SLOVENSKI STANDARD
SIST EN 100014:2002

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Basic specification: CECC assessed process average procedure (60% confidence limit)

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Grundspezifikation: CECC-bestätigtes mittleres Fertigungsergebnis (60% Vertrauensgrenze)

Spécification de base: Estimation CECC de la qualité moyenne (la limite de confiance 60%)

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Descriptors: Quality, electronic components, assessed process average procedure

English version

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This European Standard was approved by the CENELEC Electronic Components Committee (CECC) on 14 October 1991. The text of this standard consists of the text of CECC 00014 Issue 1 1986 of the corresponding CECC Specification. CENELEC members are bound to comply with 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 General Secretariat of the CECC 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 CECC General Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and United Kingdom. The membership of the CECC is identical, with the exception of the national electrotechnical committees of Greece, Iceland and Luxembourg.

CECC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B-1050 Brussels

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

CECC

English version

Harmonized System of Quality Assessment for Electronic Components

BASIC SPECIFICATION:

CECC ASSESSED PROCESS AVERAGE PROCEDURE

(60% CONFIDENCE LIMIT)

Système Harmonisé d'Assurance de la Qualité des Composants Electroniques

SPECIFICATION DE BASE:

ESTIMATION CECC DE LA QUALITE MOYENNE

(LA LIMITE DU CONFIANCE 60%)

Harmonisiertes Gütebestätigungssystem für Bauelemente der Elektronik

GRUNDSPEZIFIKATION:

CECC-BESTÄTIGTES MITTLERES FERTIGUNGSERGEBNIS

(60% VERTRAUENSGRENZE)

1 Issue
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CECC 00014

1986

Contents

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.

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.

Preface

This Basic Specification was prepared by CECC WG "*Assessment Techniques*".

The text of this specification was circulated to the CECC for voting in the document indicated below and was ratified by the President of the CECC for printing as a CECC Specification.

Document	Date of Voting	Report on the Voting
CECC(Secretariat)1810	December 1985	CECC(Secretariat)1875

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1 General

1.1 The procedure detailed hereafter is directed primarily at large scale production and is additional to what is prescribed in specifications. It is applicable, on a voluntary basis, when a manufacturer wishes, within the limits of a given level of confidence, to give information on the "assessed process average" of his production, concerning non-operative devices.

1.2 Non-operative devices are those which are unusable. The relevant specification should give a precise definition. Structural similarity, as defined in the relevant generic specification, is applicable.

1.3 When a manufacturer uses this procedure, he may declare the results obtained either in the Certified Test Records (RCE) or in the Certificate of Conformity, if used, or in a separate document, provided that he refers to the "CECC assessed process average" and follows all the requirements of the procedure.

1.4 There is no need to include the provisions of this procedure in detail specifications, since the use of the procedure is left to the manufacturer's decision. However, the National Supervising Inspectorate (ONS) concerned shall be informed of the decision, and shall be entitled to inspect the evidence, as already applies to RCE.

2 Procedure

2.1 Results of inspection for non-operatives in every inspection lot, including rejected lots but not resubmitted lots, are accumulated over a sufficient number of lots to enter the operating part of Table 1, with a minimum of three consecutive lots. The number of non-operative devices found is compared with that given in Table 1 for the accumulated sample size and the declared assessed process average. The initial Assessed Process Average (APA) can only be determined by the manufacturer after the completion of tests on at least three lots.

2.2 The manufacturer can declare the relevant assessed process average only when the accumulated number of non-operatives found is no more than the maximum number given in Table 1 for the accumulated sample. Assessment then proceeds on a continuing basis with an increasing number of permitted non-operatives, based on the accumulated number of tested devices ("accumulated sample size" in Table 1).

2.3 A manufacturer may always declare the lowest APA which is appropriate to the accumulated sample size and the accumulated number of non-operatives, provided that this total of non-operatives does not exceed 10. When the next non-operative(s) occur(s), bringing the total of non-operatives to 11 or more, the manufacturer shall discard all results preceding and including the earliest non-operative(s) the elimination of which will reduce the current total of non-operatives to 10 or less. He shall then determine the new APA value on the basis of the new total of non-operatives and accumulated sample size. If the APA deteriorates at any permitted number of non-operatives, the manufacturer shall declare a less severe APA (that is, to the left of the table), in accordance with the total of non-operatives and the accumulated sample size.

2.4 Each individual inspection lot shall be sampled on a continuing basis as specified in the detail specification for non-operative devices, but initially a larger size may be chosen by the manufacturer, who has to balance economic considerations against the time penalty if too small a sample is chosen.

2.5 It is necessary that the whole sample is tested, irrespective of the results for the release of the lot. For instance, if the Acceptable Quality Level (AQL) specified for non-operatives in the relevant specification is 0,1 % and the inspection lot is greater than 10 000, with inspection level II this gives a sample of 500 with one defective allowed and rejection of the lot on two defectives; if two defectives are found after only part of the sample has been tested, the lot shall be rejected but all remaining specimens in the sample shall be tested so that the total number of non-operatives actually found in the sample is recorded in the accumulated total.

2.6 All results shall be accumulated, with the exception of those from resubmitted lots (to avoid counting them twice) and from rogue lots. Rogue lots are defined as those where all of the following conditions apply:

1) The number of inoperatives in the lot makes it necessary to adjust the assessed process average by more than one column to the left in Table 1; and

2) a cause of rejection has been identified and appropriate corrective action has been taken; and

3) the production lot represented by the sample is rejected; and

4) the preceding 10 lots were all in conformity with the assessed process average; and