

CECC

VARISTANCES POUR LIMITATION DES SURTENSIONS TRANSITOIRES

SURGE SUPPRESSION VARISTORS

VARISTOREN FÜR DEN ÜBERSPANNUNGSSCHUTZ



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Edition
Issue
Ausgabe

CECC 42201

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AVA Documents
Document Sharing Hub

Information about the System may be obtained from:



FEN e.V. Secretariat
and
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*or from the National Authorized Institutions
of the participating countries listed
who can supply copies of:*

- 1 The Internal Regulations of the FEN e.V.
- 2 The Rules of Procedure of the System
- 3 CECC Specifications of the FEN and National Specifications for the System
- 4 CECC 00 200: Qualified Products List (QPL)
- 5 CECC 00 300: CECC Publications and their related national documents
- 6 Other CECC Publications and publicity documents

AUSTRIA

Österreichischer Verband für Elektrotechnik (ÖVE)
Eschenbachgasse 9
A-1010 VIENNA

BELGIUM

Comité Electrotechnique Belge
Galerie Ravenstein 3 (Boîte 11)
B-1000 BRUSSELS

DENMARK

Dansk Elektroteknisk Komite
Strandgade 36
DK-1401 COPENHAGEN K

FINLAND

Finnish Electrotechnical Standards Association (SESKO)
P.O. Box 134
SF-00211 HELSINKI 21

FRANCE

Union technique de l'Electricité
Participation française au CECC
F-92052 PARIS La Défense Cedex 64

GERMANY

Deutsche Elektrotechnische Kommission im DIN und VDE (DKE)
Stresemannallee 15
D-6000 FRANKFURT/Main 70

IRELAND

EOLAS - The Irish Science and Technology Agency
Glasnevin
IRL-DUBLIN 9

ITALY

Comitato Elettrotecnico Italiano (CEI)
Viale Monza, 259
I-20126 MILAN

NETHERLANDS

Nederlands Elektrotechnisch Comité (NEC)
Kalfjeslaan 2
P.O. Box 5059
NL-2600 GB DELFT

NORWAY

Norsk Elektroteknisk Komite (NEK)
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N-0212 OSLO 2

PORTUGAL

Instituto Português da Qualidade
Rua José Estevão, 83A
P-1199 LISBOA CODEX

SPAIN

Asociación Electrotécnica y Electrónica Española (AEE)
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E-28020 MADRID

SWEDEN

Svenska Elektriska Kommissionen (SEK)
Box 1284
S-16428 KISTA-STOCKHOLM

SWITZERLAND

Schweizerischer Elektrotechnischer Verein (SEV)
Postfach
CH-8008 ZÜRICH

UNITED KINGDOM

UK Electronic Components Policy Council
Electrical Department
British Standards Institution
2, Park Street
GB-LONDON W1A 2BS

FOREWORD

The CENELEC Electronic Components Committee (CECC) is composed of those member countries of the European Committee for Electrotechnical Standardization (CENELEC) who wish to take part in a harmonized System for electronic components of assessed quality.

The object of the System is to facilitate international trade by the harmonization of the specifications and quality assessment procedures for electronic components, and by the grant of an internationally recognized Mark, or Certificate of Conformity. The components produced under the System are thereby accepted by all member countries without further testing.

This specification has been formally approved by the CECC and has been prepared for those countries taking part in the System who wish to issue detail specifications for SURGE SUPPRESSION VARISTORS. It should be read in conjunction with the current regulations for the CECC System.

At the date of printing of this specification the member countries of the CECC are Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom and copies of it can be obtained from the addresses shown on the blue fly sheet.

PREFACE

This blank detail specification was prepared by CECC Working Group 4: 'RESISTORS'.

It is one of a series of blank detail specifications for surge suppression varistors, all relating to the generic specification printed as CECC 42 000 and the sectional specification printed as CECC 42 200.

The text of this specification was circulated to the CECC for voting in the documents listed below and was ratified by the President of the CECC for printing as a CECC specification:

<u>Document</u>	<u>Voting Date</u>	<u>Report on the Voting</u>
CECC (Secretariat) 1096	7 December 1981	CECC (Secretariat) 1241
CECC (Secretariat) 1097	7 December 1981	CECC (Secretariat) 1240

See also report on the voting, CECC (Secretariat) 1344, on documents CECC (Secretariat) 1227, 1228 and 1229.

Key for page 3

The numbers between square brackets on the first page correspond to the following indications which should be given:

Identification of the harmonized detail specification

[1] The name of the National Standards Organization under whose authority the detail specification is drafted.

[2] The CECC symbol and the number allocated to the national detail specification by the CECC General Secretariat.

[3] The number and issue number of the national generic and sectional specifications.

[4] The national number of the detail specification, date of issue and any further information required by the national system.

Identification of the varistor

[5] A short description of the type of varistor.

[6] Information on typical construction (where applicable) e.g. Zinc oxide, non-insulated.

[7] Outline drawing with main dimensions which are of importance for interchangeability and/or reference to the national or international documents for outlines. Alternatively, this drawing may be given in an annex to the detail specification.

[8] Application or group of applications covered, or, preferably, the level of quality assessment covered by the detail specification.

[9] Reference data on the most important properties, to allow comparison between the various varistor types.

Specification available from: [1]	CECC 42 201:  [2]
ELECTRONIC COMPONENTS OF ASSESSED QUALITY IN ACCORDANCE WITH: [3]	[4]
Outline and dimensions: [7] (First angle projection) NOTE - A fully dimensioned drawing shall be given in the detail specification.	SURGE SUPPRESSION VARISTORS [5] Construction [6] e.g. Zinc oxide (non-insulated) Assessment level S [8]
All dimensions in millimetres	

NOTES

- 1 - Other shapes are permitted within the dimensions given. [9]
- 2 - The undimensioned details do not affect the performance of the device.
- 3 - The terminations are (not) suitable for soldering.
- 4 - The terminations are (not) suitable for printed wiring applications.
- 5 - The terminations are (not) rigid.

1.1 Ratings and characteristics (at 25 °C)

Supply voltage	- - V
Maximum continuous a.c. voltage	- - V a.c. r.m.s.
Maximum continuous d.c. voltage	- - V d.c.
Class current	- - A
and/or	
Surge rating	- - J
Voltage at class current (protection level)	- - V max.
Leakage current	- - μ A max.
Climatic category	- - /- - /- -

Information about manufacturers who have components qualified to this detail specification is available in the current CECC 00 200: Qualified Products List.

Temperature coefficient of voltage (at 1 mA unless otherwise specified in the detail specification)

- - %/K

Capacitance (if applicable)

- - pF max.

Isolation voltage (if applicable)

- - V

Rated dissipation (if applicable)

- - W

(Where several styles are specified the above information shall preferably be presented in tabular form) e.g.

TABLE 1

Style reference	Dimensions (in mm)				Supply voltage	Max. cont. a.c. volt.	Max. cont. d.c. volt.	Protection level	Leakage current	Class current	Surge rating	Isolation voltage	Rated dissipation
	D		W										
	min.	max.	min.	max.									
					V	V a.c. r.m.s.	V d.c.	V max.	μ A max.	A	J	V	W

1.2 Derating

The detail specification shall give derating curves for the effect of temperature on the maximum continuous a.c. or d.c. voltage and for peak current against pulse duration. The latter curve may, if applicable, show the effect with respect to one or more pulses.

2. MARKING

The marking of the component and package shall be in the following order with the remainder in accordance with the requirements of 2.4 of CECC 42 000.

- Supply voltage (colour coding may be used).
- Detail specification number and style reference.
- Date of acceptance.
- The manufacturer's name or trade mark.

NOTE - a) is mandatory, b) and the remainder to be added where space permits.

3. RELATED DOCUMENTS

National Authorized Institutions shall complete this section, making reference to any documents, recommendations or specifications directly referred to in their national equivalent of this document.

4. ORDERING INFORMATION

Orders for varistors covered by this specification shall contain the following information:

- a) Detail specification number
- b) Style reference

5. ADDITIONAL INFORMATION (NOT FOR INSPECTION PURPOSES)

Maximum current to achieve 10 000 pulses of 8/20 μ s at 6 pulses per minute. (This information may be given in graphical form).

Maximum energy to achieve 10 000 pulses of 10/1000 μ s, or 2 ms square wave, at 1 pulse per min. (This information may be given in graphical form).

The detail specification may include information which is not required to be verified by the inspection procedure, such as circuit diagrams, curves, drawings or notes needed for the clarification of the detail specification.

6. CERTIFIED TEST RECORDS

The detail specification shall specify in this paragraph whether certified test records shall be prepared in accordance with 3.5 of CECC 42 000.

7. INSPECTION REQUIREMENTS

When it is desired to obtain qualification approval by adopting the fixed sample size procedure, (see 3.3.3 of CECC 42 000), use shall be made of the test schedule given for that purpose in CECC 42 200.

The conditions of the test and the performance requirements shall be identical to those prescribed for quality conformance inspection in the detail specification.

See notes 1, 2 and 3

Test and clause number (1)	D or ND (3)	Conditions of test (1)	IL (2)	AQL (2)	Performance requirements (1)
GROUP A INSPECTION To be conducted on a sampling basis lot-by-lot					
<u>Sub-group A1</u>	ND		II	1,0 %	
4.2.1 Visual examination					As in 4.2.1
4.2.2 Marking					As in 4.2.2
<u>Sub-group A2</u>	ND		I	0,65 %	
C2.2 Voltage under pulse conditions		8/20 pulse class current (Protection level)			< - - - V
4.3 Voltage		At 1 mA			As specified in the detail specification
4.3 Current		At maximum continuous d.c. voltage Leakage current (see note 4)			As specified in the detail specification
<u>Sub-group A3</u>	ND		S2	4,0 %	
4.2.3 Dimensions (gauging)		Dimension 'D' and such other dimensions as may be specified in the detail specification			As specified in the detail specification

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See notes 1, 2 and 3

Test and clause number (1)	D or ND (3)	Conditions of test (1)	IL (2)	AQL (2)	Performance requirements (1)
GROUP B INSPECTION					
To be conducted on a sampling basis lot-by-lot					
Sub-group B1	D		S3	2,5 %	
4.11 Robustness of terminations		Tests appropriate to the type of termination Visual examination Leakage current			As in 4.11.6 Within the original limits
4.10.1 Soldering-solderability (where applicable, see note 5)		Test Ta (IEC 68-2-20) solder bath method 235 ± 5 °C			The terminations shall be uniformly tinned
Sub-group B2	ND		S2	1 %	
4.7 Voltage proof		Insulated varistors only			As in 4.7.3

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