# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3631196

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
CHAN SUN HYUN	11/12/2015
MYUNG KYU AHN	11/12/2015
WOO JUNE KWON	11/12/2015

#### **RECEIVING PARTY DATA**

Name:	SK HYNIX INC.
Street Address:	2091, GYEONGCHUNG-DAERO, BUBAL-EUB, ICHEON-SI
City:	GYEONGGI-DO
State/Country:	KOREA, REPUBLIC OF

#### **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	14951018

#### **CORRESPONDENCE DATA**

**Fax Number:** (571)327-5452

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

**Phone:** 571-327-5450

Email: ipntlaw@ipntlaw.com
Correspondent Name: IP & T GROUP LLP

Address Line 1: 8230 LEESBURG PIKE SUITE 650

Address Line 4: VIENNA, VIRGINIA 22182

ATTORNEY DOCKET NUMBER:	PO140131HD-C1
NAME OF SUBMITTER:	MYUNG SOO KIM
SIGNATURE:	/Myung Soo KIM/
DATE SIGNED:	11/24/2015
	This document serves as an Oath/Declaration (37 CFR 1.63).

#### **Total Attachments: 2**

source=Po140131HD-C1\_Assignment Declaration#page1.tif source=Po140131HD-C1\_Assignment Declaration#page2.tif

PATENT 503584568 REEL: 037135 FRAME: 0153

					ú	÷							1	4			8	3					ú	ŝ	8																
ò	9	ř	٤	۲	9	×	٠	Ÿ	ŧ.	2	ò	Ċ	3		١,	٠,	ţ		9	÷	Ġ.	٠			U	Ż	S		>												
ø	8	۸,	C	٠,	×	z	ŀ	ж	٠	٠		У	и		•			•>	٠,		٠	ç		٠,		۲,	47	٠	×												

# ASSIGNMENT OF AND DECLARATION FOR APPLICATION FOR UNITED STATES LETTERS PATENT

## WHEREAS, Chan Sun HYUN, Myung Kyu AHN and Woo June KWON

hereinafter referred to collectively as the assignor and inventor, has invented a certain improvement relating to

### A THREE-DIMENSIONAL(3D) SEMICONDUCTOR DEVICE

[O] said application being attached hereto;	
[ ] said application having been filed in the United States Patent and Trademark Office on	
, as Application Serial No.	, and was amended
on (if applicable),	
[ ] the specification of which was filed under the Patent Cooperation Treaty on	
Deries 110, and Objects States of Enterties today acceptances.	
AND WHEREAS, SK hynix Inc. of 2091, Gyeongchung-duern, Bubal-eub, Icheon-si, G Korea, hereinafter referred to as the assignee or applicant, is desirous of acquiring the entire right said application, including any and all divisions and continuations thereof, and in and to said invi- patents which may be granted therefor, including any and all renewals, reissues and prolongation	nt, title and interest in and to ention and any and all
NOW THIS WITNESSETH, that for and in consideration of One Dollar (\$1.00), a consideration paid by said assignee to said assignor, the receipt of which is hereby acknowly assigns, sells and transfers to said assignce, and said assignce's successors and assigns, the full interest in and to said application, including any and all divisions and continuations thereof, and any and all patents which may be granted therefor, including any and all renewals, reissues an assignce, and said assignce's successors and assigns, to have, hold, exercise and enjoy the said all divisions and continuations thereof, and the said invention and any and all patents which including any and all renewals, reissues and prolongations thereof, with all the rights, powers, anywise arising from or appertaining thereto, for and during the term or terms of any and all including any and all renewals, reissues and prolongations thereof, for the use and benefit assignee's successors and assigns, in as ample and benefitial a manner as the said assignor menjoyed the same, if this assignment had not been made.	edged, said assignor hereby and exclusive right, title and in and to said invention and d prolongations thereof; said pplication, including any and ch may be granted therefor, privileges and advantages in such patents when granted, t of said assignee, and said
AND said assignor hereby agrees to perform, upon the request of said assignce, or assigns, any and all acts relating to the obtaining or to the asserting of said patents, including a and prolongations thereof.	
AND said assignor authorizes and requests the Commissioner of Patents and Trademas said application, and on any and all divisions and continuations thereof, to said assignee, and stassigns, in accordance herewith.	
As an above-named inventor, I hereby declare that the above-identified application we made by me, and that I am the original inventor or an original joint inventor of a claimed inventor.	
I hereby acknowledge that any willful false statement made in this declaration is puni- by fine or imprisonment of not more than five (5) years, or both.	shable under 18 U.S.C. 1001
ASSIGNOR (INVENTOR):	
Signature:	_
Printed or Typed Name: Chan Sun HYUN	

Page 1 of 2

#### ASSIGNMENT OF AND DECLARATION FOR APPLICATION FOR UNITED STATES LETTERS PATENT

Printed or Typed Name: Woo June KWON

**RECORDED: 11/24/2015** 

Page 2 of 2

PATENT REEL: 037135 FRAME: 0155