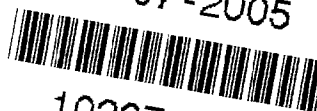


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To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

Chia-Lin Cheng
E. J. Wu
Shih-Cherng Chang
Kuo-Yin ChenAdditional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

2. Name and address of receiving party(ies)

Name: Taiwan Semiconductor Manufacturing Co., Ltd.

Internal Address: _____

Street Address: No. 8, Li-Hsin Road 6

Science Based Industrial Park

City: Hsin-Chu State: _____ Zip: _____

Country: Taiwan 300-77 R.O.C.

Additional name(s) & address(es) attached? ☐ Yes ☒ No

3. Nature of conveyance:



Assignment



Merger



Security Agreement



Change of Name



Other _____

Execution Date:

1, 3, & 4 - 3/15/05
2 - 3/19/05

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is:

1, 3, & 4 - 3/15/05
2 - 3/19/05

A. Patent Application No.(s) _____

B. Patent No.(s) _____

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Steven E. Koffs, Esquire

Internal Address: Duane Morris LLP

Street Address: One Liberty Place

City: Philadelphia State: PA Zip: 19103

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 3.41).....\$ 40.00



Enclosed



Authorized to be charged to deposit account

8. Deposit account number:

04-1679

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9. Signature.

Richard A. Paikoff

Name of Person Signing

Richard A. Paikoff
Signature

03/24/2005

Date

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ATTORNEY DOCKET NO.: 2004.0613/1280.01260

ASSIGNMENT AND AGREEMENT

For value received, we, **Chia-Lin Cheng, I. Chieh Wu, Shih-Cherng Chang, and Kuo-Yin Chen**, hereby sell, assign and transfer to **Taiwan Semiconductor Manufacturing Co., Ltd.**, with its principal place of business located at No. 8, Li-Hsin Road 6, Science-Based Industrial 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 **METHOD FOR INTEGRALLY CHECKING CHIP AND PACKAGE SUBSTRATE LAYOUTS FOR ERRORS** described in an application for Letters Patent of the United States and all the rights and privileges in said applications and under any and all Letters Patent and any divisions, continuations, continuations-in-part, reexamination certificates, reissues, and extensions thereof 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.

EXPRESS MAIL LABEL NO. EV 516214648 US

ATTORNEY DOCKET NO.: 2004.0613/1280.01260

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: 3/15/2005

Chia-Lin Cheng
Chia-Lin Cheng

Residence:

No. 14, Alley 186, Lane 336, Chung-Shing Road., Lung-Tan, Tao-Yuan, Taiwan, R.O.C.

Inventor No. 2

Dated: _____

I. Chieh Wu

Residence:

2 F, No. 13, Lane 52, Jincheng 1st Road, Hsinchu, Taiwan, R.O.C.

Inventor No. 3

Dated: 3/15/2005

Shih-Cheng Chang
Shih-Cheng Chang

Residence:

2 F, No. 168, Lane 160, Gao-Cui Road, Hsin-Chu City, Taiwan 300-77, R.O.C.

Inventor No. 4

Dated: 3/15/2005

Kuo-Yin Chen
Kuo-Yin Chen

Residence:

11 F.-2, No. 6, Lane 107, Kesyuueyuan Road, Hsinchu City 300, Taiwan, R.O.C.

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Inventor No. 1

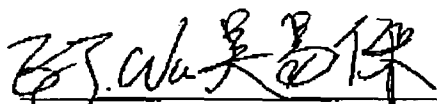
Dated: _____

Chia-Lin Cheng

Residence:

No. 14, Alley 186, Lane 336, Chung-Shing Road., Lung-Tan, Tao-Yuan, Taiwan, R.O.C.

Inventor No. 2

Dated: 19/3/2005
Shieh Wu
E J

Residence:

2 F, No. 13, Lane 52, Jincheng 1st Road, Hsinchu, Taiwan, R.O.C.

Inventor No. 3

Dated: _____

Shih-Cherng Chang

Residence:

2 F, No. 168, Lane 160, Gao-Cui Road, Hsin-Chu City, Taiwan 300-77, R.O.C.

Inventor No. 4

Dated: _____

Kuo-Yin Chen

Residence:

11 F.-2, No. 6, Lane 107, Kesyuueyuan Road, Hsinchu City 300, Taiwan, R.O.C.

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