### 507022752 12/13/2021

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 EPAS ID: PAT7069587 Stylesheet Version v1.2

SUBMISSION TYPE: NEW ASSIGNMENT

NATURE OF CONVEYANCE: ASSIGNMENT

#### **CONVEYING PARTY DATA**

| Name            | Execution Date |
|-----------------|----------------|
| SATOSHI GOTO    | 12/06/2021     |
| SHUNJI YOSHIMI  | 12/07/2021     |
| MIKIKO FUKASAWA | 12/07/2021     |

### **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: | 17548718 |

### **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

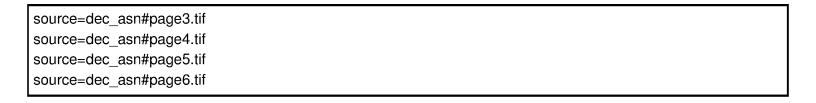
Address Line 4: TYSONS, VIRGINIA 22102

| ATTORNEY DOCKET NUMBER: | 002000-MM1016  |
|-------------------------|--|
| NAME OF SUBMITTER:      | JOSEPH J. BUCZYNSKI  |
| SIGNATURE:              | /Joseph J. Buczynski/                                      |
| DATE SIGNED:            | 12/13/2021   |
|                         | This document serves as an Oath/Declaration (37 CFR 1.63). |

**Total Attachments: 6** 

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PATENT 507022752 REEL: 058368 FRAME: 0429

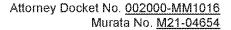


PATENT REEL: 058368 FRAME: 0430



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

| 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<br>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:   |  |
| <ul><li>□ 添付された出願、あるいは、</li><li>□ 米国出願番号またはPCT国際出願番号は、</li><li>であり、且つ</li><li>の日に出願された出願</li><li>(該当する場合)</li></ul> | 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<br>対する原発明者であるか、或いは、原共同発明者<br>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<br>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 &amp; BRACKETT PC's</u> <u>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<br>as<br>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</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.

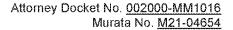
This combined Declaration and Assignment has been executed by the undersigned on the date opposite the undersigned name.

| 発明者氏名/ Legal Name of Inventor       |                  |  |
|-------------------------------------|------------------|--|
| 7597 A 50-El Legal Name C. Inventer | Satoshi GOTO     |  |
| 発明者の署名/ Signature                   | 日付/ Date         |  |
| /Satoshi Goto/                      | December 6, 2021 |  |



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

| Title of Invention:   |  |
|---|--|
| SEMICONDU   | 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<br>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:   |
| <ul><li>□ 添付された出願、あるいは、</li><li>□ 米国出願番号またはPCT国際出願番号は、</li><li>であり、且つ</li><li>の日に出願された出願</li><li>(該当する場合)</li></ul> | 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<br>対する原発明者であるか、或いは、原共同発明者<br>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.

| The inventor declaration for said application               | is combined herewith.                        |  |
|---|--|--|
| $[\mathbf{X}\ ]$ said application to be filed in the United | States Patent and Trademark Office;          |  |
| authorization being hereby given to the prac                | · · · · · · · · · · · · · · · · · · ·        |  |
| [ ] said application having been filed under                | the Patent Cooperation Treaty on             |  |
| as<br>Serial No, the  | e United States of America being designated. |  |

AND WHEREAS <u>Murata Manufacturing Co., Ltd.</u> of <u>10-1</u>, <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.

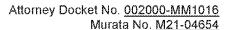
This combined Declaration and Assignment has been executed by the undersigned on the date opposite the undersigned name.

| 発明者氏名/ Legal Name of Inventor | Shunji YOSHIMI   |
|-------------------------------|------------------|
| 発明者の署名/ Signature             | 日付/ Date         |
| /Shunji Yoshimi/              | December 7, 2021 |



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

| 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<br>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:   |  |
| <ul><li>□ 添付された出願、あるいは、</li><li>□ 米国出願番号またはPCT国際出願番号は、</li><li>であり、且つ</li><li>の日に出願された出願</li><li>(該当する場合)</li></ul> | 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<br>対する原発明者であるか、或いは、原共同発明者<br>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<br>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>  |  |





**RECORDED: 12/13/2021** 

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   | c Office;               |
| [ ] said application having been filed in the United States Patent and Trad-<br>authorization being hereby given to the practitioners associated with <u>STUE<br/>CUSTOMER NUMBER 78198</u> , to insert here in parentheses (Application<br>application serial number of said application when known; | DEBAKER & BRACKETT PC's |
| [ ] said application having been filed under the Patent Cooperation Treaty  | on                      |
| as<br>Serial No the United States of America bei  | na decianated           |
| Serial No, the United States of America bei   | ng designated.          |

AND WHEREAS <u>Murata Manufacturing Co., Ltd.</u> of <u>10-1</u>, <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.

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

| 発明者氏    | A1                                    | Mikiko FUKASAWA  |  |
|---------|---------------------------------------|------------------|--|
| 発明者の    | ===================================== | 日付/ Date         |  |
| /Mikiko | Fukasawa/                             | December 7, 2021 |  |