

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4408166

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
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
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	UNITED MICROELECTRONICS CORP.
<b>Street Address:</b>	No.3, Li-Hsin Road 2, Science-Based Industrial Park
<b>City:</b>	Hsin-Chu City
<b>State/Country:</b>	TAIWAN
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15592150
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(703)997-4517
<i>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.</i>	
<b>Phone:</b>	3027291562
<b>Email:</b>	Patent.admin.uspto.cr@naipo.com
<b>Correspondent Name:</b>	WINSTON HSU
<b>Address Line 1:</b>	5F., NO.389, FUHE RD., YONGHE DIST.,
<b>Address Line 4:</b>	NEW TAIPEI CITY, TAIWAN
<b>ATTORNEY DOCKET NUMBER:</b>	NAUP2674USA1
<b>NAME OF SUBMITTER:</b>	SIBYL YU
<b>SIGNATURE:</b>	/SIBYL YU/
<b>DATE SIGNED:</b>	05/10/2017
<b>Total Attachments: 14</b>	

source=2853181#page1.tif  
source=2853181#page2.tif  
source=2853181#page3.tif  
source=2853181#page4.tif  
source=2853181#page5.tif  
source=2853181#page6.tif  
source=2853181#page7.tif  
source=2853181#page8.tif  
source=2853181#page9.tif  
source=2853181#page10.tif  
source=2853181#page11.tif  
source=2853181#page12.tif  
source=2853181#page13.tif  
source=2853181#page14.tif

**COMBINE DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION  
USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT**

**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 under 18 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 CORP.** having a postal address of

**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, and for 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 purposes thereof.

IN WITNESS WHEREOF, I have hereunto set hand and seal this **DEC 31 2015** (Date of signing)

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.

LEGAL NAME OF INVENTOR(ASSIGNOR)

Inventor: **Chia-Ming Kuo**

Date:

2015/12/31

Signature:

Chia-Ming Kuo

**COMBINE DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION  
USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT**

**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 under 18 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 CORP.** having a postal address of \_\_\_\_\_

**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, and for 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 WITNESS WHEREOF, I have hereunto set hand and seal this DEC 31 2015 (Date of signing)

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.

LEGAL NAME OF INVENTOR(ASSIGNOR)

Inventor: **Po-Jen Chuang**

Date:

2015/12/31

Signature:

Po-Jen Chuang

**COMBINE DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION  
USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT**

**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 under 18 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 CORP.** having a postal address of \_\_\_\_\_

**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, and for 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 WITNESS WHEREOF, I have hereunto set hand and seal this JAN 18 2016 (Date of signing)

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.

LEGAL NAME OF INVENTOR(ASSIGNOR)

Inventor: **Fu-Jung Chuang**

Date: 2016/01/18

Signature: 莊駿成 Fu-Jung Chuang



**COMBINE DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION  
USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT**

**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 under 18 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 CORP.** having a postal address of \_\_\_\_\_

**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, and for 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 WITNESS WHEREOF, I have hereunto set hand and seal this JAN 18 2016 (Date of signing)

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.

LEGAL NAME OF INVENTOR(ASSIGNOR)

Inventor: **Tsai-Yu Wen**

Date: **JAN 18 2016**

Signature: Tsai-Yu Wen

**COMBINE DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION  
USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT**

**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 under 18 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 CORP.** having a postal address of

**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, and for 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 purposes thereof.

IN WITNESS WHEREOF, I have hereunto set hand and seal this JAN 18 2016 (Date of signing)

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.

LEGAL NAME OF INVENTOR(ASSIGNOR)

Inventor: **Tsuo-Wen Lu**

Date: **JAN 18 2015**

Signature: Tsuo-Wen Lu

**COMBINE DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION  
USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT**

**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 under 18 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 CORP.** having a postal address of \_\_\_\_\_

**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, and for 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 WITNESS WHEREOF, I have hereunto set hand and seal this JAN 18 2016 (Date of signing)

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.

LEGAL NAME OF INVENTOR(ASSIGNOR)

Inventor: **Yu-Ren Wang**

Date: **JAN 18 2016**

Signature:

*Yu-Ren Wang*

**COMBINE DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION  
USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT**

**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 under 18 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 CORP.** having a postal address of \_\_\_\_\_

**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, and for 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 purposes thereof.

IN WITNESS WHEREOF, I have hereunto set hand and seal this JAN 18 2016 (Date of signing)

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.

LEGAL NAME OF INVENTOR(ASSIGNOR)

Inventor: **Fu-Yu Tsai**

Date: **JAN 18 2016**

Signature: Fu-Yu Tsai