PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
SHUNSUKE FUKAMI	10/23/2017
HIDEO OHNO	10/20/2017
TETSUO ENDOH	11/02/2017

RECEIVING PARTY DATA

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PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15718990

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER:	TOH-109BC1	
NAME OF SUBMITTER:	STEVEN M. RABIN	
SIGNATURE:	/Steven M. Rabin/	
DATE SIGNED:	12/19/2017	
	This document serves as an Oath/Declaration (37 CFR 1.63).	

Total Attachments: 2

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PATENT 504693842 REEL: 044429 FRAME: 0637

Attorney Reference: TOH-109BC1

ASSIGNMENT OF AND DECLARATION FOR APPLICATION FOR UNITED STATES LETTERS PATENT

WHEREAS Shunsuke FUKAMI, Hideo OHNO, and Tetsuo ENDOH, hereinafter referred to collectively as the assignor and inventor, has invented a certain improvement relating to MAGNETORESISTANCE EFFECT ELEMENT, MAGNETIC MEMORY DEVICE, MANUFACTURING METHOD, OPERATION METHOD, AND INTEGRATED CIRCUIT.

[] said application being attached hereto; [X] said application having been filed in the United State September 28, 2017, as Application Serial No. 15/718.9 [] the specification of which was filed under the Patent Serial No, the United States of A	<u>390</u> , and was amended on(if applicable); Cooperation Treaty on,
hereinafter referred to as the assignee or applicant, is and to said application, including any and all divisions a	Katahira, Aoba-ku, Sendai-shi, Miyagi 980-8577, Japan, desirous of acquiring the entire right, title and interest in nd continuations thereof, and in and to said invention and cluding any and all renewals, reissues and prolongations
valuable consideration paid by said assignee to said as assignor hereby assigns, sells and transfers to said as full and exclusive right, title and interest in and to continuations thereof, and in and to said invention a including any and all renewals, reissues and protosuccessors and assigns, to have, hold, exercise and and continuations thereof, and the said invention ar including any and all renewals, reissues and prolonge advantages in anywise arising from or appertaining the patents when granted, including any and all renewals, re	consideration of One Dollar (\$1.00), and other good and signor, the receipt of which is hereby acknowledged, said signee, and said assignee's successors and assigns, the said application, including any and all divisions and any and all patents which may be granted therefor orgations thereof; said assignee, and said assignee's enjoy the said application, including any and all divisions and any and all patents which may be granted therefor ations thereof, with all the rights, powers, privileges and reto, for and during the term or terms of any and all such elssues and prolongations thereof, for the use and beneficials, in as ample and beneficial a manner as the said se, if this assignment had not been made.
	, upon the request of said assignee, or said assignee's obtaining or to the asserting of said patents, including any
AND said assignor authorizes and requests the Letters Patent on said application, and on any and all desaid assignee's successors and assigns, in accordance	the Commissioner of Patents and Trademarks to issue divisions and continuations thereof, to said assignee, and herewith.
	are that the above-identified application was made or iginal inventor or an original joint inventor of a claimed
I hereby acknowledge that any willful false sta U.S.C. 1001 by fine or imprisonment of not more than f	atement made in this declaration is punishable under 18 ive (5) years, or both.
Address all correspondence and telephone ca 500, Washington, D.C. 20005, Telephone: (202) 371-89	lls to Rabin & Berdo, P.C., 1101 14 th Street, N.W., Suite 976; Fax: (202) 408-0924, Customer No. 23995.
WITNESS:	ASSIGNOR (SOLE OR FIRST INVENTOR):
Signature:	Signature: Shurserke Tukomi
Name:	Legal Name: Shunsuke FUKAMI
Address:	Date: <u>DCT_23_2817</u>

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WITNESS:	ASSIGNOR (SEGOND INVENTOR):
Signature:	Signature: WWW Q
Name:	Legal Name: Hideo OHNO
Address:	Date: Oct. 20, 2017
	,
WITNESS:	ASSIGNOR (THIRD INVENTOR):
Signature:	Signature: Fetzer Endh
Name:	Legai Name: <u>Tetsuo ENDOH</u>
Address:	Date: Nov. 2, 2019

RABIN & BERDO, P.C., Washington, D.C.

RECORDED: 12/19/2017

PATENT REEL: 044429 FRAME: 0639