

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 BRIDE EIA**

Harmonized System of Quality Assessment for
Electronic Components

BLANK DETAIL SPECIFICATION:

**RADIO FREQUENCY
COAXIAL CONNECTORS
Series EIA FLANGE**

Harmonisiertes Gütebestätigungssystem für
Bauelemente der Elektronik

VORDRUCK FÜR
BAUARTSPEZIFIKATION:

**HOCHFREQUENZ-
KOAXIAL-STECKVERBINDER
Serie EIA FLANSCH**



1 Edition
Issue
Ausgabe

CECC 22 151

1986

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 EIA FLANGE. It should be read in conjunction with the current Regulations of 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 339-2: General purpose rigid coaxial lines and their associated flange connectors.

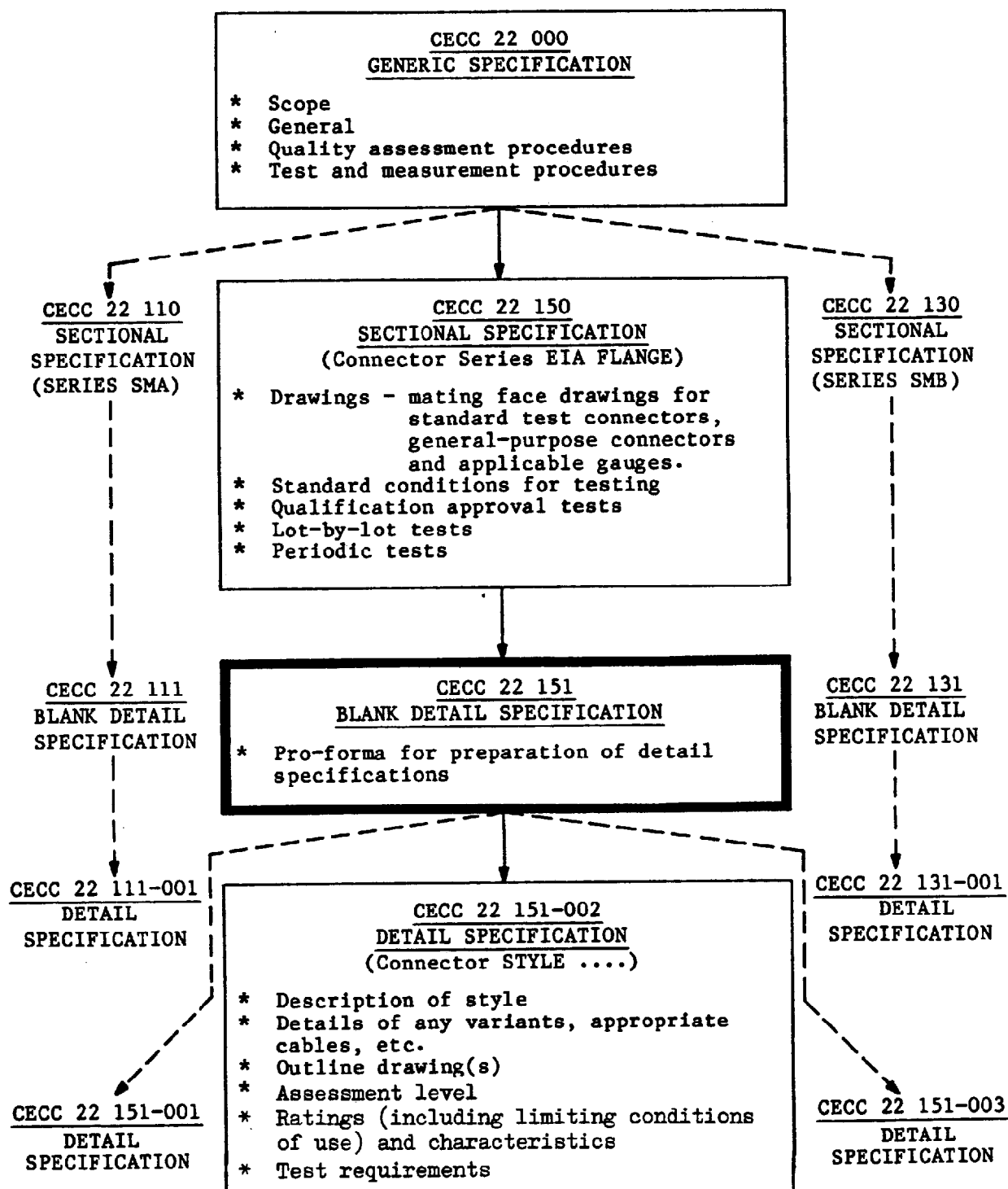
This BDS and its associated sectional specification (SS) are specific to Series EIA FLANGE radio frequency connectors and their related accessories; they should be read in conjunction with document CECC 22 000, Generic Specification: Radio Frequency Coaxial Connectors.

The text of this BDS was circulated to the CECC for voting in the documents 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)1711	July 1985	CECC(Secretariat)1853

Document numbering for r.f. connector specifications follows paragraph 2.2(1) of CECC 00 400: Part III, in order to permit the issue of more than nine sectional specifications. The approved numbering system applicable to r.f. connector specifications is illustrated in the diagram below.

CECC SPECIFICATION SYSTEM FOR R.F. CONNECTORS



NOTE: A detail specification is a 'completed' blank detail specification.

[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 22 150. 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 22 151 -	
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:		SERIES	EIA FLANGE
Style:		Special Features & Markings:	
Method of cable/wire* attachment: centre conductor - solder/crimp* : outer conductor - solder/clamp/crimp*			
Mass:(Max.) *Delete as appropriate			
[6] Assessment level Characteristic impedance Ω Climatic category/...../.....			
[7] Outline and maximum dimensions		Panel piercing and mounting details	



For mating interface dimensions and position of reference plane see CECC 22 150

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.

[9] PERFORMANCE (including limiting conditions of use)

RATINGS AND CHARACTERISTICS		CECC 22 150 CLAUSE	VALUE	REMARKS
ELECTRICAL				
	Variant No./ Designation			Measurement freq. range
Reflection factor	-01	4.4.1		
				
				
				
				
				
				
				
Centre contact resistance (max.)		4.4.2	< mΩ < mΩ	Initial After conditioning
Outer conductor continuity (max.)		4.4.3	< mΩ < mΩ	Initial After conditioning
Insulation resistance (min.)		4.4.4	> GΩ > MΩ	Initial After conditioning
* Proof voltage at sea level	-01	4.4.5	 kV	86 to 106 kPa
				
				
				
				
				
				
				
				
* Proof voltage pressurized	-01	4.4.5	 V	200 kPa (2 bar) or 400 kPa (4 bar)
				
				
				
				
				
				
				
				

For Notes relating to symbols: See page 5.

RATINGS AND CHARACTERISTICS		CECC 22 150 CLAUSE	VALUE	REMARKS
ELECTRICAL				
	Variant No./ Designation			
* Working voltage at sea level	-01		 V	86 to 106 kPa
* Working voltage pressurized	-01		 V	200 kPa (2 bar) or 400 kPa (4 bar)
RF high potential withstanding voltage	-01	4.4.7	 V	NOTE: Test 4.4.7 of CECC 22 000 is not applicable to EIA FLANGE connectors. If required, an appropriate test procedure may be appended to this DS.
Screening effectiveness	-01	4.4.8	$Z_t < \dots \Omega$	Providing > dB
ADDITIONAL ELECTRICAL CHARACTERISTICS				

For Notes relating to symbols: See page 5.

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RATINGS AND CHARACTERISTICS		CECC 22 150 CLAUSE	VALUE	REMARKS
MECHANICAL				
Engagement and separation - axial force, centre conductor coupling element only		4.5.4	 min. max.	Applicable to both insertion and withdrawal forces
Effectiveness of cable attachment against cable pulling	Variant No./ Designation -01	4.5.5 (1)	 N	
Effectiveness of cable attachment against cable pushing	-01	4.5.5 (2)	 N	
Effectiveness of cable attachment against cable torsion	-01	4.5.5 (3)	 Nm	
ADDITIONAL MECHANICAL CHARACTERISTICS				

RATINGS AND CHARACTERISTICS	CECC 22 150 CLAUSE	VALUE	REMARKS
ENVIRONMENTAL			
†Climatic Category	4.6.5	.55/.155/.21./..pa../....	Assessment Level H Assessment Level U Assessment Level
Sealing (panel and barrier sealed connectors)	4.6.8	cm ³ /h.mpa.	100 to 110 kPa pressure differential
Pressure test	4.7.2	 kPa pressure loss/24 h	Initial internal 400 ± 40 kPa (4 bar ± 400 mbar)
ADDITIONAL ENVIRONMENTAL CHARACTERISTICS			

NOTES: *Voltages are r.m.s. values of a.c. at 50 to 60 Hz unless otherwise stated.
The voltage may be dictated by the associated cable specification.

†The upper temperature limit may be reduced, as dictated by the associated cable specification.

[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
-01 | Identification |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| (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
- (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 22 151-.../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 22 150):

.....
.....

- 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 EIA FLANGE

ACCEPTANCE TESTS

GROUP A1

Visual examination

CECC 22 150 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				

GROUP B1

Outline dimensions

Compatibility mechanical

Engagement and
separationGauge retention force
(resilient contacts)

Sealing (panel and barrier)

Sealing (hermetic)

Voltage proof

PERIODIC TESTS

GROUP C1(d)

Soldering

Insulation resistance

CECC 22 150 Clause	Test Required	IL	AQL	Period
4.6.1				
4.4.4				

For Notes relating to symbols: See page 9.

	CECC 22 150 Clause	Test Required	Specimens (may be from Cl)	Permitted Failures per group†	Period
GROUP D1(d)					
Mechanical tests on cable clamping device	4.5.5				
GROUP D2(d)					
Contact resistance	4.4.2				
Outer conductor continuity	4.4.3				
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.