

## PATENT ASSIGNMENT

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NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
TOSHIBA AMERICA ELECTRONIC COMPONENTS, INC	08/27/2013
RECEIVING PARTY DATA	
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PROPERTY NUMBERS Total: 10	
Property Type	Number
Application Number:	13362063
Application Number:	13490646
Application Number:	13422122
Application Number:	13488894
Application Number:	13448513
Application Number:	13587327
Application Number:	13590341
Application Number:	13556338
Application Number:	13595022
Application Number:	13611040
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OP \$400.00 13362063

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NAME OF SUBMITTER:	Gregory Turocy
Signature:	/Greg Turocy/
Date:	08/29/2013

Total Attachments: 2  
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## ASSIGNMENT

For good and valuable consideration received of the hereinafter named assignee, receipt of which is hereby acknowledged, the undersigned

Toshiba America Electronic Components, Inc.  
19900 MacArthur Boulevard, Suite 400  
Irvine, CA 92612, U.S.A.

a corporation organized under the laws of California, hereby sells and assigns to KABUSHIKI KAISHA TOSHIBA, a Japanese corporation, having a place of business at 1-1, Shibaura 1-chome, Minato-ku, Tokyo 105-8001 Japan its successors and assigns, the entire right, title and interest, so far as concerns the United States and the Territories and Possessions thereof and all foreign countries, in and to the following inventions:

U.S. Patent Application Serial No.	Date Filed	Title
13/362,063	1/31/12	SEMICONDUCTOR DEVICE WITH LATERAL AND VERTICAL CHANNEL CONFINEMENT AND METHOD OF FABRICATING THE SAME
13/490,646	6/7/12	GENERATION OF ADDITIONAL SHAPES ON A PHOTOMASK FOR A MULTIPLE EXPOSURE PROCESS
13/422,122	3/16/12	EFFICIENT DECOMPOSITION OF LAYOUTS
13/488,894	6/5/12	ISOLATED INSULATING GATE STRUCTURE
13/448,513	4/17/12	FORMATION OF A TRENCH SILICIDE
13/587,327	8/16/12	FINFET COMPRISING A PUNCH-THROUGH STOPPER
13/590,341	8/21/12	OPTICALLY REACTIVE MASKING
13/556,338	7/24/12	PROTECTION OF UNDER-LAYER CONDUCTIVE PATHWAY
13/595,022	8/27/12	NEEDLE-SHAPED PROFILE FINFET DEVICE
13/611,040	9/12/12	SEMICONDUCTOR DEVICE AND METHOD FOR FABRICATING THE SAME

for which a United States Letters Patent has been filed or was executed by the undersigned on the date below and is being filed concurrently herewith, application for United States Letters Patent, any and all other applications for Letters Patent on said inventions in countries foreign to the United States, including all divisional, renewal, substitute, continuation and Convention applications based in whole or in part upon said inventions or upon said

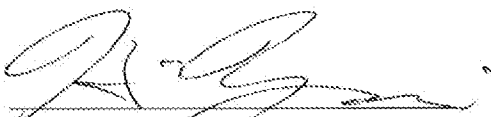
applications, and any and all Letters Patent and reissues and extensions of Letters Patent granted for said inventions or upon said applications, and every priority right that is or may be predicated upon or arise from said inventions, said applications and said Letters Patent; said assignee being hereby authorized to file patent applications in any or all countries on any or all said inventions in the name of the undersigned or in the name of said assignee or otherwise as said assignee may deem advisable, under the International Convention or otherwise; the Commissioner of Patents and Trademarks of the United States of America and the empowered officials of all other governments being hereby authorized to issue or transfer all said Letters Patent to said assignee in accordance herewith; this assignment being under covenant, not only that full power to make the same is had by the undersigned, but also that such assigned right is not encumbered by any grant, license, or other right heretofore given, and that the undersigned will do all acts reasonably serving to assure that said inventions, patent applications and Letters Patent shall be held and enjoyed by said assignee as fully and entirely as the same could have been held and enjoyed by the undersigned if this assignment had not been made, and particularly to execute and deliver to said assignee all lawful documents including petitions, specifications, oaths, assignments, invention disclaimers, and lawful affidavits in form and substance which may be requested by said assignee, to furnish said assignee with all facts relating to said inventions or the history thereof and any and all documents, photographs, models, samples or other physical exhibits which may be useful for establishing the facts of conception, disclosure and reduction to practice of said inventions, and to testify in any proceedings relating to said inventions, patent applications and Letters Patent.

The undersigned hereby appoint, request, and grant power to the following law firm to insert on this Assignment further identification which may be necessary or desirable in order to comply with the Rules of the U.S. Patent and Trademark Office for recordation of this document, for example, the U.S. Serial No. and filing date.

Turocy & Watson, LLP, 57<sup>th</sup> Floor, Key Tower, 127 Public Square, Cleveland, Ohio 44114.

Signed:

Date:



8/29/2013

Hideya Yamaguchi, President and CEO  
Toshiba America Electronic Components, Inc.

Approved  
Legal/Counsel  
TAEC