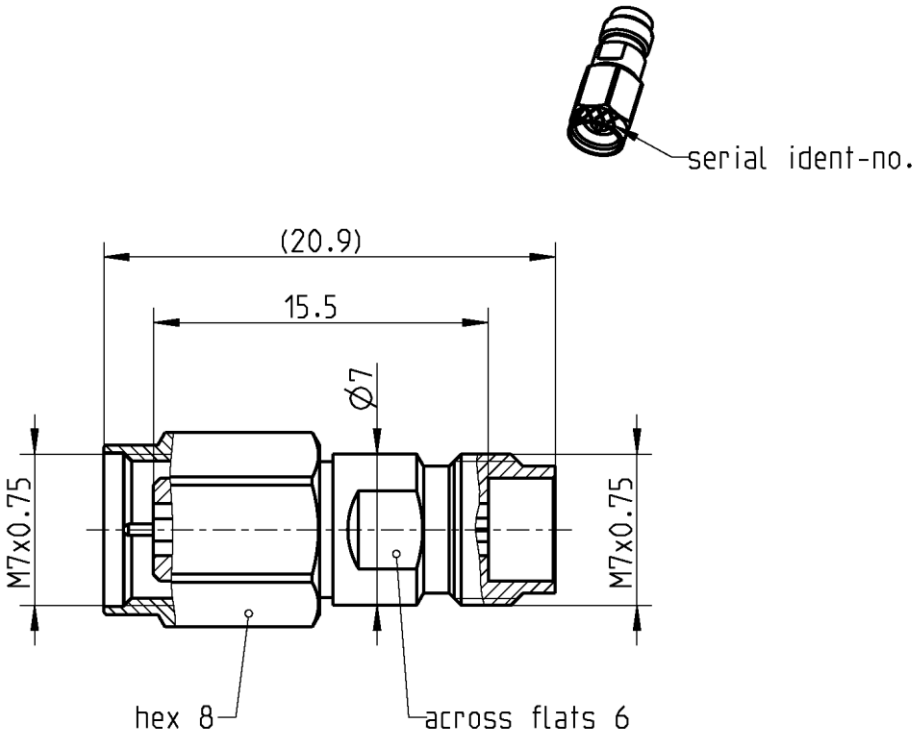


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RF_35/09.14/6.2

Technical Data Sheet		Rosenberger
RPC-2.40	Airline Plug / Jack	09S101-K015
		
All dimensions are in mm; tolerances according to ISO 2768 m-H		
Interface According to Mechanically compatible with IEC 61169-40 RPC-1.85		
Documents Application note AN001 "Calibration Services"		
Material and plating Connector parts Center conductor Outer conductor Coupling nut Material CuBe Brass Stainless steel Plating Gold, min. 1.27 µm, over chemical nickel Gold, min. 1.27 µm, over chemical nickel Passivated		
Rosenberger Hochfrequenztechnik GmbH & Co. KG P.O.Box 1260 D-84526 Tittmoning Germany www.rosenberger.de		Tel. : +49 8684 18-0 Email : info@rosenberger.de
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Electrical data

Insertion loss ≤ 0.17 dB, 0.4 GHz to 50 GHz

Mechanical data

Mating cycles ≥ 500
 Maximum torque 1.65 Nm
 Recommended torque 0.90 Nm
 Airline dimensions at 23 °C:
 - Diameter outer conductor 2.400 mm $\pm$ 0.005 mm
 - Diameter inner conductor 1.042 mm $\pm$ 0.005 mm
 - Length outer conductor 15.50 mm $\pm$ 0.02 mm
 - Length inner conductor 15.50 mm $\pm$ 0.02 mm
 - Length difference ≤ 0.04 mm
 (outer conductor – inner conductor)

Calculated data (non warranted)

Lossless characteristic impedance¹ 50 Ω $\pm$ 0.95 Ω
 Return loss² ≥ 36 dB, 0.4 GHz to 4 GHz
 ≥ 30 dB, 4 GHz to 26.5 GHz
 ≥ 26 dB, 26.5 GHz to 50 GHz

1. The lossless characteristic impedance is calculated from the specified diameters of the inner and outer conductor.
2. The return loss is calculated from the characteristic impedance, the skin depth and the connector interface.

General standard definitions

For proper work the vector network analyzer (VNA) used needs a model describing the electrical behaviour of this calibration standard. Depending on the VNA type different models, units and terms are used and have to be entered into the VNA. All values are based on typical geometry and plating.

- Offset Z_0 / Impedance / Z_0 50 Ω
 - Offset Delay 51.7526 ps
 - Length (electrical) / Offset Length 15.515 mm
 - Offset Loss 3.40 G Ω /s
 - Loss 0.0151 dB/ $\sqrt{\text{GHz}}$

Environmental data

Operating temperature range³ +20 °C to +26 °C
 Storage temperature range 0 °C to +50 °C
 RoHS compliant

3. This range is a recommendation. However, the airline can be used in a wider range.
 Any temperature change from 23 °C results in dimensional changes.

Technical Data Sheet

Rosenberger

RPC-2.40

Airline Plug / Jack

09S101-K015**Declaration of calibration options****Factory Calibration**

Standard delivery for this calibration standard includes a Factory Calibration. The Calibration Certificate issued reports individual mechanical calibration results, traceable to national / international standards. Model based standard definitions are reported in an Agilent/Keysight, Rohde & Schwarz and Anritsu compatible VNA format.

Accredited Calibration

Not available.

For further, more detailed information see application note AN001 on the Rosenberger homepage.

Calibration interval

Recommendation

12 months

Packing

Standard

1 pce in box

Weight

4.9 g/pce

Center conductor

loose in an acrylic glass tube

While the information has been carefully compiled to the best of our knowledge, nothing is intended as representation or warranty on our part and no statement herein shall be construed as recommendation to infringe existing patents. In the effort to improve our products, we reserve the right to make changes judged to be necessary.

Draft	Date	Approved	Date	Rev.	Engineering change number	Name	Date
Herbert Babinger	24.03.15	Martin Moder	27.09.23	f00	23-1604	Matthias Gehl	27.09.23
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