

INTERNATIONAL STANDARD

AMENDMENT 1

Semiconductor devices – iTeh Standards
Part 16-4: Microwave integrated circuits – Switches
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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/358/CDV	47E/373/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 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- withdrawn,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.

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

[IEC 60747-16-4:2004/AMD1:2009](https://standards.itih.ai/iec-60747-16-4-2004/AMD1-2009)

<https://standards.itih.ai/iec-60747-16-4-2004/AMD1-2009> Replace the title of this subclause by the following new title: [172fb84c8f/iec-60747-16-4-2004-amd1-2009](https://standards.itih.ai/iec-60747-16-4-2004/AMD1-2009)

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

2 Normative references

Replace the existing references IEC 60617-12, IEC 60617-13 and IEC 60747-1 as follows:

IEC 60617, *Graphical symbols for diagrams*

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

Add, to the existing list, the following new references:

IEC 60747-16-1:2001, *Semiconductor devices – Part 16-1: Microwave integrated circuits – Amplifiers*

Amendment 1 (2007)¹

¹ There exists a consolidated edition 1.1 published in 2007, including the base publication (2001) and its Amendment 1 (2007).

IEC 61340-5-1:2007, *Electrostatics – Part 5-1: Protection of electronic devices from electrostatic phenomena – General requirements*

IEC/TR 61340-5-2:2007, *Electrostatics – Part 5-2: Protection of electronic devices from electrostatic phenomena – User guide*

3 Terms and definitions

Replace the terms, definitions and NOTES 3.1, 3.2 and 3.11 by the following new terms, definitions and NOTES:

3.1

insertion loss

L_{ins}

ratio of the input power to the output power at the switched on port, in the linear region of the power transfer curve P_o (dBm) = $f(P_i)$

NOTE 1 In this region, ΔP_o (dBm) = ΔP_i (dBm).

NOTE 2 Usually the insertion loss is expressed in decibels.

3.2

isolation

L_{iso}

ratio of the input power to the output power at the switched off port, in the linear region of the power transfer curve P_o (dBm) = $f(P_i)$

NOTE 1 In this region, ΔP_o (dBm) = ΔP_i (dBm).

NOTE 2 Usually the isolation is expressed in decibels.

3.11

n th order harmonic distortion ratio

P_1/P_{nth}

See 3.14 of Amendment 1 of IEC 60747-16-1:2007.

4.1.4 Package identification

Replace, in item b), "drawing, of drawing" by "drawing, or drawing".

4.3.1 Detailed block diagram – functional blocks

Replace, in the last paragraph, "IEC 60617-12 or IEC 60617-13" by "IEC 60617".

4.4.2 Temperatures

Replace the existing all items, a) to e), by the following new items:

- a) Operating temperature (ambient or reference-point temperature)
- b) Storage temperature
- c) Channel temperature
- d) Lead temperature (for soldering).

4.6 Electrical characteristics

Delete, in the first paragraph, “of 4.6.1 and 4.6.2”.

Replace, in the table, the parameters 4.6.12 and 4.6.13 by the following new parameters.

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

4.7 Mechanical and environmental ratings, characteristics and data

Replace "IEC 60747-1, Chapter VI, clause 7" by "5.10 and 5.11 of IEC 60747-1".

4.8.8 Handling precautions

Replace the existing text by the following amended text;

Where appropriate, handling precautions specific to the circuit should be stated (see also IEC 61340-5-1 and IEC 61340-5-2, concerning electrostatic-sensitive devices.

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5.1.1 General precautions

Replace "Clause 2 of IEC 60747-1, Chapter VII, Section One apply" by "6.3, 6.4 and 6.6 of IEC 60747-1:2006 apply".

5.1.3 Handling precautions

Replace "Clause 1 of IEC 60747-1, Chapter IX" by "IEC 61340-5-1 and IEC 61340-5-2".

5.2.3 Principle of measurement

Replace Equation (1) by the following equation:

$$L_{ins} = P_i - P_o \tag{1}$$

5.2.6 Measurement procedure

Replace the second paragraph by the following new paragraph:

The bias under specified conditions is applied.

Replace, in the last paragraph, “Equations (3) and (1)” by “Equations (2), (3) and (1)”.

5.3.6 Measurement procedure

Replace the second paragraph by the following new paragraph: