Request	Application Number	12/170	,191
for	Filing Date	July 9	2008
Continued Examination (RCE)		Ully 0,	2000
Transmittal	First Named Inventor	Masafu	ımi TSUTSUI, et al.
Address to:	Art Unit	2814	
Commissioner for Patents	Fueniner Neme	Howar	d Woiss
P.O. Box 1450 Alexandria VA 22313-1450	Attorney Docket	Howard	
	Number	079195	5-0566
This is a Request for Continued Examination (RCE) under 3 Request for Continued Education (RCE) practice under 37 CFR 1.1 1995, or to any design application. See Instruction Sheet for RCEs	7 CFR 1.114 of the above-i 14 does not apply to any utility (not to be submitted to the US	dentified app or plant appli PTO) on page	cation. cation filed prior to June 8,
 Submission required under 37 CFR 1.114 No amendments and amendments enclosed with the RCE will b instructs otherwise. If applicant does not wish to have any pri request non-entry of such amendment(s). a. Previously submitted If a final Office action is outs 	te: If the RCE is proper, any e entered in the order in whic eviously filed unentered ame tanding, any amendments fi	previously file they were findment(s) ent led after the f	d unentered led unless applicant ered, applicant must inal Office action may be
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ii. Affidavit(s)/Declaration(s)	iv. 🗌 Othe	er	
Miscellaneous			
a Suspension of action of the above-identified ap period of months. (Period of suspension a	plication is requested under shall not exceed 3 months; Fe	37 CFR 1.103 e under 37 CF	3(c) for a R 1.17(i) required)
3. Fees The RCE fee under 37 CFR 1.17(e) is required	by 37 CFR 1.114 when the	RCE is filed.	
a. X The Director is hereby authorized to charge the Deposit Account No. 500417. I have enclosed	a duplicate copy of this she	overpaymen et.	ts, to
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Name (Print/Type) Takashi Saito	Limited Recogn	tion No.	L0123
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	: Customer Number: 53080
Masafumi TSUTSUI, et al.	: Confirmation Number: 1644
Application No.: 12/170,191	: Group Art Unit: 2814
Filed: July 09, 2008	: Examiner: Howard Weiss

SEMICONDUCTOR DEVICE INCLUDING MISFET HAVING INTERNAL STRESS For: FILM (as amended)

AMENDMENT ACCOMPANYING RCE

Mail Stop RCE Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

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In response to the Office Action dated December 31, 2009, wherein a three-month shortened statutory period for response is set to expire on March 31, 2010, Applicants respectfully request reconsideration of the above-identified application in view of the following amendments and remarks. A Request for Continued Examination is being filed concurrently herewith.

AMENDMENTS TO THE CLAIMS:

A listing of the claims presented in this patent application appears below. This listing replaces all prior versions and listing of claims in this patent application.

1-14. (Cancelled)

15. (Currently Amended) A semiconductor device, comprising a

MISFET, wherein

the MISFET includes:

an active region made of a semiconductor substrate;

a gate insulating film formed on the active region;

a gate electrode formed on the gate insulating film;

source/drain regions formed in regions of the active region located on both sides of the gate electrode; and

a silicon nitride film formed over from side surfaces of the gate electrode to upper surfaces of the source/drain regions, wherein

the silicon nitride film is not formed on an upper surface of the gate electrode, [[and]]

the gate insulating film is formed only under a lower surface of the gate electrode, and

the source/drain regions include lightly doped impurity regions formed in regions of the

active region located on both sides of the gate electrode, and heavily doped impurity regions formed in regions of the active region respectively extending outwardly from the lightly doped impurity regions to be in contact with the lightly doped impurity regions and having a higher impurity concentration than that of the lightly doped impurity regions. 16. (Previously Presented) The semiconductor device of claim 15, wherein

the silicon nitride film is for generating a stress in a substantially parallel direction to the gate length direction in a channel region located in the active region under the gate electrode.

17. (Previously Presented) The semiconductor device of claim 16, wherein

the substantially parallel direction of the stress includes a direction tilted by an angle of less than 10 degree from a direction in which carriers move.

18. (Previously Presented) The semiconductor device of claim 15, wherein the silicon nitride film is directly in contact with the source/drain regions,

19. (Previously Presented) The semiconductor device of claim 15, wherein the silicon nitride film is formed above the source/drain regions with a thin film interposed therebetween.

20. (Currently Amended) The semiconductor device of claim 15, wherein the source/drain regions include a lightly doped impurity region, a heavily doped impurity region and a silicide layer.

21. (Previously Presented) The semiconductor device of claim 15, further comprising: a sidewall formed on the side surface of the gate electrode.

22. (Previously Presented) The semiconductor device of claim 15, wherein

a principal surface of the semiconductor substrate is substantially a $\{100\}$ plane, and the gate length direction of the gate electrode is substantially a <011> direction. 23. (Previously Presented) The semiconductor device of claim 15, further comprising:

an interlevel insulating film formed on the silicon nitride film; and

a contact plug provided so as to pass through the interlevel insulating film and the silicon nitride film and to be connected to the source/drain regions.

24. (Previously Presented) The semiconductor device of claim 15, wherein the active region is divided by an isolation region formed in the semiconductor substrate.

25. (Previously Presented) The semiconductor device of claim 15, wherein the gate insulating film is a silicon oxide film.

26. (Previously Presented) The semiconductor device of claim 15, wherein the gate insulating film is a silicon oxynitride film.

27. (Previously Presented) The semiconductor device of claim 15, wherein the gate electrode has a polysilicon film.

28. (Previously Presented) The semiconductor device of claim 15, wherein the gate electrode has a metal film.

29. (Previously Presented) The semiconductor device of claim 15, wherein the silicon nitride film is provided so as to cover at least part of at least one of the source/drain regions.

30. (Previously Presented) The semiconductor device of claim 15, wherein the silicon nitride film covers at least respective parts of the source/drain regions.

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