

BS EN 60749-34:2010



BSI Standards Publication

Semiconductor devices — Mechanical and climatic test methods

Part 34: Power cycling

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National foreword

This British Standard is the UK implementation of EN 60749-34:2010. It is identical to IEC 60749-34:2010. It supersedes BS EN 60749-34:2004, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee EPL/47, Semiconductors.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 28 February 2011.

Amendments issued since publication

Amd. No.	Date	Text affected
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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60749-34

December 2010

ICS 31.080.01

Supersedes EN 60749-34:2004

English version

**Semiconductor devices -
Mechanical and climatic test methods -
Part 34: Power cycling
(IEC 60749-34:2010)**

Dispositifs à semiconducteurs -
Méthodes d'essais mécaniques et
climatiques -
Partie 34: Cycles en puissance
(CEI 60749-34:2010)

Halbleiterbauelemente -
Mechanische und klimatische
Prüfverfahren -
Teil 34: Lastwechselprüfung
(IEC 60749-34:2010)

This European Standard was approved by CENELEC on 2010-12-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

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CENELEC

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

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Foreword

The text of document 47/2068/FDIS, future edition 2 of IEC 60749-34, prepared by IEC TC 47, Semiconductor devices, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60749-34 on 2010-12-01.

This European Standard supersedes EN 60749-34:2004.

The significant changes with respect from EN 60749-34:2004 include:

- the specification of tighter conditions for more accelerated power cycling in the wire bond fatigue mode;
- information that under harsh power cycling conditions high current densities in a thin die metalization might initiate electromigration effects close to wire bonds.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN and CENELEC shall not be held responsible for identifying any or all such patent rights.

The following dates were fixed:

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|--|-------|------------|
| – latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement | (dop) | 2011-09-01 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn | (dow) | 2013-12-01 |

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60749-34:2010 was approved by CENELEC as a European Standard without any modification.

Annex ZA

(normative)

Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60747-1	2006	Semiconductor devices - Part 1: General	-	-
IEC 60747-2	2000	Semiconductor devices - Discrete devices and- integrated circuits - Part 2: Rectifier diodes		-
IEC 60747-6	2000	Semi conductor devices - Part 6: Thyristors	-	-
IEC 60749-3	-	Semiconductor devices - Mechanical and climatic test methods - Part 3: External visual examination	EN 60749-3	-
IEC 60749-23	-	Semiconductor devices - Mechanical and climatic test methods - Part 23: High temperature operating life	EN 60749-23	-