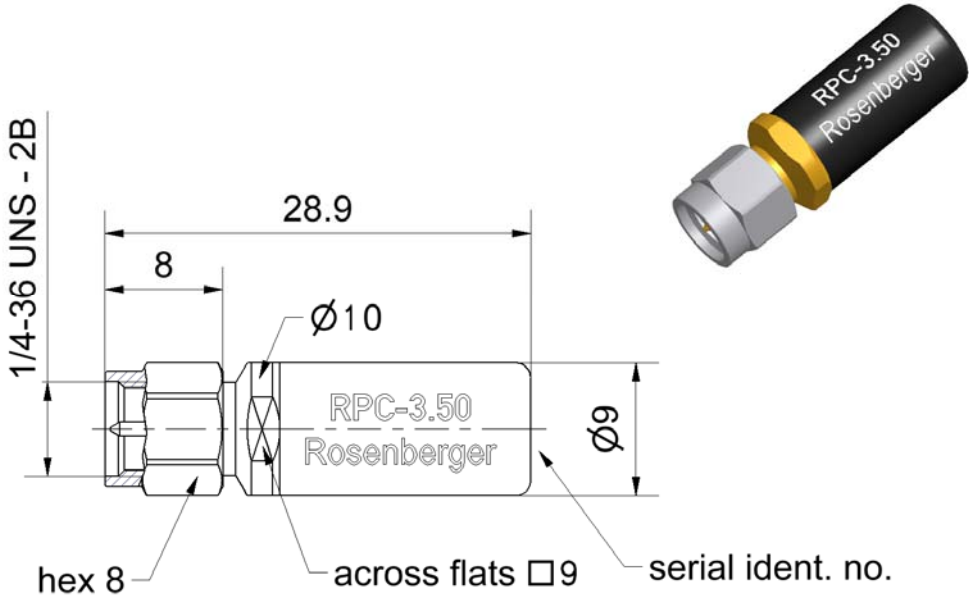


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Technical Data Sheet		Rosenberger												
RPC-3.50	Short Circuit Plug	03S12S-001D3												
														
All dimensions are in mm; tolerances according to ISO 2768 m-H														
Interface According to IEC 60169-23 Mechanically compatible with RPC-2.92 and SMA														
Documents Application note AN001 "Calibration Services"														
Material and plating <table><tr><td>Connector parts</td><td>Material</td><td>Plating</td></tr><tr><td>Center conductor</td><td>CuBe or equiv.</td><td>Gold, min. 1.27 µm, over nickel</td></tr><tr><td>Outer conductor</td><td>Brass</td><td>Gold, min. 1.27 µm, over nickel</td></tr><tr><td>Coupling nut</td><td>Stainless steel</td><td>Passivated</td></tr></table>			Connector parts	Material	Plating	Center conductor	CuBe or equiv.	Gold, min. 1.27 µm, over nickel	Outer conductor	Brass	Gold, min. 1.27 µm, over nickel	Coupling nut	Stainless steel	Passivated
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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

Frequency range	DC to 26.5 GHz
Return loss	≤ 0.10 dB, DC to 4 GHz ≤ 0.12 dB, 4 GHz to 8 GHz ≤ 0.20 dB, 8 GHz to 26.5 GHz
Error from nominal phase ¹	$\leq 1.0^\circ$, DC to 4 GHz $\leq 1.5^\circ$, 4 GHz to 8 GHz $\leq 2.0^\circ$, 8 GHz to 26.5 GHz

¹ The nominal phase is defined by the Offset Delay, the Offset Loss and the Short Inductance.

Mechanical data

Mating cycles	≥ 500
Maximum torque	1.70 Nm
Recommended torque	0.90 Nm
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.

Offset Z_o / Impedance / Z_o	50 Ω
Offset Delay	16.6782 ps
Length (electrical) / Offset Length	5.00 mm
Offset Loss	2.36 G Ω /s
Loss	0.0111 dB/ $\sqrt{\text{GHz}}$
Short Inductance ²	

² Short Inductances are determined individually for each Short circuit and are documented in a Calibration Certificate.

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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³ Temperature range over which these specification are valid.

⁴ 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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Technical Data Sheet				Rosenberger							
RPC-3.50		Short Circuit Plug		03S12S-001D3							
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 Recommendation12 months Packing Standard1 pce in box Weight6.97 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		Rev.		Engineering change number		Name		Date	
Herbert Babinger		17.10.14		c00		14-1492		Herbert Babinger		17.10.14	
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