PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
SEQUENCE:	1

CONVEYING PARTY DATA

Name	Execution Date
THORSTEN SCHMIDT	03/20/2018
RICHARD M. EHRLICH	03/20/2018
FERNANDO ANIBAL ZAYAS	03/21/2018

RECEIVING PARTY DATA

Name:	TOSHIBA AMERICA ELECTRONIC COMPONENTS, INC.
Street Address:	5231 CALIFORNIA AVENUE
City:	IRVINE
State/Country:	CALIFORNIA
Postal Code:	92617

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15919089

CORRESPONDENCE DATA

Fax Number:

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.

Email: docketing@kimandstewart.com, jcardenas@kimandstewart.com

Correspondent Name: KIM & STEWART LLP
Address Line 1: 1910 PACIFIC AVENUE

Address Line 2: SUITE 11500

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ATTORNEY DOCKET NUMBER:	TAEC/0138US
NAME OF SUBMITTER:	FREDERICK D. KIM
SIGNATURE:	/Frederick D. Kim/
DATE SIGNED:	12/13/2019

Total Attachments: 6

source=TAEC0138US_Assignment_INVENTORS#page1.tif source=TAEC0138US_Assignment_INVENTORS#page2.tif source=TAEC0138US_Assignment_INVENTORS#page3.tif

PATENT 505821060 REEL: 051281 FRAME: 0565

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WHEREAS, the undersigned inventor(s) (hereinafter referred to as "INVENTOR(S)") desire(s) to transfer to Toshiba America Electronic Components, Inc. (hereinafter referred to as "TAEC"), organized and existing under the laws of the United States, having a place for the transaction of business at 9740 Irvine Boulevard, Suite D700, Irvine, CA 92618, all right, title and interest in and to the inventions disclosed in the following Invention Disclosure Form(s):

 "SMR DRIVE THAT MAINTAINS PHYSICAL LOCATIONS OF BANDS VIA FLUSH/COPY — OPERATIONS", submitted-by-Thorsten-SGHMIDT, Richard-MEHRLIGH-and-Fernando-Anibal— ZAYAS, on January 31, 2018; 			
And such inventions which if now or hereafter are disclosed in the patent application(s):			
(a) U.S. patent application executed on			
(b) U.S. application no. <u>15/919,089</u> filed on <u>March 12, 2018</u> ,			
(c) International (e.g., PCT, JP) application no filed on,			
(collectively, the "INVENTIONS");			

WHEREAS, TAEC desires to acquire all of the right, title and interest of INVENTOR(S) in, to and under the INVENTIONS and TAEC further desires to transfer all such right, title and interest to Kabushiki Kaisha Toshiba (hereinafter referred to as "TOSHIBA") a corporation duly organized and existing under the laws of Japan, with offices at 1-1, Shibaura 1-chome, Minato-ku, Tokyo 105-8001 and Toshiba Electronic Devices and Storage Corporation (hereinafter referred to as "TEDSC") a corporation duly organized and existing under the laws of Japan, with offices at 1-1, Shibaura 1-chome, Minato-ku, Tokyo 105-0023;

Now, Therefore, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, INVENTOR(S) hereby sell(s), assign(s) and transfer(s) to TAEC the entire right, title and interest for the United States and its territorial possessions, and in all foreign countries, in and to the INVENTIONS and any and all improvements thereon which are the subject of the INVENTIONS, and in and to any U.S. or foreign patent application for such INVENTIONS and improvements and any legal equivalent thereof in a foreign country, including the right to claim priority, and in and to any division, continuation or continuation-in-part, renewal or substitute thereof, and in and to all resulting Letters Patents or any reissue, reexamination certificate, supplemental examination certificate, post grant review certificate, inter partes review certificate, or otherwise, thereof, to have and to hold the same to the full end of the term or terms for which any and all of said Letters Patent may be granted (collectively, the "ASSIGNED INVENTIONS");

And for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, TAEC hereby sells, assigns and transfers to TOSHIBA and TEDSC the entire right, title and interest to the ASSIGNED INVENTIONS;

INVENTOR(S) and TAEC authorize and request the issuing authority to issue any and all patents on said application or applications to TOSHIBA and TEDSC or its successors and assigns;

INVENTOR(S) and TAEC hereby covenant that INVENTOR(S) and TAEC, respectively, has/have the full power to make this assignment, and that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment; and

Without further payment or compensation by TAEC, TOSHIBA and TEDSC or their successors and assigns, INVENTOR(S) further covenant(s) and agree(s) to communicate to TAEC, TOSHIBA and

TEDSC, their representatives, agents, their successors or their assigns, or to subsequent assignees of the ASSIGNED INVENTIONS, any facts relating to the ASSIGNED INVENTIONS including evidence for purposes of interference or derivation proceedings or other administrative or legal proceedings whenever requested; to testify in any interference derivation, legal or administrative proceedings whenever requested; to execute and deliver, on request, all lawful papers required to make any of the foregoing provisions effective; and to do everything possible to aid TAEC, TOSHIBA and TEDSC, their successors, assigns, nominees, or to subsequent assignees of the ASSIGNED INVENTIONS to secure, obtain and enforce proper patent protection for the ASSIGNED INVENTIONS in this or any foreign country.

Any attorney of record for TOSHIBA and TEDSC, and its successors and assigns, at the direction of TOSHIBA and TEDSC is authorized and requested by the execution of this assignment to insert into this assignment any further patent or patent application information in the blanks and check boxes above as necessary for recordation of this document.

IN WITNESS WHEREOF, the INVENTOR(S) has/have hereunto affixed his/her/their signatures on the

dat	e below written.		,-
1)	Mast & M	Thorsten SCHMIDT	3/20/2018
	(Signature)	(Type or Print Name)	(Date)
	6109 Sain	t Andrews Way, Livermore CA 94551	
		(Residence Address)	
2)		Richard M. EHRLICH	
**	(Signature)	(Type or Print Name)	(Date)
	12092	Marilla Drive, Saratoga CA 95070	
		(Residence Address)	
3)		Fernando Anibal ZAYAS	
	(Signature)	(Type or Print Name)	(Date)
	782 Oxford Road.	Fernside RD1 Rangiora 7471, New Zeala	ind
		(Residence Address)	
IN۱	WITNESS WHEREOF, a representativ	re of TAEC with authorization to make this	assignment has
her	eunto affixed his/her signature on the	date below written.	
		Julius Christensen	
		SVP and General Counsel.	
	(Signature)	(Type or Print Name, Title)	(Date)

WHEREAS, the undersigned inventor(s) (hereinafter referred to as "INVENTOR(S)") desire(s) to transfer to Toshiba America Electronic Components, Inc. (hereinafter referred to as "TAEC"), organized and existing under the laws of the United States, having a place for the transaction of business at 9740 Irvine Boulevard, Suite D700, Irvine, CA 92618, all right, title and interest in and to the inventions disclosed in the following Invention Disclosure Form(s):

• "SMR DRIVE THAT MAINTAINS PHYSICAL LOCATIONS OF BANDS VIA FLUSH/COPY OPERATIONS", submitted by Thorsten SCHMIDT, Richard M. EHRLICH and Fernando Anibal ZAYAS, on January 31, 2018;

And such inventions which if now or hereafter are disclosed in the patent application(s):			
(a) 🗌	U.S. patent application executed on		
(b) 🛚	U.S. application no. <u>15/919,089</u> filed on <u>March 12, 2018</u> ,		
(c) 🗌	International (e.g., PCT, JP) application no filed on		
(collectively	the "INVENTIONS")		

WHEREAS, TAEC desires to acquire all of the right, title and interest of INVENTOR(S) in, to and under the INVENTIONS and TAEC further desires to transfer all such right, title and interest to Kabushiki Kaisha Toshiba (hereinafter referred to as "TOSHIBA") a corporation duly organized and existing under the laws of Japan, with offices at 1-1, Shibaura 1-chome, Minato-ku, Tokyo 105-8001 and Toshiba Electronic Devices and Storage Corporation (hereinafter referred to as "TEDSC") a corporation duly organized and existing under the laws of Japan, with offices at 1-1, Shibaura 1-chome, Minato-ku, Tokyo 105-0023;

Now, Therefore, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, INVENTOR(S) hereby sell(s), assign(s) and transfer(s) to TAEC the entire right, title and interest for the United States and its territorial possessions, and in all foreign countries, in and to the INVENTIONS and any and all improvements thereon which are the subject of the INVENTIONS, and in and to any U.S. or foreign patent application for such INVENTIONS and improvements and any legal equivalent thereof in a foreign country, including the right to claim priority, and in and to any division, continuation or continuation-in-part, renewal or substitute thereof, and in and to all resulting Letters Patents or any reissue, reexamination certificate, supplemental examination certificate, post grant review certificate, inter partes review certificate, or otherwise, thereof, to have and to hold the same to the full end of the term or terms for which any and all of said Letters Patent may be granted (collectively, the "ASSIGNED INVENTIONS");

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INVENTOR(S) and TAEC authorize and request the issuing authority to issue any and all patents on said application or applications to TOSHIBA and TEDSC or its successors and assigns;

INVENTOR(S) and TAEC hereby covenant that INVENTOR(S) and TAEC, respectively, has/have the full power to make this assignment, and that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment; and

Without further payment or compensation by TAEC, TOSHIBA and TEDSC or their successors and assigns, INVENTOR(S) further covenant(s) and agree(s) to communicate to TAEC, TOSHIBA and

1)

TEDSC, their representatives, agents, their successors or their assigns, or to subsequent assignees of the ASSIGNED INVENTIONS, any facts relating to the ASSIGNED INVENTIONS including evidence for purposes of interference or derivation proceedings or other administrative or legal proceedings whenever requested; to testify in any interference derivation, legal or administrative proceedings whenever requested; to execute and deliver, on request, all lawful papers required to make any of the foregoing provisions effective; and to do everything possible to aid TAEC, TOSHIBA and TEDSC, their successors, assigns, nominees, or to subsequent assignees of the ASSIGNED INVENTIONS to secure, obtain and enforce proper patent protection for the ASSIGNED INVENTIONS in this or any foreign country.

Any attorney of record for TOSHIBA and TEDSC, and its successors and assigns, at the direction of TOSHIBA and TEDSC is authorized and requested by the execution of this assignment to insert into this assignment any further patent or patent application information in the blanks and check boxes above as necessary for recordation of this document.

IN WITNESS WHEREOF, the **INVENTOR(S)** has/have hereunto affixed his/her/their signatures on the date below written.

Thorsten SCHMIDT

٠,			
	(Signature)	(Type or Print Name)	(Date)
	6109 Saint Andr	rews Way, Livermore CA 94551	
	(Re	esidence Address)	
2)	MAN (Richard M. Ehrlich)	Richard M. EHRLICH	3/20/2018
	(Signature)	(Type or Print Name)	(Date)
,	12092 Marilla	a Drive, Saratoga CA 95070	
	(Re	esidence Address)	
3)		Fernando Anibal ZAYAS	
, <u> </u>	(Signature)	(Type or Print Name)	(Date)
	782 Oxford Road, Ferns	side RD1 Rangiora 7471, New Zeala	nd
		esidence Address)	
IN WITN	ESS WHEREOF, a representative of 1	FAEC with authorization to make this	assignment has
	affixed his/her signature on the date t		2.2.3
		Julius Christensen	
		SVP and General Counsel.	
	(Signature)	(Type or Print Name, Title)	(Date)

WHEREAS, the undersigned inventor(s) (hereinafter referred to as "INVENTOR(S)") desire(s) to transfer to Toshiba America Electronic Components, Inc. (hereinafter referred to as "TAEC"), organized and existing under the laws of the United States, having a place for the transaction of business at 9740 Irvine Boulevard, Suite D700, Irvine, CA 92618, all right, title and interest in and to the inventions disclosed in the following Invention Disclosure Form(s):

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INVENTOR(S) and TAEC hereby covenant that INVENTOR(S) and TAEC, respectively, has/have the full power to make this assignment, and that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment; and

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IN WITNESS WHEREOF, the **INVENTOR(S)** has/have hereunto affixed his/her/their signatures on the date below written.

1)		Thorsten SCHMIDT	
	(Signature)	(Type or Print Name)	(Date)
-	6109 Sair	t Andrews Way, Livermore CA 94551	
		(Residence Address)	
2) _		Richard M. EHRLICH	
	(Signature)	(Type or Print Name)	(Date)
	12092	Marilla Drive, Saratoga CA 95070	
		(Residence Address)	
3)	In ansal-	Fernando Anibal ZAYAS	21 Mar Zole
	(Signature)	(Type or Print Name)	(Date)
	782 Oxford Road	Fernside RD1 Rangiora 7471, New Zeala	and
		(Residence Address)	
	r		
	TNESS WHEREOF, a representation nto affixed his/her signature on the	ve of TAEC with authorization to make this	assignment has
ici cui	into anixed his/her signature on the	date below written.	
		Julius Christensen	
		SVP and General Counsel.	
	(Signature)	(Type or Print Name, Title)	(Date)

PATENT REEL: 051281 FRAME: 0572

RECORDED: 12/13/2019