

PATENT ASSIGNMENT

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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>Il-Young Han</td> <td>02/20/2012</td> </tr> <tr> <td>Jae-Sung Kwon</td> <td>02/20/2012</td> </tr> <tr> <td>Sang-Wook Park</td> <td>02/19/2012</td> </tr> <tr> <td>Won-Keun Kim</td> <td>02/17/2012</td> </tr> </tbody> </table>		Name	Execution Date	Il-Young Han	02/20/2012	Jae-Sung Kwon	02/20/2012	Sang-Wook Park	02/19/2012	Won-Keun Kim	02/17/2012
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Il-Young Han	02/20/2012										
Jae-Sung Kwon	02/20/2012										
Sang-Wook Park	02/19/2012										
Won-Keun Kim	02/17/2012										
RECEIVING PARTY DATA											
Name:	Samsung Electronics Co., Ltd.										
Street Address:	416, Maetan-dong, Yeongtong-gu, Gyeonggi-do										
City:	Suwon-si										
State/Country:	REPUBLIC OF KOREA										
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>13412674</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13412674						
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Application Number:	13412674										
CORRESPONDENCE DATA											
Fax Number:	(617)742-7774										
Phone:	617-994-4900										
Email:	mail@omiplaw.com										
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.</i>											
Correspondent Name:	ONELLO & MELLO LLP										
Address Line 1:	ELEVEN BEACON STREET										
Address Line 2:	SUITE 605										
Address Line 4:	BOSTON, MASSACHUSETTS 02108										
ATTORNEY DOCKET NUMBER:	SAM-1569										
NAME OF SUBMITTER:	Anthony P. Onello, Jr.										
Total Attachments: 3 source=1569_execassign#page1.tif source=1569_execassign#page2.tif source=1569_execassign#page3.tif											

OP \$40.00 13412674

ASSIGNMENT

We, Il-Young Han, of 104-1701, Sungwon Ehwa Apt., Ojeon-dong, Uiwang-si, Gyeonggi-do, Republic of Korea; Jae-Sung Kwon, of 106-1001, Minsokmaeul Ssangyong Apt., Bora-dong, Giheung-gu, Yongin-si, Gyeonggi-do, Republic of Korea; Sang-Wook Park, of 411-1201, Solbitmaeul Seohai Grandbleu Apt., Bansong-dong, Hwaseong-si, Gyeonggi-do, Republic of Korea; and Won-Keun Kim, of 339-1903, Sibeom Daeunmaeul World Meridian Bando Yubora Apt., 80, Bansong-dong, Hwaseong-si, Gyeonggi-do, Republic of Korea; having invented improvements in APPARATUS FOR FABRICATING SEMICONDUCTOR DEVICES identified as Attorney Docket No. SAM-1569, described in an application for Letters Patent of the United States, which application was filed on March 6, 2012, and assigned Serial No. 13,412,674 (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 Onello & Mello, 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;

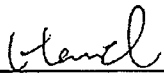
And We do hereby covenant for ourselves and our legal representatives and agree with the Assignee,



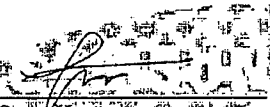
Attorney Reference No.: SAM-1569

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.

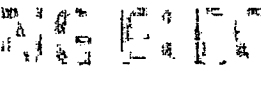
First or Sole Inventor:

Signature:  Date: 2022.02.20
Il-Young Han

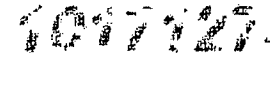
Second Joint Inventor:

Signature:  Date: 2022.02.20
Jae-Sung Kwon

Third Joint Inventor:

Signature:  Date: _____
Sang-Wook Park

Fourth Joint Inventor:

Signature:  Date: _____
Won-Keun Kim

ATTORNEY REFERENCE NO.: SAM-1569
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Attorney Reference No.: SAM-1569

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First or Sole Inventor:

Signature: _____ Date: _____
Il-Young Han

Second Joint Inventor:

Signature: _____ Date: _____
Jae-Sung Kwon

Third Joint Inventor:

Signature: Sang Wook Park Date: 2012.02.17
Sang-Wook Park

Fourth Joint Inventor:

Signature: Won-Keun Kim Date: 2012.2.17
Won-Keun Kim

ATTORNEY REFERENCE NO.: SAM-1569
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