

## 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>
	SHOWA DENKO K.K.	10/23/2019
	MITSUBISHI DENKI KABUSHIKI KAISHA	10/23/2019
<b>RECEIVING PARTY DATA</b>		
<b>Name:</b>	NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCE AND TECHNOLOGY	
<b>Street Address:</b>	3-1, KASUMIGASEKI 1-CHOME	
<b>Internal Address:</b>	CHIYODA-KU	
<b>City:</b>	TOKYO	
<b>State/Country:</b>	JAPAN	
<b>Postal Code:</b>	100-8921	
<b>Name:</b>	ULVAC, INC.	
<b>Street Address:</b>	2500, HAGISONO, CHIGASAKI-SHI	
<b>City:</b>	KANAGAWA	
<b>State/Country:</b>	JAPAN	
<b>Postal Code:</b>	253-8543	
<b>Name:</b>	KANTO DENKA KOGYO CO., LTD.	
<b>Street Address:</b>	2-105, KANDA-AWAJICHO	
<b>Internal Address:</b>	CHIYODA-KU	
<b>City:</b>	TOKYO	
<b>State/Country:</b>	JAPAN	
<b>Postal Code:</b>	101-0063	
<b>Name:</b>	SANYO ELECTRIC CO., LTD.	
<b>Street Address:</b>	1-1, SANYO-CHO, DAITO-SHI	
<b>City:</b>	OSAKA	
<b>State/Country:</b>	JAPAN	
<b>Postal Code:</b>	574-8534	
<b>Name:</b>	SONY CORPORATION	
<b>Street Address:</b>	1-7-1 KONAN, MINATO-KU	
<b>City:</b>	TOKYO	
<b>State/Country:</b>	JAPAN	

<b>Postal Code:</b>	108-0075
<b>Name:</b>	TOKYO ELECTRON LIMITED
<b>Street Address:</b>	3-1, AKASAKA 5-CHOME
<b>Internal Address:</b>	MINATO-KU
<b>City:</b>	TOKYO
<b>State/Country:</b>	JAPAN
<b>Postal Code:</b>	107-6325
<b>Name:</b>	CANON ANELVA CORPORATION
<b>Street Address:</b>	2-5-1, KURIGI, ASAO-KU
<b>Internal Address:</b>	KAWASAKI-SHI
<b>City:</b>	KANAGAWA
<b>State/Country:</b>	JAPAN
<b>Postal Code:</b>	215-8550
<b>Name:</b>	PANASONIC CORPORATION
<b>Street Address:</b>	1006 OAZA KADOMA
<b>Internal Address:</b>	KADOMA-SHI
<b>City:</b>	OSAKA
<b>State/Country:</b>	JAPAN
<b>Postal Code:</b>	571-8501
<b>Name:</b>	RENESAS ELECTRONICS CORPORATION
<b>Street Address:</b>	2-24, TOYOSU 3-CHOME
<b>Internal Address:</b>	KOUTOU-KU
<b>City:</b>	TOKYO
<b>State/Country:</b>	JAPAN
<b>Postal Code:</b>	135-0061
<b>Name:</b>	KOKUSAI ELECTRIC CORPORATION
<b>Street Address:</b>	3-4, KANDAKAJI-CHO
<b>Internal Address:</b>	CHIYODA-KU
<b>City:</b>	TOKYO
<b>State/Country:</b>	JAPAN
<b>Postal Code:</b>	101-0045

**PROPERTY NUMBERS Total: 1**

Property Type	Number
Patent Number:	8277560

**CORRESPONDENCE DATA**

**Fax Number:** (703)413-2220

*Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.*

**PATENT**

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<b>ATTORNEY DOCKET NUMBER:</b>	245731US (+5)
<b>NAME OF SUBMITTER:</b>	ELLEN MURABITO
<b>SIGNATURE:</b>	/ELLEN MURABITO/
<b>DATE SIGNED:</b>	10/29/2019

**Total Attachments: 6**  
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ASSIGNMENT

WHEREAS, SHOWA DENKO K.K., of 13-9, Shiba Daimon 1-chome, Minato-ku, Tokyo 105-8518, Japan, and MITSUBISHI DENKI KABUSHIKI KAISHA of 7-3, Marunouchi 2-chome, Chiyoda-ku, Tokyo 100-8310, Japan (hereinafter referred to as "ASSIGNORS"), corporations organized and existing under the laws of the Country of Japan, are joint owners, by assignment, of the following Letters Patent of the United States of America:

PATENT NUMBER

8,277,560

ISSUE DATE

October 2, 2012

WHEREAS, NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCE AND TECHNOLOGY OF 3-1, Kasumigaseki 1-chome, Chiyoda-ku, Tokyo 100-8921, Japan, ULVAC, INC. of 2500, Hagisono, Chigasaki-shi, Kanagawa 253-8543, Japan, KANTO DENKA KOGYO CO., LTD. of 2-105, Kanda-Awajicho, Chiyoda-ku, Tokyo 101-0063, Japan, SANYO ELECTRIC CO., LTD. of 1-1, Sanyo-cho, Daito-shi, Osaka 574-8534, Japan, SONY CORPORATION of 1-7-1 Konan, Minato-ku, Tokyo 108-0075, Japan, TOKYO ELECTRON LIMITED of 3-1, Akasaka 5-chome, Minato-ku, Tokyo 107-6325, Japan, CANON ANELVA CORPORATION of 2-5-1, Kurigi, Asao-ku, Kawasaki-shi, Kanagawa 215-8550, Japan, PANASONIC CORPORATION of 1006 Oaza Kadoma, Kadoma-shi, Osaka 571-8501, Japan, RENESAS ELECTRONICS CORPORATION of 2-24, Toyosu 3-chome, Koutou-ku, Tokyo 135-0061, Japan, and KOKUSAI ELECTRIC CORPORATION of 3-4, Kandakaji-cho, Chiyoda-ku, Tokyo 101-0045, Japan, all corporations organized and existing under the laws of the Country of Japan

(hereinafter referred to as "ASSIGNEES"), are desirous of acquiring the entire right, title, and interest in and to said Letters Patent;

NOW, THEREFORE, in consideration of the sum of FIVE DOLLARS (\$5.00) and other good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNORS by these presents do sell, assign, and transfer unto ASSIGNEES, their entire right, title, and interest for the territory of the United States of America, in and to the aforesaid Letters Patent, the inventions described therein, any and all divisions, continuations, reissues, substitutions and renewals thereof, and to any and all letters patent which have granted or may be granted therefor, said inventions and letters patent to be held and enjoyed by the ASSIGNEES, and for the use and benefit of said ASSIGNEES, and for the use and benefit of their successors, assigns or other legal representatives, to the full end of the term for which said letters patent have been granted or reissues may be granted, and for claims for damage by reasons of infringement past and present, as fully and entirely as the same would have been held by ASSIGNORS had this Assignment and sale not been made.

IN TESTIMONY WHEREOF, ASSIGNORS has caused these presents to be  
signed by its officer thereunto duly authorized.

SHOWA DENKO K.K.

Date: Oct. 20, 2019

By: Toshi Tsuzuki  
Name: TOSHI TSUZUKI  
Title: General Manager,  
Intellectual Property Department

MTSUBISHI DENKI KABUSHIKI KAISHA

Date: \_\_\_\_\_

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

## ASSIGNMENT

WHEREAS, SHOWA DENKO K.K., of 13-9, Shiba Daimon 1-chome, Minato-ku, Tokyo 105-8518, Japan, and MITSUBISHI DENKI KABUSHIKI KAISHA of 7-3, Marunouchi 2-chome, Chiyoda-ku, Tokyo 100-8310, Japan (hereinafter referred to as "ASSIGNORS"), corporations organized and existing under the laws of the Country of Japan, are joint owners, by assignment, of the following Letters Patent of the United States of America:

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(hereinafter referred to as "ASSIGNEES"), are desirous of acquiring the entire right, title, and interest in and to said Letters Patent;

NOW, THEREFORE, in consideration of the sum of FIVE DOLLARS (\$5.00) and other good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNORS by these presents do sell, assign, and transfer unto ASSIGNEES, their entire right, title, and interest for the territory of the United States of America, in and to the aforesaid Letters Patent, the inventions described therein, any and all divisions, continuations, reissues, substitutions and renewals thereof, and to any and all letters patent which have granted or may be granted therefor, said inventions and letters patent to be held and enjoyed by the ASSIGNEES, and for the use and benefit of said ASSIGNEES, and for the use and benefit of their successors, assigns or other legal representatives, to the full end of the term for which said letters patent have been granted or reissues may be granted, and for claims for damage by reasons of infringement past and present, as fully and entirely as the same would have been held by ASSIGNORS had this Assignment and sale not been made.



IN TESTIMONY WHEREOF, ASSIGNORS has caused these presents to be  
signed by its officer thereunto duly authorized.

SHOWA DENKO K.K.

Date: \_\_\_\_\_

By: \_\_\_\_\_

Name:

Title:

MITSUBISHI DENKI KABUSHIKI KAISHA

Date: October 23, 2019.

By: Jumei Matsui

Name: Jumei MATSUI

Title: General Manager, Patent  
Administration Department