BRITISH STANDARD

BS 123100:2001

System of quality assessment —

Sectional specification —

Rigid single-sided and double-sided printed boards with plain holes

ICS 31.180

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee EPL/501, Electronic assembly technology, upon which the following bodies were represented:

Association of Contract Engineers Manufacturers

Federation of the Electronics Industry

GAMBICA

Ministry of Defence

National Supervising Inspectorate

Printed Circuit Interconnection Federation

Surface Mounting and Related Technologies (Smart Group) Ltd.

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Foreword

This British Standard has been prepared by Technical Committee EPL/501, Electronic assembly technology.

The BS 123000:2001 series of British Standards is based on draft proposals to revise the EN 123000 series dated 1992 and 1997. These were circulated and voted on in CENELEC, but the CENELEC Technical Board decided not to approve them for publication. Following repeated attempts by the British National Committee to get them published, the Technical Board agreed to grant derogation from standstill to the British National Committee to publish national standards on the basis of the prEN 123000 series (Technical Board decision D106/092).

These standards are published to complement the BS EN 123000 series, which remains current. They will be withdrawn only if they are replaced by revised EN standards. They have been published because they are considered to be an improvement upon the EN series, for the following reasons.

a) Requirements for modern materials and surface finishes required by the electronics industry have been incorporated.

b) Reference is made to ANSI/IPC A-600F for many of the inspection criteria. This has been undertaken in response to industry requests.

c) References to obsolete CECC regulatory documents have been replaced.

d) Tests and requirements that are no longer considered relevant have been removed.

e) The UK electronics industry requires standards that are subject to ongoing revision, in order to take account of new European Eco-Directives.

This British Standard is a sectional specification. It should be read in conjunction with the generic specification, BS 123000, and any associated capability detail specification.

It has been assumed in the preparation of this British Standard that the execution of its provisions will be entrusted to appropriately qualified and experienced people, for whose use it has been produced.

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

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1 Scope

This British Standard specifies characteristics to be assessed and test methods to be used for capability approval testing and for quality conformity inspection (lot-by-lot and periodic inspection). It is applicable for all rigid single-sided and double-sided printed boards with plain holes, irrespective of their method of manufacture, when they are ready for the mounting of components.

This British Standard is a sectional specification intended for use with the IECQ system of quality assessment for electronic components.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this British Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. For undated references, the latest edition of the publication referred to applies.

BS 4727-1:Group 11 (IEC 60194), *Glossary of electrotechnical, power, telecommunication, electronics, lighting and colour terms — Part 1: Terms common to power, telecommunications and electronics — Group 11: Printed circuits.*

BS 6001-1:1999 (ISO 2859-1:1999), *Sampling procedures for inspection by attributes — Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection.*

BS 6221-2:1991 (IEC 60326-2:1990), *Printed wiring boards — Part 2: Methods of test.*

BS 6221-3 (IEC 60326-3), *Printed wiring boards — Guide for the design and use of printed wiring boards.*

BS 123000:2001, *System of quality assessment — Generic specification — Printed boards.*

3 Terms and definitions

For the purposes of this British Standard the terms and definitions given in BS 4727-1:Group 11 and BS 123000 together with the following apply.

3.1
relevant specification
product specification for an actual batch of printed boards, i.e. a customer detail specification as well as a capability detail specification applied to a specific material, surface finish etc., as applicable

4 General requirements

The following specifications for rigid single-sided and double-sided printed boards with plain holes shall be prepared, unless a suitable capability detail specification already exists, using this British Standard as a basis:

a) capability detail specifications for general use or applying to specific applications;

b) customer detail specifications, which shall be prepared in accordance with BS 123000:2001, **7.2**.

NOTE 1 BS 123100-003 is an example of a capability detail specification for rigid single-sided and double-sided printed boards with plain holes.

NOTE 2 A capability detail specification is prepared either by an international or national body or by a manufacturer (see also BS CECC 00111-4). A customer detail specification should preferably be written by the customer and allocated a number within the customer's own system. Further details are given in BS 123000 and BS CECC 00114-3.

5 Capability approval

5.1 Basic capability

Testing shall be carried out on the composite test pattern detailed in clause **9**.

5.2 Additional capability

BS 123000:2001, **5.3.3** shall apply.

NOTE For multiple arrangements see also clause **9**.

5.3 Maintenance of capability approval

BS 123000:2001, **5.6** shall apply.

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