

Förderverein für Elektrotechnische Normung (FEN) e.V.
Genelec 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 30 301-802

1994



Documents
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Information about the System may be obtained from:



FEN e.V. Secretariat
and
CECC General Secretariat
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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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B-1070 BRUSSELS

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Dansk Standard
Electrotechnical Sector
Baunegårdsvej 73
DK-2900 HELLERUP

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Finnish Electrotechnical Standards Association (SESKO)
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Participation française au CECC
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to be determined.

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UK Electronic Components Policy Council
Electrical Department
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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.

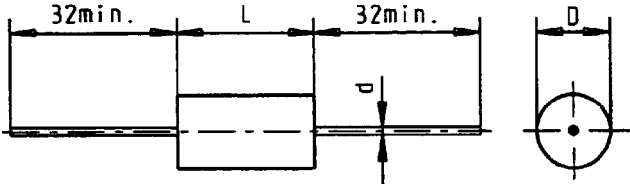
This second issue of CECC 30 301-802 shall become effective for all new qualification approvals on 31 August 1994. Issue 1 will continue to remain effective to cover all past approvals.

Secretariat Note

This detail specification is a revision of the former Issue 1 of CECC 30 301-802, 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:

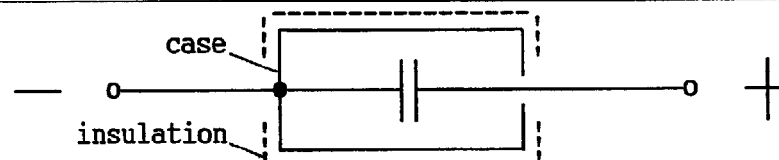
CECC WG3(Secretariat)224, items 16.1, 16.2 and 16.3.

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 30 301-802 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. For d, D and L see Table 1. Other shapes permitted within the dimensions given. For taped versions, the requirements of IEC 286-1 are to be applied. The polarity must be clearly indicated.	WG-DETAIL SPECIFICATION FOR FIXED ALUMINIUM ELECTROLYTIC CAPACITORS WITH NON-SOLID ELECTROLYTE Polar Cylindrical Metallic case Insulating sleeve Axial terminations Assessment level E

QUICK REFERENCE DATA: Rated capacitance range (C_R): 1 to 22 000 μF
Capacitance tolerance: -10/+50 %
Rated voltage range (U_R): 6,3 to 250 V d.c.
Climatic category: 55/125/56
Performance grade: long-life grade 2000 h

Circuit diagram



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 wire leads at a distance of (6 ± 1) mm from the case. Capacitors with a case size exceeding DC shall be additionally clamped by the case. See 1.3.2 of CECC 30 300 Issue 2.

1.2 DIMENSIONS

Table 1

Case size reference	Dimensions in mm		
	D _{max.} 1)	L _{max.} 1)	d _{nominal}
AA	7,5	22	0,6 to 0,8
BA	9,5		
CA	11		
CB		27	
DC	13,5	32	0,8
EC	15,5		
FC	17		
GC	19		
GD		42	
HD	23	0,8 to 1,0	
JE	26,5		46
JF			63
JG			79

¹⁾ including insulation sleeve

1.3 RATINGS AND CHARACTERISTICS

Rated capacitance range (C_R)	1 to 22 000 μF
Tolerance on rated capacitance	-10/+50 %
Rated voltage range (U_R)	6,3 to 250 V d.c.
Category voltage (U_C)	= rated voltage
Climatic category	55/125/56
Rated temperature	125 °C
Rated ripple current	see Table 2B
Tangent of loss angle ($\tan\delta$)	see Table 2B
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.)	6,3	10	16	25	40	63	100	160	200 or 250
Rated capacitance (μF)	D _{max.} x L _{max.} Case size reference								
1						7,5x22 AA	7,5x22 AA		
1,5						7,5x22 AA			
2,2						7,5x22 AA	7,5x22 AA		
3,3						7,5x22 AA	9,5x22 BA	11x22 CA	
4,7						7,5x22 AA	9,5x22 BA		
6,8						7,5x22 AA	9,5x22 BA	11x27 CB	
10					7,5x22 AA	9,5x22 BA	9,5x22 BA		
15					9,5x22 BA	9,5x22 BA	11x27 CB	13,5x32 DC	19x32 GC
22				7,5x22 AA	9,5x22 BA	9,5x22 BA	11x27 CB	19x32 GC	19x32 GC
33					9,5x22 BA	11x27 CB			19x42 GD
47		7,5x22 AA	9,5x22 BA	9,5x22 BA	9,5x22 BA	11x27 CB	13,5x32 DC	19x42 GD	26,5x46 JE
68					11x27 CB	11x27 CB	15,5x32 EC	23x42 HD	26,5x63 JF
100		9,5x22 BA	9,5x22 BA	11x22 CA	11x27 CB	13,5x32 DC	17x32 FC	26,5x46 JE	26,5x79 JG
150		11x22 CA	11x22 CA	13,5x32 DC	13,5x32 DC	15,5x32 EC	17x32 FC	26,5x63 JF	
220	11x27 CB	11x27 CB	11x27 CB	13,5x32 DC	13,5x32 DC	17x32 FC	19x42 GD	26,5x79 JG	
330	13,5x32 DC	13,5x32 DC	13,5x32 DC	13,5x32 DC	15,5x32 EC	19x32 GC	23x42 HD		
470	13,5x32 DC	13,5x32 DC	13,5x32 DC	15,5x32 EC	17x32 FC	23x42 HD	26,5x46 JE		
680		15,5x32 EC	15,5x32 EC	19x32 GC	19x32 GC	23x42 HD	26,5x63 JF		
1 000	15,5x32 EC	15,5x32 EC	17x32 FC	19x32 GC	23x42 HD	26,5x46 JE	26,5x79 JG		
1 500	19x32 GC	19x32 GC	19x32 GC	19x42 GD	23x42 HD	26,5x63 JF			
2 200	19x32 GC	19x42 GD	19x42 GD	23x42 HD	26,5x46 JE	26,5x79 JG			
3 300	19x32 GC	19x42 GD	23x42 HD	26,5x46 JE	26,5x63 JF				
4 700	19x42 GD	23x42 HD	26,5x46 JE	26,5x63 JF	26,5x79 JG				
6 800	23x42 HD	26,5x46 JE	26,5x63 JF	26,5x79 JG					
10 000	26,5x46 JE	26,5x63 JF	26,5x79 JG						
15 000	26,5x63 JF	26,5x79 JG							
22 000	26,5x79 JG								