504735784 01/18/2018

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4782510

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
PINGHUI LI	01/03/2018
HAIQING ZHOU	01/03/2018
LIYING ZHANG	01/03/2018
WANBING YI	01/04/2018
MING ZHU	01/03/2018
DANNY PAK-CHUM SHUM	01/03/2018
DARIN CHAN	01/04/2018

RECEIVING PARTY DATA

Name:	GLOBALFOUNDRIES SINGAPORE PTE. LTD.
Street Address:	60 WOODLANDS INDUSTRIAL PARK D STREET 2
City:	SINGAPORE
State/Country:	SINGAPORE
Postal Code:	738406

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15858655

CORRESPONDENCE DATA

Fax Number: (703)519-9958

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: (703) 519-9951

Email: docket@dcpatent.com

Correspondent Name: DITTHAVONG & STEINER, P.C. Address Line 1: 44 CANAL CENTER PLAZA

Address Line 2: SUITE 322

Address Line 4: ALEXANDRIA, VIRGINIA 22314

ATTORNEY DOCKET NUMBER:	P8780US00
NAME OF SUBMITTER:	KHOUANE DITTHAVONG
SIGNATURE:	/Khouane Ditthavong/
DATE SIGNED:	01/18/2018

504735784 PATENT REEL: 044658 FRAME: 0952

Total Attachments: 7

source=JSG0670-US-NP_P8780US00_CombinedDecandAssign_filed#page1.tif source=JSG0670-US-NP_P8780US00_CombinedDecandAssign_filed#page2.tif source=JSG0670-US-NP_P8780US00_CombinedDecandAssign_filed#page3.tif source=JSG0670-US-NP_P8780US00_CombinedDecandAssign_filed#page4.tif source=JSG0670-US-NP_P8780US00_CombinedDecandAssign_filed#page5.tif source=JSG0670-US-NP_P8780US00_CombinedDecandAssign_filed#page6.tif source=JSG0670-US-NP_P8780US00_CombinedDecandAssign_filed#page7.tif

PATENT REEL: 044658 FRAME: 0953

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	A DENSITY-CONTROLLABLE DUMMY FILL STRATEGY FOR NEAR-MRAM PERIPHERY AND FAR-OUTSIDE-MRAM LOGIC REGIONS FOR EMBEDDED MRAM TECHNOLOGY AND METHOD FOR PRODUCING THE SAME
	DECLARATION
As the below	named inventor, I hereby declare that:
This declaration	
3 another 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.
	owledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by comment of not more than five (5) years, or both.
I have review Trademark O	ed and understand the contents of the application and am aware of the duty to disclose to the US Patent and ffice all information known to me to be material to patentability as defined in 37 CFR § 1.56.
hereby sell, a Industrial Par interest in an United States parts, divisio contained in privileges rel recover and to present and fi	ASSIGNMENT and valuable consideration, the receipt, sufficiency and adequacy of which are hereby acknowledged, I ssign, transfer, to GLOBALFOUNDRIES Singapore Pte. Ltd. having a business address of 60 Woodlands k D Street 2, Singapore, 738406, its successors and assigns, absolutely and forever, my entire right, title and d 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- nals or extensions thereof that may be issued or granted, and all right, title and interest to the inventions said Patents and Applications, for the United States and all foreign countries, and all the rights and ating thereto including but not limited to the priority rights arising from said Applications, the right to ake all such proceedings as may be necessary for the recovery of damages or otherwise in respect of past, intere—infringement, and the right to apply for, take and maintain patents on said inventions. In of this Combined Declaration or Assignment is held unenforceable, then remaining portions hereof
shall neverti	eless remain in full force and effect.
LEGAL NA	ME OF INVENTOR
inventor:	Pingina Li Date: Jan 34, 70 (8)
Signature	
	ication data sheet (FTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form.

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	A DENSITY-CONTROLLABLE DUMMY FILL STRATEGY FOR NEAR-MRAM PERIPHERY AND FAR-OUTSIDE-MRAM LOGIC REGIONS FOR EMBEDDED MRAM TECHNOLOGY AND METHOD FOR PRODUCING THE SAME	
	DECLARATION	
As the below	named inventor, I hereby declare that:	
This declaration		
	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 acknowing fine or impris	owledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by onment of not more than five (5) years, or both.	
I have review Trademark Of	ed and understand the contents of the application and am aware of the daty 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 Singapore Pte. Ltd. having a business address of 60 Woodlands Industrial Park D Street 2, Singapore, 738406, 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-inparts, 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.		
	E OF INVENTOR Haiqing ZHOU Date: 3 Jan 2018	
inventor:	Haiqing ZHOU Date: 5 VAn 2018	
Signature:		
Note: An application	ration data sheet (FTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form, al 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	A DENSITY-CONTROLLABLE DUMMY FILL STRATEGY FOR NEAR-MRAM PERIPHERY AND FAR-OUTSIDE-MRAM LOGIC REGIONS FOR EMBEDDED MRAM TECHNOLOGY AND METHOD FOR PRODUCING THE SAME		
***************************************	DECLARATION		
As the below	named inventor, I hereby declare that:		
This declarati			
in any order to	United States application or PCT international application numberfiled on		
	The above-identified application was made or authorized to be made by me.		
1 believe that	I am the original inventor or an original joint inventor of a claimed invention in the application.		
I hereby ackt fine or impris	sowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by somment of not more than five (5) years, or both.		
I have review Trademark C	I have reviewed and understand the contents of the application and am aware of the duty to disclose to the US Petent 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 Singapore Pte. Ltd. having a business address of 60 Woodlands Industrial Park D Street 2, Singapore, 738406, 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 Umited States and/or any foreign countries, and any reissues, re-examinations, renewals, continuations, continuation-inparts, 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 NA	ME OF INVENTOR		
Inventor:	Liying ZHANG Date: Jan 3411, 248		
Signature			
Note: An app	dication data sheet (PTO/SB/18 or equivalent), including ususing the entire inventive entity, must accompany this form.		

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	A DENSITY-CONTROLLABLE DUMMY FILL STRATEGY FOR NEAR-MRAM PERIPHERY AND FAR-OUTSIDE-MRAM LOGIC REGIONS FOR EMBEDDED MRAM TECHNOLOGY AND METHOD FOR PRODUCING THE SAME	
	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-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 ackra fine or imprise	owledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by mment of not more than five (5) years, or both.	
I have reviewe Trademark Of	ed and understand the contents of the application and am aware of the duty to disclose to the US Patent and line 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 Singapore Pie. Ltd. having a business address of 60 Woodlands Industrial Park D Street 2. Singapore, 738406, 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-inparts, 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 tights 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 neverthe	of this Combined Declaration or Assignment is held unenforceable, then remaining portions hereof dess remain in full force and effect.	
LEGAL NAM	E OF INVENTOR	
Inventor:	Wanbing YI Date: 4-Jax-24018	
Signature	Wanking Vi	
Note: An applic Use an addition:	ation data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form, If form for each additional inventor.	

£4625460v1

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	A DENSITY-CONTROLLABLE DUMMY FILL STRATEGY FOR NEAR-MRAM PERIPHERY AND FAR-OUTSIDE-MRAM LOGIC REGIONS FOR EMBEDDED MRAM TECHNOLOGY AND METHOD FOR PRODUCING THE SAME	
	DECLARATION	
As the below	named inventor, I hereby declare that:	
This declarati	A see market of the second of	
	United States application or PCT international application numberfiled on	
The above-ide	entified application was made or authorized to be made by me.	
Ubelieve that	I am the original inventor or an original joint inventor of a claimed invention in the application.	
I hereby ackn fine or impris	owledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by omment of not more than five (5) years, or both.	
I have reviewed and understand the contents of the application and an 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 GLOBALPOUNDRIES Singapore Pte. Ltd. having a business address of 60 Woodlands Industrial Park D Street 2, Singapore, 738406, 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-imparts, 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 NAM	E OF INVENTOR	
Inventor: Ming ZHU Date: Jan 3th, 2015		
Signature: 22		
Note: An applic	cation data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form.	

84625460v)

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	A DENSITY-CONTROLLABLE DUMMY FILL STRATEGY FOR NEAR-MRAM PERIPHERY AND FAR-OUTSIDE-MRAM LOGIC REGIONS FOR EMBEDDED MRAM TECHNOLOGY AND METHOD FOR PRODUCING THE SAME
	DECLARATION
As the below	named inventor, I hereby declare that:
This declarati	on   The attached application, or
	United States application or PCT international application number filed on
The above-id	entified application was made or authorized to be made by me.
, and the second second	I am the original inventor or an original joint inventor of a claimed invention in the application.
	owledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by onment of not more than five (5) years, or both.
I have review Trademark O	red and understand the contents of the application and am aware of the duty to disclose to the US Paient and flice all information known to me to be material to patentability as defined in 37 CFR § 1.56.
hereby sell, a Industrial Par interest in ar United States parts, division contained in privileges ra recover and to present and f If any portice	and valuable consideration, the receipt, sufficiency and adequacy of which are hereby acknowledged, I assign, transfer, to GLOBALFOUNDRIES Singapore Pte. Ltd. having a business address of 60 Woodlands k D Street 2. Singapore, 738406, its successors and assigns, absolutely and forever, my entire right, title and it 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-insuls or extensions thereof that may be issued or granted, and all right, title and interest to the inventions said Patents and Applications, for the United States and all foreign countries, and all the rights and lating thereto including but not limited to the priority rights arising from said Applications, the right to ake all such proceedings as may be necessary for the recovery of damages or otherwise in respect of past, unure infringement, and the right to apply for, take and maintain patents on said inventions.  In of this Combined Declaration or Assignment is held unenforceable, then remaining portions hereof reless remain in full force and effect.
T COCO A L Á LA C	ME OF INVENTOR
LECIAL PIA:	Danny Pak-chum SHUM Date: Tan 344, 20 8
Signature	2254
	lication data thert (PTO/SB/14 or equivalent), including passing the entire inventive entity, must accompany this form, and 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	A DENSITY-CONTROLLABLE DUMMY FILL STRATEGY FOR NEAR-MRAM PERIPHERY AND FAR-OUTSIDE-MRAM LOGIC REGIONS FOR EMBEDDED MRAM TECHNOLOGY AND METHOD FOR PRODUCING THE SAME
	DECLARATION
As the below	named inventor, I hereby declare that:
This declarati	
io different io.	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.
	owledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by comment of not more than five (5) years, or both.
I have review Trademark O	red and understand the contents of the application and am aware of the duty to disclose to the US Patent and ffice 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 Singapore Pte. Ltd. having a business address of 60 Woodlands Industrial Park D Street 2, Singapore, 738406, 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.	
	on of this Combined Declaration or Assignment is held unenforceable, then remaining portions hereof neless remain in full force and effect.
LEGAL NAI	ME OF INVENTOR
Inventor:	Darin CHAN Date: 1/4/2018
Signature	Darin Chan
	lication data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form. nal form for each additional inventor.

PATENT REEL: 044658 FRAME: 0960

**RECORDED: 01/18/2018**