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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/170,191	07/09/2008	Masafumi Tsutsui	079195-0566	1644
53080	7590	05/10/2010	EXAMINER	
MCDERMOTT WILL & EMERY LLP 600 13TH STREET, NW WASHINGTON, DC 20005-3096			WEISS, HOWARD	
			ART UNIT	PAPER NUMBER
			2814	
			MAIL DATE	DELIVERY MODE
			05/10/2010	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**IP Bridge Exhibit 2304**  
**TSMC v. Godo Kaisha IP Bridge 1**

<b>Office Action Summary</b>	<b>Application No.</b> 12/170,191	<b>Applicant(s)</b> TSUTSUI ET AL.	
	<b>Examiner</b> HOWARD WEISS	<b>Art Unit</b> 2814	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1)  Responsive to communication(s) filed on 29 March 2010.
- 2a)  This action is **FINAL**.
- 2b)  This action is non-final.
- 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4)  Claim(s) 15-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5)  Claim(s) \_\_\_\_\_ is/are allowed.
- 6)  Claim(s) 15-36 is/are rejected.
- 7)  Claim(s) \_\_\_\_\_ is/are objected to.
- 8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9)  The specification is objected to by the Examiner.
- 10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \*    c)  None of:
  - 1.  Certified copies of the priority documents have been received.
  - 2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1)  Notice of References Cited (PTO-892)
- 2)  Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3)  Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 1/22/2010
- 4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5)  Notice of Informal Patent Application
- 6)  Other:

Attorney's Docket Number: 079195-0566

Filing Date: 7/9/2008

Continuing Data: Continuation of 10/859,219 (6/3/2004 now U.S. Patent No. 7,205,615)  
which is a continuation of 11/730,988 (4/5/2007 now U.S. Patent No.  
7,417,289); RCE established 3/29/2010

Claimed Foreign Priority Date: 6/16/2003 (JPX)

Applicant(s): Tsutsui et al. (Umimoto, Akamatsu)

Examiner: Howard Weiss

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/29/2010 has been entered.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order

for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 15 to 21 and 23 to 34 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Xiang et al. (U.S. Patent No. 6,437,404) and Matsuda et al. (U.S. Patent No. 6,870,230).

Xiang et al. show most aspects of the instant invention (e.g. Figures 1 to 11) including:

- MISFET **10** with an active region in a semiconductor substrate **110** and defined between isolation regions **60,62** with said isolation regions' lower surfaces located in and in contact with the semiconductor substrate
- a gate insulating film **58** made of the material claimed (Column 3 Lines 53 to 55)
- a gate electrode **56** made of polysilicon or metal (Column 3 Lines 50 to 53)
- source/drain regions **20,22** formed on both sides of said gate electrode and comprising extended impurity regions **50,52**, main impurity regions **64,66** and silicide layers **26,28**
- a silicon nitride film **80,82** formed over the side surface but not on an upper surface of the gate electrode and over and in contact with the source drain regions
- interlevel insulating film **86** formed on said silicon nitride film and sidewalls **70,72** formed on said gate electrode's side surfaces

Xiang et al. do not show the main impurity regions being heavily doped and the extended impurity regions being lightly doped and in contact with the main impurity regions, the gate insulating film formed only under a lower surface of the gate electrode, a thin film interposed between the silicon nitride film and the source drain regions, a contact plug that passes through the interlevel insulating film and the silicon nitride film in contact with the source/drain regions.

Matsuda et al. teach (e.g. Figures 2, 3 and 9) to form main impurity regions **12** being heavily doped and the extended impurity regions **7** being lightly doped and in contact with the main impurity regions, to form a gate insulating film **3** only under a lower surface of the gate electrode **6a**, to form a thin film **8a** between a silicon nitride film **9a** and the source/drain regions **7,12** and to provide a contact plug **16a** to pass through a interlevel insulating film **13** and the silicon nitride film contacting the source/drain regions to suppress the variation in the width of the sidewalls (Column 11 Lines 49 to 51). It would have been obvious to a person of ordinary skill in the art at the time of invention to form a gate insulating film only under a lower surface of the gate electrode, to form a thin film between a silicon nitride film and the source/drain regions and to provide a contact plug to pass through a interlevel insulating film and the silicon nitride film to contact the source/drain regions as taught by Matsuda et al. in the device of Xiang et al. to suppress the variation in the width of the sidewalls.

In reference to the claim language pertaining to the ability of the silicon nitride film to generate stress in the channel region substantially parallel to the gate length direction, the claiming of a new use, new function, or unknown property which is inherently present in the prior art does not necessarily make the claim patentable. *In re Best*, 195 USPQ 430, 433 (CCPA 1977) and *In re Swinehart*, 439 F. 2d 210, 169 USPQ 226 (CCPA 1971); please see MPEP § 2112. Since Xiang et al. show all the features of the claimed invention, the ability of the silicon nitride film to generate stress in the channel region substantially parallel to the gate length direction is an inherent property of Xiang et al. and Matsuda et al.'s invention.

4. Claims 22 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Xiang et al. and Matsuda et al., as applied to Claim 15 above, and in further view of Tatsuta (U.S. Patent No. 5,023,676).

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