EPAS ID: PAT5729091

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

SUBMISSION TYPE: NEW ASSIGNMENT NATURE OF CONVEYANCE: ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
KENICHI ITO	04/09/2019
AKIHIRO YAMATE	04/09/2019
AKIRA HOSOTANI	04/10/2019

RECEIVING PARTY DATA

Name:	RENESAS ELECTRONICS CORPORATION
Street Address:	2-24, TOYOSU 3-CHOME, KOUTOU-KU
City:	TOKYO
State/Country:	JAPAN
Postal Code:	135-0061

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16573407

CORRESPONDENCE DATA

Fax Number: (202)756-8087

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Correspondent Name: TOMOKI TANIDA

Address Line 1: MCDERMOTT WILL & EMERY LLP Address Line 2: 500 NORTH CAPITOL STREET, N.W.

Address Line 4: WASHINGTON, D.C. 20001

ATTORNEY DOCKET NUMBER:	067237-1601	
NAME OF SUBMITTER:	RENELL FEIMSTER FOR TOMOKI TANIDA	
SIGNATURE:	/Renell Feimster for Tomoki Tanida/	
DATE SIGNED:	09/20/2019	

Total Attachments: 6

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> **PATENT** REEL: 050440 FRAME: 0919

505682283



PATENT REEL: 050440 FRAME: 0920

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 consideration all papers deemed necessary by the assignee in connection with the United States application when called upon to do so by the assignee.

granted upon the invention set forth in the application to the assignee, consideration all papers deemed necessary by the assignee in connect the assignee.	, its successors and assigns; and I/we will execute without further		
(Legalization not required for recording but is prima facie evidence of e	execution under 35 USC 261)		
As the below named inventor, I hereby declare that:			
This assignment with declaration is $\begin{tabular}{ c c c c c }\hline X \end{tabular}$ The attached application directed to:	on, or		
United States Applicati	on or PCT International Application Number		
filed on	.		
The application is entitled:			
SEMICONDUCTOR DEVICE	AND CONTROL METHOD		
The above identified application was made or was authorized to be made	de 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 whi	ich 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 willful false statement made in this assi or imprisonment of not more than five (5) years, or both.	gnment with declaration is punishable under 18 USC 1001 by fine		
Authorization To Permit Access To Application by Participating Office	oe .		
If checked, the undersigned hereby grants the USPTO authority to (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual property offices in which a foreign application claiming priority to the a patent application. See 37 CFR 1.14(c) and (h). This box should not be other intellectual property office in which a foreign application claiming access to the application.	ectual Property Office (WIPO), and any other intellectual bove-identified application is filed access to the above-identified checked if the applicant does not wish the EPO, JPO, KIPO, or		
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.

PATENT R180132
REEL: 050440 FRAME: 0921

Legal Name of inventor	Nernom 110			
Inventor's Signature	Kenich	i Ito	Date April 9, 2019	
Legal Name of Additional li	nventor, If Any	Akihiro YAMATE		
Inventor's Signature			Date	***************************************
Legal Name of Additional li	nventor, If Any	Akira HOSOTANI		
Importar's Cianakura			Date	

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

consideration all papers deemed neces the assignee.	sary by t	the assignee in connection with the United States application when called upon to do so by
(Legalization not required for recording	; but is p	rima facie evidence of execution under 35 USC 261)
As the below named inventor, I hereby	declare	that:
This assignment with declaration is directed to:	\boxtimes	The attached application, or
		United States Application or PCT International Application Number
		filed on
The application is entitled:		
	SEMI	CONDUCTOR DEVICE AND CONTROL METHOD
The above identified application was m	ade or w	as authorized to be made by me.
I believe that I am the original inventor	or an or	iginal joint inventor of a claimed invention in the application.
I have reviewed and understand the co	ntents o	f the application for which this assignment with declaration is being submitted.
I am aware of the duty to disclose to t	he Office	all information known to me to be material to patentability as defined in 37 CFR 1.56.
I hereby acknowledge that any willful for imprisonment of not more than five		ement made in this assignment with declaration is punishable under 18 USC 1001 by fine s, or both.
Authorization To Permit Access To A	\pplicatio	on by Participating Office
(JPO), the Korean Intellectual Property property offices in which a foreign app patent application. See 37 CFR 1.14(c)	y Office (lication 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 sign application claiming priority to the above-identified application is filed to have
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.

> R180132 **PATENT** REEL: 050440 FRAME: 0923

Legal Name of Inventor	Kenichi ITO	
Inventor's Signature		Date
Legal Name of Additional	***************************************	1 1 2
Inventor's Signature	Spihiro Jamata	Date 6pvil 9,2019
Legal Name of Additional	Inventor, If Any Akira HOSOTANI	
Inventor's Signature		Date

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 consideration all papers deemed neces the assignee.	the ap sary by	plication to the assignee, its successors and assigns; and I/we will execute without further the assignee in connection with the United States application when called upon to do so by
(Legalization not required for recording	but is	prima facie evidence of execution under 35 USC 261)
As the below named inventor, I hereby	declare	e 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:		
	SEI	MICONDUCTOR DEVICE AND CONTROL METHOD
The above identified application was m	ade or	was authorized to be made by me.
I believe that I am the original inventor	orano	original joint inventor of a claimed invention in the application.
I have reviewed and understand the co	ntents	of the application for which this assignment with declaration is being submitted.
I am aware of the duty to disclose to t	he Offic	ce all information known to me to be material to patentability as defined in 37 CFR 1.56.
I hereby acknowledge that any willful for imprisonment of not more than five		stement made in this assignment with declaration is punishable under 18 USC 1001 by fine rs, or both.
Authorization To Permit Access To A	pplicat	ion by Participating Office
(JPO), the Korean Intellectual Property property offices in which a foreign app patent application. See 37 CFR 1.14(c)	y Office lication and (h	s 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 reign application claiming priority to the above-identified application is filed to have
identified patent application-as-filed, 2 119(a)-(d) if a copy of the foreign appl) any fo	will be provided to a copy of the application-as-filed with respect to: 1) the above- preign application to which the above-identified application claims priority under 35 USC that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the above- 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.

> R180132 **PATENT** REEL: 050440 FRAME: 0925

Legal Name of inventor Kenichi IIO		***************************************
Inventor's Signature		Data
Legal Name of Additional Inventor, If Any	Akihiro YAMATE	
Inventor's Signature		Date
Legal Name of Additional Inventor, If Any	Akira HOSOTANI	
Akira	Hosotani	note April 10 2019

Page 2 of 2 PATENT R180132 REEL: 050440 FRAME: 0926

RECORDED: 09/20/2019