

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT6556222

SUBMISSION TYPE:	CORRECTIVE ASSIGNMENT
NATURE OF CONVEYANCE:	Corrective Assignment to correct the SPELLING OF THE FIRST INVENTOR previously recorded on Reel 050462 Frame 0157. Assignor(s) hereby confirms the CORRECT SPELLING OF THE FIRST INVENTOR IS RYANGSU KIM.

CONVEYING PARTY DATA

Name	Execution Date
RYANGSU KIM	09/20/2019
KATSUYA SHIMIZU	09/20/2019
YASUSHI SHIGENO	09/20/2019
DAISUKE TOKUDA	09/20/2019
MIKIKO FUKASAWA	09/19/2019

RECEIVING PARTY DATA

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

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16578740

CORRESPONDENCE DATA

Fax Number: (216)579-6073

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.

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Correspondent Name: PEARNE & GORDON LLP

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Address Line 2: SUITE 1200

Address Line 4: CLEVELAND, OHIO 44114-3108

ATTORNEY DOCKET NUMBER:	MURATA-61403
NAME OF SUBMITTER:	AARON A. FISHMAN
SIGNATURE:	/Aaron A. Fishman/
DATE SIGNED:	02/17/2021

PATENT

Total Attachments: 9

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**DECLARATION AND ASSIGNMENT
FOR US UTILITY OR DESIGN PATENT APPLICATION**

Attorney Docket No.: MURATA-61403

As a below-named inventor, I hereby declare that:

this declaration is directed to the application entitled:

BIDIRECTIONAL COUPLER

(check only one item below)

attached hereto,

OR

filed on (YYYY/MM/DD) 2018/03/20 as United States Application Number or PCT International Application Number PCT/JP2018/010963.

The above-identified application was made or authorized to be made by me.

I believe I am the original inventor or an original joint inventor of a claimed invention in the above-identified application.

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.

WHEREAS, new and useful improvements have been made by the undersigned as described in the above-identified application.

WHEREAS, Murata Manufacturing Co., Ltd. having a place of business at 10-1, Higashikotari 1-chome, Nagaokakyo-shi, Kyoto, 617-8555, Japan, hereafter referred to as "assignee", is desirous of acquiring all right, title, and interest throughout the world in, to, and under said improvements and inventions and patent rights therefor.

NOW, THEREFORE, be it known that, for valuable consideration, the receipt and sufficiency of which are hereby acknowledged, all right, title, and interest, in the United States and throughout the world, in, to and under said improvements and inventions and all patents, patent applications, patent rights, and inventors' certificates thereof, therefor, and therein, including without limitation said application for patent in the United States, all divisions and continuations thereof, all patents which may be granted thereon, all reissues and extensions thereof, all right to sue for past infringement thereunder, all patents which may be granted for said improvements and inventions by states or nations other than the United States, or by other authority, entity, or organization, and all applications therefor, have been and are hereby sold, assigned, transferred, and delivered unto assignee, its successors and assigns by the

undersigned; and it is covenanted and agreed by the undersigned, and for executors, administrators, and legal representatives of the undersigned, that at assignee's request any and all applications, affidavits, assignments, and other instruments will be made, executed, and delivered as may be necessary, or desirable to secure for or vest in assignee, its successors or assigns, any improvement, inventions, right, title, interest, application, patent, patent right or other right or property covered by this assignment, and the Director of the United States Patent and Trademark Office is hereby requested and authorized to issue any and all United States patents granted on any of said applications to assignee as owner of the entire right, title, and interest in, to, and under the same, and appropriately empowered officials of foreign countries are hereby authorized to issue any letters patent granted on any of said applications to assignee as owner of the entire right, title and interest in, to, and under the same.

IN WITNESS WHEREOF, this declaration and assignment has been executed below by the undersigned:

Legal Name of Inventor: Ryansu KIM

Signature of Inventor: Ryansu Kim

Date: September 20, 2019

Signatures of additional inventors on attached sheet(s)

Notice to Inventor(s): A person may not execute this declaration unless that person has reviewed and understands the contents of the above-identified application, including the claims.

Notice to Inventor(s): A person may not execute this declaration unless that person is aware of the duty to disclose to the US Patent and Trademark Office all information known to the person to be material to patentability as defined in 37 CFR 1.56.

Additional Inventor(s)

Legal Name of Inventor: Katsuya SHIMIZU

Signature of Inventor: Katsuya SHIMIZU

Date: September 20, 2019

Legal Name of Inventor: Yasushi SHIGENO

Signature of Inventor: Yasushi Shigeno

Date: September 20, 2019

Legal Name of Inventor: Daisuke TOKUDA

Signature of Inventor: Daisuke TOKUDA

Date: September 20, 2019

Legal Name of Inventor: Mikiko FUKASAWA

Signature of Inventor: _____

Date: _____

**DECLARATION AND ASSIGNMENT
FOR US UTILITY OR DESIGN PATENT APPLICATION**

Attorney Docket No.: MURATA-61403

As a below-named inventor, I hereby declare that:

this declaration is directed to the application entitled:

BIDIRECTIONAL COUPLER

(check only one item below)

attached hereto,

OR

filed on (YYYY/MM/DD) 2018/03/20 as United States Application Number or PCT International Application Number PCT/JP2018/010963.

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NOW, THEREFORE, be it known that, for valuable consideration, the receipt and sufficiency of which are hereby acknowledged, all right, title, and interest, in the United States and throughout the world, in, to and under said improvements and inventions and all patents, patent applications, patent rights, and inventors' certificates thereof, therefor, and therein, including without limitation said application for patent in the United States, all divisions and continuations thereof, all patents which may be granted thereon, all reissues and extensions thereof, all right to sue for past infringement thereunder, all patents which may be granted for said improvements and inventions by states or nations other than the United States, or by other authority, entity, or organization, and all applications therefor, have been and are hereby sold, assigned, transferred, and delivered unto assignee, its successors and assigns by the

undersigned; and it is covenanted and agreed by the undersigned, and for executors, administrators, and legal representatives of the undersigned, that at assignee's request any and all applications, affidavits, assignments, and other instruments will be made, executed, and delivered as may be necessary, or desirable to secure for or vest in assignee, its successors or assigns, any improvement, inventions, right, title, interest, application, patent, patent right or other right or property covered by this assignment, and the Director of the United States Patent and Trademark Office is hereby requested and authorized to issue any and all United States patents granted on any of said applications to assignee as owner of the entire right, title, and interest in, to, and under the same, and appropriately empowered officials of foreign countries are hereby authorized to issue any letters patent granted on any of said applications to assignee as owner of the entire right, title and interest in, to, and under the same.

IN WITNESS WHEREOF, this declaration and assignment has been executed below by the undersigned:

Legal Name of Inventor: Ryangsu KIM

Signature of Inventor: _____

Date: _____

Signatures of additional inventors on attached sheet(s)

Notice to Inventor(s): A person may not execute this declaration unless that person has reviewed and understands the contents of the above-identified application, including the claims.

Notice to Inventor(s): A person may not execute this declaration unless that person is aware of the duty to disclose to the US Patent and Trademark Office all information known to the person to be material to patentability as defined in 37 CFR 1.56.

Additional Inventor(s)

Legal Name of Inventor: Katsuya SHIMIZU

Signature of Inventor: _____

Date: _____

Legal Name of Inventor: Yasushi SHIGENO

Signature of Inventor: _____

Date: _____

Legal Name of Inventor: Daisuke TOKUDA

Signature of Inventor: _____

Date: _____

Legal Name of Inventor: Mikiko FUKASAWA

Signature of Inventor: Mikiko Fukasawa

Date: September 19, 2019