uivalents as may	he
representatives any and all papers, in maintain, issue and enforce said app equivalents thereof which may be ne N WINTNESS WHEREOF, I have he	olication, said invention and secessary or desirable to carr	said Letters F y out the prop	Patent and said poses thereof.	ate of signing)
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Page 13 of 14

NPO#NAU-P2674-USA:0 CUST#UMCD-2015-0739

### Docket No NAUP2674USA

LEGAL NAME OF INVENTOR(ASSIGNOR)						
Inventor:	Fu-Yu Tsai		Date:	JAN	1 8 2016	
Signature:	Fu-Yn	T401			****	

Page 14 of 14

NPO#NAU-P2674-USA:0 CUST#UMCD-2015-0739

**RECORDED: 05/10/2017** 

F#NPO-P0002E-US1201 DSB0-104U038832

PATENT REEL: 042332 FRAME: 0701