
Harmonized system of quality assessment for electronic components: Sectional specification: Fixed low power non-wirewound resistors

Système harmonisé d'assurance de la qualité des composants électroniques:
Spécification intermédiaire: Résistances fixes non bobinées de faible puissance

Harmonisiertes Gütebestätigungssystem für Bauelemente der Elektronik:
Rahmenspezifikation: Nichtdrahtgewickelte Festwiderstände kleiner Belastbarkeit

National foreword

This British Standard has been prepared under the direction of the Electronic Components Standards Committee. It is identical with issue 2 of CENELEC Electronic Components Committee (CECC) 40100 ‘Harmonized system of quality assessment for electronic components: Sectional specification: Fixed low power non-wirewound resistors’, published in 1980.

This standard is a harmonized specification within the CECC system.

Issue 1 of CECC 40100 was published as BS E9111 : 1975. This second issue, resulting from the addition of amendments previously published and others approved but not previously published, supersedes BS E9111 : 1975, which is therefore withdrawn.

Terminology and conventions. The text of the CECC specification has been approved as suitable for publication as a British Standard without deviation. 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 throughout as a decimal marker. In British Standards it is current practice to use a full point on the baseline as the decimal marker.

Cross-references. The British Standard harmonized with CECC 00100 is BS E9000 ‘Specification for general requirements for electronic components of assessed quality harmonized with the CENELEC Electronic Components Committee System’ Part 1 ‘Basic rules’.

The following international standards are referred to in the text and for each there is a corresponding British Standard; these are listed below:

International standard	Corresponding British Standard
IEC 68-1 : 1978	BS 2011 Basic environmental testing procedures Part 1.1 : 1980 General (Identical)
IEC 68-2	Part 2.1 Tests
IEC 68-2-6 : 1970	Part 2.1Fc : 1977 Test Fc. Vibration (sinusoidal) (Identical)
IEC 68-2-13 : 1966	Part 2.1M : 1977 Test M. Low air pressure (Identical)
IEC 68-2-20A : 1970	Part 2.1Tb : 1977 Test Tb. Soldering — resistance to soldering heat, Method 1 (Identical)
CECC 40000 : 1979	BS CECC 40000 : 1980 Harmonized system of quality assessment for electronic components. Generic specification. Fixed resistors (Identical)

The references to IEC 115-1 : 1971 and IEC 115-2 : 1972 are for information only and the lack of equivalent British Standards at present therefore does not affect the validity of this standard.

NOTE. *Textual error.* When the text of the international standard was adopted, the following error was noticed and has been reported to CECC in a proposal to amend the text of the international standard.

In 2.3.2, ‘IEC 68-2-6A’ should read ‘IEC 68-2-6’.



Amendment No. 1
published and effective from 30 April 1984
to BS CECC 40100 : 1981

Harmonized system of quality assessment
for electronic components
Sectional specification: Fixed low power
non-wirewound resistors

NOTE. This Amendment is identical with the 1st Amendment published in 1983 to CECC 40100 : 1980.

A consequent amendment to the national foreword has also been made.

Revised text

AMD 4527
April 1984

National foreword

In paragraph 1, at the end of the second sentence, delete 'published 1980.' and substitute 'published in 1980, and Amendment No. 1 (1983).'

AMD 4527
April 1984

Contents

Page 2

Add:

3.4 Qualification approvals for enhanced assessment of quality 11a

Instructions for the insertion of new and revised pages

AMD 4527
April 1984

Page 3. Delete this page and insert the revised page 3 attached.
(Do not remove as page 4 is still valid).

Page 11a. Insert the new page 11a attached.

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 FIXED RESISTORS. It should be read in conjunction with document CECC 00 100: Basic Rules (1974).

At the date of printing of this document the member countries of the CECC are Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, Norway, Sweden, Switzerland, and the United Kingdom. Copies of it can be obtained from the addresses shown on the inside cover.

PREFACE

This sectional specification was prepared by CECC Working Group 4 : Resistors.

In accordance with the requirements of CECC 00 111 : Specifications (Issue 3) it is based, wherever possible, on the Recommendations of the International Electrotechnical Commission and in particular on IEC 115-1 : Fixed Resistors : Terms and methods of test.

The text of the first issue of this sectional specification (1973) was circulated to the CECC for voting in document CECC(Secretariat)99 in June 1972.

This second issue of the sectional specification results from amendments or additions to the text of Issue 1 which were circulated to the CECC for voting in the documents listed below and was approved by the CECC Management Committee for publication as a CECC specification:

<u>Document</u>	<u>Date of Vote</u>	<u>Report on the Voting</u>
CECC(Secretariat)334	27 May 1975	CECC(Secretariat)396
CECC(Secretariat)337	27 May 1975	CECC(Secretariat)405
CECC(Secretariat)501	20 June 1976	CECC(Secretariat)600
CECC(Secretariat)502	20 June 1976	CECC(Secretariat)599
CECC(Secretariat)710	28 June 1978	CECC(Secretariat)751
CECC(Secretariat)1244	3 January 1983	CECC(Secretariat)1310

Introduction of the additions to the Issue 2 of this specification covered by Amendment 1 published in 1983, enables this sectional specification to be used for the issue of specifications for FIXED RESISTORS OF ENHANCED ASSESSMENT OF QUALITY in accordance with RP7 Part II (Issue 1).

The additional tests and requirements have been prepared with the cooperation of the European Space Agency (ESA) in accordance with the provisions of the Memorandum of Understanding between the CECC and the ESA.

If the additional requirements of Appendix B to RP 7 Part II are met, then the components concerned can be supplied for use in space applications.

Effective dates

This second issue of CECC 40 100 shall become effective for all new qualification approvals on 1 October 1980. It shall become effective for all other qualification approvals by 1 October 1981.

3.4 Qualification Approval procedures for enhanced assessment of quality

The following procedures shall apply to the granting of Qualification Approval to fixed resistors having an enhanced assessment of quality.

3.4.1 General

The manufacturer shall comply with the Basic Rules and Rules of Procedure of the System governing Qualification Approval, for example CECC 00 107, RP7, Parts I and II.

The resistors shall be produced strictly in accordance with the agreed Process Identification Document (P.I.D) and the specimens taken to form the sample shall be selected at random from resistor lots which conform to the requirements of the relevant Detail Specification.

For the sample the manufacturer shall produce all the necessary inspection and test evidence to show conformance to the requirements of the relevant Detail Specification and the Fixed Sample Size Qualification Approval Test Schedule given in Appendix A of this specification.

Data documentation shall be provided in accordance with
- - - (under consideration) - - -

3.4.2 Distribution of values for Qualification Sample

Where a range of resistors is to be qualified, the distribution of resistance values within the sample shall be as follows:

1/3 with the critical resistance value

1/3 with the lowest resistance value

1/3 with the highest resistance value

In the case where the critical resistance value is outside of the range to be qualified, resistors having a value in the middle of the range shall be substituted.



Amendment No. 2
published and effective from 31 July 1989
to BS CECC 40100 : 1981

Harmonized system of quality assessment
for electronic components
Sectional specification: Fixed low power
non-wirewound resistors

AMD 5511
2nd Amendment to CECC 40100 Issue 2 (1980)

NOTE. This Amendment is identical with the 2nd Amendment published in 1986 to CECC 40100 : 1980.
A consequent amendment to the national foreword has also been made.

Revised text

AMD 5511
July 1989

National foreword

In paragraph 1, at the end of the second sentence, delete ', and Amendment No. 1 (1983).' and substitute ', Amendment No. 1 (1983) and Amendment No. 2 (1986).'

AMD 5511
July 1989

Clause 2.3.4 Overload

In the table on duration:

- (a) delete the line '30 s 3 to 4 W'
- (b) amend the previous line to '15 s 1 to 4 W'.

AMD 5511
July 1989

Appendix 'A'. Fixed sample size qualification approval test schedule for fixed low power, non-wirewound resistors

Page 12. Amend the title to 'Appendix A1'.

Page 13. In Group 4, Test 4.15.1 Soldering — Solderability, in column 2 add 'Method 1', and in column 3 amend the reference to 'As in 4.15.1.2.2'.

Page 13. In Group 4, Test 4.11 Overload, column 2, in the table delete the line '30 s 3 to 4 W' and amend the previous line to '15 s 1 to 4 W'.

Page 14. In Group 5, Test 4.15.2 Soldering — Resistance to heat, column 2, line 6, amend the IEC reference to 'IEC 68-2-20', and in column 3 amend the subclause reference to 'As in 4.15.2.3'.

Page 15. In Group 6, Test 4.24.1 Endurance at 70 °C, column 2, line 3, delete '168 h'.

Page 16. In Group 8, Test 4.24.3 Endurance at upper category temperature, in column 2, line 3, delete '168 h'.

Page 16. In Group 9, Test 4.24.3 Endurance at other temperatures, column 2, line 10, delete '168 h'.

Instructions for the insertion of new and revised pages

AMD 5511
July 1989

Page 2. Delete this page and insert the revised page 2 attached.

Page 3. Delete this page and insert the revised page 3 attached.

Page 10. Delete this page and insert the revised page 10 attached. (Do not remove as page 9 is still valid.)

Page 11. Delete this page and insert the revised page 11 attached. (Do not remove as page 12 is still valid.)

Page 11a. Insert the new page 11a attached.

Pages 18 to 24. Insert the new pages 18 to 24 attached.

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FOREWORD

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The additional tests and requirements have been prepared with the cooperation of the European Space Agency (ESA) in accordance with the provisions of the Memorandum of Understanding between the CECC and the ESA.

If the additional requirements of Appendix B to RP 7 Part II are met, then the components concerned can be supplied for use in space applications.

Amendment 2 to Issue 2 of this sectional specification results from amendments and additions to the text which were circulated to the CECC for voting in the documents listed below and were approved by the President of the CECC for publication:

<u>Document</u>	<u>Date of Vote</u>	<u>Report on the Voting</u>
CECC(Secretariat)948	June 1980	CECC(Secretariat)976
CECC(Secretariat)949	June 1980	CECC(Secretariat)977
CECC(Secretariat)1258	December 1982	CECC(Secretariat)1314
CECC(Secretariat)1379	October 1983	CECC(Secretariat)1499
CECC(Secretariat)1398	September 1983	CECC(Secretariat)1450

Effective dates

This second issue of CECC 40 100 shall become effective for all new qualification approvals on 1 October 1980. It shall become effective for all other qualification approvals by 1 October 1981.

Amendment 2 to Issue 2 of CECC 40 100 shall become effective for all new qualification approvals on 1 May 1986. It shall become effective for all other qualification approvals by 1 May 1987.

