

Förderverein für Elektrotechnische Normung (FEN) e. V.
Cenelec Electronic Components Committee

CECC

Système Harmonisé d'Assurance de la Qualité
des Composants Electroniques

SPECIFICATION PARTICULIERE
CADRE:

● **CONNECTEURS COAXIAUX
POUR FREQUENCE
RADIOELECTRIQUE
Série 1,4/4,4**

Harmonized System of Quality Assessment for
Electronic Components

● **BLANK DETAIL SPECIFICATION:**

**RADIO FREQUENCY
COAXIAL CONNECTORS
Series 1,4/4,4**

Harmonisiertes Gütebestätigungssystem für
Bauelemente der Elektronik

**VORDRUCK
FÜR BAUARTSPEZIFIKATION:
HOCHFREQUENZ-
KOAXIAL-STECKVERBINDER
Serie 1,4/4,4**



1

Edition
Issue
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CECC 22 251

1989



Documents

Document Sharing Hub

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 RADIO FREQUENCY COAXIAL CONNECTORS AND ACCESSORIES SERIES 1,4/4,4. 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 blank detail specification (BDS) was prepared by CECC Working Group 22: R.F. Connectors.

It is based wherever possible, on the Publications of the International Electrotechnical Commission and in particular on IEC 169-1: Radio-frequency connectors.

This BDS and its associated sectional specification (SS) are specific to Series 1,4/4,4 radio frequency connectors and their related accessories; they should be read in conjunction with document CECC 22 000, Generic Specification: Radio Frequency Coaxial Connectors.

The text of this BDS was circulated to the CECC for voting in the document listed below and was ratified by the President of the CECC for printing as a CECC specification:

<u>Document</u>	<u>Voting Date</u>	<u>Report on the Voting</u>
CECC(Secretariat)2026	April 1987	CECC(Secretariat)2123

CECC SPECIFICATION SYSTEM FOR RADIO FREQUENCY CONNECTORS

<u>GENERIC SPECIFICATION (GS)</u> -Scope -General -Quality assessment procedures -Test and measurement procedures	CECC 22 000
<u>SECTIONAL SPECIFICATION (SS)</u> -Drawings - Mating face drawings for standard test connectors, general-purpose connectors & applicable gauges -Standard conditions for testing -Qualification approval tests -Lot-by-lot tests -Periodic tests	CECC 22 110 Series SMA CECC 22 120 Series BNC CECC 22 130 Series SMB etc etc
<u>BLANK DETAIL SPECIFICATION (BDS)</u> -Pro-forma for preparation of DS	CECC 22 111 CECC 22 121 CECC 22 131 etc etc
<u>DETAIL SPECIFICATION (DS)</u> -Description of style -Details of any variants, appropriate cables, etc. -Outline drawing(s) -Assessment level -Ratings (including limiting conditions of use) and characteristics -Test requirements	CECC 22 111- 001 CECC 22 111- 002 CECC 22 111- 003 etc CECC 22 111- 801 CECC 22 111- 802 CECC 22 111- 803 etc
NOTES: - A detail specification (DS) is a 'completed' blank detail specification (BDS). - Document numbering for r.f. connector specifications follows 2.2(1) of CECC 00 400 Part III, in order to permit the issue of more than nine SS. The approved numbering system is shown above.	PRODUCED BY AN ONH PRODUCED BY CECC/WG22

INSTRUCTIONS FOR PREPARATION OF DETAIL SPECIFICATIONS

The numbers between square brackets on pages 1 and 2 correspond to the following indications which shall be given:

Identification of the detail specification (DS)

- [1] The name of the National Standards Institution under whose authority the DS is published and, if applicable, the organization from whom the DS is available.
- [2] The CECC symbol and the number allotted to the DS by the CECC General Secretariat.
- [3] The number and issue number of the CECC generic or sectional specification as relevant; also national reference if different.
- [4] If different from the CECC number, the national number of the DS, date of issue and any further information required by the national system, together with any amendment numbers.

Identification of the component

- [5] Enter the following details:

Style: The style designation or model number of the connector.

The method of cable/wire attachment to the centre and outer conductor:
By deletion of inapplicable options given.

Special features and markings: Example: 'Fitted with both panel and barrier seals'.

Mass: The maximum mass in grams, rounded upwards to the nearest whole number. If several variants (having differing mass) are included, list the maximum mass of each variant separately.

- [6] Enter details of assessment level, characteristic impedance and climatic category.
- [7] A reproduction of the outline drawing and panel piercing details shall be provided. It shall provide maximum envelope dimensions of the relevant body style and in the case of a fixed connector the position of the mounting plane(s) relative to the front face of the connector. Information shall be given in the places indicated concerning the international document(s) - CECC 22 250 - to which the interface dimension and the outline dimensions comply, together with any maximum panel thickness limitations for fixed connectors.

- [8] Particulars of all variants covered by the DS. Where appropriate, the information shall include:
- cable types (or sizes) applicable to each variant
 - alternative plated or protective finishes
 - details of alternative mounting flanges having either tapped or plain mounting holes
 - details of alternative solder spills or solder buckets for microwave component-mounting styles.
- [9] Performance data listing the most important characteristics of the connector in accordance with the requirements of 3.1 of CECC 22 250. Deviations from the minimum requirements listed shall be clearly indicated. Non-applicable parameters shall be marked 'na'.

For [5] and [6] the text to be given in the DS should be suitable for an entry in CECC 00 200 (QPL) or CECC 00 300.

[1]	page 1 of ...	[2] CECC 22 251 -	
ELECTRONIC COMPONENT OF ASSESSED [3] QUALITY IN ACCORDANCE WITH GENERIC SPECIFICATION SECTIONAL SPECIFICATION	[4]	Issue	
[5] DETAIL SPECIFICATION for RADIO FREQUENCY COAXIAL CONNECTOR OF ASSESSED QUALITY:			
Locking devices:		SERIES	
Style:		1,4/4,4	
Method of cable/wire* attachment: centre conductor - solder/crimp* : outer conductor - solder/clamp/crimp*		Special Features & Markings:	
Mass:(Max.) *Delete as appropriate			
[6] Assessment level Characteristic impedance 50 Ω Climatic category/...../.....			
[7] Outline and maximum dimensions		Panel piercing and mounting details	
			

For mating interface dimensions and position of reference plane see CECC 22 250

Maximum panel thickness: for front mounting mm, for rear mounting mm

The outline dimensions meet the requirements of

[8] Variants

Variant No.	Description of Variant	Relevant Cables		
		IEC 96	RG	National Cables
.....-01				
.....				
.....				
.....				
.....				
.....				
.....				
.....				

Information about manufacturers who have components qualified to this detail specification is available in the current CECC 00 200: Qualified Products List

RATINGS AND CHARACTERISTICS	CECC 22 250 CLAUSE	VALUE	REMARKS
MECHANICAL			
Contact captivation: - axial force	4.5.2	 N	CECC 22 000 method (or as specified)
Engagement and separation - axial force	4.5.4	 N max.	
Coupling torque - clamping screw torque - proof clamping screw torque		 Nm Nm	
Effectiveness of clamping device against cable pulling	Variant No./ Designation -01 4.5.5 (1)	 N	
Effectiveness of clamping device against cable torsion	-01 4.5.5 (2)	 Nm	
Tensile strength of coupling mechanism	4.5.6	 N	
Bending moment	4.5.9	 Nm	Relative to reference plane
ADDITIONAL MECHANICAL CHARACTERISTICS			

RATINGS AND CHARACTERISTICS	CECC 22 250 CLAUSE	VALUE	REMARKS
ENVIRONMENTAL			
Bump	4.6.2	 m/s ² bumps	(..g _n acceleration)
Vibration	4.6.3	 m/s ² to.... Hz	(..g _n acceleration)
Shock	4.6.4	m/s ² $\frac{1}{2}$ sine.... ms	(..g _n acceleration)
Climatic category	4.6.5	/..../....	
Sealing (panel and barrier sealed connectors)	4.6.8		100 to 110 kPa pressure differential
Sealing (hermetically sealed connectors)	4.6.9		100 to 110 kPa pressure differential
ADDITIONAL ENVIRONMENTAL CHARACTERISTICS			
ENDURANCE			
Mechanical	4.7.1	operations	
High temperature	4.7.2	 h at..... °C	
ADDITIONAL ENDURANCE CHARACTERISTICS			

[10] SUPPLEMENTARY INFORMATION

- marking of the component: in accordance with 2.4 of CECC 22 000, in the following order of precedence:

(1) Component identification	Variant No./ Designation	Identification
	-01	
		
		
		
		
		
		
		
		
(2) Identification of manufacturer:		
(3) Manufacturing date, code, year/week		

- marking and contents of package: in accordance with 2.5 and 2.5.1 of CECC 22 000 as follows:

- (1) Information prescribed in 2.4 of CECC 22 000 detailed above
- (2) Nominal characteristics impedance 50Ω
- (3) Assessment level code letter
- (4) Any additional marking required

- ordering information: in accordance with 2.6 of CECC 22 000 as follows:

- (1) Number of the detail specification CECC 22 251-.../Variant code
- (2) Assessment level code letter
- (3) Body finish (if more than one listed)
- (4) Any additional information or special requirements

- related documents (if not included in CECC 22 000 or CECC 22 250):

.....

.....

- certified test records (RCE): in accordance with 3.7 of CECC 22 000 (when applicable) (requirements to be included later)

- structural similarity: in accordance with 3.2 and 3.4 of CECC 22 000.

NOTE: Relevant information on a basic style should be entered as Variant 01.

[11] TEST SCHEDULES AND INSPECTION REQUIREMENTS - SERIES 1,4/4,4.

ACCEPTANCE TESTS

GROUP A1

Visual examination

GROUP B1

Outline dimensions

Compatibility mechanical

Engagement and
separationGauge retention force
(resilient contacts)

Sealing (panel and barrier)

Sealing (hermetic)

Voltage proof

CECC 22 250 Clause	Level			
	Test Required	IL	AQL	Period
4.2				
4.3.1				lot by lot
4.5.7				
4.5.4				
4.5.1				
4.6.8				
4.6.9				
4.4.5				

PERIODIC TESTS

GROUP C1(d)

Soldering

Insulation resistance

CECC 22 250 Clause	Test Required	IL	AQL	Period
4.6.1				
4.4.4				

For NOTES relating to symbols: See page 9.

	CECC 22 250 Clause	Test Required	Specimens (may be from C1)	Permitted Failures per group†	Period
GROUP D1(d)					
Mechanical tests on cable clamping device	4.5.5				
Bending moment	4.5.9				
Tensile strength of coupling mechanism	4.5.6				
GROUP D2(d)					
Contact resistance	4.4.2				
Outer conductor continuity	4.4.3				
Bump	4.6.2				
Vibration	4.6.3				
Shock	4.6.4				
Damp heat, steady state	4.6.6				
Salt mist	4.6.10				
GROUP D3					
Dimensions and materials (piece parts)*	4.3.2				
Mass	4.3.1				
GROUP D4(d)					
Mechanical endurance	4.7.1				
High temperature endurance	4.7.2				
GROUP D5(d)					
Reflection factor	4.4.1				
Screening effectiveness	4.4.8				

For NOTES relating to symbols: See page 9.