

General requirements for a system for electronic components of assessed quality —

Part 1: Specification of general procedures

UDC 621.37/.39:658.562.64

NO COPYING WITHOUT BSI PERMISSION EXCEPT AS PERMITTED BY COPYRIGHT LAW



Document Sharing Hub

Committees responsible for this British Standard

This British Standard was prepared by the Electronic Components Standards Policy Committee (ECL/-), upon which the following bodies were represented:

- BEAMA Ltd.
- British Standards Society
- British Telecommunications plc
- Department of Trade and Industry (Electronics Applications Division)
- Electronic Components Industry Federation
- Electronic Engineering Association
- Institution of Electrical Engineers
- Ministry of Defence
- National Supervising Inspectorate
- Society of British Aerospace Companies Limited
- Telecommunication Engineering and Manufacturing Association (TEMA)

This British Standard, having been prepared under the direction of the Electronic Components Standards Policy Committee, was published under the authority of the Board of BSI and comes into effect on 31 October 1989

© BSI 02-1999

First published May 1967
First revision July 1971
Second revision December 1981
Third revision October 1989

The following BSI references relate to the work on this standard:
Committee reference ECL/-
Draft for comment 88/30354 DC

ISBN 0 580 17704 1

Amendments issued since publication

Amd. No.	Date of issue	Comments

Contents

	Page
Committees responsible	Inside front cover
Foreword	ii
1 Scope	1
2 Definitions	1
3 The BS 9000 system and its operation	5
4 Appeals procedure	7
5 The specification system	7
6 Procedures for detail specifications	9
7 Authority of documents	11
Appendix A Cross-reference to BS 9000-1:1981	14
Figure 1 — BS 9000 mark: master symbols for photographic reproduction	12
Figure 2 — BS 9000 mark: proportional dimensions	13
Table 1 — Cross-reference to BS 9000-1:1981	14
Publications referred to	Inside back cover

Foreword

This Part of BS 9000 has been prepared under the direction of the Electronic Components Standards Policy Committee (ECL/-). It forms part of a revision of BS 9000-1:1981 and BS 9005:1985, both of which are now withdrawn. The revision comprises a vital and necessary restructuring of these standards couples with the incorporation of text from BS 9000-2:1972 and from various circular letters from PD 9004. The restructuring has resulted in BS 9000-1:1981 and BS 9005:1985 being replaced by the following publications.

- *Part 1: Specification of general procedures;*
- *Part 4: Specification of procedures for the approval of an organization;*
- *Part 5: Specification of qualification approval and conformance testing procedures;*
- *Part 6: Specification of capability approval procedures;*
- *Part 7: Specification of lot formation, release procedures and certified test records;*
- *Part 8: Drafting requirements;*
- *Section 8.1: Generic, sectional and blank detail specifications produced under qualification approval;*
- *Section 8.2: Generic and sectional specifications produced under capability approval.*

NOTE A cross-reference between BS 9000-1:1981 and this revision is given in Appendix A.

These publications describe, and specify, the BS 9000 system. They are not intended to apply to the United Kingdom implementation of either the CECC¹⁾ or IECQ²⁾ systems.

It has been decided, after considering the implications of the intended completion of the Internal Market by December 1992, that a complete “stand alone” publication describing and specifying the UK implementation of the CECC system is needed. A similar “stand alone” publication for the UK implementation of the IECQ system is also envisaged. BS 9000-2 and BS 9000-3 will be revised to implement these decisions.

This revision of BS 9000-1:1981 gives a more complete description of the requirements for capability approval and for the drafting of specifications. The revision will be applied to all approval exercises and to all generic, sectional and blank detail specifications drafted after the date of its publication. The requirements contained in the revision will also apply to the revision of existing BS 9000 standards.

BS 9000-4 specifies procedures for the approval of organizations. It is intended that the appropriate Part of BS 5750 be invoked in due course as a requirement for approval. It should be noted that BS 9000-4 contains requirements specific to the System³⁾ not covered by BS 5750.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 16, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

¹⁾ CENELEC Electronic Components Committee (System for Europe).

²⁾ IEC Quality Assessment System for Electronic Components.

³⁾ For definition of “the System”, see 2.1.1.

1 Scope

This Part of BS 9000 specifies the general procedures for the BS 9000 system for the specification, qualification or capability approval, inspection and release of electronic components of assessed quality.

The BS 9000 system operates in the United Kingdom, defined for this purpose as England, Scotland, Wales, Northern Ireland, the Isle of Man and the Channel Islands. It can be extended to any other member country of the CECC by mutual agreement of the National Authorized Institutions concerned.

NOTE The titles of the publications referred to in this standard are listed on the inside back cover.

2 Definitions

For the purposes of this British Standard the following definitions apply.

2.1 Definitions related to the System

2.1.1

the System

the totality of functions, activities, documents and definitions in BS 9000-1 and BS 9000-4 to BS 9000-8

2.1.2

the Mark

the BS 9000 Certification Trade Mark owned by BSI and registered under the Trade Marks Act 1938 under number 12 50 774 in class 9 in respect of the BS 9000 series of British Standard specifications for electronic components of assessed quality

2.1.3

qualified products list (QPL)

a list maintained by BSI and published as PD 9002, of components, organizations and technologies approved under the System

2.1.4

administrative guide

the document published by BSI as PD 9004 and entitled "BS 9000, CECC and IECQ UK Administrative Guide"

2.1.5

circular letter (CL)

a means of communicating changes or additions to the System prior to permanent revision, or administrative procedures as a supplement to the System

2.1.6

National Supervising Inspectorate (NSI)

the authority responsible for conducting the appraisal and surveillance of the requirements of the System

2.2 Definitions related to specifications

2.2.1

basic specification

a specification applicable to all electronic components or to a large group of electronic components (e.g. BS 9000, BS 6001, BS 2011)

2.2.2

generic specification

a specification applicable to a family or sub-family of electronic components

2.2.3

sectional specification

a specification applicable to a single sub-family of electronic components covered by a generic specification

2.2.4

blank detail specification (BDS)

a proforma document derived from the requirements of the generic and/or sectional specification which, when completed by the specification writer in accordance with specific requirements for a component, becomes the detail specification for that component

2.2.5

detail specification

a specification derived from a generic or sectional specification, by completing a blank detail specification describing a particular component or a range of components

2.2.6

single sheet detail specification

a uniquely-numbered specification which contains one or more requirements additional to an already published detail specification

2.2.7

customer detail specification (CDS)

a specification, agreed and confidential between an approved manufacturer and his customer, detailing the requirements for a particular component to be released under capability approval

2.2.8

minimum mandatory requirements

a list of the essential parameters and characteristics for which the values or requirements shall be given in the detail specification

2.2.9 assessment and assessment levels

2.2.9.1 assessment

the determination of whether an electronic component satisfies the requirements of the System

2.2.9.2 assessment level

a selection of tests declared in the blank detail specification which defines the minimum mandatory requirements for the stated level

2.2.9.3 basic assessment

the minimum level of assessment for which quality can be assured within the requirements of the System

2.2.9.4 full assessment

a degree of quality assessment that is higher than basic assessment level. The tests for full assessment level are prescribed in the relevant blank detail specification

2.2.9.5 additional assessment

a degree of quality assessment obtained by adding to the requirements for either basic or full assessment

2.2.10 application categories/screening levels

the identification of a component's intended application which will determine the extent of any screening

2.3 Definitions related to components

2.3.1 electronic component

a component having a distinctive function in an electronic circuit (hereinafter referred to as a component)

2.3.2 family of electronic components

a group of components which predominantly displays a particular physical attribute and/or fulfils a specific function (e.g. fixed resistors and semiconductor devices)

2.3.3 sub-family of electronic components

a group of components within a family, but further distinguished by more specific electrical attributes and/or realized through common manufacturing methods (e.g. fixed resistors: film type; printed wiring double-sided printed wiring with plated through holes)

2.3.4 style, pattern or type

NOTE A definition applicable to all electronic components is not practicable. Where these terms are required for a particular family of components the definitions will be given in the relevant generic specification.

2.3.5 standard catalogue item

an electronic component which is eligible for release under capability approval but which is offered for general sale as distinct from being custom-made for a specific application

2.3.6 qualification approval (QA)

an approval granted to an approved manufacturer when it has been demonstrated that he is capable of producing a component complying with the detail specification

2.3.7 capability approval (CA)

the approval granted to an approved manufacturer when it has been demonstrated that his declared design capability, manufacturing processes and quality control comply with the relevant generic specification

2.3.8 limits of capability

those limiting features of design, process and performance defining a manufacturer's capability to produce a given component type. These shall be values which, if exceeded, would diminish confidence in the required performance of the component

2.3.9 piece parts

the various items which when assembled comprise an electronic component

2.3.10 structurally-similar electronic components

components which, although separately identifiable from similar components, have been manufactured in the same factory using similar designs, materials, processes and methods of fabrication to incorporate elements of structural similarity. Tests carried out on one of these separately identifiable component types are valid for the others

2.3.11 capability qualifying component (CQC)

a component and/or test piece which is used to demonstrate that a specific aspect(s) of the declared capability complies with the relevant generic specification

2.3.12**capability abstract**

the statement provided by an approved manufacturer to identify the limits of his capability approval

2.3.13**qualification approval certificate**

a certificate issued by BSI to an approved manufacturer confirming qualification approval in respect of a specific component or range of components

2.3.14**capability approval certificate**

a certificate issued by BSI to the approved manufacturer confirming capability approval in respect of a specific component technology

2.4 Definitions related to approved organizations**2.4.1****approved organization**

an organization, holding a valid approval certificate, situated at an approved location and authorized to carry out or control functions within the scope of its approval in accordance with BS 9000-1 and BS 9000-4 to BS 9000-8

2.4.2**approved manufacturer**

an organization, situated at an approved location, holding a valid approval certificate permitting it to carry out or control such stages in the manufacture of electronic components enabling it to accept responsibility for capability approval or qualification approval, inspection and release of electronic components in accordance with BS 9000-1 and BS 9000-4 to BS 9000-8

2.4.3**approved distributor**

an organization holding a valid approval certificate, authorized by one or more approved manufacturers to store, repack and release approved components

2.4.4**approved independent test laboratory**

an organization holding a valid approval certificate and having the facilities and capability for carrying out tests and measurements on electronic components in accordance with the relevant specification

2.4.5**approved independent assessor of unencapsulated add-on components**

an organization holding a valid approval certificate and having the facilities and capabilities to assess and supply unencapsulated components for incorporation into components covered by a BS 9000 generic specification (e.g. semiconductor die for incorporation into hybrid microcircuits) (hereinafter referred to as an assessor)

2.4.6**approved class A integrated circuit (IC) design house**

an organization, holding a valid approval certificate, capable of releasing IC's against a customer's order by developing a design to meet a specific customer's functional requirement, and by subcontracting tooling, manufacturing and testing to approved organizations

2.4.7**approved class B integrated circuit (IC) design house**

an organization, holding a valid approval certificate, approved to undertake only design work, on a subcontracted basis, involving the translation of stated functional requirements for an integrated circuit into a design that can subsequently be realized by designated approved manufacturers

2.4.8**approved person**

the generic term for the individual within an approved organization ultimately responsible for the operation of the approval. The approved person may be responsible for one or more approved locations and may delegate defined responsibilities within the approved organization

NOTE It is recognized that locally, in approved organizations, the "approved person" may be known as the quality manager, chief inspector, chief signatory, test laboratory manager, etc.

2.4.9**approved signatory**

an individual within an approved organization with defined responsibilities for the System as delegated by the approved person

2.4.10**approved location**

the address, registered with BSI, from which the approved organization operates

2.4.11**factory code**

the code allocated by the National Supervising Inspectorate to an approved location