U.S. PTO 12/460129

07/14/2009

Form PTO-1595 (Rev 03-09)	07/	114/2009 U.S. DEPARTMENT OF COMMERCE United States Patent and Trademark Office
омв No. 07 - 24 - 2009	ATION FO	RM COVER SHEET
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<sub>™</sub> 103568359	Office: Please	e record the attached documents or the new address(es) below.
1. Name of conveying party(ies)		2. Name and address of receiving party(ies)
		Name: Samsung Electronics Co., Ltd.
li-hyun Kim, lung-hyeon Kim		Internal Address:
Additional name(s) of conveying party(ies) attached?		
3. Nature of conveyance/Execution Date	(s):	Street Address: 416, Maetan-dong, Yeongtong-gu
Execution Date(s) July 2, 2009; July 9, 2009		
Assignment Merger		City: Suwon-si, Gyeonggi-do
	e of Name	
Joint Research Agreement		State:
Government Interest Assignment		Country: Republic of Korea Zip:
Executive Order 9424, Confirmatory Lic		
Other		Additional name(s) & address(es) attached? Yes X No document is being filed together with a new application
Additio	onal numbers att	ached? Yes No
Additio  5. Name and address to whom correspo concerning document should be mailed	ondence	ached? Yes No  6. Total number of applications and patents involved: 1
5. Name and address to whom correspo	ondence	6. Total number of applications and patents
5. Name and address to whom correspo concerning document should be mailed	ondence	6. Total number of applications and patents involved: 1
5. Name and address to whom correspo concerning document should be mailed Name: Steven M. Mills	ondence	6. Total number of applications and patents involved: 1
5. Name and address to whom correspo concerning document should be mailed Name: Steven M. Mills	ondence	6. Total number of applications and patents involved: 1  7. Total fee (37 CFR 1.21(h) & 3.41) \$_40.00
5. Name and address to whom correspondencerning document should be mailed Name: Steven M. Mills Internal Address: Mills & Onello, LLP	ondence	6. Total number of applications and patents involved: 1  7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.00  Authorized to be charged to deposit account    Enclosed  None required (government interest not affecting titles)
5. Name and address to whom correspondencerning document should be mailed Name: Steven M. Mills Internal Address: Mills & Onello, LLP	ondence	6. Total number of applications and patents involved: 1  7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.00  Authorized to be charged to deposit account   Enclosed
5. Name and address to whom correspondencerning document should be mailed Name:Steven M. Mills Internal Address:Mills & Onello, LLP Street Address:11 Beacon Street, Suite 605	ondence	6. Total number of applications and patents involved: 1  7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.00  Authorized to be charged to deposit account    Enclosed  None required (government interest not affecting titles)
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5. Name and address to whom correspondencerning document should be mailed  Name:Steven M. Mills  Internal Address:Mills & Onello, LLP  Street Address:11 Beacon Street, Suite 605  City:Boston  State:MAZip:02108  Phone Number:617-994-4900	ondence	6. Total number of applications and patents involved: 1  7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.00  Authorized to be charged to deposit account
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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 1450, Alexandria, V.A. 22313-1450

> **PATENT REEL: 023004 FRAME: 0967**

Reference No.: SAM-1372

## ASSIGNMENT

We, Ji-hyun Kim, of 1018-506, Jungang-dong, Gwacheon-si, Gyeonggi-do, Republic of Korea; and Jung-hyeon Kim, of 901-1505, Anhwadong Mueul Jugong 9-danji, Byeongjeom-dong, Hwascong-si, Gyeonggi-do, Republic of Korea; having invented improvements in VOLTAGE-CONTROLLED OSCILLATIOR CIRCUIT INCLUDING LEVEL SHIFTER, AND SEMICONDUCTOR DEVICE INCLUDING VOLTAGE-CONTROLLED OSCILLATOR CIRCUIT described in an application for Letters Patent of the United States, executed by us on even date herewith, 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, Mactan-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 hoirs, 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, titlu, 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, 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

Page 1 of 2

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Reference No.: SAM-1372

First or Sole Inventor:

Signature:

Date: Jul, 02, 2009

Second Joint Inventor:

Signature:

Jung-hyeon Kim Date: Jul. 27. 1209

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**RECORDED: 07/14/2009** 

**PATENT REEL: 023004 FRAME: 0969**