501934775 05/25/2012

PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date | |
|---------------------|----------------|--|
| Jiann-Tyng TZENG | 05/25/2012 | |
| Chih-Liang CHEN | 05/25/2012 | |
| Yi-Feng CHEN | 05/25/2012 | |
| Kam-Tou SIO | 05/25/2012 | |
| Shang-Chih HSIEH | 05/25/2012 | |
| Helen Shu-Hui CHANG | 05/25/2012 | |

RECEIVING PARTY DATA

| Name: | TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD. | |
|-----------------|--|--|
| Street Address: | No. 8, Li-Hsin Rd. VI, Hsinchu Science Park | |
| City: | Hsinchu | |
| State/Country: | TAIWAN | |
| Postal Code: | 300 | |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 13481270 |

CORRESPONDENCE DATA

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via US Mail.

Correspondent Name: Lowe Hauptman Ham & Berner, LLP (TSMC)

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PATENT

REEL: 028272 FRAME: 0580

\$40.00 134812/0

501934775 REEL: 028

| NAME OF SUBMITTER: | Randy A. Noranbrock |
|--|---------------------|
| Total Attachments: 2 source=efiledassgn#page1.tif source=efiledassgn#page2.tif | |

PATENT REEL: 028272 FRAME: 0581

Docket No. T5057-624 TSMC2011-1226

ASSIGNMENT

| In consideration of the premises an | d other good and | valuable consideration | in hand paid, | , the receipt and | sufficiency of |
|---|------------------|------------------------|---------------|-------------------|----------------|
| which is hereby acknowledged, the undersign | ed, | | | | |

Jiann-Tyng TZENG
 Chih-Liang CHEN
 Yi-Feng CHEN
 Helen Shu-Hui CHANG

who has made a certain new and useful invention, hereby sells, assigns and transfers unto

TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD. having a place of business at No.

8, Li-Hsin Rd. VI, Hsinchu Science Park, Hsinchu 300, Taiwan R.O.C.

its successors and assigns (hereinafter designated "ASSIGNEE") the entire right, title and interest for the United States of America as defined in 35 U.S.C. 100 in the invention entitled

INTEGRATED CIRCUIT LAYOUT HAVING MIXED TRACK STANDARD CELL

(a) for which an application for United States Letters Patent was filed on $\frac{2012-05-25}{5}$, and identified by United States Patent Application No. $\frac{13/481}{270}$; or

(b) for which an application for United States Letters Patent was executed on _______

and the undersigned hereby authorizes and requests the United States Commissioner of Patents and Trademarks to issue any and all United States Letters Patent which may be granted therefore and any and all extensions, divisions, reissues, continuations, or continuations-in-part thereof, and the right to all benefits under the International Convention for the Protection of Industrial Property to the said ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns and legal representatives; the undersigned agrees that the attorneys of record in said application shall hereafter act on behalf of said ASSIGNEE;

AND the undersigned hereby agrees to transfer a like interest, and to render all necessary assistance in making application for and obtaining original, divisional, reissued or extended Letters Patent of the United States, upon request of the said ASSIGNEE, its successors, assigns and legal representatives, and without further remuneration, in and to any improvements, and applications for patent based thereon, growing out of or related to the said invention; and to execute any papers by the said ASSIGNEE, its successors, assigns and legal representatives, deemed essential to ASSIGNEE's full protection and title in and to the invention hereby transferred.

SIGNED on the date indicated aside my signature:

1) Jiann-Tyng Zeng 5.25.2012
Name: Jiann-Tyng TZENG Date:

2) Chih - Liang Chen 5, 15, 1011
Name: Chih-Liang CHEN Date:

3) Vi - Feng Chen 5.25.2012.
Name: Yi-Feng CHEN Date:

PATENT REEL: 028272 FRAME: 0582

| 4) Kam-Ton Sio |
|---------------------------|
| Name: Kam-Tou SIO |
| 5) Shang-chih HSieh |
| Name: Shang-Chih HSIEH |
| 6 beary |
| Name: Helen Shu-Hui CHANG |

<u>t</u> 2t 2012. 5、25、2012 Date: 5-25-2012 Date:

PATENT REEL: 028272 FRAME: 0583