

## PATENT ASSIGNMENT COVER SHEET

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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
MASASHI TSUBUKU	01/28/2016
KAZUAKI OHSHIMA	02/01/2016
MASASHI FUJITA	02/01/2016
DAIGO SHIMADA	02/01/2016
TSUTOMU MURAKAWA	02/01/2016
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<b>Name:</b>	SEMICONDUCTOR ENERGY LABORATORY CO., LTD.
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<b>City:</b>	ATSUGI-SHI, KANAGAWA-KEN
<b>State/Country:</b>	JAPAN
<b>Postal Code:</b>	243-0036
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	15007259
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<b>ATTORNEY DOCKET NUMBER:</b>	740756-4349
<b>NAME OF SUBMITTER:</b>	JEFFREY L. COSTELLIA
<b>SIGNATURE:</b>	/Jeffrey L. Costellia, Reg. No. 35,483/
<b>DATE SIGNED:</b>	02/17/2016
<b>Total Attachments: 3</b>	

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NIXON PEABODYLLP  
United States Patent Rights

Attorney Docket No. 740756-4349

ASSIGNMENT

Serial No. 15/007,259

Filed January 27, 2016

WHEREAS, Masashi TSUBUKU, Kazuaki OHSHIMA, Masashi FUJITA, Daigo SHIMADA and Tsutomu MURAKAWA

(hereinafter designated as the undersigned) has (have) invented certain new and useful improvements in SEMICONDUCTOR DEVICE AND MEMORY DEVICE for which an application for Letters Patent of the United States of America has been executed by the undersigned on \_\_\_\_\_, and;

WHEREAS, Semiconductor Energy Laboratory Co., Ltd. of 398, Hase, Atsugi-shi, Kanagawa-ken, 243-0036 Japan and its heirs, successors, legal representatives and assigns (hereinafter designated as the Assignee) is desirous of acquiring the entire right, title and interest in and to said invention and in and to any Letters Patent(s) that may be granted therefor in the United States of America;

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) to the undersigned in hand paid, the receipt of which is hereby acknowledged, and other good and valuable consideration, the undersigned has (have) sold, assigned and transferred, and by these presents do sell, assign and transfer unto said Assignee the full and exclusive right to the said invention in the United States of America and its territories and for all foreign countries, dependencies and possessions and the entire right, title and interest in and to any and all Letters Patent(s) which may be granted therefor in the United States of America and its territories, dependencies and possessions, and in and to any and all divisions, reissues, continuations and extensions thereof for the full term or terms for which the same may be granted.

The undersigned agree(s) to execute all papers necessary in connection with this application and any continuing, divisional or reissue applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

The undersigned agree(s) to execute all papers necessary in connection with any interference which may be declared concerning this application or any continuation, division or reissue thereof or Letters Patent(s) or reissue patent issued thereon and to cooperate with the Assignee in every way possible in obtaining and producing evidence and proceeding with such interference.

The undersigned agree(s) to execute all papers and documents and to perform any act which may be necessary in connection with claims under or provisions of the International Convention for the Protection of Industrial Property or similar agreements.

The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States patent(s) to the Assignee and to vest all rights therein hereby conveyed to said Assignee as fully and entirely as the same would have been held by the undersigned if this Assignment and sale had not been made.

The undersigned hereby authorize(s) and request(s) the Commissioner of Patents and Trademarks to issue any and all Letters Patents of the United States of America resulting from said application or any division or divisions or continuing or reissue applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has (they have) the full right to convey the entire interest herein assigned, and that he has (they have) not executed, and will not execute, any agreement in conflict herewith.

The undersigned hereby grant(s) the law firm of Nixon Peabody LLP the power to insert on this 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.

*In witness thereof*, this Assignment has been executed by the undersigned on the date(s) opposite the undersigned name(s).

Date 01/28/2016, Name of Inventor Masashi Tsubuku (SEAL)  
Masashi TSUBUKU

Date 02/01/2016, Name of Inventor Kazuaki OHSHIMA (SEAL)  
Kazuaki OHSHIMA

Date 02/01/2016, Name of Inventor Masashi Fujita (SEAL)  
Masashi FUJITA

Date 02/01/2016, Name of Inventor Daigo Shimada (SEAL)  
Daigo SHIMADA

Date 02/01/2016, Name of Inventor Tsutomu Murakawa (SEAL)  
Tsutomu MURAKAWA

(This assignment should preferably be acknowledged before a United States Consul or Notary Public. If not, then the execution by the Inventor(s) should be witnessed has (have) invented certain new and useful improvements in by at least two other persons who should sign here.)

Witness (name) (signature)

Witness (name) (signature)

Witness (name) (signature)