

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT2806276

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
SEIKO AMANO	04/19/2011
KOUHEI TOYOTAKA	04/20/2011
HIROYUKI MIYAKE	04/20/2011
AYA MIYAZAKI	04/15/2011
HIDEAKI SHISHIDO	04/19/2011
KOJI KUSUNOKI	04/20/2011
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	SEMICONDUCTOR ENERGY LABORATORY CO., LTD.
<b>Street Address:</b>	398, HASE
<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:	14245097
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<b>ATTORNEY DOCKET NUMBER:</b>	12732-0823003
<b>NAME OF SUBMITTER:</b>	APRIL K. SAUNDERS-FULLER
<b>SIGNATURE:</b>	/April K. Saunders-Fuller/
<b>DATE SIGNED:</b>	04/09/2014
<b>Total Attachments: 2</b>	

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## ASSIGNMENT

For valuable consideration, We, Seiko AMANO of Atsugi, Kanagawa, Japan, Kouhei TOYOTAKA of Atsugi, Kanagawa, Japan, Hiroyuki MIYAKE of Atsugi, Kanagawa, Japan, Aya MIYAZAKI of Sagamihara, Kanagawa, Japan, Hideaki SHISHIDO of Atsugi, Kanagawa, Japan and Koji KUSUNOKI of Kawasaki, 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 SIGNAL OUTPUT CIRCUIT AND SHIFT REGISTER, filed 04/04/2014 and assigned U.S. Serial Number 14245097 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 Seiko AMANO  
Name: Seiko AMANO  
Date: 04/19/2011

Signature Kouhei Toyotaka  
Name: Kouhei TOYOTAKA  
Date: 04/20/2011

Signature Hiroyuki MIYAKE  
Name: Hiroyuki MIYAKE  
Date: 04/20/2011

Signature Aya Miyazaki  
Name: Aya MIYAZAKI  
Date: 04/15/2011

Signature Hideaki SHISHIDO  
Name: Hideaki SHISHIDO  
Date: 04/19/2011

Signature Koji Kusunoki  
Name: Koji KUSUNOKI  
Date: 04/20/2011