

Förderverein für Elektrotechnische Normung (FEN) e. V.
Cenelec Electronic Components Committee

CECC

Système Harmonisé d'Assurance de la Qualité
des Composants Electroniques

SPECIFICATION PARTICULIERE:

CONDENSATEURS FIXES
ELECTROLYTIQUES
A L'ALUMINIUM
A ELECTROLYTE NON SOLIDE

Harmonized System of Quality Assessment for
Electronic Components

DETAIL SPECIFICATION:

FIXED ALUMINIUM ELECTROLYTIC
CAPACITORS WITH
NON-SOLID ELECTROLYTE

Harmonisiertes Gütebestätigungssystem für
Bauelemente der Elektronik

BAUARTSPEZIFIKATION:

ALUMINIUM-ELEKTROLYT-
FESTKONDENSATOREN
MIT FLÜSSIGEM ELEKTROLYTEN



2 Edition
Issue
Ausgabe

CECC 30 301-806

1994

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Information about the System may be obtained from:



FEN e.V. Secretariat
and
CECC General Secretariat
Gartenstraße 179
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Telephone: Int. + 49 69 639171
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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: Register of Firms, Products, and Services Approved under the CECC System
- 5 CECC 00 300: Register of National Documents Implementing CECC Publications and CECC European Standards
- 6 CECC 00 301: Register of CECC Specifications and Related Detail Specifications
- 7 Other CECC Publications and publicity documents

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Comité Electrotechnique Belge
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B-1070 BRUSSELS

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Dansk Elektroteknisk Komite
Dansk Standard
Electrotechnical Sector
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DK-2900 HELLERUP

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

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UNITED KINGDOM
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GB-LONDON W1A 2BS



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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 acceptable in all member countries without further testing.

This specification 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 specification was prepared by CECC WG 3 "Capacitors".

It is based, wherever possible, on the Publications of the International Electrotechnical Commission (IEC).

The text of this specification was circulated to the members of the CECC WG 3 and was approved for publication under the accelerated procedure for the acceptance of detail specifications with Decisions 10, 11 and 12 of the minutes of the CECC CD meeting in document CECC(Sec)1838.

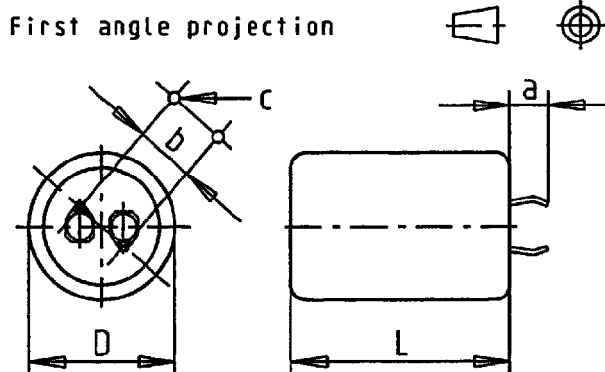
This second issue of CECC 30 301-806 shall become effective for all new qualification approvals on November 1994. Issue 1 will continue to remain effective to cover all past approvals.

Secretariat Note

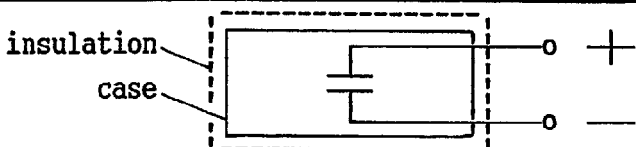
This detail specification is a revision of the former Issue 1 of CECC 30 301-806, and is based on proposals of CEMEC WG PC 1A concerning some editorial corrections and improvements. These proposals have been discussed at the 1991 meeting of CECC WG 3, held in Brussels. It was decided to accept the proposed amendments and to publish a revised version without voting as stated in the minutes of the Brussels meeting:

CECC WG 3(Secretariat)224, items 16.1, 16.2 and 16.3

To allow early publication, this detail specification is issued initially in English only. Corresponding versions in French and German will follow on request of ONHS.

Specification available from: CECC General Secretariat	CECC 30 301-806 (Issue 2) 1994 
ELECTRONIC COMPONENTS OF ASSESSED QUALITY - DETAIL SPECIFICATION IN ACCORDANCE WITH: EN 130 000 : 1993 CECC 30 300 Issue 2, Amdts. 1 to 5	
First angle projection  Notes: - all dimensions in mm - a: (6,3 ± 1) mm - b: (10 ± 0,1) mm - c: (2 ± 0,1) mm (diameter of holes in printed board) - for D, L see Table 1 - pressure relief device mandatory - The polarity must be clearly indicated	WG-DETAIL SPECIFICATION FOR FIXED ALUMINIUM ELECTROLYTIC CAPACITORS WITH NON-SOLID ELECTROLYTE Polar Cylindrical Metallic case Insulating sleeve Unidirectional rigid terminations (pins) for use in printed circuits Assessment level E

QUICK REFERENCE DATA: Rated capacitance range (C_R): 47 to 47 000 μF
 Capacitance tolerance: $\pm 20 \%$
 Rated voltage range (U_R): 10 to 400 V d.c.
 Climatic category: 40/085/56
 Performance grade: long-life grade 2000 h

Circuit diagram Note: contact of minus pole to metallic case not defined	
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Information about manufacturers who have components qualified to this detail specification is available in the current CECC 00 200: Register of Firms, Products, and Services Approved under the CECC System

It is intended that this specification should replace national specifications. Relevant numbers will be submitted by the national committees and published under issue 3 of this specification.

1. GENERAL DATA

1.1 METHOD OF MOUNTING FOR VIBRATION AND SHOCK TESTS

The capacitor is to be mounted by its body which shall be rigidly clamped to the work surface. See 1.3.2 of CECC 30 300 Issue 2.

1.2 DIMENSIONS

Table 1

Case size reference	Dimensions in mm		
	D		L
	nominal	max. ¹⁾	max. ¹⁾
1	22	23,0	32
2	22	23,0	42
3	25	26,5	27
4	25	26,5	32
5	25	26,5	42
6	30	31,5	32
7	30	31,5	42
8	30	31,5	52
9	35	36,5	32
10	35	36,5	42
11	35	36,5	52

¹⁾ including insulation sleeve

1.3 RATINGS AND CHARACTERISTICS

Rated capacitance range (C_R)	47 μ F to 47 000 μ F
Tolerance on rated capacitance	± 20 %
Rated voltage range (U_R)	10 to 400 V d.c.
Category voltage (U_C)	= rated voltage
Climatic category	40/085/56
Rated temperature	85 °C
Rated ripple current	see Table 2B
Equivalent series resistance (ESR)	see Table 2B and sub-clause 1.8
Leakage current	see Table 2B
Impedance	see Table 2B

Table 2A

Values of capacitance and voltage related to case sizes (see Table 1)

Rated voltage (V d.c.)	10	16	25	40	63	100	200 or 250	385 or 400
Rated capacitance (μ F)	Case size reference							
47								1 or 3
68								2 or 4
100							1 or 3	5 or 6
150							2 or 4	5 or 6
220							5 or 6	8 or 10
330							7 or 9	11
470						1 or 3	8 or 10	
680						2 or 4	11	
1 000					1 or 3	5 or 6		
1 500					2 or 4	7 or 9		
2 200				1 or 3	5 or 6	8 or 10		
3 300			1 or 3	2 or 4	7 or 9	11		
4 700		1 or 3	2 or 4	5 or 6	8 or 10			
6 800	1 or 3	2 or 4	5 or 6	7 or 9	11			
10 000	2 or 4	5 or 6	7 or 9	8 or 10				
15 000	5 or 6	7 or 9	8 or 10	11				
22 000	7 or 9	8 or 10	11					
33 000	8 or 10	11						
47 000	11							