

## 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>                            |
| HIROSHI MATSUYAMA   | 01/24/2019                                       |
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| <b>City:</b>  | MINATO-KU, TOKYO                                 |
| <b>State/Country:</b>   | JAPAN  |
| <b>Name:</b>  | TOSHIBA ELECTRONIC DEVICES & STORAGE CORPORATION |
| <b>Street Address:</b>  | 1-1, SHIBAURA 1-CHOME                            |
| <b>City:</b>  | MINATO-KU, TOKYO                                 |
| <b>State/Country:</b>   | JAPAN  |
| <b>PROPERTY NUMBERS Total: 1</b>  |  |
| <b>Property Type</b>  | <b>Number</b>                                    |
| Application Number:   | 16269815   |
| <b>CORRESPONDENCE DATA</b>  |  |
| <b>Fax Number:</b>  |  |
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| <b>ATTORNEY DOCKET NUMBER:</b>  | 1242236-0913-227 US                              |
| <b>NAME OF SUBMITTER:</b>   | DAVID M. TENNANT                                 |
| <b>SIGNATURE:</b>   | /David M. Tennant/                               |
| <b>DATE SIGNED:</b>   | 02/07/2019                                       |
| <b>Total Attachments: 2</b>   |  |
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| source=1242236-0913-227_Assignment#page2.tif  |  |

## ASSIGNMENT

Now, therefore, for good and valuable consideration, receipt and sufficiency of which is hereby acknowledged, the undersigned Inventor(s) (hereinafter referred to as "ASSIGNOR(S)"), hereby sell(s), assign(s) and transfer(s) to **KABUSHIKI KAISHA TOSHIBA and TOSHIBA ELECTRONIC DEVICES & STORAGE CORPORATION** (hereinafter referred to as "ASSIGNEE"), organized and existing under the laws of **JAPAN**, having a place for the transaction of business at **1-1, Shibaura 1-chome, Minato-ku, Tokyo, Japan** and **1-1, Shibaura 1-chome, Minato-ku, Tokyo, Japan**, and the successors and assigns of the ASSIGNEE, 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 an application entitled:

### SEMICONDUCTOR DEVICE

And which is disclosed in the U.S. patent application executed on even date herewith, or if not so executed, was disclosed in:

- (a)  U.S. patent application executed on \_\_\_\_\_
- (b)  U.S. application no. **16/269,815** filed on **February 7, 2019**
- (c)  International (e.g., PCT, JP) application no. \_\_\_\_\_ filed on \_\_\_\_\_

And in and to the above application 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;

ASSIGNOR(S) authorize(s) and request(s) the issuing authority to issue any and all patents on said application or applications to said ASSIGNEE or its successors and assigns;

ASSIGNOR(S) hereby covenant(s) that ASSIGNOR(S) 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 the ASSIGNEE or its successors and assigns, ASSIGNOR(S) further covenant(s) and agree(s) to communicate to said ASSIGNEE or its representatives, agents, its successors or assigns, any facts relating to said invention or inventions including evidence for purposes of interference, derivation or other administrative or legal proceedings whenever requested; to testify in any interference, 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 said ASSIGNEE, its successors or assigns and nominees to secure, obtain and enforce proper patent protection for said invention or inventions in this or any foreign country.

Any attorney of record is authorized and requested by the execution of this assignment to insert into this assignment any further information necessary for recordation of this document.

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

- |    |  |   |                                       |
|----|--|---|---------------------------------------|
| 1) | <u>Hiroshi Matsuyama</u><br><i>(Signature)</i> | <u>Hiroshi MATSUYAMA</u><br><i>(Type or Print Name)</i> | <u>Jan. 24, 2019</u><br><i>(Date)</i> |
| 2) | _____<br><i>(Signature)</i>                    | _____<br><i>(Type or Print Name)</i>                    | _____<br><i>(Date)</i>                |
| 3) | _____<br><i>(Signature)</i>                    | _____<br><i>(Type or Print Name)</i>                    | _____<br><i>(Date)</i>                |
| 4) | _____<br><i>(Signature)</i>                    | _____<br><i>(Type or Print Name)</i>                    | _____<br><i>(Date)</i>                |
| 5) | _____<br><i>(Signature)</i>                    | _____<br><i>(Type or Print Name)</i>                    | _____<br><i>(Date)</i>                |
| 6) | _____<br><i>(Signature)</i>                    | _____<br><i>(Type or Print Name)</i>                    | _____<br><i>(Date)</i>                |