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SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/561,951 11/22/95 YEN

T 64,663-004

EXAMINER

WALLACE, V

ART UNIT

PAPER NUMBER

2

BSM1/0417

BARNES KISSELLE RAISCH CHOATE
WHITEMORE & HULBERT
3500 PENOBSCOT BUILDING
DETROIT MI 48226

2503

DATE MAILED:

04/17/96

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☐ Responsive to communication filed on _____ ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), 0 days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input checked="" type="checkbox"/> Notice of Draftsman's Patent Drawing Review, PTO-948. |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449. | 4. <input type="checkbox"/> Notice of Informal Patent Application, PTO-152. |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474. | 6. <input type="checkbox"/> _____ |

Part II SUMMARY OF ACTION

1. ☒ Claims 1-12 are pending in the application.
Of the above, claims _____ are withdrawn from consideration.
2. ☐ Claims _____ have been cancelled.
3. ☐ Claims _____ are allowed.
4. ☒ Claims 1-12 are rejected.
5. ☐ Claims _____ are objected to.
6. ☐ Claims _____ are subject to restriction or election requirement.
7. ☒ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. ☐ Formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).
10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____, has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed _____, has been ☐ approved; ☐ disapproved (see explanation).
12. ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☒ not been received ☐ been filed in parent application, serial no. _____; filed on _____.
13. ☐ Since this application appears to be 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.
14. ☐ Other

INTEL 1117

EXAMINER'S ACTION

08/561,951
PTOL-326 (Rev. 2/93)

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Part III DETAILED ACTION

Drawings

This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

Field of Search

This office action has been created under the Patent and Trademark Office Semiconductor Technology Quality Assurance Pilot Program. It incorporates the examination quality standards set as a result of customer focus sessions with the semiconductor industry. The listing of the field of search to follow is one of these standards.

Field of Search	Date
U.S. Class and subclass: 257\382, 383, 387, 388	4/11/96
Other Documentation: foreign art of above subclasses	4/11/96
Electronic data base(s):	

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --
(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-12 are rejected under 35 U.S.C. § 102(a) as being anticipated by Kinoshita.

Kinoshita discloses a semiconductor device comprising: a silicon substrate (40), a diffusion region (46) formed within said substrate, a polysilicon gate electrode (26) formed on a top surface of said substrate wherein said gate is adjacent to but not in contact with said diffusion region, an insulating layer (38) such as silicon oxide or silicon nitride formed over said gate and said diffusion region wherein a contact hole (32) is formed in said insulating layer over said diffusion region, and a conducting plug formed of tungsten fills said contact hole. Note Kinoshita figure 5. Therefore, Kinoshita meets and anticipates the claims.

Claims 1-12 are rejected under 35 U.S.C. § 102(b) as being anticipated by Nishigoori.

Nishigoori discloses a semiconductor device comprising: a silicon substrate (1), a diffusion region (7) formed within said substrate and adjacent a top surface of said substrate, a polysilicon gate electrode (4) formed on said top surface of said substrate wherein said gate is adjacent to and not in contact with said diffusion region, an insulating layer (8) deposited over said substrate and covering at least a portion of said gate

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and said diffusion region wherein said insulating layer has a contact hole (12) over said diffusion region, and a contact plug (9) formed of tungsten filling said contact hole. Note Nishigoori figure 3c. Therefore, Nishigoori meets and anticipates the claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The references to Watanabe, Sato and Nishiyama are cited to show semiconductor device structures similar to that of the present invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Valencia Martin Wallace whose telephone number is (703) 308-4119. The examiner can normally be reached on Monday - Thursday from 8:00 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sara Crane, can be reached on (703) 308-4894. The fax phone number for this Group is (703) 308-7723.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

Wm
Wallace
April 14, 1996

Sara W Crane
SARA W. CRANE
SUPERVISORY PATENT EXAMINER
GROUP 2500