

**PATENT ASSIGNMENT**

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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>
Beom-seop Lee	12/23/2010
Young-hyun Jun	12/23/2010
Sang-joon Hwang	12/23/2010
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	Samsung Electronics Co., Ltd.
<b>Street Address:</b>	416 Maetan-dong, Yeongtong-gu
<b>City:</b>	Suwon-si, Gyeonggi-do
<b>State/Country:</b>	REPUBLIC OF KOREA
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	12984342
<b>CORRESPONDENCE DATA</b>	
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<b>ATTORNEY DOCKET NUMBER:</b>	SAM-1505
<b>NAME OF SUBMITTER:</b>	Steven M. Mills
<b>Total Attachments: 2</b> source=1505_executedassignment#page1.tif source=1505_executedassignment#page2.tif	

OP \$40.00 12984342

Attorney Reference No.: SAM-1505

## ASSIGNMENT

We, **Beom-seop Lee**, of 452-902, Solbit Maeul Ssangyong Sweet Dot Home Yega Apt., Bansong-dong, Hwaseong-si, Gyeonggi-do, Republic of Korea; **Young-hyun Jun**, of 205-1105, Mido Apt., Daechi 2-dong, Gangnam-gu, Seoul, Republic of Korea; and **Sang-joon Hwang**, of 102-1501, Gyeongnam Apt., Dogok 1-dong, Gangnam-gu, Seoul, Republic of Korea; having invented improvements in **SEMICONDUCTOR MEMORY DEVICE FOR REDUCING RIPPLE NOISE OF BACK-BIAS VOLTAGE AND METHOD OF DRIVING SEMICONDUCTOR MEMORY DEVICE** identified as Attorney Docket No. SAM-1505, described in an application for Letters Patent of the United States, which application was filed on \_\_\_\_\_, and assigned Serial No. \_\_\_\_\_ (in the event that the execution date, filing date and/or Serial No. are not entered above at the time we execute this document, and if such information is deemed necessary, we hereby authorize and request our attorneys at Mills & Onello, LLP, Eleven Beacon Street, Suite 605, Boston, Massachusetts 02108, USA, to insert above the execution date, filing date and/or Serial No. of said application, when known), for good and valuable consideration, receipt of which is hereby acknowledged from Samsung Electronics Co., Ltd., a Korean corporation having a place of business at 416, Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea (and hereinafter called the Assignee, which term shall include its successors and assigns), do hereby sell, assign and transfer unto the Assignee our entire right, title, and interest in and throughout the United States of America (including its territories and dependencies) and all countries foreign thereto, in and to and under said application (which term shall include hereinafter where the context so admits all divisional, continuing, reissue and other patent applications based thereon) and the inventions (which term shall include each and every such invention, or part thereof) therein described, and any and all patents and like rights of exclusion (including extensions thereof) of any country which may be granted on or for said inventions or on said application;

And for the same consideration We do also hereby sell, assign, and transfer unto the Assignee, all our rights under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, and all other treaties of like purpose in respect of said inventions and said application, and We do hereby authorize the Assignee to apply in our name or its own name or its designee for patents and like rights of exclusion on or for said inventions in all countries, claiming (if the Assignee so desires) the priority of the filing date of said application under the provisions of said Convention, Treaty or any such other Convention or Treaty;

And for the same consideration, We do hereby agree for ourselves and for our heirs, executors, and administrators, promptly upon request of the Assignee to execute and deliver without further compensation any power of attorney, assignment, original, divisional, continuing, reissue or other application or applications for patent or patents or like rights of exclusion of any country, or other lawful documents and any further assurances that may be deemed necessary or desirable by the Assignee, fully to secure to it said right, title, and interest as aforesaid in and to said inventions, applications, and said several patents and like rights of exclusion (including extensions thereof) or any of them, all, however, at the expense of the Assignee, its successors, or assigns;

And We do hereby authorize and request the Commissioner of Patents and Trademarks of the United States of America and the corresponding Official of each country foreign thereto to issue to the Assignee, any and all patents and like rights of exclusion which may be granted in any country upon said United States application on or for said inventions;

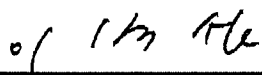
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**Attorney Reference No.: SAM-1505**

And We do hereby covenant for ourselves and our legal representatives and agree with the Assignee, that We have granted no right or license to make, use, or sell said inventions to anyone except the Assignee, that prior to the execution of this deed our right, title, and interest in and to said inventions has not been otherwise encumbered by us, and that We have not executed and will not execute any instruments in conflict herewith.

**First or Sole Inventor:**

Signature:   
Beom-seop Lee

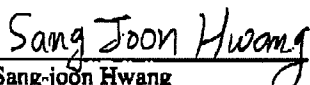
Date: 2010.12.23

**Second Joint Inventor:**

Signature:   
Young-hyun Jun

Date: 2010.12.23

**Third Joint Inventor:**

Signature:   
Sang-joon Hwang

Date: 2010.12.23

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