

PATENT ASSIGNMENT

Electronic Version v1.1

Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT								
NATURE OF CONVEYANCE:	ASSIGNMENT								
CONVEYING PARTY DATA									
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>OH CHUL KWON</td> <td>01/02/2013</td> </tr> <tr> <td>KI HONG LEE</td> <td>01/02/2013</td> </tr> <tr> <td>SEUNG HO PYI</td> <td>01/02/2013</td> </tr> </tbody> </table>		Name	Execution Date	OH CHUL KWON	01/02/2013	KI HONG LEE	01/02/2013	SEUNG HO PYI	01/02/2013
Name	Execution Date								
OH CHUL KWON	01/02/2013								
KI HONG LEE	01/02/2013								
SEUNG HO PYI	01/02/2013								
RECEIVING PARTY DATA									
<table border="1"> <tr> <td>Name:</td> <td>SK hynix Inc.</td> </tr> <tr> <td>Street Address:</td> <td>2091, Gyeongchung-daero, Bubal-eub</td> </tr> <tr> <td>City:</td> <td>Icheon-si, Gyeonggi-do</td> </tr> <tr> <td>State/Country:</td> <td>KOREA, REPUBLIC OF</td> </tr> </table>		Name:	SK hynix Inc.	Street Address:	2091, Gyeongchung-daero, Bubal-eub	City:	Icheon-si, Gyeonggi-do	State/Country:	KOREA, REPUBLIC OF
Name:	SK hynix Inc.								
Street Address:	2091, Gyeongchung-daero, Bubal-eub								
City:	Icheon-si, Gyeonggi-do								
State/Country:	KOREA, REPUBLIC OF								
PROPERTY NUMBERS Total: 1									
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13735761</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13735761				
Property Type	Number								
Application Number:	13735761								
CORRESPONDENCE DATA									
Fax Number: <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i> Phone: 206-224-2863 Email: kpedersen@kilpatricktownsend.com Correspondent Name: KILPATRICK TOWNSEND & STOCKTON LLP/SK HY Address Line 1: TWO EMBARCADERO CENTER Address Line 2: EIGHTH FLOOR Address Line 4: SAN FRANCISCO, CALIFORNIA 94111-3834									
ATTORNEY DOCKET NUMBER:	86548-853662								
NAME OF SUBMITTER:	KELLY PEDERSEN								
Signature:	/Kelly Pedersen/								
Date:	10/03/2013								
Total Attachments: 2 source=ASSGNMT_86548-853662-180200US#page1.tif source=ASSGNMT_86548-853662-180200US#page2.tif									

OP \$40.00 13735761

ASSIGNMENT
(Patent Application)

We [I], the undersigned, have invented certain inventions and improvements disclosed in a utility (provisional or non-provisional) or design patent application entitled

"[Semiconductor device and method of manufacturing the same]"

the specification of which is provided with this Assignment and identified by the Attorney Docket No. above. (Serial No. 13/735,761 filed on January 7, 2013)

For one dollar (\$1.00) and other good and valuable consideration, the receipt and sufficiency of which we [I] acknowledge, we [I]:

1. Agree to assign, transfer, convey, and sell, hereby assign, transfer, convey, and sell and have assigned, transferred, conveyed, and sold to **SK hynix Inc.**, a corporation of Korea having a principal place of business at 2091, Gyeongchung-daero, Buhul-eub, Icheon-si, Gyeonggi-do, Republic of Korea ("Assignee"), the entire right, title, and interest in and to:
 - (a) all intellectual property (including, without limitation, any innovation, information, invention, discovery, product, process, work or design) disclosed, embodied, shown, or claimed in the above-referenced patent application, implicitly or explicitly;
 - (b) the above-referenced patent application, the right to claim priority to the above-referenced patent application, all applications based in whole or in part upon the above-referenced patent application, including, without limitation, all applications that are a provisional, non-provisional, design, divisional, continuation, continuation-in-part, registration, utility model, industrial design, reissue, renewal, substitute, extension, reexamination, post-grant review, inter partes review, supplemental examination or non-U.S. patent application or application for other rights based in whole or in part on the above-referenced patent application;
 - (c) all patents (including, without limitation, all U.S. and non-U.S. patents, registrations, utility models, industrial designs, design patents, counterparts, continuations, continuations-in-part, divisionals, reissues, renewals, substitutes, extensions, reexaminations, post-grant reviews, inter partes reviews and supplemental examinations) that are granted or issued upon, or that claim priority to, any and all applications described in (b) of this paragraph or that disclose or claim intellectual property described in (a) of this paragraph, in whole or in part; and

ASSIGNMENT
[INSERT TITLE]

Attorney Docket No. 86548-853662 (180200US)

Page 2 of 2

- (d) all claims for damages by reason of past infringement of any rights under the applications or patents described in (a), (b) or (c) of this paragraph (including provisional rights to reasonable royalties pursuant to 35 U.S.C. §154(d)) and the right to sue for and collect such damages and royalties for Assignee's own use.
2. Authorize and request the U.S. Patent and Trademark Office or any other U.S. or non-U.S. agency to issue to the Assignee any and all patent(s), or other rights or documents, resulting from the intellectual property, patent application(s) and patents described in paragraph 1 of this Assignment.
 3. Agree to sign all papers and documents, including without limitation, applications, declarations, oaths and petitions, and, at the Assignee's expense, perform any other acts that are necessary in connection with prosecution of patent application(s) or intellectual property described in paragraph 1 of this Assignment and the enforcement of patent(s) or other rights resulting from such patent application(s) or intellectual property.
 4. Agree that the terms, covenants, and conditions of this Assignment shall inure to the benefit of the Assignee, its successors, assigns and other legal representative, and shall be binding upon us [me], as well as our [my] heirs, legal representatives, and assigns.
 5. Promise and affirm that we [I] have not entered, and will not enter, into any assignment, contract, or understanding that conflicts with this Assignment.
 6. Authorize Kilpatrick Townsend & Stockton to insert above the application number and filing date of the above-described patent application when known.

Signed on the dates indicated beside our [my] signatures [signature].

Signature:

[Signature]
[Oh Chul Kwon]

Date: January 2, 2013

Signature:

[Signature]
[Ki Hong Lee]

Date: January 2, 2013

Signature:

[Signature]
[Seung Ho Pyi]

Date: January 2, 2013



이 기 록 / 13년 1월 2일 / 018 / 4463

8457457/78, 204, 1-82/2012-1-03-12-31

PATENT

RECORDED: 10/03/2013

REEL: 031342 FRAME: 0605