504109822 11/23/2016

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4156491

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
RENATA A. CAMILLO-CASTILLO	11/23/2016
VIBHOR JAIN	11/21/2016
QIZHI LIU	11/21/2016
ANTHONY K. STAMPER	11/22/2016

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:	15360295

CORRESPONDENCE DATA

Fax Number: (703)848-2981

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.

Email: achernavtseva@rmsclaw.com
Correspondent Name: ANDREW M. CALDERON

Address Line 1: 7918 JONES BRANCH DRIVE, SUITE 500

Address Line 4: MCLEAN, VIRGINIA 22102

NAME OF SUBMITTER:	ANDREW M. CALDERON
SIGNATURE:	/Andrew M. Calderon/
DATE SIGNED:	11/23/2016
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 4

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PATENT 504109822 REEL: 040411 FRAME: 0502

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PATENT REEL: 040411 FRAME: 0503 (1/4) GF Ref. No.: IBUR020-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	ON A SAME WAFER
	DECLARATION
As the below	named inventor, I hereby declare that:
This declaration is directed to:	
	United States application or PCT international application number filed on
The above-ide	entified 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.	
	ed 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.
sell, assign, tr GRAND CAN title and intered United States divisionals or said Patents a including but proceedings a and the right to	ASSIGNMENT and valuable consideration, the receipt, sufficiency and adequacy of which are hereby acknowledged, I hereby ansfer, to GLOBALFOUNDRIES Inc. having a business address of PO BOX 309, UGLAND HOUSE, (MAN, CAYMAN ISLANDS KY1-1104 its successors and assigns, absolutely and forever, my entire right, est in and to the invention listed above, together with the Application, any and all Patents that may issue in the and/or any foreign countries, and any reissues, re-examinations, renewals, continuations, continuation-in-parts, extensions thereof that may be issued or granted, and all right, title and interest to the inventions contained in and Applications, for the United States and all foreign countries, and all the rights and privileges relating thereto not limited to the priority rights arising from said Applications, the right to recover and take all such as may be necessary for the recovery of damages or otherwise in respect of past, present and future infringement, to apply for, take and maintain patents on said inventions. In of this Combined Declaration or Assignment is held unenforceable, then remaining portions hereof eless remain in full force and effect.
LEGAL NAM Inventor: Signature:	Renata A. CAMILLO-CASTILLO Date: 11.23.2016

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.

COMBINED DECLARATION and ASSIGNMENT (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

	HETEROJUNCTION BIPOLAR TRANSISTOR DEVICE INTEGRATION SCHEMES
Title of	ON A SAME WAFER
Invention	
	DECLARATION
Ac the below	named inventor, I hereby declare that:
cas incocion	numero anventor, i neremy mediate man
This declarati	ion
is directed to:	
	United States application or PCT international application numberfiled on
The above-id	entified 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 ackr	nowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by
	sonment of not more than five (5) years, or both.
	red and understand the contents of the application and am aware of the duty to disclose to the US Patent and
Trademark O	office all information known to me to be material to patentability as defined in 37 CFR § 1.36.
	ASSIGNMENT
For coor	d and valuable consideration, the receipt, sufficiency and adequacy of which are hereby acknowledged. I
	issign, transfer, to GLOBALFOUNDRIES Inc. having a business address of PO BOX 309, UGLAND
	AND CAYMAN, CAYMAN ISLANDS KY1-1104 its successors and assigns, absolutely and forever, my
	itle 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 co	ontained in said Patents and Applications, for the United States and all foreign countries, and all the rights
and privilege	is relating thereto including but not limited to the priority rights arising from said Applications, the right to take all such proceedings as may be necessary for the recovery of damages or otherwise in respect of past.
reserved and	uture infringement, and the right to apply for, take and maintain patents on said inventions.

If any north	on of this Combined Declaration or Assignment is held unenforceable, then remaining portions hereof
shall nevert	heless remain in full force and effect.
TERLAT NA	ME OF INVENTOR

Inventor	Vibhor JAIN Date :
Signature	
	heation data cheef (FT()/88/14 or equivalent), including naming the entire inventive entity, must accompany this form.
Note: An app	NEW MARKANIA CONTROL OF THE CONTROL

Lee no additional form for each additional inventor. PATENT

REEL: 040411 FRAME: 0505

COMBINED DECLARATION AND ASSIGNMENT OF CERTIAN FOR LITILITY OR DESIGN APPLICATION USES ON APPLICATION DATASHEET 137 CERT 761

DECLARATION As the below named inventor, I hereby declare that This declaration The attached application, or is directed to: United States application or PCT international application number filed on
The above distributed application was made or authorized to be made by me. The above distributed application was made or authorized to be made by me. The above distributed application was made or authorized to be made by me. The above distributed application was made or authorized to be made by me. The above distributed application was made or authorized to be made by me. The above distributed application was made or authorized to be made in the declaration is punishable under 18 U.S.C. 1001 by fine or impresonment of not more than five (3) years, or both. I have reviewed and understand the coments of the application and an aware of the duty to disclose to the U.S. Patent and Treatmark 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 bereby sell, resign, transfer, to GLOBALPONDIRES Inc. having a business address of PO BOX 309, UGLAND DOD ISSU GRANDLAYMAN CAYMAN ISLANDS KYI-1 [04] its successors and assigns, absolutely and forever, my enture regin, the and interest in and to the invention listed above, together with the Application, any and all Patents that may issue in its 1 united States and/or any foreign countries, and any reissues, re-examination, renewals, continuations, continuation in spars, divisionals or extensions thereof that may be issued or granted, and all right, title and interest to the monitories contained in said Patents and Applications, for 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, pressum and distant infringement, and the right to apply for take and maintain patents of the relations.
United States application or PCT international application numberfiled on
The above identified application was made or authorized to be made by me: [Bed on Bellow that I am the original inventor or an original joint inventor of a claimed invention in the application.] [Bereby acknowledge that any weilful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or approximated of not more than five (5) years or both. [Brue 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** Per good and valuable consideration, the receipt, sufficiency and adequacy of which are hereby acknowledged. I be the subject of the content of the patentability as defined in 37 CFR § 1.56. **ASSIGNMENT** Per good and valuable consideration, the receipt, sufficiency and adequacy of which are hereby acknowledged. I be the subject of the patentability as defined in 37 CFR § 1.56. **ASSIGNMENT** Per good and valuable consideration, the receipt, sufficiency and adequacy of which are hereby acknowledged. I be the subject of the patentability as defined in 37 CFR § 1.56. **ASSIGNMENT** Per good and valuable consideration, the receipt, sufficiency and adequacy of which are hereby acknowledged. I be the subject of the patentable of th
I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by time 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 dary to disclose to the US Patent and Trademurk 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 self assign, transfer to GLOBALFOLINDRIES inc. having a business address of PO BOX 309, UGLAND HOUSE GRAND CAYMAN CAYMAN ISLANDS KY1-1104 its successors and assigns, absolutely and forever, my entire right into 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, continuations 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 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 applications contained in said Patents and Applications, for the United States and all foreign countries, and all the rights and provides relating therein 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, resent and latter information, and the right to apply for, take and maintain patents on said inventions.
I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by time or imprisonment of not more than five (5) years, or both. I have reviewed and inderstand the contents of the application and am aware of the duty to disclose to the US Patent and Trademurk 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 self, assign, transfer to GLOBALFOUNDRIES inc. having a business address of PO BOX 309, UGLAND HOUSE GRAND CAYMAN CAYMAN ISLANDS KY1-1104 its successors and assigns, absolutely and forever, my entire right into 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, continuations in-parts, divisionals or extensions thereof that may be issued or grantle, and all right, table and interest to the inventions contained in said Patents and Applications, for the United States and all right table and interest to the inventions contained in said Patents, and Applications, for the United States and all foreign countries, and all the rights and approximent relating thereto including but no timited to the priority rights arising from said Applications, the right to recover and take all much proceedings as may be necessary for the recovery of damages or otherwise in respect of past, present and lattice informations, and are right to apply for, take and maintain patents on said inventions.
Insert waterowledge 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 (3) years, or both. These reviewed and understand the contents of the application and am aware of the duty to disclose to the U.S.Patent and Trademark Office all information known to me to be material to patentiability as defined in 37 CFR § 1.56. **ASSIGNMENT** For good and valuable consideration, the receipt, sufficiency and adequacy of which are hereby acknowledged, I tereby sell, assign, transfer, to GLOBALFOUNDRIES Inc. having a business address of PO BOX 309, U.G. AND HOTSE, GRANDL AYMAN CAYMAN ISLANDS KY1-1104 its successors and assigns, absolutely and forever, my mire right, title and interest in and to the invention fisled above, together with the Application, any and all Patents that may issue in the United States and/or any foreign countries, and any resisues, re-examinations, renewals, continuation-in-parts, divisionals or extensions thereof that may be issued or granted, and all right, title and interest to the meantions contained in said Patents and Applications, for the United States and all foreign countries, and all the right to enventions contained in said Patents and Applications, for the United States and all foreign countries, and all the right to enventions contained in said Patents and Applications, for the United States and all foreign countries, and all the right to enventions contained in said Patents and the right to envention and little infilingement, and the right to apply for, take and maintain patents on said inventions.
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For good and valuable consideration, the receipt sufficiency and adequacy of which are bereby acknowledged. I best a situation, transfer to GLOBALT GLOCAND STATE having a business address of PO 30X 300 UCL AND STATE GLOCAND STATE AND STATE TO A situate state and assigns, absolutely and forever, my enter each other and one certain lead above, together with the Application, any and all Plaents that may ease in the United States and/or any foreign countries, and any resource, re-examinations, tonewish continuations, continuations, continuations for the United States and all right, title and interest to the promote countries, and all the right surfaces countries, and all the rights and proceedings thereo including but not limited to the priority rights arising from said Applications, the right to countries take all that proceedings as may be necessary for the recovery of damages or otherwise in respect of past and and liquid infringment, and the right to apply for take and maintain patents on said inventions.
Hereby sets as an entering of CBATFORADES for having a business address of PO BOX 103 U.G. AND STORES OF SETS AND A CAPARADES AND SETS AND
enge opail sale and meases in and to the invention listed above together with the Application, any and an Pacott that may issue at the United States and or any forcion countries, and any resource re-examinations, to rewalls, continuations, communication in parts, discissionals or excessions thereof that may be issued or granted, and all right, title and interest to the measurement of the states and all forcion countries, and all the rights are many accountries, and all the rights and provide the states are all states and all states and all the right to recover and take all such proceedings as may be necessary for the recovery of damages or otherwise in respect of past, and take and transfer infringement, and the right to apply for take and maintain patents or said inventions.
collegators in parts discounts or extensions thereof that may be issued or extitled, and all right, title as consection the mean row consend in said Pricery and Applications, for the United States and all foreign countries, and all the rights and provide a relating thereto including but not limited to the priority rights arising from said Applications, the right to recovery the latest and the expect of parts and take all such proceedings as may be necessary for the recovery of damages of otherwise in respect of parts are and future in tingeneers, and the right to apply for, take and maintain patents on said inventions.
recover and lating addressed and the right to apply for take and maintain patents on state there is a respect of part, present and the right to apply for take and maintain patents on said inventions.
Huny portion of this Combined Declaration or Assignment is held unenforceable, then remaining portions bereaf-
shall acvertheless remain to full force and effect.
11/2/16 manus quarte

Note: An application data sheet (FTO/SB/14 or equivalent), including naming the entire inventive entire, must accompany this form. One an additional form for each additional inventor. 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	HETEROJUNCTION BIPOLAR TRANSISTOR DEVICE INTEGRATION SCHEMES ON A SAME WAFER
	DECLARATION
As the below r	named inventor, I hereby declare that:
This declarations directed to:	m The attached application, or
	United States application or PCT international application numberfiled on
	ntified application was made or authorized to be made by me am the original inventor or an original joint inventor of a claimed invention in the application.
I hereby ackno-	wledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by nment of not more than five (5) years, or both
I have reviewed Trademark Offi	and understand the contents of the application and am aware of the duty to disclose to the US Patent and ice all information known to me to be material to patentability as defined in 37 CFR § 1.56.
For good a	ASSIGNMENT fid valuable consideration, the receipt, sufficiency and adequacy of which are hereby acknowledged, t
HOUSE GRAY entire right, title may issue in the continuation-in- inventions conte and privileges re recover and take	ign. transfer, to GLOBALFOUNDRIES Inc. having a business address of PO BOX 309 UGLAND ND CAYMAN. CAYMAN ISLANDS KY1-1104 its successors and assigns, absolutely and forever, my and interest in and to the invention listed above, together with the Application, any and all Patents that timed States and/or any foreign countries, and any reissues, re-examinations, renewals, continuations, parts, divisionals or extensions thereof that may be issued or granted, and all right, title and interest to the aneed in said Patents and Applications, for the United States and all foreign countries, and all the rights elating thereto including but not limited to the priority rights arising from said Applications, the right to eath such proceedings as may be necessary for the recovery of damages or otherwise in respect of past, the infringement, and the right to apply for, take and maintain patents on said inventions.
lf any portion (shall neverthele	of this Combined Declaration or Assignment is held unenforceable, then remaining portions hereof ess remain in full force and effect.
	11192/2-116 2-, 6-27
	on data cheef (PTO/SEC) or equivalent), including naming the entire inscensor entity, must accompany this form

PATENT REEL: 040411 FRAME: 0507

RECORDED: 11/23/2016