


Form PTO-1595 (Rev. 11-08)
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To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

1. Name of conveying party(ies) EM, Ho-Seok Additional name(s) of conveying party(ies) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	2. Name and address of receiving party(ies) Name: <u>Hynix Semiconductor, Inc.</u> Internal Address: _____ _____ Street Address: <u>Shn 136-1, Amiri, Bubakeup</u> _____ City: <u>Icheon-si</u> State: <u>Gyeonggi-do</u> Country: <u>Republic of Korea</u> Zip: <u>607-701</u> Additional name(s) & address(es) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
3. Nature of conveyance/Execution Date(s): Execution Date(s) <u>December 29, 2008</u> <input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Security Agreement <input type="checkbox"/> Change of Name <input type="checkbox"/> Joint Research Agreement <input type="checkbox"/> Government Interest Assignment <input type="checkbox"/> Executive Order 9424, Confirmatory License <input type="checkbox"/> Other _____	4. Application or patent number(s): <input type="checkbox"/> This document is being filed together with a new application. A. Patent Application No.(s) 12/345,949 B. Patent No.(s) Additional numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Name and address to whom correspondence concerning document should be mailed: Name: <u>Mannava & Kang, P.C.</u> Internal Address: _____ _____ Street Address: <u>11240 Waples Mill Road, Suite 300</u> _____ City: <u>Fairfax</u> State: <u>VA</u> Zip: <u>22030</u> Phone Number: <u>703-652-3820</u> Fax Number: <u>703-865-5150</u> Email Address: <u>jkim@mannaavakang.com</u>	6. Total number of applications and patents involved: <u>1</u> 7. Total fee (37 CFR 1.21(h) & 3.41) \$ <u>40.00</u> <input type="checkbox"/> Authorized to be charged to deposit account <input checked="" type="checkbox"/> Enclosed <input type="checkbox"/> None required (government interest not affecting title) 8. Payment Information Deposit Account Number _____ Authorized User Name _____
9. Signature: <u></u> <div style="display: flex; justify-content: space-between;"> Signature December 30, 2008 </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> Name of Person Signing Total number of pages including cover sheet, attachments, and documents: 3 </div>	

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to:
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O. Box 1460, Alexandria, V.A. 22313-1460

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2008년 12월29일 7:26PM chinsung

No. 0099 P. 5/5

Attorney Docket No. P08HA002/US

ASSIGNMENT OF PATENT APPLICATION

WHEREAS I/We, the below named inventor(s) has made an invention entitled:

PHASE-CHANGE MEMORY DEVICE

For which I/We executed an application for Letters Patent of the United States concurrently herewith; and/or
For which I/We filed an application for Letters Patent of the United States on 12/30/2008 (Application
No. 12/345,949)

BE IT KNOWN that, for good and valuable consideration, the receipt of which is hereby acknowledged, I/We, as assignor(s), have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto Hynix Semiconductor, Inc., a corporation of the Republic of Korea, whose post office address is San 136-1, Ami-ri, Buhal-eup, Icheon-si, Gyeonggi-do 467-701, Republic of Korea (hereinafter referred to as Assignee), its lawful successors and assigns my/our entire right, title, and interest in and to this application and the invention(s) and improvement(s) set forth therein; and any and all continuations, continuations-in-part, divisions, and renewals of and substitutes for said application for said Letters Patent and any and all Letters Patent of the United States and of countries foreign thereto, which may be granted thereon or therefore; and any reissues, examinations, or extensions of all such Letters Patent.

I/WE HEREBY authorize the Assignee, its lawful successors and assigns to apply for Letters Patent in all countries foreign to the United States directly in its own name, and to claim priority of the filing date of any of the above-mentioned applications for Letters Patent of the United States and of countries foreign thereto under the provisions of any and all international conventions and treaties.

I/WE HEREBY authorize and request the Commissioner of Patents and Trademarks of the United States and official of any country or countries foreign to the United States, whose duty it is to issue patents on applications as aforesaid, to issue all Letters Patent for this invention to the Assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND, I/WE HEREBY covenant that I/We have the full right to convey the interest assigned by this Assignment, and I/We have not executed and will not execute any agreement in conflict with this Assignment;

AND, I/WE HEREBY further covenant and agree that I/We will, without further consideration, communicate with said Assignee, its successors and assigns, any facts known to me/us respecting this invention and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee, its successors and assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid said Assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in the United States and in countries foreign thereto, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns.

AND, I/WE HEREBY authorize and request the attorneys of record to insert the serial number and filing date of said application now identified by the attorney docket number and title set forth above as soon as the same shall have been known to them by the United States Patent and Trademark Office.

IN TESTIMONY WHEREOF, I/We have hereunto set our hands.

Signature of first assignor: EM. Ho-Seok Date December 29, 2008
Name of first assignor: EM, Ho-Seok
Address: San 136-1, Ami-ri, Buhal-eup, Icheon-si, Gyeonggi-do 467-701, Republic of Korea

Signature of second assignor: _____ Date _____
Name of second assignor: _____
Address: _____