# Sectional Specification: Microwave modular electronic units of assessed quality - Part 1: Capability approval procedure



EESTI STANDARDIKESKUS
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## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

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|---|---|
| See Eesti standard EVS-EN 160200-1:2002 sisaldab Euroopa standardi EN 160200-1:1997 ingliskeelset teksti. | This Estonian standard EVS-EN 160200-1:2002 consists of the English text of the European standard EN 160200-1:1997. |
| 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 16.12.1997. | Date of Availability of the European standard is 16.12.1997. |
| Standard on kättesaadav Eesti Standardikeskusest. | The standard is available from the Estonian Centre for Standardisation. |



Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 31.190

Võtmesõnad: capability approval, modular electronic units, sectional specification,

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English version

# Sectional Specification: Microwave modular electronic units of assessed quality Part 1: Capability approval procedure

Rahmenspezifikation:
Elektronische Mikrowellenmodule mit bewerteter Qualität
Teil 1: Befähigungsanerkennung

This European Standard was approved by CENELEC on 1994-04-15. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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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 sectional specification has been prepared by the United Kingdom under the single originator procedure for approval and publication of CECC specifications (see RP 11: Part V). It is to be used for the assessment of Microwave Modular Electronic Units (MMEUs) within the CECC capability approval scheme. The content is in accordance with the generic specification for Modular Electronic Units (MEUs); EN 160000 and meets the requirements of Rule of Procedure 14 (RP 14).

This sectional specification is based, wherever possible, on the publications of the International Electrotechnical Commission.

It includes, as (blank) examples, formats for a capability qualifying component specification and customer's detail specification (CDS).

The use of this sectional specification is as follows:

a) a potential customer makes an enquiry to the manufacturer for a Microwave Modular Electronic Unit within the scope of his capability published in CECC 00200;

b) the specification is negotiated between the manufacturer and the customer, until an agreed customer's detail specification is finalized;

c) the Microwave Modular Electronic Unit is inspected and released in accordance with the agreed Customer's Detail Specification.

In order to facilitate the review of the document, the 'index of electrical test methods' has been published as Part 2 of this sectional specification.

The text of the draft based on document CECC(Secretariat)3317 was submitted to the formal vote; together with the voting report, circulated as document CECC(Secretariat)3522, it was approved as EN 160200-1 on 1994–04–15.

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) 1998-06-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 1999-06-01

**Contents** **Page**

**Contents** (continued) **Page**



**Tables**



**Annexes**

**Contents** (continued)

**Sectional specification for microwave modular electronic units of assessed quality**
**Part 1: Capability approval procedure**

## Section 1 General matters

### 1.1 Scope

This CECC Sectional Specification, in conjunction with the Generic Specification EN 160000 describes, a system for capability approval of manufacturers of Microwave Modular Electronic Units (MMEUs) which are not covered by other CECC specifications.

It defines standard terms, inspection procedures and methods of test for capability approval of MMEUs. These units may be supplied to either a Customer's Detail Specification (CDS) or as Standard Catalogue Items.

Examples of typical MMEUs which are covered by this specification and related Blank Detail Specifications (BDSs) are:

- amplifiers;
- couplers/power dividers;
- isolators/circulators;
- mixers;
- oscillators;
- switches;
- attenuators;
- filters;
- limiters;
- noise sources;
- phase shifters;
- transmitters (e.g. Integrated Multichannel).

The MMEUs may incorporate passive and/or active devices/elements.

## 1.2 Related documents

See clause 1.2 of EN 160000.

Latest issue of the following documents applies unless otherwise stated:

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| ISO 31 | Specification for quantities, units and symbols |
| IEC 50 (726) | International electrotechnical vocabulary - Transmission lines and waveguide |
| IEC 68 | Environmental testing |
| IEC 154 | Flanges for waveguides |
| IEC 410 | Sampling plans and procedures for inspection by attributes |
| IEC 512 | Electromechanical components for electronic equipment: basic testing procedures and measuring methods |
| CECC 00007 | Sampling plans and procedures for inspection by attributes |
| CECC 00009 | Basic testing procedures and measuring methods for electromechanical components |
| CECC 00200 | Qualified products list |
| CECC 00016 | Requirement for the use of statistical process control (SPC) in the CECC system |
| CECC 00017 | Basic specification: Microwave common modules for use up to 20 GHz Interfaces, fixings, connection protocol and module coding |
| CECC 00114 Part III | Rule of procedure 14; Quality assessment procedures; Capability approval of an electronic component manufacturing activity |
| CECC 00400 | Handbook for the production of CECC documents |
| CECC 22000 | Radio frequency coaxial connectors |

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| CECC 63000 | Film and hybrid integrated circuits |
| EN 100015 | Protection of electrostatic sensitive devices;<br>Part 1: Minimum requirements |
| EN 160200-2 | Sectional specification: Microwave modular electronic units of assessed quality<br>Part 2: Index of test methods |

**1.3 Units, symbols and terminology**

Unless otherwise stated they shall be as defined within ISO 31, IEC 50(726) and clause 1.3 of EN 160000. The following terminology is applicable to this specification:

**1.3.1** ***Microwave modular electronic unit (MMEU)***

For the purpose of this specification the term MMEU relates to devices designed to work within the frequency band 300 MHz - 300 GHz. The definition for Modular Electronic Unit (MEU) is contained in clause 1.3 of EN 160000.

MMEUs may consist of passive and/or active elements which are interconnected to form an electronic circuit.

**1.3.2** ***Components***

For the purpose of this specification, in addition to conventional discrete electronic components (e.g. resistors, capacitors and semiconductor devices), the following items which utilise microwave transmission theory in their design are considered to be components:

- lumped elements (passive circuits based on microstrip/stripline);
- machined, cast and electroformed items (e.g. passive filter);
- moulded/metallized and microwave absorbent materials (e.g. loads).

**1.4 Standard and preferred values**

**1.4.1** ***Preferred climatic categories***

The MMEUs covered by this specification are classified into climatic categories according to the general rules given under IEC 68-1.