505776153 11/15/2019

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE: NEW ASSIGNMENT NATURE OF CONVEYANCE: ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
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NOBUHIKO HONDA	04/05/2019
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RECEIVING PARTY DATA

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PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16685178

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NAME OF SUBMITTER:	RENELL FEIMSTER FOR TOMOKI TANIDA	
SIGNATURE:	/Renell Feimster for Tomoki Tanida/	
DATE SIGNED:	11/15/2019	

Total Attachments: 2

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> **PATENT** REEL: 051020 FRAME: 0633 505776153

Docket No.: Only After Sept 16, 2012

ASSIGNMENT WITH DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63)

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 deration all pagers deemed necessary by the assignee in connection with the United States application when called upon to do so by

the assignee.	ssary by	the assignee in connection with the critical states approprient when some depart to do so so
(Legalization not required for recording	g but is p	orima facie evidence of execution under 35 USC 261)
As the below named inventor, I hereby	y declare	that:
This assignment with declaration is directed to:	X	The attached application, or
		United States Application or PCT International Application Number
		filed on
The application is entitled:		
SEMICONDUCT	TOR DEV	TICE, MEMORY CONTROLLER, AND MEMORY ACCESSING METHOD
The above identified application was n	nade or w	vas authorized to be made by me.
I believe that I am the original invento	roran o	riginal joint inventor of a claimed invention in the application.
I have reviewed and understand the c	ontents c	of the application for which this assignment with declaration is being submitted.
I am aware of the duty to disclose to	the Offic	e all information known to me to be material to patentability as defined in 37 CFR 1.56.
I hereby acknowledge that any willful to imprisonment of not more than five		tement made in this assignment with declaration is punishable under 18 USC 1001 by fine s, or both.
Authorization To Permit Access To	Application	on by Participating Office
(JPO), the Korean Intellectual Property property offices in which a foreign app patent application. See 37 CFR 1.14(c	ty Office plication o c) and (h).	the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual claiming priority to the above-identified application is filed access to the above-identified. This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, or eign application claiming priority to the above-identified application is filed to have
identified patent application-as-filed,	2) any for	will be provided to a copy of the application—as—filed with respect to: 1) the above—reign 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 ha 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 data of filing the Authorization to Permit Access to Application by Participating Office.

> R180212 PATENT REEL: 051020 FRAME: 0634

Legal Name of Inventor	Sho YAMANAKA			
Inventor's Signature	Sho Yamanaka	Date April 5, 2019		
Legal Name of Additional Inventor, If Any Nobuhiko HONDA				
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Legal Name of Additional Inventor, If Any <u>Takahiro_IRITA</u>				
Inventor's Signature	Takahiro Irita	Date April 5, 2019		

R180212