Complete filter units for radio interference suppression Part 2-2: Blank detail specification – Passive filter units for electromagnetic interference suppression – Filters for which safety tests are required (safety tests only)

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN 60939-2-2:2005 sisaldab Euroopa standardi EN 60939-2-2:2004 ingliskeelset teksti.	This Estonian standard EVS-EN 60939-2-2:2005 consists of the English text of the European standard EN 60939-2-2:2004.
Standard on kinnitatud Eesti Standardikeskuse 23.02.2005 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 23.02.2005 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 07.12.2004.	Date of Availability of the European standard text 07.12.2004.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

ICS 31.190, 33.160

Võtmesõnad:

EUROPEAN STANDARD **EN 60939-2-2**

NORME EUROPÉENNE

EUROPÄISCHE NORM December 2004

ICS 31.190; 33.160 Supersedes EN 133221:1998

English version

Complete filter units for radio interference suppression Part 2-2: Blank detail specification – Passive filter units for electromagnetic interference suppression – Filters for which safety tests are required (safety tests only)

(IEC 60939-2-2:2004)

Filtres complets d'antiparasitage
Partie 2-2: Spécification particulière cadre - Filtres passifs d'antiparasitage – Filtres pour lesquels des essais de sécurité sont exigés
(seulement des essais de sécurité)
(CEI 60939-2-2:2004)

Vollständige Filter zur Unterdrückung von Funkstörungen
Teil 2-2: Vordruck für Bauartspezifikation - Passive Filter zur Unterdrückung elektromagnetischer Störungen – Filter, für die Sicherheitsprüfungen vorgeschrieben sind
(nur Sicherheitsprüfungen)
(IEC 60939-2-2:2004)

This European Standard was approved by CENELEC on 2004-11-01. 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

Ref. No. EN 60939-2-2:2004 E

Foreword

The text of document 40/1467/FDIS, future edition 1 of IEC 60939-2-2, prepared by IEC TC 40, Capacitors and resistors for electronic equipment, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60939-2-2 on 2004-11-01.

This European Standard supersedes EN 133221:1998.

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)	2005-08-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2007-11-01

Annex ZA has been added by CENELEC.

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Endorsement notice

The text of the International Standard IEC 60939-2-2:2004 was approved by CENELEC as a European Standard without any modification.

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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.

Publication	Year	Title	EN/HD	Year
IEC 60939-1	- [1)]	Passive filter units for electromagnetic interference suppression Part 1: Generic specification	-	-
IEC 60939-2	- [1)]	Part 2: Sectional specification: Passive filter units for which safety tests are appropriate - Test methods and general requirements	-	-
IEC 60939-2-1	- [2)]	Part 2-1: Blank detail specification - Passive filter units for electromagnetic interference suppression - Filters for which safety tests are required (assessment level D/DZ)	EN 60939-2-1	2004 [3)]

1) At draft stage.

2) Undated reference.

3) Valid edition at date of issue.

INTERNATIONAL STANDARD

IEC 60939-2-2

First edition
2004-11

Complete filter units for radio interference suppression –

**Part 2-2:
Blank detail specification –
Passive filter units for electromagnetic interference suppression –
Filters for which safety tests are required (safety tests only)**

Reference number
IEC 60939-2-2:2004(E)

Publication numbering

As from 1 January 1997 all IEC publications are issued with a designation in the 60000 series. For example, IEC 34-1 is now referred to as IEC 60034-1.

Consolidated editions

The IEC is now publishing consolidated versions of its publications. For example, edition numbers 1.0, 1.1 and 1.2 refer, respectively, to the base publication, the base publication incorporating amendment 1 and the base publication incorporating amendments 1 and 2.

Further information on IEC publications

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- **IEC Web Site (www.iec.ch)**

- **Catalogue of IEC publications**

  The on-line catalogue on the IEC web site (www.iec.ch/searchpub) enables you to search by a variety of criteria including text searches, technical committees and date of publication. On-line information is also available on recently issued publications, withdrawn and replaced publications, as well as corrigenda.

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INTERNATIONAL STANDARD

IEC 60939-2-2

First edition
2004-11

Complete filter units for radio interference suppression –

Part 2-2: Blank detail specification – Passive filter units for electromagnetic interference suppression – Filters for which safety tests are required (safety tests only)

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMPLETE FILTER UNITS FOR RADIO INTERFERENCE SUPPRESSION –

Part 2-2: Blank detail specification – Passive filter units for electromagnetic interference suppression – Filters for which safety tests are required (safety tests only)

FOREWORD

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International Standard IEC 60939-2-2 has been prepared by IEC technical committee 40: Capacitors and resistors for electronic equipment.

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

FDIS	Report on voting
40/1467/FDIS	40/1488/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.

IEC 60939 consists of the following parts under the general title *Complete filter units for radio interference suppression:*

Part 1: Generic specification

Part 2: Sectional specification

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.

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

INTRODUCTION

This blank detail specification forms the basis for a uniform procedure for a common Safety Mark. It implements the approval schedule for the safety test described in IEC 60939-2, requires a declaration of design for parameters relevant to safety and prescribes conformance tests to be conducted on every lot prior to its release and requalification tests depending on changes to the declared design.

In comparison with IEC 60939-2-1, which provides quality conformance and safety tests this specification is restricted to safety tests only. The use of IEC 60939-2-1 may be more appropriate for components manufactured in mass production, whereas the employment of this specification may be necessary in those cases where approval and requalification tests contribute considerably to the costs of the product.

Blank detail specification

A blank detail specification is a supplementary document to the sectional specification and contains requirements for style and layout and minimum content of detail specifications. In the preparation of detail specifications the content of 1.4 of the sectional specification shall be taken into account.

Identification of the detail specification and of the component

The first page of the detail specification should have the layout recommended on the next page of this blank detail specification. The numbers between square brackets correspond to the following information which shall be inserted at the position indicated:

[1] The name of the National Standards Organization under whose authority the detail specification is published and, if applicable, the organization from which the detail specification is available.

[2] The IECQ symbol and the number allotted to the detail specification by the IECQ General Secretariat.

[3] The number and issue number of the IECQ generic or sectional specification as relevant; also national reference if different.

[4] If different from the IECQ number, the national number of the detail specification, date of issue and any further information required by the national system, together with any amendment numbers.

[5] A brief description of the component or range of components.

[6] Information on typical construction (when applicable).

For [5] and [6] the text to be given in the detail specification should be suitable for an entry in the IECQ Register of Approvals.

[7] Outline drawing with main dimensions which are of importance for interchangeability and/or reference to the appropriate national or international documents for outlines. Alternatively the drawing may be given in an annex to the detail specification, but [7] should always contain an illustration of the general outer appearance of the component.

[8] The level(s) of quality assessment covered by the detail specification, as appropriate.

[9] Reference data giving information on the most important properties of the component which allow comparison between the various component types intended for the same or similar applications.

[1]	IEC 60939-2-2-XXX [2] QC XXXXXXXXX
ELECTRONIC COMPONENTS OF ASSESSED QUALITY IN ACCORDANCE WITH: IEC 60939-1 IEC 60939-2 [3]	[4]
Outline and dimensions (... angle projection) [7] (Other shapes are permitted within the dimensions given, see Table 1.)	PASSIVE FILTER UNITS FOR ELECTROMAGNETIC INTERFERENCE SUPPRESSION AND FOR CONNECTION TO THE SUPPLY MAINS – FILTERS FOR WHICH SAFETY TESTS ARE REQUIRED (SAFETY TESTS ONLY) [5] TYPICAL CONSTRUCTION: [6] Class or subclass of incorporated capacitors [8] Safety tests only
NOTE For [1] to [9], see preceding page.	
REFERENCE DATA: Rated voltages, current range, climatic category, frequency range, insertion loss range, functional circuit diagram. [9]	

Information on the availability of components qualified to this detail specification is given in IEC QC 001005.

COMPLETE FILTER UNITS FOR RADIO INTERFERENCE SUPPRESSION –

Part 2-2: Blank detail specification – Passive filter units for electromagnetic interference suppression – Filters for which safety tests are required (safety tests only)

1 General data

1.1 Dimensions

Table 1 – Dimensions related to case size

Case size reference	Dimensions mm							
	L	*W*	*H*	...	...	...	...	...

When there is no case size reference, Table 1 may be omitted and the dimensions shall be given in Table 2, which then becomes Table 1.

The dimensions shall be given as maximum dimensions or as nominal dimensions with a tolerance.

1.2 Ratings and characteristics

Rated voltages (see Table 2)

Category voltage (if applicable) (see Table 2)

Rated current (see Table 2)

DC line resistance or d.c. voltage drop at rated current

Maximum current at upper category temperature and derating curve (if applicable)

Maximum internal and external temperatures for temperature rise test (if applicable)

Climatic category

Rated temperature

Insertion loss (see Table 2)

Insulation resistance

Category of passive flammability (if applicable)

Discharge resistance (if applicable)

Table 2 – Insertion loss at no load

Case size or type designation	Rated voltage	Category voltage	Rated current	Minimum insertion loss dB						
				kHz	kHz	MHz	MHz	MHz	GHz	GHz

1.3 Normative references

IEC 60939-1, *Complete filter units for radio interference suppression – Part 1: Generic specification* [1]

IEC 60939-2, *Complete filter units for radio interference suppression – Part 1: Sectional specification* [2]

IEC 60939-2-1, *Complete filter units for radio interference suppression – Part 2-1: Blank detail specification: Passive filter units for electromagnetic interference suppression – Filters for which safety tests are required (Assessment level D / DZ)*

1.4 Marking

The information given in the marking is normally selected from the following list; the relative importance of each item being indicated by its position in the list:

a) manufacturer's name or trademark;

b) manufacturer's type designation;

c) recognized approval mark;

d) rated voltage and rated frequency, identification of terminations and/or circuit diagram;

f) rated current;

g) rated temperature;

h) climatic category, followed by a letter indicating the category of the passive flammability[2];

i) year and month (or week) of manufacture[3].

The filter shall be clearly marked with a), b) and c) above, and with as many as possible of the remaining items as is considered necessary. Any duplication of information in the marking on the filter should be avoided.

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1 To be published.

2 If applicable.

3 May be indicated by the code given in IEC 60062:1992, *Marking codes for resistors and capacitors*, a new edition of which is shortly to be published.