

## PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT								
NATURE OF CONVEYANCE:	ASSIGNMENT								
CONVEYING PARTY DATA									
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Li-Chun TIEN</td> <td>05/06/2013</td> </tr> <tr> <td>Chen-Chih WU</td> <td>05/06/2013</td> </tr> <tr> <td>Kuo-Ji CHEN</td> <td>05/06/2013</td> </tr> </tbody> </table>		Name	Execution Date	Li-Chun TIEN	05/06/2013	Chen-Chih WU	05/06/2013	Kuo-Ji CHEN	05/06/2013
Name	Execution Date								
Li-Chun TIEN	05/06/2013								
Chen-Chih WU	05/06/2013								
Kuo-Ji CHEN	05/06/2013								
RECEIVING PARTY DATA									
Name:	Taiwan Semiconductor Manufacturing Co., Ltd.								
Street Address:	No. 8, Li-Hsin Road 6								
Internal Address:	Hsinchu Science Park								
City:	Hsin-Chu								
State/Country:	TAIWAN								
Postal Code:	300-77								
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>13888405</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13888405				
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Application Number:	13888405								
CORRESPONDENCE DATA									
Fax Number:	2156894905								
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>									
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ATTORNEY DOCKET NUMBER:	2013.0140/1085.01190								
NAME OF SUBMITTER:	Jarrad M. Gunther								
Signature:	/Jarrad M. Gunther/								

Date:

05/07/2013

Total Attachments: 2

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Serial No. 13/888,405  
filed May 7, 2013

**ATTORNEY DOCKET NO.: 2013.0140/1085.01190**

**ASSIGNMENT AND AGREEMENT**

For value received, we, **Li-Chun TIEN, Chen-Chih WU, and Kuo-Ji CHEN**, hereby transfer to **Taiwan Semiconductor Manufacturing Co., Ltd.**, with its principal place of business located at No. 8, Li-Hsin Road 6, Hsinchu Science Park, Hsin-Chu, Taiwan 300-77, Republic of China, and its successors, assigns and legal representatives, the entire right, title and interest, for the United States of America, in and to certain inventions related to **SYSTEM AND METHOD FOR ARBITRARY METAL SPACING FOR SELF-ALIGNED DOUBLE PATTERNING**, described in a non-provisional application claiming priority to U.S. Provisional Patent Application No. 61/782,249, filed March 14, 2013, and under any and all Letters Patent and any divisions, continuations, continuations-in-part, reexamination certificates, reissues, and extensions thereof, or claiming priority therefrom that may be granted in the United States for said inventions; and we also concurrently hereby sell, assign and transfer to Taiwan Semiconductor Manufacturing Co., Ltd. the entire right, title and interest in and to said inventions for all countries foreign to the United States, including all rights of priority arising from the application aforesaid, and all the rights and privileges under any and all forms of protection, including Letters Patent, that may be granted in said countries foreign to the United States for said inventions.

We authorize Taiwan Semiconductor Manufacturing Co., Ltd. to make application for such protection in its own name and maintain such protection in any and all countries foreign to the United States, and to invoke and claim for any application for patent or other form of protection for said inventions, without further authorization from us, any and all benefits, including the right of priority provided by any and all treaties, conventions, or agreements.

We hereby consent that a copy of this assignment shall be deemed a full legal and formal equivalent of any document which may be required in any country in proof of the right of Taiwan Semiconductor Manufacturing Co., Ltd. to apply for patent or other form of protection for said inventions and to claim the aforesaid benefit of the right of priority.

We request that any and all patents for said inventions be issued to Taiwan Semiconductor Manufacturing Co., Ltd. in the United States and in all countries foreign to the United States, or to such nominees as Taiwan Semiconductor Manufacturing Co., Ltd. may designate.

ATTORNEY DOCKET NO.: 2013.0140/1085.01190

We agree that, when requested, we shall, without charge to Taiwan Semiconductor Manufacturing Co., Ltd. but at its expense, sign all papers, and do all acts which may be necessary, desirable or convenient in connection with said applications, patents, or other forms of protection.

Inventor No. 1

Dated: 5/6.2013

Li-Chun Tien  
Li-Chun TIEN

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Inventor No. 2

Dated: 5/6.2013

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Inventor No. 3

Dated: 5/6,2013

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