505762978 11/07/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5809794

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
DA IN IM	10/31/2019
YOUNG SUK SEO	10/31/2019

RECEIVING PARTY DATA

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

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16677255

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER:	PA3894-0
NAME OF SUBMITTER:	W. WILLIAM PARK
SIGNATURE:	/W. William Park/
DATE SIGNED:	11/07/2019
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 2

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PATENT 505762978 REEL: 050951 FRAME: 0508

DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT

Title of Invention	PHASE DETECTION CIRCUIT, AND SEMICONDUCTOR APPARATUS US	CLOCK GENERATING CIRCUIT AND SING THE PHASE DETECTION CIRCUIT		
Declaration	As the below named inventor(s), I hereby declare that: The declaration is directed to: The attached application, or United States application or PCT international application number PCT/KR####################################			
Assignment	NOW, THEREFORE, in consideration of the sum of one dollar (\$1), the receipt whereof is acknowledge, and other good and valuable consideration, I, by these presents do sell, assign and transfer unto said assignee(s) SK hynix Inc. 2091, Gyeongchung-daero, Bubal-eub, Icheon-si, Gyeonggi-do, Republic of Korea and the heirs, successors, assigns and legal representatives of the assignee(s) the full and exclusive right to the said invention in the United States and in its territorial possessions and in any and all foreign countries any and all improvements thereof, the entire rights, title and interest in and to any and all Patents which may be granted therefore in the United States. I hereby authorize and request the Director of the U.S. Patent and Trademark Office to issue said United States Patent to said assignee(s), of the entire right, title, and interest in and to the same, for his sole use and for the use of his legal representatives to the full end of the term for which said Patent may be granted, as fully and entirely as the same would have been held by me had this assignment and sale not been made. I agree promptly upon request of the assignee(s), its heirs, successors, assigns and legal representatives of the assignee(s) to communicate any facts known to it respecting the patent and the invention set forth therein, and to execute and deliver without further compensation any power of attorney. Assignment, application, whether original, continuation, divisional or reissue, or other papers that may be necessary. I hereby covenant that no assignment, sale agreement or encumbrance has been or will be made or entered into which would conflict with this assignment and sale. I further covenant that assignee(s) will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and s			
Legal Name	Inventor Name (First Middle LAST):	Da In IM		
Of Inventor	Inventor Signature: Date:	Da In IM October 31, 2019		

X A total of 2 supplemental sheet(s) are attached hereto for additional inventors, if any.

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DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT

Legal Name	Inventor Name (First Middle LAST):	Young Suk SEO
Of Joint Inventor, If	Inventor Signature:	Young sink SEO
Алу	Date:	October 31, 2019



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