



NSAI
Standards

Irish Standard
I.S. EN 60747-16-4:2004&A1:2011&A2:2017

Semiconductor devices - Part 16-4: Microwave integrated circuits - Switches

I.S. EN 60747-16-4:2004&A1:2011&A2:2017

Incorporating amendments/corrigenda/National Annexes issued since publication:

EN 60747-16-4:2004/A1:2011
EN 60747-16-4:2004/A2:2017

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SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):

NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.

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NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie
W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

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National Foreword

I.S. EN 60747-16-4:2004&A1:2011&A2:2017 is the adopted Irish version of the European Document EN 60747-16-4:2004, Semiconductor devices - Part 16-4: Microwave integrated circuits - Switches

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In line with international standards practice the decimal point is shown as a comma (,) throughout this document.

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EUROPEAN STANDARD

EN 60747-16-4:2004/A2

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2017

ICS 31.080.99

English Version

**Semiconductor devices - Part 16-4: Microwave integrated
circuits - Switches
(IEC 60747-16-4:2004/A2:2017)**

Dispositifs à semiconducteurs - Partie 16-4: Circuits
intégrés hyperfréquences - Commutateurs
(IEC 60747-16-4:2004/A2:2017)

Halbleiterbauelemente - Teil 16-4: Integrierte
Mikrowellenschaltkreise - Schalter
(IEC 60747-16-4:2004/A2:2017)

This amendment A2 modifies the European Standard EN 60747-16-4:2004; it was approved by CENELEC on 2017-09-20. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment the status of a national standard without any alteration.

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CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN 60747-16-4:2004/A2:2017 (E)

European foreword

The text of document 47E/546/CDV, future IEC 60747-16-4:2004/A2, prepared by SC 47E "Discrete semiconductor devices" of IEC/TC 47 "Semiconductor devices" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60747-16-4:2004/A2:2017.

The following dates are fixed:

- latest date by which the document has to be (dop) 2018-06-20
implemented at national level by
publication of an identical national
standard or by endorsement
- latest date by which the national (dow) 2020-09-20
standards conflicting with the
document have to be withdrawn

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

Endorsement notice

The text of the International Standard IEC 60747-16-4:2004/A2:2017 was approved by CENELEC as a European Standard without any modification.

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60747-16-4/A1

January 2011

ICS 31.080.99

English version

**Semiconductor devices -
Part 16-4: Microwave integrated circuits -
Switches**
(IEC 60747-16-4:2004/A1:2009)

Dispositifs à semiconducteurs -
Partie 16-4: Circuits intégrés
hyperfréquences -
Commutateurs
(CEI 60747-16-4:2004/A1:2009)

Halbleiterbauelemente -
Teil 16-4: Integrierte
Mikrowellenschaltkreise -
Schalter
(IEC 60747-16-4:2004/A1:2009)

This amendment A1 modifies the European Standard EN 60747-16-4:2004; it was approved by CENELEC on 2011-01-02. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment the status of a national standard without any alteration.

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CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 47E/358/CDV, future amendment 1 to IEC 60747-16-4:2004, prepared by SC 47E, Discrete semiconductor devices, of IEC TC 47, Semiconductor devices, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as amendment A1 to EN 60747-16-4:2004 on 2011-01-02.

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The following dates were fixed:

- latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2011-10-02
- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 2014-01-02

Endorsement notice

The text of amendment 1:2009 to the International Standard IEC 60747-16-4:2004 was approved by CENELEC as an amendment to the European Standard without any modification.

Replace the existing Annex ZA as follows:

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 60617 | - | Standard data element types with associated classification scheme for electric components - Part 4: IEC reference collection of standard data element types and component classes | - | - |
| IEC 60747-1 | 2006 | Semiconductor devices - Part 1: General | - | - |
| IEC 60747-4 | - | Semiconductor devices - Discrete devices - Part 4: Microwave diodes and transistors | - | - |
| IEC 60747-16-1 + A1 | 2001 2007 | Semiconductor devices - Part 16-1: Microwave integrated circuits - Amplifiers | EN 60747-16-1 + A1 | 2002 2007 |
| IEC 60748-2-1 | - | Semiconductors devices - Integrated circuits - Part 2: Digital integrated circuits - Section one - Blank detail specification for bipolar monolithic digital integrated circuit gates (excluding uncommitted logic arrays) | - | - |
| IEC 60748-3 | - | Semiconductors devices - Integrated circuits - Part 3: Analogue integrated circuits | - | - |
| IEC 60748-4 | - | Semiconductor devices - Integrated circuits - Part 4: Interface integrated circuits | - | - |
| IEC 61340-5-1 | 2007 | Electrostatics - Part 5-1: Protection of electronic devices from electrostatic phenomena - General requirements | EN 61340-5-1 | 2007 |
| IEC/TR 61340-5-2 | 2007 | Electrostatics - Part 5-2: Protection of electronic devices from electrostatic phenomena - User guide | CLC/TR 61340-5-2 | 2008 |

EUROPEAN STANDARD

EN 60747-16-4

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2004

ICS 31.080.99

English version

Semiconductor devices
Part 16-4: Microwave integrated circuits –
Switches
(IEC 60747-16-4:2004)

Dispositifs à semiconducteurs
Partie 16-4 : Circuits intégrés
hyperfréquences –
Commutateurs
(CEI 60747-16-4:2004)

Halbleiterbauelemente
Teil 16-4: Integrierte
Mikrowellenschaltkreise –
Schalter
(IEC 60747-16-4:2004)

This European Standard was approved by CENELEC on 2004-09-01. 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.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 47E/256/FDIS, future edition 1 of IEC 60747-16-4, prepared by SC 47E, Discrete semiconductor devices, of IEC TC 47, Semiconductor devices, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60747-16-4 on 2004-09-01.

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) 2005-06-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2007-09-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60747-16-4:2004 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 60747-16-1 NOTE Harmonized as EN 60747-16-1:2002 (not modified).

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 Where 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 60617-12 | - ¹⁾ | Graphical symbols for diagrams Part 12: Binary logic elements | EN 60617-12 | 1998 ²⁾ |
| IEC 60617-13 | - ¹⁾ | Part 13: Analogue elements | EN 60617-13 | 1993 ²⁾ |
| IEC 60747-1 | 1983 | Semiconductor devices - Discrete devices Part 1: General | - | - |
| A3 | 1996 | | - | - |
| IEC 60747-4 | - ¹⁾ | Part 4: Microwave diodes and transistors | - | - |
| IEC 60748-2-1 | - ¹⁾ | Semiconductors devices - Integrated circuits Part 2: Digital integrated circuits - Section one - Blank detail specification for bipolar monolithic digital integrated circuit gates (excluding uncommitted logic arrays) | - | - |
| IEC 60748-3 | - ¹⁾ | Part 3: Analogue integrated circuits | - | - |
| IEC 60748-4 | - ¹⁾ | Part 4: Interface integrated circuits | - | - |

1) Undated reference.

2) Valid edition at date of issue.

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