502400989 06/27/2013

PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

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

CONVEYING PARTY DATA

| Name | Execution Date |
|------------------|----------------|
| Chih-Chang CHENG | 06/24/2013 |
| Fu-Yu CHU | 06/24/2013 |
| Ruey-Hsin LIU | 06/24/2013 |

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: 13928971 | |

CORRESPONDENCE DATA

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| ATTORNEY DOCKET NUMBER: | T5057-888 | |
|-------------------------|-----------------------|--|
| NAME OF SUBMITTER: | Randy A. Noranbrock | |
| Signature: | /Randy A. Noranbrock/ | |
| Date: | 06/27/2013 | |

Total Attachments: 1

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PATENT REEL: 030700 FRAME: 0312 OP \$40.00 13928971

Docket No. T5057-888 * TSMC2013-0411

ASSIGNMENT

In consideration of the premises and other good and valuable consideration in hand paid, the receipt and sufficiency of which is hereby acknowledged, the undersigned,

- **Chih-Chang CHENG**
- Fu-Yu CHU 2)
- Ruey-Hsin LIU

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

RIC

| META | AL OXIDE SEMICONDUCTOR FIELD EFFE | CT TRANSISTOR HAVING ASYMMETRIC |
|--|--|--|
| <u>LIGH</u> | TLY DOPED DRAIN REGIONS AND METHO | DD OF MAKING THE SAME |
| (a) | for which an application for United States Letters Patent was United States Patent Application No. <u>13/928, 971</u> | filed on June 27, 2013 , and identified by |
| (b) | for which an application for United States Letters Patent was | executed on, |
| all Unite continua Property agrees th applicati ASSIGN applicati ASSIGN | undersigned hereby authorizes and requests the United States of States Letters Patent which may be granted therefore and attions-in-part thereof, and the right to all benefits under the to the said ASSIGNEE, for its interest as ASSIGNEE, its supert the attorneys of record in said application shall hereafter act AND the undersigned hereby agrees to transfer a like in its information original, divisional, reissued or extended NEE, its successors, assigns and legal representatives, and with its successors, assigns and legal representatives, deemed the nereby transferred. | any and all extensions, divisions, reissues, continuations, or the International Convention for the Protection of Industrial accessors, assigns and legal representatives; the undersigned at on behalf of said ASSIGNEE; Interest, and to render all necessary assistance in making a Letters Patent of the United States, upon request of the said hout further remuneration, in and to any improvements, and the said invention; and to execute any papers by the said |
| SIGNEE | O on the date indicated aside my signature: | |
| 1)(Name: | Chih-Chang Cheng- | 70B. 06. 24 |
| ivanie. | Fu-Yu CHU Fu-Yu CHU | >0(3, 06, γ) Date: |
| 3) Name: | Ruey-Hsin LIU | Date: |

PATENT REEL: 030700 FRAME: 0313

RECORDED: 06/27/2013