

**Blank Detail specification: C.W. power
amplifier travelling wave tubes up to
500 Watts**

Blank Detail specification: C.W. power amplifier
travelling wave tubes up to 500 Watts

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 135001:2003 sisaldab Euroopa standardi EN 135001:1992 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 05.02.2003 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 135001:2003 consists of the English text of the European standard EN 135001:1992.</p> <p>This document is endorsed on 05.02.2003 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: Blank Detail Specification: C.W. power amplifier travelling wave tubes up to 500 Watts</p>	<p>Scope: Blank Detail Specification: C.W. power amplifier travelling wave tubes up to 500 Watts</p>
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ICS 31.100

Võtmesõnad: electronic equ, limits, marking, mathematics, microwave tubes, power amplifiers, quality, quality assessment systems, quality assurance progra, quality assurance systems, standardization, testing, testing conditions, testing requirements, travelling wave tubes

UDC:

Descriptors: Quality, electronic components, travelling wave amplifier tubes

English version

Blank Detail Specification:

C.W. power amplifier travelling wave tubes up to 500 Watts

**Spécification Particulière Cadre:
Tubes amplificateurs à onde
progressive (puissance de sortie
jusqu'à 500 Watts)**

**Vordruck für Bauartspezifikation:
Dauerstrich-Wanderfeldröhren
für Leistungsverstärker bis
500 Watt**

This European Standard was approved by the CENELEC Electronic Components Committee (CECC) on 14 January 1992. The text of this standard consists of the text of CECC 35 001 Issue 1 1977 (with Amdt. 1) 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

Cette page bleue doit être insérée après la page de garde de la CECC 35 001 Edition 1 (1977)

MODIFICATION 1 DE LA CECC 35 001 (Edition 1):
SPECIFICATION PARTICULIERE CADRE:
TUBES AMPLIFICATEURS A ONDE PROGRESSIVE
(PUISSANCE DE SORTIE JUSQU'A 500 WATTS)

Retirer les pages 7/8 et insérer les nouvelles pages 7/8 de la Modification 1.

Les modifications suivantes ont été effectuées
- à la page 7

"Examen ou Essai" Sous-groupe A 3:

"T.O.S. de sortie à chaud" a été changé en
"T.O.S. de sortie à chaud ou à froid
(comme spécifié)".

- à la page 8

"Examen ou Essai" Sous-groupe C 1:

"... ou stabilité en court-circuit ou stabilité
en puissance (comme spécifié)" a été ajouté.

Le texte de cette modification a été soumis au vote du CECC dans les documents indiqués ci-dessous et a été ratifié par le Président du CECC pour être publié comme Modification 1.

Document: CECC(Secrétariat)1945

Date de Vote: 12 novembre 1986

Rapport de Vote: CECC(Secrétariat)2041

Enregistrer les modifications sur la feuille Jaune "Enregistrement de modifications".

CECC 35 001 Edition 1 Modification 1 (1987)

This blue page should be inserted after the title page of CECC 35 001 Issue 1 (1977)

AMENDMENT 1 TO CECC 35 001 (Issue 1):
BLANK DETAIL SPECIFICATION:
C.W. POWER AMPLIFIER TRAVELLING WAVE TUBES UP
TO 500 WATTS

Remove pages 7/8 and insert new pages 7/8 of Amendment 1.

The following amendments were made

- on page 7

"Examination or Test" Sub-group A 3:

"Hot output v.s.w.r." was changed to read
"Hot or cold output v.s.w.r. (as specified)".

- on page 8

"Examination or Test" Sub-group C 1

"... or short circuit stability or power stability (as specified)" was added.

The text of this amendment was circulated to the CECC for voting in the documents listed below and was ratified by the President of the CECC for printing as Amendment 1.

Document: CECC(Secretariat)1945

Voting Date: 12 November 1986

Report on the Voting: CECC(Secretariat)2041

Enter these amendments on the yellow "Record of Amendments" sheet.

CECC 35 001 Issue 1 Amendment 1 (1987)

Dieses blaue Blatt ist nach dem Titelblatt CECC 35 001 Ausgabe 1 (1977) einzufügen

ÄNDERUNG 1 ZU CECC 35 001 (Ausgabe 1):
VORDRUCK FÜR BAUARTSPEZIFIKATION:
DAUERSTRICH-WANDERFELDRÖHREN FÜR LEISTUNGS-
VERSTÄRKER BIS 500 WATT

Die Seiten 7/8 sind herauszunehmen und durch die neuen Seiten 7/8 der Änderung 1 zu ersetzen.

Die folgenden Änderungen wurden vorgenommen

- auf Seite 7

"Prüfung" Untergruppe A 3:

"Ausgangswelligkeitsfaktor bei Betrieb" wurde geändert in "warmer oder kalter Ausgangswelligkeitsfaktor (wie festgelegt)".

- auf Seite 8

"Prüfung" Untergruppe C 1

"...oder Kurzschlussstabilität oder Leistungsstabilität (wie festgelegt)" wurde hinzugefügt.

Der Text dieser Änderung wurde dem CECC mit den unten aufgeführten Schriftstücken zur Abstimmung vorgelegt und vom Präsidenten des CECC zur Herausgabe als Änderung 1 freigegeben.

Schriftstück: CECC(Sekretariat)1945

Abstimmdatum: 12. November 1986

Abstimmbericht: CECC(Sekretariat)2041

Diese Änderung ist auf dem gelben Blatt "Verzeichnis der Änderung" einzutragen.

CECC 35 001 Ausgabe 1 Änderung 1 (1987)

Examination or Test	D ND	Ref. in CECC 35 000	Conditions of Test	Limits		Units	IL	AQL %
				Min.	Max.			
<u>Sub-group A 3</u>	ND							
Gain flatness (if required by the application)		4.5.6	Heater voltageV Grid voltage(s) adjust to obtain required collector current and minimize structure current Grid(s)...voltage(s).....V		✓	dB	S4	6,5
Gain ripple (if required by the application)		4.5.7	Slow wave structure voltage adjust between.....V andV for optimum performance in each band		✓	dB	S4	6,5
Gain slope (if required by the application)		4.5.8	Collector(s) voltage(s)...V Power outputW Frequency range to be coveredGHz to.....GHz Frequency band for each measurementMHz Mount (if separate)		✓	dB	S4	6,5
Hot input v.s.w.r.		4.5.16	As for available power gain but with an r.f. drive level at least 10 dB below that required for saturation		✓		S4	6,5
Hot or cold output v.s.w.r. (as specified)		4.5.16	As for available power gain but with no r.f. drive. The power level used for making this measurement must be at least 10 dB below saturated power level		✓		S4	6,5

Group B (lot by lot) - Not applicable

Group C
(periodical inspection)

Examination or Test	D ND	Ref. in CECC 35 000	Conditions of Test	Limits		Units	sampling requirements	
				Min.	Max.		n	c
<u>Sub-group C 1</u>								
6 monthly								
Mismatch stability or Short circuit stability or Power stability (as specified)	ND	4.5.10	Heater voltageV Grid voltage(s) adjust to obtain required collector current and mini- mize structure current Grid(s)...voltage(s).....V Collector(s) voltage(s)....V Collector currentmA Mismatch condition				5	1
Power at the input					✓	W		
Power at the output					✓	W		
Noise (if applicable)	ND	4.5.11	Slow wave structure voltage range.....V toV Mount (if separate) In accordance with required application				5	1
<u>Sub-group C 2</u>								
12 monthly								
Instantaneous bandwidth	ND	4.5.12	As for available power gain Proportion of max gain....	✓		MHz	5	1
Operating loss	ND	4.5.13	As for available power gain but no r.f. drive	✓		dB	5	1
Detail dimensions	ND	4.4.2	See drawing on page.....				5	1
Robustness of termina- tions (as applicable)	See Note 2	4.6.1	Test U of IEC 68-2-21 (tensile, bending, torsion, torque as applicable)				5	1

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 the member countries without further testing.

This document has been formally approved by the CECC, and has been prepared for those member countries taking part in the System who wish to issue national harmonized specifications for C.W. POWER AMPLIFIER TRAVELLING WAVE TUBES UP TO 500 WATTS. It should be read in conjunction with document CECC 00 100: Basic Rules (1974).

At the date of printing of this document, the member countries of the CECC are Belgium, Denmark, Germany, France, Ireland, Italy, the Netherlands, Norway, Sweden, Switzerland and the United Kingdom, and copies of it can be obtained from the National Committees of the CENELEC in these countries.

PREFACE

This blank detail specification was prepared by CECC Working Group 13 : "Microwave Tubes".

It is one of a series of blank detail specifications for travelling wave amplifier tubes, all relating to the generic specification printed as CECC 35 000.

In accordance with the requirements of document CECC 00 100, it is based, wherever possible, on the Recommendations of the International Electrotechnical Commission and in particular on IEC Publication 235: Measurement of the electrical properties of microwave tubes.

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

<u>Document</u>	<u>Voting date</u>
CECC(Secretariat)267	15 Nov 1974
CECC(Secretariat)267A	7 Nov 1975