SLOVENSKI STANDARD

SIST EN 62373:2007

januar 2007

Preskušanje ravnotežne temperaturne stabilnosti za kovinsko-oksidne polprevodniške tranzistorje na poljski efekt (MOSFET) (IEC 62373:2006)

(istoveten EN 62373:2006)

Bias-temperature stability test for metal-oxide, semiconductor, field-effect transistors (MOSFET) (IEC 62373:2006)

ICS 31.080.30

Referenčna številka
SIST EN 62373:2007(en)

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 62373

August 2006

ICS 31.080

English version

Bias-temperature stability test for metal-oxide, semiconductor, field-effect transistors (MOSFET)

(IEC 62373:2006)

Essai de stabilité de température en polarisation pour transistors à effet de champ métal-oxyde-semiconducteur (MOSFET)
(CEI 62373:2006)

Stabilitätsprüfung unter Temperatur-Spannungs-Beanspruchung für Feldeffekttransistoren mit Metalloxid-Halbleiter (MOSFET)
(IEC 62373:2006)

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Ref. No. EN 62373:2006 E

Foreword

The text of document 47/1862/FDIS, future edition 1 of IEC 62373, prepared by IEC TC 47, Semiconductor devices, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 62373 on 2006-08-01.

The following dates were fixed:

– latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2007-05-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2009-08-01

Endorsement notice

The text of the International Standard IEC 62373:2006 was approved by CENELEC as a European Standard without any modification.

NORME INTERNATIONALE

INTERNATIONAL STANDARD

CEI
IEC
62373

Première édition
First edition
2006-07

Essai de stabilité de température en polarisation pour transistors à effet de champ métal-oxyde-semiconducteur (MOSFET)

Bias-temperature stability test for metal-oxide, semiconductor, field-effect transistors (MOSFET)

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International Electrotechnical Commission
Международная Электротехническая Комиссия

CODE PRIX
PRICE CODE N

Pour prix, voir catalogue en vigueur
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

BIAS-TEMPERATURE STABILITY TEST FOR METAL-OXIDE, SEMICONDUCTOR, FIELD-EFFECT TRANSISTORS (MOSFET)

FOREWORD

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International Standard IEC 62373 has been prepared by IEC technical committee 47: Semiconductor devices.

The text of this standard is based on the following documents:

FDIS	Report on voting
47/1862/FDIS	47/1875/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

INTRODUCTION

Under the stress of high temperature, and when high gate-source voltage is applied over a long period of time, MOSFET degrades; saturation current decreases and the absolute value of threshold voltage increases.

Known causes of degradation include mobile ion contamination, charge damage and the creation of interface traps at SiO_2/Si interface or fixed charge by the carrier flow into the oxide.