PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3181841

SUBMISSION TYPE:	NEW ASSIGNMENT				
NATURE OF CONVEYANCE:	ASSIGNMENT				

CONVEYING PARTY DATA

Name	Execution Date	
CHANG-MING WU	01/07/2015	
SHIH-CHANG LIU	01/07/2015	
SHENG-CHIEH CHEN	01/07/2015	
YUNG-CHANG CHANG	01/07/2015	

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PROPERTY NUMBERS Total: 1

Property Type	Number				
Application Number:	14596340				

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Total Attachments C					
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SIGNATURE:	/David W. Potashnik/				
NAME OF SUBMITTER:	DAVID W. POTASHNIK				
ATTORNEY DOCKET NUMBER:	TSMCP519US				

Total Attachments: 6

PATENT REEL: 034704 FRAME: 0707

PATENT REEL: 034704 FRAME: 0708

PATENT ASSIGNMENT

PARTIES TO THE ASSIGNMENT

Assignor(s):

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Assignor(s):

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Assignee:

Taiwan Semiconductor Manufacturing Co., Ltd. No. 8, Li-Hsin Rd. 6, Hsin-Chu Science Park Hsin-Chu, Taiwan 300-77 Republic of China

AGREEMENT

WHEREAS, ASSIGNOR(S) (listed above) are inventor(s) of an invention entitled

"TECHNIQUES TO AVOID OR LIMIT IMPLANT PUNCH THROUGH IN SPLIT

GATE FLASH MEMORY DEVICES" for which:

a n	a non-provisional application for United States Letters Patent:						
\boxtimes	was executed on even date preparatory to filing (each inventor should sign this						
	Assignment on the same day as he/she signs the Declaration); or						
	was filed on and accorded U.S. Serial No; or						
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Ш	I hereby author	ize and	request	my a	ttorney	associate	d with	Custo	mer	No.
	<u>107476</u> , to inser	rt on the	designa	ted line	es belov	w the filing	date	and ap	plica	ıtion
	number of said application when known:									
	U.S. Serial No.						•			
	filed on									

WHEREAS, ASSIGNEE (listed above), a corporation of the Republic of China is desirous of acquiring the entire right, title and interest in and to the invention and in and to any letters patent that may be granted therefore in the United States and in any and all to foreign countries;

NOW, THEREFORE, in exchange for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNOR(S) hereby sell, assign and transfer unto ASSIGNEE its successors and assigns, the entire right, title and interest in and to said invention and improvements, said application and any and all letters patent which may be granted for said invention in the United States of America and its territorial possessions and in any and all foreign countries, and in any and all divisions, reissues, re-examinations and continuations thereof, including the right to file foreign applications directly in the name of ASSIGNEE and to claim priority rights deriving from said United States application to which said foreign applications are entitled by virtue of international convention, treaty or otherwise, said invention, application and all letters patent on said invention to be held and enjoyed by ASSIGNEE and its successors and assigns for their use and benefit and of their successors and assigns as fully and entirely as the same would have been held and enjoyed by ASSIGNOR(S) had this assignment, transfer and sale not been made. ASSIGNOR(S) hereby authorize and request the Commissioner of Patents and Trademarks to issue all letters patent on said invention to ASSIGNEE. ASSIGNOR(S) agree to execute all instruments and documents required for the making and prosecution of applications for

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United States and foreign letters patent on said invention, for litigation regarding said letters patent, or for the purpose of protecting title to said invention or letters patent therefore.

√ 30, 5, 1, 7 Date

Name 1st Inventor Chang-Ming Wu

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Name 4th Inventor Yung-Chang Chang

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RECORDED: 01/14/2015

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