504790592 02/23/2018

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4837324

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
TAKASHI OSHIMA	12/21/2017
TETSUO MATSUI	12/14/2017
MITSUYA FUKAZAWA	12/14/2017
TOMOHIKO YANO	12/15/2017

RECEIVING PARTY DATA

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City:	TOKYO		
State/Country:	JAPAN		
Postal Code:	135-0061		

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15900598

CORRESPONDENCE DATA

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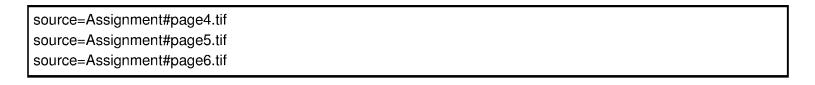
Address Line 4: **VIENNA, VIRGINIA 22182-3817**

ATTORNEY DOCKET NUMBER:	REN.401
NAME OF SUBMITTER:	SEAN M. MCGINN
SIGNATURE:	/Sean M. McGinn/
DATE SIGNED:	02/22/2018

Total Attachments: 6

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> **PATENT REEL: 045015 FRAME: 0545** 504790592



PATENT REEL: 045015 FRAME: 0546

Docket No.: REN.401 Only After Sept 16, 2012

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

Whereas, L/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, (assignes), 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 desimed necessary by the assignee in connection with the United States application when called upon to do so by the assignee.

the assignee.				
(Legalization not required for recording but is prime facile evidence of execution under 35 USC 261)				
As the below named inventor, I hereby declare that:				
This assignment with declaration is directed to:	区	The attached application, or		
		United States Application or PCT International Application Number		
The application is entitled:				
ANALOG	/DIG	ITAL CONVERTER AND MILIMETER WAVE RADAR SYSTEM		
The above identified application was mad	e or v	was authorized to be made by me.		
I believe that I am the original inventor or	r en c	riginal 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	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 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 App	dicati	on by Participating Office		
(JPO), the Korean Intellectual Property (property offices in which a foreign applica- patent application, See 37 CFR 1.14(c) as	Office ation nd (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 reign 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.				

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	Takashi OSHIMA	***************************************	*************	***************************************	
Inventor's Signature	Takas	di Oes	lina_	Dato <u>Decem</u>	ber 21,2017
Legal Name of Additional In	ventor, If Any	Tetsuo MATSI	4		
Inventor's Signature				Date	:8
Lagal Name of Additional Ir	eventor, If Any	Mitsuya FUKA	ZAWA		
Inventor's Signature				Date	······································
Legal Name of Additional In	ventor, If Any	Tomohiko YAN	10		
Inventor's Signature				Date	

Docket No.: REN 401 Only After Sept 18, 2012

ASSIGNMENT WITH DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.83)

Whereas, I/Ws. 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 releases 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.

The assignee.				
(Legalization not required for recording but is prima facie evidence of execution under 35 USC 261)				
As the below named inventor, I hereb	y declare	that:		
This assignment with declaration is directed to:	is X The attached application, or			
		United States Application or PCT International Application Number		
		filed on		
The application is entitled:				
ANAL	OG/DIG	ITAL CONVERTER AND MILIMETER WAVE RADAR SYSTEM		
The above identified application was r	nade or s	was authorized to be made by me.		
I believe that I am the original invento	r or an c	riginal joint inventor of a claimed invention in the application.		
I have reviewed and understand the c	ontents	of the application for which this assignment with declaration is being submitted.		
I am aware of the duty to disclose to	the Offic	ea all information known to me to be material to patentability as defined in 37 CFR 1,56.		
I heraby acknowledge that any willful 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 (UPO), 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 epplication—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—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.

Pagai izama ni anamon.	axasii Conima		
inventor's Signature			Date
Legal Name of Additional Inv	entor, If Any	Tetsuo MATSUI	
Inventor' e Signature	Totas	Matais	Date December 14.2017
Legal Name of Additional Inv	entor, If Any	Miksuya FUKAZAWA	
inventor's Signature	Mitsuya	Fykazawa	Data <u>December 14, 2017</u>
Legal Name of Additional Inv	entor, If Any	Temehike YANO	
inventor's Signature			Date

Docket No.: PEN. UO\
Only After Sept 16, 2012

ASSIGNMENT WITH DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (37 OFR 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 assigne, 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 prime facile evidence of execution under 35 USC 261) As the below named inventor, I hereby declare that: This assignment with declaration is X The attached application, or directed to: United States Application or PCT International Application Number filed on The application is entitled: ANALOG/DIGITAL CONVERTER AND MILIMETER WAVE RADAR SYSTEM 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 sware 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 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-

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

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1 of 2

identified patent application, and 3) any U.S. application-as-filed from which benefit is sought in the above-identified patent application.

Legal Rame of Invantor Lakashi OSHIM	IA.	
Inventor's Signature		Date
Legal Name of Additional Inventor, If Any	Tetsuo MATSUI	>
Inventor's Signature		Date
egal Name of Additional Inventor, If Any	Mitsuys FUKAZAWA	
nventor's Signature		Date
Legal Name of Additional Inventor, If Any	Tomohiko YANO	
Tomph	UKO YANO	December 15,2011

Page 2 of 2