505270743 01/09/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT5317515

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
SHIGEKI KOYA	01/07/2019
TAKAYUKI TSUTSUI	01/07/2019
KAZUHITO NAKAI	01/07/2019
YUSUKE TANAKA	01/07/2019

RECEIVING PARTY DATA

Name:	MURATA MANUFACTURING CO., LTD.	
Street Address:	10-1, HIGASHIKOTARI 1-CHOME, NAGAOKAKYO-SHI	
City:	KYOTO-FU	
State/Country:	JAPAN	
Postal Code:	617-8555	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16243943

CORRESPONDENCE DATA

Fax Number: (703)390-1277

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.

(703)390-9051 Phone:

Email: info@sbpatentlaw.com

STUDEBAKER & BRACKETT PC **Correspondent Name:** 8255 GREENSBORO DRIVE Address Line 1:

Address Line 2: SUITE 300

Address Line 4: TYSONS, VIRGINIA 22102

ATTORNEY DOCKET NUMBER:	002000-MM0534	
NAME OF SUBMITTER:	JOSEPH J. BUCZYNSKI	
SIGNATURE:	/Joseph J. Buczynski/	
DATE SIGNED:	01/09/2019	
This document serves as an Oath/Declaration (37 CFR 1.63).		

Total Attachments: 8

PATENT REEL: 047946 FRAME: 0062

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PATENT REEL: 047946 FRAME: 0063



Title of Invention:	
SEMICONDU	ICTOR DEVICE
私は、以下に記名された発明者として、ここに下記の選り 宣言する:	As a below named inventor, I hereby declare that:
本宣言書は、以下の出願に対するものである:	This declaration is directed to:
□ 添付された出願、あるいは、□ 米国出願番号またはP(T国際出願番号は、であり、且つの日に出願された出願(該当する場合)	The attached application, or United States application or PCT international application number filed on
上記出願書 (明細書及び図面) は、私が作成したものか、あるいは私がその作成を許可したものである。	The above-identified application was made or authorized to be made by me.
私は、本米国出願の請求範囲で記載された発明に 対する原発明者であるか、或いは、原共同発明者 であると信じている。	I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.
私は、ここでの宣誓または陳述において故意に偽りを述べた場合、合衆国法典第18巻第1001条に基づき、罰金あるいは5年以下の懲役、または、両方の懲罰を受けることを認める。	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.
	STATEMENT OF ACCURATE TRANSLATION IN ACCORDANCE WITH 37 CFR 1.69(b):
	The Declaration and Assignment for Patent and Design Applications is an accurate translation of the corresponding English language Declaration and Assignment for Patent and Design Applications
	Signature: #
	Date: <u>11/15/2012</u>



WHEREAS the undersigned, hereinafter referred to as the assignor, has invented a certain improvement relating to the above identified application.

The inventor declaration for said application is combined herewith.		
[X] said application to be filed in the United States Patent and Trademark Office;		
[] said application having been filed in the United States Patent and Trademark Office on,		
[] said application having been filed under the Patent Cooperation Treaty on,		
as Serial No, the United States of America being designated.		
AND WHEREAS Murata Manufacturing Co., Ltd. of 10-1, Higashikotari 1-chome, Nagaokakyo-shi, Kyoto-fu 617-8555 JAPAN, hereinafter referred to as the assignee, is desirous of acquiring the entire right, title and interest in and to said application, including any and all divisions and continuations thereof, and in and to said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof;		
NOW, that for and in consideration of One Dollar (\$1.00), and other good and valuable consideration paid by said assignee to said assignor, the receipt of which is hereby acknowledged, said assignor hereby assigns, sells and transfers to said assignee, and said assignee's successors and assigns, the full and exclusive right, title and interest in and to said application, including any and all divisions and continuations thereof, and in and to said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof; said assignee, and said assignee's successors and assigns, to have, hold, exercise and enjoy the said application, including any and all divisions and continuations thereof, and the said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof, with all the rights, powers, privileges and advantages in anywise arising from or appertaining thereto, for and during the term or terms of any and all such patents when granted, including any and all renewals, reissues and prolongations thereof, for the use and benefit of said assignee, and said assignee's successors and assigns, in as ample and beneficial a manner as the said assignor might or could have held and enjoyed the same, if this assignment had not been made.		
AND said assignor hereby agrees to perform, upon the request of said assignee, or said assignee's successors or assigns, any and all acts relating to the obtaining or to the asserting of said patents, including any and all renewals, reissues and prolongations thereof.		
AND said assignor authorizes and requests the Commissioner of Patents and Trademarks to issue Letters Patent on said application, and on any and all divisions and continuations thereof, to said assignee, and said assignee's successors and assigns, in accordance herewith.		
The undersigned hereby grants the law firm of STUDEBAKER & BRACKETT PC the power to insert on the Assignment portion of this combined Declaration and Assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office for recordation of this document.		
This combined Declaration and Assignment has been executed by the undersigned on the date opposite the undersigned name.		
赛明者氏名/ Legal Name of Inventor Shigeki KOYA		
発明者の署名/ Signature Xiguli Xoga B付/ Date 7状 Jan , 2019		



Title of Invention:	
SEMICONDL	ICTOR DEVICE
私は、以下に記名された発明者として、ここに下記の通り 宣書する:	As a below named inventor, I hereby declare that:
本宣言書は、以下の出願に対するものである:	This declaration is directed to:
□ 添付された出願、あるいは、 □ 米国出願番号またはPCT国際出願番号は、 であり、且つ の日に出願された出願 (該当する場合)	The attached application, or United States application or PCT international application number filed on
上記出願書 (明細書及び図面) は、私が作成したものか、あるいは私がその作成を許可したものである。	The above-identified application was made or authorized to be made by me.
私は、本米国出願の請求範囲で記載された発明に 対する原発明者であるか、或いは、原共同発明者 であると信じている。	I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.
私は、ここでの宣誓または陳述において故意に偽りを述べた場合、合衆国法典第18巻第1001条に基づき、罰金あるいは5年以下の懲役、または、両方の懲罰を受けることを認める。	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.
	STATEMENT OF ACCURATE TRANSLATION IN ACCORDANCE WITH 37 CFR 1.69(b):
	The Declaration and Assignment for Patent and Design Applications is an accurate translation of the corresponding English language Declaration and Assignment for Patent and Design Applications
	Signature:
	Date: <u>11/15/2012</u>



been made.

WHEREAS the undersigned, hereinafter referred to as the assignor, has invented a certain improvement relating to the above identified application.

and the contract of the contra		
The inventor declaration for said application is combined herewith.		
[X] said application to be filed in the United States Patent and Trademark Office;		
[] said application having been filed in the United States Patent and Trademark Office on, authorization being hereby given to the practitioners associated with <u>STUDEBAKER & BRACKETT PC's CUSTOMER NUMBER 78198</u> , to insert here in parentheses (Application Serial No) the application serial number of said application when known;		
[] said application having been filed under the Patent Cooperation Treaty on		
Serial No, the United States of America being designated.		
AND WHEREAS Murata Manufacturing Co., Ltd. of 10-1, Higashikotari 1-chome, Nagaokakyo-shi, Kyoto-fu 617-8555 JAPAN, hereinafter referred to as the assignee, is desirous of acquiring the entire right, title and interest in and to said application, including any and all divisions and continuations thereof, and in and to said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof;		
NOW, that for and in consideration of One Dollar (\$1.00), and other good and valuable consideration paid by said assignee to said assigner, the receipt of which is hereby acknowledged, said assigner hereby assigns, sells and transfers to said assignee, and said assignee's successors and assigns, the full and exclusive right, title and interest in and to said application, including any and all divisions and continuations thereof, and in and to said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof; said assignee, and said assignee's successors and assigns, to have, hold, exercise and enjoy the said application, including any and all divisions and continuations thereof, and the said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof, with all the rights, powers, privileges and advantages in anywise arising from or appertaining thereto, for and during the term or terms of any and all such patents when granted, including any and all renewals, reissues and prolongations thereof, for the use and benefit of said assignee, and said assignee's successors and assigns, in as ample and beneficial a manner as the said assignor might or could have held and enjoyed the same, if this assignment had not		

AND said assignor hereby agrees to perform, upon the request of said assignee, or said assignee's successors or assigns, any and all acts relating to the obtaining or to the asserting of said patents, including any and all renewals, reissues and prolongations thereof.

AND said assignor authorizes and requests the Commissioner of Patents and Trademarks to issue Letters Patent on said application, and on any and all divisions and continuations thereof, to said assignee, and said assignee's successors and assigns, in accordance herewith.

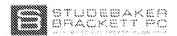
The undersigned hereby grants the law firm of STUDEBAKER & BRACKETT PC the power to insert on the Assignment portion of this combined Declaration and Assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office for recordation of this document.

This combined Declaration and Assignment has been executed by the undersigned on the date opposite the undersigned name.

発明者氏名/ Legal Name of Inventor	Takayuki TSUTSUI
発明者の署名/ Signature アムムタン(こうちゃ)	日付/ Date 67 Jan 2019



Title of Invention:	
	a war war was the total of Signature
comment control of the control of th	JCTOR DEVICE
私は、以下に記名された発明者として、ここに下 記の通り宣言する:	As a below named inventor, I hereby declare that:
本宣言書は、以下の出願に対するものである:	This declaration is directed to:
□ 添付された出願、あるいは、 □ 米国出願番号またはPCT国際出願番号は、 であり、且つ の日に出願された出願 (該当する場合)	The attached application, or United States application or PCT international application number
上記出願書(明細書及び図面)は、私が作成したも のか、あるいは私がその作成を許可したものであ る。	The above-identified application was made or authorized to be made by me.
私は、本米国出願の請求範囲で記載された発明に 対する原発明者であるか、或いは、原共同発明者 であると信じている。	I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.
私は、ここでの宣誓または陳述において故意に偽 りを述べた場合、合衆国法典第18巻第1901条に基 づき、罰金あるいは5年以下の懲役、または、両 方の懲罰を受けることを認める。	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.
	STATEMENT OF ACCURATE TRANSLATION IN ACCORDANCE WITH 37 CFR 1.69(b):
	The Declaration and Assignment for Patent and Design Applications is an accurate translation of the corresponding English language Declaration and Assignment for Patent and Design Applications Signature:
	·
	Date: <u>11/15/2012</u>



WHEREAS the undersigned, hereinafter referred to as the assignor, has invented a certain improvement relating to the above identified application.

The inventor declaration	on for said application is co	ombined herewith.				
X] said application to be filed in the United States Patent and Trademark Office;						
authorization being her CUSTOMER NUMBER	eby given to the practition	ers associated wit parentheses (Appl	d Trademark Office on,h h <u>STUDEBAKER & BRACKETT F</u> ication Serial No	2C's) the		
	ring been filed under the P	atent Cooperation	Treaty on			
as Serial No	the Uni	ted States of Ame	rica being designated.			
Kyoto-fu 617-8555 JAF title and interest in and	AN, hereinafter referred to to said application, included and any and all patents who	o as the assignee, ling any and all div	Higashikotari 1-chome Nagao is desirous of acquiring the ent isions and continuations thereo d therefor, including any and all	tire right, f, and in		
paid by said assignee to assigns, sells and trans exclusive right, title and thereof, and in and to sand all renewals, reissigns, to have, hold, continuations thereof, a including any and all readvantages in anywise such patents when graand benefit of said assigns, and assigns, and assigns, and assigns, said assid assigns,	to said assignor, the receipsfers to said assignee, and interest in and to said appeal invention and any and ues and prolongations the exercise and enjoy the saind the said invention and mewals, reissues and prolongations from or appertaininted, including any and alignee, and said assignee?	pt of which is hereld said assignee's supplication, including all patents which reof; said assigned application, including and all patent longations thereof, ng thereto, for and all renewals, reissues successors and all said applications thereof,	and other good and valuable corpy acknowledged, said assignous accessors and assigns, the full any and all divisions and continuate by a granted therefor, included and said assignee's successed and said assignee's successed and any and all divisions and as which may be granted therefor with all the rights, powers, privipulating the term or terms of any assigns, in as ample and benefithe same, if this assignment has	r hereby and nuations ling any ors and or, ileges and y and all r the use icial a		
successors or assigns,		o the obtaining or	uest of said assignee, or said a to the asserting of said patents,			
AND said assignor authorizes and requests the Commissioner of Patents and Trademarks to issue Letters Patent on said application, and on any and all divisions and continuations thereof, to said assignee, and said assignee's successors and assigns, in accordance herewith.						
on the Assignment port	tion of this combined Decl ble in order to comply with	aration and Assigr	ER & BRACKETT PC the pown ment any further identification S. Patent and Trademark Office	which may		
This combined opposite the undersign		ent has been exec	cuted by the undersigned on the	e date		
発明者氏名/ Legal Name o	f Inventor		8.18.52.8.7	:		
		Kazuhito	NAKAI	: 		
発明者の署名/ Signature	Kazuhito Nakai	日付/ Date	January, 7, 2019			



Title of Invention:						
SEMICONDUCTOR DEVICE						
私は、以下に記名された発明者として、ここに下記の通り 宣言する:	As a below named inventor, I hereby declare that:					
本宣言書は、以下の出願に対するものである:	This declaration is directed to:					
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上記出願書 (明細書及び図面) は、私が作成したものか、あるいは私がその作成を許可したものである。	The above-identified application was made or authorized to be made by me.					
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	, - ·				
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[X] said application to be fi	iled in the United States Paten	t and Trademar	k Office;		
authorization being hereby CUSTOMER NUMBER 781	peen filed in the United States given to the practitioners asso <u>98</u> , to insert here in parenther f said application when known;	clated with <u>STUI</u> ses (Application	DEBAKER & BRACKETT PC's		
[] said application having b	een filed under the Patent Co	operation Treaty	y on,		
as Serial No	, the United State	s of America be	ing designated.		
Kyoto-fu 617-8555 JAPAN, title and interest in and to sa	hereinafter referred to as the a aid application, including any a ny and all patents which may b	assignee, is des and all divisions	shikotari 1-chome, Nagaokakyo-shi, irous of acquiring the entire right, and continuations thereof, and in for, including any and all renewals,		
NOW, that for and in consideration of One Dollar (\$1.00), and other good and valuable consideration paid by said assignee to said assignor, the receipt of which is hereby acknowledged, said assignor hereby assigns, sells and transfers to said assignee, and said assignee's successors and assigns, the full and exclusive right, title and interest in and to said application, including any and all divisions and continuations thereof, and in and to said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof; said assignee, and said assignee's successors and assigns, to have, hold, exercise and enjoy the said application, including any and all divisions and continuations thereof, and the said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof, with all the rights, powers, privileges and advantages in anywise arising from or appertaining thereto, for and during the term or terms of any and all such patents when granted, including any and all renewals, reissues and prolongations thereof, for the use and benefit of said assignee, and said assignee's successors and assigns, in as ample and beneficial a manner as the said assignor might or could have held and enjoyed the same, if this assignment had not been made.					
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This combined Decopposite the undersigned n		peen executed b	by the undersigned on the date		
発明者氏名/ Legal Name of Inve	ntor Y	usuke TANAk			
発明者の署名/ Signature	usuke Tanaka B	付/ Date	January 17 2019		

Page 2 of 2