

INTERNATIONAL STANDARD

AMENDMENT 2

Semiconductor devices –
Part 16-4: Microwave integrated circuits – Switches
(standards.iteh.ai)

[IEC 60747-16-4:2004/AMD2:2017](https://standards.iteh.ai/catalog/standards/sist/47c2608e-4d9a-4d32-b676-a2e200f865a9/iec-60747-16-4-2004-amd2-2017)
<https://standards.iteh.ai/catalog/standards/sist/47c2608e-4d9a-4d32-b676-a2e200f865a9/iec-60747-16-4-2004-amd2-2017>



THIS PUBLICATION IS COPYRIGHT PROTECTED

Copyright © 2017 IEC, Geneva, Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester. If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
Fax: +41 22 919 03 00
info@iec.ch
www.iec.ch

About the IEC

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

About IEC publications

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigenda or an amendment might have been published.

IEC Catalogue - webstore.iec.ch/catalogue

The stand-alone application for consulting the entire bibliographical information on IEC International Standards, Technical Specifications, Technical Reports and other documents. Available for PC, Mac OS, Android Tablets and iPad.

IEC publications search - www.iec.ch/searchpub

The advanced search enables to find IEC publications by a variety of criteria (reference number, text, technical committee,...). It also gives information on projects, replaced and withdrawn publications.

IEC Just Published - webstore.iec.ch/justpublished

Stay up to date on all new IEC publications. Just Published details all new publications released. Available online and also once a month by email.

Electropedia - www.electropedia.org

The world's leading online dictionary of electronic and electrical terms containing 20 000 terms and definitions in English and French, with equivalent terms in 16 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

IEC Glossary - std.iec.ch/glossary

65 000 electrotechnical terminology entries in English and French extracted from the Terms and Definitions clause of IEC publications issued since 2002. Some entries have been collected from earlier publications of IEC TC 37, 77, 86 and CISPR.

IEC Customer Service Centre - webstore.iec.ch/csc

If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: csc@iec.ch

IEC STANDARD PREVIEW
(standards.iec.ch)

IEC 60747-16-4:2014 AM01:2017
a2e200f865a9/iec-60747-16-4-2014-am01-2017



IEC 60747-16-4

Edition 1.0 2017-08

INTERNATIONAL STANDARD

AMENDMENT 2

Semiconductor devices –

Part 16-4: Microwave integrated circuits – Switches

STANDARD PREVIEW
(standards.iteh.ai)
<https://standards.iteh.ai/catalog/standards/sist/47c2608e-4d9a-4d32-b676-a2e200f865a9/iec-60747-16-4-2004-amd2-2017>

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 31.080.99

ISBN 978-2-8322-4661-0

Warning! Make sure that you obtained this publication from an authorized distributor.

FOREWORD

This amendment has been prepared by subcommittee 47E: Discrete semiconductor devices, of IEC technical committee 47: Semiconductor devices.

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

CDV	Report on voting
47E/546/CDV	47E/563/RVC

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

The committee has decided that the contents of this amendment and the base publication will remain unchanged until the stability date indicated on the IEC website 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.

A bilingual version of this publication may be issued at a later date.

IEC 60747-16-4:2004/AMD2:2017
<https://standards.iteh.ai/catalog/standards/sist/47c2608e-4d9a-4d32-b676-a2e200f865a9/iec-60747-16-4-2004-amd2-2017>

CONTENTS

Replace the existing titles of subclauses 5.7 and 5.8 with the following new titles:

5.7 Adjacent channel power ratio ($P_{adj}/P_{o(mod)}$)

5.8 n th order harmonic distortion ratio (P_{nth}/P_1)

2 Normative references

Replace the existing references IEC 60617, IEC 60747-1 and IEC 60747-16-1, including the amendments brought to them by Amendment 1 as follows:

IEC 60617, *Graphical symbols for diagrams* (available from <<http://std.iec.ch/iec60617>>)

IEC 60747-1:2006, *Semiconductor devices – Part 1: General*
IEC 60747-1:2006/AMD1:2010

IEC 60747-16-1:2001, *Semiconductor devices – Part 16-1: Microwave integrated circuits – Amplifiers*
IEC 60747-16-1:2001/AMD1:2007
IEC 60747-16-1:2001/AMD2:2017

3 Terms and definitions

Replace the existing terminological entry 3.10 as follows:

3.10

adjacent channel power ratio

$P_{adj}/P_{o(mod)}$

ratio of the total output power in a specified frequency band away from a specified carrier signal frequency to the total power in a specified carrier signal frequency band, when a modulation signal is supplied

[SOURCE: IEC 60747-16-1:2001/AMD2:2017, 3.21]

Replace the existing terminological entry 3.11 and the amendments brought to it by Amendment 1 as follows:

3.11

n th order harmonic distortion ratio

P_{nth}/P_1

ratio of the power of the n th order harmonic component measured at the output port of the device to the power of the fundamental frequency measured at the output port

[SOURCE: IEC 60747-16-1:2001/AMD2:2017, 3.14]

4.6 Electrical characteristics

Replace the existing parameters 4.6.12 and 4.6.13 and the amendments brought to them by Amendment 1 with the following new parameters:

Subclause	Parameters	Min.	Typical ^a	Max.
4.6.12	Adjacent channel power ratio (where appropriate)		+	+
4.6.13	n th order harmonic distortion ratio (where appropriate)		+	+

5.7 Adjacent channel power ratio ($P_{o(mod)}/P_{adj}$)

Replace the existing title of this subclause with the following new title:

5.7 Adjacent channel power ratio ($P_{adj}/P_{o(mod)}$)

5.7.3 Principle of measurements

Replace the existing second sentence in the first paragraph with the following new sentence:

Adjacent channel power ratio $P_{adj}/P_{o(mod)}$ is the ratio of P_{adj} to $P_{o(mod)}$.

Replace the existing second paragraph and Equation (14) with the following:

$P_{adj}/P_{o(mod)}$ in dBc is given as the following equation in the circuit of Figure 6.

$$P_{adj}/P_{o(mod)} = P_{adj} - P_{o(mod)} = P_3 - P_2 \quad (14)$$

Replace the existing last sentence of this subclause with the following new sentence:

$P_{\text{adj}}/P_{\text{o(mod)}}$ is expressed in dBc.

5.7.6 Measurement procedure

Replace the existing last sentence with the following new sentence:

Adjacent channel power ratio $P_{\text{adj}}/P_{\text{o(mod)}}$ is calculated from Equation (14).

5.8 n th order harmonic distortion ratio (P_1/P_{nth})

Replace the existing title of subclause 5.8 and the amendments brought to it by Amendment 1 with the following new title:

5.8 n th order harmonic distortion ratio (P_{nth}/P_1)

5.8.3 Principle of measurements

Replace the existing first paragraph and the amendments brought to it by Amendment 1 with the following new paragraph:

The n th order harmonic distortion ratio P_{nth}/P_1 in dBc is derived from the following equations:

Replace the existing Equation (17) and the amendments brought to it by Amendment 1 with the following new equation:

$$P_{\text{nth}}/P_1 = P_{\text{o(nth)}} - P_{\text{o(1st)}} \quad (17)$$

<https://standards.iteh.ai/catalog/standards/sist/47c2608e-4d9a-4d32-b676->

Replace the existing last sentence and the amendments brought to it by Amendment 1 with the following new sentence:

$P_{\text{o(1st)}}$, $P_{\text{o(nth)}}$, $P_{\text{E(1st)}}$ and $P_{\text{E(nth)}}$ are expressed in dBm. $L_{(1\text{st})}$ and $L_{(n\text{th})}$ are expressed in dB.

5.8.5 Measurement procedure

Replace the existing last sentence and the amendments brought to it by Amendment 1 with the following new sentence:

The n th order harmonic distortion ratio P_{nth}/P_1 is calculated from Equations (15), (16) and (17).

iTeh STANDARD PREVIEW **(standards.iteh.ai)**

[IEC 60747-16-4:2004/AMD2:2017](https://standards.iteh.ai/catalog/standards/sist/47c2608e-4d9a-4d32-b676-a2e200f865a9/iec-60747-16-4-2004-amd2-2017)

<https://standards.iteh.ai/catalog/standards/sist/47c2608e-4d9a-4d32-b676-a2e200f865a9/iec-60747-16-4-2004-amd2-2017>

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

STANDARD PREVIEW
(standards.iteh.ai)

3, rue de Varembé
PO Box 131
CH-1211 Geneva 20
Switzerland

[IEC 60747-16-4:2004/AMD2:2017](https://standards.iteh.ai/catalog/standards/sist/47c2608e-4d9a-4d32-b676-a2e200f865a9/iec-60747-16-4-2004-amd2-2017)
<https://standards.iteh.ai/catalog/standards/sist/47c2608e-4d9a-4d32-b676-a2e200f865a9/iec-60747-16-4-2004-amd2-2017>

Tel: + 41 22 919 02 11
Fax: + 41 22 919 03 00
info@iec.ch
www.iec.ch