## 505840183 12/28/2019

# PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
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NOBUYOSHI SAITO	09/27/2019
JUNJI KATAOKA	09/30/2019
TOMOMASA UEDA	09/30/2019
KEIJI IKEDA	09/30/2019

#### **RECEIVING PARTY DATA**

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## **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	16563307

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NAME OF SUBMITTER:	NAOMI GREEN
SIGNATURE:	/Naomi Green/
DATE SIGNED:	12/28/2019
	•

**Total Attachments: 4** 

505840183

PATENT REEL: 051382 FRAME: 0209



PATENT REEL: 051382 FRAME: 0210

U.S. Rights-Sole or Joint

#### ASSIGNMENT

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each undersigned inventor has sold and assigned, and by these presents hereby sells and assigns, unto

#### TOSHIBA MEMORY CORPORATION

1-1, Shibaura 1-chome Minato-ku, Tokyo 105-0023 Japan

(hereinafter ASSIGNEE) all right, title and interest for the United States, its territories and possessions in and to this invention relating to

#### SEMICONDUCTOR DEVICE AND PRODUCTION METHOD THEREOF

as set forth in this United States Patent Application

check	ck executed concurrently herewith		
one	□ executed on		
	Serial No 16/563,307 filed September 6,2019		

in and to said United States Patent Application including any and all divisions or continuations thereof and in and to any and all Letters Patent of the United States which may issue on any such application or for said invention, including any and all reissues or extensions thereof, to be held and enjoyed by said ASSIGNEE, its successors, legal representatives and assigns to the full end of the term or terms for which any and all such Letters Patent may be granted as fully and entirely as would have been held and enjoyed by the undersigned had this Assignment not been made;

Each of the undersigned hereby authorizes and requests the Commissioner of Patents and Trademarks to issue any and all such Letters Patent to said ASSIGNEE, its successors or assigns in accordance herewith;

Each of the undersigned warrants and covenants that he has the full and unencumbered right to sell and assign the interests herein sold and assigned and that he has not executed and will not execute any document or instrument in conflict herewith;

Each of the undersigned further covenants and agrees he will communicate to said ASSIGNEE, its successors, legal representatives or assigns all information known to him relating to said invention or patent application and that he will execute and deliver any papers, make all rightful oaths, testify in any legal proceedings and perform all other lawful acts deemed necessary or desirable by said ASSIGNEE, its successors, legal representatives or assigns to perfect title to said invention, to said application including divisions and continuations thereof and to any and all Letters Patent which may be granted therefor or thereon, including reissues or extensions, in said ASSIGNEE, its successors, or assigns or to assist said ASSIGNEE, its successors, legal representatives or assigns in obtaining, reissuing or enforcing Letters Patent of the United States for said invention;

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-1-

NAMES AND SIGNATURES OF INVENTORS			
Name: Tomoaki SAWABE	Signature: Loppolle Lawelle	Date: Dec. 4.299	
Name: Nobuyoshi SAITO	Signature:	Date?:	
Name: Junji KATAOKA	Signature:	Date:	
Name: Tomomasa UEDA	Signature:	Date:	
Name: Keiji IKEDA	Signature:	Date:	
Name:	Signature:	Date:	
NAMES AND SIGNATURES OF WITNESSES			
Name:	Signature:	Date:	

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U.S. Rights-Sole or Joint

## ASSIGNMENT

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one	□ executed on
	Serial No <u>16/563,307</u> filed <u>September 6,2019</u>

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-1-

NAMES AND SIGNATURES OF INVENTORS			
Name: Tomoaki SAWABE	Signature:	Date:	
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Name: Junji KATAOKA	Signature: Nobuyoshi Laito Signature: Junji Katavka	Date: Sep 30, 2019	
Name: Tomomasa UEDA		Date: Sep 30,2019	
Name: Keiji IKEDA	Signature: Leiji Skeda	Date: Sep. 30, 2019	
Name:	Signature:	Date:	
NAMES AND SIGNATURES OF WITNESSES			
Name:	Signature:	Date:	

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**RECORDED: 12/28/2019** 

**PATENT REEL: 051382 FRAME: 0214**