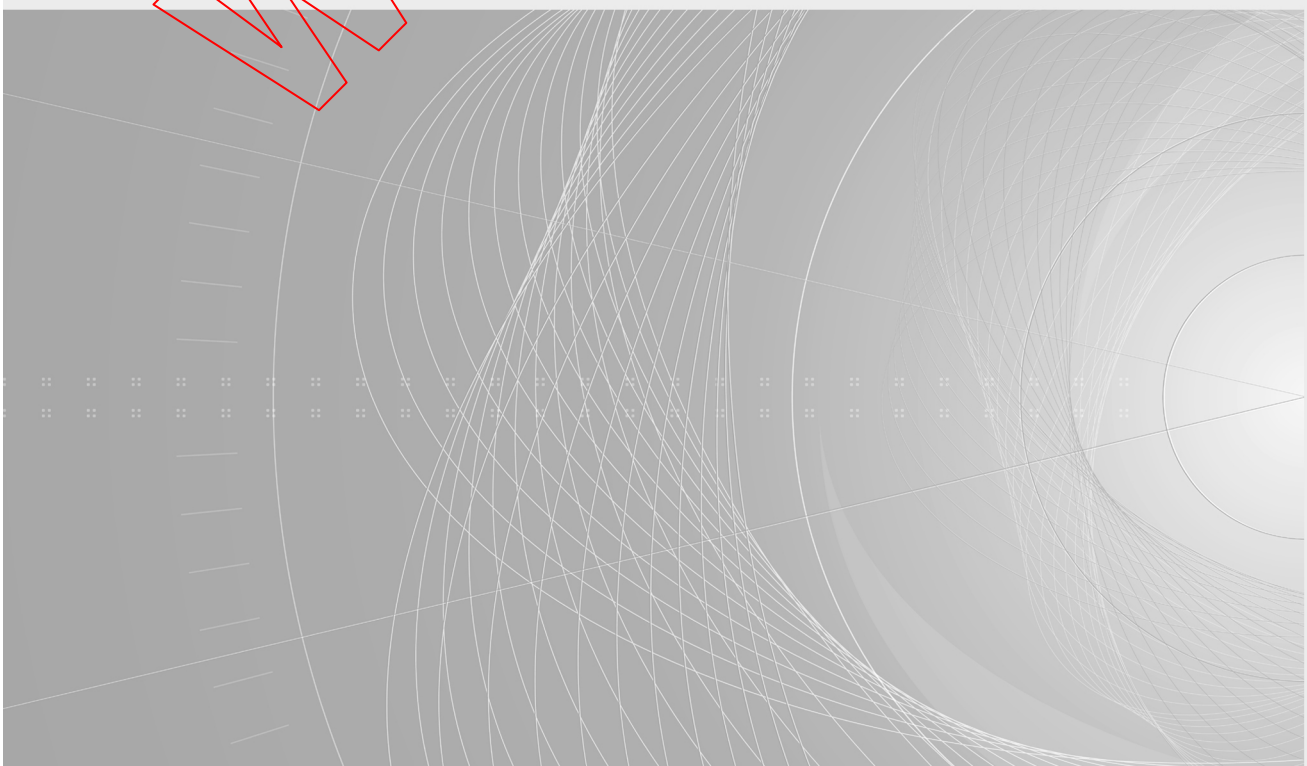
IEC/PAS 61169-41

Edition 1.0 2009-04

PUBLICLY AVAILABLE SPECIFICATION

PRE-STANDARD

Radio-frequency connectors –
Part 41: Sectional specification for CQA series quick lock R.F. coaxial connectors



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RADIO-FREQUENCY CONNECTORS –

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8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.

A PAS is a technical specification not fulfilling the requirements for a standard, but made available to the public.

IEC-PAS 61169-41 has been processed by subcommittee 46F: RF and microwave passive components, of IEC technical committee 46: Cables, wires, waveguides, R.F. connectors, R.F. and microwave passive components and accessories.

The text of this PAS is based on the following document:	This PAS was approved for publication by the P-members of the committee concerned as indicated in the following document
Draft PAS	**Report on voting**
46F/100/PAS	46F/112/RVD

Following publication of this PAS, which is a pre-standard publication, the technical committee or subcommittee concerned may transform it into an International Standard.

This PAS shall remain valid for an initial maximum period of 3 years starting from the publication date. The validity may be extended for a single 3-year period, following which it shall be revised to become another type of normative document, or shall be withdrawn.

INTRODUCTION

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RADIO-FREQUENCY CONNECTORS –

Part 41: Sectional specification for CQA series quick lock R.F. coaxial connectors

1 Scope

CQA series quick lock connectors with characteristic impedance 50 Ω are used in microwave, telecommunication, wireless and other fields, connecting with RF cables or micro-strips. The operating frequency limit is up to 18 GHz.

This PAS, which is a sectional specification, provides information and rules for preparation of detail specification of CQA series quick lock R.F. coaxial connectors together with the pro-forma blank detail specification.

It also prescribes mating face dimensions for general connectors-grade 2, dimensional detail of standard test connectors-grade 0, gauging information and tests selected from IEC 61169-1 applicable to all detail specifications relating to CQA series RF connectors.

This specification indicates recommended performance characteristics to be considered when writing a detail specification and it covers test schedules and inspection requirements for assessment levers M and H.

A CQA series connector with pin-centre contact can mate with a SMA series connector with socket-centre contact; when mating with a SMA series connector, an adjunct is required. The adjunct should meet the requirements of Annex A.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 61169-1:1992, *Radio-frequency connectors – Part 1: Generic specification – General requirements and measuring methods*[1)]

Amendment 1(1996)
Amendment 2 (1997)

1) There exists a consolidated edition 1.2 (1998) that comprises IEC 61169-1, its Amendment 1 and its Amendment 2.

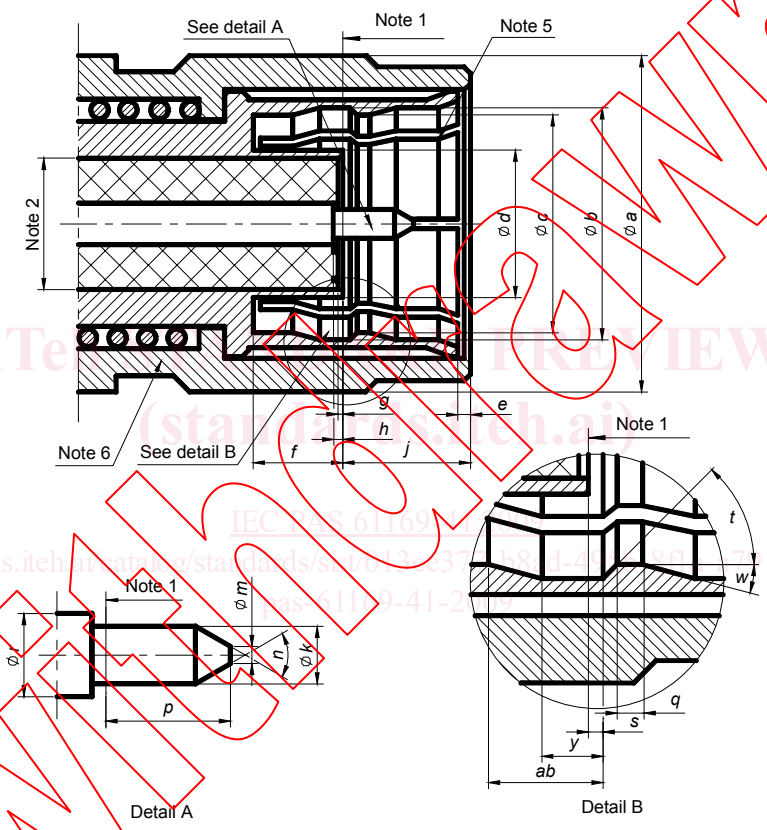
3 Mating face and gauge information

3.1 Dimensions-general connectors – Grade 2

3.1.1 Connector with pin-centre contact

Metric dimension are original dimensions.

All undimensioned pictorial configurations are for reference purpose only.



NOTE For dimensions and notes, see Table 1.

Figure 1 – Connector with pin-centre contact

Table 1 – Dimensions of connector with pin-centre contact

Ref.	mm		Notes
	Min.	**Max.**	
a	—	10,5	
b	7,25	—	
c	6,8 Nominal		Note 4
d	4,53	4,59	
e	0,25	0,75	
f	3,15	—	Note 3
g	0,00	0,18	
h	0,00	0,25	
j	—	4,02	
k	0,90	0,94	
m	—	0,38	
n	56°	64°	Angle
p	—	2,54	
q	—	0,50	
r	1,27 Nominal		
s	0,47	0,60	
t	45° Nominal		Angle
w	20°		Angle
y	0,60	—	
ab	2,00	—	

NOTE 1 Mechanical and electrical reference plane.

NOTE 2 Diameters are chosen upon the assumption that the PTFE dielectric has a dielectric constant of 2,02 to give an impedance of 50 Ω.

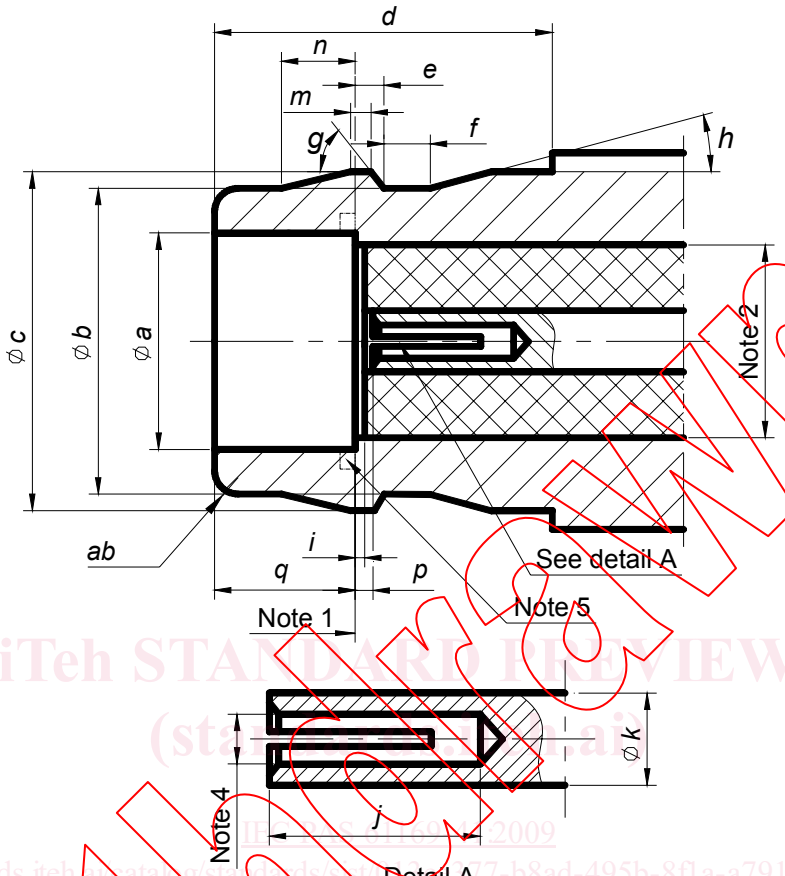
NOTE 3 Dimension *f* should be such that the reference planes coincide and the connectors meet the required electrical and environmental performance.

NOTE 4 Should meet mechanical requirements.

NOTE 5 Design for slotting is optional, and should meet electrical and mechanical performance requirements.

NOTE 6 Outer lock sleeve has a distance of 1,0 mm min. of movement from right to left.

3.1.2 Connector with socket-centre contact



NOTE For dimensions and notes, see Table 2.

Figure 2 – Connector with socket-centre contact

Table 2 – Dimensions of connector with socket-centre contact

Ref.	mm		Notes
	Min.	Max.	
a	4,60	—	
b	6,70	6,90	
c	7,15	7,24	
d	7,50	-	
e	0,32	0,45	
f	0,55	—	
g	60° Nominal		Angle Note 3
h	—	20°	Angle
i	0	0,18	
j	2,82	—	
k	1,27 Nominal		
p	0	0,25	
m	0,25	0,50	
n	1,70	2,00	
q	3,00	3,15	
ab	0,30	0,60	Radius

NOTE 1 Mechanical and electrical reference plane.

NOTE 2 Diameters are chosen upon the assumption that the PTFE dielectric has a dielectric constant of 2,02 to give an impedance of 50 Ω.

NOTE 3 Should meet mechanical requirements.

NOTE 4 Design for slotting is optional, and should meet electrical and mechanical requirements, when mating with Ø 0,90 mm to Ø 0,94 mm gauge pin.

NOTE 5 Design for root cut is allowed, no chamfer is allowed.