



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

**Interface**

RPC-3.50 according to	IEC 60169-23
RPC-3.50 mechanically compatible with	RPC-2.92 and SMA
RPC-SP according to	MIL-STD 348A and IEC 61169-33
RPC-SP mechanically compatible with	OSP and BMA

**Documents**

Application note	AN001 "Calibration Services"
------------------	------------------------------

**Material and plating**

**Connector parts**  
Center conductor  
Outer conductor  
Coupling nut  
Dielectric

**Material**  
CuBe  
Stainless steel  
Stainless steel  
PS

**Plating**  
Gold, min. 1.27 µm, over nickel  
Passivated  
Passivated

Dieses Dokument ist urheberrechtlich geschützt • This document is protected by copyright • Rosenberger Hochfrequenztechnik GmbH & Co. KG

RF\_35/09.14/6.2

**Electrical data**

Frequency	DC to 22 GHz
Return loss	≥ 34 dB, DC to 4 GHz ≥ 26 dB, 4 GHz to 22 GHz

**Mechanical data**

	RPC-3.50	RPC-SP
Mating cycles	≥ 500	≥ 1000
Maximum torque	1.70 Nm	
Recommended torque	0.90 Nm	
Engagement force		13.5 N
Disengagement force		2 N
Gauge	0.00 mm to 0.08 mm	3.25 mm to 3.35 mm

**General standard definition**

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 $\Omega$
Offset Delay	70.8001 ps
Length (electrical) / Offset Length	21.23 mm
Offset Loss	3.60 G $\Omega$ /s
Loss	0.0221 dB/ $\sqrt{\text{GHz}}$

**Environmental data**

Operating temperature range <sup>1</sup>	+20 °C to +26 °C
Rated temperature range of use <sup>2</sup>	0 °C to +50 °C
Storage temperature range	- 40 °C to +85 °C

RoHS compliant

<sup>1</sup> Temperature range over which these specification are valid.

<sup>2</sup> This range is underneath and above the operating temperature range, within the calibration adaptor is fully functional and could be used without damage.

**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 Rosenberger standards**, national / international standards are not available. 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

**Recommended accessories**

- Rosenberger Test Port Adaptor
- Rosenberger RPC-3.50 Kalibration-Kit 03CK001-150 and 03CK010-150
- Rosenberger VNA Test cable kit and Microwave Cable Assemblies

*For further, more detailed information please visit our homepage [www.rosenberger.com](http://www.rosenberger.com).*

**Packing**

Standard 1 pce in box  
Weight 8.2 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	19.05.04	Markus Müller	17.10.16	d00	16-1390	Marion Striegler	17.10.16

Rosenberger Hochfrequenztechnik GmbH & Co. KG P.O.Box 1260 D-84526 Tittmoning Germany <a href="http://www.rosenberger.de">www.rosenberger.de</a>	Tel. : +49 8684 18-0 Email : <a href="mailto:info@rosenberger.de">info@rosenberger.de</a>	Page 3 / 3
--	--	---------------