



BS CECC 30800 : 1978

UDC 621.319.45 : 621.315.55 : 669.294

Harmonized system of quality assessment for electronic components: Sectional specification : Tantalum chip capacitors

Système harmonisé d'assurance de la qualité des composants électroniques:
Spécification intermédiaire: Condensateurs chipses au tantale

Harmonisiertes gütebestätigungssystem für Bauelemente der Elektronik:
Rahmenspezifikation: Tantal-Chip-Kondensatoren

BS CECC 30800 : 1978

National foreword

This British Standard has been prepared under the direction of the Electronic Components Standards Committee. It is identical with CENELEC Electronic Components Committee (CECC) 30800 'Harmonized system of quality assessment for electronic components. Sectional Specification: Tantalum chip capacitors'.

This standard is a harmonized specification within the CECC system. The existing non-harmonized British Standard, BS 9070 : Section 3 'Tantalum electrolytic capacitors', will eventually be superseded by this standard, but for a period both standards will remain in force because of current approvals to the BS 9073 series.

Terminology and conventions. The text of the CECC specification has been accepted as suitable for publication, without deviation, as a British Standard. Some terminology and certain conventions are not identical with those used in British Standards; attention is especially drawn to the following.

The comma has been used as a decimal marker. In British Standards it is current practice to use a full point on the base line as the decimal marker.

Cross references. The British Standard harmonized with CECC 00100 is BS 9000 'General requirements for electronic components of assessed quality'.

For each of the following references to international standards given in the text, there is a corresponding British Standard; these are as listed below:

International standard	Corresponding British Standard
IEC 62 : 1974	BS 1852 : 1975 Marking codes for resistors and capacitors (identical)
IEC 63 : 1963	BS 2488 : 1966 Schedule of preferred numbers for the resistance of resistors and the capacitance of capacitors for telecommunication equipment (technically equivalent)
IEC 68-2-1 : 1974	BS 2011 Basic environmental testing procedures Part 2.1A : 1977 Test A. Cold (identical)
IEC 68-2-2 : 1974	Part 2.1B : 1977 Test B. Dry heat (identical)
IEC 68-2-20 : 1968	Part 2.1Ta : 1977 Test Ta. Solderability (identical)
CECC 00007 : 1973	BS E9007 : 1975 Harmonized system of quality assessment for electronic components: Basic specification: Sampling plans and procedures for inspection by attributes (identical)
CECC 30000 Edition 2 : 1975	BS E9070 : 1975 Harmonized system of quality assessment for electronic components: Generic specification for fixed capacitors (identical)
ISO 3 - 1973	BS 2045 : 1965 Preferred numbers (technically equivalent)

NOTE. The reference to IEC 384-3, for which there is no corresponding British Standard, constitutes informative matter only, and since no mandatory requirements are involved, the validity of this British Standard is not affected.

European Committee for Electrotechnical Standardization (CENELEC)
Cenelec Electronic Components Committee

CECC

English version

Harmonized System of Quality Assessment for
Electronic Components

SECTIONAL SPECIFICATION:

TANTALUM CHIP CAPACITORS

Système Harmonisé d'Assurance de la Qualité
des Composants Electroniques

SPECIFICATION INTERMEDIAIRE:

CONDENSATEURS CHIPSES AU TANTALE

Harmonisiertes Gütebestätigungssystem für
Bauelemente der Elektronik

RAHMENSPEZIFIKATION:

TANTAL-CHIP- KONDENSATOREN



SECTION 1 - GENERAL1.1 Scope

This document relates to tantalum solid electrolyte capacitor chips. These capacitors are primarily intended to be mounted directly into hybrid circuits.

Two styles are considered : Style 1, encapsulated capacitors and Style 2, unencapsulated capacitors.

1.2 Related documents

The following documents and any other documents to which they may relate are mandatory unless otherwise stated:

CECC 30 000	(1975)	Generic Specification : Fixed Capacitors
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For information only :

IEC Publication 384-3	(1976)	Tantalum chip capacitors. Selection of methods of test and general requirements.
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1.3 Terminology

See 2.2 of CECC 30 000.

1.4 Marking

When required by the detail specification, capacitors shall be marked with as many as practicable of the applicable items in the order given below :

- (1) Polarity of the terminations (unless identified by the construction)
- (2) Rated capacitance
- (3) Rated voltage
- (4) Style (in accordance with 2.1)
- (5) Tolerance on rated capacitance

Note: Where practicable, values and tolerances are to be coded using one of the methods specified in IEC 62.

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 national harmonized specifications for TANTALUM CHIP CAPACITORS. It should be read in conjunction with document CECC 00 100 : Basic Rules (1974).

At the date of printing of this specification the member countries of the CECC are Belgium, Denmark, Germany, France, Ireland, Italy, the Netherlands, Norway, Sweden, Switzerland, the United Kingdom, and copies of it can be obtained from the National Committees of the CENELEC in these countries.

PREFACE

This sectional specification was prepared by CECC Working Group 3 : "Capacitors".

It is one of a series of sectional specifications all relating to the generic specification printed as CECC 30 000.

In accordance with the requirements of document CECC 00 100, it is based, wherever possible, on the Publications of the International Electrotechnical Commission and in particular on IEC Publication 384-3 : Tantalum chip capacitors. Selection of methods of test and general requirements.

The text of this sectional specification was circulated to the CECC for voting in document CECC (Secretariat) 532 in July 1976, and was ratified by the CECC for printing as a CECC Specification.

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- (5) Tolerance on rated capacitance

Note: Where practicable, values and tolerances are to be coded using one of the methods specified in IEC 62.

- (6) Manufacturer's name or trade mark
- (7) Climatic category
- (8) Year and month (or week) of manufacture. This may be in code form.
- (9) Manufacturer's type designation
- (10) Reference to the national or CECC number of the detail specification.

The capacitor shall be clearly marked with as many as possible of the above items as are considered useful. Marking shall be smearproof but need not be able to withstand climatic conditions.

The package containing the capacitor(s) shall be clearly marked with all the information listed above.

Any additional marking shall be so applied that no confusion can arise.

SECTION 2 - RATINGS AND CHARACTERISTICS

2.1 Preferred climatic categories

The capacitors covered by this specification are classified into climatic categories according to the general rules given in IEC 68-1.

The severities for the cold, dry heat and damp heat (steady state) tests for the capacitors covered by this specification should preferably be within the following ranges :

	Style 1	Style 2
Lower category temperature :	-55°C	-55°C
Upper category temperature :	+85°C to 125°C	+ 85°C to 125°C
Damp heat steady state :	21 or 56 days	-

Values selected within these ranges shall be chosen from those listed in IEC 68-2. The severities for the cold and dry heat tests are the lower and upper category temperature respectively.

2.2 Rated voltage

Standard values of rated voltage are the values of the R5 series of ISO 3.

In the detail specifications, these preferred values shall be underlined. Other values conforming to the R10 series of the same specification may be listed where essential.

2.3 Category voltage (U_C)

For capacitors having an upper category temperature of 125°C the category voltages corresponding to the standard values of rated voltages are given in the following table :

U_R (V)	2,5	4	6,3	10	16	25	40	63	100
U_C (V)	1,6	2,5	4	6,3	10	16	25	40	63

2.4 Surge voltage ratio

The standard value of surge ratio is 1,15.

2.5 Rated capacitance

Standard values of rated capacitance are the values of the E6 series of IEC 63.

2.6 Tolerance on rated capacitance

Standard tolerances on rated capacitance are : $\pm 10\%$ and $\pm 20\%$

2.7 Rated temperature

The standard value of rated temperature is 85°C .

2.8 Dimensions

Dimensions and shape shall be given in the relevant detail specification.