

**Sectional Specification: Flex-rigid  
multilayer printed boards with through  
connections**

## EESTI STANDARDI EESSÖNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 123600:2002 sisaldb Euroopa standardi EN 123600:1996 ingliskeelset teksti.	This Estonian standard EVS-EN 123600:2002 consists of the English text of the European standard EN 123600:1996.
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ICS 31.180

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**EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM**

**EN 123600**

**December 1996**

Descriptors: Multilayer printed boards, with through connections, capability test, quality conformance inspection, test patterns

English version

**Sectional Specification:  
Flex-rigid multilayer printed boards with through connections**

Spécification intermédiaire:  
Cartes imprimées multicouches  
flexorigides avec connexions  
transversales

Rahmenspezifikation:  
Biegesteife Mehrlagen-Leiterplatten  
mit Durchverbindungen

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**CENELEC**

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

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### Foreword

This European Standard was prepared by CLC/TC CECC/SC 52, Printed boards (former WG 23).

It is based, wherever possible, on the Publications of the International Electrotechnical Commission, and in particular on IEC 326-11, Printed boards, Part 11: Specification for flex-rigid multilayer printed boards with through connections.

The text of the draft based on document CECC(Secretariat)2823 was submitted to the formal vote; together with the voting report, circulated as document CECC(Secretariat)3022, it was approved as EN 123600 on 1992-02-14.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 1997-07-01
  - latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2003-05-01
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## 1 Introduction

IEC 326-11 is the IEC Standard for flex-rigid multilayer printed boards with through connections. The following document comprises this IEC Standard and in accordance with the Generic Specification EN 123000, the information additionally necessary for printed boards intended to be handled within the CENELEC system for electronic components of assessed quality.

### 1.1 Scope and object

This document is a Sectional Specification (SS) relating to flex-rigid multilayer printed boards with through connections irrespective of their method of manufacture, when they are ready for the mounting of the components. It defines the characteristics to be assessed and the test methods to be used for capability approval testing and for quality conformance inspection (lot-by-lot and periodic inspection).

### 1.2 Related documents

IEC 68	Basic environmental testing procedures
IEC 97	Grid system for printed circuits
IEC 194	Terms and definitions for printed circuits
IEC 249	Metal-clad base materials for printed circuits
IEC 326-1	Printed boards, instructions for the specification writer
IEC 326-2	Test methods for printed boards
IEC 326-3	Recommendations for the design and the use of printed boards
IEC 326-11	Specification for the design and use of flex-rigid multilayer printed boards with through-connections

## 2 General

This Sectional Specification (SS) applies to flex-rigid printed boards with through-connections and is intended as a basis for the preparation of a

- Capability Detail Specification (CapDS) applying to specific materials e.g. according to IEC 249-2, and to be used for Capability Approval Procedures. It may be necessary to have a CapDS for each type of material. A CapDS may be prepared by an international or national body or by a manufacturer (see also CECC 00 111 / IV).
- Customer Detail Specification (CDS) for the custom built printed boards, according to clause 5 of EN 123000. The CDS will normally be written by the customer and allocated a number within his own system. Further details are also given in EN 123000 and CECC 00 114 / III.

Table I contains the basic characteristics that will normally be important for flex-rigid multilayer printed boards with through-connections and makes reference to the appropriate tests to verify these characteristics.

Table II contains the additional characteristics that may be important for certain flex-rigid multilayer printed boards with through connections and / or certain applications and makes reference to the appropriate tests to verify these characteristics. Where necessary, the relevant specification may quote characteristics and tests from this Table II.

Where additional details for a test have to be specified in the relevant specification, this shall be indicated by “\*” in the relevant column. These details shall then be specified in accordance with CECC 00 010 (IEC 326-2).

Table III contains the capability test programme. A specified composite test pattern (CTP) is used as a capability qualifying component.

Table IV contains the information for the quality conformance inspection.

The tables are not intended to prescribe a test sequence. The tests may be carried out in any sequence, unless otherwise specified.