503685214 02/10/2016

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ATSUSHI FUKUMOTO	01/21/2016
FUMIKI AISO	01/21/2016
TAKESHI SHUNDO	01/26/2016
HAJIME NAGANO	01/22/2016

RECEIVING PARTY DATA

Name:	KABUSHIKI KAISHA TOSHIBA
Street Address:	1-1, SHIBAURA 1-CHOME, MINATO-KU
City:	TOKYO
State/Country:	JAPAN

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15019271

CORRESPONDENCE DATA

Fax Number: (703)413-2220

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) 413-3000

Email: mguerrero@oblon.com

Correspondent Name: OBLON, ET AL. Address Line 1: 1940 DUKE STREET

Address Line 4: ALEXANDRIA, VIRGINIA 22314

ATTORNEY DOCKET NUMBER:	467078US20
NAME OF SUBMITTER:	MELANIE GUERRERO
SIGNATURE:	/Melanie Guerrero/
DATE SIGNED:	02/10/2016
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 4

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> **PATENT** REEL: 037693 FRAME: 0914 503685214

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PATENT REEL: 037693 FRAME: 0915

Title of Invention	SEMICONDUCTOR MANUFACTURING APPARATUS AND METHOD OF MANUFACTURING SEMICONDUCTOR DEVICE
As the below named in	enventor, I hereby declare that:
is directed to: \Box U	he attached application, or nited States application or PCT international application number led on
The above-identified a	pplication 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.
having a place of bus entire right, title and in	SHIKI KAISHA TOSHIBA (hereinafter referred to as "ASSIGNEE") iness at: 1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, Japan is desirous of acquiring the nterest in and to said invention and in and to any Letters Patent that may be granted therefore d its territorial possessions and in any and all foreign countries;
acknowledged, and for said ASSIGNEE, the f and in all foreign coun other relevant Internati interest in and to any	RE, in consideration of the sum of FIVE DOLLARS (\$5.00), the receipt whereof is hereby other good and valuable consideration, I, by these presents do sell, assign and transfer unto full and exclusive right to the said invention in the United States and its territorial possessions tries (including the right to claim priority under the terms of the International Convention and ional Treaties and Arrangements from the aforesaid application) and the entire right, title and and all Letters Patent which may be granted therefor in the United States and its territorial my and all foreign countries and in and to any and all divisions, reissues, continuations, wals thereof.
any and all foreign co assignee of my entire in (his) successors and as	and request the Patent Office Officials in the United States and its territorial possessions and untries to issue any and all of said Letters Patent, when granted, to said ASSIGNEE as the right, title and interest in and to the same, for the sole use and behoof of said ASSIGNEE, its ssigns, to the full end of the term for which said Letters Patent may be granted, as fully and build have been held by me had this Assignment and sale not been made.
Further, I agree that I will communicate to said ASSIGNEE or its (his) representatives any facts known to me respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, substitute, renewal and reissue applications, execute all necessary assignment papers to cause any and all of said Letters Patent to be issued to said ASSIGNEE, make all rightful oaths, and, generally do everything possible to aid said ASSIGNEE, its (his) successors and assigns, to obtain and enforce proper protection for said invention in the United States and its territorial possessions and in any and all foreign countries.	
I hereby acknowled 1001 by fine or impriso	lge that any willful false statement made in this declaration is punishable under 18 U.S.C. onment of not more than five (5) years, or both.
LEGAL NAME OF IN	VENTOR
Inventor: Atsushi FU	JKUMOTO Date: <u>Jan 21, 20 6</u>
Signature:Ottu	ichi Fukumato

OBLON, McCLELLAND, MAIER & NEUSTADT, L.L.P.

ATTORNEYS AT LAW 1940 DUKE STREET ALEXANDRIA, VIRGINIA 22314

Title of	SEMICONDUCTOR MANUFACTURING APPARATUS AND METHOD
Invention	OF MANUFACTURING SEMICONDUCTOR DEVICE
As the below named in	nventor, I hereby declare that:
This declaration T	he attached application, or
is directed to: \Box \Box	nited States application or PCT international application number
	led on
	pplication was made or authorized to be made by me.
	original inventor or an original joint inventor of a claimed invention in the application.
entire right, title and in	SHIKI KAISHA TOSHIBA (hereinafter referred to as "ASSIGNEE") iness at: 1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, Japan is desirous of acquiring the atterest in and to said invention and in and to any Letters Patent that may be granted therefore dist territorial possessions and in any and all foreign countries;
acknowledged, and for said ASSIGNEE, the f and in all foreign coun other relevant Internati interest in and to any	RE, in consideration of the sum of FIVE DOLLARS (\$5.00), the receipt whereof is hereby of other good and valuable consideration, I, by these presents do sell, assign and transfer unto full and exclusive right to the said invention in the United States and its territorial possessions tries (including the right to claim priority under the terms of the International Convention and ional Treaties and Arrangements from the aforesaid application) and the entire right, title and and all Letters Patent which may be granted therefor in the United States and its territorial ty and all foreign countries and in and to any and all divisions, reissues, continuations, wals thereof.
any and all foreign con assignee of my entire r (his) successors and as	and request the Patent Office Officials in the United States and its territorial possessions and untries to issue any and all of said Letters Patent, when granted, to said ASSIGNEE as the ight, title and interest in and to the same, for the sole use and behoof of said ASSIGNEE, its signs, to the full end of the term for which said Letters Patent may be granted, as fully and suld have been held by me had this Assignment and sale not been made.
respecting said invent continuation, substitute all of said Letters Pate possible to aid said As	I will communicate to said ASSIGNEE or its (his) representatives any facts known to me ion, and testify in any legal proceeding, sign all lawful papers, execute all divisional, renewal and reissue applications, execute all necessary assignment papers to cause any and ent to be issued to said ASSIGNEE, make all rightful oaths, and, generally do everything SSIGNEE, its (his) successors and assigns, to obtain and enforce proper protection for said States and its territorial possessions and in any and all foreign countries.
1001 by fine or impriso	ge that any willful false statement made in this declaration is punishable under 18 U.S.C. nment of not more than five (5) years, or both.
LEGAL NAME OF IN	VENTOR
Inventor: <u>Fumiki AI</u>	
Signature: <u>Fumi</u>	le siso

OBLON, McCLELLAND, MAIER & NEUSTADT, L.L.P. ATTORNEYS AT LAW

1940 DUKE STREET ALEXANDRIA, VIRGINIA 22314

Title of	SEMICONDUCTOR MANUFACTURING APPARATUS AND METHOD
Invention	OF MANUFACTURING OF GOADLIGOOD DEFICE
	OF MANUFACTURING SEMICONDUCTOR DEVICE
As the below named in	nventor, I hereby declare that:
This declaration T	he attached application, or
is directed to: U	nited States application or PCT international application number
fi	led on
	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.
WHEREAS, <u>KABU</u> having a place of bus entire right, title and i	JSHIKI KAISHA TOSHIBA (hereinafter referred to as "ASSIGNEE") iness at: 1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, Japan is desirous of acquiring the nterest in and to said invention and in and to any Letters Patent that may be granted therefore it its territorial possessions and in any and all foreign countries;
said ASSIGNEE, the is and in all foreign coun other relevant Internat- interest in and to any	RE, in consideration of the sum of FIVE DOLLARS (\$5.00), the receipt whereof is hereby it other good and valuable consideration, I, by these presents do sell, assign and transfer unto full and exclusive right to the said invention in the United States and its territorial possessions stries (including the right to claim priority under the terms of the International Convention and ional Treaties and Arrangements from the aforesaid application) and the entire right, title and and all Letters Patent which may be granted therefor in the United States and its territorial may and all foreign countries and in and to any and all divisions, reissues, continuations, wals thereof.
assignce of my entire in this) successors and as	and request the Patent Office Officials in the United States and its territorial possessions and untries to issue any and all of said Letters Patent, when granted, to said ASSIGNEE as the right, title and interest in and to the same, for the sole use and behoof of said ASSIGNEE, its signs, to the full end of the term for which said Letters Patent may be granted, as fully and build have been held by me had this Assignment and sale not been made.
Further, I agree that I will communicate to said ASSIGNEE or its (his) representatives any facts known to me respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, substitute, renewal and reissue applications, execute all necessary assignment papers to cause any and all of said Letters Patent to be issued to said ASSIGNEE, make all rightful oaths, and, generally do everything possible to aid said ASSIGNEE, its (his) successors and assigns, to obtain and enforce proper protection for said invention in the United States and its territorial possessions and in any and all foreign countries.	
1001 by line or impriso	ge that any willful false statement made in this declaration is punishable under 18 U.S.C. nment of not more than five (5) years, or both.
LEGAL NAME OF IN	VENTOR
Inventor: <u>Takeshi SF</u> Signature: <i>Takes</i>	MUNDO Date: 2016, 1, 26

OBLON, McCLELLAND, MAIER & NEUSTADT, L.L.P.

ATTORNEYS AT LAW 1940 DUKE STREET ALEXANDRIA, VIRGINIA 22314

Title of	CENTICON DILICTION & CANADA CONTROL CONTROL
Invention	SEMICONDUCTOR MANUFACTURING APPARATUS AND METHOD
III V CIII (CIII	OF MANUFACTURING SEMICONDUCTOR DEVICE
As the below named in	nventor, I hereby declare that:
This declaration T	he attached application, or
	nited States application or PCT international application number
${f fi}$	led on
The above-identified a	pplication 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.
WHEREAS, <u>KABU</u> having a place of bus entire right, title and in	SHIKI KAISHA TOSHIBA (hereinafter referred to as "ASSIGNEE") iness at: 1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, Japan is desirous of acquiring the anterest in and to said invention and in and to any Letters Patent that may be granted therefore d its territorial possessions and in any and all foreign countries;
said ASSIGNEE, the f and in all foreign coun other relevant Internati interest in and to any	RE, in consideration of the sum of FIVE DOLLARS (\$5.00), the receipt whereof is hereby other good and valuable consideration, I, by these presents do sell, assign and transfer unto till and exclusive right to the said invention in the United States and its territorial possessions tries (including the right to claim priority under the terms of the International Convention and sonal Treaties and Arrangements from the aforesaid application) and the entire right, title and and all Letters Patent which may be granted therefor in the United States and its territorial y and all foreign countries and in and to any and all divisions, reissues, continuations, vals thereof.
any and an foreign col- assignee of my entire r (his) successors and as entirely as the same wo	and request the Patent Office Officials in the United States and its territorial possessions and untries to issue any and all of said Letters Patent, when granted, to said ASSIGNEE as the ight, title and interest in and to the same, for the sole use and behoof of said ASSIGNEE, its signs, to the full end of the term for which said Letters Patent may be granted, as fully and uld have been held by me had this Assignment and sale not been made.
continuation, substitute all of said Letters Pate possible to aid said AS	I will communicate to said ASSIGNEE or its (his) representatives any facts known to me ion, and testify in any legal proceeding, sign all lawful papers, execute all divisional, renewal and reissue applications, execute all necessary assignment papers to cause any and ent to be issued to said ASSIGNEE, make all rightful oaths, and, generally do everything issignee, its (his) successors and assigns, to obtain and enforce proper protection for said States and its territorial possessions and in any and all foreign countries.
1001 by tine or impriso	ge that any willful false statement made in this declaration is punishable under 18 U.S.C. nment of not more than five (5) years, or both.
LEGAL NAME OF IN	VENTOR
Inventor: <u>Hajime NA</u>	GANO Date: <u>22/01/20/6</u>
Signature: Hain	nd. Nagames

OBLON, McCLELLAND, MAIER & NEUSTADT, L.L.P.

ATTORNEYS AT LAW 1940 DUKE STREET ALEXANDRIA, VIRGINIA 22314

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PATENT REEL: 037693 FRAME: 0919

RECORDED: 02/10/2016