

Sectional Specification: Film and hybrid integrated circuits

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN 163100:2016 sisaldab Euroopa standardi EN 163100:1991 ingliskeelset teksti.	This Estonian standard EVS-EN 163100:2016 consists of the English text of the European standard EN 163100:1991.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 15.12.1991.	Date of Availability of the European standard is 15.12.1991.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

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UDC:

Descriptors: Quality, electronic components, integrated circuits

English version

**Sectional Specification:**  
**Film and hybrid integrated circuits**

**Spécification Intermédiaire:**  
**Circuits intégrés hybride et à**  
**couches**

**Rahmenspezifikation:**  
**Integrierte Hybrid- und**  
**Schichtschaltungen**

This European Standard was approved by the CENELEC Electronic Components Committee (CECC) on 25 November 1991. The text of this standard consists of the text of CECC 63 100 Issue 1 1984 (with A1, A2 and A3) 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**

CENELEC Electronic Components Committee

Comité des Composants Electroniques du CENELEC

CENELEC Komitee für Bauelemente der Elektronik

**General Secretariat: Gartenstr. 179, D- 6000 Frankfurt/Main 70**

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## 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 FILM and HYBRID INTEGRATED CIRCUITS (F&HICs). It should be read in conjunction with the current regulations for the CECC System.

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, and copies of it can be obtained from the addresses shown on the blue flysheet.

## PREFACE

This Sectional specification was prepared by CECC Working Group 21 : "HYBRID MICRO-CIRCUITS".

It is based, wherever possible, on the Publications of the International Electrotechnical Commission and in particular on IEC Publication 147 : Essential ratings and characteristics of semiconductor devices and general principles of measuring methods.

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

<u>Documents</u>	<u>Voting date</u>	<u>Report on the voting</u>
CECC (Secretariat) 1181	August 1982	CECC (Secretariat) 1278
CECC (Secretariat) 1367	July 1983	CECC (Secretariat) 1414

At present this specification covers F&HICs using thick film techniques only but amendments are under preparation to cover F&HICs manufactured using thin film techniques as well.

Associated with this specification are one or more CECC blank detail specifications. A blank detail specification which has been completed as specified in Section 2 of this specification forms a detail specification. Such detail specifications may be used for the granting of qualification approval to a F&HIC and for quality conformance inspection in accordance with the CECC System.

SECTION 1 - SCOPE

This sectional specification applies to F&HICs manufactured as catalogue products or as custom built products using thick film techniques and whose quality is assessed on the basis of qualification approval.

It presents preferred values for ratings and characteristics. It selects from CECC 63 000 the appropriate methods of test and gives general performance requirements, to be used in detail specifications for F&HICs derived from this specification.

Passive networks can be qualified to this specification or to alternative specifications, when introduced. For resistor networks, see specification CECC 64 100.

## SECTION 2 - GENERAL, PREFERRED CHARACTERISTICS, RATINGS AND SEVERITIES FOR ENVIRONMENTAL TESTS.

### 2.1 RELATED DOCUMENTS

IEC 63	(1963)	Preferred number series for resistors and capacitors. Amendment Nr 1 (1967) Amendment Nr 2 (1977)
IEC 68	-	Basic environmental testing procedures.
CECC 63 000	(1984)	Generic specification for F&HICs.

Note : The above references apply to the current editions except for IEC 68, for which the referenced edition and the applicable test clauses of CECC 63 000 shall be used.

### 2.2 PREFERRED RATINGS AND CHARACTERISTICS

The values given in detail specifications shall preferably be selected from the following :

#### 2.2.1 Preferred climatic categories

The F&HICs covered by this document are classified into climatic categories according to the general rules given in IEC 68-1.

The lower and upper category temperature and the duration of the damp heat, steady state test shall be chosen from the following :

Minimum ambient temperature : - 55 °C, - 40 °C, - 25 °C, - 10 °C and + 5 °C

Maximum ambient temperature : + 40 °C, + 55 °C, + 70 °C, + 85 °C, + 100 °C, + 125 °C and + 155 °C

Duration of the damp heat, steady state test : 04, 10, 21 and 56 days.

The severities for the cold and dry heat tests are the minimum and maximum storage temperatures to be chosen from the minimum and maximum ambient temperatures as specified above. Because of the construction of some F&HICs these temperatures will occur between two of the preferred temperatures given in IEC 68-2. In this event the nearest preferred temperature within the actual range of the F&HIC shall be chosen for this severity.