

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

CECC



Système Harmonisé d'Assurance de la Qualité
des Composants Electroniques

SPECIFICATION PARTICULIERE:

**CONNECTEURS COAXIAUX
POUR FREQUENCE
RADIOELECTRIQUE
Série SMA**

Harmonized System of Quality Assessment for
Electronic Components

DETAIL SPECIFICATION:

**RADIO FREQUENCY
COAXIAL CONNECTORS
Series SMA**

Harmonisiertes Gütebestätigungssystem für
Bauelemente der Elektronik

BAUARTSPEZIFIKATION:

**HOCHFREQUENZ-
KOAXIAL-STECKVERBINDER
Serie SMA**

1

Edition
Issue
Ausgabe

CECC 22111-808

1984

ERRATUM

Cette page bleue doit être insérée après la page de garde de la CECC 22 111-808 Edition 1 (1984)

This blue sheet shall be inserted after the title page of CECC 22 111-808 Issue 1 (1984)

Dieses blaue Blatt ist nach dem Titelblatt der CECC 22 111-808 Ausgabe 1 (1984) einzufügen

La modification suivante doit être effectuée à la main à l'Edition 1 (1984) de la CECC 22 111-808:

Page 2 [9] ELECTRIQUES, colonne 2

- Tension de tenue à 20 km d'altitude:
Modifier 4.4.5 pour lire 4.6.5

The following amendment to Issue 1 (1984) of CECC 22 111-808 should be made in manuscript:

Page 2 [9] ELECTRICAL, column 2

- Proof voltage at 20 km altitude:
Amend 4.4.5 to read 4.6.5

In Ausgabe 1 (1984) der CECC 22 111-808 ist folgende Änderung handschriftlich vorzunehmen:

Seite 2 [9] ELEKTRISCH, Spalte 2

- Spannungsfestigkeit in 20 km Höhe:
4.4.5 ist durch 4.6.5 zu ersetzen

CECC 22 111-808 Edition 1
Issue 1 ERRATUM
Ausgabe 1

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PREFACE

This detail specification (DS) was prepared by CECC Working Group 22: 'RF Connectors'.

It relates to Series SMA connectors covered by sectional specification CECC 22 110 and by blank detail specification CECC 22 111. These in turn are related to the generic specification CECC 22 000.

The text of this DS was circulated to the CECC for voting in the documents detailed 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)1296	May 1983	CECC(Secretariat)1423

CECC 22 111-808 Issue 1

(1)	Page 1 of 6	(2) CECC 22 111 - 808	
ELECTRONIC COMPONENT OF ASSESSED QUALITY IN ACCORDANCE WITH GENERIC SPECIFICATION 22 000 SECTIONAL SPECIFICATION 22 110		(3)	(4)

[5] DETAIL SPECIFICATION for
RADIO FREQUENCY COAXIAL CONNECTOR OF ASSESSED QUALITY :

SERIES

SMA

Style: Fixed Socket.....

Special Features + Markings:

Method of cable/wire attachment:

narrow flange.....

centre conductor - solder/crimp

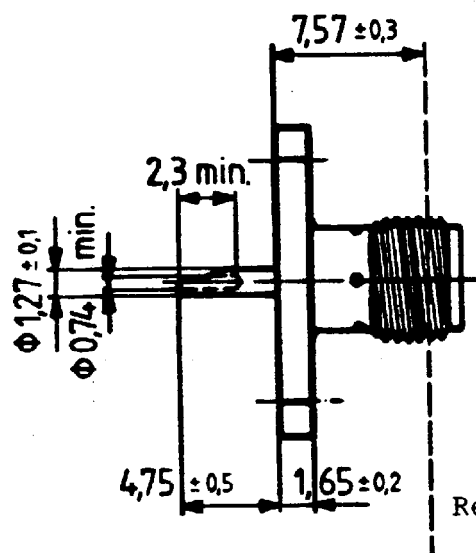
outer conductor - solder/clamp/crimp

Mass: 3.9..... (Max.)

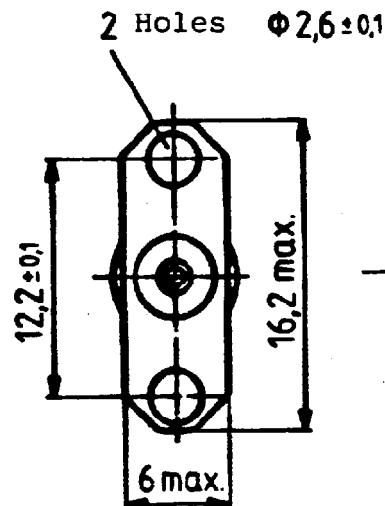
[6] Assessment level .. H .. Characteristic impedance 50 Ω Climatic category: 55 / 155 / 21

[7] Outline and maximum dimensions

Panel piercing and mounting details



Reference
plane



For mating interface and position of reference plane see CECC 22 110

Maximum panel thickness: for front mounting without limit mm
for rear mounting na..... mm

The outline dimensions meet the requirements of

[8] Variants

Variant No.	Description of Variant	IEC 96-2	Relevant Cables RC	National Cables
-01.....	Connector, Gold.....	na.....	na.....	na.....
-02.....	Connector, Passivated.....	na.....	na.....	na.....
.....	Stainless Steel.....			
.....				
.....				
.....				
.....				
.....				

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

RATINGS + CHARACTERISTICS	CECC 22 110 Clause	VALUE	REMARKS
MECHANICAL			
Contact captivation - axial force - torque	4.5.2	22.....N 0.028.....Nm	CECC 22 000 method (or as specified)
Engagement + separation - torque	4.5.4	74.....Nm max.	
Effectiveness of clamping device against cable pulling	Variant No./ Designation-01-02 (1)	74.....N 74.....	(to overcome friction of coupling nut)
Effectiveness of clamping device against cable torsion	-01-02 (2)	74.....Nm 74.....	
Tensile strength of coupling mechanism	4.5.6	74.....N	Relative to reference plane
Coupling torque - normal - proof		Nm Nm	
Bending moment	4.5.9	Nm	
ADDITIONAL MECHANICAL CHARACTERISTICS			
ENVIRONMENTAL			
Bump	4.6.2	390.....m/s ² 4000.....bumps	(.40.g acceleration)
Vibration	4.6.3	98.....m/s ² 10-2000.....Hz	(.10.g acceleration)
Shock	4.6.4	490.....m/s ² 1/2 sine 11 ms	(.50.g acceleration)
Climatic Category	4.6.5	55./155/21.	
Sealing (panel + barrier sealed connectors)	4.6.8	74.....	100 to 110 kPa pressure differential (1000 to 1100 mbar)
Sealing (hermetically sealed connectors)	4.6.9	74.....	100 to 110 kPa pressure differential (1000 to 1100 mbar)
ADDITIONAL ENVIRONMENTAL CHARACTERISTICS			
ENDURANCE			
Mechanical	4.7.1	..500...operat.	
High temperature	4.7.2	..1000...h at ..155.....°C	
ADDITIONAL ENDURANCE CHARACTERISTICS			

[10] Supplementary Information

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

i) Component identification	Variant No./ Designation	Identification
	-01	22-111-808-01...
	-02	-02...
		
		
		
		
		
ii) Identity of manufacturer		
iii) 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 :

- i) Information prescribed in 2.4 of CECC 22 000 detailed above
- ii) Nominal characteristic impedance 50 Ω unmatched style
- iii) Assessment level code letter H.....
- iv) Any additional marking required

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

- i) Number of the detail specification CECC 22 111- 808-xx (No. of variant)
- ii) Assessment level code letter H.....
- iii) Body finish (if more than one listed) see variant numbers in [8]
- iv) Any additional information or special requirements

- related documents :

CECC 22 000	Generic Specification for radio frequency connectors of assessed quality (and related documents, see 2.1 of CECC 22 000)
CECC 22 110	Sectional Specification for r.f. connectors Series SMA

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

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

[11] TEST SCHEDULE AND INSPECTION REQUIREMENTS - SERIES SMA

Details of tests and quality assessment inspection requirements for levels H and U are given in 5.1 of CECC 22 110.

ACCEPTANCE TESTS**GROUP A1**

Visual examination

GROUP B1

Outline dimensions

Compatibility mechanical

Engagement + Separation

Gauge retention force

(resilient contacts)

Sealing (panel + barrier seal)

Sealing (hermetic)

Voltage proof

CECC 22 110 Clause	LEVEL H			
	Test Requir.	I.L.	AQL	Period
4.2	a	S 3	1,5 %	Lot by Lot
4.3.1	a	S 3	4 %	
4.5.7	a	S 3	1,5 %	
4.5.4	na			
4.5.1	a	S 3	1,5 %	
4.6.8	na			
4.6.9	na			
4.4.5	a	S 3	4 %	

PERIODIC TESTS**GROUP C1 (d)**

Soldering

Insulation resistance

CECC 22 110 Clause	Test	I.L.	AQL	Period
4.6.1	a			
4.4.4	a	S 3	4 %	1 yearly

GROUP D1 (d)Mechanical tests on cable
clamping device

Bending moment

Tensile strength of
coupling mechanism

CECC 22 110 Clause	Test Requir.	Specimens (May be from C1)	Permitted Failures † per Group	Period
4.5.5	na	3 mated pairs or sets min.	1	3 yearly
4.5.9	a			
4.5.6	na			

GROUP D2 (d)

Contact resistance

Outer conductor continuity

Bump

Vibration

Shock

Damp heat, steady state

Salt mist

CECC 22 110 Clause	Test Requir.	Specimens (May be from C1)	Permitted Failures † per Group	Period
4.4.2	a	3 mated pairs or sets min.	1	3 yearly
4.4.3	a			
4.6.2	a			
4.6.3	a			
4.6.4	a			
4.6.6	a			
4.6.10	a			

GROUP D3Dimensions and materials
(piece parts)

Mass

CECC 22 110 Clause	Test Requir.	Specimens (May be from C1)	Permitted Failures † per Group	Period
4.3.2	a	1 set of piece parts	1	3 yearly
4.3.1	a	each style		

GROUP D4 (d)

Mechanical endurance

High temperature endurance

CECC 22 110 Clause	Test Requir.	Specimens (May be from C1)	Permitted Failures † per Group	Period
4.7.1	a	3 mated pairs	1	3 yearly
4.7.2	a	or sets min.		

GROUP D5 (d)

Reflection factor

Screening effectiveness

CECC 22 110 Clause	Test Requir.	Specimens (May be from C1)	Permitted Failures † per Group	Period
4.4.1	na			
4.4.8	na			

GROUP D6 (d)

Contact captivation

Rapid change of temperature

Climatic sequence

CECC 22 110 Clause	Test Requir.	Specimens (May be from C1)	Permitted Failures † per Group	Period
4.5.2	a	3 mated pairs	1	3 yearly
4.6.7	a	or		
4.6.5	a	sets min.		

PROCEDURES

Quality Conformance Inspection

This shall consist of Test Groups A1 and B1 on a lot-by-lot basis and C1 on a periodic basis.

Qualification Approval and its Maintenance

This shall consist of three consecutive lots passing Test Groups A1 and B1 followed by selection of specimens from lots as appropriate. These specimens shall successfully pass the specified periodic C1 and D tests.

NOTES

I.L. = Inspection Level
AQL = Acceptable Quality Level
a = applicable
‡ = for Qualification Approval (QA) a total of 2 failures only permitted
(d) = destructive test - specimens shall not be returned to stock
na = not applicable