PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Bo-young Lee	07/21/2011
Jong-wan Choi	07/21/2011
Jin-gi Hong	07/25/2011
Myoung-bum Lee	07/21/2011

RECEIVING PARTY DATA

Name:	Samsung Electronics Co., Ltd.	
Street Address:	416 Maetan-dong, Yeongtong-gu	
Internal Address:	Suwon-si	
City:	Gyeonggi-do	
State/Country:	REPUBLIC OF KOREA	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	13224427

CORRESPONDENCE DATA

Fax Number: (919)854-1401

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

919-854-1400 Phone:

Email: instructions@myersbigel.com Correspondent Name: MYERS BIGEL SIBLEY & SAJOVEC

PO BOX 37428 Address Line 1:

Address Line 4: RALEIGH, NORTH CAROLINA 27627

ATTORNEY DOCKET NUMBER:	5649-3311
NAME OF SUBMITTER:	Kirsten S. Carlos

Total Attachments: 5

source=3311Assignment#page1.tif source=3311Assignment#page2.tif source=3311Assignment#page3.tif source=3311Assignment#page4.tif source=3311Assignment#page5.tif

REEL: 026849 FRAME: 0509

PATENT

ASSIGNMENT

THIS ASSIGNMENT, made by us, **Bo-young Lee**, citizen of the Republic of Korea, residing at 210-602, Sibeom Hanbit Maeul Sambu Renaissance Apt., Bansong-dong, Hwasseong-si, Gyeonggi-do, Republic of Korea; **Jong-wan Choi**, citizen of the Republic of Korea, residing at 304-1301, Dongsuwon LG Village 3-cha Apt., Mangpo-dong, Yeongtonggu, Suwon-si, Gyeonggi-do, Republic of Korea; **Jin-gi Hong**, citizen of the Republic of Korea, residing at 2205-502, Baekhyeon Maeul Koaroo Apt., Dongbaek-dong, Giheung-gu, Yongin-si, Gyeonggi-do, Republic of Korea; and **Myoung-bum Lee**, citizen of the Republic of Korea, residing at 203-1201, Woosung 2 Cha Apt., Daechi 2-dong, Gangnam-gu, Seoul, Republic of Korea;

WITNESSETH: That,

WHEREAS, we are the joint inventors of certain new and useful improvements in METHODS OF FORMING NON-VOLATILE MEMORY DEVICES INCLUDING LOW-K DIELECTRIC GAPS IN SUBSTRATES AND DEVICES SO FORMED for which an application for United States Letters Patent has been filed, or is being filed concurrently, in the United States Patent and Trademark Office. We hereby authorize and request Myers Bigel Sibley & Sajovec, P.A., to insert here in parentheses (Application No. 13 204, 427, filed September 2, 2011) the filing date and application number of said application when known or to file this Assignment concurrently with the application, and

WHEREAS, Samsung Electronics Co., Ltd., a Korean corporation having a principal place of business at 416 Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea, hereinafter referred to as assignee, is desirous of acquiring the entire right, title and interest in and to said invention as described in said application, and in and to any and all Letters Patent which shall be granted therefor in the United States of America and all foreign countries;

NOW, THEREFORE, To Whom It May Concern, be it known that for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, we have sold and by these presents do hereby sell, assign, transfer and convey unto the said assignee, its successors and assigns, the entire right, title and interest in and to the said invention and application, and in and to any and all continuations, continuations-in-part, or divisions thereof, and in and to any and all Letters Patent of the United States of America and all foreign countries or reissues thereof which may be granted therefor or thereon, for the full end of the term for which said Letters Patent may be granted, together with the right to claim the

Page 1 of 2

ASSIGNMENT - CONTINUED

priority of said application in all foreign countries in accordance with the International Convention, the same to be held and enjoyed by said assignee, its successors and assigns, as fully and entirely as the same would have been held and enjoyed by us if this assignment and sale had not been made.

We hereby request that said Letters Patent be issued in accordance with this assignment.

We further covenant and agree that, at the time of the execution and delivery of these presents, we possess full title to the invention and application above-mentioned, and that we have the unencumbered right and authority to make this assignment.

We further covenant and agree to bind our heirs, legal representatives and assigns, promptly to communicate to said assignee or its representatives any facts known to us relating to said invention, to testify in any interference or legal proceedings involving said invention, to execute any additional papers which may be requested to confirm the right of the assignee, its representatives, successors or assigns to secure patent or similar protection for the said invention in all countries and to vest in the assignee complete title to the said invention and Letters Patent, without further compensation, but at the expense of said assignee, its successors, assigns and other legal representatives.

 .	WHERFOF, I have hereunto so 20_1(et my hand and seal on this _	अह€ day
Witnessed by:	Bo-young Lee	(SEAL)	
Date:	2- t-		

ASSICNMENT - CONTINUED

	IN WITNES	S WHEREO	F, I have hereunto set	my hand and sea	l on this 2/5t day
of	July	_, 20 <u> </u>			
			161 : Jony Wan g-wan Choi	(SEAL)	
Witne	ssed by:				
Date:	-t				

REEL: 026849 FRAME: 0512

ASSIGNMENT - CONTINUED

IN WITNE	SS WHEREOF, I have hereunto set my hand and seal on this 25th day
	Jin-gi Hong (SEAL)
Witnessed by:	
Date:	

ASSIGNMENT - CONTINUED

IN WITH	ESS WHEREOF, I have hereunto set my hand and seal on this 21 ^{5t} day, 20_//
	Myoung bum Lee (SEAL)
Witnessed by:	
Date:	

RECORDED: 09/02/2011

PATENT REEL: 026849 FRAME: 0514