

## 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>
CHIH-CHIN LIAO	06/27/2017
WEITING JIANG	06/27/2017
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	SANDISK SEMICONDUCTOR (SHANGHAI) CO. LTD.
<b>Street Address:</b>	NO. 388, JIANG CHUAN EAST ROAD
<b>Internal Address:</b>	MINHANG DISTRICT
<b>City:</b>	SHANGHAI
<b>State/Country:</b>	CHINA
<b>Postal Code:</b>	200241
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	15636078
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(312)321-4299
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
<b>Email:</b>	usassignments@brinksgilson.com, pchiovvari@brinksgilson.com
<b>Correspondent Name:</b>	E. BRANDON NYKIEL
<b>Address Line 1:</b>	P.O. BOX 10395
<b>Address Line 4:</b>	CHICAGO, ILLINOIS 60610
<b>ATTORNEY DOCKET NUMBER:</b>	10519-3463 (SDA-3094-US)
<b>NAME OF SUBMITTER:</b>	E. BRANDON NYKIEL
<b>SIGNATURE:</b>	/E. Brandon Nykiel/
<b>DATE SIGNED:</b>	02/20/2018
<b>Total Attachments: 4</b>	
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source=10519_3463_ExecutedAssignment2#page2.tif	
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source=10519_3463_ExecutedAssignment2#page4.tif	

**ASSIGNMENT**

WHEREAS, **CHIN-TIEN CHIU, CHIH-CHIN LIAO, WEITING JIANG, and HEM TAKIAR**, the "Assignors", have made the invention described in the Chinese patent application entitled **HETEROGENEOUS FAN-OUT STRUCTURES FOR MEMORY DEVICES**, filed on **June 20, 2017** and assigned **Chinese patent application No. 201710468484.6**, and have made the invention described in the United States patent application entitled **HETEROGENEOUS FAN-OUT STRUCTURES FOR MEMORY DEVICES**, executed by Assignors on the same date as, or on a date prior to, this Assignment;

WHEREAS, **SanDisk Semiconductor (Shanghai) Co. Ltd.**, a corporation organized and existing under the laws of the **Shanghai, P.R. of China**, having a place of business at **No. 388, Jiang Chuan East Road, Minhang District, Shanghai, 200241, P.R. China**, the "Assignee", desires to acquire the entire right, title and interest in the invention and the patent application identified above, and all patents which may be obtained for the invention, as set forth below;

NOW, THEREFORE, in consideration of valuable and legally sufficient consideration, the receipt of which by the Assignors from the Assignee is acknowledged, the Assignors have sold, assigned and transferred, and by these presents sell, assign and transfer to the Assignee, the entire right, title and interest in the invention and the Chinese and United States patent applications identified above, and any patents that may issue for the invention in the Chinese and/or the United States; with the entire right, title and interest in the invention and all patent applications and patents issuing therefrom in all countries foreign to China and/or the United States, including the full right to claim for any such application all benefits and priority rights under any applicable convention; with the entire right, title and interest in all continuations, divisions, renewals and extensions of any of the patent applications and patents defined above; with the right to recover all damages, including, but not limited to, a reasonable royalty, by reason of past, present, or future infringement or any other violation of patent or patent application rights; to have hold for the sole and exclusive

use and benefit of the Assignee, its successors and assigns, to the full end of the term or terms for all such patents.

The Assignors covenant and agree, for both the Assignors and the Assignors' legal representatives, that the Assignors will assist the Assignee in the prosecution of the patent application identified above; in the making and prosecution of any other patent applications that the Assignee may elect to make covering the invention identified above; in vesting in the Assignee exclusive title in all such other patent applications and patents; and that the Assignors will execute and deliver to the Assignee all additional papers which may be requested by the Assignee to carry out the terms of this Assignment.

The Commissioner of Patents and Trademarks is authorized and requested to issue patents to the Assignee under the terms of this Assignment.

IN TESTIMONY WHEREOF, the Assignors have executed this agreement.

DATE: \_\_\_\_\_ CHIN-TIEN CHIU

DATE: 2017, 6, 27 Chih-Chin Liao  
CHIH-CHIN LIAO

DATE: \_\_\_\_\_ WEITING JIANG

DATE: \_\_\_\_\_ HEM TAKIAR

**ASSIGNMENT**

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DATE: \_\_\_\_\_ CHIN-TIEN CHIU

DATE: \_\_\_\_\_ CHIH-CHIN LIAO

DATE: 6/27/2017 Weiting Jiang  
WEITING JIANG

DATE: \_\_\_\_\_ HEM TAKIAR