PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT5465474

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Yoshinobu Asami	01/08/2016
Yutaka Okazaki	01/08/2016
Satoru Okamoto	01/09/2016
Shinya SASAGAWA	01/08/2016

RECEIVING PARTY DATA

Name:	SEMICONDUCTOR ENERGY LABORATORY CO., LTD.
Street Address:	398, HASE
City:	ATSUGI-SHI, KANAGAWA-KEN
State/Country:	JAPAN
Postal Code:	243-0036

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16378622

CORRESPONDENCE DATA

Fax Number: (877)769-7945

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: (202) 783-5070 Email: apsi@fr.com **Correspondent Name:** JOHN F. HAYDEN

FISH & RICHARDSON P.C. Address Line 1:

Address Line 2: P.O.BOX 1022

Address Line 4: MINNEAPOLIS, MINNESOTA 55440-1022

ATTORNEY DOCKET NUMBER:	12732-1629003
NAME OF SUBMITTER:	SHARON M. ALLEN
SIGNATURE:	/Sharon M. Allen/
DATE SIGNED:	04/09/2019

Total Attachments: 2

source=12732-1629003 ASSIGN #page1.tif source=12732-1629003 ASSIGN #page2.tif

> **PATENT** REEL: 048834 FRAME: 0086 505418683

ASSIGNMENT

For valuable consideration, We, <u>Yoshinobu ASAMI of Isehara</u>, <u>Kanagawa</u>, <u>Japan, Yutaka OKAZAKI of Isehara</u>, <u>Kanagawa</u>, <u>Japan, Satoru OKAMOTO of Isehara</u>, <u>Kanagawa</u>, <u>Japan and Shinya SASAGAWA of Chigasaki</u>, <u>Kanagawa</u>, <u>Japan</u> hereby assign to <u>Semiconductor Energy Laboratory Co.</u>, <u>Ltd.</u>, a <u>Japanese</u> corporation having a place of business at:

398, Hase, Atsugi-shi, Kanagawa-ken, 243-0036 Japan

and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and
interest throughout the world in the inventions and improvements which are subject of an application for
United States Patent signed by us this day, entitled SEMICONDUCTOR DEVICE AND
MANUFACTURING METHOD THEREOF, filed January 14, 2016 , and assigned U.S. Serial
Number 14/995,562 and we authorize and request the attorneys appointed in said application
to hereafter complete this assignment by inserting above the filing date and serial number of said application
when known; this assignment including said application, any and all United States and foreign patents,
utility models, and design registrations granted for any of said inventions or improvements, and the right to
claim priority based on the filing date of said application under the International Convention for the
Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all
other treaties of like purposes; and we authorize the Assignee to apply in all countries in our name or in its
own name for patents, utility models, design registrations and like rights of exclusion and for inventors'
certificates for said inventions and improvements; and we agree for ourselves and our respective heirs, legal
representatives and assigns, without further compensation to perform such lawful acts and to sign such
further applications, assignments, Preliminary Statements and other lawful documents as the Assignee may
reasonably request to effectuate fully this assignment.

Signature
Name: Yoshinobu ASAMI
Date: 01/08/2016

Signature Yutaka Okazaki
Name: Yutaka OKAZAKI
Date: 01/08/2016

PATENT REEL: 048834 FRAME: 0087

Attorney Docket No. 12732-1629001 Client Reference No. 21935/21936/22149/22183/22241/22287

Signature

Satoru OKAMOTO

Name: Date:

01/09/2016

Signature

Shinya Sasagawa

Name:

Shinya SASAGAWA

Date:

01/08/2016

PATENT REEL: 048834 FRAME: 0088

RECORDED: 04/09/2019