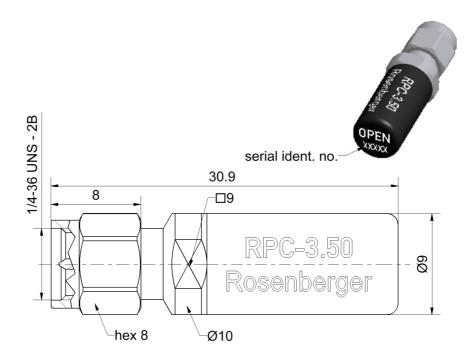
Technica	al Data Sheet	Rosenberger		
RPC-3.50	Open Circuit Plug	03S12L-000S3		



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

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According to Mechanically compatible with IEC 60169-23 RPC-2.92 and SMA

Documents

Application note

AN001 "Calibration Services"

Material and plating Connector parts

Center conductor Outer conductor Coupling nut Dielectric

Material

Plating Gold, min. 1.27 µm, over nickel CuBe Stainless steel Passivated Stainless steel **Passivated** PS

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Technical Data Sheet Rosenberger

RPC-3.50

Open Circuit

03S12L-000S3

Electrical data

Frequency range DC to 26.5 GHz

Return loss \leq 0.10 dB, DC to 4 GHz \leq 0.12 dB, 4 GHz to 8 GHz

≤ 0.18 dB, 8 GHz to 26.5 GHz

Error from nominal phase¹ $\leq 1.0^{\circ}$, DC to 4 GHz

≤ 1.5°, 4 GHz to 8 GHz ≤ 2.0°, 8 GHz to 26.5 GHz

Mechanical data

 $\begin{array}{ll} \text{Mating cycles} & \geq 500 \\ \text{Maximum torque} & 1.70 \text{ Nm} \\ \text{Recommended torque} & 0.90 \text{ Nm} \\ \end{array}$

Gauge 0.00 mm to 0.04 mm

General standard definitions

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

 $\begin{array}{lll} \text{Offset Z}_{\text{o}} \ / \ \text{Impedance} \ / \ Z_{\text{o}} & 50 \ \Omega \\ \text{Offset Delay} & 23.3495 \ \text{ps} \\ \text{Length (electrical)} \ / \ \text{Offset Length} & 7.00 \ \text{mm} \\ \text{Offset Loss} & 2.20 \ \text{G}\Omega/\text{s} \\ \text{Loss} & 0.0089 \ \text{dB}/\sqrt{\text{GHz}} \end{array}$

Fringing Capacitances²

Environmental data

Operating temperature range 3 +20 °C to +26 °C Rated temperature range of use 4 0 °C to +50 °C Storage temperature range -40 °C to +85 °C

RoHS compliant

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¹ The nominal phase is defined by the Offset Delay, the Offset Loss and the Fringing Capacitances.

² Fringing Capacitances are determined individually for each open circuit and are documented in a Calibration Certificate.

³ Temperature range over which these specification are valid.

This range is underneath and above the operating temperature range, within the open circuit is fully functional and could be used without damage.

Technical Data Sheet		Rosenberger		
RPC-3.50	Open Circuit Plug	03S12L-000S3		

Declaration of calibration options

Factory Calibration

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

Accredited Calibration

Optional this calibration standard can be delivered with an Accredited Calibration (DAkkS) having the highest confidence in the traceability. The DAkkS Calibration Certificate issued reports individual calibration results in a complex format, traceable to national / international standards. Model based standard definitions are individually optimized and reported in an Agilent/Keysight, Rohde & Schwarz and Anritsu compatible VNA format as well as in a dense data set needed for data based standard definitions. The uncertainties are smaller than in a Factory Calibration.

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	7.5 g/pce

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	15.10.14	Markus Müller	14.10.16		h00	16-1390	Marion Striegler	14.10.16

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