505867918 01/16/2020

EPAS ID: PAT5914746

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

 SUBMISSION TYPE:
 NEW ASSIGNMENT

 NATURE OF CONVEYANCE:
 ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ATSUSHI KUROKAWA	12/26/2019
YUICHI SANO	01/09/2020
TOSHIHIRO TADA	12/26/2019

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:	16744525

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.

Phone: (703)390-9051

Email: info@sbpatentlaw.com

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

Address Line 2: SUITE 300

Address Line 4: TYSONS, VIRGINIA 22102

ATTORNEY DOCKET NUMBER:	002000-MM0649
NAME OF SUBMITTER:	JOSEPH J. BUCZYNSKI
SIGNATURE:	/Joseph J. Buczynski/
DATE SIGNED:	01/16/2020
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 6

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505867918

PATENT REEL: 051534 FRAME: 0819



PATENT REEL: 051534 FRAME: 0820



COMBINED DECLARATION (37 CFR 1.63) AND ASSIGNMENT OF APPLICATION FOR UNITED STATES LETTERS PATENT

Title of Invention:		
SEMICONDUCTOR DEVICE AND METHOD FOR MANUFACTURING 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:	
□ 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: 11/15/2012	



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

unbioxement reigning to	the above recrimed application.
The inventor declaration	for said application is combined herewith.
[X] said application to b	pe filed in the United States Patent and Trademark Office;
authorization being here CUSTOMER NUMBER	ng been filed in the United States Patent and Trademark Office on,
[] said application having	ng been filed under the Patent Cooperation Treaty on
as Serial No	, the United States of America being designated.
Kyoto-fu 617-8555 JAP/ title and interest in and t	S Murata Manufacturing Co., Ltd. of 10-1, Higashikotari 1-chome, Nagaokakyo-shi, AN, hereinafter referred to as the assignee, is desirous of acquiring the entire right, o said application, including any and all divisions and continuations thereof, and in d any and all patents which may be granted therefor, including any and all renewals, ons thereof;
paid by said assignee to assigns, sells and transf exclusive right, title and thereof, and in and to sa and all renewals, reissue assigns, to have, hold, a continuations thereof, ar including any and all renadvantages in anywise a such patents when gran and benefit of said assig	nd in consideration of One Dollar (\$1.00), and other good and valuable consideration is said assignor, the receipt of which is hereby acknowledged, said assignor hereby fers to said assignee, and said assignee's successors and assigns, the full and interest in and to said application, including any and all divisions and continuations aid invention and any and all patents which may be granted therefor, including any ses and prolongations thereof; said assignee, and said assignee's successors and exercise and enjoy the said application, including any and all divisions and and the said invention and any and all patents which may be granted therefor, newals, reissues and prolongations thereof, with all the rights, powers, privileges and arising from or appertaining thereto, for and during the term or terms of any and all ted, including any and all renewals, reissues and prolongations thereof, for the use gnee, and said assignee's successors and assigns, in as ample and beneficial a gnor might or could have held and enjoyed the same, if this assignment had not
successors or assigns, a	nor hereby agrees to perform, upon the request of said assignee, or said assignee's early and all acts relating to the obtaining or to the asserting of said patents, including issues and prolongations thereof.
Letters Patent on said a	nor authorizes and requests the Commissioner of Patents and Trademarks to issue pplication, and on any and all divisions and continuations thereof, to said assignee, cessors and assigns, in accordance herewith.
on the Assignment porti	d hereby grants the law firm of STUDEBAKER & BRACKETT PC the power to insert on of this combined Declaration and Assignment any further identification which may be in order to comply with the rules of the U.S. Patent and Trademark Office for ment.
This combined I opposite the undersigns	Declaration and Assignment has been executed by the undersigned on the date and name.
発明者氏名/ Legal Name of	Inventor Atsushi KUROKAWA
発明者の署名/ Signature	ataushi Kurokaya Etti Date 26 Decamber, 2019



COMBINED DECLARATION (37 CFR 1.63) AND ASSIGNMENT OF APPLICATION FOR UNITED STATES LETTERS PATENT

Title of Invention:		
SEMICONDUCTOR DEVICE AND METHOD FOR MANUFACTURING 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:	
□ 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>	



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, 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		
as Serial No, the United States of America being designated.		
AND WHEREAS <u>Murata Manufacturing Co., Ltd.</u> of <u>10-1</u> , <u>Higashikotari 1-chome, Nagaokaky Kyoto-fu 617-8555 JAPAN</u> , hereinafter referred to as the assignee, is desirous of acquiring the entire rigitile and interest in and to said application, including any and all divisions and continuations thereof, and and to said invention and any and all patents which may be granted therefor, including any and all renereissues and prolongations thereof;	ght, f in	
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 assign successors or assigns, any and all acts relating to the obtaining or to the asserting of said patents, incluany 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.	3 .	
発明者氏名/ Legal Name of Inventor Yurchi SANO		
「はICMI 3/AIVV 新明者の署名/ Signature 日付/ Date 7 January 2020		
1 2 8 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3		



COMBINED DECLARATION (37 CFR 1.63) AND ASSIGNMENT OF APPLICATION FOR UNITED STATES LETTERS PATENT

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SEMICONDUCTOR DEVICE AND METHOD FOR MANUFACTURING 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:	
□ 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.	
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WHEREAS the undersigned, hereinafter referred to as the assignor, has invented a certain improvement relating to the above identified application.

The inventor declaration for a	Said application is combined herewith.
[X] said application to be file	ed in the United States Patent and Trademark Office;
authorization being hereby g CUSTOMER NUMBER 7819	ven filed in the United States Patent and Trademark Office on,
[] said application having be	een filed under the Patent Cooperation Treaty on
Serial No.	the United States of America being designated.

AND WHEREAS <u>Murata Manufacturing Co., Ltd.</u> of 10-1, <u>Higashikotari 1-chome</u>, <u>Nagaokakyo-shi</u>, <u>Kyoto-fu 617-8555 JAPAN</u>, 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.

発明者氏名/ Legal Name of Inventor	Toshihiro TADA
発明者の署名/ Signature To shikiyo Tada	8111 Date 26 December, 2019

Page 2 of 2

RECORDED: 01/16/2020