503892371 06/28/2016

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
TSUTOMU NAKAGAWA	06/22/2016

RECEIVING PARTY DATA

Name:	POWEREX, INC.	
Street Address:	173 PAVILLION LANE	
City:	YOUNGWOOD	
State/Country:	PENNSYLVANIA	
Postal Code:	15697-1800	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15187986

CORRESPONDENCE DATA

Fax Number: (412)562-1041

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.

412-562-1893 Phone: Email: joan.bice@bipc.com **Correspondent Name:** BRYAN H. OPALKO Address Line 1: ONE OXFORD CENTRE

Address Line 2: 301 GRANT STREET, 20TH FLOOR Address Line 4: PITTSBURGH, PENNSYLVANIA 15219

ATTORNEY DOCKET NUMBER:	0087855-000002	
NAME OF SUBMITTER:	BRYAN H. OPALKO	
SIGNATURE:	/Bryan H. Opalko/	
DATE SIGNED:	06/28/2016	

Total Attachments: 2

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> **PATENT** REEL: 039030 FRAME: 0030 503892371

ASSIGNMENT

WHEREAS, I, Tsutomu Nakagawa, residing at 826 Linmore Drive, Irwin, Pennsylvania 15642, have invented certain new and useful apparatus, inventions, discoveries and/or improvements disclosed in a patent application entitled "NEW GATE STRUCTURE OF THYRISTOR", which was filed on June 21, 2016 in the United States Patent and Trademark Office and assigned U.S. Patent Application Serial No. 15/187,986 (hereinafter the "application").

AND WHEREAS, Powerex, Inc., having a place of business at 173 Pavillion Lane, Youngwood, Pennsylvania 15697-1800 (hereinafter the "Assignee") is desirous of acquiring the entire right, title and interest in and to said application and the apparatus, inventions, discoveries, and improvements therein disclosed;

NOW THEREFORE, in consideration of One Dollar (\$1.00) and other good and valuable consideration paid to me by said Assignee, receipt whereof I hereby acknowledge, I do hereby assign, sell, transfer, and set over unto said Assignee the entire right, title, and interest in and to said application(s) and the apparatus, inventions, discoveries and improvements therein disclosed for the United States of America and its territories and all foreign countries and any Letters Patent which may issue therefor in the United States and its territories and all foreign countries and all divisions, reissues, continuations, continuations-in-part, renewals, and/or extensions thereof, including the right to apply for Letters Patents in each foreign country and the United States of America and its territories, in its own name and to claim any and all priority rights under the International Convention, other conventions, treaties, or otherwise associated therewith for each country and the United States of America and its territories, said Assignee to have and to hold the interests herein assigned to the full ends of the terms of said Letters Patent and any and all divisions, reissues, continuations, continuations-in-part, renewals, and/or extensions thereof, respectively, as fully and entirely as the same would have been held and enjoyed by us had this Assignment not been made.

The Commissioner of Patents and Trademarks is requested to issue such Letters Patent in accordance herewith. I covenant that I am the lawful owner of the said application(s), apparatus, inventions, discoveries and improvements, that the same are unencumbered, that no license has been granted to make, use, or vend the said apparatus, inventions, discoveries or improvements or any of them, and that we have the full right to make this Assignment.

And for said consideration, I agree individually that I will communicate to said Assignee or the representatives thereof any facts known to me respecting said apparatus, inventions, discoveries and improvements, and will, upon request, testify in any legal proceedings, sign all lawful papers, execute all divisional, reissue, continuation, continuation-in-part, renewal, and/or extension applications, make all rightful oaths, and generally do all other and further lawful acts, deemed necessary or expedient by said Assignee or by counsel for said Assignee, to assist or enable said Assignee to obtain and enforce full benefits from the rights and interests herein assigned, and, in the event of any application or Letters Patent assigned herein becoming involved in an inter partes review or other type of post grant proceeding to cooperate to the best

PATENT REEL: 039030 FRAME: 0031 of the ability of the undersigned in giving and producing evidence in support thereof. This Assignment shall be binding upon my heirs, executors, administrators, and/or assigns, and shall inure to the benefit of the heirs, executors, administrators, successors, and/or assigns, as the case may be, of said Assignee.

And for said consideration, the undersigned hereby agrees to execute, at the request of said Assignee, all documents in connection with any application for foreign letters patent therefor.

Executed: Jin 22 / 1/8

Tsutomic NakagaWa

Dated: 6-21-/6

Witness