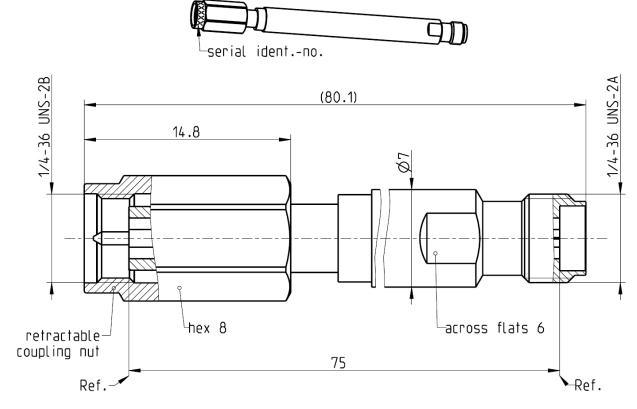
Technical Data Sheet		Rosenberger				
RPC-2 92	Airline Plug / Jack	02S101-K075				



All dimensions are in mm; tolerances according to ISO 2768 m-H

Interface	
According to	

Mechanically compatible with

IEC 61169-35 RPC-3.50 and SMA

Documents

Application note

AN001 "Calibration Services"

Material and plating

Connector parts
Center conductor
Outer conductor
Coupling nut

Material Plating

CuBe Gold, min. 1.27 μ m, over chemical nickel Brass Gold, min. 1.27 μ m, over chemical nickel

Stainless steel Passivated

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RF_35/09.14/6.2

Technical Data Sheet

Rosenberger

RPC-2.92

Airline Plug / Jack

02S101-K075

Electrical data

Insertion loss

≤ 0.50 dB at 40 GHz

Mechanical data

Mating cycles≥ 500Maximum torque1.70 NmRecommended torque0.90 Nm

Airline dimensions at 23 °C:

- Diameter outer conductor

- Diameter inner conductor

- Length outer conductor

- Length inner conductor

- Length difference ≤ 0.04 mm

(outer conductor – inner conductor)

Calculated data (non warranted)

Lossless characteristic impedance Return loss²

50 Ω ± 0.40 Ω ≥ 38 dB, 0.3 GHz to 4 GHz ≥ 35 dB, 4 GHz to 18 GHz ≥ 30 dB, 18 GHz to 40 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.

 $\begin{array}{lll} \text{- Offset $Z_{\rm o}$ / Impedance / $Z_{\rm o}$} & 50 \ \Omega \\ \text{- Offset Delay} & 250.288 \ ps \\ \text{- Length (electrical) / Offset Length} & 75.034 \ mm \\ \text{- Offset Loss} & 2.40 \ G\Omega/s \\ \end{array}$

- Loss $0.0522 \text{ dB}/\sqrt{\text{GHz}}$

Environmental data

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

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.

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Technical Data Sheet		Rosenberger			
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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 Weight Center conductor 1 pce in box 20.5 g/pce 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	04.12.14	Martin Moder	04.12.14		b00	14-1492	Herbert Babinge	r	04.12.14
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