## 504174275 01/11/2017

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4220953

| UBMISSION TYPE:  |                               | NEW ASSIGNMENT  |               |                 |  |
|--|-------------------------------|---|---------------|-----------------|--|
| NATURE OF CONVEYANCE:  |                               | ASSIGNMENT  | ASSIGNMENT    |                 |  |
| CONVEYING PARTY D  | ΑΤΑ                           |   |               |                 |  |
|  |                               | Name  |               | Execution Date  |  |
| MUNEHIRO AZAMI   |                               |   |               | 04/05/2002      |  |
| SHOU NAGAO   |                               |   |               | 04/15/2002      |  |
| YOSHIFUMI TANADA   |                               |   |               | 04/15/2002      |  |
| RECEIVING PARTY DA   | TA                            |   |               |                 |  |
| Name:  | SEMIC                         | SEMICONDUCTOR ENERGY LABORATORY CO., LTD.   |               |                 |  |
| Street Address:  | 398, H                        | 398, HASE   |               |                 |  |
| City:  | ATSUG                         | ATSUGI-SHI, KANAGAWA-KEN  |               |                 |  |
| State/Country:   | JAPAN                         | -   |               |                 |  |
| Postal Code:   | 243-00                        | 243-0036  |               |                 |  |
| Property Type  | Total: 1                      | Number  |               |                 |  |
| PROPERTY NUMBERS<br>Property Type<br>Application Number:   | Total: 1                      |   |               |                 |  |
| Property Type<br>Application Number:   |                               | Number  |               |                 |  |
| Property Type<br>Application Number:<br>CORRESPONDENCE D   | )ATA                          | <b>Number</b><br>15343373   |               |                 |  |
| Property Type<br>Application Number:<br>CORRESPONDENCE D<br>Fax Number:  | ΑΤΑ                           | Number<br>15343373<br>(877)769-7945   |               | it will be sent |  |
| Property Type<br>Application Number:<br>CORRESPONDENCE D<br>Fax Number:<br><i>Correspondence will b</i>  | DATA<br>e sent to             | <b>Number</b><br>15343373   |               |                 |  |
| Property Type<br>Application Number:<br>CORRESPONDENCE D<br>Fax Number:<br><i>Correspondence will b</i><br><i>using a fax number, if</i>   | DATA<br>e sent to<br>provideo | Number<br>15343373<br>(877)769-7945<br>o the e-mail address first; if that is a   |               |                 |  |
| Property Type<br>Application Number:<br>CORRESPONDENCE D<br>Fax Number:<br><i>Correspondence will b</i><br><i>using a fax number, if</i><br>Phone:<br>Email:   | DATA<br>e sent to<br>provideo | Number   15343373   (877)769-7945   o the e-mail address first; if that is a ddress first; if that is ddress first; if that is a ddress first; if that is ddress first |               |                 |  |
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| Property Type<br>Application Number:<br>CORRESPONDENCE D<br>Fax Number:<br><i>Correspondence will b</i><br><i>using a fax number, if</i><br>Phone:<br>Email:<br>Correspondent Name:<br>Address Line 1:                                       | DATA<br>e sent to<br>provideo | Number<br>15343373<br>(877)769-7945<br>o the e-mail address first; if that is a<br>d; if that is unsuccessful, it will be s<br>(202) 783-5070<br>APSI@fr.com<br>JOHN F. HAYDEN<br>FISH & RICHARDSON P.C.  |               |                 |  |
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| Property Type<br>Application Number:<br>CORRESPONDENCE D<br>Fax Number:<br>Correspondence will b<br>using a fax number, if<br>Phone:<br>Email:<br>Correspondent Name:<br>Address Line 1:<br>Address Line 2:<br>Address Line 4:               | OATA<br>e sent to<br>provided | Number   15343373   (877)769-7945   0 the e-mail address first; if that is a structure of the e-mail address first; if the e-mail address first; if the e-mail address first; if the e-mail addrese first; if the e-mail address first; if the e-mail address fir | sent via US M |                 |  |

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## ASSIGNMENT

For valuable consideration, We, Munchiro AZAMI of Atsugi, Kanagawa, Japan, Shou NAGAO of Atsugi, Kanagawa, Japan and Yoshifumi TANADA of Atsugi, Kanagawa, Japan hereby assign to Semiconductor Energy Laboratory Co., Ltd., a Japanese 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

PULSE OUTPUT CIRCUIT, SHIFT REGISTER AND DISPLAY DEVICE filed on \_April 23, 2002 , and assigned U.S. Serial Number \_10/127,600 , 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: Munching Azam Name: Munehiro AZ 2002 Date:

Signature: Name:

Shou NAGAO 1 2002

15

Date:

Signature: <u>Yoshifumi TANAD</u>A Name: 04/18/2002 Date:

PATENT REEL: 040949 FRAME: 0700

## **RECORDED: 01/11/2017**