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We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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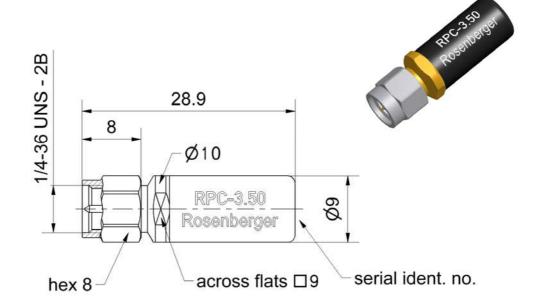
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Technical Data Sheet		Rosenberger		
RPC-3.50	Short Circuit Plug	03S12S-001D3		



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

#### Interface

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

#### Material **Plating**

Gold, min. 1.27  $\mu$ m, over nickel Gold, min. 1.27  $\mu$ m, over nickel CuBe or equiv. **Brass** Passivated

Stainless steel

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Page

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1/3

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## R\_35/09.14/6.2

### Technical Data Sheet Rosenberger

**RPC-3.50** 

Short Circuit

03S12S-001D3

#### 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  $\leq$  0.20 dB, 8 GHz to 26.5 GHz

Error from nominal phase<sup>1</sup>  $\leq 1.0^{\circ}$ , 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.

 $\begin{array}{ll} \text{Offset Z}_{\circ} \, / \, \text{Impedance} \, / \, Z_{\circ} & 50 \, \Omega \\ \text{Offset Delay} & 16.6782 \, \text{ps} \\ \text{Length (electrical)} \, / \, \text{Offset Length} & 5.00 \, \text{mm} \\ \text{Offset Loss} & 2.36 \, \text{G}\Omega/\text{s} \\ \text{Loss} & 0.0111 \, \text{dB} / \sqrt{\text{GHz}} \end{array}$ 

Short Inductance<sup>2</sup>

#### **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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<sup>&</sup>lt;sup>1</sup> The nominal phase is defined by the Offset Delay, the Offset Loss and the Short Inductance.

<sup>&</sup>lt;sup>2</sup> Short Inductances are determined individually for each Short circuit and are documented in a Calibration Certificate.

<sup>&</sup>lt;sup>3</sup> Temperature range over which these specification are valid.

<sup>&</sup>lt;sup>4</sup> This range is underneath and above the operating temperature range, within the Short circuit is fully functional and could be used without damage.

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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 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

Weight

1 pce in box 6.97 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	17.10.14	Martin Moder	17.10.14		c00	14-1492	Herbert Babinger	17.10.14
			140					

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3/3