



SLOVENSKI STANDARD
SIST EN 130202:2002

01-september-2002

Blank detail specification: Fixed tantalum capacitors with non-solid electrolyte, porous anode

Blank Detail Specification: Fixed tantalum capacitors with non-solid electrolyte, porous anode (sub-family 2)

Vordruck für Baurtspezifikation: Tantal-Festkondensatoren mit flüssigem Elektrolyt und Sinteranode (Unterfamilie 2)

Spécification particulière cadre: Condensateurs fixes au tantale à électrolyte non solide et à anode poreuse (sous famille 2)

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Ta slovenski standard je istoveten z: EN 130202:1998

ICS:

31.060.40	Tantalski elektrolitni kondenzatorji	Tantalum electrolytic capacitors
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en

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EUROPEAN STANDARD
 NORME EUROPÉENNE
 EUROPÄISCHE NORM

EN 130202

March 1998

Supersedes CECC 30 202:1986 and its amendments

English version

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 Condensateurs fixes au tantale à
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 Tantal-Festkondensatoren mit
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This European Standard was approved by CENELEC on 1992-01-12. 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, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, 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

Foreword

At the request of CLC/TC CECC/SC 40XA (former WG 3), the text of CECC 30 202:1986, Issue 2, with its amendments A1, A3 and A5 and document CECC(Secretariat)2525, was submitted to the formal vote for conversion into a European Standard.

The text of the draft, together with the voting report, circulated as document CECC(Secretariat)2997, was approved as EN 130202 on 1992-01-12.

The text of document CECC(Secretariat)3063, which was submitted to the formal vote and; together with the voting report, circulated as document CECC(Secretariat)3204, was approved as an amendment to EN 130202 on 1992-10-14, has been taken into account in this European Standard.

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) 1998-10-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 1998-10-01

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Identification of the detail specification (DS) and the component

The first page of the DS should have the layout recommended as follows. The numbers in square brackets correspond to the indications to be completed thereunder:

- [1] The name of the National Standards Organization under whose authority the DS is published and, if applicable, the organization from whom the DS is available.
- [2] The CECC symbol and the number allotted to the DS by the CECC General Secretariat.
- [3] The number and issue number of the CECC generic and sectional specification as relevant; also national reference if different.
- [4] If different from the CECC number, the national number of the DS, 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 (where applicable).

For [5] and [6] the text to be given in the DS should be suitable for an entry in the Register of Approvals CECC 00200 and CECC 00300 (Library List).

[7] An outline drawing with main dimensions which are of importance for interchangeability, and/or reference to the appropriate national or international document for outlines. Alternatively, this drawing may be given in an annex to the DS, 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 DS.

[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 for similar, applications.

Specification available from: (National Standards Organization) SIST EN 130202:2002 https://standards.iteh.ai/catalog/standards/sis/665cb11d-45f7-45ae-abd9-2ea270a13121/sist-en-130202-2002	[1]	CECC number and mark	[2]
ELECTRONIC COMPONENTS OF ASSESSED QUALITY — DETAIL SPECIFICATION IN ACCORDANCE WITH: (Number of national generic and sectional specification)	[3]	(National number of detail specification, date of issue, National type number, if any)	[4]
Outline and dimensions: (first angle projection)	[7]	DETAIL SPECIFICATION FOR FIXED TANTALUM CAPACITORS WITH NON-SOLID ELECTROLYTE, POROUS ANODE (SUB-FAMILY 2)	[5]
		TYPICAL CONSTRUCTION: Examples cylindrical/rectangular non-metallic/metallic case insulated/non-insulated axial/radial terminations	
		Assessment level E Performance grade	[8]

QUICK REFERENCE DATA: Rated capacitance range, capacitance tolerance, d.c. rated voltage range, climatic category, performance grade [9]

Information about manufacturers who have components qualified to this detail specification is available in the current Register of Approvals CECC 00200.

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1 General data

1.1 Method of mounting for vibration and bump or shock tests

The method shall be specified in the detail specification.

See 1.3.2 of EN 130200:1993.

1.2 Dimensions

Table 1 — Dimensions

Case size reference	Dimensions mm							
	ϕ	L	H	d

NOTE 1 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.

NOTE 2 The dimensions shall be given as maximum dimensions or as nominal dimensions with a tolerance.

1.3 Ratings and characteristics

The following ratings and characteristics shall be specified in the DS:

- capacitance range (See Table 2A)
- tolerance on rated capacitance (See Table 2A)
- rated voltage (See Table 2A)
- category voltage (if applicable) (See Table 2A)
- climatic category (See Table 2A)
- rated temperature (See Table 2A)
- capacitance change with temperature (See Table 2B)
- tangent of loss angle (See Table 2B)
- leakage current (See Table 2B)
- impedance (if required) (See Table 2C)
- reverse voltage (if required)

Table 2A — Values of capacitance related to voltages and case sizes

Rated voltage				
Category voltage ^a				
	Case size	Case size	Case size	Case size
Rated capacitance (in nF and/or μ F)				
^a If different from the rated voltage.				

Table 2B — Characteristics at high and low temperature

U_R	C_R	Capacitance change			Maximum values								
					Tan δ			Impedance	Leakage current				
		V	μF	%			%			Ω	μA		
T_A	T_R			T_B	T_A^b	20 °C	T_B^b	T_A	20 °C	T_R	T_B^a		

T_A : Lower category temperature
 T_B : Upper category temperature
 T_R : Rated temperature
^a Measured with category voltage.
^b If applicable.

Table 2C — Impedance at ... kHz (if required)

Case size	Impedance Ω

1.4 Related documents

Generic specification: EN 130000

Sectional specification: EN 130200

1.5 Marking

The marking of the capacitor and the packing shall be in accordance with the requirements of 1.5 of EN 130200:1993.

NOTE The details of the marking of the component and packing shall be given in full in the detail specification.

1.6 Ordering information

Orders for capacitors covered by this specification shall contain, in clear or in coded form, the following minimum information:

- rated capacitance;
- tolerance on rated capacitance;
- rated voltage;
- number and issue reference of detail specification and style reference.

1.7 Certified test records

Required/not required.

1.8 Additional information

(Not for inspection purposes).

1.9 Additional or increased severities or requirements to those specified in the generic and/or sectional specification

NOTE Additions or increased requirements should be specified only when essential.

Table 3 — Other characteristics

This table is to be used for defining characteristics which are additional to or tighter than those given in the sectional specification.

2 Inspection requirements

2.1 Procedures

2.1.1 For qualification approval the procedures shall be in accordance with 3.4 of EN 130200:1993.

2.1.2 For quality conformity inspection the test schedule (Table 4) includes sampling, periodicity, severities and requirements. The formation of inspection lots is covered by 3.5.1 of EN 130200:1993.

Table 4A — Lot-by-lot inspection (Group A and B)

Clause number and test ^a	Conditions of test ^a	IL ^b	AQL ^b %	Performance requirements ^a
Group A1	Non-destructive	S4	2,5	
4.1 Visual examination				As in 4.1 Legible marking as specified in 1.5 of this specification
4.1 Dimensions (gauging)				As specified in Table 1 of this specification
Group A2	Non-destructive	II	1,0	
4.2.1 Leakage current	Protective resistance ... Ω			$\leq \dots \mu\text{A}$, see Table 2B of this specification
4.2.2 Capacitance	Frequency: ... kHz Bias voltage: ... V			Within specified tolerance
4.2.3 Tangent of loss angle	Frequency: ... Hz			$\leq \dots$, see Table 2B of this specification
4.2.4 Impedance (if required)	Frequency: ... kHz			$\leq \dots \Omega$, see Table 2C of this specification
Group B1	Destructive^c			Method 1 and 2
4.5 Solderability (if applicable)	Specify ageing if none other than 4 h 155 °C dry heat Method:...	S-3	2,5	Good tinning as evidenced by free flowing of the solder with wetting of the terminals Method 3: < 3 s