

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT5284114

SUBMISSION TYPE:	CORRECTIVE ASSIGNMENT														
NATURE OF CONVEYANCE:	Corrective Assignment to correct the TYPOGRAPHICAL ERROR IN 1ST INVENTOR'S NAME previously recorded on Reel 045884 Frame 0491. Assignor(s) hereby confirms the ASSIGNMENT OF ASSIGNOR'S INTEREST.														
CONVEYING PARTY DATA															
<table border="1"><thead><tr><th>Name</th><th>Execution Date</th></tr></thead><tbody><tr><td>YUN-MIN CHANG</td><td>12/04/2018</td></tr><tr><td>CHIEN-AN CHEN</td><td>12/04/2018</td></tr><tr><td>GUAN-REN WANG</td><td>12/04/2018</td></tr><tr><td>PENG WANG</td><td>12/04/2018</td></tr><tr><td>HUANG-MING CHEN</td><td>12/04/2018</td></tr><tr><td>HUAN-JUST LIN</td><td>12/04/2018</td></tr></tbody></table>	Name	Execution Date	YUN-MIN CHANG	12/04/2018	CHIEN-AN CHEN	12/04/2018	GUAN-REN WANG	12/04/2018	PENG WANG	12/04/2018	HUANG-MING CHEN	12/04/2018	HUAN-JUST LIN	12/04/2018	
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YUN-MIN CHANG	12/04/2018														
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GUAN-REN WANG	12/04/2018														
PENG WANG	12/04/2018														
HUANG-MING CHEN	12/04/2018														
HUAN-JUST LIN	12/04/2018														
RECEIVING PARTY DATA															
Name:	Taiwan Semiconductor Manufacturing Company, Ltd.														
Street Address:	8, Li-Hsin Rd. 6, Hsinchu Science Park														
City:	HsinChu														
State/Country:	TAIWAN														
Postal Code:	300-78														
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>15966858</td></tr></tbody></table>	Property Type	Number	Application Number:	15966858											
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Application Number:	15966858														
CORRESPONDENCE DATA															
Fax Number:	(972)732-9218														
<i>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.</i>															
Phone:	972-732-1001														
Email:	docketing@slatermatsil.com														
Correspondent Name:	SLATER MATSIL, LLP														
Address Line 1:	17950 PRESTON RD., SUITE 1000														
Address Line 4:	DALLAS, TEXAS 75252														
ATTORNEY DOCKET NUMBER:	TSMP20173522US00														
NAME OF SUBMITTER:	MARANDA BRALLEY														
SIGNATURE:	/Maranda Bralley/														

DATE SIGNED:	12/14/2018
Total Attachments: 7 source=TSMP20173522US00 Original Assignment as filed 2018-05-23#page1.tif source=TSMP20173522US00 Original Assignment as filed 2018-05-23#page2.tif source=TSMP20173522US00 Original Assignment as filed 2018-05-23#page3.tif source=TSMP20173522US00 Original Assignment as filed 2018-05-23#page4.tif source=TSMP20173522US00 Original Assignment as filed 2018-05-23#page5.tif source=TSMP20173522US00 Assignment Corrective#page1.tif source=TSMP20173522US00 Assignment Corrective#page2.tif	

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
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EPAS ID: PAT4974695

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
YUN-MING CHANG	05/15/2018
CHIEN-AN CHEN	05/15/2018
GUAN-REN WANG	05/15/2018
PENG WANG	05/15/2018
HUANG-MING CHEN	05/15/2018
HUAN-JUST LIN	05/15/2018
RECEIVING PARTY DATA	
Name:	Taiwan Semiconductor Manufacturing Company, Ltd.
Street Address:	8, Li-Hsin Rd. 6, Hsinchu Science Park
City:	HsinChu
State/Country:	TAIWAN
Postal Code:	300-78
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	15966858
CORRESPONDENCE DATA	
Fax Number:	(972)732-9218
<i>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.</i>	
Phone:	972-732-1001
Email:	docketing@slatermatsil.com
Correspondent Name:	SLATER MATSIL, LLP
Address Line 1:	17950 PRESTON RD., SUITE 1000
Address Line 4:	DALLAS, TEXAS 75252
ATTORNEY DOCKET NUMBER:	TSMP20173522US00
NAME OF SUBMITTER:	MARANDA BRALLEY
SIGNATURE:	/Maranda Bralley/
DATE SIGNED:	05/23/2018
Total Attachments: 2	

ATTORNEY DOCKET NO.
TSMP20173522US00

ASSIGNMENT

WHEREAS, I, the undersigned inventor (or one of the undersigned joint inventors), of residence as listed, having invented certain new and useful improvements as below entitled, for which application for United States Letters Patent is made; and

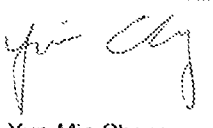
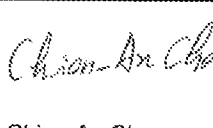
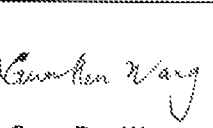
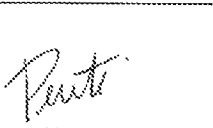
WHEREAS, Taiwan Semiconductor Manufacturing Company, Ltd. ("Assignee"), a corporation organized and existing under the laws of Taiwan, the Republic of China, with its principal office at 8, Li-Hsin Rd. 6 Hsinchu Science Park, Hsinchu 300-78 Taiwan, R.O.C., is desirous of acquiring my entire right, title and interest in and to said invention, and to said application and any Letters Patent that may issue thereon in the United States and all other countries throughout the world;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, I hereby sell and assign to said Assignee, its successors and assigns, my entire right, title and interest in and to said invention and in and to said application and all patents which may be granted therefor, and all future non-provisional applications including divisions, reissues, substitutions, continuations, and extensions thereof; and I hereby authorize and request the Commissioner for Patents to issue all patents for said invention, or patent resulting therefrom, insofar as my interest is concerned, to said Assignee, as assignee of my entire right, title and interest. I declare that I have not executed and will not execute any agreement in conflict herewith.

I also hereby sell and assign to Assignee, its successors and assigns, my foreign rights to the invention disclosed in said application, in all countries of the world, including, but not limited to, the right to file applications and obtain patents under the terms of the International Convention for the Protection of Industrial Property, and of the European Patent Convention, and further agree to execute any and all patent applications, assignments, affidavits, and any other papers in connection therewith necessary to perfect such patent rights.

I hereby further agree that I will communicate to said Assignee, or to its successors, assigns, and legal representatives, any facts known to me respecting said invention or the file history thereof, and at the expense of said Assignee, its legal representatives, successors, or assigns, will testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, reissue and substitute applications, make all lawful oaths, and generally do everything possible to aid said Assignee, its legal representatives, successors, and assigns, to obtain and enforce proper patent protection for said invention in all countries.

IN WITNESS WHEREOF, I hereunto set my hand and seal this day and year;

TITLE OF INVENTION	Selective NFET/PFET Recess Of Source/Drain Regions			
SIGNATURE OF INVENTOR AND NAME	 Yun-Min Chang	 Chien-An Chen	 Guan-Ren Wang	 Peng Wang
DATE	2018/12/4	2018/12/4	2018/12/4	2018/12/4
RESIDENCE	Hsinchu, Taiwan	Hsinchu, Taiwan	Hsinchu, Taiwan	Hsinchu, Taiwan

ATTORNEY DOCKET NO.
TSMP20173522US00

ASSIGNMENT

WHEREAS, I, the undersigned inventor (or one of the undersigned joint inventors), of residence as listed, having invented certain new and useful improvements as below entitled, for which application for United States Letters Patent is made; and

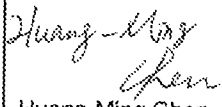
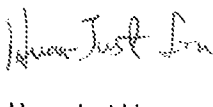
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IN WITNESS WHEREOF, I hereunto set my hand and seal this day and year;

TITLE OF INVENTION	Selective NFET/PFET Recess Of Source/Drain Regions			
SIGNATURE OF INVENTOR AND NAME	 Huang-Ming Chen	 Huan-Just Lin		
DATE	2018/12/04	2018/12/04		
RESIDENCE	Hsinchu, Taiwan	Hsinchu, Taiwan		

775

ATTORNEY DOCKET NO.
TSMP20173522US00**ASSIGNMENT**

WHEREAS, I, the undersigned inventor (or one of the undersigned joint inventors), of residence as listed, having invented certain new and useful improvements as below entitled, for which application for United States Letters Patent is made; and

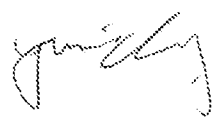
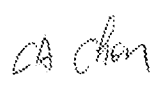
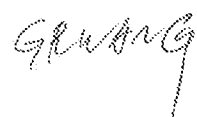

WHEREAS, Taiwan Semiconductor Manufacturing Company, Ltd. ("Assignee"), a corporation organized and existing under the laws of Taiwan, the Republic of China, with its principal office at 8, Li-Hsin Rd. 6 Hsinchu Science Park, Hsinchu 300-78 Taiwan, R.O.C., is desirous of acquiring my entire right, title and interest in and to said invention, and to said application and any Letters Patent that may issue thereon in the United States and all other countries throughout the world;

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IN WITNESS WHEREOF, I hereunto set my hand and seal this day and year;

TITLE OF INVENTION	SELECTIVE NFET/PFET RECESS OF SOURCE/DRAIN REGIONS			
SIGNATURE OF INVENTOR AND NAME	 Yun-Ming Chang	 Chien-An Chen	 Guan-Ren Wang	 Peng Wang
DATE	2018/5/15	2018/5/15	2018.5.15	2018.5.15
RESIDENCE	Hsinchu, Taiwan	Hsinchu, Taiwan	Hsinchu, Taiwan	Hsinchu, Taiwan

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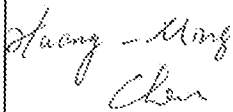
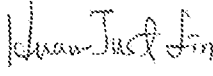
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IN WITNESS WHEREOF, I hereunto set my hand and seal this day and year;

TITLE OF INVENTION	Selective N/P-FET Recess for Device Boost			
SIGNATURE OF INVENTOR AND NAME	 Huang-Ming Chen	 Huan-Just Lin		
DATE	2018/5/15	2018/5/15		
RESIDENCE	Hsinchu, Taiwan	Hsinchu, Taiwan		