PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

SUBMISSION TYPE:NEW ASSIGNMENTNATURE OF CONVEYANCE:ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
RUILONG XIE	01/26/2017
KANGGUO CHENG	01/30/2017
TENKO YAMASHITA	01/30/2017

RECEIVING PARTY DATA

Name:	GLOBALFOUNDRIES INC.
Street Address:	PO BOX 309
Internal Address:	UGLAND HOUSE
City:	GRAND CAYMAN
State/Country:	CAYMAN ISLANDS
Postal Code:	KY1-1104

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15427594

CORRESPONDENCE DATA

Fax Number: (410)630-1656

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: 410-705-6401

Email: GUNTHER@gibbiplaw.com

Correspondent Name: GIBB & RILEY, LLC
Address Line 1: 844 WEST STREET

Address Line 2: SUITE 200

Address Line 4: ANNAPOLIS, MARYLAND 21401

	_ _
ATTORNEY DOCKET NUMBER:	IALB198-US-NP
NAME OF SUBMITTER:	PAMELA M. RILEY
SIGNATURE:	/PAMELA M. RILEY/
DATE SIGNED:	02/08/2017
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 3

PATENT REEL: 041204 FRAME: 0247

EPAS ID: PAT4265542

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PATENT REEL: 041204 FRAME: 0248

GF Ref. No.: IALB198-US-NP

COMBINED DECLARATION and ASSIGNMENT (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76) VERTICAL PILLAR-TYPE FIELD EFFECT TRANSISTOR AND METHOD Title of Invention DECLARATION As the below named inventor. Thereby declare that: This declaration The attached application, or is directed to: United States application 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. Thereby 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, I have reviewed and understand the contents of the application and am aware of the duty to disclose to the US Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR § 1.56. ASSIGNMENT For good and valuable consideration, the receipt, sufficiency and adequacy of which are hereby acknowledged, I hereby sell, assign, transfer, to GLOBALFOUNDRIES Inc. having a business address of PO Box 309, Ugland House, Grand Cayman KY1-1104 its successors and assigns, absolutely and forever, my entire right, title and interest in and to the invention listed above, together with the Application, any and all Patents that may issue in the United States and/or any foreign countries, and any reissues, re-examinations, renewals, continuations, continuation-in-parts, divisionals or extensions thereof that may be issued or granted, and all right, title and interest to the inventions contained in said Patents and Applications, for the United States and all foreign countries, and all the rights and privileges relating thereto including but not limited to the priority rights arising from said Applications, the right to recover and take all such proceedings as may be necessary for the recovery of damages or otherwise in respect of past, present and future infringement, and the right to apply for, take and maintain patents on said inventions. If any portion of this Combined Declaration or Assignment is held unenforceable, then remaining portions hereof shall nevertheless remain in full force and effect. LEGAL NAME OF INVENTOR Date: // 26/ 20/7 Inventor: Rullong Xie Signature: Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form. Lise an additional form for each additional inventor.

PATENT PATENT

GF Ref. No.: IALB198-US-NP

Title of Invention DECLARATION	COMBINED DECLARATION and ASSIGNMENT (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)			
DECLARATION As the below named inventor, I hereby declare that: This declaration is directed to: The attached application or PCT international application number	Title of	VERTICAL PILLAR-TYPE FIELD EFFECT TRANSISTOR AND METHOD		
As the below named inventor, I hereby declare that: This declaration is directed to: United States application, or is directed to: United States application or PCT international application number				
This declaration is directed to: United States application or PCT international application numberfiled on		DECLARATION		
Interest to the United States application or PCF international application number	As the below	named inventor, I hereby declare that:		
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. I have reviewed and understand the contents of the application and am aware of the duty to disclose to the US Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CPR § 1.56. **ASSIGNMENT** For good and valuable consideration, the receipt, sufficiency and adequacy of which are hereby acknowledged, I hereby sell, assign, transfer, to GLOBALFOUNDRIES Inc. having a business address of PO Box 309, Ugland House, Grand Cayman KY1-I104 its successors and assigns, absolutely and forever, my entire right, title and interest in and to the invention listed above, together with the Application, any and all Patents that may issue in the United States and/or any foreign countries, and any reissues, re-examinations, renewals, continuations, continuation-in-parts, divisionals or extensions thereof that may be issued or granted, and all right, title and interest to the inventions contained in said Patents and Applications, the rights are part of the priority rights arising from said Applications, the rights recover and take all such proceedings as may be necessary for the recovery of damages or otherwise in respect of past, present and future infringement, and the right to apply for, take and maintain patents on said inventions. If any portion of this Combined Declaration or Assignment is held unenforceable, then remaining portions hereof shall nevertheless remain in full force and effect. LEGAL NAME OF INVENTOR Inventor: Kangguo Cheng Date: 1/3 0/10 17 Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form.				
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. I have reviewed and understand the contents of the application and am aware of the duty to disclose to the US Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR § 1.56. ASSIGNMENT For good and valuable consideration, the receipt, sufficiency and adequacy of which are hereby acknowledged, I hereby sell, assign, transfer, to GLOBALFOUNDRIES Inc. having a business address of PO Box 309, Ugland House, Grand Cayman KY1-1104 its successors and assigns, absolutely and forever, my entire right, title and interest in and to the invention listed above, together with the Application, any and all Patents that may issue in the United States and/or any foreign countries, and any reissues, re-examinations, renewals, continuations, continuation-in-parts, divisionals or extensions thereof that may be issued or granted, and all right, title and interest to the inventions contained in said Patents and Applications, for the United States and all foreign countries, and all the rights and privileges relating thereto including but not limited to the priority rights arising from said Applications, the right to recover and take all such proceedings as may be necessary for the recovery of damages or otherwise in respect of past, present and future infringement, and the right to apply for, take and maintain patents on said inventions. If any portion of this Combined Declaration or Assignment is held unenforceable, then remaining portions hereof shall nevertheless remain in full force and effect. LEGAL NAME OF INVENTOR Inventor: Kangguo Cheng Date: 1/30/2017 Signature: Wangguo Cheng Date: 1/30/2017		United States application or PCT international application number filed on		
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Inventor: Kangguo Cheng Date: 1/30/2017 Signature: White: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form.				
Inventor: Kangguo Cheng Date: 1/30/2017 Signature: White: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form.	TEGAT NEC			
Signature: Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form.				
Use an additional form for each additional inventor.				

PATENT REEL: 041204 FRAME: 0250

GF Ref. No.: IALB198-US-NP

COMBINED DECLARATION and ASSIGNMENT (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)		
Title of Invention	VERTICAL PILLAR-TYPE FIELD EFFECT TRANSISTOR AND METHOD	
	DECLARATION	
As the below r	named inventor. Thereby declare that:	
This declaration is directed to:	on The attached application, or	
	United States application or PCT international application number filed on	
The above-ide	ntified 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.		
I have reviewed Trademark Off	d and understand the contents of the application and am aware of the duty to disclose to the US Patent and fice all information known to me to be material to patentability as defined in 37 CFR § 1.56.	
	ASSIGNMENT	
For good and valuable consideration, the receipt, sufficiency and adequacy of which are hereby acknowledged. I hereby sell, assign, transfer, to GLOBALFOUNDRIES Inc. having a business address of PO Box 309, Ugland House, Grand Cayman KY1-1104 its successors and assigns, absolutely and forever, my entire right, title and interest in and to the invention listed above, together with the Application, any and all Patents that may issue in the United States and/or any foreign countries, and any reissues, re-examinations, renewals, continuations, continuation-in-parts, divisionals or extensions thereof that may be issued or granted, and all right, title and interest to the inventions contained in said Patents and Applications, for the United States and all foreign countries, and all the rights and privileges relating thereto including but not limited to the priority rights arising from said Applications, the right to recover and take all such proceedings as may be necessary for the recovery of damages or otherwise in respect of past, present and future infringement, and the right to apply for, take and maintain patents on said inventions.		
If any portion shall neverthel	of this Combined Declaration or Assignment is held unenforceable, then remaining portions hereof less remain in full force and effect.	
LEGAL NAME	OF INVENTOR	
Inventor: 1	<u>fenko Yamashita</u> Date: 1/30/20/7	
Signature:	1. The	
Note: An applica	tion data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form.	

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PATENT REEL: 041204 FRAME: 0251