

## 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>               |
| HIRONORI ASANO  | 06/26/2018                          |
| NORIAKI MATSUNO   | 06/26/2018                          |
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| <b>PROPERTY NUMBERS Total: 1</b>  |                                     |
| <b>Property Type</b>  | <b>Number</b>                       |
| Application Number:   | 16116681                            |
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| <b>DATE SIGNED:</b>   | 08/30/2018                          |
| <b>Total Attachments: 2</b>   |                                     |
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| source=Assignment#page2.tif   |                                     |

ASSIGNMENT WITH DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.62)

Whereas, I/We, the undersigned inventor(s) hereinafter called assignor(s), have invented certain improvements described in the application identified below; and

Whereas, Renesas Electronics Corporation of 2-24, Toyosu 3-chome, Koutou-ku, Tokyo 135-0061, Japan, (assignee), desires to acquire the entire right, title, and interest in the application and invention, and to any United States patents to be obtained therefor;

Now therefore, for valuable consideration, receipt whereof is hereby acknowledged,

I/We, the above named assignor(s), hereby sell, assign and transfer to the above named assignee, its successors and assigns, the entire right, title and interest in the application and the invention disclosed therein for the United States of America, including all divisions, and continuations thereof, and all Letters Patent of the United States that may be granted thereon, and all reissues thereof, including the right to claim priority under 35 USC 119, and I/we request the Director of the U.S. Patent and Trademark Office to issue any Letters Patent granted upon the invention set forth in the application to the assignee, its successors and assigns; and I/we will execute without further consideration all papers deemed necessary by the assignee in connection with the United States application when called upon to do so by the assignee.

(Legalization not required for recording but is prima facie evidence of execution under 35 USC 261)

As the below named inventor, I hereby declare that:

This assignment with declaration is  The attached application, or directed to:

United States Application or PCT International Application Number \_\_\_\_\_  
filed on \_\_\_\_\_.

The application is entitled:

SEMICONDUCTOR DEVICE

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

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

I have reviewed and understand the contents of the application for which this assignment with declaration is being submitted.

I am aware of the duty to disclose to the Office all information known to me to be material to patentability as defined in 37 CFR 1.56.

I hereby acknowledge that any wilful false statement made in this assignment with declaration is punishable under 18 USC 1001 by fine or imprisonment of not more than five (5) years, or both.

Authorization To Permit Access To Application by Participating Office

If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the above-identified application is filed access to the above-identified patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, or other intellectual property office in which a foreign application claiming priority to the above-identified application is filed to have access to the application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the application-as-filed with respect to: 1) the above-identified patent application-as-filed, 2) any foreign application to which the above-identified application claims priority under 35 USC 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the above-identified patent application, and 3) any U.S. application-as-filed from which benefit is sought in the above-identified patent application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing the Authorization to Permit Access to Application by Participating Office.

Legal Name of Inventor Hironori ASANO

Inventor's Signature Hironori Asano Date June 26, 2018

Legal Name of Additional Inventor, If Any Noriaki MATSUNO

Inventor's Signature Noriaki Matsuno Date June 26, 2018