PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Toshiba America Electronic Components, Inc.	02/12/2012

RECEIVING PARTY DATA

Name:	KABUSHIKI KAISHA TOSHIBA
Street Address:	1-1, Shibaura 1-chome
City:	Minato-ku, Tokyo
State/Country:	JAPAN
Postal Code:	105-8001

PROPERTY NUMBERS Total: 19

Property Type	Number
Application Number:	12956330
Application Number:	12961793
Application Number:	13162825
Application Number:	12961762
Application Number:	13015857
Application Number:	13070702
Application Number:	13069625
Application Number:	13041732
Application Number:	13070704
Application Number:	13071956
Application Number:	13070561
Application Number:	13293269
Application Number:	13348798
Application Number:	13157744
Application Number:	13181935

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Application Number:	13338478
Application Number:	13268248
Application Number:	13338486
Application Number:	13334257

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER:	TOSHP522US
NAME OF SUBMITTER:	Gregory Turocy

Total Attachments: 3
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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
12/956,330	11/30/10	METAL CONTAINING SACRIFICE MATERIAL AND METHOD OF DAMASCENE WIRING FORMATION
12/961,793	12/7/10	SEMICONDUCTOR DEVICE AND METHOD OF FABRICATING THE SAME
13/162,825	6/17/11	SEMICONDUCTOR DEVICE WITH THRESHOLD VOLTAGE CONTROL AND METHOD OF FABRICATING THE SAME
12/961,762	12/7/10	SEMICONDUCTOR DEVICE AND METHOD OF MANUFACTURING THE SAME
13/015,857	1/28/11	SEMICONDUCTOR DEVICE AND METHOD OF MANUFACTURING
13/070,702	3/24/11	SELF-ALIGNED SILICIDE FORMATION ON SOURCE/DRAIN THROUGH CONTACT VIA
13/069,625	3/23/11	ION IMPLANTED RESIST STRIP WITH SUPERACID
13/041,732	3/7/11	SEMICONDUCTOR DEVICE AND METHOD OF FABRICATING THE SAME
13/070,704	3/24/11	SPECIFIC CONTACT RESISTIVITY MEASUREMENT METHOD, SEMICONDUCTOR DEVICE FOR SPECIFIC CONTACT RESISTIVITY MEASUREMENT, AND METHOD FOR MANUFACTURING THE SAME
13/071,956	3/25/11	OVERLAY CONTROL METHOD AND A SEMICONDUCTOR MANUFACTURING METHOD AND APPARATUS EMPLOYING THE SAME

13/070,561	3/24/11	TRANSISTOR STRUCTURE AND MANUFACTURING METHOD WHICH HAS CHANNEL EPITAXIAL EQUIPPED WITH LATERAL EPITAXIAL STRUCTURE
13/293,269	11/10/11	FORMATION OF STI TRENCHES FOR LIMITING PN-JUNCTION LEAKAGE
13/348,798	1/12/12	STEP HEIGHT REDUCTION OF STI FORMATIONS
13/157,744	6/10/11	INTERCONNECT STRUCTURE WITH IMPROVED ALIGNMENT FOR SEMICONDUCTOR DEVICES
13/181,935	7/13/11	CRYOGENIC SILICON ION-IMPLANTATION AND RECRYSTALLIZATION ANNEALING
13/338,478	12/28/11	SYSTEMS AND METHODS FOR BACKSIDE THRESHOLD VOLTAGE ADJUSTMENT
13/268,248	10/7/11	LITHOGRAPHY TOOL ALIGNMENT CONTROL SYSTEM
13/338,486	12/28/11	METHODS FOR INTEGRATION OF METAL/DIELECTRIC INTERCONNECTS
13/334,257	12/22/11	GRADED DENSITY LAYER FOR FORMATION OF INTERCONNECT STRUCTURES

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, 57th Floor, Key Tower, 127 Public Square, Cleveland, Ohio 44114.

Signed: Date:

Feb 12 2012

Hitoshi Otsuka, President and CEO
Toshiba America Electronic Components, Inc.